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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,2170S×17955W,h600km,mb4.6/6,Error ellipse: s-maj=75.5km s-min=25.7km az=151.0*
*IDC **01** 18:45:46.3±2.6,2176S×17970W,h627km±37km,mb3.5/4, mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km s-min=20.6km az=159.0*
ISC 01 18:45:43.1±2.7,223S±02×1796W±03,h613km±42km,n22, σ1§15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

ISCJB 01 00:20:27.3±3.4,254S±04×1797E±02,h528km±42km, mb4.1/6,Error ellipse: s-maj=66.8km s-min=24.7km az=164.1
IDC 01 00:20:27.3±3.1,2593S×17988E,h530km±34km,mb3.4/4, mb1 3.6/4,mb1mx3.3/15,mbtmp3.4/4,Error ellipse: s-maj=82.8km s-min=18.8km az=163.0
NEIC 01 00:20:31.4±5.0,2534S×17956E,h564km±54km,mb4.5/5, Error ellipse: s-maj=42.9km s-min=33.0km az=162.0
ISC 01 00:20:27.8±3.4,254S±04×1797E±02,h522km±41km,n17, σ0.77/12,mb4.1/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	Armidale	25.28	252	eP	P	00 25 14.0	+1.5
CTA	Charters Tower	31.24	273	eP	P	00 26 04.9	+0.3
	10nm,0.4s,mb4.7						
CTA	Charters Tower	31.24	273	P	P	00 26 05.4	+0.7
	16nm,0.6s,mb4.8,baz=96,slow=11,SNR=27						
CTAO	Charters Tower	31.24	273	eP	P	00 26 05.3	+0.6
	20nm,0.7s,mb4.7						
STKA	Stephens Creek	33.94	250	eP	P	00 26 27.3	-0.1
	1.6nm,0.5s,mb3.8						
STKA	Stephens Creek	33.94	250	P	P	00 26 25.9	-1.5
	1.9nm,0.5s,mb3.9,baz=90,slow=10,SNR=8.5						
PMG	Port Moresby	34.75	291	eP	P	00 26 34.6	+0.2
	8.3nm,0.7s,mb4.4						
ASAR	Alice Springs	41.55	262	P	P	00 27 29.3	-0.3
	2.5nm,0.4s,mb4.1,baz=87,slow=6.9,SNR=45						
ASAR				S	S	00 33 08.2	+0.5
	0.5nm,0.6s,baz=93,slow=17,SNR=4.4						
WB2	Warramunga Arr	42.05	268	eP	P	00 27 32.9	-0.7
WRAB	Tennant Creek	42.05	268	eP	P	00 27 32.9	-0.8
	3.9nm,0.6s,mb4.1						
KAKA	Kakadu	46.19	277	eP	x	00 27 48.7	
	4.7nm,0.4s						
TXAR	Lajitas Array	91.44	58	P	P	00 32 38.5	+0.2
	0.3nm,0.8s,mb3.3,baz=197,slow=3.9,SNR=4.2						
NB2	NORSAR Subarra	143.49	351	PKP	PKPdf	00 39 00.2	-2.0
	comp=Z,1.0nm,0.5s,baz=14,slow=3.3						
NOA	NORSAR Array B	143.49	351	PKP	PKPdf	00 38 59.7	-2.5
	comp=Z,2.4nm,0.8s,baz=16,slow=5.0,SNR=6.6						
AKASG	Malin Array Be	146.05	326	PKPbc	PKPbc	00 39 08.3	-0.6
	comp=Z,0.9nm,0.3s,baz=42,slow=4.8,SNR=6.3						
AKASG	Malin Array Be	146.05	326	PKPbc	PKPbc	00 39 08.3	-0.6
BRTR	Keskin Array B	148.23	305	PKPbc	PKPbc	00 39 15.2	+0.2
	comp=Z,0.6nm,0.5s,baz=145,slow=4.3,SNR=6.3						
BRTR				PKPab	PKPab	00 39 19.9	0.0
	comp=Z,1.6nm,0.8s,baz=105,slow=2.5,SNR=7.1						

IDC 01 00:20:38.1±1.4,262N×12682E,h0km,mb4.0/6,mb1 4.0/6, mb1mx3.8/17,mbtmp3.9/6,Error ellipse: s-maj=184.7km s-min=21.2km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	27.02	166	P	P	00 26 21.9	-0.3
	0.3nm,0.5s,baz=346,slow=7.1,SNR=5.3						
STKA	Stephens Creek	37.07	159	P	P	00 27 50.7	+0.6
	1.7nm,0.7s,baz=316,slow=6.0,SNR=3.0						
SONM	Songino Array	48.37	342	P	P	00 29 22.4	+0.7
	0.1nm,0.4s,baz=171,slow=10,SNR=2.7						
MKAR	Makanchi Array	58.51	326	P	P	00 30 36.6	+0.4
	0.6nm,0.5s,baz=124,slow=8.3,SNR=15						
KURK	Kurchatov	62.72	328	P	P	00 31 04.7	-0.2
	0.9nm,0.5s,baz=129,slow=6.1,SNR=4.5						
ARCES	ARCESS Array B	91.51	340	P	P	00 33 45.1	-1.1
	3.9nm,0.9s,baz=88,slow=5.5,SNR=3.9						

CASC 01 00:20:41.3±2.4,1357N×9080W,h21km±9km,MD4.2, 6C-6D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.69	29	⇑eP	Pb	00 20 55.3	+0.7
IXG				eS	Sb	00 21 06.2	+2.6
PCG	Pacaya	0.84	13	eP	Pb	00 20 57.5	+0.3
FUG	Fuego 3	0.87	357	eP	Pb	00 20 57.6	-0.2
FG6		0.99	355	eP	Pb	00 20 59.2	-0.5
FG6				i S	Sb	00 21 11.4	-1.0
NBG	Las Nubes	1.10	23	eP	Pn	00 21 02.3	+0.8
JAT	Jato	1.10	312	⇑eP	Pn	00 21 00.6	-0.9
JAT				eS	Sb	00 21 15.6	-0.1
RTR	El Retiro	1.17	74	⇓eP	x	00 21 02.2	
RTR				eS	x	00 21 17.1	
SBLS	San Blas	1.17	77	⇓eP	x	00 21 02.1	
SBLS				eS	x	00 21 17.6	
SNJE	San Jose	1.20	76	⇑eP	x	00 21 02.6	
SNJE				eS	x	00 21 18.2	
BOQS	Boqueron	1.48	83	eP	x	00 21 06.9	
BOQS				eS	x	00 21 25.9	
LFRS	El Faro	1.69	88	⇑eP	x	00 21 09.9	
LFRS				eS	x	00 21 31.6	
LBRS	Las Brisas	1.71	84	⇑eP	x	00 21 10.0	
LBRS				eS	x	00 21 33.1	
MRL	Marmol	1.83	36	⇑eP	Pn	00 21 12.8	+1.3
SNVI	San Vicente	1.91	89	eP	x	00 21 13.0	
SNVI				eS	x	00 21 37.4	
VSM	San Miguel	2.46	93	⇓eP	x	00 21 20.4	
VSM				eS	x	00 21 52.2	
BLLM	Bellamira	2.49	93	eP	x	00 21 21.6	
CAHU	Cacacuatique	2.52	85	⇓eP	x	00 21 21.7	
CNCH	Conchagua	2.90	95	⇓eP	x	00 21 26.5	
COPN	Copaltepe	4.33	108	⇓eP	Pn	00 21 46.5	+0.6

IDC 01 00:28:39.4±1.4,236N×12641E,h0km,mb3.7/5,mb1 3.7/5, mb1mx3.6/17,mbtmp3.7/5,Error ellipse: s-maj=181.6km s-min=20.6km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.88	165	P	P	00 34 22.0	-0.1
	0.4nm,0.4s,baz=346,slow=7.4,SNR=6.4						
STKA	Stephens Creek	36.98	158	P	P	00 35 50.7	+0.1
	1.6nm,0.6s,baz=306,slow=11,SNR=4.1						
SONM	Songino Array	48.49	342	P	P	00 37 24.0	+0.2
	0.4nm,0.6s,baz=165,slow=7.4,SNR=3.6						
MKAR	Makanchi Array	58.49	326	P	P	00 38 37.4	0.0
	0.6nm,0.5s,baz=119,slow=9.2,SNR=12						
BVAR	Borovoye Array	68.29	327	P	P	00 39 42.1	0.0
	0.4nm,0.6s,baz=120,slow=8.9,SNR=4.3						

CASC 01 00:29:35.0±1.5,1029N×8578W,h10km±7km,MD4.0, ML2.9,4C-5D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	Vista de Mar	0.22	138	⇓eP	Pg	00 29 39.8	+0.3
2RIO	Dos Rios de Up	0.59	66	⇑eP	Pg	00 29 49.2	+2.8
LIM1	Limonal	0.66	52	⇑eP	Pg	00 29 47.6	-0.2
LIM1				eS	Sg	00 29 57.6	+1.2
CUI	Cuipilapa	0.70	58	⇓eP	Pg	00 29 48.4	-0.2
CUI				eS	Sg	00 29 59.0	+1.2
JCR	Jicaral	0.79	123	⇓eP	Pg	00 29 49.0	-1.2
FORC	Fortuna	1.11	80	⇑eP	Pb	00 29 55.2	-1.1
FORC				⇑eP		00 29 55.3	
CONN	Concepcion	1.28	7	eP	Pn	00 29 58.4	-0.6
CGA2	Cerro Gallo 2	1.32	102	eP	Pn	00 29 57.9	-1.7
CGA2				eS	Sb	00 30 16.7	-0.3
PRS1	Puriscal	1.48	102	⇓eP	Pn	00 30 00.1	-1.7
APON	Apoyo	1.64	350	eP	Pn	00 30 03.7	-0.4
LAJ	Bijagual	1.69	104	eP	Pn	00 29 58.0	-6.6
LAJ				eS	Sn	00 30 17.1	-9.2
QCR	Quepos	1.81	118	eP	Pn	00 30 07.0	+0.7
MGAN	Managua	1.90	346	AML	AML	00 30 36.0	
	comp=E,31nm,0.6s						
URSC	Urasca	2.02	103	eP	Pn	00 30 09.3	+0.1
BUS	Buena Vista	2.12	110	eP	Pn	00 30 11.2	+0.7
LAPE	La Pedrera	14.29	100	⇓eP	x	00 29 46.1	
LAPE				i S	x	00 29 55.4	

BJI 01 00:34:04.9,220N×12721E,h10km,mB5.0,mb4.8,Ms4.7, Msz4.4
MOS 01 00:34:12.1±0.9,266N×12703E,h33km,mb5.2/22,Error ellipse: s-maj=16.9km s-min=6.6km az=117.3
IDC 01 00:34:15.9±0.8,265N×12697E,h44km±6km,mb4.4/26, mb1 4.4/28,mb1mx4.4/29,mbtmp4.4/28,ML4.0/2,Error ellipse: s-maj=20.6km s-min=10.6km az=80.0
NEIC 01 00:34:15.6±0.2,264N×12699E,mb5.0/30,Error ellipse: s-maj=9.4km s-min=4.7km az=66.0
ISCJB 01 00:34:16.3±1.0,263N±004×12699E±006,h70km±10km, mb4.8/82,Error ellipse: s-maj=10.6km s-min=6.6km az=158.7
DJA 01 00:34:20,252N×127.16E,h50km,MLv4.6/5
ISC 01 00:34:17.7±0.9,261N±004×12699E±006,h66km±9km, h19km±10.5km:pP-P,n141,σ0.86/139,mb4.8/81,6C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.86	168	P	Pn	00 34 47.7	+0.3
MNI	Manado	2.44	242	P	Pn	00 34 59.5	+4.3
LBMI	Labuha	3.26	171	P	Pn	00 35 07.7	+1.2
SWI	Sorong	5.48	129	P	Pn	00 35 37.0	+0.1
	103nm,0.8s,0.3nm						
AAI	Ambon	6.37	169	P	Pn	00 35 58.1	+9.2
KDI	Kendari	7.85	214	P	Pn	00 36 12.3	+3.1
	32nm,0.9s,5µm0.1nm						
MYLDM	Lahad Datu	8.85	287	P	Pn	00 36 27.7	+4.8
KAPI	Kappang	10.47	224	P	Pn	00 36 44.5	-0.5
	0.8nm,0.3s,baz=187,slow=22,SNR=3.9						
BATI	Baumata	13.15	195	P	Pn	00 37 20.5	-1.2
	1.1nm,0.3s,baz=96,slow=18,SNR=1.9						
COEN	Coen	22.98	136	eP	P	00 39 16.1	-0.9
	20nm,1.0s,mb4.4						
WRAB	Tennant Creek	23.54	162	c iP	P	00 39 20.8	-1.3
WRAB	Tennant Creek	23.54	162	eP	P	00 39 21.0	-1.1
	36nm,0.9s,mb4.7						
WB2	Warramunga Arr	23.54	162	⇓iP	P	00 39 21.1	-1.1
MBWA	Marble Bar	24.66	196	eP	P	00 39 33.1	+0.7
	37nm,1.1s,mb4.7						
ASAR	Alice Springs	26.97	166	P	P	00 39 52.6	-0.6
	6.7nm,0.8s,mb4.2,baz=352,slow=7.4,SNR=58						
CTAO	Charters Tower	29.43	141	eP	P	00 40 15.0	-0.2
CTAO				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.6						
CTAO	Charters Tower	29.43	141	eP	P	00 40 15.0	-0.2
	comp=Z,21nm,1.3s,mb4.6						
NJ2	Nanjing	30.27	346	eP	P	00 40 22.4	-0.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
GYA	Guiyang	30.71	322	P	P	00 40 31.8	+5.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,120nm,7.2s						
GYA				LR	LR		
	comp=N,540nm,12.3s						
GYA				LR	LR		
	comp=E,410nm,12.0s						
GYA				LR	LR		
	comp=Z,780nm,11.5s						
CMAR	Chiang Mai Arr	31.67	302	P	P	00 40 34.9	-0.2
	comp=Z,3.7nm,0.7s,mb4.2,baz=115,slow=7.0,SNR=15						
CMAR	Chiang Mai Arr	31.67	302	⇑eP	P	00 40 34.9	-0.2
CHTO	Chiang Mai	31.83	302	eP	P	00 40 35.9	-0.6
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
CHTO	Chiang Mai	31.83	302	eP	P	00 40 35.9	-0.6
	comp=Z,4.4nm,0.8s,mb4.2						
KMI	Kunming	32.36	316	P	P	00 40 42.3	+1.3
KMI				AP	pP	00 40 46.4	-11
KMI				XP	sP	00 40 47.4	-17
KMI				PP	PP	00 41 52.6	-2.7
KMI				PPP		00 42 07.4	
KMI				S	S	00 45 56.9	+6.4
KMI				SS	SS	00 47 51.1	-21
KMI				SSS		00 48 16.7	
KMI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,76nm,4.3s						
KMI				LR	LR		
	comp=N,206nm,22.7s						
KMI				LR	LR		
	comp=E,153nm,23.3s						
KMI				LR	LR		
	comp=Z,258nm,26.0s						
FORT	Forrest	33.21	178	eP	P	00 40 48.2	-0.2
	comp=Z,16nm,0.6s,mb5.0						
KSRS	Korea Array	34.69	1	P	P	00 41 01.4	+0.3
	comp=Z,3.3nm,0.6s,mb4.4,baz=179,slow=9.6,SNR=10.0						
KSRS				PcP	PcP	00 43 36.0	+2.1
	comp=Z,2.7nm,0.7s,baz=204,slow=3.3,SNR=7.0						
KLBR	Kellerberrin	35.12	194	eP	P	00 41 05.4	+0.5
	comp=Z,12nm,0.6s,mb4.9						
MJAR	Matsushiro Arr	35.32	16	P	P	00 41 04.9	-1.7
	comp=Z,3.7nm,0.8s,mb4.3,baz=179,slow=10,SNR=7.8						
XAN	Xi'an	35.53	334	P	P	00 41 06.9	-1.5
XAN				AP	pP	00 41 10.0	-15
XAN				PP	PP	00 42 27.9	-2.4
XAN				S	S	00 46 44.1	+4.8
XAN				SCS	ScS	00 51 26.1	+4.6
XAN				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
XAN				LR	LR		
	comp=N,120nm,24.2s						
XAN				LR	LR		
	comp=E,85nm,22.6s						
XAN				LR	LR		
	comp=Z,251nm,25.8s						
CD2	Chengdu	35.70	324	P	P	00 41 10.7	+0.8
CD2				AP	pP	00 41 11.1	-15
CD2				XP	sP	00 41 17.7	-16
CD2				PP	PP	00 42 31.8	-0.4
CD2				PCP	PcP	00 43 38.5	+1.5
CD2				S	S	00 46 46.9	+4.9
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
CD2				AMB	AMB		
	comp=Z,90nm,9.7s						
CD2				LR	LR		
	comp=N,780nm,6.5s						
CD2				LR	LR		
	comp=Z,630nm,13.3s						
NWAO	Narrogin (SRO)	36.53	194	P	P	00 41 17.1	+0.2
	comp=Z,2.5nm,2.1s,mb3.8,baz=95,slow=3.5,SNR=5.7						
STKA	Stephens Creek	36.99	159	eP	P	00 41 20.6	-0.3
	comp=Z,20nm,0.8s,mb5.1						
STKA	Stephens Creek	36.99	159	P	P	00 41 20.9	+0.1
	comp=Z,27nm,0.8s,mb5.2,baz=341,slow=7.5,SNR=39						
STKA				PcP	PcP	00 43 42.8	+2.0
	comp=Z,3.2nm,0.7s,baz=348,slow=6.0,SNR=4.2						
BJT	Baijiatuau	38.51	347	eP	P	00 41 33.9	+0.3
BJT				pmax	pmax		
	comp=Z,61nm,0.8s						
BJT	Baijiatuau	38.51	347	eP	P	00 41 33.9	+0.3
	comp=Z,61nm,0.8s,mb5.5						
BJI	Beijing	38.53	347	P	P	00 41 33.9	+0.1
BJI				S	S	00 47 31.9	+7.1
BJI				AMB	AMB		
	comp=Z,84nm,1.1s,mb5.5						
BJI				AMB	AMB		
	comp=Z,254nm,5.3s						
BJI				LR	LR		
	comp=N,249nm,17.2s						
BJI				LR	LR		
	comp=E,249nm,17.8s						
BJI				LR	LR		
	comp=Z,113nm,22.7s						
LZH	Lanzhou	39.60	330	eP	P	00 41 44.2	+1.5
LZH				AP	pP	00 41 47.5	-12
LZH				XP	sP	00 41 49.5	-17
LZH				PP	PP	00 43 19.5	+4.6
LZH				eS	S	00 47 47.0	+6.0
LZH				AMB	AMB		
	comp=Z,46nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,170nm,6.2s						
LZH				LR	LR		
	comp=E,430nm,10.5s						
LZH				LR	LR		
	comp=Z,710nm,12.5s						
ARMA	Armidale	40.39	146	eP	P	00 41 49.9	+0.5
HHC	Hu-ho-hao-te	40.54	342	eP	P	00 41 51.2	+0.8
HHC				AP	pP	00 41 55.3	-12
HHC				XP	sP	00 41 58.6	-16
HHC				PP	PP	00 43 27.6	+2.6
HHC				eS	S	00 48 00.1	+5.2
HHC				XS	sS	00 48 07.3	-16
HHC				SS	SS	00 50 54.2	-2.8
HHC				SCS	ScS	00 51 54.6	+4.6
HHC				AMB	AMB		
	comp=Z,19nm,0.5s,mb5.2						
HHC				AMB	AMB		
	comp=Z,85nm,4.2s						
HHC				LR	LR		
	comp=N,204nm,11.5s						
HHC				LR	LR		
	comp=E,131nm,12.1s						
HHC				LR	LR		
	comp=Z,294nm,19.6s						
CN2	Changchun	41.04	358	eP	P	00 41 52.7	-1.8
CN2				eXP	sP	00 41 59.6	-19
CN2				eS	S	00 48 05.6	+3.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
CN2				AMB	AMB		
	comp=Z,80nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
MDJ	Mudanjiang	41.90	3	P	P	00 42 02.0	+0.5
MDJ				AP	pP	00 42 05.1	-13
MDJ				XP	sP	00 42 06.3	-19
MDJ				SCP	ScP	00 47 46.8	+5.9
MDJ				PCS	PcS	00 47 48.4	+0.8
MDJ				S	S	00 48 20.4	+5.5
MDJ				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,66nm,3.6s						
MDJ				LR	LR		
	comp=N,71nm,20.7s						
MDJ				LR	LR		
	comp=E,40nm,24.8s						
MDJ				LR	LR		
	comp=Z,89nm,25.3s						
LSA	Lhasa	43.38	312	P	P	00 42 14.3	+0.5
LSA	Lhasa	43.38	312	eP	P	00 42 14.9	+1.1
LSA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
LSA	Lhasa	43.38	312	eP	P	00 42 14.9	+1.1
	comp=Z,20nm,0.7s,mb5.0						
ASAJ	Asahikawa	43.59	16	P	P	00 42 15.2	0.0
	comp=Z,9.6nm,0.6s,mb4.7,baz=209,slow=19,SNR=4.8						
GTA	Gaotai	44.19	329	eP	P	00 42 20.1	0.0
GTA				AP	pP	00 42 24.1	-13
GTA				XP	sP	00 42 27.5	-17
GTA				PCP	PcP	00 44 06.4	+2.4
GTA				S	S	00 48 50.8	+2.1
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
GTA				AMB	AMB		
	comp=Z,186nm,6.9s						
GTA				LR	LR		
	comp=N,185nm,12.6s						
GTA				LR	LR		
	comp=E,203nm,10.8s						
GTA				LR	LR		
	comp=Z,167nm,12.6s						
TAPN	Taplejung	44.89	307	eP	P	00 42 26.0	0.0
ODAN	Odare	44.94	306	eP	P	00 42 25.9	-0.4
	comp=Z,82nm,1.1s,mb5.4						
RAMN	Ramite	45.61	306	eP	P	00 42 31.9	+0.2
	comp=Z,51nm,0.9s,mb5.3						
JIRN	Jiri	46.24	307	eP	P	00 42 36.6	0.0
	comp=Z,40nm,0.7s,mb5.2						
GUN	Gumba	46.60	307	eP	P	00 42 39.2	-0.2
	comp=Z,63nm,0.7s,mb5.5						
KLR	Kul'dur	46.63	4	eP	P	00 42 35.2	-4.0
PKI	Pulchoki	46.83	306	eP	P	00 42 40.4	-0.8
	comp=Z,25nm,0.9s,mb5.0						
PKI	Pulchoki	46.83	306	eP	P	00 42 40.4	-0.8
PKI				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
HIA	Hailar	46.90	353	eP	P	00 42 42.4	+1.0
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
HIA	Hailar	46.90	353	eP	P	00 42 42.4	+1.1
	comp=Z,12nm,0.9s,mb4.6						
KKN	Kakani	47.03	306	eP	P	00 42 42.0	-0.8
	comp=Z,30nm,0.7s,mb5.1						
KKN	Kakani	47.03	306	eP	P	00 42 42.0	-0.8
KKN				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
DMN	Daman	47.09	306	eP	P	00 42 42.8	-0.5
	comp=Z,47nm,0.9s,mb5.2						
GKN	Gorkha	47.63	306	eP	P	00 42 46.8	-0.7
	comp=Z,25nm,0.8s,mb5.1						
ULN	Ulaanbaatar	48.26	342	c iP	P	00 42 52.5	+0.6
ULN	Ulaanbaatar	48.26	342	eP	P	00 42 52.6	+0.7
	comp=Z,12nm,0.8s,mb4.8						
KOLN	Koldanda	48.38	305	eP	P	00 42 52.8	-0.4
	comp=Z,67nm,0.8s,mb5.5						
SONM	Songino Array	48.44	342	P	P	00 42 54.1	+0.8
	comp=Z,4.4nm,0.7s,mb4.4,baz=156,slow=8.5,SNR=37						
SONM				PcP	PcP	00 44 19.8	+1.1
	comp=Z,2.7nm,0.7s,baz=165,slow=3.3,SNR=5.0						
DANN	Dangsing	48.48	306	eP	P	00 42 53.8	-0.2
HYB	Hyderabad	49.75	291	i P	P	00 43 04.5	+0.7
HYB	Hyderabad	49.75	291	eP	P	00 43 04.5	+0.7
ZAK	Zakamensk	51.66	341	eP	P	00 43 18.2	+0.5
ZAK				e		00 44 31.1	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
TLY	Talaya	52.67	342	eP	P	00 43 26.3	+1.2
TLY				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
TLY				MLR	MLR		
	comp=Z,105nm,14.0s						
TLY	Talaya	52.67	342	eP	P	00 43 26.0	+0.9
	comp=Z,11nm,0.8s,mb5.0						
WMQ	Urumqi	53.79	325	P	P	00 43 33.8	+0.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,227nm,26.0s						
WMQ				LR	LR		
	comp=E,160nm,26.0s						
WMQ				LR	LR		
	comp=Z,154nm,26.0s						
HVS	Khovu-Aksy	55.86	335	eP	P	00 43 49.2	+0.9
HVS				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.6						
PETK	Petropavlovsk-	56.37	22	P	P	00 43 52.7	+0.8
	comp=Z,9.5nm,0.8s,mb4.8,baz=140,slow=4.0,SNR=7.9						
PETK				pP	pP	00 44 05.8	-3.3
	comp=Z,6.4nm,0.8s,baz=199,slow=3.1,SNR=5.3						
PETK	Petropavlovsk-	56.37	22	P	P	00 43 52.7	+0.8
PETK				pP	pP	00 44 05.8	-3.3
MK31	Makanchi Array	58.62	326	P	P	00 44 07.5	-0.4
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
MKAR	Makanchi Array	58.62	326	P	P	00 44 07.8	-0.2
	comp=Z,8.7nm,0.5s,mb5.0,baz=121,slow=8.5,SNR=161						
YAK	Yakutsk	59.32	1	eP	P	00 44 11.7	-0.7
YAK				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK	Yakutsk	59.32	1	eP	P	00 44 12.1	-0.3
YAK				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.5						
RPZ	Rata Peaks	60.70	145	P	P	00 44 22.6	+0.4
	comp=Z,5.3nm,0.7s,mb4.7,baz=265,slow=1.1,SNR=2.9						
TKM2	Tokmak 2	60.76	319	eP	P	00 44 22.9	+0.2
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
TKM2	Tokmak 2	60.76	319	eP	P	00 44 22.9	+0.2
	comp=Z,5.6nm,0.7s,mb4.7						
AAK	Ala-Archa	61.36	318	eP	P	00 44 26.8	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAA0	Zalesovo Array	61.70	333	eP	P	00 44 27.7	-1.1
ZALV	Zalesovo Beam	61.70	333	P	P	00 44 28.1	-0.8
	comp=Z,2.0nm,0.5s,mb4.5,baz=116,slow=6.8,SNR=20						
EKS2	Erkin-Say	61.85	318	eP	P	00 44 30.4	+0.4
	comp=Z,7.4nm,0.7s,mb4.8						
KBL	Kabul	62.41	308	eP	P	00 44 32.4	-1.6
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KBL	Kabul	62.41	308	eP	P	00 44 32.4	-1.6
	comp=Z,4.6nm,0.7s,mb4.6						
KURK	Kurchatov	62.82	328	P	P	00 44 36.2	-0.2

	comp=Z,11nm,0.5s,mb5.0,baz=128,slow=6.2,SNR=30						
KURK	**Kurchatov**	**62.82**	**328**	P	**P**	**00 44 35.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
KURK	**Kurchatov**	**62.82**	**328**	*e*P	**P**	**00 44 36.2**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1						
NVS	**Novosibirsk**	**62.99**	**333**	*i* P	**P**	**00 44 36.1**	**-1.3**
NVS				*e*		00 45 14.1	
NVS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.1s						
SEY	**Seymchan**	**63.06**	**13**	*e*P	**P**	**00 44 38.3**	**+0.6**
KK31	**Karatay Array**	**64.23**	**317**	P	**P**	**00 44 45.2**	**-0.6**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
VOSK	**Vostochnaya**	**67.94**	**327**	P	**P**	**00 45 08.6**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
BVA0	**Borovoye Array**	**68.40**	**327**	*i* P	**P**	**00 45 12.0**	**-0.3**
BVAR	**Borovoye Array**	**68.40**	**327**	P	**P**	**00 45 12.4**	**+0.1**
	comp=Z,8.2nm,0.8s,mb4.6,baz=133,slow=8.3,SNR=38						
BRVK	**Borovoye**	**68.47**	**327**	*e*P	**P**	**00 45 12.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
BRVK	**Borovoye**	**68.47**	**327**	*e*P	**P**	**00 45 12.9**	**+0.2**
	comp=Z,13nm,0.9s,mb4.8						
TIXI	**Tiksi**	**68.95**	**1**	⇑*i*P	**P**	**00 45 14.9**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.8						
TIXI	**Tiksi**	**68.95**	**1**	*e*P	**P**	**00 45 14.1**	**-1.3**
	comp=Z,9.8nm,0.7s,mb4.8						
BILL	**Bilibino**	**70.57**	**15**	*e*P	**P**	**00 45 26.2**	**+0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.3						
AB31	**Akbulak array**	**73.18**	**321**	P	**P**	**00 45 41.2**	**-0.2**
AB31				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
AKTK	**Aktyubinsk**	**74.70**	**322**	P	**P**	**00 45 50.6**	**+0.4**
AKTK				pP	pP	00 46 04.0	-4.2
AKTO	**Aktyubinsk**	**74.70**	**322**	P	**P**	**00 45 50.6**	**+0.4**
	comp=Z,15nm,0.7s,mb4.8,baz=105,slow=7.8,SNR=66						
AKTO				pP	pP	00 46 04.0	-4.2
	comp=Z,9.9nm,0.7s,baz=101,slow=5.3,SNR=7.4						
SVE	**Sverdlovsk**	**75.05**	**329**	⇓*e*P	**P**	**00 45 52.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
ARU	**Arti**	**76.02**	**328**	*c i*P	**P**	**00 45 57.7**	**0.0**
ARU				*e*		00 48 47.2	
ARU				*e*S	S	00 55 40.3	+4.6
ARU				*e*SS	SS	01 00 26.8	-2.9
ARU				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
ARU	**Arti**	**76.02**	**328**	*e*P	**P**	**00 45 57.4**	**-0.3**
	comp=Z,20nm,0.7s,mb5.0						
RDF	**Al-Radifah**	**79.50**	**299**	*e*P	**P**	**00 46 16.0**	**-1.6**
	baz=299						
RDF				AMb	AMB	00 46 19.2	
	comp=Z,58nm,1.3s,mb5.2,baz=299						
MIB	**Mutribah**	**79.73**	**300**	*e*P	**P**	**00 46 17.3**	**-1.6**
	baz=300						
MIB				AMb	AMB	00 46 30.2	
	comp=Z,24nm,1.2s,mb4.9,baz=300						
NAY	**Al-Naaiem**	**79.79**	**299**	*e*P	**P**	**00 46 17.9**	**-1.3**
	baz=299						
NAY				AMb	AMB	00 46 29.0	
	comp=Z,21nm,1.8s,mb4.7,baz=299						
VNDA	**Vanda**	**82.28**	**173**	P	**P**	**00 46 32.7**	**+1.2**
	comp=Z,1.1nm,0.5s,mb3.9,baz=308,slow=7.7,SNR=6.3						
VNDA	**Vanda**	**82.28**	**173**	P	**P**	**00 46 32.7**	**+1.2**
MAW	**Mawson**	**82.80**	**200**	P	**P**	**00 46 35.3**	**+1.0**
	comp=Z,1.6nm,0.6s,mb4.0,baz=38,slow=3.7,SNR=5.2						
KIV	**Kislovodsk**	**84.10**	**314**	*e*P	**P**	**00 46 41.8**	**+0.3**
KIV				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.7						
KIV	**Kislovodsk**	**84.10**	**314**	*e*P	**P**	**00 46 41.8**	**+0.3**
	comp=Z,9.6nm,1.0s,mb4.6						
KLMR	**Klimovskoe**	**86.51**	**331**	*e*P	**P**	**00 46 52.3**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,40nm,1.9s,mb5.0						
OBN	**Obninsk**	**88.12**	**325**	*e*P	**P**	**00 47 00.3**	**-0.8**
OBN				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1						
ASF	**Jabal al Asfar**	**88.71**	**302**	P	**P**	**00 47 06.2**	**+1.8**
	comp=Z,5.2nm,0.9s,mb4.5,baz=74,slow=1.5,SNR=6.3						
MMAI	**Mount Meron Ar**	**89.93**	**303**	P	**P**	**00 47 12.0**	**+1.9**
	comp=Z,1.0nm,0.5s,mb4.2,baz=69,slow=9.4,SNR=2.8						
EIL	**Elat**	**90.50**	**300**	P	**P**	**00 47 14.5**	**+1.7**
	comp=Z,2.7nm,0.9s,mb4.4,baz=322,slow=4.5,SNR=4.6						
BR131	**Keskin Array S**	**90.94**	**310**	*e*P	**P**	**00 47 22.3**	**+7.7**
BRTR	**Keskin Array B**	**90.94**	**310**	P	**P**	**00 47 15.2**	**+0.7**
	comp=Z,1.1nm,0.8s,mb4.0,baz=126,slow=6.6,SNR=5.7						
BRTR	**Keskin Array B**	**90.94**	**310**	⇑*e*P	**P**	**00 47 15.3**	**+0.7**
ARCES	**ARCESS Array B**	**91.59**	**340**	P	**P**	**00 47 16.7**	**-0.2**
	comp=Z,5.8nm,0.6s,mb5.0,baz=80,slow=5.7,SNR=26						
SPITS	**Spitsbergen Ar**	**91.62**	**349**	P	**P**	**00 47 17.3**	**+0.3**
	comp=Z,0.8nm,1.8s,mb3.6,baz=2.8,slow=6.9,SNR=6.0						
SPITS	**Spitsbergen Ar**	**91.62**	**349**	P	**P**	**00 47 17.3**	**+0.3**
AKASG	**Malin Array Be**	**92.92**	**321**	P	**P**	**00 47 22.9**	**-0.6**
	comp=Z,0.7nm,0.4s,mb4.3,baz=68,slow=4.5,SNR=5.2						
AKASG				pP	pP	00 47 36.4	-5.6
	comp=Z,0.3nm,0.3s,baz=77,slow=4.0,SNR=4.1						
AKASG	**Malin Array Be**	**92.92**	**321**	P	**P**	**00 47 22.9**	**-0.6**
AKASG				pP	pP	00 47 36.4	-5.6
BUR08	**Bucovina Ar. S**	**96.01**	**318**	*e*P	**P**	**00 47 38.4**	**+0.7**
HFS	**Hagfors**	**99.13**	**332**	P	**P**	**00 47 50.8**	**-0.7**
	comp=Z,1.5nm,0.7s,mb4.6,baz=116,slow=3.4,SNR=4.0						
NOA	**NORSAR Array B**	**99.90**	**334**	P	Pdif	00 47 54.2	-0.8
	comp=Z,2.4nm,0.7s,baz=66,slow=4.5,SNR=6.6						
FCC	**Fort Churchill**	**110.73**	**21**	*e*PKIKP	PKiKP	00 52 38.7	-4.1
TXAR	**Lajitas Array**	**122.07**	**53**	PKP	PKPdf	00 53 07.3	+1.9
	comp=Z,0.4nm,0.6s,baz=183,slow=0.8,SNR=6.2						
TXAR	**Lajitas Array**	**122.07**	**53**	PKP	PKPdf	00 53 07.3	+1.9
MDT	**Midelt**	**122.29**	**312**	PKP	PKPdf	00 53 08.6	+2.8
	comp=Z,0.6nm,0.6s,baz=78,slow=4.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**123.51**	**288**	PKP	PKPdf	00 53 09.4	+0.8
	comp=Z,1.2nm,0.8s,baz=58,slow=1.9,SNR=8.1						
JCT	**Junction City**	**124.59**	**50**	*e*PKIKP	PKPdf	00 53 12.0	+1.7
DBIC	**Dimbokro**	**131.06**	**281**	PKP	PKPdf	00 53 25.4	+2.4
	comp=Z,7.3nm,1.2s,baz=194,slow=9.7,SNR=2.2						
DBIC	**Dimbokro**	**131.06**	**281**	PKP	PKPdf	00 53 25.4	+2.4
TKL	**Tuckaleechee C**	**132.29**	**34**	PKP	PKPdf	00 53 27.1	+2.3
	comp=Z,6.4nm,26.4s,baz=237,slow=4.2,SNR=5.8						
PLCA	**Paso Flores**	**138.87**	**160**	pPKP	pPKPdf	00 53 52.5	-3.5
	comp=Z,2.1nm,0.8s,baz=177,slow=6.5,SNR=4.5						

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*IDC **01** 00:38:43.5±0.9, 390S×13688E, h0km, mb4.2/11, mb1 4.3/14, mb1mx4.3/17, mbtmp4.2/14, ML4.3/3, Error ellipse: s-maj=36.6km s-min=16.5km az=79.0*
*NEIC **01** 00:38:45.4±0.5, 389S×13679E, h10km, mb4.4/4, Error ellipse: s-maj=13.8km s-min=7.7km az=63.0*
*ISCJB **01** 00:38:47.6±1.1, 393S±006×13676E±006, h40km±12km, mb4.2/11, Error ellipse: s-maj=11.4km s-min=8.6km az=138.0*
*DJA **01** 00:38:50, 380S×13681E, h30km, mb4.8/5*
ISC 01 00:38:49.5±0.8**, 392S**±005×**13677E**±006**, h40**km±9km**, n37, σ1^{s}04**/37**, mb4.2**/11**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.17**	**71**	P	**Pn**	**00 39 51.7**	**+1.0**
SWI	**Sorong**	**6.29**	**299**	P	**Pn**	**00 40 19.4**	**-0.4**
	135nm,0.7s,0.4nm						
KAKA	**Kakadu**	**9.73**	**206**	*e*P	x	00 40 50.1	
	48nm,0.6s						
KAKA				*e*S	x	00 42 41.7	
LBMI	**Labuha**	**9.82**	**289**	P	**Pn**	**00 41 09.6**	**+1.3**
	97nm,1.1s						
PMG	**Port Moresby**	**11.67**	**118**	*e*Pn	**Pn**	**00 41 32.6**	**-0.9**
	46nm,0.9s						
PMG	**Port Moresby**	**11.67**	**118**	P	**Pn**	**00 41 33.2**	**-0.4**
	48nm,0.9s						
COEN	**Coen**	**11.81**	**148**	*e*Pn	**Pn**	**00 41 31.9**	**-3.6**
	22nm,0.6s						
COEN	**Coen**	**11.81**	**148**	P	**Pn**	**00 41 32.1**	**-3.4**
KDI	**Kendari**	**14.12**	**269**	P	**Pn**	**00 42 07.7**	**+0.6**
	11nm,1.2s,3µm						
BATI	**Baumata**	**14.42**	**244**	Pn	**Pn**	**00 42 10.7**	**-0.5**
	1.9nm,0.3s,baz=133,slow=12,SNR=2.0						
BATI				Sn	**Sn**	**00 44 56.5**	**+6.5**
	1.7nm,0.3s,baz=115,slow=15,SNR=2.9						
BATI	**Baumata**	**14.42**	**244**	P	**Pn**	**00 42 20.7**	**+9.5**
WRAB	**Tennant Creek**	**16.09**	**188**	*e*Pn	**Pn**	**00 42 32.8**	**-0.2**
WRAB	**Tennant Creek**	**16.09**	**188**	P	**Pn**	**00 42 34.8**	**+1.8**
WB2	**Warramunga Arr**	**16.10**	**188**	*e*P	**Pn**	**00 42 34.0**	**+0.9**
WB2				*e*S	S	00 45 19.1	-24
KAPI	**Kappang**	**17.00**	**266**	Pn	**Pn**	**00 42 43.1**	**-1.4**
CTA	**Charters Tower**	**18.54**	**151**	*e*P	**Pn**	**00 43 02.0**	**-1.4**
	17nm,1.6s						
CTA	**Charters Tower**	**18.54**	**151**	Pn	**Pn**	**00 43 03.0**	**-0.3**
	0.6nm,0.3s,baz=317,slow=12,SNR=5.9						
CTA				Lg		00 48 35.9	
	0.7nm,0.3s,baz=217,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**19.83**	**188**	P	**Pn**	**00 43 16.9**	**-1.9**
	0.6nm,0.3s,baz=12,slow=9.2,SNR=15						
ASAR				S	**S**	**00 46 59.5**	**+1.3**
	0.2nm,0.3s,baz=9.9,slow=22,SNR=4.3						
ASAR				Lg		00 49 07.8	
	0.0nm,0.3s,baz=15,slow=34,SNR=3.5						
MBWA	**Marble Bar**	**23.83**	**223**	P	**P**	**00 43 58.5**	**-0.7**
	32nm,1.3s,mb4.6						
STKA	**Stephens Creek**	**28.18**	**171**	*e*P	**P**	**00 44 39.8**	**+1.5**
	3.1nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**28.18**	**171**	P	**P**	**00 44 38.2**	**-0.1**
	2.0nm,0.7s,mb3.9,baz=332,slow=10,SNR=2.4						
ARMA	**Armidale**	**29.86**	**154**	*e*P	**P**	**00 44 54.2**	**+0.9**
MJAR	**Matsushiro Arr**	**40.27**	**2**	P	**P**	**00 46 22.6**	**-0.2**
	3.4nm,0.8s,mb4.1,baz=178,slow=9.7,SNR=6.0						
KSRS	**Korea Array**	**41.98**	**349**	P	**P**	**00 46 36.2**	**-0.6**
	2.1nm,0.8s,baz=169,slow=10,SNR=5.2						
CMAR	**Chiang Mai Arr**	**43.39**	**302**	P	**P**	**00 46 49.2**	**+0.7**
	8.3nm,0.9s,mb4.5,baz=126,slow=6.6,SNR=31						
CHTO	**Chiang Mai**	**43.56**	**303**	*e*P	**P**	**00 46 49.2**	**-0.7**
	14nm,1.1s,mb4.6						
SONM	**Songino Array**	**58.01**	**336**	P	**P**	**00 48 40.1**	**+1.8**
	0.8nm,0.8s,baz=157,slow=8.0,SNR=4.0						
MKAR	**Makanchi Array**	**69.58**	**323**	P	**P**	**00 49 54.1**	**-0.4**
	2.6nm,0.8s,mb4.2,baz=117,slow=8.1,SNR=9.9						
ZALV	**Zalesovo Beam**	**72.02**	**331**	P	**P**	**00 50 08.8**	**-0.3**
	1.9nm,0.7s,mb4.1,baz=134,slow=4.3,SNR=5.0						
ZALV	**Zalesovo Beam**	**72.02**	**331**	P	**P**	**00 50 08.8**	**-0.3**
KURK	**Kurchatov**	**73.60**	**326**	P	**P**	**00 50 20.4**	**+1.7**
	0.7nm,0.3s,mb4.0,baz=116,slow=5.6,SNR=4.4						
VNDA	**Vanda**	**74.76**	**175**	P	**P**	**00 50 24.5**	**-0.4**
	0.9nm,0.6s,mb3.9,baz=42,slow=2.3,SNR=5.1						
VNDA	**Vanda**	**74.76**	**175**	P	**P**	**00 50 24.5**	**-0.4**
BVAR	**Borovoye Array**	**79.20**	**326**	P	**P**	**00 50 50.3**	**0.0**
	2.2nm,0.6s,mb4.2,baz=114,slow=6.7,SNR=12						
AKTK	**Aktyubinsk**	**85.86**	**321**	P	**P**	**00 51 23.9**	**-1.1**
AKTO	**Aktyubinsk**	**85.86**	**321**	P	**P**	**00 51 23.9**	**-1.1**
	1.1nm,0.7s,mb4.2,baz=63,slow=11,SNR=4.1						
TORD	**Torodi Ar. Bea**	**134.71**	**285**	PKP	PKPdf	00 58 02.9	-2.1
	0.1nm,0.5s,baz=49,slow=1.6,SNR=6.0						

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*ISCJB **01** 00:44:40.3±0.9, 3626N±005×702E±0.1, h108km±18km, Error ellipse: s-maj=17.7km s-min=7.8km az=178.0*
*NNC **01** 00:44:45.4±3.5, 3699N×6975E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=28.2km s-min=26.7km az=140.0*
*IDC **01** 00:44:58.1±17.0, 3599N×7093E, h313km±187km, mb3.3/2, mb1 3.1/4, mb1mx2.8/22, mbtmp3.1/4, Error ellipse: s-maj=255.9km s-min=67.5km az=137.0*
ISC 01 00:44:40.7±0.8**, 3625N**±004×**700E**±01**, h87**km±18km**, n12, σ1^{s}23**/19**, 7C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.89**	**146**	⇑P	**Pn**	**00 45 24.8**	**+0.1**
CEP				S	**Sn**	**00 45 58.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.74**	**133**	P	**Pn**	**00 45 36.6**	**+0.5**
SBDP	**Sheikh Budin**	**4.00**	**170**	P	**Pn**	**00 45 40.1**	**+0.4**
KK31	**Karatay Array**	**6.86**	**3**	⇑Pn	**Pn**	**00 46 20.4**	**+1.8**
	0.6nm,0.3s,baz=189,slow=14						
KK31				⇑Sn	**Sn**	**00 47 34.7**	**-0.3**
	6.4nm,0.5s,baz=190,slow=21						
SMLA	**Simla**	**7.87**	**128**	*i* P	**Pn**	**00 46 31.4**	**-1.0**
SMLA				*i* S	**Sn**	**00 47 51.6**	**-8.4**
SMLA				*i* S	**Sn**	**00 47 51.6**	**-8.4**
SMLA				*e*x	x	00 47 55.0	
	comp=E,139nm,0.3s						
SMLA				*e*x	x	00 47 55.3	
	comp=N,169nm,0.3s						
TKM2	**Tokmak 2**	**7.95**	**31**	⇑Pn	**Pn**	**00 46 33.5**	**+0.1**
	comp=N,1.7nm,0.6s						
TKM2				⇑Sn	**Sn**	**00 48 00.5**	**-1.3**
	comp=N,3.6nm,0.8s						
MKAR	**Makanchi Array**	**13.99**	**37**	P	**Pn**	**00 48 00.8**	**+6.0**
	comp=N,0.2nm,0.3s,baz=204,slow=9.8,SNR=6.9						
AB09	**Akbulak array**	**14.94**	**334**	⇑Pn	**Pn**	**00 48 07.1**	**+0.1**
	comp=N,0.4nm,0.3s						
AB09				⇑Sn	**Sn**	**00 50 45.6**	**-5.9**
	comp=N,1.0nm,0.7s						
KURK	**Kurchatov**	**15.75**	**21**	P	**Pn**	**00 48 20.1**	**+2.9**
	baz=207,slow=10,SNR=1.4						
AKTO	**Aktyubinsk**	**16.60**	**332**	⇓Pn	**Pn**	**00 48 30.4**	**+2.5**
	comp=N,0.4nm,0.9s						
AKTO				⇓Sn	**Sn**	**00 51 29.0**	**-2.6**
	comp=N,1.4nm,2.1s						
ZALV	**Zalesovo Beam**	**20.50**	**26**	P	**P**	**00 49 12.0**	**+0.6**
	comp=N,6.2nm,0.3s,baz=214,slow=9.8,SNR=35						
TORD	**Torodi Ar. Bea**	**64.88**	**268**	P	**P**	**00 55 09.7**	**-1.3**
	comp=N,0.2nm,0.4s,baz=51,slow=6.0,SNR=7.4						

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*IDC **01** 01:02:09.1±1.7, 5.15S×14504E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.9/14, mbtmp3.8/6, Error ellipse: s-maj=67.5km s-min=25.8km az=81.0*
*ISCJB **01** 01:02:15.4±3.3, 52S±02×1450E±02, h61km±34km, mb3.8/6, Error ellipse: s-maj=33.1km s-min=25.3km az=23.9*
*NEIC **01** 01:02:17.9±2.2, 521S×14504E, h67km±23km, mb3.5/1, Error ellipse: s-maj=24.6km s-min=18.3km az=108.0*
ISC 01 01:02:17.9±2.8**, 52S**±02×**1450E**±02**, h67**km±30km**, n13, σ0^{s}84**/11**, mb3.7**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.66**	**153**	*e*Pn	**Pn**	**01 03 24.9**	**-0.9**
COEN	**Coen**	**8.87**	**192**	*e*Pn	**Pn**	**01 04 25.0**	**+1.5**
WRAB	**Tennant Creek**	**17.95**	**214**	*e*Pn	**Pn**	**01 06 23.0**	**0.0**
	4.7nm,1.3s						
WB2	**Warramunga Arr**	**17.95**	**214**	*e*P	**Pn**	**01 06 22.6**	**-0.4**
ASAR	**Alice Springs**	**21.25**	**209**	P	**P**	**01 06 57.8**	**-0.9**
	0.8nm,0.5s,mb3.3,baz=33,slow=13,SNR=12						
CMAR	**Chiang Mai Arr**	**51.16**	**299**	P	**P**	**01 11 14.2**	**-0.4**
	2.3nm,0.6s,mb4.4,baz=120,slow=5.6,SNR=12						
SONM	**Songino Array**	**62.78**	**332**	P	**P**	**01 12 37.6**	**+1.3**
	0.3nm,0.5s,mb3.5,baz=210,slow=4.3,SNR=2.8						
VNDA	**Vanda**	**72.81**	**176**	P	**P**	**01 13 39.7**	**+0.9**
	1.6nm,1.1s,mb3.8,baz=353,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**75.66**	**321**	P	**P**	**01 13 55.5**	**-0.4**
	0.6nm,0.4s,mb3.6,baz=98,slow=8.5,SNR=9.6						
ZALV	**Zalesovo Beam**	**77.32**	**328**	P	**P**	**01 14 04.6**	**-0.6**
	0.9nm,0.5s,mb3.7,baz=132,slow=4.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**77.32**	**328**	P	**P**	**01 14 04.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**143.00**	**285**	PKhKP		01 21 39.9	
	0.5nm,0.7s,baz=73,slow=2.6,SNR=6.4						
DBIC	**Dimbokro**	**150.02**	**274**	PKPbc	PKPbc	01 22 02.1	+0.1
	2.6nm,0.5s,baz=60,slow=3.4,SNR=12						

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*ISCJB **01** 01:25:38.9±1.9, 2851S±009×71.1W±02, h42km±15km, mb3.8/3, Error ellipse: s-maj=35.9km s-min=11.8km az=164.3*
*NEIC **01** 01:25:39.7±1.3, 2854S×7120W, h35km, Error ellipse: s-maj=29.9km s-min=12.9km az=75.0*
*IDC **01** 01:25:40.9±1.4, 2851S×7106W, h42km±6km, mb3.6/3, mb1 3.7/6, mb1mx3.5/17, mbtmp3.6/6, ML3.6/3, MS3.9/1, Ms1 3.9/1, ms1mx2.4/27, Error ellipse: s-maj=42.4km s-min=13.2km az=61.0*
ISC 01 01:25:39.4±2.2**, 2853S**±009×**712W**±02**, h29**km±12km**, n14, σ0^{s}80**/14**, mb3.8**/3**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.64**	**138**	*e*Pg	**Pb**	**01 25 51.7**	**-0.4**
LCO				*e*Sg	**Sb**	**01 26 00.8**	**+0.1**
CFAA	**Coronel Fontan**	**3.99**	**141**	P	**Pn**	**01 26 39.4**	**+0.8**
	0.9nm,0.3s,baz=323,slow=12,SNR=46						
CFAA				S	**Sn**	**01 27 24.2**	**-0.2**
	1.5nm,0.3s,baz=241,slow=23,SNR=8.9						
CFAA				Lg		01 27 42.6	
	3.3nm,0.3s,baz=220,slow=14,SNR=15						
CFAA	**Coronel Fontan**	**3.99**	**141**	P	**Pn**	**01 26 39.4**	**+0.8**
CFAA				S	**Sn**	**01 27 24.2**	**-0.2**
LVC	**Limon Verde**	**6.24**	**20**	P	**Pn**	**01 27 09.6**	**0.0**
	0.6nm,0.3s,baz=174,slow=8.3,SNR=9.3						
LVC	**Limon Verde**	**6.24**	**20**	*e*Pn	**Pn**	**01 27 09.5**	**-0.1**
	18nm,0.5s						
LVC				*e*Sn	**Sn**	**01 28 37.1**	**+17**
SIV	**San Ignacio**	**15.59**	**39**	P	**Pn**	**01 29 17.5**	**+0.3**
	0.2nm,0.3s,baz=219,slow=12,SNR=8.0						
RPN	**Rapa Nui**	**33.67**	**263**	LR	LR	01 41 44.3	
	comp=Z,182nm,18.4s,baz=292,slow=28						
TXAR	**Lajitas Array**	**65.39**	**329**	P	**P**	**01 36 19.4**	**+0.2**
	0.3nm,0.7s,mb3.4,baz=148,slow=7.4,SNR=4.7						
TXAR	**Lajitas Array**	**65.39**	**329**	P	**P**	**01 36 19.4**	**+0.2**
DBIC	**Dimbokro**	**72.78**	**72**	P	**P**	**01 37 06.6**	**+1.0**
	2.0nm,1.1s,mb4.0,baz=207,slow=11,SNR=3.7						
TORD	**Torodi Ar. Bea**	**81.67**	**70**	P	**P**	**01 37 53.3**	**-2.1**
	1.0nm,0.6s,mb3.9,baz=269,slow=5.0,SNR=14						
TORD				pP	pP	01 38 07.0	+2.4
	0.3nm,0.5s,baz=270,slow=6.0,SNR=2.8						
TORD				sP	sP	01 38 12.2	+4.2
	2.1nm,1.0s,baz=257,slow=5.6,SNR=6.2						
ZALV	**Zalesovo Beam**	**149.14**	**28**	PKPbc	PKPbc	01 45 23.3	-1.2
	0.5nm,0.4s,baz=251,slow=4.4,SNR=2.7						
ZALV				pPKPbc	pPKPbc	01 45 37.2	+3.2
	1.4nm,0.6s,baz=303,slow=3.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**149.14**	**28**	PKPbc	PKPbc	01 45 23.3	-1.2
ZALV				pPKPbc	pPKPbc	01 45 37.2	+3.2
MKAR	**Makanchi Array**	**152.40**	**41**	pPKPbc	pPKPbc	01 45 44.6	+2.6
	0.6nm,0.6s,baz=296,slow=2.3,SNR=3.4						

TRN 01 01:30:47.5, 1691N×6122W, h7km**, MD3.5, M3.3**(FDF)**, 1C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	**La Desirade**	**0.61**	**165**	*e*P	Pg	01 31 01.5	+2.2
BPA	**Boggy Peak**	**0.62**	**283**	⇑*e*P	Pg	01 31 03.0	+3.5
BPA				*e*S	Sg	01 31 12.8	+5.2
LZG	**Guadaloupe-1**	**0.93**	**215**	*e*P	Pg	01 31 09.2	+3.8
DOG	**Dongo Capester**	**0.95**	**204**	*e*P	Pg	01 31 09.3	+3.5
SCG	**Saint Claude**	**0.98**	**207**	*e*P	Pg	01 31 09.8	+3.5

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*BJI **01** 01:30:47.8, 339S×10120E, h70km, mB5.3, mb5.2*
*MOS **01** 01:30:49.3±1.0, 268S×10126E, h33km, mb5.0/21, Error ellipse: s-maj=17.9km s-min=7.0km az=111.0*
*IDC **01** 01:30:52.2±2.8, 279S×101.11E, h47km±23km, mb4.3/13, mb1 4.4/14, mb1mx4.2/19, mbtmp4.3/14, ML4.8/1, Error ellipse: s-maj=28.9km s-min=14.9km az=52.0*
*ISCJB **01** 01:30:53.7±1.2, 280S±008×10120E±008, h77km±9km, mb4.8/49, Error ellipse: s-maj=17.0km s-min=7.8km az=42.9*
*NEIC **01** 01:30:55.2±1.8, 277S×10125E, h71km±15km, mb4.8/16, Error ellipse: s-maj=18.7km s-min=6.1km az=50.0*
NEIC Felt [II] at Mukomuko.
*DJA **01** 01:31:00, 221S×10095E, h20km, MLv4.7/5*
ISC 01 01:30:54.4±1.2**, 284S**±008×**10119E**±008**, h67**km±8km**, n101, σ0^{s}94**/92**, mb4.8**/49**, 1C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.62**	**120**	P	Px	01 31 34.4	
PDSI	**Padang**	**2.05**	**339**	P	**Pn**	**01 31 25.0**	**-1.7**
PPI	**Padang Panjang**	**2.50**	**342**	P	**Pn**	**01 31 32.4**	**-0.4**
RGRI	**Rengat**	**2.73**	**25**	P	**Pn**	**01 31 37.1**	**+1.2**
MYKOM	**Kota Tinggi**	**5.32**	**30**	P	**Pn**	**01 32 13.0**	**+1.7**
GSI	**Gunungsitoli**	**5.48**	**319**	P	**Pn**	**01 32 11.2**	**-2.3**
CBJI	**Citeko**	**6.67**	**122**	P	Px	01 32 47.1	
IPM	**Ipoh**	**7.28**	**359**	P	**Pn**	**01 32 41.7**	**+3.6**
KULM	**Kulim**	**8.10**	**356**	*e*Pn	**Pn**	**01 32 48.9**	**-0.5**
	69nm,1.1s						
KAPI	**Kappang**	**18.64**	**97**	P	**Pn**	**01 35 07.4**	**-0.6**
	2.8nm,0.3s,baz=274,slow=12,SNR=16						
KAPI	**Kappang**	**18.64**	**97**	*e*P	**Pn**	**01 35 09.1**	**+1.1**
	50nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.28**	**354**	P	**P**	**01 35 32.8**	**-2.7**
	5.6nm,0.8s,mb3.9,baz=184,slow=10,SNR=18						
CMAR				PcP	PcP	01 39 39.0	+0.9
	0.6nm,0.3s,baz=196,slow=3.7,SNR=4.2						
ODAN	**Odare**	**32.40**	**337**	*e*P	**P**	**01 37 18.6**	**+0.7**
	78nm,0.6s,mb5.6						
TAPN	**Taplejung**	**32.71**	**337**	*e*P	**P**	**01 37 21.7**	**+1.1**
	155nm,0.9s,mb5.8						
RAMN	**Ramite**	**32.80**	**335**	*e*P	**P**	**01 37 22.2**	**+0.8**
	23nm,0.4s,mb5.3						
NWAO	**Narrogin (SRO)**	**33.49**	**155**	*e*P	**P**	**01 37 28.5**	**+1.1**
NWAO				pmax	pmax		
	comp=Z,33nm,1.3s						
NWAO	**Narrogin (SRO)**	**33.49**	**155**	*e*P	**P**	**01 37 28.5**	**+1.0**
	comp=Z,33nm,1.3s,mb5.0						
JIRN	**Jiri**	**33.59**	**335**	*e*P	**P**	**01 37 29.3**	**+1.0**
PKI	**Pulchoki**	**33.85**	**334**	*e*P	**P**	**01 37 31.1**	**+0.6**
	comp=Z,26nm,0.7s,mb5.2						
PKI	**Pulchoki**	**33.85**	**334**	*e*P	**P**	**01 37 31.1**	**+0.6**
PKI				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.2						
GUN	**Gumba**	**33.94**	**335**	*e*P	**P**	**01 37 32.4**	**+1.0**
	comp=Z,142nm,0.5s						
DMN	**Daman**	**34.01**	**334**	*e*P	**P**	**01 37 32.4**	**+0.4**
	comp=Z,13nm,0.4s,mb5.1						
KKN	**Kakani**	**34.09**	**334**	*e*P	**P**	**01 37 33.3**	**+0.6**
	comp=Z,75nm,0.6s,mb5.7						
KKN	**Kakani**	**34.09**	**334**	*e*P	**P**	**01 37 33.3**	**+0.6**
KKN				pmax	pmax		
	comp=Z,75nm,0.6s,mb5.7						
GKN	**Gorkha**	**34.56**	**334**	*e*P	**P**	**01 37 37.3**	**+0.6**
	comp=Z,42nm,0.4s,mb5.6						
KOLN	**Koldanda**	**34.83**	**332**	*e*P	**P**	**01 37 39.8**	**+0.7**
	comp=Z,32nm,0.7s,mb5.3						
DANN	**Dangsing**	**35.25**	**333**	*e*P	**P**	**01 37 43.3**	**+0.6**
	comp=Z,98nm,0.4s						
WRAB	**Tennant Creek**	**36.55**	**120**	*e*P	**P**	**01 37 53.5**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**36.55**	**120**	*e*P	**P**	**01 37 53.5**	**-0.4**
	comp=Z,9.5nm,0.6s,mb4.9						
WB2	**Warramunga Arr**	**36.55**	**120**	*e*P	**P**	**01 37 52.6**	**-1.4**
XAN	**Xi'an**	**37.40**	**11**	P	**P**	**01 38 00.1**	**-0.8**
XAN				AMB	AMB		
	comp=Z,22nm,0.8s,mb5.1						
XAN				AMB	AMB		
	comp=Z,176nm,10.6s						
ASAR	**Alice Springs**	**37.80**	**126**	P	**P**	**01 38 04.6**	**+0.1**
	comp=Z,4.9nm,0.8s,mb4.4,baz=304,slow=8.3,SNR=38						
ASAR				PcP	PcP	01 40 20.7	+0.6
	comp=Z,1.8nm,0.8s,baz=309,slow=2.6,SNR=6.7						
ASAR				S	**S**	**01 43 49.5**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=299,slow=15,SNR=6.5						
NJ2	**Nanjing**	**38.54**	**24**	*e*P	**P**	**01 38 08.2**	**-2.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
NIL	**Nilore**	**44.86**	**326**	*e*P	**P**	**01 39 02.1**	**0.0**
NIL				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
NIL	**Nilore**	**44.86**	**326**	*e*P	**P**	**01 39 02.1**	**0.0**
	comp=Z,18nm,0.8s,mb4.9						
KSRS	**Korea Array**	**47.15**	**29**	P	**P**	**01 39 20.4**	**+0.3**
	comp=Z,1.2nm,0.5s,mb3.9,baz=232,slow=8.9,SNR=4.9						
CTA	**Charters Tower**	**47.17**	**115**	*e*P	**P**	**01 39 20.6**	**0.0**
	comp=Z,8.0nm,0.8s,mb4.5						
CTA	**Charters Tower**	**47.17**	**115**	*e*P	**P**	**01 39 20.6**	**0.0**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTAO	**Charters Tower**	**47.17**	**115**	*e*P	**P**	**01 39 21.5**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,40nm,1.7s,mb4.9						
CTAO	**Charters Tower**	**47.17**	**115**	*e*P	**P**	**01 39 21.5**	**+0.9**
	comp=Z,40nm,1.7s,mb4.9						
STKA	**Stephens Creek**	**47.70**	**132**	*e*P	**P**	**01 39 25.2**	**+0.6**
	comp=Z,4.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**47.70**	**132**	P	**P**	**01 39 25.2**	**+0.7**
	comp=Z,6.9nm,0.8s,mb4.5,baz=314,slow=8.4,SNR=9.4						
KBL	**Kabul**	**47.91**	**324**	P	**P**	**01 39 27.5**	**+1.4**
	comp=Z,3.1nm,1.5s,mb3.9						
WMQ	**Urumqi**	**48.01**	**347**	P	**P**	**01 39 27.3**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,42nm,1.0s,mb5.2						
SONM	**Songino Array**	**50.67**	**5**	P	**P**	**01 39 47.9**	**+1.0**
	comp=Z,18nm,0.9s,mb5.1,baz=183,slow=9.1,SNR=93						
SONM				PcP	PcP	01 41 03.7	+0.3
	comp=Z,1.2nm,0.4s,baz=194,slow=4.3,SNR=5.8						
ULN	**Ulaanbaatar**	**50.76**	**5**	*e*P	**P**	**01 39 48.7**	**+1.2**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**50.76**	**5**	*e*P	**P**	**01 39 48.7**	**+1.2**

	comp=Z,10nm,0.8s,mb4.9						
TKM2	Tokmak 2	51.08	336	eP	P	01 39 51.0	+1.0
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
TKM2	Tokmak 2	51.08	336	eP	P	01 39 51.0	+0.9
	comp=Z,8.0nm,0.6s,mb4.9						
AAK	Ala-Archa	51.30	335	eP	P	01 39 52.2	+0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
AAK	Ala-Archa	51.30	335	eP	P	01 39 52.2	+0.5
	comp=Z,2.8nm,0.9s,mb4.3						
EKS2	Erkin-Say	51.63	334	eP	P	01 39 55.2	+1.0
	comp=Z,23nm,0.8s,mb5.2						
MK31	Makanchi Array	52.16	344	eP	P	01 39 58.2	+0.2
MKAR	Makanchi Array	52.16	344	P	P	01 39 58.1	+0.1
	comp=Z,15nm,0.6s,mb5.2,baz=150,slow=8.2,SNR=62						
MJAR	Matsushiro Arr	52.19	38	P	P	01 39 57.5	-1.0
	comp=Z,1.7nm,0.7s,mb4.2,baz=208,slow=8.0,SNR=6.2						
ZAK	Zakamensk	53.05	2	eP	P	01 40 04.3	-0.2
ZAK				e		01 41 12.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
KK31	Karatay Array	53.44	332	P	P	01 40 06.8	-0.8
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
HVS	Khovu-Aksy	54.15	354	eP	P	01 40 12.0	-0.6
HIA	Hailar	54.34	15	eP	P	01 40 14.1	+0.2
TLY	Talaya	54.36	2	eP	P	01 40 14.4	+0.3
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
KURK	Kurchatov	56.75	343	eP	P	01 40 30.9	-0.3
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KURK	Kurchatov	56.75	343	eP	P	01 40 30.9	-0.3
	comp=Z,7.1nm,1.0s,mb4.7						
ZAA0	Zalesovo Array	58.22	349	eP	P	01 40 41.2	-0.2
ZALV	Zalesovo Beam	58.22	349	P	P	01 40 41.1	-0.4
	comp=Z,49nm,0.8s,mb5.6,baz=163,slow=5.7,SNR=156						
KRAR	Krasnoyarsk	59.05	355	eP	P	01 40 47.1	-0.2
NVS	Novosibirsk	59.37	348	iP	P	01 40 47.6	-1.9
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
VOSK	Vostochnaya	60.93	340	P	P	01 40 58.9	-1.3
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BVA0	Borovoye Array	61.38	339	iP	P	01 41 02.2	-1.0
BRVK	Borovoye	61.45	339	eP	P	01 41 02.8	-0.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
BRVK	Borovoye	61.45	339	eP	P	01 41 02.8	-0.9
	comp=Z,8.3nm,0.9s,mb4.8						
AB31	Akbulak array	62.95	331	P	P	01 41 12.8	-1.0
AB31				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.1						
SVE	Sverdlovsk	67.91	337	⇓eP	P	01 41 45.6	-0.1
SVE				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
YAK	Yakutsk	68.26	14	eP	P	01 41 46.8	-1.0
YAK				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
ARU	Arti	68.45	336	c iP	P	01 41 48.3	-0.8
ARU				e		01 44 15.9	
ARU				ePPP		01 45 58.2	
ARU				eS	S	01 50 49.1	+3.6
ARU				SS	SS	01 55 16.2	+5.6
ARU				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
KIV	Kislovodsk	69.95	319	eP	P	01 41 58.5	-0.2
KIV				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.6						
PETK	Petropavlovsk-	72.97	32	P	P	01 42 16.6	0.0
	comp=Z,2.1nm,0.6s,mb4.2,baz=267,slow=0.3,SNR=8.6						
BR131	Keskin Array S	74.76	312	eP	P	01 42 27.0	-0.4
	comp=Z,1.2nm,0.5s,mb3.9						
BRTR	Keskin Array B	74.76	312	P	P	01 42 26.9	-0.5
	comp=Z,2.4nm,0.6s,mb4.1,baz=136,slow=6.8,SNR=16						
SEY	Seymchan	75.96	22	eP	P	01 42 34.1	+0.3
TIXI	Tiksi	76.50	9	eP	P	01 42 35.3	-1.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
TIXI	Tiksi	76.50	9	eP	P	01 42 35.6	-1.1
	comp=Z,5.8nm,0.6s,mb4.5						
OBN	Obninsk	78.13	328	eP	P	01 42 46.0	-0.1
OBN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
AKASG	Malin Array Be	80.87	322	P	P	01 43 00.5	-0.6
	comp=Z,0.2nm,0.3s,baz=94,slow=4.1,SNR=6.4						
AKASG	Malin Array Be	80.87	322	iP	P	01 43 01.9	+0.8
AKASG	Malin Array Be	80.87	322	P	P	01 43 00.5	-0.7
BUR08	Bucovina Ar. S	82.69	319	eP	P	01 43 12.1	+1.3
BUR08				epP	pP	01 43 27.5	-1.8
JOF	Joensuu	83.48	334	ep	P	01 43 14.3	-0.2
	comp=Z,0.6nm,0.4s,mb3.8						
KAF	Kangasniemi	85.47	333	ep	P	01 43 26.1	+1.6
	comp=Z,0.9nm,0.4s,mb4.0						
KAF	Kangasniemi	85.47	333	eP	P	01 43 26.1	+1.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ARCES	ARCESS Array B	87.67	340	P	P	01 43 35.4	+0.3
	comp=Z,7.1nm,0.8s,mb4.7,baz=118,slow=3.1,SNR=13						
ARCES	ARCESS Array B	87.67	340	P	P	01 43 35.4	+0.3
GERES	GERESS Array B	90.46	319	P	P	01 43 47.8	-0.9
	comp=Z,0.9nm,0.7s,mb4.0,baz=95,slow=4.6,SNR=10						
NOA	NORSAR Array B	92.45	331	P	P	01 43 57.8	+0.1
	comp=Z,1.5nm,0.9s,mb4.2,baz=92,slow=5.1,SNR=3.8						
NVAR	Mina Array Bea	129.48	40	PKP	PKPdf	01 49 57.2	+1.3
	comp=Z,0.5nm,0.4s,baz=258,slow=4.5,SNR=3.8						
PDAR	Pinedale Array	131.72	30	PKP	PKPdf	01 49 60.0	-0.1
	comp=Z,0.2nm,0.5s,baz=258,slow=1.8,SNR=2.8						
ANMO	Albuquerque	139.01	36	PKP	PKPdf	01 50 15.7	+1.8
	comp=Z,0.9nm,0.8s,baz=113,slow=5.8,SNR=4.2						
CFAA	Coronel Fontan	144.30	196	PKP	PKPdf	01 50 25.6	+2.1
	comp=Z,0.2nm,0.3s,baz=256,slow=4.2,SNR=3.0						
BDFB	Brasilia	144.43	238	PKP	PKPdf	01 50 23.7	-0.3
	comp=Z,0.8nm,0.5s,baz=177,slow=24,SNR=4.6						
TXAR	Lajitas Array	144.62	39	PKP	PKPdf	01 50 23.7	-0.4
	comp=Z,4.5nm,0.5s,baz=249,slow=0.7,SNR=83						
TXAR				SKPbc	SKPbc	01 53 59.3	+1.6
	comp=Z,0.5nm,0.7s,baz=80,slow=0.7,SNR=4.0						
TKL	Tuckaleechee C	147.03	7	PKPbc	PKPbc	01 50 28.5	-1.5
	comp=Z,4.4nm,0.8s,baz=137,slow=5.8,SNR=6.4						
TKL	Tuckaleechee C	147.03	7	PKPbc	PKPbc	01 50 28.5	-1.5

*IDC **01** 01:39:30.5±2.5, 1500N×9086W, h238km±25km, mb3.4/7, mb1 3.7/9, mb1mx3.4/20, mbtmp3.4/9, Error ellipse: s-maj=27.7km s-min=20.0km az=50.0*

*ISCJB **01** 01:39:31.8±0.5, 1509N±009×9122W±006, h261km±4km, mb3.8/9, Error ellipse: s-maj=15.1km s-min=7.0km az=27.8*

*CASC **01** 01:39:31.7±1.1, 1487N×9108W, h263km±11km, MD4.3*

*NEIC **01** 01:39:31.0±1.3, 1495N×9097W, h249km±13km, mb4.5/4, MD4.0(MEX), Error ellipse: s-maj=22.2km s-min=17.6km az=57.0*

*MEX **01** 01:39:32.7±1.2, 1509N×9135W, h281km±16km, MD4.2*

ISC 01 01:39:32.5±0.5**, 1507N**±008×**9126W**±006**, h258**km±4km**, n38,** σ1^{s}04/41**, mb3.8**/9**, 8C-5D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG6		0.62	144	⇑eP	Pn	01 40 06.9	+0.2
FUG	Fuego 3	0.74	147	⇑eP	Pn	01 40 06.8	-0.4
JAT	Jato	0.83	206	⇑eP	Pn	01 40 07.4	-0.1
PCG	Pacaya	0.92	137	⇓eP	Pn	01 40 07.8	-0.2
THIG		0.98	261	iP	Pn	01 40 08.2	-0.1
THIG				iS	S	01 40 38.1	+1.8
NBG	Las Nubes	1.00	118	⇑eP	Pn	01 40 08.5	+0.2
IXG	Ixpaco	1.18	139	⇓eP	Pn	01 40 08.9	-0.5
MRL	Marmol	1.52	90	⇑eP	Pn	01 40 11.2	-0.4
RBDL	Robledal	1.79	122	⇓eP	x	01 40 12.4	
RTR	El Retiro	1.95	126	⇑eP	x	01 40 13.6	
MTO2	Montecristo 2	1.95	110	⇑eP	x	01 40 13.7	
PCIG		1.99	289	iP	Pn	01 40 15.6	+0.1
PCIG				iS	S	01 40 48.8	-0.7
SNJE	San Jose	2.00	126	⇑eP	x	01 40 14.0	
SNJE				eS	x	01 40 46.3	
SBLS	San Blas	2.00	127	⇓iP	x	01 40 14.1	
SBLS				eS	x	01 40 47.8	
SCX	San Cristobal	2.12	322	iP	Pn	01 40 18.3	+1.7
SCX				iS	S	01 40 51.1	-0.5
BOQS	Boqueron	2.33	124	eP	x	01 40 17.3	
TGIG		2.47	314	iP	Pn	01 40 20.7	+0.8
TGIG				iS	S	01 40 56.7	-0.8
LFRS	El Faro	2.57	124	⇓eP	x	01 40 19.2	
LFRS				eS	x	01 40 57.1	
SCIG	Sabancuy	3.88	1	iP	Pn	01 40 34.9	-0.3
CMIG	Matias Romero	4.02	300	P	Pn	01 40 37.1	+0.3
	5.8nm,0.3s,baz=113,slow=8.8,SNR=155						
CMIG				S	S	01 41 25.0	-3.1
	14nm,0.3s,baz=91,slow=24,SNR=23						
CMIG	Matias Romero	4.02	300	iP	Pn	01 40 37.3	+0.4
CMIG				iS	S	01 41 25.0	-3.2
VHO	Vista Hermosa	5.63	291	eP	Pn	01 40 57.8	+1.6
VHO				iS	S	01 42 01.2	-1.9
VHO	Vista Hermosa	5.63	291	eP	Pn	01 40 50.1	-6.0
VHO				iS	S	01 42 01.2	-1.9
PNIG	Pinotepa	6.74	282	iP	Pn	01 41 11.7	+1.7
PNIG				iS	S	01 42 23.1	-5.3
UTMO	Huajuapan	6.85	295	eP	Pn	01 41 13.1	+1.7
UTMO				iS	S	01 42 29.7	-1.1
TXAR	Lajitas Array	18.24	323	P	P	01 43 31.3	+4.2
	0.4nm,0.3s,baz=146,slow=11,SNR=26						
MIAR	Mount Ida	19.51	354	eP	P	01 43 40.9	+0.2
	14nm,1.0s						
WMOK	Wichita Mounta	20.72	342	eP	P	01 43 55.0	+1.4
	11nm,2.0s						
TKL	Tuckaleechee C	21.57	17	P	P	01 44 02.1	+0.3
	7.3nm,0.5s,mb4.3,baz=183,slow=11,SNR=20						
WCI	Wyandotte Cave	23.48	10	eP	P	01 44 19.3	+0.1
	11nm,0.6s,mb4.4						
ACSO	Alum Creek Sta	26.09	15	eP	P	01 44 42.5	-0.2
	11nm,0.8s,mb4.3						
PDAR	Pinedale Array	31.77	334	P	P	01 45 33.7	+1.0
	0.3nm,0.7s,mb3.0,baz=116,slow=6.3,SNR=3.0						
PDAR				PcP	PcP	01 48 18.5	+1.1
	0.2nm,0.7s,baz=116,slow=6.1,SNR=3.4						
NVAR	Mina Array Bea	33.31	319	P	P	01 45 49.9	+3.7
	2.0nm,0.7s,mb3.8,baz=131,slow=7.6,SNR=9.3						
NVAR	Mina Array Bea	33.31	319	P	P	01 45 49.9	+3.7
SIV	San Ignacio	42.91	135	P	P	01 47 04.0	-2.2
	0.4nm,0.3s,mb3.1,baz=218,slow=17,SNR=3.9						
SCHQ	Schefferville	43.98	20	P	P	01 47 13.2	-1.0
	8.0nm,0.7s,mb4.1,baz=216,slow=8.1,SNR=20						
YKA	Yellowknife Ar	50.16	346	P	P	01 48 01.8	+0.2
	0.6nm,0.5s,mb3.1,baz=142,slow=7.5,SNR=4.3						
ARCES	ARCESS Array B	84.90	18	P	P	01 51 36.8	-1.3
	3.1nm,0.9s,mb4.2,baz=310,slow=4.2,SNR=3.8						

*IDC **01** 01:44:25.3±0.4, 200N×9790E, h0km, mb5.6/23, mb1 5.6/23, mb1mx5.6/23, mbtmp5.6/23, MS5.4/24, Ms1 5.4/24, ms1mx5.3/35, Error ellipse: s-maj=15.6km s-min=11.8km az=61.0*

*BJI **01** 01:44:28.2, 183N×9790E, h45km, mB5.9, mb5.6, Ms5.7, Msz5.7*

*SZGRF **01** 01:44:29.8, 109N×9688E, h33km, mb5.7, MS5.4, Off west coast of northern Sumatera, Indonesia*

*MOS **01** 01:44:29.3±0.9, 2.14N×9794E, h33km, mb6.1/125, MS5.5/72, Error ellipse: s-maj=8.1km s-min=3.7km az=124.5*

*ISCJB **01** 01:44:30.2±0.1, 204N±002×9786E±002, h40km, mb5.8/311, MS5.6/236, Error ellipse: s-maj=3.1km s-min=2.1km az=28.7*

*NEIC **01** 01:44:31.9±0.1, 198N×9788E, mb5.8/180, ME5.6, MS5.6/170, MW5.9, Error ellipse: s-maj=3.8km s-min=2.6km az=224.0, Moment Tensor Solution. s54 Moment tensor: Scale 10^{17}Nm; M_{rr}7.92; $M_{\theta\theta}$-2.07; $M_{\phi\phi}$-5.85; $M_{r\theta}$5.13; $M_{\theta\phi}$1.57; $M_{\phi r}$-2.05; Best double couple: $M_0$9.10000×10^{17} NP1:ϕ_s136.00000°, δ63.00000°, λ72.00000°. NP2:ϕ_s351.00000°, δ32.00000°, λ120.00000°. Principal axes: T 10.2000, Plg67.0000°, Azm12.0000°; N -2.7000, Plg15.0000°, Azm144.0000°; P -7.5000, Plg15.0000°, Azm238.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [V] at Singkil; [IV] at Padangsidempuan and Sibolga; [III] at Payakumbuh; [II] at Medan, Padang, Padangpanjang and Painan, Sumatra. Also felt [IV] at Gunungsitoli.

*BGS **01** 01:44:31.9±1.9, 198N×9788E, h33km, mb6.1*

*GCMT **01** 01:44:32.0±0.1, 181N×9775E, h50km, MW5.9/113, Moment Tensor Solution. s113,c248; s107,c307; Duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.69±.01; $M_{\theta\theta}$-0.28±.01; $M_{\phi\phi}$-0.41±.01; $M_{r\theta}$0.54±.01; $M_{\theta\phi}$0.43±.01; $M_{\phi r}$-0.30±.01; Best double couple: $M_0$0.96300×10^{18} NP1:ϕ_s335.00000°, δ27.00000°, λ116.00000°. NP2:ϕ_s126.00000°, δ66.00000°, λ77.00000°. Principal axes: T 0.9410, Plg67.0000°, Azm12.0000°; N 0.0440, Plg12.0000°, Azm131.0000°; P -0.9850, Plg20.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*DJA **01** 01:44:34, 202N×9782E, h59km, Mw5.9/44*

ISC 01 01:44:32.0±0.1**, 201N**±002×**9786E**±002**, h42**km**,**
h42km±1.5km**: pP-P, n1317,** σ0^{s}95/1064**, mb5.8**/311**,**
MS5.6/236**, 252C-79D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.76	202	P	Pn	01 44 45.4	-0.9
TRSI	Tarutung	1.10	89	P	Pn	01 44 51.8	+0.9
PPI	Padang Panjang	3.53	134	P	Pn	01 45 25.6	+1.3
PDSI	Padang	3.90	138	P	Pn	01 45 29.4	0.0
FRIM	Kepong	3.95	72	⇑P	Pn	01 45 32.2	+2.1
IPM	Ipoh	4.00	52	⇑P	Pn	01 45 34.0	+3.3
IPM	Ipoh	4.00	52	P	Pn	01 45 33.5	+2.7
KULM	Kulim	4.28	40	⇑P	Pn	01 45 37.5	+2.8
KULM	Kulim	4.28	40	P	Pn	01 45 36.6	+1.9
BSI	Banda Aceh	4.30	324	P	Pn	01 45 36.0	+1.0
RGRI	Rengat	5.05	118	P	Pn	01 45 47.8	+2.6
	2µm,1.2s,29nm						
KGM	Kluang	5.45	90	⇓P	Pn	01 45 53.3	+2.5
MYKOM	Kota Tinggi	5.99	92	⇑P	Pn	01 46 00.7	+2.6
MYKOM	Kota Tinggi	5.99	92	P	Pn	01 46 00.3	+2.2
	2µm,0.9s,8.8nm						
KTGM	Kuala Trenggan	6.21	58	⇑P	Pn	01 46 03.4	+2.3
KSI	Kapahiang	7.35	140	P	Pn	01 46 19.4	+2.6
	2µm,1.4s,21nm						
PMBI	Palembang	8.47	125	P	Pn	01 46 40.0	+7.8
	882nm,1.3s						
KLI	Kotabumi	9.77	134	P	Pn	01 46 52.9	+2.9
	673nm,0.8s						
BLSI	Bandar Lampung	10.40	135	P	Pn	01 47 00.2	+1.6
	361nm,1.0s,5µm						
NNT	Nongplab	10.67	10	P	Pn	01 47 06.0	+3.7
TPI	Tanjungpandan	10.87	116	P	Pn	01 47 09.1	+4.0
	449nm,1.3s,4µm						
SBJI	Serang	11.55	134	P	Pn	01 47 19.4	+5.0
	756nm,0.9s,8µm						
CBJI	Citeko	12.28	133	P	Pn	01 47 26.5	+2.2
	2µm,0.9s						
DBJI	Dramaga	12.29	134	P	Pn	01 47 23.8	-0.7
	789nm,1.4s,9µm						
KSM	Kuching	12.45	92	ePn	Pn	01 47 31.3	+4.5
	218nm,1.2s						
KSM	Kuching	12.45	92	P	Pn	01 47 31.6	+4.9
LEM	Lembang	13.11	132	P	Pn	01 47 36.5	+0.8
	368nm,1.3s,5µm						
JCJI	Jatiwangi	13.39	129	P	Pn	01 47 42.6	+3.1
	822nm,1.2s,10µm						
STKI	Sintang	13.75	98	P	Pn	01 47 50.7	+6.3
	652nm,0.7s						
NST	Nakhon Sawan	13.76	9	⇑P	Pn	01 47 48.5	+4.0
	150nm,0.9s						
COCO	West Island	14.15	184	Pn	Pn	01 47 49.2	-0.6
	4µm,1.2s,SNR=7.2						
COCO	West Island	14.15	184	⇓P	Pn	01 47 51.5	+1.6
	SNR=9.8						
COCO	West Island	14.15	184	ePn	Pn	01 47 48.0	-1.9
COCO				Sn	Sn	01 50 22.7	-2.9
COCO	West Island	14.15	184	P	Pn	01 47 49.4	-0.4
	674nm,1.8s,8µm						
SBUM	Sibu	14.35	88	P	Pn	01 47 55.6	+2.9
	380nm,1.2s,6µm						
XMIS	Christmas Isla	14.63	148	eP	Pn	01 47 52.3	-4.1
XMIS				eS	Sn	01 50 17.7	-20
XMIS	Christmas Isla	14.63	148	ePn	Pn	01 47 56.7	+0.3
XMIS				eS	Sn	01 50 17.7	-20
BJII	Banjamegara	15.03	128	P	Pn	01 48 01.8	+0.1
	270nm,1.6s,4µm						
BDT	Bhumibol Dam	15.18	4	P	Pn	01 48 02.0	-1.5
	204nm,1.0s						
SMRI	Semarang	15.45	126	P	Pn	01 48 09.5	+2.4
	371nm,1.2s,7µm						
CM31	Chiang Mai Arr	16.38	4	eP	Pn	01 48 19.9	+1.0
	195nm,1.0s						
CMAR	Chiang Mai Arr	16.38	4	Pn	Pn	01 48 19.8	+0.8
	7.4nm,0.3s,baz=194,slow=12,SNR=168						
CMAR				PcP	PcP	01 53 11.0	+0.7
	1.8nm,0.3s,baz=223,slow=3.3,SNR=5.5						
CMAR				LR	LR	01 55 03.4	
	comp=Z,19µm,18.1s,baz=191,slow=39						
CMAR	Chiang Mai Arr	16.38	4	P	Pn	01 48 19.8	+0.8
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,19µm,18.1s						
PLKI	Palangkaraya	16.62	105	P	Pn	01 48 25.3	+3.2
	comp=Z,2µm,1.1s						
CHG	Chiang Mai	16.73	4	⇑P	Pn	01 48 23.9	+0.5
	comp=Z,299nm,0.9s						
CHTO	Chiang Mai	16.73	4	⇓P	Pn	01 48 23.1	-0.3
	SNR=54						
CHTO	Chiang Mai	16.73	4	eP	Pn	01 48 24.3	+0.9
CHTO				pmax	pmax		
	comp=Z,250nm,0.9s						
CHTO	Chiang Mai	16.73	4	eP	Pn	01 48 23.9	+0.5
	comp=Z,251nm,0.9s						
CHTO	Chiang Mai	16.73	4	P	Pn	01 48 23.9	+0.5
	comp=Z,383nm,0.9s,comp=Z,5µm						
TRT	Tretes	17.62	123	⇓eP	Pn	01 48 39.5	+5.0
TRT				eS	pP	01 48 49.7	+4.4
KRKI	Karangkates	17.71	125	P	Pn	01 48 41.2	+5.5
	comp=Z,384nm,1.8s						
BBKI	Banjar Baru	17.82	108	P	Pn	01 48 37.6	+0.6
	comp=Z,1µm,1.0s						
KMMI	Kalianget	18.42	119	P	Pn	01 48 43.0	-1.3
	comp=Z,821nm,0.9s,comp=Z,8µm						
KKM	Kota Kinabalu	18.74	77	eP	Pn	01 48 48.8	+0.7
	comp=Z,460nm,0.8s						
KKM	Kota Kinabalu	18.74	77	P	Pn	01 48 48.8	+0.6
	comp=Z,619nm,1.2s						
SMKI	Samarinda	19.50	97	P	Pn	01 48 58.0	+0.7
	comp=Z,772nm,1.6s,comp=Z,10µm						
NBBI	Negara	19.64	122	P	Pn	01 49 03.7	+4.8
	comp=Z,520nm,1.0s,comp=Z,6µm						
DNP	Denpasar	20.29	122	P	P	01 49 08.4	+4.0
	comp=Z,868nm,1.1s						
KHKI	Kahang-Kahang	20.48	120	P	P	01 49 08.3	+1.9
	comp=Z,560nm,1.1s,comp=Z,4µm						
QIZ	Qiongzhong	20.58	34	P	P	01 49 07.9	+0.4
QIZ				AP		01 49 18.5	
QIZ				S	S	01 52 53.6	-1.9
QIZ				XS	sS	01 53 07.3	-4.8
QIZ				SS		01 53 24.3	
QIZ				AMB	AMB		
	comp=Z,84nm,1.4s						
QIZ				AMB	AMB		
	comp=Z,3µm,12.2s						
QIZ				LR	LR		
	comp=N,8µm,26.2s						
QIZ				LR	LR		
	comp=Z,14µm,33.2s						
QIZ	Qiongzhong	20.58	34	eP	P	01 49 07.8	+0.3
	comp=Z,194nm,1.0s						
QIZ				LR	LR		
	comp=Z,9µm,21.0s,MS5.1						
MDRS	Chennai	20.61	303	⇑ix	x	01 48 58.2	
MDRS				ex	x	01 50 05.2	
MYLDM	Lahad Datu	20.83	81	P	P	01 49 11.7	+1.4
	comp=Z,1µm,0.9s						
BATP	Bataraza	20.95	70	eP	P	01 49 11.0	-0.5
VIS	Vishakhapatnam	21.15	318	eP	P	01 49 15.1	+1.4
VIS				AMb	AMB	01 49 21.0	
	comp=Z,397nm,1.1s,mb5.7						
VIS				iS	S	01 53 08.7	+2.0
KOD	Kodaikanal	21.85	293	eP	P	01 49 24.2	+3.0
PPR	Puerto Princes	22.13	69	⇑eP	P	01 49 28.0	+3.8
PCI	Palu	22.16	97	P	P	01 49 24.8	+0.3
	comp=Z,661nm,0.9s,comp=Z,7µm,mb6.1						
VJD	Vijayawada	22.24	311	eP	P	01 49 28.0	+2.7
CAL	Calcutta	22.41	336	eP	P	01 49 26.4	-0.6
CAL				eS	S	01 53 32.6	+1.5
AGT	Agartala	22.66	344	ix	x	01 49 25.0	
AGT				ix	x	01 50 42.0	
IMP	Imphal	22.95	351	eP	P	01 49 32.0	-0.8
IMP				ex	x	01 53 23.0	
KAPI	Kappang	22.95	108	P	P	01 49 31.2	-1.8
	comp=Z,2µm,0.7s,mb6.6,SNR=23						
KAPI	Kappang	22.95	108	P	P	01 49 31.4	-1.6
	SNR=27						
KAPI	Kappang	22.95	108	P	P	01 49 31.4	-1.6
	comp=Z,178nm,0.7s,mb5.6,baz=327,slow=5.1,SNR=29						
KAPI				LR	LR	01 59 27.8	
	comp=Z,13µm,20.4s,MS5.4,baz=294,slow=39						
KAPI	Kappang	22.95	108	eP	P	01 49 30.8	-2.2
	comp=Z,83nm,1.3s,mb5.0						
KAPI				ePcP	PcP	01 53 23.2	+0.9
KAPI				LR	LR		
	comp=Z,13µm,20.0s,MS5.4						
KAPI	Kappang	22.95	108	P	P	01 49 31.5	-1.5
	comp=Z,141nm,1.2s,comp=Z,3µm,mb5.3						
ENPP	El Nido	23.27	66	eP	P	01 49 36.6	+0.4
KMI	Kunming	23.45	11	P	P	01 49 37.6	-0.3
KMI				AP		01 49 50.7	
KMI				XP	sP	01 49 57.9	+4.1
KMI				PP		01 50 13.5	
KMI				PPP		01 50 26.5	
KMI				S	S	01 53 47.7	-0.5
KMI				SSS		01 55 03.9	
KMI				AMB	AMB		
	comp=Z,197nm,1.2s,mb5.4						
KMI				AMB	AMB		
	comp=Z,3µm,7.2s						
KMI				LR	LR		
	comp=N,28µm,15.7s,MS5.8						
KMI				LR	LR		
	comp=E,10µm,16.6s,MS5.8						
KMI				LR	LR		
	comp=Z,32µm,16.7s,MS5.9						
BUSP	Coron	24.27	65	eP	P	01 49 45.0	-0.5
HYB	Hyderabad	24.38	310	eP	P	01 49 47.5	+1.1
HYB				eS	S	01 54 06.0	+2.6
HYB				pmax	pmax		
	comp=Z,565nm,1.0s,mb6.0						
HYB	Hyderabad	24.38	310	iP	P	01 49 47.5	+1.1
	comp=Z,565nm,1.0s,mb6.0						
HYB				eS	S	01 54 04.0	+0.6
HYB				LR	LR	01 59 26.0	
	comp=Z,8.5nm,20.0s						
HYB	Hyderabad	24.38	310	eP	P	01 49 47.5	+1.1
	comp=Z,565nm,1.0s,mb6.0						
HYB				eS	S	01 54 06.0	+2.6
HYB				e		01 59 26.0	
BOK	Bokaro	24.56	333	eP	P	01 49 48.8	+0.8
LUBP	Lubang	25.01	61	eP	P	01 49 52.6	+0.4
MNGI	Mangalore	25.26	297	iP	P	01 49 54.6	+0.1
MNGI				iS	S	01 54 19.3	+1.8
KDI	Kendari	25.44	103	P	P	01 49 54.8	-1.4
	comp=Z,210nm,1.0s,comp=Z,4µm,mb5.6						
HKC	Hong Kong Obse	25.65	37	⇑iP	P	01 50 00.0	+2.0
GYA	Guiyang	25.74	18	⇑iP	P	01 49 57.7	-0.9
GYA				AP	pP	01 50 13.2	+3.2
GYA				XP	sP	01 50 18.8	+3.8
GYA				PP		01 50 41.7	
GYA				PPP		01 50 51.1	
GYA				PCP	PcP	01 53 27.6	-0.5
GYA				S	S	01 54 24.7	-0.1
GYA				XS	sS	01 54 44.9	+1.1
GYA				SS		01 55 31.1	
GYA				SCP	ScP	01 57 01.7	-2.7
GYA				PCS	PcS	01 57 06.4	-2.5
GYA				AMB	AMB		
	comp=Z,220nm,1.0s,mb5.6						
GYA				AMB	AMB		
	comp=Z,2µm,10.2s						
GYA				LR	LR		
	comp=N,9µm,18.8s,MS5.4						
GYA				LR	LR		

GYA LR LR
comp=E,6µm,17.1s,MS5.4
GZH LR LR
comp=Z,10µm,17.7s,MS5.4
GZH Guangzhou 25.78 34 P **P** **01 50 02.8 +3.7**
GZH LR LR
comp=N,9µm,17.9s,MS5.5
GZH LR LR
comp=E,8µm,15.1s,MS5.5
GZH LR LR
comp=Z,13µm,24.7s
GUIM Jordan 26.00 70 *e*P **P** **01 50 01.9 +0.7**
OTRP Odiongan 26.05 66 *e*P **P** **01 50 00.9 -0.7**
PAGZ Pagadian 26.07 76 *e*P **P** **01 50 02.0 +0.2**
NGP Nagpur 26.42 317 *e*P **P** **01 50 05.0 +0.1**
NGP AMb AMB 01 50 08.0
comp=Z,363nm,1.1s,mb5.8
NGP *e*S **S** **01 54 36.8 +1.0**
RCP Roxas 26.44 68⇓ *e*P **P** **01 50 05.1 -0.1**
LATR Latur 26.50 309 *e*P **P** **01 50 07.2 +1.6**
ODAN Odare 26.67 339 *e*P **P** **01 50 07.7 +0.6**
comp=Z,718nm,1.0s,mb6.1
TBP Tagbilaran 26.95 73 *e*P **P** **01 50 09.7 0.0**
MNI Manado 26.97 91 P **P** **01 50 12.8 +2.8**
comp=Z,924nm,1.0s,mb6.3
TAPN Taplejung 27.01 340 *e*P **P** **01 50 11.0 +0.9**
comp=Z,1µm,0.8s,mb6.4
GQP Guinayangan 27.02 63⇑ *e*P **P** **01 50 10.0 -0.4**
RAMN Ramite 27.05 337 *e*P **P** **01 50 11.5 +1.0**
comp=Z,194nm,0.4s,mb5.9
BALP Baler 27.06 58 *e*P **P** **01 50 12.4 +1.6**
LLP Lapu-Lapu 27.21 71⇑ *e*P **P** **01 50 12.8 +0.6**
GOA Goa 27.22 301⇑ *i*P **P** **01 50 13.5 +1.3**
GOA *i* S **S** **01 54 51.1 +2.5**
ABRA Dolores 27.29 54 *e*P **P** **01 50 13.6 +0.7**
AKL Akola 27.55 314 *e*P **P** **01 50 17.2 +2.2**
AKL AMb AMB 01 50 22.0
comp=Z,202nm,1.5s,mb5.5
BUKP Musuan 27.71 77 *e*P **P** **01 50 16.4 -0.2**
KAD Karad 27.79 305 *e*P **P** **01 50 18.9 +1.7**
KAD AMb AMB 01 50 28.9
comp=Z,147nm,1.0s,mb5.5
APYP Conner 27.84 54 *e*P **P** **01 50 17.0 -0.7**
JIRN Jiri 27.84 337 *e*P **P** **01 50 18.5 +0.9**
comp=Z,498nm,0.8s,mb6.2
CAUP Cauayan 27.84 56 *e*P **P** **01 50 17.1 -0.7**
MSLP Maasin 28.01 72 *e*P **P** **01 50 20.7 +1.4**
PKI Pulchoki 28.07 336 *e*P **P** **01 50 20.1 +0.4**
comp=Z,659nm,1.0s,mb6.2
PKI Pulchoki 28.07 336 *e*P **P** **01 50 20.1 +0.4**
PKI pmax pmax
comp=Z,659nm,1.0s,mb6.2
DAV Davao City (W) 28.07 79⇑ P **P** **01 50 18.3 -1.5**
SNR=8.8
DAV Davao City (W) 28.07 79 P **P** **01 50 20.8 +0.9**
comp=Z,220nm,0.4s,mb6.1,baz=1,0,slow=6.8,SNR=8.3
DAV Davao City (W) 28.07 79⇑ *i*P **P** **01 50 18.6 -1.3**
DAV Davao City (W) 28.07 79 P **P** **01 50 21.1 +1.3**
comp=Z,577nm,1.3s,mb6.0
DAV LR LR
comp=Z,8µm,21.0s,MS5.3
GUN Gumba 28.19 337 *e*P **P** **01 50 21.5 +0.8**
comp=Z,825nm,0.7s,mb6.5
DMN Daman 28.23 336 *e*P **P** **01 50 21.7 +0.6**
comp=Z,421nm,0.8s,mb6.1
LSA Lhasa 28.27 348 P **P** **01 50 22.0 +0.7**
LSA AP pP 01 50 32.1 -0.6
LSA XP sP 01 50 39.2 +1.4
LSA S **S** **01 55 06.0 +1.3**
LSA LR LR
comp=N,3µm,28.2s,MS5.1
LSA LR LR
comp=E,6µm,30.3s,MS5.1
LSA LR LR
comp=Z,9µm,23.2s
LSA Lhasa 28.27 348 *e*P **P** **01 50 22.6 +1.3**
LSA pmax pmax
comp=Z,302nm,0.9s,mb5.9
LSA MLR MLR
comp=Z,8µm,22.0s,MS5.3
LSA Lhasa 28.27 348 *e*P **P** **01 50 22.6 +1.2**
comp=Z,302nm,0.9s,mb5.9
LSA LR LR
comp=Z,8µm,22.0s,MS5.3
KKN Kakani 28.32 336 *e*P **P** **01 50 22.3 +0.5**
comp=Z,732nm,0.9s,mb6.3
KKN Kakani 28.32 336 *e*P **P** **01 50 22.3 +0.5**
KKN pmax pmax
comp=Z,732nm,0.9s,mb6.3
BATI Baumata 28.41 116 P **P** **01 50 18.9 -4.0**
comp=Z,136nm,0.6s,mb5.7,baz=262,slow=3.5,SNR=21
BATI PcP PcP 01 53 35.8 +1.1
comp=Z,36nm,0.7s,baz=309,slow=5.1,SNR=3.7
BATI S **S** **01 54 55.0 -12**
comp=Z,68nm,0.9s,baz=6.3,slow=19,SNR=3.0
BATI Baumata 28.41 116 P **P** **01 50 19.2 -3.6**
comp=Z,109nm,0.8s,comp=Z,1µm,mb5.6
PVCP Virac 28.43 65 *e*P **P** **01 50 30.9 +7.9**
BUTP Butuan 28.47 75 *e*P **P** **01 50 18.4 -4.9**
POO Poona 28.70 306 *e*P **P** **01 50 27.6 +2.3**
POO AMb AMB 01 50 29.7
comp=Z,73nm,0.9s,mb5.4
POO *i* PP PP 01 51 18.0 -13
POO *i* x x 01 53 33.0
MATI Mati 28.72 79 *e*P **P** **01 50 31.6 +6.0**
GKN Gorkha 28.77 335 *e*P **P** **01 50 26.2 +0.3**
comp=Z,746nm,0.9s,mb6.4
KOLN Koldanda 29.02 333 *e*P **P** **01 50 29.1 +1.0**
comp=Z,1µm,0.8s,mb6.7
CD2 Chengdu 29.28 10 P **P** **01 50 29.1 -1.2**
CD2 AP pP 01 50 39.5 -2.2
CD2 XP sP 01 50 42.9 -3.9
CD2 PP PP 01 51 25.5 -12
CD2 S **S** **01 55 13.1 -7.5**
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,2µm,5.8s
CD2 LR LR
comp=N,21µm,17.4s
CD2 LR LR
comp=Z,28µm,16.2s,MS6.0
DANN Dangsing 29.45 334 *e*P **P** **01 50 32.6 +0.7**
comp=Z,326nm,0.5s,mb6.3
BOM Bombay 29.72 306 *e*P **P** **01 50 27.1 -7.4**
BOM *ex* x 01 50 29.5
comp=Z,165nm,1.1s
BOM *e*S **S** **01 55 19.5 -8.4**
LBMI Labuha 29.75 95 P **P** **01 50 36.2 +1.4**
comp=Z,406nm,1.5s,comp=Z,4µm,mb5.9
QZH Quanzhou 30.33 40⇑ *i*P **P** **01 50 39.9 +0.2**
QZH S **S** **01 55 37.1 -0.2**
QZH LR LR
comp=N,18µm,14.4s,MS5.9
QZH LR LR
comp=E,5µm,10.7s,MS5.9
QZH LR LR
comp=Z,16µm,14.9s,MS5.8
TPUB Ta-pu 30.57 44 *e*P **P** **01 50 42.4 +0.5**
comp=Z,82nm,0.8s,mb5.6
AAI Ambon 30.84 101 P **P** **01 50 43.3 -1.1**
comp=Z,416nm,0.8s,comp=Z,4µm,mb6.3
YULB Yu-li 31.10 45 *e*P **P** **01 50 47.6 +1.0**
comp=Z,81nm,0.8s,mb5.6
SSLB Suanglung 31.12 44 *e*P **P** **01 50 47.0 +0.3**
comp=Z,72nm,0.9s,mb5.5
MBWA Marble Bar 31.44 138 *e*P **P** **01 50 47.7 -1.8**
comp=Z,168nm,1.7s,mb5.6
MBWA LR LR
comp=Z,7µm,20.0s,MS5.3
MBWA Marble Bar 31.44 138 P **P** **01 50 48.3 -1.3**
comp=Z,68nm,1.8s,mb5.2
NACB Ninganchiao 31.81 44 *e*P **P** **01 50 53.9 +1.1**
comp=Z,49nm,0.8s,mb5.4
YHNB Yeheng 31.98 43 *e*P **P** **01 50 54.6 +0.3**
comp=Z,55nm,0.9s,mb5.4
YHNB LR LR
comp=Z,9µm,22.0s,MS5.4
LGTI Lohaghat 32.02 330 *e*P **P** **01 50 55.5 +0.9**
LGTI *ex* x 01 52 50.0
PTH Pithoragarh 32.12 330 *e*P **P** **01 50 57.0 +1.6**
PTH *ex* x 01 51 14.6
TATO Taipei 32.26 43 PFAKE 01 51 10.0 +13
TATO LR LR
comp=Z,7µm,21.0s,MS5.3
WHN Wuhan 32.39 27 P **P** **01 50 57.2 -0.6**
WHN S **S** **01 56 07.7 -1.7**
WHN LR LR
comp=N,22µm,17.6s,MS6.0
WHN LR LR
comp=E,12µm,13.4s,MS6.0
WHN LR LR
comp=Z,21µm,13.8s,MS6.0
AJM Ajmer 33.00 320 *e*P **P** **01 51 04.8 +1.6**
AJM AMb AMB 01 51 07.6
comp=Z,319nm,1.0s,mb6.2
NDI New Delhi 33.03 325 *e*P **P** **01 51 02.5 -1.0**
NDI *ex* x 01 56 16.0
XAN Xi'an 33.50 17 P **P** **01 51 05.6 -1.8**
XAN AP pP 01 51 15.2 -3.7
XAN XP sP 01 51 19.5 -4.4
XAN PP PP 01 52 21.0 -2.8
XAN PPP 01 52 32.4
XAN PCP PcP 01 53 49.1 +1.3
XAN S **S** **01 56 21.0 -5.5**
XAN SCS ScS 02 01 29.4 -0.8
XAN AMB AMB
comp=Z,203nm,0.8s,mb6.1
XAN AMB AMB
comp=Z,1µm,14.6s
XAN LR LR
comp=N,3µm,25.0s
XAN LR LR
comp=E,6µm,18.7s
XAN LR LR
comp=Z,15µm,21.5s,MS5.7
SWI Sorong 33.52 95 P **P** **01 51 06.0 -1.9**
comp=Z,195nm,1.1s,comp=Z,2µm,mb6.0
DDI Dehra Dun 33.84 328 *ex* x 01 51 08.6
DDI *e*S **S** **01 56 31.0 -1.0**
LZH Lanzhou 34.35 9 *e*P **P** **01 51 14.6 -0.2**
LZH AP pP 01 51 30.5 +4.2
LZH PP PP 01 52 31.1 -2.2
LZH S **S** **01 56 39.0 -0.7**
LZH SS SS 01 58 50.0 -20
LZH AMB AMB
comp=Z,272nm,1.5s,mb6.0
LZH AMB AMB
comp=Z,1µm,4.2s
LZH LR LR
comp=E,11µm,17.1s
LZH LR LR
comp=Z,16µm,18.3s,MS5.8
SMLA Simla 34.95 328 *i* P **P** **01 51 20.2 +0.2**
SMLA *ex* x 01 51 24.0
comp=Z,1µm,0.5s
SMLA *i* S **S** **01 56 49.8 +0.8**
SDNR Sundarnagar 35.34 328 *e*P **P** **01 51 24.0 +0.5**
BHK Bhakra 35.57 327 *e*P **P** **01 51 24.2 -1.2**
NJ2 Nanjing 35.83 31 *e*P **P** **01 51 27.4 -0.2**
NJ2 AP pP 01 51 36.4 -2.8
NJ2 XP sP 01 51 39.9 -4.3
NJ2 PP PP 01 52 47.6 -2.1
NJ2 S **S** **01 57 04.0 +1.5**
NJ2 XS sS 01 57 20.5 -1.2
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
NJ2 AMB AMB
comp=Z,490nm,7.4s
NJ2 LR LR
comp=N,2µm,34.7s,MS4.9
NJ2 LR LR
comp=E,2µm,30.3s,MS4.9
NJ2 LR LR
comp=Z,2µm,30.3s,MS4.7
SSE Sheshan 36.37 35 P **P** **01 51 33.3 +1.0**
SSE AP pP 01 51 44.2 +0.4
SSE PP PP 01 52 57.0 +1.3
SSE S **S** **01 57 13.0 +2.2**
SSE XS sS 01 57 32.5 +2.4
SSE AMB AMB
comp=Z,53nm,0.8s,mb5.5
SSE AMB AMB
comp=Z,976nm,9.4s
SSE LR LR
comp=N,5µm,26.7s,MS5.3
SSE LR LR
comp=E,5µm,26.7s,MS5.3
SSE LR LR
comp=Z,10µm,16.5s
DLH Dalhousie 36.69 328 *e*P **P** **01 51 35.0 +0.1**
DLH *ex* x 01 51 49.0
THN Thein Dam 36.74 328 *e*P **P** **01 51 34.3 -1.1**
THN *ex* x 01 57 20.2
GTA Gaotai 37.27 2 P **P** **01 51 39.0 -0.7**
GTA AP pP 01 51 48.3 -3.0
GTA XP sP 01 51 52.8 -3.5
GTA PP PP 01 53 07.5 +2.1
GTA PCP PcP 01 53 59.8 +1.1
GTA S **S** **01 57 23.5 -0.7**
GTA SCS ScS 02 01 47.9 -2.6
GTA AMB AMB
comp=Z,101nm,1.2s,mb5.5
GTA AMB AMB
comp=Z,2µm,8.4s
GTA LR LR
comp=N,3µm,25.8s,MS5.2
GTA LR LR
comp=E,4µm,23.1s,MS5.2
GTA LR LR
comp=Z,3µm,21.9s,MS5.1
KAKA Kakadu 37.31 114⇑ *i*P x 01 51 21.1
comp=Z,163nm,0.7s
KAKA Kakadu 37.31 114 P x 01 51 21.5
comp=Z,385nm,0.7s,comp=Z,2µm
MUN Mundaring 38.02 154 *e*P **P** **01 51 47.9 +1.7**
MUN *e*S **S** **01 57 36.6 +0.8**
KLBR Kellerberrin 38.39 152 *e*P **P** **01 51 49.8 +0.4**
comp=Z,129nm,0.8s,mb5.7
TIA Tai'an 38.42 25 *e*P **P** **01 51 48.2 -1.3**
TIA S **S** **01 57 36.0 -5.7**
TIA AMB AMB
comp=Z,27nm,0.9s,mb5.0
TIA LR LR
comp=E,3µm,14.0s
NIL Nilore 39.00 326 *e*P **P** **01 51 54.6 +0.1**
NIL pmax pmax
comp=Z,321nm,0.8s,mb6.1
NIL MLR MLR
comp=Z,921nm,19.0s,MS4.6
NIL Nilore 39.00 326 *e*P **P** **01 51 54.6 +0.1**
comp=Z,321nm,0.8s,mb6.1
NIL LR LR
comp=Z,921nm,19.0s,MS4.6
NWAO Narrogin (SRO) 39.28 154 LR LR 02 06 50.1
comp=Z,6µm,20.9s,MS5.4,baz=310,slow=34
NWAO Narrogin (SRO) 39.28 154 *e*P **P** **01 51 58.4 +1.6**
NWAO Narrogin (SRO) 39.28 154 *e*P **P** **01 51 58.1 +1.3**
comp=Z,116nm,0.8s,mb5.7
NWAO LR LR
comp=Z,5µm,21.0s,MS5.3
BTO Baotou 39.96 14 *e*P **P** **01 52 02.2 -0.2**
HHC Hu-ho-hao-te 40.60 16 *e*P **P** **01 52 07.7 +0.1**
HHC AP pP 01 52 17.3 -2.0
HHC XP sP 01 52 21.6 -2.6
HHC PP PP 01 53 45.1 +3.3
HHC PCP PcP 01 54 09.9 +0.7
HHC SCP ScP 01 57 55.3 -0.2
HHC S **S** **01 58 15.1 +0.8**
HHC XS sS 01 58 30.9 -2.8
HHC SCS ScS 02 02 07.7 -2.1
HHC AMB AMB
comp=Z,60nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,2µm,5.9s
HHC LR LR
comp=N,10µm,16.6s,MS5.8
HHC LR LR
comp=E,6µm,17.8s,MS5.8
HHC LR LR
comp=Z,11µm,15.5s,MS5.8
BJT Baijiatuau 41.32 21 *e*P **P** **01 52 14.0 +0.4**
BJT pmax pmax
comp=Z,325nm,0.9s
BJT MLR MLR
comp=Z,4µm,22.0s
BJT Baijiatuau 41.32 21 *e*P **P** **01 52 14.0 +0.4**
comp=Z,325nm,0.9s,mb6.0
BJT LR LR
comp=Z,4µm,22.0s,MS5.2
BJI Beijing 41.34 21 P **P** **01 52 13.7 -0.1**
BJI AP pP 01 52 23.1 -2.4
BJI XP sP 01 52 27.3 -3.1
BJI S **S** **01 58 23.8 -1.7**
BJI SS SS 02 01 30.3 -0.2
BJI AMB AMB
comp=Z,63nm,0.9s,mb5.2
BJI AMB AMB
comp=Z,2µm,5.1s
BJI LR LR
comp=N,5µm,17.3s
BJI LR LR
comp=E,4µm,22.4s
BJI LR LR
comp=Z,6µm,37.6s
WRAB Tennant Creek 41.92 123 P **P** **01 52 16.0 -2.8**
comp=Z,2µm,1.0s,mb6.7
WRAB Tennant Creek 41.92 123 *e*P **P** **01 52 16.4 -2.4**
WRAB pmax pmax
comp=Z,270nm,0.8s,mb5.9
WRAB Tennant Creek 41.92 123 *e*P **P** **01 52 16.3 -2.5**
comp=Z,274nm,0.8s,mb5.9
WRAB *e*PcP PcP 01 54 14.1 +0.2
WRAB LR LR
comp=Z,5µm,20.0s,MS5.4
WRAB Tennant Creek 41.92 123 P **P** **01 52 16.5 -2.3**
comp=Z,441nm,0.9s,comp=Z,3µm,mb6.1
WB2 Warramunga Arr 41.92 123 *e*P **P** **01 52 16.0 -2.8**
WB2 *e*PCP PcP 01 54 14.1 +0.2
WB2 *e*S **S** **01 58 25.4 -9.1**
WB2 *e*SCS ScS 02 02 10.9 -7.7
KBL Kabul 42.05 324 *e*P **P** **01 52 19.8 +0.1**
KBL *e* 01 54 15.3
KBL pmax pmax
comp=Z,88nm,0.8s,mb5.4
KBL Kabul 42.05 324 *e*P **P** **01 52 19.8 +0.1**
comp=Z,88nm,0.8s,mb5.4
KBL *e*PcP PcP 01 54 15.3 +1.2
KSH Kashi 42.32 335 P **P** **01 52 22.7 +1.0**
KSH AP pP 01 52 32.6 -0.8
KSH XP sP 01 52 36.3 -2.1
KSH PP PP 01 54 03.1 +2.7
KSH PCP PcP 01 54 17.4 +2.6
KSH PPP 01 54 36.3
KSH PCS PcS 01 58 07.5 +0.8
KSH S **S** **01 58 40.3 +0.5**
KSH XS sS 01 58 56.9 -2.4
KSH SS SS 02 01 43.2 -6.5
KSH SCS ScS 02 02 20.3 0.0
KSH AMB AMB
comp=Z,320nm,1.1s,mb5.9
KSH AMB AMB
comp=Z,5µm,3.6s
KSH LR LR
comp=N,5µm,11.6s,MS6.0
KSH LR LR
comp=E,12µm,16.5s,MS6.0
KSH LR LR
comp=Z,23µm,23.2s
WMQ Urumqi 42.60 349 P **P** **01 52 24.7 +0.7**
WMQ XP sP 01 52 40.7 +0.1
WMQ PP PP 01 54 06.5 +3.1
WMQ PCP PcP 01 54 16.0 +0.3
WMQ PPP 01 54 42.6
WMQ SCP ScP 01 58 03.6 +0.2
WMQ PCS PcS 01 58 05.9 -1.7
WMQ S **S** **01 58 44.9 +1.0**
WMQ XS sS 01 59 03.4 0.0
WMQ SS SS 02 01 50.3 -4.9
WMQ SCS ScS 02 02 20.8 -1.1
WMQ AMB AMB
comp=Z,524nm,1.0s,mb6.2
WMQ AMB AMB
comp=Z,3µm,3.0s
WMQ LR LR
comp=N,4µm,18.0s,MS5.4
WMQ LR LR
comp=E,2µm,20.0s,MS5.4
WMQ LR LR
comp=Z,6µm,34.0s
DL2 Dalian 42.66 28⇑ *i*P **P** **01 52 24.0 -0.5**
DL2 XP sP 01 52 40.6 -0.6
DL2 S **S** **01 58 43.9 -0.9**
DL2 AMB AMB
comp=Z,70nm,0.9s,mb5.4
DL2 AMB AMB
comp=Z,890nm,7.6s
DL2 LR LR
comp=N,3µm,17.8s
DL2 LR LR
comp=Z,3µm,27.8s
MSEY Mahe Island 42.86 261 *e*P **P** **01 52 30.4 +3.8**
comp=Z,80nm,1.6s,mb5.2
MSEY LR LR
comp=Z,8µm,22.0s,MS5.5
WBK Wadi Bani Khal 42.94 302 P **P** **01 52 29.3 +2.3**
SNR=16
JAY Jayapura 43.07 96 P **P** **01 52 27.1 -1.2**
comp=Z,144nm,0.9s,comp=Z,10µm,mb5.7
ASAR Alice Springs 43.36 128 P **P** **01 52 28.1 -2.4**
comp=Z,30nm,0.7s,mb5.1,baz=298,slow=7.4,SNR=207
ASAR PcP PcP 01 54 18.4 -0.2
comp=Z,40nm,0.8s,baz=312,slow=3.5,SNR=11
ASAR S **S** **01 58 48.5 -7.1**
comp=Z,12nm,0.6s,baz=294,slow=14,SNR=16
ASAR Alice Springs 43.36 128 P **P** **01 52 28.1 -2.4**
ASAR 01 54 18.5
ASAR S **S** **01 58 48.6 -7.1**
ASAR pmax pmax
comp=Z,30nm,0.7s
ASAR smax
comp=N,12nm,0.6s
FORT Forrest 43.48 141 *e*P **P** **01 52 30.7 -0.6**
comp=N,161nm,0.5s,mb6.0
JMDO Jabal Madar 43.59 301 P **P** **01 52 34.2 +1.9**
SNR=20
SMDO Samad 43.89 302 P **P** **01 52 36.7 +2.0**
SNR=30
BIDO Bidbid 44.01 302 P **P** **01 52 37.6 +1.9**
SNR=74
INCN Inchon 44.11 33 PFAKE 01 52 50.0 +14
INCN LR LR
comp=Z,7µm,22.0s,MS5.5
BSY Bisya 44.50 301 P **P** **01 52 41.8 +2.1**
SNR=47
ULHL Ulahol 44.50 337 P **P** **01 52 40.2 +0.9**
SNR=32
HOQ Hoqain 44.72 302 P **P** **01 52 43.3 +2.0**
SNR=16
KZA Kyzart 44.76 336 P **P** **01 52 42.7 +1.3**
SNR=59
KS15 Wonju Array Si 44.78 34 *e*P **P** **01 52 40.8 -0.8**
KSRS Korea Array 44.81 34 P **P** **01 52 40.5 -1.3**
comp=Z,107nm,0.8s,mb5.7,baz=224,slow=8.7,SNR=133
KSRS LR LR 02 11 54.1
comp=Z,5µm,21.5s,MS5.4,baz=226,slow=37
KSRS Korea Array 44.81 34 P **P** **01 52 40.5 -1.3**
KSRS pmax pmax
comp=Z,107nm,0.8s,mb5.7
KSRS MLR MLR
comp=Z,5µm,21.5s,MS5.4
AAA Alma-Ata 45.12 338 *i* P **P** **01 52 43.9 -0.3**
AAA *e*S **S** **01 59 20.8 +0.2**
AAA pmax pmax
comp=Z,5µm,7.1s
AAA smax
comp=N,2µm,7.4s
AAA MLR MLR
comp=Z,3µm,16.0s,MS5.3
ARQ Araqi 45.30 301 P **P** **01 52 47.9 +2.0**
SNR=15
TKM2 Tokmak 2 45.33 337 *e*P **P** **01 52 46.9 +1.0**
TKM2 pmax pmax
comp=Z,245nm,1.0s,mb6.0
TKM2 Tokmak 2 45.33 337 P **P** **01 52 46.9 +1.0**
SNR=157
TKM2 Tokmak 2 45.33 337 *e*P **P** **01 52 46.9 +1.0**
comp=Z,245nm,1.0s,mb6.0
KBK Karagaybulak 45.36 336 P **P** **01 52 47.7 +1.5**
SNR=216
AAK Ala-Archa 45.53 336 P **P** **01 52 48.6 +1.1**
comp=Z,842nm,0.8s,mb6.7,SNR=46
AAK Ala-Archa 45.53 336 P **P** **01 52 48.7 +1.3**
SNR=94
AAK Ala-Archa 45.53 336 *e*P **P** **01 52 48.8 +1.3**
comp=Z,808nm,2.4s,mb6.2
AAK LR LR
comp=Z,10µm,22.0s,MS5.7

AAK Ala-Archa 45.53 336 P **P** **01 52 49.2 +1.7**
comp=Z,98nm,0.9s,comp=Z,2µm,mb5.7
RBK Rabkut 45.54 293 P **P** **01 52 49.6 +1.7**
SNR=18
FRU Bishkek 45.64 336⇑ *e*P **P** **01 52 49.5 +1.1**
FRU *e* 01 54 38.0
FRU *e*S **S** **01 59 30.0 +1.8**
FRU *e*SS SS 02 02 39.0 -14
FRU pmax pmax
comp=Z,860nm,2.2s,mb6.3
FRU MLR MLR
comp=Z,9µm,21.0s,MS5.7
CHMS Chumysh 45.73 336 P **P** **01 52 49.6 +0.6**
SNR=49
EKS2 Erkin-Say 45.85 335 P **P** **01 52 51.4 +1.4**
SNR=129
EKS2 Erkin-Say 45.85 335 *e*P **P** **01 52 51.4 +1.4**
comp=Z,180nm,0.8s,mb6.0
SNY Shenyang 45.88 27 ⇓P **P** **01 52 49.2 -1.1**
SNY S **S** **01 59 29.7 -2.0**
SNY AMB AMB
comp=Z,65nm,1.0s,mb5.5
SNY AMB AMB
comp=Z,1µm,7.3s
SNY LR LR
comp=N,5µm,17.5s,MS5.8
SNY LR LR
comp=E,7µm,16.1s,MS5.8
SNY LR LR
comp=Z,10µm,15.9s,MS5.8
WHFO Wadi Hawf 46.05 293 P **P** **01 52 53.1 +1.1**
SNR=18
USP Ospenovka 46.05 336 P **P** **01 52 52.4 +0.8**
SNR=414
HATD Hatta, Dubai 46.19 303 P **P** **01 52 55.0 +2.0**
SNR=12
SONM Songino Array 46.24 8 P **P** **01 52 53.1 +0.1**
comp=Z,219nm,0.9s,mb6.1,baz=188,slow=8.0,SNR=376
SONM PcP PcP 01 54 28.6 +0.6
comp=Z,32nm,0.7s,baz=189,slow=4.7,SNR=4.4
SONM LR LR 02 14 29.2
comp=Z,10µm,19.4s,MS5.8,baz=189,slow=39
SONM Songino Array 46.24 8 P **P** **01 52 53.1 +0.1**
SONM 01 54 28.6
SONM pmax pmax
comp=Z,219nm,0.9s
SONM MLR MLR
comp=Z,10µm,19.4s
ABTO Aybut 46.34 292 P **P** **01 52 56.0 +1.7**
SNR=12
ULN Ulaanbaatar 46.36 9 P **P** **01 52 54.3 +0.4**
SNR=54
ULN Ulaanbaatar 46.36 9 *e*P **P** **01 52 53.9 0.0**
ULN pmax pmax
comp=Z,125nm,0.8s,mb5.9
ULN MLR MLR
comp=Z,6µm,20.0s,MS5.5
ULN Ulaanbaatar 46.36 9 *e*P **P** **01 52 53.9 0.0**
comp=Z,125nm,0.8s,mb5.9
ULN LR LR
comp=Z,6µm,20.0s,MS5.5
ULN Ulaanbaatar 46.36 9 P **P** **01 52 54.1 +0.2**
comp=Z,216nm,1.1s,comp=Z,2µm,mb6.0
MK31 Makanchi Array 46.62 345 P **P** **01 52 56.4 +0.4**
MK31 pmax pmax
comp=Z,432nm,0.8s,mb6.4
MK31 Makanchi Array 46.62 345 *e*P **P** **01 52 56.4 +0.4**
MKAR Makanchi Array 46.62 345 P **P** **01 52 56.1 +0.1**
comp=Z,488nm,0.9s,mb6.5,baz=157,slow=7.1,SNR=787
MKAR LR LR 02 17 13.8
comp=Z,2µm,20.2s,MS5.2,baz=164,slow=42
MKAR Makanchi Array 46.62 345 P **P** **01 52 56.1 +0.1**
MKAR pmax pmax
comp=Z,488nm,0.9s
MKAR MLR MLR
comp=Z,2µm,20.2s
RER Riviere de l'E 47.20 239 P **P** **01 53 03.5 +2.6**
comp=Z,178nm,0.9s,mb6.0
COEN Coen 47.63 111 *e*P **P** **01 53 01.5 -2.9**
comp=Z,50nm,0.8s,mb5.6
COEN *e*pP pP 01 53 14.9 -1.3
COEN *e*PcP PcP 01 54 34.5 +0.8
COEN Coen 47.63 111 P **P** **01 53 01.8 -2.6**
comp=Z,43nm,0.9s,comp=Z,509nm,mb5.5
KK31 Karatay Array 47.63 333 *i* P **P** **01 53 04.3 +0.4**
GUMO Guam 47.87 74 P **P** **01 53 06.0 -0.3**
comp=Z,43nm,0.5s,mb5.8,baz=194,slow=23,SNR=5.0
GUMO LR LR 02 12 34.0
comp=Z,1µm,19.1s,MS4.8,baz=272,slow=35
GUMO Guam 47.87 74 P **P** **01 53 06.0 -0.3**
GUMO pmax pmax
comp=Z,43nm,0.5s,mb5.7
GUMO MLR MLR
comp=Z,1µm,19.1s,MS4.8
CN2 Changchun 48.29 27 ⇓P **P** **01 53 07.8 -1.2**
CN2 *e*AP pP 01 53 18.6 -2.3
CN2 *e*S **S** **02 00 05.0 -0.9**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CN2 AMB AMB
comp=Z,1µm,9.0s
CN2 LR LR
comp=N,5µm,17.0s,MS5.7
CN2 LR LR
comp=E,5µm,17.0s,MS5.7
CN2 LR LR
comp=Z,8µm,18.0s,MS5.8
ZAK Zakamensk 48.41 5⇑ *i*P **P** **01 53 09.9 +0.1**
ZAK *e* 01 54 36.6
ZAK pmax pmax
comp=Z,101nm,0.8s,mb5.9
HVS Khovu-Aksy 49.07 357 *d i*P **P** **01 53 14.4 -0.5**
HVS MLR MLR
comp=Z,8µm,16.0s,MS5.8
MOY Mondy 49.55 3 *e*P **P** **01 53 18.9 +0.4**
TLY Talaya 49.73 5 P **P** **01 53 20.0 +0.1**
comp=Z,958nm,0.8s,mb6.9,SNR=31
TLY Talaya 49.73 5 P **P** **01 53 20.8 +0.8**
SNR=30
TLY Talaya 49.73 5 *c i*P **P** **01 53 20.3 +0.4**
TLY *e* 01 55 18.3
TLY *e*S **S** **02 00 25.9 -0.1**
TLY pmax pmax
comp=Z,131nm,0.8s,mb6.0
TLY MLR MLR
comp=Z,14µm,19.0s,MS6.0
TLY Talaya 49.73 5 *e*P **P** **01 53 20.6 +0.7**
comp=Z,128nm,0.8s,mb6.0
TLY LR LR
comp=Z,15µm,19.0s,MS6.0
IRK Irkutsk 50.34 5⇑ *i*P **P** **01 53 24.3 -0.2**
IRK *e*S **S** **02 00 37.6 +3.1**
IRK pmax pmax
comp=Z,306nm,2.1s,mb6.0
PMG Port Moresby 50.40 104 *e*P **P** **01 53 24.1 -1.5**
PMG pmax pmax
comp=Z,115nm,0.7s
PMG MLR MLR
comp=Z,2µm,21.0s
PMG Port Moresby 50.40 104 *e*P **P** **01 53 24.1 -1.5**
comp=Z,116nm,0.7s,mb6.0
PMG LR LR
comp=Z,2µm,21.0s,MS5.0
PMG Port Moresby 50.40 104 P **P** **01 53 24.1 -1.5**
comp=Z,208nm,0.8s,comp=Z,2µm,mb6.2
MAJO Matsushiro 50.65 42 *e*P **P** **01 53 26.7 -0.5**
MAJO pmax pmax
comp=Z,44nm,0.8s,mb5.4
MAJO MLR MLR
comp=Z,3µm,19.0s,MS5.4
MAJO Matsushiro 50.65 42 *e*P **P** **01 53 26.7 -0.5**
comp=Z,44nm,0.8s,mb5.4
MAJO LR LR
comp=Z,3µm,19.0s,MS5.4
MAT Matsushiro 50.65 42 P **P** **01 53 25.9 -1.3**
MAT S **S** **02 00 33.0 -6.3**
MJAR Matsushiro Arr 50.65 42 P **P** **01 53 26.9 -0.3**
comp=Z,44nm,0.9s,mb5.4,baz=221,slow=6.1,SNR=46
MJAR PcP PcP 01 54 45.2 +1.0
comp=Z,17nm,0.9s,baz=242,slow=4.3,SNR=4.9
MJAR LR LR 02 18 26.0
comp=Z,3µm,18.3s,MS5.3,baz=235,slow=40
MJAR Matsushiro Arr 50.65 42 P **P** **01 53 26.9 -0.3**
MJAR 01 54 45.3
MJAR pmax pmax
comp=Z,44nm,0.9s
MJAR MLR MLR
comp=Z,3µm,18.3s
HIA Hailar 50.66 18 *e*P **P** **01 53 26.7 -0.3**
HIA *e**PP pP 01 53 39.1 +0.1
HIA pmax pmax
comp=Z,59nm,0.8s
HIA MLR MLR
comp=Z,7µm,19.0s
HIA Hailar 50.66 18 *e*P **P** **01 53 26.7 -0.3**
comp=Z,59nm,0.8s,mb5.6
HIA *e*pP pP 01 53 39.1 +0.1
HIA LR LR
comp=Z,7µm,19.0s,MS5.7
MDJ Mudanjiang 50.84 29 P **P** **01 53 29.2 +0.8**
MDJ AP pP 01 53 38.3 -2.1
MDJ XP sP 01 53 41.4 -3.9
MDJ PP PP 01 55 26.0 +0.9
MDJ S **S** **02 00 41.0 -0.6**
MDJ XS sS 02 00 59.7 -1.8
MDJ AMB AMB
comp=Z,54nm,0.8s,mb5.5
MDJ AMB AMB
comp=Z,1µm,7.1s
MDJ LR LR
comp=N,7µm,16.1s
MDJ LR LR
comp=Z,9µm,14.4s,MS5.9
MDJ Mudanjiang 50.84 29 *e*P **P** **01 53 29.0 +0.6**
comp=Z,45nm,0.8s,mb5.5
MDJ LR LR
comp=Z,5µm,19.0s,MS5.6
ABKT Ailbek 51.02 319 P **P** **01 53 30.2 +0.2**
comp=Z,1µm,1.0s,mb6.7,SNR=66
KURK Kurchatov 51.19 344 P **P** **01 53 31.2 +0.3**
comp=Z,3µm,0.9s,mb7.3
KURK Kurchatov 51.19 344 P **P** **01 53 31.5 +0.6**
SNR=150
KURK Kurchatov 51.19 344 S **S** **02 00 42.3 -4.0**
comp=Z,2.2nm,0.9s,baz=183,slow=16,SNR=2.8
KURK Kurchatov 51.19 344 *e*P **P** **01 53 31.5 +0.6**
KURK pmax pmax
comp=Z,490nm,0.9s,mb6.4
KURK Kurchatov 51.19 344 *e*P **P** **01 53 31.3 +0.4**
comp=Z,485nm,0.9s,mb6.4
KURK LR LR
comp=Z,5µm,22.0s,MS5.5
CIT Chita 51.54 12 *e*P **P** **01 53 34.1 +0.6**
CIT *e* pP 01 53 43.5 -2.0
CIT *e* 01 54 41.0
CIT pmax pmax
comp=Z,459nm,1.6s,mb6.2
CTA Charters Tower 52.28 117 *e*P **P** **01 53 38.3 -1.3**
comp=Z,57nm,0.8s,mb5.5
CTA *e*S **S** **02 00 57.8 -4.4**
CTA *e*SCS ScS 02 03 19.9 -6.8
CTA Charters Tower 52.28 117 LR LR 02 21 02.2
comp=Z,3µm,18.7s,MS5.3,baz=287,slow=42
CTA Charters Tower 52.28 117 *e*P **P** **01 53 38.3 -1.3**
CTA *e*S **S** **02 00 57.8 -4.4**
CTA *e* 02 03 19.9
CTA pmax pmax
comp=Z,57nm,0.8s
CTAO Charters Tower 52.28 117 *e*P **P** **01 53 38.5 -1.1**
CTAO pmax pmax
comp=Z,80nm,0.8s,mb5.7
CTAO MLR MLR
comp=Z,3µm,20.0s,MS5.2
CTAO Charters Tower 52.28 117 *e*P **P** **01 53 38.5 -1.1**
comp=Z,80nm,0.8s,mb5.7
CTAO LR LR
comp=Z,3µm,20.0s,MS5.2
CTAO Charters Tower 52.28 117 P **P** **01 53 38.7 -0.9**
comp=Z,149nm,0.8s,comp=Z,2µm,mb6.0
ZAA0 Zalesovo Array 52.87 350 *e*P **P** **01 53 43.4 0.0**
ZALV Zalesovo Beam 52.87 350 P **P** **01 53 43.2 -0.1**
comp=Z,162nm,0.3s,mb6.4,baz=180,slow=6.6,SNR=518
ZALV S **S** **02 01 09.3 +0.1**
comp=Z,7.6nm,1.0s,baz=177,slow=14,SNR=3.7
ZALV LR LR 02 18 58.7
comp=Z,2µm,21.9s,MS5.2,baz=55,slow=39
ZALV PKPPKP 02 24 12.1
comp=Z,0.5nm,0.4s,baz=300,slow=4.8,SNR=4.5
ZALV Zalesovo Beam 52.87 350 P **P** **01 53 43.3 -0.1**
ZALV S **S** **02 01 09.3 +0.1**
ZALV pmax pmax
comp=Z,162nm,0.4s,mb6.3
ZALV smax
comp=N,8.0nm,1.0s
ZALV MLR MLR
comp=Z,2µm,21.9s,MS5.2
ZALV Zalesovo Beam 52.87 350 P **P** **01 53 43.2 -0.1**
ZALV S **S** **02 01 09.3 +0.1**
ZALV LR LR 02 18 58.7
ZALV P'P' 02 24 12.1
LBOS 53.30 286⇑ *e*P **P** **01 53 47.8 +0.5**
LBOS AMb AMB 01 53 51.0
comp=Z,696nm,1.9s,mb6.3
STKA Stephens Creek 53.41 133 *e*P **P** **01 53 46.0 -1.8**
comp=Z,80nm,0.8s,mb5.7
STKA *e*S **S** **02 01 10.7 -6.6**
STKA *e*SCS ScS 02 03 29.0 -5.2
STKA *e*SS SS 02 03 55.1 -63
STKA Stephens Creek 53.41 133 P **P** **01 53 46.5 -1.3**
comp=Z,30nm,0.6s,mb5.4,baz=304,slow=7.4,SNR=48
STKA LR LR 02 17 09.5
comp=Z,4µm,20.7s,MS5.5,baz=297,slow=37
RADA Ahram - Rada'a 53.76 286 *e*P **P** **01 53 51.3 +0.7**
ABPO Ambohimpanom 53.95 245 *e*P **P** **01 53 54.6 +2.7**
comp=Z,125nm,1.2s,mb5.7
ABPO LR LR
comp=Z,8µm,22.0s,MS5.7
KRAR Krasnoyarsk 53.98 357 *e*P **P** **01 53 51.0 -0.5**
KRAR pmax pmax
comp=Z,377nm,1.3s,mb6.2
KRAR MLR MLR
comp=Z,4µm,22.0s,MS5.4
NVS Novosibirsk 54.00 350⇑ *i*P **P** **01 53 50.4 -1.3**
NVS *e* pP 01 54 03.7 0.0
NVS pmax pmax
comp=N,143nm,0.9s
NVS pmax pmax
comp=E,90nm,0.9s
NVS pmax pmax
comp=Z,148nm,0.9s,mb5.9
TRBA At Turbah 54.31 285⇑ *e*P **P** **01 53 55.1 +0.5**
TRBA AMb AMB 01 53 55.9
comp=Z,64nm,1.5s,mb5.3
QRN Al-Qurain 54.45 304 *e*P **P** **01 53 54.9 -0.5**
baz=304
QRN AMb AMB 01 54 16.3
comp=Z,318nm,1.0s,mb6.2,baz=304
KBD Kabd 54.78 305 *e*P **P** **01 53 57.4 -0.4**
baz=305
KBD AMb AMB 01 54 20.4
comp=Z,264nm,1.4s,mb6.1,baz=305
RDF Al-Radifah 54.81 304 *e*P **P** **01 53 57.9 -0.2**
baz=304
RDF AMb AMB 01 54 01.0
comp=Z,235nm,1.0s,mb6.2,baz=304
UMR Umm Al-Rimmam 54.89 305 *e*P **P** **01 53 57.6 -1.0**
baz=305
UMR AMb AMB 01 54 01.1
comp=Z,254nm,1.0s,mb6.2,baz=305
NAY Al-Naaiem 55.17 305 *e*P **P** **01 53 59.9 -0.8**
baz=305
NAY AMb AMB 01 54 02.9
comp=Z,139nm,0.9s,mb6.0,baz=305
KLR Kul'dur 55.24 26⇓ *e*P **P** **01 53 56.5 -4.2**
KLR *e*S **S** **02 01 30.0 -11**
KLR *e* 02 03 45.5
KLR smax
comp=N,1µm,8.5s
KLR smax
comp=E,700nm,8.5s
VOSK Vostochnaya 55.26 340 P **P** **01 54 00.6 -0.2**
VOSK pmax pmax
comp=Z,223nm,1.1s,mb6.1
MIB Mutribah 55.28 305 *e*P **P** **01 54 01.2 -0.2**
baz=305
MIB AMb AMB 01 54 04.5
comp=Z,520nm,0.8s,mb6.6,baz=305
BVA0 Borovoye Array 55.71 340 *i* P **P** **01 54 03.5 -0.6**
BVA0 pmax pmax
comp=Z,77nm,1.1s,mb5.7
BRVK Borovoye 55.77 340 P **P** **01 54 04.9 +0.4**
comp=Z,2µm,0.7s,mb7.2
BRVK Borovoye 55.77 340⇑P **P** **01 54 04.1 -0.4**
SNR=98
BRVK Borovoye 55.77 340 *e*P **P** **01 54 04.0 -0.5**
comp=Z,277nm,0.9s,mb6.3
BRVK LR LR
comp=Z,5µm,21.0s,MS5.6
HABR Khabarovsk 56.23 29 *e*P **P** **01 54 06.5 -1.4**
HABR *e**PP pP 01 54 14.9 -5.1
HABR *e* 01 55 02.6
HABR *e*PPP 01 57 25.0
HABR *e*S **S** **02 01 55.0 +0.4**
HABR *e* 02 02 07.2
HABR *e* 02 03 52.1
HABR *e*SS SS 02 05 42.0 +0.2
ERM Erimo 56.83 39 P **P** **01 54 13.9 +1.6**
comp=Z,684nm,0.9s,mb6.7,SNR=5.4
ERM Erimo 56.83 39 *e*P **P** **01 54 12.8 +0.5**
comp=Z,65nm,0.9s,mb5.7
ERM LR LR
comp=Z,2µm,21.0s,MS5.2
BOD Bodaibo 57.10 10 *e*P **P** **01 54 12.9 -1.0**
BOD pmax pmax
comp=Z,204nm,0.9s,mb6.2
AB31 Akbulak array 57.12 331 P **P** **01 54 13.5 -0.7**
AB31 pmax pmax
comp=Z,135nm,0.7s,mb6.1
EIDS Eidsvold 58.23 122 *e*P **P** **01 54 21.4 -1.1**
comp=Z,45nm,0.8s,mb5.5
EIDS *e*pP pP 01 54 34.5 -0.1
NRGR Nerungri 58.57 17 *e*P **P** **01 54 25.9 +1.7**
CLNS Chul'man 58.77 17 *e*P **P** **01 54 25.7 +0.1**
CLNS *e**PP pP 01 54 35.7 -2.1
CLNS *e* 01 55 14.3
CLNS *e* 01 56 34.8
CLNS *e*S **S** **02 02 27.0 -0.7**
CLNS *e* 02 04 09.8
CLNS pmax pmax
comp=Z,171nm,0.8s,mb6.1
CLNS pmax pmax
comp=E,73nm,0.9s
CLNS pmax pmax
comp=N,99nm,0.7s
CLNS pmax pmax
comp=N,17nm,0.8s
CLNS pmax pmax
comp=Z,11nm,0.9s,mb4.9
CLNS pmax pmax
comp=E,18nm,0.9s
CLNS smax
comp=E,393nm,11.2s
CLNS smax
comp=N,326nm,10.6s
CLNS MLR MLR
comp=N,5µm,20.0s,MS5.8
CLNS MLR MLR
comp=Z,7µm,20.0s,MS5.8
CLNS MLR MLR
comp=E,3µm,16.0s,MS5.8
CLNS Chul'man 58.77 17 *e*P **P** **01 54 25.8 +0.2**
CLNS Chul'man 58.77 17 *e*P **P** **01 54 25.8 +0.2**
AKTK Aktyubinsk 58.84 331 *i* P **P** **01 54 25.3 -0.9**
AKTO Aktyubinsk 58.84 331 P **P** **01 54 25.3 -0.9**
AKTO pmax pmax
comp=Z,18nm,1.0s,mb5.1
TOO Toolangi 59.07 137 *e*P **P** **01 54 28.5 +0.4**
TOO *e*S **S** **02 02 32.1 -0.1**
YSS Yuzh-Sakhalins 59.31 34⇑ *i*P **P** **01 54 29.0 -0.5**
YSS *e**SP sP 01 54 45.8 -0.8
YSS *e* 01 56 36.0
YSS *e*S **S** **02 02 30.0 -5.0**
YSS pmax pmax
comp=N,160nm,1.0s
YSS pmax pmax
comp=E,220nm,1.0s
YSS pmax pmax
comp=Z,490nm,1.0s,mb6.5
YSS pmax pmax
comp=Z,1µm,10.0s
YSS MLR MLR
comp=E,3µm,16.0s
YSS MLR MLR
comp=Z,4µm,16.0s,MS5.6
YSS Yuzh-Sakhalins 59.31 34 *e*P **P** **01 54 29.6 +0.1**
comp=Z,399nm,0.9s,mb6.5
YSS LR LR
comp=Z,809nm,22.0s,MS4.8
YUK Yuzh-Kuril'sk 59.57 38 *e*P **P** **01 54 31.0 -0.4**
YUK *e*SP 01 54 49.0
YUK *e* 01 55 15.0
YUK *e* 01 56 47.0
YUK *e*S **S** **02 02 36.0 -2.5**
YUK *e*PS 02 02 54.0
YUK *e* 02 04 09.0
YUK pmax pmax
comp=Z,3µm,4.0s
YUK MLR MLR
comp=E,3µm,15.0s
YUK MLR MLR
comp=Z,6µm,15.0s,MS5.8
CAN Canberra 60.48 133 *e*P **P** **01 54 37.2 -0.6**
CAN pmax pmax
comp=Z,53nm,0.8s,mb5.6
CAN MLR MLR
comp=Z,6µm,20.0s,MS5.8
CAN Canberra 60.48 133 *e*P **P** **01 54 37.2 -0.6**
comp=Z,53nm,0.8s,mb5.6
CAN LR LR
comp=Z,6µm,20.0s,MS5.8
ARMA Armidale 60.48 127⇑ *i*P **P** **01 54 38.0 +0.1**
ARMA *e*pP pP 01 54 45.7 -4.4
ARMA *e*sP sP 01 54 54.7 -0.3
ARMA *e*S **S** **02 02 50.9 +0.2**
MAK Makhachkala 60.54 320 *e*P **P** **01 54 36.9 -1.2**
MAK *i* 01 55 23.7
MAK *i* 01 56 49.7
MAK *e*PPP 01 58 19.0
MAK *i* S **S** **02 02 47.8 -3.2**
MAK *i* 02 04 20.3
MAK pmax pmax
comp=Z,449nm,1.9s,mb6.3
MAK MLR MLR
comp=Z,2µm,22.0s,MS5.2
CNB Canberra Magne 60.74 133 *e*P **P** **01 54 38.9 -0.7**
CNB *e*S **S** **02 02 52.0 -1.8**
CUKT Cukurca 60.86 312 *e*P **P** **01 54 39.2 -1.2**
HKR Hakkari 60.89 313 *e*P **P** **01 54 41.2 +0.6**
HAKT HAKKARI 60.90 313⇑ *i*P **P** **01 54 43.2 +2.5**
MSL Mosul 60.93 311 *e*P **P** **01 54 40.5 -0.3**
MSL *e*pP pP 01 55 00.5 +7.5
MSL *e*S **S** **02 02 51.0 -5.2**
DGRG David-gareji 61.28 317 P **P** **01 54 43.9 +0.7**
VANB Van 61.53 313 *e*P **P** **01 54 43.1 -1.8**
DYDN Diyadin 61.68 315⇑ *i*P **P** **01 54 46.5 +0.7**
MTA Mtatsminda 61.78 317 P **P** **01 54 47.0 +0.4**
TBLG Delisi 61.83 317 P **P** **01 54 46.9 0.0**
SVE Sverdlovsk 62.19 338⇓ *e*P **P** **01 54 48.7 -0.2**
SVE *e* 01 57 07.7
SVE *e*S **S** **02 03 12.3 +1.0**
SVE *e*SS SS 02 07 12.8 -2.2
SVE pmax pmax
comp=Z,341nm,0.9s,mb6.5
SVE pmax pmax
comp=Z,796nm,10.4s
SVE MLR MLR
comp=Z,6µm,21.0s,MS5.7
AGRB Hanur-Agry 62.19 314 *e*P **P** **01 54 49.7 +0.4**
TUTA Tutak 62.25 314⇑ *i*P **P** **01 54 50.1 +0.4**
GOR Gori 62.37 317 P **P** **01 54 51.2 +0.7**
KARS Kars 62.52 315 *e*P **P** **01 54 51.8 +0.4**
ARU Arti 62.70 337 P **P** **01 54 51.0 -1.4**
comp=Z,876nm,0.9s,mb6.9,SNR=51
ARU Arti 62.70 337 *c i*P **P** **01 54 51.5 -0.9**
ARU *e* 01 55 30.9
ARU *e*S **S** **02 03 20.3 +2.5**
ARU 02 04 39.1
ARU SSS 02 10 11.4
ARU pmax pmax
comp=Z,132nm,0.8s,mb6.1
ARU MLR MLR
comp=Z,4µm,20.0s,MS5.6
ARU Arti 62.70 337 *e*P **P** **01 54 51.5 -0.8**
comp=Z,41nm,0.9s,mb5.5
ARU LR LR
comp=Z,5µm,22.0s,MS5.7

BEST Besiri 62.83 312⇑iP P 01 54 53.1 -0.5
HNR Honiara 62.87 102 P P 01 54 52.6 -1.8
comp=Z,139nm,0.7s,mb6.2,baz=183,slow=6.6,SNR=5.2
HNR Honiara 62.87 102 P P 01 54 52.6 -1.8
HNR LR LR
comp=Z,1µm,21.0s,MS5.0
MARD Mardin 63.00 311⇑iP P 01 54 54.8 0.0
TAU Tasmania Unive 63.02 141 P P 01 54 55.6 +0.8
TAU pmax pmax
comp=Z,53nm,1.7s,mb5.4
TAU MLR MLR
comp=Z,3µm,20.0s,MS5.4
TAU Tasmania Unive 63.02 141 P P 01 54 55.5 +0.8
comp=Z,53nm,1.7s,mb5.4
TAU LR LR
comp=Z,3µm,20.0s,MS5.4
BNGL BINGOL 63.29 313⇑iP P 01 54 57.3 +0.7
ERZM Erzurum 63.47 314⇑iP P 01 54 58.5 +0.7
EZM Erzurum 63.48 314 eP P 01 54 58.5 +0.6
DAGI Agillar 63.52 316⇑iP P 01 54 58.4 +0.3
ARTV Artvin 63.55 316⇑iP P 01 54 58.6 +0.3
DDEM Demirkent 63.56 315⇑iP P 01 54 58.5 +0.1
DBAD Bademkaya 63.65 315⇑iP P 01 54 59.2 +0.2
DIYA Diyarbakir 63.69 312⇑iP P 01 54 59.7 +0.4
BCA Borcka 63.86 316 eP P 01 54 59.5 -0.9
KIV Kislovodsk 64.13 319 P P 01 55 02.3 +0.2
comp=Z,1µm,0.9s,mb6.9,SNR=33
KIV Kislovodsk 64.13 319 ⇑P P 01 55 03.2 +1.1
SNR=30
KIV Kislovodsk 64.13 319c iP P 01 55 01.8 -0.3
KIV i pP 01 55 14.9 +0.5
KIV e 01 55 34.0
KIV i S S 02 03 39.9 +3.7
KIV i PS 02 04 09.6
KIV eSS SS 02 07 48.0 +2.1
KIV pmax pmax
comp=Z,203nm,0.9s,mb6.2
KIV MLR MLR
comp=Z,2µm,20.0s,MS5.2
KIV Kislovodsk 64.13 319 eP P 01 55 02.0 -0.1
comp=Z,62nm,0.9s,mb5.6
KIV LR LR
comp=Z,2µm,21.0s,MS5.2
PZAR Pazar-Rize 64.27 315 eP P 01 55 03.6 +0.5
SVRC Sivrice-ELAZID 64.45 312 eP P 01 55 03.8 -0.5
YAK Yakutsk 64.46 16 eP P 01 55 02.4 -1.5
YAK e 01 55 36.5
YAK e 01 57 24.4
YAK ePPP 01 58 59.8
YAK eS S 02 03 34.1 -5.5
YAK e*SS sS 02 04 14.4 +14
YAK e 02 04 46.2
YAK pmax pmax
comp=Z,495nm,0.9s,mb6.5
YAK pmax pmax
comp=E,118nm,1.1s
YAK pmax pmax
comp=N,112nm,1.1s
YAK pmax pmax
comp=Z,100nm,2.1s,mb5.5
YAK pmax pmax
comp=N,102nm,1.9s
YAK pmax pmax
comp=E,38nm,1.6s
YAK smax
comp=N,265nm,12.6s
YAK smax
comp=E,205nm,11.8s
YAK Yakutsk 64.46 16 eP P 01 55 03.0 -0.9
comp=E,571nm,0.8s,mb6.7
YAK epP pP 01 55 16.7 +0.6
YAK LR LR
comp=Z,8µm,20.0s,MS5.9
URFA Urfa 64.51 311 eP P 01 55 04.9 +0.2
EZC Erzincan 64.53 314 eP P 01 55 07.0 +2.2
PTK Pertek 64.55 313 eP P 01 55 04.7 -0.3
ELZG Elazig 64.73 312⇑iP P 01 55 06.7 +0.6
ATAB Bozova 64.92 311⇑iP P 01 55 08.0 +0.6
MACK Trabzon 64.98 315⇑iP P 01 55 08.1 +0.4
KTUT Trabzon 65.00 315 eP P 01 55 08.7 +0.9
GUMT Gumushane 65.02 314 eP P 01 55 08.3 +0.3
KEMA Kemaliye 65.34 313⇑iP P 01 55 10.6 +0.6
GZT Gaziantep 65.44 310⇑iP P 01 55 11.4 +0.6
AKCD Akcadag 65.45 312⇑iP P 01 55 12.8 +2.0
SOKR Solikamsk 65.57 338c iP P 01 55 11.1 0.0
SOKR pmax pmax
comp=Z,250nm,0.8s,mb6.3
SOKR MLR MLR
comp=Z,7µm,22.0s,MS5.8
GAZ Gaziantep 65.65 310 eP P 01 55 12.5 +0.4
ESPY Espiye-Giresun 65.71 314 eP P 01 55 12.3 -0.2
DARE Darende-Malaty 65.75 312 eP P 01 55 13.4 +0.7
RCY Rachaya 65.75 306 eP P 01 55 14.0 +1.2
SOC Sochi 65.97 317 eP P 01 55 12.0 -2.0
SOC e*PP pP 01 55 18.0 -8.4
SOC e*SP sP 01 55 24.5 -6.7
SOC e 01 55 41.0
SOC eS S 02 03 53.0 -5.7
SOC e 02 05 07.6
SOC eSS SS 02 08 20.5 +6.0
SOC pmax pmax
comp=Z,243nm,0.9s,mb6.2
SOC pmax pmax
comp=Z,571nm,4.7s
SOC MLR MLR
comp=Z,1µm,22.0s,MS5.2
SOC Sochi 65.97 317 i P P 01 55 14.4 +0.4
KMRS Kahramanmaras 65.99 310 eP P 01 55 14.1 -0.2
BHL Bhannes 65.99 306 eP P 01 55 15.3 +0.9
HTY Hatay 66.19 309 eP P 01 55 16.1 +0.5
ANDN Andirin 66.43 310 eP P 01 55 17.7 +0.5
SARI SarD1z-Kayseri 66.49 312 eP P 01 55 18.4 +0.9
SVSK Karacayir 66.64 313 eP P 01 55 17.0 -1.4
CEYT Ceyhan 66.73 310 eP P 01 55 19.5 +0.5
KOZT Kozan 66.80 310 eP P 01 55 18.7 -0.8
KRTS Karatas 66.90 309 eP P 01 55 20.9 +0.7
TOKT Tokat 67.09 313 eP P 01 55 20.8 -0.5
BNN Bunyan 67.17 312 eP P 01 55 21.7 -0.1
KARA Karaisali 67.33 310 eP P 01 55 22.8 0.0
MERS Mersin 67.64 309 eP P 01 55 24.4 -0.5
KVT Kavak 67.69 314 eP P 01 55 23.6 -1.4
YOZ Yozgat 67.79 312 eP P 01 55 26.4 +0.7
VRHR Novokhopersk 67.83 326 eP P 01 55 24.6 -1.1
VRHR e*SP sP 01 55 42.4 -0.5
VRHR eS S 02 04 15.6 -5.3
VRHR pmax pmax
comp=Z,200nm,0.8s,mb6.2
VRHR pmax pmax
comp=N,60nm,1.3s
VRHR pmax pmax
comp=E,50nm,0.7s
VRHR smax
comp=N,600nm,2.4s
VRHR smax
comp=Z,60nm,1.3s
VRHR smax
comp=E,420nm,3.3s
VRHR MLR MLR
comp=Z,3µm,23.0s,MS5.5
VRHR MLR MLR
comp=N,3µm,26.0s
VRHR MLR MLR
comp=E,980nm,14.0s
NIG Nigde 67.90 311 eP P 01 55 26.9 +0.5
ANN Anapa 67.94 318 eP P 01 55 27.2 +0.7
ANN pmax pmax
comp=Z,73nm,0.8s,mb5.8
ANN MLR MLR
comp=N,1µm,18.0s,MS5.4
ANN MLR MLR
comp=E,2µm,18.0s,MS5.4
ANN MLR MLR
comp=Z,1µm,18.0s,MS5.2
LFK Lefkose 68.02 307 eP P 01 55 28.1 +0.8
CSS Prodhromos 68.11 307 P P 01 55 27.7 -0.1
CSS LR LR
comp=Z,2µm,19.0s,MS5.5
IKL Isikli 68.13 308 eP P 01 55 27.8 -0.2
DIKM Dikmen 68.42 314 eP P 01 55 29.6 -0.1
CORM Corum 68.45 313 eP P 01 55 28.8 -1.1
CDAG Cicekdag 68.49 312⇑iP P 01 55 30.5 +0.4
LEF Lefka 68.50 307 eP P 01 55 29.9 -0.3
CASY Casey 68.74 175 eP P 01 55 37.7 +6.6
CASY eS S 02 04 31.4 +0.2
CASY Casey 68.74 175 eP P 01 55 37.7 +6.6
CASY eS S 02 04 31.4 +0.2
CASY LR LR
comp=Z,3µm,19.0s,MS5.6
SKR Severo-Kuril's 68.81 35 eP P 01 55 26.0 -5.9
SKR e 01 55 49.0
SKR e 02 04 34.0
SKR pmax pmax
comp=N,3µm,4.0s
SKR pmax pmax
comp=Z,4µm,4.0s
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.1
KAMT Kaman 68.91 312 eP P 01 55 31.2 -1.5
BRTR Keskin Array B 69.06 312 P P 01 55 32.7 -1.0
comp=Z,42nm,0.8s,mb5.4,baz=131,slow=6.2,SNR=121
BRTR PKP2ab 02 23 47.5
comp=Z,1.2nm,0.9s,baz=298,slow=5.5,SNR=5.5
BRTR LR LR 02 30 30.4
comp=Z,1µm,20.3s,MS5.1,baz=354,slow=40
BRTR Keskin Array B 69.06 312⇑eP P 01 55 32.7 -1.0
BR131 Keskin Array S 69.06 312 eP P 01 55 33.2 -0.5
comp=Z,16nm,0.8s,mb5.0
BR131 LR LR
comp=Z,1µm,20.0s,MS5.1
VORD Divnogorie 69.11 325 eP P 01 55 32.0 -1.7
VORD e*SP sP 01 55 49.4 -1.5
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,90nm,0.9s
VORD pmax pmax
comp=Z,130nm,0.9s,mb5.9
VORD MLR MLR
comp=Z,2µm,13.0s,MS5.4
VORD MLR MLR
comp=N,700nm,14.0s,MS5.3
VORD MLR MLR
comp=E,1µm,12.0s,MS5.3
TOS Tosya 69.14 313 eP P 01 55 33.5 -0.6
HDMB Hadim 69.24 309 eP P 01 55 34.1 -0.7
VSR Storozhevoye 69.29 325 eP P 01 55 33.1 -1.7
VSR e*SP sP 01 55 51.1 -0.9
VSR eS S 02 04 31.3 -6.9
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,60nm,0.8s
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.5
VSR smax
comp=N,70nm,1.8s
VSR smax
comp=Z,50nm,3.8s
VSR smax
comp=E,60nm,2.4s
VSR MLR MLR
comp=N,510nm,24.0s,MS5.1
VSR MLR MLR
comp=E,1µm,24.0s,MS5.1
VSR MLR MLR
comp=Z,730nm,24.0s,MS4.8
CANT Cankiri 69.31 313 eP P 01 55 34.9 -0.3
BZK Bozkurt 69.41 314 eP P 01 55 35.7 -0.1
VOR Voronezh 69.48 325 eP P 01 55 34.0 -2.0
VOR pmax pmax
comp=Z,400nm,2.0s,mb6.0
KONT Konya--Tatoy 69.57 310 eP P 01 55 35.9 -1.0
LADK Ladik-KONYA 69.63 310 eP P 01 55 36.1 -1.2
ANTO Ankara 69.73 312 eP P 01 55 36.5 -1.2
ANTO Ankara 69.73 312 ⇑P P 01 55 38.9 +1.1
SNR=11
ANTO Ankara 69.73 312 P P 01 55 37.7 -0.1
ANTO Ankara 69.73 312⇓iP P 01 55 36.8 -1.0
ANTO Ankara 69.73 312 eP P 01 55 37.4 -0.4
comp=Z,65nm,0.9s,mb5.6
ANTO LR LR
comp=Z,858nm,21.0s,MS5.0
BALT Daday 69.74 314 eP P 01 55 38.0 +0.2
LOD Lodumlu 69.75 312 eP P 01 55 36.7 -1.3
SAFT Safranbolu 70.16 313 eP P 01 55 39.7 -0.7
KIZT Kizilcal 70.17 311 eP P 01 55 39.2 -1.3
PEA0B Petropavlovsk- 70.70 34 eP P 01 55 43.8 +0.4
PETK Petropavlovsk- 70.70 34 P P 01 55 43.4 0.0
comp=Z,51nm,0.7s,mb5.5,baz=208,slow=3.4,SNR=34
PETK LR LR 02 30 33.6
comp=Z,2µm,18.1s,MS5.3,baz=237,slow=39
BCK Bucak 70.83 309 eP P 01 55 43.6 -1.0
NOUC Port Laguerre 70.88 114 eP P 01 55 43.9 -1.3
ISP Isparta 70.98 309 eP P 01 55 45.3 -0.1
ISP Isparta 70.98 309⇑iP P 01 55 45.9 +0.4
ISP Isparta 70.98 309 P P 01 55 45.8 +0.3
ISP LR LR
comp=Z,2µm,21.0s,MS5.3
LSZ Lusaka 70.98 253 P P 01 55 47.8 +1.9
LSZ e*PP pP 01 55 59.5 +1.2
LSZ pmax pmax
comp=Z,127nm,1.3s,mb5.7
LSZ MLR MLR
comp=Z,6µm,19.0s,MS5.9
LSZ Lusaka 70.98 253 P P 01 55 47.8 +1.9
comp=Z,127nm,1.3s,mb5.7
LSZ epP pP 01 55 59.5 +1.2
LSZ LR LR
comp=Z,6µm,19.0s,MS5.9
MDU Mudurnu 71.05 312 eP P 01 55 44.5 -1.3
NORM Noumea 71.07 114 eP P 01 55 46.2 -0.1
KDZE Karadeniz Ereo 71.09 313 eP P 01 55 45.9 -0.1
ESKT Eskisehir 71.09 311 eP P 01 55 46.5 +0.4
SHUT Suhut-Afyon 71.10 310 eP P 01 55 45.4 -0.8
PET Petropavlovsk 71.19 34 eP P 01 55 46.3 -0.1
PET e 01 56 04.8
PET e 01 58 26.5
PET eS S 02 05 00.2 -0.2
PET ePS 02 05 27.1
PET ePPS 02 05 39.1
PET pmax pmax
comp=Z,292nm,0.8s,mb6.3
PET pmax pmax
comp=Z,1µm,8.3s
PET pmax pmax
comp=Z,1µm,15.6s
PET pmax pmax
comp=Z,400nm,19.2s
PET MLR MLR
comp=Z,2µm,19.0s,MS5.4
PET MLR MLR
comp=Z,2µm,20.0s
PET Petropavlovsk 71.19 34 eP P 01 55 45.9 -0.6
comp=Z,265nm,0.9s,mb6.2
PET LR LR
comp=Z,2µm,22.0s,MS5.4
AKAS Kas 71.35 308⇑iP P 01 55 47.5 -0.3
KSL Kastellorizon 71.35 307 eP P 01 55 48.0 +0.3
ALT Altintas 71.55 311 eP P 01 55 48.2 -0.7
GULT Gulveren 71.56 312 eP P 01 55 47.8 -1.1
GOLH Golhisar 71.58 309⇑iP P 01 55 46.5 -2.6
GPA Golpazari 71.68 312 eP P 01 55 48.9 -0.7
KHAL Karahalli 71.87 310⇑iP P 01 55 49.9 -1.0
MOS Moscow 71.98 329 eP P 01 55 48.7 -2.4
MOS i 01 56 06.5
MOS e 01 58 30.4
MOS ePPP 02 00 10.6
MOS eS S 02 05 04.5 -4.9
MOS pmax pmax
comp=Z,334nm,0.9s,mb6.3
MOS pmax pmax
comp=Z,1µm,2.2s,mb6.4
MOS MLR MLR
comp=E,3µm,22.0s
MOS MLR MLR
comp=Z,4µm,22.0s,MS5.7
GDZ Gediz 72.03 310⇑iP P 01 55 51.0 -0.8
TIXI Tiksi 72.28 10c iP P 01 55 51.3 -1.3
TIXI pmax pmax
comp=Z,221nm,0.9s,mb6.1
TIXI MLR MLR
comp=Z,7µm,21.0s,MS5.9
TIXI Tiksi 72.28 10 eP P 01 55 51.2 -1.4
comp=Z,198nm,0.8s,mb6.1
TIXI LR LR
comp=Z,5µm,20.0s,MS5.8
OBN Obninsk 72.28 328 P P 01 55 52.1 -0.8
comp=Z,997nm,0.5s,mb7.0,SNR=26
OBN Obninsk 72.28 328c iP P 01 55 51.9 -1.0
OBN i 01 56 11.0
OBN i 01 58 34.5
OBN pmax pmax
comp=Z,421nm,1.9s,mb6.0
OBN Obninsk 72.28 328 eP P 01 55 52.2 -0.7
comp=Z,226nm,1.0s,mb6.0
OBN LR LR
comp=Z,2µm,19.0s,MS5.4
DEMI Demirci 72.61 310⇑iP P 01 55 54.4 -0.8
MANT Manisa 72.62 310⇑iP P 01 55 54.9 -0.4
SEY Seymchan 72.76 23⇑iP P 01 55 55.2 -0.4
SEY Seymchan 72.76 23⇑iP P 01 55 55.3 -0.3
KARP Karpathos 73.17 306 eP P 01 55 59.0 +0.4
AKHS Akhisar 73.26 310⇑iP P 01 55 58.6 -0.5
KLMR Klimovskoe 73.31 334c iP P 01 55 57.9 -1.0
KLMR eS S 02 05 15.0 -9.4
KLMR pmax pmax
comp=Z,150nm,1.3s,mb5.8
MAW Mawson 73.65 193 eP P 01 56 01.5 +0.7
comp=Z,35nm,0.8s,mb5.3
MAW eS S 02 05 28.7 +0.8
MAW Mawson 73.65 193 P P 01 56 02.0 +1.2
comp=Z,16nm,0.8s,mb5.0,baz=1.8,slow=7.0,SNR=25
MAW LR LR 02 22 08.6
comp=Z,4µm,20.8s,MS5.7,baz=24,slow=31
MAW Mawson 73.65 193 eP P 01 56 01.5 +0.7
comp=Z,35nm,0.8s,mb5.3
MAW eS S 02 05 28.7 +0.8
MAW LR LR
comp=Z,7µm,22.0s,MS5.9
BLCB Balcova 73.76 309 P P 01 56 02.1 0.0
SMG Samos 73.80 309 eP P 01 56 00.5 -1.8
TLCR 73.89 317⇑iP P 01 56 02.4 -0.3
TLCR 73.89 317 ⇑P P 01 56 02.4 -0.3
PSN Preselentsi 73.99 315 i P P 01 56 04.7 +1.4
TIRR Tirgusor 74.00 316 P P 01 56 03.2 -0.1
TIRR Tirgusor 74.00 316⇑iP P 01 56 02.8 -0.5
TIRR Tirgusor 74.00 316 eP P 01 56 02.9 -0.5
comp=Z,100nm,0.8s,mb5.8
AYVA Ayvalik 74.20 310 eP P 01 56 04.2 -0.5
CVD Cernavoda 74.24 316 P P 01 56 05.0 +0.3
KIS Kishinev 74.33 318⇓iP P 01 56 04.0 -1.2
KIS i 01 56 11.0
KIS e 01 58 56.0
KIS ePPP 02 00 41.0
KIS eS S 02 05 34.0 -2.4
KIS ePS 02 06 07.0
KIS pmax pmax
comp=Z,500nm,2.3s,mb6.0
KIS MLR MLR
comp=E,1µm,20.0s
KIS MLR MLR
comp=Z,1µm,20.0s,MS5.2
KIS MLR MLR
comp=Z,1µm,20.0s
KIS Kishinev 74.33 318 i P P 01 56 04.0 -1.2
comp=Z,500nm,2.3s,mb6.0
KIS Kishinev 74.33 318 ePP PP 01 58 56.0 +4.4
KIS Kishinev 74.33 318 ePS 02 06 07.0
KIS eL 02 21 16.0
KIS LRM 02 31 44.0
comp=Z,1µm,20.0s
KIS Kishinev 74.33 318 ⇓P P 01 56 04.0 -1.2
NPS Neapolis 74.37 306 eP P 01 56 06.0 +0.3
HARR Harsova 74.39 316 P P 01 56 05.6 0.0
HARR Harsova 74.39 316⇓iP P 01 56 05.4 -0.2
HARR Harsova 74.39 316 ⇓P P 01 56 05.4 -0.2
PRD Provadia 74.44 314 i P P 01 56 06.8 +0.9
LAST Lasithi 74.47 306 P P 01 56 06.5 +0.3
PRK Paraskevi 74.51 310 P P 01 56 06.1 -0.3
PRK Paraskevi 74.51 310 eP P 01 56 06.5 +0.1
CHOS Chios island 74.53 309 P P 01 56 06.5 0.0
APE Apeiranthos 74.72 308 P P 01 56 07.8 +0.1
DRV Dumont d'Urvil 74.74 164 P P 01 56 11.0 +3.9
DRV Dumont d'Urvil 74.74 164 PP PP 01 58 54.0 -0.7
DRV S S 02 05 38.0 -2.2
DRV SS SS 02 10 27.0 -1.5
DRV L 02 15 00.0
DRV R 02 19 00.0
LBTB Lobatse 74.84 244 eP P 01 56 10.7 +2.1
LBTB pmax pmax
comp=Z,131nm,1.2s,mb5.7
LBTB MLR MLR
comp=Z,5µm,21.0s,MS5.8
LBTB Lobatse 74.84 244 eP P 01 56 10.7 +2.1
comp=Z,131nm,1.2s,mb5.7
LBTB LR LR
comp=Z,5µm,21.0s,MS5.8
JMB Yambol 74.88 313 P P 01 56 08.9 +0.4
JMB Yambol 74.88 313 i P P 01 56 10.4 +1.9
ALN Alexandroupoli 74.98 312 P P 01 56 08.3 -0.8
SIVA Sivas 74.99 306 P P 01 56 08.7 -0.6
AKASG Malin Array Be 75.02 322 P P 01 56 07.9 -1.2
comp=Z,109nm,0.8s,mb5.9,baz=90,slow=5.0,SNR=166
AKASG LR LR 02 35 11.8
comp=Z,1µm,19.1s,MS5.2,baz=80,slow=41
AKASG Malin Array Be 75.02 322 i P P 01 56 07.9 -1.2
AKASG pmax pmax
comp=Z,109nm,0.8s
AKBB Malin Array Si 75.02 322 eP P 01 56 08.0 -1.1
AKBB epP pP 01 56 22.6 +1.0
KIEV Kiev 75.03 322 eP P 01 56 08.0 -1.2
KIEV pmax pmax
comp=Z,91nm,0.8s,mb5.8
KIEV MLR MLR
comp=Z,2µm,19.0s,MS5.4
KIEV Kiev 75.03 322 eP P 01 56 08.0 -1.2
comp=Z,91nm,0.8s,mb5.8
KIEV LR LR
comp=Z,2µm,19.0s,MS5.4
LIA Limnos Island 75.45 311 P P 01 56 10.9 -0.9
VRI Vrincioaia 75.48 317⇓iP P 01 56 12.4 +0.5
VRI Vrincioaia 75.48 317 ⇓P P 01 56 12.4 +0.5
SZH Strazhica 75.51 314 i P P 01 56 13.1 +1.0
PLOR Plostina 75.53 317⇑iP P 01 56 12.9 +0.8
VAM Vamos 75.54 306 eP P 01 56 12.5 +0.1
GVD Gavdhos 75.55 305 eP P 01 56 13.0 +0.5
DIM Dimitrovgrad 75.57 313 i P P 01 56 12.5 0.0
BOSA Boshof 75.75 240 P P 01 56 14.6 +0.8
comp=Z,13nm,0.7s,mb5.0,baz=75,slow=6.5,SNR=24
BOSA LR LR 02 24 33.3
comp=Z,4µm,20.8s,MS5.8,baz=62,slow=32
BOSA Boshof 75.75 240 P P 01 56 15.2 +1.4
BOSA pmax pmax
comp=Z,160nm,1.5s,mb5.7
BOSA Boshof 75.75 240 eP P 01 56 14.9 +1.1
comp=Z,156nm,1.5s,mb5.7
BOSA LR LR
comp=Z,4µm,20.0s,MS5.8
MLR Muntele Rosu 75.94 316 LR LR 02 33 44.6
comp=Z,1µm,18.8s,MS5.3,slow=39
MLR Muntele Rosu 75.94 316 P P 01 56 15.1 +0.6
MLR Muntele Rosu 75.94 316⇑iP P 01 56 14.3 -0.2
MLR Muntele Rosu 75.94 316 ⇑P P 01 56 14.3 -0.2
ZIMR 75.99 314⇑iP P 01 56 15.2 +0.4
ZIMR 75.99 314 ⇑P P 01 56 15.2 +0.4
RZN Rozhen 76.11 312 i P P 01 56 16.1 +0.6
PTL Penteli 76.18 309 eP P 01 56 15.0 -1.0
PLD Plovdiv 76.19 313 P P 01 56 15.3 -0.7
ATH Athens Observa 76.28 309 eP P 01 56 16.0 -0.6
NAIG Nisos Aigina 76.43 308 eP P 01 56 17.0 -0.5
VOIR 76.54 316 P P 01 56 17.6 -0.3
VOIR 76.54 316⇓iP P 01 56 17.0 -0.9
VOIR 76.54 316 ⇓P P 01 56 17.0 -1.0
KYTH Kithira 76.59 307 eP P 01 56 18.0 -0.4
PAIG Paliouri 76.60 310 P P 01 56 17.5 -0.9
VLI Veliai 76.73 307 eP P 01 56 19.5 +0.3
MMB Musomiste 76.82 312 i P P 01 56 19.7 +0.1
PLG Polygyros 76.84 311 P P 01 56 18.7 -1.0
MNK Minsk 76.85 326⇓iP P 01 56 17.0 -2.5
MNK pmax pmax
comp=Z,930nm,2.0s,mb6.4
MNK pmax pmax
comp=N,600nm,2.0s
MNK MLR MLR
comp=Z,6µm,20.0s,MS5.9
MNK MLR MLR
comp=N,6µm,20.0s
BURAR Bucovina Array 76.86 318⇑iP P 01 56 20.4 +0.7
BUR08 Bucovina Ar. S 76.87 318 eP P 01 56 20.3 +0.6
LTK Loutraki 76.88 308 P P 01 56 17.7 -2.3
LKR Lokris 76.94 309 P P 01 56 19.5 -0.8
SOH Sokhos 76.98 311 P P 01 56 19.5 -1.0

PUL **Pulkovo** 77.10 331 *e*P P 01 56 20.7 0.0
KKB **Krupnik** 77.34 312 *i* P P 01 56 23.6 +1.1
VTS **Vitosha** 77.36 313⇓*i*P P 01 56 22.1 -0.5
VTS **Vitosha** 77.36 313 *i* P P 01 56 23.1 +0.5
VTS **Vitosha** 77.36 313 ⇓P P 01 56 22.1 -0.5
KNT **Kendrikon** 77.37 312 P P 01 56 21.6 -1.1
AGG **Agios Georgios** 77.50 309 P P 01 56 21.3 -2.2
LIT **Litokhoron** 77.53 311 P P 01 56 22.0 -1.6
ITM **Ithomi** 77.59 308 *e*P P 01 56 23.0 -1.0
VAY **Valandovo** 77.64 312 P P 01 56 22.2 -2.0
VAY **Valandovo** 77.64 312 *i* P P 01 56 22.5 -1.6
PYL **PYLOS** 77.70 307 P P 01 56 22.1 -2.5
JOF **Joensuu** 77.70 335 *e*p P 01 56 23.8 -0.2
comp=N,10nm,0.4s,mb5.1
JOF **Joensuu** 77.70 335 *e*P P 01 56 23.8 -0.2
JOF pmax pmax
comp=Z,11nm,0.4s,mb5.1
GRG **Griva** 77.71 311 P P 01 56 23.1 -1.5
THL **Klokotos Trika** 77.82 310 P P 01 56 22.6 -2.6
EVR **Evrytania** 77.89 309 *e*P P 01 56 25.5 -0.2
STIP **Stip** 77.98 312 *e*P P 01 56 26.2 +0.1
LVV **L'vov** 78.06 321⇑*i*P P 01 56 26.6 +0.3
DEV **Deva** 78.11 316⇑*i*P P 01 56 27.6 +0.9
GZR **Gura Zlata** 78.11 316⇑*i*P P 01 56 27.0 +0.3
GZR **Gura Zlata** 78.11 316 ⇑P P 01 56 27.0 +0.2
LVZ **Lovozero** 78.30 340 P P 01 56 26.5 -0.8
comp=Z,603nm,0.9s,mb6.5,SNR=6.1
LVZ **Lovozero** 78.30 340 *e*P P 01 56 26.8 -0.5
LVZ MLR MLR
comp=Z,5µm,22.0s,MS5.8
DRGR 78.39 317⇑*i*P P 01 56 28.5 +0.3
DRGR 78.39 317 ⇑P P 01 56 28.4 +0.2
FNA **Florina** 78.46 311 P P 01 56 27.1 -1.7
VSU **Vasula** 78.49 329 *e*P P 01 56 27.6 -0.9
VSU pmax pmax
comp=Z,132nm,0.9s,mb5.9
VSU MLR MLR
comp=Z,2µm,19.0s,MS5.4
BIA **Bitola** 78.53 311 *e*P P 01 56 27.3 -1.8
SKO **Skopje** 78.57 312 *e*P P 01 56 28.6 -0.7
APA **Apatity** 78.60 339⇑*i*P P 01 56 28.5 -0.5
APA *i* 01 56 34.5
APA *i* 01 59 24.0
APA *i* PPP 02 01 14.5
APA *i* S S 02 06 20.0 -2.5
APA *i* 02 06 42.0
APA pmax pmax
comp=Z,80nm,0.8s,mb5.7
APA MLR MLR
comp=Z,5µm,22.0s,MS5.8
KRUS **Krusevo** 78.63 312 *i* P P 01 56 28.8 -0.9
JAN **Janina** 78.72 310 *e*P P 01 56 30.0 -0.2
TRPA **Tarpa** 78.72 319⇑*i*P P 01 56 29.7 -0.3
VLS **Valsamata** 78.75 308 P P 01 56 29.4 -1.0
VLS **Valsamata** 78.75 308 *e*P P 01 56 30.0 -0.4
KWP **Kalwaria** 78.87 320 *e*P P 01 56 31.9 +1.1
KWP *e*S S 02 06 25.5 -0.5
KWP LMZ 02 37 07.5
comp=Z,2µm,22.9s
KWP **Kalwaria** 78.87 320 *e*P P 01 56 31.9 +1.1
KWP *e*S S 02 06 25.5 -0.5
KWP **Kalwaria** 78.87 320⇑*i*P P 01 56 31.0 +0.2
KWP **Kalwaria** 78.87 320 *e*P P 01 56 31.9 +1.1
KWP *e*S S 02 06 25.5 -0.5
KWP LR LR
comp=Z,2µm,20.0s,MS5.5
BZS **Buzias** 78.95 316⇑*i*P P 01 56 31.0 -0.3
BZS **Buzias** 78.95 316 P P 01 56 30.9 -0.4
UZH **Uzhgorod** 78.97 319⇓*i*P P 01 56 31.0 -0.4
UZH *e* pP 01 56 42.3 -1.7
UZH *i* 01 59 31.3
UZH *e*S S 02 06 23.0 -4.1
KOLS **Kolonicke sedl** 79.03 319 *e*P P 01 56 32.2 +0.5
KOLS pmax pmax
comp=Z,72nm,1.1s,mb5.5
KOLS **Kolonicke sedl** 79.03 319 *e*P P 01 56 32.2 +0.5
comp=Z,72nm,1.1s,mb5.5
IGT **Igoumenitsa** 79.11 310 P P 01 56 31.0 -1.3
TIM **Timisoara** 79.25 316 P P 01 56 33.5 +0.6
TIM **Timisoara** 79.25 316⇑*i*P P 01 56 33.4 +0.5
TIM **Timisoara** 79.25 316 ⇑P P 01 56 33.4 +0.4
RPZ **Rata Peaks** 79.31 135 P P 01 56 32.7 -0.6
comp=Z,38nm,0.7s,mb5.4,baz=249,slow=2.2,SNR=21
SUW **Suwalki** 79.40 325 *e*P P 01 56 32.8 -0.8
SUW *e*S S 02 06 28.4 -3.0
SUW LMZ 02 33 02.8
comp=Z,2µm,26.4s
SUW **Suwalki** 79.40 325 *e*P P 01 56 32.8 -0.8
SUW *e*S S 02 06 28.4 -3.0
KEK **Kerkira** 79.53 310 *e*P P 01 56 34.0 -0.7
CRVS **Cervenica-Dubn** 79.56 319 *e*P P 01 56 34.6 0.0
CRVS *e*S S 02 06 29.8 -3.5
CRVS **Cervenica-Dubn** 79.56 319 *e*P P 01 56 34.6 0.0
comp=Z,107nm,1.4s,mb5.6
CRVS *e*S S 02 06 29.8 -3.5
CRVS LR LR
comp=Z,800nm,27.3s,MS4.9
KAF **Kangasniemi** 79.66 333 *e*p P 01 56 34.4 -0.5
comp=Z,9.1nm,0.4s,mb5.1,baz=101,slow=5.0
KAF **Kangasniemi** 79.66 333 *e*P P 01 56 34.4 -0.5
KAF pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
TIR **Tirane** 79.66 312 *e*P P 01 56 35.8 +0.4
comp=Z,63nm,0.8s,mb5.6
TIR LR LR
comp=Z,2µm,20.0s,MS5.3
PVY **Plav** 79.73 313 *e*P P 01 56 34.5 -1.1
STHS **Stebnicka Huta** 79.78 320 *e*P P 01 56 36.0 +0.2
STHS *e*S S 02 06 34.4 -1.2
STHS *e*SS ScS 02 06 55.4 -1.4
STHS pmax pmax
comp=Z,37nm,0.8s,mb5.4
STHS **Stebnicka Huta** 79.78 320 *e*P P 01 56 36.0 +0.2
comp=Z,36nm,0.8s,mb5.4
STHS *e* 01 56 56.0
STHS *e*S S 02 06 34.4 -1.2
STHS *e*SS ScS 02 06 55.4 -1.4
IVA **Berane** 79.81 313 *e*P P 01 56 35.1 -1.0
SMY **Shemya** 80.08 37 *e*P P 01 56 37.5 +0.2
SMY pmax pmax
comp=Z,279nm,0.9s,mb6.2
SMY **Shemya** 80.08 37 *e*P P 01 56 37.5 +0.2
comp=Z,278nm,0.9s,mb6.2
SUR **Sutherland** 80.16 237 P P 01 56 41.9 +3.7
comp=Z,378nm,1.6s,mb6.1,SNR=5.3
SUR **Sutherland** 80.16 237 *e*P P 01 56 40.3 +2.1
comp=Z,370nm,1.8s,mb6.0
SUR LR LR
comp=Z,4µm,21.0s,MS5.8
BILL **Bilibino** 80.17 21*c* *i*P P 01 56 37.6 +0.1
BILL *e*SS SS 02 11 47.5 -2.7
BILL pmax pmax
comp=Z,25nm,1.0s,mb5.1
BILL pmax pmax
comp=Z,4µm,22.9s
BILL **Bilibino** 80.17 21 *e*P P 01 56 37.1 -0.4
comp=Z,17nm,0.4s,mb5.3
BILL LR LR
comp=Z,3µm,22.0s,MS5.6
ULC **Ulcinj** 80.19 312⇑*i*P P 01 56 37.4 -0.8
TTG **Podgorica** 80.23 313⇑*i*P P 01 56 37.2 -1.2
PLE **Pljevlja** 80.23 313⇑*i*P P 01 56 38.8 +0.4
NIE **Niedzica** 80.38 320 *e*P P 01 56 39.3 +0.3
PSZ **Piszkesteto** 80.45 318⇑*e*P P 01 56 39.0 -0.4
PSZ **Piszkesteto** 80.45 318⇑*i*P P 01 56 39.5 +0.1
PSZ **Piszkesteto** 80.45 318 *e*P P 01 56 39.0 -0.4
comp=Z,53nm,0.8s,mb5.5
PSZ LR LR
comp=Z,1µm,20.0s,MS5.2
NKY **Niksic** 80.47 313⇑*i*P P 01 56 38.7 -0.9
BUM **Brajici-Budva** 80.48 312⇑*i*P P 01 56 38.8 -0.9
UPM **Unac-Piva** 80.57 313⇑*i*P P 01 56 39.3 -0.9
HCY **Herceg Novi** 80.79 313⇑*i*P P 01 56 40.0 -1.4
BRY **Bratogost** 80.81 313⇑*i*P P 01 56 40.4 -1.0
OJC **Ojcow** 80.82 320 *e*P P 01 56 41.1 -0.3
OJC *e*sP sP 01 56 57.5 -1.2
OJC *e*S S 02 06 45.8 -0.7
OJC L 02 39 05.6
comp=Z,1.0nm,22.0s
OJC **Ojcow** 80.82 320 *e*P P 01 56 41.1 -0.3
OJC *e**SP sP 01 56 57.5 -1.2
OJC *e*S S 02 06 45.8 -0.7
SYO **Syowa Base** 80.97 198⇑*e*P P 01 56 45.0 +3.2

BUD **Budapest** 80.98 318⇑*e*P P 01 56 43.4 +1.2
PKSM **Moragy** 81.09 316 P P 01 56 42.5 -0.4
PKSM **Moragy** 81.09 316⇑*i*P P 01 56 42.3 -0.6
PKSM **Moragy** 81.09 316 ⇑P P 01 56 42.4 -0.5
VYHS **Vyhne** 81.22 319 *e*P P 01 56 43.1 -0.4
VYHS *e* pP 01 56 54.6 -1.6
VYHS *e* 01 59 48.2
VYHS pmax pmax
comp=Z,21nm,1.1s,mb5.0
VYHS MLR MLR
comp=Z,600nm,24.5s,MS4.9
VYHS **Vyhne** 81.22 319 *e*P P 01 56 43.1 -0.4
VYHS *e*pP pP 01 56 54.6 -1.6
VYHS *e*PP PP 01 59 48.2 -1.1
VYHS **Vyhne** 81.22 319 *e*P P 01 56 43.1 -0.4
comp=Z,21nm,1.1s,mb5.0
VYHS *e* pP 01 56 54.6 -1.6
VYHS *e*PP PP 01 59 48.2 -1.1
VYHS LR LR
comp=Z,600nm,24.5s,MS4.9
STON **Ston** 81.42 313 *i* P P 01 56 43.4 -1.3
SNZO **South Karori** 81.46 132 *e*P P 01 56 43.3 -1.7
comp=Z,44nm,0.8s,mb5.5
SNZO LR LR
comp=Z,4µm,22.0s,MS5.8
TSUM **Tsumeb** 81.48 250 *e*P P 01 56 47.6 +2.0
comp=Z,64nm,1.1s,mb5.5
TSUM *e*pP pP 01 56 60.0 +1.8
TSUM LR LR
comp=Z,2µm,22.0s,MS5.4
KOLL **Kolacno** 81.52 319 *e*P P 01 56 44.5 -0.6
KOLL *e*pP pP 01 56 59.1 +1.4
KOLL **Kolacno** 81.52 319 *e*P P 01 56 44.6 -0.5
KOLL *e* pP 01 56 59.1 +1.4
KEV **Kevo** 81.56 341 *e*P P 01 56 44.6 -0.3
comp=Z,2.8nm,0.3s,mb4.7
KEV LR LR
comp=Z,4µm,22.0s,MS5.7
RAC **Raciborz** 81.83 320 *e*P P 01 56 47.2 +0.5
OKC **Ostrava-Krasne** 81.83 320 *i* P P 01 56 46.7 0.0
TIP **Timpagrande** 81.83 309 *e*P P 01 56 47.2 +0.2
comp=Z,65nm,1.0s,mb5.5
TIP LR LR
comp=Z,1µm,19.0s,MS5.2
LTRZ **Laterza** 81.89 311 P P 01 56 46.7 -0.5
ARCES **ARCESS Array B** 82.00 340 P P 01 56 46.9 -0.3
comp=Z,66nm,0.7s,mb5.7,baz=96,slow=7.7,SNR=123
ARCES PP PP 01 59 56.7 +1.5
comp=Z,11nm,0.9s,baz=69,slow=6.6,SNR=3.9
ARCES LR LR 02 36 38.5
comp=Z,4µm,21.3s,MS5.8,baz=112,slow=38
ARCES **ARCESS Array B** 82.00 340 P P 01 56 46.9 -0.3
ARCES 01 59 56.7
ARCES pmax pmax
comp=Z,66nm,0.7s
ARCES pmax pmax
comp=Z,11nm,0.9s
ARCES MLR MLR
comp=Z,4µm,21.3s
ARE0 **ARCESS Array S** 82.00 340 *e*P P 01 56 47.3 +0.1
SMOL **Smolenice** 82.16 319 *e*P P 01 56 48.8 +0.3
SMOL *e*pP pP 01 57 02.3 +1.2
MODS **Modra-Piesok** 82.24 318 *e*P P 01 56 48.7 -0.2
MODS *e*pP pP 01 57 00.5 -1.0
MODS *e*S S 02 06 59.2 -2.1
MODS **Modra-Piesok** 82.24 318 *e*P P 01 56 48.7 -0.2
comp=Z,29nm,1.2s,mb5.1
MODS *e* pP 01 57 00.6 -0.9
MODS *e*S S 02 06 59.2 -2.1
MODS LR LR
comp=Z,600nm,23.9s,MS4.9
ZST **Bratislava** 82.34 318 *e*P P 01 56 49.9 +0.5
ZST *e*S S 02 07 02.5 +0.2
ZST **Bratislava** 82.34 318 *e*P P 01 56 49.9 +0.5
comp=Z,70nm,0.8s,mb5.7
ZST *e*S S 02 07 02.5 +0.2
ZST LR LR
comp=Z,800nm,12.5s,MS5.3
CEL **Celeste** 82.45 308 *e*P P 01 56 51.2 +1.0
comp=Z,115nm,0.8s,mb5.9
CEL LR LR
comp=Z,945nm,20.0s,MS5.2
SISC **Sisak** 82.60 315 *i* P P 01 56 51.4 +0.6
CUC **Castrocucco** 82.61 310 *e*P P 01 56 50.5 -0.6
comp=Z,84nm,0.8s,mb5.8
CUC LR LR
comp=Z,2µm,20.0s,MS5.5
FGMS **Monte Sant'Ang** 82.62 312 P P 01 56 50.4 -0.6
comp=Z,86nm,0.8s,mb5.8
KTK1 **Kautokeino** 82.65 339 *e*P P 01 56 50.5 -0.1
KTK1 *e*pP pP 01 57 03.7 +0.4
SOP **Sopron** 82.66 318⇑*e*P P 01 56 50.6 -0.5
KOGS **Kog** 82.76 316 *i* P P 01 56 51.6 -0.1
GKP **Gorka Klasztor** 82.78 323 *e*P P 01 56 50.9 -0.7
GKP *e*PcP PcP 01 56 53.7 -2.7
GKP LMZ 02 34 49.3
comp=Z,2µm,27.6s
GKP **Gorka Klasztor** 82.78 323 *e*P P 01 56 50.9 -0.7
GKP *e*PcP PcP 01 56 53.7 -2.7
GKP LR LR
comp=Z,2µm,27.6s,MS5.4
URZ **Urewera** 82.80 129 P P 01 56 50.5 -1.5
comp=Z,21nm,0.8s,mb5.2,baz=281,slow=2.4,SNR=16
MGR **Morigerati** 82.82 310 P P 01 56 51.2 -0.9
DPC **Dobruska-Polom** 83.05 320 *i* P P 01 56 53.5 +0.4
DPC *e*pP pP 01 57 06.2 +0.5
DPC *e*SKS 02 07 07.8
AMKA **Amchitka** 83.08 39 *e*P P 01 56 53.0 -0.2
comp=Z,63nm,1.0s,mb5.6
FG5 **Orsara di Pugl** 83.11 311 P P 01 56 54.0 +0.4
FG5 pmax pmax
comp=Z,78nm,0.8s,mb5.8
FG5 **Orsara di Pugl** 83.11 311 P P 01 56 54.0 +0.4
comp=Z,78nm,0.8s,mb5.8
KSP **Ksiaz** 83.11 321 *e*P P 01 56 52.4 -1.0
KSP *e*PcP PcP 01 56 55.1 -2.8
KSP LMZ 02 39 17.5
comp=Z,2µm,21.6s
KSP **Ksiaz** 83.11 321 *e*P P 01 56 53.3 -0.1
KSP *e**PP pP 01 57 04.5 -1.6
KSP *e*S S 02 07 12.0 +1.9
KSP **Ksiaz** 83.11 321 *e*P P 01 56 53.3 -0.1
KSP *e*pP pP 01 57 04.5 -1.6
KSP *e*S S 02 07 12.0 +1.9
KSP LR LR
comp=Z,3µm,23.4s,MS5.5
CONA **Conrad Observa** 83.14 318⇑*i*P P 01 56 53.2 -0.4
comp=Z,31nm,0.9s,mb5.4,SNR=14
CSNA **Conrad Observa** 83.15 318⇑*i*P P 01 56 53.2 -0.4
comp=Z,27nm,0.8s,mb5.3
UPC **Upice** 83.26 320 *i* P P 01 56 54.2 0.0
ARSA **Arzberg** 83.32 317 *i* P P 01 56 54.4 -0.2
comp=Z,60nm,0.9s,mb5.6,SNR=34
BOJS **Bojanci** 83.39 315 *i* P P 01 56 54.6 -0.3
WDD **Wield Dalam** 83.42 306 PFAKE 01 57 10.0 +15
WDD LR LR
comp=Z,1µm,19.0s,MS5.4
TREC **Trest** 83.50 319 *e*P P 01 56 55.1 -0.3
PERS **Pernice** 83.56 317 *i* P P 01 56 55.6 -0.1
PERS *e*S S 02 07 12.4 -2.3
NVLJ **Novalja** 83.59 314 *i* P P 01 56 54.7 -1.3
SOKA **Soboth** 83.62 317⇑*i*P P 01 56 56.1 +0.1
comp=Z,108nm,0.9s,mb6.0
MIDA **Miranda** 83.89 311 P P 01 56 56.9 -0.7
LJU **Ljubljana** 83.93 316 *i* P P 01 56 57.8 +0.1
OBKA **Obir** 83.94 316⇑*i*P P 01 56 57.7 0.0
comp=Z,54nm,1.0s,mb5.6,SNR=16
CEY **Cerknica** 83.98 316 *i* P P 01 56 57.9 0.0
PRU **Pruhonice** 84.17 320 *i* P P 01 56 58.7 -0.1
*e*pP pP 01 57 07.8 -3.7
PVCC **Panska Ves** 84.18 320 *i* P P 01 56 59.0 +0.1
PVCC *e*pP pP 01 57 07.4 -4.2
PVCC AMS AMS 02 40 50.0
comp=Z,2µm,19.7s
MOA **Molln** 84.21 318⇑*i*P P 01 56 58.3 -0.7
comp=Z,29nm,0.8s,mb5.5,SNR=34
JAVS **Javornik** 84.24 316 *i* P P 01 56 58.6 -0.7
SKDS **Skadanscina** 84.26 315 *i* P P 01 56 58.3 -1.0
TRO **Tromso** 84.27 340 *e*P P 01 56 58.2 -0.8
TRO AMb AMB 01 57 00.4
comp=Z,122nm,1.1s,mb5.9
BSD **Bornholm Skovb** 84.32 325 *i* P P 01 56 58.4 -1.0
BSD pmax pmax
comp=Z,66nm,0.8s,mb5.8

BSD **Bornholm Skovb** 84.32 325 *i* P P 01 56 58.4 -1.0
comp=Z,66nm,0.8s,mb5.8
VOY **Vojsko** 84.37 316 *e*(P) P 01 56 59.3 -0.6
VOY *e* 01 57 06.1
VOY *e* 01 57 15.0
VOY *e* 01 57 45.2
TRI **Trieste** 84.44 316 P P 01 56 59.6 -0.7
TRI pmax pmax
comp=Z,55nm,0.9s,mb5.7
TRI **Trieste** 84.44 316 *e*P P 01 56 59.5 -0.8
comp=Z,54nm,0.8s,mb5.7
TRI LR LR
comp=Z,2µm,22.0s,MS5.4
MIDW **Midway** 84.44 62 PFAKE 01 57 10.0 +9.3
MIDW LR LR
comp=Z,2µm,19.0s,MS5.4
CADS **Cadrg** 84.48 316 *i* P P 01 56 59.9 -0.6
AQU **L'Aquila** 84.55 312 P P 01 57 00.7 -0.2
AQU pmax pmax
comp=Z,130nm,1.0s,mb6.0
AQU **L'Aquila** 84.55 312⇑*i*P P 01 57 00.5 -0.4
AQU **L'Aquila** 84.55 312 *e*P P 01 57 00.6 -0.4
comp=Z,132nm,0.9s,mb6.1
AQU *e*PcP PcP 01 57 04.6 +0.2
AQU LR LR
comp=Z,1µm,20.0s,MS5.4
MYKA **Terra Mystica** 84.57 316⇑*i*P P 01 57 00.5 -0.4
comp=Z,34nm,0.8s,mb5.5
BRG **Berggiesshubel** 84.60 321 *i* P P 01 57 01.4 +0.4
BRG 02 00 20.0
BRG S S 02 07 26.0 +1.0
BRG pmax pmax
comp=Z,27nm,1.1s,mb5.3
BRG pmax pmax
comp=Z,25nm,1.6s,mb5.1
BRG **Berggiesshubel** 84.60 321 *e*P P 01 57 00.8 -0.2
comp=Z,45nm,1.1s,mb5.5
BRG **Berggiesshubel** 84.60 321 *i* P P 01 57 01.4 +0.4
comp=Z,45nm,1.1s,mb5.5
BRG PP PP 02 00 20.0 +3.0
comp=Z,42nm,1.6s
BRG S S 02 07 26.0 +1.0
GEC2 **GERESS Array S** 84.64 319 P P 01 57 01.2 0.0
GEC2 **GERESS Array S** 84.64 319 *e*P P 01 57 01.1 -0.1
comp=Z,73nm,1.1s,mb5.7
GEC2 *e*S S 02 07 25.8 +0.3
GERES **GERESS Array B** 84.64 319 P P 01 57 01.1 -0.1
comp=Z,27nm,0.8s,mb5.4,baz=88,slow=4.3,SNR=96
GERES LR LR 02 36 08.5
comp=Z,2µm,20.8s,MS5.4,baz=202,slow=37
GERES **GERESS Array B** 84.64 319 P P 01 57 01.1 -0.1
GERES pmax pmax
comp=Z,27nm,0.8s
GERES MLR MLR
comp=Z,2µm,20.8s
KHC **Kasperske Hory** 84.74 319 *i* P P 01 57 01.2 -0.5
KHC *e*pP pP 01 57 17.5 +3.1
KHC *e*SKS 02 07 23.4
CING **Cingoli** 84.74 313 P P 01 57 01.8 -0.1
KBA **Koelnbreinsper** 84.80 317⇑*i*P P 01 57 01.4 -0.7
comp=Z,32nm,0.8s,mb5.5,SNR=9.0
RUE **Ruedersdorf** 84.80 322 *e*P P 01 57 01.7 -0.3
comp=Z,152nm,1.0s,mb6.1
RUE **Ruedersdorf** 84.80 322 *e*P P 01 57 02.2 +0.2
comp=Z,153nm,0.9s,mb6.1
GMNA **Gemona** 84.83 316 P P 01 57 01.8 -0.5
comp=Z,486nm,0.8s,mb6.7
CERT **Cerreto** 84.85 312 P P 01 57 01.3 -1.1
FBE **Freiberg** 84.98 321 *e*P P 01 57 02.7 -0.2
comp=Z,61nm,1.0s,mb5.7
ASS **Assisi** 85.13 313 P P 01 57 02.7 -1.1
ASS pmax pmax
comp=Z,16nm,0.8s,mb5.2
ASS **Assisi** 85.13 313 P P 01 57 02.7 -1.1
comp=Z,16nm,0.8s,mb5.2
RGN **Rugen** 85.20 324 *e*P P 01 57 04.0 +0.1
comp=Z,165nm,1.1s,mb6.1
RJOB **Jochberg** 85.20 318 *e*P P 01 57 02.9 -1.1
comp=Z,52nm,0.9s,mb5.7
WET **Wettzell** 85.20 319 *e*P P 01 57 03.6 -0.4
WET pmax pmax
comp=Z,63nm,0.9s,mb5.8
WET **Wettzell** 85.20 319 *e*P P 01 57 03.6 -0.4
comp=Z,63nm,0.9s,mb5.8
CLL **Collm** 85.22 321 *e*P P 01 57 03.0 -1.1
CLL *e* 01 57 20.0
CLL *e*S S 02 07 32.0 +0.9
CLL pmax pmax
comp=Z,37nm,1.1s,mb5.4
CLL MLR MLR
comp=Z,1µm,21.8s,MS5.2
CLL **Collm** 85.22 321 *e*P P 01 57 03.0 -1.1
comp=Z,37nm,1.1s,mb5.4
CLL *e*(pP) pP 01 57 20.0 +3.2
CLL *e*x x 01 57 43.0
CLL *e*S S 02 07 32.0 +0.9
comp=N,1µm,26.0s
CLL *e*S S 02 07 32.0 +0.9
comp=E,600nm,26.7s
CLL *e*PS 02 08 30.0
CLL *e*SS SS 02 13 24.0 +18
CLL *e*SSS 02 16 48.0
CLL *e*SSSS 02 19 36.0
CLL LmV 02 40 00.0
comp=Z,1µm,21.8s
CLL **Collm** 85.22 321 *e*P P 01 57 03.0 -1.1
comp=Z,37nm,1.1s,mb5.4
CLL *e* 01 57 20.0
CLL *e* 01 57 43.0
CLL *e*S S 02 07 32.0 +0.9
CLL LR LR
comp=Z,1µm,21.8s,MS5.2
ABTA **Abfaltersbach** 85.35 317⇑*i*P P 01 57 04.0 -0.8
comp=Z,29nm,0.9s,mb5.4,SNR=24
STEI **Steigen** 85.36 338 *e*P P 01 57 04.2 -0.3
STEI AMb AMB 01 57 06.8
comp=Z,324nm,0.8s,mb6.5
TANN **Tannenbergstha** 85.52 320 *e*P P 01 57 05.2 -0.4
comp=Z,26nm,1.1s,mb5.4
NKC **Novy Kostel** 85.52 320 *e*P P 01 57 05.4 -0.2
comp=Z,14nm,0.9s,mb5.2
WERN **Wernitzgruen** 85.57 320 *e*P P 01 57 05.6 -0.3
comp=Z,29nm,0.9s,mb5.5
TOLF **Tolfa** 85.58 312 P P 01 57 05.1 -1.0
GUNZ **Gunzen** 85.60 320 *e*P P 01 57 05.7 -0.3
comp=Z,35nm,0.9s,mb5.6
WERD **Werda** 85.62 320 *e*P P 01 57 05.6 -0.5
comp=Z,37nm,1.0s,mb5.6
CRE **Caprese Michel** 85.66 313 P P 01 57 05.9 -0.5
ROTZ **Rotzenmuhle** 85.66 320 *e*P P 01 57 06.4 +0.1
comp=Z,52nm,0.9s,mb5.8
MANZ **Manzenberg** 85.73 320 *e*P P 01 57 06.8 +0.1
COP **Copenhagen** 85.77 326 *e*P P 01 57 07.0 +0.3
COP pmax pmax
comp=Z,55nm,0.8s,mb5.8
COP **Copenhagen** 85.77 326 *i* P P 01 57 07.0 +0.3
comp=Z,55nm,0.8s,mb5.8
COP **Copenhagen** 85.77 326 *e*P P 01 57 07.0 +0.3
comp=Z,55nm,0.8s,mb5.8
CTI **Castel Tesino** 85.93 316 P P 01 57 07.7 0.0
CTI pmax pmax
comp=Z,132nm,0.8s,mb6.2
CTI **Castel Tesino** 85.93 316 P P 01 57 07.7 0.0
comp=Z,132nm,0.8s,mb6.2
RAO **Raoul Island** 85.93 119 LR LR 02 37 41.5
comp=Z,1µm,20.0s,MS5.3,baz=14,slow=37
RAO **Raoul Island** 85.93 119 PFAKE 01 57 20.0 +12
RAO LR LR
comp=Z,1µm,21.0s,MS5.3
WTTA **Wattenberg** 85.97 317⇑*i*P P 01 57 06.9 -1.0
comp=Z,64nm,0.7s,mb6.0,SNR=26
NEUB **Neuenburg** 85.98 321 *e*P P 01 57 07.3 -0.6
comp=Z,62nm,1.0s,mb5.8
WATA **Walderalm** 86.01 317⇓*i*P P 01 57 06.8 -1.3
comp=Z,37nm,0.7s,mb5.7,SNR=11
MOX **Moxa** 86.07 320 *e*P P 01 57 08.4 +0.1
comp=Z,52nm,1.6s,mb5.5
MOX **Moxa** 86.07 320 *e*P P 01 57 08.4 +0.1
MOX pmax pmax
comp=Z,52nm,1.6s,mb5.5
MOX **Moxa** 86.07 320 *e*P P 01 57 08.0 -0.3
comp=Z,29nm,1.1s,mb5.4
STOK **Stokkvaagen** 86.09 336 *e*P P 01 57 08.3 +0.3
STOK AMb AMB 01 57 16.8
comp=Z,116nm,1.8s,mb5.8
FUR **Furstenfeldbru** 86.23 318 *e*P P 01 57 08.3 -0.9

FUR pmax pmax
comp=Z,48nm,1.0s,mb5.7
FUR Furstenfeldbru 86.23 318 *eP* **P 01 57 08.3 -0.9**
comp=Z,48nm,1.0s,mb5.7
FNVD Fontana Vidola 86.27 314 P **P 01 57 09.4 0.0**
GRA1 Grafenberg Arr 86.30 319 *eP* **P 01 57 09.4 -0.1**
comp=Z,66nm,0.9s,mb5.9
GRA1 *eS* S 02 07 44.4 +2.6
GRA1 LR LR
comp=Z,1µm,19.7s,MS5.4
GRF Grafenberg Arr 86.30 319 *eP* **P 01 57 09.4 -0.1**
GRF *eS* S 02 07 44.4 +2.6
GRF pmax pmax
comp=Z,66nm,0.9s,mb5.9
GRF MLR MLR
comp=Z,1µm,19.7s,MS5.4
GRF Grafenberg Arr 86.30 319 *eP* **P 01 57 09.4 -0.1**
comp=Z,66nm,0.9s,mb5.9
GRF *eS* S 02 07 44.4 +2.6
GRF *eL* 02 41 31.2
comp=Z,1µm,19.7s
SPB4 Spitsbergen Ar 86.30 348 *eP* **P 01 57 08.4 -0.6**
VNDA Vanda 86.49 169 P **P 01 57 09.3 -0.5**
comp=Z,3.2nm,0.8s,mb4.6,baz=291,slow=6.6,SNR=16
VNDA LR LR 02 33 17.8
comp=Z,3µm,19.9s,MS5.6,baz=306,slow=34
VNDA Vanda 86.49 169 *eP* **P 01 57 09.9 +0.1**
VNDA *e*PP pP 01 57 22.9 +0.3
VNDA pmax pmax
comp=Z,107nm,1.7s
VNDA Vanda 86.49 169 *eP* **P 01 57 09.9 +0.1**
comp=Z,106nm,1.7s,mb5.8
VNDA *e*pP pP 01 57 22.9 +0.3
RETA Reutte 86.56 317⇑*iP* **P 01 57 10.1 -0.7**
comp=Z,62nm,0.9s,mb5.9,SNR=21
FETA Feichten 86.58 317⇑*iP* **P 01 57 10.5 -0.4**
comp=Z,39nm,0.9s,mb5.7,SNR=35
NB2 NORSAR Subarra 86.62 331 P **P 01 57 10.2 -0.6**
comp=Z,113nm,0.8s,mb6.2,baz=95,slow=4.8
NOA NORSAR Array B 86.62 331 P **P 01 57 10.2 -0.7**
comp=Z,92nm,0.8s,mb6.1,baz=94,slow=4.9,SNR=173
NOA PP PP 02 00 30.4 -2.6
comp=Z,6.4nm,0.8s,baz=95,slow=7.5,SNR=5.0
NOA LR LR 02 39 01.3
comp=Z,2µm,20.7s,MS5.5,baz=80,slow=38
NOA NORSAR Array B 86.62 331 P **P 01 57 10.2 -0.6**
NOA 02 00 30.4
NOA pmax pmax
comp=Z,92nm,0.8s
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA MLR MLR
comp=Z,2µm,20.7s
NOA NORSAR Array B 86.62 331 P **P 01 57 10.2 -0.7**
NOA PP PP 02 00 30.4 -2.6
NOA LR LR 02 39 01.3
GSCL Gusciola 86.65 314 P **P 01 57 11.6 +0.3**
comp=Z,72nm,1.1s,mb5.8
MABI Malga Bissina 86.72 316 P **P 01 57 11.3 -0.3**
NAO01 NORSAR Array S 86.78 331 *eP* **P 01 57 11.4 -0.1**
comp=Z,85nm,0.8s,mb6.0
VLC Villacollemand 86.80 314 PFAKE 01 57 20.0 +8.0
VLC LR LR
comp=Z,2µm,21.0s,MS5.4
CLZ Clausthal 86.88 322 *eP* **P 01 57 12.0 -0.2**
CLZ pmax pmax
comp=Z,70nm,1.0s,mb5.8
CLZ Clausthal 86.88 322 *eP* **P 01 57 12.0 -0.2**
comp=Z,70nm,1.0s,mb5.8
BSEG Bad Segeberg 86.94 324 *eP* **P 01 57 12.5 0.0**
BSEG pmax pmax
comp=Z,106nm,1.0s,mb6.0
BSEG Bad Segeberg 86.94 324 *eP* **P 01 57 12.5 0.0**
comp=Z,106nm,1.0s,mb6.0
UBBA Unterbreizbach 87.10 321 *eP* **P 01 57 13.1 -0.3**
comp=Z,68nm,1.6s,mb5.6
DAVA Damuels 87.16 317⇑*iP* **P 01 57 13.7 0.0**
comp=Z,88nm,0.8s,mb6.0,SNR=42
KBS Kingsbay 87.25 349 *eP* **P 01 57 12.1 -1.5**
KBS Kingsbay 87.25 349 *eP* **P 01 57 13.7 +0.1**
KBS LR LR
comp=Z,4µm,21.0s,MS5.8
KONO Kongsberg 87.40 329 *eP* **P 01 57 14.4 -0.2**
KONO Kongsberg 87.40 329 *eP* **P 01 57 14.3 -0.3**
KONO LR LR
comp=Z,3µm,21.0s,MS5.7
TUE Stuetta 87.53 316 P **P 01 57 15.5 -0.1**
comp=Z,53nm,1.3s,mb5.6
TUE LR LR
comp=Z,2µm,22.0s,MS5.6
VSL Villasalto 87.56 309 *eP* **P 01 57 15.6 -0.2**
comp=Z,64nm,0.9s,mb5.8
SBA Scott Base 87.58 169 *eP* **P 01 57 15.0 -0.2**
SBA pmax pmax
comp=Z,51nm,1.1s,mb5.7
SBA MLR MLR
comp=Z,2µm,21.0s,MS5.5
SBA Scott Base 87.58 169 *eP* **P 01 57 15.0 -0.2**
comp=Z,51nm,1.1s,mb5.7
SBA LR LR
comp=Z,2µm,21.0s,MS5.5
MUD Monsted U'grnd 87.61 326 *i* P **P 01 57 16.1 +0.4**
comp=Z,63nm,0.9s,mb5.8
STU Stuttgart 87.62 319 *eP* **P 01 57 16.1 +0.2**
STU pmax pmax
comp=Z,33nm,0.8s,mb5.6
STU Stuttgart 87.62 319 *eP* **P 01 57 15.2 -0.7**
comp=Z,36nm,0.9s,mb5.6
STU Stuttgart 87.62 319 *eP* **P 01 57 16.1 +0.2**
comp=Z,33nm,0.8s,mb5.6
KEST Kesra 87.63 306 P **P 01 57 17.1 +0.8**
comp=Z,25nm,0.8s,mb5.5,baz=289,slow=1.1,SNR=40
KEST LR LR 02 37 00.6
comp=Z,930nm,20.1s,MS5.2,baz=154,slow=36
PGF Pioggiola 87.81 312⇑*iP* **P 01 57 16.7 -0.3**
comp=Z,62nm,1.1s,mb5.5
PGF Pioggiola 87.81 312⇑*iP* **P 01 57 16.7 -0.3**
PGF pmax pmax
comp=Z,31nm,1.1s,mb5.5
PGF Pioggiola 87.81 312⇑*iP* **P 01 57 16.7 -0.3**
comp=Z,31nm,1.1s,mb5.5
TOD Tromm 87.87 319 *eP* **P 01 57 16.7 -0.4**
SPAK Spaichingen-Ko 87.90 318 *eP* **P 01 57 16.7 -0.6**
VAI Varese 87.94 316 P **P 01 57 16.4 -1.1**
VAI pmax pmax
comp=Z,41nm,1.0s,mb5.6
VAI Varese 87.94 316 P **P 01 57 16.4 -1.1**
comp=Z,41nm,1.0s,mb5.6
BFO Black Forest 88.20 318 P **P 01 57 18.4 -0.3**
comp=Z,193nm,0.8s,mb6.4,SNR=11
BFO Black Forest 88.20 318 P **P 01 57 18.0 -0.7**
BFO pmax pmax
comp=Z,26nm,0.8s,mb5.5
BFO Black Forest 88.20 318 *eP* **P 01 57 17.8 -0.9**
comp=Z,34nm,0.9s,mb5.6
FIN Finale Ligure 88.36 314 P **P 01 57 19.3 -0.3**
HLG Helgoland 88.37 324 *eP* **P 01 57 19.4 0.0**
comp=Z,323nm,1.0s,mb6.5
MOL Molde 88.37 332 *eP* **P 01 57 19.7 +0.5**
MOL AMb AMB 01 57 25.4
comp=Z,114nm,2.2s,mb5.7
FELD Feldberg im Sc 88.43 318 *eP* **P 01 57 20.8 +1.0**
IBBN Ibbenburen 88.49 322 *eP* **P 01 57 19.9 -0.1**
comp=Z,168nm,0.9s,mb6.3
LANF Langenberg 88.53 319 *eP* **P 01 57 20.2 -0.1**
IMI Imperia 88.60 314 P **P 01 57 20.7 0.0**
ABH Alteburg 88.68 320 *eP* **P 01 57 20.8 -0.1**
LIBD Limburg 88.69 318 *eP* **P 01 57 22.1 +1.1**
BBS Basel-Blauen 88.77 317 *eP* **P 01 57 21.9 +0.5**
BUG Bochum--Univer 88.81 321 *eP* **P 01 57 21.4 -0.1**
comp=Z,103nm,1.0s,mb6.1
SAOF Saorge 88.84 314 *eP* **P 01 57 21.4 -0.4**
CDF Champ du Feu 88.90 318⇑*iP* **P 01 57 21.3 -0.7**
comp=Z,51nm,1.1s,mb5.5
CDF Champ du Feu 88.90 318⇑*iP* **P 01 57 21.3 -0.7**
CDF pmax pmax
comp=Z,26nm,1.1s,mb5.5
CDF Champ du Feu 88.90 318⇑*iP* **P 01 57 21.3 -0.7**
comp=Z,26nm,1.1s,mb5.5
SBF Sospel 88.93 314⇑*iP* **P 01 57 21.9 -0.3**
comp=Z,137nm,0.9s,mb6.0
SBF Sospel 88.93 314⇑*iP* **P 01 57 21.9 -0.3**
SBF pmax pmax
comp=Z,69nm,0.9s,mb6.0
SBF Sospel 88.93 314⇑*iP* **P 01 57 21.9 -0.3**
comp=Z,68nm,0.9s,mb6.0
REVF Revere 88.98 314 *eP* **P 01 57 22.2 -0.3**
ECH Echery 88.98 318 *eP* **P 01 57 22.6 +0.2**
ECH Echery 88.98 318 *eP* **P 01 57 23.0 +0.6**
ECH pmax pmax
comp=Z,27nm,0.9s,mb5.6
ECH Echery 88.98 318 *eP* **P 01 57 23.0 +0.6**
comp=Z,27nm,0.9s,mb5.6
LUCF Luceram 88.99 314 *eP* **P 01 57 22.4 -0.1**
RUP Ruppelstein 89.00 320 *eP* **P 01 57 22.4 0.0**
TOUF Mont Tournerai 89.06 314 *eP* **P 01 57 22.9 +0.1**
WTSB Winterswijk 89.09 322 *eP* **P 01 57 23.0 +0.2**
comp=Z,92nm,1.2s,mb6.0
ABSA Djebel Ababsia 89.13 306 P **P 01 57 25.0 +1.6**
WIT Witteveen 89.14 323 *eP* **P 01 57 23.8 +0.8**
comp=Z,353nm,1.1s,mb6.6
CMAH Djebel Manchou 89.17 306 P **P 01 57 26.5 +3.0**
LOMF Lomont 89.24 317 *eP* **P 01 57 23.0 -0.6**
CALN Calern 89.33 314 *eP* **P 01 57 24.2 +0.1**
SURF Saint Ours 89.36 314 *eP* **P 01 57 25.9 +1.7**
LPG La Plagne 89.36 315⇑*iP* **P 01 57 24.3 +0.1**
comp=Z,131nm,0.8s,mb6.0
LPG La Plagne 89.36 315⇑*iP* **P 01 57 24.3 +0.1**
LPG pmax pmax
comp=Z,66nm,0.8s,mb6.0
LPG La Plagne 89.36 315⇑*iP* **P 01 57 24.3 +0.1**
comp=Z,66nm,0.8s,mb6.0
LPL La Plagne 89.37 315⇑*iP* **P 01 57 24.3 0.0**
comp=Z,140nm,0.8s,mb6.0
LPL La Plagne 89.37 315⇑*iP* **P 01 57 24.3 0.0**
LPL pmax pmax
comp=Z,70nm,0.8s,mb6.0
LPL La Plagne 89.37 315⇑*iP* **P 01 57 24.3 0.0**
comp=Z,70nm,0.8s,mb6.0
MBDF Montbardon 89.38 315⇑*iP* **P 01 57 23.5 -0.8**
comp=Z,40nm,0.9s,mb5.4
MBDF Montbardon 89.38 315⇑*iP* **P 01 57 23.5 -0.8**
MBDF pmax pmax
comp=Z,20nm,0.9s,mb5.5
MBDF Montbardon 89.38 315⇑*iP* **P 01 57 23.5 -0.8**
comp=Z,20nm,0.9s,mb5.5
BNI Bardonecchia 89.43 315 P **P 01 57 24.3 -0.3**
BNI pmax pmax
comp=Z,37nm,0.9s,mb5.7
BNI Bardonecchia 89.43 315 *eP* **P 01 57 24.2 -0.3**
comp=Z,37nm,0.9s,mb5.7
FRF La Foret Royal 89.51 313⇑*iP* **P 01 57 24.8 -0.2**
comp=Z,129nm,0.9s,mb5.9
FRF La Foret Royal 89.51 313⇑*iP* **P 01 57 24.8 -0.2**
FRF pmax pmax
comp=Z,65nm,0.9s,mb6.0
FRF La Foret Royal 89.51 313⇑*iP* **P 01 57 24.8 -0.2**
comp=Z,65nm,0.9s,mb6.0
HAU Haudompre 89.53 318⇑*iP* **P 01 57 24.4 -0.6**
comp=Z,121nm,0.9s,mb5.9
HAU *e*MLR MLR
comp=Z,2µm,22.2s,MS5.2
HAU Haudompre 89.53 318⇑*iP* **P 01 57 24.4 -0.6**
HAU pmax pmax
comp=Z,61nm,0.9s,mb5.9
HAU MLR MLR
comp=Z,2µm,22.3s,MS5.6
HAU Haudompre 89.53 318⇑*iP* **P 01 57 24.4 -0.6**
comp=Z,61nm,0.9s,mb5.9
HAU LR LR
comp=Z,2µm,22.3s,MS5.6
WLF Walferdange 89.59 319 P **P 01 57 26.0 +0.8**
comp=Z,47nm,1.3s,mb5.7
LMR La Mourre 89.62 313⇑*iP* **P 01 57 25.2 -0.3**
comp=Z,60nm,1.0s,mb5.6
LMR La Mourre 89.62 313⇑*iP* **P 01 57 25.2 -0.3**
LMR pmax pmax
comp=Z,30nm,1.0s,mb5.6
LMR La Mourre 89.62 313⇑*iP* **P 01 57 25.2 -0.3**
comp=Z,30nm,1.0s,mb5.6
MEM Membach 89.64 320 P **P 01 57 25.6 +0.2**
comp=Z,39nm,1.0s,mb5.7
HGN Heimansgroeve 89.68 321 *eP* **P 01 57 26.9 +1.3**
comp=Z,44nm,0.8s,mb5.8
THEF They Montfort 89.77 318 *eP* **P 01 57 25.4 -0.7**
CABF La Chapelle 89.78 316⇑*iP* **P 01 57 26.1 0.0**
comp=Z,144nm,1.0s,mb6.0
CABF La Chapelle 89.78 316⇑*iP* **P 01 57 26.1 0.0**
CABF pmax pmax
comp=Z,72nm,1.0s,mb6.0
CABF La Chapelle 89.78 316⇑*iP* **P 01 57 26.1 0.0**
comp=Z,72nm,1.0s,mb6.0
BEBN Eben Emael 89.84 321 P **P 01 57 26.7 +0.4**
CASM Ain Smara 89.93 306 P **P 01 57 29.0 +1.9**
TAVF Tavernes 89.94 313 *eP* **P 01 57 27.3 +0.3**
ORIF Oris-en-Rattie 90.00 315 *eP* **P 01 57 27.3 +0.1**
comp=Z,96nm,1.0s,mb5.8
ORIF *e*MLR MLR
comp=Z,1µm,20.8s,MS5.1
ORIF Oris-en-Rattie 90.00 315 *eP* **P 01 57 27.3 +0.1**
ORIF pmax pmax
comp=Z,48nm,1.0s,mb5.8
ORIF Oris-en-Rattie 90.00 315 *eP* **P 01 57 27.3 +0.1**
comp=Z,48nm,1.0s,mb5.8
CTEI Djebel Teioual 90.01 306 P **P 01 57 29.5 +2.0**
GRN Grenoble 90.08 315 *eP* **P 01 57 27.6 0.0**
BCLA Clavier 90.10 320 P **P 01 57 27.7 +0.1**
comp=Z,26nm,1.5s,mb5.3
VILF Villemus 90.17 314 *eP* **P 01 57 29.3 +1.2**
PUYF Puyloubier 90.20 313 *eP* **P 01 57 29.9 +1.7**
BERF Bertagne 90.22 313 *eP* **P 01 57 28.9 +0.6**
SMRF Simiane la Rot 90.27 314⇑*iP* **P 01 57 28.9 +0.4**
comp=Z,86nm,0.9s,mb5.8
SMRF Simiane la Rot 90.27 314⇑*iP* **P 01 57 28.9 +0.4**
comp=Z,86nm,0.9s,mb6.1
MEZF Maizieres J'vi 90.38 318⇑*iP* **P 01 57 28.8 -0.1**
comp=Z,108nm,0.9s,mb5.9
MEZF Maizieres J'vi 90.38 318⇑*iP* **P 01 57 28.8 -0.1**
comp=Z,108nm,0.9s,mb6.2
GELF Grande-Etoile 90.41 313 *eP* **P 01 57 29.5 +0.3**
DFRA Djebel Bou Aff 90.41 306 P **P 01 57 31.0 +1.6**
GIVF Givet 90.43 320⇑*iP* **P 01 57 29.0 -0.1**
comp=Z,127nm,1.0s,mb5.9
GIVF Givet 90.43 320⇑*iP* **P 01 57 29.0 -0.1**
GIVF pmax pmax
comp=Z,63nm,1.0s,mb5.9
GIVF Givet 90.43 320⇑*iP* **P 01 57 29.0 -0.1**
comp=Z,63nm,1.0s,mb5.9
DOU Dourbes 90.57 320 P **P 01 57 29.8 0.0**
comp=Z,27nm,1.0s,mb5.5
DOU AP pP 01 57 44.9 +2.4
MAIT Maitri 90.60 199 *eP* **P 01 57 29.7 +0.2**
MAIT *e*E 01 57 38.9
MAIT *el* pP 01 57 44.2 +2.0
UCC Uccle 90.68 321 P **P 01 57 30.6 +0.4**
SNF Seneffe 90.74 320 P **P 01 57 30.7 +0.1**
comp=Z,27nm,1.2s,mb5.5
SET Setif 90.81 306 P **P 01 57 33.0 +1.8**
BAIF Baives 90.83 320⇑*iP* **P 01 57 31.1 +0.2**
comp=Z,228nm,0.8s,mb6.2
BAIF Baives 90.83 320⇑*iP* **P 01 57 31.1 +0.2**
BAIF pmax pmax
comp=Z,114nm,0.8s,mb6.2
BAIF Baives 90.83 320⇑*iP* **P 01 57 31.1 +0.2**
comp=Z,114nm,0.8s,mb6.2
VIVF Saint-Julien-l 90.86 315⇑*iP* **P 01 57 31.0 -0.2**
comp=Z,97nm,0.9s,mb5.8
VIVF Saint-Julien-l 90.86 315⇑*iP* **P 01 57 31.0 -0.2**
VIVF pmax pmax
comp=Z,49nm,0.9s,mb5.8
VIVF Saint-Julien-l 90.86 315⇑*iP* **P 01 57 31.0 -0.2**
comp=Z,49nm,0.9s,mb5.8
SSB Saint Sauveur 90.93 315 *eP* **P 01 57 31.6 +0.1**
SSB pmax pmax
comp=Z,65nm,0.8s,mb6.0
SSB Saint Sauveur 90.93 315 *eP* **P 01 57 31.6 0.0**
comp=Z,65nm,0.8s,mb6.0
LOR Lormes 91.26 317⇑*iP* **P 01 57 32.8 -0.2**
comp=Z,202nm,0.9s,mb6.2
LOR *e*MLR MLR
comp=Z,1µm,19.2s,MS5.1
LOR Lormes 91.26 317⇑*iP* **P 01 57 32.8 -0.2**
LOR pmax pmax
comp=Z,101nm,0.9s,mb6.2
LOR MLR MLR
comp=Z,1µm,19.3s,MS5.4
LOR Lormes 91.26 317⇑*iP* **P 01 57 32.8 -0.2**
comp=Z,101nm,0.9s,mb6.2
LOR LR LR
comp=Z,1µm,19.3s,MS5.4
SMF Signal de Mont 91.32 317⇑*iP* **P 01 57 33.0 -0.3**
comp=Z,213nm,0.8s,mb6.2
SMF Signal de Mont 91.32 317⇑*iP* **P 01 57 33.0 -0.3**
SMF pmax pmax
comp=Z,106nm,0.8s,mb6.2
SMF Signal de Mont 91.32 317⇑*iP* **P 01 57 33.0 -0.3**
comp=Z,106nm,0.8s,mb6.2
TAM Tamanrasset 91.39 293 *eP* **P 01 57 35.5 +1.3**
TAM *PP pP 01 57 48.9 +2.0
TAM pmax pmax
comp=Z,22nm,0.9s,mb5.5
TAM MLR MLR
comp=Z,2µm,19.0s,MS5.5
TAM Tamanrasset 91.39 293 *eP* **P 01 57 35.5 +1.3**
comp=Z,22nm,0.9s,mb5.5
TAM pP pP 01 57 48.9 +1.9
TAM LR LR
comp=Z,2µm,19.0s,MS5.5
LASF Ste Croix 91.50 314⇑*iP* **P 01 57 34.3 +0.1**
comp=Z,78nm,0.9s,mb5.7
SSF Saint Saulge 91.52 317⇑*iP* **P 01 57 34.0 -0.2**
comp=Z,52nm,0.9s,mb5.6
SSF Saint Saulge 91.52 317⇑*iP* **P 01 57 34.0 -0.2**
SSF pmax pmax
comp=Z,26nm,0.9s,mb5.6
SSF Saint Saulge 91.52 317⇑*iP* **P 01 57 34.0 -0.2**
comp=Z,26nm,0.9s,mb5.6
PLDF La Plantade 91.52 316 *eP* **P 01 57 34.3 0.0**
AVF Avril sur Loir 91.64 317 *eP* **P 01 57 34.5 -0.3**
comp=Z,130nm,0.9s,mb6.0
AVF Avril sur Loir 91.64 317 *eP* **P 01 57 34.5 -0.3**
AVF pmax pmax
comp=Z,65nm,0.9s,mb6.0
AVF Avril sur Loir 91.64 317 *eP* **P 01 57 34.5 -0.3**
comp=Z,65nm,0.9s,mb6.0
LBL Lubilhac 91.84 315 *eP* **P 01 57 35.9 +0.1**
AGO Saint Agoulin 91.86 316 *eP* **P 01 57 36.2 +0.4**
QSPA South Pole Qui 91.95 180 P **P 01 57 36.3 +0.7**
comp=Z,3.0nm,0.6s,mb4.8,baz=271,slow=0.7,SNR=7.8
PYM Petit Puy Mans 91.97 316 *eP* **P 01 57 36.1 -0.2**
BGF Bois d'Agland 92.01 317⇑*iP* **P 01 57 36.7 +0.2**
comp=Z,160nm,0.9s,mb6.1
BGF Bois d'Agland 92.01 317⇑*iP* **P 01 57 36.7 +0.2**
BGF pmax pmax
comp=Z,80nm,0.9s,mb6.0
BGF Bois d'Agland 92.01 317⇑*iP* **P 01 57 36.7 +0.2**
comp=Z,80nm,0.9s,mb6.0
HYF Humbligny 92.09 317 *eP* **P 01 57 37.2 +0.3**
EJON La Jonquera 92.33 312 P **P 01 57 38.3 +0.2**
comp=Z,195nm,2.0s,mb6.1
TCF Toulx Ste Croi 92.47 316⇑*iP* **P 01 57 38.7 0.0**
comp=Z,74nm,1.0s,mb5.7
TCF Toulx Ste Croi 92.47 316⇑*iP* **P 01 57 38.7 0.0**
TCF pmax pmax
comp=Z,37nm,1.0s,mb5.7
TCF Toulx Ste Croi 92.47 316⇑*iP* **P 01 57 38.7 0.0**
comp=Z,37nm,1.0s,mb5.7
ETOS Mallorca 92.61 310 P **P 01 57 40.4 +0.9**
comp=Z,555nm,2.6s,mb6.5
CAF Calviac 92.70 315⇑*iP* **P 01 57 40.0 +0.2**
comp=Z,68nm,1.0s,mb5.7
CAF Calviac 92.70 315⇑*iP* **P 01 57 40.0 +0.2**
CAF pmax pmax
comp=Z,34nm,1.0s,mb5.7
CAF Calviac 92.70 315⇑*iP* **P 01 57 40.0 +0.2**
comp=Z,34nm,1.0s,mb5.7
MTLF Montolieu 92.74 313⇑*iP* **P 01 57 40.0 0.0**
comp=Z,74nm,1.0s,mb5.8
MTLF Montolieu 92.74 313⇑*iP* **P 01 57 40.0 0.0**
MTLF pmax pmax
comp=Z,37nm,1.0s,mb5.8
MTLF Montolieu 92.74 313⇑*iP* **P 01 57 40.0 0.0**
comp=Z,37nm,1.0s,mb5.8
EMHD Djebel Mahouad 92.79 306 P **P 01 57 31.8 -8.6**
RJF Les Rejaudoux 93.05 315⇑*iP* **P 01 57 41.6 +0.2**
comp=Z,87nm,1.1s,mb5.8
RJF *e*MLR MLR
comp=Z,2µm,20.8s,MS5.2
RJF Les Rejaudoux 93.05 315⇑*iP* **P 01 57 41.6 +0.2**
RJF pmax pmax
comp=Z,44nm,1.1s,mb5.8
RJF MLR MLR
comp=Z,2µm,20.8s,MS5.5
RJF Les Rejaudoux 93.05 315⇑*iP* **P 01 57 41.6 +0.2**
comp=Z,44nm,1.1s,mb5.8
RJF LR LR
comp=Z,2µm,20.8s,MS5.5
LFF La Frestale 93.64 315 *eP* **P 01 57 44.3 +0.2**
comp=Z,77nm,1.2s,mb5.7
LFF La Frestale 93.64 315 *eP* **P 01 57 44.3 +0.2**
LFF pmax pmax
comp=Z,38nm,1.2s,mb5.7
LFF La Frestale 93.64 315 *eP* **P 01 57 44.3 +0.2**
comp=Z,38nm,1.2s,mb5.7
EPOB Poblet 93.78 311 P **P 01 57 45.2 +0.3**
comp=Z,18nm,0.7s,mb5.6
LDF La Druitiere 93.79 319 *eP* **P 01 57 44.3 -0.4**
comp=Z,91nm,1.0s,mb5.8
LDF La Druitiere 93.79 319 *eP* **P 01 57 44.3 -0.4**
LDF pmax pmax
comp=Z,46nm,1.0s,mb5.9
LDF La Druitiere 93.79 319 *eP* **P 01 57 44.3 -0.4**
comp=Z,46nm,1.0s,mb5.9
EIBI Ibiza 93.81 309 P **P 01 57 46.2 +1.2**
comp=Z,63nm,1.0s,mb6.0
EBNR Beni Rached 93.93 306 P **P 01 57 43.2 -2.4**
CWF Charnwood Fore 93.97 323 *eP* **P 01 57 44.8 -0.6**
CWF AMb AMB 01 57 45.6
comp=Z,204nm,1.6s,mb6.3
HPK Haverah Park 93.97 324 *eP* **P 01 57 45.8 +0.4**
HPK AMb AMB 01 57 47.2
comp=Z,173nm,1.1s,mb6.4
FLN La Foliniere 94.00 319 *eP* **P 01 57 45.1 -0.6**
comp=Z,74nm,1.0s,mb5.8
FLN *e*MLR MLR
comp=Z,3µm,24.5s,MS5.3
FLN La Foliniere 94.00 319 *eP* **P 01 57 45.1 -0.6**
FLN pmax pmax
comp=Z,37nm,1.0s,mb5.8
FLN MLR MLR
comp=Z,3µm,24.5s,MS5.6
FLN La Foliniere 94.00 319 *eP* **P 01 57 45.1 -0.6**
comp=Z,37nm,1.0s,mb5.8
FLN LR LR
comp=Z,3µm,24.5s,MS5.6
KBI1 Birley Grange 94.02 324⇑*eP* **P 01 57 45.8 +0.1**
MFF Saint Martin d 94.06 317 *eP* **P 01 57 45.7 -0.3**
comp=Z,59nm,1.0s,mb5.7
MFF Saint Martin d 94.06 317 *eP* **P 01 57 45.7 -0.3**
MFF pmax pmax
comp=Z,29nm,1.0s,mb5.7
MFF Saint Martin d 94.06 317 *eP* **P 01 57 45.7 -0.3**
comp=Z,30nm,1.0s,mb5.7
ECHA Ech Chlef 94.07 306 P **P 01 57 45.0 -1.3**
WOL Wolverton 94.12 322 *eP* **P 01 57 45.6 -0.5**
WOL AMb AMB 01 57 48.4
comp=Z,247nm,1.3s,mb6.5
EPF Esparros 94.14 313 *eP* **P 01 57 46.0 -0.4**
comp=Z,15nm,1.0s,mb5.1
EPF Esparros 94.14 313 *eP* **P 01 57 46.0 -0.4**
EPF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
EPF Esparros 94.14 313 *eP* **P 01 57 46.0 -0.4**
comp=Z,7.6nm,1.0s,mb5.1
XAL Allendale 94.17 325 *eP* **P 01 57 46.3 +0.1**
LHO Holmfirth 94.17 324 *eP* **P 01 57 45.6 -0.7**
MLA1 Latheron 94.19 329 *eP* **P 01 57 46.3 0.0**
ETRT Tiaret 94.20 306 P **P 01 57 47.3 +0.4**
ESY Stoneypath 94.21 326 *eP* **P 01 57 46.2 -0.2**
KWE Weaver Farm 94.24 323 *eP* **P 01 57 46.5 -0.2**
MCD Coleburn Disti 94.27 328 *eP* **P 01 57 47.5 +0.9**
GRR Gorron 94.30 319 *eP* **P 01 57 46.7 -0.3**
comp=Z,125nm,1.5s,mb5.8
GRR Gorron 94.30 319 *eP* **P 01 57 46.7 -0.3**
GRR pmax pmax
comp=Z,63nm,1.5s,mb5.8
GRR Gorron 94.30 319 *eP* **P 01 57 46.7 -0.3**
comp=Z,62nm,1.5s,mb5.8
EANR 'Ain N'Sour 94.31 306 P **P 01 57 47.9 +0.5**
EBIE Bielsa 94.33 313 P **P 01 57 48.1 +0.8**
comp=Z,71nm,1.9s,mb5.8
ERTA Horta de San J 94.38 311 P **P 01 57 48.3 +0.7**
comp=Z,14nm,0.7s,mb5.5
SSW Stow on the Wo 94.41 322 *eP* **P 01 57 48.0 +0.5**
SWN1 Swindon 94.45 322 *eP* **P 01 57 47.9 +0.2**
SWN1 AMb AMB 01 57 51.5
comp=Z,185nm,2.0s,mb6.2
ESK Eskdalemuir 94.65 326 *eP* **P 01 57 47.6 -0.9**

ESK AMb AMB 01 57 55.3
comp=Z,89nm,2.1s,mb5.8
MVH1 Achvaich 94.69 328 *e*P **P** **01 57 48.7 +0.1**
ETSF Etsaut 94.81 313 *e*P **P** **01 57 49.7 +0.2**
comp=Z,43nm,1.0s,mb5.5
ETSF Etsaut 94.81 313 *e*P **P** **01 57 49.7 +0.2**
ETSF pmax pmax
comp=Z,22nm,1.0s,mb5.5
ETSF Etsaut 94.81 313 *e*P **P** **01 57 49.7 +0.2**
comp=Z,22nm,1.0s,mb5.5
MDO Dochfour 94.88 328 *e*P **P** **01 57 49.6 +0.1**
ESAC San Caprasio 94.89 312 P **P** **01 57 50.9 +0.9**
comp=Z,54nm,0.9s,mb6.0
EMOS Mosqueruela 95.06 311 P **P** **01 57 51.5 +0.8**
comp=Z,61nm,1.0s,mb6.0
ALE Alert 95.10 357 P **P** **01 57 49.0 -1.1**
comp=Z,91nm,0.9s,mb6.2,SNR=6.8
MCH1 Michaelchurch 95.11 322 *e*P **P** **01 57 51.4 +0.8**
MCH1 AMb AMB 01 58 00.2
comp=Z,137nm,1.9s,mb6.1
SNAA Sanae 95.27 198 *e*P **P** **01 57 48.2 -2.7**
SNAA pmax pmax
comp=Z,22nm,1.5s
SNAA Sanae 95.27 198 *e*P **P** **01 57 48.2 -2.8**
comp=Z,22nm,1.5s,mb5.4
SJPF Ste Jean 95.27 313⇑ *i*P **P** **01 57 51.8 +0.2**
comp=Z,35nm,1.0s,mb5.5
SJPF Ste Jean 95.27 313⇑ *i*P **P** **01 57 51.8 +0.2**
SJPF pmax pmax
comp=Z,18nm,1.0s,mb5.5
SJPF Ste Jean 95.27 313⇑ *i*P **P** **01 57 51.8 +0.2**
comp=Z,18nm,1.0s,mb5.5
KAC Achnashellach 95.36 328 *e*P **P** **01 57 51.8 +0.1**
WPM1 Penmaenmawr 95.43 324 *e*P **P** **01 57 51.8 -0.3**
SGMF Saint Gilles 95.44 319 *e*P **P** **01 57 52.2 -0.1**
comp=Z,98nm,1.1s,mb5.8
SGMF Saint Gilles 95.44 319 *e*P **P** **01 57 52.2 -0.1**
SGMF pmax pmax
comp=Z,49nm,1.1s,mb5.8
SGMF Saint Gilles 95.44 319 *e*P **P** **01 57 52.2 -0.1**
comp=Z,49nm,1.1s,mb5.8
EALK Alkurruntz 95.46 314 P **P** **01 57 53.6 +1.1**
comp=Z,19nm,1.3s,mb5.4
ECHE Chera 95.53 310 P **P** **01 57 54.0 +1.1**
ECHE pmax pmax
comp=Z,17nm,0.7s,mb5.6
ECHE Chera 95.53 310 P **P** **01 57 54.0 +1.1**
comp=Z,17nm,0.7s,mb5.6
TORD Torodi Ar. Bea 95.55 283 P **P** **01 57 52.7 -0.8**
comp=Z,3.5nm,1.1s,mb4.7,baz=86,slow=3.8,SNR=15
TORD PP PP 02 01 50.4 +5.4
comp=Z,2.9nm,0.9s,baz=81,slow=7.5,SNR=5.6
TORD PKKP PKKPbc 02 14 44.7 +0.2
comp=Z,2.7nm,0.7s,baz=308,slow=2.8,SNR=23
TORD LR LR 02 40 11.0
comp=Z,3µm,19.0s,MS5.8,baz=95,slow=35
TORD Torodi Ar. Bea 95.55 283 P **P** **01 57 52.7 -0.8**
TORD PP PP 02 01 50.4 +5.4
TORD PKKP PKKPbc 02 14 44.7 +0.1
TORD LR LR 02 40 11.1
KPL Plockton 95.59 328 *e*P **P** **01 57 53.1 +0.4**
KPL AMb AMB 01 57 55.5
comp=Z,174nm,2.0s,mb6.1
YLL Llanberis 95.61 324 *e*P **P** **01 57 52.8 -0.1**
ETOB Tobarra 96.10 309 P **P** **01 57 56.4 +0.9**
comp=Z,44nm,1.0s,mb5.8
ETOR Torete 96.19 311 P **P** **01 57 56.1 +0.2**
ETOR pmax pmax
comp=Z,22nm,0.9s,mb5.6
ETOR Torete 96.19 311 P **P** **01 57 56.1 +0.2**
comp=Z,22nm,0.9s,mb5.6
COLD Coldfoot 96.50 21 *e*P **P** **01 57 56.5 -0.1**
comp=Z,11nm,0.9s,mb5.3
CHUM Lake Minchumin 96.82 25 *e*P **P** **01 57 58.1 -0.1**
comp=Z,26nm,0.9s,mb5.7
VNA2 Neumayer--Watz 96.86 199 *e*P **P** **01 58 02.5 +4.3**
baz=87,slow=3.1
VNA2 *e* 01 58 09.8
VNA2 *e* pP 01 58 13.9 +2.9
VNA2 *e* 01 58 20.1
EHUE Huescar 97.03 308 P **P** **01 57 59.5 -0.2**
EHUE pmax pmax
comp=Z,11nm,1.0s,mb5.2
EHUE Huescar 97.03 308 P **P** **01 57 59.5 -0.2**
comp=Z,11nm,1.0s,mb5.2
EBER Berja 97.39 307 P **P** **01 58 01.8 +0.4**
comp=Z,9.6nm,0.8s,mb5.3
EQES Quesada 97.40 308 P **P** **01 58 02.4 +1.0**
comp=Z,10nm,0.8s,mb5.3
GUD Guadarrama 97.80 311 P **P** **01 58 03.9 +0.8**
GUD pmax pmax
comp=Z,12nm,0.8s,mb5.5
GUD Guadarrama 97.80 311 P **P** **01 58 03.9 +0.7**
comp=Z,12nm,0.8s,mb5.5
ESDC Sonseca Array 97.81 310 P **P** **01 58 03.0 -0.2**
comp=Z,2.6nm,0.8s,mb4.8
ESLA Sonseca Array 97.81 310 PFAKE 01 58 10.0 +6.8
ESLA LR LR
comp=Z,8µm,21.0s,MS6.2
TRF Thorofare Moun 97.82 25 *e*P **P** **01 58 02.7 0.0**
comp=Z,21nm,0.9s,mb5.7
EGUA Guajares 97.94 307 P **P** **01 58 04.1 +0.3**
EGUA pmax pmax
comp=Z,90nm,0.8s,mb6.3
EGUA Guajares 97.94 307 P **P** **01 58 04.1 +0.2**
comp=Z,90nm,0.8s,mb6.3
PAB San Pablo 98.12 310 PFAKE 01 58 20.0 +15
PAB LR LR
comp=Z,2µm,20.0s,MS5.6
COLA College 98.28 23 PFAKE 01 58 20.0 +15
COLA LR LR
comp=Z,2µm,19.0s,MS5.6
MCK McKinley 98.28 24 *e*P **P** **01 58 04.3 -0.4**
MCK pmax pmax
comp=Z,36nm,1.4s,mb5.7
MCK McKinley 98.28 24 *e*P **P** **01 58 04.3 -0.4**
comp=Z,36nm,1.4s,mb5.7
ELUQ Luque 98.38 308 P **P** **01 58 06.3 +0.5**
comp=Z,0.1nm,0.8s
EADA Adamuz 98.52 309 P **P** **01 58 06.4 -0.1**
comp=Z,49nm,2.0s,mb5.7
KDAK Kodiak Island 98.61 31 PFAKE 01 58 20.0 +14
KDAK LR LR
comp=Z,2µm,21.0s,MS5.7
EMIJ Mijas 98.94 307 P **P** **01 58 07.4 -0.9**
comp=Z,9.4nm,1.2s,mb5.2
SFS San Fernando 100.09 307 PFAKE 01 58 20.0 +7.0
SFS LR LR
comp=Z,2µm,19.0s,MS5.7
EMIN Mina Concepcio 100.22 309 P Pdif 01 58 13.9 +0.3
comp=Z,4.2nm,0.8s
MTE Manteigas 100.38 312 *e*Pdif Pdif 01 58 16.3 +2.0
MTE Manteigas 100.38 312 PFAKE 01 58 30.0 +16
MTE LR LR
comp=Z,1µm,21.0s,MS5.4
PBAR Barrancos 100.43 309 *e*Pdif Pdif 01 58 15.9 +1.4
PBAR Barrancos 100.43 309 *e*PP PP 02 02 25.7 +4.0
EGAK Eagle 100.89 22 PFAKE 01 58 30.0 +13
EGAK LR LR
comp=Z,3µm,20.0s,MS5.8
RTC Rabat Centre 101.05 305 PFAKE 01 58 30.0 +13
RTC LR LR
comp=Z,933nm,19.0s,MS5.3
DBIC Dimbokro 102.39 277 PFAKE 01 58 40.0 +17
DBIC LR LR
comp=Z,2µm,22.0s,MS5.7
SHEL Horse Pasture 103.63 254 PFAKE 01 58 40.0 +11
SHEL LR LR
comp=Z,4µm,22.0s,MS5.9
XMAS Kiritimati 104.60 87 PFAKE 01 58 50.0 +17
XMAS LR LR
comp=Z,2µm,21.0s,MS5.6
TRIS Tristan da Cun 107.26 232 PFAKE 02 03 10.0 +16
TRIS LR LR
comp=Z,1µm,19.0s,MS5.5
SFJD Kangerlussuaq 107.62 348 *i* P PKiKP 02 03 11.0 +17
comp=Z,11nm,0.8s
WRAK Wrangell Islan 109.05 27 PFAKE 02 03 10.0 +13
WRAK LR LR
comp=Z,2µm,19.0s,MS5.7
YKA Yellowknife Ar 111.14 15 PKiKP PKiKP 02 03 01.3 +0.6
comp=Z,0.5nm,0.4s,baz=322,slow=1.8,SNR=9.5
PPT Papeete 112.10 108 *e*PP PP 02 03 40.9 -7.5
comp=Z,311nm,27.5s
PPT *e*Sdif SKKSac 02 10 40.5 -7.4
comp=Z,1µm,31.5s
PPT Papeete 112.10 108 *e*PS PS 02 13 21.9 -0.7
comp=Z,2µm,29.8s
PPT *e*SS SS 02 19 20.7 -3.8
comp=Z,1µm,32.0s
PPT Papeete 112.10 108 *e*LR LR 02 36 30.5
comp=Z,3µm,29.2s
PMSA Palmer Station 116.02 189 PFAKE 02 03 20.0 +10
PMSA LR LR
comp=Z,4µm,21.0s,MS6.0
NLWA Neilton Lookou 118.76 31 PFAKE 02 03 30.0 +14
NLWA LR LR
comp=Z,1µm,21.0s,MS5.6
C04A Brinnon 119.00 30 ⇓P PKPdf 02 03 16.0 -0.3
baz=119
A07A Ashnola River, 119.35 28 ⇓P PKPdf 02 03 16.3 -0.6
baz=119
F03A Seaside 119.87 32 ⇑P PKPdf 02 03 16.8 -1.2
baz=120
B07A Winthrop 119.89 28 ⇑P PKPdf 02 03 16.2 -1.8
baz=120
A08A Turner Farm, O 119.93 27 ⇑P PKPdf 02 03 16.9 -1.1
baz=120
FL2 Flat Top 2 120.33 31 P PKPdf 02 03 19.1 +0.3
G03A Yamhill 120.42 33 ⇑P PKPdf 02 03 18.0 -1.1
baz=120
D06A Cle Elum 120.42 30 ⇑P PKPdf 02 03 17.3 -1.7
baz=120
H02A Toledo 120.44 34 ⇑P PKPdf 02 03 18.3 -0.8
baz=120
C07A Waterville 120.46 29 ⇑P PKPdf 02 03 17.5 -1.6
baz=120
TBM Table Mountain 120.56 30 P PKPdf 02 03 18.7 -0.6
D07A Quincy 120.85 29 ⇑P PKPdf 02 03 18.4 -1.4
baz=121
COR Corvallis 120.88 33 PFAKE 02 03 30.0 +10
COR LR LR
comp=Z,1µm,20.0s,MS5.5
EPH Ephrata 120.92 29 P PKPdf 02 03 19.6 -0.4
I02A Mapleton 120.96 34 ⇑P PKPdf 02 03 19.1 -1.0
baz=121
F05A White Salmon 121.00 31 ⇑P PKPdf 02 03 19.8 -0.4
baz=121
FFC Flin Flon 121.13 13 PFAKE 02 03 30.0 +10
FFC LR LR
comp=Z,2µm,20.0s,MS5.7
HOOD Mount Hood Mea 121.28 32 *e*PKPdf PKPdf 02 03 21.0 +0.2
I03A Eugene 121.28 34 ⇓P PKPdf 02 03 20.5 -0.3
baz=121
VFP Flag Point 121.38 32 P PKPdf 02 03 21.0 +0.1
NEW Newport 121.41 27 *e*PKIKP PKPdf 02 03 20.2 -0.7
NEW *e* 02 04 52.4
NEW MLR MLR
comp=Z,1µm,19.0s
H04A Detroit Lake 121.42 33 ⇓P PKPdf 02 03 19.9 -1.2
baz=121
D08A Wollman Farm, 121.45 29 ⇓P PKPdf 02 03 20.2 -0.8
baz=121
WRD Warden 121.53 29 P PKPdf 02 03 21.1 -0.1
B11A Sandpoint 121.62 26 ⇑P PKPdf 02 03 21.0 -0.3
baz=122
HAWA Hanford 121.63 30 *e*PKPdf PKPdf 02 03 21.4 0.0
HAWA LR LR
comp=Z,1µm,20.0s,MS5.6
D09A Jones Farm, Ri 121.74 28 ⇑P PKPdf 02 03 20.4 -1.2
baz=122
CROR Criterion Ridg 121.86 32 P PKPdf 02 03 21.7 -0.2
TAOE Nuku Hiva Isla 121.91 99 *e*PP PP 02 04 46.1 -11
comp=Z,1µm,28.9s
TAOE Nuku Hiva Isla 121.91 99 *e*LR LR 02 41 11.6
comp=Z,4µm,27.5s
BKCOR Black Crater 121.94 33 P PKPdf 02 03 22.1 +0.1
SCHQ Schefferville 121.96 350 PKP PKPdf 02 03 19.7 -2.0
comp=Z,19nm,0.9s,baz=67,slow=4.4,SNR=15
SCHQ PP PP 02 04 56.4 +1.3
comp=Z,30nm,0.9s,baz=13,slow=6.9,SNR=7.8
SCHQ Schefferville 121.96 350 PKP PKPdf 02 03 19.7 -2.0
SCHQ PP PP 02 04 56.4 +1.3
SCHQ LR LR
comp=Z,3µm,22.0s,MS5.8
A13A Flathead Natio 122.07 25 ⇓P PKPdf 02 03 21.8 -0.3
HUMO Hull Mountain 122.33 35 *e*PKPdf PKPdf 02 03 23.2 +0.3
HUMO LR LR
comp=Z,996nm,21.0s,MS5.4
H07A Lands Inn, Kim 122.86 31 ⇓P PKPdf 02 03 23.4 -0.4
baz=123
F09A S2 Ranch, Elgi 122.91 29 ⇑P PKPdf 02 03 23.2 -0.6
baz=123
YBH Yreka Blue Hor 123.03 35 PFAKE 02 03 40.0 +16
YBH LR LR
comp=Z,1µm,22.0s,MS5.5
D12A Red Ives Fores 123.11 27 ⇓P PKPdf 02 03 22.7 -1.5
baz=123
LAMM Antelope Mount 123.16 36 P PKPdf 02 03 24.1 -0.3
C14A Swan Lake 123.26 25 ⇑P PKPdf 02 03 23.5 -1.0
baz=123
B15A Bradely Ranch, 123.32 24 ⇓P PKPdf 02 03 23.0 -1.5
baz=123
LHEM Herd Peak 123.38 35 P PKPdf 02 03 24.8 -0.1
E12A Beaver Dam Sad 123.50 27 ⇓P PKPdf 02 03 23.7 -1.3
G10A Bishop Farm, J 123.59 29 ⇓P PKPdf 02 03 23.8 -1.4
baz=124
F11A Grangeville 123.62 28 ⇑P PKPdf 02 03 23.9 -1.3
baz=124
BMO Blue Mountains 123.82 30 PFAKE 02 03 40.0 +14
BMO LR LR
comp=Z,1µm,21.0s,MS5.5
WDC Whiskeytown Da 123.85 36 *e*PKIKP PKPdf 02 03 25.2 -0.6
WDC MLR MLR
comp=Z,1µm,20.0s,MS5.5
MSO Missoula 123.91 26 *e*PKPdf PKPdf 02 03 25.0 -0.8
MSO LR LR
comp=Z,2µm,21.0s,MS5.7
G11A Walters Elk Ra 123.92 28 ⇑P PKPdf 02 03 24.4 -1.4
baz=124
F12A Elk City 124.14 28 ⇑P PKPdf 02 03 25.0 -1.2
baz=124
MOD Modoc 124.29 34 *e*PKPdf PKPdf 02 03 26.9 +0.3
MOD LR LR
comp=Z,1µm,22.0s,MS5.5
B18A Beardsley Farm 124.34 22 ⇓P PKPdf 02 03 25.3 -1.2
baz=124
D15A Lincoln 124.35 25 ⇑P PKPdf 02 03 25.3 -1.2
baz=124
HOPS Hopland 124.51 38 *e*PKPdf PKPdf 02 03 27.9 +0.8
HOPS LR LR
comp=Z,1µm,21.0s,MS5.5
H11A Donnelly 124.56 29 ⇑P PKPdf 02 03 26.3 -0.7
baz=124
EGMT Eagleton 124.65 22 ⇓P PKPdf 02 03 26.2 -1.0
baz=124
EGMT Eagleton 124.65 22 *e*PKPdf PKPdf 02 03 27.0 -0.1
EGMT *e*PP PP 02 05 13.3 -0.2
EGMT LR LR
comp=Z,2µm,21.0s,MS5.7
RKT Rikitea 124.71 117 *e*PS PS 02 15 15.2 -0.8
comp=Z,724nm,29.5s
RKT *e*SS SS 02 22 10.0 +2.6
comp=Z,975nm,29.0s
RKT Rikitea 124.71 117 *e*LR LR 02 42 11.9
comp=Z,1µm,24.0s
E15A Deer Lodge 124.78 25 ⇑P PKPdf 02 03 26.2 -1.2
baz=125
WVOR Wild Horse Val 124.84 32 *e*PKIKP PKPdf 02 03 28.1 +0.4
WVOR MLR MLR
comp=Z,1µm,22.0s,MS5.5
MCCM Marconi Confer 125.14 39 PFAKE 02 03 40.0 +12
MCCM LR LR
comp=Z,821nm,20.0s,MS5.4
D18A Linhart Farms, 125.32 23 ⇑P PKPdf 02 03 27.4 -1.0
baz=125
BEKR Beckwourth 125.59 36 ⇓P PKPdf 02 03 28.8 -0.4
baz=126,SNR=18
DLMT Dillon 125.64 26 *e*PKPdf PKPdf 02 03 29.1 0.0
F16A Kennard Place, 125.72 25 ⇑P PKPdf 02 03 27.6 -1.6
baz=126
E18A Harlowton 125.79 23 ⇓P PKPdf 02 03 28.0 -1.4
baz=126
BOZ Bozeman (W) 125.83 25 ⇑P PKPdf 02 03 28.4 -1.0
baz=126
BOZ Bozeman (W) 125.83 25 *e*PKPdf PKPdf 02 03 29.0 -0.4
BOZ *e*PP PP 02 05 24.9 +3.5
BOZ LR LR
comp=Z,1µm,22.0s,MS5.6
F17A Fitzpatrick Pl 126.03 24 ⇑P PKPdf 02 03 29.2 -0.6
baz=126
HLID Hailey 126.18 29 ⇓P PKPdf 02 03 29.9 -0.3
baz=126
HLID Hailey 126.18 29 *e*PKPdf PKPdf 02 03 30.7 +0.6
HLID PP PP 02 05 27.2 +3.3
HLID LR LR
comp=Z,1µm,19.0s,MS5.6
DGMT Dagmar 126.19 18 ⇑P PKPdf 02 03 29.6 -0.5
baz=126
DGMT Dagmar 126.19 18 *e*PKPdf PKPdf 02 03 29.6 -0.5
DGMT LR LR
comp=Z,2µm,19.0s,MS5.9
N08A GE Springer Mi 126.25 34 ⇓P PKPdf 02 03 30.0 -0.4
baz=126
WCN Washoe City 126.31 36 ⇓P PKPdf 02 03 30.0 -0.6
baz=126,SNR=9.2
I14A Mackay 126.36 28 ⇑P PKPdf 02 03 29.5 -1.0
baz=126
F18A Big Timber 126.41 24 ⇓P PKPdf 02 03 30.1 -0.5
baz=126
EFI East Falkland 126.55 198 PFAKE 02 03 40.0 +9.4
EFI LR LR
comp=Z,2µm,21.0s,MS5.7
ULM Lac du Bonnet 126.62 11 PKP PKPdf 02 03 30.0 -0.8
comp=Z,36nm,0.8s,baz=350,slow=3.0,SNR=24
ULM Lac du Bonnet 126.62 11 *e*PKPdf PKPdf 02 03 29.6 -1.2
ULM LR LR
comp=Z,3µm,22.0s,MS6.0
CMB Columbia Colle 126.75 38 *e*PKIKP PKPdf 02 03 31.3 -0.2
CMB MLR MLR
comp=Z,1µm,22.0s,MS5.6
SAO San Andreas Ge 126.88 39 PFAKE 02 03 40.0 +8.3
SAO LR LR
comp=Z,882nm,21.0s,MS5.4
BMN Battle Mountai 127.00 33 *e*PKIKP PKPdf 02 03 32.4 +0.6
BMN MLR MLR
comp=Z,820nm,20.0s,MS5.4
LKWY Lake 127.22 25 PFAKE 02 03 40.0 +7.9
LKWY LR LR
comp=Z,2µm,20.0s,MS5.8
S05C Merced 127.22 38 ⇑P PKPdf 02 03 30.9 -1.5
baz=127
RLMT Red Lodge 127.23 24 ⇓P PKPdf 02 03 30.9 -1.3
baz=127
RLMT Red Lodge 127.23 24 *e*PKPdf PKPdf 02 03 31.8 -0.4
RLMT *e*PP PP 02 05 32.8 +2.1
RLMT LR LR
comp=Z,2µm,20.0s,MS5.7
K14A Jones Ranch, D 127.54 29 ⇓P PKPdf 02 03 32.3 -0.5
baz=127
Q08A Gabbs 127.67 35 ⇓P PKPdf 02 03 31.0 -2.2
baz=128
NVAR Mina Array Bea 127.74 36 PKP PKPdf 02 03 34.0 +0.7
comp=Z,25nm,0.8s,baz=278,slow=1.7,SNR=47
RRI2 Red Ridge 127.78 27 *e*PKPdf PKPdf 02 03 33.7 +0.4
RRI2 *e*PP PP 02 05 34.8 +0.4
T06C Millerton Lake 127.82 38 ⇑P PKPdf 02 03 31.6 -1.9
baz=128
ELK Elko 127.84 32 *e*PKIKP PKPdf 02 03 34.2 +0.8
ELK MLR MLR
comp=Z,1µm,21.0s
K16A Soda Springs 128.07 27 ⇓P PKPdf 02 03 34.0 +0.2
baz=128
M14A Sheep Mountain 128.25 30 ⇑P PKPdf 02 03 34.8 +0.6
baz=128
L15A Malad City 128.33 29 ⇑P PKPdf 02 03 34.8 +0.4
baz=128
AHID Auburn Hatcher 128.34 27 PFAKE 02 03 50.0 +16
AHID LR LR
comp=Z,2µm,20.0s,MS5.8
J18A Kendall Valley 128.47 26 ⇑P PKPdf 02 03 34.5 -0.1
baz=128
AGMN Agassiz Refuge 128.49 12 PFAKE 02 03 50.0 +16
AGMN LR LR
comp=Z,3µm,22.0s,MS5.9
TPH Tonopah 128.61 35 *e*PKIKP PKPdf 02 03 35.2 +0.2
TPH MLR MLR
comp=Z,889nm,20.0s,MS5.5
N14A Grayback Hills 128.81 30 ⇓P PKPdf 02 03 35.5 +0.2
baz=129
VES Vestal, Richgr 128.95 39 ⇓P PKPdf 02 03 35.5 -0.2
baz=129
BW06 Boulder Array 129.03 26 ⇑P PKPdf 02 03 35.2 -0.4
baz=129
BW06 Boulder Array 129.03 26 PFAKE 02 03 50.0 +14
BW06 LR LR
comp=Z,1µm,20.0s,MS5.6
PDAR Pinedale Array 129.03 26 PKP PKPdf 02 03 35.5 -0.1
comp=Z,8.5nm,0.8s,baz=151,slow=3.4,SNR=16
PDAR PP PP 02 05 46.8 +4.2
comp=Z,6.5nm,0.9s,baz=334,slow=1.8,SNR=6.2
HWUT Hardware Ranch 129.03 28 *e*PKPdf PKPdf 02 03 36.0 +0.3
HWUT LR LR
comp=Z,2µm,19.0s,MS5.7
N15A Stansbury Isla 129.12 30 P PKPdf 02 03 36.2 +0.3
baz=129
CWC Cottonwood Cre 129.19 38 ⇓P PKPdf 02 03 35.9 -0.3
baz=129,SNR=10
GRAC Grapevine Rang 129.25 37 ⇓P PKPdf 02 03 36.1 -0.2
baz=129,SNR=10
SBC Santa Barbara 129.42 41 ⇓P PKPdf 02 03 36.3 -0.3
baz=129
DUG Dugway 129.49 30 ⇑P PKPdf 02 03 37.0 +0.4
baz=129
DUG Dugway 129.49 30 *e*PKPdf PKPdf 02 03 37.8 +1.2
DUG LR LR
comp=Z,829nm,22.0s,MS5.4
EYMN Ely 129.58 8 *e*PKPdf PKPdf 02 03 36.6 +0.1
EYMN LR LR
comp=Z,4µm,21.0s,MS6.1
MPMC Manual Prospec 129.79 38 ⇓P PKPdf 02 03 37.3 0.0
baz=130,SNR=17
FURC Furnace Creek, 129.90 37 ⇑P PKPdf 02 03 36.9 -0.6
baz=130,SNR=8.3
TPNV Topopah Spring 129.94 36 ⇓P PKPdf 02 03 37.4 -0.2
baz=130,SNR=7.5
TPNV Topopah Spring 129.94 36 *e*PKPdf PKPdf 02 03 38.8 +1.2
TPNV LR LR
comp=Z,1µm,21.0s,MS5.5
RSSD Black Hills 130.06 21 *e*PKIKP PKPdf 02 03 37.9 +0.3
RSSD *e* 02 05 49.3
RSSD MLR MLR
comp=Z,2µm,19.0s,MS5.9
P15A Leamington 130.23 31 ⇑P PKPdf 02 03 38.2 +0.2
baz=130
S12A Delamar Landin 130.29 34 ⇑P PKPdf 02 03 37.7 -0.5
baz=130
R13A O'Grain Ranch, 130.37 33 ⇓P PKPdf 02 03 38.9 +0.6
baz=130
DECC Green Verdugo 130.43 40 ⇑P PKPdf 02 03 39.2 +0.6
baz=130
P16A Fountain Green 130.52 30 ⇑P PKPdf 02 03 39.0 +0.5
baz=130
O17A Robinson Place 130.52 29 ⇓P PKPdf 02 03 39.1 +0.5
baz=130
Q15A Fillmore 130.61 31 ⇓P PKPdf 02 03 38.8 0.0
baz=130
L21A Rawlins 130.62 25 ⇑P PKPdf 02 03 37.5 -1.2
baz=130
SHOC Shoshone 130.63 37 ⇑P PKPdf 02 03 39.6 +0.7
baz=130,SNR=9.7
GSC Goldstone 130.71 38 ⇓P PKPdf 02 03 38.8 -0.3
baz=131,SNR=5.5
RWWY Rawlins 130.91 25 *e*PKPdf PKPdf 02 03 38.6 -0.6
RWWY *e*PP PP 02 05 54.4 -0.4
L22A Ellis Ranch, M 130.95 24 ⇓P PKPdf 02 03 39.3 0.0
baz=131
T12A Moapa 130.99 35 ⇑P PKPdf 02 03 39.6 0.0
baz=131
MVU Marysvale 131.07 31 PFAKE 02 03 50.0 +10
MVU LR LR
comp=Z,1µm,21.0s,MS5.6
TUQ Turquoise Moun 131.16 37 ⇑P PKPdf 02 03 39.7 -0.3
baz=131
P18A Preston Nutter 131.20 29 ⇑P PKPdf 02 03 39.6 -0.2
baz=131
Q16A Castle Valley 131.29 30 ⇓P PKPdf 02 03 39.8 -0.3
baz=131
HEC Hector,Ludlow 131.32 38 ⇑P PKPdf 02 03 39.8 -0.4
baz=131
PKME Peaks-Kenny Pk 131.56 348 PFAKE 02 03 50.0 +10
PKME LR LR
comp=Z,2µm,20.0s,MS5.8
MURC Murrieta 131.57 40 ⇓P PKPdf 02 03 40.8 0.0
baz=132
S15A Panguitch 131.60 32 ⇑P PKPdf 02 03 41.2 +0.5
baz=132
T14A Hurricane 131.66 33 ⇑P PKPdf 02 03 40.8 -0.1

baz=132
Q18A Rafter H Ranch 131.66 29 ⇑P PKPdf 02 03 40.4 -0.3
baz=132
COWI Conover 131.70 7 PFAKE 02 03 50.0 +9.4
COWI LR LR
comp=Z,2µm,19.0s,MS5.8
GMRC Granite Mounta 131.76 38 ⇓P PKPdf 02 03 40.9 -0.2
baz=132,SNR=19
P19A Cripple Cowboy 131.79 28 ⇓P PKPdf 02 03 41.1 +0.1
baz=132
N22A Wattenberg Ran 131.97 25 ⇑P PKPdf 02 03 41.7 +0.5
baz=132
PFO Pinyon Flat Ob 132.04 39 ⇑P PKPdf 02 03 41.7 0.0
baz=132
PFO Pinyon Flat Ob 132.04 39 PFAKE 02 03 50.0 +8.3
PFO LR LR
comp=Z,1µm,21.0s,MS5.6
BELC Belle Mtn. 132.07 39 ⇑P PKPdf 02 03 41.5 -0.2
baz=132,SNR=5.7
T15A Red Dirt Ranch 132.08 33 ⇓P PKPdf 02 03 41.4 -0.3
baz=132
S17A Black Ridge (B 132.45 31 ⇓P PKPdf 02 03 40.5 -1.8
baz=132
IRM Iron Mountain 132.49 38 ⇑P PKPdf 02 03 42.5 +0.1
baz=132,SNR=7.7
MONP Monument Peak 132.53 40 ⇑P PKPdf 02 03 42.6 0.0
baz=132
U15A North Rim 132.56 33 ⇓P PKPdf 02 03 42.8 +0.2
baz=132
BC3 Big Chuckw Mtn 132.64 39 ⇓P PKPdf 02 03 42.7 0.0
baz=132,SNR=7.4
ECSD EROS,Sioux Fal 132.64 14 *e*PKPdf PKPdf 02 03 42.2 -0.3
ECSD LR LR
comp=Z,2µm,20.0s,MS5.8
Q20A Ridgley Place, 132.66 28 ⇓P PKPdf 02 03 43.0 +0.3
baz=132
V14A Boquillas Ranc 132.68 35 ⇑P PKPdf 02 03 43.0 +0.2
baz=132
R19A Curley Farm, L 132.72 29 ⇑P PKPdf 02 03 42.9 +0.1
baz=133
SWSC Sam W. Stewart 132.89 40 ⇓P PKPdf 02 03 43.2 -0.1
baz=133
W14A Seligman 132.99 35 ⇑P PKPdf 02 03 43.3 -0.1
baz=133
PDMCI Parker Dam,Lak 133.00 37 ⇑P PKPdf 02 03 43.4 -0.1
baz=133
LBNH Lisbon 133.06 350 PFAKE 02 03 50.0 +6.8
LBNH LR LR
comp=Z,2µm,20.0s,MS5.8
V15A Kaibab Nationa 133.07 34 ⇓P PKPdf 02 03 43.5 0.0
baz=133
LONY Lake Ozonia 133.09 353 PFAKE 02 03 50.0 +6.7
LONY LR LR
comp=Z,2µm,22.0s,MS5.7
ISCO Idaho Springs 133.16 25 *e*PKIKP PKPdf 02 03 42.6 -1.0
ISCO MLR MLR
comp=Z,2µm,22.0s,MS5.7
GLMI Grayling 133.32 2 *e*PKPdf PKPdf 02 03 44.6 +0.8
GLMI LR LR
comp=Z,2µm,21.0s,MS5.9
GLA Glamis 133.43 39 ⇑P PKPdf 02 03 44.6 +0.3
baz=133,SNR=7.1
W15A Williams 133.48 35 ⇓P PKPdf 02 03 44.4 0.0
baz=133
OGNE Ogallala 133.56 21 PFAKE 02 04 00.0 +16
OGNE LR LR
comp=Z,2µm,21.0s,MS5.8
X14A Yava 133.63 36 ⇑P PKPdf 02 03 44.6 0.0
baz=134
NCB Newcomb 133.68 352 PFAKE 02 04 00.0 +16
NCB LR LR
comp=Z,2µm,22.0s,MS5.8
RCBR Riachuelo 133.73 264 PFAKE 02 04 00.0 +15
RCBR LR LR
comp=Z,1µm,19.0s,MS5.6
WUAZ Wupatki 133.73 33 ⇓P PKPdf 02 03 45.4 +0.6
baz=134
WUAZ Wupatki 133.73 33 *e*PKPdf PKPdf 02 03 46.1 +1.3
WUAZ LR LR
comp=Z,974nm,22.0s,MS5.5
MVCO Mesa Verde 133.94 29 ⇓P PKPdf 02 03 45.1 0.0
baz=134
MVCO Mesa Verde 133.94 29 *e*PKPdf PKPdf 02 03 46.9 +1.7
MVCO LR LR
comp=Z,2µm,22.0s,MS5.7
W16A Flagstaff 133.95 34 ⇑P PKPdf 02 03 45.3 +0.1
baz=134
T19A Beclabito 133.98 30 ⇑P PKPdf 02 03 45.3 +0.1
baz=134
Y15A Casa Rosa Ranc 134.32 36 ⇓P PKPdf 02 03 46.4 +0.5
baz=134
X16A Lo Mia Camp, P 134.50 35 ⇑P PKPdf 02 03 46.8 +0.5
baz=134
JFWS Jewell Farm 134.69 8 *e*PKIKP PKPdf 02 03 47.5 +1.2
JFWS MLR MLR
comp=Z,2µm,21.0s,MS5.8
SDCO Great Sand Dun 134.91 26 *e*PKPdf PKPdf 02 03 45.5 -1.4
SDCO LR LR
comp=Z,2µm,19.0s,MS5.8
W18A Petrified Fore 134.92 32 ⇑P PKPdf 02 03 47.2 +0.2
baz=135
SCIA State Center 135.15 12 PFAKE 02 04 00.0 +13
SCIA LR LR
comp=Z,3µm,22.0s,MS6.0
X18A Snowflake 135.25 33 ⇓P PKPdf 02 03 48.0 +0.4
baz=135
BINY Binghamton 135.64 353 *e*PKPdf PKPdf 02 03 49.1 +1.0
BINY LR LR
comp=Z,2µm,20.0s,MS5.7
AAM Ann Arbor 135.87 2 PFAKE 02 04 00.0 +11
AAM LR LR
comp=Z,2µm,22.0s,MS5.8
ERPA Erie 136.03 358 PFAKE 02 04 00.0 +11
ERPA LR LR
comp=Z,2µm,20.0s,MS5.8
216A Three Points, 136.22 37 ⇑P PKPdf 02 03 50.0 +0.4
baz=136
CBKS Cedar Bluff 136.26 20 PFAKE 02 04 00.0 +11
CBKS LR LR
comp=Z,2µm,20.0s,MS5.8
TUC Tucson 136.40 36 *e*PKIKP PKPdf 02 03 51.1 +1.2
TUC MLR MLR
comp=Z,740nm,20.0s,MS5.4
CAM4 Nova Friburgo 136.58 239 (P) PKPdf 02 03 47.2 -3.3
CAM4 *i* 02 03 49.1
CAM4 *i* 02 03 55.6
118A Homack Ranch, 136.63 35 ⇑P PKPdf 02 03 50.9 +0.6
baz=136
ANMO Albuquerque 136.74 30 PKhKP 02 03 38.8
comp=Z,4.9nm,0.9s,baz=329,slow=2.5,SNR=8.8
ANMO PP PP 02 06 34.6 +2.5
comp=Z,4.8nm,1.0s,baz=311,slow=7.2,SNR=4.0
ANMO Albuquerque 136.74 30 *i* PKHKP 02 03 38.8
ANMO 02 06 34.6
ANMO pmax pmax
comp=Z,5.0nm,0.9s
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 136.74 30 PFAKE 02 04 00.0 +10
ANMO LR LR
comp=Z,1µm,20.0s,MS5.6
217A Green Valley 136.76 37 ⇓P PKPdf 02 03 51.5 +0.9
baz=137
119A Ashpeak Ranch, 136.92 34 ⇓P PKPdf 02 03 51.4 +0.6
baz=137
KSU1 Kansas State U 136.98 17 *e*PKPdf PKPdf 02 03 50.9 +0.1
KSU1 LR LR
comp=Z,2µm,21.0s,MS5.8
218A Dragoon 137.07 36 ⇓P PKPdf 02 03 51.9 +0.8
baz=137
HDIL Hopedale 137.13 8 PFAKE 02 04 00.0 +9.0
HDIL LR LR
comp=Z,2µm,21.0s,MS5.8
SSPA Standing Stone 137.38 355 *e*PKPdf PKPdf 02 03 52.7 +1.3
SSPA LR LR
comp=Z,1µm,20.0s,MS5.7
318A Bisbee 137.49 36 ⇓P PKPdf 02 03 52.7 +0.8
baz=137
ACSO Alum Creek Sta 137.95 1 *e*PKPdf PKPdf 02 03 51.4 -1.1
ACSO LR LR
comp=Z,1µm,20.0s,MS5.7
319A Douglas 137.95 36 ⇑P PKPdf 02 03 53.6 +0.8
baz=138
MCWV Mont Chateau 138.48 357 PFAKE 02 04 10.0 +17
MCWV LR LR
comp=Z,3µm,22.0s,MS6.0
AMTX Amarillo 138.98 25 PFAKE 02 04 10.0 +15
AMTX LR LR
comp=Z,2µm,22.0s,MS5.8
CCM Cathedral Cave 139.25 11 PFAKE 02 04 10.0 +15
CCM LR LR
comp=Z,2µm,22.0s,MS5.8
CBN Corbin 139.74 354 PFAKE 02 04 10.0 +14
CBN LR LR
comp=Z,2µm,21.0s,MS5.8
WCI Wyandotte Cave 139.78 5 PFAKE 02 04 10.0 +14
WCI LR LR
comp=Z,2µm,21.0s,MS5.8
PLCA Paso Flores 140.06 194 PKhKP 02 03 49.7
comp=Z,4.5nm,0.8s,baz=223,slow=2.7,SNR=9.6
PLCA PKKP PKKPdf 02 13 21.0 -0.7
comp=Z,1.3nm,0.8s,baz=297,slow=6.2,SNR=3.0
PLCA Paso Flores 140.06 194 *i* PKHKP 02 03 49.7
PLCA pmax pmax
comp=Z,5.0nm,0.8s
PLCA pmax pmax
comp=Z,1.0nm,0.8s
PLCA Paso Flores 140.06 194 PKP 02 03 49.7
PLCA PKKP PKKPdf 02 13 21.0 -0.7
PLCA LR LR
comp=Z,3µm,22.0s,MS5.9
WMOK Wichita Mounta 140.25 22 *e*PKHKP 02 03 48.9
WMOK MLR MLR
comp=Z,2µm,21.0s,MS5.7
BLA Blacksburg 140.94 358 PFAKE 02 04 10.0 +12
BLA LR LR
comp=Z,2µm,22.0s,MS5.9
WVT Waverly 141.69 7 *e*PKIKP PKPdf 02 03 55.6 -3.8
WVT MLR MLR
comp=Z,2µm,22.0s,MS5.8
BBSR BB Station 142.02 336 PFAKE 02 04 10.0 +10
BBSR LR LR
comp=Z,984nm,20.0s,MS5.6
MIAR Mount Ida 142.08 15 *e*PKIKP PKPdf 02 03 55.2 -5.0
MIAR MLR MLR
comp=Z,3µm,21.0s,MS6.0
TKL Tuckaleechee C 142.50 2 PKhKP 02 03 54.5
comp=Z,7.9nm,0.7s,baz=76,slow=2.9,SNR=8.4
TKL Tuckaleechee C 142.50 2 *e*PKPdf 02 03 56.0
TXAR Lajitas Array 142.63 32 PKhKP 02 03 57.6
comp=Z,14nm,0.8s,baz=269,slow=1.3,SNR=46
TXAR PP PP 02 07 10.4 +2.0
comp=Z,7.3nm,1.0s,baz=321,slow=1.8,SNR=4.3
TXAR Lajitas Array 142.63 32 *i* PKIKP 02 03 57.6
TXAR 02 07 10.4
TXAR pmax pmax
comp=Z,15nm,0.8s
TXAR pmax pmax
comp=Z,7.0nm,1.0s
CNNC Cliffs of the 142.73 354 PFAKE 02 04 10.0 +8.7
CNNC LR LR
comp=Z,3µm,22.0s,MS5.9
JCT Junction City 143.56 26 *e*PKIKP PKPdf 02 03 59.1 -3.8
JCT MLR MLR
comp=Z,2µm,20.0s,MS5.8
BDFB Brasilia 143.75 246 PKP PKPdf 02 04 01.0 -2.6
comp=Z,5.7nm,0.7s,baz=151,slow=4.6,SNR=19
BDFB Brasilia 143.75 246 PKP PKPdf 02 04 01.0 -2.6
BDFB LR LR
comp=Z,2µm,21.0s,MS5.8
GOGA Godfrey 144.75 2 *e*PKIKP PKPdf 02 04 04.1 -0.8
GOGA MLR MLR
comp=Z,2µm,21.0s,MS5.9
LRAL Lakeview Retre 144.84 7 *e*PKPdf PKPdf 02 04 03.0 -2.1
LRAL LR LR
comp=Z,3µm,22.0s,MS6.0
NHSC New Hope 145.02 357 *e*PKPbc PKPbc 02 04 04.2 -0.5
NHSC LR LR
comp=Z,2µm,21.0s,MS5.9
VBMS Vicksburg 145.04 12 *e*PKPbc PKPbc 02 04 04.7 -0.1
VBMS LR LR
comp=Z,2µm,21.0s,MS5.8
MAIG Mazatlaan 145.55 42 *e*P PKPdf 02 04 06.7 +0.1
HKT Hockley 145.63 21 *e*PKIKP PKPdf 02 04 06.5 0.0
HKT MLR MLR
comp=Z,2µm,20.0s,MS6.0
BRAL Brewton 146.83 8 *e*PKPbc PKPbc 02 04 09.8 -0.5
BRAL LR LR
comp=Z,3µm,22.0s,MS6.0
FCH Farellones 146.93 198 *i* P PKPab 02 04 10.6 -1.3
KVTX Kingsville 146.93 26 *e*PKPbc PKPab 02 04 12.5 +0.5
KVTX LR LR
comp=Z,1µm,20.0s,MS5.8
CLCH Cerro Calan 146.94 198 *i* P PKPdf 02 04 09.7 +1.1
CFAA Coronel Fontan 147.77 203 PKP PKPdf 02 04 10.0 -0.1
comp=Z,7.4nm,0.8s,baz=174,slow=2.4,SNR=38
CFAA PKPbc PKPbc 02 04 12.3 -0.6
comp=Z,7.4nm,0.8s,baz=166,slow=3.3,SNR=50
CFAA Coronel Fontan 147.77 203 PKP PKPdf 02 04 10.0 -0.1
CFAA PKPbc PKPbc 02 04 12.3 -0.6
ZAIG Zacatecas 148.32 38 *e*P PKPbc 02 04 13.3 -1.3
CJM Chamela 148.97 45 *i* P PKPab 02 04 17.0 -3.4
SFJM Santa Fe 149.67 41 *e*P PKPdf 02 04 14.5 +1.0
TLL Tololo Astrono 150.00 200 *i* P PKPbc 02 04 18.2 -0.5
DWPF Disney 150.04 359 *e*PKPbc PKPbc 02 04 18.5 -0.3
DWPF LR LR
comp=Z,1µm,19.0s,MS5.7
LCO Las Campanas 151.02 201 *e*PKPbc PKPbc 02 04 21.2 +0.1
LCO LR LR
comp=Z,2µm,20.0s,MS5.9
MOIG Morelia 151.46 40 *i* P PKPdf 02 04 17.6 +1.4
ZIIG Zihuatanejo 152.74 44 *e*P PKPdf 02 04 19.3 +1.1
PTVM Pico Tres Padr 152.82 37 *e*P PKPbc 02 04 26.7 +1.3
DOG Dongo Capester 152.93 312 *e*P PKPbc 02 04 25.6 -0.1
PBVM Pinon 152.95 37 *e*P PKPdf 02 04 18.5 0.0
LZG Guadaloupe-1 152.98 313 *e*P PKPbc 02 04 25.2 -0.6
SCG Saint Claude 152.98 312 *e*P PKPbc 02 04 25.6 -0.3
BBGH Gun Hill 153.00 305 PFAKE 02 04 30.0 +11
BBGH LR LR
comp=Z,2µm,22.0s,MS5.9
HMG Houelmont 153.02 312 *e*P PKPbc 02 04 25.5 -0.5
IIO Organos 153.05 36 *e*P PKPdf 02 04 18.5 -0.1
FDF Fort de France 153.38 309 PFAKE 02 04 30.0 +11
FDF LR LR
comp=Z,1µm,20.0s,MS5.7
PLIG Platanillo 153.48 39 *e*P PKPdf 02 04 19.3 +0.1
CAIG El Cayaco 153.95 43 *i* P PKPbc 02 04 27.8 -0.2
LVIG Laguna Verde 154.25 32 *e*P PKPdf 02 04 19.4 -0.9
SJG San Juan 154.55 322 PFAKE 02 04 30.0 +9.3
SJG LR LR
comp=Z,3µm,22.0s,MS6.0
SIV San Ignacio 155.03 235 PKP PKPdf 02 04 20.6 -0.8
comp=Z,3.7nm,0.8s,baz=105,slow=2.6,SNR=3.4
GRGR Grenville 155.27 305 PFAKE 02 04 30.0 +8.2
GRGR LR LR
comp=Z,918nm,20.0s,MS5.6
LVC Limon Verde 155.83 211 PKPab PKPab 02 04 47.6 -1.4
comp=Z,8.1nm,0.7s,baz=62,slow=7.8,SNR=4.3
LVC Limon Verde 155.83 211 PKPab PKPab 02 04 47.6 -1.4
LVC LR LR
comp=Z,1µm,19.0s,MS5.7
PNIG Pinotepa 155.84 40 *e*P PKPdf 02 04 22.5 -0.1
VHO Vista Hermosa 156.19 37 *e*P PKPdf 02 04 21.5 -1.4
SDDR Presa de Saban 156.57 333 *e*PKPab PKPab 02 04 53.1 +0.9
SDDR LR LR
comp=Z,2µm,20.0s,MS5.9
TGUH Tegucigalpa,Un 163.24 18 *e*PKPdf PKPdf 02 04 31.6 +0.6
TGUH LR LR
comp=Z,1µm,22.0s
SDV Santo Domingo 164.23 314 *e*PKPdf PKPdf 02 04 32.1 +0.1
SDV LR LR
comp=Z,985nm,21.0s
BCIP Isla Barro Col 168.66 348 PFAKE 02 04 50.0 +15
BCIP LR LR
comp=Z,2µm,21.0s
NNA Nana 168.78 208 PKP PKPdf 02 04 35.3 -0.2
comp=Z,8.0nm,0.8s,baz=250,slow=12,SNR=3.6
NNA Nana 168.78 208 PKP PKPdf 02 04 35.3 -0.2
NNA LR LR
comp=Z,2µm,22.0s
PAYG Puerto Ayora 171.75 81 PFAKE 02 04 50.0 +13
PAYG LR LR
comp=Z,2µm,21.0s
ATAH Atahualpa 173.80 217 PKP PKPdf 02 04 39.7 +1.6
comp=Z,5.1nm,0.7s,baz=283,slow=2.9,SNR=7.4
OTAV Otavalo 175.69 301 *e*PKPdf PKPdf 02 04 38.6 -0.1
OTAV LR LR
comp=Z,2µm,20.0s

*IDC **01** 01:53:04.0±8.6,296S×100.97E,h69km±75km,mb4.0/11,*
mb1 4.1/12,mb1mx3.9/21,mbtmp4.0/12,ML4.5/1,Error ellipse: s-maj=49.0km s-min=17.1km az=56.0
*ISCJB **01** 01:53:07.1±5.6,28S±02×1012E±02,h110km±51km, mb4.6/20,Error ellipse: s-maj=41.8km s-min=11.6km az=137.5*
*NEIC **01** 01:53:07.9±3.1,291S×101.11E,h103km±28km,mb4.7/2, Error ellipse: s-maj=26.5km s-min=5.4km az=48.0*

ISC 01 01:53:09.4±5.6,29S±02×1012E±02,h115km±51km,n29, σ0°45/28,mb4.6/20,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.66**	**97**	P	**P**	**01 57 18.5**	**0.0**
	1.4nm,0.3s,baz=281,slow=14,SNR=5.3						
KAPI	**Kappang**	**18.66**	**97**	P	**P**	**01 57 18.5**	**0.0**
CMAR	**Chiang Mai Arr**	**21.31**	**354**	P	**P**	**01 57 46.5**	**-0.6**
	1.3nm,0.4s,mb3.6,baz=184,slow=9.9,SNR=2.9						
ODAN	**Odare**	**32.42**	**337**	*e*P	**P**	**01 59 28.5**	**0.0**
	31nm,0.6s,mb5.2						
TAPN	**Taplejung**	**32.73**	**337**	*e*P	**P**	**01 59 31.2**	**-0.1**
	70nm,1.0s						
RAMN	**Ramite**	**32.82**	**336**	*e*P	**P**	**01 59 32.4**	**+0.4**
	8.5nm,0.4s,mb5.0						
JIRN	**Jiri**	**33.62**	**336**	*e*P	**P**	**01 59 39.3**	**+0.4**
	46nm,0.8s,mb5.4						
PKI	**Pulchoki**	**33.87**	**334**	*e*P	**P**	**01 59 41.3**	**+0.2**
GUN	**Gumba**	**33.96**	**335**	*e*P	**P**	**01 59 42.3**	**+0.4**
	45nm,0.4s						
DMN	**Daman**	**34.03**	**334**	*e*P	**P**	**01 59 42.3**	**-0.2**
	11nm,0.3s,mb5.1						
KKN	**Kakani**	**34.11**	**334**	*e*P	**P**	**01 59 43.2**	**0.0**
	22nm,0.4s,mb5.3						
GKN	**Gorkha**	**34.58**	**334**	*e*P	**P**	**01 59 47.0**	**-0.3**
	21nm,0.4s,mb5.4						
KOLN	**Koldanda**	**34.85**	**332**	*e*P	**P**	**01 59 50.0**	**+0.4**
	7.0nm,0.3s,mb5.0						
DANN	**Dangsing**	**35.27**	**333**	*e*P	**P**	**01 59 53.3**	**+0.1**
	46nm,0.4s						
WRAB	**Tennant Creek**	**36.55**	**120**	*e*P	**P**	**02 00 03.9**	**-0.3**
	6.4nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**37.79**	**126**	P	**P**	**02 00 14.8**	**+0.1**
	2.2nm,0.6s,mb4.2,baz=302,slow=7.8,SNR=4.3						
KSRS	**Korea Array**	**47.19**	**29**	P	**P**	**02 01 30.5**	**0.0**
	0.8nm,0.3s,mb3.9,baz=216,slow=8.4,SNR=3.3						
STKA	**Stephens Creek**	**47.70**	**132**	P	**P**	**02 01 34.9**	**+0.3**
	8.2nm,0.9s,mb4.5,baz=83,slow=22,SNR=5.1						
SONM	**Songino Array**	**50.70**	**5**	P	**P**	**02 01 57.9**	**+0.8**
	13nm,1.1s,mb4.9,baz=187,slow=9.8,SNR=17						
SONM				PcP	PcP	02 03 13.5	+0.7
	0.6nm,0.4s,baz=185,slow=4.9,SNR=5.6						
EKS2	**Erkin-Say**	**51.65**	**334**	*e*P	**P**	**02 02 05.2**	**+0.9**
	10nm,0.8s,mb4.9						
MK31	**Makanchi Array**	**52.19**	**344**	*e*P	**P**	**02 02 08.3**	**+0.1**
MKAR	**Makanchi Array**	**52.19**	**344**	P	**P**	**02 02 08.1**	**-0.2**
	5.1nm,0.5s,mb4.8,baz=158,slow=8.9,SNR=28						
MKAR				pP	pP	02 02 20.9	-15
	1.9nm,0.7s,baz=152,slow=9.0,SNR=3.4						
KURK	**Kurchatov**	**56.77**	**343**	P	**P**	**02 02 40.1**	**-1.2**
	1.2nm,0.5s,mb4.2,baz=267,slow=22,SNR=7.4						
ZALV	**Zalesovo Beam**	**58.24**	**349**	P	**P**	**02 02 51.0**	**-0.5**
	16nm,0.7s,mb5.1,baz=163,slow=7.6,SNR=15						
BRTR	**Keskin Array B**	**74.77**	**312**	P	**P**	**02 04 36.6**	**-0.4**
	0.6nm,0.5s,mb3.6,baz=145,slow=7.7,SNR=4.4						
AKASG	**Malin Array Be**	**80.89**	**322**	P	**P**	**02 05 10.0**	**-0.7**
	0.4nm,0.5s,mb3.5,baz=84,slow=4.0,SNR=3.4						
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**02 05 45.2**	**+0.6**
	4.7nm,0.8s,mb4.5,baz=103,slow=4.8,SNR=7.7						
ARCES	**ARCESS Array B**	**87.69**	**340**	P	**P**	**02 05 45.2**	**+0.6**
TXAR	**Lajitas Array**	**144.66**	**39**	PKP	PKPdf	02 12 33.5	+0.3
	1.6nm,0.5s,baz=253,slow=0.7,SNR=52						
TXAR				pPKP	pPKPdf	02 12 47.6	-17
	1.6nm,0.5s,baz=252,slow=0.6,SNR=8.3						

*CSEM **01** 02:07:28.6±0.1,44.13N×7.96E,h8km,ML2.4/21,Error ellipse: s-maj=1.2km s-min=0.8km az=147.0*
*ROM **01** 02:07:28.6±0.1,44.14N×7.90E,h10km±2km,Md2.3/6, Ml2.1/4,Error ellipse: s-maj=2.5km s-min=1.1km az=156.0*
*ISCJB **01** 02:07:28.6±0.3,44.19N±002×787E±002,h27km±2km, Error ellipse: s-maj=3.7km s-min=2.8km az=153.7*
*LDG **01** 02:07:28.7±0.1,44.17N×7.94E,h3km,Md2.7/2,Ml2.5/22, Error ellipse: s-maj=1.7km s-min=0.6km az=111.0*
*GEN **01** 02:07:29.3,44.14N×7.88E,h10km,ML1.0*
*STR **01** 02:07:30.0±0.2,44.15N×7.85E,h5km,Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 01 02:07:28.8±0.3,4417N±002×788E±002,h20km±2km,n80, σ0°72/142,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROB	**Robourent**	**0.12**	**1**	P	**Pg**	**02 07 33.0**	**0.0**
FIN	**Finale Ligure**	**0.24**	**81**	Pg	**Pg**	**02 07 34.5**	**+0.1**
FIN				Sg	**Sg**	**02 07 37.8**	**-0.5**
FIN	**Finale Ligure**	**0.24**	**81**	Pg	**Pg**	**02 07 34.5**	**+0.1**
FIN				Sg	**Sg**	**02 07 37.8**	**-0.5**
IMI	**Imperia**	**0.26**	**178**	Pg	**Pg**	**02 07 34.3**	**-0.5**
IMI				Sg	**Sg**	**02 07 38.1**	**-0.8**
IMI	**Imperia**	**0.26**	**178**	Pg	**Pg**	**02 07 34.3**	**-0.5**
IMI				Sg	**Sg**	**02 07 38.1**	**-0.8**
SAOF	**Saorge**	**0.30**	**232**	Pg	**Pg**	**02 07 35.2**	**-0.2**
SAOF				Sg	**Sg**	**02 07 39.3**	**-0.7**
ENR	**Entracque**	**0.34**	**280**	P	**Pg**	**02 07 36.0**	**-0.1**
NEGI	**Seborga**	**0.35**	**202**	P	**Pg**	**02 07 36.0**	**-0.2**
QLNO	**Quiliano**	**0.37**	**65**	Pg	**Pg**	**02 07 36.8**	**+0.2**
QLNO				Sg	**Sg**	**02 07 42.0**	**+0.2**
	202nm,0.2s						
QLNO	**Quiliano**	**0.37**	**65**	Pg	**Pg**	**02 07 36.8**	**+0.2**
QLNO				Sg	**Sg**	**02 07 42.0**	**+0.2**
	202nm,0.2s						
AUTN	**L'Aution**	**0.37**	**242**	Pg	**Pg**	**02 07 36.8**	**+0.1**
AUTN				Sg	**Sg**	**02 07 41.6**	**-0.4**
STV	**Sant Anna di V**	**0.41**	**281**	Pg	**Pg**	**02 07 37.6**	**+0.3**
STV				Sg	**Sg**	**02 07 43.4**	**+0.4**
	86nm,0.1s						
STV	**Sant Anna di V**	**0.41**	**281**	Pg	**Pg**	**02 07 37.6**	**+0.3**
STV				Sg	**Sg**	**02 07 43.4**	**+0.4**
	86nm,0.1s						
SBF	**Sospel**	**0.45**	**226**	*e*Pg	**Pg**	**02 07 38.0**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**02 07 44.1**	**0.0**
	127nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.45**	**226**	*e*Pg	**Pg**	**02 07 38.0**	**0.0**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**02 07 44.1**	**0.0**
	63nm,0.2s,SNR=1.0						
LUCF	**Luceram**	**0.48**	**234**	Pg	**Pg**	**02 07 38.7**	**+0.2**
LUCF				Sg	**Sg**	**02 07 44.8**	**-0.2**
TOUF	**Mont Tournerai**	**0.48**	**251**	Pg	**Pg**	**02 07 38.9**	**+0.3**
DOI	**San Damiano**	**0.56**	**306**	Pg	**Pg**	**02 07 40.1**	**0.0**
DOI				Sg	**Sg**	**02 07 49.0**	**+1.3**
	90nm,0.2s						
DOI	**San Damiano**	**0.56**	**306**	Pg	**Pg**	**02 07 40.1**	**0.0**
DOI				Sg	**Sg**	**02 07 49.0**	**+1.3**
	90nm,0.2s						
REVF	**Revere**	**0.57**	**221**	Pg	**Pg**	**02 07 40.3**	**+0.1**
REVF				Sg	**Sg**	**02 07 48.2**	**+0.3**
MVIF	**Mont Vial**	**0.59**	**243**	Pg	**Pg**	**02 07 40.9**	**+0.3**
MVIF				Sg	**Sg**	**02 07 49.0**	**+0.4**
PCP	**Piancastagn**	**0.60**	**52**	Pg	**Pg**	**02 07 41.1**	**+0.3**
PCP				Sg	**Sg**	**02 07 49.6**	**+0.7**
	70nm,0.4s						
PCP	**Piancastagn**	**0.60**	**52**	Pg	**Pg**	**02 07 41.1**	**+0.3**
PCP				Sg	**Sg**	**02 07 49.6**	**+0.7**
	70nm,0.4s						
CALN	**Calern**	**0.83**	**240**	Pg	**Pg**	**02 07 45.4**	**+0.4**
CALN				Sg	**Sg**	**02 07 56.4**	**+0.3**
MBDF	**Montbardon**	**0.97**	**305**	*e*Pg	**Pg**	**02 07 47.1**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**02 08 00.2**	**-0.3**
	20nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**0.97**	**305**	*e*Pg	**Pg**	**02 07 47.1**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**02 08 00.2**	**-0.3**
	10nm,0.3s,SNR=1.0						
RSP	**Reno Superiore**	**1.07**	**336**	P	**Pg**	**02 07 48.8**	**-0.8**
RRL	**Rocca Remolon**	**1.08**	**314**	P	**Pg**	**02 07 49.2**	**-0.6**
FRF	**La Foret Royal**	**1.08**	**236**	*e*Pg	**Pg**	**02 07 49.5**	**-0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**02 08 03.7**	**-0.3**
	86nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**1.08**	**236**	*e*Pg	**Pg**	**02 07 49.5**	**-0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**02 08 03.7**	**-0.3**
	43nm,0.2s,SNR=1.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SC2M	Scurtabo	1.21	78	P	Pg	02 07 50.6	-1.6
LMR	La Mourre	1.30	230	*e*Pn	Pn	02 07 52.4	+0.6
	SNR=1.0						
LMR	La Mourre	1.30	230	*e*Pg	Pg	02 07 53.3	-0.6
	SNR=1.0						
LMR				*e*Sg	Sg	02 08 10.5	-0.4
	60nm,0.2s,SNR=1.0						
LMR	La Mourre	1.30	230	*e*Pg	Pg	02 07 53.3	-0.6
	SNR=1.0						
LMR				*e*Sg	Sg	02 08 10.5	-0.4
	30nm,0.2s,SNR=1.0						
TRAV	Traversella	1.34	356	P	Pn	02 07 52.6	+0.2
LSD	Lago del Serru	1.39	338	P	Pn	02 07 54.8	+1.7
LPG	La Plagne	1.55	329	*e*Pn	Pn	02 07 56.2	+1.0
	SNR=1.0						
LPG	La Plagne	1.55	329	*e*Pg	Pg	02 07 58.5	-0.2
LPG				*e*Sg	Sg	02 08 18.9	0.0
	8.2nm,0.4s,SNR=1.0						
LPG	La Plagne	1.55	329	*e*Pg	Pg	02 07 58.5	-0.2
LPG				*e*Sg	Sg	02 08 18.9	0.0
	4.1nm,0.4s,SNR=1.0						
LPL	La Plagne	1.57	329	*e*Pn	Pn	02 07 56.3	+0.8
LPL	La Plagne	1.57	329	*e*Pg	Pg	02 07 58.3	-0.8
	SNR=1.0						
LPL				*e*Sg	Sg	02 08 19.5	-0.1
	6.1nm,0.3s						
LPL	La Plagne	1.57	329	*e*Pg	Pg	02 07 58.3	-0.8
	SNR=1.0						
LPL				*e*Sg	Sg	02 08 19.5	-0.1
	3.0nm,0.3s						
BACM	Baccana	1.58	85	P	Pn	02 07 56.2	+0.6
GRAM	Graiana	1.60	78	P	Pn	02 07 56.7	+0.8
ORIF	Oris-en-Rattie	1.61	298	*e*Pn	Pn	02 07 57.0	+0.9
ORIF	Oris-en-Rattie	1.61	298	*e*Pg	Pg	02 07 59.1	-0.8
	SNR=1.0						
ORIF				*e*Sg	Sg	02 08 21.5	+0.6
	9.2nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	1.61	298	*e*Pg	Pg	02 07 59.1	-0.8
	SNR=1.0						
ORIF				*e*Sg	Sg	02 08 21.5	+0.6
	4.6nm,0.3s,SNR=1.0						
SMRF	Simiane la Rot	1.68	264	*e*P	Pn	02 07 59.5	+2.6
	SNR=1.0						
SMRF	Simiane la Rot	1.68	264	*e*Pg	Pg	02 08 00.9	-0.1
SMRF				*e*Sg	Sg	02 08 22.9	+0.1
	64nm,0.4s,SNR=1.0						
SMRF	Simiane la Rot	1.68	264	*e*Pg	Pg	02 08 00.9	-0.1
SMRF				*e*Sg	Sg	02 08 22.9	+0.1
	32nm,0.4s,SNR=1.0						
VALM	Valbona	1.71	83	P	Pn	02 07 57.9	+0.5
PGF	Pioggiola	1.82	153	*e*Pn	Pn	02 07 58.1	-0.7
	SNR=1.0						
PGF				*e*Sn	Sn	02 08 19.3	-1.9
	5.9nm,0.3s,SNR=1.0						
PGF	Pioggiola	1.82	153	*e*Pn	Pn	02 07 58.1	-0.7
	SNR=1.0						
PGF				*e*Sn	Sn	02 08 19.3	-1.9
	3.0nm,0.3s,SNR=1.0						
MAIM	Mastiano	1.90	97	P	Pn	02 08 00.6	+0.6
VIVF	Saint-Julien-l	2.40	288	*e*Pn	Pn	02 08 07.9	+1.1
	SNR=1.0						
VIVF				*e*Sn	Sn	02 08 35.6	0.0
	4.4nm,0.3s,SNR=1.0						
VIVF	Saint-Julien-l	2.40	288	*e*Pn	Pn	02 08 07.9	+1.1
	SNR=1.0						
VIVF				*e*Sn	Sn	02 08 35.6	0.0
	2.2nm,0.3s,SNR=1.0						
CABF	La Chapelle	2.75	333	*e*Pn	Pn	02 08 12.2	+0.5
CABF				*e*Sn	Sn	02 08 44.3	+0.1
	0.9nm,0.3s						
CABF	La Chapelle	2.75	333	*e*Pn	Pn	02 08 12.2	+0.5
CABF				*e*Sn	Sn	02 08 44.3	+0.1
	0.4nm,0.3s						
LASF	Ste Croix	2.90	270	*e*Pn	Pn	02 08 15.7	+1.9
	SNR=1.0						
LASF				*e*Sn	Sn	02 08 47.3	-0.7
	2.4nm,0.2s,SNR=1.0						
LASF	Ste Croix	2.90	270	*e*Pn	Pn	02 08 15.7	+1.9
	SNR=1.0						
LASF				*e*Sn	Sn	02 08 47.3	-0.7
	1.2nm,0.2s,SNR=1.0						
HINF	Hinteralfeld	3.72	349	*e*Pn	Pn	02 08 25.2	+0.2
HINF				*e*Sn	Sn	02 09 07.3	-0.8
	1.0nm,0.2s,SNR=1.0						
HINF	Hinteralfeld	3.72	349	*e*Pn	Pn	02 08 25.2	+0.2
HINF				*e*Sn	Sn	02 09 07.3	-0.8
	0.5nm,0.2s,SNR=1.0						
SMF	Signal de Mont	3.77	312	*e*Pn	Pn	02 08 26.2	+0.5
SMF				*e*Sn	Sn	02 09 08.9	-0.6
	0.8nm,0.2s						
SMF	Signal de Mont	3.77	312	*e*Pn	Pn	02 08 26.2	+0.5
SMF				*e*Sn	Sn	02 09 08.9	-0.6
	0.4nm,0.2s						
HAU	Haudompre	3.98	345	*e*Pn	Pn	02 08 28.7	+0.1
HAU				*e*Sn	Sn	02 09 13.4	-1.2
	2.1nm,0.3s						
HAU	Haudompre	3.98	345	*e*Pn	Pn	02 08 28.7	+0.1
HAU				*e*Sn	Sn	02 09 13.4	-1.2
	1.0nm,0.3s						
AVF	Avril sur Loir	4.12	311	*e*Pn	Pn	02 08 31.0	+0.4
AVF				*e*Sn	Sn	02 09 17.3	-0.9
	0.5nm,0.3s						
AVF	Avril sur Loir	4.12	311	*e*Pn	Pn	02 08 31.0	+0.4
AVF				*e*Sn	Sn	02 09 17.3	-0.9
	0.2nm,0.3s						
LOR	Lormes	4.19	319	*e*Pn	Pn	02 08 32.1	+0.7
LOR				*e*Sn	Sn	02 09 18.8	-0.9
	1.4nm,0.3s						
LOR	Lormes	4.19	319	*e*Pn	Pn	02 08 32.1	+0.7
LOR				*e*Sn	Sn	02 09 18.8	-0.9
	0.7nm,0.3s						
MTLF	Montolieu	4.19	261	*e*Pn	Pn	02 08 32.0	+0.6
MTLF				*e*Sn	Sn	02 09 19.0	-0.7
	0.9nm,0.2s						
MTLF	Montolieu	4.19	261	*e*Pn	Pn	02 08 32.0	+0.6
MTLF				*e*Sn	Sn	02 09 19.0	-0.7
	0.4nm,0.2s						
SSF	Saint Saulge	4.22	315	*e*Pn	Pn	02 08 32.4	+0.6
SSF				*e*Sn	Sn	02 09 19.6	-0.8
	1.1nm,0.4s						
SSF	Saint Saulge	4.22	315	*e*Pn	Pn	02 08 32.4	+0.6
SSF				*e*Sn	Sn	02 09 19.6	-0.8
	0.6nm,0.4s						
CAF	Calviac	4.23	282	*e*Pn	Pn	02 08 32.8	+0.8
	SNR=1.0						
CAF				*e*Sn	Sn	02 09 20.1	-0.6
	1.2nm,0.3s						
CAF	Calviac	4.23	282	*e*Pn	Pn	02 08 32.8	+0.8
	SNR=1.0						
CAF				*e*Sn	Sn	02 09 20.1	-0.6
	0.6nm,0.3s						
CDF	Champ du Feu	4.26	355	*e*Pn	Pn	02 08 32.6	+0.1
CDF				*e*Sn	Sn	02 09 20.0	-1.6
	0.9nm,0.3s						
CDF	Champ du Feu	4.26	355	*e*Pn	Pn	02 08 32.6	+0.1
CDF				*e*Sn	Sn	02 09 20.0	-1.6
	0.4nm,0.3s						
MEZF	Maizieres J'vi	4.75	337	*e*Pn	Pn	02 08 39.4	+0.2
MEZF				*e*Sn	Sn	02 09 32.1	-1.6
	3.1nm,0.4s						
MEZF	Maizieres J'vi	4.75	337	*e*Pn	Pn	02 08 39.4	+0.2
MEZF				*e*Sn	Sn	02 09 32.1	-1.6
	1.5nm,0.4s						

*IDC **01** 02:41:08.2±5.7, 3629N×7094E, h138km±52km, mb3.8/10, mb1 4.0/14, mb1mx3.8/23, mbtmp3.9/14, Error ellipse: s-maj=26.4km s-min=16.6km az=5.0*
*ISCJB **01** 02:41:11.8±0.3, 3654N±002×7093E±005, h178km±5km, mb4.1/18, Error ellipse: s-maj=6.9km s-min=3.4km az=173.6*
*MOS **01** 02:41:12.1±1.0, 3658N×7085E, h178km, mb4.4/13, Error ellipse: s-maj=12.6km s-min=6.0km az=89.4*
*BJI **01** 02:41:12.6, 3665N×7084E, h182km, mB4.9, mb4.4*
*NEIC **01** 02:41:13.3±0.6, 3656N×7086E, h176km±7km, mb4.5/5, Error ellipse: s-maj=8.7km s-min=6.5km az=93.0*
*NNC **01** 02:41:17.8±6.7, 3703N×7066E, h202km±62km, mb3.4, mpv4.7, Error ellipse: s-maj=58.6km s-min=31.5km az=13.0*

ISC 01 02:41:12.7±0.4**, 3655N**±002×**7093E**±006**, h172**km±4km**, n99,** σ**1.08**/125**, mb4.1**/18**, 9C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.53	218	*e*PN	Pn	02 41 55.7	+0.4
CEP	Cherat	2.84	163	⇑P	Pn	02 42 00.2	+1.2
CEP				S	Sn	02 42 36.0	+1.1
CHCP	Chirah Chowk	3.46	146	⇑P	Pn	02 42 08.3	+1.6
NIL	Nilore	3.46	146	*e*Pn	Pn	02 42 08.3	+1.6
NIL				*e*Sn	Sn	02 42 50.1	+1.3
SBDP	Sheikh Budin	4.24	181	⇑P	Pn	02 42 16.5	-0.2
SARP	Sargodha	4.84	162	⇓P	Pn	02 42 24.4	0.0
THN	Thein Dam	5.70	135	*e*P	Pn	02 42 34.6	-1.0
THN				*e*x	x	02 43 38.6	
DLH	Dalhousie	5.77	132	*e*P	Pn	02 42 37.0	+0.5
DLH				*e*x	x	02 43 41.0	
UCH	Uchtor	6.31	25	P	Sn	02 43 54.6	-0.6
	SNR=9.7						
KZA	Kyzart	6.46	30	P	Pn	02 42 45.9	+0.5
	SNR=14						
EKS2	Erkin-Say	6.49	19	P	Pn	02 42 46.7	+0.8
	SNR=15						
EKS2	Erkin-Say	6.49	19	*e*Pn	Pn	02 42 46.7	+0.8
	21nm,0.6s						
EKS2				*e*Sn	Sn	02 43 59.4	+0.1
KK31	Karatay Array	6.55	357	⇓P	Pn	02 42 46.8	0.0
	35nm,0.4s,baz=174,slow=13,SNR=260						
KK31				⇓S	Sn	02 43 56.5	-4.3
	66nm,0.3s,baz=185,slow=20,SNR=9.6						
KK31	Karatay Array	6.55	357	*e*PN	Pn	02 42 46.7	-0.1
KK31				pmax	pmax		
	comp=Z,57nm,0.3s						
AAK	Ala-Archa	6.67	23	*e*PN	Pn	02 42 49.2	+0.9
AAK				*e*		02 44 03.1	
AAK				pmax	pmax		
	comp=Z,27nm,0.4s						
AAK	Ala-Archa	6.67	23	*e*Pn	Pn	02 42 49.2	+0.9
	comp=Z,28nm,0.4s						
AAK				*e*Sn	Sn	02 44 03.1	-0.5
KBK	Karagaybulak	6.84	26	P	Pn	02 42 51.9	+1.3
	SNR=18						
BHK	Bhakra	6.85	137	*e*x	x	02 43 02.4	
FRU	Bishkek	6.89	23	*e*PN	Pn	02 42 49.5	-1.7
FRU				*i* S	Sn	02 44 09.5	+0.7
FRU				smax			
	comp=E,310nm,1.8s						
ULHL	Ulahol	7.02	34	P	Pn	02 42 53.7	+0.8
	SNR=11						
CHMS	Chumysh	7.08	23	P	Pn	02 42 54.0	+0.3
	SNR=13						
SDNR	Sundarnagar	7.11	133	*e*P	Pn	02 42 53.0	-1.2
SDNR				*e*S	Sn	02 44 07.6	-6.6
USP	Ospenovka	7.25	21	P	Pn	02 42 55.6	-0.3
	SNR=13						
TKM2	Tokmak 2	7.31	28	⇓P	Pn	02 42 57.4	+0.7
	comp=E,22nm,0.6s						
TKM2				⇓S	Sn	02 44 18.0	-0.8
	comp=E,36nm,0.7s						
TKM2	Tokmak 2	7.31	28	*e*PN	Pn	02 42 57.5	+0.8
TKM2				pmax	pmax		
	comp=Z,38nm,0.8s						
TKM2	Tokmak 2	7.31	28	*e*Pn	Pn	02 42 57.5	+0.8
	comp=Z,38nm,0.8s						
SMLA	Simla	7.49	134	*i* P	Pn	02 42 58.6	-0.6
SMLA				*i* S	Sn	02 44 18.1	-5.3
SMLA				*e*x	x	02 44 23.7	
	comp=E,3μm,0.3s						
SMLA				*e*x	x	02 44 24.6	
	comp=N,4μm,0.3s						
KLP	Kalpa	7.87	127	*e*P	Pn	02 43 04.4	+0.2
KLP				*e*S	Sn	02 44 26.4	-6.0
KLP				AML	AML	02 44 32.8	
	comp=N,731nm,0.5s						
KLP				AML	AML	02 44 39.3	
	comp=E,823nm,0.5s						
DDI	Dehra Dun	8.60	134	*e*P	Pn	02 43 11.6	-2.3
DDI				*e*S	Sn	02 44 42.5	-7.4
KHET	Khetri	9.40	153	*e*P	Pn	02 43 22.4	-2.1
KHET				*e*S	Sn	02 45 00.4	-8.8
KHET				AML	AML	02 45 04.3	
	comp=E,109nm,0.4s						
KHET				AML	AML	02 45 04.6	
	comp=N,103nm,0.2s						
NDI	New Delhi	9.46	144	*e*P	Pn	02 43 23.0	-2.3
NDI				*e*x	x	02 45 00.0	
AYAN	Aya Nagar	9.59	145	*e*P	Pn	02 43 25.1	-1.9
AYAN				*e*S	Sn	02 45 04.8	-9.0
KUDL	Kundal	9.61	149	*e*P	Pn	02 43 25.3	-1.9
KUDL				*e*S	Sn	02 45 04.9	-9.2
KUDL				AML	AML	02 45 06.3	
	comp=E,172nm,0.4s						
KUDL				AML	AML	02 45 09.8	
	comp=N,105nm,0.3s						
SONA	Sohna	9.77	146	*e*P	Pn	02 43 27.6	-1.7
SONA				*e*S	Sn	02 45 08.8	-9.2
SONA				AML	AML	02 45 11.0	
SONA				AML	AML	02 45 11.8	
	comp=E,144nm,0.4s						
PTH	Pithoragarh	10.46	129	*e*P	Pn	02 43 39.0	+0.7
PTH				*e*x	x	02 45 28.1	
AJM	Ajmer	10.53	161	*e*x	x	02 43 32.4	
AJM				*e*S	Sn	02 45 26.9	-9.3
AJM				AML	AML	02 45 31.9	
	comp=N,74nm,0.3s						
AJM				AML	AML	02 45 32.1	
	comp=E,78nm,1.0s						
MK31	Makanchi Array	13.28	36	⇑P	Pn	02 44 14.9	+0.4
	comp=E,3.7nm,0.7s,baz=216,slow=12,SNR=40						
MK31	Makanchi Array	13.28	36	*e*Pn	Pn	02 44 15.4	+0.9
MKAR	Makanchi Array	13.28	36	P	Pn	02 44 14.2	-0.2
	comp=E,0.7nm,0.3s,baz=216,slow=15,SNR=14						
MKAR	Makanchi Array	13.28	36	P	Pn	02 44 14.3	-0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BHPL	Bhopal	14.40	155	*e*P	Pn	02 44 29.1	+0.3
BHPL				*e*x	x	02 46 57.4	
AB31	Akbulak array	15.01	331	P	Pn	02 44 34.5	-1.5
AB31				S	S	02 47 10.7	-12
AB31				pmax	pmax		
	comp=Z,18nm,0.5s						
AB31				smax			
	comp=N,19nm,0.5s						
AB09	Akbulak array	15.03	331	⇑P	Pn	02 44 34.9	-1.3
	comp=N,12nm,0.6s						
AB09				⇑S	S	02 47 13.9	-9.5
	comp=N,11nm,0.6s						
KURBB	Kurchatov Arra	15.09	19	⇑P	Pn	02 44 35.2	-1.8
	comp=N,1.4nm,0.6s						
KURK	Kurchatov	15.20	19	⇓P	Pn	02 44 36.0	-2.3
	comp=N,8.7nm,1.1s						
KURK	Kurchatov	15.20	19	P	Pn	02 44 35.3	-3.0
	comp=N,0.4nm,0.3s,baz=210,slow=10,SNR=16						
KURK	Kurchatov	15.20	19	*e*P	Pn	02 44 37.3	-1.0
VOSK	Vostochnaya	16.17	0	⇑P	Pn	02 44 48.7	-1.4
	comp=N,13nm,1.4s						
VOSK	Vostochnaya	16.17	0	P	Pn	02 44 48.7	-1.4
VOSK				pmax	pmax		
	comp=Z,13nm,1.4s						
BVA0	Borovoye Array	16.48	359	P	Pn	02 44 53.3	-0.5
	comp=Z,2.1nm,0.8s,baz=156,slow=12,SNR=64						
BVAR	Borovoye Array	16.48	359	P	Pn	02 44 53.5	-0.3
	comp=Z,3.3nm,0.3s,baz=160,slow=13,SNR=45						
BVAR				S	S	02 47 53.2	-3.3
	comp=Z,0.5nm,0.3s,baz=165,slow=23,SNR=5.9						
BVAR	Borovoye Array	16.48	359	P	Pn	02 44 53.5	-0.3
BVAR				S	S	02 47 53.2	-3.3
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BVAR	Borovoye Array	16.48	359	P	Pn	02 44 53.5	-0.3
BVAR				S	S	02 47 53.2	-3.3
BRVK	Borovoye	16.51	359	*e*P	Pn	02 44 55.0	+0.7
BRVK				pmax	pmax		
	comp=Z,18nm,0.8s						
BRVK	Borovoye	16.51	359	*e*P	Pn	02 44 55.0	+0.8
	comp=Z,18nm,0.8s						
AKTK	Aktyubinsk	16.71	330	P	Pn	02 44 57.0	+0.3
AKTK				S	S	02 47 57.1	-4.4
AKTO	Aktyubinsk	16.71	330	P	Pn	02 44 57.0	+0.3
	comp=Z,3.2nm,0.3s,baz=147,slow=11,SNR=87						
AKTO				S	S	02 47 57.1	-4.5
	comp=Z,0.9nm,0.3s,baz=139,slow=19,SNR=5.4						
AKTO	Aktyubinsk	16.71	330	P	Pn	02 44 57.0	+0.4
AKTO				S	S	02 47 57.1	-4.4
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
BOK	Bokaro	18.10	130	*e*x	P	02 45 12.3	+0.8
LSA	Lhasa	18.24	106	P	P	02 45 16.4	+3.4
LSA	Lhasa	18.24	106	*e*P	P	02 45 17.0	+4.0
LSA				pmax	pmax		
	comp=Z,25nm,1.0s						
LSA	Lhasa	18.24	106	*e*P	P	02 45 17.0	+4.0
	comp=Z,25nm,1.0s						
ZAA0	Zalesovo Array	19.89	25	*e*P	P	02 45 31.1	+0.6
ZALV	Zalesovo Beam	19.89	25	P	P	02 45 31.1	+0.6
	comp=Z,8.5nm,0.4s,baz=222,slow=11,SNR=47						
ZALV				S	S	02 49 01.2	-3.6
	comp=Z,4.0nm,0.8s,baz=215,slow=18,SNR=5.2						
ZALV	Zalesovo Beam	19.89	25	P	P	02 45 31.2	+0.6
ZALV				S	S	02 49 01.2	-3.6
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZALV				smax			
	comp=N,4.0nm,0.8s						
HYB	Hyderabad	20.22	159	*i* P	P	02 45 35.5	+1.1
HYB				*e*S	S	02 49 13.0	+1.3
HYB	Hyderabad	20.22	159	*e*P	P	02 45 35.5	+1.1
SHL	Shillong	20.98	116	*e*P	P	02 45 43.0	+0.5
SVE	Sverdlovsk	21.43	344	⇑*e*P	P	02 45 47.6	+0.7
SVE				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.4						
ARU	Arti	21.57	341	*d i*P	P	02 45 48.8	+0.5
ARU				*e*S	S	02 49 38.6	+2.7
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.5						
ARU	Arti	21.57	341	*e*P	P	02 45 49.2	+0.9
	comp=Z,14nm,0.9s,mb4.4						
HVS	Khovu-Aksy	21.84	41	*e*P	P	02 45 51.2	0.0
HVS				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.4						
GTA	Gaotai	22.90	74	*e*P	P	02 46 03.5	+2.1
GTA				AMB	AMB		
	comp=Z,3.0nm,1.6s,mb3.5						
SONM	Songino Array	28.35	55	P	P	02 46 51.1	+0.8
	comp=Z,1.2nm,0.8s,mb3.7,baz=243,slow=8.7,SNR=8.7						
SONM	Songino Array	28.35	55	P	P	02 46 51.1	+0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	29.37	288	P	P	02 46 59.8	+0.4
	comp=Z,0.5nm,0.8s,mb3.3,baz=100,slow=8.4,SNR=3.7						
BRTR	Keskin Array B	29.37	288	P	P	02 46 59.8	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	Obninsk	29.86	319	*e*P	P	02 47 04.5	+0.9
OBN				pmax	pmax		
	comp=Z,23nm,2.0s,mb4.6						
CMAR	Chiang Mai Arr	30.53	119	P	P	02 47 10.8	+0.9
	comp=Z,3.0nm,0.4s,mb4.3,baz=291,slow=7.6,SNR=6.7						
CMAR	Chiang Mai Arr	30.53	119	P	P	02 47 10.8	+1.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	Malin Array Be	32.87	309	P	P	02 47 30.4	+0.4
	comp=Z,3.8nm,0.6s,mb4.3,baz=80,slow=7.5,SNR=14						
AKASG	Malin Array Be	32.87	309	P	P	02 47 30.4	+0.4
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JOF	Joensuu	35.80	330	*e*p	P	02 47 55.0	0.0
	comp=Z,3.1nm,0.3s,mb4.4						
JOF	Joensuu	35.80	330	*e*P	P	02 47 55.0	0.0
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
NJ2	Nanjing	39.52	82	*e*P	P	02 48 26.4	-0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
KEV	Kevo	40.73	338	*e*p	P	02 48 36.5	+0.4
	comp=Z,0.9nm,0.3s,mb3.9						
KEV	Kevo	40.73	338	*e*P	P	02 48 36.5	+0.4
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ARCES	ARCESS Array B	41.08	338	P	P	02 48 40.0	+1.1
	comp=Z,6.3nm,0.6s,mb4.4,baz=110,slow=8.1,SNR=28						
ARCES	ARCESS Array B	41.08	338	P	P	02 48 40.0	+1.1
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NB2	NORSAR Subarra	44.31	323	P	P	02 49 04.9	-0.1
	comp=Z,7.8nm,0.7s,mb4.5,baz=95,slow=7.9						
NOA	NORSAR Array B	44.31	323	P	P	02 49 05.2	+0.2
	comp=Z,6.2nm,0.7s,mb4.4,baz=96,slow=7.8,SNR=22						
NOA	NORSAR Array B	44.31	323	P	P	02 49 05.2	+0.2
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TORD	Torodi Ar. Bea	65.66	269	P	P	02 51 37.6	-1.2
	comp=Z,1.1nm,0.5s,mb3.9,baz=48,slow=5.6,SNR=22						
BOSA	Boshof	77.75	220	P	P	02 52 49.2	-1.2
	comp=Z,2.5nm,0.9s,mb3.9,baz=18,slow=9.6,SNR=4.1						
BOSA	Boshof	77.75	220	P	P	02 52 49.3	-1.2
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
YKA	Yellowknife Ar	81.20	3	P	P	02 53 09.3	+0.6
	comp=Z,0.5nm,0.5s,mb3.4,baz=351,slow=5.4,SNR=8.9						
YKA	Yellowknife Ar	81.20	3	P	P	02 53 09.3	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	84.33	125	P	P	02 53 23.9	-1.5
	comp=Z,3.6nm,0.6s,mb4.3,baz=310,slow=5.0,SNR=67						
ASAR	Alice Springs	84.33	125	P	P	02 53 23.9	-1.5
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						

*ISCJB **01** 03:07:08.8±1.4, 184N±0.1×6375W±006, h83km±11km, Error ellipse: s-maj=19.6km s-min=5.9km az=24.1*
*TRN **01** 03:07:08.7, 1838N×6377W, h71km, M3.4(RSPR)*
*NEIC **01** 03:07:10.2, 1843N×6375W, h77km, MD3.5(RSPR), After RSPR.*
*RSPR **01** 03:07:10.2, 1843N×6375W, h77km±1km, MD3.4/10, MD3.4/10*

ISC 01 03:07:09.6±1.4**, 184N**±01×**6374W**±006**, h78**km±11km**, n16,** σ**0.43**/26**, 10C-5D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.63	297	⇑*e*P	Pn	03 07 24.7	+0.3
ABV				*e*S	Sn	03 07 36.3	+0.9
SMRT	St. Maarten	0.74	121	⇑*e*P	Pn	03 07 25.3	-0.3
SMRT				*e*S	Sn	03 07 37.4	-0.1
TBVI	Tortola	0.83	269	⇑*e*P	Pn	03 07 26.0	-0.6
TBVI	Tortola	0.83	269	⇑*e*P	Pn	03 07 26.2	-0.4
TBVI				*e*S	Sn	03 07 38.3	-0.9
TBVI	Tortola	0.83	269	⇑*e*P	Pn	03 07 26.0	-0.6
TBVI				*e*S	Sn	03 07 38.3	-0.9
SABA	Saba	0.94	150	⇑*e*P	Pn	03 07 27.7	-0.2
SABA				*e*S	Sn	03 07 41.6	+0.1
STVI	Saint Thomas	1.16	266	⇓*e*P	Pn	03 07 30.0	-0.4
STVI	Saint Thomas	1.16	266	⇓*e*P	Pn	03 07 30.3	-0.1
STVI				*e*S	Sn	03 07 45.6	-0.5
STVI	Saint Thomas	1.16	266	⇓*e*P	Pn	03 07 30.0	-0.4
STVI				*e*S	Sn	03 07 45.6	-0.5
SEUS	St. Eustatius	1.19	142	*e*S	Sn	03 07 47.2	+0.4
HUMP	Col San Antoni	2.03	262	⇑*e*P	Pn	03 07 41.7	-0.1
HUMP				*e*S	Sn	03 08 06.7	+0.4
SJG	San Juan	2.31	262	⇑*e*P	Pn	03 07 45.7	+0.1
ICM	Isla Caja Muer	2.70	259	⇑*e*P	Pn	03 07 51.0	+0.1
CELP	Cerrillos	2.72	263	⇓*e*P	Pn	03 07 51.5	+0.4
AOPR	Arecibo Observ	2.86	269	⇑*e*P	Pn	03 07 52.6	-0.4
AOPR				*e*S	Sn	03 08 26.6	+0.1
CRPR	Cabo Rojo, PR	3.23	263	⇓*e*P	Pn	03 07 57.7	-0.3
CRPR				*e*S	Sn	03 08 36.1	+0.7

KRSC 01 03:13:03.1±0.7**, 5389N**×**16161E, h5**km±5km**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.67	6	*e*P	Pg	03 13 15.6	-0.4
MKZ				*i* S	Sg	03 13 24.1	-0.6
SPN	Mys Shipunski	1.24	231	*e*P	Pg	03 13 26.4	-0.4
SPN				*e*S	Sg	03 13 43.2	+0.4
KII	Karymskiy	1.28	277	P	Pn	03 13 26.9	-0.8
NLC	Nalytchevo	1.53	243	P	Pn	03 13 31.2	+0.2
NLC				*i* S	Sn	03 13 52.1	+0.8
TUMR	Tumrok	1.64	329	P	Pn	03 13 32.6	+0.1
AVH	Avacha	1.82	251	P	Pn	03 13 36.0	+0.9
KMNR	Kamenistaya	2.03	338	P	Pn	03 13 39.4	+1.5
KMNR				*i* S	Sn	03 14 05.4	+1.8
BZGR	Bezymyannyi-Gr	2.12	346	P	Pn	03 13 40.0	+0.8
BZMR	Bezymyannaya	2.15	343	P	Pn	03 13 40.1	+0.6
BZWR	Bezymyannyi-We	2.18	343	P	Pn	03 13 40.1	+0.2
BZWR				*i* S	Sn	03 14 07.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GNL	Ganaly	2.19	266	P	Pn	03 13 41.9	+1.9
KPT	Kopyto	2.23	340	P	Pn	03 13 41.4	+0.8
RUS	Russkaya	2.37	233	P	Pn	03 13 43.4	+0.9
RUS				iS	Sn	03 14 13.4	+1.5
KBTR	Krutoberegovo	2.42	16	P	Pn	03 13 43.7	+0.4
SRKR	Sorokina	2.78	355	P	Pn	03 13 49.3	+1.1

NEIC 01 03:20:40.7, 3778S×17681E, h5km, ML3.9(WEL), 1C, After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.23	207	⇑P	Pg	03 20 45.6	+0.3
MARZ				S	Sg	03 20 49.2	+0.9
EDRZ	Edgecumbe	0.33	190	P	Pg	03 20 47.4	+0.3
LIRZ	Lichensteins R	0.41	236	P	Pg	03 20 49.1	+0.6
TGRZ	Tauranga	0.44	276	P	Pg	03 20 49.6	+0.5
MKRZ	Makatiti	0.45	217	P	Pg	03 20 50.2	+0.8
KARZ	Kaharoa	0.51	241	P	Pg	03 20 51.0	+0.5
TAZ	Tarawera	0.51	208	P	Pg	03 20 51.1	+0.6
URZ	Urewera	0.54	154	P	Pg	03 20 50.8	-0.2
UTU	Utuhina	0.63	231	P	Pg	03 20 53.1	+0.3
MWZ	Matawai	0.79	135	P	Pg	03 20 55.7	-0.2
TOZ	Tahuroa Road	1.04	272	P	Pg	03 20 58.7	-1.9
MKAZ	Moumakai	1.47	297	P	Pn	03 21 05.0	-2.8

NEIC 01 03:30:48.9, 1443N×9416W, h20km, MD4.0(MEX), After MEX.

MEX 01 03:30:48.9±1.1, 1444N×9416W, h20km±51km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.55	36	eP	Pn	03 31 11.4	-3.9
PCIG				iS	Sn	03 31 30.1	-4.8
THIG		1.89	75	iP	Pn	03 31 17.7	-2.3
THIG				iS	Sn	03 31 39.4	-3.9
TGIG		2.53	23	iP	Pn	03 31 27.4	-1.5
TGIG				iS	Sn	03 31 57.0	-2.1
SCX	San Cristobal	2.71	32	eP	Pn	03 31 29.7	-1.7
SCX				iS	Sn	03 32 00.4	-3.3
SCX	San Cristobal	2.71	32	eP	Pn	03 31 29.7	-1.7
SCX				iS	Sn	03 31 59.8	-3.9
CMIG	Matias Romero	2.73	345	iP	Pn	03 31 29.5	-2.1
CMIG				iS	Sn	03 32 00.3	-3.7
VHO	Vista Hermosa	3.61	317	eP	Pn	03 31 45.3	+1.6
VHO				iS	Sn	03 32 23.1	-2.7
VHO	Vista Hermosa	3.61	317	eP	Pn	03 31 34.5	-9.2
VHO				iS	Sn	03 32 28.6	+2.8
PNIG	Pinotepa	4.29	297	eP	Pn	03 31 51.2	-1.9
PNIG				iS	Sn	03 32 39.5	-3.2
PNIG	Pinotepa	4.29	297	eP	Pn	03 31 44.7	-8.4
PNIG				iS	Sn	03 32 39.5	-3.2
UTMO	Huajuapan	4.87	314	eP	Pn	03 31 59.7	-1.3
UTMO				iS	Sn	03 32 53.1	-3.7
PPM	Popocatepetl	6.29	318	iS	Sn	03 33 38.5	+6.7

BJI 01 03:35:38.1, 5430S×15890E, h5km, mB5.5, mb5.7, Ms5.2, Msz4.9

IDC 01 03:35:38.1±0.8, 54.18S×15944E, h0km, mb4.8/9, mb1 4.9/9, mb1mx4.8/12, mbtmp4.8/9, MS4.6/10, Ms1 4.6/10, ms1mx4.5/12, Error ellipse: s-maj=36.8km s-min=16.1km az=76.0

ISCJB 01 03:35:40.0±0.8, 5422S±004×15893E±008, h12km±6km, mb5.3/31, MS4.8/15, Error ellipse: s-maj=7.9km s-min=5.8km az=30.0

GCMT 01 03:35:41.1±0.3, 5443S×15870E, h33km, MW5.2/59, Moment Tensor Solution. s54,c72; s59,c89; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; Mrr0.72±.04; Mθθ0.09±.02; Mφφ-0.81±.02; Mrθ0.43±.03; Mθφ0.10±.02; Mφr0.21±.03; Best double couple: M0 0.90700×10^{17} NP1:φs150.00000°, δ45.00000°, λ50.00000°. NP2: φs19.00000°, δ57.00000°, λ123.00000°. Principal axes: T 0.9750, Plg62.0000°, Azm344.0000°; N -0.1350, Plg27.0000°, Azm180.0000°; P -0.8400, Plg7.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC 01 03:35:41.1±0.3, 5430S×15885E, h10km, mb5.4/20 Error ellipse: s-maj=7.7km s-min=5.8km az=134.0

DJA 01 03:35:50, 54.14S×16030E, h111km, Mw5.4/4

ISC 01 03:35:41.9±0.7, 5428S±004×15888E±007, h14km±5km, h15km±.8km:pP-P, n213, σ1s26/78, mb5.3/31, MS4.8/15, 11C-5D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	0.22	168	⇑iP	Pg	03 35 46.8	0.0
MCQ				eS	Sg	03 35 51.0	+0.9
WHZ	Wether Hill Ro	10.21	38	P	Pn	03 38 05.9	-2.0
DCZ	Deep Cove	10.30	35	eP	Pn	03 38 11.6	+2.5
MLZ	Mavora Lakes	10.76	38	P	Pn	03 38 13.8	-1.6
MLZ				S	Sn	03 40 10.6	-5.0
TUZ	Tuapeka	10.81	44	P	Pn	03 38 15.2	-0.9
EAZ	Earnscleugh	11.28	41	P	Pn	03 38 22.1	-0.4
WKZ	Wanaka	11.51	39	eP	Pn	03 38 25.5	-0.2
ODZ	Otahua Downs	11.97	44	eP	Pn	03 38 29.9	-2.0
JCZ	Jackson Bay	12.07	36	eP	Pn	03 38 34.7	+1.3
LBZ	Lake Benmore	12.33	41	eP	Pn	03 38 34.8	-2.1
RPZ	Rata Peaks	13.23	42	Pn	Pn	03 38 47.4	-1.8
	5.8nm,0.3s,baz=220,slow=0.9,SNR=15						
RPZ				Sn	Sn	03 41 08.7	-7.3
	2.6nm,0.3s,baz=30,slow=18,SNR=5.1						
RPZ				LR	LR	03 42 52.4	
	comp=Z,1μm,20.6s,baz=208,slow=34						
TAU	Tasmania Unive	13.69	322	Pn	Pn	03 38 55.1	-0.3
	924nm,0.7s,SNR=50						
TAU	Tasmania Unive	13.69	322	ePn	Pn	03 38 54.8	-0.6
MQZ	McQueen's Vall	13.89	46	P	Pn	03 38 57.6	-0.6
MOO	Moorlands	14.14	322	eP	Pn	03 39 01.5	-0.1
MOO				eS	Sn	03 41 47.0	+8.8
MOO				eT		03 52 41.7	
SNZO	South Karori	16.72	46	Pn	Pn	03 39 34.1	-1.5
TOO	Toolangi	19.07	326	eP	Pn	03 40 04.8	+0.2
TOO				eS	Sn	03 43 47.0	+9.1
TOO				eT		03 59 16.3	
CNB	Canberra Magne	20.10	337	eP	P	03 40 16.5	+1.6
CNB				eS	S	03 44 13.3	+13
CNB				eT		03 59 01.5	
CAN	Canberra	20.18	336	eP	P	03 40 17.9	+2.1
URZ	Urewera	20.29	45	P	P	03 40 19.1	+2.1
	0.4nm,0.3s,baz=280,slow=0.6,SNR=9.1						
URZ				LR	LR	03 48 34.6	
	comp=Z,2μm,18.0s,MS4.5,baz=218,slow=39						
VNDA	Vanda	23.36	178	P	P	03 40 48.8	-0.8
	6.4nm,0.9s,mb4.1,baz=347,slow=9.4,SNR=23						
VNDA				LR	LR	03 48 15.0	
	comp=Z,2μm,19.8s,MS4.6,baz=345,slow=32						
ARMA	Armidale	24.41	345	eP	P	03 40 59.8	0.0
STKA	Stephens Creek	25.57	324	eP	P	03 41 11.1	+0.8
	15nm,1.0s,mb4.5						
STKA				eS	S	03 46 02.0	+25
STKA	Stephens Creek	25.57	324	P	P	03 41 11.1	+0.8
	28nm,1.2s,mb4.7,baz=151,slow=10.0,SNR=20						
STKA				LR	LR	03 49 42.3	
	comp=Z,2μm,19.3s,MS4.7,baz=172,slow=33						
CASY	Casey	26.04	224	eP	P	03 41 20.5	+6.2
EIDS	Eidsvold	29.45	346	eP	P	03 41 42.0	-3.1
	54nm,0.8s,mb5.3						
FORT	Forrest	32.23	304	eP	P	03 42 09.9	+0.3
	42nm,0.9s,mb5.3						
DZM	Mont Dzumac	32.67	13	eP	P	03 42 15.0	+1.6
CTA	Charters Tower	35.47	339	⇑iP	P	03 42 38.2	+0.4
	29nm,1.2s,mb5.1						
CTAO	Charters Tower	35.47	339	eP	P	03 42 38.4	+0.6
	172nm,1.6s,mb5.7						
QSPA	South Pole Qui	35.83	180	P	P	03 42 41.0	+0.6
	14nm,1.0s,mb4.8,baz=2.4,slow=3.6,SNR=26						
QSPA				PcP	PcP	03 45 06.1	-1.2
	4.0nm,0.6s,baz=91,slow=4.9,SNR=3.6						
ASAR	Alice Springs	35.83	319	P	P	03 42 41.0	+0.1
	71nm,1.2s,mb5.5,baz=156,slow=7.8,SNR=160						
ASAR				PcP	PcP	03 45 06.3	-1.9
	2.8nm,0.6s,baz=149,slow=4.3,SNR=6.2						
NWAO	Narrogin (SRO)	36.22	289	P	P	03 42 43.4	-0.7
	17nm,0.8s,mb5.0,baz=135,slow=5.3,SNR=7.2						
NWAO	Narrogin (SRO)	36.22	289	eP	P	03 42 44.4	+0.2
	70nm,1.6s,mb5.3						
KLBR	Kellerberrin	36.94	291	eP	P	03 42 49.4	-0.9
	70nm,1.1s,mb5.4						
MUN	Mundaring	37.50	289	eP	P	03 42 54.6	-0.5
WB2	Warramunga Arr	39.06	322	⇑iP	P	03 43 07.1	-1.1
WRAB	Tennant Creek	39.06	322	P	P	03 43 07.0	-1.3
	255nm,1.8s,mb5.7,SNR=17						
MAW	Mawson	43.56	214	⇑iP	P	03 43 44.1	-0.6
	9.7nm,1.0s,mb4.5						
MAW				e		03 43 52.0	
MAW	Mawson	43.56	214	P	P	03 43 45.5	+0.8
	12nm,1.0s,mb4.6,baz=121,slow=11,SNR=13						
MAW				PcP	PcP	03 45 31.4	-0.6
	9.1nm,1.0s,baz=109,slow=3.4,SNR=4.0						
MBWA	Marble Bar	44.34	303	eP	P	03 43 51.3	-0.3
	62nm,1.1s,mb5.2						
PMG	Port Moresby	45.73	344	eP	P	03 44 03.5	+0.9
	109nm,1.8s,mb5.5						
KAKA	Kakadu	46.41	323	eP	x	03 43 50.4	
	16nm,0.6s						
SYO	Syowa Base	49.29	204	⇑eP	P	03 44 27.7	-1.9
MAIT	Maitri	53.05	193	eP	P	03 44 55.6	-2.2
SNAA	Sanae	53.68	187	eP	P	03 44 57.7	-4.8
	39nm,1.4s,mb5.2						
PAE	Paea	53.70	68	eP	P	03 45 04.7	+1.4
	315nm,1.3s,mb6.1						
PPT	Papeete	53.78	68	eP	P	03 45 05.7	+1.8
	42nm,1.5s,mb5.2						
PPT				eS	S	03 52 37.8	-0.1
	629nm,30.0s						
PPT				eLR	LR	04 00 34.4	
	964nm,22.5s,baz=217						
PPT	Papeete	53.78	68	LR	LR	04 03 43.3	
	comp=Z,818nm,18.0s,MS4.8,baz=157,slow=32						
PPT	Papeete	53.78	68	eP	P	03 45 05.7	+1.8
	42nm,1.5s,mb5.1						
PPT				eS	S	03 52 37.8	-0.1
TVO	Taravao	53.78	68	eP	P	03 45 05.8	+1.9
	443nm,1.2s,mb6.2						
TIAR	Tiarei	53.91	68	eP	P	03 45 06.7	+1.9
	301nm,1.1s,mb6.1						
VNA3	Neumayer Olymp	54.51	185	eP	P	03 45 07.7	-0.8
VNA3				e		03 45 14.0	
VNA3				e		03 45 24.3	
VNA2	Neumayer--Watz	54.71	185	eP	P	03 45 08.8	-1.2
	baz=172,slow=6.7						
VNA2				e		03 45 15.8	
VNA2				e		03 45 25.5	
VNA1	Neumayer--Stat	55.03	185	eP	P	03 45 12.0	-0.3
VNA1				e		03 45 18.4	
VNA1				e		03 45 28.8	
VAH	Vaihoa	56.75	68	eP	P	03 45 26.6	+1.3
	75nm,1.5s,mb5.5						
PMOR	Pomariorio Ree	56.80	68	eP	P	03 45 27.2	+1.6
	82nm,1.3s,mb5.6						
RKT	Rikitea	57.69	85	eLR	LR	04 02 24.0	
	998nm,25.8s,baz=204						
KAPI	Kappang	58.43	312	eP	P	03 45 37.4	+0.3
	54nm,1.5s,mb5.4						
TAOE	Nuku Hiva Isla	66.11	71	eSS	SS	03 59 24.2	-7.9
	1μm,25.3s						
TAOE				eLR	LR	04 06 19.0	
	2μm,22.3s						
PLCA	Paso Flores	76.31	144	LR	LR	04 13 06.3	
	comp=Z,372nm,19.9s,MS4.7,baz=208,slow=30						
SUR	Sutherland	86.41	215	eP	P	03 48 23.8	+0.1
ABPO	Ambohimpanom	86.69	242	eP	P	03 48 26.7	+1.5
	87nm,1.4s,mb5.8						
BOSA	Boshof	88.27	220	P	P	03 48 31.5	-1.3
	13nm,1.1s,mb5.1,baz=172,slow=5.7,SNR=9.8						
BOSA				LR	LR	04 22 43.3	
	comp=Z,311nm,19.2s,MS4.7,baz=184,slow=32						
CMAR	Chiang Mai Arr	88.63	305	P	P	03 48 34.1	-0.2
	3.9nm,0.4s,mb5.1,baz=186,slow=2.9,SNR=6.3						
CMAR				LR	LR	04 25 46.4	
	comp=Z,377nm,21.6s,MS4.8,baz=112,slow=34						
CHTO	Chiang Mai	88.93	305	eP	P	03 48 36.1	+0.4
	45nm,1.6s,mb5.5						
GYA	Guiyang	92.11	315	⇓iP	P	03 48 53.2	+2.8
GYA				PP	PP	03 52 31.4	+0.6
GYA				PPP		03 54 31.1	
GYA				SKS		03 59 23.0	
GYA				S	S	03 59 52.8	+0.7
GYA				SSS		04 09 45.2	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,100nm,5.7s						
GYA				LR	LR		
	comp=N,420nm,19.5s,MS5.0						
GYA				LR	LR		
	comp=E,280nm,21.2s,MS5.0						
GYA				LR	LR		
	comp=Z,490nm,20.9s,MS4.9						
MJAR	Matsushiro Arr	92.20	343	P	P	03 48 50.6	+0.1
	comp=Z,6.5nm,1.1s,mb4.9,baz=182,slow=5.2,SNR=9.8						
MJAR				LR	LR	04 26 09.2	
	comp=Z,134nm,20.7s,MS4.4,baz=45,slow=33						
MJAR	Matsushiro Arr	92.20	343	P	P	03 48 50.6	+0.1
MJAR				LR	LR	04 26 09.2	
MAJO	Matsushiro	92.20	343	eP	P	03 48 50.2	-0.3
MAT	Matsushiro	92.20	343	P	P	03 48 50.4	-0.1
KMI	Kunming	92.63	311	P	P	03 48 56.5	+3.7
KMI				AP	pP	03 49 00.5	+3.1
KMI				XP	sP	03 49 02.0	+3.0
KMI				PP	PP	03 52 41.3	+6.4
KMI				S	S	04 00 00.6	+3.9
KMI				XS	sS	04 00 05.9	+1.6
KMI				AMB	AMB		
	comp=Z,14nm,1.1s,mb5.3						
KMI				AMB	AMB		
	comp=Z,143nm,5.5s						
KMI				LR	LR		
	comp=N,239nm,20.0s,MS4.7						
KMI				LR	LR		
	comp=E,204nm,21.5s,MS4.7						
KMI				LR	LR		
	comp=Z,310nm,22.3s,MS4.7						
NJ2	Nanjing	92.66	327	eP	P	03 48 50.8	-2.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.5						
KSRS	Korea Array	95.18	336	LR	LR	04 30 57.2	
	comp=Z,188nm,20.2s,MS4.5,baz=101,slow=35						
CD2	Chengdu	97.23	315	P	P	03 49 16.7	+3.0
CD2				AP	pP	03 49 21.3	+3.0
CD2				XP	sP	03 49 23.6	+3.7
CD2				PP	PP	03 53 17.3	+6.6
CD2				S	S	04 00 37.3	+0.7
CD2				XS	sS	04 00 45.9	+1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb5.6						
CD2				AMB	AMB		
	comp=Z,80nm,8.7s						
CD2				LR	LR		
	comp=N,190nm,8.8s						
CD2				LR	LR		
	comp=Z,470nm,15.2s,MS5.1						
XAN	Xi'an	97.93	320	P	P	03 49 16.4	-0.4
XAN				AP	pP	03 49 21.4	0.0
XAN				PP	PP	03 53 15.5	-0.6
XAN				S	S	04 00 43.7	+1.2
XAN				PS	PS	04 02 09.7	+1.9
XAN				SS	SS	04 07 28.2	+3.2
XAN				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb5.1						
XAN				AMB	AMB		
	comp=Z,38nm,12.0s						
XAN				LR	LR		
	comp=N,82nm,32.2s						
XAN				LR	LR		
	comp=E,96nm,25.0s						
XAN				LR	LR		
	comp=Z,232nm,26.3s						
BJI	Beijing	100.85	328	P	Pdif	03 49 31.9	+1.5
BJI				S	Sdif	04 01 07.8	-0.2
BJI				SS	SS	04 08 02.3	-3.4
BJI				AMB	AMB		
	comp=Z,5.0nm,0.4s						
BJI				LR	LR		
	comp=N,263nm,19.1s,MS5.0						
BJI				LR	LR		
	comp=E,308nm,19.7s,MS5.0						
BJI				LR	LR		
	comp=Z,335nm,25.6s						
LZH	Lanzhou	101.70	317	eP	Pdif	03 49 33.0	-1.2
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,70nm,4.7s						
LZH				LR	LR		
	comp=E,400nm,18.5s						
LZH				LR	LR		
	comp=Z,620nm,20.1s,MS5.1						
CN2	Changchun	101.79	336	eP	Pdif	03 49 33.9	-0.7
CN2				eXP		03 49 40.0	
CN2				eS	Sdif	04 01 12.4	-3.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,200nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS4.8						
NVAR	Mina Array Bea	116.35	60	PKKPbc	PKKPbc	04 04 54.4	+2.6
	comp=Z,0.3nm,0.3s,baz=54,slow=6.0,SNR=4.0						
TXAR	Lajitas Array	117.47	77	PKKPbc	PKKPbc	04 04 52.5	+4.8
	comp=Z,0.5nm,0.8s,baz=29,slow=8.8,SNR=4.1						
ELK	Elko	119.65	61	PKKPbc	PKKPbc	04 04 43.2	+3.2
	comp=Z,0.9nm,0.8s,baz=73,slow=3.9,SNR=4.2						
MKAR	Makanchi Array	119.67	310	PKP	PKPdf	03 54 28.2	-2.2
	comp=Z,1.8nm,0.9s,baz=205,slow=2.2,SNR=7.2						
MKAR	Makanchi Array	119.67	310	PKP	PKPdf	03 54 28.2	-2.2
AAK	Ala-Archa	120.28	302	PKPdf	PKPdf	03 54 31.4	-0.3
ZALV	Zalesovo Beam	123.93	317	PKP	PKPdf	03 54 34.8	-3.5
	comp=Z,1.0nm,0.8s,baz=116,slow=3.4,SNR=3.5						
PDAR	Pinedale Array	124.04	63	PKP	PKPdf	03 54 37.1	-1.8
	comp=Z,0.3nm,0.8s,baz=195,slow=5.5,SNR=2.7						
BRVK	Borovoye	129.58	308	ePKPdf	PKPdf	03 54 48.4	-0.7
AKTK	Aktyubinsk	133.90	299	PKP	PKPdf	03 54 56.1	-1.3
AKTO	Aktyubinsk	133.90	299	PKP	PKPdf	03 54 56.1	-1.3
	comp=Z,0.9nm,0.6s,baz=135,slow=2.9,SNR=3.8						
TORD	Torodi Ar. Bea	135.20	212	PKhKP		03 54 48.0	
	comp=Z,1.3nm,1.1s,baz=138,slow=1.9,SNR=6.3						
TORD				PKP	PKPdf	03 54 57.9	-3.1
	comp=Z,4.9nm,1.0s,baz=169,slow=0.6,SNR=12						
TORD	Torodi Ar. Bea	135.20	212	PKP	PKPdf	03 54 57.9	-3.1
BRTR	Keskin Array B	140.95	271	PKhKP		03 55 00.5	
	comp=Z,0.4nm,0.8s,baz=147,slow=4.5,SNR=2.7						
BRTR				PKP	PKPdf	03 55 07.4	-3.3
	comp=Z,0.8nm,0.9s,baz=281,slow=33,SNR=6.3						
BRTR				PP	PP	03 58 08.9	-3.4
	comp=Z,2.1nm,1.1s,baz=156,slow=9.5,SNR=4.1						
BRTR	Keskin Array B	140.95	271	PKP	PKPdf	03 55 07.4	-3.3
BRTR				PP	PP	03 58 08.9	-3.4
TAM	Tamanrasset	142.72	223	ePKPdf	PKPdf	03 55 09.8	-4.7
KYTH	Kithira	144.80	258	eP	PKiKP	03 55 23.8	+2.4
VLI	Veliai	145.16	258	eP	PKPbc	03 55 18.0	+0.1
RES	Resolute Bay	145.53	27	ePKPbc	PKPbc	03 55 17.6	-0.4
ITM	Ithomi	146.06	258	eP	PKPdf	03 55 20.5	+0.7
KDZ	Kurdzhali	146.99	267	eP	PKPdf	03 55 22.0	+0.8
RZN	Rozhen	147.43	266	iP	PKPbc	03 55 23.0	-1.5
OBN	Obninsk	147.46	295	PKPbc	PKPbc	03 55 23.5	-0.6
VLS	Valsamata	147.52	258	eP	PKPbc	03 55 23.5	-1.4
MMB	Musomiste	147.94	265	iP	PKPbc	03 55 24.0	-1.9
PVL	Pavlikeni	148.00	269	eP	PKPbc	03 55 25.0	-1.0
KIS	Kishinev	148.09	278	eUNK	PKPdf	03 55 24.0	+1.1
VAY	Valandovo	148.45	264	ePKP	PKPdf	03 55 24.7	+1.1
VRI	Vrincioaia	148.70	274	⇓iP	PKPbc	03 55 27.0	-0.7
VRI	Vrincioaia	148.70	274	P	PKPbc	03 55 26.8	-0.9
VTS	Vitosha	148.86	266	⇓iP	PKPbc	03 55 25.6	-2.7
VTS	Vitosha	148.86	266	iP	PKPbc	03 55 27.1	-1.2
MLR	Muntele Rosu	148.95	273	⇑iP	PKPbc	03 55 27.0	-1.4
MLR	Muntele Rosu	148.95	273	P	PKPbc	03 55 27.4	-0.9
BIA	Bitola	148.98	262	ePKP	PKPdf	03 55 26.4	+1.9
KRUS	Krusevo	149.25	263	ePKP	PKPbc	03 55 28.1	-1.2
VOIR		149.44	272	⇑iP	PKPbc	03 55 28.3	-1.3
SKO	Skopje	149.52	264	ePKP	PKPbc	03 55 28.5	-1.4
AKASG	Malin Array Be	149.67	284	PKPbc	PKPbc	03 55 28.5	-1.5
	comp=Z,4.8nm,0.5s,baz=88,slow=2.2,SNR=44						
AKBB	Malin Array Si	149.67	284	ePKPbc	PKPbc	03 55 28.7	-1.2
KIEV	Kiev	149.67	284	ePKPbc	PKPbc	03 55 28.5	-1.5
KIEV				ePKPab	PKPab	03 55 36.4	+1.1
TIR	Tirane	150.04	261	ePKPbc	PKPbc	03 55 31.1	0.0
CEL	Celeste	150.24	253	ePKPbc	PKPbc	03 55 31.3	-0.4
CEL				ePKPab	PKPab	03 55 39.2	+1.2
TIP	Timpagrande	150.39	255	ePKPbc	PKPbc	03 55 31.8	-0.3
BURAR	Bucovina Array	150.50	276	⇑iP	PKPbc	03 55 31.9	-0.2
VAE	Valguarnera	150.51	250	PKPbc	PKPbc	03 55 32.3	-0.2
	comp=Z,10nm,0.5s,baz=16,slow=5.4,SNR=4.1						
VAE				PKPab	PKPab	03 55 40.4	+1.3
	baz=34,slow=3.6						
BUR08	Bucovina Ar. S	150.53	276	ePKPbc	PKPbc	03 55 32.3	+0.1
GZR	Gura Zlata	150.75	271	⇑iP	PKPbc	03 55 33.1	+0.3
GZR	Gura Zlata	150.75	271	P	PKPbc	03 55 31.7	-1.1
DRGR		151.54	273	P	PKPbc	03 55 33.4	-1.1
BZS	Buzias	151.55	270	P	PKPbc	03 55 33.1	-1.5
KEST	Kesra	151.91	241	PKPbc	PKPbc	03 55 35.6	-0.2
	comp=Z,6.3nm,1.0s,baz=196,slow=2.0,SNR=7.5						
KEST				PKPab	PKPab	03 55 46.6	+1.6
	comp=Z,11nm,1.0s,baz=117,slow=2.3,SNR=8.4						
JOF	Joensuu	152.11	309	ep	PKPbc	03 55 32.9	-2.4
	comp=Z,5.9nm,0.7s						
TRPA	Tarpa	152.32	275	⇑iP	PKPbc	03 55 35.0	-1.3
KOLS	Kolonicke sedl	152.86	277	ePKP	PKPbc	03 55 36.2	-1.2
KOLS				e		03 55 48.4	
KOLS				e		03 55 56.3	
KOLS				ePP	PP	03 59 11.1	-11
CRVS	Cervenica-Dubn	153.32	276	ePKP	PKPbc	03 55 37.9	-0.6
CRVS				e		03 55 49.2	
CRVS				e		03 55 56.7	
CRVS				ePP	PP	03 59 18.7	-6.4
PKSM	Moragy	153.62	269	⇓iP	PKPbc	03 55 37.8	-1.4
STHS	Stebnicka Huta	153.69	277	ePKP	PKPbc	03 55 38.5	-0.7
STHS				e		03 55 51.0	
STHS				e		03 56 01.8	
STHS				ePP	PP	03 59 28.7	+1.6
PSZ	Piszkesteto	153.76	273	⇑iP	PKPbc	03 55 38.9	-0.6
ARCES	ARCESS Array B	154.15	324	PKPbc	PKPbc	03 55 38.0	-1.6
	comp=Z,4.9nm,0.8s,baz=74,slow=2.0,SNR=14						
ARCES				PKPab	PKPab	03 55 52.4	-1.1
	comp=Z,7.8nm,0.7s,baz=58,slow=4.8,SNR=7.2						
VYHS	Vyhne	154.66	273	ePKP	PKPdf	03 55 38.6	+5.8
VYHS				e		03 55 54.8	
VYHS				e		03 56 02.1	
VYHS	Vyhne	154.66	273	ePKP	PKPdf	03 55 38.6	+5.8
VYHS				e		03 55 54.8	
VYHS				e		03 56 02.1	
OJC	Ojcow	154.88	278	ePKP	PKPdf	03 55 40.7	+7.7
KOLL	Kolacno	154.96	273	ePKP	PKPab	03 55 56.5	-1.1
KOLL				e		03 56 04.1	
GOLS	Golise	155.28	266	i PKPab	PKPab	03 55 58.0	-1.0
GOLS				epPKPab	pPKPab	03 56 05.2	+1.6
DOBS	Dobrina	155.45	266	ePKPab	PKPab	03 55 58.4	-1.4
DOBS				epPKPab	pPKPab	03 56 05.9	+1.6
MODS	Modra-Piesok	155.52	272	ePKP	PKPab	03 55 57.6	-2.4
MODS				e		03 56 05.6	
ZST	Bratislava	155.54	271	ePKP	PKPab	03 55 58.5	-1.6
MDT	Midelt	155.55	215	PKPab	PKPab	03 55 59.9	-0.6
	comp=Z,3.7nm,1.0s,baz=166,slow=3.0,SNR=5.9						
OKC	Ostrava-Krasne	155.68	276	ePKPab	PKPab	03 55 59.1	-1.5
OKC				epPKP	pPKPab	03 56 07.2	+2.0
ZAVS	Zavodnje	155.86	266	ePKPab	PKPab	03 56 00.2	-1.3
ZAVS				i pPKPab	pPKPab	03 56 07.6	+1.5
MOZS	Mozjanca	156.12	265	ePKPab	PKPab	03 56 01.6	-1.1
MOZS				epPKPab	pPKPab	03 56 09.0	+1.8
CADS	Cadrg	156.50	264	ePKPab	PKPab	03 56 02.6	-1.6
DPC	Dobruska-Polom	156.96	276	ePKPab	PKPab	03 56 05.8	-0.3
DPC				epPKP	pPKPab	03 56 13.2	+2.5
TREC	Trest	156.99	273	ePKPab	PKPab	03 56 04.6	-1.7
TREC				epPKP	pPKPab	03 56 11.8	+0.9
UPC	Upice	157.21	276	ePKPab	PKPab	03 56 07.2	0.0
UPC				epPKP	pPKPab	03 56 13.9	+2.1
GEC2	GERESS Array S	157.84	270	ePKPab	PKPab	03 56 08.4	-1.6
GEC2				epPKPab	pPKPab	03 56 15.8	+1.2
GERES	GERESS Array B	157.84	270	PKPab	PKPab	03 56 08.3	-1.7
	comp=Z,2.8nm,1.0s,baz=134,slow=3.9,SNR=9.6						
PRU	Pruhonice	157.85	274	ePKPab	PKPab	03 56 08.0	-2.0
PRU				epPKP	pPKPab	03 56 15.8	+1.2
KHC	Kasperske Hory	158.04	271	ePKPab	PKPab	03 56 08.5	-2.3
KHC				epPKP	pPKPab	03 56 16.5	+1.1
PVCC	Panska Ves	158.06	275	ePKPab	PKPab	03 56 09.8	-1.1
PVCC				epPKP	pPKPab	03 56 18.2	+2.7
WET	Wettzell	158.46	270	ePKPab	PKPab	03 56 10.2	-2.4
WET				epPKPab	pPKPab	03 56 18.6	+1.4
BRG	Berggiesshubel	158.56	275	ePKPab	PKPab	03 56 12.0	-1.0
BRG				epPKPab	pPKPab	03 56 19.7	+2.1

BRG	Berggiesshubel	158.56	275	ePKP	PKPab	03 56 12.1	-0.9
	comp=Z,15nm,1.4s						
BRG				e		03 56 19.7	
	comp=Z,14nm,1.3s						
SBF	Sospel	158.73	252	ePKP2	PKPab	03 56 12.0	-2.0
	comp=Z,99nm,1.5s						
LMR	La Mourre	158.90	250	ePKP2	PKPab	03 56 13.2	-1.5
	comp=Z,58nm,1.3s						
FBE	Freiberg	158.92	275	ePKPab	PKPab	03 56 13.9	-0.7
FBE				epPKPab	pPKPab	03 56 21.5	+2.3
FRF	La Foret Royal	158.97	251	ePKP2	PKPab	03 56 13.5	-1.5
	comp=Z,77nm,1.3s						
ROTZ	Rotzenmuhle	159.12	271	epPKPab	pPKPab	03 56 22.0	+1.9
NKC	Novy Kostel	159.18	273	ePKPab	PKPab	03 56 15.8	+0.1
NKC				epPKP	pPKPab	03 56 22.9	+2.6
WERN	Wernitzgruen	159.24	273	epPKPab	pPKPab	03 56 23.2	+2.6
CLL	Collm	159.27	276	ePKPab	PKPab	03 56 15.1	-1.0
CLL	Collm	159.27	276⇓	iPKPab	PKPab	03 56 14.9	-1.2
	comp=Z,18nm,1.3s						
CLL				epPKPab	pPKPab	03 56 22.0	+1.3
MBDF	Montbardon	159.64	253	ePKP2	PKPab	03 56 16.7	-1.2
	comp=Z,27nm,0.9s						
GRF	Grafenberg Arr	159.67	270	ePKPab	PKPab	03 56 16.7	-1.2
GRF				epPKPab	pPKPab	03 56 24.2	+1.7
GRFO	Grafenberg	159.67	270	ePKPab	PKPab	03 56 17.0	-0.9
MOX	Moxa	159.83	273	ePKP	PKPab	03 56 16.4	-2.2
	comp=Z,22nm,1.6s						
MOX				e		03 56 25.1	
MOX	Moxa	159.83	273	epPKPab	pPKPab	03 56 25.3	+2.1
SMRF	Simiane la Rot	159.84	250	ePKP2	PKPab	03 56 18.1	-0.7
	comp=Z,109nm,1.4s						
LPG	La Plagne	160.12	255	ePKP2	PKPab	03 56 17.5	-2.5
	comp=Z,26nm,1.2s						
LPL	La Plagne	160.14	255	ePKP2	PKPab	03 56 17.6	-2.5
	comp=Z,33nm,1.3s						
ORIF	Oris-en-Rattie	160.26	253	ePKP2	PKPab	03 56 18.8	-1.8
	comp=Z,38nm,1.4s						
BFO	Black Forest	160.74	264	ePKPab	PKPab	03 56 21.2	-1.4
BFO				epPKPab	pPKPab	03 56 28.7	+1.5
LASF	Ste Croix	160.84	248	ePKP2	PKPab	03 56 21.7	-1.5
	comp=Z,83nm,1.2s						
UBBA	Unterbreizbach	160.84	272	epPKPab	pPKPab	03 56 29.7	+2.1
VIVF	Saint-Julien-l	160.89	251	ePKP2	PKPab	03 56 21.5	-1.9
	comp=Z,30nm,1.1s						
CABF	La Chapelle	161.14	257	ePKP2	PKPab	03 56 22.1	-2.3
	comp=Z,67nm,1.4s						
MTLF	Montolieu	161.22	244	ePKP2	PKPab	03 56 23.3	-1.5
	comp=Z,46nm,1.3s						
HINF	Hinteralfeld	161.34	261	ePKP2	PKPab	03 56 22.2	-3.1
	comp=Z,32nm,1.2s						
CDF	Champ du Feu	161.39	263	ePKP2	PKPab	03 56 22.6	-2.9
	comp=Z,36nm,1.2s						
NOA	NORSAR Array B	161.58	305	PKPab	PKPab	03 56 24.5	-1.4
	comp=Z,2.2nm,0.9s,baz=89,slow=4.8,SNR=3.6						
HAU	Haudompre	161.73	261	ePKP2	PKPab	03 56 24.1	-2.8
	comp=Z,41nm,1.1s						
EVO	Evora	161.89	215	ePKIKP	PKPdf	03 55 40.7	-1.2
	comp=Z,34nm,1.5s						
EPF	Esparros	161.98	240	ePKP2	PKPab	03 56 26.6	-1.5
	comp=Z,23nm,1.0s						
ETSF	Etsaut	162.33	238	ePKP2	PKPab	03 56 28.5	-1.2
	comp=Z,74nm,1.3s						
CAF	Calviac	162.37	247	ePKP2	PKPab	03 56 28.5	-1.3
	comp=Z,62nm,1.0s						
SMF	Signal de Mont	162.43	254	ePKP2	PKPab	03 56 27.4	-2.7
	comp=Z,21nm,1.1s						
BUG	Bochum--Univer	162.67	272	epPKPab	pPKPab	03 56 38.6	+3.0
MEZF	Maizieres J'vi	162.73	261	ePKP2	PKPab	03 56 28.9	-2.4
	comp=Z,84nm,1.4s						
LOR	Lormes	162.77	256	ePKP2	PKPab	03 56 29.1	-2.4
	comp=Z,32nm,1.0s						
AVF	Avril sur Loir	162.79	254	ePKP2	PKPab	03 56 29.1	-2.5
	comp=Z,26nm,1.2s						
SJPF	Ste Jean	162.82	238	ePKP2	PKPab	03 56 30.8	-1.0
	comp=Z,81nm,1.2s						
SSF	Saint Saulge	162.86	255	ePKP2	PKPab	03 56 29.6	-2.3
	comp=Z,58nm,1.2s						
RJF	Les Rejaudoux	162.91	248	ePKP2	PKPab	03 56 30.7	-1.5
	comp=Z,71nm,1.2s						
BGF	Bois d'Agland	162.94	253	ePKP2	PKPab	03 56 30.6	-1.7
	comp=Z,27nm,1.0s						
MEM	Membach	163.10	269	PKPab	PKPab	03 56 34.4	+1.5
HYF	Humbligny	163.46	255	ePKP2	PKPab	03 56 32.5	-2.1
GIVF	Givet	163.59	266	ePKP2	PKPab	03 56 32.7	-2.4
	comp=Z,51nm,1.3s						
DOU	Dourbes	163.72	266	PKPab	PKPab	03 56 35.1	-0.5
BAIF	Baives	163.93	265	ePKP2	PKPab	03 56 33.4	-3.2
MFF	Saint Martin d	164.62	249	ePKP2	PKPab	03 56 37.9	-1.8
	comp=Z,53nm,1.1s						
LDF	La Druitiere	165.74	255	ePKP2	PKPab	03 56 43.0	-1.6
	comp=Z,146nm,1.7s						
SGMF	Saint Gilles	166.92	250	ePKP2	PKPab	03 56 47.2	-2.6
ROSF	Rostrenen	167.36	249	ePKP2	PKPab	03 56 49.8	-1.9
	comp=Z,149nm,1.5s						

BER 01 03:42:37.7±1.0, 6800N×1545E, h10^{km}±3^{km}, MD1.5, ML1.0, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEI	Steigen	0.11	227	eS	Sg	03 42 42.2	-0.1
STEI				AML	AML	03 42 42.5	
	comp=Z,24nm,0.1s						
LOF	Lofoten	0.73	281	eP	Pg	03 42 51.4	-0.4
LOF				eS	Sg	03 43 00.1	-1.2
LOF				AML	AML	03 43 00.8	
	comp=Z,5.5nm,0.4s						
LOF	Lofoten	0.73	281	eP	Pg	03 42 51.4	-0.4
LOF				eS	Sg	03 43 00.1	-1.2
KONS	Konsvik	1.76	212	eS	Sn	03 43 27.7	-2.9
MOR8	Moi Rana	1.88	193	eP	Pn	03 43 05.7	-4.1
MOR8				eS	Sn	03 43 27.8	-5.8
MOR8				AML	AML	03 43 30.6	
	comp=Z,4.2nm,0.5s						
MOR8	Moi Rana	1.88	193	eP	Pn	03 43 05.7	-4.1
MOR8				eS	Sn	03 43 27.8	-5.8

ISCJB 01 04:40:07.8±3.2, 7.0S±0.1×156.5E±0.2, h271^{km}±31^{km}, mb4.0/10, Error ellipse: s-maj=25.9km s-min=16.5km az=13.3
IDC 01 04:40:09.3±2.5, 7.06S×156.44E, h268^{km}±24^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/17, mbtmp3.7/10, Error ellipse: s-maj=22.5km s-min=13.7km az=90.0
NEIC 01 04:40:13.1±3.6, 7.07S×156.46E, h310^{km}±34^{km}, mb4.1/2, Error ellipse: s-maj=21.7km s-min=13.5km az=72.0
ISC 01 04:40:11.1±3.0, 7.1S±0.1×156.5E±0.2, h289^{km}±30^{km}, n18, $\sigma 0^{s}61$/17, mb4.0/10, 1C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.34	216	eP	P	04 43 44.2	+0.7
	6.5nm,0.4s						
CTA	Charters Tower	16.34	216	P	P	04 43 44.2	+0.8
	2.4nm,0.3s,baz=43,slow=11,SNR=25						
CTAO	Charters Tower	16.34	216	eP	P	04 43 44.4	+0.9
	6.7nm,1.4s						
ARMA	Armidale	23.70	191	eP	P	04 44 57.4	0.0
KAKA	Kakadu	24.36	255	eP	x	04 44 46.9	
	7.0nm,0.4s						
WRAB	Tennant Creek	25.02	237	eP	P	04 45 09.2	-0.2
WB2	Warramunga Arr	25.02	237⇑	iP	P	04 45 09.1	-0.4
ASAR	Alice Springs	27.28	230	P	P	04 45 28.8	-0.8
	1.8nm,0.3s,mb4.0,baz=57,slow=9.9,SNR=61						
ASAR				S	S	04 49 47.5	+0.2
	0.7nm,0.7s,baz=56,slow=15,SNR=4.5						
ASAR				ScP	ScP	04 51 58.5	+4.5
	0.4nm,0.6s,baz=71,slow=2.7,SNR=6.7						
FORT	Forrest	35.59	225	eP	P	04 46 41.3	-0.5
	12nm,0.3s,mb4.9						
RPZ	Rata Peaks	38.69	163	P	P	04 47 07.6	+0.1
	15nm,0.6s,mb4.6,baz=341,slow=3.6,SNR=10						
PETK	Petropavlovsk-	59.93	1	P	P	04 49 46.3	-0.7
	7.0nm,1.1s,mb4.1,baz=182,slow=7.1,SNR=3.3						
CMAR	Chiang Mai Arr	62.16	295	P	P	04 50 03.5	+1.0
	2.2nm,0.5s,mb4.0,baz=120,slow=4.9,SNR=8.2						
SONM	Songino Array	70.19	327	P	P	04 50 53.7	+0.9
	1.6nm,0.7s,mb3.9,baz=136,slow=5.2,SNR=11						
VNDA	Vanda	70.49	179	P	P	04 50 54.8	+0.7
	0.7nm,0.8s,mb3.5,baz=348,slow=5.8,SNR=4.1						
MKAR	Makanchi Array	84.43	318	P	P	04 52 11.8	+0.4
	1.3nm,0.7s,mb3.9,baz=92,slow=3.9,SNR=5.2						
MAW	Mawson	84.93	203	P	P	04 52 13.1	-0.4
	1.0nm,0.5s,mb3.9,baz=90,slow=6.1,SNR=3.6						
ZALV	Zalesovo Beam	85.06	326	P	P	04 52 13.5	-0.9
	0.5nm,0.4s,mb3.7,baz=91,slow=7.7,SNR=4.4						
TORD	Torodi Ar. Bea	154.48	286	PKPab	PKPab	04 59 53.6	-0.7
	0.2nm,0.5s,baz=72,slow=5.0,SNR=6.3						

ISCJB 01 04:55:28.3±1.7, 7.65S±0.09×127.54E±0.09, h174^{km}±16^{km}, mb4.1/8, Error ellipse: s-maj=18.5km s-min=8.9km az=44.1
IDC 01 04:55:29.9±4.0, 7.64S×127.44E, h172^{km}±36^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.8/16, mbtmp3.9/8, Error ellipse: s-maj=39.9km s-min=14.3km az=67.0
NEIC 01 04:55:30.7±2.5, 7.60S×127.60E, h182^{km}±25^{km}, mb4.0/4, Error ellipse: s-maj=16.9km s-min=14.6km az=54.0
ISC 01 04:55:28.9±1.8, 7.6S±0.1×127.56E±0.09, h159^{km}±19^{km}, n24, $\sigma 0^{s}75$/25, mb4.1/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.63	236	P	Pn	04 56 38.7	+1.1
	128nm,0.3s,baz=116,slow=3.2,SNR=68						
BATI				S	Sn	04 57 29.9	-1.3
	51nm,0.3s,baz=107,slow=10,SNR=4.3						
KAKA	Kakadu	6.97	137	eP	x	04 56 51.2	
	35nm,0.2s						
KAKA				eS	x	04 58 03.1	
WRAB	Tennant Creek	13.89	152	ePn	Pn	04 58 39.1	0.0
	7.7nm,0.5s						
WRAB				eSn	Sn	05 01 02.3	-11
WB2	Warramunga Arr	13.90	152	eP	Pn	04 58 35.6	-3.6
WB2				eS	Sn	05 01 00.0	-14
MBWA	Marble Bar	15.44	209	eP	Pn	04 59 00.2	+1.9
	5.0nm,1.0s						
COEN	Coen	16.57	114	eP	Pn	04 59 12.3	+0.1
	7.6nm,1.3s						
ASAR	Alice Springs	17.07	160	P	Pn	04 59 18.8	+0.7
	3.6nm,0.3s,baz=341,slow=12,SNR=241						
ASAR				S	S	05 02 20.0	-7.1
	0.5nm,0.3s,baz=329,slow=19,SNR=5.5						
NWAO	Narrogin (SRO)	26.94	199	P	P	05 00 54.7	-0.7
	18nm,1.1s,mb4.6,baz=327,slow=7.5,SNR=4.0						
NWAO	Narrogin (SRO)	26.94	199	P	P	05 00 54.7	-0.7
STKA	Stephens Creek	27.45	153	eP	P	05 01 00.0	+0.1
	3.2nm,0.6s,mb4.1						
STKA	Stephens Creek	27.45	153	P	P	05 00 59.8	-0.1
	2.2nm,0.4s,mb4.1,baz=335,slow=8.3,SNR=9.3						
TAPN	Taplejung	51.93	314	eP	P	05 04 22.0	+0.5
	5.2nm,0.4s,mb4.5						
RAMN	Ramite	52.50	312	eP	P	05 04 26.0	+0.2
	14nm,0.5s						
JIRN	Jiri	53.20	313	eP	P	05 04 31.1	+0.2
	3.7nm,0.4s,mb4.5						
GUN	Gumba	53.57	313	eP	P	05 04 33.9	+0.3
	7.8nm,0.4s						
PKI	Pulchoki	53.72	312	eP	P	05 04 35.2	+0.5
GKN	Gorkha	54.53	312	eP	P	05 04 40.1	-0.5
KOLN	Koldanda	55.17	311	eP	P	05 04 44.9	-0.2
SONM	Songino Array	58.30	343	P	P	05 05 05.7	-1.1
	0.3nm,0.4s,mb3.5,baz=157,slow=7.7,SNR=3.8						
MKAR	Makanchi Array	67.45	328	P	P	05 06 07.3	0.0
	1.0nm,0.4s,mb4.0,baz=118,slow=8.0,SNR=9.8						
ZALV	Zalesovo Beam	71.09	335	P	P	05 06 29.6	0.0
	1.7nm,0.4s,mb4.1,baz=132,slow=5.1,SNR=8.9						
VNDA	Vanda	72.13	173	P	P	05 06 35.2	-0.2
	1.0nm,0.5s,mb3.8,baz=322,slow=5.7,SNR=18						
PDAR	Pinedale Array	119.04	45	PKP	PKPdf	05 13 58.2	-0.8
	0.5nm,1.1s,baz=170,slow=7.3,SNR=3.0						
TORD	Torodi Ar. Bea	126.55	281	PKP	PKPdf	05 14 13.2	-0.8
	0.6nm,0.7s,baz=38,slow=2.3,SNR=8.4						

CSEM 01 05:23:40.2±0.1, 36.96N×29.28E, h5^{km}, ML3.4, Error ellipse: s-maj=1.9km s-min=1.3km az=12.0
ISK 01 05:23:40.8, 36.99N×29.26E, h8^{km}, MD3.3
ISCJB 01 05:23:41.3±0.6, 36.99N±0.03×29.27E±0.03, h4^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=3.9km az=167.5
NEIC 01 05:23:42.0, 37.10N×29.20E, h6^{km}, MD3.3(ISK), After ISK.
DDA 01 05:23:41.1, 37.00N×29.25E, h7^{km}±5^{km}, Md3.4, Ml3.4
ISC 01 05:23:41.9±0.6, 37.00N±0.03×29.27E±0.03, h6^{km}±5^{km}, n44, $\sigma 0^{s}81$/54, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.33	44⇑	iP	Pg	05 23 48.2	-0.2
GOLH				iS	Sg	05 23 54.6	+1.8
TURN	Turunc	0.55	257⇓	iP	Pg	05 23 56.4	+3.9
TURN				iS	Sg	05 24 09.1	+10
ELL	Elmali	0.57	116	ePG	Pg	05 23 51.4	-1.4
ELL				eSG	Sg	05 24 00.7	+0.5
DENT	Denizli	0.78	346	ePG	Pg	05 23 56.2	-0.6
YER	Yerkesik	0.80	280	ePG	Pg	05 23 56.6	-0.6
YER	Yerkesik	0.80	280	ePg	Pg	05 23 56.6	-0.7
YER				Sg	Sg	05 24 07.8	+0.1
YER	Yerkesik	0.80	280	Pg	Pg	05 23 52.7	-4.5
YER				Sg	Sg	05 24 07.8	+0.1
AKAS	Kas	0.81	160	eP	Pg	05 23 56.2	-1.1
AKAS				eS	Sg	05 24 09.6	+1.8
ANTB	Antalya	1.11	95	ePN	Pn	05 24 02.8	-1.3
BCK	Bucak	1.15	66	ePN	Pn	05 24 03.4	-1.1
ARG	Arkhangelos	1.21	230	eP	Pg	05 24 05.0	0.0
MLSB	Milas	1.23	284	ePN	Pn	05 24 04.8	-0.8
MLSB	Milas	1.23	284	ePn	Pn	05 24 04.8	-0.8
ISP	Isparta	1.30	49	ePN	Pn	05 24 06.2	-0.4
ISP	Isparta	1.30	49	P	Pn	05 24 07.8	+1.2
ISP	Isparta	1.30	49	P	Pn	05 24 07.8	+1.2
KHL	Karahalli	1.34	9	ePN	Pn	05 24 06.7	-0.5
KHAL	Karahalli	1.38	7	eP	Pn	05 24 07.4	-0.4
KHAL				eS	Sb	05 24 26.4	+0.4
DAT	Datca	1.38	259	ePN	Pn	05 24 07.0	-0.7
BDRM	Kayabasi	1.46	273	eP	Pn	05 24 09.2	+0.3
BDRM				eS	Sn	05 24 29.0	+0.7
BDRM	Kayabasi	1.46	273	eP	Pn	05 24 09.1	+0.3
BDRM				eS	Sn	05 24 29.0	+0.7
BODT	Bodrum	1.57	273	ePN	Pn	05 24 09.8	-0.5
KULA	Kula-Manisa	1.59	343	ePN	Pn	05 24 09.7	-0.9
MANT	Manisa	1.59	339⇑	iP	Pn	05 24 10.3	-0.4
MANT				iS	Sn	05 24 32.7	+1.1
SHUT	Suhut-Afyon	1.86	33	ePN	Pn	05 24 14.0	-0.2
SMG	Samos	2.06	291	eP	Pn	05 24 17.0	-0.1
ALT	Altintas	2.16	18	ePN	Pn	05 24 18.3	-0.1
AKS	Akhisar	2.20	329	ePN	Pn	05 24 17.9	-1.1
KARP	Karpathos	2.23	230	eP	Pn	05 24 19.0	-0.5
KARP	Karpathos	2.23	230	P	Pn	05 24 20.5	+1.0
BLCB	Balcova	2.25	309	ePN	Pn	05 24 19.3	-0.3
HDMB	Hadim	2.58	90	ePN	Pn	05 24 23.9	-0.2
KONT	Konya--Tatoy	2.63	68	ePN	Pn	05 24 25.4	+0.4
LADK	Ladik-KONYA	2.74	63	ePN	Pn	05 24 26.7	+0.4
KIZT	Kizilcal	2.79	47	ePN	Pn	05 24 27.3	+0.2
BALB	Balikesir	2.86	338	ePN	Pn	05 24 28.2	+0.2
APE	Apeiranthos	2.99	272	eP	Pn	05 24 32.0	+2.1
APE	Apeiranthos	2.99	272	P	Pn	05 24 31.3	+1.4
PRK	Paraskevi	3.26	314	eP	Pn	05 24 28.0	-5.5
NPS	Neapolis	3.43	241	P	Pn	05 24 36.9	+1.0
GEMT	Gemlik	3.43	359	ePN	Pn	05 24 36.3	+0.4
YLV	Yalova	3.56	1	ePN	Pn	05 24 38.1	+0.4
GULT	Gulveren	3.57	15	ePN	Pn	05 24 38.2	+0.5
EZN	Ezine	3.65	322	ePN	Pn	05 24 38.7	-0.2

CASC 01 05:41:49.9±2.2, 14.40N×89.39W, h24^{km}±11^{km}, MD3.7, ML2.2, 2C-8D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.56	207⇓	eP	x	05 42 01.6	
RTR				eS	x	05 42 10.5	
SNJE	San Jose	0.57	202⇓	eP	x	05 42 01.6	
SNJE				eS	x	05 42 10.8	
SBLS	San Blas	0.60	202⇓	eP	x	05 42 01.3	
SBLS				eS	x	05 42 11.5	
BOQS	Boqueron	0.67	171⇓	iP	x	05 42 02.8	
BOQS				⇓eP	x	05 42 02.8	
BOQS				eS	x	05 42 13.0	
SNET	Serv Nac Est T	0.72	168⇓	eP	x	05 42 02.9	
SNET				eS	x	05 42 13.8	
SNET				eS	x	05 42 14.1	
LBRS	Las Brisas	0.74	153⇓	eP	x	05 42 05.0	
LFRS	El Faro	0.83	158⇓	eP	x	05 42 04.6	
LFRS				eS	x	05 42 16.2	
SNVI	San Vicente	0.94	146⇑	eP	x	05 42 07.3	
SNVI				eS	x	05 42 21.4	
SNVI				AML	x	05 42 23.8	
	comp=Z,50nm,0.4s						
IXG	Ixpaco	1.06	258⇑	eP	Pn	05 42 07.5	-1.8
IXG				eS	Sb	05 42 24.6	+1.6
CAHU	Cacacuatique	1.30	119	eP	x	05 42 14.3	
FUG	Fuego 3	1.41	272	eP	Pn	05 42 15.0	+0.8
FUG				eS	Sn	05 42 33.0	+1.0
FG6		1.46	276	eP	Pn	05 42 16.4	+1.7
FG6				eS	Sn	05 42 35.0	+1.8
CNCH	Conchagua	1.88	126	eP	x	05 42 20.2	

IDC 01 05:52:28.7±2.6, 3.40N×128.45E, h0^{km}, mb3.7/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.7/3, Error ellipse: s-maj=268.5km s-min=25.7km az=66.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	23.90	166	eP	P	05 57 45.5	+1.1
ASAR	Alice Springs	27.42	169	P	P	05 58 16.1	-0.1
	0.4nm,0.5s,baz=354,slow=8.0,SNR=8.5						
ASAR				PcP	PcP	06 01 34.1	-1.2
	0.4nm,0.5s,baz=349,slow=2.1,SNR=6.7						
STKA	Stephens Creek	37.24	161	P	P	05 59 42.7	+0.6
	1.3nm,0.6s,baz=335,slow=9.3,SNR=5.9						
MKAR	Makanchi Array	58.81	325	P	P	06 02 29.2	+0.3
	0.3nm,0.4s,baz=114,slow=8.4,SNR=8.2						

IGQ 01 06:14:49.8, 0.70N×80.20W, h12^{km}±6^{km}, Mb4.1, Ms3.9, 2C, Error ellipse: s-maj=4.6km s-min=2.3km az=33.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	0.95	181	P	Pg	06 15 07.6	-0.7
JAMA				S	Sg	06 15 20.4	-0.3
PINO	Pino	1.80	118	P	Pn	06 15 22.8	+2.1
PINO	Pino	1.80	118	S	Sn	06 15 48.2	+4.7
YANA	Yana	1.82	117	P	Pn	06 15 23.4	+2.5
COTA	Cotacachi	1.89	101	⇑P	Pn	06 15 24.9	+3.0
COTA	Cotacachi	1.89	101	⇑S	Sn	06 15 49.8	+4.0
CAMI	Rancho Maria	2.17	129	P	Pn	06 15 29.0	+3.2
VC1	Cotopaxi 1	2.23	127	P	Pn	06 15 30.2	+3.5
ANTI	Antisana	2.33	119	P	Pn	06 15 32.4	+4.4

IDC 01 06:41:47.6±0.9, 45.31S×97.24E, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.1/14, mbtmp4.1/7, MS3.9/12, Ms1 3.9/12, ms1mx3.7/29, Error ellipse: s-maj=34.0km s-min=21.4km az=96.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	19.77	58	LR	LR	06 52 10.8	
	comp=Z,220nm,21.8s,baz=211,slow=32						
MAW	Mawson	28.64	207	LR	LR	06 56 30.5	
	comp=Z,272nm,20.9s,baz=48,slow=31						
ASAR	Alice Springs	36.69	66	P	P	06 48 56.5	+0.2
	2.1nm,0.8s,baz=223,slow=6.8,SNR=18						
STKA	Stephens Creek	36.71	84	eP	P	06 48 56.7	+0.4
	2.8nm,0.6s						
STKA	Stephens Creek	36.71	84	P	P	06 48 56.0	-0.3
	3.5nm,0.7s,baz=232,slow=6.6,SNR=8.9						
STKA				PcP	PcP	06 51 17.4	-1.5
	2.0nm,0.6s,baz=207,slow=5.7,SNR=3.6						
STKA				LR	LR	07 01 07.8	
	comp=Z,132nm,19.6s,baz=14,slow=32						
WB2	Warramunga Arr	39.67	63	eP	P	06 49 21.2	-0.2
VNDA	Vanda	40.77	162	P	P	06 49 29.9	+0.1
	2.0nm,0.8s,baz=308,slow=8.2,SNR=7.5						
VNDA				LR	LR	07 03 59.6	
	comp=Z,223nm,21.0s,baz=286,slow=33						
QSPA	South Pole Qui	44.84	180	P	P	06 50 03.4	+0.6
	2.0nm,0.6s,baz=300,slow=3.5,SNR=19						
QSPA				PcP	PcP	06 51 43.8	-0.6
	0.9nm,0.9s,baz=281,slow=4.4,SNR=1.7						
CTA	Charters Tower	47.39	75	LR	LR	07 07 02.5	
	comp=Z,82nm,19.6s,baz=232,slow=32						
VNA2	Neumayer--Watz	52.38	204	e	P	06 51 01.6	+0.7
	baz=107,slow=7.7						
VNA2				e		06 51 08.3	
VNA2				e		06 51 13.8	
VNA3	Neumayer Olymp	52.84	203	e	P	06 51 04.6	+0.3
VNA3				e		06 51 11.1	
VNA3				e		06 51 17.4	
BOSA	Boshof	58.03	260	LR	LR	07 11 10.5	
	comp=Z,49nm,21.1s,baz=219,slow=30						
CMAR	Chiang Mai Arr	63.47	2	P	P	06 52 20.0	+0.7
	1.7nm,0.4s,baz=198,slow=6.4,SNR=8.2						
CMAR				LR	LR	07 16 31.9	
	comp=Z,84nm,18.7s,baz=170,slow=33						
HNR	Honiara	64.24	77	LR	LR	07 16 43.2	
	comp=Z,84nm,18.3s,baz=340,slow=33						
RAO	Raoul Island	66.43	108	LR	LR	07 17 41.1	
	comp=Z,79nm,18.4s,baz=141,slow=32						
GUMO	Guam	72.72	49	LR	LR	07 25 15.4	
	comp=Z,142nm,18.2s,baz=128,slow=36						
MKAR	Makanchi Array	92.66	350	P	P	06 55 00.4	-0.2
	0.5nm,0.6s,baz=200,slow=6.2,SNR=4.4						
SONM	Songino Array	93.10	6	P	P	06 55 02.3	-0.3
	0.6nm,0.8s,baz=206,slow=4.7,SNR=4.7						
SONM				LR	LR	07 37 56.3	
	comp=Z,135nm,19.8s,baz=14,slow=36						
PLCA	Paso Flores	93.65	189	LR	LR	07 34 31.9	
	comp=Z,196nm,21.5s,baz=189,slow=34						
NVAR	Mina Array Bea	152.81	92	PKPbc	PKPbc	07 01 47.3	+1.3
	4.0nm,0.7s,baz=225,slow=4.0,SNR=29						
YKA	Yellowknife Ar	154.94	35	PKPbc	PKPbc	07 01 48.9	-0.9
	1.4nm,0.8s,baz=298,slow=2.5,SNR=5.4						

ISCJB 01 06:46:43.5±0.6, 9.04S±0.06×118.98E±0.04, h103^{km}±8^{km}, mb3.7/4, Error ellipse: s-maj=10.9km s-min=6.3km az=15.3
DJA 01 06:46:45, 9.05S×118.88E, h30^{km}, MLv4.5/4
IDC 01 06:46:47.0±3.5, 8.94S×119.18E, h115^{km}±31^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/19, mbtmp3.5/7, MS4.2/1, Ms1 4.2/1, ms1mx3.0/26, Error ellipse: s-maj=43.7km s-min=10.0km az=57.0
ISC 01 06:46:44.9±0.6, 9.05S±0.06×118.98E±0.04, h95^{km}±8^{km}, n13, $\sigma 0^{s}69$/19, mb3.7/4, 1C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.44	115⇑	eP	Pn	06 47 08.5	-1.6
WSI				eS	Sn	06 47 44.5	+15
WSI	Waingapu	1.44	115	P	Pn	06 47 11.2	+1.1
WSI				S	Sn	06 47 29.7	+0.4
KHKI	Kahang-Kahang	3.40	281	P	Pn	06 47 35.8	-0.1
KHKI				S	Sn	06 48 14.5	-0.8
IGBI	Denpasar	3.79	273	P	Pn	06 47 41.7	+0.5
IGBI				S	Sn	06 48 24.9	+0.1
KAPI	Kappang	4.08	11	P	Pn	06 47 45.9	+0.7
	4.4nm,0.3s,baz=209,slow=9.9,SNR=17						
KAPI				S	Sn	06 48 31.6	-0.3
	21nm,0.3s,baz=20,slow=23,SNR=17						
KAPI	Kappang	4.08	11	P	Pn	06 47 46.0	+0.8
BATI	Baumata	4.76	104	P	Pn	06 47 54.9	+0.6
	14nm,0.3s,baz=20,slow=1.0,SNR=11						
BATI				S	Sn	06 48 47.8	-0.6
	11nm,0.3s,baz=329,slow=22,SNR=3.9						
ASAR	Alice Springs	20.38	137	P	P	06 51 14.2	+0.1
	2.6nm,0.6s,baz=315,slow=10.0,SNR=18						
ASAR				S	S	06 54 57.0	-0.3
	0.5nm,0.9s,baz=318,slow=25,SNR=4.1						
STKA	Stephens Creek	30.93	140	P	P	06 52 51.8	-1.0
	1.7nm,0.8s,mb3.8,baz=302,slow=12,SNR=4.1						
RPZ	Rata Peaks	56.78	137	LR	LR	07 18 37.8	
	comp=Z,207nm,21.6s,baz=190,slow=34						
SONM	Songino Array	57.72	350	P	P	06 56 25.8	+0.2
	0.9nm,0.7s,mb3.9,baz=162,slow=6.6,SNR=5.8						
MKAR	Makanchi Array	64.49	333	P	P	06 57 10.9	-0.5
	0.3nm,0.4s,mb3.5,baz=143,slow=6.1,SNR=5.0						
QSPA	South Pole Qui	80.94	180	P	P	06 58 49.6	+1.3
	0.7nm,0.7s,mb3.6,baz=270,slow=4.0,SNR=4.9						

MAN 01 06:56:36, 15.77N×121.70E, h32^{km}, mb3.7, ML2.5, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	0.12	255	eP	Pb	06 56 43.4	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BALP				eS	Sb	06 56 48.1	+2.4
PCPH	**Palayan**	**0.62**	**250**	⇓iP	Pb	06 56 49.1	+0.6
PCPH				i S	Sb	06 56 57.8	+0.9
CAUP	**Cauayan**	**1.17**	**6**	eP	Pn	06 57 01.3	+5.1

ISCJB ***01*** *07:08:04.8±0.4, 4368N±003×2550E±005, h10km, Error ellipse: s-maj=5.0km s-min=3.8km az=177.7*
SOF ***01*** *07:08:06.0, 4370N×2569E, h14km, MD2.9*
CSEM ***01*** *07:08:08.5±0.1, 4367N×2600E, h2km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.5km az=124.0*
NEIC ***01*** *07:08:10.5, 4384N×2608E, h0km, ML2.6(BUC), After BUC.*
ISC 01 07:08:05.5±0.5, **4366N**±003×**2567E**±005, **h0**km±11km, **n36**, σ0.s93/44, **8C-8D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZH	**Strazhica**	**0.44**	**153**	i Pg	**Pg**	**07 08 15.8**	**+1.9**
SZH	**Strazhica**	**0.44**	**153**	P	**Pg**	**07 08 16.0**	**+2.1**
PVL	**Pavlikeni**	**0.50**	**209**	i P	**Pg**	**07 08 19.8**	**+4.7**
PRD	**Provadia**	**1.34**	**109**	P	**Pn**	**07 08 31.4**	**-0.1**
PRD	**Provadia**	**1.34**	**109**	P	**Pg**	**07 08 31.6**	**+0.3**
PRD	**Provadia**	**1.34**	**109**	P	**Pn**	**07 08 31.4**	**-0.1**
JMB	**Yambol**	**1.37**	**150**	P	**Pg**	**07 08 31.3**	**-0.4**
JMB	**Yambol**	**1.37**	**150**	P	**Pg**	**07 08 32.0**	**+0.3**
JMB	**Yambol**	**1.37**	**150**	P	**Pg**	**07 08 31.3**	**-0.4**
PGB	**Panagyurishte**	**1.56**	**225**	P	**Pg**	**07 08 36.4**	**+1.0**
PSN	**Preselentsi**	**1.83**	**88**	P	**Pg**	**07 08 38.9**	**-1.6**
VOIR		**1.83**	**346**	⇓P	**Pg**	**07 08 40.7**	**0.0**
VOIR				S	**Sg**	**07 09 05.5**	**+1.1**
VOIR		**1.83**	**346**	⇑iP	**Pg**	**07 08 40.7**	**0.0**
VOIR		**1.83**	**346**	⇓P	**Pg**	**07 08 40.7**	**0.0**
VOIR				S	**Sg**	**07 09 05.5**	**+1.1**
MLR	**Muntele Rosu**	**1.84**	**6**	⇓P	**Pg**	**07 08 41.0**	**+0.1**
MLR				S	**Sg**	**07 09 05.0**	**+0.2**
MLR	**Muntele Rosu**	**1.84**	**6**	⇑iP	**Pg**	**07 08 41.0**	**+0.1**
MLR	**Muntele Rosu**	**1.84**	**6**	⇓P	**Pg**	**07 08 41.0**	**+0.1**
MLR				S	**Sg**	**07 09 05.0**	**+0.2**
HARR	**Harsova**	**1.93**	**57**	⇑iP	**Pn**	**07 08 39.8**	**+0.2**
HARR	**Harsova**	**1.93**	**57**	⇑P	**Pn**	**07 08 39.8**	**+0.2**
KDZ	**Kurdzhali**	**2.01**	**185**	P	**Pg**	**07 08 44.4**	**+0.3**
RZN	**Rozhen**	**2.09**	**200**	P	**Pg**	**07 08 45.5**	**0.0**
VTS	**Vitosha**	**2.09**	**240**	P	**Pg**	**07 08 44.2**	**-1.4**
TIRR	**Tirgusor**	**2.14**	**67**	⇑P	**Pn**	**07 08 42.5**	**+0.1**
TIRR	**Tirgusor**	**2.14**	**67**	⇓iP	**Pn**	**07 08 42.5**	**+0.1**
TIRR	**Tirgusor**	**2.14**	**67**	S	**Sg**	**07 09 10.7**	**-3.5**
TIRR	**Tirgusor**	**2.14**	**67**	⇑P	**Pn**	**07 08 42.5**	**+0.1**
MMB	**Musomiste**	**2.51**	**215**	i P	**Pg**	**07 08 53.6**	**-0.1**
KKB	**Krupnik**	**2.61**	**228**	P	**Pg**	**07 08 55.1**	**-0.4**
GZR	**Gura Zlata**	**2.70**	**311**	⇓P	**Pg**	**07 08 57.5**	**+0.3**
GZR				S	**Sg**	**07 09 32.4**	**+0.2**
GZR	**Gura Zlata**	**2.70**	**311**	⇓iP	**Pg**	**07 08 57.5**	**+0.3**
GZR	**Gura Zlata**	**2.70**	**311**	S	**Sg**	**07 09 32.4**	**+0.2**
GZR	**Gura Zlata**	**2.70**	**311**	⇓P	**Pg**	**07 08 57.5**	**+0.2**
GZR				S	**Sg**	**07 09 32.4**	**+0.2**
BZS	**Buzias**	**3.49**	**306**	⇑iP	**Pg**	**07 09 09.6**	**-2.8**
BZS				S	**Sg**	**07 09 53.2**	**-4.5**
BZS	**Buzias**	**3.49**	**306**	S	**Sg**	**07 09 53.2**	**-4.5**
DRGR		**3.77**	**327**	S	**Sg**	**07 10 01.9**	**-4.6**
DRGR		**3.77**	**327**	⇑iP	**Pg**	**07 09 18.0**	**+0.3**
DRGR				S	**Sg**	**07 10 01.9**	**-4.6**

SZGRF ***01*** *07:14:15.3, 39.11N×1624E, h33km, Southern Italy*
BGS ***01*** *07:14:22.0±1.5, 4024N×1658E, h256km, mb4.6*
ROM ***01*** *07:14:22.4±0.2, 3998N×1585E, h281km±2km, Ml4.4/88, Error ellipse: s-maj=3.3km s-min=1.7km az=78.0*
PDG ***01*** *07:14:23.3±1.4, 40.11N×1582E, h268km±3km, ML4.9/9, Error ellipse: s-maj=1.6km s-min=1.8km az=0.0*
CSEM ***01*** *07:14:24.3±0.0, 4000N×1578E, h253km, mb4.7/22, ML5.0/12, Error ellipse: s-maj=1.1km s-min=0.9km az=27.0*
PRU ***01*** *07:14:24.4, 4048N×1535E, h0km, M4.7*
LDG ***01*** *07:14:24.7±0.3, 40.11N×1578E, h280km, Mb4.7/44, Error ellipse: s-maj=11.3km s-min=6.7km az=51.0*
MOS ***01*** *07:14:24.4±1.0, 4002N×1577E, h275km, mb4.4/18, Error ellipse: s-maj=3.4km s-min=2.2km az=107.4*
ISCJB ***01*** *07:14:24.4±0.1, 4003N±001×1582E±001, h272km±1km, mb4.5/60, Error ellipse: s-maj=1.9km s-min=1.6km az=5.3*
BJI ***01*** *07:14:24.1, 4047N×16.15E, h247km, mB4.9, mb4.8*
CRAAG ***01*** *07:14:24.4, 4002N×1582E, Mb4.5*
NEIC ***01*** *07:14:25.2±0.1, 4001N×1579E, mb4.7/118, Error ellipse: s-maj=2.3km s-min=1.9km az=12.0*
IDC ***01*** *07:14:25.8±0.9, 40.11N×1567E, h272km±10km, mb4.1/16, mb1 4.2/29, mb1mx4.1/35, mbtmp4.1/29, Error ellipse: s-maj=8.2km s-min=7.2km az=92.0*
ISC 01 07:14:25.3±0.1, **4004N**±001×**1583E**±001, **h267**km±1km, **h258**km±2.9km**:pP-P, n1051,** σ**1.s01**/1154, **mb4.5**/60, **339C-104D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUC	**Castrocucco**	**0.05**	**195**	ePn	**Pn**	**07 14 58.8**	**-0.7**
CUC				Sg	**S**	**07 15 24.8**	**-1.7**
CUC				eS	**S**	**07 15 24.9**	**-1.6**
CUC	**Castrocucco**	**0.05**	**195**	⇓iPg	**Pn**	**07 14 58.8**	**-0.7**
CUC				Sg	**S**	**07 15 24.8**	**-1.7**
	2μm,0.7s						
SIRI	**Monte Sirino -**	**0.14**	**11**	Pg	**Pn**	**07 14 59.1**	**-0.3**
SIRI				Sg	**S**	**07 15 26.8**	**+0.4**
SIRI	**Monte Sirino -**	**0.14**	**11**	Pg	**Pn**	**07 14 59.1**	**-0.3**
SIRI				Sg	**S**	**07 15 26.8**	**+0.4**
MTSN	**Montesano sull**	**0.23**	**344**	⇓ePg	**Pn**	**07 14 59.2**	**-0.3**
	2μm,0.6s						
MTSN	**Montesano sull**	**0.23**	**344**	⇓ePg	**Pn**	**07 14 59.2**	**-0.3**
	2μm,0.6s						
MGR	**Morigerati**	**0.23**	**294**	⇓iPg	**Pn**	**07 14 59.3**	**-0.3**
MGR				Sg	**S**	**07 15 25.7**	**-0.9**
	3μm,1.0s						
MGR	**Morigerati**	**0.23**	**294**	P	**Pn**	**07 14 59.2**	**-0.4**
MGR				Sg	**S**	**07 15 25.7**	**-0.9**
MGR	**Morigerati**	**0.23**	**294**	⇓iPg	**Pn**	**07 14 59.3**	**-0.3**
MGR				Sg	**S**	**07 15 25.7**	**-0.9**
	3μm,1.0s						
SCHR	**S. Chirico Rap**	**0.24**	**50**	⇓iPg	**Pn**	**07 14 59.6**	**0.0**
SCHR				Sg	**S**	**07 15 26.4**	**-0.2**
	1μm,0.8s						
SCHR	**S. Chirico Rap**	**0.24**	**50**	⇓iPg	**Pn**	**07 14 59.6**	**0.0**
SCHR				Sg	**S**	**07 15 26.4**	**-0.2**
	1μm,0.8s						
MCEL	**Monticello**	**0.28**	**355**	⇓iPg	**Pn**	**07 15 00.1**	**+0.5**
MCEL				Sg	**S**	**07 15 27.2**	**+0.5**
	6μm,1.1s						
MCEL	**Monticello**	**0.28**	**355**	⇓iPg	**Pn**	**07 15 00.1**	**+0.5**
MCEL				Sg	**S**	**07 15 27.2**	**+0.5**
	6μm,1.1s						
ORI	**Oriolo Calabro**	**0.47**	**87**	⇓iPg	**Pn**	**07 15 00.0**	**0.0**
ORI				Sg	**S**	**07 15 27.1**	**-0.3**
	7μm,0.5s						
CMPR	**Campora**	**0.49**	**304**	⇓iPg	**Pn**	**07 15 00.0**	**-0.1**
CMPR	**Campora**	**0.49**	**304**	⇓iPg	**Pn**	**07 15 00.0**	**-0.1**
CMPR				Sg	**S**	**07 15 26.8**	**-0.7**
	2μm,1.3s						
PTRP	**Pietrapertosa**	**0.51**	**20**	P	**Pn**	**07 15 00.0**	**-0.1**
PTRP				Sg	**S**	**07 15 27.4**	**-0.2**
PTRP	**Pietrapertosa**	**0.51**	**20**	⇓iPg	**Pn**	**07 15 00.0**	**-0.1**
PTRP				Sg	**S**	**07 15 27.4**	**-0.2**
	1μm,0.9s						
TDS	**Terranova Siba**	**0.55**	**134**	P	**Pn**	**07 15 01.2**	**+0.9**
CRAC	**Craco**	**0.56**	**55**	⇓iPg	**Pn**	**07 15 00.2**	**-0.1**
CRAC	**Craco**	**0.56**	**55**	⇓iPg	**Pn**	**07 15 00.2**	**-0.1**
CRAC				Sg	**S**	**07 15 28.1**	**+0.2**
	9μm,1.2s						
CDRU	**Civita di Ruta**	**0.60**	**318**	⇓iPg	**Pn**	**07 15 00.5**	**+0.1**
CDRU	**Civita di Ruta**	**0.60**	**318**	⇓iPg	**Pn**	**07 15 00.5**	**+0.1**
CDRU				Sg	**S**	**07 15 27.7**	**-0.4**
	1μm,1.2s						
SGO	**Sicignano**	**0.66**	**322**	⇓Pg	**Pn**	**07 15 00.9**	**+0.3**
MIGL	**Miglionico**	**0.73**	**39**	⇓iPg	**Pn**	**07 15 00.6**	**-0.2**
MIGL	**Miglionico**	**0.73**	**39**	⇓iPg	**Pn**	**07 15 00.6**	**-0.2**
MIGL				Sg	**S**	**07 15 28.6**	**-0.3**
	7μm,0.9s						
MRLC	**Muro Lucano**	**0.76**	**340**	⇓iPg	**Pn**	**07 15 01.0**	**0.0**
MRLC				Sg	**S**	**07 15 28.6**	**-0.6**
MRLC	**Muro Lucano**	**0.76**	**340**	⇓iPg	**Pn**	**07 15 01.0**	**0.0**
MRLC				Sg	**S**	**07 15 28.6**	**-0.6**
CARO	**Carolei**	**0.84**	**159**	Pg	**Pn**	**07 15 00.4**	**-1.0**
CARO				Sg	**S**	**07 15 27.0**	**-2.9**
	8μm,0.4s						
CARO	**Carolei**	**0.84**	**159**	Pg	**Pn**	**07 15 00.4**	**-1.0**
CARO				Sg	**S**	**07 15 27.0**	**-2.9**
	8μm,0.4s						
MCRV	**Calabrutti - M**	**0.90**	**326**	⇓iPg	**Pn**	**07 15 01.9**	**+0.3**
MCRV	**Calabrutti - M**	**0.90**	**326**	⇓iPg	**Pn**	**07 15 01.9**	**+0.3**
MCRV				Sg	**S**	**07 15 30.3**	**+0.1**
	1μm,0.8s						
PALZ	**Palazzo San Ge**	**0.91**	**6**	⇓iPg	**Pn**	**07 15 01.4**	**-0.2**
PALZ				Sg	**S**	**07 15 29.8**	**-0.5**
	4μm,1.0s						
PALZ	**Palazzo San Ge**	**0.91**	**6**	⇓iPg	**Pn**	**07 15 01.4**	**-0.2**
PALZ				Sg	**S**	**07 15 29.8**	**-0.5**
	4μm,1.0s						
VULT	**Monte Vulture**	**0.93**	**350**	⇓iPg	**Pn**	**07 15 01.5**	**-0.2**
	2μm,1.1s						
VULT	**Monte Vulture**	**0.93**	**350**	⇓iPg	**Pn**	**07 15 01.5**	**-0.2**
	2μm,1.1s						
LTRZ	**Laterza**	**0.94**	**53**	⇓iPg	**Pn**	**07 15 01.5**	**-0.3**
LTRZ				Sg	**S**	**07 15 28.9**	**-1.7**
	3μm,0.8s						
LTRZ	**Laterza**	**0.94**	**53**	P	**Pn**	**07 15 01.4**	**-0.4**
LTRZ				Sg	**S**	**07 15 28.9**	**-1.7**
LTRZ	**Laterza**	**0.94**	**53**	⇓iPg	**Pn**	**07 15 01.5**	**-0.3**
LTRZ				Sg	**S**	**07 15 28.9**	**-1.7**
	3μm,0.8s						
SNAL	**S. Angelo Dei**	**1.00**	**332**	⇓iPg	**Pn**	**07 15 02.5**	**+0.4**
SNAL	**S. Angelo Dei**	**1.00**	**332**	⇓iPg	**Pn**	**07 15 02.5**	**+0.4**
SNAL				Sg	**S**	**07 15 31.6**	**+0.4**
	2μm,0.9s						
CSSN	**Cassano Irpino**	**1.02**	**323**	⇓iPg	**Pn**	**07 15 02.6**	**+0.4**
	230nm,0.4s						
CSSN	**Cassano Irpino**	**1.02**	**323**	P	**Pn**	**07 15 02.5**	**+0.3**
CSSN	**Cassano Irpino**	**1.02**	**323**	⇓iPg	**Pn**	**07 15 02.6**	**+0.4**
	230nm,0.4s						
SG1	**Sgolgore (BA)**	**1.03**	**39**	i P	**Pn**	**07 15 02.2**	**0.0**
AMUR	**Altamura**	**1.05**	**34**	⇓iPg	**Pn**	**07 15 02.3**	**0.0**
AMUR				Sg	**S**	**07 15 30.5**	**-1.1**
	2μm,0.8s						
AMUR	**Altamura**	**1.05**	**34**	⇓iPg	**Pn**	**07 15 02.3**	**0.0**
AMUR				Sg	**S**	**07 15 30.5**	**-1.1**
	2μm,0.8s						
MRVN	**Minervino Murg**	**1.05**	**15**	⇓iPg	**Pn**	**07 15 02.3**	**0.0**
MRVN				Sg	**S**	**07 15 30.5**	**-1.2**
	3μm,1.5s						
MRVN	**Minervino Murg**	**1.05**	**15**	⇓iPg	**Pn**	**07 15 02.3**	**0.0**
MRVN				Sg	**S**	**07 15 30.5**	**-1.2**
	3μm,1.5s						
CAFE	**Carife**	**1.08**	**335**	⇓iPg	**Pn**	**07 15 03.4**	**+0.9**
CAFE	**Carife**	**1.08**	**335**	⇓iPg	**Pn**	**07 15 03.4**	**+0.9**
CAFE				Sg	**S**	**07 15 32.9**	**+0.9**
	3μm,1.2s						
TIP	**Timpagrande**	**1.12**	**140**	ePn	**Pn**	**07 15 02.6**	**-0.2**
TIP				eS	**S**	**07 15 26.9**	**-5.5**
TIP	**Timpagrande**	**1.12**	**140**	ePn	**Pn**	**07 15 02.6**	**-0.2**
TIP				eS	**S**	**07 15 26.9**	**-5.5**
SGTA	**Sant Agata di**	**1.15**	**342**	⇓iPg	**Pn**	**07 15 03.3**	**+0.4**
SGTA	**Sant Agata di**	**1.15**	**342**	⇓iPg	**Pn**	**07 15 03.3**	**+0.4**
SGTA				Sg	**S**	**07 15 32.6**	**0.0**
NOCI	**Noci**	**1.20**	**51**	⇓iPg	**Pn**	**07 15 03.2**	**0.0**
NOCI				Sg	**S**	**07 15 31.5**	**-1.7**
	1μm,0.5s						
NOCI	**Noci**	**1.20**	**51**	⇓iPg	**Pn**	**07 15 03.2**	**0.0**
NOCI				Sg	**S**	**07 15 31.5**	**-1.7**
	1μm,0.5s						
SERS	**Sersale**	**1.20**	**146**	⇑iPg	**Pn**	**07 15 03.1**	**-0.2**
SERS				Sg	**S**	**07 15 31.4**	**-1.9**
	6μm,0.4s						
SERS	**Sersale**	**1.20**	**146**	⇑iPg	**Pn**	**07 15 03.1**	**-0.2**
SERS				Sg	**S**	**07 15 31.4**	**-1.9**
	6μm,0.4s						
MRB1	**Monte Rocchett**	**1.27**	**329**	⇓iPg	**Pn**	**07 15 04.1**	**+0.5**
	1μm,1.0s						
MRB1	**Monte Rocchett**	**1.27**	**329**	⇓iPg	**Pn**	**07 15 04.1**	**+0.5**
	1μm,1.0s						
GRI	**Girifalco**	**1.30**	**159**	⇑iPg	**Pn**	**07 15 03.7**	**-0.2**
FG5	**Orsara di Pugl**	**1.31**	**341**	Pg	**Pn**	**07 15 04.6**	**+0.7**
	249nm,0.4s						
FG5	**Orsara di Pugl**	**1.31**	**341**	Pg	**Pn**	**07 15 04.6**	**+0.7**
	249nm,0.4s						
BAI	**Bari**	**1.33**	**36**	i P	**Pn**	**07 15 02.6**	**-1.4**
PSB1	**Pescosannita**	**1.41**	**327**	⇓iPg	**Pn**	**07 15 04.9**	**+0.3**
	773nm,1.2s						
PSB1	**Pescosannita**	**1.41**	**327**	P	**Pn**	**07 15 05.0**	**+0.4**
PSB1	**Pescosannita**	**1.41**	**327**	⇓iPg	**Pn**	**07 15 04.9**	**+0.3**
	773nm,1.2s						
MOCO	**Biccari - m.te**	**1.42**	**339**	⇓iPg	**Pn**	**07 15 05.3**	**+0.7**
	2μm,2.1s						
MOCO	**Biccari - m.te**	**1.42**	**339**	⇓iPg	**Pn**	**07 15 05.3**	**+0.7**
	2μm,2.1s						
JOPP	**Joppolo**	**1.43**	**178**	⇑iPg	**Pn**	**07 15 03.6**	**-1.2**
JOPP				Sg	**S**	**07 15 32.7**	**-3.4**
	4μm,0.5s						
JOPP	**Joppolo**	**1.43**	**178**	⇑iPg	**Pn**	**07 15 03.6**	**-1.2**
JOPP				Sg	**S**	**07 15 32.7**	**-3.4**
	4μm,0.5s						
PE1	**Pezze di Greco**	**1.43**	**57**	i P	**Pn**	**07 15 04.6**	**-0.1**
SACR	**S. Croce Del S**	**1.60**	**328**	Pg	**Pn**	**07 15 06.5**	**+0.6**
	720nm,1.1s						
SACR	**S. Croce Del S**	**1.60**	**328**	Pg	**Pn**	**07 15 06.5**	**+0.6**
	720nm,1.1s						
RGNG	**Rignano Grg**	**1.64**	**354**	P	**Pn**	**07 15 06.1**	**-0.1**
RGNG	**Rignano Grg**	**1.64**	**354**	Pg	**Pn**	**07 15 06.2**	**0.0**
PTRJ	**Pietraroja**	**1.65**	**324**	Pg	**Pn**	**07 15 06.7**	**+0.4**
PTRJ	**Pietraroja**	**1.65**	**324**	Pg	**Pn**	**07 15 06.7**	**+0.4**
PLAC	**Placanica**	**1.66**	**163**	⇑iPg	**Pn**	**07 15 05.7**	**-0.8**
PLAC				Sg	**S**	**07 15 36.4**	**-2.6**
	2μm,0.4s						
PLAC	**Placanica**	**1.66**	**163**	⇑iPg	**Pn**	**07 15 05.7**	**-0.8**
PLAC				Sg	**S**	**07 15 36.4**	**-2.6**
	2μm,0.4s						
MS1	**Monte Sant'Ang**	**1.66**	**3**	i P	**Pn**	**07 15 06.5**	**+0.1**
FGMS	**Monte Sant'Ang**	**1.67**	**3**	⇑iPg	**Pn**	**07 15 06.4**	**0.0**
SLNA	**Salina**	**1.67**	**208**	Pg	**Pn**	**07 15 06.3**	**-0.2**
	509nm,0.4s						
SLNA	**Salina**	**1.67**	**208**	P	**Pn**	**07 15 06.4**	**-0.1**
SLNA	**Salina**	**1.67**	**208**	Pg	**Pn**	**07 15 06.3**	**-0.2**
	509nm,0.4s						
MSAG	**Monte S. Angel**	**1.67**	**2**	⇓iPg	**Pn**	**07 15 06.3**	**-0.1**
MSAG				Sg	**S**	**07 15 38.6**	**-0.4**
MSAG	**Monte S. Angel**	**1.67**	**2**	P	**Pn**	**07 15 06.4**	**0.0**
MSAG	**Monte S. Angel**	**1.67**	**2**	⇓iPg	**Pn**	**07 15 06.3**	**-0.1**
MSAG				Sg	**S**	**07 15 38.6**	**-0.4**
SGRT	**San Giovanni R**	**1.71**	**358**	⇓iPg	**Pn**	**07 15 06.6**	**-0.1**
SGRT				Sg	**S**	**07 15 39.0**	**-0.6**
SGRT	**San Giovanni R**	**1.71**	**358**	⇓iPg	**Pn**	**07 15 06.6**	**-0.1**
SGRT				Sg	**S**	**07 15 39.0**	**-0.6**
LLI	**Lipari**	**1.74**	**204**	⇑iPg	**Pn**	**07 15 07.1**	**0.0**
	5μm,1.0s						
LLI	**Lipari**	**1.74**	**204**	⇑iPg	**Pn**	**07 15 07.1**	**0.0**
	5μm,1.0s						
SGG	**Gregorio Mates**	**1.74**	**321**	⇑iPg	**Pn**	**07 15 07.7**	**+0.7**
	390nm,0.8s						
SGG	**Gregorio Mates**	**1.74**	**321**	P	**Pn**	**07 15 07.6**	**+0.6**
SGG	**Gregorio Mates**	**1.74**	**321**	⇑iPg	**Pn**	**07 15 07.7**	**+0.7**
	390nm,0.8s						
CIGN	**Sant'Elia a Pi**	**1.76**	**337**	Pg	**Pn**	**07 15 07.4**	**+0.3**
	724nm,1.2s						
CIGN	**Sant'Elia a Pi**	**1.76**	**337**	Pg	**Pn**	**07 15 07.4**	**+0.3**
	724nm,1.2s						
BSSO	**Busso**	**1.77**	**328**	Pg	**Pn**	**07 15 08.2**	**+1.0**
	3μm,2.2s						
BSSO	**Busso**	**1.77**	**328**	Pg	**Pn**	**07 15 08.2**	**+1.0**
	3μm,2.2s						
CEL	**Celeste**	**1.78**	**178**	⇑iPg	**Pn**	**07 15 05.9**	**-1.5**
CEL				Sg	**S**	**07 15 37.1**	**-3.6**
	4μm,0.5s						
CEL	**Celeste**	**1.78**	**178**	ePn	**Pn**	**07 15 05.9**	**-1.6**
CEL				eSn	**S**	**07 15 33.1**	**-7.6**
CEL				Sg	**S**	**07 15 37.1**	**-3.6**
CEL	**Celeste**	**1.78**	**178**	⇑iPg	**Pn**	**07 15 05.9**	**-1.5**
CEL				Sg	**S**	**07 15 37.1**	**-3.6**
	4μm,0.5s						
SCLL	**Scilla**	**1.79**	**183**	Pg	**Pn**	**07 15 05.8**	**-1.7**
	178nm,0.2s						
SCLL	**Scilla**	**1.79**	**183**	Pg	**Pn**	**07 15 05.8**	**-1.7**
	178nm,0.2s						
VPL	**Vulcano Piano**	**1.79**	**202**	⇑iPg	**Pn**	**07 15 07.0**	**-0.5**
	1μm,0.6s						
VPL	**Vulcano Piano**	**1.79**	**202**	⇑iPg	**Pn**	**07 15 07.0**	**-0.5**
	1μm,0.6s						
MSRU	**Castanea**	**1.79**	**188**	⇑iPg	**Pn**	**07 15 05.9**	**-1.6**
MSRU				Sg	**S**	**07 15 37.4**	**-3.5**
	5μm,0.8s						
MSRU	**Castanea**	**1.79**	**188**	⇑iPg	**Pn**	**07 15 05.9**	**-1.6**
MSRU				Sg	**S**	**07 15 37.4**	**-3.5**
	5μm,0.8s						
VAGA	**Valle Agricola**	**1.83**	**319**	⇑iPg	**Pn**	**07 15 08.4**	**+0.7**
	724nm,1.2s						
VAGA	**Valle Agricola**	**1.83**	**319**	⇑iPg	**Pn**	**07 15 08.4**	**+0.7**
	724nm,1.2s						
FG2	**Serracapriola**	**1.83**	**344**	P	**Pn**	**07 15 04.4**	**-3.3**
MSI	**Messina ING**	**1.85**	**187**	Pg	**Pn**	**07 15 06.3**	**-1.7**
MODR	**Mondragone**	**1.85**	**307**	⇑iPg	**Pn**	**07 15 08.5**	**+0.6**
	274nm,1.3s						
MODR	**Mondragone**	**1.85**	**307**	⇑iPg	**Pn**	**07 15 08.5**	**+0.6**
	274nm,1.3s						
IACL	**Alicudi**	**1.89**	**218**	⇑iPg	**Pn**	**07 15 08.1**	**-0.2**
	520nm,0.7s						
ATN	**Antennamare**	**1.90**	**189**	P	**Pn**	**07 15 10.6**	**+2.2**
SOI	**Samo**	**1.97**	**175**	⇑ePg	**Pn**	**07 15 07.7**	**-1.3**
SOI				Sg	**S**	**07 15 39.8**	**-3.8**
	2μm,0.5s						
SOI	**Samo**	**1.97**	**175**	⇑ePg	**Pn**	**07 15 07.7**	**-1.3**
SOI				Sg	**S**	**07 15 39.8**	**-3.8**
	2μm,0.5s						
VENT	**Ventotene**	**1.99**	**293**	⇑iPg	**Pn**	**07 15 09.5**	**+0.5**
	768nm,1.3s						
VENT				S	**S**	**07 15 45.5**	**+1.8**
VENT	**Ventotene**	**1.99**	**293**	⇑iPg	**Pn**	**07 15 09.5**	**+0.5**
	768nm,1.3s						
MIDA	**Miranda**	**2.00**	**324**	⇑iPg	**Pn**	**07 15 09.8**	**+0.7**
	357nm,0.8s						
MIDA	**Miranda**	**2.00**	**324**	⇑iPg	**Pn**	**07 15 09.8**	**+0.7**
	357nm,0.8s						
SCTE	**Santa Cesarea**	**2.02**	**88**	⇓iPg	**Pn**	**07 15 09.4**	**0.0**
	5μm,0.9s						
SCTE	**Santa Cesarea**	**2.02**	**88**	⇓iPg	**Pn**	**07 15 09.4**	**0.0**
	5μm,0.9s						
MTTG	**Motta San Giov**	**2.04**	**183**	⇑iPg	**Pn**	**07 15 08.6**	**-1.0**
	2μm,0.6s						
MTTG	**Motta San Giov**	**2.04**	**183**	P	**Pn**	**07 15 08.5**	**-1.1**
MTTG	**Motta San Giov**	**2.04**	**183**	⇑iPg	**Pn**	**07 15 08.6**	**-1.0**
	2μm,0.6s						
CERA	**Filignano**	**2.08**	**319**	⇑iPg	**Pn**	**07 15 10.3**	**+0.5**
	593nm,1.1s						
CERA	**Filignano**	**2.08**	**319**	⇑iPg	**Pn**	**07 15 10.3**	**+0.5**
	593nm,1.1s						
MPAZ	**Palizzi**	**2.09**	**176**	⇑ePg	**Pn**	**07 15 08.8**	**-1.2**
	3μm,0.5s						
MPAZ	**Palizzi**	**2.09**	**176**	⇑ePg	**Pn**	**07 15 08.8**	**-1.2**
	3μm,0.5s						
RNI2	**Rionero Sannit**	**2.09**	**323**	⇑iPg	**Pn**	**07 15 11.2**	**+1.3**
	1μm,1.3s						
RNI2	**Rionero Sannit**	**2.09**	**323**	⇑iPg	**Pn**	**07 15 11.2**	**+1.3**
	1μm,1.3s						
FRES	**Fresagrandinar**	**2.12**	**336**	⇑iPg	**Pn**	**07 15 10.6**	**+0.4**
	4μm,1.3s						
FRES	**Fresagrandinar**	**2.12**	**336**	⇑iPg	**Pn**	**07 15 10.6**	**+0.4**
	4μm,1.3s						
MMME	**Mongiuffi-Meli**	**2.15**	**192**	⇑iPg	**Pn**	**07 15 09.9**	**-0.7**
	1μm,0.6s						
MMME	**Mongiuffi-Meli**	**2.15**	**192**	⇑iPg	**Pn**	**07 15 09.9**	**-0.7**
	1μm,0.6s						
SDI	**San Donato**	**2.26**	**318**	⇑iPg	**Pn**	**07 15 11.9**	**+0.4**
	103nm,0.6s						
SDI	**San Donato**	**2.26**	**318**	⇑iPg	**Pn**	**07 15 11.9**	**+0.4**
	103nm,0.6s						
INTR	**Introdacqua**	**2.45**	**324**	⇑iPg	**Pn**	**07 15 14.0**	**+0.8**
	1μm,0.9s						
INTR	**Introdacqua**	**2.45**	**324**	⇑iPg	**Pn**	**07 15 14.0**	**+0.8**
	1μm,0.9s						
USI	**Ustica**	**2.45**	**238**	Pg	**Pn**	**07 15 13.7**	**+0.4**
	658nm,1.3s						
USI	**Ustica**	**2.45**	**238**	Pg	**Pn**	**07 15 13.7**	**+0.4**
	658nm,1.3s						
VVLD	**Villa Vallelon**	**2.48**	**318**	⇑iPg	**Pn**	**07 15 14.2**	**+0.7**
	462nm,0.8s						
VVLD	**Villa Vallelon**	**2.48**	**318**	P	**Pn**	**07 15 14.1**	**+0.6**
VVLD	**Villa Vallelon**	**2.48**	**318**	⇑iPg	**Pn**	**07 15 14.2**	**+0.7**
	462nm,0.8s						
GIB	**Gibilmanna**	**2.49**	**215**	⇑iPg	**Pn**	**07 15 13.7**	**0.0**
	2μm,1.0s						
GIB	**Gibilmanna**	**2.49**	**215**	⇑iPg	**Pn**	**07 15 13.7**	**0.0**
	2μm,1.0s						
CSLB	**Castelbuono**	**2.52**	**214**	⇑iPg	**Pn**	**07 15 13.8**	**-0.2**
	273nm,0.6s						
CSLB	**Castelbuono**	**2.52**	**214**	⇑iPg	**Pn**	**07 15 13.8**	**-0.2**
	273nm,0.6s						
GALF	**Gagliano Caste**	**2.53**	**203**	Pg	**Pn**	**07 15 14.5**	**+0.4**
GALF	**Gagliano Caste**	**2.53**	**203**	Pg	**Pn**	**07 15 14.5**	**+0.4**
ECNV	**Catenanuova**	**2.59**	**200**	⇑ePg	**Pn**	**07 15 15.0**	**+0.2**
ECNV	**Catenanuova**	**2.59**	**200**	⇑ePg	**Pn**	**07 15 15.0**	**+0.2**
PTQR	**Pietraquaria**	**2.70**	**318**	P	**Pn**	**07 15 16.8**	**+1.1**
PTQR	**Pietraquaria**	**2.70**	**318**	⇑iPg	**Pn**	**07 15 16.9**	**+1.2**
VAE	**Valguarnera**	**2.79**	**204**	P	**Pn**	**07 15 18.2**	**+1.4**
	66nm,0.3s,baz=70,slow=0.2,SNR=75						
VCEL	**Villa Celiera**	**2.79**	**328**	⇑iPg	**Pn**	**07 15 17.0**	**+0.4**
	704nm,1.0s						
VCEL	**Villa Celiera**	**2.79**	**328**	⇑iPg	**Pn**	**07 15 17.0**	**+0.4**
	704nm,1.0s						
FAGN	**Fagnano**	**2.80**	**323**	⇑iPg	**Pn**	**07 15 17.5**	**+0.9**
	703nm,0.6s						
FAGN	**Fagnano**	**2.80**	**323**	⇑iPg	**Pn**	**07 15 17.5**	**+0.9**
	703nm,0.6s						
AGST	**Augusta-Monte**	**2.82**	**190**	⇑ePg	**Pn**	**07 15 14.7**	**-2.4**
	410nm,0.5s						
AGST	**Augusta-Monte**	**2.82**	**190**	⇑ePg	**Pn**	**07 15 14.7**	**-2.4**
	410nm,0.5s						
CERT	**Cerreto**	**2.88**	**312**	⇑iPg	**Pn**	**07 15 18.1**	**+0.6**
LAV9	**Lanuvio**	**2.88**	**306**	P	**Pn**	**07 15 18.7**	**+1.1**
CORL	**Corleone**	**2.91**	**223**	⇑iPg	**Pn**	**07 15 18.9**	**+0.9**
	1μm,1.1s						
CORL	**Corleone**	**2.91**	**223**	⇑iPg	**Pn**	**07 15 18.9**	**+0.9**
	1μm,1.1s						
SSY	**Sortino**	**2.94**	**192**	⇑ePg	**Pn**	**07 15 16.5**	**-1.8**
	527nm,0.7s						
SSY	**Sortino**	**2.94**	**192**	P	**Pn**	**07 15 16.6**	**-1.7**
SSY	**Sortino**	**2.94**	**192**	⇑ePg	**Pn**	**07 15 16.5**	**-1.8**
	527nm,0.7s						
AQU	**L'Aquila**	**2.95**	**322**	Pg	**Pn**	**07 15 19.3**	**+1.1**
	220nm,0.4s						
AQU	**L'Aquila**	**2.95**	**322**	ePn	**Pn**	**07 15 19.1**	**+0.8**
AQU	**L'Aquila**	**2.95**	**322**	Pg	**Pn**	**07 15 19.3**	**+1.1**
	220nm,0.4s						
HVZN	**Vizzini**	**2.99**	**197**	⇑ePg	**Pn**	**07 15 18.2**	**-0.6**
	2μm,0.5s						
HVZN	**Vizzini**	**2.99**	**197**	⇑ePg	**Pn**	**07 15 18.2**	**-0.6**
	2μm,0.5s						
FIAM	**Fiamignano**	**3.02**	**318**	⇑iPg	**Pn**	**07 15 20.3**	**+1.3**
RAFF	**Raffo Rosso**	**3.04**	**203**	⇑ePg	**Pn**	**07 15 19.3**	**0.0**
	733nm,0.8s						
RAFF	**Raffo Rosso**	**3.04**	**203**	⇑ePg	**Pn**	**07 15 19.3**	**0.0**
	733nm,0.8s						
MTCE	**Montecelio**	**3.06**	**311**	⇑iPg	**Pn**	**07 15 19.9**	**+0.5**
	300nm,0.8s						
MTCE	**Montecelio**	**3.06**	**311**	⇑iPg	**Pn**	**07 15 19.9**	**+0.5**
	300nm,0.8s						
KEK	**Kerkira**	**3.07**	**95**	eP	**Pn**	**07 15 19.7**	**+0.2**
KEK	**Kerkira**	**3.07**	**95**	⇓iPg	**Pn**	**07 15 19.8**	**+0.3**
KEK	**Kerkira**	**3.07**	**95**	P	**Pn**	**07 15 19.4**	**-0.1**
KEK	**Kerkira**	**3.07**	**95**	⇓iPg	**Pn**	**07 15 19.8**	**+0.3**
TERO	**Teramo**	**3.08**	**328**	⇑iPg	**Pn**	**07 15 19.8**	**+0.2**
	227nm,0.7s						
TERO	**Teramo**	**3.08**	**328**	⇑iPg	**Pn**	**07 15 19.8**	**+0.2**
	227nm,0.7s						
ROM9	**Roma**	**3.08**	**306**	Pg	**Pn**	**07 15 21.0**	**+1.4**
	643nm,0.0s						
ROM9	**Roma**	**3.08**	**306**	Pg	**Pn**	**07 15 21.0**	**+1.4**
	643nm,0.0s						
CAMP	**Campotosto**	**3.09**	**325**	⇑ePg	**Pn**	**07 15 20.5**	**+0.8**
	383nm,2.3s						
CAMP	**Campotosto**	**3.09**	**325**	⇑ePg	**Pn**	**07 15 20.5**	**+0.8**
	383nm,2.3s						
TRTR	**Tortoreto Alta**	**3.12**	**333**	Pg	**Pn**	**07 15 20.6**	**+0.6**
TRTR	**Tortoreto Alta**	**3.12**	**333**	Pg	**Pn**	**07 15 20.6**	**+0.6**
HCY	**Herceg Novi**	**3.13**	**39**	⇓iPn	**Pn**	**07 15 20.2**	**0.0**
HCY				eSn	**S**	**07 16 01.5**	**-2.3**
STON	**Ston**	**3.16**	**26**	ePn	**Pn**	**07 15 20.1**	**-0.3**
HMDC	**Modica**	**3.19**	**195**	⇑ePg	**Pn**	**07 15 19.9**	**-1.0**
	731nm,0.5s						
HMDC	**Modica**	**3.19**	**195**	⇑ePg	**Pn**	**07 15 19.9**	**-1.0**
	731nm,0.5s						
ULC	**Ulcinj**	**3.22**	**52**	⇓iPn	**Pn**	**07 15 21.3**	**+0.2**
ULC				eSn	**S**	**07 16 03.5**	**-2.0**
ERC	**Erice**	**3.22**	**233**	Pg	**Pn**	**07 15 22.2**	**+1.0**
	329nm,0.6s						
ERC	**Erice**	**3.22**	**233**	P	**Pn**	**07 15 22.3**	**+1.1**
ERC	**Erice**	**3.22**	**233**	Pg	**Pn**	**07 15 22.2**	**+1.0**
	329nm,0.6s						
BUM	**Brajici-Budva**	**3.23**	**45**	⇓iPn	**Pn**	**07 15 21.6**	**+0.4**

BUM eSn S 07 16 03.6 -2.1
FAVR Favara 3.25 212 P Pn 07 15 22.7 +1.2
OFFI Offida 3.31 332⇑*iPg* Pn 07 15 23.0 +1.0
2µm,0.7s
OFFI Offida 3.31 332⇑*iPg* Pn 07 15 23.0 +1.0
2µm,0.7s
LNSS Leonessa 3.31 321⇑*iPg* Pn 07 15 22.7 +0.6
511nm,0.6s
LNSS Leonessa 3.31 321⇑*iPg* Pn 07 15 22.7 +0.6
511nm,0.6s
TIR Tirane 3.33 66 P Pn 07 15 23.1 +0.8
TIR Tirane 3.33 66⇓*iPg* Pn 07 15 23.2 +0.9
MNS Montasola 3.34 316⇑*iPg* Pn 07 15 22.9 +0.6
306nm,0.8s
MNS Montasola 3.34 316⇑*iPg* Pn 07 15 22.9 +0.6
306nm,0.8s
NRCA Norcia 3.46 325⇑*iPg* Pn 07 15 24.4 +0.7
99nm,0.5s
NRCA Norcia 3.46 325⇑*iPg* Pn 07 15 24.4 +0.7
99nm,0.5s
IGT Igoumenitsa 3.50 97 P Pn 07 15 24.8 +0.5
BRY Bratogost 3.51 35⇓*iPn* Pn 07 15 24.5 +0.3
BRY eSn S 07 16 09.4 -1.7
PDG Podgorica 3.52 46 *e*Pn Pn 07 15 24.7 +0.4
PDG eSn S 07 16 09.4 -1.9
TTG Podgorica 3.52 46 *e*Pn Pn 07 15 24.7 +0.4
TTG eSn S 07 16 09.4 -1.9
TOLF Tolfa 3.53 306⇑*iPg* Pn 07 15 25.3 +0.8
NKY Niksic 3.65 40⇓*iPn* Pn 07 15 26.2 +0.4
NKY eSn S 07 16 12.0 -2.0
CESI CESI - Serrava 3.69 324⇑*iPg* Pn 07 15 26.9 +0.7
138nm,0.7s
ASS Assisi 3.85 323⇑*iPg* Pn 07 15 28.4 +0.4
172nm,0.4s
ASS Assisi 3.85 323 P Pn 07 15 28.3 +0.3
ASS Assisi 3.85 323⇑*iPg* Pn 07 15 28.4 +0.4
172nm,0.4s
CING Cingoli 3.87 330⇑*iPg* Pn 07 15 27.9 -0.4
164nm,0.8s
CING Cingoli 3.87 330⇑*iPg* Pn 07 15 27.9 -0.4
164nm,0.8s
SNTG Esanatoglia 3.87 327⇑*iPg* Pn 07 15 28.5 +0.2
134nm,0.4s
SNTG Esanatoglia 3.87 327⇑*iPg* Pn 07 15 28.5 +0.2
134nm,0.4s
AOI Ancona 3.88 335⇑*iPg* Pn 07 15 28.0 -0.4
376nm,0.5s
AOI Ancona 3.88 335⇑*iPg* Pn 07 15 28.0 -0.4
376nm,0.5s
JAN Janina 3.88 94 *e*P Pn 07 15 29.9 +1.4
UPM Unac-Piva 3.91 35⇓*iPn* Pn 07 15 29.7 +1.0
UPM eSn S 07 16 17.4 -1.9
LATE Laterza 3.98 312 P Pn 07 15 30.7 +1.2
LATE Laterza 3.98 312 Pg Pn 07 15 30.5 +1.0
PVY Plav 4.03 49⇓*iPn* Pn 07 15 31.3 +1.2
PVY eSn S 07 16 19.9 -1.9
MURB Monte Urbino 4.06 323⇑*iPg* Pn 07 15 31.1 +0.6
481nm,0.4s
MURB Monte Urbino 4.06 323 P Pn 07 15 31.0 +0.5
MURB Monte Urbino 4.06 323⇑*iPg* Pn 07 15 31.1 +0.6
481nm,0.4s
SACS San Casciano d 4.07 315⇑*iPg* Pn 07 15 31.4 +0.8
630nm,1.8s
ARVD Arcevia 4.08 329⇑*iPg* Pn 07 15 30.5 -0.1
354nm,0.7s
ARVD Arcevia 4.08 329⇑*iPg* Pn 07 15 30.5 -0.1
354nm,0.7s
VLS Valsamata 4.14 115 *e*P Pn 07 15 31.0 -0.5
VLS Valsamata 4.14 115 P Pn 07 15 31.2 -0.3
VLS S S 07 16 21.8 -2.5
SENI Senigallia 4.14 333⇑*iPg* Pn 07 15 31.4 0.0
1µm,1.0s
BEY Berane 4.16 46⇓*iPn* Pn 07 15 33.1 +1.5
BEY eSn S 07 16 22.1 -2.4
IVA Berane 4.16 46⇓*iPn* Pn 07 15 33.1 +1.5
IVA eSn S 07 16 22.1 -2.4
PLE Pljevlja 4.23 38⇓*iPn* Pn 07 15 33.7 +1.3
PLE eSn S 07 16 23.9 -2.1
MAON Monte Argentar 4.27 305⇑*iPg* Pn 07 15 33.8 +0.9
152nm,0.6s
MAON Monte Argentar 4.27 305⇑*iPg* Pn 07 15 33.8 +0.9
152nm,0.6s
PIEI Pieia 4.27 326⇑*iPg* Pn 07 15 33.3 +0.4
468nm,0.8s
PIEI Pieia 4.27 326⇑*iPg* Pn 07 15 33.3 +0.4
468nm,0.8s
WDD Wield Dalam 4.29 194⇑*iPn* Pn 07 15 32.6 -0.7
WDD Wield Dalam 4.29 194⇑*iPg* Pn 07 15 32.8 -0.5
546nm,1.4s
WDD Wield Dalam 4.29 194⇑*iPn* Pn 07 15 32.6 -0.7
WDD Wield Dalam 4.29 194⇑*iPg* Pn 07 15 32.8 -0.5
546nm,1.4s
FNA Florina 4.30 78 P Pn 07 15 33.9 +0.7
BIA Bitola 4.30 75 P Pn 07 15 33.5 +0.3
BIA Bitola 4.30 75 *i* Pn Pn 07 15 33.3 +0.1
FSSB Fossombrone 4.30 329⇑*iPg* Pn 07 15 33.2 0.0
345nm,0.5s
FSSB Fossombrone 4.30 329⇑*iPg* Pn 07 15 33.2 0.0
345nm,0.5s
KFL Anninata 4.31 115 P Pn 07 15 33.6 +0.1
ARCI Arcidosso 4.31 312 Pg Pn 07 15 34.9 +1.5
155nm,0.8s
ARCI Arcidosso 4.31 312 Pg Pn 07 15 34.9 +1.5
155nm,0.8s
KRUS Krusevo 4.33 70 *i* Pn Pn 07 15 34.6 +1.0
CDCA Citt' di Caste 4.35 323 Pg Pn 07 15 34.1 +0.3
700nm,0.9s
CDCA Citt' di Caste 4.35 323 P Pn 07 15 34.0 +0.2
CDCA Citt' di Caste 4.35 323 Pg Pn 07 15 34.1 +0.3
700nm,0.9s
CAFI Castiglion Fio 4.38 320⇑*iPg* Pn 07 15 34.7 +0.6
171nm,0.6s
CAFI Castiglion Fio 4.38 320⇑*iPg* Pn 07 15 34.7 +0.6
171nm,0.6s
BADI Badiali 4.38 323⇑*iPg* Pn 07 15 34.6 +0.4
241nm,0.6s
BADI Badiali 4.38 323⇑*iPg* Pn 07 15 34.6 +0.4
241nm,0.6s
PESA Pesaro 4.49 331 Pg Pn 07 15 35.1 -0.3
288nm,0.5s
PESA Pesaro 4.49 331 Pg Pn 07 15 35.1 -0.3
288nm,0.5s
KZN Kozani 4.56 85 *e*P Pn 07 15 27.0 -9.3
NVLJ Novalja 4.58 351 *e*Pn Pn 07 15 36.1 -0.3
NVLJ Sn S 07 16 32.3 -1.0
NVLJ Novalja 4.58 351 *e*Pn Pn 07 15 36.1 -0.3
NVLJ Sn S 07 16 32.2 -1.1
CRE Caprese Michel 4.60 322⇑*iPg* Pn 07 15 36.7 -0.1
78nm,0.6s
CRE Caprese Michel 4.60 322⇑*iPg* Pn 07 15 36.7 -0.1
78nm,0.6s
RSM Repubblica di 4.63 328⇑*iPg* Pn 07 15 37.6 +0.5
161nm,1.1s
RSM Repubblica di 4.63 328 P Pn 07 15 37.5 +0.4
RSM Repubblica di 4.63 328⇑*iPg* Pn 07 15 37.6 +0.5
161nm,1.1s
CASP Castiglione de 4.64 308⇑*iPg* Pn 07 15 37.9 +0.7
222nm,1.2s
CASP Castiglione de 4.64 308⇑*iPg* Pn 07 15 37.9 +0.7
222nm,1.2s
BBLS Lazići 4.66 34⇓*iPn* Pn 07 15 38.1 +0.7
BBLS Lazići 4.66 34 P Pn 07 15 37.8 +0.4
SKO Skopje 4.66 64 *i* Pn Pn 07 15 38.6 +1.1
SKO S S 07 16 34.8 -0.3
SKO Skopje 4.66 64 *i* Pn Pn 07 15 38.6 +1.1
EVR Evrytania 4.76 102 *e*P Pn 07 15 40.9 +2.2
THL Klokotos Trika 4.79 94 *e*P Pn 07 15 40.0 +1.0
THL Klokotos Trika 4.79 94 P Pn 07 15 39.9 +0.9
CSNT Castellina Chi 4.83 317⇑*iPg* Pn 07 15 40.3 +0.9
149nm,0.9s
CSNT Castellina Chi 4.83 317 P Pn 07 15 40.2 +0.8
CSNT Castellina Chi 4.83 317⇑*iPg* Pn 07 15 40.3 +0.9
149nm,0.9s
SFI Santa Sofia 4.87 324⇑*ePg* Pn 07 15 40.2 +0.2
271nm,0.9s
VSL Villasalto 5.00 266⇓*iPg* Pn 07 15 42.0 +0.4
337nm,2.3s
VSL Villasalto 5.00 266 *e*Pn Pn 07 15 42.0 +0.4
VSL Villasalto 5.00 266⇓*iPg* Pn 07 15 42.0 +0.4
337nm,2.3s
VMG Vicchio 5.05 322 Pg Pn 07 15 41.9 -0.3
22nm,0.5s
VMG Vicchio 5.05 322 P Pn 07 15 41.8 -0.4
VMG Vicchio 5.05 322 Pg Pn 07 15 41.9 -0.3
22nm,0.5s

BRSN Barisano 5.08 328 P Pn 07 15 43.3 +0.9
GRG Griva 5.09 78 P Pn 07 15 43.0 +0.3
GRG S S 07 16 43.6 -0.9
LIT Litokhoron 5.11 87 P Pn 07 15 43.1 +0.2
LIT S S 07 16 44.0 -0.9
AGG Agios Georgios 5.13 99 P Pn 07 15 44.4 +1.3
SEI Scarperia 5.21 322 Pg Pn 07 15 44.0 -0.1
95nm,0.6s
SEI Scarperia 5.21 322 P Pn 07 15 44.1 0.0
SEI Scarperia 5.21 322 Pg Pn 07 15 44.0 -0.1
95nm,0.6s
CRMI Carmignano 5.21 318⇑*iPg* Pn 07 15 44.6 +0.5
271nm,2.0s
CRMI Carmignano 5.21 318⇑*iPg* Pn 07 15 44.6 +0.5
271nm,2.0s
VAY Valandovo 5.28 74 P Pn 07 15 44.7 -0.2
VAY Valandovo 5.28 74 *i* Pn Pn 07 15 44.5 -0.4
VAY Valandovo 5.28 74 *i* Pn Pn 07 15 44.5 -0.4
BARS Barje 5.28 56 P Pn 07 15 44.4 -0.5
BARS Barje 5.28 56⇓*iPn* Pn 07 15 45.3 +0.4
OSPF L'Ospedale 5.29 290 *e*P Pn 07 15 44.7 -0.4
GRUS Gruza 5.29 42⇓*iPn* Pn 07 15 45.0 0.0
GRUS Gruza 5.29 42 P Pn 07 15 44.8 -0.2
PII Pisa 5.41 315⇑*iPg* Pn 07 15 47.3 +0.9
10.0nm,0.1s
PII Pisa 5.41 315 P Pn 07 15 47.2 +0.8
PII Pisa 5.41 315⇑*iPg* Pn 07 15 47.3 +0.9
10.0nm,0.1s
FNVD Fontana Vidola 5.41 321⇑*iPg* Pn 07 15 46.4 -0.1
222nm,0.5s
FNVD Fontana Vidola 5.41 321 P Pn 07 15 46.5 0.0
FNVD Fontana Vidola 5.41 321⇑*iPg* Pn 07 15 46.4 -0.1
222nm,0.5s
CMPO Campotto Po 5.43 328⇑*iPg* Pn 07 15 47.1 +0.4
761nm,0.8s
CMPO Campotto Po 5.43 328⇑*iPg* Pn 07 15 47.1 +0.4
761nm,0.8s
SISC Sisak 5.44 4 *e*Pn Pn 07 15 47.1 +0.3
SISC Sn S 07 16 51.0 -1.1
BOJS Bojanci 5.48 356 *i* Pn Pn 07 15 47.7 +0.4
BOJS *e*S S 07 16 47.7 -5.2
BOJS *e* 07 17 11.5
BOJS
comp=Z,524nm,1.7s
BOJS Bojanci 5.48 356 *i* Pn Pn 07 15 47.7 +0.4
BOJS *e*S S 07 16 47.7 -5.2
BOJS *e* 07 17 11.5
THE Thessaloniki 5.48 82 P Pn 07 15 47.1 -0.3
KNT Kendrikon 5.49 76 P Pn 07 15 47.9 +0.4
MAIM Mastiano 5.55 316⇑*iPg* Pn 07 15 48.4 +0.2
comp=Z,34nm,0.8s
MAIM Mastiano 5.55 316⇑*iPg* Pn 07 15 48.4 +0.2
comp=Z,34nm,0.8s
MAIM Mastiano 5.55 316⇑*iPg* Pn 07 15 48.4 +0.2
comp=Z,34nm,0.8s
ITM Ithomi 5.56 119 *e*P Pn 07 15 49.0 +0.6
ITM Ithomi 5.56 119 P Pn 07 15 48.3 -0.1
HORT Hortiatis 5.58 82 P Pn 07 15 48.6 0.0
GROG Isola di Gorgo 5.58 309⇑*iPg* Pn 07 15 49.5 +0.9
comp=Z,89nm,0.6s
GROG Isola di Gorgo 5.58 309⇑*iPg* Pn 07 15 49.5 +0.9
comp=Z,89nm,0.6s
BDI Bagni Di Lucca 5.60 318 Pg Pn 07 15 48.5 -0.2
comp=Z,160nm,0.5s
BDI Bagni Di Lucca 5.60 318 P Pn 07 15 48.6 -0.1
BDI Bagni Di Lucca 5.60 318 Pg Pn 07 15 48.5 -0.2
comp=Z,160nm,0.5s
PYL PYLOS 5.60 122 P Pn 07 15 48.6 -0.3
FIU Minerbio Fiu 5.61 326⇑*iPg* Pn 07 15 49.3 +0.4
SKDS Skadanscina 5.66 347 *i* Pn Pn 07 15 49.5 0.0
SKDS *e*S S 07 16 54.9 -2.1
XOR Xorichti 5.72 94 P Pn 07 15 51.0 +0.7
PGF Pioggiola 5.72 298⇑*iP* Pn 07 15 50.6 +0.3
comp=Z,150nm,0.8s
PGF Pioggiola 5.72 298⇑*iP* Pn 07 15 50.6 +0.3
comp=Z,75nm,0.8s
LKR Lokris 5.73 102 P Pn 07 15 50.9 +0.5
NEO Neokhori 5.75 95 *e*P Pn 07 15 51.4 +0.7
VLC Villacollemand 5.77 317 *e*Pn Pn 07 15 50.5 -0.4
comp=Z,98nm,0.5s
VLC Villacollemand 5.77 317⇑*iPg* Pn 07 15 50.6 -0.3
comp=Z,122nm,1.0s
KKB Krupnik 5.78 69 *i* P Pn 07 15 52.3 +1.2
CEY Cerknica 5.79 350⇑*iPn* Pn 07 15 51.3 +0.2
CEY *e*S S 07 16 57.8 -2.0
CEY
comp=Z,1µm,3.6s
CEY Cerknica 5.79 350⇑*iPn* Pn 07 15 51.3 +0.2
CEY *e*S S 07 16 57.8 -2.0
CRES Cresnjev 5.79 357 P Pn 07 15 51.0 0.0
SOH Sokhos 5.79 80 P Pn 07 15 51.5 +0.3
GSCL Gusciola 5.81 320⇑*iPg* Pn 07 15 51.5 +0.2
comp=Z,30nm,0.8s
GSCL Gusciola 5.81 320⇑*iPg* Pn 07 15 51.5 +0.2
comp=Z,30nm,0.8s
PLG Polygyros 5.84 84 *e*P Pn 07 15 51.8 +0.1
PLG Polygyros 5.84 84 P Pn 07 15 51.7 0.0
RAVA Ravarino 5.86 325⇑*iPg* Pn 07 15 52.3 +0.3
comp=Z,828nm,0.8s
RAVA Ravarino 5.86 325⇑*iPg* Pn 07 15 52.3 +0.3
comp=Z,828nm,0.8s
TRI Trieste 5.87 346⇑*iP* Pn 07 15 52.0 0.0
TRI pmax pmax
comp=Z,384nm,0.7s
TRI Trieste 5.87 346⇑*iPn* Pn 07 15 52.0 0.0
comp=Z,384nm,0.7s
TRI Trieste 5.87 346⇑*iPg* Pn 07 15 52.1 +0.1
comp=Z,550nm,2.2s
BEO Beograd 5.87 34 P Pn 07 15 52.8 +0.7
FRGS Fruska Gora 5.89 29⇓*iPn* Pn 07 15 51.3 -1.1
LTK Loutraki 5.91 108 P Pn 07 15 52.5 -0.2
ERBM Eremo 5.94 319 Pg Pn 07 15 53.7 +0.7
comp=Z,445nm,1.8s
ERBM Eremo 5.94 319 Pg Pn 07 15 53.7 +0.7
comp=Z,445nm,1.8s
ERBM Eremo 5.94 319 Pg Pn 07 15 53.7 +0.7
comp=Z,445nm,1.8s
PAIG Paliouri 6.03 89 P Pn 07 15 53.6 -0.5
LJU Ljubljana 6.08 351⇑*iP* Pn 07 15 55.1 +0.5
LJU *e*S S 07 17 05.2 -1.0
LJU Ljubljana 6.08 351⇑*iPn* Pn 07 15 55.1 +0.5
LJU *e*S S 07 17 05.2 -1.0
LJU *e* 07 17 26.1
LJU
comp=Z,1µm,1.8s
LJU Ljubljana 6.08 351⇑*iPn* Pn 07 15 55.1 +0.5
LJU *e*S S 07 17 05.2 -1.0
LJU *e* 07 17 26.1
RHK3 Tenkes 6.11 16⇑*iP* Pn 07 15 55.2 +0.2
VTS Vitosha 6.11 63⇑*iP* Pn 07 15 56.2 +1.2
VTS Vitosha 6.11 63 ⇑P Pn 07 15 56.2 +1.2
VOY Vojsko 6.15 347⇑*ePn* Pn 07 15 56.0 +0.5
VOY *e*S S 07 17 07.4 -0.6
MMB Musomiste 6.19 73 *i* P Pn 07 15 57.0 +1.0
OUR Ouranopolis 6.25 85 P Pn 07 15 56.8 0.0
AOS Alonnisos 6.28 95 P Pn 07 15 57.3 +0.2
DID Didima 6.31 111 P Pn 07 15 57.3 -0.4
SC2M Scurtabo 6.39 315⇑*iPg* Pn 07 15 58.1 -0.4
comp=Z,86nm,0.5s
SC2M Scurtabo 6.39 315⇑*iPg* Pn 07 15 58.1 -0.4
comp=Z,86nm,0.5s
KOGS Kog 6.41 3 P Pn 07 15 58.8 +0.1
ATH Athens Observa 6.48 106 *e*P Pn 07 16 00.0 +0.3
VLI Veliai 6.49 118 *e*P Pn 07 16 01.0 +1.1
PKSM Moragy 6.50 17 P Pn 07 16 00.0 +0.2
PKSM Moragy 6.50 17⇑*eP* Pn 07 16 00.4 +0.6
PKSM Moragy 6.50 17⇓*iP* Pn 07 15 58.8 -1.0
PKSM Moragy 6.50 17 ⇓P Pn 07 15 58.8 -1.0
GMNA Gemona 6.51 344⇑*iPg* Pn 07 16 00.1 +0.1
comp=Z,531nm,1.2s
GMNA Gemona 6.51 344 P Pn 07 16 00.0 0.0
GMNA Gemona 6.51 344⇑*iPg* Pn 07 16 00.1 +0.1
comp=Z,531nm,1.2s
OBKA Obir 6.53 352⇑*iPn* Pn 07 16 00.3 +0.1
comp=Z,128nm,0.9s,SNR=67
PTL Peneli 6.56 105 *e*P Pn 07 16 01.8 +1.1
PTCC Patocco-Chiusa 6.61 345⇑*iPg* Pn 07 16 01.1 -0.1
comp=Z,93nm,1.3s
PTCC Patocco-Chiusa 6.61 345 P Pn 07 16 01.0 -0.2
PTCC Patocco-Chiusa 6.61 345⇑*iPg* Pn 07 16 01.1 -0.1
comp=Z,93nm,1.3s
SOKA Soboth 6.66 355⇑*iPn* Pn 07 16 01.9 +0.2
comp=Z,44nm,0.5s
BOB Bobbio (Coli) 6.68 317⇑*iP* Pn 07 16 02.0 0.0

BOB pmax pmax
comp=Z,96nm,1.2s
BOB Bobbio (Coli) 6.68 317⇑*iPg* Pn 07 16 02.0 0.0
comp=Z,96nm,1.2s
BOB Bobbio (Coli) 6.68 317⇑*iPg* Pn 07 16 02.0 0.0
comp=Z,96nm,1.2s
KEST Kesra 6.69 232 P Pn 07 16 03.3 +0.9
comp=Z,2.0nm,0.3s,baz=328,slow=3.5,SNR=73
CTI Castel Tesino 6.74 334⇑*iPg* Pn 07 16 02.2 -0.6
PGB Panagyurishte 6.76 66 *i* P Pn 07 16 04.0 +0.9
DJES Djerdap 6.77 45 P Pn 07 16 06.7 +3.5
MYKA Terra Mystica 6.78 347⇑*iPn* Pn 07 16 03.8 +0.6
comp=Z,139nm,1.0s
SALO Salr 6.80 327⇑*iPg* Pn 07 16 02.3 -1.3
KYTH Kithira 6.80 121 *e*P Pn 07 16 05.0 +1.3
MAGA Magasa 6.89 328 P Pn 07 16 03.1 -1.5
MAGA Magasa 6.89 328⇑*iPg* Pn 07 16 03.1 -1.5
FVI Forni Avoltri 6.92 342⇑*iP* Pn 07 16 05.1 +0.1
FVI pmax pmax
comp=Z,103nm,0.7s
FVI Forni Avoltri 6.92 342⇑*iPg* Pn 07 16 05.1 +0.1
comp=Z,103nm,0.7s
FVI Forni Avoltri 6.92 342⇑*iPg* Pn 07 16 05.1 +0.1
comp=Z,103nm,0.7s
RZN Rozhen 6.93 73 *i* P Pn 07 16 06.2 +1.0
BZS Buzias 7.01 35⇓*iP* Pn 07 16 06.9 +0.8
BZS Buzias 7.01 35 ⇓P Pn 07 16 07.0 +0.8
PLD Plovdiv 7.01 70 P Pn 07 16 07.2 +1.0
QLNO Quiliano 7.01 310⇑*iPg* Pn 07 16 06.9 +0.7
comp=Z,37nm,1.4s
QLNO Quiliano 7.01 310⇑*iPg* Pn 07 16 06.9 +0.7
comp=Z,37nm,1.4s
QLNO Quiliano 7.01 310⇑*iPg* Pn 07 16 06.9 +0.7
comp=Z,37nm,1.4s
PCP Piancastagn 7.03 312⇑*iPg* Pn 07 16 05.7 -0.7
FIN Finale Ligure 7.03 309 Pg Pn 07 16 07.0 +0.6
IMI Imperia 7.07 306 Pg Pn 07 16 07.1 +0.2
IMI Imperia 7.07 306 Pg Pn 07 16 07.1 +0.2
ABTA Abfaltersbach 7.12 341⇑*iPn* Pn 07 16 08.3 +0.7
comp=Z,254nm,0.6s,SNR=153
MABI Malga Bissina 7.16 329⇑*iPg* Pn 07 16 07.2 -0.8
MABI Malga Bissina 7.16 329⇑*iPg* Pn 07 16 07.2 -0.8
SEST Monte Rota 7.20 340⇑*iPg* Pn 07 16 09.5 +1.0
comp=Z,467nm,0.9s
SEST Monte Rota 7.20 340⇑*iPg* Pn 07 16 09.5 +1.0
comp=Z,467nm,0.9s
ARSA Arzberg 7.21 358 *i* Pn Pn 07 16 08.8 +0.1
comp=Z,78nm,0.8s,SNR=46
APPI Appiano 7.26 334 P Pn 07 16 09.0 -0.2
APPI Appiano 7.26 334⇑*iPg* Pn 07 16 09.1 -0.1
KBA Koelnbreinsper 7.26 346⇑*iPn* Pn 07 16 10.1 +0.8
comp=Z,160nm,1.1s,SNR=46
KBA Koelnbreinsper 7.26 346 P Pn 07 16 09.6 +0.3
MDI Monti di Nese 7.28 324⇑*iPg* Pn 07 16 07.6 -1.9
SAOF Saorge 7.32 305 *e*P Pn 07 16 10.5 +0.5
REVF Revere 7.32 303 *e*P Pn 07 16 10.2 +0.2
SBF Sospel 7.33 304⇑*iP* Pn 07 16 10.4 +0.2
comp=Z,341nm,0.7s
SBF Sospel 7.33 304⇑*iP* Pn 07 16 10.4 +0.2
comp=Z,170nm,0.7s
GZR Gura Zlata 7.40 41⇑*iP* Pn 07 16 11.5 +0.5
AUTN L'Aution 7.40 305 *e*P Pn 07 16 11.8 +0.8
LUCF Luceram 7.40 304 *e*P Pn 07 16 11.5 +0.4
CMAH Djebel Manchou 7.44 245 P Pn 07 16 13.0 +1.4
KDZ Kurdzhali 7.44 74 *i* P Pn 07 16 11.2 -0.4
RDO Rodhopi 7.47 78 P Pn 07 16 11.9 0.0
TOUF Mont Tournerai 7.52 305 *e*P Pn 07 16 13.5 +0.9
MVIF Mont Vial 7.53 304 *e*P Pn 07 16 13.3 +0.7
BRMO Bormio 7.56 330⇑*iPg* Pn 07 16 13.3 +0.3
comp=Z,178nm,0.8s
BRMO Bormio 7.56 330⇑*iPg* Pn 07 16 13.3 +0.3
comp=Z,178nm,0.8s
ABSA Djebel Ababsia 7.58 243 P Pn 07 16 15.0 +1.6
STV Sant Anna di V 7.59 306⇑*iPg* Pn 07 16 15.1 +1.7
comp=Z,114nm,0.8s
STV Sant Anna di V 7.59 306⇑*iPg* Pn 07 16 15.1 +1.7
comp=Z,114nm,0.8s
CALN Calern 7.63 302 *e*P Pn 07 16 14.6 +0.7
BERNI Berninapass 7.65 328⇑*iPg* Pn 07 16 14.0 -0.1
SOP Sopron 7.66 4 P Pn 07 16 14.3 +0.1
SOP Sopron 7.66 4⇑*e* Pn 07 16 14.8 +0.6
MUGIO Muggio 7.70 322⇑*iPg* Pn 07 16 12.6 -2.1
FRF La Foret Royal 7.71 300⇑*iP* Pn 07 16 14.8 -0.1
comp=Z,162nm,1.1s
FRF La Foret Royal 7.71 300⇑*iP* Pn 07 16 14.8 -0.1
comp=Z,81nm,1.1s
LMR La Mourre 7.71 298⇑*iP* Pn 07 16 14.5 -0.5
comp=Z,81nm,0.8s
LMR La Mourre 7.71 298⇑*iP* Pn 07 16 14.5 -0.5
comp=Z,40nm,0.8s
FUORN Ofenpass-Fuorn 7.73 330⇑*iPg* Pn 07 16 15.6 +0.5
CAEH 'Ain El Ouahch 7.77 248 P Pn 07 16 23.0 +7.3
DOI San Damiano 7.77 308 P Pn 07 16 16.1 +0.4
BUD Budapest 7.79 16⇑*ePn* Pn 07 16 20.3 +4.5
VAI Varese 7.79 321 P Pn 07 16 13.9 -2.0
WTTA Wattenberg 7.83 339⇑*iPn* Pn 07 16 17.3 +0.9
comp=Z,95nm,0.5s,SNR=43
WTTA Wattenberg 7.83 339 P Pn 07 16 17.5 +1.1
CONA Conrad Observa 7.88 0⇑*iPn* Pn 07 16 17.6 +0.6
comp=Z,37nm,0.7s,SNR=31
CSNA Conrad Observa 7.88 0⇑*iPn* Pn 07 16 17.6 +0.6
comp=Z,34nm,0.7s
MOA Mollin 7.89 352 *i* Pn Pn 07 16 17.8 +0.8
comp=Z,142nm,0.8s,SNR=86
MOA Mollin 7.89 352 P Pn 07 16 17.2 +0.1
FETA Feichten 7.90 334 *i* Pn Pn 07 16 17.6 +0.3
comp=Z,368nm,0.8s,SNR=305
WATA Walderalm 7.92 338⇑*iPn* Pn 07 16 18.2 +0.8
comp=Z,89nm,0.5s,SNR=41
WATA Walderalm 7.92 338 P Pn 07 16 18.2 +0.8
comp=Z,89nm,0.5s,SNR=41
WATA Walderalm 7.92 338 P Pn 07 16 18.4 +1.0
TUE Stuetta 7.98 326⇑*iPg* Pn 07 16 17.7 -0.5
TUE Stuetta 7.98 326⇑*iPg* Pn 07 16 17.7 -0.5
RJOB Jochberg 8.00 345 *e*Pn Pn 07 16 18.5 0.0
DAVOX Davos/Dischmat 8.01 329 P Pn 07 16 19.2 +0.6
comp=Z,14nm,0.3s,baz=158,slow=12,SNR=132
SURF Saint Ours 8.03 306 *e*P Pn 07 16 21.0 +2.2
ORO Oropa 8.03 317 P Pn 07 16 17.2 -1.6
CKFL Kef-Lekhel 8.04 246 P Pn 07 16 21.0 +1.8
VAM Vamos 8.08 122 *e*P Pn 07 16 19.5 -0.2
DAVOS Davos 8.09 329 P Pn 07 16 19.2 -0.4
CHOS Chios island 8.11 98 P Pn 07 16 21.3 +1.3
OG22 Abries 8.12 309 *e*P Pn 07 16 19.9 -0.2
TAVF Tavernes 8.12 299 *e*P Pn 07 16 20.5 +0.4
PENC Penc 8.14 17⇑*iP* Pn 07 16 21.1 +0.9
APE Apeiranthos 8.16 108 P Pn 07 16 20.1 -0.5
APE Apeiranthos 8.16 108⇑*iP* Pn 07 16 19.0 -1.6
MBDF Montbardon 8.18 308⇑*iP* Pn 07 16 21.6 +0.9
comp=Z,750nm,0.8s
MBDF Montbardon 8.18 308⇑*iP* Pn 07 16 21.6 +0.9
comp=Z,375nm,0.8s
ZST Bratislava 8.20 6 *e*PN Pn 07 16 21.6 +0.6
BERF Bertagne 8.26 297 *e*P Pn 07 16 23.1 +1.3
CASM Ain Smara 8.27 246 P Pn 07 16 23.0 +1.0
RETA Reutte 8.30 335⇑*iPn* Pn 07 16 23.0 +0.8
comp=Z,169nm,0.6s,SNR=87
THR3 Thira Island, 8.36 113 P Pn 07 16 23.4 +0.3
GVD Gavdhos 8.37 126 *e*P Pn 07 16 23.0 -0.3
STOF St-Etienne Org 8.38 301 *e*P Pn 07 16 25.5 +2.2
THR6 Thira Island, 8.38 113 P Pn 07 16 23.3 -0.1
MODS Modra-Piesok 8.39 7 *e*PN Pn 07 16 23.7 +0.3
DRGR 8.40 34 P Pn 07 16 24.9 +1.4
DRGR 8.40 34⇓*iP* Pn 07 16 24.6 +1.1
DRGR 8.40 34 ⇓P Pn 07 16 24.6 +1.2
PSZ Piszkesteto 8.40 19 P Pn 07 16 24.5 +1.0
PSZ Piszkesteto 8.40 19⇑*eP* Pn 07 16 23.9 +0.4
PSZ Piszkesteto 8.40 19⇑*e* Pn 07 16 23.9 +0.4
PSZ Piszkesteto 8.40 19⇑*iP* Pn 07 16 23.7 +0.2
PSZ Piszkesteto 8.40 19 ⇑P Pn 07 16 23.7 +0.2
BNI Bardonecchia 8.41 310 P Pn 07 16 24.4 +0.8
DAVA Damuels 8.43 331 *i* Pn Pn 07 16 24.3 +0.5
comp=Z,155nm,0.5s,SNR=163
CTEI Djebel Teioual 8.43 245 P Pn 07 16 27.0 +3.0
OG25 Le Caire 8.44 304 *e*P Pn 07 16 25.0 +1.0
VILF Villemus 8.45 300 *e*P Pn 07 16 24.4 +0.3
SMOL Smolenice 8.55 7 *e*PN Pn 07 16 25.8 +0.5
DFRA Djebel Bou Aff 8.57 249 P Pn 07 16 29.0 +3.2
SMRF Simiane la Rot 8.59 301⇑*iP* Pn 07 16 26.7 +0.8
comp=Z,74nm,1.1s
SMRF Simiane la Rot 8.59 301⇑*iP* Pn 07 16 26.7 +0.8
comp=Z,37nm,1.1s
IDI Anoyia 8.61 121 P Pn 07 16 24.7 -1.5
comp=Z,6.4nm,0.3s,baz=322,slow=15,SNR=55

LPG La Plagne 8.62 312⇑ *i*P Pn 07 16 27.0 +0.7
comp=Z,224nm,0.6s
LPG La Plagne 8.62 312⇑ *i*P Pn 07 16 27.0 +0.7
comp=Z,112nm,0.6s
LPL La Plagne 8.64 312⇑ *i*P Pn 07 16 26.9 +0.4
comp=Z,178nm,0.6s
LPL La Plagne 8.64 312⇑ *i*P Pn 07 16 26.9 +0.4
comp=Z,89nm,0.6s
UBR Ueberruh 8.68 333 P Pn 07 16 27.2 +0.2
VYHS Vyhne 8.72 13 *i* PN Pn 07 16 27.7 +0.2
KOLL Kolacno 8.73 11 *i* PN Pn 07 16 28.0 +0.4
FUR Furstenfeldbru 8.76 340 *e*Pn Pn 07 16 28.5 +0.6
RSL Roselend 8.80 313 *e*P Pn 07 16 29.7 +1.1
ORIF Oris-en-Rattie 8.82 307⇑ *i*P Pn 07 16 29.2 +0.4
comp=Z,226nm,0.7s
ORIF Oris-en-Rattie 8.82 307⇑ *i*P Pn 07 16 29.2 +0.4
comp=Z,113nm,0.7s
GDM Grand'Maison 8.82 309 *e*P Pn 07 16 30.0 +1.2
JAVC Velka Javorina 8.91 8 P Pn 07 16 31.1 +1.2
GEC2 GERESS Array S 8.93 351 *e*Pn Pn 07 16 30.2 +0.1
GERES GERESS Array B 8.93 351 P Pn 07 16 30.3 +0.2
comp=Z,6.1nm,0.3s,baz=167,slow=13,SNR=358
GERES GERESS Array B 8.93 351 P Pn 07 16 30.3 +0.2
GERES pmax pmax
comp=Z,6.0nm,0.3s
KRUC Moravsky 9.03 2 P Pn 07 16 31.7 +0.4
GRN Grenoble 9.07 308 *e*P Pn 07 16 32.2 +0.3
SET Setif 9.07 248 P Pn 07 16 34.0 +1.9
NPS Neapolis 9.10 119 *e*P Pn 07 16 31.5 -1.0
OG01 Vacheresse 9.17 316⇓ *e*P Pn 07 16 32.9 -0.2
MLR Muntele Rosu 9.21 50 P Pn 07 16 36.3 +2.6
comp=Z,7.3nm,0.3s,baz=198,slow=6.2,SNR=38
MLR Muntele Rosu 9.21 50⇑ P Pn 07 16 36.4 +2.7
MLR Muntele Rosu 9.21 50⇑ P Pn 07 16 36.4 +2.7
KHC Kasperske Hory 9.23 351⇑ *i*P Pn 07 16 33.8 0.0
KHC *ex* x 07 16 40.4
KHC *ex* x 07 16 47.5
TREC Trest 9.26 359⇑ *e*P Pn 07 16 34.9 +0.7
TREC *ex* x 07 16 42.4
VRAC Vranov 9.28 3 P Pn 07 16 34.9 +0.4
comp=Z,1.6nm,0.3s,baz=188,slow=12,SNR=34
VRAC Vranov 9.28 3 *e*Pn Pn 07 16 34.8 +0.3
VRAC Vranov 9.28 3⇓ *i*P Pn 07 16 34.9 +0.4
VRAC Vranov 9.28 3⇓ P Pn 07 16 34.9 +0.4
WET Wettzell 9.34 348 *e*Pn Pn 07 16 35.0 -0.2
GUT Gutenstein 9.37 331 P Pn 07 16 35.1 -0.5
TRPA Tarpa 9.41 29⇑ *i*P Pn 07 16 37.7 +1.5
HDH Heidenheim-Cha 9.44 337 P Pn 07 16 36.3 -0.2
SPAK Spaichingen-Ko 9.52 330 *e*P Pn 07 16 37.1 -0.4
VIVF Saint-Julien-I 9.55 304⇑ *i*P Pn 07 16 37.5 -0.4
comp=Z,84nm,0.8s
VIVF Saint-Julien-I 9.55 304⇑ *i*P Pn 07 16 37.5 -0.4
comp=Z,42nm,0.8s
BBS Basel-Blauen 9.55 324 *e*P Pn 07 16 36.7 -1.2
BUCH Bad Urach 9.60 333 P Pn 07 16 38.3 -0.2
FELD Feldberg im Sc 9.65 327 *e*P Pn 07 16 38.2 -0.9
CABF La Chapelle 9.67 316⇑ *i*P Pn 07 16 37.9 -1.5
comp=Z,298nm,0.7s
OG05 Jujurieux 9.67 312⇓ *e*P Pn 07 16 38.9 -0.5
CRVS Cervenica-Dubn 9.73 23 *e*PN Pn 07 16 43.2 +3.1
KIZ Kirchzarten 9.75 327 P Pn 07 16 39.7 -0.6
LASF Ste Croix 9.78 298⇑ *i*P Pn 07 16 40.2 -0.5
comp=Z,55nm,1.0s
LOMF Lomont 9.79 321 *e*P Pn 07 16 39.3 -1.6
SSB Saint Sauveur 9.82 306 *e*P Pn 07 16 41.0 -0.3
SSB Saint Sauveur 9.82 306 *e*P Pn 07 16 40.7 -0.6
SSB pmax pmax
comp=Z,71nm,0.8s
SSB Saint Sauveur 9.82 306 *e*Pn Pn 07 16 40.7 -0.6
comp=Z,71nm,0.8s
PLOR Plostina 9.82 50 P Pn 07 16 43.4 +2.1
BFO Black Forest 9.88 329 *e*Pn Pn 07 16 41.7 -0.3
VRI Vrincioaia 9.88 50 P Pn 07 16 44.4 +2.4
VRI Vrincioaia 9.88 50⇑ *i*P Pn 07 16 42.3 +0.3
VRI Vrincioaia 9.88 50⇑ P Pn 07 16 42.3 +0.3
NIE Niedzica 9.90 17 *e*P Pn 07 16 44.2 +2.0
NIE *e*PP 07 16 49.6
OKC Ostrava-Krasne 9.93 9⇑ *e*P Pn 07 16 42.7 +0.1
OKC *ex* x 07 16 48.9
STU Stuttgart 9.93 334 *e*Pn Pn 07 16 42.3 -0.3
LBG Lerchenberg 9.98 332 P Pn 07 16 43.5 +0.3
PRU Pruhonice 9.99 355⇑ *e*P Pn 07 16 43.8 +0.5
PRU *ex* x 07 16 49.4
KOLS Kolonicke sedl 10.01 25 *e*PN Pn 07 16 46.2 +2.6
ETOS Mallorca 10.01 273 P Pn 07 16 43.7 0.0
comp=Z,9.5nm,0.7s
MOF Molkenrain 10.01 324 *e*P Pn 07 16 42.3 -1.3
CVD Cernavoda 10.01 61 P Pn 07 16 45.3 +1.6
KARP Karpathos 10.02 117 *e*P Pn 07 16 42.0 -2.0
LIBD Limburg 10.03 327 *e*P Pn 07 16 43.4 -0.5
ROTZ Rotzenmuhle 10.06 346 *e*Pn Pn 07 16 43.6 -0.6
HARR Harsova 10.08 59 P Pn 07 16 45.5 +0.9
HARR Harsova 10.08 59⇑ *i*P Pn 07 16 44.9 +0.3
HARR Harsova 10.08 59⇑ P Pn 07 16 44.9 +0.3
HINF Hinteralfeld 10.11 323⇑ *i*P Pn 07 16 43.6 -1.3
comp=Z,323nm,0.9s
HINF Hinteralfeld 10.11 323⇑ *i*P Pn 07 16 43.6 -1.3
HINF pmax pmax
comp=Z,162nm,0.9s
HINF Hinteralfeld 10.11 323⇑ *i*P Pn 07 16 43.6 -1.3
comp=Z,162nm,0.9s
STHS Stebnicka Huta 10.13 20 *e*PN Pn 07 16 47.7 +2.6
BURAR Bucovina Array 10.16 39⇑ *i*P Pn 07 16 47.2 +1.8
BURAR Bucovina Array 10.16 39⇑ P Pn 07 16 47.1 +1.7
BUR08 Bucovina Ar. S 10.17 39 *e*Pn Pn 07 16 47.3 +1.7
GRFO Grafenberg 10.19 343 P Pn 07 16 45.5 -0.3
GRA1 Grafenberg Arr 10.19 343 *e*Pn Pn 07 16 45.2 -0.6
GRF Grafenberg Arr 10.19 343 *e*Pn Pn 07 16 45.2 -0.6
AKET Djebel Ketaf 10.23 251 P Pn 07 16 48.0 +1.4
ECH Echery 10.27 326 *e*P Pn 07 16 46.0 -0.9
MANZ Manzenberg 10.29 346 *e*Pn Pn 07 16 46.6 -0.4
SIND Sindeldorf 10.30 337 P Pn 07 16 46.7 -0.6
DPC Dobruska-Polom 10.31 2⇑ *i*P Pn 07 16 48.0 +0.6
DPC *ex* x 07 16 52.8
DPC Dobruska-Polom 10.31 2⇑ *i*P Pn 07 16 48.0 +0.6
CDF Champ du Feu 10.37 327⇑ *i*P Pn 07 16 47.7 -0.4
comp=Z,270nm,0.6s
CDF Champ du Feu 10.37 327⇑ *i*P Pn 07 16 47.7 -0.4
CDF pmax pmax
comp=Z,135nm,0.6s
CDF Champ du Feu 10.37 327⇑ *i*P Pn 07 16 47.7 -0.4
comp=Z,135nm,0.6s
CFR Carcaliu 10.42 56⇑ *i*P Pn 07 16 45.4 -3.3
NKC Novy Kostel 10.47 348⇑ *e*P Pn 07 16 49.1 -0.2
NKC *ex* x 07 16 55.6
NKC Novy Kostel 10.47 348 *e*P Pn 07 16 49.1 -0.2
UPC Upice 10.47 1⇑ *i*P Pn 07 16 50.1 +0.8
HAU Haudompre 10.48 323⇑ *i*P Pn 07 16 48.3 -1.2
comp=Z,144nm,0.7s
HAU Haudompre 10.48 323⇑ *i*P Pn 07 16 48.3 -1.2
HAU pmax pmax
comp=Z,72nm,0.7s
HAU Haudompre 10.48 323⇑ *i*P Pn 07 16 48.3 -1.2
comp=Z,72nm,0.7s
ADJB Djebel Djouab 10.51 252 P Pn 07 16 50.6 +0.6
PVCC Panska Ves 10.53 356⇑ *e*P Pn 07 16 50.9 +0.9
PVCC *ex* x 07 16 56.0
WERN Wernitzgruen 10.53 348 *e*Pn Pn 07 16 50.0 -0.1
WERN Wernitzgruen 10.53 348 P Pn 07 16 49.9 -0.2
ABA Alger-Bouzarea 10.55 256 P Pn 07 16 51.1 +0.6
OJC Ojcow 10.55 14 *e*P Pn 07 16 51.4 +1.0
OJC *e*PP 07 16 56.7
LANF Langenberg 10.61 330 *e*P Pn 07 16 51.6 +0.5
GUNZ Gunzen 10.61 348 *e*Pn Pn 07 16 51.0 -0.1
LBL Lubilhac 10.62 303 *e*P Pn 07 16 53.2 +1.9
TANN Tannenbergstha 10.64 348 *e*Pn Pn 07 16 52.6 +1.2
WERD Werda 10.70 348 *e*Pn Pn 07 16 52.1 0.0
MTLF Montolieu 10.70 292⇑ *i*P Pn 07 16 52.8 +0.5
comp=Z,22nm,0.8s
MTLF Montolieu 10.70 292⇑ *i*P Pn 07 16 52.8 +0.5
MTLF pmax pmax
comp=Z,11nm,0.8s
MTLF Montolieu 10.70 292⇑ *i*P Pn 07 16 52.8 +0.5
comp=Z,11nm,0.8s
SWS Schriesheim-Wi 10.71 334 P Pn 07 16 53.3 +1.0
PLDF La Plantade 10.72 308 *e*P Pn 07 16 52.2 -0.3
KWP Kalwaria 10.75 25 *e*P Pn 07 16 56.1 +3.3
KWP Kalwaria 10.75 25⇓ *i*P Pn 07 16 54.8 +1.9
KWP Kalwaria 10.75 25 *e*P Pn 07 16 56.1 +3.2
TOD Tromm 10.78 335 *e*P Pn 07 16 53.8 +0.6
KSP Ksiaz 10.81 2 *e*P Pn 07 16 54.6 +1.1
KSP Ksiaz 10.81 2⇑ *e*P Pn 07 16 54.5 +1.0
KSP *e* 07 16 59.1
THEF They Montfort 10.81 322 *e*P Pn 07 16 52.3 -1.3
EMHD Djebel Mahouad 10.85 253 P Pn 07 16 54.0 -0.2
TLCR 10.86 58⇑ *i*P Pn 07 16 54.6 +0.4
TLCR 10.86 58⇑ P Pn 07 16 54.6 +0.4
BRG Berggiesshubel 10.91 354⇑ *i*P Pn 07 16 55.7 +0.9
BRG pmax pmax
comp=Z,54nm,0.8s
BRG Berggiesshubel 10.91 354 *e*Pn Pn 07 16 55.7 +0.9
BRG Berggiesshubel 10.91 354⇑ *i*P Pn 07 16 55.7 +0.9
comp=Z,90nm,0.8s
BRG *i* 07 17 01.0
comp=Z,80nm,0.6s
BRG S S 07 19 07.4 +11
SMF Signal de Mont 10.94 311⇑ *i*P Pn 07 16 52.9 -2.3
comp=Z,59nm,0.5s
SMF Signal de Mont 10.94 311⇑ *i*P Pn 07 16 52.9 -2.3
SMF pmax pmax
comp=Z,30nm,0.5s
SMF Signal de Mont 10.94 311⇑ *i*P Pn 07 16 52.9 -2.3
comp=Z,30nm,0.5s
PYM Petit Puy Mans 11.00 305 *e*P Pn 07 16 56.6 +0.7
MOX Moxa 11.01 346 *e*P Pn 07 16 55.7 -0.3
comp=Z,272nm,0.9s
MOX Moxa 11.01 346 *e*P Pn 07 16 55.7 -0.3
MOX pmax pmax
comp=Z,272nm,0.9s
MOX Moxa 11.01 346 *e*Pn Pn 07 16 56.0 0.0
FBE Freiberg 11.02 352 *e*Pn Pn 07 16 57.3 +1.2
AGO Saint Agoulin 11.06 307 *e*P Pn 07 16 56.7 0.0
FRNF Fournois 11.12 303 *e*P Pn 07 16 57.8 +0.3
EIBI Ibiza 11.24 269 P Pn 07 16 58.5 -0.5
comp=Z,50nm,0.7s
CAF Calviac 11.28 300⇑ *i*P Pn 07 16 59.4 0.0
comp=Z,27nm,0.7s
CAF Calviac 11.28 300⇑ *i*P Pn 07 16 59.4 0.0
CAF pmax pmax
comp=Z,14nm,0.6s
CAF Calviac 11.28 300⇑ *i*P Pn 07 16 59.4 0.0
comp=Z,14nm,0.6s
LOR Lormes 11.28 314⇑ *i*P Pn 07 16 57.1 -2.3
comp=Z,74nm,0.7s
LOR Lormes 11.28 314⇑ *i*P Pn 07 16 57.1 -2.3
LOR pmax pmax
comp=Z,37nm,0.7s
LOR Lormes 11.28 314⇑ *i*P Pn 07 16 57.1 -2.3
comp=Z,37nm,0.7s
EPOB Poblet 11.28 281 P Pn 07 17 00.1 +0.6
comp=Z,13nm,0.5s
AVF Avril sur Loir 11.30 311⇑ *i*P Pn 07 16 57.4 -2.3
comp=Z,55nm,0.8s
AVF Avril sur Loir 11.30 311⇑ *i*P Pn 07 16 57.4 -2.3
AVF pmax pmax
comp=Z,28nm,0.8s
AVF Avril sur Loir 11.30 311⇑ *i*P Pn 07 16 57.4 -2.3
comp=Z,28nm,0.8s
VERF Verneugheol 11.33 305 *e*P Pn 07 17 00.0 0.0
SSF Saint Saulge 11.36 312⇑ *i*P Pn 07 16 58.1 -2.3
comp=Z,51nm,0.8s
SSF Saint Saulge 11.36 312⇑ *i*P Pn 07 16 58.1 -2.3
SSF pmax pmax
comp=Z,26nm,0.8s
SSF Saint Saulge 11.36 312⇑ *i*P Pn 07 16 58.1 -2.3
comp=Z,26nm,0.8s
CLL Collm 11.44 351⇓ *i*P Pn 07 17 03.1 +1.8
CLL pmax pmax
comp=Z,83nm,0.9s
CLL Collm 11.44 351 *e*Pn Pn 07 17 02.5 +1.2
CLL Collm 11.44 351⇓ *i*P Pn 07 17 03.1 +1.8
CLL comp=Z,83nm,0.9s *i* x x 07 17 05.9
CLL comp=Z,152nm,0.9s *ex* x x 07 19 58.0
CLL Collm 11.44 351⇓ *i*P Pn 07 17 03.1 +1.8
comp=Z,83nm,0.9s
CLL *i* 07 17 05.9
CLL S S 07 19 33.0 +24
MEZF Maizieres J'vi 11.45 321⇑ *i*P Pn 07 17 00.5 -1.0
comp=Z,61nm,0.6s
MEZF Maizieres J'vi 11.45 321⇑ *i*P Pn 07 17 00.5 -1.0
comp=Z,61nm,0.6s
ABH Alteburg 11.45 332 P Pn 07 17 02.8 +1.3
BGF Bois d'Agland 11.48 309⇑ *i*P Pn 07 17 00.2 -1.7
comp=Z,74nm,0.8s
BGF Bois d'Agland 11.48 309⇑ *i*P Pn 07 17 00.2 -1.7
BGF pmax pmax
comp=Z,37nm,0.8s
BGF Bois d'Agland 11.48 309⇑ *i*P Pn 07 17 00.2 -1.7
comp=Z,37nm,0.8s
UBBA Unterbreizbach 11.53 341 *e*Pn Pn 07 17 02.3 -0.1
ISP Isparta 11.64 96⇑ *i*P Pn 07 17 05.0 +1.0
KIS Kishinev 11.71 49⇓ *i*P Pn 07 17 04.0 -0.7
KIS *i* S S 07 19 19.0 +3.9
KIS pmax pmax
comp=Z,200nm,0.7s
KIS smax
comp=N,850nm,0.8s
KIS smax
comp=E,720nm,1.2s
KIS Kishinev 11.71 49⇓ *i*P Pn 07 17 04.0 -0.7
KIS comp=E,200nm,0.7s *i* S S 07 19 19.0 +3.9
comp=E,900nm,0.8s
TCF Toulx Ste Croi 11.74 307⇑ *i*P Pn 07 17 04.5 -0.6
comp=E,108nm,1.0s
TCF Toulx Ste Croi 11.74 307⇑ *i*P Pn 07 17 04.5 -0.6
TCF pmax pmax
comp=Z,54nm,1.0s
TCF Toulx Ste Croi 11.74 307⇑ *i*P Pn 07 17 04.5 -0.6
comp=Z,54nm,1.0s
RJF Les Rejaudoux 11.77 301⇑ *i*P Pn 07 17 05.7 +0.2
comp=Z,46nm,0.9s
RJF Les Rejaudoux 11.77 301⇑ *i*P Pn 07 17 05.7 +0.2
RJF pmax pmax
comp=Z,23nm,0.9s
RJF Les Rejaudoux 11.77 301⇑ *i*P Pn 07 17 05.7 +0.2
comp=Z,23nm,0.9s
WLF Walferdange 11.81 328 P Pn 07 17 07.7 +1.7
comp=Z,39nm,1.2s
ERTA Horta de San J 11.84 279 P Pn 07 17 05.6 -0.8
comp=Z,33nm,1.0s
EBNR Beni Rached 11.86 256 P Pn 07 17 07.4 +0.6
RESF Ens 11.96 288 *e*P Pn 07 17 08.0 +0.2
EPF Esparros 11.99 289⇑ *i*P Pn 07 17 05.7 -2.5
comp=Z,23nm,0.8s
EPF Esparros 11.99 289⇑ *i*P Pn 07 17 05.7 -2.5
EPF pmax pmax
comp=Z,11nm,0.8s
EPF Esparros 11.99 289⇑ *i*P Pn 07 17 05.7 -2.5
comp=Z,11nm,0.8s
ECHA Ech Chlef 12.04 256 P Pn 07 17 10.0 +1.0
EBIE Bielsa 12.08 288 P Pn 07 17 09.2 -0.2
comp=Z,13nm,0.6s
LFF La Frestale 12.16 299⇑ *i*P Pn 07 17 10.3 -0.1
comp=Z,30nm,0.8s
LFF La Frestale 12.16 299⇑ *i*P Pn 07 17 10.3 -0.1
LFF pmax pmax
comp=Z,15nm,0.8s
LFF La Frestale 12.16 299⇑ *i*P Pn 07 17 10.3 -0.1
comp=Z,15nm,0.8s
LABF Labassere 12.19 289 *e*P Pn 07 17 11.2 +0.6
VIEF Viey 12.20 289 *e*P Pn 07 17 10.4 -0.4
EANR 'Ain N'Sour 12.32 255 P Pn 07 17 13.7 +1.3
CLZ Clausthal 12.39 344 *e*Pn Pn 07 17 14.3 +1.2
ETRT Tiaret 12.41 253 P Pn 07 17 13.0 -0.5
ESAC San Caprasio 12.46 283 P Pn 07 17 14.5 +0.5
comp=Z,74nm,0.5s
EMOS Mosqueruela 12.47 277 P Pn 07 17 14.6 +0.3
comp=Z,46nm,0.9s
EBEN Beniarda 12.50 269 P Pn 07 17 17.1 +2.6
comp=Z,49nm,0.8s
RUE Ruedersdorf 12.52 354 *e*Pn Pn 07 17 16.9 +2.3
REYF Montagne du Re 12.53 289 *e*P Pn 07 17 14.5 -0.3
MEM Membach 12.62 330 P Pn 07 17 19.2 +3.4
comp=Z,54nm,1.0s
ETSF Etsaut 12.62 288⇑ *i*P Pn 07 17 15.1 -0.9
comp=Z,27nm,0.6s
ETSF Etsaut 12.62 288⇑ *i*P Pn 07 17 15.1 -0.9
ETSF pmax pmax
comp=Z,13nm,0.6s
ETSF Etsaut 12.62 288⇑ *i*P Pn 07 17 15.1 -0.9
comp=Z,13nm,0.6s
GIVF Givet 12.70 326⇑ *i*P Pn 07 17 18.7 +1.8
comp=Z,181nm,0.6s
GIVF Givet 12.70 326⇑ *i*P Pn 07 17 18.7 +1.8
GIVF pmax pmax
comp=Z,90nm,0.6s
GIVF Givet 12.70 326⇑ *i*P Pn 07 17 18.7 +1.8
comp=Z,90nm,0.6s
BCLA Clavier 12.74 328 P Pn 07 17 17.5 +0.1
comp=Z,21nm,1.2s
ATE Arette 12.75 289 *e*P Pn 07 17 16.7 -0.9
HGN Heimansgroeve 12.77 330 *e*P Pn 07 17 20.7 +3.0
comp=Z,91nm,0.7s
DOU Dourbes 12.80 325 P Pn 07 17 19.9 +1.8
comp=Z,23nm,0.9s
BEBN Eben Emael 12.89 330 P Pn 07 17 22.4 +3.2
comp=Z,31nm,1.0s
ECHE Chera 12.93 273 P Pn 07 17 20.0 +0.2
ECHE pmax pmax
comp=Z,43nm,0.9s
ECHE Chera 12.93 273 P Pn 07 17 20.0 +0.2
comp=Z,43nm,0.9s
BAIF Baives 12.94 325⇑ *i*P Pn 07 17 20.7 +0.9
comp=Z,40nm,0.8s
BAIF Baives 12.94 325⇑ *i*P Pn 07 17 20.7 +0.9
BAIF pmax pmax
comp=Z,20nm,0.8s
BAIF Baives 12.94 325⇑ *i*P Pn 07 17 20.7 +0.9
comp=Z,20nm,0.8s
SJPF Ste Jean 13.14 289⇑ *i*P Pn 07 17 21.1 -1.2
comp=Z,44nm,0.7s
SJPF Ste Jean 13.14 289⇑ *i*P Pn 07 17 21.1 -1.2
SJPF pmax pmax
comp=Z,22nm,0.7s
SJPF Ste Jean 13.14 289⇑ *i*P Pn 07 17 21.1 -1.2
comp=Z,22nm,0.7s
SNF Seneffe 13.24 326 P Pn 07 17 24.9 +1.5
comp=Z,8.4nm,0.7s
GKP Gorka Klasztor 13.27 4 *e*P Pn 07 17 25.7 +2.0
GKP Gorka Klasztor 13.27 4 *e*P Pn 07 17 25.7 +2.0
MFF Saint Martin d 13.34 305⇑ *i*P Pn 07 17 24.8 +0.1
comp=Z,70nm,0.9s
MFF Saint Martin d 13.34 305⇑ *i*P Pn 07 17 24.8 +0.1
MFF pmax pmax
comp=Z,35nm,0.9s
MFF Saint Martin d 13.34 305⇑ *i*P Pn 07 17 24.8 +0.1
comp=Z,35nm,0.9s
EALK Alkurruntz 13.36 289 P Pn 07 17 24.4 -0.5
comp=Z,13nm,0.6s
CART Cartagena 13.36 265 *e*Pn Pn 07 17 23.7 -1.3
ELIZ Elizondo 13.36 289 P Pn 07 17 25.0 0.0
ELIZ pmax pmax
comp=Z,14nm,0.5s
ELIZ Elizondo 13.36 289 P Pn 07 17 25.0 0.0
comp=Z,14nm,0.5s
UCC Uccle 13.42 327 P Pn 07 17 27.1 +1.5
comp=Z,113nm,1.0s
WTSB Winterswijk 13.46 335 *e*P Pn 07 17 28.5 +2.4
comp=Z,81nm,1.2s
EMUR La Murta 13.47 266 P Pn 07 17 25.3 -1.1
comp=Z,25nm,0.9s
ETOB Tobarra 13.53 270 P Pn 07 17 29.1 +1.9
comp=Z,18nm,0.9s
ETOR Torete 13.65 279 P Pn 07 17 27.0 -1.6
ETOR pmax pmax
comp=Z,37nm,0.6s
ETOR Torete 13.65 279 P Pn 07 17 27.0 -1.6
comp=Z,37nm,0.6s
BR131 Keskin Array S 13.68 86 *e*Pn Pn 07 17 30.8 +1.9
comp=Z,3.8nm,0.6s
BRTR Keskin Array B 13.68 86 P Pn 07 17 31.1 +2.1
comp=Z,0.6nm,0.3s,baz=264,slow=11,SNR=27
BRTR Keskin Array B 13.68 86 P Pn 07 17 31.1 +2.1
BRTR pmax pmax
comp=Z,1.0nm,0.3s
ECRI Cripan 14.02 286 P Pn 07 17 32.7 -0.3
ECRI pmax pmax
comp=Z,5.0nm,0.3s
ECRI Cripan 14.02 286 P Pn 07 17 32.7 -0.3
comp=Z,5.1nm,0.3s
KIEV Kiev 14.18 37 *e*P Pn 07 17 34.6 -0.2
KIEV *e*S S 07 20 09.5 -1.8
KIEV pmax pmax
comp=Z,17nm,0.6s
KIEV Kiev 14.18 37 *e*Pn Pn 07 17 34.6 -0.2
comp=Z,17nm,0.6s
KIEV *e*S S 07 20 09.5 -1.8
KIEV Kiev 14.18 37 *e*Pn Pn 07 17 34.6 -0.2
comp=Z,17nm,0.6s
KIEV *e*S S 07 20 09.5 -1.8
AKASG Malin Array Be 14.20 37 P Pn 07 17 34.8 -0.2
comp=Z,6.3nm,0.3s,baz=231,slow=12,SNR=22
AKASG S S 07 20 07.1 -4.5
comp=Z,2.2nm,0.3s,baz=226,slow=20,SNR=11
AKASG Malin Array Be 14.20 37 P Pn 07 17 34.8 -0.2
AKASG S S 07 20 07.1 -4.5
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG smax
comp=N,2.0nm,0.3s
AKASG Malin Array Be 14.20 37 S S 07 20 07.1 -4.5
AKASG Malin Array Be 14.20 37 P Pn 07 17 34.8 -0.2
AKASG S S 07 20 07.1 -4.5
AKBB Malin Array Si 14.20 37 *e*Pn Pn 07 17 34.8 -0.2
AKBB *e*S S 07 20 09.4 -2.2
AKBB Malin Array Si 14.20 37 *e*Pn Pn 07 17 34.8 -0.2
AKBB *e*S S 07 20 09.4 -2.2
LDF La Druitiere 14.24 312⇑ *i*P Pn 07 17 33.9 -1.7
comp=N,30nm,0.6s
LDF La Druitiere 14.24 312⇑ *i*P Pn 07 17 33.9 -1.7
LDF pmax pmax
comp=Z,15nm,0.6s
LDF La Druitiere 14.24 312⇑ *i*P Pn 07 17 33.9 -1.7
comp=Z,15nm,0.6s
EVIA Vianos 14.26 270 P Pn 07 17 35.9 -0.1
EVIA pmax pmax
comp=Z,23nm,0.7s
EVIA Vianos 14.26 270 P Pn 07 17 35.9 0.0
comp=Z,23nm,0.7s
BSEG Bad Segeberg 14.39 347 *e*Pn Pn 07 17 38.0 +0.7
ENIJ Nijar 14.46 264 P Pn 07 17 36.9 -1.4
ENIJ pmax pmax
comp=Z,30nm,0.6s
ENIJ Nijar 14.46 264 P Pn 07 17 36.9 -1.4
comp=Z,30nm,0.6s
EHUE Huescar 14.52 267 P Pn 07 17 40.7 +1.7
EHUE pmax pmax
comp=Z,17nm,0.8s
EHUE Huescar 14.52 267 P Pn 07 17 40.7 +1.7
comp=Z,16nm,0.8s
FLN La Foliniere 14.54 312⇑ *i*P Pn 07 17 37.0 -2.1
comp=Z,16nm,0.4s
FLN La Foliniere 14.54 312⇑ *i*P Pn 07 17 37.0 -2.1
FLN pmax pmax
comp=Z,8.0nm,0.4s
FLN La Foliniere 14.54 312⇑ *i*P Pn 07 17 37.0 -2.1
comp=Z,7.9nm,0.4s
GRR Gorron 14.57 310⇑ *i*P Pn 07 17 38.1 -1.4
comp=Z,66nm,0.8s
GRR Gorron 14.57 310⇑ *i*P Pn 07 17 38.1 -1.4
GRR pmax pmax
comp=Z,33nm,0.8s
GRR Gorron 14.57 310⇑ *i*P Pn 07 17 38.1 -1.4
comp=Z,33nm,0.8s
ELAN Lanestosa 14.76 289 P Pn 07 17 41.8 0.0
comp=Z,16nm,0.7s
CSS Prodhromos 14.78 105 *e*Pn Pn 07 17 42.4 +0.2
comp=Z,32nm,0.6s
CSS *e*S S 07 20 25.1 +0.4
SUW Suwalki 14.83 17 *e*P Pn 07 17 42.6 0.0
SUW *e*S S 07 20 22.4 -3.0
EQES Quesada 14.89 267 P Pn 07 17 46.0 +2.6
comp=Z,46nm,0.6s
EBER Berja 15.00 264 P Pn 07 17 45.3 +0.6
comp=Z,71nm,0.6s
BSD Bornholm Skovb 15.09 358⇑ *i*P Pn 07 17 44.2 -1.5
BSD pmax pmax
comp=Z,38nm,0.8s
BSD Bornholm Skovb 15.09 358⇑ *i*P Pn 07 17 44.2 -1.5
comp=Z,38nm,0.8s
ESLA Sonseca Array 15.21 275 *e*P Pn 07 17 46.1 -1.2
comp=Z,3.9nm,0.6s
ESLA Sonseca Array 15.21 275 *e*P Pn 07 17 46.1 -1.1
comp=Z,3.9nm,0.6s
ESLA *e*S S 07 20 36.7 +3.3
GUD Guadarrama 15.26 279 P Pn 07 17 46.2 -1.6
GUD pmax pmax
comp=Z,19nm,0.6s
GUD Guadarrama 15.26 279 P Pn 07 17 46.2 -1.6
comp=Z,19nm,0.6s
GUD Guadarrama 15.26 279 P Pn 07 17 46.2 -1.6

comp=Z,19nm,0.6s
EBAN Banos Encina 15.35 269 P Pn 07 17 48.2 -0.7
EBAN pmax pmax
comp=Z,26nm,0.6s
EBAN Banos Encina 15.35 269 P Pn 07 17 48.2 -0.7
comp=Z,26nm,0.6s
EBAN Banos Encina 15.35 269 P Pn 07 17 48.2 -0.7
comp=Z,26nm,0.6s
ECOG Cogollos-Vega 15.40 266 P Pn 07 17 49.5 -0.1
ECOG pmax pmax
comp=Z,30nm,0.4s
ECOG Cogollos-Vega 15.40 266 P Pn 07 17 49.5 -0.1
comp=Z,30nm,0.4s
ECOG Cogollos-Vega 15.40 266 P Pn 07 17 49.5 -0.1
comp=Z,30nm,0.4s
EALB Alboran 15.43 261 P Pn 07 17 48.6 -1.3
comp=Z,80nm,0.6s
EALB Alboran 15.43 261 P Pn 07 17 48.6 -1.3
comp=Z,80nm,0.6s
SGMF Saint Gilles 15.52 308⇑ *i*P **Pn 07 17 49.1 -1.7**
comp=Z,20nm,0.4s
PAB San Pablo 15.52 275 *e*P **Pn 07 17 50.2 -0.8**
PAB *e*S **S 07 20 42.6 +2.9**
PAB pmax pmax
comp=Z,19nm,0.6s
PAB San Pablo 15.52 275 *e*P **Pn 07 17 50.2 -0.8**
comp=Z,19nm,0.6s
PAB San Pablo 15.52 275 *e*P **Pn 07 17 50.2 -0.8**
comp=Z,19nm,0.6s
PAB *e*S **S 07 20 42.6 +2.9**
EGUA Guajares 15.53 264 P Pn 07 17 49.2 -1.9
EGUA pmax pmax
comp=Z,480nm,0.8s
EGUA Guajares 15.53 264 P Pn 07 17 49.2 -1.9
comp=Z,480nm,0.8s
EGUA Guajares 15.53 264 P Pn 07 17 49.2 -2.0
comp=Z,480nm,0.8s
ZAI Zaio 15.58 257 *i*P **Pn 07 17 54.0 +2.3**
ERON Agron 15.66 265 P Pn 07 17 50.8 -1.9
comp=Z,10nm,0.9s
ERON Agron 15.66 265 P Pn 07 17 50.8 -1.8
comp=Z,10nm,0.9s
QUIF Quistinic 15.75 306⇑ *i*P **Pn 07 17 52.1 -1.5**
comp=Z,37nm,0.8s
QUIF Quistinic 15.75 306⇑ *i*P **Pn 07 17 52.1 -1.5**
QUIF pmax pmax
comp=Z,19nm,0.8s
QUIF Quistinic 15.75 306⇑ *i*P **Pn 07 17 52.1 -1.5**
comp=Z,18nm,0.8s
COP Copenhagen 15.82 353⇑ *i*P **Pn 07 17 53.2 -1.0**
COP pmax pmax
comp=Z,110nm,0.8s
COP Copenhagen 15.82 353⇑ *i*P **Pn 07 17 53.2 -1.0**
comp=Z,112nm,0.8s
ELUQ Luque 15.87 267 P Pn 07 17 53.4 -1.6
ELUQ pmax pmax
comp=Z,168nm,0.4s
ELUQ Luque 15.87 267 P Pn 07 17 53.4 -1.6
comp=Z,168nm,0.4s
ELUQ Luque 15.87 267 P Pn 07 17 53.4 -1.7
comp=Z,168nm,0.4s
ELOJ Sierra Loja 15.89 266 P Pn 07 17 54.3 -1.0
ELOJ pmax pmax
comp=Z,14nm,0.4s
ELOJ Sierra Loja 15.89 266 P Pn 07 17 54.3 -1.0
comp=Z,14nm,0.4s
ELOJ Sierra Loja 15.89 266 P Pn 07 17 54.3 -1.1
comp=Z,14nm,0.4s
EADA Adamuz 15.96 270 P Pn 07 17 54.8 -1.3
comp=Z,21nm,0.7s
EADA Adamuz 15.96 270 P Pn 07 17 54.8 -1.3
comp=Z,21nm,0.7s
ROSF Rostrenen 15.99 308⇑ *i*P **Pn 07 17 52.9 -3.4**
comp=Z,82nm,0.9s
ROSF Rostrenen 15.99 308⇑ *i*P **Pn 07 17 52.9 -3.4**
ROSF pmax pmax
comp=Z,41nm,0.9s
ROSF Rostrenen 15.99 308⇑ *i*P **Pn 07 17 52.9 -3.4**
comp=Z,41nm,0.9s
EARI Arriondas 16.05 289 P P 07 17 55.6 0.0
comp=Z,15nm,0.6s
EARI Arriondas 16.05 289 P P 07 17 55.6 +0.1
comp=Z,15nm,0.6s
TOU Touzarine 16.34 258 *i*P **P 07 18 00.5 +1.7**
MPAL Palemas 16.38 259 *e*P **P 07 18 03.0 +3.8**
EMIJ Mijas 16.54 264 P P 07 17 59.8 -1.1
comp=Z,102nm,0.6s
ANN Anapa 16.63 66 *e*P **P 07 18 05.0 +3.2**
ANN pmax pmax
comp=Z,134nm,1.2s
MUD Monsted U'grnd 17.00 347 *i*P **P 07 18 05.6 -0.1**
MUD pmax pmax
comp=Z,70nm,0.8s
MUD Monsted U'grnd 17.00 347 *i*P **P 07 18 05.6 -0.1**
comp=Z,70nm,0.8s
LKFR Kufra 17.01 156 *i*P **P 07 18 06.7 +0.5**
comp=Z,68nm,1.4s,SNR=58
EJIF Jimena Fronter 17.11 265 P P 07 18 06.0 -1.1
EJIF pmax pmax
comp=Z,43nm,0.4s
EJIF Jimena Fronter 17.11 265 P P 07 18 06.0 -1.2
comp=Z,43nm,0.4s
ECAL Calabor 17.14 284 P P 07 18 06.9 -0.5
comp=Z,35nm,0.9s
PBRG Braganca 17.15 283 *e*P **P 07 18 07.7 +0.2**
comp=Z,73nm,1.0s
MMAI Mount Meron Ar 17.20 108 P P 07 18 09.7 +1.4
comp=Z,12nm,0.3s,baz=314,slow=8.8,SNR=52
ESPR Espera 17.28 266 P P 07 18 07.5 -1.4
comp=Z,35nm,0.7s
CWF Charnwood Fore 17.29 323 *e*P **P 07 18 08.2 -0.7**
CWF AMb AMB 07 18 09.3
comp=Z,210nm,1.8s
HGH Gray Hill 17.35 318 *e*P **P 07 18 09.6 0.0**
MVO Moncorvo 17.39 281 *e*P **P 07 18 10.6 +0.4**
comp=Z,40nm,1.0s
ERUA La Rua 17.44 285 P P 07 18 10.5 -0.1
ERUA pmax pmax
comp=Z,12nm,0.6s
ERUA La Rua 17.44 285 P P 07 18 10.5 -0.1
comp=Z,12nm,0.6s
ERUA La Rua 17.44 285 P P 07 18 10.5 -0.2
comp=Z,12nm,0.6s
EPON Pontenova 17.47 288 P P 07 18 10.1 -0.9
comp=Z,18nm,0.8s
EMIN Mina Concepcio 17.66 270 P P 07 18 12.1 -1.0
comp=Z,56nm,0.7s
EBAD Badajoz 17.70 273 P P 07 18 12.1 -1.5
comp=Z,20nm,0.8s
KWE Weaver Farm 17.72 323 *e*P **P 07 18 12.8 -0.8**
KBI1 Birley Grange 17.73 324 *e*P **P 07 18 13.2 -0.5**
HTR Trewern Hill 17.84 319 *e*P **P 07 18 15.0 +0.1**
PBAR Barrancos 17.84 271 *e*P **P 07 18 14.6 -0.5**
comp=Z,76nm,0.6s
MTE Manteigas 17.85 279 *e*P **P 07 18 14.4 -0.8**
comp=Z,54nm,1.3s
MTE Manteigas 17.85 279 *e*P **P 07 18 13.8 -1.4**
comp=Z,45nm,1.3s
TSY Tnine Yamani 17.86 262 *i*P **P 07 18 15.0 -0.3**
PMRV Marv??o 17.87 276 *e*P **P 07 18 15.2 -0.2**
comp=Z,72nm,1.4s
PCBR Castelo Branco 17.87 277 *e*P **P 07 18 15.0 -0.4**
comp=Z,36nm,0.8s
MDT Midelt 17.94 253 P P 07 18 15.0 -1.3
comp=Z,0.9nm,0.3s,baz=80,slow=12,SNR=53
LHO Holmfirth 18.07 324 *e*P **P 07 18 17.1 -0.2**
PVIS Viseu 18.08 280 *e*P **P 07 18 17.2 -0.5**
PCAB Cabril 18.11 283 *e*P **P 07 18 18.1 +0.2**
PESTR Estremoz 18.12 274 *e*P **P 07 18 17.1 -1.0**
comp=Z,26nm,1.1s
ELOB Lobios 18.13 284 P P 07 18 17.8 -0.3
comp=Z,17nm,0.8s
ELOB Lobios 18.13 284 P P 07 18 17.8 -0.4
comp=Z,17nm,0.8s
CZD Col de Zad 18.15 254 *i*P **P 07 18 19.0 +0.5**
HPK Haverah Park 18.25 326 *e*P **P 07 18 19.1 -0.1**
HPK AMb AMB 07 18 26.0
comp=Z,200nm,2.2s
SBD1 Bryn Du 18.32 321 *e*P **P 07 18 19.4 -0.7**
EVO Evora 18.51 273⇑ *i*P **P 07 18 22.2 -0.1**
comp=Z,24nm,0.8s
PBEJ Beja 18.51 271 *e*P **P 07 18 21.0 -1.3**
comp=Z,25nm,0.9s
PVAQ Vaqueiros 18.55 269 *e*P **P 07 18 21.1 -1.6**
comp=Z,64nm,0.9s
ASF Jabal al Asfar 18.72 108 P P 07 18 25.8 +1.3
comp=Z,1.3nm,0.3s,baz=176,slow=4.8,SNR=7.5

ASF Jabal al Asfar 18.72 108 P P 07 18 25.8 +1.3
ASF pmax pmax
comp=Z,1.0nm,0.3s
EIL Elat 18.76 118 P P 07 18 26.0 +1.0
comp=Z,3.2nm,0.3s,baz=335,slow=14,SNR=23
EIL S **S 07 21 50.9 +6.8**
comp=Z,0.5nm,0.3s,baz=54,slow=13,SNR=3.6
PBDV Barranco-do-Ve 18.76 269 *e*P **P 07 18 25.2 +0.2**
comp=Z,154nm,1.1s
WPM1 Penmaenmawr 18.84 321 *e*P **P 07 18 25.1 -0.6**
KIB El Ksiba 19.11 254 *i*P **P 07 18 30.0 +1.3**
PTEO Sao Teotonio 19.29 270 *e*P **P 07 18 30.2 -0.4**
comp=Z,53nm,0.7s
TAM Tamanrasset 19.29 210 *e*P **P 07 18 31.6 +0.9**
TAM pmax pmax
comp=Z,25nm,0.8s
TAM Tamanrasset 19.29 210 *e*P **P 07 18 31.6 +0.9**
comp=Z,25nm,0.8s
TAM Tamanrasset 19.29 210 *e*P **P 07 18 31.6 +0.8**
comp=Z,25nm,0.8s
MORF Marmelete 19.30 270 *e*P **P 07 18 31.4 +0.7**
XSO Sourhope Farm 19.57 328 *e*P **P 07 18 32.4 -1.0**
VSU Vasula 19.71 17 *c i*P **P 07 18 34.0 -0.9**
ECK Cauldkaine Hil 19.72 326 *e*P **P 07 18 34.3 -0.6**
EKA Eskdalemuir Ar 19.84 327 P P 07 18 35.5 -0.7
comp=Z,3.2nm,0.3s,baz=118,slow=8.8,SNR=79
EKA Eskdalemuir Ar 19.84 327 P P 07 18 35.5 -0.7
EKA pmax pmax
comp=Z,3.0nm,0.3s
ESK Eskdalemuir 19.84 327 *e*P **P 07 18 35.5 -0.7**
ESK AMb AMB 07 18 37.2
comp=Z,195nm,1.4s
ESK Eskdalemuir 19.84 327 *e*P **P 07 18 35.5 -0.7**
comp=Z,195nm,1.4s
ESY Stoneypath 20.02 329 *e*P **P 07 18 36.9 -1.2**
KONO Kongsberg 20.02 351 *e*P **P 07 18 36.5 -1.5**
KONO Kongsberg 20.02 351 *e*P **P 07 18 36.6 -1.4**
KONO pmax pmax
comp=Z,5.0nm,0.4s
KONO Kongsberg 20.02 351 *e*P **P 07 18 36.6 -1.5**
comp=Z,4.7nm,0.4s
EBL Broad Law 20.09 328 *e*P **P 07 18 37.8 -1.0**
HFS Hagfors 20.16 357 P P 07 18 38.1 -1.5
comp=Z,108nm,0.7s,baz=169,slow=8.9,SNR=188
HFS S **S 07 22 08.9 -1.5**
comp=Z,15nm,1.1s,baz=184,slow=20,SNR=3.7
HFS Hagfors 20.16 357 P P 07 18 38.1 -1.4
HFS S **S 07 22 08.9 -1.5**
HFS pmax pmax
comp=Z,108nm,0.7s
HFS smax
comp=N,15nm,1.1s
HFS Hagfors 20.16 357 S **S 07 22 08.9 -1.5**
HFA0 Hagfors New Ar 20.17 357 P **P 07 18 37.0 -2.6**
OSL Oslo 20.18 353 *e*P **P 07 18 38.5 -1.2**
EDI Edinburgh 20.25 328 *e*P **P 07 18 39.2 -1.3**
EDI AMb AMB 07 18 39.9
comp=Z,115nm,1.3s
BLS5 Blasjo 20.29 346 *e*P **P 07 18 41.0 +0.1**
BLS5 AMb AMB 07 18 42.6
comp=Z,50nm,1.2s
BLS5 Blasjo 20.29 346 *e*P **P 07 18 41.0 +0.1**
comp=Z,50nm,1.2s,SNR=54
BLS5 Blasjo 20.29 346 *e*P **P 07 18 41.0 +0.1**
comp=Z,50nm,1.2s
KIV Kislovodsk 20.30 70 *e*P **P 07 18 39.9 -1.3**
KIV pmax pmax
comp=Z,13nm,1.6s
EAU Auchinoon 20.30 328 *e*P **P 07 18 39.7 -1.4**
OBN Obninsk 20.45 36⇓ *i*P **P 07 18 40.8 -1.8**
OBN *i* S **S 07 22 11.7 -3.5**
OBN pmax pmax
comp=Z,32nm,1.2s
EBH Black Hill 20.61 328 *e*P **P 07 18 43.1 -1.2**
ODD1 Odda 20.71 347 *e*P **P 07 18 43.4 -1.9**
ODD1 AMb AMB 07 18 46.1
comp=Z,69nm,2.5s
ODD1 Odda 20.71 347 *e*P **P 07 18 43.4 -1.9**
comp=Z,69nm,2.5s
EAB Aberfoyle 20.91 327 *e*P **P 07 18 46.4 -1.0**
NAO01 NORSAR Array S 21.05 353 *e*P **P 07 18 47.6 -1.2**
comp=Z,14nm,0.4s,mb4.6
NAO01 NORSAR Array S 21.05 353 *e*P **P 07 18 47.6 -1.2**
comp=Z,14nm,0.4s,mb4.6
MME1 Meikle Cairn 21.16 331 *e*P **P 07 18 47.9 -1.9**
NB2 NORSAR Subarra 21.22 354 P P 07 18 48.8 -1.5
comp=Z,26nm,0.5s,mb4.8,baz=168,slow=11
NOA NORSAR Array B 21.22 354 P P 07 18 48.8 -1.5
comp=Z,35nm,0.6s,mb4.8,baz=167,slow=10,SNR=97
NOA NORSAR Array B 21.22 354 P P 07 18 48.8 -1.5
NOA pmax pmax
comp=Z,35nm,0.6s
MOS Moscow 21.31 35 *e*P **P 07 18 49.3 -2.0**
MOS *e* 07 22 27.3
MCD Coleburn Disti 21.46 331 *e*P **P 07 18 50.7 -1.9**
CIA Chichaoua 21.61 255 *i*P **P 07 18 54.0 -0.3**
MDO Dochfour 21.78 330 *e*P **P 07 18 54.9 -0.6**
KAR1 Arisaig 22.01 327 *e*P **P 07 18 57.2 -0.4**
MLA1 Lairon 22.03 332 *e*P **P 07 18 56.6 -1.2**
JHA Jbel Lahdid 22.05 256 *e*P **P 07 18 59.0 +0.7**
MVH1 Achvaich 22.05 331 *e*P **P 07 18 56.7 -1.3**
KAC Achnashellach 22.18 329 *e*P **P 07 18 58.1 -1.1**
KPL Plockton 22.21 328 *e*P **P 07 18 57.9 -1.6**
KPL AMb AMB 07 18 58.7
comp=Z,183nm,1.7s,mb5.1
DOMB Dombas 22.41 352 *e*P **P 07 19 01.7 +0.4**
DOMB AMb AMB 07 19 04.5
comp=Z,36nm,1.9s,mb4.4
DOMB Dombas 22.41 352 *e*P **P 07 19 01.7 +0.4**
comp=Z,36nm,1.9s,mb4.4,SNR=44
DOMB Dombas 22.41 352 *e*P **P 07 19 01.7 +0.4**
comp=Z,36nm,1.9s,mb4.4
LRW Lerwick 22.75 338 *e*P **P 07 19 02.2 -2.2**
LRW AMb AMB 07 19 04.0
comp=Z,191nm,1.9s,mb5.1
KAF Kangasniemi 23.00 13 *ep* **P 07 19 05.5 -1.1**
comp=Z,3.6nm,0.4s,mb4.0,baz=199,slow=9.3
KAF Kangasniemi 23.00 13 *e*P **P 07 19 05.5 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.1
NSS Namsos 24.63 356 *e*P **P 07 19 19.9 -1.4**
JOF Joensuu 24.72 17 *ep* **P 07 19 21.5 -0.6**
comp=Z,3.3nm,0.5s,mb4.0
JOF Joensuu 24.72 17 *e*P **P 07 19 21.5 -0.6**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
KLMR Klimovskoe 25.45 27 *e*P **P 07 19 26.8 -2.0**
KLMR pmax pmax
comp=Z,15nm,0.7s,mb4.5
APA Apatity 29.24 14⇓ *i*P **P 07 20 02.0 -0.2**
APA pmax pmax
comp=Z,14nm,0.8s,mb4.4
APA MLR MLR
comp=Z,1μm,13.0s
TOA0 Torodi Ar. Sit 29.54 209 *e*P **P 07 20 04.8 -0.7**
TORD Torodi Ar. Bea 29.54 209 P P 07 20 04.7 -0.8
comp=Z,24nm,0.5s,mb5.0,baz=17,slow=9.4,SNR=323
TORD PcP PcP 07 23 02.6 -0.8
comp=Z,1.1nm,0.6s,baz=358,slow=2.8,SNR=4.3
TORD Torodi Ar. Bea 29.54 209 P P 07 20 04.7 -0.8
TORD PcP PcP 07 23 02.6 -0.8
LVZ Lovozero 29.76 14⇓ *i*P **P 07 20 06.0 -0.8**
LVZ pmax pmax
comp=Z,33nm,1.3s,mb4.7
ARCES ARCESS Array B 30.00 7 P P 07 20 08.1 -0.9
comp=Z,13nm,0.7s,mb4.6,baz=190,slow=9.6,SNR=49
ARCES PcP PcP 07 23 03.0 -0.7
comp=Z,5.2nm,1.0s,baz=219,slow=4.2,SNR=3.3
ARCES ARCESS Array B 30.00 7 P P 07 20 08.1 -0.8
ARCES 07 23 03.0
ARCES pmax pmax
comp=Z,13nm,0.7s
ARCES ARCESS Array B 30.00 7 PcP PcP 07 23 03.0 -0.7
ARE0 ARCESS Array S 30.00 7 *e*P **P 07 20 08.2 -0.7**
KEV Kevo 30.36 8 *ep* **P 07 20 10.8 -1.3**
comp=Z,1.7nm,0.4s,mb3.9
KEV Kevo 30.36 8 *e*P **P 07 20 10.8 -1.3**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
ARU Arti 32.21 45 *d i*P **P 07 20 28.0 -0.4**
ARU *e**PP pP 07 21 19.8 -1.2
ARU *e* 07 21 44.4
ARU *e* 07 23 09.3
ARU *e*S **S 07 25 20.9 -0.1**
ARU *e*SS SS 07 27 45.0 -2.8

ARU pmax pmax
comp=Z,21nm,1.2s,mb4.5
ARU Arti 32.21 45 *e*pP pP 07 21 19.6 -1.4
ARU Arti 32.21 45 *e*P **P 07 20 28.2 -0.2**
comp=Z,29nm,1.4s,mb4.6
ARU *e*pP pP 07 21 19.6 -1.3
SVE Sverdlovsk 33.41 45 *e*P **P 07 20 39.6 +0.8**
SVE pmax pmax
comp=Z,17nm,1.1s,mb4.5
DBIC Dimbokro 38.06 215 P P 07 21 17.6 -1.0
comp=Z,45nm,0.4s,mb5.2,baz=11,slow=9.7,SNR=197
DBIC Dimbokro 38.06 215 P P 07 21 17.6 -1.0
DBIC pmax pmax
comp=Z,45nm,0.4s
DBIC Dimbokro 38.06 215⇓ *i*P **P 07 21 17.5 -1.1**
comp=Z,47nm,0.4s,mb5.3
DBIC Dimbokro 38.06 215⇓ *i*P **P 07 21 17.5 -1.1**
comp=Z,47nm,0.4s,mb5.3
TIC Toumodi 38.16 215⇓ *i*P **P 07 21 18.1 -1.3**
comp=Z,74nm,0.7s,mb5.2
SPB4 Spitsbergen Ar 38.25 0 *e*P **P 07 21 19.9 +0.5**
SPB4 Spitsbergen Ar 38.25 0 *e*P **P 07 21 19.9 +0.5**
KIC Kosan Boka 38.29 214⇓ *i*P **P 07 21 19.4 -1.1**
comp=Z,175nm,0.6s,mb5.7
LIC Lamto 38.53 215⇓ *i*P **P 07 21 21.6 -0.9**
comp=Z,118nm,0.5s,mb5.3
LIC Lamto 38.53 215⇓ *i*P **P 07 21 21.5 -1.0**
comp=Z,208nm,0.5s,mb5.8
LIC Lamto 38.53 215⇓ *i*P **P 07 21 21.6 -0.9**
comp=Z,59nm,0.5s,mb5.3
BRVK Borovoye 38.71 52 *e*P **P 07 21 24.1 +0.6**
BRVK *e**PP pP 07 22 18.4 +0.8
BRVK pmax pmax
comp=Z,12nm,0.7s,mb4.4
BRVK Borovoye 38.71 52 *e*P **P 07 21 24.1 +0.6**
comp=Z,12nm,0.7s,mb4.4
BRVK *e*pP pP 07 22 18.4 +0.8
BRVK Borovoye 38.71 52 *e*P **P 07 21 24.1 +0.6**
comp=Z,12nm,0.7s,mb4.4
BRVK *e*pP pP 07 22 18.4 +0.8
BVAR Borovoye Array 38.77 52 P P 07 21 24.9 +0.8
comp=Z,3.1nm,0.6s,mb3.9,baz=241,slow=4.9,SNR=18
BVAR pP pP 07 22 14.5 -3.7
comp=Z,1.5nm,0.7s,baz=282,slow=7.3,SNR=5.0
EKS2 Erkin-Say 42.84 67 *e*P **P 07 21 58.8 +1.5**
comp=Z,2.7nm,0.5s,mb3.7
EKS2 *e*pP pP 07 22 51.9 -0.5
EKS2 Erkin-Say 42.84 67 *e*P **P 07 21 58.8 +1.5**
comp=Z,2.7nm,0.5s,mb3.7
EKS2 *e*pP pP 07 22 51.9 -0.5
AAK Ala-Archa 43.36 67 *e*P **P 07 22 02.9 +1.5**
AAK pmax pmax
comp=Z,3.0nm,0.5s,mb3.8
AAK Ala-Archa 43.36 67 *e*P **P 07 22 02.9 +1.5**
comp=Z,2.5nm,0.5s,mb3.7
AAK Ala-Archa 43.36 67 *e*P **P 07 22 02.9 +1.5**
comp=Z,2.5nm,0.5s,mb3.7
KURK Kurchatov 44.12 54 P P 07 22 07.2 -0.2
comp=Z,3.4nm,0.7s,mb3.7,baz=287,slow=9.8,SNR=13
KURK pP pP 07 22 59.9 -2.9
comp=Z,1.8nm,0.6s,baz=291,slow=8.9,SNR=8.9
KURK Kurchatov 44.12 54⇓ *i*P **P 07 22 07.1 -0.2**
KURK pmax pmax
comp=Z,4.0nm,0.6s,mb3.8
KURK Kurchatov 44.12 54 pP pP 07 22 59.9 -2.9
KURK Kurchatov 44.12 54 P P 07 22 07.2 -0.2
KURK pP pP 07 22 59.9 -2.9
NVS Novosibirsk 46.10 48 *e*P **P 07 22 23.3 +0.5**
ZAA0 Zalesovo Array 47.19 49 *e*P **P 07 22 30.5 -0.6**
ZALV Zalesovo Beam 47.19 49 P P 07 22 31.2 +0.1
comp=Z,4.6nm,0.5s,mb4.1,baz=286,slow=8.1,SNR=22
ZALV Zalesovo Beam 47.19 49 P P 07 22 31.2 +0.1
ZALV pmax pmax
comp=Z,5.0nm,0.5s,mb4.1
MK31 Makanchi Array 47.45 59 *e*P **P 07 22 33.6 +0.4**
MK31 Makanchi Array 47.45 59 *e*P **P 07 22 33.6 +0.3**
MKAR Makanchi Array 47.45 59 P P 07 22 33.6 +0.3
comp=Z,5.9nm,0.5s,mb4.2,baz=283,slow=6.9,SNR=81
MKAR Makanchi Array 47.45 59 P P 07 22 33.6 +0.4
MKAR pmax pmax
comp=Z,6.0nm,0.5s
SCHQ Schefferville 54.59 315 P P 07 23 25.3 -0.7
comp=Z,3.2nm,0.3s,mb4.2,baz=22,slow=13,SNR=17
LSZ Lusaka 56.22 166 *e*P **P 07 23 38.6 +0.6**
LSZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
LSZ Lusaka 56.22 166 *e*P **P 07 23 38.6 +0.6**
comp=Z,3.9nm,0.7s,mb4.0
LSZ Lusaka 56.22 166 *e*P **P 07 23 38.6 +0.6**
comp=Z,3.9nm,0.7s,mb4.0
TLY Talaya 58.69 47 *e*P **P 07 23 59.7 +4.9**
TLY *e* 07 24 42.1
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
TLY Talaya 58.69 47 *e*P **P 07 23 59.3 +4.5**
comp=Z,8.3nm,0.7s,mb4.3
TLY Talaya 58.69 47 *e*P **P 07 23 59.3 +4.5**
comp=Z,8.3nm,0.7s,mb4.3
TIXI Tiksi 59.16 20⇑ *i*P **P 07 23 57.5 -0.2**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
ULN Ulaanbaatar 62.44 49 *i*P **P 07 24 20.3 +0.2**
ULN Ulaanbaatar 62.44 49 *e*P **P 07 24 30.9 +11**
comp=Z,8.3nm,0.7s,mb4.5
ULN *e*PP PP 07 26 42.4 +1.8
YAK Yakutsk 65.24 28 *i*P **P 07 24 37.4 -0.6**
LBTB Lobatse 65.36 170 *e*P **P 07 24 39.4 +0.2**
comp=Z,5.7nm,0.6s,mb4.4
LBTB Lobatse 65.36 170 *e*P **P 07 24 39.4 +0.3**
comp=Z,5.7nm,0.6s,mb4.4
RCBR Riachuelo 65.90 239 *e*P **P 07 24 42.8 -0.1**
comp=Z,15nm,0.6s,mb4.9
RCBR Riachuelo 65.90 239 *e*P **P 07 24 42.8 -0.1**
comp=Z,15nm,0.6s,mb4.9
BOSA Boshof 68.86 171 P P 07 25 01.6 +0.6
comp=Z,14nm,0.5s,mb4.9,baz=353,slow=6.5,SNR=44
BOSA Boshof 68.86 171 *e*P **P 07 25 01.2 +0.1**
comp=Z,13nm,0.5s,mb4.9
HHC Hu-ho-hao-te 68.94 54 *e*P **P 07 25 01.8 +0.2**
HHC PCP PcP 07 25 25.5 +1.5
HHC AP pP 07 26 01.2 -1.2
HHC XP sP 07 26 27.3 -3.9
HHC PP PP 07 27 38.7 +1.5
HHC PCS 07 29 29.0
HHC S S 07 33 42.6 -1.2
HHC XS sS 07 35 24.9 -6.0
HHC SS SS 07 38 13.8 -0.5
HHC AMB AMB
comp=Z,9.0nm,0.6s,mb4.7
HHC AMB AMB
comp=Z,128nm,5.3s
CD2 Chengdu 69.42 67 P P 07 25 06.4 +1.7
CD2 PCP PcP 07 25 28.4 +2.2
CD2 AP pP 07 26 05.6 -0.1
CD2 XP sP 07 26 32.5 -1.9
CD2 PP PP 07 27 45.6 +3.9
CD2 S S 07 33 51.1 +1.3
CD2 XS sS 07 35 34.1 -3.0
CD2 SS SS 07 38 26.3 +4.0
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,180nm,6.4s
CD2 LR LR
comp=N,220nm,9.2s
CD2 LR LR
comp=Z,170nm,10.7s
MCWV Mont Chateau 69.59 305 *e*P **P 07 25 06.4 +0.8**
MCWV Mont Chateau 69.59 305 *e*P **P 07 25 06.5 +0.8**
YKA Yellowknife Ar 70.35 338 P P 07 25 09.8 +0.1
comp=Z,0.7nm,0.5s,mb3.7,baz=39,slow=6.2,SNR=11
YKA Yellowknife Ar 70.35 338 *i*P **P 07 25 09.8 +0.1**
XAN Xi'an 71.17 61 P P 07 25 14.4 -0.8
XAN AP pP 07 26 14.4 -2.1
XAN XP sP 07 26 42.6 -2.5
XAN PP PP 07 27 55.5 -1.0
XAN S S 07 34 09.5 -0.4
XAN SCS ScS 07 34 53.2 -0.6
XAN SS SS 07 38 49.2 +0.3
XAN AMB AMB
comp=Z,3.0nm,0.5s,mb4.2
XAN LR LR
comp=E,72nm,21.4s
XAN LR LR
comp=Z,60nm,20.7s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ULM	**Lac du Bonnet**	**72.00**	**321**	P	**P**	**07 25 18.8**	**-1.1**
	comp=Z,2.5nm,0.4s,mb4.2,baz=65,slow=7.4,SNR=2.8						
ULM	**Lac du Bonnet**	**72.00**	**321**	P	**P**	**07 25 18.8**	**-1.1**
KMI	**Kunming**	**72.06**	**72**	P	**P**	**07 25 21.2**	**+0.6**
KMI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
BJI	**Beijing**	**72.25**	**52**	P	**P**	**07 25 20.9**	**-0.6**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.8						
GRGR	**Grenville**	**72.75**	**271**	eP	**P**	**07 25 25.2**	**+0.4**
	comp=Z,26nm,0.5s,mb5.1						
GYA	**Guiyang**	**74.10**	**69**⇓	iP	**P**	**07 25 33.6**	**+1.1**
GYA				PCP	PcP	07 25 45.9	-0.3
GYA				AP	pP	07 26 33.6	-0.7
GYA				PP	PP	07 28 21.4	-0.2
GYA				S	S	07 34 41.9	-1.2
GYA				SKS		07 35 08.4	
GYA				SCS	ScS	07 35 16.2	-1.2
GYA				XS	sS	07 36 28.7	-3.1
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,170nm,5.9s						
CN2	**Changchun**	**75.20**	**45**	eP	**P**	**07 25 40.0**	**+1.5**
SDDR	**Presa de Saban**	**75.90**	**283**	eP	**P**	**07 25 43.6**	**+0.8**
	comp=Z,22nm,0.8s,mb4.8						
WVT	**Waverly**	**76.74**	**306**	eP	**P**	**07 25 46.5**	**-0.8**
	comp=Z,2.7nm,0.6s,mb4.2						
ECSD	**EROS,Sioux Fal**	**76.77**	**317**	eP	**P**	**07 25 47.2**	**-0.1**
	comp=Z,16nm,1.4s,mb4.6						
ECSD	**EROS,Sioux Fal**	**76.77**	**317**	eP	**P**	**07 25 47.2**	**-0.1**
	comp=Z,16nm,1.4s,mb4.6						
HABR	**Khabarovsk**	**76.77**	**37**	eP	**P**	**07 25 44.2**	**-3.0**
NJ2	**Nanjing**	**78.96**	**57**	eP	**P**	**07 26 02.8**	**+3.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
BDFB	**Brasilia**	**81.12**	**241**	P	**P**	**07 26 11.9**	**+0.7**
	comp=Z,7.1nm,0.4s,mb4.7,baz=46,slow=8.0,SNR=36						
MIAR	**Mount Ida**	**81.31**	**308**	eP	**P**	**07 26 12.7**	**+0.7**
	comp=Z,4.6nm,0.7s,mb4.3						
MIAR	**Mount Ida**	**81.31**	**308**	eP	**P**	**07 26 12.7**	**+0.6**
	comp=Z,4.6nm,0.7s,mb4.3						
SDV	**Santo Domingo**	**81.66**	**275**	eP	**P**	**07 26 13.4**	**-0.8**
	comp=Z,17nm,0.8s,mb4.8						
SDV	**Santo Domingo**	**81.66**	**275**	eP	**P**	**07 26 13.4**	**-0.7**
	comp=Z,17nm,0.8s,mb4.8						
PNT	**Penticton**	**82.73**	**332**	P	**P**	**07 26 22.1**	**+3.0**
PNT	**Penticton**	**82.73**	**332**	P	**P**	**07 26 22.1**	**+3.0**
PHWY	**Pilot Hill**	**83.06**	**320**	eP	**P**	**07 26 22.3**	**+1.4**
	comp=Z,10nm,1.4s,mb4.5						
PHWY	**Pilot Hill**	**83.06**	**320**	eP	**P**	**07 26 22.3**	**+1.3**
	comp=Z,10nm,1.4s,mb4.5						
PHWY				epP	pP	07 27 26.8	+2.7
PDAR	**Pinedale Array**	**83.91**	**323**	P	**P**	**07 26 25.6**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=67,slow=6.6,SNR=10						
PDAR	**Pinedale Array**	**83.91**	**323**	P	**P**	**07 26 25.6**	**+0.4**
OD2	**Odessa Site #2**	**84.02**	**331**	P	**P**	**07 26 29.8**	**+4.1**
OD2	**Odessa Site #2**	**84.02**	**331**	P	**P**	**07 26 29.8**	**+4.1**
WTV	**Waterville**	**84.22**	**332**	P	**P**	**07 26 24.9**	**-1.8**
WMOK	**Wichita Mounta**	**84.25**	**311**	eP	**P**	**07 26 27.7**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.2						
WMOK	**Wichita Mounta**	**84.25**	**311**	eP	**P**	**07 26 27.7**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.2						
ISCO	**Idaho Springs**	**84.26**	**319**	eP	**P**	**07 26 28.6**	**+1.5**
	comp=Z,10nm,0.8s,mb4.7						
ISCO	**Idaho Springs**	**84.26**	**319**	eP	**P**	**07 26 28.6**	**+1.5**
	comp=Z,10nm,0.8s,mb4.7						
SDCO	**Great Sand Dun**	**85.75**	**317**	eP	**P**	**07 26 34.5**	**0.0**
	comp=Z,16nm,0.9s,mb4.8						
SDCO	**Great Sand Dun**	**85.75**	**317**	eP	**P**	**07 26 34.5**	**0.0**
	comp=Z,16nm,0.9s,mb4.8						
SRU	**San Rafael**	**87.22**	**321**	eP	**P**	**07 26 41.8**	**+0.3**
	comp=Z,10nm,1.0s,mb4.6						
SRU	**San Rafael**	**87.22**	**321**	eP	**P**	**07 26 41.8**	**+0.2**
	comp=Z,10nm,1.0s,mb4.6						
ANMO	**Albuquerque**	**88.37**	**316**	eP	**P**	**07 26 47.5**	**+0.5**
MVU	**Marysvale**	**88.51**	**322**	eP	**P**	**07 26 41.7**	**-6.0**
	comp=Z,21nm,1.3s,mb4.8						
BMN	**Battle Mountai**	**89.20**	**326**	eP	**P**	**07 26 52.4**	**+1.6**
	comp=Z,29nm,1.3s,mb5.0						
BMN	**Battle Mountai**	**89.20**	**326**	eP	**P**	**07 26 52.4**	**+1.6**
	comp=Z,29nm,1.3s,mb5.0						
TXAR	**Lajitas Array**	**91.02**	**311**	P	**P**	**07 27 00.6**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=66,slow=3.7,SNR=23						
TXAR	**Lajitas Array**	**91.02**	**311**	P	**P**	**07 27 00.6**	**+1.1**
TPH	**Tonopah**	**91.15**	**325**	eP	**P**	**07 26 58.2**	**-1.7**
	comp=Z,68nm,1.1s,mb5.4						
ASAR	**Alice Springs**	**125.94**	**92**	PKP	PKPdf	07 32 55.2	-0.4
	comp=Z,1.1nm,0.5s,baz=307,slow=1.6,SNR=8.1						
QSPA	**South Pole Qui**	**129.90**	**180**	PKP	PKPdf	07 33 01.1	-0.4
	baz=284,slow=1.6						

NIED ***01*** *07:15:00, 27.90N × 140.30E, h480km, Mw5.4 Best double couple: M0 1.25000×10^17 NP1: φs 339.00000°, δ78.00000°, λ-64.00000°. NP2: φs 93.00000°, δ29.00000°, λ-153.00000°.*
SZGRF ***01*** *07:15:14.8, 27.41N × 140.66E, h33km, mb5.3, Bonin Islands, Japan, region*
MOS ***01*** *07:15:23.3±0.7, 27.81N × 139.87E, h464km, mb5.1/85, Error ellipse: s-maj=8.3km s-min=5.4km az=121.8*
BJI ***01*** *07:15:24.1, 27.67N × 140.00E, h484km, mB5.0, mb5.5*
NEIC ***01*** *07:15:24.7±0.1, 27.74N × 139.90E, mb5.0/94, MW5.3(NIED), Error ellipse: s-maj=4.5km s-min=3.7km az=162.0*
NEIC Recorded [1 JMA] in the Chichijima-retto.
GCMT ***01*** *07:15:24.7±0.4, 27.78N × 139.93E, h480km±2km, MW5.3/55, Moment Tensor Solution. s55,c77; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr -0.44±.03; Mθθ 0.31±.05; Mφφ 0.13±.05; Mrθ 0.15±.06; Mθφ -0.39±.04; Mφr -0.83±.05; Best double couple: M0 1.00800×10^17 NP1: φs 101.00000°, δ26.00000°, λ-148.00000°. NP2: φs 341.00000°, δ77.00000°, λ-68.00000°. Principal axes: T 0.9750, Plg28.0000°, Azm53.0000°; N 0.0670, Plg22.0000°, Azm156.0000°; P -1.0410, Plg53.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s.*
ISCJB ***01*** *07:15:25.1±0.3, 27.79N±0.02 × 139.90E±0.02, h482km±2km, mb5.0/199 Error ellipse: s-maj=3.8km s-min=3.1km az=155.3*
JMA ***01*** *07:15:25.5±0.2, 27.90N × 140.34E, h491km±3km, M4.9*
JMA Felt I J1.
IDC ***01*** *07:15:25.3±0.4, 27.77N × 139.90E, h477km±4km, mb4.4/32, mb1 4.4/38, mb1mx4.4/40, mbtmp4.4/38, Error ellipse: s-maj=9.1km s-min=6.1km az=75.0*
DJA ***01*** *07:15:30, 27.79N × 139.91E, h542km, Mw5.3/12*
ISC 01 07:15:26.1±0.3**, 27.81N**±0.02 **× 139.91E**±0.02**, h481**km±2km**, h471**km±2.7km**: pP-P, n579, σ0.91**/595**, mb5.0**/199**, 71C-56D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.14**	**109**	P	**P**	**07 16 29.3**	**-1.0**
	2µm,0.3s,baz=340,slow=0.7,SNR=934						
CBIJ				S	**S**	**07 17 19.0**	**-3.3**
	1µm,0.3s,baz=292,slow=20,SNR=6.1						
CBIJ	**Chichi jima**	**2.14**	**109**	P	**P**	**07 16 29.2**	**-1.1**
CBIJ				S	**S**	**07 17 19.9**	**-2.4**
JHHJ	**Haha-jima-NKT**	**2.34**	**120**	P	**P**	**07 16 30.7**	**-0.7**
JHHJ				S	**S**	**07 17 22.9**	**-1.4**
JHJ2	**Mitsune**	**5.28**	**359**	P	**P**	**07 16 54.9**	**+0.3**
JHJ2				S	**S**	**07 18 04.6**	**-2.3**
JHJ	**Hachijo jima 2**	**5.29**	**359**	P	**P**	**07 16 54.8**	**+0.1**
	99nm,0.3s,baz=242,slow=21,SNR=6.7						
JHJ				S	**S**	**07 18 03.8**	**-3.3**
	204nm,0.3s,baz=261,slow=22,SNR=4.9						
JMY	**Miyakejima3**	**6.25**	**357**	P	**P**	**07 17 04.4**	**+0.4**
JKO	**Kozu shima**	**6.39**	**354**	P	**P**	**07 17 06.2**	**+0.8**
JKO				eS	**S**	**07 18 26.3**	**-0.3**
JWZ	**Kozaga**	**6.75**	**329**	P	**P**	**07 17 11.5**	**+2.5**
JWZ				S	**S**	**07 18 34.9**	**+1.6**
BSO1	**Boso 1**	**6.88**	**7**	P	**P**	**07 17 10.5**	**+0.2**
BSO1				S	**S**	**07 18 33.7**	**-2.1**
JIE	**Ise**	**7.11**	**338**	P	**P**	**07 17 15.0**	**+2.3**
JIE				S	**S**	**07 18 42.4**	**+2.3**
JOD2	**Odawara 2**	**7.46**	**355**	P	**P**	**07 17 16.9**	**+0.6**
JOD2				eS	**S**	**07 18 45.8**	**-0.9**
JTO	**Tosashimizu**	**7.94**	**311**	P	**P**	**07 17 24.2**	**+2.8**
JTO				S	**S**	**07 19 00.8**	**+4.9**
JMZ	**Minamidaito 2**	**8.02**	**258**	P	**P**	**07 17 22.5**	**+0.2**
JRY	**Ryogami san**	**8.22**	**354**	P	**P**	**07 17 24.3**	**0.0**
JRY				S	**S**	**07 18 59.8**	**-1.6**
MJAR	**Matsushiro Arr**	**8.82**	**351**	P	**P**	**07 17 31.0**	**+0.4**
	8.0nm,0.3s,baz=171,slow=9.3,SNR=49						
MJAR				S	**S**	**07 19 09.6**	**-3.4**
	3.7nm,0.3s,baz=10,slow=28,SNR=5.7						
MJAR	**Matsushiro Arr**	**8.82**	**351**	P	**P**	**07 17 31.0**	**+0.4**
MJAR				S	**S**	**07 19 09.6**	**-3.4**
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MJAR				smax			
	comp=N,4.0nm,0.3s						
MAJO	**Matsushiro**	**8.82**	**351**	ePn	**P**	**07 17 31.2**	**+0.6**
MAJO				eSn	**S**	**07 19 12.7**	**-0.2**
MAT	**Matsushiro**	**8.82**	**351**	P	**P**	**07 17 30.0**	**-0.6**
MAT				S	**S**	**07 19 11.8**	**-1.2**
MAT	**Matsushiro**	**8.82**	**351**	P	**P**	**07 17 31.4**	**+0.8**
MAT				S	**S**	**07 19 11.3**	**-1.7**
JOW	**Kunigami**	**10.40**	**267**	P	**P**	**07 17 48.0**	**+0.4**
	comp=N,33nm,0.3s,baz=104,slow=8.7,SNR=47						
JOW				S	**S**	**07 19 44.9**	**+0.8**
	baz=237,slow=28,SNR=11						
KSRS	**Korea Array**	**13.93**	**317**	P	**P**	**07 18 25.1**	**-0.1**
	comp=N,4.3nm,0.3s,baz=136,slow=11,SNR=74						
KSRS				S	**S**	**07 20 53.6**	**+0.6**
	baz=119,slow=11,SNR=2.5						
KSRS				ScP	ScP	07 25 56.6	-0.6
	comp=N,0.1nm,0.3s,baz=162,slow=0.9,SNR=12						
KS15	**Wonju Array Si**	**13.95**	**317**	eP	**P**	**07 18 25.1**	**-0.3**
ERM	**Erimo**	**14.41**	**10**	P	**P**	**07 18 31.7**	**+1.5**
	comp=N,681nm,0.6s,SNR=7.3						
ERM	**Erimo**	**14.41**	**10**	ePn	**P**	**07 18 31.3**	**+1.0**
ERM				eSn	**S**	**07 21 06.5**	**+4.3**
INCN	**Inchon**	**14.75**	**314**	ePn	**P**	**07 18 33.2**	**-0.7**
ASAJ	**Asahikawa**	**16.41**	**7**	P	**P**	**07 18 52.2**	**+1.0**
	comp=N,1.9nm,0.3s,baz=214,slow=13,SNR=15						
ASAJ				ScP	ScP	07 26 00.2	-1.4
	comp=N,0.8nm,0.3s,baz=258,slow=12,SNR=5.9						
ASAJ	**Asahikawa**	**16.41**	**7**	P	**P**	**07 18 52.2**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				pmax	pmax		
	comp=N,1.0nm,0.3s						
SSE	**Sheshan**	**16.63**	**286**	P	**P**	**07 18 52.1**	**-1.6**
SSE				S	**S**	**07 21 43.0**	**-2.0**
SSE				AMB	AMB		
	comp=Z,42nm,0.9s						
SSE				AMB	AMB		
	comp=Z,221nm,10.3s						
YUK	**Yuzh-Kuril'sk**	**16.88**	**15**	eP	**P**	**07 18 55.9**	**-0.2**
YUK				pmax	pmax		
	comp=Z,3µm,2.0s						
YHNB	**Yeheng**	**16.92**	**264**	ePn	**P**	**07 18 54.6**	**-2.2**
	comp=Z,65nm,0.8s						
YULB	**Yu-li**	**17.36**	**259**	ePn	**P**	**07 19 00.1**	**-1.3**
	comp=Z,56nm,0.6s						
YULB				eS	**S**	**07 21 49.4**	**-8.4**
SSLB	**Suanglung**	**17.53**	**261**	ePn	**P**	**07 19 01.9**	**-1.2**
	comp=Z,279nm,0.9s						
TPUB	**Ta-pu**	**17.96**	**260**	ePn	**P**	**07 19 06.2**	**-1.0**
	comp=Z,79nm,0.8s						
MDJ	**Mudanjiang**	**18.70**	**336**	P	**P**	**07 19 14.5**	**+0.9**
MDJ				AMB	AMB		
	comp=Z,74nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,534nm,5.5s						
MDJ	**Mudanjiang**	**18.70**	**336**	eP	**P**	**07 19 15.0**	**+1.4**
	comp=Z,110nm,1.3s						
MDJ				eScP	ScP	07 26 05.5	-0.9
NJ2	**Nanjing**	**18.73**	**288**	eP	**P**	**07 19 13.4**	**-0.7**
NJ2				AMB	AMB		
	comp=Z,240nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,400nm,5.4s						
YSS	**Yuzh-Sakhalins**	**19.24**	**6**⇓	iP	**P**	**07 19 19.0**	**+0.5**
YSS				eS	**S**	**07 22 27.0**	**-0.9**
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				smax			
	comp=E,170nm,1.3s						
YSS				smax			
	comp=E,600nm,5.0s						
YSS	**Yuzh-Sakhalins**	**19.24**	**6**	eP	**P**	**07 19 19.1**	**+0.5**
	comp=E,113nm,0.5s						
QZH	**Quanzhou**	**19.31**	**266**⇑	iP	**P**	**07 19 19.8**	**+0.2**
QZH				AMB	AMB		
	comp=Z,170nm,0.9s						
QZH				AMB	AMB		
	comp=Z,1µm,5.1s						
CN2	**Changchun**	**19.75**	**328**	eP	**P**	**07 19 22.8**	**-0.5**
CN2				AMB	AMB		
	comp=Z,30nm,0.9s						
CN2				AMB	AMB		
	comp=Z,800nm,4.0s						
TIA	**Tai'an**	**21.02**	**299**	⇓P	**P**	**07 19 34.9**	**-0.1**
TIA				AMB	AMB		
	comp=Z,355nm,1.0s,mb5.8						
KLR	**Kul'dur**	**22.29**	**346**⇑	iP	**P**	**07 19 43.6**	**-2.6**
KLR				e		07 23 12.5	
KLR				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.0						
WHN	**Wuhan**	**22.47**	**283**	⇓P	**P**	**07 19 48.8**	**+0.7**
WHN				SCP	ScP	07 26 16.0	0.0
WHN				AMB	AMB		
	comp=Z,660nm,1.2s,mb6.0						
BJT	**Baijiatuau**	**23.08**	**308**	eP	**P**	**07 19 52.4**	**-1.1**
BJT				pmax	pmax		
	comp=Z,113nm,0.9s						
BJT	**Baijiatuau**	**23.08**	**308**	eP	**P**	**07 19 52.4**	**-1.1**
	comp=Z,112nm,0.9s,mb5.3						
BJT				eScP	ScP	07 26 17.4	0.0
BJI	**Beijing**	**23.09**	**308**	P	**P**	**07 19 52.8**	**-0.7**
BJI				AMB	AMB		
	comp=Z,92nm,1.3s,mb5.0						
BJI				AMB	AMB		
	comp=Z,174nm,4.3s						
GZH	**Guangzhou**	**24.43**	**265**	P	**P**	**07 20 01.8**	**-3.9**
GZH				S	**S**	**07 23 45.3**	**-5.7**
HIA	**Hailar**	**26.45**	**330**	eP	**P**	**07 20 23.6**	**+0.4**
HIA				pmax	pmax		
	comp=Z,94nm,0.9s						
HIA	**Hailar**	**26.45**	**330**	eP	**P**	**07 20 23.6**	**+0.4**
	comp=Z,94nm,0.9s,mb5.2						
HHC	**Hu-ho-hao-te**	**26.65**	**307**	eP	**P**	**07 20 25.4**	**+0.3**
HHC				AMB	AMB		
	comp=Z,73nm,0.8s,mb5.2						
HHC				AMB	AMB		
	comp=Z,200nm,3.9s						
XAN	**Xi'an**	**27.23**	**291**	P	**P**	**07 20 30.4**	**0.0**
XAN				AMB	AMB		
	comp=Z,74nm,1.4s,mb4.9						
XAN				AMB	AMB		
	comp=Z,156nm,4.9s						
BTO	**Baotou**	**27.68**	**305**	eP	**P**	**07 20 33.7**	**-0.5**
PEA0B	**Petropavlovsk-**	**28.50**	**23**	eP	**P**	**07 20 41.9**	**+0.7**
PETK	**Petropavlovsk-**	**28.50**	**23**	P	**P**	**07 20 41.6**	**+0.4**
	comp=Z,3.8nm,0.6s,mb4.0,baz=300,slow=3.1,SNR=17						
PETK				ScP	ScP	07 26 30.5	-2.5
	comp=Z,6.8nm,0.8s,baz=172,slow=3.1,SNR=4.9						
PETK	**Petropavlovsk-**	**28.50**	**23**	P	**P**	**07 20 41.6**	**+0.4**
PETK				ScP	ScP	07 26 30.5	-2.5
PET	**Petropavlovsk**	**28.77**	**24**	eP	**P**	**07 20 44.0**	**+0.5**
PET				pmax	pmax		
	comp=Z,103nm,1.0s,mb5.2						
QIZ	**Qiongzhong**	**28.88**	**259**	P	**P**	**07 20 44.1**	**-0.9**
QIZ				AP		07 22 06.2	
QIZ				XP	sP	07 23 02.6	-1.1
QIZ				S	**S**	**07 24 59.1**	**-1.8**
QIZ				AMB	AMB		
	comp=Z,27nm,1.4s,mb4.5						
GYA	**Guiyang**	**29.57**	**275**⇓	iP	**P**	**07 20 51.3**	**+0.4**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,130nm,4.8s						
MYLDM	**Lahad Datu**	**30.35**	**226**	P	**P**	**07 21 00.6**	**+2.8**
	comp=Z,44nm,1.4s,comp=Z,1µm,mb4.7						
LBMI	**Labuha**	**30.70**	**205**	P	**P**	**07 21 02.6**	**+1.8**
	comp=Z,75nm,1.0s,comp=Z,2µm,mb5.1						
NRGR	**Nerungri**	**30.80**	**344**	eP	**P**	**07 21 01.8**	**+0.7**
NRGR				S	**S**	**07 25 21.8**	**-7.7**
NRGR				smax			
	comp=N,85nm,0.7s						
CLNS	**Chul'man**	**30.91**	**344**	eP	**P**	**07 21 03.5**	**+1.4**
CLNS				e		07 22 35.9	
CLNS				eS	**S**	**07 25 32.7**	**+1.4**
CLNS				e		07 30 35.5	
CLNS				pmax	pmax		
	comp=Z,39nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=N,24nm,0.9s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CLNS				smax			
	comp=E,32nm,1.2s						
CLNS				smax			
	comp=N,23nm,1.3s						
LZH	**Lanzhou**	**31.56**	**294**	⇑P	**P**	**07 21 08.5**	**+0.5**
LZH				AMB	AMB		
	comp=Z,173nm,1.3s,mb5.3						
LZH				AMB	AMB		
	comp=Z,430nm,4.8s						
CD2	**Chengdu**	**31.58**	**284**⇑	iP	**P**	**07 21 08.3**	**+0.1**
CD2				AMB	AMB		
	comp=Z,370nm,1.9s,mb5.5						
ULN	**Ulaanbaatar**	**32.42**	**317**	P	**P**	**07 21 16.4**	**+1.2**
	SNR=42						
ULN	**Ulaanbaatar**	**32.42**	**317**⇑	eP	**P**	**07 21 15.4**	**+0.3**
ULN				i *PP		07 22 36.9	
ULN	**Ulaanbaatar**	**32.42**	**317**	eP	**P**	**07 21 16.2**	**+1.0**
	comp=Z,102nm,0.8s,mb5.3						
ULN	**Ulaanbaatar**	**32.42**	**317**	P	**P**	**07 21 15.6**	**+0.5**
	comp=Z,161nm,1.1s,comp=Z,1µm,mb5.3						
SONM	**Songino Array**	**32.80**	**317**	P	**P**	**07 21 19.1**	**+0.7**
	comp=Z,33nm,0.8s,mb4.8,baz=125,slow=8.6,SNR=234						
SONM				PcP	PcP	07 23 49.6	+0.1
	comp=Z,6.4nm,0.7s,baz=140,slow=3.7,SNR=5.6						
SONM				ScP	ScP	07 26 47.2	-0.4
	comp=Z,8.9nm,0.8s,baz=126,slow=3.2,SNR=10						
KMI	**Kunming**	**33.30**	**274**	P	**P**	**07 21 24.0**	**+1.0**
KMI				AMB	AMB		
	comp=Z,89nm,1.3s,mb5.0						
KMI				AMB	AMB		
	comp=Z,326nm,3.3s						
YAK	**Yakutsk**	**34.89**	**352**	eP	**P**	**07 21 34.8**	**-1.0**
YAK				e*PP		07 23 02.3	
YAK				e		07 23 12.2	
YAK				e		07 23 54.7	
YAK				ePPP		07 23 57.0	
YAK				eS	**S**	**07 26 28.7**	**-3.0**
YAK				eSS	SS	07 29 24.5	-6.8
YAK				e		07 30 54.8	
YAK				pmax	pmax		
	comp=Z,46nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,26nm,1.5s						
YAK				pmax	pmax		
	comp=E,23nm,2.0s						
YAK				smax			
	comp=N,178nm,1.6s						
YAK				smax			
	comp=E,270nm,2.1s						
YAK	**Yakutsk**	**34.89**	**352**	eP	**P**	**07 21 35.6**	**-0.2**
	comp=E,59nm,0.9s,mb5.0						
BOD	**Bodaibo**	**35.07**	**336**	eP	**P**	**07 21 37.5**	**+0.1**
BOD				pmax	pmax		
	comp=Z,55nm,1.0s,mb4.9						
GTA	**Gaotai**	**35.08**	**300**⇓	iP	**P**	**07 21 38.3**	**+0.6**
GTA				AMB	AMB		
	comp=Z,119nm,1.1s,mb5.2						
GTA				AMB	AMB		
	comp=Z,662nm,8.1s						
KDI	**Kendari**	**35.72**	**211**	P	**P**	**07 21 45.9**	**+2.5**
	comp=Z,24nm,1.2s,comp=Z,4µm,mb4.5						
ZAK	**Zakamensk**	**35.75**	**319**⇑	iP	**P**	**07 21 43.5**	**+0.3**
ZAK				e		07 31 03.6	
ZAK				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.0						
IRK	**Irkutsk**	**36.04**	**322**⇓	iP	**P**	**07 21 39.8**	**-5.7**
IRK				pmax	pmax		
	comp=Z,104nm,1.2s,mb5.1						
SEY	**Seymchan**	**36.06**	**10**⇑	eP	**P**	**07 21 46.2**	**+0.6**
TLY	**Talaya**	**36.12**	**321**	P	**P**	**07 21 47.5**	**+1.3**
	comp=Z,229nm,0.6s,mb5.8,SNR=32						
TLY	**Talaya**	**36.12**	**321**	P	**P**	**07 21 47.5**	**+1.3**
	SNR=35						
TLY	**Talaya**	**36.12**	**321**d	iP	**P**	**07 21 47.1**	**+0.9**
TLY				pmax	pmax		
	comp=Z,53nm,1.2s,mb4.8						
TLY	**Talaya**	**36.12**	**321**	eP	**P**	**07 21 47.2**	**+1.0**
	comp=Z,38nm,0.9s,mb4.8						
SBUM	**Sibu**	**36.55**	**231**	P	**P**	**07 21 51.3**	**+0.9**
MOY	**Mondy**	**37.60**	**320**	eP	**P**	**07 21 58.7**	**+0.3**
MOY				pmax	pmax		
	comp=Z,60nm,2.7s,mb4.5						
PMG	**Port Moresby**	**37.66**	**168**⇑	iP	**P**	**07 21 54.5**	**-4.9**
KAPI	**Kappang**	**37.99**	**214**	P	**P**	**07 22 00.3**	**-1.9**
	comp=Z,17nm,1.0s,mb4.4,baz=5.4,slow=12,SNR=5.8						
KAPI	**Kappang**	**37.99**	**214**	P	**P**	**07 22 00.3**	**-1.9**
KAPI	**Kappang**	**37.99**	**214**	P	**P**	**07 22 02.2**	**0.0**
	comp=Z,14nm,1.1s,mb4.3						
CHG	**Chiang Mai**	**38.53**	**266**	⇓P	**P**	**07 22 06.8**	**+0.3**
	comp=Z,76nm,0.8s,mb5.2						
CHTO	**Chiang Mai**	**38.53**	**266**	P	**P**	**07 22 07.1**	**+0.6**
	SNR=20						
CHTO	**Chiang Mai**	**38.53**	**266**	eP	**P**	**07 22 06.3**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,122nm,1.3s,mb5.2						
CHTO	**Chiang Mai**	**38.53**	**266**	eP	**P**	**07 22 06.3**	**-0.3**
	comp=Z,122nm,1.3s,mb5.2						
CHTO	**Chiang Mai**	**38.53**	**266**	P	**P**	**07 22 06.7**	**+0.2**
	comp=Z,87nm,1.1s,comp=Z,1µm,mb5.1						
CMAR	**Chiang Mai Arr**	**38.66**	**265**	P	**P**	**07 22 08.1**	**+0.4**
	comp=Z,22nm,0.9s,mb4.6,baz=56,slow=7.9,SNR=77						
CMAR				PcP	PcP	07 24 08.0	+0.2
	comp=Z,6.1nm,0.8s,baz=92,slow=1.1,SNR=7.7						
CMAR				ScP	ScP	07 27 09.9	+0.2
	comp=Z,5.0nm,0.9s,baz=49,slow=2.4,SNR=11						
CMAR	**Chiang Mai Arr**	**38.66**	**265**⇑	eP	**P**	**07 22 02.0**	**-5.6**
NST	**Nakhon Sawan**	**38.71**	**260**	P	**P**	**07 22 09.0**	**+1.0**
STKI	**Sintang**	**38.79**	**229**	P	**P**	**07 22 09.1**	**+0.4**
BDT	**Bhumibol Dam**	**39.06**	**263**	P	**P**	**07 22 11.0**	**+0.1**
	comp=Z,33nm,0.8s,mb4.8						
KAKA	**Kakadu**	**40.93**	**191**	eP	x	07 22 08.2	
	comp=Z,14nm,0.8s						
BATI	**Baumata**	**40.94**	**205**	P	**P**	**07 22 25.1**	**-0.8**
	comp=Z,38nm,0.5s,mb5.1,baz=102,slow=1.7,SNR=4.2						
COEN	**Coen**	**41.64**	**175**	P	**P**	**07 22 32.4**	**+0.9**
HVS	**Khovu-Aksy**	**41.70**	**317**c	iP	**P**	**07 22 32.3**	**+0.7**
HVS				pmax	pmax		
	comp=Z,599nm,1.0s,mb6.0						
LSA	**Lhasa**	**42.54**	**285**	P	**P**	**07 22 40.2**	**+1.6**
LSA	**Lhasa**	**42.54**	**285**	eP	**P**	**07 22 40.3**	**+1.7**
LSA				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.0						
LSA	**Lhasa**	**42.54**	**285**	eP	**P**	**07 22 40.3**	**+1.7**
	comp=Z,39nm,0.6s,mb5.0						
SHL	**Shillong**	**42.76**	**278**⇓	iP	**P**	**07 22 41.0**	**+0.7**
SHL				i x	x	07 23 23.0	
KMMI	**Kalianget**	**42.78**	**220**	P	**P**	**07 22 41.3**	**+0.7**
	comp=Z,57nm,1.3s,mb4.8						
KHKI	**Kahang-Kahang**	**42.97**	**217**	P	**P**	**07 22 41.7**	**-0.4**
	comp=Z,115nm,1.1s,comp=Z,973nm,mb5.2						
BILL	**Bilibino**	**43.23**	**14**c	iP	**P**	**07 22 43.5**	**+0.1**
BILL				pmax	pmax		
	comp=Z,167nm,0.9s,mb5.5						
BILL	**Bilibino**	**43.23**	**14**	eP	**P**	**07 22 43.9**	**+0.6**
	comp=Z,31nm,0.8s,mb4.8						
KULM	**Kulim**	**43.49**	**246**	P	**P**	**07 22 47.0**	**+0.7**
	comp=Z,72nm,1.1s,mb5.0						
IPM	**Ipoh**	**43.66**	**245**	P	**P**	**07 22 47.7**	**+0.1**
	comp=Z,68nm,1.3s,mb4.9						
TIXI	**Tiksi**	**44.31**	**355**⇓	iP	**P**	**07 22 51.1**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,38nm,1.3s,mb4.7						
TIXI	**Tiksi**	**44.31**	**355**	eP	**P**	**07 22 51.7**	**0.0**
	comp=Z,22nm,0.8s,mb4.6						
WMQ	**Urumqi**	**44.52**	**305**	P	**P**	**07 22 54.5**	**+0.7**
WMQ				AMB	AMB		
	comp=Z,258nm,1.2s,mb5.5						
SJI	**Sawahan**	**44.60**	**222**	P	**P**	**07 22 54.2**	**-0.6**
	comp=Z,39nm,0.9s,mb4.8						
BJII	**Banjamegara**	**45.53**	**224**	P	**P**	**07 23 05.3**	**+3.3**
	comp=Z,26nm,1.9s,mb4.3						
TAPN	**Taplejung**	**45.98**	**282**	eP	**P**	**07 23 06.5**	**+1.2**
ODAN	**Odare**	**46.37**	**282**	eP	**P**	**07 23 09.3**	**+1.0**
UNV	**Unalaska Valle**	**46.73**	**41**	eP	**P**	**07 23 09.7**	**-0.9**
	comp=Z,34nm,0.4s,mb5.1						
RAMN	**Ramite**	**47.03**	**282**	eP	**P**	**07 23 14.3**	**+1.0**

PPI Padang Panjang 47.19 240 P **P** **07 23 14.6 0.0**
comp=Z,38nm,1.2s,comp=Z,945nm,mb4.7
JIRN Jiri 47.22 283 *eP* **P** **07 23 16.3 +1.6**
comp=Z,468nm,0.7s,mb6.0
PDSI Padang 47.42 240 P **P** **07 23 15.4 -1.0**
comp=Z,57nm,1.0s,mb4.9
GUN Gumba 47.43 283 *eP* **P** **07 23 17.8 +1.5**
ZAA0 Zalesovo Array 47.62 319 *eP* **P** **07 23 16.7 -0.6**
ZALV Zalesovo Beam 47.62 319 P **P** **07 23 17.1 -0.3**
comp=Z,38nm,0.5s,mb5.0,baz=100,slow=6.8,SNR=149
ZALV PcP PcP 07 24 37.1 -0.7
comp=Z,20nm,0.8s,baz=101,slow=4.7,SNR=5.0
ZALV Zalesovo Beam 47.62 319 P **P** **07 23 17.1 -0.2**
ZALV 07 24 37.1
ZALV pmax pmax
comp=Z,38nm,0.5s,mb5.0
KSI Kapahiang 47.65 235 P **P** **07 23 17.9 -0.2**
comp=Z,107nm,0.6s,comp=Z,6µm,mb5.3
WRAB Tennant Creek 47.77 187 P **P** **07 23 17.0 -1.8**
comp=Z,174nm,0.5s,mb5.6,SNR=36
WRAB Tennant Creek 47.77 187 *eP* **P** **07 23 17.7 -1.1**
WRAB pmax pmax
comp=Z,9.0nm,0.5s,mb4.4
WRAB Tennant Creek 47.77 187 *eP* **P** **07 23 17.7 -1.1**
comp=Z,9.3nm,0.5s,mb4.4
WRAB Tennant Creek 47.77 187 P **P** **07 23 17.5 -1.3**
comp=Z,39nm,1.0s,mb4.7
WB2 Warramunga Arr 47.78 187 ⇓*iP* **P** **07 23 17.8 -1.1**
WB2 *e* pP 07 24 49.4 -1.4
WB2 *eS* **S** **07 29 33.6 -5.7**
PKI Pulchoki 47.91 283 *eP* **P** **07 23 20.7 +0.8**
KKN Kakani 47.97 283 *eP* **P** **07 23 21.3 +0.9**
CTA Charters Tower 48.01 172 *eP* pP 07 24 54.0 +1.3
comp=Z,5.4nm,0.8s
CTA Charters Tower 48.01 172 P **P** **07 23 20.4 -0.2**
comp=Z,7.6nm,1.0s,mb4.0,baz=355,slow=7.9,SNR=4.5
CTA pP pP 07 24 52.8 0.0
comp=Z,6.3nm,0.7s,baz=4.6,slow=7.6,SNR=3.3
CTA Charters Tower 48.01 172 P **P** **07 23 20.4 -0.2**
CTA *PP pP 07 24 52.8 +0.1
CTA pmax pmax
comp=Z,8.0nm,1.0s
CTA Charters Tower 48.01 172 P **P** **07 23 20.4 -0.2**
CTA pP pP 07 24 52.8 0.0
DMN Daman 48.16 283 *eP* **P** **07 23 22.8 +1.0**
comp=Z,159nm,0.5s,mb5.6
GSI Gunungsitoli 48.31 244 P **P** **07 23 23.3 +0.2**
comp=Z,204nm,1.1s,comp=Z,2µm,mb5.4
MK31 Makanchi Array 48.46 309 *eP* **P** **07 23 24.2 +0.5**
MKAR Makanchi Array 48.46 309 P **P** **07 23 24.3 +0.5**
comp=Z,81nm,0.9s,mb5.1,baz=91,slow=11,SNR=86
MKAR PcP PcP 07 24 41.0 0.0
comp=Z,21nm,0.9s,baz=125,slow=4.2,SNR=2.7
MKAR ScP ScP 07 27 48.3 -1.0
comp=Z,3.6nm,0.5s,baz=85,slow=5.0,SNR=8.3
MKAR Makanchi Array 48.46 309 P **P** **07 23 24.3 +0.5**
MKAR PcP PcP 07 24 41.0 0.0
MKAR ScP ScP 07 27 48.3 -1.0
GKN Gorkha 48.48 284 *eP* **P** **07 23 25.0 +0.8**
BOK Bokaro 48.48 278 *eP* **P** **07 23 23.7 -0.6**
NVS Novosibirsk 48.70 320 *iP* **P** **07 23 25.1 -0.2**
NVS *i* 07 24 40.8
NVS *e* 07 25 24.0
NVS *i* 07 25 49.3
NVS *i* 07 29 49.6
NVS *i* 07 32 19.4
NVS pmax pmax
comp=N,35nm,1.3s
NVS pmax pmax
comp=E,120nm,1.3s
NVS pmax pmax
comp=Z,128nm,1.3s,mb5.1
DANN Dangsing 49.15 285 *eP* **P** **07 23 30.5 +1.3**
KOLN Koldanda 49.42 284 *eP* **P** **07 23 32.2 +1.0**
SDPT Sand Point 50.44 40 *eP* **P** **07 23 37.5 -0.7**
KURK Kurchatov 51.04 314 P **P** **07 23 42.5 -0.2**
comp=Z,2µm,0.7s,mb6.4,SNR=46
KURK Kurchatov 51.04 314 P **P** **07 23 43.2 +0.5**
SNR=41
KURK Kurchatov 51.04 314 P **P** **07 23 43.0 +0.3**
comp=Z,112nm,0.6s,mb5.4,baz=91,slow=8.2,SNR=119
KURK S **S** **07 30 20.9 -2.4**
comp=Z,1.3nm,0.7s,baz=103,slow=40,SNR=3.9
KURK Kurchatov 51.04 314 P **P** **07 23 43.0 +0.3**
KURK S **S** **07 30 20.9 -2.4**
KURK pmax pmax
comp=Z,112nm,0.6s,mb5.4
KURK smax
comp=N,1.0nm,0.7s
KURK Kurchatov 51.04 314 *eP* **P** **07 23 42.8 0.0**
comp=N,462nm,1.2s,mb5.7
ASAR Alice Springs 51.51 187 P **P** **07 23 45.3 -1.1**
comp=N,9.6nm,0.4s,mb4.5,baz=0.9,slow=5.6,SNR=344
ASAR PcP PcP 07 24 51.8 -0.7
comp=N,6.7nm,0.8s,baz=12,slow=4.1,SNR=8.1
ASAR S **S** **07 30 25.6 -4.5**
comp=N,0.5nm,0.4s,baz=16,slow=18,SNR=7.9
ASAR Alice Springs 51.51 187 P **P** **07 23 45.3 -1.1**
ASAR 07 24 51.8
ASAR S **S** **07 30 25.6 -4.5**
ASAR pmax pmax
comp=Z,10.0nm,0.4s
ASAR smax
comp=N,1.0nm,0.4s
LGTI Lohaghat 51.89 287 *eP* **P** **07 23 51.1 +1.9**
PTH Pithoragarh 51.89 287 *eP* **P** **07 23 50.4 +1.2**
PTH *ex* x 07 24 33.6
MBWA Marble Bar 52.45 204 *eP* **P** **07 23 51.6 -1.7**
comp=N,31nm,1.2s,mb4.5
MBWA Marble Bar 52.45 204 P **P** **07 23 53.3 +0.1**
comp=N,36nm,1.7s,mb4.4
VIS Vishakhapatnam 52.74 272 ⇓*iP* **P** **07 23 56.3 +0.8**
VIS AMb AMB 07 23 57.9
comp=Z,115nm,1.1s,mb5.1
VIS *i* x x 07 24 39.1
ULHL Ulahol 52.94 303 P **P** **07 23 57.9 +1.3**
SNR=9.3
TKM2 Tokmak 2 53.35 304 *eP* **P** **07 24 00.8 +1.3**
TKM2 pmax pmax
comp=Z,116nm,1.0s,mb5.2
TKM2 Tokmak 2 53.35 304 P **P** **07 24 00.9 +1.4**
SNR=7.5
TKM2 Tokmak 2 53.35 304 *eP* **P** **07 24 00.8 +1.3**
comp=Z,116nm,1.0s,mb5.2
KSH Kashi 53.48 300 P **P** **07 24 02.8 +2.3**
KSH PCP PcP 07 25 02.2 +2.3
KSH AP pP 07 25 37.0 +1.9
KSH PP PP 07 26 11.5 +4.2
KSH XP sP 07 26 28.1 +0.3
KSH PPP 07 27 35.9
KSH SCP ScP 07 28 13.7 +2.5
KSH PCS PcS 07 29 00.3 +0.6
KSH S **S** **07 30 57.7 +1.5**
KSH SCS ScS 07 32 59.2 0.0
KSH XS sS 07 33 45.9 -0.4
KSH SS SS 07 34 47.9 +3.1
KSH AMB AMB
comp=Z,343nm,1.1s,mb5.6
KSH AMB AMB
comp=Z,1µm,2.8s,mb5.8
DDI Dehra Dun 53.53 289 *ex* x 07 23 52.3
DDI *ex* x 07 24 33.5
KZA Kyzart 53.70 303 P **P** **07 24 04.2 +2.2**
SNR=52
SVW2 Sparrevohn 53.78 33 *eP* **P** **07 24 02.3 +0.1**
KBK Karagaybulak 53.85 304 P **P** **07 24 04.4 +1.3**
SNR=36
CHMS Chumysh 53.96 305 P **P** **07 24 04.3 +0.4**
SNR=34
FRU Bishkek 54.08 304 ⇓*iP* **P** **07 24 05.8 +1.1**
FRU pmax pmax
comp=Z,230nm,1.7s,mb5.2
SMLA Simla 54.08 290 ⇓*iP* **P** **07 24 05.0 +0.1**
SMLA AMb AMB 07 24 06.7
comp=Z,189nm,0.6s,mb5.6
SMLA *i* x x 07 24 46.8
USP Ospenovka 54.11 305 P **P** **07 24 05.7 +0.8**
SNR=28
AAK Ala-Archa 54.19 304 P **P** **07 24 06.4 +1.0**
comp=Z,424nm,1.3s,mb5.6,SNR=23
AAK Ala-Archa 54.19 304 *eP* **P** **07 24 06.3 +0.9**
AAK pmax pmax
comp=Z,56nm,0.7s,mb5.0
AAK Ala-Archa 54.19 304 *eP* **P** **07 24 06.3 +0.8**
comp=Z,56nm,0.7s,mb5.0
AAK Ala-Archa 54.19 304 P **P** **07 24 06.4 +1.0**
comp=Z,40nm,1.3s,mb4.6
UCH Uchtor 54.22 304 P **P** **07 24 07.8 +2.1**
SNR=16
NDI New Delhi 54.65 287 *eP* **P** **07 24 08.0 -0.9**
EKS2 Erkin-Say 54.71 304 P **P** **07 24 10.0 +0.9**
SNR=34
EKS2 Erkin-Say 54.71 304 *eP* **P** **07 24 09.7 +0.6**
comp=Z,55nm,0.9s,mb4.9
DLH Dalhousie 54.76 292 *eP* **P** **07 24 09.0 -0.6**
DLH *ex* x 07 24 52.0
AML Almayashu 54.84 304 P **P** **07 24 12.0 +1.9**
SNR=8.4
THN Thein Dam 54.98 292 *eP* **P** **07 24 09.4 -1.9**
KDAK Kodiak Island 55.01 37 P **P** **07 24 10.0 -0.9**
comp=Z,404nm,1.1s,mb5.7,SNR=16
KDAK Kodiak Island 55.01 37 *eP* **P** **07 24 10.7 -0.2**
comp=Z,122nm,1.2s,mb5.1
NGP Nagpur 55.31 277 *eP* **P** **07 24 12.5 -1.2**
NGP AMb AMB 07 24 14.4
comp=Z,174nm,1.6s,mb5.1
PPLA Purkeypile 55.58 31 *eP* **P** **07 24 15.9 +1.0**
comp=Z,96nm,1.3s,mb5.0
CHUM Lake Minchumin 55.63 30 *eP* **P** **07 24 16.4 +1.2**
comp=Z,100nm,1.4s,mb5.0
VOSK Vostochnaya 55.80 317 P **P** **07 24 16.3 -0.3**
VOSK pmax pmax
comp=Z,113nm,1.4s,mb5.0
BHPL Bhopal 56.05 280 ⇓*iP* **P** **07 24 18.5 -0.3**
BHPL AMb AMB 07 24 19.6
comp=Z,80nm,0.5s,mb5.3
BVA0 Borovoye Array 56.15 317 *iP* **P** **07 24 19.0 0.0**
BVA0 pmax pmax
comp=Z,21nm,0.5s,mb4.7
BVAR Borovoye Array 56.15 317 P **P** **07 24 19.4 +0.4**
comp=Z,125nm,0.6s,mb5.4,baz=91,slow=6.8,SNR=397
BVAR S **S** **07 31 29.9 -0.8**
comp=Z,3.2nm,0.9s,baz=90,slow=10,SNR=4.2
BVAR Borovoye Array 56.15 317 P **P** **07 24 19.4 +0.4**
BVAR S **S** **07 31 29.9 -0.8**
BVAR pmax pmax
comp=Z,125nm,0.6s
BVAR smax
comp=N,3.0nm,0.9s
BRVK Borovoye 56.21 317 P **P** **07 24 19.7 +0.3**
comp=N,1µm,1.2s,mb6.0,SNR=61
BRVK Borovoye 56.21 317 P **P** **07 24 20.1 +0.7**
SNR=55
KTH Kantishna Hill 56.22 30 *eP* **P** **07 24 19.4 +0.2**
comp=N,22nm,0.9s,mb4.5
KTH *e*ScP ScP 07 28 21.6 -1.1
TRF Thorofare Moun 56.49 30 *eP* **P** **07 24 21.6 +0.4**
comp=N,44nm,0.9s,mb4.8
TRF *e*ScP ScP 07 28 23.0 -0.9
SEW Seward 56.72 34 *eP* **P** **07 24 22.4 -0.4**
comp=N,108nm,1.1s,mb5.1
SEW *e*ScP ScP 07 28 24.4 -0.6
NIL Nilore 56.72 294 *eP* **P** **07 24 24.1 +0.8**
NIL pmax pmax
comp=Z,54nm,0.6s,mb5.0
NIL Nilore 56.72 294 *eP* **P** **07 24 24.1 +0.8**
comp=Z,54nm,0.6s,mb5.0
COLD Coldfoot 56.90 26 *eP* **P** **07 24 25.0 +1.1**
comp=Z,42nm,0.9s,mb4.8
COLD *e*ScP ScP 07 28 25.5 -0.2
PMR Palmer 56.92 33 *eP* **P** **07 24 23.4 -0.8**
PMR pmax pmax
comp=Z,57nm,0.9s,mb4.9
PMR Palmer 56.92 33 *eP* **P** **07 24 23.4 -0.8**
comp=Z,57nm,0.9s,mb4.9
KK31 Karatay Array 57.03 305 P **P** **07 24 25.4 +0.2**
KK31 pmax pmax
comp=Z,135nm,0.7s,mb5.4
HYB Hyderabad 57.08 273 *eP* **P** **07 24 26.5 +0.5**
HYB pmax pmax
comp=Z,90nm,1.0s,mb5.0
HYB Hyderabad 57.08 273 *iP* **P** **07 24 26.5 +0.5**
HYB *e*PcP PcP 07 25 09.0 -5.4
HYB *e*pP pP 07 25 56.0 -6.4
HYB Hyderabad 57.08 273 *eP* **P** **07 24 26.5 +0.5**
comp=Z,90nm,1.0s,mb5.0
MCK McKinley 57.11 30 *eP* **P** **07 24 25.3 -0.2**
MCK pmax pmax
comp=Z,143nm,1.0s,mb5.3
MCK McKinley 57.11 30 *eP* **P** **07 24 25.3 -0.2**
comp=Z,143nm,1.0s,mb5.2
AKL Akola 57.25 278 *eP* **P** **07 24 28.0 +0.8**
AKL AMb AMB 07 24 29.9
comp=Z,220nm,1.1s,mb5.4
AJM Ajmer 57.45 285 ⇓*iP* **P** **07 24 28.2 -0.3**
AJM AMb AMB 07 24 31.0
comp=Z,96nm,1.4s,mb4.9
COLA College 57.65 29*diP* **P** **07 24 29.8 +0.7**
COLA College 57.65 29 *eP* **P** **07 24 29.7 +0.6**
comp=Z,32nm,0.9s,mb4.7
ARMA Armidale 58.98 168 *eP* **P** **07 24 38.7 +0.2**
POHA Pohakuloa 59.04 83 *eP* **P** **07 24 40.0 +0.6**
comp=Z,144nm,0.9s,mb5.3
KHU Kahuku 59.15 83 *eP* **P** **07 24 40.7 +0.6**
FORT Forrest 59.35 192 *eP* **P** **07 24 39.7 -1.4**
comp=Z,48nm,0.5s,mb5.1
STKA Stephens Creek 59.38 178 *eP* **P** **07 24 40.3 -0.9**
comp=Z,6.5nm,0.5s,mb4.2
STKA *e*S **S** **07 32 07.3 -5.1**
STKA Stephens Creek 59.38 178 P **P** **07 24 40.5 -0.8**
comp=Z,7.8nm,0.5s,mb4.3,baz=341,slow=7.6,SNR=21
STKA S **S** **07 32 06.6 -5.8**
comp=Z,4.7nm,1.1s,baz=171,slow=17,SNR=3.6
MENT Mentasta 59.45 31 *eP* **P** **07 24 42.1 +0.8**
KBL Kabul 59.90 296 *eP* **P** **07 24 44.9 +0.1**
KBL pmax pmax
comp=Z,153nm,1.0s,mb5.4
KBL Kabul 59.90 296 *eP* **P** **07 24 44.9 +0.1**
comp=Z,153nm,1.0s,mb5.4
EGAK Eagle 60.51 29 *eP* **P** **07 24 48.1 -0.3**
comp=Z,15nm,0.6s,mb4.6
POO Poona 60.82 277 *eP* **P** **07 24 51.2 0.0**
POO AMb AMB 07 24 53.2
comp=Z,207nm,1.1s,mb5.5
POO *i* x x 07 25 33.6
KOD Kodaikanal 60.97 266 *eP* **P** **07 24 52.9 +0.6**
KOD AMb AMB 07 24 54.8
comp=Z,129nm,1.6s,mb5.1
KAD Karad 60.98 275 ⇓*iP* **P** **07 24 52.0 -0.3**
KAD AMb AMB 07 24 54.8
comp=Z,171nm,1.3s,mb5.3
DAWY Dawson 61.33 30 *eP* **P** **07 24 54.2 +0.5**
SVE Sverdlovsk 61.42 322 ⇑*eP* **P** **07 24 54.9 +0.4**
SVE pmax pmax
comp=Z,83nm,1.0s,mb5.1
PNL Peninsula 61.80 35 *eP* **P** **07 24 57.0 +0.1**
comp=Z,28nm,0.8s,mb4.8
TRD Trivandrum 62.19 265 *eP* **P** **07 25 00.1 -0.1**
TRD AMb AMB 07 25 01.8
comp=Z,90nm,0.7s,mb5.3
ARU Arti 62.62 322 P **P** **07 25 02.3 0.0**
comp=Z,875nm,1.2s,mb6.2,SNR=28
ARU Arti 62.62 322*diP* **P** **07 25 01.7 -0.6**
ARU *e* 07 25 33.5
ARU *eS* **S** **07 32 51.4 -0.8**
ARU *e*SS SS 07 37 03.6 -3.3
ARU pmax pmax
comp=Z,166nm,1.2s,mb5.4
ARU Arti 62.62 322 *eP* **P** **07 25 02.2 -0.1**
comp=Z,52nm,1.5s,mb4.8
KLBR Kellerberin 62.73 201 *eP* **P** **07 25 02.4 -1.0**
comp=Z,28nm,0.9s,mb4.8
BHJ Bhuj 62.78 283 *eP* **P** **07 25 03.5 -0.5**
BHJ *i* x x 07 25 46.8
SOKR Solikamsk 63.03 325*diP* **P** **07 25 05.5 +0.6**
SOKR pmax pmax
comp=Z,80nm,1.0s,mb5.2
AB31 Akbulak array 63.15 314 P **P** **07 25 05.5 -0.4**
AB31 pmax pmax
comp=Z,59nm,0.6s,mb5.3
INK Inuvik 63.22 25 *eP* **P** **07 25 05.6 -0.4**
comp=Z,10nm,1.3s,mb4.2
NWAO Narrogin (SRO) 64.13 201 P **P** **07 25 11.8 -0.5**
comp=Z,54nm,0.8s,mb5.1,baz=27,slow=4.6,SNR=16
NWAO Narrogin (SRO) 64.13 201 P **P** **07 25 11.9 -0.4**
NWAO pmax pmax
comp=Z,54nm,0.8s
TOO Toolangi 65.25 175 *eP* **P** **07 25 19.3 0.0**
DLBC Dease Lake 66.78 35 P **P** **07 25 29.9 +1.2**
comp=Z,26nm,0.9s,mb4.8,baz=288,slow=6.7,SNR=30
DLBC Dease Lake 66.78 35 *eP* **P** **07 25 29.7 +1.0**
ABKT Ailbek 67.41 302 P **P** **07 25 33.8 +0.8**
comp=Z,206nm,1.2s,mb5.6,SNR=10
ALE Alert 69.36 3 P **P** **07 25 45.6 +1.5**
comp=Z,105nm,0.8s,mb5.4,SNR=6.3
APA Apatity 70.61 337 ⇓*iP* **P** **07 25 52.0 +0.3**
APA pmax pmax
comp=Z,78nm,1.0s,mb5.2
KLMR Klimovskoe 70.94 329 *iP* **P** **07 25 53.4 -0.4**
KLMR pmax pmax
comp=Z,83nm,1.5s,mb5.0
KEV Kevo 71.63 340 *ep* **P** **07 25 57.2 -0.5**
comp=Z,3.4nm,0.4s,mb4.2
WBK Wadi Bani Khal 72.17 287 P **P** **07 26 02.6 +0.9**
SNR=13
ARCES ARCESS Array B 72.20 340 P **P** **07 26 01.4 +0.3**
comp=Z,17nm,0.5s,mb4.8,baz=76,slow=8.8,SNR=83
ARCES ARCESS Array B 72.20 340 P **P** **07 26 01.4 +0.4**
ARCES pmax pmax
comp=Z,17nm,0.5s
YKA Yellowknife Ar 72.47 28 P **P** **07 26 02.4 -0.2**
comp=Z,29nm,0.7s,mb4.9,baz=295,slow=5.8,SNR=67
YKA pP pP 07 27 43.5 -1.6
comp=Z,1.6nm,0.6s,baz=295,slow=5.9,SNR=1.6
YKA Yellowknife Ar 72.47 28 ⇑*eP* **P** **07 26 02.4 -0.3**
YKA Yellowknife Ar 72.47 28 P **P** **07 26 02.4 -0.2**
YKA pP pP 07 27 43.5 -1.6
BIDO Bidbid 72.52 288 P **P** **07 26 04.8 +1.1**
SNR=14
SMDO Samad 72.77 287 P **P** **07 26 06.0 +0.8**
SNR=6.2
JMDO Jabal Madar 73.00 287 P **P** **07 26 07.0 +0.5**
SNR=7.5
HOQ Hoqain 73.19 288 P **P** **07 26 08.1 +0.5**
SNR=22
JOF Joensuu 73.54 333 *ep* **P** **07 26 07.9 -1.0**
comp=Z,13nm,0.4s,mb4.8
JOF Joensuu 73.54 333 *eP* **P** **07 26 07.9 -1.0**
JOF pmax pmax
comp=Z,13nm,0.4s,mb4.8
BSY Bisya 73.61 287 P **P** **07 26 10.4 +0.4**
SNR=20
HATD Hatta, Dubai 73.68 290 P **P** **07 26 11.2 +0.8**
SNR=7.3
VRHR Novokhopersk 73.76 319 *eP* **P** **07 26 09.8 -0.5**
VRHR pmax pmax
comp=Z,60nm,0.9s,mb5.1
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=E,60nm,1.2s
PGC Sidney 73.77 43 *eP* **P** **07 26 11.2 +0.8**
comp=E,131nm,1.2s,mb5.3
ARQ Araqi 73.95 288 P **P** **07 26 12.6 +0.7**
SNR=19
MOS Moscow 73.97 325 *eP* **P** **07 26 10.2 -1.2**
MOS pmax pmax
comp=Z,200nm,1.4s,mb5.5
MOS pmax pmax
comp=Z,136nm,1.2s,mb5.3
NLWA Neilton Lookou 74.02 45 ⇑P **P** **07 26 13.3 +1.4**
baz=74
NLWA Neilton Lookou 74.02 45 *eP* **P** **07 26 13.1 +1.2**
comp=Z,63nm,0.9s,mb5.2
NLWA *ep*P pP 07 28 01.7 +6.8
NLWA *es*P sP 07 28 43.8 -1.5
TRO Tromso 74.03 342 *eP* **P** **07 26 11.5 0.0**
URZ Urewera 74.38 150 P **P** **07 26 12.9 -1.0**
comp=Z,5.4nm,0.5s,mb4.3,baz=348,slow=5.5,SNR=6.2
MBW Mount Baker 74.65 43 P **P** **07 26 16.4 +0.9**
OBN Obninsk 74.79 325*diP* **P** **07 26 15.6 -0.5**
OBN pmax pmax
comp=Z,116nm,1.2s,mb5.3
OBN Obninsk 74.79 325 *eP* **P** **07 26 16.0 -0.1**
comp=Z,81nm,1.0s,mb5.2
VSR Storozhevoye 75.11 320 *eP* **P** **07 26 17.6 -0.4**
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,50nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s,mb4.8
VORD Divnogorie 75.15 320 *eP* **P** **07 26 17.5 -0.7**
VORD pmax pmax
comp=Z,60nm,1.0s,mb5.1
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,60nm,1.0s
C05A Tolt Reservoir 75.24 44 ⇑P **P** **07 26 19.2 +0.4**
baz=75
MPOR Mary's Peak 75.40 47 P **P** **07 26 21.1 +1.4**
A07A Ashnola River, 75.45 42 ⇓P **P** **07 26 20.5 +0.6**
baz=75
TDL Tradedollar La 75.48 45 P **P** **07 26 21.3 +1.2**
COR Corvallis 75.53 47 *eP* **P** **07 26 21.7 +1.2**
COR pmax pmax
comp=Z,52nm,1.1s,mb5.0
COR Corvallis 75.53 47 P **P** **07 26 21.7 +1.2**
comp=Z,52nm,1.1s,mb5.0
LON Longmire 75.56 45 P **P** **07 26 20.8 +0.2**
LON pmax pmax
comp=Z,22nm,1.1s,mb4.6
LON Longmire 75.56 45 *eP* **P** **07 26 20.8 +0.2**
comp=Z,22nm,1.1s,mb4.6
KAF Kangasniemi 75.95 334 *ep* **P** **07 26 20.8 -1.6**
comp=Z,18nm,0.4s,mb5.0,baz=54,slow=5.3
KAF Kangasniemi 75.95 334 *eP* **P** **07 26 20.8 -1.6**
KAF pmax pmax
comp=Z,18nm,0.4s,mb5.0
KIV Kislovodsk 76.08 312 P **P** **07 26 24.3 +0.8**
comp=Z,340nm,1.3s,mb5.7,SNR=7.2
KIV Kislovodsk 76.08 312 ⇓P **P** **07 26 23.6 +0.1**
SNR=14
KIV Kislovodsk 76.08 312*diP* **P** **07 26 23.5 0.0**
KIV pmax pmax
comp=Z,131nm,1.6s,mb5.2
KIV Kislovodsk 76.08 312 *eP* **P** **07 26 23.8 +0.2**
comp=Z,187nm,1.5s,mb5.4
TBM Table Mountain 76.13 44 P **P** **07 26 24.4 +0.6**
F05A White Salmon 76.16 45 ⇓P **P** **07 26 24.6 +0.7**
baz=76
EBG Ellensburg 76.27 44 P **P** **07 26 25.5 +1.0**
HOOD Mount Hood Mea 76.28 46 *eP* **P** **07 26 25.5 +0.9**
comp=Z,97nm,1.0s,mb5.3
HOOD *ep*P pP 07 28 08.6 +0.2
HOOD *es*P sP 07 28 56.9 -1.7
IRO Indian Ridge 76.46 47 P **P** **07 26 26.4 +0.8**
MSZ Milford Sound 76.54 160 *eP* **P** **07 26 29.0 +3.2**
HUMO Hull Mountain 76.59 49 *eP* **P** **07 26 26.5 +0.1**
comp=Z,48nm,1.4s,mb4.8
BKCOR Black Crater 76.69 47 P **P** **07 26 27.7 +0.8**
RPZ Rata Peaks 76.70 157 P **P** **07 26 26.6 -0.1**
comp=Z,8.6nm,0.8s,mb4.3,baz=80,slow=9.6,SNR=3.6
HAWA Hanford 77.13 44 *eP* **P** **07 26 29.7 +0.4**
comp=Z,40nm,1.1s,mb4.9
YBH Yreka Blue Hor 77.14 50 *eP* **P** **07 26 30.1 +0.7**
YBH pmax pmax
comp=Z,32nm,0.8s
YBH Yreka Blue Hor 77.14 50 *eP* **P** **07 26 30.1 +0.7**
comp=Z,32nm,0.8s,mb4.9
MLZ Mavora Lakes 77.23 160 P **P** **07 26 20.6 -9.0**
VIPM Ingram Point 77.29 46 P **P** **07 26 31.2 +1.0**
E08A Dider Farm, El 77.38 44 ⇑P **P** **07 26 31.0 +0.4**
baz=77
EAZ Earnscleugh 77.47 159 *eP* **P** **07 26 27.5 -3.4**
MOR8 Moi Rana 77.57 340 *eP* **P** **07 26 29.8 -1.4**
MOR8 AMb AMB 07 26 31.1
comp=Z,53nm,0.9s,mb5.0
MOR8 *e* 07 27 12.1
NEW Newport 77.73 42 *eP* **P** **07 26 32.9 +0.4**
NEW *e**PP pP 07 28 15.8 -0.9
NEW pmax pmax
comp=Z,36nm,0.8s
NEW Newport 77.73 42 *eP* **P** **07 26 32.9 +0.4**
comp=Z,36nm,0.8s,mb4.8
NEW *ep*P pP 07 28 15.8 -0.9
ODZ Otahua Downs 77.74 158 *eP* **P** **07 26 37.5 +5.2**
WDC Whiskeytown Da 77.75 51 *eP* **P** **07 26 33.0 +0.2**
WDC pmax pmax
comp=Z,57nm,1.3s,mb4.8
WDC Whiskeytown Da 77.75 51 *eP* **P** **07 26 33.0 +0.2**
comp=Z,57nm,1.3s,mb4.8
VSU Vasula 77.78 330 ⇑*iP* **P** **07 26 32.5 -0.1**
VSU pmax pmax
comp=Z,127nm,1.3s,mb5.2
STOK Stokkvaagen 77.88 341 *eP* **P** **07 26 32.7 -0.2**

STOK AMb AMB 07 26 38.0
comp=Z,243nm,1.6s,mb5.4
H07A Lands Inn, Kim 77.93 46 ⇑P P 07 26 34.0 +0.4
baz=78
LASM Arnica Sink 77.96 49 P P 07 26 34.7 +0.8
TUTA Tutak 77.96 308 *i* P P 07 26 34.8 +0.9
DBAD Bademkaya 78.02 310 *i* P P 07 26 34.8 +0.6
DDEM Demirkent 78.03 310 *i* P P 07 26 35.4 +1.1
HAKT HAKKARI 78.13 306 *i* P P 07 26 39.1 +4.2
RBK Rabkut 78.35 284 ⇑P P 07 26 36.8 +0.4
SNR=15
F09A S2 Ranch, Elgi 78.45 44 ⇓P P 07 26 36.3 -0.1
baz=78
WHFO Wadi Hawf 78.54 284 ⇓P P 07 26 37.5 +0.1
SNR=12
UMR Umm Al-Rimmam 78.57 297 *e*P P 07 26 37.1 -0.3
baz=297
UMR AMb AMB 07 26 40.0
comp=Z,164nm,1.4s,mb5.4,baz=297
MOD Modoc 78.67 49 *e*P P 07 26 38.2 +0.5
comp=Z,33nm,0.9s,mb4.9
ERZM Erzurum 78.74 309 *i* P P 07 26 39.2 +1.1
KBD Kabd 78.75 297 *e*P P 07 26 38.1 -0.3
baz=297
KBD AMb AMB 07 26 39.5
comp=Z,91nm,0.9s,mb5.3,baz=297
QRN Al-Qurain 78.76 297 *e*P P 07 26 37.7 -0.7
baz=296
QRN AMb AMB 07 26 38.8
comp=Z,180nm,0.9s,mb5.6,baz=296
MIB Mutribah 78.76 298 *e*P P 07 26 38.1 -0.3
baz=298
MIB AMb AMB 07 26 38.8
comp=Z,172nm,1.0s,mb5.5,baz=298
RDF Al-Radifah 78.97 297 *e*P P 07 26 39.0 -0.5
baz=297
RDF AMb AMB 07 26 40.0
comp=Z,201nm,1.1s,mb5.6,baz=297
A13A Flathead Natio 78.98 40 ⇑P P 07 26 38.8 -0.4
baz=79
NAY Al-Naaiem 79.07 297 *e*P P 07 26 39.7 -0.4
baz=297
NAY AMb AMB 07 26 41.1
comp=Z,187nm,1.1s,mb5.5,baz=297
ABTO Aybut 79.19 284 P P 07 26 40.8 -0.1
SNR=12
BMO Blue Mountains 79.23 45 *e*P P 07 26 41.1 +0.5
comp=Z,42nm,0.9s,mb5.0
BMO *e*pP pP 07 28 26.5 +1.2
BMO *e*sP sP 07 29 11.7 -3.7
KOPT Kop Dagi 79.28 310 *i* P P 07 26 42.4 +1.4
D12A Red Ives Fores 79.36 42 ⇑P P 07 26 41.6 +0.3
baz=79
F11A Grangeville 79.45 44 ⇑P P 07 26 41.4 -0.3
baz=79
NSS Namsos 79.46 340 *e*P P 07 26 39.8 -1.6
NSS AMb AMB 07 26 42.7
comp=Z,48nm,1.5s,mb4.8
NSS *e* 07 27 22.2
WVOR Wild Horse Val 79.52 48 *e*P P 07 26 42.5 +0.3
comp=Z,28nm,0.9s,mb4.8
BEKR Beckwourth 79.57 50 ⇑P P 07 26 42.6 +0.1
baz=80,SNR=130
G11A Walters Elk Ra 79.61 44 ⇑P P 07 26 42.4 -0.2
baz=80
C14A Swan Lake 79.95 41 ⇓P P 07 26 44.3 0.0
baz=80
F12A Elk City 80.06 43 ⇓P P 07 26 45.1 +0.1
baz=80
WCN Washoe City 80.24 51 ⇑P P 07 26 46.5 +0.5
baz=80,SNR=12
G12A Big Creek, Yel 80.33 44 ⇓P P 07 26 46.4 0.0
baz=80
CMB Columbia Colle 80.39 52 *e*P P 07 26 47.2 +0.3
CMB pmax pmax
comp=Z,49nm,1.1s,mb5.0
CMB Columbia Colle 80.39 52 *e*P P 07 26 47.1 +0.3
comp=Z,49nm,1.1s,mb5.0
N08A GE Springer Mi 80.64 49 ⇓P P 07 26 48.7 +0.6
baz=80
AKASG Malin Array Be 80.84 323 P P 07 26 48.2 -0.7
comp=Z,5.7nm,0.4s,mb4.5,baz=46,slow=5.4,SNR=85
AKASG S S 07 36 13.3 -3.6
comp=Z,0.5nm,0.6s,baz=56,slow=8.8,SNR=5.2
AKASG Malin Array Be 80.84 323 *i* P P 07 26 48.2 -0.7
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKASG Malin Array Be 80.84 323 P P 07 26 48.2 -0.7
AKASG S S 07 36 13.3 -3.6
AKBB Malin Array Si 80.84 323 *e*P P 07 26 48.2 -0.7
KIEV Kiev 80.85 323 *e*P P 07 26 48.2 -0.8
KIEV pmax pmax
comp=Z,40nm,0.9s,mb5.0
KIEV Kiev 80.85 323 *e*P P 07 26 48.2 -0.8
comp=Z,40nm,0.9s,mb5.0
KEMA Kemaliye 81.00 310 *i* P P 07 26 51.2 +1.2
ELZG Elazig 81.03 309 *i* P P 07 26 51.5 +1.3
I12A Atlanta 81.11 45 ⇑P P 07 26 51.0 +0.6
baz=81
G14A Jackson 81.41 43 ⇓P P 07 26 51.6 -0.4
baz=81
NVAR Mina Array Bea 81.65 51 P P 07 26 54.1 +0.7
comp=Z,23nm,0.7s,mb4.8,baz=293,slow=5.6,SNR=120
NVAR pP pP 07 28 36.8 -2.1
comp=Z,3.4nm,0.7s,baz=293,slow=5.5,SNR=2.7
HLID Hailey 81.68 45 ⇑P P 07 26 52.9 -0.6
baz=82
PMOR Pomariorio Ree 81.82 112 *e*P P 07 26 55.0 +0.5
comp=Z,43nm,1.1s,mb4.9
AKCD Akcadag 81.86 309 *i* P P 07 26 55.8 +1.4
SMMC Simmler 81.94 54 ⇓P P 07 26 55.3 +0.4
baz=82
HFS Hagfors 81.96 336 P P 07 26 53.4 -1.1
comp=Z,11nm,0.3s,mb4.8,baz=107,slow=3.0,SNR=103
HFS Hagfors 81.96 336 P P 07 26 53.4 -1.1
HFS pmax pmax
comp=Z,11nm,0.3s
SUW Suwalki 81.98 328 *e*P P 07 26 54.2 -0.5
SUW *e* 07 27 36.8
SUW Suwalki 81.98 328 *e*P P 07 26 54.2 -0.5
SUW *e* 07 27 36.8
EGMT Eagleton 82.10 39 ⇑P P 07 26 55.7 +0.2
baz=82
FFC Flin Flon 82.19 31 P P 07 26 55.4 -0.4
comp=Z,104nm,1.3s,mb5.2,SNR=5.3
FFC Flin Flon 82.19 31 *e*P P 07 26 55.6 -0.2
FFC pmax pmax
comp=Z,22nm,1.1s,mb4.6
FFC Flin Flon 82.19 31 *e*P P 07 26 55.6 -0.2
comp=Z,22nm,1.1s,mb4.6
NB2 NORSAR Subarra 82.19 337 P P 07 26 54.6 -1.1
comp=Z,22nm,0.6s,mb4.9,baz=45,slow=5.1
NOA NORSAR Array B 82.19 337 P P 07 26 54.6 -1.0
comp=Z,30nm,0.8s,mb4.9,baz=46,slow=4.9,SNR=67
NOA PP PP 07 30 13.1 +1.4
comp=Z,4.5nm,0.9s,baz=45,slow=7.6,SNR=4.1
NOA NORSAR Array B 82.19 337 P P 07 26 54.6 -1.1
NOA 07 30 13.1
NOA pmax pmax
comp=Z,30nm,0.8s
PKM Peak Mountain 82.27 55 ⇓P P 07 26 56.6 0.0
baz=82
BOZ Bozeman (W) 82.30 42 ⇑P P 07 26 56.3 -0.2
baz=82
VES Vestal, Richgr 82.35 54 ⇑P P 07 26 56.3 -0.7
baz=82,SNR=14
TIN Tinemaha 82.37 52 ⇑P P 07 26 57.7 +0.6
baz=82
NAO01 NORSAR Array S 82.44 337 *e*P P 07 26 55.7 -1.3
comp=Z,15nm,0.8s,mb4.6
ELK Elko 82.57 48 *e*P P 07 26 58.8 +0.8
ELK pmax pmax
comp=Z,39nm,0.9s
ELK Elko 82.57 48 *e*P P 07 26 58.8 +0.7
comp=Z,39nm,0.9s,mb4.9
CWC Cottonwood Cre 82.77 53 P P 07 26 59.0 -0.1
baz=83,SNR=12
FCC Fort Churchill 82.83 25 *e*P P 07 26 58.4 -0.6
FCC pmax pmax
comp=Z,12nm,0.8s,mb4.5
FCC Fort Churchill 82.83 25 *e*P P 07 26 58.4 -0.6
comp=Z,12nm,0.8s,mb4.5
ARVC Arvin 82.87 54 P P 07 26 59.8 +0.1
baz=83
GRAC Grapevine Rang 82.99 52 ⇓P P 07 27 00.4 +0.1
baz=83,SNR=7.5
G17A Pierce Place, 83.00 42 ⇑P P 07 27 00.4 +0.3
baz=83
BLG Laguna Peak 83.19 55 ⇓P P 07 27 01.3 0.0
baz=83
MPMC Manual Prospec 83.37 53 ⇑P P 07 27 02.3 +0.1
baz=83,SNR=17
P12A McGill 83.44 49 ⇑P P 07 27 02.9 +0.5
baz=83
LRMC Laurel Mountai 83.52 53 ⇑P P 07 27 03.3 +0.4
baz=83,SNR=14
EDW2 Edwards Air Fo 83.59 54 P P 07 27 03.7 +0.4
baz=84,SNR=19
FURC Furnace Creek, 83.61 52 P P 07 27 03.8 +0.5
baz=84,SNR=26
DECC Green Verdugo 83.66 55 ⇓P P 07 27 03.5 -0.1
baz=84
TPNV Topopah Spring 83.80 51 ⇑P P 07 27 04.5 +0.2
baz=84,SNR=42
TPNV Topopah Spring 83.80 51 *e*P P 07 27 04.6 +0.3
comp=Z,48nm,0.6s,mb5.2
TPNV *e*pP pP 07 28 49.0 -1.5
PASC Pasadena Art C 83.80 55 *e*P P 07 27 04.3 -0.1
comp=Z,108nm,1.1s,mb5.3
MWC Mount Wilson 83.87 55 *e*P P 07 27 04.9 +0.2
MWC pmax pmax
comp=Z,30nm,1.0s,mb4.8
MWC Mount Wilson 83.87 55 *e*P P 07 27 04.9 +0.2
comp=Z,30nm,1.0s,mb4.8
RLMT Red Lodge 83.98 42 ⇓P P 07 27 06.1 +1.1
baz=84
BRTR Keskin Array B 84.03 312 P P 07 27 04.7 -0.7
comp=Z,10nm,0.9s,mb4.3,baz=101,slow=3.8,SNR=31
BRTR pP pP 07 28 50.5 -1.1
comp=Z,2.7nm,0.9s,baz=99,slow=1.9,SNR=1.5
BRTR Keskin Array B 84.03 312 P P 07 27 04.7 -0.7
BRTR *PP pP 07 28 50.5 -1.1
BRTR pmax pmax
comp=Z,10.0nm,1.0s
TLCR 84.11 318 ⇑*i*P P 07 27 03.9 -1.7
TLCR 84.11 318 ⇑P P 07 27 03.9 -1.8
BFSC Mount Baldy St 84.15 54 ⇓P P 07 27 05.8 -0.3
baz=84,SNR=6.3
GSC Goldstone 84.23 53 ⇓P P 07 27 04.4 -2.1
baz=84,SNR=16
N15A Stansbury Isla 84.26 47 ⇓P P 07 27 07.1 +0.6
baz=84
SHOC Shoshone 84.30 52 ⇑P P 07 27 06.9 +0.1
baz=84,SNR=9.2
DUG Dugway 84.44 47 ⇑P P 07 27 07.7 +0.3
baz=84
R13A O'Grain Ranch, 84.73 49 ⇓P P 07 27 09.1 +0.3
baz=85
BUR08 Bucovina Ar. S 84.75 322 *e*P P 07 27 08.5 -0.2
TIRR Tirgusor 84.75 318 ⇑*i*P P 07 27 05.6 -3.2
TIRR Tirgusor 84.75 318 ⇑P P 07 27 05.6 -3.2
BURAR Bucovina Array 84.76 322 ⇑*i*P P 07 27 08.8 0.0
BURAR Bucovina Array 84.76 322 ⇑P P 07 27 08.8 +0.1
TUQ Turquoise Moun 84.78 53 ⇑P P 07 27 09.5 +0.3
baz=85,SNR=22
MURC Murrieta 84.79 55 P P 07 27 09.6 +0.4
baz=85,SNR=5.5
HEC Hector,Ludlow 84.80 53 ⇑P P 07 27 09.5 +0.3
baz=85,SNR=20
KWP Kalwaria 84.88 325 *e*P P 07 27 09.3 0.0
KWP Kalwaria 84.88 325 ⇑*i*P P 07 27 09.3 0.0
KWP Kalwaria 84.88 325 *e*P P 07 27 09.3 0.0
DGMT Dagmar 84.89 37 ⇓P P 07 27 08.6 -0.9
baz=85
DGMT Dagmar 84.89 37 *e*P P 07 27 09.4 0.0
comp=Z,39nm,1.0s,mb5.0
HARR Harsova 84.91 318 ⇓*i*P P 07 27 09.5 -0.1
VRI Vrincioaia 84.93 320 ⇑*i*P P 07 27 10.2 +0.5
VRI Vrincioaia 84.93 320 ⇑P P 07 27 10.2 +0.5
PLOR Plostina 84.98 320 ⇑*i*P P 07 27 20.1 +10
BW06 Boulder Array 85.11 44 ⇑P P 07 27 10.6 0.0
baz=85
PDAR Pinedale Array 85.11 44 P P 07 27 11.0 +0.4
comp=Z,13nm,0.9s,mb4.5,baz=270,slow=3.0,SNR=52
GMRC Granite Mounta 85.30 53 ⇓P P 07 27 12.0 +0.3
baz=85,SNR=14
PFO Pinyon Flat Ob 85.33 54 P P 07 27 12.0 +0.1
comp=Z,337nm,0.7s,mb6.1,SNR=9.3
PFO Pinyon Flat Ob 85.33 54 ⇓P P 07 27 12.0 +0.2
baz=85,SNR=14
PFO Pinyon Flat Ob 85.33 54 *e*P P 07 27 12.0 +0.2
comp=Z,107nm,1.4s,mb5.3
BELC Belle Mtn. 85.46 54 P P 07 27 12.6 +0.1
baz=85,SNR=12
KOLS Kolonicke sedl 85.53 324 *e*P P 07 27 12.2 -0.3
KOLS pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
KOLS Kolonicke sedl 85.53 324 *e*P P 07 27 12.2 -0.3
comp=Z,7.9nm,1.2s,mb4.2
MLR Muntele Rosu 85.60 320 ⇑*i*P P 07 27 09.3 -3.6
ASF Jabal al Asfar 85.60 304 P P 07 27 12.8 -0.4
comp=Z,9.8nm,0.9s,mb4.4,baz=252,slow=4.9,SNR=11
ASF Jabal al Asfar 85.60 304 P P 07 27 12.8 -0.4
ASF pmax pmax
comp=Z,10.0nm,0.9s
UZH Uzhgorod 85.71 324 ⇓*i*P P 07 27 12.0 -1.4
MONP Monument Peak 85.71 55 ⇑P P 07 27 14.4 +0.6
baz=86
STHS Stebnicka Huta 85.76 325 *e*P P 07 27 13.4 -0.2
STHS pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
STHS Stebnicka Huta 85.76 325 *e*P P 07 27 13.4 -0.2
comp=Z,8.2nm,1.2s,mb4.2
CRVS Cervenica-Dubn 85.97 324 *e*P P 07 27 14.6 0.0
CRVS pmax pmax
comp=Z,26nm,1.4s,mb4.7
CRVS Cervenica-Dubn 85.97 324 *e*P P 07 27 14.6 0.0
comp=Z,26nm,1.4s,mb4.7
OJC Ojcow 85.97 326 *e*P P 07 27 13.9 -0.7
BC3 Big Chuckw Mtn 86.02 54 ⇑P P 07 27 14.2 -1.0
baz=86,SNR=7.4
DVTC Desert V Tower 86.06 55 ⇑P P 07 27 15.7 +0.3
baz=86
NIE Niedzica 86.23 325 *e*P P 07 27 16.1 +0.3
MMAI Mount Meron Ar 86.26 305 P P 07 27 16.2 -0.1
comp=Z,25nm,0.9s,mb4.8,baz=49,slow=6.7,SNR=18
SRU San Rafael 86.51 47 ⇑P P 07 27 16.9 -0.6
baz=86
S16A Weppner Ranch, 86.56 49 ⇓P P 07 27 18.0 +0.4
baz=86
DRGR 86.62 322 ⇑*i*P P 07 27 17.4 -0.3
DRGR 86.62 322 ⇑P P 07 27 17.4 -0.4
PDMCI Parker Dam,Lak 86.63 53 ⇓P P 07 27 18.3 +0.3
baz=86
GLA Glamis 86.78 54 ⇓P P 07 27 19.1 +0.3
baz=87,SNR=6.8
U15A North Rim 86.79 50 ⇑P P 07 27 19.5 +0.7
baz=87
OKC Ostrava-Krasne 87.03 327 *e*P P 07 27 18.7 -0.9
P19A Cripple Cowboy 87.22 46 ⇑P P 07 27 21.0 +0.3
baz=87
KSP Ksiaz 87.25 328 *e*P P 07 27 20.1 -0.5
KSP Ksiaz 87.25 328 *e*P P 07 27 19.8 -0.8
PSZ Piszkesteto 87.40 324 ⇑*i*P P 07 27 21.2 -0.2
PSZ Piszkesteto 87.40 324 ⇑P P 07 27 21.2 -0.2
L22A Ellis Ranch, M 87.43 43 ⇓P P 07 27 21.7 +0.1
baz=87
GZR Gura Zlata 87.44 321 ⇑*i*P P 07 27 19.6 -2.0
GZR Gura Zlata 87.44 321 ⇑P P 07 27 19.6 -2.0
VYHS Vyhne 87.57 325 *e*P P 07 27 21.5 -0.7
VYHS pmax pmax
comp=Z,20nm,1.2s,mb4.7
VYHS Vyhne 87.57 325 *e*P P 07 27 21.5 -0.7
comp=Z,20nm,1.2s,mb4.7
UPC Upice 87.61 328 *e*P P 07 27 21.7 -0.6
BSEG Bad Segeberg 87.68 333 *e*P P 07 27 21.8 -0.8
BSEG pmax pmax
comp=Z,24nm,1.0s,mb4.9
BSEG Bad Segeberg 87.68 333 *e*P P 07 27 21.8 -0.8
comp=Z,24nm,1.0s,mb4.9
KOLL Kolacno 87.73 325 *e*P P 07 27 22.7 -0.2
ULM Lac du Bonnet 87.93 32 P P 07 27 22.4 -1.4
comp=Z,2.9nm,0.4s,mb4.3,baz=272,slow=4.4,SNR=4.3
ULM Lac du Bonnet 87.93 32 P P 07 27 22.4 -1.4
BZS Buzias 87.94 322 ⇑*i*P P 07 27 22.9 -1.1
BZS Buzias 87.94 322 ⇑P P 07 27 22.9 -1.1
VRAC Vranov 88.14 327 P P 07 27 24.4 -0.4
comp=Z,16nm,1.1s,mb4.7,baz=54,slow=4.0,SNR=13
VRAC Vranov 88.14 327 P P 07 27 24.4 -0.4
VRAC pmax pmax
comp=Z,16nm,1.1s
SMOL Smolenice 88.26 326 *e*P P 07 27 25.6 +0.2
PVCC Panska Ves 88.27 329 *e*P P 07 27 24.9 -0.5
EIL Elat 88.31 303 P P 07 27 24.9 -1.2
comp=Z,9.4nm,1.0s,mb4.5,baz=357,slow=5.3,SNR=7.4
BRG Berggiesshubel 88.31 329 *e*P P 07 27 24.5 -1.1
BRG *e* 07 31 02.1
BRG pmax pmax
comp=Z,13nm,1.4s,mb4.5
BRG Berggiesshubel 88.31 329 *e*P P 07 27 24.2 -1.4
comp=Z,10.0nm,1.0s,mb4.5
BRG Berggiesshubel 88.31 329 *e*P P 07 27 24.5 -1.1
comp=Z,21nm,1.4s,mb4.7
BRG *e* 07 31 02.1
comp=Z,39nm,1.9s
CLL Collm 88.43 330 ⇓*i*P P 07 27 24.9 -1.2
CLL pmax pmax
comp=Z,37nm,1.5s,mb4.9
CLL Collm 88.43 330 *e*P P 07 27 24.5 -1.6
comp=Z,37nm,1.5s,mb4.9
CLL Collm 88.43 330 ⇓*i*P P 07 27 24.9 -1.2
comp=Z,37nm,1.5s,mb4.9
CLL *e*PP PP 07 31 01.0 -0.7
MODS Modra-Piesok 88.43 326 *e*P P 07 27 26.5 +0.3
MODS pmax pmax
comp=Z,16nm,1.2s,mb4.6
MODS Modra-Piesok 88.43 326 *e*P P 07 27 26.5 +0.3
comp=Z,16nm,1.2s,mb4.6
ZST Bratislava 88.64 326 *e*P P 07 27 26.8 -0.4
ZST pmax pmax
comp=Z,14nm,1.2s,mb4.7
ZST Bratislava 88.64 326 *e*P P 07 27 26.8 -0.4
comp=Z,14nm,1.2s,mb4.7
TREC Trest 88.68 327 *e*P P 07 27 26.6 -0.8
VTS Vitosha 88.91 319 ⇓*i*P P 07 27 28.4 -0.2
VTS Vitosha 88.91 319 ⇓P P 07 27 28.4 -0.2
CLZ Clausthal 89.19 331 *e*P P 07 27 28.2 -1.5
CLZ pmax pmax
comp=Z,21nm,1.1s,mb4.9
CLZ Clausthal 89.19 331 *e*P P 07 27 28.2 -1.5
comp=Z,21nm,1.1s,mb4.9
MOX Moxa 89.52 330 *e*P P 07 27 27.4 -3.8
comp=Z,32nm,1.8s,mb4.8
MOX Moxa 89.52 330 *e*P P 07 27 27.4 -3.8
MOX pmax pmax
comp=Z,32nm,1.8s,mb4.8
MOX Moxa 89.52 330 *e*P P 07 27 28.2 -3.0
comp=Z,33nm,1.7s,mb4.9
KHC Kasperske Hory 89.70 328 ⇑*e*P P 07 27 31.2 -0.9
KHC Kasperske Hory 89.70 328 *e*P P 07 27 31.0 -1.1
MANZ Manzenberg 89.77 329 *e*P P 07 27 31.5 -0.9
comp=Z,34nm,1.7s,mb4.9
GEC2 GERESS Array S 89.84 328 *e*P P 07 27 31.2 -1.6
GEC2 pmax pmax
comp=Z,24nm,1.2s,mb4.9
GEC2 GERESS Array S 89.84 328 *e*P P 07 27 31.2 -1.6
comp=Z,24nm,1.2s,mb4.9
GERES GERESS Array B 89.84 328 P P 07 27 31.7 -1.1
comp=Z,4.3nm,0.7s,mb4.4,baz=44,slow=4.4,SNR=30
GERES GERESS Array B 89.84 328 P P 07 27 31.7 -1.1
GERES pmax pmax
comp=Z,4.0nm,0.7s
ROTZ Rotzenmuhle 89.88 329 *e*P P 07 27 32.4 -0.5
comp=Z,23nm,1.3s,mb4.8
IBBN Ibbenburen 89.92 333 *e*P P 07 27 31.2 -1.9
comp=Z,90nm,1.7s,mb5.3
WET Wettzell 90.02 328 *e*P P 07 27 32.5 -1.1
WET pmax pmax
comp=Z,64nm,2.1s,mb5.1
WET Wettzell 90.02 328 *e*P P 07 27 32.5 -1.1
comp=Z,64nm,2.1s,mb5.1
VAY Valandovo 90.07 318 *e*P P 07 27 31.9 -2.0
UBBA Unterbreizbach 90.10 331 *e*P P 07 27 32.2 -1.7
comp=Z,45nm,2.0s,mb5.1
GRA1 Grafenberg Arr 90.38 330 *e*P P 07 27 34.3 -0.9
comp=Z,32nm,1.1s,mb5.1
GRF Grafenberg Arr 90.38 330 *e*P P 07 27 34.3 -0.9
GRF pmax pmax
comp=Z,32nm,1.1s,mb5.1
GRF Grafenberg Arr 90.38 330 *e*P P 07 27 34.3 -0.9
GRF pmax pmax
comp=Z,32nm,1.1s,mb5.1
GRF Grafenberg Arr 90.38 330 *e*P P 07 27 34.3 -0.9
comp=Z,32nm,1.1s,mb5.1
PERS Pernice 90.69 326 *i* P P 07 27 35.9 -0.8
KRUS Krusevo 90.81 319 *e*P P 07 27 36.9 -0.6
DOBS Dobrina 90.84 325 *e*P P 07 27 36.1 -1.3
RJOB Jochberg 91.05 327 *e*P P 07 27 37.9 -0.5
comp=Z,33nm,1.0s,mb5.2
EKA Eskdalemuir Ar 91.36 340 P P 07 27 38.3 -1.3
comp=Z,2.2nm,0.9s,mb4.1,baz=26,slow=4.6,SNR=5.2
EKA Eskdalemuir Ar 91.36 340 P P 07 27 38.3 -1.3
EKA pmax pmax
comp=Z,2.0nm,0.9s
LJU Ljubljana 91.39 325 *e*P P 07 27 38.7 -1.3
FUR Furstenfeldbru 91.46 328 *e*P P 07 27 39.7 -0.6
FUR pmax pmax
comp=Z,66nm,1.2s,mb5.4
FUR Furstenfeldbru 91.46 328 *e*P P 07 27 39.7 -0.6
comp=Z,66nm,1.2s,mb5.4
ANMO Albuquerque 91.54 49 ⇑*e*P P 07 27 41.3 +0.4
CEY Cerknica 91.65 325 *e*P P 07 27 39.9 -1.3
VOJS Vojsko 91.72 326 *i* P P 07 27 39.6 -1.9
STU Stuttgart 91.96 330 *e*P P 07 27 41.6 -0.9
comp=Z,37nm,1.3s,mb5.2
ECSD EROS,Sioux Fal 91.97 37 *e*P P 07 27 41.9 -0.8
comp=Z,11nm,1.1s,mb4.7
BFO Black Forest 92.67 330 *e*P P 07 27 44.5 -1.3
BFO pmax pmax
comp=Z,24nm,1.1s,mb5.1
BFO Black Forest 92.67 330 *e*P P 07 27 44.5 -1.3
comp=Z,24nm,1.1s,mb5.1
CDF Champ du Feu 93.07 331 *e*P P 07 27 46.5 -1.2
comp=Z,33nm,1.1s,mb5.0
CDF Champ du Feu 93.07 331 *e*P P 07 27 46.5 -1.2
CDF pmax pmax
comp=Z,16nm,1.1s,mb5.0
CDF Champ du Feu 93.07 331 *e*P P 07 27 46.5 -1.2
comp=Z,16nm,1.1s,mb5.0
HINF Hinteralfeld 93.71 330 *e*P P 07 27 48.9 -1.7
HAU Haudompre 93.79 331 *e*P P 07 27 49.4 -1.5
MEZF Maizieres J'vi 93.95 332 *e*P P 07 27 50.1 -1.6
AQU L'Aquila 94.54 323 ⇑*i*P P 07 27 54.6 +0.1
AQU L'Aquila 94.54 323 ⇑P P 07 27 54.6 +0.1
LPL La Plagne 95.52 329 *e*P P 07 27 57.7 -1.1
comp=Z,7.7nm,0.6s,mb4.7
LPL La Plagne 95.52 329 *e*P P 07 27 57.7 -1.1
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
LPL La Plagne 95.52 329 *e*P P 07 27 57.7 -1.1
comp=Z,3.8nm,0.6s,mb4.7
LPG La Plagne 95.52 329 *e*P P 07 27 57.8 -1.1
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 95.52 329 *e*P P 07 27 57.8 -1.1
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
LPG La Plagne 95.52 329 *e*P P 07 27 57.8 -1.1
comp=Z,4.0nm,0.6s,mb4.7
CEL Celeste 95.97 319 *e*P P 07 28 00.5 -0.5
comp=Z,65nm,0.9s,mb5.8
AVF Avril sur Loir 96.01 332 *e*P P 07 27 59.7 -1.3
comp=Z,33nm,1.2s,mb5.0
AVF Avril sur Loir 96.01 332 *e*P P 07 27 59.7 -1.3
AVF pmax pmax
comp=Z,16nm,1.2s,mb5.0
AVF Avril sur Loir 96.01 332 *e*P P 07 27 59.7 -1.3
comp=Z,16nm,1.2s,mb5.0
ORIF Oris-en-Rattie 96.36 329 *e*P P 07 28 02.1 -0.6
TXAR Lajitas Array 96.77 52 P P 07 28 05.4 +0.5
comp=Z,5.9nm,0.7s,mb4.9,baz=300,slow=2.7,SNR=54
TXAR pP pP 07 29 51.3 -2.0
comp=Z,1.2nm,0.9s,baz=266,slow=2.7,SNR=2.3
TXAR Lajitas Array 96.77 52 P P 07 28 05.4 +0.5
TXAR *PP pP 07 29 51.3 -1.9
TXAR pmax pmax
comp=Z,6.0nm,0.7s
VIVF Saint-Julien-l 96.95 330 *e*P P 07 28 03.9 -1.4
comp=Z,17nm,1.1s,mb4.9
VIVF Saint-Julien-l 96.95 330 *e*P P 07 28 03.9 -1.4
VIVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
VIVF Saint-Julien-l 96.95 330 *e*P P 07 28 03.9 -1.4
comp=Z,8.7nm,1.1s,mb4.9
TORD Torodi Ar. Bea 122.58 310 PKP PKPdf 07 33 26.1 -1.1
comp=Z,3.6nm,0.6s,baz=53,slow=1.0,SNR=34
TORD PP PP 07 34 57.0 -14
comp=Z,2.6nm,1.1s,baz=23,slow=6.1,SNR=4.5
TORD SKP 07 36 15.4
comp=Z,4.6nm,0.9s,baz=47,slow=2.9,SNR=5.3

BOSA Boshof 123.09 253 PKP PKPdf 07 33 27.9 +0.2
comp=Z,3.4nm,0.5s,baz=9.0,slow=8.3,SNR=7.5
BOSA SKP 07 36 16.6
comp=Z,4.8nm,0.9s,baz=34,slow=4.6,SNR=3.2
SNAA Sanae 131.56 195⇑iPKIKP PKPdf 07 33 38.1 -4.4
DBIC Dimbokro 131.69 310 PKP PKPdf 07 33 43.4 -1.2
comp=Z,5.8nm,0.8s,baz=107,slow=0.6,SNR=6.2
DBIC SKPbc SKPbc 07 36 24.2 -0.7
comp=Z,14nm,0.7s,baz=20,slow=4.5,SNR=16
DBIC Dimbokro 131.69 310 PKIKP PKPdf 07 33 43.4 -1.2
DBIC 07 36 24.2
DBIC pmax pmax
comp=Z,6.0nm,0.8s
TIC Toumodi 131.82 310 eP PKPdf 07 33 45.0 +0.2
comp=Z,8.6nm,0.2s
KIC Kosan Boka 131.84 309 eP PKPdf 07 33 44.2 -0.6
comp=Z,48nm,1.0s
LIC Lamto 132.13 310 eP PKPdf 07 33 45.6 +0.2
comp=Z,96nm,1.8s
SDV Santo Domingo 133.05 43 ePKPdf PKPdf 07 33 47.2 +0.1
VNA2 Neumayer--Watz 133.11 194 ePKiKP PKiKP 07 33 45.3 -1.4
baz=90,slow=0.6
VNA2 Neumayer--Watz 133.11 194 ePKiKP PKiKP 07 33 45.3 -1.4
baz=59,slow=0.7
VNA3 Neumayer Olymp 133.34 193 ePKiKP PKiKP 07 33 45.9 -1.3
VNA3 Neumayer Olymp 133.34 193 ePKiKP PKiKP 07 33 45.9 -1.3
USHA Ushuaia 146.06 151 PKPbc PKPbc 07 34 11.7 +0.7
comp=Z,7.3nm,0.9s,baz=237,slow=5.0,SNR=3.9
ARE Arequipa 148.88 75 ePKP2 PKPbc 07 34 20.0 +0.4
PLCA Paso Flores 151.87 125 PKPbc PKPbc 07 34 25.8 -0.2
comp=Z,4.2nm,0.9s,baz=254,slow=5.0,SNR=3.2
PLCA PKPab PKPab 07 34 38.4 +1.0
comp=Z,5.8nm,0.7s,baz=216,slow=6.2,SNR=10
PLCA pPKPbc pPKPbc 07 36 16.2 -3.9
comp=Z,3.8nm,0.9s,baz=204,slow=4.0,SNR=2.3
PLCA SKP 07 37 03.2
comp=Z,2.8nm,0.6s,baz=256,slow=1.7,SNR=2.4
PLCA Paso Flores 151.87 125 PKIKP PKPbc 07 34 25.8 -0.1
PLCA 07 36 16.2
PLCA 07 37 03.2
PLCA pmax pmax
comp=Z,4.0nm,0.9s
LVC Limon Verde 153.45 85 ePKPab PKPab 07 34 46.0 +1.4
BDFB Brasilia 165.83 33 PKP PKPdf 07 34 35.8 0.0
comp=Z,0.6nm,0.4s,baz=322,slow=25,SNR=4.4
BDFB Brasilia 165.83 33 PKIKP PKPdf 07 34 35.8 0.0
BDFB pmax pmax
comp=Z,1.0nm,0.4s

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*MOS **01** 07:16:05.0±1.6, 27.71N×140.14E, h460km, mb5.0/67, Error ellipse: s-maj=9.9km s-min=7.3km az=112.2*
*IDC **01** 07:16:07.8±0.5, 27.75N×139.91E, h479km±5km, mb4.4/27, mb1 4.5/33, mb1mx4.4/35, mbtmp4.4/33, Error ellipse: s-maj=10.0km s-min=7.1km az=73.0*
*ISCJB **01** 07:16:07.3±0.3, 27.77N±0.03×139.90E±0.03, h482km±2km, mb4.9/142, Error ellipse: s-maj=4.6km s-min=4.0km az=5.8*
*JMA **01** 07:16:07.6±0.1, 27.90N×140.38E, h497km, M5.0*
*BJI **01** 07:16:07.8, 27.75N×139.84E, h483km, mB5.2, mb5.5*
*NEIC **01** 07:16:08.9±0.4, 27.79N×139.82E, h491km±4km, mb4.8/84, Error ellipse: s-maj=4.2km s-min=3.2km az=142.0*
ISC 01 07:16:08.4±0.3**, 27.76N**±0.03×**139.89E**±0.03**, h484**km±2km**, h473**km±11.4km**: pP-P, n396,** σ**0.81**/408**, mb4.9**/142**, 37C-44D, Bonin Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 2.15 107 P P 07 17 12.0 -0.8
3μm,0.3s,baz=281,slow=18,SNR=14
CBIJ S S 07 18 01.7 -3.3
3μm,0.3s,baz=319,slow=24,SNR=6.2
CBIJ Chichi jima 2.15 107 P P 07 17 11.8 -1.0
CBIJ S S 07 18 02.0 -3.0
JHHJ Haha-jima-NKT 2.33 118 P P 07 17 13.3 -0.5
JHHJ S S 07 18 05.1 -1.8
JHJ2 Mitsune 5.33 359 P P 07 17 36.2 -1.2
JHJ Hachijo jima 2 5.34 359 P P 07 17 36.9 -0.6
107nm,0.3s,baz=229,slow=20,SNR=3.8
JHJ S S 07 18 47.5 -2.9
323nm,0.3s,baz=74,slow=23,SNR=6.1
JWZ Kozaga 6.78 329 P P 07 17 53.9 +2.2
JWZ S S 07 19 19.7 +3.4
BSO1 Boso 1 6.93 7 P P 07 17 53.2 0.0
BSO1 S S 07 19 16.8 -2.4
JIE Ise 7.15 338 P P 07 17 57.5 +2.1
JIE S S 07 19 24.4 +1.2
JKN2 Miekihoku 7.16 335 P P 07 17 58.0 +2.4
JKN2 S S 07 19 27.3 +3.8
JOD2 Odawara 2 7.51 355 P P 07 17 59.3 +0.2
TSUJ Tsu 2 7.54 338 P P 07 18 01.6 +2.2
TSUJ S S 07 19 33.8 +3.3
JTO Tosashimizu 7.96 311 P P 07 18 06.7 +2.9
JTO S S 07 19 41.2 +2.6
JRY Ryogami san 8.27 354 P P 07 18 06.6 -0.5
JRY S S 07 19 40.4 -4.2
JAG Ashikaga 8.65 358 P P 07 18 09.9 -1.1
JAG S S 07 19 46.5 -5.4
JHO Hitachi 8.84 4 P P 07 18 12.7 -0.4
JHO S S 07 19 51.2 -4.5
MJAR Matsushiro Arr 8.87 351 P P 07 18 12.9 -0.5
13nm,0.3s,baz=165,slow=9.9,SNR=4.4
MJAR Matsushiro Arr 8.87 351 P P 07 18 12.9 -0.5
MJAR pmax pmax
comp=Z,13nm,0.3s
MAJO Matsushiro 8.87 351 eP P 07 18 12.5 -0.9
MAT Matsushiro 8.87 351 P P 07 18 12.9 -0.5
MAT S S 07 19 53.9 -2.3
MAT Matsushiro 8.87 351 P P 07 18 14.1 +0.7
JSU Suzuyama 9.02 297 P P 07 18 17.7 +2.7
JOW Kunigami 10.37 268 P P 07 18 30.8 +1.2
comp=Z,43nm,0.3s,baz=104,slow=7.9,SNR=26
JOW S S 07 20 27.1 +1.3
comp=Z,1.0nm,0.3s,baz=214,slow=28,SNR=3.7
JAW Awa shima 10.68 357 P P 07 18 33.4 +0.7
KSRS Korea Array 13.96 317 P P 07 19 07.5 -0.1
comp=Z,6.2nm,0.3s,baz=126,slow=11,SNR=13
KSRS ScP ScP 07 26 38.3 -0.6
comp=Z,0.2nm,0.3s,baz=149,slow=1.6,SNR=9.2
ERM Erimo 14.47 10 deP P 07 19 13.6 +0.6
ERM Erimo 14.47 10 ePn P 07 19 12.6 -0.4
comp=Z,93nm,0.5s
INCN Inchon 14.77 314 ePn P 07 19 15.5 -0.8
comp=Z,286nm,0.6s
ASAJ Asahikawa 16.47 7 P P 07 19 34.5 +0.6
comp=Z,5.8nm,0.3s,baz=73,slow=26,SNR=7.5
ASAJ ScP ScP 07 26 43.0 -0.5
comp=Z,0.5nm,0.3s,baz=156,slow=11,SNR=5.6
ASAJ Asahikawa 16.47 7 P P 07 19 34.5 +0.6
ASAJ pmax pmax
comp=Z,6.0nm,0.3s
ASAJ pmax pmax
comp=N,1.0nm,0.3s
YHNB Yeheng 16.89 264 ePn P 07 19 37.4 -1.3
comp=N,50nm,0.6s
YUK Yuzh-Kuril'sk 16.94 15⇓iP P 07 19 38.9 +0.1
YUK pmax pmax
comp=Z,600nm,0.5s
YULB Yu-li 17.32 260 ePn P 07 19 42.1 -1.1
SSLB Suanglung 17.50 261 ePn P 07 19 44.8 -0.2
TWG Pinlang 17.71 258 ePn P 07 19 46.1 -0.9
TPUB Ta-pu 17.93 260 ePn P 07 19 49.2 +0.1
NJ2 Nanjing 18.72 288 eP P 07 19 55.9 -0.3
NJ2 XP sP 07 21 58.5 -2.9
NJ2 S S 07 23 01.0 -0.9
NJ2 PCP PcP 07 24 03.2 +4.2
NJ2 AMB AMB
comp=Z,70nm,0.8s
NJ2 AMB AMB
comp=Z,430nm,5.9s
MDJ Mudanjiang 18.73 337 P P 07 19 56.8 +0.8
MDJ XP sP 07 21 58.8 -2.7
MDJ S S 07 23 01.7 0.0
MDJ SCP ScP 07 26 49.0 +0.7
MDJ AMB AMB
comp=Z,42nm,0.9s
MDJ AMB AMB
comp=Z,198nm,4.8s
QZH Quanzhou 19.29 266⇑iP P 07 20 02.2 +0.8
QZH AMB AMB
comp=Z,170nm,0.8s
YSS Yuzh-Sakhalins 19.29 6⇑iP P 07 20 01.3 +0.2
YSS eS S 07 23 10.0 -0.7
YSS pmax pmax
comp=Z,120nm,0.8s
YSS smax
comp=E,210nm,1.5s
YSS Yuzh-Sakhalins 19.29 6 ePn P 07 20 01.2 +0.1
comp=E,83nm,0.5s
CN2 Changchun 19.79 328 ⇓P P 07 20 07.0 +1.3
CN2 eXP sP 07 22 12.0 -1.2
CN2 eS S 07 23 19.2 +0.4
CN2 AMB AMB
comp=Z,80nm,0.7s
CN2 AMB AMB
comp=Z,900nm,4.0s
HABR Khabarovsk 21.02 351 P P 07 20 15.8 -1.0
HABR eS S 07 23 39.1 +0.7
HABR e 07 24 02.7
HABR e 07 30 37.5
TIA Tai'an 21.03 299 ⇓P P 07 20 17.0 -0.1
TIA AMB AMB
comp=Z,368nm,0.9s,mb5.9
BJI Beijing 23.10 308 P P 07 20 35.5 -0.2
BJI S S 07 24 07.8 -3.9
BJI AMB AMB
comp=Z,103nm,0.9s,mb5.3
BJI AMB AMB
comp=Z,427nm,4.8s
HIA Hailar 26.48 330c iP P 07 21 05.5 -0.1
HHC Hu-ho-hao-te 26.66 307 eP P 07 21 07.7 +0.4
HHC XP sP 07 23 24.4 -1.7
HHC PCP PcP 07 24 16.8 +1.3
HHC AMB AMB
comp=Z,62nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,249nm,4.4s
XAN Xi'an 27.23 291 P P 07 21 12.9 +0.5
XAN XP sP 07 23 27.3 -4.1
XAN PCP PcP 07 24 17.5 +0.5
XAN AMB AMB
comp=Z,77nm,0.9s,mb5.1
XAN AMB AMB
comp=Z,155nm,12.3s
PETK Petropavlovsk- 28.56 23 P P 07 21 24.4 +0.6
comp=Z,6.6nm,0.5s,mb4.3,baz=190,slow=5.1,SNR=17
PETK ScP ScP 07 27 13.3 -1.7
comp=Z,7.3nm,0.8s,baz=138,slow=3.4,SNR=4.8
PETK Petropavlovsk- 28.56 23 P P 07 21 24.4 +0.6
PETK ScP ScP 07 27 13.3 -1.7
PET Petropavlovsk 28.82 24 eP P 07 21 26.5 +0.4
PET pmax pmax
comp=Z,123nm,1.2s,mb5.2
GYA Guiyang 29.55 275⇓iP P 07 21 33.7 +0.8
GYA AP 07 22 55.8
GYA PPP 07 23 15.3
GYA XP sP 07 23 50.6 -1.8
GYA PCP PcP 07 24 22.7 -0.4
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,320nm,5.4s
LZH Lanzhou 31.56 294 eP P 07 21 51.0 +1.0
LZH PP PP 07 23 20.0 +3.5
LZH XP sP 07 24 09.2 -1.0
LZH PCP PcP 07 24 29.5 +1.2
LZH S S 07 26 25.5 +1.8
LZH SCP ScP 07 27 27.2 +1.9
LZH SS SS 07 29 04.5 -4.6
LZH SCS ScS 07 31 25.4 +1.0
LZH AMB AMB
comp=Z,169nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,440nm,4.9s
CD2 Chengdu 31.57 285 P P 07 21 49.8 -0.4
CD2 PP PP 07 23 18.9 +2.2
CD2 XP sP 07 24 08.6 -1.7
CD2 PCP PcP 07 24 29.8 +1.4
CD2 AMB AMB
comp=Z,20nm,0.5s,mb4.8
CD2 AMB AMB
comp=Z,130nm,7.8s
ULN Ulaanbaatar 32.44 317⇓iP P 07 21 58.2 +0.8
ULN i *PP 07 23 22.2
ULN Ulaanbaatar 32.44 317 eP P 07 21 58.1 +0.7
comp=Z,99nm,0.8s,mb5.3
SONM Songino Array 32.83 317 P P 07 22 01.5 +0.8
comp=Z,47nm,0.7s,mb5.0,baz=133,slow=9.8,SNR=20
SONM PcP PcP 07 24 32.3 +0.8
comp=Z,2.4nm,0.4s,baz=133,slow=3.3,SNR=5.4
SONM ScP ScP 07 27 29.7 +0.3
comp=Z,7.4nm,0.8s,baz=146,slow=3.5,SNR=7.5
KMI Kunming 33.28 274 P P 07 22 06.5 +1.6
KMI AP 07 23 29.2
KMI PP PP 07 23 40.1 +5.0
KMI XP sP 07 24 22.5 -3.0
KMI AMB AMB
comp=Z,85nm,0.8s,mb5.2
KMI AMB AMB
comp=Z,327nm,4.1s
YAK Yakutsk 34.94 352⇑eP P 07 22 17.7 -0.6
YAK pmax pmax
comp=Z,39nm,0.7s,mb5.0
YAK Yakutsk 34.94 352 eP P 07 22 17.1 -1.1
comp=Z,43nm,0.8s,mb4.9
GTA Gaotai 35.08 300 P P 07 22 20.2 +0.3
GTA AP pP 07 23 46.3 +0.9
GTA XP sP 07 24 39.5 -1.7
GTA S S 07 27 14.6 -2.6
GTA SCP ScP 07 27 38.9 +1.2
GTA SS SS 07 30 07.9 -10
GTA SCS ScS 07 31 41.9 -1.1
GTA AMB AMB
comp=Z,139nm,0.8s,mb5.4
GTA AMB AMB
comp=Z,383nm,6.6s
IRK Irkutsk 36.06 323 eP P 07 22 21.7 -6.1
IRK pmax pmax
comp=Z,101nm,1.3s,mb5.1
SEY Seymchan 36.12 10⇑eP P 07 22 29.0 +0.9
TLY Talaya 36.14 321 eP P 07 22 28.4 -0.1
TLY pmax pmax
comp=Z,32nm,0.7s,mb4.9
TLY Talaya 36.14 321 eP P 07 22 28.9 +0.4
comp=Z,24nm,0.6s,mb4.8
KAPI Kappang 37.94 214 PcP PcP 07 24 47.2 -0.3
comp=Z,17nm,0.8s,baz=133,slow=4.9,SNR=4.7
CHTO Chiang Mai 38.50 266 eP P 07 22 48.9 +0.5
CHTO pmax pmax
comp=Z,56nm,1.0s,mb5.0
CHTO Chiang Mai 38.50 266 eP P 07 22 48.9 +0.5
comp=Z,56nm,1.0s,mb5.0
CMAR Chiang Mai Arr 38.63 265 P P 07 22 50.4 +1.0
comp=Z,26nm,1.0s,mb4.6,baz=56,slow=7.9,SNR=16
CMAR PcP PcP 07 24 50.0 +0.3
comp=Z,6.9nm,0.8s,baz=50,slow=1.5,SNR=6.4
CMAR ScP ScP 07 27 51.5 +0.1
comp=Z,1.0nm,0.3s,baz=41,slow=2.4,SNR=4.1
BILL Bilibino 43.29 14c iP P 07 23 26.0 +0.1
BILL pmax pmax
comp=Z,161nm,1.0s,mb5.4
BILL Bilibino 43.29 14 eP P 07 23 26.3 +0.4
comp=Z,97nm,0.7s,mb5.3
KRAR Krasnoyarsk 43.72 324⇓iP P 07 23 27.9 -1.5
KRAR pmax pmax
comp=Z,44nm,0.6s,mb5.1
TIXI Tiksi 44.36 355c iP P 07 23 34.1 0.0
TIXI pmax pmax
comp=Z,13nm,0.8s,mb4.4
TIXI Tiksi 44.36 355 eP P 07 23 34.2 0.0
comp=Z,8.4nm,0.6s,mb4.3
WMQ Urumqi 44.53 305 P P 07 23 36.8 +0.9
WMQ AMB AMB
comp=Z,199nm,1.0s,mb5.5
UNV Unalaska Valle 46.78 41 eP P 07 23 52.7 -0.3
comp=Z,33nm,0.5s,mb5.0
AKUT Akutan 47.27 41 eP P 07 23 56.2 -0.5
comp=Z,95nm,0.6s,mb5.4
ZALV Zalesovo Beam 47.65 319 P P 07 23 59.5 -0.1
comp=Z,40nm,0.5s,mb5.0,baz=108,slow=7.9,SNR=24
ZALV PcP PcP 07 25 19.4 -0.4
comp=Z,17nm,0.7s,baz=108,slow=4.7,SNR=4.6
ZALV ScP ScP 07 28 26.2 -1.2
comp=Z,2.8nm,0.6s,baz=103,slow=3.1,SNR=3.1
WRAB Tennant Creek 47.71 187d iP P 07 24 00.1 -0.3
WRAB i *PP pP 07 25 33.0 +0.2
WRAB Tennant Creek 47.71 187 eP P 07 24 00.0 -0.4
comp=Z,14nm,0.5s,mb4.5
WB2 Warramunga Arr 47.72 187 eP P 07 24 00.2 -0.3
WB2 eS S 07 30 13.3 -7.2
CTA Charters Tower 47.96 172 eP P 07 24 02.9 +0.6
comp=Z,6.9nm,0.9s,mb4.0
CTA Charters Tower 47.96 172 P P 07 24 02.6 +0.3
comp=Z,8.3nm,0.8s,mb4.1,baz=16,slow=7.3,SNR=6.2
CTA Charters Tower 47.96 172 eP P 07 24 02.9 +0.6
CTA pmax pmax
comp=Z,7.0nm,0.9s
MK31 Makanchi Array 48.48 309 i P P 07 24 06.2 +0.3
MK31 pmax pmax
comp=Z,53nm,0.6s,mb5.0
MKAR Makanchi Array 48.48 309 P P 07 24 06.6 +0.7
comp=Z,76nm,0.8s,mb5.1,baz=93,slow=9.3,SNR=20
MKAR PcP PcP 07 25 23.2 +0.3
comp=Z,14nm,0.8s,baz=90,slow=5.8,SNR=3.6
MKAR ScP ScP 07 28 30.6 -0.5
comp=Z,5.7nm,0.6s,baz=82,slow=4.8,SNR=7.3
SDPT Sand Point 50.49 40 eP P 07 24 19.7 -0.9
comp=Z,201nm,0.6s,mb5.6
KURK Kurchatov 51.06 314 P P 07 24 25.6 +0.8
comp=Z,203nm,0.6s,mb5.6,baz=91,slow=8.3,SNR=40
KURK S S 07 31 04.6 -0.9
comp=Z,3.1nm,1.1s,baz=84,slow=10,SNR=4.5
KURK Kurchatov 51.06 314 P P 07 24 25.7 +0.8
KURK S S 07 31 04.6 -0.8
KURK pmax pmax
comp=Z,203nm,0.6s,mb5.6
KURK smax
comp=N,3.0nm,1.1s
KURK Kurchatov 51.06 314 eP P 07 24 25.0 +0.1
comp=N,104nm,0.6s,mb5.3
ASAR Alice Springs 51.45 187 P P 07 24 27.8 -0.3
comp=N,6.5nm,0.4s,mb4.3,baz=357,slow=6.0,SNR=14
ASAR PcP PcP 07 25 33.0 -1.3
comp=N,5.2nm,0.8s,baz=11,slow=3.8,SNR=6.4
ASAR ScP ScP 07 28 43.9 -0.2
comp=N,1.2nm,0.6s,baz=13,slow=4.8,SNR=2.7
ASAR S S 07 31 08.2 -3.0
comp=N,2.4nm,1.0s,baz=23,slow=16,SNR=4.1
ASAR Alice Springs 51.45 187 P P 07 24 27.8 -0.2
ASAR 07 25 33.0
ASAR S S 07 31 08.3 -2.9
ASAR pmax pmax
comp=Z,7.0nm,0.4s
ASAR smax
comp=N,2.0nm,1.0s
MBWA Marble Bar 52.39 204 eP P 07 24 34.4 -0.4
comp=N,11nm,0.7s,mb4.3
MBWA ePcP PcP 07 25 37.9 0.0
TKM2 Tokmak 2 53.36 304 eP P 07 24 42.7 +1.1
TKM2 pmax pmax
comp=Z,42nm,0.5s,mb5.0
TKM2 Tokmak 2 53.36 304 eP P 07 24 42.7 +1.1
comp=Z,42nm,0.5s,mb5.0
SVW2 Sparrevohn 53.84 33 eP P 07 24 45.1 +0.5
AAK Ala-Archa 54.20 304⇑eP P 07 24 48.5 +0.9
AAK pmax pmax
comp=Z,45nm,1.2s,mb4.7
AAK Ala-Archa 54.20 304 eP P 07 24 48.0 +0.4
comp=Z,36nm,0.5s,mb5.0
EKS2 Erkin-Say 54.72 304 eP P 07 24 51.5 +0.3
comp=Z,31nm,0.7s,mb4.8
KDAK Kodiak Island 55.06 37 eP P 07 24 53.2 -0.2
comp=Z,36nm,0.8s,mb4.8
PPLA Purkeypile 55.64 31 eP P 07 24 58.3 +1.0
comp=Z,11nm,0.6s,mb4.4
CHUM Lake Minchumin 55.69 30 eP P 07 24 58.1 +0.5
comp=Z,12nm,0.6s,mb4.4
VOSK Vostochnaya 55.82 317 P P 07 24 58.5 -0.3
VOSK pmax pmax
comp=Z,35nm,0.6s,mb4.9
BVA0 Borovoye Array 56.17 317 P P 07 25 01.6 +0.4
BVA0 pmax pmax
comp=Z,28nm,0.5s,mb4.8
BVAR Borovoye Array 56.17 317 P P 07 25 01.7 +0.6
comp=Z,146nm,0.5s,mb5.6,baz=91,slow=7.5,SNR=44
BVAR S S 07 32 12.0 -0.9
comp=Z,2.6nm,0.6s,baz=87,slow=11,SNR=5.8
BVAR Borovoye Array 56.17 317 P P 07 25 01.7 +0.5
BVAR S S 07 32 12.0 -0.9
BVAR pmax pmax
comp=Z,146nm,0.5s
BVAR smax
comp=N,3.0nm,0.6s
BRVK Borovoye 56.23 317 P P 07 25 01.6 0.0
BRVK pmax pmax
comp=Z,225nm,0.6s,mb5.7
KTH Kantishna Hill 56.27 30 eP P 07 25 02.1 +0.5
comp=Z,16nm,0.8s,mb4.4
TRF Thorofare Moun 56.55 30 eP P 07 25 04.0 +0.4
comp=Z,27nm,0.8s,mb4.6
RC01 Rabbit Creek A 56.66 33 eP P 07 25 04.2 -0.3
comp=Z,16nm,0.4s,mb4.7
NIL Nilore 56.72 294 eP P 07 25 06.0 +0.7
NIL pmax pmax
comp=Z,52nm,0.6s,mb5.0
NIL Nilore 56.72 294 eP P 07 25 06.0 +0.6
comp=Z,52nm,0.6s,mb5.0
SEW Seward 56.77 34 eP P 07 25 04.6 -0.6
COLD Coldfoot 56.96 26 eP P 07 25 07.0 +0.6
comp=Z,19nm,0.7s,mb4.5
PMR Palmer 56.98 33 eP P 07 25 05.9 -0.7
PMR pmax pmax
comp=Z,52nm,0.8s,mb4.9
PMR Palmer 56.98 33 eP P 07 25 05.9 -0.7
comp=Z,52nm,0.8s,mb4.9
KK31 Karatay Array 57.04 305 i P P 07 25 08.0 +0.7
KK31 pmax pmax
comp=Z,122nm,0.6s,mb5.4
MCK McKinley 57.17 30 eP P 07 25 07.8 -0.1
MCK pmax pmax
comp=Z,67nm,0.8s,mb5.0
MCK McKinley 57.17 30 eP P 07 25 07.8 -0.1
comp=Z,67nm,0.8s,mb5.0
COLA College 57.71 29 eP P 07 25 12.1 +0.6
COLA pmax pmax
comp=Z,24nm,0.9s,mb4.5
COLA College 57.71 29 eP P 07 25 12.1 +0.6
comp=Z,24nm,0.9s,mb4.5
POHA Pohakuloa 59.07 83 eP P 07 25 22.3 +0.7
comp=Z,63nm,0.7s,mb5.0
KHU Kahuku 59.18 83 eP P 07 25 22.1 -0.2
FORT Forrest 59.30 192 eP P 07 25 22.6 -0.1
comp=Z,53nm,0.5s,mb5.1
STKA Stephens Creek 59.33 178 eP P 07 25 22.8 -0.1
comp=Z,9.3nm,0.6s,mb4.3
STKA Stephens Creek 59.33 178 P P 07 25 22.9 -0.1
comp=Z,12nm,0.7s,mb4.4,baz=336,slow=8.5,SNR=10
MENT Mentasta 59.51 31 eP P 07 25 24.3 +0.5
KBL Kabul 59.90 296 eP P 07 25 27.3 +0.4
KBL pmax pmax
comp=Z,95nm,0.8s,mb5.3
KBL Kabul 59.90 296 eP P 07 25 27.2 +0.4
comp=Z,95nm,0.8s,mb5.3
EGAK Eagle 60.57 29 eP P 07 25 30.5 -0.3
comp=Z,13nm,0.6s,mb4.5
DAWY Dawson 61.38 30 eP P 07 25 36.1 -0.1
SVE Sverdlovsk 61.45 322⇑eP P 07 25 37.1 +0.4
SVE pmax pmax
comp=Z,65nm,0.8s,mb5.1
PNL Peninsula 61.85 35 eP P 07 25 39.4 +0.1
comp=Z,21nm,0.6s,mb4.8
ARU Arti 62.64 322d iP P 07 25 44.3 -0.2
ARU e*PP pP 07 27 17.6 -6.1
ARU eS S 07 33 35.0 +0.7
ARU pmax pmax
comp=Z,125nm,1.0s,mb5.4
ARU Arti 62.64 322 eP P 07 25 44.4 -0.2
comp=Z,62nm,0.5s,mb5.4
KLBR Kellerberrin 62.68 201 eP P 07 25 45.1 +0.1
comp=Z,30nm,0.8s,mb4.9
SOKR Solikamsk 63.06 325d iP P 07 25 47.4 +0.2
SOKR pmax pmax
comp=Z,50nm,0.9s,mb5.0
AB31 Akbulak array 63.17 314 P P 07 25 47.6 -0.4
AB31 pmax pmax
comp=Z,74nm,0.7s,mb5.3
INK Inuvik 63.28 25 eP P 07 25 48.2 -0.2
INK pmax pmax
comp=Z,308nm,0.8s
INK Inuvik 63.28 25 eP P 07 25 48.2 -0.2
comp=Z,308nm,0.8s,mb5.9
NWAO Narrogin (SRO) 64.08 201 P P 07 25 54.2 +0.3
comp=Z,45nm,0.7s,mb5.1,baz=38,slow=6.8,SNR=13
NWAO Narrogin (SRO) 64.08 201 P P 07 25 54.3 +0.3

NWAO pmax pmax
comp=Z,45nm,0.7s
TOO Toolangi 65.20 175 *e*P **P 07 26 01.9 +0.9**
DLBC Dease Lake 66.84 35 P **P 07 26 12.2 +1.1**
comp=Z,14nm,0.7s,mb4.7,baz=302,slow=8.2,SNR=12
DLBC Dease Lake 66.84 35 *e*P **P 07 26 11.8 +0.7**
KBS Kingsbay 69.56 351⇑*e*P **P 07 26 27.4 +0.1**
APA Apatity 70.65 337⇓*i*P **P 07 26 33.5 -0.5**
APA pmax pmax
comp=Z,52nm,0.8s,mb5.1
KLMR Klimovskoe 70.98 329 *i* P **P 07 26 35.8 -0.2**
KLMR pmax pmax
comp=Z,34nm,0.8s,mb4.9
KEV Kevo 71.67 340 *e*p **P 07 26 39.6 -0.4**
comp=Z,21nm,0.6s,mb4.8
KEV Kevo 71.67 340 *e*P **P 07 26 39.6 -0.4**
KEV pmax pmax
comp=Z,21nm,0.6s,mb4.8
ARCES ARCESS Array B 72.24 340 P **P 07 26 43.6 +0.4**
comp=Z,22nm,0.5s,mb4.9,baz=72,slow=8.2,SNR=23
ARCES ARCESS Array B 72.24 340 P **P 07 26 43.7 +0.4**
ARCES pmax pmax
comp=Z,22nm,0.5s
YKA Yellowknife Ar 72.52 28 P **P 07 26 44.7 -0.3**
comp=Z,23nm,0.6s,mb4.9,baz=297,slow=5.9,SNR=23
YKA Yellowknife Ar 72.52 28 *i* P **P 07 26 49.0 +4.0**
YKA pmax pmax
comp=Z,3.0nm,0.5s
YKA Yellowknife Ar 72.52 28 P **P 07 26 44.7 -0.3**
JOF Joensuu 73.58 333 *e*p **P 07 26 50.7 -0.4**
comp=Z,56nm,0.6s,mb5.3
JOF Joensuu 73.58 333 *e*P **P 07 26 50.7 -0.4**
JOF pmax pmax
comp=Z,56nm,0.6s,mb5.3
PGC Sidney 73.82 43 *e*P **P 07 26 53.0 +0.2**
comp=Z,98nm,1.0s,mb5.3
NLWA Neilton Lookou 74.07 45⇑P **P 07 26 54.2 0.0**
baz=74,SNR=6.8
NLWA Neilton Lookou 74.07 45 *e*P **P 07 26 55.1 +0.9**
comp=Z,20nm,0.6s,mb4.8
TRO Tromso 74.07 342 *e*Sg **P 07 26 53.6 -0.2**
OBN Obninsk 74.81 325*d iP* **P 07 26 57.8 -0.4**
OBN pmax pmax
comp=Z,53nm,0.8s,mb5.1
OBN Obninsk 74.81 325 *e*P **P 07 26 58.0 -0.2**
comp=Z,50nm,0.7s,mb5.2
C05A Tolt Reservoir 75.29 44⇓P **P 07 27 01.2 +0.1**
baz=75
GOF Gofitskoye 75.41 313 *e*P **P 07 27 02.7 +0.9**
A07A Ashnola River, 75.50 42⇓P **P 07 27 02.5 +0.3**
baz=75
COR Corvallis 75.58 47 *e*P **P 07 27 03.4 +0.6**
COR pmax pmax
comp=Z,71nm,1.1s,mb5.1
COR Corvallis 75.58 47 *e*P **P 07 27 03.4 +0.7**
comp=Z,71nm,1.1s,mb5.1
LON Longmire 75.62 45 *e*P **P 07 27 03.2 +0.3**
LON pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
LON Longmire 75.62 45 *e*P **P 07 27 03.2 +0.3**
comp=Z,6.6nm,0.7s,mb4.3
KAF Kangasniemi 75.98 334 *e*p **P 07 27 03.6 -1.0**
comp=Z,58nm,0.5s,mb5.4,baz=54,slow=5.2
KAF Kangasniemi 75.98 334 *e*P **P 07 27 03.6 -1.0**
KAF pmax pmax
comp=Z,58nm,0.5s,mb5.4
KIV Kislovodsk 76.10 312⇑*i*P **P 07 27 06.7 +1.1**
KIV pmax pmax
comp=Z,49nm,1.0s,mb5.0
KIV Kislovodsk 76.10 312 *e*P **P 07 27 06.6 +1.0**
comp=Z,57nm,1.0s,mb5.1
HOOD Mount Hood Mea 76.33 46 *e*P **P 07 27 07.8 +1.0**
comp=Z,60nm,1.0s,mb5.1
HOOD *e*PcP PcP 07 27 16.4 +0.1
HUMO Hull Mountain 76.64 49 *e*P **P 07 27 09.1 +0.4**
comp=Z,5.7nm,0.5s,mb4.4
MLZ Mavora Lakes 77.19 160 S **P 07 27 05.3 -6.0**
YBH Yreka Blue Hor 77.19 50 *e*P **P 07 27 12.5 +0.8**
YBH pmax pmax
comp=Z,13nm,0.8s
YBH Yreka Blue Hor 77.19 50 *e*P **P 07 27 12.5 +0.8**
comp=Z,13nm,0.8s,mb4.5
HAWA Hanford 77.19 44 *e*P **P 07 27 12.1 +0.5**
comp=Z,9.0nm,0.5s,mb4.6
EAZ Earnscleugh 77.43 159 P **P 07 27 12.8 +0.1**
EAZ Earnscleugh 77.43 159 S **P 07 27 14.1 +1.4**
EDM Edmonton 77.50 36 *e*P **P 07 27 13.4 +0.3**
NEW Newport 77.78 42 *e*P **P 07 27 15.2 +0.4**
NEW pmax pmax
comp=Z,20nm,0.7s
NEW Newport 77.78 42 *e*P **P 07 27 15.2 +0.4**
comp=Z,20nm,0.7s,mb4.7
WDC Whiskeytown Da 77.80 51 *e*P **P 07 27 15.1 0.0**
WDC pmax pmax
comp=Z,12nm,0.9s,mb4.3
WDC Whiskeytown Da 77.80 51 *e*P **P 07 27 15.1 0.0**
comp=Z,12nm,0.9s,mb4.3
VSU Vasula 77.82 330*c iP* **P 07 27 14.8 0.0**
VSU pmax pmax
comp=Z,49nm,0.8s,mb5.0
UMR Umm Al-Rimmam 78.57 297 *e*P **P 07 27 19.4 0.0**
baz=297
UMR AMb AMB 07 27 20.4
comp=Z,114nm,0.6s,mb5.6,baz=297
MOD Modoc 78.72 49 *e*P **P 07 27 20.0 +0.1**
comp=Z,12nm,0.7s,mb4.5
KBD Kabd 78.75 297 *e*P **P 07 27 20.5 +0.1**
baz=297
KBD AMb AMB 07 27 21.7
comp=Z,64nm,1.1s,mb5.1,baz=297
QRN Al-Qurain 78.76 297 *e*P **P 07 27 20.1 -0.3**
baz=297
QRN AMb AMB 07 27 21.1
comp=Z,172nm,0.8s,mb5.6,baz=297
MIB Mutribah 78.76 298 *e*P **P 07 27 20.3 -0.2**
baz=298
MIB AMb AMB 07 27 21.1
comp=Z,192nm,0.7s,mb5.7,baz=298
RDF Al-Radifah 78.97 297 *e*P **P 07 27 21.7 +0.1**
baz=297
RDF AMb AMB 07 27 22.3
comp=Z,169nm,0.7s,mb5.7,baz=297
A13A Flathead Natio 79.04 40⇓P **P 07 27 21.9 +0.4**
baz=79
NAY Al-Naaiem 79.08 297 *e*P **P 07 27 22.0 -0.1**
baz=297
NAY AMb AMB 07 27 23.2
comp=Z,128nm,1.3s,mb5.3,baz=297
ANN Anapa 79.09 315 *e*P **P 07 27 20.5 -1.4**
ANN pmax pmax
comp=Z,139nm,1.0s,mb5.4
BMO Blue Mountains 79.28 45 *e*P **P 07 27 23.3 +0.4**
comp=Z,13nm,0.7s,mb4.6
D12A Red Ives Fores 79.42 42⇑P **P 07 27 23.8 +0.3**
baz=79
F11A Grangeville 79.50 44⇓P **P 07 27 24.1 +0.1**
baz=79
WVOR Wild Horse Val 79.58 48 *e*P **P 07 27 25.1 +0.6**
WVOR pmax pmax
comp=Z,12nm,0.8s,mb4.5
WVOR Wild Horse Val 79.58 48 *e*P **P 07 27 25.1 +0.6**
comp=Z,12nm,0.8s,mb4.5
BEKR Beckwourth 79.62 50⇓P **P 07 27 25.1 +0.4**
baz=79
G11A Walters Elk Ra 79.67 44⇑P **P 07 27 24.3 -0.7**
baz=80
C14A Swan Lake 80.01 41⇓P **P 07 27 26.9 +0.3**
baz=80
F12A Elk City 80.11 43⇑P **P 07 27 27.8 +0.5**
baz=80
WCN Washoe City 80.29 51⇓P **P 07 27 28.9 +0.6**
baz=80
G12A Big Creek, Yel 80.38 44⇓P **P 07 27 28.3 -0.3**
baz=80
CMB Columbia Colle 80.44 52 *e*P **P 07 27 29.4 +0.3**
CMB pmax pmax
comp=Z,17nm,0.8s,mb4.6
CMB Columbia Colle 80.44 52 *e*P **P 07 27 29.4 +0.3**
comp=Z,17nm,0.8s,mb4.6
CMB *e*PcP PcP 07 27 34.2 -0.2
N08A GE Springer Mi 80.69 49⇓P **P 07 27 30.7 +0.3**
baz=80
AKASG Malin Array Be 80.87 323 P **P 07 27 30.6 -0.5**
comp=Z,12nm,0.5s,mb4.7,baz=51,slow=5.6,SNR=19
AKASG S S 07 36 55.8 -3.2
comp=Z,0.4nm,0.4s,baz=52,slow=8.9,SNR=4.6
AKASG Malin Array Be 80.87 323 P **P 07 27 30.6 -0.5**
AKASG S S 07 36 55.8 -3.2
AKASG pmax pmax
comp=Z,12nm,0.5s
AKBB Malin Array Si 80.87 323 *e*P **P 07 27 30.1 -1.0**
KIEV Kiev 80.88 323 *e*P **P 07 27 30.2 -0.9**
KIEV pmax pmax
comp=Z,17nm,0.6s,mb4.8
KIEV Kiev 80.88 323 *e*P **P 07 27 30.2 -0.9**
comp=Z,17nm,0.6s,mb4.8
I12A Atlanta 81.16 45⇓P **P 07 27 33.0 +0.2**
baz=81
NVAR Mina Array Bea 81.70 51 P **P 07 27 36.5 +0.8**
comp=Z,16nm,0.7s,mb4.7,baz=289,slow=6.1,SNR=22
HLID Hailey 81.73 45⇑P **P 07 27 36.6 +0.9**
baz=82,SNR=6.8
HFS Hagfors 82.00 336 P **P 07 27 35.8 -1.0**
comp=Z,20nm,0.5s,mb4.9,baz=66,slow=5.0,SNR=13
HFS Hagfors 82.00 336 P **P 07 27 35.8 -0.9**
HFS pmax pmax
comp=Z,20nm,0.5s
EGMT Eagleton 82.16 39⇑P **P 07 27 38.0 +0.2**
baz=82
NOA NORSAR Array B 82.23 337 P **P 07 27 37.0 -0.9**
comp=Z,31nm,0.6s,mb5.0,baz=46,slow=4.9,SNR=24
NOA NORSAR Array B 82.23 337 P **P 07 27 37.0 -0.9**
NOA pmax pmax
comp=Z,31nm,0.6s
FFC Flin Flon 82.24 31 *e*P **P 07 27 38.1 0.0**
FFC pmax pmax
comp=Z,16nm,1.0s,mb4.5
FFC Flin Flon 82.24 31 *e*P **P 07 27 38.1 0.0**
comp=Z,16nm,1.0s,mb4.5
BOZ Bozeman (W) 82.35 42⇑P **P 07 27 39.2 +0.4**
baz=82
TIN Tinemaha 82.42 52⇑P **P 07 27 39.9 +0.5**
baz=82
NAO01 NORSAR Array S 82.48 337 *e*P **P 07 27 38.1 -1.1**
comp=Z,17nm,0.7s,mb4.7
TPH Tonopah 82.62 51 *e*P **P 07 27 41.2 +0.9**
TPH pmax pmax
comp=Z,65nm,1.5s,mb4.9
TPH Tonopah 82.62 51 *e*P **P 07 27 41.2 +0.8**
comp=Z,65nm,1.5s,mb4.9
ELK Elko 82.62 48 *e*P **P 07 27 40.9 +0.6**
ELK pmax pmax
comp=Z,27nm,0.9s
ELK Elko 82.62 48 *e*P **P 07 27 40.9 +0.6**
comp=Z,27nm,0.9s,mb4.8
CWC Cottonwood Cre 82.82 53⇓P **P 07 27 41.3 0.0**
baz=83
BSC Santa Cruz Isl 82.88 55⇑P **P 07 27 41.5 -0.3**
baz=83
FCC Fort Churchill 82.89 25 *e*P **P 07 27 40.9 -0.4**
ARVC Arvin 82.92 54 P **P 07 27 41.9 0.0**
baz=83
BLG Laguna Peak 83.24 55⇓P **P 07 27 43.6 +0.1**
baz=83
MPMC Manual Prospec 83.42 53⇓P **P 07 27 44.8 +0.4**
baz=83
P12A McGill 83.49 49⇑P **P 07 27 44.9 +0.2**
baz=83
LRMC Laurel Mountai 83.56 53⇓P **P 07 27 45.5 +0.4**
baz=83
EDW2 Edwards Air Fo 83.64 54⇓P **P 07 27 46.1 +0.5**
baz=84
FURC Furnace Creek, 83.66 52⇑P **P 07 27 45.8 +0.3**
baz=84
DECC Green Verdugo 83.70 55⇑P **P 07 27 45.9 0.0**
baz=84
TPNV Topopah Spring 83.85 51⇑P **P 07 27 45.9 -0.6**
baz=84
TPNV Topopah Spring 83.85 51 *e*P **P 07 27 46.8 +0.3**
TPNV pmax pmax
comp=Z,27nm,0.8s,mb4.8
TPNV Topopah Spring 83.85 51 *e*P **P 07 27 46.8 +0.2**
comp=Z,27nm,0.8s,mb4.8
PASC Pasadena Art C 83.85 55 *e*P **P 07 27 46.7 +0.1**
comp=Z,34nm,0.7s,mb5.0
MWC Mount Wilson 83.91 55 *e*P **P 07 27 47.1 +0.2**
MWC pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
MWC Mount Wilson 83.91 55 *e*P **P 07 27 47.1 +0.2**
comp=Z,9.2nm,0.6s,mb4.5
RLMT Red Lodge 84.03 42⇓P **P 07 27 48.7 +1.4**
baz=84
BR131 Keskin Array S 84.05 312 *e*P **P 07 27 47.1 -0.3**
comp=Z,9.1nm,0.8s,mb4.4
BRTR Keskin Array B 84.05 312 P **P 07 27 47.1 -0.3**
comp=Z,8.4nm,0.7s,mb4.4,baz=101,slow=3.9,SNR=13
BRTR Keskin Array B 84.05 312 P **P 07 27 47.1 -0.3**
BRTR pmax pmax
comp=Z,8.0nm,0.7s
BFSC Mount Baldy St 84.19 54⇓P **P 07 27 48.1 -0.2**
baz=84
GSC Goldstone 84.28 53⇑P **P 07 27 46.9 -1.8**
baz=84
N15A Stansbury Isla 84.32 47⇑P **P 07 27 48.4 -0.4**
baz=84
DUG Dugway 84.49 47⇑P **P 07 27 48.6 -1.0**
baz=84
TUQ Turquoise Moun 84.83 53⇓P **P 07 27 52.0 +0.5**
baz=85
HEC Hector,Ludlow 84.85 53⇓P **P 07 27 52.0 +0.5**
baz=85
KWP Kalwaria 84.91 324 *e*P **P 07 27 51.6 +0.1**
KWP pmax pmax
comp=Z,17nm,0.8s,mb4.7
KWP Kalwaria 84.91 324 *e*P **P 07 27 51.6 +0.1**
comp=Z,17nm,0.8s,mb4.7
KWP Kalwaria 84.91 324 *e* **P 07 27 51.4 0.0**
KWP Kalwaria 84.91 324 *e* **P 07 27 51.4 -0.1**
DGMT Dagmar 84.95 37⇑P **P 07 27 51.8 +0.1**
baz=85
DGMT Dagmar 84.95 37 *e*P **P 07 27 52.1 +0.4**
comp=Z,16nm,0.9s,mb4.6
BW06 Boulder Array 85.16 44⇓P **P 07 27 53.1 +0.2**
baz=85,SNR=5.0
PDAR Pinedale Array 85.16 44 P **P 07 27 53.5 +0.6**
comp=Z,6.9nm,0.8s,mb4.3,baz=264,slow=3.7,SNR=8.6
GMRC Granite Mounta 85.35 53⇓P **P 07 27 54.7 +0.7**
baz=85
PFO Pinyon Flat Ob 85.38 54⇑P **P 07 27 53.5 -0.5**
baz=85
PFO Pinyon Flat Ob 85.38 54 *e*P **P 07 27 54.5 +0.4**
PFO pmax pmax
comp=Z,24nm,0.6s,mb5.0
PFO Pinyon Flat Ob 85.38 54 *e*P **P 07 27 54.5 +0.4**
comp=Z,24nm,0.6s,mb5.0
BELC Belle Mtn. 85.51 54⇑P **P 07 27 54.4 -0.3**
baz=85
ASF Jabal al Asfar 85.61 304 P **P 07 27 55.2 0.0**
comp=Z,7.7nm,1.0s,mb4.3,baz=215,slow=2.2,SNR=5.5
ASF Jabal al Asfar 85.61 304 P **P 07 27 55.2 0.0**
ASF pmax pmax
comp=Z,8.0nm,1.0s
MLR Murrtele Rosu 85.62 320 P **P 07 27 55.1 +0.1**
baz=45,slow=7.1
STHS Stebnicka Huta 85.79 325 *e*P **P 07 27 56.2 +0.5**
STHS Stebnicka Huta 85.79 325 *e* **P 07 27 56.2 +0.5**
CRVS Cervenica-Dubn 86.00 324 *e*P **P 07 27 56.0 -0.8**
CRVS Cervenica-Dubn 86.00 324 *e* **P 07 27 56.0 -0.8**
IRM Iron Mountain 86.03 53⇑P **P 07 27 58.1 +0.8**
baz=86
BC3 Big Chuckw Mtn 86.07 54⇑P **P 07 27 58.0 +0.6**
baz=86
DVTC Desert V Tower 86.11 55⇑P **P 07 27 58.3 +0.6**
baz=86
SWSC Sam W. Stewart 86.19 55⇓P **P 07 27 58.4 +0.4**
baz=86
MMAI Mount Meron Ar 86.27 305 P **P 07 27 58.3 -0.1**
comp=Z,16nm,0.7s,mb4.8,baz=52,slow=6.7,SNR=12
SRU San Rafael 86.56 47⇑P **P 07 28 00.3 +0.6**
baz=86
S16A Weppner Ranch, 86.61 49⇓P **P 07 28 00.7 +0.8**
baz=86
PDMCI Parker Dam,Lak 86.67 53⇓P **P 07 28 01.5 +1.2**
baz=86
GLA Glamis 86.83 54⇓P **P 07 28 01.7 +0.7**
baz=87
U15A North Rim 86.84 50⇓P **P 07 28 01.9 +0.9**
baz=87
OKC Ostrava-Krasne 87.06 327 *e*P **P 07 28 01.2 -0.6**
OKC Ostrava-Krasne 87.06 327 *e*pP **P 07 28 01.2 -0.6**
P19A Cripple Cowboy 87.27 46⇓P **P 07 28 03.5 +0.5**
baz=87
KSP Ksiaz 87.28 328 *e*P **P 07 28 02.3 -0.5**
KSP Ksiaz 87.28 328 *e* **P 07 28 02.4 -0.3**
VYHS Vyhne 87.60 325 *e*P **P 07 28 04.3 0.0**
VYHS Vyhne 87.60 325 *e* **P 07 28 04.3 0.0**
DPC Dobruska-Polom 87.60 328 *e*P **P 07 28 04.2 -0.1**
UPC Upice 87.64 328 *e*P **P 07 28 04.1 -0.4**
UPC Upice 87.64 328 *e*pP **P 07 28 04.1 -0.4**
KOLL Kolacno 87.76 325 *e*P **P 07 28 04.6 -0.5**
KOLL Kolacno 87.76 325 *e* **P 07 28 04.6 -0.5**
ULM Lac du Bonnet 87.99 32 P **P 07 28 05.4 -0.7**
comp=Z,2.5nm,0.5s,mb4.2,baz=272,slow=5.7,SNR=3.2
Q20A Ridgley Place, 88.09 46⇑P **P 07 28 07.6 +0.7**
baz=88
PVCC Panska Ves 88.30 329 *e*P **P 07 28 07.1 -0.4**
PVCC Panska Ves 88.30 329 *e*pP **P 07 28 07.1 -0.4**
EIL Elat 88.31 303 P **P 07 28 06.8 -1.2**
comp=Z,5.5nm,0.8s,mb4.3,baz=18,slow=5.3,SNR=4.4
EIL Elat 88.31 303 P **P 07 28 06.8 -1.2**
BRG Berggiesshubel 88.34 329 *e*P **P 07 28 07.2 -0.6**
comp=Z,8.0nm,0.7s,mb4.6
BRG Berggiesshubel 88.34 329 *i* **P 07 28 07.2 -0.5**
comp=Z,8.3nm,0.6s,mb4.6
MODS Modra-Piesok 88.46 326 *e*P **P 07 28 08.1 -0.2**
MODS Modra-Piesok 88.46 326 *e* **P 07 28 08.2 -0.1**
CLL Collm 88.46 330⇓*i*P **P 07 28 07.3 -1.0**
CLL pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 88.46 330 *e*P **P 07 28 07.2 -1.1**
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 88.46 330⇓*i*P **P 07 28 07.3 -1.0**
comp=Z,9.0nm,0.7s,mb4.6
CLL Collm 88.46 330⇓*i*P **P 07 28 07.3 -1.0**
comp=Z,9.0nm,0.7s,mb4.6
PHWY Pilot Hill 88.50 43 *e*P **P 07 28 08.4 -0.3**
comp=Z,3.7nm,0.7s,mb4.3
ZST Bratislava 88.67 326 *e*P **P 07 28 05.9 -3.4**
ZST Bratislava 88.67 326 *e* **P 07 28 05.9 -3.4**
TREC Trest 88.71 327 *e*P **P 07 28 08.9 -0.6**
115A Sonoran Desert 88.88 53⇓P **P 07 28 11.2 +0.5**
baz=89
CLZ Clausthal 89.22 331 *e*P **P 07 28 11.3 -0.5**
CLZ pmax pmax
comp=Z,13nm,0.7s,mb4.9
CLZ Clausthal 89.22 331 *e*P **P 07 28 11.3 -0.5**
comp=Z,13nm,0.7s,mb4.9
NKC Novy Kostel 89.47 329 *e*P **P 07 28 12.6 -0.4**
MOX Moxa 89.55 330 *e*P **P 07 28 11.2 -2.2**
MOX Moxa 89.55 330 *e*P **P 07 28 12.9 -0.5**
comp=Z,15nm,1.3s,mb4.7
KHC Kasperske Hory 89.73 328 *e*P **P 07 28 13.8 -0.4**
KHC Kasperske Hory 89.73 328 *e*pP **P 07 28 13.8 -0.4**
MANZ Manzenberg 89.80 329 *e*P **P 07 28 14.1 -0.5**
comp=Z,11nm,1.3s,mb4.5
GEC2 GERESS Array S 89.87 328 *e*P **P 07 28 14.0 -0.9**
GEC2 pmax pmax
comp=Z,17nm,1.5s,mb4.7
GEC2 GERESS Array S 89.87 328 *e*P **P 07 28 14.0 -0.9**
comp=Z,17nm,1.5s,mb4.7
GERES GERESS Array B 89.87 328 P **P 07 28 14.1 -0.8**
comp=Z,4.1nm,0.6s,mb4.4,baz=39,slow=6.0,SNR=14
GERES GERESS Array B 89.87 328 P **P 07 28 14.1 -0.8**
GERES pmax pmax
comp=Z,4.0nm,0.6s
ROTZ Rotzenmuhle 89.92 329 *e*P **P 07 28 14.7 -0.4**
comp=Z,12nm,1.1s,mb4.6
IBBN Ibbenburen 89.96 333 *e*P **P 07 28 14.5 -0.7**
comp=Z,29nm,0.6s,mb5.3
GRA1 Grafenberg Arr 90.42 330 *e*P **P 07 28 16.7 -0.7**
comp=Z,17nm,0.8s,mb4.9
GRF Grafenberg Arr 90.42 330 *e*P **P 07 28 16.7 -0.7**
GRF pmax pmax
comp=Z,17nm,0.8s,mb4.9
GRF Grafenberg Arr 90.42 330 *e*P **P 07 28 16.7 -0.7**
GRF pmax pmax
comp=Z,17nm,0.8s,mb4.9
GRF Grafenberg Arr 90.42 330 *e*P **P 07 28 16.7 -0.7**
comp=Z,17nm,0.8s,mb4.9
PERS Pernice 90.72 326 *i* pP **P 07 28 18.2 -0.6**
APE Apeiranthos 90.82 313⇑*i*P **P 07 28 20.8 +1.3**
DOBS Dobrina 90.87 325 *i* pP **P 07 28 18.6 -1.0**
RJOB Jochberg 91.08 327 *e*P **P 07 28 20.0 -0.5**
comp=Z,17nm,0.9s,mb5.0
EKA Eskdalemuir Ar 91.40 340 P **P 07 28 21.5 -0.3**
comp=Z,2.6nm,0.7s,mb4.3,baz=27,slow=6.6,SNR=6.3
EKA Eskdalemuir Ar 91.40 340 P **P 07 28 21.5 -0.3**
EKA pmax pmax
comp=Z,3.0nm,0.7s
FUR Furstenfeldbru 91.49 328 *e*P **P 07 28 22.0 -0.4**
FUR pmax pmax
comp=Z,46nm,1.1s,mb5.3
FUR Furstenfeldbru 91.49 328 *e*P **P 07 28 22.0 -0.4**
comp=Z,46nm,1.1s,mb5.3
ANMO Albuquerque 91.60 49*d iP* **P 07 28 24.2 +1.0**
ANMO Albuquerque 91.60 49 *e*P **P 07 28 24.0 +0.8**
comp=Z,16nm,0.8s,mb5.0
CEY Cerknica 91.68 325 *i* pP **P 07 28 22.0 -1.3**
VOJS Vojsko 91.75 326 *i* pP **P 07 28 22.1 -1.5**
STU Stuttgart 91.99 330 *e*P **P 07 28 24.1 -0.6**
comp=Z,19nm,0.7s,mb5.1
ECSD EROS,Sioux Fal 92.03 37 *e*P **P 07 28 24.8 -0.2**
comp=Z,5.7nm,1.0s,mb4.5
BFO Black Forest 92.71 330 *e*P **P 07 28 26.9 -1.1**
BFO pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
BFO Black Forest 92.71 330 *e*P **P 07 28 26.9 -1.1**
comp=Z,9.0nm,0.7s,mb4.9
CDF Champ du Feu 93.11 331 *e*P **P 07 28 28.7 -1.1**
comp=Z,11nm,0.6s,mb4.7
CDF Champ du Feu 93.11 331 *e*P **P 07 28 28.7 -1.1**
CDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
CDF Champ du Feu 93.11 331 *e*P **P 07 28 28.7 -1.1**
comp=Z,5.3nm,0.6s,mb4.8
HINF Hinteralfeld 93.75 330 *e*P **P 07 28 31.2 -1.5**
HAU Haudompre 93.82 331 *e*P **P 07 28 31.7 -1.4**
comp=Z,4.6nm,0.5s,mb4.5
HAU Haudompre 93.82 331 *e*P **P 07 28 31.7 -1.4**
HAU pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
HAU Haudompre 93.82 331 *e*P **P 07 28 31.7 -1.4**
comp=Z,2.3nm,0.5s,mb4.5
MEZF Maizieres J'vi 93.99 332 *e*P **P 07 28 33.0 -0.8**
CABF La Chapelle 95.00 330 *e*P **P 07 28 37.2 -1.3**
LPL La Plagne 95.55 329 *e*P **P 07 28 39.9 -1.1**
comp=Z,17nm,0.8s,mb4.9
LPL La Plagne 95.55 329 *e*P **P 07 28 39.9 -1.1**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
LPL La Plagne 95.55 329 *e*P **P 07 28 39.9 -1.1**
comp=Z,8.6nm,0.8s,mb4.9
LPG La Plagne 95.56 329 *e*P **P 07 28 40.2 -0.8**
comp=Z,14nm,0.8s,mb4.9
LPG La Plagne 95.56 329 *e*P **P 07 28 40.2 -0.8**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
LPG La Plagne 95.56 329 *e*P **P 07 28 40.2 -0.8**
comp=Z,7.3nm,0.8s,mb4.9
CEL Celeste 95.99 319 *e*P **P 07 28 42.5 -0.6**
comp=Z,40nm,0.8s,mb5.6
AVF Avril sur Loir 96.05 332 *e*P **P 07 28 41.8 -1.4**
ORIF Oris-en-Rattie 96.39 329 *e*P **P 07 28 43.5 -1.3**
comp=Z,6.5nm,0.7s,mb4.5
ORIF Oris-en-Rattie 96.39 329 *e*P **P 07 28 43.5 -1.3**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 96.39 329 *e*P **P 07 28 43.5 -1.3**
comp=Z,3.3nm,0.7s,mb4.6
TXAR Lajitas Array 96.82 52 P **P 07 28 47.7 +0.7**
comp=Z,3.9nm,0.7s,mb4.8,baz=305,slow=2.6,SNR=12
TXAR Lajitas Array 96.82 52 P **P 07 28 47.7 +0.6**
TXAR pmax pmax
comp=Z,4.0nm,0.7s
TXAR Lajitas Array 96.82 52 P **P 07 28 47.7 +0.7**
VIVF Saint-Julien-l 96.99 330 *e*P **P 07 28 46.1 -1.4**
LFF La Frestale 98.62 332 *e*P Pdif 07 28 53.9 -0.8
TOA0 Torodi Ar. Sit 122.60 310 *e*PKPdf PKPdf 07 34 08.2 -0.9
TORD Torodi Ar. Bea 122.60 310 PKP PKPdf 07 34 08.7 -0.5
comp=Z,5.1nm,0.7s,baz=14,slow=2.6,SNR=14
TORD SKP 07 36 58.1
comp=Z,3.1nm,1.0s,baz=351,slow=1.3,SNR=3.5
BOSA Boshof 123.06 252 PKP PKPdf 07 34 09.8 +0.2
comp=Z,4.3nm,0.7s,baz=22,slow=2.8,SNR=8.7
BOSA Boshof 123.06 252 PKIKP PKPdf 07 34 09.8 +0.2
BOSA pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 131.71 310 PKP PKPdf 07 34 26.7 +0.2
comp=Z,6.1nm,0.8s,baz=234,slow=4.8,SNR=6.7
DBIC SKPbc SKPbc 07 37 06.6 -0.2

	comp=Z,17nm,0.7s,baz=38,slow=3.0,SNR=14						
DBIC	Dimbokro	131.71	310	PKIKP	PKPdf	07 34 26.7	+0.1
DBIC						07 37 06.6	
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VNA2	Neumayer--Watz	133.05	194	ePKiKP	PKiKP	07 34 27.9	-0.7
	baz=90,slow=0.6						
VNA2	Neumayer--Watz	133.05	194	ePKiKP	PKiKP	07 34 27.9	-0.7
	baz=59,slow=0.7						
VNA2				e		07 34 29.0	
VNA2				e		07 36 33.4	
VNA2				e		07 37 11.1	
SDV	Santo Domingo	133.10	43	ePKPdf	PKPdf	07 34 29.5	+0.3
VNA3	Neumayer Olymp	133.28	193	ePKiKP	PKiKP	07 34 28.6	-0.4
VNA3	Neumayer Olymp	133.28	193	ePKiKP	PKiKP	07 34 28.6	-0.4
VNA3				e		07 34 29.6	
VNA3				e		07 36 33.2	
VNA3				e		07 37 11.7	
USHA	Ushuaia	146.02	151	SKPbc	SKPbc	07 37 44.1	-0.9
	comp=Z,14nm,0.9s,baz=206,slow=2.9,SNR=5.1						
PLCA	Paso Flores	151.86	125	PKPbc	PKPbc	07 35 07.4	-0.4
	comp=Z,2.3nm,0.5s,baz=265,slow=3.5,SNR=7.1						
PLCA	Paso Flores	151.86	125	PKIKP	PKPbc	07 35 07.4	-0.5
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LVC	Limon Verde	153.47	85	ePKPdf	PKPdf	07 35 04.5	+0.7
BDFB	Brasilia	165.89	33	PKPab	PKPab	07 36 20.7	0.0
	comp=Z,0.8nm,0.7s,baz=316,slow=27,SNR=3.5						
BDFB	Brasilia	165.89	33	PKP2	PKPab	07 36 20.7	0.0
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.7s						

GUC 01 07:28:37.8±0.5, 2301S×7028W, h37km±3km, MD3.5, ML3.3, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.18	238	⇑iP	Pn	07 28 44.0	-0.7
MECH				iS	Sn	07 28 49.3	-0.1
MECH				AML	AML	07 28 49.8	
	comp=N,5µm,0.3s						
CEN1	Los Morros	0.39	169	⇓iP	Pn	07 28 49.2	+2.2
CEN1				iS	Sn	07 28 57.6	+4.3
ANCH	Antofagasta	0.69	190	⇓iP	Pn	07 28 50.7	-0.3
ANCH				iS	Sn	07 29 00.5	0.0
ANCH				AML	AML	07 29 02.4	
	comp=N,3µm,0.3s						
TOCH	Tocopilla	0.91	5	⇑iP	Pn	07 28 54.0	-0.1
TOCH				iS	Sn	07 29 06.6	+0.6
TOCH				AML	AML	07 29 07.7	
	comp=E,2µm,0.5s						
MACH	Maria Elena	0.94	31	⇓iP	Pn	07 28 55.4	+0.9
MACH				iS	Sn	07 29 08.3	+1.6
LVC	Limon Verde	1.32	73	⇓iP	Pn	07 29 02.5	+2.8
LVC				iS	Sn	07 29 20.3	+4.2
PB01	Plate Boundary	2.09	21	AML	AML	07 29 46.3	
	comp=E,290nm,0.3s						

*BJI **01** 07:42:11.4, 5160N×17900E, h63km, mB4.9, mb4.5, Ms4.0, Msz3.8*
*ISCJB **01** 07:42:12.8±0.5, 517N±0.1×17899E±0.07, h80km±6km, mb4.3/14, Error ellipse: s-maj=19.4km s-min=7.0km az=6.2*
*NEIC **01** 07:42:14.4±0.8, 5165N×17898E, h84km±8km, mb4.3/5, Error ellipse: s-maj=23.6km s-min=7.8km az=183.0*
*IDC **01** 07:42:15.9±3.7, 5188N×17905E, h87km±30km, mb3.9/8, mb1 4.1/9, mb1mx3.8/23, mbtmp3.9/9, MS2.9/2, Ms1 2.9/2, ms1mx2.6/32, Error ellipse: s-maj=43.2km s-min=15.2km az=9.0*
ISC 01 07:42:14.1±0.5, 518N±01×17906E±007, h70km±6km, n29, σ1s07/32, mb4.3/14, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.43	160	P	Pn	07 42 26.0	-0.2
AMKA				S	Sn	07 42 34.6	-0.4
SMY	Shemya	3.20	289	P	Pn	07 43 01.9	+0.1
SMY				S	Sn	07 43 38.4	-0.3
FX1	Attu Island--F	3.78	289	P	Pn	07 43 09.2	-0.7
NIKO	Nikolski	7.49	76	P	Pn	07 44 03.4	+2.8
UNV	Unalaska Valle	8.99	71	ePn	Pn	07 44 24.2	+3.3
PETK	Petropavlovsk-	13.10	284	P	Pn	07 45 19.5	+2.6
	0.2nm,0.3s,baz=89,slow=19,SNR=4.3						
PETK				LR	LR	07 50 09.2	
	comp=Z,30nm,21.9s,baz=251,slow=36						
SVW2	Sparrevohn	16.73	46	eP	Pn	07 46 07.6	+4.0
SEW	Seward	19.34	52	eP	Pn	07 46 32.7	-2.4
RC01	Rabbit Creek A	19.42	49	eP	Pn	07 46 35.8	-0.3
	3.3nm,0.3s						
MCK	McKinley	20.58	42	eP	P	07 46 47.6	+0.8
	1.9nm,0.4s						
EGAK	Eagle	24.13	42	eP	P	07 47 22.9	-0.1
	8.4nm,0.6s,mb4.2						
DAWY	Dawson	24.74	44	eP	P	07 47 28.9	+0.5
ASAJ	Asahikawa	25.39	267	LR	LR	07 58 51.6	
	comp=Z,57nm,18.4s,baz=156,slow=39						
YKA	Yellowknife Ar	35.92	46	P	P	07 49 07.0	-0.1
	0.7nm,0.3s,mb4.0,baz=282,slow=9.0,SNR=12						
EDM	Edmonton	39.78	60	eP	P	07 49 38.6	-1.1
BJI	Beijing	43.99	280	P	P	07 50 15.0	+0.8
BJI				S	S	07 56 42.8	+2.0
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.6						
BJI				AMB	AMB		
	comp=Z,239nm,7.0s						
BJI				LR	LR		
	comp=N,263nm,10.7s						
BJI				LR	LR		
	comp=E,204nm,18.5s						
BJI				LR	LR		
	comp=Z,66nm,19.4s						
BOZ	Bozeman (W)	44.56	69	eP	P	07 50 17.8	-0.9
	comp=Z,2.6nm,0.6s,mb4.1						
NVAR	Mina Array Bea	44.82	82	P	P	07 50 22.2	+1.4
	comp=Z,2.2nm,0.5s,mb4.2,baz=307,slow=8.9,SNR=6.9						
NVAR				PcP	PcP	07 52 02.2	+0.7
	comp=Z,0.5nm,0.5s,baz=273,slow=3.3,SNR=4.0						
NVAR	Mina Array Bea	44.82	82	P	P	07 50 22.2	+1.4
NVAR				PcP	PcP	07 52 02.2	+0.7
SONM	Songino Array	45.27	295	P	P	07 50 24.1	-0.2
	comp=Z,1.4nm,0.6s,mb3.9,baz=59,slow=8.5,SNR=11						
SONM				ScP	ScP	07 55 47.3	-1.8
	comp=Z,0.6nm,0.8s,baz=58,slow=3.7,SNR=3.6						
TPNV	Topopah Spring	47.02	82	eP	P	07 50 38.2	+0.1
	comp=Z,7.7nm,0.8s,mb4.5						
PDAR	Pinedale Array	47.45	71	P	P	07 50 40.5	-0.9
	comp=Z,2.0nm,0.7s,mb4.0,baz=334,slow=3.8,SNR=19						
SPITS	Spitsbergen Ar	49.88	355	P	P	07 50 59.0	-0.5
	comp=Z,10nm,1.0s,mb4.7,baz=46,slow=6.0,SNR=5.3						
XAN	Xi'an	52.28	279	P	P	07 51 17.2	-0.9
XAN				AP	pP	07 51 32.7	-3.2
XAN				XP	sP	07 51 38.7	-5.1
XAN				PP	PP	07 53 17.7	+0.7
XAN				SCP	ScP	07 56 22.8	+3.7
XAN				S	S	07 58 40.2	+2.3
XAN				AMB	AMB		
	comp=Z,1.0nm,0.4s,mb4.2						
XAN				AMB	AMB		
	comp=Z,44nm,14.0s						
XAN				LR	LR		
	comp=N,20nm,19.4s						
XAN				LR	LR		
	comp=E,63nm,17.3s						
XAN				LR	LR		
	comp=Z,80nm,19.4s						
ARCES	ARCESS Array B	57.46	349	P	P	07 51 54.7	-0.3
	comp=Z,3.1nm,0.8s,mb4.4,baz=24,slow=9.1,SNR=2.6						
MKAR	Makanchi Array	58.73	307	P	P	07 52 03.1	-1.2
	comp=Z,0.9nm,0.3s,mb4.2,baz=48,slow=6.9,SNR=27						
GYA	Guiyang	58.96	274	P	P	07 52 05.8	-0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
TXAR	Lajitas Array	59.90	80	P	P	07 52 12.3	-0.3
	comp=Z,2.0nm,0.6s,mb4.3,baz=304,slow=5.1,SNR=26						
TXAR	Lajitas Array	59.90	80	P	P	07 52 12.3	-0.3

*IDC **01** 07:58:42.0±1.0, 1107S×16164E, h0km, mb4.1/7, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, ML3.9/2, MS3.6/4, Ms1 3.6/4, ms1mx3.1/31, Error ellipse: s-maj=27.4km s-min=22.6km az=99.0*
*ISCJB **01** 07:58:46.8±3.6, 11.1S±0.1×1616E±0.2, h45km±29km, mb4.0/7, MS3.6/3, Error ellipse: s-maj=33.0km s-min=16.5km az=6.0*
ISC 01 07:58:46.8±6.5, 1110S±010×1617E±02, h31km±45km, n11, σ1s01/10, mb4.0/7, MS3.6/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.35	315	Pn	Pn	07 59 22.9	-0.4
	18nm,0.3s,baz=173,slow=7.4,SNR=3.8						
HNR				Sn	Sn	07 59 51.5	+0.4
	111nm,0.3s,baz=72,slow=23,SNR=7.9						
CTA	Charters Tower	17.30	237	P	Pn	08 02 47.0	+0.9
	0.4nm,0.3s,baz=64,slow=13,SNR=11						
CTA				LR	LR	08 07 39.7	
	comp=Z,142nm,19.6s,baz=46,slow=31						
STKA	Stephens Creek	27.76	219	P	P	08 04 31.4	-1.4
	2.4nm,0.9s,mb3.8,baz=356,slow=15,SNR=3.3						
STKA				LR	LR	08 15 08.5	
	comp=Z,186nm,18.1s,MS3.7,baz=23,slow=36						
ASAR	Alice Springs	29.21	241	P	P	08 04 45.3	-0.6
	2.9nm,0.8s,mb4.0,baz=73,slow=9.7,SNR=20						
RAR	Rarotonga	38.30	110	LR	LR	08 17 52.4	
	comp=Z,65nm,18.9s,MS3.5,baz=272,slow=30						
CBIJ	Chichi jima	42.40	334	LR	LR	08 23 27.4	
	comp=Z,94nm,19.3s,MS3.7,baz=270,slow=35						
VNDA	Vanda	66.41	180	P	P	08 09 33.8	+1.3
	0.9nm,0.8s,mb3.9,baz=346,slow=8.2,SNR=4.3						
SONM	Songino Array	76.37	325	P	P	08 10 34.0	+1.0
	0.8nm,0.7s,mb3.7,baz=156,slow=5.9,SNR=6.1						
NVAR	Mina Array Bea	89.15	51	P	P	08 11 40.6	+1.1
	0.8nm,0.6s,mb4.2,baz=242,slow=5.7,SNR=6.6						
MKAR	Makanchi Array	90.82	318	P	P	08 11 46.2	-0.9
	0.3nm,0.5s,mb3.8,baz=102,slow=3.2,SNR=3.5						
YKA	Yellowknife Ar	96.88	28	P	P	08 12 13.0	-1.5
	0.8nm,0.6s,mb4.3,baz=268,slow=5.1,SNR=5.9						

MOS 01 08:50:00.0±1.4, 4390N×4641E, h37km, mb4.3/3, 6C-2D, Error ellipse: s-maj=15.8km s-min=11.8km az=178.8, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	Dubki	0.93	161	eP	Pn	08 50 24.0	+7.5
DBC				pmax	pmax		
	comp=Z,78nm,0.2s						
MAK	Makhachkala	1.23	139	eP	Pn	08 50 22.3	+1.7
MAK				e		08 50 38.3	
MAK				pmax	pmax		
	comp=Z,159nm,0.3s						
MAK				smax			
	comp=N,1µm,0.6s						
MAK				smax			
	comp=E,1µm,0.6s						
MNSR	Manas	1.53	141	eP	Pn	08 50 15.0	-10
MNSR				pmax	pmax		
	comp=Z,225nm,0.2s						
KMKR	Kumukh	1.83	164	i P	Pn	08 50 18.0	-11
KMKR				pmax	pmax		
	comp=Z,315nm,0.4s						
KUBR	Kubataba	2.17	269	⇑iP	Pn	08 50 35.5	+1.9
KSMR	Kasumkent	2.62	151	eP	Pn	08 50 33.0	-6.7
KIV	Kislovodsk	2.69	273	⇑eP	Pn	08 50 43.4	+2.7
KIV				e		08 51 15.0	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHAR	Shatzhatmas	2.71	268	⇑iP	Pn	08 50 42.2	+1.2
DOMR	Dombai	3.53	262	i P	Pn	08 50 54.0	+1.7
SOC	Sochi	4.86	269	⇓iP	Pn	08 51 10.9	+0.4
ANN	Anapa	6.50	281	eP	Pn	08 51 35.3	+2.2
ANN				eS	Sn	08 52 52.8	+6.9
ANN				pmax	pmax		
	comp=Z,89nm,1.4s						
OBN	Obninsk	12.90	334	⇑iP	Pn	08 53 03.9	+3.3
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ARU	Arti	14.73	27c	iP	Pn	08 53 27.3	+1.7
ARU				S	Sn	08 56 11.5	+4.1
ARU				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BRVK	Borovoye	18.21	51	i P	Pn	08 54 11.6	+1.9
AAK	Ala-Archa	20.46	84	⇑iP	P	08 54 35.6	+1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURK	Kurchatov	22.75	61	⇓iP	P	08 55 01.7	+3.0
KURK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
CMAR	Chiang Mai Arr	50.59	103	i P	P	08 58 55.2	+0.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						

GUC 01 08:57:03.2±0.5, 2226S×7013W, h46km±1km, MD3.5, ML3.3, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	Tocopilla	0.18	337	eP	Pn	08 57 11.1	0.0
TOCH				iS	Sn	08 57 16.5	0.0
TOCH				AML	AML	08 57 17.2	
	comp=E,9µm,0.1s						
MACH	Maria Elena	0.35	79	⇑iP	Pn	08 57 12.9	+0.5
MECH	Mejillones	0.89	200	eP	Pn	08 57 19.8	+0.5
MECH				iS	Sn	08 57 32.4	+1.2
MECH				AML	AML	08 57 38.9	
	comp=E,983nm,0.5s						
CEN1	Los Morros	1.12	184	⇓iP	Pn	08 57 25.9	+3.4
CEN1				iS	Sn	08 57 43.5	+6.6
CEN1				AML	AML	08 57 46.6	
	comp=E,444nm,0.5s						
PB01	Plate Boundary	1.35	26	AML	AML	08 57 46.8	
	comp=E,2µm,0.3s						
ANCH	Antofagasta	1.44	190	i P	Pn	08 57 27.7	+0.9
ANCH				iS	Sn	08 57 45.8	+1.3
ANCH				AML	AML	08 57 49.6	
	comp=N,398nm,0.5s						

*BJI **01** 09:13:20.3, 5780N×14290W, h10km, mB5.0, mb4.5, Ms4.7, Msz4.3*
*ISCJB **01** 09:13:24.8±0.2, 5783N±0.03×14294W±0.05, h10km, mb4.5/63, MS3.9/14, Error ellipse: s-maj=4.9km s-min=2.7km az=36.5*
*IDC **01** 09:13:25.4±0.6, 5783N×14276W, h0km, mb4.2/20, mb1 4.4/22, mb1mx4.4/26, mbtmp4.2/22, ML4.1/2, MS3.8/13, Ms1 3.8/13, ms1mx3.6/32, Error ellipse: s-maj=17.8km s-min=10.7km az=24.0*
*NEIC **01** 09:13:26.4±0.2, 5779N×14295W, h10km, mb4.6/36, ML4.5(AEIC), MW4.5(PGC), Error ellipse: s-maj=4.1km s-min=2.1km az=38.0*
*MOS **01** 09:13:27.0±1.0, 5782N×14291W, h26km, mb4.8/20, Error ellipse: s-maj=14.9km s-min=5.7km az=110.7*
*PGC **01** 09:13:27.2±2.3, 5760N×14260W, h10km, ML4.7/3, Mw4.5, 260km Wsw of Yakutat, Ak Gulf Of Alaska*
ISC 01 09:13:26.8±0.2, 5784N±003×14286W±004, h10km, n182, σ0s95/199, mb4.5/63, MS3.9/14, 9C-12D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKU2	Yakutat	2.37	43	P	Pn	09 14 05.9	+0.3
MID	Middleton Isla	2.42	313	P	Pn	09 14 05.1	-1.2
PNL	Peninsula	2.58	43	P	Pn	09 14 08.4	0.0
EYAK	Cordova Ski Ar	3.10	333	P	Pn	09 14 15.1	-0.5
PLBC	Pleasant Camp	3.76	62	⇓Pn	Pn	09 14 24.5	-0.3
PLBC				⇑Sn	Sn	09 15 06.2	-2.8
HYT	Haines Junctio	4.06	40	⇑Pn	Pn	09 14 29.7	+0.8
HYT				⇓Sn	Sn	09 15 15.6	-0.9
SEW	Seward	4.10	306	P	Pn	09 14 27.4	-2.0
SEW				S	Sn	09 15 12.7	-4.7
SIT	Sitka	4.14	98	P	Pn	09 14 24.6	-5.4
SKAG	Skagway	4.26	64	P	Pn	09 14 31.1	-0.4
BESE	Bessie Mountai	4.30	77	P	Pn	09 14 30.3	-1.8
SLKM	Skilak Lake	4.64	308	P	Pn	09 14 35.7	-1.1
RC01	Rabbit Creek A	4.79	316	P	Pn	09 14 37.5	-1.3
SML	Sawmill	4.85	328	P	Pn	09 14 39.5	-0.1
PMR	Palmer	4.93	323	P	Pn	09 14 40.3	-0.4
WHY	Whitehorse	4.98	52	⇓Pn	Pn	09 14 41.9	+0.4
WHY				⇑Sn	Sn	09 15 36.8	-2.2
WHY	Whitehorse	4.98	52	P	Pn	09 14 41.8	+0.4
WHY				Sn	Sn	09 15 36.8	-2.2
MENT	Mentasta	5.14	356	eP	Pn	09 14 45.3	+1.7
KDAK	Kodiak Island	5.20	274	P	Pn	09 14 43.3	-1.2
BCA3	Beaver Creek A	5.28	5	P	Pn	09 14 46.5	+1.0
PAX	Paxson	5.31	347	P	Pn	09 14 46.4	+0.4
OHAK	Old Harbor	5.65	268	P	Pn	09 14 47.3	-3.4
AUL	Augustine Lava	5.74	290	P	Pn	09 14 51.8	-0.1
DOT	Dot Lake	5.86	355	P	Pn	09 14 55.1	+1.5
CRAG	Craig	5.87	110	P	Pn	09 14 48.2	-5.5
WRAK	Wrangell Islan	5.90	99	ePn	Pn	09 14 50.0	-4.1
WRAK				eSn	Sn	09 15 53.8	-7.9
SKT	Skwentna	6.02	317	P	Pn	09 14 54.4	-1.3
DAWY	Dawson	6.47	14	⇓Pn	Pn	09 15 03.5	+1.5
DAWY				⇑Sn	Sn	09 16 13.2	-2.6
DAWY	Dawson	6.47	14	P	Pn	09 15 03.5	+1.5
MCK	McKinley	6.62	336	P	Pn	09 15 04.3	+0.4
TRF	Thorofare Moun	6.71	330	P	Pn	09 15 05.7	+0.5
NDB	Naden	6.80	121	⇑Pn	Pn	09 15 01.2	-5.2
NDB				⇓Sn	Sn	09 16 11.9	-12
DLBC	Dease Lake	6.82	80	Pn	Pn	09 15 05.6	-1.2
	4.6nm,0.3s,baz=256,slow=9.1,SNR=101						
DLBC				Sn	Sn	09 16 19.4	-5.0
	12nm,0.3s,baz=294,slow=14,SNR=9.0						
DLBC	Dease Lake	6.82	80	⇓Pn	Pn	09 15 05.2	-1.5
DLBC				⇑Sn	Sn	09 16 18.6	-5.8
DLBC	Dease Lake	6.82	80	P	Pn	09 15 05.0	-1.7
DLBC				Sn	Sn	09 16 18.6	-5.8
PPLA	Purkeypile	6.86	322	P	Pn	09 15 06.9	-0.4
KTH	Kantishna Hill	6.96	329	P	Pn	09 15 09.2	+0.6
EGAK	Eagle	7.01	6	P	Pn	09 15 10.7	+1.3
IL1	Eielson Array	7.22	346	P	Pn	09 15 11.8	-0.4
SVW2	Sparrevohn	7.26	302	P	Pn	09 15 11.3	-1.4
BPAW	Bear Paw Mtn.	7.42	331	P	Pn	09 15 14.8	-0.1
VIB	Van Inlet	7.44	124	Pn	Pn	09 15 10.2	-4.9
VIB				Sn	Sn	09 16 26.8	-13
VIB	Van Inlet	7.44	124	⇑Pn	Pn	09 15 10.4	-4.8
VIB				⇑Sn	Sn	09 16 26.3	-13
VIB	Van Inlet	7.44	124	⇑Pn	Pn	09 15 10.4	-4.8
VIB				Sn	Sn	09 16 26.3	-13
COLA	College	7.46	343	P	Pn	09 15 14.7	-0.7
DIB	Dawson Inlet,	7.50	124	Pn	Pn	09 15 10.7	-5.3
DIB				Sn	Sn	09 16 29.9	-11
DIB	Dawson Inlet,	7.50	124	⇑Pn	Pn	09 15 11.2	-4.8
DIB				⇑Sn	Sn	09 16 29.0	-12
MOBC	Moresby Island	7.76	123	⇑Pn	Pn	09 15 14.5	-5.2
MOBC				⇑Sn	Sn	09 16 35.8	-12
RUBB	Prince Rupert	7.88	111	⇓Pn	Pn	09 15 15.8	-5.4
RUBB				⇓Sn	Sn	09 16 39.9	-10
BNB	Barry Inlet	8.25	125	⇑Pn	Pn	09 15 21.2	-5.1
BNB				⇓Sn	Sn	09 16 45.8	-14
TT01	Tatalina	8.26	313	P	Pn	09 15 25.1	-1.3
IM3	Indian Mountai	9.64	332	P	Pn	09 15 45.3	0.0
GCSA	Galena City Sc	9.65	322	P	Pn	09 15 45.7	+0.2
BM3	Burnt Mountain	9.65	356	P	Pn	09 15 47.0	+1.5
SDPT	Sand Point	10.03	263	eP	Pn	09 15 49.8	-0.9
	479nm,1.0s						
BBB	Bella Bella	10.18	117	Pn	Pn	09 15 47.5	-5.1
	6.5nm,0.3s,baz=312,slow=15,SNR=27						
BBB				Sn	Sn	09 17 34.4	-12
	2.4nm,0.3s,baz=352,slow=16,SNR=4.6						
BBB				LR	LR	09 19 18.8	
	comp=Z,344nm,19.5s,baz=298,slow=35						
BBB	Bella Bella	10.18	117	⇑Pn	Pn	09 15 47.5	-5.1
BBB				⇑Sn	Sn	09 17 33.6	-13
UNV	Unalaska Valle	13.84	263	ePn	Pn	09 16 40.1	-2.6
	28nm,0.4s						
UNV				eSn	Sn	09 19 10.4	-5.9
YKA	Yellowknife Ar	14.74	60	Pn	Pn	09 16 53.6	-1.4
	0.5nm,0.3s,baz=257,slow=12,SNR=19						
YKA				Sn	Sn	09 19 28.9	-9.2
	0.2nm,0.3s,baz=255,slow=22,SNR=6.0						
YKA				LR	LR	09 22 37.4	
	comp=Z,128nm,21.4s,baz=165,slow=38						
NLWA	Neilton Lookou	15.51	124	ePn	Pn	09 17 05.8	+0.5
	64nm,1.4s						
JCW	Jim Creek	15.80	119	P	Pn	09 17 08.8	-0.3
EBG	Ellensburg	17.37	119	P	Pn	09 17 29.1	+0.1
OD2	Odessa Site #2	17.91	115	P	Pn	09 17 34.7	-0.9
WAH2	Wahluke Slope	17.95	118	P	Pn	09 17 35.8	-0.4
MDW	Midway	17.96	119	P	Pn	09 17 36.0	-0.3
NEW	Newport	18.09	111	eP	Pn	09 17 37.8	-0.1
NEW				pmax	pmax		
	comp=Z,95nm,1.3s						
NEW	Newport	18.09	111	eP	Pn	09 17 37.8	-0.1
	comp=Z,95nm,1.3s						
GBL	Gable Mountain	18.11	118	P	Pn	09 17 37.7	-0.5
HAWA	Hanford	18.23	119	eP	Pn	09 17 38.9	-0.7
	comp=Z,16nm,0.9s						
HUMO	Hull Mountain	19.74	132	eP	Pn	09 17 57.0	-0.9
	comp=Z,21nm,1.1s						
BMO	Blue Mountains	20.42	118	eP	P	09 18 03.7	-0.1
	comp=Z,20nm,1.1s						
YBH	Yreka Blue Hor	20.58	133	P	P	09 18 06.0	+0.5
	comp=Z,13nm,0.9s,baz=327,slow=3.2,SNR=11						
YBH				LR	LR	09 24 11.3	
	comp=Z,322nm,21.9s,MS3.6,baz=329,slow=32						
YBH	Yreka Blue Hor	20.58	133	eP	P	09 18 05.7	+0.2
YBH				pmax	pmax		
	comp=Z,24nm,1.1s						
YBH	Yreka Blue Hor	20.58	133	eP	P	09 18 05.7	+0.2
	comp=Z,24nm,1.1s						
MSO	Missoula	20.65	110	eP	P	09 18 06.6	+0.4
	comp=Z,15nm,1.0s						
LHEM	Herd Peak	20.86	132	P	P	09 18 09.5	+1.0
MOD	Modoc	21.42	128	eP	P	09 18 14.9	+0.3
	comp=Z,22nm,1.0s,mb4.4						
WDC	Whiskeytown Da	21.63	134	eP	P	09 18 17.1	+0.2
WDC				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.0						
WDC	Whiskeytown Da	21.63	134	eP	P	09 18 17.1	+0.2
	comp=Z,82nm,1.4s,mb5.0						
WVOR	Wild Horse Val	21.70	125	eP	P	09 18 17.6	0.0
WVOR				pmax	pmax		
	comp=Z,33nm,1.5s,mb4.5						
WVOR	Wild Horse Val	21.70	125	eP	P	09 18 17.6	0.0
	comp=Z,33nm,1.5s,mb4.5						
EGMT	Eagleton	22.02	102	eP	P	09 18 20.7	-0.3
	comp=Z,46nm,1.0s,mb4.9						
DLMT	Dillon	22.34	111	eP	P	09 18 24.4	0.0
	comp=Z,42nm,1.1s,mb4.8						
BOZ	Bozeman (W)	22.63	109	eP	P	09 18 27.5	0.0
BOZ				e*PP		09 18 37.3	
BOZ				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
BOZ	Bozeman (W)	22.63	109	eP	P	09 18 27.5	0.0
	comp=Z,15nm,1.1s,mb4.3						
BOZ				epP		09 18 37.3	
HLID	Hailey	22.76	117	eP	P	09 18 28.5	-0.4
	comp=Z,16nm,0.9s,mb4.4						
RLMT	Red Lodge	24.19	107	eP	P	09 18 43.4	+0.4
	comp=Z,24nm,1.2s,mb4.5						
IMW	Indian Meadow	24.22	111	eP	P	09 18 43.7	+0.4
	comp=Z,30nm,1.1s,mb4.6						
RRI2	Red Ridge	24.43	113	eP	P	09 18 46.6	+1.4
	comp=Z,11nm,1.2s,mb4.2						
TPAW	Teton Pass	24.51	112	eP	P	09 18 47.2	+1.3
	comp=Z,18nm,1.3s,mb4.5						
BILL	Bilibino	24.52	315	⇑eP	P	09 18 44.0	-1.8
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.0						
ELK	Elko	24.57	122	P	P	09 18 46.6	+0.1
	comp=Z,6.0nm,0.8s,mb4.2,baz=307,slow=9.1,SNR=25						
ELK				LR	LR	09 26 54.1	
	comp=Z,183nm,20.9s,MS3.5,baz=253,slow=33						
ELK	Elko	24.57	122	eP	P	09 18 47.2	+0.7
ELK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ELK	Elko	24.57	122	eP	P	09 18 47.2	+0.6
	comp=Z,9.0nm,0.9s,mb4.3						
LOHW	Long Hollow	24.59	111	eP	P	09 18 46.8	+0.2
	comp=Z,15nm,1.3s,mb4.4						
SNOW	Snow King Moun	24.62	112	eP	P	09 18 46.9	-0.1
	comp=Z,17nm,1.3s,mb4.4						
REDW	Red Top Meadow	24.65	112	eP	P	09 18 47.5	+0.3
	comp=Z,19nm,1.4s,mb4.4						
DGMT	Dagmar	24.69	95	eP	P	09 18 47.1	-0.4
	comp=Z,42nm,1.3s,mb4.8						
DGMT				epP		09 18 57.2	
SMY	Shemya	24.71	277	eP	P	09 18 45.4	-2.3
SMY				pmax	pmax		
	comp=Z,213nm,1.0s,mb5.6						
SMY	Shemya	24.71	277	eP	P	09 18 45.4	-2.3
	comp=Z,213nm,1.0s,mb5.6						
NVAR	Mina Array Bea	25.16	130	P	P	09 18 52.2	+0.3
	comp=Z,9.6nm,0.8s,mb4.4,baz=314,slow=8.2,SNR=28						
HWUT	Hardware Ranch	25.62	116	eP	P	09 18 56.6	+0.5

	comp=Z,24nm,1.1s,mb4.6						
PDAR	**Pinedale Array**	**25.73**	**111**	P	**P**	**09 18 57.1**	**+0.1**
	comp=Z,3.6nm,0.9s,mb3.9,baz=311,slow=5.7,SNR=16						
TPH	**Tonopah**	**25.91**	**129**	*e*P	**P**	**09 18 57.6**	**-1.1**
TPH				pmax	pmax		
	comp=Z,78nm,1.3s,mb5.1						
TPH	**Tonopah**	**25.91**	**129**	*e*P	**P**	**09 18 57.6**	**-1.1**
	comp=Z,78nm,1.3s,mb5.1						
DUG	**Dugway**	**26.12**	**119**	*e*P	**P**	**09 19 00.4**	**-0.2**
DUG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
DUG	**Dugway**	**26.12**	**119**	*e*P	**P**	**09 19 00.4**	**-0.2**
	comp=Z,13nm,1.0s,mb4.4						
TPNV	**Topopah Spring**	**27.27**	**128**	*e*P	**P**	**09 19 10.9**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,118nm,1.2s,mb5.3						
TPNV	**Topopah Spring**	**27.27**	**128**	*e*P	**P**	**09 19 10.9**	**-0.1**
	comp=Z,118nm,1.2s,mb5.3						
RSSD	**Black Hills**	**27.59**	**103**	*e*P	**P**	**09 19 14.4**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
RSSD	**Black Hills**	**27.59**	**103**	*e*P	**P**	**09 19 14.4**	**+0.7**
	comp=Z,10nm,0.9s,mb4.5						
SEY	**Seymchan**	**31.17**	**307**	⇑*i*P	**P**	**09 19 46.2**	**+0.9**
ECSD	**EROS,Sioux Fal**	**31.77**	**96**	*e*P	**P**	**09 19 49.8**	**-1.0**
	comp=Z,9.9nm,1.4s,mb4.5						
EYMN	**Ely**	**31.79**	**86**	*e*P	**P**	**09 19 50.7**	**-0.2**
	comp=Z,17nm,1.3s,mb4.7						
PETK	**Petropavlovsk-**	**33.07**	**288**	P	**P**	**09 20 02.7**	**+0.6**
	comp=Z,3.8nm,0.6s,mb4.5,baz=73,slow=13,SNR=8.9						
PETK				LR	LR	09 33 25.4	
	comp=Z,105nm,19.0s,MS3.6,baz=68,slow=36						
PETK	**Petropavlovsk-**	**33.07**	**288**	P	**P**	**09 20 02.7**	**+0.6**
PETK				LR	LR	09 33 25.4	
ANMO	**Albuquerque**	**33.33**	**117**	⇑*i*P	**P**	**09 20 04.7**	**+0.1**
KSU1	**Kansas State U**	**35.06**	**102**	*e*P	**P**	**09 20 18.8**	**-0.7**
	comp=Z,19nm,1.0s,mb5.0						
TIXI	**Tiksi**	**36.24**	**328**	⇑*i*P	**P**	**09 20 28.8**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.5s,mb4.2						
TXAR	**Lajitas Array**	**39.30**	**119**	P	**P**	**09 20 55.5**	**-0.1**
	comp=Z,1.5nm,0.9s,mb3.7,baz=322,slow=6.7,SNR=13						
TXAR				LR	LR	09 36 06.5	
	comp=Z,134nm,18.5s,MS3.8,baz=10.0,slow=35						
MIAR	**Mount Ida**	**40.10**	**104**	*e*P	**P**	**09 21 02.1**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
MIAR	**Mount Ida**	**40.10**	**104**	*e*P	**P**	**09 21 02.1**	**-0.1**
	comp=Z,15nm,1.0s,mb4.7						
SCHQ	**Schefferville**	**40.19**	**60**	P	**P**	**09 21 03.2**	**+0.4**
	comp=Z,12nm,1.2s,mb4.5,baz=312,slow=15,SNR=2.3						
YAK	**Yakutsk**	**40.86**	**314**	⇓*i*P	**P**	**09 21 09.6**	**+1.4**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
BOD	**Bodaibo**	**49.56**	**317**	*e*P	**P**	**09 22 15.4**	**-1.8**
ARCES	**ARCESS Array B**	**52.65**	**5**	P	**P**	**09 22 40.4**	**+0.1**
	comp=Z,3.4nm,0.9s,mb4.3,baz=352,slow=7.5,SNR=4.7						
ARCES				PcP	PcP	09 23 50.1	+0.1
	comp=Z,2.1nm,0.9s,baz=14,slow=4.2,SNR=2.9						
HIA	**Hailar**	**53.61**	**306**	⇑*i*P	**P**	**09 22 46.3**	**-1.4**
CN2	**Changchun**	**55.16**	**298**	*e*P	**P**	**09 22 55.5**	**-3.5**
JHJ	**Hachijo jima 2**	**56.10**	**279**	LR	LR	09 50 16.1	
	comp=Z,69nm,18.3s,MS3.8,baz=258,slow=39						
TLY	**Talaya**	**58.10**	**318**	⇑*i*P	**P**	**09 23 21.4**	**+1.6**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KSRS	**Korea Array**	**58.84**	**292**	P	**P**	**09 23 26.1**	**+1.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=40,slow=5.2,SNR=5.6						
KSRS				LR	LR	09 50 58.8	
	comp=Z,82nm,18.9s,MS3.9,baz=292,slow=38						
NB2	**NORSAR Subarra**	**59.74**	**14**	P	**P**	**09 23 31.9**	**+0.9**
	comp=Z,3.9nm,0.8s,mb4.5,baz=349,slow=6.9						
NOA	**NORSAR Array B**	**59.74**	**14**	P	**P**	**09 23 31.3**	**+0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=349,slow=6.7,SNR=3.1						
ULN	**Ulaanbaatar**	**59.94**	**313**	⇓*i*P	**P**	**09 23 33.8**	**+1.2**
SONM	**Songino Array**	**60.22**	**313**	P	**P**	**09 23 36.1**	**+1.6**
	comp=Z,2.7nm,0.8s,mb4.3,baz=41,slow=7.5,SNR=18						
NVS	**Novosibirsk**	**61.67**	**332**	*e*P	**P**	**09 23 43.8**	**-0.4**
HVS	**Khovu-Aksy**	**61.94**	**323**	⇑*i*P	**P**	**09 23 47.5**	**+1.4**
HVS				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.1						
ZAA0	**Zalesovo Array**	**62.06**	**330**	*e*P	**P**	**09 23 47.3**	**+0.5**
ZALV	**Zalesovo Beam**	**62.06**	**330**	P	**P**	**09 23 47.5**	**+0.6**
	comp=Z,2.9nm,0.6s,mb4.6,baz=22,slow=7.2,SNR=13						
ZALV				LR	LR	09 54 17.5	
	comp=Z,120nm,20.9s,MS4.0,baz=65,slow=40						
BJI	**Beijing**	**62.40**	**302**	P	**P**	**09 23 42.4**	**-7.0**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb5.1						
ARU	**Arti**	**64.79**	**347**	*d i*P	**P**	**09 24 05.3**	**+0.4**
ARU				*e*S	**S**	**09 32 45.9**	**+0.7**
ARU				*e*SS	SS	09 36 52.6	-2.6
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ARU	**Arti**	**64.79**	**347**	*e*P	**P**	**09 24 05.5**	**+0.6**
	comp=Z,6.5nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**66.23**	**339**	P	**P**	**09 24 14.9**	**+0.7**
	comp=Z,1.8nm,0.6s,mb4.3,baz=46,slow=8.5,SNR=9.7						
KURK	**Kurchatov**	**66.58**	**333**	P	**P**	**09 24 17.6**	**+1.0**
	comp=Z,3.1nm,0.7s,mb4.5,baz=24,slow=6.1,SNR=7.6						
OBN	**Obninsk**	**67.41**	**0**	*e*P	**P**	**09 24 22.6**	**+0.9**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
BAIF	**Baives**	**69.11**	**22**	*e*P	**P**	**09 24 33.2**	**+0.7**
	comp=Z,28nm,1.1s,mb4.8						
BAIF	**Baives**	**69.11**	**22**	*e*P	**P**	**09 24 33.2**	**+0.7**
BAIF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
BAIF	**Baives**	**69.11**	**22**	*e*P	**P**	**09 24 33.2**	**+0.7**
	comp=Z,14nm,1.1s,mb4.8						
MKAR	**Makanchi Array**	**69.23**	**329**	P	**P**	**09 24 33.6**	**+0.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=47,slow=5.3,SNR=10						
MKAR				LR	LR	09 59 28.5	
	comp=Z,116nm,21.8s,MS4.1,baz=354,slow=40						
CLL	**Collm**	**69.43**	**16**	*e*P	**P**	**09 24 43.0**	**+8.5**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CLL	**Collm**	**69.43**	**16**	*e*(sP)	sP	09 24 43.0	+4.1
	comp=Z,6.0nm,1.0s						
GTA	**Gaotai**	**69.88**	**313**	*e*P	**P**	**09 24 38.8**	**+1.4**
GTA				PP	PP	09 27 13.1	+1.7
GTA				S	S	09 33 39.8	-7.0
GTA				SS	SS	09 38 06.9	-7.8
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
GTA				AMB	AMB		
	comp=Z,152nm,8.1s						
GTA				LR	LR		
	comp=N,169nm,16.8s,MS4.6						
GTA				LR	LR		
	comp=E,210nm,17.4s,MS4.6						
GTA				LR	LR		
	comp=Z,123nm,14.1s,MS4.3						
XAN	**Xi'an**	**70.62**	**303**	P	**P**	**09 24 35.5**	**-6.5**
XAN				PCP	PcP	09 24 55.6	-7.5
XAN				PP	PP	09 27 10.9	-7.0
XAN				S	S	09 33 43.3	-12
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.0						
XAN				LR	LR		
	comp=N,64nm,19.9s,MS4.0						
XAN				LR	LR		
	comp=E,48nm,19.9s,MS4.0						
XAN				LR	LR		
	comp=Z,131nm,18.6s,MS4.2						
AKTK	**Aktyubinsk**	**70.74**	**346**	P	**P**	**09 24 42.0**	**-0.4**
AKTO	**Aktyubinsk**	**70.74**	**346**	P	**P**	**09 24 42.0**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=13,slow=7.1,SNR=4.8						
LZH	**Lanzhou**	**71.09**	**308**	*e*P	**P**	**09 24 45.5**	**+0.6**
LZH				AMB	AMB		
	comp=Z,18nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,75nm,4.3s						
CDF	**Champ du Feu**	**71.28**	**21**	*e*P	**P**	**09 24 46.4**	**+0.6**
AKASG	**Malin Array Be**	**71.63**	**5**	P	**P**	**09 24 48.0**	**+0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=355,slow=6.1,SNR=6.3						
KHC	**Kasperske Hory**	**71.64**	**16**	*e*P	**P**	**09 24 38.5**	**-9.5**
KHC	**Kasperske Hory**	**71.64**	**16**	*e*P	**P**	**09 24 58.0**	**+10**
LOR	**Lormes**	**71.69**	**23**	*e*P	**P**	**09 24 48.7**	**+0.4**
HINF	**Hinteralfeld**	**71.77**	**21**	*e*P	**P**	**09 24 49.0**	**+0.2**
SSF	**Saint Saulge**	**71.81**	**23**	*e*P	**P**	**09 24 49.4**	**+0.4**
	comp=Z,13nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**71.81**	**23**	*e*P	**P**	**09 24 49.4**	**+0.4**
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**71.81**	**23**	*e*P	**P**	**09 24 49.4**	**+0.4**
	comp=Z,6.3nm,0.9s,mb4.5						
GERES	**GERESS Array B**	**71.94**	**16**	P	**P**	**09 24 50.1**	**+0.3**
	comp=Z,0.3nm,0.3s,mb3.7,baz=344,slow=3.2,SNR=2.9						
AVF	**Avril sur Loir**	**72.04**	**24**	*e*P	**P**	**09 24 50.6**	**+0.2**
	comp=Z,13nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**72.04**	**24**	*e*P	**P**	**09 24 50.6**	**+0.2**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**72.04**	**24**	*e*P	**P**	**09 24 50.6**	**+0.2**
	comp=Z,6.3nm,0.8s,mb4.6						
AAK	**Ala-Archa**	**75.15**	**332**	⇑*i*P	**P**	**09 25 09.8**	**+1.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AFI	**Afiamalu**	**75.35**	**209**	LR	LR	09 50 17.4	
	comp=Z,147nm,20.0s,MS4.3,baz=111,slow=29						
EVO	**Evora**	**76.80**	**35**	*e*P	**P**	**09 25 20.4**	**+2.1**
GYA	**Guiyang**	**78.07**	**301**	P	**P**	**09 25 18.6**	**-7.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**78.47**	**356**	*e*P	**P**	**09 25 27.1**	**-0.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
SOC	**Sochi**	**78.93**	**358**	*e*P	**P**	**09 25 30.4**	**+0.4**
SOC				*e*		09 25 36.3	
SOC				*e*S	S	09 35 23.8	-4.3
SOC				*e*SS	SS	09 40 33.2	+1.6
KMI	**Kunming**	**81.00**	**303**	P	**P**	**09 25 37.1**	**-4.4**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=Z,58nm,35.3s,MS3.7						
HNR	**Honiara**	**81.47**	**237**	LR	LR	09 54 52.4	
	comp=Z,93nm,20.3s,MS4.1,baz=356,slow=30						
BRTR	**Keskin Array B**	**82.76**	**3**	P	**P**	**09 25 51.8**	**+1.2**
	comp=Z,1.1nm,0.7s,mb4.0,baz=349,slow=1.7,SNR=4.8						
BRTR	**Keskin Array B**	**82.76**	**3**	*i* P	**P**	**09 25 51.7**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**88.51**	**303**	P	**P**	**09 26 20.3**	**+0.9**
	comp=Z,2.2nm,0.5s,mb4.8,baz=9.9,slow=4.6,SNR=8.6						
CMAR				LR	LR	10 05 57.2	
	comp=Z,46nm,19.5s,MS3.9,baz=25,slow=36						
QSPA	**South Pole Qui**	**147.64**	**180**	PKPbc	PKPbc	09 33 08.4	-1.0
	comp=Z,6.4nm,1.0s,baz=89,slow=2.3,SNR=12						
BOSA	**Boshof**	**149.63**	**21**	PKPbc	PKPbc	09 33 16.0	0.0
	comp=Z,3.1nm,0.5s,baz=334,slow=3.2,SNR=11						
MAW	**Mawson**	**164.81**	**219**	*e*PKIKP	PKPdf	09 33 29.9	+0.8
MAW				*e*		09 33 39.9	

NEIC 01 09:21:45.6,3927S×17587E,h87km,ML3.9(WEL),9C, After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOVZ	**Moawhango**	**0.16**	**213**	⇑P	Pn	09 21 57.7	-0.4
TUVZ	**Tukino**	**0.17**	**271**	⇑P	Pn	09 21 58.2	+0.1
WNVZ	**Wahianoa**	**0.22**	**255**	⇑P	Pn	09 21 58.4	+0.1
NGZ	**Ngauruhoe**	**0.23**	**295**	⇑P	Pn	09 21 58.2	-0.1
FWVZ	**Far West T-bar**	**0.24**	**274**	P	Pn	09 21 58.5	+0.1
WTVZ	**West Tongariro**	**0.27**	**306**	⇑P	Pn	09 21 58.2	-0.3
RITZ	**Rihia Road**	**0.29**	**359**	P	Pn	09 21 58.8	+0.2
KATZ	**Kakaramea**	**0.32**	**336**	⇑P	Pn	09 21 58.8	0.0
TWVZ	**Taurewa**	**0.39**	**301**	⇑P	Pn	09 21 59.0	-0.2
RATZ	**Rangitukua**	**0.41**	**349**	⇑P	Pn	09 21 59.2	-0.2
HATZ	**Hinemaiaia**	**0.42**	**25**	P	Pn	09 21 59.1	-0.3
BKZ	**Black Stump Fm**	**0.50**	**78**	⇑P	Pn	09 21 59.9	-0.1
TSZ	**Takapari Road**	**0.79**	**175**	P	Pn	09 22 02.8	0.0
WAZ	**Wanganui**	**0.84**	**234**	P	Pn	09 22 04.0	+0.8
VRZ	**Vera Road**	**0.87**	**279**	P	Pn	09 22 04.1	+0.4
HIZ	**Hauiti**	**1.09**	**313**	P	Pn	09 22 06.7	+0.5
UTU	**Utuhina**	**1.12**	**13**	P	Pn	09 22 07.1	+0.6
RAEZ	**Rainy Point**	**1.14**	**269**	P	Pn	09 22 08.1	+1.3
TAZ	**Tarawera**	**1.15**	**26**	P	Pn	09 22 07.3	+0.4
KARZ	**Kaharoa**	**1.28**	**13**	P	Pn	09 22 09.0	+0.5
EDRZ	**Edgecumbe**	**1.35**	**31**	P	Pn	09 22 09.4	+0.1
NEZ	**North Egmont**	**1.38**	**269**	P	Pn	09 22 11.2	+1.6
URZ	**Urewera**	**1.40**	**44**	P	Pn	09 22 09.6	-0.4
MRZ	**Mangatainoka R**	**1.41**	**189**	P	Pn	09 22 09.5	-0.5
KNZ	**Kokohu**	**1.43**	**80**	P	Pn	09 22 10.0	-0.3
BFZ	**Birch Farm**	**1.44**	**168**	P	Pn	09 22 10.0	-0.4
PKE	**Pukeiti**	**1.46**	**272**	P	Pn	09 22 11.9	+1.2
TOZ	**Tahuroa Road**	**1.56**	**349**	P	Pn	09 22 12.8	+0.7
MWZ	**Matawai**	**1.60**	**55**	P	Pn	09 22 12.3	-0.2
KIW	**Kapiti Island**	**1.75**	**205**	P	Pn	09 22 13.7	-0.7
CAW	**Cannon Point**	**1.93**	**198**	P	Pn	09 22 15.7	-1.1
PAWZ	**Paruwai Farm**	**2.13**	**189**	P	Pn	09 22 18.1	-1.4
MRW	**Makara Radio**	**2.15**	**204**	P	Pn	09 22 18.3	-1.4
MSWZ	**Moikau Station**	**2.19**	**192**	P	Pn	09 22 18.7	-1.5
PUZ	**Puketiti**	**2.22**	**58**	P	Pn	09 22 20.0	-0.6
SNZO	**South Karori**	**2.22**	**203**	P	Pn	09 22 19.1	-1.5
BHW	**Baring Head**	**2.27**	**199**	P	Pn	09 22 19.5	-1.7
TCW	**Tory Channel**	**2.29**	**212**	P	Pn	09 22 20.2	-1.3
KUZ	**Kuaotunu**	**2.52**	**357**	P	Pn	09 22 25.3	+0.6
MXZ	**Matakaoa Point**	**2.56**	**49**	P	Pn	09 22 24.9	-0.3
NNZ	**Nelson**	**2.72**	**224**	P	Pn	09 22 25.5	-1.8
BSWZ	**Blackbirch Sta**	**2.87**	**211**	P	Pn	09 22 27.7	-1.6
QRZ	**Quartz Range**	**3.00**	**238**	P	Pn	09 22 29.4	-1.6
THZ	**Tophouse**	**3.36**	**221**	P	Pn	09 22 34.1	-1.8
KHZ	**Kahutara**	**3.60**	**209**	P	Pn	09 22 36.8	-2.4
DSZ	**Denniston Nort**	**3.96**	**230**	P	Pn	09 22 41.6	-2.5
DSZ				S	Sn	09 23 26.2	-3.2
CRLZ	**Canterbury Las**	**4.95**	**209**	P	Pn	09 22 53.5	-3.9
MQZ	**McQueen's Vall**	**5.05**	**208**	P	Pn	09 22 54.1	-4.7
MQZ				S	Sn	09 23 46.1	-10
WVZ	**Waitaha Valley**	**5.42**	**224**	P	Pn	09 23 00.9	-3.0
RPZ	**Rata Peaks**	**5.72**	**218**	P	Pn	09 23 04.2	-3.8
ODZ	**Otahua Downs**	**6.95**	**212**	P	Pn	09 23 20.1	-4.6
TUZ	**Tuapeka**	**8.11**	**212**	P	Pn	09 23 36.9	-3.5

NEIC 01 09:29:56.8,4533S×16726E,h59km,ML3.7(WEL),1D, After WEL.,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.16**	**207**	P	Pn	09 30 05.5	-0.3
DCZ				S	Sn	09 30 12.6	+0.2
MLZ	**Mavora Lakes**	**0.64**	**92**	P	Pn	09 30 09.6	-0.6
WHZ	**Wether Hill Ro**	**0.74**	**140**	⇓P	Pn	09 30 11.3	-0.1
MSZ	**Milford Sound**	**0.81**	**36**	P	Pn	09 30 11.9	-0.4
MSZ				*e*P		09 30 12.3	
MSZ				S	Sn	09 30 23.5	-0.2
WKZ	**Wanaka**	**1.34**	**69**	P	Pn	09 30 19.2	0.0
WKZ				*e*P		09 30 19.4	
EAZ	**Earnscleugh**	**1.45**	**87**	P	Pn	09 30 20.5	-0.2
JCZ	**Jackson Bay**	**1.65**	**41**	P	Pn	09 30 23.4	0.0
JCZ				*e*P		09 30 23.7	
TUZ	**Tuapeka**	**1.78**	**111**	P	Pn	09 30 24.5	-0.6
LBZ	**Lake Benmore**	**2.28**	**67**	P	Pn	09 30 30.5	-1.5
ODZ	**Otahua Downs**	**2.41**	**84**	P	Pn	09 30 32.4	-1.3
FOZ	**Fox Glacier**	**2.48**	**45**	P	Pn	09 30 34.1	-0.6
WVZ	**Waitaha Valley**	**3.37**	**49**	P	Pn	09 30 44.3	-2.5
MQZ	**McQueen's Vall**	**4.18**	**69**	P	Pn	09 30 55.2	-2.8
DSZ	**Denniston Nort**	**4.87**	**44**	P	Pn	09 31 06.0	-1.4

*CSEM **01** 09:53:09.8±0.1,4081N×3972E,h8km,MD2.8,Error ellipse: s-maj=2.0km s-min=1.6km az=140.0*
*ISK **01** 09:53:09.6,4081N×3975E,h12km,MD2.7*
*ISCJB **01** 09:53:10.0±0.8,4086N±005×3963E±008,h14km±4km, Error ellipse: s-maj=11.7km s-min=5.4km az=37.2*
*DDA **01** 09:53:11.6,4091N×3992E,h7km±2km,Md2.8*
ISC 01 09:53:10.4±0.7,**4085N**±005×**3966E**±008,**h13**km±5km,**n11**, σ**0.s54**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.13**	**42**	*i* P	**Pg**	**09 53 13.1**	**-0.6**
MACK				*i* S	**Sg**	**09 53 16.8**	**+0.7**
KTUT	**Trabzon**	**0.16**	**31**	*e*PG	**Pg**	**09 53 14.2**	**-0.1**
KTUT				*e*SG	**Sg**	**09 53 16.9**	**-0.1**
GUMT	**Gumushane**	**0.41**	**199**	*e*PG	**Pg**	**09 53 18.1**	**-0.5**
GUMT				*e*SG	**Sg**	**09 53 23.8**	**-0.2**
ESPY	**Espiye-Giresun**	**0.71**	**276**	*e*PG	**Pg**	**09 53 25.1**	**+0.9**
KOPT	**Kop Dagi**	**1.05**	**142**	*i* P	**Pb**	**09 53 30.1**	**-0.2**
KOPT				*i* S	**Sb**	**09 53 45.1**	**+1.1**
EZC	**Erzincan**	**1.10**	**174**	*e*PN	**Pn**	**09 53 31.1**	**-0.4**
DBAD	**Bademkaya**	**1.56**	**83**	*i* P	**Pn**	**09 53 37.3**	**-0.4**
DBAD				*i* S	**Sn**	**09 53 57.1**	**-0.6**
DDEM	**Demirkent**	**1.59**	**88**	*i* P	**Pn**	**09 53 38.2**	**0.0**
DDEM				*i* S	**Sn**	**09 53 58.8**	**+0.2**
BCA	**Borcka**	**1.60**	**67**	*e*PN	**Pn**	**09 53 37.6**	**-0.8**
DAGI	**Agillar**	**1.73**	**82**	*i* P	**Pn**	**09 53 40.3**	**+0.2**
DAGI				*i* S	**Sn**	**09 54 01.5**	**-0.4**
ARTV	**Artvin**	**1.75**	**78**	*i* P	**Pn**	**09 53 40.8**	**+0.3**
ARTV				*i* S	**Sn**	**09 54 03.5**	**+0.9**

*BJI **01** 10:17:50.7,480S×15160E,h23km,mB5.0,mb5.0*
*IDC **01** 10:18:06.4±0.9,480S×15165E,h148km±7km,mb4.2/14, mb1 4.3/15,mb1mx4.1/21,mbtmp4.2/15,MS3.4/1, Ms1 3.3/1,ms1mx2.7/22,Error ellipse: s-maj=17.9km s-min=10.5km az=87.0*
*ISCJB **01** 10:18:07.5±1.7,478S±006×15171E±009,h172km±15km, mb4.7/36,Error ellipse: s-maj=15.2km s-min=9.7km az=169.3*
*MOS **01** 10:18:08.9±0.8,475S×15152E,h178km,mb5.0/5,Error ellipse: s-maj=15.6km s-min=10.9km az=73.2*
*NEIC **01** 10:18:09.8±1.6,481S×15165E,h178km±13km,mb5.0/19, Error ellipse: s-maj=12.0km s-min=7.0km az=63.0*
*DJA **01** 10:18:13,495S×15150E,h199km,Mw5.3/4*
ISC 01 10:18:09.3±1.6,**482S**±006×**15168E**±009,**h172**km±15km, **n73**,σ**0.s74**/65,**mb4.7**/36,**9C-1D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.39**	**224**	*c i*P	**Pn**	**10 19 40.5**	**-0.9**
PMG	**Port Moresby**	**6.39**	**224**	*e*Pn	**Pn**	**10 19 40.7**	**-0.7**
	132nm,0.8s						
PMG				*e*Sn	Px	10 20 27.0	
COEN	**Coen**	**12.36**	**222**	*e*Pn	**Pn**	**10 21 00.8**	**+1.2**
CTA	**Charters Tower**	**16.07**	**199**	*e*P	**Pn**	**10 21 46.9**	**+1.1**
	7.4nm,0.7s						
CTA	**Charters Tower**	**16.07**	**199**	P	**Pn**	**10 21 46.2**	**+0.4**
	1.2nm,0.3s,baz=6.5,slow=9.4,SNR=10						
CTA	**Charters Tower**	**16.07**	**199**	*e*P	**Pn**	**10 21 46.9**	**+1.1**
CTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTAO	**Charters Tower**	**16.07**	**199**	*e*P	**Pn**	**10 21 47.4**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	**16.07**	**199**	*e*Pn	**Pn**	**10 21 47.4**	**+1.6**
	comp=Z,18nm,0.9s						
KAKA	**Kakadu**	**20.55**	**246**	*e*P	x	10 22 18.2	
	comp=Z,238nm,0.6s						
DZM	**Mont Dzumac**	**22.32**	**142**	*e*P	**P**	**10 22 51.7**	**-1.3**
DZM	**Mont Dzumac**	**22.32**	**142**	*e*P	**P**	**10 22 52.4**	**-0.6**
	comp=Z,16nm,0.5s,mb4.7						
WRAB	**Tennant Creek**	**22.59**	**227**	⇑*i*P	**P**	**10 22 55.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,187nm,0.5s,mb5.8						
WRAB	**Tennant Creek**	**22.59**	**227**	⇑*i*P	**P**	**10 22 55.5**	**+0.1**
	comp=Z,187nm,0.5s,mb5.8						
WB2	**Warramunga Arr**	**22.59**	**227**	*e*P	**P**	**10 22 55.6**	**+0.1**
ASAR	**Alice Springs**	**25.39**	**221**	P	**P**	**10 23 20.8**	**-0.1**
	comp=Z,21nm,0.6s,mb4.8,baz=51,slow=8.8,SNR=329						
ASAR				S	**S**	**10 27 35.0**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=40,slow=14,SNR=3.2						
ASAR				ScP	ScP	10 30 14.4	+2.4
	comp=Z,1.1nm,0.8s,baz=49,slow=2.8,SNR=4.4						
ASAR	**Alice Springs**	**25.39**	**221**	P	**P**	**10 23 20.8**	**-0.1**
ASAR				S	**S**	**10 27 35.0**	**+0.2**
ARMA	**Armidale**	**25.46**	**180**	*e*P	**P**	**10 23 22.8**	**+1.4**
BATI	**Baumata**	**28.27**	**257**	P	**P**	**10 23 46.8**	**0.0**
	comp=Z,26nm,0.4s,mb5.3,baz=98,slow=5.8,SNR=6.2						
STKA	**Stephens Creek**	**28.53**	**198**	*e*P	**P**	**10 23 48.2**	**-0.6**
	comp=Z,4.6nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**28.53**	**198**	P	**P**	**10 23 48.1**	**-0.7**
	comp=Z,5.9nm,0.7s,mb4.4,baz=29,slow=10.0,SNR=13						
STKA				pP	pP	10 24 19.5	-4.9
	comp=Z,1.7nm,0.5s,baz=356,slow=11,SNR=1.9						
STKA				LR	LR	10 35 15.5	
	comp=Z,71nm,18.2s,baz=24,slow=36						
CNB	**Canberra Magne**	**30.42**	**184**	*e*P	**P**	**10 24 06.2**	**+0.8**
KAPI	**Kappang**	**31.81**	**268**	P	**P**	**10 24 15.9**	**-2.1**
	comp=Z,4.2nm,0.3s,mb4.7,baz=111,slow=12,SNR=6.2						
FORT	**Forrest**	**34.07**	**218**	*e*P	**P**	**10 24 36.7**	**-0.7**
	comp=Z,50nm,0.6s,mb5.4						
MBWA	**Marble Bar**	**34.99**	**239**	*e*P	**P**	**10 24 45.1**	**-0.3**
	comp=Z,18nm,0.5s,mb5.0						
URZ	**Urewera**	**40.54**	**149**	P	**P**	**10 25 31.8**	**+0.1**
	comp=Z,6.4nm,0.5s,mb4.5,baz=295,slow=3.4,SNR=7.7						
KLBR	**Kellerberrin**	**41.48**	**226**	*e*P	**P**	**10 25 38.2**	**-1.3**
	comp=Z,16nm,0.5s,mb4.9						
RPZ	**Rata Peaks**	**42.34**	**159**	P	**P**	**10 25 46.4**	**+0.2**
	comp=Z,4.9nm,0.5s,mb4.4,baz=338,slow=5.4,SNR=5.2						
NWAO	**Narrogin (SRO)**	**42.58**	**225**	P	**P**	**10 25 47.0**	**-1.4**
	comp=Z,24nm,1.1s,mb4.7,baz=67,slow=8.0,SNR=3.2						
MUN	**Mundaring**	**42.80**	**227**	*e*P	**P**	**10 25 49.7**	**-0.5**
KSRS	**Korea Array**	**47.53**	**334**	P	**P**	**10 26 26.7**	**-0.6**
	comp=Z,1.4nm,0.8s,mb3.7,baz=132,slow=5.4,SNR=3.8						
HABR	**Khabarovsk**	**55.03**	**347**	*e*P	**P**	**10 27 17.1**	**-5.8**
HABR				*e**SP	sP	10 27 53.9	-27
HABR				*e*		10 29 23.6	
HABR				*e*S	**S**	**10 34 58.9**	**+7.2**
HABR				*e*		10 36 56.0	
XAN	**Xi'an**	**55.87**	**317**	P	**P**	**10 27 29.3**	**+0.1**
XAN				AP	pP	10 27 37.5	-31
XAN				XP	sP	10 27 41.4	-46
XAN				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.8						
XAN				AMB	AMB		
	comp=Z,113nm,6.9s						
CMAR	**Chiang Mai Arr**	**56.88**	**296**	P	**P**	**10 27 37.6**	**+1.0**
	comp=Z,11nm,0.8s,mb4.7,baz=114,slow=5.3,SNR=44						
PETK	**Petropavlovsk-**	**57.94**	**4**	P	**P**	**10 27 42.5**	**-0.8**
	comp=Z,2.2nm,0.9s,mb4.0,baz=151,slow=6.2,SNR=7.4						
LZH	**Lanzhou**	**60.47**	**316**	*e*P	**P**	**10 28 04.8**	**+3.7**
LZH				AP	pP	10 28 09.0	-32
LZH				XP	sP	10 28 12.3	-48
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,105nm,5.0s						
HIA	**Hailar**	**60.60**	**337**	⇑*i*P	**P**	**10 28 01.0**	**-0.7**
GTA	**Gaotai**	**64.92**	**318**	*e*P	**P**	**10 28 31.1**	**+0.7**
GTA				AP	pP	10 28 35.3	-36
GTA				XP	sP	10 28 38.8	-51
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**65.43**	**329**	⇑*i*P	**P**	**10 28 33.9**	**+0.4**
ULN	**Ulaanbaatar**	**65.43**	**329**	*e*P	**P**	**10 28 33.7**	**+0.2**
	comp=Z,4.2nm,0.7s,mb4.4						
SONM	**Songino Array**	**65.75**	**328**	P	**P**	**10 28 35.8**	**+0.2**
	comp=Z,3.9nm,0.5s,mb4.5,baz=143,slow=5.1,SNR=29						
SONM				pP	pP	10 29 12.0	-4.3
	comp=Z,1.1nm,0.8s,baz=135,slow=5.2,SNR=2.2						
LSA	**Lhasa**	**67.33**	**305**	P	**P**	**10 28 47.3**	**+1.3**
TAPN	**Taplejung**	**69.46**	**301**	*e*P	**P**	**10 28 59.9**	**+0.6**
	comp=Z,22nm,0.8s,mb5.0						
TLY	**Talaya**	**69.54**	**330**	⇑*i*P	**P**	**10 28 59.3**	**0.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
ODAN	**Odare**	**69.59**	**301**	*e*P	**P**	**10 29 00.3**	**+0.2**
	comp=Z,34nm,0.8s,mb5.2						
RAMN	**Ramite**	**70.30**	**301**	*e*P	**P**	**10 29 04.7**	**+0.3**
	comp=Z,6.8nm,0.5s,mb4.7						
JIRN	**Jiri**	**70.85**	**301**	*e*P	**P**	**10 29 08.3**	**+0.6**
	comp=Z,19nm,0.7s,mb4.9						
MOY	**Mondy**	**70.86**	**329**	*e*P	**P**	**10 29 07.6**	**+0.3**
GUN	**Gumba**	**71.18**	**301**	*e*P	**P**	**10 29 10.3**	**+0.6**
PKI	**Pulchoki**	**71.49**	**301**	*e*P	**P**	**10 29 11.7**	**+0.1**
KKN	**Kakani**	**71.66**	**301**	*e*P	**P**	**10 29 12.8**	**+0.2**
	comp=Z,24nm,0.6s,mb5.1						
KKN	**Kakani**	**71.66**	**301**	*e*P	**P**	**10 29 12.8**	**+0.2**
KKN				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.1						
DMN	**Daman**	**71.76**	**301**	*e*P	**P**	**10 29 13.6**	**+0.4**
	comp=Z,42nm,0.8s,mb5.2						
GKN	**Gorkha**	**72.26**	**301**	*e*P	**P**	**10 29 16.2**	**0.0**
	comp=Z,38nm,0.8s,mb5.2						
VNDA	**Vanda**	**72.85**	**178**	P	**P**	**10 29 18.9**	**+0.1**
	comp=Z,1.5nm,0.8s,mb3.8,baz=341,slow=6.9,SNR=6.5						
KOLN	**Koldanda**	**73.09**	**301**	*e*P	**P**	**10 29 21.1**	**0.0**
	comp=Z,28nm,0.7s,mb5.1						
DANN	**Dangsing**	**73.10**	**301**	*e*P	**P**	**10 29 21.0**	**-0.1**
	comp=Z,23nm,0.7s,mb5.0						
BILL	**Bilibino**	**73.42**	**6**	⇑*i*P	**P**	**10 29 13.3**	**-8.8**
HVS	**Khovu-Aksy**	**74.45**	**326**	⇓*i*P	**P**	**10 29 28.7**	**+0.2**
HVS				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.2						
MKAR	**Makanchi Array**	**79.61**	**319**	P	**P**	**10 29 57.0**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.1,baz=105,slow=5.9,SNR=21						
MKAR	**Makanchi Array**	**79.61**	**319**	*i* P	**P**	**10 29 57.5**	**+0.1**
MKAR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	80.56	327	P	P	10 30 00.8	-1.4
	comp=Z,4.0nm,0.4s,mb4.4,baz=114,slow=6.0,SNR=20						
KURK	Kurchatov	83.10	322	⇑*i*P	P	10 30 14.9	-0.8
KURK				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.4						
AAK	Ala-Archa	83.87	314	⇑*i*P	P	10 30 20.1	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TXAR	Lajitas Array	105.12	61	PKKPbc	PKKPbc	10 47 39.8	+0.5
	comp=Z,0.4nm,0.9s,baz=98,slow=6.5,SNR=3.7						
TXAR				PKKPab	PKKPab	10 47 56.8	-0.1
	comp=Z,0.4nm,0.7s,baz=111,slow=5.1,SNR=6.4						
ARCES	ARCESS Array B	106.56	343	PKiKP	PKiKP	10 36 12.5	-0.8
	comp=Z,4.9nm,1.1s,baz=156,slow=2.5,SNR=4.3						
BRTR	Keskin Array B	114.49	312	PKP	PKiKP	10 36 28.2	-1.0
	comp=Z,0.4nm,0.5s,baz=110,slow=1.7,SNR=2.6						
BOSA	Boshof	118.71	234	PKP	PKPdf	10 36 37.4	-0.3
	comp=Z,1.6nm,0.9s,baz=90,slow=2.0,SNR=3.5						
GERES	GERESS Array B	123.49	328	PKP	PKPdf	10 36 45.8	-0.4
	comp=Z,1.1nm,0.6s,baz=61,slow=4.6,SNR=6.8						
TORD	Torodi Ar. Bea	149.25	288	PKPbc	PKPbc	10 37 37.9	-0.7
	comp=Z,4.1nm,0.3s,baz=74,slow=2.1,SNR=103						
TORD				pPKPbc	pPKPbc	10 38 15.4	-8.0
	comp=Z,1.9nm,0.6s,baz=68,slow=2.8,SNR=2.5						
KIC	Kosan Boka	156.49	275	*e*PKP1	PKPab	10 38 13.7	-0.6
	comp=Z,23nm,0.6s						
DBIC	Dimbokro	156.58	276	PKPab	PKPab	10 38 13.3	-1.4
	comp=Z,3.4nm,0.5s,baz=68,slow=5.4,SNR=7.7						
TIC	Toumodi	156.75	276	*e*PKP1	PKPab	10 38 14.7	-0.7
	comp=Z,8.2nm,0.2s						
LIC	Lamto	156.78	275	*e*PKP1	PKPab	10 38 14.7	-0.8
	comp=Z,34nm,1.2s						

MEX 01 10:19:35.6±0.8, 1697N×9485W, h118km±7km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.13	346	*i* P	Pn	10 19 50.6	-1.3
CMIG				*i* S	Sn	10 20 02.0	-2.1
TGIG		1.67	96	*i* P	Pn	10 20 04.3	-0.6
TGIG				*i* S	Sn	10 20 24.9	-2.4
VHO	Vista Hermosa	1.80	274	*i* P	Pn	10 20 06.2	-0.3
VHO				*i* S	Sn	10 20 29.1	-1.0
PCIG		2.01	128	*e*P	Pn	10 20 07.7	-1.4
PCIG				*i* S	Sn	10 20 32.6	-2.1
TPIG	Tehuac#an	2.79	301	*e*P	Pn	10 20 17.5	-1.7
TPIG				*i* S	Sn	10 20 51.6	-1.1
UTMO	Huajuapan	2.95	287	*i* P	Pn	10 20 19.2	-1.9
UTMO				*i* S	Sn	10 20 53.9	-2.3
PNIG	Pinotepa	3.19	260	*i* P	Pn	10 20 22.1	-2.3
PNIG				*i* S	Sn	10 20 58.9	-3.1

*NIED **01** 10:24:00, 32.10N×130.50E, h5km, Mw3.6 Best double couple: M0 2.70000×10^14 NP1:φs 93.00000°, δ74.00000°, λ-26.00000°. NP2:φs 191.00000°, δ65.00000°, λ-163.00000°.*
*ISCJB **01** 10:24:02.4±1.0, 32.08N±0.04×130.51E±0.08, h9km±8km, Error ellipse: s-maj=12.1km s-min=6.2km az=10.8*
*JMA **01** 10:24:03.0, 32.08N×130.54E, h8km±1km, M3.6*
JMA Felt III J1.
ISC 01 10:24:02.7±1.2, 3209N±004×13051E±008, h9km±12km, n6, σ0s07/10, 2C-4D, Kyushu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JZO	Okuchi	0.09	55	⇓P	Pg	10 24 05.2	+0.1
JZO				*e*S	Sg	10 24 06.8	-0.1
JIU2	Izumi 2	0.53	29	⇓P	Pg	10 24 12.9	0.0
JIU2				*e*S	Sg	10 24 19.9	+0.1
JTZ	Takazaki	0.53	111	⇑P	Pg	10 24 13.0	+0.1
JTZ				*e*S	Sg	10 24 19.9	+0.1
JSU	Suzuyama	0.58	185	⇓P	Pg	10 24 14.0	0.0
JSU				S	Sg	10 24 21.6	0.0
JTSN	Tsuno	0.86	79	⇓P	Pg	10 24 19.1	-0.2
JTA	Tamana	0.87	1	⇑P	Pg	10 24 19.6	0.0

*ISCJB **01** 10:39:29.0±0.7, 73.66N±0.05×9.6E±0.2, h10km, mb3.8/3, Error ellipse: s-maj=10.5km s-min=5.9km az=156.5*
*NEIC **01** 10:39:29.3, 73.50N×8.25E, h0km, ML2.5(BER), After BER.*
*IDC **01** 10:39:30.3±1.3, 73.55N×8.95E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, ML3.3/2, Error ellipse: s-maj=22.3km s-min=14.9km az=74.0*
*CSEM **01** 10:39:30.7±0.2, 73.69N×8.79E, h8km, ML2.5, Error ellipse: s-maj=6.6km s-min=2.3km az=72.0*
*BER **01** 10:39:31.1±3.8, 73.57N×8.48E, h8km±72km, MD2.4, ML2.5(NAO)*
*NAO **01** 10:39:31.3±3.5, 73.64N×9.33E, ML2.5*
ISC 01 10:39:31.2±0.7, 7366N±005×94E±02, h10km, n14, σ1s10/22, mb3.8/3, Greenland Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	4.85	17	Pn	Pn	10 40 44.4	+0.4
	baz=188,slow=14						
SPA0				Sn	Sn	10 41 40.0	-0.1
	baz=196,slow=16						
SPA0	Spitsbergen Ar	4.85	17	Pn	Pn	10 40 44.4	+0.3
	baz=188,slow=14,SNR=3.2						
SPA0				Sn	Sn	10 41 40.0	-0.1
	baz=196,slow=14						
SPITS	Spitsbergen Ar	4.85	17	Pn	Pn	10 40 44.7	+0.6
	baz=260,slow=12,SNR=69						
KBS	Kingsbay	5.33	5	Pn	Pn	10 40 49.4	-1.3
KBS				Sn	Sn	10 41 52.9	+0.9
KBS	Kingsbay	5.33	5	*e*P	Pn	10 40 50.1	-0.6
KBS				*e*S	Sn	10 41 48.7	-3.4
KBS	Kingsbay	5.33	5	*e*P	Pn	10 40 50.1	-0.6
	SNR=49						
KBS				Sn	Sn	10 41 52.9	+0.9
ARA0	ARCESS Array S	6.55	121	Pn	Pn	10 41 09.1	+1.7
	baz=322,slow=11						
ARA0				Sn	Sn	10 42 20.9	-1.1
	baz=313,slow=22						
ARA0	ARCESS Array S	6.55	121	Pn	Pn	10 41 09.1	+1.7
	baz=322,slow=10,SNR=1.3						
ARA0				Sn	Sn	10 42 20.9	-1.1
	baz=313,slow=20,SNR=8.7						
ARCES	ARCESS Array B	6.55	121	Pn	Pn	10 41 08.4	+1.0
	0.6nm,0.3s,baz=319,slow=12,SNR=17						
ARCES				Sn	Sn	10 42 21.1	-0.9
	0.5nm,0.3s,baz=312,slow=19,SNR=5.6						
SUMG	Summit	13.65	289	Pn	Pn	10 42 43.8	-0.6
SUMG	Summit	13.65	289	Pn	Pn	10 42 43.8	-0.5
VRAC	Vranov	24.64	169	P	P	10 44 51.2	-0.1
	2.4nm,0.7s,mb3.9,baz=352,slow=4.8,SNR=3.5						
GERES	GERESS Array B	24.97	173	P	P	10 44 56.4	+2.0
	0.9nm,0.7s,mb3.4,baz=328,slow=9.2,SNR=4.2						
TORD	Torodi Ar. Bea	60.65	189	P	P	10 49 40.5	-1.6
	1.2nm,1.0s,mb4.0,baz=11,slow=6.1,SNR=5.4						

*IDC **01** 10:42:02.1±1.2, 54.39S×159.21E, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.1/13, mbtmp4.1/7, ML4.4/1, MS3.8/8, Ms1 3.8/8, ms1mx3.6/16, Error ellipse: s-maj=51.0km s-min=19.6km az=76.0*
*ISCJB **01** 10:42:03.5±1.5, 54.24S±0.08×159.4E±0.2, h24km±12km, mb4.0/6, MS3.7/7, Error ellipse: s-maj=16.0km s-min=11.8km az=26.6*
*NEIC **01** 10:42:03.4±0.6, 54.39S×159.12E, h10km, Error ellipse: s-maj=15.8km s-min=9.3km az=73.0*
ISC 01 10:42:05.0±1.5, 5431S±007×1593E±02, h21km±12km, n20, σ0s89/12, mb4.0/6, MS3.7/7, Macquarie Island region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	0.29	229	*e*P	Pb	10 42 11.7	0.0
RPZ	Rata Peaks	13.07	41	Pn	Pn	10 45 11.0	+1.7
	1.8nm,0.3s,baz=167,slow=4.8,SNR=11						
RPZ				Sn	Sn	10 47 32.8	-1.2
	0.5nm,0.3s,baz=294,slow=20,SNR=3.8						
RPZ				LR	LR	10 50 25.3	
	comp=Z,236nm,18.7s,baz=224,slow=38						
TAU	Tasmania Unive	13.88	320	*e*Pn	Pn	10 45 18.6	-1.7
MOO	Moorlands	14.33	321	*e*P	Pn	10 45 26.7	+0.3
URZ	Urewera	20.11	44	LR	LR	10 54 19.3	
	comp=Z,118nm,18.1s,MS3.3,baz=321,slow=36						
CNB	Canberra Magne	20.23	336	*e*P	pP	10 46 48.3	+3.9
CAN	Canberra	20.31	335	P	pP	10 46 49.8	+4.6
VNDA	Vanda	23.33	179	P	P	10 47 10.4	-0.9
	0.6nm,0.7s,mb3.2,baz=326,slow=3.3,SNR=3.6						
VNDA				LR	LR	10 54 38.2	
	comp=Z,156nm,20.5s,MS3.5,baz=0.7,slow=32						
STKA	Stephens Creek	25.75	323	P	P	10 47 33.7	-0.2
	1.4nm,0.4s,mb3.9,baz=143,slow=16,SNR=4.6						
STKA				LR	LR	10 56 25.1	
	comp=Z,192nm,19.8s,MS3.6,baz=203,slow=34						
RAO	Raoul Island	29.98	43	LR	LR	11 00 24.7	
	comp=Z,183nm,18.2s,MS3.8,baz=194,slow=37						
CTA	Charters Tower	35.59	339	P	P	10 49 02.1	+1.2
	2.3nm,0.8s,mb4.2,baz=169,slow=12,SNR=3.9						
QSPA	South Pole Qui	35.81	180	P	P	10 49 02.2	0.0
	0.5nm,0.4s,mb3.8,baz=3.4,slow=1.3,SNR=4.7						
ASAR	Alice Springs	36.03	318	P	P	10 49 04.7	+0.1
	4.5nm,0.8s,mb4.5,baz=151,slow=7.9,SNR=42						
ASAR				PcP	PcP	10 51 30.6	-0.1
	0.7nm,0.8s,baz=148,slow=4.2,SNR=6.1						
WRAB	Tennant Creek	39.25	321	*e*P	P	10 49 31.8	-0.1
PPT	Papeete	53.54	67	*e*LR	LR	11 07 02.5	
	111nm,23.5s,baz=221						
PPT	Papeete	53.54	67	LR	LR	11 10 04.8	
	comp=Z,138nm,18.4s,MS4.0,baz=255,slow=31						
PLCA	Paso Flores	76.13	143	LR	LR	11 20 44.2	
	comp=Z,72nm,19.9s,MS4.0,baz=82,slow=30						
CMAR	Chiang Mai Arr	88.86	304	P	P	10 54 58.1	+0.7
	0.5nm,0.3s,mb4.3,baz=171,slow=4.5,SNR=4.8						
CMAR				LR	LR	11 32 29.1	
	comp=Z,55nm,19.9s,MS4.0,baz=4.4,slow=34						
TORD	Torodi Ar. Bea	135.32	212	PKP	PKPdf	11 01 22.3	-0.8
	0.5nm,0.7s,baz=160,slow=1.3,SNR=3.3						
AKASG	Malin Array Be	149.93	284	PKPbc	PKPbc	11 01 52.3	-0.2
	1.4nm,0.6s,baz=92,slow=2.4,SNR=7.1						
AKASG				PKPab	PKPab	11 02 00.3	+2.0
	0.9nm,0.5s,baz=76,slow=3.6,SNR=4.1						

NNC 01 10:45:45.1±5.3, 3810N×7145E, h0km, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=42.4km s-min=36.2km az=25.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.05	352	⇑Pn	Pn	10 47 04.2	+2.3
	0.9nm,0.3s,baz=147,slow=12,SNR=5.2						
KK31				⇓Sn	Sn	10 48 07.4	+6.4
	7.3nm,0.6s,baz=151,slow=24,SNR=3.7						
TKM2	Tokmak 2	5.76	32	⇑Pn	Pn	10 47 12.0	+0.3
	9.5nm,1.4s						
TKM2				⇑Sn	Sn	10 48 21.0	+2.5
	10nm,1.2s						
AB09	Akbulak array	13.91	327	⇓Pn	Pn	10 49 06.1	+2.8
	2.3nm,1.4s						
AB09				⇓Sn	Sn	10 51 42.9	+4.5
	0.8nm,0.8s						

*TIF **01** 11:04:30.0, 41.64N×46.81E, h20km±3km*
MOS 01 11:04:30.4±1.1, 4175N×4693E, h18km, mb4.2/1, 1D, Error ellipse: s-maj=13.1km s-min=8.1km az=119.1, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMKR	Kumukh	0.40	18	*i* PG	Pg	11 04 36.0	-2.8
KMKR				pmax	pmax		
	comp=Z,314nm,0.2s						
UNCR	Uncukul	0.97	354	⇓*i*PG	Pg	11 04 44.5	-4.8
UNCR				pmax	pmax		
	comp=Z,120nm,0.6s						
DRN	Derbent	1.08	74	*e*PG	Pg	11 04 50.6	-0.8
DRN				*e*S	Sg	11 05 08.0	+2.4
DRN				pmax	pmax		
	comp=Z,87nm,0.2s						
BUJR	Buynaksk	1.08	7	*e*PG	Pn	11 04 49.0	-1.7
BUJR				*e*S	Sn	11 05 03.5	-1.8
DGRG	David-gareji	1.20	256	P	Pn	11 04 51.2	-1.1
DGRG				S	Sb	11 05 08.8	+1.0
MAK	Makhachkala	1.29	19	PG	Pg	11 04 59.8	+4.6
MAK				*e*		11 05 13.4	
MAK				pmax	pmax		
	comp=Z,114nm,0.2s						
MAK				smax			
	comp=E,390nm,0.4s						
MAK				smax			
	comp=N,489nm,0.5s						
MTA	Mtatsminda	1.60	269	S	Sn	11 05 15.5	-2.4
TBLG	Delisi	1.64	270	P	Pn	11 04 56.7	-1.6
TBLG				S	Sn	11 05 16.9	-2.0
SNJR	Sundja	2.05	311	*e*PN	Pn	11 05 06.8	+2.9
LACR	Lac	2.23	300	*e*PN	Pn	11 05 08.1	+1.7
LACR				*e*S	Sn	11 05 36.3	+2.8
BTKR	Batakoyurt	2.40	313	*e*PN	Pn	11 05 11.3	+2.6
BTKR				*e*S	Sn	11 05 42.0	+4.4
ARNR	Ardon	2.43	307	*e*PN	Pn	11 05 11.2	+2.0
ARNR				*e*S	Sn	11 05 41.8	+3.3
ZEI	Tsey	2.47	295	*e*PN	Pn	11 05 10.9	+1.2
ZEI				*e*S	Sn	11 05 41.1	+1.7
KORR	Kora	2.51	303	*e*PN	Pn	11 05 11.9	+1.7
KORR				*e*S	Sn	11 05 42.9	+2.6
KMSR	Komsomolskaya	2.54	311	*e*PN	Pn	11 05 12.8	+2.2
KMSR				*e*S	Sn	11 05 44.7	+3.7
DIGR	Digorskoe uzhe	2.74	296	*e*PN	Pn	11 05 14.1	+0.7
DIGR				*e*S	Sn	11 05 47.0	+1.0
PRTR	Priterechnaya	2.79	317	*e*PN	Pn	11 05 16.6	+2.4
PRTR				*e*S	Sn	11 05 51.3	+3.9

*ISCJB **01** 11:14:47.5±0.7, 24.01S±0.06×66.84W±0.08, h200km±8km, mb3.7/7, Error ellipse: s-maj=12.6km s-min=9.6km az=171.5*
*IDC **01** 11:14:47.9±1.2, 24.02S×66.72W, h189km±10km, mb3.6/7, mb1 3.6/12, mb1mx3.6/18, mbtmp3.4/12, Error ellipse: s-maj=19.0km s-min=15.3km az=35.0*
*GUC **01** 11:14:50.8±0.6, 23.84S×67.34W, h229km±9km, ML4.7*
*NEIC **01** 11:14:50.8, 23.84S×67.34W, h229km, MG4.7(GUC), After GUC.*
ISC 01 11:14:48.4±0.7, 2401S±006×6683W±008, h192km±8km, n28, σ1s12/36, mb3.7/7, 4C-3D, Salta Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.37	306	P	Pn	11 15 32.3	+2.0
	100nm,0.3s,baz=131,slow=6.6,SNR=330						
LVC				S	Sn	11 16 04.3	+1.5
	87nm,0.3s,baz=108,slow=20,SNR=24						
LVC	Limon Verde	2.37	306	⇑*i*Pn	Pn	11 15 32.2	+1.9
LVC				*e*S	Sn	11 16 03.9	+1.0
LVC	Limon Verde	2.37	306	*i* P	Pn	11 15 32.3	+2.0
LVC				*i* S	Sn	11 16 04.3	+1.5
PECH	Pedro de Valdi	2.97	298	*e*P	Pn	11 15 38.5	+1.2
PECH				*i* S	Sn	11 16 14.6	-0.7
PECH				AML	AML	11 16 15.8	
	comp=N,2μm,0.3s						
CEN1	Los Morros	3.15	281	⇓*i*P	Pn	11 15 41.7	+2.3
CEN1				*i* S	Sn	11 16 19.4	+0.1
CEN1				AML	AML	11 16 23.6	
	comp=N,736nm,0.8s						
MACH	Maria Elena	3.25	303	⇓*i*P	Pn	11 15 41.8	+1.2
MACH				*i* S	Sn	11 16 20.8	-0.6
ANCH	Antofagasta	3.30	275	⇑*i*P	Pn	11 15 42.1	+0.9
ANCH				*i* S	Sn	11 16 20.6	-1.7
ANCH	Antofagasta	3.30	275	⇑*i*P	Pn	11 15 42.1	+0.9
ANCH				*i* S	Sn	11 16 20.6	-1.7
ANCH				AML	AML	11 16 24.1	
	comp=N,2μm,0.4s						
CPN1	Cerro Paranal	3.32	259	AML	AML	11 16 23.8	
	comp=E,1μm,0.6s						
MECH	Mejillones	3.44	284	⇑*i*P	Pn	11 15 44.0	+1.1
MECH				*i* S	Sn	11 16 24.0	-1.6
MECH				AML	AML	11 16 29.4	
	comp=N,1μm,0.3s						
TOCH	Tocopilla	3.65	301	⇓*i*P	Pn	11 15 45.9	+0.5
TOCH				*i* S	Sn	11 16 27.6	-2.5
TOCH				AML	AML	11 16 32.8	
	comp=N,519nm,0.3s						
PB01	Plate Boundary	3.84	320	*e*P	Pn	11 15 48.3	+0.4
PB01				*e*S	Sn	11 16 33.1	-1.5
PB01				AML	AML	11 16 39.2	
	comp=N,343nm,0.5s						
LCO	Las Campanas	6.07	214	*e*Pn	Pn	11 16 15.6	-0.8
LCO				*e*S	Sn	11 17 18.1	-7.7
CFAA	Coronel Fontan	7.67	189	P	Pn	11 16 36.4	-0.8
	comp=N,0.3nm,0.3s,baz=9.0,slow=12,SNR=24						
CFAA				S	Sn	11 17 57.4	-6.2
	comp=N,1.1nm,0.3s,baz=294,slow=19,SNR=25						
SIV	San Ignacio	9.64	35	P	Pn	11 17 02.3	-0.7
	comp=N,0.3nm,0.3s,baz=232,slow=11,SNR=9.3						
PLCA	Paso Flores	16.96	190	P	Pn	11 18 34.6	+0.1
	comp=N,0.1nm,0.3s,baz=7.8,slow=10,SNR=3.3						
BDFB	Brasilia	19.54	68	P	P	11 19 01.1	-0.5
	comp=N,0.3nm,0.3s,baz=225,slow=20,SNR=6.1						
TXAR	Lajitas Array	63.78	324	P	P	11 25 00.2	+0.2
	comp=N,0.4nm,0.6s,mb3.2,baz=154,slow=8.6,SNR=6.3						
DBIC	Dimbokro	67.66	71	P	P	11 25 23.8	-1.4
	comp=N,5.0nm,1.1s,mb4.1,baz=211,slow=5.9,SNR=2.6						
TORD	Torodi Ar. Bea	76.42	69	P	P	11 26 16.1	-1.1
	comp=N,0.8nm,0.5s,mb3.6,baz=259,slow=6.2,SNR=13						
PDAR	Pinedale Array	77.24	329	P	P	11 26 21.6	+0.5
	comp=N,0.4nm,0.5s,mb3.3,baz=134,slow=8.5,SNR=5.6						
ULM	Lac du Bonnet	78.29	341	P	P	11 26 26.6	-0.2
	comp=N,3.0nm,0.5s,mb4.2,baz=145,slow=3.3,SNR=3.7						
NVAR	Mina Array Bea	78.65	321	P	P	11 26 30.4	+1.5
	comp=N,0.3nm,0.5s,mb3.1,baz=143,slow=5.2,SNR=3.1						
YKA	Yellowknife Ar	94.19	340	P	P	11 27 45.0	+0.2
	comp=N,1.1nm,0.5s,mb4.1,baz=136,slow=4.6,SNR=13						
ASAR	Alice Springs	128.51	205	PKP	PKPdf	11 33 32.5	-0.5
	comp=N,0.7nm,0.7s,baz=155,slow=2.7,SNR=10						
ZALV	Zalesovo Beam	143.33	28	PKP	PKPdf	11 33 56.9	-2.5
	comp=N,1.9nm,0.6s,baz=294,slow=4.6,SNR=10						
MKAR	Makanchi Array	146.43	40	PKPbc	PKPbc	11 34 05.5	-1.1
	comp=N,2.8nm,0.6s,baz=319,slow=2.2,SNR=24						
SONM	Songino Array	155.62	11	PKPab	PKPab	11 34 46.4	+0.4
	comp=N,0.5nm,0.7s,baz=352,slow=5.0,SNR=4.0						

*CSEM **01** 11:27:56.5, 35.35N×23.31E, h5km, MD3.6/5, After ATH*
*NEIC **01** 11:27:56.5, 35.35N×23.31E, h5km, ML3.6(ATH), After ATH.*
ATH 01 11:27:56.6, 3538N×2333E, h5km±3km, MD3.6/5, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.71	88	*e*PB	Pb	11 28 11.0	-0.5
GVD	Gavdhos	0.82	131	*e*PG	Pg	11 28 12.0	-0.4
KYTH	Kithira	0.93	345	*e*PB	Pb	11 28 14.5	-0.7
VLI	Veliai	1.37	347	*e*PG	Pg	11 28 22.5	-0.4
NPS	Neapolis	1.87	93	*e*PN	Pn	11 28 32.0	+2.8
NPS	Neapolis	1.87	93	*e*Pn	Pn	11 28 32.5	+3.3
ITM	Ithomi	2.12	328	*e*PG	Pg	11 28 36.3	-1.0
ITM	Ithomi	2.12	328	*e*Pg	Pg	11 28 37.0	-0.3

IDC 01 12:12:38.7±1.3, 004S×12403E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=73.9km s-min=22.8km az=73.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	25.36	158	P	P	12 18 08.2	+0.6
	1.1nm,0.6s,baz=336,slow=9.1,SNR=15						
STKA	Stephens Creek	35.76	154	P	P	12 19 38.7	-0.8
	1.4nm,0.7s,baz=326,slow=10,SNR=3.8						
MJAR	Matsushiro Arr	38.70	18	P	P	12 20 04.5	+0.1
	0.8nm,0.8s,baz=194,slow=8.3,SNR=4.2						
MKAR	Makanchi Array	59.19	328	P	P	12 22 41.5	0.0
	0.1nm,0.3s,baz=121,slow=8.5,SNR=5.9						

SKHL 01 12:22:21.5±0.7, 5595N×12439E, h10km, mb3.6/3, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLNS	Chul'man	0.93	17	*e*Pg	Pg	12 22 40.3	+0.9
CLNS				*e*rx	rx	12 22 52.0	
CLNS				*e*Sg	Sg	12 22 53.6	+2.1
KROS	Kirovskiy	2.12	135	*e*Pn	Pn	12 22 58.2	+1.3
KROS				*e*Pg	Pg	12 22 59.2	-2.9
KROS				AMB	AMB	12 22 59.5	
	10.0nm,0.4s						
KROS				AMB	AMB	12 22 59.5	
	8.0nm,0.4s						
KROS				AMB	AMB	12 22 59.5	
	12nm,0.4s						
KROS				*e*Sn	Sn	12 23 24.5	+1.2
KROS				*e*Sg	Sg	12 23 27.9	-1.7
KROS				A		12 23 30.0	
	51nm,0.4s						
KROS				A		12 23 30.0	
	72nm,0.4s						
KROS				A		12 23 30.0	
	14nm,0.4s						
ZEA	Zeya	2.77	142	*e*Sg	Sg	12 23 49.0	-1.2
ZEA				A		12 23 53.4	
	60nm,0.7s						
ZEA				A		12 23 53.4	
	33nm,0.7s						
BMKR	Bomnak	2.83	114	*e*Pn	Pn	12 23 07.0	+0.3
BMKR				*e*Pg	Pg	12 23 12.0	-3.7
BMKR				AMB	AMB	12 23 14.1	
	12nm,0.3s						
BMKR				AMB	AMB	12 23 14.1	
	7.0nm,0.3s						
BMKR				*e*Sn	Sn	12 23 41.5	+0.7
BMKR				*e*Sg	Sg	12 23 50.0	-2.3
BMKR				A		12 23 52.8	
	54nm,0.3s						
BMKR				A		12 23 52.8	
	52nm,0.3s						
BMKR				A		12 23 52.8	
	28nm,0.3s						
TUP	Tupik	2.97	241	*e*Pn	Pn	12 23 12.0	+3.4
TUP				*e*Pg	Pg	12 23 16.9	-1.4
TUP				AMB	AMB	12 23 21.3	
	7.0nm,0.3s						
TUP				*e*Sg	Sg	12 23 55.7	-1.0
TUP				A		12 24 05.1	
	18nm,0.6s						
YASR	Yasnyy	3.38	140	*e*Pn	Pn	12 23 16.2	+1.9
YASR				*e*Pg	Pg	12 23 22.8	-3.5
YASR				*e*Sg	Sg	12 24 07.2	-2.9
YASR				A		12 24 15.3	
	12nm,0.7s						
YASR				A		12 24 15.3	
	8.0nm,0.7s						
YASR				A		12 24 15.3	
	5.0nm,0.7s						
CRS	Chara	3.53	288	*e*Pg	Pg	12 23 23.3	-5.8
CRS				*e*Sg	Sg	12 24 12.1	-2.7
EKMR	Ekimchan	5.76	117	*e*rx	rx	12 24 51.5	
EKMR				*e*Sg	Sg	12 25 21.5	-4.8
EKMR				A		12 25 31.5	
	8.0nm,0.5s						
EKMR				A		12 25 31.5	
	5.0nm,0.5s						
EKMR				A		12 25 31.5	
	4.0nm,0.5s						

*ISCJB **01** 12:22:33.8±1.0, 29.85N±0.05×36.32E±0.06, h0km, Error ellipse: s-maj=8.2km s-min=6.5km az=11.8*
*GII **01** 12:22:34.1±0.0, 29.82N×36.32E, h0km, ML1.8/3, EXPLOSION*
*HLW **01** 12:22:34.1, 29.84N×36.70E, h25km, Mb2.9*
*CSEM **01** 12:22:34.6±0.9, 29.79N×36.35E, h10km, ML2.9, Error ellipse: s-maj=20.3km s-min=11.3km az=76.0*
*SGS **01** 12:22:34.6, 30.13N×36.17E, h6km*
ISC 01 12:22:33.9±1.0, 2984N±005×3635E±006, h0km, n24, σ0s73/28, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.14	265	Pg	Pg	12 22 55.2	-0.6
HRFI	Mount Harif	1.16	280	Pg	Pg	12 22 55.4	-0.8
EIL	Elat	1.23	262	Pg	Pg	12 22 57.4	-0.2
EIL				Sg	Sg	12 23 14.8	+1.3
ZFRI	Zfri	1.24	305	Pg	Pg	12 22 56.9	-0.8
HQLS		1.25	245	P	Pg	12 22 57.0	-0.9
HQLS		1.25	245	P	Pg	12 22 57.0	-0.8
HQLS				S	Sg	12 23 13.6	-0.4
MBRI	Mt Berech	1.25	268	Pg	Pg	12 22 57.2	-0.7
MBRI				Sg	Sg	12 23 15.0	+0.8
PRNI	Paran	1.27	294	Pg	Pg	12 22 57.3	-1.1
JLOS		1.33	215	P	Pg	12 23 00.2	+0.7
KRMI	Paran Flat	1.44	281	Pn	Pn	12 23 00.0	-1.2
HBST	Basata	1.54	247	P	Pn	12 23 02.9	+0.2
RMNI	Mount Ramon	1.57	299	Pn	Pn	12 23 02.7	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MZDA	Masada	1.69	330	Pn	Pn	12 23 06.0	+1.2
BDAS	Al Bad'	1.78	218	S	Sn	12 23 29.7	+0.4
BDAS	Al Bad'	1.78	218	P	Pn	12 23 06.1	+0.2
DSI	Dead Sea	1.92	334	Pn	Pn	12 23 09.4	+1.5
RSHS		2.05	222	P	Pn	12 23 09.4	-0.3
HNKL	Nakhl	2.06	273	P	Pn	12 23 10.4	+0.5
HNKL				S	Sn	12 23 36.8	+0.5
HKAT	Jabal Katrina	2.44	238	P	Pn	12 23 15.3	+0.2
RSH		2.53	297	P	Pn	12 23 16.4	+0.1
TR2		2.72	238	P	Pn	12 23 19.0	+0.1
TR1		2.79	230	P	Pn	12 23 19.2	-0.5
TR1		2.79	230	P	Pn	12 23 19.2	-0.6
HRSH	Kfar Ka'horesh	3.00	342	P	Pn	12 23 16.4	-6.3

*ISCJB **01** 12:32:38.8±0.6, 7362N±005×94E±02, h10^{km}, mb3.7/9, Error ellipse: s-maj=10.3km s-min=6.0km az=153.3*
*IDC **01** 12:32:39.7±0.8, 7353N×873E, h0^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.8/22, mbtmp3.7/10, ML3.4/3, Error ellipse: s-maj=15.8km s-min=10.8km az=69.0*
*NAO **01** 12:32:39.9±1.9, 7359N×899E, ML2.2*
*BER **01** 12:32:39.9±4.3, 7361N×858E, h0^{km}±122^{km}, ML2.2(NAO)*
ISC 01 12:32:40.9±3.1, **7360N**±005×**92E**±02, **h10**^{km}±21^{km}, **n20**, σ**0^{s}97**/20, **mb3.7**/9, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	4.92	17	Pn	Pn	12 33 54.1	-0.5
	baz=184,slow=14						
SPITS	Spitsbergen Ar	4.92	17	Pn	Pn	12 33 54.1	-0.6
	baz=260,slow=14,SNR=23						
SPITS				Sn	Sn	12 34 52.4	+0.9
	baz=251,slow=24,SNR=1.6						
KBS	Kingsbay	5.39	6	Pn	Pn	12 33 59.4	-1.8
ARA0	ARCESS Array S	6.56	120	Pn	Pn	12 34 17.8	+0.6
	baz=322,slow=11						
ARA0				Sn	Sn	12 35 31.2	-0.9
	baz=321,slow=22						
ARCES	ARCESS Array B	6.56	120	Pn	Pn	12 34 17.8	+0.5
	1.0nm,0.3s,baz=326,slow=12,SNR=17						
ARCES				Sn	Sn	12 35 31.4	-0.6
	0.4nm,0.3s,baz=312,slow=21,SNR=3.5						
HFS	Hagfors	13.64	170	Pn	Pn	12 35 53.6	-0.4
	0.1nm,0.3s,baz=297,slow=6.5,SNR=4.7						
HFS	Hagfors	13.64	170	Pn	Pn	12 35 53.0	-1.0
FIA0	FINESS Array S	13.71	144	Pn	Pn	12 35 56.1	+1.1
	slow=8.6						
AKASG	Malin Array Be	24.54	148	P	P	12 38 00.6	+0.4
	1.5nm,0.6s,mb3.7,baz=344,slow=9.8,SNR=4.2						
GERES	GERESS Array B	24.92	173	P	P	12 38 04.8	+1.1
	1.2nm,0.8s,mb3.5,baz=10,slow=8.1,SNR=6.5						
AKTO	Aktyubinsk	31.04	111	P	P	12 39 03.1	+4.8
	0.8nm,0.7s,mb3.6,baz=334,slow=16,SNR=2.5						
ZALV	Zalesovo Beam	35.40	81	P	P	12 39 39.8	+3.5
	0.4nm,0.3s,mb3.8,baz=325,slow=9.2,SNR=3.3						
SONM	Songino Array	46.79	67	P	P	12 41 15.2	+5.2
	0.8nm,0.8s,mb3.7,baz=318,slow=6.2,SNR=3.7						
PDAR	Pinedale Array	56.77	310	P	P	12 42 24.5	0.0
	0.7nm,0.9s,mb3.7,baz=34,slow=5.6,SNR=3.9						
TORD	Torodi Ar. Bea	60.59	188	P	P	12 42 50.1	-1.3
	1.4nm,0.9s,mb4.1,baz=353,slow=8.2,SNR=6.6						
NVAR	Mina Array Bea	62.77	316	P	P	12 43 06.8	+1.0
	0.6nm,0.8s,mb3.8,baz=49,slow=3.1,SNR=4.2						
TXAR	Lajitas Array	68.23	300	P	P	12 43 40.8	-0.5
	0.3nm,0.8s,mb3.4,baz=52,slow=5.8,SNR=3.9						
ASAR	Alice Springs	122.06	63	PKP	PKPdf	12 51 36.0	+1.1
	0.2nm,0.7s,baz=326,slow=1.3,SNR=3.9						
VNA2	Neumayer--Watz	144.69	189	e	PKPdf	12 52 16.0	+0.4
	baz=0.5,slow=5.0						
VNA2				e		12 52 22.1	
VNA3	Neumayer Olymp	145.12	191	e	PKPbc	12 52 17.2	+1.3
VNA3				e		12 52 24.3	

*MOS **01** 12:35:01.7±2.0, 7357N×826E, h10^{km}, mb4.2/2, Error ellipse: s-maj=77.3km s-min=13.3km az=93.1*
*IDC **01** 12:35:02.8±0.9, 7355N×791E, h0^{km}, mb3.5/6, mb1 3.7/10, mb1mx3.6/24, mbtmp3.6/10, ML3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.8/25, Error ellipse: s-maj=19.2km s-min=13.2km az=80.0*
*ISCJB **01** 12:35:02.1±0.6, 7362N±004×86E±03, h10^{km}, mb3.6/7, Error ellipse: s-maj=10.7km s-min=5.6km az=165.3*
*NAO **01** 12:35:03.6±2.5, 7358N×850E*
*NEIC **01** 12:35:04.1±0.6, 7360N×8.11E, h10^{km}, mb4.3/1, Error ellipse: s-maj=14.2km s-min=7.7km az=80.0*
*CSEM **01** 12:35:05.9±0.2, 7353N×786E, h30^{km}, mb4.3/1, Error ellipse: s-maj=6.2km s-min=2.4km az=72.0*
*HEL **01** 12:35:23.6±1.0, 7285N×1233E, h10^{km}, ML3.6*
ISC 01 12:35:04.3±0.6, **7362N**±004×**84E**±03, **h10**^{km}, **n40**, σ**0^{s}95**/43, **mb3.6**/7, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPB4	Spitsbergen Ar	4.97	19	ePn	Pn	12 36 19.1	+0.2
SPA0	Spitsbergen Ar	4.97	19	Pn	Pn	12 36 18.6	-0.2
	baz=194,slow=16						
SPA0	Spitsbergen Ar	4.97	19	Pn	Pn	12 36 18.6	-0.3
	SNR=1.1						
SPITS	Spitsbergen Ar	4.97	19	Pn	Pn	12 36 18.8	0.0
	baz=254,slow=14,SNR=43						
SPITS				Sn	Sn	12 37 15.9	-0.4
	baz=244,slow=26,SNR=2.0						
SPITS				LR	LR	12 37 55.3	
	comp=Z,211nm,21.3s,baz=270,slow=34						
SPITS	Spitsbergen Ar	4.97	19	Pn	Pn	12 36 18.8	-0.1
SPITS				Sn	Sn	12 37 15.9	-0.4
SPITS	Spitsbergen Ar	4.97	19	Pn	Pn	12 36 18.8	0.0
SPITS				Sn	Sn	12 37 15.9	-0.4
SPITS				LR	LR	12 37 55.3	
KBS	Kingsbay	5.40	7	Pn	Pn	12 36 23.7	-1.0
KBS	Kingsbay	5.40	7	ePn	Pn	12 36 24.5	-0.2
KBS	Kingsbay	5.40	7	ePn	Pn	12 36 24.6	-0.2
KIF	Kilpisjarvi	6.11	133	eP	Pn	12 36 33.9	-0.5
KIF				MPN		12 36 35.7	
	comp=Z,9.3nm,0.3s						
ARA0	ARCESS Array S	6.78	119	Pn	Pn	12 36 43.2	-0.4
	baz=329,slow=12						
ARA0	ARCESS Array S	6.78	119	eP	Pn	12 36 44.5	+0.9
ARCES	ARCESS Array B	6.78	119	Pn	Pn	12 36 43.4	-0.3
	comp=Z,2.0nm,0.3s,baz=330,slow=12,SNR=25						
ARCES	ARCESS Array B	6.78	119	P	Pn	12 36 43.4	-0.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ARE0	ARCESS Array S	6.78	119	ePn	Pn	12 36 44.5	+0.9
ARE0	ARCESS Array S	6.78	119	ePn	Pn	12 36 44.5	+0.8
KEV	Kevo	7.01	114	eP	Pn	12 36 46.7	0.0
KEV	Kevo	7.01	114	ePn	Pn	12 36 46.9	+0.1
KEV	Kevo	7.01	114	ePn	Pn	12 36 46.9	+0.1
HEF	Hetta	7.20	129	eP	Pn	12 36 50.5	+1.1
SGF	Sodankyl	8.63	127	eP	Pn	12 37 09.0	0.0
VRF	Varrio	9.12	120	eP	Pn	12 37 14.8	-0.8
VRF				MPN		12 37 16.4	
	comp=Z,2.5nm,0.3s						
APA0	Apatity Array	10.08	114	Pn	Pn	12 37 27.1	-1.8
KU6	Riekki	10.56	125	eP	Pn	12 37 35.3	-0.1
KJN	Kajaani	11.76	134	eP	Pn	12 37 52.5	+0.7
KJN				MPN		12 37 53.1	
	comp=Z,4.1nm,0.4s						
NOA	NORSAR Array B	12.68	174	Pn	Pn	12 38 03.8	-0.6
	comp=Z,0.2nm,0.3s,baz=358,slow=14,SNR=2.8						
HFS	Hagfors	13.70	169	Pn	Pn	12 38 18.8	+0.5
	baz=348,slow=14						
HFS	Hagfors	13.70	169	Pn	Pn	12 38 16.8	-1.5
	comp=Z,0.1nm,0.3s,baz=350,slow=14,SNR=3.4						
FIA0	FINESS Array S	13.87	142	Pn	Pn	12 38 19.2	-1.4
	baz=350,slow=8.6						
AKASG	Malin Array Be	24.68	147	P	P	12 40 25.3	+0.5
	comp=Z,0.5nm,0.3s,mb3.5,baz=344,slow=9.2,SNR=2.7						
AKASG	Malin Array Be	24.68	147	P	P	12 40 25.3	+0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	24.97	172	P	P	12 40 29.2	+1.7
	comp=Z,0.4nm,0.5s,mb3.2,baz=9.2,slow=8.0,SNR=3.0						
COLA	College	40.87	345	eP	P	12 42 47.1	+1.5
COLA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
COLA	College	40.87	345	eP	P	12 42 47.0	+1.4
COLA	College	40.87	345	eP	P	12 42 47.0	+1.4
	comp=Z,3.4nm,0.5s,mb4.2						
MKAR	Makanchi Array	41.34	88	P	P	12 42 51.7	+2.0
	comp=Z,0.4nm,0.7s,mb3.1,baz=351,slow=6.8,SNR=4.6						
MKAR	Makanchi Array	41.34	88	P	P	12 42 51.7	+2.0
PDAR	Pinedale Array	56.58	309	P	P	12 44 44.8	-1.8
	comp=Z,0.5nm,0.9s,mb3.5,baz=64,slow=4.1,SNR=3.0						
TORD	Torodi Ar. Bea	60.58	187	P	P	12 45 14.4	-0.3
	comp=Z,1.0nm,0.8s,mb4.0,baz=352,slow=5.8,SNR=5.2						
TXAR	Lajitas Array	68.02	299	P	P	12 46 03.6	+0.2
	comp=Z,0.4nm,0.9s,mb3.5,baz=50,slow=6.3,SNR=3.0						

*ISCJB **01** 12:36:06.0±0.6, 7360N±005×94E±02, h10^{km}, mb3.5/5, Error ellipse: s-maj=10.3km s-min=5.9km az=158.4*
*BER **01** 12:36:06.9±2.6, 7347N×798E, h15^{km}±87^{km}, ML2.1(NAO)*
*NEIC **01** 12:36:06.3±0.7, 7356N×820E, h10^{km}, Error ellipse: s-maj=11.0km s-min=7.1km az=82.0*
*IDC **01** 12:36:07.2±0.9, 7347N×856E, h0^{km}, mb3.5/5, mb1 3.8/9, mb1mx3.5/24, mbtmp3.6/9, ML3.3/3, Error ellipse: s-maj=22.9km s-min=14.4km az=62.0*
*CSEM **01** 12:36:08.3±0.1, 7354N×823E, h10^{km}, ML2.1, Error ellipse: s-maj=3.4km s-min=2.5km az=77.0*
*NAO **01** 12:36:09.8±1.5, 7367N×1005E, ML2.1*
ISC 01 12:36:08.2±0.6, **7360N**±005×**94E**±02, **h10**^{km}, **n27**, σ**1^{s}43**/31, **mb3.5**/5, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPB4	Spitsbergen Ar	4.91	17	ePn	Pn	12 37 21.7	-0.2
SPB4	Spitsbergen Ar	4.91	17	ePn	Pn	12 37 21.7	-0.1
SPA0	Spitsbergen Ar	4.91	17	Pn	Pn	12 37 22.3	+0.4
	baz=200,slow=14						
SPITS	Spitsbergen Ar	4.91	17	Pn	Pn	12 37 22.4	+0.6
	baz=268,slow=14,SNR=4.4						
SPITS				Sn	Sn	12 38 17.3	-1.3
	baz=254,slow=26,SNR=3.2						
SPITS	Spitsbergen Ar	4.91	17	Pn	Pn	12 37 22.4	+0.6
SPITS				Sn	Sn	12 38 17.3	-1.3
KBS	Kingsbay	5.39	5	Pn	Pn	12 37 27.2	-1.2
KBS	Kingsbay	5.39	5	ePn	Pn	12 37 27.2	-1.3
ARA0	ARCESS Array S	6.53	121	Pn	Pn	12 37 46.3	+2.2
	baz=322,slow=11						
ARA0				Sn	Sn	12 38 57.0	-1.5
	baz=310,slow=22						
ARCES	ARCESS Array B	6.53	121	Pn	Pn	12 37 46.1	+2.0
	1.3nm,0.3s,baz=325,slow=11,SNR=8.1						
ARCES				Sn	Sn	12 38 57.0	-1.5
	0.4nm,0.3s,baz=306,slow=21,SNR=2.9						
ARE0	ARCESS Array S	6.53	121	ePn	Pn	12 37 47.0	+2.9
ARE0	ARCESS Array S	6.53	121	ePn	Pn	12 37 47.0	+2.9
KEV	Kevo	6.75	116	ePn	Pn	12 37 49.7	+2.6
KEV	Kevo	6.75	116	ePn	Pn	12 37 49.7	+2.6
KEV	Kevo	6.75	116	eS	Pn	12 37 49.7	+2.5
HEF	Hetta	6.98	131	eS	Pn	12 37 54.2	+4.0
APA0	Apatity Array	9.82	116	Pn	Pn	12 38 29.6	+0.4
	baz=319,slow=14						
APA0	Apatity Array	9.82	116	Pn	Pn	12 38 29.6	+0.4
	SNR=4.8						
NOA	NORSAR Array B	12.64	176	Pn	Pn	12 39 06.0	-1.7
	0.1nm,0.3s,baz=352,slow=13,SNR=2.8						
HFS	Hagfors	13.63	171	Pn	Pn	12 39 20.4	-0.8
	0.1nm,0.3s,baz=310,slow=9.2,SNR=2.2						
FIA0	FINESS Array S	13.69	144	Pn	Pn	12 39 19.9	-2.1
BORG	Borgarnes	13.85	246	Pn	Pn	12 39 17.7	-6.5
BORG	Borgarnes	13.85	246	Pn	Pn	12 39 17.7	-6.4
AKASG	Malin Array Be	24.51	149	P	P	12 41 27.7	+0.5
	0.5nm,0.4s,mb3.4,baz=346,slow=9.4,SNR=3.6						
PDAR	Pinedale Array	56.80	310	P	P	12 45 53.9	+1.9
	0.6nm,1.0s,mb3.6,baz=9.7,slow=6.4,SNR=3.0						
TORD	Torodi Ar. Bea	60.59	189	P	P	12 46 17.9	-0.7
	0.6nm,0.9s,mb3.7,baz=348,slow=6.9,SNR=3.3						
NVAR	Mina Array Bea	62.80	316	P	P	12 46 33.1	-0.2
	0.4nm,0.7s,mb3.7,baz=54,slow=6.1,SNR=2.8						
TXAR	Lajitas Array	68.27	300	P	P	12 47 08.8	+0.1
	0.3nm,0.9s,mb3.3,baz=21,slow=7.9,SNR=2.7						

*IDC **01** 12:40:47.5±0.6, 7351N×8.15E, h0^{km}, mb3.8/12, mb1 4.0/18, mb1mx4.0/26, mbtmp3.8/18, ML3.6/5, MS3.9/20, Ms1 3.9/20, ms1mx3.7/31, Error ellipse: s-maj=14.1km s-min=11.2km az=71.0*
*ISCJB **01** 12:40:47.3±0.4, 7359N±004×86E±02, h10^{km}, mb4.0/24, MS3.9/17, Error ellipse: s-maj=8.3km s-min=5.5km az=171.4*
*NEIC **01** 12:40:49.2±0.5, 7360N×861E, h10^{km}, mb4.5/3, Error ellipse: s-maj=10.7km s-min=7.2km az=77.0*
*CSEM **01** 12:40:49.6±0.1, 7357N×839E, h10^{km}, mb4.4/3, Error ellipse: s-maj=3.2km s-min=1.4km az=89.0*
*NAO **01** 12:40:49.2±1.8, 7356N×925E, ML2.6*
*BER **01** 12:40:50.3±4.2, 7358N×864E, h15^{km}±140^{km}, ML2.6(NAO)*
*HEL **01** 12:40:51.7±0.7, 7376N×971E, h10^{km}, mb4.5(NEIC), ML2.6(NAO)*
*MOS **01** 12:40:51.7±1.5, 7326N×947E, h10^{km}, mb4.3/18, Error ellipse: s-maj=26.9km s-min=6.7km az=95.8*
*SZGRF **01** 12:40:59.8, 7301N×1000E, h33^{km}, mb4.5, Greenland Sea*
ISC 01 12:40:50.2±3.1, **7345N**±007×**87E**±02, **h7**^{km}±19^{km}, **n90**, σ**1^{s}29**/87, **mb4.0**/24, **MS3.9**/17, **7C-5D**, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPB4	Spitsbergen Ar	5.11	18	Pn	Pn	12 42 02.9	-4.1
SPA0	Spitsbergen Ar	5.11	18	Pn	Pn	12 42 03.1	-3.9
	baz=198,slow=14						
SPA0	Spitsbergen Ar	5.11	18	eP	Pn	12 42 03.1	-3.9
SPITS	Spitsbergen Ar	5.11	18	Pn	Pn	12 42 02.7	-4.3
	baz=245,slow=13,SNR=8.2						
SPITS				Sn	Sn	12 43 00.8	-5.3
	baz=245,slow=26,SNR=1.5						
KBS	Kingsbay	5.56	7	Pn	Pn	12 42 08.5	-4.7
KBS	Kingsbay	5.56	7	Pn	Pn	12 42 08.5	-4.7
JMIC	Jan Mayen	5.80	253	Pn	Pn	12 42 11.5	-5.0
	11nm,0.3s,baz=91,slow=6.8,SNR=3.1						
JMIC				LR	LR	12 43 54.8	
	comp=Z,1µm,20.3s,baz=113,slow=33						
KIF	Kilpisjarvi	5.93	133	eP	Pn	12 42 18.0	-0.2
ARA0	ARCESS Array S	6.63	118	Pn	Pn	12 42 27.1	-0.6
	baz=320,slow=12						
ARA0				Sn	Sn	12 43 37.9	-5.5
	baz=312,slow=22						
ARA0	ARCESS Array S	6.63	118	eP	Pn	12 42 27.1	-0.6
ARA0				eS	Sn	12 43 37.9	-5.5
ARCES	ARCESS Array B	6.63	118	Pn	Pn	12 42 26.9	-0.8
	1.0nm,0.3s,baz=324,slow=12,SNR=8.8						
ARCES				Sn	Sn	12 43 39.6	-3.7
	0.8nm,0.3s,baz=310,slow=21,SNR=3.2						
ARCES				LR	LR	12 45 23.4	
	comp=Z,826nm,21.2s,baz=317,slow=41						
ARCES	ARCESS Array B	6.63	118	P	Pn	12 42 27.0	-0.8
ARCES						12 43 39.7	
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				smax			
	comp=N,1.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,826nm,21.3s						
ARE0	ARCESS Array S	6.63	118	ePn	Pn	12 42 27.9	+0.1
ARE0	ARCESS Array S	6.63	118	ePn	Pn	12 42 27.9	+0.1
KEV	Kevo	6.86	114	eP	Pn	12 42 30.5	-0.6
KEV	Kevo	6.86	114	ePn	Pn	12 42 32.1	+1.1
KEV	Kevo	6.86	114	ePn	Pn	12 42 32.1	+1.1
SGF	Sodankyl	8.46	126	P	Pn	12 42 50.6	-2.3
MSF	Maaselka	10.29	127	P	Pn	12 43 17.3	-0.6
MSF				pmax	pmax		
	comp=Z,34nm,2.1s						
MSF	Maaselka	10.29	127	P	Pn	12 43 17.3	-0.6
	comp=Z,34nm,2.1s						
KU6	Riekki	10.39	125	eP	Pn	12 43 18.9	-0.5
NB2	NORSAR Subarra	12.50	174	Pn	Pn	12 43 48.4	+0.2
	baz=5.6,slow=14						
NB2	NORSAR Subarra	12.50	174	eP	Pn	12 43 48.4	+0.2
NOA	NORSAR Array B	12.50	174	Pn	Pn	12 43 48.3	+0.1
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=4.2						
NOA				Sn	Sn	12 46 01.8	-5.7
	comp=Z,0.1nm,0.3s,baz=357,slow=19,SNR=2.6						
HFS	Hagfors	13.51	169	Pn	Pn	12 44 02.6	+0.6
	comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=3.9						
HFS				LR	LR	12 48 41.9	
	comp=Z,759nm,18.4s,baz=40,slow=35						
HFS	Hagfors	13.51	169	eP	Pn	12 44 02.2	+0.3
HFS	Hagfors	13.51	169	Pn	Pn	12 44 02.2	+0.3
	baz=353,slow=11						
HFS	Hagfors	13.51	169	Pn	Pn	12 44 02.2	+0.3
	SNR=3.9						
FIA0	FINESS Array S	13.68	143	Pn	Pn	12 44 03.0	-1.2
	baz=19,slow=14						
FIA0	FINESS Array S	13.68	143	eP	Pn	12 44 03.0	-1.2
FIA0	FINESS Array S	13.68	143	Pn	Pn	12 44 03.0	-1.3
	SNR=4.0						
KONO	Kongsberg	13.87	178⇓	iP	Pn	12 44 08.2	+1.4
VSU	Vasula	16.61	145⇑	iP	Pn	12 44 43.4	+0.3
VSU				pmax	pmax		
	comp=Z,86nm,2.5s						
KLMR	Klimovskoe	17.09	121	eP	Pn	12 44 50.3	+1.2
KLMR				pmax	pmax		
	comp=Z,34nm,1.1s						
EKA	Eskdalemuir Ar	18.82	201	P	Pn	12 45 10.1	-0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=11,SNR=4.4						
OBN	Obninsk	21.61	133⇑	eP	P	12 45 40.0	-0.3
OBN				pmax	pmax		
	comp=Z,33nm,1.6s,mb4.5						
CLL	Collm	22.30	173	eP	P	12 45 48.0	+0.3
CLL				e(sP)	sP	12 45 57.0	+6.5
	comp=Z,32nm,1.9s						
CLL	Collm	22.30	173	eP	P	12 45 44.0	-3.7
CLL				e		12 45 57.0	
MOX	Moxa	22.92	175	P	P	12 45 55.6	+1.3
MOX				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
MOX	Moxa	22.92	175	P	P	12 45 55.6	+1.3
	comp=Z,9.7nm,1.0s,mb4.2						
OJC	Ojcow	23.81	162	eP	P	12 46 04.1	+0.9
GRA1	Grafenberg Arr	23.87	176	eP	P	12 46 05.5	+1.7
	comp=Z,26nm,1.8s,mb4.4						
GRF	Grafenberg Arr	23.87	176	eP	P	12 46 05.5	+1.7
GRF				pmax	pmax		
	comp=Z,26nm,1.8s,mb4.4						
GRF	Grafenberg Arr	23.87	176	eP	P	12 46 05.5	+1.7
GRF				pmax	pmax		
	comp=Z,26nm,1.8s,mb4.4						
GRF	Grafenberg Arr	23.87	176	eP	P	12 46 05.5	+1.7
	comp=Z,26nm,1.8s,mb4.4						
VRAC	Vranov	24.47	167	P	P	12 46 11.6	+2.3
	comp=Z,2.3nm,0.3s,mb4.0,baz=5.2,slow=11,SNR=4.0						
VRAC	Vranov	24.47	167	P	P	12 46 11.6	+2.3
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	24.49	147	P	P	12 46 07.0	-2.4
	comp=Z,0.8nm,0.5s,mb3.4,baz=336,slow=8.9,SNR=2.8						
AKASG	Malin Array Be	24.49	147	P	P	12 46 07.0	-2.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	24.79	172	P	P	12 46 10.6	-1.6
	comp=Z,3.2nm,1.0s,mb3.8,baz=17,slow=7.2,SNR=6.6						
GERES	GERESS Array B	24.79	172	P	P	12 46 10.6	-1.6
GERES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARU	Arti	25.95	104c	iP	P	12 46 24.8	+2.2
ARU				e		12 49 52.1	
ARU				eS	S	12 50 54.6	+1.8
ARU				eSS		12 51 49.6	
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.3						
SVE	Sverdlovsk	26.19	101	eP	P	12 46 25.7	+0.9
SVE				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
FRB	Frobisher Bay	27.59	291	LR	LR	12 58 12.7	
	comp=Z,180nm,19.0s,MS3.7,baz=23,slow=38						
MLR	Muntele Rosu	29.13	155	LR	LR	12 57 45.7	
	comp=Z,222nm,21.2s,MS3.8,baz=350,slow=35						
TIXI	Tiksi	30.34	33⇑	iP	P	12 47 05.3	+3.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
AKTK	Aktyubinsk	31.14	110	P	P	12 47 08.8	-0.1
AKTK				LR	LR	13 00 38.9	
AKTO	Aktyubinsk	31.14	110	P	P	12 47 08.8	-0.1
	baz=316,slow=11						
AKTO				LR	LR	13 00 38.9	
	comp=Z,283nm,21.8s,MS3.9,baz=150,slow=38						
BVAR	Borovoye Array	32.27	95	LR	LR	13 01 02.3	
	comp=Z,253nm,18.2s,MS4.0,baz=150,slow=38						
KIV	Kislovodsk	33.46	133⇑	eP	P	12 47 30.7	+1.3
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
NVS	Novosibirsk	34.35	81	eP	P	12 47 36.6	-0.3
SCHQ	Schefferville	34.62	280	LR	LR	13 00 09.1	
	comp=Z,419nm,20.9s,MS4.2,baz=78,slow=34						
ZALV	Zalesovo Beam	35.58	81	P	P	12 47 46.4	-1.2
	comp=Z,0.2nm,0.3s,mb3.5,baz=309,slow=6.9,SNR=3.2						
ZALV				LR	LR	13 04 11.0	
	comp=Z,154nm,18.8s,MS3.8,baz=103,slow=39						
BRTR	Keskin Array B	35.88	146	P	P	12 47 51.3	+1.0
	comp=Z,1.4nm,0.9s,mb3.9,baz=349,slow=4.6,SNR=2.6						
BRTR	Keskin Array B	35.88	146	P	P	12 47 51.3	+1.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	36.68	89	LR	LR	13 05 42.9	
	comp=Z,260nm,18.6s,MS4.0,baz=320,slow=40						
KURK	Kurchatov	36.68	89⇓	iP	P	12 47 57.2	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.0						
BILL	Bilibino	38.00	13	eP	P	12 48 12.3	+4.3
BILL				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.3						
YKA	Yellowknife Ar	39.15	322	P	P	12 48 16.4	-1.3
	comp=Z,2.4nm,1.0s,mb3.9,baz=20,slow=9.2,SNR=4.1						
YKA				LR	LR	13 04 23.1	
	comp=Z,76nm,18.8s,MS3.5,baz=30,slow=36						
YKA	Yellowknife Ar	39.15	322	P	P	12 48 16.4	-1.3
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA				MLR	MLR		
	comp=Z,76nm,18.8s						
HVS	Khovu-Aksy	40.57	75⇓	iP	P	12 48 33.2	+3.6
HVS				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.3						
MKAR	Makanchi Array	41.27	88	P	P	12 48 36.4	+0.9
	comp=Z,2.8nm,1.1s,mb3.8,baz=348,slow=9.9,SNR=5.2						
MKAR				LR	LR	13 06 58.7	
	comp=Z,201nm,20.0s,MS4.0,baz=319,slow=38						
MKAR	Makanchi Array	41.27	88	P	P	12 48 36.4	+1.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MKAR				MLR	MLR		
	comp=Z,201nm,20.0s						
AAK	Ala-Archa	42.85	98⇓	iP	P	12 48 51.1	+2.7
AAK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb3.9						
ASF	Jabal al Asfar	43.79	145	LR	LR	13 09 25.3	
	comp=Z,59nm,19.4s,MS3.5,baz=227,slow=39						
ULM	Lac du Bonnet	46.50	301	LR	LR	13 07 51.6	
	comp=Z,186nm,21.8s,MS4.0,baz=60,slow=35						
SONM	Songino Array	47.00	66	P	P	12 49 21.7	+0.4
	comp=Z,1.0nm,0.9s,mb3.8,baz=327,slow=7.9,SNR=5.9						
SONM				LR	LR	13 11 43.2	
	comp=Z,67nm,20.4s,MS3.6,baz=313,slow=39						
SONM	Songino Array	47.00	66	P	P	12 49 21.7	+0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,67nm,20.4s						
ULN	Ulaanbaatar	47.15	65⇓	iP	P	12 49 23.3	+0.8
HIA	Hailar	48.98	54⇑	iP	P	12 49 40.8	+4.2
PDAR	Pinedale Array	56.75	309	P	P	12 50 30.6	-3.5
	comp=Z,0.6nm,0.8s,mb3.6,baz=15,slow=3.7,SNR=2.8						
PDAR				LR	LR	13 14 22.4	
	comp=Z,119nm,20.5s,MS4.0,baz=45,slow=36						
PDAR	Pinedale Array	56.75	309	P	P	12 50 30.5	-3.6
TORD	Torodi Ar. Bea	60.42	188	P	P	12 50 58.1	-1.8
	comp=Z,2.4nm,0.9s,mb4.2,baz=0.1,slow=7.3,SNR=10						
KSRS	Korea Array	62.05	52	LR	LR	13 18 40.7	
	comp=Z,121nm,19.4s,MS4.1,baz=87,slow=37						
NVAR	Mina Array Bea	62.77	315	P	P	12 51 13.7	-1.9
	comp=Z,1.0nm,0.7s,mb4.0,baz=46,slow=5.2,SNR=6.7						
ANMO	Albuquerque	63.49	304⇑	iP	P	12 51 29.4	+9.0
MJAR	Matsushiro Arr	65.10	43	LR	LR	13 24 47.1	
	comp=Z,58nm,19.2s,MS3.8,baz=20,slow=40						
TXAR	Lajitas Array	68.17	300	P	P	12 51 48.4	-2.2
	comp=Z,0.5nm,0.9s,mb3.6,baz=59,slow=5.4,SNR=4.7						
TXAR				LR	LR	13 21 55.8	
	comp=Z,126nm,18.1s,MS4.2,baz=300,slow=36						
TXAR	Lajitas Array	68.17	300	P	P	12 51 48.4	-2.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR				MLR	MLR		
	comp=Z,126nm,18.1s						
CMAR	Chiang Mai Arr	72.53	84	P	P	12 52 16.9	-0.6
	comp=Z,0.6nm,0.8s,mb3.6,baz=328,slow=5.1,SNR=3.7						
CMAR				LR	LR	13 30 57.8	
	comp=Z,53nm,20.9s,MS3.8,baz=295,slow=41						

ISCJB ***01*** *13:11:22.0±0.5, 7357N±004×85E±02, h10km, mb3.7/14, MS4.1/15, Error ellipse: s-maj=9.3km s-min=5.5km az=166.3*
CSEM ***01*** *13:11:21.9±0.1, 7340N×722E, h10km, ML2.5, Error ellipse: s-maj=3.9km s-min=1.9km az=68.0*
MOS ***01*** *13:11:22.0±2.1, 7348N×821E, h10km, mb4.1/7, Error ellipse: s-maj=37.3km s-min=8.1km az=94.4*
IDC ***01*** *13:11:22.4±0.7, 7349N×787E, h0km, mb3.7/12, mb1 3.9/16, mb1mx3.9/25, mbtmp3.7/16, ML3.9/3, MS4.1/16, Ms1 4.1/16, ms1mx4.0/22, Error ellipse: s-maj=16.8km s-min=11.5km az=71.0*
GCMT ***01*** *13:11:23.6±0.3, 7358N×807E, h12km, MW4.8/69, Moment Tensor Solution. s13,c15; s69,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.77±.06; $M_{\theta\theta}$0.51±.06; $M_{\phi\phi}$1.26±.06; $M_{r\theta}$-0.03±.27; $M_{\theta\phi}$0.73±.06; $M_{\phi r}$-1.60±.27; Best double couple: $M_0$2.35200×10^{16} NP1:ϕ_s226.00000°,δ27.00000°,λ-60.00000°. NP2: ϕ_s13.00000°,δ67.00000°,λ-104.00000°. Principal axes: T 2.2220, Plg20.0000°, Azm113.0000°; N 0.2600, Plg13.0000°, Azm18.0000°; P -2.4820, Plg65.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *13:11:23.6±0.4, 7355N×827E, h10km, mb3.9/1 Error ellipse: s-maj=10.0km s-min=6.1km az=76.0*
NAO ***01*** *13:11:23.8±1.8, 7350N×903E, ML2.5*
HEL ***01*** *13:11:25.4±0.3, 7373N×861E, h10km, mb3.9(NEIC), ML2.5(NAO)*
BER ***01*** *13:11:25.5±2.2, 7352N×855E, h17km±56km, MD2.4, ML2.5(NAO)*

ISC 01 13:11:22.6±2.8**, 7356N**±004×**84E**±02**, h0**km±18km**, n61, σ1.11**s/57**, mb3.8**/14**, MS4.1**/15**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPB4	**Spitsbergen Ar**	**5.03**	**19**	*e*Pn	**Pn**	**13 12 39.0**	**0.0**
SPB4	**Spitsbergen Ar**	**5.03**	**19**	*e*Pn	**Pn**	**13 12 39.0**	**0.0**
SPA0	**Spitsbergen Ar**	**5.03**	**19**	Pn	**Pn**	**13 12 38.6**	**-0.5**
	baz=201,slow=14						
SPA0	**Spitsbergen Ar**	**5.03**	**19**	*e*P	**Pn**	**13 12 38.6**	**-0.5**
SPITS	**Spitsbergen Ar**	**5.03**	**19**	Pn	**Pn**	**13 12 38.8**	**-0.2**
	baz=252,slow=12,SNR=79						
SPITS				Sn	**Sn**	**13 13 37.2**	**-0.5**
	baz=244,slow=27,SNR=1.4						
SPITS				LR	LR	13 14 27.1	
	comp=Z,1μm,19.8s,baz=310,slow=36						
KBS	**Kingsbay**	**5.46**	**7**	*e*P	**Pn**	**13 12 44.7**	**-0.2**
KBS	**Kingsbay**	**5.46**	**7**	*e*P	**Pn**	**13 12 44.4**	**-0.6**
KBS				pmax	pmax		
	comp=Z,12nm,0.4s						
KBS	**Kingsbay**	**5.46**	**7**	*e*Pn	**Pn**	**13 12 44.3**	**-0.7**
KBS	**Kingsbay**	**5.46**	**7**	*e*P	**Pn**	**13 12 44.7**	**-0.3**
	SNR=53						
KBS	**Kingsbay**	**5.46**	**7**	*e*Pn	**Pn**	**13 12 44.4**	**-0.6**
	comp=Z,12nm,0.4s						
KIF	**Kilpisjarvi**	**6.06**	**133**	*e*P	**Pn**	**13 12 53.0**	**-0.3**
ARA0	**ARCESS Array S**	**6.75**	**118**	Pn	**Pn**	**13 13 02.1**	**-0.6**
	baz=322,slow=12						
ARA0				Sn	**Sn**	**13 14 12.5**	**-7.6**
	baz=313,slow=22						
ARA0	**ARCESS Array S**	**6.75**	**118**	*e*P	**Pn**	**13 13 02.1**	**-0.6**
ARA0				*e*		13 14 12.5	
ARCES	**ARCESS Array B**	**6.75**	**118**	Pn	**Pn**	**13 13 02.5**	**-0.2**
	comp=Z,2.9nm,0.3s,baz=326,slow=12,SNR=58						
ARCES				Sn	**Sn**	**13 14 17.1**	**-3.0**
	comp=Z,1.1nm,0.3s,baz=318,slow=21,SNR=3.5						
ARCES	**ARCESS Array B**	**6.75**	**118**	P	**Pn**	**13 13 02.5**	**-0.2**
ARCES						13 14 17.1	
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ARCES				smax			
	comp=N,1.0nm,0.3s						
ARE0	**ARCESS Array S**	**6.75**	**118**	*e*Pn	**Pn**	**13 13 03.5**	**+0.8**
ARE0	**ARCESS Array S**	**6.75**	**118**	*e*Pn	**Pn**	**13 13 03.5**	**+0.9**
KEV	**Kevo**	**6.98**	**114**	*e*P	**Pn**	**13 13 06.7**	**+0.9**
KEV	**Kevo**	**6.98**	**114**	*e*P	**Pn**	**13 13 05.7**	**-0.2**
KEV				pmax	pmax		
	comp=Z,46nm,1.3s						
KEV	**Kevo**	**6.98**	**114**	*e*Pn	**Pn**	**13 13 05.7**	**-0.2**
	comp=Z,46nm,1.3s						
HEF	**Hetta**	**7.17**	**129**	*e*P	**Pn**	**13 13 10.4**	**+2.1**
APA0	**Apatity Array**	**10.06**	**114**	Pn	**Pn**	**13 13 47.2**	**-0.7**
	baz=326,slow=14						
APA0	**Apatity Array**	**10.06**	**114**	*e*P	**Pn**	**13 13 47.2**	**-0.7**
APA0	**Apatity Array**	**10.06**	**114**	Pn	**Pn**	**13 13 47.2**	**-0.7**
	SNR=6.1						
NB2	**NORSAR Subarra**	**12.63**	**174**	*e*P	**Pn**	**13 14 22.1**	**-1.0**
NOA	**NORSAR Array B**	**12.63**	**174**	Pn	**Pn**	**13 14 23.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=343,slow=13,SNR=2.9						
HFS	**Hagfors**	**13.64**	**169**	Pn	**Pn**	**13 14 34.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=10,SNR=3.9						
HFS	**Hagfors**	**13.64**	**169**	*e*P	**Pn**	**13 14 36.5**	**-0.4**
FIA0	**FINESS Array S**	**13.82**	**142**	Pn	**Pn**	**13 14 37.9**	**-1.5**
	baz=347,slow=16						
FIA0	**FINESS Array S**	**13.82**	**142**	*e*P	**Pn**	**13 14 37.9**	**-1.5**
BRG	**Berggiesshubel**	**22.90**	**171**	*e*P	**P**	**13 16 28.2**	**+0.8**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.0						
BRG	**Berggiesshubel**	**22.90**	**171**	*e*(P)	**P**	**13 16 28.2**	**+0.8**
	comp=Z,9.9nm,1.3s,mb4.2						
VRAC	**Vranov**	**24.61**	**167**	P	**P**	**13 16 45.5**	**+1.6**
	comp=Z,2.3nm,0.5s,mb4.2,baz=350,slow=13,SNR=2.9						
VRAC	**Vranov**	**24.61**	**167**	P	**P**	**13 16 45.5**	**+1.6**
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**24.63**	**147**	P	**P**	**13 16 43.4**	**-0.8**
	comp=Z,2.5nm,0.6s,mb4.1,baz=345,slow=9.5,SNR=5.7						
AKASG				LR	LR	13 26 09.3	
	comp=Z,870nm,21.4s,MS4.2,baz=15,slow=36						
AKASG	**Malin Array Be**	**24.63**	**147**	P	**P**	**13 16 43.4**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG				MLR	MLR		
	comp=Z,870nm,21.4s						
GERES	**GERESS Array B**	**24.91**	**172**	P	**P**	**13 16 47.0**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.5,baz=0.7,slow=8.2,SNR=4.8						
GERES	**GERESS Array B**	**24.91**	**172**	P	**P**	**13 16 47.0**	**+0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVS	**Novosibirsk**	**34.41**	**81**	*e*P	**P**	**13 18 12.2**	**+1.3**
SCHQ	**Schefferville**	**34.52**	**279**	LR	LR	13 30 23.9	
	comp=Z,477nm,18.6s,MS4.3,baz=265,slow=33						
ZALV	**Zalesovo Beam**	**35.64**	**80**	LR	LR	13 36 07.7	
	comp=Z,205nm,19.3s,MS3.9,baz=145,slow=42						
BRTR	**Keskin Array B**	**36.02**	**146**	P	**P**	**13 18 26.8**	**+1.9**
	comp=Z,0.4nm,0.5s,mb3.5,baz=342,slow=6.9,SNR=4.5						
BRTR				LR	LR	13 34 17.7	
	comp=Z,269nm,18.6s,MS4.0,baz=171,slow=38						
YKA	**Yellowknife Ar**	**39.01**	**322**	P	**P**	**13 18 50.1**	**+0.1**
	comp=Z,1.6nm,0.9s,mb3.7,baz=21,slow=8.6,SNR=3.6						
YKA				LR	LR	13 33 40.9	
	comp=Z,102nm,19.5s,MS3.7,baz=90,slow=34						
MK31	**Makanchi Array**	**41.34**	**88**	*e*P	**P**	**13 19 08.8**	**-0.7**
MK31	**Makanchi Array**	**41.34**	**88**	*e*P	**P**	**13 19 08.8**	**-0.7**
MKAR	**Makanchi Array**	**41.34**	**88**	P	**P**	**13 19 11.3**	**+1.8**
	comp=Z,0.3nm,0.5s,mb3.3,baz=352,slow=6.9,SNR=4.6						
MKAR				LR	LR	13 40 25.1	
	comp=Z,349nm,19.3s,MS4.2,baz=328,slow=42						
MKAR	**Makanchi Array**	**41.34**	**88**	P	**P**	**13 19 11.3**	**+1.8**
MKAR				LR	LR	13 40 25.1	
ZAK	**Zakamensk**	**43.88**	**67**	*e*P	**P**	**13 19 33.8**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.9s,mb3.5						
ULM	**Lac du Bonnet**	**46.38**	**301**	LR	LR	13 38 58.4	
	comp=Z,536nm,20.0s,MS4.5,baz=23,slow=36						
SONM	**Songino Array**	**47.03**	**66**	P	**P**	**13 19 56.7**	**+1.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=339,slow=6.2,SNR=4.3						
SONM				LR	LR	13 43 04.6	
	comp=Z,182nm,19.7s,MS4.0,baz=343,slow=40						
PETK	**Petropavlovsk-**	**51.89**	**23**	LR	LR	13 42 13.3	
	comp=Z,60nm,18.0s,MS3.7,baz=188,slow=36						
PDAR	**Pinedale Array**	**56.61**	**309**	P	**P**	**13 21 06.5**	**-0.1**
	comp=Z,0.8nm,1.1s,mb3.7,baz=54,slow=9.1,SNR=3.1						
PDAR				LR	LR	13 45 45.0	
	comp=Z,212nm,18.7s,MS4.3,baz=33,slow=36						
TORD	**Torodi Ar. Bea**	**60.52**	**187**	P	**P**	**13 21 33.7**	**-0.4**
	comp=Z,1.0nm,0.8s,mb4.0,baz=359,slow=7.5,SNR=3.8						
TORD				LR	LR	13 47 28.2	
	comp=Z,144nm,19.2s,MS4.1,baz=345,slow=36						
KSRS	**Korea Array**	**62.05**	**52**	LR	LR	13 51 54.5	
	comp=Z,90nm,18.6s,MS4.0,baz=340,slow=39						
NVAR	**Mina Array Bea**	**62.63**	**315**	P	**P**	**13 21 47.6**	**-0.5**
	comp=Z,0.8nm,0.8s,mb3.9,baz=22,slow=1.6,SNR=4.3						
TXAR	**Lajitas Array**	**68.05**	**299**	P	**P**	**13 22 20.8**	**-2.5**
	comp=Z,0.4nm,0.9s,mb3.6,baz=74,slow=5.0,SNR=2.9						
TXAR				LR	LR	13 52 14.3	
	comp=Z,312nm,18.4s,MS4.6,baz=5.0,slow=36						
TXAR	**Lajitas Array**	**68.05**	**299**	P	**P**	**13 22 20.8**	**-2.5**
TXAR				LR	LR	13 52 14.3	
CMAR	**Chiang Mai Arr**	**72.60**	**84**	P	**P**	**13 22 52.0**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.8,baz=330,slow=5.2,SNR=2.4						
CMAR				LR	LR	13 58 19.3	
	comp=Z,80nm,18.4s,MS4.0,baz=109,slow=39						
CMAR	**Chiang Mai Arr**	**72.60**	**84**	P	**P**	**13 22 52.0**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,80nm,18.5s						
BDFB	**Brasilia**	**96.03**	**234**	LR	LR	14 01 12.2	
	comp=Z,56nm,20.5s,MS4.0,baz=186,slow=31						
ASAR	**Alice Springs**	**122.30**	**62**	PKP	PKPdf	13 30 18.6	0.0
	comp=Z,0.4nm,0.9s,baz=20,slow=1.2,SNR=3.4						

CSEM ***01*** *13:18:40.6±0.1, 7355N×753E, h10km, mb4.5/11, Error ellipse: s-maj=3.8km s-min=2.5km az=60.0*
IDC ***01*** *13:18:40.6±0.6, 7348N×790E, h0km, mb3.8/12, mb1 4.0/17, mb1mx3.9/26, mbtmp3.8/17, ML3.7/5, MS3.9/3, Ms1 3.9/3, ms1mx3.3/21, Error ellipse: s-maj=16.6km s-min=11.7km az=66.0*
ISCJB ***01*** *13:18:41.2±0.4, 7361N±004×84E±02, h10km, mb4.2/29, MS3.8/4, Error ellipse: s-maj=8.7km s-min=5.4km az=171.9*
MOS ***01*** *13:18:41.0±1.4, 7362N×807E, h10km, mb4.5/20, Error ellipse: s-maj=29.9km s-min=5.6km az=92.7*
NAO ***01*** *13:18:41.3±1.8, 7348N×884E, ML2.7*
BER ***01*** *13:18:42.2±2.1, 7355N×850E, h10km, ML2.7(NAO)*
HEL ***01*** *13:18:42.7±0.8, 7375N×864E, h10km, mb4.6(NEIC), ML2.7(NAO)*
NEIC ***01*** *13:18:42.3±0.5, 7361N×8.19E, h10km, mb4.6/11, Error ellipse: s-maj=13.0km s-min=7.0km az=87.0*
SZGRF ***01*** *13:18:55.6, 7257N×901E, h33km, mb4.4, Norwegian Sea*

ISC 01 13:18:43.0±0.3**, 7357N**±004×**84E**±02**, h10**km**, n103, σ1.24**s/104**, mb4.2**/29**, MS3.8**/4**, 8C-4D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**5.02**	**19**	Pn	**Pn**	**13 19 56.9**	**-1.3**
	baz=199,slow=14						
SPA0	**Spitsbergen Ar**	**5.02**	**19**	*e*P	**Pn**	**13 19 56.9**	**-1.3**
SPITS	**Spitsbergen Ar**	**5.02**	**19**	Pn	**Pn**	**13 19 57.0**	**-1.3**
	baz=251,slow=12,SNR=29						
KBS	**Kingsbay**	**5.45**	**7**	*e*P	**Pn**	**13 20 00.3**	**-3.8**
KBS	**Kingsbay**	**5.45**	**7**	*e*P	**Pn**	**13 20 01.6**	**-2.6**
KBS				pmax	pmax		
	comp=Z,17nm,0.9s						
KBS	**Kingsbay**	**5.45**	**7**	Pn	**Pn**	**13 20 02.1**	**-2.1**
KBS	**Kingsbay**	**5.45**	**7**	*e*Pn	**Pn**	**13 20 01.6**	**-2.6**
	comp=Z,16nm,0.9s						
KIF	**Kilpisjarvi**	**6.06**	**133**	*e*P	**Pn**	**13 20 11.9**	**-0.7**
ARA0	**ARCESS Array S**	**6.75**	**118**	Pn	**Pn**	**13 20 20.7**	**-1.2**
	baz=318,slow=12						
ARA0				Sn	**Sn**	**13 21 30.6**	**-8.0**
	baz=313,slow=18						
ARA0	**ARCESS Array S**	**6.75**	**118**	*e*P	**Pn**	**13 20 20.7**	**-1.2**
ARA0				*e*		13 21 30.6	
ARCES	**ARCESS Array B**	**6.75**	**118**	Pn	**Pn**	**13 20 21.1**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=322,slow=12,SNR=14						
ARCES				Sn	**Sn**	**13 21 31.2**	**-7.5**
	comp=Z,0.5nm,0.3s,baz=310,slow=20,SNR=2.4						
ARCES	**ARCESS Array B**	**6.75**	**118**	Pn	**Pn**	**13 20 21.0**	**-0.9**
ARCES				Sn	**Sn**	**13 21 31.1**	**-7.6**
KEV	**Kevo**	**6.98**	**114**	*e*P	**Pn**	**13 20 24.8**	**-0.2**
KEV	**Kevo**	**6.98**	**114**	*e*P	**Pn**	**13 20 17.7**	**-7.4**
KEV				*e*		13 21 41.2	
KEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KEV	**Kevo**	**6.98**	**114**	*e*Pn	**Pn**	**13 20 17.7**	**-7.4**
	comp=Z,7.4nm,0.9s						
KEV				*e*Sn	**Sn**	**13 21 41.1**	**-3.2**
KU6	**Riekki**	**10.52**	**125**	*e*P	**Pn**	**13 21 12.4**	**-1.2**
NB2	**NORSAR Subarra**	**12.63**	**174**	*e*P	**Pn**	**13 21 41.3**	**-1.1**
NOA	**NORSAR Array B**	**12.63**	**174**	Pn	**Pn**	**13 21 39.8**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=342,slow=13,SNR=3.3						
NOA	**NORSAR Array B**	**12.63**	**174**	Pn	**Pn**	**13 21 39.8**	**-2.6**
HFS	**Hagfors**	**13.64**	**169**	Pn	**Pn**	**13 21 53.3**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=10,slow=9.2,SNR=7.0						
HFS	**Hagfors**	**13.64**	**169**	*e*P	**Pn**	**13 21 53.5**	**-2.7**
HFS	**Hagfors**	**13.64**	**169**	Pn	**Pn**	**13 21 53.5**	**-2.7**
	baz=356,slow=7.9						
FIA0	**FINESS Array S**	**13.82**	**142**	*e*P	**Pn**	**13 21 54.6**	**-4.1**
VSU	**Vasula**	**16.75**	**145**	⇑*i*P	**Pn**	**13 22 38.6**	**+1.2**
VSU				pmax	pmax		
	comp=Z,52nm,1.7s						
KLMR	**Klimovskoe**	**17.21**	**121**	*e*P	**Pn**	**13 22 44.4**	**+1.3**
KLMR				pmax	pmax		
	comp=Z,75nm,1.5s						
EKA	**Eskdalemuir Ar**	**18.90**	**201**	P	**Pn**	**13 23 02.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=352,slow=9.4,SNR=3.4						
RUE	**Ruedersdorf**	**21.29**	**171**	*e*P	**P**	**13 23 28.5**	**-0.8**
	comp=Z,17nm,0.4s,mb4.7						
RUE	**Ruedersdorf**	**21.29**	**171**	*e*P	**P**	**13 23 28.5**	**-0.7**
	comp=Z,17nm,0.4s,mb4.7						
MOS	**Moscow**	**21.39**	**131**	*e*P	**P**	**13 23 28.3**	**-2.0**
OBN	**Obninsk**	**21.75**	**133**	*e*P	**P**	**13 23 33.7**	**-0.5**
OBN				pmax	pmax		
	comp=Z,29nm,1.6s,mb4.5						
CLL	**Collm**	**22.43**	**172**	*e*P	**P**	**13 23 41.0**	**-0.4**
CLL				*e*(sP)	sP	13 23 49.0	+3.4
	comp=Z,27nm,1.5s						
BRG	**Berggiesshubel**	**22.90**	**171**	*e*P	**P**	**13 23 47.1**	**+0.6**
BRG				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.3						
BRG	**Berggiesshubel**	**22.90**	**171**	*e*P	**P**	**13 23 47.0**	**+0.5**
	comp=Z,26nm,1.9s,mb4.3						
BRG	**Berggiesshubel**	**22.90**	**171**	*e*P	**P**	**13 23 47.0**	**+0.6**
	comp=Z,44nm,1.9s,mb4.5						
PVCC	**Panska Ves**	**23.28**	**170**	*e*P	**P**	**13 23 52.4**	**+2.0**
DPC	**Dobruska-Polom**	**23.55**	**167**	*e*P	**P**	**13 23 54.4**	**+1.1**
PRU	**Pruhonice**	**23.81**	**170**	*e*P	**P**	**13 23 57.4**	**+1.7**
GRA1	**Grafenberg Arr**	**23.99**	**176**	*e*P	**P**	**13 23 57.0**	**-0.3**
	comp=Z,25nm,1.9s,mb4.3						
GRF	**Grafenberg Arr**	**23.99**	**176**	*e*P	**P**	**13 23 57.0**	**-0.3**
GRF				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.3						
GRF	**Grafenberg Arr**	**23.99**	**176**	*e*P	**P**	**13 23 57.0**	**-0.3**
GRF				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.3						
GRF	**Grafenberg Arr**	**23.99**	**176**	*e*P	**P**	**13 23 57.0**	**-0.3**
	comp=Z,25nm,1.9s,mb4.3						
VRAC	**Vranov**	**24.61**	**167**	P	**P**	**13 24 02.6**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.0,baz=354,slow=11,SNR=5.3						
VRAC				LR	LR	13 32 57.6	
	comp=Z,208nm,21.2s,MS3.6,baz=200,slow=35						
VRAC	**Vranov**	**24.61**	**167**	P	**P**	**13 24 02.6**	**-0.3**
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VRAC				MLR	MLR		
	comp=Z,208nm,21.2s						
KHC	**Kasperske Hory**	**24.63**	**172**	*e*P	**P**	**13 24 04.1**	**+1.0**
AKASG	**Malin Array Be**	**24.63**	**147**	P	**P**	**13 24 01.4**	**-1.6**
	comp=Z,1.2nm,0.4s,mb3.8,baz=342,slow=9.5,SNR=8.8						
AKASG	**Malin Array Be**	**24.63**	**147**	P	**P**	**13 24 01.5**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KRUC	**Moravsky**	**24.84**	**167**	P	**P**	**13 24 06.9**	**+1.9**
STHS	**Stebnicka Huta**	**24.88**	**160**	*e*P	**P**	**13 24 07.1**	**+1.7**
STHS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.1						
STHS	**Stebnicka Huta**	**24.88**	**160**	*e*P	**P**	**13 24 07.1**	**+1.7**
	comp=Z,6.9nm,1.1s,mb4.1						
STHS	**Stebnicka Huta**	**24.88**	**160**	*e*P	**P**	**13 24 07.1**	**+1.7**
	comp=Z,6.9nm,1.1s,mb4.1						
GERES	**GERESS Array B**	**24.92**	**172**	P	**P**	**13 24 05.3**	**-0.5**
	comp=Z,3.4nm,1.1s,mb3.8,baz=10,slow=8.1,SNR=9.9						
GERES	**GERESS Array B**	**24.92**	**172**	P	**P**	**13 24 05.3**	**-0.4**
GERES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CRVS	**Cervenica-Dubn**	**25.41**	**160**	*e*P	**P**	**13 24 12.1**	**+1.9**
CRVS				pmax	pmax		
	comp=Z,24nm,1.7s,mb4.5						
CRVS	**Cervenica-Dubn**	**25.41**	**160**	*e*P	**P**	**13 24 12.1**	**+1.9**
	comp=Z,24nm,1.7s,mb4.4						
CRVS	**Cervenica-Dubn**	**25.41**	**160**	*e*P	**P**	**13 24 12.1**	**+1.9**
	comp=Z,24nm,1.7s,mb4.4						
KOLS	**Kolonicke sedl**	**25.46**	**158**	*e*P	**P**	**13 24 10.3**	**-0.3**
KOLS				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.2						
KOLS	**Kolonicke sedl**	**25.46**	**158**	*e*P	**P**	**13 24 10.3**	**-0.3**
	comp=Z,13nm,1.5s,mb4.2						
KOLS	**Kolonicke sedl**	**25.46**	**158**	*e*P	**P**	**13 24 10.3**	**-0.3**
	comp=Z,13nm,1.5s,mb4.2						
VYHS	**Vyhne**	**25.58**	**164**	*e*P	**P**	**13 24 11.6**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.1						
VYHS	**Vyhne**	**25.58**	**164**	*e*P	**P**	**13 24 11.6**	**-0.1**
	comp=Z,10nm,1.8s,mb4.1						
VYHS	**Vyhne**	**25.58**	**164**	*e*P	**P**	**13 24 11.5**	**-0.2**
ZST	**Bratislava**	**25.75**	**167**	*e*P	**P**	**13 24 15.0**	**+1.7**
ZST				pmax	pmax		
	comp=Z,49nm,2.0s,mb4.7						
ZST	**Bratislava**	**25.75**	**167**	*e*P	**P**	**13 24 15.0**	**+1.7**
	comp=Z,49nm,2.0s,mb4.7						
ZST	**Bratislava**	**25.75**	**167**	*e*P	**P**	**13 24 15.0**	**+1.7**
	comp=Z,49nm,2.0s,mb4.7						
ARU	**Arti**	**26.05**	**104**	*c i*P	**P**	**13 24 18.0**	**+2.1**
ARU				*e*		13 24 55.5	
ARU				*e*S	**S**	**13 28 50.6**	**+4.1**
ARU				*e*SS		13 29 48.5	
ARU				pmax	pmax		
	comp=Z,34nm,1.7s,mb4.6						
ARU	**Arti**	**26.05**	**104**	*e*P	**P**	**13 24 16.3**	**+0.4**
	comp=Z,37nm,1.4s,mb4.7						
ARU	**Arti**	**26.05**	**104**	*e*P	**P**	**13 24 16.3**	**+0.4**
	comp=Z,37nm,1.4s,mb4.7						
PSZ	**Piszkesteto**	**26.24**	**162**	*e*P	**P**	**13 24 18.7**	**+1.0**
PSZ				pmax	pmax		
	comp=Z,44nm,1.9s,mb4.7						
PSZ	**Piszkesteto**	**26.24**	**162**	*e*P	**P**	**13 24 18.7**	**+1.0**
	comp=Z,44nm,1.9s,mb4.7						
PSZ	**Piszkesteto**	**26.24**	**162**	*e*P	**P**	**13 24 18.7**	**+1.0**
	comp=Z,44nm,1.9s,mb4.7						
MLR	**Muntele Rosu**	**29.27**	**154**	LR	LR	13 36 27.5	
	comp=Z,430nm,19.8s,MS4.1,baz=63,slow=36						
TIXI	**Tiksi**	**30.28**	**33**	⇑*i*P	**P**	**13 24 54.8**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.5						
KIV	**Kislovodsk**	**33.60**	**133**	*e*P	**P**	**13 25 21.6**	**-1.3**
KIV				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.5						
NVS	**Novosibirsk**	**34.40**	**81**	*e*P	**P**	**13 25 30.0**	**+0.2**
SCHQ	**Schefferville**	**34.53**	**279**	LR	LR	13 39 16.1	
	comp=Z,161nm,18.1s,MS3.8,baz=55,slow=36						
BRTR	**Keskin Array B**	**36.02**	**146**	P	**P**	**13 25 44.7**	**+0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=330,slow=7.1,SNR=4.5						
BRTR	**Keskin Array B**	**36.02**	**146**	P	**P**	**13 25 44.7**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KRAR	**Krasnoyarsk**	**36.04**	**72**	⇑*i*P	**P**	**13 25 44.3**	**+0.4**
BILL	**Bilibino**	**37.90**	**13**	*e*P	**P**	**13 25 59.1**	**-0.5**
BILL				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.7						
YKA	**Yellowknife Ar**	**39.01**	**322**	P	**P**	**13 26 08.1**	**-0.8**
	comp=Z,2.5nm,1.1s,mb3.9,baz=26,slow=9.1,SNR=3.7						
YKA	**Yellowknife Ar**	**39.01**	**322**	P	**P**	**13 26 08.1**	**-0.8**
HVS	**Khovu-Aksy**	**40.61**	**75**	⇑*i*P	**P**	**13 26 24.6**	**+2.3**
HVS				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.5						
COLA	**College**	**40.92**	**345**	⇑*i*P	**P**	**13 26 25.1**	**+0.3**
MKAR	**Makanchi Array**	**41.34**	**88**	P	**P**	**13 26 29.2**	**+0.8**
	comp=Z,1.0nm,1.0s,mb3.4,baz=325,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**41.34**	**88**	P	**P**	**13 26 29.2**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**41.34**	**88**	P	**P**	**13 26 29.2**	**+0.8**
SEY	**Seymchan**	**41.66**	**24**	⇑*i*P	**P**	**13 26 30.8**	**0.0**
AAK	**Ala-Archa**	**42.94**	**98**	⇓*i*P	**P**	**13 26 42.4**	**+0.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb3.9						
SONM	**Songino Array**	**47.02**	**66**	P	**P**	**13 27 16.0**	**+2.1**
	comp=Z,2.3nm,1.2s,mb4.0,baz=339,slow=7.9,SNR=7.4						
SONM	**Songino Array**	**47.02**	**66**	P	**P**	**13 27 16.0**	**+2.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ULN	**Ulaanbaatar**	**47.16**	**65**	⇓*i*P	**P**	**13 27 16.2**	**+1.2**
HIA	**Hailar**	**48.97**	**54**	⇓*i*P	**P**	**13 27 28.4**	**-0.5**
YSS	**Yuzh-Sakhalins**	**55.80**	**36**	⇑*i*P	**P**	**13 28 19.9**	**+0.3**
YSS				pmax	pmax		
	comp=Z,39nm,1.7s,mb5.2						
PDAR	**Pinedale Array**	**56.62**	**309**	P	**P**	**13 28 25.2**	**-0.2**
	comp=Z,1.3nm,1.1s,mb3.9,baz=38,slow=4.6,SNR=6.5						
PDAR	**Pinedale Array**	**56.62**	**309**	P	**P**	**13 28 25.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**60.52**	**188**	P	**P**	**13 28 51.5**	**-1.5**
	comp=Z,2.4nm,1.0s,mb4.3,baz=344,slow=5.6,SNR=9.1						
NVAR	**Mina Array Bea**	**62.63**	**315**	P	**P**	**13 29 06.7**	**-0.3**
	comp=Z,1.3nm,1.0s,mb4.0,baz=18,slow=3.1,SNR=5.5						
ANMO	**Albuquerque**	**63.36**	**304**	⇓*i*P	**P**	**13 29 11.7**	**-0.2**
TXAR	**Lajitas Array**	**68.05**	**299**	P	**P**	**13 29 39.2**	**-3.0**
	comp=Z,0.2nm,0.7s,mb3.3,baz=27,slow=3.0,SNR=2.9						
TXAR	**Lajitas Array**	**68.05**	**299**	P	**P**	**13 29 39.2**	**-3.0**
CMAR	**Chiang Mai Arr**	**72.59**	**84**	P	**P**	**13 30 09.5**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=347,slow=7.5,SNR=3.9						
ASAR	**Alice Springs**	**122.29**	**62**	PKP	PKPdf	13 37 35.2	-2.2
	comp=Z,0.6nm,0.9s,baz=6.6,slow=4.0,SNR=3.0						
ASAR	**Alice Springs**	**122.29**	**62**	PKIKP	PKPdf	13 37 35.2	-2.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						

GUC 01 13:54:40.4±0.4**, 2243S**×**6889W, h109**km±2km**, MD3.5, ML3.8, 4C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.19**	**186**	⇓*i*P	Pn	13 54 56.3	+0.7
LVC				*i* S	Sn	13 55 08.5	+1.5
PECH	**Pedro de Valdi**	**0.74**	**257**	⇑*i*P	Pn	13 55 00.0	+1.0
PECH				*i* S	Sn	13 55 14.8	+1.7
PECH				AML	AML	13 55 15.5	
	comp=N,8μm,0.5s						
SPCH	**San Pedro de A**	**0.80**	**127**	⇑*i*P	Pn	13 55 00.5	+0.9
SPCH				*i* S	Sn	13 55 15.7	+1.7
SPCH				AML	AML	13 55 16.3	
	comp=E,11μm,0.3s						
MACH	**Maria Elena**	**0.83**	**286**	⇑*i*P	Pn	13 55 00.7	+0.8
MACH				*i* S	Sn	13 55 16.0	+1.5
TOCH	**Tocopilla**	**1.26**	**285**	*i* P	Pn	13 55 04.6	+0.3
TOCH				*i* S	Sn	13 55 22.9	+0.5
TOCH				AML	AML	13 55 25.6	
	comp=E,2μm,0.2s						
PB01	**Plate Boundary**	**1.48**	**338**	⇑*i*P	Pn	13 55 06.8	-0.2
PB01				*i* S	Sn	13 55 27.3	+0.2
CEN1	**Los Morros**	**1.54**	**231**	⇓*i*P	Pn	13 55 10.9	+3.3
CEN1				*i* S	Sn	13 55 34.1	+5.8
CEN1				AML	AML	13 55 36.5	
	comp=N,390nm,0.5s						
MECH	**Mejillones**	**1.59**	**245**	*i* P	Pn	13 55 08.9	+0.7
MECH				*i* S	Sn	13 55 30.2	+0.9
MECH				AML	AML	13 55 36.2	
	comp=N,977nm,0.4s						
ANCH	**Antofagasta**	**1.88**	**228**	*i* P	Pn	13 55 12.2	+0.5
ANCH				*i* S	Sn	13 55 36.5	+0.8
ANCH				AML	AML	13 55 38.5	
	comp=N,750nm,0.1s						
CPN1	**Cerro Paranal**	**2.59**	**212**	AML	AML	13 55 53.9	
	comp=E,227nm,0.2s						

ISCJB ***01*** *14:26:22.5±0.6, 3993N±003×2692E±004, h1km±8km, Error ellipse: s-maj=5.8km s-min=4.4km az=40.8*
ISK ***01*** *14:26:22.0, 3991N×2693E, h5km, MD2.8*
CSEM ***01*** *14:26:22.1±0.1, 3992N×2693E, h5km, MD2.8, Error ellipse: s-maj=1.2km s-min=1.1km az=155.0*
DDA ***01*** *14:26:23.0, 3995N×2692E, h7km±2km, Md2.9*

ISC 01 14:26:23.1±0.5**, 3993N**±003×**2692E**±004**, h6**km±6km**, n17, σ0.75**s/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.46**	**345**	*e*PG	**Pg**	**14 26 31.9**	**-0.1**
LPK				*e*SG	**Sg**	**14 26 39.0**	**+1.0**
EZN	**Ezine**	**0.47**	**258**	*e*PG	**Pg**	**14 26 31.7**	**-0.5**
EZN				*e*SG	**Sg**	**14 26 38.4**	**+0.2**
AYVA	**Ayvalik**	**0.64**	**196**	*i* P	**Pg**	**14 26 35.8**	**+0.4**
AYVA				*i* S	**Sg**	**14 26 43.9**	**+0.1**
BOZC	**Bozcaada**	**0.67**	**263**	*i* P	**Pg**	**14 26 35.9**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOZC				*i* S	**Sg**	**14 26 45.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**0.78**	**15**	*e*PG	**Pg**	**14 26 37.8**	**-0.3**
GADA	**Gvkgeada**	**0.83**	**289**	*e*PG	**Pg**	**14 26 38.8**	**-0.1**
EDC	**Edincik**	**0.84**	**60**	*e*PG	**Pg**	**14 26 38.7**	**-0.5**
EDC				*e*SG	**Sg**	**14 26 50.8**	**+0.8**
BNT	**Bandirma**	**0.88**	**61**	*e*PG	**Pg**	**14 26 39.1**	**-0.9**
ENEZ	**Enez**	**1.00**	**324**	*e*PG	**Pg**	**14 26 42.0**	**-0.2**
KCT	**Karacabey**	**1.15**	**73**	*e*PN	**Pn**	**14 26 44.3**	**-1.5**
AKHS	**Akhisar**	**1.26**	**146**	*i* P	**Pn**	**14 26 47.1**	**0.0**
AKHS				*i* S	**Sg**	**14 27 03.6**	**+0.2**
AKS	**Akhisar**	**1.26**	**146**	*e*PN	**Pn**	**14 26 45.7**	**-1.5**
DST	**Dursunbey**	**1.36**	**103**	*e*PN	**Pn**	**14 26 47.9**	**-0.6**
BLCB	**Balcova**	**1.54**	**176**	*e*PN	**Pn**	**14 26 50.6**	**-0.4**
DEMI	**Demirci**	**1.65**	**122**	*e*P	**Pn**	**14 26 54.8**	**+2.3**
DEMI				*i* S	**Sn**	**14 27 15.2**	**+1.2**
CTKS	**Kestanelik-??a**	**1.78**	**42**	*e*PN	**Pn**	**14 26 54.5**	**+0.1**
EDRB	**Edirne**	**1.92**	**356**	*e*PN	**Pn**	**14 26 56.8**	**+0.5**

*NIED **01** 14:37:00,3490N×13800E,h23km,Mw3.5 Best double couple: M₀2.02000×10¹⁴ NP1:φs327.00000°,δ85.00000°,λ5.00000°. NP2:φs237.00000°,δ85.00000°,λ175.00000°.*
*ISCJB **01** 14:37:55.0±0.5,3489N±004×13798E±004,h14km±4km, Error ellipse: s-maj=6.1km s-min=5.3km az=10.8*
*JMA **01** 14:37:55.0,3489N×13798E,h16km±1km,M3.5 Broadband fault plane solution: P waves. NP1: φs242.00000°,δ74.00000°,λ-175.00000°. NP2: φs150.00000°,δ85.00000°,λ-16.00000°. Principal axes: T Plg8.0000°, Azm197.0000°; N Plg73.0000°, Azm314.0000°; P Plg15.0000°, Azm105.0000°;*
JMA Felt II J1.
ISC 01 14:37:55.0±0.6**,3488N**±003×**13800E**±004**,h14**km±5km**, n11,**σ**0ˢ39**/21**,4C-3D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKKG	**Kakegawa**	**0.10**	**191**	P	**Pg**	**14 37 58.3**	**+0.1**
JKKG				*e*S	**Sg**	**14 38 00.8**	**+0.4**
JHMK	**Hamakita**	**0.21**	**251**	P	**Pg**	**14 37 59.5**	**-0.2**
JHMK				S	**Sg**	**14 38 02.6**	**-0.3**
HMMJ	**Hamamatsu 2**	**0.23**	**263**	⇓P	**Pg**	**14 38 00.0**	**0.0**
HMMJ				*e*S	**Sg**	**14 38 03.4**	**-0.1**
JYZW	**Yoshizawa**	**0.24**	**297**	P	**Pg**	**14 38 00.2**	**-0.1**
JYZW				*e*S	**Sg**	**14 38 03.7**	**-0.2**
SHZ3	**Shizuoka 3**	**0.25**	**44**	⇑P	**Pg**	**14 38 00.7**	**+0.2**
SHZ3				S	**Sg**	**14 38 04.6**	**+0.4**
JNY	**Yasuok**	**0.49**	**347**	⇑P	**Pg**	**14 38 04.5**	**-0.2**
JNY				*e*S	**Sg**	**14 38 11.2**	**0.0**
TK04	**Tokai 4**	**0.51**	**191**	⇑P	**Pg**	**14 38 05.8**	**+0.8**
JIZS	**Izushimoda**	**0.74**	**103**	⇓P	**Pg**	**14 38 08.7**	**-0.8**
JIZS				*e*S	**Sg**	**14 38 19.5**	**+0.2**
JYN	**Shimob**	**0.76**	**36**	⇑P	**Pg**	**14 38 09.2**	**-0.6**
JYN				*e*S	**Sg**	**14 38 20.1**	**+0.3**
JOD2	**Odawara 2**	**0.97**	**67**	⇓P	**Pb**	**14 38 12.9**	**-0.7**
JOD2				*e*S	**Sb**	**14 38 26.1**	**-0.2**
MAT	**Matsushiro**	**1.66**	**6**	P	**Pn**	**14 38 24.2**	**+0.5**
MAT				S	**Sn**	**14 38 45.3**	**+0.5**

*ISCJB **01** 14:41:04.0±0.4,519N±004×12591E±008,h125km±7km, mb4.5/9,Error ellipse: s-maj=13.6km s-min=6.3km az=162.9*
*MAN **01** 14:41:05,522N×12584E,h96km,mb4.6,ML3.5,MS3.4*
*NEIC **01** 14:41:05.9±1.1,530N×12583E,h137km±17km,mb4.8/4, Error ellipse: s-maj=41.4km s-min=15.0km az=69.0*
*IDC **01** 14:41:06.9±1.1,524N×12569E,h139km±15km,mb3.9/5, mb1 4.0/6,mb1mx3.6/19,mbtmp4.0/6,Error ellipse: s-maj=52.1km s-min=15.1km az=79.0*
*DJA **01** 14:42:07,005N×12856E,h10km,MLv3.5/3*
ISC 01 14:41:05.1±0.4**,519N**±004×**12591E**±008**,h117**km±7km**, n29,**σ**0ˢ95**/36**,mb4.5**/9**,2C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.78**	**11**	*e*P	**Pn**	**14 41 34.8**	**-0.9**
MATI				*e*S	**Sn**	**14 41 57.8**	**-1.3**
DAV	**Davao City (W)**	**1.89**	**350**	P	**Pn**	**14 41 37.7**	**+0.6**
	75nm,0.3s,baz=219,slow=4.2,SNR=4.2						
DAV				S	**Sn**	**14 42 04.7**	**+3.1**
	161nm,0.3s,baz=264,slow=23,SNR=7.7						
DAV	**Davao City (W)**	**1.89**	**350**	P	**Pn**	**14 41 37.7**	**+0.6**
DAV				S	**Sn**	**14 42 04.7**	**+3.1**
KCP	**Kidapawan**	**1.98**	**336**	⇓*e*P	**Pn**	**14 41 28.2**	**-10**
KCP				*i* S	**Sn**	**14 42 06.8**	**+3.3**
BUKP	**Musuan**	**2.80**	**343**	*e*P	**Pn**	**14 41 48.6**	**-0.1**
BIPH	**Bislig**	**3.01**	**9**	⇑*e*P	**Pn**	**14 41 51.7**	**+0.2**
BIPH				*i* S	**Sn**	**14 42 26.8**	**-0.4**
BIPH	**Bislig**	**3.01**	**9**	⇑*e*P	**Pn**	**14 41 51.7**	**+0.2**
BIPH				*i* S	**Sn**	**14 42 26.8**	**-0.4**
PAGZ	**Pagadian**	**3.64**	**317**	*e*P	**Pn**	**14 41 59.5**	**-0.3**
BUTP	**Butuan**	**3.76**	**356**	*e*P	**Pn**	**14 42 02.3**	**+0.9**
IPIL	**Ipil**	**4.20**	**308**	⇓*e*P	**Pn**	**14 42 07.2**	**-0.1**
IPIL				*e*S	**Sn**	**14 42 54.4**	**-1.2**
IPIL	**Ipil**	**4.20**	**308**	*e*P	**Pn**	**14 42 07.4**	**+0.1**
TNTI	**Ternate**	**4.63**	**162**	P	**Pn**	**14 42 12.3**	**-0.7**
TNTI				S	**Sn**	**14 43 05.1**	**-0.7**
MSLP	**Maasin**	**5.02**	**348**	*e*P	**Pn**	**14 42 18.2**	**-0.1**
OCLP	**Ormoc**	**5.96**	**348**	*e*P	**Pn**	**14 42 32.5**	**+1.5**
LBMI	**Labuha**	**6.01**	**165**	P	**Pn**	**14 42 31.8**	**+0.2**
BATI	**Baumata**	**15.46**	**188**	P	**Pn**	**14 44 38.2**	**+1.4**
	3.1nm,0.3s,baz=336,slow=1.6,SNR=8.5						
KAKA	**Kakadu**	**18.93**	**160**	*e*P	x	14 45 01.4	
	17nm,0.6s						
WRAB	**Tennant Creek**	**26.31**	**162**	*e*P	**P**	**14 46 29.6**	**-0.3**
	3.9nm,0.3s,mb4.3						
WB2	**Warramunga Arr**	**26.32**	**162**	*e*P	**P**	**14 46 30.0**	**0.0**
MBWA	**Marble Bar**	**26.88**	**193**	*e*P	**P**	**14 46 33.8**	**-1.3**
	34nm,1.6s,mb4.6						
ASAR	**Alice Springs**	**29.73**	**165**	P	**P**	**14 47 00.8**	**+0.5**
	5.1nm,0.6s,mb4.4,baz=345,slow=7.5,SNR=91						
KSRS	**Korea Array**	**32.16**	**3**	P	**P**	**14 47 21.5**	**-0.1**
	2.2nm,1.1s,mb3.8,baz=191,slow=8.8,SNR=4.1						
FORT	**Forrest**	**35.83**	**177**	*e*P	**P**	**14 47 54.2**	**+0.8**
	12nm,0.7s,mb4.9						
KLBR	**Kellerberrin**	**37.39**	**191**	*e*P	**P**	**14 48 06.9**	**+0.2**
	75nm,1.9s,mb5.3						
NWAO	**Narrogin (SRO)**	**38.79**	**192**	P	**P**	**14 48 18.6**	**+0.3**
	4.2nm,0.3s,mb4.7,baz=18,slow=9.6,SNR=9.9						
STKA	**Stephens Creek**	**39.78**	**159**	*e*P	**P**	**14 48 27.8**	**+1.2**
	3.9nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**39.78**	**159**	P	**P**	**14 48 27.2**	**+0.6**
	4.5nm,0.7s,mb4.4,baz=328,slow=8.1,SNR=14						
STKA	**Stephens Creek**	**39.78**	**159**	*e*P	**P**	**14 48 26.9**	**+0.3**
	0.9nm,0.8s,mb3.6						
MKAR	**Makanchi Array**	**55.89**	**325**	P	**P**	**14 50 28.5**	**-2.2**
	0.4nm,0.3s,mb3.9,baz=123,slow=6.7,SNR=6.0						

*ISCJB **01** 14:45:42.2±0.7,3637N±009×9769E±008,h10km,Error ellipse: s-maj=13.8km s-min=8.1km az=26.1*
*IDC **01** 14:45:42.6±1.2,3629N×9784E,h0km,mb3.5/3,mb1 3.6/8, mb1mx3.5/25,mbtmp3.5/8,ML3.7/5,MS3.1/1,Ms1 3.1/1, ms1mx2.7/32,Error ellipse: s-maj=36.6km s-min=20.1km az=55.0*
*BJI **01** 14:45:45.7,3632N×9771E,h13km,ML3.8,Ms3.5,Msz3.6*
*NEIC **01** 14:45:47.1±0.9,3636N×9764E,h35km,mb3.8/1,Error ellipse: s-maj=23.8km s-min=12.9km az=68.0*
ISC 01 14:45:43.8±0.7**,3634N**±009×**9768E**±007**,h10**km**,n12, σ1ˢ32**/16**,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.50**	**28**	P	**Pn**	**14 46 41.8**	**+3.6**
GTA				S	**Sn**	**14 47 25.9**	**+6.2**
GTA				Smax			
	comp=N,37nm,0.9s						
GTA				Smax			
	comp=E,27nm,1.1s						
LZH	**Lanzhou**	**4.99**	**91**	P	**Pn**	**14 47 02.5**	**+3.8**
LZH				PG	**Pg**	**14 47 17.7**	**-1.7**
LZH				S	**Sn**	**14 47 57.4**	**+1.0**
LZH				SG	**Sg**	**14 48 20.8**	**-3.2**
LZH				Smax			
	comp=N,166nm,0.6s						
LZH				Smax			
	comp=E,194nm,0.6s						
LZH				LR	LR		
	comp=N,275nm,5.1s						
LZH				LR	LR		
	comp=Z,439nm,6.7s						
SONM	**Songino Array**	**13.17**	**27**	Pn	**Pn**	**14 48 51.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=209,slow=15,SNR=38						
SONM				LR	LR	14 54 15.2	
	comp=Z,94nm,21.9s,baz=12,slow=39						
MK31	**Makanchi Array**	**15.52**	**317**	*e*Pn	**Pn**	**14 49 23.0**	**+0.4**
MKAR	**Makanchi Array**	**15.52**	**317**	Pn	**Pn**	**14 49 21.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=133,slow=14,SNR=4.1						
CMAR	**Chiang Mai Arr**	**17.85**	**176**	P	**Pn**	**14 49 53.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=340,slow=15,SNR=3.5						
ZALV	**Zalesovo Beam**	**19.75**	**337**	P	**Pn**	**14 50 14.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=152,slow=12,SNR=9.7						
KURK	**Kurchatov**	**19.85**	**322**	P	**Pn**	**14 50 15.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=127,slow=11,SNR=4.8						
KURK	**Kurchatov**	**19.85**	**322**	*e*P	**Pn**	**14 50 12.9**	**-3.4**
	comp=Z,7.4nm,1.5s						
KSRS	**Korea Array**	**24.16**	**78**	P	**P**	**14 50 59.5**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=270,slow=8.7,SNR=5.0						
BVAR	**Borovoye Array**	**25.36**	**320**	P	**P**	**14 51 12.5**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=111,slow=8.1,SNR=4.6						
ASAR	**Alice Springs**	**68.79**	**144**	P	**P**	**14 56 47.3**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=333,slow=7.6,SNR=6.4						

TRN 01 14:58:52.6,1497N×**6107W,h161**km**,MD3.7,M2.8**(FDF)**, 3C-2D,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.25**	**198**	⇓*e*P	Pn	14 59 14.8	+0.5
FDF				⇓*e*S	Sn	14 59 30.0	-0.9
MVM	**Montagne Vaucl**	**0.45**	**158**	⇑*i*P	Pn	14 59 15.4	+0.4
BIM	**Bigot**	**0.45**	**180**	*e*P	Pn	14 59 15.3	+0.4
SLW	**Petit Monier**	**0.95**	**172**	*e*P	Pn	14 59 17.9	-0.1
SLW	**Petit Monier**	**0.95**	**172**	*e*P	Pn	14 59 19.9	+1.8
SLW				*e*S	Sn	14 59 37.8	+0.3
SLPE	**Piton Saint Es**	**1.12**	**176**	*e*S	Sn	14 59 41.4	+1.3
SLB	**Belfond**	**1.14**	**179**	*e*P	Pn	14 59 20.9	+1.4
SLB				*e*S	Sn	14 59 41.5	+1.3
SCG	**Saint Claude**	**1.21**	**331**	⇑*i*P	Pn	14 59 21.8	+1.6
SCG				⇑*i*S	Sn	14 59 42.0	+0.7
LZG	**Guadaloupe-1**	**1.35**	**330**	*e*P	Pn	14 59 22.9	+1.5
SSV	**Crater Summit**	**1.64**	**184**	*e*P	Pn	14 59 26.0	+1.6
SSV				*e*S	Sn	14 59 49.6	+0.7
SVV	**Soufriere Volc**	**1.65**	**185**	*e*P	Pn	14 59 25.4	+0.9
SVV				*e*S	Sn	14 59 50.2	+1.1
FCV	**Fort Charlotte**	**1.81**	**185**	*e*P	Pn	14 59 26.6	+0.3
FCV				*e*S	Sn	14 59 52.1	-0.1

*BJI **01** 14:58:52.5,7360N×830E,h10km,mB5.1,mb4.6,Ms5.0, Msz4.7*
*IDC **01** 14:58:53.7±0.6,7359N×809E,h0km,mb3.9/16, mb1 4.1/21,mb1mx4.1/29,mbtmp4.0/21,ML3.9/5,MS4.1/24, Ms1 4.1/24,ms1mx3.9/35,Error ellipse: s-maj=13.4km s-min=10.5km az=71.0*
*ISCJB **01** 14:58:54.2±0.2,7373N±002×85E±0.1,h10km,mb4.5/70, MS4.2/31,Error ellipse: s-maj=5.1km s-min=3.4km az=166.3*
*MOS **01** 14:58:54.2±0.8,7373N×8.13E,h10km,mb4.7/32,Error ellipse: s-maj=25.5km s-min=4.8km az=93.7*
*NAO **01** 14:58:54.5±1.8,7359N×884E,ML3.1*
*HEL **01** 14:58:54.7±0.5,7372N×831E,h10km,mb4.8(NEIC), MD2.8(BER),ML2.9(BER)*
*NEIC **01** 14:58:55.6±0.3,7365N×833E,h10km,mb4.8/31,Error ellipse: s-maj=6.8km s-min=4.2km az=68.0*
*GCMT **01** 14:58:55.6±0.2,7363N×796E,h12km,MW4.9/75, Moment Tensor Solution. s20,c23; s75,c115; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.03±.07; Mθθ0.26±.07; Mφφ1.78±.06; Mrθ-0.02±.29; Mθφ0.69±.06; Mφr-1.21±.24; Best double couple: M₀2.37100×10¹⁶ NP1:φs211.00000°,δ31.00000°,λ-73.00000°. NP2: φs11.00000°,δ60.00000°,λ-100.00000°. Principal axes: T 2.3500, Plg15.0000°, Azm109.0000°; N 0.0530, Plg9.0000°, Azm16.0000°; P -2.3930, Plg73.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BER **01** 14:58:56.4±2.8,7364N×857E,h10km,MD2.8,ML2.9, ML3.1(NAO)*
*CSEM **01** 14:58:56.9±0.1,7369N×823E,h32km,mb4.8/29,Error ellipse: s-maj=2.6km s-min=1.9km az=57.0*
*SZGRF **01** 14:59:05.8,7294N×8.15E,h33km,mb4.8,Norwegian Sea*
ISC 01 14:58:55.8±0.2**,7366N**±002×**83E**±01**,h10**km**, (h19**km±4.5km**:pP-P),n245,**σ**1ˢ29**/242**,mb4.5**/70**,MS4.2**/31**, 13C-4D,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**3.83**	**25**	*e*P	**Pn**	**14 59 52.5**	**-2.2**
SPB4	**Spitsbergen Ar**	**4.94**	**19**	*e*Pn	**Pn**	**15 00 08.9**	**-1.0**
SPB4	**Spitsbergen Ar**	**4.94**	**19**	*e*Pn	**Pn**	**15 00 08.8**	**-1.1**
SPA0	**Spitsbergen Ar**	**4.94**	**20**	Pn	**Pn**	**15 00 08.8**	**-1.1**
	baz=200,slow=14						
SPA0	**Spitsbergen Ar**	**4.94**	**20**	*e*P	**Pn**	**15 00 08.8**	**-1.1**
SPITS	**Spitsbergen Ar**	**4.94**	**20**	Pn	**Pn**	**15 00 09.1**	**-0.9**
	baz=247,slow=12,SNR=57						
SPITS				Sn	**Sn**	**15 01 04.2**	**-2.9**
	baz=262,slow=12,SNR=1.8						
SPITS				LR	LR	15 01 56.2	
	comp=Z,1µm,19.5s,baz=160,slow=36						
TRO	**Tromso**	**5.24**	**135**	*e*P	**Pn**	**15 00 12.0**	**-2.0**
TRO				AML	AML	15 01 11.7	
	comp=Z,31nm,0.6s						
KBS	**Kingsbay**	**5.37**	**7**	*e*	**Pn**	**15 00 13.7**	**-2.0**
KBS				*e*P		15 00 13.9	
KBS	**Kingsbay**	**5.37**	**7**	*e*Pn	**Pn**	**15 00 14.2**	**-1.5**
KBS	**Kingsbay**	**5.37**	**7**	*e*Pn	**Pn**	**15 00 14.2**	**-1.6**
JMIC	**Jan Mayen**	**5.78**	**251**	LR	LR	15 01 44.3	
	comp=Z,478nm,20.2s,baz=226,slow=30						
LOF	**Lofoten**	**5.81**	**160**	*e*P	**Pn**	**15 00 20.8**	**-1.1**
LOF				*e*S	**Sn**	**15 01 18.1**	**-10**
LOF				AML	AML	15 01 23.6	
	comp=Z,34nm,0.4s						
LOF	**Lofoten**	**5.81**	**160**	*e*P	**Pn**	**15 00 20.8**	**-1.1**
LOF				*e*S	**Sn**	**15 01 18.1**	**-10**
KIF	**Kilpisjarvi**	**6.14**	**133**	*e*P	**Pn**	**15 00 25.1**	**-1.2**
STEI	**Steigen**	**6.18**	**155**	*e*P	**Pn**	**15 00 25.6**	**-1.3**
KTK1	**Kautokeino**	**6.66**	**127**	*e*P	**Pn**	**15 00 33.8**	**+0.3**
ARA0	**ARCESS Array S**	**6.81**	**119**	Pn	**Pn**	**15 00 33.5**	**-2.0**
	baz=318,slow=12						
ARA0				Sn	**Sn**	**15 01 46.1**	**-6.8**
	baz=314,slow=22						
ARA0	**ARCESS Array S**	**6.81**	**119**	*e*P	**Pn**	**15 00 33.5**	**-2.0**
ARA0				*e*S	**Sn**	**15 01 46.1**	**-6.8**
ARA0	**ARCESS Array S**	**6.81**	**119**	Pn	**Pn**	**15 00 33.5**	**-2.0**
	SNR=50						
ARA0				Sn	**Sn**	**15 01 46.1**	**-6.8**
	SNR=50						
ARCES	**ARCESS Array B**	**6.81**	**119**	Pn	**Pn**	**15 00 33.9**	**-1.7**
	comp=Z,4.5nm,0.3s,baz=308,slow=8.6,SNR=60						
ARCES				Sn	**Sn**	**15 01 46.8**	**-6.2**
	comp=Z,2.9nm,0.3s,baz=307,slow=18,SNR=6.5						
ARCES				LR	LR	15 03 30.8	
	comp=Z,1µm,21.4s,baz=339,slow=40						
ARCES	**ARCESS Array B**	**6.81**	**119**	Pn	**Pn**	**15 00 33.8**	**-1.7**
ARCES				Sn	**Sn**	**15 01 46.8**	**-6.1**
ARE0	**ARCESS Array S**	**6.81**	**119**	*e*Pn	**Pn**	**15 00 34.5**	**-1.0**
ARE0	**ARCESS Array S**	**6.81**	**119**	*e*Pn	**Pn**	**15 00 34.5**	**-1.0**
KEV	**Kevo**	**7.04**	**115**	*e*P	**Pn**	**15 00 37.3**	**-1.3**
KEV	**Kevo**	**7.04**	**115**	*e*Pn	**Pn**	**15 00 37.1**	**-1.5**
KEV	**Kevo**	**7.04**	**115**	*e*Pn	**Pn**	**15 00 37.1**	**-1.5**
HEF	**Hetta**	**7.24**	**129**	*e*P	**Pn**	**15 00 40.9**	**-0.5**
KONS	**Konsvik**	**7.37**	**165**	*e*P	**Pn**	**15 00 41.3**	**-2.0**
DAG	**Danmarks Havn**	**7.52**	**307**	*i* P	**Pn**	**15 00 43.0**	**-2.2**
DAG	**Danmarks Havn**	**7.52**	**307**	*e*P	**Pn**	**15 00 43.0**	**-2.2**
STOK	**Stokkvaagen**	**7.53**	**165**	*e*P	**Pn**	**15 00 43.6**	**-1.8**
STOK				AML	AML	15 02 03.2	
	comp=Z,11nm,0.7s						
FLOS	**Flostrand**	**7.55**	**164**	*e*P	**Pn**	**15 00 44.2**	**-1.5**
MOR8	**Moi Rana**	**7.80**	**161**	*e*P	**Pn**	**15 00 47.0**	**-2.2**
MOR8	**Moi Rana**	**7.80**	**161**	*i* P	**Pn**	**15 00 47.0**	**-2.2**
NSS	**Namsos**	**9.26**	**170**	*e*P	**Pn**	**15 01 07.8**	**-1.3**
APA0	**Apatity Array**	**10.11**	**114**	Pn	**Pn**	**15 01 18.1**	**-2.6**
	baz=313,slow=11						
APA0	**Apatity Array**	**10.11**	**114**	*e*P	**Pn**	**15 01 18.1**	**-2.6**
APA	**Apatity**	**10.24**	**114**	⇓*i*P	**Pn**	**15 01 21.5**	**-1.0**
APA				pmax	pmax		
	comp=Z,76nm,1.4s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
NB2	**NORSAR Subarra**	**12.72**	**174**	Pn	**Pn**	**15 01 54.0**	**-2.4**
	baz=357,slow=14						
NB2	**NORSAR Subarra**	**12.72**	**174**	*e*P	**Pn**	**15 01 54.0**	**-2.4**
NB2	**NORSAR Subarra**	**12.72**	**174**	Pn	**Pn**	**15 01 54.0**	**-2.4**
	SNR=50						
NOA	**NORSAR Array B**	**12.72**	**174**	Pn	**Pn**	**15 01 54.5**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=347,slow=14,SNR=6.9						
NOA				LR	LR	15 06 29.0	
	comp=Z,358nm,21.9s,baz=340,slow=36						
NOA	**NORSAR Array B**	**12.72**	**174**	Pn	**Pn**	**15 01 54.5**	**-1.9**
NAO01	**NORSAR Array S**	**12.91**	**174**	*e*Pn	**Pn**	**15 01 57.0**	**-2.0**
KAF	**Kangasniemi**	**13.32**	**141**	*e*p	**Pn**	**15 02 03.0**	**-1.6**
	comp=Z,2.1nm,0.4s						
KAF	**Kangasniemi**	**13.32**	**141**	*e*P	**Pn**	**15 02 03.0**	**-1.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**13.58**	**130**	*e*p	**Pn**	**15 02 04.4**	**-3.7**
	comp=Z,2.3nm,0.4s						
JOF	**Joensuu**	**13.58**	**130**	*e*P	**Pn**	**15 02 04.4**	**-3.7**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**13.74**	**169**	Pn	**Pn**	**15 02 08.2**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=355,slow=12,SNR=7.6						
HFS				LR	LR	15 06 59.3	
	comp=Z,801nm,19.5s,baz=349,slow=36						
HFS	**Hagfors**	**13.74**	**169**	*e*P	**Pn**	**15 02 08.6**	**-1.7**
HFS	**Hagfors**	**13.74**	**169**	Pn	**Pn**	**15 02 08.6**	**-1.7**
	baz=357,slow=14						
FIA0	**FINESS Array S**	**13.91**	**142**	Pn	**Pn**	**15 02 10.1**	**-2.5**
	baz=340,slow=11						
FIA0	**FINESS Array S**	**13.91**	**142**	*e*P	**Pn**	**15 02 10.1**	**-2.5**
VSU	**Vasula**	**16.84**	**145**	⇓*i*P	**Pn**	**15 02 52.0**	**+0.8**
VSU				pmax	pmax		
	comp=Z,42nm,1.3s						
KLMR	**Klimovskoe**	**17.28**	**121**	⇑*i*P	**Pn**	**15 02 58.0**	**+1.3**
KLMR				*i* S	**Sn**	**15 06 10.1**	**+1.5**
KLMR				pmax	pmax		
	comp=Z,98nm,1.3s						
EKA	**Eskdalemuir Ar**	**18.98**	**200**	P	**Pn**	**15 03 14.4**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=5.6,slow=10,SNR=6.5						
SFJD	**Kangerlussuaq**	**20.07**	**281**	LR	LR	15 10 21.9	
	comp=Z,1µm,19.1s,MS4.2,baz=34,slow=34						
MOS	**Moscow**	**21.47**	**131**	*e*P	**P**	**15 03 46.2**	**+2.3**
MOS				*e*		15 04 16.7	
OBN	**Obninsk**	**21.83**	**133**	⇓*i*P	**P**	**15 03 47.4**	**-0.4**
OBN				pmax	pmax		
	comp=Z,39nm,1.2s,mb4.7						
OBN				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.1						
OBN	**Obninsk**	**21.83**	**133**	P	**P**	**15 03 47.0**	**-0.8**
	comp=Z,73nm,1.3s,mb5.0						
OBN	**Obninsk**	**21.83**	**133**	P	**P**	**15 03 47.0**	**-0.8**
	comp=Z,73nm,1.3s,mb5.0						
CLZ	**Clausthal**	**21.92**	**177**	*e*P	**P**	**15 03 49.4**	**+0.7**
CLZ				pmax	pmax		
	comp=Z,82nm,1.9s,mb4.8						
CLZ	**Clausthal**	**21.92**	**177**	*e*P	**P**	**15 03 49.4**	**+0.7**
	comp=Z,82nm,1.9s,mb4.8						
CLL	**Collm**	**22.52**	**172**	*e*P	**P**	**15 03 59.1**	**+3.9**
	comp=Z,45nm,1.8s,mb4.6						
CLL	**Collm**	**22.52**	**172**	*e*P	**P**	**15 04 00.0**	**+4.8**
CLL				*i* (pP)		15 04 03.8	
	comp=Z,50nm,1.6s						
CLL				*e*x	x	15 04 30.0	
SOKR	**Solikamsk**	**22.91**	**102**	*c i*P	**P**	**15 04 02.2**	**+2.9**
SOKR				pmax	pmax		
	comp=Z,50nm,1.1s,mb4.9						
BRG	**Berggiesshubel**	**23.00**	**171**	*e*P	**P**	**15 04 00.5**	**+0.3**
BRG				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.1						
BRG	**Berggiesshubel**	**23.00**	**171**	*e*P	**P**	**15 04 00.5**	**+0.3**
	comp=Z,13nm,1.7s,mb4.1						
MOX	**Moxa**	**23.14**	**175**	*e*P	**P**	**15 04 01.7**	**0.0**
	comp=Z,17nm,1.4s,mb4.3						
MOX	**Moxa**	**23.14**	**175**	*e*P	**P**	**15 04 01.7**	**0.0**
MOX				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.3						
MOX	**Moxa**	**23.14**	**175**	*e*P	**P**	**15 04 00.6**	**-1.1**
	comp=Z,57nm,2.2s,mb4.6						
MEM	**Membach**	**23.15**	**184**	P	**P**	**15 04 02.4**	**+0.5**
PVCC	**Panska Ves**	**23.37**	**170**	*e*P	**P**	**15 04 04.7**	**+0.6**
TANN	**Tannenbergstha**	**23.39**	**173**	*e*P	**P**	**15 04 05.9**	**+1.5**
	comp=Z,51nm,2.0s,mb4.6						
NKC	**Novy Kostel**	**23.58**	**173**	*e*P	**P**	**15 04 05.6**	**-0.7**
DPC	**Dobruska-Polom**	**23.64**	**167**	*e*P	**P**	**15 04 13.6**	**+6.7**
MANZ	**Manzenberg**	**23.81**	**174**	*e*P	**P**	**15 04 07.5**	**-0.9**
	comp=Z,78nm,2.4s,mb4.7						
PRU	**Pruhonice**	**23.91**	**170**	*e*P	**P**	**15 04 10.2**	**+0.9**
OJC	**Ojcow**	**24.04**	**162**	*e*P	**P**	**15 04 10.7**	**+0.2**
GRA1	**Grafenberg Arr**	**24.08**	**175**	*e*P	**P**	**15 04 11.1**	**+0.2**
	comp=Z,100nm,2.0s,mb4.9						
GRF	**Grafenberg Arr**	**24.08**	**175**	*e*P	**P**	**15 04 11.1**	**+0.2**
GRF				pmax	pmax		
	comp=Z,100nm,2.0s,mb4.9						
GRF	**Grafenberg Arr**	**24.08**	**175**	*e*P	**P**	**15 04 11.1**	**+0.2**
GRF				pmax	pmax		
	comp=Z,100nm,2.0s,mb4.9						
GRF	**Grafenberg Arr**	**24.08**	**175**	*e*P	**P**	**15 04 11.1**	**+0.2**
	comp=Z,100nm,2.0s,mb4.9						
WLF	**Walferdange**	**24.10**	**183**	P	**P**	**15 04 11.0**	**0.0**
	comp=Z,32nm,2.4s,mb4.3						
OKC	**Ostrava-Krasne**	**24.28**	**164**	*e*P	**P**	**15 04 14.0**	**+1.3**
WET	**Wettzell**	**24.68**	**173**	*e*P	**P**	**15 04 17.5**	**+1.2**
WET				pmax	pmax		
	comp=Z,63nm,2.0s,mb4.8						
WET	**Wettzell**	**24.68**	**173**	*e*P	**P**	**15 04 17.5**	**+1.2**
	comp=Z,63nm,2.0s,mb4.8						
VRAC	**Vranov**	**24.70**	**167**	P	**P**	**15 04 16.6**	**+0.1**
	comp=Z,4.0nm,0.6s,mb4.2,baz=337,slow=8.1,SNR=4.9						
VRAC	**Vranov**	**24.70**	**167**	P	**P**	**15 04 16.6**	**+0.1**
VRAC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**24.72**	**147**	P	**P**	**15 04 15.4**	**-1.2**
	comp=Z,2.0nm,0.6s,mb3.8,baz=340,slow=8.8,SNR=7.3						
AKASG				LR	LR	15 13 40.8	
	comp=Z,1µm,19.4s,MS4.4,baz=330,slow=36						
AKASG	**Malin Array Be**	**24.72**	**147**	*i* P	**P**	**15 04 17.2**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	**Malin Array Si**	**24.72**	**147**	*e*P	**P**	**15 04 17.0**	**+0.3**
AKBB	**Malin Array Si**	**24.72**	**147**	*e*P	**P**	**15 04 17.0**	**+0.3**
KHC	**Kasperske Hory**	**24.72**	**172**	⇑*i*P	**P**	**15 04 16.5**	**-0.2**
KHC	**Kasperske Hory**	**24.72**	**172**	*e*P	**P**	**15 04 18.7**	**+2.0**
KIEV	**Kiev**	**24.72**	**147**	*e*P	**P**	**15 04 16.6**	**-0.1**
KIEV				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.5						
KIEV	**Kiev**	**24.72**	**147**	*e*P	**P**	**15 04 16.6**	**-0.1**
	comp=Z,22nm,1.3s,mb4.5						
RES	**Resolute Bay**	**24.86**	**322**	P	**P**	**15 04 13.4**	**-4.4**
LVV	**L'vov**	**24.87**	**155**	*e*P	**P**	**15 04 24.2**	**+6.1**
KWP	**Kalwaria**	**24.91**	**157**	*e*P	**P**	**15 04 19.3**	**+0.9**
KWP				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.8						
KWP	**Kalwaria**	**24.91**	**157**	*e*P	**P**	**15 04 19.3**	**+0.9**
	comp=Z,29nm,1.0s,mb4.8						
KWP	**Kalwaria**	**24.91**	**157**	*e*P	**P**	**15 04 19.3**	**+0.9**
	comp=Z,29nm,1.0s,mb4.8						
STHS	**Stebnicka Huta**	**24.97**	**160**	*e*P	**P**	**15 04 19.5**	**+0.5**
STHS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
STHS	**Stebnicka Huta**	**24.97**	**160**	*e*P	**P**	**15 04 19.5**	**+0.5**
	comp=Z,8.3nm,1.0s,mb4.2						
STHS	**Stebnicka Huta**	**24.97**	**160**	*e*P	**P**	**15 04 19.5**	**+0.5**
	comp=Z,8.3nm,1.0s,mb4.2						
GEC2	**GERESS Array S**	**25.01**	**172**	*e*P	**P**	**15 04 20.3**	**+1.0**
GEC2				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.4						
GEC2	**GERESS Array S**	**25.01**	**172**	*e*P	**P**	**15 04 20.3**	**+1.0**
	comp=Z,17nm,1.4s,mb4.4						
GERES	**GERESS Array B**	**25.01**	**172**	P	**P**	**15 04 19.3**	**0.0**
	comp=Z,3.0nm,1.0s,mb3.8,baz=356,slow=8.6,SNR=11						
GERES	**GERESS Array B**	**25.01**	**172**	P	**P**	**15 04 19.3**	**0.0**
GERES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BFO	**Black Forest**	**25.41**	**180**	*e*P	**P**	**15 04 23.5**	**+0.5**
BFO				pmax	pmax		
	comp=Z,83nm,2.1s,mb4.9						
BFO	**Black Forest**	**25.41**	**180**	*e*P	**P**	**15 04 23.5**	**+0.5**
	comp=Z,83nm,2.1s,mb4.9						
CRVS	**Cervenica-Dubn**	**25.50**	**160**	*e*P	**P**	**15 04 24.9**	**+1.1**
CRVS				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.4						
CRVS	**Cervenica-Dubn**	**25.50**	**160**	*e*P	**P**	**15 04 24.9**	**+1.1**
	comp=Z,19nm,1.4s,mb4.4						
CRVS	**Cervenica-Dubn**	**25.50**	**160**	*e*P	**P**	**15 04 24.8**	**+1.0**

SMOL Smolenice 25.55 166 *e*P **P 15 04 24.6 +0.4**
KOLS Kolonicke sedl 25.55 158 *e*P **P 15 04 24.6 +0.3**
KOLS pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
KOLS Kolonicke sedl 25.55 158 *e*P **P 15 04 24.6 +0.3**
comp=Z,9.7nm,1.1s,mb4.2
KOLS Kolonicke sedl 25.55 158 *e*P **P 15 04 24.6 +0.3**
comp=Z,9.7nm,1.1s,mb4.2
VOR Voronezh 25.55 132 P **P 15 04 26.0 +1.7**
VOR pmax pmax
comp=Z,120nm,2.0s,mb5.1
FUR Furstenfeldbru 25.61 175 *e*P **P 15 04 26.9 +2.1**
FUR pmax pmax
comp=Z,113nm,1.9s,mb5.1
FUR Furstenfeldbru 25.61 175 *e*P **P 15 04 26.9 +2.1**
comp=Z,113nm,1.9s,mb5.1
VYHS Vyhne 25.67 164 *e*P **P 15 04 25.6 +0.3**
VYHS pmax pmax
comp=Z,9.0nm,1.4s,mb4.1
VYHS Vyhne 25.67 164 *e*P **P 15 04 25.6 +0.3**
comp=Z,9.0nm,1.4s,mb4.1
VYHS Vyhne 25.67 164 *e*P **P 15 04 25.6 +0.3**
comp=Z,9.0nm,1.4s,mb4.1
ZST Bratislava 25.84 166 *e*P **P 15 04 29.3 +2.4**
ZST pmax pmax
comp=Z,134nm,2.6s,mb5.0
ZST Bratislava 25.84 166 *e*P **P 15 04 29.3 +2.4**
comp=Z,134nm,2.6s,mb5.0
ZST Bratislava 25.84 166 *e*P **P 15 04 29.3 +2.4**
comp=Z,134nm,2.6s,mb5.0
UZH Uzhgorod 25.85 158 *e*P **P 15 04 27.5 +0.5**
ARU Arti 26.09 104*c i*P **P 15 04 30.7 +1.6**
ARU *e* 15 05 07.1
ARU *e*S **S 15 09 05.0 +5.1**
ARU *e*SS 15 10 07.8
ARU pmax pmax
comp=Z,55nm,2.5s,mb4.6
ARU Arti 26.09 104 *e*P **P 15 04 30.2 +1.1**
comp=Z,102nm,1.7s,mb5.1
ARU Arti 26.09 104 *e*P **P 15 04 30.2 +1.2**
comp=Z,102nm,1.7s,mb5.1
SVE Sverdlovsk 26.32 101 *e*P **P 15 04 32.1 +0.9**
SVE pmax pmax
comp=Z,15nm,1.2s,mb4.4
PSZ Piszkesteto 26.33 162 *e*P **P 15 04 33.3 +2.0**
PSZ pmax pmax
comp=Z,27nm,1.5s,mb4.6
PSZ Piszkesteto 26.33 162 *e*P **P 15 04 33.3 +2.0**
comp=Z,27nm,1.5s,mb4.5
PSZ Piszkesteto 26.33 162 *e*P **P 15 04 33.3 +2.0**
comp=Z,27nm,1.5s,mb4.5
BUR08 Bucovina Ar. S 27.15 155 *e*P **P 15 04 40.2 +1.5**
BUR08 Bucovina Ar. S 27.15 155 *e*P **P 15 04 40.2 +1.5**
FRB Frobisher Bay 27.43 290 LR LR 15 15 32.1
comp=Z,267nm,18.5s,MS3.9,baz=40,slow=36
MLR Muntele Rosu 29.36 154 LR LR 15 16 05.8
comp=Z,398nm,21.0s,MS4.0,baz=87,slow=35
TIXI Tiksi 30.22 33⇑*e*P **P 15 05 06.7 +0.9**
TIXI pmax pmax
comp=Z,13nm,1.8s,mb4.4
TIXI MLR MLR
comp=Z,100nm,19.0s,MS3.5
TIXI Tiksi 30.22 33 P **P 15 05 06.7 +0.9**
TIXI Tiksi 30.22 33 P **P 15 05 06.7 +0.9**
AKTK Aktyubinsk 31.30 110 P **P 15 05 15.8 +0.3**
AKTK LR LR 15 18 25.6
AKTO Aktyubinsk 31.30 110 P **P 15 05 15.8 +0.3**
comp=Z,4.2nm,1.1s,mb4.2,baz=331,slow=7.3,SNR=3.8
AKTO LR LR 15 18 25.6
comp=Z,600nm,20.0s,MS4.3,baz=164,slow=37
AKTO Aktyubinsk 31.30 110 P **P 15 05 15.8 +0.3**
AKTO pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
AKTO MLR MLR
comp=Z,600nm,20.0s,MS4.3
BRVK Borovoye 32.32 95 *e*P **P 15 05 26.3 +1.8**
BRVK pmax pmax
comp=Z,15nm,1.3s,mb4.7
BRVK Borovoye 32.32 95 *e*P **P 15 05 26.2 +1.7**
comp=Z,15nm,1.3s,mb4.7
BRVK Borovoye 32.32 95 *e*P **P 15 05 26.2 +1.8**
comp=Z,15nm,1.3s,mb4.7
BVAR Borovoye Array 32.38 95 P **P 15 05 26.2 +1.2**
comp=Z,3.3nm,0.9s,mb4.2,baz=319,slow=7.9,SNR=15
BVAR Borovoye Array 32.38 95 P **P 15 05 26.2 +1.2**
BVAR pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 33.68 133 *e*P **P 15 05 38.2 +1.8**
KIV pmax pmax
comp=Z,15nm,1.5s,mb4.7
KIV MLR MLR
comp=Z,500nm,18.0s,MS4.3
KIV Kislovodsk 33.68 133 P **P 15 05 39.7 +3.3**
comp=Z,12nm,1.0s,mb4.8
KIV Kislovodsk 33.68 133 P **P 15 05 39.7 +3.3**
comp=Z,12nm,1.0s,mb4.8
NVS Novosibirsk 34.41 81 *e*P **P 15 05 43.7 +1.1**
NVS pmax pmax
comp=N,14nm,1.8s
NVS pmax pmax
comp=Z,22nm,1.8s,mb4.8
NVS pmax pmax
comp=E,6.0nm,1.5s
SCHQ Schefferville 34.49 279 LR LR 15 18 06.7
comp=E,572nm,21.5s,MS4.3,baz=63,slow=34
ZALV Zalesovo Beam 35.64 81 P **P 15 05 54.0 +0.8**
comp=E,1.1nm,0.7s,mb3.9,baz=330,slow=8.6,SNR=5.5
ZALV PcP PcP 15 08 20.4 -0.9
comp=E,0.3nm,0.3s,baz=324,slow=6.4,SNR=4.0
ZALV LR LR 15 22 54.4
comp=E,269nm,19.0s,MS4.0,baz=160,slow=40
ZALV Zalesovo Beam 35.64 81 P **P 15 05 54.1 +0.9**
ZALV 15 08 20.4
ZALV pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
ZALV MLR MLR
comp=Z,269nm,19.0s,MS4.0
MAK Makhachkala 35.67 127 *e*P **P 15 05 49.0 -4.6**
MAK MLR MLR
comp=Z,482nm,9.0s
BRTR Keskin Array B 36.11 146 P **P 15 05 57.7 +0.3**
comp=Z,1.1nm,0.9s,mb3.8,baz=17,slow=5.6,SNR=3.1
BRTR LR LR 15 21 50.0
comp=Z,232nm,18.8s,MS4.0,baz=319,slow=38
BRTR Keskin Array B 36.11 146 P **P 15 05 57.7 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR MLR MLR
comp=Z,232nm,18.8s
INK Inuvik 36.14 337 *e*P **P 15 05 56.7 -0.7**
comp=Z,165nm,1.0s
INK Inuvik 36.14 337 *e*P **P 15 05 56.7 -0.7**
comp=Z,165nm,1.0s
KURK Kurchatov 36.77 89 P **P 15 06 03.6 +0.7**
comp=Z,2.3nm,0.7s,mb4.1,baz=336,slow=7.1,SNR=11
KURK Kurchatov 36.77 89 *e*P **P 15 06 03.7 +0.8**
KURK pmax pmax
comp=Z,78nm,2.8s,mb5.0
KURK Kurchatov 36.77 89 *e*P **P 15 06 03.7 +0.8**
comp=Z,78nm,2.8s,mb5.0
KURK Kurchatov 36.77 89 *e*P **P 15 06 03.7 +0.8**
comp=Z,78nm,2.8s,mb5.0
BILL Bilibino 37.82 13 *e*P **P 15 06 12.7 +1.1**
BILL pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KEST Kesra 38.01 179 LR LR 15 21 14.8
comp=Z,85nm,18.6s,MS3.6,baz=294,slow=35
FCC Fort Churchill 38.11 304 P **P 15 06 13.8 -0.4**
FCC Fort Churchill 38.11 304 P **P 15 06 13.8 -0.4**
YKA Yellowknife Ar 38.93 322 P **P 15 06 20.4 -0.6**
comp=Z,1.4nm,0.8s,mb3.7,baz=20,slow=9.6,SNR=4.6
YKA PcP PcP 15 08 30.1 -1.1
comp=Z,1.6nm,1.0s,baz=12,slow=3.7,SNR=3.9
YKA LR LR 15 22 20.1
comp=Z,116nm,18.8s,MS3.7,baz=80,slow=36
YKA Yellowknife Ar 38.93 322⇑*e*P **P 15 06 21.1 +0.1**
YKA Yellowknife Ar 38.93 322 PcP PcP 15 08 30.1 -1.1
BOD Bodaibo 39.71 54 *e*P **P 15 06 25.5 -2.1**
BOD pmax pmax
comp=Z,8.0nm,2.0s,mb4.1
HVS Khovu-Aksy 40.61 75⇑*i*P **P 15 06 36.9 +1.8**
HVS pmax pmax
comp=Z,35nm,1.7s,mb4.7
COLA College 40.83 345⇑*i*P **P 15 06 36.9 +0.1**
DAWY Dawson 40.88 339 *e*P **P 15 06 37.5 +0.3**
DAWY Dawson 40.88 339 *e*P **P 15 06 37.5 +0.4**

MK31 Makanchi Array 41.35 88 *e*P **P 15 06 42.7 +1.4**
MK31 Makanchi Array 41.35 88 *e*P **P 15 06 42.7 +1.4**
MKAR Makanchi Array 41.35 88 P **P 15 06 41.8 +0.5**
comp=Z,1.9nm,1.0s,mb3.7,baz=338,slow=6.9,SNR=7.7
MKAR LR LR 15 27 55.2
comp=Z,402nm,18.6s,MS4.3,baz=332,slow=42
MKAR Makanchi Array 41.35 88 P **P 15 06 41.8 +0.5**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR MLR MLR
comp=Z,402nm,18.6s
MDT Midelt 41.44 197 LR LR 15 24 00.6
comp=Z,111nm,22.0s,MS3.7,baz=34,slow=36
SEY Seymchan 41.58 24⇓*i*P **P 15 06 43.0 0.0**
AAK Ala-Archa 42.97 98⇑*i*P **P 15 06 54.5 0.0**
AAK pmax pmax
comp=Z,8.0nm,2.5s,mb4.0
ZAK Zakamensk 43.85 67 *e*P **P 15 06 58.2 -3.3**
ZAK pmax pmax
comp=Z,3.0nm,1.8s,mb3.7
WMQ Urumqi 45.61 85 *e*P **P 15 07 16.8 +1.2**
WMQ AMB AMB
comp=Z,8.0nm,1.2s,mb4.5
WMQ LR LR
comp=N,227nm,26.0s,MS4.3
WMQ LR LR
comp=E,360nm,23.0s,MS4.3
WMQ LR LR
comp=Z,340nm,25.0s,MS4.2
ULM Lac du Bonnet 46.31 301 LR LR 15 26 08.7
comp=Z,452nm,18.2s,MS4.5,baz=36,slow=35
SONM Songino Array 47.00 66 P **P 15 07 27.3 +0.8**
comp=Z,0.5nm,0.7s,mb3.6,baz=349,slow=5.5,SNR=6.4
SONM LR LR 15 31 27.0
comp=Z,112nm,19.9s,MS3.8,baz=22,slow=42
ULN Ulaanbaatar 47.14 65 *e*P **P 15 07 29.5 +1.9**
ULN pmax pmax
comp=Z,41nm,2.2s,mb5.0
ULN Ulaanbaatar 47.14 65 *e*P **P 15 07 29.5 +1.9**
comp=Z,41nm,2.2s,mb5.0
ULN Ulaanbaatar 47.14 65 *e*P **P 15 07 29.5 +1.9**
comp=Z,41nm,2.2s,mb5.0
EYMN Ely 47.35 296 P **P 15 07 27.8 -1.4**
comp=Z,16nm,1.1s,mb4.9
EYMN Ely 47.35 296 P **P 15 07 27.8 -1.5**
comp=Z,16nm,1.1s,mb4.9
WALA Waterton Lakes 51.47 315 *e*P **P 15 08 00.2 -0.4**
comp=Z,5.3nm,1.1s,mb4.4
WALA Waterton Lakes 51.47 315 *e*P **P 15 08 00.2 -0.4**
comp=Z,5.4nm,1.1s,mb4.4
PETK Petropavlovsk- 51.81 23 LR LR 15 34 38.3
comp=Z,84nm,18.3s,MS3.8,baz=167,slow=41
PET Petropavlovsk 51.99 22⇑*i*P **P 15 08 03.4 -1.1**
PET pmax pmax
comp=Z,55nm,1.3s,mb5.3
GTA Gaotai 53.07 76 *e*P **P 15 08 16.3 +3.6**
GTA AP pP 15 08 21.0 +5.1
GTA XP sP 15 08 23.7 +6.6
GTA AMB AMB
comp=Z,3.0nm,1.6s,mb4.0
SCIA State Center 53.42 294 *e*pP pP 15 08 29.4 +11
MSO Missoula 53.60 314 *e*P **P 15 08 17.2 +0.8**
MSO *e*pP pP 15 08 26.9 +7.3
MSO Missoula 53.60 314 *e*P **P 15 08 17.2 +0.8**
MSO *e*pP pP 15 08 26.9 +7.3
HHC Hu-ho-hao-te 54.85 65 *e*P **P 15 08 26.0 +0.4**
HHC AP pP 15 08 30.7 +1.9
HHC PCP PcP 15 09 30.5 +2.8
HHC PP PP 15 10 29.7 +1.7
HHC S **S 15 16 03.5 -2.8**
HHC AMB AMB
comp=Z,13nm,0.5s,mb5.2
HHC AMB AMB
comp=Z,192nm,5.7s
HHC LR LR
comp=N,203nm,13.1s,MS4.7
HHC LR LR
comp=E,372nm,14.3s,MS4.7
HHC LR LR
comp=Z,220nm,20.2s
CN2 Changchun 55.38 52 *e*P **P 15 08 29.9 +0.5**
CN2 *e*XP sP 15 08 37.0 +3.1
CN2 *e*S **S 15 16 11.0 -2.4**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CN2 AMB AMB
comp=Z,400nm,7.0s
CN2 LR LR
comp=N,200nm,13.0s,MS4.5
CN2 LR LR
comp=E,200nm,13.0s,MS4.5
CN2 LR LR
comp=Z,300nm,14.0s,MS4.5
YSS Yuzh-Sakhalins 55.74 36⇑*i*P **P 15 08 31.0 -1.0**
YSS pmax pmax
comp=Z,37nm,1.3s,mb5.2
IMW Indian Meadow 55.77 310 *e*P **P 15 08 33.3 +1.1**
IMW Indian Meadow 55.77 310 *e*P **P 15 08 33.3 +1.1**
MOOW Moose Ponds 55.87 310 *e*P **P 15 08 33.3 +0.4**
MOOW Moose Ponds 55.87 310 *e*P **P 15 08 33.4 +0.4**
comp=Z,3.1nm,1.3s,mb4.2
MOOW *e* 15 08 43.4
MOOW *e*pP pP 15 08 43.9 +7.8
BMO Blue Mountains 56.17 316 *e*P **P 15 08 35.1 +0.1**
BMO Blue Mountains 56.17 316 *e*P **P 15 08 35.1 0.0**
BW06 Boulder Array 56.54 309 *e*P **P 15 08 38.4 +0.6**
BW06 Boulder Array 56.54 309 *e*P **P 15 08 38.4 +0.7**
PDAR Pinedale Array 56.54 309 P **P 15 08 37.5 -0.3**
comp=Z,1.6nm,1.1s,mb4.0,baz=66,slow=5.0,SNR=6.5
PDAR LR LR 15 32 31.8
comp=Z,239nm,19.4s,MS4.3,baz=45,slow=36
BJI Beijing 56.77 61 P **P 15 08 38.6 -0.8**
BJI S **S 15 16 31.3 -0.6**
BJI SS SS 15 20 20.0 +0.9
BJI AMB AMB
comp=Z,8.0nm,0.4s,mb5.1
BJI AMB AMB
comp=Z,167nm,4.3s
BJI LR LR
comp=N,208nm,17.1s,MS4.5
BJI LR LR
comp=E,290nm,16.1s,MS4.5
BJI LR LR
comp=Z,110nm,20.8s,MS3.9
HLID Hailey 56.82 313 *e*P **P 15 08 37.7 -2.0**
comp=Z,6.0nm,1.4s,mb4.4
LZH Lanzhou 57.29 73 *e*P **P 15 08 43.9 +0.8**
LZH AP pP 15 08 47.6 +1.3
LZH XP sP 15 08 49.7 +2.2
LZH AMB AMB
comp=Z,16nm,1.2s,mb4.9
LZH AMB AMB
comp=Z,60nm,4.5s
LZH LR LR
comp=N,510nm,13.9s
LZH LR LR
comp=Z,778nm,14.9s,MS4.9
XAN Xi'an 60.58 70 P **P 15 09 02.8 -3.2**
XAN S **S 15 17 19.0 -2.6**
XAN SS SS 15 21 20.3 +1.2
XAN AMB AMB
comp=Z,3.0nm,1.6s,mb4.2
XAN LR LR
comp=N,49nm,19.6s,MS4.1
XAN LR LR
comp=E,135nm,19.6s,MS4.1
XAN LR LR
comp=Z,242nm,19.1s,MS4.4
TOA0 Torodi Ar. Sit 60.61 187 *e*P **P 15 09 05.2 -1.2**
TOA0 Torodi Ar. Sit 60.61 187 *e*P **P 15 09 05.2 -1.1**
TORD Torodi Ar. Bea 60.61 187 P **P 15 09 05.7 -0.7**
comp=Z,5.6nm,1.0s,mb4.7,baz=355,slow=6.9,SNR=22
MVCO Mesa Verde 61.61 306 *e*P **P 15 09 14.6 +1.7**
comp=Z,28nm,1.3s,mb5.2
KSRS Korea Array 62.00 52 LR LR 15 39 25.3
comp=Z,122nm,20.9s,MS4.0,baz=130,slow=39
CD2 Chengdu 62.15 75 P **P 15 09 19.3 +2.7**
CD2 PCP PcP 15 09 59.6 +2.9
CD2 PP PP 15 11 38.0 +5.1
CD2 S **S 15 17 43.0 +1.5**
CD2 SKS 15 19 08.7
CD2 SS SS 15 21 47.0 +3.3
CD2 AMB AMB
comp=Z,30nm,0.7s,mb5.5
CD2 AMB AMB
comp=Z,130nm,5.8s
CD2 LR LR
comp=N,310nm,9.6s
CD2 LR LR
comp=Z,730nm,15.4s,MS5.0
NVAR Mina Array Bea 62.55 315 P **P 15 09 20.1 +0.8**
comp=Z,0.8nm,0.8s,mb3.9,baz=15,slow=6.0,SNR=6.0
ANMO Albuquerque 63.30 303⇑*e*P **P 15 09 25.1 +0.9**
NJ2 Nanjing 65.02 61 *e*P **P 15 09 39.2 +3.6**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
GYA Guiyang 67.15 74 P **P 15 09 49.3 -0.1**
GYA PCP PcP 15 10 17.6 +0.2
GYA PP PP 15 12 18.9 +2.0
GYA SCP 15 14 19.8
GYA S S 15 18 41.2 -2.2
GYA PS 15 19 05.6
GYA SKS 15 19 43.2
GYA SS SS 15 23 03.1 +1.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,5.3s
GYA LR LR
comp=N,480nm,19.5s,MS4.9
GYA LR LR
comp=E,460nm,18.2s,MS4.9
GYA LR LR
comp=Z,450nm,19.9s,MS4.7
KMI Kunming 67.34 78 P **P 15 09 52.9 +2.3**
KMI AP pP 15 09 57.0 +3.2
KMI XP sP 15 09 58.9 +3.9
KMI PP PP 15 12 22.4 +3.8
KMI PPP 15 13 58.9
KMI S S 15 18 46.3 +0.6
KMI XS sS 15 18 53.4 +2.4
KMI SSS 15 26 04.2
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb4.6
KMI AMB AMB
comp=Z,102nm,5.0s
KMI LR LR
comp=N,196nm,21.4s,MS4.4
KMI LR LR
comp=E,137nm,22.6s,MS4.4
KMI LR LR
comp=Z,199nm,20.2s,MS4.3
TXAR Lajitas Array 67.99 299 P **P 15 09 53.6 -1.0**
comp=Z,1.0nm,1.0s,mb3.8,baz=63,slow=5.8,SNR=5.4
TXAR LR LR 15 39 44.9
comp=Z,289nm,18.2s,MS4.5,baz=20,slow=36
TXAR Lajitas Array 67.99 299 P **P 15 09 53.6 -1.0**
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR MLR MLR
comp=Z,289nm,18.2s
CHTO Chiang Mai 72.27 84 P **P 15 10 21.1 +0.2**
CHTO pmax pmax
comp=Z,15nm,1.7s,mb4.7
CHTO Chiang Mai 72.27 84 P **P 15 10 21.0 +0.1**
comp=Z,14nm,1.7s,mb4.6
CHTO Chiang Mai 72.27 84 P **P 15 10 21.1 +0.1**
comp=Z,14nm,1.7s,mb4.6
CMAR Chiang Mai Arr 72.61 84 P **P 15 10 21.6 -1.4**
comp=Z,0.7nm,1.0s,mb3.6,baz=328,slow=6.0,SNR=4.4
CMAR LR LR 15 47 04.7
comp=Z,77nm,19.6s,MS4.0,baz=130,slow=40
CMAR Chiang Mai Arr 72.61 84⇑*e*P **P 15 10 24.1 +1.1**
CMAR Chiang Mai Arr 72.61 84 P **P 15 10 21.5 -1.5**
OTAV Otavalo 88.86 267 *e*P **P 15 11 51.2 +1.4**
comp=Z,25nm,1.4s,mb5.3
OTAV Otavalo 88.86 267 *e*P **P 15 11 51.2 +1.3**
comp=Z,25nm,1.4s,mb5.3
ASAR Alice Springs 122.26 62 PKP PKPdf 15 17 48.3 -1.8
comp=Z,0.3nm,0.9s,baz=20,slow=2.7,SNR=4.3
VNA2 Neumayer--Watz 144.70 189 *e* PKPdf 15 18 31.2 +0.8
VNA2 *e* 15 18 39.1
VNA3 Neumayer Olymp 145.12 190 *e* PKPbc 15 18 32.4 +1.6
SNAA Sanae 145.28 186 *e*PKHKP 15 18 26.8
MAW Mawson 145.38 147 PKPbc PKPbc 15 18 30.6 -1.1
comp=Z,7.2nm,1.0s,baz=330,slow=4.4,SNR=5.4
MAW Mawson 145.38 147 PKIKP PKPdf 15 18 30.6 -1.1
MAW pmax pmax
comp=Z,7.0nm,1.0s

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*ISCJB **01** 15:07:26.6±0.6, 7358N±004×85E±02, h10km, mb3.6/7, Error ellipse: s-maj=9.8km s-min=5.1km az=176.8*
*IDC **01** 15:07:28.9±1.1, 7344N×8.17E, h0km, mb3.7/7, mb1 3.9/12, mb1mx3.7/26, mbtmp3.8/12, ML3.5/5, MS3.5/1, Ms1 3.5/1, ms1mx2.8/31, Error ellipse: s-maj=18.5km s-min=11.9km az=98.0*
*NEIC **01** 15:07:28.8±0.6, 7358N×802E, h10km, Error ellipse: s-maj=11.3km s-min=7.2km az=88.0*
*BER **01** 15:07:28.5±2.5, 7348N×840E, h0km±52km, ML2.0(NAO)*
*NAO **01** 15:07:31.4±2.8, 7367N×990E, ML2.0*
ISC 01 15:07:28.8±0.5, 7357N±004×83E±02, h10km, n23, σ1§15/26, mb3.6/7, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SPB4	**Spitsbergen Ar**	**5.03**	**19**	*e*Pn	**Pn**	**15 08 43.6**	**-0.5**
SPA0	**Spitsbergen Ar** baz=201,slow=14	**5.03**	**19**	Pn	**Pn**	**15 08 43.8**	**-0.4**
SPITS	**Spitsbergen Ar** baz=263,slow=14,SNR=52	**5.03**	**19**	Pn	**Pn**	**15 08 43.9**	**-0.2**
SPITS				Sn	**Sn**	**15 09 43.3**	**+1.0**
	baz=143,slow=50,SNR=1.2						
KBS	**Kingsbay**	**5.45**	**8**	Pn	**Pn**	**15 08 48.8**	**-1.2**
KBS				Sn	**Sn**	**15 09 52.0**	**-0.7**
KBS	**Kingsbay**	**5.45**	**8**	*e*Pn	**Pn**	**15 08 49.1**	**-0.8**
ARA0	**ARCESS Array S** baz=318,slow=14	**6.79**	**118**	Pn	**Pn**	**15 09 07.6**	**-0.7**
ARA0				Sn	**Sn**	**15 10 18.2**	**-7.2**
	baz=308,slow=22						
ARCES	**ARCESS Array B** 1.2nm,0.3s,baz=328,slow=12,SNR=15	**6.79**	**118**	Pn	**Pn**	**15 09 07.9**	**-0.4**
ARCES				Sn	**Sn**	**15 10 23.4**	**-2.1**
	0.6nm,0.3s,baz=317,slow=22,SNR=3.1						
KEV	**Kevo** 14nm,0.9s	**7.02**	**114**	*e*Pn	**Pn**	**15 09 11.4**	**0.0**
NOA	**NORSAR Array B** 0.3nm,0.3s,baz=351,slow=13,SNR=3.7	**12.64**	**173**	Pn	**Pn**	**15 10 28.5**	**+0.1**
NAO01	**NORSAR Array S** 5.7nm,0.7s	**12.83**	**174**	*e*Pn	**Pn**	**15 10 31.6**	**+0.7**
SUMG	**Summit** 13nm,1.8s	**13.37**	**288**	Pn	**Pn**	**15 10 37.2**	**-1.0**
HFS	**Hagfors** 0.2nm,0.3s,baz=0.7,slow=12,SNR=3.6	**13.66**	**168**	Pn	**Pn**	**15 10 42.0**	**-0.2**
FIA0	**FINESS Array S** baz=337,slow=18	**13.85**	**142**	Pn	**Pn**	**15 10 44.1**	**-0.8**
EKA	**Eskdalemuir Ar** 0.1nm,0.3s,baz=244,slow=38,SNR=3.3	**18.89**	**200**	P	**Pn**	**15 11 47.8**	**-1.8**
VRAC	**Vranov** 1.7nm,0.4s,mb4.0,baz=356,slow=8.7,SNR=4.2	**24.62**	**167**	P	**P**	**15 12 50.4**	**+1.5**
AKASG	**Malin Array Be** 1.5nm,0.5s,mb3.8,baz=345,slow=9.8,SNR=6.1	**24.66**	**147**	P	**P**	**15 12 49.4**	**+0.2**
GERES	**GERESS Array B** 2.3nm,0.9s,mb3.7,baz=10,slow=8.3,SNR=12	**24.93**	**171**	P	**P**	**15 12 52.3**	**+0.7**
AKTO	**Aktyubinsk** comp=Z,96nm,21.8s,baz=111,slow=38	**31.29**	**110**	LR	LR	15 27 28.5	
BVAR	**Borovoye Array** baz=324,slow=8.0	**32.40**	**95**	P	**P**	**15 14 00.3**	**+2.2**
ZALV	**Zalesovo Beam** 0.4nm,0.6s,mb3.5,baz=343,slow=4.5,SNR=3.0	**35.67**	**80**	P	**P**	**15 14 29.4**	**+2.9**
MKAR	**Makanchi Array** 0.3nm,0.5s,mb3.2,baz=355,slow=6.5,SNR=5.7	**41.38**	**88**	P	**P**	**15 15 17.8**	**+3.2**
SONM	**Songino Array** 0.2nm,0.5s,mb3.3,baz=353,slow=11,SNR=2.7	**47.06**	**66**	P	**P**	**15 16 04.3**	**+4.4**
TORD	**Torodi Ar. Bea** 1.1nm,0.9s,mb4.0,baz=356,slow=6.5,SNR=5.3	**60.52**	**187**	P	**P**	**15 17 39.7**	**+0.9**

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*ISCJB **01** 15:11:03.2±0.9, 7355N±007×87E±03, h10km, mb3.5/2, Error ellipse: s-maj=14.6km s-min=8.8km az=162.3*
*NAO **01** 15:11:04.7±1.9, 7350N×846E, ML2.4*
*IDC **01** 15:11:04.6±1.4, 7348N×832E, h0km, mb3.7/1, mb1 3.7/5, mb1mx3.4/23, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=22.1km s-min=15.3km az=79.0*
*NEIC **01** 15:11:05.5±0.8, 7359N×837E, h10km, Error ellipse: s-maj=16.1km s-min=7.3km az=89.0*
*CSEM **01** 15:11:05.3±0.1, 7354N×802E, h2km, ML2.4, Error ellipse: s-maj=6.4km s-min=2.7km az=88.0*

BER ***01*** *15:11:06.8±3.5, 7352N×8.18E, h16km±111km, MD2.2, ML2.4(NAO)*
HEL ***01*** *15:11:07.2±0.4, 7371N×902E, h10km, ML2.4(NAO)*
ISC 01 15:11:06.0±0.9**, 7358N**±007×**88E**±03**, h10**km**, n24,** σ**1.19**/28**, mb3.5**/2**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	4.97	18	Pn	Pn	15 12 20.6	+0.1
	baz=204,slow=14						
SPA0	Spitsbergen Ar	4.97	18	eP	Pn	15 12 20.6	+0.1
SPA0	Spitsbergen Ar	4.97	18	Pn	Pn	15 12 20.6	0.0
SPITS	Spitsbergen Ar	4.97	18	Pn	Pn	15 12 20.6	0.0
	baz=217,slow=9.5,SNR=57						
KBS	Kingsbay	5.43	6	eP	Pn	15 12 25.9	-0.9
KBS	Kingsbay	5.43	6	Pn	Pn	15 12 25.5	-1.3
KBS	Kingsbay	5.43	6	eP	Pn	15 12 25.9	-0.9
	SNR=53						
KBS	Kingsbay	5.43	6	ePn	Pn	15 12 25.9	-0.9
	27nm,1.1s						
KIF	Kilpisjarvi	5.99	134	eP	Pn	15 12 35.5	+0.9
ARA0	ARCESS Array S	6.66	119	Pn	Pn	15 12 44.7	+1.0
	baz=328,slow=12						
ARA0				Sn	Sn	15 13 56.3	-3.2
	baz=309,slow=22						
ARA0	ARCESS Array S	6.66	119	eP	Pn	15 12 44.7	+1.0
ARA0				eS	Sn	15 13 56.3	-3.2
ARCES	ARCESS Array B	6.66	119	Pn	Pn	15 12 44.4	+0.7
	1.3nm,0.3s,baz=326,slow=11,SNR=22						
ARCES				Sn	Sn	15 13 58.1	-1.3
	0.3nm,0.3s,baz=308,slow=21,SNR=2.6						
ARCES	ARCESS Array B	6.66	119	Pn	Pn	15 12 44.4	+0.7
ARCES				Sn	Sn	15 13 58.1	-1.3
KEV	Kevo	6.88	115	eP	Pn	15 12 47.7	+0.9
KEV	Kevo	6.88	115	eP	Pn	15 12 48.2	+1.4
	5.2nm,0.6s						
KU6	Riekki	10.44	126	eP	Pn	15 13 35.9	+0.4
NB2	NORSAR Subarra	12.63	175	eP	Pn	15 14 04.4	-1.0
NOA	NORSAR Array B	12.63	175	Pn	Pn	15 14 04.9	-0.5
	0.2nm,0.3s,baz=352,slow=11,SNR=3.2						
HFS	Hagfors	13.64	170	Pn	Pn	15 14 18.4	-0.7
	0.2nm,0.3s,baz=340,slow=12,SNR=6.0						
HFS	Hagfors	13.64	170	eP	Pn	15 14 16.9	-2.2
HFS	Hagfors	13.64	170	Pn	Pn	15 14 16.9	-2.2
	baz=18,slow=12						
FIA0	FINESS Array S	13.77	143	eP	Pn	15 14 21.3	+0.4
GERES	GERESS Array B	24.92	172	P	P	15 16 31.3	+2.6
	0.9nm,0.9s,mb3.3,baz=16,slow=14,SNR=4.1						
TORD	Torodi Ar. Bea	60.55	188	P	P	15 21 15.5	-0.7
	0.9nm,1.1s,mb3.8,baz=357,slow=6.4,SNR=3.5						

NEIC ***01*** *15:52:52.4, 3123S×6932W, h150km, MD3.9(GUC), After GUC.*
GUC 01 15:52:52.4±0.5**, 3123S×6932W, h150**km±17km**, MD3.9, ML3.6, 1C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.66	309	eP	Pn	15 53 25.0	+1.3
TLL				i S	Sn	15 53 49.3	+1.6
TLL	Tololo Astrono	1.66	309	eP	Pn	15 53 25.0	+1.3
TLL				i S	Sn	15 53 49.3	+1.6
TLL				AML	AML	15 53 53.3	
	comp=N,497nm,0.5s						
PEL	Peldehue	2.23	211	eP	Pn	15 53 30.9	+0.8
PEL				i S	Sn	15 53 59.8	+0.5
PEL				AML	AML	15 54 03.8	
	comp=E,504nm,0.3s						
FCH	Farellones	2.24	201	eP	Pn	15 53 31.5	+1.1
FCH				i S	Sn	15 54 01.5	+1.8
FCH				AML	AML	15 54 08.1	
	comp=E,221nm,0.3s						
CLCH	Cerro Calan	2.39	205	eP	Pn	15 53 32.8	+0.7
CLCH				i S	Sn	15 54 03.7	+0.8
CLCH				AML	AML	15 54 15.0	
	comp=N,242nm,0.7s						
LCO	Las Campanas	2.52	331	i P	Pn	15 53 34.9	+1.1
LCO				i S	Sn	15 54 07.0	+1.3
LCO	Las Campanas	2.52	331	i P	Pn	15 53 34.9	+1.1
LCO				i S	Sn	15 54 07.0	+1.3
LCO				AML	AML	15 54 10.8	
	comp=E,273nm,0.3s						
PCH	Pirque	2.59	203	i P	Pn	15 53 35.4	+0.9
PCH				i S	Sn	15 54 08.0	+0.9
LMEL	Las Melosas	2.71	196	AML	AML	15 54 21.3	
	comp=N,166nm,0.1s						
CHCH	Chadas Angostu	2.92	202	⇑iP	Pn	15 53 39.3	+0.6
CHCH				i S	Sn	15 54 15.0	+0.5

IGQ 01 16:04:13.5, 051N×7988W, h12km±4km**, Mb4.2, Ms4.0, Error ellipse: s-maj=5.2km s-min=1.2km az=59.5, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	0.84	203	P	Pg	16 04 28.0	-1.7
JAMA	Jama	0.84	203	S	Sg	16 04 41.0	+0.4
PINO	Pino	1.43	118	P	Pn	16 04 40.7	+1.4
YANA	Yana	1.45	116	P	Pn	16 04 41.0	+1.4
YANA	Yana	1.45	116	S	Sn	16 05 06.9	+8.4
COTA	Cotacachi	1.55	97	P	Pn	16 04 42.7	+1.7
CHIS	Cerro-Chispas-	1.77	209	P	Pn	16 04 46.5	+2.5
CAMI	Rancho Maria	1.81	131	P	Pn	16 04 47.3	+2.8
VC1	Cotopaxi 1	1.87	128	P	Pn	16 04 48.3	+3.0
TAMB	Tambo	1.93	128	P	Pn	16 04 49.2	+3.0
CAYA	Cayambe	1.94	103	P	Pn	16 04 49.6	+3.4
ANTI	Antisana	1.96	119	P	Pn	16 04 50.1	+3.5
ANTI	Antisana	1.96	119	S	Sn	16 05 22.8	+12
CONE	Cono NE Rev Vo	2.31	105	P	Pn	16 04 55.1	+3.8
LAV3	Lava3-Reventad	2.33	105	P	Pn	16 04 56.4	+4.8

CSEM ***01*** *16:09:01.3±0.3, 4029N×2783E, h4km±2km, MD2.4, Error ellipse: s-maj=4.1km s-min=3.0km az=49.0*
ISK ***01*** *16:09:01.3, 4028N×2782E, h4km, MD2.4*
ISCJB ***01*** *16:09:02.1±1.2, 4041N±008×279E±0.1, h6km±5km, Error ellipse: s-maj=18.5km s-min=9.1km az=138.4*
DDA ***01*** *16:09:02.5, 4033N×2783E, h7km±2km, Md3.0*
ISC 01 16:09:02.6±1.1**, 4039N**±008×**279E**±01**, h4**km±5km**, n6,** σ**0.44**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDC	Edincik	0.04	168	PG	Pg	16 09 03.3	-0.4
EDC				eSG	Sg	16 09 04.6	+0.1
BNT	Bandirma	0.06	124	PG	Pg	16 09 03.9	-0.1
BNT				eSG	Sg	16 09 05.7	+0.8
KCT	Karacabey	0.41	108	ePG	Pg	16 09 10.0	-0.4
RKY	Sarkoy-Tekirda	0.59	300	ePG	Pg	16 09 14.3	+0.3
DURS	Dursunbey	0.92	149	i P	Pg	16 09 19.4	-0.9
DURS				i S	Sg	16 09 32.3	+0.1
DEMI	Demirci	1.50	153	i P	Pn	16 09 30.5	+0.2
DEMI				i S	Sn	16 09 50.6	+0.3

NOU ***01*** *16:08:38.6±0.3, 1743S×16907W, h30km*
SZGRF ***01*** *16:09:48.0, 2234S×17570W, h33km, Tonga Islands region*
BJI ***01*** *16:09:52.4, 21.19S×17521W, h75km, mB5.3, mb5.0, Ms5.2, Msz5.0*
ISCJB ***01*** *16:09:60.0±1.2, 2163S±004×17629W±004, h121km±11km, mb4.9/66, Error ellipse: s-maj=8.0km s-min=5.3km az=145.7*
NEIC ***01*** *16:10:02.6±1.1, 2165S×17624W, h136km±9km, mb4.9/44, Error ellipse: s-maj=7.2km s-min=4.9km az=147.0*
NEIC Felt at Nuku'alofa, Tonga.
GCMT ***01*** *16:10:02.7±0.2, 2169S×17584W, h169km±1km, MW5.3/97, Moment Tensor Solution. s69,c109; s97,c181; Duration: 1.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.56±.02; $M_{\theta\theta}$0.25±.02; $M_{\phi\phi}$-0.80±.02; $M_{r\theta}$-0.51±.01; $M_{\theta\phi}$-0.16±.02; $M_{\phi r}$-0.39±.01; Best double couple: $M_0$0.96900×10^{17} NP1:ϕ_s339.00000°,δ37.00000°, λ37.00000°. NP2:ϕ_s217.00000°,δ69.00000°,λ121.00000°. Principal axes: T 0.9610, Plg55.0000°, Azm167.0000°; N 0.0170, Plg28.0000°, Azm25.0000°; P -0.9780, Plg18.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BGS ***01*** *16:10:02.6±5.1, 2165S×17624W, h136km, mb4.9(NEIC)*
MOS ***01*** *16:10:02.0±2.2, 2153S×17627W, h130km, mb4.8/24, Error ellipse: s-maj=10.0km s-min=8.3km az=145.8*
IDC ***01*** *16:10:05.1±1.4, 2164S×17635W, h154km±12km, mb4.6/20, mb1 4.8/22, mb1mx4.7/23, mbtmp4.7/22, MS3.9/10, Ms1 3.9/10, ms1mx3.7/27, Error ellipse: s-maj=12.3km s-min=9.0km az=115.0*
DJA ***01*** *16:10:16, 2187S×17668W, h226km, mb5.0/9*
ISC 01 16:10:02.0±1.1**, 2165S**±005×**17625W**±004**, h126**km±10km**, h73**km±2.4km**: pP-P, n560,** σ**0.69**/375**, mb4.9**/66**, 136C-120D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	7.72	191	P	Pn	16 11 51.5	-0.2
	27nm,0.3s,baz=98,slow=20,SNR=3.9						
RAO				S	Sn	16 13 17.5	0.0
	355nm,0.3s,baz=265,slow=24,SNR=16						
AFI	Afiamalu	8.80	30	P	Pn	16 12 01.9	-4.5
	82nm,0.3s,baz=31,slow=23,SNR=52						
AFI				S	Sn	16 13 27.4	-16
	72nm,0.3s,baz=35,slow=22,SNR=6.3						
AFI	Afiamalu	8.80	30	eP	Pn	16 11 58.7	-7.7
AFI				pmax	pmax		
	comp=Z,274nm,0.5s						
AFI	Afiamalu	8.80	30	ePn	Pn	16 11 58.7	-7.6
	comp=Z,274nm,0.5s						
AFI				eSn	Sn	16 13 29.7	-14
FUNA	Funafuti	13.77	341	ePn	Pn	16 13 13.2	+1.2
	comp=Z,126nm,0.9s						
RAR	Rarotonga	15.35	91	P	Pn	16 13 33.0	+1.0
	comp=Z,9.9nm,0.3s,baz=256,slow=9.4,SNR=11						
RAR				S	S	16 16 10.6	-19
	comp=Z,3.5nm,0.3s,baz=76,slow=20,SNR=4.6						
RAR	Rarotonga	15.35	91	eP	Pn	16 13 30.3	-1.7
RAR				pmax	pmax		
	comp=Z,133nm,1.0s						
RAR	Rarotonga	15.35	91	ePn	Pn	16 13 30.3	-1.7
	comp=Z,133nm,1.0s						
LASL	Noumea	15.98	265	eP	Pn	16 13 45.5	+5.8
DZM	Mont Dzumac	16.07	265	eP	Pn	16 13 46.3	+5.4
DZM	Mont Dzumac	16.07	265	ePn	Pn	16 13 46.4	+5.5
NOUC	Port Laguerre	16.20	265	eP	Pn	16 13 48.4	+5.9
URZ	Urewera	17.52	198	P	Pn	16 13 57.2	-1.1
	comp=Z,13nm,0.3s,baz=14,slow=4.0,SNR=118						
URZ				S	S	16 16 60.0	-13
	comp=Z,6.0nm,0.3s,baz=108,slow=23,SNR=8.6						
URZ				LR	LR	16 19 05.5	
	comp=Z,169nm,20.9s,baz=140,slow=31						
SNZO	South Karori	21.04	199	eP	P	16 14 34.0	-1.7
	comp=Z,66nm,0.8s,mb5.0						
RPZ	Rata Peaks	24.40	203	P	P	16 15 08.3	-0.3
	comp=Z,76nm,0.6s,mb5.2,baz=346,slow=1.3,SNR=28						
RPZ				S	S	16 19 16.3	-2.8
	comp=Z,5.6nm,0.6s,baz=279,slow=8.7,SNR=2.4						
TARA	Tarawa	25.19	334	eP	P	16 15 14.5	-1.5
	comp=Z,168nm,1.1s,mb5.4						
PAE	Paea	25.42	86	eP	P	16 15 17.4	-0.6
	comp=Z,146nm,1.1s,mb5.3						
PAE				epP	pP	16 15 48.1	+3.1
	comp=Z,478nm,1.4s						
PAE	Paea	25.42	86	eP	P	16 15 17.4	-0.6
PAE				e*PP	pP	16 15 48.1	+3.1
PAE				pmax	pmax		
	comp=Z,146nm,1.1s,mb5.3						
PPT	Papeete	25.44	86	eP	P	16 15 18.0	-0.3
	comp=Z,31nm,1.3s,mb4.6						
PPT				epP	pP	16 15 48.1	+2.9
	comp=Z,72nm,1.3s						
PPT				eLR	LR	16 21 46.9	
	comp=Z,727nm,24.8s						
PPT	Papeete	25.44	86	LR	LR	16 23 53.3	
	comp=Z,279nm,18.3s,baz=250,slow=32						
PPT	Papeete	25.44	86	eP	P	16 15 18.0	-0.3
	comp=Z,31nm,1.3s,mb4.6						
PPT				epP	pP	16 15 48.1	+2.9
TIAR	Tiarei	25.66	86	eP	P	16 15 19.9	-0.3
	comp=Z,250nm,0.9s,mb5.6						
HNR	Honiara	25.90	294	P	P	16 15 24.8	+2.3
	comp=Z,123nm,0.8s,mb5.4,baz=184,slow=2.7,SNR=10						
HNR	Honiara	25.90	294	eP	P	16 15 22.5	+0.1
HNR				pmax	pmax		
	comp=Z,126nm,0.8s,mb5.4						
HNR	Honiara	25.90	294	eP	P	16 15 22.4	0.0
	comp=Z,126nm,0.8s,mb5.4						
ARMA	Armidale	30.07	246	eP	P	16 16 01.0	+1.6
EIDS	Eidsvold	30.14	257	eP	P	16 16 00.4	+0.3
	comp=Z,23nm,0.6s,mb5.0						
CNB	Canberra Magne	32.97	238	eP	P	16 16 25.9	+1.1
CAN	Canberra	33.26	238	eP	P	16 16 27.9	+0.6
CAN				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
CAN	Canberra	33.26	238	eP	P	16 16 27.9	+0.6
	comp=Z,8.6nm,0.6s,mb4.8						
CTA	Charters Tower	35.02	266	⇓iP	P	16 16 43.3	+0.6
	comp=Z,11nm,0.4s,mb5.0						
CTA	Charters Tower	35.02	266	P	P	16 16 43.5	+0.8
	comp=Z,15nm,0.5s,mb5.1,baz=90,slow=10,SNR=32						
CTA				ScP	ScP	16 22 43.8	-2.3
	comp=Z,17nm,1.1s,baz=81,slow=4.8,SNR=5.6						
CTA	Charters Tower	35.02	266	⇓iP	P	16 16 43.3	+0.6
CTA				pmax	pmax		
	comp=Z,11nm,0.4s						
CTAO	Charters Tower	35.02	266	eP	P	16 16 43.6	+0.9
CTAO				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.0						
CTAO	Charters Tower	35.02	266	eP	P	16 16 43.6	+1.0
	comp=Z,17nm,0.6s,mb5.0						
TOO	Toolangi	36.57	236	eP	P	16 16 55.9	+0.2
TAU	Tasmania Unive	36.99	226	eP	P	16 16 59.6	+0.4
TAU				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
TAU	Tasmania Unive	36.99	226	eP	P	16 16 59.6	+0.5
	comp=Z,9.2nm,0.6s,mb4.9						
PMG	Port Moresby	37.19	283	d iP	P	16 17 01.5	+0.3
PMG	Port Moresby	37.19	283	eP	P	16 17 01.8	+0.5
RKT	Rikitea	38.11	100	eLR	LR	16 27 44.1	
	comp=Z,515nm,29.2s						
STKA	Stephens Creek	38.78	246	eP	P	16 17 14.5	+0.1
	comp=Z,8.0nm,0.6s,mb4.7						
STKA	Stephens Creek	38.78	246	P	P	16 17 13.8	-0.6
	comp=Z,9.3nm,0.5s,mb4.9,baz=92,slow=8.7,SNR=48						
STKA				S	S	16 22 55.2	-7.4
	comp=Z,5.9nm,1.1s,baz=101,slow=12,SNR=4.2						
ASAR	Alice Springs	45.86	258	P	P	16 18 11.9	+0.1
	comp=Z,47nm,0.9s,mb5.2,baz=91,slow=8.2,SNR=254						
ASAR				PcP	PcP	16 19 45.9	-1.2
	comp=Z,4.1nm,0.7s,baz=101,slow=5.1,SNR=5.1						
ASAR				ScP	ScP	16 23 26.1	-2.4
	comp=Z,3.1nm,0.8s,baz=101,slow=4.8,SNR=7.3						
ASAR				S	S	16 24 39.2	-7.4
	comp=Z,3.1nm,0.9s,baz=96,slow=16,SNR=8.5						
ASAR	Alice Springs	45.86	258	P	P	16 18 12.0	+0.2
ASAR						16 19 45.9	
ASAR				S	S	16 24 39.2	-7.4
WB2	Warramunga Arr	46.06	263	eP	P	16 18 11.7	-1.7
WRAB	Tennant Creek	46.06	263	P	P	16 18 12.6	-0.8
	comp=Z,86nm,0.5s,mb5.7,SNR=6.1						
WRAB	Tennant Creek	46.06	263	eP	P	16 18 12.2	-1.2
WRAB				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.0						
WRAB	Tennant Creek	46.06	263	eP	P	16 18 12.2	-1.2
	comp=Z,44nm,1.5s,mb5.0						
KAKA	Kakadu	49.63	272	eP	x	16 18 23.7	
	comp=Z,16nm,0.4s						
FORT	Forrest	50.35	247	eP	P	16 18 45.1	-1.2
	comp=Z,68nm,0.6s,mb5.8						
GUMO	Guam	51.79	309	P	P	16 18 57.4	+0.3
	comp=Z,163nm,0.9s,mb6.1,baz=38,slow=5.7,SNR=5.5						
GUMO				LR	LR	16 36 46.7	
	comp=Z,96nm,21.4s,baz=136,slow=31						
GUMO	Guam	51.79	309	eP	P	16 18 57.0	-0.1
GUMO				pmax	pmax		
	comp=Z,186nm,1.0s,mb6.1						
GUMO	Guam	51.79	309	eP	P	16 18 57.0	-0.1
	comp=Z,186nm,1.0s,mb6.1						
SBA	Scott Base	56.84	184	eP	P	16 19 35.9	+3.0
VNDA	Vanda	56.92	186	P	P	16 19 34.6	+1.2
	comp=Z,8.6nm,0.9s,mb4.8,baz=6.4,slow=7.0,SNR=31						
VNDA	Vanda	56.92	186	eP	P	16 19 35.2	+1.8
VNDA				pmax	pmax		
	comp=Z,24nm,1.3s						
VNDA	Vanda	56.92	186	eP	P	16 19 35.2	+1.8
	comp=Z,24nm,1.3s,mb5.1						
KLBR	Kellerberrin	59.06	245	eP	P	16 19 47.7	-1.4
	comp=Z,19nm,0.5s,mb5.4						
MBWA	Marble Bar	59.20	258	eP	P	16 19 49.4	-0.8
NWAO	Narrogin (SRO)	59.32	244	eP	P	16 19 51.0	+0.2
NWAO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
NWAO	Narrogin (SRO)	59.32	244	eP	P	16 19 51.0	+0.1
	comp=Z,5.2nm,0.4s,mb4.9						
MUN	Mundaring	60.31	245	eP	P	16 19 58.8	+1.2
CASY	Casey	63.63	206	eP	P	16 20 20.1	+0.9
CASY	Casey	63.63	206	eP	P	16 20 19.5	+0.3
	comp=Z,24nm,1.0s,mb5.0						
DAV	Davao City (W)	63.76	290	LR	LR	16 45 12.2	
	comp=Z,66nm,20.7s,baz=5.0,slow=33						
QSPA	South Pole Qui	68.43	180	P	P	16 20 51.1	+1.5
	comp=Z,32nm,0.7s,mb5.2,baz=29,slow=1.1,SNR=156						
QSPA	South Pole Qui	68.43	180	eP	P	16 20 51.2	+1.5
MJAR	Matsushiro Arr	72.10	323	P	P	16 21 11.5	-1.1
	comp=Z,7.0nm,0.7s,mb4.6,baz=157,slow=6.1,SNR=21						
MJAR	Matsushiro Arr	72.10	323	P	P	16 21 11.5	-1.1
MAJO	Matsushiro	72.10	323	eP	P	16 21 10.6	-2.0
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
MAJO	Matsushiro	72.10	323	eP	P	16 21 10.6	-2.0
	comp=Z,9.5nm,0.8s,mb4.7						
MAT	Matsushiro	72.10	323	P	P	16 21 11.4	-1.2
ASAJ	Asahikawa	75.52	331	P	P	16 21 33.0	+0.7
	comp=Z,39nm,0.8s,mb5.2,baz=225,slow=5.0,SNR=26						
ASAJ				LR	LR	16 48 11.6	
	comp=Z,105nm,21.7s,baz=340,slow=30						
YSS	Yuzh-Sakhalins	77.65	333	⇑iP	P	16 21 43.8	-0.5
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
SMMC	Simmler	77.78	44	⇑P	P	16 21 46.2	+0.9
	baz=78						
PEA0B	Petropavlovsk-	77.80	344	eP	P	16 21 43.7	-1.3
PETK	Petropavlovsk-	77.80	344	P	P	16 21 44.0	-0.9
	comp=Z,21nm,0.8s,mb4.9,baz=119,slow=8.1,SNR=37						
PETK				LR	LR	16 47 49.6	
	comp=Z,65nm,21.8s,baz=305,slow=29						
U04C	Hernandez Rese	77.93	43	⇓P	P	16 21 47.1	+1.0
	baz=78						
MURC	Murrieta	78.62	47	⇓P	P	16 21 50.8	+0.8
	baz=79						
S05C	Merced	78.82	42	⇑P	P	16 21 51.3	+0.3
	baz=79						
KSRS	Korea Array	78.83	318	P	P	16 21 51.0	0.0
	comp=Z,2.9nm,0.9s,mb4.1,baz=141,slow=6.3,SNR=7.5						
EDW2	Edwards Air Fo	78.84	45	⇑P	P	16 21 50.9	-0.2
	baz=79						
T06C	Millerton Lake	79.00	43	⇑P	P	16 21 51.7	-0.3
	baz=79						
CMB	Columbia Colle	79.21	42	eP	P	16 21 53.0	-0.1
CMB				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.9						
CMB	Columbia Colle	79.21	42	eP	P	16 21 53.0	-0.1
	comp=Z,26nm,1.4s,mb4.9						
LAVA	Lava Cap Winer	79.44	41	⇑P	P	16 21 54.3	-0.1
	baz=80						
WDC	Whiskeytown Da	79.53	39	eP	P	16 21 54.9	+0.1
WDC				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
WDC	Whiskeytown Da	79.53	39	eP	P	16 21 54.9	+0.1
	comp=Z,15nm,1.2s,mb4.7						
MPMC	Manual Prospec	79.86	45	⇓P	P	16 21 57.1	+0.5
	baz=80						
R06C	Coleville	80.09	42	⇓P	P	16 21 58.1	+0.3
	baz=80						
YBH	Yreka Blue Hor	80.18	38	P	P	16 21 58.6	+0.4
	comp=Z,12nm,0.8s,mb4.8,baz=225,slow=1.5,SNR=21						
YBH	Yreka Blue Hor	80.18	38	eP	P	16 21 58.8	+0.6
YBH				pmax	pmax		
	comp=Z,25nm,1.1s						
YBH	Yreka Blue Hor	80.18	38	eP	P	16 21 58.8	+0.6
	comp=Z,25nm,1.1s,mb5.0						
IRM	Iron Mountain	80.34	47	⇑P	P	16 21 58.8	-0.5
	baz=80						
GMRC	Granite Mounta	80.34	47	⇑P	P	16 21 59.9	+0.6
	baz=80						
BEKR	Beckwourth	80.37	40	⇑P	P	16 21 59.6	+0.3
	baz=80						
WCN	Washoe City	80.38	41	⇓P	P	16 22 00.1	+0.7
	baz=80						
GRAC	Grapevine Rang	80.50	44	⇑P	P	16 22 00.5	+0.5
	baz=81						
SHOC	Shoshone	80.57	45	⇑P	P	16 22 00.5	0.0
	baz=81						
NVAR	Mina Array Bea	80.75	42	P	P	16 22 01.2	-0.1
	comp=Z,3.6nm,0.8s,mb4.3,baz=223,slow=9.0,SNR=25						
O06A	Flanigan	80.87	40	⇓P	P	16 22 02.5	+0.5
	baz=81						
S09A	Goldfield	81.02	43	⇓P	P	16 22 02.9	+0.1
	baz=81						
MAW	Mawson	81.03	199	eP	P	16 22 03.2	+0.7
	comp=Z,15nm,0.7s,mb4.9						
MAW	Mawson	81.03	199	P	P	16 22 03.3	+0.8
	comp=Z,31nm,1.0s,mb5.1,baz=130,slow=7.8,SNR=28						
MAW				LR	LR	16 54 41.6	
	comp=Z,108nm,18.8s,baz=38,slow=33						
MAW	Mawson	81.03	199	⇑eP	P	16 22 02.9	+0.4
MAW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAW	Mawson	81.03	199	⇑eP	P	16 22 02.9	+0.4
	comp=Z,5.5nm,0.8s,mb4.4						
I02A	Mapleton	81.05	35	⇓P	P	16 22 03.2	+0.4
	baz=81						
Y13A	Salome	81.06	48	⇑P	P	16 22 03.5	+0.4
	baz=81						
V11A	Goodsprings	81.10	46	⇓P	P	16 22 02.6	-0.6
	baz=81						
PDMCI	Parker Dam,Lak	81.11	48	⇓P	P	16 22 03.3	-0.1
	baz=81						
TPNV	Topopah Spring	81.19	45	⇓P	P	16 22 03.7	0.0
	baz=81						
TPNV	Topopah Spring	81.19	45	eP	P	16 22 04.2	+0.4
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TPNV	Topopah Spring	81.19	45	eP	P	16 22 04.2	+0.4
	comp=Z,5.2nm,0.7s,mb4.5						
N06A	Buffalo Meadow	81.23	40	⇑P	P	16 22 03.5	-0.3
	baz=81						
R09A	Tonopah	81.42	43	⇑P	P	16 22 05.3	+0.4
	baz=82,SNR=6.8						
Z14A	Wintersburg	81.43	49	⇓P	P	16 22 05.0	-0.1
	baz=82						
O07A	Toulon	81.44	41	⇓P	P	16 22 05.3	+0.3
	baz=82						
X13A	Yucca	81.49	48	⇑P	P	16 22 05.7	+0.4
	baz=82						
S10A	Tonopah Range,	81.54	44	⇑P	P	16 22 05.7	+0.2
	baz=82,SNR=10						
Y14A	Wickenburg	81.70	49	⇓P	P	16 22 06.8	+0.3
	baz=82						
N07B	Gerlach	81.77	40	⇓P	P	16 22 07.1	+0.5
	baz=82						
H03A	Soap Creek Ran	81.79	35	⇑P	P	16 22 07.5	+0.8
	baz=82						
K05A	Summer Lake	81.85	38	⇑P	P	16 22 07.6	+0.6
	baz=82,SNR=9.2						
NJ2	Nanjing	81.87	309	eP	P	16 22 09.2	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
S11A	Rachel	81.92	44	⇓P	P	16 22 08.3	+0.7
	baz=82						
R10A	Warm Springs	81.94	43	⇓P	P	16 22 07.2	-0.4
	baz=82,SNR=8.1						
O08A	Rochester Mine	81.96	41	P	P	16 22 08.2	+0.5
	baz=82,SNR=10.0						
M07A	Soldier Meadow	82.02	40	P	P	16 22 08.7	+0.7
	baz=82,SNR=6.3						
U12A	Valley of Fire	82.03	46	⇑P	P	16 22 08.7	+0.5
	baz=82,SNR=6.0						
T11A	Corn Creek, Al	82.03	45	⇓P	P	16 22 08.6	+0.5
	baz=82,SNR=9.8						
V13A	Grand Canyon W	82.08	47	⇑P	P	16 22 09.0	+0.6
	baz=82,SNR=5.6						
217A	Green Valley	82.11	51	⇑P	P	16 22 09.5	+0.8
	baz=82						
Y15A	Casa Rosa Ranc	82.18	49	⇓P	P	16 22 09.2	+0.2
	baz=82,SNR=6.5						
Q10A	Clear Creek Ra	82.19	43	⇑P	P	16 22 09.1	+0.2
	baz=82						
N08A	GE Springer Mi	82.27	41	⇑P	P	16 22 09.5	+0.2
	baz=82						
L07A	Adell	82.31	39	⇑P	P	16 22 10.2	+0.7
	baz=82						
W14A	Seligman	82.34	47	⇑P	P	16 22 10.6	+0.8
	baz=82,SNR=8.2						
MDJ	Mudanjiang	82.39	324	P	P	16 22 10.2	+0.3
MDJ				AP	pP	16 22 26.4	-16

MDJ XP sP 16 22 37.1 -18
MDJ S S 16 32 17.4 +1.9
MDJ AMB AMB
comp=Z,21nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,151nm,5.6s
MDJ LR LR
comp=Z,80nm,17.0s
MDJ Mudanjiang 82.39 324 *e*P **P 16 22 09.2 -0.7**
comp=Z,21nm,0.9s,mb5.0
U13A Pakoon Wash 82.40 46 ⇓P **P 16 22 10.0 -0.1**
baz=82,SNR=9.0
BKCOR Black Crater 82.41 36 P **P 16 22 10.7 +0.8**
TUC Tucson 82.42 51 *e*P **P 16 22 09.8 -0.5**
TUC pmax pmax
comp=Z,13nm,1.2s,mb4.6
TUC Tucson 82.42 51 *e*P **P 16 22 09.8 -0.4**
comp=Z,13nm,1.2s,mb4.6
R11A Troy Canyon, C 82.43 44 P **P 16 22 10.2 0.0**
baz=83,SNR=5.8
F03A Seaside 82.48 34 ⇑P **P 16 22 11.0 +0.7**
baz=83
O09A Fish Creek Ran 82.48 42 ⇑P **P 16 22 10.5 +0.1**
baz=83
S12A Delamar Landin 82.49 45 ⇑P **P 16 22 11.3 +0.8**
baz=83,SNR=8.4
M08A Happy Creek Ra 82.53 40 ⇓P **P 16 22 11.4 +0.8**
baz=83,SNR=8.6
X15A Humboldt 82.53 48 ⇑P **P 16 22 11.7 +0.9**
baz=83,SNR=8.1
V14A Boquillas Ranc 82.55 47 ⇓P **P 16 22 12.0 +1.1**
baz=83,SNR=8.9
J06A Christmas Vall 82.61 38 ⇑P **P 16 22 11.3 +0.3**
baz=83,SNR=8.7
BMN Battle Mountai 82.62 41 *e*P **P 16 22 10.7 -0.4**
BMN pmax pmax
comp=Z,17nm,1.1s,mb4.8
BMN Battle Mountai 82.62 41 *e*P **P 16 22 10.7 -0.4**
comp=Z,17nm,1.1s,mb4.8
Q11A Duckwater 82.67 43 ⇓P **P 16 22 11.3 -0.1**
baz=83
Y16A Circle Bar Ran 82.74 49 ⇓P **P 16 22 12.7 +0.8**
baz=83,SNR=5.7
K07A Rock Creek Ran 82.78 39 P **P 16 22 12.4 +0.5**
baz=83,SNR=9.1
218A Dragoon 82.78 52 ⇑P **P 16 22 12.7 +0.6**
baz=83,SNR=7.1
T13A Saint George 82.78 46 ⇓P **P 16 22 12.5 +0.5**
baz=83
H05A Madras 82.89 36 ⇓P **P 16 22 13.1 +0.7**
baz=83
U14A Mt Trumbull 82.93 46 ⇑P **P 16 22 13.6 +0.8**
baz=83,SNR=7.5
WVOR Wild Horse Val 82.97 39 *e*P **P 16 22 12.9 0.0**
WVOR pmax pmax
comp=Z,14nm,1.1s,mb4.7
WVOR Wild Horse Val 82.97 39 *e*P **P 16 22 12.8 -0.1**
comp=Z,14nm,1.1s,mb4.7
L08A Fields 83.00 39 ⇑P **P 16 22 13.4 +0.3**
baz=83,SNR=19
I06A Prineville 83.01 37 ⇓P **P 16 22 13.7 +0.6**
baz=83,SNR=10
319A Douglas 83.04 52 ⇓P **P 16 22 13.5 0.0**
baz=83
R12A Pony Springs, 83.05 44 ⇑P **P 16 22 13.7 +0.3**
baz=83,SNR=6.1
X16A Lo Mia Camp, P 83.05 49 ⇓P **P 16 22 13.9 +0.4**
baz=83,SNR=6.8
M09A Marrel Ranch, 83.07 40 P **P 16 22 14.2 +0.8**
baz=83,SNR=7.0
F04A Amboy 83.08 35 ⇑P **P 16 22 13.5 +0.2**
baz=83,SNR=5.9
S13A Holt Ranch, En 83.12 45 ⇓P **P 16 22 13.8 0.0**
baz=83
J07A Hines 83.16 38 ⇓P **P 16 22 14.1 +0.3**
baz=83,SNR=5.0
118A Homack Ranch, 83.17 51 ⇓P **P 16 22 14.7 +0.5**
baz=83,SNR=6.8
G05A Wamic 83.22 36 ⇓P **P 16 22 14.7 +0.6**
baz=83
CROR Criterion Ridg 83.23 36 P **P 16 22 14.5 +0.3**
K08A Mann Creek Ran 83.24 39 ⇑P **P 16 22 14.7 +0.4**
baz=83,SNR=16
V15A Kaibab Nationa 83.29 47 ⇑P **P 16 22 15.5 +0.8**
baz=83,SNR=8.8
L09A Wilkinson Ranc 83.30 40 ⇑P **P 16 22 14.8 +0.2**
baz=83
Q12A Willow Creek R 83.31 44 ⇑P **P 16 22 15.0 +0.2**
baz=83
219A White Tail Can 83.37 52 ⇓P **P 16 22 14.4 -0.8**
baz=84,SNR=5.5
O11A Cowboy Ranch, 83.41 42 P **P 16 22 15.8 +0.6**
baz=84,SNR=13
H06A Lindquist Farm 83.44 36 ⇓P **P 16 22 15.3 0.0**
baz=84
TDL Tradedollar La 83.46 34 P **P 16 22 16.2 +0.9**
I07A Izee 83.49 37 ⇓P **P 16 22 16.1 +0.5**
baz=84,SNR=9.0
P12A McGill 83.51 43 ⇓P **P 16 22 15.9 +0.2**
baz=84
U15A North Rim 83.54 47 ⇑P **P 16 22 15.8 -0.2**
baz=84
F05A White Salmon 83.56 35 ⇑P **P 16 22 16.2 +0.4**
baz=84
G06A Carlson Farm, 83.59 36 ⇓P **P 16 22 15.9 -0.1**
baz=84,SNR=6.0
J08A Circle Bar Ran 83.63 38 ⇓P **P 16 22 16.0 -0.3**
baz=84
K09A Rome 83.67 39 ⇑P **P 16 22 16.7 +0.2**
baz=84,SNR=21
M10A I.L. Ranch, Tu 83.68 41 ⇑P **P 16 22 16.9 +0.3**
baz=84,SNR=12
WUAZ Wupatki 83.68 48 ⇑P **P 16 22 16.3 -0.4**
baz=84
Y18A Canyon Day Jun 83.71 50 ⇑P **P 16 22 17.6 +0.7**
baz=84,SNR=11
119A Ashpeak Ranch, 83.72 51 ⇓P **P 16 22 17.2 +0.2**
baz=84,SNR=5.9
H07A Lands Inn, Kim 83.77 37 ⇓P **P 16 22 17.3 +0.3**
baz=84
Q13A Wheeler Ranch, 83.78 44 ⇑P **P 16 22 17.4 +0.2**
baz=84
T15A Red Dirt Ranch 83.80 46 ⇑P **P 16 22 17.1 -0.2**
baz=84,SNR=14
E05A Randle 83.83 34 P **P 16 22 17.4 +0.2**
baz=84,SNR=13
F06A Goldendale 83.85 35 ⇓P **P 16 22 17.6 +0.3**
baz=84,SNR=5.5
I08A Drewsey 83.92 38 ⇑P **P 16 22 17.6 -0.1**
baz=84,SNR=6.4
LON Longmire 83.93 34 *e*P **P 16 22 16.9 -0.8**
LON pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
LON Longmire 83.93 34 *e*P **P 16 22 16.9 -0.8**
comp=Z,5.7nm,0.7s,mb4.5
C04A Brinnon 83.97 33 ⇑P **P 16 22 18.2 +0.4**
baz=84
Z19A T-Link Ranch, 84.02 51 ⇓P **P 16 22 18.4 0.0**
baz=84,SNR=7.6
ELK Elko 84.03 42 *e*P **P 16 22 18.4 +0.1**
ELK pmax pmax
comp=Z,9.0nm,1.0s
ELK Elko 84.03 42 *e*P **P 16 22 18.4 0.0**
comp=Z,9.5nm,1.0s,mb4.6
J09A Fry Pan Ranch, 84.04 39 ⇑P **P 16 22 18.6 +0.2**
baz=84,SNR=13
L10A Juniper Basin 84.05 40 ⇓P **P 16 22 18.7 +0.3**
baz=84,SNR=18
O12A Currie 84.06 43 ⇑P **P 16 22 18.7 +0.2**
baz=84
P13A Bates Ranch, G 84.07 44 ⇑P **P 16 22 18.9 +0.3**
baz=84,SNR=10.0
D05A Enumclaw 84.12 34 ⇓P **P 16 22 19.7 +1.1**
baz=84
G07A Ruggs Ranch, H 84.14 36 ⇓P **P 16 22 19.2 +0.4**
baz=84,SNR=6.0
U16A Tuba City 84.18 48 ⇓P **P 16 22 19.3 0.0**
baz=84,SNR=8.5
CN2 Changchun 84.20 322 ⇑P **P 16 22 19.1 -0.1**
CN2 *e*AP pP 16 22 40.0 -11
CN2 *e*S S 16 32 37.1 +3.4
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,90nm,4.0s
N12A Clover Valley, 84.21 42 ⇓P **P 16 22 19.3 +0.1**
baz=84,SNR=9.3
K10A MacKenzie Ranc 84.22 40 ⇑P **P 16 22 19.4 +0.2**
baz=84,SNR=8.1
H08A Prairie City 84.23 37 ⇑P **P 16 22 19.3 0.0**
baz=84
E06A Yakima 84.24 35 ⇑P **P 16 22 19.3 +0.1**
baz=84,SNR=6.6
Q14A Sevier Lake (B 84.28 44 ⇓P **P 16 22 20.2 +0.5**
baz=84,SNR=16
KLR Kul'dur 84.35 329 *e*P **P 16 22 16.1 -3.6**
Y19A Nutrioso 84.36 50 ⇓P **P 16 22 20.3 +0.1**
baz=84,SNR=12
T16A Glen Canyon Da 84.37 47 ⇑P **P 16 22 19.8 -0.3**
baz=84,SNR=9.9
F07A Phinny Hill Vi 84.39 36 ⇓P **P 16 22 20.7 +0.6**
baz=84
I09A Lost Marbles R 84.43 38 ⇓P **P 16 22 20.3 0.0**
baz=85
O13A Hicks Ranch, I 84.47 43 ⇓P **P 16 22 20.9 +0.3**
baz=85
L11A Cat Creek Ranc 84.53 41 ⇑P **P 16 22 21.2 +0.3**
baz=85,SNR=11
G08A Pilot Rock 84.55 37 ⇓P **P 16 22 20.8 0.0**
baz=85,SNR=22
C05A Tolt Reservoir 84.61 34 ⇓P **P 16 22 21.4 +0.3**
baz=85
M12A Wells 84.61 42 ⇓P **P 16 22 21.1 -0.1**
baz=85,SNR=6.7
EBG Ellensburg 84.69 35 P **P 16 22 22.2 +0.7**
K11A Parker Ranch, 84.72 40 ⇑P **P 16 22 22.0 +0.2**
baz=85,SNR=9.0
D06A Cle Elum 84.72 34 ⇓P **P 16 22 21.9 +0.2**
baz=85,SNR=6.7
P14A Drum Mountains 84.75 44 ⇓P **P 16 22 22.1 +0.1**
baz=85,SNR=7.1
B05A Bryant 84.77 33 ⇑P **P 16 22 22.0 +0.1**
baz=85,SNR=5.5
V18A Ganado 84.78 48 ⇓P **P 16 22 22.5 +0.3**
baz=85
TBM Table Mountain 84.84 34 P **P 16 22 22.6 +0.4**
E07A Sunnyside 84.85 35 ⇓P **P 16 22 23.0 +0.7**
baz=85,SNR=8.0
T17A Navajo Res., N 84.85 47 ⇓P **P 16 22 22.7 +0.1**
baz=85
H09A Durkee 84.89 38 ⇓P **P 16 22 23.0 +0.4**
baz=85,SNR=7.3
SNIWA Snively Ranch 84.89 35 P **P 16 22 23.4 +0.8**
HAWA Hanford 84.92 36 *e*P **P 16 22 22.6 -0.1**
comp=Z,29nm,1.4s,mb5.0
MDW Midway 84.93 35 P **P 16 22 23.5 +0.8**
F08A Pendleton 84.96 36 ⇓P **P 16 22 23.4 +0.5**
baz=85
L12A House Creek Ra 84.97 41 ⇓P **P 16 22 23.3 +0.3**
baz=85
M13A Montello 85.04 42 ⇑P **P 16 22 23.5 +0.1**
baz=85
R16A Teasdale 85.08 46 ⇑P **P 16 22 23.9 +0.2**
baz=85
GBL Gable Mountain 85.08 35 P **P 16 22 24.2 +0.7**
D07A Quincy 85.18 35 ⇑P **P 16 22 23.8 -0.1**
baz=85,SNR=6.1
G09A Cove 85.20 37 ⇓P **P 16 22 23.9 -0.2**
baz=85
MFID Camas Ranch 85.22 39 ⇑P **P 16 22 24.2 -0.1**
baz=85,SNR=8.5
E08A Dider Farm, El 85.23 36 ⇓P **P 16 22 24.1 -0.1**
baz=85
P15A Leamington 85.25 44 ⇑P **P 16 22 24.5 0.0**
baz=85
F09A S2 Ranch, Elgi 85.39 37 ⇓P **P 16 22 25.4 +0.4**
baz=86
C07A Waterville 85.45 34 P **P 16 22 25.4 +0.1**
baz=86,SNR=8.2
WTV Waterville 85.51 34 P **P 16 22 25.9 +0.3**
NLW Nelson Butte 85.55 34 P **P 16 22 26.0 +0.2**
J12A Stokes Ranch, 85.55 40 ⇓P **P 16 22 25.8 -0.1**
baz=86,SNR=7.7
T18A Mexican Hat 85.56 47 ⇓P **P 16 22 26.1 0.0**
baz=86,SNR=12
G10A Bishop Farm, J 85.58 37 ⇑P **P 16 22 25.5 -0.5**
baz=86
Q16A Castle Valley 85.62 45 ⇑P **P 16 22 26.0 -0.4**
baz=86
M14A Sheep Mountain 85.63 42 ⇓P **P 16 22 26.3 0.0**
baz=86
D08A Wollman Farm, 85.66 35 ⇓P **P 16 22 26.4 0.0**
baz=86,SNR=7.1
R17A Hanksville Air 85.67 46 ⇓P **P 16 22 26.4 -0.2**
baz=86
E09A Wood Farm, Sta 85.75 36 ⇓P **P 16 22 26.0 -0.8**
baz=86
I12A Atlanta 85.85 39 ⇓P **P 16 22 26.9 -0.4**
baz=86
B07A Winthrop 85.91 34 ⇑P **P 16 22 26.4 -1.1**
baz=86,SNR=5.6
F10A Beach Ranch, E 85.92 37 ⇑P **P 16 22 26.6 -1.1**
baz=86,SNR=7.4
SYO Syowa Base 85.96 192⇑*e*X 16 22 25.8
OD2 Odessa Site #2 85.98 35 P **P 16 22 28.2 +0.3**
D09A Jones Farm, Ri 85.99 36 ⇓P **P 16 22 28.0 0.0**
baz=86
C08A Higginbotham F 86.04 35 ⇓P **P 16 22 28.3 0.0**
baz=86
G11A Walters Elk Ra 86.12 38 ⇑P **P 16 22 28.5 -0.1**
baz=86
HLID Hailey 86.14 40 ⇑P **P 16 22 28.9 +0.1**
baz=86
SRU San Rafael 86.15 45 ⇑P **P 16 22 28.9 -0.1**
baz=86
B08A Colville Reser 86.25 34 ⇑P **P 16 22 29.0 -0.2**
baz=86,SNR=8.9
TXAR Lajitas Array 86.31 57 P **P 16 22 30.3 +0.3**
comp=Z,9.6nm,0.9s,mb4.7,baz=214,slow=8.1,SNR=62
TXAR PKKPbc PKKPbc 16 40 34.5 +6.7
comp=Z,0.2nm,0.7s,baz=64,slow=2.9,SNR=3.6
H12A Diamond D Ranc 86.44 39 ⇑P **P 16 22 29.9 -0.4**
baz=87,SNR=5.8
C09A Chrisman Ranch 86.46 35 ⇓P **P 16 22 29.9 -0.4**
baz=87,SNR=5.9
F11A Grangeville 86.48 37 ⇓P **P 16 22 29.1 -1.3**
baz=87
G12A Big Creek, Yel 86.50 38 ⇑P **P 16 22 29.5 -1.1**
baz=87
I13A Wildhorse Cree 86.52 40 ⇑P **P 16 22 29.9 -0.8**
baz=87
J14A Carey 86.54 41 ⇑P **P 16 22 30.2 -0.6**
baz=87
D10A Wagner Farm, O 86.55 36 ⇓P **P 16 22 30.1 -0.6**
baz=87,SNR=8.7
O17A Robinson Place 86.58 44 ⇓P **P 16 22 30.5 -0.6**
baz=87,SNR=14
P18A Preston Nutter 86.61 45 ⇑P **P 16 22 31.0 -0.2**
baz=87
A08A Turner Farm, O 86.65 34 ⇑P **P 16 22 31.0 -0.2**
baz=87,SNR=9.3
E11A Bogner Ranch, 86.72 37 ⇑P **P 16 22 29.9 -1.6**
baz=87
ANMO Albuquerque 86.86 51 *e*P **P 16 22 32.4 -0.1**
ANMO pmax pmax
comp=Z,16nm,1.4s
ANMO Albuquerque 86.86 51 *e*P **P 16 22 32.4 -0.1**
comp=Z,16nm,1.4s,mb4.8
VNA3 Neumayer Olymp 86.89 176 *e*P **P 16 22 31.5 -0.6**
VNA3 *e* 16 22 33.4
VNA3 *e* 16 22 47.6
VNA3 *e* 16 22 53.0
VNA3 *e* 16 22 55.8
F12A Elk City 86.91 38 ⇑P **P 16 22 32.3 -0.2**
baz=87
B09A Rice 86.91 34 P **P 16 22 32.4 0.0**
baz=87,SNR=5.1
Q19A Hogan Spring (86.91 46 ⇓P **P 16 22 32.5 -0.2**
baz=87
I14A Mackay 86.92 40 ⇑P **P 16 22 32.3 -0.3**
baz=87
A09A Danville 87.02 34 ⇑P **P 16 22 32.6 -0.4**
baz=87,SNR=11
D11A Klaveano Farm, 87.06 36 ⇑P **P 16 22 31.8 -1.4**
baz=87
G13A Cobalt 87.12 39 ⇑P **P 16 22 32.9 -0.6**
baz=87
TRF Thorofare Moun 87.24 11 *e*P **P 16 22 32.7 -0.9**
comp=Z,16nm,0.7s,mb5.1
J15A Blackfoot 87.25 41 ⇑P **P 16 22 33.5 -0.7**
baz=87
PLCA Paso Flores 87.30 133 P **P 16 22 35.2 +0.4**
comp=Z,42nm,1.4s,mb5.2,baz=233,slow=6.5,SNR=11
PLCA Paso Flores 87.30 133 P **P 16 22 35.2 +0.4**
VNA2 Neumayer--Watz 87.35 176 *e*P **P 16 22 34.2 -0.1**
baz=198,slow=3.6
VNA2 *e* 16 22 36.7
VNA2 *e* 16 22 49.8
VNA2 *e* 16 22 54.6
VNA2 *e* 16 22 57.1
F13A Darby 87.46 38 ⇑P **P 16 22 34.2 -1.0**
baz=88,SNR=10.0
Q20A Ridgley Place, 87.56 46 ⇑P **P 16 22 35.4 -0.4**
baz=88
VNA1 Neumayer--Stat 87.56 176 *e*P **P 16 22 35.4 0.0**
VNA1 *e* 16 22 38.3
VNA1 *e* 16 22 50.7
C11A Tepee Creek (N 87.57 36 ⇓P **P 16 22 35.7 +0.1**
baz=88
D12A Red Ives Fores 87.61 37 ⇑P **P 16 22 35.0 -0.9**
baz=88
G14A Jackson 87.65 39 ⇓P **P 16 22 35.4 -0.7**
baz=88
N18A Larsen Ranch, 87.69 44 ⇓P **P 16 22 36.0 -0.4**
baz=88
R21A Cimarron 87.77 47 ⇓P **P 16 22 37.0 +0.2**
baz=88,SNR=7.9
BJI Beijing 87.85 315 P **P 16 22 38.8 +1.6**
BJI S S 16 33 08.6 -0.8
BJI AMB AMB
comp=Z,7.0nm,0.5s,mb5.0
BJI AMB AMB
comp=Z,268nm,9.0s
BJI LR LR
comp=N,329nm,10.2s
BJI LR LR
comp=E,305nm,19.8s
BJI LR LR
comp=Z,97nm,18.1s
SEY Seymchan 87.87 346⇑*e*P **P 16 22 36.0 -0.7**
E13A Victor 87.91 38 ⇓P **P 16 22 36.1 -1.2**
baz=88
C12B Naegeli Ranch, 87.92 36 ⇓P **P 16 22 36.5 -0.8**
baz=88,SNR=8.5
F14A Wisdom 88.03 39 ⇓P **P 16 22 37.8 0.0**
baz=88
D13A Huson 88.13 37 ⇓P **P 16 22 38.0 -0.3**
baz=88
A11A Hall Mountain, 88.18 35 ⇓P **P 16 22 38.5 0.0**
baz=88,SNR=8.3
DLMT Dillon 88.23 39 *e*P **P 16 22 38.5 -0.2**
comp=Z,6.9nm,1.1s,mb4.6
E14A Clinton 88.29 38 ⇓P **P 16 22 38.4 -0.6**
baz=88
B12A Libby 88.31 35 ⇓P **P 16 22 39.1 +0.1**
baz=88
C13A Hot Springs 88.40 37 ⇓P **P 16 22 38.4 -1.1**
baz=88
DLBC Dease Lake 88.48 22 P **P 16 22 39.6 0.0**
comp=Z,2.8nm,0.8s,mb4.3,baz=328,slow=0.8,SNR=4.4
F15A Butte 88.55 39 ⇑P **P 16 22 40.0 -0.3**
baz=89
J18A Kendall Valley 88.63 42 ⇑P **P 16 22 40.6 -0.1**
baz=89,SNR=7.1
GYA Guiyang 88.63 299 *e*P **P 16 22 41.0 -0.2**
GYA AP pP 16 23 02.6 -11
GYA XP sP 16 23 12.8 -14
GYA PP PP 16 26 12.0 +0.2
GYA S S 16 33 22.8 +5.4
GYA XS sS 16 33 55.0 -18
GYA SS SS 16 39 15.9 +3.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,130nm,5.2s
GYA LR LR
comp=N,590nm,21.5s
GYA LR LR
comp=E,560nm,20.2s
GYA LR LR
comp=Z,650nm,20.9s
D14A Greenough 88.66 37 ⇑P **P 16 22 39.1 -1.7**
baz=89,SNR=5.4
PDAR Pinedale Array 88.69 43 P **P 16 22 40.7 -0.3**
comp=Z,1.7nm,0.8s,mb4.2,baz=216,slow=3.0,SNR=14
PDAR PKKPbc PKKPbc 16 40 20.4 -2.3
comp=Z,0.2nm,0.9s,baz=252,slow=3.0,SNR=4.0
PDAR LR LR 16 57 17.8
comp=Z,120nm,21.9s,baz=245,slow=32
C14A Swan Lake 88.91 37 ⇑P **P 16 22 41.3 -0.7**
baz=89
BOZ Bozeman (W) 88.95 39 ⇑P **P 16 22 41.7 -0.5**
baz=89
BOZ Bozeman (W) 88.95 39 *e*P **P 16 22 42.0 -0.2**
BOZ pmax pmax
comp=Z,14nm,1.4s,mb4.8
BOZ Bozeman (W) 88.95 39 *e*P **P 16 22 42.0 -0.2**
comp=Z,14nm,1.4s,mb4.8
COLA College 88.98 12*c i*P **P 16 22 40.7 -1.2**
COLA College 88.98 12 *e*P **P 16 22 40.5 -1.4**
comp=Z,18nm,1.1s,mb5.0
D15A Lincoln 89.20 38 ⇓P **P 16 22 43.1 -0.2**
baz=89
M21A Separation Pea 89.50 44 ⇑P **P 16 22 43.9 -1.0**
baz=90
B14A Marquette Ranc 89.51 36 ⇑P **P 16 22 44.2 -0.5**
baz=90,SNR=8.7
C15A Salmond Ranch, 89.55 37 ⇑P **P 16 22 44.5 -0.5**
baz=90
F17A Fitzpatrick Pl 89.66 39 ⇑P **P 16 22 45.1 -0.4**
baz=90,SNR=6.6
D16A Dana Ranch, Ca 89.75 38 ⇓P **P 16 22 44.7 -1.2**
baz=90,SNR=5.4
A14A Double T Ranch 89.77 36 ⇓P **P 16 22 45.3 -0.6**
baz=90,SNR=8.8
B15A Bradely Ranch, 89.88 37 ⇓P **P 16 22 45.1 -1.4**
baz=90
C16A Fuhringer Ranc 90.05 37 ⇑P **P 16 22 46.2 -1.1**
baz=90,SNR=5.5
RLMT Red Lodge 90.09 41 ⇑P **P 16 22 46.3 -1.2**
baz=90
RLMT Red Lodge 90.09 41 *e*P **P 16 22 47.5 0.0**
comp=Z,13nm,1.4s,mb4.8
XAN Xi'an 90.12 307 P **P 16 22 48.2 +0.2**
XAN AP pP 16 23 07.7 -13
XAN PP PP 16 26 22.3 -1.2
XAN S S 16 33 36.3 +5.4
XAN PS PS 16 34 52.3 -1.7
XAN SS SS 16 39 38.7 +5.4
XAN AMB AMB
comp=Z,5.0nm,0.8s,mb4.7
XAN LR LR
comp=N,103nm,25.5s
XAN LR LR
comp=E,77nm,28.0s
XAN LR LR
comp=Z,117nm,25.3s
A15A Johnson Ranch, 90.15 36 ⇑P **P 16 22 46.8 -0.9**
baz=90
F18A Big Timber 90.22 40 ⇓P **P 16 22 46.7 -1.4**
baz=90
EGAK Eagle 90.30 14 *e*P **P 16 22 47.7 -0.3**
comp=Z,10nm,1.0s,mb4.9
D17A Six Diamond Ra 90.31 38 ⇑P **P 16 22 48.3 -0.2**
baz=90,SNR=10
BILL Bilibino 90.35 354⇓*e*P **P 16 22 47.4 -0.8**
BILL pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
BILL Bilibino 90.35 354 *e*P **P 16 22 47.7 -0.4**
comp=Z,9.9nm,0.9s,mb4.9
B16A M & M Farms, S 90.41 37 ⇓P **P 16 22 48.2 -0.8**
baz=90
E18A Harlowton 90.45 39 ⇓P **P 16 22 49.0 -0.2**
baz=91,SNR=5.6
C17A Wharram Farm, 90.52 38 ⇑P **P 16 22 49.5 0.0**
baz=91,SNR=9.7
A16A West Butte Ran 90.76 37 ⇑P **P 16 22 49.6 -1.0**
baz=91
B17A L&G Farms, Che 90.85 37 ⇓P **P 16 22 50.6 -0.4**
baz=91
A17A Triple J Farms 91.26 37 ⇓P **P 16 22 52.6 -0.2**
baz=91
KMI Kunming 91.32 296 P **P 16 22 55.5 +1.8**
KMI AP pP 16 23 15.4 -11
KMI XP sP 16 23 21.6 -18
KMI PP PP 16 26 35.1 +2.0
KMI S S 16 33 45.0 +2.8
KMI XS sS 16 34 21.2 -17
KMI SS SS 16 39 55.6 +4.7
KMI AMB AMB
comp=Z,7.0nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,94nm,5.1s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				LR	LR		
	comp=N,126nm,15.6s						
KMI				LR	LR		
	comp=E,107nm,12.5s						
KMI				LR	LR		
	comp=Z,167nm,20.8s						
A18A	Metzger Ranch,	91.72	37	⇓P	P	16 22 54.5	-0.5
	baz=92						
CMAR	Chiang Mai Arr	92.03	289	P	P	16 22 57.7	+0.5
	comp=Z,4.1nm,0.8s,mb4.7,baz=121,slow=2.9,SNR=21						
CMAR				PKKPbc	PKKPbc	16 40 09.9	-3.2
	comp=Z,0.7nm,0.8s,baz=282,slow=5.9,SNR=7.1						
CHTO	Chiang Mai	92.17	289	eP	P	16 22 56.3	-1.5
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
CHTO	Chiang Mai	92.17	289	eP	P	16 22 56.3	-1.5
	comp=Z,3.6nm,0.8s,mb4.7						
CD2	Chengdu	92.78	302	P	P	16 23 02.3	+1.9
CD2				AP	pP	16 23 23.1	-10
CD2				XP	sP	16 23 31.3	-15
CD2				PP	PP	16 26 47.7	+3.2
CD2				SKS		16 33 27.6	
CD2				S	S	16 33 58.4	+3.4
CD2				XS	sS	16 34 34.3	-17
CD2				SS	SS	16 40 17.0	+5.4
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.9						
CD2				AMB	AMB		
	comp=Z,370nm,4.6s						
CD2				LR	LR		
	comp=N,320nm,12.3s						
CD2				LR	LR		
	comp=Z,550nm,16.8s						
RSSD	Black Hills	92.86	43	eP	P	16 22 59.7	-0.7
RSSD				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
RSSD	Black Hills	92.86	43	eP	P	16 22 59.7	-0.7
	comp=Z,15nm,1.0s,mb5.3						
YAK	Yakutsk	93.79	338	eP	P	16 23 01.0	-3.2
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
LZH	Lanzhou	94.76	307	eP	P	16 23 14.5	+5.2
LZH				AP	pP	16 23 34.5	-7.4
LZH				XP	sP	16 23 44.5	-11
LZH				PP	PP	16 27 06.0	+6.2
LZH				SKS		16 33 39.0	
LZH				eS	S	16 34 17.0	+4.9
LZH				XS	sS	16 34 55.0	-14
LZH				SS	SS	16 40 45.5	+5.8
LZH				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,190nm,7.5s						
LZH				LR	LR		
	comp=E,310nm,14.5s						
LZH				LR	LR		
	comp=Z,520nm,15.7s						
LVC	Limon Verde	96.66	117	LR	LR	16 57 55.9	
	comp=Z,120nm,18.1s,baz=213,slow=30						
YKA	Yellowknife Ar	96.88	24	P	P	16 23 16.9	-1.3
	comp=Z,3.0nm,0.8s,mb4.8,baz=240,slow=4.1,SNR=12						
YKA	Yellowknife Ar	96.88	24	P	P	16 23 16.9	-1.3
ULN	Ulaanbaatar	97.30	319	⇑iP	P	16 23 21.7	+1.1
SONM	Songino Array	97.69	318	P	P	16 23 24.8	+2.5
	comp=Z,0.3nm,0.6s,mb4.0,baz=141,slow=4.8,SNR=4.5						
SONM				LR	LR	17 03 19.2	
	comp=Z,59nm,20.0s,baz=316,slow=33						
TIXI	Tiksi	100.28	345	⇑eP	Pdif	16 23 29.3	-4.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ZALV	Zalesovo Beam	112.41	321	PKiKP	PKiKP	16 28 21.0	-1.8
	comp=Z,2.2nm,0.7s,baz=151,slow=1.5,SNR=10						
MK31	Makanchi Array	113.17	313	ePKIKP	PKiKP	16 28 22.4	-2.0
MKAR	Makanchi Array	113.17	313	PKiKP	PKiKP	16 28 22.9	-1.5
	comp=Z,1.6nm,0.6s,baz=116,slow=0.5,SNR=20						
MKAR				PKKPbc	PKKPbc	16 39 10.4	-1.3
	comp=Z,0.7nm,0.8s,baz=258,slow=4.8,SNR=4.2						
MKAR	Makanchi Array	113.17	313	⇑iPKIKP	PKiKP	16 28 22.8	-1.6
KURK	Kurchatov	115.94	317	PKP	PKPdf	16 28 27.7	-1.9
	comp=Z,0.9nm,0.3s,baz=89,slow=1.9,SNR=5.1						
KURK	Kurchatov	115.94	317	⇑iPKIKP	PKPdf	16 28 28.4	-1.2
KURK	Kurchatov	115.94	317	PKP	PKPdf	16 28 27.7	-1.9
BVAR	Borovoye Array	121.01	320	PKP	PKPdf	16 28 37.7	-1.6
	comp=Z,3.2nm,0.4s,baz=128,slow=2.1,SNR=26						
KBL	Kabul	121.87	298	ePKIKP	PKPdf	16 28 41.2	-0.3
BOSA	Boshof	125.89	203	PKP	PKPdf	16 28 49.2	-0.3
	comp=Z,7.9nm,1.1s,baz=155,slow=3.0,SNR=5.8						
BOSA	Boshof	125.89	203	PKP	PKPdf	16 28 49.2	-0.3
ARU	Arti	127.07	325	i PKIKP	PKPdf	16 28 50.1	-0.7
ARU						16 30 49.2	
ARU				SS	SS	16 47 46.1	-2.8
AKTK	Aktyubinsk	129.01	318	PKP	PKPdf	16 28 54.6	0.0
AKTK				SKPbc		16 32 00.7	
AKTO	Aktyubinsk	129.01	318	PKP	PKPdf	16 28 54.6	0.0
	comp=Z,2.4nm,0.6s,baz=66,slow=6.3,SNR=7.6						
AKTO				SKPbc		16 32 00.7	
	comp=Z,0.6nm,0.4s,baz=43,slow=9.0,SNR=3.7						
ARCES	ARCESS Array B	130.33	350	PKP	PKPdf	16 28 55.5	-1.2
	comp=Z,2.6nm,0.5s,baz=32,slow=1.0,SNR=11						
ARCES				SKPbc	SKPbc	16 32 05.8	-2.5
	comp=Z,12nm,0.9s,baz=23,slow=6.6,SNR=8.5						
ARCES	ARCESS Array B	130.33	350	PKP	PKPdf	16 28 55.5	-1.2
ARCES				SKPbc	SKPbc	16 32 05.8	-2.5
JOF	Joensuu	134.72	343	ep	PKPdf	16 29 04.9	-0.2
	comp=Z,1.2nm,0.4s						
LSZ	Lusaka	136.17	215	ePKIKP	PKPdf	16 29 08.9	-0.4
KAF	Kangasniemi	136.69	345	ep	PKPdf	16 29 08.7	-0.1
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	136.69	345	ePKIKP	PKPdf	16 29 08.7	-0.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	Obninsk	138.54	332	⇓iPKIKP	PKPdf	16 29 11.2	-1.2
OBN				pmax	pmax		
	comp=Z,22nm,1.3s						
NB2	NORSAR Subarra	140.30	354	PKP		16 29 07.0	
	comp=Z,4.4nm,1.0s,baz=5.7,slow=3.6						
NOA	NORSAR Array B	140.30	354	PKhKP		16 29 08.6	
	comp=Z,1.2nm,0.8s,baz=4.8,slow=2.2,SNR=3.9						
NOA				SKPbc	SKPbc	16 32 38.0	-2.0
	comp=Z,3.6nm,0.8s,baz=13,slow=4.4,SNR=4.8						
NOA	NORSAR Array B	140.30	354	PKP		16 29 08.6	
NOA				SKPbc	SKPbc	16 32 38.0	-2.0
HFS	Hagfors	140.91	352	PKhKP		16 29 08.9	
	comp=Z,2.0nm,0.3s,baz=56,slow=3.9,SNR=21						
KIV	Kislovodsk	140.92	314	⇓iPKIKP	PKPdf	16 29 15.8	-1.3
KIV				pmax	pmax		
	comp=Z,12nm,1.6s						
HAKT	HAKKARI	142.12	304	i P	PKPdf	16 29 20.0	+0.5
DBAD	Bademkaya	142.65	310	i P	PKPdf	16 29 17.3	-3.0
KAC	Achnashellach	143.59	8	eP	PKPdf	16 29 17.5	-3.9
MCD	Coleburn Disti	143.75	6	eP	PKPdf	16 29 17.8	-3.9
MDO	Dochfour	143.76	7	eP	PKPdf	16 29 18.7	-3.0
BEST	Besiri	143.91	305	i P	PKPdf	16 29 21.6	-1.1
MARD	Mardin	144.44	304	i P	PKPdf	16 29 22.1	-1.4
SUW	Suwalki	144.48	340	ePKP	PKPdf	16 29 22.4	-0.6
SUW	Suwalki	144.48	340	ePKP	PKPdf	16 29 22.4	-0.7
DIYA	Diyarbakir	144.77	306	i P	PKPdf	16 29 23.5	-0.6
AKASG	Malin Array Be	144.80	332	PKP	PKPdf	16 29 21.2	-2.5
	comp=Z,24nm,0.5s,baz=42,slow=4.3,SNR=80						
AKASG				SKPbc	SKPbc	16 32 49.0	-2.5
	comp=Z,3.6nm,0.9s,baz=40,slow=2.3,SNR=10						
AKASG	Malin Array Be	144.80	332	PKP	PKPdf	16 29 21.2	-2.5
AKASG				SKPbc	SKPbc	16 32 49.0	-2.5
AKBB	Malin Array Si	144.80	332	⇑ePKIKP	PKPdf	16 29 21.8	-1.9
KIEV	Kiev	144.81	332	ePKIKP	PKPdf	16 29 21.6	-2.2
EAB	Aberfoyle	144.99	8	eP	PKPdf	16 29 20.0	-3.9
EBH	Black Hill	145.03	7	eP	PKPbc	16 29 22.7	-0.9
EAU	Auchinoon	145.43	7	eP	PKPdf	16 29 23.9	-0.7
ELZG	Elazig	145.45	307	i P	PKPdf	16 29 26.6	+1.3
EBL	Broad Law	145.55	7	eP	PKPdf	16 29 22.9	-2.0
KEMA	Kemaliye	145.55	309	i P	PKPdf	16 29 26.2	+0.8
XSO	Sourhope Farm	145.91	6	eP	PKPdf	16 29 24.9	-0.6
EKA	Eskdalemuir Ar	145.97	7	PKPbc	PKPbc	16 29 25.5	-1.0
	comp=Z,8.4nm,0.9s,baz=303,slow=3.3,SNR=9.7						
AKCD	Akcadag	146.30	307	i P	PKPdf	16 29 28.7	+1.9
WAR	Warsaw	146.67	341	ePKP	PKPab	16 29 30.9	+0.9
WAR	Warsaw	146.67	341	ePKP	PKPab	16 29 30.9	+0.9
GKP	Gorka Klasztor	146.78	345	ePKP	PKPbc	16 29 29.0	0.0
GKP	Gorka Klasztor	146.78	345	ePKP	PKPbc	16 29 29.0	0.0
GZT	Gaziantep	146.88	306	i P	PKPbc	16 29 30.1	+0.3
PINB	Pinarbasi	147.28	309	i P	PKPbc	16 29 31.7	+0.9
BSEG	Bad Segeberg	147.38	353	ePKPbc	PKPbc	16 29 30.0	-0.6
KIS	Kishinev	147.59	327	⇑iPKP2	PKPbc	16 29 31.0	-0.4
KIS	Kishinev	147.59	327	⇑iUNK	PKPbc	16 29 31.0	-0.4
CTKT	Corum	147.63	313	eP	PKPbc	16 29 32.5	+0.8
LVV	L'vov	147.64	335	ePKP2	PKPbc	16 29 30.6	-0.8
ANDN	Andirin	147.72	307	i P	PKPbc	16 29 32.7	+0.6
COBT	Iskenderun	148.14	305	i P	PKPbc	16 29 33.9	+0.6
BALT	Daday	148.14	315	i P	PKPdf	16 29 28.1	-1.5
KWP	Kalwaria	148.29	336	ePKP	PKPbc	16 29 33.1	-0.1
KWP	Kalwaria	148.29	336	⇑iP	PKPbc	16 29 33.2	0.0
KWP	Kalwaria	148.29	336	ePKP	PKPbc	16 29 33.1	-0.1
SBD1	Bryn Du	148.34	8	eP	PKPdf	16 29 31.4	+1.8
AVNT	Avonos	148.36	310	i P	PKPbc	16 29 33.6	-0.1
OJC	Ojcow	148.81	340	ePKP	PKPbc	16 29 34.0	-0.5
BR131	Keskin Array S	148.82	312	ePKPdf	PKPbc	16 29 33.8	-1.1
BRTR	Keskin Array B	148.82	312	PKPbc	PKPbc	16 29 34.1	-0.7
	comp=Z,5.8nm,0.5s,baz=139,slow=4.9,SNR=48						
BRTR				SKPab		16 33 26.7	
	comp=Z,3.4nm,0.9s,baz=76,slow=4.3,SNR=6.7						
BUR08	Bucovina Ar. S	148.84	331	ePKPbc	PKPbc	16 29 35.2	+0.6
BURAR	Bucovina Array	148.85	331	⇑iP	PKPbc	16 29 34.7	0.0
BURAR	Bucovina Array	148.85	331	⇑P	PKPbc	16 29 34.7	0.0
STHS	Stebnicka Huta	149.01	338	ePKP	PKPbc	16 29 35.6	+0.6
KOLS	Kolonicke sedl	149.03	336	ePKP	PKPbc	16 29 33.6	-1.5
IBBN	Ibbenburen	149.24	355	ePKPab	PKPab	16 29 41.3	+1.0
KSP	Ksiaz	149.25	344	ePKP	PKPbc	16 29 35.6	0.0
KSP	Ksiaz	149.25	344	ePKP	PKPbc	16 29 35.4	-0.2
UZH	Uzhgorod	149.27	336	⇑iPKP2	PKPbc	16 29 35.7	0.0
NIE	Niedzica	149.33	339	ePKP	PKPbc	16 29 36.5	+0.7
ANTO	Ankara	149.33	313	PKP2	PKPbc	16 29 37.4	+1.3
ANTO	Ankara	149.33	313	⇑iP	PKPbc	16 29 36.6	+0.5
ANTO	Ankara	149.33	313	⇑P	PKPbc	16 29 36.6	+0.5
CRVS	Cervenica-Dubn	149.36	337	ePKP	PKPbc	16 29 35.8	-0.1
CLZ	Clausthal	149.43	352	ePKP2	PKPab	16 29 41.5	+0.4
CLZ	Clausthal	149.43	352	ePKPbc	PKPbc	16 29 35.9	-0.1
CLZ				ePKPab	PKPab	16 29 41.5	+0.4
SSW	Stow on the Wo	149.43	7	eP	PKPdf	16 29 33.0	+1.6
TIRR	Tirgusor	149.48	324	⇓iP	PKPbc	16 29 36.3	0.0
SGKT	Sivrigoynuk	149.49	315	i P	PKPbc	16 29 36.9	+0.4
CLL	Collm	149.53	349	ePKPbc	PKPbc	16 29 35.5	-0.7
CLL				ePKPab	PKPab	16 29 41.4	-0.1
CLL	Collm	149.53	349	⇑iPKPbc	PKPbc	16 29 35.7	-0.5
	comp=Z,27nm,0.8s						
CLL				i PKiKP	PKiKP	16 29 38.5	+1.2
	comp=Z,37nm,0.9s						
CLL				i PKPab	PKPab	16 29 41.1	-0.4
	comp=Z,39nm,1.1s						
CLL				epPKPab	pPKPab	16 30 18.0	+3.5
CLL				esPKPbc		16 30 25.0	
CLL	Collm	149.53	349	⇑iPKP	PKPbc	16 29 35.7	-0.5
CLL				i		16 29 38.5	
TRPA	Tarpa	149.58	335	⇓iP	PKPbc	16 29 36.4	-0.1
UPC	Upice	149.63	344	ePKPbc	PKPbc	16 29 36.8	+0.3
UPC				ePKPab	PKPab	16 29 42.4	+0.4
HGH	Gray Hill	149.63	8	eP	PKPdf	16 29 33.3	+1.6
DPC	Dobruska-Polom	149.69	344	ePKPbc	PKPbc	16 29 36.8	+0.1
BRG	Berggiesshubel	149.76	347	ePKPbc	PKPbc	16 29 36.3	-0.5
BRG				ePKPab	PKPab	16 29 42.8	+0.3
BRG	Berggiesshubel	149.76	347	ePKP	PKPbc	16 29 36.4	-0.4
	comp=Z,21nm,1.0s						
BRG				i		16 29 43.4	
	comp=Z,10nm,0.8s						
BRG				epPKP	pPKPdf	16 30 18.2	+12
	comp=Z,36nm,1.8s						
PVCC	Panska Ves	149.95	346	ePKPbc	PKPbc	16 29 37.1	-0.2
MLR	Muntele Rosu	150.07	328	PKPbc	PKPbc	16 29 38.0	+0.2
	comp=Z,26nm,1.1s,baz=50,slow=8.0,SNR=10						
MLR	Muntele Rosu	150.07	328	⇑iP	PKPbc	16 29 37.6	-0.1
MLR	Muntele Rosu	150.07	328	⇑P	PKPbc	16 29 37.6	-0.2
BUG	Bochum--Univer	150.14	356	ePKPab	PKPab	16 29 45.5	+1.5
MOX	Moxa	150.41	350	ePKP	PKPbc	16 29 37.8	-0.6
	comp=Z,56nm,1.9s						
MOX	Moxa	150.41	350	ePKPbc	PKPbc	16 29 37.9	-0.5
MOX				ePKPab	PKPab	16 29 44.8	-0.4
KDHN	Kadinhani	150.41	311	i P	PKPbc	16 29 38.2	-0.6
PRU	Pruhonice	150.46	346	ePKPbc	PKPbc	16 29 38.2	-0.3
UBBA	Unterbreizbach	150.48	352	ePKPbc	PKPbc	16 29 38.4	-0.1
TANN	Tannenbergstha	150.48	349	ePKPbc	PKPbc	16 29 38.0	-0.6
VOIR		150.54	329	⇓iP	PKPbc	16 29 39.3	+0.4
VOIR		150.54	329	⇓P	PKPbc	16 29 39.3	+0.4
VRAC	Vranov	150.57	343	PKPbc	PKPbc	16 29 38.8	0.0
	comp=Z,7.2nm,0.7s,baz=155,slow=0.9,SNR=9.6						
VRAC	Vranov	150.57	343	⇑iP	PKPbc	16 29 40.1	+1.3
VRAC	Vranov	150.57	343	⇑P	PKPbc	16 29 40.1	+1.3
DRGR		150.58	333	⇑iP	PKPbc	16 29 38.2	-0.7
DRGR		150.58	333	⇑P	PKPbc	16 29 38.2	-0.7
VYHS	Vyhne	150.62	339	ePKP	PKPbc	16 29 38.7	-0.2
NKC	Novy Kostel	150.66	349	ePKPbc	PKPbc	16 29 39.0	0.0
NKC				ePKPab	PKPab	16 29 44.7	-1.5
KOLL	Kolacno	150.69	340	ePKP	PKPbc	16 29 39.0	-0.1
PSZ	Piszkesteto	150.75	337	⇓iP	PKPbc	16 29 37.7	-1.6
TREC	Trest	150.88	344	ePKPbc	PKPbc	16 29 39.4	-0.1
UCC	Uccle	150.91	359	PKPbc	PKPbc	16 29 39.3	-0.2
MANZ	Manzenberg	150.96	349	ePKPbc	PKPbc	16 29 39.5	-0.2
MEM	Membach	151.04	357	PKPbc	PKPbc	16 29 40.0	+0.1
MEM				PKPab	PKPab	16 29 48.3	+0.5
BOLV	Bolvadin	151.13	312	i P	PKPbc	16 29 40.7	+0.2
ROTZ	Rotzenmuhle	151.15	349	ePKPbc	PKPbc	16 29 39.5	-0.7
SNF	Seneffe	151.19	359	PKPdf	PKPdf	16 29 34.4	+0.2
SNF				PKPbc	PKPbc	16 29 40.4	+0.2
BCLA	Clavier	151.26	358	PKPbc	PKPbc	16 29 40.2	-0.1
GRA1	Grafenberg Arr	151.40	350	ePKPbc	PKPbc	16 29 40.6	-0.1
GRA1				ePKPab	PKPab	16 29 50.3	+1.0
GRF	Grafenberg Arr	151.40	350	ePKPbc	PKPbc	16 29 40.6	-0.1
GRF				ePKPab	PKPab	16 29 50.3	+1.0
GRF	Grafenberg Arr	151.40	350	ePKP	PKPbc	16 29 40.6	-0.1
GRF				ePKP	PKPab	16 29 50.3	+1.0
KHC	Kasperske Hory	151.48	346	ePKPdf	PKPdf	16 29 34.0	-0.7
KHC				ePKPbc	PKPbc	16 29 40.7	-0.2
KHC				ePKPab	PKPab	16 29 46.4	-3.3
KHC	Kasperske Hory	151.48	346	ePKP	PKPbc	16 29 40.7	-0.2
KHC				e		16 29 46.4	
GIVF	Givet	151.59	359	⇑iPKP1	PKPbc	16 29 40.2	-1.0
	comp=Z,46nm,0.9s						
DOU	Dourbes	151.60	359	PKPbc	PKPbc	16 29 41.0	-0.1
WET	Wettzell	151.62	347	ePKPbc	PKPbc	16 29 40.8	-0.4
WET				ePKPab	PKPab	16 29 51.1	+0.9
ULDT	Uludag	151.62	316	i P	PKPdf	16 29 37.4	+2.2
GZR	Gura Zlata	151.64	331	⇑iP	PKPbc	16 29 40.5	-0.9
GZR	Gura Zlata	151.64	331	⇑P	PKPbc	16 29 40.5	-0.9
BAIF	Baives	151.65	359	⇑iPKP1	PKPbc	16 29 40.5	-0.8
	comp=Z,37nm,1.0s						
GEC2	GERESS Array S	151.72	346	ePKPbc	PKPbc	16 29 41.1	-0.4
GEC2				ePKPab	PKPab	16 29 51.8	+1.1
GERES	GERESS Array B	151.72	346	PKP	PKPdf	16 29 34.4	-0.6
	comp=Z,1.0nm,0.8s,baz=80,slow=1.5,SNR=6.8						
GERES				PKPbc	PKPbc	16 29 41.1	-0.4
	comp=Z,2.9nm,0.5s,baz=11,slow=1.5,SNR=26						
GDZ	Gediz	151.95	314	i P	PKPbc	16 29 42.2	-0.1
BZS	Buzias	151.97	333	⇓iP	PKPbc	16 29 41.4	-0.8
BZS	Buzias	151.97	333	⇓P	PKPbc	16 29 41.4	-0.7
WLF	Walferdange	151.98	357	PKPbc	PKPbc	16 29 42.5	+0.4
WLF				PKPab	PKPab	16 29 51.1	-0.6
KHAL	Karahalli	152.30	313	i P	PKPbc	16 29 43.2	+0.1
STU	Stuttgart	152.59	352	ePKPab	PKPab	16 29 54.7	+0.4
PKSM	Moragy	152.65	337	⇓iP	PKPbc	16 29 42.3	-1.4
PKSM	Moragy	152.65	337	⇓P	PKPbc	16 29 42.3	-1.4
FLN	La Foliniere	152.74	6	ePKP1	PKPbc	16 29 42.3	-1.5
ROSF	Rostrenen	152.78	10	ePKP1	PKPbc	16 29 42.2	-1.7
	comp=Z,54nm,1.0s						
GOLH	Golhisar	152.80	311	i P	PKPbc	16 29 45.7	+1.4
FUR	Furstenfeldbru	152.86	349	ePKPab	PKPab	16 29 55.6	+0.1
MANT	Manisa	152.88	314	i P	PKPbc	16 29 44.8	+0.4
LDF	La Druitiere	152.94	6	ePKP1	PKPbc	16 29 42.9	-1.3
RJOB	Jochberg	152.97	346	ePKPab	PKPab	16 29 56.5	+0.5
GRR	Gorron	153.07	7	ePKP1	PKPbc	16 29 43.3	-1.2
	comp=Z,56nm,1.0s						
BFO	Black Forest	153.13	353	ePKIKP	PKPdf	16 29 40.6	+3.4
CDF	Champ du Feu	153.15	355	ePKP1	PKPbc	16 29 43.7	-1.0
	comp=Z,19nm,0.9s						
MEZF	Maizieres J'vi	153.19	358	ePKP1	PKPbc	16 29 44.0	-0.8
	comp=Z,18nm,0.8s						
VTS	Vitosha	153.52	327	⇓iP	PKPbc	16 29 46.8	+1.1
VTS	Vitosha	153.52	327	⇓P	PKPbc	16 29 46.8	+1.2
HAU	Haudompre	153.62	356	ePKP1	PKPbc	16 29 44.6	-1.1
TURN	Turunc	153.64	311	i P	PKPbc	16 29 46.8	+0.7
HINF	Hinteralfeld	153.77	355	ePKP1	PKPbc	16 29 44.7	-1.4
PTCC	Patocco-Chiusa	154.09	345	PKP	PKPab	16 29 59.6	-1.2
LJU	Ljubljana	154.12	343	ePKPdf	PKPdf	16 29 37.9	-0.8
LJU				i PKPbc	PKPbc	16 29 46.0	-0.9
GMNA	Gemona	154.25	345	PKP	PKPab	16 30 01.1	-0.3
BOJS	Bojanci	154.40	341	ePKPdf	PKPdf	16 29 38.0	-1.1
BOJS				ePKPbc	PKPbc	16 29 47.1	-0.4
DAVOX	Davos/Dischmat	154.44	350	PKPbc	PKPbc	16 29 47.2	-0.3
	comp=Z,3.9nm,0.4s,baz=320,slow=6.0,SNR=6.3						
DAVOX				PKPab	PKPab	16 30 03.1	+0.8
	comp=Z,6.8nm,0.7s,baz=284,slow=5.9,SNR=6.4						
AVF	Avril sur Loir	154.92	1	ePKP1	PKPbc	16 29 48.2	-0.3
SMF	Signal de Mont	155.06	360	ePKP1	PKPdf	16 29 47.7	+7.8
	comp=Z,42nm,1.4s						
TCF	Toulx Ste Croi	155.39	3	ePKP1	PKPdf	16 29 48.3	+7.9
BNI	Bardonecchia	156.53	355	ePKP2	PKPab	16 30 11.7	+0.5
VMG	Vicchio	156.83	346	PKP	PKPab	16 30 13.5	+1.0
ASS	Assisi	157.39	343	PKP2	PKPab	16 30 14.8	-0.2
NRCA	Norcia	157.47	342	PKP	PKPab	16 30 15.5	+0.1
EVO	Evora	160.37	28	⇑iPKIKP	PKPdf	16 29 46.6	-0.2
	comp=Z,21nm,1.2s						
LIC	Lamto	162.47	150	⇑iPKIKP	PKPdf	16 29 48.3	-1.4
	comp=Z,56nm,1.4s						
LIC	Lamto	162.47	150	ePKIKP	PKPdf	16 29 48.1	-1.6
	comp=Z,50nm,1.4s						
KIC	Kosan Boka	162.72	150	ePKIKP	PKPdf	16 29 48.4	-1.6
	comp=Z,118nm,1.4s						
TIC	Toumodi	162.84	149	ePKIKP	PKPdf	16 29 47.9	-2.2
	comp=Z,16nm,0.2s						
DBIC	Dimbokro	162.94	150	PKP	PKPdf	16 29 48.6	-1.6
	comp=Z,6.2nm,1.1s,baz=172,slow=1.8,SNR=4.0						
DBIC				PKPab	PKPab	16 30 39.1	-0.8
	comp=Z,7.7nm,0.9s,baz=178,slow=6.2,SNR=5.6						
KEST	Kesra	165.14	342	PKPab	PKPab	16 30 48.1	-0.9
	comp=Z,2.7nm,0.8s,baz=2.7,slow=1.8,SNR=6.8						
TORD	Torodi Ar. Bea	171.32	167	PKP	PKPdf	16 29 53.9	-2.3
	comp=Z,3.5nm,1.0s,baz=346,slow=0.4,SNR=12						
TORD				PKPab	PKPab	16 31 16.6	-0.2
	comp=Z,8.3nm,0.9s,baz=184,slow=3.4,SNR=23						
TORD				PP	PP	16 35 06.7	+0.4
	comp=Z,1.5nm,1.1s,baz=205,slow=3.2,SNR=5.4						

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*IDC **01** 16:11:54.4±1.4, 47.12N×155.61E, h0km, mb4.1/6, mb1 4.2/8, mb1mx3.8/24, mbtmp4.0/8, ML3.5/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/42, Error ellipse: s-maj=45.4km s-min=20.7km az=168.0*

*ISCJB **01** 16:11:57.9±1.1, 47.3N±0.1×155.5E±0.2, h33km, mb3.9/6, Error ellipse: s-maj=22.8km s-min=8.8km az=40.4*

*NEIC **01** 16:11:59.8±0.9, 47.18N×155.58E, h35km, Error ellipse: s-maj=19.7km s-min=10.7km az=138.0*

*MOS **01** 16:12:05.3±1.9, 47.92N×154.56E, h52km, mb4.3/4, Error ellipse: s-maj=27.9km s-min=15.8km az=66.6*

ISC 01 16:12:00.1±1.1**, 47.2N**±0.1×**155.5E**±0.2**, h35km, n17, σ0.s51**/17**, mb3.9**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	6.04	13	ePn	Pn	16 13 27.8	+0.9
PETK	Petropavlovsk-	6.04	13	Pn	Pn	16 13 27.3	+0.4
	0.5nm,0.3s,baz=194,slow=10,SNR=15						
PET	Petropavlovsk	6.13	18	ePN	Pn	16 13 27.5	-0.6
PET						16 14 36.4	
PET				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PET	Petropavlovsk	6.13	18	ePn	Pn	16 13 27.5	-0.7
	comp=Z,7.5nm,0.5s						
PET				Sn	Sn	16 14 36.4	-0.6
ASAJ	Asahikawa	9.57	256	Pn	Pn	16 14 14.7	-0.6
	comp=Z,0.6nm,0.3s,baz=54,slow=14,SNR=4.8						
ASAJ	Asahikawa	9.57	256	PN	Pn	16 14 14.7	-0.6
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	32.73	290	P	P	16 18 29.5	+0.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=46,slow=12,SNR=3.7						
MKAR	Makanchi Array	48.18	298	LR	LR	16 41 21.3	
	comp=Z,107nm,19.6s,baz=70,slow=37						
KURK	Kurchatov	48.47	304	P	P	16 20 38.6	-0.2
	comp=Z,1.1nm,0.5s,mb4.1,baz=66,slow=8.6,SNR=5.4						
KURK	Kurchatov	48.47	304	P	P	16 20 38.7	-0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BVAR	Borovoye Array	51.82	310	P	P	16 21 04.9	+0.7
	comp=Z,1.1nm,0.5s,mb4.0,baz=50,slow=6.4,SNR=8.1						
BVAR	Borovoye Array	51.82	310	P	P	16 21 04.9	+0.7
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	54.09	258	P	P	16 21 21.1	-0.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=39,slow=6.8,SNR=4.8						
CMAR	Chiang Mai Arr	54.09	258	P	P	16 21 21.2	-0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	63.12	55	P	P	16 22 23.9	0.0
	comp=Z,1.0nm,1.0s,mb3.9,baz=318,slow=2.4,SNR=4.6						
TXAR	Lajitas Array	75.81	62	P	P	16 23 42.5	0.0
	comp=Z,2.1nm,0.8s,mb4.1,baz=303,slow=4.5,SNR=11						
TXAR	Lajitas Array	75.81	62	P	P	16 23 42.5	0.0
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						

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*ISCJB **01** 16:22:20.5±0.7, 73.52N±0.04×9.0E±0.3, h10km, mb3.4/2, Error ellipse: s-maj=10.5km s-min=5.4km az=174.1*

*BER **01** 16:22:21.7±3.3, 73.50N×8.21E, h0km±73km, ML2.3(NAO)*

*NAO **01** 16:22:21.7±1.8, 73.47N×8.51E, ML2.3*

*IDC **01** 16:22:22.2±1.5, 73.44N×8.64E, h0km, mb3.5/2, mb1 3.7/6, mb1mx3.4/24, mbtmp3.7/6, ML3.8/4, MS3.4/2, Ms1 3.4/2, ms1mx2.9/37, Error ellipse: s-maj=23.2km s-min=11.9km az=85.0*

*NEIC **01** 16:22:22.0±0.8, 73.55N×8.24E, h10km, Error ellipse: s-maj=16.5km s-min=6.8km az=88.0*

*HEL **01** 16:22:54.4±0.6, 71.36N×12.37E, h10km, ML2.3(BER)*

ISC 01 16:22:23.1±0.7**, 73.54N**±0.04×**8.9E**±0.2**, h10km, n29, σ1.s18**/37**, mb3.4**/2**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPB4	Spitsbergen Ar	5.01	18	ePn	Pn	16 23 37.4	-0.7
SPA0	Spitsbergen Ar	5.01	18	Pn	Pn	16 23 38.0	-0.1
	baz=187,slow=14						
SPITS	Spitsbergen Ar	5.01	18	Pn	Pn	16 23 37.9	-0.2
	baz=267,slow=14,SNR=14						
SPITS				Sn	Sn	16 24 36.4	+0.4
	baz=121,slow=21,SNR=1.4						
SPITS	Spitsbergen Ar	5.01	18	Pn	Pn	16 23 37.9	-0.2
SPITS				Sn	Sn	16 24 36.4	+0.4
TRO	Tromso	5.04	136	eP	Pn	16 23 39.9	+1.3
TRO				AML	AML	16 24 40.8	
	comp=Z,9.4nm,0.8s						
KBS	Kingsbay	5.47	6	Pn	Pn	16 23 42.8	-1.6
KBS	Kingsbay	5.47	6	ePn	Pn	16 23 42.7	-1.8
	comp=Z,18nm,0.6s						
LOF	Lofoten	5.64	162	eP	Pn	16 23 48.5	+1.6
LOF				AML	AML	16 24 48.5	
	comp=Z,17nm,0.4s						
KIF	Kilpisjarvi	5.94	134	eP	Pn	16 23 52.0	+1.0
KTK1	Kautokeino	6.46	128	eP	Pn	16 24 01.6	+3.6
KTK1				eSG	Sn	16 25 08.1	-3.5
ARA0	ARCESS Array S	6.61	119	Pn	Pn	16 24 01.2	+1.1
	baz=310,slow=11						
ARA0				Sn	Sn	16 25 13.8	-1.6
	baz=312,slow=22						
ARCES	ARCESS Array B	6.61	119	Pn	Pn	16 24 00.6	+0.5
	comp=Z,3.0nm,0.3s,baz=327,slow=11,SNR=24						
ARCES				Sn	Sn	16 25 13.9	-1.4
	comp=Z,0.6nm,0.3s,baz=312,slow=20,SNR=3.1						
ARCES				LR	LR	16 26 15.6	
	comp=Z,291nm,19.6s,baz=135,slow=35						
ARCES	ARCESS Array B	6.61	119	Pn	Pn	16 24 00.6	+0.5
ARCES				Sn	Sn	16 25 13.9	-1.4
ARCES				LR	LR	16 26 15.6	
ARE0	ARCESS Array S	6.61	119	eP	Pn	16 24 01.9	+1.8
KONS	Konsvik	7.21	166	eP	Pn	16 24 07.9	-0.5
FLOS	Flostrand	7.39	166	eP	Pn	16 24 10.1	-0.8
MOR8	Moi Rana	7.64	163	eP	Pn	16 24 13.1	-1.1
MOR8				eSG	Sn	16 25 33.9	-6.7
MOR8				AML	AML	16 25 37.3	
	comp=Z,8.7nm,0.4s						
MOR8	Moi Rana	7.64	163	eP	Pn	16 24 13.1	-1.1
MOR8				eSg	Sn	16 25 33.9	-6.7
SGF	Sodankyl	8.46	127	eP	Pn	16 24 26.7	+1.3
VRF	Varrio	8.95	120	eP	Pn	16 24 32.5	+0.4
NSS	Namsos	9.11	172	eP	Pn	16 24 33.7	-0.8
APA0	Apatity Array	9.91	115	Pn	Pn	16 24 45.1	-0.2
	baz=309,slow=16						
NB2	NORSAR Subarra	12.58	175	Pn	Pn	16 25 21.0	-0.8
	baz=356,slow=14						
NOA	NORSAR Array B	12.58	175	Pn	Pn	16 25 20.7	-1.2
	comp=Z,0.3nm,0.3s,baz=338,slow=18,SNR=4.0						
HFS	Hagfors	13.59	170	Pn	Pn	16 25 33.6	-2.0
	comp=Z,0.3nm,0.3s,baz=350,slow=13,SNR=7.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HFS				LR	LR	16 31 12.5	
	comp=Z,170nm,21.4s,baz=279,slow=39						
HFS	**Hagfors**	**13.59**	**170**	Pn	**Pn**	**16 25 34.2**	**-1.3**
	baz=358,slow=14						
FIA0	**FINESS Array S**	**13.71**	**143**	Pn	**Pn**	**16 25 36.9**	**-0.4**
	baz=348,slow=11						
AKASG	**Malin Array Be**	**24.53**	**148**	P	**P**	**16 27 44.0**	**+1.7**
	comp=Z,0.3nm,0.2s,mb3.4,baz=345,slow=9.6,SNR=3.1						
GERES	**GERESS Array B**	**24.87**	**172**	P	**P**	**16 27 46.6**	**+1.2**
	comp=Z,0.9nm,0.8s,mb3.3,baz=13,slow=13,SNR=4.2						

*ISCJB **01** 16:28:08.8±0.5, 4225N±004×14301E±006, h65km±3km, mb3.7/9, Error ellipse: s-maj=7.7km s-min=6.2km az=43.6*
*MOS **01** 16:28:08.8±1.0, 4225N×14303E, h69km, mb4.2/7, Error ellipse: s-maj=17.7km s-min=11.6km az=86.1*
*NEIC **01** 16:28:10.2, 4233N×14301E, h52km, MG3.4(JMA), After JMA.*
NEIC Recorded [2 JMA] in south-central Hokkaido.
*JMA **01** 16:28:10.2±0.1, 4233N×14301E, h52km±1km, M3.4*
JMA Felt II J1.
*IDC **01** 16:28:12.2±2.1, 4230N×14291E, h81km±15km, mb3.5/9, mb1 3.5/11, mb1mx3.4/24, mbtmp3.5/11, Error ellipse: s-maj=24.4km s-min=14.9km az=105.0*

ISC 01 16:28:09.9±0.5**, 4226N**±004×**14302E**±006**, h59**km±4km**, n34, σ1^{s}00**/41**, mb3.8**/9**, 5C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.20**	**275**	⇑P	**Pn**	**16 28 18.5**	**-0.7**
JEM	**Erimo**	**0.27**	**157**	⇑P	**Pn**	**16 28 19.9**	**+0.2**
ERM	**Erimo**	**0.27**	**157**	*e*PN	**Pn**	**16 28 19.8**	**+0.1**
ERM				*e*S	**Sn**	**16 28 26.2**	**-0.5**
JCH	**Churui**	**0.43**	**36**	⇑P	**Pn**	**16 28 20.4**	**-0.7**
JCH				*e*S	**Sn**	**16 28 28.4**	**-0.8**
JBT2	**Biratori 2**	**0.71**	**317**	⇓P	**Pn**	**16 28 23.5**	**-0.6**
JBT2				*e*S	**Sn**	**16 28 34.8**	**+0.2**
JOB	**Onbets**	**0.88**	**43**	⇑P	**Pn**	**16 28 26.5**	**+0.2**
JOB				*e*S	**Sn**	**16 28 39.3**	**+0.9**
JFR	**Furan**	**0.95**	**341**	P	**Pn**	**16 28 25.6**	**-1.6**
JAR	**Ashorobuto**	**1.17**	**28**	⇑P	**Pn**	**16 28 29.3**	**-0.8**
JAR				*e*S	**Sn**	**16 28 43.5**	**-1.7**
JEW	**Eniwo**	**1.29**	**297**	⇓P	**Pn**	**16 28 31.6**	**-0.1**
JEW				*e*S	**Sn**	**16 28 48.8**	**+0.7**
JAB	**Ashibetsu**	**1.37**	**335**	P	**Pn**	**16 28 32.6**	**-0.2**
ASAJ	**Asahikawa**	**1.88**	**351**	P	**Pn**	**16 28 40.0**	**+0.4**
	37nm,0.3s,baz=198,slow=16,SNR=310						
ASAJ				S	**Sn**	**16 29 04.9**	**+2.7**
	15nm,0.3s,baz=15,slow=32,SNR=12						
ASAJ	**Asahikawa**	**1.88**	**351**	PN	**Pn**	**16 28 40.0**	**+0.4**
ASAJ				S	**Sn**	**16 29 04.9**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,37nm,0.3s						
ASAJ				smax			
	comp=N,15nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.73**	**49**	*e*PN	**Pn**	**16 28 52.0**	**+0.7**
YUK				*e*S	**Sn**	**16 29 24.9**	**+1.8**
YUK				pmax	pmax		
	comp=Z,200nm,0.3s						
YUK				smax			
	comp=N,550nm,0.5s						
YUK				smax			
	comp=E,370nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.69**	**358**	*e*PN	**Pn**	**16 29 20.0**	**+1.9**
MJAR	**Matsushiro Arr**	**6.82**	**215**	P	**Pn**	**16 29 48.5**	**+1.3**
	comp=E,0.4nm,0.3s,baz=20,slow=15,SNR=5.7						
KSRS	**Korea Array**	**12.55**	**253**	P	**Pn**	**16 31 08.4**	**+2.9**
	comp=E,0.2nm,0.3s,baz=64,slow=14,SNR=3.7						
SONM	**Songino Array**	**26.29**	**295**	P	**P**	**16 33 39.0**	**-0.5**
	comp=E,1.1nm,0.7s,mb3.5,baz=74,slow=7.4,SNR=8.2						
SONM	**Songino Array**	**26.29**	**295**	P	**P**	**16 33 39.0**	**-0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.49**	**308**	P	**P**	**16 35 33.7**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.0,baz=87,slow=7.6,SNR=8.2						
ZALV	**Zalesovo Beam**	**39.49**	**308**	P	**P**	**16 35 33.7**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**42.59**	**298**	P	**P**	**16 35 59.1**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.7,baz=82,slow=11,SNR=15						
MKAR	**Makanchi Array**	**42.59**	**298**	P	**P**	**16 35 59.2**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**43.85**	**304**	P	**P**	**16 36 09.8**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.2,baz=77,slow=8.9,SNR=8.9						
KURK	**Kurchatov**	**43.85**	**304**	P	**P**	**16 36 09.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**44.19**	**251**	P	**P**	**16 36 12.6**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.2,baz=51,slow=7.1,SNR=3.4						
BVAR	**Borovoye Array**	**48.10**	**309**	P	**P**	**16 36 42.9**	**-0.4**
	comp=Z,1.0nm,0.4s,mb4.2,baz=73,slow=8.7,SNR=6.6						
BVAR	**Borovoye Array**	**48.10**	**309**	P	**P**	**16 36 42.9**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**66.13**	**189**	P	**P**	**16 38 51.8**	**+1.0**
	comp=Z,0.5nm,1.0s,mb3.5,baz=9.2,slow=8.1,SNR=2.9						
ASAR	**Alice Springs**	**66.13**	**189**	P	**P**	**16 38 51.8**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HFS	**Hagfors**	**69.84**	**336**	P	**P**	**16 39 12.3**	**-1.4**
	comp=Z,2.9nm,0.8s,mb4.2,baz=43,slow=6.7,SNR=8.1						
HFS	**Hagfors**	**69.84**	**336**	P	**P**	**16 39 12.3**	**-1.4**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TXAR	**Lajitas Array**	**85.98**	**53**	P	**P**	**16 40 43.4**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.5,baz=316,slow=5.0,SNR=3.7						
SIV	**San Ignacio**	**146.64**	**46**	PKPbc	PKPbc	16 47 45.1	+0.1
	comp=Z,1.0nm,0.7s,baz=268,slow=2.9,SNR=6.5						
VNA2	**Neumayer--Watz**	**147.67**	**198**	*e*	PKPdf	16 47 47.4	+3.9
VNA2				*e*		16 47 55.7	

*ISCJB **01** 16:34:11.1±0.5, 5142N±003×1609E±002, h0km, Error ellipse: s-maj=3.9km s-min=2.1km az=13.1*
*NEIC **01** 16:34:12.0±0.5, 5152N×16.11E, h5km, ML3.0(SZGRF), Error ellipse: s-maj=6.1km s-min=4.0km az=203.0*
*IPEC **01** 16:34:12.0±0.5, 5152N×16.15E, h5km±2km, ML2.4/2, Error ellipse: s-maj=3.0km s-min=1.5km az=30.0*
*BGR **01** 16:34:12.1±0.5, 5155N×16.12E, h1km, ML3.0, Error ellipse: s-maj=6.7km s-min=3.3km az=12.0*
*CSEM **01** 16:34:13.9±0.1, 5144N×1608E, h1km, ML3.3/5, Error ellipse: s-maj=2.4km s-min=1.3km az=10.0*
*WAR **01** 16:34:13.1, 5150N×16.10E, Mw2.7*
*PRU **01** 16:34:13.2, 5146N×1607E, h0km*
*VIE **01** 16:34:14.8±0.3, 5133N×1586E, h0km, mb2.4/3, ML3.0/3, Error ellipse: s-maj=2.6km s-min=1.9km az=87.0, Suspected Mining induced.*

ISC 01 16:34:11.6±0.4**, 5151N**±002×**1612E**±003**, h0**km**, n51, σ0^{s}86**/98**, 4C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 34 25.4**	**+0.8**
KSP				*e*Sg	**Sg**	**16 34 34.4**	**+1.0**
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 34 25.4**	**+0.8**
KSP				*e*Sg	**Sg**	**16 34 34.5**	**+1.1**
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 34 25.1**	**+0.5**
KSP				Sg	**Sg**	**16 34 33.9**	**+0.5**
KSP	**Ksiaz**	**0.68**	**170**	⇓*i*Pg	**Pg**	**16 34 25.4**	**+0.8**
KSP				*i* Sg	**Sg**	**16 34 34.4**	**+1.0**
UPC	**Upice**	**1.01**	**184**	*e*PG	**Pg**	**16 34 31.4**	**+0.5**
DPC	**Dobruska-Polom**	**1.17**	**173**	*e*Pg	**Pg**	**16 34 34.2**	**+0.2**
DPC				*e*Sg	**Sg**	**16 34 51.2**	**+2.1**
DPC	**Dobruska-Polom**	**1.17**	**173**	*e*PG	**Pg**	**16 34 34.2**	**+0.2**
DPC				*e*SG	**Sg**	**16 34 49.1**	**-0.1**
	comp=Z,42nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**225**	Pg	**Pg**	**16 34 38.2**	**+0.1**
PVCC				*e*Sg	**Sg**	**16 34 56.4**	**+0.3**
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG	**Pg**	**16 34 38.2**	**+0.1**
PVCC				*e*SG	**Sg**	**16 34 56.9**	**+0.8**
	comp=Z,185nm,0.2s						
BRG	**Berggiesshubel**	**1.51**	**246**	*e*Pn	**Pn**	**16 34 39.7**	**-0.1**
BRG				*e*Sg	**Sg**	**16 35 00.8**	**+0.8**
BRG	**Berggiesshubel**	**1.51**	**246**	PN	**Pn**	**16 34 39.2**	**-0.6**
BRG				PG	**Pg**	**16 34 40.6**	**+0.1**
BRG				SG	**Sg**	**16 35 00.8**	**+0.8**
	comp=Z,88nm,0.5s						
PRU	**Pruhonice**	**1.82**	**214**	*e*Pn	**Pn**	**16 34 43.8**	**-0.3**
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**	**16 34 44.0**	**-0.1**
PRU				*e*PG	**Pg**	**16 34 45.6**	**-0.9**
PRU				*e*SG	**Sg**	**16 35 08.9**	**-1.2**
	comp=Z,48nm,0.4s						
FBE	**Freiberg**	**1.83**	**252**	*e*Sg	**Sg**	**16 35 10.0**	**-0.4**
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**16 34 45.4**	**-0.6**
CLL				*e*Pg	**Pg**	**16 34 48.0**	**-1.1**
CLL				*e*Sg	**Sg**	**16 35 15.5**	**+1.0**
CLL	**Collm**	**1.96**	**265**	Pg	**Pg**	**16 34 48.0**	**-1.1**
CLL				Sg	**Sg**	**16 35 15.5**	**+1.0**
CLL	**Collm**	**1.96**	**265**	*i* Pn	**Pn**	**16 34 45.5**	**-0.5**
CLL				*e*Pg	**Pg**	**16 34 48.0**	**-1.1**
CLL				*i* x	x	16 34 51.6	
CLL				*i* Sg	**Sg**	**16 35 14.6**	**+0.1**
	comp=Z,34nm,0.7s						
CLL	**Collm**	**1.96**	**265**	*i* Pn	**Pn**	**16 34 45.5**	**-0.5**
CLL				*e*Pg	**Pg**	**16 34 48.0**	**-1.1**
CLL				*i* Sg	**Sg**	**16 35 14.6**	**+0.1**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*Pn	**Pn**	**16 34 48.0**	**-0.1**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG	**Pg**	**16 34 52.2**	**+0.1**
OKC				*e*SG	**Sg**	**16 35 18.4**	**-1.1**
	comp=Z,58nm,0.7s						
VRAC	**Vranov**	**2.23**	**172**	*e*Pn	**Pn**	**16 34 49.7**	**0.0**
VRAC				*e*Sg	**Sg**	**16 35 22.4**	**-0.7**
	comp=Z,19nm,0.5s						
TREC	**Trest**	**2.26**	**190**	*e*PN	**Pn**	**16 34 50.6**	**+0.5**
TREC				*e*PG	**Pg**	**16 34 53.5**	**-1.3**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pn	**Pn**	**16 34 53.7**	**+0.8**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pg	**Pg**	**16 34 57.2**	**-1.5**
KRUC				*e*Sg	**Sg**	**16 35 28.3**	**-2.3**
	comp=Z,14nm,0.4s						
TANN	**Tannenbergstha**	**2.56**	**246**	*e*Pn	**Pn**	**16 34 54.5**	**+0.2**
TANN				*e*Sg	**Sg**	**16 35 33.7**	**0.0**
NKC	**Novy Kostel**	**2.65**	**243**	*e*Pn	**Pn**	**16 34 55.4**	**-0.1**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**16 34 55.7**	**+0.2**
NKC				*e*PG	**Pg**	**16 35 02.4**	**0.0**
NKC				*e*SG	**Sg**	**16 35 36.7**	**0.0**
	comp=Z,68nm,0.3s						
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**16 35 02.8**	**+0.1**
OJC				*e*Sg	**Sg**	**16 35 37.1**	**-0.1**
OJC	**Ojcow**	**2.67**	**118**	*e*Sg	**Sg**	**16 35 38.7**	**+1.5**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**16 34 58.7**	**0.0**
KHC				*e*PG	**Pg**	**16 35 05.0**	**-1.8**
KHC				*e*SN	**Sn**	**16 35 33.9**	**-0.2**
KHC				*e*SG	**Sg**	**16 35 42.7**	**-1.5**
	comp=Z,16nm,0.5s						
MGBB	**Grossbuechelbe**	**2.92**	**240**	⇓*i*Pn	**Pn**	**16 34 59.6**	**+0.4**
MANZ	**Manzenberg**	**2.97**	**241**	*e*Pn	**Pn**	**16 35 00.4**	**+0.6**
MANZ				*e*Sg	**Sg**	**16 35 49.1**	**+2.2**
MOX	**Moxa**	**2.97**	**255**	*e*Pn	**Pn**	**16 35 00.8**	**+1.0**
MOX				*e*Sg	**Sg**	**16 35 48.0**	**+1.2**
MOX	**Moxa**	**2.97**	**255**	*e*PN	**Pn**	**16 35 00.8**	**+1.0**
MOX				*e*PG	**Pg**	**16 35 08.2**	**-0.2**
MOX				*e*SG	**Sg**	**16 35 48.0**	**+1.2**
ROTZ	**Rotzenmuhle**	**3.04**	**236**	*e*Pn	**Pn**	**16 35 01.5**	**+0.6**
ROTZ				*e*Sg	**Sg**	**16 35 48.0**	**-1.2**
GEC2	**GERESS Array S**	**3.09**	**211**	*e*Pn	**Pn**	**16 35 02.0**	**+0.5**
WET	**Wettzell**	**3.15**	**222**	*e*Pn	**Pn**	**16 35 02.6**	**+0.3**
WET	**Wettzell**	**3.15**	**222**	*e*Pn	**Pn**	**16 35 02.6**	**+0.2**
KOLL	**Kolacno**	**3.29**	**152**	*e*PN	**Pn**	**16 35 05.3**	**+1.1**
KOLL				*e*PG	**Pg**	**16 35 13.9**	**-0.6**
KOLL				*e*SG	**Sg**	**16 35 55.6**	**-1.5**
ZST	**Bratislava**	**3.38**	**169**	*e*SG	**Sg**	**16 35 59.9**	**-0.2**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pg**	**16 35 16.5**	**-0.3**
NIE				*e*S	**Sg**	**16 36 01.7**	**+0.8**
VYHS	**Vyhne**	**3.50**	**149**	*e*PN	**Pn**	**16 35 07.4**	**+0.3**
VYHS				*e*PG	**Pg**	**16 35 17.6**	**-0.9**
VYHS				*e*SG	**Sg**	**16 36 05.2**	**+1.4**
CONA	**Conrad Observa**	**3.59**	**183**	⇓*i*Pn	**Pn**	**16 35 09.4**	**+1.0**
CONA				⇓*i*Sg	**Sg**	**16 36 07.4**	**+0.5**
	comp=Z,24nm,0.5s						
CSNA	**Conrad Observa**	**3.59**	**183**	⇑*i*Pn	**Pn**	**16 35 09.4**	**+1.0**
CSNA				⇑*i*Sg	**Sg**	**16 36 07.4**	**+0.5**
	comp=Z,15nm,0.4s						
GRA1	**Grafenberg Arr**	**3.61**	**242**	Sg	**Sg**	**16 36 07.5**	**0.0**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Sg	**Sg**	**16 36 07.5**	**0.0**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Sg	**Sg**	**16 36 07.5**	**0.0**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**16 35 09.0**	**-0.6**
BSD				*i* S	**Sn**	**16 35 51.0**	**-2.6**
MOA	**Molln**	**3.86**	**199**	⇑*i*Pn	**Pn**	**16 35 12.6**	**+0.5**
MOA				⇑*i*Sg	**Sg**	**16 36 15.2**	**-0.3**
	comp=Z,22nm,0.6s						
HROE	**Hohe Rhon--Fla**	**3.89**	**258**	⇓*i*Pn	**Pn**	**16 35 12.6**	**+0.1**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*PN	**Pn**	**16 35 13.0**	**+0.5**
STHS				*e*PG	**Pg**	**16 35 26.0**	**-0.1**
STHS				*e*SG	**Sg**	**16 36 21.4**	**+4.9**

*TEH **01** 16:55:01.8, 3044N×5655E, h20km, ML3.7*
*CSEM **01** 16:55:22.2±0.1, 30.11N×5662E, h2km, ML3.7, Error ellipse: s-maj=3.0km s-min=2.0km az=23.0*
*THR **01** 16:55:22.5±0.4, 30.10N×5669E, h14km±3km, ML3.8*
*ISCJB **01** 16:55:23.5±0.6, 3009N±005×5661E±004, h14km±6km, Error ellipse: s-maj=8.1km s-min=6.0km az=163.4*

ISC 01 16:55:24.4±0.8**, 3013N**±005×**5672E**±005**, h7**km±8km**, n42, σ1^{s}33**/54**, 1D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.15**	**168**	*e*Pg	**Pg**	**16 55 26.4**	**-1.1**
KRBR				*e*Sg	**Sg**	**16 55 29.4**	**-0.3**
KRBR				AML	AML	16 55 29.9	
	comp=E,56µm,0.2s						
KRBR				AML	AML	16 55 29.9	
	comp=N,70µm,0.2s						
IBAF	**Bafgh**	**1.76**	**326**	*e*Pn	**Pn**	**16 55 54.2**	**-1.2**
IBAF	**Bafgh**	**1.76**	**326**	*e*Pn	**Pn**	**16 55 54.2**	**-1.2**
IBAF				*e*Sn	**Sn**	**16 56 12.8**	**-5.3**
IBAF				*e*		16 56 21.2	
IMEH	**Mehriz**	**2.21**	**305**	*e*Sn	**Sn**	**16 56 24.0**	**-5.1**
IMEH	**Mehriz**	**2.21**	**305**	*e*Pn	**Pn**	**16 56 00.8**	**-0.7**
IMEH				*e*Sn	**Sn**	**16 56 24.0**	**-5.1**
IMEH				*e*		16 56 32.8	
ICHK	**Chekchek**	**2.89**	**317**	*e*Pn	**Pn**	**16 56 10.2**	**-0.7**
ICHK				*e*Sn	**Sn**	**16 56 40.3**	**-5.7**
ICHK	**Chekchek**	**2.89**	**317**	*e*Pn	**Pn**	**16 56 10.2**	**-0.7**
ICHK				*e*Sn	**Sn**	**16 56 40.3**	**-5.7**
ICHK				*e*		16 56 57.5	
IKOO	**Kooshah**	**3.01**	**40**	*e*Pn	**Pn**	**16 56 13.9**	**+1.4**
IKOO	**Kooshah**	**3.01**	**40**	*e*Pn	**Pn**	**16 56 13.9**	**+1.4**
IKOO				*e*	**Sg**	**16 57 08.5**	**+7.5**
ISAD	**Sadrabad**	**3.15**	**305**	⇓*e*Pn	**Pn**	**16 56 14.2**	**-0.3**
ISAD				*e*	**Sg**	**16 57 07.3**	**+1.5**
IPAR	**Pars**	**3.20**	**266**	*e*Pn	**Pn**	**16 56 17.5**	**+2.3**
IPAR	**Pars**	**3.20**	**266**	*e*Pn	**Pn**	**16 56 17.9**	**+2.7**
IPAR				*e*	**Sg**	**16 57 17.2**	**+10**
ISRV	**Sarvestan**	**3.23**	**258**	*e*Pn	**Pn**	**16 56 18.7**	**+3.2**
ISRV	**Sarvestan**	**3.23**	**258**	*e*Pn	**Pn**	**16 56 18.1**	**+2.6**
ISRV				*e*		16 57 19.9	
ITEG	**Tejag**	**3.25**	**32**	*e*Pn	**Pn**	**16 56 16.7**	**+0.8**
ITEG				*e*Sn	**Sn**	**16 56 52.2**	**-2.7**
ITEG	**Tejag**	**3.25**	**32**	*e*Pn	**Pn**	**16 56 16.5**	**+0.6**
ITEG				*e*Sn	**Sn**	**16 56 52.7**	**-2.2**
ITEG				*e*		16 57 14.0	
IMOK	**Mouk**	**3.66**	**254**	*e*Pn	**Pn**	**16 56 24.1**	**+2.7**
IMOK	**Mouk**	**3.66**	**254**	*e*Pn	**Pn**	**16 56 23.9**	**+2.5**
IMOK				*e*		16 57 25.4	
IDAH	**Dahanechah**	**3.74**	**45**	*e*Pn	**Pn**	**16 56 24.7**	**+2.1**
IDAH	**Dahanechah**	**3.74**	**45**	*e*Pn	**Pn**	**16 56 24.7**	**+2.1**
IDAH				*e*		16 57 28.8	
GHIR	**Ghir-Karzin**	**3.75**	**242**	*e*Pn	**Pn**	**16 56 21.6**	**-1.1**
IMON	**Monand**	**3.95**	**39**	*e*Pn	**Pn**	**16 56 27.6**	**+2.1**
IMON	**Monand**	**3.95**	**39**	*e*Pn	**Pn**	**16 56 27.5**	**+2.0**
IMON				*e*		16 56 46.8	
NASN	**Na'in**	**4.27**	**309**	*e*Pn	**Pn**	**16 56 29.7**	**-0.2**
NASN				*e*Sg	**Sg**	**16 57 35.1**	**-6.5**
NASN				AML	AML	16 57 40.4	
	comp=E,53nm,0.5s						
NASN				AML	AML	16 57 42.8	
	comp=N,46nm,0.8s						
NASN	**Na'in**	**4.27**	**309**	*e*Pn	**Pn**	**16 56 29.7**	**-0.2**
	SNR=52						
NASN				*e*Sg	**Sg**	**16 57 35.2**	**-6.5**
	SNR=90						
IZEF	**Zefreh**	**4.66**	**307**	*e*Pn	**Pn**	**16 56 35.2**	**0.0**
IZEF	**Zefreh**	**4.66**	**307**	*e*Pn	**Pn**	**16 56 36.6**	**+1.4**
IZEF				*e*		16 58 00.4	
IKLH	**Kolahrood**	**5.41**	**307**	*e*Pn	**Pn**	**16 56 46.4**	**+0.8**
IKLH	**Kolahrood**	**5.41**	**307**	*e*Pn	**Pn**	**16 56 46.4**	**+0.8**
IKLH				*e*		16 58 16.8	
IPIR	**Pirpir**	**5.60**	**299**	*e*Pn	**Pn**	**16 56 47.5**	**-0.6**
IPIR	**Pirpir**	**5.60**	**299**	*e*Pn	**Pn**	**16 56 48.0**	**-0.1**
IPIR				*e*		16 58 46.5	
ISFB	**Sefidab**	**5.67**	**319**	*e*Pn	**Pn**	**16 56 47.8**	**-1.3**
ISFB	**Sefidab**	**5.67**	**319**	*e*Pn	**Pn**	**16 56 48.6**	**-0.5**
ISFB				*e*		16 58 27.4	
IANJ	**Anjilo**	**5.82**	**337**	*e*Pn	**Pn**	**16 56 48.8**	**-2.4**
IANJ	**Anjilo**	**5.82**	**337**	*e*Pn	**Pn**	**16 56 48.8**	**-2.4**
IANJ				*e*		16 58 33.8	
IPAY	**Payeh**	**6.58**	**16**	*e*Pn	**Pn**	**16 57 01.4**	**-0.2**
IPAY				*e*		16 57 14.1	
IDMV	**Damavand**	**6.71**	**325**	*e*Pn	**Pn**	**16 57 01.3**	**-2.1**
IDMV	**Damavand**	**6.71**	**325**	*e*Pn	**Pn**	**16 57 01.3**	**-2.1**
IDMV				*e*		16 59 29.2	
KBD	**Kabd**	**7.92**	**265**	*e*P	**Pn**	**16 57 20.2**	**+0.2**
RDF	**Al-Radifah**	**8.08**	**264**	*e*P	**Pn**	**16 57 22.4**	**+0.2**
	baz=261						
RDF				AML	AML	16 58 51.0	
	comp=Z,5.0nm,0.5s,baz=261						
MIB	**Mutribah**	**8.15**	**270**	*e*P	**Pn**	**16 57 22.2**	**-0.9**
NAY	**Al-Naaiem**	**8.29**	**266**	*e*P	**Pn**	**16 57 25.0**	**-0.2**
	baz=264						
NAY				AML	AML	16 58 53.5	
	comp=Z,2.0nm,0.5s,baz=264						

IDC 01 17:18:39.3±1.8**, 1678S**×**17831W, h0**km**, mb4.0**/5**, mb1 4.3**/5**, mb1mx3.9**/16**, mbtmp4.0**/5**, Error ellipse: s-maj=194.9km s-min=24.0km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.27**	**240**	P	P	17 26 10.3	+0.4
	1.9nm,0.9s,baz=95,slow=9.8,SNR=3.3						
ASAR	**Alice Springs**	**45.20**	**253**	P	P	17 26 58.0	-0.4
	7.1nm,0.6s,baz=88,slow=8.2,SNR=150						
NVAR	**Mina Array Bea**	**78.55**	**44**	P	P	17 30 44.2	+1.5
	0.4nm,0.7s,baz=221,slow=8.0,SNR=3.2						
TXAR	**Lajitas Array**	**85.31**	**58**	P	P	17 31 18.8	+0.3
	0.6nm,0.8s,baz=216,slow=6.2,SNR=8.3						
PDAR	**Pinedale Array**	**86.47**	**43**	P	P	17 31 23.4	-0.6
	0.4nm,0.7s,baz=235,slow=3.2,SNR=3.6						

GUC 01 17:24:25.0±0.4**, 2293S**×**6981W, h55**km±3km**, MD3.5, ML3.0, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	**Pedro de Valdi**	**0.36**	**21**	⇑*i*P	Pn	17 24 35.5	+0.4
PECH				*i* S	Sn	17 24 43.5	+1.1
PECH				AML	AML	17 24 45.5	
	comp=E,2µm,0.1s						
CEN1	**Los Morros**	**0.58**	**218**	⇓*i*P	Pn	17 24 39.6	+2.1
CEN1				*i* S	Sn	17 24 51.6	+5.1
LVC	**Limon Verde**	**0.89**	**69**	*e*P	Pn	17 24 42.2	+0.8
LVC				*i* S	Sn	17 24 55.4	+1.9
TOCH	**Tocopilla**	**0.91**	**337**	⇑*i*P	Pn	17 24 42.0	+0.3
TOCH				*i* S	Sn	17 24 54.9	+1.0
TOCH				AML	AML	17 24 59.1	
	comp=E,952nm,0.1s						
ANCH	**Antofagasta**	**0.93**	**216**	⇑*i*P	Pn	17 24 42.0	+0.2
ANCH				*i* S	Sn	17 24 55.0	+0.8
ANCH				AML	AML	17 24 57.8	
	comp=E,1µm,0.1s						
SPCH	**San Pedro de A**	**1.49**	**89**	AML	AML	17 25 15.4	
	comp=E,388nm,0.6s						
CPN1	**Cerro Paranal**	**1.77**	**198**	AML	AML	17 25 18.1	
	comp=E,240nm,0.5s						
PB01	**Plate Boundary**	**1.91**	**9**	AML	AML	17 25 26.9	
	comp=E,225nm,0.2s						

*NEIC **01** 17:31:59.8, 1542N×9671W, h16km, MD4.0(MEX), After MEX.*

MEX 01 17:31:59.8±0.5**, 1542N**×**9671W, h16**km±10km**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.68**	**59**	*i* P	Pg	17 32 10.6	-2.4
HUIG				*i* S	Sg	17 32 19.1	-2.9
VHO	**Vista Hermosa**	**1.65**	**359**	*i* P	Pn	17 32 25.2	-2.9
VHO				*i* S	Sn	17 32 44.1	-4.8
PNIG	**Pinotepa**	**1.68**	**306**	*i* P	Pn	17 32 25.9	-2.6
PNIG				*i* S	Sn	17 32 44.2	-5.4
CMIG	**Matias Romero**	**2.42**	**46**	*i* P	Pn	17 32 35.1	-3.5
CMIG				*i* S	Sn	17 33 03.6	-4.4
TPIG	**Tehuac#an**	**3.05**	**348**	*i* S	Sn	17 33 20.5	-3.1

GUC 01 17:43:38.7±0.5**, 2317S**×**7000W, h37**km±6km**, MD3.8, ML3.6, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.28**	**221**	⇓*i*P	Pn	17 43 49.4	+2.8
CEN1				*i* S	Sn	17 43 57.1	+5.0
CEN1				AML	AML	17 44 00.4	
	comp=N,3µm,0.2s						
MECH	**Mejillones**	**0.42**	**279**	⇑*i*P	Pn	17 43 47.9	-0.4
MECH				*i* S	Sn	17 43 54.7	-0.3
MECH				AML	AML	17 43 56.9	
	comp=E,9µm,0.4s						
ANCH	**Antofagasta**	**0.63**	**217**	⇑*i*P	Pn	17 43 50.6	-0.6
ANCH				*i* S	Sn	17 43 59.9	-0.1
ANCH				AML	AML	17 44 01.9	
	comp=E,4µm,0.1s						
PECH	**Pedro de Valdi**	**0.65**	**27**	⇑*i*P	Pn	17 43 51.5	+0.1
PECH				*i* S	Sn	17 44 01.3	+0.9
PECH				AML	AML	17 44 01.9	
	comp=E,27µm,0.4s						
TOCH	**Tocopilla**	**1.09**	**350**	*i* P	Pn	17 43 56.9	-0.6
TOCH				*i* S	Sn	17 44 11.3	-0.1
TOCH				AML	AML	17 44 13.7	
	comp=E,4µm,0.3s						
LVC	**Limon Verde**	**1.15**	**61**	*e*P	Pn	17 43 59.4	+1.2
LVC				*i* S	Sn	17 44 15.1	+2.4
LVC				AML	AML	17 44 17.5	
	comp=E,1µm,0.2s						
CPN1	**Cerro Paranal**	**1.49**	**194**	AML	AML	17 44 26.1	
	comp=E,909nm,0.3s						
SPCH	**San Pedro de A**	**1.68**	**81**	AML	AML	17 44 42.1	
	comp=E,2µm,0.4s						
PB01	**Plate Boundary**	**2.17**	**13**	AML	AML	17 44 43.7	
	comp=E,749nm,0.1s						

*BJI **01** 17:47:25.1, 485S×10143E, h15km, mB5.1, mb5.1, Ms5.0, Msz4.7*
*ISCJB **01** 17:47:28.7±0.2, 460S±003×10125E±003, h24km, mb5.0/100, MS4.7/40, Error ellipse: s-maj=5.4km s-min=3.9km az=135.0*
*NEIC **01** 17:47:28.2±0.3, 462S×10136E, h10km, mb5.1/45, Error ellipse: s-maj=9.3km s-min=6.2km az=57.0*
NEIC Felt [II] at Mukomuko.
*GCMT **01** 17:47:28.2±0.5, 474S×10142E, h16km±1km, MW5.3/46, Moment Tensor Solution. s46,c67; s42,c49; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.19±.02; $M_{\theta\theta}$-0.12±.01; $M_{\phi\phi}$-0.06±.02; $M_{r\theta}$0.82±.11; $M_{\theta\phi}$0.15±.01; $M_{\phi r}$-0.61±.09; Best double couple: $M_0$1.04200×10^{17} NP1:ϕ_s316.00000°, δ6.00000°, λ99.00000°. NP2: ϕ_s127.00000°, δ84.00000°, λ89.00000°. Principal axes: T 1.0130, Plg51.0000°, Azm36.0000°; N 0.0580, Plg1.0000°, Azm127.0000°; P -1.0710, Plg39.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **01** 17:47:29, 470S×101.19E, h10km, Mw5.5/10*
*MOS **01** 17:47:30.4±1.1, 443S×10147E, h33km, mb5.2/37, MS4.9/8, Error ellipse: s-maj=12.4km s-min=6.2km az=108.2*
*IDC **01** 17:47:31.9±0.6, 444S×10143E, h28km±3km, mb4.4/23, mb1 4.5/24, mb1mx4.5/27, mbtmp4.5/24, ML3.8/1, MS4.5/16, Ms1 4.5/16, ms1mx4.3/35, Error ellipse: s-maj=19.0km s-min=10.1km az=44.0*
*SZGRF **01** 17:47:42.8, 509S×10036E, h33km, mb4.7, Southwest of Sumatera, Indonesia*

ISC 01 17:47:31.0±0.2**, 460S**±003×**10127E**±003**, h26**km**, h26**km±1.3km**:pP-P, n254, σ1^{s}17**/217**, mb5.0**/100**, MS4.7**/40**, 23C-10D, Southern Sumatera**

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

KSI Kapahiang 1.63 55 P **Pn** 17 47 57.4 -0.6
KLI Kotabumi 3.59 94 P **Pn** 17 48 27.7 +2.7
PDSI Padang 3.75 348 P **Pn** 17 48 26.6 -0.7
PPI Padang Panjang 4.21 348 P **Pn** 17 48 33.5 -0.1
RGRI Rengat 4.36 14 P **Pn** 17 48 36.1 +0.5
SBJI Serang 5.07 108 P **Pn** 17 48 48.1 +2.6
656nm,1.0s,3.1nm
PPBI Pangkal Pinang 5.43 64 P **Pn** 17 48 52.8 +2.4
138nm,0.6s,4µm2.3nm
DBJI Dramaga 5.79 110 P **Pn** 17 48 56.2 +0.8
528nm,1.0s,7µm2.5nm
TPI Tanjungpandan 6.63 74⇓*eP* **Pn** 17 49 11.0 +4.1
TPI *eS* **Sn** 17 50 29.0 +7.2
LEM Lembang 6.70 110 P **Pn** 17 49 09.6 +1.8
915nm,1.1s,2.5nm
MYKOM **Kota Tinggi 6.85 22**⇑P **Pn** 17 49 11.2 +1.3
MYKOM **Kota Tinggi 6.85 22** P **Pn** 17 49 12.4 +2.4
186nm,1.1s,2µm0.6nm
KGM Kluang 6.89 17⇓*eP* **Pn** 17 49 12.6 +2.2
JCJI Jatiwangi 7.22 105 P **Pn** 17 49 18.4 +3.4
273nm,1.4s,5µm1.3nm
FRIM Kepong 7.79 3⇓P **Pn** 17 49 23.2 +0.3
COCO West Island 8.72 210 Pn **Pn** 17 49 33.3 -2.3
4µm,0.7s,SNR=6.8
COCO West Island 8.72 210 *e*Pn **Pn** 17 49 33.0 -2.6
411nm,0.8s
COCO West Island 8.72 210 P **Pn** 17 49 33.9 -1.7
383nm,0.9s,0.9nm
BJII Banjamegara 8.83 108 P **Pn** 17 49 37.8 +0.8
105nm,1.7s,2µm
IPM Ipoh 9.02 358⇑P **Pn** 17 49 40.2 +0.5
IPM Ipoh 9.02 358 P **Pn** 17 49 42.1 +2.3
56nm,1.1s
KULM Kulim 9.85 356⇑P **Pn** 17 49 51.0 0.0
KULM Kulim 9.85 356 P **Pn** 17 49 52.1 +1.1
64nm,1.2s
KTGM Kuala Trenggan 10.04 11⇑P **Pn** 17 49 55.1 +1.4
KSM Kuching 10.87 56⇑P **Pn** 17 50 09.8 +4.8
SJI Sawahan 10.89 107 P **Pn** 17 50 05.6 +0.2
179nm,0.8s,2µm
BSI Banda Aceh 11.67 329 P **Pn** 17 50 15.3 -0.7
157nm,0.9s
KMMI Kaliangket 12.87 101 P **Pn** 17 50 33.7 +1.3
SBUM Sibu 13.00 58⇑P **Pn** 17 50 38.6 +4.5
KKM Kota Kinabalu 18.29 55 *e*Pn **Pn** 17 51 42.7 -0.5
71nm,1.0s
KAPI Kappang 18.43 92 P **Pn** 17 51 41.6 -3.3
0.3nm,0.3s,baz=280,slow=8.8,SNR=5.6
KAPI LR LR 17 59 20.1
comp=Z,2µm,21.4s,baz=278,slow=39
KAPI Kappang 18.43 92 *e*Pn **Pn** 17 51 42.0 -2.9
64nm,1.1s
TSM Tawau 18.80 62⇑P **Pn** 17 51 49.8 +0.5
SDKM Sandakan 18.88 58⇑P **Pn** 17 51 50.3 -0.1
MYLDM **Lahad Datu 19.77 61**⇓P **Pn** 17 52 01.3 +0.3
BDT Bhumibol Dam 21.82 354 P **P** 17 52 20.0 -1.5
16nm,0.8s,mb4.5
BATI Baumata 22.89 105 P **P** 17 52 31.0 -2.0
18nm,0.3s,mb5.0,baz=279,slow=1.3,SNR=36
BATI S **S** 17 56 35.4 -6.2
21nm,0.6s,baz=81,slow=18,SNR=4.5
CM31 Chiang Mai Arr 23.03 354 *e*P **P** 17 52 32.3 -2.0
CMAR Chiang Mai Arr 23.03 354 P **P** 17 52 31.8 -2.5
30nm,0.8s,mb4.8,baz=187,slow=8.6,SNR=90
CMAR PcP PcP 17 56 24.9 +1.3
0.9nm,0.4s,baz=197,slow=2.7,SNR=3.8
CMAR pPcP 17 56 33.5
4.7nm,1.0s,baz=212,slow=3.7,SNR=6.2
CMAR LR LR 18 02 44.1
comp=Z,1µm,19.6s,MS4.3,baz=188,slow=40
CMAR Chiang Mai Arr 23.03 354 P **P** 17 52 31.8 -2.5
CMAR 17 56 24.9
CMAR 17 56 33.6
CHG Chiang Mai 23.38 354⇓P **P** 17 52 36.5 -1.5
31nm,1.0s,mb4.7
CHTO Chiang Mai 23.38 354 *e*P **P** 17 52 37.0 -1.0
CHTO *eS* S 17 56 29.2 -20
CHTO pmax pmax
comp=Z,31nm,1.0s,mb4.7
CHTO Chiang Mai 23.38 354 *e*P **P** 17 52 37.0 -1.1
comp=Z,31nm,1.0s,mb4.7
CHTO *eS* S 17 56 29.2 -20
MBWA Marble Bar 24.34 134 *e*P **P** 17 52 51.9 +5.0
comp=Z,68nm,1.5s,mb4.9
QIZ Qiongzhong 24.95 20 P **P** 17 52 50.8 -1.7
QIZ S **S** 17 57 11.1 -3.7
QIZ XS sS 17 57 18.4 -8.9
QIZ AMB AMB
comp=Z,21nm,1.6s,mb4.4
QIZ AMB AMB
comp=Z,500nm,3.8s
QIZ LR LR
comp=N,887nm,14.4s
QIZ LR LR
comp=Z,1µm,22.5s
KMI Kunming 29.58 3 P **P** 17 53 35.1 +1.1
KMI AP pP 17 53 40.5 -1.1
KMI XP sP 17 53 43.0 -1.8
KMI PP PP 17 54 33.3 -7.8
KMI PPP 17 54 47.4
KMI S **S** 17 58 31.2 +3.5
KMI XS sS 17 58 40.4 +0.1
KMI SS SS 18 00 08.1 -26
KMI SSS 18 00 29.0
KMI AMB AMB
comp=Z,30nm,1.1s,mb4.9
KMI AMB AMB
comp=Z,159nm,4.4s
KMI LR LR
comp=N,1µm,18.2s,MS4.7
KMI LR LR
comp=E,963nm,17.7s,MS4.7
KMI LR LR
comp=Z,1µm,18.2s,MS4.6
GYA Guiyang 31.32 9⇑*iP* **P** 17 53 49.0 -0.3
GYA PP PP 17 54 52.0 -8.4
GYA PPP 17 55 06.8
GYA PCP PcP 17 56 43.0 -0.2
GYA S **S** 17 58 55.7 +0.8
GYA SCP ScP 18 00 26.9 +2.1
GYA SS SS 18 00 45.1 -24
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,4.8s
GYA LR LR
comp=N,870nm,20.0s,MS4.8
GYA LR LR
comp=E,2µm,18.2s,MS4.8
GYA LR LR
comp=Z,1µm,15.2s,MS4.7
HYB Hyderabad 31.33 315 *eP* **P** 17 53 59.0 +9.4
SHL Shillong 31.34 344 *eP* **P** 17 53 57.0 +7.4
KAKA Kakadu 31.82 107 *eP* x 17 53 35.4
comp=Z,16nm,0.9s
NWAO Narrogin (SRO) 31.88 154 LR LR 18 06 43.8
comp=Z,937nm,19.1s,MS4.5,baz=329,slow=36
ODAN Odare 34.03 337 *eP* **P** 17 54 14.4 +1.3
comp=Z,116nm,1.1s,mb5.7
TAPN Taplejung 34.36 338 *eP* **P** 17 54 17.7 +1.8
comp=Z,98nm,0.9s,mb5.8
RAMN Ramite 34.42 336 *eP* **P** 17 54 18.2 +1.7
comp=Z,73nm,1.0s,mb5.5
JIRN Jiri 35.22 336 *eP* **P** 17 54 25.2 +1.8
comp=Z,109nm,0.8s,mb5.8
CD2 Chengdu 35.39 4 P **P** 17 54 24.2 -0.6
CD2 PP PP 17 55 48.2 +2.7
CD2 PCP PcP 17 56 57.3 +2.7
CD2 S **S** 17 59 58.7 +0.7
CD2 SS SS 18 02 22.8 -10
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,230nm,6.0s
CD2 LR LR
comp=N,2µm,17.4s
CD2 LR LR
comp=Z,2µm,21.0s,MS4.9
LSA Lhasa 35.46 345 P **P** 17 54 26.3 +0.9
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA LR LR
comp=N,450nm,25.9s,MS4.3
LSA LR LR
comp=E,620nm,30.4s,MS4.3
LSA LR LR
comp=Z,620nm,23.6s
PKI Pulchoki 35.46 335 *eP* **P** 17 54 26.7 +1.3
GUN Gumba 35.57 336 *eP* **P** 17 54 28.1 +1.7
comp=Z,98nm,0.8s,mb5.8
DMN Daman 35.62 335 *eP* **P** 17 54 28.1 +1.3
WRAB Tennant Creek 35.63 118 P **P** 17 54 26.2 -0.9
comp=Z,127nm,0.8s,mb5.9,SNR=8.4
WRAB Tennant Creek 35.63 118 *eP* **P** 17 54 25.9 -1.2
WRAB pmax pmax
comp=Z,17nm,0.8s,mb5.0
WRAB Tennant Creek 35.63 118 *eP* **P** 17 54 25.9 -1.2
comp=Z,17nm,0.8s,mb5.0
WB2 Warramunga Arr 35.64 118⇑*iP* **P** 17 54 26.6 -0.5
KKN Kakani 35.71 335 *eP* **P** 17 54 28.9 +1.3
GKN Gorkha 36.16 335 *eP* **P** 17 54 32.6 +1.1
comp=Z,147nm,1.2s,mb5.8
KOLN Koldanda 36.42 333 *eP* **P** 17 54 35.2 +1.5
comp=Z,151nm,1.1s,mb5.8
ASAR Alice Springs 36.73 124 P **P** 17 54 36.6 +0.2
comp=Z,3.4nm,0.7s,mb4.3,baz=298,slow=7.2,SNR=28
ASAR PcP PcP 17 56 59.9 +1.1
comp=Z,1.3nm,0.7s,baz=324,slow=6.1,SNR=3.0
ASAR S **S** 18 00 18.1 -0.8
comp=Z,4.1nm,1.1s,baz=291,slow=15,SNR=7.7
DANN Dangsing 36.84 334 *eP* **P** 17 54 38.5 +1.2
comp=Z,88nm,0.8s,mb5.6
WHN Wuhan 37.12 19 P **P** 17 54 38.8 -0.8
WHN LR LR
comp=N,2µm,15.0s,MS5.2
WHN LR LR
comp=E,2µm,17.2s,MS5.2
WHN LR LR
comp=Z,2µm,19.7s,MS5.0
XAN Xi'an 39.11 10 P **P** 17 54 55.2 -1.1
XAN PP PP 17 56 27.7 +1.4
XAN PPP 17 56 51.5
XAN PCP PcP 17 57 06.8 +1.0
XAN S **S** 18 00 54.9 +0.4
XAN SS SS 18 03 37.4 -10
XAN SCS ScS 18 05 05.3 +1.2
XAN AMB AMB
comp=Z,45nm,1.3s,mb5.0
XAN AMB AMB
comp=Z,256nm,12.3s
XAN LR LR
comp=N,212nm,16.0s,MS4.8
XAN LR LR
comp=E,1µm,18.1s,MS4.8
XAN LR LR
comp=Z,2µm,15.1s,MS5.0
NJ2 Nanjing 40.11 23 *eP* **P** 17 55 03.2 -1.5
NJ2 AP pP 17 55 07.4 -5.0
NJ2 XP sP 17 55 10.2 -5.4
NJ2 PP PP 17 56 41.2 +3.9
NJ2 S **S** 18 01 09.0 -0.6
NJ2 XS sS 18 01 17.5 -4.9
NJ2 AMB AMB
comp=Z,230nm,7.0s
NJ2 LR LR
comp=N,1µm,25.3s,MS5.0
NJ2 LR LR
comp=E,2µm,20.5s,MS5.0
NJ2 LR LR
comp=Z,3µm,20.6s,MS5.1
SSE Sheshan 40.27 27 P **P** 17 55 06.9 +0.8
SSE AP pP 17 55 10.1 -3.7
SSE S **S** 18 01 17.2 +5.1
SSE AMB AMB
comp=Z,44nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,157nm,8.2s
SSE LR LR
comp=N,341nm,16.3s,MS4.5
SSE LR LR
comp=E,462nm,16.3s,MS4.5
SSE LR LR
comp=Z,488nm,15.1s,MS4.5
LZH Lanzhou 40.55 3 *eP* **P** 17 55 08.5 +0.3
LZH AP pP 17 55 11.1 -4.9
LZH XP sP 17 55 12.4 -6.7
LZH PP PP 17 56 46.1 +4.1
LZH *eS* **S** 18 01 15.0 -1.0
LZH SS SS 18 04 14.1 -2.4
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,230nm,4.6s
LZH LR LR
comp=N,2µm,16.4s
LZH LR LR
comp=Z,2µm,17.2s,MS5.1
GTA Gaotai 43.81 358 P **P** 17 55 35.4 +0.6
GTA AP pP 17 55 39.7 -2.9
GTA XP sP 17 55 42.9 -2.8
GTA PCP PcP 17 57 20.1 -1.0
GTA S **S** 18 02 11.3 +7.2
GTA XS sS 18 02 16.7 -0.3
GTA SS SS 18 05 20.6 -0.2
GTA AMB AMB
comp=Z,21nm,1.3s,mb4.7
GTA AMB AMB
comp=Z,234nm,7.5s
GTA LR LR
comp=N,937nm,20.7s,MS4.8
GTA LR LR
comp=E,812nm,18.9s,MS4.8
GTA LR LR
comp=Z,1µm,21.0s,MS4.8
THN Thein Dam 44.11 328 *ex* x 17 55 36.2
BTO Baotou 45.70 9 *eP* **P** 17 55 49.6 -0.2
PMG Port Moresby 45.77 99⇑*eP* **P** 17 55 49.5 -1.4
PMG Port Moresby 45.77 99 *eP* **P** 17 55 45.2 -5.7
comp=Z,128nm,1.8s,mb5.5
HHC Hu-ho-hao-te 46.20 11 *eP* **P** 17 55 54.1 +0.3
HHC AP pP 17 55 58.4 -3.3
HHC PCP PcP 17 57 29.5 +0.2
HHC PP PP 17 57 43.4 +0.8
HHC PCS PcS 18 01 22.2 -1.5
HHC S **S** 18 02 40.7 +2.0
HHC XS sS 18 02 48.1 -3.5
HHC SCS ScS 18 05 46.5 -1.2
HHC SS SS 18 05 58.7 -5.8
HHC AMB AMB
comp=Z,41nm,1.0s,mb5.3
HHC AMB AMB
comp=Z,230nm,7.8s
HHC LR LR
comp=N,756nm,15.5s,MS4.9
HHC LR LR
comp=E,566nm,14.3s,MS4.9
HHC LR LR
comp=Z,724nm,17.8s,MS4.7
NIL Nilore 46.36 327 *eP* **P** 17 55 55.0 -0.2
NIL *e* pP 17 56 03.1 +0.1
NIL pmax pmax
comp=Z,18nm,0.9s,mb5.0
NIL Nilore 46.36 327 *eP* **P** 17 55 55.0 -0.2
comp=Z,18nm,0.9s,mb5.0
NIL *e* pP 17 56 03.1 +0.1
CTA Charters Tower 46.38 113 *eP* **P** 17 55 55.6 0.0
comp=Z,19nm,1.1s,mb4.9
CTA Charters Tower 46.38 113 P **P** 17 55 55.9 +0.3
comp=Z,23nm,1.0s,mb5.0,baz=273,slow=9.1,SNR=11
CTA LR LR 18 18 41.4
comp=Z,412nm,18.6s,MS4.4,baz=29,slow=40
CTAO Charters Tower 46.38 113 *eP* **P** 17 55 55.3 -0.3
CTAO pmax pmax
comp=Z,62nm,1.4s,mb5.3
CTAO Charters Tower 46.38 113 *eP* **P** 17 55 55.3 -0.3
comp=Z,62nm,1.4s,mb5.3
BJI Beijing 46.49 16 P **P** 17 55 56.1 0.0
BJI S **S** 18 02 49.5 +6.6
BJI AMB AMB
comp=Z,77nm,0.7s,mb5.7
BJI AMB AMB
comp=Z,118nm,4.3s
BJI LR LR
comp=N,1µm,17.4s,MS5.0
BJI LR LR
comp=E,691nm,15.8s,MS5.0
BJI LR LR
comp=Z,665nm,21.4s
STKA Stephens Creek 46.50 131 *eP* **P** 17 55 56.8 +0.4
comp=Z,8.7nm,0.8s,mb4.7
STKA Stephens Creek 46.50 131 P **P** 17 55 57.4 +1.0
comp=Z,6.1nm,0.8s,mb4.6,baz=310,slow=8.3,SNR=11
STKA LR LR 18 16 55.6
comp=Z,818nm,21.1s,MS4.7,baz=288,slow=38
STKA Stephens Creek 46.50 131 *eP* **P** 17 55 56.7 +0.3
comp=Z,2.4nm,0.8s,mb4.2
KSRS Korea Array 48.65 28 P **P** 17 56 11.1 -1.9
comp=Z,15nm,0.9s,mb5.0,baz=212,slow=8.2,SNR=37
KBL Kabul 49.37 325 *eP* **P** 17 56 17.7 -0.8
KBL pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KBL Kabul 49.37 325 *eP* **P** 17 56 17.7 -0.8
comp=Z,8.0nm,0.9s,mb4.8
WMQ Urumqi 49.73 347 P **P** 17 56 22.1 +1.0
WMQ XP sP 17 56 30.0 -2.1
WMQ PCP PcP 17 57 43.1 +1.2
WMQ PP PP 17 58 17.4 +1.5
WMQ PPP 17 59 13.2
WMQ S **S** 18 03 29.2 +0.6
WMQ XS sS 18 03 36.8 -4.8
WMQ SCS ScS 18 06 08.3 -2.7
WMQ SS SS 18 06 59.0 -2.5
WMQ AMB AMB
comp=Z,65nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,701nm,10.0s
WMQ LR LR
comp=N,380nm,22.0s,MS4.4
WMQ LR LR
comp=E,243nm,22.0s,MS4.4
WMQ LR LR
comp=Z,379nm,24.0s,MS4.3
SNY Shenyang 50.49 22⇓P **P** 17 56 25.8 -1.0
SNY S **S** 18 03 33.1 -6.1
SNY AMB AMB
comp=Z,24nm,1.5s,mb5.0
SNY AMB AMB
comp=Z,121nm,7.1s
SNY LR LR
comp=N,710nm,17.5s
SNY LR LR
comp=E,530nm,11.9s
SNY LR LR
comp=Z,912nm,15.1s,MS4.9
SONM Songino Array 52.41 4 P **P** 17 56 42.0 +0.9
comp=Z,38nm,0.8s,mb5.4,baz=182,slow=9.3,SNR=176
SONM pP pP 17 56 49.6 +0.6
comp=Z,26nm,0.8s,baz=182,slow=8.8,SNR=16
SONM LR LR 18 21 04.4
comp=Z,583nm,19.0s,MS4.6,baz=4.0,slow=38
SONM Songino Array 52.41 4 P **P** 17 56 42.0 +0.9
SONM *PP pP 17 56 49.6 +0.5
ULN Ulaanbaatar 52.49 5*c iP* **P** 17 56 40.4 -1.3
ULN Ulaanbaatar 52.49 5 *eP* **P** 17 56 42.2 +0.4
comp=Z,40nm,1.0s,mb5.3
TKM2 Tokmak 2 52.71 336 *eP* **P** 17 56 43.7 +0.3
TKM2 pmax pmax
comp=Z,37nm,1.0s,mb5.3
TKM2 Tokmak 2 52.71 336 *eP* **P** 17 56 43.7 +0.2
comp=Z,37nm,1.0s,mb5.3
CN2 Changchun 52.88 22⇑P **P** 17 56 43.7 -1.0
CN2 *e*XP sP 17 56 50.0 -5.7
CN2 *eS* **S** 18 04 11.9 -0.2
CN2 AMB AMB
comp=Z,50nm,1.0s,mb5.4
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,900nm,17.0s,MS4.9
CN2 LR LR
comp=E,400nm,17.0s,MS4.9
CN2 LR LR
comp=Z,800nm,18.0s,MS4.8
AAK Ala-Archa 52.91 335*c iP* **P** 17 56 44.7 -0.3
AAK pmax pmax
comp=Z,9.0nm,2.5s,mb4.3
AAK Ala-Archa 52.91 335 *eP* **P** 17 56 45.6 +0.7
comp=Z,25nm,1.4s,mb5.0
EKS2 Erkin-Say 53.24 335 *eP* **P** 17 56 48.1 +0.8
comp=Z,21nm,0.8s,mb5.1
MAJO Matsushiro 53.53 37 *eP* **P** 17 56 46.7 -3.0
MAJO pmax pmax
comp=Z,17nm,0.9s,mb5.0
MAJO Matsushiro 53.53 37 *eP* **P** 17 56 46.7 -2.9
comp=Z,17nm,0.9s,mb5.0
MAT Matsushiro 53.53 37 P **P** 17 56 47.6 -2.1
MJAR Matsushiro Arr 53.53 37 P **P** 17 56 47.8 -1.9
comp=Z,21nm,1.0s,mb5.0,baz=218,slow=7.6,SNR=36
MK31 Makanchi Array 53.86 344 *i* P **P** 17 56 51.6 -0.2
MK31 pmax pmax
comp=Z,29nm,1.0s,mb5.2
MK31 Makanchi Array 53.86 344 *eP* **P** 17 56 51.8 -0.1
MKAR Makanchi Array 53.86 344 P **P** 17 56 52.0 +0.1
comp=Z,13nm,0.7s,mb5.0,baz=146,slow=7.9,SNR=139
MKAR LR LR 18 25 15.3
comp=Z,267nm,18.7s,MS4.3,baz=158,slow=42
MKAR Makanchi Array 53.86 344 *i* P **P** 17 56 52.0 +0.2
MKAR pmax pmax
comp=Z,13nm,0.7s
ZAK Zakamensk 54.79 2 *eP* **P** 17 56 58.1 -0.4
ZAK pmax pmax
comp=Z,13nm,0.9s,mb5.0
KK31 Karatay Array 55.03 333 P **P** 17 56 59.4 -1.0
KK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MDJ Mudanjiang 55.19 24 P **P** 17 57 01.0 -0.5
MDJ PP PP 17 59 02.8 -2.5
MDJ SCP ScP 18 02 04.4 +4.7
MDJ SCS ScS 18 06 50.3 +1.2
MDJ AMB AMB
comp=Z,19nm,1.4s,mb4.9
MDJ AMB AMB
comp=Z,168nm,5.8s
MDJ LR LR
comp=N,282nm,18.5s,MS4.5
MDJ LR LR
comp=E,201nm,18.0s,MS4.5
MDJ LR LR
comp=Z,279nm,20.2s,MS4.3
TAU Tasmania Unive 55.78 140 P **P** 17 57 06.3 +0.4
TAU pmax pmax
comp=Z,23nm,1.2s,mb5.1
TAU Tasmania Unive 55.78 140 P **P** 17 57 06.3 +0.3
comp=Z,23nm,1.2s,mb5.1
HVS Khovu-Aksy 55.90 354*d iP* **P** 17 57 05.5 -1.0
HVS pmax pmax
comp=Z,58nm,1.7s,mb5.3
MOY Mondy 56.05 360 *eP* **P** 17 57 07.7 +0.1
TLY Talaya 56.10 2 *eP* **P** 17 57 09.0 +1.1
TLY *e* pP 17 57 16.4 +0.5
TLY pmax pmax
comp=Z,20nm,0.9s,mb5.2
TLY MLR MLR
comp=Z,748nm,16.0s,MS4.9
TLY Talaya 56.10 2 *eP* **P** 17 57 08.6 +0.6
comp=Z,11nm,0.8s,mb4.9
IRK Irkutsk 56.69 2⇑*iP* **P** 17 57 11.2 -0.9
IRK pmax pmax
comp=Z,54nm,2.3s,mb5.2
CIT Chita 57.37 9 *eP* **P** 17 57 17.8 +0.8
CIT *e* pP 17 57 25.4 +0.4
CIT *e* 17 57 30.1
CIT pmax pmax
comp=Z,82nm,1.7s,mb5.5
HNR Honiara 58.39 98 P **P** 17 57 23.2 -1.7
comp=Z,16nm,0.3s,mb5.5,baz=132,slow=10,SNR=4.3
KURK Kurchatov 58.44 343 P **P** 17 57 24.6 +0.1
comp=Z,117nm,0.8s,mb6.0,SNR=12
KURK Kurchatov 58.44 343 LR LR 18 26 56.5
comp=Z,468nm,18.9s,MS4.6,baz=135,slow=41
KURK Kurchatov 58.44 343 *eP* **P** 17 57 24.1 -0.4
KURK pmax pmax
comp=Z,20nm,0.9s,mb5.2
KURK Kurchatov 58.44 343 *eP* **P** 17 57 24.1 -0.4
comp=Z,20nm,0.9s,mb5.2
KLR Kul'dur 59.80 23 *eP* **P** 17 57 29.6 -4.4
KLR pmax pmax
comp=Z,57nm,1.6s,mb5.3
KLR MLR MLR
comp=E,600nm,13.5s
KLR MLR MLR
comp=Z,1µm,13.5s,MS5.3
ZAA0 Zalesovo Array 59.94 349 *eP* **P** 17 57 34.4 -0.5
ZALV Zalesovo Beam 59.94 349 P **P** 17 57 34.5 -0.3
comp=Z,14nm,0.7s,mb5.1,baz=178,slow=5.3,SNR=98
ZALV pP pP 17 57 42.6 -0.3

comp=Z,23nm,0.8s,baz=177,slow=7.4,SNR=18
ZALV LR LR 18 26 18.9
comp=Z,309nm,20.2s,MS4.4,baz=5.2,slow=39
ZALV Zalesovo Beam 59.94 349 P **P** **17 57 34.5 -0.3**
ZALV *PP pP 17 57 42.6 -0.3
HABR Khabarovsk 60.54 25 *eP* **P** **17 57 35.0 -4.0**
HABR *e*SP sP 17 57 40.0 -10
HABR *e* 17 58 20.0
HABR *e* 17 59 48.3
HABR *eS* **S** **18 05 50.2 -3.0**
HABR *e*SS sS 18 05 56.8 -10
HABR *e* 18 07 26.3
HABR *eSS* SS 18 09 50.2 -1.7
NVS Novosibirsk 61.10 348⇑ *iP* **P** **17 57 41.7 -1.0**
NVS *e* 18 00 05.3
NVS *eS* **S** **18 05 56.1 -4.0**
NVS pmax pmax
comp=Z,36nm,1.9s,mb5.2
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,18nm,2.0s
NVS pmax pmax
comp=Z,24nm,2.2s,mb4.9
NVS pmax pmax
comp=N,9.0nm,1.8s
NVS pmax pmax
comp=E,9.0nm,1.6s
NVS smax
comp=N,32nm,2.4s
RDF Al-Radifah 61.39 306 *eP* **P** **17 57 45.6 +0.4**
baz=306
RDF AMb AMB 17 57 55.6
comp=Z,51nm,1.3s,mb5.5,baz=306
NAY Al-Naaiem 61.77 307 *eP* **P** **17 57 48.0 +0.2**
baz=307
NAY AMb AMB 17 57 57.9
comp=Z,17nm,1.0s,mb5.1,baz=307
MIB Mutribah 61.92 307 *eP* **P** **17 57 49.3 +0.5**
baz=307
MIB AMb AMB 17 57 59.2
comp=Z,51nm,1.0s,mb5.6,baz=307
VOSK Vostochnaya 62.59 340 P **P** **17 57 51.6 -1.2**
VOSK pmax pmax
comp=Z,11nm,1.2s,mb4.9
YSS Yuzh-Sakhalins 63.03 31⇑ *iP* **P** **17 57 54.8 -1.1**
YSS *e* pP 17 58 03.0 -1.0
YSS pmax pmax
comp=E,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 63.03 31 *eP* **P** **17 57 55.0 -0.9**
BVA0 Borovoye Array 63.05 340 *i* P **P** **17 57 54.4 -1.4**
BVA0 pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
BOD Bodaibo 63.06 8 *eP* **P** **17 57 55.4 -0.4**
BOD pmax pmax
comp=Z,21nm,1.1s,mb5.2
BRVK Borovoye 63.11 340 P **P** **17 57 55.1 -1.1**
BRVK pmax pmax
comp=Z,17nm,0.8s,mb5.2
BRVK Borovoye 63.11 340 *eP* **P** **17 57 55.2 -1.0**
comp=Z,7.9nm,0.8s,mb4.9
CLNS Chul'man 64.19 14 *eP* **P** **17 58 02.6 -0.7**
CLNS *e*PP pP 17 58 11.3 -0.1
CLNS *e* 18 00 23.9
CLNS *e*PPP 18 01 50.8
CLNS *eS* **S** **18 06 38.1 -0.8**
CLNS *eSS* SS 18 10 42.7 -6.0
CLNS pmax pmax
comp=Z,16nm,1.1s,mb5.0
CLNS pmax pmax
comp=N,10.0nm,1.3s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=E,3.0nm,0.8s
CLNS smax
comp=E,167nm,16.7s
CLNS smax
comp=N,137nm,15.8s
CLNS MLR MLR
comp=N,361nm,16.0s,MS4.8
CLNS MLR MLR
comp=Z,506nm,19.0s,MS4.7
CLNS MLR MLR
comp=E,466nm,17.0s,MS4.8
AB31 Akbulak array 64.51 331 P **P** **17 58 04.8 -0.8**
AB31 pmax pmax
comp=Z,51nm,1.0s,mb5.5
AKTK Aktyubinsk 66.23 331 P **P** **17 58 16.3 -0.4**
AKTO Aktyubinsk 66.23 331 P **P** **17 58 16.3 -0.4**
comp=Z,1.0nm,0.3s,mb4.3,baz=119,slow=6.0,SNR=7.6
AKTO Aktyubinsk 66.23 331 P **P** **17 58 15.6 -1.1**
AKTO pmax pmax
comp=Z,4.0nm,1.4s,mb4.3
MAW Mawson 68.10 195 P **P** **17 58 29.8 +1.5**
comp=Z,2.1nm,0.8s,mb4.2,baz=270,slow=21,SNR=3.8
MAW LR LR 18 22 42.6
comp=Z,828nm,19.6s,MS5.0,baz=47,slow=31
MAW Mawson 68.10 195 P **P** **17 58 28.2 0.0**
comp=Z,1.7nm,0.9s,mb4.1
SVE Sverdlovsk 69.55 338 *eP* **P** **17 58 37.7 +0.2**
SVE *e* 17 59 03.1
SVE *eSS* SS 18 12 06.2 -5.7
SVE pmax pmax
comp=Z,58nm,1.3s,mb5.3
SVE MLR MLR
comp=Z,704nm,19.0s,MS4.9
YAK Yakutsk 69.94 14 *eP* **P** **17 58 37.2 -2.5**
YAK pmax pmax
comp=Z,32nm,1.1s,mb5.2
YAK pmax pmax
comp=N,15nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK MLR MLR
comp=Z,610nm,18.0s,MS4.9
YAK MLR MLR
comp=N,213nm,17.0s,MS4.7
YAK MLR MLR
comp=E,364nm,18.0s,MS4.7
YAK Yakutsk 69.94 14 *eP* **P** **17 58 38.0 -1.7**
comp=E,31nm,0.8s,mb5.3
ARU Arti 70.08 336 *d iP* **P** **17 58 39.4 -1.3**
ARU *e* 18 01 14.1
ARU *eS* S 18 07 50.9 +1.0
ARU *eSS* SS 18 12 14.7 -5.3
ARU pmax pmax
comp=Z,30nm,1.7s,mb5.0
ARU Arti 70.08 336 *eP* **P** **17 58 39.7 -1.0**
comp=Z,44nm,1.6s,mb5.1
ARU *e* pP 17 58 48.8 -0.1
ASF Jabal al Asfar 71.13 306 P **P** **17 58 48.4 +0.7**
comp=Z,2.0nm,0.8s,mb4.1,baz=357,slow=8.2,SNR=3.3
KIV Kislovodsk 71.33 319 *eP* **P** **17 58 47.7 -0.9**
KIV pmax pmax
comp=Z,30nm,2.5s,mb4.8
KIV MLR MLR
comp=Z,200nm,18.0s,MS4.4
KIV Kislovodsk 71.33 319 P **P** **17 58 56.7 +8.1**
comp=Z,13nm,0.9s,mb4.9
EIL Elat 71.98 303 P **P** **17 58 54.4 +1.5**
comp=Z,2.6nm,0.6s,mb4.3,baz=128,slow=4.3,SNR=4.3
EIL LR LR 18 31 50.9
comp=Z,446nm,18.2s,MS4.8,baz=95,slow=37
LSZ Lusaka 72.49 256 P **P** **17 58 54.0 -2.1**
LSZ pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
LSZ Lusaka 72.49 256 P **P** **17 58 54.0 -2.1**
comp=Z,6.5nm,1.2s,mb4.4
MMAI Mount Meron Ar 72.59 307 P **P** **17 58 57.2 +0.9**
comp=Z,6.9nm,1.1s,mb4.5,baz=294,slow=17,SNR=3.8
PETK Petropavlovsk- 74.41 31 P **P** **17 59 05.9 -0.7**
comp=Z,4.0nm,0.8s,mb4.4,baz=260,slow=8.5,SNR=3.1
LBTB Lobatse 75.08 245 *eP* **P** **17 59 13.5 +2.3**
LBTB pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LBTB Lobatse 75.08 245 *eP* **P** **17 59 13.4 +2.2**
comp=Z,6.0nm,1.0s,mb4.5
ANN Anapa 75.11 319 *eP* **P** **17 59 03.5 -7.4**
VRHR Novokhopersk 75.18 326 *eP* **P** **17 59 19.5 +8.4**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VRHR pmax pmax
comp=E,10.0nm,0.8s
BOSA Boshof 75.53 242 LR LR 18 28 04.2
comp=E,535nm,18.9s,MS4.9,baz=81,slow=32
BR131 Keskin Array S 76.00 313 *eP* **P** **17 59 14.5 -1.6**
comp=E,3.8nm,0.8s,mb4.4
BRTR Keskin Array B 76.00 313 P **P** **17 59 16.1 0.0**
comp=E,1.7nm,0.7s,mb4.1,baz=134,slow=7.7,SNR=8.7
BRTR pP pP 17 59 24.1 -0.3
comp=E,3.5nm,0.8s,baz=133,slow=7.1,SNR=11
BRTR LR LR 18 36 03.0
comp=E,291nm,19.0s,MS4.6,baz=95,slow=38
BRTR Keskin Array B 76.00 313 P **P** **17 59 16.2 +0.1**
BRTR *PP pP 17 59 24.1 -0.3
VORD Divnogorie 76.44 325 *eP* **P** **17 59 26.1 +7.7**
VORD pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
VORD pmax pmax
comp=N,10.0nm,1.2s
VORD pmax pmax
comp=E,10.0nm,1.2s
VSR Storozhevoye 76.62 325 *eP* **P** **17 59 26.9 +7.5**
VSR pmax pmax
comp=N,3.0nm,0.7s
VSR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VSR pmax pmax
comp=E,8.0nm,1.1s
SEY Seymchan 77.56 21⇑ *iP* **P** **17 59 24.0 -0.4**
TIXI Tiksi 78.22 9*c iP* **P** **17 59 26.4 -1.5**
TIXI pmax pmax
comp=Z,21nm,1.3s,mb4.9
TIXI MLR MLR
comp=Z,700nm,21.0s,MS5.0
TIXI Tiksi 78.22 9 *eP* **P** **17 59 26.1 -1.8**
comp=Z,44nm,1.4s,mb5.2
MOS Moscow 79.36 329 *eP* **P** **17 59 33.7 -0.8**
MOS *e* pP 17 59 42.6 -0.2
VNDA Vanda 79.38 169 P **P** **17 59 35.6 +1.3**
comp=Z,1.3nm,0.9s,mb3.9,baz=303,slow=6.8,SNR=3.1
VNDA LR LR 18 29 28.6
comp=Z,162nm,21.3s,MS4.3,baz=316,slow=32
VNDA Vanda 79.38 169 *eP* **P** **17 59 34.7 +0.4**
VNDA *e* pP 17 59 44.0 +1.4
VNDA pmax pmax
comp=Z,9.0nm,1.3s
VNDA Vanda 79.38 169 *eP* **P** **17 59 34.7 +0.4**
comp=Z,8.9nm,1.3s,mb4.5
VNDA *e* pP 17 59 44.0 +1.4
OBN Obninsk 79.66 328⇓ *eP* **P** **17 59 35.3 -0.8**
OBN *i* 17 59 45.2
OBN pmax pmax
comp=Z,58nm,2.5s,mb5.1
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.8
AKASG Malin Array Be 82.30 322 P **P** **17 59 49.8 -0.6**
comp=Z,0.8nm,0.5s,mb3.9,baz=87,slow=5.4,SNR=5.7
AKASG pP pP 17 59 58.9 +0.2
comp=Z,2.9nm,0.6s,baz=90,slow=4.5,SNR=6.4
MLR Muntele Rosu 83.05 317 P **P** **17 59 54.1 -0.2**
comp=Z,5.4nm,1.0s,mb4.5,baz=145,slow=17,SNR=3.6
BUR08 Bucovina Ar. S 84.05 319 *eP* **P** **18 00 00.8 +1.3**
BUR08 *e* pP 18 00 09.6 +1.8
BILL Bilibino 85.15 20⇑ *eP* **P** **18 00 03.8 -0.8**
BILL pmax pmax
comp=Z,13nm,1.6s,mb4.8
QSPA South Pole Qui 85.38 180 *eP* **P** **18 00 06.2 +0.7**
comp=Z,8.4nm,1.1s,mb4.8
APA Apatity 85.95 339⇑ *iP* pP 18 00 24.0 +7.1
APA pmax pmax
comp=Z,22nm,0.5s,mb5.6
APA MLR MLR
comp=Z,1μm,15.0s,MS5.5
KOLS Kolonicke sedl 86.24 320 *eP* **P** **18 00 12.1 +1.7**
KOLS *e* pP 18 00 20.0 +1.3
KOLS pmax pmax
comp=Z,21nm,1.0s,mb5.3
KOLS Kolonicke sedl 86.24 320 *eP* **P** **18 00 12.1 +1.7**
comp=Z,21nm,1.0s,mb5.3
KOLS *e* pP 18 00 20.0 +1.3
CRVS Cervenica-Dubn 86.76 319 *eP* **P** **18 00 14.9 +2.0**
CRVS *e* pP 18 00 24.0 +2.7
CRVS pmax pmax
comp=Z,14nm,1.6s,mb4.9
CRVS Cervenica-Dubn 86.76 319 *eP* **P** **18 00 14.9 +2.0**
comp=Z,14nm,1.6s,mb4.9
CRVS *e* pP 18 00 24.0 +2.7
STHS Stebnicka Huta 86.99 320 *eP* **P** **18 00 15.7 +1.6**
STHS *e* pP 18 00 23.5 +1.1
STHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
STHS Stebnicka Huta 86.99 320 *eP* **P** **18 00 15.7 +1.6**
comp=Z,7.8nm,1.3s,mb4.8
STHS *e* pP 18 00 23.5 +1.1
VYHS Vyhne 88.40 319 *eP* **P** **18 00 21.4 +0.5**
VYHS *e* pP 18 00 29.5 +0.3
VYHS pmax pmax
comp=Z,17nm,1.9s,mb5.0
VYHS Vyhne 88.40 319 *eP* **P** **18 00 21.4 +0.5**
comp=Z,17nm,1.9s,mb4.9
VYHS *e* pP 18 00 29.5 +0.3
KOLL Kolacno 88.70 319 *e* pP 18 00 32.3 +1.7
OKC Ostrava-Krasne 89.05 320 *eP* pP 18 00 33.2 +1.0
ARCES ARCESS Array B 89.33 340 P **P** **18 00 25.6 +0.9**
comp=Z,6.3nm,0.8s,mb5.0,baz=79,slow=6.3,SNR=8.2
ARCES LR LR 18 46 28.3
comp=Z,279nm,19.7s,MS4.7,baz=327,slow=40
ZST Bratislava 89.51 318 *eP* pP 18 00 35.8 +1.4
KOGS Kog 89.87 316 *i P* pP 18 00 37.6 +1.4
SNAA Sanae 90.07 198⇓ *iP* **P** **18 00 26.9 -1.4**
SNAA Sanae 90.07 198 *eP* **P** **18 00 26.9 -1.4**
comp=Z,8.1nm,1.0s,mb5.0
DPC Dobruska-Polom 90.28 320 *eP* pP 18 00 39.9 +1.9
CRES Cresnjev 90.34 316 *i P* pP 18 00 39.6 +1.2
BOJS Bojanci 90.45 315 *eP* pP 18 00 40.1 +1.2
UPC Upice 90.50 320 *eP* **P** **18 00 35.6 +5.0**
PERS Pernice 90.67 317 *eP* pP 18 00 40.9 +1.1
TREC Trest 90.70 319 *eP* pP 18 00 41.4 +1.4
PRU Pruhonice 91.38 320 *eP* pP 18 00 44.4 +1.3
PVCC Panska Ves 91.41 320 *eP* pP 18 00 43.3 0.0
VNA2 Neumayer--Watz 91.69 198 *eP* pP 18 00 47.4 +3.2
VNA2 *e* 18 00 55.8
GERES GERESS Array B 91.82 319 P **P** **18 00 37.8 +0.9**
comp=Z,1.0nm,0.7s,mb4.2,baz=101,slow=5.6,SNR=10
GERES pP pP 18 00 46.7 +1.5
comp=Z,1.9nm,0.7s,baz=88,slow=4.4,SNR=11
BRG Berggiesshubel 91.84 321 *eP* pP 18 00 46.7 +1.5
BRG pmax pmax
comp=Z,28nm,1.9s,mb5.3
BRG Berggiesshubel 91.84 321 *eP* pP 18 00 46.7 +1.5
comp=Z,47nm,1.9s
KHC Kasperske Hory 91.93 319 *eP* pP 18 00 45.8 +0.1
VNA1 Neumayer--Stat 92.06 198 *eP* pP 18 00 49.0 +3.1
VNA1 *e* 18 00 57.3
VNA3 Neumayer Olymp 92.28 198 *eP* pP 18 00 50.4 +3.5
VNA3 *e* 18 00 58.1
NKC Novy Kostel 92.74 320 *eP* pP 18 00 49.8 +0.4
GRA1 Grafenberg Arr 93.50 319 *eP* pP 18 00 54.7 +1.8
comp=Z,3.0nm,0.9s
GRF Grafenberg Arr 93.50 319 *eP* pP 18 00 54.7 +1.8
GRF pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
GRF Grafenberg Arr 93.50 319 *eP* pP 18 00 54.7 +1.8
comp=Z,3.0nm,0.9s,mb4.7
GRF Grafenberg Arr 93.50 319 *eP* pP 18 00 54.7 +1.8
comp=Z,3.0nm,0.9s
NOA NORSAR Array B 94.02 331 LR LR 18 49 40.2
comp=Z,155nm,18.6s,MS4.5,baz=105,slow=40
KONO Kongsberg 94.78 329⇑ *iP* **P** **18 00 49.3 -0.9**
PPT Papeete 106.75 110 *e*LR LR 18 37 09.2
comp=Z,201nm,23.0s
YKA Yellowknife Ar 116.46 18 PKP PKPdf 18 06 12.0 -0.3
comp=Z,0.7nm,0.8s,baz=276,slow=1.6,SNR=3.5
YKA Yellowknife Ar 116.46 18 PKP PKPdf 18 06 12.0 -0.3
MOD Modoc 127.57 39 P PKPdf 18 06 33.4 -0.8
DLMT Dillon 129.80 31 *e*PKPdf PKPdf 18 06 37.5 -0.8
NVAR Mina Array Bea 130.76 41 PKP PKPdf 18 06 42.2 +1.8
comp=Z,1.0nm,0.7s,baz=282,slow=2.0,SNR=8.4
NVAR pPKP pPKPdf 18 06 51.6 +2.6
comp=Z,2.3nm,0.9s,baz=271,slow=1.8,SNR=9.4
NVAR Mina Array Bea 130.76 41 PKP PKPdf 18 06 42.2 +1.8
NVAR pPKP pPKPdf 18 06 51.6 +2.6
RLMT Red Lodge 131.62 29 *e*PKPdf PKPdf 18 06 42.6 +0.8
PDAR Pinedale Array 133.18 31 PKP PKPdf 18 06 45.4 +0.6
comp=Z,0.4nm,0.7s,baz=341,slow=3.1,SNR=4.3
RSSD Black Hills 134.78 26 *e*PKIKP PKPdf 18 06 45.4 -2.4
ANMO Albuquerque 140.38 37⇑ *i*PKIKP PKPdf 18 06 58.6 +0.2
WMOK Wichita Mounta 144.73 29 *e*PKIKP PKPdf 18 07 04.5 -1.6
WMOK *e* 18 07 13.5
CCM Cathedral Cave 144.80 17 *e*PKIKP PKPdf 18 07 03.9 -2.3
CCM *e* 18 07 12.9
FVM French Village 145.10 16 *e*PKIKP PKPdf 18 07 05.1 -1.6
FVM *e* 18 07 13.8
SIUC Southern Illin 145.68 15 *e*PKPdf PKPdf 18 07 07.6 -0.1
SIUC *e* 18 07 16.0
USIN University of 145.81 13 *e*PKPdf PKPdf 18 07 05.9 -2.0
USIN *e* 18 07 16.9
WCI Wyandotte Cave 145.83 11 PKPdf PKPdf 18 07 08.1 +0.1
WCI *e* 18 07 16.8
TXAR Lajitas Array 145.91 41 PKPbc PKPbc 18 07 09.9 +1.0
comp=Z,18nm,0.9s,baz=320,slow=1.0,SNR=140
TXAR pPKPbc pPKPbc 18 07 18.4 +1.0
comp=Z,22nm,0.9s,baz=24,slow=2.1,SNR=21
TXAR Lajitas Array 145.91 41 PKPbc PKPbc 18 07 09.9 +1.0
TXAR pPKPbc pPKPbc 18 07 18.4 +0.9
MIAR Mount Ida 147.18 23 *e*PKPbc PKPbc 18 07 12.3 -0.2
MIAR *e*PKPab PKPab 18 07 14.4 +0.3
MIAR *e* 18 07 21.1
UALR University of 147.44 21 *e*PKPbc PKPbc 18 07 12.8 -0.4
JCT Junction City 147.49 35 *e*PKPbc PKPbc 18 07 13.6 +0.1
JCT *e* 18 07 22.7
WVT Waverly 147.53 14 *e*PKPdf PKPbc 18 07 13.2 -0.2
WVT *e* 18 07 21.7
TZTN Tazewell 147.91 7 *e*PKPbc PKPbc 18 07 13.9 -0.5
TKL Tuckaleechee C 148.75 8 *e*PKPbc PKPbc 18 07 16.2 -0.5
TKL *e* 18 07 24.9
HKT Hockley 150.05 31 *e*PKPbc PKPbc 18 07 21.1 +1.0
HKT *e* 18 07 30.2
GOGA Godfrey 151.00 8 *e*PKIKP PKPdf 18 07 14.8 -1.7
GOGA *e* 18 07 20.0
GOGA *e* 18 07 30.9
OTAV Otavalo 175.66 184 *e*PKP PKPdf 18 07 46.8 +6.8

*ISCJB **01** 17:58:39.9±0.6, 4369N±003×773E±003, h10km, Error ellipse: s-maj=4.5km s-min=3.0km az=143.9*
*LDG **01** 17:58:40.3±0.2, 4369N×781E, h10km, Md2.5/2, Ml2.4/7, Error ellipse: s-maj=3.5km s-min=2.4km az=121.0*
*GEN **01** 17:58:40.6, 4368N×777E, h12km, ML2.0*
*ROM **01** 17:58:41.8±0.3, 4377N×775E, h10km±1km, Md2.2/4, Ml2.3/2, Error ellipse: s-maj=3.4km s-min=1.7km az=176.0*
*CSEM **01** 17:58:41.0±0.2, 4371N×776E, h20km, ML2.5/9, Error ellipse: s-maj=3.0km s-min=1.8km az=146.0*
*STR **01** 17:58:42.0±0.4, 4374N×774E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 01 17:58:40.4±0.7, 4370N±003×775E±004, h19km±2km, n42, σ0881/78, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NEGI	**Seborga**	**0.15**	**347**	P		**Pg**	**17 58 44.6**	**-0.2**
IMI	**Imperia**	**0.24**	**26**	Pg		**Pg**	**17 58 46.1**	**+0.1**
IMI				Sg		**Sg**	**17 58 49.4**	**-0.4**
	591nm,0.1s							
IMI	**Imperia**	**0.24**	**26**	Pg		**Pg**	**17 58 46.1**	**+0.1**
IMI				Sg		**Sg**	**17 58 49.4**	**-0.4**
	591nm,0.1s							
REVF	**Revere**	**0.28**	**279**	Pg		**Pg**	**17 58 47.6**	**+0.9**
REVF				Sg		**Sg**	**17 58 52.1**	**+1.2**
SAOF	**Saorge**	**0.32**	**334**	Pg		**Pg**	**17 58 47.4**	**0.0**
SAOF				Sg		**Sg**	**17 58 52.0**	**-0.1**
LUCF	**Luceram**	**0.35**	**304**	Pg		**Pg**	**17 58 48.4**	**+0.5**
LUCF				Sg		**Sg**	**17 58 53.6**	**+0.7**
AUTN	**L'Aution**	**0.38**	**322**	Pg		**Pg**	**17 58 48.8**	**+0.5**
AUTN				Sg		**Sg**	**17 58 54.0**	**+0.3**
MVIF	**Mont Vial**	**0.48**	**295**	Pg		**Pg**	**17 58 50.8**	**+0.7**
MVIF				Sg		**Sg**	**17 58 56.7**	**+0.1**
TOUF	**Mont Tournerai**	**0.48**	**311**	Pg		**Pg**	**17 58 50.7**	**+0.5**
TOUF				Sg		**Sg**	**17 58 56.3**	**-0.4**
ENR	**Entracque**	**0.58**	**336**	P		**Pb**	**17 58 52.2**	**+0.3**
ENR				S		**Sg**	**17 58 59.6**	**-0.2**
ROB	**Robourent**	**0.61**	**9**	P		**Pb**	**17 58 52.4**	**0.0**
FIN	**Finale Ligure**	**0.61**	**33**	Pg		**Pg**	**17 58 52.4**	**-0.1**
FIN				Sg		**Sg**	**17 59 00.8**	**+0.1**
FIN	**Finale Ligure**	**0.61**	**33**	Pg		**Pg**	**17 58 52.4**	**-0.1**
FIN				Sg		**Sg**	**17 59 00.8**	**+0.1**
CALN	**Calern**	**0.63**	**275**	Pg		**Pg**	**17 58 53.4**	**+0.6**
CALN				Sg		**Sg**	**17 59 01.8**	**+0.6**
STV	**Sant Anna di V**	**0.63**	**331**	Pg		**Pg**	**17 58 53.2**	**+0.4**
STV				Sg		**Sg**	**17 59 01.0**	**-0.3**
STV	**Sant Anna di V**	**0.63**	**331**	Pg		**Pg**	**17 58 53.2**	**+0.4**
STV				Sg		**Sg**	**17 59 01.0**	**-0.3**
FRF	**La Foret Royal**	**0.81**	**261**	*e*Pg		**Pg**	**17 58 56.2**	**-0.1**
FRF				*e*Sg		**Sg**	**17 59 06.9**	**-0.2**
	31nm,0.2s							
FRF	**La Foret Royal**	**0.81**	**261**	*e*Pg		**Pg**	**17 58 56.2**	**-0.1**
FRF				*e*Sg		**Sg**	**17 59 06.9**	**-0.2**
	15nm,0.2s							
DOI	**San Damiano**	**0.89**	**336**	Pg		**Pg**	**17 58 57.6**	**-0.1**
DOI				Sg		**Sg**	**17 59 08.7**	**-0.7**
	85nm,0.3s							
DOI	**San Damiano**	**0.89**	**336**	Pg		**Pg**	**17 58 57.6**	**-0.1**
DOI				Sg		**Sg**	**17 59 08.7**	**-0.7**
	85nm,0.3s							
LMR	**La Mourre**	**0.97**	**249**	*e*Pg		**Pg**	**17 58 58.3**	**-1.0**
LMR				*e*Sg		**Sg**	**17 59 10.5**	**-1.6**
	10nm,0.2s							
LMR	**La Mourre**	**0.97**	**249**	*e*Pg		**Pg**	**17 58 58.3**	**-1.0**
LMR				*e*Sg		**Sg**	**17 59 10.5**	**-1.6**
	5.2nm,0.2s							
PCP	**Piancastagn**	**1.02**	**34**	P		**Pb**	**17 58 58.7**	**-0.7**
MBDF	**Montbardon**	**1.25**	**326**	*e*Pn		**Pn**	**17 59 01.9**	**-0.9**
MBDF	**Montbardon**	**1.25**	**326**	*e*Pg		**Pg**	**17 59 04.4**	**-0.1**
MBDF				*e*Sn		**Sn**	**17 59 19.7**	**+0.7**
	65nm,0.4s							
MBDF	**Montbardon**	**1.25**	**326**	*e*Pg		**Pg**	**17 59 04.4**	**-0.1**
MBDF				*e*Sn		**Sn**	**17 59 19.7**	**+0.7**
	32nm,0.4s							
RRL	**Rocca Remolon**	**1.40**	**331**	P		**Pn**	**17 59 06.9**	**+2.0**
RRL				S		**Sn**	**17 59 25.0**	**+2.1**
RSP	**Reno Superiore**	**1.49**	**347**	P		**Pn**	**17 59 05.7**	**-0.4**
RSP				S		**Sn**	**17 59 23.6**	**-1.5**
SMRF	**Simiane la Rot**	**1.60**	**281**	*e*Pn		**Pn**	**17 59 08.0**	**+0.4**
SMRF				*e*Sg		**Sg**	**17 59 32.2**	**+0.2**
	3.8nm,0.3s							
SMRF	**Simiane la Rot**	**1.60**	**281**	*e*Pn		**Pn**	**17 59 08.0**	**+0.4**
SMRF				*e*Sg		**Sg**	**17 59 32.2**	**+0.2**
	1.9nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.81**	**313**	*e*Pg		**Pg**	**17 59 14.4**	**-0.9**
ORIF				*e*Sg		**Sg**	**17 59 38.6**	**-0.3**
	3.9nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.81**	**313**	*e*Pg		**Pg**	**17 59 14.4**	**-0.9**
ORIF				*e*Sg		**Sg**	**17 59 38.6**	**-0.3**
	2.0nm,0.3s							
LPG	**La Plagne**	**1.94**	**339**	*e*P		**Pn**	**17 59 14.6**	**+2.3**
LPG	**La Plagne**	**1.94**	**339**	*e*Pg		**Pg**	**17 59 16.9**	**-0.7**
LPG				*e*Sg		**Sg**	**17 59 42.6**	**-0.2**
	2.7nm,0.3s							
LPG	**La Plagne**	**1.94**	**339**	*e*Pg		**Pg**	**17 59 16.9**	**-0.7**
LPG				*e*Sg		**Sg**	**17 59 42.6**	**-0.2**
	1.4nm,0.3s							
LPL	**La Plagne**	**1.96**	**339**	*e*P		**Pn**	**17 59 14.7**	**+2.1**
LPL	**La Plagne**	**1.96**	**339**	*e*Pg		**Pg**	**17 59 16.9**	**-1.1**
LPL				*e*Sg		**Sg**	**17 59 43.1**	**-0.4**
	2.0nm,0.3s							
LPL	**La Plagne**	**1.96**	**339**	*e*Pg		**Pg**	**17 59 16.9**	**-1.1**
LPL				*e*Sg		**Sg**	**17 59 43.1**	**-0.4**
	1.0nm,0.3s							
VIVF	**Saint-Julien-l**	**2.50**	**299**	*e*Pn		**Pn**	**17 59 19.3**	**-0.6**
VIVF				*e*Sn		**Sn**	**17 59 48.7**	**-1.1**
VIVF				*e*Sg		**Sg**	**18 00 00.0**	**-0.6**
	1.5nm,0.3s							
VIVF	**Saint-Julien-l**	**2.50**	**299**	*e*Pn		**Pn**	**17 59 19.3**	**-0.6**
VIVF				*e*Sn		**Sn**	**17 59 48.7**	**-1.1**
VIVF				*e*Sg		**Sg**	**18 00 00.0**	**-0.6**
	0.8nm,0.3s							
LASF	**Ste Croix**	**2.84**	**279**	*e*Pn		**Pn**	**17 59 23.8**	**-0.9**
MTLF	**Montolieu**	**4.04**	**267**	*e*Pn		**Pn**	**17 59 40.8**	**-0.4**

*NSSP **01** 18:21:50.3, 3825N×4675E, h5km, ML3.5*
*TEH **01** 18:21:53.3, 38.13N×46.42E, h1km, ML3.9*

*ISCJB **01** 18:22:16.9±0.3, 3829N±003×4645E±002, h15km±4km, Error ellipse: s-maj=4.6km s-min=2.8km az=2.5*
*THR **01** 18:22:17.8±0.6, 3822N×4648E, h15km±4km, ML3.5*
*CSEM **01** 18:22:19.8±0.4, 3799N×4658E, h5km±2km, ML3.6, Error ellipse: s-maj=3.1km s-min=2.0km az=42.0*
*DDA **01** 18:22:31.5, 3850N×4554E, h2km, Md3.4*
ISC 01 18:22:17.9±0.4, **3822N**±003×**4646E**±002, **h4**km±5km, **n50**, σ**1s39**/72, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITBZ	Tabriz	0.25	274	ePg	Pg	18 22 23.2	+0.5
ITBZ				eSg	Sg	18 22 27.2	+1.2
ITBZ				e		18 22 27.8	
IHRS	Heris	0.47	77	ePg	Pg	18 22 28.8	+1.9
IHRS				e		18 22 29.1	
IHRS				eSg	Sg	18 22 35.0	+2.1
IBST	Bostanabad	0.62	147	ePg	Pg	18 22 28.3	-1.4
IBST				e		18 22 36.2	
ISHB	Shabestar	0.67	276	ePg	Pg	18 22 30.4	-0.4
ISHB				eSg	Sg	18 22 39.6	+0.2
ISHB				e		18 22 40.7	
ISRB	Sarab	1.03	112	eSg	Sg	18 22 51.9	+1.0
ISRB	Sarab	1.03	112	ePg	Pg	18 22 37.5	-0.1
ISRB				eSg	Sg	18 22 51.9	+1.0
ISRB				e		18 22 53.6	
GRMI	Germi	1.27	62	ePg	Pg	18 22 41.0	-1.2
GRMI				eSg	Sg	18 22 58.3	-0.4
GRMI				AML	AML	18 23 02.3	
	comp=N,996nm,0.5s						
MAKU	Maku	1.80	310	ePg	Pg	18 22 50.9	-1.5
MAKU				eSg	Sg	18 23 15.2	-0.4
MAKU				AML	AML	18 23 18.6	
	comp=N,505nm,0.5s						
GLBA	Clilabad	1.82	55	P	Pg	18 22 53.5	+0.6
	SNR=175						
GLBA				S	Sg	18 23 21.8	+5.3
VADZ	Vardenis	2.03	344	P	Pg	18 22 58.0	+1.2
BRDA	Brd	2.12	15	P	Pg	18 22 59.5	+1.0
	SNR=12						
BRDA				S	Sg	18 23 31.4	+5.4
HKR	Hakkari	2.25	254	ePN	Pn	18 22 58.4	+2.5
HAKT	HAKKARI	2.28	254	i P	Pg	18 23 02.9	+1.4
HAKT				i S	Sg	18 23 34.1	+3.0
ZNJK	Zanjan	2.35	130	ePn	Pn	18 22 57.6	+0.4
ZNJK				AML	AML	18 23 33.1	
	comp=N,229nm,0.5s						
TVAN	Van	2.42	278	i P	Pg	18 23 03.3	-1.0
TVAN				i S	Sg	18 23 39.5	+3.8
TVAN	Van	2.42	278	i P	Pg	18 23 03.3	-1.0
TVAN				i S	Sg	18 23 39.5	+3.8
GANJ	Ganja	2.43	357	P	Pg	18 23 03.5	-1.0
	SNR=59						
GANJ				S	Sg	18 23 37.0	+1.0
VANB	Van	2.44	280	ePN	Pg	18 23 03.5	-1.2
CUKT	Cukurca	2.46	248	ePN	Pn	18 23 00.2	+1.4
DYDN	Diyadin	2.54	302	i P	Pg	18 23 05.4	-1.2
DYDN				i S	Sg	18 23 41.4	+1.9
ALIB	Ii-Bayraml	2.63	48	P	Pg	18 23 07.8	-0.6
	SNR=4.6						
AGRB	Hanur-Agry	3.03	298	eP	Pg	18 23 14.1	-1.9
SEKA	Sheki	3.04	10	P	Pg	18 23 10.4	-5.8
	SNR=6.8						
PQL	Pirkuli	3.05	32	P	Pg	18 23 11.3	-5.1
	SNR=9.4						
TUTA	Tutak	3.09	294	eP	Pg	18 23 15.2	-1.8
TUTA				i S	Sg	18 23 58.4	+1.3
SNGE	Sanandaj	3.20	167	ePn	Pn	18 23 09.8	+0.9
SNGE				eSg	Sg	18 23 57.6	-3.0
SNGE				AML	AML	18 24 01.7	
	comp=N,139nm,0.5s						
SNGE				AML	AML	18 24 03.2	
	comp=E,146nm,0.1s						
SNGE	Sanandaj	3.20	167	ePn	Pn	18 23 09.8	+0.9
	SNR=52						
SNGE				eSg	Sg	18 23 57.6	-3.0
	SNR=90						
MSL	Mosul	3.23	237	ePn	x	18 23 16.0	
MSL				i Sn	x	18 24 01.0	
MSL				i Sb	x	18 24 09.0	
MSL				i Sg	x	18 24 18.5	
DGRG	David-gareji	3.34	346	P	Pg	18 23 21.4	-0.4
SIZA	Siyzn	3.42	33	P	Pg	18 23 17.9	-5.5
	SNR=6.3						
IDHR	Dehrash	3.51	181	ePn	Pn	18 23 13.3	+0.1
IDHR	Dehrash	3.51	181	ePn	Pn	18 23 13.3	+0.1
IDHR				e		18 24 22.4	
KARS	Kars	3.54	314	eP	Pg	18 23 23.3	-2.4
IVIS	Veis	3.69	175	ePn	Pn	18 23 15.6	-0.2
IVIS				eSn	Sn	18 23 58.0	-1.8
IVIS	Veis	3.69	175	ePn	Pn	18 23 15.6	-0.2
IVIS				eSn	Sn	18 23 58.0	-1.8
IVIS				e		18 24 18.1	
MTA	Mtatsminda	3.70	340	P	Pg	18 23 27.6	-1.2
TBLG	Delisi	3.75	340	P	Pg	18 23 27.7	-2.1
IRAZ	Razeghan	3.95	134	ePn	Pn	18 23 19.9	+0.6
IRAZ				eSn	Sn	18 24 04.6	-1.5
IRAZ	Razeghan	3.95	134	ePn	Pn	18 23 19.9	+0.6
IRAZ				e		18 23 32.7	
IRAZ				eSn	Sn	18 24 04.6	-1.5
BEST	Besiri	4.11	267	i P	Pg	18 23 33.3	-3.4
BEST				i S	Sg	18 24 33.8	+3.8
EZM	Erzurum	4.31	295	eP	Pg	18 23 33.1	-7.5
CHTH	Charan	4.38	120	ePn	Pn	18 23 26.3	+1.0
IDMV	Damavand	5.18	119	ePn	Pn	18 23 38.6	+2.4
IDMV				eSn	Sn	18 24 34.4	-2.0
IDMV	Damavand	5.18	119	ePn	Pn	18 23 38.6	+2.4
IDMV				e		18 23 58.5	
IDMV				eSn	Sn	18 24 34.4	-2.0
IVRN	Varamin	5.32	126	ePn	Pn	18 23 38.9	+0.8
IVRN	Varamin	5.32	126	ePn	Pn	18 23 38.9	+0.8
IVRN				e		18 24 00.6	
ISFB	Sefidab	6.05	128	ePn	Pn	18 23 48.6	+0.4
ISFB	Sefidab	6.05	128	ePn	Pn	18 23 48.6	+0.4
ISFB				e		18 24 10.1	
IKIA	Kiasar	6.10	107	ePn	Pn	18 23 47.1	-1.8
IKIA				e		18 24 08.6	
IGLO	Ghaloghah	6.11	104	ePn	Pn	18 23 51.7	+2.7
IGLO				e		18 24 04.4	

*ISCJB **01** 18:27:04.7±0.5, 2103S±005×6904W±007, h111km±4km, mb4.4/22, Error ellipse: s-maj=11.1km s-min=6.4km az=153.5*
*NEIC **01** 18:27:05.2±0.6, 2098S×6888W, h103km±6km, mb4.4/15, Error ellipse: s-maj=11.4km s-min=7.0km az=71.0*
*IDC **01** 18:27:06.5±0.5, 2101S×6891W, h112km±3km, mb3.9/10, mb1 4.2/12, mb1mx4.1/16, mbtmp4.0/12, Error ellipse: s-maj=16.0km s-min=13.4km az=70.0*
*GUC **01** 18:27:06.0±0.4, 2098S×6908W, h45km±2km, MD4.0, ML4.4*
ISC 01 18:27:05.8±0.4, **2103S**±004×**6905W**±006, **h105**km±4km, **h113**km±1.9km**:pP-P**, **n62**, σ**1s11**/63, **mb4.4**/22, **3C-3D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.41	268⇓	iP	Pn	18 27 21.8	+0.3
PB01				i S	Sn	18 27 33.6	+0.3
MACH	Maria Elena	1.34	210⇓	iP	Pn	18 27 30.1	-0.3
MACH				i S	Sn	18 27 48.3	-0.7
TOCH	Tocopilla	1.51	225⇓	iP	Pn	18 27 31.8	-0.7
TOCH				i S	Sn	18 27 51.3	-1.4
TOCH				AML	AML	18 27 52.6	
	comp=E,16µm,0.3s						
LVC	Limon Verde	1.58	176	P	Pn	18 27 33.1	-0.3
	comp=E,72nm,0.3s,baz=1.6,slow=9.2,SNR=824						
LVC				S	Sn	18 27 55.2	+0.9
	comp=E,207nm,0.3s,baz=102,slow=20,SNR=9.8						
LVC	Limon Verde	1.58	176	P	Pn	18 27 33.1	-0.3
LVC				ePn	Pn	18 27 33.5	+0.1
LVC				eSn	Sn	18 27 54.8	+0.5
LVC	Limon Verde	1.58	176⇑	iP	Pn	18 27 33.6	+0.2
LVC				i S	Sn	18 27 55.1	+0.9
LVC				AML	AML	18 27 58.4	
	comp=N,3µm,0.4s						
PECH	Pedro de Valdi	1.67	200⇑	iP	Pn	18 27 34.2	-0.2
PECH				AML	AML	18 27 55.4	
	comp=E,14µm,0.2s						
PECH				i S	Sn	18 27 55.9	-0.2
SPCH	San Pedro de A	2.03	157	eP	Pn	18 27 40.4	+1.4
SPCH				i S	Sn	18 28 06.5	+2.2
SPCH	San Pedro de A	2.03	157	eP	Pn	18 27 40.4	+1.4
SPCH				i S	Sn	18 28 06.5	+2.2
SPCH				AML	AML	18 28 57.6	
	comp=E,2µm,0.7s						
MECH	Mejillones	2.44	212	AML	AML	18 28 19.2	
	comp=N,3µm,0.4s						
CEN1	Los Morros	2.58	204	AML	AML	18 28 20.7	
	comp=N,813nm,0.5s						
ANCH	Antofagasta	2.93	205	AML	AML	18 28 22.6	
	comp=E,1µm,0.4s						
ARE	Arequipa	5.10	333⇑	iP	Pn	18 28 18.0	-2.0
ARE				i S	Sn	18 29 12.6	-5.1
LCO	Las Campanas	8.09	190	ePn	Pn	18 28 51.5	-9.0
LCO				eSn	Sn	18 30 21.5	-8.8
SIV	San Ignacio	9.07	58	P	Pn	18 29 11.2	-2.8
	comp=E,23nm,0.3s,baz=247,slow=11,SNR=404						
CFAA	Coronel Fontan	10.56	176	P	Pn	18 29 29.1	-5.0
	comp=E,0.1nm,0.3s,baz=347,slow=12,SNR=20						
CFAA				S	Sn	18 31 18.9	-11
	comp=E,0.3nm,0.3s,baz=215,slow=18,SNR=12						
NNA	Nana	11.69	319	ePn	Pn	18 29 50.8	+1.5
NNA				eSn	Sn	18 31 59.4	+1.5
PLCA	Paso Flores	19.68	183	P	P	18 31 26.6	-0.1
	comp=E,0.5nm,0.3s,baz=0.0,slow=13,SNR=14						
PLCA	Paso Flores	19.68	183	eP	P	18 31 26.3	-0.3
	comp=E,16nm,0.9s						
BDFB	Brasilia	20.66	78	P	P	18 31 36.2	-1.2
	comp=E,7.5nm,0.5s,baz=244,slow=18,SNR=21						
BDFB	Brasilia	20.66	78	eP	P	18 31 35.8	-1.6
	comp=E,12nm,0.5s						
OTAV	Otavalo	23.05	335	P	P	18 32 04.2	+1.9
	comp=E,4.4nm,0.9s,mb3.8						
EFI	East Falkland	31.77	167	eP	P	18 33 17.4	-2.6
	comp=E,23nm,0.9s,mb4.9						
RCBR	Riachuelo	35.49	70	eP	P	18 33 53.4	+0.7
	comp=E,30nm,0.6s,mb5.3						
WVT	Waverly	59.56	342	P	P	18 36 56.7	-1.7
	comp=E,5.6nm,0.8s,mb4.7						
MIAR	Mount Ida	59.99	337	P	P	18 37 00.0	-1.3
	comp=E,2.5nm,0.4s,mb4.6						
TXAR	Lajitas Array	60.17	325	P	P	18 37 02.7	0.0
	comp=E,0.5nm,0.5s,mb3.8,baz=147,slow=8.3,SNR=8.5						
VNA3	Neumayer Olymp	60.56	161	e	P	18 37 04.9	+0.1
VNA3				e		18 37 10.0	
VNA3				e		18 37 17.1	
VNA1	Neumayer--Stat	60.77	161	e	P	18 37 06.4	+0.2
VNA1				e		18 37 10.4	
VNA1				e		18 37 18.1	
VNA2	Neumayer--Watz	61.14	161	e	P	18 37 08.7	0.0
	baz=308,slow=7.8						
VNA2				e		18 37 13.5	
VNA2				e		18 37 21.4	
SNAA	Sanae	62.77	161	eP	P	18 37 15.3	-4.3
	comp=E,2.6nm,0.6s,mb4.3						
ANMO	Albuquerque	66.04	327	P	P	18 37 42.1	+0.7
	comp=E,1.5nm,0.8s,mb3.9						
LIC	Lamto	68.38	74	ePKIKP	P	18 37 59.0	+2.3
	comp=E,12nm,0.5s,mb5.0						
TIC	Toumodi	68.56	74	ePKIKP	P	18 37 58.7	+0.9
	comp=E,10nm,0.2s,mb5.3						
KIC	Kosan Boka	68.69	74	ePKIKP	P	18 37 58.8	+0.2
	comp=E,67nm,0.9s,mb5.5						
DBIC	Dimbokro	68.72	74	P	P	18 37 58.2	-0.6
	comp=E,4.4nm,0.8s,mb4.3,baz=216,slow=6.0,SNR=8.8						
DBIC				pP	pP	18 38 26.2	+1.2
	comp=E,2.9nm,0.6s,baz=235,slow=11,SNR=2.1						
DBIC				sP	sP	18 38 37.6	+1.2
	comp=E,5.7nm,0.9s,baz=235,slow=3.8,SNR=3.1						
DBIC	Dimbokro	68.72	74	eP	P	18 37 57.1	-1.7
	comp=E,6.2nm,0.6s,mb4.6						
DBIC				pP	pP	18 38 26.2	+1.2
DBIC				sP	sP	18 38 37.6	+1.2
QSPA	South Pole Qui	69.16	180	eP	P	18 38 01.0	+0.5
	comp=E,3.6nm,0.4s,mb4.5						
PDAR	Pinedale Array	73.64	330	P	P	18 38 28.1	+0.3
	comp=E,0.6nm,0.6s,mb3.5,baz=137,slow=7.6,SNR=6.2						
PDAR				pP	pP	18 38 55.5	+1.1
	comp=E,0.4nm,0.5s,baz=116,slow=6.1,SNR=2.7						
HWUT	Hardware Ranch	73.72	328	eP	P	18 38 27.9	-0.4
	comp=E,3.3nm,0.7s,mb4.2						
ULM	Lac du Bonnet	74.83	343	P	P	18 38 33.8	-0.7
	comp=E,2.7nm,0.5s,mb4.2,baz=162,slow=6.5,SNR=3.0						
ULM				pP	pP	18 39 02.7	+1.6
	comp=E,2.5nm,0.5s,baz=165,slow=11,SNR=2.1						
ULM	Lac du Bonnet	74.83	343	P	P	18 38 33.8	-0.7
ULM				pP	pP	18 39 02.7	+1.6
NVAR	Mina Array Bea	75.04	322	P	P	18 38 37.2	+1.2
	comp=E,1.0nm,0.8s,mb3.6,baz=153,slow=6.9,SNR=6.6						
NVAR				pP	pP	18 39 04.7	+1.9
	comp=E,0.6nm,0.7s,baz=152,slow=4.7,SNR=2.9						
NVAR				sP	sP	18 39 18.7	+4.7
	comp=E,0.9nm,0.8s,baz=155,slow=7.1,SNR=3.6						
NVAR	Mina Array Bea	75.04	322	P	P	18 38 37.2	+1.2
NVAR				pP	pP	18 39 04.7	+1.9
NVAR				sP	sP	18 39 18.7	+4.7
HLID	Hailey	76.58	328	eP	P	18 38 45.2	+0.6
	comp=E,5.2nm,1.1s,mb4.2						
VNDA	Vanda	77.29	190	P	P	18 38 49.3	+1.0
	comp=E,1.9nm,0.8s,mb3.9,baz=113,slow=5.7,SNR=11						
VNDA	Vanda	77.29	190	eP	P	18 38 49.3	+1.0
	comp=E,2.6nm,0.8s,mb4.0						
TORD	Torodi Ar. Bea	77.32	70	P	P	18 38 48.1	-1.3
	comp=E,11nm,0.4s,mb4.9,baz=253,slow=5.4,SNR=32						
TORD				pP	pP	18 39 17.5	+1.3
	comp=E,11nm,0.7s,baz=252,slow=5.6,SNR=9.8						
MAW	Mawson	84.82	163	P	P	18 39 28.4	+0.1
	comp=E,2.6nm,0.5s,mb4.4,baz=358,slow=6.8,SNR=8.1						
MAW	Mawson	84.82	163	eP	P	18 39 27.6	-0.7
	comp=E,0.7nm,0.6s,mb3.8						
YKA	Yellowknife Ar	90.70	341	P	P	18 39 55.9	-0.4
	comp=E,1.5nm,0.7s,mb4.2,baz=135,slow=4.8,SNR=8.1						
YKA				pP	pP	18 40 24.7	+0.9
	comp=E,2.0nm,0.7s,baz=136,slow=4.5,SNR=7.9						
YKA	Yellowknife Ar	90.70	341	P	P	18 39 55.9	-0.4
YKA				pP	pP	18 40 24.7	+0.9
ASAR	Alice Springs	130.27	208	PKP	PKPdf	18 46 03.5	-1.0
	comp=E,1.3nm,0.9s,baz=161,slow=2.8,SNR=8.7						
PETK	Petropavlovsk-	132.11	324	PKP	PKPdf	18 46 07.6	+0.6
	comp=E,4.1nm,1.0s,baz=335,slow=1.6,SNR=5.4						
KURK	Kurchatov	141.00	33	PKhKP		18 46 16.5	
	comp=E,0.2nm,0.2s,baz=324,slow=4.6,SNR=2.0						
KURK				PKP	PKPdf	18 46 23.7	+0.1
	comp=E,0.8nm,0.8s,baz=286,slow=2.8,SNR=3.2						
KURK				pPKP	pPKPdf	18 46 54.7	+2.5
	comp=E,0.2nm,0.3s,baz=307,slow=3.2,SNR=2.2						
ZALV	Zalesovo Beam	141.58	25	PKP	PKPdf	18 46 23.3	-1.2
	comp=E,1.4nm,0.6s,baz=296,slow=3.4,SNR=8.1						
ZALV				pPKP	pPKPdf	18 46 55.5	+2.4
	comp=E,1.1nm,0.6s,baz=250,slow=3.0,SNR=3.4						
ZALV	Zalesovo Beam	141.58	25	PKP	PKPdf	18 46 23.3	-1.2
ZALV				pPKP	pPKPdf	18 46 55.5	+2.4
MK31	Makanchi Array	145.32	35	ePKPdf	PKPdf	18 46 31.3	0.0
MKAR	Makanchi Array	145.32	35	PKPbc	PKPbc	18 46 31.2	-0.1
	comp=E,3.3nm,0.8s,baz=316,slow=3.3,SNR=26						
MKAR				pPKPbc	pPKPbc	18 47 01.2	+1.7
	comp=E,2.9nm,0.7s,baz=329,slow=2.5,SNR=7.2						
MKAR	Makanchi Array	145.32	35	PKPbc	PKPbc	18 46 31.2	-0.1
MKAR				pPKPbc	pPKPbc	18 47 01.2	+1.7
MJAR	Matsushiro Arr	151.68	309	PKPbc	PKPbc	18 46 47.8	-0.5
	comp=E,1.3nm,0.5s,baz=143,slow=0.8,SNR=6.5						
SONM	Songino Array	153.00	7	PKP	PKPdf	18 46 44.0	+0.5
	comp=E,0.4nm,0.7s,baz=320,slow=3.8,SNR=4.5						
SONM				PKPbc	PKPbc	18 46 50.9	+0.1
	comp=E,0.6nm,0.5s,baz=342,slow=2.1,SNR=5.6						
SONM				pPKP	pPKPdf	18 47 12.6	+0.4
	comp=E,0.7nm,0.5s,baz=316,slow=1.5,SNR=4.2						
SONM				pPKPbc	pPKPbc	18 47 20.3	+0.8
	comp=E,0.9nm,0.6s,baz=328,slow=1.9,SNR=3.8						

*IDC **01** 18:37:21.8±12.0, 794S×15727E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.9/4, Error ellipse: s-maj=404.9km s-min=40.6km az=111.0*
*ISCJB **01** 18:37:28.7±1.8, 88S±02×1566E±0.1, h69km±20km, mb3.8/3, Error ellipse: s-maj=39.9km s-min=19.5km az=2.2*
*NEIC **01** 18:37:30.2±1.2, 866S×15659E, h69km±14km, Error ellipse: s-maj=27.6km s-min=13.2km az=185.0*
ISC 01 18:37:30.3±1.6, **87S**±02×**1566E**±01, **h69**km±18km, **n9**, σ**0s47**/9, **mb3.8**/3, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.41	103	ePn	Pn	18 38 21.0	0.0
PMG	Port Moresby	9.34	265	ePn	Pn	18 39 42.2	0.0
	10.0nm,0.6s						
ASAR	Alice Springs	26.33	233	P	P	18 43 08.6	+8.6
	0.5nm,0.8s,baz=61,slow=9.5,SNR=4.4						
CASY	Casey	65.50	199	eP	P	18 48 05.9	0.0
	28nm,0.6s						
SONM	Songino Array	71.59	327	P	P	18 48 44.1	-0.1
	0.4nm,0.4s,mb3.6,baz=128,slow=6.1,SNR=3.7						
MK31	Makanchi Array	85.70	318	eP	P	18 50 01.6	-0.1
MKAR	Makanchi Array	85.70	318	P	P	18 50 02.7	+1.0
	1.0nm,0.7s,mb3.9,baz=96,slow=6.9,SNR=8.3						
MKAR	Makanchi Array	85.70	318	P	P	18 50 02.7	+1.0
ZALV	Zalesovo Beam	86.44	326	P	P	18 50 04.4	-0.8
	1.2nm,0.6s,mb4.0,baz=116,slow=6.6,SNR=6.2						

*IDC **01** 18:41:20.0±2.1, 188S×105.18E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/18, mbtmp4.0/6, Error ellipse: s-maj=133.6km s-min=19.7km az=61.0*
*ISCJB **01** 18:41:22.2±0.5, 138S±004×10565E±005, h10km, mb4.0/7, Error ellipse: s-maj=7.7km s-min=5.4km az=161.6*
*NEIC **01** 18:41:22.7±0.7, 163S×10558E, h10km, mb4.1/3, Error ellipse: s-maj=20.2km s-min=9.2km az=56.0*
*DJA **01** 18:41:28, 160S×10559E, h5km, MLv4.9/5*
ISC 01 18:41:23.9±0.5, **144S**±004×**10567E**±004, **h10**km, **n29**, σ**1s47**/34, **mb4.0**/7, **1C**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPBI	Pangkal Pinang	0.86	147	P	Pg	18 41 39.9	-0.6
PPBI				S	Sg	18 41 54.0	+2.3
PMBI	Palembang	1.73	211	P	Pn	18 41 53.2	-0.8
PMBI				S	Sn	18 42 15.0	-1.2
TPI	Tanjungpandan	2.38	123⇑	eP	Pn	18 42 01.5	-1.5
TPI				eS	Sg	18 42 50.0	+10
TPI	Tanjungpandan	2.38	123	P	Pg	18 42 08.8	-0.8
TPI				S	Sg	18 42 40.5	+0.1
KLI	Kotabumi	3.50	193	P	Pn	18 42 17.0	-1.4
KLI				S	Sn	18 43 05.3	+5.4
RGRI	Rengat	3.50	288	P	Pg	18 42 25.1	-6.0
RGRI				S	Sg	18 43 08.1	-8.4
MYKOM	Kota Tinggi	3.69	330	P	Pn	18 42 24.2	+3.2
KSI	Kapahiang	3.78	234	P	Pn	18 42 19.6	-2.6
KSI				S	Sn	18 43 12.4	+5.6
SBJI	Serang	4.67	174	P	Pn	18 42 36.7	+2.1
CBJI	Citeko	5.09	167	P	Pn	18 42 43.9	+3.6
DBJI	Dramaga	5.20	168	P	Pn	18 42 45.2	+3.4
PDSI	Padang	5.23	276	P	Pn	18 42 47.9	+5.7
PPI	Padang Panjang	5.36	280	P	Pn	18 42 47.9	+3.9
	76nm,1.1s,1µm0.6nm						
KSM	Kuching	5.47	58	ePn	Pn	18 42 46.3	+0.8
KSM				eS	Sg	18 44 17.4	-2.2
JCJI	Jatiwangi	5.65	153	P	Pn	18 42 51.5	+3.5
LEM	Lembang	5.70	160	P	Pn	18 42 49.5	+0.9
STKI	Sintang	6.00	76	P	Pn	18 42 58.6	+5.8
PCI	Palu	14.18	88	P	pP	18 44 59.5	+4.1
CM31	Chiang Mai Arr	20.85	342	eP	P	18 46 06.6	+0.6
	8.3nm,0.8s						
CMAR	Chiang Mai Arr	20.85	342	P	P	18 46 06.8	+0.8
	6.8nm,0.7s,baz=175,slow=9.2,SNR=39						
CHTO	Chiang Mai	21.18	342	P	P	18 46 10.0	+0.4
	3.6nm,1.0s,mb3.7						
WRAB	Tennant Creek	33.53	125	P	P	18 48 04.0	-0.1
	3.3nm,0.7s,mb4.4						
ASAR	Alice Springs	35.17	131	P	P	18 48 16.6	-1.6
	0.8nm,0.9s,mb3.6,baz=308,slow=8.0,SNR=4.2						
ASAR				PcP	PcP	18 50 48.5	-1.1
	0.5nm,0.7s,baz=322,slow=2.1,SNR=6.2						
STKA	Stephens Creek	45.43	136	P	P	18 49 40.6	-2.5
	1.2nm,0.6s,mb3.9,baz=311,slow=9.3,SNR=2.4						
SONM	Songino Array	49.07	1	P	P	18 50 12.8	+1.6
	2.0nm,0.7s,mb4.3,baz=179,slow=9.2,SNR=14						
SONM				PcP	PcP	18 51 33.2	-1.7
	0.5nm,0.6s,baz=169,slow=1.9,SNR=3.3						
MKAR	Makanchi Array	52.24	340	P	P	18 50 34.9	-0.3
	1.8nm,0.6s,mb4.2,baz=157,slow=7.5,SNR=18						
ZALV	Zalesovo Beam	57.85	346	P	P	18 51 14.8	-0.8
	1.5nm,0.6s,mb4.2,baz=143,slow=5.2,SNR=9.9						
NVAR	Mina Array Bea	125.49	42	PKP	PKPdf	19 00 24.6	-1.2
	0.2nm,0.6s,baz=316,slow=2.5,SNR=3.0						
TXAR	Lajitas Array	140.64	42	PKP	PKPdf	19 00 53.9	-0.6
	0.3nm,0.7s,baz=173,slow=3.6,SNR=3.0						

*TEH **01** 18:44:42.8, 38.18N×4640E, h2km, ML4.6*
*IDC **01** 18:45:08.4±0.9, 38.10N×4633E, h0km, mb3.9/11, mb1 4.0/15, mb1mx4.0/24, mbtmp3.9/15, ML3.8/4, MS3.6/3, Ms1 3.6/3, ms1mx3.1/42, Error ellipse: s-maj=22.1km s-min=13.0km az=154.0*
*ISCJB **01** 18:45:09.5±0.2, 3821N±002×4647E±002, h10km, mb4.2/25, MS3.8/3, Error ellipse: s-maj=2.7km s-min=2.1km az=15.3*
*NEIC **01** 18:45:09.7±0.8, 3820N×4642E, h4km±6km, mb4.3/14, ML4.4(THR), MN4.6(TEH), Error ellipse: s-maj=6.1km s-min=4.2km az=208.0*
NEIC Felt at Tabriz.
*THR **01** 18:45:09.7±0.9, 3823N×4648E, h14km±6km, ML4.4*
*CSEM **01** 18:45:10.9±0.1, 3800N×4644E, h10km, mb4.6/4, Error ellipse: s-maj=1.8km s-min=1.0km az=33.0*
*MOS **01** 18:45:13.0±1.3, 3845N×4647E, h24km, mb4.5/13, Error ellipse: s-maj=9.5km s-min=6.9km az=94.5*
*NSSP **01** 18:45:16.4, 3837N×4652E, h10km, ML4.3*
*DDA **01** 18:45:30.0, 3826N×4505E, h3km, Md3.8*
ISC 01 18:45:11.0±0.2, **3818N**±002×**4646E**±002, **h10**km, **n169**, σ**1s52**/202, **mb4.2**/25, **MS3.8**/3, **9C-7D**, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITBZ	Tabriz	0.25	283	Pg	Pg	18 45 14.6	-1.6
ITBZ	Tabriz	0.25	283	ePg	Pg	18 45 14.6	-1.6
IHRS	Heris	0.48	73	Pg	Pg	18 45 20.6	+0.2
IHRS	Heris	0.48	73	ePg	Pg	18 45 20.6	+0.2
IHRS				e		18 45 21.0	
IBST	Bostanabad	0.59	144	Pg	Pg	18 45 20.0	-2.4
IBST	Bostanabad	0.59	144	ePg	Pg	18 45 20.1	-2.3
IBST				e		18 45 33.0	
ISHB	Shabestar	0.67	279	Pg	Pg	18 45 22.3	-1.7
ISHB	Shabestar	0.67	279	ePg	Pg	18 45 22.3	-1.7
ISHB				e		18 45 32.5	
ISRB	Sarab	1.02	110	Pg	Pg	18 45 29.5	-1.1
ISRB				Sg	Sg	18 45 44.1	+0.3
ISRB	Sarab	1.02	110	ePg	Pg	18 45 29.6	-1.0
ISRB				eSg	Sg	18 45 44.2	+0.4
ISRB				e		18 45 48.2	
NAX	Nakhchivan	1.25	323	S	Sg	18 45 51.9	+0.7
GRMI	Germi	1.29	60	ePg	Pn	18 45 32.7	-2.4
GRMI				AML	AML	18 45 54.8	
	comp=E,6µm,0.7s						
GRMI				AML	AML	18 45 57.3	
	comp=N,3µm,0.3s						
GRMI	Germi	1.29	60	Pg	Pn	18 45 32.0	-3.1
MAKU	Maku	1.82	311	ePg	Pn	18 45 42.6	+0.2
MAKU				AML	AML	18 46 10.5	
	comp=N,3µm,0.5s						
MAKU	Maku	1.82	311	Pg	Pn	18 45 42.0	-0.4
GLBA	Clilabad	1.85	54	P	Pg	18 45 45.3	-1.1
	SNR=404						
GLBA				S	Sg	18 46 13.5	+3.1
BRDA	Brd	2.15	15	P	Pn	18 45 50.8	+3.8
	SNR=24						
HKR	Hakkari	2.23	255	ePN	Pn	18 45 48.2	+0.1
HAKT	HAKKARI	2.27	255	i P	Pg	18 45 52.4	-2.1
HAKT				i S	Sg	18 46 26.1	+2.3
ZNJK	Zanjan	2.32	130	ePn	Pn	18 45 49.5	+0.2
ZNJK				eSg	Sg	18 46 23.4	-2.3
ZNJK				AML	AML	18 46 30.3	
	comp=N,2µm,0.6s						
TVAN	Van	2.43	279	i P	Pn	18 45 52.4	+1.7
TVAN				i S	Sn	18 46 17.1	-3.4
VANT	Van	2.43	277	ePN	Pn	18 45 53.7	+2.9
CUKT	Cukurca	2.45	249	ePN	Pn	18 45 51.2	+0.2
VANB	Van	2.45	281	ePN	Pn	18 45 51.8	+0.7
GANJ	Ganja	2.47	358	P	Pg	18 45 55.2	-3.1
	SNR=136						
GANJ				S	Sg	18 46 28.6	-1.7
ERE	Yerevan	2.52	323	P	Pn	18 45 54.5	+2.5
ERE				S	Sn	18 46 27.5	+4.8
KAPZ	Kaputan	2.54	328	⇑P	Pn	18 45 56.2	+3.9
KAPZ				S	Sn	18 46 28.8	+5.5

comp=E,0.5nm,0.3s,baz=201,slow=12,SNR=14
AKTO Sn **Sn** **18 51 17.6 -5.6**
comp=E,0.4nm,0.3s,baz=45,slow=20,SNR=3.4
AKTO LR LR 18 54 36.1
comp=E,68nm,21.1s,baz=236,slow=38
AKTO Aktyubinsk 14.76 30 P **Pn** **18 48 37.0 -2.7**
AKTO 18 51 17.6
AKASG Malin Array Be 17.50 321 P **Pn** **18 49 13.4 -1.6**
comp=E,0.4nm,0.3s,baz=127,slow=12,SNR=5.5
KIEV Kiev 17.50 321 *e*P **Pn** **18 49 14.3 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 17.50 321 *e*Pn **Pn** **18 49 14.3 -0.8**
comp=Z,4.7nm,0.8s
IDI Anoyia 17.53 267 P **Pn** **18 49 14.5 -0.9**
comp=Z,0.8nm,0.3s,baz=67,slow=13,SNR=6.5
BUR08 Bucovina Ar. S 18.17 308 *e*Pn **Pn** **18 49 22.4 -0.9**
OBN Obninsk 18.22 342⇑*i*P **Pn** **18 49 21.5 -2.3**
OBN pmax pmax
comp=Z,21nm,1.2s
OBN Obninsk 18.22 342 P **Pn** **18 49 21.9 -1.9**
comp=Z,11nm,0.6s
KBL Kabul 18.54 94 *e*P **Pn** **18 49 31.1 +3.2**
KBL pmax pmax
comp=Z,6.0nm,1.0s
KBL Kabul 18.54 94 *e*P **Pn** **18 49 31.1 +3.2**
comp=Z,5.6nm,1.0s
LVV L'vov 19.81 313 *e*P **Pn** **18 49 55.2 +12**
ARU Arti 19.96 20*c i*P **Pn** **18 49 43.1 -1.7**
ARU *e*S **Sn** **18 53 23.0 -6.1**
ARU pmax pmax
comp=Z,4.0nm,0.6s
ARU Arti 19.96 20 *e*P **Pn** **18 49 42.6 -2.2**
comp=Z,9.2nm,0.6s
UZH Uzhgorod 20.35 309 *e*P **P** **18 49 52.5 +5.1**
UZH *e* 18 50 08.7
UZH *i* 18 50 12.0
KWP Kalwaria 20.50 312 P **P** **18 49 49.9 +0.9**
KWP pmax pmax
comp=Z,14nm,0.9s
KWP Kalwaria 20.50 312 P **P** **18 49 49.9 +0.9**
comp=Z,14nm,0.9s
KWP Kalwaria 20.50 312 P **P** **18 49 49.9 +0.9**
comp=Z,14nm,0.9s
SVE Sverdlovsk 20.89 22 *e*P **P** **18 50 03.2 +10**
SVE *e*S **S** **18 53 46.2 +0.3**
SVE pmax pmax
comp=Z,21nm,0.9s
SVE MLR MLR
comp=Z,560nm,9.0s
AML Almayashu 21.15 71 P **P** **18 49 51.7 -4.4**
comp=Z,1nm,1.3s,mb4.4
EKS2 Erkin-Say 21.23 69 *e*P **P** **18 49 57.3 +0.3**
comp=Z,11nm,0.9s,mb4.2
EKS2 Erkin-Say 21.23 69 *e*P **P** **18 49 57.3 +0.3**
comp=Z,11nm,0.9s,mb4.2
AAK Ala-Archa 21.76 69⇑*e*P **P** **18 50 05.0 +2.3**
AAK pmax pmax
comp=Z,4.0nm,1.4s,mb3.7
AAK Ala-Archa 21.76 69 *e*P **P** **18 50 05.3 +2.6**
comp=Z,18nm,0.8s,mb4.6
AAK Ala-Archa 21.76 69 *e*P **P** **18 50 05.3 +2.7**
comp=Z,18nm,0.8s,mb4.6
NIE Niedzica 21.85 309 *e*P **P** **18 50 10.8 +7.2**
BRVK Borovoye 22.19 40 *e*P **P** **18 50 07.1 -0.1**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
BRVK Borovoye 22.19 40 *e*P **P** **18 50 07.1 -0.1**
comp=Z,9.8nm,0.7s,mb4.3
BRVK Borovoye 22.19 40 *e*P **P** **18 50 07.1 -0.1**
comp=Z,9.8nm,0.7s,mb4.3
BVAR Borovoye Array 22.23 40 P **P** **18 50 07.2 -0.3**
comp=Z,4.7nm,0.7s,mb4.0,baz=226,slow=10,SNR=15
BVAR S **S** **18 54 19.4 +7.3**
comp=Z,3.0nm,1.0s,baz=228,slow=19,SNR=4.9
TKM2 Tokmak 2 22.58 69 *e*P **P** **18 50 12.0 +0.6**
TKM2 pmax pmax
comp=Z,21nm,1.0s,mb4.5
TKM2 Tokmak 2 22.58 69 *e*P **P** **18 50 12.0 +0.6**
comp=Z,21nm,1.0s,mb4.5
TKM2 Tokmak 2 22.58 69 *e*P **P** **18 50 12.0 +0.6**
comp=Z,21nm,1.0s,mb4.5
KLMR Klimovskoe 23.11 351 *e*P **P** **18 50 16.0 -0.9**
KLMR pmax pmax
comp=Z,22nm,1.1s,mb4.5
TIP Timpagrande 23.17 282 *e*P **P** **18 50 15.5 -2.2**
comp=Z,10nm,1.1s,mb4.2
TIP Timpagrande 23.17 282 *e*P **P** **18 50 15.5 -2.2**
comp=Z,10nm,1.1s,mb4.2
UPC Upice 24.83 310 *e*P **P** **18 50 38.6 +5.4**
GERES GERESS Array B 25.85 305 P **P** **18 50 41.6 -0.9**
comp=Z,0.9nm,0.6s,mb3.5,baz=90,slow=8.0,SNR=11
KURK Kurchatov 25.93 51 P **P** **18 50 42.6 -0.7**
comp=Z,7.2nm,0.8s,mb4.2,baz=260,slow=10,SNR=26
KURK LR LR 19 03 07.8
comp=Z,89nm,18.7s,MS3.3,baz=305,slow=42
KURK Kurchatov 25.93 51⇓*i*P **P** **18 50 44.4 +1.1**
KURK pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
KHC Kasperske Hory 25.99 306⇓*i*P **P** **18 50 46.2 +2.4**
KHC Kasperske Hory 25.99 306 *e*P **P** **18 50 47.4 +3.6**
KHC *e*pP pP 18 50 53.5 +6.7
KHC *ex* x 18 51 02.0
MK31 Makanchi Array 27.59 60 *e*P **P** **18 50 58.4 +0.2**
MK31 Makanchi Array 27.59 60 *e*P **P** **18 50 58.4 +0.2**
MKAR Makanchi Array 27.59 60 P **P** **18 50 59.1 +0.9**
comp=Z,2.2nm,0.8s,mb3.9,baz=254,slow=6.5,SNR=8.3
NVS Novosibirsk 29.86 44 *e*P **P** **18 51 16.1 -2.2**
ZALV Zalesovo Beam 30.48 46 P **P** **18 51 24.3 +0.5**
comp=Z,0.9nm,0.4s,mb3.8,baz=263,slow=10.0,SNR=5.1
NOA NORSAR Array B 31.68 328 P **P** **18 51 32.9 -1.4**
comp=Z,0.7nm,0.6s,mb3.6,baz=124,slow=8.8,SNR=3.0
ARCES ARCESS Array B 33.38 347 P **P** **18 51 49.3 +0.3**
comp=Z,5.0nm,1.1s,mb4.3,baz=139,slow=8.4,SNR=3.2
HVS Khovu-Aksy 35.40 53⇓*i*P **P** **18 52 08.6 +1.8**
HVS pmax pmax
comp=Z,14nm,1.0s,mb4.8
KBS Kingsbay 43.16 351 *e*P **P** **18 53 11.9 +0.6**
KBS pmax pmax
comp=Z,22nm,0.4s,mb5.2
KBS Kingsbay 43.16 351 *e*P **P** **18 53 11.9 +0.6**
comp=Z,22nm,0.4s,mb5.2
KBS Kingsbay 43.16 351 *e*P **P** **18 53 11.9 +0.7**
comp=Z,22nm,0.4s,mb5.2
SONM Songino Array 43.87 57 P **P** **18 53 17.9 +0.6**
comp=Z,0.7nm,0.9s,mb3.4,baz=270,slow=8.3,SNR=3.7
ULN Ulaanbaatar 44.30 57⇑*e*P **P** **18 53 22.0 +1.2**
ULN Ulaanbaatar 44.30 57 *e*P **P** **18 53 21.3 +0.5**
comp=Z,4.4nm,0.9s,mb4.2
ULN Ulaanbaatar 44.30 57 *e*P **P** **18 53 21.3 +0.5**
comp=Z,4.4nm,0.9s,mb4.2
TORD Torodi Ar. Bea 46.83 250 P **P** **18 53 37.8 -3.4**
comp=Z,0.3nm,0.6s,mb3.4,baz=53,slow=7.2,SNR=3.4
BOD Bodaibo 47.07 42 *e*P **P** **18 53 41.4 -1.2**
BOD pmax pmax
comp=Z,4.0nm,1.7s,mb4.1
CHTO Chiang Mai 49.31 98 P **P** **18 53 58.9 -1.5**
CHTO pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
CHTO Chiang Mai 49.31 98 P **P** **18 53 58.9 -1.5**
comp=Z,5.4nm,1.2s,mb4.5
CHTO Chiang Mai 49.31 98 P **P** **18 53 58.9 -1.5**
comp=Z,5.4nm,1.2s,mb4.5
CMAR Chiang Mai Arr 49.51 98 P **P** **18 54 01.1 -0.9**
comp=Z,1.1nm,0.7s,mb4.0,baz=296,slow=8.1,SNR=8.9
CMAR Chiang Mai Arr 49.51 98 *i*P **P** **18 54 01.7 -0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 49.51 98 P **P** **18 54 01.0 -0.9**
TIXI Tiksi 51.91 24⇓*i*P **P** **18 54 20.7 +1.4**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
TIXI MLR MLR
comp=Z,100nm,22.0s,MS3.8
YAK Yakutsk 54.08 35⇓*i*P **P** **18 54 34.8 -0.6**
YAK pmax pmax
comp=Z,15nm,2.5s,mb4.5
KSRS Korea Array 62.23 63 P **P** **18 55 33.0 +0.1**
comp=Z,1.6nm,0.8s,mb4.2,baz=286,slow=6.3,SNR=5.6
KSRS Korea Array 62.23 63 P **P** **18 55 33.0 +0.1**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
BATI Baumata 86.36 106 LR LR 19 39 06.7
comp=Z,142nm,19.1s,MS4.4,baz=259,slow=38

*IDC **01** 18:45:52.6±4.5, 52.73N×173.60E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.4/22, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=296.4km s-min=34.9km az=180.0*
*ISCJB **01** 18:45:55.2±1.4, 52.6N×02.1734E±0.1, h41km±12km, mb3.6/2, Error ellipse: s-maj=38.9km s-min=10.9km az=12.7*
*NEIC **01** 18:45:56.3, 52.57N×173.35E, h20km, ML4.2(AEIC), After AEIC.*
ISC 01 18:45:56.0±1.9, 52.6N±03×173.6E±01, h31km±13km, n6, σ0.9s/96, mb3.6/2, Near Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.28**	**339**	P		**Pb**		**18 46 03.2**	**-0.1**
FX1				S		**Sb**		**18 46 08.8**	**+0.5**
SMY	**Shemya**	**0.48**	**76**	P		**Pb**		**18 46 05.5**	**-0.7**
SMY				S		**Sb**		**18 46 12.8**	**-0.3**
AMKA	**Amchitka**	**3.89**	**106**	P		**Pn**		**18 46 54.0**	**+0.3**
PETK	**Petropavlovsk-** 0.6nm,0.3s,baz=90,slow=19,SNR=18	**9.47**	**279**	Pn		**Pn**		**18 48 12.1**	**+2.0**
PETK				Sn		**Sn**		**18 49 53.5**	**-2.0**
PDAR	**Pinedale Array** 0.2nm,0.4s,mb3.5,baz=330,slow=6.5,SNR=3.5	**50.48**	**69**	P		**P**		**18 54 50.3**	**-0.3**
TXAR	**Lajitas Array** 0.2nm,0.3s,mb3.7,baz=302,slow=5.8,SNR=6.1	**63.18**	**76**	P		**P**		**18 56 21.4**	**+0.5**

*IDC **01** 18:58:07.0±0.5, 12.42N×126.18E, h0km, mb4.5/19, mb1 4.6/21, mb1mx4.6/24, mbtmp4.5/21, ML4.1/2, MS3.7/9, Ms1 3.7/9, ms1mx3.5/36, Error ellipse: s-maj=23.2km s-min=11.6km az=79.0*
*MAN **01** 18:58:08, 1256N×126.34E, h30km, mb5.2, ML4.1, MS4.3*
*MOS **01** 18:58:09.7±1.1, 12.44N×126.31E, h33km, mb4.9/20, Error ellipse: s-maj=14.0km s-min=7.4km az=117.7*
*ISCJB **01** 18:58:10.0±0.3, 12.42N±002×126.27E±004, h33km, mb4.7/63, MS3.7/15, Error ellipse: s-maj=5.2km s-min=3.2km az=10.5*
*BJI **01** 18:58:11.6, 12.52N×126.35E, h43km±mB5.0, mb4.7, Ms4.5, Msz4.2*
*NEIC **01** 18:58:12.4±1.2, 12.39N×126.30E, h43km±10km, mb4.9/30, Error ellipse: s-maj=8.8km s-min=5.5km az=79.0*
*DJA **01** 18:58:55, 10.45N×124.90E, h265km, Mw5.1/5*
ISC 01 18:58:12.1±0.3, 12.40N±002×126.23E±004, h35km, (h46km±2.1km: pP-P), n159, σ1.9s/15/165, mb4.6/63, MS3.7/15, 10C-7D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.11**	**224**	*e*P		**Pn**		**18 58 29.8**	**-1.3**
CNP	**Catarman**	**1.53**	**274**	*e*P		**Pn**		**18 58 35.5**	**-1.4**
PLP	**Palo**	**1.73**	**225**⇓	*e*P		**Pn**		**18 58 38.3**	**-1.4**
PLP				*i* S		**Sn**		**18 58 59.5**	**-1.1**
PLP	**Palo**	**1.73**	**225**⇓	*e*P		**Pn**		**18 58 38.3**	**-1.4**
PLP				*i* S		**Sn**		**18 58 59.5**	**-1.1**
OCLP	**Ormoc**	**2.08**	**230**	*e*P		**Pn**		**18 58 44.3**	**-0.1**
PVCP	**Virac**	**2.34**	**301**	*e*P		**Pn**		**18 58 45.0**	**-3.1**
PVCP				*e*S		**Sn**		**18 59 13.5**	**-2.2**
PVCP	**Virac**	**2.34**	**301**⇑	*i*P		**Pn**		**18 58 45.4**	**-2.7**
PVCP				*i* S		**Sn**		**18 59 08.5**	**-7.1**
MMPH	**Masbate**	**2.54**	**269**	*e*P		**Pn**		**18 58 52.3**	**+1.5**
MSLP	**Maasin**	**2.62**	**211**	*e*P		**Pn**		**18 58 52.5**	**+0.6**
MSLP				*e*S		**Sn**		**18 59 23.9**	**+1.3**
SCPH	**Surigao**	**2.70**	**196**	*e*P		**Pn**		**18 58 51.8**	**-1.2**
SCPH				*e*S		**Sn**		**18 59 23.2**	**-1.4**
LLP	**Lapu-Lapu**	**3.04**	**227**⇑	*e*P		**Pn**		**18 58 57.4**	**-0.2**
LLP				*e*S		**Sn**		**18 59 22.9**	**-10**
BUTP	**Butuan**	**3.46**	**190**	*e*P		Px		18 59 16.5	
RCP	**Roxas**	**3.51**	**257**⇓	*i*P		**Pn**		**18 59 04.8**	**+0.6**
TBP	**Tagbilaran**	**3.56**	**221**⇓	*e*P		**Pn**		**18 59 04.8**	**0.0**
AUQP	**San Andres**	**3.58**	**285**	*e*P		**Pn**		**18 59 11.5**	**+6.4**
GQP	**Guinayangan**	**3.97**	**292**⇓	*e*P		**Pn**		**18 59 07.5**	**-3.0**
GQP				*e*S		**Sn**		**18 59 53.4**	**-2.5**
GUIM	**Jordan**	**3.98**	**244**	*e*P		**Pn**		**18 59 10.3**	**-0.3**
OTRP	**Odiongan**	**4.11**	**270**	*e*P		**Pn**		**18 59 12.2**	**-0.2**
BUKP	**Musuan**	**4.64**	**194**	*e*P		**Pn**		**18 59 20.6**	**+0.9**
POLP	**Polilio Island**	**4.77**	**299**	*e*P		Px		18 59 34.5	
SJMP	**San Jose**	**4.99**	**271**	*e*P		**Pn**		**18 59 25.4**	**+0.9**
PAGZ	**Pagadian**	**5.32**	**212**	*e*P		**Pn**		**18 59 30.5**	**+1.4**
CUYO	**Cuyo Island**	**5.33**	**254**	*e*P		**Pn**		**18 59 29.2**	**0.0**
DAV	**Davao City (W)** comp=Z,750nm,19.7s,baz=311,slow=38	**5.34**	**187**	LR		LR		19 01 28.8	
MATI	**Mati**	**5.42**	**180**	*e*P		**Pn**		**18 59 33.7**	**+3.2**
BALP	**Baler**	**5.60**	**307**	*e*P		**Pn**		**18 59 29.2**	**-3.7**
BUSP	**Coron**	**5.91**	**267**	*e*P		**Pn**		**18 59 37.2**	**+0.1**
PALP	**Palanan**	**5.91**	**322**	*e*P		**Pn**		**18 59 34.7**	**-2.5**
LUBP	**Lubang**	**5.97**	**283**	*e*P		**Pn**		**18 59 40.5**	**+2.4**
CAUP	**Cauayan**	**6.21**	**317**	*e*P		**Pn**		**18 59 38.8**	**-2.5**
ENPP	**El Nido**	**6.76**	**261**	*e*P		**Pn**		**18 59 49.2**	**+0.3**
ABRA	**Dolores**	**7.45**	**315**	*e*P		**Pn**		**18 59 58.0**	**-0.4**
SDKM	**Sandakan**	**11.16**	**234**	⇓P		**Pn**		**19 00 54.8**	**+5.5**
KKM	**Kota Kinabalu** 56nm,1.3s	**11.73**	**238**	*e*P		**Pn**		**19 00 58.6**	**+1.6**
SSLB	**Suanglung** 30nm,1.0s	**12.38**	**337**	*e*Pn		**Pn**		**19 01 06.0**	**+0.1**
JOW	**Kunigami** 1.2nm,0.3s,baz=162,slow=16,SNR=3.8	**14.48**	**7**	Pn		**Pn**		**19 01 35.3**	**+0.7**
SBUM	**Sibu**	**17.04**	**236**	⇑P		**Pn**		**19 02 13.4**	**+5.7**
KAPI	**Kappang** 1.1nm,0.3s,baz=26,slow=5.1,SNR=26	**18.46**	**201**	P		**Pn**		**19 02 25.6**	**+0.3**
KAPI	**Kappang** 89nm,1.0s	**18.46**	**201**	*e*Pn		**Pn**		**19 02 25.2**	**-0.1**
KAPI				*e*				19 02 35.8	
KSM	**Kuching** 26nm,0.8s	**19.15**	**237**	*e*P		**Pn**		**19 02 32.6**	**-1.0**
KSM	**Kuching**	**19.15**	**237**	⇑P		**Pn**		**19 02 34.9**	**+1.2**
SSE	**Sheshan**	**19.18**	**347**	P		**Pn**		**19 02 33.0**	**-0.8**
SSE				S		**S**		**19 06 08.2**	**0.0**
SSE	comp=Z,36nm,0.7s			AMB		AMB			
SSE	comp=Z,159nm,10.6s			AMB		AMB			
SSE	comp=N,177nm,14.6s			LR		LR			
SSE	comp=E,196nm,14.6s			LR		LR			
SSE	comp=Z,260nm,12.9s			LR		LR			
NJ2	**Nanjing**	**20.70**	**342**	*e*P		**P**		**19 02 52.6**	**+3.4**
NJ2	comp=Z,30nm,0.6s			AMB		AMB			
CBIJ	**Chichi jima** comp=Z,176nm,21.8s,MS3.4,baz=224,slow=32	**20.92**	**43**	LR		LR		19 09 18.8	
BATI	**Baumata** comp=Z,99nm,0.8s,mb5.3,baz=308,slow=0.6,SNR=33	**22.61**	**187**	P		**P**		**19 03 10.3**	**+0.5**
BATI				S		**S**		**19 07 13.8**	**-1.9**
	comp=Z,25nm,1.1s,baz=299,slow=19,SNR=4.4								
BATI				LR		LR		19 11 05.8	
	comp=Z,97nm,20.8s,MS3.2,baz=16,slow=34								
GYA	**Guiyang**	**23.10**	**310**	P		**P**		**19 03 16.5**	**+1.5**
GYA				AP				19 03 26.0	
GYA				XP		sP		19 03 33.0	+4.2
GYA				PP				19 03 49.5	
GYA				PPP				19 03 59.5	
GYA				PCP		PcP		19 07 02.5	-0.8
GYA				S		**S**		**19 07 22.0**	**-1.8**
GYA				XS		sS		19 07 40.5	+0.3
GYA	comp=Z,10.0nm,0.9s,mb4.2			AMB		AMB			
GYA	comp=Z,90nm,5.6s			AMB		AMB			
GYA	comp=N,910nm,12.5s,MS4.5			LR		LR			
GYA	comp=E,750nm,12.3s,MS4.5			LR		LR			
GYA	comp=Z,1μm,11.8s,MS4.5			LR		LR			
JHJ	**Hachijo jima 2** comp=Z,188nm,18.0s,MS3.6,baz=209,slow=31	**24.06**	**29**	LR		LR		19 10 41.8	
KSRS	**Korea Array** comp=Z,11nm,0.7s,mb4.5,baz=184,slow=10.0,SNR=38	**24.99**	**3**	P		**P**		**19 03 32.4**	**-0.2**
KSRS	comp=Z,97nm,18.1s,MS3.4,baz=128,slow=35			LR		LR		19 12 51.3	
KMI	**Kunming**	**25.53**	**303**	P		**P**		**19 03 39.3**	**+1.7**
KMI				AP		pP		19 03 50.7	+3.1
KMI				XP		sP		19 03 56.4	+4.6
KMI				PP				19 04 19.4	
KMI				S		**S**		**19 08 00.9**	**-2.1**
KMI				XS		sS		19 08 23.3	+3.7
KMI				SS				19 09 06.4	
KMI				AMB		AMB			

comp=Z,13nm,1.0s,mb4.4
KMI AMB AMB
comp=Z,92nm,4.4s
KMI LR LR
comp=N,129nm,15.2s,MS3.8
KMI LR LR
comp=E,205nm,15.2s,MS3.8
KMI LR LR
comp=Z,191nm,17.2s,MS3.7
KAKA Kakadu 25.70 166 *e*P x 19 03 24.2
comp=Z,42nm,0.6s
MJAR Matsushiro Arr 26.34 22 P **P** **19 03 43.2 -1.6**
comp=Z,1.9nm,0.9s,mb3.6,baz=192,slow=9.4,SNR=4.6
MJAR LR LR 19 12 04.9
comp=Z,169nm,19.4s,MS3.6,baz=210,slow=32
XAN Xi'an 26.69 327 P **P** **19 03 48.1 +0.1**
XAN AP pP 19 04 00.9 +2.9
XAN XP sP 19 04 07.2 +5.0
XAN PCP PcP 19 07 09.7 -1.4
XAN S **S** **19 08 21.4 +0.3**
XAN SCP ScP 19 10 45.5 -3.2
XAN AMB AMB
comp=Z,4.0nm,0.8s,mb4.0
XAN AMB AMB
comp=Z,33nm,14.2s
XAN LR LR
comp=E,109nm,21.3s
XAN LR LR
comp=Z,135nm,19.5s,MS3.5
CM31 Chiang Mai Arr 26.96 286 *e*P **P** **19 03 50.1 -0.5**
comp=Z,7.4nm,0.7s,mb4.3
CMAR Chiang Mai Arr 26.96 286 P **P** **19 03 50.2 -0.4**
comp=Z,4.5nm,0.7s,mb4.1,baz=95,slow=7.6,SNR=41
CMAR LR LR 19 16 40.7
comp=Z,143nm,18.1s,MS3.6,baz=206,slow=41
CMAR Chiang Mai Arr 26.96 286 *i* P **P** **19 03 50.4 -0.2**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CHTO Chiang Mai 27.02 287 *e*P **P** **19 03 49.4 -1.7**
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
CHTO Chiang Mai 27.02 287 *e*P **P** **19 03 49.4 -1.7**
comp=Z,5.5nm,0.9s,mb4.1
CD2 Chengdu 27.74 315 P **P** **19 03 58.9 +1.4**
CD2 AP pP 19 04 10.6 +3.1
CD2 XP sP 19 04 16.1 +4.3
CD2 PP 19 04 48.9
CD2 PCP PcP 19 07 14.6 +0.9
CD2 S **S** **19 08 37.0 -0.8**
CD2 XS sS 19 08 56.9 +2.5
CD2 SS 19 09 59.5
CD2 AMB AMB
comp=Z,20nm,1.0s,mb4.7
CD2 AMB AMB
comp=Z,300nm,4.7s
CD2 LR LR
comp=N,350nm,9.6s
CD2 LR LR
comp=Z,300nm,11.4s,MS4.1
BJI Beijing 28.92 344 P **P** **19 04 08.2 +0.4**
BJI S **S** **19 08 56.5 +0.4**
BJI AMB AMB
comp=Z,13nm,0.4s,mb5.0
BJI LR LR
comp=N,234nm,18.2s
BJI LR LR
comp=E,212nm,10.6s
BJI LR LR
comp=Z,112nm,21.8s,MS3.4
LZH Lanzhou 31.03 323 *e*P **P** **19 04 27.2 +0.6**
LZH AP pP 19 04 37.6 +0.9
LZH XP sP 19 04 44.0 +3.1
LZH PP PP 19 05 30.7 -6.3
LZH *e*S **S** **19 09 30.0 +0.7**
LZH XS sS 19 09 46.0 0.0
LZH SS SS 19 11 13.0 -30
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,95nm,5.7s
LZH LR LR
comp=E,420nm,12.8s
LZH LR LR
comp=Z,668nm,13.7s,MS4.5
HHC Hu-ho-hao-te 31.12 338 *e*P **P** **19 04 28.4 +1.1**
HHC XP sP 19 04 42.7 +1.1
HHC PP PP 19 05 31.9 -6.1
HHC S **S** **19 09 30.7 0.0**
HHC XS sS 19 09 47.3 0.0
HHC SS SS 19 11 17.8 -27
HHC SCS ScS 19 14 57.5 -2.1
HHC AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,96nm,4.7s
HHC LR LR
comp=N,225nm,16.3s,MS4.1
HHC LR LR
comp=E,232nm,13.1s,MS4.1
HHC LR LR
comp=Z,235nm,13.1s,MS4.0
CN2 Changchun 31.29 359 *e*P **P** **19 04 31.9 +3.1**
WRAB Tennant Creek 33.11 166 *e*P **P** **19 04 43.9 -1.0**
WRAB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
WRAB Tennant Creek 33.11 166 *e*P **P** **19 04 43.9 -1.1**
comp=Z,4.6nm,0.6s,mb4.6
WB2 Warramunga Arr 33.12 166 *e*P **P** **19 04 41.5 -3.5**
MBWA Marble Bar 33.96 191 *e*P **P** **19 04 50.6 -1.6**
comp=Z,20nm,1.1s,mb5.0
ASAJ Asahikawa 34.59 21 LR LR 19 16 53.1
comp=Z,133nm,18.9s,MS3.7,baz=160,slow=33
SHL Shillong 34.90 297 *e*P **P** **19 05 02.0 +1.5**
GTA Gaotai 35.63 324 *e*P **P** **19 05 10.3 +3.7**
GTA AP pP 19 05 22.7 +6.0
GTA XP sP 19 05 27.7 +6.7
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.3
ASAR Alice Springs 36.62 168 P **P** **19 05 15.1 -0.2**
comp=Z,2.8nm,0.7s,mb4.2,baz=350,slow=6.8,SNR=46
ASAR PcP PcP 19 07 37.9 0.0
comp=Z,1.3nm,0.6s,baz=349,slow=3.0,SNR=4.5
HABR Khabarovsk 36.70 10 P **P** **19 05 12.5 -3.1**
HABR *e*S **S** **19 10 56.1 -0.6**
HABR *e*SSS 19 13 49.3
HABR *e* 19 15 24.2
LSA Lhasa 36.79 303 P **P** **19 05 20.1 +3.4**
LSA Lhasa 36.79 303 *e*P **P** **19 05 19.4 +2.7**
LSA pmax pmax
comp=Z,12nm,1.3s,mb4.6
LSA Lhasa 36.79 303 *e*P **P** **19 05 19.4 +2.8**
comp=Z,12nm,1.3s,mb4.5
ULN Ulaanbaatar 38.82 339⇑ *e*P **P** **19 05 33.9 +0.4**
ULN Ulaanbaatar 38.82 339 *e*P **P** **19 05 33.7 +0.1**
comp=Z,2.9nm,0.7s,mb4.1
TAPN Taplejung 38.97 298 *e*P **P** **19 05 36.9 +1.8**
comp=Z,36nm,1.2s,mb5.0
SONM Songino Array 39.02 339 P **P** **19 05 35.7 +0.4**
comp=Z,3.3nm,0.8s,mb4.1,baz=156,slow=9.6,SNR=23
ODAN Odare 39.13 297 *e*P **P** **19 05 37.3 +0.9**
comp=Z,35nm,0.8s,mb5.1
RAMN Ramite 39.84 297 *e*P **P** **19 05 43.1 +0.8**
comp=Z,50nm,1.1s,mb5.2
JIRN Jiri 40.36 298 *e*P **P** **19 05 47.6 +0.9**
comp=Z,20nm,0.7s,mb5.0
GUN Gumba 40.69 298 *e*P **P** **19 05 51.9 +2.5**
PKI Pulchoki 41.01 298 *e*P **P** **19 05 53.2 +1.2**
KKN Kakani 41.17 298 *e*P **P** **19 05 55.4 +2.0**
comp=Z,27nm,1.0s,mb4.8
KKN Kakani 41.17 298 *e*P **P** **19 05 55.4 +2.0**
KKN pmax pmax
comp=Z,27nm,1.0s,mb4.8
DMN Daman 41.28 298 *e*P **P** **19 05 56.0 +1.7**
comp=Z,52nm,1.2s,mb5.0
GKN Gorkha 41.77 298 *e*P **P** **19 05 59.5 +1.2**
comp=Z,22nm,1.0s,mb4.7
DANN Dangsing 42.61 298 *e*P **P** **19 06 06.4 +1.3**
KOLN Koldanda 42.62 298 *e*P **P** **19 06 06.3 +1.1**
comp=Z,31nm,0.9s,mb5.0
FORT Forrest 42.97 178 *e*P **P** **19 06 11.3 +3.4**
comp=Z,80nm,0.6s,mb5.6
KLBR Kellerberrin 44.49 190 *e*P **P** **19 06 19.6 -0.5**
comp=Z,22nm,1.1s,mb4.8
WMQ Urumqi 45.54 321 *e*P **P** **19 06 28.3 -0.1**
WMQ AMB AMB
comp=Z,5.0nm,1.0s,mb4.4

NWAO Narrogin (SRO) 45.88 191 *e*P **P** **19 06 30.0 -1.1**
NWAO pmax pmax
comp=Z,33nm,1.0s
NWAO Narrogin (SRO) 45.88 191 *e*P **P** **19 06 30.0 -1.1**
comp=Z,32nm,1.0s,mb5.2
HYB Hyderabad 46.25 282 *i* P **P** **19 06 34.5 +0.2**
HYB Hyderabad 46.25 282 *e*P **P** **19 06 34.5 +0.2**
STKA Stephens Creek 46.42 162 *e*P **P** **19 06 35.9 +0.5**
comp=Z,9.1nm,0.8s,mb4.8
STKA Stephens Creek 46.42 162 P **P** **19 06 36.2 +0.8**
comp=Z,16nm,0.9s,mb4.9,baz=338,slow=7.4,SNR=25
STKA PcP PcP 19 08 10.3 +0.5
comp=Z,2.8nm,0.7s,baz=349,slow=5.1,SNR=2.3
HVS Khovu-Aksy 46.79 332⇑ *i*P **P** **19 06 38.6 +0.6**
HVS pmax pmax
comp=Z,13nm,1.0s,mb4.8
PETK Petropavlovsk- 47.73 25 P **P** **19 06 46.5 +1.2**
comp=Z,8.1nm,0.8s,mb4.8,baz=152,slow=2.9,SNR=8.4
PETK PcP PcP 19 08 14.4 +0.2
comp=Z,3.9nm,0.8s,baz=269,slow=2.9,SNR=3.3
PETK LR LR 19 24 38.7
comp=Z,102nm,18.8s,MS3.8,baz=278,slow=33
PETK Petropavlovsk- 47.73 25 P **P** **19 06 46.5 +1.1**
PETK 19 08 14.4
ARMA Armidale 49.09 151 *e*P **P** **19 06 55.7 -0.4**
YAK Yakutsk 49.61 2 *e*P **P** **19 06 58.6 -1.1**
YAK pmax pmax
comp=Z,15nm,1.0s,mb5.0
YAK Yakutsk 49.61 2 *e*P **P** **19 06 58.2 -1.4**
comp=Z,13nm,0.8s,mb5.0
MK31 Makanchi Array 50.33 322 *e*P **P** **19 07 05.8 +0.4**
MKAR Makanchi Array 50.33 322 P **P** **19 07 06.2 +0.8**
comp=Z,5.7nm,0.8s,mb4.6,baz=115,slow=8.5,SNR=47
CNB Canberra Magne 52.27 156 *e*P **P** **19 07 20.9 +0.9**
ZAA0 Zalesovo Array 52.75 331 *e*P **P** **19 07 22.3 -1.1**
ZALV Zalesovo Beam 52.75 331 P **P** **19 07 23.3 -0.1**
comp=Z,3.0nm,0.7s,mb4.3,baz=118,slow=8.6,SNR=14
ZALV Zalesovo Beam 52.75 331 P **P** **19 07 23.3 -0.1**
TKM2 Tokmak 2 53.13 315 P **P** **19 07 26.0 -0.4**
TKM2 pmax pmax
comp=Z,14nm,1.4s,mb4.7
TKM2 Tokmak 2 53.13 315 P **P** **19 07 26.0 -0.4**
comp=Z,14nm,1.4s,mb4.7
AAK Ala-Archa 53.80 314⇑ *i*P **P** **19 07 34.9 +3.6**
AAK pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
KURK Kurchatov 54.30 325 P **P** **19 07 35.5 +0.7**
comp=Z,7.8nm,0.8s,mb4.7,baz=122,slow=7.2,SNR=17
KURK Kurchatov 54.30 325⇑ *e*P **P** **19 07 35.0 +0.2**
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.8
KURK Kurchatov 54.30 325 *e*P **P** **19 07 34.5 -0.3**
comp=Z,13nm,0.8s,mb4.9
KBL Kabul 56.12 303 *e*P **P** **19 07 48.0 -0.2**
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KBL Kabul 56.12 303 *e*P **P** **19 07 48.0 -0.2**
comp=Z,7.6nm,0.8s,mb4.8
TIXI Tiksi 59.23 1⇑ *e*P **P** **19 08 08.4 -1.1**
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
TIXI Tiksi 59.23 1 *e*P **P** **19 08 08.7 -0.8**
comp=Z,6.2nm,0.8s,mb4.7
BVAR Borovoye Array 59.90 325 P **P** **19 08 14.7 +0.4**
comp=Z,2.9nm,0.8s,mb4.4,baz=118,slow=9.1,SNR=19
BRVK Borovoye 59.98 325 *e*P **P** **19 08 14.5 -0.4**
BILL Bilibino 61.38 16 *e*P **P** **19 08 23.6 -0.6**
BILL pmax pmax
comp=Z,11nm,1.3s,mb4.8
BILL Bilibino 61.38 16 *e*P **P** **19 08 23.7 -0.5**
SVE Sverdlovsk 66.41 327 *e*P **P** **19 08 57.3 -0.2**
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.9
ARU Arti 67.44 326 *c i*P **P** **19 09 03.9 -0.1**
ARU *e* 19 11 30.6
ARU *e*S S 19 17 59.8 +2.3
ARU *e*SS SS 19 22 25.7 +7.9
ARU pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ARU Arti 67.44 326 P **P** **19 09 03.4 -0.6**
comp=Z,6.1nm,0.8s,mb4.7
RDF Al-Radifah 74.28 297 *e*P **P** **19 09 45.8 -0.4**
baz=297
RDF AMb AMB 19 09 56.8
comp=Z,28nm,1.6s,mb4.9,baz=297
MIB Mutribah 74.38 298 *e*P **P** **19 09 46.2 -0.5**
baz=298
MIB AMb AMB 19 09 51.4
comp=Z,17nm,1.2s,mb4.8,baz=298
NAY Al-Naaiem 74.52 297 *e*P **P** **19 09 46.8 -0.7**
baz=297
NAY AMb AMB 19 09 49.9
comp=Z,12nm,1.0s,mb4.8,baz=297
MCK McKinley 76.69 27 *e*P **P** **19 09 58.8 -0.5**
MCK pmax pmax
comp=Z,12nm,1.1s,mb4.7
MCK McKinley 76.69 27 *e*P **P** **19 09 58.8 -0.5**
comp=Z,12nm,1.1s,mb4.8
KIV Kislovodsk 76.88 313 *e*P **P** **19 10 01.0 +0.2**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIV Kislovodsk 76.88 313 *e*P **P** **19 09 57.9 -2.8**
comp=Z,18nm,0.9s,mb5.0
OBN Obninsk 79.75 324 *e*P **P** **19 10 15.7 -0.7**
OBN pmax pmax
comp=Z,13nm,1.3s,mb4.7
JOF Joensuu 81.29 333 *e*p **P** **19 10 23.9 -0.6**
comp=Z,3.4nm,0.7s,mb4.4
ARCES ARCESS Array B 82.19 340 P **P** **19 10 29.4 +0.3**
comp=Z,4.7nm,0.8s,mb4.5,baz=81,slow=7.5,SNR=10
ARE0 ARCESS Array S 82.19 340 P **P** **19 10 28.6 -0.6**
INK Inuvik 82.33 22 *e*P **P** **19 10 29.5 -0.3**
comp=Z,235nm,1.3s
KAF Kangasniemi 83.73 332 *e*p **P** **19 10 35.4 -1.8**
comp=Z,5.0nm,0.8s,mb4.7
KAF Kangasniemi 83.73 332 *e*P **P** **19 10 35.4 -1.8**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
BRTR Keskin Array B 84.16 309 P **P** **19 10 39.2 -0.7**
comp=Z,2.0nm,0.8s,mb4.3,baz=72,slow=2.4,SNR=7.1
BRTR Keskin Array B 84.16 309 *i* P **P** **19 10 39.5 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 84.90 321 P **P** **19 10 42.6 -0.8**
comp=Z,8.3nm,0.9s,mb4.9,baz=65,slow=4.3,SNR=18
AKASG Malin Array Be 84.90 321 *i* P **P** **19 10 43.0 -0.4**
AKASG pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 84.90 321 *e*P **P** **19 10 42.1 -1.3**
KIEV Kiev 84.91 321 *e*P **P** **19 10 42.0 -1.4**
KIEV pmax pmax
comp=Z,13nm,1.0s,mb5.0
KIEV Kiev 84.91 321 *e*P **P** **19 10 42.0 -1.5**
comp=Z,13nm,1.0s,mb5.0
DLBC Dease Lake 86.59 31 P **P** **19 10 53.5 +1.9**
comp=Z,1.4nm,0.6s,mb4.4,baz=264,slow=9.2,SNR=3.5
RES Resolute Bay 89.42 10 *e*P **P** **19 11 03.7 -1.1**
comp=Z,221nm,1.0s
UZH Uzhgorod 89.79 320⇓ *i*P **P** **19 11 07.3 +0.2**
UZH *i* 19 11 24.5
MAW Mawson 91.67 200 P **P** **19 11 15.9 +0.6**
comp=Z,1.9nm,0.8s,mb4.5,baz=16,slow=8.0,SNR=4.6
VNDA Vanda 92.04 173 P **P** **19 11 17.4 +0.6**
comp=Z,2.7nm,1.0s,mb4.5,baz=312,slow=6.4,SNR=6.7
GERES GERESS Array B 94.99 322 P **P** **19 11 30.8 -0.3**
comp=Z,0.2nm,0.6s,mb3.7,baz=23,slow=7.2,SNR=3.5
VNA2 Neumayer--Watz 115.03 195 *e*PKPdf PKiKP 19 16 48.9 +0.1
baz=267,slow=17
VNA2 *e* 19 16 52.3
VNA3 Neumayer Olymp 115.40 194 *e*PKPdf PKPdf 19 16 49.4 -0.1
VNA3 *e* 19 16 52.4
TXAR Lajitas Array 116.46 48 PKP PKPdf 19 16 53.1 +0.2
comp=Z,0.3nm,0.8s,baz=171,slow=1.1,SNR=5.1
TORD Torodi Ar. Bea 119.42 293 PKP PKPdf 19 16 57.6 -1.2
comp=Z,0.7nm,0.9s,baz=44,slow=1.4,SNR=3.0
PLCA Paso Flores 148.16 155 PKPbc PKPbc 19 17 55.8 +1.3
comp=Z,5.4nm,0.9s,baz=201,slow=7.6,SNR=9.4

IDC ***01*** *19:02:19.7±4.4,* **220S×9971E,h0km,mb3.4/3,mb1 3.5/3, mb1mx3.3/19,mbtmp3.4/3,Error ellipse: s-maj=188.2km s-min=29.0km az=58.0,Southern Sumatera**

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ASAR Alice Springs 39.37 126 P P 19 09 51.0 -0.3
0.2nm,0.6s,baz=301,slow=7.1,SNR=3.6
SONM Songino Array 50.17 6 P P 19 11 17.1 +0.1
0.2nm,0.5s,baz=182,slow=9.2,SNR=6.1
MKAR Makanchi Array 51.15 345 P P 19 11 24.1 -0.3
0.3nm,0.5s,baz=165,slow=9.3,SNR=6.1
TXAR Lajitas Array 145.04 37 PKPbc PKPbc 19 21 59.2 +0.1
0.4nm,0.7s,baz=257,slow=1.9,SNR=5.4

ISCJB ***01*** *19:18:53.3±4.4,51.5S±0.1×1529E±0.2,h60km±35km, mb4.0/12,MS3.5/2,Error ellipse: s-maj=30.7km s-min=19.6km az=180.0*
NEIC ***01*** *19:18:55.7±3.5,524S×15296E,h76km±27km,mb4.4/1, Error ellipse: s-maj=31.4km s-min=15.4km az=83.0*
IDC ***01*** *19:18:56.5±11.0,515S×15281E,h75km±99km,mb3.8/11, mb1 3.9/11,mb1mx3.8/17,mbtmp3.8/11,MS3.5/3, Ms1 3.4/3,ms1mx3.0/35,Error ellipse: s-maj=45.4km s-min=20.0km az=74.0*
ISC 01 19:18:55.8±3.8,51S±01×1529E±02,h69km±30km,n22, σ0s78/16,mb3.9/12,New Britain region

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

PMG Port Moresby 7.09 233 *e*Pn **Pn** **19 20 36.5 -0.4**
31nm,0.7s
PMG *e*Sn **Sn** **19 21 56.9 +0.7**
CTA Charters Tower 16.21 203 LR LR 19 27 59.2
comp=Z,97nm,20.2s,baz=53,slow=34
KAKA Kakadu 21.55 248 *e*P x 19 23 21.7
15nm,0.5s
WB2 Warramunga Arr 23.28 229 *e*P **P** **19 23 57.5 -0.1**
ASAR Alice Springs 25.97 223 P **P** **19 24 21.4 -0.6**
4.1nm,0.8s,mb3.9,baz=56,slow=8.6,SNR=29
STKA Stephens Creek 28.63 200 P **P** **19 24 44.9 -0.9**
1.8nm,0.8s,mb3.8,baz=23,slow=15,SNR=3.6
STKA LR LR 19 34 53.2
comp=Z,76nm,19.5s,baz=25,slow=34
RAR Rarotonga 48.56 114 LR LR 19 43 09.0
comp=Z,85nm,18.7s,baz=308,slow=30
CMAR Chiang Mai Arr 58.10 295 P **P** **19 28 43.1 +0.6**
1.9nm,0.9s,mb4.1,baz=117,slow=5.2,SNR=12
SONM Songino Array 66.65 328 P **P** **19 29 40.0 +1.0**
0.4nm,0.6s,mb3.4,baz=144,slow=5.4,SNR=4.2
VNDA Vanda 72.50 178 P **P** **19 30 15.9 +1.4**
1.2nm,0.7s,mb3.8,baz=318,slow=8.4,SNR=9.0
SBA Scott Base 73.04 177 *e*P **P** **19 30 14.3 -3.5**
MKAR Makanchi Array 80.63 319 P **P** **19 31 01.0 -0.1**
0.5nm,0.8s,mb3.4,baz=99,slow=5.5,SNR=4.7
ZALV Zalesovo Beam 81.48 326 P **P** **19 31 04.4 -0.9**
2.3nm,0.7s,mb4.1,baz=104,slow=6.3,SNR=10
KURK Kurchatov 84.08 322 P **P** **19 31 18.7 -0.2**
1.1nm,0.9s,mb3.7,baz=105,slow=4.3,SNR=4.8
QSPA South Pole Qui 84.83 180 *e*P **P** **19 31 22.9 +0.7**
2.7nm,0.7s,mb4.3
MAW Mawson 85.30 203 P **P** **19 31 24.6 -0.1**
2.5nm,0.7s,mb4.3,baz=73,slow=10,SNR=4.5
BVAR Borovoye Array 89.56 323 P **P** **19 31 44.8 -0.7**
2.1nm,0.7s,mb4.3,baz=108,slow=4.8,SNR=9.5
NVAR Mina Array Bea 92.22 52 P **P** **19 31 58.8 +0.6**
0.2nm,0.4s,mb3.7,baz=281,slow=5.3,SNR=2.5
BOSA Boshof 119.50 233 PKP PKPdf 19 37 35.7 -2.5
3.1nm,1.0s,baz=180,slow=1.9,SNR=2.9
BOSA Boshof 119.50 233 PKP PKPdf 19 37 35.7 -2.5
MDT Midelt 145.37 325 PKPbc PKPbc 19 38 26.8 +0.5
1.4nm,0.9s,baz=88,slow=5.6,SNR=1.9
TORD Torodi Ar. Bea 150.49 288 PKPbc PKPbc 19 38 40.4 -0.3
5.3nm,0.8s,baz=70,slow=2.4,SNR=38

NNC ***01*** *19:52:21.6±6.3,5008N×9174E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=63.8km s-min=50.7km az=66.0*
ISCJB ***01*** *19:52:25.4±1.1,504N±0.1×912E±0.1,h10km,Error ellipse: s-maj=18.3km s-min=11.6km az=10.3*
IDC ***01*** *19:52:28.2±2.2,5002N×9114E,h0km,mb1 2.9/4, mb1mx2.9/25,mbtmp2.9/4,ML2.7/4,Error ellipse: s-maj=24.1km s-min=22.1km az=37.0*
ISC 01 19:52:28.6±1.1,504N±01×912E±01,h10km,n7,σ0s75/9, 4C-3D,Tuva-Buryatia-Mongolia border region

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

ZALV Zalesovo Beam 5.30 315 Pn **Pn** **19 53 53.3 +5.5**
0.2nm,0.3s,baz=126,slow=14,SNR=2.6
ZALV Pg **Pg** **19 54 09.6 -0.5**
0.3nm,0.3s,baz=134,slow=16,SNR=5.3
ZALV Lg 19 55 23.2
0.7nm,0.3s,baz=121,slow=26,SNR=6.9
MK31 Makanchi Array 6.88 242⇑ Pn **Pn** **19 54 09.0 -0.5**
0.2nm,0.3s,baz=71,slow=14,SNR=5.0
MK31 ⇓Pg **Pg** **19 54 34.9 -5.5**
1.5nm,0.6s,baz=70,slow=15,SNR=6.2
MK31 ⇑Lg 19 56 03.9
3.8nm,0.5s,baz=61,slow=32,SNR=5.1
MKAR Makanchi Array 6.88 242 Pn **Pn** **19 54 09.2 -0.3**
0.2nm,0.3s,baz=73,slow=12,SNR=9.5
MKAR Lg 19 56 02.3
0.4nm,0.3s,baz=56,slow=32,SNR=3.0
KURK Kurchatov 8.00 277 ⇓Pn **Pn** **19 54 24.0 -0.8**
12nm,2.3s
KURK ⇑Lg 19 56 45.9
3.8nm,0.7s
KURK Kurchatov 8.00 277 Pn **Pn** **19 54 26.8 +2.0**
0.1nm,0.3s,baz=91,slow=14,SNR=20
KURK Lg 19 56 45.2
0.1nm,0.3s,baz=83,slow=36,SNR=5.4
KURBB Kurchatov Arra 8.06 277 ⇓Pn **Pn** **19 54 26.5 +0.8**
0.2nm,0.5s
KURBB ⇑Lg 19 56 47.3
2.2nm,0.7s
SONM Songino Array 10.31 98 Pn **Pn** **19 54 56.5 0.0**
0.0nm,0.3s,baz=289,slow=14,SNR=2.2
SONM Lg 19 57 42.9
0.2nm,0.3s,baz=287,slow=34,SNR=4.2

MEX 01 19:53:08.2±0.4,1606N×9833W,h7km±5km,MD3.9,Near coast of Guerrero

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

PNIG Pinotepa 0.39 30 *i* P Pg 19 53 15.2 -0.5
PNIG *e*S Sg 19 53 21.0 +0.2
VHO Vista Hermosa 1.83 56 *i* P Pn 19 53 36.9 -3.2
VHO *e*S Sn 19 53 59.3 -4.3
TPIG Tehuac#an 2.52 21 *i* P Pn 19 53 47.0 -2.6
TPIG *e*S Sn 19 54 16.0 -4.7
CMIG Matias Romero 3.46 72 *i* P Pn 19 54 00.1 -2.4
CMIG *e*S Sn 19 54 38.7 -5.1

ISCJB ***01*** *20:06:31.7±0.7,3405N±003×4675E±004,h8km±5km, mb3.5/5,Error ellipse: s-maj=6.2km s-min=4.4km az=152.1*
IDC ***01*** *20:06:31.4±1.4,3385N×4691E,h0km,mb3.6/5,mb1 3.8/6, mb1mx3.5/21,mbtmp3.7/6,ML3.9/1,Error ellipse: s-maj=52.7km s-min=21.5km az=159.0*
CSEM ***01*** *20:06:32.9±0.1,3412N×4678E,h19km±1km,mb3.3,Error ellipse: s-maj=2.2km s-min=1.9km az=123.0*
NEIC ***01*** *20:06:33.0,3406N×4681E,h3km,ML3.3(THR), MN3.3(TEH),After TEH.*
KISR ***01*** *20:06:35.3,3371N×4693E,h5km,ML3.0*
THR ***01*** *20:06:37.0±0.8,3428N×4703E,h14km±6km,ML3.3*
ISC 01 20:06:32.9±0.8,3407N±003×4676E±004,h3km±5km,n50, σ0s96/58,mb3.5/5,Western Iran

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

IGHG Ghaleghazi 0.30 329 Pg **Pg** **20 06 39.5 +0.8**
IVIS Veis 0.46 10 Pg **Pg** **20 06 40.9 -0.9**
IKOM Komasi 0.63 80 Pg **Pg** **20 06 43.4 -1.6**
IDHR Dehrash 0.70 334 Pg **Pg** **20 06 45.8 -0.5**
ILIN Lien 0.86 11 Pg **Pg** **20 06 49.2 -0.2**
SNGE Sanandaj 1.13 25 *e*Pg **Pg** **20 06 53.1 -1.5**
SNGE AML AML 20 07 10.6
comp=E,878nm,0.5s
SNGE AML AML 20 07 13.0
comp=N,764nm,0.4s
SNGE Sanandaj 1.13 25 Pg **Pg** **20 06 53.0 -1.6**
SHGR Shooshtar-Gavs 2.60 138 *e*Pn **Pn** **20 07 21.1 +5.3**
SHGR *e*Sg **Sg** **20 07 58.9 +2.4**
SHGR AML AML 20 08 06.5
comp=N,198nm,0.5s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR				AML	AML	20 08 26.2	
	comp=E,151nm,0.8s						
ASAO	Ashtian	2.75	79	ePn	Pn	20 07 19.6	+1.8
ASAO				eSg	Sg	20 07 55.4	-5.8
ASAO				AML	AML	20 08 06.4	
	comp=N,110nm,0.6s						
ASAO				AML	AML	20 08 09.3	
	comp=E,94nm,0.6s						
ASAO	Ashtian	2.75	79	Pn	Pn	20 07 19.0	+1.2
ASAO				eSg	Sg	20 07 55.3	-5.8
	SNR=90						
IRAZ	Razeghan	2.93	62	Pn	Pn	20 07 20.1	-0.2
ZNJK	Zanjan	3.04	31	ePn	Pn	20 07 23.1	+1.3
IBST	Bostanabad	3.62	2	Pn	Pn	20 07 29.8	0.0
IPIR	Pirpir	3.73	111	Pn	Pn	20 07 30.9	-0.3
GHVR	GHOM	3.78	83	ePn	Pn	20 07 32.7	+0.7
GHVR				AML	AML	20 08 37.2	
	comp=N,40nm,0.6s						
GHVR				AML	AML	20 08 37.6	
	comp=E,63nm,0.7s						
GHVR	GHOM	3.78	83	Pn	Pn	20 07 32.0	0.0
MSL	Mosul	3.78	309	ePn	Pg	20 07 45.0	-0.4
MSL				eSn	Sn	20 08 18.5	+1.5
THKV	Tehran--Karaj	3.85	60	ePn	Pn	20 07 34.2	+1.2
CHTH	Charan	4.03	62	ePn	Pn	20 07 36.3	+0.9
CHTH	Charan	4.03	62	Pn	Pn	20 07 36.0	+0.6
IKLH	Kolahrood	4.09	99	Pn	Pn	20 07 36.1	-0.1
IVRN	Varamin	4.21	76	Pn	Pn	20 07 38.0	+0.2
MIB	Mutribah	4.28	173	eP	Pn	20 07 40.2	+1.3
MIB				eS	Sn	20 08 28.3	-1.1
MIB	Mutribah	4.28	173	eP	Pn	20 07 40.2	+1.3
	baz=175						
MIB				eS	Sn	20 08 28.3	-1.1
	baz=175						
MIB				AML	AML	20 08 36.9	
	comp=Z,29nm,0.6s,baz=175						
ISHB	Shabestar	4.30	348	Pn	Pn	20 07 40.1	+0.9
ISFB	Sefidab	4.55	85	Pn	Pn	20 07 42.0	-0.6
DAMV	Damavand	4.56	69	ePn	Pn	20 07 43.7	+0.9
UMR	Umm Al-Rimmam	4.58	169	eP	Pn	20 07 44.0	+1.0
UMR				eS	Sn	20 08 35.0	-1.7
	comp=Z,17nm,0.4s						
UMR	Umm Al-Rimmam	4.58	169	eP	Pn	20 07 44.0	+1.0
	baz=171						
UMR				eS	Sn	20 08 35.0	-1.6
	baz=171						
UMR				AML	AML	20 08 38.1	
	comp=Z,17nm,0.4s,baz=171						
IDMV	Damavand	4.59	69	Pn	Pn	20 07 43.3	+0.1
IZEF	Zefreh	4.80	103	Pn	Pn	20 07 46.2	+0.2
NAY	Al-Naaiem	4.82	175	eP	Pn	20 07 47.0	+0.6
	baz=177						
NAY				AML	AML	20 08 43.8	
	comp=Z,11nm,0.5s,baz=177						
RDF	Al-Radifah	5.17	172	eP	Pn	20 07 52.2	+1.0
RDF				eS	Sn	20 08 49.9	-1.4
RDF	Al-Radifah	5.17	172	eP	Pn	20 07 52.2	+1.0
	baz=174						
RDF				eS	Sn	20 08 49.9	-1.4
	baz=174						
RDF				AML	AML	20 08 52.4	
	comp=Z,14nm,0.4s,baz=174						
IFIR	Firoozkooh	5.17	71	Pn	Pn	20 07 51.0	-0.2
IANJ	Anjilo	6.05	75	Pn	Pn	20 08 02.9	-0.3
ASF	Jabal al Asfar	8.48	260	Lg		20 11 05.7	
	comp=Z,0.3nm,0.3s,baz=342,slow=19,SNR=2.6						
EIL	Elat	10.95	250	Lg		20 12 30.2	
	comp=Z,0.3nm,0.3s,baz=331,slow=19,SNR=2.4						
IDI	Anoyia	18.03	280	P	Pn	20 10 43.9	-0.5
	comp=Z,0.4nm,0.3s,baz=69,slow=17,SNR=3.4						
BUR08	Bucovina Ar. S	21.11	316	eP	P	20 11 17.8	-0.7
BUR08	Bucovina Ar. S	21.11	316	eP	P	20 11 17.8	-0.7
BVAR	Borovoye Array	25.34	34	P	P	20 12 00.1	-0.7
	comp=Z,1.0nm,0.6s,mb3.5,baz=221,slow=11,SNR=6.9						
KURK	Kurchatov	28.52	45	P	P	20 12 28.8	-0.7
	comp=Z,0.5nm,0.7s,mb3.4,baz=249,slow=8.7,SNR=4.7						
MK31	Makanchi Array	29.62	54	eP	P	20 12 38.9	-0.3
MK31	Makanchi Array	29.62	54	eP	P	20 12 38.9	-0.3
MKAR	Makanchi Array	29.62	54	P	P	20 12 39.2	-0.1
	comp=Z,1.8nm,0.6s,mb4.0,baz=248,slow=7.9,SNR=22						
MKAR	Makanchi Array	29.62	54	P	P	20 12 39.2	-0.1
TORD	Torodi Ar. Bea	45.80	254	P	P	20 14 56.0	0.0
	comp=Z,0.3nm,0.8s,mb3.3,baz=64,slow=6.6,SNR=2.1						
CMAR	Chiang Mai Arr	48.81	95	P	P	20 15 16.6	-2.9
	comp=Z,0.3nm,0.5s,mb3.6,baz=289,slow=8.1,SNR=4.3						
CMAR	Chiang Mai Arr	48.81	95	P	P	20 15 16.6	-2.9

*ISCJB **01** 20:23:41.7±0.4, 4140N±002×2269E±004, h5^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=3.0km az=154.8*
*SKO **01** 20:23:41.6, 4137N×2268E, h15^{km}, M2.0, ML2.3*
*CSEM **01** 20:23:41.9±0.1, 4135N×2269E, h12^{km}±1^{km}, ML3.2/6, Error ellipse: s-maj=2.6km s-min=1.6km az=64.0*
*THE **01** 20:23:42.7, 4136N×2267E, h10^{km}, ML3.2/6, Error ellipse: s-maj=0.7km s-min=0.4km az=222.0*
*BEO **01** 20:23:44.6±1.0, 4144N×2263E, h4^{km}±4^{km}, ML2.5/4*
ISC 01 20:23:42.4±0.4, **4138N**±002×**2266E**±003, **h10**^{km}±4^{km}, **n27**, σ**0^{s}86**/47, **1C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	230	⇓iPg	Pg	20 23 44.9	+0.1
VAY				i Sg	Sg	20 23 47.0	+0.5
VAY	Valandovo	0.09	230	⇓iPg	Pg	20 23 45.0	+0.2
VAY				i Sg	Sg	20 23 47.1	+0.6
VAY				eLg		20 23 47.1	
	comp=E,5μm,0.2s						
VAY				eLg		20 23 47.2	
	comp=N,3μm,0.2s						
KNT	Kendrikon	0.28	140	P	Pg	20 23 48.2	+0.2
KNT				S	Sg	20 23 52.0	+0.2
GRG	Griva	0.47	205	P	Pg	20 23 51.4	-0.1
GRG				S	Sg	20 23 58.4	+0.8
STIP	Stip	0.48	312	P	Pg	20 23 52.0	+0.3
STIP				S	Sg	20 23 59.4	+1.4
STIP	Stip	0.48	312	i Pg	Pg	20 23 52.2	+0.5
STIP				i Sg	Sg	20 23 59.6	+1.6
STIP	Stip	0.48	312	i Pg	Pg	20 23 52.2	+0.5
STIP				i Sg	Sg	20 23 59.7	+1.7
STIP				eLg		20 23 59.7	
	comp=E,173nm,0.4s						
STIP				eLg		20 24 00.0	
	comp=N,192nm,0.2s						
SOH	Sokhos	0.76	137	P	Pg	20 23 56.4	-0.7
SOH				S	Sg	20 24 07.8	+0.7
THE	Thessaloniki	0.78	163	P	Pg	20 23 56.9	-0.6
THE				S	Sg	20 24 07.8	+0.2
HORT	Hortiatis	0.85	157	P	Pg	20 23 58.4	-0.3
HORT				S	Sg	20 24 10.9	+1.1
KRUS	Krusevo	1.06	270	ePg	Pg	20 24 01.8	-1.1
KRUS	Krusevo	1.06	270	ePg	Pg	20 24 01.9	-1.0
BIA	Bitola	1.07	251	ePg	Pg	20 24 03.0	0.0
BIA				eSg	Sg	20 24 15.0	-1.9
BIA	Bitola	1.07	251	ePg	Pg	20 24 03.1	+0.1
BIA				eSg	Sg	20 24 15.0	-1.9
BIA				eLg		20 24 16.8	
	comp=E,18nm,0.3s						
BIA				eLg		20 24 16.9	
	comp=N,18nm,0.3s						
SKO	Skopje	1.09	303	ePg	Pg	20 24 03.2	-0.2
SKO				eSg	Sg	20 24 17.6	0.0
SKO	Skopje	1.09	303	ePg	Pg	20 24 03.5	+0.1
SKO				eSg	Sg	20 24 17.1	-0.5
SKO				eLg		20 24 17.5	
	comp=N,76nm,0.8s						
SKO				eLg		20 24 17.6	
	comp=E,29nm,0.3s						
FNA	Florina	1.14	239	P	Pb	20 24 03.8	-0.4
FNA				S	Sg	20 24 19.7	+0.6
PLG	Polygyros	1.17	149	P	Pb	20 24 03.8	-0.9
PLG				S	Sb	20 24 20.5	+0.6
VTS	Vitosha	1.28	18	ePg	Pg	20 24 07.1	+0.1
VTS				eSg	Sg	20 24 23.7	+0.1
LIT	Litokhoron	1.28	186	P	Pn	20 24 05.9	-0.5
OUR	Ouranopolis	1.45	136	P	Pn	20 24 08.3	-0.4
BARS	Barje	1.57	337	⇑iPn	Pn	20 24 11.3	+0.9
BARS				eSn	Sn	20 24 32.9	+2.1
PAIG	Paliouri	1.64	152	P	Pn	20 24 11.1	-0.3
PAIG				S	Sn	20 24 32.2	-0.4
PLD	Plovdiv	1.69	64	P	Pn	20 24 11.7	-0.4
BOLS	Boljevac	2.50	348	ePg	Pg	20 24 28.1	-2.3
BOLS				eSg	Sg	20 25 02.0	-0.9
GRUS	Gruza	2.89	331	ePn	Pn	20 24 31.8	+3.3
BZS	Buzias	4.30	350	ePn	Pn	20 24 47.8	-0.2

MAN 01 20:24:27, 1341N×12308E, h58^{km}, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	0.79	309	⇓eP	Pn	20 24 44.6	+2.3
GQP				eS	Sn	20 24 56.3	+2.8
PVCP	Virac	1.06	80	eP	Pn	20 24 46.6	+0.8
PVCP				eS	Sn	20 25 02.2	+2.6
POLP	Polilio Island	1.72	320	eP	Pn	20 24 56.1	+1.5
POLP				eS	Sn	20 25 14.1	-1.3

IDC 01 20:31:03.3±5.7, **2304N**×**14300E**, **h0**^{km}, **mb3.8**/6, **mb1 3.8**/6, **mb1mx3.7**/21, **mbtmp3.8**/6, **Error ellipse: s-maj=257.4km s-min=21.9km az=72.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	38.20	319	P	P	20 38 25.2	+0.6
	0.2nm,0.4s,baz=123,slow=7.1,SNR=2.8						
ASAR	Alice Springs	47.26	191	P	P	20 39 38.1	-0.3
	0.1nm,0.3s,baz=14,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	53.67	312	P	P	20 40 26.9	+0.2
	0.6nm,0.4s,baz=86,slow=8.9,SNR=17						
STKA	Stephens Creek	54.62	181	P	P	20 40 34.0	+0.3
	4.4nm,1.1s,baz=9.9,slow=8.6,SNR=3.6						
KURK	Kurchatov	56.38	317	P	P	20 40 46.3	+0.1
	0.9nm,0.5s,baz=91,slow=8.5,SNR=9.9						
BVAR	Borovoye Array	61.55	319	P	P	20 41 21.9	-0.1
	2.0nm,0.5s,baz=91,slow=6.8,SNR=18						

*ISCJB **01** 20:42:53.7±0.4, 2324N±002×12167E±002, h31^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.4km az=135.9*
*TAP **01** 20:42:54.1, 2326N×12157E, h44^{km}, ML3.4, C*
*JMA **01** 20:42:55.4±0.5, 2338N×12172E, h100^{km}, M2.5*
ISC 01 20:42:54.1±0.4, **2324N**±002×**12165E**±002, **h29**^{km}±2^{km}, **n55**, σ**0^{s}82**/105, **8C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.30	242	⇓iP	Pb	20 43 02.0	+0.5
	baz=227						
CHKT				i S	Sb	20 43 08.0	+1.6
	baz=227						
TWF1	Yuli	0.34	289	⇑iP	Pb	20 43 02.5	+0.5
	baz=291						
TWF1				i S	Sb	20 43 08.4	+0.9
	baz=291						
EHY	Hungye	0.40	311	⇑iP	Pb	20 43 03.1	+0.1
	baz=306						
EHY				i S	Sb	20 43 09.4	+0.4
	baz=306						
ELDTW	Lidau	0.58	265	⇑iP	Pb	20 43 05.0	-0.9
	baz=259						
ELDTW				eS	Sb	20 43 12.4	-1.5
	baz=259						
ESL	Shilin	0.60	341	P	Pb	20 43 05.5	-0.7
	baz=338						
ESL				eS	Sb	20 43 13.7	-0.7
	baz=338						
TTN	Taitung	0.67	224	eP	Pb	20 43 07.4	0.0
	baz=227						
TTN				S	Sb	20 43 17.7	+1.4
	baz=227						
TWG	Pinlang	0.68	232	P	Pb	20 43 06.2	-1.2
	baz=234						
TWG				eS	Sb	20 43 15.2	-1.4
	baz=234						
YUS	Yu-Shan	0.69	291	P	Pb	20 43 07.5	-0.1
	baz=294						
YUS				S	Sb	20 43 16.7	-0.1
	baz=294						
HWA	Hwalien	0.73	357	eP	Pb	20 43 07.8	-0.6
	baz=11						
ALS	Alishan	0.82	289	⇑iP	Pn	20 43 09.6	-0.1
	baz=288						
ALS				S	Sb	20 43 20.9	+0.4
	baz=288						
STYT	Tauyuan	0.83	265	⇑iP	Pn	20 43 09.0	-0.8
	baz=256						
STYT				eS	Sb	20 43 19.7	-1.0
	baz=256						
TWD	Chiawan	0.84	357	eP	Pn	20 43 09.1	-0.8
	baz=350						
TWD				S	Sb	20 43 20.3	-0.7
	baz=350						
ECL	Taimali	0.91	225	P	Pn	20 43 08.9	-2.0
	baz=212						
ECL				eS	Sn	20 43 20.2	-2.8
	baz=212						
SMLT	Sun Moon Lake	0.94	313	⇑iP	Pn	20 43 11.0	-0.3
	baz=321						
SMLT				eS	Sn	20 43 23.7	0.0
	baz=321						
WTP	Ta-pu	0.95	270	P	Pn	20 43 11.4	-0.1
	baz=269						
WTP				eS	Sn	20 43 24.3	+0.2
	baz=269						
CHN5	Tsauling	0.96	292	⇑iP	Pn	20 43 11.8	+0.1
	baz=304						
CHN5				eS	Sn	20 43 24.6	+0.3
	baz=304						
WHF	Hehuan Shan	0.97	339	P	Pn	20 43 11.1	-0.6
	baz=343						
WHF				eS	Sn	20 43 23.1	-1.4
	baz=343						
CHN4	Tsaushan	0.98	277	P	Pn	20 43 12.0	+0.2
	baz=271						
CHN4				eS	Sn	20 43 25.1	+0.4
	baz=271						
TYC	Yuchr	0.98	312	⇑iP	Pn	20 43 11.8	-0.1
	baz=320						
TYC				eS	Sn	20 43 24.7	-0.1
	baz=320						
SGST	Jiashian	1.00	261	P	Pn	20 43 12.3	+0.2
	baz=254						
SGST				eS	Sn	20 43 25.7	+0.5
	baz=254						
CHN1	Nanshi	1.03	267	P	Pn	20 43 13.0	+0.4
	baz=265						
CHN1				eS	Sn	20 43 26.5	+0.4
	baz=265						
SSD	Sandimen	1.06	242	eP	Pn	20 43 12.4	-0.6
	baz=237						
SSD				eS	Sn	20 43 27.3	+0.6
	baz=237						
TWK	Hsinying	1.07	272	P	Pn	20 43 13.2	+0.1
	baz=270						
TWK				eS	Sn	20 43 27.3	+0.3
	baz=270						
WNT	Mingjian	1.09	306	eP	Pn	20 43 13.7	+0.3
	baz=307						
WNT				eS	Sn	20 43 28.0	+0.5
	baz=307						
WGK	Gukeng	1.09	294	P	Pn	20 43 13.9	+0.5
	baz=303						
WGK				eS	Sn	20 43 28.6	+1.0
	baz=303						
TWT	Tachien	1.10	337	eP	Pn	20 43 13.0	-0.5
	baz=345						
TWT				eS	Sn	20 43 26.4	-1.2
	baz=345						
CHN2	Minshiung	1.12	285	eP	Pn	20 43 14.3	+0.6
	baz=273						
CHN2				eS	Sn	20 43 28.9	+0.8
	baz=273						
TAW	Tawu	1.12	219	eP	Pn	20 43 14.1	+0.3
	baz=213						
TAW				eS	Sn	20 43 25.6	-2.7
	baz=213						
CHY	Chiayi	1.16	283	P	Pn	20 43 14.3	0.0
	baz=270						
CHY				S	Sn	20 43 29.1	-0.1
	baz=270						
ENA	Nanau	1.18	4	eP	Pn	20 43 14.3	-0.4
	baz=18						
ENA				eS	Sn	20 43 29.5	-0.3
	baz=18						
SGLT	Jiouru	1.19	245	eP	Pn	20 43 14.9	+0.2
	baz=241						
LAY	Lan-yu	1.20	184	eP	Pn	20 43 14.1	-0.8
	baz=176						
LAY				eS	Sn	20 43 29.0	-1.2
	baz=176						
TWM1	Shoushan	1.21	250	eP	Pn	20 43 16.4	+1.4
	baz=247						
TWM1				eS	Sn	20 43 32.0	+1.7
	baz=247						
NNS	Nan Shan	1.22	348	eP	Pn	20 43 15.6	+0.4
	baz=359						
NNS				eS	Sn	20 43 29.6	-1.1
	baz=359						
TCU	Taichung	1.27	315	P	Pn	20 43 16.8	+0.9
	baz=306						
TCU				eS	Sn	20 43 33.2	+1.3
	baz=306						
SCZT	Fangliau	1.29	228	eP	Pn	20 43 16.5	+0.4
	baz=216						
SCZT				eS	Sn	20 43 33.0	+0.7
	baz=216						
CHN8	Yiju	1.33	275	P	Pn	20 43 16.6	0.0
	baz=274						
CHN8				S	Sn	20 43 33.3	-0.1
	baz=274						
SCLT	Jiali	1.34	267	eP	Pn	20 43 16.9	0.0
	baz=266						
SCLT				eS	Sn	20 43 34.6	+0.9
	baz=266						
TWQ1	Liyutan	1.36	324	P	Pn	20 43 18.4	+1.2
	baz=339						
TWQ1				eS	Sn	20 43 36.1	+1.8
	baz=339						
WSF	Szhu	1.37	287	eP	Pn	20 43 17.3	+0.1
	baz=287						
WSF				eS	Sn	20 43 34.2	-0.2
	baz=287						
TWC	Suao	1.37	8	eP	Pn	20 43 17.1	-0.2
	baz=19						
TWC				eS	Sn	20 43 33.9	-0.6
	baz=19						
ENTT	Nioudou	1.39	357	eP	Pn	20 43 17.6	0.0
	baz=351						
ENTT				eS	Sn	20 43 34.0	-1.0
	baz=351						
WTCT	Ta-ch'eng	1.40	297	P	Pn	20 43 17.5	-0.2
	baz=297						
WTCT				eS	Sn	20 43 34.9	-0.2
	baz=297						
NSK	Sanguang	1.45	349	eP	Pn	20 43 18.6	+0.2
	baz=352						
NSK				eS	Sn	20 43 35.7	-0.7
	baz=352						
TWE	Neicheng	1.47	1	eP	Pn	20 43 19.2	+0.5
	baz=356						
TWE				eS	Sn	20 43 36.1	-0.9
	baz=356						
NSTT	Nanjuang	1.50	337	eP	Pn	20 43 20.0	+0.9
	baz=339						
NSTT				eS	Sn	20 43 37.7	0.0
	baz=339						
TWK1	Hengchun	1.51	211	eP	Pn	20 43 19.9	+0.7
	baz=197						
TWK1				eS	Sn	20 43 36.8	-1.1
	baz=197						
YOJ	Yonaguni jima	1.74	45	P	Pn	20 43 23.1	+0.8
YOJ				eS	Sn	20 43 44.4	+0.9
NWF	Wu-fen Shan	1.82	4	eP	Pn	20 43 24.3	+0.8
	baz=356						
PNG	Penghu	1.95	280	P	Pn	20 43 24.5	-0.8
	baz=268						
PNG				eS	Sn	20 43 46.5	-2.3
	baz=268						
HATJ	Hateruma jima	2.13	67	S	Sn	20 43 53.6	+0.3
IRIF	Iriomote-Funau	2.19	60	P	Pn	20 43 29.8	+1.2
JKRS	Kuro-shima	2.38	65	P	Pn	20 43 32.0	+0.9
JKRS				eS	Sn	20 43 59.8	+0.5
JIJ	Ishigaki jima	2.54	63	P	Pn	20 43 33.4	+0.1
JIJ				eS	Sn	20 44 02.6	-0.7
JTJ	Tarama	3.12	63	P	Pn	20 43 42.1	+0.8
JTJ				eS	Sn	20 44 17.8	+0.2

GUC 01 20:43:34.7±0.6, **3057S**×**6894W**, **h150**^{km}, **ML3.7, 2C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.66	283	eP	Pn	20 44 08.9	+3.0
TLL				i S	Sn	20 44 33.4	+3.6
TLL				AML	AML	20 44 35.9	
	comp=N,260nm,0.3s						
LCO	Las Campanas	2.18	315	i S	Sn	20 44 42.1	+1.6
LCO				AML	AML	20 44 47.2	
	comp=E,147nm,0.3s						
CHNG	Los Chungos	2.56	238	⇑iP	Pn	20 44 17.0	+0.5
CHNG				i S	Sn	20 44 49.0	+0.2
CHNG				AML	AML	20 45 00.7	
	comp=E,367nm,0.8s						
PEL	Peldehue	2.97	210	eP	Pn	20 44 22.0	+0.4
PEL				i S	Sn	20 44 58.6	+0.6
PEL				AML	AML	20 45 02.1	
	comp=E,274nm,0.4s						
FCH	Farellones	2.98	202	⇓iP	Pn	20 44 23.3	+1.5
FCH				i S	Sn	20 45 00.4	+2.1
FCH				AML	AML	20 45 03.7	
	comp=E,115nm,0.4s						
CLCH	Cerro Calan	3.13	205	⇑iP	Pn	20 44 24.5	+0.8
CLCH				i S	Sn	20 45 02.5	+0.8
CLCH				AML	AML	20 45 04.9	
	comp=E,244nm,0.5s						
LMEL	Las Melosas	3.44	198	eP	Pn	20 44 29.6	+2.0
LMEL				i S	Sn	20 45 10.4	+1.6

*NEIC **01** 20:50:12.3, 3882N×12279W, h3^{km}, MW4.0(BRK), After NCEDC.*
NEIC Felt [IV] at Middletown and [II] at Cloverdale. Felt at Daly City, Kelseyville, Millbrae, Novato and San Francisco.
*ISCJB **01** 20:50:13.2±1.1, 3873N±006×1229W±0.1, h16^{km}±18^{km}, MS3.6/2, Error ellipse: s-maj=20.1km s-min=7.4km az=162.0*
*IDC **01** 20:50:16.9±3.0, 3899N×12278W, h21^{km}±11^{km}, mb3.8/1, mb1 3.9/6, mb1mx3.6/23, mbtmp3.6/6, ML3.0/4, MS3.6/6, Ms1 3.5/6, ms1mx3.3/31, Error ellipse: s-maj=30.7km s-min=9.5km az=45.0*
ISC 01 20:50:13.1±1.2, **3872N**±005×**1232W**±02, **h13**^{km}±8^{km}, **n31**, σ**1^{s}20**/32, **MS3.6**/2, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPS	Hopland	0.28	12	ePg	Pg	20 50 18.2	-0.8
MCCM	Marconi Confer	0.61	160	ePg	Pg	20 50 26.0	+1.0
WDC	Whiskeytown Da	1.92	14	ePn	Pn	20 50 45.2	-0.2
CMB	Columbia Colle	2.27	107	ePn	Pn	20 50 46.4	-4.0
CMB				eSn	Sn	20 51 13.1	-5.2
SAO	San Andreas Ge	2.37	145	ePn	Pn	20 50 49.8	-1.9
YBH	Yreka Blue Hor	3.03	6	Pn	Pn	20 51 01.7	+0.9
	0.3nm,0.3s,baz=210,slow=7.6,SNR=4.6						
YBH				Pg	Pg	20 51 05.8	-5.4
	2.5nm,0.3s,baz=171,slow=8.6,SNR=11						
YBH	Yreka Blue Hor	3.03	6	ePn	Pn	20 51 03.2	+2.5
NVAR	Mina Array Bea	3.81	93	Pn	Pn	20 51 09.9	-1.5
	2.2nm,0.3s,baz=270,slow=15,SNR=52						
NVAR				Pg	Pg	20 51 19.0	-7.0
	14nm,0.3s,baz=269,slow=17,SNR=53						
NVAR				Lg		20 52 07.4	
	5.4nm,0.3s,baz=263,slow=15,SNR=3.6						
NVAR	Mina Array Bea	3.81	93	Pn	Pn	20 51 09.9	-1.5
NVAR				Pg	Pg	20 51 19.0	-7.0
NVAR				Lg		20 52 07.4	
MOD	Modoc	3.85	33	ePn	Pn	20 51 11.8	-0.3
HUMO	Hull Mountain	3.89	2	Pn	Pn	20 51 12.1	-0.5
HUMO				ePg	Pg	20 51 27.5	0.0
TPH	Tonopah	4.70	96	ePn	Pn	20 51 24.5	+0.8
BMN	Battle Mountai	4.89	68	ePn	Pn	20 51 28.0	+1.7
WVOR	Wild Horse Val	5.06	41	ePn	Pn	20 51 27.8	-0.8
TPNV	Topopah Spring	5.74	106	ePn	Pn	20 51 37.0	-1.0
	33nm,0.8s						
MWC	Mount Wilson	6.08	136	ePn	Pn	20 51 42.4	-0.2
ELK	Elko	6.42	69	Pn	Pn	20 51 46.6	-0.7
	0.4nm,0.3s,baz=255,slow=11,SNR=17						
ELK				Lg		20 53 28.1	
	0.2nm,0.3s,baz=44,slow=14,SNR=3.0						
ELK	Elko	6.42	69	ePn	Pn	20 51 46.1	-1.3
	8.8nm,1.0s						
PFO	Pinyon Flat Ob	7.43	131	LR	LR	20 55 25.7	
	comp=Z,309nm,18.5s,baz=7.9,slow=42						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BMO	Blue Mountains	7.52	34	ePn	Pn	20 51 59.1	-3.3
	15nm,1.9s						
HAWA	Hanford	8.12	18	ePn	Pn	20 52 11.7	+1.1
	32nm,1.6s						
DUG	Dugway	8.13	76	ePn	Pn	20 52 11.3	+0.4
	9.3nm,0.9s						
MCMT	McKenzie Canyo	9.82	48	ePn	Pn	20 52 37.2	+3.3
	1.2nm,1.0s						
PDAR	Pinedale Array	11.07	64	Pn	Pn	20 52 52.5	+1.4
	0.0nm,0.3s,baz=249,slow=12,SNR=14						
RLMT	Red Lodge	12.15	54	ePn	Pn	20 53 14.0	+8.2
ANMO	Albuquerque	13.88	101	LR	LR	20 59 35.9	
	comp=Z,118nm,18.9s,baz=336,slow=41						
LPIG	La Paz	18.20	139	LR	LR	21 01 52.7	
	comp=Z,193nm,18.4s,baz=323,slow=38						
TXAR	Lajitas Array	18.63	114	P	Pn	20 54 32.5	+1.8
	baz=289,slow=7.8,SNR=11						
TXAR				LR	LR	21 02 53.8	
	comp=Z,158nm,18.5s,baz=5.0,slow=41						
ULM	Lac du Bonnet	22.48	50	P	P	20 55 11.3	-0.7
	4.4nm,0.8s,baz=246,slow=7.3,SNR=3.1						
ULM				LR	LR	21 04 49.4	
	comp=Z,104nm,18.9s,MS3.3,baz=287,slow=40						
ULM	Lac du Bonnet	22.48	50	P	P	20 55 11.3	-0.7
ULM				LR	LR	21 04 49.4	
TKL	Tuckaleechee C	31.35	83	LR	LR	21 10 08.6	
	comp=Z,210nm,18.6s,MS3.8,baz=254,slow=38						

*ISCJB **01** 20:58:50.7±0.7, 3798N±003×2130E±004, h1^{km}±8^{km}, Error ellipse: s-maj=5.6km s-min=4.8km az=13.8*
*CSEM **01** 20:58:50.3±0.1, 3789N×2124E, h2^{km}, MD3.4, Error ellipse: s-maj=3.5km s-min=3.1km az=35.0*
*NEIC **01** 20:58:51.2, 3804N×2125E, h5^{km}, MD3.4(ATH), After ATH.*
*ATH **01** 20:58:51.2, 3804N×2125E, h5^{km}±2^{km}, MD3.4/6*
*THE **01** 20:58:51.3, 3791N×2128E, h0^{km}±3^{km}, ML2.9/3, Error ellipse: s-maj=3.6km s-min=1.1km az=221.0*
ISC 01 20:58:51.4±0.6**, 3796N**±003×**2130E**±004**, h2**^{km}±7^{km}**, n14, σ1**^{s}**00**/23**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.17	55	ePG	Pg	20 58 54.8	+0.2
KFL	Anninata	0.43	290	P	Pg	20 58 59.8	+0.2
KFL				S	Sg	20 59 06.1	+1.0
VLS	Valsamata	0.60	291	ePb	Pg	20 59 02.1	-0.7
VLS				S	Sg	20 59 11.3	+0.7
ITM	Ithomi	0.93	147	ePB	Pb	20 59 10.5	+0.3
EVR	Evrytania	1.03	23	ePB	Pb	20 59 10.0	-2.0
PYL	PYLOS	1.12	161	P	Pg	20 59 12.1	-0.8
PYL				S	Sg	20 59 27.1	-0.3
AGG	Agios Georgios	1.33	37	P	Pn	20 59 16.0	-1.0
AGG				S	Sn	20 59 36.2	+0.9
LKR	Lokris	1.51	62	P	Pg	20 59 18.2	-2.0
LKR				S	Sg	20 59 41.7	+1.9
LKR	Lokris	1.51	62	ePb	Pg	20 59 20.1	-0.1
LKR				S	Sg	20 59 41.7	+1.9
DID	Didima	1.60	106	P	Pn	20 59 20.7	0.0
DID				S	Sn	20 59 42.4	+0.4
THL	Klokotos Trika	1.70	19	P	Pg	20 59 22.2	-1.7
THL				S	Sg	20 59 46.1	+0.2
IGT	Igoumenitsa	1.74	335	P	Pg	20 59 23.7	-1.0
IGT				S	Sg	20 59 48.1	+0.8
VLI	Veliai	1.80	133	ePN	Pg	20 59 27.2	+1.3
VLI	Veliai	1.80	133	ePn	Pg	20 59 27.5	+1.6

*ATH **01** 21:17:56.8, 37.11N×28.88E, h15^{km}, MD3.2/3*
*ISCJB **01** 21:18:02.7±0.5, 3696N±003×2828E±003, h3^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.9km az=3.6*
*CSEM **01** 21:18:02.3±0.1, 3700N×2823E, h0^{km}±1^{km}, MD2.9, Error ellipse: s-maj=1.6km s-min=1.4km az=141.0*
*DDA **01** 21:18:03.8, 3700N×2820E, h37^{km}±1^{km}, Md3.0*
*ISK **01** 21:18:03.2, 3701N×2824E, h10^{km}, MD2.9*
ISC 01 21:18:03.8±0.5**, 3700N**±003×**2825E**±003**, h9**^{km}±4^{km}**, n27, σ1**^{s}**02**/41**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	10	PG	Pg	21 18 06.5	-0.4
YER				eSG	Sg	21 18 09.4	+0.3
TURN	Turunc	0.30	113	i P	Pg	21 18 07.0	-2.9
TURN				i S	Sg	21 18 10.5	-3.5
MLSB	Milas	0.48	308	ePG	Pg	21 18 12.9	-0.3
MLSB				eSG	Sg	21 18 20.7	+1.0
DAT	Datca	0.60	244	ePG	Pg	21 18 14.8	-0.7
DAT				eSG	Sg	21 18 24.4	+1.0
BDRM	Kayabasi	0.65	276	i P	Pg	21 18 15.5	-0.9
BDRM				i S	Sg	21 18 26.7	+1.8
BODT	Bodrum	0.76	275	ePG	Pg	21 18 17.1	-1.3
ARG	Arkhangelos	0.78	188	ePN	Pn	21 18 17.2	-3.8
ARG				eSN	Sg	21 18 32.2	+3.1
DENT	Denizli	0.98	39	ePG	Pg	21 18 22.5	-0.2
GOLH	Golhisar	1.07	77	eP	Pg	21 18 24.2	-0.2
GOLH				i S	Sg	21 18 39.6	+1.2
GCAM	G?zelcaml?	1.08	311	eP	Pg	21 18 24.1	-0.4
GCAM				i S	Sg	21 18 39.1	+0.6
AKAS	Kas	1.33	125	i P	Pn	21 18 28.4	-0.1
AKAS				i S	Sb	21 18 49.7	+3.8
SMG	Samos	1.33	303	ePN	Pn	21 18 28.5	-0.1
ELL	Elmali	1.35	100	ePN	Pn	21 18 29.7	+0.8
MANT	Manisa	1.51	9	i P	Pn	21 18 31.3	+0.2
MANT				i S	Sn	21 18 51.6	+0.7
KULA	Kula-Manisa	1.55	12	ePN	Pn	21 18 31.2	-0.4
KDAG	Bornova	1.61	331	i P	Pn	21 18 31.6	-0.8
KDAG				i S	Sn	21 19 00.5	+7.2
KHL	Karahalli	1.67	37	ePN	Pn	21 18 33.2	0.0
BLCB	Balcova	1.69	326	ePN	Pn	21 18 32.8	-0.7
KHAL	Karahalli	1.69	35	eP	Pn	21 18 34.3	+0.8
KHAL				i S	Sn	21 18 56.4	+1.1
KHAL	Karahalli	1.69	35	eP	Pn	21 18 34.3	+0.8
KHAL				i S	Sn	21 18 56.3	+1.1
KARP	Karpathos	1.69	212	ePN	Pn	21 18 33.5	-0.1
AKHS	Akhisar	1.91	350	i P	Pn	21 18 36.3	-0.3
AKHS				i S	Sn	21 18 58.0	-2.8
AKS	Akhisar	1.91	350	ePN	Pn	21 18 35.9	-0.7
BCK	Bucak	1.92	75	ePN	Pn	21 18 37.7	+1.0
DEMI	Demirci	2.08	10	eP	Pn	21 18 35.1	-3.8
GDZ	Gediz	2.30	24	eP	Pn	21 18 42.1	+0.1
ALT	Altintas	2.53	35	ePN	Pn	21 18 45.2	+0.2

*BJI **01** 21:21:12.1, 522S×10138E, h35^{km}, mB5.2, mb5.2, Ms4.8, Msz4.6*
*ISCJB **01** 21:21:17.0±0.3, 450S±004×10126E±004, h27^{km}, mb5.0/73, MS4.5/22, Error ellipse: s-maj=6.8km s-min=3.9km az=42.6*
*DJA **01** 21:21:16, 470S×10102E, h10^{km}, Mw5.4/7*
*MOS **01** 21:21:18.4±1.2, 433S×10144E, h33^{km}, mb5.3/28, Error ellipse: s-maj=13.3km s-min=6.4km az=106.7*
*IDC **01** 21:21:18.9±0.5, 443S×10144E, h26^{km}±2^{km}, mb4.6/16, mb1 4.7/17, mb1mx4.6/20, mbtmp4.6/17, ML4.1/1, MS4.3/11, Ms1 4.3/11, ms1mx4.1/28, Error ellipse: s-maj=17.3km s-min=10.6km az=58.0*
*NEIC **01** 21:21:19.1±0.8, 445S×10137E, h27^{km}±5^{km}, mb5.1/23, Error ellipse: s-maj=10.7km s-min=6.6km az=47.0*
ISC 01 21:21:19.2±0.3**, 451S**±004×**10125E**±004**, h29**^{km}**, h29**^{km}±.6^{km}**:pP-P, n220, σ1**^{s}**12**/186**, mb5.0**/73**, MS4.5**/22**, 13C-10D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLI	Kotabumi	3.61	96	P	Pn	21 22 14.5	+1.2
PDSI	Padang	3.66	348	P	Pn	21 22 13.4	-0.5
PPI	Padang Panjang	4.12	348	P	Pn	21 22 20.4	+0.2
SBJI	Serang	5.12	108	P	Pn	21 22 35.1	+1.1
	388nm,1.2s,6µm1.9nm						
PPBI	Pangkal Pinang	5.41	65	P	Pn	21 22 42.7	+4.7
	140nm,0.8s,3µm0.9nm						
DBJI	Dramaga	5.84	111	P	Pn	21 22 43.4	-0.5
	484nm,1.0s,4µm1.3nm						
CBJI	Citeko	5.89	109	P	Pn	21 22 46.6	+2.0
	2µm,1.1s,5.7nm						
TPI	Tanjungpandan	6.62	75⇓	eP	Pn	21 22 57.0	+2.3
LEM	Lembang	6.74	110	P	Pn	21 22 57.2	+0.9
	436nm,1.0s,5µm1.4nm						
MYKOM	Kota Tinggi	6.78	23	P	Pn	21 23 01.9	+5.1
	123nm,1.1s,0.4nm						
JCJI	Jatiwangi	7.26	106	P	Pn	21 23 04.7	+1.3
	240nm,1.6s,4µm0.9nm						
PSI	Prapat	7.63	342⇑	eP	Pn	21 23 08.7	+0.2
COCO	West Island	8.79	210	ePn	Pn	21 23 20.5	-3.9
COCO	West Island	8.79	210	P	Pn	21 23 21.3	-3.1
	399nm,1.0s,1.1nm						
BJII	Banjamegara	8.87	109	P	Pn	21 23 25.3	-0.2
	95nm,1.4s						
IPM	Ipoh	8.93	359	⇓P	Pn	21 23 27.6	+1.1
IPM	Ipoh	8.93	359	P	Pn	21 23 29.3	+2.9
	61nm,1.1s						
KULM	Kulim	9.75	356	P	Pn	21 23 38.2	+0.5
	48nm,1.0s						
SJI	Sawahan	10.94	108	P	Pn	21 23 53.4	-0.5
	128nm,0.8s						
BSI	Banda Aceh	11.58	329	P	Pn	21 24 02.1	-0.6
	142nm,0.9s						
PLKI	Palangkaraya	12.87	80	P	Pn	21 24 24.3	+3.9
KMMI	Kalianget	12.90	102	P	Pn	21 24 25.5	+4.7
	85nm,1.1s,1µm						
KKM	Kota Kinabalu	18.25	55	eP	Pn	21 25 31.0	+0.4
KAPI	Kappang	18.45	92	P	Pn	21 25 30.4	-2.5
	204nm,0.8s,SNR=5.7						
KAPI	Kappang	18.45	92	P	Pn	21 25 28.9	-4.0
	0.7nm,0.3s,baz=266,slow=6.0,SNR=8.5						
KAPI				LR	LR	21 33 07.6	
	comp=Z,776nm,21.5s,baz=278,slow=39						
KAPI	Kappang	18.45	92	eP	Pn	21 25 30.4	-2.5
	24nm,0.9s						
SDKM	Sandakan	18.85	58	⇓P	Pn	21 25 38.0	+0.2
BDT	Bhumibol Dam	21.73	354	P	P	21 26 07.5	-0.8
	16nm,0.9s,mb4.4						
BATI	Baumata	22.93	106	P	P	21 26 18.2	-3.0
	69nm,0.8s,mb5.2,baz=250,slow=0.8,SNR=28						
BATI				S	S	21 30 22.6	-7.1
	16nm,0.5s,baz=295,slow=19,SNR=6.9						
CMAR	Chiang Mai Arr	22.93	354	P	P	21 26 19.4	-1.7
	37nm,0.8s,mb4.9,baz=187,slow=8.6,SNR=89						
CMAR				PcP	PcP	21 30 12.0	+0.9
	1.9nm,0.9s,baz=207,slow=3.9,SNR=5.5						
CMAR				pPcP		21 30 21.2	
	1.7nm,0.7s,baz=216,slow=3.0,SNR=5.4						
CMAR				LR	LR	21 37 06.4	
	comp=Z,736nm,18.9s,MS4.2,baz=186,slow=41						
CMAR	Chiang Mai Arr	22.93	354	i P	P	21 26 21.7	+0.5
CMAR				pmax	pmax		
	comp=Z,37nm,0.8s						
CHG	Chiang Mai	23.29	354	⇑P	P	21 26 24.3	-0.6
	comp=Z,35nm,1.1s,mb4.7						
CHTO	Chiang Mai	23.29	354	eP	P	21 26 24.3	-0.6
CHTO				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.7						
CHTO	Chiang Mai	23.29	354	eP	P	21 26 24.3	-0.6
	comp=Z,34nm,1.0s,mb4.7						
QIZ	Qiongzhong	24.88	20	P	P	21 26 41.7	+2.1
QIZ				S	S	21 31 01.0	0.0
QIZ				XS	sS	21 31 17.3	+2.3
QIZ				SS		21 32 01.2	
QIZ				AMB	AMB		
	comp=Z,33nm,1.3s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,314nm,5.3s						
QIZ				LR	LR		
	comp=E,517nm,16.8s						
QIZ				LR	LR		
	comp=Z,559nm,21.9s						
KMI	Kunming	29.49	3	P	P	21 27 22.2	+1.2
KMI				AP	pP	21 27 29.8	+0.3
KMI				XP	sP	21 27 32.2	-0.9
KMI				PP	PP	21 28 22.4	-5.5
KMI				PPP		21 28 34.5	
KMI				S	S	21 32 18.1	+4.3
KMI				XS	sS	21 32 30.7	+2.9
KMI				SSS		21 34 16.8	
KMI				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,55nm,3.8s						
KMI				LR	LR		
	comp=N,737nm,16.5s,MS4.5						
KMI				LR	LR		
	comp=E,769nm,17.6s,MS4.5						
KMI				LR	LR		
	comp=Z,805nm,16.5s,MS4.4						
GYA	Guiyang	31.23	9⇑	iP	P	21 27 38.1	+1.8
GYA				AP	pP	21 27 49.7	+4.8
GYA				XP	sP	21 27 56.0	+7.6
GYA				PP	PP	21 28 44.6	-2.6
GYA				PPP		21 28 53.7	
GYA				PCP	PcP	21 30 31.7	+1.0
GYA				S	S	21 32 42.5	+1.5
GYA				XS	sS	21 33 01.6	+6.5
GYA				SS	SS	21 34 32.8	-23
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,210nm,6.6s						
GYA				LR	LR		
	comp=N,950nm,15.5s,MS4.8						
GYA				LR	LR		
	comp=E,1µm,15.0s,MS4.8						
GYA				LR	LR		
	comp=Z,1µm,14.9s,MS4.8						
KAKA	Kakadu	31.86	107	eP	x	21 27 23.2	
	comp=Z,19nm,0.8s						
CD2	Chengdu	35.30	4	P	P	21 28 11.0	-0.8
CD2				AP	pP	21 28 21.1	+0.7
CD2				XP	sP	21 28 24.6	+0.7
CD2				PP	PP	21 29 31.8	-0.5
CD2				PCP	PcP	21 30 39.6	-2.4
CD2				S	S	21 33 48.4	+4.3
CD2				XS	sS	21 34 01.5	+3.2
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
CD2				AMB	AMB		
	comp=Z,250nm,13.8s						
CD2				LR	LR		
	comp=N,2µm,12.2s						
CD2				LR	LR		
	comp=Z,2µm,21.0s						
LSA	Lhasa	35.37	345	P	P	21 28 13.4	+1.0
LSA				XP	sP	21 28 27.8	+3.3
WRAB	Tennant Creek	35.69	118	P	P	21 28 14.2	-1.1
	comp=Z,193nm,0.8s,mb6.1,SNR=6.8						
WRAB	Tennant Creek	35.69	118	eP	P	21 28 14.5	-0.8
WRAB				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
WRAB	Tennant Creek	35.69	118	eP	P	21 28 14.5	-0.9
	comp=Z,27nm,0.9s,mb5.2						
WB2	Warramunga Arr	35.69	118	eP	P	21 28 14.4	-1.0
ASAR	Alice Springs	36.79	124	P	P	21 28 24.1	-0.6
	comp=Z,6.5nm,0.9s,mb4.5,baz=300,slow=8.0,SNR=25						
ASAR				PcP	PcP	21 30 47.0	+0.3
	comp=Z,3.2nm,0.8s,baz=310,slow=3.2,SNR=7.3						
ASAR				pPcP		21 30 55.9	
	comp=Z,3.1nm,1.1s,baz=301,slow=5.3,SNR=4.3						
ASAR				S	S	21 34 05.2	-2.1
	comp=Z,2.4nm,1.1s,baz=295,slow=15,SNR=6.2						
ASAR	Alice Springs	36.79	124	P	P	21 28 24.1	-0.6
ASAR						21 30 47.0	
ASAR				S	S	21 34 05.2	-2.1
WHN	Wuhan	37.04	19	P	P	21 28 25.0	-1.7
WHN				LR	LR		
	comp=N,587nm,6.6s						
WHN				LR	LR		
	comp=E,1µm,11.6s						
WHN				LR	LR		
	comp=Z,1µm,16.9s						
XAN	Xi'an	39.02	10	P	P	21 28 42.5	-0.8
XAN				AP	pP	21 28 50.4	-1.6
XAN				XP	sP	21 28 54.1	-1.4
XAN				PP	PP	21 30 15.9	+2.7
XAN				PPP		21 30 38.6	
XAN				PCP	PcP	21 30 54.2	+1.0
XAN				S	S	21 34 43.0	+2.4
XAN				SCS	ScS	21 38 47.6	-3.4
XAN				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
XAN				AMB	AMB		
	comp=Z,101nm,10.6s						
XAN				LR	LR		
	comp=N,134nm,19.8s,MS4.4						
XAN				LR	LR		
	comp=E,602nm,18.9s,MS4.4						
XAN				LR	LR		
	comp=Z,840nm,16.0s,MS4.7						
NJ2	Nanjing	40.03	24	eP	P	21 28 53.2	+1.4
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.3						
NDI	New Delhi	40.30	326	eP	P	21 28 52.0	-2.0
LZH	Lanzhou	40.46	3	⇓P	P	21 28 56.5	+1.3
LZH				AP	pP	21 29 03.6	-0.3
LZH				XP	sP	21 29 08.5	+1.0
LZH				PP	PP	21 30 34.5	+5.7
LZH				eS	S	21 35 04.0	+1.9
LZH				XS	sS	21 35 20.0	+3.6
LZH				SS	SS	21 38 00.2	-2.1
LZH				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,270nm,4.0s						
LZH				LR	LR		
	comp=N,740nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.8s,MS4.8						
DDI	Dehra Dun	41.14	329	eP	P	21 28 58.3	-2.7
GTA	Gaotai	43.72	358	P	P	21 29 21.9	+0.1
GTA				AP	pP	21 29 30.5	-0.1
GTA				XP	sP	21 29 35.4	+1.3
GTA				PCP	PcP	21 31 09.0	+0.5
GTA				S	S	21 35 50.1	-0.1
GTA				XS	sS	21 36 08.1	+3.5
GTA				SS	SS	21 39 00.8	-5.8
GTA				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,562nm,3.6s						
GTA				LR	LR		
	comp=N,461nm,19.2s,MS4.5						
GTA				LR	LR		
	comp=E,383nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=Z,677nm,19.2s,MS4.6						
BTO	Baotou	45.61	9	eP	P	21 29 36.7	-0.2
PMG	Port Moresby	45.80	99⇑	eP	P	21 29 38.3	-0.6
PMG	Port Moresby	45.80	99	eP	P	21 29 37.9	-1.0
	comp=Z,40nm,1.2s,mb5.2						
HHC	Hu-ho-hao-te	46.12	11	eP	P	21 29 41.6	+0.7
HHC				AP	pP	21 29 51.5	+1.8
HHC				XP	sP	21 29 55.8	+2.6
HHC				PCP	PcP	21 31 16.7	0.0
HHC				PP	PP	21 31 30.1	+0.6
HHC				PCS	PcS	21 35 09.6	-1.5
HHC				S	S	21 36 25.0	+0.1
HHC				XS	sS	21 36 43.2	+3.8
HHC				SCS	ScS	21 39 30.7	-3.8
HHC				SS	SS	21 39 43.6	-6.9
HHC				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.3						
HHC				AMB	AMB		
	comp=Z,170nm,4.0s						
HHC				LR	LR		
	comp=N,309nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=E,523nm,16.6s,MS4.7						
HHC				LR	LR		
	comp=Z,442nm,19.0s,MS4.4						
NIL	Nilore	46.28	327	eP	P	21 29 42.6	+0.3
NIL				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
NIL	Nilore	46.28	327	eP	P	21 29 42.6	+0.3
	comp=Z,13nm,0.9s,mb4.9						
BJI	Beijing	46.41	16	P	P	21 29 43.1	-0.1
BJI				S	S	21 36 33.7	+4.6
BJI				AMB	AMB		
	comp=Z,92nm,0.7s,mb5.8						
BJI				AMB	AMB		
	comp=Z,313nm,5.2s						
BJI				LR	LR		
	comp=N,619nm,13.4s,MS4.8						
BJI				LR	LR		
	comp=E,315nm,13.9s,MS4.8						
BJI				LR	LR		
	comp=Z,381nm,18.6s,MS4.4						
CTA	Charters Tower	46.43	113	eP	P	21 29 43.5	-0.3
	comp=Z,21nm,1.0s,mb5.0						
CTA	Charters Tower	46.43	113	eP	P	21 29 43.5	-0.3
CTA				pmax	pmax		
	comp=Z,21nm,1.0s						
CTAO	Charters Tower	46.43	113	eP	P	21 29 43.6	-0.2
CTAO				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
CTAO	Charters Tower	46.43	113	eP	P	21 29 43.6	-0.2
	comp=Z,42nm,1.1s,mb5.3						
STKA	Stephens Creek	46.57	131	eP	P	21 29 44.5	-0.2
	comp=Z,7.2nm,0.8s,mb4.7						
STKA				e	pP	21 29 52.8	-0.6
STKA				e		21 30 02.4	
STKA	Stephens Creek	46.57	131	P	P	21 29 44.2	-0.4
	comp=Z,9.9nm,0.8s,mb4.8,baz=300,slow=9.0,SNR=18						
STKA				LR	LR	21 50 43.1	
	comp=Z,489nm,20.6s,MS4.4,baz=107,slow=38						
KS15	Wonju Array Si	48.55	28	eP	P	21 30 00.2	+0.4
KSRS	Korea Array	48.57	28	P	P	21 29 58.9	-1.2
	comp=Z,21nm,0.9s,mb5.2,baz=215,slow=8.2,SNR=48						
KSRS				pP	pP	21 30 07.4	-1.5
	comp=Z,11nm,0.9s,baz=216,slow=7.7,SNR=8.9						
KBL	Kabul	49.29	325	eP	P	21 30 05.9	+0.3
KBL				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
KBL	Kabul	49.29	325	eP	P	21 30 05.9	+0.2
	comp=Z,17nm,1.4s,mb4.9						
WMQ	Urumqi	49.64	347	P	P	21 30 09.1	+1.0
WMQ				AMB	AMB		
	comp=Z,51nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,324nm,3.0s						
WMQ				LR	LR		
	comp=N,253nm,23.0s,MS4.3						
WMQ				LR	LR		
	comp=E,197nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,174nm,24.0s,MS4.0						
SNY	Shenyang	50.41	22	⇓P	P	21 30 12.9	-1.1
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
SNY				AMB	AMB		
	comp=Z,228nm,4.7s						
SNY				LR	LR		
	comp=N,412nm,16.9s,MS4.6						
SNY				LR	LR		
	comp=E,269nm,14.1s,MS4.6						
SNY				LR	LR		
	comp=Z,574nm,14.3s,MS4.7						
KZA	Kyzart	52.05	336	P	P	21 30 27.9	+1.6
	SNR=6.4						
SONM	Songino Array	52.32	4	P	P	21 30 29.1	+0.9
	comp=Z,46nm,0.8s,mb5.4,baz=184,slow=8.8,SNR=321						
SONM				pP	pP	21 30 36.5	-0.6
	comp=Z,30nm,0.9s,baz=182,slow=8.6,SNR=16						
ULN	Ulaanbaatar	52.40	5	eP	P	21 30 29.8	+1.0
ULN				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
ULN	Ulaanbaatar	52.40	5	eP	P	21 30 29.8	+1.0
	comp=Z,41nm,1.0s,mb5.3						
TKM2	Tokmak 2	52.62	336	eP	P	21 30 31.3	+0.8
TKM2				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
TKM2	Tokmak 2	52.62	336	P	P	21 30 31.3	+0.8
	SNR=13						
TKM2	Tokmak 2	52.62	336	eP	P	21 30 31.2	+0.7
	comp=Z,34nm,1.1s,mb5.2						
KBK	Karagaybulak	52.66	336	P	P	21 30 32.1	+1.2
	SNR=8.4						
CN2	Changchun	52.80	22	⇑P	P	21 30 30.9	-1.0
CN2				eAP	pP	21 30 38.5	-2.3
CN2				eS	S	21 37 57.4	-1.1
CN2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.4						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s,MS4.7						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.7						
CN2				LR	LR		
	comp=Z,500nm,18.0s,MS4.6						
AAK	Ala-Archa	52.83	335c	iP	P	21 30 33.0	+0.9
AAK				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.3						
AAK	Ala-Archa	52.83	335	eP	P	21 30 32.9	+0.9

comp=Z,7.1nm,1.0s,mb4.5
CHMS Chumysh 53.02 336 P **P** **21 30 33.9 +0.3**
SNR=5.6
EKS2 Erkin-Say 53.15 335 P **P** **21 30 35.7 +1.2**
SNR=11
EKS2 Erkin-Say 53.15 335 *e*P **P** **21 30 35.6 +1.1**
comp=Z,23nm,0.8s,mb5.2
EKS2 *e*pP pP 21 30 44.4 +1.0
USP Ospenovka 53.35 336 P **P** **21 30 36.0 +0.1**
SNR=9.8
MAJO Matsushiro 53.47 37 *e*P **P** **21 30 35.2 -1.7**
MAJO pmax pmax
comp=Z,28nm,1.0s,mb5.2
MAJO Matsushiro 53.47 37 *e*P **P** **21 30 35.2 -1.7**
comp=Z,28nm,1.0s,mb5.2
MAT Matsushiro 53.47 37 P **P** **21 30 34.9 -2.0**
MJAR Matsushiro Arr 53.47 37 P **P** **21 30 35.1 -1.8**
comp=Z,25nm,0.9s,mb5.1,baz=217,slow=7.5,SNR=54
MJAR pP pP 21 30 42.9 -2.9
comp=Z,14nm,0.9s,baz=211,slow=7.7,SNR=9.2
MJAR Matsushiro Arr 53.47 37 P **P** **21 30 35.1 -1.8**
MJAR pP pP 21 30 42.9 -2.9
MK31 Makanchi Array 53.77 344 *e*P **P** **21 30 39.5 +0.6**
MKAR Makanchi Array 53.77 344 P **P** **21 30 39.1 +0.2**
comp=Z,15nm,0.7s,mb5.0,baz=147,slow=8.2,SNR=153
MKAR LR LR 21 56 03.6
comp=Z,169nm,18.1s,MS4.1,baz=168,slow=39
ZAK Zakamensk 54.70 2⇑ *i*P **P** **21 30 46.1 +0.5**
ZAK *e* 21 31 46.1
ZAK pmax pmax
comp=Z,13nm,0.9s,mb5.0
MDJ Mudanjiang 55.11 24 P **P** **21 30 48.2 -0.5**
MDJ AP pP 21 30 57.1 -0.6
MDJ XP sP 21 30 59.8 -1.3
MDJ S **S** **21 38 31.7 +2.0**
MDJ AMB AMB
comp=Z,17nm,1.0s,mb5.0
MDJ AMB AMB
comp=Z,134nm,4.6s
MDJ LR LR
comp=N,170nm,16.3s,MS4.3
MDJ LR LR
comp=E,87nm,16.6s,MS4.3
MDJ LR LR
comp=Z,178nm,18.7s,MS4.2
HVS Khovu-Aksy 55.80 354*d i*P **P** **21 30 52.9 -0.7**
HVS pmax pmax
comp=Z,27nm,1.3s,mb5.1
MOY Mondy 55.96 360 *e*P **P** **21 30 55.2 +0.5**
TLY Talaya 56.01 2 *e*P **P** **21 30 55.8 +0.8**
TLY *e* pP 21 31 04.2 +0.2
TLY pmax pmax
comp=Z,27nm,1.0s,mb5.2
TLY MLR MLR
comp=Z,346nm,16.0s,MS4.5
TLY Talaya 56.01 2 *e*P **P** **21 30 56.6 +1.6**
comp=Z,20nm,0.9s,mb5.2
TLY *e*pP pP 21 31 04.9 +0.9
KURK Kurchatov 58.35 343 P **P** **21 31 11.6 0.0**
comp=Z,139nm,0.9s,mb6.0,SNR=9.3
KURK Kurchatov 58.35 343 *e*P **P** **21 31 11.7 +0.1**
KURK pmax pmax
comp=Z,21nm,0.9s,mb5.2
KURK Kurchatov 58.35 343 *e*P **P** **21 31 11.7 0.0**
comp=Z,21nm,0.9s,mb5.2
KLR Kul'dur 59.73 23 *e*P **P** **21 31 16.7 -4.5**
ZAA0 Zalesovo Array 59.85 349 *e*P **P** **21 31 21.7 -0.2**
ZALV Zalesovo Beam 59.85 349 P **P** **21 31 21.6 -0.3**
comp=Z,17nm,0.7s,mb5.2,baz=177,slow=5.9,SNR=91
ZALV pP pP 21 31 29.0 -1.9
comp=Z,23nm,0.8s,baz=173,slow=6.0,SNR=17
ZALV LR LR 21 57 26.6
comp=Z,131nm,19.7s,MS4.1,baz=342,slow=36
ZALV Zalesovo Beam 59.85 349 P **P** **21 31 21.6 -0.3**
ZALV *PP pP 21 31 29.0 -2.0
ZALV Zalesovo Beam 59.85 349 P **P** **21 31 21.6 -0.3**
ZALV pP pP 21 31 29.0 -1.9
ZALV LR LR 21 57 26.6
HABR Khabarovsk 60.46 25 *e*P **P** **21 31 23.5 -2.7**
HABR *e* 21 32 08.6
HABR *e* 21 33 34.6
HABR *e*S **S** **21 39 38.2 -1.5**
HABR *e**SS sS 21 39 43.2 -11
HABR *e* 21 41 13.9
KRAR Krasnoyarsk 60.71 355⇓ *i*P **P** **21 31 27.9 +0.2**
KRAR pmax pmax
comp=Z,42nm,1.3s,mb5.4
NVS Novosibirsk 61.01 348 *e*P **P** **21 31 28.6 -1.2**
NVS pmax pmax
comp=Z,18nm,1.5s,mb5.0
NVS pmax pmax
comp=N,7.0nm,1.3s
NVS pmax pmax
comp=E,6.0nm,1.2s
RDF Al-Radifah 61.33 306 *e*P **P** **21 31 32.8 +0.2**
baz=306
RDF AMb AMB 21 31 56.8
comp=Z,34nm,1.3s,mb5.3,baz=306
NAY Al-Naaiem 61.70 307 *e*P **P** **21 31 35.3 +0.2**
baz=306
NAY AMb AMB 21 31 36.3
comp=Z,11nm,1.1s,mb4.9,baz=306
MIB Mutribah 61.85 307 *e*P **P** **21 31 36.6 +0.5**
baz=307
MIB AMb AMB 21 31 37.6
comp=Z,23nm,1.0s,mb5.3,baz=307
VOSK Vostochnaya 62.50 340 P **P** **21 31 38.8 -1.1**
VOSK pmax pmax
comp=Z,12nm,1.4s,mb4.8
BVA0 Borovoye Array 62.95 340 *i* P **P** **21 31 41.4 -1.5**
BVA0 pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
YSS Yuzh-Sakhalins 62.96 31⇓ *i*P **P** **21 31 42.0 -1.1**
YSS *e* pP 21 31 50.1 -2.1
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 62.96 31 *e*P **P** **21 31 42.8 -0.3**
comp=Z,94nm,1.1s,mb5.8
BOD Bodaibo 62.98 8 *e*P **P** **21 31 42.3 -0.7**
BOD pmax pmax
comp=Z,25nm,0.9s,mb5.3
BRVK Borovoye 63.02 340 P **P** **21 31 42.0 -1.4**
comp=Z,76nm,0.9s,mb5.8,SNR=5.4
BRVK Borovoye 63.02 340 *e*P **P** **21 31 42.9 -0.5**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
BRVK Borovoye 63.02 340 *e*P **P** **21 31 42.9 -0.5**
comp=Z,10nm,0.8s,mb5.0
CLNS Chul'man 64.11 14 *e*P **P** **21 31 50.3 -0.2**
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=Z,19nm,0.9s,mb5.1
CLNS pmax pmax
comp=E,12nm,0.9s
AB31 Akbulak array 64.43 331 P **P** **21 31 51.8 -0.9**
AB31 pmax pmax
comp=Z,49nm,1.3s,mb5.4
MAW Mawson 68.18 195 P **P** **21 32 17.0 +0.5**
comp=Z,2.7nm,0.7s,mb4.4,baz=52,slow=9.0,SNR=3.6
MAW LR LR 21 56 39.7
comp=Z,327nm,18.7s,MS4.6,baz=58,slow=31
MAW Mawson 68.18 195 P **P** **21 32 17.0 +0.5**
MAW LR LR 21 56 39.7
SVE Sverdlovsk 69.46 338⇓ *e*P **P** **21 32 24.9 +0.3**
SVE *e* pP 21 32 33.3 -0.5
SVE pmax pmax
comp=Z,41nm,1.0s,mb5.3
YAK Yakutsk 69.85 14 *e*P **P** **21 32 23.6 -3.3**
YAK *e* pP 21 32 33.0 -3.1
YAK pmax pmax
comp=Z,43nm,1.0s,mb5.3
YAK pmax pmax
comp=N,19nm,1.3s
YAK pmax pmax
comp=E,11nm,1.3s
YAK Yakutsk 69.85 14 *e*P **P** **21 32 25.7 -1.2**
comp=E,45nm,0.8s,mb5.5
ARU Arti 69.99 336 P **P** **21 32 27.3 -0.6**
comp=E,120nm,1.2s,mb5.7,SNR=7.4
ARU Arti 69.99 336*c i*P **P** **21 32 27.1 -0.8**
ARU *e* 21 34 57.7
ARU *e*S S 21 41 37.9 +1.6
ARU pmax pmax
comp=Z,37nm,1.7s,mb5.0
ARU Arti 69.99 336 *e*P **P** **21 32 27.8 -0.1**
comp=Z,31nm,1.2s,mb5.1
ASF Jabal al Asfar 71.06 306 LR LR 22 04 48.2
comp=Z,288nm,19.3s,MS4.5,baz=30,slow=37
KIV Kislovodsk 71.25 319 *i* P **P** **21 32 35.4 -0.4**
KIV *i* pP 21 32 45.7 +0.7
KIV pmax pmax
comp=Z,16nm,1.2s,mb4.8
KIV Kislovodsk 71.25 319 *e*pP pP 21 32 45.1 +0.1
EIL Eilat 71.92 303 LR LR 22 05 46.3
comp=Z,226nm,18.6s,MS4.5,baz=0.8,slow=37
MMAI Mount Meron Ar 72.52 307 LR LR 22 06 06.0
comp=Z,272nm,18.7s,MS4.5,baz=140,slow=37
SOKR Solikamsk 72.84 338⇑ *i*P **P** **21 32 46.4 +1.4**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb5.1
PETK Petropavlovsk- 74.34 31 P **P** **21 32 51.5 -2.4**
comp=Z,7.4nm,0.8s,mb4.7,baz=165,slow=6.2,SNR=5.9
PETK pP pP 21 33 01.0 -2.2
comp=Z,5.2nm,0.7s,baz=197,slow=4.5,SNR=4.7
PETK Petropavlovsk- 74.34 31 P **P** **21 32 51.5 -2.4**
PETK *e* pP pP 21 33 01.0 -2.2
VRHR Novokhopersk 75.09 326 *e*P **P** **21 32 57.8 -0.6**
VRHR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VRHR pmax pmax
comp=N,8.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,1.5s
BOSA Boshof 75.56 242 LR LR 22 01 31.8
comp=E,310nm,18.9s,MS4.6,baz=75,slow=32
BR131 Keskin Array S 75.93 313 *e*P **P** **21 33 03.1 -0.3**
BRTR Keskin Array B 75.93 313 P **P** **21 33 03.1 -0.3**
comp=E,2.7nm,0.8s,mb4.2,baz=142,slow=7.7,SNR=12
BRTR pP pP 21 33 11.2 -1.5
comp=E,2.5nm,0.7s,baz=125,slow=9.8,SNR=8.7
BRTR Keskin Array B 75.93 313 *i* P **P** **21 33 03.2 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
VORD Divnogorie 76.36 325 *e*P **P** **21 33 03.9 -1.7**
VORD pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,1.2s
SEY Seymchan 77.48 21⇓ *i*P **P** **21 33 12.0 +0.3**
TIXI Tiksi 78.13 9*ce*P **P** **21 33 13.4 -1.7**
TIXI pmax pmax
comp=Z,26nm,1.4s,mb5.0
TIXI Tiksi 78.13 9 *e*P **P** **21 33 13.7 -1.5**
comp=Z,36nm,1.4s,mb5.1
VNDA Vanda 79.47 169 P **P** **21 33 22.7 +0.2**
comp=Z,1.0nm,0.8s,mb3.8,baz=306,slow=5.9,SNR=4.4
VNDA pP pP 21 33 31.3 -0.5
comp=Z,4.0nm,0.9s,baz=311,slow=6.1,SNR=11
VNDA LR LR 22 02 04.2
comp=Z,114nm,18.9s,MS4.2,baz=311,slow=31
VNDA Vanda 79.47 169 P **P** **21 33 22.7 +0.2**
VNDA *PP pP 21 33 31.3 -0.5
OBN Obninsk 79.57 328⇑ *i*P **P** **21 33 23.3 -0.1**
OBN *i* pP 21 33 32.2 -0.5
OBN pmax pmax
comp=Z,59nm,2.5s,mb5.1
KLMR Klimovskoe 80.62 334 P **P** **21 33 27.2 -1.7**
KLMR pmax pmax
comp=Z,68nm,1.9s,mb5.2
AKASG Malin Array Be 82.22 322 P **P** **21 33 36.7 -0.9**
comp=Z,2.5nm,0.8s,mb4.2,baz=83,slow=5.3,SNR=7.8
AKASG pP pP 21 33 45.3 -1.6
comp=Z,0.7nm,0.4s,baz=96,slow=4.4,SNR=3.3
BUR08 Bucovina Ar. S 83.97 319 *e*P **P** **21 33 48.3 +1.5**
BILL Bilibino 85.07 20⇑ *e*P **P** **21 33 51.3 -0.6**
BILL pmax pmax
comp=Z,11nm,1.0s,mb4.9
QSPA South Pole Qui 85.47 180 P **P** **21 33 54.8 +1.0**
comp=Z,0.6nm,0.8s,mb3.8,baz=294,slow=4.7,SNR=3.1
QSPA South Pole Qui 85.47 180 P **P** **21 33 54.8 +1.0**
QSPA *e*pP pP 21 34 02.5 -0.6
MAIT Maitri 85.61 199 *e*P **P** **21 33 55.1 +0.5**
MAIT *e*E pP 21 34 03.7 -0.3
UZH Uzhgorod 86.09 319 *e*P **P** **21 33 57.0 -0.4**
KOLS Kolonicke sedl 86.16 320 *e*P **P** **21 33 58.5 +0.8**
KOLS *e* pP 21 34 07.4 +0.3
KOLS pmax pmax
comp=Z,16nm,1.2s,mb5.1
KOLS Kolonicke sedl 86.16 320 *e*P **P** **21 33 58.5 +0.8**
comp=Z,16nm,1.2s,mb5.1
KOLS *e* pP 21 34 07.4 +0.3
CRVS Cervenica-Dubn 86.68 319 *e*P **P** **21 34 02.3 +2.0**
CRVS *e*pP pP 21 34 09.9 +0.3
STHS Stebnicka Huta 86.91 320 *e*P **P** **21 34 02.7 +1.3**
STHS *e* pP 21 34 10.2 -0.6
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
STHS Stebnicka Huta 86.91 320 *e*P **P** **21 34 02.7 +1.3**
comp=Z,3.3nm,1.1s,mb4.5
STHS *e* pP 21 34 10.2 -0.6
VYHS Vyhne 88.33 319 *e*P **P** **21 34 07.8 -0.4**
VYHS *e*pP pP 21 34 17.1 -0.5
VYHS Vyhne 88.33 319 *e*P **P** **21 34 07.8 -0.4**
VYHS *e* pP 21 34 17.2 -0.4
KOLL Kolacno 88.62 319 *e*P **P** **21 34 10.0 +0.4**
KOLL Kolacno 88.62 319 *e*P **P** **21 34 10.1 +0.5**
ARCES ARCESS Array B 89.24 340 P **P** **21 34 11.4 -0.6**
comp=Z,6.0nm,0.8s,mb5.0,baz=70,slow=4.0,SNR=7.0
ARCES pP pP 21 34 20.6 -0.9
comp=Z,12nm,0.8s,baz=70,slow=5.3,SNR=6.6
ZST Bratislava 89.43 318 *e*P **P** **21 34 13.8 +0.4**
ZST *e* pP 21 34 22.7 -0.1
ZST pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
ZST Bratislava 89.43 318 *e*P **P** **21 34 13.8 +0.4**
comp=Z,8.4nm,1.1s,mb5.0
ZST *e* pP 21 34 22.7 -0.1
SNAA Sanae 90.15 198⇑ *i*P **P** **21 34 19.4 +3.1**
DPC Dobruska-Polom 90.20 320 *e*P **P** **21 34 15.5 -1.4**
DPC *ex* x 21 34 26.2
GERES GERESS Array B 91.75 319 P **P** **21 34 24.8 +0.7**
comp=Z,1.7nm,0.9s,mb4.4,baz=93,slow=2.7,SNR=11
GERES pP pP 21 34 34.0 +0.4
comp=Z,2.0nm,0.8s,baz=98,slow=4.0,SNR=9.0
VNA2 Neumayer--Watz 91.78 198 *e*P **P** **21 34 25.7 +1.8**
VNA2 *e* pP 21 34 33.6 +0.3
VNA1 Neumayer--Stat 92.14 198 *e*P **P** **21 34 36.3 +1.3**
VNA1 *e* 21 34 39.7
VNA3 Neumayer Olymp 92.36 198 *e*P **P** **21 34 28.2 +1.6**
VNA3 *e* pP 21 34 36.8 +0.8
VNA3 *e* 21 34 40.3
CLL Collm 92.39 321 *e*(pP) pP 21 34 38.0 +1.5
YKA Yellowknife Ar 116.38 18 PKP PKPdf 21 39 59.3 -0.5
comp=Z,0.7nm,0.8s,baz=309,slow=3.6,SNR=3.6
YKA Yellowknife Ar 116.38 18 PKP PKPdf 21 39 59.3 -0.5
MOD Modoc 127.51 39 *e*PKPdf PKPdf 21 40 23.2 +1.4
MSO Missoula 128.04 30 *e*PKPdf PKPdf 21 40 23.4 +0.8
OHCM Honcut 128.11 42 *e*PP PP 21 42 24.2 -1.9
BOZ Bozeman (W) 130.01 30 *e*PKIKP PKPdf 21 40 27.7 +1.3
NVAR Mina Array Bea 130.70 41 PKP PKPdf 21 40 29.7 +1.8
comp=Z,1.2nm,0.6s,baz=271,slow=2.0,SNR=6.9
NVAR pPKP pPKPdf 21 40 37.5 -0.1
comp=Z,1.8nm,0.8s,baz=272,slow=2.2,SNR=6.4
NVAR SKPbc SKPbc 21 43 50.9 +0.9
comp=Z,2.5nm,1.0s,baz=256,slow=4.3,SNR=7.8
MTUM Tungsten Hills 131.10 43 *e*PP PP 21 42 51.8 +6.2
ELK Elko 131.28 37 PKP PKPdf 21 40 30.1 +1.1
comp=Z,2.2nm,0.8s,baz=342,slow=5.7,SNR=7.8
RRI2 Red Ridge 131.78 32 *e*PKPdf PKPdf 21 40 31.7 +1.8
TPAW Teton Pass 131.88 31 *e*SKPbc SKPbc 21 43 54.6 +0.5
REDW Red Top Meadow 132.02 31 *e*PKPdf PKPdf 21 40 32.3 +2.0
ULM Lac du Bonnet 132.19 15 PKP PKPdf 21 40 30.9 +0.4
comp=Z,1.5nm,0.4s,baz=107,slow=4.9,SNR=3.5
DUG Dugway 133.07 36 *e*PKPdf PKPdf 21 40 34.9 +2.6
DUG *e*SKPbc SKPbc 21 43 59.7 +1.4
PDAR Pinedale Array 133.11 31 PKP PKPdf 21 40 32.3 -0.1
comp=Z,0.8nm,0.7s,baz=182,slow=2.3,SNR=5.8
MSU Marysvale 134.52 37 *e*PKIKP PKPdf 21 40 38.6 +3.4
LDFC Landfair 134.68 43 *e*SKPbc SKPbc 21 44 03.8 -0.1
GLA Glamis 135.98 45 *e*PP PP 21 43 07.4 -9.4
ANMO Albuquerque 140.32 37 PKP PKPdf 21 40 47.4 +1.4
comp=Z,2.6nm,0.9s,baz=247,slow=2.5,SNR=5.6
ACSO Alum Creek Sta 144.24 6 *e*PKPdf PKPdf 21 40 50.5 -2.3
WMOK Wichita Mounta 144.66 29 *e*PKIKP PKPdf 21 40 51.9 -1.8
CCM Cathedral Cave 144.72 17 *e*PKIKP PKPdf 21 40 52.1 -1.6
BLO Bloomington 144.78 11 *e*PKIKP PKPdf 21 40 52.7 -1.1
MCWV Mont Chateau 145.00 1 *e*PKPdf PKPdf 21 40 53.7 -0.4
FVM French Village 145.02 16 *e*PKIKP PKPdf 21 40 53.0 -1.2
SDMD Soldier's Deli 145.22 357 *e*PKPab PKPab 21 40 53.8 -0.4
SIUC Southern Illin 145.59 15 *e*PKPbc PKPbc 21 40 55.4 0.0
USIN University of 145.72 13 *e*PKPab PKPab 21 40 55.6 -0.5
WCI Wyandotte Cave 145.74 11 *e*PKP2 PKPab 21 40 55.4 -0.8
TXAR Lajitas Array 145.85 41 PKPbc PKPbc 21 40 57.1 +0.7
comp=Z,28nm,0.9s,baz=306,slow=1.3,SNR=178
TXAR pPKPbc pPKPbc 21 41 05.4 -0.7
comp=Z,19nm,0.8s,baz=302,slow=1.2,SNR=18
GNAR Gosnell 147.02 17 *e*PKPab PKPab 21 41 00.5 -0.7
MIAR Mount Ida 147.10 23 *e*PKP2 PKPab 21 41 00.2 -1.3
UALR University of 147.36 21 *e*PKPbc PKPbc 21 41 00.9 +0.2
JCT Junction City 147.42 35 *e*PKP2 PKPab 21 41 01.6 -1.3
WVT Waverly 147.44 14 *e*PKP2 PKPab 21 41 00.9 -1.9
TZTN Tazewell 147.82 7 *e*PKPbc PKPbc 21 41 01.5 -0.4
TKL Tuckaleechee C 148.66 8 PKPbc PKPbc 21 41 03.8 -0.3
comp=Z,18nm,0.7s,baz=113,slow=2.2,SNR=17
TKL pPKPbc pPKPbc 21 41 11.7 -2.1
comp=Z,27nm,1.0s,baz=214,slow=3.6,SNR=9.0
SWET Sewanee 148.73 11 *e*PKPab PKPbc 21 41 03.9 -0.5
CPCT Cooper Cave 148.75 9 *e*PKPab PKPbc 21 41 03.8 -0.6
LRAL Lakeview Retre 150.59 14 *e*PKPbc PKPbc 21 41 08.7 -0.3
GOGA Godfrey 150.91 8 *e*PKIKP PKPbc 21 41 10.2 +0.5

NIED ***01*** *21:40:00, 34.90N±138.00E, h20km, Mw3.5 Best double couple: M0 2.00000×10^14 NP1:φs=323.00000°, δ87.00000°, λ16.00000°. NP2:φs=232.00000°, δ74.00000°, λ177.00000°.*
ISCJB ***01*** *21:40:21.8±0.5, 34.89N±0.04km×137.99E±0.05, h13km±4km, Error ellipse: s-maj=7.7km s-min=5.1km az=36.9*
JMA ***01*** *21:40:21.9, 34.89N×137.98E, h16km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs=241.00000°, δ74.00000°, λ-179.00000°. NP2: φs=151.00000°, δ89.00000°, λ-16.00000°. Principal axes: T Plg11.0000°, Azm197.0000°; N Plg74.0000°, Azm329.0000°; P Plg12.2000°, Azm105.0000°;*
JMA Felt II J1.
ISC 01 21:40:21.9±0.7, 3489N±0.04×13800E±0.04, h14km±5km, n11, σ0.844/17, 4C-3D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JKKG	**Kakegawa**	**0.10**	**194**	P		**Pg**	**21 40 25.2**	**+0.2**
JKKG				S		**Sg**	**21 40 27.6**	**+0.4**
JHMK	**Hamakita**	**0.21**	**251**	P		**Pg**	**21 40 26.3**	**-0.3**
JHMK				S		**Sg**	**21 40 29.5**	**-0.3**
HMMJ	**Hamamatsu 2**	**0.23**	**263**	⇓P		**Pg**	**21 40 26.8**	**-0.1**
HMMJ				S		**Sg**	**21 40 30.4**	**0.0**
JYZW	**Yoshizawa**	**0.25**	**297**	P		**Pg**	**21 40 27.1**	**-0.1**
JYZW				S		**Sg**	**21 40 30.6**	**-0.2**
SHZ3	**Shizuoka 3**	**0.25**	**43**	⇑P		**Pg**	**21 40 27.5**	**+0.3**
SHZ3				S		**Sg**	**21 40 31.4**	**+0.6**
JNY	**Yasuok**	**0.49**	**346**	⇑P		**Pg**	**21 40 31.4**	**-0.1**
TK04	**Tokai 4**	**0.51**	**192**	⇑P		**Pg**	**21 40 32.6**	**+0.7**
JIZS	**Izushimoda**	**0.74**	**103**	⇓P		**Pg**	**21 40 35.5**	**-0.7**
JYN	**Shimob**	**0.76**	**36**	⇓P		**Pg**	**21 40 36.0**	**-0.6**
JOD2	**Odawara 2**	**0.97**	**67**	⇓P		**Pb**	**21 40 39.6**	**-0.8**
MAT	**Matsushiro**	**1.66**	**6**	⇑P		**Pn**	**21 40 51.1**	**+0.5**
MAT				S		**Sn**	**21 41 12.2**	**+0.5**

CASC 01 21:45:20.9±2.5, 1466N×8973W, h3km±10km, MD3.6, 4C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.40**	**5**⇑ *i*P			Pg	21 45 30.0	+1.3
MRL				*e*S		Sg	21 45 35.6	+1.6
MTO2	**Montecristo 2**	**0.44**	**126**⇑ *e*P			x	21 45 30.1	
MTO2				*e*S		x	21 45 36.9	
NBG	**Las Nubes**	**0.60**	**263**⇑ *e*P			Pg	21 45 33.2	+0.7
RTR	**El Retiro**	**0.76**	**174** *e*P			x	21 45 35.9	
SNJE	**San Jose**	**0.80**	**171** *e*P			x	21 45 36.9	
IXG	**Ixpaco**	**0.85**	**236**⇑ *e*P			Pg	21 45 37.9	+0.6
IXG				*e*S		Sg	21 45 50.8	+2.4
BOQS	**Boqueron**	**1.02**	**155** *e*P			x	21 45 40.5	
BOQS				*e*S		x	21 45 54.9	
FUG	**Fuego 3**	**1.10**	**259**⇓ *e*P			Pg	21 45 42.5	+0.5
FG6		**1.12**	**265**⇓ *e*P			Pg	21 45 43.0	+0.5
SNVI	**San Vicente**	**1.35**	**140** *e*S			x	21 46 05.4	
CAHU	**Cacacuatique**	**1.72**	**121** *e*P			x	21 45 53.2	
VSM	**San Miguel**	**1.87**	**131** *e*S			x	21 46 20.8	
JAT	**Jato**	**1.88**	**260** *e*P			Pn	21 45 52.8	-1.1
BLLM	**Bellamira**	**1.89**	**130** *e*P			x	21 45 53.4	
BLLM				*e*S		x	21 46 17.5	

NIED ***01*** *22:01:00, 45.40N×151.30E, h11km, Mw4.3 Best double couple: M0 3.59000×10^15 NP1:φs=12.00000°, δ72.00000°, λ66.00000°. NP2:φs=247.00000°, δ29.00000°, λ141.00000°.*
BJI ***01*** *22:01:53.3, 45.20N×151.93E, h28km, mB4.8, mb4.6, Ms4.5*
ISCJB ***01*** *22:01:58.4±1.2, 45.14N±0.06×151.18E±0.06, h33km±8km, mb4.7/63, MS3.9/3, Error ellipse: s-maj=11.8km s-min=4.3km az=145.5*
JMA ***01*** *22:01:58.4±0.5, 45.39N×151.30E, h30km, M4.8*
SKHL ***01*** *22:01:59.5±3.5, 45.40N×151.00E, h49km±16km, mb5.1/3, ms4.5/1, msh5.4/1*
SZGRF ***01*** *22:02:00.2, 45.13N×151.77E, h33km, mb4.7, Kuril Islands, Russia*
MOS ***01*** *22:02:01.4±0.9, 45.35N×151.00E, h47km, mb4.8/35, Error ellipse: s-maj=9.7km s-min=6.1km az=114.6*
IDC ***01*** *22:02:02.3±0.7, 45.43N×151.15E, h47km±6km, mb4.0/15, mb1 4.1/18, mb1mx4.0/24, mbtmp4.0/18, MS3.8/4, Ms1 3.8/4, ms1mx3.3/34, Error ellipse: s-maj=18.1km s-min=14.9km az=145.0*
NEIC ***01*** *22:02:02.2±0.8, 45.34N×151.23E, h47km±6km, mb4.6/24, Error ellipse: s-maj=9.3km s-min=4.6km az=142.0*
ISC 01 22:02:00.4±0.6, 4513N±0.06×15128E±0.07, h37km±4km, n238, σ1$10/254, mb4.7/63, MS3.9/3, 21C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.41**	**274**	*e*PN		**Pn**	**22 02 32.5**	**-4.8**
KUR				*e*S		**Sn**	**22 03 06.0**	**+0.4**
KUR				pmax	pmax			
	comp=N,260nm,0.7s							
KUR				pmax	pmax			
	comp=E,260nm,0.7s							
KUR				pmax	pmax			
	comp=Z,430nm,0.7s							
KUR				smax				
	comp=N,4μm,0.8s							
KUR				smax				
	comp=E,650nm,0.8s							
KUR				smax				
	comp=N,8μm,2.0s							
KUR				smax				
	comp=E,5μm,2.0s							
KUR	**Kuril'sk**	**2.41**	**274**	*e*P		**Pn**	**22 02 32.5**	**-4.8**
KUR				AMB	AMB		22 02 47.0	
	comp=E,258nm,0.7s							
KUR				AMB	AMB		22 02 47.0	
	comp=E,430nm,0.7s							
KUR				*e*S		**Sn**	**22 03 06.0**	**+0.4**
KUR				A			22 03 06.5	
	comp=E,4μm,0.8s							
KUR				A			22 03 06.5	
	comp=E,645nm,0.8s							
KUR				A			22 03 16.0	
	comp=E,8μm,2.0s							
KUR				A			22 03 16.0	
	comp=E,5μm,2.0s							
YUK	**Yuzh-Kuril'sk**	**4.02**	**256**	PN		**Pn**	**22 02 59.7**	**+0.3**
YUK				*e*S		**Sn**	**22 03 47.5**	**+2.3**
YUK				pmax	pmax			
	comp=E,280nm,0.4s							
YUK				pmax	pmax			
	comp=Z,490nm,0.4s							
YUK				pmax	pmax			
	comp=N,440nm,0.6s							
YUK				pmax	pmax			
	comp=N,1μm,0.4s							
YUK				pmax	pmax			
	comp=E,1μm,0.4s							
YUK				pmax	pmax			
	comp=Z,2μm,0.4s							
YUK				smax				
	comp=N,3μm,0.7s							

YUK smax
comp=E,2µm,0.7s
YUK smax
comp=N,4µm,1.0s
YUK smax
comp=E,4µm,1.0s
YUK Yuzh-Kuril'sk 4.02 256 *e*P Pn **22 02 59.7 +0.3**
YUK AMB AMB 22 03 07.4
comp=E,440nm,0.6s
YUK AMB AMB 22 03 07.4
comp=E,280nm,0.4s
YUK AMB AMB 22 03 07.4
comp=E,490nm,0.4s
YUK AMB AMB 22 03 07.5
comp=E,1µm,0.4s
YUK AMB AMB 22 03 07.5
comp=E,1µm,0.4s
YUK AMB AMB 22 03 07.5
comp=E,2µm,0.4s
YUK *e*S Sn **22 03 47.5 +2.3**
YUK A 22 04 03.0
comp=E,3µm,0.7s
YUK A 22 04 03.0
comp=E,2µm,0.7s
YUK A 22 04 03.0
comp=E,4µm,1.0s
YUK A 22 04 03.0
comp=E,4µm,1.0s
NEM2 Nemuro 2 4.35 248 P Pn **22 03 03.2 -0.7**
NEM2 *e*S Sn **22 03 50.9 -2.4**
JRA Rausu 4.56 257 P Pn **22 03 08.1 +1.3**
JRA *e*S Sn **22 04 00.5 +2.0**
JNK Nakash 4.95 254 P Pn **22 03 12.7 +0.6**
JNK *e*S Sn **22 04 07.6 -0.5**
JAK Akkeshi 5.20 248 P Pn **22 03 14.9 -0.7**
JAK *e*S Sn **22 04 11.9 -2.3**
JTKR Abashiri--Toko 5.39 260 P Pn **22 03 19.8 +1.6**
JAR Ashorobuto 5.70 254 P Pn **22 03 23.4 +1.0**
JAR *e*S Sn **22 04 26.6 +0.1**
JMP Maruseppu 5.77 262 P Pn **22 03 25.1 +1.8**
JOB Onbets 5.81 250 P Pn **22 03 23.9 0.0**
JOB *e*S Sn **22 04 27.9 -1.4**
YSS Yuzh-Sakhalins 6.21 290 *e*P Pn **22 03 30.0 +0.6**
YSS *e*SP 22 03 46.0
YSS *e*S Sn **22 04 35.3 -3.7**
YSS A 22 04 42.8
comp=E,50nm,1.0s
YSS *e*LQ 22 05 18.0
YSS AMS AMS 22 05 50.0
comp=E,900nm,16.0s
YSS AMS AMS 22 05 50.0
comp=E,1µm,16.0s
JKK2 Kamakawa 2 6.23 261 P Pn **22 03 31.6 +1.9**
JCH Churui 6.25 249 P Pn **22 03 29.6 -0.4**
JCH *e*S Sn **22 04 37.9 -2.2**
ASAJ Asahikawa 6.28 264 P Pn **22 03 32.6 +2.3**
comp=E,7.1nm,0.3s,baz=317,slow=21,SNR=51
ASAJ S Sn **22 04 46.0 +5.3**
baz=75,slow=16,SNR=1.8
ASAJ LR LR 22 06 08.2
comp=E,677nm,18.5s,baz=354,slow=40
ASAJ Asahikawa 6.28 264 P Pn **22 03 32.5 +2.2**
ASAJ Asahikawa 6.28 264 PN Pn **22 03 32.7 +2.4**
ASAJ S Sn **22 04 46.1 +5.3**
ASAJ pmax pmax
comp=E,7.0nm,0.3s
ASAJ MLR MLR
comp=E,677nm,18.5s
SKR Severo-Kuril's 6.44 29 *e*P Pn **22 03 30.0 -2.5**
SKR AMB AMB 22 03 38.8
comp=E,80nm,0.5s
SKR AMB AMB 22 03 38.8
comp=E,90nm,0.5s
SKR *e*S Sn **22 04 39.5 -5.2**
SKR A 22 04 59.3
comp=E,180nm,1.0s
SKR A 22 04 59.3
comp=E,110nm,0.7s
SKR AMS AMS 22 06 08.0
comp=E,2µm,14.0s
SKR AMS AMS 22 06 08.0
comp=E,3µm,14.0s
JFR Furan 6.55 256 P Pn **22 03 36.3 +2.2**
JEM Erimo 6.67 245 P Pn **22 03 36.9 +1.2**
ERM Erimo 6.67 245 *e*PN Pn **22 03 37.6 +1.9**
ERM pmax pmax
comp=E,431nm,0.6s
ERM Erimo 6.67 245 *e*Pn Pn **22 03 37.5 +1.8**
comp=E,431nm,0.6s
ERM *e*Sn Sn **22 05 09.0 +19**
JAB Ashibetsu 6.69 259 P Pn **22 03 38.8 +2.7**
JNBK Urakawa-nobuka 6.80 248 P Pn **22 03 36.7 -0.9**
JNBK *e*S Sn **22 04 50.5 -3.2**
JBT2 Biratori 2 6.85 253 P Pn **22 03 38.3 +0.1**
UGL Uglegorsk 7.42 305 *e*P Pn **22 03 46.0 0.0**
UGL AMS AMS 22 06 41.0
comp=E,2µm,15.0s
JEW Eniwo 7.45 256 P Pn **22 03 48.1 +1.7**
JNB Noboribetsu 7.87 254 P Pn **22 03 53.0 +0.8**
JNB *e*S Sn **22 05 18.1 -1.8**
JKB Kayabe 8.12 250 P Pn **22 03 55.1 -0.5**
JKB *e*S Sn **22 05 20.9 -5.2**
JYM2 Yakumo 2 8.46 253 P Pn **22 04 00.1 -0.3**
JSH Shimam 8.48 257 P Pn **22 04 02.5 +1.9**
JANG Nango 8.61 240 P Pn **22 03 59.7 -2.7**
JANG *e*S Sn **22 05 29.3 -8.9**
JTM Tenmabayashi 8.65 243 P Pn **22 04 02.0 -0.9**
JTM *e*S Sn **22 05 32.4 -6.8**
JTH Tanohata 8.67 237 P Pn **22 04 00.4 -2.8**
JTH *e*S Sn **22 05 30.1 -10**
JSR Shiriuchi 8.69 249 P Pn **22 04 03.0 -0.5**
JSR *e*S Sn **22 05 34.8 -5.4**
PEA0B Petropavlovsk- 9.02 25 *e*Pn Pn **22 04 07.6 -0.3**
PETK Petropavlovsk- 9.02 25 P Pn **22 04 07.2 -0.8**
comp=E,0.5nm,0.3s,baz=180,slow=12,SNR=11
JOSM Okushiri--Mats 9.09 255 P Pn **22 04 08.9 0.0**
PET Petropavlovsk 9.26 29⇑*i*PN Pn **22 04 13.7 +2.5**
OFUJ Ofunato 9.35 233 P Pn **22 04 10.6 -1.9**
OFUJ *e*S Sn **22 05 48.6 -7.8**
JRG Rokugo 9.75 238 P Pn **22 04 16.2 -1.7**
JRG *e*S Sn **22 05 57.9 -8.1**
JIO Ouri 9.97 231 P Pn **22 04 18.6 -2.4**
JIO *e*S Sn **22 06 02.0 -9.5**
JFK Kawauchi 11.01 229 P Pn **22 04 32.8 -2.5**
MJAR Matsushiro Arr 13.08 234 P Pn **22 05 02.4 -1.1**
comp=E,0.6nm,0.3s,baz=26,slow=15,SNR=11
MJAR Matsushiro Arr 13.08 234 PN Pn **22 05 02.4 -1.1**
MJAR pmax pmax
comp=E,1.0nm,0.3s
KLR Kul'dur 13.89 294 *e*P Pn **22 05 16.0 +1.5**
KLR MLR MLR
comp=E,500nm,13.5s
KLR MLR MLR
comp=E,2µm,13.5s
MDJ Mudanjiang 15.38 276 P Pn **22 05 36.7 +2.2**
MDJ AMB AMB
comp=E,16nm,0.9s
MDJ AMB AMB
comp=E,140nm,7.2s
MDJ Mudanjiang 15.38 276 *e*P Pn **22 05 37.3 +2.8**
comp=E,18nm,1.1s
ZEA Zeya 17.77 308 *e*P Pn **22 06 03.0 -1.6**
ZEA AMB AMB 22 06 04.7
comp=E,28nm,1.2s
KSRS Korea Array 19.11 255 P Pn **22 06 20.4 -0.5**
comp=E,0.4nm,0.3s,baz=57,slow=11,SNR=13
KSRS LR LR 22 13 43.2
comp=E,140nm,18.2s,baz=40,slow=37
YAK Yakutsk 21.06 331 *e*P P **22 06 39.1 -1.7**
YAK pmax pmax
comp=E,21nm,0.9s,mb4.5
YAK Yakutsk 21.06 331 *e*P P **22 06 39.1 -1.7**
comp=E,25nm,0.7s,mb4.7
HIA Hailar 21.73 292⇓*i*P P **22 06 45.4 -2.8**
BILL Bilibino 24.26 14 *e*P P **22 07 13.1 -0.4**
BILL pmax pmax
comp=E,9.0nm,1.3s,mb4.0
BILL MLR MLR
comp=E,300nm,16.0s,MS3.9
ULN Ulaanbaatar 30.25 291 *e*P P **22 08 08.4 +1.0**
ULN pmax pmax
comp=E,4.0nm,1.1s,mb4.1
ULN Ulaanbaatar 30.25 291 *e*P P **22 08 08.4 +1.0**
comp=E,4.4nm,1.1s,mb4.1

SONM Songino Array 30.70 291 P P **22 08 11.5 +0.2**
comp=E,1.8nm,0.9s,mb3.9,baz=74,slow=7.0,SNR=7.7
SONM PcP PcP 22 11 08.8 +0.4
comp=E,0.4nm,0.6s,baz=137,slow=1.8,SNR=2.9
SONM LR LR 22 20 27.0
comp=E,158nm,18.3s,MS3.7,baz=12,slow=36
SONM Songino Array 30.70 291 P P **22 08 11.5 +0.2**
SONM 22 11 08.8
SONM pmax pmax
comp=E,2.0nm,0.9s
SONM MLR MLR
comp=E,158nm,18.3s
SONM Songino Array 30.70 291 P P **22 08 11.5 +0.2**
SONM PcP PcP 22 11 08.8 +0.4
SONM LR LR 22 20 27.0
WHN Wuhan 32.29 256 P P **22 08 25.5 0.0**
LZH Lanzhou 36.67 273 *e*P P **22 09 04.5 +1.1**
LZH AMB AMB
comp=E,31nm,1.2s,mb5.0
LZH AMB AMB
comp=E,210nm,5.5s
GTA Gaotai 37.97 280 *e*P P **22 09 14.8 +0.4**
GTA AP pP 22 09 19.2 -5.8
GTA AMB AMB
comp=E,12nm,1.1s,mb4.5
HVS Khovu-Aksy 38.03 300⇑*i*P P **22 09 13.4 -1.3**
HVS pmax pmax
comp=E,12nm,1.3s,mb4.5
COLA College 38.20 37⇓*i*P P **22 09 16.8 +0.8**
CD2 Chengdu 39.47 266 P P **22 09 27.2 +0.2**
CD2 AMB AMB
comp=E,30nm,0.8s,mb5.1
ZALV Zalesovo Beam 42.53 307 P P **22 09 50.9 -1.0**
comp=E,1.0nm,0.6s,mb3.7,baz=84,slow=7.6,SNR=5.2
ZALV PcP PcP 22 11 44.2 +0.4
comp=E,2.0nm,0.6s,baz=77,slow=3.2,SNR=10
ZALV Zalesovo Beam 42.53 307 P P **22 09 50.9 -1.0**
ZALV 22 11 44.3
ZALV pmax pmax
comp=E,1.0nm,0.6s,mb3.7
ZALV pmax pmax
comp=E,2.0nm,0.6s,mb4.0
ZALV Zalesovo Beam 42.53 307 P P **22 09 50.9 -1.0**
ZALV PcP PcP 22 11 44.2 +0.4
MK31 Makanchi Array 46.56 298 *e*P P **22 10 24.1 0.0**
MK31 *e* 22 11 58.4
MKAR Makanchi Array 46.56 298 P P **22 10 22.9 -1.2**
comp=E,3.3nm,0.7s,mb4.4,baz=74,slow=7.0,SNR=48
MKAR PcP PcP 22 11 58.2 +0.4
comp=E,1.2nm,0.5s,baz=48,slow=2.1,SNR=8.5
MKAR LR LR 22 30 56.5
comp=E,208nm,21.9s,MS4.0,baz=235,slow=37
MKAR Makanchi Array 46.56 298 *i*P P **22 10 23.7 -0.4**
MKAR pmax pmax
comp=E,3.0nm,0.7s
MKAR Makanchi Array 46.56 298 P P **22 10 22.9 -1.2**
MKAR PcP PcP 22 11 58.2 +0.4
MKAR LR LR 22 30 56.5
KURK Kurchatov 47.20 304 P P **22 10 28.4 -0.7**
comp=E,4.2nm,0.7s,mb4.5,baz=76,slow=8.0,SNR=3.9
KURK Kurchatov 47.20 304 P P **22 10 28.4 -0.7**
KURK pmax pmax
comp=E,4.0nm,0.7s,mb4.5
KURK Kurchatov 47.20 304 P P **22 10 28.4 -0.7**
LSA Lhasa 49.08 273 P P **22 10 46.0 +2.1**
LSA Lhasa 49.08 273 *e*P P **22 10 45.9 +2.0**
LSA pmax pmax
comp=E,7.0nm,0.8s,mb4.7
LSA Lhasa 49.08 273 *e*P P **22 10 45.9 +2.0**
comp=E,6.8nm,0.8s,mb4.7
CHTO Chiang Mai 50.49 256 *e*P P **22 10 56.1 +1.4**
CMAR Chiang Mai Arr 50.74 256 P P **22 10 57.8 +1.2**
comp=E,0.6nm,0.4s,mb3.9,baz=40,slow=8.9,SNR=6.0
CMAR PcP PcP 22 12 14.2 +0.8
comp=E,0.7nm,0.5s,baz=19,slow=1.4,SNR=4.7
CMAR Chiang Mai Arr 50.74 256 P P **22 10 57.8 +1.2**
CMAR 22 12 14.2
CMAR pmax pmax
comp=E,1.0nm,0.4s
SHL Shillong 51.05 268 *e*P P **22 11 00.0 +1.2**
TAPN Taplejung 52.91 273 *e*P P **22 11 13.7 +1.0**
comp=E,27nm,0.9s,mb5.2
YKA Yellowknife Ar 52.99 35 P P **22 11 12.9 +0.2**
comp=E,0.7nm,0.7s,mb3.7,baz=297,slow=6.9,SNR=3.1
YKA Yellowknife Ar 52.99 35 P P **22 11 12.9 +0.1**
YKA pmax pmax
comp=E,1.0nm,0.7s
AAK Ala-Archa 53.41 297 *e*P P **22 11 16.6 +0.5**
AAK pmax pmax
comp=E,4.0nm,0.9s,mb4.3
AAK Ala-Archa 53.41 297 *e*P P **22 11 16.6 +0.5**
comp=E,4.5nm,0.9s,mb4.4
ODAN Odare 53.43 273 *e*P P **22 11 17.3 +0.8**
JIRN Jiri 53.80 274 *e*P P **22 11 20.3 +1.1**
comp=E,25nm,0.7s,mb5.3
GUN Gumba 53.86 275 *e*P P **22 11 20.4 +0.7**
comp=E,44nm,1.0s,mb5.3
RAMN Ramite 53.94 274 *e*P P **22 11 20.7 +0.5**
comp=E,31nm,0.6s,mb5.4
KKN Kakani 54.36 275 *e*P P **22 11 24.5 +1.2**
comp=E,29nm,0.8s,mb5.2
PKI Pulchoki 54.40 275 *e*P P **22 11 24.2 +0.6**
comp=E,13nm,0.8s,mb5.0
PKI Pulchoki 54.40 275 *e*P P **22 11 24.2 +0.6**
PKI pmax pmax
comp=E,13nm,0.8s,mb4.9
DMN Daman 54.59 275 *e*P P **22 11 26.0 +1.0**
comp=E,26nm,0.8s,mb5.3
GKN Gorkha 54.68 276 *e*P P **22 11 26.3 +0.6**
comp=E,23nm,0.7s,mb5.3
DANN Dangsing 55.09 277 *e*P P **22 11 29.7 +1.1**
comp=E,22nm,0.5s,mb5.4
ARU Arti 55.34 318*c i*P P **22 11 27.8 -2.2**
ARU *e*S S **22 19 06.0 -5.2**
ARU *e*SS SS 22 22 49.5 -5.8
ARU pmax pmax
comp=E,3.0nm,0.7s,mb4.4
KOLN Koldanda 55.55 276 *e*P P **22 11 32.8 +0.9**
comp=E,24nm,1.0s,mb5.2
KEV Kevo 58.44 340 *e*p P **22 11 49.8 -1.9**
comp=E,1.0nm,0.4s,mb4.2
KEV Kevo 58.44 340 *e*P P **22 11 49.8 -1.9**
KEV pmax pmax
comp=E,1.0nm,0.4s,mb4.2
AKTK Aktyubinsk 58.85 312 P P **22 11 52.7 -2.2**
AKTO Aktyubinsk 58.85 312 P P **22 11 52.7 -2.2**
comp=E,1.3nm,0.6s,mb4.2,baz=69,slow=9.4,SNR=5.8
AKTO Aktyubinsk 58.85 312 P P **22 11 52.7 -2.2**
AKTO pmax pmax
comp=E,1.0nm,0.6s,mb4.0
ARCES ARCESS Array B 58.96 341 P P **22 11 53.6 -1.7**
comp=E,3.1nm,0.9s,mb4.4,baz=38,slow=6.6,SNR=7.4
ARCES ARCESS Array B 58.96 341 P P **22 11 53.6 -1.7**
ARCES pmax pmax
comp=E,3.0nm,0.9s
KBL Kabul 61.47 291 *e*P P **22 12 12.7 -0.4**
KBL pmax pmax
comp=E,20nm,1.0s,mb5.2
KBL Kabul 61.47 291 *e*P P **22 12 12.7 -0.4**
comp=E,20nm,1.0s,mb5.2
JOF Joensuu 62.21 333 *e*p P **22 12 15.3 -2.3**
comp=E,1.6nm,0.4s,mb4.5
JOF Joensuu 62.21 333 *e*P P **22 12 15.3 -2.3**
JOF pmax pmax
comp=E,2.0nm,0.4s,mb4.6
HYB Hyderabad 65.74 271 *i*P P **22 12 41.0 -0.5**
HYB Hyderabad 65.74 271 *e*P P **22 12 41.0 -0.5**
NB2 NORSAR Subarra 69.34 340 P P **22 13 02.6 -0.9**
comp=E,7.2nm,0.5s,mb4.9,baz=29,slow=6.5
NOA NORSAR Array B 69.34 340 P P **22 13 02.6 -0.9**
comp=E,6.7nm,0.5s,mb4.8,baz=28,slow=6.5,SNR=41
NOA NORSAR Array B 69.34 340 P P **22 13 02.6 -0.9**
NOA pmax pmax
comp=E,7.0nm,0.5s
ASAR Alice Springs 70.27 197 P P **22 13 11.7 +2.1**
comp=E,1.4nm,0.7s,mb4.0,baz=11,slow=5.3,SNR=16
ASAR pP pP 22 13 26.2 +5.3
comp=E,2.1nm,0.7s,baz=14,slow=6.0,SNR=9.3
ASAR Alice Springs 70.27 197 P P **22 13 11.7 +2.1**
ASAR *PP pP 22 13 26.3 +5.3
ASAR pmax pmax
comp=E,1.0nm,0.7s
KIV Kislovodsk 71.00 314⇑*e*P P **22 13 13.7 -0.3**
KIV pmax pmax
comp=E,14nm,0.6s,mb5.1
KIV Kislovodsk 71.00 314 *e*P P **22 13 14.9 +1.0**

comp=E,13nm,0.7s,mb5.0
AKASG Malin Array Be 72.17 326 P P **22 13 19.5 -1.4**
comp=E,5.4nm,0.4s,mb4.8,baz=37,slow=6.2,SNR=16
AKASG Malin Array Be 72.17 326 *i*P P **22 13 19.7 -1.2**
AKASG pmax pmax
comp=E,5.0nm,0.4s
AKASG Malin Array Be 72.17 326 P P **22 13 19.5 -1.4**
SCHQ Schefferville 75.30 22 P P **22 13 38.9 -0.3**
comp=E,2.7nm,0.7s,mb4.3,baz=315,slow=16,SNR=2.8
KWP Kalwaria 75.54 328⇓*i*P P **22 13 40.8 +0.1**
KWP Kalwaria 75.54 328⇓P P **22 13 40.8 +0.2**
OJC Ojcow 76.11 330 *e*P P **22 13 43.6 -0.3**
BURAR Bucovina Array 76.22 326⇑*i*P P **22 13 44.0 -0.6**
BURAR Bucovina Array 76.22 326⇑P P **22 13 44.0 -0.6**
STHS Stebnicka Huta 76.26 329 *e*P P **22 13 45.3 +0.6**
STHS pmax pmax
comp=E,9.0nm,0.7s,mb4.8
STHS Stebnicka Huta 76.26 329 *e*P P **22 13 45.3 +0.6**
comp=E,8.7nm,0.7s,mb4.8
KOLS Kolonicke sedl 76.28 328 *i*P P **22 13 44.5 -0.4**
KOLS pmax pmax
comp=E,10.0nm,1.0s,mb4.7
KOLS Kolonicke sedl 76.28 328 *i*P P **22 13 44.5 -0.4**
comp=E,9.6nm,1.0s,mb4.7
NIE Niedzica 76.59 330 *e*P P **22 13 47.0 +0.4**
CRVS Cervenica-Dubn 76.61 329 *e*P P **22 13 46.1 -0.6**
CRVS pmax pmax
comp=E,5.0nm,0.7s,mb4.5
CRVS Cervenica-Dubn 76.61 329 *e*P P **22 13 46.1 -0.6**
comp=E,4.5nm,0.7s,mb4.5
TLCR 76.66 322⇓*i*P P **22 13 46.7 -0.4**
TLCR 76.66 322⇓P P **22 13 46.7 -0.4**
TRPA Tarpa 76.84 328⇑*i*P P **22 13 48.1 0.0**
OKC Ostrava-Krasne 77.00 331 *e*P P **22 13 46.9 -2.0**
UPC Upice 77.14 333 *e*P P **22 13 49.6 -0.1**
DPC Dobruska-Polom 77.18 332 *e*P P **22 13 49.8 -0.1**
CLL Collm 77.39 335⇑*i*P P **22 13 50.4 -0.7**
CLL pmax pmax
comp=E,17nm,1.1s,mb4.9
CLL Collm 77.39 335⇑*i*P P **22 13 50.4 -0.7**
comp=E,17nm,1.1s,mb4.9
HARR Harsova 77.44 322⇓*i*P P **22 13 47.8 -3.7**
HARR Harsova 77.44 322⇓P P **22 13 47.9 -3.6**
BRG Berggiesshubel 77.49 334 *e*P P **22 13 50.7 -0.9**
BRG pmax pmax
comp=E,6.0nm,1.5s,mb4.3
BRG Berggiesshubel 77.49 334 *e*P P **22 13 50.7 -0.9**
comp=E,9.2nm,1.5s,mb4.5
PVCC Panska Ves 77.59 333 *e*P P **22 13 52.0 -0.2**
MLR Muntele Rosu 77.64 324⇓*i*P P **22 13 53.6 +1.0**
MLR Muntele Rosu 77.64 324⇓P P **22 13 53.6 +1.0**
DRGR 77.88 327⇑*i*P P **22 13 53.7 -0.2**
DRGR 77.88 327⇑P P **22 13 53.6 -0.2**
VYHS Vyhne 77.90 330 *e*P P **22 13 54.0 0.0**
VYHS pmax pmax
comp=E,4.0nm,0.8s,mb4.4
VYHS Vyhne 77.90 330 *e*P P **22 13 54.0 0.0**
comp=E,3.6nm,0.8s,mb4.3
KOLL Kolacno 77.98 330 *e*P P **22 13 54.5 +0.1**
PSZ Piszkesteto 78.00 329⇓*i*P P **22 13 54.4 -0.2**
PSZ Piszkesteto 78.00 329⇓P P **22 13 54.4 -0.2**
VOIR 78.05 325⇓*i*P P **22 13 55.4 +0.5**
PRU Pruhonice 78.07 333 *e*P P **22 13 54.7 -0.2**
UMR Umm Al-Rimmam 78.35 300 *e*P P **22 13 56.5 -0.3**
baz=300
UMR AMb AMB 22 13 57.4
comp=E,29nm,0.5s,mb5.5,baz=300
TREC Trest 78.36 332 *e*P P **22 13 56.5 0.0**
SMOL Smolnice 78.38 331 *e*P P **22 13 57.0 +0.4**
MIB Mutribah 78.40 301 *e*P P **22 13 56.9 -0.1**
baz=300
MIB AMb AMB 22 13 58.0
comp=E,26nm,0.7s,mb5.3,baz=300
NKC Novy Kostel 78.51 334 *e*P P **22 13 57.0 -0.3**
BRTR Keskin Array B 78.67 316 P P **22 13 58.2 -0.2**
comp=E,2.6nm,0.9s,mb4.2,baz=52,slow=4.8,SNR=7.0
BRTR Keskin Array B 78.67 316⇑*e*P P **22 13 58.9 +0.5**
ZST Bratislava 78.76 331 *e*P P **22 13 58.6 -0.1**
ZST pmax pmax
comp=E,6.0nm,1.2s,mb4.4
ZST Bratislava 78.76 331 *e*P P **22 13 58.6 -0.1**
comp=E,5.9nm,1.2s,mb4.4
NAY Al-Naaiem 78.85 300 *e*P P **22 13 59.4 -0.2**
baz=300
NAY AMb AMB 22 14 00.1
comp=E,10.0nm,0.8s,mb4.8,baz=300
RDF Al-Radifah 78.89 300 *e*P P **22 13 59.8 0.0**
baz=300
RDF AMb AMB 22 14 00.6
comp=E,25nm,0.5s,mb5.4,baz=300
GZR Gura Zlata 79.01 326⇑*i*P P **22 13 59.8 -0.3**
GZR Gura Zlata 79.01 326⇑P P **22 13 59.8 -0.4**
KHC Kasperske Hory 79.12 333⇑*e*P P **22 14 00.8 +0.1**
KHC Kasperske Hory 79.12 333 *e*P P **22 14 00.7 0.0**
BZS Buzias 79.28 327⇑*i*P P **22 14 01.0 -0.6**
BZS Buzias 79.28 327⇑P P **22 14 01.0 -0.6**
GERES GERESS Array B 79.33 333 P P **22 14 01.5 -0.3**
comp=E,1.7nm,0.5s,mb4.2,baz=31,slow=5.6,SNR=18
GERES GERESS Array B 79.33 333 P P **22 14 01.5 -0.4**
GERES pmax pmax
comp=E,2.0nm,0.5s
GRA1 Grafenberg Arr 79.36 335 *e*P P **22 14 02.1 +0.1**
comp=E,11nm,1.2s,mb4.7
GRF Grafenberg Arr 79.36 335 *e*P P **22 14 02.1 +0.1**
GRF pmax pmax
comp=E,11nm,1.2s,mb4.7
GRF Grafenberg Arr 79.36 335 *e*P P **22 14 02.1 +0.1**
GRF pmax pmax
comp=E,11nm,1.2s,mb4.7
GRF Grafenberg Arr 79.36 335 *e*P P **22 14 02.1 +0.1**
comp=E,11nm,1.2s,mb4.7
TXAR Lajitas Array 79.42 59 P P **22 14 03.3 +0.7**
comp=E,0.4nm,0.6s,mb3.6,baz=299,slow=4.3,SNR=6.7
TXAR pP pP 22 14 16.8 +2.6
comp=E,1.5nm,0.7s,baz=296,slow=4.4,SNR=11
CONA Conrad Observa 79.42 331⇑*i*P P **22 14 02.6 +0.3**
comp=E,13nm,1.6s,mb4.6
CSNA Conrad Observa 79.42 331⇑*i*P P **22 14 02.6 +0.3**
comp=E,11nm,1.5s,mb4.6
GIVF Givet 80.77 339 *e*P P **22 14 10.5 +0.9**
WATA Walderalm 81.34 334⇑*i*P P **22 14 12.8 +0.2**
comp=E,4.8nm,0.5s,mb4.7
WTTA Wattenberg 81.39 334⇑*i*P P **22 14 13.4 +0.5**
comp=E,4.4nm,0.5s,mb4.7
CDF Champ du Feu 81.65 337 *e*P P **22 14 14.0 -0.3**
FLN La Foliniere 83.28 342 *e*P P **22 14 22.5 -0.3**
LDF La Druitiere 83.36 341 *e*P P **22 14 22.8 -0.4**
LOR Lormes 83.63 338 *e*P P **22 14 24.3 -0.3**
comp=E,7.8nm,0.6s,mb4.8
LOR Lormes 83.63 338 *e*P P **22 14 24.3 -0.3**
LOR pmax pmax
comp=E,4.0nm,0.6s,mb4.7
LOR Lormes 83.63 338 *e*P P **22 14 24.3 -0.3**
comp=E,3.9nm,0.6s,mb4.7
CABF La Chapelle 83.63 337 *e*P P **22 14 25.6 +1.0**
GRR Gorron 83.72 342 *e*P P **22 14 24.6 -0.5**
SSF Saint Saulge 83.91 338 *e*P P **22 14 25.9 -0.1**
comp=E,5.9nm,0.8s,mb4.5
SSF Saint Saulge 83.91 338 *e*P P **22 14 25.9 -0.1**
SSF pmax pmax
comp=E,3.0nm,0.8s,mb4.5
SSF Saint Saulge 83.91 338 *e*P P **22 14 25.9 -0.1**
comp=E,3.0nm,0.8s,mb4.5
AVF Avril sur Loir 84.20 338 *e*P P **22 14 27.5 0.0**
comp=E,9.4nm,0.6s,mb4.8
AVF Avril sur Loir 84.20 338 *e*P P **22 14 27.5 0.0**
AVF pmax pmax
comp=E,5.0nm,0.6s,mb4.8
AVF Avril sur Loir 84.20 338 *e*P P **22 14 27.5 0.0**
comp=E,4.7nm,0.6s,mb4.8
SMF Signal de Mont 84.21 338 *e*P P **22 14 27.6 0.0**
comp=E,18nm,1.0s,mb4.9
SMF Signal de Mont 84.21 338 *e*P P **22 14 27.6 0.0**
SMF pmax pmax
comp=E,9.0nm,1.0s,mb4.8
SMF Signal de Mont 84.21 338 *e*P P **22 14 27.6 0.0**
comp=E,8.9nm,1.0s,mb4.8
SGMF Saint Gilles 84.21 343 *e*P P **22 14 27.1 -0.5**
ROSF Rostrenen 84.28 343 *e*P P **22 14 28.6 +0.7**
LPL La Plagne 84.44 336 *e*P P **22 14 29.3 +0.5**
LPG La Plagne 84.45 336 *e*P P **22 14 29.6 +0.8**
comp=E,7.9nm,0.8s,mb4.6
LPG La Plagne 84.45 336 *e*P P **22 14 29.6 +0.8**
LPG pmax pmax
comp=E,4.0nm,0.8s,mb4.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LPG	La Plagne	84.45	336	eP	P	22 14 29.6	+0.8
	comp=Z,4.0nm,0.8s,mb4.6						
BGF	Bois d'Agland	84.55	339	eP	P	22 14 29.3	0.0
TCF	Toulx Ste Croi	84.96	339	eP	P	22 14 31.7	+0.3
MBDF	Montbardon	85.15	335	eP	P	22 14 32.8	+0.4
	comp=Z,5.4nm,0.6s,mb4.5						
MBDF	Montbardon	85.15	335	eP	P	22 14 32.8	+0.4
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
MBDF	Montbardon	85.15	335	eP	P	22 14 32.8	+0.4
	comp=Z,2.7nm,0.6s,mb4.5						
ORIF	Oris-en-Rattie	85.23	336	eP	P	22 14 33.4	+0.6
	comp=Z,9.2nm,0.8s,mb4.7						
ORIF	Oris-en-Rattie	85.23	336	eP	P	22 14 33.4	+0.6
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
ORIF	Oris-en-Rattie	85.23	336	eP	P	22 14 33.4	+0.6
	comp=Z,4.6nm,0.8s,mb4.7						
MFF	Saint Martin d	85.24	341	eP	P	22 14 33.2	+0.4
VIVF	Saint-Julien-l	85.63	337	eP	P	22 14 35.2	+0.4
RJF	Les Rejaudoux	86.05	339	eP	P	22 14 37.1	+0.3
CAF	Calviac	86.27	339	eP	P	22 14 38.3	+0.4
	comp=Z,18nm,0.9s,mb5.0						
CAF	Calviac	86.27	339	eP	P	22 14 38.3	+0.4
CAF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
CAF	Calviac	86.27	339	eP	P	22 14 38.3	+0.4
	comp=Z,8.8nm,0.9s,mb5.0						
LFF	La Frestale	86.59	340	eP	P	22 14 39.7	+0.2
TORD	Torodi Ar. Bea	115.79	327	PKP	PKPdf	22 20 38.5	-0.6
	comp=Z,0.2nm,0.4s,baz=21,slow=2.1,SNR=8.4						
TORD				pPKP	pPKPdf	22 20 52.2	+1.1
	comp=Z,0.2nm,0.6s,baz=46,slow=2.2,SNR=1.5						
TORD	Torodi Ar. Bea	115.79	327	PKP	PKPdf	22 20 38.5	-0.6
TORD				pPKP	pPKPdf	22 20 52.2	+1.1
QSPA	South Pole Qui	134.87	180	PKP	PKPdf	22 21 15.4	+1.9
	comp=Z,1.7nm,1.0s,baz=287,slow=2.2						
QSPA				pPKP	pPKPdf	22 21 29.2	+3.6
	comp=Z,0.8nm,0.6s,baz=28,slow=1.9,SNR=2.1						
BDFB	Brasilia	146.40	35	PKPbc	PKPbc	22 21 37.7	+0.3
	comp=Z,0.7nm,0.5s,baz=36,slow=16,SNR=4.2						
BDFB	Brasilia	146.40	35	PKP2	PKPab	22 21 37.7	-0.6
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	149.31	97	PKPbc	PKPbc	22 21 44.2	-0.4
	comp=Z,1.6nm,1.0s,baz=217,slow=5.1,SNR=2.0						
PLCA	Paso Flores	149.31	97	PKHKP	PKPbc	22 21 44.2	-0.4
PLCA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PLCA	Paso Flores	149.31	97	PKPbc	PKPbc	22 21 44.2	-0.4
VNA2	Neumayer--Watz	152.11	195	ePKPdf	PKPbc	22 21 51.3	+1.0
VNA2				e		22 21 57.2	
VNA2				e		22 22 05.8	
VNA3	Neumayer Olymp	152.23	193	ePKPdf	PKPbc	22 21 51.0	+0.5
VNA3				e		22 21 56.0	
VNA3				e		22 22 03.0	
VNA3				e		22 22 05.6	
VNA1	Neumayer--Stat	152.50	195	ePKPdf	PKPab	22 22 06.3	+4.6

*JMA **01** 22:06:18.9±0.3,2221N×12250E,h103km,M3.7*
*NEIC **01** 22:06:27.6±13.0,2261N×12175E,h35km,MG3.7(JMA), Error ellipse: s-maj=170.0km s-min=22.8km az=142.0*
TAP 01 22:06:19.0,2217N×12220E,h22km,ML3.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.61	258	iP	Pb	22 06 30.6	-0.4
	baz=267						
LAY				S	Sb	22 06 38.7	-0.5
	baz=267						
CHKT	Chengkung	1.20	321	P	Pn	22 06 39.2	-1.3
	baz=321						
CHKT				S	Sn	22 06 54.6	-1.6
	baz=321						
TWG	Pinlang	1.22	302	ePn	Pn	22 06 40.5	-0.4
TWG				eSn	Sn	22 06 56.6	-0.1
TWG	Pinlang	1.22	302	P	Pn	22 06 40.8	0.0
	baz=313						
TWG				eS	Sn	22 06 57.2	+0.5
	baz=313						
ECL	Taimali	1.23	291	P	Pn	22 06 40.7	-0.1
	baz=275						
ECL				S	Sn	22 06 57.5	+0.8
	baz=275						
TSEB	Hengchuen, Pin	1.23	258	eP	Pn	22 06 42.1	+1.2
	baz=258						
TSEB				eS	Sn	22 06 59.8	+2.9
	baz=258						
TWK1	Hengchun	1.31	260	eP	Pn	22 06 42.1	+0.1
	baz=260						
HEN	Hengchun	1.36	263	eP	Pn	22 06 43.8	+1.1
	baz=263						
TWF1	Yuli	1.44	325	P	Pn	22 06 42.9	-0.9
	baz=325						
YULB	Yu-li	1.47	326	ePn	Pn	22 06 43.4	-0.9
YULB				eSn	Sn	22 07 01.6	-1.2
SCZT	Fangliau	1.47	278	eP	Pn	22 06 44.5	+0.3
	baz=278						
ELDTW	Lidau	1.49	313	P	Pn	22 06 43.8	-0.6
	baz=322						
ELDTW				S	Sn	22 07 03.1	-0.1
	baz=322						
EHY	Hungye	1.56	329	eP	Pn	22 06 45.0	-0.3
	baz=329						
EHY				eS	Sn	22 07 04.3	-0.5
	baz=329						
SSD	Sandimen	1.56	292	P	Pn	22 06 46.3	+0.9
	baz=292						
STYT	Tauyuan	1.66	307	eP	Pn	22 06 47.0	+0.3
	baz=307						
STYT				eS	Sn	22 07 07.3	-0.1
	baz=307						
TWP	Hsiaoliuchiu	1.71	276	eP	Pn	22 06 50.7	+3.2
	baz=276						
YUS	Yu-Shan	1.74	319	eP	Pn	22 06 48.8	+0.8
	baz=330						
YUS				eS	Sn	22 07 10.1	+0.6
	baz=330						
SGST	Jiashian	1.74	302	P	Pn	22 06 50.2	+2.2
	baz=302						
TWM1	Shoushan	1.76	292	eP	Pn	22 06 51.6	+3.4
	baz=292						
ESL	Shilin	1.78	337	eP	Pn	22 06 47.7	-0.8
	baz=348						
ESL				eS	Sn	22 07 09.6	-0.9
	baz=348						
WTP	Ta-pu	1.81	307	P	Pn	22 06 50.8	+1.9
	baz=315						
TPUB	Ta-pu	1.83	308	ePn	Pn	22 06 51.6	+2.5
TPUB				eSn	Sn	22 07 15.7	+4.0
CHN1	Nanshi	1.84	304	P	Pn	22 06 51.7	+2.4
	baz=305						
CHN1				eS	Sn	22 07 16.5	+4.6
	baz=305						
ALS	Alishan	1.85	316	P	Pn	22 06 50.7	+1.3
	baz=326						
HWA	Hwalien	1.88	343	eP	Pn	22 06 49.0	-0.8
	baz=344						
HWA				eS	Sn	22 07 12.7	-0.1
	baz=344						
CHN4	Tsaushan	1.89	309	eP	Pn	22 06 52.3	+2.3
	baz=318						
CHN4				eS	Sn	22 07 17.8	+4.7
	baz=318						
TWK	Hsinying	1.92	305	eP	Pn	22 06 52.7	+2.3
	baz=289						
TWK				eS	Sn	22 07 18.8	+5.0
	baz=289						
SSLB	Suanglung	1.98	325	ePn	Pn	22 06 54.1	+3.0
TWD	Chiawan	1.98	344	P	Pn	22 06 50.5	-0.7
	baz=344						
TWD				eS	Sn	22 07 14.0	-1.4
	baz=344						
CHN5	Tsauling	1.99	316	P	Pn	22 06 53.7	+2.3
	baz=327						
NACB	Ninganchiao	2.07	345	ePn	Pn	22 06 51.5	-0.9
NACB				eSn	Sn	22 07 16.2	-1.4
SMLT	Sun Moon Lake	2.08	325	eP	Pn	22 06 53.8	+1.2
	baz=335						
SMLT				eS	Sn	22 07 19.4	+1.5
	baz=335						
TYC	Yuchr	2.12	325	P	Pn	22 06 55.3	+2.2
	baz=333						
WGK	Gukeng	2.13	315	eS	Sn	22 07 24.5	+5.4
	baz=301						
WHF	Hehuan Shan	2.14	337	eP	Pn	22 06 53.7	+0.2
	baz=337						
WNT	Mingjian	2.20	321	eP	Pn	22 06 57.1	+2.9
	baz=322						
WNT				eS	Sn	22 07 25.6	+4.8
	baz=322						
ENA	Nanau	2.29	350	eP	Pn	22 06 55.0	-0.4
	baz=350						
ENA				eS	Sn	22 07 22.4	-0.5
	baz=350						
NNS	Nan Shan	2.38	342	eP	Pn	22 06 57.3	+0.5
	baz=342						
NNS				eS	Sn	22 07 24.9	-0.4
	baz=342						
HATJ	Hateruma jima	2.39	38	P	Pn	22 06 54.6	-2.3
HATJ				S	Sn	22 07 21.7	-3.8
YOJ	Yonaguni jima	2.40	18	P	Pn	22 06 55.8	-1.2
YOJ				eS	Sn	22 07 24.7	-1.1
TWC	Suao	2.45	353	P	Pn	22 06 57.8	+0.1
	baz=353						
TWC				eS	Sn	22 07 26.0	-0.9
	baz=353						
ENTT	Nioudou	2.53	347	eP	Pn	22 06 59.0	+0.2
	baz=347						
ENTT				eS	Sn	22 07 28.6	-0.2
	baz=347						
TWQ1	Liyutan	2.53	329	eP	Pn	22 07 01.4	+2.6
	baz=330						
TWQ1				eS	Sn	22 07 33.1	+4.1
	baz=330						
IRIF	Iriomote-Funau	2.58	33	P	Pn	22 06 57.5	-1.9
IRIF				eS	Sn	22 07 26.9	-3.2
TWE	Neicheng	2.58	349	eP	Pn	22 06 59.8	+0.2
	baz=350						
TWE				eS	Sn	22 07 29.8	-0.5
	baz=350						
YHNB	Yeheng	2.60	343	ePn	Pn	22 07 00.7	+0.9
NSK	Sanguang	2.61	343	eP	Pn	22 07 00.8	+1.0
	baz=344						
NSK				eS	Sn	22 07 30.9	0.0
	baz=344						
JKRS	Kuro-shima	2.65	39	P	Pn	22 06 58.4	-2.0
JKRS				S	Sn	22 07 27.6	-4.3
NSTT	Nanjuang	2.68	336	eP	Pn	22 07 02.2	+1.3
	baz=345						
NSTT				eS	Sn	22 07 33.8	+1.1
	baz=345						
PNG	Penghu	2.80	300	eP	Pn	22 07 04.3	+1.7
	baz=302						
JIJ	Ishigaki jima	2.82	39	P	Pn	22 07 00.3	-2.5
JIJ				S	Sn	22 07 31.1	-5.1
TATO	Taipei	2.87	347	ePn	Pn	22 07 05.0	+1.6
JTJ	Tarama	3.37	43	P	Pn	22 07 07.3	-3.0
JTJ				S	Sn	22 07 44.5	-5.2
JOGS	Gusukube	3.92	48	eS	Sn	22 07 58.6	-4.6

GUC 01 22:34:22.0±0.4,2344S×7086W,h26km±6km,MD3.7, ML2.5,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	Antofagasta	0.47	120	iP	Pb	22 34 31.2	-0.6
ANCH				iS	Sb	22 34 38.0	-0.5
ANCH				AML	AML	22 34 42.1	
	comp=N,659nm,0.4s						
CEN1	Los Morros	0.60	85	iP	Pb	22 34 31.4	-2.6
CEN1				iS	Sb	22 34 38.7	-3.4
CPN1	Cerro Paranal	1.25	161	iP	Pn	22 34 44.2	+0.5
CPN1				iS	Sn	22 35 01.0	+1.3
CPN1				AML	AML	22 35 05.7	
	comp=E,234nm,0.4s						
LVC	Limon Verde	1.97	66	iP	Pn	22 34 56.0	+2.3
LVC				iS	Sn	22 35 21.9	+4.4
LVC				AML	AML	22 35 24.3	
	comp=N,55nm,0.4s						

GUC 01 22:35:46.2±0.5,2093S×6890W,h39km±3km,MD3.6, ML3.5,2C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.56	259	⇑iP	Pn	22 36 04.2	+6.5
PB01				iS	Sn	22 36 18.0	+12
PB01				AML	AML	22 36 19.3	
	comp=N,3µm,0.2s						
MACH	Maria Elena	1.49	212	⇓iP	Pn	22 36 12.8	+2.3
MACH				iS	Sn	22 36 32.5	+3.8
LVC	Limon Verde	1.67	180	⇑iP	Pn	22 36 15.1	+2.0
LVC				iS	Sn	22 36 37.0	+3.8
LVC				AML	AML	22 36 40.2	
	comp=N,365nm,0.2s						
TOCH	Tocopilla	1.68	226	eP	Pn	22 36 14.6	+1.6
TOCH				iS	Sn	22 36 36.1	+2.8
TOCH				AML	AML	22 36 38.8	
	comp=N,987nm,0.1s						
PECH	Pedro de Valdi	1.81	203	⇓iP	Pn	22 36 16.7	+1.8
PECH				iS	Sn	22 36 40.1	+3.5
PECH				AML	AML	22 36 43.9	
	comp=N,329nm,0.2s						
CEN1	Los Morros	2.73	206	AML	AML	22 37 11.8	
	comp=N,92nm,0.5s						
ANCH	Antofagasta	3.08	207	AML	AML	22 37 08.8	
	comp=N,333nm,0.1s						
CPN1	Cerro Paranal	3.93	200	AML	AML	22 37 36.6	
	comp=E,78nm,0.6s						

*MOS **01** 22:45:06.8±1.8,7364N×879E,h10km,mb4.4/14,Error ellipse: s-maj=31.1km s-min=6.4km az=95.6*
*IDC **01** 22:45:06.5±0.6,7363N×805E,h0km,mb3.9/12, mb1 4.1/17,mb1mx4.0/26,mbtmp3.9/17,ML4.0/4,MS3.9/12, Ms1 3.9/12,ms1mx3.6/37,Error ellipse: s-maj=15.3km s-min=11.4km az=64.0*
*ISCJB **01** 22:45:06.1±0.4,7369N±004×87E±02,h10km,mb4.1/20, MS3.9/11,Error ellipse: s-maj=7.7km s-min=5.2km az=171.8*
*NEIC **01** 22:45:07.9±0.4,7367N×842E,h10km,mb4.5/6,Error ellipse: s-maj=8.6km s-min=5.6km az=85.0*
*HEL **01** 22:45:08.4±0.5,7380N×893E,h10km,mb4.5(NEIC), MD3.3(BER),ML2.9(BER)*
*NAO **01** 22:45:08.9±2.2,7369N×972E,ML3.1*
*BER **01** 22:45:10.4±4.0,7375N×909E,h12km±48km,MD2.7,ML2.9*
*CSEM **01** 22:45:11.3±0.1,7360N×930E,h30km,mb4.5/5,Error ellipse: s-maj=5.1km s-min=1.5km az=91.0*
*SZGRF **01** 22:45:15.2,7325N×997E,h33km,mb4.3,Greenland Sea*
ISC 01 22:45:08.0±0.4,7369N±004×86E±02,h10km,n107, σ1s27/92,mb4.1/20,MS3.9/11,2C,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	Bjornoya	2.97	69	eP	Pn	22 45 54.0	-1.1
BJO1				e		22 48 33.0	
BJO	Bjornoya	3.02	69	eP	Pn	22 45 54.0	-1.8
BJO				eT		22 48 33.0	
HSP	Hornsund	3.77	24	eP	Pn	22 46 05.1	-1.0
SPB4	Spitsbergen Ar	4.89	19	ePn	Pn	22 46 21.6	+0.2
SPB4	Spitsbergen Ar	4.89	19	ePn	Pn	22 46 21.6	+0.2
SPA0	Spitsbergen Ar	4.89	19	Pn	Pn	22 46 20.8	-0.6
	baz=199,slow=14						
SPA0	Spitsbergen Ar	4.89	19	eP	Pn	22 46 20.8	-0.6
SPITS	Spitsbergen Ar	4.89	19	Pn	Pn	22 46 21.5	+0.1
	baz=254,slow=14,SNR=194						
SPITS	Spitsbergen Ar	4.89	19	Pn	Pn	22 46 21.5	+0.1
TRO	Tromso	5.20	136	eP	Pn	22 46 25.3	-0.4
TRO				eS	Sn	22 47 18.0	-7.7
TRO				e		22 51 07.3	
TRO	Tromso	5.20	136	eP	Pn	22 46 25.3	-0.4
TRO				eS	Sn	22 47 18.0	-7.7
KBS	Kingsbay	5.33	7	Pn	Pn	22 46 26.2	-1.2
KBS	Kingsbay	5.33	7	eP	Pn	22 46 25.9	-1.5
KBS				e		22 46 26.2	
KBS	Kingsbay	5.33	7	eP	Pn	22 46 27.6	+0.2
KBS				pmax	pmax		
	comp=Z,21nm,0.4s						
KBS	Kingsbay	5.33	7	ePn	Pn	22 46 27.6	+0.2
	comp=Z,21nm,0.4s						
KBS	Kingsbay	5.33	7	ePn	Pn	22 46 27.6	+0.2
	comp=Z,21nm,0.4s						
LOF	Lofoten	5.81	162	eP	Pn	22 46 35.5	+1.5
LOF				AML	AML	22 47 35.1	
	comp=Z,30nm,0.5s						
LOF				e		22 51 41.7	
JMIC	Jan Mayen	5.87	251	LR	LR	22 48 04.5	
	comp=Z,500nm,19.6s,baz=294,slow=31						
KIF	Kilpisjarvi	6.10	134	eP	Pn	22 46 37.8	-0.2
STEI	Steigen	6.18	156	eT		22 51 48.1	
KTK1	Kautokeino	6.61	128	eP	Pn	22 46 46.0	+1.0
KTK1				eS	Sn	22 47 56.5	-3.9
KTK1	Kautokeino	6.61	128	eP	Pn	22 46 46.0	+1.0
	SNR=47						
ARA0	ARCESS Array S	6.75	120	Pn	Pn	22 46 46.2	-0.7
	baz=310,slow=12						
ARA0				Sn	Sn	22 47 56.2	-7.5
	baz=310,slow=22						
ARA0	ARCESS Array S	6.75	120	eP	Pn	22 46 46.2	-0.7
ARA0				e		22 47 56.2	
ARCES	ARCESS Array B	6.75	120	Pn	Pn	22 46 46.5	-0.5
	comp=Z,3.4nm,0.3s,baz=322,slow=9.3,SNR=76						
ARCES				Sn	Sn	22 47 57.4	-6.3
	comp=Z,2.8nm,0.3s,baz=307,slow=19,SNR=6.9						
ARCES	ARCESS Array B	6.75	120	P	Pn	22 46 46.5	-0.4
ARCES						22 47 57.4	
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ARCES				smax			
	comp=N,3.0nm,0.3s						
ARE0	ARCESS Array S	6.75	120	ePn	Pn	22 46 48.4	+1.4
KEV	Kevo	6.97	115	ep	Pn	22 46 49.7	-0.3
	comp=N,5.5nm,0.4s						
KEV	Kevo	6.97	115	eP	Pn	22 46 49.8	-0.2
KEV	Kevo	6.97	115	ePn	Pn	22 46 52.0	+2.0
HEF	Hetta	7.19	130	eP	Pn	22 46 53.6	+0.7
NSS	Namsos	9.28	171	eP	Pn	22 47 19.7	-1.8
APA0	Apatity Array	10.04	115	Pn	Pn	22 47 29.9	-2.1
	baz=322,slow=14						
APA0	Apatity Array	10.04	115	eP	Pn	22 47 29.9	-2.1
APA	Apatity	10.18	114	⇑iP	Pn	22 47 33.5	-0.4
APA				pmax	pmax		
	comp=Z,34nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,10.0s						
APA				MLR	MLR		
	comp=Z,1µm,9.0s						
NB2	NORSAR Subarra	12.74	174	Pn	Pn	22 48 08.3	-0.5
	baz=356,slow=16						
NB2	NORSAR Subarra	12.74	174	eP	Pn	22 48 08.3	-0.5
NOA	NORSAR Array B	12.74	174	Pn	Pn	22 48 07.8	-1.1
	comp=Z,0.2nm,0.3s,baz=341,slow=12,SNR=3.5						
KAF	Kangasniemi	13.29	142	ep	Pn	22 48 15.4	-1.0
	comp=Z,1.8nm,0.4s						
KAF	Kangasniemi	13.29	142	eP	Pn	22 48 15.4	-1.0
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	Joensuu	13.54	131	ep	Pn	22 48 17.1	-2.6
	comp=Z,2.1nm,0.4s						
JOF	Joensuu	13.54	131	eP	Pn	22 48 17.1	-2.6
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	Hagfors	13.75	169	Pn	Pn	22 48 22.0	-0.6
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=5.1						
HFS	Hagfors	13.75	169	Pn	Pn	22 48 22.0	-0.6
FIA0	FINESS Array S	13.88	143	Pn	Pn	22 48 23.1	-1.3
	baz=340,slow=16						
FIA0	FINESS Array S	13.88	143	eP	Pn	22 48 23.1	-1.3
EKA	Eskdalemuir Ar	19.04	201	P	Pn	22 49 28.9	-1.6
	comp=Z,0.2nm,0.3s,baz=14,slow=10,SNR=5.7						
SFJD	Kangerlussuaq	20.14	281	LR	LR	22 56 03.3	
	comp=Z,380nm,21.6s,MS3.7,baz=54,slow=33						
MOS	Moscow	21.43	131	eP	P	22 49 55.1	-0.6
MOS				e		22 50 24.8	
MOS				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.7						
CLL	Collm	22.54	173	iP	P	22 50 12.4	+4.8
CLL				i		22 50 20.1	
CLL				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.4						
CLL	Collm	22.54	173	iP	P	22 50 12.4	+4.8
	comp=Z,23nm,1.5s,mb4.4						
CLL				i (sP)	sP	22 50 20.1	+8.4
CLL				ix	x	22 50 26.0	
SOKR	Solikamsk	22.84	102	c iP	P	22 50 16.1	+5.4
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
BRG	Berggiesshubel	23.01	171	iP	sP	22 50 25.5	+8.8
BRG				pmax	pmax		
	comp=Z,14nm,2.0s,mb4.0						
BRG	Berggiesshubel	23.01	171	iP	sP	22 50 25.5	+8.7
	comp=Z,24nm,2.0s						
MOX	Moxa	23.16	175	eP	P	22 50 15.3	+1.1
	comp=Z,21nm,1.6s,mb4.3						
MOX	Moxa	23.16	175	eP	P	22 50 15.3	+1.1
MOX				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.3						
UPC	Upice	23.48	168	eP	sP	22 50 33.3	+12
NKC	Novy Kostel	23.59	174	eP	P	22 50 18.0	-0.7
DPC	Dobruska-Polom	23.65	168	eP	P	22 50 19.6	+0.4
PRU	Pruhonice	23.92	171	eP	P	22 50 23.3	+1.7
GRA1	Grafenberg Arr	24.11	176	eP	P	22 50 23.3	0.0
	comp=Z,14nm,1.5s,mb4.2						
GRF	Grafenberg Arr	24.11	176	eP	P	22 50 23.3	0.0
GRF				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.2						
GRF	Grafenberg Arr	24.11	176	eP	P	22 50 23.3	0.0
GRF				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.2						
GRF	Grafenberg Arr	24.11	176	eP	P	22 50 23.3	0.0
	comp=Z,14nm,1.5s,mb4.2						
AKASG	Malin Array Be	24.70	148	P	P	22 50 28.3	-0.4
	comp=Z,0.7nm,0.5s,mb3.5,baz=346,slow=10,SNR=5.5						
AKASG	Malin Array Be	24.70	148	P	P	22 50 28.3	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VRAC	Vranov	24.71	167	P	P	22 50 30.2	+1.4
	comp=Z,3.1nm,0.6s,mb4.0,baz=360,slow=11,SNR=4.6						
VRAC	Vranov	24.71	167	P	P	22 50 30.2	+1.4
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KRUC	Moravsky	24.94	168	P	P	22 50 33.3	+2.4
GERES	GERESS Array B	25.03	172	P	P	22 50 33.1	+1.4
	comp=Z,1.9nm,1.0s,mb3.6,baz=12,slow=6.8,SNR=12						
GERES	GERESS Array B	25.03	172	P	P	22 50 33.1	+1.4
GERES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARU	Arti	26.02	104	eP	P	22 50 43.0	+2.4
ARU				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
ARU	Arti	26.02	104	eP	P	22 50 43.0	+2.4
	comp=Z,24nm,1.1s,mb4.6						
BVAR	Borovoye Array	32.30	95	LR	LR	23 06 58.3	
	comp=Z,90nm,18.1s,MS3.5,baz=242,slow=40						
NVS	Novosibirsk	34.33	82	eP	P	22 51 46.3	-7.8
SCHQ	Schefferville	34.57	279	LR	LR	23 04 28.4	
	comp=Z,298nm,19.0s,MS4.0,baz=120,slow=34						
ZALV	Zalesovo Beam	35.55	81	P	P	22 52 06.0	+1.3
	comp=Z,0.4nm,0.4s,mb3.7,baz=331,slow=12,SNR=3.8						
ZALV				PcP	PcP	22 54 33.6	+0.3
	comp=Z,0.9nm,0.7s,baz=325,slow=1.8,SNR=5.0						
ZALV				LR	LR	23 09 05.9	
	comp=Z,152nm,18.4s,MS3.8,baz=313,slow=40						
ZALV	Zalesovo Beam	35.55	81	P	P	22 52 06.0	+1.3
ZALV						22 54 33.6	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ZALV				MLR	MLR		
	comp=Z,152nm,18.4s,MS3.8						
KURK	Kurchatov	36.69	89	LR	LR	23 11 40.7	
	comp=Z,152nm,18.2s,MS3.8,baz=340,slow=43						
YKA	Yellowknife Ar	38.96	322	P	P	22 52 31.7	-1.8
	comp=Z,3.1nm,1.0s,mb4.0,baz=20,slow=8.8,SNR=11						
YKA				LR	LR	23 08 40.1	
	comp=Z,61nm,20.3s,MS3.4,baz=45,slow=36						
YKA	Yellowknife Ar	38.96	322	P	P	22 52 31.7	-1.7
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA				MLR	MLR		
	comp=Z,61nm,20.3s						
YKA	Yellowknife Ar	38.96	322	P	P	22 52 31.7	-1.8
YKA				LR	LR	23 08 40.1	
MKAR	Makanchi Array	41.27	88	P	P	22 52 55.0	+2.2
	comp=Z,0.4nm,0.3s,mb3.5,baz=92,slow=16,SNR=5.9						
ULM	Lac du Bonnet	46.37	301	LR	LR	23 12 27.9	
	comp=Z,223nm,18.5s,MS4.2,baz=34,slow=36						
SONM	Songino Array	46.91	66	P	P	22 53 40.2	+2.2
	comp=Z,2.4nm,1.1s,mb4.0,baz=324,slow=8.2,SNR=11						
SONM	Songino Array	46.91	66	P	P	22 53 40.2	+2.2
SONM				pmax	pmax		

	comp=Z,2.0nm,1.1s						
ULN	Ulaanbaatar	47.06	65	eP	P	22 53 41.5	+2.4
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ULN	Ulaanbaatar	47.06	65	eP	P	22 53 41.5	+2.4
	comp=Z,7.0nm,1.1s,mb4.5						
ULN	Ulaanbaatar	47.06	65	eP	P	22 53 41.5	+2.3
	comp=Z,7.0nm,1.1s,mb4.5						
BBB	Bella Bella	51.02	327	LR	LR	23 17 40.1	
	comp=Z,97nm,19.9s,MS3.8,baz=130,slow=38						
PDAR	Pinedale Array	56.59	309	P	P	22 54 49.9	-0.4
	comp=Z,1.3nm,1.1s,mb3.9,baz=349,slow=3.0,SNR=6.6						
PDAR				LR	LR	23 17 47.7	
	comp=Z,133nm,20.7s,MS4.0,baz=46,slow=35						
TKL	Tuckaleechee C	56.84	284	LR	LR	23 18 03.0	
	comp=Z,135nm,18.3s,MS4.1,baz=356,slow=35						
YBH	Yreka Blue Hor	60.24	320	LR	LR	23 20 36.2	
	comp=Z,143nm,19.2s,MS4.1,baz=12,slow=35						
TORD	Torodi Ar. Bea	60.65	188	P	P	22 55 18.3	-0.5
	comp=Z,3.3nm,0.9s,mb4.5,baz=353,slow=6.7,SNR=16						
NVAR	Mina Array Bea	62.59	315	P	P	22 55 31.7	0.0
	comp=Z,0.8nm,0.8s,mb3.9,baz=35,slow=4.5,SNR=5.3						
TXAR	Lajitas Array	68.05	299	P	P	22 56 06.4	-0.7
	comp=Z,2.0nm,1.2s,mb4.0,baz=58,slow=7.5,SNR=5.7						
TXAR	Lajitas Array	68.05	299	P	P	22 56 06.4	-0.8
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CMAR	Chiang Mai Arr	72.52	84	P	P	22 56 36.5	+1.8
	comp=Z,0.7nm,0.4s,mb4.0,baz=330,slow=8.4,SNR=4.6						
CMAR	Chiang Mai Arr	72.52	84	P	P	22 56 36.5	+1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	72.52	84	P	P	22 56 36.5	+1.8
ASAR	Alice Springs	122.18	62	PKP	PKPdf	23 04 01.9	-0.2
	comp=Z,0.8nm,0.6s,baz=26,slow=1.7,SNR=3.1						
ASAR	Alice Springs	122.18	62	PKIKP	PKPdf	23 04 01.9	-0.3
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VNA1	Neumayer--Stat	144.51	190	e	PKPdf	23 04 41.6	-0.7
VNA1				e		23 04 51.4	
VNA2	Neumayer--Watz	144.74	189	e	PKPdf	23 04 42.0	-0.7
	baz=356,slow=5.4						
VNA2				e		23 04 52.6	
VNA3	Neumayer Olymp	145.17	190	e	PKPbc	23 04 43.0	-0.1
VNA3				e		23 04 53.8	
MAW	Mawson	145.35	147	PKPbc	PKPbc	23 04 44.6	+0.8
	comp=Z,2.3nm,0.3s,baz=346,slow=6.7,SNR=5.1						
MAW	Mawson	145.35	147	PKIKP	PKPdf	23 04 44.6	+0.8
MAW				pmax	pmax		
	comp=Z,2.0nm,0.3s						

*IDC **01** 22:53:25.9±0.5, 1823N×12240E, h0km, mb4.5/23, mb1 4.6/25, mb1mx4.6/30, mbtmp4.5/25, ML4.5/2, MS4.1/14, Ms1 4.1/14, ms1mx3.9/38, Error ellipse: s-maj=17.4km s-min=12.0km az=71.0*

*MAN **01** 22:53:27, 1839N×12252E, h18km, mb5.4, ML4.4, MS4.7*

MAN INTENSITY IV - STA ANA CAGAYAN VALLEY; INTENSITY III - BUGUEY; CAGAYAN.

*ISCJB **01** 22:53:28.9±0.8, 1834N±002×12250E±003, h27km±5km, mb4.8/87, MS4.2/24, Error ellipse: s-maj=5.2km s-min=3.0km az=179.8*

*MOS **01** 22:53:30.3±0.9, 1844N×12245E, h33km, mb5.2/31, Error ellipse: s-maj=10.5km s-min=5.6km az=117.7*

*NEIC **01** 22:53:32.3±0.6, 1834N×12249E, h41km±5km, mb4.9/32, Error ellipse: s-maj=5.3km s-min=5.1km az=128.0*

NEIC Felt [IV PIVS] at Santa Ana and [III PIVS] at Buguey.

*GCMT **01** 22:53:32.3±0.3, 1835N×12251E, h20km±1km, MW5.0/74, Moment Tensor Solution. s29,c32; s74,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.01±.14; Mθθ2.69±.12; Mφφ-2.68±.14; Mrθ0.79±.23; Mθφ-2.24±.09; Mφr1.77±.28; Best double couple: Mo3.93000×10^{16} NP1:φs152.00000°,δ71.00000°,λ-16.00000°. NP2: φs247.00000°,δ75.00000°,λ-161.00000°. Principal axes: T 3.5080, Plg3.0000°, Azm19.0000°; N 0.8460, Plg66.0000°, Azm283.0000°; P -4.3520, Plg24.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **01** 22:53:33.1, 1856N×12248E, h46km, mB5.0, mb4.7, Ms4.6, Msz4.4*

*DJA **01** 22:53:39, 1852N×12191E, h65km, Mw5.2/7*

ISC 01 22:53:31.9±0.3, **1831N**±002×**12251E**±003, **h38**km±3km, **n225**, σ1§**06**/243, **mb4.8**/87, **MS4.2**/24, **18C-16D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	0.45	261	eP	Pn	22 53 36.3	-5.5
PALP	Palanan	1.25	184	eP	Pn	22 53 51.1	-1.7
PALP				eS	Sn	22 54 08.5	+0.1
PALP	Palanan	1.25	184	⇓iP	Pn	22 53 51.1	-1.7
PALP				iS	Sn	22 54 10.9	+2.6
CAUP	Cauayan	1.51	206	eP	Pn	22 53 55.5	-0.9
CAUP				eS	Sn	22 54 30.9	+16
ABRA	Dolores	1.83	249	eP	Pn	22 53 58.8	-2.0
ABRA				eS	Sn	22 54 22.0	-0.8
BALP	Baler	2.71	199	eP	Pn	22 54 12.0	-0.9
BALP				eS	Sn	22 54 47.5	+3.0
BOLP	Bolinao	3.14	233	eP	Pn	22 54 17.5	-1.3
SCZP	Santa Cruz	3.54	225	eP	Pn	22 54 25.0	+0.7
POLP	Polilio Island	3.61	189	eP	Pn	22 54 25.2	-0.1
POLP				eS	Sn	22 55 08.0	+1.3
GQP	Guinayangan	4.38	181	⇓eP	Pn	22 54 35.9	-0.1
GQP				eS	Sn	22 55 24.3	-1.5
TWG	Pinlang	4.68	344	ePn	Pn	22 54 40.2	+0.2
TWG				eSn	Sn	22 55 33.0	-0.2
PVCP	Virac	4.95	161	⇑eP	Pn	22 54 40.7	-3.1
PVCP				eS	Sn	22 55 36.1	-3.7
PVCP	Virac	4.95	161	eP	Pn	22 54 42.2	-1.6
LUBP	Lubang	5.05	206	eP	Pn	22 54 46.8	+1.7
YULB	Yu-li	5.18	348	ePn	Pn	22 54 45.6	-1.3
	135nm,0.6s						
YULB				eSn	Sn	22 55 45.9	+0.5
TPUB	Ta-pu	5.26	341	ePn	Pn	22 54 49.0	+1.0
	505nm,0.9s						
TPUB				eSn	Sn	22 55 47.6	+0.2
SSLB	Suanglung	5.64	345	ePn	Pn	22 54 54.5	+1.3
	243nm,0.8s						
NACB	Ninganchiao	5.89	352	ePn	Pn	22 54 56.0	-0.7
	119nm,0.7s						
OTRP	Odiongan	5.94	185	eP	Pn	22 54 56.4	-1.0
SJMP	San Jose	5.97	193	eP	Pn	22 54 59.0	+1.3
YHNB	Yeheng	6.41	351	ePn	Pn	22 55 04.3	+0.5
	189nm,0.8s						
YHNB				eSn	Sn	22 56 17.6	+1.9
BUSP	Coron	6.66	200	eP	Pn	22 55 08.1	+0.9
TATO	Taipei	6.70	352	ePn	Pn	22 55 09.4	+1.7
	120nm,0.7s						
QZH	Quanzhou	7.54	332	P	Pn	22 55 17.1	-2.1
QZH				S	Sn	22 56 43.3	-0.1
QZH				LR	LR		
	comp=N,1µm,8.4s						
QZH				LR	LR		
	comp=E,3µm,14.0s						
QZH				LR	LR		
	comp=Z,3µm,16.2s						
MSLP	Maasin	8.44	164	eP	Pn	22 55 32.0	+0.3
TBP	Tagbilaran	8.67	171	eP	Pn	22 55 31.2	-3.6
JOW	Kunigami	10.01	31	Pn	Pn	22 55 51.4	-1.8
	comp=Z,10.0nm,0.3s,baz=200,slow=12,SNR=18						
JOW				Sn	Sn	22 57 39.2	-5.0
	comp=Z,2.4nm,0.3s,baz=292,slow=19,SNR=2.7						
JOW				LR	LR	22 59 30.4	
	comp=Z,1µm,18.4s,baz=223,slow=36						
DAV	Davao City (W)	11.57	165	LR	LR	23 01 16.0	
	comp=Z,2µm,19.4s,baz=334,slow=41						
QIZ	Qiongzhong	12.03	275	P	Pn	22 56 20.2	-0.6
QIZ				AP		22 56 28.7	
QIZ				S	Sn	22 58 42.0	+8.3
QIZ				AMB	AMB		
	comp=Z,32nm,1.0s						
QIZ				LR	LR		
	comp=E,1µm,14.8s						
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ	Qiongzhong	12.03	275	ePn	Pn	22 56 21.4	+0.6
	comp=Z,32nm,0.8s						
QIZ				eSn	Sn	22 58 33.8	+0.1
SSE	Sheshan	12.78	355	P	Pn	22 56 30.8	-0.3
SSE				S	Sn	22 58 51.1	-1.0
SSE				AMB	AMB		
	comp=Z,46nm,0.7s						
SSE				AMB	AMB		
	comp=Z,136nm,8.5s						
SSE				LR	LR		
	comp=N,789nm,21.0s						
SSE				LR	LR		
	comp=E,2µm,21.0s						
SSE				LR	LR		
	comp=Z,1µm,16.8s						
WHN	Wuhan	14.26	330	P	Pn	22 56 49.0	-2.2
WHN				LR	LR		
	comp=N,4µm,16.0s						
WHN				LR	LR		
	comp=E,2µm,10.0s						
WHN				LR	LR		
	comp=Z,3µm,12.4s						
GYA	Guiyang	16.73	302	P	Pn	22 57 26.7	+3.2
GYA				AP	pP	22 57 35.9	+0.9
GYA				XP	sP	22 57 42.0	+2.2
GYA				S	S	23 00 32.1	-6.1
GYA				XS	sS	23 00 43.0	-10
GYA				SS		23 00 49.8	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
GYA				AMB	AMB		
	comp=Z,230nm,7.5s						
GYA				LR	LR		
	comp=N,1µm,17.0s						
GYA				LR	LR		
	comp=E,2µm,16.5s						
GYA				LR	LR		
	comp=Z,2µm,15.5s						
TIA	Tai'an	18.45	346	eP	Pn	22 57 44.2	-0.4
INCN	Inchon	19.44	10	eP	Pn	22 57 58.2	+1.7
	comp=Z,49nm,1.2s						
KMI	Kunming	19.57	294	P	Pn	22 57 59.7	+1.6
KMI				AP	pP	22 58 09.2	+3.0
KMI				XP	sP	22 58 13.4	+2.3
KMI				PP		22 58 17.9	
KMI				PPP		22 58 28.0	
KMI				S	S	23 01 31.9	-3.7
KMI				XS	sS	23 01 47.5	-3.5
KMI				SS		23 01 59.4	
KMI				AMB	AMB		
	comp=Z,11nm,0.9s						
KMI				AMB	AMB		
	comp=Z,332nm,4.6s						
KMI				LR	LR		
	comp=N,2µm,15.5s						
KMI				LR	LR		
	comp=E,1µm,17.0s						
KMI				LR	LR		
	comp=Z,2µm,15.1s						
KS15	Wonju Array Si	19.63	13	ePn	Pn	22 57 58.9	+0.1
KSRS	Korea Array	19.65	13	P	Pn	22 57 58.2	-0.8
	comp=Z,0.8nm,0.3s,baz=193,slow=12,SNR=49						
KSRS				LR	LR	23 05 39.7	
	comp=Z,523nm,19.7s,baz=206,slow=37						
XAN	Xi'an	19.82	325	P	Pn	22 58 00.8	-0.2
XAN				AP	pP	22 58 11.2	+2.3
XAN				XP	sP	22 58 16.1	+2.4
XAN				PP		22 58 20.3	
XAN				S	S	23 01 39.5	-0.9
XAN				SS		23 01 58.6	
XAN				LG1		23 03 36.2	
XAN				LG2		23 04 14.7	
XAN				AMB	AMB		
	comp=Z,60nm,1.4s						
XAN				AMB	AMB		
	comp=Z,469nm,11.7s						
XAN				LR	LR		
	comp=N,315nm,23.2s						
XAN				LR	LR		
	comp=E,798nm,22.8s						
XAN				LR	LR		
	comp=Z,1µm,15.2s						
KSM	Kuching	20.58	217	eP	P	22 58 06.5	-1.1
	comp=Z,109nm,1.1s						
KSM	Kuching	20.58	217	⇓P	P	22 58 13.6	+6.0
CD2	Chengdu	21.12	310	⇑iP	P	22 58 14.8	+1.4
CD2				AP		22 58 26.1	
CD2				XP	sP	22 58 31.8	+3.8
CD2				PP		22 58 38.7	
CD2				S	S	23 02 01.3	-5.1
CD2				XS	sS	23 02 20.7	-1.3
CD2				SS		23 02 38.4	
CD2				AMB	AMB		
	comp=Z,180nm,0.8s,mb5.5						
CD2				LR	LR		
	comp=N,2µm,12.6s						
CD2				LR	LR		
	comp=Z,1µm,15.0s,MS4.4						
JHJ	Hachijo jima 2	21.39	43	P	P	22 58 18.2	+2.0
	comp=Z,270nm,0.9s,mb5.6,baz=60,slow=6.7,SNR=3.8						
JHJ				LR	LR	23 04 43.4	
	comp=Z,353nm,21.2s,MS3.7,baz=37,slow=31						
NST	Nakhon Sawan	21.56	266	P	P	22 58 19.2	+1.0
GUMO	Guam	22.00	99	P	P	22 58 24.2	+1.2
	comp=Z,192nm,1.1s,mb5.4,baz=66,slow=14,SNR=3.8						
GUMO				LR	LR	23 04 58.3	
	comp=Z,189nm,21.2s,MS3.5,baz=299,slow=31						
GUMO	Guam	22.00	99	P	P	22 58 24.2	+1.2
GUMO				LR	LR	23 04 58.3	
BJT	Baijiatuau	22.31	347	eP	P	22 58 25.5	-0.6
BJT				pmax	pmax		
	comp=Z,36nm,0.8s						
BJT	Baijiatuau	22.31	347	eP	P	22 58 25.5	-0.6
	comp=Z,36nm,0.8s,mb4.8						
BJI	Beijing	22.33	347	P	P	22 58 24.8	-1.5
BJI				S	S	23 02 29.8	0.0
BJI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
BJI				AMB	AMB		
	comp=Z,245nm,4.6s						
BJI				LR	LR		
	comp=N,555nm,14.8s,MS4.4						
BJI				LR	LR		
	comp=E,906nm,15.5s,MS4.4						
BJI				LR	LR		
	comp=Z,450nm,19.2s,MS3.9						
CHG	Chiang Mai	22.34	275	⇑P	P	22 58 26.1	-0.5
	comp=Z,30nm,1.0s,mb4.7						
CHTO	Chiang Mai	22.34	275	eP	P	22 58 27.3	+0.7
CHTO				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.6						
CHTO	Chiang Mai	22.34	275	eP	P	22 58 27.3	+0.7
	comp=Z,21nm,0.9s,mb4.6						
CM31	Chiang Mai Arr	22.36	274	eP	P	22 58 27.7	+0.9
	comp=Z,13nm,1.1s,mb4.3						
CMAR	Chiang Mai Arr	22.36	274	P	P	22 58 26.6	-0.3
	comp=Z,14nm,1.0s,mb4.4,baz=75,slow=9.7,SNR=51						
CMAR				PcP	PcP	23 02 22.6	+1.3
	comp=Z,1.4nm,0.6s,baz=42,slow=0.9,SNR=4.7						
CMAR				LR	LR	23 08 31.7	
	comp=Z,407nm,18.3s,MS3.9,baz=93,slow=41						
CMAR	Chiang Mai Arr	22.36	274	P	P	22 58 26.6	-0.2
CMAR						23 02 22.6	
BDT	Bhumibol Dam	22.41	271	P	P	22 58 28.0	+0.7
MAJO	Matsushiro	22.83	34	eP	P	22 58 30.8	-0.8
MAJO				pmax	pmax		
	comp=Z,210nm,2.1s,mb5.2						
MAJO	Matsushiro	22.83	34	eP	P	22 58 30.8	-0.8
	comp=Z,210nm,2.1s,mb5.2						
MAT	Matsushiro	22.83	34	P	P	22 58 32.5	+0.9
MAT				S	S	23 02 37.0	-1.5
MJAR	Matsushiro Arr	22.83	34	P	P	22 58 31.8	+0.2
	comp=Z,10nm,1.1s,mb4.2,baz=223,slow=9.4,SNR=16						
MJAR				LR	LR	23 07 37.0	
	comp=Z,269nm,20.4s,MS3.7,baz=255,slow=37						
KAPI	Kappang	23.34	187	P	P	22 58 34.7	-2.4
	comp=Z,197nm,1.1s,mb5.5,SNR=5.7						
KAPI	Kappang	23.34	187	P	P	22 58 34.2	-2.9
	comp=Z,5.9nm,0.7s,mb4.2,baz=28,slow=14,SNR=4.9						
KAPI	Kappang	23.34	187	eP	P	22 58 34.3	-2.8
	comp=Z,34nm,1.7s,mb4.5						
SNY	Shenyang	23.45	2	⇓P	P	22 58 37.3	-0.7
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
SNY				AMB	AMB		
	comp=Z,209nm,11.2s						
SNY				LR	LR		
	comp=E,2µm,15.8s						
SNY				LR	LR		
	comp=Z,1µm,16.7s,MS4.4						
LZH	Lanzhou	24.19	321	⇑P	P	22 58 47.2	+2.4
LZH				PP		22 59 22.7	
LZH				eS	S	23 02 59.0	-1.6
LZH				XS	sS	23 03 17.0	-1.1
LZH				AMB	AMB		
	comp=Z,143nm,1.6s,mb5.2						
LZH				AMB	AMB		
	comp=Z,370nm,4.0s						
LZH				LR	LR		
	comp=N,1µm,16.2s						
LZH				LR	LR		
	comp=Z,2µm,14.4s,MS4.7						
HHC	Hu-ho-hao-te	24.35	340	eP	P	22 58 47.0	+0.8
HHC				AP		22 58 58.6	
HHC				XP	sP	22 59 04.1	+2.8
HHC				PP		22 59 23.1	
HHC				PCP	PcP	23 02 28.4	+3.4
HHC				S	S	23 02 59.0	-4.0
HHC				XS	sS	23 03 18.6	-1.9
HHC				SS		23 03 53.5	
HHC				PCS	PcS	23 06 06.1	+1.3
HHC				AMB	AMB		
	comp=Z,26nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,357nm,4.6s						
HHC				LR	LR		
	comp=N,863nm,18.5s,MS4.5						
HHC				LR	LR		
	comp=E,1µm,15.3s,MS4.5						
HHC				LR	LR		
	comp=Z,1µm,17.4s,MS4.4						
BTO	Baotou	24.68	337	eP	P	22 58 49.6	+0.4
KULM	Kulim	24.96	241	⇓P	P	22 58 52.4	+0.4
IPM	Ipoh	25.10	239	⇑P	P	22 58 55.0	+1.7
CN2	Changchun	25.53	5	eP	P	22 58 56.4	-0.5
CN2				eXP	sP	22 59 13.0	+1.0
CN2				eS	S	23 03 17.4	-4.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,1µm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,1µm,16.0s,MS4.5						
MDJ	Mudanjiang	26.89	11	P	P	22 59 10.7	+1.6
MDJ				XP	sP	22 59 26.5	+2.2
MDJ				S	S	23 03 42.0	-1.2
MDJ				XS	sS	23 04 03.6	+2.7
MDJ				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,187nm,4.3s						
MDJ				LR	LR		
	comp=N,606nm,13.7s,MS4.4						
MDJ				LR	LR		
	comp=E,444nm,13.7s,MS4.4						
MDJ				LR	LR		
	comp=Z,964nm,14.6s,MS4.5						
BATI	Baumata	28.36	178	P	P	22 59 20.2	-2.3
	comp=Z,6.3nm,0.4s,mb4.6,baz=342,slow=3.2,SNR=3.3						
GTA	Gaotai	28.78	322	eP	P	22 59 29.8	+3.7
GTA				AP	pP	22 59 41.0	+4.2
GTA				XP	sP	22 59 47.6	+6.3
GTA				PP	PP	23 00 21.6	-10
GTA				S	S	23 04 16.1	+2.9
GTA				AMB	AMB		
	comp=Z,6.0nm,1.6s,mb4.1						
GTA				AMB	AMB		
	comp=Z,151nm,8.7s						
GTA				LR	LR		
	comp=N,517nm,14.4s,MS4.4						
GTA				LR	LR		
	comp=E,514nm,15.3s,MS4.4						
GTA				LR	LR		
	comp=Z,883nm,15.9s,MS4.5						
LSA	Lhasa	30.71	298	P	P	22 59 45.3	+2.0
LSA				LR	LR		
	comp=N,500nm,15.0s,MS4.5						
LSA				LR	LR		
	comp=E,550nm,13.7s,MS4.5						
LSA	Lhasa	30.71	298	eP	P	22 59 45.3	+2.0
LSA				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.8						
LSA	Lhasa	30.71	298	eP	P	22 59 45.3	+1.9
	comp=Z,21nm,1.2s,mb4.8						
ASAJ	Asahikawa	30.77	29	LR	LR	23 10 33.4	
	comp=Z,184nm,20.5s,MS3.7,baz=342,slow=33						
HIA	Hailar	30.96	356	⇑iP	P	22 59 44.4	-0.8
KLR	Kul'dur	31.73	12	eP	P	22 59 48.6	-3.4
KLR				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
ULN	Ulaanbaatar	32.06	340	eP	P	22 59 56.2	+1.2
ULN				pmax	pmax		
	comp=Z,65nm,1.8s,mb5.2						
ULN	Ulaanbaatar	32.06	340	eP	P	22 59 56.1	+1.2
	comp=Z,64nm,1.8s,mb5.2						
SONM	Songino Array	32.25	339	P	P	22 59 57.1	+0.4
	comp=Z,6.7nm,0.9s,mb4.5,baz=156,slow=9.3,SNR=29						
SONM				PcP	PcP	23 02 44.6	+0.2
	comp=Z,0.3nm,0.4s,baz=162,slow=1.5,SNR=5.8						
SONM				LR	LR	23 14 30.1	
	comp=Z,1µm,18.7s,MS4.6,baz=155,slow=39						
SONM	Songino Array	32.25	339	P	P	22 59 57.1	+0.4
SONM						23 02 44.6	
KAKA	Kakadu	32.35	162	eP	x	22 59 40.8	
	comp=Z,9.9nm,0.6s						
TAPN	Taplejung	33.22	292	eP	P	23 00 05.8	+0.4
	comp=Z,62nm,1.4s,mb5.4						
ODAN	Odare	33.44	291	eP	P	23 00 07.4	+0.1
	comp=Z,33nm,0.8s,mb5.3						
RAMN	Ramite	34.15	291	eP	P	23 00 13.9	+0.4
	comp=Z,47nm,0.8s,mb5.5						
JIRN	Jiri	34.60	292	eP	P	23 00 17.7	+0.3
	comp=Z,50nm,1.1s,mb5.4						
GUN	Gumba	34.91	293	eP	P	23 00 20.4	+0.4
	comp=Z,71nm,0.9s,mb5.6						
PKI	Pulchoki	35.27	292	eP	P	23 00 23.0	-0.2
	comp=Z,21nm,0.9s,mb5.1						
PKI	Pulchoki	35.27	292	eP	P	23 00 23.0	-0.2
PKI				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
KKN	Kakani	35.41	292	eP	P	23 00 24.1	-0.3
	comp=Z,33nm,1.0s,mb5.2						
KKN	Kakani	35.41	292	eP	P	23 00 24.1	-0.3
KKN				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
ZAK	Zakamensk	35.49	339	eP	P	23 00 24.9	+0.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
DMN	Daman	35.55	292	eP	P	23 00 25.5	0.0
	comp=Z,33nm,0.9s,mb5.3						
GKN	Gorkha	36.01	293	eP	P	23 00 28.8	-0.7
	comp=Z,40nm,0.9s,mb5.3						
TLY	Talaya	36.48	340	eP	P	23 00 34.0	+0.8
TLY				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
TLY				MLR	MLR		
	comp=Z,453nm,17.0s,MS4.3						
TLY	Talaya	36.48	340	eP	P	23 00 32.6	-0.5
	comp=Z,10nm,0.8s,mb4.8						
DANN	Dangsing	36.82	293	eP	P	23 00 35.7	-0.7
KOLN	Koldanda	36.89	292	eP	P	23 00 37.0	0.0
	comp=Z,26nm,0.8s,mb5.1						
MOY	Mondy	37.37	338	eP	P	23 00 41.1	+0.4
MOY				pmax	pmax		
	comp=Z,6.0nm,2.4s,mb4.0						
WMQ	Urumqi	38.74	319	P	P	23 00 53.5	+1.1
WMQ				XP	sP	23 01 10.6	+2.8
WMQ				PP	PP	23 02 27.7	+6.2
WMQ				PPP		23 02 51.9	
WMQ				S	S	23 06 46.0	-0.9
WMQ				XS	sS	23 07 06.8	+1.9
WMQ				SS	SS	23 09 29.0	-10
WMQ				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,50nm,10.0s						
WMQ				LR	LR		
	comp=N,612nm,13.0s,MS4.7						
WMQ				LR	LR		
	comp=E,533nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,341nm,21.0s						
WRAB	Tennant Creek	39.74	162	eP	P	23 01 03.6	+2.6
WRAB				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRAB	Tennant Creek	39.74	162	eP	P	23 01 03.5	+2.6
	comp=Z,27nm,1.1s,mb4.9						
WB2	Warramunga Arr	39.75	162	eP	P	23 01 00.3	-0.8
HVS	Khovu-Aksy	39.92	332	d iP	P	23 01 02.5	+0.4
HVS				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.1						
BOD	Bodaibo	39.95	353	eP	P	23 01 01.5	-0.8
BOD				pmax	pmax		
	comp=Z,11nm,2.1s,mb4.2						
HYB	Hyderabad	41.77	276	i P	P	23 01 18.0	+0.1
HYB				e		23 01 23.0	
HYB	Hyderabad	41.77	276	eP	P	23 01 27.0	+9.1
ASAR	Alice Springs	43.18	165	P	P	23 01 27.7	-1.4
	comp=Z,2.0nm,0.6s,mb4.0,baz=349,slow=7.6,SNR=11						
MK31	Makanchi Array	43.50	320	eP	P	23 01 32.3	+0.8
MKAR	Makanchi Array	43.50	320	P	P	23 01 31.7	+0.1
	comp=Z,9.7nm,0.7s,mb4.6,baz=111,slow=9.6,SNR=103						
MKAR				LR	LR	23 22 38.2	
	comp=Z,224nm,18.1s,MS4.1,baz=217,slow=40						
MKAR	Makanchi Array	43.50	320	P	P	23 01 31.7	+0.1
MKAR				LR	LR	23 22 38.2	
KRAR	Krasnoyarsk	43.77	336	⇓iP	P	23 01 34.4	+0.9
KRAR				pmax	pmax		
	comp=Z,15nm,0.4s,mb5.1						
YAK	Yakutsk	43.96	5	eP	P	23 01 33.2	-1.8
YAK				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.0						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK				MLR	MLR		
	comp=Z,411nm,15.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,373nm,15.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,129nm,15.0s,MS4.5						
YAK	Yakutsk	43.96	5	eP	P	23 01 34.6	-0.3
	comp=E,59nm,1.2s,mb5.2						
PETK	Petropavlovsk-	44.17	30	P	P	23 01 37.5	+0.7
	comp=E,7.5nm,0.9s,mb4.4,baz=205,slow=6.6,SNR=3.6						
PETK				LR	LR	23 21 24.2	
	comp=E,159nm,19.8s,MS3.9,baz=106,slow=38						
CTA	Charters Tower	44.71	147	eP	P	23 01 42.1	+0.6
	comp=E,8.3nm,0.9s,mb4.6						
CTA	Charters Tower	44.71	147	P	P	23 01 41.9	+0.4
	comp=E,7.8nm,0.8s,mb4.6,baz=342,slow=10,SNR=5.6						
CTA	Charters Tower	44.71	147	eP	P	23 01 42.1	+0.6
CTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAA0	Zalesovo Array	45.87	330	eP	P	23 01 50.0	-0.3
ZALV	Zalesovo Beam	45.87	330	P	P	23 01 49.5	-0.7
	comp=Z,5.1nm,0.9s,mb4.4,baz=116,slow=6.5,SNR=19						
ZALV				PcP	PcP	23 03 26.1	-0.9
	comp=Z,2.3nm,0.7s,baz=104,slow=4.6,SNR=2.4						
ZALV				LR	LR	23 22 35.4	
	comp=Z,206nm,19.4s,MS4.1,baz=290,slow=38						
ZALV	Zalesovo Beam	45.87	330	P	P	23 01 49.6	-0.7
ZALV						23 03 26.1	
HNR	Honiara	46.10	124	LR	LR	23 19 36.9	
	comp=Z,215nm,19.5s,MS4.1,baz=323,slow=34						
NIL	Nilore	46.41	299	eP	P	23 01 55.3	+0.4
NIL				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
NIL	Nilore	46.41	299	eP	P	23 01 55.2	+0.3
	comp=Z,18nm,0.9s,mb5.0						
NVS	Novosibirsk	47.14	330	eP	P	23 01 59.6	-0.7
NVS				e		23 03 28.8	
NVS				eS	S	23 08 58.1	+8.1
NVS				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
NVS				pmax	pmax		
	comp=N,11nm,1.7s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.3s						
NVS				smax			
	comp=E,25nm,2.1s						
AAK	Ala-Archa	47.18	312	⇑iP	P	23 02 00.7	0.0
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.1						
KURK	Kurchatov	47.44	323	P	P	23 02 02.1	-0.6
	comp=Z,99nm,1.1s,mb5.7,SNR=15						
KURK	Kurchatov	47.44	323	P	P	23 02 02.8	+0.1
	comp=Z,16nm,0.8s,mb5.0,baz=123,slow=7.5,SNR=62						
KURK				LR	LR	23 22 08.6	
	comp=Z,192nm,21.1s,MS4.0,baz=110,slow=36						
EKS2	Erkin-Say	47.70	311	eP	P	23 02 06.2	+1.4
	comp=Z,6.2nm,1.1s,mb4.5						
KLBR	Kellerberrin	49.83	185	eP	P	23 02 22.4	+1.3
	comp=Z,23nm,1.2s,mb5.1						
KBL	Kabul	49.98	300	eP	P	23 02 22.4	0.0
KBL				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
KBL	Kabul	49.98	300	eP	P	23 02 22.4	0.0
	comp=Z,17nm,1.1s,mb5.0						
KK31	Karatay Array	50.13	311	i P	P	23 02 22.8	-0.6
KK31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NWAO	Narrogin (SRO)	51.20	186	P	P	23 02 32.8	+1.3
	comp=Z,10nm,0.6s,mb4.9,baz=30,slow=5.4,SNR=9.4						
BVA0	Borovoye Array	53.04	323	i P	P	23 02 41.2	-3.8
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
BVAR	Borovoye Array	53.04	323	P	P	23 02 44.6	-0.4
	comp=Z,2.5nm,0.7s,mb4.3,baz=115,slow=10,SNR=19						
BVAR				PcP	PcP	23 03 53.4	+0.2
	comp=Z,3.4nm,0.7s,baz=134,slow=4.3,SNR=5.8						
BRVK	Borovoye	53.11	323	P	P	23 02 45.0	-0.5
	comp=Z,83nm,0.9s,mb5.7,SNR=7.0						
BRVK	Borovoye	53.11	323	eP	P	23 02 45.6	+0.1
BRVK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
BRVK	Borovoye	53.11	323	eP	P	23 02 45.6	0.0
	comp=Z,18nm,1.0s,mb4.9						
STKA	Stephens Creek	53.15	160	eP	P	23 02 45.9	-0.1
	comp=Z,5.2nm,0.6s,mb4.6						
STKA	Stephens Creek	53.15	160	P	P	23 02 45.3	-0.7
	comp=Z,2.4nm,0.9s,mb4.1,baz=305,slow=9.8,SNR=2.9						
TIXI	Tiksi	53.47	3	c iP	P	23 02 46.3	-1.5
TIXI				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.7						
TIXI	Tiksi	53.47	3	eP	P	23 02 47.3	-0.6
	comp=Z,24nm,1.2s,mb5.0						
BILL	Bilibino	56.81	18	⇓iP	P	23 03 12.3	+0.3
BILL				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
BILL	Bilibino	56.81	18	eP	P	23 03 12.4	+0.4
	comp=Z,7.2nm,0.8s,mb4.8						
AB31	Akbulak array	58.49	317	P	P	23 03 22.4	-1.7
AB31				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
SVE	Sverdlovsk	59.53	326	⇓eP	P	23 03 30.7	-0.5
SVE				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
ARU	Arti	60.56	325	d iP	P	23 03 37.4	-0.9
ARU				e		23 05 47.9	
ARU				eS	S	23 11 50.3	-1.1
ARU				eSS	SS	23 15 45.1	-4.7
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
ARU	Arti	60.56	325	eP	P	23 03 37.2	-1.1
	comp=Z,7.2nm,0.6s,mb5.0						
RDF	Al-Radifah	68.51	295	eP	P	23 04 29.4	-1.3
	baz=294						
RDF				AMb	AMB	23 04 36.6	
	comp=Z,71nm,0.9s,mb5.6,baz=294						
MIB	Mutribah	68.54	295	eP	P	23 04 29.4	-1.5
	baz=295						
MIB				AMb	AMB	23 04 36.1	
	comp=Z,32nm,1.1s,mb5.2,baz=295						
NAY	Al-Naaiem	68.72	295	eP	P	23 04 30.6	-1.4
	baz=295						
NAY				AMb	AMB	23 04 37.8	
	comp=Z,26nm,0.7s,mb5.3,baz=295						
KIV	Kislovodsk	70.29	311	⇑iP	P	23 04 41.0	-0.5
KIV				pmax	pmax		
	comp=Z,40nm,2.5s,mb4.9						
KIV	Kislovodsk	70.29	311	eP	P	23 04 43.1	+1.6
	comp=Z,27nm,0.8s,mb5.2						
BPAW	Bear Paw Mtn.	72.18	27	eP	P	23 04 54.1	+1.6
	comp=Z,33nm,1.3s,mb5.1						
OBN	Obninsk	72.89	323	⇑iP	P	23 04 55.4	-1.5
OBN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
MCK	McKinley	73.12	28	eP	P	23 04 58.7	+0.6
MCK				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
MCK	McKinley	73.12	28	eP	P	23 04 58.7	+0.6
	comp=Z,33nm,1.2s,mb5.1						
COLA	College	73.44	26	⇑iP	P	23 04 59.9	-0.1
ARCES	ARCESS Array B	75.43	339	P	P	23 05 10.1	-1.4
	comp=Z,2.9nm,0.9s,mb4.2,baz=70,slow=10,SNR=4.1						
SPITS	Spitsbergen Ar	75.45	348	P	P	23 05 11.4	0.0
	comp=Z,5.1nm,0.8s,mb4.5,baz=64,slow=4.5,SNR=2.3						
EGAK	Eagle	76.27	26	eP	P	23 05 17.0	+0.7
	comp=Z,14nm,1.1s,mb4.8						
DAWY	Dawson	77.19	27	eP	P	23 05 22.5	+1.0
BRTR	Keskin Array B	77.69	308	P	P	23 05 26.0	+1.3
	comp=Z,1.4nm,0.9s,mb3.9,baz=74,slow=4.4,SNR=5.2						
AKASG	Malin Array Be	78.09	320	P	P	23 05 25.6	-1.1
	comp=Z,3.4nm,0.7s,mb4.4,baz=62,slow=5.7,SNR=11						
INK	Inuvik	78.19	22	eP	P	23 05 27.4	+0.4
	comp=Z,323nm,1.1s						
SUW	Suwalki	80.72	324	eP	P	23 05 40.8	-0.2
SUW	Suwalki	80.72	324	eP	P	23 05 40.8	-0.3
VRI	Vrincioaia	80.99	315	⇓iP	P	23 05 43.4	+0.7
VRI	Vrincioaia	80.99	315	⇓P	P	23 05 43.4	+0.7
BURAR	Bucovina Array	81.47	317	⇑iP	P	23 05 45.2	0.0
BURAR	Bucovina Array	81.47	317	⇑P	P	23 05 45.2	0.0
BUR08	Bucovina Ar. S	81.47	317	eP	P	23 05 45.4	+0.2
MLR	Muntele Rosu	81.63	315	P	P	23 05 46.2	+0.2
	comp=Z,3.1nm,0.7s,mb4.3,baz=202,slow=3.3,SNR=5.3						
MLR	Muntele Rosu	81.63	315	⇑iP	P	23 05 45.9	-0.2
MLR	Muntele Rosu	81.63	315	⇑P	P	23 05 45.9	-0.2
KWP	Kalwaria	82.41	320	eP	P	23 05 50.2	+0.1
KWP	Kalwaria	82.41	320	⇑iP	P	23 05 49.7	-0.4
KWP	Kalwaria	82.41	320	eP	P	23 05 50.2	+0.1
UZH	Uzhgorod	83.00	319	eP	P	23 06 02.0	+8.8
DRGR		83.35	317	⇓iP	P	23 05 55.3	+0.3
DRGR		83.35	317	⇓P	P	23 05 55.3	+0.3
STHS	Stebnicka Huta	83.38	320	eP	P	23 05 57.5	+2.4
STHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
STHS	Stebnicka Huta	83.38	320	eP	P	23 05 57.5	+2.4
	comp=Z,3.3nm,0.9s,mb4.4						
CRVS	Cervenica-Dubn	83.42	319	eP	P	23 05 55.7	+0.4
CRVS				pmax	pmax		
	comp=Z,27nm,1.9s,mb5.0						
CRVS	Cervenica-Dubn	83.42	319	eP	P	23 05 55.7	+0.4
	comp=Z,27nm,1.9s,mb5.0						
NIE	Niedzica	83.95	320	eP	P	23 05 59.0	+1.0
OJC	Ojcow	83.97	321	eP	P	23 05 58.1	0.0
NB2	NORSAR Subarra	83.98	333	P	P	23 05 56.8	-1.1
	comp=Z,8.9nm,0.9s,mb4.9,baz=63,slow=5.3						
NOA	NORSAR Array B	83.98	333	P	P	23 05 57.1	-0.8
	comp=Z,6.1nm,0.8s,mb4.8,baz=63,slow=5.0,SNR=13						
PSZ	Piszkesteto	84.75	319	⇓eP	P	23 06 02.7	+0.6
OKC	Ostrava-Krasne	85.10	321	eP	P	23 06 03.6	-0.2
VYHS	Vyhne	85.19	320	eP	P	23 06 04.7	+0.4
VYHS				pmax	pmax		
	comp=Z,27nm,2.1s,mb5.0						
VYHS	Vyhne	85.19	320	eP	P	23 06 04.7	+0.4
	comp=Z,27nm,2.1s,mb5.0						
KOLL	Kolacno	85.43	320	eP	P	23 06 05.8	+0.3
BUD	Budapest	85.45	319	⇓eP	P	23 06 07.2	+1.5
KSP	Ksiaz	85.80	322	eP	P	23 06 06.0	-1.3
DPC	Dobruska-Polom	85.98	322	eP	P	23 06 07.4	-0.8
UPC	Upice	86.09	322	eP	P	23 06 09.1	+0.3
PKSM	Moragy	86.18	317	⇑iP	P	23 06 08.9	-0.4
PKSM	Moragy	86.18	317	⇑P	P	23 06 08.9	-0.4
VRAC	Vranov	86.24	321	P	P	23 06 08.8	-0.7
	comp=Z,2.7nm,0.5s,mb4.8,baz=23,slow=3.2,SNR=4.7						
BRG	Berggiesshubel	87.14	323	eP	P	23 06 13.5	-0.4
BRG				pmax	pmax		
	comp=Z,16nm,2.1s,mb4.9						
BRG	Berggiesshubel	87.14	323	eP	P	23 06 13.5	-0.4
	comp=Z,26nm,2.1s,mb5.1						
PRU	Pruhonice	87.17	322	eP	P	23 06 10.7	-3.3
YKA	Yellowknife Ar	87.87	23	P	P	23 06 17.3	+0.2
	comp=Z,6.0nm,0.7s,mb4.9,baz=308,slow=4.6,SNR=28						
YKA	Yellowknife Ar	87.87	23	P	P	23 06 17.3	+0.2
GERES	GERESS Array B	88.16	321	P	P	23 06 18.3	-0.5
	comp=Z,1.3nm,0.9s,mb4.2,baz=66,slow=4.5,SNR=8.0						
PPT	Papeete	93.48	107	eLR	LR	23 36 53.9	
	comp=Z,227nm,28.5s						
LPG	La Plagne	93.92	321	eP	P	23 06 45.4	-0.3
	comp=Z,52nm,1.6s,mb5.4						
LPG	La Plagne	93.92	321	eP	P	23 06 45.4	-0.3
LPG				pmax	pmax		
	comp=Z,26nm,1.6s,mb5.4						
LPG	La Plagne	93.92	321	eP	P	23 06 45.4	-0.3
	comp=Z,26nm,1.6s,mb5.4						
LPL	La Plagne	93.92	321	eP	P	23 06 44.7	-1.0
	comp=Z,34nm,1.4s,mb5.3						
LPL	La Plagne	93.92	321	eP	P	23 06 44.7	-1.0
LPL				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.3						
LPL	La Plagne	93.92	321	eP	P	23 06 44.7	-1.0
	comp=Z,17nm,1.4s,mb5.3						
TORD	Torodi Ar. Bea	113.79	294	PKiKP	PKiKP	23 12 06.4	-1.0
	comp=Z,0.7nm,0.9s,baz=60,slow=3.1,SNR=3.3						
TORD				PP	PP	23 12 55.5	-4.9
	comp=Z,1.9nm,1.0s,baz=69,slow=6.3,SNR=7.3						
TORD	Torodi Ar. Bea	113.79	294	PKPdf	PKiKP	23 12 06.4	-1.0
TORD				PP	PP	23 12 55.5	-4.9
TXAR	Lajitas Array	114.97	44	PKP	PKiKP	23 12 09.8	+0.4
	comp=Z,0.7nm,0.7s,baz=232,slow=1.1,SNR=6.1						
VNA2	Neumayer--Watz	119.69	197	ePKPdf	PKPdf	23 12 17.0	-0.1
	baz=38,slow=1.4						
VNA2				e		23 12 31.1	
VNA3	Neumayer Olymp	120.12	196	ePKPdf	PKPdf	23 12 17.7	-0.2
VNA3				e		23 12 31.5	
TKL	Tuckaleechee C	120.82	25	PKP	PKPdf	23 12 20.5	+0.1
	comp=Z,1.9nm,0.7s,baz=124,slow=3.6,SNR=3.6						
TKL	Tuckaleechee C	120.82	25	PKP	PKPdf	23 12 20.5	+0.1
SDV	Santo Domingo	150.02	27	ePKPdf	PKPdf	23 13 15.7	+1.4
SDV				ePKPab	PKPab	23 13 25.5	+0.5

*IDC **01** 22:58:33.8±2.8, 47.08N×152.76E, h82^{km}±24^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.7/26, mbtmp3.6/16, MS4.2/2, Ms1 4.2/2, ms1mx3.2/39, Error ellipse: s-maj=29.7km s-min=17.5km az=163.0*
*NEIC **01** 22:58:36.6±1.0, 47.03N×152.78E, h111^{km}±9^{km}, Error ellipse: s-maj=18.2km s-min=7.7km az=137.0*
*ISCJB **01** 22:58:37.1±1.1, 46.9N±0.1×152.7E±0.2, h131^{km}±9^{km}, mb4.0/17, Error ellipse: s-maj=23.3km s-min=7.8km az=135.6*
*MOS **01** 22:58:42.5±2.0, 46.40N×152.88E, h212^{km}, mb4.0/6, Error ellipse: s-maj=17.5km s-min=15.4km az=58.0*
ISC 01 22:58:36.4±1.2**, 47.0N**±0.1×**152.8E**±0.2**, h106**^{km}±10^{km}**, n54, σ0^{s}99**/51**, mb4.1**/17**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.27	30	ePN	Pn	22 59 43.5	+4.4
YUK	Yuzh-Kuril'sk	5.72	241	PN		23 00 14.4	
YUK				eS	Sn	23 01 02.9	-0.1
YUK				smax			
	comp=N,400nm,0.6s						
YUK				smax			
	comp=E,190nm,0.5s						
YUK				smax			
	comp=E,2μm,0.8s						
PEA0B	Petropavlovsk-	6.86	26	ePn	Pn	23 00 16.9	+2.8
PETK	Petropavlovsk-	6.86	26	P	Pn	23 00 11.9	-2.3
	comp=E,0.4nm,0.3s,baz=196,slow=12,SNR=9.8						
PETK				LR	LR	23 03 30.4	
	comp=E,55nm,18.1s,baz=102,slow=44						
YSS	Yuzh-Sakhalins	6.88	273	⇑iPN	Pn	23 00 05.0	-9.4
YSS				pmax	pmax		
	comp=Z,27nm,1.3s						
ASAJ	Asahikawa	7.73	252	P	Pn	23 00 21.6	-4.5
	comp=Z,1.2nm,0.3s,baz=77,slow=26,SNR=5.5						
ASAJ	Asahikawa	7.73	252	PN	Pn	23 00 21.6	-4.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	Erimo	8.51	238	ePN	Pn	23 00 38.0	+1.3
MJAR	Matsushiro Arr	15.08	231	P	Pn	23 02 02.5	-1.1
	comp=Z,0.3nm,0.3s,baz=32,slow=8.7,SNR=7.8						
MAJO	Matsushiro	15.08	231	eP	Pn	23 02 03.2	-0.4
MAJO				pmax	pmax		
	comp=Z,144nm,2.3s						
MAJO	Matsushiro	15.08	231	eP	Pn	23 02 03.2	-0.4
	comp=Z,144nm,2.3s						
SEY	Seymchan	15.95	359	⇑iP	Pn	23 02 16.6	+2.3
KSRS	Korea Array	20.68	251	P	P	23 03 08.7	+1.0
	comp=Z,2.7nm,0.8s,baz=56,slow=10.0,SNR=7.1						
KSRS	Korea Array	20.68	251	P	P	23 03 08.7	+1.0
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	31.05	289	P	P	23 04 44.9	+1.1
	comp=Z,0.7nm,0.7s,mb3.5,baz=66,slow=7.1,SNR=3.5						
SONM	Songino Array	31.05	289	P	P	23 04 44.9	+1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	42.28	305	P	P	23 06 17.4	-1.5
	comp=Z,0.5nm,0.4s,mb3.6,baz=59,slow=5.8,SNR=2.6						
ZALV				PcP	PcP	23 08 10.5	-0.1
	comp=Z,0.8nm,0.7s,baz=101,slow=6.0,SNR=3.7						
ZALV	Zalesovo Beam	42.28	305	P	P	23 06 17.4	-1.6
ZALV						23 08 10.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
BUKP	Musuan	45.63	220	eP	P	23 06 42.4	-3.7
DAV	Davao City (W)	46.13	219	eP	P	23 06 44.9	-5.1
	comp=Z,194nm,0.8s						
MKAR	Makanchi Array	46.63	297	P	P	23 06 52.5	-1.1
	comp=Z,0.9nm,0.7s,mb3.6,baz=63,slow=7.8,SNR=7.5						
MKAR				PcP	PcP	23 08 26.1	+0.3
	comp=Z,0.4nm,0.6s,baz=70,slow=3.1,SNR=5.5						
MKAR	Makanchi Array	46.63	297	P	P	23 06 52.5	-1.1
MKAR						23 08 26.1	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	47.04	303	P	P	23 06 56.1	-0.7
	comp=Z,0.9nm,0.5s,mb3.8,baz=70,slow=8.2,SNR=7.3						
KURK	Kurchatov	47.04	303	P	P	23 06 56.1	-0.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
BVAR	Borovoye Array	50.52	309	P	P	23 07 22.5	-0.9
	comp=Z,0.6nm,0.4s,mb4.0,baz=54,slow=6.7,SNR=6.1						
BVAR				PcP	PcP	23 08 40.0	+0.3
	comp=Z,0.6nm,0.5s,baz=71,slow=2.4,SNR=3.9						
BVAR	Borovoye Array	50.52	309	P	P	23 07 22.5	-0.8
BVAR						23 08 40.0	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	Taplejung	53.87	273	eP	P	23 07 48.8	+0.3
JIRN	Jiri	54.72	274	eP	P	23 07 54.8	+0.2
	comp=Z,14nm,0.7s,mb5.1						
GUN	Gumba	54.77	275	eP	P	23 07 55.2	+0.2
RAMN	Ramite	54.89	273	eP	P	23 07 55.6	-0.2
	comp=Z,23nm,0.9s,mb5.2						
KKN	Kakani	55.25	275	eP	P	23 07 58.9	+0.4
	comp=Z,12nm,0.6s,mb5.1						
KKN	Kakani	55.25	275	eP	P	23 07 58.9	+0.4
KKN				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
PKI	Pulchoki	55.30	275	eP	P	23 07 58.7	-0.1
DMN	Daman	55.49	275	eP	P	23 08 00.3	+0.2
GKN	Gorkha	55.55	276	eP	P	23 08 00.4	-0.2
	comp=Z,12nm,0.7s,mb5.0						
DANN	Dangsing	55.93	276	eP	P	23 08 03.8	+0.5
KOLN	Koldanda	56.41	276	eP	P	23 08 06.9	+0.2
	comp=Z,12nm,0.8s,mb5.0						
PDAR	Pinedale Array	64.76	54	P	P	23 09 03.5	+0.3
	comp=Z,0.5nm,0.7s,mb3.4,baz=251,slow=4.5,SNR=4.5						
NB2	NORSAR Subarra	67.91	341	P	P	23 09 23.0	+0.1
	comp=Z,1.8nm,0.6s,mb4.1,baz=27,slow=6.2						
NOA	NORSAR Array B	67.91	341	P	P	23 09 23.4	+0.5
	comp=Z,2.5nm,0.6s,mb4.2,baz=28,slow=6.3,SNR=10						
NOA	NORSAR Array B	67.91	341	P	P	23 09 23.4	+0.5
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	71.21	326	P	P	23 09 43.1	-0.3
	comp=Z,3.2nm,0.5s,mb4.4,baz=34,slow=5.7,SNR=6.4						
AKASG	Malin Array Be	71.21	326	P	P	23 09 43.1	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MLR	Muntele Rosu	76.72	325	P	P	23 10 15.7	+0.1
	comp=Z,2.6nm,0.8s,mb4.0,baz=135,slow=9.9,SNR=5.0						
MLR	Muntele Rosu	76.72	325	P	P	23 10 15.7	+0.1
MLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	77.55	60	P	P	23 10 20.9	+0.4
	comp=Z,0.5nm,0.8s,mb3.3,baz=295,slow=5.7,SNR=4.9						
TXAR	Lajitas Array	77.55	60	P	P	23 10 20.9	+0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	77.55	60	P	P	23 10 20.9	+0.4
BRTR	Keskin Array B	78.05	316	P	P	23 10 24.4	+1.3
	comp=Z,1.0nm,0.9s,mb3.5,baz=48,slow=6.4,SNR=2.9						
BRTR				LR	LR	23 49 02.7	
	comp=Z,200nm,21.2s,baz=256,slow=39						
GERES	GERESS Array B	78.12	334	P	P	23 10 22.0	-1.3
	comp=Z,0.5nm,0.8s,mb3.3,baz=15,slow=6.9,SNR=4.2						
GERES	GERESS Array B	78.12	334	P	P	23 10 22.0	-1.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MMAI	Mount Meron Ar	82.48	311	LR	LR	23 51 33.8	
	comp=Z,70nm,18.2s,baz=330,slow=39						
PLCA	Paso Flores	148.44	95	PKPbc	PKPbc	23 18 09.3	-0.6
	comp=Z,1.9nm,0.8s,baz=309,slow=2.6,SNR=4.0						
PLCA	Paso Flores	148.44	95	PKP2	PKPbc	23 18 09.4	-0.5
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						

*BJI **01** 23:01:20.3, 8.09S×106.00E, h65^{km}, mB5.3, mb5.4, Ms4.8, Msz4.5*
*MOS **01** 23:01:25.5±0.9, 6.92S×106.07E, h33^{km}, mb5.5/40, Error ellipse: s-maj=10.2km s-min=5.4km az=113.2*
*DJA **01** 23:01:29, 7.45S×105.70E, h28^{km}, Mw5.7/13*
*IDC **01** 23:01:29.1±2.1, 7.07S×105.96E, h55^{km}±17^{km}, mb5.1/24, mb1 5.1/25, mb1mx5.0/27, mbtmp5.1/25, ML5.9/1, MS3.9/11, Ms1 4.0/11, ms1mx3.7/39, Error ellipse: s-maj=14.7km s-min=10.8km az=68.0*
*ISCJB **01** 23:01:32.5±0.4, 7.11S±0.03×105.98E±0.03, h97^{km}±3^{km}, mb5.3/102, Error ellipse: s-maj=6.3km s-min=4.1km az=38.2*
*GCMT **01** 23:01:32.9±0.3, 7.33S×105.91E, h72^{km}±2^{km}, MW5.0/61, Moment Tensor Solution. s29,c34; s61,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.87±.17; $M_{\theta\theta}$1.71±.18; $M_{\phi\phi}$-4.58±.19; $M_{r\theta}$0.93±.09; $M_{\theta\phi}$-1.66±.13; $M_{\phi r}$-0.91±.13; Best double couple: $M_0$4.37800×10^{16} NP1:ϕ_s45.00000°, δ50.00000°, λ138.00000°. NP2: ϕ_s165.00000°, δ59.00000°, λ48.00000°. Principal axes: T 3.7080, Plg55.0000°, Azm20.0000°; N 1.3390, Plg35.0000°, Azm190.0000°; P -5.0470, Plg5.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 23:01:32.9±1.6, 7.07S×105.99E, h88^{km}±13^{km}, mb5.2/27 Error ellipse: s-maj=7.9km s-min=4.7km az=54.0*
NEIC Felt [III] at Cisarua and Palabuhanratu. Also felt at Depok.
ISC 01 23:01:33.3±0.4**, 7.15S**±0.03×**105.96E**±0.03**, h91**^{km}±3^{km}**, h58**^{km}±2.7^{km}**:pP-P, n431, σ0^{s}99**/392**, mb5.3**/102**, 58C-25D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.61	77	P	Pn	23 01 46.8	-2.3
SKJI				S	Sn	23 01 59.9	-1.0
DBJI	Dramaga	0.98	53	P	Pn	23 01 53.1	+0.2
DBJI				S	Sn	23 02 10.3	+2.7
SBJI	Serang	1.03	9	P	Pn	23 01 53.6	+0.1
CBJI	Citeko	1.14	51	P	Pn	23 01 53.1	-1.7
TNG	Tangerang	1.19	35	P	Pn	23 01 56.5	+1.2
TNG				S	Sn	23 02 15.0	+3.2
LEM	Lembang	1.68	79	P	Pn	23 02 01.5	+0.1
JCJI	Jatiwangi	2.39	74	P	Pn	23 02 10.0	-0.7
KLI	Kotabumi	2.52	334	P	Pn	23 02 12.8	+0.3
XMIS	Christmas Isla	3.33	185	eP	Pn	23 02 14.9	-8.4
XMIS				eS	Sn	23 02 49.4	-12
BJII	Banjamegara	3.73	93	⇑eP	Pn	23 02 28.9	+0.2
BJII				eS	Sn	23 03 12.4	+0.8
BJII	Banjamegara	3.73	93	P	Pn	23 02 28.8	+0.1
TPI	Tanjungpandan	4.68	21	⇓eP	Pn	23 02 42.5	+0.9
TPI				eS	Sn	23 03 55.0	+20
TPI	Tanjungpandan	4.68	21	P	Pn	23 02 43.5	+1.9
	170nm,0.7s,3μm1.4nm						
KSI	Kapahiang	4.83	316	P	Pn	23 02 43.0	-0.6
SJI	Sawahan	5.79	96	P	Pn	23 02 56.5	-0.2
	1μm,0.6s,6.0nm						
KRKI	Karangkates	6.51	99	⇓iP	Pn	23 03 02.5	-4.1
KRKI	Karangkates	6.51	99	P	Pn	23 03 06.6	0.0
	3μm,0.9s,15nm						
TRT	Tretes	6.64	95	⇓eP	Pn	23 03 07.4	-1.0
RGRI	Rengat	7.66	332	P	Pn	23 03 22.8	+0.6
	504nm,0.4s,4.5nm						
KMMI	Kalianget	7.95	90	P	Pn	23 03 27.4	+1.2

349nm,1.1s,3µm0.8nm
PDSI Padang 8.27 318 P Pn 23 03 26.9 -3.7
399nm,0.6s,4µm1.5nm
PPI Padang Panjang 8.66 320 P Pn 23 03 32.0 -3.8
242nm,0.6s,3µm0.9nm
NBBI Negara 8.67 99 P Pn 23 03 36.3 +0.3
2µm,0.8s,7.7nm
MYKOM Kota Tinggi 9.12 347 ⇓P Pn 23 03 43.6 +1.4
DNP Denpasar 9.29 100 P Pn 23 03 44.4 0.0
3µm,0.6s
KGM Kluang 9.48 344 ⇑P Pn 23 03 47.4 +0.4
BBKI Banjar Baru 9.57 68 P Pn 23 03 54.3 +6.0
KHKI Kahang-Kahang 9.64 98 P Pn 23 03 47.0 -2.2
1µm,0.7s,7µm
FRIM Kepong 11.19 337 ⇓P Pn 23 04 09.6 -0.6
SBUM Sibu 11.40 33 ⇓P Pn 23 04 16.4 +3.2
SBUM Sibu 11.40 33 P Pn 23 04 17.1 +3.9
79nm,0.9s,972nm
BTM Bintulu 12.50 35 ⇑P Pn 23 04 31.1 +3.1
KULM Kulim 13.44 337 ⇓P Pn 23 04 34.3 -6.1
KULM Kulim 13.44 337 P Pn 23 04 38.9 -1.5
44nm,1.4s
KAPI Kappang 13.88 82 P Pn 23 04 45.6 -0.5
1.6nm,0.3s,baz=272,slow=11,SNR=12
KAPI Kappang 13.88 82 *e*Pn **Pn 23 04 47.4 +1.3**
KAPI *e*PcP PcP 23 10 02.2 +0.1
KAPI Kappang 13.88 82 P Pn 23 04 49.7 +3.6
36nm,1.0s,387nm
WSI Waingapu 14.40 101⇑ *e*P **Pn 23 04 49.0 -3.9**
PCI Palu 15.16 66 P Pn 23 05 06.5 +3.9
KKM Kota Kinabalu 16.63 38 *e*Pn **Pn 23 05 22.6 +1.7**
140nm,0.8s
KKM Kota Kinabalu 16.63 38 ⇑P Pn 23 05 22.5 +1.6
SDKM Sandakan 16.94 42 ⇑P Pn 23 05 26.5 +1.7
MYLDM Lahad Datu 17.51 46 ⇑P Pn 23 05 35.3 +3.6
KDM Kudat 17.69 38 ⇓P Pn 23 05 35.5 +1.6
BATI Baumata 17.76 101 P Pn 23 05 31.5 -3.3
40nm,0.3s,baz=303,slow=1.1,SNR=36
BATI S **S 23 08 42.0 -11**
18nm,0.3s,baz=201,slow=21,SNR=4.9
BATI LR LR 23 14 23.6
comp=Z,521nm,20.2s,baz=303,slow=44
MBWA Marble Bar 19.27 138 P Pn 23 05 53.2 +0.4
SNR=5.7
MBWA Marble Bar 19.27 138 *e*Pn **Pn 23 05 51.2 -1.6**
73nm,0.6s
BATP Bataraza 19.75 37 *e*P **Pn 23 05 57.9 -0.6**
ENPP El Nido 22.63 36 *e*P **P 23 06 26.8 -0.1**
PAGZ Pagadian 22.89 50 *e*P **P 23 06 31.3 +1.7**
DAV Davao City (W) 24.13 55 ⇑P P 23 06 39.8 -1.2
SNR=6.6
DAV Davao City (W) 24.13 55 P P 23 06 41.6 +0.6
305nm,0.4s,mb6.0,baz=67,slow=4.0,SNR=9.2
DAV LR LR 23 15 41.5
comp=Z,78nm,20.6s,baz=343,slow=35
DAV Davao City (W) 24.13 55 P P 23 06 41.6 +0.6
DAV LR LR 23 15 41.5
GUIM Jordan 24.20 43 *e*P **P 23 06 43.5 +1.9**
TBP Tagbilaran 24.45 47 *e*P **P 23 06 44.2 +0.4**
OTRP Odiongan 25.11 40 *e*P **P 23 06 50.8 +0.9**
MSLP Maasin 25.48 48 *e*P **P 23 06 53.5 +0.3**
QIZ Qiongzhong 26.29 8 P P 23 07 02.5 +2.0
QIZ AP pP 23 07 15.5 -5.5
QIZ S **S 23 11 28.7 +2.1**
QIZ AMB AMB
comp=Z,19nm,1.3s,mb4.4
CM31 Chiang Mai Arr 26.37 345 *e*P **P 23 06 59.8 -1.3**
comp=Z,9.2nm,0.6s,mb4.4
CMAR Chiang Mai Arr 26.37 345 P P 23 06 59.5 -1.6
comp=Z,12nm,0.5s,mb4.6,baz=182,slow=8.4,SNR=55
CMAR PcP PcP 23 10 25.6 +0.7
comp=Z,6.8nm,0.7s,baz=204,slow=3.3,SNR=14
CMAR LR LR 23 19 35.7
comp=Z,171nm,19.6s,baz=185,slow=41
CMAR Chiang Mai Arr 26.37 345⇑ *e*P **P 23 06 59.7 -1.4**
KAKA Kakadu 26.65 104 *e*P x 23 06 45.8
comp=Z,22nm,0.4s
CHTO Chiang Mai 26.71 345 P P 23 07 03.4 -0.8
SNR=7.1
CHTO Chiang Mai 26.71 345 *e*P **P 23 07 02.5 -1.7**
CHTO pmax pmax
comp=Z,16nm,0.7s,mb4.7
CHTO Chiang Mai 26.71 345 *e*P **P 23 07 02.5 -1.7**
comp=Z,16nm,0.7s,mb4.7
NWAO Narrogin (SRO) 27.71 159 LR LR 23 19 20.5
comp=Z,308nm,18.5s,baz=325,slow=39
WRAB Tennant Creek 30.32 118 P P 23 07 36.0 -0.4
comp=Z,159nm,0.6s,mb5.8,SNR=24
WRAB Tennant Creek 30.32 118 *e*P **P 23 07 36.3 -0.1**
WRAB pmax pmax
comp=Z,26nm,0.7s,mb5.0
WRAB Tennant Creek 30.32 118 *e*P **P 23 07 36.3 -0.1**
40nm,0.3s,mb5.0
WB2 Warramunga Arr 30.33 118 *e*P **P 23 07 35.7 -0.8**
WB2 *e* 23 08 23.5
WB2 *e* 23 08 34.6
WB2 *e*PCP PcP 23 10 35.0 +0.2
ASAR Alice Springs 31.45 125 P P 23 07 45.9 -0.5
comp=Z,5.4nm,0.7s,mb4.4,baz=308,slow=8.2,SNR=41
ASAR PP PP 23 08 42.4 -17
comp=Z,14nm,0.7s,baz=303,slow=11,SNR=15
ASAR PcP PcP 23 10 38.1 +0.4
comp=Z,8.7nm,0.4s,baz=304,slow=2.5,SNR=14
ASAR Alice Springs 31.45 125 P P 23 07 45.9 -0.4
ASAR 23 10 38.1
ASAR pmax pmax
comp=Z,5.0nm,0.7s
KMI Kunming 32.23 355 P P 23 07 53.7 +0.7
KMI AP pP 23 08 09.5 -4.4
KMI XP sP 23 08 15.9 -8.5
KMI PP PP 23 09 06.0 -1.6
KMI PPP 23 09 22.7
KMI PCP PcP 23 10 39.5 -0.2
KMI S **S 23 13 07.5 +7.8**
KMI SSS 23 15 29.2
KMI AMB AMB
comp=Z,26nm,0.8s,mb5.0
KMI AMB AMB
comp=Z,749nm,12.1s
KMI LR LR
comp=N,178nm,20.2s
KMI LR LR
comp=E,436nm,14.8s
KMI LR LR
comp=Z,400nm,10.8s
MDRS Chennai 32.49 308 *ex* x 23 10 53.2
KOD Kodaikanal 33.21 301 *e*P **P 23 08 03.9 +2.1**
KOD AMb AMB 23 08 08.8
comp=Z,28nm,0.3s,mb5.5
VIS Vishakhapatnam 33.32 318 *e*P **P 23 08 02.6 -0.1**
VIS AMb AMB 23 08 04.5
GYA Guiyang 33.41 1⇑ *i*P **P 23 08 04.2 +0.8**
GYA AP pP 23 08 18.0 -6.3
GYA XP sP 23 08 25.0 -10
GYA PP PP 23 09 19.4 -1.3
GYA PPP 23 09 34.3
GYA S **S 23 13 21.9 +3.8**
GYA PCS PcS 23 14 28.0 -0.9
GYA SS SS 23 15 34.7 -11
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,280nm,5.4s
GYA LR LR
comp=N,1µm,13.8s
GYA LR LR
comp=E,1µm,14.0s
GYA LR LR
comp=Z,2µm,12.9s
SHL Shillong 35.28 338 *e*P **P 23 08 20.0 +0.5**
HYB Hyderabad 36.46 312 *i*P **P 23 08 30.0 +0.3**
HYB Hyderabad 36.46 312 *e*P **P 23 08 30.0 +0.3**
BOK Bokaro 36.47 328 *e*P **P 23 08 29.8 +0.1**
BOK AMb AMB 23 08 30.9
comp=Z,40nm,0.7s,mb5.5
MNGI Mangalore 36.81 303 *e*P **P 23 08 32.5 -0.2**
MNGI AMb AMB 23 09 03.4
comp=Z,24nm,2.3s,mb4.7
COEN Coen 37.17 104 *e*P **P 23 08 34.6 -1.2**
comp=Z,25nm,0.8s,mb5.2
CD2 Chengdu 37.90 357 P P 23 08 40.6 -1.1
CD2 AP pP 23 08 58.7 -4.2
CD2 XP sP 23 09 05.9 -7.5
CD2 PP PP 23 10 15.6 +5.5
CD2 S **S 23 14 29.4 +2.8**
CD2 XS sS 23 14 58.3 -4.9
CD2 AMB AMB
comp=Z,40nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,1µm,12.6s
CD2 LR LR
comp=E,400nm,9.6s
CD2 LR LR
comp=Z,430nm,13.8s
WHN Wuhan 38.33 12 P P 23 08 45.0 -0.3
NGP Nagpur 38.59 317 *e*P **P 23 08 46.5 -1.2**
NGP AMb AMB 23 08 47.5
comp=Z,74nm,1.1s,mb5.4
GOA Goa 38.98 305 *e*P **P 23 08 53.3 +2.3**
GOA AMb AMB 23 08 55.7
comp=Z,46nm,0.5s,mb5.5
LSA Lhasa 39.30 339 P P 23 08 53.2 -0.3
LSA Lhasa 39.30 339 *e*P **P 23 08 53.2 -0.3**
LSA pmax pmax
comp=Z,43nm,0.5s,mb5.5
LSA Lhasa 39.30 339 *e*P **P 23 08 53.2 -0.3**
comp=Z,43nm,0.5s,mb5.5
AKL Akola 39.69 315 *e*P **P 23 08 56.8 0.0**
AKL AMb AMB 23 08 59.7
comp=Z,30nm,0.4s,mb5.5
KAD Karad 39.71 308 *e*P **P 23 08 56.4 -0.6**
KAD AMb AMB 23 09 00.9
comp=Z,30nm,0.6s,mb5.3
JOW Kunigami 40.11 32 P P 23 09 00.4 +0.2
comp=Z,31nm,0.5s,mb5.4,baz=243,slow=8.3,SNR=10
JOW LR LR 23 26 57.8
comp=Z,77nm,19.0s,baz=40,slow=38
POO Poona 40.67 309 *e*P **P 23 09 04.4 -0.6**
POO AMb AMB 23 09 08.7
comp=Z,42nm,0.6s,mb5.4
PMG Port Moresby 40.82 96 *e*P **P 23 09 06.4 +0.1**
NJ2 Nanjing 40.88 17 *e*P **P 23 09 07.2 +0.7**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
XAN Xi'an 41.06 4 P P 23 09 06.3 -1.6
XAN AP pP 23 09 21.0 -6.4
XAN PP PP 23 10 44.2 -0.3
XAN PCP PcP 23 11 05.3 -0.8
XAN PPP 23 11 21.0
XAN S **S 23 15 19.5 +5.6**
XAN SS SS 23 18 26.2 +6.4
XAN AMB AMB
comp=Z,47nm,0.7s,mb5.4
XAN LR LR
comp=E,148nm,20.4s
XAN LR LR
comp=Z,230nm,22.4s
CTA Charters Tower 41.10 112 *e*P **P 23 09 08.8 +0.3**
comp=Z,20nm,0.8s,mb5.0
CTA *e*PCP PcP 23 11 06.8 +0.2
CTA Charters Tower 41.10 112 P P 23 09 08.9 +0.4
comp=Z,32nm,0.9s,mb5.2,baz=281,slow=9.6,SNR=24
CTA PcP PcP 23 11 06.3 -0.3
comp=Z,11nm,0.6s,baz=300,slow=5.4,SNR=5.9
CTA Charters Tower 41.10 112 P P 23 09 08.9 +0.4
CTA 23 11 06.3
CTA pmax pmax
comp=Z,33nm,0.9s
CTAO Charters Tower 41.10 112 *e*P **P 23 09 08.5 0.0**
CTAO pmax pmax
comp=Z,34nm,0.9s,mb5.2
CTAO Charters Tower 41.10 112 *e*P **P 23 09 08.5 0.0**
comp=Z,34nm,0.9s,mb5.2
BHPL Bhopal 41.12 318 *e*P **P 23 09 08.9 +0.3**
BHPL AMb AMB 23 09 10.0
comp=Z,66nm,0.7s,mb5.6
STKA Stephens Creek 41.31 131 *e*P **P 23 09 10.1 0.0**
comp=Z,56nm,0.4s,mb5.8
STKA *e*PCP PcP 23 11 07.5 +0.4
STKA Stephens Creek 41.31 131 P P 23 09 10.2 +0.1
comp=Z,60nm,0.4s,mb5.8,baz=308,slow=7.5,SNR=284
STKA PcP PcP 23 11 06.8 -0.3
comp=Z,19nm,0.6s,baz=307,slow=4.1,SNR=4.1
LZH Lanzhou 43.05 357 *e*P **P 23 09 24.0 -0.1**
LZH AP pP 23 09 40.5 -5.2
LZH XP sP 23 09 45.5 -11
LZH PP PP 23 11 07.5 +1.6
LZH PCP PcP 23 11 13.5 +0.8
LZH *e*S **S 23 15 45.0 +1.8**
LZH AMB AMB
comp=Z,38nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,210nm,4.8s
LZH LR LR
comp=E,601nm,12.9s
LZH LR LR
comp=Z,847nm,14.0s
GUMO Guam 43.78 62 P P 23 09 27.7 -2.7
comp=Z,107nm,0.5s,mb5.9,baz=171,slow=8.9,SNR=8.1
GUMO Guam 43.78 62 P P 23 09 27.7 -2.6
GUMO pmax pmax
comp=Z,107nm,0.5s,mb5.8
PTH Pithoragarh 44.09 327 *e*P **P 23 09 32.7 +0.1**
PTH *ex* x 23 11 17.3
NDI New Delhi 45.13 323 *e*P **P 23 09 38.0 -2.9**
NDI *e*S **S 23 16 10.0 -3.7**
AJM Ajmer 45.17 319 *e*P **P 23 09 41.7 +0.5**
AJM AMb AMB 23 09 42.2
comp=Z,26nm,0.5s,mb5.2
DDI Dehra Dun 45.88 326 *ex* x 23 09 43.5
GTA Gaotai 46.67 353 P P 23 09 52.2 -0.6
GTA AP pP 23 10 04.9 -10
GTA PCP PcP 23 11 25.8 +0.7
GTA PP PP 23 11 41.2 -2.7
GTA S **S 23 16 41.7 +6.3**
GTA SS SS 23 20 01.1 -1.9
GTA AMB AMB
comp=Z,65nm,1.0s,mb5.3
GTA AMB AMB
comp=Z,188nm,8.1s
GTA LR LR
comp=N,278nm,18.0s
GTA LR LR
comp=E,272nm,17.1s
GTA LR LR
comp=Z,269nm,18.0s
EIDS Eidsvold 46.68 118 *e*P **P 23 09 53.8 +0.7**
comp=Z,17nm,0.9s,mb4.8
EIDS *ep*P pP 23 10 04.3 -11
TOO Toolangi 46.91 136 *e*P **P 23 09 56.2 +1.5**
TOO *e*PCP PcP 23 11 27.1 +1.0
SMLA Simla 46.98 326 *i*P **P 23 09 54.8 -0.6**
SMLA *ex* x 23 09 56.4
comp=Z,528nm,0.3s
SMLA *i* x x 23 16 36.8
SDNR Sundarnagar 47.38 326 *e*P **P 23 09 58.0 -0.4**
BJT Baijiatuau 47.87 11 *e*P **P 23 10 01.8 -0.3**
BJT *e* 23 11 29.8
BJT pmax pmax
comp=Z,65nm,0.6s
BJT Baijiatuau 47.87 11 *e*P **P 23 10 01.8 -0.3**
comp=Z,65nm,0.6s,mb5.6
BJT *e*PcP PcP 23 11 29.8 +0.4
BJI Beijing 47.89 11 P P 23 10 01.4 -0.8
BJI AMB AMB
comp=Z,95nm,0.6s,mb5.8
HHC Hu-ho-hao-te 48.04 6 *e*P **P 23 10 03.3 0.0**
HHC AP pP 23 10 18.6 -6.7
HHC XP sP 23 10 25.9 -10
HHC PCP PcP 23 11 29.8 -0.2
HHC PP PP 23 11 56.0 -0.4
HHC S **S 23 16 55.7 +1.0**
HHC SCS ScS 23 19 47.5 -0.1
HHC AMB AMB
comp=Z,17nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,331nm,9.4s
HHC LR LR
comp=N,448nm,14.3s
HHC LR LR
comp=E,209nm,14.3s
HHC LR LR
comp=Z,225nm,14.3s
CAN Canberra 48.38 132 *e*P **P 23 10 07.4 +1.2**
CAN pmax pmax
comp=Z,34nm,1.3s,mb5.0
CAN Canberra 48.38 132 *e*P **P 23 10 07.4 +1.2**
comp=Z,34nm,1.3s,mb5.0
ARMA Armidale 48.60 125 *e*P **P 23 10 09.7 +1.7**
ARMA *e*PCP PcP 23 11 33.7 +1.4
CNB Canberra Magne 48.64 132 *e*P **P 23 10 09.8 +1.6**
CNB *e*PCP PcP 23 11 30.7 -1.7
THN Thein Dam 48.78 326 *e*P **P 23 10 07.2 -2.0**
KS15 Wonju Array Si 48.86 23 *e*P **P 23 10 10.3 +0.6**
KSRS Korea Array 48.89 23 P P 23 10 09.6 -0.4
comp=Z,38nm,0.7s,mb5.4,baz=214,slow=8.1,SNR=112
KSRS PcP PcP 23 11 33.2 0.0
comp=Z,2.7nm,0.7s,baz=226,slow=4.4,SNR=3.9
KSRS Korea Array 48.89 23 P P 23 10 09.6 -0.3
KSRS 23 11 33.2
KSRS pmax pmax
comp=Z,38nm,0.7s,mb5.4
NIL Nilore 51.07 325 *e*P **P 23 10 25.6 -1.0**
NIL pmax pmax
comp=Z,51nm,1.0s,mb5.5
NIL Nilore 51.07 325 *e*P **P 23 10 25.6 -0.9**
comp=Z,51nm,1.0s,mb5.5
MAJO Matsushiro 52.94 33 *e*P **P 23 10 38.2 -2.2**
MAT Matsushiro 52.94 33 P P 23 10 38.1 -2.3
MJAR Matsushiro Arr 52.94 33 P P 23 10 37.6 -2.8
comp=Z,20nm,0.7s,mb5.2,baz=209,slow=8.0,SNR=68
MJAR Matsushiro Arr 52.94 33 P P 23 10 37.6 -2.8
MJAR pmax pmax
comp=Z,20nm,0.7s
WMQ Urumqi 53.36 344 P P 23 10 43.3 0.0
WMQ PCP PcP 23 11 50.2 +0.6
WMQ AMB AMB
comp=Z,63nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,118nm,3.0s
WMQ LR LR
comp=N,91nm,18.0s
WMQ LR LR
comp=E,151nm,15.0s
WMQ LR LR
comp=Z,182nm,14.0s
CN2 Changchun 53.69 17 ⇑P P 23 10 44.5 -1.2
CN2 PCP PcP 23 11 50.5 -0.4
CN2 *e*S **S 23 18 14.2 +1.4**
CN2 AMB AMB
comp=Z,70nm,1.0s,mb5.7
CN2 AMB AMB
comp=Z,800nm,6.0s
CN2 LR LR
comp=N,300nm,13.0s
CN2 LR LR
comp=E,200nm,13.0s
CN2 LR LR
comp=Z,400nm,14.0s
KSH Kashi 54.09 331 P P 23 10 48.9 +0.2
KSH AP pP 23 11 04.5 -6.6
KSH XP sP 23 11 11.6 -10
KSH PP PP 23 12 52.5 +1.2
KSH PPP 23 14 02.9
KSH SCP ScP 23 15 44.3 +1.8
KSH S **S 23 18 18.9 +0.6**
KSH SCS ScS 23 20 29.2 -0.2
KSH SS SS 23 22 00.9 -0.5
KSH AMB AMB
comp=Z,172nm,0.7s,mb6.2
KSH AMB AMB
comp=Z,538nm,4.8s
KSH LR LR
comp=Z,1µm,10.1s
KBL Kabul 54.18 322 *e*P **P 23 10 48.7 -0.8**
KBL pmax pmax
comp=Z,23nm,0.7s,mb5.3
KBL Kabul 54.18 322 *e*P **P 23 10 48.7 -0.8**
comp=Z,23nm,0.7s,mb5.3
SONM Songino Array 54.74 0 P P 23 10 53.3 0.0
comp=Z,14nm,0.4s,mb5.4,baz=181,slow=9.6,SNR=211
SONM PcP PcP 23 11 54.9 +0.1
comp=Z,16nm,0.5s,baz=191,slow=4.0,SNR=25
SONM ScP ScP 23 15 48.9 +3.7
comp=Z,0.7nm,0.6s,baz=161,slow=3.9,SNR=4.7
SONM LR LR 23 35 53.3
comp=Z,229nm,20.6s,baz=177,slow=38
SONM PKPPKP 23 40 57.3
comp=Z,0.6nm,1.0s,baz=48,slow=2.2,SNR=3.7
SONM Songino Array 54.74 0 P P 23 10 53.3 0.0
SONM 23 11 54.9
SONM pmax pmax
comp=Z,14nm,0.4s
SONM MLR MLR
comp=Z,229nm,20.6s
ULN Ulaanbaatar 54.78 1 P P 23 10 53.8 +0.2
SNR=5.5
ULN Ulaanbaatar 54.78 1 *e*P **P 23 10 53.4 -0.2**
SMDO Samad 55.63 304 P P 23 11 01.3 +1.1
SNR=7.4
MDJ Mudanjiang 55.75 20 P P 23 10 59.8 -0.8
MDJ AP pP 23 11 13.4 -10
MDJ S **S 23 18 36.1 -4.3**
MDJ SS SS 23 22 29.5 +2.1
MDJ AMB AMB
comp=Z,52nm,0.7s,mb5.7
MDJ AMB AMB
comp=Z,152nm,5.3s
MDJ LR LR
comp=E,61nm,18.2s
MDJ LR LR
comp=Z,93nm,17.2s
MDJ Mudanjiang 55.75 20 *e*P **P 23 11 00.1 -0.5**
comp=Z,40nm,0.8s,mb5.5
BIDO Bidbid 55.78 305 ⇓P P 23 11 01.7 +0.5
SNR=9.6
KZA Kyzart 56.45 333 P P 23 11 06.1 +0.4
SNR=5.3
TKM2 Tokmak 2 56.97 334 *e*P **P 23 11 08.7 -0.6**
TKM2 pmax pmax
comp=Z,104nm,0.6s,mb6.0
TKM2 Tokmak 2 56.97 334 P P 23 11 08.7 -0.6
SNR=145
TKM2 Tokmak 2 56.97 334 *e*P **P 23 11 08.7 -0.6**
comp=Z,104nm,0.6s,mb6.0
KBK Karagaybulak 57.05 333 P P 23 11 09.9 0.0
SNR=62
WHFO Wadi Hawf 57.22 297 P P 23 11 12.3 +0.8
SNR=5.7
AAK Ala-Archa 57.23 333 P P 23 11 11.8 +0.6
comp=Z,143nm,0.8s,mb6.0,SNR=16
AAK Ala-Archa 57.23 333 P P 23 11 11.3 +0.1
SNR=8.3
AAK Ala-Archa 57.23 333⇑ *e*P **P 23 11 10.3 -0.9**
AAK pmax pmax
comp=Z,17nm,1.2s,mb5.0
CHMS Chumysh 57.41 333 P P 23 11 11.8 -0.6
SNR=15
HIA Hailar 57.46 11⇑ *i*P **P 23 11 11.2 -1.4**
EKS2 Erkin-Say 57.58 332 P P 23 11 13.6 -0.1
SNR=60
MK31 Makanchi Array 57.68 341 *i*P **P 23 11 13.4 -0.8**
MKAR Makanchi Array 57.68 341 P P 23 11 13.2 -1.0
comp=Z,29nm,0.5s,mb5.6,baz=150,slow=8.0,SNR=491
MKAR LR LR 23 37 20.0
comp=Z,184nm,18.6s,baz=262,slow=37
MKAR Makanchi Array 57.68 341 P P 23 11 13.3 -0.9
MKAR pmax pmax
comp=Z,29nm,0.5s
MKAR MLR MLR
comp=Z,184nm,18.6s
USP Ospenovka 57.73 333 P P 23 11 13.9 -0.8
SNR=23
TLY Talaya 58.63 358 *e*P **P 23 11 22.2 +1.5**
TLY pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
TLY Talaya 58.63 358⇑ *i*P **P 23 11 21.1 +0.4**
MOY Mondy 58.73 356 *e*P **P 23 11 21.7 +0.2**
HVS Khovu-Aksy 59.00 351 *c i*P **P 23 11 22.5 -0.8**
HVS pmax pmax
comp=Z,30nm,0.7s,mb5.4
CASY Casey 59.12 178 *e*P **P 23 11 23.6 -0.4**
KK31 Karatay Array 59.47 330 *e*P **P 23 11 24.9 -1.9**
KK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
KK31 Karatay Array 59.47 330 *i*P **P 23 11 24.9 -1.9**
KLR Kul'dur 60.50 19⇓ *i*P **P 23 11 28.7 -5.0**
KLR pmax pmax
comp=Z,130nm,1.8s,mb5.7
HABR Khabarovsk 61.00 22 *e*P **P 23 11 35.2 -1.9**
HABR *e*S **S 23 19 52.1 +3.6**
HABR *e* 23 21 23.2
HABR *e*SS SS 23 23 53.8 +4.0
KURK Kurchatov 62.29 341 P P 23 11 45.9 +0.2
comp=Z,735nm,0.6s,SNR=57
KURK Kurchatov 62.29 341 P P 23 11 45.5 -0.2

SNR=29
KURK Kurchatov 62.29 341 P **P** **23 11 44.3 -1.4**
comp=Z,68nm,0.7s,mb5.8,baz=155,slow=6.1,SNR=274
KURK PcP PcP 23 12 24.4 -0.3
comp=Z,10nm,0.7s,baz=160,slow=4.0,SNR=5.5
KURK Kurchatov 62.29 341⇑ *eP* **P** **23 11 44.8 -0.9**
KURK pmax pmax
comp=Z,109nm,0.9s,mb5.9
YSS Yuzh-Sakhalins 62.98 27⇑ *iP* **P** **23 11 49.0 -1.3**
YSS pmax pmax
comp=N,60nm,0.9s
YSS pmax pmax
comp=E,60nm,0.9s
YSS pmax pmax
comp=Z,180nm,0.9s,mb6.0
YSS Yuzh-Sakhalins 62.98 27⇑ *eP* **P** **23 11 49.1 -1.2**
ABKT Ailbek 63.19 319 P **P** **23 11 51.3 -0.6**
comp=Z,333nm,1.0s,mb6.2,SNR=16
ZAA0 Zalesovo Array 63.42 346 *eP* **P** **23 11 52.0 -1.1**
ZALV Zalesovo Beam 63.42 346 P **P** **23 11 51.8 -1.3**
comp=Z,32nm,0.3s,mb5.7,baz=156,slow=5.4,SNR=234
ZALV PKPPKP 23 40 49.0
comp=Z,0.9nm,0.6s,baz=306,slow=3.4,SNR=6.0
ZALV LR LR 23 44 26.9
comp=Z,91nm,20.8s,baz=84,slow=41
KRAR Krasnoyarsk 63.86 352⇑ *iP* **P** **23 11 55.6 -0.4**
KRAR pmax pmax
comp=Z,52nm,1.3s,mb5.2
NVS Novosibirsk 64.62 346⇑ *iP* **P** **23 11 59.1 -1.8**
NVS *eS* **S** **23 20 28.3 -5.2**
NVS *ePS* 23 21 10.9
NVS pmax pmax
comp=Z,38nm,1.4s,mb5.0
NVS pmax pmax
comp=N,23nm,1.3s
NVS pmax pmax
comp=E,23nm,1.4s
NVS smax
comp=E,11nm,1.1s
BOD Bodaibo 65.08 5 *eP* **P** **23 12 03.1 -0.7**
BOD pmax pmax
comp=Z,37nm,0.9s,mb5.2
CLNS Chul'man 65.63 11 *eP* **P** **23 12 07.1 -0.3**
CLNS *e* 23 12 39.7
CLNS *eS* S 23 20 43.8 -2.0
CLNS pmax pmax
comp=Z,37nm,1.0s,mb5.2
CLNS pmax pmax
comp=N,29nm,1.0s
CLNS pmax pmax
comp=E,16nm,1.2s
CLNS smax
comp=E,230nm,13.1s
CLNS smax
comp=N,66nm,12.5s
VOSK Vostochnaya 66.64 338 P **P** **23 12 13.2 -0.8**
VOSK pmax pmax
comp=Z,18nm,0.6s,mb5.1
RDF Al-Radifah 66.66 306 *eP* **P** **23 12 14.2 -0.4**
baz=305
RDF AMb AMB 23 12 15.7
comp=Z,105nm,1.0s,mb5.6,baz=305
UMR Umm Al-Rimmam 66.77 306 *eP* **P** **23 12 15.2 -0.2**
baz=306
UMR AMb AMB 23 12 16.0
comp=Z,113nm,0.6s,mb5.9,baz=306
MAW Mawson 66.93 197 *eP* **P** **23 12 15.9 +0.3**
comp=Z,6.8nm,0.6s,mb4.7
MAW Mawson 66.93 197 P **P** **23 12 16.0 +0.4**
comp=Z,7.6nm,0.6s,mb4.7,baz=43,slow=7.1,SNR=18
MAW Mawson 66.93 197 P **P** **23 12 16.0 +0.4**
MAW pmax pmax
comp=Z,8.0nm,0.6s
NAY Al-Naaiem 67.03 306 *eP* **P** **23 12 16.4 -0.6**
baz=306
NAY AMb AMB 23 12 17.8
comp=Z,40nm,0.9s,mb5.2,baz=306
BVAR Borovoye Array 67.10 338 P **P** **23 12 16.4 -0.5**
comp=Z,85nm,0.6s,mb5.8,baz=143,slow=9.0,SNR=691
BVAR Borovoye Array 67.10 338 P **P** **23 12 16.4 -0.5**
BVAR pmax pmax
comp=Z,85nm,0.6s
BRVK Borovoye 67.17 338 P **P** **23 12 16.8 -0.5**
comp=Z,704nm,0.6s,SNR=43
BRVK Borovoye 67.17 338 P **P** **23 12 17.2 -0.2**
SNR=18
BRVK Borovoye 67.17 338⇑ *eP* **P** **23 12 16.7 -0.6**
MIB Mutribah 67.17 306 *eP* **P** **23 12 17.1 -0.8**
baz=306
MIB AMb AMB 23 12 19.0
comp=Z,61nm,0.9s,mb5.4,baz=306
AB31 Akbulak array 69.01 330 P **P** **23 12 28.2 -0.8**
AB31 pmax pmax
comp=Z,98nm,0.8s,mb5.7
YAK Yakutsk 71.38 12*c* *iP* **P** **23 12 41.9 -1.2**
YAK pmax pmax
comp=Z,189nm,0.9s,mb5.9
YAK pmax pmax
comp=N,59nm,1.1s
YAK pmax pmax
comp=E,35nm,1.4s
YAK Yakutsk 71.38 12⇑ *eP* **P** **23 12 41.6 -1.5**
SKR Severo-Kuril's 72.00 31 *eP* **P** **23 12 44.0 -3.1**
SVE Sverdlovsk 73.72 336⇓ *eP* **P** **23 12 57.4 +0.3**
SVE *eS* S 23 22 22.9 +2.3
SVE pmax pmax
comp=Z,89nm,1.4s,mb5.3
PETK Petropavlovsk- 74.22 29 P **P** **23 12 59.2 -1.0**
comp=Z,22nm,0.6s,mb5.1,baz=157,slow=1.3,SNR=71
PETK LR LR 23 48 25.9
comp=Z,44nm,18.9s,baz=271,slow=38
PETK Petropavlovsk- 74.22 29 P **P** **23 12 59.2 -1.0**
PETK LR LR 23 48 25.9
ARU Arti 74.31 335 P **P** **23 13 00.1 -0.5**
comp=Z,318nm,1.1s,mb6.0,SNR=16
ARU Arti 74.31 335*c* *iP* **P** **23 13 00.3 -0.3**
ARU *ePPP* 23 17 29.5
ARU *eS* S 23 22 33.2 +5.9
ARU *eSS* SS 23 27 13.9 -1.3
ARU pmax pmax
comp=Z,71nm,1.7s,mb5.1
ARU Arti 74.31 335⇑ *eP* **P** **23 13 00.2 -0.4**
RAO Raoul Island 74.45 118 LR LR 23 43 20.4
comp=Z,170nm,18.1s,baz=168,slow=34
PET Petropavlovsk 74.64 30 *eP* **P** **23 13 01.5 -1.1**
PET pmax pmax
comp=Z,82nm,0.7s,mb5.6
PET Petropavlovsk 74.64 30⇑ *eP* **P** **23 13 01.3 -1.3**
SYO Syowa Base 75.01 200⇑ *iP* **P** **23 13 03.2 -1.3**
MARD Mardin 75.08 312 *iP* **P** **23 13 06.0 +0.5**
VNDA Vanda 76.01 169 P **P** **23 13 10.1 -0.1**
comp=Z,14nm,0.8s,mb4.7,baz=308,slow=6.1,SNR=71
VNDA Vanda 76.01 169 P **P** **23 13 10.1 0.0**
VNDA pmax pmax
comp=Z,14nm,0.9s
VNDA Vanda 76.01 169 P **P** **23 13 10.1 -0.1**
KIV Kislovodsk 76.30 318*c* *iP* **P** **23 13 12.3 0.0**
KIV pmax pmax
comp=Z,41nm,1.0s,mb5.1
LSZ Lusaka 76.39 256 *eP* **P** **23 13 13.8 +0.4**
LSZ pmax pmax
comp=Z,32nm,1.5s,mb4.8
LSZ Lusaka 76.39 256 *eP* **P** **23 13 13.8 +0.4**
comp=Z,32nm,1.5s,mb4.8
ELZG Elazig 76.82 312 *iP* **P** **23 13 16.4 +1.0**
SOKR Solikamsk 77.06 337*c* *iP* **P** **23 13 16.1 -0.1**
SOKR pmax pmax
comp=Z,40nm,0.9s,mb5.2
SBA Scott Base 77.09 169 *eP* **P** **23 13 16.8 +0.6**
SBA pmax pmax
comp=Z,12nm,0.8s,mb4.7
SBA Scott Base 77.09 169 *eP* **P** **23 13 16.8 +0.5**
comp=Z,12nm,0.8s,mb4.7
KEMA Kemaliye 77.45 313 *iP* **P** **23 13 19.6 +0.8**
GZT Gaziantep 77.50 311 *iP* **P** **23 13 20.1 +0.9**
AKCD Akcadag 77.54 312 *iP* **P** **23 13 19.9 +0.5**
SEY Seymchan 78.29 20⇑ *eP* **P** **23 13 22.2 -0.8**
SEY Seymchan 78.29 20⇑ *eP* **P** **23 13 22.3 -0.7**
BOSA Boshof 78.47 242 P **P** **23 13 25.1 +0.3**
comp=Z,9.0nm,0.9s,mb4.5,baz=99,slow=5.3,SNR=16
BOSA Boshof 78.47 242 P **P** **23 13 25.2 +0.4**
BOSA pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
ANDN Andirin 78.49 311 *iP* **P** **23 13 25.4 +0.7**
GULE Gulek 79.59 310 *iP* Px 23 13 09.5
VRHR Novokhopersk 79.92 325*c* *iP* **P** **23 13 31.6 -0.5**
VRHR pmax pmax
comp=Z,100nm,0.5s,mb5.9
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=E,40nm,1.2s
CSS Prodhromos 80.05 307 P **P** **23 13 33.8 +0.6**
TIXI Tiksi 80.08 7⇑ *eP* **P** **23 13 30.6 -2.0**
TIXI pmax pmax
comp=Z,103nm,1.1s,mb5.6
TIXI MLR MLR
comp=Z,100nm,19.0s
CTKT Corum 80.58 313 *i* P **P** **23 13 36.2 +0.3**
CDAG Cicekdag 80.58 312 *i* P **P** **23 13 37.0 +1.0**
BRTR Keskin Array B 81.16 312 P **P** **23 13 38.9 -0.2**
comp=Z,36nm,0.7s,mb5.3,baz=137,slow=7.0,SNR=181
BRTR Keskin Array B 81.16 312⇓ *eP* **P** **23 13 38.9 -0.1**
BR131 Keskin Array S 81.16 312 *eP* **P** **23 13 39.0 -0.1**
comp=Z,32nm,0.7s,mb5.3
VORD Divnogorie 81.21 324 *eP* **P** **23 13 38.4 -0.6**
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.2
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,40nm,0.4s
VSR Storozhevoye 81.38 324*d* *iP* **P** **23 13 39.5 -0.4**
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,30nm,0.5s,mb5.4
ANTO Ankara 81.82 312⇓ *iP* **P** **23 13 42.1 -0.4**
ANTO Ankara 81.82 312 ⇓P **P** **23 13 42.1 -0.5**
KDHN Kadinhani 81.95 310 *iP* **P** **23 13 42.9 -0.4**
HENT Hendek 83.47 312 *iP* **P** **23 13 50.9 -0.2**
BORA Eskisehir 83.56 311 *iP* **P** **23 13 52.0 +0.4**
GOLH Golhisar 83.58 309 *iP* **P** **23 13 51.9 +0.1**
KHAL Karahalli 83.91 310 *iP* **P** **23 13 53.0 -0.4**
MOS Moscow 83.96 328 *eP* **P** **23 13 52.4 -0.8**
MOS *i* 23 14 00.2
MOS *i* 23 14 09.2
MOS pmax pmax
comp=Z,70nm,1.0s,mb5.5
GDZ Gediz 84.09 310 *iP* **P** **23 13 54.5 +0.3**
OBN Obninsk 84.29 327 P **P** **23 13 54.5 -0.4**
comp=Z,476nm,0.7s,mb6.4,SNR=7.9
OBN Obninsk 84.29 327*c* *iP* **P** **23 13 54.6 -0.3**
OBN pmax pmax
comp=Z,49nm,0.6s,mb5.5
OBN Obninsk 84.29 327⇑ *iP* **P** **23 13 54.7 -0.2**
DEMI Demirci 84.66 310 *iP* **P** **23 13 57.8 +0.6**
MAIT Maitri 84.70 199 *eP* **P** **23 13 56.3 -0.4**
KLMR Klimovskoe 85.04 333 *eP* **P** **23 13 58.1 -0.5**
KLMR pmax pmax
comp=Z,92nm,1.3s,mb5.5
KARP Karpathos 85.08 307 *eP* **P** **23 14 01.0 +1.6**
AMKA Amchitka 85.30 37 *eP* **P** **23 13 59.1 -0.9**
comp=Z,32nm,0.7s,mb5.4
KDAG Bornova 85.62 309 *iP* **P** **23 14 03.0 +1.1**
ZKR Zakros 85.75 306 P **P** **23 14 03.2 +0.5**
BLCB Balcova 85.79 309 P **P** **23 14 03.9 +1.1**
BILL Bilibino 85.97 19*c* *iP* **P** **23 14 02.1 -0.9**
BILL pmax pmax
comp=Z,13nm,0.8s,mb4.9
BILL Bilibino 85.97 19⇑ *iP* **P** **23 14 02.2 -0.8**
TLCR 86.06 316⇑ *iP* **P** **23 14 04.5 +0.5**
TLCR 86.06 316 ⇑P **P** **23 14 04.5 +0.5**
TIRR Tirgusor 86.16 316 P **P** **23 14 05.2 +0.7**
TIRR Tirgusor 86.16 316⇑ *iP* **P** **23 14 04.7 +0.2**
TIRR Tirgusor 86.16 316 ⇑P **P** **23 14 04.7 +0.2**
NPS Neapolis 86.27 306 *eP* **P** **23 14 07.0 +1.8**
LAST Lasithi 86.35 306 P **P** **23 14 06.7 +1.0**
CVD Cernavoda 86.39 315⇓ *iP* **P** **23 14 06.7 +1.1**
CVD Cernavoda 86.39 315 ⇓P **P** **23 14 06.7 +1.1**
KIS Kishinev 86.50 318⇓ *iP* **P** **23 14 06.0 -0.1**
KIS *e* 23 14 14.0
KIS Kishinev 86.50 318⇓ *i* UNK 23 14 06.0
CHOS Chios island 86.54 309 P **P** **23 14 07.1 +0.6**
HARR Harsova 86.55 316 P **P** **23 14 07.4 +1.0**
PRK Paraskevi 86.56 310 P **P** **23 14 07.2 +0.6**
PRK Paraskevi 86.56 310 *eP* **P** **23 14 07.5 +0.9**
SIVA Sivas 86.86 306 P **P** **23 14 09.5 +1.3**
JMB Yambol 87.01 313 P **P** **23 14 09.8 +1.1**
ALN Alexandroupoli 87.07 312 P **P** **23 14 09.4 +0.4**
AKASG Malin Array Be 87.17 322 P **P** **23 14 08.1 -1.1**
comp=Z,10nm,0.7s,mb4.9,baz=86,slow=4.8,SNR=40
AKASG PP PP 23 17 32.3 -2.0
comp=Z,0.4nm,0.3s,baz=95,slow=6.4,SNR=8.2
AKBB Malin Array Si 87.17 322 *eP* **P** **23 14 08.9 -0.3**
ODB Odobesti 87.40 317⇑ *iP* **P** **23 14 12.8 +2.3**
ODB Odobesti 87.40 317 ⇑P **P** **23 14 12.8 +2.3**
VAM Vamos 87.43 306 *eP* **P** **23 14 12.5 +1.6**
LIA Limnos Island 87.51 311 P **P** **23 14 11.0 -0.2**
VRI Vrincioaia 87.64 317 P **P** **23 14 12.7 +1.1**
VRI Vrincioaia 87.64 317⇓ *iP* **P** **23 14 12.6 +1.0**
VRI Vrincioaia 87.64 317 ⇓P **P** **23 14 12.6 +0.9**
PLOR Plostina 87.69 317 P **P** **23 14 13.1 +1.2**
PLOR Plostina 87.69 317⇓ *iP* **P** **23 14 12.9 +1.0**
MLR Muntele Rosu 88.10 316 P **P** **23 14 14.6 +0.8**
comp=Z,55nm,1.0s,mb5.5,baz=146,slow=0.6,SNR=52
MLR Muntele Rosu 88.10 316⇑ *iP* **P** **23 14 14.9 +1.1**
MLR Muntele Rosu 88.10 316 ⇑P **P** **23 14 14.3 +0.5**
MLR Muntele Rosu 88.10 316 ⇑P **P** **23 14 14.3 +0.5**
PTL Penteli 88.17 309 *eP* **P** **23 14 15.0 +0.7**
ATH Athens Observa 88.27 308 *eP* **P** **23 14 15.5 +0.7**
OUR Ouranopolis 88.50 311 P **P** **23 14 16.2 +0.4**
DID Didima 88.56 308 P **P** **23 14 14.9 -1.3**
PAIG Paliouri 88.65 310 P **P** **23 14 16.6 0.0**
VLI Veliai 88.67 307 *eP* **P** **23 14 16.5 -0.2**
VOIR 88.70 316 P **P** **23 14 16.9 +0.2**
VOIR 88.70 316⇑ *iP* **P** **23 14 16.7 0.0**
VOIR 88.70 316 ⇑P **P** **23 14 16.7 0.0**
PLG Polygyros 88.91 311 P **P** **23 14 17.6 -0.2**
PLG Polygyros 88.91 311 *eP* **P** **23 14 18.0 +0.2**
XOR Xorichti 88.92 310 P **P** **23 14 17.6 -0.3**
LKR Lokris 88.95 309 P **P** **23 14 17.0 -1.0**
BURAR Bucovina Array 89.03 318⇑ *iP* **P** **23 14 19.6 +1.5**
BURAR Bucovina Array 89.03 318 ⇑P **P** **23 14 19.6 +1.4**
BUR08 Bucovina Ar. S 89.04 318 *eP* **P** **23 14 19.4 +1.2**
SOH Sokhos 89.06 311 P **P** **23 14 18.2 -0.2**
SNAA Sanae 89.08 197 *eP* **P** **23 14 15.5 -2.5**
SNAA *e**PP pP 23 14 32.8 -9.4
SNAA pmax pmax
comp=Z,27nm,1.3s
SNAA Sanae 89.08 197 *eP* **P** **23 14 15.5 -2.4**
comp=Z,27nm,1.3s,mb5.1
SNAA *ep*P pP 23 14 32.8 -9.4
HORT Hortiatis 89.21 311 P **P** **23 14 18.8 -0.4**
JOF Joensuu 89.41 334 *ep* **P** **23 14 19.1 -0.5**
comp=Z,4.1nm,0.4s,mb4.8
JOF Joensuu 89.41 334 *eP* **P** **23 14 19.1 -0.5**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KNT Kendrikon 89.46 311 P **P** **23 14 20.2 -0.1**
AGG Agios Georgios 89.53 309 P **P** **23 14 20.4 -0.3**
ITM Ithomi 89.54 307 *eP* **P** **23 14 21.0 +0.2**
LIT Litokhoron 89.58 310 P **P** **23 14 20.7 -0.2**
VAY Valandovo 89.73 312 *eP* **P** **23 14 20.5 -1.1**
GRG Griva 89.79 311 P **P** **23 14 21.6 -0.3**
THL Klokotos Trika 89.86 310 P **P** **23 14 21.4 -0.8**
EVR Evrytania 89.91 309 *eP* **P** **23 14 23.5 +1.0**
STIP Stip 90.07 312 *eP* **P** **23 14 22.0 -1.2**
DEV Deva 90.27 316⇓ *iP* **P** **23 14 25.9 +1.9**
DEV Deva 90.27 316 ⇓P **P** **23 14 25.9 +2.0**
GZR Gura Zlata 90.27 316⇑ *iP* **P** **23 14 25.8 +1.8**
GZR Gura Zlata 90.27 316 ⇑P **P** **23 14 25.8 +1.8**
DRGR 90.55 317 P **P** **23 14 26.1 +0.8**
DRGR 90.55 317⇑ *iP* **P** **23 14 25.7 +0.4**
DRGR 90.55 317 ⇑P **P** **23 14 25.7 +0.4**
VNA2 Neumayer--Watz 90.72 198 *eP* **P** **23 14 27.0 +1.4**
baz=79,slow=3.2
VLS Valsamata 90.74 308 *eP* **P** **23 14 27.0 +0.6**
JAN Janina 90.76 310 *eP* **P** **23 14 27.0 +0.6**
TRPA Tarpa 90.89 318⇓ *iP* **P** **23 14 26.9 +0.1**
VNA1 Neumayer--Stat 91.10 198 *eP* **P** **23 14 28.8 +1.4**
BZS Buzias 91.11 316 P **P** **23 14 28.2 +0.3**
BZS Buzias 91.11 316⇑ *iP* **P** **23 14 27.9 0.0**
BZS Buzias 91.11 316 ⇑P **P** **23 14 27.9 0.0**
IGT Igoumenitsa 91.14 310 P **P** **23 14 28.6 +0.4**
KOLS Kolonicke sedl 91.20 319 *eP* **P** **23 14 28.9 +0.7**
KOLS pmax pmax
comp=Z,23nm,1.0s,mb5.3
KOLS Kolonicke sedl 91.20 319 *eP* **P** **23 14 28.9 +0.7**
comp=Z,23nm,1.0s,mb5.3
VNA3 Neumayer Olymp 91.25 197 *eP* **P** **23 14 28.9 +0.8**
KAF Kangasniemi 91.45 332 *ep* **P** **23 14 29.1 0.0**
comp=Z,1.0nm,0.4s,mb4.3,baz=94,slow=4.1
KAF Kangasniemi 91.45 332 *eP* **P** **23 14 29.1 0.0**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
CRVS Cervenica-Dubn 91.72 319 *eP* **P** **23 14 30.7 0.0**
CRVS pmax pmax
comp=Z,7.0nm,1.6s,mb4.6
CRVS Cervenica-Dubn 91.72 319 *eP* **P** **23 14 30.7 0.0**
comp=Z,6.9nm,1.6s,mb4.6
STHS Stebnicka Huta 91.94 319 *eP* **P** **23 14 32.0 +0.3**
STHS pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
STHS Stebnicka Huta 91.94 319 *eP* **P** **23 14 32.0 +0.3**
comp=Z,8.7nm,1.0s,mb4.9
NIE Niedzica 92.55 319 *eP* **P** **23 14 35.2 +0.8**
KEV Kevo 92.85 340 *ep* **P** **23 14 34.3 -1.1**
comp=Z,0.9nm,0.4s,mb4.5
KEV Kevo 92.85 340 *eP* **P** **23 14 34.3 -1.1**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.5
PKSM Moragy 93.25 316⇑ *iP* **P** **23 14 37.7 -0.1**
PKSM Moragy 93.25 316 ⇑P **P** **23 14 37.6 -0.1**
ARCES ARCESS Array B 93.31 340 P **P** **23 14 36.7 -0.9**
comp=Z,6.6nm,0.6s,mb5.2,baz=108,slow=6.2,SNR=32
ARCES ARCESS Array B 93.31 340 P **P** **23 14 36.7 -0.9**
ARCES pmax pmax
comp=Z,7.0nm,0.6s
VYHS Vyhne 93.39 318 *eP* **P** **23 14 38.0 -0.4**
KOLL Kolacno 93.69 318 *eP* **P** **23 14 40.2 +0.5**
OKC Ostrava-Krasne 93.99 320 *eP* **P** **23 14 36.3 -4.8**
ZST Bratislava 94.51 318 *eP* **P** **23 14 40.0 -3.5**
ZST pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
ZST Bratislava 94.51 318 *eP* **P** **23 14 40.0 -3.5**
comp=Z,3.7nm,0.7s,mb4.9
AKUT Akutan 94.72 36 *eP* **P** **23 14 43.8 -0.5**
comp=Z,440nm,2.1s,mb6.5
KOGS Kog 94.92 316 *iP* **P** **23 14 45.4 0.0**
DPC Dobruska-Polom 95.21 320 *eP* **P** **23 14 46.8 +0.1**
GCIS Gornji Cirnik 95.30 315 *eP* **P** **23 14 47.1 -0.1**
GOLS Golise 95.32 316 *eP* **P** **23 14 47.4 +0.1**
GROS Grobnik 95.44 316 *iP* **P** **23 14 47.8 0.0**
PERS Pernice 95.72 316 *eP* **P** **23 14 49.9 +0.8**
LJU Ljubljana 96.08 316 *iP* **P** **23 14 51.0 +0.3**
GERES GERESS Array B 96.81 318 P **P** **23 14 53.9 -0.1**
comp=Z,1.1nm,0.7s,mb4.4,baz=98,slow=4.6,SNR=9.9
GERES PP PP 23 18 49.7 -0.5
comp=Z,0.9nm,0.8s,baz=95,slow=6.7,SNR=6.3
GERES GERESS Array B 96.81 318 P **P** **23 14 53.9 -0.1**
GERES 23 18 49.7
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.8s
SPITS Spitsbergen Ar 96.86 348 P **P** **23 14 52.5 -1.1**
comp=Z,20nm,0.9s,mb5.5,baz=334,slow=9.3,SNR=16
SPITS LR LR 00 05 21.0
comp=Z,198nm,19.9s,baz=275,slow=40
SPB4 Spitsbergen Ar 96.87 348 *eP* **P** **23 14 53.1 -0.5**
KHC Kasperske Hory 96.91 319 *eP* **P** **23 14 54.0 -0.4**
LPG La Plagne 101.51 315 *ePP* PP 23 19 26.2 +0.2
comp=Z,11nm,1.0s
LPL La Plagne 101.52 315 *ePP* PP 23 19 26.3 +0.2
comp=Z,11nm,0.9s
TORD Torodi Ar. Bea 105.43 282 PKiKP PKiKP 23 19 45.8 -0.8
comp=Z,1.1nm,0.7s,baz=27,slow=1.8,SNR=11
TORD PKKPbc PKKPbc 23 31 12.5 +0.8
comp=Z,1.4nm,1.4s,baz=304,slow=3.9,SNR=7.7
TORD Torodi Ar. Bea 105.43 282 PKPdf PiKiKP 23 19 45.8 -0.8
TORD PKKPbc PKKPbc 23 31 12.5 +0.8
YKA Yellowknife Ar 117.35 20 PKP PKPdf 23 20 06.5 -1.4
comp=Z,1.0nm,0.6s,baz=347,slow=2.0,SNR=9.1
YKA PKKPbc PKKPbc 23 30 34.8 +0.9
comp=Z,0.6nm,0.5s,baz=127,slow=4.9,SNR=5.6
EDM Edmonton 124.09 27 *e*PKIKP PKPdf 23 20 20.7 -0.4
WVOR Wild Horse Val 127.32 41 *e*PKIKP PKPdf 23 20 29.1 +1.5
EGMT Eagleton 129.24 30 *e*PKPdf PKPdf 23 20 32.3 +1.2
NVAR Mina Array Bea 129.40 45 PKP PKPdf 23 20 33.5 +1.8
comp=Z,3.8nm,1.0s,baz=286,slow=1.2,SNR=11
NVAR Mina Array Bea 129.40 45 PKP PKPdf 23 20 33.5 +1.8
DLMT Dillon 129.40 35 *e*PKPdf PKPdf 23 20 32.7 +1.2
BOZ Bozeman (W) 129.77 34 *e*PKIKP PKPdf 23 20 33.1 +0.9
ELK Elko 130.37 41 *e*PKIKP PKPdf 23 20 34.8 +1.3
LOHW Long Hollow 131.60 35 *e*PKPdf PKPdf 23 20 32.8 -2.9
SCHQ Schefferville 132.10 354 PKP PKPdf 23 20 37.4 +1.1
comp=Z,6.5nm,0.7s,baz=58,slow=3.7,SNR=4.7
PDAR Pinedale Array 132.72 36 PKP PKPdf 23 20 39.0 +1.2
comp=Z,1.6nm,0.6s,baz=258,slow=0.6,SNR=15
PDAR SKPbc SKPbc 23 23 59.4 +2.2
comp=Z,0.5nm,0.8s,baz=318,slow=1.2,SNR=2.7
ULM Lac du Bonnet 133.32 19 PKP PKPdf 23 20 37.1 -1.7
comp=Z,8.0nm,0.8s,baz=329,slow=2.3,SNR=6.7
RSSD Black Hills 134.81 30 *e*PKIKP PKPdf 23 20 41.6 -0.2
ANMO Albuquerque 139.34 43 PKP PKPdf 23 20 51.2 +0.8
comp=Z,2.8nm,0.9s,baz=279,slow=4.6,SNR=6.9
ANMO Albuquerque 139.34 43 PKIKP PKPdf 23 20 51.3 +0.9
ANMO pmax pmax
comp=Z,3.0nm,0.9s
NCB Newcomb 143.32 0 *e*PKPdf PKPdf 23 20 54.1 -3.2
HDIL Hopedale 144.05 20 *e*PKPdf PKPdf 23 20 55.8 -2.9
WMOK Wichita Mounta 144.33 36 *e*PKIKP PKPdf 23 20 57.6 -1.7
TXAR Lajitas Array 144.44 48 PKP PKPdf 23 20 59.0 -0.7
comp=Z,20nm,0.6s,baz=289,slow=1.2,SNR=246
TXAR Lajitas Array 144.44 48 PKIKP PKPdf 23 20 59.0 -0.7
TXAR pmax pmax
comp=Z,20nm,0.6s
BINY Binghamton 145.05 3 *e*PKPbc PKPbc 23 20 59.3 -0.6
CCM Cathedral Cave 145.51 24 *e*PKIKP PKPdf 23 21 00.6 -0.7
BDFB Brasilia 145.69 229 PKPbc PKPbc 23 21 02.8 +0.1
comp=Z,12nm,0.7s,baz=120,slow=5.5,SNR=48
BDFB Brasilia 145.69 229 PKP2 PKPab 23 21 02.8 -0.2
BDFB pmax pmax
comp=Z,12nm,0.7s
FVM French Village 145.90 23 *e*PKP2 PKPab 23 21 01.9 -1.3
ACSO Alum Creek Sta 146.10 12 *e*PKPbc PKPbc 23 21 02.3 -0.9
BLO Bloomington 146.19 18 *e*PKP2 PKPab 23 21 02.8 -1.5
SSPA Standing Stone 146.48 5 *e*PKPbc PKPbc 23 21 03.4 -0.9
JCT Junction City 146.50 43 *e*PKP2 PKPbc 23 21 03.6 -1.1
SIUC Southern Illin 146.60 22 *e*PKPbc PKPbc 23 21 04.3 -0.5
USIN University of 146.93 20 *e*PKPbc PKPbc 23 21 05.2 -0.5
WCI Wyandotte Cave 147.13 18 *e*PKP2 PKPbc 23 21 05.8 -0.5
MCWV Mont Chateau 147.21 8 *e*PKPbc PKPbc 23 21 06.3 -0.1
MIAR Mount Ida 147.33 31 *e*PKP2 PKPab 23 21 07.0 -1.9
UALR University of 147.75 29 *e*PKPbc PKPbc 23 21 08.2 +0.1
WVT Waverly 148.51 22 *e*PKP2 PKPbc 23 21 09.8 -0.2
HKT Hockley 149.44 39 *e*PKP2 PKPbc 23 21 12.6 0.0
TZTN Tazewell 149.48 15 *e*PKPbc PKPbc 23 21 12.2 -0.2
BLA Blacksburg 149.52 10 *e*PKP2 PKPbc 23 21 11.9 -0.6
LVC Limon Verde 150.00 190 *e*PKPdf PKPdf 23 21 10.4 +1.3
TKL Tuckaleechee C 150.25 16 PKPbc PKPbc 23 21 14.2 -0.2
comp=Z,35nm,0.5s,baz=141,slow=4.6,SNR=78
TKL Tuckaleechee C 150.25 16 PKIKP PKPbc 23 21 14.2 -0.2
TKL pmax pmax
comp=Z,35nm,0.5s
LRAL Lakeview Retre 151.57 23 *e*PKPbc PKPbc 23 21 14.2 -3.3
LRAL *e*PKPbc PKPbc 23 21 17.2 -0.3
CNNC Cliffs of the 151.82 7 *e*PKPbc PKPbc 23 21 18.2 +0.2
CNNC *e*PKPab PKPab 23 21 26.9 -0.2
GOGA Godfrey 152.44 17 *e*PKIKP PKPbc 23 21 19.0 -0.5
BRAL Brewton 153.31 26 *e*PKPbc PKPbc 23 21 21.9 +0.4
OTAV Otavalo 171.85 147 *e*PKPdf PKPdf 23 21 33.5 +1.0

IDC 01 23:27:34.4±2.0,559S×10273E,h43km±7km,mb3.8/7,
mb1 3.9/7,mb1mx3.6/19,mbtmp3.9/7,MS3.8/2,Ms1 3.8/2,
ms1mx3.2/32,Error ellipse: s-maj=81.9km
s-min=15.6km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**21.23**	**104**	P	P		23 32 16.6	-0.4
	8.5nm,0.4s,baz=104,slow=4.9,SNR=3.9							
CMAR	**Chiang Mai Arr**	**24.19**	**351**	P	P		23 32 47.0	0.0
	2.9nm,0.6s,baz=184,slow=8.5,SNR=20							
ASAR	**Alice Springs**	**34.97**	**124**	P	P		23 34 21.4	-1.4
	0.3nm,0.4s,baz=300,slow=8.0,SNR=6.5							
ASAR				pP	pP		23 34 35.4	+0.9
	0.7nm,0.8s,baz=301,slow=7.8,SNR=3.1							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	**Stephens Creek**	**44.75**	**131**	P	P	23 35 43.4	-0.5
	2.0nm,0.9s,baz=332,slow=11,SNR=3.4						
STKA				pP	pP	23 35 57.0	+1.2
	1.2nm,0.7s,baz=226,slow=21,SNR=1.9						
SONM	**Songino Array**	**53.30**	**3**	P	P	23 36 50.1	+1.2
	1.5nm,0.6s,baz=180,slow=9.5,SNR=17						
SONM				pP	pP	23 37 00.4	-0.8
	1.4nm,0.7s,baz=182,slow=8.5,SNR=8.0						
MKAR	**Makanchi Array**	**55.22**	**343**	P	P	23 37 02.6	-0.4
	0.8nm,0.4s,baz=154,slow=8.1,SNR=40						
KURK	**Kurchatov**	**59.81**	**343**	LR	LR	00 09 02.4	
	comp=Z,58nm,19.3s,baz=295,slow=42						
ZALV	**Zalesovo Beam**	**61.20**	**348**	P	P	23 37 44.3	-0.4
	1.2nm,0.4s,baz=174,slow=6.5,SNR=9.0						
RPZ	**Rata Peaks**	**70.53**	**134**	LR	LR	00 07 25.3	
	comp=Z,94nm,20.2s,baz=187,slow=34						
TXAR	**Lajitas Array**	**145.66**	**43**	PKPbc	PKPbc	23 47 09.8	+0.6
	0.5nm,0.8s,baz=330,slow=2.8,SNR=4.9						
TXAR				pPKPbc	pPKPbc	23 47 21.5	-0.9
	0.3nm,0.6s,baz=318,slow=1.7,SNR=3.8						

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*TIR **01** 23:48:28.9±1.9, 3920N×1921E, h0km±101km*
*BEO **01** 23:48:32.6±1.1, 3902N×2007E, h14km±5km, ML3.6/3*
*IDC **01** 23:48:32.7±1.0, 3940N×2029E, h0km, mb3.8/7, mb1 3.8/13, mb1mx3.7/27, mbtmp3.7/13, ML3.1/5, Error ellipse: s-maj=20.1km s-min=16.0km az=46.0*
*ISCJB **01** 23:48:34.2±0.6, 3928N±002×2014E±002, h5km±4km, mb3.9/7, Error ellipse: s-maj=3.0km s-min=2.4km az=145.4*
*PDG **01** 23:48:34.7±0.5, 3927N×2019E, h11km±1km, ML3.4/10, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
*NEIC **01** 23:48:35.7, 3928N×2025E, h15km, ML3.8(ATH), After ATH.*
*THE **01** 23:48:35.5, 3927N×2025E, h0km±2km, ML4.3/7, Error ellipse: s-maj=2.7km s-min=0.8km az=257.0*
*ATH **01** 23:48:35.9, 3929N×2026E, h15km±1km, MD3.9/14, ML3.8*
*CSEM **01** 23:48:35.1±0.1, 3924N×2026E, h5km±1km, ML4.3/7, Error ellipse: s-maj=1.4km s-min=1.1km az=28.0*
*PRU **01** 23:48:39.2, 3937N×2007E, h0km*
ISC 01 23:48:35.3±0.5, **3926N**±002×**2020E**±002, **h3**km±3km, **n142**, σ**1^{s}20**/194, **mb3.8**/8, **15C-6D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.29**	**21**	P	**Pg**	**23 48 39.7**	**-1.2**
IGT				S	**Sg**	**23 48 44.4**	**-0.2**
KEK	**Kerkira**	**0.55**	**326**	ePN	**Pg**	**23 48 46.5**	**+0.7**
KEK				eSN	**Sg**	**23 48 54.9**	**+2.0**
KEK	**Kerkira**	**0.55**	**326**	ePn	**Pg**	**23 48 45.9**	**+0.1**
KEK				eSn	**Sg**	**23 48 54.9**	**+2.0**
SRN	**Sarande**	**0.64**	**346**	i PN	**Pg**	**23 48 46.9**	**-0.6**
JAN	**Janina**	**0.64**	**52**	ePN	**Pg**	**23 48 47.0**	**-0.6**
JAN				eSN	**Sg**	**23 48 55.5**	**-0.4**
JAN	**Janina**	**0.64**	**52**	ePn	**Pg**	**23 48 46.8**	**-0.8**
JAN				eSn	**Sg**	**23 48 55.5**	**-0.4**
VLS	**Valsamata**	**1.13**	**164**	P	**Pg**	**23 48 55.4**	**-1.5**
VLS				S	**Sg**	**23 49 13.7**	**+2.3**
VLS	**Valsamata**	**1.13**	**164**	ePN	**Pn**	**23 48 57.5**	**-0.4**
VLS				eSN	**Sn**	**23 49 13.9**	**+0.1**
VLS	**Valsamata**	**1.13**	**164**	ePn	**Pn**	**23 48 57.1**	**-0.8**
VLS				S	**Sg**	**23 49 13.7**	**+2.3**
VLS				eSn	**Sn**	**23 49 14.0**	**+0.2**
KFL	**Anninata**	**1.24**	**158**	P	**Pg**	**23 48 57.9**	**-1.1**
KFL				S	**Sg**	**23 49 15.9**	**+0.8**
EVR	**Evrytania**	**1.30**	**105**	ePN	**Pn**	**23 48 59.5**	**-0.8**
KBN	**Korca**	**1.43**	**18**	i PN	**Pn**	**23 49 05.8**	**+3.7**
THL	**Klokotos Trika**	**1.44**	**77**	P	**Pn**	**23 49 01.2**	**-1.0**
THL				S	**Sb**	**23 49 22.0**	**+0.6**
THL	**Klokotos Trika**	**1.44**	**77**	ePn	**Pn**	**23 49 02.3**	**+0.1**
THL				S	**Sb**	**23 49 22.0**	**+0.6**
RLS	**Riolos of Patr**	**1.56**	**140**	ePN	**Pn**	**23 49 04.8**	**+1.0**
KZN	**Kozani**	**1.60**	**49**	ePN	**Pn**	**23 49 05.4**	**+1.0**
KZN	**Kozani**	**1.60**	**49**	ePn	**Pn**	**23 49 05.8**	**+1.4**
AGG	**Agios Georgios**	**1.67**	**98**	P	**Pn**	**23 49 04.9**	**-0.5**
AGG				S	**Sn**	**23 49 27.9**	**+0.5**
FNA	**Florina**	**1.77**	**30**	P	**Pn**	**23 49 07.2**	**+0.5**
FNA				S	**Sn**	**23 49 30.9**	**+1.2**
BIA	**Bitola**	**1.96**	**26**	P	**Pn**	**23 49 09.4**	**+0.1**
BIA				S	**Sn**	**23 49 34.7**	**+0.4**
BIA	**Bitola**	**1.96**	**26**	ePn	**Pn**	**23 49 10.4**	**+1.1**
BIA				S	**Sn**	**23 49 34.7**	**+0.4**
BIA				eSg	**Sg**	**23 49 39.0**	**+0.9**
BIA	**Bitola**	**1.96**	**26**	ePn	**Pn**	**23 49 10.5**	**+1.2**
BIA				eSg	**Sg**	**23 49 39.1**	**+1.0**
LIT	**Litokhoron**	**1.96**	**64**	P	**Pn**	**23 49 09.2**	**-0.1**
LIT				S	**Sn**	**23 49 34.3**	**0.0**
TIR	**Tirane**	**2.10**	**353**	ePn	**Pn**	**23 49 11.5**	**+0.2**
TIR				eSg	**Sg**	**23 49 46.7**	**+4.0**
TIR	**Tirane**	**2.10**	**353**	P	**Pn**	**23 49 11.7**	**+0.4**
TIR				S	**Sn**	**23 49 39.0**	**+1.1**
TIR	**Tirane**	**2.10**	**353**	i PN	**Pn**	**23 49 11.7**	**+0.4**
TIR	**Tirane**	**2.10**	**353**	ePn	**Pn**	**23 49 11.9**	**+0.6**
TIR				S	**Sn**	**23 49 39.0**	**+1.1**
TIR				eSg	**Sg**	**23 49 46.7**	**+4.0**
TIR	**Tirane**	**2.10**	**353**	ePn	**Pn**	**23 49 11.9**	**+0.6**
TIR				P		23 49 12.5	
LKR	**Lokris**	**2.27**	**105**	P	**Pn**	**23 49 13.3**	**-0.3**
XOR	**Xorichti**	**2.32**	**87**	P	**Pn**	**23 49 14.0**	**-0.4**
NEO	**Neokhori**	**2.35**	**88**	ePN	**Pn**	**23 49 15.5**	**+0.8**
GRG	**Griva**	**2.39**	**44**	P	**Pn**	**23 49 14.8**	**-0.5**
ITM	**Ithomi**	**2.48**	**146**	ePB	**Pb**	**23 49 18.0**	**-2.5**
LTK	**Loutraki**	**2.50**	**119**	P	**Pn**	**23 49 17.1**	**+0.4**
HORT	**Hortiatis**	**2.60**	**58**	P	**Pn**	**23 49 17.7**	**-0.4**
PE1	**Pezze di Greco**	**2.63**	**307**	ePn	**Pn**	**23 49 21.0**	**+2.4**
TIP	**Timpagrande**	**2.67**	**269**	P	**Pn**	**23 49 19.6**	**+0.4**
PLG	**Polygyros**	**2.73**	**65**	ePN	**Pn**	**23 49 20.2**	**+0.2**
PLG	**Polygyros**	**2.73**	**65**	P	**Pn**	**23 49 19.4**	**-0.6**
PLG	**Polygyros**	**2.73**	**65**	ePn	**Pn**	**23 49 19.6**	**-0.4**
PLG	**Polygyros**	**2.73**	**65**	ePn	**Pn**	**23 49 19.6**	**-0.4**
VAY	**Valandovo**	**2.74**	**41**	P	**Pn**	**23 49 20.4**	**+0.3**
VAY				S	**Sn**	**23 49 54.1**	**+0.4**
VAY	**Valandovo**	**2.74**	**41**	ePn	**Pn**	**23 49 20.2**	**+0.1**
VAY				S	**Sn**	**23 49 54.1**	**+0.4**
VAY	**Valandovo**	**2.74**	**41**	ePn	**Pn**	**23 49 20.2**	**+0.1**
VAY				eSg	**Sg**	**23 49 55.9**	**-7.4**
PAIG	**Paliouri**	**2.77**	**75**	P	**Pn**	**23 49 19.8**	**-0.7**
PAIG				S	**Sn**	**23 49 53.9**	**-0.5**
PUK	**Puka**	**2.79**	**355**	i PN	**Pn**	**23 49 20.6**	**-0.1**
ULC	**Ulcinj**	**2.79**	**345**	⇑iPn	**Pn**	**23 49 19.9**	**-0.9**
ULC				eSn	**Sn**	**23 49 55.9**	**+0.9**
KNT	**Kendrikon**	**2.81**	**47**	P	**Pn**	**23 49 20.8**	**-0.2**
SKO	**Skopje**	**2.87**	**19**	ePn	**Pn**	**23 49 21.1**	**-0.7**
SKO	**Skopje**	**2.87**	**19**	ePn	**Pn**	**23 49 22.3**	**+0.4**
SOH	**Sokhos**	**2.88**	**56**	P	**Pn**	**23 49 22.2**	**+0.2**
SOH				S	**Sn**	**23 49 57.3**	**+0.2**
LTRZ	**Laterza**	**2.92**	**298**	Pn	**Pn**	**23 49 22.9**	**+0.3**
DID	**Didima**	**2.96**	**125**	P	**Pn**	**23 49 22.7**	**-0.4**
ATH	**Athens Observa**	**3.04**	**114**	ePN	**Pn**	**23 49 25.1**	**+0.9**
ATH	**Athens Observa**	**3.04**	**114**	ePn	**Pn**	**23 49 24.5**	**+0.3**
OUR	**Ouranopolis**	**3.10**	**69**	P	**Pn**	**23 49 25.1**	**0.0**
PTL	**Penteli**	**3.12**	**112**	ePN	**Pn**	**23 49 26.4**	**+1.2**
PTL	**Penteli**	**3.12**	**112**	ePn	**Pn**	**23 49 26.8**	**+1.6**
SG1	**Sgolgore (BA)**	**3.13**	**301**	ePn	**Pn**	**23 49 25.3**	**-0.1**
BUM	**Brajici-Budva**	**3.19**	**342**	⇑iPn	**Pn**	**23 49 25.5**	**-0.8**
BUM				eSn	**Sn**	**23 50 05.4**	**+0.6**
PDG	**Podgorica**	**3.24**	**348**	ePN	**Pn**	**23 49 26.7**	**-0.3**
PDG	**Podgorica**	**3.24**	**348**	⇑iPn	**Pn**	**23 49 26.7**	**-0.3**
PDG				eSn	**Sn**	**23 50 05.8**	**-0.3**
TTG	**Podgorica**	**3.24**	**348**	⇑iPn	**Pn**	**23 49 26.7**	**-0.3**
TTG				eSn	**Sn**	**23 50 05.8**	**-0.3**
PVY	**Plav**	**3.33**	**357**	⇓iPn	**Pn**	**23 49 28.7**	**+0.5**
PVY				eSn	**Sn**	**23 50 09.1**	**+0.8**
VLI	**Veliai**	**3.34**	**139**	ePN	**Pn**	**23 49 30.0**	**+1.7**
HCY	**Herceg Novi**	**3.43**	**338**	⇓iPn	**Pn**	**23 49 29.1**	**-0.5**
HCY				eSn	**Sn**	**23 50 11.6**	**+0.8**
HCY	**Herceg Novi**	**3.43**	**338**	ePN	**Pn**	**23 49 29.1**	**-0.5**
HCY				i SN	**Sn**	**23 50 11.7**	**+0.9**
SOI	**Samo**	**3.46**	**251**	Pn	**Pn**	**23 49 27.8**	**-2.1**
CUC	**Castrocucco**	**3.46**	**284**	P	**Pn**	**23 49 32.6**	**+2.6**
NVR	**Nevrokopi**	**3.49**	**52**	P	**Pn**	**23 49 32.7**	**+2.3**
CEL	**Celeste**	**3.51**	**255**	P	**Pn**	**23 49 30.7**	**0.0**
BEY	**Berane**	**3.61**	**356**	⇓iPn	**Pn**	**23 49 32.6**	**+0.5**
BEY				eSn	**Sn**	**23 50 15.5**	**+0.3**
IVA	**Berane**	**3.61**	**356**	⇓iPn	**Pn**	**23 49 32.6**	**+0.5**
IVA				eSn	**Sn**	**23 50 15.5**	**+0.3**
SCLL	**Scilla**	**3.65**	**255**	Pn	**Pn**	**23 49 32.4**	**-0.2**
NKY	**Niksic**	**3.66**	**346**	⇑iPn	**Pn**	**23 49 32.7**	**-0.1**
NKY				eSn	**Sn**	**23 50 16.9**	**+0.5**
NKY	**Niksic**	**3.66**	**346**	ePN	**Pn**	**23 49 32.7**	**-0.1**
TREB	**Trebinje**	**3.72**	**339**	ePn	**Pn**	**23 49 32.6**	**-1.0**
TREB				eSn	**Sn**	**23 50 17.6**	**-0.4**
KYTH	**Kithira**	**3.73**	**142**	ePN	**Pn**	**23 49 35.5**	**+1.8**
KYTH	**Kithira**	**3.73**	**142**	ePn	**Pn**	**23 49 35.0**	**+1.3**
MTTG	**Motta San Giov**	**3.75**	**252**	Pn	**Pn**	**23 49 33.3**	**-0.6**
BARS	**Barje**	**3.75**	**18**	⇓iPn	**Pn**	**23 49 33.1**	**-0.9**
BARS				eSn	**Sn**	**23 50 20.4**	**+1.7**
BRY	**Bratogost**	**3.84**	**342**	⇑iPn	**Pn**	**23 49 34.5**	**-0.8**
BRY				eSn	**Sn**	**23 50 20.2**	**-0.7**
BRY	**Bratogost**	**3.84**	**342**	ePN	**Pn**	**23 49 34.5**	**-0.8**
LIA	**Limnos Island**	**3.90**	**79**	P	**Pn**	**23 49 36.7**	**+0.6**
MRLC	**Muro Lucano**	**3.91**	**294**	Pn	**Pn**	**23 49 38.1**	**+1.9**
SGO	**Sicignano**	**3.98**	**291**	Pn	**Pn**	**23 49 39.0**	**+1.9**
VTS	**Vitosha**	**4.03**	**33**	ePn	**Pn**	**23 49 38.3**	**+0.5**
VTS				eSn	**Sn**	**23 50 26.2**	**+0.7**
UPM	**Unac-Piva**	**4.05**	**347**	⇑iPn	**Pn**	**23 49 38.5**	**+0.3**
UPM				eSn	**Sn**	**23 50 25.7**	**-0.4**
MS1	**Monte Sant'Ang**	**4.06**	**308**	ePn	**Pn**	**23 49 39.0**	**+0.8**
STON	**Ston**	**4.07**	**333**	ePn	**Pn**	**23 49 36.5**	**-1.9**
STON				Sn	**Sn**	**23 50 23.6**	**-2.9**
PLE	**Pljevlja**	**4.11**	**352**	⇓iPn	**Pn**	**23 49 38.7**	**-0.2**
PLE				eSn	**Sn**	**23 50 27.1**	**-0.3**
RGNG	**Rignano Grg**	**4.26**	**306**	Pn	**Pn**	**23 49 40.4**	**-0.6**
CSSN	**Cassano Irpino**	**4.28**	**294**	Pn	**Pn**	**23 49 43.1**	**+1.8**
GRUS	**Gruza**	**4.64**	**5**	ePn	**Pn**	**23 49 43.6**	**-2.6**
GRUS				eSn	**Sn**	**23 50 38.3**	**-2.2**
ALN	**Alexandroupoli**	**4.77**	**68**	P	**Pn**	**23 49 47.8**	**-0.2**
SGG	**Gregorio Mates**	**4.93**	**297**	Pn	**Pn**	**23 49 52.3**	**+2.1**
MIDA	**Miranda**	**5.12**	**300**	Pn	**Pn**	**23 49 49.2**	**-3.6**
	75nm,1.0s						
IDI	**Anoyia**	**5.45**	**135**	Pn	**Pn**	**23 49 55.8**	**-1.6**
	0.7nm,0.3s,baz=74,slow=0.8,SNR=11						
IDI				Sn	**Sn**	**23 50 55.2**	**-5.4**
	5.2nm,0.3s,baz=294,slow=22,SNR=11						
INTR	**Introdacqua**	**5.52**	**302**	Pn	**Pn**	**23 49 58.7**	**+0.4**
	96nm,0.9s						
NPS	**Neapolis**	**5.88**	**131**	P	**Pn**	**23 50 02.4**	**-0.8**
AQU	**L'Aquila**	**6.01**	**303**	⇑iP	**Pn**	**23 50 09.1**	**+4.1**
AQU	**L'Aquila**	**6.01**	**303**	ePn	**Pn**	**23 50 09.4**	**+4.4**
	50nm,1.1s						
TERO	**Teramo**	**6.02**	**306**	Pn	**Pn**	**23 50 05.5**	**+0.4**
	22nm,0.6s						
FIAM	**Fiamignano**	**6.16**	**301**	Pn	**Pn**	**23 50 09.2**	**+2.2**
	27nm,0.8s						
BZS	**Buzias**	**6.44**	**9**	ePn	**Pn**	**23 50 09.7**	**-1.2**
BZS	**Buzias**	**6.44**	**9**	⇑iP	**Pn**	**23 50 09.3**	**-1.6**
CING	**Cingoli**	**6.68**	**310**	Pn	**Pn**	**23 50 13.8**	**-0.5**
PKSM	**Moragy**	**7.04**	**351**	⇑iP	**Pn**	**23 50 17.0**	**-2.1**
FSSB	**Fossombrone**	**7.12**	**311**	Pn	**Pn**	**23 50 19.7**	**-0.5**
VOIR		**7.14**	**29**	⇑iP	**Pn**	**23 50 21.7**	**+1.2**
MLR	**Muntele Rosu**	**7.54**	**32**	Pn	**Pn**	**23 50 29.4**	**+3.4**
	0.4nm,0.3s,baz=261,slow=16,SNR=8.1						
MLR	**Muntele Rosu**	**7.54**	**32**	Pn	**Pn**	**23 50 28.6**	**+2.6**
MLR	**Muntele Rosu**	**7.54**	**32**	⇑iP	**Pn**	**23 50 29.5**	**+3.5**
MLR	**Muntele Rosu**	**7.54**	**32**	⇑iP	**Pn**	**23 50 29.5**	**+3.5**
VISS	**Visnje**	**7.64**	**331**	i Pn	**Pn**	**23 50 27.7**	**+0.4**
VISS				i Sn	**Sn**	**23 51 49.9**	**-4.4**
CEY	**Cerknica**	**7.75**	**329**	i Pn	**Pn**	**23 50 31.0**	**+2.1**
CEY				i Sn	**Sn**	**23 51 54.8**	**-2.2**
LJU	**Ljubljana**	**7.96**	**330**	Pn	**Pn**	**23 50 32.6**	**+0.8**
PLOR	**Plostina**	**8.12**	**34**	⇑iP	**Pn**	**23 50 35.9**	**+1.9**
VRI	**Vrincioaia**	**8.17**	**34**	⇑iP	**Pn**	**23 50 36.5**	**+1.9**
VOY	**Vojsko**	**8.21**	**328**	ePn	**Pn**	**23 50 33.8**	**-1.3**
VOY				e		23 50 36.8	
VOY				e		23 50 39.5	
VOY				e		23 50 44.1	
VOY				e		23 52 04.6	
VOY				e		23 52 13.0	
VOY	**Vojsko**	**8.21**	**328**	ePn	**Pn**	**23 50 33.8**	**-1.3**
VOY				e		23 52 04.6	
PERS	**Pernice**	**8.26**	**335**	i Pn	**Pn**	**23 50 38.5**	**+2.6**
PERS				i Sn	**Sn**	**23 52 09.9**	**+0.4**
PTCC	**Patocco-Chiusa**	**8.73**	**327**	Pn	**Pn**	**23 50 41.6**	**-0.7**
VYHS	**Vyhne**	**9.28**	**354**	ePN	**Pn**	**23 50 48.0**	**-1.9**
KEST	**Kesra**	**9.32**	**251**	Pn	**Pn**	**23 50 50.3**	**-0.1**
	0.0nm,0.3s,baz=79,slow=16,SNR=2.2						
KOLL	**Kolacno**	**9.40**	**353**	ePN	**Pn**	**23 50 48.9**	**-2.6**
CRVS	**Cervenica-Dubn**	**9.68**	**5**	ePN	**Pn**	**23 50 52.7**	**-2.6**
KOLS	**Kolonicke sedl**	**9.78**	**8**	ePN	**Pn**	**23 51 01.1**	**+4.4**
BRTR	**Keskin Array B**	**10.40**	**83**	Pn	**Pn**	**23 51 04.0**	**-1.3**
	0.0nm,0.3s,baz=304,slow=13,SNR=2.5						
DAVOX	**Davos/Dischmat**	**10.65**	**318**	Pn	**Pn**	**23 51 07.7**	**-0.9**
	baz=238,slow=16						
DAVOX				Sn	**Sn**	**23 53 05.1**	**-3.1**
	0.1nm,0.3s,baz=343,slow=19,SNR=2.5						
GERES	**GERESS Array B**	**10.65**	**336**	Pn	**Pn**	**23 51 05.7**	**-3.0**
	0.2nm,0.3s,baz=162,slow=13,SNR=5.9						
GERES				Sn	**Sn**	**23 53 04.4**	**-4.0**
	0.2nm,0.3s,baz=138,slow=24,SNR=3.3						
KHC	**Kasperske Hory**	**10.95**	**336**	ePN	**Pn**	**23 51 13.6**	**+0.9**
KHC				ex	x	23 51 25.0	
EIL	**Elat**	**15.46**	**124**	Pn	**Pn**	**23 52 14.1**	**-0.1**
	0.3nm,0.3s,baz=259,slow=2.7,SNR=5.3						
MDT	**Midelt**	**21.04**	**260**	P	**P**	**23 53 22.3**	**+2.2**
	1.3nm,0.8s,mb3.3,baz=112,slow=12,SNR=4.0						
HFS	**Hagfors**	**21.29**	**351**	P	**P**	**23 53 19.4**	**-3.2**
	4.1nm,0.6s,mb3.9,baz=153,slow=16,SNR=4.2						
EKA	**Eskdalemuir Ar**	**22.40**	**324**	P	**P**	**23 53 32.4**	**-2.3**
	3.3nm,0.9s,mb3.8,baz=284,slow=24,SNR=3.5						
NB2	**NORSAR Subarra**	**22.51**	**349**	P	**P**	**23 53 34.1**	**-1.6**
	comp=Z,2.5nm,0.6s,mb3.8,baz=159,slow=11						
NOA	**NORSAR Array B**	**22.51**	**349**	P	**P**	**23 53 33.5**	**-2.2**
	comp=Z,1.7nm,0.6s,mb3.6,baz=161,slow=9.4,SNR=5.1						
TORD	**Torodi Ar. Bea**	**30.73**	**217**	P	**P**	**23 54 50.6**	**-1.0**
	comp=Z,2.4nm,0.9s,mb4.0,baz=30,slow=8.9,SNR=13						
MKAR	**Makanchi Array**	**44.96**	**59**	P	**P**	**23 56 48.0**	**-3.3**
	comp=Z,1.1nm,0.5s,mb3.9,baz=278,slow=7.5,SNR=33						
ZALV	**Zalesovo Beam**	**45.16**	**49**	P	**P**	**23 56 49.6**	**-3.3**
	comp=Z,1.6nm,0.5s,mb4.1,baz=282,slow=7.5,SNR=7.2						
SONM	**Songino Array**	**59.97**	**51**	P	**P**	**23 58 38.8**	**-3.9**
	comp=Z,0.4nm,0.8s,mb3.5,baz=280,slow=9.5,SNR=3.7						

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*ISCJB **01** 23:49:26.0±1.6, 1680S±006×17367W±005, h40km±14km, mb5.0/37, MS4.2/10, Error ellipse: s-maj=11.1km s-min=6.6km az=146.3*
*MOS **01** 23:49:26.1±1.3, 1681S×17369W, h33km, mb5.4/5, Error ellipse: s-maj=14.2km s-min=9.4km az=145.9*
*BJI **01** 23:49:27.4, 1680S×17360W, h39km, mB5.4, mb5.0, Ms5.3, Msz5.0*
*NEIC **01** 23:49:27.7±1.0, 1681S×17364W, h42km±8km, mb5.2/16, Error ellipse: s-maj=8.4km s-min=4.3km az=149.0*
*GCMT **01** 23:49:27.5±0.4, 1678S×173.15W, h118km±5km, MW4.9/59, Moment Tensor Solution. s19,c21; s59,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.16±.20; $M_{\theta\theta}$-0.19±.24; $M_{\phi\phi}$-0.97±.24; $M_{r\theta}$-1.51±.13; $M_{\theta\phi}$0.16±.29; $M_{\phi r}$2.40±.13; Best double couple: $M_0$3.03000×10^{16} NP1:ϕ_s177.00000°, δ11.00000°, λ117.00000°. NP2: ϕ_s329.00000°, δ80.00000°, λ85.00000°. Principal axes: T 3.1560, Plg55.0000°, Azm233.0000°; N -0.2500, Plg5.0000°, Azm330.0000°; P -2.9050, Plg35.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **01** 23:49:29.0±2.5, 1684S×17358W, h57km±21km, mb4.4/15, mb1 4.5/15, mb1mx4.4/19, mbtmp4.4/15, ML3.7/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/28 Error ellipse: s-maj=16.9km s-min=11.2km az=122.0*
*SZGRF **01** 23:49:30.1, 1583S×17261W, h33km, Samoa Islands region*
*DJA **01** 23:49:50, 1892S×17455W, h185km, mb5.0/7*
ISC 01 23:49:28.3±1.4, **1684S**±006×**17362W**±005, **h47**km±12km, **h43**km±2.1km**:pP-P**, **n191**, σ**0^{s}70**/86, **mb5.0**/37, **MS4.2**/10, **19C-10D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.41**	**32**	P	**Pn**	**23 50 18.7**	**-0.3**
	476nm,0.3s,baz=194,slow=1.8,SNR=421						
AFI				S	**Sn**	**23 50 52.3**	**-5.9**
	1μm,0.3s,baz=20,slow=23,SNR=16						
AFI				LR	LR	23 51 14.9	
	comp=Z,452nm,20.9s,baz=287,slow=31						
AFI	**Afiamalu**	**3.41**	**32**	ePn	**Pn**	**23 50 18.6**	**-0.4**
AFI				Sn	**Sn**	**23 50 52.0**	**-6.2**
RAR	**Rarotonga**	**13.80**	**111**	LR	LR	23 55 45.9	
	comp=Z,205nm,20.7s,baz=281,slow=27						
DZM	**Mont Dzumac**	**19.50**	**251**	eP	**Pn**	**23 53 55.6**	**+2.4**
DZM				i P		23 53 55.6	
DZM	**Mont Dzumac**	**19.50**	**251**	ePn	**Pn**	**23 53 53.4**	**+0.2**
	48nm,0.9s						
NOUC	**Port Laguerre**	**19.64**	**251**	eP	**Pn**	**23 53 58.7**	**+3.9**
URZ	**Urewera**	**22.84**	**199**	P	**P**	**23 54 27.3**	**-0.2**
	25nm,0.5s,mb4.9,baz=339,slow=4.4,SNR=28						
URZ				S	**S**	**23 58 32.4**	**-1.2**
	7.7nm,0.8s,baz=296,slow=19,SNR=6.7						
PAE	**Paea**	**22.97**	**96**	eP	**P**	**23 54 28.9**	**-0.1**
	304nm,1.3s,mb5.6						
PAE	**Paea**	**22.97**	**96**	eP	**P**	**23 54 28.9**	**-0.1**
PAE				pmax	pmax		
	comp=Z,304nm,1.3s,mb5.6						
PPT	**Papeete**	**22.98**	**95**	eP	**P**	**23 54 29.4**	**+0.3**
	comp=Z,56nm,1.2s,mb4.9						
PPT				eLR	LR	23 59 43.4	
	comp=Z,674nm,32.8s						
PPT	**Papeete**	**22.98**	**95**	P	**P**	**23 54 28.5**	**-0.5**
	comp=Z,20nm,0.8s,mb4.6,baz=215,slow=7.4,SNR=3.9						
PPT				LR	LR	00 01 04.9	
	comp=Z,89nm,19.1s,MS3.2,baz=302,slow=30						
TIAR	**Tiarei**	**23.20**	**95**	eP	**P**	**23 54 31.4**	**0.0**
	comp=Z,265nm,1.1s,mb5.6						
TVO	**Taravao**	**23.28**	**96**	eP	**P**	**23 54 32.4**	**+0.1**
	comp=Z,642nm,1.2s,mb5.9						
XMAS	**Kiritimati**	**24.63**	**42**	eP	**P**	**23 54 44.3**	**-0.3**
	comp=Z,77nm,0.8s,mb5.3						
PMOR	**Pomariorio Ree**	**24.80**	**89**	eP	**P**	**23 54 46.0**	**-0.2**
	comp=Z,128nm,1.2s,mb5.3						
VAH	**Vaihoa**	**25.03**	**90**	eP	**P**	**23 54 47.7**	**-0.5**
	comp=Z,84nm,1.2s,mb5.1						
SNZO	**South Karori**	**26.38**	**200**	eP	**P**	**23 55 00.1**	**-0.1**
	comp=Z,44nm,1.5s,mb4.8						
HNR	**Honiara**	**26.75**	**283**	LR	LR	00 02 53.6	
	comp=Z,66nm,20.4s,MS3.2,baz=324,slow=30						
RPZ	**Rata Peaks**	**29.78**	**203**	P	**P**	**23 55 31.4**	**+0.9**
	comp=Z,7.0nm,0.8s,mb4.5,baz=38,slow=12,SNR=3.3						
ARMA	**Armidale**	**34.44**	**241**	eP	**P**	**23 56 12.1**	**+0.5**
RKT	**Rikitea**	**36.77**	**106**	eLR	LR	00 05 57.6	
	comp=Z,349nm,36.2s						
CNB	**Canberra Magne**	**37.72**	**234**	eP	**P**	**23 56 39.7**	**+0.1**
CAN	**Canberra**	**38.00**	**234**	P	**P**	**23 56 41.3**	**-0.7**
CAN				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.8						
CAN	**Canberra**	**38.00**	**234**	P	**P**	**23 56 41.3**	**-0.7**
	comp=Z,26nm,1.3s,mb4.8						
CTA	**Charters Tower**	**38.14**	**259**	eP	**P**	**23 56 43.0**	**-0.3**
	comp=Z,5.5nm,0.8s,mb4.3						
CTA	**Charters Tower**	**38.14**	**259**	P	**P**	**23 56 41.3**	**-2.0**
	comp=Z,13nm,1.1s,mb4.6,baz=87,slow=11,SNR=8.0						
CTA	**Charters Tower**	**38.14**	**259**	eP	**P**	**23 56 43.0**	**-0.3**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PMG	**Port Moresby**	**38.85**	**276**	eP	**P**	**23 56 50.4**	**+1.1**
TOO	**Toolangi**	**41.41**	**232**	eP	**P**	**23 57 10.0**	**-0.2**
STKA	**Stephens Creek**	**43.15**	**241**	eP	**P**	**23 57 24.3**	**-0.2**
	comp=Z,31nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**43.15**	**241**	P	**P**	**23 57 24.4**	**-0.2**
	comp=Z,39nm,1.0s,mb5.1,baz=77,slow=7.8,SNR=44						
STKA				LR	LR	00 13 20.4	
	comp=Z,71nm,19.8s,MS3.6,baz=27,slow=33						
STKA	**Stephens Creek**	**43.15**	**241**	eP	**P**	**23 57 24.9**	**+0.4**
	comp=Z,12nm,1.0s,mb4.6						
WB2	**Warramunga Arr**	**49.31**	**258**	eP	**P**	**23 58 11.9**	**-1.2**
WRAB	**Tennant Creek**	**49.32**	**258**	⇓iP	**P**	**23 58 11.9**	**-1.2**
WRAB	**Tennant Creek**	**49.32**	**258**	eP	**P**	**23 58 11.9**	**-1.2**
	comp=Z,39nm,1.6s,mb5.2						
ASAR	**Alice Springs**	**49.48**	**253**	P	**P**	**23 58 13.7**	**-0.7**
	comp=Z,79nm,0.7s,mb5.9,baz=88,slow=8.4,SNR=709						
ASAR				PcP	PcP	23 59 36.0	0.0
	comp=Z,3.6nm,0.7s,baz=100,slow=4.7,SNR=4.2						
KAKA	**Kakadu**	**52.19**	**267**	eP	x	23 58 18.3	
	comp=Z,10nm,0.6s						
FORT	**Forrest**	**54.59**	**244**	eP	**P**	**23 58 51.6**	**-0.7**
	comp=Z,25nm,0.7s,mb5.3						
BATI	**Baumata**	**61.13**	**267**	P	**P**	**23 59 39.0**	**+0.6**
	comp=Z,31nm,0.7s,mb5.5,baz=132,slow=1.3,SNR=12						
VNDA	**Vanda**	**61.93**	**186**	P	**P**	**23 59 43.1**	**+0.4**
	comp=Z,3.7nm,0.9s,mb4.5,baz=7.5,slow=6.6,SNR=16						
KLBR	**Kellerberrin**	**63.39**	**243**	eP	**P**	**23 59 52.8**	**-0.5**
	comp=Z,15nm,0.6s,mb5.3						
MUN	**Mundaring**	**64.67**	**242**	eP	**P**	**00 00 02.4**	**+0.7**
MJAR	**Matsushiro Arr**	**69.90**	**320**	P	**P**	**00 00 33.6**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.1,baz=162,slow=5.9,SNR=5.0						
PETK	**Petropavlovsk-**	**73.93**	**342**	P	**P**	**00 00 57.5**	**-0.8**
	comp=Z,6.9nm,0.8s,mb4.6,baz=111,slow=9.1,SNR=7.6						
CMB	**Columbia Colle**	**73.98**	**41**	eP	**P**	**00 00 58.7**	**-0.3**
WDC	**Whiskeytown Da**	**74.23**	**38**	eP	**P**	**00 01 01.1**	**+0.7**
WDC				pmax	pmax		
	comp=Z,46nm,1.9s,mb5.1						
WDC	**Whiskeytown Da**	**74.23**	**38**	eP	**P**	**00 01 01.1**	**+0.7**
	comp=Z,46nm,1.9s,mb5.1						
YSS	**Yuzh-Sakhalins**	**74.62**	**331**	⇓iP	**P**	**00 00 57.4**	**-5.1**
YSS				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.3						
WAKR	**Walker**	**74.86**	**41**	eP	**P**	**00 01 04.5**	**+0.4**
YBH	**Yreka Blue Hor**	**74.86**	**37**	eP	**P**	**00 01 04.6**	**+0.6**
NVAR	**Mina Array Bea**	**75.53**	**42**	P	**P**	**00 01 07.5**	**-0.4**
	comp=Z,7.5nm,1.1s,mb4.5,baz=227,slow=9.3,SNR=19						
TPH	**Tonopah**	**76.02**	**43**	eP	**P**	**00 01 11.1**	**+0.3**
TPH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
TPH	**Tonopah**	**76.02**	**43**	eP	**P**	**00 01 11.1**	**+0.3**
	comp=Z,28nm,1.5s,mb5.0						
TPNV	**Topopah Spring**	**76.03**	**44**	eP	**P**	**00 01 11.1**	**+0.3**
KSRS	**Korea Array**	**77.03**	**316**	P	**P**	**00 01 17.2**	**+0.7**
	comp=Z,3.2nm,0.9s,mb4.3,baz=134,slow=5.4,SNR=8.8						
MSU	**Marysvale**	**79.59**	**44**	eP	**P**	**00 01 31.6**	**+1.0**
HLID	**Hailey**	**80.87**	**39**	eP	**P**	**00 01 37.2**	**-0.1**
SRU	**San Rafael**	**81.01**	**45**	eP	**P**	**00 01 38.1**	**-0.1**
TXAR	**Lajitas Array**	**81.58**	**56**	P	**P**	**00 01 41.6**	**0.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=216,slow=6.2,SNR=15						
TXAR				LR	LR	00 31 22.9	
	comp=Z,97nm,18.4s,MS4.2,baz=180,slow=31						
ANMO	**Albuquerque**	**81.88**	**50**	eP	**P**	**00 01 43.4**	**+0.5**
CN2	**Changchun**	**82.05**	**320**	eP	**P**	**00 01 47.1**	**+3.5**
RRI2	**Red Ridge**	**82.65**	**41**	eP	**P**	**00 01 46.9**	**+0.2**
REDW	**Red Top Meadow**	**82.95**	**41**	eP	**P**	**00 01 48.5**	**+0.1**
TPAW	**Teton Pass**	**82.96**	**41**	eP	**P**	**00 01 48.6**	**+0.3**
SNOW	**Snow King Moun**	**83.06**	**41**	eP	**P**	**00 01 49.3**	**+0.4**
IMW	**Indian Meadow**	**83.17**	**40**	eP	**P**	**00 01 49.7**	**+0.3**
LOHW	**Long Hollow**	**83.24**	**41**	eP	**P**	**00 01 49.7**	**-0.1**
SMCO	**Snowmass**	**83.46**	**46**	eP	**P**	**00 01 51.6**	**+0.5**
BW06	**Boulder Array**	**83.47**	**42**	eP	**P**	**00 01 50.5**	**-0.5**
PDAR	**Pinedale Array**	**83.47**	**42**	P	**P**	**00 01 50.0**	**-1.0**
	comp=Z,3.1nm,0.8s,mb4.4,baz=212,slow=3.4,SNR=25						
PDAR				LR	LR	00 30 35.2	
	comp=Z,122nm,20.7s,MS4.3,baz=77,slow=30						
BOZ	**Bozeman (W)**	**83.67**	**39**	eP	**P**	**00 01 51.8**	**-0.1**
COLA	**College**	**83.81**	**11**	⇑iP	**P**	**00 01 51.0**	**-1.2**
SEY	**Seymchan**	**83.84**	**345**	⇑eP	**P**	**00 01 51.4**	**-1.0**
BILL	**Bilibino**	**85.90**	**353**	⇓eP	**P**	**00 02 02.1**	**-0.6**
BILL				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.1						
BJI	**Beijing**	**86.30**	**314**	P	**P**	**00 02 05.5**	**+0.2**
BJI				S	S	00 12 31.3	-6.0
BJI				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.2						
BJI				AMB	AMB		
	comp=Z,231nm,6.2s						
BJI				LR	LR		
	comp=N,262nm,19.9s,MS4.8						
BJI				LR	LR		
	comp=E,322nm,19.0s,MS4.8						
BJI				LR	LR		
	comp=Z,76nm,19.3s,MS4.1						
XAN	**Xi'an**	**89.30**	**306**	P	**P**	**00 02 20.1**	**+0.3**
XAN				AP	pP	00 02 31.5	-2.1
XAN				XP	sP	00 02 38.2	-0.6
XAN				PP	PP	00 05 52.7	+1.4
XAN				PPP		00 07 52.0	
XAN				SKS		00 12 47.5	
XAN				S	S	00 13 05.9	-0.3
XAN				PS	PS	00 14 19.0	+2.0
XAN				SS	SS	00 19 01.3	-0.7
XAN				AMB	AMB		
	comp=Z,11nm,1.7s,mb4.9						
XAN				AMB	AMB		
	comp=Z,191nm,14.0s						
XAN				LR	LR		
	comp=N,325nm,16.9s,MS4.9						
XAN				LR	LR		
	comp=E,108nm,12.1s,MS4.9						
XAN				LR	LR		
	comp=Z,492nm,18.4s						
HHC	**Hu-ho-hao-te**	**89.84**	**313**	eP	**P**	**00 02 22.7**	**+0.5**
HHC				AP	pP	00 02 36.1	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HHC				XP	sP	00 02 41.3	+0.1
HHC				PP	PP	00 05 58.1	+2.6
HHC				SKS		00 12 47.7	
HHC				S	S	00 13 10.1	-0.9
HHC				XS	sS	00 13 32.6	-1.6
HHC				SS	SS	00 19 12.1	+2.5
HHC				AMB	AMB		
	comp=Z,13nm,0.8s,mb5.3						
HHC				AMB	AMB		
	comp=Z,166nm,5.6s						
HHC				LR	LR		
	comp=N,251nm,14.3s,MS4.9						
HHC				LR	LR		
	comp=E,202nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=Z,202nm,17.8s,MS4.6						
SYO	Syowa Base	91.16	191	⇑eP	P	00 02 26.4	-1.5
SYO	Syowa Base	91.16	191	⇓epP	pP	00 02 42.0	+0.3
VNA3	Neumayer Olymp	91.45	175	e	P	00 02 29.2	0.0
VNA3				e		00 02 34.7	
KMI	Kunming	91.45	296	P	P	00 02 29.3	-0.8
KMI				AP	pP	00 02 42.9	-1.0
KMI				XP	sP	00 02 48.6	-0.5
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.0						
KMI				AMB	AMB		
	comp=Z,99nm,4.5s						
VNA2	Neumayer--Watz	91.94	176	e	P	00 02 32.1	+0.6
	baz=197,slow=2.6						
VNA2				e		00 02 37.6	
VNA1	Neumayer--Stat	92.15	175	e	P	00 02 33.6	+1.2
VNA1				e		00 02 39.0	
CMAR	Chiang Mai Arr	92.86	288	P	P	00 02 37.8	+1.1
	comp=Z,5.5nm,0.8s,mb5.0,baz=98,slow=2.5,SNR=37						
CMAR	Chiang Mai Arr	92.86	288	⇑eP	P	00 02 38.2	+1.5
LZH	Lanzhou	93.90	306	eP	P	00 02 42.3	+1.2
LZH				AP	pP	00 02 54.0	-1.0
LZH				XP	sP	00 03 03.5	+3.4
LZH				PP	PP	00 06 32.3	+4.7
LZH				SKS		00 13 12.0	
LZH				eS	S	00 13 46.5	-1.2
LZH				XS	sS	00 14 12.0	+0.9
LZH				SS	SS	00 20 14.0	+5.8
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,110nm,6.0s						
LZH				LR	LR		
	comp=E,470nm,16.2s						
LZH				LR	LR		
	comp=Z,668nm,18.0s,MS5.1						
ULM	Lac du Bonnet	95.17	39	LR	LR	00 37 11.7	
	comp=Z,143nm,19.6s,MS4.5,baz=308,slow=30						
SONM	Songino Array	95.77	318	P	P	00 02 49.1	-0.3
	comp=Z,0.3nm,0.6s,mb3.9,baz=125,slow=7.2,SNR=3.3						
GTA	Gaotai	97.91	309	eP	P	00 02 59.6	+0.3
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.8						
ZALV	Zalesovo Beam	110.22	322	PKiKP	PKiKP	00 07 53.5	-1.3
	comp=Z,0.3nm,0.4s,baz=146,slow=1.1,SNR=3.6						
ZALV	Zalesovo Beam	110.22	322	PKPdf	PKiKP	00 07 53.5	-1.3
MKAR	Makanchi Array	111.68	314	PKiKP	PKiKP	00 07 56.4	-1.4
	comp=Z,0.9nm,0.6s,baz=68,slow=1.4,SNR=11						
MKAR	Makanchi Array	111.68	314	⇑iPKIKP	PKiKP	00 07 56.4	-1.4
MKAR	Makanchi Array	111.68	314	PKPdf	PKiKP	00 07 56.4	-1.4
KURK	Kurchatov	114.08	318	PKP	PKiKP	00 08 00.5	-1.8
	comp=Z,1.3nm,0.8s,baz=93,slow=1.8,SNR=8.2						
KURK	Kurchatov	114.08	318	⇑iPKIKP	PKiKP	00 08 01.1	-1.1
BVAR	Borovoye Array	118.88	322	PKP	PKPdf	00 08 10.2	-1.2
	comp=Z,2.5nm,0.7s,baz=117,slow=1.7,SNR=15						
KBL	Kabul	121.70	300	ePKIKP	PKPdf	00 08 17.4	0.0
ARU	Arti	124.44	328	i PKIKP	PKPdf	00 08 21.5	-0.5
ARCES	ARCESS Array B	126.00	352	PKP	PKPdf	00 08 23.1	-1.5
	comp=Z,6.6nm,0.8s,baz=345,slow=1.4,SNR=9.8						
HFS	Hagfors	136.44	355	PKP	PKPdf	00 08 45.1	+0.5
	comp=Z,9.7nm,1.1s,baz=103,slow=6.4,SNR=4.8						
HFS	Hagfors	136.44	355	PKP	PKPdf	00 08 45.1	+0.5
AKASG	Malin Array Be	141.57	337	PKhKP		00 08 49.0	
	comp=Z,0.5nm,0.4s,baz=32,slow=3.5,SNR=4.1						
AKASG				PKP	PKPdf	00 08 53.1	-1.2
	comp=Z,1.0nm,0.6s,baz=28,slow=3.0,SNR=4.0						
KWP	Kalwaria	144.72	342	ePKP	PKPdf	00 08 58.6	-1.2
KWP	Kalwaria	144.72	342	⇑iP	PKPdf	00 08 58.4	-1.5
KWP	Kalwaria	144.72	342	ePKP	PKPdf	00 08 58.6	-1.3
OJC	Ojcow	144.99	345	ePKP	PKPdf	00 08 59.3	-1.0
KSP	Ksiaz	145.16	349	ePKP	PKPdf	00 09 00.4	-0.2
KSP	Ksiaz	145.16	349	ePKP	PKPdf	00 08 59.7	-0.9
CLL	Collm	145.21	353	⇓iPKP2	PKPab	00 08 59.7	-0.7
CLL				pmax	pmax		
	comp=Z,26nm,1.3s						
CLL	Collm	145.21	353	ePKPbc	PKPbc	00 08 59.5	-0.8
CLL	Collm	145.21	353	⇓iPKPdf	PKPdf	00 08 59.7	-1.0
	comp=Z,26nm,1.3s						
CLL				ePKiKP	PKiKP	00 09 04.0	-0.6
NEUB	Neuenburg	145.44	354	ePKPbc	PKPbc	00 09 00.6	-0.5
BRG	Berggiesshubel	145.51	352	ePKP2	PKPab	00 09 00.7	-0.8
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRG	Berggiesshubel	145.51	352	ePKPbc	PKPbc	00 09 00.6	-0.7
BRG	Berggiesshubel	145.51	352	ePKP	PKPdf	00 09 00.7	-0.5
	comp=Z,16nm,1.1s						
UPC	Upice	145.53	349	ePKIKP	PKPdf	00 09 01.3	+0.1
FBE	Freiberg	145.54	352	ePKPbc	PKPbc	00 09 01.1	-0.3
NIE	Niedzica	145.59	344	ePKP	PKPdf	00 09 01.3	-0.1
BUR08	Bucovina Ar. S	145.59	337	ePKPbc	PKPbc	00 09 02.2	+0.5
BURAR	Bucovina Array	145.61	337	⇓iP	PKPdf	00 09 01.7	+0.2
DPC	Dobruska-Polom	145.62	349	ePKP	PKPdf	00 09 01.5	+0.1
DPC				e		00 09 06.3	
UZH	Uzhgorod	145.73	341	⇑iPKP2	PKPab	00 09 02.0	-0.4
OKC	Ostrava-Krasne	145.73	346	ePKP	PKPdf	00 09 01.9	+0.3
OKC				e		00 09 06.3	
PVCC	Panska Ves	145.75	351	ePKP2	PKPab	00 09 01.9	-0.6
MORC	Moravsky Berou	145.92	347	ePKP	PKPdf	00 09 02.0	+0.1
MOX	Moxa	146.01	354	ePKP	PKPdf	00 09 02.5	+0.4
	comp=Z,34nm,1.3s						
MOX	Moxa	146.01	354	ePKPbc	PKPbc	00 09 02.4	-0.5
WERD	Werda	146.13	353	ePKPbc	PKPbc	00 09 03.0	-0.2
TANN	Tannenbergstha	146.15	353	ePKPbc	PKPbc	00 09 03.0	-0.3
GUNZ	Gunzen	146.22	353	ePKPbc	PKPbc	00 09 03.3	-0.2
PRU	Pruhonice	146.28	350	ePKP	PKPdf	00 09 03.2	+0.7
PRU				e		00 09 07.4	
WERN	Wernitzgruen	146.28	353	ePKPbc	PKPbc	00 09 03.5	-0.2
MEM	Membach	146.31	0	PKPbc	PKPbc	00 09 03.6	-0.1
NKC	Novy Kostel	146.33	353	ePKP2	PKPab	00 09 03.2	-1.5
BCLA	Clavier	146.49	1	PKPab	PKPab	00 09 04.8	-0.4
VRAC	Vranov	146.57	348	PKPbc	PKPbc	00 09 02.8	-1.8
	comp=Z,7.8nm,0.8s,baz=344,slow=4.1,SNR=6.5						
VRAC	Vranov	146.57	348	ePKP	PKPdf	00 09 04.6	+1.6
TREC	Trest	146.79	349	ePKP2	PKPab	00 09 04.9	-1.6
DOU	Dourbes	146.79	2	PKPbc	PKPbc	00 09 04.9	-0.2
GIVF	Givet	146.79	2	ePKP1	PKPbc	00 09 04.5	-0.7
	comp=Z,17nm,0.8s						
BAIF	Baives	146.81	3	⇑iPKP1	PKPbc	00 09 04.8	-0.5
	comp=Z,26nm,0.8s						
GRA1	Grafenberg Arr	147.00	354	ePKPbc	PKPbc	00 09 05.7	-0.1
GRF	Grafenberg Arr	147.00	354	ePKP2	PKPab	00 09 05.7	-1.6
GRF	Grafenberg Arr	147.00	354	ePKPbc	PKPbc	00 09 05.7	-0.1
MLR	Muntele Rosu	147.07	334	⇓iP	PKPbc	00 09 05.3	-0.8
BR131	Keskin Array S	147.12	319	ePKPbc	PKPbc	00 09 06.4	0.0
BRTR	Keskin Array B	147.12	319	PKPbc	PKPbc	00 09 06.1	-0.4
	comp=Z,6.0nm,0.8s,baz=128,slow=1.2,SNR=20						
WLF	Walferdange	147.26	0	PKPbc	PKPbc	00 09 06.8	+0.3
KHC	Kasperske Hory	147.26	351	⇑iPKP2	PKPab	00 09 07.0	-1.3
VOIR		147.48	335	⇓iP	PKPbc	00 09 07.5	+0.2
GERES	GERESS Array B	147.52	351	PKPbc	PKPbc	00 09 06.5	-0.8
	comp=Z,2.1nm,0.7s,baz=20,slow=2.7,SNR=17						
ROSF	Rostrenen	147.60	12	ePKP1	PKPbc	00 09 06.1	-1.4
	comp=Z,71nm,1.1s						
FLN	La Foliniere	147.67	9	ePKP1	PKPbc	00 09 06.6	-1.1
	comp=Z,9.2nm,0.5s						
SGMF	Saint Gilles	147.82	11	ePKP1	PKPbc	00 09 07.1	-1.0
LDF	La Druitiere	147.88	8	ePKP1	PKPbc	00 09 07.1	-1.2
	comp=Z,8.1nm,0.6s						
GRR	Gorron	147.98	9	ePKP1	PKPbc	00 09 07.7	-0.8
	comp=Z,96nm,1.3s						
CONA	Conrad Observa	148.03	348	⇑iPKPbc	PKPbc	00 09 08.6	0.0
	comp=Z,14nm,1.1s						
CSNA	Conrad Observa	148.03	348	⇑iPKPbc	PKPbc	00 09 08.6	-0.1
	comp=Z,12nm,1.0s						
MEZF	Maizieres J'vi	148.40	2	ePKP1	PKPbc	00 09 09.2	-0.4
	comp=Z,30nm,1.1s						
CDF	Champ du Feu	148.50	359	⇑iPKP1	PKPbc	00 09 09.4	-0.5
	comp=Z,25nm,1.0s						
HAU	Haudompre	148.92	0	ePKP1	PKPbc	00 09 10.4	-0.6
	comp=Z,15nm,0.9s						
PKSM	Moragy	148.98	343	⇓iP	PKPbc	00 09 10.5	-0.7
HINF	Hinteralfeld	149.10	359	ePKP1	PKPbc	00 09 11.8	+0.4
	comp=Z,15nm,1.0s						
SOKA	Soboth	149.39	348	⇑iPKPbc	PKPbc	00 09 11.0	-1.2
	comp=Z,10nm,1.2s						
LOR	Lormes	149.58	3	ePKP1	PKPbc	00 09 12.2	-0.5
ABTA	Abfaltersbach	149.75	352	⇑iPKPbc	PKPbc	00 09 12.1	-1.0
	comp=Z,18nm,1.1s,SNR=6.9						
SSF	Saint Saulge	149.77	4	⇑iPKP1	PKPbc	00 09 12.7	-0.4
	comp=Z,33nm,1.0s						
MFF	Saint Martin d	149.83	9	ePKP1	PKPbc	00 09 12.5	-0.8
DAVOS	Davos	149.95	355	PKP2	PKPbc	00 09 13.7	+0.1
DAVOX	Davos/Dischmat	150.00	355	PKPbc	PKPbc	00 09 13.7	0.0
	comp=Z,9.9nm,0.8s,baz=352,slow=2.9,SNR=10						
AVF	Avril sur Loir	150.03	4	⇑iPKP1	PKPbc	00 09 13.0	-0.8
	comp=Z,14nm,0.9s						
BGF	Bois d'Agland	150.22	5	⇑iPKP1	PKPbc	00 09 13.6	-0.6
	comp=Z,33nm,0.9s						
CABF	La Chapelle	150.31	0	ePKP1	PKPbc	00 09 14.5	+0.1
	comp=Z,86nm,1.2s						
TCF	Toulx Ste Croi	150.43	6	ePKP1	PKPbc	00 09 13.9	-0.8
	comp=Z,56nm,1.3s						
BOJS	Bojanci	150.47	347	ePKPbc	PKPbc	00 09 14.4	-0.4
RJF	Les Rejaudoux	151.33	7	ePKP1	PKPbc	00 09 15.9	-1.0
	comp=Z,23nm,1.0s						
LPL	La Plagne	151.41	359	ePKP1	PKPbc	00 09 17.5	+0.5
	comp=Z,9.2nm,0.7s						
LPG	La Plagne	151.42	359	ePKP1	PKPbc	00 09 17.6	+0.5
	comp=Z,12nm,0.8s						
ORIF	Oris-en-Rattie	152.00	1	ePKP1	PKPbc	00 09 18.3	-0.1
VIVF	Saint-Julien-l	152.03	3	⇑iPKP1	PKPbc	00 09 18.2	-0.3
	comp=Z,19nm,1.0s						
MBDF	Montbardon	152.19	359	ePKP1	PKPbc	00 09 18.6	-0.3
	comp=Z,10nm,0.7s						
LASF	Ste Croix	152.76	4	ePKP1	PKPbc	00 09 20.0	-0.2
	comp=Z,14nm,0.8s						
SMRF	Simiane la Rot	152.94	1	ePKP1	PKPbc	00 09 20.6	0.0
SBF	Sospel	153.05	358	ePKP1	PKPbc	00 09 20.7	-0.1
	comp=Z,37nm,0.9s						
ETSF	Etsaut	153.36	11	ePKP1	PKPbc	00 09 21.0	-0.5
	comp=Z,11nm,0.7s						
FRF	La Foret Royal	153.36	360	ePKP1	PKPbc	00 09 21.7	+0.2
EPF	Esparros	153.39	10	ePKP1	PKPbc	00 09 21.1	-0.5
LMR	La Mourre	153.59	360	ePKP1	PKPbc	00 09 21.8	-0.2
PGF	Pioggiola	154.28	356	ePKP1	PKPbc	00 09 23.8	+0.3
	comp=Z,22nm,0.8s						
TORD	Torodi Ar. Bea	174.17	128	PKP	PKPdf	00 09 31.8	-1.9
	comp=Z,1.6nm,0.9s,baz=321,slow=0.1,SNR=8.4						
TORD				PKPab	PKPab	00 11 04.4	-1.1
	comp=Z,0.1nm,0.3s,baz=222,slow=5.8,SNR=8.3						

*ISCJB **02** 00:17:33.8±0.5, 33.07N±0.05×138.43E±0.07, h307km±5km, mb3.2/6, Error ellipse: s-maj=9.3km s-min=7.8km az=147.3*
*JMA **02** 00:17:33.1±0.4, 33.08N×138.44E, h321km±4km, M3.3*
*IDC **02** 00:17:34.2±1.0, 33.05N×138.34E, h294km±11km, mb3.0/6, mb1 3.3/9, mb1mx3.1/23, mbtmp3.1/9, Error ellipse: s-maj=23.7km s-min=11.9km az=67.0*
ISC 02 00:17:34.5±0.5**, 33.04N**±0.05×**138.45E**±0.07**, h298**km±5km**, n28,** σ0.85s/37**, mb3.2**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TK02	Tokai 2	1.07	328	P	Pn	00 18 16.6	+1.6
TK04	Tokai 4	1.42	341	P	Pn	00 18 18.6	+1.6
JKN2	Miekihoku	2.17	304	P	Pn	00 18 22.7	+0.2
JOD2	Odawara 2	2.28	13	P	Pn	00 18 24.5	+1.1
JNY	Yasuok	2.36	348	P	Pn	00 18 25.2	+1.1
JNY				eS	S	00 19 04.4	+0.8
JYN	Shimob	2.45	2	P	Pn	00 18 26.0	+1.1
BSO1	Boso 1	2.65	52	P	Pn	00 18 26.6	-0.1
BSO1				eS	S	00 19 07.6	-0.8
JWM	Minabe	2.71	288	P	Pn	00 18 27.0	-0.3
JRY	Ryogami san	2.99	7	P	Pn	00 18 30.8	+0.8
JRY				eS	S	00 19 13.6	-0.7
JGM	Miyama	3.01	332	P	Pn	00 18 30.4	+0.2
JGM				eS	S	00 19 14.0	-0.7
JWT	Wachi	3.37	312	P	Pn	00 18 33.7	-0.2
JAI	Aioi	3.42	284	P	Pn	00 18 34.1	-0.3
MJAR	Matsushiro Arr	3.50	357	P	Pn	00 18 34.8	-0.3
	6.3nm,0.3s,baz=172,slow=11,SNR=100						
MJAR				S	S	00 19 23.1	-0.6
	0.3nm,0.3s,baz=199,slow=2.9,SNR=2.3						
MAT	Matsushiro	3.50	357	P	Pn	00 18 35.0	-0.2
MAT				eS	S	00 19 23.6	-0.1
MAT	Matsushiro	3.50	357	P	Pn	00 18 35.2	0.0
JMN	Monobe	3.88	281	P	Pn	00 18 39.2	-0.1
JHO	Hitachi	3.97	26	P	Pn	00 18 39.0	-1.2
JHO				eS	S	00 19 28.1	-4.7
JTO	Tosashimizu	4.75	269	P	Pn	00 18 48.6	-0.5
JFK	Kawauchi	4.75	24	P	Pn	00 18 47.8	-1.2
JFK				eS	S	00 19 43.6	-5.2
JHS	Saijyo	4.84	295	P	Pn	00 18 49.9	-0.2
CBIJ	Chichi jima	6.75	150	P	Pn	00 19 13.1	+0.2
	7.9nm,0.3s,baz=144,slow=23,SNR=5.8						
CBIJ				S	S	00 20 30.9	-1.4
	5.9nm,0.3s,baz=266,slow=22,SNR=1.2						
KSRS	Korea Array	9.67	300	P	Pn	00 19 47.9	-0.6
	0.3nm,0.3s,baz=115,slow=13,SNR=8.4						
SONM	Songino Array	28.28	311	P	P	00 23 00.3	-0.4
	1.1nm,0.7s,mb3.4,baz=113,slow=8.2,SNR=9.2						
MKAR	Makanchi Array	44.30	305	P	P	00 25 13.9	-1.3
	0.2nm,0.4s,mb2.7,baz=83,slow=10,SNR=5.0						
ASAR	Alice Springs	56.55	185	P	P	00 26 47.4	+0.9
	0.3nm,0.4s,mb3.0,baz=16,slow=9.2,SNR=9.6						
NOA	NORSAR Array B	76.90	337	P	P	00 28 53.2	-0.5
	0.6nm,0.7s,mb3.5,baz=45,slow=5.6,SNR=2.5						
NVAR	Mina Array Bea	79.36	51	P	P	00 29 08.1	+0.5
	0.9nm,0.8s,mb3.6,baz=281,slow=5.4,SNR=5.4						
PDAR	Pinedale Array	82.22	44	P	P	00 29 24.7	+2.1
	0.2nm,0.3s,mb3.3,baz=29,slow=2.1,SNR=2.7						

*NIED **02** 00:24:00, 36.20N×140.00E, h35km, Mw3.7 Best double couple: M0 4.69000×10^14 NP1:φs54.00000°, δ61.00000°, λ80.00000°. NP2:φs253.00000°, δ31.00000°, λ107.00000°.*
*ISCJB **02** 00:24:37.6±0.5, 36.19N±0.03×140.00E±0.06, h63km±4km, mb3.6/6, Error ellipse: s-maj=7.8km s-min=5.4km az=19.7*
*JMA **02** 00:24:38.5±0.1, 36.20N×139.98E, h54km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs234.00000°, δ16.00000°, λ102.00000°. NP2: φs41.00000°, δ74.00000°, λ86.00000°. Principal axes: T Plg61.0000°, Azm306.0000°; N Plg3.0000°, Azm42.0000°; P Plg29.0000°, Azm134.0000°;*
JMA Felt II J1.
*IDC **02** 00:24:39.3±3.9, 36.14N×139.78E, h61km±30km, mb3.5/6, mb1 3.6/7, mb1mx3.4/21, mbtmp3.6/7, ML4.2/1 Error ellipse: s-maj=51.3km s-min=8.3km az=59.0*
*NEIC **02** 00:24:40.1±1.3, 36.20N×139.81E, h68km±8km, MG3.9(JMA), Error ellipse: s-maj=18.6km s-min=12.6km az=145.0*
NEIC Recorded [2 JMA] in Ibaraki and Tochigi; [1 JMA] in Chiba, Gumma, Saitama and Tokyo Prefectures.
ISC 02 00:24:38.7±0.5**, 36.20N**±0.03×**139.97E**±0.05**, h56**km±4km**, n23,** σ0.71s/35**, mb3.6**/6**, 1C-9D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.19	81	⇑P	Pn	00 24 47.2	-0.4
JYT				S	Sn	00 24 53.2	-0.7
JAG	Ashikaga	0.47	299	⇓P	Pn	00 24 49.9	-0.1
JAG				S	Sn	00 24 57.8	-0.4
JKT	Katashina	0.81	315	⇓P	Pn	00 24 53.9	-0.2
JKT				S	Sn	00 25 05.6	+0.3
JRY	Ryogami san	0.88	258	⇓P	Pn	00 24 55.1	+0.1
JRY				S	Sn	00 25 07.1	+0.1
JOD2	Odawara 2	1.18	218	P	Pn	00 24 59.1	+0.2
JOD2				S	Sn	00 25 14.5	+0.6
JFY	Yanaizu	1.22	350	⇓P	Pn	00 24 59.6	+0.1
JFY				eS	Sn	00 25 15.7	+0.6
JHK	Hiroka	1.30	324	⇓P	Pn	00 25 00.7	+0.2
JYN	Shimob	1.35	239	⇓P	Pn	00 25 02.9	+1.7
JFT	Otama	1.35	13	⇓P	Pn	00 25 01.3	+0.1
JFK	Kawauchi	1.38	32	⇓P	Pn	00 25 01.2	-0.4
JFK				eS	Sn	00 25 18.5	-0.2
MJAR	Matsushiro Arr	1.46	284	P	Pn	00 25 02.1	-0.6
	33nm,0.3s,baz=188,slow=1.2,SNR=414						
MJAR				S	Sn	00 25 17.8	-3.0
	31nm,0.3s,baz=54,slow=28,SNR=12						
MJAR	Matsushiro Arr	1.46	284	P	Pn	00 25 02.1	-0.6
MJAR				S	Sn	00 25 17.8	-3.0
MAJO	Matsushiro	1.46	284	⇓iPn	Pn	00 25 03.4	+0.7
MAJO				eSn	Sn	00 25 16.7	-4.1
MAT	Matsushiro	1.46	284	P	Pn	00 25 03.3	+0.6
MAT				eS	Sn	00 25 16.2	-4.6
JHJ	Hachijo jima 2	3.08	183	P	Pn	00 25 24.6	-0.2
	79nm,0.3s,baz=65,slow=19,SNR=12						
JHJ				S	Sn	00 25 59.8	-0.5
	44nm,0.3s,baz=236,slow=24,SNR=6.4						
ERM	Erimo	6.32	22	Pn	Pn	00 26 11.2	+2.1
SONM	Songino Array	27.30	306	P	P	00 30 17.6	-0.3
	0.5nm,0.7s,mb3.2,baz=95,slow=8.6,SNR=4.1						
ZALV	Zalesovo Beam	41.63	313	P	P	00 32 20.5	-0.5
	1.0nm,0.6s,mb3.6,baz=98,slow=7.4,SNR=6.1						
MK31	Makanchi Array	43.58	303	eP	P	00 32 36.9	-0.1
MKAR	Makanchi Array	43.58	303	P	P	00 32 36.8	-0.2
	1.2nm,0.7s,mb3.8,baz=92,slow=9.7,SNR=17						
ASAR	Alice Springs	59.81	186	P	P	00 34 38.5	+0.3
	0.4nm,0.6s,mb3.7,baz=20,slow=11,SNR=5.4						
NOA	NORSAR Array B	74.50	337	P	P	00 36 10.5	-0.3
	0.5nm,0.6s,mb3.6,baz=44,slow=2.5,SNR=2.8						
BRTR	Keskin Array B	78.53	311	P	P	00 36 33.3	-0.6
	2.1nm,1.1s,mb4.0,baz=51,slow=8.7,SNR=2.9						

*ISCJB **02** 00:26:24.7±1.7, 18.26N±0.07×122.52E±0.07, h10km±10km, mb3.3/4, Error ellipse: s-maj=13.2km s-min=9.5km az=32.6*
*IDC **02** 00:26:26.2±1.4, 17.32N×120.99E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.4/19, mbtmp3.4/5, Error ellipse: s-maj=68.7km s-min=24.6km az=72.0*
*MAN **02** 00:26:26, 18.24N×122.39E, h9km, mb4.8, ML3.7, MS3.8*
ISC 02 00:26:25.3±1.7**, 18.21N**±0.07×**122.48E**±0.07**, h2**km±8km**, n17,** σ1.06s/21**, mb3.3**/4**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	0.41	274	eP	Pg	00 26 33.5	+0.2
PALP	Palanan	1.14	183	⇓iP	Pg	00 26 47.4	+0.1
PALP				i S	Sg	00 27 07.3	+5.2
PALP	Palanan	1.14	183	eP	Pg	00 26 47.7	+0.4
APYP	Conner	1.23	254	eP	Pg	00 26 47.5	-1.4
APYP				eS	Sg	00 27 04.7	-0.2
CAUP	Cauayan	1.41	207	eP	Pn	00 26 52.2	+0.2
ABRA	Dolores	1.77	252	eP	Pn	00 26 55.9	-1.1
SIPP	Brgy, Tapao	1.94	262	⇑eP	Pn	00 26 59.4	+0.1
SIPP				eS	Sn	00 27 24.8	+0.4
BALP	Baler	2.60	200	eP	Pn	00 27 09.4	+0.9
BOLP	Bolinao	3.06	234	eP	Pn	00 27 15.2	+0.5
SCZP	Santa Cruz	3.45	226	eP	Pn	00 27 21.9	+1.8
POLP	Polilio Island	3.50	189	eP	Pn	00 27 20.9	+0.1
GQP	Guinayangan	4.28	180	eP	Pn	00 27 33.0	+1.5
GQP				eS	Sn	00 28 20.5	-1.6
KSRS	Korea Array	19.76	13	P	Pn	00 31 10.2	+12
	1.3nm,0.9s,baz=185,slow=13,SNR=3.3						
SONM	Songino Array	32.34	340	P	P	00 33 02.2	+6.4
	0.2nm,0.4s,mb3.3,baz=151,slow=12,SNR=2.9						
ASAR	Alice Springs	43.09	165	P	P	00 34 24.6	-2.4
	0.6nm,0.7s,mb3.4,baz=348,slow=7.2,SNR=6.5						
MKAR	Makanchi Array	43.56	320	P	P	00 34 29.5	-1.1
	0.3nm,0.7s,mb3.2,baz=110,slow=9.3,SNR=3.5						
ZALV	Zalesovo Beam	45.95	330	P	P	00 34 50.5	+1.0
	0.2nm,0.4s,mb3.4,baz=126,slow=7.3,SNR=3.0						

*NIED **02** 00:32:00, 29.40N×142.30E, h8km, Mw4.7 Best double couple: M0 1.44000×10^16 NP1:φs173.00000°, δ79.00000°, λ-64.00000°. NP2:φs283.00000°, δ28.00000°, λ-157.00000°.*
*ISCJB **02** 00:32:50.0±1.5, 29.37N±0.04×142.1E±0.1, h15km±11km, mb4.5/34, MS4.0/15, Error ellipse: s-maj=16.0km s-min=5.7km az=168.2*
*JMA **02** 00:32:51.6±0.2, 29.38N×142.32E, h56km, M4.4*
*MOS **02** 00:32:52.4±0.9, 29.31N×142.08E, h33km, mb4.7/20, MS4.1/7, Error ellipse: s-maj=20.1km s-min=7.8km az=119.3*
*NEIC **02** 00:32:54.8±1.7, 29.30N×142.09E, h40km±14km, mb4.4/5, Error ellipse: s-maj=19.3km s-min=11.9km az=87.0*
*IDC **02** 00:32:54.5±4.8, 29.26N×142.06E, h34km±38km, mb3.9/14, mb1 4.1/15, mb1mx4.1/20, mbtmp3.9/15, ML3.8/2, MS3.9/17, Ms1 4.0/17, ms1mx3.8/34, Error ellipse: s-maj=21.6km s-min=16.8km az=61.0*
*BJI **02** 00:32:55.5, 29.23N×141.31E, h40km, mB4.7, mb4.5, Ms4.2, Msz4.1*
ISC 02 00:32:53.2±1.6**, 29.34N**±0.04×**142.1E**±0.1**, h25**km±11km**, n90,** σ0.95s/88**, mb4.5**/34**, MS4.0**/15**, 10C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.23	178	Pn	Pn	00 33 27.9	-0.7
	14nm,0.3s,baz=299,slow=17,SNR=9.6						
CBIJ				Sn	Sn	00 33 54.4	-1.0
	119nm,0.3s,baz=286,slow=20,SNR=8.9						
CBIJ	Chichi jima	2.23	178	P	Pn	00 33 27.9	-0.7
CBIJ				eS	Sn	00 33 54.3	-1.1
JHJ	Hachijo jima 2	4.26	333	LR	LR	00 35 48.1	
	comp=Z,2μm,18.2s,baz=108,slow=40						
BSO1	Boso 1	5.38	350	P	Pn	00 34 11.6	-0.3
BSO1				eS	Sn	00 35 09.5	-3.6
BSO3	Boso 3	5.61	347	P	Pn	00 34 14.8	-0.2
HMMJ	Hamamatsu 2	6.63	327	P	Pn	00 34 30.4	+1.3
JHU	Hanno	6.91	341	P	Pn	00 34 33.2	+0.3
JHU				eS	Sn	00 35 48.1	-2.7
JRY	Ryogami san	7.18	339	P	Pn	00 34 37.3	+0.7
JRY				eS	Sn	00 35 56.2	-1.2
JHO	Hitachi	7.37	350	P	Pn	00 34 37.4	-1.7
JHO				eS	Sn	00 35 55.1	-6.8
JAG	Ashikaga	7.41	343	P	Pn	00 34 38.9	-0.8
JAG				eS	Sn	00 35 58.9	-4.0
MJAR	Matsushiro Arr	7.89	337	Pn	Pn	00 34 47.1	+0.7
	5.1nm,0.3s,baz=162,slow=17,SNR=52						
MJAR				LR	LR	00 37 54.2	
	comp=Z,732nm,19.5s,baz=180,slow=38						
MJAR	Matsushiro Arr	7.89	337	Pn	Pn	00 34 47.0	+0.7
MJAR				LR	LR	00 37 54.2	
MAJO	Matsushiro	7.89	337	eP	Pn	00 34 47.8	+1.5
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s						
MAJO	Matsushiro	7.89	337	ePn	Pn	00 34 47.8	+1.5
	comp=Z,22nm,0.6s						
MAT	Matsushiro	7.89	337	P	Pn	00 34 46.8	+0.5
MAT				S	Sn	00 36 14.2	-0.6
MAT	Matsushiro	7.89	337	P	Pn	00 34 46.7	+0.4
JMK	Ichinoseki	9.62	356	P	Pn	00 35 09.0	-1.0
JMK				eS	Sn	00 36 48.4	-8.8
JOW	Kunigami	12.45	262	LR	LR	00 40 01.7	
	comp=Z,1μm,21.6s,baz=120,slow=34						
KSRS	Korea Array	14.32	308	Pn	Pn	00 36 19.4	+5.0
	comp=Z,0.3nm,0.3s,baz=120,slow=11,SNR=11						
KSRS				LR	LR	00 41 51.1	
	comp=Z,642nm,18.4s,baz=132,slow=37						
ASAJ	Asahikawa	14.76	1	LR	LR	00 41 41.3	
	comp=Z,347nm,21.7s,baz=343,slow=36						
GUMO	Guam	15.88	170	LR	LR	00 41 54.1	
	comp=Z,398nm,21.0s,baz=92,slow=34						
MDJ	Mudanjiang	18.19	330	P	Pn	00 37 04.8	+0.9
MDJ				AMB	AMB		
	comp=Z,13nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,163nm,8.6s						
MDJ				LR	LR		
	comp=N,329nm,15.6s						
MDJ				LR	LR		
	comp=E,341nm,18.1s						
MDJ				LR	LR		
	comp=Z,597nm,13.4s						
CN2	Changchun	19.62	322	eP	Pn	00 37 20.4	-0.8
KLR	Kul'dur	21.38	341	eP	P	00 37 39.3	+0.6
PETK	Petropavlovsk-	26.38	21	LR	LR	00 47 42.4	
	comp=Z,92nm,19.1s,MS3.3,baz=208,slow=34						
DAV	Davao City (W)	27.07	218	LR	LR	00 47 07.6	
	comp=Z,226nm,19.1s,MS3.8,baz=8.4,slow=32						
QIZ	Qiongzhong	31.06	258	P	P	00 39 05.0	-4.4
QIZ				S	S	00 44 06.2	-7.1
QIZ				LR	LR		
	comp=E,324nm,20.1s						
QIZ				LR	LR		
	comp=Z,309nm,17.9s,MS4.0						
ULN	Ulaanbaatar	32.67	314	P	P	00 39 23.7	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
ULN	**Ulaanbaatar**	**32.67**	**314**	P	**P**	**00 39 23.7**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.3						
SONM	**Songino Array**	**33.07**	**314**	P	**P**	**00 39 28.2**	**+1.4**
	comp=Z,2.4nm,0.6s,mb4.3,baz=121,slow=6.9,SNR=16						
SONM				LR	LR	00 53 33.1	
	comp=Z,255nm,19.3s,MS3.9,baz=131,slow=37						
SONM	**Songino Array**	**33.07**	**314**	P	**P**	**00 39 28.2**	**+1.5**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,255nm,19.3s						
YAK	**Yakutsk**	**33.70**	**349⇑**	*e*P	**P**	**00 39 32.8**	**+0.7**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ZAK	**Zakamensk**	**35.90**	**317**	*e*P	**P**	**00 39 51.9**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TLY	**Talaya**	**36.17**	**319**	*e*P	**P**	**00 39 54.7**	**+1.2**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
TLY				MLR	MLR		
	comp=Z,409nm,18.0s,MS4.2						
CHTO	**Chiang Mai**	**40.56**	**265**	*e*P	**P**	**00 40 30.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
CHTO	**Chiang Mai**	**40.56**	**265**	*e*P	**P**	**00 40 30.4**	**-0.3**
	comp=Z,5.4nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**40.70**	**264**	P	**P**	**00 40 31.6**	**-0.3**
	comp=Z,2.1nm,0.6s,mb3.9,baz=76,slow=4.6,SNR=15						
CMAR				LR	LR	00 57 16.9	
	comp=Z,278nm,20.2s,MS4.1,baz=106,slow=36						
CMAR	**Chiang Mai Arr**	**40.70**	**264⇑**	*e*P	**P**	**00 40 31.7**	**-0.3**
HVS	**Khovu-Aksy**	**41.94**	**315*d***	*i*P	**P**	**00 40 42.7**	**+1.0**
HVS				pmax	pmax		
	comp=Z,142nm,1.7s,mb5.3						
TIXI	**Tiksi**	**42.98**	**354⇑**	*i*P	**P**	**00 40 53.2**	**+3.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.0						
KRAR	**Krasnoyarsk**	**43.65**	**322⇑**	*i*P	**P**	**00 40 56.7**	**+1.2**
KRAR				pmax	pmax		
	comp=Z,18nm,0.4s,mb5.2						
ZAA0	**Zalesovo Array**	**47.76**	**318**	*e*P	**P**	**00 41 28.2**	**+0.2**
ZALV	**Zalesovo Beam**	**47.76**	**318**	P	**P**	**00 41 28.2**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.4,baz=98,slow=7.6,SNR=18						
ZALV				LR	LR	01 02 42.8	
	comp=Z,180nm,20.1s,MS4.0,baz=339,slow=37						
ZALV	**Zalesovo Beam**	**47.76**	**318**	P	**P**	**00 41 28.3**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ZALV				MLR	MLR		
	comp=Z,180nm,20.1s,MS4.0						
NVS	**Novosibirsk**	**48.79**	**319**	*e*P	**P**	**00 41 36.1**	**+0.2**
NVS				pmax	pmax		
	comp=Z,41nm,2.5s,mb5.0						
NVS				pmax	pmax		
	comp=E,18nm,1.8s						
MK31	**Makanchi Array**	**49.01**	**308**	*e*P	**P**	**00 41 37.6**	**-0.2**
MKAR	**Makanchi Array**	**49.01**	**308**	P	**P**	**00 41 37.6**	**-0.1**
	comp=E,3.1nm,0.7s,mb4.4,baz=91,slow=9.8,SNR=26						
MKAR				LR	LR	01 02 28.5	
	comp=E,194nm,18.7s,MS4.1,baz=243,slow=36						
MKAR	**Makanchi Array**	**49.01**	**308**	P	**P**	**00 41 37.6**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,194nm,18.7s						
WRAB	**Tennant Creek**	**49.55**	**190⇑**	*i*P	**P**	**00 41 42.4**	**+0.3**
WB2	**Warramunga Arr**	**49.56**	**190**	*e*P	**P**	**00 41 41.5**	**-0.6**
KURK	**Kurchatov**	**51.38**	**313**	LR	LR	01 04 28.3	
	comp=Z,137nm,18.2s,MS4.0,baz=305,slow=37						
KURK	**Kurchatov**	**51.38**	**313⇑**	*e*P	**P**	**00 41 55.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KURK	**Kurchatov**	**51.38**	**313**	*e*P	**P**	**00 41 55.1**	**-0.6**
	comp=Z,13nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**53.28**	**189**	P	**P**	**00 42 09.6**	**-0.4**
	comp=Z,0.4nm,0.3s,mb3.8,baz=2.9,slow=5.3,SNR=9.5						
AAK	**Ala-Archa**	**54.93**	**304⇑**	*i*P	**P**	**00 42 21.6**	**-0.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
BVAR	**Borovoye Array**	**56.35**	**316**	LR	LR	01 06 52.3	
	comp=Z,317nm,21.8s,MS4.4,baz=62,slow=36						
SVE	**Sverdlovsk**	**61.41**	**322⇑**	*e*P	**P**	**00 43 00.8**	**-6.2**
SVE				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.5						
ARU	**Arti**	**62.61**	**322*c***	*i*P	**P**	**00 43 15.7**	**+0.6**
ARU				*e*		00 45 33.1	
ARU				PPP		00 47 04.2	
ARU				*e*S	**S**	**00 51 42.5**	**+1.0**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
AKTO	**Aktyubinsk**	**64.38**	**315**	LR	LR	01 11 17.7	
	comp=Z,135nm,21.7s,MS4.1,baz=337,slow=36						
YKA	**Yellowknife Ar**	**70.22**	**29**	P	**P**	**00 44 04.2**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=296,slow=6.2,SNR=3.7						
YKA	**Yellowknife Ar**	**70.22**	**29**	P	**P**	**00 44 04.2**	**+0.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KEV	**Kevo**	**70.85**	**341**	*e*p	**P**	**00 44 05.2**	**-2.2**
	comp=Z,6.4nm,0.9s,mb4.5						
KEV	**Kevo**	**70.85**	**341**	*e*P	**P**	**00 44 05.2**	**-2.2**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**71.41**	**341**	P	**P**	**00 44 11.4**	**+0.7**
	comp=Z,4.5nm,0.9s,mb4.4,baz=62,slow=6.2,SNR=3.8						
ARCES	**ARCESS Array B**	**71.41**	**341**	P	**P**	**00 44 11.5**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JOF	**Joensuu**	**73.05**	**333**	*e*p	**P**	**00 44 20.1**	**-0.6**
	comp=Z,2.3nm,0.6s,mb4.3						
JOF	**Joensuu**	**73.05**	**333**	*e*P	**P**	**00 44 20.1**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
OBN	**Obninsk**	**74.65**	**325**	P	**P**	**00 44 34.0**	**+3.8**
OBN				*e*		00 44 49.9	
OBN				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
KAF	**Kangasniemi**	**75.43**	**334**	*e*p	**P**	**00 44 29.8**	**-4.8**
	comp=Z,3.2nm,0.9s,mb4.2						
KAF	**Kangasniemi**	**75.43**	**334**	*e*P	**P**	**00 44 29.8**	**-4.8**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KIV	**Kislovodsk**	**76.46**	**313**	*e*P	**P**	**00 44 42.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=Z,183nm,18.0s,MS4.4						
NVAR	**Mina Array Bea**	**79.21**	**52**	P	**P**	**00 44 57.0**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=292,slow=5.2,SNR=7.9						
NVAR				PcP	PcP	00 45 05.7	+1.1
	comp=Z,1.2nm,0.7s,baz=302,slow=5.2,SNR=7.3						
ANN	**Anapa**	**79.34**	**316**	*e*P	**P**	**00 44 54.8**	**-2.0**
MIB	**Mutribah**	**79.73**	**298**	*e*P	**P**	**00 44 58.9**	**-0.4**
	baz=298						
MIB				AMb	AMB	00 45 00.7	
	comp=Z,28nm,0.7s,mb5.3,baz=298						
RDF	**Al-Radifah**	**79.98**	**297**	*e*P	**P**	**00 44 59.6**	**-1.0**
	baz=297						
RDF				AMb	AMB	00 45 03.0	
	comp=Z,24nm,0.8s,mb5.2,baz=297						
NAY	**Al-Naaiem**	**80.07**	**298**	*e*P	**P**	**00 45 00.2**	**-0.8**
	baz=298						
NAY				AMb	AMB	00 45 03.7	
	comp=Z,19nm,0.8s,mb5.1,baz=298						
PPT	**Papeete**	**80.72**	**116**	*e*LR	LR	01 10 14.1	
	comp=Z,93nm,24.2s						
PPT	**Papeete**	**80.72**	**116**	LR	LR	01 15 54.0	
	comp=Z,11nm,18.1s,MS3.2,baz=228,slow=32						
AKASG	**Malin Array Be**	**80.77**	**324**	P	**P**	**00 45 04.1**	**-0.3**
	comp=Z,1.1nm,0.5s,mb4.0,baz=45,slow=6.5,SNR=3.8						
AKASG	**Malin Array Be**	**80.77**	**324**	P	**P**	**00 45 04.1**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**81.51**	**338**	P	**P**	**00 45 07.8**	**-0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=42,slow=5.3						
NOA	**NORSAR Array B**	**81.51**	**338**	P	**P**	**00 45 08.0**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=38,slow=5.4,SNR=3.4						
NOA				LR	LR	01 21 31.0	
	comp=Z,145nm,21.6s,MS4.3,baz=25,slow=36						
NOA	**NORSAR Array B**	**81.51**	**338**	P	**P**	**00 45 08.0**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,145nm,21.6s						
PDAR	**Pinedale Array**	**82.69**	**45**	P	**P**	**00 45 15.8**	**+1.0**
	comp=Z,0.8nm,1.0s,mb3.7,baz=325,slow=1.8,SNR=4.3						
BRTR	**Keskin Array B**	**84.42**	**313**	P	**P**	**00 45 24.6**	**+0.9**
	comp=Z,3.6nm,0.8s,mb4.5,baz=84,slow=2.8,SNR=13						
BRTR	**Keskin Array B**	**84.42**	**313⇑**	*e*P	**P**	**00 45 24.6**	**+0.9**
GERES	**GERESS Array B**	**89.56**	**329**	P	**P**	**00 45 48.2**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.8,baz=18,slow=4.1,SNR=3.7						
TXAR	**Lajitas Array**	**94.33**	**53**	P	**P**	**00 46 10.5**	**-0.4**
	comp=Z,0.3nm,0.5s,mb4.0,baz=276,slow=1.6,SNR=3.1						
VNA2	**Neumayer--Watz**	**135.04**	**194**	*e*PKPdf	PKPdf	00 52 11.7	+2.4
	baz=68,slow=0.9						
VNA3	**Neumayer Olymp**	**135.24**	**193**	*e*PKPdf	PKPdf	00 52 10.1	+0.5

TAP 02 00:33:34.6, 2499N×12193E, h118km, ML3.9, 4D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.05**	**73⇓**	*i*P	Pn	00 33 51.2	+0.5
	baz=91						
TWB1				S	Sn	00 34 02.7	-0.1
	baz=91						
NWF	**Wu-fen Shan**	**0.16**	**300⇓**	*i*P	Pn	00 33 51.2	+0.4
	baz=297						
NWF				S	Sn	00 34 04.8	+1.8
	baz=297						
ILA	**Ilan**	**0.28**	**216**	*e*P	Pn	00 33 52.1	+0.9
	baz=214						
ILA				S	Sn	00 34 05.6	+2.0
	baz=214						
TWA	**Mucha**	**0.32**	**268**	*i* P	Pn	00 33 51.6	+0.3
	baz=266						
TWA				S	Sn	00 34 04.5	+0.7
	baz=266						
TWE	**Neicheng**	**0.36**	**222**	*e*P	Pn	00 33 52.7	+1.1
	baz=220						
TWE				*e*S	Sn	00 34 06.0	+1.8
	baz=220						
TAP1	**Taipei**	**0.37**	**277**	P	Pn	00 33 51.9	+0.3
	baz=279						
TAP1				S	Sn	00 34 04.5	+0.2
	baz=279						
TWC	**Suao**	**0.39**	**191**	*e*P	Pn	00 33 52.1	+0.4
	baz=192						
TWY	**Chenhua**	**0.41**	**313**	*e*P	Pn	00 33 52.0	+0.3
	baz=307						
TWS1	**Kuangyinshan**	**0.48**	**283**	P	Pn	00 33 52.7	+0.6
	baz=281						
TWS1				*e*S	Sn	00 34 06.1	+0.8
	baz=281						
ENTT	**Nioudou**	**0.48**	**224**	P	Pn	00 33 52.9	+0.7
	baz=233						
ENTT				*e*S	Sn	00 34 06.2	+0.7
	baz=233						
ENA	**Nanau**	**0.59**	**197**	P	Pn	00 33 54.1	+1.2
	baz=209						
NSK	**Sanguang**	**0.61**	**239⇓**	*i*P	Pn	00 33 53.2	+0.2
	baz=238						
NSK				S	Sn	00 34 06.3	-0.6
	baz=238						
PCYT	**Pengchaiyu**	**0.65**	**11**	P	Pn	00 33 54.3	+1.0
	baz=4.0						
NNS	**Nan Shan**	**0.75**	**223⇓**	*i*P	Pn	00 33 54.8	+0.7
	baz=227						
NNS				S	Sn	00 34 09.1	+0.2
	baz=227						
NSTT	**Nanjuang**	**0.92**	**247**	P	Pn	00 33 56.0	+0.3
	baz=250						
NSTT				S	Sn	00 34 11.1	-0.5
	baz=250						
TWD	**Chiawan**	**0.96**	**199**	*e*P	Pn	00 33 57.2	+1.2
	baz=198						
TWD				*e*S	Sn	00 34 12.4	+0.2
	baz=198						
TWT	**Tachien**	**1.01**	**223**	*e*P	Pn	00 33 58.0	+1.4
	baz=223						
TWT				S	Sn	00 34 13.6	+0.5
	baz=223						
WHF	**Hehuan Shan**	**1.04**	**216**	*e*P	Pn	00 33 57.9	+1.0
	baz=214						
WHF				*e*S	Sn	00 34 14.3	+0.7
	baz=214						
HWA	**Hwalien**	**1.05**	**196**	*e*P	Pn	00 33 58.7	+1.7
	baz=206						
TWQ1	**Liyutan**	**1.23**	**239**	*e*P	Pn	00 33 59.4	+0.5
	baz=237						
TWQ1				*e*S	Sn	00 34 17.0	-0.3
	baz=237						
ESL	**Shilin**	**1.26**	**201**	*e*P	Pn	00 33 58.4	-0.7
	baz=195						
ESL				*e*S	Sn	00 34 15.8	-1.9
	baz=195						
TCU	**Taichung**	**1.42**	**234**	*e*P	Pn	00 34 02.0	+1.1
	baz=226						
TCU				S	Sn	00 34 20.1	-0.9
	baz=226						
SMLT	**Sun Moon Lake**	**1.45**	**221**	*e*P	Pn	00 34 02.2	+0.9
	baz=227						
SMLT				*e*S	Sn	00 34 21.9	+0.3
	baz=227						
TYC	**Yuchr**	**1.46**	**222**	P	Pn	00 34 02.0	+0.6
	baz=228						
TYC				S	Sn	00 34 21.5	-0.3
	baz=228						
EHY	**Hungye**	**1.58**	**201**	*e*P	Pn	00 34 03.6	+0.7
	baz=192						
EHY				*e*S	Sn	00 34 23.0	-1.3
	baz=192						
WNT	**Mingjian**	**1.59**	**226**	*e*P	Pn	00 34 03.3	+0.3
	baz=232						
WNT				*e*S	Sn	00 34 24.1	-0.4
	baz=232						
TWF1	**Yuli**	**1.73**	**200**	*e*P	Pn	00 34 05.2	+0.6
	baz=199						
YUS	**Yu-Shan**	**1.74**	**211**	*e*P	Pn	00 34 06.4	+1.6
	baz=203						
YUS				*e*S	Sn	00 34 29.4	+1.7
	baz=203						
ALS	**Alishan**	**1.80**	**215**	*e*P	Pn	00 34 06.8	+1.4
	baz=225						
CHN5	**Tsauling**	**1.80**	**220**	*e*P	Pn	00 34 03.7	-1.8
	baz=218						
CHN5				*e*S	Sn	00 34 29.0	0.0
	baz=218						
WGK	**Gukeng**	**1.80**	**224**	*e*S	Sn	00 34 28.7	-0.4
	baz=230						
ELDTW	**Lidau**	**1.98**	**205**	*e*P	Pn	00 34 08.8	+1.1
	baz=195						
ELDTW				*e*S	Sn	00 34 33.7	+0.7
	baz=195						
CHN4	**Tsaushan**	**2.04**	**217**	*e*P	Pn	00 34 09.4	+0.9
	baz=214						
CHN4				*e*S	Sn	00 34 34.3	-0.1
	baz=214						
STYT	**Tauyuan**	**2.11**	**211**	*e*P	Pn	00 34 10.0	+0.6
	baz=208						
STYT				*e*S	Sn	00 34 35.5	-0.5
	baz=208						
WTP	**Ta-pu**	**2.11**	**215**	*e*P	Pn	00 34 09.9	+0.5
	baz=212						
WTP				*e*S	Sn	00 34 35.6	-0.4
	baz=212						
TWK	**Hsinying**	**2.17**	**218**	*e*P	Pn	00 34 10.5	+0.4
	baz=215						
TWK				*e*S	Sn	00 34 37.5	+0.3
	baz=215						
CHN1	**Nanshi**	**2.21**	**216**	*e*P	Pn	00 34 10.9	+0.3
	baz=213						
CHN1				*e*S	Sn	00 34 37.7	-0.4
	baz=213						
SGST	**Jiashian**	**2.27**	**213**	*e*P	Pn	00 34 12.2	+0.8
	baz=210						
SGST				*e*S	Sn	00 34 39.1	-0.4
	baz=210						

*IDC **02** 01:06:47.2±59.0, 2330N×12409E, h0km, mb3.4/4, mb1 3.4/4, mb1mx3.3/19, mbtmp3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/19, Error ellipse: s-maj=1072.0km s-min=175.6km az=131.0*
*TAP **02** 01:07:05.0, 2487N×12266E, h5km±1km, ML3.2, D*
*ISCJB **02** 01:07:05.6±1.1, 2492N±006×12273E±006, h18km±7km, mb3.2/4, Error ellipse: s-maj=11.0km s-min=6.7km az=37.9*
ISC 02 01:07:05.9±1.0, **2489N**±005×**12268E**±005, **h10**km±5km, **n30**, σ0§97/32, **mb3.2**/4, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**145**	*i* P	**Pg**	**01 07 15.9**	**-0.1**
	baz=141						
YOJ				*e*S	**Sg**	**01 07 23.4**	**+0.5**
	baz=141						
TWB1	**Santiao Chiao**	**0.64**	**281**	P	**Pg**	**01 07 18.1**	**-0.3**
	baz=282						
TWB1				*e*S	**Sg**	**01 07 27.7**	**+0.9**
	baz=282						
TWC	**Suao**	**0.81**	**250**	*e*P	**Pg**	**01 07 21.3**	**-0.2**
	baz=250						
TWC				*e*S	**Sg**	**01 07 32.1**	**+0.1**
	baz=250						
NWF	**Wu-fen Shan**	**0.84**	**283**	*e*P	**Pg**	**01 07 22.4**	**+0.3**
	baz=284						
ENA	**Nanau**	**0.97**	**242**	*e*P	**Pg**	**01 07 23.4**	**-1.3**
	baz=242						
TWA	**Mucha**	**1.00**	**275**	*e*P	**Pg**	**01 07 25.4**	**+0.2**
	baz=276						
ENTT	**Nioudou**	**1.04**	**257**	*e*P	**Pg**	**01 07 25.3**	**-0.7**
	baz=257						
NSK	**Sanguang**	**1.22**	**260**	P	**Pn**	**01 07 28.4**	**-0.6**
	baz=260						
NNS	**Nan Shan**	**1.27**	**250**	P	**Pn**	**01 07 29.4**	**-0.4**
	baz=249						
TWD	**Chiawan**	**1.28**	**231**	*e*P	**Pn**	**01 07 29.6**	**-0.2**
	baz=230						
WHF	**Hehuan Shan**	**1.49**	**240**	P	**Pn**	**01 07 32.7**	**0.0**
	baz=240						
NSTT	**Nanjuang**	**1.55**	**261**	*e*P	**Pn**	**01 07 33.6**	**+0.1**
	baz=261						
ESL	**Shilin**	**1.56**	**227**	*e*P	**Pn**	**01 07 35.8**	**+2.0**
	baz=226						
TWQ1	**Liyutan**	**1.82**	**253**	*e*P	**Pn**	**01 07 39.3**	**+2.0**
	baz=253						
EHY	**Hungye**	**1.85**	**222**	*e*P	**Pn**	**01 07 36.5**	**-1.3**
	baz=221						
SMLT	**Sun Moon Lake**	**1.91**	**239**	P	**Pn**	**01 07 39.1**	**+0.6**
	baz=238						
TYC	**Yuchr**	**1.93**	**240**	*e*P	**Pn**	**01 07 37.4**	**-1.4**
	baz=239						
TWF1	**Yuli**	**1.98**	**220**	*e*P	**Pn**	**01 07 38.0**	**-1.6**
	baz=219						
YUS	**Yu-Shan**	**2.11**	**229**	*e*P	**Pn**	**01 07 41.5**	**+0.3**
	baz=228						
ALS	**Alishan**	**2.20**	**232**	*e*P	**Pn**	**01 07 44.8**	**+2.3**
	baz=231						
ELDTW	**Lidau**	**2.28**	**222**	*e*P	**Pn**	**01 07 42.7**	**-0.9**
	baz=221						
STYT	**Tauyuan**	**2.46**	**226**	*e*P	**Pn**	**01 07 45.6**	**-0.5**
	baz=225						
WTP	**Ta-pu**	**2.50**	**230**	*e*P	**Pn**	**01 07 47.6**	**+1.0**
	baz=229						
SGST	**Jiashian**	**2.63**	**227**	*e*P	**Pn**	**01 07 47.4**	**-1.1**
	baz=226						
SCZT	**Fangliau**	**3.14**	**217**	*e*P	**Pn**	**01 07 57.4**	**+2.0**
	baz=216						
KSRS	**Korea Array**	**13.30**	**18**	LR	LR	01 15 59.9	
	comp=Z,86nm,18.2s,baz=160,slow=38						
SONM	**Songino Array**	**26.28**	**335**	P	**P**	**01 12 42.2**	**+0.8**
	0.5nm,0.8s,mb3.1,baz=147,slow=8.2,SNR=3.6						
MKAR	**Makanchi Array**	**38.80**	**315**	P	**P**	**01 14 30.5**	**-0.3**
	0.6nm,0.9s,mb3.3,baz=109,slow=9.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**40.41**	**326**	P	**P**	**01 14 43.5**	**-0.6**
	0.3nm,0.4s,mb3.4,baz=142,slow=7.3,SNR=2.9						
KURK	**Kurchatov**	**42.44**	**319**	P	**P**	**01 15 00.1**	**-0.7**
	0.3nm,0.7s,mb3.0,baz=110,slow=8.0,SNR=3.6						

*ISCJB **02** 01:20:02.4±1.3, 1942N±004×7826W±007, h23km±12km, Error ellipse: s-maj=11.3km s-min=6.8km az=2.0*
*SSNC **02** 01:20:03.4±5.1, 1913N×7830W, h38km±999km, MD3.5, ML3.4*
*JSN **02** 01:20:04.5±1.2, 1937N×7820W, h10km±8km, MD4.3*
ISC 02 01:20:02.9±1.6, **1940N**±004×**7830W**±005, **h24**km±14km, **n14**, σ0§95/24, **6C-3D**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBJ	**Montego Bay**	**1.08**	**157⇑**	*e*P	**Pn**	**01 20 22.3**	**-0.2**
MBJ				*e*S	**Sb**	**01 20 35.3**	**-1.2**
CVJ	**Coleyville**	**1.38**	**148⇑**	*e*P	**Pn**	**01 20 27.1**	**+0.5**
LMGC	**Las Mercedes**	**1.39**	**61⇓**	*i*P	**Pn**	**01 20 28.2**	**+1.4**
LMGC				*i* S	**Sn**	**01 20 43.8**	**-0.6**
	comp=N,1µm,0.3s						
LMGC				*e*			
	comp=E,2µm,0.6s						
MCJ	**Malvern**	**1.58**	**158⇓**	*e*P	**Pn**	**01 20 30.3**	**+0.9**
MCJ				*i* S	**Sn**	**01 20 48.8**	**-0.3**
CCCC	**Cccc**	**1.86**	**16**	*e*P	**Pn**	**01 20 36.9**	**+3.6**
CCCC				*e*S	**Sn**	**01 21 02.6**	**+6.5**
	comp=N,402nm,0.5s						
CCCC				*e*			
	comp=E,372nm,0.4s						
STH	**Stony Hill**	**1.93**	**133⇑**	*e*P	**Pn**	**01 20 34.5**	**+0.1**
STH				*i* S	**Sn**	**01 20 57.3**	**-0.5**
PCJ	**Portland Cotta**	**1.98**	**147⇑**	*e*P	**Pn**	**01 20 36.2**	**+1.3**
PCJ				*i* S	**Sn**	**01 20 59.6**	**+0.7**
GWJ	**Greenwich**	**1.99**	**131⇑**	*e*P	**Pn**	**01 20 35.2**	**+0.1**
HOJ	**Hope**	**2.02**	**133⇑**	*e*P	**Pn**	**01 20 34.5**	**-1.1**
RCC	**Rio Carpintero**	**2.52**	**76⇓**	*i*P	**Pn**	**01 20 41.8**	**-0.7**
RCC				*i* S	**Sn**	**01 21 07.0**	**-5.5**
	comp=N,153nm,0.2s						
RCC				*e*			
	comp=E,223nm,0.2s						
GTMO	**Guantanamo**	**3.05**	**77**	*e*P	**Pn**	**01 20 49.1**	**-0.6**
SABC	**Sabc**	**3.08**	**71**	*e*P	**Pn**	**01 20 49.5**	**-0.7**
SABC				*e*S	**Sn**	**01 21 18.1**	**-8.2**
	comp=N,46nm,0.3s						
SABC				*e*			
	comp=E,54nm,0.3s						
MASC	**Masc**	**3.91**	**78**	*e*P	**Pn**	**01 21 03.3**	**+1.8**
MASC				*e*S	**Sn**	**01 21 46.2**	**-0.5**
	comp=N,6.2nm,0.5s						
MASC				*e*			
	comp=E,7.3nm,0.5s						
SOR	**Soroa**	**5.54**	**308**	*e*P	**Pn**	**01 21 24.9**	**+0.9**
SOR				*e*S	**Sn**	**01 22 25.3**	**-1.6**
	comp=N,1.8nm,0.2s						
SOR				*e*			
	comp=E,1.8nm,0.2s						

*CSEM **02** 01:34:22.1±0.1, 3828N×39.15E, h2km, MD2.6, Error ellipse: s-maj=4.3km s-min=2.7km az=123.0*
*ISK **02** 01:34:22.4, 3823N×3929E, h2km, MD2.6*
*ISCJB **02** 01:34:23.7±0.5, 3825N±003×3925E±004, h10km, Error ellipse: s-maj=4.9km s-min=4.0km az=26.7*
*DDA **02** 01:34:23.3, 3830N×39.19E, h2km±2km, Md2.5*
ISC 02 01:34:24.2±0.6, **3827N**±003×**3918E**±004, **h1**km±9km, **n9**, σ1§**02**/17, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.15**	**41**	PG	**Pg**	**01 34 26.1**	**-1.0**
SVRC				*e*SG	**Sg**	**01 34 28.6**	**-0.3**
PTK	**Pertek**	**0.65**	**15**	*e*PG	**Pg**	**01 34 36.1**	**-0.5**
PTK				*e*SG	**Sg**	**01 34 46.3**	**+1.3**
DIYA	**Diyarbakir**	**0.81**	**115**	*i* P	**Pg**	**01 34 40.5**	**+0.7**
DIYA				*i* S	**Sg**	**01 34 52.8**	**+2.4**
DIYA	**Diyarbakir**	**0.81**	**115**	*i* P	**Pg**	**01 34 40.5**	**+0.7**
URFA	**Urfa**	**0.87**	**199**	*e*PG	**Pg**	**01 34 39.9**	**-1.1**
URFA				*e*SG	**Sg**	**01 34 53.0**	**+0.7**
AKCD	**Akcadag**	**0.99**	**272**	*i* P	**Pg**	**01 34 42.4**	**-0.9**
AKCD				*i* S	**Sg**	**01 34 57.3**	**+1.2**
ATAB	**Bozova**	**1.06**	**222**	*i* P	**Pn**	**01 34 45.6**	**-0.6**
ATAB				*i* S	**Sn**	**01 35 01.4**	**-0.2**
KEMA	**Kemaliye**	**1.14**	**332**	*i* P	**Pn**	**01 34 48.2**	**+1.0**
KEMA				*i* S	**Sg**	**01 35 00.5**	**-0.2**
BEST	**Besiri**	**1.69**	**102**	*i* P	**Pg**	**01 34 54.6**	**-1.9**
BEST				*i* S	**Sg**	**01 35 18.4**	**-0.1**

*ISCJB **02** 01:38:33.6±0.4, 3885N±002×10738W±003, h0km, Error ellipse: s-maj=3.4km s-min=2.3km az=44.4*
*IDC **02** 01:38:34.8±1.2, 39.17N×107.12W, h0km, mb1 3.5/4, mb1mx3.3/23, mbtmp3.1/4, ML2.9/4, Error ellipse: s-maj=24.8km s-min=9.8km az=69.0*
*NEIC **02** 01:38:35.1±0.4, 3885N×10731W, h1km, ML3.3, Error ellipse: s-maj=5.1km s-min=4.1km az=183.0, Suspected Mining induced.*

NEIC Probable coal bump.

ISC 02 01:38:34.3±0.3**, 3887N**±002×**10742W**±002**, h0**km**, n89, σ1§43**/139**, 30C-35D, Colorado**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMCO	**Snowmass**	**0.46**	**48**	*e*Pg	**Pg**	**01 38 42.9**	**-0.3**
SMCO				*e*Sg	**Sg**	**01 38 50.1**	**+0.8**
R21A	**Cimarron**	**0.51**	**192**	⇓P	**Pg**	**01 38 45.0**	**+0.9**
	baz=0.5						
Q20A	**Ridgley Place,**	**0.69**	**277**	⇓P	**Pg**	**01 38 47.4**	**-0.1**
	baz=0.8						
O21A	**Pagoda**	**1.34**	**358**	⇓P	**Pg**	**01 38 59.0**	**-1.0**
	baz=1.4						
O20A	**White River Ci**	**1.41**	**334**	⇑P	**Pn**	**01 39 00.7**	**-0.6**
	baz=1.5						
P19A	**Cripple Cowboy**	**1.43**	**303**	⇑P	**Pn**	**01 39 00.8**	**-0.7**
	baz=1.5,SNR=39						
P19A				⇓S	**Sg**	**01 39 19.1**	**-1.3**
	baz=1.5						
Q19A	**Hogan Spring (**	**1.44**	**274**	⇑P	**Pn**	**01 39 00.7**	**-0.9**
	baz=1.5,SNR=115						
Q19A				⇓S	**Sg**	**01 39 19.4**	**-1.2**
	baz=1.5						
R19A	**Curley Farm, L**	**1.55**	**249**	⇓P	**Pn**	**01 39 03.3**	**+0.1**
	baz=1.6						
R19A				⇑S	**Sn**	**01 39 23.7**	**-0.3**
	baz=1.6						
ISCO	**Idaho Springs**	**1.68**	**56**	*e*Pn	**Pn**	**01 39 05.9**	**+0.9**
S19A	**Harvey Farm, M**	**1.76**	**231**	⇓Pg	**Pg**	**01 39 07.3**	**-0.7**
	baz=1.8						
S19A				⇓S	**Sn**	**01 39 30.2**	**+1.2**
	baz=1.8						
N21A	**Black Mountain**	**1.89**	**358**	⇑Pb	**Pb**	**01 39 09.2**	**-0.5**
	baz=1.9						
R18A	**Canyonlands Na**	**2.00**	**257**	⇓Pg	**Pg**	**01 39 11.2**	**-1.4**
	baz=2.1						
R18A				⇓Sb	**Sb**	**01 39 36.8**	**-0.1**
	baz=2.1						
N20A	**Spence Gulch,**	**2.07**	**342**	⇑Pg	**Pg**	**01 39 12.9**	**-1.0**
	baz=2.1						
N22A	**Wattenberg Ran**	**2.07**	**21**	⇓Pb	**Pb**	**01 39 12.5**	**-0.2**
	baz=2.1						
Q18A	**Rafter H Ranch**	**2.13**	**277**	⇑Pb	**Pb**	**01 39 12.4**	**-1.3**
	baz=2.2						
Q18A				⇓Sb	**Sb**	**01 39 40.4**	**-0.2**
	baz=2.2						
P18A	**Preston Nutter**	**2.32**	**290**	⇓Pb	**Pb**	**01 39 15.3**	**-1.7**
	baz=2.4,SNR=49						
P18A				⇑Sn	**Sn**	**01 39 41.5**	**-1.4**
	baz=2.4						
P18A				⇑Sb	**Sb**	**01 39 45.7**	**-0.5**
	baz=2.4						
S18A	**Hurst Farm, Bl**	**2.34**	**241**	⇑Pb	**Pb**	**01 39 16.0**	**-1.4**
	baz=2.4						
S18A				⇓Sb	**Sb**	**01 39 48.2**	**+1.3**
	baz=2.4						
T19A	**Beclabito**	**2.40**	**212**	⇑Pb	**Pb**	**01 39 18.7**	**+0.3**
	baz=2.4						
N19A	**John Jarvie Ra**	**2.43**	**327**	⇑Pb	**Pb**	**01 39 17.5**	**-1.4**
	baz=2.5						
SRU	**San Rafael**	**2.43**	**277**	⇓Pb	**Pb**	**01 39 17.0**	**-1.9**
	baz=2.5,SNR=95						
SRU				⇑Sb	**Sb**	**01 39 49.2**	**-0.2**
	baz=2.5						
SRU	**San Rafael**	**2.43**	**277**	*e*Pn	**Pn**	**01 39 17.4**	**+2.1**
O18A	**Roosevelt**	**2.44**	**306**	⇑Pb	**Pb**	**01 39 17.5**	**-1.5**
	baz=2.5						
O18A				⇓Sb	**Sb**	**01 39 49.4**	**-0.2**
	baz=2.5						
O18A				⇓Sb	**Sb**	**01 39 49.9**	**+0.3**
	baz=2.5						
T18A	**Mexican Hat**	**2.60**	**229**	⇓Pn	**Pn**	**01 39 16.8**	**-0.8**
	baz=2.6						
R17A	**Hanksville Air**	**2.62**	**261**	⇓Pg	**Pg**	**01 39 23.1**	**-1.4**
	baz=2.7,SNR=15						
R17A				⇑Sb	**Sb**	**01 39 55.1**	**+0.4**
	baz=2.7						
P17A	**Butcher Ranch,**	**2.65**	**284**	⇑Pb	**Pb**	**01 39 19.6**	**-3.0**
	baz=2.7,SNR=8.6						
P17A				⇑Sb	**Sb**	**01 39 55.4**	**-0.3**
	baz=2.7						
N18A	**Larsen Ranch,**	**2.73**	**321**	⇓Pb	**Pb**	**01 39 22.9**	**-1.0**
	baz=2.8,SNR=12						
N18A				⇑Sb	**Sb**	**01 39 58.0**	**+0.2**
	baz=2.8						
M21A	**Separation Pea**	**2.73**	**1**	⇓Sb	**Sb**	**01 39 59.8**	**+1.7**
	baz=2.8						
RWWY	**Rawlins**	**2.82**	**3**	*e*Pn	**Pn**	**01 39 25.7**	**+5.1**
PHWY	**Pilot Hill**	**2.86**	**31**	*e*Pn	**Pn**	**01 39 23.1**	**+2.0**
PHWY				*e*Sg	**Sg**	**01 40 05.2**	**-0.9**
O17A	**Robinson Place**	**2.89**	**298**	⇑Pb	**Pb**	**01 39 24.6**	**-2.0**
	baz=3.0						
Q16A	**Castle Valley**	**2.93**	**272**	⇓Pb	**Pb**	**01 39 26.1**	**-1.3**
	baz=3.0						
S17A	**Black Ridge (B**	**2.93**	**246**	⇑Sb	**Sb**	**01 40 05.3**	**+1.5**
	baz=3.0						
M19A	**Rock Springs**	**2.95**	**334**	⇓Pb	**Pb**	**01 39 26.9**	**-0.8**
	baz=3.0						
M19A				⇓Sb	**Sb**	**01 40 05.0**	**+0.7**
	baz=3.0						
L21A	**Rawlins**	**3.09**	**1**	⇑Pb	**Pb**	**01 39 29.6**	**-0.5**
	baz=3.1						
L21A				⇑Sn	**Sn**	**01 40 02.9**	**+1.0**
	baz=3.1						
L21A				⇓Sb	**Sb**	**01 40 10.2**	**+1.9**
	baz=3.1						
R16A	**Teasdale**	**3.24**	**261**	⇑Pb	**Pb**	**01 39 31.9**	**-0.7**
	baz=3.3						
R16A				⇓Sb	**Sb**	**01 40 13.7**	**+1.1**
	baz=3.3						
M18A	**Lyman**	**3.26**	**322**	⇓Sb	**Sb**	**01 40 14.1**	**+0.9**
	baz=3.3						
T17A	**Navajo Res., N**	**3.26**	**236**	⇓Sb	**Sb**	**01 40 15.4**	**+2.1**
	baz=3.3						
DAU	**Daniels Canyon**	**3.34**	**299**	*e*Pn	**Pn**	**01 39 30.0**	**+2.3**
P16A	**Fountain Green**	**3.37**	**284**	⇑Pn	**Pn**	**01 39 27.8**	**-0.4**
	baz=3.5						
MPU	**Maple Canyon**	**3.46**	**291**	*e*Pn	**Pn**	**01 39 30.9**	**+1.6**
JLU	**Jordanelle**	**3.56**	**300**	*e*Pn	**Pn**	**01 39 33.3**	**+2.6**
M17A	**Scullys Gap (B**	**3.60**	**317**	⇓Pn	**Pn**	**01 39 33.2**	**+1.9**
	baz=3.7						
N16A	**Rees Ranch, Co**	**3.69**	**304**	⇑Pg	**Pg**	**01 39 43.5**	**-1.5**
	baz=3.8						
MSU	**Marysvale**	**3.74**	**266**	*e*Pn	**Pn**	**01 39 37.3**	**+4.1**
T16A	**Glen Canyon Da**	**3.74**	**241**	⇑Pg	**Pg**	**01 39 45.1**	**-0.9**
	baz=3.8						
R15A	**Junction**	**3.87**	**262**	⇑Pg	**Pg**	**01 39 47.0**	**-1.4**
	baz=3.9						
ANMO	**Albuquerque**	**3.99**	**169**	Pn	**Pn**	**01 39 46.1**	**+9.5**
	0.4nm,0.3s,baz=350,slow=17,SNR=9.6						
ANMO				Sn	**Sg**	**01 40 41.2**	**-1.2**
	0.5nm,0.3s,baz=252,slow=21,SNR=3.5						
ANMO	**Albuquerque**	**3.99**	**169**	*e*Pg	**Pg**	**01 39 49.5**	**-1.2**
ANMO				*e*Sg	**Sg**	**01 40 38.2**	**-4.2**
NOQ	**North Oquirrh**	**4.04**	**298**	*e*Pg	**Pg**	**01 39 50.8**	**-0.8**
M16A	**Huntsville**	**4.05**	**308**	⇑Pg	**Pg**	**01 39 50.3**	**-1.6**
	baz=4.1						
K19A	**Absolon Red Bu**	**4.10**	**345**	⇓Pb	**Pb**	**01 39 46.8**	**-0.4**
	baz=4.1						
BW06	**Boulder Array**	**4.22**	**338**	⇑Pb	**Pb**	**01 39 50.8**	**+1.5**
	baz=4.3						
BW06	**Boulder Array**	**4.22**	**338**	*e*Pb	**Pb**	**01 39 51.4**	**+2.0**
PDAR	**Pinedale Array**	**4.22**	**338**	Pn	**Pn**	**01 39 40.2**	**+0.5**
	0.2nm,0.3s,baz=148,slow=14,SNR=14						
PDAR				Pg	**Pg**	**01 39 51.0**	**-4.1**
	1.2nm,0.3s,baz=150,slow=15,SNR=58						
PDAR				Lg		01 40 44.3	
	1.0nm,0.3s,baz=149,slow=26,SNR=5.9						
T15A	**Red Dirt Ranch**	**4.34**	**246**	⇓Pb	**Pb**	**01 39 53.1**	**+1.7**
	baz=4.4						
DUG	**Dugway**	**4.38**	**289**	⇓Pn	**Pn**	**01 39 43.4**	**+1.4**
	baz=4.5						
DUG				⇓Pb	**Pb**	**01 39 54.4**	**+2.4**
	baz=4.5						
DUG	**Dugway**	**4.38**	**289**	*e*Pn	**Pn**	**01 39 43.1**	**+1.2**
DUG				*e*Pg	**Pg**	**01 39 56.0**	**-2.1**
P14A	**Drum Mountains**	**4.45**	**281**	⇓Pb	**Pb**	**01 39 54.9**	**+1.7**
	baz=4.5						
SPUT	**South Promonto**	**4.56**	**304**	*e*Pb	**Pb**	**01 39 57.0**	**+1.8**
Q14A	**Sevier Lake (B**	**4.57**	**273**	⇓Pb	**Pb**	**01 39 56.7**	**+1.4**
	baz=4.6						
LPM	**Los Pinos Moun**	**4.59**	**172**	*e*Pg	**Pg**	**01 40 02.6**	**+0.3**
WUAZ	**Wupatki**	**4.60**	**225**	⇑Pb	**Pb**	**01 39 57.1**	**+1.2**
	baz=4.6						
WUAZ	**Wupatki**	**4.60**	**225**	*e*Pg	**Pg**	**01 39 58.8**	**-3.7**
OGNE	**Ogallala**	**4.63**	**62**	*e*Pn	**Pn**	**01 39 45.0**	**-0.5**
OGNE				*e*Pg	**Pg**	**01 39 59.9**	**-3.2**
LENM	**Lemitar**	**4.71**	**175**	*e*Pg	**Pg**	**01 40 03.5**	**-1.1**
AHID	**Auburn Hatcher**	**4.79**	**326**	*e*Pn	**Pn**	**01 39 50.4**	**+2.7**
AHID				*e*Pg	**Pg**	**01 40 00.5**	**-5.6**
AHID				*e*Sg	**Sg**	**01 41 02.1**	**-6.0**
HVU	**Hansel Valley**	**5.02**	**307**	*e*Pb	**Pb**	**01 40 05.1**	**+2.1**
REDW	**Red Top Meadow**	**5.18**	**331**	*e*Pn	**Pn**	**01 39 55.7**	**+2.7**
REDW				*e*Pb	**Pb**	**01 40 07.8**	**+2.1**
REDW				*e*Pg	**Pg**	**01 40 13.7**	**+0.1**
SNOW	**Snow King Moun**	**5.23**	**332**	*e*Pn	**Pn**	**01 39 54.9**	**+1.2**
	29nm,0.9s						
SNOW				*e*Pg	**Pg**	**01 40 11.0**	**-3.6**
SNOW				*e*Sg	**Sg**	**01 41 19.4**	**-3.0**
LOHW	**Long Hollow**	**5.31**	**334**	*e*Pn	**Pn**	**01 39 59.2**	**+4.4**
	18nm,0.9s						
LOHW				*e*Pg	**Pg**	**01 40 09.8**	**-6.2**
TPAW	**Teton Pass**	**5.33**	**331**	*e*Pn	**Pn**	**01 39 56.7**	**+1.6**
	32nm,0.9s						
TPAW				*e*Pg	**Pg**	**01 40 15.1**	**-1.3**
TPAW				*e*Sg	**Sg**	**01 41 23.9**	**-1.5**
RRI2	**Red Ridge**	**5.36**	**328**	*e*Pn	**Pn**	**01 39 58.0**	**+2.6**
RRI2				*e*Pg	**Pg**	**01 40 12.1**	**-4.8**
RRI2				*e*Sg	**Sg**	**01 41 24.1**	**-2.2**
MOOW	**Moose Ponds**	**5.48**	**334**	*e*Pn	**Pn**	**01 40 01.0**	**+3.9**
DCID1	**Drake Creek**	**5.51**	**330**	*e*Pg	**Pg**	**01 40 13.4**	**-6.4**
IMW	**Indian Meadow**	**5.68**	**333**	*e*Pn	**Pn**	**01 40 03.1**	**+3.3**
IMW				*e*Pg	**Pg**	**01 40 16.4**	**-6.7**
IMW				*e*Sg	**Sg**	**01 41 30.0**	**-6.6**
RSSD	**Black Hills**	**5.83**	**25**	*e*Pn	**Pn**	**01 40 02.8**	**+0.9**
RSSD				*e*Pg	**Pg**	**01 40 19.5**	**-6.5**
RSSD				*e*Sg	**Sg**	**01 41 40.5**	**-1.0**
CBKS	**Cedar Bluff**	**6.00**	**88**	*e*Pn	**Pn**	**01 40 03.5**	**-0.7**
CBKS				*e*Pg	**Pg**	**01 40 27.6**	**-1.7**
AMTX	**Amarillo**	**6.08**	**129**	*e*Pg	**Pg**	**01 40 28.9**	**-1.9**
ELK	**Elko**	**6.30**	**290**	Pn	**Pn**	**01 40 13.2**	**+4.7**
	0.1nm,0.3s,baz=95,slow=13,SNR=4.0						
ELK				Lg		01 41 51.5	
	0.1nm,0.3s,baz=36,slow=19,SNR=2.5						
ELK	**Elko**	**6.30**	**290**	Pn	**Pn**	**01 40 13.2**	**+4.7**
ELK				*e*Pg	**Pg**	**01 40 36.6**	**+1.5**
ELK				Lg		01 41 51.5	
YNR	**Norris Junctio**	**6.33**	**338**	*e*Pg	**Pg**	**01 40 38.5**	**+3.0**
RLMT	**Red Lodge**	**6.40**	**348**	*e*Pn	**Pn**	**01 40 11.1**	**+1.3**
	7.3nm,0.8s						
RLMT				*e*Pg	**Pg**	**01 40 34.4**	**-2.4**
RLMT				*e*Sg	**Sg**	**01 41 55.8**	**-3.9**
SHPR	**Sheep Range**	**6.58**	**251**	*e*Pb	**Pb**	**01 40 34.7**	**+5.2**
HLID	**Hailey**	**7.05**	**314**	*e*Pn	**Pn**	**01 40 20.9**	**+2.1**
	3.3nm,0.7s						
HLID				*e*Sg	**Pg**	**01 40 42.2**	**-7.2**
HLID				*e*Sg	**Sg**	**01 42 17.2**	**-3.6**
TUC	**Tucson**	**7.10**	**204**	*e*Pg	**Pg**	**01 40 46.8**	**-3.5**
	12nm,0.9s						
TUC				*e*Sg	**Sg**	**01 42 17.6**	**-4.6**
TPNV	**Topopah Spring**	**7.24**	**257**	*e*Pn	**Pn**	**01 40 23.8**	**+2.5**
	2.0nm,0.8s						
TPNV				*e*Pg	**Pg**	**01 40 49.1**	**-3.8**
DLMT	**Dillon**	**7.54**	**331**	*e*Pn	**Pn**	**01 40 27.9**	**+2.5**
	16nm,1.2s						
NVAR	**Mina Array Bea**	**8.53**	**270**	Pn	**Pn**	**01 40 44.9**	**+5.9**
	0.1nm,0.3s,baz=92,slow=13,SNR=4.4						
TXAR	**Lajitas Array**	**10.01**	**161**	Pn	**Pn**	**01 41 04.7**	**+5.3**
	0.0nm,0.3s,baz=348,slow=13,SNR=7.7						
TXAR				Pg	Pn	01 41 43.6	+44
	0.0nm,0.3s,baz=330,slow=12,SNR=5.2						

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*CSEM **02** 01:40:19.4±0.0, 3737N×31.12E, h142km, Mw3.4, Error ellipse: s-maj=1.4km s-min=1.1km az=62.0*
*ISCJB **02** 01:40:20.6±0.2, 3727N±002×31.10E±002, h150km±3km, mb3.6/9, Error ellipse: s-maj=3.6km s-min=2.5km az=139.8*
*ISK **02** 01:40:21.5, 3732N×3109E, h141km, MD3.7*
*IDC **02** 01:40:21.1±0.9, 3725N×31.11E, h142km±10km, mb3.4/8, mb1 3.3/14, mb1mx3.3/25, mbtmp3.3/14, Error ellipse: s-maj=12.4km s-min=9.0km az=137.0*
*HLW **02** 01:40:22.8, 37.16N×31.15E, h30km, Mb4.1*
*NEIC **02** 01:40:22.0, 3730N×31.10E, h89km, mb3.9/2, MD3.7(ISK), After ISK.*
*NIC **02** 01:40:23.2±0.3, 3730N×31.12E, h36km, mb4.1, ML3.6, MW3.4*
*DDA **02** 01:40:25.0, 3740N×31.17E, h56km±9km, Md3.4*
*GII **02** 01:40:24.9±0.5, 37.11N×3148E, h100km, ML2.6/3*

ISC 02 01:40:21.6±0.2**, 3727N**±002×**3111E**±002**, h144**km±3km**, n128, σ0§84**/152**, mb3.6**/9**, 4C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.45**	**295**	*e*PG	**Pn**	**01 40 41.6**	**-0.3**
ANTB	**Antalya**	**0.52**	**225**	*e*PG	**Pn**	**01 40 42.6**	**+0.3**
ISP	**Isparta**	**0.74**	**321**	*e*PG	**Pn**	**01 40 43.2**	**-0.5**
ISP				*e*SG	**Sn**	**01 40 58.9**	**-1.7**
ISP	**Isparta**	**0.74**	**321**	*e*Pn	**Pn**	**01 40 43.0**	**-0.7**
ISP				*e*Sn	**Sn**	**01 40 58.4**	**-2.2**
ELL	**Elmali**	**1.09**	**242**	*e*PN	**Pn**	**01 40 47.4**	**+0.9**
HDMB	**Hadim**	**1.15**	**105**	*e*PN	**Pn**	**01 40 47.5**	**+0.4**
HDMB				*e*SN	**Sn**	**01 41 06.4**	**0.0**
KONT	**Konya--Tatoy**	**1.21**	**56**	*e*PN	**Pn**	**01 40 48.1**	**+0.5**
GOLH	**Golhisar**	**1.23**	**269**	*i* P	**Pn**	**01 40 48.8**	**+0.8**
GOLH				*i* S	**Sn**	**01 41 09.4**	**+1.4**
SHUT	**Suhut-Afyon**	**1.35**	**341**	*e*PN	**Pn**	**01 40 49.1**	**0.0**
LADK	**Ladik-KONYA**	**1.36**	**47**	*e*PN	**Pn**	**01 40 49.3**	**+0.1**
BOLV	**Bolvadin**	**1.45**	**355**	*i* P	**Pn**	**01 40 50.2**	**+0.1**
BOLV				*i* S	**Sn**	**01 41 10.5**	**-1.6**
KDHN	**Kadinhani**	**1.48**	**32**	*e*P	**Pn**	**01 40 47.2**	**-3.3**
ERMK	**Ermenek**	**1.58**	**113**	*i* P	**Pn**	**01 40 53.2**	**+1.6**
ERMK				*i* S	**Sn**	**01 41 16.8**	**+2.4**
AKAS	**Kas**	**1.59**	**230**	*i* P	**Pn**	**01 40 52.7**	**+1.1**
AKAS				*i* S	**Sn**	**01 41 15.2**	**+0.6**
KHL	**Karahalli**	**1.64**	**311**	*e*PN	**Pn**	**01 40 52.0**	**-0.1**
KSL	**Kastellorizon**	**1.66**	**228**	*e*P	**Pn**	**01 40 53.0**	**+0.6**
KHAL	**Karahalli**	**1.69**	**311**	*i* P	**Pn**	**01 40 52.7**	**0.0**
KHAL				*i* S	**Sn**	**01 41 15.0**	**-1.5**
DENT	**Denizli**	**1.72**	**287**	*e*PN	**Pn**	**01 40 53.2**	**+0.2**
KIZT	**Kizilcal**	**1.72**	**21**	*e*PN	**Pn**	**01 40 52.9**	**-0.1**
ALT	**Altintas**	**1.95**	**337**	*e*PN	**Pn**	**01 40 55.0**	**-0.6**
TURN	**Turunc**	**2.04**	**260**	*i* P	**Pn**	**01 41 00.9**	**+4.1**
TURN				*i* S	**Sn**	**01 41 29.5**	**+5.8**
GDZ	**Gediz**	**2.22**	**325**	*i* P	**Pn**	**01 40 59.0**	**+0.1**
GDZ				*i* S	**Sn**	**01 41 26.9**	**-0.8**
GDZ	**Gediz**	**2.22**	**325**	*i* P	**Pn**	**01 40 59.0**	**0.0**
GDZ				*i* S	**Sn**	**01 41 26.9**	**-0.8**
ESKT	**Eskisehir**	**2.26**	**355**	*e*PN	**Pn**	**01 40 58.9**	**-0.5**
YER	**Yerkesik**	**2.26**	**267**	*e*PN	**Pn**	**01 40 59.6**	**+0.2**
KULA	**Kula-Manisa**	**2.30**	**303**	*e*PN	**Pn**	**01 41 00.0**	**+0.1**
IKL	**Isikli**	**2.31**	**116**	*e*PN	**Pn**	**01 41 01.0**	**+0.9**
ALFC	**Alevga**	**2.43**	**150**	P	**Pn**	**01 41 00.9**	**-0.7**
	36nm,0.2s						
ALFC				S	**Sn**	**01 41 29.9**	**-2.4**
PPCY	**Paphos**	**2.58**	**157**	P	**Pn**	**01 41 03.4**	**-0.1**
DEMI	**Demirci**	**2.58**	**314**	*i* P	**Pn**	**01 41 03.6**	**+0.2**
LEF	**Lefka**	**2.59**	**146**	*e*PN	**Pn**	**01 41 04.2**	**+0.7**
ARG	**Arkhangelos**	**2.61**	**247**	*e*P	**Pn**	**01 41 03.8**	**0.0**
MLSB	**Milas**	**2.66**	**272**	*e*PN	**Pn**	**01 41 04.5**	**+0.2**
BORA	**Eskisehir**	**2.66**	**349**	*i* P	**Pn**	**01 41 04.0**	**-0.3**
MAMC	**Mammari**	**2.70**	**140**	⇑P	**Pn**	**01 41 04.8**	**-0.2**
MERS	**Mersin**	**2.76**	**97**	*e*PN	**Pn**	**01 41 06.4**	**+0.7**
LFK	**Lefkose**	**2.79**	**135**	*e*PN	**Pn**	**01 41 06.7**	**+0.6**
DAT	**Datca**	**2.87**	**260**	*e*PN	**Pn**	**01 41 06.9**	**-0.2**
SZAC	**Souni-Zanaja**	**2.89**	**150**	⇑P	**Pn**	**01 41 07.7**	**+0.3**
	21nm,0.2s						
SZAC				S	**Sn**	**01 41 42.8**	**+0.2**
NIG	**Nigde**	**2.91**	**72**	*e*PN	**Pn**	**01 41 07.9**	**+0.4**
ANTO	**Ankara**	**2.91**	**27**	*e*PN	**Pn**	**01 41 06.7**	**-0.8**
LOD	**Lodumlu**	**2.92**	**26**	*e*PN	**Pn**	**01 41 07.0**	**-0.7**
CSS	**Prodhromos**	**2.92**	**141**	P	**Pn**	**01 41 08.0**	**+0.2**
	3.2nm,0.3s						
CSS				S	**Sn**	**01 41 42.8**	**-0.5**
GULE	**Gulek**	**2.93**	**89**	*i* P	Px	01 40 48.3	
BDRM	**Kayabasi**	**2.93**	**267**	*i* P	**Pn**	**01 41 07.7**	**-0.1**
BDRM				*i* S	**Sn**	**01 41 41.9**	**-1.5**
KAMT	**Kaman**	**2.93**	**44**	*e*PN	**Pn**	**01 41 08.0**	**+0.2**
EREN	**Erenkoy**	**3.02**	**124**	*e*PN	**Pn**	**01 41 09.9**	**+0.9**
BODT	**Bodrum**	**3.04**	**267**	*e*PN	**Pn**	**01 41 09.7**	**+0.5**
AKS	**Akhisar**	**3.06**	**303**	*e*PN	**Pn**	**01 41 09.3**	**-0.1**
GPA	**Golpazari**	**3.08**	**349**	*e*PN	**Pn**	**01 41 09.3**	**-0.3**
GPA	**Golpazari**	**3.08**	**349**	*e*Pn	**Pn**	**01 41 09.3**	**-0.4**
GCAM	**G?zelcaml?**	**3.11**	**279**	*i* P	**Pn**	**01 41 09.3**	**-0.8**
GCAM				*i* S	**Sn**	**01 41 46.1**	**-1.4**
KARA	**Karaisali**	**3.15**	**89**	*e*PN	**Pn**	**01 41 11.6**	**+1.0**
BR131	**Keskin Array S**	**3.16**	**38**	*e*Pn	**Pn**	**01 41 10.7**	**0.0**
BR131	**Keskin Array S**	**3.16**	**38**	*e*Pn	**Pn**	**01 41 10.7**	**+0.1**
BRTR	**Keskin Array B**	**3.16**	**38**	P	**Pn**	**01 41 10.5**	**-0.2**
	3.4nm,0.3s,baz=214,slow=13,SNR=29						
BRTR				S	**Sn**	**01 41 49.5**	**+0.8**
	0.2nm,0.3s,baz=211,slow=22,SNR=7.5						
BRTR	**Keskin Array B**	**3.16**	**38**	P	**Pn**	**01 41 10.5**	**-0.2**
BRTR				S	**Sn**	**01 41 49.5**	**+0.8**
GULT	**Gulveren**	**3.19**	**352**	*e*PN	**Pn**	**01 41 10.8**	**-0.3**
MDU	**Mudurnu**	**3.19**	**2**	*e*PN	**Pn**	**01 41 10.9**	**-0.2**
PHNC	**Paralimni**	**3.27**	**133**	P	**Pn**	**01 41 12.8**	**+0.5**
ADVT	**Abdulvahap**	**3.33**	**342**	*e*PN	**Pn**	**01 41 12.9**	**-0.1**
EYL	**Eskiyayla**	**3.37**	**348**	*e*PN	**Pn**	**01 41 14.2**	**+0.7**
BLCB	**Balcova**	**3.40**	**290**	*e*PN	**Pn**	**01 41 14.9**	**+1.0**
BALB	**Balikesir**	**3.47**	**314**	*e*PN	**Pn**	**01 41 15.4**	**+0.8**
KRTS	**Karatas**	**3.49**	**100**	*e*PN	**Pn**	**01 41 15.8**	**+0.8**
YLV	**Yalova**	**3.56**	**338**	*e*PN	**Pn**	**01 41 16.1**	**+0.2**
KARP	**Karpathos**	**3.62**	**243**	*e*P	**Pn**	**01 41 17.0**	**+0.3**
BNT	**Bandirma**	**3.96**	**322**	*e*PN	**Pn**	**01 41 21.1**	**0.0**
ANDN	**Andirin**	**4.18**	**84**	*i* P	**Pn**	**01 41 25.8**	**+1.7**
PRK	**Paraskevi**	**4.29**	**299**	*e*P	**Pn**	**01 41 26.5**	**+1.1**
NPS	**Neapolis**	**4.87**	**247**	*e*P	**Pn**	**01 41 33.5**	**+0.3**
HWQ	**Hawqa**	**4.94**	**126**	*e*P	**Pn**	**01 41 34.7**	**+0.6**
BHL	**Bhannes**	**5.00**	**131**	*e*P	**Pn**	**01 41 34.5**	**-0.5**
RCY	**Rachaya**	**5.39**	**133**	*e*P	**Pn**	**01 41 40.5**	**+0.3**
IDI	**Anoyia**	**5.39**	**250**	P	**Pn**	**01 41 40.7**	**+0.6**
	0.5nm,0.3s,baz=357,slow=9.3,SNR=10						
IDI				S	**Sn**	**01 42 39.6**	**-1.8**
	2.5nm,0.3s,baz=316,slow=18,SNR=6.4						
MMC6	**Mount Meron ar**	**5.51**	**139**	Pn	**Pn**	**01 41 41.8**	**+0.1**
MMA0	**Mount Meron ar**	**5.51**	**139**	Pn	**Pn**	**01 41 41.7**	**-0.1**
MMAI	**Mount Meron Ar**	**5.51**	**139**	P	**Pn**	**01 41 41.8**	**0.0**
	13nm,0.3s,baz=321,slow=12,SNR=62						
MMAI				S	**Sn**	**01 42 43.0**	**-1.3**
	17nm,0.3s,baz=328,slow=27,SNR=10						
OFRI	**'Ofer**	**5.63**	**144**	Pn	**Pn**	**01 41 43.2**	**0.0**
BLGI	**Bet Lehem HaGe**	**5.63**	**142**	Pn	**Pn**	**01 41 43.7**	**+0.4**
KSHT	**Keshet**	**5.76**	**137**	Pn	**Pn**	**01 41 44.5**	**-0.5**
SLTI	**Sal'it**	**5.97**	**146**	Pn	**Pn**	**01 41 47.0**	**-0.9**
MMLI	**Mount Malkishu**	**5.99**	**142**	Pn	**Pn**	**01 41 48.4**	**+0.3**
MMLI				Sn	**Sn**	**01 42 53.3**	**-2.3**
HMDT	**Nahal Hemdat**	**6.19**	**143**	Pn	**Pn**	**01 41 51.3**	**+0.5**
HMDT				Sn	**Sn**	**01 42 59.1**	**-1.4**
RSH		**6.66**	**160**	P	**Pn**	**01 41 56.5**	**-0.6**
DSI	**Dead Sea**	**6.69**	**147**	Pn	**Pn**	**01 41 57.6**	**+0.1**
YTIR	**Yattir**	**6.76**	**149**	Pn	**Pn**	**01 41 58.6**	**+0.2**
AMAG	**Maghara**	**6.84**	**165**	P	**Pn**	**01 41 58.4**	**-1.1**
RTMI	**Retamim**	**6.87**	**153**	Pn	**Pn**	**01 41 59.6**	**-0.4**
MZDA	**Masada**	**6.91**	**148**	Pn	**Pn**	**01 42 00.7**	**+0.3**
ASF	**Jabal al Asfar**	**6.97**	**135**	P	**Pn**	**01 42 03.9**	**+2.7**
	0.9nm,0.3s,baz=173,slow=4.4,SNR=14						
HMAT	**Matruh**	**7.00**	**209**	⇓P	**Pn**	**01 42 01.9**	**+0.3**
HHAG	**Hagoal**	**7.34**	**173**	⇓P	**Pn**	**01 42 06.6**	**+0.3**
KOT	**Kottamia**	**7.35**	**175**	P	**Pn**	**01 42 06.4**	**+0.1**
KOT				S	**Sn**	**01 43 22.1**	**-6.2**
ZFRI	**Zfri**	**7.50**	**152**	Pn	**Pn**	**01 42 07.4**	**-1.0**
SLUM		**7.54**	**222**	⇑P	**Pn**	**01 42 09.8**	**+0.8**
SUZ		**7.55**	**168**	P	**Pn**	**01 42 08.9**	**-0.1**
PRNI	**Paran**	**7.62**	**154**	Pn	**Pn**	**01 42 09.4**	**-0.6**
HSAF	**As Saff**	**7.64**	**177**	⇑P	**Pn**	**01 42 10.5**	**+0.2**
GLL	**Jalalah**	**7.69**	**176**	⇓P	**Pn**	**01 42 11.3**	**+0.5**
HNKL	**Nakhl**	**7.70**	**161**	P	**Pn**	**01 42 11.3**	**+0.2**
KRMI	**Paran Flat**	**7.74**	**156**	Pn	**Pn**	**01 42 10.7**	**-0.9**
KRMI				Sn	**Sn**	**01 43 36.4**	**-1.5**
HRFI	**Mount Harif**	**7.92**	**154**	Pn	**Pn**	**01 42 13.2**	**-0.8**
MBRI	**Mt Berech**	**8.10**	**156**	Pn	**Pn**	**01 42 16.8**	**+0.3**
MBRI				Sn	**Sn**	**01 43 45.1**	**-1.5**
EIL	**Elat**	**8.23**	**156**	P	**Pn**	**01 42 17.4**	**-0.7**
	0.8nm,0.3s,baz=327,slow=15,SNR=12						
EIL	**Elat**	**8.23**	**156**	Pn	**Pn**	**01 42 17.4**	**-0.7**
HKAT	**Jabal Katrina**	**9.05**	**164**	P	**Pn**	**01 42 30.1**	**+1.0**
TR2		**9.13**	**165**	⇓P	**Pn**	**01 42 30.9**	**+0.8**
SWA2		**9.29**	**212**	⇓P	**Pn**	**01 42 33.8**	**+1.5**
AKASG	**Malin Array Be**	**13.50**	**355**	P	**Pn**	**01 43 31.1**	**+4.0**
	0.4nm,0.3s,baz=174,slow=8.7,SNR=4.3						
GERES	**GERESS Array B**	**17.15**	**318**	P	**Pn**	**01 44 12.8**	**+0.4**
	0.1nm,0.3s,baz=146,slow=5.7,SNR=2.5						
DAVOX	**Davos/Dischmat**	**18.36**	**308**	P	**P**	**01 44 26.4**	**+1.4**
	0.4nm,0.3s,baz=103,slow=9.2,SNR=8.7						
BNI	**Bardonecchia**	**19.92**	**301**	*e*P	**P**	**01 44 44.2**	**+2.3**
	2.0nm,0.6s						
BNI	**Bardonecchia**	**19.92**	**301**	*e*P	**P**	**01 44 44.2**	**+2.3**
	2.0nm,0.6s						
AKTK	**Aktyubinsk**	**23.30**	**47**	P	**P**	**01 45 15.9**	**-0.5**
AKTO	**Aktyubinsk**	**23.30**	**47**	P	**P**	**01 45 15.9**	**-0.5**
	0.6nm,0.4s,mb3.4,baz=280,slow=8.7,SNR=4.5						
NOA	**NORSAR Array B**	**26.89**	**339**	P	**P**	**01 45 48.0**	**-0.8**
	1.6nm,0.8s,mb3.7,baz=75,slow=1.6,SNR=3.3						
ARCES	**ARCESS Array B**	**32.47**	**356**	P	**P**	**01 46 36.8**	**-1.1**
	2.3nm,0.8s,mb4.0,baz=163,slow=4.4,SNR=8.1						
TORD	**Torodi Ar. Bea**	**35.59**	**235**	P	**P**	**01 47 05.6**	**+0.2**
	0.4nm,0.6s,mb3.2,baz=26,slow=10,SNR=4.0						
KURK	**Kurchatov**	**36.10**	**53**	*e*P	**P**	**01 47 08.6**	**-0.8**
KURK	**Kurchatov**	**36.10**	**53**	*e*P	**P**	**01 47 08.6**	**-0.7**
	1.0nm,0.4s,mb3.8						
MK31	**Makanchi Array**	**38.59**	**59**	*e*P	**P**	**01 47 29.9**	**-0.5**
MK31	**Makanchi Array**	**38.59**	**59**	*e*P	**P**	**01 47 29.9**	**-0.5**
MKAR	**Makanchi Array**	**38.59**	**59**	P	**P**	**01 47 29.9**	**-0.5**
	1.2nm,0.5s,mb3.8,baz=270,slow=7.8,SNR=28						
ZALV	**Zalesovo Beam**	**40.05**	**48**	P	**P**	**01 47 41.2**	**-1.3**
	0.7nm,0.4s,mb3.7,baz=265,slow=8.9,SNR=4.2						
DBIC	**Dimbokro**	**44.69**	**236**	P	**P**	**01 48 20.1**	**-0.3**
	2.3nm,1.0s,mb3.8,baz=36,slow=8.7,SNR=1.5						
DBIC	**Dimbokro**	**44.69**	**236**	P	**P**	**01 48 20.0**	**-0.3**
SONM	**Songino Array**	**54.41**	**53**	P	**P**	**01 49 34.2**	**+0.7**
	0.2nm,0.3s,mb3.3,baz=301,slow=6.3,SNR=2.7						

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*ISCJB **02** 02:17:02.5±1.0, 3805N±006×74.1E±02, h151km±23km, Error ellipse: s-maj=20.6km s-min=7.1km az=162.0*
*NNC **02** 02:17:09.6±5.5, 3852N×7382E, h162km±73km, mb2.6, mpv3.5, Error ellipse: s-maj=57.6km s-min=27.0km az=177.0*

ISC 02 02:17:03.5±0.9**, 3804N**±006×**742E**±02**, h151**km±18km**, n15, σ0§76**/17**, 4C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**5.00**	**12**	⇓P	**Pn**	**02 18 17.9**	**+1.1**
	2.1nm,0.5s						
TKM2				⇓S	**Sn**	**02 19 12.6**	**-1.4**
DLH	**Dalhousie**	**5.69**	**164**	*e*P	**Sn**	**02 19 31.0**	**+0.4**
KK31	**Karatay Array**	**5.76**	**332**	⇑P	**Pn**	**02 18 27.1**	**+0.1**
	7.1nm,0.6s,baz=161,slow=18,SNR=152						
KK31				⇑S	**Sn**	**02 19 25.2**	**-7.1**
	6.8nm,0.6s,baz=171,slow=24,SNR=6.4						
MK31	**Makanchi Array**	**10.61**	**32**	⇑P	**Pn**	**02 19 32.1**	**+0.7**
	1.0nm,0.7s,baz=214,slow=13,SNR=8.2						
DANN	**Dangsing**	**12.57**	**137**	*e*P	**Pn**	**02 19 56.8**	**-0.3**
	21nm,0.3s						
KOLN	**Koldanda**	**12.95**	**140**	*e*P	**Pn**	**02 20 01.7**	**-0.4**
	25nm,0.6s						
GKN	**Gorkha**	**13.32**	**136**	*e*P	**Pn**	**02 20 06.8**	**+0.1**
PKI	**Pulchoki**	**14.08**	**135**	*e*P	**Pn**	**02 20 16.2**	**-0.2**
	13nm,0.5s						
GUN	**Gumba**	**14.10**	**132**	*e*P	**Pn**	**02 20 16.1**	**-0.5**
	6.7nm,0.3s						
JIRN	**Jiri**	**14.46**	**132**	*e*P	**Pn**	**02 20 21.0**	**-0.2**
	18nm,0.4s						
AB01	**Akbulak array**	**15.18**	**322**	⇓P	**Pn**	**02 20 28.5**	**-1.4**
	0.7nm,0.5s						
BVA0	**Borovoye Array**	**15.21**	**351**	⇑P	**Pn**	**02 20 31.9**	**+1.7**
	0.3nm,1.1s,baz=160,slow=9.8,SNR=6.5						
RAMN	**Ramite**	**15.24**	**133**	*e*P	**Pn**	**02 20 31.3**	**+0.5**
	16nm,0.6s						
TAPN	**Taplejung**	**15.60**	**129**	*e*P	**Pn**	**02 20 35.1**	**-0.2**
	6.6nm,0.5s						
ODAN	**Odare**	**15.77**	**131**	*e*P	**Pn**	**02 20 37.5**	**+0.1**
	15nm,0.5s						

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*CSEM **02** 02:58:45.7, 1428N×4753E, h21km, ML4.1, After DHMR*

DHMR 02 02:58:45.7±1.1**, 1428N**×**4753E, h21**km±6km**, ML4.1, 3C-5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.48**	**82**	⇓*i*P	Pn	02 59 12.1	+1.0
MUKL				*i* S	Sn	02 59 31.5	+1.8
BDHA	**Al Bayda'**	**1.93**	**261**	⇓*i*P	Pn	02 59 19.2	+2.0
BDHA				*i* S	Sn	02 59 44.9	+4.1
	1μm,0.7s						
BDHA	**Al Bayda'**	**1.93**	**261**	⇓*i*P	Pn	02 59 19.2	+1.9
BDHA				*i* S	Sn	02 59 44.9	+4.1
BDHA				AML	AML	02 59 48.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,2μm,0.7s						
LBOS		**2.25**	**260**	⇓iP	Pn	02 59 24.3	+2.6
LBOS				iS	Sn	02 59 54.2	+5.4
DHBB	**Dhamar BB**	**3.05**	**276**	iP	Pn	02 59 36.6	+3.8
DHBB				iS	Sn	03 00 15.3	+6.6
SANA	**San'a**	**3.40**	**289**	iP	Pn	02 59 40.4	+2.9
SANA				iS	Sn	03 00 23.3	+6.1
UDYN	**Al 'Udayn**	**3.47**	**265**	⇓iP	Pn	02 59 41.0	+2.5
UDYN				iS	Sn	03 00 24.3	+5.3
TRBA	**At Turbah**	**3.48**	**253**	⇑iP	Pn	02 59 40.5	+1.9
TRBA				iS	Sn	03 00 25.0	+5.9
HAJJ	**Hajjah**	**4.05**	**291**	⇑iP	Pn	02 59 48.4	+1.9
HAJJ				iS	Sn	03 00 38.6	+5.3
HAJJ	**Hajjah**	**4.05**	**291**	⇑iP	Pn	02 59 48.4	+1.9
HAJJ				iS	Sn	03 00 38.6	+5.2
HAJJ				AML	AML	03 00 56.0	
	comp=Z,725nm,0.3s						
ZUQR	**Zugar Island**	**4.64**	**267**	iS	Sn	03 00 52.1	+4.2

MEX 02 03:23:05.5±1.1**, 1698N×9979W, h16**^{km}±17^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.46**	**279**	iP	Pg	03 23 13.1	-1.6
CAIG				eS	Sg	03 23 19.3	-1.7
MEIG	**Mezcala**	**0.96**	**10**	iP	Pb	03 23 21.3	-2.4
MEIG				eS	Sb	03 23 30.9	-5.3
PNIG	**Pinotepa**	**1.70**	**110**	iP	Pn	03 23 30.2	-4.3
PNIG				eS	Sn	03 23 51.9	-4.0
ZIIG	**Zihuatanejo**	**1.72**	**292**	iP	Pn	03 23 31.6	-3.1
ZIIG				eS	Sn	03 23 51.2	-5.1

*DDA **02** 03:27:55.3, 3895N×4479E, h8^{km}±16^{km}, Md3.3*
*NSSP **02** 03:27:57.3, 3888N×4452E, h10^{km}, ML3.4*
*ISK **02** 03:27:58.1, 3898N×4468E, h5^{km}, MD3.5*
*ISCJB **02** 03:27:59.9±0.7, 3885N±003×4456E±004, h1^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=3.9km az=39.6*
*CSEM **02** 03:27:59.1±0.7, 3888N×4458E, h4^{km}±5^{km}, MD3.3, Error ellipse: s-maj=8.8km s-min=5.4km az=117.0*
ISC 02 03:28:00.8±0.6**, 3889N**±003×**4454E**±004**, h5**^{km}±5^{km}**, n25,** σ**1**^{s}**49**/40**, 6C, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NAX	**Nakhchivan**	**0.79**	**69**	P	**Pg**	**03 28 16.2**	**+0.2**
	SNR=289						
NAX				S	**Sg**	**03 28 28.4**	**+2.1**
DYDN	**Diyadin**	**0.93**	**315**	iP	**Pg**	**03 28 17.6**	**-1.1**
DYDN				iS	**Sg**	**03 28 28.4**	**-2.4**
VANB	**Van**	**0.95**	**252**	ePN	**Pg**	**03 28 19.4**	**+0.5**
TVAN	**Van**	**0.96**	**248**	iP	**Pg**	**03 28 17.7**	**-1.5**
TVAN				iS	**Sg**	**03 28 36.5**	**+4.9**
VANT	**Van**	**1.01**	**244**	ePN	**Pg**	**03 28 22.6**	**+2.5**
VANT				eSN	**Sg**	**03 28 41.3**	**+8.2**
PAAR	**P'arak'ar**	**1.27**	**354**	⇑P	**Pn**	**03 28 24.8**	**-0.4**
PAAR				S	**Sg**	**03 28 43.7**	**+2.2**
ERE	**Yerevan**	**1.28**	**357**	P	**Pn**	**03 28 23.0**	**-2.4**
ERE				S	**Sg**	**03 28 41.0**	**-1.0**
VNNZ	**Vanand**	**1.34**	**336**	⇑P	**Pn**	**03 28 28.5**	**+2.4**
AGRB	**Hanur-Agry**	**1.39**	**300**	ePN	**Pn**	**03 28 26.3**	**-0.5**
AGRB				eSN	**Sn**	**03 28 47.5**	**+2.0**
ARUZ	**Aruch**	**1.44**	**346**	⇑P	**Pn**	**03 28 28.3**	**+0.8**
ARUZ				S	**Sb**	**03 28 50.5**	**+3.8**
KAPZ	**Kaputan**	**1.44**	**5**	⇑P	**Pn**	**03 28 25.9**	**-1.6**
KAPZ				S	**Sb**	**03 28 46.3**	**-0.4**
TUTA	**Tutak**	**1.44**	**291**	iP	**Pn**	**03 28 23.0**	**-4.6**
TUTA				iS	**Sb**	**03 28 47.4**	**+0.7**
HAKT	**HAKKARI**	**1.48**	**207**	iP	**Pn**	**03 28 27.3**	**-0.8**
HAKT				iS	**Sn**	**03 28 45.9**	**-1.9**
AMBZ	**Amberd**	**1.52**	**352**	⇑P	**Pn**	**03 28 29.3**	**+0.7**
AMBZ				S	**Sn**	**03 28 50.7**	**+2.0**
GRS	**Goris**	**1.52**	**66**	⇑P	**Pn**	**03 28 27.0**	**-1.6**
GRS				S	**Sn**	**03 28 48.0**	**-0.8**
CUKT	**Cukurca**	**1.80**	**205**	ePN	**Pn**	**03 28 33.7**	**+1.3**
KARS	**Kars**	**2.06**	**327**	ePN	**Pn**	**03 28 35.1**	**-0.8**
HOMI	**Horasan**	**2.35**	**300**	iP	**Pn**	**03 28 37.6**	**-2.3**
BNGL	**BINGOL**	**2.65**	**272**	iP	**Pn**	**03 28 43.1**	**-1.0**
BNGL				iS	**Sg**	**03 29 24.5**	**-1.3**
ERZM	**Erzurum**	**2.67**	**293**	iP	**Pn**	**03 28 49.1**	**+4.7**
EZM	**Erzurum**	**2.67**	**293**	ePN	**Pn**	**03 28 45.0**	**+0.6**
MSL	**Mosul**	**2.73**	**205**	ePn	**Pg**	**03 28 51.0**	**-2.1**
MSL				eSn	**Sg**	**03 29 30.5**	**+2.0**
MSL				iSb	x	03 29 37.5	
MSL				iSg	x	03 29 44.0	
BEST	**Besiri**	**2.76**	**250**	iP	Px	03 28 34.2	
BEST				iS	**Sn**	**03 29 13.1**	**-6.3**
PTK	**Pertek**	**4.02**	**272**	ePN	**Pn**	**03 29 04.6**	**+1.6**
SVRC	**Sivrice-ELAZID**	**4.13**	**265**	ePN	**Pn**	**03 29 06.0**	**+1.5**

*ISCJB **02** 03:55:19.0±1.2, 155S±03×1751W±02, h301^{km}±13^{km}, mb3.5/6, Error ellipse: s-maj=49.1km s-min=19.5km az=151.1*
*IDC **02** 03:55:19.8±1.4, 1545S×175.10W, h296^{km}±17^{km}, mb3.3/5, mb1 3.6/6, mb1mx3.4/17, mbtmp3.4/6, Error ellipse: s-maj=140.4km s-min=16.2km az=151.0*
*NEIC **02** 03:55:19.9±1.1, 1564S×17499W, h300^{km}±12^{km}, mb3.5/1, Error ellipse: s-maj=94.8km s-min=13.6km az=151.0*
ISC 02 03:55:19.9±1.2**, 156S**±03×**1751W**±02**, h296**^{km}±13^{km}**, n10,** σ**0**^{s}**23**/10**, mb3.5**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.58**	**63**	P	**Pn**	**03 56 21.4**	**0.0**
	30nm,0.3s,baz=80,slow=2.3,SNR=32						
AFI				S	**S**	**03 57 10.4**	**0.0**
	9.2nm,0.3s,baz=228,slow=24,SNR=3.4						
STKA	**Stephens Creek**	**42.57**	**240**	P	**P**	**04 02 47.5**	**+0.1**
	1.2nm,0.4s,mb3.4,baz=68,slow=7.2,SNR=4.0						
WRAB	**Tennant Creek**	**48.24**	**257**	eP	**P**	**04 03 31.8**	**0.0**
	1.6nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**48.54**	**252**	P	**P**	**04 03 33.9**	**-0.1**
	10nm,0.6s,mb4.3,baz=87,slow=8.2,SNR=141						
NVAR	**Mina Array Bea**	**75.52**	**43**	P	**P**	**04 06 32.6**	**+0.5**
	0.5nm,0.6s,mb3.3,baz=228,slow=9.7,SNR=4.2						
TXAR	**Lajitas Array**	**82.03**	**57**	P	**P**	**04 07 07.6**	**+0.1**
	0.1nm,0.6s,mb2.8,baz=289,slow=2.8,SNR=2.3						
PDAR	**Pinedale Array**	**83.45**	**42**	P	**P**	**04 07 14.0**	**-0.5**
	0.4nm,0.6s,mb3.5,baz=218,slow=5.5,SNR=5.2						
VNA3	**Neumayer Olymp**	**92.84**	**175**	e	**P**	**04 07 58.7**	**-0.1**
VNA2	**Neumayer--Watz**	**93.32**	**176**	e	**P**	**04 08 01.0**	**0.0**
	baz=220,slow=3.0						
TORD	**Torodi Ar. Bea**	**176.05**	**127**	PKP	PKPdf	04 14 54.9	-0.6
	0.1nm,0.4s,baz=236,slow=1.6,SNR=5.0						

IDC 02 03:55:56.5±1.7**, 205N×12773E, h0**^{km}**, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.6**/15**, mbtmp3.7**/4**, Error ellipse: s-maj=198.5km s-min=21.8km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**22.81**	**164**	eP	P	04 01 02.7	+1.6
ASAR	**Alice Springs**	**26.26**	**167**	P	P	04 01 34.0	+0.4
	0.3nm,0.3s,baz=350,slow=7.9,SNR=9.8						
STKA	**Stephens Creek**	**36.22**	**160**	P	P	04 03 00.9	-0.4
	1.0nm,0.3s,baz=341,slow=10.0,SNR=4.0						
SONM	**Songino Array**	**49.19**	**341**	P	P	04 04 46.6	+0.2
	0.2nm,0.6s,baz=151,slow=9.5,SNR=3.5						
MKAR	**Makanchi Array**	**59.49**	**325**	P	P	04 06 01.5	0.0
	0.4nm,0.4s,baz=118,slow=7.8,SNR=16						

NEIC 02 04:19:39.3, 3782S×17694E, h138^{km}**, MG4.0**(WEL)**, 1C, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.27**	**232**	P	Pn	04 19 58.6	+0.4
URZ	**Urewera**	**0.46**	**163**	P	Pn	04 19 58.6	-0.4
MWZ	**Matawai**	**0.69**	**138**	⇑P	Pn	04 20 00.1	-0.3
MXZ	**Matakaoa Point**	**1.11**	**77**	P	Pn	04 20 03.8	-0.1
KNZ	**Kokohu**	**1.33**	**155**	P	Pn	04 20 06.1	0.0
BKZ	**Black Stump Fm**	**1.39**	**194**	P	Pn	04 20 06.5	-0.2
KUZ	**Kuaotunu**	**1.45**	**317**	P	Pn	04 20 07.5	+0.1
TUVZ	**Tukino**	**1.76**	**214**	P	Pn	04 20 11.1	+0.2
WNVZ	**Wahianoa**	**1.84**	**215**	P	Pn	04 20 12.1	+0.4
MOVZ	**Moawhango**	**1.84**	**210**	P	Pn	04 20 11.3	-0.4
TSZ	**Takapari Road**	**2.36**	**199**	P	Pn	04 20 17.0	-1.1
BFZ	**Birch Farm**	**2.91**	**190**	P	Pn	04 20 23.2	-1.8
MRZ	**Mangatainoka R**	**3.03**	**200**	P	Pn	04 20 24.5	-2.0
KIW	**Kapiti Island**	**3.42**	**207**	P	Pn	04 20 29.4	-2.2
CAW	**Cannon Point**	**3.59**	**203**	P	Pn	04 20 31.2	-2.6
MSWZ	**Moikau Station**	**3.82**	**199**	P	Pn	04 20 33.7	-3.1
SNZO	**South Karori**	**3.89**	**206**	P	Pn	04 20 34.7	-3.0
BHW	**Baring Head**	**3.92**	**203**	P	Pn	04 20 35.0	-3.2
TCW	**Tory Channel**	**3.97**	**210**	P	Pn	04 20 35.8	-2.9

*KISR **02** 04:20:33.0, 3409N×4721E, h33^{km}, ML3.2*
*CSEM **02** 04:20:33.6±0.6, 34.11N×4652E, h30^{km}, ML3.2, Error ellipse: s-maj=17.6km s-min=3.3km az=122.0*
*ISCJB **02** 04:20:34.0±1.5, 3397N±007×467E±0.1, h10^{km}, Error ellipse: s-maj=18.1km s-min=6.1km az=26.1*
*THR **02** 04:20:38.0±0.5, 3406N×4709E, h14^{km}±16^{km}, ML3.2*
ISC 02 04:20:35.3±1.5**, 3401N**±007×**466E**±01**, h10**^{km}**, n13,** σ**0**^{s}**74**/19**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**2.62**	**136**	ePn	**Pn**	**04 21 18.9**	**+1.2**
SHGR				AML	AML	04 22 07.8	
	comp=E,211nm,0.5s						
SHGR				AML	AML	04 22 08.4	
	comp=N,185nm,0.5s						
ASAO	**Ashtian**	**2.85**	**78**	ePn	**Pn**	**04 21 20.1**	**-0.8**
ASAO				eSg	**Sn**	**04 21 55.8**	**+0.5**
ASAO				AML	AML	04 22 14.1	
	comp=N,86nm,0.8s						
ASAO				AML	AML	04 22 16.5	
	comp=E,82nm,0.7s						
ASAO	**Ashtian**	**2.85**	**78**	ePn	**Pn**	**04 21 20.1**	**-0.8**
	SNR=52						
ASAO				eSg	**Sn**	**04 21 55.8**	**+0.6**
	SNR=90						
ZNJK	**Zanjan**	**3.14**	**32**	ePn	**Pn**	**04 21 26.1**	**+1.3**
GHVR	**GHOM**	**3.88**	**82**	ePn	**Pn**	**04 21 33.7**	**-1.3**
GHVR				AML	AML	04 22 44.4	
	comp=E,51nm,0.7s						
GHVR				AML	AML	04 22 52.1	
	comp=N,38nm,0.4s						
MIB	**Mutribah**	**4.23**	**172**	eP	**Pn**	**04 21 39.8**	**-0.1**
	baz=178						
MIB				AML	AML	04 22 41.6	
	comp=Z,37nm,0.5s,baz=178						
UMR	**Umm Al-Rimmam**	**4.53**	**168**	eP	**Pn**	**04 21 43.7**	**-0.3**
DAMV	**Damavand**	**4.67**	**68**	ePn	**Pn**	**04 21 45.3**	**-0.6**
NAY	**Al-Naaiem**	**4.77**	**174**	eP	**Pn**	**04 21 46.9**	**-0.4**
NAY				eS	**Sn**	**04 22 43.4**	**+0.8**
NAY	**Al-Naaiem**	**4.77**	**174**	eP	**Pn**	**04 21 46.9**	**-0.3**
	baz=180						
NAY				eS	**Sn**	**04 22 43.4**	**+0.8**
	baz=180						
NAY				AML	AML	04 22 53.3	
	comp=Z,11nm,0.5s,baz=180						
RDF	**Al-Radifah**	**5.12**	**171**	eP	**Pn**	**04 21 51.8**	**-0.3**
RDF				eS	**Sn**	**04 22 51.0**	**-0.3**
	comp=Z,20nm,0.6s						
RDF	**Al-Radifah**	**5.12**	**171**	eP	**Pn**	**04 21 51.8**	**-0.3**
	baz=177						
RDF				eS	**Sn**	**04 22 51.0**	**-0.4**
	baz=177						
RDF				AML	AML	04 22 53.4	
	comp=Z,21nm,0.6s,baz=177						
NASN	**Na'in**	**5.29**	**101**	ePn	**Pn**	**04 21 54.6**	**+0.2**

*IDC **02** 04:37:12.7±1.3, 1820N×12250E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.6/21, mbtmp3.8/6, ML3.8/2, MS3.4/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=45.7km s-min=25.4km az=79.0*
*NEIC **02** 04:37:14.4±6.6, 1822N×12255E, h12^{km}±41^{km}, mb4.2/1, Error ellipse: s-maj=24.9km s-min=15.2km az=51.0*
NEIC Felt [II PIVS] at Buguey, Casambalangan and Santa Ana.
*ISCJB **02** 04:37:16.3±0.5, 1836N±003×12249E±006, h33^{km}, mb3.7/5, Error ellipse: s-maj=7.9km s-min=4.2km az=16.6*
*MAN **02** 04:37:16, 1826N×12241E, h8^{km}, mb4.7, ML3.7, MS3.7*
MAN INTENSITY II - CASAMBALANGA, CAGAYAN, STA ANA, BUGUEY, CAGAYAN.
ISC 02 04:37:15.6±1.4**, 1832N**±004×**12245E**±006**, h13**^{km}±8^{km}**, n25,** σ**0**^{s}**98**/31**, mb3.7**/5**, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.39**	**259**	eP	**Pg**	**04 37 23.2**	**-0.2**
APYP	**Conner**	**1.23**	**249**	eP	**Pn**	**04 37 37.1**	**-1.4**
APYP				eS	**Sb**	**04 37 53.2**	**-1.4**
PALP	**Palanan**	**1.25**	**181**	⇓iP	**Pn**	**04 37 37.5**	**-1.3**
PALP				iS	**Sb**	**04 37 51.0**	**-4.1**
CAUP	**Cauayan**	**1.49**	**204**	eP	**Pn**	**04 37 42.7**	**+0.6**
PIP	**Pasuquin**	**1.74**	**270**	iS	**Sn**	**04 38 04.0**	**-3.5**
PIP	**Pasuquin**	**1.74**	**270**	⇑iP	**Pn**	**04 37 46.1**	**+0.7**
ABRA	**Dolores**	**1.78**	**248**	eP	**Pn**	**04 37 45.8**	**-0.3**
ABRA				eS	**Sn**	**04 38 08.6**	**0.0**
SIPP	**Brgy, Tapao**	**1.94**	**259**	⇑iP	**Pn**	**04 37 49.0**	**+0.9**
SIPP				iS	**Sn**	**04 38 19.3**	**+7.0**
BALP	**Baler**	**2.70**	**198**	eP	**Pn**	**04 37 59.3**	**+0.6**
BALP				eS	**Sn**	**04 38 33.0**	**+1.9**
BOLP	**Bolinao**	**3.10**	**232**	eP	**Pn**	**04 38 05.6**	**+1.5**
TWG	**Pinlang**	**4.66**	**344**	ePn	**Pn**	**04 38 26.2**	**+0.6**
TWG				eSn	**Sn**	**04 39 19.5**	**-0.1**
YULB	**Yu-li**	**5.16**	**348**	ePn	**Pn**	**04 38 32.2**	**-0.4**
	21nm,0.6s						
YULB				eSn	**Sn**	**04 39 31.5**	**-0.4**
SSLB	**Suanglung**	**5.62**	**346**	ePn	**Pn**	**04 38 40.5**	**+1.7**
	22nm,0.6s						
YHNB	**Yeheng**	**6.40**	**351**	ePn	**Pn**	**04 38 50.6**	**+1.1**
	19nm,0.5s						
JOW	**Kunigami**	**10.03**	**31**	Pn	**Pn**	**04 39 38.6**	**-0.8**
	2.0nm,0.3s,baz=190,slow=14,SNR=7.2						
KSRS	**Korea Array**	**19.66**	**13**	P	**Pn**	**04 41 45.3**	**-0.3**
	0.3nm,0.3s,baz=194,slow=12,SNR=4.9						
KSRS				LR	LR	04 51 18.6	
	comp=Z,27nm,18.1s,baz=345,slow=43						
SONM	**Songino Array**	**32.23**	**340**	P	**P**	**04 43 42.7**	**-0.8**
	0.3nm,0.3s,mb3.6,baz=162,slow=6.9,SNR=3.9						
ASAR	**Alice Springs**	**43.20**	**165**	P	**P**	**04 45 14.5**	**-2.0**
	0.5nm,0.6s,mb3.4,baz=349,slow=7.8,SNR=5.1						
MK31	**Makanchi Array**	**43.46**	**320**	eP	**P**	**04 45 18.4**	**+0.1**
MKAR	**Makanchi Array**	**43.46**	**320**	P	**P**	**04 45 18.9**	**+0.6**
	0.7nm,0.5s,mb3.7,baz=113,slow=9.4,SNR=14						
MKAR	**Makanchi Array**	**43.46**	**320**	P	**P**	**04 45 18.9**	**+0.6**
KURK	**Kurchatov**	**47.40**	**323**	eP	**P**	**04 45 49.4**	**-0.2**
	1.8nm,0.8s,mb4.0						
NOA	**NORSAR Array B**	**83.95**	**333**	LR	LR	05 27 27.7	
	comp=Z,89nm,21.5s,baz=60,slow=36						
YKA	**Yellowknife Ar**	**87.89**	**23**	P	**P**	**04 50 04.6**	**0.0**
	0.3nm,0.6s,mb3.7,baz=304,slow=4.6,SNR=4.5						
YKA	**Yellowknife Ar**	**87.89**	**23**	P	**P**	**04 50 04.6**	**0.0**

*ISCJB **02** 04:44:13.7±1.0, 693S±009×125.1E±0.1, h560^{km}±14^{km}, mb4.0/16, Error ellipse: s-maj=23.0km s-min=9.3km az=151.2*
*NEIC **02** 04:44:13.7±0.8, 691S×125.12E, h542^{km}±12^{km}, mb3.9/5, Error ellipse: s-maj=11.1km s-min=5.3km az=60.0*
*IDC **02** 04:44:14.5±1.4, 692S×12506E, h552^{km}±17^{km}, mb3.3/8, mb1 3.4/10, mb1mx3.3/18, mbtmp3.4/10, Error ellipse: s-maj=31.0km s-min=11.5km az=71.0*
ISC 02 04:44:13.2±0.9**, 691S**±009×**1251E**±01**, h532**^{km}±10^{km}**, n40,** σ**0**^{s}**64**/39**, mb4.0**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.58**	**204**	P	**P**	**04 45 32.7**	**+2.1**
	27nm,0.3s,baz=73,slow=1.8,SNR=21						
BATI				S	**S**	**04 46 32.0**	**-1.7**
	17nm,0.3s,baz=259,slow=20,SNR=10						
KAKA	**Kakadu**	**9.24**	**129**	eP	x	04 46 06.9	
	19nm,0.6s						
MBWA	**Marble Bar**	**15.09**	**200**	eP	**P**	**04 47 23.4**	**-0.4**
	14nm,0.8s						
WRAB	**Tennant Creek**	**15.75**	**146**	eP	**P**	**04 47 30.6**	**0.0**
	5.6nm,0.9s						
WB2	**Warramunga Arr**	**15.75**	**146**	eP	**P**	**04 47 30.5**	**-0.2**
KSM	**Kuching**	**16.96**	**299**	eP	**P**	**04 47 43.0**	**+0.5**
	7.2nm,0.6s						
ASAR	**Alice Springs**	**18.68**	**154**	P	**P**	**04 47 58.7**	**+0.6**
	1.6nm,0.3s,baz=345,slow=14,SNR=99						
ASAR				ScP	ScP	04 54 41.3	-3.4
	0.1nm,0.3s,baz=343,slow=1.8,SNR=5.5						
FORT	**Forrest**	**23.91**	**174**	eP	**P**	**04 48 45.5**	**+0.3**
	23nm,0.6s						
FORT	**Forrest**	**23.91**	**174**	eP	**P**	**04 48 45.4**	**+0.2**
	26nm,0.7s						
KLBR	**Kellerberrin**	**25.50**	**195**	eP	**P**	**04 48 59.3**	**0.0**
	12nm,0.9s,mb4.5						
MUN	**Mundaring**	**26.29**	**197**	eP	**P**	**04 49 06.3**	**+0.1**
NWAO	**Narrogin (SRO)**	**26.90**	**195**	P	**P**	**04 49 11.8**	**+0.2**
	7.5nm,0.4s,baz=30,slow=7.8,SNR=20						
NWAO	**Narrogin (SRO)**	**26.90**	**195**	P	**P**	**04 49 11.8**	**+0.2**
STKA	**Stephens Creek**	**29.22**	**150**	eP	**P**	**04 49 32.5**	**+0.6**
	3.8nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**29.22**	**150**	P	**P**	**04 49 32.5**	**+0.6**
	4.6nm,0.5s,mb4.4,baz=309,slow=6.1,SNR=21						
CMAR	**Chiang Mai Arr**	**36.08**	**315**	P	**P**	**04 50 30.7**	**+0.4**
	1.0nm,0.4s,mb3.7,baz=153,slow=7.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**36.08**	**315**	P	**P**	**04 50 30.7**	**+0.4**
LSA	**Lhasa**	**48.89**	**320**	eP	**P**	**04 52 11.4**	**+0.9**
	14nm,0.6s						
ODAN	**Odare**	**49.62**	**314**	eP	**P**	**04 52 16.2**	**+0.1**
	22nm,0.5s						
TAPN	**Taplejung**	**49.69**	**315**	eP	**P**	**04 52 16.9**	**+0.3**
	21nm,0.4s						
RAMN	**Ramite**	**50.24**	**314**	eP	**P**	**04 52 21.2**	**+0.6**
	48nm,0.6s						
JIRN	**Jiri**	**50.95**	**314**	eP	**P**	**04 52 26.1**	**+0.3**
	16nm,0.5s,mb4.6						
GUN	**Gumba**	**51.33**	**314**	eP	**P**	**04 52 28.6**	**+0.1**
	43nm,0.7s						
PKI	**Pulchoki**	**51.46**	**314**	eP	**P**	**04 52 29.2**	**-0.3**
	19nm,0.4s						
KKN	**Kakani**	**51.68**	**314**	eP	**P**	**04 52 31.0**	**-0.1**
	17nm,0.5s,mb4.6						
DMN	**Daman**	**51.70**	**313**	eP	**P**	**04 52 31.4**	**+0.2**
	11nm,0.5s,mb4.4						
GKN	**Gorkha**	**52.27**	**313**	eP	**P**	**04 52 35.2**	**-0.1**
	28nm,0.4s						
KOLN	**Koldanda**	**52.89**	**313**	eP	**P**	**04 52 39.9**	**+0.2**
	33nm,0.8s,mb4.7						
DANN	**Dangsing**	**53.10**	**313**	eP	**P**	**04 52 41.3**	**+0.1**
	18nm,0.6s,mb4.6						
SONM	**Songino Array**	**56.96**	**345**	P	**P**	**04 53 07.6**	**-0.1**
	1.2nm,0.8s,mb3.2,baz=161,slow=9.0,SNR=6.9						
MK31	**Makanchi Array**	**65.58**	**329**	eP	**P**	**04 54 03.8**	**-0.5**
MKAR	**Makanchi Array**	**65.58**	**329**	P	**P**	**04 54 04.1**	**-0.1**
	2.3nm,0.6s,mb3.9,baz=122,slow=7.3,SNR=29						
PETK	**Petropavlovsk-**	**65.86**	**21**	P	**P**	**04 54 06.2**	**+0.3**
	1.7nm,0.7s,mb3.7,baz=205,slow=2.3,SNR=5.3						
AAK	**Ala-Archa**	**67.41**	**322**	eP	**P**	**04 54 15.8**	**+0.2**
	1.4nm,0.6s,mb3.7						
ZAA0	**Zalesovo Array**	**69.44**	**336**	eP	**P**	**04 54 26.4**	**-1.3**
ZALV	**Zalesovo Beam**	**69.44**	**336**	P	**P**	**04 54 26.6**	**-1.1**
	2.9nm,0.5s,mb4.1,baz=130,slow=4.6,SNR=13						
KURK	**Kurchatov**	**69.98**	**331**	eP	**P**	**04 54 30.2**	**-0.9**
	3.9nm,0.8s,mb4.0						
VNDA	**Vanda**	**73.16**	**172**	P	**P**	**04 54 48.4**	**-0.8**
	0.4nm,0.5s,mb3.1,baz=17,slow=5.9,SNR=5.9						
BRVK	**Borovoye**	**75.53**	**329**	eP	**P**	**04 55 02.6**	**-0.3**
	1.9nm,0.5s,mb3.8						
TORD	**Torodi Ar. Bea**	**124.03**	**281**	PKP	PKPdf	05 02 11.5	-0.6
	0.3nm,0.7s,baz=347,slow=0.8,SNR=2.3						

KRSC 02 04:45:48.9±0.5**, 5375N×16066E, h39**^{km}±29^{km}**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.76**	**211**	iP	Pn	04 46 02.6	-0.5
SPN				iS	Sn	04 46 12.8	-0.4
KII	**Karymskiy**	**0.77**	**292**	iP	Pn	04 46 03.7	+0.4
KII				iS	Sn	04 46 15.0	+1.4
NLC	**Nalytchevo**	**0.98**	**234**	iP	Pn	04 46 06.2	+0.1
NLC				iS	Sn	04 46 18.5	-0.2
MKZ	**Mys Kozlova**	**1.02**	**37**	iP	Pn	04 46 05.5	-1.2
MKZ				iS	Sn	04 46 17.2	-2.6
AVH	**Avacha**	**1.25**	**248**	iP	Pn	04 46 11.1	+1.3
AVH				iS	Sn	04 46 27.0	+1.7
PET	**Petropavlovsk**	**1.41**	**240**	eP	Pn	04 46 12.7	+0.8
PET				iS	Sn	04 46 30.5	+1.3
TUMR	**Tumrok**	**1.56**	**349**	eP	Pn	04 46 14.8	+0.6
TUMR				iS	Sn	04 46 33.1	-0.1
GNL	**Ganaly**	**1.62**	**269**	eP	Pn	04 46 16.1	+1.3
GNL				iS	Sn	04 46 36.4	+2.0
RUS	**Russkaya**	**1.85**	**225**	P	Pn	04 46 18.5	+0.5
RUS				iS	Sn	04 46 40.0	-0.1
KMNR	**Kamenistaya**	**2.02**	**353**	iP	Pn	04 46 22.0	+1.5
KMNR				iS	Sn	04 46 46.7	+2.2
BZMR	**Bezymyannaya**	**2.19**	**357**	P	Pn	04 46 24.6	+1.8
KPT	**Kopyto**	**2.23**	**354**	eP	Pn	04 46 24.8	+1.4
KPT				iS	Sn	04 46 51.5	+1.8
ZLN	**Zelenaya**	**2.27**	**2**	eP	Pn	04 46 25.4	+1.5
ZLN				iS	Sn	04 46 51.6	+1.0
KOZ	**Kozyrevsk**	**2.36**	**349**	eP	Pn	04 46 26.0	+1.0
KOZ				eS	Sn	04 46 53.4	+0.7
KRSR	**Krestovskiy**	**2.47**	**359**	P	Pn	04 46 28.4	+1.8
SRDR	**Sredinnyy**	**2.63**	**348**	eP	Pn	04 46 29.3	+0.5
KBTR	**Krutoberegovo**	**2.76**	**26**	eP	Pn	04 46 31.0	+0.5
MIPR	**Malaya Ipel'ka**	**2.78**	**240**	P	Pn	04 46 32.4	+1.6

*ISCJB **02** 04:54:56.6±0.5, 303S±0.1×608E±0.1, h10^{km}, mb4.2/17, MS3.7/5, Error ellipse: s-maj=16.2km s-min=13.3km az=176.6*
*IDC **02** 04:54:56.8±0.6, 3023S×6080E, h0^{km}, mb4.1/15, mb1 4.2/15, mb1mx4.1/26, mbtmp4.1/15, MS3.7/5, Ms1 3.7/5, ms1mx3.5/20, Error ellipse: s-maj=19.0km s-min=18.8km az=48.0*
*NEIC **02** 04:54:58.5±0.3, 3023S×6075E, h10^{km}, mb4.4/6, Error ellipse: s-maj=11.5km s-min=9.2km az=177.0*
ISC 02 04:54:58.6±0.5**, 302S**±01×**608E**±01**, h10**^{km}**, n28,** σ**0**^{s}**59**/26**, mb4.2**/17**, MS3.7**/5**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**30.91**	**264**	P	**P**	**05 01 15.3**	**-0.2**
	2.8nm,0.9s,mb4.1,baz=140,slow=11,SNR=3.5						
BOSA				LR	LR	05 11 21.4	
	comp=Z,119nm,18.3s,MS3.6,baz=105,slow=32						
BOSA	**Boshof**	**30.91**	**264**	eP	**P**	**05 01 15.1**	**-0.5**
	4.8nm,1.0s,mb4.3						
BOSA				LR	LR	05 11 21.4	
LBTB	**Lobatse**	**31.52**	**271**	P	**P**	**05 01 20.2**	**-0.7**
	1.7nm,0.6s,mb4.1,baz=129,slow=10,SNR=5.8						
LBTB	**Lobatse**	**31.52**	**271**	eP	**P**	**05 01 20.0**	**-0.9**
	5.7nm,1.0s,mb4.4						
LSZ	**Lusaka**	**33.38**	**289**	eP	**P**	**05 01 38.3**	**+0.9**
	2.7nm,0.8s,mb4.2						
MAW	**Mawson**	**37.45**	**179**	LR	LR	05 12 42.9	
	comp=Z,106nm,21.2s,MS3.6,baz=182,slow=28						
TSUM	**Tsumeb**	**40.53**	**275**	P	**P**	**05 02 39.0**	**+0.8**
	5.0nm,0.7s,mb4.3,baz=117,slow=10.0,SNR=7.3						
TSUM	**Tsumeb**	**40.53**	**275**	eP	**P**	**05 02 39.0**	**+0.8**
	5.1nm,0.7s,mb4.3						
QSPA	**South Pole Qui**	**59.95**	**180**	P	**P**	**05 05 03.8**	**-0.6**
	8.4nm,1.1s,mb4.7,baz=268,slow=6.0,SNR=10						
CMAR	**Chiang Mai Arr**	**60.76**	**42**	P	**P**	**05 05 09.9**	**-0.9**
	0.9nm,0.3s,mb4.4,baz=220,slow=6.5,SNR=5.5						
CMAR				LR	LR	05 26 43.8	
	comp=Z,26nm,19.4s,MS3.4,baz=245,slow=31						
VNDA	**Vanda**	**63.10**	**166**	P	**P**	**05 05 25.8**	**0.0**
	2.2nm,0.9s,mb4.3,baz=274,slow=8.4,SNR=8.8						
VNDA				LR	LR	05 29 56.6	
	comp=Z,83nm,20.9s,MS3.9,baz=171,slow=33						
ASAR	**Alice Springs**	**64.52**	**104**	P	**P**	**05 05 36.0**	**0.0**
	1.2nm,0.6s,mb4.1,baz=242,slow=6.1,SNR=16						
WRAB	**Tennant Creek**	**66.42**	**100**	eP	**P**	**05 05 49.8**	**+1.4**
	7.2nm,0.9s,mb4.7						
TOA0	**Torodi Ar. Sit**	**71.33**	**298**	eP	**P**	**05 06 18.9**	**0.0**
TORD	**Torodi Ar. Bea**	**71.33**	**298**	P	**P**	**05 06 18.9**	**0.0**
	0.6nm,0.7s,mb3.6,baz=122,slow=5.0,SNR=8.9						
TORD				LR	LR	05 37 55.2	
	comp=Z,69nm,21.5s,MS3.9,baz=85,slow=36						
BRTR	**Keskin Array B**	**74.01**	**339**	P	**P**	**05 06 34.6**	**+0.3**
	1.1nm,0.8s,mb3.9,baz=167,slow=11,SNR=5.3						
MK31	**Makanchi Array**	**79.07**	**15**	eP	**P**	**05 07 03.2**	**+0.4**
MKAR	**Makanchi Array**	**79.07**	**15**	P	**P**	**05 07 03.2**	**+0.5**
	1.2nm,0.8s,mb3.9,baz=193,slow=5.0,SNR=10						
MKAR	**Makanchi Array**	**79.07**	**15**	P	**P**	**05 07 03.2**	**+0.5**
AKTK	**Aktyubinsk**	**80.33**	**358**	P	**P**	**05 07 08.8**	**-0.6**
AKTO	**Aktyubinsk**	**80.33**	**358**	P	**P**	**05 07 08.8**	**-0.6**
	0.8nm,0.6s,mb3.8,baz=236,slow=3.6,SNR=3.4						
KURK	**Kurchatov**	**82.10**	**11**	P	**P**	**05 07 18.6**	**-0.3**
	2.4nm,0.5s,mb4.4,baz=210,slow=5.5,SNR=3.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KURK	**Kurchatov**	**82.10**	**11**	*e*P	**P**	**05 07 19.4**	**+0.5**
	3.9nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**83.31**	**6**	P	**P**	**05 07 25.3**	**+0.2**
	0.3nm,0.5s,mb3.6,baz=178,slow=8.7,SNR=2.4						
AKASG	**Malin Array Be**	**85.25**	**340**	P	**P**	**05 07 35.0**	**-0.1**
	0.4nm,0.4s,mb3.9,baz=145,slow=3.6,SNR=4.8						
ZAA0	**Zalesovo Array**	**86.36**	**14**	*e*P	**P**	**05 07 40.1**	**-0.4**
ZALV	**Zalesovo Beam**	**86.36**	**14**	P	**P**	**05 07 40.1**	**-0.3**
	2.9nm,0.7s,mb4.6,baz=198,slow=3.8,SNR=12						
YKA	**Yellowknife Ar**	**147.57**	**356**	PKPbc	PKPbc	05 14 41.8	-0.5
	4.4nm,0.7s,baz=356,slow=2.8,SNR=27						

*NEIC **02** 05:19:49.0, 32.66N×116.12W, h9km, ML2.7(PAS), After PAS.*
NEIC Felt at Ocotillo.
ECX 02 05:19:50.5±0.7**, 32.68N×116.05W, h4**km±2km**, MD2.7, ML2.6, 7C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVTC	**Desert V Tower**	**0.04**	**248**	⇑*i*P	Pg	05 19 51.6	-0.1
DVTC				*i* S	Sg	05 19 52.9	+0.4
YUH	**Yuha Desert**	**0.11**	**105**	⇑*i*P	Pg	05 19 52.8	0.0
CRR	**Carrizo Plain**	**0.22**	**18**	⇓*i*P	Pg	05 19 54.3	-0.5
CBKC	**Canebrake**	**0.28**	**323**	⇓*i*P	Pg	05 19 55.1	-0.8
WESC	**Westside Schoo**	**0.28**	**73**	⇑*i*P	Pg	05 19 56.3	+0.3
WESC				*e*S	Sg	05 20 01.6	+1.9
COK	**Cook Ranch**	**0.32**	**58**	⇑*i*P	Pg	05 19 57.0	+0.2
ERPC	**Ernies Place**	**0.34**	**78**	*e*P	Pg	05 19 57.5	+0.5
SWSC	**Sam W. Stewart**	**0.34**	**39**	⇑*i*P	Pg	05 19 56.7	-0.4
SWSC				*i* S	Sg	05 20 01.8	+0.3
RDX	**Rancho Dowling**	**0.75**	**173**	⇓*e*P	Pg	05 20 03.6	-1.2
RDX				*e*S	Sg	05 20 13.6	-0.9
RDX				*e*		05 20 14.6	
	comp=E,146nm,0.4s						
FRK	**Frink**	**0.80**	**26**	*e*P	Pg	05 20 04.8	-1.1
PFO	**Pinyon Flat Ob**	**0.99**	**340**	P	Pg	05 20 07.3	-2.2
PBX	**Punta Banda**	**1.09**	**212**	⇑*e*P	Pg	05 20 10.0	-1.5
PBX				*e*S	Sg	05 20 24.1	-1.5
PBX				⇓*e*		05 20 27.8	
	comp=E,217nm,1.0s						
ECNX	**Esteban Cantu**	**1.12**	**205**	⇑*e*P	Pg	05 20 10.2	-1.7
ECNX				*e*S	Sg	05 20 25.0	-1.4

*ISCJB **02** 05:27:53.8±1.2, 4.06S±0.06×76.1W±0.1, h40km±12km, mb3.9/8, Error ellipse: s-maj=17.5km s-min=10.0km az=172.4*
*IDC **02** 05:27:53.4±0.8, 4.04S×76.10W, h23km±4km, mb3.8/6, mb1 3.9/11, mb1mx3.8/21, mbtmp3.8/11, ML3.8/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/30, Error ellipse: s-maj=24.3km s-min=18.3km az=52.0*
*NEIC **02** 05:27:53.9±0.5, 4.12S×76.12W, mb4.3/1, Error ellipse: s-maj=15.1km s-min=8.9km az=72.0*
ISC 02 05:27:56.0±0.9**, 4.07S**±0.06×**76.05W**±0.10**, h42**km±10km**, h27**km±2.7km**:pP-P, n28, σ0.83**/26**, mb3.9**/8**, Northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.73**	**219**	Pn	**Pn**	**05 28 52.0**	**+0.9**
	25nm,0.3s,baz=27,slow=12,SNR=68						
ATAH				LR	LR	05 30 44.3	
	comp=Z,386nm,20.5s,baz=110,slow=45						
OTAV	**Otavalo**	**4.91**	**331**	*e*Pn	**Pn**	**05 29 07.7**	**+0.3**
NNA	**Nana**	**7.90**	**186**	Pn	**Pn**	**05 29 47.0**	**-1.5**
	5.5nm,0.3s,baz=0.4,slow=9.4,SNR=14						
NNA				Sn	**Sn**	**05 31 10.8**	**-5.9**
	5.8nm,0.3s,baz=212,slow=7.1,SNR=5.0						
NNA	**Nana**	**7.90**	**186**	Pn	**Pn**	**05 29 47.0**	**-1.5**
NNA				Sn	**Sn**	**05 31 10.8**	**-5.9**
ROSC	**El Rosal**	**9.04**	**11**	Pn	**Pn**	**05 30 04.3**	**+0.2**
	0.1nm,0.3s,baz=268,slow=22,SNR=2.5						
ROSC				LR	LR	05 33 54.8	
	comp=Z,96nm,20.7s,baz=199,slow=40						
SDV	**Santo Domingo**	**13.96**	**23**	Pn	**Pn**	**05 31 11.6**	**+0.2**
	0.2nm,0.3s,baz=240,slow=15,SNR=2.5						
SDV				Lg		05 34 53.7	
	0.3nm,0.3s,baz=51,slow=19,SNR=3.1						
PCRV	**Puerto La Cruz**	**18.16**	**39**	LR	LR	05 40 07.5	
	comp=Z,178nm,19.3s,baz=193,slow=40						
SIV	**San Ignacio**	**18.89**	**130**	P	**Pn**	**05 32 14.0**	**-0.1**
	0.1nm,0.3s,baz=228,slow=4.8,SNR=5.0						
PLCA	**Paso Flores**	**36.83**	**173**	P	**P**	**05 34 55.7**	**-4.4**
	2.0nm,0.9s,mb4.0,baz=341,slow=7.4,SNR=4.6						
TXAR	**Lajitas Array**	**42.49**	**323**	P	**P**	**05 35 46.2**	**-1.2**
	0.9nm,1.1s,mb3.3,baz=112,slow=9.0,SNR=4.2						
TXAR				PcP	PcP	05 37 40.6	+0.9
	0.6nm,0.8s,baz=151,slow=8.0,SNR=7.0						
TXAR	**Lajitas Array**	**42.49**	**323**	P	**P**	**05 35 46.2**	**-1.2**
TXAR				PcP	PcP	05 37 40.6	+0.9
SDCO	**Great Sand Dun**	**49.79**	**329**	*e*P	**P**	**05 36 44.6**	**-0.1**
	3.4nm,1.0s,mb4.3						
PDAR	**Pinedale Array**	**55.61**	**330**	P	**P**	**05 37 27.1**	**-0.5**
	0.8nm,0.8s,mb3.8,baz=127,slow=9.5,SNR=5.9						
PDAR				PcP	PcP	05 38 26.6	-0.2
	0.6nm,0.8s,baz=130,slow=8.4,SNR=3.7						
NVAR	**Mina Array Bea**	**57.57**	**321**	P	**P**	**05 37 42.2**	**+0.6**
	0.7nm,0.8s,mb3.8,baz=135,slow=8.3,SNR=5.5						
NVAR	**Mina Array Bea**	**57.57**	**321**	P	**P**	**05 37 42.2**	**+0.6**
FCC	**Fort Churchill**	**64.27**	**350**	*e*P	**P**	**05 38 28.1**	**+1.4**
DBIC	**Dimbokro**	**71.87**	**82**	P	**P**	**05 39 14.8**	**-0.5**
	3.2nm,0.8s,mb4.3,baz=233,slow=8.3,SNR=3.8						
DBIC				pP	pP	05 39 23.7	-4.2
	3.7nm,0.6s,baz=256,slow=3.6,SNR=3.9						
DBIC	**Dimbokro**	**71.87**	**82**	P	**P**	**05 39 14.8**	**-0.5**
DBIC				pP	pP	05 39 23.7	-4.2
YKA	**Yellowknife Ar**	**72.56**	**342**	P	**P**	**05 39 16.5**	**-2.0**
	0.4nm,0.5s,mb3.6,baz=140,slow=7.0,SNR=5.0						
YKA				pP	pP	05 39 25.3	-5.6
	0.4nm,0.5s,baz=139,slow=5.9,SNR=3.3						
YKA	**Yellowknife Ar**	**72.56**	**342**	P	**P**	**05 39 16.5**	**-2.0**
YKA				pP	pP	05 39 25.3	-5.6
VNA3	**Neumayer Olymp**	**78.69**	**162**	*e*	**P**	**05 39 54.2**	**+0.7**
VNA3				*e*		05 40 02.3	
VNA1	**Neumayer--Stat**	**78.92**	**162**	*e*	**P**	**05 39 55.5**	**+0.8**
VNA1				*e*		05 40 03.7	
TOA0	**Torodi Ar. Sit**	**79.03**	**76**	*e*P	**P**	**05 39 56.4**	**0.0**
TORD	**Torodi Ar. Bea**	**79.03**	**76**	P	**P**	**05 39 56.4**	**0.0**
	1.2nm,0.5s,mb4.1,baz=281,slow=5.9,SNR=34						
TORD				pP	pP	05 40 04.0	-5.1
	3.2nm,0.5s,baz=280,slow=5.8,SNR=13						
VNA2	**Neumayer--Watz**	**79.28**	**162**	*e*	**P**	**05 39 57.3**	**+0.6**
	baz=304,slow=5.3						
VNA2				*e*		05 40 05.5	
ZALV	**Zalesovo Beam**	**127.88**	**14**	PKP	PKPdf	05 46 57.1	0.0
	0.5nm,0.4s,baz=341,slow=3.1,SNR=4.1						
ZALV				pPKP	pPKPdf	05 47 03.6	-6.7
	1.1nm,0.6s,baz=243,slow=1.7,SNR=4.9						
MKAR	**Makanchi Array**	**133.49**	**20**	PKP	PKPdf	05 47 08.4	+0.4
	0.2nm,0.4s,baz=31,slow=3.4,SNR=4.8						
ASAR	**Alice Springs**	**139.84**	**225**	PKhKP		05 47 12.4	
	0.3nm,0.6s,baz=154,slow=2.7,SNR=3.1						
ASAR				PKP	PKPdf	05 47 19.9	-0.6
	0.9nm,0.7s,baz=111,slow=2.8,SNR=7.6						

*NIED **02** 05:36:00, 33.60N×139.90E, h140km, Mw3.8 Best double couple: M0 5.98000×10^14 NP1:φs219.00000°, δ76.00000°, λ37.00000°. NP2:φs118.00000°, δ55.00000°, λ162.00000°.*
*IDC **02** 05:36:02.9±16.0, 32.80N×139.76E, h78km±118km, mb3.6/3, mb1 3.7/4, mb1mx3.3/21, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=211.9km s-min=63.2km az=18.0*
*ISCJB **02** 05:36:10.8±0.7, 33.65N±0.07×139.94E±0.09, h142km±4km, mb3.8/6, Error ellipse: s-maj=13.3km s-min=10.3km az=151.7*
*NEIC **02** 05:36:11.3, 33.61N×139.93E, h137km, mb4.2/2, After JMA.*
*JMA **02** 05:36:11.3±0.1, 33.61N×139.93E, h137km±1km, M3.8*
ISC 02 05:36:11.8±0.7**, 33.64N**±0.07×**139.96E**±0.09**, h137**km±4km**, n27, σ0.71**/35**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.54**	**193**	P	**Pn**	**05 36 31.2**	**-0.6**
JMY	**Miyakejima3**	**0.57**	**319**	P	**Pn**	**05 36 31.9**	**-0.1**
JMY				*e*S	**Sn**	**05 36 47.8**	**+0.5**
JKO	**Kozu shima**	**0.88**	**309**	P	**Pn**	**05 36 33.7**	**-0.5**
JKO				*e*S	**Sn**	**05 36 51.0**	**-0.2**
NJJJ	**Nii jima 2**	**0.95**	**324**	P	**Pn**	**05 36 34.9**	**+0.1**
NJJJ				*e*S	**Sn**	**05 36 52.7**	**+0.4**
JIM2	**Oshima 3**	**1.16**	**338**	P	**Pn**	**05 36 36.9**	**+0.1**
JIM2				*e*S	**Sn**	**05 36 56.1**	**+0.2**
BSO3	**Boso 3**	**1.25**	**21**	P	**Pn**	**05 36 38.1**	**+0.5**
BSO1	**Boso 1**	**1.32**	**40**	P	**Pn**	**05 36 38.7**	**+0.3**
JIZS	**Izushimoda**	**1.40**	**321**	P	**Pn**	**05 36 39.2**	**0.0**
JIZS				*e*S	**Sn**	**05 36 59.9**	**-0.3**
JOD2	**Odawara 2**	**1.77**	**336**	P	**Pn**	**05 36 43.4**	**0.0**
JOD2				*e*S	**Sn**	**05 37 07.9**	**+0.2**
TK04	**Tokai 4**	**1.88**	**294**	P	**Pn**	**05 36 44.7**	**0.0**
TK04				*e*S	**Sn**	**05 37 11.0**	**+1.1**
TK01	**Tokai 1**	**1.98**	**274**	P	**Pn**	**05 36 44.6**	**-1.2**
SHZ3	**Shizuoka 3**	**2.03**	**315**	P	**Pn**	**05 36 46.8**	**+0.4**
SHZ3				*e*S	**Sn**	**05 37 13.7**	**+0.7**
JYN	**Shimob**	**2.19**	**328**	P	**Pn**	**05 36 48.7**	**+0.3**
JRY	**Ryogami san**	**2.53**	**340**	P	**Pn**	**05 36 52.8**	**+0.3**
JRY				*e*S	**Sn**	**05 37 23.7**	**-0.3**
MJAR	**Matsushiro Arr**	**3.23**	**334**	P	**Pn**	**05 37 00.7**	**-0.8**
	17nm,0.3s,baz=166,slow=13,SNR=131						
MAJO	**Matsushiro**	**3.23**	**334**	*e*Pn	**Pn**	**05 37 01.4**	**-0.2**
MAT	**Matsushiro**	**3.23**	**334**	P	**Pn**	**05 37 01.3**	**-0.3**
MAT				*e*S	**Sn**	**05 37 38.7**	**-1.5**
SONM	**Songino Array**	**28.86**	**309**	P	**P**	**05 41 59.3**	**+2.1**
	0.3nm,0.4s,mb3.4,baz=128,slow=9.3,SNR=2.7						
ZALV	**Zalesovo Beam**	**43.40**	**315**	P	**P**	**05 44 00.1**	**-0.3**
	1.1nm,0.3s,mb4.0,baz=111,slow=8.4,SNR=8.0						
ZALV				PcP	PcP	05 45 45.7	-0.6
	0.6nm,0.5s,baz=103,slow=0.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**43.40**	**315**	P	**P**	**05 44 00.1**	**-0.3**
ZALV				PcP	PcP	05 45 45.7	-0.6
MKAR	**Makanchi Array**	**44.99**	**305**	P	**P**	**05 44 12.9**	**-0.4**
	0.7nm,0.5s,mb3.6,baz=81,slow=9.6,SNR=11						
KURK	**Kurchatov**	**47.16**	**310**	*e*P	**P**	**05 44 29.5**	**-0.6**
	4.0nm,0.6s,mb4.2						
KEV	**Kevo**	**66.19**	**339**	*e*p	pP	05 47 18.9	+1.6
JOF	**Joensuu**	**68.40**	**332**	*e*p	**P**	**05 46 57.8**	**-0.4**
	1.2nm,0.5s,mb3.9						
KAF	**Kangasniemi**	**70.78**	**333**	*e*p	**P**	**05 47 12.0**	**-0.8**
	2.0nm,0.6s,mb4.0						
CLL	**Collm**	**83.43**	**330**	*e*(P)	**P**	**05 48 26.0**	**+2.4**
TORD	**Torodi Ar. Bea**	**118.80**	**312**	PKP	PKPdf	05 54 43.8	-0.6
	0.6nm,1.0s,baz=61,slow=2.8,SNR=2.6						

IDC 02 06:10:58.4±5.2**, 8.18N×103.14W, h0**km**, mb3.5**/3**, mb1 4.1**/3**, mb1mx3.8**/14**, mbtmp3.6**/3**, MS3.8**/5**, Ms1 3.8**/5**, ms1mx3.5**/13**, Error ellipse: s-maj=198.6km s-min=65.9km az=98.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**21.05**	**359**	P	P	06 15 44.0	-0.1
	1.1nm,0.7s,baz=184,slow=12,SNR=8.3						
TXAR				LR	LR	06 23 07.3	
	comp=Z,234nm,18.9s,baz=0.0,slow=35						
NVAR	**Mina Array Bea**	**33.08**	**338**	P	P	06 17 36.5	+0.6
	0.4nm,0.6s,baz=155,slow=8.8,SNR=4.3						
PDAR	**Pinedale Array**	**34.91**	**352**	P	P	06 17 52.0	+0.2
	1.2nm,0.9s,baz=168,slow=9.0,SNR=7.8						
ULM	**Lac du Bonnet**	**42.37**	**7**	LR	LR	06 36 28.8	
	comp=Z,167nm,18.2s,baz=52,slow=36						
PPT	**Papeete**	**52.53**	**241**	LR	LR	06 35 45.3	
	comp=Z,128nm,20.2s,baz=99,slow=28						
YKA	**Yellowknife Ar**	**54.85**	**354**	LR	LR	06 43 60.0	
	comp=Z,50nm,18.0s,baz=115,slow=36						
PLCA	**Paso Flores**	**57.18**	**151**	LR	LR	06 40 09.3	
	comp=Z,109nm,21.1s,baz=181,slow=31						
CMAR	**Chiang Mai Arr**	**145.72**	**321**	PKPbc	PKPbc	06 30 39.4	-0.9
	0.7nm,0.3s,baz=327,slow=2.7,SNR=4.0						

CASC 02 06:29:46.6±0.9**, 13.10N×89.27W, h32**km±3km**, MD3.5, ML3.2, 6C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.56**	**21**	⇓*e*P	x	06 29 58.2	
LFRS				*e*S	x	06 30 07.5	
SNET	**Serv Nac Est T**	**0.58**	**4**	⇑*e*P	x	06 29 58.6	
SNET				*e*S	x	06 30 08.1	
BOQS	**Boqueron**	**0.63**	**359**	⇑*e*P	x	06 29 59.5	
BOQS				*e*S	x	06 30 08.9	
BOQS				*e*S	x	06 30 10.0	
BOQS				AML	x	06 30 10.1	
	comp=Z,982nm,0.2s						
SNVI	**San Vicente**	**0.66**	**40**	⇓*e*P	x	06 29 59.4	
SNVI				*e*S	x	06 30 09.6	
LFU	**La Fuente**	**0.66**	**13**	⇑*e*P	x	06 29 60.0	
LBRS	**Las Brisas**	**0.67**	**19**	⇓*e*P	x	06 29 60.0	
SBLS	**San Blas**	**0.81**	**335**	*e*P	x	06 30 02.1	
SNJE	**San Jose**	**0.83**	**337**	*e*P	x	06 30 02.2	
RTR	**El Retiro**	**0.87**	**335**	*e*P	x	06 30 02.4	
VSM	**San Miguel**	**1.02**	**71**	⇑*e*P	x	06 30 05.2	
BLLM	**Bellamira**	**1.06**	**71**	⇑*e*P	x	06 30 05.4	
BLLM				*e*S	x	06 30 19.8	
RBDL	**Robledal**	**1.08**	**338**	⇑*e*P	x	06 30 05.6	
RBDL				*e*S	x	06 30 21.0	
CAHU	**Cacacuatique**	**1.23**	**57**	*e*P	x	06 30 07.4	
CNCH	**Conchagua**	**1.41**	**83**	*e*P	x	06 30 10.0	

*ISCJB **02** 06:31:37.6±2.4, 16.6S±0.2×174.2W±0.2, h79km±21km, mb4.0/7, Error ellipse: s-maj=46.0km s-min=20.1km az=136.4*
*IDC **02** 06:31:39.6±3.2, 16.49S×174.11W, h84km±29km, mb3.7/6, mb1 4.0/7, mb1mx3.8/17, mbtmp3.8/7, Error ellipse: s-maj=38.1km s-min=18.3km az=134.0*
*NEIC **02** 06:31:39.3±1.9, 16.49S×174.18W, h80km±17km, Error ellipse: s-maj=33.9km s-min=15.1km az=136.0*
ISC 02 06:31:39.2±2.3**, 16.5S**±0.2×**174.2W**±0.2**, h77**km±21km**, n11, σ0.77**/10**, mb4.1**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.47**	**42**	P	**Pn**	**06 32 30.9**	**0.0**
	23nm,0.3s,baz=54,slow=1.6,SNR=35						
AFI				S	**Sn**	**06 33 05.2**	**-5.7**
	126nm,0.3s,baz=44,slow=22,SNR=29						
STKA	**Stephens Creek**	**42.84**	**241**	P	**P**	**06 39 29.8**	**0.0**
	2.1nm,0.5s,mb4.1,baz=98,slow=9.9,SNR=8.6						
ASAR	**Alice Springs**	**49.07**	**253**	P	**P**	**06 40 18.7**	**-0.2**
	2.9nm,0.7s,mb4.3,baz=87,slow=8.6,SNR=30						
VNDA	**Vanda**	**62.20**	**186**	P	**P**	**06 41 52.4**	**+0.2**
	1.1nm,0.7s,mb4.0,baz=11,slow=5.1,SNR=6.1						
PETK	**Petropavlovsk-**	**73.46**	**343**	P	**P**	**06 43 03.1**	**+0.1**
	4.1nm,0.9s,mb4.2,baz=103,slow=8.8,SNR=4.8						
GLA	**Glamis**	**75.08**	**48**	*e*P	**P**	**06 43 12.9**	**-0.1**
	11nm,0.5s,mb4.8						
NVAR	**Mina Array Bea**	**75.65**	**42**	P	**P**	**06 43 15.8**	**-0.3**
	0.4nm,0.7s,mb3.2,baz=229,slow=8.2,SNR=3.1						
PDAR	**Pinedale Array**	**83.58**	**42**	P	**P**	**06 43 57.5**	**-1.4**
	0.8nm,0.7s,mb3.7,baz=210,slow=2.7,SNR=6.7						
EDM	**Edmonton**	**86.82**	**32**	*e*P	**P**	**06 44 16.7**	**+1.9**
BRTR	**Keskin Array B**	**146.53**	**319**	PKPbc	PKPbc	06 51 11.8	-0.2
	2.1nm,0.7s,baz=128,slow=2.6,SNR=7.8						
GERES	**GERESS Array B**	**147.12**	**350**	PKPbc	PKPbc	06 51 12.5	-0.9
	0.9nm,0.7s,baz=28,slow=3.2,SNR=5.3						

*BJI **02** 06:33:10.5, 2.81S×100.38E, h36km, mB5.1, mb5.2, Ms5.0, Msz4.9*
*MOS **02** 06:33:14.7±0.9, 2.16S×100.50E, h33km, mb5.7/79, MS5.1/16, Error ellipse: s-maj=9.4km s-min=4.0km az=119.7*
*DJA **02** 06:33:14, 2.52S×99.97E, h10km, Mw5.5/20*
*ISCJB **02** 06:33:16.4±0.1, 2.25S±0.02×100.39E±0.02, h47km, mb5.5/174, MS5.1/181, Error ellipse: s-maj=3.8km s-min=2.7km az=40.8*
*IDC **02** 06:33:17.7±0.5, 2.19S×100.46E, h47km±3km, mb4.9/26, mb1 5.0/27, mb1mx5.0/27, mbtmp4.9/27, MS4.6/27, Ms1 4.6/27, ms1mx4.6/30, Error ellipse: s-maj=13.4km s-min=8.4km az=50.0*
*GCMT **02** 06:33:18.0±0.2, 2.44S×100.23E, h38km, MW5.3/79, Moment Tensor Solution. s58,c90; s79,c133; Duration: 1.0 Moment tensor: Scale 10^17Nm; Mrr-0.79±.02; Mθθ0.68±.02; Mφφ0.10±.02; Mrθ-0.30±.02; Mθφ-0.52±.01; Mφr-0.26±.02; Best double couple: M0 0.98800×10^17 NP1:φs324.00000°, δ46.00000°, λ-54.00000°. NP2: φs97.00000°, δ54.00000°, λ-122.00000°. Principal axes: T 0.9980, Plg4.0000°, Azm209.0000°; N -0.0210, Plg25.0000°, Azm117.0000°; P -0.9770, Plg64.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 06:33:18.0±0.1, 2.28S×100.45E, mb5.5/99, MS5.3/135 Error ellipse: s-maj=6.1km s-min=4.0km az=51.0*
NEIC Felt [IV] at Mukomuko and Padang, Sumatra.
*SZGRF **02** 06:33:30.2, 0.52S×98.51E, h51km, mb5.5, Southern Sumatera, Indonesia*
ISC 02 06:33:18.3±0.1**, 2.27S**±0.02×**100.39E**±0.02**, h49**km**, h49**km±.9km**:pP-P, n691, σ0.98**/585**, mb5.5**/174**, MS5.1**/181**, 55C-36D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.35**	**3**	P	**Pn**	**06 33 39.4**	**-1.4**
PPI	**Padang Panjang**	**1.80**	**0**	P	**Pn**	**06 33 46.7**	**-0.2**
KSI	**Kapahiang**	**2.60**	**122**	P	**Pn**	**06 33 57.7**	**-0.2**
TRSI	**Tarutung**	**4.50**	**342**	P	**Pn**	**06 34 25.6**	**+1.6**
KLI	**Kotabumi**	**5.15**	**120**	P	**Pn**	**06 34 34.2**	**+1.3**
	1μm,1.1s,8.0nm						
KGM	**Kluang**	**5.17**	**35**	⇓P	**Pn**	**06 34 34.7**	**+1.5**
MYKOM	**Kota Tinggi**	**5.32**	**41**	⇑P	**Pn**	**06 34 36.5**	**+1.3**
MYKOM	**Kota Tinggi**	**5.32**	**41**	P	**Pn**	**06 34 36.2**	**+1.0**
FRIM	**Kepong**	**5.61**	**13**	⇑P	**Pn**	**06 34 40.9**	**+1.7**
PPBI	**Pangkal Pinang**	**5.75**	**89**	P	**Pn**	**06 34 47.6**	**+6.5**
	119nm,0.6s,3μm1.1nm						
IPM	**Ipoh**	**6.73**	**5**	⇑P	**Pn**	**06 34 55.5**	**+0.8**
IPM	**Ipoh**	**6.73**	**5**	P	**Pn**	**06 34 57.5**	**+2.9**
	433nm,0.9s,4μm1.4nm						
SBJI	**Serang**	**6.89**	**124**	P	**Pn**	**06 34 58.9**	**+2.1**
	735nm,1.0s,7μm1.9nm						
TPI	**Tanjungpandan**	**7.28**	**94**	P	**Pn**	**06 35 05.2**	**+3.1**
	113nm,0.6s,1μm0.4nm						
TNG	**Tangerang**	**7.35**	**122**	P	**Pn**	**06 35 06.3**	**+3.2**
	1μm,1.2s,3.9nm						
KULM	**Kulim**	**7.51**	**2**	⇓P	**Pn**	**06 35 05.9**	**+0.6**
KULM	**Kulim**	**7.51**	**2**	P	**Pn**	**06 35 06.0**	**+0.7**
	385nm,1.2s,3μm0.9nm						
DBJI	**Dramaga**	**7.64**	**124**	P	**Pn**	**06 35 06.9**	**-0.2**
	474nm,1.0s,6μm1.4nm						
CBJI	**Citeko**	**7.65**	**123**	P	**Pn**	**06 35 10.2**	**+3.0**
KTGM	**Kuala Trenggan**	**8.03**	**20**	⇑P	**Pn**	**06 35 13.8**	**+1.3**
LEM	**Lembang**	**8.51**	**122**	⇑*e*P	**Pn**	**06 35 19.6**	**+0.6**
LEM	**Lembang**	**8.51**	**122**	P	**Pn**	**06 35 20.7**	**+1.7**
	474nm,1.6s,7μm1.5nm						
JCJI	**Jatiwangi**	**8.91**	**118**	P	**Pn**	**06 35 26.9**	**+2.4**
	334nm,0.9s						
BSI	**Banda Aceh**	**9.24**	**327**	P	**Pn**	**06 35 27.7**	**-1.3**
	178nm,1.1s,2μm						
SNG	**Songkhla**	**9.38**	**1**	P	**Pn**	**06 35 35.0**	**+4.0**
	212nm,1.0s						
XMIS	**Christmas Isla**	**9.69**	**148**	*e*P	**Pn**	**06 35 27.1**	**-8.1**
XMIS				*e*S	**Sn**	**06 37 06.9**	**-16**
COCO	**West Island**	**10.47**	**199**	*e*Pn	**Pn**	**06 35 40.0**	**-5.8**
COCO				*e*Sn	**Sn**	**06 37 24.1**	**-18**
COCO	**West Island**	**10.47**	**199**	P	**Pn**	**06 35 46.9**	**+1.1**
BJII	**Banjamegara**	**10.56**	**119**	P	**Pn**	**06 35 47.7**	**+0.6**
	153nm,1.3s,2μm						
KSM	**Kuching**	**10.59**	**70**	Pn	**Pn**	**06 35 51.4**	**+3.8**
	17nm,0.7s						
STKI	**Sintang**	**11.33**	**78**	P	**Pn**	**06 36 03.8**	**+6.2**
	126nm,1.3s						
SJI	**Sawahan**	**12.57**	**116**	P	**Pn**	**06 36 13.6**	**-0.9**
	236nm,0.7s,3μm						
SBUM	**Sibu**	**12.73**	**68**	⇑P	**Pn**	**06 36 17.6**	**+0.9**
SBUM	**Sibu**	**12.73**	**68**	P	**Pn**	**06 36 21.6**	**+4.9**
	77nm,1.8s,2μm						
KRKI	**Karangkates**	**13.36**	**116**	P	**Pn**	**06 36 30.1**	**+4.7**
	304nm,0.7s						
PLKI	**Palangkaraya**	**13.55**	**90**	P	Px	06 36 39.2	
KMMI	**Kalianget**	**14.34**	**110**	P	**Pn**	**06 36 38.9**	**+0.2**
	306nm,1.2s,2μm						
BBKI	**Banjar Baru**	**14.49**	**95**	P	**Pn**	**06 36 43.6**	**+3.0**
	260nm,1.2s,4μm						
KHKI	**Kahang-Kahang**	**16.32**	**112**	P	**Pn**	**06 37 03.9**	**-0.3**
	123nm,0.8s,1μm						
NST	**Nakhon Sawan**	**17.83**	**359**	P	**Pn**	**06 37 18.0**	**-4.9**
KKM	**Kota Kinabalu**	**17.83**	**62**	Pn	**Pn**	**06 37 18.2**	**-4.8**
	110nm,1.2s						
KKM	**Kota Kinabalu**	**17.83**	**62**	⇓P	**Pn**	**06 37 25.6**	**+2.6**
KKM	**Kota Kinabalu**	**17.83**	**62**	P	**Pn**	**06 37 28.9**	**+5.8**
	88nm,1.2s,1μm						
UBT	**Ubonrachathani**	**18.00**	**15**	P	**Pn**	**06 37 30.0**	**+5.0**
SDKM	**Sandakan**	**18.54**	**65**	⇑P	**Pn**	**06 37 31.6**	**-0.1**
TSM	**Tawau**	**18.65**	**70**	⇑P	**Pn**	**06 37 32.5**	**-0.5**
KDM	**Kudat**	**18.78**	**61**	⇓P	**Pn**	**06 37 34.6**	**0.0**
BDT	**Bhumibol Dam**	**19.44**	**356**	P	**Pn**	**06 37 36.5**	**-5.8**
	18nm,0.7s						
PCI	**Palu**	**19.49**	**86**	P	**Pn**	**06 37 45.3**	**+2.2**
	331nm,1.8s,4μm						
KAPI	**Kappang**	**19.52**	**99**	Pn	**Pn**	**06 37 41.3**	**-2.1**
	955nm,0.6s,SNR=12						
KAPI	**Kappang**	**19.52**	**99**	P	**Pn**	**06 37 41.8**	**-1.6**
	SNR=29						
KAPI	**Kappang**	**19.52**	**99**	P	**Pn**	**06 37 40.6**	**-2.8**
	9.2nm,0.3s,baz=269,slow=6.2,SNR=30						
KAPI				S	**S**	**06 41 18.6**	**-1.2**
	0.2nm,0.3s,baz=28,slow=21,SNR=4.1						
KAPI				LR	LR	06 46 04.4	
	comp=Z,2μm,18.6s,baz=272,slow=39						
KAPI	**Kappang**	**19.52**	**99**	*e*Pn	**Pn**	**06 37 40.6**	**-2.8**
KAPI	**Kappang**	**19.52**	**99**	P	**Pn**	**06 37 41.3**	**-2.1**
MYLDM	**Lahad Datu**	**19.55**	**68**	⇓P	**Pn**	**06 37 44.6**	**+0.8**
MYLDM	**Lahad Datu**	**19.55**	**68**	P	**Pn**	**06 37 48.7**	**+4.9**
	142nm,0.9s,2μm						
CM31	**Chiang Mai Arr**	**20.64**	**356**	*e*P	**P**	**06 37 49.7**	**-4.2**
	121nm,1.3s						
CM31				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
CMAR	**Chiang Mai Arr**	**20.64**	**356**	P	**P**	**06 37 52.5**	**-1.5**
	comp=Z,53nm,0.7s,baz=188,slow=10,SNR=92						
CMAR				pP		06 38 05.8	
	comp=Z,46nm,0.8s,baz=188,slow=7.8,SNR=10						
CMAR				S	**S**	**06 41 42.8**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=209,slow=6.7,SNR=2.6						
CMAR				PcP	PcP	06 42 03.5	+0.4
	comp=Z,4.2nm,0.6s,baz=210,slow=3.4,SNR=6.3						
CMAR				ScP	ScP	06 45 36.7	+1.0
	comp=Z,1.8nm,0.3s,baz=216,slow=4.6,SNR=6.0						
CMAR				LR	LR	06 46 02.5	
	comp=Z,2μm,19.5s,MS4.5,baz=181,slow=37						
CMAR	**Chiang Mai Arr**	**20.64**	**356**	⇑*e*P	**P**	**06 37 52.5**	**-1.4**
CHG	**Chiang Mai**	**21.00**	**356**	⇓P	**P**	**06 37 56.7**	**-1.0**
	comp=Z,28nm,0.8s						
CHTO	**Chiang Mai**	**21.00**	**356**	P	**P**	**06 37 57.1**	**-0.6**
	SNR=7.4						
CHTO	**Chiang Mai**	**21.00**	**356**	*e*P	**P**	**06 37 56.5**	**-1.2**
	comp=Z,21nm,0.8s						
CHTO				*e*pP		06 38 09.7	
CHTO				LR	LR		
	comp=Z,2μm,20.0s,MS4.5						
CHRT	**Chiangrai**	**22.01**	**358**	⇑P	**P**	**06 38 07.0**	**-1.6**
	comp=Z,184nm,1.0s,mb5.5						
KDI	**Kendari**	**22.26**	**95**	P	**P**	**06 38 12.6**	**+1.2**
	comp=Z,105nm,1.3s,comp=Z,4μm,mb5.1						
QIZ	**Qiongzhong**	**23.12**	**23**	P	**P**	**06 38 20.1**	**-0.2**
QIZ				AP		06 38 32.1	
QIZ				XP	sP	06 38 39.0	+0.9
QIZ				S	**S**	**06 42 24.3**	**-3.7**
QIZ				XS	sS	06 42 44.9	-4.3
QIZ				AMB	AMB		
	comp=Z,33nm,1.6s,mb4.5						
QIZ				LR	LR		
	comp=N,1μm,14.1s						
QIZ				LR	LR		
	comp=Z,1μm,15.7s,MS4.5						
QIZ	**Qiongzhong**	**23.12**	**23**	*e*P	**P**	**06 38 18.4**	**-1.9**
	comp=Z,81nm,1.3s,mb5.0						
QIZ				LR	LR		
	comp=Z,1μm,21.0s,MS4.3						
BATI	**Baumata**	**24.43**	**110**	P	**P**	**06 38 29.8**	**-2.8**
	comp=Z,92nm,0.9s,mb5.2,baz=225,slow=2.2,SNR=7.0						
BATI				S	**S**	**06 42 41.4**	**-8.0**
	comp=Z,17nm,0.5s,baz=324,slow=22,SNR=6.9						
BATI	**Baumata**	**24.43**	**110**	P	**P**	**06 38 36.7**	**+4.1**
	comp=Z,51nm,1.1s,mb4.9						
MDRS	**Chennai**	**25.13**	**308**	*e*x	x	06 38 19.2	
MDRS				*e*x	x	06 43 05.2	
TRD	**Trivandrum**	**25.69**	**295**	*e*P	**P**	**06 38 44.4**	**+0.3**
TRD				*e*x	x	06 43 38.0	
KOD	**Kodaikanal**	**25.98**	**299**	*e*P	**P**	**06 38 48.8**	**+2.1**
VIS	**Vishakhapatnam**	**26.02**	**320**	*e*P	**P**	**06 38 47.2**	**+0.2**
VIS				AMb	AMB	06 38 50.5	
	comp=Z,100nm,1.4s,mb5.1						
VIS				*i* x	x	06 43 35.0	
MBWA	**Marble Bar**	**26.60**	**136**	*e*P	**P**	**06 38 51.2**	**-1.1**
	comp=Z,122nm,1.6s,mb5.2						

MBWA LR LR
comp=Z,1μm,20.0s,MS4.5
MBWA Marble Bar 26.60 136 P **P** **06 38 54.8 +2.6**
comp=Z,53nm,1.6s,mb4.8
DAV Davao City (W) 26.80 70 LR LR 06 50 36.5
comp=Z,1μm,20.9s,MS4.5,baz=251,slow=39
DAV Davao City (W) 26.80 70 PFAKE 06 39 00.0 +5.9
DAV LR LR
comp=Z,1μm,20.0s,MS4.5
LBMI Labuha 27.15 87 P **P** **06 39 02.5 +5.2**
comp=Z,227nm,1.8s,comp=Z,2μm,mb5.4
CAL Calcutta 27.32 335 *e*P **P** **06 39 05.8 +7.2**
CAL *e*S **S** **06 43 42.7 +7.7**
KMI Kunming 27.32 5 P **P** **06 38 57.9 -0.7**
KMI AP pP 06 39 05.5 -5.8
KMI XP sP 06 39 09.6 -7.6
KMI S **S** **06 43 30.5 -4.5**
KMI AMB AMB
comp=Z,23nm,1.0s,mb4.7
KMI AMB AMB
comp=Z,159nm,4.4s
KMI LR LR
comp=N,2μm,19.8s,MS4.8
KMI LR LR
comp=E,897nm,15.1s,MS4.8
KMI LR LR
comp=Z,2μm,18.9s,MS4.7
GZH Guangzhou 28.19 26 P **P** **06 39 10.6 +4.2**
GZH S **S** **06 44 00.7 +12**
GZH LR LR
comp=N,1μm,14.9s,MS4.8
GZH LR LR
comp=E,1μm,15.3s,MS4.8
GZH LR LR
comp=Z,2μm,14.7s,MS4.9
SHL Shillong 28.87 344 ⇓*i*P **P** **06 39 11.5 -0.9**
SHL *ex* **S** **06 43 55.0 -4.3**
HYB Hyderabad 29.09 313 *i* P **P** **06 39 15.0 +0.5**
HYB *e*pP pP 06 39 34.0 +6.8
HYB *e*PcP PcP 06 42 23.0 +1.3
HYB Hyderabad 29.09 313 *e*P **P** **06 39 15.0 +0.5**
GYA Guiyang 29.20 12 ⇑*i*P **P** **06 39 17.3 +2.0**
GYA PP PP 06 40 14.8 -7.2
GYA PCP PcP 06 42 22.3 +0.5
GYA S **S** **06 44 04.9 +0.5**
GYA XS sS 06 44 26.4 +0.4
GYA SS SS 06 45 40.5 -30
GYA SCP ScP 06 45 58.7 -0.9
GYA PCS PcS 06 46 03.6 -1.2
GYA SCS ScS 06 49 51.2 -2.7
GYA AMB AMB
comp=Z,70nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,320nm,4.8s
GYA LR LR
comp=N,2μm,17.0s,MS5.1
GYA LR LR
comp=E,3μm,16.2s,MS5.1
GYA LR LR
comp=Z,5μm,16.3s,MS5.2
MNGI Mangalore 29.53 301 *e*P **P** **06 39 19.2 +0.8**
SWI Sorong 30.89 88 P **P** **06 39 29.6 -0.9**
NGP Nagpur 31.27 319 *e*P **P** **06 39 32.6 -1.1**
ODAN Odare 31.56 337 *e*P **P** **06 39 36.9 +0.7**
comp=Z,258nm,0.8s,mb6.1
TAPN Taplejung 31.88 338 *e*P **P** **06 39 40.1 +1.1**
comp=Z,343nm,1.0s,mb6.2
RAMN Ramite 31.95 336 *e*P **P** **06 39 40.6 +1.0**
comp=Z,210nm,0.8s,mb6.0
QZH Quanzhou 32.31 32 ⇑*i*P **P** **06 39 42.9 +0.1**
QZH S **S** **06 44 53.0 -0.2**
QZH LR LR
comp=N,2μm,12.8s,MS5.0
QZH LR LR
comp=E,2μm,15.5s,MS5.0
QZH LR LR
comp=Z,2μm,19.0s,MS4.8
AKL Akola 32.34 316 *ex* x 06 40 35.5
KAD Karad 32.35 308 *e*P **P** **06 39 43.3 +0.1**
KAD AMb AMB 06 39 46.7
comp=Z,118nm,1.2s,mb5.6
SSLB Suanglung 32.73 37 *e*P **P** **06 39 46.6 +0.1**
comp=Z,16nm,0.7s,mb5.1
JIRN Jiri 32.74 336 *e*P **P** **06 39 47.3 +0.7**
comp=Z,431nm,0.7s,mb6.5
PKI Pulchoki 32.99 335 *e*P **P** **06 39 49.0 +0.3**
comp=Z,149nm,1.1s,mb5.8
PKI Pulchoki 32.99 335 *e*P **P** **06 39 49.0 +0.3**
PKI pmax pmax
comp=Z,149nm,1.1s,mb5.8
LSA Lhasa 32.99 345 P **P** **06 39 49.7 +1.0**
LSA S **S** **06 45 05.6 +1.8**
LSA LR LR
comp=N,570nm,28.2s
LSA LR LR
comp=E,770nm,35.3s
LSA LR LR
comp=Z,1μm,26.4s,MS4.4
LSA Lhasa 32.99 345 *e*P **P** **06 39 49.7 +1.0**
LSA pmax pmax
comp=Z,298nm,1.1s,mb6.1
LSA MLR MLR
comp=Z,692nm,21.0s,MS4.3
LSA Lhasa 32.99 345 *e*P **P** **06 39 49.7 +1.0**
comp=Z,298nm,1.1s,mb6.1
LSA LR LR
comp=Z,692nm,21.0s,MS4.3
GUN Gumba 33.09 336 *e*P **P** **06 39 50.4 +0.8**
comp=Z,378nm,0.7s,mb6.5
MUN Mundaring 33.10 155 *e*P **P** **06 39 50.2 +0.6**
MUN *e*pP pP 06 40 04.1 +1.6
CD2 Chengdu 33.15 5 P **P** **06 39 52.6 +2.5**
CD2 AP pP 06 40 02.2 -0.7
CD2 XP sP 06 40 06.1 -2.7
CD2 PP PP 06 41 04.3 -1.5
CD2 PCP PcP 06 42 34.9 +2.6
CD2 S **S** **06 45 09.6 +3.4**
CD2 XS sS 06 45 25.2 -2.6
CD2 SS SS 06 47 11.4 -19
CD2 SCS ScS 06 50 10.8 -2.5
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,180nm,4.8s
CD2 LR LR
comp=N,2μm,16.8s,MS5.1
CD2 LR LR
comp=E,2μm,15.6s,MS5.1
CD2 LR LR
comp=Z,3μm,16.8s,MS5.1
DMN Daman 33.15 335 *e*P **P** **06 39 50.5 +0.4**
comp=Z,108nm,0.9s,mb5.8
KKN Kakani 33.23 335 *e*P **P** **06 39 51.1 +0.3**
comp=Z,195nm,0.8s,mb6.1
KKN Kakani 33.23 335 *e*P **P** **06 39 51.1 +0.3**
KKN pmax pmax
comp=Z,195nm,0.8s,mb6.1
POO Poona 33.30 309 *e*P **P** **06 39 51.9 +0.3**
POO AMb AMB 06 39 54.8
comp=Z,114nm,1.3s,mb5.6
KAKA Kakadu 33.38 110 *e*P x 06 39 32.5
comp=Z,20nm,0.8s
KLBR Kellerberrin 33.45 152 *e*P **P** **06 39 53.0 +0.3**
comp=Z,29nm,0.9s,mb5.2
KLBR *e*pP pP 06 40 06.8 +1.2
YHNB Yeheng 33.65 36 PFAKE 06 40 10.0 +15
YHNB LR LR
comp=Z,1μm,21.0s,MS4.6
GKN Gorkha 33.69 334 *e*P **P** **06 39 55.1 +0.3**
comp=Z,333nm,1.2s,mb6.1
TATO Taipei 33.95 36 PFAKE
TATO LR LR
comp=Z,990nm,19.0s,MS4.6
KOLN Koldanda 33.95 333 *e*P **P** **06 39 57.7 +0.6**
comp=Z,233nm,0.8s,mb6.2
NWAO Narrogin (SRO) 34.35 154 P **P** **06 40 00.7 +0.1**
comp=Z,40nm,0.8s,mb5.4,baz=323,slow=9.3,SNR=16
NWAO pP pP 06 40 14.3 +0.9
comp=Z,51nm,1.1s,baz=325,slow=9.5,SNR=7.7
NWAO Narrogin (SRO) 34.35 154 *e*P **P** **06 40 00.1 -0.4**
NWAO pP 06 40 13.8 +0.4
NWAO pmax pmax
comp=Z,41nm,0.9s
NWAO Narrogin (SRO) 34.35 154 *e*P **P** **06 39 59.3 -1.2**
comp=Z,41nm,0.9s,mb5.4

NWAO LR LR
comp=Z,1μm,22.0s,MS4.7
DANN Dangsing 34.38 333 *e*P **P** **06 40 01.3 +0.5**
comp=Z,271nm,0.8s,mb6.2
WHN Wuhan 35.24 21 ⇓P **P** **06 40 09.2 +1.0**
WHN AP pP 06 40 22.9 +1.8
WHN S **S** **06 45 42.3 +3.8**
WHN LR LR
comp=N,4μm,14.5s,MS5.3
WHN LR LR
comp=E,2μm,16.4s,MS5.3
WHN LR LR
comp=Z,6μm,16.6s,MS5.4
LGTI Lohaghat 36.97 330 *e*P **P** **06 40 22.5 -0.5**
LGTI *ex* x 06 42 10.0
XAN Xi'an 37.00 12 P **P** **06 40 21.7 -1.5**
XAN AP pP 06 40 33.3 -2.8
XAN XP sP 06 40 39.1 -2.9
XAN PP PP 06 41 48.8 +0.5
XAN PCP PcP 06 42 43.8 +0.3
XAN S **S** **06 46 01.1 -4.2**
XAN SCP ScP 06 46 25.8 -0.7
XAN PCS PcS 06 46 30.6 -1.1
XAN SCS ScS 06 50 30.4 -3.5
XAN AMB AMB
comp=Z,53nm,0.8s,mb5.4
XAN AMB AMB
comp=Z,175nm,9.6s
XAN LR LR
comp=N,194nm,16.4s,MS4.8
XAN LR LR
comp=E,1μm,19.5s,MS4.8
XAN LR LR
comp=Z,3μm,19.2s,MS5.1
PTH Pithoragarh 37.06 330 *e*P **P** **06 40 24.7 +0.9**
PTH *ex* PcP 06 42 44.8 +1.0
WRAB Tennant Creek 37.53 120 P **P** **06 40 26.0 -1.9**
comp=Z,1μm,0.4s,mb6.9,SNR=48
WRAB Tennant Creek 37.53 120 *e*P **P** **06 40 26.2 -1.7**
comp=Z,135nm,0.9s,mb5.7
WRAB LR LR
comp=Z,795nm,21.0s,MS4.5
WRAB Tennant Creek 37.53 120 P **P** **06 40 26.3 -1.6**
WB2 Warramunga Arr 37.54 120 *e*P **P** **06 40 25.8 -2.2**
WB2 *e*S **S** **06 46 05.8 -8.1**
AJM Ajmer 37.88 321 *e*P **P** **06 40 30.6 -0.1**
AJM AMb AMB 06 40 33.7
comp=Z,88nm,1.6s,mb5.2
NDI New Delhi 37.97 326 *e*P **P** **06 40 29.0 -2.4**
NDI *ex* x 06 46 27.0
LZH Lanzhou 38.29 5 *e*P **P** **06 40 34.1 0.0**
LZH AP pP 06 40 46.5 -0.6
LZH XP sP 06 40 50.5 -2.4
LZH PP PP 06 42 06.0 +3.5
LZH PCP PcP 06 42 48.5 +1.1
LZH *e*S **S** **06 46 26.0 +1.1**
LZH SCP ScP 06 46 33.0 +1.6
LZH AMB AMB
comp=Z,91nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,250nm,5.1s
LZH LR LR
comp=N,2μm,14.9s
LZH LR LR
comp=Z,3μm,18.0s,MS5.1
NJ2 Nanjing 38.37 26 *e*P **P** **06 40 34.3 -0.5**
NJ2 AP pP 06 40 44.1 -3.7
NJ2 XP sP 06 40 48.0 -5.6
NJ2 PP PP 06 42 06.2 +2.8
NJ2 S **S** **06 46 26.0 -0.1**
NJ2 XS sS 06 46 44.0 -4.0
NJ2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
NJ2 AMB AMB
comp=Z,180nm,11.0s
NJ2 LR LR
comp=N,640nm,21.8s,MS4.7
NJ2 LR LR
comp=E,1μm,18.4s,MS4.7
NJ2 LR LR
comp=Z,1μm,18.4s,MS4.7
FORT Forrest 38.59 140 *e*P **P** **06 40 37.0 +0.3**
comp=Z,54nm,0.5s,mb5.5
SSE Sheshan 38.64 29 P **P** **06 40 37.0 -0.1**
SSE XP sP 06 40 53.2 -2.7
SSE S **S** **06 46 32.6 +2.4**
SSE AMB AMB
comp=Z,36nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,145nm,5.2s
SSE LR LR
comp=N,826nm,18.2s,MS4.7
SSE LR LR
comp=E,762nm,18.2s,MS4.7
SSE LR LR
comp=Z,1μm,13.1s
ASAR Alice Springs 38.78 126 P **P** **06 40 37.4 -1.0**
comp=Z,46nm,0.6s,mb5.4,baz=300,slow=7.8,SNR=290
ASAR PcP PcP 06 42 48.5 -0.7
comp=Z,10nm,0.7s,baz=316,slow=2.8,SNR=8.6
ASAR S **S** **06 46 29.6 -3.1**
comp=Z,11nm,0.9s,baz=298,slow=16,SNR=22
DDI Dehra Dun 38.79 328 *e*P **P** **06 40 35.7 -2.6**
DDI *e*S **S** **06 46 35.0 +2.5**
BHJ Bhuj 39.24 312 *e*P **P** **06 40 43.2 +1.0**
SMLA Simla 39.89 328 *i* P **P** **06 40 47.3 -0.2**
SMLA *ex* x 06 40 48.4
comp=Z,162nm,0.8s
SMLA *i* x x 06 46 54.6
GTA Gaotai 41.48 359 *e*P **P** **06 41 00.3 -0.2**
GTA AP pP 06 41 11.0 -2.6
GTA XP sP 06 41 14.6 -4.8
GTA PP PP 06 42 40.4 +3.3
GTA PCP PcP 06 42 58.4 +0.9
GTA S **S** **06 47 12.8 +0.4**
GTA SS SS 06 50 13.7 -4.8
GTA AMB AMB
comp=Z,19nm,1.5s,mb4.5
GTA AMB AMB
comp=Z,157nm,6.6s
GTA LR LR
comp=N,644nm,17.7s,MS4.9
GTA LR LR
comp=E,1μm,15.9s,MS4.9
GTA LR LR
comp=Z,1μm,23.4s
THN Thein Dam 41.68 328 *e*P **P** **06 41 01.2 -1.0**
NIL Nilore 43.94 327 *e*P **P** **06 41 19.9 -0.6**
NIL pmax pmax
comp=Z,78nm,0.8s,mb5.5
NIL Nilore 43.94 327 *e*P **P** **06 41 19.9 -0.7**
comp=Z,78nm,0.8s,mb5.5
HHC Hu-ho-hao-te 44.11 12 *e*P **P** **06 41 22.8 +1.0**
HHC AP pP 06 41 32.9 -2.1
HHC XP sP 06 41 36.7 -4.0
HHC PP PP 06 43 07.5 +2.1
HHC SCP ScP 06 46 54.6 +0.3
HHC S **S** **06 47 51.7 +0.7**
HHC XS sS 06 48 09.7 -3.5
HHC SS SS 06 51 03.2 -6.9
HHC SCS ScS 06 51 16.3 +0.2
HHC AMB AMB
comp=Z,31nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,128nm,4.3s
HHC LR LR
comp=N,1μm,17.8s,MS5.0
HHC LR LR
comp=E,535nm,13.1s,MS5.0
HHC LR LR
comp=Z,1μm,19.0s
BJT Baijiatuan 44.50 17 *e*P **P** **06 41 24.9 0.0**
BJT *e**PP pP 06 41 37.4 -0.8
BJT pmax pmax
comp=Z,109nm,1.3s
BJT MLR MLR
comp=Z,2μm,19.0s
BJT Baijiatuau 44.50 17 *e*P **P** **06 41 24.9 0.0**
comp=Z,109nm,1.3s,mb5.4
BJT *e*pP pP 06 41 37.4 -0.8
BJT LR LR
comp=Z,2μm,19.0s,MS5.0
BJI Beijing 44.52 17 P **P** **06 41 25.4 +0.3**
BJI S **S** **06 47 59.0 +1.9**
BJI AMB AMB
comp=Z,70nm,1.2s,mb5.4
BJI AMB AMB
comp=Z,310nm,4.9s
BJI LR LR
comp=N,2μm,18.5s,MS5.0
BJI LR LR
comp=E,594nm,19.0s,MS5.0
BJI LR LR
comp=Z,1μm,19.4s,MS4.8
MSEY Mahe Island 44.88 266 PFAKE 06 41 40.0 +12
MSEY LR LR
comp=Z,878nm,22.0s,MS4.6
INCN Inchon 46.44 29 PFAKE 06 41 50.0 +10
INCN LR LR
comp=Z,803nm,19.0s,MS4.7
KBL Kabul 46.98 324 *e*P **P** **06 41 44.4 -0.2**
KBL pmax pmax
comp=Z,21nm,0.8s,mb5.1
KBL Kabul 46.98 324 *e*P **P** **06 41 44.4 -0.2**
comp=Z,21nm,0.8s,mb5.1
KS15 Wonju Array Si 47.03 30 *e*P **P** **06 41 44.0 -0.9**
PMG Port Moresby 47.03 101 ⇑*e*P **P** **06 41 44.0 -1.3**
PMG Port Moresby 47.03 101 PFAKE 06 42 00.0 +15
PMG LR LR
comp=Z,828nm,22.0s,MS4.7
KSRS Korea Array 47.05 30 P **P** **06 41 44.0 -1.2**
comp=Z,15nm,0.6s,mb5.1,baz=223,slow=8.1,SNR=47
KSRS LR LR 07 02 14.3
comp=Z,508nm,19.0s,MS4.5,baz=234,slow=37
KSH Kashi 47.24 334 P **P** **06 41 48.1 +1.6**
KSH AP pP 06 41 58.4 -1.5
KSH XP sP 06 42 02.1 -3.5
KSH PCP PcP 06 43 19.6 +2.4
KSH PP PP 06 43 38.0 0.0
KSH SCP ScP 06 47 09.2 +1.9
KSH PCS PcS 06 47 13.7 +1.3
KSH S **S** **06 48 38.6 +2.4**
KSH XS sS 06 48 54.4 -4.2
KSH SCS ScS 06 51 37.6 +1.1
KSH SS SS 06 51 56.2 -8.1
KSH AMB AMB
comp=Z,145nm,0.7s,mb6.0
KSH LR LR
comp=N,1μm,7.4s
KSH LR LR
comp=E,1μm,6.1s
KSH LR LR
comp=Z,2μm,11.9s,MS5.2
WMQ Urumqi 47.27 347 P **P** **06 41 47.2 +0.5**
WMQ XP sP 06 42 01.1 -4.7
WMQ PCP PcP 06 43 18.6 +1.4
WMQ PP PP 06 43 37.4 -0.8
WMQ S **S** **06 48 37.1 +0.6**
WMQ XS sS 06 48 55.2 -3.7
WMQ SCS ScS 06 51 35.7 -0.8
WMQ SS SS 06 51 57.5 -7.2
WMQ AMB AMB
comp=Z,263nm,1.0s,mb6.1
WMQ AMB AMB
comp=Z,412nm,3.6s
WMQ LR LR
comp=N,382nm,21.0s,MS4.5
WMQ LR LR
comp=E,364nm,20.0s,MS4.5
WMQ LR LR
comp=Z,483nm,20.0s,MS4.5
WBK Wadi Bani Khal 47.36 304 P **P** **06 41 49.3 +1.5**
SNR=6.3
CTA Charters Tower 48.13 115 *e*P **P** **06 41 52.8 -1.0**
comp=Z,32nm,1.0s,mb5.3
CTA *e*pP pP 06 42 06.9 -0.3
CTA *e*sP sP 06 42 13.3 +0.4
CTA *e*S **S** **06 49 01.0 +11**
CTA Charters Tower 48.13 115 P **P** **06 41 52.6 -1.2**
comp=Z,48nm,1.0s,mb5.5,baz=290,slow=9.3,SNR=23
CTA Charters Tower 48.13 115 *e*P **P** **06 41 52.8 -1.0**
CTA *e**PP pP 06 42 06.9 -0.3
CTA *e*S **S** **06 49 01.0 +11**
CTA pmax pmax
comp=Z,33nm,1.0s
CTAO Charters Tower 48.13 115 *e*P **P** **06 41 51.8 -2.0**
comp=Z,69nm,1.1s,mb5.6
CTAO *e*pP pP 06 42 07.2 0.0
CTAO *e*sP sP 06 42 13.7 +0.8
CTAO LR LR
comp=Z,777nm,20.0s,MS4.7
CTAO Charters Tower 48.13 115 P **P** **06 41 52.9 -0.9**
SMDO Samad 48.32 304 P **P** **06 41 56.1 +0.9**
SNR=8.5
BIDO Bidbid 48.45 304 P **P** **06 41 57.4 +1.1**
SNR=8.7
SNY Shenyang 48.67 23 ⇓P **P** **06 41 57.4 -0.2**
SNY AMB AMB
comp=Z,26nm,1.3s,mb5.1
SNY LR LR
comp=N,271nm,19.5s,MS4.4
SNY LR LR
comp=E,325nm,19.5s,MS4.4
SNY LR LR
comp=Z,297nm,27.6s
STKA Stephens Creek 48.68 132 *e*P **P** **06 41 57.3 -0.6**
comp=Z,40nm,0.8s,mb5.5
STKA Stephens Creek 48.68 132 P **P** **06 41 57.5 -0.4**
comp=Z,51nm,0.7s,mb5.7,baz=302,slow=7.5,SNR=77
STKA S **S** **06 48 55.1 -1.8**
comp=Z,0.9nm,0.5s,baz=153,slow=22,SNR=4.5
STKA LR LR 07 02 28.8
comp=Z,2μm,21.9s,MS5.0,baz=300,slow=36
BSY Bisya 48.89 303 P **P** **06 42 00.7 +1.0**
SNR=12
HOQ Hoqain 49.16 304 P **P** **06 42 03.2 +1.6**
SNR=8.2
ULHL Ulahol 49.41 336 P **P** **06 42 01.2 -2.0**
SNR=14
RBK Rabkut 49.58 295 P **P** **06 42 05.9 +1.1**
SNR=20
KZA Kyzart 49.67 335 P **P** **06 42 06.2 +1.0**
SNR=44
ARQ Araqi 49.71 303 ⇑P **P** **06 42 06.7 +0.9**
SNR=5.9
WHFO Wadi Hawf 50.10 296 P **P** **06 42 09.1 +0.2**
SNR=15
UCH Uchtor 50.10 335 P **P** **06 42 10.4 +2.0**
SNR=8.4
UCH Uchtor 50.10 335 *e*P **P** **06 42 10.3 +1.9**
comp=Z,44nm,1.3s,mb5.3
UCH LR LR
comp=Z,262nm,20.0s,MS4.2
SONM Songino Array 50.17 5 P **P** **06 42 08.9 0.0**
comp=Z,29nm,0.7s,mb5.4,baz=189,slow=8.2,SNR=174
TKM2 Tokmak 2 50.23 336 P **P** **06 42 09.8 +0.4**
SNR=93
TKM2 Tokmak 2 50.23 336 *e*P **P** **06 42 10.0 +0.6**
comp=Z,81nm,0.8s,mb5.8
TKM2 LR LR
comp=Z,714nm,22.0s,MS4.6
ULN Ulaanbaatar 50.27 6 P **P** **06 42 10.5 +0.9**
SNR=22
ULN Ulaanbaatar 50.27 6 *e*P **P** **06 42 09.6 0.0**
comp=Z,93nm,1.5s,mb5.6
ULN *e*PcP PcP 06 43 26.4 -1.6
ULN LR LR
comp=Z,1μm,19.0s,MS4.9
ULN Ulaanbaatar 50.27 6 P **P** **06 42 10.1 +0.5**
KBK Karagaybulak 50.27 336 P **P** **06 42 10.9 +1.1**
SNR=35
ABTO Aybut 50.35 295 P **P** **06 42 11.2 +0.4**
SNR=17
AML Almayashu 50.37 334 PFAKE 06 42 20.0 +9.5
AML LR LR
comp=Z,195nm,21.0s,MS4.1
AAK Ala-Archa 50.44 335 P **P** **06 42 11.1 +0.1**
comp=Z,227nm,1.0s,mb6.2,SNR=23
AAK Ala-Archa 50.44 335 P **P** **06 42 12.1 +1.0**
SNR=35
AAK Ala-Archa 50.44 335 P **P** **06 42 11.8 +0.8**
AAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AAK Ala-Archa 50.44 335 *e*P **P** **06 42 11.6 +0.5**
comp=Z,31nm,0.9s,mb5.3
AAK LR LR
comp=Z,840nm,20.0s,MS4.8
AAK Ala-Archa 50.44 335 P **P** **06 42 11.7 +0.7**
FRU Bishkek 50.56 336 ⇓*i*P **P** **06 42 12.4 +0.5**
FRU *e* 06 49 24.5
FRU pmax pmax

comp=Z,213nm,1.6s,mb5.8
CHMS Chumysh 50.64 336 P **P** **06 42 12.7 +0.2**
SNR=34
HATD Hatta, Dubai 50.66 305 P **P** **06 42 13.9 +0.9**
SNR=7.0
EKS2 Erkin-Say 50.77 335 P **P** **06 42 14.4 +0.9**
SNR=6.2
EKS2 Erkin-Say 50.77 335 *e*P **P** **06 42 14.4 +0.9**
comp=Z,71nm,0.6s,mb5.8
EKS2 LR LR
comp=Z,697nm,19.0s,MS4.7
USP Ospenovka 50.96 336 P **P** **06 42 15.2 +0.3**
SNR=38
CN2 Changchun 51.08 23 ⇑P **P** **06 42 15.2 -0.6**
CN2 *e*AP pP 06 42 25.1 -4.2
CN2 *e*XP sP 06 42 29.0 -6.0
CN2 PCP PcP 06 43 30.4 -0.7
CN2 *e*S **S** **06 49 29.3 -0.6**
CN2 AMB AMB
comp=Z,90nm,0.7s,mb5.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,15.0s,MS4.9
CN2 LR LR
comp=E,800nm,15.0s,MS4.9
CN2 LR LR
comp=Z,900nm,15.0s,MS4.9
MKAR Makanchi Array 51.39 344 P **P** **06 42 17.7 -0.3**
comp=Z,16nm,0.6s,mb5.1,baz=147,slow=8.1,SNR=111
MKAR pP pP 06 42 31.7 +0.1
comp=Z,23nm,0.6s,baz=155,slow=7.4,SNR=12
MKAR S **S** **06 49 33.7 -0.4**
comp=Z,0.9nm,0.9s,baz=141,slow=7.8,SNR=4.0
MKAR LR LR 07 08 10.6
comp=Z,478nm,21.4s,MS4.5,baz=159,slow=41
MKAR Makanchi Array 51.39 344 *i*P **P** **06 42 17.7 -0.4**
MKAR pmax pmax
comp=Z,16nm,0.6s
MKAR Makanchi Array 51.39 344 P **P** **06 42 17.7 -0.3**
MKAR pP pP 06 42 31.7 +0.1
MKAR S **S** **06 49 33.7 -0.4**
MKAR LR LR 07 08 10.6
MAJO Matsushiro 52.24 39 PFAKE 06 42 40.0 +15
MAJO LR LR
comp=Z,465nm,20.0s,MS4.5
MAT Matsushiro 52.24 39 P **P** **06 42 22.6 -2.0**
MAT *e*S **S** **06 49 39.0 -7.2**
MJAR Matsushiro Arr 52.24 39 P **P** **06 42 22.9 -1.7**
comp=Z,9.6nm,0.9s,mb4.7,baz=223,slow=7.2,SNR=17
MJAR PcP PcP 06 43 35.9 +0.3
comp=Z,5.2nm,1.0s,baz=227,slow=6.1,SNR=4.8
MJAR LR LR 07 05 47.7
comp=Z,305nm,19.9s,MS4.3,baz=220,slow=37
MJAR Matsushiro Arr 52.24 39 P **P** **06 42 22.9 -1.7**
MJAR 06 43 35.9
ZAK Zakamensk 52.50 2 *e*P **P** **06 42 21.8 -4.5**
ZAK *e* 06 43 35.2
KK31 Karatay Array 52.57 333 *i*P **P** **06 42 25.9 -1.0**
MDJ Mudanjiang 53.46 26 P **P** **06 42 33.6 +0.1**
MDJ AP pP 06 42 43.1 -3.9
MDJ XP sP 06 42 46.0 -6.7
MDJ PCP PcP 06 43 37.0 -3.0
MDJ PP PP 06 44 30.5 -3.9
MDJ SCP ScP 06 47 31.7 -2.2
MDJ PCS PcS 06 47 36.3 -2.6
MDJ S **S** **06 50 06.0 +3.5**
MDJ SCS ScS 06 52 17.8 -0.9
MDJ AMB AMB
comp=Z,20nm,0.7s,mb5.2
MDJ AMB AMB
comp=Z,119nm,7.2s
MDJ LR LR
comp=N,768nm,16.0s,MS5.0
MDJ LR LR
comp=E,867nm,18.9s,MS5.0
MDJ LR LR
comp=Z,886nm,18.9s,MS4.8
MDJ Mudanjiang 53.46 26 *e*P **P** **06 42 33.4 0.0**
comp=Z,18nm,0.8s,mb5.0
MDJ LR LR
comp=Z,942nm,21.0s,MS4.8
HVS Khovu-Aksy 53.51 355⇑ *i*P **P** **06 42 32.7 -1.0**
MOY Mondy 53.73 0 *e*P **P** **06 42 36.1 +0.8**
MOY pmax pmax
comp=Z,9.0nm,2.2s,mb4.3
TLY Talaya 53.82 3 P **P** **06 42 37.7 +1.8**
comp=Z,214nm,0.9s,mb6.1,SNR=6.1
TLY Talaya 53.82 3 P **P** **06 42 36.6 +0.7**
SNR=11
TLY Talaya 53.82 3 *e*P **P** **06 42 37.2 +1.3**
TLY *e*S **S** **06 50 16.3 +9.2**
TLY *e* 06 52 17.4
TLY *e*SSS 06 55 33.1
TLY pmax pmax
comp=Z,51nm,1.1s,mb5.4
TLY MLR MLR
comp=Z,1μm,15.0s,MS5.1
TLY Talaya 53.82 3 *e*P **P** **06 42 36.7 +0.7**
comp=Z,13nm,0.6s,mb5.0
TLY LR LR
comp=Z,711nm,20.0s,MS4.7
EIDS Eidsvold 53.89 120 *e*P **P** **06 42 36.3 -0.7**
comp=Z,105nm,1.3s,mb5.6
HIA Hailar 53.99 16 *e*P **P** **06 42 36.9 -0.4**
HIA *e* 06 43 41.8
HIA pmax pmax
comp=Z,38nm,1.2s
HIA MLR MLR
comp=Z,2μm,20.0s
HIA Hailar 53.99 16 *e*P **P** **06 42 36.9 -0.4**
comp=Z,38nm,1.2s,mb5.2
HIA *e*PcP PcP 06 43 41.8 -0.1
HIA LR LR
comp=Z,2μm,20.0s,MS5.1
TOO Toolangi 54.25 136 *e*P **P** **06 42 40.9 +1.5**
IRK Irkutsk 54.41 3 *i*P **P** **06 42 40.8 +0.6**
IRK pmax pmax
comp=Z,99nm,1.8s,mb5.4
ABPO Ambohimpanom 54.58 248 PFAKE 06 42 50.0 +7.9
ABPO LR LR
comp=Z,1μm,20.0s,MS5.0
CIT Chita 55.23 10 *e*P **P** **06 42 47.4 +1.2**
CIT *e* pP 06 42 58.2 -1.6
CIT pmax pmax
comp=Z,178nm,2.0s,mb5.8
CAN Canberra 55.75 132 P **P** **06 42 47.5 -2.8**
CAN *e**PP pP 06 42 58.4 -5.5
CAN pmax pmax
comp=Z,38nm,1.0s,mb5.4
CAN Canberra 55.75 132 P **P** **06 42 47.5 -2.8**
comp=Z,38nm,1.0s,mb5.4
CAN *e*pP pP 06 42 58.4 -5.5
ABKT Ailbek 55.90 320 P **P** **06 42 51.8 +0.5**
comp=Z,344nm,0.9s,mb6.4,SNR=8.1
ARMA Armidale 55.93 126 *e*P **P** **06 42 52.2 +0.5**
KURK Kurchatov 55.97 343 P **P** **06 42 51.8 +0.3**
comp=Z,534nm,0.7s,mb6.7,SNR=22
KURK Kurchatov 55.97 343 LR LR 07 10 15.8
comp=Z,440nm,19.9s,MS4.5,baz=180,slow=40
KURK Kurchatov 55.97 343 P **P** **06 42 50.8 -0.7**
KURK pmax pmax
comp=Z,57nm,0.7s,mb5.7
KURK Kurchatov 55.97 343 *e*P **P** **06 42 50.6 -0.9**
comp=Z,64nm,0.8s,mb5.7
KURK LR LR
comp=Z,780nm,19.0s,MS4.8
CNB Canberra Magne 56.01 132 *e*P **P** **06 42 52.4 +0.2**
ZAA0 Zalesovo Array 57.50 349 *e*P **P** **06 43 01.4 -0.9**
ZAA0 *e*pP pP 06 43 14.5 -1.5
ZAA0 *e*S **S** **06 50 55.2 -0.9**
ZALV Zalesovo Beam 57.50 349 P **P** **06 43 01.4 -0.9**
comp=Z,24nm,0.7s,mb5.3,baz=183,slow=6.9,SNR=90
ZALV S **S** **06 50 55.8 -0.3**
comp=Z,7.7nm,1.1s,baz=156,slow=11,SNR=12
ZALV LR LR 07 11 14.2
comp=Z,397nm,20.6s,MS4.5,baz=169,slow=40
ZALV Zalesovo Beam 57.50 349 P **P** **06 43 01.4 -0.9**
ZALV S **S** **06 50 55.8 -0.3**
ZALV Zalesovo Beam 57.50 349 P **P** **06 43 01.4 -0.9**
ZALV S **S** **06 50 55.8 -0.3**
ZALV LR LR 07 11 14.2
KLR Kul'dur 58.02 24⇓ *e*P **P** **06 43 02.0 -4.0**
KLR *e*S **S** **06 51 00.0 -3.0**
KLR pmax pmax
comp=Z,160nm,1.8s,mb5.8
TAU Tasmania Unive 58.13 141 PFAKE 06 43 20.0 +13
TAU LR LR
comp=Z,863nm,20.0s,MS4.9
KRAR Krasnoyarsk 58.41 355⇓ *i*P **P** **06 43 08.0 -0.6**
KRAR pmax pmax
comp=Z,145nm,1.3s,mb5.8
ERM Erimo 58.64 36 PFAKE 06 43 20.0 +9.5
ERM LR LR
comp=Z,255nm,21.0s,MS4.3
NVS Novosibirsk 58.65 348 *e*P **P** **06 43 08.5 -1.9**
NVS *i* pP 06 43 21.7 -2.4
NVS *e*S **S** **06 51 05.3 -5.8**
NVS *e* 06 53 01.3
NVS pmax pmax
comp=Z,69nm,1.9s,mb5.4
NVS pmax pmax
comp=N,47nm,1.7s
NVS pmax pmax
comp=E,36nm,1.9s
NVS smax
comp=N,94nm,2.5s
NVS smax
comp=E,50nm,1.6s
HABR Khabarovsk 58.83 26 *e*P **P** **06 43 09.8 -1.9**
HABR *e**SP pP 06 43 23.2 -2.2
HABR *e* 06 43 59.1
HABR *e*S **S** **06 51 13.2 -0.4**
HABR *e**SS sS 06 51 29.7 -6.9
HABR *e* 06 52 55.4
HABR *e*SS SS 06 55 06.4 -1.4
QRN Al-Qurain 58.95 306 *e*P **P** **06 43 12.4 -0.6**
baz=306
QRN AMb AMB 06 43 14.0
comp=Z,173nm,1.0s,mb6.0,baz=306
KBD Kabd 59.30 306 *e*P **P** **06 43 15.1 -0.2**
baz=306
KBD AMb AMB 06 43 16.6
comp=Z,112nm,1.0s,mb5.8,baz=306
RDF Al-Radifah 59.32 306 *e*P **P** **06 43 14.8 -0.7**
baz=306
RDF AMb AMB 06 43 16.6
comp=Z,278nm,1.0s,mb6.2,baz=306
HNR Honiara 59.61 100 PFAKE 06 43 30.0 +12
HNR LR LR
comp=Z,349nm,20.0s,MS4.5
NAY Al-Naaiem 59.69 306 *e*P **P** **06 43 17.4 -0.7**
baz=306
NAY AMb AMB 06 43 19.0
comp=Z,102nm,1.0s,mb5.8,baz=306
VOSK Vostochnaya 60.12 340 P **P** **06 43 19.9 -0.6**
VOSK pmax pmax
comp=Z,24nm,0.9s,mb5.2
BVA0 Borovoye Array 60.57 340 P **P** **06 43 22.3 -1.3**
BVAR Borovoye Array 60.57 340 P **P** **06 43 22.4 -1.2**
comp=Z,30nm,0.7s,mb5.6,baz=143,slow=9.0,SNR=148
BVAR pP pP 06 43 37.4 +0.1
comp=Z,19nm,0.6s,baz=145,slow=8.1,SNR=9.3
BVAR LR LR 07 11 29.6
comp=Z,501nm,20.3s,MS4.7,baz=356,slow=38
BVAR Borovoye Array 60.57 340 P **P** **06 43 22.4 -1.2**
BVAR *PP pP 06 43 37.4 +0.1
BRVK Borovoye 60.63 340 P **P** **06 43 22.5 -1.5**
comp=Z,250nm,0.8s,mb6.4,SNR=22
BRVK Borovoye 60.63 340 *e*P **P** **06 43 22.7 -1.3**
BRVK pmax pmax
comp=Z,30nm,0.8s,mb5.5
BRVK MLR MLR
comp=Z,770nm,20.0s,MS4.8
BRVK Borovoye 60.63 340 *e*P **P** **06 43 22.7 -1.3**
comp=Z,30nm,0.8s,mb5.5
BRVK LR LR
comp=Z,770nm,20.0s,MS4.8
BOD Bodaibo 60.89 8 *e*P **P** **06 43 25.2 -0.5**
BOD pmax pmax
comp=Z,90nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 61.51 32⇑ *e*P **P** **06 43 29.4 -0.7**
YSS *e* pP 06 43 46.0 +2.1
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.6
YSS Yuzh-Sakhalins 61.51 32 *e*P **P** **06 43 29.8 -0.2**
comp=Z,68nm,1.3s,mb5.6
AB31 Akbulak array 62.06 331 P **P** **06 43 32.3 -1.4**
CLNS Chul'man 62.17 15 *e*P **P** **06 43 34.8 +0.5**
CLNS pmax pmax
comp=Z,34nm,1.0s,mb5.4
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,22nm,1.1s
AKTK Aktyubinsk 63.78 331 P **P** **06 43 43.8 -1.3**
AKTK LR LR 07 14 58.3
AKTO Aktyubinsk 63.78 331 P **P** **06 43 43.8 -1.3**
comp=N,29nm,1.0s,mb5.3,baz=130,slow=7.8,SNR=42
AKTO LR LR 07 14 58.3
comp=N,282nm,19.6s,MS4.5,baz=33,slow=39
CASY Casey 64.29 175 PFAKE 06 44 00.0 +12
CASY LR LR
comp=Z,982nm,21.0s,MS5.0
HAKT HAKKARI 65.65 313 *i*P **P** **06 44 01.5 +3.9**
DGRG David-gareji 66.12 318 P **P** **06 44 00.9 +0.3**
DYDN Diyadin 66.47 315 *i*P **P** **06 44 03.7 +0.8**
MTA Mtatsminda 66.62 318 P **P** **06 44 04.6 +0.9**
TBLG Delisi 66.67 318 P **P** **06 44 04.5 +0.4**
SVE Sverdlovsk 67.08 338⇑ *e*P **P** **06 44 05.8 -0.5**
SVE *e* 06 46 34.3
SVE pmax pmax
comp=Z,130nm,1.0s,mb5.9
SVE MLR MLR
comp=Z,722nm,18.0s,MS4.9
ARU Arti 67.61 336 P **P** **06 44 08.1 -1.6**
comp=Z,361nm,1.2s,mb6.3,SNR=6.9
ARU Arti 67.61 336*d* *i*P **P** **06 44 08.6 -1.1**
ARU *e* 06 44 35.8
ARU *e* 06 46 34.5
ARU *e*S S 06 53 04.7 +1.8
ARU *e*SS SS 06 57 31.0 +6.5
ARU pmax pmax
comp=Z,129nm,1.7s,mb5.7
ARU Arti 67.61 336 *e*P **P** **06 44 08.6 -1.1**
comp=Z,80nm,1.1s,mb5.7
ARU LR LR
comp=Z,842nm,19.0s,MS5.0
YAK Yakutsk 67.90 14 *e*P **P** **06 44 09.7 -1.8**
YAK *e**PP pP 06 44 18.6 -6.8
YAK *e* pP 06 44 23.8 -1.6
YAK *e* 06 46 45.5
YAK *e*S S 06 53 04.6 -1.6
YAK *e* 06 53 58.2
YAK pmax pmax
comp=Z,121nm,0.9s,mb5.9
YAK pmax pmax
comp=N,53nm,1.4s
YAK pmax pmax
comp=E,54nm,1.8s
YAK pmax pmax
comp=Z,90nm,3.0s
YAK pmax pmax
comp=E,71nm,2.8s
YAK pmax pmax
comp=N,141nm,3.2s
YAK smax
comp=E,58nm,1.6s
YAK smax
comp=N,89nm,1.6s
YAK MLR MLR
comp=E,482nm,21.0s,MS4.9
YAK MLR MLR
comp=Z,1μm,20.0s,MS5.0
YAK MLR MLR
comp=N,512nm,17.0s,MS4.9
YAK Yakutsk 67.90 14 *e*P **P** **06 44 09.9 -1.6**
comp=N,149nm,0.8s,mb6.1
YAK *e*pP pP 06 44 25.3 -0.2
YAK LR LR
comp=Z,813nm,19.0s,MS5.0
DDEM Demirkent 68.37 316 *i*P **P** **06 44 14.6 -0.2**
DBAD Bademkaya 68.46 316 *i*P **P** **06 44 15.6 +0.2**
KIV Kislovodsk 69.00 319 P **P** **06 44 19.5 +0.8**
comp=Z,438nm,1.2s,mb6.3,SNR=6.4
KIV Kislovodsk 69.00 319 P **P** **06 44 19.5 +0.9**
SNR=9.1
KIV Kislovodsk 69.00 319 *e*P **P** **06 44 18.0 -0.7**
KIV *e*S S 06 53 18.8 -1.1
KIV *e*SS SS 06 57 46.4 -0.1
KIV pmax pmax
comp=Z,86nm,1.1s,mb5.6
KIV pmax pmax
comp=Z,159nm,7.8s
KIV MLR MLR
comp=Z,244nm,20.0s,MS4.4
KIV Kislovodsk 69.00 319 *e*P **P** **06 44 18.5 -0.2**
comp=Z,86nm,1.0s,mb5.6
KIV *e*pP pP 06 44 33.9 +1.2
KIV LR LR
comp=Z,341nm,20.0s,MS4.6
ASF Jabal al Asfar 69.06 306 LR LR 07 16 16.5
comp=Z,467nm,18.1s,MS4.8,baz=332,slow=37
ELZG Elazig 69.45 313 *i*P **P** **06 44 23.1 +1.4**
ATAB Bozova 69.62 311 *i*P **P** **06 44 23.0 +0.4**
DRV Dumont d'Urvil 69.96 164 S S 06 53 30.0 -0.5
DRV SS SS 06 58 00.0 -0.4
DRV L 07 02 00.0
DRV R 07 06 00.0
EIL Elat 69.99 303 LR LR 07 15 04.5
comp=Z,867nm,18.4s,MS5.0,baz=96,slow=36
KEMA Kemaliye 70.08 313 *i*P **P** **06 44 25.8 +0.3**
MAW Mawson 70.12 194 *e*P **P** **06 44 26.4 +1.3**
comp=Z,23nm,0.8s,mb5.2
MAW Mawson 70.12 194 P **P** **06 44 26.1 +1.0**
comp=Z,38nm,0.9s,mb5.3,baz=48,slow=7.3,SNR=26
MAW LR LR 07 08 29.5
comp=Z,968nm,21.9s,MS5.0,baz=44,slow=30
MAW Mawson 70.12 194 P **P** **06 44 26.8 +1.7**
MAW pmax pmax
comp=Z,55nm,1.0s
GZT Gaziantep 70.13 311 *i*P **P** **06 44 26.4 +0.6**
SOKR Solikamsk 70.45 338*c* *i*P **P** **06 44 28.2 +0.9**
SOKR pmax pmax
comp=Z,120nm,1.3s,mb5.7
MMAI Mount Meron Ar 70.50 306 LR LR 07 16 31.2
comp=Z,630nm,18.8s,MS4.9,baz=120,slow=37
SOC Sochi 70.81 318 *e*P **P** **06 44 29.1 -0.7**
SOC *e* pP 06 44 47.5 +3.6
SOC *e* 06 47 04.3
SOC *e*S S 06 53 38.1 -3.1
SOC *e**SS sS 06 54 05.2 +0.4
SOC *e*SS SS 06 58 13.6 -0.9
SOC pmax pmax
comp=Z,116nm,0.9s,mb5.8
LSZ Lusaka 72.23 255 P **P** **06 44 40.2 +1.3**
SNR=6.2
LSZ Lusaka 72.23 255 *e*P **P** **06 44 39.2 +0.2**
LSZ *e**PP pP 06 44 54.0 +1.0
LSZ pmax pmax
comp=Z,43nm,1.4s,mb5.2
LSZ MLR MLR
comp=Z,702nm,19.0s,MS5.0
LSZ Lusaka 72.23 255 *e*P **P** **06 44 39.2 +0.2**
comp=Z,43nm,1.4s,mb5.2
LSZ *e*pP pP 06 44 54.0 +1.0
LSZ LR LR
comp=Z,702nm,19.0s,MS5.0
AVNT Avonos 72.60 312 *i*P **P** **06 44 39.9 -0.8**
CSS Prodhromos 72.69 308 *e*P **P** **06 44 41.5 +0.2**
comp=Z,200nm,1.4s,mb5.8
CSS *e*pP pP 06 44 54.9 -0.6
CSS LR LR
comp=Z,539nm,20.0s,MS4.8
VRHR Novokhopersk 72.77 326 *e*P **P** **06 44 40.6 -0.8**
VRHR pmax pmax
comp=Z,120nm,0.7s,mb5.9
VRHR pmax pmax
comp=N,20nm,1.5s
VRHR pmax pmax
comp=E,20nm,0.7s
ANN Anapa 72.79 318 *e*P **P** **06 44 41.2 -0.5**
ANN *e*S S 06 54 02.9 -1.0
ANN pmax pmax
comp=Z,144nm,1.6s,mb5.7
PETK Petropavlovsk- 72.90 32 P **P** **06 44 41.0 -1.1**
comp=Z,12nm,0.7s,mb4.9,baz=211,slow=4.2,SNR=17
PETK LR LR 07 18 55.2
comp=Z,248nm,19.4s,MS4.5,baz=255,slow=38
PET Petropavlovsk 73.37 32⇑ *i*P **P** **06 44 44.8 -0.1**
PET *e* pP 06 45 00.2 +1.1
PET *e* 06 47 36.2
PET *e*PPP 06 49 06.2
PET *e*S S 06 54 12.3 +2.1
PET pmax pmax
comp=Z,70nm,0.9s,mb5.6
PET pmax pmax
comp=Z,100nm,11.7s
PET MLR MLR
comp=Z,300nm,20.0s,MS4.6
PET Petropavlovsk 73.37 32⇑ *e*P **P** **06 44 44.7 -0.2**
BRTR Keskin Array B 73.79 312 P **P** **06 44 46.5 -1.2**
comp=Z,22nm,0.8s,mb5.2,baz=134,slow=7.0,SNR=74
BRTR pP pP 06 45 00.7 -1.2
comp=Z,25nm,0.8s,baz=130,slow=7.1,SNR=17
BRTR LR LR 07 19 29.3
comp=Z,227nm,18.4s,MS4.5,baz=106,slow=38
BRTR Keskin Array B 73.79 312 *i*P **P** **06 44 46.5 -1.2**
BRTR pmax pmax
comp=Z,23nm,0.8s
BR131 Keskin Array S 73.79 312 *e*P **P** **06 44 46.6 -1.1**
comp=Z,22nm,0.8s,mb5.1
BR131 *e*pP pP 06 45 01.4 -0.4
VORD Divnogorie 74.04 325 *e*P **P** **06 44 48.0 -0.9**
VORD pmax pmax
comp=Z,60nm,0.9s,mb5.5
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,30nm,0.8s
VSR Storozhevoye 74.22 325 *e*P **P** **06 44 48.8 -1.1**
VSR pmax pmax
comp=E,40nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,10.0nm,0.8s
ANTO Ankara 74.45 312 P **P** **06 44 51.8 +0.2**
SNR=5.7
ANTO Ankara 74.45 312 *e*P **P** **06 44 51.6 0.0**
ANTO *e**PP pP 06 45 05.1 -0.6
ANTO pmax pmax
comp=Z,42nm,1.0s,mb5.3
ANTO MLR MLR
comp=Z,389nm,20.0s,MS4.7
ANTO Ankara 74.45 312⇓ *i*P **P** **06 44 50.8 -0.8**
ANTO Ankara 74.45 312 *e*P **P** **06 44 51.6 0.0**
comp=Z,42nm,1.0s,mb5.3
ANTO *e*pP pP 06 45 05.1 -0.6
ANTO LR LR
comp=Z,389nm,20.0s,MS4.7
RPZ Rata Peaks 74.52 135 P **P** **06 44 51.9 0.0**
comp=Z,27nm,1.0s,mb5.1,baz=359,slow=1.3,SNR=8.6
LBTB Lobatse 75.26 245 P **P** **06 44 56.8 +0.2**
LBTB pmax pmax
comp=Z,66nm,1.5s,mb5.3
LBTB Lobatse 75.26 245 *e*P **P** **06 44 56.6 0.0**
comp=Z,66nm,1.6s,mb5.3
LBTB LR LR
comp=Z,1μm,20.0s,MS5.2
SEY Seymchan 75.73 22⇑ *e*P **P** **06 44 58.6 +0.2**
SEY Seymchan 75.73 22⇑ *e*P **P** **06 44 58.7 +0.3**
BOSA Boshof 75.87 241 P **P** **06 44 59.9 -0.1**
comp=Z,20nm,0.7s,mb5.1,baz=95,slow=6.9,SNR=40
BOSA LR LR 07 14 28.5
comp=Z,863nm,18.1s,MS5.1,baz=67,slow=32
BOSA Boshof 75.87 241 *e*P **P** **06 44 59.7 -0.3**
BOSA pmax pmax
comp=Z,22nm,0.8s,mb5.1
BOSA MLR MLR
comp=Z,962nm,19.0s,MS5.1
BOSA Boshof 75.87 241 P **P** **06 44 59.9 -0.1**
BOSA pmax pmax
comp=Z,22nm,0.8s,mb5.1
BOSA Boshof 75.87 241 *e*P **P** **06 44 59.7 -0.3**
comp=Z,22nm,0.8s,mb5.1
BOSA LR LR
comp=Z,962nm,19.0s,MS5.1
TIXI Tiksi 76.06 9⇑ *e*P **P** **06 44 58.5 -1.6**
TIXI pmax pmax
comp=Z,137nm,1.7s,mb5.6
TIXI MLR MLR
comp=Z,1μm,20.0s,MS5.2
TIXI Tiksi 76.06 9 *e*P **P** **06 44 58.5 -1.6**
comp=Z,64nm,1.0s,mb5.5
TIXI LR LR

comp=Z,1μm,19.0s,MS5.2
SNZO South Karori 76.74 132 PFAKE 06 45 20.0 +15
SNZO LR LR
comp=Z,1μm,20.0s,MS5.2
MOS Moscow 76.92 329 *eP* **P** **06 45 03.1 -2.2**
MOS *e* pP 06 45 14.7 -4.8
MOS *e* 06 47 52.8
MOS *eS* S 06 54 46.9 -2.7
MOS *e* 06 55 15.0
MOS pmax pmax
comp=Z,166nm,1.1s,mb5.9
MOS pmax pmax
comp=Z,400nm,1.9s,mb6.0
OBN Obninsk 77.22 328α *iP* **P** **06 45 07.4 +0.4**
OBN *e* 06 45 15.6
OBN *i* pP 06 45 21.3 +0.1
OBN pmax pmax
comp=Z,219nm,1.8s,mb5.8
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.5
OBN Obninsk 77.22 328 *eP* **P** **06 45 07.1 +0.1**
comp=Z,232nm,1.4s,mb5.9
OBN LR LR
comp=Z,450nm,20.0s,MS4.8
SYO Syowa Base 77.74 199⇑ *eP* **P** **06 45 08.8 -0.9**
SYO Syowa Base 77.74 199⇑ *e*PcP PcP 06 45 19.0 -0.5
URZ Urewera 78.18 128 P **P** **06 45 11.4 -1.4**
comp=Z,5.0nm,0.4s,mb4.8,baz=278,slow=4.7,SNR=7.3
KLMR Klimovskoe 78.24 334 *iP* **P** **06 45 11.9 -0.6**
KLMR pmax pmax
comp=Z,114nm,1.2s,mb5.7
TLCR 78.72 317⇓ *iP* **P** **06 45 15.9 +0.3**
TLCR 78.72 317 ⇓P **P** **06 45 15.9 +0.3**
TIRR Tirgusor 78.81 316 P **P** **06 45 15.8 -0.3**
TIRR Tirgusor 78.81 316 *eP* **P** **06 45 15.6 -0.5**
comp=Z,51nm,0.9s,mb5.5
PRK Paraskevi 79.19 311 P **P** **06 45 18.6 +0.3**
KIS Kishinev 79.19 319 *eP* **P** **06 45 17.0 -1.1**
KIS *e* 06 45 20.0
KIS *e* 06 48 18.0
HARR Harsova 79.20 316⇓ *iP* **P** **06 45 18.2 0.0**
HARR Harsova 79.20 316 ⇓P **P** **06 45 18.2 -0.1**
NEF NEVSHA 79.33 315 P **P** **06 45 19.4 +0.5**
IDI Anoyia 79.51 306 LR LR 07 23 58.4
comp=Z,216nm,21.0s,MS4.5,baz=86,slow=38
JMB Yambol 79.54 314 P **P** **06 45 20.7 0.0**
ALN Alexandroupoli 79.70 312 P **P** **06 45 21.1 +0.1**
AKASG Malin Array Be 79.93 322 P **P** **06 45 19.8 -2.2**
comp=Z,6.9nm,0.7s,mb4.7,baz=90,slow=4.8,SNR=36
AKASG pP pP 06 45 34.1 -2.2
comp=Z,9.7nm,0.8s,baz=86,slow=5.0,SNR=8.1
AKASG PP PP 06 48 20.8 -3.4
comp=Z,2.2nm,0.8s,baz=100,slow=5.9,SNR=4.4
AKASG LR LR 07 24 45.6
comp=Z,272nm,20.6s,MS4.6,baz=80,slow=39
AKASG Malin Array Be 79.93 322 P **P** **06 45 19.8 -2.2**
AKASG *P*PP pP 06 45 34.1 -2.2
AKASG 06 48 20.8
AKASG Malin Array Be 79.93 322 *i* P **P** **06 45 21.5 -0.5**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 79.93 322 *eP* **P** **06 45 21.0 -1.0**
AKBB *e**PP pP 06 45 33.9 -2.4
KIEV Kiev 79.94 322 P **P** **06 45 20.4 -1.7**
KIEV pmax pmax
comp=Z,25nm,1.2s,mb5.0
KIEV Kiev 79.94 322 *eP* **P** **06 45 20.3 -1.8**
comp=Z,25nm,1.2s,mb5.0
KIEV LR LR
comp=Z,275nm,19.0s,MS4.6
SUR Sutherland 79.98 238 P **P** **06 45 24.1 +1.3**
comp=Z,324nm,1.2s,mb6.1,SNR=6.5
SUR Sutherland 79.98 238 PFAKE 06 45 30.0 +7.2
SUR LR LR
comp=Z,1μm,19.0s,MS5.3
LIA Limnos Island 80.14 311 P **P** **06 45 21.0 -2.4**
VRI Vrincioaia 80.31 317⇓ *iP* **P** **06 45 24.6 +0.4**
VRI Vrincioaia 80.31 317 ⇓P **P** **06 45 24.6 +0.5**
PLOR Plostina 80.36 317 P **P** **06 45 25.2 +0.7**
PLOR Plostina 80.36 317⇓ *iP* **P** **06 45 25.1 +0.6**
MLR Muntele Rosu 80.76 317⇑ *iP* **P** **06 45 26.9 +0.3**
MLR Muntele Rosu 80.76 317 ⇑P **P** **06 45 26.9 +0.3**
PLD Plovdiv 80.93 313 P **P** **06 45 27.6 0.0**
OUR Ouranopolis 81.13 311 P **P** **06 45 28.5 -0.2**
DID Didima 81.20 308 P **P** **06 45 27.4 -1.8**
PAIG Paliouri 81.28 311 P **P** **06 45 27.7 -1.8**
VLI Veliai 81.31 307 *eP* **P** **06 45 27.0 -2.8**
VOIR 81.36 316⇓ *iP* **P** **06 45 29.3 -0.5**
VOIR 81.36 316 ⇓P **P** **06 45 29.3 -0.5**
PGB Panagyurishte 81.41 313 *eP* **P** **06 45 29.8 -0.3**
LTK Loutraki 81.50 309 P **P** **06 45 28.8 -1.9**
PLG Polygyros 81.54 311 P **P** **06 45 29.7 -1.2**
MMB Musomiste 81.55 312 *eP* **P** **06 45 30.1 -0.8**
SOH Sokhos 81.69 312 P **P** **06 45 30.3 -1.4**
BURAR Bucovina Array 81.72 319⇓ *iP* **P** **06 45 32.4 +0.8**
BURAR Bucovina Array 81.72 319 ⇓P **P** **06 45 32.4 +0.8**
BUR08 Bucovina Ar. S 81.73 319 *eP* **P** **06 45 32.2 +0.5**
BUR08 epP pP 06 45 45.8 -0.3
VNDA Vanda 81.82 169 P **P** **06 45 32.0 +0.4**
comp=Z,9.2nm,1.0s,mb4.7,baz=300,slow=5.1,SNR=29
VNDA LR LR 07 16 16.6
comp=Z,286nm,22.0s,MS4.6,baz=310,slow=32
THE Thessaloniki 81.94 311 P **P** **06 45 31.1 -1.9**
PUL Pulkovo 82.04 331⇑ *eP* **P** **06 45 33.5 +0.4**
KKB Krupnik 82.07 313 *eP* **P** **06 45 32.9 -0.8**
VTS Vitosha 82.11 313⇓ *iP* **P** **06 45 33.6 -0.2**
VTS Vitosha 82.11 313 *eP* **P** **06 45 33.3 -0.5**
VTS Vitosha 82.11 313 ⇓P **P** **06 45 33.6 -0.2**
ITM Ithomi 82.18 308 *eP* **P** **06 45 31.0 -3.3**
LIT Litokhoron 82.21 311 P **P** **06 45 33.2 -1.2**
PYL PYLOS 82.29 308 P **P** **06 45 33.5 -1.4**
VAY Valandovo 82.36 312 P **P** **06 45 34.2 -1.0**
VAY Valandovo 82.36 312 *eP* **P** **06 45 34.0 -1.2**
TSUM Tsumeb 82.46 251 *eP* **P** **06 45 37.1 +0.9**
comp=Z,36nm,1.1s,mb5.2
TSUM LR LR
comp=Z,1μm,21.0s,MS5.2
THL Klokotos Trika 82.49 310 P **P** **06 45 33.5 -2.4**
EVR Evrytania 82.54 310 *eP* **P** **06 45 36.0 -0.2**
JOF Joensuu 82.62 334 *ep* **P** **06 45 35.6 -0.4**
comp=Z,26nm,0.7s,mb5.4
JOF Joensuu 82.62 334 *eP* **P** **06 45 35.6 -0.4**
JOF pmax pmax
comp=Z,26nm,0.7s,mb5.4
SBA Scott Base 82.92 169 P **P** **06 45 39.0 +1.6**
SBA *e* 06 45 47.2
SBA pmax pmax
comp=Z,24nm,1.1s,mb5.1
SBA Scott Base 82.92 169 *eP* **P** **06 45 38.8 +1.4**
comp=Z,14nm,0.8s,mb5.1
SBA *e*PP PP 06 48 34.2 -14
GZR Gura Zlata 82.92 316 P **P** **06 45 38.0 0.0**
GZR Gura Zlata 82.92 316⇓ *iP* **P** **06 45 37.9 -0.1**
LVV L'vov 82.95 321 *eP* **P** **06 45 37.7 -0.3**
LVV *e* pP 06 45 51.3 -1.1
LVZ Lovozero 83.17 340⇑ *eP* **P** **06 45 39.2 +0.4**
LVZ Lovozero 83.17 340⇑ *eP* **P** **06 45 39.3 +0.5**
LVZ Lovozero 83.17 340⇑ *eP* **P** **06 45 39.3 +0.5**
DRGR 83.22 317 P **P** **06 45 40.5 +1.0**
DRGR 83.22 317⇓ *iP* **P** **06 45 40.2 +0.7**
DRGR 83.22 317 ⇓P **P** **06 45 40.2 +0.6**
BILL Bilibino 83.27 20κ *eP* **P** **06 45 39.4 +0.1**
BILL pmax pmax
comp=Z,31nm,1.7s,mb5.1
BILL Bilibino 83.27 20⇑ *iP* **P** **06 45 38.2 -1.1**
BILL LR LR
comp=Z,570nm,19.0s,MS5.0
SKO Skopje 83.30 313 P **P** **06 45 40.0 0.0**
VLS Valsamata 83.38 309 P **P** **06 45 39.5 -1.0**
VLS Valsamata 83.38 309 *eP* **P** **06 45 40.0 -0.5**
JAN Janina 83.39 310 *eP* **P** **06 45 40.5 0.0**
VSU Vasula 83.43 329⇑ *iP* **P** **06 45 38.9 -1.4**
VSU pmax pmax
comp=Z,146nm,2.0s,mb5.7
APA Apatity 83.47 339⇓ *iP* **P** **06 45 40.5 +0.1**
APA *eS* S 06 55 58.0 +0.1
APA *e* 06 56 43.0
APA pmax pmax
comp=Z,30nm,0.8s,mb5.4
APA MLR MLR
comp=Z,1μm,13.0s,MS5.5
TRPA Tarpa 83.58 319⇑ *iP* **P** **06 45 41.7 +0.4**
BZS Buzias 83.77 316 P **P** **06 45 42.1 -0.2**
BZS Buzias 83.77 316⇓ *iP* **P** **06 45 42.0 -0.3**
BZS Buzias 83.77 316 ⇓P **P** **06 45 42.0 -0.3**
IGT Igoumenitsa 83.77 310 P **P** **06 45 41.7 -0.8**
UZH Uzhgorod 83.84 319⇑ *iP* **P** **06 45 42.3 -0.3**
UZH *e* 06 45 50.0
KOLS Kolonicke sedl 83.91 320 *eP* **P** **06 45 43.8 +0.8**
KOLS *e* pP 06 45 59.2 +1.9
KOLS pmax pmax
comp=Z,65nm,1.1s,mb5.7
KOLS Kolonicke sedl 83.91 320 *eP* **P** **06 45 43.8 +0.8**
comp=Z,65nm,1.1s,mb5.7
KOLS *e* pP 06 45 59.2 +1.9
KEK Kerkira 84.20 310 *eP* **P** **06 45 44.5 -0.2**
SUW Suwalki 84.33 325 *eP* **P** **06 45 44.6 -0.4**
SUW *e* pP 06 45 57.2 -2.1
SUW Suwalki 84.33 325 *eP* **P** **06 45 44.6 -0.4**
SUW *e* pP 06 45 57.2 -2.2
CRVS Cervenica-Dubn 84.43 319 *eP* **P** **06 45 46.5 +0.9**
CRVS *e* pP 06 46 01.1 +1.1
CRVS pmax pmax
comp=Z,272nm,3.5s
CRVS Cervenica-Dubn 84.43 319 *eP* **P** **06 45 46.5 +0.9**
comp=Z,272nm,3.5s
CRVS *e* pP 06 46 01.1 +1.1
KAF Kangasniemi 84.60 333 *ep* **P** **06 45 46.1 -0.1**
comp=Z,29nm,0.8s,mb5.5,baz=100,slow=4.6
KAF Kangasniemi 84.60 333 *eP* **P** **06 45 46.1 -0.1**
KAF pmax pmax
comp=Z,29nm,0.8s,mb5.5
STHS Stebnicka Huta 84.66 320 *i* P **P** **06 45 47.6 +0.8**
STHS *e* pP 06 46 00.8 -0.3
STHS pmax pmax
comp=Z,22nm,0.9s,mb5.3
STHS Stebnicka Huta 84.66 320 *i* P **P** **06 45 47.6 +0.8**
comp=Z,22nm,0.9s,mb5.3
STHS *e* pP 06 46 00.8 -0.3
NIE Niedzica 85.25 320 *eP* **P** **06 45 50.1 +0.3**
PSZ Piszkesteto 85.30 318 *eP* **P** **06 45 49.8 -0.2**
PSZ *e**PP pP 06 46 05.4 +1.0
PSZ *e* 06 49 05.3
PSZ pmax pmax
comp=Z,30nm,1.1s,mb5.3
PSZ Piszkesteto 85.30 318⇑ *es*P **P** **06 45 50.9 +0.9**
PSZ Piszkesteto 85.30 318⇑ *iP* **P** **06 45 50.2 +0.2**
PSZ Piszkesteto 85.30 318 *eP* **P** **06 45 49.8 -0.2**
comp=Z,30nm,1.1s,mb5.3
PSZ *ep*P pP 06 46 05.4 +0.9
PSZ *e*PP PP 06 49 05.3 -3.1
OJC Ojcow 85.71 321 *eP* **P** **06 45 52.5 +0.5**
BUD Budapest 85.82 318⇑ *es*P **P** **06 45 53.1 +0.5**
PKSM Moragy 85.91 316⇑ *iP* **P** **06 45 52.9 -0.2**
PKSM Moragy 85.91 316 ⇑P **P** **06 45 52.9 -0.2**
VYHS Vyhne 86.08 319 *eP* **P** **06 45 54.2 +0.3**
VYHS *e* pP 06 46 07.9 -0.4
VYHS pmax pmax
comp=Z,23nm,1.5s,mb5.2
VYHS Vyhne 86.08 319 *eP* **P** **06 45 54.2 +0.3**
comp=Z,23nm,1.5s,mb5.2
VYHS *e* pP 06 46 07.9 -0.4
KOLL Kolacno 86.38 319 *eP* **P** **06 45 55.9 +0.5**
KOLL *ep*P pP 06 46 08.0 -1.8
KOLL Kolacno 86.38 319 *eP* **P** **06 45 55.9 +0.5**
KOLL *e* pP 06 46 08.1 -1.7
KEV Kevo 86.41 340 *ep* **P** **06 45 54.4 -0.7**
comp=Z,17nm,0.7s,mb5.4
KEV Kevo 86.41 340 *eP* **P** **06 45 54.4 -0.7**
KEV pmax pmax
comp=Z,17nm,0.7s,mb5.4
TIP Timpagrande 86.48 309 *eP* **P** **06 45 56.2 +0.2**
comp=Z,33nm,1.3s,mb5.4
TIP *ep*P pP 06 46 10.7 +0.3
TIP LR LR
comp=Z,502nm,20.0s,MS4.9
LTRZ Laterza 86.57 311 P **P** **06 45 56.4 -0.1**
OKC Ostrava-Krasne 86.71 320 *eP* **P** **06 45 57.6 +0.7**
OKC *ex* x 06 46 05.4
ORI Oriolo Calabro 86.80 310 P **P** **06 45 59.4 +1.8**
comp=Z,368nm,1.6s,mb6.4
ARCES ARCESS Array B 86.86 340 P **P** **06 45 57.1 -0.1**
comp=Z,32nm,0.8s,mb5.6,baz=99,slow=5.4,SNR=96
ARCES LR LR 07 29 35.0
comp=Z,491nm,20.0s,MS4.9,baz=91,slow=39
CEL Celeste 87.06 308 *eP* **P** **06 45 59.8 +0.9**
comp=Z,73nm,1.1s,mb5.8
CEL LR LR
comp=Z,293nm,21.0s,MS4.7
PTRP Pietrapertosa 87.14 311 P **P** **06 46 00.2 +0.9**
comp=Z,71nm,1.3s,mb5.7
ZST Bratislava 87.19 318 *eP* **P** **06 45 59.9 +0.6**
ZST *e* pP 06 46 14.3 +0.5
ZST pmax pmax
comp=Z,17nm,0.8s,mb5.3
ZST Bratislava 87.19 318 *eP* **P** **06 45 59.9 +0.6**
comp=Z,17nm,0.8s,mb5.3
ZST *e* pP 06 46 14.3 +0.5
CUC Castrocucco 87.28 310 *eP* **P** **06 45 59.9 0.0**
comp=Z,24nm,1.0s,mb5.4
CUC *ep*P pP 06 46 13.5 -0.9
CUC LR LR
comp=Z,642nm,20.0s,MS5.0
AFI Afiamalu 87.36 104 P **P** **06 45 51.4 -9.5**
MAIT Maitri 87.43 199 *eP* **P** **06 46 00.6 +0.6**
MAIT *e*E pP 06 46 15.0 +0.5
SOP Sopron 87.50 318⇑ *eP* **P** **06 46 01.5 +0.7**
QSPA South Pole Qui 87.69 180 PFAKE 06 46 10.0 +8.8
QSPA LR LR
comp=Z,785nm,20.0s,MS5.1
GKP Gorka Klasztor 87.70 323 *eP* **P** **06 46 02.2 +0.6**
GKP *e* pP 06 46 17.0 +0.9
GKP Gorka Klasztor 87.70 323 *eP* **P** **06 46 02.2 +0.6**
GKP *e* pP 06 46 17.0 +0.9
DPC Dobruska-Polom 87.94 320 *eP* **P** **06 46 03.3 +0.5**
DPC *ep*P pP 06 46 17.4 +0.1
CSSN Cassano Irpino 87.96 311 P **P** **06 46 03.9 +0.7**
comp=Z,16nm,1.3s,mb5.1
WDD Wield Dalam 87.96 306 PFAKE 06 46 10.0 +6.7
WDD LR LR
comp=Z,285nm,19.0s,MS4.7
CONA Conrad Observa 87.99 318 *iP* **P** **06 46 03.6 +0.4**
comp=Z,13nm,1.5s,mb5.0,SNR=5.6
KSP Ksiaz 88.01 321 *eP* **P** **06 46 04.0 +0.8**
KSP *e* pP 06 46 19.6 +2.0
KSP Ksiaz 88.01 321 *eP* **P** **06 46 03.9 +0.7**
KSP *ep*P pP 06 46 18.5 +0.9
GROS Grobnik 88.10 316 *eP* **P** **06 46 00.2 -3.6**
UPC Upice 88.15 321 *eP* **P** **06 46 04.5 +0.6**
UPC *ep*P pP 06 46 15.0 -3.3
ARSA Arzberg 88.16 317 *i* PcP PcP 06 46 04.9 -0.7
comp=Z,34nm,1.4s,SNR=9.5
BOJS Bojanci 88.19 315 *iP* **P** **06 46 04.5 +0.4**
BOJS *i* pP 06 46 19.3 +0.7
BOJS *e* 06 46 38.5
TREC Trest 88.37 319 *eP* **P** **06 46 05.6 +0.7**
TREC *ep*P pP 06 46 19.9 +0.5
PERS Pernice 88.38 317 *iP* **P** **06 46 05.9 +0.8**
PERS *i* pP 06 46 20.5 +1.0
SOKA Soboth 88.44 317⇑ *i*PcP PcP 06 46 05.9 -1.1
comp=Z,37nm,1.2s
VISS Visnje 88.50 316 *iP* **P** **06 46 06.0 +0.4**
VISS *i* pP 06 46 21.0 +0.9
LJU Ljubljana 88.74 316 *eP* **P** **06 46 07.0 +0.3**
LJU *e* pP 06 46 22.5 +1.3
SDI San Donato 88.93 312 P **P** **06 46 07.2 -0.6**
SDI pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
SDI San Donato 88.93 312 P **P** **06 46 07.2 -0.6**
comp=Z,9.7nm,1.2s,mb5.0
PRU Pruhonice 89.04 320 *eP* **P** **06 46 08.4 +0.3**
PRU *ep*P pP 06 46 23.0 +0.4
JAVS Javornik 89.05 316 *iP* **P** **06 46 08.6 +0.4**
JAVS *i* pP 06 46 23.2 +0.6
MOA Molln 89.06 318⇑ *i*PcP PcP 06 46 08.8 -0.9
comp=Z,26nm,1.9s
PVCC Panska Ves 89.07 320 *eP* **P** **06 46 09.1 +0.9**
PVCC *ep*P pP 06 46 21.8 -0.9
PTQR Pietraquaria 89.26 312 P **P** **06 46 09.3 0.0**
comp=Z,15nm,0.8s,mb5.4
AQU L'Aquila 89.28 312⇑ *iP* **P** **06 46 10.1 +0.7**
AQU L'Aquila 89.28 312 *eP* **P** **06 46 09.7 +0.3**
comp=Z,72nm,1.0s,mb6.0
AQU LR LR
comp=Z,369nm,20.0s,MS4.8
MYKA Terra Mystica 89.39 317⇑ *i*PcP PcP 06 46 10.3 -0.8
comp=Z,38nm,1.6s
BRG Berggiesshubel 89.49 321 *eP* **P** **06 46 10.4 +0.2**
BRG *i* pP 06 46 25.4 +0.8
BRG pmax pmax
comp=Z,22nm,1.3s,mb5.3
BRG pmax pmax
comp=Z,52nm,2.0s,mb5.5
BRG Berggiesshubel 89.49 321 *eP* **P** **06 46 10.3 +0.2**
comp=Z,37nm,1.3s,mb5.5
BRG *i* pP 06 46 25.4 +0.7
comp=Z,88nm,2.0s
GEC2 GERESS Array S 89.50 319 *eP* **P** **06 46 10.4 +0.1**
GEC2 pmax pmax
comp=Z,108nm,1.6s,mb5.9
GEC2 GERESS Array S 89.50 319 *eP* **P** **06 46 10.4 +0.1**
comp=Z,108nm,1.6s,mb5.9
GERES GERESS Array B 89.50 319 P **P** **06 46 10.3 0.0**
comp=Z,8.6nm,0.8s,mb5.2,baz=99,slow=4.2,SNR=39
GERES pP pP 06 46 24.5 -0.2
comp=Z,7.5nm,0.9s,baz=104,slow=4.3,SNR=9.4
GERES LR LR 07 27 24.0
comp=Z,202nm,21.6s,MS4.5,baz=84,slow=36
GERES GERESS Array B 89.50 319 P **P** **06 46 10.3 0.0**
GERES *PP pP 06 46 24.5 -0.3
NRCA Norcia 89.52 313 P **P** **06 46 10.2 -0.3**
comp=Z,9.7nm,1.2s,mb5.0
PTCC Patocco-Chiusa 89.58 316 P **P** **06 46 10.6 -0.1**
comp=Z,344nm,3.9s
KHC Kasperske Hory 89.60 319 *eP* **P** **06 46 11.4 +0.7**
KHC *ep*P pP 06 46 22.5 -2.7
KBA Koelnbreinsper 89.62 317⇑ *i*PcP PcP 06 46 11.2 -1.0
comp=Z,20nm,1.5s
RUE Ruedersdorf 89.71 322 *eP* **P** **06 46 11.3 +0.2**
comp=Z,111nm,1.1s,mb6.1
RUE Ruedersdorf 89.71 322 *eP* **P** **06 46 11.3 +0.2**
comp=Z,40nm,0.9s,mb5.8
RUE *ep*P pP 06 46 27.0 +1.3
FSSB Fossombrone 89.82 314 P **P** **06 46 11.6 -0.3**
comp=Z,22nm,1.3s,mb5.3
FBE Freiberg 89.87 321 *eP* **P** **06 46 12.1 +0.2**
comp=Z,124nm,1.8s,mb5.9
RJOB Jochberg 90.04 318 *eP* **P** **06 46 12.2 -0.6**
comp=Z,19nm,1.1s,mb5.3
WET Wettzell 90.06 319 *eP* **P** **06 46 12.9 0.0**
WET *e**PP pP 06 46 27.6 +0.2
WET pmax pmax
comp=Z,47nm,1.3s,mb5.7
WET Wettzell 90.06 319 *eP* **P** **06 46 12.9 0.0**
comp=Z,47nm,1.3s,mb5.7
WET *ep*P pP 06 46 27.6 +0.2
CLL Collm 90.11 321⇑ *iP* **P** **06 46 13.6 +0.5**
CLL *e* pP 06 46 28.0 +0.5
CLL pmax pmax
comp=Z,41nm,1.4s,mb5.6
CLL Collm 90.11 321 *eP* **P** **06 46 12.8 -0.3**
comp=Z,41nm,1.4s,mb5.6
CLL Collm 90.11 321⇑ *iP* **P** **06 46 13.6 +0.5**
comp=Z,41nm,1.4s,mb5.6
CLL *ep*P pP 06 46 28.0 +0.5
CLL *ex* x 06 46 37.0
CLL Collm 90.11 321⇑ *iP* **P** **06 46 13.6 +0.5**
comp=Z,41nm,1.4s,mb5.6
CLL *e* pP 06 46 28.0 +0.5
NKC Novy Kostel 90.40 320 *eP* **P** **06 46 15.6 +1.2**
NKC *ep*P pP 06 46 29.7 +0.8
TANN Tannenbergstha 90.41 320 *eP* **P** **06 46 14.5 +0.1**
comp=Z,32nm,1.4s,mb5.5
WERN Wernitzgruen 90.45 320 *eP* **P** **06 46 14.9 +0.2**
comp=Z,31nm,1.3s,mb5.5
GUNZ Gunzen 90.48 320 *eP* **P** **06 46 15.0 +0.2**
comp=Z,49nm,1.4s,mb5.6
SFI Santa Sofia 90.50 314 P **P** **06 46 15.9 +0.9**
WERD Werda 90.50 320 *eP* **P** **06 46 14.9 0.0**
comp=Z,24nm,1.1s,mb5.4
ROTZ Rotzenmuhle 90.53 320 *eP* **P** **06 46 15.5 +0.4**
comp=Z,39nm,1.3s,mb5.6
MANZ Manzenberg 90.61 320 *eP* **P** **06 46 15.9 +0.5**
comp=Z,55nm,1.2s,mb5.8
CTI Castel Tesino 90.74 316 P **P** **06 46 16.4 +0.3**
WTTA Wattenberg 90.80 317⇑ *iP* **P** **06 46 16.2 -0.2**
comp=Z,31nm,0.9s,mb5.6,SNR=19
WATA Walderalm 90.84 317⇑ *i*PcP PcP 06 46 16.6 -1.0
comp=Z,15nm,0.8s,SNR=11
MOX Moxa 90.95 320 *eP* **P** **06 46 17.9 +0.9**
comp=Z,53nm,1.9s,mb5.5
MOX *e* pP 06 46 32.6 +1.1
MOX Moxa 90.95 320 *eP* **P** **06 46 17.9 +0.9**
MOX *e* pP 06 46 32.6 +1.1
MOX pmax pmax
comp=Z,53nm,1.9s,mb5.5
MOX Moxa 90.95 320 *eP* **P** **06 46 17.0 0.0**
comp=Z,35nm,1.6s,mb5.4
MOX *ep*P pP 06 46 31.9 +0.4
GRA1 Grafenberg Arr 91.17 319 *eP* **P** **06 46 18.3 +0.3**
comp=Z,44nm,1.2s,mb5.7
GRF Grafenberg Arr 91.17 319 *eP* **P** **06 46 18.3 +0.3**
GRF pmax pmax
comp=Z,44nm,1.2s,mb5.7
GRF Grafenberg Arr 91.17 319 *eP* **P** **06 46 18.3 +0.3**
GRF pmax pmax
comp=Z,44nm,1.2s,mb5.7
GRF Grafenberg Arr 91.17 319 *eP* **P** **06 46 18.3 +0.3**
comp=Z,44nm,1.2s,mb5.7
RETA Reutte 91.40 317 *i* PcP PcP 06 46 19.1 -1.0
comp=Z,30nm,0.8s,SNR=20
FETA Feichten 91.41 317 *i* PcP PcP 06 46 20.0 -0.1
comp=Z,24nm,1.1s,SNR=13
NOA NORSAR Array B 91.56 331 P **P** **06 46 18.6 -1.0**
comp=Z,6.2nm,0.7s,mb5.0,baz=93,slow=4.7,SNR=19
NOA pP pP 06 46 32.6 -1.5
comp=Z,5.4nm,0.9s,baz=93,slow=4.8,SNR=5.8
NOA LR LR 07 30 34.5
comp=Z,263nm,21.9s,MS4.6,baz=95,slow=38
NOA NORSAR Array B 91.56 331 P **P** **06 46 18.6 -1.0**
NOA *PP pP 06 46 32.6 -1.5
CLZ Clausthal 91.78 322 *eP* **P** **06 46 21.1 +0.3**
CLZ pmax pmax
comp=Z,30nm,1.3s,mb5.5
CLZ Clausthal 91.78 322 *eP* **P** **06 46 21.1 +0.3**
comp=Z,30nm,1.3s,mb5.5
BSEG Bad Segeberg 91.86 324 *eP* **P** **06 46 21.2 +0.1**
BSEG pmax pmax
comp=Z,36nm,1.5s,mb5.5
BSEG Bad Segeberg 91.86 324 *eP* **P** **06 46 21.2 +0.1**
comp=Z,36nm,1.5s,mb5.5
DAVOX Davos/Dischmat 91.98 317 LR LR 07 36 09.2
comp=Z,176nm,18.3s,MS4.5,baz=348,slow=41
DAVA Damuels 91.99 317⇓ *i*PcP PcP 06 46 22.8 +0.1
comp=Z,45nm,0.9s,SNR=8.0
SNAA Sanae 92.01 198 *eP* **P** **06 46 17.0 -4.5**
SNAA pmax pmax
comp=Z,23nm,1.6s
SNAA Sanae 92.01 198 *eP* **P** **06 46 17.0 -4.4**
comp=Z,23nm,1.6s,mb5.3
KEST Kesra 92.16 306 P **P** **06 46 24.2 +1.3**
comp=Z,14nm,0.9s,mb5.3,baz=45,slow=0.4,SNR=41
KEST LR LR 07 29 00.7
comp=Z,140nm,18.7s,MS4.4,baz=300,slow=36
KONO Kongsberg 92.34 329⇑ *eP* **P** **06 46 23.8 +0.6**
STU Stuttgart 92.48 319 *eP* **P** **06 46 24.3 +0.2**
comp=Z,84nm,2.0s,mb5.7
PGF Pioggiola 92.54 312 *eP* **P** **06 46 24.8 +0.3**
comp=Z,72nm,1.1s,mb5.7
PGF Pioggiola 92.54 312 *eP* **P** **06 46 24.8 +0.3**
PGF pmax pmax
comp=Z,36nm,1.1s,mb5.7
PGF Pioggiola 92.54 312 *eP* **P** **06 46 24.8 +0.3**
comp=Z,36nm,1.1s,mb5.7
VNA2 Neumayer--Watz 93.62 198 *eP* **P** **06 46 30.4 +1.5**
baz=103,slow=3.7
VNA2 *e* 06 46 35.4
VNA2 *e* 06 46 39.0
VNA2 *e* pP 06 46 44.4 +1.0
VNA2 *e* 06 46 49.8
SBF Sospel 93.69 314 *eP* **P** **06 46 29.7 -0.1**
comp=Z,24nm,0.8s,mb5.4
SBF Sospel 93.69 314 *eP* **P** **06 46 29.7 -0.1**
SBF pmax pmax
comp=Z,12nm,0.8s,mb5.4
SBF Sospel 93.69 314 *eP* **P** **06 46 29.7 -0.1**
comp=Z,12nm,0.8s,mb5.4
CDF Champ du Feu 93.75 318 *eP* **P** **06 46 29.7 -0.3**
comp=Z,13nm,0.9s,mb5.1
CDF Champ du Feu 93.75 318 *eP* **P** **06 46 29.7 -0.3**
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0

CDF Champ du Feu 93.75 318 *e*P **P** **06 46 29.7 -0.3**
comp=Z,6.4nm,0.9s,mb5.0
VNA1 Neumayer--Stat 93.98 198 *e*P **P** **06 46 32.0 +1.4**
VNA1 *e* 06 46 39.1
VNA1 *e* pP 06 46 41.8 -3.3
VNA1 *e* pP 06 46 46.8 +1.7
MBDF Montbardon 94.16 314 *e*P **P** **06 46 31.3 -0.6**
comp=Z,9.5nm,0.9s,mb4.9
MBDF Montbardon 94.16 314 *e*P **P** **06 46 31.3 -0.6**
MBDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
MBDF Montbardon 94.16 314 *e*P **P** **06 46 31.3 -0.6**
comp=Z,4.8nm,0.9s,mb4.9
LPG La Plagne 94.16 315 *e*P **P** **06 46 32.2 +0.3**
comp=Z,15nm,0.7s,mb5.2
LPG La Plagne 94.16 315 *e*P **P** **06 46 32.2 +0.3**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb5.2
LPG La Plagne 94.16 315 *e*P **P** **06 46 32.2 +0.3**
comp=Z,7.4nm,0.7s,mb5.2
LPL La Plagne 94.17 315 *e*P **P** **06 46 32.2 +0.2**
comp=Z,17nm,0.8s,mb5.2
LPL La Plagne 94.17 315 *e*P **P** **06 46 32.2 +0.2**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
LPL La Plagne 94.17 315 *e*P **P** **06 46 32.2 +0.2**
comp=Z,8.5nm,0.8s,mb5.2
VNA3 Neumayer Olymp 94.22 198 *e*P **P** **06 46 31.8 +0.1**
VNA3 *e* 06 46 37.8
FRF La Foret Royal 94.27 313 *e*P **P** **06 46 31.2 -1.3**
comp=Z,28nm,1.0s,mb5.3
FRF La Foret Royal 94.27 313 *e*P **P** **06 46 31.2 -1.3**
FRF pmax pmax
comp=Z,14nm,1.0s,mb5.3
FRF La Foret Royal 94.27 313 *e*P **P** **06 46 31.2 -1.3**
comp=Z,14nm,1.0s,mb5.3
LMR La Mourre 94.37 313 *e*P **P** **06 46 32.9 0.0**
HAU Haudompre 94.38 318 *e*P **P** **06 46 32.5 -0.4**
comp=Z,43nm,1.0s,mb5.5
HAU Haudompre 94.38 318 *e*P **P** **06 46 32.5 -0.4**
HAU pmax pmax
comp=Z,22nm,1.0s,mb5.5
HAU Haudompre 94.38 318 *e*P **P** **06 46 32.5 -0.4**
comp=Z,22nm,1.0s,mb5.5
CABF La Chapelle 94.59 316 *e*P **P** **06 46 34.1 +0.2**
comp=Z,12nm,0.8s,mb5.1
CABF La Chapelle 94.59 316 *e*P **P** **06 46 34.1 +0.2**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
CABF La Chapelle 94.59 316 *e*P **P** **06 46 34.1 +0.2**
comp=Z,6.1nm,0.8s,mb5.1
ORIF Oris-en-Rattie 94.79 315 *e*P **P** **06 46 33.4 -1.4**
ORIF *e*MLR MLR
comp=Z,501nm,22.0s,MS4.6
MEZF Maizieres J'vi 95.23 318 *e*P **P** **06 46 35.4 -1.3**
TAM Tamanrasset 95.35 293 *e*P **P** **06 46 38.0 +0.1**
TAM *e**PP pP 06 46 53.9 +1.5
TAM pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
TAM Tamanrasset 95.35 293 *e*P **P** **06 46 38.0 0.0**
comp=Z,1.8nm,0.8s,mb4.5
TAM *e*pP pP 06 46 53.9 +1.5
VIVF Saint-Julien-l 95.65 315 *e*P **P** **06 46 38.5 -0.2**
comp=Z,12nm,1.1s,mb4.9
VIVF Saint-Julien-l 95.65 315 *e*P **P** **06 46 38.5 -0.2**
VIVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
VIVF Saint-Julien-l 95.65 315 *e*P **P** **06 46 38.5 -0.2**
comp=Z,5.8nm,1.1s,mb4.9
BAIF Baives 95.70 320 *e*P **P** **06 46 38.9 0.0**
LOR Lormes 96.09 317 *e*P **P** **06 46 40.5 -0.2**
comp=Z,22nm,1.0s,mb5.2
LOR Lormes 96.09 317 *e*P **P** **06 46 40.5 -0.2**
LOR pmax pmax
comp=Z,11nm,1.0s,mb5.2
LOR Lormes 96.09 317 *e*P **P** **06 46 40.5 -0.2**
comp=Z,11nm,1.0s,mb5.2
SMF Signal de Mont 96.14 316 *e*P **P** **06 46 40.7 -0.2**
comp=Z,26nm,1.1s,mb5.2
SMF Signal de Mont 96.14 316 *e*P **P** **06 46 40.7 -0.2**
SMF pmax pmax
comp=Z,13nm,1.1s,mb5.3
SMF Signal de Mont 96.14 316 *e*P **P** **06 46 40.7 -0.2**
comp=Z,13nm,1.1s,mb5.3
AVF Avril sur Loir 96.47 317 *e*P **P** **06 46 42.2 -0.2**
BGF Bois d'Agland 96.83 316 *e*P **P** **06 46 44.2 +0.1**
CAF Calviac 97.49 315 *e*P **P** **06 46 46.1 -1.0**
RJF Les Rejaudoux 97.85 315 *e*P **P** **06 46 47.4 -1.3**
TORD Torodi Ar. Bea 98.97 283 P **P** **06 46 53.7 -0.7**
comp=Z,1.8nm,0.9s,mb4.6,baz=78,slow=5.2,SNR=10
TORD pP pP 06 47 07.9 -1.1
comp=Z,2.2nm,0.9s,baz=69,slow=3.1,SNR=7.3
TORD PP PP 06 50 51.6 -5.4
comp=Z,1.4nm,1.2s,baz=111,slow=3.3,SNR=4.3
TORD LR LR 07 24 58.8
comp=Z,323nm,21.7s,MS4.8,baz=85,slow=31
TORD Torodi Ar. Bea 98.97 283 P **P** **06 46 53.7 -0.7**
TORD pP pP 06 47 07.9 -1.1
TORD PP PP 06 50 51.6 -5.4
TORD LR LR 07 24 58.8
EGAK Eagle 103.86 23 PFAKE 06 47 30.0 +15
EGAK LR LR
comp=Z,380nm,19.0s,MS5.0
SHEL Horse Pasture 104.85 253 PFAKE 06 47 30.0 +10
SHEL LR LR
comp=Z,512nm,19.0s,MS5.1
DBIC Dimbokro 105.39 276 PFAKE 06 51 50.0 +13
DBIC LR LR
comp=Z,396nm,19.0s,MS5.0
RTC Rabat Centre 105.54 305 PFAKE 06 51 50.0 +13
RTC LR LR
comp=Z,339nm,21.0s,MS4.9
LIC Lamto 105.56 276 *e*P Pdif 06 47 26.5 +3.7
comp=Z,4.3nm,0.6s
LIC *e*MLR MLR
comp=Z,476nm,20.8s,MS4.7
LIC Lamto 105.56 276 *e*P Pdif 06 47 26.5 +3.7
comp=Z,2.2nm,0.6s
LIC LR LR
comp=Z,240nm,20.8s,MS4.7
PPT Papeete 108.35 109 *e*LR LR 07 23 38.0
comp=Z,382nm,23.8s
PMSA Palmer Station 112.15 187 *e*PKPdf Pdif 06 47 55.5 +3.4
YKA Yellowknife Ar 114.51 17 PKP PKiKP 06 51 52.2 -0.4
comp=Z,1.0nm,0.8s,baz=328,slow=2.4,SNR=4.5
YKA Yellowknife Ar 114.51 17 PKP PKiKP 06 51 52.2 -0.4
RKT Rikitea 120.50 118 *e*LR LR 07 29 16.6
comp=Z,275nm,25.8s
NLWA Neilton Lookou 121.01 34 PFAKE 06 52 20.0 +14
NLWA LR LR
comp=Z,721nm,19.0s,MS5.3
EDM Edmonton 122.08 23 *e*PKIKP PKPdf 06 52 06.6 -0.8
FCC Fort Churchill 122.53 9 *e*PKIKP PKPdf 06 52 07.3 -0.8
HAWA Hanford 123.97 32 PFAKE 06 52 20.0 +8.7
HAWA LR LR
comp=Z,634nm,19.0s,MS5.3
NEW Newport 123.98 29 PFAKE 06 52 20.0 +8.8
NEW LR LR
comp=Z,726nm,19.0s,MS5.4
HUMO Hull Mountain 124.27 38 PFAKE 06 52 20.0 +8.0
HUMO LR LR
comp=Z,947nm,19.0s,MS5.5
FFC Flin Flon 124.62 16 PFAKE 06 52 20.0 +7.7
FFC LR LR
comp=Z,2μm,22.0s,MS5.7
YBH Yreka Blue Hor 124.90 39 PFAKE 06 52 20.0 +6.8
YBH LR LR
comp=Z,722nm,19.0s,MS5.4
WDC Whiskeytown Da 125.64 40 PFAKE 06 52 30.0 +15
WDC LR LR
comp=Z,532nm,19.0s,MS5.2
HOPS Hopland 126.15 42 PFAKE 06 52 30.0 +14
HOPS LR LR
comp=Z,1μm,21.0s,MS5.5
BMO Blue Mountains 126.16 33 PFAKE 06 52 30.0 +14
BMO LR LR
comp=Z,530nm,19.0s,MS5.2
MOD Modoc 126.28 37 PFAKE 06 52 30.0 +14
MOD LR LR
comp=Z,671nm,20.0s,MS5.3
MSO Missoula 126.53 29 PFAKE 06 52 30.0 +14
MSO LR LR
comp=Z,502nm,19.0s,MS5.2
SCHQ Schefferville 126.58 351 PKP PKPdf 06 52 16.2 +0.2
comp=Z,7.3nm,0.8s,baz=226,slow=2.9,SNR=5.5
MCCM Marconi Confer 126.72 42 PFAKE 06 52 30.0 +13
MCCM LR LR
comp=Z,959nm,19.0s,MS5.5
WVOR Wild Horse Val 126.95 36 PFAKE 06 52 30.0 +13
WVOR LR LR
comp=Z,870nm,19.0s,MS5.5
EGMT Eagleton 127.53 25 PFAKE 06 52 30.0 +12
EGMT LR LR
comp=Z,855nm,20.0s,MS5.4
SAO San Andreas Ge 128.41 43 PFAKE 06 52 30.0 +10
SAO LR LR
comp=Z,1μm,20.0s,MS5.5
CMB Columbia Colle 128.44 41 PFAKE 06 52 30.0 +10
CMB LR LR
comp=Z,528nm,19.0s,MS5.2
BOZ Bozeman (W) 128.49 28 PFAKE 06 52 30.0 +10
BOZ LR LR
comp=Z,768nm,19.0s,MS5.4
HLID Hailey 128.57 32 PFAKE 06 52 30.0 +10
HLID LR LR
comp=Z,729nm,22.0s,MS5.3
BMN Battle Mountai 129.03 37 PFAKE 06 52 30.0 +8.9
BMN LR LR
comp=Z,900nm,21.0s,MS5.4
DGMT Dagmar 129.35 21 PFAKE 06 52 30.0 +8.5
DGMT LR LR
comp=Z,2μm,22.0s,MS5.8
NVAR Mina Array Bea 129.56 40 PKP PKPdf 06 52 22.4 +0.1
comp=Z,2.2nm,0.8s,baz=248,slow=2.3,SNR=13
LKWY Lake 129.88 28 PFAKE 06 52 30.0 +7.4
LKWY LR LR
comp=Z,1μm,20.0s,MS5.5
RLMT Red Lodge 129.98 27 PFAKE 06 52 30.0 +7.2
RLMT LR LR
comp=Z,2μm,21.0s,MS5.7
ELK Elko 129.99 35 PFAKE 06 52 30.0 +7.0
ELK LR LR
comp=Z,789nm,20.0s,MS5.4
ULM Lac du Bonnet 130.24 14 PKP PKPdf 06 52 20.2 -2.9
comp=Z,6.5nm,0.8s,baz=310,slow=1.5,SNR=3.1
ULM Lac du Bonnet 130.24 14 PKP PKPdf 06 52 20.2 -2.9
ULM LR LR
comp=Z,1μm,19.0s,MS5.5
TPH Tonopah 130.46 39 PFAKE 06 52 40.0 +16
TPH LR LR
comp=Z,909nm,20.0s,MS5.5
AHID Auburn Hatcher 130.85 31 PFAKE 06 52 40.0 +15
AHID LR LR
comp=Z,467nm,19.0s,MS5.2
DAC Darwin (Calif) 131.27 41 PFAKE 06 52 40.0 +14
DAC LR LR
comp=Z,1μm,20.0s,MS5.5
BW06 Boulder Array 131.62 29 PFAKE 06 52 40.0 +14
BW06 LR LR
comp=Z,563nm,19.0s,MS5.3
PDAR Pinedale Array 131.62 29 PKP PKPdf 06 52 25.8 -0.2
comp=Z,0.9nm,0.8s,baz=270,slow=1.3,SNR=8.1
PDAR SKP 06 55 59.1
comp=Z,1.6nm,0.7s,baz=284,slow=0.4,SNR=6.4
DUG Dugway 131.74 34 *e*PKIKP PKPdf 06 52 27.0 +0.7
DUG MLR MLR
comp=Z,541nm,20.0s,MS5.2
TPNV Topopah Spring 131.75 40 PFAKE 06 52 40.0 +14
TPNV LR LR
comp=Z,574nm,21.0s,MS5.3
AGMN Agassiz Refuge 132.06 15 PFAKE 06 52 40.0 +13
AGMN LR LR
comp=Z,946nm,20.0s,MS5.5
MVU Marysvale 133.23 35 PFAKE 06 52 40.0 +11
MVU LR LR
comp=Z,1μm,19.0s,MS5.6
EYMN Ely 133.35 11 PFAKE 06 52 40.0 +11
EYMN LR LR
comp=Z,1μm,20.0s,MS5.5
PFO Pinyon Flat Ob 133.55 44 PFAKE 06 52 40.0 +10
PFO LR LR
comp=Z,1μm,19.0s,MS5.5
RCBR Riachuelo 135.61 259 PFAKE 06 52 50.0 +16
RCBR LR LR
comp=Z,410nm,21.0s,MS5.1
WUAZ Wupatki 135.71 38 PFAKE 06 52 50.0 +16
WUAZ LR LR
comp=Z,597nm,20.0s,MS5.3
ISCO Idaho Springs 135.81 29 PFAKE 06 52 50.0 +16
ISCO LR LR
comp=Z,2μm,19.0s,MS5.9
ECSD EROS,Sioux Fal 136.03 18 PFAKE 06 52 50.0 +16
ECSD LR LR
comp=Z,1μm,21.0s,MS5.6
PLCA Paso Flores 136.41 190 PFAKE 06 52 50.0 +15
PLCA LR LR
comp=Z,514nm,21.0s,MS5.2
OGNE Ogallala 136.50 25 PFAKE 06 52 50.0 +15
OGNE LR LR
comp=Z,2μm,21.0s,MS5.9
GLMI Grayling 137.39 5 PFAKE 06 52 50.0 +13
GLMI LR LR
comp=Z,2μm,21.0s,MS5.7
SDCO Great Sand Dun 137.44 31 PFAKE 06 52 50.0 +13
SDCO LR LR
comp=Z,2μm,22.0s,MS5.8
LONY Lake Ozonia 137.59 355 PFAKE 06 52 50.0 +13
LONY LR LR
comp=Z,903nm,21.0s,MS5.5
TUC Tucson 138.15 41 PFAKE 06 52 50.0 +11
TUC LR LR
comp=Z,673nm,19.0s,MS5.4
JFWS Jewell Farm 138.43 12 PFAKE 06 52 50.0 +11
JFWS LR LR
comp=Z,1μm,19.0s,MS5.7
ANMO Albuquerque 139.01 34 PFAKE 06 52 50.0 +10
ANMO LR LR
comp=Z,1μm,20.0s,MS5.6
CBKS Cedar Bluff 139.25 24 PFAKE 06 52 50.0 +10
CBKS LR LR
comp=Z,2μm,20.0s,MS5.9
AAM Ann Arbor 139.98 5 PFAKE 06 52 50.0 +8.4
AAM LR LR
comp=Z,1μm,19.0s,MS5.6
ERPA Erie 140.33 0 PFAKE 06 52 50.0 +7.8
ERPA LR LR
comp=Z,1μm,20.0s,MS5.6
HDIL Hopedale 140.89 12 PFAKE 06 52 50.0 +6.7
HDIL LR LR
comp=Z,865nm,19.0s,MS5.5
AMTX Amarillo 141.60 30 PFAKE 06 53 00.0 +15
AMTX LR LR
comp=Z,3μm,20.0s,MS6.0
SSPA Standing Stone 141.78 358 PFAKE 06 53 00.0 +15
SSPA LR LR
comp=Z,840nm,20.0s,MS5.5
ACSO Alum Creek Sta 142.09 4 PFAKE 06 53 00.0 +15
ACSO LR LR
comp=Z,875nm,20.0s,MS5.5
MCWV Mont Chateau 142.78 0 PFAKE 06 53 00.0 +13
MCWV LR LR
comp=Z,753nm,19.0s,MS5.5
CCM Cathedral Cave 142.82 15 PFAKE 06 53 00.0 +13
CCM LR LR
comp=Z,1μm,21.0s,MS5.7
WMOK Wichita Mounta 143.09 27 *e*PKIKP PKPdf 06 52 43.0 -4.4
WMOK MLR MLR
comp=Z,3μm,19.0s,MS6.1
WCI Wyandotte Cave 143.69 9 PFAKE 06 53 00.0 +12
WCI LR LR
comp=Z,1μm,21.0s,MS5.6
BDFB Brasilia 144.04 239 PKP PKPdf 06 52 47.9 -1.6
comp=Z,4.3nm,0.6s,baz=75,slow=4.8,SNR=25
BDFB Brasilia 144.04 239 PKP PKPdf 06 52 47.9 -1.6
BDFB LR LR
comp=Z,371nm,19.0s,MS5.2
CBN Corbin 144.18 357 PFAKE 06 53 00.0 +11
CBN LR LR
comp=Z,918nm,20.0s,MS5.5
TXAR Lajitas Array 144.68 38 PKP PKPdf 06 52 49.2 -1.1
comp=Z,48nm,0.7s,baz=288,slow=1.2,SNR=380
TXAR pPKP pPKPdf 06 53 04.2 -1.1
comp=Z,25nm,0.8s,baz=231,slow=1.0,SNR=9.1
TXAR Lajitas Array 144.68 38 PKP PKPdf 06 52 49.2 -1.1
TXAR pPKP pPKPdf 06 53 04.2 -1.1
UTMT University of 145.03 13 *e*PKPbc PKPbc 06 52 49.8 -0.3
BLA Blacksburg 145.22 1 *e*PKIKP PKPdf 06 52 49.4 -1.6
BLA MLR MLR
comp=Z,687nm,19.0s,MS5.5
MIAR Mount Ida 145.35 21 *e*PKIKP PKPdf 06 52 50.5 -0.8
MIAR MLR MLR
comp=Z,757nm,22.0s,MS5.4
WVT Waverly 145.46 12 *e*PKIKP PKPdf 06 52 50.3 -1.2
WVT MLR MLR
comp=Z,1μm,22.0s,MS5.6
UALR University of 145.56 19 *e*PKPbc PKPbc 06 52 51.2 -0.6
TZTN Tazewell 145.70 6 *e*PKPbc PKPbc 06 52 51.1 -1.1
JCT Junction City 146.05 32 *e*PKP2 PKPab 06 52 53.2 -0.8
JCT MLR MLR
comp=Z,3μm,20.0s,MS6.1
TKL Tuckaleechee C 146.56 6 *e*PKP2 PKPdf 06 52 53.5 +0.2
BBSR BB Station 146.93 336 PFAKE 06 53 10.0 +16
BBSR LR LR
comp=Z,1μm,21.0s,MS5.6
CNNC Cliffs of the 147.16 357 *e*PKPbc PKPbc 06 52 56.2 -0.3
CNNC LR LR
comp=Z,1μm,19.0s,MS5.7
NATX Nacogdoches 147.42 24 PFAKE 06 53 10.0 +15
NATX LR LR
comp=Z,877nm,19.0s,MS5.6
LCO Las Campanas 147.75 195 *e*PKPbc PKPbc 06 52 56.8 -1.5
HKT Hockley 148.46 28 PFAKE 06 53 10.0 +13
HKT LR LR
comp=Z,1μm,20.0s,MS5.7
VBMS Vicksburg 148.49 18 *e*PKPbc PKPbc 06 53 00.3 +0.1
VBMS LR LR
comp=Z,923nm,21.0s,MS5.5
LRAL Lakeview Retre 148.62 12 *e*PKPbc PKPbc 06 52 59.3 -1.3
LRAL *e*PKPab PKPab 06 53 03.3 -0.8
LRAL LR LR
comp=Z,846nm,19.0s,MS5.5
GOGA Godfrey 148.81 6 *e*PKPbc PKPbc 06 53 00.1 -0.9
GOGA *e*PKPab PKPab 06 53 04.5 -0.3
GOGA LR LR
comp=Z,751nm,20.0s,MS5.5
NHSC New Hope 149.32 1 PFAKE 06 53 10.0 +12
NHSC LR LR
comp=Z,859nm,20.0s,MS5.5
KVTX Kingsville 149.38 33 PFAKE 06 53 10.0 +12
KVTX LR LR
comp=Z,2μm,20.0s,MS5.9
BRAL Brewton 150.56 13 *e*PKPdf PKPdf 06 52 59.0 -1.0
BRAL *e*PKPbc PKPbc 06 53 05.6 +0.2
BRAL LR LR
comp=Z,1μm,21.0s,MS5.6
LVC Limon Verde 153.16 202 *e*PKPbc PKPbc 06 53 13.0 +1.5
LVC LR LR
comp=Z,397nm,19.0s,MS5.2
DWPF Disney 154.25 4 PFAKE 06 53 20.0 +14
DWPF LR LR
comp=Z,3μm,20.0s,MS6.0
ANWB Willy Bob 156.75 312 PFAKE 06 53 20.0 +11
ANWB LR LR
comp=Z,748nm,20.0s,MS5.5
BBGH Gun Hill 157.41 300 PFAKE 06 53 20.0 +10
BBGH LR LR
comp=Z,1μm,21.0s,MS5.6
SJG San Juan 159.45 321 PFAKE 06 53 20.0 +7.6
SJG LR LR
comp=Z,790nm,19.0s,MS5.6
GRGR Grenville 159.68 300 PFAKE 06 53 20.0 +7.2
GRGR LR LR
comp=Z,416nm,20.0s,MS5.3
SDDR Presa de Saban 161.50 334 PFAKE 06 53 20.0 +5.4
SDDR LR LR
comp=Z,2μm,20.0s
NNA Nana 165.57 191 PFAKE 06 53 30.0 +11
NNA LR LR
comp=Z,940nm,19.0s
TGUH Tegucigalpa,Un 166.06 32 PFAKE 06 53 30.0 +11
TGUH LR LR
comp=Z,448nm,21.0s
SDV Santo Domingo 168.91 307 PFAKE 06 53 30.0 +8.9
SDV LR LR
comp=Z,198nm,20.0s
BCIP Isla Barro Col 173.14 2 PFAKE 06 53 30.0 +6.8
BCIP LR LR
comp=Z,391nm,20.0s
OTAV Otavalo 177.67 210 *e*PKPdf PKPdf 06 53 24.8 +0.3
OTAV LR LR
comp=Z,549nm,21.0s

SGS ***02*** *07:38:04.8, 3252N×3557E, h29km*
HLW ***02*** *07:38:12.5, 3180N×3582E, h25km, Mb4.7*
CSEM ***02*** *07:38:13.8±0.1, 3161N×3556E, h17km±1km, Mw3.8, Error ellipse: s-maj=1.8km s-min=1.3km az=101.0*
NEIC ***02*** *07:38:14.1, 3167N×3554E, h10km, ML4.0(GII), After GII.*
NEIC Felt at Jerusalem.
GII ***02*** *07:38:14.5±0.3, 3167N×3555E, h8km, mb4.2/3, ML4.0/7*
GRAL ***02*** *07:38:14.9±1.7, 3163N×3556E, h0km±9km, MD4.0*
ISCJB ***02*** *07:38:14.4±0.5, 3163N±002×3554E±004, h17km±4km, Error ellipse: s-maj=6.3km s-min=2.5km az=7.1*
NIC ***02*** *07:38:16.3±0.3, 3156N×3546E, h71km, ML3.3, MW3.8*
ISC 02 07:38:13.9±0.5, 3163N±002×3558E±004, h6km±3km, n72, σ0s79/86, 1C, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSI	**Dead Sea**	**0.18**	**251**	Pg	**Pg**	**07 38 18.2**	**+0.6**
DSI	**Dead Sea**	**0.18**	**251**	Pg	**Pg**	**07 38 18.3**	**+0.7**
MZDA	**Masada**	**0.37**	**210**	Pg	**Pg**	**07 38 22.5**	**+1.4**
MZDA				Sg	**Sg**	**07 38 27.2**	**+1.3**
MZDA	**Masada**	**0.37**	**210**	Pg	**Pg**	**07 38 22.6**	**+1.5**
MZDA				Sg	**Sg**	**07 38 27.2**	**+1.3**
YTIR	**Yattir**	**0.48**	**237**	Pg	**Pg**	**07 38 24.0**	**+0.9**
YTIR	**Yattir**	**0.48**	**237**	Pg	**Pg**	**07 38 24.1**	**+1.0**
HMDT	**Nahal Hemdat**	**0.62**	**356**	Pg	**Pg**	**07 38 25.6**	**-0.4**
SLTI	**Sal'it**	**0.76**	**323**	Pg	**Pg**	**07 38 27.9**	**-0.8**
SLTI				Sg	**Sg**	**07 38 38.1**	**-0.4**
MMLI	**Mount Malkishu**	**0.82**	**351**	Pg	**Pg**	**07 38 29.1**	**-0.5**
MMLI				Sg	**Sg**	**07 38 40.3**	**0.0**
RTMI	**Retamim**	**0.95**	**233**	Pg	**Pg**	**07 38 32.7**	**+0.5**
HRSH	**Kfar Ka'horesh**	**1.10**	**347**	P	**Pg**	**07 38 44.3**	**+9.2**
OFRI	**'Ofer**	**1.11**	**333**	Pg	**Pg**	**07 38 33.9**	**-1.3**
ZFRI	**Zfri**	**1.12**	**198**	Pg	**Pg**	**07 38 35.8**	**+0.3**
ZFRI				Sg	**Sg**	**07 38 51.4**	**+1.3**
BLGI	**Bet Lehem HaGe**	**1.15**	**343**	Pg	**Pg**	**07 38 34.9**	**-1.1**
KZIT	**Kziot**	**1.24**	**235**	Pg	**Pg**	**07 38 37.4**	**-0.4**
RMNI	**Mount Ramon**	**1.25**	**215**	Pg	**Pg**	**07 38 37.6**	**-0.2**
KSHT	**Keshet**	**1.36**	**8**	Pn	**Pn**	**07 38 38.5**	**-0.9**
PRNI	**Paran**	**1.36**	**201**	Pn	**Pn**	**07 38 39.5**	**+0.1**
MMC6	**Mount Meron ar**	**1.39**	**353**	Pn	**Pn**	**07 38 38.6**	**-1.2**
HRI	**Mount Hermon**	**1.64**	**4**	Pn	**Pn**	**07 38 42.6**	**-0.6**
HRFI	**Mount Harif**	**1.65**	**197**	Pn	**Pn**	**07 38 43.5**	**+0.1**
KRMI	**Paran Flat**	**1.68**	**206**	Pn	**Pn**	**07 38 43.9**	**+0.1**
RSH		**1.73**	**248**	P	**Pn**	**07 38 44.3**	**-0.1**
RCY	**Rachaya**	**1.86**	**6**	*e*P	**Pn**	**07 38 46.5**	**+0.2**
RCY				*e*S	**Sn**	**07 39 10.6**	**+0.5**
MATL	**Matirih**	**1.87**	**354**	*e*P	**Pn**	**07 38 46.5**	**+0.1**
MBRI	**Mt Berech**	**1.92**	**198**	Pn	**Pn**	**07 38 47.1**	**+0.1**
AQBJ	**Aqaba**	**1.95**	**194**	Pn	**Pn**	**07 38 47.8**	**+0.3**
EIL	**Elat**	**2.03**	**196**	Pn	**Pn**	**07 38 48.5**	**0.0**
GLFJ		**2.17**	**193**	*e*P	**Pn**	**07 38 51.6**	**+1.1**
	SNR=48						
HNKL	**Nakhl**	**2.18**	**220**	P	**Pn**	**07 38 50.5**	**-0.2**
BEYL	**Beyrouth**	**2.24**	**358**	*e*P	**Pn**	**07 38 52.5**	**+1.1**
BEYL	**Beyrouth**	**2.24**	**358**	*e*P	**Pn**	**07 38 52.5**	**+1.0**
AMAG	**Maghara**	**2.26**	**245**	P	**Pn**	**07 38 51.6**	**-0.1**
AMAG				S	**Sn**	**07 39 20.8**	**+0.9**
BHL	**Bhannes**	**2.27**	**2**	*e*P	**Pn**	**07 38 53.0**	**+1.1**
BHL				*e*S	**Sn**	**07 39 20.6**	**+0.4**
HQLS		**2.36**	**191**	S	**Sn**	**07 39 28.4**	**+5.9**
HQLS		**2.36**	**191**	P	**Pn**	**07 38 52.1**	**-1.0**
HBST	**Basata**	**2.51**	**197**	P	**Pn**	**07 38 54.9**	**-0.3**
HWQ	**Hawqa**	**2.66**	**7**	*e*P	**Pn**	**07 38 58.7**	**+1.4**
HWQ				*e*S	**Sn**	**07 39 30.2**	**+0.4**
JLOS		**2.88**	**182**	S	**Sn**	**07 39 41.0**	**+5.7**
JLOS		**2.88**	**182**	P	**Pn**	**07 39 00.2**	**-0.2**
SUZ		**2.96**	**234**	P	**Pn**	**07 39 01.1**	**-0.4**
BDAS	**Al Bad'**	**3.21**	**188**	P	**Pn**	**07 39 05.0**	**+0.1**
ZNM		**3.24**	**227**	P	**Pn**	**07 39 05.1**	**-0.1**
RSHS		**3.39**	**192**	P	**Pn**	**07 39 06.6**	**-0.6**
HKAT	**Jabal Katrina**	**3.39**	**204**	P	**Pn**	**07 39 07.0**	**-0.2**
HHAG	**Hagoal**	**3.43**	**242**	P	**Pn**	**07 39 07.7**	**-0.2**
TBKS	**Tabuk**	**3.50**	**166**	P	**Pn**	**07 39 08.1**	**-0.7**
ZAF		**3.51**	**229**	P	**Pn**	**07 39 08.6**	**-0.4**
PHNC	**Paralimni** 1.4nm,0.3s	**3.61**	**339**	P	**Pn**	**07 39 10.8**	**+0.5**
PHNC				S	**Sn**	**07 39 54.3**	**+1.1**
TR2		**3.61**	**207**	P	**Pn**	**07 39 10.0**	**-0.3**
KOT	**Kottamia**	**3.65**	**243**	P	**Pn**	**07 39 10.3**	**-0.5**

CSS	Prodhromos	3.82	331	P	Pn	07 39 13.7	+0.5
CSS				S	Sn	07 39 58.2	-0.3
SZAC	Souni-Zanaja	3.85	325	P	Pn	07 39 14.2	+0.5
SZAC				S	Sn	07 39 58.9	-0.3
TR1		3.88	202	P	Pn	07 39 13.6	-0.4
GLL	Jalalah	3.92	240	P	Pn	07 39 14.2	-0.3
HSAF	As Saff	4.01	241	P	Pn	07 39 15.2	-0.6
HSAF				S	Sn	07 40 02.4	-0.6
MAMC	Mammari	4.05	331	P	Pn	07 39 17.1	+0.7
SQR		4.16	246	P	Pn	07 39 17.6	-0.3
PPCY	Paphos	4.23	321	P	Pn	07 39 19.3	+0.4
AYT	Al 'Ayyat	4.27	244	P	Pn	07 39 18.9	-0.6
ALFC	Alevga	4.31	325⇑	iP	Pn	07 39 20.5	+0.5
	4.0nm,0.4s						
ALFC				S	Sn	07 40 11.1	+0.5
FYM	Al Fayyum	4.36	245	P	Pn	07 39 20.5	-0.1
HHRG	Al Ghardaqah	4.73	202	P	Pn	07 39 24.9	-0.9
BIDS	Bi'r al Bayda'	4.89	165	P	Pn	07 39 27.4	-0.6
COBT	Iskenderun	4.91	6	iP	Pn	07 39 24.2	-4.1
ERMK	Ermenek	5.47	337	iP	Pn	07 39 38.5	+2.6
GZT	Gaziantep	5.94	15	iP	Pb	07 39 55.6	-2.3
ATAB	Bozova	6.24	20	iP	Pg	07 40 09.7	-3.8
HMAT	Matruh	7.28	268	P	Pn	07 39 59.5	-1.2
HFRF	Wahat Farafira	7.75	237	P	Pn	07 40 06.0	-1.3
BEST	Besiri	7.80	35	iP	Pn	07 40 10.4	+2.5
KHAL	Karahalli	8.38	325	iP	Pn	07 40 16.1	+0.3

IDC 02 07:38:21.5±1.0, 8.45N×103.11W, h0km, mb3.7/7, mb1 4.0/8, mb1mx4.0/18, mbtmp3.8/8, ML3.5/1, MS4.5/12, Ms1 4.5/12, ms1mx4.3/19, Error ellipse: s-maj=41.6km s-min=18.8km az=62.0
ISCJB 02 07:38:22.0±0.5, 8.23N±0.07×103.24W±0.08, h10km, mb4.6/31, MS4.6/13, Error ellipse: s-maj=12.1km s-min=8.0km az=145.0
GCMT 02 07:38:24.4±0.2, 8.44N×103.30W, h12km, MW5.2/87, Moment Tensor Solution. s56,c77; s87,c144; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.62±.17; $M_{\theta\theta}$2.58±.15; $M_{\phi\phi}$-0.95±.19; $M_{r\theta}$-2.32±.40; $M_{\theta\phi}$-7.48±.13; $M_{\phi r}$1.61±.46; Best double couple: $M_0$8.05500×10^{16} NP1:ϕ_s354.00000°,δ78.00000°,λ9.00000°. NP2: ϕ_s263.00000°,δ81.00000°,λ168.00000°. Principal axes: T 9.2310, Plg15.0000°, Azm218.0000°; N -2.3460, Plg75.0000°, Azm47.0000°; P -6.8790, Plg2.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 02 07:38:24.4±0.6, 8.33N×103.09W, h10km, mb4.7/26 Error ellipse: s-maj=16.1km s-min=8.5km az=51.0
BJI 02 07:38:24.3, 8.30N×103.10W, h10km, mB5.4, Ms5.2, Msz4.8
ISC 02 07:38:24.2±0.6, 8.26N±0.08×103.21W±0.09, h10km, n65, σ1s08/46, mb4.6/31, MS4.6/13, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	11.96	42	Pn	Pn	07 41 09.2	-5.7
	0.3nm,0.3s,baz=214,slow=10,SNR=7.2						
CMIG				LR	LR	07 44 44.0	
	comp=Z,7μm,21.2s,baz=220,slow=32						
TGUH	Tegucigalpa,Un	16.66	68	ePn	Pn	07 42 17.6	-0.3
	71nm,1.7s						
LPIG	La Paz	17.16	337	LR	LR	07 47 19.1	
	comp=Z,3μm,18.6s,baz=162,slow=32						
TXAR	Lajitas Array	20.97	359	P	P	07 43 06.4	-1.2
	2.7nm,1.1s,baz=181,slow=8.8,SNR=15						
TXAR				LR	LR	07 50 37.7	
	comp=Z,3μm,18.1s,MS4.7,baz=295,slow=35						
JCT	Junction City	22.34	8	eP	P	07 43 21.5	-0.7
	28nm,1.4s,mb4.5						
TUC	Tucson	24.95	345	eP	P	07 43 47.8	0.0
	21nm,1.3s,mb4.5						
OTAV	Otavalo	25.92	107	eP	P	07 43 58.8	+2.0
VBMS	Vicksburg	26.60	25	eP	P	07 44 01.2	-1.5
WUAZ	Wupatki	28.14	346	eP	P	07 44 17.4	+0.8
	13nm,1.2s,mb4.4						
PV01	Paradox Valley	30.14	352	eP	P	07 44 34.3	+0.1
TPNV	Topopah Spring	30.92	339	eP	P	07 44 41.8	+0.6
	68nm,2.6s,mb5.0						
SMCO	Snowmass	30.97	354	eP	P	07 44 41.6	0.0
	27nm,1.9s,mb4.8						
SRU	San Rafael	31.42	349	eP	P	07 44 45.1	-0.5
	5.5nm,1.2s,mb4.3						
SIUC	Southern Illin	31.95	21	eP	P	07 44 49.0	-1.2
SDV	Santo Domingo	32.21	86	eP	P	07 44 53.8	+0.9
	19nm,1.2s,mb4.8						
TPH	Tonopah	32.27	339	P	P	07 44 54.4	+1.3
	6.6nm,1.2s,mb4.3						
MPU	Maple Canyon	32.51	348	eP	P	07 44 55.8	+0.7
	25nm,1.1s,mb5.1						
DAU	Daniels Canyon	32.82	349	eP	P	07 44 58.0	+0.2
DUG	Dugway	32.94	346	eP	P	07 44 59.0	+0.1
	137nm,2.6s,mb5.4						
NVAR	Mina Array Bea	32.98	338	P	P	07 44 56.5	-2.8
	1.5nm,0.9s,mb3.9,baz=104,slow=9.7,SNR=5.6						
ELK	Elko	34.08	344	eP	P	07 45 10.7	+1.9
HDIL	Hopedale	34.47	19	eP	P	07 45 13.0	+0.8
	31nm,1.1s,mb5.2						
PAHR	Pah Rah Range	34.50	338	eP	P	07 45 13.4	+0.9
	104nm,2.7s,mb5.3						
BW06	Boulder Array	34.82	352	eP	P	07 45 14.8	-0.5
	12nm,1.1s,mb4.8						
PDAR	Pinedale Array	34.82	352	P	P	07 45 12.4	-2.9
	1.4nm,0.9s,mb3.9,baz=154,slow=7.4,SNR=11						
PDAR				LR	LR	07 59 32.1	
	comp=Z,384nm,21.7s,MS4.1,baz=192,slow=37						
REDW	Red Top Meadow	35.60	350	eP	P	07 45 22.6	+0.6
	16nm,1.3s,mb4.8						
RRI2	Red Ridge	35.67	350	eP	P	07 45 23.2	+0.7
	7.4nm,0.9s,mb4.6						
LOHW	Long Hollow	35.81	351	eP	P	07 45 22.8	-0.9
	6.9nm,1.0s,mb4.5						
IMW	Indian Meadow	36.14	351	eP	P	07 45 26.6	+0.1
	18nm,1.5s,mb4.8						
HLID	Hailey	36.51	346	eP	P	07 45 29.7	-0.1
	8.5nm,1.2s,mb4.5						
WVOR	Wild Horse Val	36.66	341	eP	P	07 45 30.6	-0.3
	10nm,1.1s,mb4.6						
DLMT	Dillon	37.85	349	eP	P	07 45 41.1	0.0
	12nm,1.2s,mb4.5						
LRM	Limekiln Ridge	38.27	350	eP	P	07 45 45.5	+1.0
BMO	Blue Mountains	38.45	344	eP	P	07 45 47.5	+1.4
	11nm,1.4s,mb4.4						
DGMT	Dagmar	40.09	359	eP	P	07 46 00.9	+1.1
	16nm,1.0s,mb4.7						
NEW	Newport	41.58	346	eP	P	07 46 11.1	-1.0
	9.6nm,1.0s,mb4.4						
WALA	Waterton Lakes	41.65	349	eP	P	07 46 14.4	+1.8
	144nm,2.9s,mb5.1						
ULM	Lac du Bonnet	42.30	7	LR	LR	08 03 40.8	
	comp=Z,636nm,18.1s,MS4.5,baz=315,slow=36						
BBSR	BB Station	43.00	51	eP	P	07 46 24.0	0.0
	78nm,1.2s,mb5.3						
RKT	Rikitea	44.02	224	eS	S	07 53 02.7	-2.0
	182nm,27.5s						
RKT				eLR	LR	07 59 00.4	
	2μm,27.5s,baz=41						
LVC	Limon Verde	45.49	133	eP	P	07 46 45.1	+1.1
EDM	Edmonton	45.59	351	eP	P	07 46 42.7	-1.6
SIV	San Ignacio	48.17	120	P	P	07 47 03.9	-1.2
	5.3nm,1.2s,mb4.4,baz=307,slow=11,SNR=8.9						
CFAA	Coronel Fontan	51.86	142	P	P	07 47 32.6	-0.2
	0.4nm,0.9s,mb3.4,baz=286,slow=12,SNR=3.4						
PPT	Papeete	52.50	240	eS	S	07 55 00.6	-4.2
	246nm,26.5s						
PPT				eLR	LR	08 02 29.7	
	2μm,25.0s,baz=61						
PPT	Papeete	52.50	240	LR	LR	08 03 19.8	
	comp=Z,656nm,19.1s,MS4.7,baz=58,slow=28						
YKA	Yellowknife Ar	54.77	354	P	P	07 47 51.3	-2.5
	0.6nm,0.9s,mb3.6,baz=90,slow=34,SNR=3.6						
YKA				LR	LR	08 11 42.7	
	comp=Z,374nm,19.3s,MS4.5,baz=140,slow=37						
YKA	Yellowknife Ar	54.77	354	P	P	07 47 51.3	-2.5
YKA				LR	LR	08 11 42.7	
PLCA	Paso Flores	57.28	151	LR	LR	08 06 48.1	
	comp=Z,585nm,21.1s,MS4.7,baz=317,slow=30						
BDFB	Brasilia	59.60	113	P	P	07 48 28.0	-0.8
	1.2nm,0.8s,mb4.0,baz=297,slow=21,SNR=4.0						
BDFB				LR	LR	08 13 08.1	
	comp=Z,186nm,18.8s,MS4.2,baz=356,slow=35						
PETK	Petropavlovsk-	88.88	323	LR	LR	08 24 31.8	
	comp=Z,105nm,18.3s,MS4.3,baz=268,slow=31						
DBIC	Dimbokro	97.26	82	LR	LR	08 30 29.2	
	comp=Z,189nm,18.1s,MS4.6,baz=265,slow=32						
VNDA	Vanda	99.08	193	LR	LR	08 27 56.4	
	comp=Z,182nm,18.8s,MS4.6,baz=96,slow=30						
CN2	Changchun	112.03	324	ePKP	PKiKP	07 56 54.5	-5.6
BJI	Beijing	119.73	326	PKP	PKPdf	07 57 15.9	+0.9
BJI				SS	SS	08 15 01.3	-0.1
BJI				LR	LR		
	comp=N,163nm,19.0s,MS4.9						
BJI				LR	LR		
	comp=E,206nm,14.8s,MS4.9						
BJI				LR	LR		
	comp=Z,63nm,21.9s						
HHC	Hu-ho-hao-te	121.59	329	ePKP	PKPdf	07 57 15.3	-3.3
HHC				PP	PP	07 58 49.8	+0.1
HHC				PKS		08 00 51.1	
HHC				SKS	SKSdf	08 04 22.8	-8.1
HHC				PP	PP		
	comp=Z,115nm,4.7s						
HHC				LR	LR		
	comp=N,222nm,14.3s,MS5.2						
HHC				LR	LR		
	comp=E,233nm,10.7s,MS5.2						
HHC				LR	LR		
	comp=Z,320nm,15.5s,MS5.1						
NJ2	Nanjing	123.27	317	ePKP	PKPdf	07 57 20.6	-1.5
ASAR	Alice Springs	123.35	247	PKP	PKPdf	07 57 21.3	-1.1
	comp=Z,1.0nm,0.8s,baz=99,slow=1.9,SNR=9.5						
MKAR	Makanchi Array	124.98	355	PKP	PKPdf	07 57 23.2	-1.6
	comp=Z,0.4nm,0.8s,baz=48,slow=2.0,SNR=4.8						
WMQ	Urumqi	127.23	350	ePKP	PKPdf	07 57 32.2	+2.9
LZH	Lanzhou	129.08	332	ePKP	PKPdf	07 57 29.6	-3.4
LZH				XPKP		07 57 34.3	
LZH				PP	PP		
	comp=Z,75nm,4.3s						
CD2	Chengdu	133.26	328	PKP	PKPdf	07 57 43.5	+2.4
CD2				PP	PP	08 00 12.8	+5.9
CD2				PKS		08 01 18.5	
CD2				SKS	SKSdf	08 04 53.2	+0.3
CD2				SKKS	SKKSac	08 07 03.8	-0.4
CD2				SS	SS	08 17 54.2	+3.8
CD2				PP	PP		
	comp=Z,1μm,18.5s						
CD2				LR	LR		
	comp=N,90nm,10.3s						
CD2				LR	LR		
	comp=Z,140nm,16.6s						
GYA	Guiyang	134.92	321	ePDIF	Pdif	07 54 45.3	+0.5
GYA				PKP	PKPdf	07 57 45.3	+1.0
GYA				PP	PP	08 00 21.5	+3.8
GYA				PP	PP		
	comp=Z,90nm,8.7s						
KMI	Kunming	138.29	323	PKP	PKPdf	07 57 52.1	+1.5
KMI				XPKP		07 57 56.5	
KMI				PP	PP	08 00 43.8	+5.0
KMI				SKKS	SKKSac	08 07 35.3	+0.7
KMI				SS	SS	08 18 51.5	+0.5
KMI				PP	PP		
	comp=Z,58nm,5.8s						
KMI				LR	LR		
	comp=N,137nm,26.3s,MS4.8						
KMI				LR	LR		
	comp=E,190nm,22.7s,MS4.8						
KMI				LR	LR		
	comp=Z,193nm,21.5s,MS4.8						
CMAR	Chiang Mai Arr	145.61	321	PKPbc	PKPbc	07 58 02.5	-1.5
	comp=Z,4.5nm,0.9s,baz=12,slow=3.6,SNR=4.3						

PRE 02 07:41:27.6±1.0, 16.52S×28.78E, h5km, ML5.0
ISCJB 02 07:41:31.6±0.6, 16.90S±0.03×28.49E±0.07, h10km, mb4.0/2, Error ellipse: s-maj=10.2km s-min=4.7km az=170.2
IDC 02 07:41:31.3±3.1, 16.74S×28.86E, h0km, mb4.1/2, mb1 4.3/5, mb1mx3.7/21, mbtmp4.3/5, ML4.4/1, Error ellipse: s-maj=68.7km s-min=28.2km az=87.0
NEIC 02 07:41:32.4±1.2, 16.73S×28.81E, h10km, mb4.2/1, Error ellipse: s-maj=27.8km s-min=9.4km az=88.0
ISC 02 07:41:33.1±0.6, 16.82S±0.03×28.57E±0.07, h10km, n20, σ1s35/31, mb4.0/2, 1C, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	Lusaka	1.58	347⇑	iPn	Pn	07 42 00.6	-0.5
LSZ				eSn	Sn	07 42 19.6	-2.0
MSNA	Messina	5.67	166	eP	Pn	07 42 57.6	+0.2
MSNA				eS	Sn	07 44 03.5	+1.1
MSNA				AML	AML	07 44 34.0	
	comp=Z,196nm,0.4s						
MOPA	Mopani	7.17	159	eP	Pn	07 43 17.0	-1.1
MOPA				eS	Sn	07 44 37.0	-2.6
MOPA				AML	AML	07 45 17.9	
	comp=Z,600nm,0.8s						
LBTB	Lobatse	8.61	198	Pn	Pn	07 43 40.1	+2.3
	comp=Z,6.2nm,0.3s,baz=28,slow=13,SNR=64						
LBTB				Sn	Sn	07 45 13.9	-1.2
	comp=Z,2.6nm,0.3s,baz=322,slow=23,SNR=4.2						
LBTB				Lg		07 45 59.8	
	comp=Z,2.6nm,0.3s,baz=304,slow=22,SNR=7.0						
LBTB	Lobatse	8.61	198	eP	Pn	07 43 38.4	+0.6
LBTB				eS	Sn	07 45 14.3	-0.7
LBTB				AML	AML	07 46 15.6	
	comp=Z,26nm,0.6s						
SLR	Silverton	8.88	182	eP	Pn	07 43 41.7	+0.3
SLR				eS	Sn	07 45 20.9	-0.6
SLR				AML	AML	07 46 19.9	
	comp=Z,74nm,0.5s						
KSR	Koster	9.12	190	eP	Pn	07 43 46.5	+1.8
KSR				eS	Sn	07 45 26.7	-0.8
KSR				AML	AML	07 46 23.1	
	comp=Z,35nm,0.4s						
TSUM	Tsumeb	10.72	256	Pn	Pn	07 44 09.5	+2.8
	comp=Z,1.0nm,0.3s,baz=50,slow=12,SNR=23						
TSUM				Sn	Sn	07 46 05.0	-1.8
	comp=Z,0.1nm,0.3s,baz=49,slow=22,SNR=3.0						
TSUM				Lg		07 47 06.0	
	comp=Z,0.6nm,0.3s,baz=104,slow=16,SNR=3.6						
SWZ	Schweizer	10.74	196	eP	Pn	07 44 08.8	+1.8
SWZ				eS	Sn	07 46 05.9	-1.4
SWZ				AML	AML	07 47 32.9	
	comp=Z,43nm,0.6s						
POGA	Pongola	10.87	166	eP	Pn	07 44 08.7	-0.1
POGA				eS	Sn	07 46 06.0	-4.5
POGA				AML	AML	07 47 24.3	
	comp=Z,62nm,0.6s						
BOSA	Boshof	12.13	194	Pn	Pn	07 44 27.4	+1.4
	comp=Z,1.4nm,0.3s,baz=19,slow=12,SNR=22						
BOSA				Sn	Sn	07 46 36.6	-4.7
	comp=Z,1.2nm,0.3s,baz=85,slow=11,SNR=6.0						
BOSA				Lg		07 47 50.5	
	comp=Z,1.3nm,0.3s,baz=280,slow=17,SNR=5.2						
BOSA	Boshof	12.13	194	Pn	Pn	07 44 27.4	+1.4
BOSA				Sn	Sn	07 46 36.6	-4.7
BOSA				Lg		07 47 50.5	
BOSA	Boshof	12.13	194	eP	Pn	07 44 27.3	+1.4
BOSA				eS	Sn	07 46 38.2	-3.1
BOSA				AML	AML	07 47 54.3	
	comp=Z,14nm,0.7s						
SUR	Sutherland	17.01	203	ePn	Pn	07 45 31.8	+0.7
	comp=Z,33nm,1.5s						
TOA0	Torodi Ar. Sit	39.90	317	eP	P	07 49 06.3	-1.1
TORD	Torodi Ar. Bea	39.90	317	P	P	07 49 07.9	+0.5
	comp=Z,1.5nm,0.4s,mb4.0,baz=130,slow=7.5,SNR=38						
DBIC	Dimbokro	40.46	303	P	P	07 49 14.0	+1.8
	comp=Z,2.3nm,0.9s,mb3.9,baz=117,slow=11,SNR=2.9						
DBIC	Dimbokro	40.46	303	P	P	07 49 14.0	+1.8
NVAR	Mina Array Bea	143.90	313	PKP	PKPdf	08 01 09.1	+0.1
	comp=Z,1.7nm,0.7s,baz=64,slow=4.1,SNR=15						
NVAR	Mina Array Bea	143.90	313	PKP	PKPdf	08 01 09.1	+0.1

DDA 02 08:16:12.8, 36.87N×26.40E, h7km±2km, Md3.1
ISCJB 02 08:16:13.4±0.5, 36.87N±0.03×26.43E±0.03, h10km, Error ellipse: s-maj=4.6km s-min=3.2km az=153.0
ISK 02 08:16:14.1, 36.83N×26.50E, h10km, MD2.8
THE 02 08:16:15.4, 36.86N×26.30E, h9km±3km, Error ellipse: s-maj=3.2km s-min=0.6km az=248.0
ISC 02 08:16:13.6±0.5, 36.85N±0.03×26.42E±0.03, h8km±6km, n15, σ0s63/25, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.74	73	ePG	Pg	08 16 27.7	-0.3
BODT				eSG	Sg	08 16 38.0	+0.3
APE	Apeiranthos	0.75	288	P	Pg	08 16 27.8	-0.2
APE				S	Sg	08 16 37.9	+0.1
BDRM	Kayabasi	0.85	75	iP	Pg	08 16 29.3	-0.6
BDRM				iS	Sg	08 16 41.9	+0.9
THR1	Thera Island	0.91	239	P	Pg	08 16 31.0	-0.1
THR1				S	Sg	08 16 43.8	+1.0
THR4	Thira Island,	0.91	245	P	Pg	08 16 31.2	+0.1
THR3	Thira Island,	0.93	242	P	Pg	08 16 31.0	-0.5
DAT	Datca	0.94	97	ePG	Pg	08 16 31.4	-0.2
DAT				eSG	Sg	08 16 43.6	-0.2
THR6	Thira Island,	0.96	240	P	Pg	08 16 31.9	-0.1
GCAM	G?zelcaml?	1.07	37	iP	Pg	08 16 33.5	-0.7
GCAM				iS	Sg	08 16 48.2	+0.1
YER	Yerkesik	1.52	78	ePN	Pn	08 16 41.6	+0.6
URLA	Izmir	1.52	5	iP	Pn	08 16 40.7	-0.4
URLA				iS	Sg	08 17 03.7	+1.2
CHOS	Chios island	1.57	349	P	Pn	08 16 42.0	+0.3
CHOS				S	Sn	08 17 01.6	-0.6
BLCB	Balcova	1.61	18	ePN	Pn	08 16 43.1	+0.7
BLCB	Balcova	1.61	18	P	Pg	08 16 43.1	-1.5
BLCB				S	Sg	08 17 05.0	-0.5
KDAG	Bornova	1.69	23	iP	Pg	08 16 45.5	-0.6
KDAG				iS	Sg	08 17 09.2	+1.1

MAN 02 08:20:37, 13.82N×120.35E, h62km, mb3.6, ML2.3, MS1.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.14	230	eP	Pn	08 20 48.8	+2.4
LUBP				eS	Sn	08 20 55.9	+2.7
TGY	Tagaytay City	0.63	64⇑	iP	Pn	08 20 53.7	+3.1
TGY				eS	Sn	08 21 04.3	+3.8
PGP	Puerto Galera	0.66	119	eP	Pn	08 20 52.7	+1.7
SJMP	San Jose	1.54	151	eP	Pn	08 21 04.5	+2.1
SJMP				eS	Sn	08 21 24.1	+2.7
BUSP	Coron	1.81	185	eP	Pn	08 21 07.3	+1.3
ENPP	El Nido	2.75	199	eP	Pn	08 21 20.3	+1.5

BJI 02 08:24:02.9, 40.07N×103.51E, h25km, ML3.5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	2.92	258	PG	Pn	08 24 55.8	+8.0
GTA				S	Sn	08 25 28.0	+5.9
GTA				SG	Sn	08 25 32.7	+11
GTA				Smax			
	comp=N,265nm,0.6s						
GTA				Smax			
	comp=E,148nm,0.5s						
HHC	Hu-ho-hao-te	6.19	80	ePG	Pn	08 25 51.6	+19
HHC				S	Sn	08 26 54.5	+12
HHC				Smax			
	comp=N,51nm,0.4s						
HHC				Smax			
	comp=E,39nm,0.3s						

ISCJB 02 09:26:38.8±1.1, 41.10N±0.07×39.83E±0.08, h11km±7km, Error ellipse: s-maj=12.2km s-min=9.5km az=145.4
DDA 02 09:26:38.4, 41.10N×39.93E, h7km±3km, Md2.8
CSEM 02 09:26:39.0±0.1, 40.94N×39.91E, h10km, MD2.7, Error ellipse: s-maj=3.3km s-min=1.9km az=175.0
ISK 02 09:26:39.6, 40.90N×39.85E, h2km, MD2.7
ISC 02 09:26:39.4±0.9, 41.05N±0.07×39.84E±0.10, h13km±6km, n9, σ0s79/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTUT	Trabzon	0.08	223	PG	Pg	09 26 42.3	+0.1
KTUT				eSG	Sg	09 26 44.2	0.0
MACK	Trabzon	0.12	207	iP	Pg	09 26 42.8	+0.2
MACK				iS	Sg	09 26 45.5	+0.6
GUMT	Gumushane	0.65	205	ePG	Pg	09 26 50.7	-1.3
GUMT				eSG	Sg	09 26 58.8	-1.7
ESPY	Espiye-Giresun	0.85	262	ePG	Pg	09 26 57.0	+1.1
KOPT	Kop Dagi	1.14	154	iP	Pb	09 27 01.2	+0.2
KOPT				iS	Sb	09 27 17.4	+1.7
EZC	Erzincan	1.30	181	ePN	Pn	09 27 03.6	+0.5
DBAD	Bademkaya	1.41	90	iP	Pn	09 27 04.2	-0.5
DBAD				iS	Sn	09 27 22.2	-0.8
DDEM	Demirkent	1.46	95	iP	Pn	09 27 04.9	-0.5
DDEM				iS	Sn	09 27 24.5	+0.3
DAGI	Agillar	1.57	88	iP	Pn	09 27 06.9	-0.1
DAGI				iS	Sn	09 27 27.2	+0.1

GUC 02 09:35:27.8±0.6, 22.39S×70.29W, h37km±3km, MD3.5, ML3.1, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	Tocopilla	0.30	16	iP	Pn	09 35 35.6	-0.3
TOCH				iS	Sn	09 35 41.0	-0.4
TOCH				AML	AML	09 35 41.2	
	comp=N,2μm,0.1s						
CEN1	Los Morros	1.00	175⇓	iP	Pn	09 35 48.7	+3.4
CEN1				iS	Sn	09 36 04.7	+6.4
ANCH	Antofagasta	1.29	185	eP	Pn	09 35 50.1	+0.7
ANCH				iS	Sn	09 36 07.3	+1.8
LVC	Limon Verde	1.29	100	eP	Pn	09 35 51.1	+1.8
LVC				iS	Sn	09 36 08.4	+2.9
SPCH	San Pedro de A	2.00	105	AML	AML	09 36 37.1	
	comp=E,152nm,0.4s						

IDC 02 09:38:50.1±1.3, 2.84N×127.22E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, Error ellipse: s-maj=176.2km s-min=18.1km az=68.0
ISCJB 02 09:38:53.1±0.9, 2.8N±0.4×127.1E±10, h33km, mb4.0/8, Error ellipse: s-maj=146.2km s-min=12.0km az=159.4
NEIC 02 09:38:55.0±1.0, 2.83N×127.38E, h35km, mb4.3/3, Error ellipse: s-maj=155.0km s-min=12.9km az=70.0
ISC 02 09:38:55.1±0.9, 2.8N±0.4×127.3E±10, h35km, n10, σ1s12/10, mb4.0/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	23.61	163	eP	P	09 44 02.2	-1.0
	1.7nm,0.4s,mb3.8						
WB2	Warramunga Arr	23.62	163	eP	P	09 44 02.7	-0.6
ASAR	Alice Springs	27.07	167	P	P	09 44 36.6	+2.1
	0.4nm,0.3s,mb3.5,baz=342,slow=7.8,SNR=12						
ASAR				PcP	PcP	09 47 54.9	-0.4
	0.5nm,0.6s,baz=358,slow=2.3,SNR=6.3						
STKA	Stephens Creek	37.05	160	eP	P	09 46 01.8	-0.1
	2.3nm,0.5s,mb4.3						
STKA	Stephens Creek	37.05	160	P	P	09 46 01.6	-0.2
	3.1nm,0.5s,mb4.4,baz=320,slow=10,SNR=11						
ULN	Ulaanbaatar	48.19	342	eP	P	09 47 32.7	+0.7
	3.9nm,0.9s,mb4.4						
SONM	Songino Array	48.37	341	P	P	09 47 33.4	0.0
	0.7nm,0.6s,mb3.8,baz=156,slow=7.1,SNR=5.2						
MKAR	Makanchi Array	58.64	325	P	P	09 48 47.5	-1.3
	0.4nm,0.5s,mb3.7,baz=120,slow=7.4,SNR=9.1						
ZALV	Zalesovo Beam	61.67	333	P	P	09 49 08.4	-1.0
	0.3nm,0.3s,mb3.8,baz=120,slow=8.7,SNR=3.7						
KURK	Kurchatov	62.83	328	P	P	09 49 19.0	+1.7
	0.7nm,0.4s,mb4.2,baz=126,slow=6.0,SNR=5.8						

IDC 02 09:46:39.2±1.8, 13.15N×88.98W, h0km, mb3.8/7, mb1 4.2/8, mb1mx4.0/19, mbtmp3.9/8, ML4.1/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/23, Error ellipse: s-maj=47.2km s-min=27.6km az=28.0
ISCJB 02 09:46:47.0±0.6, 13.2N±0.1×89.47W±0.08, h69km±7km, mb3.8/6, Error ellipse: s-maj=22.1km s-min=4.2km az=33.2
CASC 02 09:46:46.7±1.9, 13.12N×89.58W, h32km±5km, MD4.3, ML3.9, mb3.8(NEIC)
NEIC 02 09:46:48.2±2.2, 13.13N×89.40W, h76km±15km, mb3.8/1, MD4.4(SNET), Error ellipse: s-maj=38.8km s-min=12.7km az=200.0
NEIC Felt [II] at San Salvador.
ISC 02 09:46:48.4±0.5, 13.4N±0.1×89.43W±0.08, h58km±9km, n51, σ1s28/39, mb3.9/6, 11C-13D, El Salvador

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

SNET	**Serv Nac Est T**	**0.39**	**30**	*e*P	x	09 46 59.6	
SNET				*e*S	x	09 47 09.9	
SNET				*i*		09 47 12.1	
	comp=Z,16µm,0.4s						
BOQS	**Boqueron**	**0.41**	**21**	⇑*i*P	x	09 47 00.2	
LFRS	**El Faro**	**0.46**	**53**	⇓*i*P	x	09 47 00.5	
SONS		**0.48**	**325**	*e*P	x	09 46 58.7	
SONS				*e*S	x	09 47 07.8	
SONS				AML	x	09 47 08.2	
	comp=Z,12µm,0.2s						
LFU	**La Fuente**	**0.51**	**38**	⇓*i*P	x	09 47 01.7	
SBLS	**San Blas**	**0.53**	**339**	⇓*e*P	x	09 47 00.6	
LBRS	**Las Brisas**	**0.55**	**44**	⇓*i*P	x	09 47 02.1	
SNJE	**San Jose**	**0.55**	**342**	⇓*i*P	x	09 47 00.9	
RTR	**El Retiro**	**0.59**	**339**	⇓*i*P	x	09 47 01.4	
SNVI	**San Vicente**	**0.64**	**65**	⇓*e*P	x	09 47 02.8	
RBDL	**Robledal**	**0.80**	**342**	⇓*i*P	x	09 47 04.6	
MTO2	**Montecristo 2**	**1.05**	**4**	⇓*i*P	x	09 47 09.1	
VSM	**San Miguel**	**1.13**	**86**	⇑*e*P	x	09 47 08.7	
BLLM	**Bellamira**	**1.17**	**85**	⇑*e*P	x	09 47 09.4	
CAHU	**Cacacuatique**	**1.26**	**70**	⇓*e*P	x	09 47 11.4	
IXG	**Ixpaco**	**1.29**	**310**	⇑*e*P	**Pn**	**09 47 09.1**	**-1.2**
PCG	**Pacaya**	**1.54**	**313**	*e*P	**Pn**	**09 47 14.3**	**+0.6**
PCG				*e*S	**Sn**	**09 47 35.5**	**+2.8**
CNCH	**Conchagua**	**1.56**	**92**	⇑*e*P	x	09 47 14.5	
CNCH				*e*S	x	09 47 35.8	
FUG	**Fuego 3**	**1.75**	**309**	⇑*e*P	**Pn**	**09 47 15.8**	**-0.7**
FG6		**1.85**	**311**	⇑*e*P	**Pn**	**09 47 17.7**	**-0.2**
FG6				*e*S	**Sn**	**09 47 40.1**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.22**	**71**	⇓*e*P	**Pn**	**09 47 24.3**	**+1.5**
TGUH	**Tegucigalpa,Un**	**2.22**	**71**	⇓*i*Pn	**Pn**	**09 47 24.3**	**+1.5**
JAT	**Jato**	**2.35**	**295**	⇑*e*P	**Pn**	**09 47 23.2**	**-1.4**
CRIN	**San Cristobal**	**2.41**	**105**	*e*P	**Pn**	**09 47 25.3**	**-0.2**
TEL3	**Telica 3**	**2.64**	**107**	⇓*e*P	**Pn**	**09 47 27.3**	**-1.2**
TELN	**Telica**	**2.64**	**106**	*e*P	**Pn**	**09 47 30.1**	**+1.5**
CNGN	**Cerro Negro**	**2.79**	**107**	*e*P	**Pn**	**09 47 30.9**	**+0.2**
MIRN	**Miramar**	**2.80**	**108**	*e*P	**Pn**	**09 47 29.2**	**-1.6**
COPN	**Copaltepe**	**3.00**	**112**	*e*P	**Pn**	**09 47 31.9**	**-1.7**
COPN				*e*S	**Sn**	**09 48 07.8**	**-0.5**
CSAN		**3.16**	**111**	*e*P	**Pn**	**09 47 35.6**	**0.0**
TISN	**Laguna Tiscapa**	**3.31**	**111**	*e*P	**Pn**	**09 47 37.9**	**+0.1**
MGAN	**Managua**	**3.33**	**111**	⇑*e*P	**Pn**	**09 47 37.7**	**-0.3**
HUEN		**3.33**	**107**	*e*P	**Pn**	**09 47 36.8**	**-1.3**
PRS1	**Puriscal**	**6.03**	**123**	*e*P	**Pn**	**09 48 17.0**	**+2.0**
PRS1				*e*S	**Sn**	**09 49 23.4**	**+0.7**
CMIG	**Matias Romero**	**6.45**	**306**	Pn	**Pn**	**09 48 21.6**	**+0.8**
	comp=Z,3.8nm,0.3s,baz=97,slow=9.3,SNR=71						
CMIG				Sn	**Sn**	**09 49 31.2**	**-1.8**
	comp=Z,3.7nm,0.3s,baz=293,slow=11,SNR=5.6						
CMIG				LR	LR	09 51 20.0	
	comp=Z,286nm,18.8s,baz=119,slow=41						
CMIG	**Matias Romero**	**6.45**	**306**	Pn	**Pn**	**09 48 21.6**	**+0.8**
CMIG				Sn	**Sn**	**09 49 31.2**	**-1.8**
CMIG				LR	LR	09 51 20.0	
URSC	**Urasca**	**6.55**	**122**	*e*P	**Pn**	**09 48 21.4**	**-0.7**
BUS	**Buena Vista**	**6.72**	**124**	⇑*e*P	**Pn**	**09 48 26.4**	**+2.0**
ACR	**Cerro Adams**	**7.72**	**127**	*e*P	**Pn**	**09 48 39.6**	**+1.4**
CHI2		**17.74**	**118**	⇑*e*P	x	09 47 25.1	
SDV	**Santo Domingo**	**18.97**	**102**	P	**Pn**	**09 51 02.9**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=317,slow=8.7,SNR=12						
JCT	**Junction City**	**19.56**	**332**	Pn	**Pn**	**09 51 14.2**	**+1.0**
	comp=Z,5.3nm,1.0s						
TXAR	**Lajitas Array**	**20.68**	**323**	P	**P**	**09 51 26.5**	**+2.9**
	comp=Z,2.4nm,0.6s,baz=145,slow=11,SNR=36						
TXAR				PcP	PcP	09 55 32.8	+0.9
	comp=Z,0.2nm,0.5s,baz=124,slow=5.4,SNR=3.9						
TKL	**Tuckaleechee C**	**22.80**	**12**	P	**P**	**09 51 46.1**	**0.0**
	comp=Z,2.5nm,0.7s,mb3.7,baz=183,slow=11,SNR=4.1						
TKL				LR	LR	10 01 19.3	
	comp=Z,188nm,19.2s,baz=258,slow=38						
PDAR	**Pinedale Array**	**34.09**	**333**	P	**P**	**09 53 27.8**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=131,slow=13,SNR=3.7						
NVAR	**Mina Array Bea**	**35.77**	**320**	P	**P**	**09 53 44.7**	**+2.9**
	comp=Z,1.7nm,0.7s,mb4.1,baz=132,slow=9.0,SNR=14						
NVAR	**Mina Array Bea**	**35.77**	**320**	P	**P**	**09 53 44.7**	**+2.9**
SCHQ	**Schefferville**	**45.01**	**18**	P	**P**	**09 54 56.6**	**-1.3**
	comp=Z,3.3nm,0.7s,mb4.3,baz=251,slow=3.5,SNR=6.8						
YKA	**Yellowknife Ar**	**52.26**	**346**	P	**P**	**09 55 52.8**	**-0.6**
	comp=Z,1.5nm,0.4s,mb4.2,baz=131,slow=7.9,SNR=16						
TORD	**Torodi Ar. Bea**	**88.10**	**77**	P	**P**	**09 59 30.6**	**-2.8**
	comp=Z,0.1nm,0.3s,mb3.5,baz=137,slow=38,SNR=2.4						
CMAR	**Chiang Mai Arr**	**147.34**	**345**	PKPbc	PKPbc	10 06 25.6	-0.8
	comp=Z,1.8nm,0.6s,baz=342,slow=3.4,SNR=9.8						

*ISCJB **02** 09:51:12.8±0.7, 550N±02×352W±02, h10km, mb3.7/6, MS3.5/6, Error ellipse: s-maj=29.0km s-min=12.4km az=8.1*

*IDC **02** 09:51:13.2±0.9, 5504N×35.13W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.7/25, mbtmp3.8/8, ML3.2/2, MS3.6/7, Ms1 3.6/7, ms1mx3.2/37, Error ellipse: s-maj=36.4km s-min=19.4km az=14.0*

ISC 02 09:51:14.9±0.7**, 550N**±02×**352W**±02**, h10**km**, n16, σ0s82**/9**, mb3.7**/6**, MS3.5**/6**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.11**	**282**	P	**Pn**	**09 55 25.4**	**-0.8**
	0.4nm,0.3s,baz=35,slow=18,SNR=4.1						
SCHQ				LR	LR	10 00 45.7	
	comp=Z,172nm,20.0s,baz=87,slow=32						
EKA	**Eskdalemuir Ar**	**18.22**	**76**	P	**Pn**	**09 55 27.9**	**+0.3**
	0.1nm,0.3s,baz=267,slow=11,SNR=3.9						
NOA	**NORSAR Array B**	**24.86**	**57**	LR	LR	10 04 04.8	
	comp=Z,60nm,20.9s,MS3.1,baz=0.0,slow=31						
DAVOX	**Davos/Dischmat**	**29.15**	**87**	LR	LR	10 07 57.8	
	comp=Z,168nm,20.2s,MS3.6,baz=261,slow=34						
GERES	**GERESS Array B**	**30.25**	**81**	LR	LR	10 07 33.6	
	comp=Z,92nm,21.2s,MS3.4,baz=286,slow=32						
VRAC	**Vranov**	**31.66**	**79**	LR	LR	10 10 16.3	
	comp=Z,120nm,19.6s,MS3.6,baz=78,slow=36						
ULM	**Lac du Bonnet**	**36.12**	**288**	LR	LR	10 12 52.7	
	comp=Z,125nm,18.9s,MS3.7,baz=93,slow=36						
TKL	**Tuckaleechee C**	**38.30**	**260**	LR	LR	10 13 44.5	
	comp=Z,120nm,18.7s,MS3.7,baz=28,slow=35						
PDAR	**Pinedale Array**	**48.14**	**288**	P	**P**	**09 59 54.1**	**-0.6**
	0.7nm,0.6s,mb3.9,baz=63,slow=7.7,SNR=7.9						
TORD	**Torodi Ar. Bea**	**50.69**	**131**	P	**P**	**10 00 14.8**	**+0.4**
	0.9nm,1.0s,mb3.7,baz=322,slow=8.6,SNR=3.4						
DBIC	**Dimbokro**	**53.98**	**142**	P	**P**	**10 00 37.9**	**-0.9**
	3.2nm,0.8s,mb4.3,baz=328,slow=6.4,SNR=3.8						
HAKT	**HAKKARI**	**54.25**	**74**	*i* P	**P**	**10 00 45.1**	**+4.5**
TXAR	**Lajitas Array**	**54.34**	**271**	P	**P**	**10 00 43.0**	**+1.6**
	0.9nm,1.1s,mb3.6,baz=64,slow=6.3,SNR=3.3						
NVAR	**Mina Array Bea**	**55.93**	**290**	P	**P**	**10 00 53.2**	**+0.5**
	0.3nm,0.7s,mb3.5,baz=66,slow=7.3,SNR=3.5						
MKAR	**Makanchi Array**	**65.72**	**42**	P	**P**	**10 01 58.7**	**-0.5**
	0.2nm,0.5s,mb3.4,baz=333,slow=5.1,SNR=4.9						
ASAR	**Alice Springs**	**147.66**	**19**	PKPbc	PKPbc	10 10 58.5	-0.7
	1.1nm,0.7s,baz=340,slow=2.3,SNR=9.9						

*TEH **02** 09:59:06.6, 38.10N×4639E, h5km, ML3.8*

*ISCJB **02** 10:00:01.7±0.3, 38.11N±003×4645E±003, h10km, Error ellipse: s-maj=4.5km s-min=3.0km az=21.9*

*THR **02** 10:00:01.4±0.8, 3825N×4650E, h14km±24km, ML3.6*

*CSEM **02** 10:00:01.7±0.1, 3808N×4639E, h16km, ML3.6, Error ellipse: s-maj=2.7km s-min=1.7km az=31.0*

*NSSP **02** 10:00:01.7, 38.13N×4642E, h15km, ML3.2*

ISC 02 10:00:02.4±0.3**, 3820N**±003×**4642E**±003**, h10**km**, n47, σ1s24**/59**, 2C-4D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITBZ	**Tabriz**	**0.21**	**279**	*e*Sg	**Sg**	**10 00 10.7**	**+0.8**
ITBZ	**Tabriz**	**0.21**	**279**	⇑*e*Pg	**Pg**	**10 00 06.7**	**-0.2**
ITBZ				*e*Sg	**Sg**	**10 00 10.7**	**+0.8**
ITBZ				*e*		10 00 11.3	
IHRS	**Heris**	**0.51**	**76**	⇓*e*Pg	**Pg**	**10 00 12.3**	**0.0**
IHRS				*e*		10 00 12.6	
IHRS				*e*Sg	**Sg**	**10 00 20.7**	**+1.7**
IBST	**Bostanabad**	**0.63**	**143**	⇑*e*Pg	**Pg**	**10 00 11.8**	**-2.7**
IBST				*e*		10 00 23.8	
ISHB	**Shabestar**	**0.63**	**278**	⇓*e*Pg	**Pg**	**10 00 14.0**	**-0.7**
ISHB				*e*Sg	**Sg**	**10 00 22.4**	**-0.6**
ISHB				*e*		10 00 24.1	
ISRB	**Sarab**	**1.06**	**110**	⇓*e*Pg	**Pn**	**10 00 21.0**	**-2.3**
ISRB	**Sarab**	**1.06**	**110**	⇓*e*Pg	**Pn**	**10 00 21.0**	**-2.3**
ISRB				*e*		10 00 39.9	
NAX	**Nakhchivan**	**1.21**	**324**	P	**Pn**	**10 00 25.7**	**+0.3**
	SNR=101						
NAX				S	**Sb**	**10 00 43.2**	**+2.1**
GRMI	**Germi**	**1.31**	**62**	*e*Pg	**Pn**	**10 00 24.3**	**-2.5**
GRMI				AML	AML	10 00 46.2	
	comp=E,2µm,0.5s						
GRMI				AML	AML	10 00 46.3	
	comp=N,942nm,0.4s						
MAKU	**Maku**	**1.78**	**311**	*e*Pg	**Pn**	**10 00 34.3**	**+1.1**
MAKU				*e*Sg	**Sg**	**10 00 58.4**	**-1.2**
MAKU				AML	AML	10 01 02.2	
	comp=N,601nm,0.5s						
MAKU				AML	AML	10 01 02.6	
	comp=E,337nm,0.3s						
MAKU	**Maku**	**1.78**	**311**	*e*Pg	**Pn**	**10 00 34.3**	**+1.1**
	SNR=90						
MAKU				*e*Sg	**Sg**	**10 00 58.4**	**-1.2**
	SNR=90						
GLBA	**Clilabad**	**1.86**	**55**	P	**Pg**	**10 00 36.9**	**-1.3**
	SNR=8.9						
GLBA				S	**Sg**	**10 01 03.2**	**+0.8**
BRDA	**Brd**	**2.14**	**16**	P	**Pn**	**10 00 38.8**	**+0.6**
	SNR=3.8						
ZNJK	**Zanjan**	**2.37**	**130**	*e*P	**Pn**	**10 00 41.4**	**+0.1**
ZNJK				AML	AML	10 01 21.8	
	comp=N,261nm,0.5s						
TVAN	**Van**	**2.39**	**279**	*i* P	**Pn**	**10 00 44.4**	**+2.8**
GANJ	**Ganja**	**2.44**	**358**	P	**Pg**	**10 00 47.1**	**-2.2**
	SNR=15						
GANJ				S	**Sg**	**10 01 19.1**	**-1.9**
DYDN	**Diyadin**	**2.52**	**303**	*i* P	**Pb**	**10 00 48.8**	**+1.2**
TUTA	**Tutak**	**3.06**	**294**	*i* P	**Pb**	**10 00 57.7**	**+0.8**
SEKA	**Sheki**	**3.06**	**11**	P	**Pn**	**10 00 51.6**	**+0.7**
	SNR=3.0						
SEKA				S	**Sn**	**10 01 31.9**	**+4.3**
PQL	**Pirkuli**	**3.09**	**32**	P	**Pn**	**10 00 53.0**	**+1.8**
	SNR=8.8						
SNGE	**Sanandaj**	**3.19**	**166**	*e*Pn	**Pn**	**10 00 53.8**	**+1.1**
SNGE				AML	AML	10 01 45.0	
	comp=N,154nm,0.7s						
SNGE				AML	AML	10 01 46.4	
	comp=E,201nm,0.5s						
DGRG	**David-gareji**	**3.34**	**346**	P	**Pg**	**10 01 10.1**	**+3.6**
DGRG				S	**Sg**	**10 02 01.0**	**+11**
IVIS	**Veis**	**3.68**	**174**	*e*Pn	**Pn**	**10 00 58.5**	**-0.9**
IVIS	**Veis**	**3.68**	**174**	*e*Pn	**Pn**	**10 00 58.5**	**-0.9**
IVIS				*e*		10 02 06.2	
MTA	**Mtatsminda**	**3.71**	**341**	P	**Pg**	**10 01 10.0**	**-3.4**
MTA				S	**Sg**	**10 02 00.4**	**-1.1**
TBLG	**Delisi**	**3.75**	**340**	P	**Pn**	**10 01 04.7**	**+4.3**
TBLG				S	**Sg**	**10 01 52.4**	**-11**
IRAZ	**Razeghan**	**3.97**	**134**	*e*Pn	**Pn**	**10 01 03.5**	**+0.2**
IRAZ	**Razeghan**	**3.97**	**134**	*e*Pn	**Pn**	**10 01 03.5**	**+0.2**
IRAZ				*e*		10 01 16.1	
BEST	**Besiri**	**4.07**	**267**	*i* P	**Pn**	**10 01 04.3**	**-0.5**
IMHD	**Mahdasht**	**4.23**	**125**	*e*Sg	**Sg**	**10 02 14.0**	**-4.3**
IMHD	**Mahdasht**	**4.23**	**125**	*e*Sg	**Sg**	**10 02 14.0**	**-4.3**
CHTH	**Charan**	**4.41**	**120**	*e*Pn	**Pn**	**10 01 10.2**	**+0.9**
CHTH				AML	AML	10 02 21.6	
	comp=E,50nm,0.9s						
CHTH				AML	AML	10 02 22.6	
	comp=N,55nm,1.9s						
CHTH	**Charan**	**4.41**	**120**	*e*Pn	**Pn**	**10 01 10.2**	**+0.8**
	SNR=52						
MARD	**Mardin**	**4.55**	**261**	*i* P	**Pb**	**10 01 21.9**	**-0.5**
ASAO	**Ashtian**	**4.67**	**140**	*e*Pn	**Pn**	**10 01 13.7**	**+0.8**
IDMV	**Damavand**	**5.21**	**118**	*e*Pn	**Pn**	**10 01 21.6**	**+1.2**
IDMV	**Damavand**	**5.21**	**118**	*e*Pn	**Pn**	**10 01 21.6**	**+1.2**
IDMV				*e*		10 02 50.2	
IVRN	**Varamin**	**5.34**	**125**	*e*Pn	**Pn**	**10 01 22.0**	**-0.1**
IVRN	**Varamin**	**5.34**	**125**	*e*Pn	**Pn**	**10 01 22.0**	**-0.1**
IVRN				*e*		10 02 57.8	
IFIR	**Firoozkooh**	**5.68**	**115**	*e*Pn	**Pn**	**10 01 27.0**	**+0.1**
IFIR	**Firoozkooh**	**5.68**	**115**	*e*Pn	**Pn**	**10 01 27.0**	**+0.1**
IFIR				*e*		10 01 46.8	
ISHM	**Shahmirzad**	**6.00**	**111**	*e*Pn	**Pn**	**10 01 31.3**	**+0.1**
ISHM	**Shahmirzad**	**6.00**	**111**	*e*Pn	**Pn**	**10 01 31.3**	**+0.1**
ISHM				*e*		10 01 58.5	
ISFB	**Sefidab**	**6.07**	**127**	*e*Pn	**Pn**	**10 01 31.7**	**-0.5**
ISFB	**Sefidab**	**6.07**	**127**	*e*Pn	**Pn**	**10 01 31.7**	**-0.5**
ISFB				*e*		10 01 55.0	
IKLH	**Kolahrood**	**6.43**	**138**	*e*Pn	**Pn**	**10 01 35.9**	**-1.2**
IKLH	**Kolahrood**	**6.43**	**138**	*e*Pn	**Pn**	**10 01 35.9**	**-1.2**
IKLH				*e*		10 02 03.7	

*ISCJB **02** 10:27:17.0±1.1, 41.13N±006×3869E±004, h5km±5km, Error ellipse: s-maj=10.2km s-min=4.3km az=162.0*

*CSEM **02** 10:27:16.9±0.4, 41.12N×3871E, h5km, MD2.8, Error ellipse: s-maj=9.7km s-min=5.2km az=156.0*

*DDA **02** 10:27:16.6, 41.14N×3864E, h17km±3km, Md2.9*

*ISK **02** 10:27:19.0, 4100N×3876E, h13km, MD2.8*

ISC 02 10:27:17.5±1.1**, 4114N**±006×**3867E**±004**, h4**km±5km**, n13, σ1s05**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.22**	**170**	PG	**Pg**	**10 27 22.1**	**+0.4**
ESPY				*e*SG	**Sg**	**10 27 24.5**	**-0.1**
GRSN	**GIRESUNGRSN**	**0.37**	**236**	*i* P	**Pg**	**10 27 24.8**	**+0.2**
GRSN				*i* S	**Sg**	**10 27 29.0**	**-0.5**
KTUT	**Trabzon**	**0.84**	**100**	*e*PG	**Pg**	**10 27 34.2**	**+0.6**
KTUT				*e*SG	**Sg**	**10 27 45.5**	**+1.0**
MACK	**Trabzon**	**0.85**	**103**	*i* P	**Pg**	**10 27 34.2**	**+0.5**
MACK				*i* S	**Sg**	**10 27 45.5**	**+0.8**
MACK	**Trabzon**	**0.85**	**103**	*i* P	**Pg**	**10 27 34.2**	**+0.4**
MACK				*i* S	**Sg**	**10 27 45.5**	**+0.7**
GUMT	**Gumushane**	**0.91**	**138**	*e*PG	**Pg**	**10 27 34.1**	**-0.9**
GUMT				*e*SG	**Sg**	**10 27 45.1**	**-1.6**
EZC	**Erzincan**	**1.64**	**147**	*e*PN	**Pn**	**10 27 43.9**	**-3.0**
SVSK	**Karacayir**	**1.76**	**227**	*e*PN	**Pn**	**10 27 49.2**	**+0.5**
SVSK				*e*SN	**Sn**	**10 28 11.6**	**+0.1**
KEMA	**Kemaliye**	**1.87**	**184**	*i* P	**Pn**	**10 27 50.4**	**+0.2**
KEMA				*i* S	**Sn**	**10 28 15.5**	**+1.4**
DBOC	**Borcka**	**2.27**	**84**	*i* P	**Pn**	**10 27 54.2**	**-1.5**
DBOC				*i* S	**Sn**	**10 28 21.6**	**-2.4**
DBAD	**Bademkaya**	**2.29**	**92**	*i* P	**Pn**	**10 27 55.9**	**0.0**
DBAD				*i* S	**Sn**	**10 28 23.8**	**-0.6**
DDEM	**Demirkent**	**2.34**	**95**	*i* P	**Pn**	**10 27 57.5**	**+0.8**
DDEM				*i* S	**Sn**	**10 28 27.6**	**+1.8**
ERZM	**Erzurum**	**2.39**	**120**	*i* P	**Pn**	**10 28 02.4**	**+5.1**

*CSEM **02** 10:48:46.7±0.2, 3887N×4373E, h35km±1km, MD2.7, Error ellipse: s-maj=3.5km s-min=1.8km az=94.0*

*ISCJB **02** 10:48:48.2±1.5, 3894N±004×437E±0.1, h24km±11km, Error ellipse: s-maj=17.3km s-min=6.6km az=7.9*

*DDA **02** 10:48:48.1, 3894N×4366E, h7km±4km, Md2.9*

*ISK **02** 10:48:49.8, 3887N×43.16E, h5km, MD2.7*

ISC 02 10:48:48.0±1.4**, 3893N**±004×**438E**±01**, h27**km±9km**, n7, σ0s60**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.44**	**221**	*e*PG	**Pb**	**10 48 57.0**	**-0.2**
VANB				*e*SG	**Sb**	**10 49 03.8**	**+0.2**
TVAN	**Van**	**0.48**	**214**	*i* P	**Pb**	**10 48 57.1**	**-0.9**
TVAN				*i* S	**Sb**	**10 49 05.2**	**+0.4**
VANT	**Van**	**0.56**	**211**	*e*PG	**Pb**	**10 48 59.4**	**+0.1**
DYDN	**Diyadin**	**0.62**	**355**	*i* P	**Pb**	**10 49 00.9**	**+0.7**
DYDN				*i* S	**Sb**	**10 49 08.3**	**-0.3**
TUTA	**Tutak**	**0.87**	**303**	*i* P	**Pn**	**10 49 03.4**	**-1.0**
TUTA				*i* S	**Sb**	**10 49 15.5**	**-0.2**
AGRB	**Hanur-Agry**	**0.88**	**318**	*e*PG	**Pn**	**10 49 04.2**	**-0.3**
AGRB				*e*SG	**Sn**	**10 49 16.7**	**+0.3**
EZM	**Erzurum**	**2.09**	**299**	*e*PN	**Pn**	**10 49 22.5**	**+1.2**

PRE 02 11:27:50.7±1.2**, 1667S**×**2851E, h5**km**, ML4.7, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**5.82**	**166**	*e*P	Pn	11 29 19.6	+1.9
MSNA				*e*S	Sn	11 30 24.6	-0.3
MSNA				AML	AML	11 30 55.9	
	comp=Z,91nm,0.4s						
MOPA	**Mopani**	**7.33**	**159**	*e*P	Pn	11 29 39.7	+1.2
MOPA				*e*S	Sn	11 30 59.7	-2.4
MOPA				AML	AML	11 31 43.4	
	comp=Z,215nm,0.5s						
LBTB	**Lobatse**	**8.74**	**198**	*e*P	Pn	11 29 59.1	+1.3
LBTB				*e*S	Sn	11 31 32.6	-4.1
LBTB				AML	AML	11 32 29.0	
	comp=Z,14nm,0.5s						
POGA	**Pongola**	**11.03**	**165**	*e*P	Pn	11 30 31.2	+2.0
POGA				*e*S	Sn	11 32 26.6	-6.3
POGA				AML	AML	11 33 43.8	
	comp=Z,20nm,0.6s						
PKA	**Prieska**	**13.97**	**201**	*e*P	Pn	11 31 10.9	+1.5
PKA				*e*S	Sn	11 33 38.7	-6.4
PKA				AML	AML	11 35 15.9	
	comp=Z,3.8nm,0.5s						

IDC 02 11:35:11.3±5.2**, 3942N**×**11087E, h0**km**, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.4**/21**, mbtmp3.5**/5**, ML2.6**/1**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx2.7**/27**, Error ellipse: s-maj=109.7km s-min=23.3km az=84.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.01**	**340**	Pn	Pn	11 37 24.2	+1.6
	0.1nm,0.3s,baz=156,slow=13,SNR=17						
SONM				Lg		11 39 56.9	
	0.4nm,0.3s,baz=157,slow=29,SNR=5.2						
MKAR	**Makanchi Array**	**22.05**	**299**	P	P	11 40 08.4	+1.0
	1.9nm,0.8s,baz=93,slow=12,SNR=15						
ZALV	**Zalesovo Beam**	**22.86**	**318**	P	P	11 40 15.6	-0.4
	0.2nm,0.3s,baz=107,slow=7.8,SNR=2.7						
CMAR	**Chiang Mai Arr**	**23.31**	**210**	P	P	11 40 20.9	0.0
	1.9nm,0.8s,baz=13,slow=10,SNR=13						
KURK	**Kurchatov**	**25.22**	**307**	P	P	11 40 38.2	-0.4
	1.0nm,0.8s,baz=107,slow=11,SNR=6.9						
BRTR	**Keskin Array B**	**57.68**	**297**	LR	LR	12 11 30.2	
	comp=Z,107nm,21.0s,baz=133,slow=38						

TRN 02 11:47:09.2, 1316N×**6017W, h38**km**, MD3.8, M3.7**(FDF)**, 4C-2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHS	**Barnard House**	**0.94**	**278**	⇑*i*P	Pn	11 47 27.9	+2.1
BHS				*e*S	Sn	11 47 39.4	+1.3
SFAN	**Fancy Village**	**1.00**	**283**	*e*P	Pn	11 47 28.1	+1.4
SFAN				*e*S	Sn	11 47 41.9	+2.4
SSV	**Crater Summit**	**1.01**	**279**	⇓*i*P	Pn	11 47 28.6	+1.8
SSV				*e*S	Sn	11 47 42.2	+2.5
SVV	**Soufriere Volc**	**1.03**	**279**	⇑*i*P	Pn	11 47 29.2	+2.1
SVV				*e*S	Sn	11 47 42.1	+1.9
FCV	**Fort Charlotte**	**1.04**	**270**	⇑*e*P	Pn	11 47 29.0	+1.7
FCV				*e*S	Sn	11 47 42.3	+1.6
SLB	**Belfond**	**1.07**	**308**	⇓*e*P	Pn	11 47 29.4	+1.7
SLB				*e*S	Sn	11 47 43.8	+2.4
MVM	**Montagne Vaucl**	**1.55**	**333**	*e*P	Pn	11 47 35.9	+1.6
MVM				*e*S	Sn	11 47 53.0	-0.2
BIM	**Bigot**	**1.60**	**327**	*e*P	Pn	11 47 36.0	+1.1
GRW	**Mount Saint Ca**	**1.76**	**236**	⇑*e*P	Pn	11 47 38.9	+1.8
GRW				*e*S	Sn	11 48 00.7	+2.3
FDF	**Fort de France**	**1.83**	**329**	*e*P	Pn	11 47 39.5	+1.4
FDF				*e*S	Sn	11 48 00.0	0.0
TPR	**Prospect**	**2.05**	**197**	*e*P	Pn	11 47 41.8	+0.6
TRN	**Trinidad (W)**	**2.77**	**206**	*e*P	Pn	11 47 52.4	+1.3

*SZGRF **02** 11:56:56.4, 3584N×7206E, h245km, mb5.3, Pakistan*

*ISCJB **02** 11:57:03.7±0.1, 3657N±002×7102E±002, h246km, mb4.8/228, Error ellipse: s-maj=2.5km s-min=1.6km az=37.4*

*BJI **02** 11:57:03.2, 3673N×7098E, h239km, mB5.0, mb4.9*

*MOS **02** 11:57:03.5±0.9, 3662N×7100E, h243km, mb4.9/95, Error ellipse: s-maj=5.5km s-min=3.1km az=128.6*

*DJA **02** 11:57:04, 3651N×7097E, h223km, Mw5.4/9*

*NEIC **02** 11:57:05.2±0.3, 3659N×7103E, h246km±4km, mb4.9/131, Error ellipse: s-maj=4.3km s-min=2.5km az=209.0*

NEIC Felt at Jalalabad, Kabul and Nuristan. Felt [III] at Islamabad, Pakistan. Also felt at Peshawar.

*IDC **02** 11:57:05.1±0.3, 3657N×7102E, h248km±2km, mb4.4/23, mb1 4.5/28, mb1mx4.5/30, mbtmp4.4/28, Error ellipse: s-maj=9.5km s-min=6.6km az=5.0*

*GCMT **02** 11:57:05.2±0.3, 3661N×7089E, h241km±2km, MW5.2/72, Moment Tensor Solution. s41,c51; s72,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.81±.19; $M_{\theta\theta}$-0.51±.22; $M_{\phi\phi}$-1.30±.22; $M_{r\theta}$0.64±.17; $M_{\theta\phi}$-0.66±.20; $M_{\phi r}$6.59±.17; Best double couple: $M_0$6.83900×10^{16} NP1:ϕ_s221.00000°, δ8.00000°, λ124.00000°. NP2: ϕ_s7.00000°, δ83.00000°, λ85.00000°. Principal axes: T 7.0270, Plg52.0000°, Azm271.0000°; N -0.3730, Plg5.0000°, Azm7.0000°; P -6.6520, Plg38.0000°, Azm101.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NNC **02** 11:57:14.5±3.7, 3747N×7141E, h263km±32km, mb3.9, mpv5.3 Error ellipse: s-maj=35.0km s-min=20.3km az=14.0*

ISC 02 11:57:05.3±0.1**, 3658N**±002×**7104E**±002**, h248**km**, h248**km±1.2km**: pP-P, n610, σ0s98**/666**, mb4.8**/228**, 63C-43D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.60**	**219**	*e*PN	**Pn**	**11 57 52.4**	**-1.1**
KBL				*e*S	**S**	**11 58 28.7**	**-2.8**
CEP	**Cherat**	**2.84**	**165**	⇓P	**Pn**	**11 57 55.9**	**-0.1**
CEP				S	**S**	**11 58 35.0**	**-1.0**
NIL	**Nilore**	**3.44**	**148**	*e*PN	**Pn**	**11 58 02.8**	**+0.3**
NIL				*e*S	**S**	**11 58 45.8**	**-2.0**
SBDP	**Sheikh Budin**	**4.27**	**183**	⇑P	**Pn**	**11 58 11.3**	**-1.0**
SARP	**Sargodha**	**4.83**	**163**	⇑P	**Pn**	**11 58 18.5**	**-0.6**
JMU	**Jammu**	**4.99**	**139**	*e*P	**Pn**	**11 58 21.0**	**0.0**
JMU				*e*S	**S**	**11 59 16.5**	**-4.7**
THN	**Thein Dam**	**5.65**	**136**	*e*P	**Pn**	**11 58 28.0**	**-1.1**
THN				*e*S	**S**	**11 59 33.2**	**-2.8**
DLH	**Dalhousie**	**5.72**	**133**	*e*P	**Pn**	**11 58 29.0**	**-0.9**
DLH				*e*x	**S**	**11 59 36.0**	**-1.5**
UCH	**Uchtor**	**6.25**	**24**	P	**Pn**	**11 58 35.5**	**-0.9**
	SNR=151						
UCH	**Uchtor**	**6.25**	**24**	*e*Pn	**Pn**	**11 58 35.6**	**-0.8**
	226nm,0.6s						
UCH				*e*S	**S**	**11 59 45.4**	**-3.9**
KZA	**Kyzart**	**6.39**	**29**	P	**Pn**	**11 58 36.6**	**-1.5**
	SNR=238						
EKS2	**Erkin-Say**	**6.43**	**18**	P	**Pn**	**11 58 37.3**	**-1.4**
	SNR=87						
EKS2	**Erkin-Say**	**6.43**	**18**	*e*Pn	**Pn**	**11 58 37.4**	**-1.3**
	26nm,0.7s						
EKS2				*e*S	**S**	**11 59 43.7**	**-10**
KK31	**Karatay Array**	**6.53**	**357**	P	**Pn**	**11 58 37.8**	**-2.1**
	106nm,0.4s,baz=181,slow=12,SNR=1668						
KK31				⇓S	**S**	**11 59 47.3**	**-8.4**
	218nm,0.4s,baz=177,slow=19,SNR=7.9						
KK31	**Karatay Array**	**6.53**	**357**	*e*PN	**Pn**	**11 58 37.8**	**-2.1**
KK31				*e*		11 59 50.1	
KK31				pmax	pmax		
	comp=Z,29nm,0.2s						
KK31				pmax	pmax		
	comp=Z,90nm,0.3s						
KK31				smax			
	comp=N,432nm,0.4s						
AAK	**Ala-Archa**	**6.61**	**23**	⇑*i*PN	**Pn**	**11 58 39.8**	**-1.1**
AAK				pmax	pmax		
	comp=Z,32nm,0.5s						
AAK	**Ala-Archa**	**6.61**	**23**	P	**Pn**	**11 58 39.9**	**-1.0**
	SNR=558						
AAK	**Ala-Archa**	**6.61**	**23**	*e*Pn	**Pn**	**11 58 39.8**	**-1.1**
AAK				*e*S	**S**	**11 59 49.9**	**-7.7**
KBK	**Karagaybulak**	**6.78**	**25**	P	**Pn**	**11 58 42.1**	**-0.9**
	SNR=145						
BHK	**Bhakra**	**6.81**	**138**	*e*x	**Pn**	**11 58 41.0**	**-2.6**
BHK				*e*S	**S**	**11 59 56.2**	**-6.2**
FRU	**Bishkek**	**6.83**	**23**	*e*PN	**Pn**	**11 58 42.0**	**-1.7**
FRU				pmax	pmax		
	comp=Z,290nm,1.2s						
ULHL	**Ulahol**	**6.95**	**34**	P	**Pn**	**11 58 43.8**	**-1.3**
	SNR=272						
CHMS	**Chumysh**	**7.02**	**23**	P	**Pn**	**11 58 44.5**	**-1.6**
	SNR=103						
SDNR	**Sundarnagar**	**7.06**	**134**	*e*P	**Pn**	**11 58 45.4**	**-1.3**
SDNR				*e*S	**S**	**12 00 03.0**	**-5.1**
USP	**Ospenovka**	**7.19**	**21**	P	**Pn**	**11 58 46.0**	**-2.2**
	SNR=22						
TKM2	**Tokmak 2**	**7.24**	**28**	⇑P	**Pn**	**11 58 47.5**	**-1.3**
	comp=Z,332nm,1.0s						
TKM2				⇑S	**S**	**12 00 00.0**	**-12**
	comp=Z,869nm,0.9s						
TKM2	**Tokmak 2**	**7.24**	**28**	*e*PN	**Pn**	**11 58 47.6**	**-1.3**

TKM2 pmax pmax
comp=Z,24nm,1.7s
TKM2 Tokmak 2 7.24 28 P **Pn 11 58 47.7 -1.2**
SNR=305
TKM2 Tokmak 2 7.24 28 *e*Pn **Pn 11 58 47.6 -1.2**
comp=Z,24nm,1.7s
TKM2 *e*Sn S 11 59 45.3 -27
SMLA Simla 7.45 135 *i* P **Pn 11 58 51.0 -0.6**
SMLA *i* S **S 12 00 12.1 -5.0**
KNDC Almaty 8.04 33 ⇑P **Pn 11 58 58.6 -0.4**
comp=Z,149nm,0.6s
KNDC ⇑S **S 12 00 19.0 -12**
comp=Z,616nm,1.4s
AAA Alma-Ata 8.08 32 *e*PN **Pn 11 58 58.0 -1.4**
AAA pmax pmax
comp=Z,200nm,0.8s
DDI Dehra Dun 8.55 135 *e*P **Pn 11 59 02.0 -3.7**
DDI *e*S **S 12 00 33.0 -10**
JOSI Joshimath 9.30 128 *e*P **Pn 11 59 15.4 +0.3**
JOSI *ex* x 12 00 29.2
JOSI AML AML 12 00 59.9
comp=E,3μm,0.6s
JOSI AML AML 12 01 01.5
comp=N,4μm,0.4s
BHGR Bahadurgarh 9.30 146 *e*P **Pn 11 59 14.4 -0.8**
BHGR *e*S **S 12 00 52.2 -7.9**
BHGR AML AML 12 01 06.9
comp=Z,486nm,0.6s
KHET Khetri 9.38 153 *ex* **Pn 11 59 14.4 -1.7**
KHET *e*S **S 12 00 56.9 -5.2**
KHET AML AML 12 00 59.1
comp=N,313nm,0.5s
KHET AML AML 12 00 59.2
comp=E,412nm,0.4s
NDI New Delhi 9.43 145⇓*ex* **Pn 11 59 14.5 -2.3**
NDI *e*S **S 12 00 59.0 -4.2**
AYAN Aya Nagar 9.56 146 *e*P **Pn 11 59 17.8 -0.6**
AYAN *e*S **S 12 01 00.6 -5.6**
AYAN AML AML 12 01 03.8
comp=Z,223nm,0.8s
KALG Kalgarh 9.57 135 *e*P **Pn 11 59 08.8 -10**
KALG *e*S **S 12 00 52.6 -14**
KUDL Kundal 9.58 150 *e*S **S 12 00 58.9 -7.9**
KUDL AML AML 12 01 00.8
comp=N,169nm,0.3s
KUDL AML AML 12 01 02.1
comp=E,400nm,0.4s
SONA Sohna 9.74 147 *ex* **Pn 11 59 19.4 -1.3**
SONA *e*S **S 12 01 03.4 -7.0**
SONA AML AML 12 01 06.5
comp=N,237nm,0.1s
SONA AML AML 12 01 22.1
comp=E,324nm,0.5s
VAN Vannovskaya 10.40 281⇓*i* P **Pn 11 59 26.0 -2.9**
PTH Pithoragarh 10.40 130 *ex* **Pn 11 59 27.0 -2.0**
PTH *ex* x 12 01 12.0
LGTI Lohaghat 10.49 130 *e*P **Pn 11 59 27.5 -2.6**
LGTI *e*S **S 12 01 16.1 -12**
AJM Ajmer 10.52 162 *e*S **S 12 01 22.3 -6.3**
AJM AML AML 12 01 23.4
comp=N,156nm,0.3s
AJM AML AML 12 01 25.9
comp=E,234nm,0.2s
AGRA Agra 11.00 146 *ex* **Pn 11 59 35.9 -0.7**
AGRA *e*S **S 12 01 32.0 -7.8**
AGRA AML AML 12 01 45.9
comp=E,324nm,0.1s
AGRA AML AML 12 02 07.8
comp=N,417nm,0.3s
MKAR Makanchi Array 13.21 36 P **Pn 12 00 01.9 -1.7**
comp=N,4.6nm,0.3s,baz=225,slow=10,SNR=280
MKAR Makanchi Array 13.21 36 *i* P **Pn 12 00 01.6 -2.1**
MKAR pmax pmax
comp=Z,53nm,0.8s
BHJ Bhuj 13.33 186 *ex* **Pn 12 00 05.6 +0.2**
DANN Dangsing 13.50 124 *e*P **Pn 12 00 06.9 -0.5**
comp=Z,1μm,0.7s
KOLN Koldanda 13.78 126 *e*P **Pn 12 00 10.4 -0.4**
GKN Gorkha 14.32 123 *e*P **Pn 12 00 16.6 -0.7**
comp=Z,518nm,0.5s
BHPL Bhopal 14.39 156 *e*P **Pn 12 00 18.2 -0.1**
WMQ Urumqi 14.63 55 P **Pn 12 00 21.1 +0.2**
WMQ XP 12 01 22.4
WMQ S **S 12 02 59.1 -3.3**
WMQ AMB AMB
comp=Z,538nm,1.0s
WMQ AMB AMB
comp=Z,1μm,3.0s
DMN Daman 14.89 123 *e*P **Pn 12 00 23.7 -0.5**
comp=Z,347nm,0.5s
KKN Kakani 14.89 122 *e*P **Pn 12 00 23.5 -0.7**
comp=Z,1μm,0.8s
KKN Kakani 14.89 122 *e*P **Pn 12 00 23.5 -0.7**
KKN pmax pmax
comp=Z,1μm,0.8s
AB01 Akbulak array 15.03 331 ⇑P **Pn 12 00 23.1 -2.6**
comp=Z,182nm,1.4s
AB01 ⇑S **S 12 03 08.2 -3.2**
comp=Z,42nm,0.8s
AB31 Akbulak array 15.03 331 P **Pn 12 00 23.1 -2.6**
AB31 12 03 08.2
AB31 pmax pmax
comp=Z,36nm,0.6s
AB31 smax
comp=N,58nm,0.8s
KURBB Kurchatov Arra 15.04 19 P **Pn 12 00 23.5 -2.3**
comp=N,24nm,1.1s
PKI Pulchoki 15.12 122 *e*P **Pn 12 00 26.6 -0.4**
comp=N,894nm,0.6s
PKI Pulchoki 15.12 122 *e*P **Pn 12 00 26.6 -0.4**
PKI pmax pmax
comp=Z,894nm,0.6s
KURK Kurchatov 15.15 19 P **Pn 12 00 23.4 -3.7**
comp=Z,0.8nm,0.3s,baz=207,slow=11,SNR=76
KURK sP 12 01 26.0
comp=Z,0.6nm,0.3s,baz=210,slow=11,SNR=5.3
KURK Kurchatov 15.15 19 *e*P **Pn 12 00 25.0 -2.1**
KURK *e*S **S 12 03 09.6 -4.2**
KURK pmax pmax
comp=Z,171nm,1.2s
KURK Kurchatov 15.15 19 *e*P **Pn 12 00 25.0 -2.1**
comp=Z,171nm,1.2s
KURK *e*S **S 12 03 09.6 -4.2**
GUN Gumba 15.23 120 *e*P **Pn 12 00 28.0 -0.3**
JBP Jabalpur 15.44 147 *e*P **Pn 12 00 30.2 -0.6**
JBP *ex* x 12 03 12.3
JIRN Jiri 15.60 120 *e*P **Pn 12 00 33.0 +0.3**
VOSK Vostochnaya 16.15 360 ⇑P **P 12 00 37.2 -0.3**
comp=Z,30nm,0.8s
VOSK Vostochnaya 16.15 360 P **P 12 00 37.2 -0.3**
VOSK pmax pmax
comp=Z,30nm,0.8s
RAMN Ramite 16.33 122 *e*P **P 12 00 41.1 +1.3**
comp=Z,1μm,0.9s
BVA0 Borovoye Array 16.45 359 P **P 12 00 40.8 -0.1**
comp=Z,6.5nm,0.8s,baz=172,slow=13,SNR=189
BVA0 Borovoye Array 16.45 359 *i* P **P 12 00 40.8 -0.1**
BVAR Borovoye Array 16.45 359 P **P 12 00 40.6 -0.3**
comp=Z,8.1nm,0.3s,baz=163,slow=11,SNR=143
BVAR Borovoye Array 16.45 359 P **P 12 00 40.6 -0.3**
BVAR pmax pmax
comp=Z,8.0nm,0.3s
BRVK Borovoye 16.49 358 *e*P **P 12 00 41.3 0.0**
BRVK pmax pmax
comp=Z,57nm,0.7s
BRVK Borovoye 16.49 358 *e*P **P 12 00 41.3 0.0**
comp=Z,57nm,0.7s
AKL Akola 16.65 160 *e*P **P 12 00 42.6 -0.8**
AKL *e*S **S 12 03 44.6 -0.1**
AKTK Aktyubinsk 16.73 330 P **P 12 00 43.8 -0.2**
AKTO Aktyubinsk 16.73 330 ⇑P **P 12 00 43.8 -0.2**
comp=Z,40nm,0.8s
AKTO Aktyubinsk 16.73 330 P **P 12 00 43.8 -0.2**
comp=Z,12nm,0.3s,baz=142,slow=8.7,SNR=477
AKTO Aktyubinsk 16.73 330 P **P 12 00 43.8 -0.2**
AKTO pmax pmax
comp=Z,12nm,0.3s
TAPN Taplejung 16.85 118 *e*P **P 12 00 47.6 +2.0**
comp=Z,1μm,1.0s
NGP Nagpur 16.88 153 *e*P **P 12 00 45.1 -0.8**
NGP *e*S **S 12 03 50.0 +0.7**
ODAN Odare 16.93 120 *e*P **P 12 00 48.4 +2.0**
comp=Z,2μm,0.9s
BOK Bokaro 18.05 131 *ex* **P 12 01 00.2 +1.6**
POO Poona 18.15 171 *e*P **P 12 00 59.4 -0.3**
POO *ex* x 12 05 24.5
LSA Lhasa 18.17 106 P **P 12 01 02.3 +2.5**
LSA S **S 12 04 13.5 -1.1**
LSA LR LR
comp=E,320nm,11.2s
LSA LR LR
comp=Z,390nm,8.8s
LSA Lhasa 18.17 106⇓*i* P **P 12 01 02.7 +2.9**
LSA *e*S **S 12 04 18.9 +4.3**
LSA pmax pmax
comp=Z,210nm,0.7s
LSA Lhasa 18.17 106⇓*i* Pn **P 12 01 02.7 +2.9**
comp=Z,210nm,0.7s
LSA *e*S **S 12 04 18.9 +4.2**
LATR Latur 18.73 163 *ex* x 12 05 06.3
MAK Makhachkala 19.15 297 *e*P **P 12 01 08.7 -1.5**
MAK *e*S **S 12 04 33.8 +0.1**
MAK MLR MLR
comp=Z,646nm,17.0s
KAD Karad 19.39 171 *e*P **P 12 01 11.7 -1.3**
ZAA0 Zalesovo Array 19.83 25 *e*P **P 12 01 16.3 -1.0**
ZALV Zalesovo Beam 19.83 25 P **P 12 01 16.3 -1.0**
comp=Z,12nm,0.3s,baz=214,slow=12,SNR=200
ZALV sP sP 12 02 27.2 -1.4
comp=Z,3.3nm,0.3s,baz=219,slow=11,SNR=2.7
NVS Novosibirsk 20.10 21⇑*i* P **P 12 01 19.7 -0.5**
NVS *e* 12 02 32.6
NVS *e*S **S 12 04 49.3 -2.4**
NVS pmax pmax
comp=Z,172nm,1.5s
NVS pmax pmax
comp=N,259nm,1.8s
NVS smax
comp=N,322nm,2.1s
HYB Hyderabad 20.21 159 *e*P **P 12 01 22.5 +0.8**
HYB *e*S **S 12 04 56.0 +1.5**
HYB pmax pmax
comp=Z,250nm,1.0s
HYB Hyderabad 20.21 159 *i* P **P 12 01 22.5 +0.8**
comp=Z,250nm,1.0s
HYB *e* 12 02 20.0
HYB *e*sP sP 12 02 34.0 +1.1
HYB *e*S **S 12 04 55.0 +0.5**
HYB Hyderabad 20.21 159 *e*P **P 12 01 22.5 +0.8**
comp=Z,250nm,1.0s
HYB *e*S **S 12 04 56.0 +1.5**
CAL Calcutta 20.49 128 *e*P **P 12 01 27.8 +3.2**
CAL *e*S **S 12 05 04.6 +5.1**
DGRG David-gareji 20.50 292 P **P 12 01 25.1 +0.6**
BWNR Bhubaneshwar 20.73 137 *ex* x 12 01 28.9
BWNR *ex* x 12 03 16.3
UMR Umm Al-Rimmam 20.74 257 *e*P **P 12 01 27.0 -0.2**
baz=257
UMR AMb AMB 12 01 29.6
comp=Z,1μm,1.0s,baz=257
SHL Shillong 20.91 116⇓*i* P **P 12 01 29.5 +0.4**
SHL *e*S **S 12 05 07.0 +0.7**
KBD Kabd 20.92 256 *e*P **P 12 01 28.4 -0.8**
baz=256
KBD AMb AMB 12 01 31.3
comp=Z,502nm,1.1s,baz=256
MIB Mutribah 20.93 258 *e*P **P 12 01 28.7 -0.5**
baz=258
MIB AMb AMB 12 01 31.4
comp=Z,1μm,1.0s,baz=258
QRN Al-Qurain 20.94 255 *e*P **P 12 01 28.3 -1.1**
baz=255
QRN AMb AMB 12 01 31.3
comp=Z,594nm,1.0s,baz=255
RDF Al-Radifah 21.15 256 *e*P **P 12 01 30.9 -0.6**
baz=255
RDF AMb AMB 12 01 33.4
comp=Z,719nm,0.9s,mb6.2,baz=255
NAY Al-Naaiem 21.24 257 *e*P **P 12 01 32.0 -0.5**
baz=257
NAY AMb AMB 12 01 34.4
comp=Z,312nm,0.8s,mb5.9,baz=257
SVE Sverdlovsk 21.43 344⇑*e*P **P 12 01 33.8 -0.1**
SVE *e*S **S 12 05 15.1 +1.0**
SVE pmax pmax
comp=Z,92nm,1.4s,mb5.1
ARU Arti 21.57 341*c i*P **P 12 01 34.6 -0.6**
ARU *e*S **S 12 05 17.9 +1.5**
ARU pmax pmax
comp=Z,212nm,1.7s,mb5.4
ARU Arti 21.57 341 *e*P **P 12 01 34.8 -0.4**
comp=Z,99nm,0.9s,mb5.3
VIS Vishakhapatnam 21.69 147 *e*P **P 12 01 35.8 -0.9**
VIS *i* x **S 12 05 18.9 -0.3**
HVS Khovu-Aksy 21.76 41⇓*i* P **P 12 01 37.5 +0.5**
ONI Oni 22.04 294 P **P 12 01 39.9 +0.2**
MSL Mosul 22.43 278 *e*P **P 12 01 45.0 +1.7**
GOF Gofitskoye 22.74 301 *i* S **S 12 05 38.8 +3.2**
GOF pmax pmax
comp=Z,510nm,1.3s,mb5.9
GOF smax
comp=E,230nm,1.3s
KIV Kislovodsk 22.78 298*c i*P **P 12 01 46.5 +0.1**
KIV *e**PP 12 02 29.3
KIV *e**SP sP 12 03 03.4 +2.6
KIV *e*S **S 12 05 38.2 +1.9**
KIV pmax pmax
comp=Z,70nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,203nm,16.0s
KIV Kislovodsk 22.78 298 *e*P **P 12 01 47.1 +0.7**
comp=Z,87nm,0.7s,mb5.4
GTA Gaotai 22.81 74⇓P **P 12 01 48.3 +1.6**
GTA XP sP 12 03 00.3 -0.8
GTA S **S 12 05 38.4 +1.5**
GTA AMB AMB
comp=Z,176nm,1.2s,mb5.5
GTA AMB AMB
comp=Z,706nm,4.8s
GTA LR LR
comp=N,235nm,9.5s
GTA LR LR
comp=E,227nm,10.1s
GTA LR LR
comp=Z,234nm,10.7s
IMP Imphal 22.87 115 *i* P **P 12 01 48.0 +0.6**
IMP *ex* x 12 06 06.0
SOKR Solikamsk 24.79 343*c i*P **P 12 02 05.5 +1.1**
SOKR pmax pmax
comp=Z,80nm,1.1s,mb5.3
VRHR Novokhopersk 25.49 314 *e*P **P 12 02 10.4 -0.4**
VRHR pmax pmax
comp=Z,50nm,1.3s,mb5.0
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,30nm,1.0s
MOY Mondy 26.03 45 *e*P **P 12 02 17.5 +1.9**
MOY pmax pmax
comp=Z,6.0nm,2.0s,mb3.9
LZH Lanzhou 26.36 81 ⇑P **P 12 02 20.5 +1.7**
LZH AP pP 12 03 03.0 -4.2
LZH XP sP 12 03 32.5 -3.7
LZH PCP PcP 12 05 39.5 +2.0
LZH S **S 12 06 32.5 -0.7**
LZH XS sS 12 08 00.0 -1.0
LZH SCP ScP 12 08 53.5 +0.1
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,240nm,4.0s
ANN Anapa 26.63 298 *e*P **P 12 02 19.5 -1.5**
ANN *e**PP pP 12 03 08.6 -0.9
ANN *e*S **S 12 06 35.4 -1.7**
ANN pmax pmax
comp=Z,50nm,0.7s,mb5.2
VORD Divnogorie 26.81 312 *e*P **P 12 02 22.2 -0.4**
VORD pmax pmax
comp=Z,20nm,0.6s,mb4.9
VORD pmax pmax
comp=N,60nm,0.7s
VORD pmax pmax
comp=E,70nm,0.6s
ZAK Zakamensk 26.92 49⇓*i* P **P 12 02 24.5 +1.0**
ZAK *e* pP 12 03 14.1 +2.0
ZAK pmax pmax
comp=Z,21nm,1.1s,mb4.7
VSR Storozhevoye 26.98 313 *e*P **P 12 02 23.5 -0.5**
VSR pmax pmax
comp=Z,20nm,1.4s,mb4.5
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,50nm,1.0s
VOR Voronezh 27.14 314 *e*P **P 12 02 24.0 -1.5**
VOR pmax pmax
comp=Z,140nm,1.8s,mb5.3
TLY Talaya 27.57 46 *e*P **P 12 02 31.5 +2.2**
TLY pmax pmax
comp=Z,23nm,1.4s,mb4.6
TLY Talaya 27.57 46 *e*P **P 12 02 30.4 +1.2**
comp=Z,30nm,1.2s,mb4.8
TLY *e*pP pP 12 03 20.6 +2.7
CD2 Chengdu 27.70 92⇓*i* P **P 12 02 31.5 +0.8**
CD2 AP pP 12 03 21.2 +1.7
CD2 XP sP 12 03 50.8 +2.5
CD2 S **S 12 06 54.0 -0.3**
CD2 SCS ScS 12 12 47.0 -3.1
CD2 AMB AMB
comp=Z,70nm,1.2s,mb5.2
CD2 AMB AMB
comp=Z,270nm,7.2s
SONM Songino Array 28.27 55 P **P 12 02 36.6 +1.0**
comp=Z,22nm,0.8s,mb4.8,baz=256,slow=9.7,SNR=155
SONM pP pP 12 03 26.5 +2.1
comp=Z,21nm,0.9s,baz=259,slow=9.8,SNR=7.9
SONM Songino Array 28.27 55 P **P 12 02 36.6 +1.1**
SONM *PP pP 12 03 26.5 +2.2
SONM pmax pmax
comp=Z,22nm,0.8s
SONM pmax pmax
comp=Z,21nm,0.9s
ASF Jabal al Asfar 28.43 271 P **P 12 02 38.2 +1.0**
comp=Z,9.0nm,0.7s,mb4.5,baz=339,slow=2.9,SNR=11
ASF pP pP 12 03 27.4 +1.4
comp=Z,15nm,0.9s,baz=257,slow=3.3,SNR=5.5
ASF Jabal al Asfar 28.43 271 P **P 12 02 38.2 +1.0**
ASF *PP pP 12 03 27.4 +1.4
ASF pmax pmax
comp=Z,9.0nm,0.7s
ASF pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 28.71 56 *e*P **P 12 02 40.1 +0.7**
ULN *e**PP pP 12 03 30.4 +2.1
ULN pmax pmax
comp=Z,25nm,0.9s,mb4.8
ULN Ulaanbaatar 28.71 56 *e*P **P 12 02 40.1 +0.7**
comp=Z,25nm,0.9s,mb4.8
ULN *e*pP pP 12 03 30.4 +2.1
MMAI Mount Meron Ar 29.38 274 P **P 12 02 46.1 +0.6**
comp=Z,10nm,0.6s,mb4.6,baz=58,slow=11,SNR=8.1
MMAI pP pP 12 03 33.7 -0.8
comp=Z,8.7nm,0.9s,baz=29,slow=16,SNR=2.6
MMAI PcP PcP 12 05 45.3 +0.3
comp=Z,7.8nm,0.8s,baz=39,slow=5.4,SNR=3.8
KMI Kunming 29.38 104 P **P 12 02 46.7 +1.0**
KMI AP pP 12 03 37.2 +2.5
KMI PP PP 12 03 56.3 -1.1
KMI XP sP 12 04 03.9 +0.5
KMI S **S 12 07 22.8 +2.0**
KMI XS sS 12 08 48.3 -0.8
KMI SS SS 12 09 17.6 -6.3
KMI AMB AMB
comp=Z,17nm,1.3s,mb4.5
KMI AMB AMB
comp=Z,143nm,3.1s
KMI LR LR
comp=N,180nm,13.0s
KMI LR LR
comp=E,150nm,10.6s
KMI LR LR
comp=Z,192nm,15.9s
BR131 Keskin Array S 29.44 288 *e*P **P 12 02 46.5 +0.5**
comp=Z,32nm,0.7s,mb5.1
BR131 *e*pP pP 12 03 34.1 -0.9
BRTR Keskin Array B 29.44 288 P **P 12 02 46.5 +0.4**
comp=Z,26nm,0.7s,mb5.0,baz=103,slow=8.5,SNR=92
BRTR pP pP 12 03 34.4 -0.6
comp=Z,16nm,1.0s,baz=94,slow=8.8,SNR=3.5
BRTR ScP ScP 12 09 01.1 -1.8
comp=Z,2.6nm,1.1s,baz=142,slow=4.4,SNR=3.6
MOS Moscow 29.62 321 *e*P **P 12 02 44.7 -2.7**
MOS *e**PP pP 12 03 34.2 -2.2
MOS *e*S **S 12 07 29.8 +6.0**
MOS pmax pmax
comp=Z,150nm,1.1s,mb5.5
MOS pmax pmax
comp=Z,200nm,1.2s,mb5.6
OBN Obninsk 29.90 319*ae*P **P 12 02 49.7 -0.2**
OBN *i* *PP pP 12 03 37.7 -1.3
OBN *e**SP sP 12 04 03.7 -4.1
OBN pmax pmax
comp=Z,175nm,1.6s,mb5.4
OBN MLR MLR
comp=Z,200nm,19.0s
OBN Obninsk 29.90 319 *e*P **P 12 02 49.7 -0.2**
comp=Z,104nm,1.0s,mb5.4
OBN *e*pP pP 12 03 37.9 -1.1
ANTO Ankara 30.08 288 *e*P **P 12 02 52.5 +0.9**
ANTO *e**PP pP 12 03 43.6 +2.9
ANTO pmax pmax
comp=Z,16nm,0.8s,mb4.7
ANTO Ankara 30.08 288 *e*P **P 12 02 52.5 +0.9**
comp=Z,16nm,0.8s,mb4.7
ANTO *e*pP pP 12 03 43.6 +2.9
CHRT Chiangrai 30.14 116⇓P **P 12 02 53.5 +1.1**
comp=Z,184nm,1.3s,mb5.5
CHG Chiang Mai 30.23 118⇓P **P 12 02 54.7 +1.6**
comp=Z,26nm,0.9s,mb4.9
CHTO Chiang Mai 30.23 118 *e*P **P 12 02 54.1 +1.0**
CHTO *e**PP pP 12 03 45.1 +2.8
CHTO pmax pmax
comp=Z,21nm,0.9s,mb4.8
CHTO Chiang Mai 30.23 118 *e*P **P 12 02 54.1 +1.0**
comp=Z,21nm,0.9s,mb4.8
CHTO *e*pP pP 12 03 45.1 +2.8
CMAR Chiang Mai Arr 30.46 119 P **P 12 02 56.1 +0.9**
comp=Z,39nm,0.9s,mb5.0,baz=300,slow=8.1,SNR=168
CMAR pP pP 12 03 45.2 +0.9
comp=Z,17nm,1.0s,baz=307,slow=9.2,SNR=3.9
CMAR ScP ScP 12 09 05.2 -1.3
comp=Z,6.7nm,1.0s,baz=295,slow=5.1,SNR=10
CMAR Chiang Mai Arr 30.46 119 P **P 12 02 56.1 +0.9**
CMAR *PP pP 12 03 45.3 +0.9
CMAR pmax pmax
comp=Z,39nm,0.9s
CMAR pmax pmax
comp=Z,17nm,1.0s
CMAR pmax pmax
comp=N,7.0nm,1.0s
BTO Baotou 30.56 70 *e*P **P 12 02 56.4 +0.6**
XAN Xi'an 30.89 83 P **P 12 02 59.2 +0.4**
XAN AP pP 12 03 51.2 +3.2
XAN PP PP 12 04 13.9 0.0
XAN XP sP 12 04 14.8 -1.9
XAN S **S 12 07 45.4 +1.3**
XAN AMB AMB
comp=Z,48nm,1.0s,mb5.1
XAN LR LR
comp=N,115nm,13.5s
XAN LR LR
comp=E,242nm,14.2s
XAN LR LR
comp=Z,390nm,21.4s
BDT Bhumibol Dam 31.32 120 P **P 12 03 03.5 +0.8**
comp=Z,60nm,1.1s,mb5.1
KLMR Klimovskoe 31.43 331 *e*P **P 12 03 02.2 -1.0**
KLMR pmax pmax
comp=Z,168nm,1.5s,mb5.5
HHC Hu-ho-hao-te 31.71 70 *e*P **P 12 03 07.5 +1.7**
HHC AP pP 12 03 58.3 +3.1
HHC PP PP 12 04 23.7 +0.8
HHC XP sP 12 04 27.7 +3.8
HHC PCP PcP 12 05 52.6 +1.6
HHC S **S 12 07 56.5 -0.1**
HHC XS sS 12 09 27.0 +1.7
HHC PCS PcS 12 09 36.6 +0.8
HHC SS SS 12 10 09.5 -7.8
HHC SCS ScS 12 13 07.7 -1.3
HHC AMB AMB
comp=Z,27nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,176nm,3.6s
GYA Guiyang 31.84 98⇓*i* P **P 12 03 08.4 +1.2**
GYA AP pP 12 03 57.5 +0.9

GYA XP sP 12 04 26.6 +1.4
GYA PCP PcP 12 05 51.5 -0.1
GYA S **S** **12 08 01.5 +2.4**
GYA SCP ScP 12 09 09.9 -1.2
GYA SCS ScS 12 13 10.5 +0.4
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,190nm,5.4s
LBOS 32.30 232 *eP* **P** **12 03 12.4 +1.1**
AKASG Malin Array Be 32.92 309 P **P** **12 03 15.4 -0.9**
comp=Z,16nm,0.7s,mb4.7,baz=84,slow=7.1,SNR=60
AKASG pP pP 12 04 04.0 -1.9
comp=Z,12nm,0.7s,baz=88,slow=7.5,SNR=3.4
AKASG sP sP 12 04 33.0 -1.6
comp=Z,18nm,0.9s,baz=83,slow=9.3,SNR=4.1
AKASG Malin Array Be 32.92 309 P **P** **12 03 15.4 -0.9**
AKASG *PP pP 12 04 04.0 -1.8
AKASG *SP sP 12 04 33.0 -1.5
AKASG pmax pmax
comp=Z,16nm,0.7s
AKASG Malin Array Be 32.92 309 P **P** **12 03 15.4 -0.9**
AKASG pP pP 12 04 04.0 -1.9
AKASG sP sP 12 04 33.0 -1.6
AKBB Malin Array Si 32.92 309 *eP* **P** **12 03 16.1 -0.2**
AKBB *e*PP pP 12 04 05.3 -0.5
AKBB *e*SP sP 12 04 30.4 -4.1
KIEV Kiev 32.93 309 *eP* **P** **12 03 16.0 -0.4**
KIEV *e*PP pP 12 04 05.4 -0.5
KIEV pmax pmax
comp=Z,88nm,1.5s,mb5.1
KIEV Kiev 32.93 309 *eP* **P** **12 03 16.0 -0.4**
comp=Z,88nm,1.5s,mb5.1
KIEV *ep*P pP 12 04 05.4 -0.5
TIRR Tirgusor 33.05 297 *eP* **P** **12 03 16.9 -0.5**
TIRR pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
TIRR Tirgusor 33.05 297 *eP* **P** **12 03 16.9 -0.5**
comp=Z,5.3nm,1.0s,mb4.0
NST Nakhon Sawan 33.19 121 ⇑*iP* **P** **12 03 21.0 +2.1**
comp=Z,131nm,0.7s,mb5.6
CIT Chita 33.58 49 *eP* **P** **12 03 23.2 +1.3**
CIT *e* pP 12 04 14.3 +2.8
CIT pmax pmax
comp=Z,192nm,1.5s,mb5.4
VRI Vrincioaia 34.22 300 ⇓*iP* **P** **12 03 29.2 +1.7**
VRI Vrincioaia 34.22 300 ⇓P **P** **12 03 29.2 +1.7**
PLOR Plostina 34.27 300 ⇑*iP* **P** **12 03 29.8 +1.8**
MNK Minsk 34.50 315 ⇓*eP* **P** **12 03 28.0 -1.8**
MNK pmax pmax
comp=Z,140nm,1.4s,mb5.3
MLR Muntele Rosu 34.77 299 ⇓*iP* **P** **12 03 34.4 +2.2**
MLR Muntele Rosu 34.77 299 ⇓P **P** **12 03 34.4 +2.1**
BOD Bodaibo 35.27 39 *eP* **P** **12 03 36.2 -0.1**
BOD pmax pmax
comp=Z,22nm,1.4s,mb4.5
BURAR Bucovina Array 35.27 303 ⇑*iP* **P** **12 03 37.2 +0.7**
BURAR Bucovina Array 35.27 303 ⇑P **P** **12 03 37.2 +0.8**
BUR08 Bucovina Ar. S 35.28 303 *eP* **P** **12 03 37.0 +0.4**
BUR08 *ep*P pP 12 04 23.7 -2.9
BJI Beijing 35.30 70 P **P** **12 03 36.6 -0.2**
BJI S **S** **12 08 52.6 +0.7**
BJI AMB AMB
comp=Z,14nm,0.4s,mb4.8
BJI AMB AMB
comp=Z,203nm,5.0s
BJI LR LR
comp=N,215nm,19.5s
BJI LR LR
comp=E,279nm,18.0s
BJI LR LR
comp=Z,118nm,20.8s
VOIR 35.41 299 ⇑*iP* **P** **12 03 38.6 +1.0**
VOIR 35.41 299 ⇑P **P** **12 03 38.6 +1.0**
JOF Joensuu 35.82 330 *ep* **P** **12 03 39.8 -1.1**
comp=Z,50nm,0.7s,mb5.2
JOF Joensuu 35.82 330 *eP* **P** **12 03 39.8 -1.1**
JOF pmax pmax
comp=Z,50nm,0.7s,mb5.2
LVV L'vov 36.14 307 ⇓*iP* **P** **12 03 43.3 -0.5**
LVV *e* 12 04 59.3
LVV *e* 12 06 03.3
LVV *eS* **S** **12 08 59.5 -5.0**
LVV pmax pmax
comp=Z,200nm,1.3s,mb5.5
APE Apeiranthos 36.17 285 ⇑*iP* **P** **12 03 44.1 -0.1**
WHN Wuhan 36.35 87 ⇑P **P** **12 03 47.2 +1.3**
WHN AP pP 12 04 40.7 +4.6
WHN PP PP 12 05 20.9 +6.7
WHN AMB AMB
comp=Z,536nm,4.3s
VTS Vitosha 36.96 294 ⇓*iP* **P** **12 03 51.7 +1.0**
DRGR 36.99 301 ⇓*iP* **P** **12 03 52.2 +1.3**
DRGR 36.99 301 ⇓P **P** **12 03 52.2 +1.2**
KWP Kalwaria 36.99 306 *eP* **P** **12 03 52.0 +1.0**
KWP *ep*P pP 12 04 41.9 +0.6
KWP *eS* **S** **12 09 13.5 -3.8**
KWP Kalwaria 36.99 306 ⇓*iP* **P** **12 03 51.7 +0.7**
KWP Kalwaria 36.99 306 *eP* **P** **12 03 52.0 +1.0**
KWP *ep*P pP 12 04 41.9 +0.5
KWP *eS* **S** **12 09 13.5 -3.8**
GZR Gura Zlata 37.01 299 ⇓*iP* **P** **12 03 51.7 +0.6**
GZR Gura Zlata 37.01 299 ⇓P **P** **12 03 51.7 +0.6**
SUW Suwalki 37.09 313 *eP* **P** **12 03 50.7 -1.0**
SUW Suwalki 37.09 313 *eP* **P** **12 03 50.7 -1.0**
HIA Hailar 37.22 54 *eP* **P** **12 03 54.4 +1.5**
HIA pmax pmax
comp=Z,5.0nm,0.7s
HIA Hailar 37.22 54 *eP* **P** **12 03 54.4 +1.6**
comp=Z,5.2nm,0.7s,mb4.2
UZH Uzhgorod 37.24 305 ⇓*iP* **P** **12 03 53.0 -0.1**
UZH *e*PP pP 12 04 41.0 -2.5
UZH *i* 12 05 26.5
KOLS Kolonicke sedl 37.26 305 *eP* **P** **12 03 53.7 +0.5**
KOLS *e* pP 12 04 43.6 -0.1
KOLS *e* 12 05 23.0
KOLS *e* 12 06 07.7
KOLS pmax pmax
comp=Z,17nm,1.1s,mb4.5
KOLS Kolonicke sedl 37.26 305 *eP* **P** **12 03 53.7 +0.5**
comp=Z,17nm,1.1s,mb4.5
KOLS *e* pP 12 04 43.6 -0.1
KOLS *eP*P PP 12 05 23.0 -0.7
KOLS *e* 12 06 07.7
LVZ Lovozero 37.40 338 ⇑*eP* **P** **12 03 55.2 +1.1**
APA Apatity 37.58 337 ⇑*iP* **P** **12 03 57.2 +1.6**
APA *i* 12 05 15.5
APA pmax pmax
comp=Z,43nm,1.2s,mb4.8
APA MLR MLR
comp=Z,1μm,16.0s
KAF Kangasniemi 37.58 327 *ep* **P** **12 03 54.7 -1.0**
comp=Z,19nm,0.8s,mb4.7,baz=111,slow=8.4
KAF Kangasniemi 37.58 327 *eP* **P** **12 03 54.7 -1.0**
KAF pmax pmax
comp=Z,19nm,0.8s,mb4.7
CRVS Cervenica-Dubn 37.80 305 *eP* **P** **12 03 55.7 -2.0**
CRVS *ep*P pP 12 04 43.8 -4.5
CRVS *eP*P PP 12 05 27.5 -2.1
BZS Buzias 37.80 300 ⇓*iP* **P** **12 03 58.5 +0.7**
BZS Buzias 37.80 300 ⇓P **P** **12 03 58.5 +0.7**
STHS Stebnicka Huta 37.94 306 *eP* **P** **12 03 58.8 -0.1**
STHS *e* pP 12 04 49.5 0.0
STHS *e* 12 06 10.0
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
STHS Stebnicka Huta 37.94 306 *eP* **P** **12 03 58.8 -0.1**
comp=Z,5.8nm,0.9s,mb4.1
STHS *e* pP 12 04 49.5 0.0
STHS *e* 12 05 44.9
STHS *e* 12 06 10.0
QIZ Qiongzhong 38.21 107 P **P** **12 04 02.2 +0.7**
QIZ XP sP 12 05 18.3 -2.2
QIZ PP PP 12 05 34.9 +0.4
QIZ S **S** **12 09 38.5 +2.2**
QIZ AMB AMB
comp=Z,29nm,2.1s,mb4.4
NIE Niedzica 38.55 306 *eP* **P** **12 04 05.4 +1.5**
NIE *ep*P pP 12 04 55.8 +1.1
PSZ Piszkesteto 38.86 303 *eP* **P** **12 04 07.6 +1.1**
PSZ *e*PP pP 12 04 58.4 +1.0
PSZ pmax pmax
comp=Z,43nm,1.3s,mb4.8
PSZ Piszkesteto 38.86 303 ⇓P **P** **12 04 07.6 +1.1**
PSZ Piszkesteto 38.86 303 ⇑*iP* **P** **12 04 08.0 +1.5**
PSZ Piszkesteto 38.86 303 *eP* **P** **12 04 07.6 +1.1**
comp=Z,43nm,1.3s,mb4.8
PSZ *ep*P pP 12 04 58.4 +1.1
OJC Ojcow 38.88 307 *eP* **P** **12 04 06.0 -0.7**
OJC *ep*P pP 12 04 57.6 +0.1
NJ2 Nanjing 39.43 82 *eP* **P** **12 04 12.5 +1.0**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb4.9
BUD Budapest 39.47 303 ⇓*eP* **P** **12 04 12.7 +1.1**
VYHS Vyhne 39.54 304 *eP* **P** **12 04 12.2 0.0**
VYHS *e* pP 12 05 03.3 +0.2
VYHS *e* 12 05 48.3
VYHS pmax pmax
comp=Z,25nm,1.5s,mb4.4
VYHS Vyhne 39.54 304 *eP* **P** **12 04 12.2 0.0**
comp=Z,25nm,1.5s,mb4.4
VYHS *e* pP 12 05 03.3 +0.2
VYHS *ePP* PP 12 05 48.3 -0.2
KOLL Kolacno 39.83 304 *eP* **P** **12 04 15.2 +0.7**
KOLL *ep*P pP 12 05 06.1 +0.6
KOLL *ePP* PP 12 05 53.2 +1.7
PKSM Moragy 39.83 301 ⇑*iP* **P** **12 04 15.4 +0.9**
PKSM Moragy 39.83 301 ⇑P **P** **12 04 15.4 +0.9**
OKC Ostrava-Krasne 39.95 306 *eP* **P** **12 04 16.0 +0.5**
SMOL Smolenice 40.48 304 *eP* **P** **12 04 19.9 +0.1**
SNY Shenyang 40.52 66 P **P** **12 04 16.7 -3.6**
SNY S **S** **12 10 05.6 -4.7**
SNY AMB AMB
comp=Z,18nm,1.4s,mb4.3
SNY LR LR
comp=N,254nm,8.1s
SNY LR LR
comp=E,103nm,12.3s
SNY LR LR
comp=Z,206nm,8.7s
GKP Gorka Klasztor 40.55 312 *eP* **P** **12 04 20.7 +0.4**
GKP *ep*P pP 12 05 12.1 +0.5
GKP Gorka Klasztor 40.55 312 *eP* **P** **12 04 20.7 +0.4**
GKP *ep*P pP 12 05 12.1 +0.6
ZST Bratislava 40.71 304 *eP* **P** **12 04 22.7 +0.9**
ZST *e* pP 12 05 12.7 -0.3
ZST *e* 12 06 01.3
ZST pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
ZST Bratislava 40.71 304 *eP* **P** **12 04 22.7 +0.9**
comp=Z,6.5nm,0.8s,mb4.1
ZST *e* pP 12 05 12.7 -0.3
ZST *e* 12 06 01.3
KEV Kevo 40.74 338 *ep* **P** **12 04 20.8 -0.9**
comp=Z,20nm,0.7s,mb4.7
KEV Kevo 40.74 338 *eP* **P** **12 04 20.8 -0.9**
KEV pmax pmax
comp=Z,20nm,0.7s,mb4.7
VRAC Vranov 40.98 306 ⇑*iP* **P** **12 04 25.3 +1.4**
VRAC Vranov 40.98 306 ⇑P **P** **12 04 25.3 +1.4**
ARCES ARCESS Array B 41.09 338 P **P** **12 04 24.7 +0.2**
comp=Z,59nm,1.0s,mb5.0,baz=111,slow=6.9,SNR=46
ARCES *ep* pP 12 05 16.1 +0.3
comp=Z,10.0nm,0.8s,baz=105,slow=7.9,SNR=2.3
ARCES sP sP 12 05 44.1 0.0
comp=Z,16nm,0.7s,baz=113,slow=9.3,SNR=4.0
ARCES ARCESS Array B 41.09 338 P **P** **12 04 24.7 +0.2**
ARCES *PP pP 12 05 16.1 +0.3
ARCES *SP sP 12 05 44.2 +0.1
ARCES pmax pmax
comp=Z,59nm,1.0s
ARCES ARCESS Array B 41.09 338 P **P** **12 04 24.7 +0.2**
ARCES pP pP 12 05 16.1 +0.3
ARCES sP sP 12 05 44.1 0.0
ARE0 ARCESS Array S 41.09 338 *eP* **P** **12 04 25.1 +0.7**
DPC Dobruska-Polom 41.11 307 *eP* **P** **12 04 25.8 +0.8**
DPC *ep*P pP 12 05 17.2 +0.9
DPC *eP*P PP 12 06 13.6 +8.3
KSP Ksiaz 41.12 308 *eP* **P** **12 04 25.3 +0.3**
KSP *ep*P pP 12 05 15.4 -1.0
KSP *eP*P PP 12 06 04.6 -0.7
KSP Ksiaz 41.12 308 *eP* **P** **12 04 23.8 -1.2**
KSP *ep*P pP 12 05 13.7 -2.6
KSP *eP*P PP 12 06 04.2 -1.1
SOP Sopron 41.12 303 ⇓*eP* **P** **12 04 25.7 +0.7**
KULM Kulim 41.30 132 ⇑P **P** **12 04 28.4 +1.5**
UPC Upice 41.31 308 *eP* **P** **12 04 27.0 +0.5**
UPC *ep*P pP 12 05 18.5 +0.6
UPC *eP*P PP 12 06 08.1 +0.8
CN2 Changchun 41.54 63 *eP* **P** **12 04 29.3 +0.8**
CN2 *eS* **S** **12 10 25.2 0.0**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.4
KTK1 Kautokeino 41.56 336 *eP* **P** **12 04 28.3 0.0**
CONA Conrad Observa 41.56 304 ⇑*iP* **P** **12 04 29.2 +0.5**
comp=Z,58nm,1.3s,mb4.9,SNR=23
CSNA Conrad Observa 41.57 304 ⇑*iP* **P** **12 04 29.3 +0.6**
comp=Z,56nm,1.3s,mb4.8
TREC Trest 41.71 306 *eP* **P** **12 04 30.6 +0.8**
TREC *ep*P pP 12 05 21.6 +0.3
ARSA Arzberg 41.86 303 ⇑*iP* **P** **12 04 31.2 +0.1**
comp=Z,20nm,1.4s,mb4.3
LUJL Ujela 42.06 275 *iP* **P** **12 04 32.7 -0.2**
comp=Z,202nm,1.4s,mb5.4,SNR=52
IPM Ipoh 42.17 132 ⇑P **P** **12 04 35.0 +1.1**
PERS Pernice 42.21 302 *eP* **P** **12 04 34.1 +0.2**
PVCC Panska Ves 42.23 308 *eP* **P** **12 04 34.7 +0.8**
SOKA Soboth 42.26 302 ⇑*iP* **P** **12 04 34.4 +0.1**
comp=Z,55nm,1.3s,mb4.8
BOJS Bojanci 42.26 300 *iP* **P** **12 04 34.4 +0.1**
BOJS *i* pP pP 12 05 25.8 -0.1
BOJS *ePcP* PcP 12 06 22.6 -0.5
PRU Pruhonice 42.27 307 *eP* **P** **12 04 34.4 +0.1**
PRU *ep*P pP 12 05 26.7 +0.7
PRU *eP*P PP 12 06 19.4 +1.7
TIP Timpagrande 42.39 291 *eP* **P** **12 04 35.2 -0.3**
comp=Z,70nm,1.3s,mb4.9
BRG Berggiesshubel 42.60 308 *eP* **P** **12 04 37.1 +0.1**
comp=Z,66nm,1.3s,mb4.9
BRG Berggiesshubel 42.60 308 *eP* **P** **12 04 37.3 +0.3**
comp=Z,66nm,1.3s,mb4.9
BRG *i* pP pP 12 05 28.9 +0.2
comp=Z,19nm,1.0s
BRG *eS*P sP 12 05 56.1 -0.7
comp=Z,26nm,1.2s
BRG *e* 12 27 37.9
comp=Z,8.3nm,1.4s
MOA Molln 42.64 304 ⇑*iP* **P** **12 04 37.2 -0.1**
comp=Z,41nm,1.3s,mb4.7,SNR=16
LKFR Kufra 42.68 267 *iP* **P** **12 04 37.8 -0.2**
comp=Z,241nm,0.9s,mb5.6,SNR=52
LJU Ljubljana 42.69 301 *iP* **P** **12 04 38.6 +0.9**
LJU *i* pP pP 12 05 30.5 +1.0
LJU *i* PcP PcP 12 06 24.7 +0.1
RGNG Rignano Grg 42.70 294 P **P** **12 04 37.7 -0.2**
KTGM Kuala Trenggan 42.79 129 ⇑P **P** **12 04 40.4 +1.4**
CUC Castrocucco 42.90 292 *eP* **P** **12 04 40.0 +0.5**
comp=Z,125nm,1.1s,mb5.3
CUC *ep*P pP 12 05 32.1 +0.8
GERES GERESS Array B 42.91 305 P **P** **12 04 40.0 +0.5**
comp=Z,2.1nm,0.7s,mb3.7,baz=98,slow=7.0,SNR=19
GERES *ep* pP 12 05 31.7 +0.5
comp=Z,4.5nm,1.0s,baz=78,slow=8.3,SNR=4.8
GERES sP sP 12 05 58.3 -1.1
comp=Z,2.3nm,0.8s,baz=76,slow=7.4,SNR=2.8
GERES PcP PcP 12 06 25.2 0.0
comp=Z,9.4nm,1.1s,baz=76,slow=5.6,SNR=7.7
GERES ScP ScP 12 09 51.5 -0.8
comp=Z,0.9nm,0.7s,baz=76,slow=5.6,SNR=4.1
GERES GERESS Array B 42.91 305 P **P** **12 04 40.0 +0.5**
GERES *PP pP 12 05 31.7 +0.4
GERES *SP sP 12 05 58.3 -1.1
GERES 12 06 25.2
KHC Kasperske Hory 42.97 306 *eP* **P** **12 04 39.0 -0.9**
KHC *ex* x 12 04 52.5
KHC *ep*P pP 12 05 31.0 -0.7
KHC *eP*P PP 12 06 23.9 -1.1
KHC *ex* x 12 06 30.5
FBE Freiberg 42.97 308 *eP* **P** **12 04 39.8 -0.1**
comp=Z,74nm,1.3s,mb5.0
FBE *ep*P pP 12 05 31.6 -0.1
FBE *es*P sP 12 05 59.4 -0.4
JAVS Javornik 43.03 301 *iP* **P** **12 04 41.0 +0.6**
JAVS *i* pP pP 12 05 32.3 0.0
JAVS *i* PcP PcP 12 06 25.3 -0.5
SGO Sicignano 43.15 293 P **P** **12 04 42.0 +0.5**
SGO pmax pmax
comp=Z,24nm,0.6s,mb4.8
SGO Sicignano 43.15 293 P **P** **12 04 42.0 +0.5**
comp=Z,24nm,0.6s,mb4.8
CLL Collm 43.17 309 ⇓*iP* **P** **12 04 41.5 0.0**
CLL *e*PP pP 12 05 33.0 -0.3
CLL *e*SP sP 12 05 59.0 -2.4
CLL pmax pmax
comp=Z,48nm,1.5s,mb4.7
CLL Collm 43.17 309 *eP* **P** **12 04 41.6 +0.1**
comp=Z,49nm,1.5s,mb4.7
CLL Collm 43.17 309 ⇓*iP* **P** **12 04 41.5 0.0**
comp=Z,48nm,1.5s,mb4.7
CLL *ep*P pP 12 05 33.0 -0.3
CLL *es*P sP 12 05 59.0 -2.4
CLL *eP*P PP 12 06 26.0 -1.1
CLL Collm 43.17 309 ⇓*iP* **P** **12 04 41.5 0.0**
comp=Z,48nm,1.5s,mb4.7
CLL *ep*P pP 12 05 33.0 -0.3
CLL *es*P sP 12 05 59.0 -2.4
TRO Tromso 43.21 336 *eP* **P** **12 04 42.2 +0.6**
CEL Celeste 43.28 290 *eP* **P** **12 04 42.6 0.0**
comp=Z,43nm,1.0s,mb4.8
CEL *ep*P pP 12 05 34.8 +0.3
CEL *es*P sP 12 06 02.1 -0.4
CSSN Cassano Irpino 43.29 293 P **P** **12 04 42.0 -0.6**
comp=Z,86nm,1.6s,mb4.9
KBA Koelnbreinsper 43.36 303 ⇓*iP* **P** **12 04 43.3 +0.3**
comp=Z,16nm,0.9s,mb4.4,SNR=8.3
WET Wettzell 43.42 306 *eP* **P** **12 04 43.7 +0.1**
WET pmax pmax
comp=Z,31nm,1.6s,mb4.5
WET Wettzell 43.42 306 *eP* **P** **12 04 43.7 +0.1**
comp=Z,31nm,1.6s,mb4.5
PTCC Patocco-Chiusa 43.44 302 P **P** **12 04 44.0 +0.2**
MTTG Motta San Giov 43.50 289 P **P** **12 04 44.8 +0.4**
FRIM Kepong 43.52 132 ⇓P **P** **12 04 46.2 +1.5**
TANN Tannenbergstha 43.58 308 *eP* **P** **12 04 44.9 +0.2**
comp=Z,47nm,1.5s,mb4.6
TANN *ep*P pP 12 05 36.4 -0.3
NKC Novy Kostel 43.60 307 *eP* **P** **12 04 45.7 +0.8**
NKC *ep*P pP 12 05 35.5 -1.4
WERN Wernitzgruen 43.64 307 *eP* **P** **12 04 45.1 -0.2**
comp=Z,61nm,1.7s,mb4.7
GUNZ Gunzen 43.66 308 *eP* **P** **12 04 46.0 +0.6**
comp=Z,46nm,1.4s,mb4.6
WERD Werda 43.67 308 *eP* **P** **12 04 45.4 -0.1**
comp=Z,33nm,1.3s,mb4.5
MOR8 Moi Rana 43.77 331 *eP* **P** **12 04 45.5 -0.5**
MOR8 AMb AMB 12 04 46.0
comp=Z,104nm,0.9s,mb5.2
MOR8 Moi Rana 43.77 331 *eP* **P** **12 04 45.5 -0.5**
comp=Z,104nm,0.9s,mb5.2
ROTZ Rotzenmuhle 43.80 307 *eP* **P** **12 04 47.4 +0.9**
comp=Z,91nm,1.6s,mb4.8
ROTZ *ep*P pP 12 05 37.8 -0.7
MANZ Manzenberg 43.84 307 *eP* **P** **12 04 47.2 +0.4**
comp=Z,36nm,1.4s,mb4.5
YAK Yakutsk 43.89 36 *eP* **P** **12 04 45.4 -1.6**
YAK *e*PP pP 12 05 40.3 +1.3
YAK *e* 12 06 06.9
YAK *e* 12 06 38.5
YAK *eS* **S** **12 10 57.0 -1.8**
YAK pmax pmax
comp=Z,25nm,0.8s,mb4.6
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK smax
comp=N,247nm,3.5s
YAK smax
comp=E,109nm,2.6s
YAK Yakutsk 43.89 36 *eP* **P** **12 04 46.8 -0.3**
comp=E,48nm,0.7s,mb4.9
YAK *ep*P pP 12 05 42.0 +2.9
ABTA Abfaltersbach 43.97 302 *iP* **P** **12 04 47.9 0.0**
comp=E,14nm,1.1s,mb4.2,SNR=7.2
MOX Moxa 44.09 308 *eP* **P** **12 04 49.4 +0.6**
comp=E,56nm,1.7s,mb4.6
MOX Moxa 44.09 308 *eP* **P** **12 04 49.4 +0.6**
MOX pmax pmax
comp=Z,56nm,1.7s,mb4.6
MOX Moxa 44.09 308 *eP* **P** **12 04 49.0 +0.2**
comp=Z,42nm,1.4s,mb4.6
AQU L'Aquila 44.14 296 ⇓*iP* **P** **12 04 50.9 +1.5**
AQU L'Aquila 44.14 296 ⇓P **P** **12 04 50.9 +1.6**
AQU *ep*P pP 12 05 41.7 +0.2
PTQR Pietraquaria 44.22 296 P **P** **12 04 50.8 +0.9**
NRCA Norcia 44.25 297 P **P** **12 04 50.7 +0.5**
comp=Z,9.0nm,0.8s,mb4.2
MDJ Mudanjiang 44.34 61 P **P** **12 04 50.3 -0.6**
MDJ AP pP 12 05 42.8 -0.2
MDJ XP sP 12 06 07.8 -3.2
MDJ PCP PcP 12 06 31.1 +0.9
MDJ SCP ScP 12 10 00.1 +1.9
MDJ PCS PcS 12 10 26.4 +2.6
MDJ S **S** **12 11 04.7 -1.1**
MDJ XS sS 12 12 33.7 -4.4
MDJ SCS ScS 12 14 21.1 -0.5
MDJ AMB AMB
comp=Z,11nm,1.7s,mb3.9
MDJ AMB AMB
comp=Z,130nm,4.3s
NB2 NORSAR Subarra 44.34 323 P **P** **12 04 49.8 -0.8**
comp=Z,60nm,1.0s,mb4.9,baz=95,slow=7.9
NOA NORSAR Array B 44.34 323 P **P** **12 04 50.1 -0.5**
comp=Z,34nm,0.8s,mb4.7,baz=96,slow=7.7,SNR=76
NOA *pP pP 12 05 41.8 -1.0
comp=Z,15nm,0.8s,baz=96,slow=8.1,SNR=5.2
NOA sP sP 12 06 08.9 -1.8
comp=Z,28nm,0.8s,baz=95,slow=8.0,SNR=6.8
NOA NORSAR Array B 44.34 323 P **P** **12 04 50.1 -0.5**
NOA *PP pP 12 05 41.8 -0.9
NOA *SP sP 12 06 09.0 -1.8
NOA pmax pmax
comp=Z,35nm,0.8s
GRA1 Grafenberg Arr 44.44 307 *eP* **P** **12 04 52.6 +1.0**
comp=Z,155nm,1.7s,mb5.1
GRA1 *ep*P pP 12 05 44.2 +0.5
GRF Grafenberg Arr 44.44 307 *eP* **P** **12 04 52.6 +1.0**
GRF *e*PP pP 12 05 44.2 +0.5
GRF pmax pmax
comp=Z,155nm,1.7s,mb5.1
GRF Grafenberg Arr 44.44 307 *eP* **P** **12 04 52.6 +1.0**
GRF *e*PP pP 12 05 44.2 +0.5
GRF pmax pmax
comp=Z,155nm,1.7s,mb5.1
GRF Grafenberg Arr 44.44 307 *eP* **P** **12 04 52.6 +1.0**
comp=Z,155nm,1.7s,mb5.1
GRF *ep*P pP 12 05 44.2 +0.5
NAO01 NORSAR Array S 44.48 323 *eP* **P** **12 04 50.9 -0.9**
comp=Z,22nm,0.9s,mb4.5
WTTA Wattenberg 44.48 303 ⇑*iP* **P** **12 04 51.4 -0.6**
comp=Z,42nm,1.4s,mb4.6,SNR=14
WATA Walderalm 44.51 303 ⇓*iP* **P** **12 04 51.0 -1.2**
comp=Z,25nm,1.2s,mb4.4,SNR=5.7
ASS Assisi 44.53 297 P **P** **12 04 53.0 +0.6**
ASS pmax pmax
comp=Z,75nm,1.4s,mb4.8
ASS Assisi 44.53 297 P **P** **12 04 53.0 +0.6**
comp=Z,74nm,1.4s,mb4.8
SSLB Suanglung 44.54 92 *eP* **P** **12 04 54.7 +2.0**
comp=Z,64nm,1.0s,mb4.9
FUR Furstenfeldbru 44.59 305 *eP* **P** **12 04 53.1 +0.3**
FUR *e* 12 06 13.4
FUR pmax pmax
comp=Z,111nm,1.4s,mb5.0
FUR Furstenfeldbru 44.59 305 *eP* **P** **12 04 53.1 +0.3**
comp=Z,111nm,1.4s,mb5.0
FUR *es*P sP 12 06 13.4 +0.4
BSEG Bad Segeberg 44.67 313 *eP* **P** **12 04 53.9 +0.6**
BSEG *e* 12 06 13.2
BSEG pmax pmax
comp=Z,60nm,1.3s,mb4.8
BSEG Bad Segeberg 44.67 313 *eP* **P** **12 04 53.9 +0.6**
comp=Z,60nm,1.3s,mb4.8
BSEG *es*P sP 12 06 13.2 -0.3
CTI Castel Tesino 44.67 301 P **P** **12 04 53.7 +0.3**
BADI Badiali 44.73 298 P **P** **12 04 54.7 +0.7**
RAFF Raffo Rosso 44.74 289 P **P** **12 04 54.5 +0.4**
CLZ Clausthal 44.77 310 *eP* **P** **12 04 54.1 0.0**
CLZ pmax pmax
comp=Z,90nm,1.5s,mb4.9
CLZ Clausthal 44.77 310 *eP* **P** **12 04 54.1 0.0**

comp=Z,90nm,1.5s,mb4.9
KSRS Korea Array 44.82 71 P **P** **12 04 55.1 +0.3**
comp=Z,7.0nm,1.0s,mb3.9,baz=282,slow=6.9,SNR=14
KSRS pP pP 12 05 47.9 +0.8
comp=Z,5.4nm,1.0s,baz=285,slow=7.5,SNR=3.8
KSRS sP sP 12 06 16.1 +1.2
comp=Z,6.8nm,1.1s,baz=282,slow=7.6,SNR=2.8
KSRS Korea Array 44.82 71 P **P** **12 04 55.1 +0.3**
KSRS *PP pP 12 05 47.9 +0.9
KSRS *SP sP 12 06 16.2 +1.2
KSRS pmax pmax
comp=Z,7.0nm,1.0s,mb4.0
YULB Yu-li 45.00 92 *eP* **P** **12 04 58.7 +2.4**
comp=Z,17nm,0.8s,mb4.4
LSRT Sirt 45.01 280 *i* P **P** **12 04 56.4 0.0**
comp=Z,118nm,1.5s,mb5.0,SNR=50
KONO Kongsberg 45.05 321⇑ *eP* **P** **12 04 55.2 -1.0**
KLR Kul'dur 45.07 54 *eP* **P** **12 04 52.8 -3.8**
KLR *e* pP 12 05 43.8 -5.0
KLR pmax pmax
comp=Z,50nm,1.6s,mb4.6
TWG Pinlang 45.10 93 *eP* **P** **12 04 59.8 +2.6**
comp=Z,103nm,1.0s,mb5.1
UBBA Unterbreizbach 45.10 308 *eP* **P** **12 04 56.7 0.0**
comp=Z,48nm,1.6s,mb4.6
FETA Feichten 45.13 303⇑ *i*P **P** **12 04 56.4 -0.7**
comp=Z,28nm,1.1s,mb4.5,SNR=10
VMG Vicchio 45.13 299 P **P** **12 04 58.7 +1.6**
comp=Z,141nm,1.0s,mb5.2
SEI Scarperia 45.25 299 P **P** **12 04 59.3 +1.3**
comp=Z,163nm,1.0s,mb5.3
KGM Kluang 45.50 132 ⇓ P **P** **12 05 02.1 +1.7**
DAVA Damuels 45.66 304⇑ *i*P **P** **12 05 01.1 -0.1**
comp=Z,67nm,0.9s,mb5.0,SNR=34
TIXI Tiksi 45.69 22 *i*P **P** **12 05 00.7 -0.4**
TIXI pmax pmax
comp=Z,26nm,0.8s,mb4.6
TIXI Tiksi 45.69 22 *eP* **P** **12 05 00.8 -0.3**
comp=Z,52nm,0.9s,mb4.9
TIXI *e*pP pP 12 05 57.0 +3.5
GSCL Gusciola 45.73 299 P **P** **12 05 03.0 +1.2**
comp=Z,34nm,1.1s,mb4.6
LMSR Misrath 45.86 282 *i* P **P** **12 05 02.9 -0.1**
comp=Z,181nm,0.9s,mb5.4,SNR=50
STU Stuttgart 45.88 306 *eP* **P** **12 05 02.8 -0.1**
comp=Z,35nm,1.0s,mb4.6
STU *e*sP sP 12 06 24.2 +0.9
MYKOM Kota Tinggi 46.00 131⇑ P **P** **12 05 05.7 +1.4**
TOD Tromm 46.01 307 *eP* **P** **12 05 04.4 +0.5**
TUE Stuetta 46.16 302 *eP* **P** **12 05 04.8 -0.4**
comp=Z,7.6nm,0.8s,mb4.1
IBBN Ibbenburen 46.33 311 *eP* **P** **12 05 06.6 +0.3**
comp=Z,84nm,1.2s,mb5.0
LJFR Jufra 46.46 277 *i* P **P** **12 05 07.2 -0.5**
comp=Z,178nm,1.5s,mb5.2,SNR=49
BFO Black Forest 46.52 305 *eP* **P** **12 05 07.5 -0.3**
BFO pmax pmax
comp=Z,24nm,1.4s,mb4.3
BFO Black Forest 46.52 305 *eP* **P** **12 05 07.5 -0.3**
comp=Z,24nm,1.4s,mb4.3
KTD Kalmit 46.52 307 *eP* **P** **12 05 08.5 +0.7**
VAI Varese 46.68 302 P **P** **12 05 08.0 -1.1**
LANF Langenberg 46.75 306 *eP* **P** **12 05 10.5 +0.9**
FELD Feldberg im Sc 46.81 305 *eP* **P** **12 05 10.2 +0.1**
RUP Ruppelstein 47.12 307 *eP* **P** **12 05 13.1 +0.6**
CDF Champ du Feu 47.20 305 *eP* **P** **12 05 12.7 -0.4**
PGF Pioggiola 47.27 297 *eP* **P** **12 05 12.9 -0.8**
comp=Z,55nm,0.9s,mb4.6
PGF Pioggiola 47.27 297 *eP* **P** **12 05 12.9 -0.8**
PGF pmax pmax
comp=Z,28nm,0.9s,mb4.6
PGF Pioggiola 47.27 297 *eP* **P** **12 05 12.9 -0.8**
comp=Z,28nm,0.9s,mb4.6
LSHF Shwairf 47.35 279 *i* P **P** **12 05 14.1 -0.4**
comp=Z,135nm,1.4s,mb5.1,SNR=49
GHAR Gharyan 47.44 282 *i* P **P** **12 05 15.1 -0.1**
comp=Z,83nm,1.8s,mb4.8,SNR=49
HINF Hinteralfeld 47.58 305 *eP* **P** **12 05 15.4 -0.7**
comp=Z,87nm,1.3s,mb4.6
HINF Hinteralfeld 47.58 305 *eP* **P** **12 05 15.4 -0.7**
HINF pmax pmax
comp=Z,44nm,1.3s,mb4.6
HINF Hinteralfeld 47.58 305 *eP* **P** **12 05 15.4 -0.7**
comp=Z,44nm,1.3s,mb4.6
MEM Membach 47.64 309 P **P** **12 05 17.4 +0.9**
comp=Z,12nm,1.1s,mb4.2
MEM AP pP 12 06 10.3 +1.0
MEM XP sP 12 06 37.8 +0.7
WLF Walferdange 47.70 307 P **P** **12 05 17.8 +0.9**
comp=Z,49nm,1.6s,mb4.6
WLF AP pP 12 06 10.8 +1.0
WLF XP sP 12 06 37.2 -0.5
HAU Haudompre 47.88 305 *eP* **P** **12 05 17.8 -0.5**
comp=Z,122nm,1.3s,mb4.8
HAU Haudompre 47.88 305 *eP* **P** **12 05 17.8 -0.5**
HAU pmax pmax
comp=Z,61nm,1.3s,mb4.8
HAU Haudompre 47.88 305 *eP* **P** **12 05 17.8 -0.5**
comp=Z,61nm,1.3s,mb4.8
SAOF Saorge 47.93 300 *eP* **P** **12 05 19.1 +0.3**
AUTN L'Aution 48.02 300 *eP* **P** **12 05 20.1 +0.6**
SBF Sospel 48.05 299 *eP* **P** **12 05 19.3 -0.4**
comp=Z,218nm,1.2s,mb5.1
SBF Sospel 48.05 299 *eP* **P** **12 05 19.3 -0.4**
SBF pmax pmax
comp=Z,109nm,1.2s,mb5.1
SBF Sospel 48.05 299 *eP* **P** **12 05 19.3 -0.4**
comp=Z,109nm,1.2s,mb5.1
LUCF Luceram 48.10 299 *eP* **P** **12 05 20.4 +0.3**
BCLA Clavier 48.12 308 P **P** **12 05 23.9 +3.8**
comp=Z,13nm,1.0s,mb4.2
BCLA XP sP 12 06 40.0 -0.8
LPG La Plagne 48.14 302 *eP* **P** **12 05 20.4 +0.1**
comp=Z,191nm,1.4s,mb4.9
LPG La Plagne 48.14 302 *eP* **P** **12 05 20.4 +0.1**
LPG pmax pmax
comp=Z,95nm,1.4s,mb4.9
LPG La Plagne 48.14 302 *eP* **P** **12 05 20.4 +0.1**
comp=Z,95nm,1.4s,mb4.9
TOUF Mont Tournerai 48.14 300 *eP* **P** **12 05 21.1 +0.7**
LPL La Plagne 48.15 302 *eP* **P** **12 05 20.4 0.0**
comp=Z,140nm,1.2s,mb4.9
LPL La Plagne 48.15 302 *eP* **P** **12 05 20.4 0.0**
LPL pmax pmax
comp=Z,70nm,1.2s,mb4.9
LPL La Plagne 48.15 302 *eP* **P** **12 05 20.4 0.0**
comp=Z,70nm,1.2s,mb4.9
RSL Roselend 48.18 302 *eP* **P** **12 05 21.0 +0.4**
BNI Bardonecchia 48.29 301 *eP* **P** **12 05 21.3 -0.2**
BNI *e*PP pP 12 06 14.8 +0.3
MBDF Montbardon 48.30 301 *eP* **P** **12 05 20.7 -0.9**
comp=Z,83nm,1.2s,mb4.7
MBDF Montbardon 48.30 301 *eP* **P** **12 05 20.7 -0.9**
MBDF pmax pmax
comp=Z,42nm,1.2s,mb4.6
MBDF Montbardon 48.30 301 *eP* **P** **12 05 20.7 -0.9**
comp=Z,42nm,1.2s,mb4.6
ALAS Alassa 48.33 284 *i* P **P** **12 05 22.4 +0.4**
comp=Z,379nm,0.9s,mb5.7,SNR=48
CABF La Chapelle 48.34 303 *eP* **P** **12 05 21.7 -0.2**
comp=Z,262nm,1.5s,mb5.0
CABF La Chapelle 48.34 303 *eP* **P** **12 05 21.7 -0.2**
CABF pmax pmax
comp=Z,131nm,1.5s,mb5.0
CABF La Chapelle 48.34 303 *eP* **P** **12 05 21.7 -0.2**
comp=Z,131nm,1.5s,mb5.0
GIVF Givet 48.48 308 *eP* **P** **12 05 23.0 +0.2**
comp=Z,208nm,1.6s,mb4.9
GIVF Givet 48.48 308 *eP* **P** **12 05 23.0 +0.2**
GIVF pmax pmax
comp=Z,104nm,1.6s,mb4.9
GIVF Givet 48.48 308 *eP* **P** **12 05 23.0 +0.2**
comp=Z,104nm,1.6s,mb4.9
LUMB Murzuk 48.58 274 *i* P **P** **12 05 23.5 -0.5**
comp=Z,180nm,1.1s,mb5.3,SNR=48
DOU Dourbes 48.62 308 P **P** **12 05 24.8 +0.8**
MEZF Maizieres J'vi 48.63 306 *eP* **P** **12 05 24.0 0.0**
comp=Z,266nm,1.5s,mb5.1
MEZF Maizieres J'vi 48.63 306 *eP* **P** **12 05 24.0 0.0**
comp=Z,266nm,1.5s,mb5.3
UCC Uccle 48.65 309 P **P** **12 05 24.0 -0.1**
FRF La Foret Royal 48.68 299 *eP* **P** **12 05 23.7 -0.8**
comp=Z,98nm,1.2s,mb4.7
FRF *e*pP pP 12 06 12.3 -5.3
FRF La Foret Royal 48.68 299 *eP* **P** **12 05 23.7 -0.8**
FRF *e*PP pP 12 06 12.3 -5.3
FRF pmax pmax
comp=Z,49nm,1.2s,mb4.7
FRF La Foret Royal 48.68 299 *eP* **P** **12 05 23.7 -0.8**
comp=Z,49nm,1.2s,mb4.7
FRF *e*pP pP 12 06 12.3 -5.3
LMR La Mourre 48.83 299 *eP* **P** **12 05 24.7 -0.9**
comp=Z,26nm,1.0s,mb4.2
LMR La Mourre 48.83 299 *eP* **P** **12 05 24.7 -0.9**
LMR pmax pmax
comp=Z,13nm,1.0s,mb4.2
LMR La Mourre 48.83 299 *eP* **P** **12 05 24.7 -0.9**
comp=Z,13nm,1.0s,mb4.2
ORIF Oris-en-Rattie 48.87 301 *eP* **P** **12 05 26.5 +0.6**
comp=Z,48nm,1.3s,mb4.4
ORIF Oris-en-Rattie 48.87 301 *eP* **P** **12 05 26.5 +0.6**
ORIF pmax pmax
comp=Z,24nm,1.3s,mb4.4
ORIF Oris-en-Rattie 48.87 301 *eP* **P** **12 05 26.5 +0.6**
comp=Z,24nm,1.3s,mb4.4
BAIF Baives 48.87 308 *eP* **P** **12 05 26.1 +0.3**
comp=Z,244nm,1.5s,mb5.0
BAIF Baives 48.87 308 *eP* **P** **12 05 26.1 +0.3**
BAIF pmax pmax
comp=Z,122nm,1.5s,mb5.0
BAIF Baives 48.87 308 *eP* **P** **12 05 26.1 +0.3**
comp=Z,122nm,1.5s,mb5.0
KEST Kesra 49.04 288 P **P** **12 05 28.2 +0.9**
comp=Z,10nm,0.7s,mb4.3,baz=326,slow=1.2,SNR=36
KEST pP pP 12 06 21.2 +0.7
comp=Z,13nm,1.1s,baz=119,slow=1.8,SNR=4.4
KEST sP sP 12 06 48.1 -0.1
comp=Z,8.3nm,1.0s,baz=305,slow=7.0,SNR=3.0
SMRF Simiane la Rot 49.32 300 *eP* **P** **12 05 29.0 -0.3**
comp=Z,26nm,0.8s,mb4.3
SMRF *e*pP pP 12 06 17.6 -5.0
SMRF Simiane la Rot 49.32 300 *eP* **P** **12 05 29.0 -0.3**
comp=Z,26nm,0.8s,mb4.6
SMRF *e*pP pP 12 06 17.6 -5.0
LOR Lormes 49.68 305 *eP* **P** **12 05 31.0 -1.0**
comp=Z,130nm,1.7s,mb4.7
LOR Lormes 49.68 305 *eP* **P** **12 05 31.0 -1.0**
LOR pmax pmax
comp=Z,65nm,1.7s,mb4.7
LOR Lormes 49.68 305 *eP* **P** **12 05 31.0 -1.0**
comp=Z,65nm,1.7s,mb4.7
SSB Saint Sauveur 49.70 302 *eP* **P** **12 05 32.2 0.0**
SSB pmax pmax
comp=Z,6.0nm,0.6s,mb4.1
SSB Saint Sauveur 49.70 302 *eP* **P** **12 05 32.2 +0.1**
comp=Z,5.9nm,0.6s,mb4.1
VIVF Saint-Julien-l 49.72 301 *eP* **P** **12 05 32.1 -0.2**
comp=Z,128nm,1.3s,mb4.8
VIVF *e*pP pP 12 06 21.0 -4.6
VIVF Saint-Julien-l 49.72 301 *eP* **P** **12 05 32.1 -0.2**
VIVF *e*PP pP 12 06 21.0 -4.6
VIVF pmax pmax
comp=Z,64nm,1.3s,mb4.8
VIVF Saint-Julien-l 49.72 301 *eP* **P** **12 05 32.1 -0.2**
comp=Z,64nm,1.3s,mb4.8
VIVF *e*pP pP 12 06 21.0 -4.6
SMF Signal de Mont 49.84 304⇑ *i*P **P** **12 05 32.6 -0.6**
comp=Z,176nm,1.2s,mb5.0
SMF Signal de Mont 49.84 304⇑ *i*P **P** **12 05 32.6 -0.6**
SMF pmax pmax
comp=Z,88nm,1.2s,mb5.0
SMF Signal de Mont 49.84 304⇑ *i*P **P** **12 05 32.6 -0.6**
comp=Z,88nm,1.2s,mb5.0
SSF Saint Saulge 49.96 304⇑ *i*P **P** **12 05 33.4 -0.7**
comp=Z,65nm,1.2s,mb4.5
SSF Saint Saulge 49.96 304⇑ *i*P **P** **12 05 33.4 -0.7**
SSF pmax pmax
comp=Z,33nm,1.2s,mb4.5
SSF Saint Saulge 49.96 304⇑ *i*P **P** **12 05 33.4 -0.7**
comp=Z,33nm,1.2s,mb4.5
AVF Avril sur Loir 50.13 304 *eP* **P** **12 05 34.7 -0.7**
comp=Z,102nm,1.1s,mb4.8
AVF Avril sur Loir 50.13 304 *eP* **P** **12 05 34.7 -0.7**
AVF pmax pmax
comp=Z,51nm,1.1s,mb4.8
AVF Avril sur Loir 50.13 304 *eP* **P** **12 05 34.7 -0.7**
comp=Z,51nm,1.1s,mb4.8
PLDF La Plantade 50.15 303 *eP* **P** **12 05 35.7 +0.2**
KSM Kuching 50.34 125 *eP* **P** **12 05 38.5 +1.1**
comp=Z,16nm,0.8s,mb4.4
KSM Kuching 50.34 125⇑ P **P** **12 05 38.6 +1.2**
AGO Saint Agoulin 50.46 303 *eP* **P** **12 05 38.2 +0.3**
LASF Ste Croix 50.49 301 *eP* **P** **12 05 38.0 -0.1**
comp=Z,138nm,1.2s,mb4.9
LASF *e*pP pP 12 06 26.9 -4.7
BGF Bois d'Agland 50.53 304 *eP* **P** **12 05 37.6 -0.7**
LBIL Lubilhac 50.60 302 *eP* **P** **12 05 39.4 +0.5**
SBUM Sibu 50.91 122 ⇓ P **P** **12 05 43.6 +2.0**
TCF Toulx Ste Croi 51.02 304 *eP* **P** **12 05 41.7 -0.3**
comp=Z,246nm,1.4s,mb5.1
TCF *e*pP pP 12 06 30.8 -4.8
TCF Toulx Ste Croi 51.02 304 *eP* **P** **12 05 41.7 -0.3**
TCF *e*PP pP 12 06 30.8 -4.8
TCF pmax pmax
comp=Z,123nm,1.4s,mb5.1
TCF Toulx Ste Croi 51.02 304 *eP* **P** **12 05 41.7 -0.3**
comp=Z,123nm,1.4s,mb5.1
TCF *e*pP pP 12 06 30.8 -4.8
KKM Kota Kinabalu 51.21 115 *eP* **P** **12 05 45.8 +2.0**
comp=Z,98nm,1.1s,mb5.2
KKM *e*pP pP 12 06 40.8 +3.2
KKM Kota Kinabalu 51.21 115 ⇓ P **P** **12 05 45.0 +1.1**
CAF Calviac 51.49 302 *eP* **P** **12 05 45.3 -0.2**
comp=Z,155nm,1.4s,mb5.0
CAF Calviac 51.49 302 *eP* **P** **12 05 45.3 -0.2**
CAF pmax pmax
comp=Z,77nm,1.4s,mb4.9
CAF Calviac 51.49 302 *eP* **P** **12 05 45.3 -0.2**
comp=Z,77nm,1.4s,mb4.9
RJF Les Rejaudoux 51.75 303 *eP* **P** **12 05 47.4 0.0**
comp=Z,104nm,1.3s,mb4.8
RJF Les Rejaudoux 51.75 303 *eP* **P** **12 05 47.4 0.0**
RJF pmax pmax
comp=Z,52nm,1.3s,mb4.8
RJF Les Rejaudoux 51.75 303 *eP* **P** **12 05 47.4 0.0**
comp=Z,52nm,1.3s,mb4.8
MTLF Montolieu 51.84 300 *eP* **P** **12 05 47.7 -0.4**
comp=Z,64nm,1.1s,mb4.7
MTLF *e*pP pP 12 06 37.0 -4.9
MTLF Montolieu 51.84 300 *eP* **P** **12 05 47.7 -0.4**
MTLF *e*PP pP 12 06 37.0 -4.9
MTLF pmax pmax
comp=Z,32nm,1.1s,mb4.7
MTLF Montolieu 51.84 300 *eP* **P** **12 05 47.7 -0.4**
comp=Z,32nm,1.1s,mb4.7
MTLF *e*pP pP 12 06 37.0 -4.9
LDF La Druitiere 51.96 307⇑ *i*P **P** **12 05 48.0 -0.9**
comp=Z,166nm,1.4s,mb5.0
LDF La Druitiere 51.96 307⇑ *i*P **P** **12 05 48.0 -0.9**
LDF pmax pmax
comp=Z,83nm,1.4s,mb5.0
LDF La Druitiere 51.96 307⇑ *i*P **P** **12 05 48.0 -0.9**
comp=Z,83nm,1.4s,mb5.0
FLN La Foliniere 52.15 307 *eP* **P** **12 05 50.0 -0.3**
SDKM Sandakan 52.20 115⇑ P **P** **12 05 52.2 +1.1**
LFF La Frestale 52.38 302 *eP* **P** **12 05 51.8 -0.3**
comp=Z,170nm,1.3s,mb5.0
LFF La Frestale 52.38 302 *eP* **P** **12 05 51.8 -0.3**
LFF pmax pmax
comp=Z,85nm,1.3s,mb5.0
LFF La Frestale 52.38 302 *eP* **P** **12 05 51.8 -0.3**
comp=Z,85nm,1.3s,mb5.0
GRR Gorron 52.48 307 *eP* **P** **12 05 51.7 -1.1**
comp=Z,176nm,1.4s,mb5.0
GRR Gorron 52.48 307 *eP* **P** **12 05 51.7 -1.1**
GRR pmax pmax
comp=Z,88nm,1.4s,mb5.0
GRR Gorron 52.48 307 *eP* **P** **12 05 51.7 -1.1**
comp=Z,88nm,1.4s,mb5.0
MFF Saint Martin d 52.51 305 *eP* **P** **12 05 52.0 -0.9**
comp=Z,180nm,1.4s,mb5.0
MFF Saint Martin d 52.51 305 *eP* **P** **12 05 52.0 -0.9**
MFF pmax pmax
comp=Z,90nm,1.4s,mb5.0
MFF Saint Martin d 52.51 305 *eP* **P** **12 05 52.0 -0.9**
comp=Z,90nm,1.4s,mb5.0
YSS Yuzh-Sakhalins 52.75 55 *eP* **P** **12 05 54.0 -0.7**
YSS *e* pP 12 06 50.0 +1.3
YSS pmax pmax
comp=Z,30nm,1.0s,mb4.7
YSS Yuzh-Sakhalins 52.75 55 *epP* pP 12 06 50.8 +2.0
EMIR Miracle 52.76 299 P **P** **12 05 54.6 -0.3**
comp=Z,81nm,1.7s,mb4.9
MAJO Matsushiro 52.89 69 *eP* **P** **12 05 56.4 +0.5**
MAT Matsushiro 52.89 69 P **P** **12 05 55.0 -0.9**
MJAR Matsushiro Arr 52.90 69 P **P** **12 05 56.2 +0.3**
comp=Z,12nm,1.1s,mb4.2,baz=291,slow=8.9,SNR=14
MJAR pP pP 12 06 51.4 +1.4
comp=Z,2.8nm,0.7s,baz=294,slow=7.4,SNR=3.4
MJAR sP sP 12 07 18.2 +0.7
comp=Z,6.4nm,1.0s,baz=296,slow=10,SNR=4.2
MJAR Matsushiro Arr 52.90 69 P **P** **12 05 56.2 +0.3**
MJAR *PP pP 12 06 51.4 +1.4
MJAR *SP sP 12 07 18.2 +0.8
MJAR pmax pmax
comp=Z,12nm,1.1s
MJAR Matsushiro Arr 52.90 69 P **P** **12 05 56.2 +0.3**
MJAR pP pP 12 06 51.4 +1.4
MJAR sP sP 12 07 18.2 +0.7
EPF Esparros 53.24 300 *eP* **P** **12 05 56.9 -1.4**
comp=Z,25nm,0.9s,mb4.3
EPF Esparros 53.24 300 *eP* **P** **12 05 56.9 -1.4**
EPF pmax pmax
comp=Z,13nm,0.9s,mb4.4
EPF Esparros 53.24 300 *eP* **P** **12 05 56.9 -1.4**
comp=Z,13nm,0.9s,mb4.3
EPOB Poblet 53.26 298 P **P** **12 05 58.4 -0.1**
comp=Z,18nm,0.8s,mb4.5
MYLDM Lahad Datu 53.47 114⇑ P **P** **12 06 01.9 +1.6**
EBIE Bielsa 53.49 300 P **P** **12 06 00.4 +0.2**
comp=Z,33nm,1.1s,mb4.7
TSM Tawau 53.61 115⇑ P **P** **12 06 02.6 +1.3**
SGMF Saint Gilles 53.61 307 *eP* **P** **12 06 00.3 -0.7**
comp=Z,276nm,1.5s,mb5.2
SGMF Saint Gilles 53.61 307 *eP* **P** **12 06 00.3 -0.7**
SGMF pmax pmax
comp=Z,138nm,1.5s,mb5.3
SGMF Saint Gilles 53.61 307 *eP* **P** **12 06 00.3 -0.7**
comp=Z,138nm,1.5s,mb5.3
ETSF Etsaut 53.91 300 *eP* **P** **12 06 03.0 -0.2**
comp=Z,91nm,1.0s,mb5.0
ETSF Etsaut 53.91 300 *eP* **P** **12 06 03.0 -0.2**
ETSF pmax pmax
comp=Z,46nm,1.0s,mb5.0
ETSF Etsaut 53.91 300 *eP* **P** **12 06 03.0 -0.2**
comp=Z,46nm,1.0s,mb5.0
ROSF Rostrenen 54.05 307 *eP* **P** **12 06 03.1 -1.0**
comp=Z,199nm,1.3s,mb5.2
ROSF Rostrenen 54.05 307 *eP* **P** **12 06 03.1 -1.0**
ROSF pmax pmax
comp=Z,99nm,1.3s,mb5.2
ROSF Rostrenen 54.05 307 *eP* **P** **12 06 03.1 -1.0**
comp=Z,99nm,1.3s,mb5.2
SJPF Ste Jean 54.30 301 *eP* **P** **12 06 05.9 -0.1**
comp=Z,151nm,1.5s,mb5.0
SJPF Ste Jean 54.30 301 *eP* **P** **12 06 05.9 -0.1**
SJPF pmax pmax
comp=Z,75nm,1.5s,mb5.0
SJPF Ste Jean 54.30 301 *eP* **P** **12 06 05.9 -0.1**
comp=Z,75nm,1.5s,mb5.0
SEY Seymchan 54.34 34 *i* P **P** **12 06 07.0 +1.1**
EMOS Mosqueruela 54.71 297 P **P** **12 06 09.8 +0.8**
comp=Z,72nm,1.3s,mb5.0
ECHE Chera 55.34 297 P **P** **12 06 14.2 +0.7**
ECHE pmax pmax
comp=Z,15nm,0.7s,mb4.6
ECHE Chera 55.34 297 P **P** **12 06 14.2 +0.7**
comp=Z,15nm,0.7s,mb4.6
ETOB Tobarra 56.11 296 P **P** **12 06 19.7 +0.8**
comp=Z,37nm,1.0s,mb4.9
EMUR La Murta 56.19 295 P **P** **12 06 19.5 -0.1**
comp=Z,59nm,1.7s,mb4.8
EVIA Vianos 56.80 296 P **P** **12 06 24.3 +0.5**
EVIA pmax pmax
comp=Z,15nm,0.7s,mb4.7
EVIA Vianos 56.80 296 P **P** **12 06 24.3 +0.4**
comp=Z,15nm,0.7s,mb4.7
EHUE Huescar 57.19 295 P **P** **12 06 26.7 +0.1**
EHUE pmax pmax
comp=Z,30nm,0.9s,mb4.9
EHUE Huescar 57.19 295 P **P** **12 06 26.7 +0.1**
comp=Z,30nm,0.9s,mb4.9
GUD Guadarrama 57.22 299 P **P** **12 06 27.4 +0.7**
GUD pmax pmax
comp=Z,25nm,0.6s,mb5.0
GUD Guadarrama 57.22 299 P **P** **12 06 27.4 +0.7**
comp=Z,25nm,0.6s,mb5.0
ENIJ Nijar 57.24 294 P **P** **12 06 26.9 0.0**
ENIJ pmax pmax
comp=Z,53nm,0.8s,mb5.2
ENIJ Nijar 57.24 294 P **P** **12 06 26.9 0.0**
comp=Z,52nm,0.8s,mb5.2
ESLA Sonseca Array 57.45 298 *eP* **P** **12 06 28.4 +0.1**
comp=Z,13nm,1.1s,mb4.5
EQES Quesada 57.54 295 P **P** **12 06 29.1 +0.1**
comp=Z,66nm,1.1s,mb5.2
TAM Tamanrasset 57.56 276 *eP* **P** **12 06 28.8 -0.6**
TAM *eSP sP 12 07 52.2 +0.7
TAM *e* 12 08 42.3
TAM pmax pmax
comp=Z,21nm,0.8s,mb4.8
TAM Tamanrasset 57.56 276 *eP* **P** **12 06 28.8 -0.5**
comp=Z,21nm,0.8s,mb4.8
TAM *esP sP 12 07 52.2 +0.6
TAM *ePP PP 12 08 42.3 +2.4
EBAN Banos Encina 57.92 296 P **P** **12 06 31.7 +0.1**
EBAN pmax pmax
comp=Z,24nm,0.6s,mb5.0
EBAN Banos Encina 57.92 296 P **P** **12 06 31.7 +0.1**
comp=Z,24nm,0.6s,mb5.0
ECOG Cogollos-Vega 58.11 295 P **P** **12 06 32.5 -0.5**
ECOG pmax pmax
comp=Z,11nm,0.6s,mb4.7
ECOG Cogollos-Vega 58.11 295 P **P** **12 06 32.5 -0.5**
comp=Z,11nm,0.6s,mb4.7
EGUA Guajares 58.29 295 P **P** **12 06 34.0 -0.2**
EGUA pmax pmax
comp=Z,89nm,0.8s,mb5.5
EGUA Guajares 58.29 295 P **P** **12 06 34.0 -0.2**
comp=Z,89nm,0.8s,mb5.5
ERON Agron 58.39 295 P **P** **12 06 34.9 0.0**
comp=Z,19nm,0.6s,mb4.9
EADA Adamuz 58.49 296 P **P** **12 06 35.5 0.0**
comp=Z,33nm,0.8s,mb5.0
ELUQ Luque 58.51 296 P **P** **12 06 35.7 0.0**
ELUQ pmax pmax
comp=Z,31nm,0.7s,mb5.0
ELUQ Luque 58.51 296 P **P** **12 06 35.7 0.0**
comp=Z,31nm,0.7s,mb5.0
BILL Bilibino 58.53 26⇑ *eP* **P** **12 06 36.8 +1.5**
BILL *PP pP 12 07 32.0 +1.6
BILL *SP sP 12 07 58.0 +0.3
BILL 12 08 48.0
BILL pmax pmax
comp=Z,12nm,0.9s,mb4.5
BILL MLR MLR
comp=Z,100nm,15.0s
BILL Bilibino 58.53 26 P **P** **12 06 36.3 +1.0**
comp=Z,31nm,1.5s,mb4.7
ELOJ Sierra Loja 58.59 295 P **P** **12 06 35.0 -1.3**
ELOJ pmax pmax
comp=Z,11nm,1.4s,mb4.3
ELOJ Sierra Loja 58.59 295 P **P** **12 06 35.0 -1.2**
comp=Z,11nm,1.4s,mb4.3
ERUA La Rua 58.62 302 P **P** **12 06 37.3 +0.9**
ERUA pmax pmax
comp=Z,12nm,0.9s,mb4.5
ERUA La Rua 58.62 302 P **P** **12 06 37.3 +0.9**
comp=Z,12nm,0.9s,mb4.5
EPLA Plasencia 58.80 299 P **P** **12 06 38.3 +0.7**
EPLA pmax pmax
comp=Z,173nm,1.2s,mb5.6
EPLA Plasencia 58.80 299 P **P** **12 06 38.3 +0.6**
comp=Z,173nm,1.2s,mb5.6
MVO Moncorvo 59.03 301 *eP* **P** **12 06 39.5 +0.3**
EMIJ Mijas 59.29 295 P **P** **12 06 39.2 -1.8**
comp=Z,23nm,0.9s,mb4.8
ELOB Lobios 59.46 302 P **P** **12 06 42.4 +0.3**
comp=Z,111nm,1.1s,mb5.4
PCAB Cabril 59.50 301 *eP* **P** **12 06 43.2 +0.8**
comp=Z,100nm,1.5s,mb5.2
MTE Manteigas 59.69 300 *eP* **P** **12 06 44.6 +0.9**
comp=Z,76nm,1.3s,mb5.2
MTE Manteigas 59.69 300 *eP* **P** **12 06 44.6 +0.8**
PVIS Viseu 59.81 300 *eP* **P** **12 06 45.1 +0.6**
comp=Z,76nm,1.3s,mb5.2
EJIF Jimena Fronter 59.84 295 P **P** **12 06 42.7 -2.1**
EJIF pmax pmax

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,30nm,1.1s,mb4.8						
EJIF	**Jimena Fronter**	**59.84**	**295**	P	**P**	**12 06 42.7**	**-2.1**
	comp=Z,30nm,1.1s,mb4.8						
PCBR	**Castelo Branco**	**59.87**	**299**	eP	**P**	**12 06 45.6**	**+0.6**
	comp=Z,33nm,1.9s,mb4.6						
PETK	**Petropavlovsk-**	**59.89**	**44**	P	**P**	**12 06 44.8**	**-0.1**
	comp=Z,3.5nm,0.7s,mb4.1,baz=308,slow=3.3,SNR=4.6						
PMRV	**Marv??o**	**59.98**	**299**	eP	**P**	**12 06 45.8**	**+0.1**
EBAD	**Badajoz**	**59.99**	**298**	P	**P**	**12 06 46.0**	**+0.2**
	comp=Z,143nm,1.3s,mb5.4						
PBAR	**Barrancos**	**60.25**	**297**	eP	**P**	**12 06 47.6**	**0.0**
	comp=Z,91nm,1.5s,mb5.2						
PESTR	**Estremoz**	**60.35**	**298**	eP	**P**	**12 06 48.3**	**+0.1**
	comp=Z,55nm,1.4s,mb5.0						
EVO	**Evora**	**60.80**	**298**	eP	**P**	**12 06 51.9**	**+0.7**
	comp=Z,131nm,1.3s,mb5.1						
EVO	**Evora**	**60.80**	**298**	eP	**P**	**12 06 51.5**	**+0.3**
	comp=Z,57nm,1.4s,mb5.0						
EGRO	**El Granado**	**60.84**	**297**	P	**P**	**12 06 51.5**	**0.0**
	comp=Z,19nm,0.9s,mb4.7						
PBEJ	**Beja**	**60.91**	**298**	eP	**P**	**12 06 52.2**	**+0.2**
	comp=Z,52nm,1.4s,mb5.0						
SUMG	**Summit**	**61.00**	**341**	eP	**P**	**12 06 53.6**	**+1.5**
	comp=Z,19nm,1.0s,mb4.7						
SUMG				epP	pP	12 07 48.9	+1.3
PVAQ	**Vaqueiros**	**61.06**	**297**	eP	**P**	**12 06 53.1**	**0.0**
	comp=Z,59nm,1.4s,mb5.0						
PBDV	**Barranco-do-Ve**	**61.29**	**297**	eP	**P**	**12 06 54.9**	**+0.3**
	comp=Z,97nm,1.4s,mb5.2						
KAPI	**Kappang**	**61.47**	**122**	P	**P**	**12 06 54.4**	**-1.6**
	comp=Z,8.1nm,0.6s,mb4.5,baz=66,slow=4.4,SNR=4.3						
KAPI	**Kappang**	**61.47**	**122**	P	**P**	**12 06 54.4**	**-1.6**
PTEO	**Sao Teotonio**	**61.73**	**297**	eP	**P**	**12 06 57.9**	**+0.4**
LSZ	**Lusaka**	**65.53**	**226**	eP	**P**	**12 07 23.1**	**+0.7**
LSZ				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.1						
LSZ	**Lusaka**	**65.53**	**226**	eP	**P**	**12 07 23.1**	**+0.7**
	comp=Z,49nm,1.0s,mb5.1						
TOA0	**Torodi Ar. Sit**	**65.75**	**269**⇑	iP	**P**	**12 07 21.6**	**-2.3**
TOA0				epP	pP	12 08 20.2	-0.3
TORD	**Torodi Ar. Bea**	**65.75**	**269**	P	**P**	**12 07 22.4**	**-1.6**
	comp=Z,81nm,0.8s,mb5.4,baz=43,slow=5.7,SNR=447						
TORD				pP	pP	12 08 19.7	-0.8
	comp=Z,22nm,0.9s,baz=52,slow=6.0,SNR=5.8						
TORD				sP	sP	12 08 45.6	-1.7
	comp=Z,8.7nm,0.9s,baz=45,slow=6.0,SNR=2.2						
BATI	**Baumata**	**67.88**	**122**	P	**P**	**12 07 36.3**	**-1.0**
	comp=Z,79nm,0.6s,mb5.5,baz=296,slow=1.9,SNR=12						
RES	**Resolute Bay**	**68.63**	**356**	eP	**P**	**12 07 41.6**	**+0.5**
COLD	**Coldfoot**	**71.89**	**16**	eP	**P**	**12 08 01.3**	**+0.4**
	comp=Z,13nm,0.9s,mb4.6						
COLD				epP	pP	12 09 00.4	+2.0
MBWA	**Marble Bar**	**73.55**	**133**	eP	**P**	**12 08 11.4**	**+0.2**
	comp=Z,46nm,1.1s,mb5.0						
COLA	**College**	**74.40**	**16**	eP	**P**	**12 08 16.1**	**+0.6**
COLA				e*PP	pP	12 09 15.1	+1.7
COLA				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
COLA	**College**	**74.40**	**16**	eP	**P**	**12 08 16.1**	**+0.5**
	comp=Z,19nm,0.8s,mb4.8						
COLA				epP	pP	12 09 15.1	+1.7
DBIC	**Dimbokro**	**74.73**	**267**	P	**P**	**12 08 16.8**	**-1.6**
	comp=Z,26nm,0.9s,mb4.9,baz=38,slow=6.8,SNR=20						
DBIC				pP	pP	12 09 15.8	-0.5
	comp=Z,6.2nm,0.7s,baz=70,slow=7.0,SNR=3.0						
DBIC	**Dimbokro**	**74.73**	**267**	eP	**P**	**12 08 17.0**	**-1.4**
DBIC				e*PP	pP	12 09 15.5	-0.8
DBIC				pmax	pmax		
	comp=Z,94nm,1.4s						
DBIC	**Dimbokro**	**74.73**	**267**	eP	**P**	**12 08 17.0**	**-1.3**
	comp=Z,94nm,1.4s,mb5.2						
DBIC				epP	pP	12 09 15.5	-0.9
LBTB	**Lobatse**	**74.75**	**222**	eP	**P**	**12 08 18.7**	**+0.6**
LBTB				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.8						
LBTB	**Lobatse**	**74.75**	**222**	eP	**P**	**12 08 18.7**	**+0.5**
	comp=Z,19nm,0.7s,mb4.8						
KIC	**Kosan Boka**	**74.82**	**267**	eP	**P**	**12 08 17.4**	**-1.5**
	comp=Z,212nm,1.0s,mb5.7						
TIC	**Toumodi**	**74.88**	**267**	eP	**P**	**12 08 17.6**	**-1.6**
	comp=Z,248nm,1.2s,mb5.7						
TSUM	**Tsumeb**	**74.99**	**232**	eP	**P**	**12 08 19.8**	**+0.2**
	comp=Z,13nm,1.0s,mb4.5						
PPLA	**Purkeypile**	**75.00**	**19**	eP	**P**	**12 08 19.4**	**+0.3**
	comp=Z,24nm,1.4s,mb4.6						
PPLA				epP	pP	12 09 18.5	+1.4
LIC	**Lamto**	**75.13**	**267**	eP	**P**	**12 08 19.0**	**-1.6**
	comp=Z,102nm,1.0s,mb5.1						
LIC	**Lamto**	**75.13**	**267**	eP	**P**	**12 08 18.8**	**-1.8**
	comp=Z,134nm,1.0s,mb5.5						
LIC	**Lamto**	**75.13**	**267**	eP	**P**	**12 08 19.0**	**-1.6**
	comp=Z,51nm,1.0s,mb5.1						
KAKA	**Kakadu**	**75.74**	**118**	eP	x	12 08 05.2	
	comp=Z,16nm,0.9s						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**12 08 35.2**	**-0.1**
	comp=Z,21nm,0.9s,mb4.8,baz=32,slow=6.2,SNR=22						
BOSA				pP	pP	12 09 34.8	+1.0
	comp=Z,7.7nm,0.9s,baz=35,slow=5.9,SNR=2.4						
BOSA				sP	sP	12 10 00.5	+0.5
	comp=Z,8.2nm,0.8s,baz=36,slow=6.2,SNR=4.2						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**12 08 35.2**	**-0.1**
BOSA				*PP	pP	12 09 34.8	+1.1
BOSA				*SP	sP	12 10 00.5	+0.5
BOSA				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.8						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**12 08 35.2**	**-0.1**
BOSA				pP	pP	12 09 34.8	+1.0
BOSA				sP	sP	12 10 00.5	+0.5
MUN	**Mundaring**	**80.23**	**142**	eP	**P**	**12 08 47.1**	**-1.1**
KLBR	**Kellerberrin**	**80.69**	**141**	eP	**P**	**12 08 49.5**	**-1.2**
	comp=Z,31nm,1.3s,mb4.8						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**12 08 52.8**	**0.0**
	comp=Z,7.3nm,0.6s,mb4.5,baz=349,slow=5.4,SNR=75						
YKA				pP	pP	12 09 52.1	+0.4
	comp=Z,6.6nm,0.7s,baz=349,slow=5.4,SNR=5.7						
YKA				sP	sP	12 10 17.0	-1.0
	comp=Z,5.6nm,0.6s,baz=351,slow=5.6,SNR=3.5						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**12 08 52.8**	**0.0**
YKA				*PP	pP	12 09 52.1	+0.4
YKA				*SP	sP	12 10 17.0	-1.0
YKA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**12 08 52.8**	**0.0**
YKA				pP	pP	12 09 52.1	+0.4
YKA				sP	sP	12 10 17.1	-1.0
NWAO	**Narrogin (SRO)**	**81.51**	**142**	P	**P**	**12 08 54.5**	**-0.5**
	comp=Z,8.5nm,0.9s,mb4.3,baz=277,slow=7.0,SNR=5.2						
NWAO	**Narrogin (SRO)**	**81.51**	**142**	P	**P**	**12 08 54.5**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WRAB	**Tennant Creek**	**82.00**	**122**	eP	**P**	**12 08 57.4**	**-0.4**
WRAB				e*PP	pP	12 09 57.4	+0.5
WRAB				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**82.00**	**122**	eP	**P**	**12 08 57.4**	**-0.4**
	comp=Z,24nm,0.9s,mb4.8						
WRAB				epP	pP	12 09 57.4	+0.5
WB2	**Warramunga Arr**	**82.01**	**122**	eP	**P**	**12 08 56.3**	**-1.5**
SCHQ	**Schefferville**	**82.04**	**337**	P	**P**	**12 08 56.5**	**-1.0**
	comp=Z,2.5nm,0.6s,mb4.0,baz=50,slow=7.9,SNR=3.6						
SCHQ	**Schefferville**	**82.04**	**337**	P	**P**	**12 08 56.5**	**-1.0**
ASAR	**Alice Springs**	**84.27**	**125**	P	**P**	**12 09 08.3**	**-0.9**
	comp=Z,7.1nm,0.8s,mb4.4,baz=314,slow=4.8,SNR=64						
ASAR				pP	pP	12 10 08.6	-0.1
	comp=Z,6.6nm,0.7s,baz=309,slow=5.6,SNR=6.3						
ASAR	**Alice Springs**	**84.27**	**125**	P	**P**	**12 09 08.4**	**-0.9**
ASAR				*PP	pP	12 10 08.6	-0.1
ASAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FFC	**Flin Flon**	**88.87**	**356**	eP	**P**	**12 09 31.4**	**+0.3**
FFC				e*PP	pP	12 10 32.1	+1.0
FFC				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
FFC	**Flin Flon**	**88.87**	**356**	eP	**P**	**12 09 31.4**	**+0.3**
	comp=Z,19nm,1.1s,mb4.8						
FFC				epP	pP	12 10 32.1	+1.1
CTA	**Charters Tower**	**90.54**	**115**	eP	**P**	**12 09 39.2**	**-0.2**
	comp=Z,12nm,1.8s,mb4.5						
CTA	**Charters Tower**	**90.54**	**115**	P	**P**	**12 09 38.9**	**-0.4**
	comp=Z,9.7nm,1.1s,mb4.7,baz=347,slow=6.6,SNR=4.4						
CTA	**Charters Tower**	**90.54**	**115**	eP	**P**	**12 09 39.2**	**-0.2**
CTA				pmax	pmax		
	comp=Z,12nm,1.8s						
QSPA	**South Pole Qui**	**126.37**	**180**	PKP	PKPdf	12 15 36.2	-0.9
	comp=Z,3.1nm,0.7s,baz=276,slow=1.0,SNR=10						
PLCA	**Paso Flores**	**149.88**	**250**	PKP	PKPdf	12 16 20.3	-0.3
	comp=Z,12nm,1.1s,baz=137,slow=3.6,SNR=3.6						
PLCA				PKPbc	PKPbc	12 16 25.8	0.0
	comp=Z,23nm,1.0s,baz=94,slow=4.1,SNR=28						

*ISCJB **02** 12:03:53.4±0.6, 886S±007×11248E±004, h88km±5km, mb4.0/9, Error ellipse: s-maj=12.4km s-min=6.1km az=13.8*
*IDC **02** 12:03:53.8±5.5, 871S×11241E, h68km±48km, mb3.9/9, mb1 4.0/11, mb1mx3.8/19, mbtmp4.0/11, Error ellipse: s-maj=44.5km s-min=23.7km az=64.0*
*NEIC **02** 12:03:54.6±1.0, 900S×11249E, h94km±12km, mb4.2/1, Error ellipse: s-maj=15.2km s-min=11.0km az=168.0*
NEIC Felt [III] at Blitar and Trenggalek; [II] at Karangkates.
*DJA **02** 12:03:55, 886S×11251E, h45km, MLv4.7/12*
ISC 02 12:03:54.7±0.6**, 885S**±007×**11248E**±004**, h80**km±5km**, n30, σ0s84**/34**, mb4.0**/9**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**0.69**	**358**	P	**Pn**	**12 04 10.1**	**-0.2**
KRKI				S	**Sn**	**12 04 20.3**	**-1.5**
TRT	**Tretes**	**1.15**	**8**⇓	eP	**Pn**	**12 04 15.0**	**-0.6**
TRT				eS	**Sn**	**12 04 27.0**	**-4.2**
SJI	**Sawahan**	**1.31**	**327**	P	**Pn**	**12 04 18.1**	**+0.4**
SJI				S	**Sn**	**12 04 35.0**	**+0.1**
UGM	**Wanagama**	**2.15**	**295**	P	**Pn**	**12 04 29.0**	**+0.4**
NBBI	**Negara**	**2.17**	**78**	P	**Pn**	**12 04 28.2**	**-0.7**
KMMI	**Kalianget**	**2.31**	**40**	P	**Pn**	**12 04 31.6**	**+0.8**
IGBI	**Denpasar**	**2.63**	**90**	P	**Pn**	**12 04 35.8**	**+0.7**
SMRI	**Semarang**	**2.70**	**311**	P	**Pn**	**12 04 36.6**	**+0.6**
DNP	**Denpasar**	**2.70**	**87**	P	**Pn**	**12 04 36.8**	**+0.7**
KHKI	**Kahang-Kahang**	**3.13**	**81**	P	**Pn**	**12 04 42.2**	**+0.4**
KHKI				S	**Sn**	**12 05 17.8**	**-0.4**
BJII	**Banjamegara**	**3.13**	**299**	P	**Pn**	**12 04 42.4**	**+0.6**
LEM	**Lembang**	**5.22**	**292**	P	**Pn**	**12 05 10.8**	**+0.5**
BBKI	**Banjar Baru**	**5.84**	**24**	P	**Pn**	**12 05 20.2**	**+1.4**
XMIS	**Christmas Isla**	**6.93**	**256**	ePn	**Pn**	**12 05 33.1**	**-0.5**
KAPI	**Kappang**	**8.16**	**63**	P	**Pn**	**12 05 50.4**	**0.0**
	0.9nm,0.3s,baz=247,slow=14,SNR=4.8						
KAPI	**Kappang**	**8.16**	**63**	ePn	**Pn**	**12 05 51.3**	**+0.9**
BATI	**Baumata**	**11.11**	**98**	P	**Pn**	**12 06 30.1**	**-0.7**
	5.4nm,0.3s,baz=18,slow=2.5,SNR=6.5						
BATI	**Baumata**	**11.11**	**98**	P	**Pn**	**12 06 30.7**	**0.0**
MBWA	**Marble Bar**	**14.10**	**151**	ePn	**Pn**	**12 07 08.2**	**-2.5**
	16nm,0.5s						
STKA	**Stephens Creek**	**35.43**	**134**	eP	**P**	**12 10 46.3**	**+3.1**
	2.9nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**35.43**	**134**	P	**P**	**12 10 45.0**	**+1.8**
	3.5nm,0.4s,mb4.5,baz=311,slow=9.6,SNR=10.0						
KSRS	**Korea Array**	**48.27**	**16**	P	**P**	**12 12 28.5**	**+0.8**
	1.4nm,0.6s,mb4.0,baz=205,slow=8.7,SNR=5.7						
MJAR	**Matsushiro Arr**	**51.21**	**27**	P	**P**	**12 12 49.3**	**-0.8**
	0.6nm,0.3s,mb4.1,baz=242,slow=14,SNR=6.4						
SONM	**Songino Array**	**56.69**	**355**	P	**P**	**12 13 29.1**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=175,slow=7.4,SNR=4.5						
MKAR	**Makanchi Array**	**61.58**	**337**	P	**P**	**12 14 03.0**	**-0.6**
	1.8nm,0.5s,mb4.3,baz=152,slow=7.3,SNR=30						
ZALV	**Zalesovo Beam**	**66.79**	**343**	P	**P**	**12 14 36.2**	**-1.2**
	1.3nm,0.4s,mb4.1,baz=156,slow=4.0,SNR=7.3						
PETK	**Petropavlovsk-**	**72.67**	**27**	P	**P**	**12 15 13.2**	**-0.5**
	2.1nm,0.7s,mb4.1,baz=175,slow=3.5,SNR=5.9						
AKTK	**Aktyubinsk**	**75.53**	**327**	P	**P**	**12 15 30.3**	**-0.1**
AKTO	**Aktyubinsk**	**75.53**	**327**	P	**P**	**12 15 30.3**	**-0.1**
	1.0nm,0.6s,mb3.7,baz=161,slow=6.6,SNR=4.1						
BRTR	**Keskin Array B**	**87.12**	**311**	P	**P**	**12 16 32.4**	**+0.4**
	0.4nm,0.5s,mb3.6,baz=128,slow=5.9,SNR=5.2						

*GII **02** 12:13:05.8±1.2, 2978N×3629E, h0km, ML1.9/1, EXPLOSION*
*ISCJB **02** 12:13:06.5±1.1, 2988N±005×3627E±007, h0km, Error ellipse: s-maj=8.5km s-min=7.6km az=0.9*
*CSEM **02** 12:13:08.2, 3002N×36.15E, h8km, ML2.6, After SNSN*
*SGS **02** 12:13:08.2, 3002N×36.15E, h8km*
ISC 02 12:13:06.6±1.1**, 2987N**±005×**3632E**±007**, h0**km**, n12, σ0s90**/15**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.11**	**263**	Pg	**Pg**	**12 13 27.2**	**-0.6**
HRFI	**Mount Harif**	**1.12**	**279**	Pg	**Pg**	**12 13 27.4**	**-0.7**
EIL	**Elat**	**1.20**	**261**	Pg	**Pg**	**12 13 29.1**	**-0.5**
EIL				Sg	**Sg**	**12 13 46.7**	**+1.5**
MBRI	**Mt Berech**	**1.22**	**267**	Pg	**Pg**	**12 13 29.1**	**-0.8**
MBRI				Sg	**Sg**	**12 13 47.0**	**+1.2**
HQLS		**1.23**	**243**	P	**Pg**	**12 13 29.0**	**-1.2**
PRNI	**Paran**	**1.23**	**293**	Pg	**Pg**	**12 13 29.8**	**-0.5**
JLOS		**1.34**	**213**	P	**Pg**	**12 13 32.1**	**-0.1**
JLOS		**1.34**	**213**	P	**Pg**	**12 13 32.1**	**-0.1**
JLOS				S	**Sg**	**12 13 49.9**	**+0.3**
KRMI	**Paran Flat**	**1.40**	**281**	Pn	**Pn**	**12 13 32.2**	**-1.2**
TBKS	**Tabuk**	**1.65**	**173**	P	**Pn**	**12 13 37.8**	**+0.9**
MZDA	**Masada**	**1.66**	**331**	Pn	**Pn**	**12 13 37.7**	**+0.8**
DSI	**Dead Sea**	**1.88**	**335**	Pn	**Pn**	**12 13 41.1**	**+1.1**

*NEIC **02** 12:47:25.9, 3628N×2192E, h15km, ML3.5(ATH), After ATH.*
*ISCJB **02** 12:47:25.2±0.4, 3638N±003×2192E±003, h10km, mb3.8/14, Error ellipse: s-maj=4.7km s-min=2.9km az=39.2*
*PDG **02** 12:47:26.4±0.2, 3626N×2060E, h6km±11km, ML4.1/10, Error ellipse: s-maj=186.5km s-min=37.9km az=90.0*
*ATH **02** 12:47:26.2, 3627N×2194E, h18km±1km, MD3.7/16, ML3.5*
*THE **02** 12:47:28.9, 3640N×22.12E, h12km±1km, ML3.9/3, Error ellipse: s-maj=2.5km s-min=0.6km az=236.0*
*CSEM **02** 12:47:28.0±0.1, 3639N×22.13E, h15km, ML3.9/3, Error ellipse: s-maj=3.2km s-min=1.5km az=44.0*
*IDC **02** 12:47:30.8±2.3, 3654N×2220E, h49km±23km, mb3.6/12, mb1 3.6/15, mb1mx3.6/27, mbtmp3.6/15, ML3.2/3, Error ellipse: s-maj=23.9km s-min=18.1km az=29.0*
ISC 02 12:47:27.2±0.4**, 3639N**±003×**2200E**±003**, h10**km**, n102, σ1s41**/135**, mb3.8**/14**, 4C-8D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.55**	**337**	P	**Pg**	**12 47 39.7**	**+1.8**
PYL				S	**Sg**	**12 47 48.7**	**+3.6**
ITM	**Ithomi**	**0.79**	**356**	ePN	**Pg**	**12 47 43.7**	**+1.2**
ITM	**Ithomi**	**0.79**	**356**	ePn	**Pg**	**12 47 43.5**	**+1.0**
ITM				eSn	**Sg**	**12 47 55.0**	**+2.1**
VLI	**Veliai**	**0.82**	**66**	ePN	**Pg**	**12 47 43.7**	**+0.7**
VLI	**Veliai**	**0.82**	**66**	ePn	**Pg**	**12 47 43.5**	**+0.5**
KYTH	**Kithira**	**0.84**	**97**	ePN	**Pg**	**12 47 43.3**	**-0.1**
KYTH	**Kithira**	**0.84**	**97**	ePn	**Pg**	**12 47 43.5**	**+0.1**
DID	**Didima**	**1.49**	**41**	P	**Pn**	**12 47 54.2**	**+0.2**
DID				S	**Sn**	**12 48 13.4**	**-0.1**
RLS	**Riolos of Patr**	**1.72**	**346**	ePn	**Pn**	**12 48 00.3**	**+3.1**
LTK	**Loutraki**	**1.80**	**25**	P	**Pn**	**12 47 58.2**	**-0.1**
LTK				S	**Sn**	**12 48 21.6**	**+0.3**
NAIG	**Nisos Aigina**	**1.81**	**41**	ePN	**Pn**	**12 48 00.5**	**+2.1**
KFL	**Anninata**	**1.97**	**331**	P	**Pn**	**12 48 02.4**	**+1.7**
VAM	**Vamos**	**2.03**	**118**	ePN	**Pn**	**12 48 01.6**	**+0.1**
VAM	**Vamos**	**2.03**	**118**	ePb	**Pn**	**12 48 01.5**	**0.0**
ATH	**Athens Observa**	**2.09**	**40**	ePN	**Pn**	**12 48 04.4**	**+2.1**
ATH	**Athens Observa**	**2.09**	**40**	ePn	**Pg**	**12 48 05.2**	**-2.1**
ATH				eSn	**Sg**	**12 48 32.8**	**-1.6**
VLS	**Valsamata**	**2.11**	**328**	ePN	**Pn**	**12 48 04.0**	**+1.4**
VLS	**Valsamata**	**2.11**	**328**	P	**Pn**	**12 48 03.7**	**+1.1**
VLS	**Valsamata**	**2.11**	**328**	ePn	**Pn**	**12 48 04.0**	**+1.4**
PTL	**Penteli**	**2.23**	**41**	ePN	**Pn**	**12 48 05.5**	**+1.4**
PTL	**Penteli**	**2.23**	**41**	ePn	**Pn**	**12 48 04.5**	**+0.4**
LKR	**Lokris**	**2.39**	**19**	ePN	**Pn**	**12 48 08.3**	**+1.9**
LKR	**Lokris**	**2.39**	**19**	P	**Pn**	**12 48 06.5**	**+0.1**
LKR	**Lokris**	**2.39**	**19**	ePb	**Pn**	**12 48 07.8**	**+1.4**
LKR	**Lokris**	**2.39**	**19**	ePb	**Pn**	**12 48 07.8**	**+1.4**
EVR	**Evrytania**	**2.53**	**357**	ePB	**Pn**	**12 48 11.2**	**+2.9**
EVR	**Evrytania**	**2.53**	**357**	ePb	**Pn**	**12 48 12.5**	**+4.2**
IDI	**Anoyia**	**2.59**	**114**	P	**Pn**	**12 48 09.2**	**+0.1**
	1.9nm,0.3s,baz=284,slow=14,SNR=20						
AGG	**Agios Georgios**	**2.64**	**6**	P	**Pn**	**12 48 11.1**	**+1.2**
AGG				S	**Sn**	**12 48 43.1**	**+1.1**
THR4	**Thira Island,**	**2.74**	**88**	P	**Pn**	**12 48 10.6**	**-0.6**
THR6	**Thira Island,**	**2.74**	**90**	P	**Pn**	**12 48 10.9**	**-0.3**
THR3	**Thira Island,**	**2.74**	**89**	P	**Pn**	**12 48 11.2**	**0.0**
THR1	**Thera Island**	**2.79**	**89**	P	**Pn**	**12 48 11.9**	**0.0**
APE	**Apeiranthos**	**2.91**	**75**	P	**Pn**	**12 48 13.3**	**-0.3**
APE				S	**Sn**	**12 48 47.7**	**-0.9**
NEO	**Neokhori**	**3.07**	**18**	ePN	**Pn**	**12 48 18.4**	**+2.7**
NEO	**Neokhori**	**3.07**	**18**	ePn	**Pn**	**12 48 18.8**	**+3.1**
LAST	**Lasithi**	**3.08**	**112**	P	**Pn**	**12 48 16.0**	**+0.1**
LAST				S	**Sn**	**12 48 52.5**	**-0.2**
XOR	**Xorichti**	**3.12**	**17**	P	**Pn**	**12 48 17.4**	**+1.0**
NPS	**Neapolis**	**3.14**	**110**	ePN	**Pn**	**12 48 17.4**	**+0.7**
NPS	**Neapolis**	**3.14**	**110**	ePn	**Pn**	**12 48 18.2**	**+1.5**
THL	**Klokotos Trika**	**3.17**	**0**	P	**Pn**	**12 48 18.3**	**+1.2**
THL				S	**Sn**	**12 48 57.1**	**+2.1**
THL	**Klokotos Trika**	**3.17**	**0**	ePN	**Pn**	**12 48 19.4**	**+2.3**
THL	**Klokotos Trika**	**3.17**	**0**	ePn	**Pn**	**12 48 18.9**	**+1.8**
THL				S	**Sn**	**12 48 57.1**	**+2.1**
JAN	**Janina**	**3.39**	**345**	ePN	**Pn**	**12 48 22.0**	**+1.9**
IGT	**Igoumenitsa**	**3.41**	**338**	P	**Pn**	**12 48 21.3**	**+0.9**
ZKR	**Zakros**	**3.65**	**109**	P	**Pn**	**12 48 24.9**	**+1.1**
ZKR				S	**Sn**	**12 49 07.3**	**+0.4**
LIT	**Litokhoron**	**3.73**	**6**	P	**Pn**	**12 48 26.7**	**+1.9**
LIT				S	**Sn**	**12 49 10.3**	**+1.6**
KEK	**Kerkira**	**3.75**	**333**	ePN	**Pn**	**12 48 26.8**	**+1.7**
KEK	**Kerkira**	**3.75**	**333**	ePn	**Pn**	**12 48 25.6**	**+0.5**
PAIG	**Paliouri**	**3.77**	**20**	P	**Pn**	**12 48 26.1**	**+0.7**
KZN	**Kozani**	**3.92**	**357**	ePN	**Pn**	**12 48 30.5**	**+3.1**
PLG	**Polygyros**	**4.14**	**15**	P	**Pn**	**12 48 35.6**	**+5.2**
OUR	**Ouranopolis**	**4.24**	**21**	P	**Pn**	**12 48 32.9**	**+1.1**
HORT	**Hortiatis**	**4.29**	**11**	P	**Pn**	**12 48 33.4**	**+0.9**
FNA	**Florina**	**4.42**	**354**	P	**Pn**	**12 48 35.1**	**+0.9**
BIA	**Bitola**	**4.65**	**354**	ePn	**Pn**	**12 48 40.3**	**+2.8**
BIA				i Sn	**Sn**	**12 49 30.3**	**-1.3**
TIP	**Timpagrande**	**5.00**	**305**	ePn	**Pn**	**12 48 43.0**	**+0.7**
	5.5nm,0.4s						
TIP	**Timpagrande**	**5.00**	**305**	ePn	**Pn**	**12 48 43.0**	**+0.7**
	5.5nm,0.4s						
KRUS	**Krusevo**	**5.01**	**353**	i Pn	**Pn**	**12 48 43.2**	**+0.8**
KRUS				i Sn	**Sn**	**12 49 39.5**	**-0.8**
KRUS	**Krusevo**	**5.01**	**353**	i Pn	**Pn**	**12 48 43.3**	**+0.9**
KRUS				i Sn	**Sn**	**12 49 39.6**	**-0.7**
SOI	**Samo**	**5.04**	**291**	Pn	**Pn**	**12 48 42.8**	**0.0**
	22nm,1.0s						
CEL	**Celeste**	**5.22**	**293**	P	**Pn**	**12 48 45.9**	**+0.7**
LTRZ	**Laterza**	**5.85**	**318**	Pn	**Pn**	**12 48 53.6**	**-0.4**
	11nm,0.2s						
ULC	**Ulcinj**	**5.96**	**340**⇓	iPn	**Pn**	**12 48 54.7**	**-0.8**
ULC				eSn	**Sn**	**12 50 00.8**	**-3.0**
CUC	**Castrocucco**	**6.06**	**308**	ePn	**Pn**	**12 48 58.7**	**+1.9**
	18nm,0.6s						
CUC				eSn	**Sn**	**12 50 00.7**	**-5.5**
CUC	**Castrocucco**	**6.06**	**308**	ePn	**Pn**	**12 48 58.7**	**+1.9**
	18nm,0.6s						
CUC				eSn	**Sn**	**12 50 00.7**	**-5.5**
WDD	**Wield Dalam**	**6.08**	**267**	P	**Pn**	**12 48 57.9**	**+0.8**
BUM	**Brajici-Budva**	**6.38**	**339**⇓	iPn	**Pn**	**12 48 59.9**	**-1.3**
BUM				eSn	**Sn**	**12 50 09.9**	**-4.1**
PVY	**Plav**	**6.39**	**346**⇓	iPn	**Pn**	**12 49 02.1**	**+0.7**
PVY				eSn	**Sn**	**12 50 14.2**	**-0.2**
PDG	**Podgorica**	**6.40**	**341**⇓	iPn	**Pn**	**12 49 00.7**	**-0.7**
PDG				eSn	**Sn**	**12 50 12.0**	**-2.5**
TTG	**Podgorica**	**6.40**	**341**⇓	iPn	**Pn**	**12 49 00.7**	**-0.7**
TTG				eSn	**Sn**	**12 50 12.0**	**-2.5**
BARS	**Barje**	**6.42**	**359**	ePn	**Pn**	**12 49 02.3**	**+0.5**
HCY	**Herceg Novi**	**6.63**	**337**⇑	iPn	**Pn**	**12 49 02.5**	**-2.2**
HCY				eSn	**Sn**	**12 50 15.7**	**-4.6**
BEY	**Berane**	**6.67**	**347**⇓	iPn	**Pn**	**12 49 06.5**	**+1.2**
BEY				eSn	**Sn**	**12 50 20.7**	**-0.7**
IVA	**Berane**	**6.67**	**347**⇓	iPn	**Pn**	**12 49 06.5**	**+1.2**
IVA				eSn	**Sn**	**12 50 20.7**	**-0.7**
NKY	**Niksic**	**6.82**	**341**⇑	iPn	**Pn**	**12 49 06.4**	**-0.9**
NKY				eSn	**Sn**	**12 50 21.9**	**-3.1**
BRY	**Bratogost**	**7.03**	**339**⇑	iPn	**Pn**	**12 49 09.3**	**-0.8**
BRY				eSn	**Sn**	**12 50 25.7**	**-4.4**
UPM	**Unac-Piva**	**7.21**	**342**⇓	iPn	**Pn**	**12 49 12.5**	**-0.1**
UPM				eSn	**Sn**	**12 50 31.6**	**-2.9**
PLE	**Pljevlja**	**7.22**	**345**⇑	iPn	**Pn**	**12 49 12.9**	**+0.2**
PLE				eSn	**Sn**	**12 50 32.4**	**-2.3**
BBLS	**Lazići**	**7.73**	**346**	ePn	**Pn**	**12 49 18.4**	**-1.3**
BRTR	**Keskin Array B**	**9.76**	**67**	P	**Pn**	**12 49 46.6**	**-1.0**
	0.1nm,0.3s,baz=255,slow=16,SNR=2.4						
NVLJ	**Novalja**	**9.80**	**329**	ePn	**Pn**	**12 49 48.0**	**-0.2**
NVLJ				Sn	**Sn**	**12 51 31.5**	**-6.7**
BOJS	**Bojanci**	**10.44**	**333**	i Pn	**Pn**	**12 49 56.2**	**-0.7**
BOJS				i Sn	**Sn**	**12 51 45.8**	**-8.0**
VISS	**Visnje**	**10.84**	**332**	i Pn	**Pn**	**12 50 01.1**	**-1.3**
VISS				i Sn	**Sn**	**12 51 55.1**	**-8.6**
JAVS	**Javornik**	**11.22**	**330**	i Pn	**Pn**	**12 50 06.9**	**-0.7**
JAVS				i Sn	**Sn**	**12 52 05.2**	**-7.8**
GERES	**GERESS Array B**	**13.86**	**337**	P	**Pn**	**12 50 42.8**	**-0.7**
	0.1nm,0.3s,baz=149,slow=13,SNR=3.7						
HFS	**Hagfors**	**24.36**	**350**	P	**P**	**12 52 42.3**	**-2.7**
	1.0nm,0.3s,mb3.7,baz=160,slow=11,SNR=14						
EKA	**Eskdalemuir Ar**	**25.57**	**326**	P	**P**	**12 52 54.9**	**-1.2**
	1.4nm,0.7s,mb3.6,baz=122,slow=6.4,SNR=6.0						
NB2	**NORSAR Subarra**	**25.61**	**348**	P	**P**	**12 52 54.1**	**-2.3**
	comp=Z,0.9nm,0.7s,mb3.4,baz=160,slow=9.3						
NOA	**NORSAR Array B**	**25.61**	**348**	P	**P**	**12 52 54.1**	**-2.3**
	comp=Z,0.9nm,0.5s,mb3.5,baz=144,slow=9.5,SNR=6.2						
KAF	**Kangasniemi**	**25.89**	**5**	ep	**P**	**12 52 55.9**	**-3.0**
	comp=Z,3.4nm,0.9s,mb3.9						
JOF	**Joensuu**	**27.17**	**9**	ep	**P**	**12 53 06.7**	**-3.8**
	comp=Z,2.7nm,0.7s,mb3.9						
TORD	**Torodi Ar. Bea**	**29.46**	**223**	P	**P**	**12 53 32.1**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.4,baz=21,slow=8.5,SNR=2.4						
ARCES	**ARCESS Array B**	**33.26**	**2**	P	**P**	**12 54 01.6**	**-2.7**
	comp=Z,1.6nm,0.5s,mb4.2,baz=181,slow=8.5,SNR=9.6						
KEV	**Kevo**	**33.54**	**3**	ep	**P**	**12 54 03.8**	**-2.9**
BVAR	**Borovoye Array**	**37.40**	**48**	P	**P**	**12 54 37.2**	**-2.9**
	comp=Z,0.8nm,0.5s,mb3.8,baz=256,slow=6.0,SNR=5.6						
KURK	**Kurchatov**	**42.42**	**52**	P	**P**	**12 55 17.9**	**-3.9**
	comp=Z,1.3nm,0.5s,mb3.9,baz=280,slow=8.6,SNR=5.8						
MKAR	**Makanchi Array**	**45.25**	**57**	P	**P**	**12 55 41.2**	**-3.4**
	comp=Z,1.3nm,0.6s,mb3.9,baz=275,slow=7.8,SNR=18						
ZALV	**Zalesovo Beam**	**46.02**	**47**	P	**P**	**12 55 47.0**	**-3.6**
	comp=Z,2.2nm,0.4s,mb4.4,baz=268,slow=10.0,SNR=13						
SONM	**Songino Array**	**60.69**	**50**	P	**P**	**12 57 36.0**	**-2.5**
	comp=Z,0.3nm,0.5s,mb3.7,baz=261,slow=7.7,SNR=3.5						
CMAR	**Chiang Mai Arr**	**68.96**	**82**	P	**P**	**12 58 29.8**	**-3.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=303,slow=7.3,SNR=5.8						
KSRS	**Korea Array**	**79.54**	**51**	P	**P**	**12 59 31.4**	**-2.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=305,slow=4.2,SNR=4.7						

CASC 02 13:00:08.8±1.1**, 1368N**×**9098W, h26**km±4km**, MD3.5, 6C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.78**	**10**⇑	eP	Pb	13 00 23.9	+0.2
PCG	**Pacaya**	**0.80**	**27**	eP	Pb	13 00 24.8	+0.7
FG6		**0.88**	**6**⇑	eP	Pb	13 00 25.3	-0.2
FG6				eS	Sb	13 00 37.9	+1.0
JAT	**Jato**	**0.90**	**315**⇓	eP	Pb	13 00 25.1	-0.7
RTR	**El Retiro**	**1.32**	**80**⇓	eP	x	13 00 31.8	
RTR				eS	x	13 00 50.2	
RBDL	**Robledal**	**1.33**	**71**⇑	eP	x	13 00 32.1	
RBDL				eS	x	13 00 50.1	
SBLS	**San Blas**	**1.33**	**83**⇑	eP	x	13 00 31.7	
SBLS				eS	x	13 00 50.3	
SNJE	**San Jose**	**1.35**	**82**⇓	eP	x	13 00 32.0	
SNJE				eS	x	13 00 50.5	
BOQS	**Boqueron**	**1.66**	**88**⇑	eP	x	13 00 36.6	
BOQS				eS	x	13 00 58.3	
MTO2	**Montecristo 2**	**1.73**	**65**	eP	x	13 00 37.3	
MTO2				eS	x	13 01 00.5	
LFRS	**El Faro**	**1.87**	**91**⇑	eP	x	13 00 39.7	
LFRS				eS	x	13 01 03.1	
LBRS	**Las Brisas**	**1.89**	**88**	eP	x	13 00 39.9	
SNVI	**San Vicente**	**2.09**	**92**	eP	x	13 00 42.6	
SNVI				eS	x	13 01 08.6	

SKHL 02 13:00:10.6±0.7**, 5290N**×**14330E, h10**km**, mb3.8**/2**, 1C, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	**Okha**	**0.69**	**341**⇑	iPg	Pg	13 00 24.7	+0.8
OKH				AMB	AMB	13 00 25.2	
	400nm,0.6s						
OKH				erx	rx	13 00 27.4	
OKH				i Sg	Sg	13 00 35.0	+2.1
OKH				A		13 00 35.9	
	2μm,0.6s						
NKL	**Nikolayevsk**	**1.60**	**280**	ePg	Pg	13 00 42.3	+1.0
NKL				AMB	AMB	13 00 43.4	
	18nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NKL				AMB	AMB	13 00 43.4	
	26nm,0.8s						
NKL				*e*rx	rx	13 00 47.0	
NKL				*e*Sg	Sg	13 01 04.0	+1.9
NKL				A		13 01 04.6	
	60nm,0.3s						
NKL				A		13 01 04.6	
	120nm,0.3s						
TYV	**Tymovskoe**	**2.08**	**191**	*e*Sg	Sg	13 01 21.5	+4.2
GRNR	**Gornyy**	**4.77**	**246**	*e*Sg	Sg	13 02 51.5	+7.9
GRNR				A		13 02 56.5	
	20nm,0.8s						
GRNR				A		13 02 56.5	
	15nm,0.8s						
EKMR	**Ekimchan**	**6.25**	**276**	*e*Pg	Pg	13 02 15.2	+4.9
EKMR				*e*rx	rx	13 03 34.0	
EKMR				A		13 03 38.0	
	8.0nm,0.6s						

*IDC **02** 13:21:18.9±2.2, 20.58N×93.11E, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.5/20, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=77.4km s-min=22.3km az=51.0*
*ISCJB **02** 13:21:22.5±2.0, 20.8N±0.3×93.5E±0.3, h33km, mb3.8/3, Error ellipse: s-maj=59.6km s-min=13.3km az=43.6*
*NEIC **02** 13:21:25.2±1.6, 20.79N×93.51E, h35km, Error ellipse: s-maj=51.8km s-min=11.3km az=224.0*
ISC 02 13:21:25.3±2.0**, 20.8N**±0.3×**93.5E**±0.3**, h35km, n7, σ0.56**/8**, mb3.7**/3**, Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.98**	**343**	*e*P	**Pn**	**13 22 44.5**	**+7.0**
CHTO	**Chiang Mai**	**5.47**	**110**	*e*P	**Pn**	**13 22 44.0**	**-0.4**
	9.3nm,0.6s						
CM31	**Chiang Mai Arr**	**5.62**	**114**	*e*P	**Pn**	**13 22 46.4**	**+0.1**
	14nm,0.8s						
CMAR	**Chiang Mai Arr**	**5.62**	**114**	Pn	**Pn**	**13 22 46.9**	**+0.5**
	1.2nm,0.3s,baz=302,slow=13,SNR=47						
CMAR				Sn	**Sn**	**13 23 59.1**	**+9.4**
	0.3nm,0.3s,baz=294,slow=31,SNR=5.0						
MKAR	**Makanchi Array**	**27.50**	**343**	P	**P**	**13 27 09.1**	**+0.8**
	0.2nm,0.3s,mb3.1,baz=152,slow=9.8,SNR=5.2						
ZALV	**Zalesovo Beam**	**33.76**	**351**	P	**P**	**13 28 02.5**	**-0.8**
	1.8nm,0.3s,mb4.5,baz=163,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**59.17**	**136**	P	**P**	**13 31 22.6**	**-0.2**
	0.6nm,0.8s,mb3.7,baz=310,slow=6.4,SNR=5.7						

TRN 02 13:22:01.0, 15.15N×60.90W, h139km, MD3.9, M2.8(FDF)**, 6C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.48**	**211**	⇑*e*P	Pn	13 22 22.2	+1.2
FDF				⇑*e*S	Sn	13 22 37.0	+0.9
MVM	**Montagne Vaucl**	**0.59**	**180**	*e*P	Pn	13 22 23.0	+1.5
MVM				*e*S	Sn	13 22 38.0	+0.8
BIM	**Bigot**	**0.65**	**195**	⇑*e*P	Pn	13 22 23.0	+1.0
DOG	**Dongo Capester**	**1.12**	**322**	*e*P	Pn	13 22 26.8	+1.0
SLW	**Petit Monier**	**1.12**	**182**	⇑*i*P	Pn	13 22 26.3	+0.4
SLW				⇑*i*S	Sn	13 22 44.0	-0.8
SCG	**Saint Claude**	**1.16**	**319**	*e*P	Pn	13 22 27.2	+1.1
DEG	**La Desirade**	**1.17**	**352**	*e*P	Pn	13 22 28.1	+1.8
DEG				*e*S	Sn	13 22 47.0	+1.5
LZG	**Guadaloupe-1**	**1.30**	**319**	*e*P	Pn	13 22 28.5	+0.9
SLB	**Belfond**	**1.32**	**186**	*e*P	Pn	13 22 29.0	+1.2
SLB				*e*S	Sn	13 22 49.9	+1.6
SSV	**Crater Summit**	**1.83**	**189**	⇑*i*P	Pn	13 22 34.2	+0.7
SSV				*e*S	Sn	13 23 00.1	+1.7
SVV	**Soufriere Volc**	**1.85**	**190**	⇓*e*P	Pn	13 22 34.5	+0.8
SVV				*e*S	Sn	13 23 00.2	+1.6
BHS	**Barnard House**	**1.86**	**187**	*e*P	Pn	13 22 34.7	+0.9

*ISCJB **02** 13:51:32.4±0.5, 24.72N±0.03×122.42E±0.02, h116km±4km, Error ellipse: s-maj=4.5km s-min=2.7km az=161.9*
*TAP **02** 13:51:32.3, 24.78N×122.42E, h119km, ML4.1, D*
*JMA **02** 13:51:32.6±0.2, 24.85N×122.44E, h114km±2km, M3.4*
ISC 02 13:51:33.0±0.5**, 24.73N**±0.03×**122.42E**±0.02**, h114km**±4km**, n63, σ0.70**/124**, 3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48**	**305**	*i* P	**Pn**	**13 51 50.0**	**-0.1**
	baz=300						
TWB1				*i* S	**Sn**	**13 52 03.2**	**+0.1**
	baz=300						
TWC	**Suao**	**0.53**	**257**	*i* P	**Pn**	**13 51 50.4**	**-0.1**
	baz=252						
TWC				*i* S	**Sn**	**13 52 03.7**	**0.0**
	baz=252						
YOJ	**Yonaguni jima**	**0.60**	**117**	P	**Pn**	**13 51 51.0**	**0.0**
YOJ				S	**Sn**	**13 52 04.9**	**+0.4**
ILA	**Ilan**	**0.61**	**273**	*i* P	**Pn**	**13 51 51.2**	**+0.2**
	baz=268						
ILA				S	**Sn**	**13 52 05.3**	**+0.6**
	baz=268						
NWF	**Wu-fen Shan**	**0.67**	**300**	*i* P	**Pn**	**13 51 51.4**	**-0.1**
	baz=296						
NWF				S	**Sn**	**13 52 05.2**	**-0.3**
	baz=296						
TWE	**Neicheng**	**0.69**	**269**	⇓*i*P	**Pn**	**13 51 51.6**	**-0.1**
	baz=265						
TWE				S	**Sn**	**13 52 05.5**	**-0.1**
	baz=265						
ENA	**Nanau**	**0.69**	**244**	*i* P	**Pn**	**13 51 51.9**	**+0.2**
	baz=240						
ENA				*e*S	**Sn**	**13 52 06.5**	**+0.7**
	baz=240						
ENTT	**Nioudou**	**0.78**	**263**	*i* P	**Pn**	**13 51 52.7**	**+0.3**
	baz=260						
ENTT				*e*S	**Sn**	**13 52 07.8**	**+0.7**
	baz=260						
TWA	**Mucha**	**0.80**	**288**	P	**Pn**	**13 51 52.2**	**-0.3**
	baz=284						
TWA				S	**Sn**	**13 52 06.6**	**-0.8**
	baz=284						
TAP1	**Taipei**	**0.87**	**291**	*e*P	**Pn**	**13 51 53.3**	**0.0**
	baz=287						
TAP1				S	**Sn**	**13 52 08.2**	**-0.4**
	baz=287						
TWY	**Chenhua**	**0.92**	**306**	P	**Pn**	**13 51 53.4**	**-0.3**
	baz=303						
TWY				S	**Sn**	**13 52 09.0**	**-0.4**
	baz=303						
PCYT	**Pengchaiyu**	**0.95**	**341**	P	**Pn**	**13 51 54.1**	**+0.1**
	baz=339						
PCYT				S	**Sn**	**13 52 08.8**	**-1.1**
	baz=339						
NSK	**Sanguang**	**0.97**	**267**	*i* P	**Pn**	**13 51 54.2**	**0.0**
	baz=264						
NSK				S	**Sn**	**13 52 10.1**	**-0.1**
	baz=264						
TWS1	**Kuangyinshan**	**0.98**	**292**	P	**Pn**	**13 51 54.0**	**-0.3**
	baz=289						
TWS1				*e*S	**Sn**	**13 52 09.8**	**-0.6**
	baz=289						
TWD	**Chiawan**	**0.99**	**229**	P	**Pn**	**13 51 54.1**	**-0.3**
	baz=227						
TWD				*e*S	**Sn**	**13 52 10.8**	**+0.1**
	baz=227						
NNS	**Nan Shan**	**1.00**	**253**	⇓*i*P	**Pn**	**13 51 55.0**	**+0.5**
	baz=250						
NNS				*e*S	**Sn**	**13 52 11.3**	**+0.6**
	baz=250						
HWA	**Hwalien**	**1.06**	**225**	*e*P	**Pn**	**13 51 55.0**	**-0.2**
	baz=222						
HWA				*e*S	**Sn**	**13 52 12.5**	**+0.6**
	baz=222						
WHF	**Hehuan Shan**	**1.21**	**241**	P	**Pn**	**13 51 57.3**	**+0.6**
	baz=239						
WHF				*e*S	**Sn**	**13 52 15.4**	**+0.8**
	baz=239						
TWT	**Tachien**	**1.23**	**247**	*i* P	**Pn**	**13 51 57.9**	**+0.9**
	baz=245						
TWT				*e*S	**Sn**	**13 52 16.1**	**+1.0**
	baz=245						
IRIF	**Iriomote-Funau**	**1.26**	**108**	P	**Pn**	**13 51 57.1**	**-0.1**
IRIF				S	**Sn**	**13 52 16.1**	**+0.5**
ESL	**Shilin**	**1.28**	**225**	*i* P	**Pn**	**13 51 56.8**	**-0.7**
	baz=223						
ESL				*e*S	**Sn**	**13 52 15.4**	**-0.8**
	baz=223						
NSTT	**Nanjuang**	**1.29**	**266**	*i* P	**Pn**	**13 51 57.5**	**-0.2**
	baz=263						
NSTT				S	**Sn**	**13 52 15.9**	**-0.5**
	baz=263						
HSN	**Hsinchu**	**1.32**	**273**	P	**Pn**	**13 51 57.5**	**-0.4**
	baz=272						
HSN				*e*S	**Sn**	**13 52 16.2**	**-0.7**
	baz=272						
HATJ	**Hateruma jima**	**1.43**	**118**	P	**Pn**	**13 51 59.6**	**+0.4**
HATJ				S	**Sn**	**13 52 21.0**	**+1.8**
JKRS	**Kuro-shima**	**1.53**	**109**	P	**Pn**	**13 52 00.6**	**+0.2**
JKRS				S	**Sn**	**13 52 21.7**	**+0.5**
TWQ1	**Liyutan**	**1.55**	**256**	*i* P	**Pn**	**13 52 00.8**	**+0.2**
	baz=254						
TWQ1				*e*S	**Sn**	**13 52 21.6**	**0.0**
	baz=254						
EHY	**Hungye**	**1.58**	**220**	*e*P	**Pn**	**13 51 59.9**	**-1.2**
	baz=218						
EHY				*e*S	**Sn**	**13 52 21.2**	**-1.1**
	baz=218						
JIJ	**Ishigaki jima**	**1.61**	**103**	P	**Pn**	**13 52 01.0**	**-0.4**
JIJ				S	**Sn**	**13 52 22.5**	**-0.5**
SMLT	**Sun Moon Lake**	**1.62**	**239**	P	**Pn**	**13 52 02.5**	**+0.9**
	baz=237						
SMLT				*e*S	**Sn**	**13 52 24.8**	**+1.6**
	baz=237						
TYC	**Yuchr**	**1.65**	**240**	P	**Pn**	**13 52 02.4**	**+0.6**
	baz=238						
TYC				*e*S	**Sn**	**13 52 24.4**	**+0.6**
	baz=238						
TCU	**Taichung**	**1.69**	**250**	P	**Pn**	**13 52 02.6**	**+0.2**
	baz=248						
TCU				*e*S	**Sn**	**13 52 23.8**	**-1.0**
	baz=248						
TWF1	**Yuli**	**1.72**	**217**	P	**Pn**	**13 52 01.6**	**-1.0**
	baz=215						
TWF1				*e*S	**Sn**	**13 52 24.3**	**-1.0**
	baz=215						
WNT	**Mingjian**	**1.80**	**242**	*e*P	**Pn**	**13 52 04.2**	**+0.6**
	baz=240						
WNT				*e*S	**Sn**	**13 52 27.1**	**+0.1**
	baz=240						
YUS	**Yu-Shan**	**1.83**	**228**	*e*P	**Pn**	**13 52 05.0**	**+1.0**
	baz=226						
YUS				*e*S	**Sn**	**13 52 28.1**	**+0.4**
	baz=226						
CHKT	**Chengkung**	**1.89**	**211**	*i* P	**Pn**	**13 52 04.1**	**-0.8**
	baz=209						
CHKT				*e*S	**Sn**	**13 52 27.9**	**-1.2**
	baz=209						
ALS	**Alishan**	**1.91**	**231**	P	**Pn**	**13 52 06.3**	**+1.2**
	baz=229						
ALS				*e*S	**Sn**	**13 52 31.1**	**+1.5**
	baz=229						
CHN5	**Tsauling**	**1.95**	**235**	*i* P	**Pn**	**13 52 06.1**	**+0.5**
	baz=233						
CHN5				*e*S	**Sn**	**13 52 30.9**	**+0.4**
	baz=233						
WGK	**Gukeng**	**1.99**	**239**	P	**Pn**	**13 52 06.5**	**+0.4**
	baz=237						
WGK				*e*S	**Sn**	**13 52 31.6**	**+0.2**
	baz=237						
ELDTW	**Lidau**	**2.00**	**220**	⇓*i*P	**Pn**	**13 52 05.7**	**-0.5**
	baz=219						
ELDTW				*e*S	**Sn**	**13 52 31.2**	**-0.4**
	baz=219						
JTJ	**Tarama**	**2.08**	**92**	P	**Pn**	**13 52 07.4**	**+0.3**
JTJ				S	**Sn**	**13 52 33.1**	**-0.2**
WTCT	**Ta-ch'eng**	**2.13**	**247**	*e*P	**Pn**	**13 52 08.1**	**+0.2**
	baz=245						
WTCT				*e*S	**Sn**	**13 52 34.1**	**-0.4**
	baz=245						
CHN2	**Minshiung**	**2.14**	**236**	P	**Pn**	**13 52 08.4**	**+0.4**
	baz=235						
CHN2				*e*S	**Sn**	**13 52 34.6**	**-0.1**
	baz=235						
CHN4	**Tsaushan**	**2.17**	**231**	P	**Pn**	**13 52 08.8**	**+0.6**
	baz=229						
CHN4				*e*S	**Sn**	**13 52 35.0**	**-0.3**
	baz=229						
STYT	**Tauyuan**	**2.18**	**225**	P	**Pn**	**13 52 09.3**	**+0.8**
	baz=223						
STYT				*e*S	**Sn**	**13 52 36.0**	**+0.3**
	baz=223						
CHY	**Chiayi**	**2.20**	**236**	P	**Pn**	**13 52 08.9**	**+0.2**
	baz=235						
CHY				*e*S	**Sn**	**13 52 35.6**	**-0.5**
	baz=235						
WTP	**Ta-pu**	**2.22**	**228**	P	**Pn**	**13 52 09.3**	**+0.4**
	baz=227						
WTP				*e*S	**Sn**	**13 52 36.8**	**+0.3**
	baz=227						
TWG	**Pinlang**	**2.27**	**213**	*e*P	**Pn**	**13 52 08.4**	**-1.2**
	baz=212						
TWG				*e*S	**Sn**	**13 52 37.0**	**-0.7**
	baz=212						
TTN	**Taitung**	**2.29**	**211**	*e*P	**Pn**	**13 52 10.7**	**+0.9**
	baz=210						
TTN				*e*S	**Sn**	**13 52 38.2**	**+0.1**
	baz=210						
TWK	**Hsinying**	**2.29**	**231**	*e*P	**Pn**	**13 52 10.3**	**+0.4**
	baz=229						
TWK				*e*S	**Sn**	**13 52 38.7**	**+0.5**
	baz=229						
CHN1	**Nanshi**	**2.32**	**229**	*i* P	**Pn**	**13 52 10.4**	**+0.2**
	baz=227						
CHN1				*e*S	**Sn**	**13 52 38.9**	**+0.1**
	baz=227						
SGST	**Jiashian**	**2.35**	**226**	P	**Pn**	**13 52 11.4**	**+0.7**
	baz=224						
SGST				*e*S	**Sn**	**13 52 40.2**	**+0.6**
	baz=224						
CHN8	**Yiju**	**2.45**	**236**	*e*P	**Pn**	**13 52 12.3**	**+0.4**
	baz=234						
CHN8				*e*S	**Sn**	**13 52 40.4**	**-1.3**
	baz=234						
ECL	**Taimali**	**2.52**	**213**	*e*P	**Pn**	**13 52 11.4**	**-1.4**
	baz=211						
ECL				*e*S	**Sn**	**13 52 41.4**	**-2.0**
	baz=211						
SCLT	**Jiali**	**2.56**	**233**	*e*P	**Pn**	**13 52 13.7**	**+0.3**
	baz=231						
SCLT				*e*S	**Sn**	**13 52 44.8**	**+0.4**
	baz=231						
SSD	**Sandimen**	**2.57**	**220**	P	**Pn**	**13 52 14.3**	**+0.8**
	baz=219						
SSD				*e*S	**Sn**	**13 52 44.4**	**-0.2**
	baz=219						
JMJ	**Miyako jima 2**	**2.61**	**88**	P	**Pn**	**13 52 14.4**	**+0.4**
JMJ				*e*S	**Sn**	**13 52 45.2**	**-0.4**
TWM1	**Shoushan**	**2.64**	**224**	*e*P	**Pn**	**13 52 15.2**	**+0.8**
	baz=223						
JOGS	**Gusukube**	**2.71**	**89**	S	**Sn**	**13 52 46.3**	**-1.6**
LAY	**Lan-yu**	**2.80**	**197**	*e*P	**Pn**	**13 52 15.6**	**-0.9**
	baz=196						
LAY				*e*S	**Sn**	**13 52 47.7**	**-2.2**
	baz=196						
PNG	**Penghu**	**2.86**	**247**	*e*P	**Pn**	**13 52 15.9**	**-1.4**
	baz=245						
PNG				*e*S	**Sn**	**13 52 47.7**	**-3.7**
	baz=245						
SCZT	**Fangliau**	**2.87**	**215**	*e*P	**Pn**	**13 52 17.8**	**+0.3**
	baz=214						
SCZT				*e*S	**Sn**	**13 52 51.0**	**-0.6**
	baz=214						
TWK1	**Hengchun**	**3.15**	**208**	*e*P	**Pn**	**13 52 21.0**	**-0.1**
	baz=207						
TWK1				*e*S	**Sn**	**13 52 58.5**	**+0.3**
	baz=207						
KNM	**Kinmen**	**3.64**	**266**	*e*P	**Pn**	**13 52 28.5**	**+0.9**
	baz=264						
KNM				*e*S	**Sn**	**13 53 09.3**	**-0.6**
	baz=264						

*ISK **02** 14:11:25.9, 39.05N×26.70E, h7km, MD3.0*
*CSEM **02** 14:11:25.7±0.1, 39.04N×26.69E, h10km, MD2.9, Error ellipse: s-maj=4.0km s-min=1.9km az=68.0*
*ISCJB **02** 14:11:26.6±0.6, 39.07N±0.03×26.75E±0.07, h6km±6km, Error ellipse: s-maj=8.8km s-min=4.4km az=166.1*
*DDA **02** 14:11:26.8, 39.07N×26.78E, h7km±4km, Md2.9*
ISC 02 14:11:27.3±0.5**, 39.07N**±0.03×**26.75E**±0.06**, h11km**±5km**, n15, σ0.93**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.24**	**349**	*i* P	**Pg**	**14 11 32.0**	**-0.3**
AYVA				*i* S	**Sg**	**14 11 36.2**	**+0.6**
URLA	**Izmir**	**0.72**	**190**	*i* P	**Pg**	**14 11 40.2**	**-1.1**
URLA				*i* S	**Sg**	**14 11 52.5**	**+1.8**
BLCB	**Balcova**	**0.72**	**161**	*e*PG	**Pg**	**14 11 40.3**	**-1.0**
BLCB				*e*SG	**Sg**	**14 11 50.0**	**-0.7**
KDAG	**Bornova**	**0.78**	**149**	*i* P	**Pg**	**14 11 41.7**	**-0.7**
KDAG				*i* S	**Sg**	**14 11 54.6**	**+2.0**
EZN	**Ezine**	**0.82**	**337**	*e*PG	**Pg**	**14 11 42.5**	**-0.6**
EZN				*e*SG	**Sg**	**14 11 54.3**	**+0.5**
AKHS	**Akhisar**	**0.85**	**103**	*i* P	**Pg**	**14 11 43.7**	**0.0**
AKHS				*i* S	**Sg**	**14 11 54.2**	**-0.6**
AKS	**Akhisar**	**0.85**	**103**	*e*PG	**Pg**	**14 11 43.9**	**+0.2**
BALB	**Balikesir**	**1.04**	**57**	*e*PN	**Pn**	**14 11 46.3**	**-1.6**
GADA	**Gvkgeada**	**1.29**	**330**	*e*PN	**Pn**	**14 11 50.3**	**-1.0**
DST	**Dursunbey**	**1.55**	**69**	*e*PN	**Pn**	**14 11 55.6**	**+0.8**
BNT	**Bandirma**	**1.57**	**35**	*e*PN	**Pn**	**14 11 55.3**	**+0.2**
KULA	**Kula-Manisa**	**1.60**	**110**	*e*PN	**Pn**	**14 11 55.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.65**	**11**	*e*PN	**Pn**	**14 11 56.8**	**+0.6**
KCT	**Karacabey**	**1.72**	**46**	*e*PN	**Pn**	**14 11 56.9**	**-0.3**
YLV	**Yalova**	**2.51**	**53**	*e*PN	**Pn**	**14 12 09.6**	**+1.6**

IDC 02 15:01:44.0±16.0**, 23.75S**×**179.63E, h700km**±232km**, mb3.1**/4**, mb1 3.3**/4**, mb1mx2.9**/15**, mbtmp3.1**/4**, Error ellipse: s-maj=113.5km s-min=77.1km az=129.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**25.76**	**249**	*e*P	P	15 06 24.7	-0.2
CTA	**Charters Tower**	**31.14**	**270**	*e*P	P	15 07 10.9	-0.1
	5.1nm,0.3s						
CTA	**Charters Tower**	**31.14**	**270**	P	P	15 07 11.1	0.0
	6.6nm,0.4s,baz=89,slow=11,SNR=13						
STKA	**Stephens Creek**	**34.46**	**248**	*e*P	P	15 07 38.6	+0.1
	1.5nm,0.6s						
STKA	**Stephens Creek**	**34.46**	**248**	P	P	15 07 38.4	-0.1
	1.9nm,0.6s,baz=98,slow=9.9,SNR=7.5						
ASAR	**Alice Springs**	**41.72**	**261**	P	P	15 08 36.5	0.0
	3.1nm,0.8s,baz=96,slow=7.4,SNR=58						
WB2	**Warramunga Arr**	**42.07**	**266**	*e*P	P	15 08 39.3	0.0
TXAR	**Lajitas Array**	**90.64**	**58**	P	P	15 13 35.4	+0.1
	0.3nm,0.7s,baz=214,slow=4.2,SNR=4.6						

CASC 02 15:05:00.2±2.0**, 10.75N**×**87.14W, h36km**±999km**, MD3.8, ML2.7, 12C-7D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.52**	**21**	⇓*i*P	Pn	15 05 25.0	+0.1
COPN				*e*S	Sn	15 05 44.7	+1.3
TICN	**Ticuantepe**	**1.55**	**35**	⇓*e*P	Pn	15 05 26.1	+0.7
APON	**Apoyo**	**1.56**	**42**	⇑*e*P	Pn	15 05 26.1	+0.6
CSAN		**1.58**	**26**	⇓*e*P	Pn	15 05 25.6	-0.2
XAVN	**Gruta Xavier**	**1.60**	**30**	*e*P	Pn	15 05 25.8	-0.2
VCR	**Vista de Mar**	**1.61**	**113**	⇑*e*P	Pn	15 05 25.6	-0.5
VCR				*e*S	Sn	15 05 45.6	0.0
TISN	**Laguna Tiscapa**	**1.62**	**32**	*e*P	Pn	15 05 26.4	+0.1
MGAN	**Managua**	**1.64**	**32**	*e*P	Pn	15 05 26.6	0.0
MGAN				*e*S	Sn	15 05 48.3	+1.9
MGAN				AML	AML	15 05 49.5	
	comp=E,76nm,0.5s						
APYN	**Apoyeque**	**1.66**	**28**	*e*P	Pn	15 05 26.9	0.0
APYN				*e*S	Sn	15 05 48.4	+1.4
WILN	**Americas 2**	**1.68**	**34**	⇓*e*P	Pn	15 05 27.4	+0.3
MIRN	**Miramar**	**1.73**	**14**	⇑*e*P	Pn	15 05 27.9	+0.1
MIRN				*e*S	Sn	15 05 49.1	+0.5
MOMN	**Momotombo**	**1.75**	**20**	⇑*e*P	Pn	15 05 28.3	+0.3
MOMN				*e*S	Sn	15 05 50.3	+1.3
TEL3	**Telica 3**	**1.83**	**9**	⇑*e*P	Pn	15 05 29.4	+0.2
HUEN		**1.84**	**31**	⇓*e*P	Pn	15 05 29.4	+0.2
LIM1	**Limonal**	**1.85**	**91**	*i* P	Pn	15 05 29.2	-0.3
LIM1				*i* S	Sn	15 05 51.9	+0.3
TELN	**Telica**	**1.86**	**9**	⇑*e*P	Pn	15 05 30.0	+0.4
TELN				*e*S	Sn	15 05 53.2	+1.2
2RIO	**Dos Rios de Up**	**1.89**	**97**	*i* P	Pn	15 05 28.6	-1.3
CUI	**Cuipilapa**	**1.93**	**92**	*i* P	Pn	15 05 30.9	+0.3
CUI				*i* S	Sn	15 05 53.7	+0.2
CRIN	**San Cristobal**	**1.94**	**3**	⇑*e*P	Pn	15 05 30.8	+0.2
CRIN				*e*S	Sn	15 05 55.2	+1.5
JCR	**Jicaral**	**2.19**	**114**	*e*P	Pn	15 05 34.0	-0.1
JCR				*e*S	Sn	15 05 58.3	-1.6
FORC	**Fortuna**	**2.44**	**96**	⇑*e*P	Pn	15 05 39.0	+1.4
FORC				*e*S	Sn	15 06 08.7	+2.4
CNCH	**Conchagua**	**2.60**	**345**	*e*P	x	15 05 40.0	
CNCH				*e*S	x	15 06 09.6	
CGA2	**Cerro Gallo 2**	**2.73**	**105**	*e*P	Pn	15 05 42.7	+1.1
CGA2				*e*S	Sn	15 06 13.7	+0.4
BLLM	**Bellamira**	**2.88**	**338**	*e*P	x	15 05 44.1	
PRS1	**Puriscal**	**2.88**	**105**	*e*P	Pn	15 05 44.9	+1.2
PRS1				*e*S	Sn	15 06 15.3	-1.9
LAJ	**Bijagual**	**3.10**	**106**	⇑*e*P	Pn	15 05 43.7	-2.9
CAHU	**Cacacuatique**	**3.18**	**341**	*e*P	x	15 05 48.8	
CAHU				*e*S	x	15 06 24.6	
TGUH	**Tegucigalpa,Un**	**3.29**	**358**	⇑*i*P	Pn	15 05 50.0	+0.8
SNVI	**San Vicente**	**3.29**	**330**	*e*P	x	15 05 50.6	
SNVI				*e*S	x	15 06 26.6	
LFRS	**El Faro**	**3.42**	**327**	⇓*e*P	x	15 05 51.8	
LFRS				*e*S	x	15 06 30.3	
URSC	**Urasca**	**3.43**	**105**	*e*P	Pn	15 05 54.3	+3.1
SBLS	**San Blas**	**3.91**	**322**	*e*P	x	15 05 59.6	
SBLS				*e*S	x	15 06 43.1	
BAR1		**4.06**	**111**	⇓*e*P	Pn	15 06 01.9	+2.1
BAR1				*e*S	Sn	15 06 45.5	-0.6
RBDL	**Robledal**	**4.17**	**324**	*e*P	x	15 06 01.8	
ACR	**Cerro Adams**	**4.43**	**118**	⇑*e*P	Pn	15 06 07.2	+2.1
ACR				*e*S	Sn	15 06 56.3	+0.9
CHI2		**14.59**	**114**	⇑*e*P	x	15 05 29.9	

CASC 02 15:35:00.4±1.4**, 12.22N**×**87.05W, h81km**±8km**, MD3.5, ML2.9, 3C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIRN	**Miramar**	**0.40**	**56**	⇑*e*P	Pn	15 35 13.4	-0.1
TEL3	**Telica 3**	**0.41**	**30**	⇓*e*P	Pn	15 35 13.6	+0.1
TELN	**Telica**	**0.44**	**29**	⇑*e*P	Pn	15 35 14.3	+0.5
TELN				*e*S	Sn	15 35 25.5	+1.8
CNGN	**Cerro Negro**	**0.45**	**51**	*e*P	Pn	15 35 13.6	-0.2
CNGN				*e*S	Sn	15 35 24.6	+0.9
COPN	**Copaltepe**	**0.45**	**94**	⇓*e*P	Pn	15 35 14.1	+0.3
COPN				*e*S	Sn	15 35 22.7	-1.1
MOMN	**Momotombo**	**0.54**	**69**	⇓*e*P	Pn	15 35 14.7	+0.1
MOMN				*e*S	Sn	15 35 26.0	+0.9
CSAN		**0.62**	**93**	*i* P	Pn	15 35 15.7	+0.4
XAVN	**Gruta Xavier**	**0.71**	**95**	⇑*e*P	Pn	15 35 16.4	+0.1
TISN	**Laguna Tiscapa**	**0.77**	**95**	⇓*e*P	Pn	15 35 16.9	0.0
CRUN	**El Crucero**	**0.77**	**107**	*e*P	Pn	15 35 17.5	+0.6
MGAN	**Managua**	**0.79**	**95**	*e*P	Pn	15 35 17.1	0.0
MGAN				*e*S	Sn	15 35 30.7	+1.2
MGAN				AML	AML	15 35 31.2	
	comp=Z,822nm,0.3s						
MGAN				AML	AML	15 35 31.7	
	comp=N,62nm,0.5s						
TICN	**Ticuantepe**	**0.82**	**103**	⇓*e*P	Pn	15 35 17.6	+0.1
HUEN		**0.87**	**82**	*e*P	Pn	15 35 17.6	-0.4
HUEN				*e*S	Sn	15 35 31.6	+0.5
CNCH	**Conchagua**	**1.30**	**324**	⇓*e*P	x	15 35 23.2	
CNCH				*e*S	x	15 35 41.0	
TGUH	**Tegucigalpa,Un**	**1.84**	**353**	*e*P	Pn	15 35 30.2	-0.1
LFRS	**El Faro**	**2.41**	**306**	*e*P	x	15 35 38.9	
LFRS				*e*S	x	15 36 07.0	
CHI2		**15.16**	**119**	⇓*e*P	x	15 35 13.8	

*NIED **02** 15:41:00, 37.90N×142.70E, h29km, Mw3.9 Best double couple: $M_0$8.36000×10^{14} NP1:ϕ_s20.00000°, δ70.00000°, λ100.00000°. NP2:ϕ_s173.00000°, δ23.00000°, λ64.00000°.*
*ISCJB **02** 15:41:48.9±0.8, 37.85N±0.04×142.68E±0.08, h33km, mb3.7/6, Error ellipse: s-maj=9.3km s-min=5.3km az=15.9*
*JMA **02** 15:41:48.0±0.2, 37.87N×142.66E, h31km±3km, M4.3*
*IDC **02** 15:41:50.6±4.1, 37.81N×142.82E, h38km±29km, mb3.7/6, mb1 3.7/10, mb1mx3.6/23, mbtmp3.7/10, ML3.5/4, MS3.1/4, Ms1 3.1/4, ms1mx2.9/32, Error ellipse: s-maj=49.1km s-min=24.2km az=113.0*
*NEIC **02** 15:41:51.7±2.7, 37.90N×142.64E, h38km±9km, Error ellipse: s-maj=48.8km s-min=9.3km az=127.0*
ISC 02 15:41:51.2±0.8**, 37.89N**±0.04×**142.56E**±0.08**, h35km, n27, σ0.83**/32**, mb3.7**/6**, 6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.11**	**301**	⇓P	**Pn**	**15 42 09.0**	**-1.2**
JIO				*e*S	**Sn**	**15 42 23.9**	**-0.4**
OFUJ	**Ofunato**	**1.38**	**330**	⇓P	**Pn**	**15 42 12.5**	**-1.4**
OFUJ				*e*S	**Sn**	**15 42 30.5**	**-0.4**
JMM	**Marumori**	**1.40**	**269**	⇓P	**Pn**	**15 42 13.1**	**-1.1**
JFK	**Kawauchi**	**1.44**	**249**	⇓P	**Pn**	**15 42 13.5**	**-1.3**
JMK	**Ichinoseki**	**1.49**	**316**	⇓P	**Pn**	**15 42 14.5**	**-1.0**
JOU	**Okura**	**1.57**	**288**	P	**Pn**	**15 42 16.2**	**-0.4**
JFT	**Otama**	**1.80**	**259**	⇓P	**Pn**	**15 42 19.7**	**-0.1**
JOM	**Ohasama**	**1.86**	**328**	P	**Pn**	**15 42 19.9**	**-0.7**
JOM				*e*S	**Sn**	**15 42 44.4**	**+1.5**
JYS	**Shirataka**	**2.00**	**280**	P	**Pn**	**15 42 22.8**	**+0.3**
JYK	**Kaneyama**	**2.01**	**301**	P	**Pn**	**15 42 22.6**	**0.0**
JANG	**Nango**	**2.61**	**342**	P	**Pn**	**15 42 30.4**	**-0.5**
MJAR	**Matsushiro Arr**	**3.73**	**250**	Pn	**Pn**	**15 42 47.5**	**+1.3**
	3.6nm,0.3s,baz=80,slow=16,SNR=23						
MJAR				Sn	**Sn**	**15 43 34.1**	**+5.2**
	2.7nm,0.3s,baz=163,slow=21,SNR=4.7						
MAJO	**Matsushiro**	**3.73**	**250**	*e*Pn	**Pn**	**15 42 47.9**	**+1.6**
MAT	**Matsushiro**	**3.73**	**250**	P	**Pn**	**15 42 47.2**	**+0.9**
MAT				*e*S	**Sn**	**15 43 29.5**	**+0.6**
ERM	**Erimo**	**4.14**	**6**	*e*Pn	**Pn**	**15 42 52.0**	**0.0**
JHJ	**Hachijo jima 2**	**5.27**	**206**	Pn	**Pn**	**15 43 07.1**	**-0.4**
	26nm,0.3s,baz=77,slow=22,SNR=12						
JHJ				Sn	**Sn**	**15 44 05.8**	**-1.2**
	32nm,0.3s,baz=75,slow=21,SNR=7.9						
ASAJ	**Asahikawa**	**6.22**	**0**	Pn	**Pn**	**15 43 20.4**	**-0.1**
	0.8nm,0.3s,baz=229,slow=33,SNR=8.6						
ASAJ				LR	LR	15 46 15.6	
	comp=Z,124nm,20.3s,baz=184,slow=42						
KSRS	**Korea Array**	**11.61**	**272**	Pn	**Pn**	**15 44 38.3**	**+3.9**
	0.1nm,0.3s,baz=173,slow=32,SNR=3.4						
KSRS				LR	LR	15 48 58.1	
	comp=Z,103nm,18.0s,baz=50,slow=36						
PETK	**Petropavlovsk-**	**18.49**	**30**	LR	LR	15 52 32.1	
	comp=Z,25nm,19.0s,baz=276,slow=35						
YAK	**Yakutsk**	**25.45**	**346**	*e*P	**P**	**15 47 16.0**	**+0.5**
SONM	**Songino Array**	**28.08**	**302**	P	**P**	**15 47 39.9**	**+0.6**
	0.9nm,0.5s,mb3.6,baz=118,slow=7.7,SNR=7.9						
SONM				LR	LR	15 57 53.4	
	comp=Z,76nm,19.2s,baz=297,slow=34						
ZAA0	**Zalesovo Array**	**42.02**	**312**	*e*P	**P**	**15 49 39.4**	**+0.5**
ZALV	**Zalesovo Beam**	**42.02**	**312**	P	**P**	**15 49 39.5**	**+0.6**
	1.2nm,0.5s,mb3.8,baz=92,slow=7.1,SNR=7.2						
CMAR	**Chiang Mai Arr**	**42.60**	**255**	P	**P**	**15 49 44.2**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=56,slow=6.1,SNR=5.0						
MKAR	**Makanchi Array**	**44.44**	**302**	P	**P**	**15 49 59.0**	**+0.5**
	1.1nm,0.6s,mb3.8,baz=87,slow=9.5,SNR=11						
NOA	**NORSAR Array B**	**73.75**	**338**	P	**P**	**15 53 21.8**	**+0.5**
	0.5nm,0.6s,mb3.6,baz=26,slow=3.0,SNR=3.3						
AKASG	**Malin Array Be**	**74.17**	**323**	P	**P**	**15 53 24.5**	**+0.5**
	0.7nm,0.3s,mb4.0,baz=45,slow=6.3,SNR=6.8						

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*IDC **02** 15:45:44.7±2.4, 493S×15271E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, MS3.3/1, Ms1 3.5/1, ms1mx2.7/25, Error ellipse: s-maj=79.2km s-min=35.1km az=104.0*

*NEIC **02** 15:46:00.5±3.9, 5.14S×15230E, h118km±25km, mb4.5/2, Error ellipse: s-maj=55.1km s-min=18.1km az=100.0*

ISC 02 15:46:04.7±5.1**, 51S**±02×**1517E**±05**, h130**km±34km**, n12, σ0s84**/9**, mb3.9**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.27**	**226**	*e*P	**Pn**	**15 47 35.5**	**+0.5**
	26nm,0.6s						
PMG				*e*Sn	**Sn**	**15 48 44.8**	**-0.6**
KAKA	**Kakadu**	**20.51**	**247**	*e*P	x	15 50 17.1	
	6.2nm,0.4s						
WRAB	**Tennant Creek**	**22.48**	**227**	*e*P	**P**	**15 50 53.3**	**-0.3**
	5.8nm,0.4s,mb4.4						
WB2	**Warramunga Arr**	**22.48**	**227**	*e*P	**P**	**15 50 53.4**	**-0.2**
ASAR	**Alice Springs**	**25.26**	**221**	P	**P**	**15 51 19.6**	**+0.8**
	2.2nm,0.7s,mb3.8,baz=53,slow=9.4,SNR=34						
CMAR	**Chiang Mai Arr**	**57.02**	**296**	P	**P**	**15 55 39.0**	**+1.6**
	1.2nm,0.8s,mb3.8,baz=103,slow=5.0,SNR=6.8						
CMAR				LR	LR	16 18 50.7	
	comp=Z,23nm,18.7s,baz=0.0,slow=34						
MKAR	**Makanchi Array**	**79.82**	**319**	P	**P**	**15 57 58.2**	**-0.4**
	0.9nm,0.7s,baz=93,slow=7.8,SNR=8.3						
MKAR	**Makanchi Array**	**79.82**	**319**	P	**P**	**15 57 58.2**	**-0.4**
ZALV	**Zalesovo Beam**	**80.77**	**327**	P	**P**	**15 58 02.3**	**-1.3**
	0.8nm,0.4s,mb3.7,baz=117,slow=6.4,SNR=4.5						
GERES	**GERESS Array B**	**123.71**	**328**	PKP	PKPdf	16 04 45.8	-1.3
	0.4nm,0.5s,baz=77,slow=1.8,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**149.37**	**287**	*e*PKPbc	PKPbc	16 05 38.2	-1.2
TORD	**Torodi Ar. Bea**	**149.37**	**287**	PKPbc	PKPbc	16 05 38.5	-0.9
	2.1nm,0.4s,baz=101,slow=2.4,SNR=50						
TORD				PKPab	PKPab	16 05 43.2	-1.3
	0.5nm,0.4s,baz=60,slow=2.5,SNR=4.6						

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*IDC **02** 15:49:23.3±1.1, 1259N×9194E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/21, mbtmp4.0/11, ML3.7/1, MS3.6/2, Ms1 3.6/2, ms1mx3.1/25, Error ellipse: s-maj=27.4km s-min=21.4km az=32.0*

*ISCJB **02** 15:49:26.4±0.7, 1269N±008×9194E±006, h33km, mb4.1/13, MS3.6/2, Error ellipse: s-maj=11.3km s-min=9.1km az=8.8*

*NEIC **02** 15:49:29.1±0.8, 1283N×9208E, h35km, mb4.2/7, Error ellipse: s-maj=15.5km s-min=10.2km az=47.0*

ISC 02 15:49:28.7±0.7**, 1269N**±008×**9188E**±006**, h35**km**, n34, σ1s03**/34**, mb4.1**/13**, MS3.6**/2**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.90**	**49**	Pn	**Pn**	**15 51 33.8**	**-1.1**
	0.2nm,0.3s,baz=241,slow=15,SNR=9.9						
CMAR				Sn	**Sn**	**15 53 15.2**	**+1.2**
	0.1nm,0.3s,baz=239,slow=28,SNR=6.3						
CHTO	**Chiang Mai**	**9.13**	**47**	*e*P	**Pn**	**15 51 33.2**	**-4.8**
VIS	**Vishakhapatnam**	**9.64**	**302**	*e*P	**Pn**	**15 51 44.3**	**-0.8**
VIS				*e*S	**Sn**	**15 53 23.9**	**-8.4**
MDRS	**Chennai**	**11.35**	**273**	*e*P	**Pn**	**15 51 58.5**	**-10**
MDRS				*e*S	Sx	15 53 53.8	
MDRS				AML	AML	15 53 55.2	
	comp=N,304nm,0.1s						
MDRS				AML	AML	15 53 55.8	
	comp=E,223nm,0.2s						
BOK	**Bokaro**	**12.42**	**334**	*e*S	Sx	15 54 21.8	
BOK				AML	AML	15 54 52.1	
	comp=N,11nm,0.2s						
BOK				AML	AML	15 55 05.0	
	comp=E,8.9nm,1.1s						
SHL	**Shillong**	**12.81**	**0**	*i* P	**Pn**	**15 52 23.5**	**-4.9**
ODAN	**Odare**	**14.71**	**344**	*e*P	**Pn**	**15 52 52.4**	**-1.9**
	comp=E,15nm,0.6s						
RAMN	**Ramite**	**15.02**	**342**	*e*P	**Pn**	**15 52 57.2**	**-1.3**
	comp=E,8.3nm,0.4s						
TAPN	**Taplejung**	**15.10**	**346**	*e*P	**Pn**	**15 52 57.8**	**-1.6**
	comp=E,24nm,1.0s						
JIRN	**Jiri**	**15.81**	**341**	*e*P	**Pn**	**15 53 08.5**	**-0.3**
	comp=E,7.1nm,0.4s						
DMN	**Daman**	**16.14**	**338**	*e*P	**Pn**	**15 53 13.2**	**+0.3**
GUN	**Gumba**	**16.15**	**341**	*e*P	**Pn**	**15 53 11.4**	**-1.6**
KOLN	**Koldanda**	**16.88**	**334**	*e*P	**Pn**	**15 53 23.0**	**+0.7**
	comp=E,22nm,0.8s						
LSA	**Lhasa**	**16.94**	**358**	*e*P	**Pn**	**15 53 23.0**	**0.0**
	comp=E,14nm,1.1s						
DANN	**Dangsing**	**17.32**	**335**	*e*P	**Pn**	**15 53 28.5**	**+0.7**
	comp=E,29nm,0.7s						
MKAR	**Makanchi Array**	**34.94**	**348**	P	**P**	**15 56 18.7**	**+1.5**
	comp=E,2.8nm,0.8s,mb4.2,baz=163,slow=8.9,SNR=24						
MKAR	**Makanchi Array**	**34.94**	**348**	P	**P**	**15 56 18.7**	**+1.5**
SONM	**Songino Array**	**37.08**	**16**	P	**P**	**15 56 37.0**	**+1.5**
	comp=E,1.8nm,0.7s,mb4.0,baz=216,slow=10.0,SNR=16						
KURK	**Kurchatov**	**39.43**	**347**	*e*P	**P**	**15 56 55.5**	**+0.2**
	comp=E,4.4nm,1.1s,mb4.1						
KSRS	**Korea Array**	**40.53**	**46**	P	**P**	**15 57 02.9**	**-1.7**
	comp=E,1.0nm,0.9s,mb3.5,baz=249,slow=10,SNR=3.1						
KSRS				LR	LR	16 16 04.6	
	comp=E,25nm,19.8s,MS3.1,baz=95,slow=40						
ZAA0	**Zalesovo Array**	**41.53**	**354**	*e*P	**P**	**15 57 13.4**	**+0.8**
ZALV	**Zalesovo Beam**	**41.53**	**354**	P	**P**	**15 57 13.1**	**+0.5**
	comp=E,3.1nm,0.8s,mb4.0,baz=175,slow=8.3,SNR=14						
ZALV	**Zalesovo Beam**	**41.53**	**354**	P	**P**	**15 57 13.1**	**+0.5**
AKTK	**Aktyubinsk**	**46.68**	**331**	P	**P**	**15 57 54.0**	**+0.2**
AKTO	**Aktyubinsk**	**46.68**	**331**	P	**P**	**15 57 54.0**	**+0.2**
	comp=E,1.9nm,0.6s,mb4.2,baz=101,slow=7.1,SNR=7.6						
WRAB	**Tennant Creek**	**52.90**	**127**	*e*P	**P**	**15 58 40.5**	**-1.1**
	comp=E,1.5nm,0.5s,mb4.2						
ASAR	**Alice Springs**	**54.72**	**131**	P	**P**	**15 58 54.3**	**-0.6**
	comp=E,1.3nm,0.4s,mb4.3,baz=311,slow=7.2,SNR=27						
BRTR	**Keskin Array B**	**57.65**	**309**	P	**P**	**15 59 16.2**	**+0.6**
	comp=E,1.2nm,0.9s,mb3.9,baz=99,slow=7.8,SNR=4.6						
AKASG	**Malin Array Be**	**63.03**	**321**	P	**P**	**15 59 52.3**	**+0.1**
	comp=E,1.7nm,0.7s,mb4.3,baz=80,slow=6.0,SNR=5.4						
JOF	**Joensuu**	**65.57**	**334**	*e*p	**P**	**16 00 09.9**	**+1.3**
	comp=E,2.1nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**70.01**	**340**	LR	LR	16 32 59.8	
	comp=E,123nm,20.3s,MS4.2,baz=207,slow=37						
GERES	**GERESS Array B**	**72.78**	**317**	P	**P**	**16 00 55.0**	**+1.4**
	comp=E,1.5nm,1.0s,mb3.9,baz=131,slow=4.1,SNR=5.6						
NB2	**NORSAR Subarra**	**74.47**	**330**	P	**P**	**16 01 03.6**	**+0.4**
	comp=Z,3.9nm,1.0s,mb4.3,baz=92,slow=5.9						
NOA	**NORSAR Array B**	**74.47**	**330**	P	**P**	**16 01 03.8**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.1,baz=91,slow=5.8,SNR=4.4						

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*BJI **02** 15:57:40.2, 2125S×17837W, h623km, mB4.9, mb4.7*

*ISCJB **02** 15:57:41.1±0.6, 2123S±005×17914W±007, h604km±9km, mb4.6/43, Error ellipse: s-maj=9.8km s-min=6.7km az=19.9*

*NEIC **02** 15:57:41.8±0.8, 2121S×17906W, h602km±10km, mb4.8/20, Error ellipse: s-maj=10.0km s-min=8.1km az=103.0*

*DJA **02** 15:57:44, 21.13S×17920W, h614km, Mw5.2/5*

*IDC **02** 15:57:44.3±1.3, 21.18S×17927W, h621km±14km, mb4.0/17, mb1 4.1/17, mb1mx4.0/19, mbtmp4.0/17, Error ellipse: s-maj=10.6km s-min=10.3km az=42.0*

*MOS **02** 15:57:44.1±2.9, 2108S×17947W, h596km, mb5.0/10, Error ellipse: s-maj=14.1km s-min=11.3km az=120.0*

ISC 02 15:57:41.4±0.6**, 2120S**±005×**17904W**±007**, h594**km±8km**, h603**km±4.0km**:pP-P, n189, σ1s01**/94**, mb4.6**/43**, 30C-24D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.09**	**173**	P	**P**	**15 59 42.7**	**+1.5**
RAO				S	**S**	**16 01 19.2**	**-0.2**
	26nm,0.3s,baz=104,slow=23,SNR=7.7						
RAO	**Raoul Island**	**8.09**	**173**	*e*P	**P**	**15 59 42.6**	**+1.5**
AFI	**Afiamalu**	**10.02**	**45**	P	**P**	**16 00 00.5**	**+0.2**
AFI				S	**S**	**16 01 53.7**	**-0.7**
	8.3nm,0.3s,baz=173,slow=20,SNR=7.8						
URZ	**Urewera**	**17.33**	**190**	P	**P**	**16 01 09.9**	**-1.0**
	7.0nm,0.3s,baz=325,slow=1.5,SNR=23						
URZ				S	**S**	**16 03 55.7**	**-5.6**
	1.1nm,0.3s,baz=13,slow=23,SNR=9.0						
MWZ	**Matawai**	**17.34**	**189**	P	**P**	**16 01 09.6**	**-1.4**
SNZO	**South Karori**	**20.74**	**193**	*e*P	**P**	**16 01 41.1**	**-0.7**
	26nm,0.5s						
QRZ	**Quartz Range**	**20.84**	**198**	P	**P**	**16 01 43.4**	**+0.7**
THZ	**Tophouse**	**21.60**	**197**	P	**P**	**16 01 48.5**	**-1.0**
DSZ	**Denniston Nort**	**21.90**	**199**	P	**P**	**16 01 52.2**	**0.0**
KHZ	**Kahutara**	**22.06**	**195**	P	**P**	**16 01 52.6**	**-1.0**
LTZ	**Lake Taylor**	**22.72**	**197**	P	**P**	**16 01 58.1**	**-1.4**
HNR	**Honiara**	**23.36**	**297**	P	**P**	**16 02 04.5**	**-1.0**
	66nm,0.6s,mb5.4,baz=196,slow=3.4,SNR=6.1						
HNR				S	**S**	**16 05 33.4**	**-4.4**
	34nm,0.4s,baz=236,slow=12,SNR=4.8						
HNR	**Honiara**	**23.36**	**297**	*e*P	**P**	**16 02 06.3**	**+0.7**
HNR				pmax	pmax		
	comp=Z,37nm,0.5s,mb5.3						
HNR	**Honiara**	**23.36**	**297**	*e*P	**P**	**16 02 06.3**	**+0.8**
	comp=Z,37nm,0.5s,mb5.3						
RPZ	**Rata Peaks**	**23.93**	**198**	P	**P**	**16 02 09.9**	**-0.2**
	comp=Z,7.5nm,0.5s,mb4.6,baz=63,slow=0.9,SNR=12						
FOZ	**Fox Glacier**	**24.20**	**200**	P	**P**	**16 02 11.2**	**-1.4**
JCZ	**Jackson Bay**	**24.96**	**201**	P	**P**	**16 02 19.3**	**0.0**
EIDS	**Eidsvold**	**27.73**	**256**	*e*P	**P**	**16 02 44.5**	**+0.7**
	comp=Z,9.7nm,0.5s,mb4.7						
ARMA	**Armidale**	**27.89**	**245**	⇓*i*P	**P**	**16 02 46.9**	**+1.7**
CTA	**Charters Tower**	**32.46**	**266**	⇓*i*P	**P**	**16 03 25.1**	**+0.6**
	comp=Z,27nm,0.4s,mb5.2						
CTA	**Charters Tower**	**32.46**	**266**	P	**P**	**16 03 25.2**	**+0.8**
	comp=Z,35nm,0.4s,mb5.3,baz=97,slow=11,SNR=59						
CTA				ScP	ScP	16 08 41.4	-0.2
	comp=Z,4.3nm,0.7s,baz=93,slow=3.5,SNR=4.8						
CTA	**Charters Tower**	**32.46**	**266**	⇓*i*P	**P**	**16 03 25.1**	**+0.6**
CTA				pmax	pmax		
	comp=Z,27nm,0.4s						
PMG	**Port Moresby**	**34.56**	**285**	*e*P	**P**	**16 03 42.6**	**+0.4**
PMG				pmax	pmax		
	comp=Z,77nm,0.8s						
PMG	**Port Moresby**	**34.56**	**285**	*e*P	**P**	**16 03 42.6**	**+0.4**
	comp=Z,77nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**36.61**	**245**	⇓*i*P	**P**	**16 03 59.7**	**+0.9**
	comp=Z,3.9nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**36.61**	**245**	P	**P**	**16 03 59.8**	**+1.0**
	comp=Z,5.7nm,0.7s,mb4.2,baz=82,slow=10,SNR=16						
STKA				S	**S**	**16 08 56.0**	**-4.6**
	comp=Z,2.9nm,0.6s,baz=84,slow=9.7,SNR=5.4						
COEN	**Coen**	**36.66**	**275**	*e*P	**P**	**16 04 00.0**	**+0.6**
	comp=Z,30nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**43.41**	**258**	P	**P**	**16 04 53.3**	**+0.2**
	comp=Z,27nm,0.6s,mb5.0,baz=92,slow=7.4,SNR=497						
ASAR				ScP	ScP	16 09 23.1	-0.4
	comp=Z,4.1nm,0.7s,baz=105,slow=4.3,SNR=14						
ASAR				S	**S**	**16 10 36.1**	**-3.3**
	comp=Z,6.2nm,0.8s,baz=95,slow=16,SNR=23						
WB2	**Warramunga Arr**	**43.53**	**263**	*e*P	**P**	**16 04 53.5**	**-0.6**
WRAB	**Tennant Creek**	**43.54**	**263**	*e*P	**P**	**16 04 53.5**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,42nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**43.54**	**263**	*e*P	**P**	**16 04 53.5**	**-0.6**
	comp=Z,42nm,1.0s,mb4.9						
KAKA	**Kakadu**	**47.02**	**272**	*e*P	x	16 05 03.4	
	comp=Z,29nm,0.4s						
FORT	**Forrest**	**48.13**	**247**	*e*P	**P**	**16 05 28.5**	**-0.2**
	comp=Z,18nm,0.6s,mb4.8						
GUMO	**Guam**	**49.51**	**311**	P	**P**	**16 05 39.2**	**+0.1**
	comp=Z,50nm,0.5s,mb5.2,baz=214,slow=19,SNR=3.0						
BATI	**Baumata**	**55.97**	**272**	P	**P**	**16 06 26.3**	**+1.3**
	comp=Z,50nm,0.6s,mb4.9,baz=158,slow=1.9,SNR=21						
KLBR	**Kellerberrin**	**56.88**	**245**	*e*P	**P**	**16 06 30.8**	**-0.2**
	comp=Z,14nm,0.8s,mb4.2						
SBA	**Scott Base**	**57.12**	**184**	*e*P	**P**	**16 06 34.6**	**+2.7**
SBA				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.5						
SBA	**Scott Base**	**57.12**	**184**	*e*P	**P**	**16 06 34.5**	**+2.7**
	comp=Z,27nm,0.9s,mb4.5						
VNDA	**Vanda**	**57.14**	**185**	P	**P**	**16 06 33.9**	**+1.9**
	comp=Z,5.6nm,0.5s,mb4.1,baz=355,slow=7.4,SNR=77						
VNDA	**Vanda**	**57.14**	**185**	*e*P	**P**	**16 06 33.7**	**+1.7**
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VNDA	**Vanda**	**57.14**	**185**	*e*P	**P**	**16 06 33.7**	**+1.7**
	comp=Z,8.8nm,0.8s,mb4.0						
MUN	**Mundaring**	**58.15**	**245**	*e*P	**P**	**16 06 39.8**	**+0.2**
QSPA	**South Pole Qui**	**68.88**	**180**	*e*P	**P**	**16 07 48.4**	**+1.4**
	comp=Z,44nm,0.8s,mb4.9						
MJAR	**Matsushiro Arr**	**70.20**	**324**	P	**P**	**16 07 55.4**	**-0.2**
	comp=Z,9.9nm,0.4s,mb4.6,baz=155,slow=5.5,SNR=53						
MAJO	**Matsushiro**	**70.20**	**324**	*e*P	**P**	**16 07 55.4**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.7						
MAJO	**Matsushiro**	**70.20**	**324**	*e*P	**P**	**16 07 55.4**	**-0.2**
	comp=Z,31nm,1.0s,mb4.7						
MAT	**Matsushiro**	**70.20**	**324**	P	**P**	**16 07 55.1**	**-0.4**
TWG	**Pinlang**	**72.94**	**303**	*e*P	**P**	**16 08 09.9**	**-1.8**
TPUB	**Ta-pu**	**73.54**	**304**	*e*P	**P**	**16 08 13.8**	**-1.4**
SSLB	**Suanglung**	**73.55**	**304**	*e*P	**P**	**16 08 13.8**	**-1.4**
YHNB	**Yeheng**	**73.70**	**305**	*e*P	**P**	**16 08 16.1**	**0.0**
	comp=Z,27nm,1.1s,mb4.7						
PEA0B	**Petropavlovsk-**	**76.70**	**346**	*e*P	**P**	**16 08 31.9**	**-0.1**
PETK	**Petropavlovsk-**	**76.70**	**346**	P	**P**	**16 08 31.9**	**-0.1**
	comp=Z,11nm,0.6s,mb4.5,baz=209,slow=3.8,SNR=64						
KSRS	**Korea Array**	**76.77**	**319**	P	**P**	**16 08 33.0**	**+0.2**
	comp=Z,3.3nm,0.7s,mb3.9,baz=129,slow=5.7,SNR=9.8						
NJ2	**Nanjing**	**79.58**	**310**	*e*P	**P**	**16 08 48.7**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.5						
MDJ	**Mudanjiang**	**80.53**	**326**	P	**P**	**16 08 53.2**	**+0.6**
MDJ				PP	PP	16 12 07.0	-0.6
MDJ				S	S	16 18 10.5	-0.8
MDJ				XS	sS	16 21 56.5	+2.4
MDJ				SS	SS	16 23 52.7	+11
MDJ				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,88nm,3.1s						
HABR	**Khabarovsk**	**80.57**	**331**	*e*P	**P**	**16 08 53.3**	**+0.6**
HABR				*e**PP	pP	16 10 55.7	-2.0
HABR				*e**SP	sP	16 11 56.9	-0.9
HABR				*e*		16 12 03.7	
HABR				*e*S	S	16 18 03.6	-7.9
HABR				*e*		16 18 19.6	
MAW	**Mawson**	**80.58**	**200**	P	**P**	**16 08 52.2**	**-0.3**
	comp=Z,6.2nm,0.8s,mb4.1,baz=162,slow=4.4,SNR=6.2						
NVAR	**Mina Array Bea**	**82.20**	**44**	P	**P**	**16 09 03.8**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=232,slow=5.3,SNR=2.9						
CN2	**Changchun**	**82.26**	**323**	⇓P	**P**	**16 09 01.4**	**0.0**
CN2				*e*S	S	16 18 28.9	+0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
BJI	**Beijing**	**85.70**	**316**	P	**P**	**16 09 18.9**	**+0.5**
BJI				S	S	16 18 58.9	-3.3
BJI				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
BJI				AMB	AMB		
	comp=Z,109nm,4.6s						
SYO	**Syowa Base**	**85.83**	**193**	⇓*e*P	**P**	**16 09 16.4**	**-2.2**
GYA	**Guiyang**	**86.15**	**300**	P	**P**	**16 09 21.6**	**+0.7**
GYA				AP	pP	16 11 31.1	+2.9
GYA				XP	sP	16 12 30.3	+2.6
GYA				PP	PP	16 12 55.9	+2.8
GYA				SKS		16 18 49.8	
GYA				S	S	16 19 06.5	-0.5
GYA				SS	SS	16 25 09.5	+4.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				AMB	AMB		
	comp=Z,70nm,6.2s						
SEY	**Seymchan**	**86.83**	**347**	⇑*e*P	**P**	**16 09 22.4**	**-0.8**
KTH	**Kantishna Hill**	**87.30**	**12**	*e*P	**P**	**16 09 24.1**	**-1.3**
	comp=Z,12nm,0.8s,mb4.7						
TRF	**Thorofare Moun**	**87.33**	**12**	*e*P	**P**	**16 09 24.9**	**-0.6**
	comp=Z,26nm,0.7s,mb5.1						
VNA3	**Neumayer Olymp**	**87.51**	**177**	*e*P	**P**	**16 09 25.9**	**-0.6**
VNA3				*e*		16 09 27.2	
VNA3				*e*		16 09 37.0	
VNA3				*e*	pP	16 11 37.2	+3.0
VNA3				*e*		16 11 41.1	
VNA3				*e*		16 11 44.4	
XAN	**Xi'an**	**87.78**	**308**	P	**P**	**16 09 28.9**	**+0.5**
XAN				AP	pP	16 11 36.9	+0.6
XAN				PP	PP	16 13 05.5	-0.3
XAN				S	S	16 19 22.6	+0.7
XAN				SS	SS	16 25 29.3	+1.4
XAN				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.6						
MCK	**McKinley**	**87.86**	**13**	*e*P	**P**	**16 09 27.3**	**-0.7**
MCK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
MCK	**McKinley**	**87.86**	**13**	*e*P	**P**	**16 09 27.3**	**-0.7**
	comp=Z,12nm,0.8s,mb4.7						
VNA2	**Neumayer--Watz**	**87.94**	**177**	*e*P	**P**	**16 09 28.3**	**-0.2**
	baz=188,slow=3.5						
VNA2				*e*		16 09 29.9	
VNA2				*e*		16 09 38.8	
VNA2				*e*	pP	16 11 39.6	+3.2
VNA2				*e*		16 11 43.7	
VNA2				*e*		16 11 47.5	
VNA1	**Neumayer--Stat**	**88.17**	**177**	*e*P	**P**	**16 09 29.6**	**0.0**
VNA1				*e*		16 09 31.0	
TXAR	**Lajitas Array**	**88.25**	**58**	P	**P**	**16 09 31.9**	**+1.3**
	comp=Z,2.2nm,0.8s,mb3.9,baz=219,slow=6.0,SNR=23						
TXAR	**Lajitas Array**	**88.25**	**58**	P	**P**	**16 09 31.9**	**+1.3**
KMI	**Kunming**	**88.80**	**297**	P	**P**	**16 09 34.8**	**+1.5**
KMI				AP	pP	16 11 42.9	+1.4
KMI				XP	sP	16 12 42.7	+1.9
KMI				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.4						
COLA	**College**	**89.09**	**13**	*i* P	**P**	**16 09 32.9**	**-0.8**
COLA	**College**	**89.09**	**13**	*e*P	**P**	**16 09 32.7**	**-1.0**
	comp=Z,13nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**89.14**	**315**	*e*P	**P**	**16 09 34.5**	**0.0**
HHC				AP	pP	16 11 45.5	+2.6
HHC				XP	sP	16 12 43.8	+1.7
HHC				PP	PP	16 13 18.3	+1.9
HHC				SKS		16 19 06.8	
HHC				*e*S	S	16 19 31.7	-2.4
HHC				SS	SS	16 25 48.7	+1.5
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,121nm,6.6s						
CMAR	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**16 09 37.6**	**+1.2**
	comp=Z,7.9nm,0.9s,mb4.5,baz=131,slow=3.2,SNR=59						
PLCA	**Paso Flores**	**89.50**	**134**	P	**P**	**16 09 37.9**	**+1.6**
	comp=Z,5.4nm,0.6s,mb4.5,baz=214,slow=5.3,SNR=21						
PLCA	**Paso Flores**	**89.50**	**134**	P	**P**	**16 09 37.9**	**+1.6**
CHTO	**Chiang Mai**	**89.57**	**290**	*e*P	**P**	**16 09 37.5**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
CHTO	**Chiang Mai**	**89.57**	**290**	*e*P	**P**	**16 09 37.5**	**+0.5**
	comp=Z,8.2nm,0.6s,mb4.7						
BILL	**Bilibino**	**89.63**	**355**	⇑*e*P	**P**	**16 09 36.2**	**+0.1**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**90.13**	**44**	P	**P**	**16 09 41.3**	**+2.2**
	comp=Z,0.6nm,0.8s,mb3.5,baz=192,slow=4.4,SNR=3.1						
YAK	**Yakutsk**	**92.39**	**338**	*e*P	**P**	**16 09 46.8**	**-2.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
LZH	**Lanzhou**	**92.42**	**308**	P	**P**	**16 09 50.5**	**+0.7**
LZH				AP	pP	16 12 01.5	+2.9
LZH				XP	sP	16 12 59.5	+1.9
LZH				PP	PP	16 13 45.5	+3.6
LZH				SKS		16 19 26.5	
LZH				*e*S	S	16 20 01.5	-1.8
LZH				SS	SS	16 26 36.5	+2.6
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,69nm,4.7s						
ULN	**Ulaanbaatar**	**95.25**	**319**	⇑*e*P	**P**	**16 10 01.2**	**-1.1**
SONM	**Songino Array**	**95.64**	**319**	P	**P**	**16 10 02.5**	**-1.6**
	comp=Z,0.4nm,0.4s,mb4.0,baz=143,slow=4.3,SNR=4.0						
SONM				PP	PP	16 14 04.7	-1.5
	comp=Z,1.0nm,1.0s,baz=120,slow=5.8,SNR=3.8						
MKAR	**Makanchi Array**	**110.97**	**313**	PKiKP	PKiKP	16 15 06.1	-1.8
	comp=Z,0.3nm,0.4s,baz=185,slow=0.9,SNR=10						
AAK	**Ala-Archa**	**115.96**	**308**	⇑*i*PKIKP	PKPdf	16 15 14.0	-3.6
KEV	**Kevo**	**128.96**	**349**	*e*pkp	PKPdf	16 15 38.9	-2.8
ARCES	**ARCESS Array B**	**129.42**	**349**	PKhKP		16 15 30.7	
	comp=Z,4.4nm,1.0s,baz=42,slow=1.2,SNR=5.3						
ARCES				PKP	PKPdf	16 15 41.0	-1.5
	comp=Z,2.4nm,0.6s,baz=101,slow=1.3,SNR=17						
ARCES				SKPbc	SKPbc	16 18 08.2	-1.4
	comp=Z,19nm,0.9s,baz=47,slow=5.7,SNR=14						
JOF	**Joensuu**	**133.48**	**341**	*e*pkp	PKPdf	16 15 48.8	-1.6
	comp=Z,2.5nm,0.4s						
KAF	**Kangasniemi**	**135.54**	**343**	*e*pkp	PKPdf	16 15 43.7	-11
	comp=Z,3.4nm,0.8s						
NB2	**NORSAR Subarra**	**139.54**	**352**	PKP		16 15 53.6	
	comp=Z,0.7nm,0.5s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**139.54**	**352**	PKhKP		16 15 53.4	
	comp=Z,1.1nm,0.5s,baz=6.7,slow=3.7,SNR=9.1						
NOA				SKPbc	SKPbc	16 18 40.5	-1.4
	comp=Z,2.6nm,0.9s,baz=17,slow=4.3,SNR=4.8						
NOA	**NORSAR Array B**	**139.54**	**352**	PKP		16 15 53.4	
NOA				SKPbc	SKPbc	16 18 40.5	-1.4
SUW	**Suwalki**	**143.13**	**338**	*e*PKP	PKPdf	16 16 05.8	-2.4
SUW	**Suwalki**	**143.13**	**338**	*e*PKP	PKPdf	16 16 05.8	-2.5
AKASG	**Malin Array Be**	**143.14**	**330**	PKP	PKPdf	16 16 05.5	-2.9
	comp=Z,20nm,0.4s,baz=44,slow=4.2,SNR=103						
AKASG				SKPbc	SKPbc	16 18 49.4	-1.9
	comp=Z,4.2nm,0.9s,baz=52,slow=2.4,SNR=9.2						
AKASG	**Malin Array Be**	**143.14**	**330**	PKP	PKPdf	16 16 05.5	-2.9
AKASG				SKPbc	SKPbc	16 18 49.4	-1.9
KIEV	**Kiev**	**143.15**	**330**	*e*PKHKP	PKPdf	16 16 05.1	-3.3
LVV	**L'vov**	**146.09**	**333**	⇑*i*PKHKP	PKPbc	16 16 14.5	-1.1
LVV				*e*		16 22 29.7	
BR131	**Keskin Array S**	**146.57**	**311**	*e*PKPbc	PKPbc	16 16 16.6	-0.7
BRTR	**Keskin Array B**	**146.57**	**311**	PKPbc	PKPbc	16 16 16.8	-0.5
	comp=Z,4.6nm,0.6s,baz=133,slow=4.4,SNR=24						
BRTR				pPKPbc		16 18 40.3	
	comp=Z,1.7nm,1.1s,baz=66,slow=1.7,SNR=3.7						
KWP	**Kalwaria**	**146.79**	**334**	*e*PKP	PKPbc	16 16 17.2	-0.3
KWP	**Kalwaria**	**146.79**	**334**	⇓*i*P	PKPbc	16 16 17.4	-0.1
KWP	**Kalwaria**	**146.79**	**334**	*e*PKP	PKPbc	16 16 17.3	-0.2
TLCR		**146.89**	**323**	⇓*i*P	PKPbc	16 16 17.5	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLCR		146.89	323	⇓P	PKPbc	16 16 17.5	-0.4
ANTO	Ankara	147.10	312	⇑iP	PKPbc	16 16 18.6	-0.1
ANTO	Ankara	147.10	312	ePKPbc	PKPbc	16 16 18.3	-0.3
BUR08	Bucovina Ar. S	147.16	329	ePKPbc	PKPbc	16 16 18.7	+0.1
BURAR	Bucovina Array	147.17	329	⇓iP	PKPbc	16 16 19.1	+0.5
CFR	Carcaliu	147.27	323	⇓iP	PKPbc	16 16 16.9	-2.0
CFR	Carcaliu	147.27	323	⇓P	PKPbc	16 16 16.9	-2.0
OJC	Ojcow	147.44	337	ePKP	PKPbc	16 16 18.5	-0.7
KOLS	Kolonicke sedl	147.51	333	ePKP	PKPbc	16 16 19.8	+0.4
STHS	Stebnicka Huta	147.55	335	ePKP	PKPbc	16 16 19.5	0.0
STHS				e		16 16 24.7	
TIRR	Tirgusor	147.55	322	⇑iP	PKPbc	16 16 19.5	-0.2
TIRR	Tirgusor	147.55	322	⇑P	PKPbc	16 16 19.5	-0.2
VRI	Vrincioaia	147.60	325	⇑iP	PKPbc	16 16 19.4	-0.4
VRI	Vrincioaia	147.60	325	⇑P	PKPbc	16 16 19.4	-0.4
PLOR	Plostina	147.65	326	⇑iP	PKPbc	16 16 19.2	-0.7
HARR	Harsova	147.69	323	⇓iP	PKPbc	16 16 19.9	-0.1
HARR	Harsova	147.69	323	⇓P	PKPbc	16 16 19.9	-0.2
UZH	Uzhgorod	147.74	333	ePKHKP	PKPdf	16 16 14.0	-2.2
UZH				i	PKPbc	16 16 20.0	0.0
UZH				e		16 18 33.0	
CRVS	Cervenica-Dubn	147.87	334	ePKP	PKPbc	16 16 20.2	-0.1
CRVS				e		16 16 25.3	
NIE	Niedzica	147.91	336	ePKP	PKPbc	16 16 21.0	+0.6
TRPA	Tarpa	148.02	332	⇑iP	PKPbc	16 16 20.5	-0.2
KSP	Ksiaz	148.05	342	ePKP	PKPbc	16 16 21.1	+0.4
KSP				e		16 16 26.4	
KSP	Ksiaz	148.05	342	ePKP2	PKPab	16 16 25.6	-0.2
KSP	Ksiaz	148.05	342	ePKPbc	PKPbc	16 16 20.6	-0.1
KSP				ePKPab	PKPab	16 16 25.6	-0.2
MLR	Muntele Rosu	148.26	326	⇓iP	PKPbc	16 16 19.5	-1.9
MLR	Muntele Rosu	148.26	326	⇓P	PKPbc	16 16 19.5	-2.0
OKC	Ostrava-Krasne	148.34	339	⇑ePKP	PKPbc	16 16 21.3	-0.2
OKC				ePKPAB	PKPab	16 16 26.9	-0.1
UPC	Upice	148.43	342	⇑iPKP	PKPbc	16 16 21.7	0.0
UPC				ePKPAB	PKPab	16 16 27.6	+0.2
DPC	Dobruska-Polom	148.48	341	⇑iPKP	PKPbc	16 16 22.0	+0.2
DPC				ePKPAB	PKPab	16 16 28.2	+0.6
CLL	Collm	148.50	345	i PKHKP	PKPbc	16 16 21.6	-0.2
CLL				i	PKPab	16 16 27.1	-0.5
CLL	Collm	148.50	345	i PKPbc	PKPbc	16 16 21.6	-0.2
	comp=Z,16nm,1.0s						
CLL				i PKPab	PKPab	16 16 27.1	-0.5
	comp=Z,10.0nm,0.8s						
CLL				epPKPbc	pPKPbc	16 18 37.0	-0.8
BRG	Berggiesshubel	148.67	344	ePKP	PKPbc	16 16 22.0	-0.2
	comp=Z,31nm,1.5s						
BRG				e		16 16 28.0	
	comp=Z,6.8nm,0.7s						
VOIR		148.76	326	⇓iP	PKPbc	16 16 22.5	-0.2
VOIR		148.76	326	⇓P	PKPbc	16 16 22.5	-0.2
PVCC	Panska Ves	148.82	343	⇑iPKP	PKPbc	16 16 22.9	+0.3
DRGR		148.95	330	⇑iP	PKPbc	16 16 22.5	-0.6
DRGR		148.95	330	⇑P	PKPbc	16 16 22.5	-0.6
VYHS	Vyhne	149.22	336	ePKP	PKPbc	16 16 23.3	-0.4
VYHS				e		16 16 30.9	
PSZ	Piszkesteto	149.28	335	⇑iP	PKPbc	16 16 23.1	-0.7
PSZ	Piszkesteto	149.28	335	⇑P	PKPbc	16 16 23.1	-0.8
VRAC	Vranov	149.31	340	⇑iP	PKPab	16 16 31.3	+0.3
VRAC	Vranov	149.31	340	⇑P	PKPab	16 16 31.3	+0.3
KOLL	Kolacno	149.31	337	ePKP	PKPbc	16 16 24.1	+0.2
KOLL				e		16 16 30.7	
PRU	Pruhonice	149.32	343	⇑iPKP	PKPbc	16 16 23.7	-0.2
PRU				ePKPAB	PKPab	16 16 30.8	-0.2
NKC	Novy Kostel	149.63	345	⇑ePKP	PKPbc	16 16 24.4	-0.2
TREC	Trest	149.67	341	i PKHKP	PKPbc	16 16 24.0	-0.7
TREC	Trest	149.67	341	⇑iPKP	PKPbc	16 16 24.0	-0.7
SMOL	Smolenice	149.71	338	ePKP	PKPbc	16 16 25.2	+0.4
SMOL				e		16 16 33.2	
GZR	Gura Zlata	149.94	328	⇓iP	PKPbc	16 16 25.1	-0.4
GZR	Gura Zlata	149.94	328	⇓P	PKPbc	16 16 25.1	-0.4
ZST	Bratislava	150.10	338	ePKP	PKPbc	16 16 25.9	+0.2
ZST				e		16 16 33.4	
BZS	Buzias	150.33	330	⇑iP	PKPbc	16 16 26.1	-0.3
BZS	Buzias	150.33	330	⇑P	PKPbc	16 16 26.1	-0.3
KHC	Kasperske Hory	150.36	343	⇑iPKP	PKPbc	16 16 26.3	0.0
KHC				ePKPAB	PKPab	16 16 35.6	+0.2
GRA1	Grafenberg Arr	150.42	346	ePKPbc	PKPbc	16 16 26.0	-0.4
GRA1				ePKPab	PKPab	16 16 34.1	-1.5
GRF	Grafenberg Arr	150.42	346	ePKPbc	PKPbc	16 16 26.0	-0.4
GRF				ePKPab	PKPab	16 16 34.1	-1.5
GERES	GERESS Array B	150.59	343	PKPbc	PKPbc	16 16 26.5	-0.4
	comp=Z,4.7nm,0.7s,baz=28,slow=2.5,SNR=29						
GERES				PKPab	PKPab	16 16 36.5	+0.1
	comp=Z,1.4nm,0.6s,baz=44,slow=4.1,SNR=6.3						
GERES				pPKPbc	pPKPbc	16 18 48.6	+5.3
	comp=Z,0.9nm,0.8s,baz=0.0,slow=4.1,SNR=2.9						
GERES	GERESS Array B	150.59	343	PKIKP	PKPbc	16 16 26.5	-0.4
GERES						16 16 36.5	
CONA	Conrad Observa	150.75	339	⇓iPKPbc	PKPbc	16 16 27.0	-0.3
	comp=Z,7.0nm,0.6s						
CSNA	Conrad Observa	150.75	339	⇓iPKiKP	PKiKP	16 16 27.2	-0.5
	comp=Z,6.7nm,0.6s						
GIVF	Givet	150.99	355	ePKP1	PKPbc	16 16 27.1	-0.6
	comp=Z,21nm,0.7s						
BAIF	Baives	151.08	356	ePKP1	PKPbc	16 16 27.3	-0.6
PKSM	Moragy	151.17	334	⇓iP	PKPbc	16 16 27.6	-0.7
PKSM	Moragy	151.17	334	⇓P	PKPbc	16 16 27.6	-0.7
VTS	Vitosha	151.66	324	⇑iP	PKPdf	16 16 19.0	-3.6
VTS	Vitosha	151.66	324	⇑P	PKPdf	16 16 19.0	-3.6
CDF	Champ du Feu	152.38	351	ePKP1	PKPbc	16 16 30.1	-0.8
	comp=Z,15nm,0.8s						
FLN	La Foliniere	152.47	2	ePKP1	PKPbc	16 16 29.9	-1.2
MEZF	Maizieres J'vi	152.56	354	ePKP1	PKPbc	16 16 30.8	-0.5
LDF	La Druitiere	152.65	2	ePKP1	PKPbc	16 16 30.3	-1.2
HAU	Haudompre	152.90	352	ePKP1	PKPbc	16 16 30.9	-1.1
HINF	Hinteralfeld	153.02	351	ePKP1	PKPbc	16 16 31.1	-1.2
KEST	Kesra	163.76	335	PKPab	PKPab	16 17 34.0	+0.1
	comp=Z,2.8nm,0.8s,baz=282,slow=0.8,SNR=11						
LIC	Lamto	164.03	158	ePKP2	PKPab	16 17 35.8	+0.3
	comp=Z,50nm,1.5s						
KIC	Kosan Boka	164.25	159	ePKP2	PKPab	16 17 36.7	+0.3
	comp=Z,48nm,0.6s						
TIC	Toumodi	164.42	157	ePKP2	PKPab	16 17 37.5	+0.3
	comp=Z,28nm,0.2s						
DBIC	Dimbokro	164.50	158	PKP	PKPdf	16 16 37.7	-1.0
	comp=Z,6.9nm,1.1s,baz=290,slow=8.1,SNR=4.2						
DBIC				PKPab	PKPab	16 17 38.1	+0.6
	comp=Z,1.8nm,0.4s,baz=186,slow=6.9,SNR=8.2						
DBIC	Dimbokro	164.50	158	PKP	PKPdf	16 16 37.7	-1.0
DBIC				PKPab	PKPab	16 17 38.1	+0.6
TORD	Torodi Ar. Bea	171.97	185	PKP	PKPdf	16 16 42.1	-1.4
	comp=Z,1.1nm,0.8s,baz=338,slow=0.9,SNR=6.6						
TORD				PKPab	PKPab	16 18 08.2	-2.2
	comp=Z,2.2nm,0.7s,baz=172,slow=4.1,SNR=9.4						

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*NEIC **02** 16:03:22.8, 16.10N×100.46W, h16km, MD4.0(MEX), After MEX.*

MEX 02 16:03:22.8±0.7**, 1610N×10046W, h16**km±28km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.92	34	i P	Pb	16 03 37.7	-2.8
ACX				i S	Sb	16 03 48.3	-4.2
CAIG	El Cayaco	0.96	11	i P	Pb	16 03 37.1	-4.0
CAIG				i S	Sb	16 03 49.4	-4.2
MEIG	Mezcala	1.99	24	i P	Pn	16 03 52.7	-3.1
MEIG				i S	Sn	16 04 15.9	-4.4
PNIG	Pinotepa	2.26	82	i P	Pn	16 03 56.4	-3.1
PNIG				i S	Sn	16 04 21.1	-5.9
PLIG	Platanillo	2.46	22	i P	Pn	16 03 59.6	-2.7
PLIG				i S	Sn	16 04 27.5	-4.4
UTMO	Huajuapan	3.07	55	i P	Pn	16 04 08.3	-2.4
UTMO				i S	Sn	16 04 45.7	-1.4
MZVM		3.29	21	i P	Pn	16 04 10.6	-3.1
MZVM				i S	Sn	16 04 48.2	-4.3
PPM	Popocatepetl	3.43	30	i P	Pn	16 04 13.4	-2.2
PPM				i S	Sn	16 04 54.1	-1.9
VHO	Vista Hermosa	3.70	74	i P	Pn	16 04 17.8	-1.6
VHO				i S	Sn	16 04 59.6	-3.1
TPIG	Tehuac#an	3.75	52	eP	Pn	16 04 17.9	-2.2
TPIG				i S	Sn	16 05 00.7	-3.3
IIO	Organos	3.85	25	eP	Pn	16 04 18.8	-2.6
IIO				i S	Sn	16 05 02.5	-3.8
CMIG	Matias Romero	5.43	79	i P	Pn	16 04 40.6	-2.6
CMIG				i S	Sn	16 05 42.0	-3.5

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*IDC **02** 16:28:37.6±2.9, 0.31N×96.11E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=115.5km s-min=27.0km az=61.0*
*DJA **02** 16:28:40, 0.10N×97.42E, h20km, MLv3.6/3*

ISC 02 16:28:39.1±4.2**, 005N**±008×**9719E**±009**, h32**km±34km**, n7, σ0^{s}51**/9**, mb3.8**/2**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.31	17	P	Pn	16 29 00.4	-0.8
GSI				S	Sn	16 29 18.2	+0.7
TRSI	Tarutung	2.64	42	P	Pn	16 29 20.3	+0.7
TRSI				S	Sn	16 29 49.9	-0.6
PDSI	Padang	3.41	106	P	Pn	16 29 30.1	+0.1
PDSI				S	Sn	16 30 09.4	0.0
CMAR	Chiang Mai Arr	18.38	5	P	Pn	16 32 51.5	0.0
	0.1nm,0.3s,baz=199,slow=12,SNR=15						
ASAR	Alice Springs	42.72	126	P	pP	16 36 45.1	+2.0
	0.3nm,0.9s,baz=297,slow=8.9,SNR=4.0						
MKAR	Makanchi Array	48.35	346	P	P	16 37 17.3	-0.4
	0.4nm,0.7s,mb3.6,baz=160,slow=9.1,SNR=3.7						
ZALV	Zalesovo Beam	54.69	351	P	P	16 38 05.3	+0.4
	0.7nm,0.5s,mb4.0,baz=168,slow=7.4,SNR=3.1						

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*NEIC **02** 16:29:00.6, 15.24N×94.93W, h26km, MD4.1(MEX), After MEX.*

MEX 02 16:29:00.7±0.7**, 1524N×9493W, h26**km±15km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		1.71	74	i P	Pn	16 29 26.8	-2.0
PCIG				i S	Sn	16 29 45.8	-4.1
CMIG	Matias Romero	1.84	1	i P	Pn	16 29 28.2	-2.4
CMIG				i S	Sn	16 29 50.0	-3.1
TGIG		2.31	48	i P	Pn	16 29 35.0	-2.1
TGIG				i S	Sn	16 30 02.3	-2.5
OXX	Oaxaca	2.52	317	eP	Pn	16 29 38.7	-1.3
VHO	Vista Hermosa	2.52	317	i P	Pn	16 29 38.0	-2.0
VHO				i S	Sn	16 30 07.5	-2.3
THIG		2.59	97	eP	Pn	16 29 39.5	-1.5
THIG				i S	Sn	16 30 09.1	-2.6
SCX	San Cristobal	2.66	56	eP	Pn	16 29 39.5	-2.4
SCX				i S	Sn	16 30 11.2	-2.1
TUIG	Tuzandepetl	2.82	10	eP	Pn	16 29 42.0	-2.1
TUIG				i S	Sn	16 30 15.2	-2.1
PNIG	Pinotepa	3.29	291	eP	Pn	16 29 49.0	-1.6
PNIG				i S	Sn	16 30 22.7	-6.2
UTMO	Huajuapan	3.77	313	i P	Pn	16 29 58.0	+0.7
UTMO				i S	Sn	16 30 37.8	-3.0
TPIG	Tehuac#an	3.93	324	eP	Pn	16 30 00.9	+1.5
TPIG				i S	Sn	16 30 43.2	-1.4
PPM	Popocatepetl	5.19	318	eP	Pn	16 30 17.1	+0.3
PPM				i S	Sn	16 31 11.6	-4.3
CAIG	El Cayaco	5.44	290	eP	Pn	16 30 18.3	-1.8
CAIG				i S	Sn	16 31 19.0	-2.9
IIO	Organos	5.64	321	eP	Pn	16 30 24.7	+1.7
IIO				i S	Sn	16 31 30.4	+3.4
MZVM		5.69	314	eP	Pn	16 30 23.8	+0.3
MZVM				i S	Sn	16 31 25.6	-2.4
ZIIG	Zihuatanejo	6.70	291	eP	Pn	16 30 37.8	+0.3
ZIIG				i S	Sn	16 31 51.8	-1.3

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*ISCJB **02** 16:34:47.3±0.7, 34.19N±0.05×135.14E±0.05, h11km±6km, Error ellipse: s-maj=8.6km s-min=5.9km az=29.3*
*JMA **02** 16:34:47.5, 34.17N×135.12E, h7km±1km, M3.4*
JMA Felt II J1.
*IDC **02** 16:34:51.7±7.6, 34.37N×135.11E, h22km±37km, mb3.3/1, mb1 3.3/3, mb1mx3.1/22, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=103.4km s-min=27.3km az=168.0*

ISC 02 16:34:48.0±0.7**, 3419N**±004×**13515E**±004**, h5**km±6km**, n8, σ0^{s}54**/15**, 1C-2D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAJ2	Tsuna	0.32	316	P	Pg	16 34 54.0	-0.2
JAJ2				S	Sg	16 34 58.3	-0.1
JWY	Kouya	0.37	85	⇓P	Pg	16 34 54.9	-0.2
JWY				S	Sg	16 35 00.4	+0.5
JWM	Minabe	0.38	154	⇑P	Pg	16 34 55.1	-0.2
JWM				S	Sg	16 35 00.1	-0.1
JHE	Heguri	0.64	43	⇓P	Pg	16 35 00.4	+0.1
JHE				S	Sg	16 35 09.3	+0.6
MAT	Matsushiro	3.43	46	P	Pn	16 35 42.5	+0.4
MAT				eS	Sn	16 36 22.8	-0.3
MJAR	Matsushiro Arr	3.43	46	Pn	Pn	16 35 43.0	+0.9
	2.0nm,0.3s,baz=235,slow=14,SNR=21						
MJAR				Pg	Pg	16 35 52.6	-1.1
	3.7nm,0.3s,baz=228,slow=14,SNR=27						
MJAR				Sn	Sn	16 36 22.4	-0.8
	1.1nm,0.3s,baz=262,slow=29,SNR=2.8						
KSRS	Korea Array	6.72	301	Pn	Pn	16 36 28.1	+0.8
	0.5nm,0.3s,baz=118,slow=14,SNR=8.1						
SONM	Songino Array	25.45	311	P	P	16 40 16.6	-0.2
	0.4nm,0.6s,baz=125,slow=9.8,SNR=4.2						

IDC 02 16:39:23.0±11.0**, 235S×10212E, h0**km**, mb3.5**/3**, mb1 3.5**/3**, mb1mx3.2**/18**, mbtmp3.5**/3**, Error ellipse: s-maj=627.3km s-min=29.3km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	37.35	127	P	P	16 46 37.5	0.0
	0.2nm,0.6s,baz=304,slow=8.0,SNR=5.3						
MKAR	Makanchi Array	51.96	343	P	P	16 48 33.5	-0.2
	0.4nm,0.7s,baz=154,slow=9.1,SNR=4.5						
ZALV	Zalesovo Beam	57.92	348	P	P	16 49 16.9	+0.2
	0.6nm,0.4s,baz=190,slow=7.3,SNR=6.1						

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*BJI **02** 16:52:38.9, 45.30S×97.20E, h10km, mB5.3, mb4.9, Ms4.8, Msz4.6*
*ISCJB **02** 16:52:40.4±0.4, 45.28S±0.08×97.2E±0.2, h10km, mb4.4/16, MS4.0/8, Error ellipse: s-maj=15.5km s-min=10.8km az=13.2*
*IDC **02** 16:52:40.3±0.7, 45.31S×97.16E, h0km, mb4.4/10, mb1 4.5/10, mb1mx4.4/14, mbtmp4.3/10, MS3.9/8, Ms1 3.9/8, ms1mx3.7/19, Error ellipse: s-maj=30.1km s-min=18.6km az=94.0*
*NEIC **02** 16:52:41.9±0.3, 45.28S×97.17E, h10km, mb4.6/5, Error ellipse: s-maj=11.4km s-min=8.5km az=88.0*

ISC 02 16:52:42.2±0.4**, 4527S**±008×**972E**±01**, h10**km**, (h14**km±.3km**:pP-P), n34, σ0^{s}48**/25**, mb4.4**/16**, MS4.0**/8**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	19.78	58	LR	LR	17 02 26.3	
	comp=Z,225nm,19.5s,baz=40,slow=30						
MAW	Mawson	28.66	207	LR	LR	17 07 22.4	
	comp=Z,277nm,19.8s,MS3.9,baz=26,slow=31						
ASAR	Alice Springs	36.71	66	P	P	16 59 49.3	-0.1
	3.5nm,0.8s,mb4.2,baz=222,slow=7.0,SNR=25						
ASAR				PcP	PcP	17 02 10.9	-1.0
	1.6nm,0.9s,baz=208,slow=2.2,SNR=6.9						
STKA	Stephens Creek	36.74	84	eP	P	16 59 49.7	+0.1
	4.5nm,0.6s,mb4.5						
STKA	Stephens Creek	36.74	84	P	P	16 59 49.6	0.0
	6.4nm,0.7s,mb4.6,baz=270,slow=6.7,SNR=16						
STKA				PcP	PcP	17 02 11.0	-0.9
	3.0nm,0.8s,baz=257,slow=5.2,SNR=3.7						
STKA				LR	LR	17 11 32.0	
	comp=Z,68nm,21.2s,MS3.4,baz=207,slow=31						
WB2	Warramunga Arr	39.69	63	eP	P	17 00 14.4	-0.1
VNDA	Vanda	40.81	162	P	P	17 00 23.1	-0.1
	4.4nm,1.0s,mb4.0,baz=281,slow=8.3,SNR=17						
VNDA				LR	LR	17 15 39.2	
	comp=Z,208nm,19.0s,MS4.0,baz=289,slow=34						
BATI	Baumata	41.68	41	LR	LR	17 14 37.9	
	comp=Z,267nm,21.7s,MS4.1,baz=128,slow=32						
SBA	Scott Base	41.91	163	P	P	17 00 31.9	-0.2
	6.5nm,1.1s,mb4.2						
KAPI	Kappang	44.67	33	LR	LR	17 16 12.9	
	comp=Z,102nm,20.5s,MS3.7,baz=249,slow=32						
QSPA	South Pole Qui	44.87	180	P	P	17 00 56.2	+0.1
	8.1nm,1.0s,mb4.5,baz=299,slow=3.6,SNR=18						
QSPA				PcP	PcP	17 02 36.8	-0.6
	1.9nm,0.9s,baz=289,slow=4.0,SNR=2.5						
QSPA	South Pole Qui	44.87	180	P	P	17 00 56.2	+0.1
QSPA				PcP	PcP	17 02 36.8	-0.6
VNA2	Neumayer--Watz	52.39	204	e	P	17 01 54.2	+0.2
	baz=107,slow=7.1						
VNA2				e	pP	17 01 58.2	+1.0
VNA2				e		17 02 01.2	
VNA1	Neumayer--Stat	52.78	204	e	P	17 01 57.6	+0.7
VNA1				e	pP	17 02 01.4	+1.4
VNA1				e		17 02 04.4	
VNA3	Neumayer Olymp	52.86	203	e	P	17 01 57.5	+0.1
VNA3				e	pP	17 02 01.7	+1.1
VNA3				e		17 02 04.8	
LBTB	Lobatse	60.00	264	P	P	17 02 49.0	0.0
CMAR	Chiang Mai Arr	63.44	2	P	P	17 03 12.8	+0.8
	3.6nm,0.9s,mb4.5,baz=198,slow=5.8,SNR=26						
CMAR				LR	LR	17 25 19.6	
	comp=Z,157nm,20.8s,MS4.2,baz=118,slow=31						
LSZ	Lusaka	64.56	274	eP	P	17 03 19.5	-0.2
	9.4nm,1.0s,mb4.8						
LSA	Lhasa	74.82	355	eP	P	17 04 23.1	+0.7
	3.0nm,0.8s,mb4.3						
KBL	Kabul	83.44	337	eP	P	17 05 09.1	-0.4
	12nm,1.1s,mb4.8						
GTA	Gaotai	84.33	2	eP	P	17 05 14.2	+0.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.4						
GTA				LR	LR		
	comp=N,144nm,14.1s,MS4.6						
GTA				LR	LR		
	comp=E,134nm,15.3s,MS4.6						
GTA				LR	LR		
	comp=Z,224nm,15.9s,MS4.7						
KSRS	Korea Array	86.89	24	P	P	17 05 27.2	+0.5
	comp=Z,3.7nm,1.1s,mb4.5,baz=204,slow=2.7,SNR=4.6						
AAK	Ala-Archa	89.83	343	eP	P	17 05 40.7	+0.2
	comp=Z,6.9nm,1.1s,mb4.9						
MKAR	Makanchi Array	92.62	350	P	P	17 05 53.1	-0.2
	comp=Z,0.5nm,0.8s,mb4.0,baz=155,slow=3.7,SNR=4.7						
SONM	Songino Array	93.07	6	P	P	17 05 55.4	0.0
	comp=Z,0.8nm,0.8s,mb4.2,baz=211,slow=2.7,SNR=5.2						
PLCA	Paso Flores	93.68	189	P	P	17 05 58.2	-0.6
	comp=Z,2.8nm,0.9s,mb4.7,baz=192,slow=5.6,SNR=6.4						
PLCA	Paso Flores	93.68	189	P	P	17 05 58.2	-0.6
KURK	Kurchatov	96.95	348	eP	P	17 06 12.5	-0.6
ZALV	Zalesovo Beam	99.41	353	P	P	17 06 22.6	-1.5
	comp=Z,0.2nm,0.2s,mb4.2,baz=185,slow=6.9,SNR=2.3						
ZALV				LR	LR	17 52 41.6	
	comp=Z,54nm,18.8s,MS4.1,baz=84,slow=36						
NVAR	Mina Array Bea	152.85	92	PKPbc	PKPbc	17 12 39.7	+0.7
	comp=Z,4.8nm,0.7s,baz=222,slow=4.4,SNR=22						
YKA	Yellowknife Ar	154.93	35	PKP	PKPdf	17 12 33.5	-0.4
	comp=Z,0.4nm,0.7s,baz=292,slow=2.6,SNR=3.6						
YKA				PKPbc	PKPbc	17 12 42.0	-0.6
	comp=Z,1.7nm,0.8s,baz=301,slow=2.4,SNR=11						
YKA	Yellowknife Ar	154.93	35	PKP	PKPdf	17 12 33.5	-0.4
YKA				PKPbc	PKPbc	17 12 42.0	-0.6
TXAR	Lajitas Array	157.11	127	PKP	PKPdf	17 12 37.9	-0.1
	comp=Z,0.8nm,1.0s,baz=308,slow=2.1,SNR=6.0						
TXAR				PKPab	PKPab	17 13 07.0	-1.5
	comp=Z,0.9nm,1.0s,baz=252,slow=1.8,SNR=5.6						
PDAR	Pinedale Array	160.62	88	PKPab	PKPab	17 13 23.8	+0.3
	comp=Z,0.5nm,0.8s,baz=274,slow=4.3,SNR=4.3						

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*BJI **02** 17:10:42.4, 16.32N×123.33E, h34km, mB4.8, mb4.3, Ms4.1, Msz4.0*
*ISCJB **02** 17:10:44.1±0.2, 16.77N±0.02×122.85E±0.04, h10km, mb4.5/44, MS3.9/9, Error ellipse: s-maj=5.2km s-min=2.9km az=166.8*
*MAN **02** 17:10:47, 16.58N×122.59E, h8km, mb4.9, ML3.9, MS4.0*
*MOS **02** 17:10:47.1±0.7, 16.67N×122.59E, h33km, mb4.9/19, MS4.1/4, Error ellipse: s-maj=19.3km s-min=8.4km az=112.4*
*NEIC **02** 17:10:48.5±0.3, 16.54N×122.61E, h35km, mb4.8/15, Error ellipse: s-maj=9.4km s-min=5.7km az=76.0*
*IDC **02** 17:10:50.9±3.1, 16.63N×122.53E, h50km±30km, mb4.1/19, mb1 4.2/20, mb1mx4.1/25, mbtmp4.2/20, ML5.4/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/35, Error ellipse: s-maj=20.5km s-min=11.6km az=75.0*
*DJA **02** 17:11:32, 14.95N×123.39E, h334km, mb4.5/11*

ISC 02 17:10:45.8±0.2**, 1671N**±002×**12278E**±004**, h10**km**, (h22**km±2.0km**:pP-P), n131, σ1^{s}33**/133**, mb4.5**/44**, MS3.9**/9**, 14C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.49	317	⇓iP	Pg	17 10 57.6	+2.3
PALP				i S	Sg	17 11 05.7	+4.0
CAUP	Cauayan	0.94	285	eP	Pg	17 11 03.4	-0.5
CAUP				eS	Sg	17 11 16.5	+0.3
BALP	Baler	1.50	230	eP	Pn	17 11 10.6	-2.1
SGCP	Mt. Cagua	1.68	336	eP	Pn	17 11 18.2	+3.1
POLP	Polilio Island	2.13	202	eP	Pn	17 11 20.2	-1.1
POLP				eS	Sn	17 11 43.5	-4.3
ABRA	Dolores	2.18	296	eP	Pn	17 11 21.7	-0.4
SIPP	Brgy, Tapao	2.52	299	⇑eP	Pn	17 11 27.7	+0.9
PIP	Pasuquin	2.61	308	⇑iP	Pn	17 11 30.2	+2.2
PIP				i S	Sn	17 12 02.1	+2.3
BOLP	Bolinao	2.76	264	eP	Pn	17 11 31.0	+0.9
GQP	Guinayangan	2.80	187	eP	Pn	17 11 32.5	+1.8
GQP				eS	Sn	17 12 02.0	-2.6
SCZP	Santa Cruz	2.90	252	eP	Pn	17 11 32.9	+0.8
TGY	Tagaytay City	3.14	215	⇑eP	Pn	17 11 40.3	+5.0
TGY				eS	Pg	17 11 50.3	+4.4
AUQP	San Andres	3.37	182	eP	Px	17 11 48.5	
PVCP	Virac	3.37	157	⇓iP	Pn	17 11 39.9	+1.4
PVCP				i S	Sn	17 12 17.2	-1.3
PGP	Puerto Galera	3.64	209	eP	Pn	17 11 46.3	+4.1
LUBP	Lubang	3.83	220	eP	Pn	17 11 47.5	+2.6
OTRP	Odiongan	4.38	190	eP	Pn	17 11 52.1	-0.3
SJMP	San Jose	4.52	201	eP	Pn	17 11 56.5	+2.3
CNP	Catarman	4.55	156	eP	Pn	17 11 58.2	+3.4
BUSP	Coron	5.30	208	eP	Pn	17 12 06.2	+1.1
OCLP	Ormoc	5.90	162	eP	Pn	17 12 15.4	+2.1
PLP	Palo	5.91	158	⇑iP	Pn	17 12 17.2	+3.8
GUIM	Jordan	6.05	182	eP	Pn	17 12 17.8	+2.5
TWG	Pinlang	6.29	346	ePn	Pn	17 12 20.3	+1.7
	28nm,0.6s						
TWG				eSn	Sn	17 13 31.8	+1.3
ENPP	El Nido	6.36	211	eP	Px	17 12 30.0	
YULB	Yu-li	6.79	348	ePn	Pn	17 12 27.6	+2.0
	23nm,0.6s						
YULB				eSn	Sn	17 13 41.7	-1.3
MSLP	Maasin	6.84	163	eP	Pn	17 12 30.7	+4.5
TPUB	Ta-pu	6.86	343	ePn	Pn	17 12 30.2	+3.7
	61nm,0.9s						
TPUB				eSn	Sn	17 13 44.9	+0.2
SSLB	Suanglung	7.25	347	ePn	Pn	17 12 35.6	+3.8
	34nm,0.8s						
SCPH	Surigao	7.37	159	⇓eP	Pn	17 12 35.4	+1.8
NACB	Ninganchiao	7.51	352	ePn	Pn	17 12 37.3	+1.9
	36nm,1.0s						
NACB				eSn	Sn	17 13 56.7	-4.0
YHNB	Yeheng	8.03	351	ePn	Pn	17 12 46.6	+4.1
	26nm,0.6s						
BUKP	Musuan	9.05	165	eP	Pn	17 13 00.3	+3.7
DAV	Davao City (W)	9.96	164	P	Pn	17 13 12.6	+3.5
	30nm,0.3s,baz=140,slow=12,SNR=3.9						
DAV				LR	LR	17 17 35.7	
	comp=Z,404nm,18.8s,baz=336,slow=41						
JOW	Kunigami	11.29	26	LR	LR	17 18 05.3	
	comp=Z,172nm,18.9s,baz=101,slow=38						
QIZ	Qiongzhong	12.53	283	ePn	Pn	17 13 43.7	-0.5
	10nm,0.7s						
SSE	Sheshan	14.40	355	P	Pn	17 14 08.0	-1.6
SSE				S	Sn	17 16 47.1	-2.3
SSE				AMB	AMB		
	comp=Z,37nm,0.7s						
SSE				AMB	AMB		
	comp=Z,182nm,4.6s						
SSE				LR	LR		
	comp=N,196nm,21.1s						
SSE				LR	LR		
	comp=E,192nm,21.1s						
SSE				LR	LR		
	comp=Z,423nm,18.5s						
GYA	Guiyang	17.83	306	P	Pn	17 15 00.9	+6.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CBIJ	Chichi jima	20.74	57	LR	LR	17 22 09.6	
	comp=Z,131nm,20.4s,MS3.3,baz=75,slow=32						
INCN	Inchon	20.97	9	eP	P	17 15 30.3	+1.2
	comp=Z,325nm,2.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KSRS	**Korea Array**	**21.16**	**11**	P	**P**	**17 15 32.5**	**+1.4**
	comp=Z,5.6nm,0.7s,mb4.0,baz=193,slow=11,SNR=16						
KSRS				LR	LR	17 23 52.3	
	comp=Z,129nm,19.7s,MS3.3,baz=200,slow=37						
XAN	**Xi'an**	**21.28**	**327**	P	**P**	**17 15 34.6**	**+2.2**
XAN				AP		17 15 42.0	
XAN				XP	sP	17 15 45.8	+9.2
XAN				PP		17 15 59.4	
XAN				S	**S**	**17 19 28.4**	**-0.5**
XAN				PCP	PcP	17 19 34.9	-2.2
XAN				SS		17 20 05.7	
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.3						
XAN				AMB	AMB		
	comp=Z,106nm,5.3s						
XAN				LR	LR		
	comp=N,250nm,26.5s						
XAN				LR	LR		
	comp=E,127nm,17.3s						
XAN				LR	LR		
	comp=Z,479nm,15.5s						
KAPI	**Kappang**	**21.79**	**188**	P	**P**	**17 15 36.4**	**-1.6**
	comp=Z,8.9nm,0.9s,mb4.2,baz=148,slow=21,SNR=3.5						
KAPI				LR	LR	17 24 44.2	
	comp=Z,148nm,18.1s,MS3.4,baz=2.6,slow=38						
CD2	**Chengdu**	**22.37**	**313**	P	**P**	**17 15 44.5**	**+0.4**
CD2				S	**S**	**17 19 48.5**	**-1.7**
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
CD2				AMB	AMB		
	comp=Z,140nm,5.1s						
CD2				LR	LR		
	comp=N,550nm,14.4s						
CD2				LR	LR		
	comp=Z,500nm,17.4s,MS4.0						
CMAR	**Chiang Mai Arr**	**22.78**	**278**	P	**P**	**17 15 46.8**	**-1.9**
	comp=Z,2.2nm,0.8s,mb3.6,baz=82,slow=8.7,SNR=17						
CMAR				PcP	PcP	17 19 40.8	+0.4
	comp=Z,1.4nm,0.8s,baz=89,slow=0.8,SNR=10						
MJAR	**Matsushiro Arr**	**24.03**	**32**	P	**P**	**17 16 01.4**	**+0.5**
	comp=Z,4.6nm,1.0s,mb3.9,baz=197,slow=8.7,SNR=8.7						
MJAR	**Matsushiro Arr**	**24.03**	**32**	P	**P**	**17 16 01.4**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**25.60**	**323**	*e*P	**P**	**17 16 18.9**	**+3.6**
LZH				AP	pP	17 16 23.6	+5.3
LZH				XP	sP	17 16 27.4	+7.8
LZH				AMB	AMB		
	comp=Z,33nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,127nm,4.5s						
HHC	**Hu-ho-hao-te**	**25.94**	**340**	*e*P	**P**	**17 16 18.9**	**+0.7**
HHC				AP	pP	17 16 23.9	+2.6
HHC				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.2						
HHC				AMB	AMB		
	comp=Z,209nm,5.1s						
HHC				LR	LR		
	comp=N,419nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=E,210nm,11.9s,MS4.2						
HHC				LR	LR		
	comp=Z,360nm,17.8s						
BATI	**Baumata**	**26.75**	**178**	P	**P**	**17 16 26.1**	**+0.2**
	comp=Z,42nm,0.7s,mb5.1,baz=274,slow=4.0,SNR=6.5						
ULN	**Ulaanbaatar**	**33.66**	**341⇑**	*e*P	**P**	**17 17 27.1**	**+0.5**
ULN	**Ulaanbaatar**	**33.66**	**341**	*e*P	**P**	**17 17 25.1**	**-1.5**
	comp=Z,11nm,1.0s,mb4.8						
SONM	**Songino Array**	**33.84**	**340**	P	**P**	**17 17 28.8**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.2,baz=159,slow=10,SNR=17						
SONM				PcP	PcP	17 20 06.5	-0.5
	comp=Z,0.8nm,0.7s,baz=166,slow=2.9,SNR=3.8						
SONM				LR	LR	17 32 46.1	
	comp=Z,411nm,18.2s,MS4.2,baz=137,slow=39						
SONM	**Songino Array**	**33.84**	**340**	P	**P**	**17 17 28.8**	**+0.6**
SONM						17 20 06.5	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,411nm,18.2s						
PMG	**Port Moresby**	**35.43**	**135**	*e*P	**P**	**17 17 40.8**	**-1.5**
	comp=Z,14nm,1.0s,mb4.8						
ZAK	**Zakamensk**	**37.08**	**339**	*e*P	**P**	**17 17 55.9**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
TLY	**Talaya**	**38.07**	**341**	*e*P	**P**	**17 18 05.4**	**+1.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
TLY				MLR	MLR		
	comp=Z,252nm,17.0s,MS4.1						
WRAB	**Tennant Creek**	**38.15**	**162**	*e*P	**P**	**17 18 00.5**	**-4.8**
	comp=Z,14nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**38.16**	**162**	*e*P	**P**	**17 18 04.2**	**-1.2**
ASAR	**Alice Springs**	**41.57**	**165**	P	**P**	**17 18 33.6**	**-0.2**
	comp=Z,1.7nm,0.6s,mb3.9,baz=351,slow=8.9,SNR=45						
ASAR	**Alice Springs**	**41.57**	**165**	P	**P**	**17 18 33.6**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**44.90**	**321**	P	**P**	**17 19 00.4**	**-0.1**
	comp=Z,2.4nm,0.7s,mb4.1,baz=116,slow=9.1,SNR=20						
MKAR				PcP	PcP	17 20 40.6	-1.4
	comp=Z,1.7nm,1.0s,baz=106,slow=3.9,SNR=3.6						
MKAR	**Makanchi Array**	**44.90**	**321**	*i* P	**P**	**17 19 00.4**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	**Petropavlovsk-**	**45.44**	**29**	P	**P**	**17 19 06.9**	**+2.2**
	comp=Z,16nm,0.8s,mb4.9,baz=214,slow=4.2,SNR=21						
YAK	**Yakutsk**	**45.53**	**5⇑**	*e*P	**P**	**17 19 04.8**	**-0.5**
YAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
YAK	**Yakutsk**	**45.53**	**5**	P	**P**	**17 19 04.8**	**-0.5**
	comp=Z,4.3nm,0.6s,mb4.6						
ZAA0	**Zalesovo Array**	**47.38**	**330**	*e*P	**P**	**17 19 18.8**	**-1.2**
ZALV	**Zalesovo Beam**	**47.38**	**330**	P	**P**	**17 19 19.4**	**-0.6**
	comp=Z,3.1nm,0.7s,mb4.3,baz=111,slow=8.1,SNR=16						
ZALV	**Zalesovo Beam**	**47.38**	**330**	P	**P**	**17 19 19.4**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**47.75**	**313**	*e*P	**P**	**17 19 21.7**	**-1.3**
	comp=Z,2.5nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**48.44**	**313⇑**	*e*P	**P**	**17 19 28.4**	**+0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
AAK	**Ala-Archa**	**48.44**	**313**	*e*P	**P**	**17 19 28.2**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.6						
NVS	**Novosibirsk**	**48.66**	**331**	*e*P	**P**	**17 19 28.7**	**-1.1**
NVS				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=N,6.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
KURK	**Kurchatov**	**48.88**	**324**	P	**P**	**17 19 31.3**	**-0.3**
	comp=E,6.6nm,0.7s,mb4.8,baz=120,slow=8.1,SNR=52						
KURK	**Kurchatov**	**48.88**	**324⇑**	*i*P	**P**	**17 19 30.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
KURK	**Kurchatov**	**48.88**	**324**	P	**P**	**17 19 31.3**	**-0.3**
KBL	**Kabul**	**51.01**	**301**	*e*P	**P**	**17 19 47.1**	**-1.0**
	comp=Z,14nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**51.57**	**159**	*e*P	**P**	**17 19 50.8**	**-1.4**
	comp=Z,2.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**51.57**	**159**	P	**P**	**17 19 52.6**	**+0.5**
	comp=Z,2.0nm,0.9s,mb4.1,baz=315,slow=14,SNR=2.7						
BVAR	**Borovoye Array**	**54.48**	**324**	P	**P**	**17 20 13.1**	**-0.4**
	comp=Z,3.6nm,0.8s,mb4.4,baz=108,slow=9.5,SNR=17						
BVAR	**Borovoye Array**	**54.48**	**324**	P	**P**	**17 20 13.1**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**54.55**	**324**	*e*P	**P**	**17 20 12.9**	**-1.0**
	comp=Z,10nm,0.8s,mb4.9						
TIXI	**Tiksi**	**55.05**	**2⇑**	*e*P	**P**	**17 20 17.2**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.9						
TIXI	**Tiksi**	**55.05**	**2**	*e*P	**P**	**17 20 16.7**	**-0.6**
	comp=Z,5.5nm,0.7s,mb4.7						
BILL	**Bilibino**	**58.25**	**18⇑**	*e*P	**P**	**17 20 41.0**	**+0.9**
BILL				*PP	pP	17 20 48.0	+4.7
BILL				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.9						
BILL	**Bilibino**	**58.25**	**18**	*e*P	**P**	**17 20 40.4**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.8						
SVE	**Sverdlovsk**	**60.99**	**326**	*e*P	**P**	**17 20 58.8**	**-0.4**
SVE				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
AKTK	**Aktyubinsk**	**61.25**	**319**	P	**P**	**17 21 00.7**	**-0.3**
AKTO	**Aktyubinsk**	**61.25**	**319**	P	**P**	**17 21 00.7**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.5,baz=97,slow=9.3,SNR=6.6						
AKTO	**Aktyubinsk**	**61.25**	**319**	P	**P**	**17 21 00.7**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
ARU	**Arti**	**62.02**	**325*c***	*i*P	**P**	**17 21 05.1**	**-1.0**
ARU				*e*		17 23 20.9	
ARU				*e*S	**S**	**17 29 28.4**	**-2.2**
ARU				SS	SS	17 33 29.8	-3.0
ARU				pmax	pmax		
	comp=Z,27nm,1.7s,mb5.1						
ARU	**Arti**	**62.02**	**325**	*e*P	**P**	**17 21 04.8**	**-1.3**
	comp=Z,12nm,0.6s,mb5.2						
KIV	**Kislovodsk**	**71.53**	**311**	*e*P	**P**	**17 22 06.5**	**-0.5**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
KIV				MLR	MLR		
	comp=Z,78nm,18.0s,MS4.0						
KLMR	**Klimovskoe**	**72.29**	**329**	*e*P	**P**	**17 22 07.7**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.0						
OBN	**Obninsk**	**74.32**	**323⇑**	*e*P	**P**	**17 22 22.3**	**-1.0**
OBN				*PP	pP	17 22 30.0	+3.4
OBN				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.9						
JOF	**Joensuu**	**75.95**	**332**	*e*p	**P**	**17 22 31.3**	**-1.3**
	comp=Z,6.3nm,0.6s,mb4.7						
JOF	**Joensuu**	**75.95**	**332**	*e*P	**P**	**17 22 31.3**	**-1.3**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KEV	**Kevo**	**76.45**	**339**	*e*p	**P**	**17 22 34.5**	**-0.8**
ARCES	**ARCESS Array B**	**77.01**	**339**	P	**P**	**17 22 38.5**	**+0.1**
	comp=Z,1.7nm,0.5s,mb4.2,baz=76,slow=7.4,SNR=14						
ARCES	**ARCESS Array B**	**77.01**	**339**	P	**P**	**17 22 38.5**	**0.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	**78.38**	**332**	*e*p	**P**	**17 22 44.0**	**-2.3**
	comp=Z,7.4nm,0.7s,mb4.7,baz=73,slow=5.0						
KAF	**Kangasniemi**	**78.38**	**332**	*e*P	**P**	**17 22 44.0**	**-2.3**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
DAWY	**Dawson**	**78.51**	**26**	*e*P	**P**	**17 22 47.5**	**+0.5**
BRTR	**Keskin Array B**	**78.87**	**308**	P	**P**	**17 22 47.6**	**-1.8**
	comp=Z,1.0nm,0.7s,mb3.8,baz=102,slow=3.1,SNR=4.6						
BRTR	**Keskin Array B**	**78.87**	**308**	*i* P	**P**	**17 22 48.7**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**79.47**	**320**	P	**P**	**17 22 50.3**	**-2.2**
	comp=Z,2.7nm,0.5s,mb4.4,baz=62,slow=5.6,SNR=8.2						
AKASG	**Malin Array Be**	**79.47**	**320**	P	**P**	**17 22 50.3**	**-2.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PLOR	**Plostina**	**82.36**	**315⇑**	*i*P	**P**	**17 23 08.8**	**+0.8**
BURAR	**Bucovina Array**	**82.81**	**317⇑**	*i*P	**P**	**17 23 10.0**	**-0.3**
BUR08	**Bucovina Ar. S**	**82.82**	**317**	*e*P	**P**	**17 23 08.8**	**-1.5**
MLR	**Muntele Rosu**	**82.94**	**315⇓**	*i*P	**P**	**17 23 10.9**	**-0.1**
VOIR		**83.56**	**315⇓**	*i*P	**P**	**17 23 13.7**	**-0.5**
NIE	**Niedzica**	**85.33**	**320**	*e*P	**P**	**17 23 22.4**	**-0.8**
OJC	**Ojcow**	**85.37**	**321**	*e*P	**P**	**17 23 22.4**	**-0.9**
NB2	**NORSAR Subarra**	**85.52**	**333**	P	**P**	**17 23 22.3**	**-1.5**
	comp=Z,8.3nm,0.7s,mb5.1,baz=63,slow=5.1						
NOA	**NORSAR Array B**	**85.52**	**333**	P	**P**	**17 23 22.9**	**-0.9**
	comp=Z,8.3nm,0.9s,mb5.0,baz=64,slow=5.0,SNR=16						
NOA				LR	LR	18 06 22.0	
	comp=Z,83nm,18.4s,MS4.2,baz=110,slow=39						
NOA	**NORSAR Array B**	**85.52**	**333**	P	**P**	**17 23 22.9**	**-0.9**
NOA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,83nm,18.4s						
RES	**Resolute Bay**	**85.76**	**9**	*e*P	**P**	**17 23 25.2**	**+0.3**
	comp=Z,325nm,0.8s						
YKA	**Yellowknife Ar**	**89.24**	**23**	P	**P**	**17 23 42.5**	**+0.7**
	comp=Z,3.2nm,0.8s,mb4.7,baz=305,slow=4.5,SNR=22						
YKA	**Yellowknife Ar**	**89.24**	**23**	P	**P**	**17 23 42.5**	**+0.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**89.24**	**23**	P	**P**	**17 23 42.5**	**+0.7**
SUMG	**Summit**	**90.05**	**354**	*e*P	**P**	**17 23 45.9**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.9						
TORD	**Torodi Ar. Bea**	**114.67**	**293**	PKP	PKiKP	17 29 24.5	-2.9
	comp=Z,0.7nm,0.7s,baz=355,slow=1.2,SNR=4.0						
TXAR	**Lajitas Array**	**115.94**	**45**	PKhKP		17 29 24.5	
	comp=Z,0.4nm,0.7s,baz=270,slow=7.5,SNR=3.5						
TXAR	**Lajitas Array**	**115.94**	**45**	*i* PKIKP	PKPdf	17 29 24.5	-5.0
VNA2	**Neumayer--Watz**	**118.23**	**197**	*e*PKPdf	PKPdf	17 29 32.2	-0.4
	baz=55,slow=1.7						
VNA1	**Neumayer--Stat**	**118.63**	**197**	*e*PKPdf	PKPdf	17 29 33.7	+0.4
VNA3	**Neumayer Olymp**	**118.66**	**196**	*e*PKPdf	PKPdf	17 29 33.1	-0.3
SDV	**Santo Domingo**	**151.32**	**29**	*e*PKPbc	PKPbc	17 30 40.8	+0.2
PLCA	**Paso Flores**	**153.43**	**157**	PKPbc	PKPbc	17 30 43.4	-1.2
	comp=Z,1.2nm,0.8s,baz=179,slow=17,SNR=4.1						
PLCA	**Paso Flores**	**153.43**	**157**	PKIKP	PKPbc	17 30 43.4	-1.2
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

MAN 02 17:46:37,1672N×12274E,h32km,mb3.9,ML2.7,MS2.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.90**	**284**	*e*P	Pn	17 46 54.4	+0.9
CAUP				*e*S	Sn	17 47 06.7	+1.3
BALP	**Baler**	**1.48**	**229**	*e*P	Pn	17 47 01.3	-0.2
POLP	**Polilio Island**	**2.13**	**201**	*e*P	Pn	17 47 11.0	+0.7
POLP				*e*S	Sn	17 47 34.0	-1.7
ABRA	**Dolores**	**2.14**	**296**	*e*P	Pn	17 47 12.5	+2.0
BOLP	**Bolinao**	**2.73**	**263**	*e*P	Pn	17 47 22.1	+3.5
PVCP	**Virac**	**3.40**	**156**	*e*P	Pn	17 47 30.0	+2.2

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*IDC **02** 17:49:55.3±1.0,2663S×6521W,h0km,mb3.8/4,mb1 3.9/6, mb1mx3.8/16,mbtmp3.7/6,ML3.3/3,MS3.3/2,Ms1 3.2/2, ms1mx2.5/24,Error ellipse: s-maj=37.4km s-min=17.8km az=117.0*

*ISCJB **02** 17:49:58.0±3.4,2673S±006×650W±0.1,h27km±27km, mb3.7/4,Error ellipse: s-maj=20.9km s-min=7.8km az=17.2*

ISC 02 17:49:58.9±3.7**,2674S**±006×**650W**±01**,h15**km±24km**,n14,** σ**1§07**/13**,mb3.7**/4**,Tucuman Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**5.45**	**318**	Pn	**Pn**	**17 51 20.4**	**+0.8**
	3.0nm,0.3s,baz=155,slow=7.0,SNR=20						
LVC				Lg		17 52 41.1	
	1.0nm,0.3s,baz=54,slow=23,SNR=6.8						
CFAA	**Coronel Fontan**	**5.63**	**210**	Pn	**Pn**	**17 51 22.1**	**+0.1**
	0.2nm,0.3s,baz=19,slow=12,SNR=27						
CFAA				Sn	**Sn**	**17 52 26.9**	**+0.5**
	1.1nm,0.3s,baz=19,slow=10,SNR=2.6						
CFAA				Lg		17 52 52.4	
	1.9nm,0.3s,baz=20,slow=12,SNR=4.3						
CEN1	**Los Morros**	**5.80**	**304**	*e*P	**Pn**	**17 51 24.6**	**+0.2**
TLL	**Tololo Astrono**	**6.17**	**235**	*e*P	**Pn**	**17 51 36.0**	**+6.6**
FCH	**Farellones**	**8.02**	**214**	*e*P	**Pn**	**17 51 55.5**	**+0.6**
SIV	**San Ignacio**	**11.29**	**20**	Pn	**Pn**	**17 52 39.0**	**-0.8**
	0.5nm,0.3s,baz=223,slow=12,SNR=7.3						
SIV				Sn	**Sn**	**17 54 48.0**	**+2.2**
	0.7nm,0.3s,baz=299,slow=22,SNR=1.3						
PLCA	**Paso Flores**	**14.70**	**197**	Pn	**Pn**	**17 53 26.6**	**+0.3**
	0.0nm,0.3s,baz=44,slow=15,SNR=2.1						
PLCA				LR	LR	18 00 03.1	
	comp=Z,72nm,21.9s,baz=268,slow=41						
PCRV	**Puerto La Cruz**	**36.70**	**1**	LR	LR	18 14 34.6	
	comp=Z,69nm,21.5s,baz=233,slow=40						
TXAR	**Lajitas Array**	**66.96**	**324**	P	**P**	**18 00 48.6**	**-2.4**
	0.5nm,0.9s,mb3.5,baz=138,slow=10.0,SNR=3.5						
DBIC	**Dimbokro**	**66.98**	**69**	P	**P**	**18 00 51.8**	**+0.3**
	1.7nm,0.6s,mb4.3,baz=185,slow=6.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**75.88**	**67**	P	**P**	**18 01 45.0**	**-0.2**
	0.8nm,0.9s,mb3.7,baz=256,slow=5.2,SNR=4.2						
PDAR	**Pinedale Array**	**80.43**	**328**	P	**P**	**18 02 08.1**	**-1.8**
	0.4nm,0.7s,mb3.4,baz=104,slow=6.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**144.86**	**31**	PKP	PKPdf	18 09 33.5	-1.4
	1.9nm,0.6s,baz=305,slow=5.2,SNR=10						
MKAR	**Makanchi Array**	**147.35**	**44**	PKPbc	PKPbc	18 09 39.0	-2.8
	1.1nm,0.7s,baz=308,slow=2.9,SNR=9.1						

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*ISCJB **02** 17:56:33.2±0.4,4278N±003×14201E±005,h116km±3km, mb3.6/9,Error ellipse: s-maj=5.9km s-min=5.1km az=30.1*

*NEIC **02** 17:56:34.0,4279N×14200E,h112km,MG3.1(JMA),After JMA.*

*JMA **02** 17:56:33.9±0.1,4279N×14200E,h112km±1km,M3.1*

*IDC **02** 17:56:34.1±1.3,4286N×14203E,h106km±14km,mb3.4/9, mb1 3.4/10,mb1mx3.3/24,mbtmp3.4/10,Error ellipse: s-maj=32.3km s-min=16.8km az=92.0*

ISC 02 17:56:34.3±0.4**,4278N**±003×**14202E**±005**,h110**km±3km**, n31,**σ**0§64**/47**,mb3.6**/9**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JBT2	**Biratori 2**	**0.25**	**90**	P	**Pn**	**17 56 49.9**	**0.0**
JBT2				*e*S	**Sn**	**17 57 01.9**	**+0.4**
JEW	**Eniwo**	**0.42**	**279**	P	**Pn**	**17 56 50.4**	**-0.3**
JEW				*e*S	**Sn**	**17 57 02.4**	**-0.6**
JFR	**Furan**	**0.57**	**47**	P	**Pn**	**17 56 51.4**	**-0.3**
JFR				*e*S	**Sn**	**17 57 04.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.73**	**132**	P	**Pn**	**17 56 53.3**	**+0.3**
JNBK				*e*S	**Sn**	**17 57 08.3**	**+1.3**
JAB	**Ashibetsu**	**0.74**	**11**	P	**Pn**	**17 56 53.3**	**+0.3**
JAB				*e*S	**Sn**	**17 57 07.5**	**+0.4**
JNB	**Noboribetsu**	**0.79**	**247**	P	**Pn**	**17 56 53.0**	**-0.4**
JNB				*e*S	**Sn**	**17 57 07.5**	**-0.3**
JHR	**Hokuryu**	**0.99**	**348**	P	**Pn**	**17 56 55.8**	**+0.4**
JHR				*e*S	**Sn**	**17 57 12.3**	**+1.0**
JCH	**Churui**	**1.00**	**99**	P	**Pn**	**17 56 54.7**	**-0.8**
JCH				*e*S	**Sn**	**17 57 10.0**	**-1.5**
JEM	**Erimo**	**1.14**	**132**	P	**Pn**	**17 56 57.2**	**+0.3**
ERM	**Erimo**	**1.14**	**132**	*e*Pn	**Pn**	**17 56 57.5**	**+0.6**
ERM				*e*Sn	**Sn**	**17 57 15.4**	**+1.4**
JKB	**Kayabe**	**1.15**	**220**	P	**Pn**	**17 56 56.8**	**-0.3**
JKB				*e*S	**Sn**	**17 57 13.8**	**-0.5**
JKK2	**Kamakawa 2**	**1.22**	**26**	P	**Pn**	**17 56 57.9**	**+0.1**
JKK2				*e*S	**Sn**	**17 57 15.7**	**+0.1**
JSK	**Shakotan**	**1.27**	**297**	P	**Pn**	**17 56 58.8**	**+0.4**
JSK				*e*S	**Sn**	**17 57 16.9**	**+0.2**
JAR	**Ashorobuto**	**1.38**	**67**	P	**Pn**	**17 56 59.3**	**-0.4**
JAR				*e*S	**Sn**	**17 57 18.1**	**-0.9**
ASAJ	**Asahikawa**	**1.40**	**17**	P	**Pn**	**17 57 00.1**	**+0.1**
	26nm,0.3s,baz=224,slow=11,SNR=345						
ASAJ				S	**Sn**	**17 57 16.7**	**-2.7**
	10nm,0.3s,baz=184,slow=14,SNR=6.6						
JOT	**Ohata**	**1.57**	**208**	P	**Pn**	**17 57 01.7**	**-0.3**
JOT				*e*S	**Sn**	**17 57 22.7**	**-0.3**
JYG	**Yagishiri**	**1.70**	**346**	*e*S	**Sn**	**17 57 26.8**	**+0.9**
JTKR	**Abashiri--Toko**	**1.82**	**48**	P	**Pn**	**17 57 05.4**	**+0.4**
JTKR				*e*S	**Sn**	**17 57 28.7**	**+0.2**
MJAR	**Matsushiro Arr**	**6.89**	**207**	P	**Pn**	**17 58 12.7**	**+0.1**
	0.6nm,0.3s,baz=24,slow=10,SNR=11						
MJAR	**Matsushiro Arr**	**6.89**	**207**	P	**Pn**	**17 58 12.7**	**+0.1**
SONM	**Songino Array**	**25.41**	**294**	P	**P**	**18 01 50.4**	**-0.9**
	0.4nm,0.7s,mb2.9,baz=95,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**38.60**	**307**	P	**P**	**18 03 46.4**	**+0.1**
	0.6nm,0.5s,mb3.7,baz=81,slow=9.6,SNR=4.3						
MKAR	**Makanchi Array**	**41.70**	**297**	P	**P**	**18 04 12.1**	**+0.1**
	0.9nm,0.6s,mb3.7,baz=79,slow=9.6,SNR=9.4						
MKAR	**Makanchi Array**	**41.70**	**297**	P	**P**	**18 04 12.1**	**+0.1**
KURK	**Kurchatov**	**42.95**	**303**	P	**P**	**18 04 22.1**	**0.0**
	1.4nm,0.3s,mb4.1,baz=77,slow=8.8,SNR=6.8						
BVAR	**Borovoye Array**	**47.20**	**309**	P	**P**	**18 04 56.1**	**+0.5**
	1.0nm,0.4s,mb3.9,baz=77,slow=8.2,SNR=7.2						
AKTK	**Aktyubinsk**	**55.29**	**309**	P	**P**	**18 05 56.1**	**+0.1**
AKTO	**Aktyubinsk**	**55.29**	**309**	P	**P**	**18 05 56.1**	**+0.1**
	0.5nm,0.3s,mb4.0,baz=79,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**66.53**	**188**	P	**P**	**18 07 13.1**	**+0.8**
	0.2nm,0.7s,mb3.0,baz=8.1,slow=6.5,SNR=3.6						
HFS	**Hagfors**	**69.07**	**335**	P	**P**	**18 07 27.2**	**-0.6**
	0.7nm,0.3s,mb3.9,baz=46,slow=4.2,SNR=7.0						
NOA	**NORSAR Array B**	**69.09**	**337**	P	**P**	**18 07 27.6**	**-0.3**
	0.6nm,0.8s,mb3.5,baz=42,slow=7.6,SNR=2.4						

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*ISCJB **02** 18:09:01.2±0.6,4730N±008×1512E±0.1,h173km±7km, mb3.6/11,Error ellipse: s-maj=18.6km s-min=6.1km az=44.4*

*MOS **02** 18:09:01.6±1.3,4750N×15126E,h169km,mb4.0/6,Error ellipse: s-maj=19.8km s-min=9.3km az=56.7*

*IDC **02** 18:09:04.8±1.8,4752N×151.16E,h181km±16km,mb3.4/11, mb1 3.6/15,mb1mx3.4/25,mbtmp3.3/15,Error ellipse: s-maj=17.1km s-min=11.1km az=145.0*

*NEIC **02** 18:09:04.5±0.9,4748N×15122E,h179km±9km,mb4.1/2, Error ellipse: s-maj=12.4km s-min=7.8km az=136.0*

ISC 02 18:09:02.4±0.6**,4732N**±008×**1512E**±01**,h165**km±7km**,n64,** σ**1§36**/78**,mb3.6**/11**,1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.10**	**229**	PN	**Pn**	**18 09 51.5**	**0.0**
KUR				*e*S	**Sn**	**18 10 30.8**	**+1.2**
KUR				smax			
	comp=N,240nm,0.6s						
KUR				smax			
	comp=E,230nm,0.6s						
SKR	**Severo-Kuril's**	**4.68**	**42⇓**	*i*PN	**Pn**	**18 10 08.5**	**-3.2**
SKR				*e*S	**Sn**	**18 11 01.5**	**-4.5**
SKR				pmax	pmax		
	comp=N,40nm,0.4s						
SKR				pmax	pmax		
	comp=Z,60nm,0.4s						
SKR				smax			
	comp=N,180nm,0.2s						
SKR				smax			
	comp=E,120nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.96**	**230**	*e*PN	**Pn**	**18 10 16.4**	**+0.9**
YUK				*e*S	**Sn**	**18 11 14.6**	**+2.0**
YUK				smax			
	comp=N,250nm,0.4s						
YUK				smax			
	comp=E,100nm,0.4s						
JRA	**Rausu**	**5.42**	**234**	P	**Pn**	**18 10 22.9**	**+1.4**
NEM2	**Nemuro 2**	**5.50**	**226**	P	**Pn**	**18 10 21.0**	**-1.6**
NEM2				*e*S	**Sn**	**18 11 20.5**	**-4.9**
YSS	**Yuzh-Sakhalins**	**5.75**	**269**	*i* PN	**Pn**	**18 10 28.4**	**+2.6**
YSS	**Yuzh-Sakhalins**	**5.75**	**269**	*e*Pn	**Pn**	**18 10 28.5**	**+2.7**
	comp=E,16nm,0.9s						
JNK	**Nakash**	**5.88**	**233**	P	**Pn**	**18 10 28.5**	**+1.0**
JTKR	**Abashiri--Toko**	**6.09**	**239**	P	**Pn**	**18 10 32.5**	**+2.2**
JAK	**Akkeshi**	**6.30**	**229**	P	**Pn**	**18 10 31.7**	**-1.3**
JAK				*e*S	**Sn**	**18 11 40.4**	**-3.8**
JMP	**Maruseppu**	**6.40**	**242**	P	**Pn**	**18 10 37.2**	**+2.8**
JAR	**Ashorobuto**	**6.59**	**235**	P	**Pn**	**18 10 38.5**	**+1.6**
ASAJ	**Asahikawa**	**6.80**	**245**	P	**Pn**	**18 10 43.2**	**+3.5**
	comp=E,5.1nm,0.3s,baz=70,slow=13,SNR=41						
ASAJ	**Asahikawa**	**6.80**	**245**	P	**Pn**	**18 10 43.6**	**+3.9**
ASAJ	**Asahikawa**	**6.80**	**245**	PN	**Pn**	**18 10 43.3**	**+3.6**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
JOB	**Onbets**	**6.81**	**232**	P	**Pn**	**18 10 39.6**	**-0.3**
JOB				*e*S	**Sn**	**18 11 54.0**	**-2.6**
JKK2	**Kamakawa 2**	**6.84**	**243**	P	**Pn**	**18 10 43.1**	**+2.9**
PETK	**Petropavlovsk-**	**7.15**	**33**	P	**Pn**	**18 10 43.7**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=202,slow=12,SNR=35						
PETK				S	**Sn**	**18 12 04.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=167,slow=15,SNR=2.5						
PETK	**Petropavlovsk-**	**7.15**	**33**	P	**Pn**	**18 10 43.7**	**-0.5**
PETK				S	**Sn**	**18 12 04.2**	**-0.2**
JCH	**Churui**	**7.26**	**232**	P	**Pn**	**18 10 45.0**	**-0.9**
JCH				*e*S	**Sn**	**18 12 03.1**	**-4.2**
JFR	**Furan**	**7.34**	**239**	P	**Pn**	**18 10 48.6**	**+1.7**
JBT2	**Biratori 2**	**7.71**	**237**	P	**Pn**	**18 10 52.3**	**+0.5**
ERM	**Erimo**	**7.79**	**230**	*i* PN	**Pn**	**18 10 53.7**	**+0.8**
JNBK	**Urakawa-nobuka**	**7.82**	**233**	P	**Pn**	**18 10 52.2**	**-1.1**
JNBK				*e*S	**Sn**	**18 12 14.7**	**-6.0**
JNB	**Noboribetsu**	**8.67**	**240**	P	**Pn**	**18 11 04.5**	**0.0**
JNB				*e*S	**Sn**	**18 12 37.9**	**-3.2**
JKB	**Kayabe**	**9.04**	**237**	P	**Pn**	**18 11 08.1**	**-1.3**
JKB				*e*S	**Sn**	**18 12 42.1**	**-7.8**
JYM2	**Yakumo 2**	**9.28**	**240**	P	**Pn**	**18 11 12.0**	**-0.5**
JSR	**Shiriuchi**	**9.62**	**237**	P	**Pn**	**18 11 16.3**	**-0.7**
JSR				*e*S	**Sn**	**18 12 58.0**	**-5.9**
JTM	**Tenmabayashi**	**9.77**	**232**	P	**Pn**	**18 11 16.5**	**-2.5**
JTM				*e*S	**Sn**	**18 12 57.6**	**-10**
JOSM	**Okushiri--Mats**	**9.83**	**242**	P	**Pn**	**18 11 19.5**	**-0.3**
JANG	**Nango**	**9.84**	**229**	P	**Pn**	**18 11 15.8**	**-4.1**
JANG				*e*S	**Sn**	**18 12 58.1**	**-11**
JRG	**Rokugo**	**11.02**	**228**	P	**Pn**	**18 11 32.3**	**-3.0**
JIO	**Ouri**	**11.41**	**223**	P	**Pn**	**18 11 36.5**	**-4.0**
MAJO	**Matsushiro**	**14.44**	**226**	*e*P	**Pn**	**18 12 21.6**	**+2.6**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAJO	**Matsushiro**	**14.44**	**226**	*e*Pn	**Pn**	**18 12 21.6**	**+2.6**
	comp=Z,2.8nm,0.5s						
MJAR	**Matsushiro Arr**	**14.44**	**226**	P	**Pn**	**18 12 23.4**	**+4.4**

	comp=Z,0.4nm,0.3s,baz=19,slow=13,SNR=7.2						
YAK	Yakutsk	19.13	328	eP	P	18 13 16.8	+4.4
YAK				pmax	pmax		
	comp=Z,30nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,1.2s						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK	Yakutsk	19.13	328	eP	P	18 13 13.8	+1.4
	comp=N,37nm,0.6s						
KSRS	Korea Array	19.73	248	P	P	18 13 23.2	+4.0
	comp=N,0.1nm,0.3s,baz=49,slow=9.6,SNR=3.5						
ZALV	Zalesovo Beam	41.19	305	P	P	18 16 29.8	-0.5
	comp=N,0.4nm,0.5s,mb3.3,baz=45,slow=9.0,SNR=2.7						
ZALV				PcP	PcP	18 18 26.6	+0.6
	comp=N,0.5nm,0.3s,baz=90,slow=3.0,SNR=3.6						
MKAR	Makanchi Array	45.49	296	P	P	18 17 04.5	-0.3
	comp=N,0.9nm,0.6s,mb3.6,baz=68,slow=7.4,SNR=18						
MKAR				pP	pP	18 17 45.5	+4.2
	comp=N,0.9nm,0.6s,baz=67,slow=7.7,SNR=6.6						
MKAR				PcP	PcP	18 18 41.6	+0.9
	comp=N,0.2nm,0.5s,baz=264,slow=0.3,SNR=5.7						
MKAR	Makanchi Array	45.49	296	P	P	18 17 04.5	-0.3
MKAR				*PP	pP	18 17 45.5	+4.2
MKAR						18 18 41.6	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	45.49	296	P	P	18 17 04.5	-0.3
MKAR				pP	pP	18 17 45.5	+4.1
MKAR				PcP	PcP	18 18 41.6	+0.9
KURK	Kurchatov	45.94	302	P	P	18 17 08.3	+0.1
	comp=Z,0.5nm,0.3s,mb3.6,baz=67,slow=8.4,SNR=10.0						
KURK				pP	pP	18 17 49.9	+5.1
	comp=Z,1.5nm,1.0s,baz=69,slow=8.1,SNR=3.3						
KURK	Kurchatov	45.94	302	P	P	18 17 08.3	+0.1
KURK				*PP	pP	18 17 49.9	+5.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
KURK	Kurchatov	45.94	302	P	P	18 17 08.3	+0.1
KURK				pP	pP	18 17 49.9	+5.1
RES	Resolute Bay	50.71	18	eP	P	18 17 43.7	-0.7
	comp=Z,163nm,0.9s						
YKA	Yellowknife Ar	51.26	36	P	P	18 17 49.0	+0.4
	comp=Z,0.8nm,0.6s,mb3.5,baz=300,slow=7.1,SNR=6.2						
YKA	Yellowknife Ar	51.26	36	eP	P	18 17 48.9	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	51.26	36	P	P	18 17 49.0	+0.4
ARCES	ARCESS Array B	56.87	340	P	P	18 18 29.5	+0.4
	comp=Z,5.2nm,1.0s,mb4.3,baz=32,slow=6.8,SNR=9.3						
ARCES	ARCESS Array B	56.87	340	P	P	18 18 29.5	+0.4
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	63.34	62	P	P	18 19 14.3	+0.7
	comp=Z,0.4nm,0.3s,mb3.8,baz=309,slow=7.5,SNR=3.7						
NVAR	Mina Array Bea	63.34	62	P	P	18 19 14.3	+0.7
PDAR	Pinedale Array	65.47	53	P	P	18 19 27.8	+0.3
	comp=Z,0.7nm,0.7s,mb3.6,baz=353,slow=1.6,SNR=5.4						
NOA	NORSAR Array B	67.25	340	P	P	18 19 37.4	-0.9
	comp=Z,0.2nm,0.4s,mb3.3,baz=28,slow=6.7,SNR=3.3						
NOA	NORSAR Array B	67.25	340	P	P	18 19 37.4	-0.9
ASAR	Alice Springs	72.35	197	P	P	18 20 11.3	+1.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=11,slow=6.0,SNR=15						
ASAR	Alice Springs	72.35	197	eP	P	18 20 11.3	+1.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	Eskdalemuir Ar	75.46	345	P	P	18 20 27.4	-0.2
	comp=Z,2.4nm,1.1s,mb3.8,baz=14,slow=5.0,SNR=4.5						
EKA	Eskdalemuir Ar	75.46	345	P	P	18 20 27.4	-0.2
EKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TXAR	Lajitas Array	78.36	59	P	P	18 20 44.4	+0.1
	comp=Z,0.9nm,0.5s,mb3.7,baz=297,slow=5.9,SNR=2.2						
TXAR	Lajitas Array	78.36	59	P	P	18 20 44.4	+0.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	149.58	93	PKPbc	PKPbc	18 28 31.9	+0.3
	comp=Z,1.0nm,0.5s,baz=255,slow=4.9,SNR=4.9						

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*ISCJB **02** 18:48:38.6±0.7, 17.91S±0.06×178.44W±0.07, h532km±10km, mb4.1/25, Error ellipse: s-maj=12.2km s-min=8.2km az=39.4*

*BJI **02** 18:48:38.1, 17.45S×178.06W, h528km, mB4.8, mb4.4*

*IDC **02** 18:48:39.8±1.6, 17.87S×178.41W, h534km±18km, mb3.6/16, mb1 3.8/18, mb1mx3.8/22, mbtmp3.7/18, Error ellipse: s-maj=14.3km s-min=11.2km az=131.0*

*NEIC **02** 18:48:39.8±0.9, 17.91S×178.47W, h529km±9km, mb4.4/12, Error ellipse: s-maj=12.6km s-min=8.9km az=128.0*

ISC 02 18:48:40.2±0.8**, 17.89S**±0.07×**178.46W**±0.08**, h537**km±10km**, n123, σ0.88**/51**, mb4.1**/25**, 10C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.55	59	P	P	18 50 32.2	-0.9
	21nm,0.3s,baz=86,slow=4.2,SNR=22						
AFI				S	S	18 52 01.0	-4.6
	3.2nm,0.3s,baz=330,slow=22,SNR=2.6						
FUNA	Funafuti	9.59	346	eP	P	18 50 55.0	+1.2
	71nm,0.6s						
RAO	Raoul Island	11.32	178	P	P	18 51 11.4	-0.1
	51nm,0.3s,baz=97,slow=21,SNR=2.7						
URZ	Urewera	20.66	190	P	P	18 52 40.8	-1.9
	5.3nm,0.3s,baz=310,slow=4.8,SNR=10						
URZ				S	S	18 55 50.0	-9.1
	3.6nm,0.4s,baz=229,slow=10,SNR=5.4						
TARA	Tarawa	20.93	335	eP	P	18 52 44.6	-0.8
	51nm,0.8s						
RPZ	Rata Peaks	27.23	197	P	P	18 53 41.1	+0.1
	2.4nm,0.5s,mb4.1,baz=138,slow=12,SNR=3.4						
ARMA	Armidale	29.91	240	eP	P	18 54 06.2	+1.6
CNB	Canberra Magne	33.40	232	⇑iP	P	18 54 35.7	+1.4
CTA	Charters Tower	33.41	261	eP	P	18 54 34.9	+0.3
	7.4nm,0.8s,mb4.3						
CTA	Charters Tower	33.41	261	P	P	18 54 34.6	0.0
	5.9nm,0.4s,mb4.5,baz=100,slow=12,SNR=8.2						
CTAO	Charters Tower	33.41	261	eP	P	18 54 34.4	-0.2
PMG	Port Moresby	34.41	280	eP	P	18 54 43.8	+0.6
	44nm,0.9s,mb5.0						
TOO	Toolangi	37.15	231	eP	P	18 55 06.4	+1.0
STKA	Stephens Creek	38.60	241	eP	P	18 55 18.5	+1.1
	20nm,0.6s,mb4.8						
STKA	Stephens Creek	38.60	241	P	P	18 55 18.6	+1.3
	22nm,0.5s,mb5.0,baz=90,slow=9.7,SNR=90						
STKA	Stephens Creek	38.60	241	eP	P	18 55 18.2	+0.8
	4.9nm,0.6s,mb4.2						
WB2	Warramunga Arr	44.58	260	eP	P	18 56 04.0	-0.8
WRAB	Tennant Creek	44.58	260	eP	P	18 56 03.8	-1.0
	7.6nm,0.8s,mb4.3						
ASAR	Alice Springs	44.75	254	P	P	18 56 06.3	+0.2
	80nm,0.6s,baz=88,slow=8.5,SNR=1128						
ASAR				PcP	PcP	18 57 36.4	-0.5
	2.1nm,0.5s,baz=92,slow=3.8,SNR=4.9						
ASAR				S	S	19 02 01.2	-2.9
	1.0nm,1.0s,baz=89,slow=16,SNR=5.6						
KAKA	Kakadu	47.54	269	eP	x	18 56 10.4	
	12nm,0.3s						
GUMO	Guam	47.83	308	P	P	18 56 29.4	0.0
	98nm,0.8s,baz=348,slow=23,SNR=2.7						
GUMO	Guam	47.83	308	P	P	18 56 29.4	-0.1
FORT	Forrest	49.97	245	eP	P	18 56 44.6	-0.6
	30nm,0.6s,mb4.9						
MBWA	Marble Bar	58.03	256	eP	P	18 57 41.1	-1.1
	5.4nm,0.4s,mb4.1						
KLBR	Kellerberrin	58.80	244	eP	P	18 57 46.5	-0.7
	17nm,0.7s,mb4.4						
MUN	Mundaring	60.09	243	eP	P	18 57 54.9	-0.9
SBA	Scott Base	60.43	184	eP	P	18 57 56.4	-0.9
	1.2nm,0.5s,mb3.5						
VNDA	Vanda	60.46	185	P	P	18 57 58.5	+1.1
	0.6nm,0.6s,mb3.1,baz=350,slow=7.4,SNR=8.4						
VNDA	Vanda	60.46	185	eP	P	18 57 58.0	+0.6
	1.0nm,0.9s,mb3.1						
MJAR	Matsushiro Arr	67.87	323	P	P	18 58 44.4	-0.7
	7.6nm,0.8s,mb4.3,baz=158,slow=6.0,SNR=14						
QSPA	South Pole Qui	72.16	180	eP	P	18 59 10.9	+1.0
	6.7nm,1.1s,mb4.0						
PETK	Petropavlovsk-	73.65	345	P	P	18 59 18.3	-0.5
	6.5nm,0.7s,mb4.2,baz=116,slow=7.4,SNR=13						
PETK	Petropavlovsk-	73.65	345	P	P	18 59 18.3	-0.5
KSRS	Korea Array	74.66	318	P	P	18 59 25.6	+0.7
	1.7nm,0.7s,mb3.6,baz=130,slow=6.8,SNR=7.4						
MDJ	Mudanjiang	78.15	325	P	P	18 59 43.9	+0.1
MDJ				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,116nm,3.7s						
MDJ	Mudanjiang	78.15	325	eP	P	18 59 44.4	+0.5
	comp=Z,12nm,0.9s,mb4.2						
NVAR	Mina Array Bea	79.44	44	P	P	18 59 51.4	+0.5
	comp=Z,3.1nm,0.7s,mb3.8,baz=227,slow=8.6,SNR=10						
LDFC	Landfair	79.88	48	eP	P	18 59 54.0	+0.7
CN2	Changchun	79.98	322	eP	P	18 59 52.8	-0.8
ELK	Elko	82.67	43	P	P	19 00 07.8	+0.3
	comp=Z,2.0nm,0.8s,mb3.7,baz=259,slow=4.7,SNR=8.4						
TXAR	Lajitas Array	86.02	58	P	P	19 00 25.4	+1.2
	comp=Z,4.1nm,0.8s,mb4.1,baz=220,slow=6.1,SNR=36						
TXAR	Lajitas Array	86.02	58	P	P	19 00 25.4	+1.2
ANMO	Albuquerque	86.12	52	P	P	19 00 24.2	-0.3
	comp=Z,0.8nm,0.6s,mb3.5,baz=211,slow=5.0,SNR=3.6						
XAN	Xi'an	86.22	307	P	P	19 00 25.5	+0.5
XAN				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.5						
XAN				AMB	AMB		
	comp=Z,96nm,6.0s						
HHC	Hu-ho-hao-te	87.23	314	eP	P	19 00 28.9	-0.7
HHC				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.4						
HHC				AMB	AMB		
	comp=Z,112nm,4.3s						
PDAR	Pinedale Array	87.37	43	P	P	19 00 30.4	+0.2
	comp=Z,1.1nm,0.6s,mb3.7,baz=220,slow=3.6,SNR=7.5						
CMAR	Chiang Mai Arr	88.84	290	P	P	19 00 38.8	+1.1
	comp=Z,3.1nm,0.9s,mb4.1,baz=106,slow=2.9,SNR=21						
SONM	Songino Array	93.51	319	P	P	19 00 58.6	+0.2
	comp=Z,0.5nm,0.6s,mb3.8,baz=131,slow=4.7,SNR=4.9						
YKA	Yellowknife Ar	94.34	25	P	P	19 01 00.7	-1.2
	comp=Z,0.7nm,0.8s,mb3.8,baz=244,slow=4.4,SNR=5.0						
ZALV	Zalesovo Beam	108.19	322	PKiKP	PKiKP	19 06 05.4	-1.5
	comp=Z,0.3nm,0.4s,baz=159,slow=1.2,SNR=3.1						
MKAR	Makanchi Array	109.09	314	PKiKP	PKiKP	19 06 07.2	-1.6
	comp=Z,0.8nm,0.5s,baz=115,slow=0.3,SNR=20						
MKAR	Makanchi Array	109.09	314	PKPdf	PKiKP	19 06 07.2	-1.6
ARCES	ARCESS Array B	126.29	350	PKP	PKPdf	19 06 39.7	-1.4
	comp=Z,3.9nm,0.9s,baz=328,slow=3.3,SNR=5.3						
NOA	NORSAR Array B	136.35	353	PKP	PKPdf	19 07 01.1	+0.7
	comp=Z,0.5nm,0.7s,baz=64,slow=17,SNR=2.3						
AKASG	Malin Array Be	140.53	332	PKhKP		19 07 00.2	
	comp=Z,0.4nm,0.4s,baz=46,slow=4.6,SNR=4.3						
TLCR		144.53	326	⇓iP	PKPdf	19 07 15.7	+0.1
BUR08	Bucovina Ar. S	144.56	332	ePKPdf	PKPdf	19 07 15.5	0.0
BURAR	Bucovina Array	144.58	332	⇑iP	PKPdf	19 07 16.2	+0.7
OJC	Ojcow	144.58	340	ePX	PKPdf	19 07 15.0	-0.5
BR131	Keskin Array S	144.74	315	ePKPdf	PKPdf	19 07 15.2	-0.9
BRTR	Keskin Array B	144.74	315	PKP	PKPdf	19 07 15.5	-0.6
	comp=Z,6.1nm,0.8s,baz=135,slow=3.8,SNR=29						
STHS	Stebnicka Huta	144.76	338	ePKP	PKPdf	19 07 16.3	+0.5
STHS	Stebnicka Huta	144.76	338	eP	PKPdf	19 07 16.3	+0.5
KOLS	Kolonicke sedl	144.77	336	ePKP	PKPdf	19 07 16.3	+0.5
KOLS	Kolonicke sedl	144.77	336	eP	PKPdf	19 07 16.3	+0.5
KSP	Ksiaz	145.08	344	eP	PKPdf	19 07 16.6	+0.3
NIE	Niedzica	145.09	338	ePX	PKPdf	19 07 17.3	+0.9
CRVS	Cervenica-Dubn	145.11	337	ePKP	PKPdf	19 07 16.8	+0.4
CRVS	Cervenica-Dubn	145.11	337	eP	PKPdf	19 07 16.8	+0.4
PLOR	Plostina	145.19	329	⇓iP	PKPdf	19 07 17.4	+0.7
TIRR	Tirgusor	145.23	325	⇓iP	PKPdf	19 07 17.7	+0.9
ANTO	Ankara	145.24	316	⇓iP	PKPbc	19 07 18.2	+0.3
TRPA	Tarpa	145.31	335	⇑iP	PKPdf	19 07 17.6	+0.8
HARR	Harsova	145.33	326	⇑iP	PKPbc	19 07 18.6	+0.5
CLL	Collm	145.44	347	⇓iPKPbc	PKPbc	19 07 17.5	-0.6
	comp=Z,11nm,0.8s						
OKC	Ostrava-Krasne	145.44	341	ePKP	PKPdf	19 07 17.6	+0.6
OKC				ex	x	19 07 27.0	
UPC	Upice	145.46	344	ePKP	PKPbc	19 07 18.0	-0.2
DPC	Dobruska-Polom	145.52	343	ePKP	PKPbc	19 07 18.4	0.0
BRG	Berggiesshubel	145.64	346	eP	PKPbc	19 07 18.0	-0.7
	comp=Z,5.0nm,0.8s						
MLR	Muntele Rosu	145.80	329	⇑iP	PKPbc	19 07 19.6	+0.2
PVCC	Panska Ves	145.81	345	ePKP	PKPbc	19 07 19.1	-0.1
VOIR		146.27	330	⇓iP	PKPbc	19 07 20.5	-0.2
DRGR		146.31	333	⇑iP	PKPbc	19 07 20.4	-0.3
PRU	Pruhonice	146.32	345	ePKP	PKPbc	19 07 20.1	-0.6
VRAC	Vranov	146.38	342	⇓iP	PKPbc	19 07 20.6	-0.3
VYHS	Vyhne	146.39	339	ePKP	PKPbc	19 07 20.4	-0.5
VYHS	Vyhne	146.39	339	eP	PKPbc	19 07 20.4	-0.5
KOLL	Kolacno	146.46	340	ePKP	PKPbc	19 07 21.2	+0.1
KOLL	Kolacno	146.46	340	eP	PKPbc	19 07 21.2	+0.1
SMOL	Smolenice	146.83	341	ePKP	PKPbc	19 07 22.6	+0.5
SMOL	Smolenice	146.83	341	eP	PKPbc	19 07 22.6	+0.5
GRA1	Grafenberg Arr	147.33	348	ePKP	PKPbc	19 07 22.9	-0.5
GRF	Grafenberg Arr	147.33	348	ePKP	PKPbc	19 07 22.9	-0.5
KHC	Kasperske Hory	147.35	345	ePKP	PKPbc	19 07 23.3	-0.2
KHC				ex	x	19 07 26.0	
GZR	Gura Zlata	147.36	332	⇓iP	PKPbc	19 07 22.9	-0.7
GERES	GERESS Array B	147.59	345	PKPbc	PKPbc	19 07 23.7	-0.4
	comp=Z,4.1nm,0.6s,baz=17,slow=3.1,SNR=16						
BZS	Buzias	147.70	333	⇑iP	PKPbc	19 07 23.6	-0.9
GIVF	Givet	147.76	356	ePKP1	PKPbc	19 07 23.7	-0.8
	comp=Z,16nm,0.7s						
CONA	Conrad Observa	147.84	342	⇓iPKPbc	PKPbc	19 07 24.8	+0.1
	comp=Z,7.8nm,1.1s						
CSNA	Conrad Observa	147.84	342	⇓iPKPbc	PKPbc	19 07 24.7	0.0
	comp=Z,6.7nm,1.0s						
BAIF	Baives	147.84	357	ePKP1	PKPbc	19 07 24.1	-0.6
PKSM	Moragy	148.40	337	⇑iP	PKPbc	19 07 25.4	-0.8
FLN	La Foliniere	149.16	3	ePKP1	PKPbc	19 07 26.9	-1.1
CDF	Champ du Feu	149.20	353	ePKP1	PKPbc	19 07 27.6	-0.5
VTS	Vitosha	149.25	328	⇑iP	PKPbc	19 07 28.1	-0.3
LDF	La Druitiere	149.35	2	ePKP1	PKPbc	19 07 27.3	-1.2
	comp=Z,4.6nm,0.4s						
WATA	Walderalm	149.50	346	⇓iPKPbc	PKPbc	19 07 28.1	-0.8
	comp=Z,2.7nm,0.5s						
GRR	Gorron	149.52	3	ePKP1	PKPbc	19 07 27.9	-1.0
	comp=Z,12nm,0.6s						
WTTA	Wattenberg	149.55	346	⇓iPKPbc	PKPbc	19 07 28.6	-0.4
	comp=Z,8.6nm,0.6s						
HAU	Haudompre	149.71	354	ePKP1	PKPbc	19 07 28.5	-0.8
ABTA	Abfaltersbach	149.83	345	⇑iPKPbc	PKPbc	19 07 28.7	-1.0
	comp=Z,7.5nm,0.6s						
HINF	Hinteralfeld	149.84	353	ePKP1	PKPbc	19 07 28.5	-1.2
	comp=Z,8.9nm,0.8s						
DAVOX	Davos/Dischmat	150.38	348	PKPbc	PKPbc	19 07 30.7	-0.2
	comp=Z,8.4nm,0.6s,baz=252,slow=2.1,SNR=21						
LOR	Lormes	150.64	357	ePKP1	PKPbc	19 07 30.8	-0.7
	comp=Z,8.4nm,0.5s						
SSF	Saint Saulge	150.87	357	ePKP1	PKPbc	19 07 31.3	-0.8
CABF	La Chapelle	151.12	354	ePKP1	PKPbc	19 07 32.4	-0.2
AVF	Avril sur Loir	151.14	357	ePKP1	PKPbc	19 07 31.9	-0.8
MFF	Saint Martin d	151.34	2	ePKP1	PKPbc	19 07 32.0	-1.1
BGF	Bois d'Agland	151.40	358	ePKP1	PKPbc	19 07 32.5	-0.8
TCF	Toulx Ste Croi	151.68	359	ePKP1	PKPbc	19 07 33.4	-0.5
ORIF	Oris-en-Rattie	152.81	353	ePKP1	PKPbc	19 07 35.8	-0.6
MBDF	Montbardon	152.89	352	ePKP1	PKPbc	19 07 35.8	-0.8
	comp=Z,7.9nm,0.8s						
TORD	Torodi Ar. Bea	175.28	182	PKP	PKPdf	19 07 47.9	-1.4
	comp=Z,0.6nm,0.8s,baz=319,slow=1.7,SNR=3.1						

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*NEIC **02** 19:40:02.8, 38.27N×21.58E, h35km, MD3.5(ATH), After ATH.*

*ATH **02** 19:40:02.7, 38.27N×21.59E, h35km±1km, MD3.5/5*

*ISCJB **02** 19:40:03.7±0.5, 38.26N±0.03×21.63E±0.04, h31km±5km, Error ellipse: s-maj=5.6km s-min=5.1km az=139.7*

*CSEM **02** 19:40:03.4±0.2, 38.27N×21.60E, h30km, MD3.5, Error ellipse: s-maj=4.9km s-min=4.2km az=127.0*

*THE **02** 19:40:04.0, 38.20N×21.62E, h32km±32km, ML2.8/2, Error ellipse: s-maj=32.0km s-min=0.7km az=241.0*

ISC 02 19:40:03.8±0.6**, 38.27N**±0.04×**21.62E**±0.04**, h28**km±6km**, n16, σ0.80**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.24	211	ePB	Pb	19 40 10.0	-0.3
RLS				eSB	Sb	19 40 15.7	+1.0
EVR	Evrytania	0.67	12	ePN	Pn	19 40 16.1	-1.2
EVR				eSN	Sn	19 40 26.5	-0.3
EVR	Evrytania	0.67	12	ePn	Pn	19 40 16.0	-1.3
EVR				eSn	Sn	19 40 26.9	+0.1
KFL	Anninata	0.68	257	P	Pb	19 40 16.7	-0.4
KFL				S	Sb	19 40 25.6	-0.5
VLS	Valsamata	0.82	264	P	Pn	19 40 18.3	-1.1
VLS				S	Sb	19 40 30.2	+0.1
VLS	Valsamata	0.82	264	ePN	Pn	19 40 18.4	-1.0
VLS				eSN	Sn	19 40 30.6	0.0
VLS	Valsamata	0.82	264	ePn	Pn	19 40 18.3	-1.1
VLS				eSn	Sn	19 40 30.6	0.0
AGG	Agios Georgios	0.94	36	P	Pn	19 40 20.3	-0.7
AGG				S	Sn	19 40 34.5	+1.0
LTK	Loutraki	1.09	102	P	Pn	19 40 22.6	-0.5
LTK				S	Sn	19 40 36.4	-0.8
ITM	Ithomi	1.11	167	ePN	Pn	19 40 23.7	+0.3
ITM				eSN	Sn	19 40 39.4	+1.7
ITM	Ithomi	1.11	167	ePn	Pn	19 40 23.7	+0.3
ITM				eSn	Sn	19 40 39.9	+2.2
LKR	Lokris	1.15	70	P	Pn	19 40 24.0	+0.1
LKR				S	Sn	19 40 38.4	-0.3
THL	Klokotos Trika	1.33	13	P	Pn	19 40 27.2	+0.7
THL				S	Sn	19 40 44.9	+1.6
DID	Didima	1.48	120	P	Pn	19 40 27.9	-0.7
DID				S	Sn	19 40 46.2	-0.8
VLI	Veliai	1.86	146	ePN	Pn	19 40 34.5	+0.7
LIT	Litokhoron	1.95	20	P	Pn	19 40 35.4	+0.4

GUC 02 20:14:10.6±0.6**, 22.99S**×**69.83W, h54**km±4km**, MD3.8, ML3.5, 2C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECH	Pedro de Valdi	0.41	20	⇑iP	Pn	20 14 21.8	+0.6
PECH				iS	Sn	20 14 29.8	+1.0
PECH				AML	AML	20 14 30.3	
	comp=E,8μm,0.3s						
CEN1	Los Morros	0.53	221	eP	Pn	20 14 25.6	+3.2
CEN1				iS	Sn	20 14 36.7	+5.7
CEN1				AML	AML	20 14 39.5	
	comp=N,901nm,0.7s						
MACH	Maria Elena	0.79	5	iP	Pn	20 14 26.3	+0.6
MACH				iS	Sn	20 14 38.0	+1.4
LVC	Limon Verde	0.92	66	eP	Pn	20 14 28.4	+1.0
LVC				iS	Sn	20 14 41.9	+2.1
LVC				AML	AML	20 14 42.6	
	comp=E,3μm,0.2s						
TOCH	Tocopilla	0.95	339	⇑iP	Pn	20 14 28.1	+0.2
TOCH				iS	Sn	20 14 41.5	+1.0
TOCH				AML	AML	20 14 45.0	
	comp=E,2μm,0.1s						
SPCH	San Pedro de A	1.50	87	AML	AML	20 15 04.9	
	comp=E,2μm,0.3s						
CPN1	Cerro Paranal	1.71	198	iP	Pn	20 14 39.4	+1.3
CPN1				iS	Sn	20 15 01.3	+2.4
CPN1				AML	AML	20 15 05.1	
	comp=N,620nm,0.6s						
PB01	Plate Boundary	1.96	9	AML	AML	20 15 11.1	
	comp=E,1μm,0.3s						

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*IDC **02** 20:16:14.7±2.2, 2.21N×96.05E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.6/19, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=68.8km s-min=25.6km az=59.0*

*ISCJB **02** 20:16:18.1±1.6, 2.3N±0.2×96.3E±0.2, h33km, mb3.7/6, Error ellipse: s-maj=32.2km s-min=17.6km az=41.2*

ISC 02 20:16:20.6±1.6**, 2.3N**±0.2×**96.4E**±0.2**, h35**km**, n8, σ1.07**/8**, mb3.7**/6**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.60	79	⇑eP	Pn	20 16 58.7	-1.5
CMAR	Chiang Mai Arr	16.26	9	Pn	Pn	20 20 08.0	+1.6
	0.1nm,0.3s,baz=195,slow=11,SNR=15						
ASAR	Alice Springs	44.71	127	P	P	20 24 31.7	+1.1
	0.2nm,0.6s,mb3.1,baz=299,slow=8.3,SNR=3.8						
KSRS	Korea Array	45.43	36	P	P	20 24 37.2	+1.0
	0.4nm,0.4s,mb3.6,baz=220,slow=8.8,SNR=3.6						
MKAR	Makanchi Array	45.98	347	P	P	20 24 40.4	0.0
	1.0nm,0.7s,mb3.9,baz=161,slow=8.9,SNR=12						
SONM	Songino Array	46.18	9	P	P	20 24 41.8	-0.1
	0.3nm,0.4s,mb3.6,baz=193,slow=8.6,SNR=4.0						
KURK	Kurchatov	50.53	345	P	P	20 25 14.4	-0.9
	0.5nm,0.2s,mb4.1,baz=164,slow=7.7,SNR=2.2						
ZALV	Zalesovo Beam	52.35	351	P	P	20 25 27.6	-1.3
	0.9nm,0.5s,mb4.0,baz=168,slow=6.8,SNR=6.5						

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*ISCJB **02** 20:18:43.9±0.5, 67.74N±0.05×139.3E±0.1, h10km, mb3.9/9, Error ellipse: s-maj=8.4km s-min=5.0km az=139.9*

*MOS **02** 20:18:46.1±1.9, 67.72N×138.63E, h10km, mb4.2/5, Error ellipse: s-maj=35.5km s-min=16.4km az=96.3*

*IDC **02** 20:18:47.6±1.9, 68.17N×138.64E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/22, mbtmp3.8/5, Error ellipse: s-maj=52.7km s-min=25.9km az=140.0*

*NEIC **02** 20:18:49.6±0.7, 67.74N×139.33E, h35km, mb4.0/4, Error ellipse: s-maj=15.1km s-min=13.5km az=134.0*

*NERS **02** 20:18:53.4, 68.11N×140.67E, h33km*

ISC 02 20:18:46.0±2.0**, 67.74N**±0.05×**139.4E**±0.2**, h10**km±14km**, n28, σ1.22**/32**, mb3.9**/9**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	Tiksi	5.36	322	eP	Pn	20 20 06.1	+0.3
TIXI				e		20 21 05.4	
TIXI				pmax	pmax		
	comp=Z,15nm,0.6s						
TIXI	Tiksi	5.36	322	ePn	Pn	20 20 06.1	+0.3
	comp=Z,15nm,0.6s						
TIXI				eSn	Sn	20 21 05.4	-2.1
YAK	Yakutsk	7.05	220	ePn	Pn	20 20 30.8	+1.7
	comp=Z,28nm,0.8s						
YAK				eSn	Sn	20 21 49.4	+0.2
OCHR	Omchak	7.09	145	eP	Pn	20 20 37.7	+8.0
OCHR				ePg	Pg	20 21 01.8	+0.1
OCHR				Pgmax		20 22 12.9	
	comp=Z,30nm,0.2s						
OCHR				eS	Sb	20 22 12.9	-0.8
OCHR				eSg	Sg	20 22 32.6	-0.8
OCHR				Sgmax		20 22 42.5	
	comp=Z,10.0nm,0.3s						
OCHR				Sgmax		20 22 42.5	
	comp=Z,30nm,0.4s						
SEY	Seymchan	7.26	125	ePg	Pg	20 21 00.5	-4.4
SEY				eSg	Sg	20 22 31.4	-7.4
SEY				Sgmax		20 22 45.8	
	comp=Z,30nm,0.8s						
SEY				Sgmax		20 22 45.8	
	comp=Z,20nm,0.8s						
SNGR	Sinegor'e	7.37	135	e	Sg	20 22 50.6	+8.4
TLAR	Talaya	8.68	134	eSg	Sx	20 23 20.0	
MGD	Magadan 1	9.19	142	eSg	Sx	20 23 37.6	
MGD				Sgmax		20 23 52.0	
	comp=Z,50nm,0.7s						
BILL	Bilibino	10.11	76	ePn	Pn	20 21 11.6	+0.8
	comp=Z,26nm,2.4s						
MDJ	Mudanjiang	23.75	198	eP	P	20 23 59.3	+1.1
	comp=Z,11nm,1.1s,mb4.2						
SONM	Songino Array	26.03	237	P	P	20 24 23.2	+4.4
	comp=Z,1.8nm,1.0s,mb3.6,baz=26,slow=8.8,SNR=8.6						
SONM	Songino Array	26.03	237	P	P	20 24 23.2	+4.4
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAJO	Matsushiro	31.25	182	eP	P	20 25 03.3	-2.2
	comp=Z,303nm,3.0s						
KURK	Kurchatov	33.69	271	eP	P	20 25 26.3	-0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
KURK	Kurchatov	33.69	271	eP	P	20 25 26.3	-0.4
	comp=Z,1.5nm,0.8s,mb4.0						
KEV	Kevo	35.28	326	eP	P	20 25 40.5	+0.3
	comp=Z,160nm,1.9s						
MKAR	Makanchi Array	35.51	263	P	P	20 25 42.4	0.0
	comp=Z,1.2nm,0.9s,mb3.8,baz=35,slow=7.1,SNR=7.5						
MKAR	Makanchi Array	35.51	263	P	P	20 25 42.4	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	35.51	263	P	P	20 25 42.4	0.0
ARU	Arti	36.62	293	eP	P	20 25 49.7	-2.1
ARU				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
ARU	Arti	36.62	293	eP	P	20 25 49.7	-2.1
	comp=Z,1.2nm,0.6s,mb3.9						
YKA	Yellowknife Ar	39.64	44	P	P	20 26 19.0	+1.9
	comp=Z,0.6nm,0.9s,mb3.3,baz=321,slow=8.5,SNR=4.9						
AAK	Ala-Archa	41.99	267	P	P	20 26 39.0	+2.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
AAK	Ala-Archa	41.99	267	P	P	20 26 39.0	+2.3
	comp=Z,2.1nm,0.8s,mb3.8						
NOA	NORSAR Array B	46.12	328	P	P	20 27 09.5	-0.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=26,slow=7.8,SNR=3.4						
NOA	NORSAR Array B	46.12	328	P	P	20 27 09.5	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	50.94	310	P	P	20 27 46.4	-0.4

	comp=Z,1.9nm,0.5s,mb4.3,baz=30,slow=9.1,SNR=3.0						
AKASG	**Malin Array Be**	**50.94**	**310**	P	**P**	**20 27 46.4**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						

BJI ***02*** *20:21:47.2, 3686N×2878E, h30km, mB5.0, mb4.7, Ms4.7, Msz4.4*
ISCJB ***02*** *20:21:48.6±0.1, 3691N±001×2933E±001, h10km, mb4.6/67, MS3.8/14, Error ellipse: s-maj=1.7km s-min=1.4km az=40.1*
CSEM ***02*** *20:21:49.6±0.0, 3695N×2933E, h20km, mb4.6/20, Ms3.4, Mw4.0, Error ellipse: s-maj=1.3km s-min=1.0km az=29.0*
DDA ***02*** *20:21:49.8, 3703N×2932E, h38km±3km, Md4.2, Ml4.5*
NEIC ***02*** *20:21:49.0, 3707N×2920E, h8km, mb4.6/46, ML4.5(ISK), After ISK.*
NEIC Felt at Sogutludere.
ISK ***02*** *20:21:50.0, 3707N×2922E, h7km, ML4.5*
NIC ***02*** *20:21:51.8±0.3, 3727N×29.16E, h25km, mb4.5, ML4.2, MW4.0, Western Turkey, 16 km S Abbas*
GII ***02*** *20:21:52.8±0.0, 3648N×29.14E, h0km, mb4.1/3, ML3.8/4*
THE ***02*** *20:21:52.8, 3703N×2934E, h10km±3km, ML4.8/3, Error ellipse: s-maj=4.1km s-min=1.4km az=100.0*
IDC ***02*** *20:21:52.7±2.1, 3695N×2930E, h33km±16km, mb4.3/19, mb1 4.4/31, mb1mx4.3/36, mbtmp4.3/31, ML4.1/10, MS3.7/11, Ms1 3.7/11, ms1mx3.4/35, Error ellipse: s-maj=13.2km s-min=10.5km az=167.0*
MOS ***02*** *20:21:52.1±1.0, 3697N×2933E, h42km, mb4.6/34, Error ellipse: s-maj=4.5km s-min=2.7km az=113.0*
HLW ***02*** *20:21:59.5, 3644N×2923E, h33km, Mb4.7*
SZGRF ***02*** *20:21:59.3, 3771N×2968E, h10km, mb4.6, Turkey*
ISC 02 20:21:51.7±0.4**, 3693N**±001×**2930E**±001**, h18**km±3km**, h27**km±3.3km**:pP-P, n615,** σ1**s**22/658**, mb4.6**/67**, MS3.8**/14**, 20C-19D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.37**	**34**	*i* P	**Pg**	**20 21 56.5**	**-2.9**
GOLH				*i* S	**Sg**	**20 22 03.3**	**-1.4**
ELL	**Elmali**	**0.52**	**110**	PG	**Pg**	**20 22 00.9**	**-1.2**
ELL				*e*SG	**Sg**	**20 22 11.7**	**+2.6**
ELL	**Elmali**	**0.52**	**110**	Pg	**Pg**	**20 22 00.9**	**-1.2**
TURN	**Turunc**	**0.56**	**264**	*i* P	Px	20 22 05.0	
TURN				*i* S	Sx	20 22 16.1	
TURN	**Turunc**	**0.56**	**264**	*i* P	Px	20 22 04.9	
TURN				*i* S	Sx	20 22 16.1	
AKAS	**Kas**	**0.74**	**161**	*i* P	**Pb**	**20 22 05.6**	**-0.4**
AKAS				*i* S	**Sg**	**20 22 19.6**	**+3.7**
AKAS	**Kas**	**0.74**	**161**	*i* P	**Pb**	**20 22 05.6**	**-0.4**
AKAS				S	**Sg**	**20 22 23.4**	**+7.4**
KSL	**Kastellorizon**	**0.81**	**164**	*e*P	**Pb**	**20 22 06.1**	**-1.2**
YER	**Yerkesik**	**0.84**	**284**	*e*PG	**Pg**	**20 22 05.0**	**-3.1**
YER	**Yerkesik**	**0.84**	**284**	Pg	**Pg**	**20 22 04.6**	**-3.5**
YER				Sg	**Sg**	**20 22 15.6**	**-3.7**
DENT	**Denizli**	**0.85**	**345**	PG	**Pg**	**20 22 04.0**	**-4.3**
DENT	**Denizli**	**0.85**	**345**	Pg	**Pg**	**20 22 03.8**	**-4.5**
ANTB	**Antalya**	**1.08**	**91**	*e*PN	**Pn**	**20 22 12.4**	**+0.5**
BCK	**Bucak**	**1.16**	**62**	*e*PN	**Pn**	**20 22 12.5**	**-0.5**
BCK	**Bucak**	**1.16**	**62**	Pn	**Pn**	**20 22 12.7**	**-0.3**
ARG	**Arkhangelos**	**1.19**	**233**	*e*P	**Pn**	**20 22 11.5**	**-1.9**
ARG	**Arkhangelos**	**1.19**	**233**	P	**Pn**	**20 22 12.0**	**-1.4**
MLSB	**Milas**	**1.27**	**287**	*e*PN	**Pn**	**20 22 12.8**	**-1.8**
MLSB	**Milas**	**1.27**	**287**	Pn	**Pn**	**20 22 12.7**	**-1.9**
AYDN	**Tasoluk**	**1.35**	**303**	*i* P	**Pn**	**20 22 13.9**	**-1.7**
AYDN				*i* S	**Sn**	**20 22 33.1**	**+0.1**
AYDN	**Tasoluk**	**1.35**	**303**	P	**Pn**	**20 22 13.9**	**-1.7**
AYDN				S	**Sn**	**20 22 33.1**	**0.0**
DAT	**Datca**	**1.40**	**262**	*e*PN	**Pn**	**20 22 15.7**	**-0.7**
KHL	**Karahalli**	**1.40**	**7**	*e*PN	**Pn**	**20 22 14.8**	**-1.5**
KHL	**Karahalli**	**1.40**	**7**	Pn	**Pn**	**20 22 14.7**	**-1.7**
KHAL	**Karahalli**	**1.44**	**6**	*i* P	**Pn**	**20 22 15.4**	**-1.6**
KHAL				*i* S	**Sg**	**20 22 34.8**	**-3.6**
BDRM	**Kayabasi**	**1.49**	**276**	*i* P	**Pn**	**20 22 16.6**	**-1.1**
BDRM				*i* S	**Sn**	**20 22 37.2**	**+0.5**
BDRM	**Kayabasi**	**1.49**	**276**	P	**Pn**	**20 22 17.8**	**+0.2**
BDRM				S	**Sn**	**20 22 36.5**	**-0.2**
BODT	**Bodrum**	**1.60**	**275**	*e*PN	**Pn**	**20 22 18.9**	**-0.2**
BODT	**Bodrum**	**1.60**	**275**	Pn	**Pn**	**20 22 17.9**	**-1.2**
KULA	**Kula-Manisa**	**1.66**	**342**	*e*PN	**Pn**	**20 22 17.9**	**-2.0**
NISR	**Nisiros**	**1.77**	**260**	*e*P	**Pn**	**20 22 22.5**	**+1.0**
GCAM	**G?zelcaml?**	**1.82**	**296**	*i* P	**Pn**	**20 22 21.0**	**-1.1**
GCAM				*i* S	**Sn**	**20 22 43.0**	**-1.7**
SHUT	**Suhut-Afyon**	**1.90**	**31**	*e*PN	**Pn**	**20 22 22.6**	**-0.6**
SMG	**Samos**	**2.11**	**292**	*e*P	**Pn**	**20 22 25.5**	**-0.7**
SMG	**Samos**	**2.11**	**292**	P	**Pn**	**20 22 25.4**	**-0.8**
KDAG	**Bornova**	**2.18**	**313**	*i* P	**Pn**	**20 22 25.9**	**-1.2**
KDAG				*i* S	**Sn**	**20 22 51.8**	**-1.9**
BOLV	**Bolvadin**	**2.21**	**36**	*i* P	**Pn**	**20 22 27.4**	**0.0**
BOLV				*i* S	**Sn**	**20 22 54.5**	**+0.1**
ALT	**Altintas**	**2.21**	**16**	*e*PN	**Pn**	**20 22 26.5**	**-1.1**
ALT	**Altintas**	**2.21**	**16**	Pn	**Pn**	**20 22 26.4**	**-1.1**
KARP	**Karpathos**	**2.21**	**232**	*e*P	**Pn**	**20 22 28.5**	**+0.9**
KARP	**Karpathos**	**2.21**	**232**	P	**Pn**	**20 22 28.8**	**+1.2**
AKHS	**Akhisar**	**2.27**	**329**	*i* P	**Pn**	**20 22 26.7**	**-1.7**
AKHS				*i* S	**Sg**	**20 23 03.9**	**-1.0**
AKS	**Akhisar**	**2.27**	**329**	*e*PN	**Pn**	**20 22 26.8**	**-1.5**
AKS	**Akhisar**	**2.27**	**329**	Pn	**Pn**	**20 22 27.0**	**-1.4**
BLCB	**Balcova**	**2.31**	**310**	P	**Pn**	**20 22 27.9**	**-0.9**
BLCB				S	**Sn**	**20 22 57.0**	**+0.3**
BLCB	**Balcova**	**2.31**	**310**	*e*Pn	**Pn**	**20 22 27.6**	**-1.2**
BLCB	**Balcova**	**2.31**	**310**	P	**Pn**	**20 22 27.9**	**-0.9**
BLCB				S	**Sn**	**20 22 57.0**	**+0.3**
BLCB	**Balcova**	**2.31**	**310**	Pn	**Pn**	**20 22 27.2**	**-1.6**
HDMB	**Hadim**	**2.55**	**88**	*e*PN	**Pn**	**20 22 34.1**	**+2.0**
HDMB	**Hadim**	**2.55**	**88**	Pn	**Pn**	**20 22 34.3**	**+2.1**
KONT	**Konya--Tatoy**	**2.63**	**67**	*e*PN	**Pn**	**20 22 34.5**	**+1.2**
DST	**Dursunbey**	**2.72**	**349**	*e*PN	**Pn**	**20 22 33.0**	**-1.5**
LADK	**Ladik-KONYA**	**2.74**	**62**	*e*PN	**Pn**	**20 22 35.9**	**+1.1**
LADK	**Ladik-KONYA**	**2.74**	**62**	Pn	**Pn**	**20 22 35.8**	**+1.0**
KIZT	**Kizilcal**	**2.82**	**46**	*e*PN	**Pn**	**20 22 36.5**	**+0.7**
KIZT	**Kizilcal**	**2.82**	**46**	Pn	**Pn**	**20 22 36.4**	**+0.6**
ESKT	**Eskisehir**	**2.86**	**25**	*e*PN	**Pn**	**20 22 36.0**	**-0.4**
BALB	**Balikesir**	**2.93**	**338**	*e*PN	**Pn**	**20 22 36.1**	**-1.2**
BALB	**Balikesir**	**2.93**	**338**	Pn	**Pn**	**20 22 35.9**	**-1.4**
CHOS	**Chios island**	**2.96**	**300**	P	**Pn**	**20 22 37.3**	**-0.5**
CHOS				S	**Sn**	**20 23 13.2**	**+0.4**
APE	**Apeiranthos**	**3.02**	**274**	P	**Pn**	**20 22 38.7**	**0.0**
APE				S	**Sn**	**20 23 16.0**	**+1.6**
APE	**Apeiranthos**	**3.02**	**274**	*e*P	**Pn**	**20 22 39.0**	**+0.3**
APE	**Apeiranthos**	**3.02**	**274**	⇓*i*P	**Pn**	**20 22 38.7**	**0.0**
APE	**Apeiranthos**	**3.02**	**274**	⇓*i*P	**Pn**	**20 22 38.6**	**-0.1**
ZKR	**Zakros**	**3.09**	**235**	P	**Pn**	**20 22 41.4**	**+1.8**
ZKR				S	**Sn**	**20 23 18.9**	**+2.9**
THR1	**Thera Island**	**3.14**	**261**	P	**Pn**	**20 22 41.5**	**+1.2**
THR3	**Thira Island,**	**3.18**	**262**	P	**Pn**	**20 22 41.7**	**+0.9**
THR6	**Thira Island,**	**3.19**	**261**	P	**Pn**	**20 22 42.3**	**+1.3**
PPCY	**Paphos**	**3.20**	**129**	⇓*e*P	**Pn**	**20 22 43.6**	**+2.4**
ALFC	**Alevga**	**3.21**	**123**	P	**Pn**	**20 22 43.4**	**+2.2**
	23nm,0.3s						
ALFC				S	**Sn**	**20 23 23.5**	**+4.6**
CAVI	**Cavuskoy**	**3.29**	**7**	*e*PN	**Pn**	**20 22 41.7**	**-0.6**
PRK	**Paraskevi**	**3.33**	**315**	P	**Pn**	**20 22 42.1**	**-0.7**
PRK				S	**Sn**	**20 23 21.7**	**-0.1**
PRK	**Paraskevi**	**3.33**	**315**	P	**Pn**	**20 22 43.0**	**+0.2**
KCT	**Karacabey**	**3.41**	**348**	*e*PN	**Pn**	**20 22 43.1**	**-0.9**
KCT	**Karacabey**	**3.41**	**348**	Pn	**Pn**	**20 22 42.8**	**-1.2**
NPS	**Neapolis**	**3.42**	**242**	*e*P	**Pn**	**20 22 44.8**	**+0.7**
NPS	**Neapolis**	**3.42**	**242**	P	**Pn**	**20 22 45.4**	**+1.3**
LEF	**Lefka**	**3.42**	**121**	*e*PN	**Pn**	**20 22 46.2**	**+2.0**
LEF	**Lefka**	**3.42**	**121**	Pn	**Pn**	**20 22 46.1**	**+1.9**
GPA	**Golpazari**	**3.44**	**13**	*e*PN	**Pn**	**20 22 44.0**	**-0.4**
GPA	**Golpazari**	**3.44**	**13**	Pn	**Pn**	**20 22 44.8**	**+0.4**
GEMT	**Gemlik**	**3.50**	**359**	*e*PN	**Pn**	**20 22 44.4**	**-0.8**
GEMT	**Gemlik**	**3.50**	**359**	Pn	**Pn**	**20 22 44.3**	**-0.9**
ADVT	**Abdulvahap**	**3.51**	**5**	*e*PN	**Pn**	**20 22 44.7**	**-0.7**
ADVT	**Abdulvahap**	**3.51**	**5**	Pn	**Pn**	**20 22 44.6**	**-0.8**
LAST	**Lasithi**	**3.57**	**241**	P	**Pn**	**20 22 46.9**	**+0.8**
IKL	**Isikli**	**3.59**	**100**	*e*PN	**Pn**	**20 22 49.3**	**+2.8**
GULT	**Gulveren**	**3.62**	**15**	*e*PN	**Pn**	**20 22 46.5**	**-0.4**
GULT	**Gulveren**	**3.62**	**15**	Pn	**Pn**	**20 22 46.4**	**-0.5**
MAMC	**Mammari**	**3.63**	**118**	P	**Pn**	**20 22 49.4**	**+2.4**
SZAC	**Souni-Zanaja**	**3.63**	**126**	P	**Pn**	**20 22 49.4**	**+2.4**
	8.4nm,0.2s						
SZAC				S	**Sn**	**20 23 34.8**	**+5.4**
YLV	**Yalova**	**3.63**	**1**	*e*PN	**Pn**	**20 22 46.2**	**-0.8**
EYL	**Eskiyayla**	**3.69**	**10**	Pn	**Pn**	**20 22 47.2**	**-0.6**
LFK	**Lefkose**	**3.80**	**114**	*e*PN	**Pn**	**20 22 52.6**	**+3.2**
LFK	**Lefkose**	**3.80**	**114**	Pn	**Pn**	**20 22 52.5**	**+3.1**
CSS	**Prodhromos**	**3.81**	**120**	⇑P	**Pn**	**20 22 51.1**	**+1.6**
	8.2nm,0.7s						
CSS				S	**Sn**	**20 23 42.3**	**+8.4**
CSS	**Prodhromos**	**3.81**	**120**	P	**Pn**	**20 22 50.5**	**+1.0**
CSS	**Prodhromos**	**3.81**	**120**	*e*Pn	**Pn**	**20 22 49.5**	**0.0**
CSS	**Prodhromos**	**3.81**	**120**	⇑P	**Pn**	**20 22 51.1**	**+1.6**
	8.2nm,0.7s						
CSS				S	**Sn**	**20 23 42.3**	**+8.4**
CSS	**Prodhromos**	**3.81**	**120**	*e*Pn	**Pn**	**20 22 49.5**	**0.0**
MDU	**Mudurnu**	**3.83**	**22**	*e*PN	**Pn**	**20 22 49.9**	**+0.1**
MDU	**Mudurnu**	**3.83**	**22**	Pn	**Pn**	**20 22 49.8**	**0.0**
HRT	**Hereke**	**3.90**	**4**	*e*PN	**Pn**	**20 22 49.8**	**-0.8**
IDI	**Anoyia**	**3.93**	**247**	Pn	**Pn**	**20 22 51.6**	**+0.4**
	48nm,0.3s,baz=62,slow=16,SNR=365						
IDI				Sn	**Sn**	**20 23 38.0**	**+1.2**
	26nm,0.3s,baz=35,slow=21,SNR=3.6						
LPK	**Lapseki**	**3.97**	**331**	*e*PN	**Pn**	**20 22 50.8**	**-0.9**
LOD	**Lodumlu**	**4.01**	**42**	*e*PN	**Pn**	**20 22 53.2**	**+0.9**
LOD	**Lodumlu**	**4.01**	**42**	Pn	**Pn**	**20 22 53.1**	**+0.8**
ANTO	**Ankara**	**4.01**	**42**	*e*PN	**Pn**	**20 22 53.4**	**+1.1**
ANTO	**Ankara**	**4.01**	**42**	*e*Pn	**Pn**	**20 22 53.0**	**+0.7**
ANTO	**Ankara**	**4.01**	**42**	⇑*i*P	**Pn**	**20 22 53.3**	**+1.0**
ANTO	**Ankara**	**4.01**	**42**	⇑*i*P	**Pn**	**20 22 53.3**	**+1.0**
ANTO	**Ankara**	**4.01**	**42**	*e*Pn	**Pn**	**20 22 53.0**	**+0.8**
RKY	**Sarkoy-Tekirda**	**4.10**	**337**	*e*PN	**Pn**	**20 22 52.7**	**-0.7**
SIVA	**Sivas**	**4.11**	**244**	P	**Pn**	**20 22 55.8**	**+2.1**
ISK	**Istanbul-Kandi**	**4.13**	**357**	*e*PN	**Pn**	**20 22 53.0**	**-0.9**
EREN	**Erenkoy**	**4.18**	**108**	*e*PN	**Pn**	**20 22 58.0**	**+3.5**
EREN	**Erenkoy**	**4.18**	**108**	Pn	**Pn**	**20 22 57.9**	**+3.4**
MERS	**Mersin**	**4.18**	**89**	*e*PN	**Pn**	**20 22 57.5**	**+2.9**
GADA	**Gvkgeada**	**4.21**	**322**	*e*PN	**Pn**	**20 22 54.1**	**-0.8**
SILT	**Sile**	**4.22**	**3**	*e*PN	**Pn**	**20 22 55.2**	**0.0**
SILT	**Sile**	**4.22**	**3**	Pn	**Pn**	**20 22 54.5**	**-0.7**
KAMT	**Kaman**	**4.24**	**54**	*e*PN	**Pn**	**20 22 56.8**	**+1.4**
BGKT	**Bogazkoy**	**4.26**	**355**	*e*PN	**Pn**	**20 22 54.8**	**-0.9**
BGKT	**Bogazkoy**	**4.26**	**355**	Pn	**Pn**	**20 22 54.7**	**-1.0**
TKR	**Tekirdag**	**4.28**	**342**	*e*PN	**Pn**	**20 22 55.2**	**-0.7**
TKR	**Tekirdag**	**4.28**	**342**	Pn	**Pn**	**20 22 55.1**	**-0.8**
PHNC	**Paralimni**	**4.29**	**115**	P	**Pn**	**20 23 00.7**	**+4.6**
	29nm,1.6s						
PHNC				S	**Sn**	**20 23 54.6**	**+8.9**
KLYT	**Kilyos**	**4.32**	**357**	*e*PN	**Pn**	**20 22 56.0**	**-0.5**
KLYT	**Kilyos**	**4.32**	**357**	Pn	**Pn**	**20 22 55.6**	**-0.9**
CTKS	**Kestanelik-??a**	**4.34**	**352**	*e*PN	**Pn**	**20 22 56.7**	**-0.1**
CRLT	**Corlu**	**4.37**	**344**	*e*PN	**Pn**	**20 22 56.5**	**-0.6**
CRLT	**Corlu**	**4.37**	**344**	Pn	**Pn**	**20 22 56.4**	**-0.7**
SLVT	**Silivri**	**4.38**	**349**	*e*PN	**Pn**	**20 22 56.8**	**-0.4**
NIG	**Nigde**	**4.38**	**73**	*e*PN	**Pn**	**20 22 59.5**	**+2.2**
LIA	**Limnos Island**	**4.39**	**314**	P	**Pn**	**20 22 57.1**	**-0.3**
LIA	**Limnos Island**	**4.39**	**314**	P	**Pn**	**20 22 57.8**	**+0.4**
VAM	**Vamos**	**4.40**	**251**	*e*P	**Pn**	**20 22 58.7**	**+1.1**
BRTR	**Keskin Array B**	**4.40**	**49**	Pn	**Pn**	**20 22 58.8**	**+1.1**
	4.7nm,0.3s,baz=232,slow=16,SNR=152						
BRTR				Sn	**Sn**	**20 23 51.8**	**+3.3**
	1.6nm,0.3s,baz=210,slow=17,SNR=3.7						
BRTR	**Keskin Array B**	**4.40**	**49**	P	**Pn**	**20 22 58.8**	**+1.2**
BRTR						20 23 51.8	
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BRTR				smax			
	comp=N,2.0nm,0.3s						
BR131	**Keskin Array S**	**4.41**	**49**	*e*Pn	**Pn**	**20 22 58.5**	**+0.9**
PTL	**Penteli**	**4.47**	**286**	*e*P	**Pn**	**20 22 59.0**	**+0.5**
PTL	**Penteli**	**4.47**	**286**	P	**Pn**	**20 22 59.8**	**+1.3**
ENEZ	**Enez**	**4.53**	**328**	*e*PN	**Pn**	**20 22 59.1**	**-0.2**
ATH	**Athens Observa**	**4.56**	**285**	*e*P	**Pn**	**20 23 00.0**	**+0.1**
CTYL	**Yal??k??y-??at**	**4.61**	**350**	*e*PN	**Pn**	**20 22 59.5**	**-0.9**
KARA	**Karaisali**	**4.61**	**84**	*e*PN	**Pn**	**20 23 03.4**	**+2.9**
KDZE	**Karadeniz Ereo**	**4.68**	**20**	*e*PN	**Pn**	**20 23 01.9**	**+0.5**
ALN	**Alexandroupoli**	**4.70**	**328**	P	**Pn**	**20 23 01.0**	**-0.8**
ALN				S	**Sn**	**20 23 54.9**	**-0.9**
ALN	**Alexandroupoli**	**4.70**	**328**	P	**Pn**	**20 23 01.0**	**-0.8**
ALN				S	**Sn**	**20 23 54.3**	**-1.5**
NAIG	**Nisos Aigina**	**4.71**	**282**	*e*P	**Pn**	**20 22 57.0**	**-4.8**
GVD	**Gavdhos**	**4.72**	**245**	*e*P	**Pn**	**20 23 03.5**	**+1.5**
DID	**Didima**	**4.88**	**279**	P	**Pn**	**20 23 04.4**	**+0.3**
KRTS	**Karatas**	**4.89**	**92**	*e*PN	**Pn**	**20 23 07.7**	**+3.3**
CANT	**Cankiri**	**4.98**	**41**	*e*PN	**Pn**	**20 23 06.9**	**+1.3**
CANT	**Cankiri**	**4.98**	**41**	Pn	**Pn**	**20 23 06.8**	**+1.2**
SAFT	**Safranbolu**	**5.04**	**30**	*e*PN	**Pn**	**20 23 06.8**	**+0.4**
KYTH	**Kithira**	**5.08**	**265**	*e*P	**Pn**	**20 23 09.1**	**+2.1**
VLI	**Veliai**	**5.11**	**270**	*e*P	**Pn**	**20 23 09.0**	**+1.6**
RDO	**Rodhopi**	**5.13**	**326**	*e*P	**Pn**	**20 23 07.5**	**-0.1**
RDO	**Rodhopi**	**5.13**	**326**	P	**Pn**	**20 23 06.8**	**-0.8**
LTK	**Loutraki**	**5.16**	**284**	P	**Pn**	**20 23 08.7**	**+0.7**
CEYT	**Ceyhan**	**5.16**	**87**	*e*PN	**Pn**	**20 23 11.4**	**+3.4**
KOZT	**Kozan**	**5.24**	**82**	*e*PN	**Pn**	**20 23 12.1**	**+3.0**
CORM	**Corum**	**5.29**	**51**	*e*PN	**Pn**	**20 23 11.5**	**+1.7**
PAIG	**Paliouri**	**5.33**	**306**	P	**Pn**	**20 23 10.4**	**0.0**
NEO	**Neokhori**	**5.35**	**298**	P	**Pn**	**20 23 12.1**	**+1.5**
OUR	**Ouranopolis**	**5.38**	**311**	P	**Pn**	**20 23 11.2**	**+0.2**
YOZ	**Yozgat**	**5.45**	**58**	*e*PN	**Pn**	**20 23 13.6**	**+1.6**
TOS	**Tosya**	**5.50**	**40**	*e*PN	**Pn**	**20 23 14.1**	**+1.3**
TOS	**Tosya**	**5.50**	**40**	Pn	**Pn**	**20 23 14.0**	**+1.2**
BNN	**Bunyan**	**5.52**	**68**	*e*PN	**Pn**	**20 23 15.6**	**+2.7**
HTY	**Hatay**	**5.56**	**96**	*e*PN	**Pn**	**20 23 17.4**	**+3.8**
HTY	**Hatay**	**5.56**	**96**	Pn	**Pn**	**20 23 17.3**	**+3.7**
KDZ	**Kurdzhali**	**5.59**	**329**	P	**Pn**	**20 23 13.6**	**-0.4**
PLG	**Polygyros**	**5.73**	**309**	*e*P	**Pn**	**20 23 16.5**	**+0.7**
PLG	**Polygyros**	**5.73**	**309**	P	**Pn**	**20 23 16.3**	**+0.5**
PLG	**Polygyros**	**5.73**	**309**	P	**Pn**	**20 23 18.8**	**+3.0**
DIM	**Dimitrovgrad**	**5.88**	**331**	P	**Pn**	**20 23 17.2**	**-0.8**
AGG	**Agios Georgios**	**5.89**	**293**	P	**Pn**	**20 23 19.2**	**+1.1**
AGG				S	**Sn**	**20 24 25.9**	**+0.8**
JMB	**Yambol**	**5.91**	**340**	P	**Pn**	**20 23 18.3**	**0.0**
JMB	**Yambol**	**5.91**	**340**	*e*P	**Pn**	**20 23 19.0**	**+0.7**
JMB	**Yambol**	**5.91**	**340**	P	**Pn**	**20 23 18.7**	**+0.4**
RZN	**Rozhen**	**5.93**	**325**	P	**Pn**	**20 23 18.5**	**-0.1**
BHL	**Bhannes**	**6.00**	**118**	*e*P	**Pn**	**20 23 19.9**	**+0.3**
MATL	**Matirih**	**6.01**	**123**	*e*P	**Pn**	**20 23 23.0**	**+3.3**
HWQ	**Hawqa**	**6.02**	**114**	*e*P	**Pn**	**20 23 22.0**	**+2.1**
SOH	**Sokhos**	**6.05**	**312**	P	**Pn**	**20 23 20.8**	**+0.5**
SOH	**Sokhos**	**6.05**	**312**	P	**Pn**	**20 23 20.5**	**+0.2**
PYL	**PYLOS**	**6.06**	**272**	P	**Pn**	**20 23 22.8**	**+2.4**
HORT	**Hortiatis**	**6.07**	**309**	P	**Pn**	**20 23 21.1**	**+0.5**
HMAT	**Matruh**	**6.10**	**198**	P	**Pn**	**20 23 19.8**	**-1.2**
NVR	**Nevrokopi**	**6.11**	**318**	P	**Pn**	**20 23 21.5**	**+0.4**
THE	**Thessaloniki**	**6.18**	**309**	P	**Pn**	**20 23 23.4**	**+1.4**
LIT	**Litokhoron**	**6.21**	**303**	P	**Pn**	**20 23 23.0**	**+0.6**
LIT	**Litokhoron**	**6.21**	**303**	P	**Pn**	**20 23 23.9**	**+1.5**
MANS	**Anshas**	**6.24**	**162**	P	**Pn**	**20 23 31.1**	**+8.2**
MANS				S	**Sn**	**20 24 37.9**	**+4.2**
EVR	**Evrytania**	**6.25**	**291**	*e*P	**Pn**	**20 23 25.0**	**+2.0**
EVR	**Evrytania**	**6.25**	**291**	P	**Pn**	**20 23 26.6**	**+3.6**
PLD	**Plovdiv**	**6.27**	**327**	P	**Pn**	**20 23 22.8**	**-0.5**
PLD	**Plovdiv**	**6.27**	**327**	P	**Pn**	**20 23 23.1**	**-0.2**
PLD				P		20 23 23.1	
THL	**Klokotos Trika**	**6.31**	**297**	P	**Pn**	**20 23 24.1**	**+0.3**
RCY	**Rachaya**	**6.35**	**121**	*e*P	**Pn**	**20 23 24.8**	**+0.5**
MMAI	**Mount Meron Ar**	**6.35**	**126**	Pn	**Pn**	**20 23 25.0**	**+0.6**
	comp=N,50nm,0.3s,baz=298,slow=17,SNR=153						
MMB	**Musomiste**	**6.35**	**319**	P	**Pn**	**20 23 24.0**	**-0.4**
OFRI	**'Ofer**	**6.35**	**131**	Pn	**Pn**	**20 23 24.9**	**+0.5**
BLGI	**Bet Lehem HaGe**	**6.40**	**129**	Pn	**Pn**	**20 23 25.2**	**+0.2**
PRD	**Provadia**	**6.43**	**347**	P	**Pn**	**20 23 24.0**	**-1.4**
HRSH	**Kfar Ka'horesh**	**6.48**	**129**	P	**Pn**	**20 23 33.3**	**+7.2**
NEF	**NEVSHA**	**6.51**	**347**	P	**Pn**	**20 23 26.0**	**-0.6**
KNT	**Kendrikon**	**6.53**	**312**	P	**Pn**	**20 23 27.7**	**+0.8**
LTBQ	**Tobruq**	**6.59**	**224**	*i* P	**Pn**	**20 23 27.9**	**+0.2**
	SNR=22						
LTBQ				*e*S	**Sn**	**20 24 36.7**	**-5.6**
	comp=N,230nm,0.5s,SNR=22						
SLTI	**Sal'it**	**6.65**	**133**	Pn	**Pn**	**20 23 29.2**	**+0.6**
GRG	**Griva**	**6.71**	**309**	P	**Pn**	**20 23 30.4**	**+1.0**
MMLI	**Mount Malkishu**	**6.74**	**130**	P	**Pn**	**20 23 30.6**	**+0.8**
MMLI	**Mount Malkishu**	**6.74**	**130**	Pn	**Pn**	**20 23 30.4**	**+0.6**
MMLI				Sn	**Sn**	**20 24 47.6**	**+1.5**
KZN	**Kozani**	**6.79**	**302**	P	**Pn**	**20 23 33.0**	**+2.6**
PSN	**Preselentsi**	**6.80**	**353**	*e*P	**Pn**	**20 23 30.4**	**-0.1**
VAY	**Valandovo**	**6.83**	**312**	*i* Pn	**Pn**	**20 23 32.2**	**+1.3**
VAY				*i* Sn	**Sn**	**20 24 43.0**	**-5.1**
VAY	**Valandovo**	**6.83**	**312**	P	**Pn**	**20 23 32.3**	**+1.4**
SZH	**Strazhica**	**6.83**	**339**	P	**Pn**	**20 23 30.3**	**-0.7**
AANS		**6.85**	**165**	P	**Pn**	**20 23 31.1**	**-0.2**
AANS				S	**Sn**	**20 24 37.9**	**-11**
PGB	**Panagyurishte**	**6.87**	**326**	*e*P	**Pn**	**20 23 30.3**	**-1.1**
KKB	**Krupnik**	**6.89**	**318**	P	**Pn**	**20 23 31.9**	**+0.1**
HMDT	**Nahal Hemdat**	**6.94**	**130**	Pn	**Pn**	**20 23 33.6**	**+1.2**
RSH		**7.00**	**147**	P	**Pn**	**20 23 33.3**	**0.0**
VLS	**Valsamata**	**7.03**	**283**	*e*P	**Pn**	**20 23 37.5**	**+3.7**
VLS	**Valsamata**	**7.03**	**283**	P	**Pn**	**20 23 40.4**	**+6.6**
AMAG	**Maghara**	**7.06**	**151**	P	**Pn**	**20 23 33.9**	**-0.3**
JAN	**Janina**	**7.18**	**295**	*e*P	**Pn**	**20 23 41.1**	**+5.3**
FNA	**Florina**	**7.28**	**304**	P	**Pn**	**20 23 38.9**	**+1.7**
KOT	**Kottamia**	**7.30**	**162**	P	**Pn**	**20 23 37.0**	**-0.5**
DSI	**Dead Sea**	**7.34**	**135**	Pn	**Pn**	**20 23 38.0**	**0.0**
HHAG	**Hagoal**	**7.34**	**161**	P	**Pn**	**20 23 37.9**	**-0.1**
VTS	**Vitosha**	**7.35**	**322**	⇑*i*Pn	**Pn**	**20 23 38.5**	**+0.5**
VTS	**Vitosha**	**7.35**	**322**	P	**Pn**	**20 23 39.1**	**+1.1**
VTS	**Vitosha**	**7.35**	**322**	⇓*i*P	**Pn**	**20 23 38.8**	**+0.8**
VTS	**Vitosha**	**7.35**	**322**	P	**Pn**	**20 23 39.1**	**+1.1**
YTIR	**Yattir**	**7.35**	**137**	Pn	**Pn**	**20 23 38.2**	**+0.1**
AYT	**Al 'Ayyat**	**7.37**	**167**	P	**Pn**	**20 23 37.4**	**-1.0**
RTMI	**Retamim**	**7.37**	**141**	Pn	**Pn**	**20 23 38.2**	**-0.2**
BIA	**Bitola**	**7.43**	**306**	*i* Pn	**Pn**	**20 23 41.7**	**+2.4**
IGT	**Igoumenitsa**	**7.52**	**293**	P	**Pn**	**20 23 43.6**	**+3.1**
MZDA	**Masada**	**7.53**	**136**	Pn	**Pn**	**20 23 40.9**	**+0.3**
MZDA				Sn	**Sn**	**20 25 06.1**	**+0.7**
HSAF	**As Saff**	**7.53**	**165**	P	**Pn**	**20 23 39.9**	**-0.8**
TIRR	**Tirgusor**	**7.55**	**355**	*e*P	**Pn**	**20 23 39.7**	**-1.1**
TIRR				pmax	pmax		
	comp=Z,23nm,0.8s						
TIRR	**Tirgusor**	**7.55**	**355**	*e*Pn	**Pn**	**20 23 39.7**	**-1.1**
	comp=Z,23nm,0.8s						
TIRR	**Tirgusor**	**7.55**	**355**	⇓*i*P	**Pn**	**20 23 40.6**	**-0.2**
TIRR	**Tirgusor**	**7.55**	**355**	⇓*i*P	**Pn**	**20 23 40.6**	**-0.2**
TIRR	**Tirgusor**	**7.55**	**355**	*e*Pn	**Pn**	**20 23 39.7**	**-1.1**
	comp=Z,23nm,0.8s						
GLL	**Jalalah**	**7.61**	**164**	P	**Pn**	**20 23 40.8**	**-0.9**
SUZ		**7.66**	**156**	P	**Pn**	**20 23 42.3**	**-0.1**
KRUS	**Krusevo**	**7.67**	**308**	*i* Pn	**Pn**	**20 23 43.9**	**+1.5**
KRUS	**Krusevo**	**7.67**	**308**	*i* Pn	**Pn**	**20 23 44.0**	**+1.5**
RMNI	**Mount Ramon**	**7.78**	**143**	Pn	**Pn**	**20 23 43.4**	**-0.7**
HARR	**Harsova**	**7.82**	**353**	⇓*i*P	**Pn**	**20 23 45.1**	**+0.6**
HARR	**Harsova**	**7.82**	**353**	⇓P	**Pn**	**20 23 45.1**	**+0.6**
ASF	**Jabal al Asfar**	**7.86**	**125**	Pn	**Pn**	**20 23 46.2**	**+1.1**
	comp=Z,2.9nm,0.3s,baz=166,slow=4.1,SNR=23						
ASF				LR	LR	20 27 31.5	
	comp=Z,285nm,18.1s,baz=336,slow=43						
ASF	**Jabal al Asfar**	**7.86**	**125**	P	**Pn**	**20 23 46.2**	**+1.1**
ASF				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASF				MLR	MLR		
	comp=Z,285nm,18.1s						
SKO	**Skopje**	**7.89**	**312**	*i* Pn	**Pn**	**20 23 46.8**	**+1.2**
SKO	**Skopje**	**7.89**	**312**	*i* Pn	**Pn**	**20 23 46.9**	**+1.3**
KEK	**Kerkira**	**7.97**	**293**	*e*P	**Pn**	**20 23 49.5**	**+2.9**
KEK	**Kerkira**	**7.97**	**293**	P	**Pn**	**20 23 51.3**	**+4.7**
HNKL	**Nakhl**	**8.00**	**149**	P	**Pn**	**20 23 46.5**	**-0.6**
HNKL				S	**Sn**	**20 25 07.1**	**-10**
ZFRI	**Zfri**	**8.02**	**141**	Pn	**Pn**	**20 23 48.1**	**+0.7**
ZAF		**8.10**	**159**	P	**Pn**	**20 23 47.6**	**-0.8**
PRNI	**Paran**	**8.10**	**142**	Pn	**Pn**	**20 23 48.1**	**-0.4**
ZNM		**8.11**	**157**	P	**Pn**	**20 23 48.6**	**0.0**
ZNM		**8.11**	**157**	P	**Pn**	**20 23 48.1**	**-0.4**
KRMI	**Paran Flat**	**8.16**	**145**	Pn	**Pn**	**20 23 48.6**	**-0.7**
BARS	**Barje**	**8.22**	**318**	P	**Pn**	**20 23 50.6**	**+0.5**
BARS	**Barje**	**8.22**	**318**	⇑*i*Pn	**Pn**	**20 23 51.1**	**+1.0**
TLCR		**8.26**	**358**	⇑*i*P	**Pn**	**20 23 50.4**	**-0.1**
SEV	**Sevastopol'**	**8.29**	**22**	*e*P	**Pn**	**20 23 50.4**	**-0.6**
SEV				*e*		20 25 18.6	
SWA2		**8.32**	**204**	⇑*e*P	**Pn**	**20 23 49.9**	**-1.5**
HRFI	**Mount Harif**	**8.38**	**144**	Pn	**Pn**	**20 23 51.9**	**-0.4**
YAL	**Yalta**	**8.40**	**24**	*e*P	**Pn**	**20 23 53.1**	**+0.7**
MBRI	**Mt Berech**	**8.52**	**145**	Pn	**Pn**	**20 23 53.7**	**-0.5**
MBRI				Sn	**Sn**	**20 25 28.9**	**-1.1**
TIR	**Tirane**	**8.55**	**304**	*e*Pn	Px	20 24 03.7	
TIR	**Tirane**	**8.55**	**304**	*e*P	**Pn**	**20 23 58.3**	**+3.7**
TIR				pmax	pmax		
	comp=Z,60nm,0.8s						
TIR	**Tirane**	**8.55**	**304**	*e*Pn	**Pn**	**20 23 58.3**	**+3.7**
	comp=Z,60nm,0.8s						
AQBJ	**Aqaba**	**8.64**	**145**	Pn	**Pn**	**20 23 54.5**	**-1.3**
EIL	**Elat**	**8.65**	**145**	Pn	**Pn**	**20 23 55.5**	**-0.4**
	comp=Z,17nm,0.3s,baz=336,slow=8.6,SNR=56						
EIL				Sn	**Sn**	**20 25 29.0**	**-4.0**
	comp=Z,9.2nm,0.3s,baz=92,slow=21,SNR=4.6						
EIL	**Elat**	**8.65**	**145**	Pn	**Pn**	**20 23 55.5**	**-0.4**
EIL				Sn	**Sn**	**20 25 30.6**	**-2.4**
ALU	**Alushta**	**8.65**	**25**	*e*P	**Pn**	**20 23 56.2**	**+0.3**
SIM	**Simferopol'**	**8.80**	**23**	*e*P	**Pn**	**20 23 58.2**	**+0.3**
SIM				*e*S	**Sn**	**20 25 37.6**	**+1.1**
GLFJ		**8.81**	**146**	*e*P	**Pn**	**20 23 58.2**	**0.0**
	SNR=52						
BOLS	**Boljevac**	**8.88**	**323**	*e*Pn	**Pn**	**20 24 00.6**	**+1.5**
MLR	**Muntele Rosu**	**8.92**	**345**	Pn	**Pn**	**20 23 59.9**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=185,slow=2.3,SNR=66						
MLR	**Muntele Rosu**	**8.92**	**345**	P	**Pn**	**20 23 59.9**	**+0.3**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MLR	**Muntele Rosu**	**8.92**	**345**	⇓*i*P	**Pn**	**20 24 00.2**	**+0.6**
MLR	**Muntele Rosu**	**8.92**	**345**	⇓*i*P	**Pn**	**20 24 00.2**	**+0.6**
ODB	**Odobesti**	**8.99**	**350**	P	**Pn**	**20 24 01.8**	**+1.2**
ODB	**Odobesti**	**8.99**	**350**	⇓*i*P	**Pn**	**20 24 00.4**	**-0.2**
SUDU	**Sudak**	**9.04**	**27**	*e*P	**Pn**	**20 24 01.6**	**+0.3**
SUDU				*e*S	**Sn**	**20 25 41.9**	**-0.7**
VOIR		**9.08**	**341**	P	**Pn**	**20 24 01.8**	**0.0**
VOIR		**9.08**	**341**	⇑*i*P	**Pn**	**20 24 02.0**	**+0.2**
PLOR	**Plostina**	**9.13**	**348**	P	**Pn**	**20 24 03.7**	**+1.2**
PLOR	**Plostina**	**9.13**	**348**	⇑*i*P	**Pn**	**20 24 04.1**	**+1.6**
VRI	**Vrincioaia**	**9.13**	**349**	P	**Pn**	**20 24 03.3**	**+0.8**
VRI	**Vrincioaia**	**9.13**	**349**	⇑*i*P	**Pn**	**20 24 03.2**	**+0.7**
HKAT	**Jabal Katrina**	**9.27**	**153**	P	**Pn**	**20 24 03.7**	**-0.8**
TR2		**9.30**	**155**	P	**Pn**	**20 24 04.1**	**-0.8**
GRUS	**Gruza**	**9.54**	**319**	*e*Pn	**Pn**	**20 24 07.8**	**-0.4**
GRUS	**Gruza**	**9.54**	**319**	P	**Pn**	**20 24 09.2**	**+1.0**
GRUS	**Gruza**	**9.54**	**319**	P	**Pn**	**20 24 09.2**	**+1.0**
LJBD	**Adjabya**	**9.65**	**234**	*i* P	**Pn**	**20 24 06.5**	**-3.2**
	SNR=22						
TR1		**9.72**	**155**	⇓*e*P	**Pn**	**20 24 09.9**	**-0.8**
GZR	**Gura Zlata**	**9.78**	**332**	⇓*i*P	**Pn**	**20 24 10.5**	**-0.9**
GZR	**Gura Zlata**	**9.78**	**332**	⇓P	**Pn**	**20 24 10.5**	**-0.9**
HFRF	**Wahat Farafira**	**9.79**	**185**	P	**Pn**	**20 24 09.9**	**-1.8**
SHRM		**9.89**	**154**	P	**Pn**	**20 24 12.2**	**-0.8**
ANN	**Anapa**	**9.98**	**36**	*e*P	**Pn**	**20 24 16.3**	**+2.2**
ANN				*e*S	**Sn**	**20 26 08.2**	**+2.6**
ANN				MLR	MLR		
	comp=Z,367nm,13.0s						
TIP	**Timpagrande**	**10.14**	**287**	*e*Pn	**Pn**	**20 24 16.5**	**+0.1**
TIP	**Timpagrande**	**10.14**	**287**	*e*Pn	**Pn**	**20 24 16.5**	**+0.1**
BBLS	**Lazići**	**10.24**	**316**	*e*Pn	**Pn**	**20 24 19.3**	**+1.6**
LUJL	**Ujela**	**10.28**	**223**	*i* P	**Pn**	**20 24 15.0**	**-3.3**
	SNR=22						
HHRG	**Al Ghardaqah**	**10.34**	**158**	P	**Pn**	**20 24 18.1**	**-1.0**
GRI	**Girifalco**	**10.36**	**284**	P	**Pn**	**20 24 21.7**	**+2.3**
BZS	**Buzias**	**10.42**	**329**	P	**Pn**	**20 24 18.6**	**-1.6**
BZS	**Buzias**	**10.42**	**329**	P	**Pn**	**20 24 19.7**	**-0.5**
BZS	**Buzias**	**10.42**	**329**	⇑*i*P	**Pn**	**20 24 19.1**	**-1.1**
SOI	**Samo**	**10.59**	**280**	P	**Pn**	**20 24 24.1**	**+1.6**
CEL	**Celeste**	**10.72**	**281**	*e*Pn	**Pn**	**20 24 25.0**	**+0.6**
	comp=Z,69nm,1.1s						
CEL	**Celeste**	**10.72**	**281**	*e*Pn	**Pn**	**20 24 25.0**	**+0.6**
	comp=Z,69nm,1.1s						
CEL				*e*Sn	**Sn**	**20 26 24.6**	**+0.7**
PTRP	**Pietrapertosa**	**10.95**	**293**	P	**Pn**	**20 24 30.3**	**+2.9**
DRGR		**11.01**	**336**	P	**Pn**	**20 24 30.4**	**+2.3**
DRGR		**11.01**	**336**	⇑*i*P	**Pn**	**20 24 30.2**	**+2.1**
CUC	**Castrocucco**	**11.01**	**290**	*e*Pn	**Pn**	**20 24 29.6**	**+1.4**
	comp=Z,94nm,0.8s						
HSFG		**11.05**	**158**	⇓*e*P	**Pn**	**20 24 28.1**	**-0.9**
BURAR	**Bucovina Array**	**11.09**	**345**	⇓*i*P	**Pn**	**20 24 30.6**	**+1.2**
BURAR	**Bucovina Array**	**11.09**	**345**	⇓P	**Pn**	**20 24 30.6**	**+1.3**
BUR08	**Bucovina Ar. S**	**11.12**	**345**	*e*Pn	**Pn**	**20 24 29.1**	**-0.7**
BUR08	**Bucovina Ar. S**	**11.12**	**345**	*e*Pn	**Pn**	**20 24 29.1**	**-0.6**
MGR	**Morigerati**	**11.23**	**291**	P	**Pn**	**20 24 32.1**	**+0.8**
HDK1	**Dakhla**	**11.35**	**180**	⇓*e*P	**Pn**	**20 24 31.2**	**-1.8**
GTR	**Jabal at Tayr**	**11.44**	**174**	⇑*i*P	**Pn**	**20 24 32.4**	**-1.8**
AKRG	**Al Kharijah**	**11.44**	**175**	P	**Pn**	**20 24 32.2**	**-2.0**
SGO	**Sicignano**	**11.51**	**293**	P	**Pn**	**20 24 36.5**	**+1.4**
RGNG	**Rignano Grg**	**11.63**	**298**	P	**Pn**	**20 24 41.2**	**+4.5**
HVZN	**Vizzini**	**11.66**	**276**	P	**Pn**	**20 24 34.9**	**-2.3**
	comp=Z,150nm,0.9s						
CSSN	**Cassano Irpino**	**11.80**	**294**	P	**Pn**	**20 24 42.0**	**+3.0**
VAE	**Valguarnera**	**11.89**	**277**	Pn	**Pn**	**20 24 41.8**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=264,slow=12,SNR=3.0						
PKSM	**Moragy**	**12.22**	**323**	P	**Pn**	**20 24 45.0**	**+0.2**
PKSM	**Moragy**	**12.22**	**323**	⇑*i*P	**Pn**	**20 24 44.9**	**+0.1**
TRPA	**Tarpa**	**12.25**	**338**	⇑*i*P	**Pn**	**20 24 46.5**	**+1.4**
KIV	**Kislovodsk**	**12.37**	**51**	*e*P	**Pn**	**20 24 47.7**	**+0.9**
KIV				*e*S	**Sn**	**20 27 05.3**	**+1.2**
KIV				pmax	pmax		

comp=Z,13nm,1.2s
KIV MLR MLR

comp=Z,173nm,13.0s
HDK2 Wahat Dakhilah 12.57 181 P Pn 20 24 47.7 -2.0
UZH Uzhgorod 12.77 339 *e*P **Pn 20 24 55.0 +2.8**
UZH *e*S **Sn 20 27 20.0 +6.2**
UZH MLR MLR

comp=N,750nm,12.0s
UZH MLR MLR

comp=E,1µm,12.0s
UZH MLR MLR

comp=Z,650nm,12.0s
LZLA Zalla 12.93 233 *i* P **Pn 20 24 48.7 -5.9**
SNR=22
PSZ Piszkesteto 12.98 331 *e*Pn **Pn 20 24 56.3 +1.1**
PSZ Piszkesteto 12.98 331 *e*Pn **Pn 20 24 56.3 +1.2**
KOLS Kolonicke sedl 13.04 339 *e*PN **Pn 20 24 59.1 +3.1**
KOLS Kolonicke sedl 13.04 339 *e*Pn **Pn 20 24 59.1 +3.1**
CRVS Cervenica-Dubn 13.26 337 *e*PN **Pn 20 25 00.0 +1.0**
PTQR Pietraquaria 13.29 297 P **Pn 20 25 04.5 +5.1**
comp=Z,57nm,0.9s
LJFR Jufra 13.74 239 *i* P **Pn 20 24 58.0 -7.6**
SNR=22
NRCA Norcia 13.75 300 P **Pn 20 25 07.9 +2.2**
KIEV Kiev 13.76 360 *e*P **Pn 20 25 04.2 -1.5**
KIEV pmax pmax

comp=Z,8.0nm,0.8s
KIEV Kiev 13.76 360 *e*Pn **Pn 20 25 04.2 -1.5**

comp=Z,8.0nm,0.8s
LKFR Kufra 13.76 204 *i* P **Pn 20 25 04.0 -2.0**
SNR=22
AKASG Malin Array Be 13.77 360 Pn **Pn 20 25 04.0 -1.9**
comp=Z,0.3nm,0.3s,baz=179,slow=12,SNR=9.4
STHS Stebnicka Huta 13.78 337 *e*PN **Pn 20 25 05.1 -1.0**
STHS *e* 20 26 08.9
VYHS Vyhne 13.87 330 *e*PN **Pn 20 25 04.2 -3.0**
SMOL Smolenice 14.47 327 *e*P Px 20 25 23.1
OJC Ojcow 14.94 336 *e*P **Pn 20 25 28.3 +6.4**
SFI Santa Sofia 15.00 303 P **Pn 20 25 25.5 +2.9**
OKC Ostrava-Krasne 15.21 331 *e*P **Pn 20 25 31.6 +6.1**
VMG Vicchio 15.22 303 P **Pn 20 25 31.9 +6.3**
VRAC Vranov 15.44 327 Pn **Pn 20 25 30.7 +2.3**
baz=145,slow=12,SNR=7.2
VRAC LR LR 20 31 11.4

comp=Z,160nm,19.8s,baz=334,slow=36
VRAC Vranov 15.44 327⇑ *i*P **Pn 20 25 33.8 +5.4**
VORD Divnogorie 15.74 24 *e*P **Pn 20 25 32.1 -0.3**
VORD pmax pmax

comp=Z,30nm,1.1s
VORD pmax pmax

comp=N,20nm,0.7s
VORD pmax pmax

comp=E,30nm,0.9s
ABTA Abfaltersbach 15.87 313⇑ *i*P **Pn 20 25 38.3 +4.3**
comp=E,7.6nm,0.9s
VSL Villasalto 15.87 285 *e*P **Pn 20 25 37.8 +3.7**
comp=E,30nm,0.8s
TREC Trest 15.92 325 *e*P **Pn 20 25 38.8 +4.1**
VSR Storozhevoye 15.92 23 *e*P **Pn 20 25 34.1 -0.6**
VSR pmax pmax

comp=Z,6.0nm,0.8s
VSR pmax pmax

comp=N,8.0nm,1.0s
VSR pmax pmax

comp=E,5.0nm,0.6s
CTI Castel Tesino 16.03 310 P **Pn 20 25 39.4 +3.3**
KEST Kesra 16.13 272 Pn **Pn 20 25 37.4 -0.1**
comp=E,0.2nm,0.3s,baz=9.3,slow=6.4,SNR=17
DPC Dobruska-Polom 16.34 329 *e*P **Pn 20 25 43.9 +3.8**
DPC *ex* x 20 25 57.4
LUMB Murzuk 16.40 233 *i* P **Pn 20 25 39.2 -1.8**
SNR=42
GEC2 GERESS Array S 16.47 321 *e*P **Pn 20 25 41.9 +0.2**
GEC2 pmax pmax

comp=Z,6µm,1.5s
GEC2 GERESS Array S 16.47 321 *e*P **Pn 20 25 45.9 +4.2**
comp=Z,44nm,1.9s
GEC2 GERESS Array S 16.47 321 *e*Pn **Pn 20 25 41.9 +0.2**
comp=Z,6µm,1.5s
GEC2 GERESS Array S 16.47 321 *e*Pn **Pn 20 25 41.9 +0.2**
comp=Z,6µm,1.5s
GEC2 *e*P 20 25 45.9
GERES GERESS Array B 16.47 321 Pn **Pn 20 25 42.4 +0.7**
comp=Z,0.2nm,0.3s,baz=128,slow=13,SNR=12
GERES LR LR 20 31 38.9

comp=Z,141nm,20.4s,baz=98,slow=36
UPC Upice 16.59 329 *e*P **Pn 20 25 47.1 +3.9**
VRHR Novokhopersk 16.67 28 *e*P **Pn 20 25 44.1 -0.1**
VRHR pmax pmax

comp=Z,20nm,0.6s
VRHR pmax pmax

comp=N,10.0nm,0.5s
VRHR pmax pmax

comp=E,7.0nm,0.4s
KHC Kasperske Hory 16.72 322 *e*P **Pn 20 25 45.5 +0.7**
KHC pmax pmax

comp=Z,4.0nm,0.7s
KHC Kasperske Hory 16.72 322 *e*Pn **Pn 20 25 45.5 +0.7**

comp=Z,4.0nm,0.7s
KHC Kasperske Hory 16.72 322 *e*P **Pn 20 25 47.6 +2.8**
KHC *ep*P pP 20 25 51.0 -1.1
KHC *es*P sP 20 25 56.5 +2.0
KHC Kasperske Hory 16.72 322 *e*Pn **Pn 20 25 45.5 +0.6**
comp=Z,4.0nm,0.7s
PRU Pruhonice 16.84 325 *e*P **Pn 20 25 48.1 +1.7**
FETA Feichten 17.06 312⇑ *i*pP pP 20 25 51.4 -4.5
comp=Z,26nm,1.1s
WET Wettzell 17.08 321 *e*P **Pn 20 25 50.0 +0.6**
WET Wettzell 17.08 321 P **Pn 20 25 52.2 +2.8**
PVCC Panska Ves 17.22 327 *e*P **Pn 20 25 54.4 +3.3**
PVCC *ex* x 20 26 01.6
PVCC Panska Ves 17.22 327 P **Pn 20 25 54.5 +3.4**
DAVOX Davos/Dischmat 17.46 310 P **Pn 20 25 55.0 +0.9**
comp=Z,0.1nm,0.3s,baz=93,slow=8.3,SNR=4.3
DAVOX LR LR 20 33 31.2

comp=Z,322nm,19.1s,baz=101,slow=40
DAVOS Davos 17.54 310 P **Pn 20 25 55.0 -0.1**
SUW Suwalki 17.60 348 *e*P **Pn 20 25 56.8 +1.0**
TUE Stuetta 17.65 309 *e*Pn **Pn 20 25 59.6 +3.1**
comp=Z,7.2nm,0.8s
BRG Berggiesshubel 17.75 327 *e*P **Pn 20 25 58.6 +0.9**
BRG pmax pmax

comp=Z,8.0nm,1.3s
BRG pmax pmax

comp=Z,14nm,1.5s
BRG Berggiesshubel 17.75 327 *e*P **Pn 20 25 58.2 +0.5**
BRG Berggiesshubel 17.75 327 *e*P **Pn 20 25 58.6 +1.0**
comp=Z,13nm,1.3s
BRG *e* 20 26 03.5

comp=Z,24nm,1.5s
VAI Varese 17.77 307 P **Pn 20 26 01.3 +3.3**
ROTZ Rotzenmuhle 17.81 321 *e*P **Pn 20 25 59.0 +0.5**
MANZ Manzenberg 18.00 322 *e*P **Pn 20 26 03.4 +2.6**
SBF Sospel 18.01 299 *e*P **Pn 20 26 00.8 -0.2**
comp=Z,76nm,1.0s
SBF Sospel 18.01 299 *e*P **Pn 20 26 00.8 -0.2**
SBF pmax pmax

comp=Z,38nm,1.0s
SBF Sospel 18.01 299 *e*P **Pn 20 26 00.8 -0.2**
comp=Z,38nm,1.0s
ORO Oropa 18.19 305 P **Pn 20 26 03.4 +0.2**
CLL Collm 18.47 326 *e*P **Pn 20 26 04.0 -2.6**
CLL LmV 20 34 00.0

comp=Z,200nm,19.5s
FRF La Foret Royal 18.49 298 *e*P **Pn 20 26 06.3 -0.6**
comp=Z,125nm,1.6s
FRF La Foret Royal 18.49 298 *e*P **Pn 20 26 06.3 -0.6**
FRF pmax pmax

comp=Z,62nm,1.6s
FRF La Foret Royal 18.49 298 *e*P **Pn 20 26 06.3 -0.6**
comp=Z,62nm,1.6s
LMR La Mourre 18.54 297 *e*P **Pn 20 26 06.7 -0.7**
comp=Z,54nm,1.3s
LMR La Mourre 18.54 297 *e*P **Pn 20 26 06.7 -0.7**
LMR pmax pmax

comp=Z,27nm,1.3s
LMR La Mourre 18.54 297 *e*P **Pn 20 26 06.7 -0.7**
comp=Z,27nm,1.3s
MOX Moxa 18.67 323 *e*P **Pn 20 26 09.9 +1.0**
comp=Z,133nm,2.5s
MOX Moxa 18.67 323 *e*P **Pn 20 26 10.1 +1.2**
MBDF Montbardon 18.71 302 *e*P **Pn 20 26 08.4 -1.1**
comp=Z,38nm,0.7s
MBDF Montbardon 18.71 302 *e*P **Pn 20 26 08.4 -1.1**
MBDF pmax pmax

comp=Z,19nm,0.7s
MBDF Montbardon 18.71 302 *e*P **Pn 20 26 08.4 -1.1**
comp=Z,19nm,0.7s
OBN Obninsk 18.85 13 P **Pn 20 26 10.0 -1.2**
OBN pmax pmax

comp=Z,30nm,1.3s
OBN MLR MLR

comp=Z,100nm,13.0s
OBN Obninsk 18.85 13 *e*Pn **Pn 20 26 10.6 -0.6**
comp=Z,62nm,1.4s
OBN Obninsk 18.85 13 *e*Pn **Pn 20 26 10.6 -0.5**
comp=Z,62nm,1.4s
BNI Bardonecchia 18.86 303 *e*P **Pn 20 26 10.3 -1.1**
BNI pmax pmax

comp=Z,362nm,3.0s
BNI Bardonecchia 18.86 303 *e*Pn **Pn 20 26 10.3 -1.1**
comp=Z,362nm,3.0s
BNI Bardonecchia 18.86 303 *e*Pn **Pn 20 26 10.3 -1.1**
comp=Z,362nm,3.0s
LPG La Plagne 18.96 304 *e*P **Pn 20 26 12.9 +0.4**
comp=Z,41nm,0.8s
LPG La Plagne 18.96 304 *e*P **Pn 20 26 12.9 +0.4**
LPG pmax pmax

comp=Z,20nm,0.8s
LPG La Plagne 18.96 304 *e*P **Pn 20 26 12.9 +0.4**
comp=Z,20nm,0.8s
LPL La Plagne 18.97 304 *e*P **Pn 20 26 13.0 +0.3**
comp=Z,24nm,0.7s
LPL La Plagne 18.97 304 *e*P **Pn 20 26 13.0 +0.3**
LPL pmax pmax

comp=Z,12nm,0.7s
LPL La Plagne 18.97 304 *e*P **Pn 20 26 13.0 +0.3**
comp=Z,12nm,0.7s
BFO Black Forest 19.11 313 *e*P **Pn 20 26 11.6 -2.8**
BFO pmax pmax

comp=Z,34nm,1.3s
BFO Black Forest 19.11 313 *e*P **Pn 20 26 11.6 -2.8**
comp=Z,34nm,1.3s
BFO Black Forest 19.11 313 *e*P **Pn 20 26 11.6 -2.8**
comp=Z,34nm,1.3s
SMRF Simiane la Rot 19.34 299 *e*P **Pn 20 26 16.4 -0.7**
comp=Z,33nm,1.1s
SMRF Simiane la Rot 19.34 299 *e*P **Pn 20 26 16.4 -0.7**
comp=Z,16nm,1.1s
ORIF Oris-en-Rattie 19.37 302 *e*P **Pn 20 26 16.8 -0.7**
comp=Z,40nm,0.9s
ORIF *e*MLR MLR

comp=Z,213nm,20.8s
ORIF Oris-en-Rattie 19.37 302 *e*P **Pn 20 26 16.8 -0.7**
ORIF pmax pmax

comp=Z,20nm,0.9s
ORIF Oris-en-Rattie 19.37 302 *e*P **Pn 20 26 16.8 -0.7**
comp=Z,20nm,0.9s
MOS Moscow 19.64 14 *e*P **Pn 20 26 20.5 -0.1**
MOS pmax pmax

comp=Z,52nm,0.9s
HINF Hinteralfeld 19.76 310 *e*P **Pn 20 26 20.5 -1.6**
CABF La Chapelle 19.77 307 *e*P **Pn 20 26 20.8 -1.4**
comp=Z,43nm,0.8s
CABF La Chapelle 19.77 307 *e*P **Pn 20 26 20.8 -1.4**
CABF pmax pmax

comp=Z,21nm,0.8s
CABF La Chapelle 19.77 307 *e*P **Pn 20 26 20.8 -1.4**
comp=Z,21nm,0.8s
CDF Champ du Feu 19.77 312 *e*P **Pn 20 26 21.4 -0.8**
comp=Z,88nm,1.4s
CDF Champ du Feu 19.77 312 *e*P **Pn 20 26 21.4 -0.8**
CDF pmax pmax

comp=Z,44nm,1.4s
CDF Champ du Feu 19.77 312 *e*P **Pn 20 26 21.4 -0.8**
comp=Z,44nm,1.4s
HAU Haudompre 20.15 311 *e*P **P 20 26 25.1 +0.3**
HAU *e*MLR MLR

comp=Z,421nm,22.8s,MS3.4
VIVF Saint-Julien-l 20.18 301 *e*P **P 20 26 24.0 -1.2**
comp=Z,95nm,1.0s
VIVF Saint-Julien-l 20.18 301 *e*P **P 20 26 24.0 -1.2**
VIVF pmax pmax

comp=Z,48nm,1.0s
VIVF Saint-Julien-l 20.18 301 *e*P **P 20 26 24.0 -1.2**
comp=Z,48nm,1.0s
LASF Ste Croix 20.57 298 *e*P **P 20 26 30.1 +0.7**
comp=Z,67nm,1.4s
LASF Ste Croix 20.57 298 *e*P **P 20 26 30.1 +0.7**
comp=Z,33nm,1.4s
WLF Walferdange 21.01 315 P **P 20 26 36.3 +2.2**
MEZF Maizieres J'vi 21.14 311 *e*P **P 20 26 35.6 0.0**
SMF Signal de Mont 21.24 305 *e*P **P 20 26 36.2 -0.4**
LOR Lormes 21.43 307 *e*P **P 20 26 38.9 +0.2**
comp=Z,37nm,1.0s,mb4.3
LOR *e*MLR MLR

comp=Z,286nm,18.8s,MS3.4
LOR Lormes 21.43 307 *e*P **P 20 26 38.9 +0.2**
LOR pmax pmax

comp=Z,18nm,1.0s,mb4.4
LOR MLR MLR

comp=Z,290nm,18.8s,MS3.7
LOR Lormes 21.43 307 *e*P **P 20 26 38.9 +0.2**
comp=Z,18nm,1.0s,mb4.4
LOR LR LR

comp=Z,290nm,18.8s,MS3.7
BSEG Bad Segeberg 21.49 328 *e*P **P 20 26 42.6 +3.4**
BSEG pmax pmax

comp=Z,217nm,2.6s,mb5.0
BSEG Bad Segeberg 21.49 328 *e*P **P 20 26 42.6 +3.4**
comp=Z,217nm,2.6s,mb5.0
MEM Membach 21.56 317 P **P 20 26 41.0 +0.9**
comp=Z,19nm,1.7s,mb4.3
MEM Membach 21.56 317 P **P 20 26 40.9 +0.9**
comp=Z,19nm,1.7s,mb4.3
SSF Saint Saulge 21.59 306 *e*P **P 20 26 41.0 +0.6**
comp=Z,33nm,1.1s,mb4.4
SSF Saint Saulge 21.59 306 *e*P **P 20 26 41.0 +0.6**
SSF pmax pmax

comp=Z,16nm,1.1s,mb4.4
SSF Saint Saulge 21.59 306 *e*P **P 20 26 41.0 +0.6**
comp=Z,16nm,1.1s,mb4.4
AVF Avril sur Loir 21.61 305 *e*P **P 20 26 40.5 0.0**
MTLF Montolieu 21.62 296 *e*P **P 20 26 40.2 -0.5**
comp=Z,14nm,0.8s,mb4.1
MTLF Montolieu 21.62 296 *e*P **P 20 26 40.2 -0.5**
MTLF pmax pmax

comp=Z,7.0nm,0.8s,mb4.1
MTLF Montolieu 21.62 296 *e*P **P 20 26 40.2 -0.5**
comp=Z,6.9nm,0.8s,mb4.1
BCLA Clavier 21.86 316 P **P 20 26 43.8 +0.6**
comp=Z,40nm,1.9s,mb4.5
BGF Bois d'Agland 21.87 304 *e*P **P 20 26 43.0 -0.4**
GIVF Givet 21.98 315 *e*P **P 20 26 44.3 -0.2**
comp=Z,54nm,1.0s,mb4.6
GIVF Givet 21.98 315 *e*P **P 20 26 44.3 -0.2**
GIVF pmax pmax

comp=Z,27nm,1.0s,mb4.6
GIVF Givet 21.98 315 *e*P **P 20 26 44.3 -0.2**
comp=Z,27nm,1.0s,mb4.6
DOU Dourbes 22.11 314 P **P 20 26 45.6 -0.3**
TCF Toulx Ste Croi 22.22 303 *e*P **P 20 26 47.4 +0.3**
BAIF Baives 22.31 314 *e*P **P 20 26 47.4 -0.6**
ETSF Etsaut 23.59 294 *e*P **P 20 27 00.2 -1.3**
comp=Z,45nm,1.4s,mb4.4
ETSF Etsaut 23.59 294 *e*P **P 20 27 00.2 -1.3**
ETSF pmax pmax

comp=Z,23nm,1.4s,mb4.4
ETSF Etsaut 23.59 294 *e*P **P 20 27 00.2 -1.3**
comp=Z,22nm,1.4s,mb4.4
MFF Saint Martin d 23.88 303 *e*P **P 20 27 03.2 -0.9**
SJPF Ste Jean 24.10 294 *e*P **P 20 27 04.8 -1.3**
comp=Z,24nm,0.8s,mb4.4
SJPF Ste Jean 24.10 294 *e*P **P 20 27 04.8 -1.3**
SJPF pmax pmax

comp=Z,12nm,0.8s,mb4.4
SJPF Ste Jean 24.10 294 *e*P **P 20 27 04.8 -1.3**
comp=Z,12nm,0.8s,mb4.4
AKTK Aktyubinsk 24.58 48 P **P 20 27 09.9 -0.6**
AKTK Aktyubinsk 24.58 48 P **P 20 27 09.8 -0.6**
AKTO Aktyubinsk 24.58 48 P **P 20 27 09.8 -0.6**
comp=Z,9.8nm,0.7s,mb4.5,baz=250,slow=9.5,SNR=23
AKTO Aktyubinsk 24.58 48 P **P 20 27 09.9 -0.6**
AKTO pmax pmax

comp=Z,10.0nm,0.7s,mb4.5
GRR Gorron 24.80 307 *e*P **P 20 27 11.5 -1.0**
comp=Z,38nm,0.9s,mb4.6
GRR Gorron 24.80 307 *e*P **P 20 27 11.5 -1.0**
GRR pmax pmax

comp=Z,19nm,0.9s,mb4.6
GRR Gorron 24.80 307 *e*P **P 20 27 11.5 -1.0**
comp=Z,19nm,0.9s,mb4.6
KLMR Klimovskoe 24.81 12 *e*P **P 20 27 12.8 +0.4**
KLMR pmax pmax

comp=Z,42nm,1.4s,mb4.8
TAM Tamanrasset 24.89 242 *e*P **P 20 27 14.2 +0.7**
TAM pmax pmax

comp=Z,6.0nm,0.7s,mb4.2
TAM Tamanrasset 24.89 242 *e*P **P 20 27 14.1 +0.6**
comp=Z,6.1nm,0.7s,mb4.2
TAM Tamanrasset 24.89 242 *e*P **P 20 27 14.2 +0.6**
comp=Z,6.1nm,0.7s,mb4.2
KAF Kangasniemi 25.28 357 *ep* **P 20 27 15.8 -0.9**
comp=Z,6.4nm,0.7s,mb4.3
KAF Kangasniemi 25.28 357 *e*P **P 20 27 15.8 -0.9**
KAF pmax pmax

comp=Z,6.0nm,0.7s,mb4.2
HFS Hagfors 25.28 342 P **P 20 27 16.8 0.0**
comp=Z,12nm,0.9s,mb4.5,baz=149,slow=12,SNR=9.0
HFS LR LR 20 38 09.4

comp=Z,275nm,18.1s,MS3.8,baz=90,slow=39
HFS Hagfors 25.28 342 P **P 20 27 16.8 +0.1**
HFS Hagfors 25.28 342 P **P 20 27 16.8 0.0**
HFS LR LR 20 38 09.4
JOF Joensuu 26.04 2 *ep* **P 20 27 23.3 -0.3**
comp=Z,6.6nm,0.7s,mb4.3
JOF Joensuu 26.04 2 *e*P **P 20 27 23.3 -0.3**
JOF pmax pmax

comp=Z,7.0nm,0.7s,mb4.3
PAB San Pablo 26.47 286 *e*P **P 20 27 25.9 -1.9**
PAB pmax pmax

comp=Z,7.0nm,0.8s,mb4.2
PAB San Pablo 26.47 286 *e*P **P 20 27 25.9 -1.9**
comp=Z,7.4nm,0.8s,mb4.3
PAB San Pablo 26.47 286 *e*P **P 20 27 25.9 -1.8**
comp=Z,7.4nm,0.8s,mb4.3
NB2 NORSAR Subarra 26.70 340 P **P 20 27 28.1 -1.5**
comp=Z,3.9nm,0.9s,mb3.9,baz=145,slow=10
NOA NORSAR Array B 26.70 340 P **P 20 27 28.7 -0.9**
comp=Z,4.1nm,1.0s,mb3.9,baz=145,slow=9.1,SNR=8.0
NOA LR LR 20 39 43.4

comp=Z,183nm,18.8s,MS3.7,baz=0.0,slow=40
NOA NORSAR Array B 26.70 340 P **P 20 27 28.7 -0.9**
NOA pmax pmax

comp=Z,4.0nm,1.0s
NOA MLR MLR

comp=Z,183nm,18.8s
ARU Arti 27.65 36 *d* *i*P **P 20 27 39.5 +1.4**
ARU *e* 20 28 26.4
ARU *e*S **S 20 32 22.7 +3.8**
ARU *e*SS 20 33 36.3
ARU pmax pmax

comp=Z,11nm,1.7s,mb4.2
ARU Arti 27.65 36 *e*P **P 20 27 37.9 -0.2**
comp=Z,7.7nm,0.9s,mb4.3
ARU Arti 27.65 36 *e*P **P 20 27 37.9 -0.2**
comp=Z,7.7nm,0.9s,mb4.3
MDT Midelt 28.04 272 P **P 20 27 40.5 -1.4**
comp=Z,1.9nm,0.6s,mb3.9,baz=64,slow=8.7,SNR=6.7
EKA Eskdalemuir Ar 28.68 320 P **P 20 27 45.1 -2.2**
comp=Z,3.7nm,1.0s,mb4.1,baz=122,slow=9.0,SNR=4.4
EKA Eskdalemuir Ar 28.68 320 P **P 20 27 45.2 -2.1**
EKA pmax pmax

comp=Z,4.0nm,1.0s
SVE Sverdlovsk 28.83 36⇑ *e*P **P 20 27 48.5 -0.2**
SVE pmax pmax

comp=Z,8.0nm,1.0s,mb4.4
KBL Kabul 32.19 82 *e*P **P 20 28 18.6 0.0**
KBL pmax pmax

comp=Z,4.0nm,0.9s,mb4.2
KBL Kabul 32.19 82 *e*P **P 20 28 18.5 -0.1**
comp=Z,4.2nm,0.9s,mb4.3
KBL Kabul 32.19 82 *e*P **P 20 28 18.6 0.0**
comp=Z,4.2nm,0.9s,mb4.3
BVAR Borovoye Array 32.69 47 P **P 20 28 21.8 -0.9**
comp=Z,1.0nm,0.6s,mb3.9,baz=253,slow=7.6,SNR=6.3
BVAR Borovoye Array 32.69 47 P **P 20 28 21.8 -0.9**
BVAR pmax pmax

comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 32.73 358 P **P 20 28 22.8 -0.1**
comp=Z,6.1nm,0.8s,mb4.6,baz=152,slow=5.5,SNR=9.3
ARCES LR LR 20 43 51.5

comp=Z,144nm,18.4s,MS3.7,baz=5.8,slow=40
ARCES ARCESS Array B 32.73 358 P **P 20 28 22.8 -0.1**
ARCES pmax pmax

comp=Z,6.0nm,0.8s
ARCES MLR MLR

comp=Z,144nm,18.4s
TOA0 Torodi Ar. Sit 34.22 233 *e*P **P 20 28 35.9 -0.5**
TOA0 Torodi Ar. Sit 34.22 233 *e*P **P 20 28 35.9 -0.5**
TORD Torodi Ar. Bea 34.22 233 P **P 20 28 35.7 -0.7**
comp=Z,14nm,0.6s,mb5.0,baz=33,slow=8.2,SNR=101
TORD ScP ScP 20 34 56.4 -0.7

comp=Z,0.4nm,0.5s,baz=33,slow=8.6,SNR=12
TORD Torodi Ar. Bea 34.22 233 P **P 20 28 35.7 -0.7**
TORD ScP ScP 20 34 56.4 -0.7
AAK Ala-Archa 34.87 66 *e*P **P 20 28 40.7 -1.1**
AAK pmax pmax

comp=Z,9.0nm,1.0s,mb4.7
AAK Ala-Archa 34.87 66 *e*P **P 20 28 40.7 -1.1**
comp=Z,9.4nm,1.0s,mb4.7
AAK Ala-Archa 34.87 66 *e*P **P 20 28 40.6 -1.2**
comp=Z,9.4nm,1.0s,mb4.7
FRU Bishkek 34.94 66 *e*P **P 20 28 43.0 +0.6**
TKM2 Tokmak 2 35.64 66 *e*P **P 20 28 46.6 -1.9**
TKM2 pmax pmax

comp=Z,5.0nm,0.8s,mb4.5
TKM2 Tokmak 2 35.64 66 *e*P **P 20 28 46.6 -1.9**
comp=Z,4.5nm,0.8s,mb4.5
TKM2 Tokmak 2 35.64 66 *e*P **P 20 28 46.6 -1.9**
comp=Z,4.5nm,0.8s,mb4.5
KURK Kurchatov 37.45 52 P **P 20 29 02.3 -1.5**
comp=Z,7.0nm,0.3s,mb4.7,baz=277,slow=8.9,SNR=5.8
KURK Kurchatov 37.45 52 *e*P **P 20 29 02.5 -1.3**
KURK pmax pmax

comp=Z,6.0nm,0.6s,mb4.6
KURK Kurchatov 37.45 52 *e*P **P 20 29 02.5 -1.3**
comp=Z,6.3nm,0.6s,mb4.6
KURK Kurchatov 37.45 52 *e*P **P 20 29 02.5 -1.3**
comp=Z,6.3nm,0.6s,mb4.6
MKAR Makanchi Array 39.99 59 P **P 20 29 24.4 -0.8**
comp=Z,5.1nm,0.7s,mb4.3,baz=279,slow=6.3,SNR=27
MKAR Makanchi Array 39.99 59 P **P 20 29 24.4 -0.8**
MKAR pmax pmax

comp=Z,5.0nm,0.7s
MKAR Makanchi Array 39.99 59 P **P 20 29 24.4 -0.8**
NVS Novosibirsk 40.45 46 *e*P **P 20 29 27.9 -1.0**
NVS *e* 20 31 04.0
NVS pmax pmax

comp=Z,15nm,2.1s,mb4.3
ZALV Zalesovo Beam 41.35 48 P **P 20 29 35.5 -0.7**
comp=Z,1.7nm,0.6s,mb3.9,baz=266,slow=9.3,SNR=6.6
ZALV LR LR 20 49 53.2

comp=Z,57nm,20.4s,MS3.4,baz=77,slow=41
ZALV Zalesovo Beam 41.35 48 P **P 20 29 35.5 -0.7**
ZALV pmax pmax

comp=Z,2.0nm,0.6s,mb3.9
ZALV MLR MLR

comp=Z,57nm,20.4s,MS3.4
DBIC Dimbokro 43.31 234 P **P 20 29 51.8 -0.9**
comp=Z,7.1nm,0.8s,mb4.4,baz=23,slow=7.2,SNR=8.0
DBIC LR LR 20 50 59.9

comp=Z,103nm,21.3s,MS3.7,baz=106,slow=40
DBIC Dimbokro 43.31 234 P **P 20 29 51.8 -0.9**
DBIC pmax pmax

comp=Z,7.0nm,0.8s
DBIC MLR MLR

comp=Z,103nm,21.3s
TIC Toumodi 43.44 235 *e*P **P 20 29 53.0 -0.7**
comp=Z,8.3nm,0.2s,mb5.1
KIC Kosan Boka 43.47 234 *e*P **P 20 29 53.6 -0.4**
comp=Z,80nm,1.2s,mb5.3
LIC Lamto 43.76 234 *e*P **P 20 29 56.0 -0.3**
comp=Z,46nm,1.2s,mb4.8
LIC Lamto 43.76 234 *e*P **P 20 29 55.4 -0.9**
comp=Z,51nm,1.2s,mb5.1
LIC Lamto 43.76 234 *e*P **P 20 29 56.0 -0.3**
comp=Z,23nm,1.2s,mb4.8
WMQ Urumqi 44.21 62 P **P 20 30 00.8 +1.2**
WMQ XP sP 20 30 11.5 +4.0
WMQ PP PP 20 31 46.2 +3.6
WMQ AMB AMB

comp=Z,10.0nm,1.1s,mb4.5
WMQ AMB AMB

comp=Z,310nm,7.0s
WMQ LR LR

comp=N,90nm,20.0s,MS3.8
WMQ LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,55nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,73nm,17.0s,MS3.7						
DANN	**Dangsing**	**46.12**	**84**	*e*P	**P**	**20 30 14.8**	**-0.2**
	comp=Z,109nm,0.7s						
KOLN	**Koldanda**	**46.24**	**85**	*e*P	**P**	**20 30 15.3**	**-0.7**
	comp=Z,34nm,0.6s,mb5.4						
BBTS	**Babate**	**46.31**	**254**	P	**P**	**20 30 14.5**	**-2.1**
	comp=Z,8.2nm,0.5s,mb4.9,baz=344,slow=4.5,SNR=3.6						
GKN	**Gorkha**	**46.97**	**84**	*e*P	**P**	**20 30 20.7**	**-0.9**
	comp=Z,62nm,0.8s,mb5.6						
DMN	**Daman**	**47.51**	**84**	*e*P	**P**	**20 30 25.2**	**-0.7**
	comp=Z,60nm,0.7s,mb5.7						
KKN	**Kakani**	**47.57**	**84**	*e*P	**P**	**20 30 25.6**	**-0.8**
	comp=Z,22nm,0.6s,mb5.3						
KKN	**Kakani**	**47.57**	**84**	*e*P	**P**	**20 30 25.6**	**-0.8**
KKN				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
PKI	**Pulchoki**	**47.77**	**84**	*e*P	**P**	**20 30 27.4**	**-0.5**
	comp=Z,24nm,0.7s,mb5.3						
PKI	**Pulchoki**	**47.77**	**84**	*e*P	**P**	**20 30 27.4**	**-0.5**
PKI				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.3						
GUN	**Gumba**	**48.00**	**84**	*e*P	**P**	**20 30 29.2**	**-0.5**
	comp=Z,24nm,0.6s,mb5.4						
JIRN	**Jiri**	**48.35**	**84**	*e*P	**P**	**20 30 31.9**	**-0.5**
	comp=Z,42nm,1.0s,mb5.4						
RAMN	**Ramite**	**48.99**	**84**	*e*P	**P**	**20 30 35.8**	**-1.6**
	comp=Z,39nm,0.8s,mb5.5						
ODAN	**Odare**	**49.66**	**84**	*e*P	**P**	**20 30 41.6**	**-0.9**
TAPN	**Taplejung**	**49.70**	**83**	*e*P	**P**	**20 30 42.2**	**-0.6**
	comp=Z,24nm,1.0s,mb5.2						
LSA	**Lhasa**	**51.40**	**79**	*e*P	**P**	**20 30 54.5**	**-1.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
LSA	**Lhasa**	**51.40**	**79**	*e*P	**P**	**20 30 54.5**	**-1.1**
	comp=Z,4.5nm,0.9s,mb4.4						
LSA	**Lhasa**	**51.40**	**79**	*e*P	**P**	**20 30 54.5**	**-1.1**
	comp=Z,4.5nm,0.9s,mb4.4						
LSZ	**Lusaka**	**51.94**	**181**	P	**P**	**20 31 02.7**	**+3.2**
	comp=Z,2.1nm,0.8s,mb4.1,baz=4.2,slow=6.9,SNR=5.9						
LSZ	**Lusaka**	**51.94**	**181**	P	**P**	**20 31 02.7**	**+3.2**
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SHL	**Shillong**	**53.84**	**83**	*e*P	**P**	**20 31 12.0**	**-1.7**
GTA	**Gaotai**	**54.17**	**64**	*e*P	**P**	**20 31 12.4**	**-3.5**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.5s,mb3.8						
SONM	**Songino Array**	**55.76**	**53**	P	**P**	**20 31 25.6**	**-1.6**
	comp=Z,1.2nm,0.7s,mb4.1,baz=285,slow=7.4,SNR=9.0						
SONM	**Songino Array**	**55.76**	**53**	P	**P**	**20 31 25.6**	**-1.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LZH	**Lanzhou**	**58.41**	**66**	*e*P	**P**	**20 31 50.0**	**+3.8**
LZH				AP	pP	20 31 54.3	+2.3
LZH				XP	sP	20 31 56.7	+2.5
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,87nm,4.3s						
CD2	**Chengdu**	**60.63**	**72**	P	**P**	**20 32 02.3**	**+0.7**
CD2				AP	pP	20 32 09.9	+2.5
CD2				XP	sP	20 32 13.2	+3.6
CD2				PCP	PcP	20 32 46.3	+0.4
CD2				PP	PP	20 34 17.9	+2.8
CD2				S	**S**	**20 40 14.6**	**-2.6**
CD2				SS	SS	20 44 13.0	-2.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb5.3						
CD2				AMB	AMB		
	comp=Z,100nm,5.6s						
CD2				LR	LR		
	comp=N,110nm,7.3s						
CD2				LR	LR		
	comp=Z,290nm,15.8s,MS4.5						
HHC	**Hu-ho-hao-te**	**61.86**	**58**	*e*P	**P**	**20 32 07.3**	**-2.5**
HHC				AP	pP	20 32 17.7	+2.1
HHC				XP	sP	20 32 21.6	+3.8
HHC				PP	PP	20 34 24.2	-1.5
HHC				*e*S	**S**	**20 40 25.7**	**-6.8**
HHC				SCS	ScS	20 41 52.5	-8.2
HHC				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,145nm,4.9s						
HHC				LR	LR		
	comp=N,117nm,13.1s,MS4.5						
HHC				LR	LR		
	comp=E,193nm,16.7s,MS4.5						
HHC				LR	LR		
	comp=Z,89nm,15.5s,MS4.0						
KMI	**Kunming**	**62.63**	**78**	P	**P**	**20 32 14.4**	**-0.8**
KMI				AP	pP	20 32 23.8	+2.8
KMI				XP	sP	20 32 27.2	+4.0
KMI				PP	PP	20 34 35.9	+3.0
KMI				S	**S**	**20 40 40.1**	**-2.6**
KMI				SS	SS	20 44 45.7	-1.3
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.7						
KMI				AMB	AMB		
	comp=Z,75nm,4.3s						
KMI				LR	LR		
	comp=N,132nm,20.9s,MS4.2						
KMI				LR	LR		
	comp=E,128nm,25.9s,MS4.2						
KMI				LR	LR		
	comp=Z,58nm,20.9s,MS3.7						
YAK	**Yakutsk**	**62.64**	**31**	*e*P	**P**	**20 32 14.5**	**-0.2**
CHTO	**Chiang Mai**	**62.88**	**86**	*e*P	**P**	**20 32 15.4**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.7						
CHTO	**Chiang Mai**	**62.88**	**86**	*e*P	**P**	**20 32 15.4**	**-1.5**
	comp=Z,8.9nm,1.3s,mb4.7						
CHTO	**Chiang Mai**	**62.88**	**86**	*e*P	**P**	**20 32 15.4**	**-1.5**
	comp=Z,8.9nm,1.3s,mb4.7						
XAN	**Xi'an**	**63.05**	**66**	P	**P**	**20 32 17.0**	**-0.8**
XAN				AP	pP	20 32 23.9	+0.2
XAN				PCP	PcP	20 32 55.4	-0.2
XAN				PP	PP	20 34 35.7	-0.6
XAN				S	**S**	**20 40 46.6**	**-1.1**
XAN				SS	SS	20 44 53.0	0.0
XAN				AMB	AMB		
	comp=Z,2.0nm,0.6s,mb4.4						
XAN				LR	LR		
	comp=Z,36nm,19.9s,MS3.5						
CMAR	**Chiang Mai Arr**	**63.07**	**86**	P	**P**	**20 32 15.6**	**-2.6**
	comp=Z,1.3nm,0.6s,mb4.3,baz=300,slow=8.3,SNR=10.0						
CMAR	**Chiang Mai Arr**	**63.07**	**86**	P	**P**	**20 32 15.6**	**-2.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	**Schefferville**	**64.00**	**320**	P	**P**	**20 32 21.4**	**-2.4**
	comp=Z,6.5nm,0.6s,mb4.8,baz=60,slow=4.1,SNR=11						
GYA	**Guiyang**	**65.02**	**75**	*e*P	**P**	**20 32 30.8**	**-0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
KSRS	**Korea Array**	**74.53**	**55**	LR	LR	21 10 13.4	
	comp=Z,61nm,18.1s,MS3.9,baz=108,slow=39						
COLD	**Coldfoot**	**76.16**	**360**	*e*P	**P**	**20 33 38.5**	**+0.3**
	comp=Z,8.0nm,1.2s,mb4.5						
COLD	**Coldfoot**	**76.16**	**360**	*e*P	**P**	**20 33 38.5**	**+0.3**
	comp=Z,8.0nm,1.2s,mb4.5						
YKA	**Yellowknife Ar**	**76.75**	**344**	P	**P**	**20 33 40.8**	**-0.7**
	comp=Z,2.2nm,0.7s,mb4.2,baz=31,slow=5.7,SNR=20						
YKA	**Yellowknife Ar**	**76.75**	**344**	P	**P**	**20 33 40.8**	**-0.7**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**76.75**	**344**	P	**P**	**20 33 40.8**	**-0.8**
DAWY	**Dawson**	**78.94**	**355**	*e*P	**P**	**20 33 53.1**	**-0.6**
DAWY	**Dawson**	**78.94**	**355**	*e*P	**P**	**20 33 53.1**	**-0.6**
FFC	**Flin Flon**	**79.59**	**334**	*e*P	**P**	**20 33 56.6**	**-0.8**
FFC				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
FFC	**Flin Flon**	**79.59**	**334**	*e*P	**P**	**20 33 56.6**	**-0.8**
	comp=Z,9.1nm,0.8s,mb4.8						
FFC	**Flin Flon**	**79.59**	**334**	*e*P	**P**	**20 33 56.6**	**-0.8**
	comp=Z,9.1nm,0.8s,mb4.8						
ULM	**Lac du Bonnet**	**80.66**	**328**	P	**P**	**20 34 00.2**	**-3.1**
	comp=Z,5.6nm,0.7s,mb4.6,baz=49,slow=4.0,SNR=4.9						
ULM				LR	LR	21 10 17.2	
	comp=Z,113nm,19.8s,MS4.2,baz=26,slow=36						
PNL	**Peninsula**	**83.30**	**354**	*e*P	**P**	**20 34 18.2**	**+1.2**
	comp=Z,111nm,0.8s						
PNL	**Peninsula**	**83.30**	**354**	*e*P	**P**	**20 34 18.2**	**+1.2**
	comp=Z,111nm,0.8s						
EDM	**Edmonton**	**84.55**	**339**	*e*P	**P**	**20 34 23.0**	**-0.5**
EDM	**Edmonton**	**84.55**	**339**	*e*P	**P**	**20 34 23.0**	**-0.5**
SCIA	**State Center**	**85.61**	**321**	*e*P	**P**	**20 34 30.8**	**+1.8**
	comp=Z,55nm,0.3s						
ECSD	**EROS,Sioux Fal**	**85.91**	**324**	*e*P	**P**	**20 34 29.6**	**-0.9**
	comp=Z,83nm,2.5s,mb5.5						
ECSD	**EROS,Sioux Fal**	**85.91**	**324**	*e*P	**P**	**20 34 29.6**	**-0.9**
	comp=Z,83nm,2.5s,mb5.5						
RLMT	**Red Lodge**	**90.16**	**332**	*e*P	**P**	**20 34 52.2**	**+1.4**
	comp=Z,33nm,1.8s,mb5.4						
PDAR	**Pinedale Array**	**92.27**	**331**	P	**P**	**20 34 59.4**	**-1.2**
	comp=Z,1.2nm,0.7s,mb4.3,baz=64,slow=3.5,SNR=10						
RRI2	**Red Ridge**	**92.44**	**332**	*e*P	**P**	**20 35 02.0**	**+0.6**
	comp=Z,105nm,3.0s						
TXAR	**Lajitas Array**	**100.68**	**319**	P	Pdif	20 35 38.6	-0.2
	comp=Z,0.9nm,0.8s,baz=72,slow=4.1,SNR=6.7						
TXAR	**Lajitas Array**	**100.68**	**319**	P	Pdif	20 35 38.6	-0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*ATH **02** 20:28:44.9, 40.18N×1957E, h19^{km}±4^{km}, MD3.5/5*
*NEIC **02** 20:28:45.1, 40.18N×1958E, h17^{km}, MD3.8(ATH), After ATH.*
ISC 02 20:28:46.1±2.1**, 4000N**±008×**194E**±02**, h28**^{km}±11^{km}**, n10, σ1^{s}05**/16**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.43**	**131**	*e*PB	**Pb**	**20 28 55.3**	**0.0**
KEK				*e*SB	**Sb**	**20 29 02.0**	**+0.4**
KEK	**Kerkira**	**0.43**	**131**	*e*Pb	**Pb**	**20 28 55.5**	**+0.2**
KEK				*e*Sb	**Sb**	**20 29 02.0**	**+0.4**
JAN	**Janina**	**1.19**	**106**	*e*PN	**Pn**	**20 29 05.6**	**-1.2**
JAN				*e*SN	**Sn**	**20 29 21.3**	**-0.7**
JAN	**Janina**	**1.19**	**106**	*e*Pn	**Pn**	**20 29 05.5**	**-1.3**
JAN				*e*Sn	**Sn**	**20 29 21.3**	**-0.7**
BIA	**Bitola**	**1.81**	**55**	*i* Pn	**Pn**	**20 29 14.4**	**-0.9**
BIA				*i* Sn	**Sn**	**20 29 37.9**	**+0.6**
KRUS	**Krusevo**	**1.98**	**46**	*i* Pn	**Pn**	**20 29 17.8**	**+0.1**
KRUS				*i* Sn	**Sn**	**20 29 41.7**	**+0.1**
VLS	**Valsamata**	**2.05**	**152**	*e*PB	**Pb**	**20 29 21.7**	**-0.9**
EVR	**Evrytania**	**2.17**	**119**	*e*PN	**Pn**	**20 29 22.3**	**+1.9**
EVR	**Evrytania**	**2.17**	**119**	*e*Pn	**Pn**	**20 29 23.0**	**+2.6**
RLS	**Riolos of Patr**	**2.53**	**139**	*e*PB	**Pn**	**20 29 28.5**	**+3.2**

*NEIC **02** 20:37:51.4, 1730N×9592W, h110^{km}, MD3.7(MEX), After MEX.*
MEX 02 20:37:51.4±1.1**, 1730N**×**9592W, h110**^{km}±14^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**0.80**	**254**	*i* P	Pn	20 38 10.4	-0.3
OXX				*i* S	Sn	20 38 23.9	-1.3
VHO	**Vista Hermosa**	**0.81**	**254**	*i* P	Pn	20 38 09.7	-1.0
VHO				*i* S	Sn	20 38 23.7	-1.6
CMIG	**Matias Romero**	**1.01**	**102**	*i* P	Pn	20 38 11.4	-1.3
CMIG				*i* S	Sn	20 38 26.0	-2.9
UTMO	**Huajuapan**	**1.87**	**287**	*i* P	Pn	20 38 22.0	-0.7
UTMO				*i* S	Sn	20 38 44.3	-2.4
PNIG	**Pinotepa**	**2.30**	**247**	*i* P	Pn	20 38 25.8	-2.4
PNIG				*i* S	Sn	20 38 51.6	-4.9
TGIG		**2.73**	**101**	*i* P	Pn	20 38 33.4	-0.4
TGIG				*i* S	Sn	20 39 05.2	-1.2
PCIG		**3.04**	**121**	*e*P	Pn	20 38 37.4	-0.5
PCIG				*i* S	Sn	20 39 12.7	-1.1

*CSEM **02** 20:38:40.5±0.2, 3701N×2926E, h5^{km}±1^{km}, MD3.2, Error ellipse: s-maj=2.1km s-min=1.6km az=20.0*
*DDA **02** 20:38:40.9, 3704N×29.17E, h7^{km}±3^{km}, Md3.2*
*ISK **02** 20:38:40.6, 3703N×2925E, h3^{km}, MD3.0*
*ISCJB **02** 20:38:41.5±0.6, 3703N±003×2923E±004, h7^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=4.5km az=33.1*
ISC 02 20:38:42.2±0.5**, 3703N**±003×**2924E**±004**, h10**^{km}±5^{km}**, n20, σ0^{s}83**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**52**	*i* P	**Pg**	**20 38 47.9**	**-0.8**
GOLH				*i* S	**Sg**	**20 38 54.2**	**+1.1**
TURN	**Turunc**	**0.53**	**253**	*i* P	**Pg**	**20 38 56.4**	**+3.9**
TURN				*i* S	**Sg**	**20 39 08.9**	**+9.4**
ELL	**Elmali**	**0.61**	**118**	*e*PG	**Pg**	**20 38 52.2**	**-1.7**
ELL				*e*SG	**Sg**	**20 39 01.8**	**-0.1**
DENT	**Denizli**	**0.74**	**347**	*e*PG	**Pg**	**20 38 55.4**	**-1.0**
DENT				*e*SG	**Sg**	**20 39 06.7**	**+0.6**
YER	**Yerkesik**	**0.77**	**278**	*e*PG	**Pg**	**20 38 56.6**	**-0.5**
YER				*e*SG	**Sg**	**20 39 07.6**	**+0.5**
AKAS	**Kas**	**0.85**	**160**	*i* P	**Pg**	**20 38 57.9**	**-0.7**
AKAS				*i* S	**Sg**	**20 39 11.5**	**+1.9**
AKAS	**Kas**	**0.85**	**160**	*i* P	**Pg**	**20 38 57.8**	**-0.7**
AKAS				*i* S	**Sg**	**20 39 11.5**	**+1.9**
ANTB	**Antalya**	**1.14**	**96**	*e*PN	**Pn**	**20 39 03.1**	**-1.1**
BCK	**Bucak**	**1.16**	**68**	*e*PN	**Pn**	**20 39 03.8**	**-0.7**
MLSB	**Milas**	**1.20**	**283**	*e*PN	**Pn**	**20 39 04.3**	**-0.7**
KHL	**Karahalli**	**1.31**	**10**	*e*PN	**Pn**	**20 39 05.9**	**-0.6**
KHAL	**Karahalli**	**1.35**	**8**	*i* P	**Pn**	**20 39 06.9**	**-0.2**
KHAL				*i* S	**Sb**	**20 39 25.3**	**+0.3**
DAT	**Datca**	**1.36**	**258**	*e*PN	**Pn**	**20 39 07.5**	**+0.2**
BODT	**Bodrum**	**1.54**	**272**	*e*PN	**Pn**	**20 39 09.7**	**0.0**
KULA	**Kula-Manisa**	**1.55**	**343**	*e*PN	**Pn**	**20 39 09.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.84**	**34**	*e*PN	**Pn**	**20 39 14.0**	**+0.2**
BLCB	**Balcova**	**2.20**	**308**	*e*PN	**Pn**	**20 39 19.2**	**+0.4**
HDMB	**Hadim**	**2.60**	**91**	*e*PN	**Pn**	**20 39 25.2**	**+0.9**
KONT	**Konya--Tatoy**	**2.65**	**69**	*e*PN	**Pn**	**20 39 25.7**	**+0.8**
KIZT	**Kizilcal**	**2.79**	**48**	*e*PN	**Pn**	**20 39 27.8**	**+0.9**

*CSEM **02** 20:47:23.3±0.1, 3702N×2924E, h2^{km}, ML3.5, Error ellipse: s-maj=2.5km s-min=1.5km az=5.0*
*ISCJB **02** 20:47:24.1±0.6, 3700N±003×2922E±003, h2^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=4.0km az=6.4*
*ISK **02** 20:47:24.0, 3704N×2923E, h5^{km}, MD3.0*
*DDA **02** 20:47:26.9, 37.17N×2931E, h28^{km}, Md3.2, Ml3.5*
*ATH **02** 20:47:32.8, 3623N×2900E, h10^{km}, MD3.4/3*
ISC 02 20:47:24.6±0.5**, 3699N**±003×**2922E**±003**, h6**^{km}±5^{km}**, n27, σ0^{s}72**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.37**	**47**	*i* P	**Pg**	**20 47 31.1**	**-0.7**
GOLH				*i* S	**Sg**	**20 47 37.5**	**+0.8**
TURN	**Turunc**	**0.51**	**257**	*i* P	**Pg**	**20 47 39.5**	**+5.2**
TURN				*i* S	**Sg**	**20 47 51.7**	**+11**
ELL	**Elmali**	**0.60**	**113**	*e*PG	**Pg**	**20 47 35.5**	**-0.6**
ELL				*e*SG	**Sg**	**20 47 45.5**	**+1.5**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**20 47 39.0**	**-0.3**
YER				*e*SG	**Sg**	**20 47 50.5**	**+1.3**
DENT	**Denizli**	**0.78**	**349**	*e*PG	**Pg**	**20 47 38.7**	**-0.9**
DENT				*e*SG	**Sg**	**20 47 48.8**	**-1.0**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**20 47 39.9**	**-0.3**
AKAS				*i* S	**Sg**	**20 47 55.7**	**+5.0**
KSL	**Kastellorizon**	**0.88**	**160**	*e*PB	**Pb**	**20 47 42.0**	**-0.3**
ANTB	**Antalya**	**1.15**	**94**	*e*PN	**Pn**	**20 47 46.5**	**-0.7**
ARG	**Arkhangelos**	**1.17**	**229**	*e*PB	**Pb**	**20 47 46.4**	**-0.7**
BCK	**Bucak**	**1.19**	**66**	*e*PN	**Pn**	**20 47 47.0**	**-0.8**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**20 47 46.9**	**-0.9**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pg**	**20 47 48.2**	**-0.6**
AYDN				*i* S	**Sg**	**20 48 06.7**	**+1.4**
DAT	**Datca**	**1.34**	**260**	*e*PN	**Pn**	**20 47 50.1**	**+0.3**
KHL	**Karahalli**	**1.36**	**10**	*e*PN	**Pn**	**20 47 49.3**	**-0.8**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**20 47 50.7**	**+0.1**
KHAL				*i* S	**Sb**	**20 48 09.3**	**+0.1**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**20 47 51.5**	**+0.6**
BDRM				*i* S	**Sb**	**20 48 10.3**	**+0.4**
BODT	**Bodrum**	**1.53**	**273**	*e*PN	**Pn**	**20 47 53.1**	**+0.7**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**20 47 53.0**	**-0.2**
SHUT	**Suhut-Afyon**	**1.89**	**34**	*e*PN	**Pn**	**20 47 57.6**	**+0.3**
KDAG	**Bornova**	**2.10**	**313**	*i* P	**Pn**	**20 48 00.0**	**-0.2**
KDAG				*i* S	**Sn**	**20 48 26.4**	**-0.2**
ALT	**Altintas**	**2.18**	**19**	*e*PN	**Pn**	**20 48 01.4**	**0.0**
AKS	**Akhisar**	**2.19**	**330**	*e*PN	**Pn**	**20 48 01.8**	**+0.2**
KARP	**Karpathos**	**2.20**	**230**	*e*PB	**Pb**	**20 48 03.6**	**-1.1**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**20 48 02.3**	**+0.4**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**	**20 48 08.2**	**+0.9**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*PN	**Pn**	**20 48 09.1**	**+0.9**
KIZT	**Kizilcal**	**2.83**	**47**	*e*PN	**Pn**	**20 48 11.1**	**+0.8**

*DDA **02** 21:04:53.0, 3677N×2808E, h7^{km}±7^{km}, Md2.9*
*ISK **02** 21:04:55.4, 3681N×2801E, h6^{km}, MD2.8*
*CSEM **02** 21:04:55.5±0.0, 3688N×2795E, h10^{km}, MD2.8, Error ellipse: s-maj=1.2km s-min=0.6km az=153.0*
*ISCJB **02** 21:04:56.2±0.9, 3686N±006×2797E±005, h7^{km}±7^{km}, Error ellipse: s-maj=9.7km s-min=5.9km az=160.0*
ISC 02 21:04:56.4±1.1**, 3685N**±005×**2799E**±005**, h2**^{km}±11^{km}**, n11, σ0^{s}51**/15**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	**Datca**	**0.35**	**250**	*e*PG	**Pg**	**21 05 02.7**	**-0.3**
DAT				*e*SG	**Sg**	**21 05 08.1**	**+0.5**
YER	**Yerkesik**	**0.37**	**40**	*e*PG	**Pg**	**21 05 03.5**	**0.0**
YER				*e*SG	**Sg**	**21 05 09.2**	**+0.9**
MLSB	**Milas**	**0.48**	**339**	*e*PG	**Pg**	**21 05 06.0**	**+0.5**
BDRM	**Kayabasi**	**0.48**	**297**	*i* P	**Pg**	**21 05 04.9**	**-0.7**
BDRM				*i* S	**Sg**	**21 05 12.3**	**+0.3**
TURN	**Turunc**	**0.49**	**87**	*i* P	Px	21 05 00.6	
TURN				*i* S	Sx	21 05 05.2	
BODT	**Bodrum**	**0.58**	**292**	*e*PG	**Pg**	**21 05 08.0**	**+0.5**
AYDN	**Tasoluk**	**0.81**	**354**	*i* P	**Pg**	**21 05 11.2**	**-0.8**
AYDN				*i* S	**Sg**	**21 05 22.2**	**-0.3**
GCAM	**G?zelcaml?**	**1.04**	**325**	*i* P	**Pg**	**21 05 15.6**	**-0.7**
GCAM				*i* S	**Sg**	**21 05 29.8**	**0.0**
ELL	**Elmali**	**1.55**	**93**	*e*PN	**Pn**	**21 05 24.4**	**-0.5**
BLCB	**Balcova**	**1.71**	**334**	*e*PN	**Pn**	**21 05 27.5**	**+0.4**
KULA	**Kula-Manisa**	**1.75**	**18**	*e*PN	**Pn**	**21 05 27.9**	**+0.2**

*DDA **02** 21:17:31.7, 3701N×2933E, h7^{km}±5^{km}, Md3.0*
*ISCJB **02** 21:17:33.4±0.7, 3709N±004×2935E±006, h9^{km}±8^{km}, Error ellipse: s-maj=8.7km s-min=5.5km az=138.1*
*CSEM **02** 21:17:33.1±0.1, 3707N×2933E, h10^{km}, MD2.8, Error ellipse: s-maj=2.3km s-min=2.0km az=24.0*
*ISK **02** 21:17:33.0, 3707N×2935E, h9^{km}, MD2.8*
ISC 02 21:17:34.1±0.6**, 3710N**±004×**2935E**±005**, h16**^{km}±7^{km}**, n11, σ0^{s}88**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.57**	**128**	*e*PG	**Pg**	**21 17 43.8**	**-1.5**
ELL				*e*SG	**Sg**	**21 17 52.5**	**-0.4**
TURN	**Turunc**	**0.64**	**250**	*i* P	**Pg**	**21 17 47.6**	**+1.0**
TURN				*i* S	**Sg**	**21 18 00.4**	**+5.2**
DENT	**Denizli**	**0.70**	**339**	*e*PG	**Pg**	**21 17 47.5**	**-0.4**
DENT				*e*SG	**Sg**	**21 17 57.9**	**+0.7**
YER	**Yerkesik**	**0.86**	**273**	*e*PG	**Pg**	**21 17 49.9**	**-0.8**
AKAS	**Kas**	**0.89**	**167**	*i* P	**Pg**	**21 17 47.2**	**-4.1**
AKAS				*i* S	**Sg**	**21 18 04.9**	**+2.0**
BCK	**Bucak**	**1.05**	**69**	*e*PG	**Pg**	**21 17 54.5**	**+0.1**
KHL	**Karahalli**	**1.23**	**6**	*e*PN	**Pn**	**21 17 57.4**	**+0.7**
KHAL	**Karahalli**	**1.28**	**5**	*i* P	**Pn**	**21 17 57.7**	**+0.4**
KHAL				*i* S	**Sb**	**21 18 19.0**	**+5.0**
AYDN	**Tasoluk**	**1.30**	**296**	*i* P	**Pn**	**21 17 56.7**	**-0.9**
AYDN				*i* S	**Sb**	**21 18 14.0**	**-0.7**
DAT	**Datca**	**1.47**	**256**	*e*PN	**Pn**	**21 18 00.0**	**+0.1**
KULA	**Kula-Manisa**	**1.52**	**339**	*e*PN	**Pn**	**21 18 01.1**	**+0.4**

*CSEM **02** 21:32:18.6±0.1, 3552N×2202E, h41^{km}, ML4.2/4, Error ellipse: s-maj=2.0km s-min=1.5km az=56.0*
*ISCJB **02** 21:32:19.4±0.6, 3554N±004×2203E±004, h62^{km}±7^{km}, mb3.8/9, Error ellipse: s-maj=7.4km s-min=4.0km az=41.1*
*NEIC **02** 21:32:20.9±0.9, 3550N×2206E, h51^{km}±8^{km}, MG3.2(ATH), Error ellipse: s-maj=11.5km s-min=6.3km az=203.0*
*THE **02** 21:32:20.7, 3558N×22.12E, h82^{km}±6^{km}, ML4.2/4, Error ellipse: s-maj=6.7km s-min=1.1km az=47.0*
*IDC **02** 21:32:22.0±2.3, 3564N×22.16E, h52^{km}±23^{km}, mb3.6/9, mb1 3.7/12, mb1mx3.6/23, mbtmp3.6/12, ML3.1/3, Error ellipse: s-maj=24.9km s-min=17.7km az=180.0*
*BEO **02** 21:32:29.4, 3646N×2160E*
ISC 02 21:32:20.6±0.6**, 3551N**±004×**2204E**±004**, h48**^{km}±7^{km}**, h42**^{km}±1.0^{km}**:pP-P, n98, σ1^{s}16**/121**, mb3.8**/9**, 2C-1D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.11**	**46**	*e*PG	**Pn**	**21 32 38.0**	**-1.8**
PYL	**PYLOS**	**1.40**	**350**	P	**Pn**	**21 32 43.3**	**-0.4**
PYL				S	**Sn**	**21 33 02.4**	**+1.4**
VLI	**Veliai**	**1.40**	**31**	*e*PB	**Pn**	**21 32 43.5**	**-0.3**
ITM	**Ithomi**	**1.67**	**357**	*e*PB	**Pn**	**21 32 48.1**	**+0.8**
ITM	**Ithomi**	**1.67**	**357**	P	**Pn**	**21 32 50.7**	**+3.4**
VAM	**Vamos**	**1.77**	**93**	*e*PG	**Pn**	**21 32 58.6**	**+10**
GVD	**Gavdhos**	**1.81**	**111**	*e*PN	**Pn**	**21 32 48.5**	**-0.7**
DID	**Didima**	**2.21**	**25**	P	**Pn**	**21 32 54.6**	**-0.2**
DID				S	**Sn**	**21 33 21.0**	**+0.1**
SIVA	**Sivas**	**2.32**	**102**	P	**Pn**	**21 32 55.4**	**-0.9**
SIVA				S	**Sn**	**21 33 24.9**	**+1.3**
IDI	**Anoyia**	**2.34**	**95**	P	**Pn**	**21 32 56.7**	**+0.2**
	3.5nm,0.3s,baz=286,slow=18,SNR=20						
NAIG	**Nisos Aigina**	**2.52**	**27**	*e*PG	**Pn**	**21 33 03.5**	**+4.4**
RLS	**Riolos of Patr**	**2.58**	**350**	P	**Pn**	**21 33 02.3**	**+2.4**
LTK	**Loutraki**	**2.61**	**16**	P	**Pn**	**21 33 00.7**	**+0.4**
LTK				S	**Sn**	**21 33 30.0**	**-0.8**
ATH	**Athens Observa**	**2.80**	**28**	*e*PN	**Pn**	**21 33 05.0**	**+2.1**
LAST	**Lasithi**	**2.83**	**96**	P	**Pn**	**21 33 03.8**	**+0.5**
THR6	**Thira Island,**	**2.85**	**72**	P	**Pn**	**21 33 02.7**	**-0.9**
THR3	**Thira Island,**	**2.87**	**71**	P	**Pn**	**21 33 03.4**	**-0.4**
THR1	**Thera Island**	**2.90**	**72**	P	**Pn**	**21 33 03.6**	**-0.7**
THR1				S	**Sn**	**21 33 37.7**	**-0.2**
VLS	**Valsamata**	**2.90**	**337**	P	**Pn**	**21 33 04.9**	**+0.6**
VLS				S	**Sn**	**21 33 39.1**	**+1.2**
VLS	**Valsamata**	**2.90**	**337**	*e*PB	**Pn**	**21 33 05.0**	**+0.7**
VLS	**Valsamata**	**2.90**	**337**	P	**Pn**	**21 33 05.3**	**+1.0**
VLS				S	**Sn**	**21 33 39.1**	**+1.2**
PTL	**Penteli**	**2.92**	**30**	*e*PN	**Pn**	**21 33 04.0**	**-0.6**
NPS	**Neapolis**	**2.93**	**94**	*e*PB	**Pn**	**21 33 09.5**	**+4.9**
APE	**Apeiranthos**	**3.22**	**60**	*e*PN	**Pn**	**21 33 07.0**	**-1.6**
APE	**Apeiranthos**	**3.22**	**60**	P	**Pn**	**21 33 08.4**	**-0.2**
LKR	**Lokris**	**3.22**	**13**	P	**Pn**	**21 33 08.9**	**+0.2**
LKR	**Lokris**	**3.22**	**13**	P	**Pn**	**21 33 09.4**	**+0.7**
EVR	**Evrytania**	**3.40**	**357**	*e*PB	**Pn**	**21 33 14.0**	**+2.9**
EVR	**Evrytania**	**3.40**	**357**	P	**Pn**	**21 33 15.2**	**+4.1**
ZKR	**Zakros**	**3.44**	**95**	P	**Pn**	**21 33 11.6**	**0.0**
AGG	**Agios Georgios**	**3.51**	**4**	P	**Pn**	**21 33 13.8**	**+1.2**
NEO	**Neokhori**	**3.90**	**14**	P	**Pn**	**21 33 19.3**	**+1.3**
XOR	**Xorichti**	**3.95**	**13**	P	**Pn**	**21 33 19.7**	**+1.0**
THL	**Klokotos Trika**	**4.04**	**360**	P	**Pn**	**21 33 20.7**	**+0.8**
THL				S	**Sn**	**21 34 07.4**	**+1.4**
IGT	**Igoumenitsa**	**4.24**	**342**	P	**Pn**	**21 33 22.4**	**-0.2**
IGT				S	**Sn**	**21 34 11.2**	**+0.5**
JAN	**Janina**	**4.24**	**347**	*e*PN	**Pn**	**21 33 24.0**	**+1.3**
KEK	**Kerkira**	**4.55**	**338**	*e*PN	**Pn**	**21 33 26.0**	**-0.9**
LIT	**Litokhoron**	**4.59**	**4**	P	**Pn**	**21 33 28.1**	**+0.6**
LIT				S	**Sn**	**21 34 19.0**	**-0.5**
LIT	**Litokhoron**	**4.59**	**4**	P	**Pn**	**21 33 28.1**	**+0.6**
LIT				S	**Sn**	**21 34 20.9**	**+1.4**
PAIG	**Paliouri**	**4.59**	**16**	P	**Pn**	**21 33 27.5**	**0.0**
KZN	**Kozani**	**4.79**	**358**	*e*PN	**Pn**	**21 33 31.2**	**+1.0**
KZN	**Kozani**	**4.79**	**358**	P	**Pn**	**21 33 32.3**	**+2.1**
PLG	**Polygyros**	**4.98**	**12**	P	**Pn**	**21 33 33.2**	**+0.5**
OUR	**Ouranopolis**	**5.05**	**17**	P	**Pn**	**21 33 33.7**	**0.0**
FNA	**Florina**	**5.29**	**355**	P	**Pn**	**21 33 37.3**	**+0.3**
FNA				S	**Sn**	**21 34 36.5**	**-0.1**
SOH	**Sokhos**	**5.40**	**11**	P	**Pn**	**21 33 38.6**	**+0.1**
GRG	**Griva**	**5.44**	**3**	P	**Pn**	**21 33 38.8**	**-0.3**
BIA	**Bitola**	**5.53**	**354**	*i* Pn	**Pn**	**21 33 40.1**	**-0.2**
BIA				*i* Sn	**Sn**	**21 34 41.5**	**-0.9**
BIA	**Bitola**	**5.53**	**354**	*i* Pn	**Pn**	**21 33 40.2**	**-0.1**
BIA				*i* Sn	**Sn**	**21 34 41.6**	**-0.9**
TIP	**Timpagrande**	**5.58**	**313**	*e*Pn	**Pn**	**21 33 40.9**	**-0.1**
	7.5nm,0.6s						
TIP				*e*Sn	**Sn**	**21 34 39.9**	**-3.8**
TIP	**Timpagrande**	**5.58**	**313**	*e*Pn	**Pn**	**21 33 40.9**	**-0.1**
	7.5nm,0.6s						
TIP				*e*Sn	**Sn**	**21 34 39.9**	**-3.8**
KNT	**Kendrikon**	**5.68**	**7**	P	**Pn**	**21 33 42.5**	**+0.1**
VAY	**Valandovo**	**5.81**	**4**	P	**Pn**	**21 33 43.6**	**-0.6**
VAY	**Valandovo**	**5.81**	**4**	*i* Pn	**Pn**	**21 33 43.8**	**-0.4**
VAY				*i* Sn	**Sn**	**21 34 49.7**	**+0.2**
VAY	**Valandovo**	**5.81**	**4**	P	**Pn**	**21 33 43.2**	**-1.0**
KRUS	**Krusevo**	**5.88**	**354**	*i* Pn	**Pn**	**21 33 44.4**	**-0.7**
KRUS				*i* Sn	**Sn**	**21 34 48.5**	**-2.6**
KRUS	**Krusevo**	**5.88**	**354**	*i* Pn	**Pn**	**21 33 44.5**	**-0.6**
KRUS				*i* Sn	**Sn**	**21 34 48.6**	**-2.5**
NVR	**Nevrokopi**	**6.00**	**13**	P	**Pn**	**21 33 48.7**	**+1.9**
TIR	**Tirane**	**6.07**	**344**	*e*Pn	**Pn**	**21 33 47.1**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	26nm,0.6s						
TIR	Tirane	6.07	344	ePn	Pn	21 33 47.1	-0.6
	26nm,0.6s						
TIR				eSn	Sn	21 34 57.8	+2.0
VAE	Valguarnera	6.45	290	P	Pn	21 33 55.0	+2.1
	0.7nm,0.3s,baz=108,slow=20,SNR=3.8						
LTRZ	Laterza	6.54	323	Pn	Pn	21 33 51.4	-2.8
CUC	Castrocucco	6.66	314	ePn	Pn	21 33 56.9	+1.1
	14nm,0.8s						
CUC				eSn	Sn	21 35 08.9	-1.4
MGR	Morigerati	6.90	314	Pn	Pn	21 33 59.1	-0.1
	19nm,0.8s						
BARS	Barje	7.29	359	⇓iPn	Pn	21 34 03.8	-0.7
TREB	Trebinje	7.74	339	ePn	Pn	21 34 07.9	-2.8
RGNG	Rignano Grg	7.96	323	Pn	Pn	21 34 12.2	-1.4
BOLS	Boljevac	8.30	360	i Pn	Pn	21 34 16.9	-1.4
GRUS	Gruza	8.43	353	⇑iPn	Pn	21 34 17.2	-2.8
BBLS	Lazići	8.59	347	⇑iPn	Pn	21 34 20.0	-2.2
BRTR	Keskin Array B	10.11	62	P	Pn	21 34 44.5	+1.4
	0.1nm,0.3s,baz=243,slow=15,SNR=4.7						
BOJS	Bojanci	11.23	335	i Pn	Pn	21 34 57.4	-1.0
BOJS				i Sn	Sn	21 36 53.7	-8.7
PERS	Pernice	12.27	337	i Pn	Pn	21 35 11.8	-0.7
PERS				i Sn	Sn	21 37 17.8	-10
VYHS	Vyhne	13.19	351	ePN	Pn	21 35 22.3	-2.7
KOLL	Kolacno	13.33	349	ePN	Pn	21 35 23.9	-3.1
CRVS	Cervenica-Dubn	13.39	358	ePN	Pn	21 35 22.8	-4.9
CRVS	Cervenica-Dubn	13.39	358	ePn	Pn	21 35 22.8	-4.9
STHS	Stebnicka Huta	13.91	358	eP	Pn	21 35 44.0	+9.2
STHS	Stebnicka Huta	13.91	358	eP	Pn	21 35 44.0	+9.2
AKASG	Malin Array Be	16.05	17	P	Pn	21 35 59.1	-3.7
	0.8nm,0.3s,baz=206,slow=12,SNR=4.2						
HFS	Hagfors	25.22	350	P	P	21 37 41.8	+0.2
	2.9nm,0.8s,mb3.9,baz=169,slow=11,SNR=11						
HFS				pP	pP	21 37 52.8	-1.2
	2.0nm,0.7s,baz=158,slow=12,SNR=1.6						
EKA	Eskdalemuir Ar	26.31	327	P	P	21 37 52.0	+0.5
	3.4nm,0.7s,mb4.0,baz=128,slow=9.0,SNR=12						
EKA	Eskdalemuir Ar	26.31	327	P	P	21 37 52.0	+0.5
NB2	NORSAR Subarra	26.47	348	P	P	21 37 52.7	-0.2
	comp=Z,2.2nm,1.2s,mb3.6,baz=156,slow=9.3						
NOA	NORSAR Array B	26.47	348	P	P	21 37 52.4	-0.5
	comp=Z,0.6nm,0.7s,mb3.3,baz=149,slow=7.7,SNR=4.8						
NOA	NORSAR Array B	26.47	348	P	P	21 37 52.3	-0.6
TORD	Torodi Ar. Bea	28.86	225	P	P	21 38 17.0	+2.4
	comp=Z,0.7nm,1.1s,mb3.3,baz=38,slow=9.7,SNR=5.3						
ARCES	ARCESS Array B	34.13	2	P	P	21 39 00.2	-0.2
	comp=Z,2.3nm,0.5s,mb4.3,baz=185,slow=10,SNR=21						
ARCES				pP	pP	21 39 11.6	-1.5
	comp=Z,3.4nm,0.9s,baz=193,slow=9.9,SNR=1.7						
ARCES	ARCESS Array B	34.13	2	P	P	21 39 00.2	-0.2
ARCES				pP	pP	21 39 11.6	-1.5
ARCES	ARCESS Array B	34.13	2	P	P	21 39 00.2	-0.2
ARCES				pP	pP	21 39 11.6	-1.5
MKAR	Makanchi Array	45.71	56	P	P	21 40 36.4	-0.3
	comp=Z,0.7nm,0.4s,mb4.0,baz=272,slow=7.8,SNR=27						
MKAR				pP	pP	21 40 47.8	-1.9
	comp=Z,1.0nm,0.4s,baz=268,slow=7.6,SNR=7.6						
MKAR				sP	sP	21 40 53.9	-1.4
	comp=Z,0.7nm,0.5s,baz=268,slow=7.6,SNR=3.3						
MKAR	Makanchi Array	45.71	56	P	P	21 40 36.4	-0.3
MKAR				pP	pP	21 40 47.8	-1.9
MKAR	Makanchi Array	45.71	56	P	P	21 40 36.4	-0.3
MKAR				pP	pP	21 40 47.8	-1.9
MKAR				sP	sP	21 40 53.9	-1.4
ZALV	Zalesovo Beam	46.60	46	P	P	21 40 42.9	-0.8
	comp=Z,0.9nm,0.3s,mb4.2,baz=269,slow=9.3,SNR=5.7						
ZALV	Zalesovo Beam	46.60	46	P	P	21 40 42.8	-0.8
SONM	Songino Array	61.22	50	P	P	21 42 29.9	-0.5
	comp=Z,0.7nm,0.7s,mb3.9,baz=296,slow=8.5,SNR=6.1						
YKA	Yellowknife Ar	76.31	341	P	P	21 44 05.5	+1.5
	comp=Z,0.3nm,0.6s,mb3.4,baz=31,slow=6.4,SNR=3.5						
YKA				pP	pP	21 44 17.1	-0.7
	comp=Z,0.3nm,0.6s,baz=99,slow=18,SNR=3.6						
YKA	Yellowknife Ar	76.31	341	P	P	21 44 05.5	+1.5
YKA				pP	pP	21 44 17.1	-0.7

*IDC **02** 21:46:29.3±0.9, 4341N×8724E, h0^{km}, mb3.7/8, mb1 3.9/13, mb1mx3.7/26, mbtmp3.8/13, ML3.7/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/24, Error ellipse: s-maj=27.6km s-min=13.1km az=47.0*
*NEIC **02** 21:46:32.0±3.2, 4350N×8725E, h16^{km}±22^{km}, mb4.0/2, Error ellipse: s-maj=9.2km s-min=8.2km az=199.0*
*BJI **02** 21:46:31.8, 4343N×8733E, h15^{km}, mb4.0, ML4.1, Ms3.7, Msz3.3*
*ISCJB **02** 21:46:32.1±0.9, 4350N±005×8731E±006, h32^{km}±7^{km}, mb3.8/11, Error ellipse: s-maj=8.9km s-min=6.6km az=15.4*
*MOS **02** 21:46:33.3±1.3, 4361N×87.17E, h33^{km}, mb4.1/7, Error ellipse: s-maj=12.7km s-min=8.4km az=118.3*
*NNC **02** 21:46:36.7±5.4, 4402N×8697E, h0^{km}, mb4.2, mpv4.1, Error ellipse: s-maj=51.0km s-min=27.4km az=95.0*
ISC 02 21:46:34.4±0.7, **4359N**±004×**8739E**±005, **h35**^{km}±5^{km}, **n54**, σ**1^{s}32**/65, **mb3.8**/11, **7C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	0.32	44	⇓iPG	Pb	21 46 41.5	-1.1
WMQ				SG	Sb	21 46 48.8	+0.7
WMQ				Smax			
	comp=N,6μm,0.4s						
WMQ				Smax			
	comp=E,20μm,0.4s						
MKAR	Makanchi Array	4.82	313	Pn	Pn	21 47 46.0	+1.6
	comp=E,5.3nm,0.3s,baz=131,slow=14,SNR=261						
MKAR				Sn	Sn	21 48 41.4	+2.4
	comp=E,14nm,0.3s,baz=138,slow=24,SNR=5.7						
MKAR				Lg		21 48 60.0	
	comp=E,18nm,0.3s,baz=79,slow=15,SNR=6.6						
MKAR	Makanchi Array	4.82	313	P	Pn	21 47 46.1	+1.7
MKAR						21 48 41.4	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MKAR				smax			
	comp=N,14nm,0.3s						
MKAR	Makanchi Array	4.82	313	Pn	Pn	21 47 46.0	+1.6
MKAR				Sn	Sn	21 48 41.4	+2.4
MKAR				Lg		21 48 60.0	
KNDC	Almaty	7.60	271	⇑Pn	Pn	21 48 24.7	+2.1
	comp=N,12nm,0.6s						
KNDC				⇑Lg		21 50 28.2	
	comp=N,104nm,1.1s						
TKM2	Tokmak 2	8.63	270	⇓Pn	Pn	21 48 38.4	+1.7
	comp=N,6.3nm,0.8s						
TKM2				⇓Lg		21 51 02.9	
	comp=N,24nm,1.0s						
TKM2	Tokmak 2	8.63	270	eP	Pn	21 48 37.0	+0.2
TKM2				e		21 50 07.2	
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TKM2	Tokmak 2	8.63	270	ePn	Pn	21 48 37.0	+0.2
	comp=Z,6.7nm,0.7s						
TKM2				eSn	Sn	21 50 07.2	-5.6
HVS	Khovu-Aksy	8.68	27	eP	Pn	21 48 41.6	+4.3
KURBB	Kurchatov Arra	9.27	322	⇑Pn	Pn	21 48 44.7	-0.7
	comp=Z,1.9nm,0.7s						
KURBB				⇓Sn	Sn	21 50 24.8	-3.5
	comp=Z,2.2nm,0.8s						
KURBB				⇑Lg		21 51 13.9	
	comp=Z,7.3nm,0.7s						
KURK	Kurchatov	9.29	323	⇑Pn	Pn	21 48 44.7	-1.1
	comp=Z,12nm,1.0s						
KURK				⇓Sn	Sn	21 50 26.3	-2.7
	comp=Z,6.7nm,0.5s						
KURK				⇑Lg		21 51 14.7	
	comp=Z,33nm,0.8s						
KURK	Kurchatov	9.29	323	Pn	Pn	21 48 45.2	-0.5
	comp=Z,0.7nm,0.3s,baz=128,slow=14,SNR=7.2						
KURK				Lg		21 51 25.6	
	comp=Z,0.7nm,0.3s,baz=139,slow=29,SNR=4.3						
KURK	Kurchatov	9.29	323	Pn	Pn	21 48 45.2	-0.5
KURK				eSn	Sn	21 50 27.4	-1.5
KURK				Lg		21 51 25.6	
AAK	Ala-Archa	9.48	269	eP	Pn	21 48 46.3	-2.1
AAK				e		21 50 35.1	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	Ala-Archa	9.48	269	ePn	Pn	21 48 46.3	-2.1
	comp=Z,3.7nm,0.6s						
AAK				eSn	Sn	21 50 35.1	+1.4
EKS2	Erkin-Say	10.00	269	Pn	Pn	21 48 52.2	-3.3
GTA	Gaotai	10.21	110	eP	Pn	21 48 58.4	0.0
GTA				PP		21 49 05.0	
GTA				S	Sn	21 50 49.3	-2.3
GTA				AMB	AMB		
	comp=Z,2.0nm,0.5s						
GTA				LR	LR		
	comp=N,190nm,7.8s						
GTA				LR	LR		
	comp=E,132nm,6.3s						
GTA				LR	LR		
	comp=Z,84nm,6.3s						
ZAA0	Zalesovo Array	10.50	352	ePn	Pn	21 49 02.0	-0.3
ZAA0				eSn	Sn	21 50 56.9	-1.6
ZALV	Zalesovo Beam	10.50	352	Pn	Pn	21 49 02.2	-0.1
	comp=Z,1.2nm,0.3s,baz=169,slow=15,SNR=15						
ZALV				Sn	Sn	21 50 58.5	0.0
	comp=Z,4.1nm,0.3s,baz=167,slow=24,SNR=15						
ZALV				Lg		21 52 16.2	
	baz=165,slow=23,SNR=2.0						
ZALV				LR	LR	21 53 16.4	
	comp=Z,26nm,20.7s,baz=68,slow=38						
ZALV	Zalesovo Beam	10.50	352	P	Pn	21 49 02.2	-0.1
ZALV						21 50 58.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,4.0nm,0.3s						
KK31	Karatay Array	12.30	274	Pn	Pn	21 49 27.7	+0.8
	comp=N,0.3nm,0.5s,baz=68,slow=13,SNR=4.2						
KK31				⇑Lg		21 52 58.4	
	comp=N,3.1nm,0.7s,baz=68,slow=31						
ZAK	Zakamensk	12.79	52	eP	Px	21 49 46.6	
ZAK				e		21 52 01.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
SONM	Songino Array	13.93	66	Pn	Pn	21 49 52.5	+3.3
	comp=Z,0.1nm,0.3s,baz=245,slow=13,SNR=5.4						
SONM				Lg		21 53 59.1	
	comp=Z,0.1nm,0.3s,baz=267,slow=28,SNR=3.9						
LSA	Lhasa	14.19	167	P	Pn	21 49 51.1	-1.7
ULN	Ulaanbaatar	14.38	66	eP	Pn	21 49 56.6	+1.4
BVAR	Borovoye Array	14.70	316	Pn	Pn	21 49 57.4	-2.2
	comp=Z,0.3nm,0.3s,baz=124,slow=14,SNR=4.1						
BVAR				LR	LR	21 55 59.7	
	comp=Z,113nm,19.1s,baz=9.7,slow=39						
BRVK	Borovoye	14.77	316	P	Pn	21 50 00.8	+0.3
KBL	Kabul	16.84	244	eP	Pn	21 50 26.1	-1.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	16.84	244	ePn	Pn	21 50 26.1	-1.3
	comp=Z,3.8nm,0.6s						
AKTK	Aktyubinsk	21.07	299	P	P	21 51 16.3	+1.0
AKTO	Aktyubinsk	21.07	299	P	P	21 51 16.3	+1.0
	comp=Z,0.6nm,0.3s,mb3.4,baz=90,slow=8.1,SNR=3.3						
AKTO	Aktyubinsk	21.07	299	P	P	21 51 16.3	+1.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
SVE	Sverdlovsk	21.47	317	eP	P	21 51 19.3	-0.2
SVE				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
ARU	Arti	22.34	315	d iP	P	21 51 30.6	+1.7
ARU				e		21 51 51.0	
ARU				eS	S	21 55 31.3	-1.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
CMAR	Chiang Mai Arr	26.89	155	P	P	21 52 12.4	+0.4
	comp=Z,0.6nm,0.7s,mb3.2,baz=325,slow=8.8,SNR=4.5						
CMAR	Chiang Mai Arr	26.89	155	P	P	21 52 12.4	+0.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	Joensuu	37.20	321	ep	P	21 53 40.0	-1.9
KAF	Kangasniemi	39.50	320	ep	P	21 54 01.2	0.0
FINES	FINESS Array B	39.63	319	eP	P	21 54 08.0	+5.7
KEV	Kevo	39.73	332	P	P	21 54 03.2	+0.2
BRTR	Keskin Array B	39.76	283	eP	P	21 54 10.1	+6.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	40.22	331	P	P	21 54 08.2	+1.2
	comp=Z,1.4nm,0.6s,mb3.9,baz=97,slow=8.0,SNR=9.7						
ARCES	ARCESS Array B	40.22	331	P	P	21 54 08.2	+1.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	45.82	318	P	P	21 54 52.8	+0.3
	comp=Z,2.5nm,0.8s,mb4.2,baz=90,slow=7.4,SNR=6.9						
HFS	Hagfors	45.82	318	P	P	21 54 52.8	+0.4
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	Piszkesteto	45.94	300	P	P	21 54 56.2	+2.7
PSZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
PSZ	Piszkesteto	45.94	300	P	P	21 54 56.2	+2.7
	comp=Z,1.7nm,0.5s,mb4.2						
NB2	NORSAR Subarra	46.79	320	P	P	21 55 00.0	0.0
	comp=Z,0.9nm,0.5s,mb4.0,baz=73,slow=7.9						
NOA	NORSAR Array B	46.79	320	P	P	21 55 00.3	+0.3
	comp=Z,0.4nm,0.4s,mb3.7,baz=75,slow=7.8,SNR=5.3						
NOA	NORSAR Array B	46.79	320	P	P	21 55 00.3	+0.3
YKA	Yellowknife Ar	72.80	10	P	P	21 57 59.6	+0.9
	comp=Z,0.2nm,0.4s,mb3.4,baz=342,slow=5.9,SNR=3.2						
TORD	Torodi Ar. Bea	77.97	277	P	P	21 58 28.2	-1.0
	comp=Z,0.4nm,0.8s,mb3.4,baz=26,slow=5.7,SNR=4.3						
ASAR	Alice Springs	79.39	137	P	P	21 58 35.9	-0.7
	comp=Z,0.4nm,0.7s,mb3.5,baz=331,slow=5.3,SNR=4.0						
ASAR	Alice Springs	79.39	137	P	P	21 58 35.9	-0.7

*CSEM **02** 21:49:23.9±0.1, 3701N×2928E, h10^{km}, MD3.1, Error ellipse: s-maj=4.3km s-min=2.6km az=10.0*
*DDA **02** 21:49:23.1, 3699N×2920E, h7^{km}±6^{km}, Md3.1*
*ISK **02** 21:49:23.6, 3701N×2927E, h5^{km}, MD3.0*
*ISCJB **02** 21:49:24.0±0.6, 3699N±004×2926E±003, h8^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=4.3km az=7.3*
ISC 02 21:49:24.5±0.6, **3698N**±004×**2926E**±003, **h10**^{km}±5^{km}, **n19**, σ**0^{s}93**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.35	44	i P	Pg	21 49 30.3	-1.2
GOLH				i S	Sg	21 49 37.0	+0.9
TURN	Turunc	0.54	258	i P	Pg	21 49 37.5	+2.6
ELL	Elmali	0.57	114	ePG	Pg	21 49 35.1	-0.5
ELL				eSG	Sg	21 49 43.3	+0.2
DENT	Denizli	0.79	347	ePG	Pg	21 49 38.9	-0.9
DENT				eSG	Sg	21 49 49.8	-0.2
YER	Yerkesik	0.79	281	ePG	Pg	21 49 39.4	-0.4
YER				eSG	Sg	21 49 50.8	+0.6
AKAS	Kas	0.80	159	i P	Pg	21 49 39.0	-0.9
ANTB	Antalya	1.12	94	ePN	Pn	21 49 45.3	-1.0
BCK	Bucak	1.17	65	ePN	Pn	21 49 46.0	-0.8
MLSB	Milas	1.22	285	ePN	Pn	21 49 47.9	+0.3
KHL	Karahalli	1.35	9	ePN	Pn	21 49 49.2	-0.2
DAT	Datca	1.37	260	ePN	Pn	21 49 50.5	+0.9
BDRM	Kayabasi	1.45	274	i P	Pn	21 49 49.1	-1.6
BDRM				i S	Sn	21 50 08.7	-1.2
BDRM	Kayabasi	1.45	274	i P	Pn	21 49 49.2	-1.6
BDRM				i S	Sn	21 50 08.6	-1.3
BODT	Bodrum	1.56	273	ePN	Pn	21 49 53.1	+0.8
KULA	Kula-Manisa	1.60	343	ePN	Pn	21 49 52.7	-0.1
SHUT	Suhut-Afyon	1.87	33	ePN	Pn	21 49 57.1	+0.6
HDMB	Hadim	2.59	89	ePN	Pn	21 50 07.5	+1.1
KONT	Konya--Tatoy	2.65	68	ePN	Pn	21 50 08.2	+1.0
LADK	Ladik-KONYA	2.75	63	ePN	Pn	21 50 09.6	+1.0

*ISK **02** 22:21:51.9, 3700N×2927E, h2^{km}, MD2.9*
*CSEM **02** 22:21:51.8±0.1, 3700N×2926E, h2^{km}, MD3.3, Error ellipse: s-maj=1.8km s-min=1.5km az=26.0*
*ISCJB **02** 22:21:53.2±0.6, 3700N±003×2925E±003, h8^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=4.4km az=7.0*
*DDA **02** 22:21:54.5, 3705N×2925E, h6^{km}±5^{km}, Md3.3*
ISC 02 22:21:53.8±0.6, **3701N**±003×**2925E**±003, **h11**^{km}±4^{km}, **n20**, σ**0^{s}93**/29, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.34	47	i P	Pg	22 21 59.4	-1.1
GOLH				i S	Sg	22 22 05.7	+0.6
TURN	Turunc	0.54	256	i P	Pg	22 22 07.9	+3.6
TURN				i S	Sg	22 22 20.3	+9.0
ELL	Elmali	0.59	116	ePG	Pg	22 22 03.8	-1.4
DENT	Denizli	0.77	347	ePG	Pg	22 22 07.7	-1.0
DENT				eSG	Sg	22 22 19.4	+0.8
YER	Yerkesik	0.79	280	ePG	Pg	22 22 08.2	-0.7
YER				eSG	Sg	22 22 19.9	+0.7
AKAS	Kas	0.82	160	i P	Pg	22 22 09.3	-0.4
AKAS				i S	Sg	22 22 22.7	+2.3
ANTB	Antalya	1.13	95	ePN	Pn	22 22 14.4	-1.1
BCK	Bucak	1.16	67	ePN	Pn	22 22 14.8	-1.1
MLSB	Milas	1.21	284	ePN	Pn	22 22 16.4	-0.3
AYDN	Tasoluk	1.27	301	i P	Pn	22 22 17.2	-0.3
AYDN				i S	Sb	22 22 34.3	+0.1
KHL	Karahalli	1.33	9	ePN	Pn	22 22 18.4	+0.1
DAT	Datca	1.37	259	ePN	Pn	22 22 19.2	+0.4
KHAL	Karahalli	1.38	8	i P	Pn	22 22 18.7	-0.2
KHAL				i S	Sn	22 22 38.9	+1.8
BDRM	Kayabasi	1.45	273	i P	Pn	22 22 20.2	+0.3
BDRM				i S	Sn	22 22 38.6	-0.2
BODT	Bodrum	1.55	273	ePN	Pn	22 22 21.5	+0.2
KULA	Kula-Manisa	1.58	343	ePN	Pn	22 22 21.9	+0.3
GCAM	G?zelcaml?	1.75	294	eP	Pn	22 22 22.4	-1.7
GCAM				i S	Sn	22 22 45.7	-0.6
SHUT	Suhut-Afyon	1.86	33	ePN	Pn	22 22 25.8	+0.3
ALT	Altintas	2.15	18	ePN	Pn	22 22 30.3	+0.7
HDMB	Hadim	2.59	90	ePN	Pn	22 22 36.9	+1.3

*CSEM **02** 22:51:58.7±0.1, 3701N×2927E, h2^{km}, MD3.4, Error ellipse: s-maj=2.1km s-min=2.0km az=30.0*
*ISCJB **02** 22:51:59.9±0.7, 3703N±003×2924E±004, h2^{km}±7^{km}, Error ellipse: s-maj=5.8km s-min=4.7km az=137.1*
*ISK **02** 22:51:59.7, 3703N×2925E, h7^{km}, MD2.9*
*DDA **02** 22:52:00.1, 3703N×2921E, h7^{km}±3^{km}, Md3.4*
ISC 02 22:52:00.7±0.6, **3703N**±003×**2925E**±004, **h9**^{km}±6^{km}, **n16**, σ**0^{s}95**/24, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.32	51	⇑iP	Pg	22 52 06.0	-1.1
GOLH				i S	Sg	22 52 12.3	+0.8
TURN	Turunc	0.54	253	i P	Pg	22 52 14.5	+3.3
TURN				i S	Sg	22 52 26.6	+8.3
ELL	Elmali	0.60	118	ePG	Pg	22 52 10.8	-1.5
ELL				eSG	Sg	22 52 21.2	+1.0
DENT	Denizli	0.74	347	ePG	Pg	22 52 14.4	-0.6
DENT				eSG	Sg	22 52 25.2	+0.6
YER	Yerkesik	0.78	278	ePG	Pg	22 52 14.6	-1.1
AKAS	Kas	0.85	160	i P	Pg	22 52 15.9	-1.1
AKAS				i S	Sg	22 52 29.9	+1.9
BCK	Bucak	1.15	68	ePN	Pn	22 52 21.8	-1.2
MLSB	Milas	1.20	283	ePN	Pn	22 52 23.9	+0.3
AYDN	Tasoluk	1.26	300	i P	Pn	22 52 24.1	-0.3
AYDN				i S	Sb	22 52 40.8	0.0
KHL	Karahalli	1.31	10	ePN	Pn	22 52 24.3	-0.8
KHAL	Karahalli	1.35	8	i P	Pn	22 52 25.4	-0.2
KHAL				i S	Sb	22 52 45.0	+1.6
DAT	Datca	1.37	258	ePN	Pn	22 52 26.2	+0.2
BDRM	Kayabasi	1.44	272	eP	Pn	22 52 26.1	-0.8
BDRM				i S	Sn	22 52 46.5	+0.6
KULA	Kula-Manisa	1.55	343	ePN	Pn	22 52 28.9	+0.5
SHUT	Suhut-Afyon	1.83	34	ePN	Pn	22 52 32.3	0.0
ALT	Altintas	2.13	18	ePN	Pn	22 52 36.7	+0.3

*ISCJB **02** 23:10:12.3±0.8, 4071N±003×3490E±005, h2^{km}±6^{km}, Error ellipse: s-maj=7.0km s-min=5.6km az=173.8*
*CSEM **02** 23:10:12.3±0.1, 4068N×3484E, h8^{km}, MD3.0, Error ellipse: s-maj=2.3km s-min=1.9km az=116.0*
*ISK **02** 23:10:12.4, 4068N×3484E, h8^{km}, MD2.8*
*DDA **02** 23:10:13.7, 4069N×3482E, h4^{km}±1^{km}, Md3.0*
ISC 02 23:10:12.9±0.7, **4070N**±003×**3489E**±005, **h9**^{km}±6^{km}, **n12**, σ**0^{s}56**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTKT	Corum	0.11	225	i P	Pg	23 10 14.9	-0.6
CTKT				i S	Sg	23 10 17.0	-0.3
CORM	Corum	0.56	201	ePG	Pg	23 10 23.4	-0.2
CORM				eSG	Sg	23 10 30.9	0.0
TOS	Tosya	0.74	297	ePG	Pg	23 10 27.0	-0.2
TOS				eSG	Sg	23 10 36.5	-0.3
ILGA	Ilgaz	0.96	292	i P	Pg	23 10 31.1	-0.2
ILGA				i S	Sg	23 10 44.5	+0.7
KVT	Kavak	0.96	66	ePG	Pg	23 10 31.9	+0.5
CANT	Cankiri	0.97	265	ePG	Pg	23 10 30.8	-0.8
DIKM	Dikmen	0.99	16	ePG	Pg	23 10 32.4	+0.4
YOZ	Yozgat	1.11	163	ePN	Pn	23 10 33.4	-1.1
ELDT	Eldivan	1.13	260	eP	Pb	23 10 34.8	+0.1
ELDT				i S	Sg	23 10 49.8	+0.4
CDAG	Cicekdag	1.14	200	i P	Pb	23 10 35.5	+0.7
CDAG				i S	Sg	23 10 50.9	+1.2
KAMT	Kaman	1.60	215	ePN	Pn	23 10 41.2	-0.2
SAFT	Safranbolu	1.75	289	ePN	Pn	23 10 43.4	0.0

*NEIC **02** 23:32:48.6, 3704N×2924E, h5^{km}, MD3.4(ISK), MD3.6(ATH), After ISK.*
*ISK **02** 23:32:48.9, 3704N×2925E, h5^{km}, MD3.4*
*ISCJB **02** 23:32:50.2±0.5, 3702N±002×2926E±002, h5^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=6.2*
*ATH **02** 23:32:50.6, 3700N×29.11E, h15^{km}, MD3.6/4*
*DDA **02** 23:32:50.4, 3702N×2925E, h7^{km}±6^{km}, Md3.6*
*CSEM **02** 23:32:50.2±0.1, 3707N×2928E, h6^{km}, MD3.6, Error ellipse: s-maj=1.7km s-min=1.0km az=172.0*
ISC 02 23:32:51.0±0.5, **3701N**±002×**2925E**±002, **h7**^{km}±4^{km}, **n54**, σ**1^{s}14**/77, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.34	48	i P	Pg	23 32 57.0	-0.6
GOLH				i S	Sg	23 33 03.6	+1.6
TURN	Turunc	0.54	255	i P	Pg	23 33 05.1	+3.8
TURN				i S	Sg	23 33 17.1	+8.7
ELL	Elmali	0.59	116	ePG	Pg	23 33 00.9	-1.4
ELL				eSG	Sg	23 33 10.8	+0.8
ELL	Elmali	0.59	116	ePg	Pg	23 33 00.9	-1.4
ELL				Sg	Sg	23 33 11.9	+1.9
ELL	Elmali	0.59	116	Pg	Pg	23 33 00.9	-1.4
ELL				Sg	Sg	23 33 11.9	+2.0
DENT	Denizli	0.76	347	ePG	Pg	23 33 03.7	-2.0
DENT				eSG	Sg	23 33 14.9	-0.6
DENT	Denizli	0.76	347	Pg	Pg	23 33 03.9	-1.7
DENT				eSg	Sg	23 33 14.9	-0.6
DENT	Denizli	0.76	347	Pg	Pg	23 33 03.9	-1.8
YER	Yerkesik	0.78	279	ePG	Pg	23 33 05.7	-0.4
YER				eSG	Sg	23 33 16.7	+0.5
YER	Yerkesik	0.78	279	Pg	Pg	23 33 04.8	-1.2
AKAS	Kas	0.83	160	i P	Pg	23 33 05.6	-1.2
AKAS				i S	Sg	23 33 19.5	+2.0
KSL	Kastellorizon	0.90	163	ePN	Pn	23 33 08.2	-1.8
ANTB	Antalya	1.13	95	ePN	Pn	23 33 11.5	-1.6
BCK	Bucak	1.16	67	ePN	Pn	23 33 12.0	-1.6
ARG	Arkhangelos	1.20	229	ePN	Pn	23 33 11.7	-2.4
MLSB	Milas	1.21	284	ePN	Pn	23 33 12.7	-1.5
AYDN	Tasoluk	1.27	301	i P	Pn	23 33 14.8	-0.3
AYDN				i S	Sb	23 33 32.7	+0.9
KHL	Karahalli	1.33	9	ePN	Pn	23 33 15.0	-0.9
KHAL	Karahalli	1.37	8	i P	Pn	23 33 16.0	-0.5
KHAL				i S	Sb	23 33 36.3	+1.7
DAT	Datca	1.37	259	ePN	Pn	23 33 15.8	-0.6
BDRM	Kayabasi	1.45	273	i P	Pn	23 33 17.7	+0.2
BDRM				i S	Sn	23 33 37.8	+1.1
BODT	Bodrum	1.55	272	ePN	Pn	23 33 18.3	-0.7
KULA	Kula-Manisa	1.57	343	ePN	Pn	23 33 18.6	-0.6
GCAM	G?zelcaml?	1.75	294	i P	Pn	23 33 21.4	-0.3
GCAM				i S	Sg	23 33 48.8	+1.7
SHUT	Suhut-Afyon	1.85	33	ePN	Pn	23 33 22.7	-0.4
SMG	Samos	2.04	291	ePN	Pn	23 33 25.3	-0.4
GDZ	Gediz	2.08	5	i P	Pn	23 33 30.0	+3.7
GDZ				i S	Sn	23 33 53.1	+0.8
KDAG	Bornova	2.10	312	i P	Pn	23 33 26.5	0.0
KDAG				i S	Sn	23 33 50.2	-2.6
ALT	Altintas	2.15	18	ePN	Pn	23 33 26.8	-0.4
BOLV	Bolvadin	2.17	38	i P	Pn	23 33 28.4	+0.9
BOLV				i S	Sn	23 33 55.7	+1.1
AKHS	Akhisar	2.18	329	i P	Pn	23 33 27.1	-0.5
AKHS				i S	Sn	23 33 56.1	+1.2
AKS	Akhisar	2.18	329	ePN	Pn	23 33 27.1	-0.5
BLCB	Balcova	2.23	309	ePN	Pn	23 33 27.8	-0.4
KARP	Karpathos	2.23	230	ePN	Pn	23 33 28.0	-0.3
HDMB	Hadim	2.59	90	ePN	Pn	23 33 33.6	+0.4
DST	Dursunbey	2.64	349	ePN	Pn	23 33 33.8	0.0
KONT	Konya--Tatoy	2.64	68	ePN	Pn	23 33 34.2	+0.2

KDHN	**Kadinhani**	**2.73**	**56**	*i* P	**Pn**	**23 33 36.4**	**+1.3**
KDHN				*e*S	**Sn**	**23 34 09.8**	**+1.6**
LADK	**Ladik-KONYA**	**2.74**	**63**	*e*PN	**Pn**	**23 33 35.6**	**+0.3**
KIZT	**Kizilcal**	**2.79**	**47**	*e*PN	**Pn**	**23 33 36.0**	**0.0**
ESKT	**Eskisehir**	**2.80**	**26**	*i* P	**Pn**	**23 33 36.6**	**+0.4**
ESKT				*i* S	**Sn**	**23 34 08.3**	**-1.8**
ESKT	**Eskisehir**	**2.80**	**26**	*e*Pn	**Pn**	**23 33 36.0**	**-0.1**
SEYT	**Eskypehyr**	**2.80**	**26**	*i* P	**Pn**	**23 33 36.6**	**+0.5**
SEYT				*i* S	**Sn**	**23 34 08.4**	**-1.8**
APE	**Apeiranthos**	**2.98**	**272**	P	**Pn**	**23 33 39.6**	**+1.1**
BORA	**Eskisehir**	**3.02**	**18**	*e*P	**Pg**	**23 33 48.1**	**-0.6**
BORA				*i* S	**Sn**	**23 34 15.2**	**-0.2**
PRK	**Paraskevi**	**3.24**	**314**	P	**Pn**	**23 33 43.2**	**+1.1**
NPS	**Neapolis**	**3.42**	**240**	P	**Pn**	**23 33 45.8**	**+1.1**
LEF	**Lefka**	**3.50**	**122**	*e*PN	**Pn**	**23 33 46.4**	**+0.6**
LEF	**Lefka**	**3.50**	**122**	Pn	**Pn**	**23 33 46.3**	**+0.6**
IKL	**Isikli**	**3.65**	**101**	*e*PN	**Pn**	**23 33 48.9**	**+1.1**
IDI	**Anoyia**	**3.92**	**245**	P	**Pn**	**23 33 53.2**	**+1.6**
BR131	**Keskin Array S**	**4.39**	**51**	*e*Pn	**Pn**	**23 33 56.2**	**-1.7**
BR131				*e*Sn	**Sn**	**23 34 45.5**	**-3.7**
BR131	**Keskin Array S**	**4.39**	**51**	*e*Pn	**Pn**	**23 33 56.2**	**-1.7**
BR131				*e*Sn	**Sn**	**23 34 45.5**	**-3.6**
NVR	**Nevrokopi**	**6.02**	**318**	P	**Pn**	**23 34 22.1**	**+1.7**

*TAP **02** 23:45:07.8, 2452N×12287E, h93km, ML3.5, C*
*ISCJB **02** 23:45:08.4±0.7, 2446N±005×12287E±002, h86km±7km, Error ellipse: s-maj=7.5km s-min=3.5km az=179.8*
*JMA **02** 23:45:08.2±0.2, 2460N×12291E, h90km±2km, M2.3*
ISC 02 23:45:09.0±0.7**, 2446N**±004×**12287E**±002**, h84**km±7km**, n33,** σ**0^{s}69**/60**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.13**	**87**	P	**Pn**	**23 45 21.2**	**+0.2**
YOJ				*e*S	**Sn**	**23 45 30.7**	**+0.9**
IRIF	**Iriomote-Funau**	**0.79**	**99**	P	**Pn**	**23 45 25.7**	**-0.2**
IRIF				*e*S	**Sn**	**23 45 39.0**	**+0.5**
HATJ	**Hateruma jima**	**0.94**	**115**	*e*S	**Sn**	**23 45 42.3**	**+0.9**
TWC	**Suao**	**0.94**	**279**	*i* P	**Pn**	**23 45 27.0**	**-0.6**
	baz=279						
TWC				S	**Sn**	**23 45 40.6**	**-0.9**
	baz=279						
JKRS	**Kuro-shima**	**1.06**	**102**	P	**Pn**	**23 45 29.0**	**0.0**
JKRS				*e*S	**Sn**	**23 45 44.8**	**+0.9**
JIJ	**Ishigaki jima**	**1.16**	**94**	P	**Pn**	**23 45 29.5**	**-0.7**
JIJ				*e*S	**Sn**	**23 45 45.2**	**-0.9**
NWF	**Wu-fen Shan**	**1.17**	**302**	*e*P	**Pn**	**23 45 30.4**	**+0.1**
	baz=291						
NWF				S	**Sn**	**23 45 46.2**	**-0.1**
	baz=291						
ENTT	**Nioudou**	**1.20**	**279**	P	**Pn**	**23 45 30.9**	**+0.2**
	baz=275						
ENTT				*e*S	**Sn**	**23 45 47.4**	**+0.4**
	baz=275						
TWD	**Chiawan**	**1.22**	**252**	P	**Pn**	**23 45 30.4**	**-0.6**
	baz=242						
TWD				*e*S	**Sn**	**23 45 46.5**	**-1.1**
	baz=242						
TWA	**Mucha**	**1.28**	**294**	*e*P	**Pn**	**23 45 31.7**	**0.0**
	baz=283						
TWA				S	**Sn**	**23 45 48.4**	**-0.5**
	baz=283						
NNS	**Nan Shan**	**1.37**	**270**	*e*P	**Pn**	**23 45 32.6**	**-0.1**
	baz=259						
NNS				*e*S	**Sn**	**23 45 50.1**	**-0.6**
	baz=259						
NSK	**Sanguang**	**1.40**	**279**	P	**Pn**	**23 45 32.8**	**-0.3**
	baz=276						
NSK				S	**Sn**	**23 45 51.4**	**0.0**
	baz=276						
ESL	**Shilin**	**1.46**	**244**	*e*P	**Pn**	**23 45 33.3**	**-0.7**
	baz=237						
TWS1	**Kuangyinshan**	**1.47**	**296**	*e*P	**Pn**	**23 45 33.6**	**-0.4**
	baz=286						
WHF	**Hehuan Shan**	**1.50**	**258**	*i* P	**Pn**	**23 45 34.4**	**-0.1**
	baz=255						
WHF				*e*S	**Sn**	**23 45 53.7**	**0.0**
	baz=255						
TWT	**Tachien**	**1.56**	**263**	*e*P	**Pn**	**23 45 35.9**	**+0.7**
	baz=260						
TWT				*e*S	**Sn**	**23 45 55.1**	**0.0**
	baz=260						
JTJ	**Tarama**	**1.68**	**83**	P	**Pn**	**23 45 36.1**	**-0.6**
JTJ				*e*S	**Sn**	**23 45 57.4**	**-0.4**
EHY	**Hungye**	**1.71**	**237**	*e*P	**Pn**	**23 45 36.3**	**-0.8**
	baz=234						
EHY				S	**Sn**	**23 45 57.7**	**-0.8**
	baz=234						
NSTT	**Nanjuang**	**1.71**	**276**	*e*P	**Pn**	**23 45 37.4**	**+0.2**
	baz=273						
NSTT				*e*S	**Sn**	**23 45 58.5**	**-0.2**
	baz=273						
TWF1	**Yuli**	**1.81**	**233**	*i* P	**Pn**	**23 45 38.0**	**-0.5**
	baz=241						
TWF1				*e*S	**Sn**	**23 46 00.2**	**-0.7**
	baz=241						
SMLT	**Sun Moon Lake**	**1.89**	**253**	P	**Pn**	**23 45 39.9**	**+0.3**
	baz=246						
SMLT				*e*S	**Sn**	**23 46 03.2**	**+0.4**
	baz=246						
TWQ1	**Liyutan**	**1.92**	**267**	*e*P	**Pn**	**23 45 40.0**	**+0.1**
	baz=265						
TYC	**Yuchr**	**1.92**	**254**	P	**Pn**	**23 45 40.2**	**+0.3**
	baz=247						
TYC				*e*S	**Sn**	**23 46 04.3**	**+0.8**
	baz=247						
YUS	**Yu-Shan**	**2.00**	**242**	P	**Pn**	**23 45 41.8**	**+0.7**
	baz=233						
YUS				*e*S	**Sn**	**23 46 05.3**	**-0.2**
	baz=233						
ALS	**Alishan**	**2.11**	**244**	P	**Pn**	**23 45 43.3**	**+0.8**
	baz=236						
ALS				*e*S	**Sn**	**23 46 07.9**	**-0.2**
	baz=236						
CHN5	**Tsauling**	**2.18**	**247**	P	**Pn**	**23 45 44.1**	**+0.7**
	baz=238						
CHN5				*e*S	**Sn**	**23 46 10.2**	**+0.5**
	baz=238						
TWG	**Pinlang**	**2.32**	**226**	*e*P	**Pn**	**23 45 44.6**	**-0.6**
	baz=231						
TWG				*e*S	**Sn**	**23 46 12.0**	**-1.0**
	baz=231						
STYT	**Tauyuan**	**2.33**	**237**	*e*P	**Pn**	**23 45 45.9**	**+0.5**
	baz=235						
STYT				*e*S	**Sn**	**23 46 13.4**	**+0.3**
	baz=235						
CHN4	**Tsaushan**	**2.36**	**243**	*e*P	**Pn**	**23 45 47.2**	**+1.5**
	baz=234						
CHN4				*e*S	**Sn**	**23 46 14.9**	**+0.9**
	baz=234						
WTP	**Ta-pu**	**2.39**	**240**	P	**Pn**	**23 45 46.8**	**+0.6**
	baz=239						
CHN1	**Nanshi**	**2.49**	**240**	*e*P	**Pn**	**23 45 48.2**	**+0.7**
	baz=238						
CHN1				*e*S	**Sn**	**23 46 18.4**	**+1.3**
	baz=238						
SGST	**Jiashian**	**2.50**	**237**	*e*P	**Pn**	**23 45 48.9**	**+1.1**
	baz=236						
LAY	**Lan-yu**	**2.70**	**207**	*e*P	**Pn**	**23 45 48.7**	**-1.6**
	baz=203						
LAY				*e*S	**Sn**	**23 46 18.9**	**-3.2**
	baz=203						

*ISCJB **02** 23:47:46.3±0.7, 5144N±004×16.12E±003, h0km, Error ellipse: s-maj=5.4km s-min=2.6km az=12.7*
*PRU **02** 23:47:49.6, 5141N×1607E, h0km*
*CSEM **02** 23:47:49.1±0.1, 5142N×1605E, h2km, ML2.5, Error ellipse: s-maj=1.9km s-min=1.1km az=19.0*
*WAR **02** 23:47:49.2, 5146N×16.10E, Mw2.5*
*NEIC **02** 23:47:52.7±1.3, 5122N×1584E, h5km, ML2.5(PRU), Error ellipse: s-maj=15.9km s-min=7.3km az=14.0*
ISC 02 23:47:48.0±0.8**, 5146N**±004×**1611E**±003**, h0**km**, n23,** σ**0^{s}94**/43**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**170**	*e*Pg	**Pg**	**23 48 00.6**	**+0.7**
KSP				*e*Sg	**Sg**	**23 48 09.1**	**+1.1**
KSP	**Ksiaz**	**0.62**	**170**	⇓*i*Pg	**Pg**	**23 48 00.6**	**+0.7**
KSP				*e*Sg	**Sg**	**23 48 08.3**	**+0.3**
UPC	**Upice**	**0.95**	**184**	*e*PG	**Pg**	**23 48 06.9**	**+0.7**
DPC	**Dobruska-Polom**	**1.11**	**173**	*e*PG	**Pg**	**23 48 09.3**	**0.0**
DPC				*e*SG	**Sg**	**23 48 24.0**	**+0.2**
	comp=Z,14nm,0.5s						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**23 48 13.7**	**-0.1**
PVCC				*e*SG	**Sg**	**23 48 31.5**	**+0.2**
	comp=Z,48nm,0.4s						
BRG	**Berggiesshubel**	**1.49**	**248**	PG	**Pg**	**23 48 16.4**	**-0.1**
BRG				SG	**Sg**	**23 48 36.4**	**+0.7**
	comp=Z,20nm,0.4s						
PRU	**Pruhonice**	**1.78**	**215**	*e*PG	**Pg**	**23 48 21.0**	**-1.0**
PRU				*e*SG	**Sg**	**23 48 44.2**	**-0.8**
	comp=Z,11nm,0.5s						
CLL	**Collm**	**1.96**	**267**	*e*(Pn)	**Pn**	**23 48 23.0**	**+0.6**
CLL				*i* Pg	**Pg**	**23 48 25.1**	**-0.3**
CLL				*e*x	x	23 48 27.0	
CLL				*e*Sg	**Sg**	**23 48 51.0**	**+0.2**
CLL	**Collm**	**1.96**	**267**	Pn	**Pn**	**23 48 23.0**	**+0.6**
CLL				*i* Pg	**Pg**	**23 48 25.1**	**-0.3**
CLL				*e*Sg	**Sg**	**23 48 51.0**	**+0.2**
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*PG	**Pg**	**23 48 26.9**	**-0.8**
OKC				*e*SG	**Sg**	**23 48 53.4**	**-1.2**
VRAC	**Vranov**	**2.17**	**172**	*e*Pg	**Pg**	**23 48 26.6**	**-3.0**
TREC	**Trest**	**2.20**	**191**	*e*PG	**Pg**	**23 48 29.2**	**-0.9**
TREC				*e*SG	**Sg**	**23 48 58.8**	**+0.1**
NKC	**Novy Kostel**	**2.63**	**244**	*e*PG	**Pg**	**23 48 37.8**	**-0.5**
NKC				*e*SG	**Sg**	**23 49 12.9**	**+0.6**
	comp=Z,12nm,0.3s						
OJC	**Ojcow**	**2.64**	**116**	*e*Pg	**Pg**	**23 48 38.4**	**-0.2**
OJC				*e*Sg	**Sg**	**23 49 14.2**	**+1.3**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**23 48 34.8**	**+0.3**
KHC				*e*PG	**Pg**	**23 48 40.6**	**-1.8**
KHC				*e*SN	**Sn**	**23 49 08.5**	**-0.9**
KHC				*e*SG	**Sg**	**23 49 18.9**	**-0.3**
MOX	**Moxa**	**2.95**	**256**	*e*PG	**Pg**	**23 48 44.4**	**-0.1**
MOX				*e*SG	**Sg**	**23 49 24.7**	**+1.9**
KOLL	**Kolacno**	**3.24**	**152**	*e*Sg	**Sg**	**23 49 33.0**	**+1.1**
KOLL	**Kolacno**	**3.24**	**152**	*e*SG	**Sg**	**23 49 33.0**	**+1.1**
ZST	**Bratislava**	**3.33**	**169**	*e*SG	**Sg**	**23 49 35.1**	**+0.3**
NIE	**Niedzica**	**3.37**	**126**	*e*P	**Pg**	**23 48 51.2**	**-1.4**
NIE				*e*S	**Sg**	**23 49 35.6**	**-0.6**
VYHS	**Vyhne**	**3.45**	**148**	*e*Sg	**Sg**	**23 49 41.7**	**+3.0**
VYHS	**Vyhne**	**3.45**	**148**	*e*SG	**Sg**	**23 49 41.7**	**+3.0**
STHS	**Stebnicka Huta**	**3.86**	**120**	*e*PG	**Pg**	**23 49 03.5**	**+1.5**
STHS				*e*SG	**Sg**	**23 49 56.8**	**+4.8**

*ISCJB **02** 23:59:44.6±0.6, 3700N±003×2927E±003, h6km±6km, Error ellipse: s-maj=5.7km s-min=4.6km az=14.9*
*CSEM **02** 23:59:44.0±0.1, 3702N×2928E, h8km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.5km az=15.0*
*DDA **02** 23:59:44.9, 3703N×2922E, h6km±6km, Md2.8*
*ISK **02** 23:59:44.0, 3702N×2928E, h7km, MD2.8*
ISC 02 23:59:45.2±0.5**, 3701N**±003×**2928E**±004**, h13**km±5km**, n24,** σ**0^{s}85**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.32**	**44**	*i* P	**Pg**	**23 59 51.1**	**-0.7**
GOLH				*i* S	**Sg**	**23 59 57.9**	**+1.7**
TURN	**Turunc**	**0.56**	**257**	*i* P	**Pg**	**23 59 59.3**	**+3.1**
TURN				*i* S	**Sg**	**00 00 12.6**	**+9.0**
ELL	**Elmali**	**0.56**	**117**	*e*PG	**Pg**	**23 59 55.7**	**-0.6**
ELL				*e*SG	**Sg**	**00 00 04.1**	**+0.4**
ELL	**Elmali**	**0.56**	**117**	*e*Sg	**Sg**	**00 00 04.1**	**+0.3**
DENT	**Denizli**	**0.77**	**345**	*e*PG	**Pg**	**23 59 59.0**	**-1.2**
DENT				*e*SG	**Sg**	**00 00 10.2**	**-0.2**
DENT	**Denizli**	**0.77**	**345**	*e*Sg	**Sg**	**00 00 10.2**	**-0.2**
YER	**Yerkesik**	**0.81**	**279**	*e*PG	**Pg**	**00 00 00.4**	**-0.5**
YER				*e*SG	**Sg**	**00 00 11.3**	**-0.2**
YER	**Yerkesik**	**0.81**	**279**	*e*Pg	**Pg**	**00 00 00.4**	**-0.5**
YER				*e*Sg	**Sg**	**00 00 11.3**	**-0.2**
AKAS	**Kas**	**0.81**	**161**	*i* P	**Pg**	**00 00 00.2**	**-0.8**
AKAS				*i* S	**Sg**	**00 00 15.2**	**+3.6**
BCK	**Bucak**	**1.14**	**66**	*e*PN	**Pn**	**00 00 05.9**	**-1.0**
BCK	**Bucak**	**1.14**	**66**	*e*Pn	**Pn**	**00 00 05.9**	**-1.0**
MLSB	**Milas**	**1.24**	**284**	*e*PN	**Pn**	**00 00 07.7**	**-0.6**
MLSB	**Milas**	**1.24**	**284**	*e*Pn	**Pn**	**00 00 07.7**	**-0.5**
AYDN	**Tasoluk**	**1.29**	**301**	*i* P	**Pn**	**00 00 08.4**	**-0.7**
AYDN				*i* S	**Sb**	**00 00 26.9**	**+0.8**
KHL	**Karahalli**	**1.33**	**8**	*e*PN	**Pn**	**00 00 09.2**	**-0.3**
KHL	**Karahalli**	**1.33**	**8**	*e*Pn	**Pn**	**00 00 09.2**	**-0.3**
KHAL	**Karahalli**	**1.37**	**7**	*i* P	**Pn**	**00 00 09.8**	**-0.3**
KHAL				*i* S	**Sn**	**00 00 29.4**	**+1.2**
DAT	**Datca**	**1.39**	**259**	*e*PN	**Pn**	**00 00 10.5**	**+0.1**
DAT	**Datca**	**1.39**	**259**	*e*Pn	**Pn**	**00 00 10.5**	**+0.1**
BDRM	**Kayabasi**	**1.47**	**273**	*i* P	**Pn**	**00 00 12.0**	**+0.6**
BDRM				*i* S	**Sn**	**00 00 30.7**	**+0.1**
KULA	**Kula-Manisa**	**1.58**	**342**	*e*PN	**Pn**	**00 00 12.9**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**342**	*e*Pn	**Pn**	**00 00 12.9**	**-0.1**
SHUT	**Suhut-Afyon**	**1.84**	**33**	*e*PN	**Pn**	**00 00 16.9**	**+0.3**
SHUT	**Suhut-Afyon**	**1.84**	**33**	*e*Pn	**Pn**	**00 00 16.9**	**+0.3**

*NEIC **03** 00:19:56.4, 3528N×2545E, h40km, MD4.0(ATH), After ATH.*
*ATH **03** 00:19:56.3, 3526N×2545E, h39km±1km, MD4.0/6*
*CSEM **03** 00:19:57.4±0.1, 3543N×2566E, h24km, MD4.0, Error ellipse: s-maj=2.2km s-min=1.8km az=73.0*
*ISCJB **03** 00:19:58.0±0.3, 3538N±003×2556E±004, h34km±5km, mb3.7/3, Error ellipse: s-maj=5.5km s-min=4.7km az=139.0*
*THE **03** 00:19:58.6, 3543N×2556E, h18km±1km, Error ellipse: s-maj=2.0km s-min=0.6km az=174.0*
*IDC **03** 00:19:58.8±2.2, 3545N×2552E, h25km±21km, mb3.6/3, mb1 3.5/10, mb1mx3.4/25, mbtmp3.5/10, ML3.6/6, Error ellipse: s-maj=25.0km s-min=18.4km az=170.0*
ISC 03 00:19:58.5±0.4**, 3542N**±003×**2552E**±004**, h27**km±4km**, n47,** σ**1^{s}21**/59**, mb3.7**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.17**	**153**	*e*PB	**Pb**	**00 20 03.3**	**-0.8**
NPS				*e*SB	**Sb**	**00 20 07.6**	**-0.2**
NPS	**Neapolis**	**0.17**	**153**	*e*P	**Pb**	**00 20 03.7**	**-0.4**
NPS				*e*S	**Sb**	**00 20 07.6**	**-0.2**
LAST	**Lasithi**	**0.26**	**187**	P	**Pb**	**00 20 04.9**	**-0.2**
LAST				S	**Sb**	**00 20 09.5**	**-0.1**
LAST	**Lasithi**	**0.26**	**187**	P	**Pb**	**00 20 04.8**	**-0.3**
IDI	**Anoyia**	**0.53**	**256**	Pg	**Pb**	**00 20 09.6**	**+0.4**
	89nm,0.3s,baz=346,slow=16,SNR=1881						
IDI				Lg		00 20 17.4	
	1μm,0.3s,baz=347,slow=13,SNR=134						
ZKR	**Zakros**	**0.65**	**118**	P	**Pb**	**00 20 10.9**	**-0.4**
ZKR				S	**Sb**	**00 20 19.8**	**-0.2**
SIVA	**Sivas**	**0.70**	**235**	P	**Pb**	**00 20 13.0**	**+0.8**
SIVA				S	**Sb**	**00 20 22.9**	**+1.4**
THR6	**Thira Island,**	**0.94**	**354**	P	**Pn**	**00 20 15.3**	**-0.7**
THR1	**Thera Island**	**0.95**	**357**	P	**Pn**	**00 20 15.2**	**-0.9**
THR1				S	**Sb**	**00 20 29.7**	**+1.1**
THR3	**Thira Island,**	**0.99**	**355**	P	**Pn**	**00 20 15.8**	**-0.9**
THR3				S	**Sb**	**00 20 30.3**	**+0.5**
THR5	**Thira Island,**	**1.00**	**352**	P	**Pn**	**00 20 16.2**	**-0.7**
THR4	**Thira Island,**	**1.04**	**355**	P	**Pn**	**00 20 16.8**	**-0.6**
VAM	**Vamos**	**1.07**	**270**	*e*PN	**Pn**	**00 20 16.0**	**-1.8**
GVD	**Gavdhos**	**1.31**	**244**	*e*PN	**Pn**	**00 20 18.0**	**-3.0**
KARP	**Karpathos**	**1.35**	**84**	*e*PB	**Pb**	**00 20 21.3**	**-1.8**
APE	**Apeiranthos**	**1.65**	**0**	P	**Pn**	**00 20 25.2**	**-0.5**
APE				S	**Sn**	**00 20 46.6**	**+0.6**
APE	**Apeiranthos**	**1.65**	**0**	*e*PN	**Pn**	**00 20 25.0**	**-0.7**
APE	**Apeiranthos**	**1.65**	**0**	*e*P	**Pn**	**00 20 25.4**	**-0.3**
APE				S	**Sn**	**00 20 46.6**	**+0.6**
ARG	**Arkhangelos**	**2.27**	**69**	*e*PN	**Pn**	**00 20 35.0**	**+0.8**
DID	**Didima**	**2.78**	**319**	P	**Pn**	**00 20 41.9**	**+0.7**
CHOS	**Chios island**	**2.99**	**8**	P	**Pn**	**00 20 44.0**	**-0.2**
PRK	**Paraskevi**	**3.87**	**9**	P	**Pn**	**00 20 55.8**	**-0.4**
CSS	**Prodhromos**	**6.42**	**92**	*e*Pn	**Pn**	**00 21 31.0**	**-0.2**
CSS	**Prodhromos**	**6.42**	**92**	*e*Pn	**Pn**	**00 21 31.1**	**-0.2**
BR131	**Keskin Array S**	**7.75**	**54**	*e*Pn	**Pn**	**00 21 51.0**	**+1.5**
BR131	**Keskin Array S**	**7.75**	**54**	*e*Pn	**Pn**	**00 21 51.0**	**+1.5**
BRTR	**Keskin Array B**	**7.75**	**54**	Pn	**Pn**	**00 21 51.5**	**+2.0**
	0.3nm,0.3s,baz=241,slow=16,SNR=15						
TIP	**Timpagrande**	**7.92**	**301**	*e*Pn	**Pn**	**00 21 49.2**	**-2.7**
TIP	**Timpagrande**	**7.92**	**301**	*e*Pn	**Pn**	**00 21 49.2**	**-2.7**
CEL	**Celeste**	**8.22**	**293**	*e*Pn	**Pn**	**00 21 53.8**	**-2.2**
CEL	**Celeste**	**8.22**	**293**	*e*Pn	**Pn**	**00 21 53.9**	**-2.1**
MMAI	**Mount Meron Ar**	**8.53**	**104**	Pn	**Pn**	**00 22 01.9**	**+1.6**
	0.9nm,0.3s,baz=317,slow=8.4,SNR=3.3						
MMAI				Sn	**Sn**	**00 23 32.5**	**-3.2**
	2.0nm,0.3s,baz=295,slow=24,SNR=4.2						
CUC	**Castrocucco**	**8.94**	**304**	*e*Pn	**Pn**	**00 22 02.7**	**-3.1**
EIL	**Elat**	**9.81**	**123**	Pn	**Pn**	**00 22 18.2**	**+0.4**
	0.5nm,0.3s,baz=359,slow=9.1,SNR=4.9						
EIL				Sn	**Sn**	**00 24 00.2**	**-6.8**
	1.1nm,0.3s,baz=71,slow=15,SNR=5.8						
EIL	**Elat**	**9.81**	**123**	Pn	**Pn**	**00 22 18.2**	**+0.4**
EIL				Sn	**Sn**	**00 24 00.2**	**-6.8**
ASF	**Jabal al Asfar**	**10.01**	**106**	Pn	**Pn**	**00 22 21.9**	**+1.4**
	0.1nm,0.3s,baz=164,slow=19,SNR=2.2						
ASF				Sn	**Sn**	**00 24 12.9**	**+1.0**
	0.1nm,0.3s,baz=321,slow=23,SNR=2.4						
KEST	**Kesra**	**13.17**	**276**	Pn	**Pn**	**00 23 06.2**	**+2.4**
	0.0nm,0.3s,baz=30,slow=16,SNR=2.0						
VYHS	**Vyhne**	**13.97**	**341**	*e*PN	**Pn**	**00 23 16.1**	**+1.5**
STHS	**Stebnicka Huta**	**14.34**	**349**	*e*PN	**Pn**	**00 23 23.0**	**+3.4**
STHS	**Stebnicka Huta**	**14.34**	**349**	*e*Pn	**Pn**	**00 23 23.0**	**+3.4**
AKASG	**Malin Array Be**	**15.51**	**9**	Pn	**Pn**	**00 23 34.5**	**-0.7**
	0.9nm,0.3s,baz=199,slow=11,SNR=4.1						
GERES	**GERESS Array B**	**16.00**	**331**	Pn	**Pn**	**00 23 43.6**	**+2.0**
	0.1nm,0.3s,baz=160,slow=12,SNR=3.3						
TORD	**Torodi Ar. Bea**	**30.88**	**230**	P	**P**	**00 26 13.8**	**+1.0**
	0.2nm,0.5s,mb3.2,baz=30,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**43.39**	**57**	P	**P**	**00 27 58.6**	**0.0**
	0.8nm,0.3s,mb3.9,baz=267,slow=8.2,SNR=28						
MKAR				pP	pP	00 28 05.9	-0.7
	0.5nm,0.4s,baz=267,slow=8.2,SNR=4.2						
MKAR				sP	sP	00 28 08.9	-1.0
	0.5nm,0.4s,baz=275,slow=7.1,SNR=4.3						
MKAR	**Makanchi Array**	**43.39**	**57**	P	**P**	**00 27 58.6**	**0.0**
MKAR				pP	pP	00 28 05.9	-0.8
ZALV	**Zalesovo Beam**	**44.62**	**46**	P	**P**	**00 28 07.2**	**-1.1**
	0.7nm,0.4s,mb3.9,baz=263,slow=7.4,SNR=5.5						
YKA	**Yellowknife Ar**	**77.29**	**342**	pP	pP	00 31 57.4	-1.3
	0.2nm,0.7s,baz=45,slow=6.3,SNR=1.8						

*CSEM **03** 00:20:34.0±0.1, 3721N×2232E, h4km, ML3.6, Error ellipse: s-maj=2.8km s-min=2.7km az=53.0*
*ISCJB **03** 00:20:35.7±0.8, 3726N±004×22.18E±004, h9km±8km, mb3.7/8, Error ellipse: s-maj=7.7km s-min=4.8km az=13.7*
*THE **03** 00:20:35.8, 3728N×2221E, h0km±1km, ML4.0/2, Error ellipse: s-maj=1.8km s-min=0.6km az=150.0*
*ATH **03** 00:20:36.4, 3730N×22.14E, h5km±4km, MD3.9/9, ML3.6*
*NEIC **03** 00:20:36.4, 3730N×22.15E, h4km, ML3.6(ATH), After ATH.*
*IDC **03** 00:20:44.5±2.6, 3753N×2238E, h64km±23km, mb3.5/8, mb1 3.7/11, mb1mx3.5/23, mbtmp3.5/11, Error ellipse: s-maj=33.1km s-min=15.7km az=0.0*
ISC 03 00:20:35.9±0.6**, 3725N**±004×**2221E**±003**, h5**km±6km**, n49,** σ**1^{s}11**/62**, mb3.7**/8**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.23**	**252**	*e*PG	**Pg**	**00 20 40.7**	**+0.3**
PYL	**PYLOS**	**0.51**	**226**	P	**Pg**	**00 20 46.2**	**+0.4**
PYL				S	**Sg**	**00 20 53.9**	**+1.5**
VLI	**Veliai**	**0.79**	**132**	*e*PB	**Pb**	**00 20 53.0**	**+0.8**
DID	**Didima**	**0.86**	**73**	P	**Pg**	**00 20 51.9**	**-0.5**
DID				S	**Sg**	**00 21 04.6**	**+1.0**
RLS	**Riolos of Patr**	**0.99**	**324**	*e*PB	**Pb**	**00 20 54.2**	**-1.5**
NAIG	**Nisos Aigina**	**1.14**	**63**	*e*PN	**Pn**	**00 20 58.0**	**-0.5**
NAIG	**Nisos Aigina**	**1.14**	**63**	*e*Pb	**Pb**	**00 20 57.0**	**-1.1**
ATH	**Athens Observa**	**1.40**	**59**	*e*PB	**Pb**	**00 21 03.3**	**+0.8**
ATH				*e*SB	**Sb**	**00 21 22.2**	**+1.5**
ATH	**Athens Observa**	**1.40**	**59**	*e*Pn	**Pn**	**00 21 03.5**	**+1.4**
ATH				*e*Sb	**Sb**	**00 21 22.2**	**+1.5**
KFL	**Anninata**	**1.41**	**308**	P	**Pn**	**00 21 01.8**	**-0.5**
LKR	**Lokris**	**1.53**	**24**	P	**Pn**	**00 21 03.4**	**-0.5**
PTL	**Penteli**	**1.54**	**58**	*e*PB	**Pb**	**00 21 03.0**	**-1.9**
VLS	**Valsamata**	**1.58**	**306**	P	**Pn**	**00 21 04.2**	**-0.4**
VLS				S	**Sn**	**00 21 26.6**	**+1.2**
VLS	**Valsamata**	**1.58**	**306**	*e*Pg	**Pg**	**00 21 04.3**	**-1.9**
VLS				S	**Sn**	**00 21 26.6**	**+1.2**
EVR	**Evrytania**	**1.69**	**349**	*e*PB	**Pb**	**00 21 07.3**	**-0.2**
EVR	**Evrytania**	**1.69**	**349**	*e*Pb	**Pb**	**00 21 07.9**	**+0.4**
AGG	**Agios Georgios**	**1.77**	**3**	P	**Pn**	**00 21 06.4**	**-0.8**
AGG				S	**Sn**	**00 21 30.7**	**+0.6**
NEO	**Neokhori**	**2.20**	**21**	P	**Pn**	**00 21 13.6**	**+0.4**
THL	**Klokotos Trika**	**2.31**	**356**	P	**Pn**	**00 21 14.2**	**-0.5**
THL				S	**Sn**	**00 21 43.6**	**0.0**
JAN	**Janina**	**2.63**	**337**	*e*PN	**Pn**	**00 21 20.7**	**+1.7**
FNA	**Florina**	**3.59**	**350**	P	**Pn**	**00 21 31.8**	**-0.4**
BIA	**Bitola**	**3.82**	**350**	*i* Pn	**Pn**	**00 21 36.2**	**+0.7**
BIA	**Bitola**	**3.82**	**350**	*i* Sn	**Sn**	**00 22 23.5**	**+2.7**
BIA	**Bitola**	**3.82**	**350**	*i* Pn	**Pn**	**00 21 36.3**	**+0.8**
BIA				*i* Sn	**Sn**	**00 22 23.6**	**+2.8**
VAY	**Valandovo**	**4.07**	**4**	*i* Pn	**Pn**	**00 21 38.6**	**-0.3**
VAY				*i* Sn	**Sn**	**00 22 26.4**	**-0.6**
VAY	**Valandovo**	**4.07**	**4**	*i* Pn	**Pn**	**00 21 38.6**	**-0.3**
VAY				*i* Sn	**Sn**	**00 22 26.5**	**-0.5**
KRUS	**Krusevo**	**4.18**	**350**	*i* Pn	**Pn**	**00 21 41.3**	**+1.0**
KRUS				*i* Sn	**Sn**	**00 22 32.7**	**+3.2**
KRUS	**Krusevo**	**4.18**	**350**	*i* Pn	**Pn**	**00 21 41.4**	**+1.1**
KRUS				*i* Sn	**Sn**	**00 22 32.8**	**+3.2**
TIR	**Tirane**	**4.47**	**337**	*e*Pn	**Pn**	**00 21 43.1**	**-1.3**
TIR	**Tirane**	**4.47**	**337**	*e*Pn	**Pn**	**00 21 43.1**	**-1.3**
MMB	**Musomiste**	**4.49**	**15**	P	**Pn**	**00 21 44.7**	**+0.1**
KKB	**Krupnik**	**4.66**	**8**	P	**Pn**	**00 21 50.7**	**+3.8**
VAE	**Valguarnera**	**6.21**	**274**	P	**Pn**	**00 22 14.0**	**+5.7**
	0.6nm,0.3s,baz=131,slow=20,SNR=3.4						
VAE				S	**Sn**	**00 23 29.0**	**+9.3**
	0.2nm,0.3s,baz=61,slow=18,SNR=3.1						
GRUS	**Gruza**	**6.73**	**351**	*e*Pn	**Pn**	**00 22 15.1**	**-0.2**
BBLS	**Lazići**	**6.94**	**343**	*e*Pn	**Pn**	**00 22 18.9**	**+0.6**
MLR	**Muntele Rosu**	**8.70**	**18**	P	**Pn**	**00 22 44.3**	**+1.9**
	baz=193,slow=16						
BRTR	**Keskin Array B**	**9.30**	**71**	P	**Pn**	**00 22 54.7**	**+4.1**
	0.1nm,0.3s,baz=255,slow=13,SNR=6.1						
CLL	**Collm**	**15.50**	**338**	*e*PP		00 24 21.0	
HFS	**Hagfors**	**23.54**	**349**	P	**P**	**00 25 45.5**	**-1.5**
	2.6nm,0.7s,mb3.8,baz=144,slow=11,SNR=5.3						
NB2	**NORSAR Subarra**	**24.80**	**347**	P	**P**	**00 25 56.2**	**-2.4**
	comp=Z,2.5nm,1.0s,mb3.7,baz=154,slow=9.3						
NOA	**NORSAR Array B**	**24.80**	**347**	P	**P**	**00 25 58.2**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.5,baz=159,slow=9.9,SNR=4.3						
EKA	**Eskdalemuir Ar**	**24.95**	**325**	P	**P**	**00 25 59.5**	**-0.6**
	comp=Z,2.2nm,0.7s,mb3.8,baz=127,slow=9.3,SNR=8.6						
MKAR	**Makanchi Array**	**44.66**	**58**	P	**P**	**00 28 48.7**	**-0.7**
	comp=Z,0.9nm,0.6s,mb3.8,baz=281,slow=7.3,SNR=6.8						
MKAR				PcP	PcP	00 30 31.9	-0.1
	comp=Z,0.3nm,0.7s,baz=242,slow=3.1,SNR=2.8						
MKAR	**Makanchi Array**	**44.66**	**58**	P	**P**	**00 28 48.7**	**-0.7**
MKAR				PcP	PcP	00 30 31.9	-0.1
ZALV	**Zalesovo Beam**	**45.32**	**48**	P	**P**	**00 28 53.4**	**-1.2**
	comp=Z,1.4nm,0.5s,mb4.0,baz=271,slow=8.4,SNR=6.6						
ZALV	**Zalesovo Beam**	**45.32**	**48**	P	**P**	**00 28 53.4**	**-1.2**
SONM	**Songino Array**	**60.01**	**51**	P	**P**	**00 30 41.5**	**-1.9**
	comp=Z,0.2nm,0.6s,mb3.3,baz=288,slow=5.6,SNR=3.4						
CMAR	**Chiang Mai Arr**	**68.69**	**83**	P	**P**	**00 31 40.1**	**-0.6**
	comp=Z,0.5nm,0.3s,mb3.9,baz=279,slow=7.2,SNR=2.8						
YKA	**Yellowknife Ar**	**74.71**	**341**	P	**P**	**00 32 17.3**	**+1.0**
	comp=Z,0.1nm,0.4s,mb3.1,baz=22,slow=6.6,SNR=3.2						

*NEIC **03** 00:28:18.6, 3557N×2557E, h20km, MD3.5(ATH), After ATH.*
*ATH **03** 00:28:18.6, 3558N×2556E, h20km±2km, MD3.5/6*
*CSEM **03** 00:28:19.8±0.1, 3545N×2560E, h26km±1km, MD3.5, Error ellipse: s-maj=4.1km s-min=2.7km az=162.0*
*ISCJB **03** 00:28:20.3±0.4, 3543N±003×2554E±004, h27km±4km, Error ellipse: s-maj=5.4km s-min=4.5km az=173.2*
*THE **03** 00:28:20.1, 3547N×2555E, h7km±3km, Error ellipse: s-maj=3.7km s-min=0.6km az=157.0*
ISC 03 00:28:20.4±0.4**, 3544N**±003×**2555E**±004**, h23**km±5km**, n22,** σ**0^{s}74**/36**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.19**	**163**	*e*PB	**Pb**	**00 28 25.3**	**-0.3**
NPS				*e*SB	**Sb**	**00 28 29.8**	**+0.6**
NPS	**Neapolis**	**0.19**	**163**	*e*Pb	**Pb**	**00 28 25.3**	**-0.3**
NPS				*e*Sb	**Sb**	**00 28 28.9**	**-0.3**
LAST	**Lasithi**	**0.29**	**191**	P	**Pb**	**00 28 26.3**	**-0.7**
LAST				S	**Sb**	**00 28 31.1**	**-0.4**
IDI	**Anoyia**	**0.56**	**254**	*e*Pg	**Pb**	**00 28 31.5**	**0.0**
IDI				*e*Sg	**Sb**	**00 28 39.0**	**-0.1**
IDI	**Anoyia**	**0.56**	**254**	*e*Pg	**Pb**	**00 28 31.5**	**0.0**
IDI				*e*Sg	**Sb**	**00 28 39.0**	**-0.1**
ZKR	**Zakros**	**0.64**	**121**	P	**Pb**	**00 28 32.9**	**0.0**
ZKR				S	**Sb**	**00 28 41.8**	**+0.4**
SIVA	**Sivas**	**0.74**	**235**	P	**Pb**	**00 28 34.7**	**+0.2**
SIVA				S	**Sb**	**00 28 44.8**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THR6	Thira Island,	0.92	353	P	Pb	00 28 37.1	-0.6
THR6				S	Sb	00 28 50.2	+0.7
THR1	Thera Island	0.93	356	P	Pb	00 28 36.9	-0.9
THR1				S	Sb	00 28 50.4	+0.7
THR3	Thira Island,	0.97	353	P	Pn	00 28 37.5	-1.2
THR3				S	Sb	00 28 51.0	0.0
THR5	Thira Island,	0.99	351	P	Pn	00 28 37.9	-1.0
THR5				S	Sb	00 28 52.1	+0.7
THR4	Thira Island,	1.02	353	P	Pn	00 28 38.7	-0.7
THR4				S	Sb	00 28 53.1	+0.7
VAM	Vamos	1.10	269	ePN	Pn	00 28 40.3	-0.1
VAM	Vamos	1.10	269	ePn	Pn	00 28 40.8	+0.4
KARP	Karpathos	1.32	85	ePN	Pn	00 28 43.1	-0.4
KARP				eSN	Sn	00 29 01.6	+1.2
KARP	Karpathos	1.32	85	ePn	Pn	00 28 43.0	-0.5
KARP				eSn	Sn	00 29 01.8	+1.4
GVD	Gavdhos	1.34	244	ePN	Pn	00 28 45.6	+1.9
GVD	Gavdhos	1.34	244	ePn	Pn	00 28 46.2	+2.5
APE	Apeiranthos	1.62	360	ePN	Pn	00 28 46.3	-1.3
APE	Apeiranthos	1.62	360	P	Pn	00 28 46.9	-0.7
VLI	Veliai	2.47	302	ePN	Pn	00 28 59.0	-0.2
DID	Didima	2.78	319	P	Pn	00 29 03.9	+0.4

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*MOS **03** 00:36:38.9±1.3, 4175N×4530E, h19km, mb3.8/1, Error ellipse: s-maj=32.4km s-min=9.8km az=116.5*
*TIF **03** 00:36:38.3, 4166N×4524E, h13km±2km*
ISC 03 00:36:36.4±1.8**, 4163N**±006×**4538E**±010**, h12**km±12km**, n11, σ0s62**/22**, 1C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTA	Mtatsminda	0.45	278	P	Pg	00 36 45.5	+0.3
MTA				S	Sg	00 36 51.3	+0.2
TBLG	Delisi	0.49	282	i PG	Pg	00 36 46.4	+0.3
TBLG				i S	Sg	00 36 52.7	+0.1
TBLG	Delisi	0.49	282	P	Pg	00 36 46.4	+0.4
TBLG				S	Sg	00 36 52.7	+0.1
LACR	Lac	1.44	326⇓	iPG	Pg	00 37 04.7	+0.6
LACR				eS	Sg	00 37 23.5	+0.7
SNJR	Sundja	1.50	344	ePG	Pg	00 37 05.5	+0.3
SNJR				eS	Sg	00 37 25.2	+0.6
VLKR	Vladikavkaz	1.51	340	ePG	Pg	00 37 05.4	0.0
VLKR				eS	Sg	00 37 25.5	+0.5
ZEI	Tsey	1.58	316⇑	iPG	Pg	00 37 07.1	+0.3
ZEI				i S	Sg	00 37 28.1	+0.7
KORR	Kora	1.75	327	ePG	Pg	00 37 09.3	-0.7
KORR				eS	Sg	00 37 32.0	-0.7
ARNR	Ardon	1.76	333	ePN	Pg	00 37 09.6	-0.6
ARNR				eS	Sg	00 37 32.3	-0.7
DIGR	Digorskoe uzhe	1.84	314	ePN	Pg	00 37 10.6	-1.2
DIGR				eS	Sg	00 37 34.3	-1.3
LSNR	Lesken	2.01	325	ePN	Pb	00 37 12.7	-0.2
LSNR				eS	Sb	00 37 38.4	+0.5

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*ISCJB **03** 00:45:37.4±3.2, 133S±02×1662E±02, h44km±23km, mb4.0/6, MS3.4/5, Error ellipse: s-maj=46.4km s-min=12.1km az=145.0*
*IDC **03** 00:45:42.5±6.4, 1304S×166.18E, h75km±48km, mb3.7/6, mb1 3.9/7, mb1mx3.8/16, mbtmp3.9/7, ML4.6/1, MS3.4/6, Ms1 3.4/6, ms1mx3.2/28, Error ellipse: s-maj=50.0km s-min=24.0km az=74.0*
ISC 03 00:45:39.1±2.8**, 132S**±02×**1664E**±02**, h51**km±20km**, n18, σ1s09**/12**, mb4.0**/6**, MS3.4**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.30	300	P	Pn	00 47 24.1	+0.9
	12nm,0.3s,baz=200,slow=4.3,SNR=4.6						
HNR				S	Sn	00 48 44.4	-0.4
	32nm,0.3s,baz=41,slow=20,SNR=5.1						
HNR				LR	LR	00 49 45.6	
	comp=Z,172nm,18.9s,baz=336,slow=34						
DZM	Mont Dzumac	8.86	180	eP	Pn	00 47 43.9	-0.7
DZM				eS	Sn	00 49 14.5	-8.5
CTA	Charters Tower	20.45	248	LR	LR	00 57 22.5	
	comp=Z,156nm,19.1s,MS3.4,baz=51,slow=34						
URZ	Urewera	26.76	161	LR	LR	01 00 02.7	
	comp=Z,80nm,19.4s,MS3.3,baz=200,slow=32						
STKA	Stephens Creek	29.38	227	pP	pP	00 51 51.5	+0.9
	1.6nm,0.7s,baz=51,slow=6.5,SNR=2.4						
STKA				LR	LR	01 03 02.6	
	comp=Z,83nm,18.4s,MS3.4,baz=206,slow=36						
ASAR	Alice Springs	32.45	247	P	P	00 52 05.2	+0.6
	1.0nm,0.6s,mb3.8,baz=74,slow=9.7,SNR=13						
ASAR				PcP	PcP	00 54 52.1	+1.0
	0.7nm,0.6s,baz=97,slow=2.1,SNR=6.2						
CBIJ	Chichi jima	46.39	330	LR	LR	01 10 38.8	
	comp=Z,62nm,19.0s,MS3.6,baz=197,slow=32						
VNDA	Vanda	64.40	181	P	P	00 56 10.4	+1.0
	1.6nm,0.9s,mb4.0,baz=0.0,slow=6.5,SNR=8.5						
PETK	Petropavlovsk-	66.42	354	LR	LR	01 19 34.2	
	comp=Z,28nm,20.1s,MS3.5,baz=307,slow=31						
CMAR	Chiang Mai Arr	73.51	294	P	P	00 57 04.5	-2.5
	1.8nm,0.5s,mb4.2,baz=102,slow=15,SNR=10						
CMAR				pP	pP	00 57 22.2	+0.7
	0.7nm,0.3s,baz=131,slow=5.1,SNR=2.4						
SONM	Songino Array	80.72	324	P	P	00 57 44.9	-1.9
	0.4nm,0.8s,mb3.4,baz=141,slow=4.8,SNR=2.5						
MKAR	Makanchi Array	95.47	317	P	P	00 58 59.5	+1.2
	0.3nm,0.4s,mb4.0,baz=83,slow=7.0,SNR=6.6						
MKAR				pP	pP	00 59 15.6	+2.3
	0.5nm,0.7s,baz=92,slow=4.6,SNR=2.6						
ZALV	Zalesovo Beam	95.61	324	P	P	00 58 59.8	+1.0
	1.1nm,0.6s,mb4.4,baz=131,slow=4.5,SNR=7.8						
VNA3	Neumayer Olymp	95.76	181	e	P	00 58 58.9	-0.4
VNA3				e		00 59 01.0	
VNA2	Neumayer--Watz	96.01	182	e	P	00 59 00.5	+0.1
	baz=194,slow=5.3						
VNA2				e		00 59 02.1	
ARCES	ARCESS Array B	118.52	345	PKP	PKPdf	01 04 20.8	+0.2
	4.7nm,1.0s,baz=60,slow=2.6,SNR=7.2						
KEST	Kesra	149.44	321	PKPbc	PKPbc	01 05 23.6	+0.6
	1.5nm,0.9s,baz=24,slow=4.9,SNR=5.5						
TORD	Torodi Ar. Bea	165.07	272	PKP	PKPdf	01 05 39.1	+0.5
	1.0nm,1.0s,baz=60,slow=0.9,SNR=4.0						

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*IDC **03** 00:56:25.3±0.8, 266N×12684E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/18, mbtmp3.9/10, Error ellipse: s-maj=52.4km s-min=17.0km az=70.0*
*ISCJB **03** 00:56:28.3±0.7, 27N±0.1×1269E±03, h33km, mb3.9/11, Error ellipse: s-maj=47.6km s-min=13.6km az=161.4*
*NEIC **03** 00:56:30.6±0.5, 265N×12690E, h35km, mb4.1/2, Error ellipse: s-maj=37.4km s-min=10.7km az=71.0*
ISC 03 00:56:30.7±0.7**, 26N**±01×**1269E**±03**, h35**km**, n15, σ0s68**/14**, mb3.9**/11**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	27.03	166	P	P	01 02 09.2	-0.5
	0.4nm,0.6s,mb3.1,baz=337,slow=6.1,SNR=5.2						
STKA	Stephens Creek	37.06	159	P	P	01 03 37.3	-0.2
	7.0nm,0.8s,mb4.6,baz=329,slow=9.0,SNR=9.0						
STKA	Stephens Creek	37.06	159	eP	P	01 03 37.1	-0.4
	0.7nm,0.6s,mb3.7						
ULN	Ulaanbaatar	48.19	342	eP	P	01 05 08.4	+0.8
	4.1nm,0.9s,mb4.5						
SONM	Songino Array	48.37	342	P	P	01 05 09.0	0.0
	1.0nm,0.6s,mb4.0,baz=162,slow=7.3,SNR=7.3						
PETK	Petropavlovsk-	56.37	22	P	P	01 06 08.3	+0.1
	2.0nm,0.8s,mb4.2,baz=218,slow=9.1,SNR=3.0						
MKAR	Makanchi Array	58.53	326	P	P	01 06 22.9	-0.8
	0.4nm,0.4s,mb3.8,baz=120,slow=7.8,SNR=15						
ZALV	Zalesovo Beam	61.62	333	P	P	01 06 44.2	-0.5
	0.5nm,0.5s,mb3.9,baz=133,slow=6.3,SNR=3.8						
ZALV	Zalesovo Beam	61.62	333	P	P	01 06 44.2	-0.5
KURK	Kurchatov	62.74	328	P	P	01 06 51.2	-0.9
	0.5nm,0.4s,mb4.0,baz=130,slow=6.0,SNR=6.0						
KURK	Kurchatov	62.74	328	eP	P	01 06 51.7	-0.5
BVAR	Borovoye Array	68.31	327	P	P	01 07 27.8	-0.4
	0.6nm,0.6s,mb3.8,baz=141,slow=9.6,SNR=5.7						
VNDA	Vanda	82.34	173	P	P	01 08 49.0	+0.7
	0.4nm,0.8s,mb3.4,baz=46,slow=4.5,SNR=3.7						
BRTR	Keskin Array B	90.83	310	P	P	01 09 32.3	+1.5
	0.4nm,0.8s,mb3.8,baz=90,slow=4.3,SNR=2.4						
TORD	Torodi Ar. Bea	123.40	288	PKP	PKPdf	01 15 25.0	-0.2
	0.3nm,0.9s,baz=66,slow=2.8,SNR=2.8						

IDC 03 01:00:04.3±1.4**, 258N**×**12671E, h0**km**, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.7**/16**, mbtmp3.7**/5**, Error ellipse: s-maj=214.1km s-min=21.2km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	27.02	165	P	P	01 05 48.9	+0.7
	0.4nm,0.6s,baz=348,slow=8.6,SNR=2.9						
STKA	Stephens Creek	37.07	159	P	P	01 07 15.9	-0.5
	3.6nm,0.6s,baz=334,slow=10,SNR=6.7						
SONM	Songino Array	48.37	342	P	P	01 08 48.1	+0.2
	0.6nm,0.7s,baz=158,slow=8.7,SNR=4.1						
MKAR	Makanchi Array	58.48	326	P	P	01 10 02.0	-0.3
	0.2nm,0.4s,baz=119,slow=7.9,SNR=9.7						
ZALV	Zalesovo Beam	61.59	333	P	P	01 10 23.9	+0.4
	0.3nm,0.4s,baz=132,slow=6.0,SNR=2.3						

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*NEIC **03** 01:03:52.8, 1438N×9302W, h9km, MD4.1(MEX), After MEX.*
MEX 03 01:03:52.9±0.8**, 1438N**×**9302W, h8**km±19km**, MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.90	54	i P	Pg	01 04 07.2	-3.1
THIG				i S	Sg	01 04 20.1	-1.9
PCIG		1.33	352	i P	Pn	01 04 14.4	-3.3
PCIG				i S	Sb	01 04 29.6	-5.7
SCX	San Cristobal	2.37	9	eP	Pn	01 04 29.4	-2.6
SCX				i S	Sn	01 04 58.0	-3.3
TGIG		2.38	358	i P	Pn	01 04 30.1	-2.2
TGIG				i S	Sn	01 04 58.0	-3.6
CMIG	Matias Romero	3.24	327	eP	Pn	01 04 41.4	-2.6
CMIG				i S	Sn	01 05 19.4	-3.3
VHO	Vista Hermosa	4.46	307	eP	Pn	01 04 59.2	-1.6
VHO				i S	Sn	01 05 50.5	-2.6
PNIG	Pinotepa	5.32	293	eP	Pn	01 05 10.7	-1.9
PNIG				i S	Sn	01 06 10.1	-3.9
UTMO	Huajuapan	5.74	307	eP	Pn	01 05 16.4	-2.0
UTMO				i S	Sn	01 06 20.6	-3.8
PPM	Popocatepetl	7.11	312	eP	Pn	01 05 36.8	-0.4
PPM				i S	Sn	01 07 01.3	+3.0

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*ISCJB **03** 01:11:24.6±0.7, 26.1S±0.1×686E±02, h10km, mb3.9/11, MS3.6/2, Error ellipse: s-maj=25.7km s-min=16.4km az=174.8*
*IDC **03** 01:11:24.8±0.7, 26.10S×6852E, h0km, mb3.9/11, mb1 4.1/11, mb1mx4.0/18, mbtmp3.9/11, MS3.6/2, Ms1 3.7/2, ms1mx3.2/23, Error ellipse: s-maj=26.9km s-min=17.6km az=83.0*
*NEIC **03** 01:11:26.4±0.5, 26.11S×6852E, h10km, Error ellipse: s-maj=18.2km s-min=11.6km az=85.0*
ISC 03 01:11:26.6±0.7**, 261S**±01×**685E**±02**, h10**km**, n12, σ0s44**/11**, mb3.9**/11**, MS3.6**/2**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAW	Mawson	41.66	183	P	P	01 19 15.0	+0.2
	1.7nm,0.5s,mb4.0,baz=333,slow=11,SNR=4.4						
CMAR	Chiang Mai Arr	53.24	37	P	P	01 20 46.2	+0.7
	0.5nm,0.3s,mb3.9,baz=236,slow=6.4,SNR=3.9						
CMAR				LR	LR	01 39 02.2	
	comp=Z,35nm,18.9s,MS3.4,baz=215,slow=31						
ASAR	Alice Springs	58.78	103	P	P	01 21 24.8	-0.5
	2.7nm,0.6s,mb4.5,baz=255,slow=6.2,SNR=24						
STKA	Stephens Creek	63.07	114	P	P	01 21 53.8	-0.5
	2.2nm,0.9s,mb4.3,baz=309,slow=6.5,SNR=3.8						
QSPA	South Pole Qui	64.03	180	P	P	01 22 00.3	+0.4
	1.7nm,0.5s,mb4.3,baz=256,slow=2.6,SNR=9.7						
VNDA	Vanda	65.43	166	P	P	01 22 09.0	0.0
	1.3nm,0.7s,mb4.0,baz=277,slow=8.8,SNR=8.7						
CTA	Charters Tower	70.78	103	LR	LR	01 54 04.0	
	comp=Z,48nm,19.2s,MS3.8,baz=102,slow=36						
BRTR	Keskin Array B	73.13	333	P	P	01 22 57.1	0.0
	0.7nm,0.9s,mb3.6,baz=131,slow=4.0,SNR=4.3						
MKAR	Makanchi Array	73.61	10	P	P	01 22 59.2	-0.5
	0.5nm,0.8s,mb3.5,baz=189,slow=4.7,SNR=5.0						
TORD	Torodi Ar. Bea	75.79	292	P	P	01 23 12.7	-0.5
	0.3nm,0.7s,mb3.3,baz=108,slow=6.6,SNR=2.2						
ZALV	Zalesovo Beam	80.96	10	P	P	01 23 40.8	0.0
	0.7nm,0.5s,mb3.8,baz=210,slow=4.5,SNR=4.7						
SONM	Songino Array	81.09	25	P	P	01 23 42.2	+0.6
	0.4nm,0.6s,mb3.5,baz=213,slow=3.9,SNR=3.0						

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*ISCJB **03** 01:25:07.8±1.5, 252S±007×10042E±0.10, h58km±12km, mb4.1/11, Error ellipse: s-maj=19.3km s-min=7.3km az=146.6*
*NEIC **03** 01:25:07.3±0.8, 256S×10031E, h35km, mb4.3/4, Error ellipse: s-maj=28.8km s-min=9.6km az=49.0*
*IDC **03** 01:25:08.5±0.9, 254S×10029E, h47km±5km, mb3.7/9, mb1 3.9/10, mb1mx3.7/20, mbtmp3.8/10, MS3.3/2, Ms1 3.3/2, ms1mx3.0/23, Error ellipse: s-maj=40.7km s-min=12.9km az=54.0*
*DJA **03** 01:25:08, 246S×10054E, h21km, MLv4.3/4*
ISC 03 01:25:08.5±1.7**, 253S**±008×**1004E**±01**, h45**km±14km**, h49**km±1.5km**:pP-P, n24, σ0s90**/24**, mb4.1**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDSI	Padang	1.61	2	P	Pn	01 25 33.3	-1.2
PDSI				S	Sn	01 25 53.6	-0.5
PPI	Padang Panjang	2.06	360	P	Pn	01 25 40.6	-0.1
PPI				S	Sn	01 26 05.9	+0.7
KSI	Kapahiang	2.45	117	P	Pn	01 25 48.1	+2.0
KSI				S	Sn	01 26 13.6	-1.2
RGRI	Rengat	2.91	42	S	Sn	01 26 26.2	+0.2
MYKOM	Kota Tinggi	5.51	39	P	Pn	01 26 29.0	+1.0
KAPI	Kappang	19.46	98	P	Pn	01 29 32.2	-1.0
	1.0nm,0.3s,baz=215,slow=13,SNR=4.1						
KAPI				LR	LR	01 38 11.4	
	comp=Z,59nm,18.1s,baz=101,slow=40						
KAPI	Kappang	19.46	98	eP	Pn	01 29 32.0	-1.3
	5.5nm,0.8s						
CMAR	Chiang Mai Arr	20.91	356	P	P	01 29 47.6	+0.3
	0.7nm,0.5s,baz=191,slow=8.0,SNR=4.5						
CMAR				pP		01 29 59.1	
	1.3nm,0.5s,baz=185,slow=9.5,SNR=2.6						
DAV	Davao City (W)	26.88	69	LR	LR	01 42 26.8	
	comp=Z,72nm,18.5s,baz=320,slow=38						
LSA	Lhasa	33.25	345	P	P	01 31 42.1	+0.5
	6.6nm,1.2s,mb4.4						
ASAR	Alice Springs	38.62	126	P	P	01 32 27.6	0.0
	2.5nm,0.6s,mb4.1,baz=298,slow=7.8,SNR=34						
ASAR				pP	pP	01 32 41.0	+1.1
	2.4nm,0.7s,baz=298,slow=8.0,SNR=6.0						
STKA	Stephens Creek	48.50	132	P	P	01 33 47.9	+0.8
	1.4nm,0.5s,mb4.3,baz=304,slow=9.9,SNR=6.1						
STKA				pP	pP	01 34 00.9	+1.3
	4.8nm,0.8s,baz=281,slow=5.8,SNR=3.9						
STKA	Stephens Creek	48.50	132	eP	P	01 33 48.1	+1.0
STKA				pP	pP	01 34 00.9	+1.3
SONM	Songino Array	50.43	5	P	P	01 34 02.0	+0.5
	1.3nm,0.5s,mb4.2,baz=189,slow=8.9,SNR=10						
SONM				pP	pP	01 34 13.6	-0.5
	1.0nm,0.9s,baz=185,slow=12,SNR=3.9						
TKM2	Tokmak 2	50.48	336	eP	P	01 34 02.3	+0.3
	1.6nm,0.6s,mb4.2						
EKS2	Erkin-Say	51.01	335	eP	P	01 34 06.6	+0.6
	2.9nm,0.8s,mb4.3						
MK31	Makanchi Array	51.65	344	eP	P	01 34 10.5	-0.1
MKAR	Makanchi Array	51.65	344	P	P	01 34 09.8	-0.9
	0.7nm,0.5s,mb3.9,baz=156,slow=8.4,SNR=11						
MKAR				pP	pP	01 34 22.4	-0.8
	1.5nm,0.7s,baz=152,slow=8.2,SNR=6.7						
KURK	Kurchatov	56.23	344	P	P	01 34 42.7	-1.3
	0.4nm,0.7s,mb3.6,baz=153,slow=7.7,SNR=3.0						
KURK				pP	pP	01 34 57.2	+0.5
	0.8nm,0.7s,baz=200,slow=6.1,SNR=4.1						
ZALV	Zalesovo Beam	57.76	349	P	P	01 34 54.0	-0.8
	0.8nm,0.3s,mb4.2,baz=180,slow=6.8,SNR=5.5						
ZALV				pP	pP	01 35 07.7	+0.1
	3.8nm,0.9s,baz=165,slow=6.2,SNR=6.1						
BRTR	Keskin Array B	73.98	312	P	P	01 36 38.6	-0.9
	0.5nm,0.6s,mb3.6,baz=136,slow=6.2,SNR=4.5						
BRTR				pP	pP	01 36 52.2	-0.4
	0.8nm,1.0s,baz=118,slow=5.2,SNR=2.9						
ARCES	ARCESS Array B	87.11	340	P	P	01 37 50.7	+1.5
	4.5nm,1.0s,mb4.7,baz=99,slow=5.7,SNR=3.9						
ARCES				pP	pP	01 38 03.3	+0.7
	2.7nm,0.9s,baz=106,slow=3.8,SNR=6.8						
TXAR	Lajitas Array	144.88	38	PKP	PKPdf	01 44 40.7	-0.7
	0.6nm,0.6s,baz=220,slow=0.7,SNR=13						
TXAR				pPKP	pPKPdf	01 44 55.1	-0.2
	2.4nm,0.5s,baz=318,slow=1.2,SNR=18						
TXAR	Lajitas Array	144.88	38	PKP	PKPdf	01 44 40.7	-0.7
TXAR				pPKP	pPKPdf	01 44 55.1	-0.2

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*ISCJB **03** 01:29:42.7±0.4, 3731N±003×22.16E±003, h10km, Error ellipse: s-maj=4.7km s-min=3.3km az=148.1*
*NEIC **03** 01:29:42.6, 3734N×22.15E, h9km, ML2.8(ATH), After ATH.*
*CSEM **03** 01:29:42.6±0.1, 3730N×2220E, h8km, ML2.8, Error ellipse: s-maj=3.1km s-min=1.7km az=161.0*
*ATH **03** 01:29:42.6, 3734N×22.15E, h11km±3km, MD3.1/8, ML2.8*
*THE **03** 01:29:43.0, 3732N×2220E, h0km±2km, ML3.2/2, Error ellipse: s-maj=3.0km s-min=0.9km az=153.0*
ISC 03 01:29:42.6±0.5**, 3734N**±003×**2217E**±003**, h2**km±6km**, n23, σ0s97**/35**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.25	231	ePG	Pg	01 29 47.5	+0.1
ITM				eSG	Sg	01 29 51.2	+0.6
PYL	PYLOS	0.56	218	P	Pg	01 29 53.1	-0.2
PYL				S	Sg	01 30 01.3	+0.8
DID	Didima	0.87	78	P	Pg	01 29 59.0	-0.2
DID				S	Sg	01 30 11.5	+1.0
VLI	Veliai	0.87	135	ePB	Pb	01 29 59.5	-0.9
RLS	Riolos of Patr	0.91	322	ePG	Pg	01 29 59.3	-0.7
RLS				eSB	Sb	01 30 12.1	-1.5
LTK	Loutraki	0.93	43	P	Pg	01 29 59.9	-0.6
LTK				S	Sg	01 30 14.7	+2.1
NAIG	Nisos Aigina	1.13	68	ePB	Pb	01 30 04.3	-0.5
KFL	Anninata	1.34	306	P	Pg	01 30 08.6	+0.3
ATH	Athens Observa	1.38	62	ePG	Pg	01 30 08.3	-0.8
ATH				eSB	Sb	01 30 27.9	+0.7
ATH	Athens Observa	1.38	62	ePg	Pg	01 30 08.2	-0.9
ATH				eSb	Sb	01 30 27.9	+0.7
LKR	Lokris	1.47	26	P	Pn	01 30 09.5	-0.5
LKR				S	Sg	01 30 31.2	+1.5
VLS	Valsamata	1.51	304	P	Pn	01 30 11.1	+0.5
VLS				S	Sb	01 30 33.4	+2.6
VLS	Valsamata	1.51	304	ePB	Pb	01 30 11.2	0.0
VLS	Valsamata	1.51	304	ePb	Pb	01 30 11.5	+0.3
VLS				S	Sb	01 30 33.4	+2.6
PTL	Penteli	1.52	62	ePB	Pb	01 30 11.0	-0.5
EVR	Evrytania	1.60	350	ePB	Pb	01 30 12.9	0.0
EVR	Evrytania	1.60	350	ePb	Pb	01 30 13.0	+0.1
AGG	Agios Georgios	1.69	4	P	Pg	01 30 13.4	-1.5
AGG				S	Sg	01 30 36.4	-0.4
THL	Klokotos Trika	2.23	357	P	Pn	01 30 20.3	-0.2
THL				S	Sn	01 30 49.4	+0.9
IGT	Igoumenitsa	2.62	327	P	Pb	01 30 27.4	-2.9
APE	Apeiranthos	2.70	95	P	Pn	01 30 26.5	-0.4
CHOS	Chios island	3.25	70	P	Pn	01 30 34.8	+0.3
LAST	Lasithi	3.45	128	P	Pb	01 30 38.4	-5.9

IDC 03 01:47:24.3±9.3**, 619S**×**15475E, h248**km±93km**, mb3.4**/7**, mb1 3.5**/7**, mb1mx3.4**/15**, mbtmp3.4**/7**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.6**/18**, Error ellipse: s-maj=52.1km s-min=25.5km az=108.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.53	227	P	P	01 52 39.0	-0.5
	0.4nm,0.5s,baz=56,slow=9.1,SNR=6.7						
STKA	Stephens Creek	28.36	204	P	P	01 52 56.1	+0.5
	2.1nm,0.9s,baz=46,slow=10,SNR=3.6						
STKA				LR	LR	02 04 29.4	
	comp=Z,66nm,18.9s,baz=35,slow=36						
PETK	Petropavlovsk-	59.12	2	P	P	01 56 58.8	+0.1
	3.4nm,0.8s,baz=188,slow=7.9,SNR=3.5						
CMAR	Chiang Mai Arr	60.23	295	P	P	01 57 07.4	+0.5
	1.0nm,0.3s,baz=115,slow=6.1,SNR=3.1						
SONM	Songino Array	68.53	327	P	P	01 58 00.3	+0.3
	0.5nm,0.5s,baz=147,slow=5.0,SNR=4.1						
MKAR	Makanchi Array	82.65	319	P	P	01 59 20.1	+0.1
	1.3nm,0.7s,baz=97,slow=5.2,SNR=15						
ZALV	Zalesovo Beam	83.38	326	P	P	01 59 22.6	-0.9
	1.1nm,0.5s,baz=90,slow=5.9,SNR=5.8						
TORD	Torodi Ar. Bea	152.58	287	PKPbc	PKPbc	02 06 52.6	+0.3
	0.1nm,0.4s,baz=101,slow=2.4,SNR=5.3						

MAN 03 01:56:57, 982N×12506E, h3km, mb4.3, ML3.1, MS2.9, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.37	328	eP	Pg	01 57 04.2	+0.1
MSLP				eS	Sg	01 57 12.1	+3.1
SCPH	Surigao	0.43	94⇓	eP	Pg	01 57 05.5	+0.3
SCPH				eS	Sg	01 57 13.7	+3.0
LLP	Lapu-Lapu	1.18	295	eP	Pg	01 57 19.3	-0.4
LLP				eS	Sg	01 57 37.5	+2.4
TBP	Tagbilaran	1.18	264	eP	Pg	01 57 20.6	+0.8
TBP				eS	Sg	01 57 38.2	+3.1
OCLP	Ormoc	1.30	340	eP	Pg	01 57 21.6	-0.4
PLP	Palo	1.34	357⇓	eP	Pn	01 57 20.2	-2.5
PLP				eS	Sg	01 57 39.4	-0.9
BUKP	Musuan	1.93	180	eP	Pn	01 57 31.2	+0.6
BUKP				eS	Sn	01 57 52.1	-3.3
GUIM	Jordan	2.56	289	eP	Pn	01 57 39.6	+0.2
GUIM				eS	Sn	01 58 09.4	-1.7

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*DDA **03** 02:07:27.4, 4245N×3103E, h8km±2km, Md3.2*
*CSEM **03** 02:07:29.8±0.1, 4248N×3100E, h20km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.1km az=14.0*
*NEIC **03** 02:07:30.0, 4252N×3101E, h32km, MD3.4(ISK), After ISK.*
*ISK **03** 02:07:30.7, 4253N×3100E, h33km, MD3.5*
*ISCJB **03** 02:07:31.3±0.3, 4248N±002×3097E±003, h33km, Error ellipse: s-maj=4.0km s-min=2.4km az=137.9*
*THE **03** 02:07:36.1, 4234N×3041E, h4km±19km, ML3.0/1, Error ellipse: s-maj=26.2km s-min=3.0km az=74.0*
ISC 03 02:07:33.1±0.3**, 4244N**±002×**3098E**±003**, h35**km**, n79, σ0s69**/92**, 3C-7D, Black Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDZE	Karadeniz Ereo	1.18	163	ePN	Pn	02 07 51.9	-1.1
HENT	Hendek	1.61	182	i P	Pn	02 07 57.8	-1.2
HENT				i S	Sn	02 08 17.2	-1.4
SILT	Sile	1.63	218	ePN	Pn	02 07 59.0	-0.2
SILT				eSN	Sn	02 08 19.1	+0.2
SAFT	Safranbolu	1.75	133	ePN	Pn	02 08 00.0	-0.9
SAFT				eSN	Sn	02 08 20.9	-1.1
KLYT	Kilyos	1.87	231	ePN	Pn	02 08 02.1	-0.5
HRT	Hereke	1.89	212	ePN	Pn	02 08 03.2	+0.4
EYL	Eskiyayla	1.97	199	ePN	Pn	02 08 04.2	+0.3
MDU	Mudurnu	1.98	175	ePN	Pn	02 08 04.5	+0.4
ISK	Istanbul-Kandi	1.99	227	ePN	Pn	02 08 04.3	+0.2
BALT	Daday	2.01	116	i P	Pn	02 08 03.5	-1.0
SGKT	Sivrigoynuk	2.03	156	i P	Pn	02 08 05.2	+0.5
SGKT	Sivrigoynuk	2.03	156	i P	Pn	02 08 05.2	+0.4
GULT	Gulveren	2.04	190	ePN	Pn	02 08 05.3	+0.5
BGKT	Bogazkoy	2.07	233	ePN	Pn	02 08 05.3	-0.1
CTKS	Kestanelik-??a	2.20	238	ePN	Pn	02 08 06.7	-0.4
GPA	Golpazari	2.21	193	ePN	Pn	02 08 07.6	+0.4
ADVT	Abdulvahap	2.21	205	ePN	Pn	02 08 07.7	+0.5
CTYL	Yal??k??y-??at	2.23	245	ePN	Pn	02 08 07.0	-0.5
YLV	Yalova	2.23	213	ePN	Pn	02 08 07.5	0.0
BZK	Bozkurt	2.30	101	ePN	Pn	02 08 07.2	-1.2
CTT	Catalca	2.30	237	ePN	Pn	02 08 08.4	0.0
ELBA	Catalca	2.30	237	i P	Pn	02 08 09.0	+0.5
CAVI	Cavuskoy	2.39	201	ePN	Pn	02 08 10.3	+0.6
SLVT	Silivri	2.40	241	ePN	Pn	02 08 09.6	-0.1
GEMT	Gemlik	2.41	214	ePN	Pn	02 08 10.4	+0.4
ILGA	Ilgaz	2.47	123	i P	Pn	02 08 10.9	+0.1
BORA	Eskisehir	2.59	189	i P	Pn	02 08 12.2	-0.2
TOS	Tosya	2.67	121	ePN	Pn	02 08 13.4	-0.2
CANT	Cankiri	2.70	132	ePN	Pn	02 08 14.1	+0.2
TIRR	Tirgusor	2.75	318⇓	iP	Pn	02 08 14.3	-0.3
TIRR				S	Sn	02 08 45.3	-1.3
TIRR	Tirgusor	2.75	318	ePn	Pn	02 08 14.2	-0.4
TIRR				eSn	Sn	02 08 40.5	-6.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CVD	Cernavoda	2.85	312	⇑iP	Pn	02 08 17.6	+1.6
CVD				S	Sn	02 08 49.3	+0.2
LOD	Lodumlu	2.88	152	ePN	Pn	02 08 16.6	+0.1
ANTO	Ankara	2.91	151	ePN	Pn	02 08 17.5	+0.7
ESKT	Eskisehir	2.92	182	ePN	Pn	02 08 17.4	+0.4
ESKT	Eskisehir	2.92	182	i P	Pn	02 08 16.6	-0.4
SEYT	Eskypehyr	2.92	182	i P	Pn	02 08 16.6	-0.4
KCT	Karacabey	2.93	223	ePN	Pn	02 08 17.4	+0.2
TKR	Tekirdag	2.96	242	ePN	Pn	02 08 17.6	+0.1
BNT	Bandirma	3.10	229	ePN	Pn	02 08 19.9	+0.4
EDC	Edincik	3.14	229	ePN	Pn	02 08 20.5	+0.5
HARR	Harsova	3.16	316	⇓iP	Pn	02 08 20.1	-0.1
TLCR		3.16	331	⇓iP	Pn	02 08 19.2	-1.1
TLCR				S	Sn	02 08 53.8	-3.0
EDRB	Edirne	3.20	261	ePN	Pn	02 08 20.8	-0.1
JMB	Yambol	3.25	272	P	Pn	02 08 22.4	+0.9
JMB				S	Sn	02 08 55.6	-3.4
JMB	Yambol	3.25	272	P	Pn	02 08 22.6	+1.1
DIKM	Dikmen	3.28	102	ePN	Pn	02 08 21.7	-0.2
CTKT	Corum	3.39	121	i P	Pn	02 08 23.3	-0.1
DURS	Dursunbey	3.41	215	i P	Pn	02 08 23.4	-0.3
ALT	Altintas	3.44	191	ePN	Pn	02 08 25.0	+0.8
GDZ	Gediz	3.53	199	i P	Pn	02 08 25.8	+0.3
CORM	Corum	3.56	128	ePN	Pn	02 08 25.9	+0.1
KIZT	Kizilcal	3.62	169	ePN	Pn	02 08 26.6	0.0
KAMT	Kaman	3.70	145	ePN	Pn	02 08 28.2	+0.5
CDAG	Cicekdag	3.81	136	i P	Pn	02 08 30.0	+0.8
SHUT	Suhut-Afyon	3.90	185	ePN	Pn	02 08 31.3	+0.9
ALN	Alexandroupoli	4.00	249	P	Pn	02 08 31.7	-0.2
ALN				S	Sn	02 09 15.0	-2.5
KVT	Kavak	4.03	108	ePN	Pn	02 08 32.6	+0.4
YOZ	Yozgat	4.31	129	ePN	Pn	02 08 37.0	+0.8
EZN	Ezine	4.38	235	ePN	Pn	02 08 37.4	+0.3
VRI	Vrincioaia	4.59	320	⇓iP	Pn	02 08 40.0	0.0
PLOR	Plostina	4.62	319	⇓iP	Pn	02 08 40.5	+0.2
PLOR				S	Sn	02 09 32.6	-0.1
PLD	Plovdiv	4.67	268	P	Pn	02 08 40.4	-0.6
MLR	Muntele Rosu	4.74	312	⇑iP	Pn	02 08 43.3	+1.3
MLR				S	Sn	02 09 36.0	+0.2
PRK	Paraskevi	4.79	230	P	Pn	02 08 43.3	+0.7
LIA	Limnos Island	5.06	242	P	Pn	02 08 46.1	-0.2
VOIR		5.22	307	⇑iP	Pn	02 08 49.8	+1.2
VOIR				S	Sn	02 09 47.6	0.0
CHOS	Chios island	5.52	224	P	Pn	02 08 53.3	+0.6
OUR	Ouranopolis	5.67	251	P	Pn	02 08 54.2	-0.5
PLG	Polygyros	6.03	253	P	Pn	02 08 59.4	-0.3
PAIG	Paliouri	6.05	248	P	Pn	02 08 59.5	-0.5
PAIG	Paliouri	6.05	248	P	Pn	02 08 59.6	-0.4
KNT	Kendrikon	6.17	261	P	Pn	02 09 01.3	-0.4
KNT	Kendrikon	6.17	261	P	Pn	02 09 01.4	-0.3
GZR	Gura Zlata	6.62	299	⇓iP	Pn	02 09 08.6	+0.8
GZR				S	Sn	02 10 21.8	-0.1
BUR08	Bucovina Ar. S	6.62	324	ePn	Pn	02 09 08.5	+0.7
BUR08	Bucovina Ar. S	6.62	324	ePn	Pn	02 09 08.5	+0.7
LIT	Litokhoron	6.81	253	P	Pn	02 09 09.7	-0.7
BZS	Buzias	7.46	298	⇓iP	Pn	02 09 19.4	+0.1

*NIED **03** 02:46:00, 38.60N×142.20E, h14km, Mw3.4 Best double couple: M0 1.47000×10^14 NP1:φs316.00000°, δ73.00000°, λ-143.00000°. NP2:φs213.00000°, δ55.00000°, λ-22.00000°.*
*JMA **03** 02:46:45.1±0.1, 38.62N×142.17E, h28km±2km, M3.6*
ISC 03 02:46:44.7±1.9, **38.61N**±005×**142.2E**±01, **h27**km±8km, **n8**, σ**0.s49**/15, **1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.61	320	⇓P	Pb	02 46 57.0	+0.1
OFUJ				S	Sb	02 47 05.1	0.0
JIO	Ouri	0.66	257	⇑P	Pb	02 46 57.8	+0.1
JIO				S	Sb	02 47 06.3	-0.2
JMK	Ichinoseki	0.82	295	⇓P	Pb	02 47 00.3	0.0
JMK				S	Sb	02 47 10.7	-0.3
JOM	Ohasama	1.10	322	⇓P	Pn	02 47 04.6	+0.3
JOM				eS	Sn	02 47 18.8	+0.2
JOU	Okura	1.21	259	⇓P	Pn	02 47 06.2	+0.5
JOU				eS	Sn	02 47 21.6	+0.4
JMM	Marumori	1.31	236	P	Pn	02 47 07.0	-0.2
JMM				eS	Sn	02 47 22.8	-1.0
JTH	Tanohata	1.35	350	P	Pn	02 47 07.3	-0.4
JTH				eS	Sn	02 47 24.0	-0.7
JYK	Kaneyama	1.45	283	P	Pn	02 47 10.2	+1.1

*IGQ **03** 03:09:22.4, 1.60S×77.74W, h219km±3km, Mb4.7, Ms4.6, Error ellipse: s-maj=4.0km s-min=2.0km az=48.0*
*ISCJB **03** 03:09:26.0±0.3, 1.50S±0.04×77.63W±0.06, h192km±2km, mb4.3/29, Error ellipse: s-maj=10.1km s-min=5.8km az=173.1*
*IDC **03** 03:09:27.3±1.6, 1.44S×77.58W, h194km±15km, mb3.9/12, mb1 4.1/16, mb1mx4.0/23, mbtmp3.9/16, MS3.1/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=16.0km s-min=8.8km az=63.0*
*NEIC **03** 03:09:27.1±0.8, 1.50S×77.60W, h189km±7km, mb4.5/9, Error ellipse: s-maj=12.0km s-min=6.9km az=63.0*
*BJI **03** 03:09:30.1, 1.50S×77.60W, h188km*
ISC 03 03:09:26.9±0.3, **1.51S**±004×**77.59W**±006, **h186**km±2km, **n69**, σ**0.s94**/66, **mb4.5**/29, **1C-8D, Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PATA	Patacocha	0.85	270	⇓P	Pn	03 09 53.4	-0.8
PATA	Patacocha	0.85	270	⇓S	Sn	03 10 14.8	-0.2
RETU	Refugio	0.86	274	P	Pn	03 09 54.0	-0.2
RETU	Refugio	0.86	274	S	Sn	03 10 15.9	+0.7
ARRY	Arrayan	0.87	270	⇑P	Pn	03 09 53.1	-1.1
IGUA	Igualata	1.05	271	P	Pn	03 09 55.0	-0.6
TAMB	Tambo	1.12	316	P	Pn	03 09 55.8	-0.3
VC1	Cotopaxi 1	1.18	316	P	Pn	03 09 56.3	-0.3
ANTI	Antisana	1.20	331	⇓P	Pn	03 09 56.8	+0.1
CAMI	Rancho Maria	1.23	312	P	Pn	03 09 57.0	0.0
LAV3	Lava3-Reventad	1.40	358	P	Pn	03 09 58.2	-0.3
LAV3	Lava3-Reventad	1.40	358	S	Sn	03 10 24.5	+1.5
CONE	Cono NE Rev Vo	1.43	358	⇓P	Pn	03 09 58.9	+0.2
CONE	Cono NE Rev Vo	1.43	358	⇓S	Sn	03 10 24.6	+1.2
CAYA	Cayambe	1.62	346	⇓P	Pn	03 10 01.1	+0.6
PINO	Pino	1.68	323	⇓P	Pn	03 10 00.6	-0.5
YANA	Yana	1.69	324	P	Pn	03 10 00.6	-0.7
OTAV	Otavalo	1.94	333	ePn	Pn	03 10 03.0	-0.7
OTAV				eSn	Sn	03 10 32.0	-0.3
COTA	Cotacachi	1.98	338	P	Pn	03 10 04.2	+0.1
JAMA	Jama	2.90	295	P	Pn	03 10 11.5	-3.1
CHIS	Cerro-Chispas-	3.17	278	P	Pn	03 10 13.8	-4.1
CHIS	Cerro-Chispas-	3.17	278	S	Sn	03 10 51.0	-6.6
ATAH	Atahualpa	5.52	188	P	Pn	03 10 49.2	+1.5
	35nm,0.3s,baz=18,slow=8.2,SNR=208						
ATAH				S	Sn	03 11 51.1	-0.2
	16nm,0.3s,baz=22,slow=10,SNR=15						
ROSC	El Rosal	7.11	27	P	Pn	03 11 09.5	+1.0
	1.3nm,0.3s,baz=266,slow=19,SNR=4.6						
ROSC	El Rosal	7.11	27	ePn	Pn	03 11 10.8	+2.3
NNA	Nana	10.44	176	P	Pn	03 11 51.7	-0.4
	3.5nm,0.3s,baz=344,slow=13,SNR=11						
NNA				S	Sn	03 13 38.2	-10
	4.4nm,0.3s,baz=4.7,slow=23,SNR=3.6						
NNA	Nana	10.44	176	P	Pn	03 11 51.7	-0.4
NNA				S	Sn	03 13 38.2	-10
SDV	Santo Domingo	12.43	34	P	Pn	03 12 17.9	+0.1
	2.6nm,0.3s,baz=245,slow=9.6,SNR=24						
SDV	Santo Domingo	12.43	34	ePn	Pn	03 12 18.3	+0.5
PCRV	Puerto La Cruz	17.34	48	P	Pn	03 13 17.5	-0.6
	1.1nm,0.3s,baz=241,slow=5.3,SNR=6.7						
SIV	San Ignacio	21.73	132	P	P	03 14 04.1	+0.3
	9.3nm,0.8s,mb4.2,baz=302,slow=8.7,SNR=35						
LVC	Limon Verde	22.61	159	P	P	03 14 14.0	+2.0
	6.5nm,0.5s,mb4.3,baz=342,slow=7.7,SNR=4.1						
CMIG	Matias Romero	25.15	318	P	P	03 14 34.6	-0.5
	9.9nm,0.8s,mb4.4,baz=109,slow=6.3,SNR=16						
CMIG				LR	LR	03 23 01.3	
	comp=Z,43nm,19.1s,baz=190,slow=32						
CFAA	Coronel Fontan	31.21	164	P	P	03 15 29.1	+0.3
	0.4nm,0.6s,mb3.3,baz=352,slow=8.1,SNR=8.3						
BDFB	Brasilia	32.37	117	P	P	03 15 39.9	+0.7
	1.9nm,0.4s,mb4.1,baz=278,slow=16,SNR=15						
TXAR	Lajitas Array	39.53	323	P	P	03 16 40.1	+0.3
	4.5nm,0.9s,mb4.1,baz=144,slow=8.3,SNR=21						
TXAR				PcP	PcP	03 18 43.5	-0.1
	2.6nm,0.9s,baz=152,slow=6.3,SNR=8.3						
PLCA	Paso Flores	39.56	172	P	P	03 16 40.6	+0.7
	5.0nm,0.7s,mb4.2,baz=333,slow=7.9,SNR=11						
PLCA				PcP	PcP	03 18 43.0	-0.5
	2.4nm,0.9s,baz=328,slow=4.7,SNR=3.7						
AMTX	Amarillo	42.66	330	eP	P	03 17 05.3	+0.1
	14nm,1.0s,mb4.6						
CBKS	Cedar Bluff	45.01	335	eP	P	03 17 24.0	+0.1
	37nm,0.7s,mb5.1						
ANMO	Albuquerque	45.23	326	eP	P	03 17 26.8	+1.0
	21nm,0.8s,mb4.8						
TUC	Tucson	46.02	320	eP	P	03 17 32.6	+0.6
	6.8nm,0.8s,mb4.3						
SDCO	Great Sand Dun	46.82	329	eP	P	03 17 38.9	+0.9
	24nm,1.1s,mb4.7						
WUAZ	Wupatki	48.49	323	eP	P	03 17 52.3	+1.3
	30nm,1.0s,mb4.9						
LDFC	Landfair	50.55	320	eP	P	03 18 07.9	+1.3
	8.4nm,0.8s,mb4.4						
TPNV	Topopah Spring	52.43	321	eP	P	03 18 21.6	+1.1
	12nm,0.9s,mb4.5						
DUG	Dugway	52.50	326	eP	P	03 18 21.7	+0.8
	23nm,1.3s,mb4.8						
PDAR	Pinedale Array	52.64	331	P	P	03 18 21.4	-0.4
	2.7nm,0.8s,mb4.0,baz=129,slow=9.5,SNR=18						
PDAR				PcP	PcP	03 19 28.1	-1.2
	1.4nm,0.8s,baz=129,slow=6.2,SNR=6.2						
ULM	Lac du Bonnet	53.89	346	P	P	03 18 28.6	-2.2
	6.6nm,0.7s,mb4.5,baz=162,slow=7.8,SNR=5.8						
NVAR	Mina Array Bea	54.62	321	P	P	03 18 36.4	0.0
	2.9nm,0.7s,mb4.1,baz=128,slow=6.9,SNR=12						
NVAR				PcP	PcP	03 19 37.4	+0.4
	0.3nm,0.5s,baz=139,slow=4.8,SNR=4.3						
WVOR	Wild Horse Val	57.28	325	eP	P	03 18 55.6	+0.4
	13nm,1.1s,mb4.7						
YKA	Yellowknife Ar	69.67	343	P	P	03 20 14.1	-1.8
	3.1nm,0.6s,mb4.2,baz=140,slow=5.8,SNR=33						
LIC	Lamto	72.84	83	eP	P	03 20 34.3	-1.7
	34nm,1.3s,mb4.9						
TIC	Toumodi	72.87	83	eP	P	03 20 33.9	-2.3
	6.1nm,0.2s,mb4.9						
DBIC	Dimbokro	73.04	83	P	P	03 20 36.5	-0.7
	2.9nm,0.6s,mb4.2,baz=33,slow=2.8,SNR=5.3						
KIC	Kosan Boka	73.13	83	eP	P	03 20 36.2	-1.6
	104nm,1.4s,mb5.4						
TORD	Torodi Ar. Bea	79.91	76	P	P	03 21 14.2	-1.5
	0.8nm,0.4s,mb3.7,baz=279,slow=5.8,SNR=11						
EGAK	Eagle	80.38	337	eP	P	03 21 17.3	+0.1
	26nm,0.9s,mb4.9						
VNA3	Neumayer Olymp	81.59	162	e	P	03 21 24.2	+0.7
VNA3				e		03 21 26.8	
VNA3				e	pP	03 22 10.9	+2.0
VNA1	Neumayer--Stat	81.82	162	e	P	03 21 25.3	+0.5
VNA1				e		03 21 28.1	
VNA2	Neumayer--Watz	82.18	162	e	P	03 21 27.1	+0.4
VNA2				e		03 21 29.9	
VNA2				e	pP	03 22 14.2	+2.1
COLA	College	83.08	336	eP	P	03 21 31.1	-0.2
	8.6nm,0.9s,mb4.5						
PPLA	Purkeypile	84.35	334	eP	P	03 21 37.6	-0.3
	39nm,1.3s,mb5.0						
ZALV	Zalesovo Beam	125.75	13	PKP	PKPdf	03 28 04.3	-2.1
	2.2nm,0.6s,baz=270,slow=3.0,SNR=11						
MKAR	Makanchi Array	131.60	18	PKP	PKPdf	03 28 17.1	-0.6
	0.5nm,0.4s,baz=309,slow=2.1,SNR=7.3						
SONM	Songino Array	133.72	356	PKP	PKPdf	03 28 21.4	-0.2
	0.6nm,0.5s,baz=39,slow=1.4,SNR=5.1						
KSRS	Korea Array	137.21	330	PKP	PKPdf	03 28 27.7	-0.8
	2.3nm,0.6s,baz=28,slow=1.0,SNR=6.0						
ASAR	Alice Springs	140.46	229	PKhKP		03 28 25.4	
	0.8nm,0.5s,baz=120,slow=3.9,SNR=12						
ASAR				PKP	PKPdf	03 28 34.1	-0.7
	1.2nm,0.7s,baz=123,slow=1.9,SNR=8.8						
LZH	Lanzhou	145.57	358	⇓PKP	PKPdf	03 28 43.5	0.0
LZH				APKP		03 29 30.0	
LZH				XPKP		03 29 50.2	
XAN	Xi'an	147.07	350	PKP	PKPbc	03 28 47.7	-0.7

*CSEM **03** 03:17:33.9±0.2, 36.80N×21.02E, h3km±1km, ML2.6/2, Error ellipse: s-maj=4.4km s-min=2.0km az=32.0*
*ATH **03** 03:17:35.8, 36.92N×21.11E, h11km±4km, MD3.5/5*
*NEIC **03** 03:17:36.0, 36.94N×21.12E, h12km, MD3.6(ATH), After ATH.*
THE 03 03:17:35.7, 36.87N×21.07E, h0km±2km, **ML2.6**/2, **Error ellipse: s-maj=5.1km s-min=1.1km az=211.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.54	87	P	Pg	03 17 45.6	-0.4
PYL				S	Sg	03 17 53.7	+0.8
ITM	Ithomi	0.75	65	ePG	Pg	03 17 49.0	-1.1
ITM				eSB	Sb	03 17 58.9	-3.5
RLS	Riolos of Patr	1.23	15	ePB	Pb	03 17 58.0	-1.8
RLS	Riolos of Patr	1.23	15	ePb	Pb	03 17 58.2	-1.6
KFL	Anninata	1.26	350	P	Pg	03 17 58.7	-1.2
KFL				S	Sg	03 18 17.4	+1.2
VLS	Valsamata	1.36	344	ePG	Pg	03 18 00.2	-1.6
VLS				eSB	Sb	03 18 19.4	-0.6
VLS	Valsamata	1.36	344	P	Pg	03 18 00.4	-1.4
VLS				eSb	Sb	03 18 19.4	-0.6
VLS				S	Sg	03 18 21.1	+1.6
VLI	Veliai	1.50	95	ePB	Pb	03 18 04.0	-0.4
VLI	Veliai	1.50	95	ePb	Pb	03 18 04.3	-0.1
DID	Didima	1.84	69	P	Pn	03 18 07.8	-0.7
DID				S	Sn	03 18 32.8	+0.3
LTK	Loutraki	1.90	52	P	Pn	03 18 08.6	-0.7
LTK				S	Sn	03 18 33.7	-0.2
EVR	Evrytania	2.12	16	ePN	Pn	03 18 12.5	+0.1
LKR	Lokris	2.34	40	P	Pn	03 18 14.9	-0.5
AGG	Agios Georgios	2.37	24	P	Pn	03 18 16.6	+0.8
AGG				S	Sn	03 18 46.0	+0.5
IGT	Igoumenitsa	2.72	348	P	Pn	03 18 20.2	-0.4
IGT				S	Sn	03 18 54.7	+0.4
THL	Klokotos Trika	2.79	15	P	Pn	03 18 21.9	+0.3
THL				S	Sn	03 18 57.0	+1.1

*CSEM **03** 03:33:08.8±0.1, 36.95N×29.29E, h1km, MD2.9, Error ellipse: s-maj=1.3km s-min=1.0km az=7.0*
*DDA **03** 03:33:09.7, 36.99N×29.29E, h7km±2km, Md3.1*
*ISCJB **03** 03:33:10.4±0.8, 36.95N±0.04×29.28E±0.05, h8km±6km, Error ellipse: s-maj=6.8km s-min=5.4km az=41.6*
*ISK **03** 03:33:10.4, 36.95N×29.29E, h11km, MD2.9*
ISC 03 03:33:10.9±0.7, **36.95N**±004×**29.28E**±005, **h10**km±5km, **n18**, σ**0.s62**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.37	38	i P	Pg	03 33 16.7	-1.4
GOLH				i S	Sg	03 33 23.3	+0.2
ELL	Elmali	0.54	111	ePG	Pg	03 33 21.2	-0.3
ELL				eSG	Sg	03 33 29.4	+0.8
AKAS	Kas	0.76	160	i P	Pg	03 33 25.1	-0.5
AKAS	Kas	0.76	160	i P	Pg	03 33 25.0	-0.5
YER	Yerkesik	0.82	284	ePG	Pg	03 33 26.9	+0.2
DENT	Denizli	0.83	346	ePG	Pg	03 33 26.8	-0.2
DENT				eSG	Sg	03 33 38.7	+1.0
ANTB	Antalya	1.10	92	ePN	Pn	03 33 31.8	-0.6
BCK	Bucak	1.17	63	ePN	Pn	03 33 32.9	-0.3
MLSB	Milas	1.25	287	ePN	Pn	03 33 34.4	0.0
DAT	Datca	1.38	261	ePN	Pn	03 33 36.4	+0.2
KHL	Karahalli	1.39	8	ePN	Pn	03 33 36.2	-0.1
KHAL	Karahalli	1.43	7	i P	Pn	03 33 35.5	-1.5
KHAL				i S	Sn	03 33 55.6	-0.2
BODT	Bodrum	1.58	275	ePN	Pn	03 33 39.1	+0.2
KULA	Kula-Manisa	1.64	343	ePN	Pn	03 33 39.9	+0.1
SHUT	Suhut-Afyon	1.89	32	ePN	Pn	03 33 43.5	+0.2
HDMB	Hadim	2.57	89	ePN	Pn	03 33 53.4	+0.9
KONT	Konya--Tatoy	2.65	67	ePN	Pn	03 33 54.3	+0.6
LADK	Ladik-KONYA	2.75	62	ePN	Pn	03 33 55.7	+0.6

IDC 03 03:52:02.8±9.4, **5.81N**×**124.57E**, **h465**km±99km, **mb3.1**/3, **mb1 3.2**/3, **mb1mx2.8**/18, **mbtmp3.1**/3, **Error ellipse: s-maj=328.5km s-min=22.1km az=63.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	30.68	163	P	P	03 57 38.0	-0.2
	1.4nm,0.3s,baz=339,slow=7.7,SNR=24						
ASAR				PcP	PcP	04 00 22.1	-0.3
	0.3nm,0.6s,baz=340,slow=3.1,SNR=4.6						
STKA	Stephens Creek	40.84	158	P	P	03 59 02.9	+0.1
	1.6nm,0.4s,baz=330,slow=12,SNR=6.0						
MKAR	Makanchi Array	54.63	325	P	P	04 00 46.5	0.0
	0.2nm,0.4s,baz=116,slow=7.4,SNR=5.1						

*ISCJB **03** 04:02:14.3±0.7, 9.08S±0.08×114.15E±0.05, h109km±5km, mb4.1/7, Error ellipse: s-maj=13.8km s-min=7.3km az=6.1*
*IDC **03** 04:02:14.7±1.0, 9.09S×114.13E, h98km±8km, mb4.0/7, mb1 4.1/8, mb1mx3.8/17, mbtmp4.0/8, Error ellipse: s-maj=22.4km s-min=13.8km az=55.0*
*DJA **03** 04:02:14, 9.34S×114.09E, h62km, MLv4.4/7*
*NEIC **03** 04:02:14.6±0.7, 9.15S×114.11E, mb4.4/1, Error ellipse: s-maj=19.8km s-min=12.3km az=47.0*
ISC 03 04:02:14.9±0.7, **9.15S**±008×**114.13E**±005, **h98**km±6km, **n23**, σ**0.s92**/27, **mb4.1**/7, **South of Bali**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NBBI	Negara	0.92	32	P	Pn	04 02 34.4	+0.1
NBBI				S	Sn	04 02 49.5	+0.7
IGBI	Denpasar	1.06	72	P	Pn	04 02 35.4	-0.4
IGBI				S	Sn	04 02 50.0	-1.5
DNP	Denpasar	1.17	66	P	Pn	04 02 36.9	-0.2
KHKI	Kahang-Kahang	1.66	62	P	Pn	04 02 43.4	+0.4
KHKI				S	Sn	04 03 05.2	+0.8
KRKI	Karangkates	1.93	301	P	Pn	04 02 46.2	-0.3
KRKI				S	Sn	04 03 10.2	-0.4
KMMI	Kalianget	2.09	356	P	Pn	04 02 49.7	+1.0
SJI	Sawahan	2.73	301	P	Pn	04 02 56.2	-0.8
BBKI	Banjar Baru	5.70	7	P	Pn	04 03 39.7	+2.6
	118nm,0.7s,0.5nm						
KAPI	Kappang	6.93	54	P	Pn	04 03 53.8	-0.1
	4.4nm,0.3s,baz=235,slow=3.9,SNR=16						
KAPI				S	Sn	04 05 10.5	-0.8
	2.3nm,0.3s,baz=97,slow=22,SNR=11						
KAPI	Kappang	6.93	54	ePn	Pn	04 03 53.8	-0.1
KAPI	Kappang	6.93	54	P	Pn	04 03 54.1	+0.2
ASAR	Alice Springs	23.79	130	P	P	04 07 18.4	-0.4
	5.8nm,0.3s,mb4.3,baz=306,slow=9.3,SNR=76						
ASAR				pP		04 07 41.0	
	2.0nm,0.6s,baz=308,slow=9.4,SNR=4.8						
ASAR				PcP	PcP	04 11 00.0	+0.1
	1.1nm,0.6s,baz=315,slow=1.9,SNR=8.5						
CMAR	Chiang Mai Arr	31.26	331	P	P	04 08 26.8	+1.2
	1.4nm,0.3s,mb4.1,baz=160,slow=8.6,SNR=4.1						
STKA	Stephens Creek	34.06	136	P	P	04 08 50.0	0.0
	7.1nm,0.6s,mb4.7,baz=310,slow=8.5,SNR=21						
STKA				pP	pP	04 09 12.6	+0.4
	1.7nm,0.5s,baz=332,slow=9.6,SNR=1.8						
STKA	Stephens Creek	34.06	136	eP	P	04 08 50.2	+0.2
	0.9nm,0.7s,mb3.7						
STKA				pP	pP	04 09 12.6	+0.4
SONM	Songino Array	57.15	354	P	P	04 11 51.0	-0.4
	0.7nm,0.4s,mb4.1,baz=187,slow=7.7,SNR=5.0						
MK31	Makanchi Array	62.51	336	eP	P	04 12 27.7	-0.4
MKAR	Makanchi Array	62.51	336	P	P	04 12 27.6	-0.5
	1.2nm,0.5s,mb4.1,baz=154,slow=7.3,SNR=11						
MKAR				pP	pP	04 12 51.2	-1.3
	0.3nm,0.3s,baz=145,slow=5.3,SNR=2.8						
KURK	Kurchatov	67.11	336	P	P	04 12 56.6	-1.3
	0.5nm,0.4s,mb3.7,baz=145,slow=5.8,SNR=3.6						
ZALV	Zalesovo Beam	67.57	342	P	P	04 12 59.4	-1.4
	1.0nm,0.4s,mb4.0,baz=170,slow=6.2,SNR=4.7						
VNA2	Neumayer--Watz	91.17	196	e	P	04 15 10.3	+1.7
	baz=101,slow=6.7						
VNA3	Neumayer Olymp	91.61	196	e	P	04 15 11.7	+1.1
TORD	Torodi Ar. Bea	113.75	280	PKiKP	PKiKP	04 20 42.8	-0.3
	0.5nm,1.1s,baz=58,slow=1.0,SNR=2.9						

*NEIC **03** 04:16:36.3, 22.93S×70.45W, h37km, MG3.6(GUC), After GUC.*
GUC 03 04:16:36.3±0.7, **22.93S**×**70.45W**, **h37**km±4km, **ML3.6**, **4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.17	180	⇑iP	Pn	04 16 42.5	-0.6
MECH				i S	Sn	04 16 47.8	0.0
MECH				AML	AML	04 16 48.2	
	comp=E,31μm,0.6s						
CEN1	Los Morros	0.51	153	⇓iP	Pn	04 16 48.8	+1.7
CEN1				i S	Sn	04 16 57.8	+3.0
CEN1				AML	AML	04 16 58.7	
	comp=E,2μm,0.5s						
ANCH	Antofagasta	0.75	177	⇑iP	Pn	04 16 50.0	-0.4
ANCH				i S	Sn	04 17 01.1	+0.5
ANCH	Antofagasta	0.75	177	⇑iP	Pn	04 16 50.0	-0.4
ANCH				i S	Sn	04 17 01.1	+0.5
ANCH				AML	AML	04 17 04.4	
	comp=E,3μm,0.2s						
PECH	Pedro de Valdi	0.79	65	⇓iP	Pn	04 16 51.4	+0.5
PECH				i S	Sn	04 17 02.5	+1.0
PECH				AML	AML	04 17 03.0	
	comp=N,7μm,0.3s						
TOCH	Tocopilla	0.86	15	⇑iP	Pn	04 16 52.1	+0.2
TOCH				i S	Sn	04 17 03.9	+0.6
TOCH				AML	AML	04 17 05.1	
	comp=E,7μm,0.2s						
MACH	Maria Elena	0.97	41	⇓iP	Pn	04 16 54.2	+0.8
MACH				i S	Sn	04 17 07.6	+1.6
LVC	Limon Verde	1.45	78	ePn	Pn	04 17 02.5	+2.4
LVC				eSn	Sn	04 17 21.5	+3.6
LVC	Limon Verde	1.45	78	⇓iP	Pn	04 17 02.3	+2.3
LVC				i S	Sn	04 17 21.5	+3.6
CPN1	Cerro Paranal	1.69	179	AML	AML	04 17 33.6	
	comp=E,1μm,0.4s						
SPCH	San Pedro de A	2.07	90	AML	AML	04 17 49.4	
	comp=N,2μm,0.4s						
PB01	Plate Boundary	2.08	26	AML	AML	04 17 41.4	
	comp=E,947nm,0.2s						
LCO	Las Campanas	6.06	182	ePn	Pn	04 18 03.4	0.0
ARE	Arequipa	6.51	351	eP	Pn	04 18 10.0	+0.4
ARE				eS	Sn	04 19 22.0	-0.6

*NEIC **03** 04:31:01.1, 17.34N×94.63W, h149km, MD4.1(MEX), After MEX.*
MEX 03 04:31:01.1±1.1, **17.33N**×**94.62W**, **h149**km±8km, **MD4.1**, **Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.35	226	i P	Pn	04 31 20.4	-1.2
CMIG				i S	Sn	04 31 35.2	-2.0
TUIG	Tuzandepetl	0.72	15	i P	Pn	04 31 22.0	-1.6
TUIG				i S	Sn	04 31 38.7	-2.1
TGIG		1.54	111	i P	Pn	04 31 29.8	-1.2
TGIG				eS	Sn	04 31 51.0	-2.8
VHO	Vista Hermosa	2.03	263	i P	Pn	04 31 36.0	-0.5
VHO				i S	Sn	04 32 03.3	-0.4
PCIG		2.11	140	i P	Pn	04 31 36.7	-0.7
PCIG				i S	Sn	04 32 03.8	-1.5
HUIG	Huatulco	2.11	223	i P	Pn	04 31 34.5	-3.0
HUIG				i S	Sn	04 32 04.1	-1.2
CCIG	Comitan	2.60	113	i P	Pn	04 31 42.6	-0.8
CCIG				eS	Sn	04 32 15.4	-0.5
TPIG	Tehuac#an	2.82	293	i P	Pn	04 31 46.0	-0.1
TPIG				eS	Sn	04 32 19.5	-1.5
UTMO	Huajuapan	3.07	280	i P	Pn	04 31 48.7	-0.7
UTMO				i S	Sn	04 32 24.9	-1.7
PNIG	Pinotepa	3.48	255	i P	Pn	04 31 51.6	-3.0
PNIG				i S	Sn	04 32 35.3	-0.8

*ISCJB **03** 04:33:59.7±0.4, 41.21N±0.03×20.72E±0.03, h10km, Error ellipse: s-maj=4.4km s-min=2.2km az=27.5*
*SKO **03** 04:33:59.5, 41.20N×20.75E, h15km, M1.9, ML2.2*
*TIR **03** 04:33:59.8±2.6, 41.28N×20.62E, h0km±5km*
*THE **03** 04:33:59.9, 41.22N×20.76E, h0km±2km, ML3.1/3, Error ellipse: s-maj=2.2km s-min=0.7km az=283.0*
*PDG **03** 04:34:01.1±0.3, 41.20N×20.83E, h8km±1km, ML2.7/9, Error ellipse: s-maj=1.2km s-min=1.2km az=90.0*
*NEIC **03** 04:34:01.1, 41.20N×20.83E, h8km, ML3.2(THE), ML2.3(SKO), ML2.7(PDG), After PDG.*
*CSEM **03** 04:34:02.0±0.2, 41.15N×20.96E, h2km, ML2.2, Error ellipse: s-maj=7.5km s-min=3.3km az=31.0*
ISC 03 04:34:00.1±0.5, **41.19N**±003×**20.73E**±003, **h0**km±8km, **n35**, σ**1.s20**/69, **4C-6D, Albania**

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

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUS	Krusevo	0.43	65	iPg	Pg	04 34 08.4	+0.1
KRUS				iSg	Sg	04 34 14.9	+1.0
KRUS	Krusevo	0.43	65	iPg	Pg	04 34 08.4	+0.1
KRUS				iSg	Sg	04 34 14.9	+1.0
KRUS				eLg		04 34 15.1	
	comp=N,176nm,0.2s						
KRUS				eLg		04 34 15.1	
	comp=E,143nm,0.2s						
BIA	Bitola	0.48	111	P	Pg	04 34 08.6	-0.7
BIA				S	Sg	04 34 15.7	+0.2
BIA	Bitola	0.48	111	iPg	Pg	04 34 08.5	-0.8
BIA				iSg	Sg	04 34 16.2	+0.7
BIA	Bitola	0.48	111	iPg	Pg	04 34 08.6	-0.7
BIA				iSg	Sg	04 34 16.2	+0.7
BIA				eLg		04 34 16.5	
	comp=N,162nm,0.3s						
BIA				eLg		04 34 16.8	
	comp=E,84nm,0.2s						
PHP	Peshkopia	0.54	337	iPG	Pg	04 34 09.7	-0.7
PHP				iSG	Sg	04 34 17.5	+0.1
FNA	Florina	0.64	129	P	Pg	04 34 12.1	-0.2
FNA				S	Sg	04 34 21.3	+0.8
TIR	Tirane	0.67	284	P	Pg	04 34 12.6	-0.3
TIR				S	Sg	04 34 23.1	+1.6
TIR	Tirane	0.67	284	ePG	Pg	04 34 12.6	-0.3
TIR				iSG	Sg	04 34 23.3	+1.8
TIR	Tirane	0.67	284	ePg	Pg	04 34 12.7	-0.2
TIR				eSg	Sg	04 34 23.6	+2.1
TIR	Tirane	0.67	284	ePg	Pg	04 34 12.7	-0.2
TIR				eSg	Sg	04 34 23.6	+2.1
SKO	Skopje	0.95	34	P	Pg	04 34 18.1	-0.1
SKO				S	Sg	04 34 31.2	+0.7
SKO	Skopje	0.95	34	iPg	Pg	04 34 18.0	-0.2
SKO				S	Sg	04 34 31.2	+0.7
SKO	Skopje	0.95	34	iPg	Pg	04 34 18.0	-0.2
SKO				iSg	Sg	04 34 30.4	-0.1
SKO				eLg		04 34 31.2	
	comp=N,92nm,0.4s						
SKO				eLg		04 34 32.1	
	comp=E,49nm,0.4s						
GRG	Griva	1.29	100	P	Pg	04 34 23.8	-0.9
GRG				S	Sg	04 34 42.7	+1.3
ULC	Ulcinj	1.35	305	⇑iPg	Pg	04 34 26.9	+1.0
ULC				eSg	Sg	04 34 48.8	+5.3
VAY	Valandovo	1.40	84	iPg	Pg	04 34 25.2	-1.6
VAY				S	Sg	04 34 46.0	+1.1
VAY	Valandovo	1.40	84	iPg	Pg	04 34 25.2	-1.6
VAY				iSg	Sg	04 34 43.6	-1.3
VAY				eLg		04 34 44.9	
	comp=E,21nm,0.4s						
VAY				eLg		04 34 45.2	
	comp=N,39nm,0.9s						
PVY	Plav	1.51	338	⇓iPg	Pg	04 34 29.7	+0.7
PVY				eSg	Sg	04 34 51.7	+3.1
KNT	Kendrikon	1.64	90	P	Pn	04 34 29.6	-0.5
PDG	Podgorica	1.65	319	⇓iPn	Pg	04 34 32.0	+0.2
PDG				eSn	Sg	04 34 56.2	+3.0
TTG	Podgorica	1.65	319	⇓iPn	Pg	04 34 32.0	+0.2
TTG				eSn	Sg	04 34 56.2	+3.0
LIT	Litokhoron	1.73	128	P	Pn	04 34 30.4	-0.9
LIT				S	Sn	04 34 54.9	+0.9
BUM	Brajici-Budva	1.76	310	⇑iPn	Pg	04 34 33.8	0.0
BUM				eSn	Sg	04 34 59.7	+3.0
BUM	Brajici-Budva	1.76	310	ePN	Pg	04 34 33.8	0.0
BUM				iSN	Sg	04 34 59.7	+3.0
BEY	Berane	1.79	340	ePN	Pg	04 34 33.0	-1.4
BEY				iSN	Sg	04 34 58.5	+0.9
BEY	Berane	1.79	340	⇓iPn	Pg	04 34 33.2	-1.2
BEY				eSn	Sg	04 34 58.5	+0.9
IVA	Berane	1.79	340	⇓iPn	Pg	04 34 33.2	-1.2
IVA				eSn	Sg	04 34 58.5	+0.9
NKY	Niksic	2.07	322	⇑iPn	Pg	04 34 37.8	-1.9
NKY				eSn	Sg	04 35 05.9	-0.7
NKY	Niksic	2.07	322	ePN	Pg	04 34 37.8	-1.9
NKY				iSN	Sg	04 35 05.9	-0.7
HCY	Herceg Novi	2.09	308	⇑iPn	Pg	04 34 38.8	-1.2
HCY				eSn	Sg	04 35 07.3	+0.2
HCY	Herceg Novi	2.09	308	ePN	Pg	04 34 38.8	-1.2
HCY				iSN	Sg	04 35 07.3	+0.2
PLE	Pljevlja	2.36	336	⇓iPn	Pg	04 34 41.6	-3.6
PLE				eSn	Sg	04 35 12.6	-3.1
BRY	Bratogost	2.36	317	ePn	Pg	04 34 41.4	-3.9
BRY				eSn	Sg	04 35 13.0	-2.8
BRY	Bratogost	2.36	317	ePN	Pg	04 34 41.4	-3.9
BRY				iSN	Sg	04 35 13.0	-2.8

JMA 03 04:52:56.8±0.4, 4386N×14838E, h0km, M3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.98	256	P	Pn	04 53 32.0	+0.5
NEM2				eS	Sn	04 53 57.9	+0.9
JRA	Rausu	2.36	273	P	Pn	04 53 37.6	+0.9
JRA				eS	Sn	04 54 07.4	+1.1
JAR	Ashorobuto	3.40	262	P	Pn	04 53 53.2	+2.2
JAR				eS	Sn	04 54 35.1	+3.1
JCH	Churui	3.87	253	P	Pn	04 54 00.0	+2.5
JCH				eS	Sn	04 54 46.2	+2.5
JNBK	Urakawa-nobuka	4.42	251	P	Pn	04 54 07.2	+2.2
JKB	Kayabe	5.75	252	P	Pn	04 54 25.3	+2.0
JKB				eS	Sn	04 55 29.8	-0.1

*NEIC **03** 05:33:55.1, 3396S×7091W, h76km, MD3.2(GUC), After GUC.*

GUC 03 05:33:55.1±0.9, 3396S×7091W, h76km±5km, MD3.2, ML3.5, 5C-12D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCH	Chadas Angostu	0.21	82	⇓iP	Pn	05 34 06.5	+0.1
TACH	Talagante	0.31	355	⇓iP	Pn	05 34 07.4	+0.4
TACH				iS	Sn	05 34 16.0	+0.3
LNV	Longovilo	0.42	271	⇑iP	Pn	05 34 08.1	+0.3
ANTU	Antumapu	0.45	30	eP	Pn	05 34 08.4	+0.4
ANTU				iS	Sn	05 34 18.4	+0.8
ANTU				AML	AML	05 34 18.9	
	comp=E,5μm,0.3s						
PCH	Pirque	0.47	44	⇓iP	Pn	05 34 08.5	+0.3
SAN	Santiago	0.55	22	iS	Sn	05 34 19.9	+0.8
FSR	Penalolen	0.58	33	eP	Pn	05 34 09.6	+0.4
FSR				iS	Sn	05 34 20.6	+1.0
FSR	Penalolen	0.58	33	eP	Pn	05 34 09.6	+0.4
FSR				iS	Sn	05 34 20.6	+1.0
FSR				AML	AML	05 34 21.7	
	comp=N,494nm,0.2s						
LMEL	Las Melosas	0.59	79	⇓iP	Pn	05 34 10.2	+0.8
LMEL				iS	Sn	05 34 21.9	+2.0
LMEL	Las Melosas	0.59	79	⇓iP	Pn	05 34 10.2	+0.8
LMEL				iS	Sn	05 34 21.9	+2.0
LMEL				AML	AML	05 34 22.5	
	comp=N,6μm,0.1s						
CLCH	Cerro Calan	0.64	29	⇓iP	Pn	05 34 10.4	+0.5
CLCH				iS	Sn	05 34 21.9	+1.1
CLCH				AML	AML	05 34 23.8	
	comp=E,2μm,0.2s						
CLCH				AML	AML	05 34 24.3	
	comp=E,3μm,0.2s						
YECH	El Yeso	0.75	67	⇓iP	Pn	05 34 12.1	+1.2
YECH				iS	Sn	05 34 24.7	+2.1
YECH				AML	AML	05 34 27.0	
	comp=N,1μm,0.3s						
FCH	Farellones	0.81	39	⇓iP	Pn	05 34 12.6	+0.9
FCH				iS	Sn	05 34 25.7	+1.7
FCH	Farellones	0.81	39	⇓iP	Pn	05 34 12.5	+0.8
FCH				⇓iP		05 34 12.6	
FCH				iS	Sn	05 34 25.6	+1.5
FCH				iS	Sn	05 34 25.7	+1.7
FCH				AML	AML	05 34 26.4	
	comp=E,4μm,0.2s						
PEL	Peldehue	0.84	13	⇑iP	Pn	05 34 12.7	+0.7
PEL				iS	Sn	05 34 26.0	+1.5
PEL				AML	AML	05 34 27.5	
	comp=E,7μm,0.4s						
ROCH	El Roble	0.99	355	iS	Sn	05 34 28.8	+1.0
NICH	Los Niches	1.07	194	⇓iP	Pn	05 34 15.0	+0.3
NICH				iS	Sn	05 34 30.2	+0.7
IHA	Instituto Hidr	1.12	326	⇑iP	Pn	05 34 16.6	+1.3
IHA				iS	Sn	05 34 32.9	+2.3
JACH	Jahuel	1.30	12	⇑iP	Pn	05 34 18.6	+0.8
JACH				iS	Sn	05 34 35.5	+0.7
TALC	Talca	1.55	203	⇓iP	Pn	05 34 47.8	+27
TALC				iS	Sn	05 35 07.5	+27
TALC				AML	AML	05 35 12.5	
	comp=N,3μm,0.1s						
CHNG	Los Chungos	2.13	346	⇑iP	Pn	05 34 29.2	+0.5
CHNG				eS	Sn	05 34 55.4	+1.1
CHNG				AML	AML	05 35 03.6	
	comp=E,316nm,0.2s						
CNCO	Chanco	2.22	217	eP	Pn	05 34 29.8	0.0
LCO	Las Campanas	4.94	2	ePn	Pn	05 35 06.5	-0.3
LCO				eSn	Sn	05 36 05.2	+2.6

GUC 03 05:58:51.1±0.9, 2282S×7064W, h34km±6km, MD4.1, ML3.6, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.33	148	⇑eP	Pb	05 58 58.8	-0.7
MECH				iS	Sb	05 59 04.7	-0.4
MECH				AML	AML	05 59 06.0	
	comp=N,13μm,0.4s						
CEN1	Los Morros	0.70	144	⇑eP	Pn	05 59 05.9	+1.3
CEN1				iS	Sn	05 59 17.0	+2.9
CEN1				AML	AML	05 59 18.5	
	comp=E,2μm,0.4s						
TOCH	Tocopilla	0.83	30	⇓iP	Pn	05 59 06.1	-0.3
TOCH				iS	Sn	05 59 18.0	+0.6
TOCH				AML	AML	05 59 18.5	
	comp=E,4μm,0.4s						
ANCH	Antofagasta	0.88	166	eP	Pn	05 59 13.4	+6.3
ANCH				iS	Sn	05 59 25.1	+6.3
MACH	Maria Elena	1.03	53	eP	Pn	05 59 09.3	+0.3
MACH				iS	Sn	05 59 23.9	+1.7
LVC	Limon Verde	1.61	83	⇓eP	Pn	05 59 19.4	+2.3
LVC				iS	Sn	05 59 40.8	+4.1
CPN1	Cerro Paranal	1.81	173	⇓eP	Pn	05 59 20.3	+0.4
CPN1				iS	Sn	05 59 41.6	0.0
CPN1				AML	AML	05 59 52.9	
	comp=E,953nm,0.6s						
SPCH	San Pedro de A	2.25	93	eP	Pn	05 59 31.3	+5.3
SPCH				iS	Sn	06 00 01.9	+9.4
SPCH				AML	AML	06 00 10.8	
	comp=N,2μm,0.4s						

*IGQ **03** 06:42:11.0, 230S×78.16W, h155km±4km, Mb4.4, Ms4.2, Error ellipse: s-maj=6.4km s-min=2.8km az=41.5*
*ISCJB **03** 06:42:14.8±0.4, 204S±004×78.19W±008, h149km±3km, mb3.7/12, Error ellipse: s-maj=12.7km s-min=6.4km az=2.9*
*IDC **03** 06:42:14.4±2.1, 202S×7806W, h132km±23km, mb3.5/9, mb1 3.8/13, mb1mx3.7/22, mbtmp3.6/13, Error ellipse: s-maj=23.0km s-min=15.1km az=68.0*
*NEIC **03** 06:42:15.5±1.0, 202S×7807W, h143km±10km, mb4.2/3, Error ellipse: s-maj=15.2km s-min=9.4km az=73.0*

ISC 03 06:42:15.8±0.4, 204S±004×7817W±008, h142km±3km, n42, σ1.09/43, mb3.7/12, 3C-4D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATA	Patacocha	0.59	334	⇓P	Pn	06 42 36.1	-0.8
ARRY	Arrayan	0.60	332	⇓P	Pn	06 42 35.6	-1.3
ARRY	Arrayan	0.60	332	⇓S	Sn	06 42 51.9	-1.1
RETU	Refugio	0.65	335	⇓P	Pn	06 42 36.5	-0.6
IGUA	Igualata	0.72	319	P	Pn	06 42 37.1	-0.6
TAMB	Tambo	1.35	352	P	Pn	06 42 43.9	+0.6
TAMB	Tambo	1.35	352	S	Sn	06 43 06.5	+2.2
CAMI	Rancho Maria	1.40	346	P	Pn	06 42 44.4	+0.7
VC1	Cotopaxi 1	1.41	351	P	Pn	06 42 44.1	+0.3
ANTI	Antisana	1.58	0	⇑P	Pn	06 42 45.7	0.0
PINO	Pino	1.92	347	P	Pn	06 42 49.6	0.0
YANA	Yana	1.95	348	P	Pn	06 42 49.6	-0.3
LAV3	Lava3-Reventad	2.00	16	⇑P	Pn	06 42 49.9	-0.7
LAV3	Lava3-Reventad	2.00	16	⇑S	Sn	06 43 18.1	+0.9
CONE	Cono NE Rev Vo	2.03	15	P	Pn	06 42 50.2	-0.7
CONE	Cono NE Rev Vo	2.03	15	S	Sn	06 43 19.5	+1.7
CAYA	Cayambe	2.10	5	P	Pn	06 42 52.0	+0.3
OTAV	Otavalo	2.28	353	ePn	Pn	06 42 53.1	-0.8
OTAV				eSn	Sn	06 43 28.9	+5.7
COTA	Cotacachi	2.37	356	P	Pn	06 42 55.5	+0.5
CHIS	Cerro-Chispas-	2.74	291	P	Pn	06 42 56.9	-2.6
ATAH	Atahualpa	4.93	183	P	Pn	06 43 29.5	+1.2
	18nm,0.3s,baz=10,slow=9.3,SNR=85						
ATAH				S	Sn	06 44 26.1	+1.4
	11nm,0.3s,baz=0.2,slow=23,SNR=6.7						
ROSC	El Rosal	7.85	29	P	Pn	06 44 08.5	+1.1
	0.7nm,0.3s,baz=104,slow=19,SNR=3.9						
NNA	Nana	9.97	172	P	Pn	06 44 34.8	-0.9
	3.7nm,0.3s,baz=345,slow=7.2,SNR=9.7						
NNA				S	Sn	06 46 14.2	-12
	3.2nm,0.3s,baz=285,slow=22,SNR=5.9						
NNA	Nana	9.97	172	ePn	Pn	06 44 34.4	-1.2
NNA				eSn	Sn	06 46 15.1	-11
SDV	Santo Domingo	13.20	35	P	Pn	06 45 15.7	-2.3
	0.7nm,0.3s,baz=222,slow=2.8,SNR=7.6						
SDV	Santo Domingo	13.20	35	ePn	Pn	06 45 15.6	-2.3
PCRV	Puerto La Cruz	18.14	48	P	P	06 46 16.9	-0.4
	0.8nm,0.3s,baz=320,slow=16,SNR=5.1						
SIV	San Ignacio	21.82	130	P	P	06 46 57.3	+0.5
	1.0nm,0.5s,mb3.5,baz=323,slow=13,SNR=9.6						
CMIG	Matias Romero	25.16	320	P	P	06 47 28.6	+0.5
	3.5nm,1.0s,mb3.9,baz=102,slow=6.0,SNR=3.9						
PLCA	Paso Flores	39.13	171	P	P	06 49 30.2	+0.9
	1.3nm,0.9s,mb3.6,baz=41,slow=11,SNR=3.7						
TXAR	Lajitas Array	39.61	324	P	P	06 49 34.3	+0.8
	0.8nm,0.8s,mb3.4,baz=146,slow=8.1,SNR=8.9						
WMOK	Wichita Mounta	41.38	334	eP	P	06 49 47.7	-0.4
	2.9nm,0.9s,mb3.9						
ANMO	Albuquerque	45.35	327	eP	P	06 50 20.8	+0.9
	5.4nm,0.9s,mb4.2						
SDCO	Great Sand Dun	46.98	330	eP	P	06 50 33.8	+1.2
	4.6nm,0.7s,mb4.2						
PDAR	Pinedale Array	52.82	331	P	P	06 51 16.9	+0.3
	0.7nm,0.6s,mb3.5,baz=123,slow=9.7,SNR=6.3						
NVAR	Mina Array Bea	54.67	322	P	P	06 51 31.6	+1.4
	0.7nm,0.4s,mb3.7,baz=131,slow=6.3,SNR=3.9						
SCHQ	Schefferville	57.45	8	P	P	06 51 48.2	-1.3
	5.5nm,0.9s,mb4.4,baz=256,slow=8.3,SNR=3.1						
YKA	Yellowknife Ar	70.00	343	P	P	06 53 09.9	-1.8
	0.5nm,0.7s,mb3.4,baz=141,slow=5.6,SNR=6.3						
TORD	Torodi Ar. Bea	80.60	76	P	P	06 54 11.0	-2.3
	0.2nm,0.4s,mb3.1,baz=277,slow=6.0,SNR=3.5						
ZALV	Zalesovo Beam	126.40	12	PKP	PKPdf	07 01 01.0	-0.7
	0.5nm,0.4s,baz=318,slow=3.9,SNR=3.3						
MKAR	Makanchi Array	132.28	18	PKP	PKPdf	07 01 12.2	-0.9
	0.3nm,0.5s,baz=290,slow=3.8,SNR=6.7						
SONM	Songino Array	134.21	356	PKP	PKPdf	07 01 16.0	-0.7
	0.3nm,0.7s,baz=347,slow=4.4,SNR=2.7						

*KRSC **03** 06:43:35.4±2.7, 5179N×153.14E, h567km±57km, ML4.8*
*ISCJB **03** 06:43:39.4±0.3, 5245N±006×15223E±008, h491km±5km, mb4.0/43, Error ellipse: s-maj=10.6km s-min=6.5km az=146.8*
*MOS **03** 06:43:39.4±0.7, 5236N×15260E, h517km, mb4.0/24, Error ellipse: s-maj=12.6km s-min=9.9km az=101.5*
*BJI **03** 06:43:39.4, 5231N×15236E, h509km, mB5.0, mb4.7*
*IDC **03** 06:43:40.8±1.2, 5248N×152.18E, h494km±13km, mb3.4/22, mb1 3.6/24, mb1mx3.5/26, mbtmp3.4/24, Error ellipse: s-maj=12.5km s-min=9.4km az=165.0*
*NEIC **03** 06:43:40.7±0.3, 5246N×15222E, h494km±4km, mb4.4/16, Error ellipse: s-maj=6.7km s-min=4.1km az=159.0*

ISC 03 06:43:40.3±0.3, 5243N±006×15225E±008, h486km±5km, n118, σ0.90/126, mb4.0/43, 4C-1D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.77	91	eP	P	06 44 49.1	+0.7
SKR	Severo-Kuril's	2.98	124	⇑iP	P	06 44 49.5	-0.4
SKR				eS	S	06 45 44.9	-1.7
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				pmax	pmax		
	comp=N,180nm,1.0s						
SKR				smax			
	comp=N,170nm,0.5s						
SKR				smax			
	comp=E,110nm,0.5s						
PEA0B	Petropavlovsk-	3.38	76	ePn	P	06 44 53.3	+0.7
PETK	Petropavlovsk-	3.38	76	P	P	06 44 53.3	+0.7
	comp=E,8.0nm,0.3s,baz=32,slow=1.0,SNR=170						
GNL	Ganaly	3.66	67	eP	P	06 44 55.8	+1.0
GNL				iS	S	06 45 54.7	-1.0
RUS	Russkaya	3.83	87	eP	P	06 44 56.5	+0.3
RUS				iS	S	06 45 56.1	-2.1
PET	Petropavlovsk	3.94	79	⇓iP	P	06 44 58.2	+1.2
PET				eS	S	06 46 00.2	+0.4
PET				pmax	pmax		
	comp=Z,291nm,1.1s						
PET				smax			
	comp=E,217nm,1.1s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	Petropavlovsk	3.94	79	eP	P	06 44 57.7	+0.7
PET				iS	S	06 45 57.8	-2.0
PET	Petropavlovsk	3.94	79	ePn	P	06 44 58.1	+1.1
PET				eSn	S	06 46 00.1	+0.4
SDLR	Sedlovina	4.11	75	iP	P	06 44 59.7	+1.3
SDLR				iS	S	06 46 01.2	-1.1
NLC	Nalytchevo	4.37	77	eP	P	06 45 01.3	+0.7
NLC				iS	S	06 46 04.5	-1.9
KII	Karymskiy	4.62	67	eP	P	06 45 04.4	+1.6
KII				iS	S	06 46 09.4	-0.9
SPN	Mys Shipunski	4.77	79	eP	P	06 45 03.4	-0.8
SPN				iS	S	06 46 07.3	-5.5
TUMR	Tumrok	5.48	55	P	P	06 45 12.4	+1.7
TUMR				iS	S	06 46 23.4	-1.4
KMNR	Kamenistaya	5.76	51	eP	P	06 45 16.3	+2.9
SRDR	Sredinnyy	5.85	45	P	P	06 45 16.8	+2.6
KPT	Kopyto	5.87	50	P	P	06 45 16.9	+2.5
MKZ	Mys Kozlova	6.05	66	eP	P	06 45 15.5	-0.7
MKZ				iS	S	06 46 28.4	-6.4
ZLN	Zelenaya	6.17	51	P	P	06 45 19.5	+2.1
KBTR	Krutoberegovo	7.25	54	P	P	06 45 27.7	-0.6
KBTR				iS	S	06 46 49.4	-7.5
YSS	Yuzh-Sakhalins	8.24	232	⇑iP	P	06 45 40.0	+1.2
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS	Yuzh-Sakhalins	8.24	232	ePn	P	06 45 40.2	+1.5
	comp=Z,41nm,0.6s						
YAK	Yakutsk	15.47	317	eP	P	06 46 56.0	+0.8
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
MAJO	Matsushiro	18.72	218	eP	P	06 47 27.3	-0.6
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAJO	Matsushiro	18.72	218	eP	P	06 47 27.2	-0.7
	comp=Z,7.2nm,0.5s						
MJAR	Matsushiro Arr	18.72	218	P	P	06 47 27.7	-0.2
	comp=Z,1.8nm,0.3s,baz=17,slow=10,SNR=6.6						
MJAR	Matsushiro Arr	18.72	218	P	P	06 47 27.7	-0.2
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
HIA	Hailar	20.67	274	eP	P	06 47 45.4	-0.1
HIA				pmax	pmax		
	comp=Z,20nm,0.8s						
HIA	Hailar	20.67	274	eP	P	06 47 45.4	-0.1
	comp=Z,20nm,0.8s						
TIXI	Tiksi	21.89	340	eP	P	06 47 56.8	+0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
TIXI	Tiksi	21.89	340	eP	P	06 47 56.8	+0.6
	comp=Z,5.3nm,0.4s,mb4.4						
BOD	Bodaibo	22.30	299	eP	P	06 47 58.1	-2.0
BOD				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb3.8						
KSRS	Korea Array	22.66	238	P	P	06 48 03.6	0.0
	comp=Z,3.3nm,0.8s,mb3.8,baz=46,slow=8.5,SNR=7.1						
KSRS	Korea Array	22.66	238	P	P	06 48 03.7	+0.1
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
SONM	Songino Array	29.36	280	P	P	06 49 02.8	+0.2
	comp=Z,0.5nm,0.3s,mb3.4,baz=70,slow=8.5,SNR=7.2						
SONM				PcP	PcP	06 51 52.5	-1.0
	comp=Z,0.7nm,0.7s,baz=89,slow=1.9,SNR=4.5						
SONM	Songino Array	29.36	280	P	P	06 49 02.8	+0.2
SONM						06 51 52.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAK	Zakamensk	30.16	286	eP	P	06 49 10.0	+0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.0						
MCK	McKinley	31.89	46	eP	P	06 49 24.5	+0.4
MCK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
MCK	McKinley	31.89	46	eP	P	06 49 24.5	+0.4
	comp=Z,17nm,1.1s,mb4.4						
COLA	College	32.22	44	eP	P	06 49 27.2	+0.3
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
COLA	College	32.22	44	eP	P	06 49 27.2	+0.3
	comp=Z,5.0nm,0.6s,mb4.1						
ZALV	Zalesovo Beam	39.05	300	P	P	06 50 23.5	-0.5
	comp=Z,2.4nm,0.4s,mb3.9,baz=62,slow=6.8,SNR=11						
ZALV				PcP	PcP	06 52 20.7	-1.0
	comp=Z,0.7nm,0.4s,baz=160,slow=4.7,SNR=5.1						
ZALV	Zalesovo Beam	39.05	300	P	P	06 50 23.5	-0.5
ZALV						06 52 20.7	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
NVS	Novosibirsk	39.49	302	eP	P	06 50 27.7	+0.2
NVS				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.4						
NVS				pmax	pmax		
	comp=E,10.0nm,0.5s						
GYA	Guiyang	42.73	251	⇑iP	P	06 50 53.4	-0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
KURK	Kurchatov	43.95	298	P	P	06 51 03.5	+0.6
	comp=Z,3.7nm,0.3s,mb4.3,baz=58,slow=7.3,SNR=26						
KURK				PcP	PcP	06 52 36.8	-1.4
	comp=Z,0.7nm,0.7s,baz=72,slow=3.1,SNR=4.7						
KURK	Kurchatov	43.95	298	eP	P	06 51 02.6	-0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.5						
KURK	Kurchatov	43.95	298	eP	P	06 51 02.6	-0.2
	comp=Z,9.3nm,0.4s,mb4.6						
MKAR	Makanchi Array	44.06	292	P	P	06 51 03.7	-0.1
	comp=Z,2.6nm,0.5s,mb3.9,baz=66,slow=7.3,SNR=43						
MKAR	Makanchi Array	44.06	292	P	P	06 51 03.7	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YKA	Yellowknife Ar	46.80	39	P	P	06 51 24.5	-0.1
	comp=Z,1.2nm,0.6s,mb3.5,baz=302,slow=7.4,SNR=16						
YKA				PcP	PcP	06 52 47.5	-0.5
	comp=Z,0.3nm,0.3s,baz=312,slow=3.6,SNR=5.7						
YKA	Yellowknife Ar	46.80	39	P	P	06 51 24.5	0.0
YKA						06 52 47.5	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SPITS	Spitsbergen Ar	46.93	349	P	P	06 51 24.7	-0.6
	comp=Z,5.5nm,0.9s,mb4.0,baz=51,slow=13,SNR=4.3						
SPITS	Spitsbergen Ar	46.93	349	P	P	06 51 24.7	-0.7
SPITS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BVAR	Borovoye Array	46.97	305	P	P	06 51 25.9	-0.1
	comp=Z,3.3nm,0.3s,mb4.2,baz=58,slow=8.4,SNR=26						
BVAR				PcP	PcP	06 52 47.5	-1.3
	comp=Z,0.7nm,0.4s,baz=60,slow=3.6,SNR=4.3						
BVAR	Borovoye Array	46.97	305	P	P	06 51 25.9	-0.1
BVAR						06 52 47.5	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRVK	Borovoye	47.00	305	eP	P	06 51 25.8	-0.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
BRVK	Borovoye	47.00	305	eP	P	06 51 25.8	-0.5
	comp=Z,8.7nm,0.8s,mb4.2						
ARU	Arti	50.55	314	c iP	P	06 51 52.4	-0.2
ARU				e		06 52 59.5	
ARU				e		06 53 51.1	
ARU				S	S	06 58 30.6	+1.1
ARU				SS	SS	07 02 12.6	+1.8
ARU				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.4						
ARU	Arti	50.55	314	eP	P	06 51 52.0	-0.6
	comp=Z,23nm,0.9s,mb4.5						
AAK	Ala-Archa	51.00	292	eP	P	06 51 56.4	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AAK	**Ala-Archa**	**51.00**	**292**	*e*P	**P**	**06 51 56.4**	**+0.3**
	comp=Z,7.0nm,0.8s,mb4.0						
KEV	**Kevo**	**51.82**	**339**	*e*p	**P**	**06 52 00.8**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.3						
ARCES	**ARCESS Array B**	**52.32**	**339**	P	**P**	**06 52 04.4**	**-0.9**
	comp=Z,1.5nm,0.6s,mb3.5,baz=20,slow=7.8,SNR=9.4						
ARCES	**ARCESS Array B**	**52.32**	**339**	P	**P**	**06 52 04.4**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.41**	**251**	P	**P**	**06 52 14.2**	**+0.4**
	comp=Z,2.6nm,0.6s,mb3.8,baz=25,slow=6.2,SNR=7.1						
CMAR	**Chiang Mai Arr**	**53.41**	**251**	P	**P**	**06 52 14.2**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAPN	**Taplejung**	**53.46**	**268**	*e*P	**P**	**06 52 14.2**	**+0.2**
ODAN	**Odare**	**54.01**	**268**	*e*P	**P**	**06 52 18.4**	**+0.4**
JIRN	**Jiri**	**54.17**	**270**	*e*P	**P**	**06 52 19.0**	**-0.1**
	comp=Z,9.3nm,0.5s,mb4.4						
GUN	**Gumba**	**54.17**	**270**	*e*P	**P**	**06 52 18.9**	**-0.2**
	comp=Z,11nm,0.4s,mb4.5						
RAMN	**Ramite**	**54.43**	**269**	*e*P	**P**	**06 52 20.7**	**-0.2**
KKN	**Kakani**	**54.63**	**271**	*e*P	**P**	**06 52 22.4**	**+0.1**
	comp=Z,17nm,0.4s,mb4.7						
AKTK	**Aktyubinsk**	**54.63**	**309**	P	**P**	**06 52 21.4**	**-0.5**
AKTO	**Aktyubinsk**	**54.63**	**309**	P	**P**	**06 52 21.4**	**-0.5**
	comp=Z,2.1nm,0.4s,mb3.8,baz=68,slow=12,SNR=5.8						
AKTO	**Aktyubinsk**	**54.63**	**309**	P	**P**	**06 52 21.5**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.8						
PKI	**Pulchoki**	**54.71**	**270**	*e*P	**P**	**06 52 22.8**	**-0.1**
DMN	**Daman**	**54.87**	**271**	*e*P	**P**	**06 52 24.3**	**+0.3**
	comp=Z,49nm,0.9s,mb4.8						
GKN	**Gorkha**	**54.87**	**271**	*e*P	**P**	**06 52 23.9**	**-0.1**
DANN	**Dangsing**	**55.16**	**272**	*e*P	**P**	**06 52 26.4**	**+0.4**
KOLN	**Koldanda**	**55.67**	**272**	*e*P	**P**	**06 52 29.5**	**-0.1**
	comp=Z,30nm,0.7s,mb4.7						
JOF	**Joensuu**	**56.03**	**332**	*e*p	**P**	**06 52 30.9**	**-0.6**
	comp=Z,1.9nm,0.3s,mb3.9						
JOF	**Joensuu**	**56.03**	**332**	*e*P	**P**	**06 52 30.9**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb3.9						
KAF	**Kangasniemi**	**58.08**	**333**	*e*p	**P**	**06 52 44.7**	**-0.9**
	comp=Z,1.2nm,0.4s,mb3.6						
KAF	**Kangasniemi**	**58.08**	**333**	*e*P	**P**	**06 52 44.7**	**-0.9**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
NVAR	**Mina Array Bea**	**60.40**	**65**	P	**P**	**06 53 03.0**	**+1.5**
	comp=Z,2.2nm,0.7s,mb3.7,baz=300,slow=7.2,SNR=7.8						
PDAR	**Pinedale Array**	**61.92**	**56**	P	**P**	**06 53 12.1**	**+0.5**
	comp=Z,1.9nm,0.8s,mb3.6,baz=315,slow=2.0,SNR=12						
PDAR				pP	pP	06 54 55.1	+4.6
	comp=Z,1.2nm,0.8s,baz=344,slow=3.2,SNR=6.5						
DUG	**Dugway**	**62.10**	**60**	*e*P	**P**	**06 53 13.7**	**+0.9**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
DUG	**Dugway**	**62.10**	**60**	*e*P	**P**	**06 53 13.7**	**+1.0**
	comp=Z,3.6nm,1.0s,mb3.8						
TPNV	**Topopah Spring**	**62.59**	**64**	*e*P	**P**	**06 53 16.3**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TPNV	**Topopah Spring**	**62.59**	**64**	*e*P	**P**	**06 53 16.3**	**+0.3**
	comp=Z,3.0nm,0.8s,mb3.9						
NB2	**NORSAR Subarra**	**62.69**	**340**	P	**P**	**06 53 15.3**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=27,slow=6.2						
NOA	**NORSAR Array B**	**62.69**	**340**	P	**P**	**06 53 15.6**	**-0.6**
	comp=Z,2.4nm,0.9s,mb3.7,baz=25,slow=6.4,SNR=5.0						
NOA	**NORSAR Array B**	**62.69**	**340**	P	**P**	**06 53 15.6**	**-0.6**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	**62.69**	**340**	P	**P**	**06 53 15.6**	**-0.6**
RSSD	**Black Hills**	**63.65**	**51**	*e*P	**P**	**06 53 22.7**	**0.0**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
RSSD	**Black Hills**	**63.65**	**51**	*e*P	**P**	**06 53 22.7**	**0.0**
	comp=Z,2.7nm,0.6s,mb4.0						
AKASG	**Malin Array Be**	**66.56**	**324**	P	**P**	**06 53 39.6**	**-1.3**
	comp=Z,1.2nm,0.4s,mb3.9,baz=33,slow=6.2,SNR=7.2						
AKASG	**Malin Array Be**	**66.56**	**324**	P	**P**	**06 53 39.6**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCHQ	**Schefferville**	**68.30**	**23**	P	**P**	**06 53 50.2**	**-1.3**
	comp=Z,4.3nm,1.0s,mb4.0,baz=291,slow=8.6,SNR=4.9						
SCHQ	**Schefferville**	**68.30**	**23**	P	**P**	**06 53 50.2**	**-1.3**
GERES	**GERESS Array B**	**73.12**	**333**	P	**P**	**06 54 19.7**	**-0.5**
	comp=Z,0.6nm,0.3s,mb3.5,baz=36,slow=5.6,SNR=5.4						
GERES	**GERESS Array B**	**73.12**	**333**	P	**P**	**06 54 19.7**	**-0.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**73.92**	**315**	P	**P**	**06 54 24.7**	**-0.2**
	comp=Z,1.5nm,1.0s,mb3.5,baz=64,slow=2.9,SNR=5.6						
BRTR	**Keskin Array B**	**73.92**	**315**	P	**P**	**06 54 24.7**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**75.21**	**61**	P	**P**	**06 54 32.7**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.4,baz=314,slow=5.1,SNR=8.8						
TXAR	**Lajitas Array**	**75.21**	**61**	P	**P**	**06 54 32.7**	**+0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**75.21**	**61**	P	**P**	**06 54 32.7**	**+0.4**
ASAR	**Alice Springs**	**77.44**	**197**	P	**P**	**06 54 44.8**	**+0.3**
	comp=Z,9.4nm,0.7s,mb4.5,baz=8.8,slow=5.4,SNR=114						
ASAR	**Alice Springs**	**77.44**	**197**	P	**P**	**06 54 44.8**	**+0.3**
ASAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
STKA	**Stephens Creek**	**84.46**	**189**	P	**P**	**06 55 20.4**	**-0.3**
	comp=Z,3.2nm,1.1s,mb3.8,baz=350,slow=6.1,SNR=3.2						
KEST	**Kesra**	**86.43**	**331**	P	**P**	**06 55 30.5**	**0.0**
	comp=Z,1.1nm,1.0s,mb3.5,baz=326,slow=7.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**109.93**	**329**	PKiKP	PKiKP	07 01 13.8	-2.1
	comp=Z,0.2nm,0.3s,baz=48,slow=1.6,SNR=4.6						
VNDA	**Vanda**	**129.81**	**177**	PKP	PKPdf	07 01 52.1	+0.1
	comp=Z,0.3nm,0.4s,baz=14,slow=4.2,SNR=8.4						
SIV	**San Ignacio**	**135.12**	**48**	PKP	PKPdf	07 02 03.1	-0.7
	comp=Z,0.5nm,0.6s,baz=254,slow=7.4,SNR=3.9						
SIV				SKPbc	SKPbc	07 04 46.9	-1.5
	comp=Z,1.5nm,0.8s,baz=322,slow=3.1,SNR=10						
CFAA	**Coronel Fontan**	**144.06**	**71**	PKP	PKPdf	07 02 17.9	-1.6
	comp=Z,0.3nm,0.6s,baz=269,slow=4.6,SNR=7.4						
CFAA	**Coronel Fontan**	**144.06**	**71**	PKP	PKPdf	07 02 17.9	-1.6
PLCA	**Paso Flores**	**148.79**	**85**	PKPbc	PKPbc	07 02 31.4	-0.3
	comp=Z,1.0nm,0.6s,baz=53,slow=2.7,SNR=7.8						

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*ISCJB **03** 06:48:46.8±0.4, 3846N±003×2179E±003, h10km, Error ellipse: s-maj=4.1km s-min=3.6km az=38.0*
*NEIC **03** 06:48:46.4, 3840N×2178E, h21km, MD3.4(ATH), After ATH.*
*CSEM **03** 06:48:46.1±0.1, 3842N×2179E, h5km, MD3.4, Error ellipse: s-maj=2.7km s-min=2.2km az=108.0*
*ATH **03** 06:48:46.4, 3841N×2177E, h22km±1km, MD3.4/11, ML3.2*
*THE **03** 06:48:47.1, 3845N×2182E, h2km±2km, ML3.5/2, Error ellipse: s-maj=2.4km s-min=0.9km az=344.0*
ISC 03 06:48:46.9±0.5**, 3843N**±003×**2182E**±003**, h7**km±4km**, n30, σ1ˢ14**/49**, 4C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.46**	**217**	P	**Pg**	**06 48 55.9**	**+0.1**
EVR	**Evrytania**	**0.49**	**359**	⇑*i*PN	**Pg**	**06 48 56.6**	**+0.2**
EVR				*e*SN	**Sg**	**06 49 04.4**	**+1.6**
EVR	**Evrytania**	**0.49**	**359**	⇑*i*Pn	**Pg**	**06 48 56.0**	**-0.4**
EVR				*e*Sn	**Sg**	**06 49 04.4**	**+1.6**
AGG	**Agios Georgios**	**0.72**	**34**	P	**Pg**	**06 48 59.8**	**-0.9**
AGG				S	**Sg**	**06 49 09.7**	**-0.4**
KFL	**Anninata**	**0.87**	**249**	P	**Pg**	**06 49 03.3**	**-0.3**
LKR	**Lokris**	**0.95**	**76**	P	**Pg**	**06 49 04.7**	**-0.5**
LKR				S	**Sg**	**06 49 18.5**	**+0.9**
LKR	**Lokris**	**0.95**	**76**	*e*PN	**Pb**	**06 49 04.1**	**-1.7**
LKR				*e*SN	**Sn**	**06 49 19.5**	**-1.1**
LKR	**Lokris**	**0.95**	**76**	P	**Pg**	**06 49 04.7**	**-0.5**
LKR				S	**Sg**	**06 49 18.5**	**+0.9**
LKR				*e*Sn	**Sn**	**06 49 20.0**	**-0.6**
LKR	**Lokris**	**0.95**	**76**	*e*Pb	**Pb**	**06 49 04.1**	**-1.7**
LKR				*e*Sn	**Sn**	**06 49 20.0**	**-0.6**
LTK	**Loutraki**	**0.99**	**114**	P	**Pg**	**06 49 05.7**	**-0.2**
LTK				S	**Sg**	**06 49 20.9**	**+2.2**
VLS	**Valsamata**	**1.00**	**256**	P	**Pg**	**06 49 04.8**	**-1.3**
VLS				S	**Sg**	**06 49 21.1**	**+2.0**
VLS	**Valsamata**	**1.00**	**256**	*e*Pn	**Pn**	**06 49 05.0**	**-2.4**
VLS				S	**Sg**	**06 49 21.1**	**+2.0**
THL	**Klokotos Trika**	**1.15**	**8**	P	**Pg**	**06 49 08.5**	**-0.5**
THL				S	**Sg**	**06 49 25.2**	**+1.3**
THL	**Klokotos Trika**	**1.15**	**8**	*e*PN	**Pg**	**06 49 08.5**	**-0.5**
THL				*e*SN	**Sn**	**06 49 25.3**	**-0.1**
THL	**Klokotos Trika**	**1.15**	**8**	*e*Pn	**Pg**	**06 49 08.5**	**-0.5**
THL				S	**Sg**	**06 49 25.2**	**+1.3**
THL				*e*Sn	**Sn**	**06 49 26.3**	**+0.9**
ITM	**Ithomi**	**1.25**	**176**	*e*PN	**Pn**	**06 49 10.0**	**-0.8**
NEO	**Neokhori**	**1.41**	**51**	⇑*i*PN	**Pn**	**06 49 13.1**	**+0.1**
NEO				*e*SN	**Sn**	**06 49 33.1**	**+1.3**
NEO	**Neokhori**	**1.41**	**51**	⇑*i*Pb	**Pb**	**06 49 12.5**	**-1.0**
NEO				*e*Sn	**Sn**	**06 49 33.1**	**+1.3**
XOR	**Xorichti**	**1.42**	**48**	P	**Pn**	**06 49 12.8**	**-0.4**
DID	**Didima**	**1.45**	**129**	P	**Pn**	**06 49 13.9**	**+0.4**
DID				S	**Sn**	**06 49 33.5**	**+0.7**
NAIG	**Nisos Aigina**	**1.48**	**116**	*e*PN	**Pn**	**06 49 14.0**	**+0.1**
PYL	**PYLOS**	**1.53**	**182**	P	**Pn**	**06 49 14.4**	**-0.2**
PYL				S	**Sn**	**06 49 37.4**	**+2.6**
ATH	**Athens Observa**	**1.56**	**106**	*e*PB	**Pb**	**06 49 14.3**	**-1.9**
LIT	**Litokhoron**	**1.75**	**17**	P	**Pn**	**06 49 17.6**	**-0.1**
KZN	**Kozani**	**1.88**	**359**	*e*PN	**Pn**	**06 49 20.0**	**+0.5**
KZN	**Kozani**	**1.88**	**359**	*e*Pn	**Pn**	**06 49 21.0**	**+1.5**
KEK	**Kerkira**	**2.03**	**310**	*e*PN	**Pn**	**06 49 21.5**	**-0.1**
KEK	**Kerkira**	**2.03**	**310**	*e*Pn	**Pn**	**06 49 22.8**	**+1.2**
PLG	**Polygyros**	**2.32**	**32**	*e*PB	**Pb**	**06 49 26.5**	**-2.6**
SMG	**Samos**	**4.02**	**99**	P	**Pn**	**06 49 49.7**	**+0.7**

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*IDC **03** 06:53:58.7±11.0, 840S×11834E, h94km±102km, mb3.8/7, mb1 3.9/7, mb1mx3.7/15, mbtmp3.8/7, Error ellipse: s-maj=56.3km s-min=18.9km az=80.0*
*ISCJB **03** 06:54:02.5±0.5, 850S±007×11838E±005, h147km±7km, mb4.1/10, Error ellipse: s-maj=12.4km s-min=7.6km az=9.3*
*NEIC **03** 06:54:02.0±1.6, 856S×11828E, h126km±15km, mb4.2/4, Error ellipse: s-maj=22.2km s-min=10.5km az=80.0*
*DJA **03** 06:54:04, 855S×11835E, h123km, MLv4.7/6*
ISC 03 06:54:03.6±0.5**, 854S**±008×**11839E**±005**, h139**km±7km**, n27, σ1ˢ06**/33**, mb4.1**/10**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**0.30**	**91**	P	**Pn**	**06 54 24.1**	**+1.3**
KHKI	**Kahang-Kahang**	**2.76**	**273**	P	**Pn**	**06 54 46.1**	**-1.4**
KHKI				S	**Sn**	**06 55 20.7**	**-0.6**
DNP	**Denpasar**	**3.15**	**267**	P	**Pn**	**06 54 54.2**	**+1.7**
IGBI	**Denpasar**	**3.22**	**265**	P	**Pn**	**06 54 52.5**	**-0.9**
IGBI				S	**Sn**	**06 55 31.4**	**-0.5**
NBBI	**Negara**	**3.73**	**272**	P	**Pn**	**06 54 59.2**	**-0.9**
NBBI				S	**Sn**	**06 55 44.2**	**+0.3**
KAPI	**Kappang**	**3.75**	**21**	*e*Pn	**Pn**	**06 55 00.3**	**0.0**
KAPI				*e*Sn	**Sn**	**06 55 34.3**	**-10**
KAPI	**Kappang**	**3.75**	**21**	P	**Pn**	**06 55 00.3**	**0.0**
BATI	**Baumata**	**5.46**	**108**	P	**Pn**	**06 55 22.3**	**-0.7**
	72nm,0.7s,1μm0.3nm						
KRKI	**Karangkates**	**5.89**	**273**	P	**Pn**	**06 55 32.5**	**+3.8**
SJI	**Sawahan**	**6.61**	**276**	P	**Pn**	**06 55 40.5**	**+2.1**
MBWA	**Marble Bar**	**12.62**	**174**	*e*Pn	**Pn**	**06 56 55.3**	**-2.9**
	16nm,0.7s						
KAKA	**Kakadu**	**14.42**	**108**	*e*P	x	06 57 01.5	
	22nm,0.6s						
KAKA				*e*S	x	06 59 30.4	
WB2	**Warramunga Arr**	**19.16**	**128**	*e*P	**P**	**06 58 16.0**	**-0.3**
WB2				*e*S	**S**	**07 01 41.9**	**-4.3**
ASAR	**Alice Springs**	**21.14**	**137**	P	**P**	**06 58 37.6**	**0.0**
	3.2nm,0.5s,mb3.9,baz=311,slow=9.5,SNR=54						
ASAR				S	**S**	**07 02 24.3**	**-0.8**
	1.1nm,0.8s,baz=307,slow=17,SNR=5.3						
KLBR	**Kellerberrin**	**22.95**	**181**	*e*P	**P**	**06 58 55.0**	**-0.8**
	6.3nm,0.5s,mb4.3						
KLBR				*e*S	**S**	**07 03 05.1**	**+10**
MUN	**Mundaring**	**23.41**	**185**	*e*P	**P**	**06 59 05.9**	**+5.8**
MUN				*e*S	**S**	**07 03 17.2**	**+14**
FORT	**Forrest**	**23.90**	**159**	*e*P	**P**	**06 59 05.2**	**+0.7**
	36nm,0.6s,mb5.1						
COEN	**Coen**	**24.89**	**105**	*e*P	**P**	**06 59 13.7**	**0.0**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**31.69**	**140**	P	**P**	**07 00 14.3**	**+0.3**
	1.6nm,0.4s,mb4.1,baz=302,slow=9.4,SNR=11						
STKA	**Stephens Creek**	**31.69**	**140**	*e*P	**P**	**07 00 14.5**	**+0.4**
SONM	**Songino Array**	**57.12**	**350**	P	**P**	**07 03 34.7**	**-0.7**
	0.4nm,0.5s,mb3.5,baz=166,slow=8.3,SNR=4.4						
MKAR	**Makanchi Array**	**63.77**	**333**	P	**P**	**07 04 19.4**	**-1.2**
	0.2nm,0.3s,mb3.4,baz=155,slow=6.7,SNR=6.2						
MKAR	**Makanchi Array**	**63.77**	**333**	P	**P**	**07 04 19.4**	**-1.2**
MAW	**Mawson**	**69.47**	**200**	P	**P**	**07 04 58.0**	**+1.6**
	2.7nm,0.6s,mb4.1,baz=79,slow=11,SNR=4.5						
PETK	**Petropavlovsk-**	**69.89**	**24**	P	**P**	**07 04 59.5**	**+0.3**
	4.7nm,1.0s,mb4.2,baz=241,slow=4.8,SNR=3.6						
VNDA	**Vanda**	**72.54**	**171**	P	**P**	**07 05 16.1**	**+1.3**
	1.0nm,0.4s,mb3.9,baz=321,slow=7.1,SNR=26						
TORD	**Torodi Ar. Bea**	**117.79**	**280**	PKP	PKPdf	07 12 33.6	-0.8
	0.4nm,0.4s,baz=101,slow=1.9,SNR=8.5						

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*MOS **03** 07:04:31.9±1.9, 4152N×4236E, h17km, mb3.9/1, Error ellipse: s-maj=48.8km s-min=13.0km az=55.5*
*TIF **03** 07:04:33.9, 4148N×4258E, h12km±2km*
*ISCJB **03** 07:04:34.3±0.9, 4141N±004×4256E±005, h5km±9km, Error ellipse: s-maj=7.2km s-min=5.7km az=35.7*
*CSEM **03** 07:04:34.0, 4145N×4258E, h12km, MD2.9, After ISK*
*ISK **03** 07:04:34.0, 4145N×4258E, h12km, MD2.9*
ISC 03 07:04:35.1±0.9**, 4141N**±004×**4256E**±005**, h9**km±9km**, n17, σ1ˢ09**/29**, 1C-1D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BCA	**Borcka**	**0.70**	**274**	PG	**Pg**	**07 04 48.3**	**-0.3**
BCA				*e*SG	**Sg**	**07 04 59.0**	**+1.2**
KARS	**Kars**	**0.89**	**153**	*e*PG	**Pg**	**07 04 52.4**	**+0.2**
KARS				*e*SG	**Sg**	**07 05 05.2**	**+1.4**
PZAR	**Pazar-Rize**	**1.27**	**260**	*e*PN	**Pn**	**07 04 57.8**	**-1.2**
GOR	**Gori**	**1.30**	**63**	P	**Pn**	**07 04 57.6**	**-1.9**
GOR				S	**Sb**	**07 05 16.2**	**-0.3**
ONI	**Oni**	**1.35**	**29**	P	**Pn**	**07 04 58.7**	**-1.5**
ONI				S	**Sb**	**07 05 16.4**	**-1.6**
TBLG	**Delisi**	**1.67**	**78**	PN	**Pn**	**07 05 00.0**	**-4.5**
TBLG	**Delisi**	**1.67**	**78**	P	**Sn**	**07 05 25.0**	**-1.0**
DIGR	**Digorskoe uzhe**	**1.68**	**27**	*e*PN	**Pn**	**07 05 04.1**	**-0.5**
DIGR				*i* S	**Sn**	**07 05 27.2**	**+0.9**
ZEI	**Tsey**	**1.69**	**36**	⇓*i*PN	**Pn**	**07 05 05.0**	**+0.2**
ZEI				*i* S	**Sn**	**07 05 28.5**	**+1.9**
MTA	**Mtatsminda**	**1.70**	**80**	P	**Pn**	**07 05 03.9**	**-1.1**
MTA				S	**Sn**	**07 05 26.1**	**-0.8**
AGRB	**Hanur-Agry**	**1.86**	**170**	*e*PN	**Pn**	**07 05 07.2**	**0.0**
LACR	**Lac**	**1.92**	**42**	⇑*i*PN	**Pn**	**07 05 07.7**	**-0.3**
LACR				*i* S	**Sn**	**07 05 34.4**	**+2.1**
KORR	**Kora**	**2.02**	**33**	*e*PN	**Pn**	**07 05 09.0**	**-0.4**
KORR				*e*S	**Sn**	**07 05 35.9**	**+1.2**
LSNR	**Lesken**	**2.09**	**26**	*e*PN	**Pn**	**07 05 09.3**	**-1.0**
LSNR				*e*S	**Sn**	**07 05 36.8**	**+0.4**
DGRG	**David-gareji**	**2.12**	**88**	P	**Pn**	**07 05 12.1**	**+1.4**
DGRG				S	**Sn**	**07 05 40.9**	**+3.7**
ARNR	**Ardon**	**2.19**	**35**	*e*PN	**Pn**	**07 05 11.6**	**-0.1**
ARNR				*e*S	**Sn**	**07 05 40.3**	**+1.3**
GUMT	**Gumushane**	**2.52**	**249**	*e*PN	**Pn**	**07 05 16.2**	**0.0**

IDC 03 07:21:21.4±2.1**, 515S**×**15217E, h0**km**, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.8**/15**, mbtmp3.8**/5**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.8**/20**, Error ellipse: s-maj=79.5km s-min=32.6km az=110.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.92**	**201**	LR	LR	07 30 33.3	
	comp=Z,79nm,20.1s,baz=232,slow=35						
GUMO	**Guam**	**19.98**	**339**	LR	LR	07 32 50.7	
	comp=Z,45nm,20.9s,baz=73,slow=34						
KAKA	**Kakadu**	**20.88**	**248**	*e*P	x	07 25 48.5	
	9.8nm,0.8s						
WB2	**Warramunga Arr**	**22.73**	**228**	*e*P	P	07 26 28.4	+3.2
ASAR	**Alice Springs**	**25.47**	**222**	P	P	07 26 52.0	+0.6
	1.4nm,0.6s,baz=55,slow=8.7,SNR=8.5						
SONM	**Songino Array**	**66.29**	**328**	P	P	07 32 12.4	+0.9
	0.6nm,0.6s,baz=143,slow=8.7,SNR=3.8						
MKAR	**Makanchi Array**	**80.18**	**319**	P	P	07 33 34.1	+0.5
	0.8nm,0.8s,baz=202,slow=2.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**81.09**	**326**	P	P	07 33 38.1	-0.3
	0.6nm,0.5s,baz=116,slow=5.0,SNR=3.3						
YKA	**Yellowknife Ar**	**96.03**	**28**	P	P	07 34 51.0	+0.6
	0.2nm,0.5s,baz=274,slow=5.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**149.81**	**287**	PKPbc	PKPbc	07 41 12.4	-2.2
	1.8nm,0.9s,baz=90,slow=2.8,SNR=4.5						

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*IDC **03** 07:48:04.0±10.0, 3707N×7138E, h211km±91km, mb2.9/1, mb1 3.0/6, mb1mx2.8/23, mbtmp2.9/6, Error ellipse: s-maj=86.0km s-min=47.7km az=2.0*
*NNC **03** 07:48:08.3±5.2, 3762N×7160E, h215km±53km, mb2.4, mpv3.6, Error ellipse: s-maj=50.8km s-min=28.0km az=176.0*
ISC 03 07:48:04.7±2.9**, 374N**±02×**714E**±01**, h178**km±23km**, n10, σ0ˢ98**/14**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.77**	**354**	P	**Pn**	**07 49 29.8**	**+1.3**
	3.3nm,0.5s,baz=174,slow=12,SNR=67						
KK31				S	**Sn**	**07 50 34.6**	**+0.1**
	4.5nm,0.3s,baz=169,slow=24,SNR=20						
TKM2	**Tokmak 2**	**6.42**	**29**	⇑P	**Pn**	**07 49 36.7**	**-0.4**
	3.4nm,0.5s						
TKM2				⇓S	**Sn**	**07 50 48.9**	**-1.0**
	4.0nm,0.7s						
MKAR	**Makanchi Array**	**12.42**	**37**	P	**Pn**	**07 50 55.2**	**-0.2**
	0.1nm,0.3s,baz=220,slow=13,SNR=4.3						
KURK	**Kurchatov**	**14.31**	**19**	P	**Pn**	**07 51 20.4**	**+1.2**
	0.1nm,0.3s,baz=205,slow=10,SNR=7.5						
AB09	**Akbulak array**	**14.50**	**329**	⇓P	**Pn**	**07 51 22.0**	**+0.5**
	0.5nm,0.5s						
AB09				⇑S	**Sn**	**07 54 01.2**	**-1.7**
	2.2nm,1.0s						
BVA0	**Borovoye Array**	**15.67**	**358**	P	**Pn**	**07 51 35.9**	**0.0**
	0.3nm,0.8s,baz=166,slow=11,SNR=6.7						
BVAR	**Borovoye Array**	**15.67**	**358**	P	**Pn**	**07 51 36.7**	**+0.9**
	0.4nm,0.3s,baz=185,slow=7.2,SNR=7.0						
AKTO	**Aktyubinsk**	**16.19**	**328**	P	**Pn**	**07 51 41.7**	**-0.5**
	0.3nm,0.3s,baz=138,slow=9.7,SNR=4.5						
AKTO				S	**S**	**07 54 43.0**	**+1.3**
	0.1nm,0.3s,baz=156,slow=20,SNR=5.3						
ZALV	**Zalesovo Beam**	**19.00**	**25**	P	**P**	**07 52 12.7**	**0.0**
	0.7nm,0.3s,baz=214,slow=10,SNR=9.1						
NOA	**NORSAR Array B**	**43.87**	**322**	P	**P**	**07 55 51.1**	**-2.0**
	0.5nm,0.6s,baz=119,slow=5.6,SNR=2.6						

MAN 03 07:57:02, 915N×**12223E, h48**km**, mb4.1, ML2.9, MS2.6, Negros**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.01**	**79**	*e*P	Pn	07 57 20.0	+0.2
GUIM	**Jordan**	**1.50**	**13**	*e*P	Pn	07 57 27.6	+1.0
GUIM				*e*S	Sn	07 57 47.4	+2.4
TBP	**Tagbilaran**	**1.69**	**71**	*e*P	Pn	07 57 30.4	+1.3
TBP				*e*S	Sn	07 57 51.8	+2.2
PAGZ	**Pagadian**	**1.72**	**139**	*e*P	Pn	07 57 31.9	+2.3
CUYO	**Cuyo Island**	**2.07**	**325**	*e*P	Pn	07 57 35.4	+1.1
OTRP	**Odiongan**	**3.19**	**356**	*e*P	Pn	07 57 52.8	+3.1

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*NEIC **03** 08:04:13.6, 1577N×9453W, h35km, MD3.8(MEX), After MEX.*
MEX 03 08:04:13.6±0.7**, 1577N**×**9453W, h35**km±73km**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		**1.27**	**93**	*i* P	Pn	08 04 33.1	-1.7
PCIG				*i* S	Sn	08 04 48.0	-2.6
CMIG	**Matias Romero**	**1.36**	**346**	*i* P	Pn	08 04 34.9	-1.3
CMIG				*i* S	Sn	08 04 50.3	-2.7
TGIG		**1.69**	**53**	*e*P	Pn	08 04 37.4	-3.2
TGIG				*i* S	Sn	08 04 58.5	-2.5
SCX	**San Cristobal**	**2.06**	**62**	*e*P	Pn	08 04 43.5	-2.3
SCX				*i* S	Sn	08 05 08.8	-1.5
THIG		**2.35**	**111**	*e*P	Pn	08 04 48.5	-1.2
THIG				*i* S	Sn	08 05 15.6	-1.7
VHO	**Vista Hermosa**	**2.48**	**302**	*e*P	Pn	08 04 50.5	-1.1
VHO				*i* S	Sn	08 05 18.6	-2.0
PNIG	**Pinotepa**	**3.51**	**281**	*e*P	Pn	08 05 04.1	-1.7
PNIG				*i* S	Sn	08 05 41.3	-4.8
UTMO	**Huajuapan**	**3.75**	**304**	*e*P	Pn	08 05 08.7	-0.3
UTMO				*i* S	Sn	08 05 50.8	-1.0

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*NIED **03** 08:13:00, 2450N×14300E, h35km, Mw4.5 Best double couple: M₀5.46000×10¹⁵ NP1:φs322.00000°, δ76.00000°, λ48.00000°. NP2:φs217.00000°, δ43.00000°, λ160.00000°.*
*ISCJB **03** 08:13:15.4±1.7, 2449N±005×14297E±004, h23km±11km, mb4.6/61, MS3.8/8, Error ellipse: s-maj=8.4km s-min=5.0km az=17.1*
*MOS **03** 08:13:17.0±0.8, 2461N×14296E, h33km, mb4.9/24, Error ellipse: s-maj=15.2km s-min=7.6km az=106.9*
*BJI **03** 08:13:17.4, 2440N×14336E, h63km, mB4.9, mb4.7, Ms4.5, Msz4.2*
*IDC **03** 08:13:19.5±2.5, 2454N×14296E, h42km±20km, mb4.3/17, mb1 4.3/21, mb1mx4.3/26, mbtmp4.2/21, ML3.9/4, MS3.4/8, Ms1 3.4/8, ms1mx3.2/31, Error ellipse: s-maj=21.9km s-min=14.9km az=77.0*
*NEIC **03** 08:13:20.6±0.2, 2451N×14301E, mb4.7/28, MW4.4(NIED), Error ellipse: s-maj=6.7km s-min=6.4km az=211.0*
ISC 03 08:13:19.7±1.1**, 2456N**±005×**14302E**±004**, h41**km±8km**, h56**km±2.1km**: pP-P, n336, σ0ˢ55**/338**, mb4.6**/61**, MS3.8**/8**, 116C-108D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.64**	**344**	P	**Pn**	**08 14 00.3**	**+0.6**
	31nm,0.3s,baz=154,slow=1.6,SNR=24						
CBIJ				S	**Sn**	**08 14 31.0**	**+0.5**
	433nm,0.3s,baz=281,slow=22,SNR=37						
CBIJ				LR	LR	08 15 07.2	
	comp=Z,412nm,21.5s,baz=86,slow=41						
JHJ	**Hachijo jima 2**	**8.99**	**342**	LR	LR	08 18 38.9	
	comp=Z,63nm,18.5s,baz=122,slow=36						
MJAR	**Matsushiro Arr**	**12.64**	**342**	P	**Pn**	**08 16 14.5**	**-2.4**
	0.9nm,0.3s,baz=168,slow=12,SNR=5.8						
MJAR				S	**Sn**	**08 18 31.5**	**-4.8**
	0.6nm,0.3s,baz=156,slow=8.6,SNR=4.3						
MJAR	**Matsushiro Arr**	**12.64**	**342**	P	**Pn**	**08 16 14.5**	**-2.4**
MJAR				S	**Sn**	**08 18 31.5**	**-4.8**
MAJO	**Matsushiro**	**12.64**	**342**	P	**Pn**	**08 16 22.0**	**+5.1**
MAT	**Matsushiro**	**12.64**	**342**	P	**Pn**	**08 16 16.3**	**-0.6**
MAT				*e*S	**Sn**	**08 18 32.1**	**-4.2**
KSRS	**Korea Array**	**18.21**	**318**	P	**Pn**	**08 17 28.5**	**-0.8**
	0.4nm,0.3s,baz=131,slow=12,SNR=7.0						
KSRS				LR	LR	08 24 21.5	
	comp=Z,79nm,18.3s,baz=70,slow=36						
ASAJ	**Asahikawa**	**19.52**	**359**	P	**Pn**	**08 17 44.9**	**-0.1**
	0.4nm,0.3s,baz=230,slow=16,SNR=3.7						
ASAJ				LR	LR	08 24 20.1	
	comp=Z,109nm,21.0s,baz=177,slow=34						
YSS	**Yuzh-Sakhalins**	**22.35**	**360**	*i* P	**P**	**08 18 15.5**	**+1.5**
YSS				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.4						
CN2	**Changchun**	**23.99**	**327**	*e*P	**P**	**08 18 32.2**	**+1.8**
CN2				*e*S	**S**	**08 22 43.6**	**-0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
HABR	**Khabarovsk**	**24.69**	**347**	*e*P	**P**	**08 18 36.5**	**-0.2**
HABR				*e**PP		08 18 49.6	
HABR				*e*S	**S**	**08 22 55.3**	**-0.3**
HABR				*e*SS		08 23 46.8	
HABR				*e*		08 29 32.2	
WHN	**Wuhan**	**26.07**	**290**	*e*P	**P**	**08 18 49.7**	**+0.3**
KLR	**Kul'dur**	**26.17**	**343**	*e*P	**P**	**08 18 46.7**	**-3.4**
BJI	**Beijing**	**27.31**	**311**	P	**P**	**08 19 01.8**	**+1.3**
BJI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.6						
PETK	**Petropavlovsk-**	**30.59**	**17**	LR	LR	08 29 57.6	
	comp=Z,72nm,20.0s,MS3.3,baz=189,slow=33						
HIA	**Hailar**	**30.66**	**329**	⇓*e*P	**P**	**08 19 30.7**	**+0.5**
HHC	**Hu-ho-hao-te**	**30.85**	**309**	*e*P	**P**	**08 19 30.8**	**-1.1**
HHC				AP	pP	08 19 45.3	+2.2
HHC				XP	sP	08 19 53.8	+5.9
HHC				PP	PP	08 20 33.4	-8.6
HHC				PCP	PcP	08 22 27.8	-0.4
HHC				*e*S	**S**	**08 24 28.8**	**-4.1**
HHC				SCS	ScS	08 29 58.0	-6.4
HHC				AMB	AMB		
	comp=Z,14nm,0.6s,mb5.0						
HHC				AMB	AMB		
	comp=Z,140nm,3.8s						

HHC LR LR
comp=N,106nm,12.0s,MS4.0
HHC LR LR
comp=E,151nm,12.0s,MS4.0
HHC LR LR
comp=Z,143nm,12.0s,MS3.9
XAN Xi'an 31.09 296 P **P** **08 19 34.3 +0.2**
XAN AP pP 08 19 47.8 +2.6
XAN PCP PcP 08 22 28.8 -0.1
XAN S **S** **08 24 37.9 +1.1**
XAN AMB AMB
comp=Z,2.0nm,0.4s,mb4.3
GYA Guiyang 32.80 281 *e*P **P** **08 19 50.2 +0.9**
GYA AP pP 08 20 03.8 +3.4
GYA XP sP 08 20 13.4 +8.1
GYA PP PP 08 21 02.0 -1.9
GYA PCP PcP 08 22 31.6 -2.1
GYA S **S** **08 25 01.8 -1.9**
GYA XS sS 08 25 27.9 +5.5
GYA SCP ScP 08 26 12.3 -2.3
GYA SCS ScS 08 30 11.5 -3.2
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,90nm,4.9s
GYA LR LR
comp=N,430nm,17.0s,MS4.4
GYA LR LR
comp=E,450nm,16.2s,MS4.4
GYA LR LR
comp=Z,480nm,16.3s,MS4.3
CD2 Chengdu 35.19 289 P **P** **08 20 10.3 +0.3**
CD2 AP pP 08 20 25.4 +4.2
CD2 XP sP 08 20 32.6 +6.5
CD2 PP PP 08 21 30.7 +0.4
CD2 PCP PcP 08 22 40.5 0.0
CD2 S **S** **08 25 38.5 -2.1**
CD2 XS sS 08 26 04.3 +5.0
CD2 SS SS 08 27 57.8 -17
CD2 AMB AMB
comp=Z,60nm,0.6s,mb5.7
CD2 AMB AMB
comp=Z,140nm,6.7s
CD2 LR LR
comp=N,390nm,7.9s
CD2 LR LR
comp=Z,660nm,6.4s
LZH Lanzhou 35.50 298 ⇓P **P** **08 20 13.5 +1.0**
LZH AP pP 08 20 28.6 +4.8
LZH XP sP 08 20 35.1 +6.5
LZH PP PP 08 21 35.7 +2.1
LZH AMB AMB
comp=Z,23nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,75nm,5.2s
LZH LR LR
comp=E,267nm,13.5s
LZH LR LR
comp=Z,386nm,18.0s,MS4.2
KMI Kunming 36.47 280 P **P** **08 20 22.6 +1.7**
KMI AP pP 08 20 37.6 +5.4
KMI S **S** **08 26 00.4 +0.2**
KMI AMB AMB
comp=Z,13nm,0.7s,mb5.0
KMI AMB AMB
comp=Z,70nm,3.5s
KMI LR LR
comp=Z,43nm,15.9s,MS3.3
SONM Songino Array 37.08 318 PcP PcP 08 22 46.2 +0.5
baz=131,slow=3.5
COEN Coen 38.28 180 *e*P **P** **08 20 35.8 -0.4**
comp=Z,12nm,0.8s,mb4.7
KAKA Kakadu 38.45 197 *e*P x 08 20 19.0
comp=Z,4.6nm,0.5s
YAK Yakutsk 38.54 350 *e*P **P** **08 20 36.4 -1.6**
YAK pmax pmax
comp=Z,14nm,0.7s,mb4.8
SEY Seymchan 38.88 7⇑ *e*P **P** **08 20 40.9 +0.1**
GTA Gaotai 39.15 303 *e*P **P** **08 20 43.4 0.0**
GTA AP pP 08 20 59.1 +4.3
GTA XP sP 08 21 06.3 +6.7
GTA AMB AMB
comp=Z,4.0nm,0.7s,mb4.3
BOD Bodaibo 39.17 336 *e*P **P** **08 20 42.4 -0.9**
BOD pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
ZAK Zakamensk 40.03 320 *e*P **P** **08 20 48.9 -1.7**
ZAK pmax pmax
comp=Z,3.0nm,1.5s,mb3.8
CMAR Chiang Mai Arr 41.33 270 LR LR 08 36 46.5
comp=Z,46nm,18.7s,MS3.4,baz=239,slow=34
WB2 Warramunga Arr 45.03 192⇑ *i*P **P** **08 21 30.1 -1.3**
BILL Bilibino 45.76 12 *e*P **P** **08 21 36.5 -0.2**
BILL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BILL Bilibino 45.76 12 *e*P **P** **08 21 36.7 0.0**
comp=Z,7.0nm,1.0s,mb4.5
BILL *e* pP 08 21 50.1 +1.9
HVS Khovu-Aksy 45.98 318⇓ *e*P **P** **08 21 38.9 +0.2**
HVS pmax pmax
comp=Z,14nm,0.9s,mb4.9
TIXI Tiksi 47.80 354⇓ *e*P **P** **08 21 52.2 -0.5**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
TIXI Tiksi 47.80 354 *e*P **P** **08 21 52.4 -0.2**
comp=Z,67nm,2.7s,mb5.2
TIXI *e* pP 08 22 05.6 +1.4
WMQ Urumqi 48.69 308 P **P** **08 22 00.5 +0.6**
WMQ XP sP 08 22 20.9 +4.6
WMQ AMB AMB
comp=Z,14nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,131nm,5.0s
ASAR Alice Springs 48.74 191 P **P** **08 21 59.3 -1.1**
comp=Z,0.9nm,0.4s,mb4.2,baz=17,slow=12,SNR=32
ZAA0 Zalesovo Array 51.91 320 *e*P **P** **08 22 23.0 -1.0**
ZALV Zalesovo Beam 51.91 320 P **P** **08 22 23.2 -0.8**
comp=Z,2.9nm,0.4s,mb4.5,baz=100,slow=8.5,SNR=16
ZALV PcP PcP 08 23 35.9 -0.4
comp=Z,1.8nm,0.5s,baz=123,slow=5.5,SNR=6.0
ZALV LR LR 08 44 37.1
comp=Z,31nm,19.3s,MS3.4,baz=25,slow=36
ZALV Zalesovo Beam 51.91 320 P **P** **08 22 23.3 -0.8**
ZALV 08 23 35.9
MKAR Makanchi Array 52.69 311 P **P** **08 22 30.1 +0.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=91,slow=8.7,SNR=15
MKAR PcP PcP 08 23 39.6 +0.2
comp=Z,2.1nm,0.6s,baz=79,slow=8.0,SNR=7.8
KURK Kurchatov 55.31 316 P **P** **08 22 49.0 0.0**
comp=Z,3.4nm,0.4s,mb4.7,baz=91,slow=7.9,SNR=34
KURK Kurchatov 55.31 316 *e*P **P** **08 22 49.1 0.0**
KURK pmax pmax
comp=Z,16nm,1.5s,mb4.8
KURK Kurchatov 55.31 316 *e*P **P** **08 22 49.1 +0.1**
comp=Z,16nm,1.5s,mb4.8
STKA Stephens Creek 56.13 181 *e*P **P** **08 22 54.1 -0.9**
comp=Z,3.2nm,0.6s,mb4.5
STKA Stephens Creek 56.13 181 P **P** **08 22 54.6 -0.4**
comp=Z,3.3nm,0.5s,mb4.6,baz=352,slow=8.3,SNR=14
ULHL Ulahol 57.09 306 P **P** **08 23 03.2 +1.4**
SNR=5.6
TKM2 Tokmak 2 57.51 306 *e*P **P** **08 23 06.0 +1.2**
TKM2 pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
TKM2 Tokmak 2 57.51 306 P **P** **08 23 06.2 +1.4**
SNR=5.7
TKM2 Tokmak 2 57.51 306 *e*P **P** **08 23 06.0 +1.1**
comp=Z,4.1nm,0.5s,mb4.7
KZA Kyzart 57.84 306 P **P** **08 23 09.1 +2.0**
SNR=8.9
KBK Karagaybulak 58.01 306 P **P** **08 23 09.5 +1.1**
SNR=6.0
AAK Ala-Archa 58.34 306 *e*P **P** **08 23 11.5 +0.8**
AAK *e* 08 23 28.7
AAK pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
AAK Ala-Archa 58.34 306 P **P** **08 23 11.3 +0.6**
SNR=7.5
AAK Ala-Archa 58.34 306 *e*P **P** **08 23 11.5 +0.8**
comp=Z,6.6nm,0.5s,mb4.9
AAK *e* 08 23 28.7
MCK McKinley 58.56 29 *e*P **P** **08 23 10.8 -1.0**
MCK pmax pmax
comp=Z,15nm,1.0s,mb5.0
MCK McKinley 58.56 29 *e*P **P** **08 23 10.8 -1.1**
comp=Z,16nm,1.0s,mb5.0
EKS2 Erkin-Say 58.87 306 P **P** **08 23 15.4 +1.1**
SNR=5.8
COLA College 59.19 28 *i*P **P** **08 23 16.7 +0.5**
COLA College 59.19 28 *e*P **P** **08 23 16.6 +0.4**
comp=Z,7.0nm,1.1s,mb4.6
BVAR Borovoye Array 60.43 318 P **P** **08 23 24.7 -0.2**
comp=Z,6.5nm,0.5s,mb4.9,baz=89,slow=7.7,SNR=33
BRVK Borovoye 60.49 319 *e*P **P** **08 23 25.2 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BRVK Borovoye 60.49 319 *e*P **P** **08 23 25.2 -0.1**
comp=Z,2.8nm,0.6s,mb4.5
KBL Kabul 63.85 298 *e*P **P** **08 23 49.3 +1.1**
KBL pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KBL Kabul 63.85 298 *e*P **P** **08 23 49.3 +1.1**
comp=Z,5.1nm,0.5s,mb4.8
ARU Arti 66.89 323 *d*/P **P** **08 24 07.1 -0.4**
ARU *e**PP pP 08 24 23.3 +3.8
ARU *e* 08 26 32.0
ARU *e*S S 08 32 56.2 -1.1
ARU SS SS 08 37 09.5 -6.0
ARU pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ARU Arti 66.89 323 *e*P **P** **08 24 07.0 -0.5**
comp=Z,3.9nm,0.3s,mb4.9
ARU *e* 08 24 23.6
AKTK Aktyubinsk 68.38 317 P **P** **08 24 16.2 -0.8**
AKTO Aktyubinsk 68.38 317 P **P** **08 24 16.2 -0.8**
comp=Z,1.5nm,0.6s,mb4.2,baz=77,slow=14,SNR=6.7
YKA Yellowknife Ar 74.01 28 P **P** **08 24 50.1 -0.7**
comp=Z,2.7nm,0.5s,mb4.4,baz=292,slow=6.0,SNR=40
RES Resolute Bay 74.34 14 *e*P **P** **08 24 52.2 -0.3**
comp=Z,160nm,0.8s,mb6.0
ARCES ARCESS Array B 76.18 341 P **P** **08 25 03.3 +0.1**
comp=Z,2.9nm,0.8s,mb4.2,baz=68,slow=8.0,SNR=12
B07A Winthrop 76.35 43 ⇓P **P** **08 25 04.4 -0.1**
baz=76
C07A Waterville 76.67 44 ⇓P **P** **08 25 05.6 -0.7**
baz=76
B08A Colville Reser 76.87 43 ⇑P **P** **08 25 07.0 -0.5**
baz=77
F06A Goldendale 76.92 46 ⇑P **P** **08 25 07.9 +0.1**
baz=77
A09A Danville 77.10 42 ⇑P **P** **08 25 08.9 +0.2**
baz=77
E07A Sunnyside 77.22 45 ⇑P **P** **08 25 09.6 +0.1**
baz=77
B09A Rice 77.58 42 ⇓P **P** **08 25 11.4 0.0**
baz=77
D08A Wollman Farm, 77.63 44 ⇓P **P** **08 25 11.5 -0.3**
baz=78
JOF Joensuu 77.69 334 *ep* **P** **08 25 11.5 -0.3**
comp=Z,14nm,0.9s,mb4.9
A10A Northport 77.72 42 ⇓P **P** **08 25 12.2 0.0**
baz=78
C09A Chrisman Ranch 77.74 43 ⇑P **P** **08 25 11.9 -0.5**
baz=78
E08A Dider Farm, El 77.76 44 ⇑P **P** **08 25 12.3 -0.1**
baz=78
NEW Newport 78.27 42 *e*P **P** **08 25 14.8 -0.5**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 78.27 42 *e*P **P** **08 25 14.8 -0.5**
comp=Z,4.2nm,0.8s,mb4.4
E09A Wood Farm, Sta 78.33 44 ⇑P **P** **08 25 15.6 0.0**
baz=78
EDM Edmonton 78.39 37 *e*P **P** **08 25 15.4 -0.5**
EDM *e* pP 08 25 26.1 -2.0
A11A Hall Mountain, 78.45 41 ⇓P **P** **08 25 16.5 +0.2**
baz=78
B11A Sandpoint 78.66 42 ⇑P **P** **08 25 17.8 +0.3**
baz=78
J07A Hines 78.80 47 ⇑P **P** **08 25 19.0 +0.7**
baz=79
A12A Yaak River Ran 78.89 41 ⇓P **P** **08 25 19.4 +0.7**
baz=79
OBN Obninsk 79.05 326 *e*P **P** **08 25 19.6 +0.2**
OBN pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
I08A Drewsey 79.08 47 ⇓P **P** **08 25 19.6 -0.2**
baz=79
K07A Rock Creek Ran 79.11 48 ⇓P **P** **08 25 20.1 0.0**
baz=79
F10A Beach Ranch, E 79.13 44 ⇑P **P** **08 25 20.6 +0.6**
baz=79
J08A Circle Bar Ran 79.37 47 ⇑P **P** **08 25 21.7 +0.3**
baz=79
H09A Durkee 79.38 46 ⇑P **P** **08 25 21.8 +0.4**
baz=79
BEKR Beckwourth 79.45 51 ⇑P **P** **08 25 22.0 0.0**
baz=79
G10A Bishop Farm, J 79.47 45 ⇓P **P** **08 25 21.9 -0.1**
baz=79
N06A Buffalo Meadow 79.47 50 ⇓P **P** **08 25 21.7 -0.4**
baz=79
BMO Blue Mountains 79.53 45 *e*P **P** **08 25 22.1 -0.2**
BMO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BMO Blue Mountains 79.53 45 *e*P **P** **08 25 22.1 -0.2**
comp=Z,5.3nm,0.9s,mb4.5
I09A Lost Marbles R 79.61 46 ⇓P **P** **08 25 22.5 -0.2**
baz=80
LAVA Lava Cap Winer 79.61 52 ⇓P **P** **08 25 21.7 -1.1**
baz=80
E11A Bogner Ranch, 79.62 44 ⇑P **P** **08 25 22.6 -0.1**
baz=80
M07A Soldier Meadow 79.68 49 ⇓P **P** **08 25 23.2 0.0**
baz=80
O06A Flanigan 79.71 51 ⇑P **P** **08 25 23.4 +0.1**
baz=80
B13A Whitefish 79.84 41 ⇑P **P** **08 25 23.9 +0.1**
baz=80
J09A Fry Pan Ranch, 79.85 47 ⇑P **P** **08 25 23.9 -0.1**
baz=80
WALA Waterton Lakes 79.87 41 *e*P **P** **08 25 24.8 +0.8**
comp=Z,19nm,1.4s,mb4.8
L08A Fields 79.93 48 ⇓P **P** **08 25 24.5 0.0**
baz=80
G11A Walters Elk Ra 79.98 45 ⇑P **P** **08 25 24.2 -0.5**
baz=80
H10A Noah's Angus R 80.01 46 ⇑P **P** **08 25 24.4 -0.5**
baz=80
N07B Gerlach 80.06 50 ⇓P **P** **08 25 25.3 +0.1**
baz=80
C13A Hot Springs 80.07 42 ⇓P **P** **08 25 24.8 -0.3**
baz=80
KAF Kangasniemi 80.08 335 *ep* **P** **08 25 24.4 -0.5**
comp=Z,7.5nm,0.5s,mb4.9,baz=53,slow=5.0
KAF Kangasniemi 80.08 335 *e*P **P** **08 25 24.4 -0.5**
KAF pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
K09A Rome 80.14 48 ⇑P **P** **08 25 25.6 0.0**
baz=80
CMB Columbia Colle 80.15 53 *e*P **P** **08 25 25.4 -0.4**
CMB *e* 08 25 40.8
CMB pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
CMB Columbia Colle 80.15 53 *e*P **P** **08 25 25.4 -0.4**
comp=Z,8.7nm,0.7s,mb4.8
CMB *e* 08 25 40.8
A14A Double T Ranch 80.20 41 ⇑P **P** **08 25 25.9 +0.1**
baz=80
PAHR Pah Rah Range 80.21 51 *e*P **P** **08 25 26.4 +0.3**
comp=Z,8.1nm,1.0s,mb4.6
D13A Huson 80.39 43 ⇓P **P** **08 25 26.7 -0.2**
baz=80
H11A Donnelly 80.43 45 ⇑P **P** **08 25 26.8 -0.4**
baz=80
L09A Wilkinson Ranc 80.46 48 ⇓P **P** **08 25 27.2 -0.2**
baz=80
S05C Merced 80.47 53 ⇓P **P** **08 25 27.8 +0.3**
baz=80
U04C Hernandez Rese 80.53 54 ⇓P **P** **08 25 28.0 +0.2**
baz=80
C14A Swan Lake 80.53 42 ⇓P **P** **08 25 27.8 +0.2**
baz=80
A15A Johnson Ranch, 80.61 40 ⇓P **P** **08 25 28.3 +0.3**
baz=80
R06C Coleville 80.63 52 ⇑P **P** **08 25 28.8 +0.4**
baz=80
I11A Placerville 80.81 46 ⇑P **P** **08 25 29.0 -0.1**
baz=81
O08A Rochester Mine 80.83 50 ⇑P **P** **08 25 29.5 +0.1**
baz=81
D14A Greenough 80.98 42 ⇓P **P** **08 25 29.8 -0.2**
baz=81
B15A Bradely Ranch, 81.01 41 ⇓P **P** **08 25 30.2 0.0**
baz=81
F13A Darby 81.04 44 ⇑P **P** **08 25 29.8 -0.6**
baz=81
T06C Millerton Lake 81.06 53 ⇑P **P** **08 25 30.2 -0.5**
baz=81
MFID Camas Ranch 81.10 46 ⇑P **P** **08 25 30.6 -0.2**
baz=81
K11A Parker Ranch, 81.24 47 ⇓P **P** **08 25 31.5 0.0**
baz=81
L10A Juniper Basin 81.24 48 ⇑P **P** **08 25 31.6 +0.1**
baz=81
H12A Diamond D Ranc 81.25 45 ⇓P **P** **08 25 31.6 +0.1**
baz=81
A16A West Butte Ran 81.29 40 ⇓P **P** **08 25 31.4 -0.2**
baz=81,SNR=7.4
G13A Cobalt 81.41 44 ⇓P **P** **08 25 32.3 -0.1**
baz=81
M10A I.L. Ranch, Tu 81.43 48 ⇓P **P** **08 25 32.1 -0.4**
baz=81
B16A M & M Farms, S 81.47 41 ⇓P **P** **08 25 32.6 0.0**
baz=81,SNR=5.3
NVAR Mina Array Bea 81.49 52 P **P** **08 25 33.2 +0.3**
comp=Z,4.2nm,0.7s,mb4.5,baz=278,slow=5.7,SNR=18
NVAR Mina Array Bea 81.49 52 P **P** **08 25 33.2 +0.3**
O09A Fish Creek Ran 81.55 50 ⇓P **P** **08 25 33.3 +0.1**
baz=81
Q08A Gabbs 81.58 51 ⇓P **P** **08 25 33.3 -0.1**
baz=82
H13A Challis 81.63 45 ⇑P **P** **08 25 33.5 0.0**
baz=82
J12A Stokes Ranch, 81.65 46 ⇑P **P** **08 25 33.3 -0.4**
baz=82
L11A Cat Creek Ranc 81.69 47 ⇑P **P** **08 25 33.9 +0.1**
baz=82
C16A Fuhringer Ranc 81.73 41 ⇓P **P** **08 25 33.8 -0.1**
baz=82
E15A Deer Lodge 81.81 43 ⇑P **P** **08 25 34.3 -0.1**
baz=82
A17A Triple J Farms 81.81 40 ⇑P **P** **08 25 34.0 -0.4**
baz=82
PKM Peak Mountain 81.83 55 ⇓P **P** **08 25 34.7 -0.1**
baz=82
P09A Austin 81.85 50 ⇓P **P** **08 25 34.6 -0.2**
baz=82
HLID Hailey 81.97 46 ⇑P **P** **08 25 35.3 -0.1**
baz=82
HLID Hailey 81.97 46 *e*P **P** **08 25 35.2 -0.1**
comp=Z,1.7nm,0.7s,mb4.1
M11A Holland Ranch, 81.98 48 ⇑P **P** **08 25 35.6 +0.2**
baz=82
VES Vestal, Richgr 81.99 54 ⇑P **P** **08 25 35.1 -0.5**
baz=82
I13A Wildhorse Cree 82.00 45 ⇓P **P** **08 25 36.2 +0.7**
baz=82
K12A Draper Farm, C 82.05 47 ⇑P **P** **08 25 36.0 +0.2**
baz=82
B17A L&G Farms, Che 82.06 40 ⇑P **P** **08 25 35.7 0.0**
baz=82
F15A Butte 82.17 43 ⇑P **P** **08 25 36.3 0.0**
baz=82,SNR=6.8
H14A Leadore 82.17 44 ⇑P **P** **08 25 36.4 +0.1**
baz=82
HRY Holter Researc 82.18 42 *e*P **P** **08 25 36.4 +0.1**
HRY *e* 08 25 51.4
L12A House Creek Ra 82.19 47 ⇑P **P** **08 25 36.9 +0.4**
baz=82
J13A Cove Ranch, Pi 82.19 46 ⇑P **P** **08 25 36.7 +0.2**
baz=82
D16A Dana Ranch, Ca 82.20 42 ⇑P **P** **08 25 36.2 -0.3**
baz=82
A18A Metzger Ranch, 82.32 39 ⇓P **P** **08 25 37.0 0.0**
baz=82,SNR=5.3
I14A Mackay 82.43 45 ⇑P **P** **08 25 37.8 +0.1**
baz=82
R09A Tonopah 82.45 51 ⇑P **P** **08 25 37.9 -0.1**
baz=82
G15A Dillon 82.48 44 ⇑P **P** **08 25 38.3 +0.3**
baz=82
S09A Goldfield 82.56 52 ⇓P **P** **08 25 38.4 -0.1**
baz=82
M12A Wells 82.58 48 ⇓P **P** **08 25 38.8 +0.3**
baz=82
K13A Stover Farm, H 82.59 46 ⇑P **P** **08 25 38.7 +0.2**
baz=82
ELK Elko 82.65 49 *e*P **P** **08 25 38.7 -0.3**
ELK pmax pmax
comp=Z,3.0nm,0.9s
ELK Elko 82.65 49 *e*P **P** **08 25 38.7 -0.2**
comp=Z,2.8nm,0.9s,mb4.3
J14A Carey 82.66 46 ⇑P **P** **08 25 39.6 +0.6**
baz=82,SNR=6.1
N12A Clover Valley, 82.74 48 ⇑P **P** **08 25 39.3 -0.1**
baz=83
G16A Moss Hill, Enn 82.88 43 ⇑P **P** **08 25 39.6 -0.4**
baz=83
S10A Tonopah Range, 82.93 52 ⇓P **P** **08 25 40.7 +0.2**
baz=83
L13A Double Diamond 82.93 47 ⇓P **P** **08 25 40.6 +0.3**
baz=83
R10A Warm Springs 82.98 51 ⇑P **P** **08 25 40.6 -0.1**
baz=83
MPMC Manual Prospec 83.08 54 ⇓P **P** **08 25 41.4 +0.1**
baz=83
M13A Montello 83.11 48 ⇑P **P** **08 25 41.3 0.0**
baz=83
SUMG Summit 83.12 0 *e*P **P** **08 25 41.8 +1.0**
comp=Z,1.8nm,0.5s,mb4.4
LRMC Laurel Mountai 83.18 54 ⇑P **P** **08 25 41.5 -0.3**
baz=83
Q11A Duckwater 83.19 50 ⇓P **P** **08 25 41.4 -0.4**
baz=83
O12A Currie 83.20 49 ⇑P **P** **08 25 41.6 -0.2**
baz=83
EDW2 Edwards Air Fo 83.21 55 ⇓P **P** **08 25 41.8 -0.2**
baz=83
F17A Fitzpatrick Pl 83.27 42 ⇑P **P** **08 25 42.7 +0.7**
baz=83
J15A Blackfoot 83.33 45 ⇓P **P** **08 25 43.2 +0.8**
baz=83
FURC Furnace Creek, 83.36 53 ⇑P **P** **08 25 42.8 +0.1**
baz=83
E18A Harlowton 83.41 42 ⇓P **P** **08 25 43.2 +0.4**
baz=83,SNR=6.6
R11A Troy Canyon, C 83.46 51 ⇑P **P** **08 25 43.4 +0.2**
baz=83
FFC Flin Flon 83.49 32 *e*P **P** **08 25 42.9 -0.1**
FFC *e* pP 08 25 57.4 +2.1
FFC pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
FFC Flin Flon 83.49 32 *e*P **P** **08 25 42.9 -0.1**
comp=Z,7.5nm,0.9s,mb4.7
FFC *e* pP 08 25 57.4 +2.1
M14A Sheep Mountain 83.59 47 ⇓P **P** **08 25 44.0 +0.2**
baz=83,SNR=5.7
TPNV Topopah Spring 83.60 52 ⇑P **P** **08 25 43.6 -0.3**
baz=84
TPNV Topopah Spring 83.60 52 *e*P **P** **08 25 43.3 -0.6**
TPNV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TPNV Topopah Spring 83.60 52 *e*P **P** **08 25 43.3 -0.6**
comp=Z,4.1nm,0.9s,mb4.6
I16A Newdale 83.71 45 ⇓P **P** **08 25 45.1 +0.8**
baz=84
U10A Ash Meadows, A 83.77 53 ⇑P **P** **08 25 45.3 +0.5**
baz=84
F18A Big Timber 83.85 42 ⇓P **P** **08 25 45.7 +0.7**
baz=84
GSC Goldstone 83.90 54 ⇑P **P** **08 25 47.1 +1.6**
baz=84
J16A Bone 83.91 45 ⇑P **P** **08 25 45.7 +0.3**
baz=84
N14A Grayback Hills 84.00 48 ⇓P **P** **08 25 46.0 +0.1**
baz=84
L15A Malad City 84.00 46 ⇓P **P** **08 25 45.9 0.0**
baz=84
SHOC Shoshone 84.03 53 ⇓P **P** **08 25 45.3 -0.9**
baz=84
P13A Bates Ranch, G 84.06 49 ⇓P **P** **08 25 45.9 -0.4**
baz=84
K16A Soda Springs 84.14 45 ⇑P **P** **08 25 47.5 +1.0**
baz=84
R12A Pony Springs, 84.16 51 ⇓P **P** **08 25 46.5 -0.3**
baz=84
M15A Larsen Ranch, 84.21 47 ⇓P **P** **08 25 46.9 0.0**
baz=84
HEC Hector,Ludlow 84.46 54 ⇑P **P** **08 25 47.2 -1.2**

	baz=84						
TUQ	**Turquoise Moun**	**84.49**	**54**	⇓P	**P**	**08 25 48.3**	**-0.2**
	baz=84						
DUG	**Dugway**	**84.55**	**48**	⇓P	**P**	**08 25 48.8**	**+0.1**
	baz=84,SNR=6.7						
DUG	**Dugway**	**84.55**	**48**	*e*P	**P**	**08 25 48.5**	**-0.2**
DUG				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.6						
DUG	**Dugway**	**84.55**	**48**	*e*P	**P**	**08 25 48.5**	**-0.2**
	comp=Z,7.4nm,1.3s,mb4.7						
P14A	**Drum Mountains**	**84.66**	**49**	⇑P	**P**	**08 25 49.3**	**0.0**
	baz=84,SNR=6.4						
R13A	**O'Grain Ranch,**	**84.67**	**50**	⇑P	**P**	**08 25 49.2**	**-0.2**
	baz=84						
V11A	**Goodsprings**	**84.68**	**53**	⇓P	**P**	**08 25 49.4**	**-0.1**
	baz=84						
Q14A	**Sevier Lake (B**	**84.79**	**49**	⇓P	**P**	**08 25 50.0**	**+0.1**
	baz=85,SNR=5.0						
I18A	**Diamond G Ranc**	**84.86**	**44**	⇑P	**P**	**08 25 50.0**	**-0.1**
	baz=85						
PFO	**Pinyon Flat Ob**	**84.90**	**55**	⇑P	**P**	**08 25 50.5**	**-0.1**
	baz=85						
L17A	**Cokeville**	**84.95**	**46**	⇓P	**P**	**08 25 50.8**	**+0.1**
	baz=85						
J18A	**Kendall Valley**	**84.97**	**45**	⇓P	**P**	**08 25 51.1**	**+0.3**
	baz=85,SNR=5.8						
GMRC	**Granite Mounta**	**84.98**	**54**	⇓P	**P**	**08 25 50.5**	**-0.5**
	baz=85						
S13A	**Holt Ranch, En**	**85.02**	**51**	⇓P	**P**	**08 25 51.1**	**-0.1**
	baz=85						
U12A	**Valley of Fire**	**85.06**	**52**	⇑P	**P**	**08 25 51.1**	**-0.2**
	baz=85						
BELC	**Belle Mtn.**	**85.07**	**55**	⇑P	**P**	**08 25 50.6**	**-0.8**
	baz=85						
AKASG	**Malin Array Be**	**85.11**	**324**	P	**P**	**08 25 50.6**	**-0.7**
	comp=Z,4.5nm,0.7s,mb4.7,baz=50,slow=4.7,SNR=15						
AKASG	**Malin Array Be**	**85.11**	**324**	*i* P	**P**	**08 25 50.7**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIEV	**Kiev**	**85.12**	**324**	*e*P	**P**	**08 25 50.4**	**-1.0**
KIEV				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
KIEV	**Kiev**	**85.12**	**324**	*e*P	**P**	**08 25 50.4**	**-1.0**
	comp=Z,12nm,1.1s,mb5.0						
V12A	**Nelson**	**85.15**	**53**	⇑P	**P**	**08 25 51.2**	**-0.6**
	baz=85						
P15A	**Leamington**	**85.20**	**49**	⇑P	**P**	**08 25 51.8**	**-0.2**
	baz=85						
K18A	**Toltan Ranch,**	**85.23**	**45**	⇑P	**P**	**08 25 53.0**	**+1.0**
	baz=85						
MONP	**Monument Peak**	**85.24**	**56**	⇑P	**P**	**08 25 52.2**	**-0.1**
	baz=85						
T13A	**Saint George**	**85.24**	**51**	⇓P	**P**	**08 25 52.2**	**-0.1**
	baz=85						
JLU	**Jordanelle**	**85.28**	**47**	*e*P	**P**	**08 25 51.9**	**-0.4**
	comp=Z,4.2nm,0.9s,mb4.6						
JLU				*e*		08 26 08.9	
M17A	**Scullys Gap (B**	**85.39**	**46**	⇑P	**P**	**08 25 52.6**	**-0.3**
	baz=85						
Q15A	**Fillmore**	**85.40**	**49**	⇑P	**P**	**08 25 52.9**	**-0.1**
	baz=85						
O16A	**Springville**	**85.43**	**48**	⇑P	**P**	**08 25 52.8**	**-0.3**
	baz=85						
U13A	**Pakoon Wash**	**85.48**	**52**	⇑P	**P**	**08 25 53.5**	**+0.1**
	baz=85,SNR=5.2						
BW06	**Boulder Array**	**85.48**	**45**	⇓P	**P**	**08 25 53.1**	**-0.2**
	baz=85						
PDAR	**Pinedale Array**	**85.48**	**45**	P	**P**	**08 25 52.8**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.2,baz=318,slow=2.0,SNR=10						
PDAR				LR	LR	09 00 05.5	
	comp=Z,151nm,18.9s,MS4.4,baz=281,slow=33						
N17A	**Moffit Pass**	**85.53**	**47**	⇑P	**P**	**08 25 53.5**	**-0.1**
	baz=85						
P16A	**Fountain Green**	**85.61**	**48**	⇓P	**P**	**08 25 54.1**	**+0.1**
	baz=86						
BC3	**Big Chuckw Mtn**	**85.63**	**55**	⇑P	**P**	**08 25 54.3**	**0.0**
	baz=86						
IRM	**Iron Mountain**	**85.63**	**54**	⇓P	**P**	**08 25 53.4**	**-0.8**
	baz=86						
V13A	**Grand Canyon W**	**85.72**	**53**	⇓P	**P**	**08 25 54.3**	**-0.3**
	baz=86						
M18A	**Lyman**	**85.80**	**46**	⇑P	**P**	**08 25 54.8**	**-0.2**
	baz=86						
T14A	**Hurricane**	**85.81**	**51**	⇑P	**P**	**08 25 55.2**	**+0.2**
	baz=86						
R15A	**Junction**	**85.84**	**50**	⇑P	**P**	**08 25 55.1**	**-0.1**
	baz=86						
K19A	**Absolon Red Bu**	**85.91**	**45**	⇓P	**P**	**08 25 55.2**	**-0.2**
	baz=86						
L19A	**Farson**	**85.94**	**45**	⇓P	**P**	**08 25 55.4**	**-0.2**
	baz=86						
O17A	**Robinson Place**	**85.95**	**47**	⇑P	**P**	**08 25 55.7**	**0.0**
	baz=86,SNR=5.4						
U14A	**Mt Trumbull**	**86.04**	**52**	⇑P	**P**	**08 25 56.2**	**0.0**
	baz=86						
HFS	**Hagfors**	**86.05**	**337**	P	**P**	**08 25 54.7**	**-1.0**
	comp=Z,9.3nm,0.8s,mb5.1,baz=72,slow=4.8,SNR=21						
NOA	**NORSAR Array B**	**86.24**	**339**	P	**P**	**08 25 56.0**	**-0.7**
	comp=Z,5.0nm,0.8s,mb4.8,baz=43,slow=4.6,SNR=14						
Q16A	**Castle Valley**	**86.27**	**49**	⇓P	**P**	**08 25 57.3**	**0.0**
	baz=86						
N18A	**Larsen Ranch,**	**86.28**	**46**	⇑P	**P**	**08 25 56.9**	**-0.5**
	baz=86						
P17A	**Butcher Ranch,**	**86.30**	**48**	⇓P	**P**	**08 25 57.5**	**0.0**
	baz=86						
K20A	**Yellowstone Ra**	**86.31**	**44**	⇓P	**P**	**08 25 57.1**	**-0.3**
	baz=86						
PDMCI	**Parker Dam,Lak**	**86.31**	**54**	⇑P	**P**	**08 25 57.4**	**-0.3**
	baz=86						
T15A	**Red Dirt Ranch**	**86.33**	**51**	⇓P	**P**	**08 25 57.9**	**+0.3**
	baz=86						
R16A	**Teasdale**	**86.36**	**49**	⇑P	**P**	**08 25 58.3**	**+0.5**
	baz=86,SNR=6.4						
GLA	**Glamis**	**86.37**	**55**	⇓P	**P**	**08 25 58.4**	**+0.5**
	baz=86						
O18A	**Roosevelt**	**86.41**	**47**	⇑P	**P**	**08 25 58.4**	**+0.4**
	baz=86						
X13A	**Yucca**	**86.41**	**54**	⇓P	**P**	**08 25 58.1**	**0.0**
	baz=86						
V14A	**Boquillas Ranc**	**86.45**	**52**	⇑P	**P**	**08 25 58.4**	**+0.1**
	baz=86,SNR=5.9						
S16A	**Weppner Ranch,**	**86.55**	**50**	⇓P	**P**	**08 25 58.6**	**-0.1**
	baz=86						
SRU	**San Rafael**	**86.62**	**48**	⇑P	**P**	**08 25 58.9**	**-0.1**
	baz=86,SNR=5.7						
L20A	**Wamsutter**	**86.64**	**45**	⇓P	**P**	**08 25 58.7**	**-0.3**
	baz=86						
N19A	**John Jarvie Ra**	**86.65**	**46**	⇑P	**P**	**08 25 59.0**	**-0.1**
	baz=86						
W14A	**Seligman**	**86.67**	**53**	⇑P	**P**	**08 25 59.5**	**+0.1**
	baz=86						
U15A	**North Rim**	**86.67**	**51**	⇓P	**P**	**08 25 59.7**	**+0.4**
	baz=86,SNR=7.3						
Y13A	**Salome**	**86.77**	**54**	⇓P	**P**	**08 25 59.8**	**0.0**
	baz=87						
R17A	**Hanksville Air**	**86.83**	**49**	⇓P	**P**	**08 26 00.1**	**0.0**
	baz=87						
V15A	**Kaibab Nationa**	**87.04**	**52**	⇑P	**P**	**08 26 01.3**	**+0.1**
	baz=87						
S17A	**Black Ridge (B**	**87.14**	**50**	⇑P	**P**	**08 26 01.0**	**-0.6**
	baz=87						
X14A	**Yava**	**87.15**	**53**	⇑P	**P**	**08 26 02.3**	**+0.6**
	baz=87						
W15A	**Williams**	**87.27**	**52**	⇑P	**P**	**08 26 02.6**	**+0.3**
	baz=87						
N20A	**Spence Gulch,**	**87.28**	**46**	⇑P	**P**	**08 26 02.8**	**+0.6**
	baz=87						
113A	**Mohawk Valley,**	**87.29**	**55**	⇑P	**P**	**08 26 02.1**	**-0.3**
	baz=87						
Y14A	**Wickenburg**	**87.32**	**54**	⇓P	**P**	**08 26 02.5**	**0.0**
	baz=87						
R18A	**Canyonlands Na**	**87.40**	**49**	⇑P	**P**	**08 26 02.3**	**-0.5**
	baz=87						
P19A	**Cripple Cowboy**	**87.41**	**47**	⇑P	**P**	**08 26 03.1**	**+0.2**
	baz=87						
T17A	**Navajo Res., N**	**87.45**	**50**	⇓P	**P**	**08 26 02.9**	**-0.1**
	baz=87						
M21A	**Separation Pea**	**87.47**	**45**	⇓P	**P**	**08 26 03.5**	**+0.4**
	baz=87						
Q19A	**Hogan Spring (**	**87.55**	**48**	⇑P	**P**	**08 26 03.3**	**-0.3**
	baz=87						
X15A	**Humboldt**	**87.62**	**53**	⇓P	**P**	**08 26 04.4**	**+0.5**
	baz=88						
U16A	**Tuba City**	**87.63**	**51**	⇓P	**P**	**08 26 04.3**	**+0.3**
	baz=88						
O20A	**White River Ci**	**87.65**	**47**	⇓P	**P**	**08 26 04.0**	**0.0**
	baz=88						
S18A	**Hurst Farm, Bl**	**87.67**	**49**	⇓P	**P**	**08 26 04.1**	**0.0**
	baz=88						
U17A	**Shonto**	**87.74**	**51**	⇓P	**P**	**08 26 05.0**	**+0.5**
	baz=88,SNR=5.1						
WUAZ	**Wupatki**	**87.75**	**52**	⇓P	**P**	**08 26 04.9**	**+0.3**
	baz=88						
WUAZ	**Wupatki**	**87.75**	**52**	*e*P	**P**	**08 26 04.6**	**0.0**
	comp=Z,2.3nm,0.9s,mb4.4						
Y15A	**Casa Rosa Ranc**	**87.80**	**54**	⇑P	**P**	**08 26 05.2**	**+0.3**
	baz=88						
N21A	**Black Mountain**	**87.80**	**46**	⇓P	**P**	**08 26 05.1**	**+0.4**
	baz=88						
W16A	**Flagstaff**	**87.84**	**52**	⇑P	**P**	**08 26 05.1**	**+0.1**
	baz=88						
R19A	**Curley Farm, L**	**87.88**	**49**	⇓P	**P**	**08 26 05.0**	**-0.2**
	baz=88						
T18A	**Mexican Hat**	**88.03**	**50**	⇑P	**P**	**08 26 05.6**	**-0.3**
	baz=88						
X16A	**Lo Mia Camp, P**	**88.23**	**53**	⇑P	**P**	**08 26 07.6**	**+0.7**
	baz=88						
S19A	**Harvey Farm, M**	**88.24**	**49**	⇑P	**P**	**08 26 06.7**	**-0.2**
	baz=88						
Z15A	**Gila River Ind**	**88.24**	**54**	⇓P	**P**	**08 26 07.0**	**+0.1**
	baz=88						
BRTR	**Keskin Array B**	**88.28**	**313**	P	**P**	**08 26 06.5**	**-0.5**
	comp=Z,3.4nm,0.7s,mb4.7,baz=93,slow=3.4,SNR=18						
214A	**Organ Pipe Nat**	**88.38**	**56**	⇓P	**P**	**08 26 07.9**	**+0.3**
	baz=88						
U18A	**Rough Rock, Ch**	**88.38**	**50**	⇓P	**P**	**08 26 07.6**	**+0.1**
	baz=88						
Y16A	**Circle Bar Ran**	**88.46**	**53**	⇓P	**P**	**08 26 08.2**	**+0.2**
	baz=88						
115A	**Sonoran Desert**	**88.47**	**55**	⇓P	**P**	**08 26 08.5**	**+0.4**
	baz=88						
V18A	**Ganado**	**88.69**	**51**	⇓P	**P**	**08 26 09.3**	**+0.3**
	baz=88						
Z16A	**Peralta Trail,**	**88.76**	**54**	⇓P	**P**	**08 26 09.7**	**+0.3**
	baz=89						
T19A	**Beclabito**	**88.77**	**50**	⇑P	**P**	**08 26 09.8**	**+0.4**
	baz=89						
MVCO	**Mesa Verde**	**88.95**	**49**	⇑P	**P**	**08 26 10.5**	**+0.3**
	baz=89						
R21A	**Cimarron**	**89.01**	**48**	⇑P	**P**	**08 26 11.1**	**+0.7**
	baz=89						
Y17A	**Roosevelt**	**89.01**	**53**	⇑P	**P**	**08 26 10.7**	**+0.2**
	baz=89						
BUR08	**Bucovina Ar. S**	**89.02**	**323**	*e*P	**P**	**08 26 10.1**	**-0.2**
Y18A	**Canyon Day Jun**	**89.56**	**53**	⇓P	**P**	**08 26 13.3**	**+0.2**
	baz=89						
X19A	**St. Johns**	**89.78**	**52**	⇑P	**P**	**08 26 15.2**	**+1.0**
	baz=90						
118A	**Homack Ranch,**	**90.17**	**54**	⇑P	**P**	**08 26 16.5**	**+0.5**
	baz=90						
218A	**Dragoon**	**90.44**	**54**	⇓P	**P**	**08 26 17.5**	**+0.3**
	baz=90						
119A	**Ashpeak Ranch,**	**90.59**	**53**	⇓P	**P**	**08 26 18.5**	**+0.5**
	baz=90						
219A	**White Tail Can**	**91.01**	**54**	⇑P	**P**	**08 26 19.9**	**0.0**
	baz=91						
ANMO	**Albuquerque**	**91.52**	**50**	*e*P	**P**	**08 26 22.4**	**+0.2**
ANMO				*e*		08 26 38.2	
ANMO				pmax	pmax		
	comp=Z,15nm,1.8s						
ANMO	**Albuquerque**	**91.52**	**50**	*e*P	**P**	**08 26 22.4**	**+0.2**
	comp=Z,15nm,1.8s,mb5.0						
ANMO				*e*		08 26 38.2	
GERES	**GERESS Array B**	**94.07**	**329**	P	**P**	**08 26 33.0**	**-0.7**
	comp=Z,0.4nm,0.4s,mb4.2,baz=15,slow=5.7,SNR=4.2						
TXAR	**Lajitas Array**	**96.50**	**54**	P	**P**	**08 26 47.0**	**+1.8**
	comp=Z,0.3nm,0.6s,mb3.9,baz=294,slow=4.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**126.81**	**311**	PKP	PKPdf	08 32 19.0	-0.7
	comp=Z,0.8nm,0.6s,baz=46,slow=1.4,SNR=4.7						
VNA2	**Neumayer--Watz**	**130.59**	**192**	*e*PKPdf	PKPdf	08 32 24.4	-0.8
	baz=155,slow=1.5						
VNA2				*e*		08 32 29.4	
VNA2				*e*		08 32 43.0	
VNA3	**Neumayer Olymp**	**130.75**	**191**	*e*PKPdf	PKPdf	08 32 25.3	-0.2
VNA3				*e*		08 32 30.4	
VNA3				*e*		08 32 43.4	
PLCA	**Paso Flores**	**147.69**	**128**	PKPbc	PKPbc	08 33 00.1	+0.1
	comp=Z,4.5nm,0.4s,baz=243,slow=3.5,SNR=28						

GUC 03 08:38:36.9±0.6**, 2299S**×**7031W, h32**^{km}±7^{km}**, MD3.5, ML2.1, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.41**	**166**	*e*P	Pb	08 38 48.0	+2.0
CEN1				*i* S	Sb	08 38 56.3	+4.1
CEN1				AML	AML	08 38 58.9	
	comp=E,83nm,0.3s						
ANCH	**Antofagasta**	**0.69**	**188**	*e*P	Pn	08 38 49.9	-0.6
TOCH	**Tocopilla**	**0.90**	**6**	⇑*e*P	Pn	08 38 52.7	-0.7
TOCH				*i* S	Sn	08 39 04.8	-0.4
TOCH				AML	AML	08 39 06.1	
	comp=E,243nm,0.1s						
LVC	**Limon Verde**	**1.34**	**74**	*e*P	Pn	08 39 00.7	+1.3
LVC				*i* S	Sn	08 39 18.6	+2.5

*IDC **03** 08:39:07.4±1.2, 2497N×12795E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=39.3km s-min=24.4km az=78.0*
*ISCJB **03** 08:39:09.7±1.8, 2498N±005×12791E±006, h27^{km}±12^{km}, mb3.6/7, Error ellipse: s-maj=9.4km s-min=8.0km az=136.7*
*JMA **03** 08:39:10.6±0.3, 2500N×12792E, h57^{km}, M3.7*
ISC 03 08:39:10.4±2.9**, 2502N**±005×**12787E**±007**, h19**^{km}±19^{km}**, n20,** σ**0.72**/27**, mb3.6**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.12**	**355**	P	**Pn**	**08 39 31.0**	**-0.1**
JJT2				*e*S	**Sb**	**08 39 46.0**	**+0.7**
NAH1	**Naha**	**1.19**	**352**	P	**Pn**	**08 39 31.8**	**-0.2**
NAH1				*e*S	**Sb**	**08 39 46.8**	**-0.5**
JKE	**Kume jima 2**	**1.62**	**323**	P	**Pn**	**08 39 38.2**	**+0.2**
JKE				*e*S	**Sn**	**08 39 58.7**	**+0.3**
JAGN	**Aguni-jima**	**1.66**	**340**	P	**Pn**	**08 39 38.9**	**+0.4**
JAGN				*e*S	**Sn**	**08 39 59.4**	**+0.1**
JOW	**Kunigami**	**1.84**	**11**	Pn	**Pn**	**08 39 40.2**	**-0.8**
	70nm,0.3s,baz=166,slow=17,SNR=139						
JOW				Sn	**Sn**	**08 40 00.4**	**-3.4**
	76nm,0.3s,baz=135,slow=21,SNR=13						
JOW	**Kunigami**	**1.84**	**11**	P	**Pn**	**08 39 40.2**	**-0.8**
JIH	**Iheya**	**2.01**	**3**	P	**Pn**	**08 39 43.5**	**+0.2**
JIH				*e*S	**Sn**	**08 40 07.8**	**-0.1**
JOGS	**Gusukube**	**2.25**	**264**	*e*S	**Sn**	**08 40 13.4**	**-0.5**
JMJ	**Miyako jima 2**	**2.34**	**265**	*e*S	**Sn**	**08 40 15.3**	**-0.9**
JTK	**Tokunoshima**	**2.92**	**19**	P	**Pn**	**08 39 55.4**	**-0.5**
JMZ	**Minamidaito 2**	**3.14**	**75**	P	**Pn**	**08 39 54.5**	**-4.3**
JAM	**Amami Oshima**	**3.72**	**24**	P	**Pn**	**08 40 06.3**	**-0.5**
JAM				*e*S	**Sn**	**08 40 45.6**	**-4.5**
JZK	**Kikaishima**	**3.78**	**29**	P	**Pn**	**08 40 07.7**	**0.0**
SONM	**Songino Array**	**28.40**	**329**	P	**P**	**08 45 06.2**	**+2.6**
	0.6nm,0.5s,mb3.5,baz=149,slow=10,SNR=4.0						
MKAR	**Makanchi Array**	**42.10**	**313**	P	**P**	**08 47 01.4**	**+0.1**
	0.7nm,0.5s,mb3.6,baz=97,slow=10,SNR=15						
ZALV	**Zalesovo Beam**	**43.01**	**324**	P	**P**	**08 47 08.8**	**+0.3**
	0.8nm,0.4s,mb3.8,baz=92,slow=6.7,SNR=4.9						
ASAR	**Alice Springs**	**48.75**	**173**	P	**P**	**08 47 53.6**	**-0.5**
	0.5nm,0.8s,mb3.6,baz=359,slow=8.8,SNR=5.7						
AKASG	**Malin Array Be**	**76.23**	**320**	P	**P**	**08 50 57.9**	**+0.3**
	0.4nm,0.4s,mb3.7,baz=62,slow=5.4,SNR=3.5						
BRTR	**Keskin Array B**	**77.52**	**308**	P	**P**	**08 51 06.0**	**+0.9**
	0.5nm,0.6s,mb3.6,baz=106,slow=2.1,SNR=3.1						
YKA	**Yellowknife Ar**	**79.76**	**25**	P	**P**	**08 51 17.3**	**+0.4**
	0.2nm,0.6s,mb3.2,baz=296,slow=5.2,SNR=3.3						

SKHL 03 09:29:04.6±1.6**, 5290N**×**14360E, h10**^{km}**, mb3.5**/2**, 1D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**0.77**	**329**	⇓*i*Pg	Pg	09 29 21.6	+2.3
OKH				AMB	AMB	09 29 21.8	
	400nm,0.5s						
OKH				*i* Sg	Sg	09 29 32.4	+3.1
OKH				A		09 29 33.5	
	2μm,0.5s						
NKL	**Nikolayevsk**	**1.78**	**279**	*e*Pg	Pg	09 29 39.5	+0.8
NKL				AMB	AMB	09 29 41.1	
	20nm,0.4s						
NKL				*e*rx	rx	09 29 44.0	
NKL				*e*S	Sn	09 29 57.6	-0.4
NKL				*e*Sg	Sg	09 30 05.0	+3.2
NKL				A		09 30 07.0	
	80nm,0.7s						
NKL				A		09 30 07.0	
	110nm,0.3s						
TYV	**Tymovskoe**	**2.12**	**196**	*e*rx	rx	09 30 10.6	
TYV				*e*Sg	Sg	09 30 17.3	+4.6
GRNR	**Gornyy**	**4.94**	**247**	*e*Pg	Pg	09 30 41.5	+2.4
GRNR				*e*Sg	Sg	09 31 50.0	+7.0
EKMR	**Ekimchan**	**6.43**	**276**	*e*Pg	Pg	09 31 12.3	+4.6
EKMR				AMB	AMB	09 31 20.9	
	2.0nm,0.4s						
EKMR				*e*S	Sn	09 31 54.5	+1.8
EKMR				A		09 32 29.5	
	8.0nm,0.5s						
EKMR				A		09 32 29.5	
	4.0nm,0.5s						
EKMR				A		09 32 29.5	
	5.0nm,0.5s						

*BJI **03** 10:08:37.5, 5340N×16500W, h10^{km}, mB4.7, mb4.6, Ms4.4, Msz4.3*
*IDC **03** 10:08:38.2±1.2, 5354N×16523W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.9/25, mbtmp3.9/7, MS3.6/4, Ms1 3.6/4, ms1mx3.0/32, Error ellipse: s-maj=48.3km s-min=23.2km az=2.0*
*NEIC **03** 10:08:41.6, 5342N×16501W, h26^{km}, ML4.0(AEIC), After AEIC.*
*ISCJB **03** 10:08:42.0±0.6, 5346N±006×16501W±006, h33^{km}, mb4.1/11, MS3.7/6, Error ellipse: s-maj=8.0km s-min=5.0km az=5.0*
ISC 03 10:08:44.0±0.6**, 5354N**±006×**16508W**±006**, h35**^{km}**, n23,** σ**0.84**/26**, mb4.1**/11**, MS3.7**/6**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKA	**Akutan**	**0.72**	**326**	P	**Pn**	**10 08 57.1**	**-0.5**
AKA				S	**Sn**	**10 09 08.2**	**+0.8**
AKUT	**Akutan**	**0.72**	**326**	P	**Pn**	**10 08 57.1**	**-0.5**
AKUT				S	**Sn**	**10 09 08.3**	**+0.9**
AKLV	**Akutan Long Va**	**0.81**	**321**	P	**Pn**	**10 08 58.2**	**-0.6**
AKGG	**Akutan Green G**	**0.85**	**321**	P	**Pn**	**10 08 59.0**	**-0.4**
UNV	**Unalaska Valle**	**0.90**	**290**	P	**Pn**	**10 08 58.6**	**-1.4**
UNV				S	**Sn**	**10 09 11.3**	**-0.4**
FALS	**False Pass**	**1.64**	**36**	P	**Pn**	**10 09 09.2**	**-1.0**
FALS				S	**Sn**	**10 09 31.4**	**+1.3**
SDPT	**Sand Point**	**3.24**	**54**	P	**Pn**	**10 09 31.9**	**-0.3**
SDPT				S	**Sn**	**10 10 09.6**	**+0.1**
CHGN	**Chignik**	**4.74**	**52**	*e*Pn	**Pn**	**10 09 52.9**	**+0.2**
CHGN				*e*Sn	**Sn**	**10 10 44.9**	**-1.5**
PETK	**Petropavlovsk-**	**22.07**	**284**	LR	LR	10 21 15.7	
	comp=Z,36nm,21.1s,MS2.8,baz=177,slow=34						
YKA	**Yellowknife Ar**	**27.50**	**51**	P	**P**	**10 14 26.7**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=274,slow=8.0,SNR=14						
YBH	**Yreka Blue Hor**	**30.45**	**95**	P	**P**	**10 14 54.4**	**+1.4**
	2.4nm,0.9s,mb3.9,baz=305,slow=16,SNR=2.7						
NVAR	**Mina Array Bea**	**35.15**	**96**	P	**P**	**10 15 34.6**	**+0.6**
	3.5nm,0.8s,mb4.3,baz=297,slow=9.0,SNR=14						
PDAR	**Pinedale Array**	**37.66**	**83**	P	**P**	**10 15 55.1**	**-0.3**
	0.5nm,0.6s,mb3.4,baz=324,slow=2.0,SNR=5.7						
MJAR	**Matsushiro Arr**	**42.31**	**270**	LR	LR	10 33 49.9	
	comp=Z,29nm,18.7s,MS3.2,baz=295,slow=36						
TXAR	**Lajitas Array**	**50.18**	**93**	P	**P**	**10 17 35.5**	**-0.4**
	1.8nm,0.6s,mb4.3,baz=300,slow=5.2,SNR=20						
SCHQ	**Schefferville**	**52.78**	**46**	LR	LR	10 41 20.4	
	comp=Z,248nm,21.8s,MS4.2,baz=147,slow=37						
BJI	**Beijing**	**52.87**	**289**	P	**P**	**10 17 57.0**	**+1.1**
BJI				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
SONM	**Songino Array**	**52.89**	**302**	P	**P**	**10 17 55.2**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.6,baz=35,slow=8.5,SNR=3.6						
XAN	**Xi'an**	**61.20**	**289**	P	**P**	**10 18 55.8**	**+0.8**
XAN				AP	pP	10 18 59.3	-6.3
XAN				PP	PP	10 21 10.7	+1.1
XAN				S	**S**	**10 27 15.9**	**+3.8**
XAN				SS	SS	10 31 17.0	+5.1
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.2						
XAN				LR	LR		
	comp=Z,35nm,17.6s,MS3.6						
LZH	**Lanzhou**	**62.52**	**294**	*e*P	**P**	**10 19 07.5**	**+3.7**
LZH				AP	pP	10 19 10.7	-3.8
LZH				XP	sP	10 19 12.3	-6.2
LZH				*e*PP	PP	10 21 26.6	+5.5
LZH				AMB	AMB		
	comp=Z,16nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,98nm,6.7s						
LZH				LR	LR		
	comp=E,143nm,16.7s						
LZH				LR	LR		
	comp=Z,209nm,18.4s,MS4.3						
GYA	**Guiyang**	**68.17**	**285**	P	**P**	**10 19 41.2**	**+0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**93.16**	**233**	P	**P**	**10 21 53.7**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.8,baz=21,slow=5.5,SNR=3.3						
STKA	**Stephens Creek**	**96.80**	**223**	LR	LR	11 04 27.4	
	comp=Z,53nm,18.0s,MS4.1,baz=24,slow=35						

IDC 03 10:25:39.0±1.1**, 2541S**×**7008E, h0**^{km}**, mb3.8**/5**, mb1 3.8**/5**, mb1mx3.6**/19**, mbtmp3.8**/5**, MS3.6**/3**, Ms1 3.7**/3**, ms1mx3.2**/26**, Error ellipse: s-maj=46.1km s-min=28.8km az=53.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**51.87**	**36**	LR	LR	10 55 06.6	
	comp=Z,26nm,19.1s,baz=235,slow=34						
ASAR	**Alice Springs**	**57.59**	**103**	P	P	10 35 31.2	+0.3
	0.4nm,0.8s,baz=256,slow=5.2,SNR=4.6						
VNDA	**Vanda**	**65.77**	**166**	P	P	10 36 25.2	-0.1
	0.4nm,0.6s,baz=285,slow=8.1,SNR=4.0						
CTA	**Charters Tower**	**69.59**	**103**	LR	LR	11 06 35.2	
	comp=Z,50nm,18.0s,baz=50,slow=35						
MKAR	**Makanchi Array**	**72.70**	**9**	P	P	10 37 08.1	-0.4
	1.0nm,0.8s,baz=205,slow=7.0,SNR=7.6						
BRTR	**Keskin Array B**	**73.17**	**331**	P	P	10 37 12.7	+1.3
	0.7nm,0.7s,baz=172,slow=11,SNR=4.2						
TORD	**Torodi Ar. Bea**	**76.81**	**292**	P	P	10 37 32.8	-0.3
	1.1nm,1.0s,baz=120,slow=5.8,SNR=4.1						
DBIC	**Dimbokro**	**79.38**	**283**	LR	LR	11 12 54.6	
	comp=Z,56nm,21.0s,baz=321,slow=36						

GUC 03 10:35:18.2±0.6**, 2279S**×**7039W, h41**^{km}±3^{km}**, MD3.6, ML2.6, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.32**	**190**	*e*P	Pn	10 35 26.3	-0.5
MECH				*i* S	Sn	10 35 32.9	+0.1
MECH				AML	AML	10 35 39.3	
	comp=N,1μm,0.5s						
CEN1	**Los Morros**	**0.63**	**164**	⇑*e*P	Pn	10 35 33.0	+2.3
CEN1				*i* S	Sn	10 35 44.0	+4.4
TOCH	**Tocopilla**	**0.71**	**14**	*e*P	Pn	10 35 31.6	-0.2
TOCH				*i* S	Sn	10 35 42.0	+0.4
TOCH				AML	AML	10 35 43.6	
	comp=E,366nm,0.1s						
ANCH	**Antofagasta**	**0.89**	**181**	*e*P	Pn	10 35 34.7	+0.4
ANCH				*i* S	Sn	10 35 46.8	+0.8
LVC	**Limon Verde**	**1.38**	**83**	*e*P	Pn	10 35 42.9	+2.0
LVC				*i* S	Sn	10 36 01.4	+3.5
CPN1	**Cerro Paranal**	**1.83**	**180**	*i* S	Sn	10 36 09.2	+0.1

IDC 03 10:35:52.6±29.0**, 2310S**×**17931E, h550**^{km}±270^{km}**, mb3.2**/2**, mb1 3.3**/2**, mb1mx2.9**/15**, mbtmp3.2**/2**, Error ellipse: s-maj=210.0km s-min=141.8km az=92.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.44**	**247**	*e*P	P	10 41 55.2	+0.5
	2.2nm,0.9s						
STKA	**Stephens Creek**	**34.44**	**247**	P	P	10 41 54.8	0.0
	1.0nm,0.4s,baz=90,slow=9.3,SNR=5.7						
ASAR	**Alice Springs**	**41.54**	**260**	P	P	10 42 52.4	-0.2
	3.7nm,0.7s,baz=90,slow=7.0,SNR=43						
ASAR				PcP	PcP	10 44 36.5	-0.4
	0.5nm,0.7s,baz=107,slow=3.7,SNR=4.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**41.82**	**265**	*e*P	P	10 42 54.0	-0.9
KAKA	**Kakadu**	**45.61**	**275**	*e*P	x	10 43 06.2	
	20nm,1.2s						
FORT	**Forrest**	**46.00**	**249**	*e*P	P	10 43 26.4	-0.6
	12nm,0.6s						
VNA3	**Neumayer Olymp**	**85.70**	**177**	*e*	P	10 47 33.0	-0.1
VNA3				*e*		10 47 35.9	
VNA2	**Neumayer--Watz**	**86.11**	**178**	*e*	P	10 47 35.3	+0.2
	baz=189,slow=3.7						
VNA2				*e*		10 47 37.7	
AKASG	**Malin Array Be**	**143.96**	**327**	PKP	PKPdf	10 54 23.9	-1.5
	1.0nm,0.4s,baz=44,slow=2.7,SNR=4.1						
BRTR	**Keskin Array B**	**146.59**	**308**	PKPbc	PKPbc	10 54 33.0	+0.2
	0.8nm,0.6s,baz=90,slow=4.3,SNR=4.1						

*ISCJB **03** 10:53:55.1±0.7, 178N±005×12749E±006, h136km±5km, mb4.2/14, Error ellipse: s-maj=10.7km s-min=7.0km az=138.6*
*NEIC **03** 10:53:56.8±2.4, 172N×12748E, h138km±23km, mb4.7/4, Error ellipse: s-maj=16.9km s-min=7.2km az=69.0*
*IDC **03** 10:53:57.0±1.8, 165N×12740E, h142km±15km, mb3.8/11, mb1 4.0/12, mb1mx3.9/17, mbtmp3.9/12, Error ellipse: s-maj=20.5km s-min=9.5km az=76.0*
*DJA **03** 10:53:59, 166N×12734E, h109km, Mw5.3/4*
ISC 03 10:53:56.6±0.6**, 172N**±005×**12748E**±006**, h135**km±5km**, n38,** σ**0s98**/42**, mb4.2**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.95**	**187**	P	**Pn**	**10 54 19.1**	**-0.4**
TNTI				S	**Sn**	**10 54 36.8**	**-0.1**
LBMI	**Labuha**	**2.34**	**180**	P	**Pn**	**10 54 36.2**	**+1.1**
LBMI				S	**Sn**	**10 55 04.7**	**0.0**
MNI	**Manado**	**2.66**	**264**	P	**Pn**	**10 54 38.4**	**-0.6**
MNI				S	**Sn**	**10 55 09.4**	**-2.2**
SWI	**Sorong**	**4.57**	**124**	P	**Pn**	**10 55 04.9**	**+0.9**
KDI	**Kendari**	**7.45**	**221**	P	**Pn**	**10 55 41.9**	**-0.8**
	68nm,0.8s,2μm0.4nm						
PCI	**Palu**	**8.08**	**251**	P	**Pn**	**10 55 51.8**	**+0.6**
MYLDM	**Lahad Datu**	**9.60**	**291**	P	**Pn**	**10 56 11.8**	**+0.2**
KAPI	**Kappang**	**10.22**	**229**	P	**Pn**	**10 56 20.0**	**+0.1**
	24nm,0.3s,baz=20,slow=6.3,SNR=69						
KAPI				S	**Sn**	**10 58 06.6**	**-6.2**
	7.8nm,0.3s,baz=111,slow=24,SNR=15						
KAPI	**Kappang**	**10.22**	**229**	P	**Pn**	**10 56 19.3**	**-0.6**
	50nm,0.6s,570nm						
SMKI	**Samarinda**	**10.50**	**258**	P	**Pn**	**10 56 23.0**	**-0.6**
JAY	**Jayapura**	**13.87**	**108**	P	**Pn**	**10 57 12.7**	**+5.1**
KAKA	**Kakadu**	**15.16**	**161**	*e*P	x	10 57 09.2	
	7.5nm,0.5s						
SBUM	**Sibu**	**15.27**	**273**	P	**Pn**	**10 57 28.4**	**+3.2**
	48nm,1.2s						
KHKI	**Kahang-Kahang**	**15.51**	**230**	P	**Pn**	**10 57 29.7**	**+1.5**
	54nm,1.2s						
SJI	**Sawahan**	**18.27**	**239**	P	**P**	**10 58 02.6**	**+2.5**
	89nm,0.8s						
BJII	**Banjamegara**	**19.88**	**243**	P	**P**	**10 58 19.9**	**+2.3**
WRAB	**Tennant Creek**	**22.55**	**163**	*e*P	**P**	**10 58 45.0**	**-0.7**
	12nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**22.56**	**163**	*e*P	**P**	**10 58 45.0**	**-0.8**
WB2				*e*SCP	**S**	**11 02 40.9**	**-2.1**
MYKOM	**Kota Tinggi**	**23.62**	**271**	P	**P**	**10 58 56.1**	**+0.4**
MBWA	**Marble Bar**	**23.97**	**198**	P	**P**	**10 58 58.5**	**-0.2**
ASAR	**Alice Springs**	**26.00**	**166**	P	**P**	**10 59 16.6**	**-0.4**
	6.8nm,0.5s,mb4.5,baz=348,slow=7.5,SNR=178						
ASAR				PcP	PcP	11 02 42.3	+0.3
	0.4nm,0.5s,baz=344,slow=2.1,SNR=4.2						
ASAR				S	**S**	**11 03 35.2**	**-2.7**
	0.8nm,0.8s,baz=344,slow=20,SNR=4.3						
ASAR				ScP	ScP	11 06 08.7	-0.6
	0.7nm,0.7s,baz=331,slow=1.9,SNR=5.5						
CTA	**Charters Tower**	**28.44**	**141**	P	**P**	**10 59 39.3**	**+0.4**
	3.2nm,0.9s,mb4.1,baz=307,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**32.56**	**303**	P	**P**	**11 00 15.7**	**+0.5**
	1.6nm,0.6s,mb3.9,baz=116,slow=7.0,SNR=13						
CMAR				ScP	ScP	11 06 30.6	+0.2
	0.5nm,0.5s,baz=135,slow=2.0,SNR=4.2						
KLBR	**Kellerberrin**	**34.39**	**195**	*e*P	**P**	**11 00 30.6**	**-0.4**
	62nm,2.0s,mb5.0						
KSRS	**Korea Array**	**35.56**	**1**	P	**P**	**11 00 40.7**	**-0.2**
	1.1nm,0.7s,mb3.6,baz=176,slow=9.7,SNR=3.6						
STKA	**Stephens Creek**	**36.00**	**159**	*e*P	**P**	**11 00 44.7**	**0.0**
	12nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**36.00**	**159**	P	**P**	**11 00 44.8**	**+0.1**
	16nm,0.7s,mb4.8,baz=333,slow=8.9,SNR=40						
MJAR	**Matsushiro Arr**	**36.04**	**15**	P	**P**	**11 00 44.4**	**-0.6**
	2.5nm,0.8s,mb3.9,baz=180,slow=11,SNR=5.2						
MJAR	**Matsushiro Arr**	**36.04**	**15**	P	**P**	**11 00 44.4**	**-0.6**
TOO	**Toolangi**	**42.51**	**159**	*e*P	**P**	**11 01 40.1**	**+1.4**
SONM	**Songino Array**	**49.43**	**341**	P	**P**	**11 02 32.8**	**+0.1**
	0.8nm,0.7s,mb3.5,baz=161,slow=10,SNR=5.1						
SONM				ScP	ScP	11 07 35.1	-0.9
	0.2nm,0.4s,baz=157,slow=4.2,SNR=4.4						
PETK	**Petropavlovsk-**	**57.01**	**21**	P	**P**	**11 03 28.1**	**0.0**
	2.9nm,0.8s,mb4.1,baz=186,slow=4.2,SNR=4.8						
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**11 03 46.7**	**+0.3**
	4.1nm,0.3s,mb4.7,baz=113,slow=7.5,SNR=47						
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**11 03 46.7**	**+0.3**
ZALV	**Zalesovo Beam**	**62.71**	**333**	P	**P**	**11 04 05.9**	**-1.1**
	1.1nm,0.5s,mb3.9,baz=151,slow=9.2,SNR=3.1						
KURK	**Kurchatov**	**63.83**	**328**	*e*P	**P**	**11 04 14.3**	**-0.2**
	7.5nm,0.6s,mb4.7						
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**11 05 57.0**	**-0.6**
	1.2nm,0.8s,mb3.6,baz=316,slow=6.0,SNR=9.4						
TORD	**Torodi Ar. Bea**	**124.24**	**287**	PKP	PKPdf	11 12 37.2	-3.3
	0.4nm,1.0s,baz=91,slow=2.7,SNR=2.7						

DJA 03 11:16:25, 245S×12936E, h25km, MLv3.7/5**, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.99**	**206**	P	Pn	11 16 42.4	-0.9
AAI	**Ambon**	**1.69**	**223**	P	Pn	11 16 50.6	-2.4
AAI				S	Sn	11 17 17.3	+3.4
SWI	**Sorong**	**2.47**	**50**	P	Pn	11 17 06.3	+2.6
LBMI	**Labuha**	**2.59**	**314**	P	Pn	11 17 05.5	+0.2
LBMI				S	Sn	11 17 38.4	+2.4

MAN 03 11:25:51, 1452N×12173E, h15km, mb4.2, ML3.1, MS2.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.28**	**44**	*e*P	Pg	11 25 57.7	+0.6
POLP				*e*S	Sg	11 26 04.7	+3.5
GQP	**Guinayangan**	**0.93**	**132**⇓	*e*P	Pb	11 26 08.7	-0.1
GQP				*e*S	Sb	11 26 22.0	+1.1
BALP	**Baler**	**1.22**	**353**	*e*P	Pn	11 26 13.2	-0.3
BALP				*e*S	Sb	11 26 31.2	+1.9
AUQP	**San Andres**	**1.50**	**142**	*e*P	Pn	11 26 21.3	+3.8
LUBP	**Lubang**	**1.64**	**242**	*e*P	Pn	11 26 19.2	-0.2
LUBP				*e*S	Sn	11 26 55.9	+16
SJMP	**San Jose**	**2.14**	**196**	*e*P	Pn	11 26 25.5	-0.7
OTRP	**Odiongan**	**2.17**	**173**	*e*P	Pn	11 26 27.5	+1.0
OTRP				*e*S	Sn	11 26 47.2	-5.9
CAUP	**Cauayan**	**2.41**	**2**	*e*P	Pn	11 26 28.7	-1.2
CAUP				*e*S	Sn	11 26 59.1	0.0
PVCP	**Virac**	**2.52**	**111**	*e*P	Pn	11 26 35.8	+4.3

*NEIC **03** 11:44:55.6, 3583N×2563E, h34km, MD3.2(ATH), After ATH.*
*CSEM **03** 11:44:55.9±0.1, 3584N×2560E, h20km, MD3.2, Error ellipse: s-maj=2.2km s-min=1.9km az=97.0*
*ATH **03** 11:44:55.5, 3583N×2563E, h34km±3km, MD3.2/7*
*ISCJB **03** 11:44:56.2±0.4, 3578N±002×2561E±005, h26km±6km, Error ellipse: s-maj=6.4km s-min=4.1km az=179.3*
*THE **03** 11:44:56.0, 3577N×2560E, h12km±3km, Error ellipse: s-maj=3.4km s-min=0.7km az=56.0*
ISC 03 11:44:56.4±0.5**, 3579N**±002×**2561E**±005**, h21**km±9km**, n23,** σ**0s68**/33**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.53**	**179**	*e*PN	**Pb**	**11 45 06.9**	**0.0**
NPS				*e*SN	**Sb**	**11 45 15.8**	**+1.8**
THR6	**Thira Island,**	**0.59**	**343**	P	**Pb**	**11 45 07.7**	**-0.3**
THR6				S	**Sb**	**11 45 16.9**	**+0.9**
THR6	**Thira Island,**	**0.59**	**343**	S	**Sb**	**11 45 16.9**	**+0.9**
THR6	**Thira Island,**	**0.59**	**343**	P	**Pb**	**11 45 07.7**	**-0.3**
THR1	**Thera Island**	**0.59**	**348**	P	**Pb**	**11 45 07.4**	**-0.7**
THR1				S	**Sb**	**11 45 16.4**	**+0.4**
LAST	**Lasithi**	**0.64**	**189**	P	**Pb**	**11 45 08.8**	**0.0**
LAST				S	**Sb**	**11 45 16.6**	**-0.6**
THR3	**Thira Island,**	**0.64**	**345**	P	**Pb**	**11 45 08.4**	**-0.5**
THR3				S	**Sb**	**11 45 18.4**	**+1.0**
THR3	**Thira Island,**	**0.64**	**345**	S	**Sb**	**11 45 18.4**	**+1.0**
THR5	**Thira Island,**	**0.66**	**342**	P	**Pb**	**11 45 08.8**	**-0.4**
THR4	**Thira Island,**	**0.69**	**346**	P	**Pb**	**11 45 09.6**	**-0.1**
ZKR	**Zakros**	**0.84**	**143**	P	**Pb**	**11 45 11.2**	**-1.0**
ZKR				S	**Sb**	**11 45 23.8**	**+0.8**
SIVA	**Sivas**	**1.01**	**220**	P	**Pb**	**11 45 15.5**	**+0.4**
SIVA				S	**Sb**	**11 45 27.5**	**-0.4**
SIVA	**Sivas**	**1.01**	**220**	S	**Sb**	**11 45 27.5**	**-0.4**
VAM	**Vamos**	**1.21**	**252**	*e*PB	**Pb**	**11 45 17.3**	**-1.2**
VAM	**Vamos**	**1.21**	**252**	*e*Pb	**Pb**	**11 45 17.0**	**-1.5**
APE	**Apeiranthos**	**1.28**	**357**	*e*PN	**Pn**	**11 45 18.4**	**-0.6**
APE	**Apeiranthos**	**1.28**	**357**	P	**Pn**	**11 45 18.9**	**-0.1**
KARP	**Karpathos**	**1.29**	**100**	*e*PN	**Pn**	**11 45 19.1**	**0.0**
KARP				*e*SN	**Sn**	**11 45 35.5**	**-0.2**
KARP	**Karpathos**	**1.29**	**100**	*e*Pn	**Pn**	**11 45 19.3**	**+0.2**
KARP				*e*Sn	**Sn**	**11 45 35.5**	**-0.2**
GVD	**Gavdhos**	**1.56**	**233**	*e*PN	**Pn**	**11 45 23.5**	**+0.6**
ARG	**Arkhangelos**	**2.09**	**77**	*e*PN	**Pn**	**11 45 30.0**	**-0.1**
ARG				*e*SN	**Sn**	**11 45 55.3**	**-0.1**
VLI	**Veliai**	**2.35**	**294**	*e*PN	**Pn**	**11 45 34.1**	**+0.4**
VLI	**Veliai**	**2.35**	**294**	*e*Pn	**Pn**	**11 45 34.5**	**+0.8**

*ISCJB **03** 11:53:37.7±0.7, 4928N±007×9378E±008, h10km, mb4.0/2, Error ellipse: s-maj=10.8km s-min=7.5km az=9.9*
*MOS **03** 11:53:37.5±1.1, 4929N×9370E, h10km, mb4.0/1, Error ellipse: s-maj=19.5km s-min=12.9km az=99.6*
*IDC **03** 11:53:38.1±1.2, 4936N×9384E, h0km, mb3.8/2, mb1 3.6/6, mb1mx3.4/24, mbtmp3.5/6, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/26, Error ellipse: s-maj=24.3km s-min=12.9km az=12.0*
*NNC **03** 11:53:45.0±4.0, 4937N×93.12E, h0km, mb3.8, mpv3.2, Error ellipse: s-maj=36.9km s-min=31.0km az=80.0*
ISC 03 11:53:40.3±0.7**, 4936N**±008×**9383E**±008**, h10**km**, n18,** σ**1s10**/20**, mb4.0**/2**, 3C-7D, Mongolia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HVS	**Khovu-Aksy**	**1.78**	**357** *d*	*i*PN	**Pn**	**11 54 10.0**	**-1.1**
HVS				*i*		11 54 11.4	
HVS				*i*		11 54 32.4	
KZLR	**Kyzyl**	**2.38**	**9** ⇓	*i*PN	**Pn**	**11 54 20.1**	**+0.8**
KZLR						11 54 53.5	
BLRR	**Bol'shaya Rech**	**3.79**	**347** κ	*i*PN	**Pn**	**11 54 39.1**	**+0.4**
BLRR				*e*		11 54 46.0	
BLRR				*e*		11 55 34.8	
ZAK	**Zakamensk**	**6.19**	**77**	*e*PN	**Pn**	**11 55 11.2**	**-0.5**
ZAK				*e*		11 55 31.1	
ZAK				pmax	pmax		
	comp=Z,17nm,0.8s						
TLY	**Talaya**	**6.67**	**66**	*e*PN	**Pg**	**11 55 39.1**	**-8.9**
ZALV	**Zalesovo Beam**	**7.25**	**313**	Pn	**Pn**	**11 55 25.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=124,slow=12,SNR=2.7						
ZALV				Pg	**Pg**	**11 55 50.8**	**-8.2**
	comp=Z,0.5nm,0.3s,baz=119,slow=15,SNR=8.4						
ZALV				Sn	**Sn**	**11 56 50.9**	**+2.5**
	comp=Z,0.6nm,0.3s,baz=137,slow=14,SNR=3.6						
ZALV				Lg		11 57 25.5	
	comp=Z,1.2nm,0.3s,baz=126,slow=29,SNR=5.4						
ZALV	**Zalesovo Beam**	**7.25**	**313**	P	**Pn**	**11 55 25.3**	**-0.8**
ZALV						11 56 50.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
MK31	**Makanchi Array**	**8.15**	**256**	⇑Pn	**Pn**	**11 55 39.4**	**+0.9**
	comp=N,0.2nm,0.3s,baz=66,slow=13,SNR=15						
MK31				Pg	Pn	11 56 05.9	+27
	comp=N,1.6nm,0.5s,baz=68,slow=17,SNR=7.2						
MK31				⇑Lg		11 57 49.1	
	comp=N,6.1nm,0.5s,baz=71,slow=31,SNR=5.2						
MKAR	**Makanchi Array**	**8.15**	**256**	Pn	**Pn**	**11 55 39.2**	**+0.8**
	comp=N,0.1nm,0.3s,baz=79,slow=15,SNR=12						
MKAR				Lg		11 57 58.6	
	comp=N,1.3nm,0.3s,baz=74,slow=37,SNR=6.0						
SONM	**Songino Array**	**8.47**	**96**	Pn	**Pn**	**11 55 43.8**	**+1.0**
	comp=N,0.5nm,0.3s,baz=288,slow=15,SNR=11						
SONM				Pg	Pn	11 56 13.7	+31
	comp=N,0.6nm,0.3s,baz=279,slow=17,SNR=6.0						
SONM				Lg		11 58 10.5	
	comp=N,1.4nm,0.3s,baz=281,slow=31,SNR=17						
SONM				LR	LR	11 59 20.2	
	comp=N,74nm,18.3s,baz=317,slow=40						
SONM	**Songino Array**	**8.47**	**96**	*e*P	**Pn**	**11 55 44.0**	**+1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**9.89**	**284**	⇓Pn	**Pn**	**11 56 01.6**	**-0.7**
	comp=Z,3.4nm,0.6s						
KURK				⇑Lg		11 58 45.4	
	comp=Z,23nm,0.8s						
KURK	**Kurchatov**	**9.89**	**284**	Pn	**Pn**	**11 56 01.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=93,slow=14,SNR=15						
KURK				Lg		11 58 52.7	
	comp=Z,0.2nm,0.3s,baz=88,slow=34,SNR=4.2						
KURBB	**Kurchatov Arra**	**9.94**	**283**	⇓Pn	**Pn**	**11 56 01.5**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=95,slow=14						
KURBB				⇓Lg		11 58 45.5	
	comp=Z,5.1nm,0.8s,baz=114,slow=22						
ARCES	**ARCESS Array B**	**37.51**	**328**	P	**P**	**12 00 53.4**	**-0.4**
	comp=Z,13nm,1.3s,mb4.5,baz=79,slow=9.3,SNR=7.2						
ARCES	**ARCESS Array B**	**37.51**	**328**	P	**P**	**12 00 53.4**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,13nm,1.3s						
ASAR	**Alice Springs**	**80.98**	**143**	P	**P**	**12 05 52.5**	**-2.3**
	comp=Z,0.9nm,1.1s,mb3.6,baz=341,slow=6.2,SNR=4.6						
ASAR	**Alice Springs**	**80.98**	**143**	*e*P	**P**	**12 05 55.8**	**+1.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						

*ISCJB **03** 12:08:55.6±0.9, 2983N±005×3628E±006, h0km, Error ellipse: s-maj=8.1km s-min=6.3km az=139.7*
*GII **03** 12:08:55.1±0.0, 2976N×3630E, h0km, ML2.1/1, EXPLOSION*
*SGS **03** 12:08:55.9, 30.11N×36.18E, h7km*
*CSEM **03** 12:08:55.9, 30.11N×36.18E, h7km, ML2.7, After SNSN*
ISC 03 12:08:55.7±1.0**, 2982N**±005×**3631E**±006**, h0**km**, n23,** σ**0s96**/28**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.10**	**266**	Pg	**Pg**	**12 09 16.4**	**-0.4**
AQBJ	**Aqaba**	**1.10**	**266**	Pg	**Pg**	**12 09 16.5**	**-0.3**
HRFI	**Mount Harif**	**1.13**	**281**	Pg	**Pg**	**12 09 16.6**	**-0.7**
HRFI	**Mount Harif**	**1.13**	**281**	Pg	**Pg**	**12 09 16.9**	**-0.5**
HRFI				Sg	**Sg**	**12 09 33.4**	**+1.4**
EIL	**Elat**	**1.19**	**263**	Pg	**Pg**	**12 09 18.4**	**-0.2**
EIL	**Elat**	**1.19**	**263**	Pg	**Pg**	**12 09 18.3**	**-0.2**
HQLS		**1.21**	**245**	P	**Pg**	**12 09 18.0**	**-0.8**
HQLS		**1.21**	**245**	P	**Pg**	**12 09 18.0**	**-0.8**
HQLS				S	**Sg**	**12 09 34.6**	**+0.1**
MBRI	**Mt Berech**	**1.22**	**269**	Pg	**Pg**	**12 09 18.4**	**-0.6**
MBRI				Sg	**Sg**	**12 09 35.1**	**+0.4**
MBRI	**Mt Berech**	**1.22**	**269**	Pg	**Pg**	**12 09 18.6**	**-0.5**
MBRI				Sg	**Sg**	**12 09 35.3**	**+0.6**
ZFRI	**Zfri**	**1.23**	**307**	Pg	**Pg**	**12 09 18.6**	**-0.6**
ZFRI	**Zfri**	**1.23**	**307**	Pg	**Pg**	**12 09 18.3**	**-0.9**
PRNI	**Paran**	**1.25**	**295**	Pg	**Pg**	**12 09 18.6**	**-1.1**
PRNI				Sg	**Sg**	**12 09 37.8**	**+1.9**
PRNI	**Paran**	**1.25**	**295**	Pg	**Pg**	**12 09 18.6**	**-1.2**
JLOS		**1.30**	**214**	P	**Pg**	**12 09 21.2**	**+0.7**
KRMI	**Paran Flat**	**1.41**	**283**	Pn	**Pn**	**12 09 21.2**	**-1.4**
KRMI	**Paran Flat**	**1.41**	**283**	Pg	**Pg**	**12 09 21.3**	**-1.4**
TBKS	**Tabuk**	**1.61**	**173**	P	**Pn**	**12 09 27.0**	**+1.7**
MZDA	**Masada**	**1.70**	**331**	Pn	**Pn**	**12 09 27.2**	**+0.6**
BDAS	**Al Bad'**	**1.74**	**218**	P	**Pn**	**12 09 27.3**	**+0.1**
DSI	**Dead Sea**	**1.92**	**336**	Pn	**Pn**	**12 09 31.0**	**+1.3**
DSI	**Dead Sea**	**1.92**	**336**	Pn	**Pn**	**12 09 30.4**	**+0.8**
RSHS		**2.01**	**222**	P	**Pn**	**12 09 30.4**	**-0.5**

GRAL 03 12:11:44.8±0.3**, 3453N×3676E, h6**km±8km**, MD2.9, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**0.72**	**250**	*e*P	Pg	12 11 57.7	-0.9
HWQ				*e*S	Sg	12 12 07.3	-0.6
BHL	**Bhannes**	**1.11**	**236**	*e*P	Pg	12 12 04.4	-1.7
RCY	**Rachaya**	**1.30**	**217**	*e*P	Pn	12 12 07.3	-2.2
RCY				*e*S	Sb	12 12 24.0	-2.6

*ISCJB **03** 13:08:22.7±0.5, 2474N±004×12256E±002, h112km±5km, Error ellipse: s-maj=6.1km s-min=3.0km az=168.6*
*TAP **03** 13:08:23.0, 2474N×12249E, h114km, ML3.8, C*
*JMA **03** 13:08:23.5±0.2, 2490N×12260E, h104km±2km, M2.8*
ISC 03 13:08:23.4±0.5**, 2474N**±004×**12256E**±002**, h110**km±5km**, n49,** σ**0s78**/85**, 7D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**124**	P	**Pn**	**13 08 40.3**	**+0.1**
YOJ				*e*S	**Sn**	**13 08 53.1**	**+0.3**
TWB1	**Santiao Chiao**	**0.58**	**297**	*i* P	**Pn**	**13 08 41.0**	**+0.2**
	baz=291						
TWB1				S	**Sn**	**13 08 53.6**	**-0.2**
	baz=291						
TWC	**Suao**	**0.66**	**259**	*i* P	**Pn**	**13 08 41.0**	**-0.4**
	baz=254						
TWC				S	**Sn**	**13 08 54.2**	**-0.7**
	baz=254						
ILA	**Ilan**	**0.74**	**272**	*e*P	**Pn**	**13 08 42.3**	**+0.2**
	baz=267						
ILA				*e*S	**Sn**	**13 08 56.5**	**+0.4**
	baz=267						
NWF	**Wu-fen Shan**	**0.78**	**295** ⇓	*i*P	**Pn**	**13 08 42.6**	**+0.2**
	baz=290						
NWF				S	**Sn**	**13 08 57.0**	**+0.3**
	baz=290						
ENA	**Nanau**	**0.81**	**248** ⇓	*i*P	**Pn**	**13 08 42.6**	**0.0**
	baz=243						
ENA				*e*S	**Sn**	**13 08 57.2**	**0.0**
	baz=243						
TWE	**Neicheng**	**0.81**	**269** ⇓	*i*P	**Pn**	**13 08 42.7**	**0.0**
	baz=273						
TWE				*e*S	**Sn**	**13 08 57.1**	**-0.2**
	baz=273						
ENTT	**Nioudou**	**0.91**	**264**	*i* P	**Pn**	**13 08 43.8**	**+0.1**
	baz=268						
TWA	**Mucha**	**0.92**	**285**	P	**Pn**	**13 08 43.5**	**-0.2**
	baz=278						
TWA				S	**Sn**	**13 08 58.3**	**-0.8**
	baz=278						
TWY	**Chenhua**	**1.02**	**302**	*e*P	**Pn**	**13 08 44.9**	**+0.1**
	baz=303						
NSK	**Sanguang**	**1.09**	**267** ⇓	*i*P	**Pn**	**13 08 45.6**	**+0.1**
	baz=274						
NSK				S	**Sn**	**13 09 02.0**	**-0.3**
	baz=274						
TWD	**Chiawan**	**1.10**	**233**	P	**Pn**	**13 08 44.9**	**-0.7**
	baz=228						
TWD				*e*S	**Sn**	**13 09 01.9**	**-0.5**
	baz=228						
TWS1	**Kuangyinshan**	**1.10**	**289**	P	**Pn**	**13 08 45.5**	**-0.1**
	baz=283						
TWS1				*e*S	**Sn**	**13 09 01.9**	**-0.4**
	baz=283						
NNS	**Nan Shan**	**1.12**	**255** ⇓	*i*P	**Pn**	**13 08 46.0**	**+0.1**
	baz=249						
NNS				*e*S	**Sn**	**13 09 03.1**	**+0.3**
	baz=249						
IRIF	**Iriomote-Funau**	**1.14**	**110**	P	**Pn**	**13 08 46.1**	**+0.1**
IRIF				*e*S	**Sn**	**13 09 03.4**	**+0.2**
HWA	**Hwalien**	**1.16**	**229**	*e*P	**Pn**	**13 08 45.8**	**-0.4**
	baz=221						
WHF	**Hehuan Shan**	**1.32**	**244** ⇓	*i*P	**Pn**	**13 08 48.3**	**+0.2**
	baz=242						
WHF				*e*S	**Sn**	**13 09 06.5**	**-0.3**
	baz=242						
HATJ	**Hateruma jima**	**1.32**	**121**	P	**Pn**	**13 08 49.0**	**+0.9**
HATJ				*e*S	**Sn**	**13 09 07.5**	**+0.7**
TWT	**Tachien**	**1.35**	**249**	⇓P	**Pn**	**13 08 49.1**	**+0.7**
	baz=248						
TWT				*e*S	**Sn**	**13 09 07.8**	**+0.4**
	baz=248						
ESL	**Shilin**	**1.38**	**228**	P	**Pn**	**13 08 47.8**	**-1.0**
	baz=235						
ESL				*e*S	**Sn**	**13 09 06.4**	**-1.6**
	baz=235						
JKRS	**Kuro-shima**	**1.41**	**110**	P	**Pn**	**13 08 49.7**	**+0.6**
JKRS				*e*S	**Sn**	**13 09 09.0**	**+0.3**
NSTT	**Nanjuang**	**1.42**	**266**	P	**Pn**	**13 08 49.0**	**-0.3**
	baz=265						
NSTT				*e*S	**Sn**	**13 09 08.2**	**-0.7**
	baz=265						
JIJ	**Ishigaki jima**	**1.49**	**104**	P	**Pn**	**13 08 50.0**	**-0.1**
JIJ				*e*S	**Sn**	**13 09 09.6**	**-0.7**
EHY	**Hungye**	**1.67**	**223**	P	**Pn**	**13 08 51.0**	**-1.3**
	baz=228						
TWQ1	**Liyutan**	**1.67**	**257**	P	**Pn**	**13 08 52.2**	**0.0**
	baz=256						
TWQ1				*e*S	**Sn**	**13 09 14.3**	**0.0**
	baz=256						
SMLT	**Sun Moon Lake**	**1.74**	**241**	*i* P	**Pn**	**13 08 53.5**	**+0.4**
	baz=237						
SMLT				S	**Sn**	**13 09 17.7**	**+2.0**
	baz=237						
TYC	**Yuchr**	**1.76**	**242**	P	**Pn**	**13 08 53.8**	**+0.4**
	baz=239						
TYC				*e*S	**Sn**	**13 09 17.8**	**+1.6**
	baz=239						
TWF1	**Yuli**	**1.80**	**220**	P	**Pn**	**13 08 52.5**	**-1.3**
	baz=225						
TWF1				S	**Sn**	**13 09 15.0**	**-2.0**
	baz=225						
WNT	**Mingjian**	**1.91**	**244**	*e*P	**Pn**	**13 08 55.7**	**+0.4**
	baz=250						
YUS	**Yu-Shan**	**1.93**	**230**	*e*P	**Pn**	**13 08 56.2**	**+0.7**
	baz=223						
YUS				*e*S	**Sn**	**13 09 20.5**	**+0.6**
	baz=223						
JTJ	**Tarama**	**1.95**	**92**	P	**Pn**	**13 08 56.2**	**+0.4**
JTJ				*e*S	**Sn**	**13 09 20.7**	**+0.2**
CHKT	**Chengkung**	**1.96**	**214**	P	**Pn**	**13 08 54.8**	**-1.1**
	baz=207						
CHKT				*e*S	**Sn**	**13 09 18.2**	**-2.6**
	baz=207						
ALS	**Alishan**	**2.02**	**233**	P	**Pn**	**13 08 57.4**	**+0.8**
	baz=227						
ALS				*e*S	**Sn**	**13 09 23.1**	**+1.1**
	baz=227						
CHN5	**Tsauling**	**2.06**	**237**	P	**Pn**	**13 08 57.6**	**+0.5**
	baz=244						
CHN5				*e*S	**Sn**	**13 09 23.5**	**+0.6**
	baz=244						
ELDTW	**Lidau**	**2.09**	**223**	P	**Pn**	**13 08 56.6**	**-1.0**
	baz=220						
WGK	**Gukeng**	**2.10**	**241**	*e*P	**Pn**	**13 08 59.0**	**+1.3**
	baz=249						
CHN4	**Tsaushan**	**2.27**	**233**	*e*P	**Pn**	**13 09 00.2**	**+0.3**
	baz=232						
CHN4				*e*S	**Sn**	**13 09 28.9**	**+1.2**
	baz=232						
STYT	**Tauyuan**	**2.28**	**227**	P	**Pn**	**13 09 00.3**	**+0.4**
	baz=225						
STYT				*e*S	**Sn**	**13 09 28.1**	**+0.2**
	baz=225						
WTP	**Ta-pu**	**2.32**	**231**	P	**Pn**	**13 09 00.7**	**+0.2**
	baz=240						
WTP				*e*S	**Sn**	**13 09 29.8**	**+0.9**
	baz=240						
TWG	**Pinlang**	**2.35**	**216**	*e*P	**Pn**	**13 08 59.6**	**-1.2**
	baz=214						
TWK	**Hsinying**	**2.40**	**233**	*e*P	**Pn**	**13 09 01.4**	**0.0**
	baz=231						
CHN1	**Nanshi**	**2.42**	**231**	P	**Pn**	**13 09 01.9**	**+0.2**
	baz=239						
CHN1				*e*S	**Sn**	**13 09 31.6**	**+0.4**
	baz=239						
SGST	**Jiashian**	**2.45**	**228**	P	**Pn**	**13 09 02.6**	**+0.5**
	baz=227						
SGST				*e*S	**Sn**	**13 09 33.1**	**+1.2**
	baz=227						
JOGS	**Gusukube**	**2.59**	**89**	P	**Pn**	**13 09 04.6**	**+0.6**
JOGS				*e*S	**Sn**	**13 09 35.8**	**+0.7**
ECL	**Taimali**	**2.59**	**215**	*e*P	**Pn**	**13 09 02.5**	**-1.5**
	baz=208						
ECL				*e*S	**Sn**	**13 09 32.2**	**-3.0**
	baz=208						
SSD	**Sandimen**	**2.66**	**222**	*e*P	**Pn**	**13 09 04.3**	**-0.6**
	baz=228						
JKE	**Kume jima 2**	**4.13**	**67**	P	**Pn**	**13 09 24.4**	**-0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**4.89**	**72**	P	**Pn**	**13 09 34.1**	**-0.7**
JIH	**Iheya**	**5.38**	**64**	P	**Pn**	**13 09 40.0**	**-1.4**

*ISCJB **03** 13:35:46.7±0.5, 7.40S±0.08×120.05E±0.10, h552km±6km, mb3.5/9, Error ellipse: s-maj=17.1km s-min=9.1km az=146.0*
*NEIC **03** 13:35:47.6±0.5, 7.41S×120.01E, h550km±7km, mb4.4/2, Error ellipse: s-maj=16.1km s-min=7.2km az=59.0*
*IDC **03** 13:35:47.4±0.6, 7.28S×120.35E, h543km±6km, mb3.2/10, mb1 3.3/12, mb1mx3.2/20, mbtmp3.3/12, Error ellipse: s-maj=40.6km s-min=7.9km az=58.0*
*DJA **03** 13:36:03, 11.73S×119.15E, h30km, MLv4.7/3*
ISC 03 13:35:47.4±0.5**, 7.42S**±0.08×**120.03E**±0.10**, h544**km±6km**, n29, σ0^{s}75**/29**, mb3.5**/9**, 1D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.41**	**353**	P	**P**	**13 36 59.5**	**+0.9**
	62nm,0.3s,baz=194,slow=2.9,SNR=86						
KAPI				S	**S**	**13 37 56.0**	**-0.4**
	baz=137,slow=19,SNR=3.4						
KAPI	**Kappang**	**2.41**	**353**	*e*P	**P**	**13 36 59.2**	**+0.6**
KAPI				S	**S**	**13 37 56.0**	**-0.4**
KHKI	**Kahang-Kahang**	**4.48**	**258**	P	**P**	**13 37 12.8**	**+0.2**
KHKI				S	**S**	**13 38 12.6**	**-9.4**
BATI	**Baumata**	**4.54**	**128**	P	**P**	**13 37 13.3**	**+0.2**
	13nm,0.3s,baz=277,slow=0.4,SNR=14						
BATI				S	**S**	**13 38 17.2**	**-5.7**
	17nm,0.3s,baz=306,slow=3.9,SNR=9.2						
BATI	**Baumata**	**4.54**	**128**	P	**P**	**13 37 12.6**	**-0.5**
IGBI	**Denpasar**	**5.03**	**254**	P	**P**	**13 37 16.3**	**-0.8**
KSM	**Kuching**	**13.12**	**312**	*e*P	**P**	**13 38 39.0**	**+1.4**
MBWA	**Marble Bar**	**13.66**	**181**	*e*P	**P**	**13 38 43.2**	**+0.1**
KKM	**Kota Kinabalu**	**13.90**	**344**	*e*P	**P**	**13 38 45.1**	**-0.6**
XMIS	**Christmas Isla**	**14.52**	**257**	*e*P	**P**	**13 38 51.3**	**-0.8**
WRAB	**Tennant Creek**	**18.64**	**133**	*e*P	**P**	**13 39 31.7**	**+0.3**
	8.2nm,0.6s						
WB2	**Warramunga Arr**	**18.65**	**133**	*e*P	**P**	**13 39 31.3**	**-0.2**
ASAR	**Alice Springs**	**20.94**	**142**	P	**P**	**13 39 52.4**	**+0.2**
	3.7nm,0.5s,baz=320,slow=8.5,SNR=160						
ASAR				S	**S**	**13 43 08.1**	**-2.2**
	0.4nm,0.6s,baz=318,slow=14,SNR=3.7						
ASAR				PcP	PcP	13 43 36.1	-0.2
	0.8nm,0.5s,baz=329,slow=1.6,SNR=12						
STKA	**Stephens Creek**	**31.56**	**143**	⇓*i*P	**P**	**13 41 26.0**	**+0.5**
	2.7nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**31.56**	**143**	P	**P**	**13 41 26.1**	**+0.6**
	4.3nm,0.4s,mb4.3,baz=320,slow=7.7,SNR=22						
STKA				PcP	PcP	13 44 00.9	-0.5
	0.9nm,0.5s,baz=153,slow=22,SNR=4.6						
CMAR	**Chiang Mai Arr**	**33.07**	**321**	P	**P**	**13 41 39.3**	**+0.8**
	0.3nm,0.4s,mb3.1,baz=161,slow=6.7,SNR=2.9						
CMAR				PcP	PcP	13 44 07.2	+1.2
	0.6nm,0.4s,baz=144,slow=3.2,SNR=4.2						
SONM	**Songino Array**	**56.32**	**349**	P	**P**	**13 44 37.0**	**+0.4**
	0.2nm,0.3s,mb2.8,baz=159,slow=5.8,SNR=2.6						
RPZ	**Rata Peaks**	**57.27**	**138**	P	**P**	**13 44 43.2**	**-0.1**
	6.6nm,0.6s,mb4.1,baz=315,slow=7.1,SNR=12						
MKAR	**Makanchi Array**	**63.53**	**332**	P	**P**	**13 45 24.6**	**+0.2**
	0.6nm,0.5s,mb3.3,baz=140,slow=6.9,SNR=7.2						
ZALV	**Zalesovo Beam**	**67.94**	**338**	P	**P**	**13 45 50.2**	**-1.6**
	0.6nm,0.3s,mb3.5,baz=154,slow=5.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**67.94**	**338**	P	**P**	**13 45 50.2**	**-1.6**
KURK	**Kurchatov**	**68.05**	**333**	P	**P**	**13 45 51.7**	**-0.8**
	0.3nm,0.3s,mb3.2,baz=134,slow=5.3,SNR=2.0						
VNDA	**Vanda**	**73.38**	**171**	P	**P**	**13 46 24.5**	**+0.9**
	1.6nm,0.6s,mb3.6,baz=306,slow=6.7,SNR=17						
QSPA	**South Pole Qui**	**82.56**	**180**	P	**P**	**13 47 13.4**	**+0.6**
	0.9nm,0.2s,mb3.9,baz=302,slow=0.5,SNR=4.3						
YKA	**Yellowknife Ar**	**112.34**	**24**	PKiKP	PKiKP	13 53 20.4	-0.7
	0.2nm,0.4s,baz=304,slow=1.7,SNR=4.6						
YKA	**Yellowknife Ar**	**112.34**	**24**	PKPdf	PKiKP	13 53 20.4	-0.7
TORD	**Torodi Ar. Bea**	**119.17**	**281**	PKP	PKPdf	13 53 34.7	-1.0
	0.4nm,0.5s,baz=59,slow=1.8,SNR=5.2						
TORD	**Torodi Ar. Bea**	**119.17**	**281**	PKP	PKPdf	13 53 34.7	-1.0
NVAR	**Mina Array Bea**	**119.23**	**50**	PKP	PKPdf	13 53 36.2	+1.0
	0.4nm,0.5s,baz=228,slow=3.5,SNR=3.0						

MAN 03 13:35:51, 9.98N×125.03E, h4km, mb3.9, ML2.6, MS2.3, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.23**	**312**	*e*P	Pg	13 35 56.2	+0.7
MSLP				*e*S	Sg	13 36 00.7	+2.3
SCPH	**Surigao**	**0.49**	**114**	⇓*e*P	Pg	13 36 01.5	+1.0
SCPH				*e*S	Sg	13 36 10.7	+3.7
OCLP	**Ormoc**	**1.14**	**339**	*e*P	Pg	13 36 12.9	0.0
PLP	**Palo**	**1.18**	**358**	⇓*e*P	Pg	13 36 10.7	-2.9
PLP				*e*S	Sg	13 36 25.3	-3.6
TBP	**Tagbilaran**	**1.19**	**256**	*e*P	Pg	13 36 13.7	-0.1
TBP				*e*S	Sg	13 36 31.5	+2.3
PAGZ	**Pagadian**	**2.67**	**218**	*e*P	Pn	13 36 43.3	+8.4

*CSEM **03** 13:51:43.7±0.1, 38.29N×20.41E, h5km, MD3.9, Error ellipse: s-maj=2.8km s-min=1.9km az=26.0*
*ISCJB **03** 13:51:43.8±0.4, 38.29N±0.02×20.38E±0.03, h10km, mb3.8/4, Error ellipse: s-maj=4.1km s-min=2.8km az=137.6*
*NEIC **03** 13:51:44.1, 38.32N×20.50E, h14km, MD3.9(ATH), After ATH.*
*ATH **03** 13:51:44.1, 38.32N×20.50E, h15km±1km, MD3.8/12, ML3.6*
*THE **03** 13:51:45.0, 38.33N×20.48E, h1km±2km, ML4.3/4, Error ellipse: s-maj=3.2km s-min=0.6km az=251.0*
*IDC **03** 13:51:49.1±2.4, 38.35N×20.31E, h65km±25km, mb3.6/4, mb1 3.7/9, mb1mx3.4/23, mbtmp3.5/9, ML3.8/5, Error ellipse: s-maj=22.9km s-min=16.7km az=71.0*
ISC 03 13:51:44.7±0.6**, 38.32N**±0.03×**20.41E**±0.03**, h7**km±5km**, n61, σ1^{s}08**/84**, mb3.8**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**135**	P	**Pg**	**13 51 48.4**	**-0.2**
VLS				S	**Sg**	**13 51 51.6**	**+0.3**
VLS	**Valsamata**	**0.20**	**135**	*e*PB	**Pg**	**13 51 48.5**	**-0.1**
VLS				*e*SB	**Sg**	**13 51 51.7**	**+0.4**
KFL	**Anninata**	**0.36**	**125**	P	**Pg**	**13 51 51.0**	**-0.7**
RLS	**Riolos of Patr**	**0.87**	**107**	*e*PN	**Pn**	**13 51 59.5**	**-3.8**
IGT	**Igoumenitsa**	**1.22**	**357**	P	**Pb**	**13 52 08.0**	**-0.1**
IGT				S	**Sg**	**13 52 24.4**	**+0.5**
EVR	**Evrytania**	**1.25**	**61**	*e*PB	**Pn**	**13 52 05.7**	**-2.8**
JAN	**Janina**	**1.38**	**14**	*e*PN	**Pn**	**13 52 09.9**	**-0.5**
JAN				*e*SN	**Sn**	**13 52 28.6**	**-0.3**
JAN	**Janina**	**1.38**	**14**	*e*Pb	**Pb**	**13 52 10.1**	**-0.8**
JAN				*e*Sb	**Sb**	**13 52 28.7**	**0.0**
KEK	**Kerkira**	**1.48**	**341**	*e*PN	**Pn**	**13 52 12.0**	**+0.3**
ITM	**Ithomi**	**1.65**	**133**	*e*PB	**Pn**	**13 52 12.2**	**-1.9**
AGG	**Agios Georgios**	**1.66**	**64**	P	**Pn**	**13 52 13.6**	**-0.6**
AGG				S	**Sn**	**13 52 35.9**	**+0.2**
THL	**Klokotos Trika**	**1.76**	**45**	P	**Pn**	**13 52 15.2**	**-0.5**
THL				S	**Sn**	**13 52 38.9**	**+0.6**
THL	**Klokotos Trika**	**1.76**	**45**	*e*Pn	**Pn**	**13 52 15.4**	**-0.3**
THL				S	**Sn**	**13 52 38.9**	**+0.6**
PYL	**PYLOS**	**1.77**	**143**	P	**Pn**	**13 52 15.2**	**-0.5**
LTK	**Loutraki**	**2.03**	**97**	P	**Pn**	**13 52 19.2**	**-0.1**
LTK				S	**Sn**	**13 52 45.9**	**+0.9**
LKR	**Lokris**	**2.06**	**80**	P	**Pn**	**13 52 19.7**	**0.0**
LKR				S	**Sn**	**13 52 45.9**	**+0.4**
LKR	**Lokris**	**2.06**	**80**	*e*PN	**Pn**	**13 52 19.8**	**+0.1**
LKR	**Lokris**	**2.06**	**80**	*e*Pn	**Pn**	**13 52 20.1**	**+0.4**
LKR				S	**Sn**	**13 52 45.9**	**+0.4**
KZN	**Kozani**	**2.25**	**27**	*e*PN	**Pn**	**13 52 22.6**	**+0.3**
KZN	**Kozani**	**2.25**	**27**	*e*Pn	**Pn**	**13 52 22.4**	**+0.1**
DID	**Didima**	**2.37**	**109**	P	**Pn**	**13 52 24.4**	**+0.4**
DID				S	**Sn**	**13 52 53.9**	**+0.5**
LIT	**Litokhoron**	**2.40**	**41**	P	**Pn**	**13 52 24.4**	**0.0**
NEO	**Neokhori**	**2.41**	**65**	*e*PN	**Pn**	**13 52 24.3**	**-0.2**
XOR	**Xorichti**	**2.41**	**63**	P	**Pn**	**13 52 24.4**	**-0.1**
FNA	**Florina**	**2.58**	**16**	P	**Pn**	**13 52 26.9**	**+0.1**
FNA				S	**Sn**	**13 53 00.2**	**+1.9**
ATH	**Athens Observa**	**2.63**	**96**	*e*PB	**Pn**	**13 52 27.7**	**+0.2**
ATH				*e*SN	**Sn**	**13 52 59.3**	**-0.3**
ATH	**Athens Observa**	**2.63**	**96**	*e*Pn	**Pn**	**13 52 28.3**	**+0.8**
ATH				*e*Sn	**Sn**	**13 52 59.3**	**-0.3**
PTL	**Penteli**	**2.73**	**95**	*e*PB	**Pn**	**13 52 29.0**	**0.0**
BIA	**Bitola**	**2.79**	**14**	*e*Pn	**Pn**	**13 52 32.1**	**+2.3**
BIA				*i* Sn	**Sn**	**13 53 03.4**	**-0.2**
BIA	**Bitola**	**2.79**	**14**	*e*Pn	**Pn**	**13 52 32.2**	**+2.4**
BIA				*i* Sn	**Sn**	**13 53 03.4**	**-0.2**
AOS	**Alonnisos**	**2.84**	**71**	P	**Pn**	**13 52 29.9**	**-0.6**
TIP	**Timpagrande**	**2.99**	**288**	*e*P	**Pn**	**13 52 32.5**	**+0.1**
TIP	**Timpagrande**	**2.99**	**288**	*e*P	**Pn**	**13 52 32.5**	**+0.1**
KRUS	**Krusevo**	**3.12**	**12**	*e*Pn	**Pn**	**13 52 35.1**	**+0.9**
KRUS				*i* Sn	**Sn**	**13 53 08.6**	**-3.1**
KRUS	**Krusevo**	**3.12**	**12**	*e*Pn	**Pn**	**13 52 35.2**	**+0.9**
KRUS				*i* Sn	**Sn**	**13 53 08.6**	**-3.1**
PE1	**Pezze di Greco**	**3.40**	**318**	*e*Pn	**Pn**	**13 52 39.0**	**+0.9**
OUR	**Ouranopolis**	**3.42**	**53**	P	**Pn**	**13 52 37.7**	**-0.8**
VAY	**Valandovo**	**3.43**	**28**	*e*Pn	**Pn**	**13 52 36.9**	**-1.7**
VAY				*i* Sn	**Sn**	**13 53 18.7**	**-0.7**
VAY	**Valandovo**	**3.43**	**28**	*e*Pn	**Pn**	**13 52 37.0**	**-1.6**
VAY				*i* Sn	**Sn**	**13 53 18.7**	**-0.7**
CEL	**Celeste**	**3.56**	**270**	*e*P	**Pn**	**13 52 40.6**	**+0.3**
CEL	**Celeste**	**3.56**	**270**	*e*P	**Pn**	**13 52 40.6**	**+0.3**
STIP	**Stip**	**3.64**	**21**	*e*Pn	**Pn**	**13 52 40.1**	**-1.3**
STIP	**Stip**	**3.64**	**21**	*e*Pn	**Pn**	**13 52 40.2**	**-1.3**
SG1	**Sgolgore (BA)**	**3.83**	**312**	*e*Pn	**Pn**	**13 52 44.1**	**0.0**
CUC	**Castrocucco**	**3.95**	**297**	P	**Pn**	**13 52 47.0**	**+1.3**
CUC	**Castrocucco**	**3.95**	**297**	P	**Pn**	**13 52 47.0**	**+1.4**
SGO	**Sicignano**	**4.54**	**301**	Pn	**Pn**	**13 52 54.5**	**+0.6**
IDI	**Anoyia**	**4.69**	**129**	P	**Pn**	**13 52 58.2**	**+2.2**
	1.0nm,0.3s,baz=309,slow=18,SNR=4.7						
IDI				S	**Sn**	**13 53 53.8**	**+3.2**
	2.7nm,0.3s,baz=308,slow=18,SNR=4.0						
STON	**Ston**	**5.00**	**336**	*e*Pn	**Pn**	**13 53 00.4**	**+0.3**
STON				Sn	**Sn**	**13 53 53.1**	**-4.9**
WDD	**Wield Dalam**	**5.31**	**244**	*e*P	**Pn**	**13 53 03.6**	**-0.7**
WDD	**Wield Dalam**	**5.31**	**244**	*e*P	**Pn**	**13 53 03.6**	**-0.7**
ZKR	**Zakros**	**5.65**	**123**	P	**Pn**	**13 53 04.3**	**-4.8**
NRCA	**Norcia**	**7.16**	**311**	Pn	**Pn**	**13 53 31.0**	**+1.3**
MLR	**Muntele Rosu**	**8.27**	**28**	P	**Pn**	**13 53 46.7**	**+1.7**
	1.7nm,0.3s,baz=352,slow=23,SNR=15						
BRTR	**Keskin Array B**	**10.39**	**78**	P	**Pn**	**13 54 16.9**	**+2.9**
	0.1nm,0.3s,baz=255,slow=12,SNR=3.4						
GERES	**GERESS Array B**	**11.59**	**337**	P	**Pn**	**13 54 29.7**	**-0.7**
	0.1nm,0.3s,baz=156,slow=12,SNR=3.8						
MMAI	**Mount Meron Ar**	**13.28**	**109**	P	**Pn**	**13 54 55.0**	**+1.3**
	1.1nm,0.3s,baz=279,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	**30.08**	**219**	P	**P**	**13 57 52.2**	**-2.6**
	0.9nm,1.0s,mb3.5,baz=38,slow=9.4,SNR=2.3						
ARCES	**ARCESS Array B**	**31.40**	**3**	P	**P**	**13 58 04.8**	**-1.1**
	2.6nm,1.0s,mb4.0,baz=197,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**45.30**	**58**	P	**P**	**14 00 00.1**	**-2.9**
	0.3nm,0.4s,mb3.5,baz=266,slow=8.6,SNR=6.4						
ZALV	**Zalesovo Beam**	**45.66**	**48**	P	**P**	**14 00 02.7**	**-3.0**
	1.1nm,0.4s,mb4.2,baz=273,slow=8.6,SNR=6.9						

*ISCJB **03** 13:56:27.9±0.5, 39.36N±0.02×27.80E±0.03, h9km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=28.7*
*CSEM **03** 13:56:27.3±0.1, 39.35N×27.79E, h9km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0*
*DDA **03** 13:56:27.4, 39.36N×27.80E, h19km±2km, Md3.1*
*ISK **03** 13:56:27.5, 39.36N×27.79E, h8km, MD3.0*
ISC 03 13:56:28.3±0.4**, 39.35N**±0.02×**27.79E**±0.03**, h10**km±3km**, n37, σ0^{s}61**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.30**	**13**	*e*PG	**Pg**	**13 56 34.1**	**-0.1**
BALB				*e*SG	**Sg**	**13 56 38.5**	**+0.3**
AKHS	**Akhisar**	**0.47**	**178**	*i* P	**Pg**	**13 56 37.3**	**-0.2**
AKHS				*i* S	**Sg**	**13 56 44.1**	**+0.4**
AKS	**Akhisar**	**0.47**	**178**	*e*PG	**Pg**	**13 56 37.5**	**0.0**
AKS				*e*SG	**Sg**	**13 56 44.3**	**+0.6**
DST	**Dursunbey**	**0.69**	**68**	*e*PG	**Pg**	**13 56 41.3**	**-0.4**
DST				*e*SG	**Sg**	**13 56 50.8**	**0.0**
AYVA	**Ayvalik**	**0.86**	**267**	*i* P	**Pg**	**13 56 44.7**	**-0.1**
AYVA				*i* S	**Sg**	**13 56 56.2**	**+0.3**
EDC	**Edincik**	**1.00**	**3**	*e*PG	**Pg**	**13 56 47.0**	**-0.4**
BNT	**Bandirma**	**1.01**	**5**	*e*PG	**Pg**	**13 56 47.4**	**-0.3**
KCT	**Karacabey**	**1.01**	**25**	*e*PG	**Pg**	**13 56 47.1**	**-0.6**
KDAG	**Bornova**	**1.03**	**204**	*i* P	**Pg**	**13 56 47.3**	**-0.8**
KDAG				*i* S	**Sg**	**13 57 01.6**	**0.0**
KULA	**Kula-Manisa**	**1.07**	**141**	*e*PN	**Pn**	**13 56 48.7**	**-0.7**
BLCB	**Balcova**	**1.13**	**212**	*e*PN	**Pn**	**13 56 50.0**	**-0.2**
EZN	**Ezine**	**1.23**	**293**	*e*PN	**Pn**	**13 56 50.5**	**-1.0**
LPK	**Lapseki**	**1.29**	**322**	*e*PN	**Pn**	**13 56 52.9**	**+0.5**
ULDT	**Uludag**	**1.30**	**52**	*i* P	**Pn**	**13 56 51.9**	**-0.6**
ULDT				*i* S	**Sb**	**13 57 07.9**	**-1.7**
GDZ	**Gediz**	**1.34**	**101**	*i* P	**Pn**	**13 56 53.5**	**+0.5**
GDZ				*i* S	**Sb**	**13 57 10.2**	**-0.3**
URLA	**Izmir**	**1.36**	**224**	*i* P	**Pn**	**13 56 53.7**	**+0.3**
URLA				*i* S	**Sb**	**13 57 11.9**	**+0.6**
URLA	**Izmir**	**1.36**	**224**	*i* P	**Pn**	**13 56 53.7**	**+0.4**
URLA				*i* S	**Sb**	**13 57 11.9**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.42**	**341**	*e*PN	**Pn**	**13 56 53.9**	**-0.2**
GEMT	**Gemlik**	**1.52**	**44**	*e*PN	**Pn**	**13 56 56.3**	**+0.7**
KHAL	**Karahalli**	**1.65**	**126**	*i* P	**Pn**	**13 56 57.3**	**+0.1**
KHAL				*i* S	**Sn**	**13 57 18.2**	**-0.3**
GADA	**Gvkgeada**	**1.69**	**300**	*e*PN	**Pn**	**13 56 57.2**	**-0.5**
AYDN	**Tasoluk**	**1.69**	**178**	*i* P	**Pn**	**13 56 57.5**	**-0.3**
AYDN				*i* S	**Sn**	**13 57 17.9**	**-1.6**
KHL	**Karahalli**	**1.70**	**127**	*e*PN	**Pn**	**13 56 58.2**	**+0.3**
YLV	**Yalova**	**1.72**	**44**	*e*PN	**Pn**	**13 56 57.6**	**-0.7**
ALT	**Altintas**	**1.82**	**99**	*e*PN	**Pn**	**13 56 59.8**	**+0.1**
ADVT	**Abdulvahap**	**1.84**	**54**	*e*PN	**Pn**	**13 57 00.6**	**+0.6**
ENEZ	**Enez**	**1.87**	**318**	*e*PN	**Pn**	**13 57 00.3**	**0.0**
CTKS	**Kestanelik-??a**	**1.96**	**16**	*e*PN	**Pn**	**13 57 02.8**	**+1.2**
ISK	**Istanbul-Kandi**	**1.97**	**29**	*e*PN	**Pn**	**13 57 01.8**	**+0.2**
HRT	**Hereke**	**2.06**	**44**	*e*PN	**Pn**	**13 57 04.0**	**+1.1**
BORA	**Eskisehir**	**2.12**	**75**	*i* P	**Pn**	**13 57 03.8**	**0.0**
BORA				*i* S	**Sn**	**13 57 30.2**	**+0.1**
BORA	**Eskisehir**	**2.12**	**75**	*i* P	**Pn**	**13 57 03.8**	**0.0**
BORA				*i* S	**Sn**	**13 57 30.2**	**0.0**
KLYT	**Kilyos**	**2.13**	**26**	*e*PN	**Pn**	**13 57 04.3**	**+0.4**
CTYL	**Yal??k??y-??at**	**2.15**	**10**	*e*PN	**Pn**	**13 57 04.3**	**0.0**
GULT	**Gulveren**	**2.35**	**62**	*e*PN	**Pn**	**13 57 07.7**	**+0.7**
ESKT	**Eskisehir**	**2.37**	**85**	*e*PN	**Pn**	**13 57 07.9**	**+0.7**
KIZT	**Kizilcal**	**3.21**	**97**	*e*PN	**Pn**	**13 57 19.9**	**+1.2**

*ISK **03** 14:18:53.4, 38.77N×27.76E, h5km, MD2.6*
*ISCJB **03** 14:18:54.7±1.0, 38.83N±0.05×27.74E±0.07, h10km, Error ellipse: s-maj=8.1km s-min=6.6km az=43.2*
*CSEM **03** 14:18:54.4±0.5, 38.84N×27.74E, h5km, MD2.6, Error ellipse: s-maj=12.9km s-min=8.0km az=134.0*
*DDA **03** 14:18:55.7, 38.88N×27.87E, h7km±5km, Md2.3*
ISC 03 14:18:55.3±1.0**, 38.84N**±0.05×**27.77E**±0.08**, h7**km±8km**, n8, σ1^{s}22**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.05**	**43**	PG	**Pg**	**14 18 56.0**	**-0.9**
BLCB	**Balcova**	**0.73**	**232**	*e*PG	**Pg**	**14 19 07.3**	**-2.0**
KULA	**Kula-Manisa**	**0.77**	**115**	*e*PG	**Pg**	**14 19 09.8**	**-0.4**
KULA				*e*SG	**Sg**	**14 19 19.6**	**-0.5**
DST	**Dursunbey**	**1.01**	**41**	*e*PG	**Pg**	**14 19 15.2**	**+0.3**
DST				*e*SG	**Sg**	**14 19 30.3**	**+2.2**
AYDN	**Tasoluk**	**1.18**	**176**	*i* P	**Pg**	**14 19 18.7**	**+0.7**
AYDN				*i* S	**Sg**	**14 19 36.4**	**+3.0**
AYDN	**Tasoluk**	**1.18**	**176**	*i* P	**Pg**	**14 19 18.7**	**+0.7**
AYDN				*i* S	**Sg**	**14 19 36.3**	**+3.0**
GDZ	**Gediz**	**1.36**	**79**	*i* P	**Pn**	**14 19 20.8**	**+0.1**
GDZ				*i* S	**Sb**	**14 19 37.2**	**-1.4**
KHAL	**Karahalli**	**1.43**	**109**	*i* P	**Pn**	**14 19 22.7**	**+1.0**
KHAL				*i* S	**Sb**	**14 19 40.1**	**-0.6**

*IDC **03** 15:14:13.8±2.6, 36.18N×70.93E, h0km, mb3.7/5, mb1 3.9/9, mb1mx3.6/24, mbtmp3.8/9, ML3.7/4, Error ellipse: s-maj=50.8km s-min=25.8km az=139.0*
*ISCJB **03** 15:14:25.1±0.4, 36.61N±0.03×70.91E±0.06, h126km±9km, Error ellipse: s-maj=8.2km s-min=4.7km az=161.3*
*MOS **03** 15:14:25.5±2.0, 36.64N×70.94E, h103km, mb4.0/2, Error ellipse: s-maj=16.4km s-min=8.2km az=85.3*
*NNC **03** 15:14:26.5±4.0, 36.91N×70.14E, h48km±69km, mb3.8, mpv4.3, Error ellipse: s-maj=35.3km s-min=23.4km az=7.0*
*NEIC **03** 15:14:26.4±0.8, 36.53N×71.10E, h103km±11km, mb4.6/14, Error ellipse: s-maj=10.1km s-min=5.7km az=69.0*
ISC 03 15:14:26.2±0.4**, 36.59N**±0.03×**70.89E**±0.06**, h131**km±9km**, n64, σ1^{s}08**/73**, 7C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.54**	**217**	*e*PN	**Pn**	**15 15 07.7**	**+0.8**
KBL				*e*S	**Sn**	**15 15 37.2**	**-0.9**
CEP	**Cherat**	**2.89**	**163**	P	**Pn**	**15 15 12.4**	**+1.1**
CEP				S	Sx	15 15 56.0	
NIL	**Nilore**	**3.52**	**146**	*e*PN	**Pn**	**15 15 21.4**	**+1.8**
SBDP	**Sheikh Budin**	**4.28**	**181**	P	**Pn**	**15 15 30.9**	**+1.2**
THN	**Thein Dam**	**5.75**	**135**	*e*P	**Pn**	**15 15 49.3**	**-0.1**
THN				*e*x	x	15 17 25.2	
DLH	**Dalhousie**	**5.82**	**132**	*e*P	**Pn**	**15 15 51.0**	**+0.7**
DLH				*e*x	**Sn**	**15 16 57.0**	**+1.1**
UCH	**Uchtor**	**6.29**	**25**	*e*P	**Pn**	**15 15 57.2**	**+0.7**
	4.8nm,0.4s						
KZA	**Kyzart**	**6.44**	**30**	P	**Pn**	**15 15 58.6**	**+0.1**
	SNR=8.5						
EKS2	**Erkin-Say**	**6.46**	**19**	P	**Pn**	**15 15 58.6**	**-0.2**
	SNR=23						
EKS2	**Erkin-Say**	**6.46**	**19**	*e*P	**Pn**	**15 15 58.7**	**-0.1**
KK31	**Karatay Array**	**6.51**	**358**	⇑Pn	**Pn**	**15 15 56.8**	**-2.6**
	6.0nm,0.3s,baz=181,slow=10,SNR=311						
KK31				⇓Sn	**Sn**	**15 17 03.9**	**-8.4**
	8.1nm,0.6s,baz=187,slow=20,SNR=3.7						
AAK	**Ala-Archa**	**6.64**	**24**	*e*PN	**Pn**	**15 16 01.2**	**-0.1**
AAK				pmax	pmax		
	comp=Z,31nm,0.4s						
AAK	**Ala-Archa**	**6.64**	**24**	P	**Pn**	**15 16 01.3**	**0.0**
	SNR=55						
AAK	**Ala-Archa**	**6.64**	**24**	*e*P	**Pn**	**15 16 01.2**	**-0.1**
	comp=Z,31nm,0.4s						
KBK	**Karagaybulak**	**6.82**	**26**	P	**Pn**	**15 16 04.2**	**+0.5**
	SNR=20						
CHMS	**Chumysh**	**7.06**	**24**	P	**Pn**	**15 16 06.7**	**-0.1**
	SNR=23						
USP	**Ospenovka**	**7.22**	**21**	P	**Pn**	**15 16 08.4**	**-0.6**
	SNR=8.1						
TKM2	**Tokmak 2**	**7.29**	**28**	⇑Pn	**Pn**	**15 16 09.8**	**-0.2**
	comp=Z,18nm,0.6s						
TKM2				⇑Sn	**Sn**	**15 17 34.8**	**+3.7**
	comp=Z,11nm,1.0s						
TKM2	**Tokmak 2**	**7.29**	**28**	*e*PN	**Pn**	**15 16 09.8**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,27nm,0.7s						
TKM2	**Tokmak 2**	**7.29**	**28**	P	**Pn**	**15 16 10.0**	**+0.1**
	SNR=15						
TKM2	**Tokmak 2**	**7.29**	**28**	*e*P	**Pn**	**15 16 09.8**	**-0.1**
	comp=Z,27nm,0.7s						
SMLA	**Simla**	**7.55**	**134**	*i* P	**Pn**	**15 16 13.8**	**+0.3**
SMLA				*i* x	x	15 18 22.6	
SMLA				*e*x	x	15 18 24.6	
	comp=N,265nm,0.4s						
SMLA				*e*x	x	15 18 25.6	
	comp=E,267nm,0.4s						
KLP	**Kalpa**	**7.92**	**127**	*e*P	**Pn**	**15 16 18.4**	**-0.2**
KLP				*e*S	**Sn**	**15 17 42.2**	**-4.4**
DDI	**Dehra Dun**	**8.66**	**134**	*e*P	**Pn**	**15 16 26.0**	**-2.5**
DDI				*e*x	**Sn**	**15 18 09.0**	**+4.6**
JOSI	**Joshimath**	**9.41**	**127**	*e*P	**Pn**	**15 16 39.0**	**+0.5**
JOSI				*e*S	**Sn**	**15 18 17.1**	**-5.5**
KHET	**Khetri**	**9.46**	**153**	*e*S	**Sn**	**15 18 18.2**	**-5.6**
SONA	**Sohna**	**9.82**	**146**	*e*P	**Pn**	**15 16 43.2**	**-0.9**
SONA				*e*S	**Sn**	**15 18 26.8**	**-5.9**
MK31	**Makanchi Array**	**13.27**	**36**	⇑P	**Pn**	**15 17 30.9**	**+1.6**
	comp=E,1.4nm,0.6s,baz=225,slow=15,SNR=10.0						
MK31	**Makanchi Array**	**13.27**	**36**	*e*P	**Pn**	**15 17 31.2**	**+1.8**
MKAR	**Makanchi Array**	**13.27**	**36**	Pn	**Pn**	**15 17 29.3**	**0.0**
	comp=E,0.4nm,0.3s,baz=227,slow=15,SNR=11						
DANN	**Dangsing**	**13.62**	**123**	*e*P	**Pn**	**15 17 32.7**	**-1.2**
	comp=E,9.9nm,0.2s						
KOLN	**Koldanda**	**13.89**	**126**	*e*P	**Pn**	**15 17 36.6**	**-0.8**
	comp=E,9.1nm,0.3s						
GKN	**Gorkha**	**14.43**	**122**	*e*P	**Pn**	**15 17 42.9**	**-1.4**
	comp=E,12nm,0.3s						
AB09	**Akbulak array**	**14.97**	**331**	⇓P	**Pn**	**15 17 48.6**	**-2.3**
	comp=E,0.9nm,0.5s						
AB09				⇑S	**Sn**	**15 20 23.1**	**-13**
	comp=E,1.2nm,0.6s						
DMN	**Daman**	**15.00**	**123**	*e*P	**Pn**	**15 17 51.4**	**0.0**
KKN	**Kakani**	**15.00**	**122**	*e*P	**Pn**	**15 17 50.7**	**-0.8**
	comp=E,15nm,0.5s						
KKN	**Kakani**	**15.00**	**122**	*e*P	**Pn**	**15 17 50.7**	**-0.8**
KKN				pmax	pmax		
	comp=Z,15nm,0.5s						
KURBB	**Kurchatov Arra**	**15.07**	**19**	⇓P	**Pn**	**15 17 55.8**	**+3.8**
	comp=Z,0.5nm,0.6s						
KURK	**Kurchatov**	**15.17**	**19**	⇑P	**Pn**	**15 17 57.0**	**+3.6**
	comp=Z,4.6nm,0.9s						
KURK	**Kurchatov**	**15.17**	**19**	Pn	**Pn**	**15 17 50.0**	**-3.4**
	comp=Z,0.0nm,0.3s,baz=209,slow=10,SNR=4.5						
KURK	**Kurchatov**	**15.17**	**19**	*e*P	**Pn**	**15 17 57.1**	**+3.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**15.17**	**19**	*e*P	**Pn**	**15 17 57.1**	**+3.7**
	comp=Z,2.2nm,0.6s						
PKI	**Pulchoki**	**15.23**	**122**	*e*P	**Pn**	**15 17 54.1**	**-0.2**
GUN	**Gumba**	**15.34**	**120**	*e*P	**Pn**	**15 17 55.5**	**-0.2**
	comp=Z,19nm,0.4s						
JIRN	**Jiri**	**15.71**	**120**	*e*P	**Pn**	**15 17 59.3**	**-1.0**
	comp=Z,20nm,0.4s						
BVA0	**Borovoye Array**	**16.44**	**359**	P	**Pn**	**15 18 08.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=162,slow=14,SNR=14						
BVAR	**Borovoye Array**	**16.44**	**359**	Pn	**Pn**	**15 18 08.2**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=165,slow=9.5,SNR=11						
BVAR	**Borovoye Array**	**16.44**	**359**	P	**Pn**	**15 18 08.2**	**-0.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RAMN	**Ramite**	**16.44**	**121**	*e*P	**Pn**	**15 18 08.0**	**-1.3**
	comp=Z,15nm,0.5s						
BRVK	**Borovoye**	**16.47**	**359**	*e*P	**Pn**	**15 18 09.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**16.47**	**359**	*e*P	**Pn**	**15 18 09.2**	**-0.2**
	comp=Z,5.6nm,0.8s						
AKTK	**Aktyubinsk**	**16.66**	**330**	Pn	**Pn**	**15 18 11.3**	**-0.4**
AKTK				Sn	Sx	15 21 04.9	
AKTO	**Aktyubinsk**	**16.66**	**330**	⇑P	**Pn**	**15 18 10.6**	**-1.1**
	comp=Z,0.8nm,0.8s						
AKTO				⇓S	Sx	15 21 07.3	
	comp=Z,0.4nm,1.0s						
AKTO	**Aktyubinsk**	**16.66**	**330**	Pn	**Pn**	**15 18 11.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=13						
AKTO				Sn	Sx	15 21 04.9	
	comp=Z,0.1nm,0.3s,baz=133,slow=19,SNR=3.1						
TAPN	**Taplejung**	**16.97**	**118**	*e*P	**Pn**	**15 18 16.9**	**+1.2**
	comp=Z,18nm,0.5s						
ODAN	**Odare**	**17.05**	**120**	*e*P	**Pn**	**15 18 17.0**	**+0.4**
	comp=Z,11nm,0.5s						
ZALV	**Zalesovo Beam**	**19.87**	**25**	P	**P**	**15 18 49.1**	**+2.3**
	comp=Z,4.5nm,0.5s,baz=213,slow=12,SNR=24						
ZALV	**Zalesovo Beam**	**19.87**	**25**	P	**P**	**15 18 49.1**	**+2.3**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**15 22 01.6**	**+5.5**
	comp=Z,0.8nm,0.5s,baz=106,slow=8.9,SNR=7.3						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**15 22 01.6**	**+5.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**44.25**	**323**	P	**P**	**15 22 25.7**	**+3.5**
	comp=Z,0.5nm,0.6s,baz=96,slow=8.0,SNR=2.8						
NOA	**NORSAR Array B**	**44.25**	**323**	P	**P**	**15 22 25.7**	**+3.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.63**	**269**	P	**P**	**15 25 00.9**	**+4.4**
	comp=Z,0.4nm,0.4s,baz=49,slow=6.1,SNR=3.5						
YKA	**Yellowknife Ar**	**81.16**	**3**	P	**P**	**15 26 33.1**	**+6.4**
	comp=Z,0.3nm,0.8s,baz=352,slow=5.4,SNR=3.9						

PRE 03 15:41:08.2±1.2**, 24.56S×29.54E, h5**km**, ML3.5, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLR	**Silverton**	**1.63**	**224**	*e*P	Pn	15 41 38.2	+0.6
SLR				*e*S	Sn	15 41 59.3	+0.3
SLR				AML	AML	15 42 03.5	
	comp=Z,234nm,0.4s						
MOPA	**Mopani**	**1.99**	**59**	*e*P	Pn	15 41 42.9	+0.4
MOPA				*e*S	Sn	15 42 07.5	-0.3
MOPA				AML	AML	15 42 12.2	
	comp=Z,1μm,0.1s						
MSNA	**Messina**	**2.25**	**11**	*e*P	Pn	15 41 45.9	-0.2
MSNA				*e*S	Sn	15 42 12.6	-1.7
MSNA				AML	AML	15 42 17.9	
	comp=Z,246nm,0.1s						
KSR	**Koster**	**2.72**	**241**	*e*P	Pn	15 41 53.4	+0.9
KSR				*e*S	Sn	15 42 25.7	-0.1
KSR				AML	AML	15 42 33.4	
	comp=Z,129nm,0.3s						
PRYS	**Parys**	**3.07**	**219**	*e*P	Pn	15 41 58.3	+1.0
PRYS				*e*S	Sn	15 42 34.4	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PRYS				AML	AML	15 42 51.0	
	comp=Z,79nm,0.5s						
POGA	Pongola	3.36	147	eP	Pn	15 42 02.3	+1.0
POGA				eS	Sn	15 42 42.1	+0.5
POGA				AML	AML	15 42 58.8	
	comp=Z,76nm,0.5s						
LBTB	Lobatse	3.62	262	eP	Pn	15 42 04.8	-0.1
LBTB				eS	Sn	15 42 47.8	-0.1
LBTB				AML	AML	15 43 04.3	
	comp=Z,61nm,0.3s						
SEK	Senekal	4.12	204	eP	Pn	15 42 11.8	0.0
SEK				eS	Sn	15 43 00.5	+0.1
SEK				AML	AML	15 43 19.5	
	comp=Z,46nm,0.7s						
SWZ	Schweizer	4.60	235	eP	Pn	15 42 18.3	-0.2
SWZ				eS	Sn	15 43 11.5	-0.9
SWZ				AML	AML	15 43 30.4	
	comp=Z,56nm,0.5s						
KSD	Kokstad	5.96	181	eP	Pn	15 42 37.5	+0.4
KSD				eS	Sn	15 43 43.0	-2.7
KSD				AML	AML	15 44 18.9	
	comp=Z,36nm,0.4s						
PKA	Prieska	7.90	228	eS	Sn	15 44 30.4	-3.2
PKA				AML	AML	15 45 15.1	
	comp=Z,16nm,0.8s						

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*ISK **03** 16:12:30.4, 37.00N×29.23E, h5km, ML3.6*
*CSEM **03** 16:12:31.4±0.1, 37.02N×29.25E, h5km, MD3.3, Error ellipse: s-maj=1.8km s-min=1.0km az=5.0*
*ISCJB **03** 16:12:31.5±0.5, 37.00N±0.02×29.25E±0.02, h0km±4km, Error ellipse: s-maj=3.5km s-min=2.6km az=166.8*
*DDA **03** 16:12:31.7, 37.02N×29.27E, h28km±1km, Md3.3*
*NEIC **03** 16:12:33.6±0.6, 37.00N×29.28E, h10km, ML3.5(ATH), ML3.6(ISK), Error ellipse: s-maj=10.4km s-min=7.0km az=156.0*
*HLW **03** 16:12:38.8, 36.46N×29.20E, h22km, Mb4.1*
ISC 03 16:12:32.1±0.4, **36.96N**±0.02×**29.24E**±0.02, **h2**km±3km, **n104**, σ1^{s}**17**/126, **3C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.35	200	PG	Pg	16 12 38.8	-0.1
FETY				eSG	Sg	16 12 44.8	+1.5
GOLH	Golhisar	0.38	44	iP	Pg	16 12 38.9	-0.5
GOLH				iS	Sg	16 12 45.6	+1.3
TURN	Turunc	0.52	260	iP	Pg	16 12 46.8	+4.8
TURN				iS	Sg	16 12 58.4	+10
DALT	Dalyan (Mudla)	0.52	248	PG	Pg	16 12 41.6	-0.4
DALT				eSG	Sg	16 12 50.4	+1.6
ELL	Elmali	0.58	111	ePG	Pg	16 12 42.8	-0.5
ELL				eSG	Sg	16 12 52.7	+1.9
YER	Yerkesik	0.78	283	ePG	Pg	16 12 46.7	-0.4
AKAS	Kas	0.79	158	iP	Pg	16 12 47.8	+0.5
AKAS				iS	Sg	16 13 02.0	+4.6
DENT	Denizli	0.81	349	ePG	Pg	16 12 45.8	-1.8
KSL	Kastellorizon	0.86	161	eP	Pg	16 12 49.0	+0.4
ANTB	Antalya	1.14	93	ePN	Pn	16 12 54.1	-0.9
ARG	Arkhangelos	1.16	230	eP	Pg	16 12 53.0	-1.4
ARG	Arkhangelos	1.16	230	P	Pg	16 12 54.2	-0.2
BCK	Bucak	1.19	65	ePN	Pn	16 12 54.4	-1.4
MLSB	Milas	1.21	286	ePN	Pn	16 12 54.8	-1.3
AYDN	Tasoluk	1.29	303	iP	Pg	16 12 55.9	-0.9
AYDN				iS	Sg	16 13 14.7	+1.2
AYDN	Tasoluk	1.29	303	iP	Pg	16 12 55.8	-1.0
AYDN				iS	Sg	16 13 14.7	+1.2
ISP	Isparta	1.34	49	ePN	Pn	16 12 56.6	-1.3
ISP	Isparta	1.34	49	eP	Pn	16 12 56.7	-1.2
DAT	Datca	1.35	261	ePN	Pn	16 12 57.4	-0.6
KHL	Karahalli	1.38	9	ePN	Pn	16 12 57.1	-1.2
KHAL	Karahalli	1.42	8	iP	Pn	16 12 56.8	-2.1
KHAL				iS	Sg	16 13 17.3	-0.4
BDRM	Kayabasi	1.44	275	iP	Pn	16 12 58.9	-0.3
BDRM				iS	Sb	16 13 19.2	+0.8
BODT	Bodrum	1.54	274	ePN	Pn	16 13 00.4	-0.3
KULA	Kula-Manisa	1.61	344	ePN	Pn	16 13 00.7	-1.0
NISR	Nisiros	1.73	259	eP	Pn	16 13 04.0	+0.8
GCAM	G?zelcaml?	1.76	295	iP	Pn	16 13 03.4	-0.2
GCAM				iS	Sn	16 13 26.4	-0.1
SHUT	Suhut-Afyon	1.90	33	ePN	Pn	16 13 04.8	-0.8
SMG	Samos	2.05	292	eP	Pn	16 13 07.2	-0.4
SMG	Samos	2.05	292	P	Pn	16 13 07.4	-0.2
KDAG	Bornova	2.12	313	iP	Pn	16 13 08.2	-0.5
KDAG				eS	Sn	16 13 36.3	+0.7
GDZ	Gediz	2.13	5	iP	Pn	16 13 08.2	-0.6
GDZ				eS	Sn	16 13 35.0	-0.7
GDZ	Gediz	2.13	5	iP	Pn	16 13 08.2	-0.5
GDZ				eS	Sn	16 13 35.0	-0.8
KARP	Karpathos	2.19	230	eP	Pn	16 13 10.4	+0.8
KARP	Karpathos	2.19	230	P	Pg	16 13 13.3	-0.9
ALT	Altintas	2.20	18	ePN	Pn	16 13 08.8	-0.9
BOLV	Bolvadin	2.22	37	eP	Pn	16 13 10.4	+0.5
BOLV				eS	Sn	16 13 39.7	+1.8
AKHS	Akhisar	2.22	330	iP	Pn	16 13 08.9	-1.0
AKHS				iS	Sn	16 13 38.0	+0.1
AKS	Akhisar	2.22	330	ePN	Pn	16 13 09.1	-0.8
BLCB	Balcova	2.25	310	ePN	Pn	16 13 10.0	-0.4
URLA	Izmir	2.52	304	iP	Pn	16 13 13.5	-0.5
URLA				eS	Sn	16 13 44.2	-1.1
HDMB	Hadim	2.60	89	ePN	Pn	16 13 15.8	+0.5
KONT	Konya--Tatoy	2.67	68	ePN	Pn	16 13 16.2	0.0
DST	Dursunbey	2.68	350	ePN	Pn	16 13 15.2	-1.1
KDHN	Kadinhani	2.76	55	iP	Pn	16 13 17.8	+0.3
KDHN				eS	Sn	16 13 54.1	+2.7
LADK	Ladik-KONYA	2.78	63	ePN	Pn	16 13 17.8	+0.2
KIZT	Kizilcal	2.83	47	ePN	Pn	16 13 18.5	+0.1
ESKT	Eskisehir	2.85	26	ePN	Pn	16 13 18.1	-0.5
BALB	Balikesir	2.88	339	ePN	Pn	16 13 18.6	-0.4
APE	Apeiranthos	2.97	273	eP	Pn	16 13 20.7	+0.4
APE	Apeiranthos	2.97	273	P	Pn	16 13 21.5	+1.3
APE	Apeiranthos	2.97	273	⇓iP	Sn	16 13 58.9	+2.5
ZKR	Zakros	3.06	234	P	Pn	16 13 23.7	+2.1
BORA	Eskisehir	3.06	18	eP	Pn	16 13 21.1	-0.5
BORA	Eskisehir	3.06	18	eP	Pn	16 13 21.0	-0.6
PRK	Paraskevi	3.27	315	eP	Pn	16 13 24.1	-0.2
PRK	Paraskevi	3.27	315	P	Pn	16 13 24.9	+0.6
CAVI	Cavuskoy	3.27	8	ePN	Pn	16 13 24.1	-0.3
NPS	Neapolis	3.39	241	P	Pn	16 13 27.6	+1.6
GPA	Golpazari	3.43	14	ePN	Pn	16 13 26.4	-0.2
LAST	Lasithi	3.54	241	P	Pn	16 13 29.9	+1.9
YLV	Yalova	3.60	2	ePN	Pn	16 13 29.2	+0.3
GULT	Gulveren	3.61	16	ePN	Pn	16 13 29.1	+0.1
IKL	Isikli	3.65	100	ePN	Pn	16 13 30.3	+0.6
MDU	Mudurnu	3.82	23	ePN	Pn	16 13 32.1	+0.1
LFK	Lefkose	3.86	115	ePN	Pn	16 13 33.7	+1.1
CSS	Prodhromos	3.88	120	eP	Pn	16 13 33.9	+1.2
CSS	Prodhromos	3.88	120	eP	Pn	16 13 33.9	+1.2
ANTO	Ankara	4.03	43	ePN	Pn	16 13 35.3	+0.5
ANTO	Ankara	4.03	43	eP	Pn	16 13 34.0	-0.8
ANTO	Ankara	4.03	43	ePn	Pn	16 13 35.3	+0.5
ANTO	Ankara	4.03	43	⇑iP	Pn	16 13 35.4	+0.6
SIVA	Sivas	4.08	243	P	Pn	16 13 39.3	+3.8
GADA	Gvkgeada	4.15	322	ePN	Pn	16 13 36.8	+0.3
EREN	Erenkoy	4.24	108	ePN	Pn	16 13 38.9	+1.2
MERS	Mersin	4.24	90	ePN	Pn	16 13 38.7	+1.0
KAMT	Kaman	4.27	54	ePN	Pn	16 13 38.6	+0.5
LIA	Limnos Island	4.33	314	eP	Pn	16 13 38.6	-0.3
LIA	Limnos Island	4.33	314	P	Pn	16 13 40.1	+1.2
VAM	Vamos	4.36	251	eP	Pn	16 13 40.5	+1.1
BR131	Keskin Array S	4.43	50	eP	Pn	16 13 40.8	+0.5
BR131	Keskin Array S	4.43	50	eP	Pn	16 13 40.8	+0.5
KARA	Karaisali	4.66	85	ePN	Pn	16 13 44.7	+1.2
GVD	Gavdhos	4.69	245	eP	Pn	16 13 47.5	+3.6
VLI	Veliai	5.06	269	eP	Pn	16 13 51.8	+2.8
CORM	Corum	5.31	51	ePN	Pn	16 13 53.0	+0.6
TOS	Tosya	5.52	41	ePN	Pn	16 13 56.2	+0.9
HTY	Hatay	5.62	97	ePN	Pn	16 13 59.2	+2.5
NVR	Nevrokopi	6.05	318	P	Pn	16 14 03.7	+1.1
HMAT	Matruh	6.12	197	P	Pn	16 14 00.7	-2.8
HMAT				S	Sn	16 15 00.2	-14
HRSH	Kfar Ka'horesh	6.54	129	P	Pn	16 14 14.8	+5.4
HRSH				S	Sn	16 15 25.1	+0.5
RSH		7.05	147	P	Pn	16 14 14.8	-1.6
RSH				S	Sn	16 15 25.1	-12
AMAG	Maghara	7.12	151	P	Pn	16 14 15.6	-1.7
KOT	Kottamia	7.34	162	P	Pn	16 14 18.2	-2.2
TIRR	Tirgusor	7.51	355	⇑iP	Pn	16 14 22.7	0.0
HSAF	As Saff	7.58	165	P	Pn	16 14 21.1	-2.5
GLL	Jalalah	7.65	164	P	Pn	16 14 22.3	-2.4
SUZ		7.71	156	P	Pn	16 14 23.4	-2.1
SWA2		8.32	203	P	Pn	16 14 31.2	-2.7
MLR	Muntele Rosu	8.87	345	⇓iP	Pn	16 14 41.9	+0.6
VOIR		9.03	341	⇑iP	Pn	16 14 44.5	+1.0
PLOR	Plostina	9.09	348	⇓iP	Pn	16 14 46.8	+2.5
VRI	Vrincioaia	9.09	349	⇓iP	Pn	16 14 54.2	+10
HKAT	Jabal Katrina	9.32	153	P	Pn	16 14 45.8	-1.7
HFRF	Wahat Farafira	9.82	185	P	Pn	16 14 51.9	-2.5
HFRF				S	Sn	16 16 29.2	-16

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*ISCJB **03** 16:31:37.5±1.7, 55.4S±0.1×28.2W±0.8, h10km, mb3.8/2, MS3.2/3, Error ellipse: s-maj=68.0km s-min=15.7km az=176.9*
*IDC **03** 16:31:37.3±1.9, 55.13S×29.91W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.7/10, mbtmp3.8/2, MS3.2/3, Ms1 3.2/3, ms1mx3.1/20, Error ellipse: s-maj=111.9km s-min=34.7km az=106.0*
*NEIC **03** 16:31:42.7±1.0, 55.43S×28.14W, h35km, mb3.8/1, Error ellipse: s-maj=53.0km s-min=18.0km az=90.0*
ISC 03 16:31:39.6±1.7, **55.4S**±0.1×**28.2W**±0.8, **h10**km, **n13**, σ0^{s}**99**/7, **mb3.8**/2, **MS3.2**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.80	160	eP	Pn	16 35 48.2	+1.2
VNA3				e		16 35 51.4	
VNA3				e		16 35 54.8	
VNA2	Neumayer--Watz	18.01	158	eP	Pn	16 35 50.2	+0.6
	baz=315,slow=13						
VNA2				e		16 35 54.0	
VNA2				e		16 35 57.6	
SNAA	Sanae	19.57	156	eP	Pn	16 36 06.3	-2.1
	2.7nm,0.5s						
PLCA	Paso Flores	31.35	280	LR	LR	16 49 33.8	
	comp=Z,130nm,19.0s,MS3.6,baz=273,slow=36						
CFAA	Coronel Fontan	36.80	293	LR	LR	16 52 01.1	
	comp=Z,11nm,19.3s,MS2.7,baz=29,slow=34						
BDFB	Brasilia	42.52	331	LR	LR	16 54 51.7	
	comp=Z,34nm,20.0s,MS3.2,baz=190,slow=33						
VNDA	Vanda	47.21	183	P	P	16 40 11.5	-0.3
	0.8nm,0.7s,mb3.7,baz=166,slow=3.4,SNR=5.0						
VNDA	Vanda	47.21	183	eP	P	16 40 11.7	-0.1
TOA0	Torodi Ar. Sit	72.76	31	eP	P	16 43 07.9	+0.1
TORD	Torodi Ar. Bea	72.76	31	P	P	16 43 07.8	0.0
	0.6nm,0.5s,mb3.8,baz=200,slow=6.0,SNR=9.2						
YKA	Yellowknife Ar	135.31	319	PKP	PKPdf	16 50 56.4	-1.5
	0.2nm,0.5s,baz=125,slow=2.7,SNR=4.4						
YKA	Yellowknife Ar	135.31	319	PKP	PKPdf	16 50 56.4	-1.5
SONM	Songino Array	151.23	86	PKPbc	PKPbc	16 51 35.9	+3.8
	0.9nm,0.7s,baz=244,slow=3.3,SNR=5.5						
SONM				PKPab	PKPab	16 51 43.6	+3.5
	0.5nm,0.6s,baz=235,slow=5.1,SNR=3.2						

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*NIED **03** 16:33:00, 30.50N×138.60E, h32km, Mw5.0 Best double couple: $M_0$3.48000×10^{16} NP1:ϕ_s50.00000°, δ76.00000°, λ-22.00000°. NP2:ϕ_s145.00000°, δ69.00000°, λ-165.00000°.*
*BJI **03** 16:33:46.5, 30.35N×139.29E, h20km, mB5.1, mb5.0, Ms4.8, Msz4.5*
*JMA **03** 16:33:49.4±0.4, 30.55N×138.61E, h26km, M5.2*
*IDC **03** 16:33:49.4±0.5, 30.58N×138.81E, h0km, mb4.5/20, mb1 4.6/24, mb1mx4.6/28, mbtmp4.5/24, ML5.1/4, MS4.4/29, Ms1 4.4/29, ms1mx4.3/42, Error ellipse: s-maj=15.4km s-min=12.5km az=80.0*
*ISCJB **03** 16:33:51.2±0.2, 30.63N±0.02×138.72E±0.03, h21km, mb4.9/111, MS4.6/48, Error ellipse: s-maj=3.7km s-min=2.6km az=23.1*
*GCMT **03** 16:33:52.8±0.2, 30.56N×138.73E, h22km±1km, MW5.2/83, Moment Tensor Solution. s51,c76; s83,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.31±.19; $M_{\theta\theta}$-6.85±.17; $M_{\phi\phi}$6.54±.18; $M_{r\theta}$0.36±.26; $M_{\theta\phi}$-0.45±.15; $M_{\phi r}$1.00±.28; Best double couple: $M_0$6.79700×10^{16} NP1:ϕ_s313.00000°, δ82.00000°, λ176.00000°. NP2: ϕ_s43.00000°, δ86.00000°, λ9.00000°. Principal axes: T 6.7080, Plg9.0000°, Azm268.0000°; N 0.1790, Plg81.0000°, Azm68.0000°; P -6.8870, Plg3.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **03** 16:33:52.8±1.8, 30.60N×138.76E, h21km±12km, mb5.1/64, MW5.0(NIED) Error ellipse: s-maj=6.4km s-min=4.7km az=122.0*
*MOS **03** 16:33:53.0±1.0, 30.66N×138.79E, h33km, mb5.1/49, MS4.3/24, Error ellipse: s-maj=10.5km s-min=5.3km az=115.8*
*DJA **03** 16:33:57, 30.71N×138.12E, h0km, Mw5.5/5*
ISC 03 16:33:50.6±0.8, **30.62N**±0.02×**138.79E**±0.03, **h6**km±5km, **h22**km±2.5km**:pP-P, n358,** σ1^{s}**18**/381, **mb4.9**/111, **MS4.6**/48, **15C-23D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.63	19	Pn	Pn	16 34 34.0	+0.3
	304nm,0.3s,baz=187,slow=13,SNR=30						
JHJ				Sn	Sn	16 35 12.7	+6.8
	277nm,0.3s,baz=78,slow=20,SNR=4.7						
JHJ				LR	LR	16 35 32.7	
	comp=Z,7µm,19.6s,baz=7.3,slow=39						
JHJ2	Mitsune	2.63	19	P	Pn	16 34 34.8	+1.1
TK01	Tokai 1	3.29	342	P	Pn	16 34 41.0	-1.8
TK01				eS	Sn	16 35 20.4	-1.9
TK02	Tokai 2	3.43	346	⇓P	Pn	16 34 43.2	-1.4
TK02				eS	Sn	16 35 24.6	-1.0
TK03	Tokai 3	3.60	349	P	Pn	16 34 46.2	-0.8
TK03				eS	Sn	16 35 28.6	-1.2
JWZ	Kozaga	3.90	319	P	Pn	16 34 49.2	-1.9
JWZ				eS	Sn	16 35 31.7	-5.5
JIE	Ise	4.15	336	⇓P	Pn	16 34 52.9	-1.6
JIE				S	Sn	16 35 40.9	-2.5
JAA	Atsumi	4.23	341	⇓P	Pn	16 34 54.1	-1.5
JWM	Minabe	4.34	319	⇓P	Pn	16 34 55.6	-1.5
AJI	Ajiro2	4.42	3	P	Pn	16 34 59.3	+1.1
BSO1	Boso 1	4.43	24	P	Pn	16 34 59.7	+1.4
JWY	Kouya	4.49	324	⇓P	Pn	16 34 58.0	-1.2
TSUJ	Tsu 2	4.54	335	P	Pn	16 34 58.5	-1.4
CBIJ	Chichi jima	4.61	139	Pn	Pn	16 34 59.8	-1.0
	166nm,0.3s,baz=336,slow=5.3,SNR=66						
CBIJ				Sn	Sn	16 35 52.5	-2.1
	baz=311,slow=19,SNR=1.7						
CBIJ	Chichi jima	4.61	139	⇓P	Pn	16 34 59.7	-1.1
JOD2	Odawara 2	4.64	3	P	Pn	16 35 02.4	+1.2
JAO	Obara	4.81	345	P	Pn	16 35 02.4	-1.1
MRT2	Murotomisaki 2	4.81	306	⇑P	Pn	16 35 02.4	-1.2
JAI	Aioi	4.85	312	P	Pn	16 35 02.9	-1.2
JYN	Shimob	4.87	358	P	Pn	16 35 04.7	+0.3
JRY	Ryogami san	5.38	1	P	Pn	16 35 13.0	+1.6
JJS	Sakaide	5.55	314	P	Pn	16 35 12.7	-1.1
JKU	Kubokawa	5.55	300	P	Pn	16 35 13.0	-0.8
JTO	Tosashimizu	5.56	295	P	Pn	16 35 12.7	-1.3
JTO				eS	Sn	16 36 12.7	-5.6
JET	Tanbara	5.79	304	P	Pn	16 35 16.5	-0.6
JNG	Nsakai	5.80	355	P	Pn	16 35 18.5	+1.3
JNG				S	Sn	16 36 24.9	+0.9
JAG	Ashikaga	5.82	5	P	Pn	16 35 20.0	+2.6
UWA2	Uwa jima 2	5.84	298	⇑P	Pn	16 35 17.0	-0.8
MJAR	Matsushiro Arr	5.92	355	Pn	Pn	16 35 19.9	+1.0
	18nm,0.3s,baz=176,slow=12,SNR=228						
MJAR				Sn	Sn	16 36 26.9	-0.2
	13nm,0.3s,baz=199,slow=21,SNR=4.5						
MJAR				LR	LR	16 37 25.8	
	comp=Z,4µm,21.6s,baz=155,slow=36						
MJAR	Matsushiro Arr	5.92	355	P	Pn	16 35 19.9	+1.0
MJAR						16 36 26.9	
MJAR				pmax	pmax		
	comp=Z,18nm,0.3s						
MJAR				smax			
	comp=N,13nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,4µm,21.6s						
MJAR	Matsushiro Arr	5.92	355	Pn	Pn	16 35 19.9	+1.0
MJAR				Sn	Sn	16 36 26.9	-0.2
MJAR				LR	LR	16 37 25.8	
MAJO	Matsushiro	5.93	355	eP	Pn	16 35 20.0	+1.1
MAJO				pmax	pmax		
	comp=Z,482nm,0.8s						
MAJO	Matsushiro	5.93	355	eP	Pn	16 35 20.0	+1.1
	comp=Z,482nm,0.8s						
MAT	Matsushiro	5.93	355	P	Pn	16 35 20.0	+1.1
MAT				S	Sn	16 36 25.6	-1.5
MAT	Matsushiro	5.93	355	P	Pn	16 35 19.9	+1.0
MAT				eS	Sn	16 36 26.5	-0.6
JGK	Kuni	5.93	359	P	Pn	16 35 22.3	+3.4
JGK				S	Sn	16 36 29.7	+2.5
JNA	Nagahama	6.10	300	⇑P	Pn	16 35 20.8	-0.5
JUS	Usuki	6.46	294	P	Pn	16 35 25.4	-0.9
JHS	Saijyo	6.47	314	P	Pn	16 35 24.4	-1.9
JHS				eS	Sn	16 36 35.1	-5.4
JKIT	Kitakata	6.56	290	P	Pn	16 35 27.1	-0.6
JIU2	Izumi 2	7.07	288	P	Pn	16 35 34.4	-0.2
JSJ	Shimokoshiki	7.85	280	P	Pn	16 35 46.6	+1.3
JMZ	Minamidaito 2	8.21	236	⇓P	Pn	16 35 50.9	+0.6
JAM	Amami Oshima	8.30	257	P	Pn	16 35 52.5	+1.0
JMK	Ichinoseki	8.55	13	P	Pn	16 35 55.4	+0.5
JTU	Tsushima	8.82	299	P	Pn	16 35 57.4	-1.3
JTK	Tokunoshima	9.05	254	P	Pn	16 36 03.2	+1.4
JOW	Kunigami	9.97	250	Pn	Pn	16 36 15.0	+0.6
	comp=Z,127nm,0.3s,baz=114,slow=19,SNR=149						
JOW				Sn	Sn	16 37 59.5	-7.2
	baz=112,slow=19,SNR=1.4						
JOW				LR	LR	16 39 52.5	
	comp=Z,2µm,19.7s,baz=113,slow=36						
JOW	Kunigami	9.97	250	P	Pn	16 36 14.9	+0.5
JIH	Iheya	10.14	252	P	Pn	16 36 17.0	+0.3
JJT2	Tamagusuku 2	10.70	248	P	Pn	16 36 24.6	+0.2
NAH1	Naha	10.71	248	P	Pn	16 36 24.8	+0.2
JAGN	Aguni-jima	10.91	251	P	Pn	16 36 27.5	+0.2
KSRS	Korea Array	11.29	310	Pn	Pn	16 36 33.7	+1.2
	comp=Z,0.8nm,0.3s,baz=126,slow=14,SNR=22						
KSRS				Sn	Sn	16 38 35.8	-3.3
	comp=Z,2.0nm,0.3s,baz=128,slow=24,SNR=14						
KSRS				LR	LR	16 41 03.9	
	comp=Z,2µm,18.6s,baz=121,slow=38						
KSRS	Korea Array	11.29	310	P	Pn	16 36 33.7	+1.2
KSRS						16 38 35.8	
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,2µm,18.6s						
JKE	Kume jima 2	11.39	251	P	Pn	16 36 34.0	+0.1
ERM	Erimo	11.90	16	⇓eP	Pn	16 36 40.7	-0.1
ERM	Erimo	11.90	16	eP	Pn	16 36 40.5	-0.3
	comp=Z,46nm,0.8s						
ASAJ	Asahikawa	13.80	12	Pn	Pn	16 37 03.7	-3.1
	comp=Z,1.0nm,0.3s,baz=247,slow=14,SNR=15						
ASAJ				LR	LR	16 43 09.0	
	comp=Z,2µm,18.1s,baz=188,slow=40						
ASAJ	Asahikawa	13.80	12	P	Pn	16 37 03.7	-3.1
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,2µm,18.1s						
SSE	Sheshan	15.13	276	P	Pn	16 37 26.2	+1.3
SSE				S	Sn	16 40 15.3	+2.5
SSE				AMB	AMB		
	comp=Z,65nm,0.9s						
SSE				AMB	AMB		
	comp=Z,117nm,4.3s						
SSE				LR	LR		
	comp=N,439nm,14.9s						
SSE				LR	LR		
	comp=E,644nm,14.9s						
SSE				LR	LR		
	comp=Z,794nm,18.0s						
MDJ	Mudanjiang	15.74	335	P	Pn	16 37 36.3	+3.5
MDJ				S	Sn	16 40 35.2	+7.7
MDJ				AMB	AMB		
	comp=Z,59nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,360nm,3.4s						
MDJ				LR	LR		
	comp=N,2µm,13.3s						
MDJ				LR	LR		
	comp=E,3µm,11.9s						
MDJ				LR	LR		
	comp=Z,995nm,11.9s						
MDJ	Mudanjiang	15.74	335	eP	Pn	16 37 34.8	+2.0
	comp=Z,156nm,1.3s						
TATO	Taipei	16.30	254	eP	Pn	16 37 39.8	-0.4
	comp=Z,114nm,1.0s						
DL2	Dalian	16.33	305	P	Pn	16 37 43.9	+3.5
DL2				S	Sn	16 40 50.2	+8.3
DL2				LR	LR		
	comp=N,2µm,18.1s						
DL2				LR	LR		
	comp=Z,2µm,13.2s						
YHNB	Yeheng	16.52	253	eP	Pn	16 37 42.5	-0.5
	comp=Z,134nm,1.0s						
YSS	Yuzh-Sakhalins	16.60	10	⇑eP	Pn	16 37 40.7	-3.1
YSS				eS	Sn	16 40 40.0	-8.3
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2µm,18.0s						
YSS				MLR	MLR		
	comp=N,2µm,19.0s						
YSS				MLR	MLR		
	comp=E,2µm,18.0s						
YSS	Yuzh-Sakhalins	16.60	10	eP	Pn	16 37 39.8	-4.0
	comp=E,126nm,1.0s						
CN2	Changchun	16.88	325	⇑P	Pn	16 37 51.7	+4.3
CN2				PP		16 38 05.3	
CN2				eS	Sn	16 40 59.7	+4.5
CN2				AMB	AMB		
	comp=Z,100nm,1.4s						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,2µm,17.0s						
CN2				LR	LR		
	comp=E,3µm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
NJ2	Nanjing	17.09	280	eP	Pn	16 37 51.2	+1.0
NJ2				XP	sP	16 37 58.8	+4.6
NJ2				PP		16 38 05.9	
NJ2				S	Sn	16 41 00.0	-0.5
NJ2				AMB	AMB		
	comp=Z,290nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,590nm,4.4s						
NJ2				LR	LR		
	comp=N,460nm,13.4s						
NJ2				LR	LR		
	comp=E,810nm,18.1s						
NJ2				LR	LR		
	comp=Z,640nm,17.2s						
YULB	Yu-li	17.16	249	eP	Pn	16 37 48.9	-2.1
	comp=Z,118nm,1.1s						
SSLB	Suanglung	17.25	251	eP	Pn	16 37 51.9	-0.4
	comp=Z,152nm,1.1s						
TWG	Pinlang	17.62	248	eP	Pn	16 37 55.5	-1.2
	comp=Z,153nm,1.3s						
TPUB	Ta-pu	17.74	250	eP	Pn	16 37 57.9	-0.4
	comp=Z,116nm,1.0s						
GUMO	Guam	17.85	160	LR	LR	16 44 07.4	
	comp=Z,1µm,21.4s,baz=199,slow=35						
HABR	Khabarovsk	18.06	352	d iP	Pn	16 37 57.9	-4.1
HABR				e		16 41 16.4	
HABR				pmax	pmax		
	comp=Z,40nm,2.5s						
QZH	Quanzhou	18.73	257	⇑iP	Pn	16 38 10.0	-0.5
QZH				S	Sn	16 41 33.2	-7.2
QZH				SS		16 42 00.5	
QZH				AMB	AMB		
	comp=Z,1µm,3.9s						
QZH				LR	LR		
	comp=N,1µm,12.8s						
QZH				LR	LR		
	comp=E,2µm,13.1s						
QZH				LR	LR		
	comp=Z,1µm,16.8s						
TIA	Tai'an	18.91	293	⇓P	Pn	16 38 14.8	+2.2
TIA				AMB	AMB		
	comp=Z,113nm,1.4s						
KLR	Kul'dur	19.34	346	eP	Pn	16 38 12.3	-5.3
KLR				eS	Sn	16 41 44.0	-11
KLR				MLR	MLR		
	comp=N,2µm,13.0s						

KLR MLR MLR
comp=Z,6µm,13.0s
BJT Baijiatuau 20.66 303 *e*P **P** **16 38 32.9 +1.9**
BJT pmax pmax
comp=Z,464nm,0.9s
BJT Baijiatuau 20.66 303 *e*P **P** **16 38 32.9 +1.9**
comp=Z,464nm,0.9s
BJI Beijing 20.66 303 P **P** **16 38 32.9 +1.9**
BJI S **S** **16 42 22.8 +0.6**
BJI AMB AMB
comp=Z,296nm,0.8s
BJI AMB AMB
comp=Z,485nm,4.2s
BJI LR LR
comp=N,1µm,12.3s,MS4.7
BJI LR LR
comp=E,2µm,16.1s,MS4.7
BJI LR LR
comp=Z,1µm,16.6s,MS4.4
WHN Wuhan 21.03 276 ⇑P **P** **16 38 37.5 +2.3**
WHN S **S** **16 42 31.3 +1.5**
WHN LR LR
comp=N,4µm,10.6s,MS5.0
WHN LR LR
comp=E,813nm,14.0s,MS5.0
WHN LR LR
comp=Z,2µm,13.2s,MS4.8
HIA Hailar 23.55 328⇑ *e*P **P** **16 39 00.6 -1.2**
HIA Hailar 23.55 328 *e*P **P** **16 38 60.0 -1.8**
comp=Z,46nm,0.8s,mb5.0
GZH Guangzhou 23.87 258 P **P** **16 39 01.6 -3.4**
GZH S **S** **16 43 19.0 -2.6**
GZH LR LR
comp=N,866nm,13.7s,MS4.5
GZH LR LR
comp=E,707nm,15.7s,MS4.5
GZH LR LR
comp=Z,1µm,18.6s,MS4.4
HHC Hu-ho-hao-te 24.25 302 *e*P **P** **16 39 08.8 +0.4**
HHC AP 16 39 12.6
HHC XP sP 16 39 15.3 +4.6
HHC PP 16 39 43.0
HHC S **S** **16 43 22.3 -5.1**
HHC PCS PcS 16 46 28.7 +0.5
HHC AMB AMB
comp=Z,35nm,0.8s,mb4.8
HHC AMB AMB
comp=Z,259nm,3.7s
HHC LR LR
comp=N,1µm,13.1s,MS4.8
HHC LR LR
comp=E,2µm,14.2s,MS4.8
HHC LR LR
comp=Z,2µm,14.2s,MS4.8
BTO Baotou 25.32 301 *e*P **P** **16 39 17.9 -0.2**
BTO S **S** **16 43 45.6 +1.0**
BTO AMB AMB
comp=Z,14nm,0.8s,mb4.5
BTO LR LR
comp=N,566nm,17.6s
BTO LR LR
comp=E,444nm,12.3s
BTO LR LR
comp=Z,959nm,13.3s,MS4.5
XAN Xi'an 25.42 286 P **P** **16 39 19.7 +0.6**
XAN PP 16 39 56.2
XAN S **S** **16 43 46.0 -0.3**
XAN AMB AMB
comp=Z,135nm,1.2s,mb5.3
XAN AMB AMB
comp=Z,223nm,13.6s
XAN LR LR
comp=N,139nm,11.1s,MS4.4
XAN LR LR
comp=E,716nm,14.0s,MS4.4
XAN LR LR
comp=Z,1µm,13.2s,MS4.5
PETK Petropavlovsk- 26.36 26 P **P** **16 39 27.4 +0.1**
comp=Z,8.8nm,0.8s,mb4.4,baz=217,slow=9.6,SNR=8.0
PETK LR LR 16 49 57.5
comp=Z,366nm,18.5s,MS4.0,baz=210,slow=37
PETK Petropavlovsk- 26.36 26 P **P** **16 39 27.4 +0.1**
PETK LR LR 16 49 57.5
CLNS Chul'man 27.95 344 *e*P **P** **16 39 38.2 -3.4**
CLNS *e**PP pP 16 39 42.9 -0.4
CLNS *e* 16 39 51.7
CLNS *e*S **S** **16 44 28.7 +2.9**
CLNS *e* 16 46 03.3
CLNS pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
CLNS pmax pmax
comp=N,3.0nm,1.2s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS smax
comp=N,416nm,13.8s
CLNS smax
comp=E,288nm,14.9s
CLNS MLR MLR
comp=Z,540nm,14.0s,MS4.3
CLNS MLR MLR
comp=N,392nm,18.0s
CLNS MLR MLR
comp=E,294nm,10.0s
CIT Chita 28.32 326 *e*P **P** **16 39 46.7 +1.8**
CIT *e* 16 40 04.3
GYA Guiyang 28.47 270⇑ *i*P **P** **16 39 47.2 +0.6**
GYA PP PP 16 40 38.2 -13
GYA PCP PcP 16 42 59.8 +1.2
GYA S **S** **16 44 33.5 -1.0**
GYA SS 16 45 57.4
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,180nm,5.4s
GYA LR LR
comp=N,1µm,14.8s,MS4.8
GYA LR LR
comp=E,850nm,15.0s,MS4.8
GYA LR LR
comp=Z,1µm,14.5s,MS4.7
QIZ Qiongzhong 28.61 253 P **P** **16 39 48.1 +0.3**
QIZ S **S** **16 44 34.9 -1.9**
QIZ SS SS 16 45 59.7 -38
QIZ AMB AMB
comp=Z,38nm,1.5s,mb4.9
QIZ AMB AMB
comp=Z,232nm,8.5s
QIZ LR LR
comp=N,1µm,19.0s
QIZ LR LR
comp=Z,659nm,36.8s
LZH Lanzhou 29.59 290⇑P **P** **16 39 57.0 +0.6**
LZH AP pP 16 40 00.3 +2.2
LZH PP PP 16 40 51.2 -12
LZH PCP PcP 16 42 59.5 -1.7
LZH S **S** **16 44 49.1 -2.9**
LZH AMB AMB
comp=Z,39nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,258nm,5.1s
LZH LR LR
comp=N,2µm,14.8s
LZH LR LR
comp=Z,2µm,15.2s,MS4.8
ULN Ulaanbaatar 29.73 314 P **P** **16 39 59.5 +2.0**
SNR=18
ULN Ulaanbaatar 29.73 314 P **P** **16 39 59.5 +2.0**
SNR=18
ULN Ulaanbaatar 29.73 314⇓ *e*P **P** **16 39 58.6 +1.1**
ULN Ulaanbaatar 29.73 314 *e*P **P** **16 39 58.9 +1.4**
comp=Z,43nm,0.9s,mb5.2
CD2 Chengdu 30.03 280 P **P** **16 40 00.8 +0.4**
CD2 PP PP 16 40 57.5 -11
CD2 PCP PcP 16 43 04.5 +2.0
CD2 S **S** **16 44 58.0 -1.0**
CD2 PCS PcS 16 46 46.5 +0.6
CD2 AMB AMB
comp=Z,80nm,1.0s,mb5.4
CD2 AMB AMB
comp=Z,160nm,5.5s
CD2 LR LR
comp=N,3µm,15.0s
CD2 LR LR
comp=Z,1µm,15.0s,MS4.7
SONM Songino Array 30.12 314 P **P** **16 40 02.2 +1.2**
comp=Z,6.7nm,0.9s,mb4.4,baz=120,slow=8.1,SNR=20
SONM LR LR 16 52 01.0
comp=Z,372nm,19.6s,MS4.0,baz=294,slow=36
SONM Songino Array 30.12 314 P **P** **16 40 02.2 +1.2**
SONM pmax pmax
comp=Z,7.0nm,0.9s
SONM MLR MLR
comp=Z,372nm,19.6s
YAK Yakutsk 31.98 352 *e*P **P** **16 40 16.0 -1.2**
YAK *e**PP pP 16 40 24.7 +5.8
YAK *e* 16 41 24.0
YAK *e*S **S** **16 45 30.8 +2.0**
YAK *e**SS sS 16 45 41.9 +10
YAK *e*SS SS 16 47 21.6 -24
YAK *e*SSS 16 47 40.4
YAK *e* 16 50 41.9
YAK pmax pmax
comp=Z,34nm,0.9s,mb5.2
YAK pmax pmax
comp=N,21nm,1.5s
YAK pmax pmax
comp=Z,70nm,2.7s,mb5.0
YAK smax
comp=N,163nm,3.2s
YAK MLR MLR
comp=N,660nm,17.0s,MS4.5
YAK MLR MLR
comp=E,273nm,15.0s,MS4.5
YAK MLR MLR
comp=Z,526nm,15.0s,MS4.3
YAK Yakutsk 31.98 352 *e*P **P** **16 40 15.0 -2.2**
comp=Z,44nm,0.9s,mb5.3
BOD Bodaibo 32.12 335 *e*P **P** **16 40 17.0 -1.4**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
KMI Kunming 32.24 269⇓P **P** **16 40 21.2 +1.3**
KMI PP PP 16 41 27.0 -5.7
KMI S **S** **16 45 33.0 -0.7**
KMI AMB AMB
comp=Z,14nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,133nm,4.4s
KMI LR LR
comp=N,496nm,14.1s,MS4.7
KMI LR LR
comp=E,944nm,10.7s,MS4.7
KMI LR LR
comp=Z,712nm,10.7s,MS4.6
GTA Gaotai 32.89 296 *e*P **P** **16 40 25.9 +0.4**
GTA AP pP 16 40 34.0 +6.8
GTA XP sP 16 40 38.2 +10
GTA PP PP 16 41 38.7 -1.0
GTA S **S** **16 45 45.5 +1.9**
GTA XS sS 16 45 58.1 +12
GTA SS SS 16 47 46.5 -18
GTA AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
GTA AMB AMB
comp=Z,136nm,7.5s
GTA LR LR
comp=N,1µm,14.7s,MS4.8
GTA LR LR
comp=E,805nm,15.3s,MS4.8
GTA LR LR
comp=Z,871nm,14.7s,MS4.6
ZAK Zakamensk 33.01 317 *e*P **P** **16 40 27.0 +0.7**
ZAK pmax pmax
comp=Z,14nm,1.2s,mb4.8
IRK Irkutsk 33.23 321 *e*P **P** **16 40 34.8 +6.5**
IRK pmax pmax
comp=Z,54nm,1.7s,mb5.2
TLY Talaya 33.33 319 P **P** **16 40 37.4 +8.2**
SNR=9.1
TLY Talaya 33.33 319 P **P** **16 40 37.4 +8.2**
SNR=9.1
TLY Talaya 33.33 319 *e*P **P** **16 40 37.1 +7.9**
TLY *e*S **S** **16 45 53.3 +3.2**
TLY *e*SS SS 16 47 53.0 -21
TLY pmax pmax
comp=Z,40nm,1.2s,mb5.2
TLY MLR MLR
comp=Z,438nm,15.0s,MS4.3
TLY Talaya 33.33 319 *e*P **P** **16 40 32.2 +3.1**
comp=Z,37nm,1.1s,mb5.2
MOY Mondy 34.84 318 *e*P **P** **16 40 47.8 +5.6**
MOY pmax pmax
comp=Z,4.0nm,2.1s,mb4.0
KKTK Khon Kaen 35.75 255 P **P** **16 40 51.0 +0.5**
CHG Chiang Mai 37.87 261⇑P **P** **16 41 09.2 +0.7**
comp=Z,39nm,1.2s,mb5.0
CHTO Chiang Mai 37.87 261 P **P** **16 41 09.5 +1.0**
SNR=11
CHTO Chiang Mai 37.87 261 P **P** **16 41 09.5 +1.0**
SNR=11
CHTO Chiang Mai 37.87 261 *e*P **P** **16 41 09.1 +0.6**
CHTO pmax pmax
comp=Z,34nm,0.9s,mb5.1
CHTO Chiang Mai 37.87 261 *e*P **P** **16 41 09.1 +0.6**
comp=Z,34nm,0.9s,mb5.1
CMAR Chiang Mai Arr 38.02 261 P **P** **16 41 10.4 +0.6**
comp=Z,6.7nm,0.8s,mb4.4,baz=53,slow=7.0,SNR=58
CMAR PcP PcP 16 43 26.4 +1.0
comp=Z,0.9nm,0.8s,baz=344,slow=1.3,SNR=2.3
CMAR LR LR 16 58 54.7
comp=Z,262nm,18.4s,MS4.1,baz=73,slow=40
CMAR Chiang Mai Arr 38.02 261 *i*P **P** **16 41 10.5 +0.6**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
KSM Kuching 39.61 228 *e*P **P** **16 41 23.1 0.0**
comp=Z,18nm,0.8s,mb4.8
KAPI Kappang 39.84 210 P **P** **16 41 33.7 +8.7**
SNR=5.4
KAPI Kappang 39.84 210 P **P** **16 41 33.7 +8.7**
SNR=5.4
PMG Port Moresby 40.60 167 *e*P **P** **16 41 29.9 -1.4**
PMG pmax pmax
comp=Z,7.0nm,0.9s
PMG Port Moresby 40.60 167 *e*P **P** **16 41 29.9 -1.4**
comp=Z,7.4nm,0.9s,mb4.3
BILL Bilibino 40.78 15 *e*P **P** **16 41 31.5 -0.7**
BILL *e* 16 43 09.1
BILL pmax pmax
comp=Z,25nm,0.9s,mb4.8
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.2
BILL Bilibino 40.78 15 *e*P **P** **16 41 32.0 -0.2**
comp=Z,42nm,1.2s,mb4.9
KRAR Krasnoyarsk 40.87 322 *i*P **P** **16 41 36.1 +2.9**
KRAR pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
KRAR MLR MLR
comp=Z,400nm,12.0s,MS4.5
LSA Lhasa 40.95 281 P **P** **16 41 35.4 +1.2**
LSA Lhasa 40.95 281 *e*P **P** **16 41 35.3 +1.1**
LSA pmax pmax
comp=Z,11nm,0.9s,mb4.5
LSA Lhasa 40.95 281 *e*P **P** **16 41 35.3 +1.1**
comp=Z,11nm,0.9s,mb4.5
TIXI Tiksi 41.44 355⇑ *e*P **P** **16 41 36.3 -1.3**
TIXI MLR MLR
comp=Z,400nm,10.0s,MS4.6
TIXI Tiksi 41.44 355 *e*P **P** **16 41 36.8 -0.8**
comp=Z,22nm,1.0s,mb4.8
SHL Shillong 41.45 275 *e*P **P** **16 41 39.0 +0.6**
SHL *ex* x 16 43 16.0
WMQ Urumqi 42.13 303 P **P** **16 41 45.0 +1.3**
WMQ PP PP 16 43 26.9 +5.9
WMQ PCP PcP 16 43 40.5 +2.3
WMQ S **S** **16 48 06.0 +2.2**
WMQ SS SS 16 51 05.0 -6.1
WMQ AMB AMB
comp=Z,44nm,1.1s,mb5.0
WMQ AMB AMB
comp=Z,272nm,4.8s
WMQ LR LR
comp=N,853nm,26.0s,MS4.5
WMQ LR LR
comp=E,175nm,28.0s,MS4.5
WMQ LR LR
comp=Z,334nm,23.0s,MS4.2
BATI Baumata 43.12 202 P **P** **16 41 51.5 -0.4**
comp=Z,41nm,0.7s,mb5.3,baz=110,slow=4.3,SNR=5.6
KAKA Kakadu 43.51 189 *e*P x 16 41 38.7
comp=Z,25nm,0.9s
TAPN Taplejung 44.49 279 *e*P **P** **16 42 03.3 +0.3**
comp=Z,30nm,1.1s,mb4.9
ZALV Zalesovo Beam 44.88 317 P **P** **16 42 05.3 -0.4**
comp=Z,1.3nm,0.5s,mb4.0,baz=91,slow=8.9,SNR=7.8
ZALV PcP PcP 16 43 46.5 -0.7
comp=Z,4.2nm,0.8s,baz=121,slow=2.7,SNR=4.4
ZALV LR LR 16 59 13.5
comp=Z,278nm,21.9s,MS4.2,baz=276,slow=34
ZALV Zalesovo Beam 44.88 317 P **P** **16 42 05.3 -0.4**
ZALV 16 43 46.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
ZALV MLR MLR
comp=Z,278nm,21.9s,MS4.2
ZALV Zalesovo Beam 44.88 317 P **P** **16 42 05.3 -0.4**
ZALV PcP PcP 16 43 46.5 -0.7
ZALV LR LR 16 59 13.5
ODAN Odare 44.91 279 *e*P **P** **16 42 06.8 +0.5**
RAMN Ramite 45.55 279 *e*P **P** **16 42 11.9 +0.5**
comp=Z,65nm,1.0s,mb5.5
JIRN Jiri 45.69 280 *e*P **P** **16 42 13.5 +1.0**
comp=Z,100nm,1.0s,mb5.7
GUN Gumba 45.88 281 *e*P **P** **16 42 15.1 +1.1**
comp=Z,120nm,0.9s,mb5.8
NVS Novosibirsk 45.93 318 *e*P **P** **16 42 11.8 -2.2**
NVS pmax pmax
comp=N,5.0nm,1.3s
NVS pmax pmax
comp=E,21nm,1.3s
NVS pmax pmax
comp=Z,26nm,1.3s,mb5.0
MKAR Makanchi Array 45.96 307 P **P** **16 42 14.7 +0.4**
comp=Z,15nm,0.8s,mb5.0,baz=92,slow=9.1,SNR=76
MKAR LR LR 17 02 36.4
comp=Z,744nm,18.0s,MS4.7,baz=91,slow=38
MKAR Makanchi Array 45.96 307 P **P** **16 42 14.7 +0.4**
MKAR pmax pmax
comp=Z,15nm,0.8s
MKAR MLR MLR
comp=Z,744nm,18.0s
PKI Pulchoki 46.38 280 *e*P **P** **16 42 18.4 +0.4**
KKN Kakani 46.43 281 *e*P **P** **16 42 18.9 +0.6**
comp=Z,46nm,0.9s,mb5.4
DMN Daman 46.63 280 *e*P **P** **16 42 20.2 +0.3**
GKN Gorkha 46.91 281 *e*P **P** **16 42 22.3 +0.2**
comp=Z,64nm,1.3s,mb5.4
BOK Bokaro 47.19 275 *e*P **P** **16 42 24.3 0.0**
DANN Dangsing 47.55 282 *e*P **P** **16 42 28.0 +0.9**
comp=Z,78nm,0.9s,mb5.7
KOLN Koldanda 47.86 281 *e*P **P** **16 42 30.0 +0.5**
KURK Kurchatov 48.41 312 P **P** **16 42 33.3 -0.1**
comp=Z,150nm,0.8s,mb6.1,SNR=13
KURK Kurchatov 48.41 312 P **P** **16 42 33.8 +0.4**
SNR=8.6
KURK Kurchatov 48.41 312 P **P** **16 42 33.8 +0.4**
SNR=8.6
KURK Kurchatov 48.41 312 P **P** **16 42 33.5 +0.1**
comp=Z,10nm,0.9s,mb4.9,baz=94,slow=8.0,SNR=18
KURK Kurchatov 48.41 312 P **P** **16 42 33.5 +0.1**
KURK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KURK Kurchatov 48.41 312 *e*P **P** **16 42 32.6 -0.8**
comp=Z,21nm,0.8s,mb5.2
LGTI Lohaghat 50.19 284 *e*P **P** **16 42 48.5 +1.2**
WRAB Tennant Creek 50.44 185 P **P** **16 42 48.2 -1.0**
comp=Z,248nm,1.3s,mb6.1,SNR=8.0
WB2 Warramunga Arr 50.45 185⇓ *i*P **P** **16 42 47.8 -1.4**
CTA Charters Tower 50.92 171 *e*P **P** **16 42 59.6 +6.8**
comp=Z,11nm,0.9s,mb4.8
CTA Charters Tower 50.92 171 P **P** **16 42 51.8 -1.0**
comp=Z,4.9nm,0.9s,mb4.4,baz=103,slow=19,SNR=3.0
CTA LR LR 17 01 48.0
comp=Z,267nm,21.7s,MS4.2,baz=0.6,slow=33
CTA Charters Tower 50.92 171 P **P** **16 42 51.8 -1.0**
CTA pmax pmax
comp=Z,5.0nm,0.9s
CTA MLR MLR
comp=Z,267nm,21.7s
CTAO Charters Tower 50.92 171 P **P** **16 42 55.0 +2.2**
CTAO pmax pmax
comp=Z,23nm,1.1s,mb5.0
CTAO Charters Tower 50.92 171 P **P** **16 42 55.0 +2.2**
comp=Z,22nm,1.1s,mb5.0
TKM2 Tokmak 2 50.99 302 *e*P **P** **16 42 53.4 +0.2**
TKM2 pmax pmax
comp=Z,28nm,1.3s,mb5.0
TKM2 Tokmak 2 50.99 302 *e*P **P** **16 42 53.4 +0.2**
comp=Z,28nm,1.3s,mb5.0
VIS Vishakhapatnam 51.74 269 *e*P **P** **16 43 00.1 +1.0**
VIS AMb AMB 16 43 00.9
comp=Z,31nm,1.1s,mb5.2
DDI Dehra Dun 51.76 286 *ex* **P** **16 42 55.6 -3.5**
AAK Ala-Archa 51.83 302 P **P** **16 43 00.4 +0.9**
comp=Z,58nm,0.8s,mb5.6,SNR=5.6
AAK Ala-Archa 51.83 302⇓ *e*P **P** **16 42 59.6 +0.1**
AAK pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
AAK MLR MLR
comp=Z,300nm,14.0s,MS4.5
AAK Ala-Archa 51.83 302 *e*P **P** **16 42 59.5 0.0**
comp=Z,9.6nm,0.9s,mb4.7
SMLA Simla 52.26 287 *e*P **P** **16 43 02.9 0.0**
SMLA AMb AMB 16 43 04.0
comp=Z,32nm,1.2s,mb5.1
EKS2 Erkin-Say 52.35 302 *e*P **P** **16 43 03.0 -0.4**
comp=Z,6.9nm,0.9s,mb4.6
THN Thein Dam 53.08 289 *e*P **P** **16 43 07.1 -1.8**
BVA0 Borovoye Array 53.44 316 P **P** **16 43 12.1 +0.8**
BVA0 pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BRVK Borovoye 53.51 316 P **P** **16 43 11.3 -0.4**
BRVK pmax pmax
comp=Z,17nm,0.9s,mb5.0
BRVK Borovoye 53.51 316 P **P** **16 43 11.3 -0.4**
comp=Z,17nm,0.9s,mb5.0
PPLA Purkeypile 53.71 32 *e*P **P** **16 43 15.2 +2.1**
comp=Z,29nm,1.1s,mb5.1
NGP Nagpur 54.03 275 AMb AMB 16 43 15.2
comp=Z,149nm,1.0s,mb5.9
NGP *e*P 16 43 15.7
ASAR Alice Springs 54.18 186 P **P** **16 43 15.8 -1.1**
comp=Z,9.3nm,1.0s,mb4.7,baz=3.6,slow=5.1,SNR=46
ASAR Alice Springs 54.18 186 P **P** **16 43 15.8 -1.1**
ASAR pmax pmax
comp=Z,9.0nm,1.0s
KK31 Karatay Array 54.64 303 P **P** **16 43 20.1 0.0**
KK31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
MBWA Marble Bar 54.64 202 P **P** **16 43 19.8 -0.5**
comp=Z,26nm,1.1s,mb5.2
NIL Nilore 54.74 292 *e*P **P** **16 43 21.4 +0.4**
NIL pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
NIL Nilore 54.74 292 *e*P **P** **16 43 21.4 +0.4**
comp=Z,4.1nm,0.8s,mb4.5
SEW Seward 54.99 36 *e*P **P** **16 43 22.9 +0.5**
MCK McKinley 55.21 31 *e*P **P** **16 43 23.7 -0.3**
comp=Z,44nm,1.1s,mb5.4
COLA College 55.69 30 *i*P **P** **16 43 28.7 +1.3**
COLA College 55.69 30 *e*P **P** **16 43 28.8 +1.4**
comp=Z,9.8nm,0.8s,mb4.9
AJM Ajmer 55.83 283 *e*P **P** **16 43 27.9 -1.1**
AJM AMb AMB 16 43 30.5
comp=Z,23nm,1.0s,mb5.2
AKL Akola 55.95 275 *e*P **P** **16 43 30.6 +0.6**
HYB Hyderabad 55.99 271 *i*P **P** **16 43 30.5 +0.3**
HYB Hyderabad 55.99 271 *e*P **P** **16 43 30.5 +0.3**
EIDS Eidsvold 56.90 167 P **P** **16 43 37.9 +1.4**
comp=Z,27nm,1.3s,mb5.1
KBL Kabul 57.83 294 *e*P **P** **16 43 43.2 +0.1**
KBL pmax pmax
comp=Z,17nm,0.9s,mb5.1
KBL Kabul 57.83 294 *e*P **P** **16 43 43.2 +0.1**
comp=Z,17nm,0.9s,mb5.1
EGAK Eagle 58.55 30 *e*P **P** **16 43 48.0 +0.3**
comp=Z,8.1nm,0.7s,mb4.9
SVE Sverdlovsk 58.62 321 *e*P **P** **16 43 49.3 +1.0**
SVE *e* 16 46 04.9
SVE *e*S **S** **16 52 09.1 +16**
SVE pmax pmax
comp=Z,28nm,1.5s,mb5.1
SVE MLR MLR
comp=Z,449nm,15.0s,MS4.7
KAD Karad 59.80 273 *e*P **P** **16 43 57.1 +0.1**
KAD AMb AMB 16 43 58.8
comp=Z,41nm,1.3s,mb5.3
ARU Arti 59.82 321*c* *i*P **P** **16 43 59.3 +2.7**
ARU *e* 16 44 42.1

ARU ePPP 16 47 31.1
ARU eS S 16 52 14.4 +6.1
ARU eSS SS 16 56 04.8 +1.0
ARU pmax pmax
comp=Z,373nm,21.1s
ARU MLR MLR
comp=Z,359nm,20.0s,MS4.5
ARU Arti 59.82 321 eP P **16 43 55.9 -0.7**
comp=Z,20nm,1.0s,mb5.1
KOD Kodaikanal 60.22 264 eP P **16 44 00.7 +0.8**
KOD AMb AMB 16 44 01.9
comp=Z,59nm,1.9s,mb5.3
AB31 Akbulak array 60.52 312 P P **16 44 00.9 -0.6**
AB31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AKTO Aktyubinsk 61.44 314 LR LR 17 13 27.1
comp=Z,315nm,18.1s,MS4.5,baz=223,slow=39
TRD Trivandrum 61.51 263 eP P **16 44 09.1 +0.3**
TRD AMb AMB 16 44 12.0
comp=Z,60nm,0.9s,mb5.7
FORT Forrest 61.91 190 eP P **16 44 11.5 +0.6**
comp=Z,34nm,0.6s,mb5.7
ARMA Armidale 61.92 167 eP P **16 44 10.5 -0.5**
STKA Stephens Creek 62.21 177 eP P **16 44 11.9 -1.1**
comp=Z,7.3nm,0.8s,mb4.9
STKA Stephens Creek 62.21 177 P P **16 44 11.9 -1.1**
comp=Z,7.2nm,0.8s,mb4.9,baz=339,slow=6.0,SNR=8.6
STKA LR LR 17 08 01.6
comp=Z,241nm,20.6s,MS4.3,baz=22,slow=33
APA Apatity 67.65 336 eP P **16 44 49.0 +1.0**
APA *i* S S 16 53 43.0 -2.4
APA pmax pmax
comp=Z,16nm,0.8s,mb5.1
APA MLR MLR
comp=Z,800nm,18.0s,MS5.0
KLMR Klimovskoe 68.04 329 eP P **16 44 54.0 +3.4**
KLMR *e* 16 47 25.4
KLMR pmax pmax
comp=Z,28nm,1.4s,mb5.1
TOO Toolangi 68.13 174 eP P **16 44 58.4 +7.1**
ARCES ARCESS Array B 69.23 340 P P **16 44 57.5 -0.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=69,slow=10,SNR=7.8
ARCES LR LR 17 19 48.3
comp=Z,309nm,18.1s,MS4.6,baz=60,slow=40
ARCES ARCESS Array B 69.23 340 P P **16 44 57.6 -0.3**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES MLR MLR
comp=Z,309nm,18.1s
RES Resolute Bay 69.33 13 eP P **16 44 58.2 -0.3**
comp=Z,308nm,0.8s
YKA Yellowknife Ar 70.46 28 P P **16 45 04.6 -1.0**
comp=Z,3.4nm,1.0s,mb4.2,baz=294,slow=6.1,SNR=9.4
YKA LR LR 17 15 08.8
comp=Z,99nm,20.3s,MS4.1,baz=85,slow=35
YKA Yellowknife Ar 70.46 28 P P **16 45 04.6 -1.0**
YKA pmax pmax
comp=Z,3.0nm,1.0s
YKA MLR MLR
comp=Z,99nm,20.3s
YKA Yellowknife Ar 70.46 28 P P **16 45 04.6 -1.0**
YKA LR LR 17 15 08.8
JOF Joensuu 70.60 332 ep P **16 45 09.6 +3.2**
comp=Z,15nm,1.0s,mb4.9
JOF Joensuu 70.60 332 eP P **16 45 09.6 +3.2**
JOF pmax pmax
comp=Z,15nm,1.0s,mb4.9
MAK Makhachkala 70.73 309 eP P **16 45 00.9 -6.7**
MAK *e* 16 47 41.4
MAK ePPP 16 49 29.7
MAK eS S 16 54 12.9 -10
MAK pmax pmax
comp=Z,86nm,1.0s,mb5.6
MAK MLR MLR
comp=Z,919nm,16.0s,MS5.1
VRHR Novokhopersk 71.00 319 eP P **16 45 08.4 -0.7**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR pmax pmax
comp=E,10.0nm,0.7s
MOS Moscow 71.12 324 eP P **16 45 14.8 +5.1**
MOS *e* 16 47 54.6
MOS pmax pmax
comp=Z,32nm,0.9s,mb5.2
MOS pmax pmax
comp=Z,90nm,2.0s,mb5.3
HOQ Hoqain 71.41 287 P P **16 45 12.8 +0.8**
SNR=6.0
HOQ Hoqain 71.41 287 P P **16 45 12.8 +0.8**
SNR=6.0
OBN Obninsk 71.94 324 eP P **16 45 14.6 -0.1**
OBN *i* 16 45 33.4
OBN pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
OBN MLR MLR
comp=Z,600nm,16.0s,MS5.0
ARQ Araqi 72.17 287 P P **16 45 17.6 +1.0**
SNR=6.2
VSR Storozhevoye 72.34 319 eP P **16 45 17.1 0.0**
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,9.0nm,0.8s
VORD Divnogorie 72.38 319 eP P **16 45 17.1 -0.3**
VORD pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.9s
KAF Kangasniemi 73.00 333 ep P **16 45 19.9 -1.0**
comp=E,7.2nm,0.8s,mb4.7
KAF Kangasniemi 73.00 333 eP P **16 45 19.9 -1.0**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIV Kislovodsk 73.48 311 eP P **16 45 25.0 +1.0**
KIV pmax pmax
comp=Z,14nm,1.0s,mb4.8
KIV Kislovodsk 73.48 311 eP P **16 45 25.0 +1.0**
comp=Z,18nm,0.8s,mb5.1
VSU Vasula 74.87 330 *i* P P **16 45 33.6 +1.7**
SOC Sochi 75.56 312 eP P **16 45 45.0 +8.9**
EDM Edmonton 75.76 36 P P **16 45 36.1 -1.0**
YBH Yreka Blue Hor 76.07 50 P P **16 45 39.9 +0.8**
comp=Z,2.8nm,0.8s,mb4.2,baz=268,slow=5.6,SNR=3.6
YBH Yreka Blue Hor 76.07 50 P P **16 45 39.9 +0.8**
YBH pmax pmax
comp=Z,3.0nm,0.8s
ANN Anapa 76.40 314 eP P **16 45 35.3 -5.6**
ANN *e* 16 45 46.7
ANN eS S 16 55 14.8 -12
ANN pmax pmax
comp=Z,121nm,1.5s,mb5.6
ANN MLR MLR
comp=Z,653nm,19.0s,MS5.0
UMR Umm Al-Rimmam 76.43 296 eP P **16 45 39.4 -2.0**
baz=296
UMR AML AML 16 45 52.7
comp=Z,89nm,1.6s,baz=296
MIB Mutribah 76.60 297 eP P **16 45 40.8 -1.6**
baz=297
MIB AMb AMB 16 45 53.2
comp=Z,38nm,0.9s,mb5.3,baz=297
WHFO Wadi Hawf 76.92 283 P P **16 45 44.0 -0.2**
SNR=6.7
NAY Al-Naaiem 76.94 296 eP P **16 45 41.8 -2.4**
baz=296
NAY AMb AMB 16 45 45.3
comp=Z,39nm,1.7s,mb5.1,baz=296
SUMG Summit 77.06 359 eP P **16 45 46.4 +2.2**
comp=Z,5.9nm,1.0s,mb4.5
WALA Waterton Lakes 77.70 40 eP P **16 45 50.2 +2.1**
comp=Z,12nm,0.8s,mb4.9
AKASG Malin Array Be 78.02 322 P P **16 45 49.0 -0.9**
comp=Z,2.6nm,0.4s,mb4.5,baz=51,slow=5.3,SNR=16
AKASG LR LR 17 23 10.1
comp=Z,238nm,19.7s,MS4.5,baz=35,slow=38
AKASG Malin Array Be 78.02 322 P P **16 45 49.0 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG MLR MLR
comp=Z,238nm,19.7s

AKBB Malin Array Si 78.02 322 eP P **16 45 48.9 -1.0**
KIEV Kiev 78.03 322 eP P **16 45 48.8 -1.1**
KIEV pmax pmax
comp=Z,21nm,0.9s,mb5.1
KIEV Kiev 78.03 322 eP P **16 45 48.8 -1.2**
comp=Z,21nm,0.9s,mb5.1
RAR Rarotonga 78.33 123 LR LR 17 15 27.3
comp=Z,227nm,18.9s,MS4.5,baz=288,slow=32
HFS Hagfors 79.01 335 LR LR 17 23 51.8
comp=Z,417nm,20.9s,MS4.8,baz=196,slow=38
SUW Suwalki 79.09 327 eP P **16 46 00.7 +4.9**
SUW Suwalki 79.09 327 eP P **16 46 00.7 +5.0**
NOA NORSAR Array B 79.23 337 P P **16 45 56.0 -0.4**
comp=Z,2.3nm,0.8s,mb4.2,baz=43,slow=5.5,SNR=3.1
NOA LR LR 17 24 27.8
comp=Z,376nm,20.7s,MS4.7,baz=40,slow=38
NOA NORSAR Array B 79.23 337 P P **16 45 56.0 -0.3**
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA MLR MLR
comp=Z,376nm,20.7s
FFC Flin Flon 80.30 31 eP P **16 46 02.2 0.0**
FFC pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
FFC Flin Flon 80.30 31 eP P **16 46 02.2 -0.1**
comp=Z,9.7nm,0.9s,mb4.7
NVAR Mina Array Bea 80.65 51 P P **16 46 05.2 +0.7**
comp=Z,1.2nm,0.7s,mb4.0,baz=280,slow=5.8,SNR=5.8
LVV L'vov 81.24 323 eP P **16 46 10.1 +2.7**
BR131 Keskin Array S 81.44 311 eP P **16 46 08.7 +0.1**
comp=Z,8.0nm,0.8s,mb4.7
BRTR Keskin Array B 81.44 311 P P **16 46 08.6 -0.1**
comp=Z,7.8nm,0.8s,mb4.7,baz=112,slow=3.3,SNR=17
BRTR LR LR 17 25 21.9
comp=Z,158nm,19.7s,MS4.4,baz=40,slow=38
BRTR Keskin Array B 81.44 311 P P **16 46 08.6 -0.1**
BRTR pmax pmax
comp=Z,8.0nm,0.9s
BRTR MLR MLR
comp=Z,158nm,19.7s
BUR08 Bucovina Ar. S 81.94 321 eP P **16 46 10.7 -0.5**
BURAR Bucovina Array 81.95 321 *i*P P **16 46 13.9 +2.7**
BURAR Bucovina Array 81.95 321 ⇓P P **16 46 13.9 +2.7**
KWP Kalwaria 82.03 324 *i*P P **16 46 10.8 -0.8**
KWP Kalwaria 82.03 324 eP P **16 46 13.3 +1.7**
comp=Z,26nm,0.9s,mb5.2
VRI Vrincioaia 82.16 319 ⇓*i*P P **16 46 14.2 +1.8**
VRI Vrincioaia 82.16 319 ⇓P P **16 46 14.2 +1.9**
KOLS Kolonicke sedl 82.69 323 epP pP 16 46 18.8 +1.9
TPNV Topopah Spring 82.82 51 P P **16 46 16.0 0.0**
TPNV pmax pmax
comp=Z,17nm,0.8s,mb5.1
TPNV Topopah Spring 82.82 51 P P **16 46 16.0 0.0**
comp=Z,17nm,0.8s,mb5.1
MLR Muntele Rosu 82.83 319 ⇑*i*P P **16 46 16.4 +0.6**
MLR Muntele Rosu 82.83 319 ⇑P P **16 46 16.4 +0.5**
STHS Stebnicka Huta 82.91 324 eP P **16 46 14.1 -2.1**
STHS epP pP 16 46 19.6 +1.6
STHS Stebnicka Huta 82.91 324 eP P **16 46 14.1 -2.1**
STHS *e* 16 46 19.7
OJC Ojcow 83.11 326 eP P **16 46 21.8 +4.6**
CRVS Cervenica-Dubn 83.13 324 eP P **16 46 16.1 -1.2**
CRVS epP pP 16 46 21.9 +2.7
DUG Dugway 83.26 47 P P **16 46 18.7 +0.5**
DUG pmax pmax
comp=Z,28nm,1.3s,mb5.1
DUG Dugway 83.26 47 P P **16 46 18.7 +0.5**
comp=Z,28nm,1.3s,mb5.1
VOIR 83.36 320 ⇑*i*P P **16 46 21.9 +3.3**
FRB Frobisher Bay 83.49 12 LR LR 17 27 59.4
comp=Z,264nm,20.1s,MS4.6,baz=355,slow=39
PDAR Pinedale Array 83.77 44 P P **16 46 20.9 +0.2**
comp=Z,0.6nm,0.8s,mb3.8,baz=358,slow=4.5,SNR=3.5
DRGR 83.81 322 ⇓*i*P P **16 46 20.7 -0.2**
DRGR 83.81 322 ⇓P P **16 46 20.7 -0.2**
OKC Ostrava-Krasne 84.16 326 eP P **16 46 30.1 +7.5**
KSP Ksiaz 84.36 327 eP P **16 46 23.3 -0.3**
KSP *e* 16 46 30.9
MORC Moravsky Berou 84.49 326 P P **16 46 25.4 +1.1**
MORC pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
MORC Moravsky Berou 84.49 326 ⇑*i*P P **16 46 31.0 +6.7**
MORC Moravsky Berou 84.49 326 P P **16 46 25.4 +1.1**
comp=Z,9.3nm,1.3s,mb4.8
PFO Pinyon Flat Ob 84.49 54 P P **16 46 24.9 +0.3**
PFO pmax pmax
comp=Z,23nm,1.2s,mb5.2
PFO Pinyon Flat Ob 84.49 54 P P **16 46 24.9 +0.3**
comp=Z,23nm,1.2s,mb5.2
DPC Dobruska-Polom 84.68 327 eP P **16 46 31.1 +5.9**
DPC *ex* x 16 46 43.9
VYHS Vyhne 84.71 325 eP P **16 46 25.2 -0.2**
VYHS epP pP 16 46 32.8 +5.5
VYHS *e* 17 56 48.6
VYHS Vyhne 84.71 325 eP P **16 46 25.2 -0.2**
VYHS ePcP PcP 16 46 32.8 +3.9
UPC Upice 84.72 327 eP P **16 46 30.9 +5.5**
VRAC Vranov 85.26 326 LR LR 17 26 21.6
comp=Z,417nm,18.2s,MS4.9,baz=214,slow=37
VRAC Vranov 85.26 326 ⇓*i*P P **16 46 27.9 -0.3**
VRAC Vranov 85.26 326 ⇓P P **16 46 27.9 -0.3**
PVCC Panska Ves 85.37 328 eP P **16 46 36.5 +7.8**
BRG Berggiesshubel 85.41 329 eP P **16 46 36.0 +7.1**
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
BRG Berggiesshubel 85.41 329 eP P **16 46 36.0 +7.2**
comp=Z,14nm,1.3s,mb4.9
CLL Collm 85.52 329 *i* P P **16 46 36.1 +6.7**
CLL pmax pmax
comp=Z,19nm,1.1s,mb5.2
CLL Collm 85.52 329 *i* pP pP 16 46 36.1 +4.8
comp=Z,19nm,1.1s
CLL *i* sP sP 16 46 39.9 +8.0
CLL *i* x x 16 46 48.7
CLL Collm 85.52 329 *i* P P **16 46 36.1 +6.7**
comp=Z,19nm,1.1s,mb5.2
CLL *i* 16 46 39.9
PRU Pruhonice 85.76 328 eP P **16 46 37.9 +7.3**
NKC Novy Kostel 86.54 329 eP P **16 46 40.3 +5.8**
KHC Kasperske Hory 86.81 327 eP P **16 46 40.7 +4.9**
KHC *ex* x 16 46 46.5
GERES GERESS Array B 86.95 327 P P **16 46 36.2 -0.3**
comp=Z,1.0nm,0.7s,mb4.2,baz=27,slow=4.6,SNR=3.0
GERES LR LR 17 29 03.7
comp=Z,391nm,20.3s,MS4.8,baz=262,slow=38
GERES GERESS Array B 86.95 327 P P **16 46 36.2 -0.3**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,391nm,20.3s
GRA1 Grafenberg Arr 87.47 329 eP P **16 46 46.0 +7.0**
comp=Z,9.0nm,1.4s,mb4.8
GRF Grafenberg Arr 87.47 329 eP P **16 46 46.0 +7.0**
GRF pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
GRF Grafenberg Arr 87.47 329 eP P **16 46 46.0 +7.0**
GRF pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
GRF Grafenberg Arr 87.47 329 eP P **16 46 46.0 +7.0**
comp=Z,9.0nm,1.4s,mb4.8
CDF Champ du Feu 90.16 330 eP P **16 46 51.0 -0.7**
DAVOX Davos/Dischmat 90.22 328 LR LR 17 32 12.3
comp=Z,668nm,18.3s,MS5.1,baz=64,slow=39
SCHQ Schefferville 92.08 14 LR LR 17 33 38.1
comp=Z,432nm,20.2s,MS4.9,baz=204,slow=39
LOR Lormes 92.49 331 eP P **16 47 01.2 -1.4**
LPL La Plagne 92.61 328 eP P **16 47 02.5 -0.7**
comp=Z,11nm,0.8s,mb5.0
LPL La Plagne 92.61 328 eP P **16 47 02.5 -0.7**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LPL La Plagne 92.61 328 eP P **16 47 02.5 -0.7**
comp=Z,5.4nm,0.8s,mb5.0
LPG La Plagne 92.62 328 eP P **16 47 02.8 -0.4**
comp=Z,11nm,0.8s,mb5.0
LPG La Plagne 92.62 328 eP P **16 47 02.8 -0.4**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LPG La Plagne 92.62 328 eP P **16 47 02.8 -0.4**
comp=Z,5.7nm,0.8s,mb5.0
SMF Signal de Mont 92.99 331 eP P **16 47 03.7 -1.2**
MBDF Montbardon 93.20 328 eP P **16 47 04.0 -1.9**
comp=Z,30nm,1.2s,mb5.3
MBDF Montbardon 93.20 328 eP P **16 47 04.0 -1.9**
MBDF pmax pmax
comp=Z,15nm,1.2s,mb5.3
MBDF Montbardon 93.20 328 eP P **16 47 04.0 -1.9**
comp=Z,15nm,1.2s,mb5.3
ORIF Oris-en-Rattie 93.46 329 eP P **16 47 05.6 -1.5**
SBF Sospel 93.56 327 eP P **16 47 06.2 -1.4**
VIVF Saint-Julien-l 94.05 329 eP P **16 47 08.4 -1.4**
comp=Z,52nm,1.3s,mb5.5
VIVF Saint-Julien-l 94.05 329 eP P **16 47 08.4 -1.4**
VIVF pmax pmax
comp=Z,26nm,1.3s,mb5.5
VIVF Saint-Julien-l 94.05 329 eP P **16 47 08.4 -1.4**
comp=Z,26nm,1.3s,mb5.5
FRF La Foret Royal 94.16 327 eP P **16 47 09.5 -0.8**
SMRF Simiane la Rot 94.33 328 eP P **16 47 09.3 -1.8**
LMR La Mourre 94.39 327 eP P **16 47 10.7 -0.7**
comp=Z,97nm,1.6s,mb5.7
LMR La Mourre 94.39 327 eP P **16 47 10.7 -0.7**
comp=Z,48nm,1.5s,mb5.7
TXAR Lajitas Array 95.80 51 P P **16 47 18.5 +0.4**
comp=Z,1.0nm,0.8s,mb4.3,baz=298,slow=2.7,SNR=5.5
TXAR LR LR 17 24 54.0
comp=Z,207nm,21.4s,MS4.6,baz=315,slow=32
TXAR Lajitas Array 95.80 51 P P **16 47 18.5 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,207nm,21.4s
TXAR Lajitas Array 95.80 51 P P **16 47 18.5 +0.4**
TXAR LR LR 17 24 54.0
DRV Dumont d'Urvil 96.98 180 P P **16 47 28.0 +5.6**
DRV SS SS 17 05 20.0 -2.0
DRV R 17 21 00.0
SADO Sadowa 97.39 26 LR LR 17 32 14.9
comp=Z,318nm,20.4s,MS4.8,baz=34,slow=36
KEST Kesra 98.68 321 LR LR 17 37 00.6
comp=Z,90nm,19.2s,MS4.3,baz=1.6,slow=38
TORD Torodi Ar. Bea 120.03 310 PKP PKPdf 16 52 42.0 -1.0
comp=Z,0.5nm,0.7s,baz=14,slow=3.7,SNR=3.3
TORD PP PP 16 54 05.2 -1.5
comp=Z,1.3nm,0.9s,baz=39,slow=7.2,SNR=4.1
TORD Torodi Ar. Bea 120.03 310 PKP PKPdf 16 52 42.0 -1.0
TORD PP PP 16 54 05.2 -1.5
VNA2 Neumayer--Watz 135.57 195 ePKPdf PKPdf 16 53 05.4 -5.4
baz=96,slow=1.1
VNA2 *e* 16 53 10.7
VNA2 *e* 16 53 17.6
VNA2 *e* 16 53 29.2
VNA3 Neumayer Olymp 135.83 194 ePKPdf PKPdf 16 53 16.2 +4.9
VNA3 *e* 16 53 28.0
SIV San Ignacio 156.72 56 PKP PKPdf 16 53 48.2 +0.8
comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=2.4
SIV PKPab PKPab 16 54 17.6 +0.9
comp=Z,2.3nm,0.7s,baz=296,slow=2.8,SNR=4.4
CFAA Coronel Fontan 156.86 99 PKPab PKPab 16 54 16.6 -0.4
comp=Z,0.4nm,0.9s,baz=275,slow=5.4,SNR=5.0

KRSC 03 16:36:59.0±0.7, 5610N×16365E, h10km±10km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.48**	**283**	*i* P		Pg	16 37 08.0	-0.3
KBTR				eS		Sg	16 37 15.6	+1.0
SRKR	**Sorokina**	**1.49**	**293**	eP		Pn	16 37 26.2	+0.5
SRKR				eS		Sn	16 37 46.0	+0.8
ZLN	**Zelenaya**	**1.60**	**268**	eP		Pn	16 37 27.8	+0.5
ZLN				eS		Sn	16 37 49.0	+1.1
KLY	**Klyuchi**	**1.69**	**279**	eP		Pn	16 37 27.4	-1.1
KLY				eS		Sn	16 37 48.0	-2.1
KRSR	**Krestovskiy**	**1.73**	**275**	eP		Pn	16 37 29.6	+0.5
KRSR				eS		Sn	16 37 52.3	+1.1
BZMR	**Bezymyannaya**	**1.78**	**266**	eP		Pn	16 37 30.8	+1.0
BZMR				eS		Sn	16 37 54.4	+2.0
MKZ	**Mys Kozlova**	**1.90**	**216**	eP		Pn	16 37 31.3	-0.1
MKZ				eS		Sn	16 37 54.4	-0.9
KPT	**Kopyto**	**1.93**	**267**	P		Pn	16 37 31.9	+0.1
KPT				eS		Sn	16 37 56.1	0.0
KMNR	**Kamenistaya**	**1.95**	**261**	eP		Pn	16 37 34.7	+2.6
KMNR				eS		Sn	16 38 00.5	+3.9
KOZ	**Kozyrevsk**	**2.12**	**270**	eP		Pn	16 37 36.5	+2.1
KOZ				eS		Sn	16 38 03.7	+3.0
TUMR	**Tumrok**	**2.15**	**249**	eP		Pn	16 37 37.4	+2.6
TUMR				eS		Sn	16 38 05.1	+3.7
SRDR	**Sredinnyy**	**2.21**	**277**	eP		Pn	16 37 37.4	+1.8
SRDR				eS		Sn	16 38 04.9	+2.0
SPN	**Mys Shipunski**	**3.67**	**217**	S		Sn	16 38 37.4	-1.7
NLC	**Nalytchevo**	**3.86**	**222**	S		Sn	16 38 43.3	-0.3
AVH	**Avacha**	**4.02**	**227**	eP		Pn	16 38 02.4	+1.8
GNL	**Ganaly**	**4.08**	**236**	eP		Pn	16 38 04.2	+2.8
PET	**Petropavlovsk**	**4.24**	**225**	S		Sn	16 38 52.8	-0.2
RUS	**Russkaya**	**4.75**	**221**	eP		Pn	16 38 11.9	+1.4

DJA 03 16:39:16, 892S×11133E, h50km, MLv3.7/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SJI	**Sawahan**	**1.25**	**20**	P		Pn	16 39 37.1	-0.1
SJI				S		Sn	16 39 54.3	+1.3
UGM	**Wanagama**	**1.28**	**321**	P		Pn	16 39 37.3	-0.2
UGM				S		Sn	16 39 53.6	0.0
KRKI	**Karangkates**	**1.34**	**56**	P		Pn	16 39 38.3	-0.1
KRKI				S		Sn	16 39 55.5	+0.4
SMRI	**Semarang**	**2.06**	**335**	P		Pn	16 39 37.9	-10
BJII	**Banjamegara**	**2.25**	**314**	P		Pn	16 39 51.9	+1.1

MAN 03 16:45:13, 1119N×12464E, h7km, mb4.1, ML3.0, MS2.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.14**	**192**	eP		Pg	16 45 17.6	+1.7
OCLP				eS		Sg	16 45 20.0	+2.1
PLP	**Palo**	**0.34**	**94**	⇓*i*P		Pg	16 45 21.4	+1.8
PLP				eS		Sg	16 45 26.6	+2.6
BESP	**Borongan**	**0.88**	**62**	eP		Pg	16 45 30.3	+0.3
MSLP	**Maasin**	**1.07**	**168**	eP		Pg	16 45 34.0	+0.5
MSLP				eS		Sg	16 45 51.2	+3.6
LLP	**Lapu-Lapu**	**1.09**	**217**	eP		Pg	16 45 34.8	+0.8
LLP				eS		Sg	16 45 49.9	+1.8

*ISCJB **03** 16:54:16.2±1.8, 624S±007×14665E±0.10, h105km±17km, mb4.6/24, Error ellipse: s-maj=17.1km s-min=10.3km az=159.6*
*BJI **03** 16:54:16.4, 620S×14650E, h110km, mB5.3, mb4.7*
*NEIC **03** 16:54:18.9±1.5, 620S×14651E, h111km±16km, mb5.0/14, Error ellipse: s-maj=12.9km s-min=10.6km az=82.0*
*IDC **03** 16:54:20.7±0.9, 621S×14654E, h130km±7km, mb4.0/12, mb1 4.1/14, mb1mx4.1/18, mbtmp4.1/14, Error ellipse: s-maj=18.9km s-min=10.3km az=92.0*

ISC 03 16:54:17.6±1.4, 629S±006×14653E±008, h96km±14km, n54, σ1s07/50, mb4.6/24, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.15**	**169**	eP		**Pn**	**16 55 06.0**	**+0.7**
HNR	**Honiara**	**13.65**	**104**	P		**Pn**	**16 57 30.3**	**+3.0**
	4.7nm,0.3s,baz=250,slow=9.8,SNR=3.8							
HNR	**Honiara**	**13.65**	**104**	ePn		**Pn**	**16 57 29.8**	**+2.6**
CTA	**Charters Tower**	**13.71**	**181**	eP		**Pn**	**16 57 32.5**	**+4.5**
	29nm,0.4s							
CTA				eS		**Sn**	**16 59 56.4**	**-2.6**
CTA	**Charters Tower**	**13.71**	**181**	P		**Pn**	**16 57 32.4**	**+4.4**
	8.1nm,0.3s,baz=1.1,slow=14,SNR=120							
CTAO	**Charters Tower**	**13.71**	**181**	eP		**Pn**	**16 57 32.3**	**+4.3**
	42nm,0.6s							
KAKA	**Kakadu**	**15.28**	**244**	eP		x	16 57 31.2	
	44nm,0.6s							
KAKA				eS		x	17 00 14.3	
WRAB	**Tennant Creek**	**17.99**	**220**	eP		**Pn**	**16 58 20.8**	**-0.7**
	6.5nm,0.6s							
WB2	**Warramunga Arr**	**18.00**	**220**	eP		**Pn**	**16 58 20.8**	**-0.8**
WB2				eS		**S**	**17 01 51.1**	**+8.7**
AAI	**Ambon**	**18.45**	**277**	P		**Pn**	**16 58 27.3**	**+0.3**
	179nm,0.8s,1μm							
EIDS	**Eidsvold**	**19.46**	**168**	eP		**Pn**	**16 58 37.9**	**-1.0**
LBMI	**Labuha**	**19.80**	**286**	P		**Pn**	**16 58 42.4**	**-0.6**
	98nm,1.1s,775nm							
TNTI	**Ternate**	**20.37**	**289**	P		**P**	**16 58 50.1**	**+3.3**
	179nm,0.9s,1μm							
ASAR	**Alice Springs**	**21.11**	**214**	P		**P**	**16 58 55.0**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	2.5nm,0.3s,mb4.0,baz=50,slow=9.1,SNR=62						
ASAR				S	S	17 02 44.6	+0.4
	4.6nm,0.9s,baz=23,slow=22,SNR=8.4						
BATI	Baumata	22.95	259	P	P	16 59 14.8	+0.8
	28nm,0.6s,mb4.8,baz=162,slow=3.8,SNR=10						
BATI	Baumata	22.95	259	P	P	16 59 15.6	+1.6
ARMA	Armidale	24.47	169	eP	P	16 59 28.3	+0.6
STKA	Stephens Creek	25.87	190	eP	P	16 59 40.0	-0.3
	3.4nm,0.6s,mb4.0						
STKA	Stephens Creek	25.87	190	P	P	16 59 40.0	-0.3
	4.9nm,0.6s,mb4.1,baz=338,slow=7.5,SNR=9.9						
MBWA	Marble Bar	29.86	238	eP	P	17 00 15.1	-0.9
RPZ	Rata Peaks	43.05	154	P	P	17 02 09.0	+1.2
	5.5nm,0.6s,mb4.5,baz=56,slow=14,SNR=4.4						
MJAR	Matsushiro Arr	43.32	350	P	P	17 02 07.2	-2.8
	2.7nm,0.8s,mb4.0,baz=22,slow=23,SNR=6.4						
MAJO	Matsushiro	43.32	350	eP	P	17 02 08.4	-1.6
	5.8nm,0.6s,mb4.5						
KSRS	Korea Array	46.86	340	P	P	17 02 37.2	-0.8
	8.7nm,0.8s,mb4.5,baz=157,slow=8.9,SNR=15						
CMAR	Chiang Mai Arr	52.98	299	P	P	17 03 25.8	+1.1
	18nm,0.9s,mb5.1,baz=122,slow=5.9,SNR=144						
CHG	Chiang Mai	53.12	299	⇓P	P	17 03 26.5	+0.8
	14nm,1.0s,mb4.9						
CHTO	Chiang Mai	53.12	299	eP	P	17 03 26.6	+0.9
	14nm,1.1s,mb4.9						
PETK	Petropavlovsk-	59.93	8	P	P	17 04 12.7	-0.7
	3.8nm,0.8s,mb4.5,baz=133,slow=5.6,SNR=4.4						
SHL	Shillong	61.78	303	eP	P	17 04 28.5	+2.0
GTA	Gaotai	62.67	321	eP	P	17 04 32.4	+0.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
LSA	Lhasa	64.04	307	P	P	17 04 43.0	+1.6
LSA	Lhasa	64.04	307	eP	P	17 04 42.2	+0.8
	comp=Z,6.5nm,0.6s,mb4.6						
SONM	Songino Array	64.43	331	P	P	17 04 43.0	-0.6
	comp=Z,0.4nm,0.3s,mb3.7,baz=162,slow=8.6,SNR=5.1						
TAPN	Taplejung	65.92	304	eP	P	17 04 54.5	+0.9
ODAN	Odare	66.01	303	eP	P	17 04 54.7	+0.5
RAMN	Ramite	66.70	303	eP	P	17 04 58.9	+0.3
	comp=Z,10nm,0.6s,mb4.9						
JIRN	Jiri	67.29	303	eP	P	17 05 03.1	+0.7
	comp=Z,16nm,0.7s,mb5.0						
GUN	Gumba	67.64	303	eP	P	17 05 04.9	+0.4
KKN	Kakani	68.09	303	eP	P	17 05 07.5	+0.1
	comp=Z,22nm,0.8s,mb5.1						
DMN	Daman	68.17	303	eP	P	17 05 08.4	+0.5
	comp=Z,35nm,0.8s,mb5.2						
GKN	Gorkha	68.70	303	eP	P	17 05 10.7	-0.5
	comp=Z,26nm,0.7s,mb5.2						
KOLN	Koldanda	69.49	303	eP	P	17 05 16.2	+0.1
	comp=Z,34nm,0.7s,mb5.3						
DANN	Dangsing	69.55	303	eP	P	17 05 16.3	-0.1
	comp=Z,24nm,0.6s,mb5.2						
HYB	Hyderabad	71.12	291	iP	P	17 05 26.5	+0.3
VNDA	Vanda	71.65	177	P	P	17 05 28.7	+0.4
	comp=Z,1.2nm,0.5s,mb4.0,baz=330,slow=6.5,SNR=16						
MKAR	Makanchi Array	77.42	321	P	P	17 06 01.1	-1.1
	comp=Z,1.6nm,0.8s,mb3.8,baz=95,slow=9.0,SNR=16						
MKAR				pP	pP	17 06 34.9	+7.7
	comp=Z,1.1nm,0.9s,baz=127,slow=3.2,SNR=3.0						
ZALV	Zalesovo Beam	79.01	328	P	P	17 06 08.4	-2.4
	comp=Z,1.9nm,0.6s,mb4.1,baz=106,slow=5.1,SNR=9.4						
ZALV				pP	pP	17 06 42.7	+6.9
	comp=Z,1.8nm,0.7s,baz=101,slow=5.4,SNR=4.0						
KBL	Kabul	83.32	306	eP	P	17 06 32.6	-1.5
	comp=Z,3.4nm,0.5s,mb4.4						
TOA0	Torodi Ar. Sit	144.71	284	ePKP	PKPdf	17 13 43.4	-0.8
TORD	Torodi Ar. Bea	144.71	284	PKP	PKPdf	17 13 43.2	-0.9
	comp=Z,34nm,0.9s,baz=83,slow=3.8,SNR=97						
SIV	San Ignacio	144.83	129	PKP	PKPdf	17 13 42.6	-1.8
	comp=Z,1.7nm,0.5s,baz=251,slow=1.6,SNR=7.0						
SIV				pPKP	pPKPdf	17 14 16.0	+5.0
	comp=Z,1.3nm,0.7s,baz=249,slow=3.9,SNR=3.0						
KIC	Kosan Boka	151.44	272	ePKIKP	PKPbc	17 14 01.2	-0.2
	comp=Z,40nm,1.0s						
LIC	Lamto	151.73	271	ePKIKP	PKPbc	17 14 01.7	-0.4
	comp=Z,16nm,0.7s						
TIC	Toumodi	151.73	272	ePKIKP	PKPbc	17 14 01.8	-0.3
	comp=Z,32nm,0.2s						

*IDC **03** 17:06:13.9±0.9, 34.70N×28.30E, h0^{km}, mb4.0/13, mb1 3.9/18, mb1mx3.9/27, mbtmp3.8/18, ML3.6/5, Error ellipse: s-maj=19.6km s-min=15.5km az=164.0*
*ISCJB **03** 17:06:16.9±0.3, 34.60N±0.02×28.55E±0.03, h44^{km}±6^{km}, mb3.8/14, Error ellipse: s-maj=4.9km s-min=3.0km az=143.4*
*CSEM **03** 17:06:17.1±0.1, 34.58N×28.57E, h40^{km}, MD3.8, Error ellipse: s-maj=2.4km s-min=1.5km az=51.0*
*HLW **03** 17:06:17.0, 34.70N×28.59E, h16^{km}, Mb4.0*
*MOS **03** 17:06:17.4±1.3, 34.71N×28.44E, h33^{km}, mb4.1/10, Error ellipse: s-maj=13.6km s-min=9.7km az=97.7*
*DDA **03** 17:06:18.9, 35.11N×28.26E, h2^{km}±1^{km}, Md3.9, Ml3.7*
*NEIC **03** 17:06:19.4±0.7, 34.68N×28.43E, h42^{km}±7^{km}, mb4.3/1, MD3.8(ATH), Error ellipse: s-maj=9.2km s-min=6.5km az=168.0*
*GII **03** 17:06:22.8±0.0, 34.19N×29.01E, h0^{km}, ML3.3/3*
*ATH **03** 17:06:29.0, 35.44N×27.89E, h43^{km}±1^{km}, MD3.7/5*
ISC 03 17:06:18.6±0.3, **34.63N**±0.02×**28.51E**±0.03, **h37**^{km}±6^{km}, **n91**, σ**0^{s}95**/107, **mb3.8**/14, **5D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	1.43	310	⇓iP	Pn	17 06 42.3	+0.2
KARP	Karpathos	1.43	310	⇓iPn	Pn	17 06 42.6	+0.5
KARP				eSn	Sn	17 07 00.8	+1.1
ARG	Arkhangelos	1.61	349	eP	Pn	17 06 44.8	+0.2
ARG	Arkhangelos	1.61	349	ePn	Pn	17 06 45.0	+0.4
AKAS	Kas	1.83	29	⇓iP	Pn	17 06 48.8	+1.2
AKAS				iS	Sn	17 07 10.3	+0.7
TURN	Turunc	2.24	2	⇓iP	Pn	17 06 52.0	-1.2
TURN				iS	Sn	17 07 17.3	-2.3
NPS	Neapolis	2.46	286	eP	Pn	17 06 59.3	+3.1
NPS	Neapolis	2.46	286	ePb	Pn	17 06 57.0	+0.8
BDRM	Kayabasi	2.58	341	eP	Pn	17 06 57.6	-0.2
BDRM				eS	Sn	17 07 25.2	-2.7
GOLH	Golhisar	2.74	18	⇓iP	Pn	17 07 02.0	+1.9
GOLH				iS	Sn	17 07 34.1	+2.2
IDI	Anoyia	3.04	283	Pn	Pn	17 07 05.2	+1.0
	6.6nm,0.3s,baz=95,slow=18,SNR=4.0						
IDI				Sn	Sn	17 07 38.8	-0.6
	32nm,0.3s,baz=253,slow=22,SNR=15						
AYDN	Tasoluk	3.07	351	eP	Pn	17 07 05.8	+1.3
AYDN				eS	Sn	17 07 39.4	-0.6
GCAM	G?zelcaml?	3.23	342	eP	Pn	17 07 06.7	-0.1
GCAM				eS	Sn	17 07 40.8	-3.2
SMG	Samos	3.36	337	eP	Pn	17 07 07.9	-0.6
SMG	Samos	3.36	337	ePn	Pn	17 07 08.1	-0.4
APE	Apeiranthos	3.43	316	eP	Pn	17 07 09.0	-0.5
APE	Apeiranthos	3.43	316	ePn	Pn	17 07 09.1	-0.4
VAM	Vamos	3.62	284	ePn	Pn	17 07 13.0	+0.9
GVD	Gavdhos	3.65	275	ePn	Pn	17 07 12.0	-0.5
HMAT	Matruh	3.72	199	P	Pn	17 07 14.5	+0.9
SLUM		4.18	222	P	Pn	17 07 20.3	+0.5
VLI	Veliai	4.99	296	ePn	Pn	17 07 30.0	-0.9
HMYD	Mayadein	5.20	157	P	Pn	17 07 34.0	+0.2
AYT	Al ‘Ayyat	5.40	155	P	Pn	17 07 36.9	+0.3
KOT	Kottamia	5.47	148	P	Pn	17 07 37.5	-0.1
HHAG	Hagoal	5.57	146	P	Pn	17 07 38.9	-0.1
AMAG	Maghara	5.62	134	P	Pn	17 07 39.4	-0.2
HSAF	As Saff	5.62	152	P	Pn	17 07 39.8	0.0
RSH		5.72	128	P	Pn	17 07 40.8	-0.2
GLL	Jalalah	5.72	151	P	Pn	17 07 41.6	+0.5
MMAI	Mount Meron Ar	5.96	104	Pn	Pn	17 07 45.4	+1.0
	1.9nm,0.3s,baz=288,slow=11,SNR=6.8						
MMAI				Sn	Sn	17 08 50.3	-1.1
	4.0nm,0.3s,baz=314,slow=25,SNR=6.3						
HRSH	Kfar Ka’horesh	5.97	107	P	Pn	17 07 40.8	-3.6
SUZ		6.02	141	P	Pn	17 07 44.9	-0.2
MMLI	Mount Malkishu	6.17	109	Pn	Pn	17 07 47.0	-0.3
KZIT	Kziot	6.20	125	Pn	Pn	17 07 47.3	-0.3
RTMI	Retamim	6.31	123	Pn	Pn	17 07 49.0	-0.1
HMDT	Nahal Hemdat	6.33	110	Pn	Pn	17 07 49.5	+0.1
HMDT				Sn	Sn	17 08 58.7	-1.7
ZAF		6.34	146	P	Pn	17 07 49.6	0.0
DSI	Dead Sea	6.53	116	Pn	Pn	17 07 53.0	+0.9
BR131	Keskin Array S	6.53	37	eP	Pn	17 07 52.7	+0.6
	0.8nm,0.3s						
BR131	Keskin Array S	6.53	37	eP	Pn	17 07 52.7	+0.6
	0.8nm,0.3s						
BRTR	Keskin Array B	6.53	37	Pn	Pn	17 07 52.7	+0.6
	0.4nm,0.3s,baz=222,slow=16,SNR=13						
BRTR				Sn	Sn	17 09 05.0	-0.3
	0.4nm,0.3s,baz=203,slow=25,SNR=14						
HNKL	Nakhl	6.59	134	P	Pn	17 07 52.9	-0.1
MZDA	Masada	6.64	118	Pn	Pn	17 07 53.9	+0.2
KRMI	Paran Flat	6.92	129	Pn	Pn	17 07 57.5	-0.1
PRNI	Paran	6.95	126	Pn	Pn	17 07 57.4	-0.6
HRFI	Mount Harif	7.18	128	Pn	Pn	17 08 00.4	-0.6
MBRI	Mt Berech	7.26	130	Pn	Pn	17 08 02.7	+0.5
MBRI				Sn	Sn	17 09 20.5	-2.8
EIL	Elat	7.37	130	Pn	Pn	17 08 03.9	+0.3
	1.7nm,0.3s,baz=320,slow=8.4,SNR=16						
EIL				Sn	Sn	17 09 21.1	-4.9
	2.0nm,0.3s,baz=340,slow=21,SNR=7.4						
EIL	Elat	7.37	130	Pn	Pn	17 08 03.9	+0.2
EIL				Sn	Sn	17 09 21.1	-4.9
EIL	Elat	7.37	130	Pn	Pn	17 08 03.9	+0.3
EIL				Sn	Sn	17 09 21.1	-4.9
EIL	Elat	7.37	130	Pn	Pn	17 08 03.9	+0.3
EIL				Sn	Sn	17 09 21.7	-4.3
TR2		7.65	143	P	Pn	17 08 07.1	-0.4
HKAT	Jabal Katrina	7.68	141	P	Pn	17 08 07.9	0.0
HQLS		7.70	132	S	Sn	17 09 28.7	-5.4
HQLS		7.70	132	P	Pn	17 08 08.7	+0.5
SHRM		8.26	143	P	Pn	17 08 15.3	-0.6
RSHS		8.29	138	P	Pn	17 08 16.3	+0.1
BDAS	Al Bad‘	8.36	136	P	Pn	17 08 16.6	-0.6
JLOS		8.36	133	P	Pn	17 08 17.6	+0.3
HHRG	Al Ghardaqah	8.57	148	P	Pn	17 08 20.6	+0.5
PSZ	Piszkesteto	14.76	337	eP	Pn	17 09 50.1	+5.5
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PSZ	Piszkesteto	14.76	337	eP	Pn	17 09 50.1	+5.5
	comp=Z,7.9nm,0.9s						
AKASG	Malin Array Be	16.07	2	Pn	Pn	17 10 01.7	+0.1
	comp=Z,1.1nm,0.3s,baz=199,slow=12,SNR=6.3						
AKASG	Malin Array Be	16.07	2	P	Pn	17 10 01.7	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	GERESS Array B	17.95	327	P	Pn	17 10 22.6	-2.5
	comp=Z,0.1nm,0.3s,baz=117,slow=10.0,SNR=2.4						
ESDC	Sonseca Array	26.28	291	P	P	17 11 49.9	-0.5
	comp=Z,0.7nm,0.4s,mb3.5,baz=83,slow=10,SNR=4.1						
AKTK	Aktyubinsk	26.64	45	P	P	17 11 54.2	+0.6
AKTO	Aktyubinsk	26.64	45	P	P	17 11 54.2	+0.6
	comp=Z,0.7nm,0.6s,mb3.4,baz=244,slow=11,SNR=4.5						
AKTO	Aktyubinsk	26.64	45	P	P	17 11 54.2	+0.6
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
HFS	Hagfors	27.28	344	P	P	17 11 57.7	-1.5
	comp=Z,2.9nm,0.7s,mb3.9,baz=146,slow=11,SNR=8.3						
HFS	Hagfors	27.28	344	P	P	17 11 57.7	-1.5
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	28.67	342	P	P	17 12 10.4	-1.2
	comp=Z,0.4nm,0.6s,mb3.4,baz=154,slow=8.1,SNR=3.2						
EKA	Eskdalemuir Ar	30.09	323	P	P	17 12 23.2	-1.0
	comp=Z,1.3nm,0.7s,mb3.8,baz=122,slow=11,SNR=4.1						
EKA	Eskdalemuir Ar	30.09	323	P	P	17 12 23.2	-1.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	32.35	235	P	P	17 12 45.1	+0.5
	comp=Z,1.0nm,1.1s,mb3.6,baz=38,slow=9.6,SNR=3.5						
ARCES	ARCESS Array B	35.00	358	P	P	17 13 06.6	-0.4
	comp=Z,2.4nm,0.7s,mb4.2,baz=157,slow=7.9,SNR=8.6						
ARCES	ARCESS Array B	35.00	358	P	P	17 13 06.6	-0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	39.39	50	P	P	17 13 45.0	+0.5
	comp=Z,0.6nm,0.6s,mb3.5,baz=275,slow=8.9,SNR=4.6						
KURK	Kurchatov	39.39	50	P	P	17 13 45.0	+0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
DBIC	Dimbokro	41.46	236	P	P	17 14 01.4	-0.6
	comp=Z,2.7nm,0.6s,mb4.1,baz=113,slow=3.1,SNR=9.2						
DBIC	Dimbokro	41.46	236	eP	P	17 14 01.6	-0.4
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DBIC	Dimbokro	41.46	236	eP	P	17 14 01.6	-0.4
	comp=Z,4.0nm,0.7s,mb4.2						
MKAR	Makanchi Array	41.77	56	P	P	17 14 05.7	+1.5
	comp=Z,0.9nm,0.7s,mb3.5,baz=278,slow=3.6,SNR=6.0						
MKAR	Makanchi Array	41.77	56	P	P	17 14 05.7	+1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	43.40	46	P	P	17 14 18.8	+1.5
	comp=Z,0.5nm,0.3s,mb3.8,baz=270,slow=7.2,SNR=3.0						
ZALV	Zalesovo Beam	43.40	46	P	P	17 14 18.8	+1.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
ZAK	Zakamensk	55.03	49	eP	P	17 15 41.1	-5.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb4.0						
SONM	Songino Array	57.69	51	P	P	17 16 07.9	+2.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=293,slow=8.0,SNR=7.7						
SONM	Songino Array	57.69	51	P	P	17 16 07.9	+2.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	65.36	321	P	P	17 16 56.6	-0.2
	comp=Z,5.5nm,0.8s,mb4.6,baz=212,slow=18,SNR=6.2						

*IDC **03** 17:06:53.9±1.2, 9.53N×125.88E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/21, mbtmp3.7/7, ML4.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/35, Error ellipse: s-maj=47.8km s-min=20.6km az=72.0*
*MAN **03** 17:06:55, 9.19N×125.55E, h5^{km}, mb4.7, ML3.6, MS3.6*
*ISCJB **03** 17:06:57.0±0.5, 9.25N±0.03×125.63E±0.05, h33^{km}, mb3.6/6, MS3.1/2, Error ellipse: s-maj=7.4km s-min=4.2km az=155.4*
ISC 03 17:06:56.3±0.8, **9.20N**±0.03×**125.63E**±0.06, **h17**^{km}±6^{km}, **n29**, σ**1^{s}18**/39, **mb3.6**/6, **MS3.1**/2, **3C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.23	181	eP	Pg	17 07 01.4	-0.2
BUTP				eS	Sg	17 07 11.2	+6.0
SCPH	Surigao	0.60	347	⇑eP	Pg	17 07 07.2	-1.0
SCPH				eS	Sg	17 07 16.8	+0.7
MSLP	Maasin	1.20	321	eP	Pn	17 07 17.3	-1.1
MSLP				eS	Sb	17 07 37.1	+3.2
BIPH	Bislig	1.24	144	⇓iP	Pn	17 07 18.0	-1.0
BIPH				iS	Sb	17 07 34.2	-0.9
BUKP	Musuan	1.43	203	eP	Pn	17 07 21.2	-0.3
BUKP				eS	Sn	17 07 46.2	+6.3
TBP	Tagbilaran	1.81	286	eP	Pn	17 07 26.1	-0.7
TBP				eS	Sn	17 07 45.1	-4.3
LLP	Lapu-Lapu	1.98	304	eP	Pn	17 07 28.4	-0.7
LLP				eS	Sn	17 07 51.2	-2.3
PLP	Palo	2.06	342	⇓eP	Pn	17 07 30.8	+0.6
PLP				eS	Sn	17 07 58.4	+2.9
OCLP	Ormoc	2.10	332	eP	Pn	17 07 30.0	-0.8
OCLP				eS	Sn	17 08 08.1	+12
DAV	Davao City (W)	2.12	181	Pn	Pn	17 07 37.5	+6.5
	47nm,0.3s,baz=283,slow=3.3,SNR=11						
DAV				Sn	Sn	17 08 13.2	+16
	26nm,0.3s,baz=259,slow=16,SNR=4.2						
KCP	Kidapawan	2.24	194	⇑eP	Pn	17 07 34.8	+2.1
MATI	Mati	2.32	164	eP	Pn	17 07 34.6	+0.7
MATI				eS	Sn	17 08 08.9	+6.8
SNPH	Sibulan	2.36	274	eP	Pn	17 07 35.0	+0.6
PAGZ	Pagadian	2.59	239	eP	Pn	17 07 37.2	-0.4
PAGZ				eS	Sn	17 08 09.9	+1.1
GUIM	Jordan	3.31	296	eP	Pn	17 07 46.3	-1.2
GUIM				eS	Sn	17 08 22.2	-4.2
CNP	Catarman	3.42	344	eP	Pn	17 07 52.5	+3.5
RCP	Roxas	3.68	310	⇑eP	Pn	17 07 52.8	+0.3
PVCP	Virac	4.60	342	⇓iP	Pn	17 08 08.7	+3.5
OTRP	Odiongan	4.74	312	eP	Pn	17 08 08.8	+1.7
ENPP	El Nido	6.42	289	eP	Pn	17 08 25.5	-4.8
BATI	Baumata	19.38	186	LR	LR	17 21 31.7	
	comp=Z,60nm,18.5s,baz=125,slow=44						
CMAR	Chiang Mai Arr	27.46	292	P	P	17 12 42.2	+0.4
	1.2nm,1.1s,mb3.3,baz=96,slow=5.8,SNR=6.0						
KSRS	Korea Array	28.21	4	LR	LR	17 23 42.2	
	comp=Z,30nm,18.6s,MS2.9,baz=200,slow=36						
MJAR	Matsushiro Arr	29.52	21	LR	LR	17 22 51.8	
	comp=Z,64nm,20.8s,MS3.2,baz=100,slow=33						
ASAR	Alice Springs	33.65	166	P	P	17 13 37.6	+1.3
	0.2nm,0.5s,mb3.3,baz=343,slow=7.3,SNR=7.5						
MKAR	Makanchi Array	52.50	324	P	P	17 16 08.2	-0.3
	1.0nm,0.6s,mb3.9,baz=139,slow=7.9,SNR=8.1						
KURK	Kurchatov	56.59	326	P	P	17 16 37.5	-0.7
	1.0nm,0.7s,mb4.0,baz=127,slow=6.4,SNR=6.2						
BVAR	Borovoye Array	62.19	326	P	P	17 17 16.4	-0.5
	0.4nm,0.6s,mb3.7,baz=102,slow=6.1,SNR=3.0						
YKA	Yellowknife Ar	94.99	24	P	P	17 20 16.6	-1.3
	0.2nm,0.8s,mb3.6,baz=301,slow=4.4,SNR=3.0						

*ISCJB **03** 17:12:48.4±0.7, 1.72N±0.05×127.04E±0.07, h86^{km}±7^{km}, mb4.0/12, Error ellipse: s-maj=12.6km s-min=6.8km az=158.2*
*IDC **03** 17:12:49.1±3.0, 1.53N×127.05E, h73^{km}±26^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.8/19, mbtmp3.8/12, Error ellipse: s-maj=28.0km s-min=12.7km az=77.0*
*NEIC **03** 17:12:49.1±2.5, 1.57N×127.15E, h75^{km}±24^{km}, mb4.1/1, Error ellipse: s-maj=23.3km s-min=9.0km az=68.0*
*DJA **03** 17:12:51, 1.71N×126.98E, h40^{km}, MLv4.2/5*
ISC 03 17:12:49.2±0.7, **1.68N**±0.05×**127.07E**±0.08, **h74**^{km}±8^{km}, **n21**, σ**1^{s}13**/26, **mb4.0**/12, **1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.95	162	P	Pn	17 13 07.9	+0.6
MNI	Manado	2.24	264	P	Pn	17 13 24.8	+0.7
MNI				S	Sn	17 13 51.0	+0.4
LBMI	Labuha	2.34	169	P	Pn	17 13 26.5	+1.0
LBMI				S	Sn	17 13 57.4	+4.3
GSPH	General Santos	4.86	334	⇑eP	Pn	17 14 00.3	+0.4
GSPH				eS	Sn	17 14 53.4	-1.5
MATI	Mati	5.30	351	eP	Pn	17 14 04.1	-1.7
MATI				eS	Sn	17 14 56.5	-8.9
AAI	Ambon	5.45	168	P	Pn	17 14 11.2	+3.4
KDI	Kendari	7.15	218	P	Pn	17 14 29.6	-1.5
KAPI	Kappang	9.88	228	P	Pn	17 15 08.5	+0.1
	1.1nm,0.3s,baz=55,slow=11,SNR=3.4						
KAPI				S	Sn	17 16 52.5	-5.2
	0.8nm,0.3s,baz=41,slow=20,SNR=2.8						
WRAB	Tennant Creek	22.63	162	eP	P	17 17 42.2	-1.8
	5.6nm,0.6s,mb4.1						
ASAR	Alice Springs	26.05	166	P	P	17 18 14.6	-1.2
	0.8nm,0.3s,mb3.6,baz=346,slow=13,SNR=36						
ASAR				ScP	ScP	17 25 14.6	-0.9
	0.2nm,0.6s,baz=344,slow=2.4,SNR=5.0						
CMAR	Chiang Mai Arr	32.23	303	P	P	17 19 10.5	-0.2
	0.6nm,0.8s,mb3.4,baz=115,slow=6.8,SNR=6.3						
NWAO	Narrogin (SRO)	35.65	194	P	P	17 19 39.1	-1.0
	8.4nm,0.9s,mb4.7,baz=9.5,slow=16,SNR=2.9						
STKA	Stephens Creek	36.10	159	P	P	17 19 43.1	-0.9
	1.7nm,0.4s,mb4.3,baz=340,slow=9.1,SNR=7.7						
MJAR	Matsushiro Arr	36.19	15	P	P	17 19 44.9	+0.2
	0.6nm,0.4s,mb3.9,baz=187,slow=8.7,SNR=3.9						
SONM	Songino Array	49.34	342	P	P	17 21 32.8	+1.9
	0.8nm,0.4s,mb4.0,baz=154,slow=7.6,SNR=8.0						
MKAR	Makanchi Array	59.43	326	P	P	17 22 46.0	+1.9
	2.3nm,0.3s,mb4.6,baz=119,slow=8.2,SNR=51						
ZALV	Zalesovo Beam	62.56	333	P	P	17 23 05.3	+0.1
	0.6nm,0.4s,mb3.9,baz=120,slow=5.8,SNR=5.0						
ZALV	Zalesovo Beam	62.56	333	P	P	17 23 05.3	+0.1
KURK	Kurchatov	63.64	328	P	P	17 23 13.4	+1.0
	5.5nm,0.6s,mb4.6,baz=129,slow=6.2,SNR=39						
BVAR	Borovoye Array	69.22	327	P	P	17 23 48.8	+0.8
	1.6nm,0.8s,mb3.9,baz=152,slow=6.7,SNR=5.9						
VNDA	Vanda	81.36	173	P	P	17 24 56.6	-0.6
	0.3nm,0.4s,mb3.5,baz=313,slow=7.3,SNR=5.6						

*ISCJB **03** 17:22:20.0±1.2, 19.3S±0.1×178.2W±0.1, h497^{km}±20^{km}, mb3.8/5, Error ellipse: s-maj=22.4km s-min=13.6km az=41.5*
*IDC **03** 17:22:20.8±1.7, 19.40S×178.07W, h501^{km}±22^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.3/19, mbtmp3.5/7, Error ellipse: s-maj=20.6km s-min=13.1km az=131.0*
*NEIC **03** 17:22:20.8±1.2, 19.43S×178.08W, h499^{km}±18^{km}, mb4.5/2, Error ellipse: s-maj=28.9km s-min=12.7km az=147.0*
ISC 03 17:22:20.3±1.2, **19.4S**±0.1×**178.1W**±0.1, **h492**^{km}±20^{km}, **n19**, σ**0^{s}69**/18, **mb3.8**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.16	49	P	P	17 24 19.0	+0.7
	3.7nm,0.3s,baz=275,slow=1.3,SNR=3.9						
AFI				S	S	17 25 54.3	-0.6
	7.4nm,0.3s,baz=331,slow=19,SNR=3.9						
URZ	Urewera	19.27	191	P	P	17 26 13.0	+0.4
	2.2nm,0.3s,baz=313,slow=2.5,SNR=8.9						
URZ				S	S	17 29 21.5	-0.1
	0.3nm,0.3s,baz=96,slow=19,SNR=2.7						
ARMA	Armidale	29.47	242	eP	P	17 27 43.1	-0.5
CTA	Charters Tower	33.50	263	eP	P	17 28 20.1	+1.8
	5.1nm,0.3s,mb4.4						
CTA	Charters Tower	33.50	263	P	P	17 28 19.4	+1.1
	6.4nm,0.4s,mb4.4,baz=93,slow=11,SNR=12						
CTAO	Charters Tower	33.50	263	eP	P	17 28 19.7	+1.4
	6.7nm,0.4s,mb4.4						
STKA	Stephens Creek	38.19	243	eP	P	17 28 55.7	-1.4
	1.8nm,0.5s,mb3.8						
STKA	Stephens Creek	38.19	243	P	P	17 28 55.8	-1.3
	1.4nm,0.4s,mb3.7,baz=105,slow=9.8,SNR=7.3						
STKA	Stephens Creek	38.19	243	eP	P	17 28 55.8	-1.4
	0.5nm,0.6s,mb3.1						
WB2	Warramunga Arr	44.64	261	eP	P	17 29 48.5	-0.1
ASAR	Alice Springs	44.68	256	P	P	17 29 48.8	-0.1
	5.5nm,0.5s,mb4.3,baz=89,slow=7.9,SNR=174						
NVAR	Mina Array Bea	80.29	44	P	P	17 33 39.4	-0.2
	0.8nm,0.7s,mb3.4,baz=227,slow=9.7,SNR=3.7						
TXAR	Lajitas Array	86.55	57	P	P	17 34 11.3	+0.4
	0.7nm,0.7s,mb3.5,baz=218,slow=7.8,SNR=7.4						
TXAR	Lajitas Array	86.55	57	P	P	17 34 11.3	+0.4
VNA3	Neumayer Olymp	89.26	176	e	P	17 34 17.0	-5.9
VNA3				e		17 34 20.1	
VNA2	Neumayer--Watz	89.70	177	e	P	17 34 19.2	-5.8
	baz=203,slow=3.6						
VNA2				e		17 34 22.4	
AKASG	Malin Array Be	141.98	332	PKP	PKPdf	17 40 52.2	-3.4
	1.5nm,0.4s,baz=44,slow=4.2,SNR=7.9						
BRTR	Keskin Array B	146.00	313	PKPbc	PKPbc	17 41 05.2	+0.5
	0.6nm,0.7s,baz=76,slow=6.1,SNR=3.0						
CLL	Collm	146.95	347	ePKPbc	PKPbc	17 41 08.0	+1.0
	comp=Z,4.0nm,0.6s						

*IDC **03** 17:38:46.3±2.5, 21.95S×174.86W, h0^{km}, mb4.2/6, mb1 4.3/6, mb1mx4.0/17, mbtmp4.1/6, MS3.5/3, Ms1 3.5/3, ms1mx3.1/30, Error ellipse: s-maj=112.1km s-min=25.9km az=152.0*
*ISCJB **03** 17:38:50.2±0.7, 21.9S±0.2×175.0W±0.2, h33^{km}, mb4.1/7, MS3.4/3, Error ellipse: s-maj=24.9km s-min=21.9km az=34.1*
*NEIC **03** 17:38:52.0±0.7, 21.87S×174.93W, h35^{km}, mb4.7/1, Error ellipse: s-maj=27.5km s-min=18.3km az=143.0*
ISC 03 17:38:52.0±0.7, **21.9S**±0.2×**174.9W**±0.2, **h35**^{km}, **n17**, σ**0^{s}71**/10, **mb4.1**/7, **MS3.4**/3, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	24.23	84	eLR	LR	17 49 54.7	
	133nm,23.8s						
PPT	Papeete	24.23	84	LR	LR	17 49 58.6	
	comp=Z,147nm,20.8s,MS3.5,baz=286,slow=28						
HNR	Honiara	27.14	293	LR	LR	17 53 31.2	
	comp=Z,100nm,20.2s,MS3.4,baz=152,slow=32						
CTA	Charters Tower	36.23	266	P	P	17 45 51.7	-0.2
	4.8nm,0.9s,mb4.5,baz=70,slow=8.9,SNR=4.4						
CTA	Charters Tower	36.23	266	P	P	17 45 51.7	-0.2
STKA	Stephens Creek	39.81	246	LR	LR	18 01 45.6	
	comp=Z,66nm,19.9s,MS3.5,baz=204,slow=35						
ASAR	Alice Springs	47.01	258	P	P	17 47 19.4	-0.7
	1.8nm,0.8s,mb4.0,baz=89,slow=8.3,SNR=18						
QSPA	South Pole Qui	68.17	180	eP	P	17 49 48.9	+0.8
	5.9nm,0.9s,mb4.6						
PETK	Petropavlovsk-	78.39	344	P	P	17 50 48.5	-0.1
	3.2nm,0.9s,mb4.2,baz=120,slow=8.5,SNR=4.3						
NVAR	Mina Array Bea	80.11	42	P	P	17 50 58.7	+0.3
	0.5nm,0.8s,mb3.5,baz=196,slow=5.6,SNR=2.5						
VNA3	Neumayer Olymp	86.53	175	e	P	17 51 30.3	-0.7
VNA3				e		17 51 34.2	
VNA3				e		17 51 47.1	
VNA2	Neumayer--Watz	87.01	176	e	P	17 51 33.2	-0.1
VNA2				e		17 51 37.7	
VNA2				e		17 51 50.5	
CMAR	Chiang Mai Arr	93.29	288	P	P	17 52 05.2	+1.5
	0.7nm,0.6s,mb4.3,baz=139,slow=3.2,SNR=7.1						
YKA	Yellowknife Ar	96.61	24	P	P	17 52 17.0	-0.8
	0.3nm,0.6s,mb3.9,baz=232,slow=4.6,SNR=3.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**145.61**	**333**	PKPbc	PKPbc	17 58 25.7	-0.9
	2.0nm,0.6s,baz=36,slow=4.1,SNR=8.8						
BR131	**Keskin Array S**	**149.90**	**313**	PKPbc	PKPbc	17 58 39.0	+0.3
BRTR	**Keskin Array B**	**149.90**	**313**	PKPbc	PKPbc	17 58 38.9	+0.1
	1.0nm,0.9s,baz=207,slow=1.4,SNR=4.7						

*ISCJB **03** 18:06:03.0±0.5,3682N±004×7130E±009,h176^{km}±13^{km}, Error ellipse: s-maj=13.1km s-min=5.5km az=158.2*
*NNC **03** 18:06:10.4±9.0,3729N×7078E,h172^{km}±101^{km},mb2.9, mpv4.1,Error ellipse: s-maj=90.2km s-min=62.1km az=40.0*
ISC 03 18:06:04.2±0.6**,3682N**±004×**714E**±01**,h163**^{km}±13^{km}**,n27,** σ**1**^{s}**06**/34**,5C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.02**	**171**	⇑P	**Pn**	**18 06 52.9**	**+0.5**
CEP				S	**Sn**	**18 07 30.0**	**+0.3**
CHCP	**Chirah Chowk**	**3.52**	**153**	P	**Pn**	**18 07 00.2**	**+1.6**
SBDP	**Sheikh Budin**	**4.54**	**186**	⇑P	**Pn**	**18 07 11.9**	**+0.1**
THN	**Thein Dam**	**5.66**	**139**	eP	**Pn**	**18 07 26.4**	**-0.1**
THN				eS	**Sn**	**18 08 28.3**	**-2.6**
DLH	**Dalhousie**	**5.71**	**137**	eP	**Pn**	**18 07 27.0**	**-0.1**
DLH				ex	x	18 08 32.0	
KZA	**Kyzart**	**6.05**	**29**	P	**Pn**	**18 07 31.8**	**+0.3**
	SNR=14						
EKS2	**Erkin-Say**	**6.12**	**17**	P	**Pn**	**18 07 32.1**	**-0.4**
	SNR=15						
AAK	**Ala-Archa**	**6.28**	**22**	P	**Pn**	**18 07 35.0**	**+0.4**
	SNR=20						
KK31	**Karatay Array**	**6.31**	**354**	P	**Pn**	**18 07 34.0**	**-0.9**
	9.3nm,0.4s,baz=182,slow=14,SNR=325						
KK31				⇑S	**Sn**	**18 08 42.2**	**-4.1**
	6.1nm,0.3s,baz=176,slow=27,SNR=5.0						
KBK	**Karagaybulak**	**6.45**	**24**	P	**Pn**	**18 07 38.4**	**+1.6**
	SNR=7.8						
CHMS	**Chumysh**	**6.69**	**22**	P	**Pn**	**18 07 40.2**	**+0.2**
	SNR=18						
USP	**Ospenovka**	**6.87**	**19**	P	**Pn**	**18 07 42.3**	**-0.1**
	SNR=12						
SDNR	**Sundarnagar**	**7.05**	**137**	eP	**Pn**	**18 07 45.0**	**+0.1**
SDNR				eS	**Sn**	**18 08 58.4**	**-5.7**
SMLA	**Simla**	**7.44**	**138**	i P	**Pn**	**18 07 49.0**	**-1.1**
SMLA				i S	**Sn**	**18 09 08.4**	**-5.2**
SMLA				ex	x	18 09 12.1	
	comp=N,642nm,0.3s						
SMLA				ex	x	18 09 13.2	
	comp=E,428nm,0.4s						
KLP	**Kalpa**	**7.76**	**131**	eP	**Pn**	**18 07 55.9**	**+1.5**
KLP				eS	**Sn**	**18 09 19.5**	**-1.8**
KLP				AML	AML	18 09 20.4	
	comp=N,87nm,0.3s						
KLP				AML	AML	18 09 21.7	
	comp=E,90nm,0.2s						
DDI	**Dehra Dun**	**8.55**	**137**	ex	x	18 09 39.0	
JOSI	**Joshimath**	**9.25**	**130**	eS	**Sn**	**18 09 52.6**	**-4.3**
JOSI				AML	AML	18 09 56.5	
	comp=N,72nm,0.4s						
JOSI				AML	AML	18 09 56.7	
	comp=E,63nm,0.4s						
KHET	**Khetri**	**9.49**	**156**	eS	**Sn**	**18 09 52.5**	**-10**
KHET				AML	AML	18 10 00.0	
	comp=N,17nm,0.2s						
KHET				AML	AML	18 10 01.4	
	comp=E,14nm,0.2s						
DANN	**Dangsing**	**13.43**	**125**	eP	**Pn**	**18 09 08.4**	**+0.1**
KOLN	**Koldanda**	**13.72**	**128**	eP	**Pn**	**18 09 12.3**	**+0.3**
	comp=E,3.9nm,0.3s						
GKN	**Gorkha**	**14.23**	**124**	eP	**Pn**	**18 09 18.3**	**-0.2**
	comp=E,4.1nm,0.3s						
KKN	**Kakani**	**14.80**	**124**	eP	**Pn**	**18 09 25.1**	**-0.5**
AB09	**Akbulak array**	**14.96**	**330**	⇑P	**Pn**	**18 09 26.7**	**-0.7**
	comp=E,1.2nm,0.4s						
AB09				S	**Sn**	**18 12 02.9**	**-11**
GUN	**Gumba**	**15.13**	**122**	eP	**Pn**	**18 09 32.9**	**+3.3**
	comp=E,8.2nm,0.4s						
RAMN	**Ramite**	**16.23**	**123**	eP	**Pn**	**18 09 45.7**	**+2.5**
AKTO	**Aktyubinsk**	**16.65**	**329**	⇑P	**Pn**	**18 09 46.7**	**-1.2**
	comp=E,0.8nm,1.3s						
AKTO				⇓S	**S**	**18 12 43.7**	**-9.0**
	comp=E,0.4nm,1.1s						
TAPN	**Taplejung**	**16.74**	**120**	eP	**Pn**	**18 09 55.1**	**+5.8**
	comp=E,5.9nm,0.5s						

*ISCJB **03** 18:06:07.4±0.6,213S±0.1×6824W±009,h103^{km}±9^{km}, mb3.7/4,Error ellipse: s-maj=21.7km s-min=9.4km az=147.3*
*IDC **03** 18:06:09.0±1.1,2155S×68.10W,h109^{km}±15^{km},mb3.6/4, mb1 3.7/5,mb1mx3.5/14,mbtmp3.6/5,MS3.8/1,Ms1 3.8/1, ms1mx2.8/19,Error ellipse: s-maj=33.7km s-min=16.7km az=147.0*
*GUC **03** 18:06:09.9±0.6,2162S×6846W,h124^{km}±9^{km},ML3.9*
ISC 03 18:06:08.6±0.6**,214S**±01×**6827W**±009**,h100**^{km}±9^{km}**,n13,** σ**0**^{s}**97**/18**,mb3.7**/4**,1C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.18**	**285**	AML	AML	18 06 55.2	
	comp=E,4μm,0.3s						
LVC	**Limon Verde**	**1.38**	**205**	P	**Pn**	**18 06 34.0**	**+0.5**
	comp=E,51nm,0.3s,baz=9.8,slow=6.3,SNR=288						
LVC				S	**Sn**	**18 06 52.3**	**0.0**
	comp=E,55nm,0.3s,baz=107,slow=22,SNR=56						
LVC	**Limon Verde**	**1.38**	**205**	⇓iP	**Pn**	**18 06 33.9**	**+0.4**
LVC				i S	**Sn**	**18 06 52.2**	**-0.1**
MACH	**Maria Elena**	**1.61**	**239**	eP	**Pn**	**18 06 36.6**	**+0.3**
MACH				i S	**Sn**	**18 06 57.3**	**0.0**
PECH	**Pedro de Valdi**	**1.79**	**226**	⇑iP	**Pn**	**18 06 38.4**	**-0.2**
PECH				i S	**Sn**	**18 07 00.1**	**-1.3**
PECH				AML	AML	18 07 01.6	
	comp=N,2μm,0.2s						
TOCH	**Tocopilla**	**1.94**	**247**	⇓iP	**Pn**	**18 06 40.5**	**0.0**
TOCH				i S	**Sn**	**18 07 03.4**	**-1.3**
TOCH				AML	AML	18 07 04.0	
	comp=E,5μm,0.2s						
CEN1	**Los Morros**	**2.70**	**221**	eP	**Pn**	**18 06 52.6**	**+2.3**
CEN1				i S	**Sn**	**18 07 23.0**	**+0.5**
CEN1				AML	AML	18 07 34.4	
	comp=E,189nm,0.4s						
SIV	**San Ignacio**	**8.66**	**53**	P	**Pn**	**18 08 12.6**	**+1.4**
	comp=E,1.4nm,0.3s,baz=246,slow=11,SNR=22						
SIV				S	**Sn**	**18 09 46.2**	**-0.9**
	comp=E,0.1nm,0.3s,baz=318,slow=22,SNR=4.1						
PLCA	**Paso Flores**	**19.41**	**185**	LR	LR	18 17 34.6	
	comp=E,310nm,21.1s,baz=0.1,slow=36						
TXAR	**Lajitas Array**	**60.85**	**325**	P	**P**	**18 16 12.0**	**+1.4**
	comp=E,0.2nm,0.7s,mb3.3,baz=176,slow=13,SNR=2.0						
DBIC	**Dimbokro**	**68.12**	**73**	P	**P**	**18 16 57.6**	**-0.8**
	comp=E,2.3nm,0.7s,mb4.1,baz=234,slow=7.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	**P**	**18 17 48.2**	**-1.3**
	comp=E,1.1nm,0.7s,mb3.7,baz=254,slow=5.7,SNR=18						
YKA	**Yellowknife Ar**	**91.25**	**340**	P	**P**	**18 19 02.1**	**0.0**
	comp=E,0.4nm,0.5s,mb3.8,baz=133,slow=4.9,SNR=5.9						

*ISCJB **03** 18:13:54.4±0.4,40.15N±002×2890E±003,h5^{km}±4^{km}, Error ellipse: s-maj=4.7km s-min=3.5km az=36.2*
*ISK **03** 18:13:54.3,40.14N×2893E,h9^{km},MD2.9*
*CSEM **03** 18:13:54.3±0.1,40.15N×2893E,h10^{km},MD3.0,Error ellipse: s-maj=1.5km s-min=1.3km az=134.0*
*DDA **03** 18:13:54.5,40.11N×2893E,h15^{km}±1^{km},Md3.0*
ISC 03 18:13:55.0±0.4**,4016N**±002×**2891E**±003**,h8**^{km}±4^{km}**,n29,** σ**0**^{s}**69**/39**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.17**	**95**	i P	**Pg**	**18 13 58.6**	**0.0**
GEMT	**Gemlik**	**0.35**	**37**	ePG	**Pg**	**18 14 02.3**	**+0.5**
GEMT				eSG	**Sg**	**18 14 07.3**	**+0.8**
KCT	**Karacabey**	**0.44**	**284**	ePG	**Pg**	**18 14 03.7**	**+0.1**
YLV	**Yalova**	**0.54**	**40**	ePG	**Pg**	**18 14 05.7**	**+0.3**
YLV				eSG	**Sg**	**18 14 12.9**	**+0.4**
DST	**Dursunbey**	**0.59**	**202**	ePG	**Pg**	**18 14 06.2**	**-0.3**
DST				eSG	**Sg**	**18 14 14.8**	**+0.6**
CAVI	**Cavuskoy**	**0.71**	**86**	ePG	**Pg**	**18 14 08.2**	**-0.6**
CAVI				eSG	**Sg**	**18 14 18.1**	**+0.1**
BNT	**Bandirma**	**0.79**	**285**	ePG	**Pg**	**18 14 10.2**	**0.0**
HRT	**Hereke**	**0.88**	**41**	ePG	**Pg**	**18 14 11.2**	**-0.7**
ISK	**Istanbul-Kandi**	**0.91**	**7**	ePG	**Pg**	**18 14 12.9**	**+0.3**
BALB	**Balikesir**	**0.95**	**237**	ePG	**Pg**	**18 14 13.2**	**-0.1**
BGKT	**Bogazkoy**	**1.03**	**354**	ePG	**Pg**	**18 14 14.7**	**-0.1**
CTT	**Catalca**	**1.05**	**340**	ePG	**Pg**	**18 14 15.6**	**+0.3**
KLYT	**Kilyos**	**1.10**	**5**	ePN	**Pn**	**18 14 15.6**	**-1.0**
CTKS	**Kestanelik-??a**	**1.12**	**344**	ePN	**Pn**	**18 14 16.0**	**-1.0**
SILT	**Sile**	**1.14**	**29**	ePN	**Pn**	**18 14 16.2**	**-1.0**
GDZ	**Gediz**	**1.15**	**158**	eP	**Pb**	**18 14 17.1**	**-0.1**
GDZ				i S	**Sg**	**18 14 31.1**	**-1.1**
SLVT	**Silivri**	**1.20**	**334**	ePN	**Pn**	**18 14 18.5**	**+0.4**
BORA	**Eskisehir**	**1.21**	**103**	i P	**Pb**	**18 14 17.3**	**-0.9**
BORA				i S	**Sb**	**18 14 34.5**	**+0.5**
GULT	**Gulveren**	**1.25**	**77**	ePN	**Pn**	**18 14 18.5**	**-0.3**
CTYL	**Yal??k??y-??at**	**1.40**	**340**	ePN	**Pn**	**18 14 20.3**	**-0.5**
ALT	**Altintas**	**1.44**	**140**	ePN	**Pn**	**18 14 21.1**	**-0.2**
AKHS	**Akhisar**	**1.54**	**214**	i P	**Pn**	**18 14 22.3**	**-0.4**
AKHS				i S	**Sn**	**18 14 42.8**	**+0.1**
AKS	**Akhisar**	**1.54**	**214**	ePN	**Pn**	**18 14 22.8**	**+0.1**
ESKT	**Eskisehir**	**1.62**	**113**	ePN	**Pn**	**18 14 23.4**	**-0.4**
HENT	**Hendek**	**1.65**	**66**	i P	**Pn**	**18 14 26.0**	**+1.7**
HENT				i S	**Sn**	**18 14 49.1**	**+3.4**
MANT	**Manisa**	**1.69**	**190**	i P	**Pn**	**18 14 26.3**	**+1.6**
MANT				eS	**Sn**	**18 14 47.7**	**+1.2**
KHAL	**Karahalli**	**1.84**	**166**	eP	**Pn**	**18 14 26.4**	**-0.4**
KHAL				i S	**Sn**	**18 14 50.1**	**-0.2**
KIZT	**Kizilcal**	**2.62**	**118**	ePN	**Pn**	**18 14 37.2**	**-0.4**
FETY	**Fethiye**	**3.52**	**178**	ePG	**Pg**	**18 15 02.7**	**+0.3**

*CSEM **03** 18:14:54.5±0.3,3694N×2931E,h2^{km},MD2.9,Error ellipse: s-maj=6.7km s-min=6.2km az=29.0*
*ISK **03** 18:14:54.8,3699N×2932E,h8^{km},MD2.6*
*ISCJB **03** 18:14:55.9±0.6,3697N±003×2928E±005,h10^{km},Error ellipse: s-maj=5.6km s-min=4.7km az=18.3*
*DDA **03** 18:14:56.4,3697N×2931E,h8^{km}±3^{km},Md2.9*
ISC 03 18:14:56.3±0.6**,3698N**±003×**2927E**±005**,h2**^{km}±10^{km}**,n11,** σ**1**^{s}**02**/16**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**42**	i P	**Pg**	**18 15 02.4**	**-0.7**
GOLH				i S	**Sg**	**18 15 08.8**	**+1.2**
FETY	**Fethiye**	**0.37**	**203**	eSg	**Sg**	**18 15 09.4**	**+1.1**
FETY	**Fethiye**	**0.37**	**203**	eSG	**Sg**	**18 15 09.4**	**+1.1**
TURN	**Turunc**	**0.54**	**259**	i P	**Pg**	**18 15 12.4**	**+5.7**
TURN				i S	**Sg**	**18 15 25.4**	**+12**
DALT	**Dalyan (Mudla)**	**0.55**	**248**	ePG	**Pg**	**18 15 06.9**	**+0.1**
ELL	**Elmali**	**0.56**	**114**	ePG	**Pg**	**18 15 04.7**	**-2.5**
ELL				eSG	**Sg**	**18 15 14.0**	**-0.5**
AKAS	**Kas**	**0.79**	**160**	i P	**Pg**	**18 15 11.3**	**-0.2**
AKAS				i S	**Sg**	**18 15 22.9**	**+1.2**
DENT	**Denizli**	**0.80**	**347**	ePG	**Pg**	**18 15 11.0**	**-0.6**
YER	**Yerkesik**	**0.80**	**282**	ePG	**Pg**	**18 15 11.1**	**-0.6**
DAT	**Datca**	**1.38**	**260**	ePN	**Pn**	**18 15 21.6**	**-0.9**
KHAL	**Karahalli**	**1.40**	**7**	i P	**Pn**	**18 15 22.9**	**0.0**
KHAL				i S	**Sb**	**18 15 43.2**	**+1.6**

*ISCJB **03** 18:42:14.9±1.6,3537N±004×14134E±009,h12^{km}±7^{km}, mb3.5/4,Error ellipse: s-maj=13.0km s-min=6.8km az=4.3*
*JMA **03** 18:42:15.7±0.2,3539N×14131E,h31^{km}±2^{km},M3.2*
*IDC **03** 18:42:20.4±1.9,3607N×141.11E,h0^{km},mb3.5/4, mb1 3.5/6,mb1mx3.4/23,mbtmp3.5/6,ML3.3/2,MS2.8/2, Ms1 2.8/2,ms1mx2.5/28,Error ellipse: s-maj=45.0km s-min=26.6km az=72.0*
ISC 03 18:42:16.1±1.4**,3533N**±004×**14126E**±010**,h8**^{km}±6^{km}**,n17,** σ**1**^{s}**16**/21**,mb3.5**/4**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.49**	**318**	P	**Pg**	**18 42 25.7**	**0.0**
CHOJ				S	**Sg**	**18 42 32.7**	**+0.5**
BSO1	**Boso 1**	**0.72**	**199**	eS	**Sg**	**18 42 40.1**	**+0.8**
KTR	**Katsuura**	**0.80**	**257**	P	**Pg**	**18 42 31.4**	**-0.1**
BSO3	**Boso 3**	**0.81**	**230**	P	**Pg**	**18 42 32.2**	**+0.4**
BSO4	**Boso 4**	**0.83**	**246**	P	**Pg**	**18 42 32.0**	**-0.1**
JCN	**Nagara**	**0.87**	**276**	P	**Pg**	**18 42 32.8**	**-0.1**
JYT	**Yasato**	**1.25**	**316**	P	**Pn**	**18 42 37.1**	**-2.7**
JHO	**Hitachi**	**1.39**	**336**	P	**Pn**	**18 42 40.1**	**-1.7**
JIM2	**Oshima 3**	**1.62**	**248**	P	**Pn**	**18 42 42.5**	**-2.5**
JIM2				eS	**Sn**	**18 43 00.9**	**-5.2**
MJAR	**Matsushiro Arr**	**2.75**	**297**	Pn	**Pn**	**18 43 00.3**	**-0.2**
	2.0nm,0.3s,baz=101,slow=14,SNR=12						
MJAR				Sn	**Sn**	**18 43 35.0**	**+1.0**
	3.0nm,0.3s,baz=249,slow=17,SNR=5.3						
MAT	**Matsushiro**	**2.76**	**297**	P	**Pn**	**18 43 00.1**	**-0.5**
MAT				eS	**Sn**	**18 43 34.1**	**+0.1**
ASAJ	**Asahikawa**	**8.83**	**6**	Pn	**Pn**	**18 44 19.9**	**-4.0**
	0.7nm,0.3s,baz=84,slow=32,SNR=6.5						
ASAJ				Sn	**Sn**	**18 46 04.8**	**+1.2**
	baz=244,slow=32,SNR=2.2						
ASAJ				LR	LR	18 47 45.7	
	comp=Z,61nm,20.0s,baz=160,slow=40						
PETK	**Petropavlovsk-**	**21.23**	**28**	LR	LR	18 54 18.3	
	comp=Z,26nm,21.4s,baz=223,slow=35						
SONM	**Songino Array**	**28.67**	**307**	P	**P**	**18 48 15.6**	**+2.4**
	0.4nm,0.7s,mb3.3,baz=89,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**42.98**	**314**	P	**P**	**18 50 14.6**	**-0.9**
	0.5nm,0.5s,mb3.5,baz=95,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**44.94**	**304**	P	**P**	**18 50 32.8**	**+1.4**
	0.3nm,0.5s,mb3.4,baz=90,slow=7.6,SNR=3.6						
ASAR	**Alice Springs**	**59.09**	**188**	P	**P**	**18 52 27.4**	**+11**
	0.5nm,0.8s,mb3.6,baz=357,slow=5.7,SNR=5.5						

MAN 03 18:50:19,592N×**12673E,h48**^{km}**,mb4.7,ML3.6,MS3.6, 1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.12**	**335**	eP	Pn	18 50 39.9	+1.6
MATI				eS	Sn	18 50 53.9	+1.2
GSPH	**General Santos**	**1.78**	**275**	⇑iP	Pn	18 50 44.6	-2.7
GSPH				eS	Sn	18 51 04.1	-4.7
KCP	**Kidapawan**	**1.95**	**304**	⇓iP	Pn	18 50 53.3	+3.6
KCP				i S	Sn	18 51 15.5	+2.4
BUKP	**Musuan**	**2.55**	**320**	eP	Pn	18 50 57.9	-0.1
BUKP				eS	Sn	18 51 29.9	+2.0

*IDC **03** 18:51:06.2±1.0,272N×127.10E,h0^{km},mb3.9/6,mb1 4.1/6, mb1mx3.8/16,mbtmp3.9/6,Error ellipse: s-maj=80.7km s-min=18.9km az=64.0*
*ISCJB **03** 18:51:09.2±0.8,27N±02×1270E±03,h33^{km},mb3.9/7, Error ellipse: s-maj=50.1km s-min=13.5km az=157.2*
*NEIC **03** 18:51:11.8±7.2,267N×12707E,h41^{km}±67^{km},mb4.1/1, Error ellipse: s-maj=45.7km s-min=13.3km az=63.0*
ISC 03 18:51:11.3±0.8**,27N**±02×**1271E**±03**,h35**^{km}**,n10,** σ**0**^{s}**61**/9**, mb3.9**/7**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**23.58**	**163**	eP	**P**	**18 56 18.6**	**-0.4**
ASAR	**Alice Springs**	**27.01**	**166**	P	**P**	**18 56 50.0**	**-0.1**
	0.4nm,0.5s,mb3.2,baz=346,slow=7.6,SNR=14						
ASAR				PcP	PcP	19 00 12.2	+0.9
	0.3nm,0.5s,baz=353,slow=2.1,SNR=6.3						
CMAR	**Chiang Mai Arr**	**31.70**	**302**	P	**P**	**18 57 32.0**	**+0.2**
	0.4nm,0.3s,mb3.7,baz=124,slow=7.7,SNR=4.7						
STKA	**Stephens Creek**	**37.03**	**159**	P	**P**	**18 58 18.6**	**+0.8**
	1.3nm,0.6s,mb3.9,baz=335,slow=10,SNR=3.9						
STKA				PcP	PcP	19 00 38.9	+0.6
	0.8nm,0.6s,baz=328,slow=5.1,SNR=3.4						
SONM	**Songino Array**	**48.40**	**341**	P	**P**	**18 59 50.6**	**+0.7**
	0.4nm,0.6s,mb3.7,baz=155,slow=9.0,SNR=2.8						
MKAR	**Makanchi Array**	**58.61**	**325**	P	**P**	**19 01 04.7**	**-0.1**
	0.8nm,0.5s,mb4.0,baz=120,slow=8.6,SNR=20						
TIXI	**Tiksi**	**68.89**	**1**	eP	**P**	**19 02 12.2**	**+0.1**
	1.6nm,0.8s,mb4.0						
ARCES	**ARCESS Array B**	**91.55**	**340**	P	**P**	**19 04 12.8**	**-1.3**
	3.7nm,0.9s,mb4.7,baz=72,slow=5.9,SNR=3.6						
ARCES	**ARCESS Array B**	**91.55**	**340**	P	**P**	**19 04 12.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**123.56**	**288**	PKP	PKPdf	19 10 07.0	+0.9
	0.8nm,1.1s,baz=90,slow=1.4,SNR=8.7						

MAN 03 19:04:53,1840N×**12081E,h23**^{km}**,mb4.2,ML3.0,MS2.7, 1D,Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.58**	**216**	⇓iP	Pb	19 05 06.2	+1.8
SIPP				i S	Sb	19 05 17.3	+5.1
ABRA	**Dolores**	**0.75**	**187**	eP	Pb	19 05 08.2	+0.9
ABRA				eS	Sb	19 05 20.2	+3.0
CAUP	**Cauayan**	**1.74**	**146**	eP	Pn	19 05 24.4	+2.6
PALP	**Palanan**	**2.03**	**130**	eP	Pn	19 05 27.1	+1.3
PALP				eS	Sn	19 05 42.0	-8.5

*CSEM **03** 19:27:35.7±0.4,3700N×2921E,h2^{km},MD2.8,Error ellipse: s-maj=8.9km s-min=6.3km az=1.0*
*ISK **03** 19:27:36.1,3699N×2923E,h10^{km},MD2.6*
*ISCJB **03** 19:27:37.1±0.6,3697N±005×2924E±005,h10^{km},Error ellipse: s-maj=7.4km s-min=4.7km az=146.8*
*DDA **03** 19:27:37.5,3700N×2922E,h7^{km}±3^{km},Md2.8*
ISC 03 19:27:37.5±0.7**,3698N**±005×**2923E**±005**,h7**^{km}±13^{km}**,n8,** σ**0**^{s}**88**/13**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.36**	**199**	ePG	**Pg**	**19 27 44.2**	**-0.3**
FETY				eSG	**Sg**	**19 27 49.6**	**+0.4**
GOLH	**Golhisar**	**0.37**	**46**	i P	**Pg**	**19 27 44.2**	**-0.5**
GOLH				i S	**Sg**	**19 27 50.6**	**+1.0**
DALT	**Dalyan (Mudla)**	**0.52**	**246**	ePG	**Pg**	**19 27 47.6**	**+0.1**
DALT				eSG	**Sg**	**19 27 54.2**	**0.0**
ELL	**Elmali**	**0.59**	**113**	ePG	**Pg**	**19 27 47.9**	**-1.0**
YER	**Yerkesik**	**0.77**	**282**	ePG	**Pg**	**19 27 50.6**	**-1.7**
AKAS	**Kas**	**0.80**	**158**	i P	**Pg**	**19 27 53.6**	**+0.6**
AKAS				i S	**Sg**	**19 28 09.2**	**+5.9**
DAT	**Datca**	**1.34**	**260**	ePN	**Pn**	**19 28 01.5**	**-1.3**
BDRM	**Kayabasi**	**1.43**	**274**	i P	**Pn**	**19 28 05.1**	**+1.2**
BDRM				i S	**Sg**	**19 28 24.4**	**+0.9**

NEIC 03 20:02:48.5,970N×**8388W,h8**^{km}**,MD4.1**(CASC)**,4C-6D, After CASC.,Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URSC	**Urasca**	**0.17**	**37**	⇓iP	Pg	20 02 53.3	+1.2
BUS	**Buena Vista**	**0.19**	**140**	⇑iP	Pg	20 02 53.5	+1.1
LAJ	**Bijagual**	**0.29**	**304**	⇓eP	Pg	20 03 01.7	+7.4
SJS	**Escuela Geolog**	**0.29**	**324**	⇓iP	Pg	20 02 55.1	+0.8
SJS				eS	Sg	20 02 59.8	+1.5
QCR	**Quepos**	**0.39**	**226**	⇓iP	Pg	20 02 56.8	+0.6
CGA2	**Cerro Gallo 2**	**0.66**	**299**	⇑eP	Pg	20 03 01.1	-0.2
FORC	**Fortuna**	**1.09**	**315**	⇑eP	Pg	20 03 08.8	-0.7
JCR	**Jicaral**	**1.22**	**277**	⇑eP	Pn	20 03 10.6	-1.3
ACR	**Cerro Adams**	**1.25**	**146**	⇓eP	Pn	20 03 10.2	-2.1
ACR				eS	Sb	20 03 28.1	-0.6
VCR	**Vista de Mar**	**1.78**	**284**	⇓eP	Pn	20 03 19.8	+0.3
BCIP	**Isla Barro Col**	**4.02**	**97**	eP	Pn	20 03 50.0	-0.4
TGUH	**Tegucigalpa,Un**	**5.46**	**323**	eP	Pn	20 04 06.3	-3.9
SDV	**Santo Domingo**	**13.10**	**92**	eP	Pn	20 05 53.4	-1.6

*IDC **03** 20:04:00.5±1.5,268S×13938E,h0^{km},mb3.9/4,mb1 4.2/5, mb1mx3.8/15,mbtmp4.1/5,ML4.7/1,Error ellipse: s-maj=50.8km s-min=18.1km az=90.0*
*ISCJB **03** 20:04:03.7±1.5,28S±0.1×1395E±02,h33^{km},mb3.8/4, Error ellipse: s-maj=31.4km s-min=20.6km az=169.7*
*NEIC **03** 20:04:06.9±1.3,282S×13885E,h35^{km},mb3.9/1,Error ellipse: s-maj=53.6km s-min=15.9km az=87.0*
ISC 03 20:04:06.0±1.6**,28S**±01×**1394E**±02**,h35**^{km}**,n8,** σ**1**^{s}**01**/8**, mb3.8**/4**,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.01**	**215**	eP	x	20 06 36.1	
	18nm,0.4s						
BATI	**Baumata**	**17.27**	**244**	Pn	**Pn**	**20 08 05.7**	**+1.2**
	2.5nm,0.3s,baz=43,slow=1.8,SNR=6.0						
WRAB	**Tennant Creek**	**17.72**	**196**	eP	**Pn**	**20 08 09.1**	**-1.1**
	5.8nm,0.6s						
WB2	**Warramunga Arr**	**17.73**	**196**	eP	**Pn**	**20 08 09.2**	**-1.1**
ASAR	**Alice Springs**	**21.41**	**194**	P	**P**	**20 08 50.7**	**-0.2**
	1.7nm,0.5s,mb3.7,baz=18,slow=9.6,SNR=51						
ASAR				S	**S**	**20 12 51.9**	**+5.2**
	1.6nm,0.8s,baz=15,slow=24,SNR=5.6						
STKA	**Stephens Creek**	**28.99**	**176**	P	**P**	**20 10 03.8**	**+1.3**
	1.3nm,0.7s,mb3.8,baz=358,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**70.28**	**322**	P	**P**	**20 15 14.9**	**-1.0**
	0.4nm,0.3s,mb3.8,baz=104,slow=6.1,SNR=11						
VNDA	**Vanda**	**75.62**	**175**	P	**P**	**20 15 47.9**	**+0.9**
	1.9nm,0.7s,mb4.2,baz=325,slow=6.9,SNR=15						

*MOS **03** 20:49:10.7±1.3,4340N×8334E,h33^{km},mb4.1/9,Error ellipse: s-maj=10.0km s-min=6.7km az=108.6*
*ISCJB **03** 20:49:10.0±0.3,4334N±003×8342E±004,h33^{km}, mb3.9/11,MS3.4/5,Error ellipse: s-maj=4.6km s-min=3.8km az=160.7*
*BJI **03** 20:49:11.1,4331N×8355E,h16^{km},mB4.4,mb4.3,ML4.4, Ms3.7,Msz3.4*
*IDC **03** 20:49:12.0±2.9,4347N×8352E,h35^{km}±23^{km},mb3.8/9, mb1 4.0/15,mb1mx3.8/25,mbtmp3.9/15,ML3.9/6,MS3.4/9, Ms1 3.4/9,ms1mx3.2/37,Error ellipse: s-maj=24.5km s-min=14.4km az=39.0*
*NEIC **03** 20:49:12.8±0.7,4332N×8345E,h43^{km}±9^{km},mb4.4/8, Error ellipse: s-maj=10.0km s-min=5.8km az=64.0*
*NNC **03** 20:49:13.6±2.4,4363N×8297E,h0^{km},mb4.3,mpv4.2, Error ellipse: s-maj=23.0km s-min=12.8km az=113.0*
ISC 03 20:49:12.1±0.3**,4335N**±003×**8350E**±004**,h35**^{km}**,n105,** σ**1**^{s}**31**/121**,mb3.9**/11**,MS3.4**/5**,14C-9D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.08**	**80**	PG	**Pn**	**20 50 02.7**	**+4.5**
WMQ				SG	**Sn**	**20 50 44.3**	**+10**
WMQ				Smax			
	comp=N,638nm,0.8s						
WMQ				Smax			
	comp=E,523nm,0.9s						
MK31	**Makanchi Array**	**3.55**	**346**	⇓Pn	**Pn**	**20 50 05.7**	**+1.1**
	comp=E,61nm,0.5s,baz=173,slow=15,SNR=1461						
MK31				⇑Lg		20 50 56.5	
	comp=E,751nm,0.8s,baz=169,slow=28,SNR=9.1						
MK31	**Makanchi Array**	**3.55**	**346**	P	**Pn**	**20 50 06.2**	**+1.6**
MK31				pmax	pmax		
	comp=Z,38nm,0.2s						
MK31	**Makanchi Array**	**3.55**	**346**	eP	**Pn**	**20 50 06.0**	**+1.4**
MKAR	**Makanchi Array**	**3.55**	**346**	Pn	**Pn**	**20 50 06.1**	**+1.5**
	comp=Z,8.6nm,0.3s,baz=160,slow=14,SNR=227						
MKAR				Pg	**Pn**	**20 50 14.4**	**+10**
	comp=Z,33nm,0.3s,baz=157,slow=17,SNR=53						
MKAR				Sn	**Sn**	**20 50 39.0**	**-6.3**
	comp=Z,48nm,0.3s,baz=156,slow=18,SNR=14						
MKAR				Lg		20 50 58.8	
	comp=Z,147nm,0.3s,baz=173,slow=28,SNR=14						
MKAR				LR	LR	20 51 43.5	
	comp=Z,561nm,21.3s,baz=100,slow=44						
MKAR	**Makanchi Array**	**3.55**	**346**	P	**Pn**	**20 50 06.1**	**+1.5**
MKAR						20 50 39.0	
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MKAR				smax			
	comp=N,48nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,561nm,21.3s						
MKAR	**Makanchi Array**	**3.55**	**346**	Pn	**Pn**	**20 50 06.1**	**+1.5**
MKAR				Pg	**Pn**	**20 50 14.4**	**+10**
MKAR				Sn	**Sn**	**20 50 39.0**	**-6.3**
MKAR				Lg		20 50 58.8	
MKAR				LR	LR	20 51 43.5	
KNDC	**Almaty**	**4.77**	**271**	⇑Pn	**Pn**	**20 50 22.4**	**+1.0**
	comp=Z,181nm,0.7s						
KNDC				⇑Lg		20 51 34.0	
	comp=Z,763nm,0.9s						
AAA	**Alma-Ata**	**4.78**	**271**	eP	Px	20 50 35.7	
AAA				pmax	pmax		
	comp=Z,297nm,0.8s						
ULHL	**Ulahol**	**5.45**	**261**	P	**Pn**	**20 50 32.8**	**+2.0**
	SNR=5.8						
TKM2	**Tokmak 2**	**5.80**	**268**	P	**Pn**	**20 50 36.3**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.3s						
TKM2	**Tokmak 2**	**5.80**	**268**	P	**Pn**	**20 50 38.6**	**+3.1**
	SNR=22						
TKM2	**Tokmak 2**	**5.80**	**268**	eP	**Pn**	**20 50 33.6**	**-1.9**
	comp=Z,56nm,0.6s						
KZA	**Kyzart**	**6.21**	**261**	P	**Pn**	**20 50 43.8**	**+2.6**
	SNR=38						
KBK	**Karagaybulak**	**6.31**	**267**	P	**Pn**	**20 50 44.9**	**+2.4**
	SNR=24						
CHMS	**Chumysh**	**6.41**	**270**	P	**Pn**	**20 50 44.8**	**+1.0**

SNR=9.2
FRU Bishkek 6.53 269 *e*P **Pn** **20 50 46.0 +0.5**
FRU pmax pmax
comp=Z,120nm,1.0s
USP Ospenovka 6.57 272 P **Pn** **20 50 47.1 +1.1**
SNR=14
AAK Ala-Archa 6.64 267 *d i*P **Pn** **20 50 48.3 +1.2**
AAK Ala-Archa 6.64 267 P **Pn** **20 50 48.7 +1.6**
SNR=5.7
AAK Ala-Archa 6.64 267 *e*P **Pn** **20 50 48.2 +1.1**
comp=Z,52nm,0.8s
UCH Uchtor 6.71 263 P **Pn** **20 50 50.9 +3.0**
SNR=8.7
UCH Uchtor 6.71 263 *e*P **Pn** **20 50 50.9 +3.0**
comp=Z,22nm,0.6s
KSH Kashi 6.83 238 P **Pn** **20 50 55.2 +5.5**
KSH S **Sn** **20 52 13.3 +7.2**
KSH Smax
comp=N,25nm,0.9s
KSH Smax
comp=E,47nm,0.8s
EKS2 Erkin-Say 7.16 268 P **Pn** **20 50 55.8 +1.6**
SNR=9.1
EKS2 Erkin-Say 7.16 268 *e*P **Pn** **20 50 55.2 +1.0**
comp=E,22nm,0.5s
KURBB Kurchatov Arra 8.03 337 ⇑Pn **Pn** **20 51 05.4 -0.6**
comp=E,2.1nm,0.8s
KURBB ⇑Sn **Sn** **20 52 33.8 -1.7**
comp=E,16nm,0.7s
KURBB ⇓Lg 20 53 16.1
comp=E,38nm,0.7s
KURK Kurchatov 8.09 337 ⇓Pn **Pn** **20 51 06.0 -0.9**
comp=E,7.1nm,0.7s
KURK ⇑Sn **Sn** **20 52 34.1 -2.9**
comp=E,65nm,0.7s
KURK ⇓Lg 20 53 15.6
comp=E,223nm,0.9s
KURK Kurchatov 8.09 337 Pn **Pn** **20 51 05.3 -1.6**
comp=E,0.7nm,0.3s,baz=163,slow=12,SNR=40
KURK Sn **Sn** **20 52 24.0 -13**
comp=E,0.8nm,0.3s,baz=163,slow=18,SNR=4.4
KURK Lg 20 53 16.6
comp=E,1.9nm,0.3s,baz=327,slow=16,SNR=4.9
KURK LR LR 20 54 28.0
comp=E,222nm,21.7s,baz=155,slow=40
KURK Kurchatov 8.09 337 ⇓*e*P **Pn** **20 51 06.0 -0.8**
KURK Kurchatov 8.09 337 *e*P **Pn** **20 51 05.5 -1.4**
KURK Sn **Sn** **20 52 24.0 -13**
KURK Lg 20 53 16.6
KURK LR LR 20 54 28.0
KK31 Karatay Array 9.49 273 ⇑Pn **Pn** **20 51 27.0 +0.9**
comp=E,1.9nm,0.5s,baz=85,slow=13,SNR=36
KK31 ⇓Lg 20 54 05.2
comp=E,19nm,0.5s,baz=88,slow=28,SNR=7.8
KK31 Karatay Array 9.49 273 *e*P **Pn** **20 51 26.7 +0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 10.64 4 Pn **Pn** **20 51 40.9 -1.0**
comp=Z,2.9nm,0.3s,baz=186,slow=14,SNR=56
ZALV Sn **Sn** **20 53 35.5 -4.1**
comp=Z,3.2nm,0.3s,baz=171,slow=23,SNR=8.6
ZALV Lg 20 54 53.8
comp=Z,0.6nm,0.3s,baz=183,slow=25,SNR=5.5
ZALV LR LR 20 56 03.8
comp=Z,197nm,19.6s,baz=271,slow=39
ZALV Zalesovo Beam 10.64 4 P **Pn** **20 51 40.9 -1.0**
ZALV 20 53 35.5
ZALV pmax pmax
comp=Z,3.0nm,0.3s
ZALV smax
comp=N,3.0nm,0.3s
ZALV MLR MLR
comp=Z,197nm,19.6s
THN Thein Dam 12.50 212 *e*P **Pn** **20 52 05.6 -1.8**
THN *ex* x 20 54 20.2
KLP Kalpa 12.51 201 *e*P **Pn** **20 52 05.5 -1.9**
KLP *e*S **Sn** **20 54 15.0 -10**
KLP AML AML 20 54 38.9
comp=E,52nm,0.6s
KLP AML AML 20 54 43.0
comp=N,34nm,0.6s
CHCP Chirah Chowk 12.55 223 P **Pn** **20 52 08.8 +0.7**
VOSK Vostochnaya 12.56 323 ⇑Pn **Pn** **20 52 06.6 -1.4**
comp=N,4.1nm,0.9s
VOSK ⇑Sn **Sn** **20 54 22.3 -4.2**
comp=N,16nm,0.8s
VOSK ⇑Lg 20 55 34.2
comp=N,20nm,0.9s
NIL Nilore 12.57 223 *e*P **Pn** **20 52 08.0 -0.3**
NIL pmax pmax
comp=Z,14nm,0.6s
NIL Nilore 12.57 223 *e*P **Pn** **20 52 08.0 -0.2**
comp=Z,14nm,0.6s
GTA Gaotai 12.87 102 *e*P **Pn** **20 52 12.6 +0.3**
GTA PP 20 52 21.8
GTA S **Sn** **20 54 32.8 -1.4**
GTA AMB AMB
comp=Z,2.0nm,0.7s
GTA LR LR
comp=N,55nm,5.5s
GTA LR LR
comp=E,130nm,6.3s
GTA LR LR
comp=Z,88nm,6.9s
BVA0 Borovoye Array 13.03 323 Pn **Pn** **20 52 13.3 -1.1**
comp=Z,0.8nm,0.8s,baz=130,slow=13,SNR=12
BVA0 ⇓Sn **Sn** **20 54 37.1 -0.8**
comp=Z,3.4nm,1.2s,baz=120,slow=24,SNR=2.7
BVA0 ⇑Lg 20 55 54.0
comp=Z,12nm,1.2s,baz=131,slow=31,SNR=4.0
BVA0 Borovoye Array 13.03 323 *i*P **Pn** **20 52 13.3 -1.1**
BVA0 pmax pmax
comp=Z,2.0nm,1.2s
BVAR Borovoye Array 13.03 323 Pn **Pn** **20 52 13.3 -1.1**
comp=Z,0.5nm,0.3s,baz=129,slow=13,SNR=11
BVAR Sn **Sn** **20 54 31.1 -6.8**
comp=Z,1.0nm,0.3s,baz=126,slow=20,SNR=3.7
BVAR Lg 20 56 05.3
comp=Z,1.1nm,0.3s,baz=137,slow=20,SNR=4.7
BVAR LR LR 20 57 26.5
comp=Z,195nm,21.4s,baz=227,slow=38
BVAR Borovoye Array 13.03 323 P **Pn** **20 52 13.3 -1.1**
BVAR 20 54 31.1
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR smax
comp=N,1.0nm,0.3s
BVAR MLR MLR
comp=Z,195nm,21.4s
BRVK Borovoye 13.10 322 *e*P **Pn** **20 52 15.0 -0.4**
BRVK pmax pmax
comp=Z,10.0nm,0.8s
BRVK Borovoye 13.10 322 *e*P **Pn** **20 52 15.0 -0.4**
comp=Z,10.0nm,0.8s
CEP Cherat 13.13 227 P **Pn** **20 52 14.8 -1.1**
CEP S **Sn** **20 54 35.0 -5.6**
JOSI Joshimath 13.15 195 *e*P **Pn** **20 52 15.5 -0.8**
JOSI *e*S **Sn** **20 54 31.1 -10**
JOSI AML AML 20 54 57.5
comp=E,18nm,0.5s
JOSI AML AML 20 54 58.2
comp=N,23nm,0.6s
SMLA Simla 13.19 204 *i*P **Pn** **20 52 14.8 -2.0**
SMLA *e*S **Sn** **20 54 30.0 -12**
SMLA *ex* x 20 54 39.7
comp=N,185nm,0.3s
SMLA *ex* x 20 54 40.5
comp=E,154nm,0.4s
LGTI Lohaghat 14.11 192 *e*P **Pn** **20 52 29.1 -0.3**
KBL Kabul 14.26 237 *e*P **Pn** **20 52 29.7 -1.7**
KBL pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 14.26 237 *e*P **Pn** **20 52 29.7 -1.7**
comp=Z,12nm,0.9s
LSA Lhasa 14.93 153 P **Pn** **20 52 43.1 +2.6**
LSA Lhasa 14.93 153 *e*P **Pn** **20 52 43.3 +2.8**
LSA pmax pmax
comp=Z,16nm,0.8s
LSA Lhasa 14.93 153 *e*P **Pn** **20 52 43.3 +2.8**
comp=Z,16nm,0.8s
ZAK Zakamensk 15.22 56 *e*P **Pn** **20 52 37.7 -6.4**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
GKN Gorkha 15.34 176 *e*P **Pn** **20 52 45.7 -0.1**
comp=Z,13nm,0.3s
GUN Gumba 15.52 172 *e*P **Pn** **20 52 48.5 +0.3**
comp=Z,23nm,0.6s
KOLN Koldanda 15.54 180 *e*P **Pn** **20 52 46.4 -2.1**
comp=Z,27nm,1.0s
JIRN Jiri 15.80 171 *e*P **Pn** **20 52 52.5 +0.6**
comp=Z,33nm,0.8s
SONA Sohna 15.93 201 *ex* x 20 52 49.5
SONA *ex* x 20 55 40.6
TAPN Taplejung 16.32 167 *e*P **Pn** **20 52 58.7 +0.2**
comp=Z,17nm,0.5s
KHET Khetri 16.46 205 *e*P **Pn** **20 52 56.8 -3.5**
KHET *ex* x 20 55 52.3
RAMN Ramite 16.55 170 *e*P **Pn** **20 53 00.0 -1.4**
comp=Z,24nm,0.6s
SONM Songino Array 16.62 66 Pn **Pn** **20 53 03.1 +1.0**
comp=Z,0.2nm,0.3s,baz=263,slow=9.8,SNR=31
SONM Sn **Sn** **20 56 06.1 +0.6**
comp=Z,0.8nm,0.3s,baz=179,slow=23,SNR=20
SONM Lg 20 58 04.8
comp=Z,0.1nm,0.3s,baz=260,slow=31,SNR=6.1
SONM LR LR 21 00 02.5
comp=Z,242nm,18.1s,baz=261,slow=39
ODAN Odare 16.75 168 *e*P **Pn** **20 53 03.1 -0.8**
comp=Z,22nm,0.7s
ULN Ulaanbaatar 17.07 66 ⇓*e*P **Pn** **20 53 10.0 +2.3**
ULN Ulaanbaatar 17.07 66 *e*P **Pn** **20 53 05.0 -2.7**
comp=Z,18nm,1.3s
LZH Lanzhou 17.23 108 *e*P **Pn** **20 53 17.5 +7.7**
LZH AP pP 20 53 22.3 +2.1
LZH XP sP 20 53 25.0 +0.4
LZH AMB AMB
comp=Z,23nm,1.5s
LZH AMB AMB
comp=Z,87nm,4.3s
AB09 Akbulak array 17.30 298 ⇑Pn **Pn** **20 53 07.4 -3.2**
comp=Z,3.2nm,0.8s
AKTK Aktyubinsk 18.74 301 P **Pn** **20 53 27.8 -0.5**
AKTK Lg 20 58 59.8
AKTK LR LR 21 01 34.0
AKTO Aktyubinsk 18.74 301 P **Pn** **20 53 27.8 -0.5**
comp=Z,0.2nm,0.3s,baz=112,slow=15,SNR=8.0
AKTO Lg 20 58 59.8
baz=179,slow=12,SNR=3.7
AKTO LR LR 21 01 34.0
comp=Z,64nm,21.0s,baz=242,slow=40
SHL Shillong 19.02 156 *e*P **Pn** **20 53 33.0 +1.2**
SVE Sverdlovsk 19.80 321 ⇑*e*P **Pn** **20 53 40.5 -0.3**
SVE *e*S **S** **20 57 20.3 +0.2**
SVE pmax pmax
comp=Z,14nm,1.0s
SVE MLR MLR
comp=Z,283nm,12.0s
ARU Arti 20.58 318 *c i*P **P** **20 53 48.8 +1.2**
ARU *e* 20 54 04.7
ARU *e*S **S** **20 57 38.6 +3.1**
ARU *e*SS 20 57 58.0
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU MLR MLR
comp=Z,170nm,18.0s,MS3.5
ARU Arti 20.58 318 *e*P **P** **20 53 47.3 -0.3**
comp=Z,9.6nm,0.7s
BOD Bodaibo 23.91 42 *e*P **P** **20 54 24.3 +2.0**
BOD pmax pmax
comp=Z,7.0nm,1.3s,mb3.9
CMAR Chiang Mai Arr 28.03 147 P **P** **20 55 01.1 +1.3**
comp=Z,1.7nm,0.8s,mb3.8,baz=322,slow=8.1,SNR=10.0
CMAR Chiang Mai Arr 28.03 147 *i*P **P** **20 55 01.7 +1.8**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
KSRS Korea Array 34.02 85 LR LR 21 11 17.9
comp=Z,28nm,18.2s,MS3.0,baz=345,slow=39
TIXI Tiksi 35.80 23 *i*P **P** **20 56 08.8 +1.4**
TIXI MLR MLR
comp=Z,100nm,20.0s,MS3.6
BRTR Keskin Array B 37.05 282 P **P** **20 56 19.2 +0.7**
comp=Z,1.7nm,1.1s,mb3.8,baz=76,slow=5.2,SNR=5.1
BRTR Keskin Array B 37.05 282 P **P** **20 56 19.2 +0.7**
BRTR pmax pmax
comp=Z,2.0nm,1.1s
ARCES ARCESS Array B 39.08 332 P **P** **20 56 35.9 +0.7**
comp=Z,1.2nm,0.6s,mb3.8,baz=84,slow=8.0,SNR=11
ARCES ARCESS Array B 39.08 332 P **P** **20 56 35.9 +0.7**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 45.13 319 P **P** **20 57 23.7 -0.9**
comp=Z,1.4nm,0.6s,mb4.0,baz=79,slow=8.6
NOA NORSAR Array B 45.13 319 P **P** **20 57 23.8 -0.8**
comp=Z,1.1nm,0.6s,mb3.9,baz=79,slow=7.8,SNR=6.2
NOA LR LR 21 16 57.8
comp=Z,48nm,19.1s,MS3.4,baz=345,slow=37
NOA NORSAR Array B 45.13 319 P **P** **20 57 23.8 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,48nm,19.1s
NOA NORSAR Array B 45.13 319 P **P** **20 57 23.8 -0.7**
NOA LR LR 21 16 57.8
CLL Collm 46.74 306 *e*P pP 20 57 50.0 +2.2
CLL Collm 46.74 306 *e*pP pP 20 57 50.0 +2.2
PETK Petropavlovsk- 48.28 51 LR LR 21 18 36.2
comp=Z,43nm,18.1s,MS3.5,baz=178,slow=37
ESDC Sonseca Array 62.62 300 P **P** **20 59 35.1 +2.4**
comp=Z,0.8nm,0.7s,mb4.0,baz=39,slow=9.6,SNR=2.8
YKA Yellowknife Ar 73.51 9 P **P** **21 00 39.5 -1.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=343,slow=5.8,SNR=6.7
YKA Yellowknife Ar 73.51 9 *i*P **P** **21 00 39.5 -1.1**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 73.51 9 P **P** **21 00 39.5 -1.1**
TORD Torodi Ar. Bea 75.17 274 P **P** **21 00 50.1 -0.9**
comp=Z,1.0nm,0.4s,mb4.1,baz=41,slow=5.3,SNR=39
ASAR Alice Springs 81.18 134 P **P** **21 01 24.9 +1.0**
comp=Z,1.8nm,0.7s,mb4.1,baz=332,slow=5.1,SNR=17
ASAR Alice Springs 81.18 134 P **P** **21 01 25.0 +1.0**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 84.28 274 P **P** **21 01 39.7 -0.7**
comp=Z,0.5nm,0.4s,mb4.0,baz=45,slow=3.4,SNR=3.0
DBIC Dimbokro 84.28 274 P **P** **21 01 39.7 -0.7**
DBIC pmax pmax
comp=Z,1.0nm,0.4s
DBIC Dimbokro 84.28 274 P **P** **21 01 39.7 -0.7**
STKA Stephens Creek 91.80 134 P **P** **21 02 15.7 -0.3**
comp=Z,1.1nm,0.7s,mb4.3,baz=315,slow=21,SNR=3.2

*ISCJB **03** 21:04:01.1±0.3, 4391N±003×10556W±003, h0km, Error ellipse: s-maj=4.3km s-min=2.7km az=135.7*
*NEIC **03** 21:04:02.2±0.6, 4379N×10551W, h0km, ML3.5, Error ellipse: s-maj=11.0km s-min=7.4km az=160.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] S of Gillette.
*IDC **03** 21:04:03.8±1.7, 4395N×10578W, h0km, mb4.3/1, mb1 4.0/4, mb1mx3.6/23, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=52.3km s-min=8.3km az=147.0*

ISC 03 21:04:03.5±0.3, 4383N±002×10541W±004, h0km, n49, σ1§57/87, 12C-20D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.04**	**73**	*e*P	**Pg**	**21 04 22.9**	**-0.4**
L21A	**Rawlins**	**2.35**	**218**	⇑P	**Pn**	**21 04 43.7**	**+0.4**
	baz=2.5						
L21A				⇓S	**Sn**	**21 05 14.1**	**+1.3**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.44**	**242**	⇓P	**Pn**	**21 04 46.8**	**+2.4**
	baz=2.6						
K20A				⇓S	**Sn**	**21 05 18.9**	**+3.9**
	baz=2.6						
RWWY	**Rawlins**	**2.51**	**212**	*e*Pn	**Pn**	**21 04 41.3**	**-4.2**
RWWY				*e*Pg	**Pg**	**21 04 46.7**	**-4.9**
RWWY				*e*Sg	**Sg**	**21 05 17.9**	**-6.2**
M22A	**Cedar Creek Ra**	**2.57**	**200**	⇓P	**Pn**	**21 04 46.5**	**+0.2**
	baz=2.6						
M22A				⇓S	**Sn**	**21 05 18.9**	**+0.6**
	baz=2.6						
M21A	**Separation Pea**	**2.64**	**214**	⇓P	**Pn**	**21 04 48.1**	**+0.8**
	baz=2.7						
M21A				⇓S	**Sn**	**21 05 21.8**	**+1.8**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.70**	**249**	⇓P	**Pn**	**21 04 49.4**	**+1.4**
	baz=2.9						
K19A				⇑S	**Sn**	**21 05 26.0**	**+4.6**
	baz=2.9						
M20A	**Sweetwater, Wa**	**3.10**	**222**	⇑P	**Pn**	**21 04 54.8**	**+1.2**
	baz=3.2						
I18A	**Diamond G Ranc**	**3.19**	**269**	⇓P	**Pn**	**21 04 57.7**	**+2.8**
	baz=3.5						
I18A				⇓S	**Sn**	**21 05 39.1**	**+5.5**
	baz=3.5						
BW06	**Boulder Array**	**3.21**	**252**	⇑P	**Pn**	**21 04 56.7**	**+1.7**
	baz=3.4						
PDAR	**Pinedale Array**	**3.21**	**252**	Pn	**Pn**	**21 04 56.4**	**+1.4**
	4.5nm,0.3s,baz=71,slow=16,SNR=68						
PDAR				Pg	**Pg**	**21 05 01.7**	**-3.2**
	8.6nm,0.3s,baz=65,slow=17,SNR=38						
PDAR				Lg		21 05 36.4	
	6.6nm,0.3s,baz=74,slow=21,SNR=4.6						
G18A	**Lazy EL Ranch,**	**3.32**	**298**	⇓P	**Pn**	**21 04 59.1**	**+2.5**
	baz=3.6						
L19A	**Farson**	**3.37**	**241**	⇑P	**Pn**	**21 04 59.3**	**+2.0**
	baz=3.6						
J18A	**Kendall Valley**	**3.41**	**261**	⇑P	**Pn**	**21 05 00.4**	**+2.6**
	baz=3.7						
N21A	**Black Mountain**	**3.44**	**208**	⇑P	**Pn**	**21 04 58.7**	**+0.4**
	baz=3.5						
N20A	**Spence Gulch,**	**3.66**	**216**	⇓P	**Pn**	**21 05 01.7**	**+0.4**
	baz=3.8						
F18A	**Big Timber**	**3.70**	**306**	⇓P	**Pn**	**21 05 04.7**	**+2.9**
	baz=4.0						
LOHW	**Long Hollow**	**3.77**	**269**	*e*Pn	**Pn**	**21 04 58.6**	**-4.2**
LOHW				*e*Pg	**Sg**	**21 05 11.1**	**-4.6**
LOHW				*e*Sg	**Sg**	**21 05 56.9**	**-7.6**
OGNE	**Ogallala**	**3.81**	**138**	*e*Pn	**Pn**	**21 05 02.3**	**-1.1**
OGNE				*e*Pg	**Pg**	**21 05 14.4**	**-2.1**
OGNE				*e*Sg	**Sg**	**21 06 02.7**	**-3.3**
MOOW	**Moose Ponds**	**3.86**	**271**	Pn	**Pn**	**21 04 59.4**	**-4.6**
MOOW				*e*Pg	**Pg**	**21 05 13.4**	**-4.0**
MOOW				*e*Sg	**Sg**	**21 06 04.9**	**-2.5**
SNOW	**Snow King Moun**	**3.89**	**267**	*e*Pn	**Pn**	**21 05 02.9**	**-1.6**
SNOW				*e*Pg	**Pg**	**21 05 13.7**	**-4.3**
SNOW				*e*Sg	**Sg**	**21 06 01.1**	**-7.4**
REDW	**Red Top Meadow**	**3.98**	**265**	*e*Pn	**Pn**	**21 05 05.2**	**-0.4**
REDW				*e*Pg	**Pg**	**21 05 15.2**	**-4.4**
REDW				*e*Sg	**Sg**	**21 06 09.3**	**-1.9**
IMW	**Indian Meadow**	**4.00**	**273**	*e*Pn	**Pn**	**21 05 06.6**	**+0.6**
IMW				*e*Pg	**Pg**	**21 05 16.2**	**-3.8**
IMW				*e*Sg	**Sg**	**21 06 05.5**	**-6.3**
ISCO	**Idaho Springs**	**4.02**	**182**	*e*Pn	**Pn**	**21 05 06.0**	**-0.3**
TPAW	**Teton Pass**	**4.03**	**267**	*e*Pn	**Pn**	**21 05 04.5**	**-1.9**
TPAW				*e*Pg	**Pg**	**21 05 17.7**	**-3.0**
N19A	**John Jarvie Ra**	**4.04**	**225**	⇓P	**Pn**	**21 05 07.0**	**+0.4**
	baz=4.2						
G17A	**Pierce Place,**	**4.09**	**293**	⇑P	**Pn**	**21 05 09.9**	**+2.7**
	baz=4.4						
F17A	**Fitzpatrick Pl**	**4.27**	**301**	⇓P	**Pn**	**21 05 12.2**	**+2.6**
	baz=4.5						
AHID	**Auburn Hatcher**	**4.28**	**258**	*e*Pn	**Pn**	**21 05 06.5**	**-3.4**
AHID				*e*Pg	**Pg**	**21 05 29.1**	**+3.5**
AHID				*e*Sn	**Sn**	**21 05 55.6**	**-5.0**
AHID				*e*Sg	**Sg**	**21 06 19.6**	**-1.5**
RRI2	**Red Ridge**	**4.32**	**266**	*e*Pn	**Pn**	**21 05 06.3**	**-4.0**
RRI2				*e*Pg	**Pg**	**21 05 21.5**	**-4.7**
RRI2				*e*Sg	**Sg**	**21 06 28.0**	**+5.9**
DGMT	**Dagmar**	**4.72**	**10**	*e*Pn	**Pn**	**21 05 16.9**	**+1.0**
DGMT				*e*Pg	**Pg**	**21 05 33.0**	**-1.0**
DGMT				*e*Sn	**Sn**	**21 06 09.8**	**-1.5**
DGMT				*e*Sg	**Sg**	**21 06 37.1**	**+2.0**
SMCO	**Snowmass**	**4.79**	**195**	*e*Pn	**Pn**	**21 05 16.0**	**-0.8**
SMCO				*e*Pg	**Pg**	**21 05 27.7**	**-7.5**
SMCO				*e*Sn	**Sn**	**21 06 17.3**	**+4.3**
SMCO				*e*Sg	**Sg**	**21 06 30.5**	**-6.8**
EGMT	**Eagleton**	**5.18**	**326**	*e*Pn	**Pn**	**21 05 20.1**	**-2.0**
	13nm,0.4s						
EGMT				*e*Pg	**Pg**	**21 05 39.6**	**-3.1**
EGMT				*e*Sn	**Sn**	**21 06 24.7**	**+2.2**
P18A	**Preston Nutter**	**5.54**	**222**	⇑P	**Pn**	**21 05 27.5**	**+0.4**
	baz=5.7,SNR=7.3						
E15A	**Deer Lodge**	**5.74**	**299**	⇓P	**Pn**	**21 05 32.0**	**+2.1**
	baz=6.0						
B16A	**M & M Farms, S**	**6.34**	**319**	⇓P	**Pn**	**21 05 39.6**	**+1.5**
	baz=6.6,SNR=6.1						
ECSD	**EROS,Sioux Fal**	**6.37**	**88**	*e*Pn	**Pn**	**21 05 38.1**	**-0.4**
	3.9nm,0.3s						
R18A	**Canyonlands Na**	**6.40**	**213**	P	**Pn**	**21 05 38.7**	**-0.3**
	baz=6.5,SNR=7.4						
Q16A	**Castle Valley**	**6.54**	**223**	⇓P	**Pn**	**21 05 41.2**	**+0.3**
	baz=6.7						
D14A	**Greenough**	**6.56**	**303**	⇑P	**Pn**	**21 05 43.2**	**+2.1**
	baz=6.8						
DUG	**Dugway**	**6.60**	**239**	*e*Pn	**Pn**	**21 05 39.1**	**-2.6**
B15A	**Bradely Ranch,**	**6.70**	**315**	⇑P	**Pn**	**21 05 44.7**	**+1.7**
	baz=6.9						
R17A	**Hanksville Air**	**6.72**	**218**	⇓P	**Pn**	**21 05 43.2**	**-0.1**
	baz=6.8						
S18A	**Hurst Farm, Bl**	**7.04**	**211**	⇑P	**Pn**	**21 05 47.4**	**-0.4**
	baz=7.1						
S17A	**Black Ridge (B**	**7.41**	**215**	⇓P	**Pn**	**21 05 52.6**	**-0.3**
	baz=7.5,SNR=5.0						
AGMN	**Agassiz Refuge**	**8.01**	**53**	*e*Pn	**Pn**	**21 06 00.6**	**-0.3**
	8.9nm,0.4s						
AGMN				*e*Pg	**Pg**	**21 06 30.4**	**-6.3**
AGMN				*e*Sn	**Sn**	**21 07 36.3**	**+4.1**
AGMN				*e*Sg	**Sg**	**21 08 28.0**	**+7.6**
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**21 06 15.7**	**-0.8**
	4.3nm,0.3s,baz=238,slow=12,SNR=14						
YKA	**Yellowknife Ar**	**19.46**	**347**	P	**Pn**	**21 08 30.8**	**-1.7**
	baz=168,slow=9.5,SNR=2.5						
ARCES	**ARCESS Array B**	**61.37**	**18**	P	**P**	**21 14 20.3**	**-0.2**
	3.4nm,0.9s,baz=340,slow=5.5,SNR=5.6						

SKHL 03 21:12:35.0±0.5, 5287N×14362E, h10km, mb3.9/2, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**0.80**	**329**	⇓*i*Pg	Pg	21 12 52.2	+1.8
OKH				AMB	AMB	21 12 53.4	
	500nm,0.7s						
OKH				*i* Sg	Sg	21 13 03.9	+3.2
OKH				A		21 13 04.0	
	2μm,0.5s						
OKH				A		21 13 05.0	
	2μm,0.5s						
NKL	**Nikolayevsk**	**1.80**	**280**	*e*Pg	Pg	21 13 10.7	+1.2
NKL				*e*rx	rx	21 13 14.7	
NKL				*e*S	Sn	21 13 27.5	-1.4
NKL				*e*Sg	Sg	21 13 36.0	+3.2
NKL				A		21 13 39.0	
	140nm,0.3s						
TYV	**Tymovskoe**	**2.10**	**197**	*e*Sg	Sg	21 13 46.6	+4.3
GRNR	**Gornyy**	**4.94**	**248**	*e*Pg	Pg	21 14 12.0	+2.5
GRNR				*e*Sg	Sg	21 15 22.0	+8.7
GRNR				A		21 15 24.8	
	26nm,1.0s						
EKMR	**Ekimchan**	**6.45**	**276**	*e*P	Pn	21 14 13.0	+3.1
EKMR				*e*Pg	Pg	21 14 42.0	+3.6
EKMR				AMB	AMB	21 14 52.5	
	2.0nm,0.4s						
EKMR				*e*S	Sn	21 15 25.0	+1.5
EKMR				*e*rx	rx	21 15 58.0	
EKMR				A		21 16 06.8	
	8.0nm,0.5s						
EKMR				A		21 16 06.8	
	4.0nm,0.5s						
EKMR				A		21 16 06.8	
	5.0nm,0.5s						

*NEIC **03** 21:48:04.5, 3832N×2588E, h24km, MD2.9(ATH), ML3.3(THE), After ATH.*
*CSEM **03** 21:48:04.2±0.3, 3835N×2592E, h8km, ML3.3/1, Error ellipse: s-maj=7.1km s-min=4.7km az=85.0*
*ATH **03** 21:48:04.5, 3832N×2588E, h24km±1km, MD3.0/4*
*DDA **03** 21:48:05.0, 3835N×2595E, h6km±3km, Md2.9*
*ISCJB **03** 21:48:05.0±0.8, 3833N±003×2590E±005, h13km±4km, Error ellipse: s-maj=6.7km s-min=4.7km az=7.7*
*THE **03** 21:48:05.6, 3833N×2595E, h14km, ML3.3/1, Error ellipse: s-maj=1.3km s-min=0.8km az=90.0*

ISC 03 21:48:05.0±0.9, 3834N±003×2590E±006, h13km±4km, n14, σ0§68/25, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.13**	**67**	P	**Pg**	**21 48 08.7**	**+0.3**
CHOS				S	**Sg**	**21 48 10.9**	**0.0**
URLA	**Izmir**	**0.54**	**87**	*i* P	**Pg**	**21 48 15.6**	**-0.1**
URLA				*i* S	**Sg**	**21 48 23.0**	**+0.1**

BLCB Balcova 0.90 87 P Pg 21 48 22.0 -0.3
BLCB S Sg 21 48 34.3 +0.2
PRK Paraskevi 0.95 17 P Pb 21 48 23.3 0.0
PRK S Sb 21 48 36.3 +0.5
PRK Paraskevi 0.95 17⇑iPN Pb 21 48 23.3 0.0
PRK eSN Sn 21 48 36.7 -0.7
SMG Samos 0.97 130 ePN Pn 21 48 23.3 -0.9
SMG eSN Sn 21 48 36.8 -1.0
KDAG Bornova 1.07 86 i P Pb 21 48 25.0 -0.4
AYVA Ayvalik 1.15 32 i P Pb 21 48 26.0 -0.7
AYVA i S Sb 21 48 40.4 -1.1
APE Apeiranthos 1.30 193 P Pn 21 48 28.8 0.0
APE S Sb 21 48 45.5 -0.3
APE Apeiranthos 1.30 193 ePn Pn 21 48 28.9 +0.1
APE S Sb 21 48 45.5 -0.3
AKHS Akhisar 1.59 70 i P Pn 21 48 32.9 +0.1
AKHS i S Sn 21 48 54.9 +1.7
LIA Limnos Island 1.66 340 P Pn 21 48 33.8 +0.1
LIA S Sn 21 48 55.4 +0.6
BDRM Kayabasi 1.76 136 i P Pn 21 48 36.3 +1.2
ARG Arkhangelos 2.76 139 ePN Pn 21 48 49.9 +1.0

*BJI **03** 21:52:37.2, 7.22S×149.24E, h39km, mB5.5, mb4.9, Ms5.5, Msz5.4*
*NEIC **03** 21:52:45.6±1.7, 6.37S×148.46E, h30km±11km, mb5.3/38, MS5.8/174, MW5.7, Error ellipse: s-maj=5.9km s-min=4.7km az=67.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^17Nm; Mrr3.62; Mθθ-4.16; Mφφ0.54; Mrθ2.88; Mθφ0.03; Mφr-0.44; Best double couple: M0 4.90000×10^17 NP1:φs96.00000°, δ63.00000°, λ95.00000°. NP2:φs264.00000°, δ27.00000°, λ79.00000°. Principal axes: T 4.6100, Plg70.0000°, Azm17.0000°; N 0.5000, Plg4.0000°, Azm273.0000°; P -5.1100, Plg18.0000°, Azm181.0000°;*
*ISCJB **03** 21:52:45.0±0.2, 6.41S±0.02×148.57E±0.04, h41km, mb5.0/80, MS5.7/210 Error ellipse: s-maj=5.1km s-min=3.5km az=173.3*
*GCMT **03** 21:52:45.6±0.1, 6.74S×148.69E, h28km, MW5.9/100, Moment Tensor Solution. s100,c221; s99,c310; Duration: 2s1 Moment tensor: Scale 10^18Nm; Mrr0.59±.01; Mθθ-0.70±.01; Mφφ0.10±.01; Mrθ0.51±.01; Mθφ-0.04±.01; Mφr-0.02±.01; Best double couple: M0 0.82500×10^18 NP1:φs263.00000°, δ26.00000°, λ83.00000°. NP2:φs91.00000°, δ64.00000°, λ93.00000°. Principal axes: T 0.7730, Plg71.0000°, Azm8.0000°; N 0.1050, Plg3.0000°, Azm269.0000°; P -0.8770, Plg19.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MOS **03** 21:52:45.5±1.4, 6.36S×148.40E, h33km, mb5.2/21, MS5.6/34 Error ellipse: s-maj=10.0km s-min=6.1km az=101.4*
*IDC **03** 21:52:47.7±0.4, 6.42S×148.46E, h49km±4km, mb4.6/22, mb1 4.6/24, mb1mx4.6/25, mbtmp4.6/24, MS5.4/25, Ms1 5.4/25, ms1mx5.3/33, Error ellipse: s-maj=13.3km s-min=9.4km az=89.0*
*DJA **03** 21:52:54, 6.85S×148.66E, h98km, Mw5.5/16*
ISC 03 21:52:47.1±0.2, **6.43S**±0.02×**148.58E**±0.04, **h44**km, **h44**km±1.5km**:pP-P, n475,** σ1s**24**/255, **mb5.0**/80, **MS5.7**/210, **26C-25D, New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 3.27 205 d iP Pn 21 53 36.4 +0.5
PMG Port Moresby 3.27 205 ePn Pn 21 53 36.5 +0.6
PMG Sn Sn 21 54 16.2 +2.7
COEN Coen 9.17 215 ePn Pn 21 54 56.6 -0.3
151nm,1.1s
COEN Sn Sn 21 56 34.3 -4.5
HNR Honiara 11.65 106 P Pn 21 55 32.1 +1.3
7.7nm,0.3s,baz=230,slow=12,SNR=7.8
HNR LR LR 21 59 38.3
comp=Z,8μm,19.2s,baz=283,slow=35
HNR Honiara 11.65 106 P Pn 21 55 32.1 +1.3
HNR LR LR 21 59 38.3
CTA Charters Tower 13.76 189 eP Pn 21 55 59.7 +0.1
33nm,0.9s
CTA eS Sn 21 58 44.9 +14
CTA Charters Tower 13.76 189 P Pn 21 55 59.8 +0.1
1.4nm,0.3s,baz=16,slow=13,SNR=28
CTA LR LR 22 01 16.9
comp=Z,23μm,18.8s,baz=259,slow=37
CTA Charters Tower 13.76 189 eP Pn 21 55 59.7 +0.1
CTA pmax pmax
comp=Z,33nm,0.9s
CTAO Charters Tower 13.76 189⇓iPn Pn 21 55 58.5 -1.2
CTAO eSn Sn 21 58 37.6 +6.5
KAKA Kakadu 17.09 247 eP x 21 56 24.9
comp=Z,49nm,0.6s
KAKA eS x 21 59 36.9
EIDS Eidsvold 18.98 173⇓iP Pn 21 57 04.5 -1.5
comp=Z,249nm,0.9s
EIDS eS S 22 00 37.1 -1.2
WRAB Tennant Creek 19.26 224 Pn Pn 21 57 10.0 +0.6
comp=Z,1μm,1.0s,SNR=21
WRAB Tennant Creek 19.26 224⇓iP Pn 21 57 07.5 -1.9
WRAB eS S 22 00 38.6 -5.4
WRAB pmax pmax
comp=Z,182nm,0.8s
WRAB Tennant Creek 19.26 224⇓iP Pn 21 57 07.5 -1.9
comp=Z,182nm,0.8s
WRAB eS S 22 00 38.6 -5.4
WB2 Warramunga Arr 19.27 224 eP Pn 21 57 07.2 -2.3
WB2 eS S 22 00 31.9 -12
GUMO Guam 20.23 350 P P 21 57 21.4 +2.8
comp=Z,112nm,0.6s,baz=192,slow=22,SNR=4.4
GUMO LR LR 22 04 17.0
comp=Z,9μm,19.8s,MS5.1,baz=142,slow=34
GUMO Guam 20.23 350 eP P 21 57 18.7 +0.1
GUMO eS S 22 01 05.6 +2.3
ASAR Alice Springs 22.20 218 P P 21 57 39.7 0.0
comp=Z,59nm,0.7s,mb5.1,baz=55,slow=9.0,SNR=330
ASAR S S 22 01 40.7 -1.2
comp=Z,52nm,0.9s,baz=32,slow=22,SNR=15
NOUC Port Laguerre 23.15 134 eP P 21 57 48.1 -1.7
DZM Mont Dzumac 23.23 134 eP P 21 57 49.5 -1.2
ARMA Armidale 24.03 174 eP P 21 57 56.9 -1.1
ARMA eS S 22 02 07.6 -4.7
BATI Baumata 24.93 260 P P 21 58 08.7 +2.2
comp=Z,154nm,0.6s,mb5.7,baz=201,slow=1.4,SNR=31
TARA Tarawa 25.50 73 eP P 21 58 14.0 +2.3
TARA eS S 22 02 44.0 +7.7
TARA LR LR
comp=Z,12μm,19.0s,MS5.4
STKA Stephens Creek 26.14 194 eP P 21 58 16.4 -0.8
comp=Z,60nm,0.9s,mb5.1
STKA eS S 22 02 43.7 -2.2
STKA Stephens Creek 26.14 194 P P 21 58 16.8 -0.4
comp=Z,67nm,0.7s,mb5.2,baz=12,slow=10,SNR=29
STKA LR LR 22 09 38.8
comp=Z,19μm,19.0s,MS5.7,baz=109,slow=39
DAV Davao City (W) 26.58 300 eP P 21 58 18.0 -3.3
DAV PcP PcP 22 01 50.8 +5.6
DAV eS S 22 03 12.9 +20
DAV LR LR
comp=Z,5μm,19.0s,MS5.0
KAPI Kappang 28.71 271 P P 21 58 39.9 -0.6
comp=Z,27nm,0.7s,mb5.1,baz=122,slow=6.1,SNR=11
KAPI PcP PcP 22 01 49.6 -0.7
comp=Z,9.3nm,0.7s,baz=181,slow=7.4,SNR=3.5
KAPI Kappang 28.71 271⇑eP P 21 58 40.1 -0.4
KAPI eS S 22 03 28.5 +1.6
KAPI LR LR
comp=Z,6μm,21.0s,MS5.2
CNB Canberra Magne 28.75 179 eP P 21 58 41.4 +0.8
CNB e pP 21 58 55.1 +2.8
CNB eS S 22 03 22.9 -4.1
FUNA Funafuti 30.43 96 eP P 21 58 55.4 -0.3
comp=Z,308nm,1.7s,mb5.8
FUNA e pP 21 59 08.2 +0.8
FORT Forrest 30.94 216 eP P 21 58 59.6 -0.4
comp=Z,68nm,0.6s,mb5.7
TOO Toolangi 31.12 185 eP P 21 59 01.3 -0.2
TOO e 21 59 16.3
TOO eS S 22 04 06.0 +1.8
MBWA Marble Bar 31.52 239 eP P 21 59 06.0 +0.7
comp=Z,64nm,0.8s,mb5.5
MBWA e pP 21 59 18.0 +1.0
MBWA ePcP PcP 22 01 59.6 +2.1
MBWA eS S 22 04 12.4 +1.5
MBWA LR LR
comp=Z,11μm,21.0s,MS5.5
MYLDM Lahad Datu 32.16 290 ⇓P pP 21 59 21.0 -1.8
CBIJ Chichi jima 33.90 350 P P 21 59 25.8 -0.1
comp=Z,78nm,0.7s,mb5.8,baz=200,slow=16,SNR=3.9
CBIJ LR LR 22 12 35.1
comp=Z,3μm,19.5s,MS5.0,baz=325,slow=35
KKM Kota Kinabalu 34.59 290 eP P 21 59 27.6 -4.5
KKM ePP PP 22 00 49.7 -1.5
KKM eS S 22 04 49.3 -9.5
KKM LR LR
comp=Z,3μm,20.0s,MS5.0
MOO Moorlands 35.88 182 eP P 21 59 43.6 +0.8
MOO eS S 22 05 24.6 +6.8
TAU Tasmania Unive 36.34 182 eP P 21 59 47.5 +0.7
TAU e pP 22 00 00.1 +1.4
TAU e 22 01 11.6
TAU e 22 02 12.1
TAU eS S 22 05 29.3 +4.5
TAU pmax pmax
comp=Z,42nm,0.9s,mb5.4
TAU MLR MLR
comp=Z,16μm,19.0s,MS5.8
TAU Tasmania Unive 36.34 182 eP P 21 59 47.5 +0.7
comp=Z,42nm,0.9s,mb5.4
TAU e pP 22 00 00.1 +1.3
TAU ePP PP 22 01 11.6 +1.4
TAU ePcP PcP 22 02 12.1 +1.3
TAU eS S 22 05 29.3 +4.5
TAU LR LR
comp=Z,16μm,19.0s,MS5.8
SBUM Sibu 37.35 283 ⇑P P 21 59 58.5 +2.6
KLBR Kellerberrin 38.16 225 eP P 22 00 02.3 -0.1
comp=Z,154nm,0.9s,mb5.7
JOW Kunigami 38.48 330 P P 22 00 03.5 -1.5
comp=Z,14nm,0.6s,mb4.8,baz=153,slow=16,SNR=2.8
JOW LR LR 22 13 23.7
comp=Z,10μm,20.4s,MS5.6,baz=336,slow=32
JOW Kunigami 38.48 330 P P 22 00 03.5 -1.5
JOW LR LR 22 13 23.7
RAO Raoul Island 38.90 130 LR LR 22 14 06.2
comp=Z,1μm,18.2s,MS4.8,baz=301,slow=33
RAO Raoul Island 38.90 130 eP P 22 00 11.3 +2.7
RAO e 22 02 18.0
RAO e 22 06 02.8
RAO MLR MLR
comp=Z,2μm,22.0s,MS5.0
KSM Kuching 39.00 280 eP P 22 00 11.3 +1.6
KSM e pP 22 00 20.2 -1.4
KSM ePcP PcP 22 02 20.1 +0.6
KSM Kuching 39.00 280 ⇓P P 22 00 13.8 +4.1
NWAO Narrogin (SRO) 39.28 224 LR LR 22 17 36.9
comp=Z,17μm,18.3s,MS5.9,baz=52,slow=38
NWAO Narrogin (SRO) 39.28 224 eP P 22 00 16.0 +4.2
NWAO e 22 00 23.5
NWAO e 22 01 49.9
NWAO eS S 22 06 14.8 +5.1
NWAO pmax pmax
comp=Z,108nm,1.4s
NWAO MLR MLR
comp=Z,12μm,19.0s
NWAO Narrogin (SRO) 39.28 224 eP P 22 00 16.0 +4.2
comp=Z,108nm,1.4s,mb5.4
NWAO e 22 00 23.5
NWAO ePP PP 22 01 49.9 +7.3
NWAO eS S 22 06 14.8 +5.1
NWAO LR LR
comp=Z,12μm,19.0s,MS5.7
MUN Mundaring 39.47 226 eP P 22 00 15.0 +1.7
MUN eS S 22 06 14.0 +1.5
AFI Afiamalu 39.68 104 P P 22 00 15.0 -0.4
comp=Z,30nm,0.7s,mb5.1,baz=142,slow=21,SNR=4.5
AFI LR LR 22 15 30.9
comp=Z,4μm,18.4s,MS5.3,baz=274,slow=34
AFI Afiamalu 39.68 104 eP P 22 00 15.6 +0.3
AFI eS S 22 06 13.1 -3.0
AFI Afiamalu 39.68 104 eP P 22 00 15.6 +0.2
AFI ePP PP 22 01 41.3 -5.8
AFI eS S 22 06 13.1 -2.9
AFI LR LR 22 15 30.9
JHJ Hachijo jima 2 40.21 349 LR LR 22 16 38.3
comp=Z,8μm,18.2s,MS5.6,baz=118,slow=36
NACB Ninganchiao 40.22 320 eP P 22 00 19.2 -0.5
YHNB Yeheng 40.72 320 eP P 22 00 23.8 +0.1
YHNB ePP PP 22 01 56.0 -2.2
YHNB PP PcP 22 02 50.0 +25
YHNB eS S 22 06 41.2 +10
YHNB LR LR
comp=Z,4μm,19.0s,MS5.3
TATO Taipei 40.86 321 PFAKE 22 00 40.0 +15
TATO LR LR
comp=Z,5μm,20.0s,MS5.4
URZ Urewera 40.89 145 P P 22 00 24.0 -1.0
comp=Z,8.9nm,0.5s,mb4.7,baz=0.0,slow=2.0,SNR=7.0
URZ LR LR 22 16 22.1
comp=Z,10μm,18.4s,MS5.7,baz=322,slow=34
SNZO South Karori 41.81 150 eP P 22 00 27.7 -4.9
SNZO S S 22 06 45.0 -2.1
SNZO LR LR
comp=Z,8μm,19.0s,MS5.6
RPZ Rata Peaks 42.06 156 P P 22 00 34.7 +0.2
comp=Z,10.0nm,0.8s,mb4.5,baz=329,slow=2.4,SNR=6.1
RPZ LR LR 22 16 33.0
comp=Z,5μm,19.4s,MS5.4,baz=324,slow=34
QZH Quanzhou 42.71 318⇑iP P 22 00 40.2 +0.1
QZH S S 22 07 00.0 -0.8
QZH LR LR
comp=N,2μm,15.9s,MS5.6
QZH LR LR
comp=E,5μm,16.6s,MS5.6
QZH LR LR
comp=Z,3μm,18.8s,MS5.3
MJAR Matsushiro Arr 43.84 348 P P 22 00 48.8 -0.1
comp=Z,6.7nm,0.8s,mb4.5,baz=172,slow=8.5,SNR=14
MJAR LR LR 22 18 54.8
comp=Z,7μm,18.4s,MS5.6,baz=160,slow=36
MAJO Matsushiro 43.84 348 eP P 22 00 48.5 -0.5
MAJO e pP 22 01 01.1 0.0
MAJO e 22 02 40.1
MAJO eS S 22 07 27.2 +10
MAJO pmax pmax
comp=Z,161nm,1.5s,mb5.5
MAJO MLR MLR
comp=Z,7μm,19.0s,MS5.6
MAJO Matsushiro 43.84 348 eP P 22 00 48.5 -0.5
comp=Z,161nm,1.5s,mb5.5
MAJO e pP 22 01 01.1 0.0
MAJO ePP PP 22 02 40.1 +8.3
MAJO eS S 22 07 27.2 +10
MAJO LR LR
comp=Z,7μm,19.0s,MS5.6
MAT Matsushiro 43.84 348 P P 22 00 48.6 -0.4
MAT S S 22 07 11.0 -5.9
GZH Guangzhou 45.24 312 P P 22 01 03.5 +3.1
GZH S S 22 07 46.1 +8.4
GZH LR LR
comp=N,2μm,15.7s,MS5.3
GZH LR LR
comp=E,2μm,18.1s,MS5.3
GZH LR LR
comp=Z,4μm,17.4s,MS5.4
SSE Sheshan 45.59 326 P P 22 01 04.1 +1.0
SSE XP sP 22 01 20.4 0.0
SSE PP PP 22 02 50.9 +0.4
SSE S S 22 07 43.9 +1.3
SSE XS sS 22 08 03.5 +0.6
SSE SS SS 22 11 09.0 +1.6
SSE AMB AMB
comp=Z,28nm,0.9s,mb5.2
SSE AMB AMB
comp=Z,561nm,8.3s
SSE LR LR
comp=N,3μm,13.2s,MS5.6
SSE LR LR
comp=E,3μm,13.2s,MS5.6
SSE LR LR
comp=Z,5μm,12.7s,MS5.7
QIZ Qiongzhong 45.79 304 P P 22 01 05.4 +0.6
QIZ AP pP 22 01 17.0 0.0
QIZ XP sP 22 01 22.8 +0.7
QIZ S S 22 07 44.9 -0.8
QIZ XS sS 22 08 05.5 -0.6
QIZ AMB AMB
comp=Z,497nm,11.0s
QIZ LR LR
comp=E,2μm,17.9s
QIZ LR LR
comp=Z,3μm,19.3s,MS5.2
QIZ Qiongzhong 45.79 304 eP P 22 01 05.4 +0.6
QIZ eS S 22 08 05.3 +20
QIZ LR LR
comp=Z,3μm,20.0s,MS5.2
KGM Kluang 45.95 279 ⇓P P 22 01 08.2 +2.0
KTGM Kuala Trenggan 46.84 283 ⇓P P 22 01 14.7 +1.5
MIDW Midway 47.60 42 eP P 22 01 25.0 +6.2
MIDW eS S 22 08 23.3 +12
MIDW LR LR
comp=Z,7μm,19.0s,MS5.7
NJ2 Nanjing 47.62 325 eP P 22 01 19.7 +0.8
NJ2 AP pP 22 01 29.6 -1.5
NJ2 XP sP 22 01 33.2 -3.1
NJ2 PP PP 22 03 10.8 0.0
NJ2 S S 22 08 10.6 -0.9
NJ2 AMB AMB
comp=Z,50nm,0.9s,mb5.5
NJ2 AMB AMB
comp=Z,390nm,8.2s
NJ2 LR LR
comp=N,2μm,20.8s,MS5.3
NJ2 LR LR
comp=E,3μm,19.4s,MS5.3
NJ2 LR LR
comp=Z,600nm,21.3s,MS4.5
KSRS Korea Array 47.73 338 P P 22 01 19.6 -0.1
comp=Z,15nm,0.7s,mb5.1,baz=153,slow=8.4,SNR=32
KSRS LR LR 22 19 26.3
comp=Z,5μm,21.7s,MS5.4,baz=134,slow=34
INCN Inchon 48.25 337 eP P 22 01 17.4 -6.3
INCN PcP PcP 22 02 53.2 +3.0
INCN eS S 22 08 24.1 +3.8
INCN LR LR
comp=Z,4μm,22.0s,MS5.4
ERM Erimo 48.47 355 eP P 22 01 24.4 -0.9
ERM eS S 22 08 26.8 +3.6
ERM MLR MLR
comp=Z,6μm,22.0s,MS5.6
IPM Ipoh 48.69 282 ⇑P P 22 01 29.1 +1.6
KULM Kulim 49.24 283 ⇓P P 22 01 32.8 +1.0
ASAJ Asahikawa 50.60 354 P P 22 01 41.1 -0.4
comp=Z,5.0nm,0.8s,mb4.5,baz=239,slow=5.9,SNR=2.6
ASAJ LR LR 22 23 26.6
comp=Z,3μm,19.4s,MS5.3,baz=186,slow=36
COCO West Island 51.32 260 eP P 22 01 44.8 -2.6
COCO ePP PP 22 03 51.2 +6.3
COCO eS S 22 09 10.1 +6.2
COCO LR LR
comp=Z,3μm,20.0s,MS5.3
DL2 Dalian 51.57 333 eP P 22 01 48.5 -0.4
DL2 XS sS 22 09 28.6 +1.5
DL2 AMB AMB
comp=Z,10.0nm,2.0s,mb4.4
DL2 LR LR
comp=N,2μm,19.1s
DL2 LR LR
comp=Z,3μm,19.6s,MS5.3
GYA Guiyang 52.15 311 P P 22 01 54.0 +0.6
GYA AP pP 22 02 05.5 -0.3
GYA XP sP 22 02 09.6 -1.3
GYA PP PP 22 03 54.3 +2.1
GYA SCP ScP 22 06 55.9 -2.6
GYA PCS PcS 22 06 59.1 -4.2
GYA S S 22 09 17.3 +2.4
GYA XS sS 22 09 37.0 +1.4
GYA SS SS 22 12 55.1 +2.1
GYA AMB AMB
comp=Z,80nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,720nm,9.6s
GYA LR LR
comp=N,3μm,20.0s,MS5.4
GYA LR LR
comp=E,3μm,20.4s,MS5.4
GYA LR LR
comp=Z,4μm,20.2s,MS5.4
ENH Enshi 52.30 316 eP P 22 01 54.2 -0.3
NST Nakhon Sawan 52.76 295 P P 22 01 55.0 -3.1
YSS Yuzh-Sakhalins 53.40 355 eP P 22 01 58.2 -4.1
YSS ePP PP 22 04 13.8 +11
YSS eScP ScP 22 07 03.9 +0.4
YSS eS S 22 09 31.3 0.0
YSS LR LR
comp=Z,1μm,21.0s,MS5.0
MDJ Mudanjiang 53.61 343 P P 22 02 05.0 +1.1
MDJ AP pP 22 02 14.8 -1.5
MDJ XP sP 22 02 18.3 -3.1
MDJ S S 22 09 36.9 +2.6
MDJ XS sS 22 09 55.6 +0.6
MDJ AMB AMB
comp=Z,13nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,761nm,9.2s
MDJ LR LR
comp=N,3μm,21.6s,MS5.3
MDJ LR LR
comp=E,1μm,20.7s,MS5.3
MDJ LR LR
comp=Z,4μm,21.6s,MS5.4
MDJ Mudanjiang 53.61 343 eP P 22 02 04.1 +0.2
MDJ e pP 22 02 15.4 -0.9
MDJ ePcP PcP 22 03 10.3 +0.4
MDJ ePP PP 22 04 15.0 +10
MDJ eScP ScP 22 07 10.0 +5.6
MDJ eS S 22 09 49.8 +16
MDJ LR LR
comp=Z,3μm,20.0s,MS5.4
CN2 Changchun 54.20 339 eP P 22 02 08.7 +0.5
CN2 eXP sP 22 02 24.4 -1.3
CN2 PCP PcP 22 03 10.5 -1.7
CN2 eS S 22 09 43.8 +1.6
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,700nm,5.0s
CN2 LR LR
comp=N,4μm,18.0s,MS5.6
CN2 LR LR
comp=E,3μm,18.0s,MS5.6
CN2 LR LR
comp=Z,3μm,19.0s,MS5.4
KMI Kunming 54.50 307 P P 22 02 13.0 +2.2
KMI AP pP 22 02 23.7 +0.5
KMI XP sP 22 02 29.4 +1.1
KMI PP PP 22 04 17.5 +4.0
KMI S S 22 09 46.4 -0.6
KMI XS sS 22 10 07.4 -0.3
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,437nm,10.7s
KMI LR LR
comp=N,2μm,17.6s,MS5.3
KMI LR LR
comp=E,1μm,17.6s,MS5.3
KMI LR LR
comp=Z,2μm,17.6s,MS5.3
XMAS Kiritimati 54.54 83 PFAKE 22 02 20.0 +8.7
XMAS LR LR
comp=Z,6μm,20.0s,MS5.7
CM31 Chiang Mai Arr 54.84 298 eP P 22 02 14.9 +1.7
CM31 e 22 02 30.2
CM31 ePcP PcP 22 03 12.5 -2.7
CM31 eScP ScP 22 06 50.2 -20
CM31 eS S 22 09 59.1 +7.5
CM31 LR LR
comp=Z,1μm,20.0s,MS4.9
CMAR Chiang Mai Arr 54.84 298 P P 22 02 13.8 +0.5
comp=Z,4.1nm,0.7s,mb4.6,baz=123,slow=5.6,SNR=19
CMAR LR LR 22 25 55.1
comp=Z,1μm,20.5s,MS5.0,baz=299,slow=36
CMAR Chiang Mai Arr 54.84 298 i P P 22 02 13.8 +0.5
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 54.97 298 eP P 22 02 14.1 -0.1
CHTO e 22 03 16.5
CHTO eS S 22 10 06.1 +13
CHTO pmax pmax

comp=Z,8.0nm,1.1s,mb4.7
CHTO MLR MLR
comp=Z,1μm,19.0s,MS5.1
CHTO Chiang Mai 54.97 298 *e*P **P** **22 02 14.1 -0.2**
comp=Z,8.3nm,1.1s,mb4.7
CHTO *e*PcP PcP 22 03 16.4 +0.7
CHTO *e*ScP ScP 22 06 48.0 -23
CHTO *e*S **S** **22 10 06.1 +13**
CHTO LR LR
comp=Z,1μm,19.0s,MS5.1
XAN Xi'an 55.02 320 P **P** **22 02 13.4 -0.9**
XAN AP pP 22 02 26.4 -0.4
XAN XP sP 22 02 32.9 +1.0
XAN PCP PcP 22 03 16.1 +0.5
XAN PP PP 22 04 17.8 -0.1
XAN SCP ScP 22 07 08.2 -2.7
XAN PCS PcS 22 07 14.5 -1.0
XAN S **S** **22 09 50.7 -2.9**
XAN SCS ScS 22 11 55.4 -4.7
XAN SS SS 22 13 43.1 +5.1
XAN AMB AMB
comp=Z,12nm,1.3s,mb4.8
XAN AMB AMB
comp=Z,578nm,14.2s
XAN LR LR
comp=N,835nm,19.7s,MS5.1
XAN LR LR
comp=E,1μm,18.5s,MS5.1
XAN LR LR
comp=Z,4μm,19.2s,MS5.5
BJT Baijiatuau 55.04 330 *e*P **P** **22 02 14.7 +0.4**
BJT *e* pP 22 02 25.9 -0.9
BJT *e*
BJT *e* 22 04 12.9
BJT *e*S **S** **22 10 04.6 +11**
BJT MLR MLR
comp=Z,8μm,22.0s
BJT Baijiatuau 55.04 330 *e*P **P** **22 02 14.7 +0.3**
BJT *e* pP 22 02 25.9 -0.9
BJT *e*PcP PcP 22 03 15.7 +0.1
BJT *e*PP PP 22 04 12.9 -5.1
BJT *e*ScP ScP 22 07 26.4 +16
BJT *e*S **S** **22 10 04.6 +11**
BJT LR LR
comp=Z,8μm,22.0s,MS5.7
BJI Beijing 55.05 330 P **P** **22 02 14.8 +0.4**
BJI PP PP 22 04 15.5 -2.6
BJI S **S** **22 09 58.5 +4.7**
BJI SS SS 22 13 44.6 +6.2
BJI AMB AMB
comp=Z,9.0nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,549nm,9.2s
BJI LR LR
comp=N,5μm,20.5s,MS5.7
BJI LR LR
comp=E,4μm,22.0s,MS5.7
BJI LR LR
comp=Z,6μm,23.5s,MS5.6
HABR Khabarovsk 55.95 349*c*eP **P** **22 02 19.5 -1.2**
HABR *e**SP sP 22 02 33.6 -4.7
HABR *e* 22 03 18.2
HABR *e*PPP 22 05 37.8
HABR *e*S **S** **22 10 04.9 -0.6**
HABR *e* 22 10 16.9
HABR *e* 22 12 05.9
HABR *e*SS SS 22 13 52.8 +0.6
HABR *e*SSS 22 16 05.3
CD2 Chengdu 56.70 314 P **P** **22 02 25.8 -0.7**
CD2 AP pP 22 02 41.8 +2.8
CD2 XP sP 22 02 43.3 -0.7
CD2 PP PP 22 04 34.8 +1.8
CD2 S **S** **22 10 14.9 -1.2**
CD2 XS sS 22 10 36.2 -0.8
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.6
CD2 AMB AMB
comp=Z,790nm,14.2s
CD2 LR LR
comp=N,2μm,18.0s
CD2 LR LR
comp=Z,3μm,18.0s,MS5.4
SKR Severo-Kuril's 57.26 6 P **P** **22 02 34.0 +4.0**
SKR *e*PPP 22 06 06.0
SKR *e*S S 22 10 44.0 +21
SKR *e*SS SS 22 14 14.0 +1.3
SKR MLR MLR
comp=N,2μm,18.0s,MS5.6
SKR MLR MLR
comp=E,3μm,18.0s,MS5.6
SKR MLR MLR
comp=Z,3μm,18.0s,MS5.5
KLR Kul'dur 57.35 347 *e*P **P** **22 02 25.2 -5.4**
KLR pmax pmax
comp=Z,70nm,1.8s,mb5.4
HHC Hu-ho-hao-te 58.03 327 *e*P **P** **22 02 38.6 +3.0**
HHC AP pP 22 02 51.4 +3.2
HHC XP sP 22 02 57.1 +3.9
HHC PP PP 22 04 48.9 +4.2
HHC PCS PcS 22 07 29.4 +0.9
HHC S **S** **22 10 32.6 -0.6**
HHC XS sS 22 10 56.8 +2.7
HHC SCS ScS 22 12 20.9 -0.8
HHC SS SS 22 14 29.6 +4.3
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,656nm,9.7s
HHC LR LR
comp=N,3μm,21.4s,MS5.5
HHC LR LR
comp=E,3μm,19.0s,MS5.5
HHC LR LR
comp=Z,5μm,20.2s,MS5.7
KIP Kipapa 59.23 61 PFAKE 22 03 00.0 +16
KIP LR LR
comp=Z,9μm,19.0s,MS5.9
LZH Lanzhou 59.56 319 *e*P **P** **22 02 45.1 -1.3**
LZH AP pP 22 02 57.0 -2.0
LZH XP sP 22 03 01.5 -2.5
LZH S **S** **22 10 51.2 -2.1**
LZH AMB AMB
comp=Z,51nm,1.4s,mb5.4
LZH AMB AMB
comp=Z,533nm,7.8s
LZH LR LR
comp=N,2μm,18.0s
LZH LR LR
comp=Z,3μm,19.7s,MS5.5
PEA0B Petropavlovsk- 59.81 6 *e*P **P** **22 02 50.6 +2.8**
PEA0B *e* 22 02 58.5
PEA0B *e*PP PP 22 04 57.2 -3.0
PETK Petropavlovsk- 59.81 6 P **P** **22 02 47.1 -0.6**
comp=Z,19nm,0.6s,mb5.3,baz=162,slow=5.6,SNR=24
PETK LR LR 22 30 00.5
comp=Z,2μm,18.6s,MS5.2,baz=204,slow=37
PET Petropavlovsk 59.84 7*c i*P **P** **22 02 47.1 -0.8**
PET *e* 22 05 04.9
PET *e*S **S** **22 10 55.9 -0.4**
PET *e*SS SS 22 14 56.6 +3.3
PET pmax pmax
comp=Z,20nm,0.6s,mb5.3
PET pmax pmax
comp=Z,800nm,15.3s
PET pmax pmax
comp=Z,200nm,16.5s
PET MLR MLR
comp=Z,3μm,20.0s,MS5.4
PET MLR MLR
comp=Z,3μm,19.0s
PET Petropavlovsk 59.84 7 *e*P **P** **22 02 46.9 -1.0**
PET *e*PP PP 22 05 14.4 +14
PET *e*S **S** **22 10 47.7 -8.6**
PET LR LR
comp=Z,3μm,19.0s,MS5.5
DRV Dumont d'Urvil 60.43 184 P **P** **22 02 57.0 +5.2**
DRV S **S** **22 11 10.0 +6.5**
DRV SS SS 22 15 09.0 +7.2
DRV L 22 18 00.0
DRV R 22 22 00.0
POHA Pohakuloa 60.83 63 PFAKE 22 03 10.0 +15
POHA LR LR
comp=Z,12μm,19.0s,MS6.1
HIA Hailar 60.91 339 *e*P **P** **22 02 55.3 0.0**
HIA *e* pP 22 03 07.0 -0.9
HIA *e* 22 05 14.4
HIA pmax pmax
comp=Z,10.0nm,0.6s
HIA MLR MLR
comp=Z,4μm,21.0s
HIA Hailar 60.91 339 *e*P **P** **22 02 55.3 0.0**
comp=Z,10nm,0.6s,mb5.1
HIA *e* pP 22 03 07.0 -1.0
HIA *e*PP PP 22 05 14.4 +4.4
HIA *e*S **S** **22 10 58.4 -12**
HIA LR LR
comp=Z,4μm,21.0s,MS5.6
PPT Papeete 61.27 106 *e*S **S** **22 11 14.8 -1.1**
comp=Z,5μm,25.5s
PPT *e*LQ 22 18 25.1
comp=Z,11μm,31.8s
PPT *e*LR LR 22 21 07.2
comp=Z,3μm,24.0s
PPT Papeete 61.27 106 LR LR 22 26 52.9
comp=Z,1μm,18.4s,MS5.0,baz=269,slow=33
PMOR Pomariorio Ree 62.83 104 *e*P **P** **22 03 11.6 +2.7**
comp=Z,140nm,1.1s,mb6.0
SHL Shillong 63.57 303 *e*P **P** **22 03 16.0 +2.4**
SHL *ex* x 22 11 47.0
GTA Gaotai 64.08 320 *e*P **P** **22 03 17.8 +1.1**
GTA AP pP 22 03 28.1 -1.3
GTA XP sP 22 03 32.6 -1.8
GTA PP PP 22 05 41.5 +3.3
GTA S **S** **22 11 51.0 +0.7**
GTA AMB AMB
comp=Z,7.0nm,0.9s,mb4.7
GTA AMB AMB
comp=Z,528nm,11.7s
GTA LR LR
comp=N,558nm,18.0s,MS5.0
GTA LR LR
comp=E,772nm,17.7s,MS5.0
GTA LR LR
comp=Z,834nm,16.8s,MS5.0
ADK Adak 65.24 23 *e*P **P** **22 03 19.9 -4.1**
ADK *e* 22 05 56.8
ADK *e*S S 22 12 01.5 -2.6
ADK MLR MLR
comp=Z,5μm,19.0s,MS5.8
ULN Ulaanbaatar 65.25 331 *e*P **P** **22 03 24.2 +0.1**
ULN *e* pP 22 03 36.7 -0.1
ULN *e* 22 05 47.7
ULN *e*S S 22 12 06.9 +2.5
ULN pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ULN MLR MLR
comp=Z,6μm,21.0s,MS5.7
ULN Ulaanbaatar 65.25 331 *e*P **P** **22 03 24.2 +0.1**
comp=Z,4.5nm,0.6s,mb4.7
ULN *e* pP 22 03 36.7 -0.1
ULN *e*PP PP 22 05 47.7 -0.5
ULN *e*S S 22 12 06.9 +2.5
ULN LR LR
comp=Z,6μm,21.0s,MS5.7
CASY Casey 65.27 196 *e*P **P** **22 03 14.9 -9.1**
CASY Casey 65.27 196 *e*P **P** **22 03 24.4 +0.4**
CASY *e* pP 22 03 34.2 -2.5
CASY *e*PcP PcP 22 03 54.1 -1.9
CASY *e*PP PP 22 05 48.5 +0.6
CASY *e*S S 22 11 50.4 -14
CASY LR LR
comp=Z,6μm,20.0s,MS5.8
SONM Songino Array 65.55 330 P **P** **22 03 25.2 -0.8**
comp=Z,3.4nm,0.7s,mb4.5,baz=150,slow=3.6,SNR=15
SONM pP pP 22 03 39.6 +0.8
comp=Z,2.7nm,0.6s,baz=151,slow=3.8,SNR=7.1
SONM LR LR 22 30 31.2
comp=Z,6μm,21.2s,MS5.8,baz=134,slow=35
SONM Songino Array 65.55 330 P **P** **22 03 25.2 -0.9**
SONM *PP pP 22 03 39.6 +0.8
CAL Calcutta 65.57 298 *e*P **P** **22 03 24.1 -2.6**
CAL *ex* x 22 12 03.4
CAL AMP 22 33 23.0
comp=Z,562nm,25.3s
LSA Lhasa 65.75 306 P **P** **22 03 27.2 -0.6**
LSA S S 22 12 15.1 +3.8
LSA LR LR
comp=N,990nm,28.7s,MS5.1
LSA LR LR
comp=E,1μm,26.5s,MS5.1
LSA LR LR
comp=Z,1μm,25.3s,MS5.1
LSA Lhasa 65.75 306 *e*P **P** **22 03 27.8 0.0**
LSA *e* 22 03 59.2
LSA *e* 22 05 56.5
LSA *e*S S 22 12 08.9 -2.4
LSA pmax pmax
comp=Z,17nm,0.7s,mb5.2
LSA MLR MLR
comp=Z,1μm,21.0s,MS5.1
LSA Lhasa 65.75 306 *e*P **P** **22 03 27.8 0.0**
comp=Z,17nm,0.7s,mb5.2
LSA *e*PcP PcP 22 03 59.1 +0.4
LSA *e*PP PP 22 05 56.5 +3.5
LSA *e*S S 22 12 08.9 -2.4
LSA LR LR
comp=Z,1μm,21.0s,MS5.1
TAPN Taplejung 67.70 303 *e*P **P** **22 03 39.1 -1.1**
comp=Z,24nm,0.7s,mb5.3
ODAN Odare 67.80 302 *e*P **P** **22 03 40.8 -0.1**
comp=Z,31nm,0.6s,mb5.5
RAMN Ramite 68.49 302 *e*P **P** **22 03 44.6 -0.6**
comp=Z,18nm,0.6s,mb5.3
ZAK Zakamensk 68.77 331 *e*P **P** **22 03 46.2 -0.3**
ZAK pmax pmax
comp=Z,12nm,1.1s,mb4.7
JIRN Jiri 69.07 303 *e*P **P** **22 03 48.1 -0.7**
comp=Z,32nm,0.6s,mb5.4
SEY Seymchan 69.23 2[1] *e*P **P** **22 03 49.5 +0.5**
GUN Gumba 69.42 303 *e*P **P** **22 03 50.3 -0.7**
comp=Z,62nm,0.6s,mb5.7
TLY Talaya 69.45 332 *e*P **P** **22 03 50.3 -0.4**
TLY *e* pP 22 04 03.0 -0.5
TLY *e* 22 06 23.2
TLY *e*S S 22 13 02.5 +7.7
TLY MLR MLR
comp=Z,4μm,22.0s,MS5.6
YAK Yakutsk 69.81 351 *e*P **P** **22 03 47.4 -5.2**
YAK *e**PP pP 22 03 56.4 -9.1
YAK *e* 22 06 22.8
YAK *e*S S 22 13 00.1 +1.5
YAK *e**SS sS 22 13 19.3 -0.7
YAK *e* 22 13 48.7
YAK *e*SS SS 22 17 30.7 +2.6
YAK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
YAK pmax pmax
comp=Z,105nm,2.5s,mb5.3
YAK smax
comp=N,197nm,3.4s
YAK smax
comp=E,37nm,2.2s
YAK MLR MLR
comp=Z,2μm,18.0s,MS5.3
YAK MLR MLR
comp=N,842nm,19.0s,MS5.2
YAK MLR MLR
comp=E,803nm,18.0s,MS5.2
YAK Yakutsk 69.81 351 *e*P **P** **22 03 49.4 -3.2**
YAK *e*PP PP 22 06 25.1 -2.5
YAK *e*S S 22 12 48.3 -10
YAK LR LR
comp=Z,3μm,22.0s,MS5.5
KKN Kakani 69.88 303 *e*P **P** **22 03 53.1 -0.7**
comp=Z,21nm,0.7s,mb5.2
KKN Kakani 69.88 303 *e*P **P** **22 03 53.1 -0.7**
KKN pmax pmax
comp=Z,21nm,0.7s,mb5.2
BOD Bodaibo 69.88 341 *e*P **P** **22 03 51.6 -1.6**
BOD pmax pmax
comp=Z,7.0nm,1.9s,mb4.3
DMN Daman 69.96 302 *e*P **P** **22 03 53.4 -0.9**
comp=Z,31nm,0.6s,mb5.4
GKN Gorkha 70.48 303 *e*P **P** **22 03 56.2 -1.3**
comp=Z,32nm,0.7s,mb5.4
TAOE Nuku Hiva Isla 70.59 97 *e*LR LR 22 25 29.1
comp=Z,6μm,22.2s
MOY Mondy 70.71 331 *e*P **P** **22 03 58.7 +0.4**
MIR Mirnyy 70.92 200 *e*P **P** **22 04 04.0 +4.6**
MIR *i* 22 04 11.0
MIR *i* 22 04 24.0
MIR *i*S S 22 13 12.0 +0.5
MIR *i* 22 14 04.0
MIR *e*SS SS 22 17 54.0 +9.3
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.5
KOLN Koldanda 71.28 302 *e*P **P** **22 04 01.6 -0.8**
comp=Z,40nm,0.7s,mb5.4
DANN Dangsing 71.33 303 *e*P **P** **22 04 01.0 -1.6**
comp=Z,27nm,0.7s,mb5.3
VNDA Vanda 71.40 177 P **P** **22 04 03.0 +0.8**
comp=Z,5.4nm,0.9s,mb4.5,baz=323,slow=5.9,SNR=31
VNDA LR LR 22 32 16.8
comp=Z,2μm,18.3s,MS5.5,baz=349,slow=33
VNDA Vanda 71.40 177 P **P** **22 04 03.0 +0.8**
VNDA LR LR 22 32 16.8
SBA Scott Base 72.02 176 *e*P **P** **22 04 06.1 +0.2**
SBA *e* 22 06 46.1
SBA *e*S S 22 13 22.2 -1.7
SBA pmax pmax
comp=Z,25nm,1.2s,mb5.0
SBA MLR MLR
comp=Z,3μm,20.0s,MS5.5
SBA Scott Base 72.02 176 *e*P **P** **22 04 06.1 +0.2**
comp=Z,25nm,1.2s,mb5.0
SBA *e*PP PP 22 06 46.1 0.0
SBA *e*S S 22 13 22.2 -1.8
SBA LR LR
comp=Z,3μm,20.0s,MS5.5
HYB Hyderabad 73.08 290 *i* P **P** **22 04 13.5 +0.2**
HYB *e*PcP PcP 22 04 31.5 +1.6
HYB Hyderabad 73.08 290 *e*P **P** **22 04 13.5 +0.2**
WMQ Urumqi 74.14 319 P **P** **22 04 19.6 +0.6**
WMQ PCP PcP 22 04 35.2 +1.3
WMQ XP sP 22 04 37.0 +0.1
WMQ PP PP 22 07 02.8 -2.3
WMQ S S 22 13 47.8 -1.3
WMQ XS sS 22 14 07.3 -3.3
WMQ SKS 22 14 18.8
WMQ SCS ScS 22 14 22.7 -3.3
WMQ SS SS 22 18 38.5 +3.3
WMQ AMB AMB
comp=Z,11nm,1.1s,mb4.7
WMQ AMB AMB
comp=Z,449nm,13.0s
WMQ LR LR
comp=N,662nm,18.0s,MS5.2
WMQ LR LR
comp=E,1μm,19.0s,MS5.2
WMQ LR LR
comp=Z,1μm,21.0s,MS5.2
RKT Rikitea 75.06 112 *e*S S 22 14 01.0 +0.8
comp=Z,3μm,29.8s
RKT Rikitea 75.06 112 *e*LQ 22 24 24.8
comp=Z,3μm,30.0s
RKT *e*LR LR 22 27 47.3
comp=Z,2μm,30.0s,baz=282
BILL Bilibino 75.34 7 *i* P **P** **22 04 28.0 +2.6**
BILL *i* 22 04 37.3
BILL *i*S S 22 14 07.4 +5.9
BILL *i*SS SS 22 18 55.4 +2.9
BILL pmax pmax
comp=Z,15nm,1.2s,mb4.8
BILL MLR MLR
comp=Z,1μm,17.0s,MS5.3
BILL Bilibino 75.34 7 *e*P **P** **22 04 26.7 +1.2**
comp=Z,13nm,0.8s,mb4.9
BILL *e*PP PP 22 07 18.9 +4.1
BILL *e*S S 22 14 02.8 +1.3
BILL LR LR
comp=Z,3μm,22.0s,MS5.5
MK31 Makanchi Array 78.83 320 *e*P **P** **22 04 43.9 -1.6**
MK31 *e* pP 22 04 54.7 -3.8
MK31 *e* 22 07 44.9
MKAR Makanchi Array 78.83 320 P **P** **22 04 43.9 -1.6**
comp=Z,3.9nm,0.7s,mb4.4,baz=98,slow=7.6,SNR=18
MKAR LR LR 22 39 35.7
comp=Z,1μm,21.9s,MS5.2,baz=228,slow=36
TIXI Tiksi 79.00 354 *e*P **P** **22 04 47.1 +1.2**
TIXI *e* 22 04 53.6
TIXI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TIXI MLR MLR
comp=Z,2μm,22.0s,MS5.3
TIXI Tiksi 79.00 354 *e*P **P** **22 04 47.1 +1.2**
comp=Z,6.5nm,0.9s,mb4.6
TIXI *e*PcP PcP 22 04 53.5 -0.8
TIXI *e*PP PP 22 07 17.3 -28
TIXI *e*S S 22 14 18.2 -23
TIXI LR LR
comp=Z,2μm,22.0s,MS5.3
KDAK Kodiak Island 79.54 28 LR LR 22 37 44.1
comp=Z,2μm,18.7s,MS5.4,baz=268,slow=34
KDAK Kodiak Island 79.54 28 *e*P **P** **22 04 45.0 -4.1**
KDAK *e*S S 22 14 51.4 +4.0
KDAK LR LR
comp=Z,5μm,21.0s,MS5.8
ZALV Zalesovo Beam 80.21 327 P **P** **22 04 50.0 -2.8**
comp=Z,4.3nm,0.8s,mb4.5,baz=111,slow=5.8,SNR=11
ZALV LR LR 22 39 51.3
comp=Z,3μm,21.0s,MS5.7,baz=124,slow=35
NVS Novosibirsk 81.43 328 *e*P pP 22 05 09.8 -2.6
NVS *e*S S 22 14 56.8 -10
NVS pmax pmax
comp=Z,27nm,2.0s,mb4.8
NVS pmax pmax
comp=N,15nm,1.7s
NVS pmax pmax
comp=E,16nm,1.7s
NVS smax
comp=N,15nm,2.2s
NVS smax
comp=E,28nm,2.2s
NIL Nilore 81.45 305 *e*P **P** **22 04 59.0 -0.9**
NIL *e* 22 05 04.4
NIL *e* 22 05 15.4
NIL pmax pmax
comp=Z,11nm,0.7s,mb4.9
NIL MLR MLR
comp=Z,153nm,20.0s,MS4.4
NIL Nilore 81.45 305 *e*P **P** **22 04 59.0 -0.9**
comp=Z,11nm,0.7s,mb4.9
NIL *e*PcP PcP 22 05 04.4 -1.5
NIL *e* 22 05 15.4
NIL LR LR
comp=Z,153nm,20.0s,MS4.4
TKM2 Tokmak 2 82.06 315 *e*P **P** **22 05 02.7 -0.2**
TKM2 *e* 22 05 09.2
TKM2 *e*S S 22 15 06.5 -7.8
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
TKM2 MLR MLR
comp=Z,1μm,20.0s,MS5.2
TKM2 Tokmak 2 82.06 315 *e*P **P** **22 05 02.7 -0.2**
comp=Z,4.6nm,0.6s,mb4.6
TKM2 *e*PcP PcP 22 05 09.2 +0.9
TKM2 *e*S S 22 15 06.5 -7.8
TKM2 LR LR
comp=Z,1μm,20.0s,MS5.2
RC01 Rabbit Creek A 82.43 26 *e*P **P** **22 05 05.7 +1.3**
MAW Mawson 82.45 203 *e*P **P** **22 05 05.8 +1.3**
comp=Z,15nm,0.9s,mb4.9
MAW Mawson 82.45 203 P **P** **22 05 05.0 +0.5**
comp=Z,4.6nm,0.7s,mb4.5,baz=88,slow=5.2,SNR=8.3
MAW pP pP 22 05 18.9 +1.3
comp=Z,18nm,0.9s,baz=90,slow=5.9,SNR=10.0
MAW LR LR 22 40 55.0
comp=Z,3μm,19.6s,MS5.6,baz=81,slow=35
MAW Mawson 82.45 203 *e*P **P** **22 05 05.2 +0.7**
MAW *e*PcP PcP 22 05 08.9 -0.7
MAW *e* pP 22 05 18.2 +0.6
KURK Kurchatov 82.49 323 P **P** **22 05 03.6 -1.4**
comp=Z,1.7nm,0.3s,mb4.4,baz=116,slow=3.9,SNR=1.7
UCH Uchtor 82.64 314 *e*P **P** **22 05 06.3 +0.3**
AAK Ala-Archa 82.76 314 *e*P **P** **22 05 06.5 -0.1**
AAK *e* pP 22 05 22.0 +2.3
AAK *e*S S 22 15 23.8 +2.3
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
AAK MLR MLR
comp=Z,2μm,20.0s,MS5.4
AAK Ala-Archa 82.76 314 *e*P **P** **22 05 06.5 -0.1**
comp=Z,5.6nm,0.6s,mb4.8
AAK *e* pP 22 05 22.0 +2.3

AAK *e*PP PP 22 08 30.9 +14
AAK *e*S S 22 15 23.8 +2.3
AAK LR LR
comp=Z,2µm,20.0s,MS5.4
KTH Kantishna Hill 83.13 23 *e*P **P 22 05 07.9 -0.1**
comp=Z,6.7nm,0.6s,mb4.8
KTH *e*PcP PcP 22 05 12.0 -0.5
KTH *e* pP 22 05 21.8 +0.7
EKS2 Erkin-Say 83.28 314 *e*P **P 22 05 08.9 -0.3**
EKS2 *e* 22 05 14.4
EKS2 *e*PP PP 22 09 08.3 +47
EKS2 *e*S S 22 15 11.2 -16
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.3
QSPA South Pole Qui 83.54 180 *e*P **P 22 05 10.9 +1.0**
comp=Z,102nm,1.2s,mb5.8
QSPA *e* pP 22 05 22.3 -0.8
MCK McKinley 84.00 23 *e*P **P 22 05 12.2 -0.3**
MCK pmax pmax
comp=Z,21nm,0.9s,mb5.3
MCK McKinley 84.00 23 *e*P **P 22 05 12.2 -0.2**
comp=Z,21nm,0.9s,mb5.3
MCK *e*PcP PcP 22 05 15.1 -1.2
COLA College 84.94 23 *e*P **P 22 05 17.5 +0.3**
COLA *e* pP 22 05 31.1 +0.7
COLA pmax pmax
comp=Z,15nm,1.0s,mb5.1
COLA MLR MLR
comp=Z,3µm,20.0s,MS5.7
COLA College 84.94 23 *e*P **P 22 05 17.5 +0.3**
comp=Z,15nm,1.0s,mb5.1
COLA *e*PcP PcP 22 05 20.5 +0.1
COLA *e* pP 22 05 31.1 +0.7
COLA *e*S S 22 15 56.2 +14
COLA LR LR
comp=Z,3µm,20.0s,MS5.7
KBL Kabul 85.05 305 *e*P **P 22 05 17.7 -0.8**
KBL pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KBL Kabul 85.05 305 *e*P **P 22 05 17.7 -0.8**
comp=Z,2.0nm,0.6s,mb4.4
EGAK Eagle 87.52 24 *e*P **P 22 05 30.9 +1.0**
comp=Z,16nm,1.0s,mb5.2
EGAK *e*PP PP 22 09 14.1 +19
EGAK *e*S S 22 16 02.6 -5.0
EGAK LR LR
comp=Z,5µm,22.0s,MS5.9
DAWY Dawson 88.00 25 *e*P **P 22 05 33.7 +1.4**
DAWY *e* pP 22 05 44.2 -1.2
BVAR Borovoye Array 88.04 324 P **P 22 05 30.6 -2.0**
comp=Z,5.0nm,0.8s,mb4.8,baz=112,slow=5.0,SNR=24
BRVK Borovoye 88.11 324 *e*P **P 22 05 31.8 -1.2**
BRVK *e* pP 22 05 45.7 -0.5
BRVK *e* 22 09 02.6
BRVK *e*S S 22 16 01.0 -13
BRVK pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
BRVK MLR MLR
comp=Z,3µm,22.0s,MS5.6
BRVK Borovoye 88.11 324 *e*P **P 22 05 31.8 -1.2**
comp=Z,6.9nm,1.1s,mb4.8
BRVK *e* pP 22 05 45.7 -0.5
BRVK *e*PP PP 22 09 02.6 +2.3
BRVK *e*S S 22 16 01.0 -13
BRVK LR LR
comp=Z,3µm,22.0s,MS5.6
WRAK Wrangell Islan 89.31 33 PFAKE 22 05 50.0 +11
WRAK LR LR
comp=Z,5µm,19.0s,MS5.9
SYO Syowa Base 90.73 200⇑ *e*P **P 22 05 41.2 -3.8**
SYO Syowa Base 90.73 200⇑ *e*P **P 22 05 48.2 +3.2**
MSEY Mahe Island 92.55 265 *e*P **P 22 05 55.7 +1.1**
MSEY *e*PP PP 22 09 44.2 +7.7
MSEY *e*S S 22 16 46.3 -10
MSEY LR LR
comp=Z,2µm,19.0s,MS5.5
HOPS Hopland 92.72 51 PFAKE 22 06 10.0 +15
HOPS LR LR
comp=Z,7µm,19.0s,MS6.2
MCCM Marconi Confer 92.78 52 PFAKE 22 06 10.0 +15
MCCM LR LR
comp=Z,4µm,19.0s,MS5.9
COR Corvallis 93.13 46 PFAKE 22 06 10.0 +13
COR LR LR
comp=Z,7µm,19.0s,MS6.1
HUMO Hull Mountain 93.18 48 PFAKE 22 06 10.0 +13
HUMO LR LR
comp=Z,6µm,21.0s,MS6.0
YBH Yreka Blue Hor 93.27 49 PFAKE 22 06 10.0 +13
YBH LR LR
comp=Z,6µm,20.0s,MS6.0
WDC Whiskeytown Da 93.29 50 PFAKE 22 06 10.0 +13
WDC LR LR
comp=Z,3µm,19.0s,MS5.8
SAO San Andreas Ge 93.78 54 PFAKE 22 06 10.0 +10
SAO LR LR
comp=Z,5µm,19.0s,MS6.0
CMB Columbia Colle 94.73 52 PFAKE 22 06 20.0 +16
CMB LR LR
comp=Z,4µm,21.0s,MS5.8
MOD Modoc 95.08 49 PFAKE 22 06 20.0 +14
MOD LR LR
comp=Z,5µm,20.0s,MS6.0
AKTK Aktyubinsk 95.27 320 P **P 22 06 04.8 -1.5**
AKTO Aktyubinsk 95.27 320 P **P 22 06 04.8 -1.5**
comp=Z,0.9nm,0.6s,mb4.4,baz=113,slow=13,SNR=3.3
ARU Arti 95.32 326 *e*P **P 22 06 04.9 -1.4**
ARU *e* 22 09 53.6
ARU PPP 22 11 59.5
ARU S SKSac 22 16 37.5 -1.1
ARU SP SP 22 18 37.7 +1.9
ARU PS PS 22 18 46.4 +4.6
ARU SSS 22 27 22.3
ARU MLR MLR
comp=Z,2µm,20.0s,MS5.5
ARU Arti 95.32 326 *e*P **P 22 06 05.2 -1.1**
ARU *e* pP 22 06 19.2 -0.4
ARU *e*PP PP 22 09 44.5 -12
ARU *e*S SP 22 18 18.7 -17
ARU LR LR
comp=Z,2µm,20.0s,MS5.6
HAWA Hanford 95.91 44 PFAKE 22 06 20.0 +11
HAWA LR LR
comp=Z,3µm,20.0s,MS5.8
WVOR Wild Horse Val 96.35 48 PFAKE 22 06 20.0 +8.6
WVOR LR LR
comp=Z,6µm,20.0s,MS6.1
NVAR Mina Array Bea 96.39 52 P **P 22 06 13.6 +1.9**
comp=Z,1.4nm,0.7s,mb4.5,baz=250,slow=6.9,SNR=6.8
NVAR PKiKP PKiKP 22 10 50.6 +1.3
comp=Z,0.6nm,0.6s,baz=240,slow=5.1,SNR=3.6
DAC Darwin (Calif) 96.85 54 PFAKE 22 06 30.0 +16
DAC LR LR
comp=Z,6µm,19.0s,MS6.1
TPH Tonopah 97.23 53 PFAKE 22 06 30.0 +15
TPH LR LR
comp=Z,3µm,19.0s,MS5.8
BMN Battle Mountai 97.32 50 PFAKE 22 06 30.0 +14
BMN LR LR
comp=Z,4µm,20.0s,MS5.9
BMO Blue Mountains 97.41 46 PFAKE 22 06 30.0 +14
BMO LR LR
comp=Z,4µm,20.0s,MS5.9
NEW Newport 97.62 42 PFAKE 22 06 30.0 +13
NEW LR LR
comp=Z,4µm,22.0s,MS5.9
PFO Pinyon Flat Ob 97.65 57 PFAKE 22 06 30.0 +13
PFO LR LR
comp=Z,7µm,20.0s,MS6.2
TPNV Topopah Spring 97.96 54 PFAKE 22 06 30.0 +11
TPNV LR LR
comp=Z,4µm,20.0s,MS5.9
ABPO Ambohimpanom 98.57 250 PFAKE 22 06 30.0 +8.1
ABPO LR LR
comp=Z,2µm,20.0s,MS5.7
YKA Yellowknife Ar 98.82 28 P **P 22 06 23.2 +1.2**
comp=Z,1.4nm,0.9s,mb4.5,baz=276,slow=5.3,SNR=9.1
YKA PKiKP PKiKP 22 10 53.3 +0.4
comp=Z,0.8nm,0.6s,baz=268,slow=1.4,SNR=10.0
YKA PKKPbc PKKPbc 22 22 49.5 -2.6
comp=Z,0.6nm,0.7s,baz=92,slow=2.8,SNR=5.2
YKA LR LR 22 48 37.5
comp=Z,1µm,20.6s,MS5.4,baz=160,slow=34
YKA Yellowknife Ar 98.82 28 P **P 22 06 23.2 +1.2**
ELK Elko 98.84 50 PFAKE 22 06 30.0 +7.3
ELK LR LR
comp=Z,5µm,20.0s,MS6.0
HLID Hailey 99.47 47 PFAKE 22 06 40.0 +15
HLID LR LR
comp=Z,4µm,20.0s,MS5.9
MSO Missoula 99.77 44 PFAKE 22 06 40.0 +14
MSO LR LR
comp=Z,2µm,20.0s,MS5.6
DUG Dugway 100.69 50 PFAKE 22 06 40.0 +9.4
DUG LR LR
comp=Z,4µm,20.0s,MS5.9
VNA3 Neumayer Olymp 101.14 187 *e*Pdiff Pdif 22 06 32.4 -0.2
VNA3 *e* 22 06 46.3
VNA3 *e* 22 06 50.1
VNA3 *e* 22 06 56.9
VNA3 *e* 22 06 59.7
VNA3 *e* 22 10 40.7
VNA3 *e* 22 10 59.6
VNA3 *e* 22 11 07.1
VNA3 *e* 22 11 13.5
VNA3 *e* 22 11 33.5
VNA2 Neumayer--Watz 101.15 188 *e*Pdiff Pdif 22 06 32.8 +0.2
VNA2 *e* 22 06 46.5
VNA2 *e* 22 06 50.3
VNA2 *e* 22 06 56.9
VNA2 *e* 22 07 00.6
VNA2 *e* 22 11 00.0
VNA2 *e* 22 11 07.5
VNA2 *e* 22 11 12.9
VNA2 *e* 22 11 35.4
MVU Marysvale 101.18 52 PFAKE 22 06 50.0 +17
MVU LR LR
comp=Z,3µm,19.0s,MS5.9
BOZ Bozeman (W) 101.41 45 PFAKE 22 06 50.0 +16
BOZ LR LR
comp=Z,3µm,21.0s,MS5.8
VNA1 Neumayer--Stat 101.52 188 *e*Pdiff Pdif 22 06 45.0 +11
VNA1 *e* 22 06 49.1
WUAZ Wupatki 101.88 55 PFAKE 22 06 50.0 +14
WUAZ LR LR
comp=Z,4µm,20.0s,MS6.0
AHID Auburn Hatcher 101.91 48 PFAKE 22 06 50.0 +14
AHID LR LR
comp=Z,6µm,20.0s,MS6.1
TUC Tucson 102.39 58 PFAKE 22 06 50.0 +12
TUC LR LR
comp=Z,4µm,21.0s,MS5.9
MAK Makhachkala 102.45 312 *i* P Pdif 22 06 32.7 -5.7
MAK *e* 22 10 50.1
MAK *e* 22 17 15.4
MAK *e*SS SKKSdf 22 29 23.3 -33
MAK pmax pmax
comp=Z,101nm,1.2s
MAK MLR MLR
comp=Z,2µm,17.0s,MS5.7
EGMT Eagleton 102.56 42 PFAKE 22 06 50.0 +11
EGMT LR LR
comp=Z,3µm,19.0s,MS5.8
BW06 Boulder Array 103.05 48 PFAKE 22 06 50.0 +8.9
BW06 LR LR
comp=Z,6µm,19.0s,MS6.1
PDAR Pinedale Array 103.05 48 Pdiff Pdif 22 06 42.4 +1.4
comp=Z,0.9nm,1.0s,baz=239,slow=2.8,SNR=3.3
PDAR PKiKP PKiKP 22 11 02.5 +1.4
comp=Z,0.9nm,0.9s,baz=224,slow=2.5,SNR=3.9
PDAR Pinedale Array 103.05 48 Pdif Pdif 22 06 42.4 +1.4
RLMT Red Lodge 103.11 45 PFAKE 22 06 50.0 +8.7
RLMT LR LR
comp=Z,3µm,19.0s,MS5.8
MVCO Mesa Verde 104.15 53 PFAKE 22 07 00.0 +14
MVCO LR LR
comp=Z,3µm,20.0s,MS5.8
KBS Kingsbay 104.41 352 PFAKE 22 07 00.0 +13
KBS LR LR
comp=Z,1µm,19.0s,MS5.4
PMSA Palmer Station 104.96 166 PFAKE 22 11 20.0 +16
PMSA LR LR
comp=Z,2µm,19.0s,MS5.7
KIV Kislovodsk 105.87 314 *e*PKiKP PKiKP 22 11 06.6 +0.3
KIV LR LR
comp=Z,954nm,19.0s,MS5.4
ANMO Albuquerque 105.92 56 PFAKE 22 11 20.0 +13
ANMO LR LR
comp=Z,4µm,19.0s,MS6.0
DGMT Dagmar 106.20 41 PFAKE 22 11 20.0 +13
DGMT LR LR
comp=Z,2µm,20.0s,MS5.7
ISCO Idaho Springs 106.23 51 PFAKE 22 11 20.0 +13
ISCO LR LR
comp=Z,3µm,21.0s,MS5.9
FFC Flin Flon 106.41 35 PFAKE 22 11 20.0 +13
FFC LR LR
comp=Z,4µm,20.0s,MS6.0
SDCO Great Sand Dun 106.50 53 PFAKE 22 11 20.0 +12
SDCO LR LR
comp=Z,4µm,19.0s,MS5.9
KEV Kevo 106.58 342 PFAKE 22 11 20.0 +13
KEV LR LR
comp=Z,2µm,22.0s,MS5.6
RSSD Black Hills 106.92 46 PFAKE 22 11 20.0 +12
RSSD LR LR
comp=Z,5µm,21.0s,MS6.1
ARCES ARCESS Array B 107.15 342 PKiKP PKiKP 22 11 07.7 -0.2
comp=Z,4.4nm,0.9s,baz=64,slow=3.1,SNR=6.3
OBN Obninsk 107.76 326 PFAKE 22 11 20.0 +11
OBN LR LR
comp=Z,2µm,20.0s,MS5.7
TXAR Lajitas Array 108.60 61 Pdiff Pdif 22 07 10.7 +4.9
comp=Z,0.3nm,0.8s,baz=270,slow=3.6,SNR=2.5
TXAR PKiKP PKiKP 22 11 12.6 +0.8
comp=Z,2.0nm,0.8s,baz=256,slow=1.0,SNR=15
TXAR PKKPbc PKKPbc 22 22 25.1 +3.3
comp=Z,0.2nm,0.7s,baz=113,slow=5.1,SNR=4.4
TXAR PKKP PKKPbc 22 22 36.6 +15
comp=Z,1.0nm,0.9s,baz=66,slow=3.3,SNR=6.8
TXAR Lajitas Array 108.60 61 Pdif Pdif 22 07 10.7 +4.9
TXAR PKPdf PKiKP 22 11 12.6 +0.8
TXAR PKKPbc PKKPbc 22 22 25.1 +3.3
TXAR PKKP PKKPab 22 22 36.6 +2.5
OGNE Ogallala 108.82 49 PFAKE 22 11 20.0 +8.1
OGNE LR LR
comp=Z,3µm,21.0s,MS5.8
AMTX Amarillo 109.84 55 PFAKE 22 11 30.0 +16
AMTX LR LR
comp=Z,3µm,19.0s,MS6.0
CBKS Cedar Bluff 110.88 51 PFAKE 22 11 30.0 +14
CBKS LR LR
comp=Z,4µm,20.0s,MS6.0
ULM Lac du Bonnet 111.13 38 PKiKP PKiKP 22 11 15.5 -0.4
comp=Z,4.1nm,0.6s,baz=275,slow=3.0,SNR=4.9
ULM Lac du Bonnet 111.13 38 PKPdf PKiKP 22 11 15.5 -0.4
ULM LR LR
comp=Z,5µm,20.0s,MS6.1
JCT Junction City 111.86 60 *e*PKIKP PKiKP 22 11 18.8 +0.9
JCT MLR MLR
comp=Z,4µm,20.0s,MS6.0
WMOK Wichita Mounta 112.22 55 PFAKE 22 11 30.0 +12
WMOK LR LR
comp=Z,4µm,19.0s,MS6.0
ECSD EROS,Sioux Fal 112.27 45 PFAKE 22 11 30.0 +12
ECSD LR LR
comp=Z,4µm,21.0s,MS6.0
BR131 Keskin Array S 113.20 310 PFAKE 22 11 30.0 +10
BR131 LR LR
comp=Z,683nm,20.0s,MS5.2
BRTR Keskin Array B 113.20 310 PKiKP PKiKP 22 11 20.1 -0.1
comp=Z,0.4nm,0.5s,baz=90,slow=2.6,SNR=3.9
KSU1 Kansas State U 113.23 50 PFAKE 22 11 30.0 +10
KSU1 LR LR
comp=Z,5µm,20.0s,MS6.1
AKASG Malin Array Be 113.31 323 PKiKP PKiKP 22 11 18.9 -1.2
comp=Z,1.7nm,0.6s,baz=70,slow=2.3,SNR=6.7
KIEV Kiev 113.32 323 PFAKE 22 11 30.0 +10
KIEV LR LR
comp=Z,2µm,22.0s,MS5.7
KVTX Kingsville 113.80 63 PFAKE 22 11 30.0 +8.3
KVTX LR LR
comp=Z,4µm,19.0s,MS6.1
ANTO Ankara 113.81 311 PFAKE 22 11 30.0 +8.6
ANTO LR LR
comp=Z,799nm,20.0s,MS5.3
CSS Prodhromos 114.31 305 PFAKE 22 11 30.0 +7.5
CSS LR LR
comp=Z,934nm,21.0s,MS5.4
EYMN Ely 114.56 40 PFAKE 22 11 30.0 +7.5
EYMN LR LR
comp=Z,3µm,19.0s,MS6.0
SCIA State Center 115.13 47 PFAKE 22 11 40.0 +16
SCIA LR LR
comp=Z,2µm,21.0s,MS5.8
HKT Hockley 115.33 60 PFAKE 22 11 40.0 +15
HKT LR LR
comp=Z,7µm,20.0s,MS6.3
ISP Isparta 115.99 309 PFAKE 22 11 40.0 +14
ISP LR LR
comp=Z,619nm,21.0s,MS5.2
HARR Harsova 116.06 317⇓ *i*P PKPdf 22 11 25.6 +0.1
HARR Harsova 116.06 317⇓ P PKPdf 22 11 25.6 0.0
NATX Nacogdoches 116.07 58 PFAKE 22 11 40.0 +14
NATX LR LR
comp=Z,3µm,20.0s,MS5.9
LBTB Lobatse 116.36 238 *e*PKIKP PKPdf 22 11 27.9 +1.2
LBTB MLR MLR
comp=Z,3µm,20.0s,MS6.0
MIAR Mount Ida 116.49 55 PFAKE 22 11 40.0 +13
MIAR LR LR
comp=Z,4µm,20.0s,MS6.0
BUR08 Bucovina Ar. S 116.85 321 *e*PKPdf PKPdf 22 11 27.2 +0.2
BURAR Bucovina Array 116.85 321⇓ *i*P PKPdf 22 11 28.0 +1.0
BURAR Bucovina Array 116.85 321⇓ P PKPdf 22 11 28.0 +1.1
NB2 NORSAR Subarra1 116.94 338 PKPdf PKPdf 22 11 26.3 -0.4
comp=Z,1.5nm,0.8s,baz=44,slow=1.9
NOA NORSAR Array B 116.94 338 PKP PKPdf 22 11 26.8 +0.1
comp=Z,1.6nm,0.7s,baz=53,slow=2.0,SNR=6.5
NOA NORSAR Array B 116.94 338 PKP PKPdf 22 11 26.8 0.0
JFWS Jewell Farm 116.97 45 PFAKE 22 11 40.0 +13
JFWS LR LR
comp=Z,4µm,21.0s,MS6.0
LSZ Lusaka 117.13 249 *e*PKIKP PKPdf 22 11 29.3 +0.9
LSZ *e* 22 11 42.2
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.7
MLR Muntele Rosu 117.13 318⇓ *i*P PKPdf 22 11 27.3 -0.3
MLR Muntele Rosu 117.13 318⇓ P PKPdf 22 11 27.3 -0.2
CMIG Matias Romero 117.21 74 PKP PKPdf 22 11 29.0 +0.5
comp=Z,3.7nm,0.6s,baz=349,slow=5.7,SNR=6.5
CCM Cathedral Cave 117.56 50 PFAKE 22 11 40.0 +11
CCM LR LR
comp=Z,5µm,20.0s,MS6.2
KWP Kalwaria 117.59 324⇓ *i*P PKPdf 22 11 28.3 0.0
KWP Kalwaria 117.59 324 *e*PKPdf PKPdf 22 11 28.2 -0.2
KWP LR LR
comp=Z,2µm,19.0s,MS5.8
VOIR 117.74 318⇓ *i*P PKPdf 22 11 30.7 +2.0
VOIR 117.74 318⇓ P PKPdf 22 11 30.7 +2.0
SFJD Kangerlussuaq 118.11 8 PFAKE 22 11 40.0 +11
SFJD LR LR
comp=Z,3µm,20.0s,MS5.9
KOLS Kolonicke sedl 118.14 323 *e*PKP PKPdf 22 11 30.5 +1.1
TRPA Tarpa 118.31 322⇓ *i*P PKPdf 22 11 30.4 +0.6
HDIL Hopedale 118.34 47 PFAKE 22 11 40.0 +10
HDIL LR LR
comp=Z,4µm,19.0s,MS6.0
KONO Kongsberg 118.47 338 PFAKE 22 11 40.0 +10
KONO LR LR
comp=Z,2µm,21.0s,MS5.6
STHS Stebnicka Huta 118.55 324 *e*PKP PKPdf 22 11 31.0 +0.8
CRVS Cervenica-Dubn 118.64 323 *e*PKP PKPdf 22 11 30.1 -0.3
DRGR 118.75 321⇓ *i*P PKPdf 22 11 30.8 +0.2
DRGR 118.75 321⇓ P PKPdf 22 11 30.8 +0.1
BSD Bornholm Skovb 119.03 332 *i* P PP 22 12 46.5 -4.0
BSD
comp=Z,2µm,19.0s
NIE Niedzica 119.09 324 *e*PKPdf PKPdf 22 11 32.4 +1.2
GZR Gura Zlata 119.25 319⇑ *i*P PKPdf 22 11 31.4 -0.2
GZR Gura Zlata 119.25 319⇑ P PKPdf 22 11 31.4 -0.3
VBMS Vicksburg 119.45 57 PFAKE 22 11 40.0 +7.5
VBMS LR LR
comp=Z,2µm,20.0s,MS5.8
COP Copenhagen 119.84 333 *i* P PP 22 12 43.8 -12
COP *i* 22 22 14.5
COP
comp=Z,1µm,21.0s
BZS Buzias 119.91 320⇑ *i*P PKPdf 22 11 32.2 -0.7
BZS Buzias 119.91 320⇑ P PKPdf 22 11 32.2 -0.7
PSZ Piszkesteto 120.01 323 PFAKE 22 11 40.0 +7.0
PSZ LR LR
comp=Z,2µm,19.0s,MS5.8
GLMI Grayling 120.12 41 PFAKE 22 11 50.0 +17
GLMI LR LR
comp=Z,3µm,21.0s,MS6.0
OKC Ostrava-Krasne 120.14 325 *e*PKPdf PKPdf 22 11 30.7 -2.5
OKC AMS AMS 23 04 00.0
comp=Z,2µm,24.3s
VYHS Vyhne 120.38 324 *e*PKP PKPdf 22 11 33.7 0.0
WVT Waverly 120.70 52 PFAKE 22 11 50.0 +15
WVT LR LR
comp=Z,3µm,20.0s,MS6.0
MUD Monsted U'grnd 120.76 335 *i* P PP 22 12 58.3 -4.0
MUD *e* 22 13 01.6
MUD
comp=Z,2µm,19.0s
PAYG Puerto Ayora 120.83 95 PFAKE 22 11 50.0 +14
PAYG LR LR
comp=Z,2µm,20.0s,MS5.7
PLCA Paso Flores 120.90 146 PKP PKPdf 22 11 35.7 +0.7
comp=Z,3.4nm,0.9s,baz=304,slow=4.5,SNR=4.7
PLCA Paso Flores 120.90 146 PKP PKPdf 22 11 35.7 +0.7
PLCA LR LR
comp=Z,1µm,19.0s,MS5.5
DPC Dobruska-Polom 120.90 326 *e*PKPdf PKPdf 22 11 35.4 +0.7
DPC AMS AMS 23 01 50.0
comp=Z,2µm,23.5s
WCI Wyandotte Cave 121.26 49 PFAKE 22 11 50.0 +14
WCI LR LR
comp=Z,2µm,22.0s,MS5.8
PKSM Moragy 121.54 321⇓ *i*P PKPdf 22 11 35.2 -0.8
PKSM Moragy 121.54 321⇓ P PKPdf 22 11 35.2 -0.9
ZST Bratislava 121.54 324 *e*PKP PKPdf 22 11 36.6 +0.6
AAM Ann Arbor 121.75 44 PFAKE 22 11 50.0 +13
AAM LR LR
comp=Z,3µm,20.0s,MS6.0
PVCC Panska Ves 121.76 327 AMS AMS 23 08 10.0
comp=Z,2µm,20.7s
BRG Berggiesshubel 121.90 328 *e*PKIKP PKPdf 22 11 37.2 +0.6
BRG *e* 22 11 52.1
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG MLR MLR
comp=N,918nm,21.2s
BRG MLR MLR
comp=E,1µm,30.4s
BRG MLR MLR
comp=Z,1µm,20.2s,MS5.6
BRG Berggiesshubel 121.90 328 *e*PKP PKPdf 22 11 37.2 +0.6
comp=Z,6.7nm,0.8s
BRG *e* 22 11 52.1
comp=Z,8.5nm,1.0s
BRG
comp=N,2µm,21.2s
BRG
comp=E,2µm,30.4s
BRG
comp=Z,2µm,20.2s
BRG Berggiesshubel 121.90 328 *e*PKP PKPdf 22 11 37.2 +0.6
BRG *e* 22 11 52.1
BRG LR LR
comp=Z,1µm,20.2s,MS5.6
TREC Trest 121.91 326 AMS AMS 23 02 20.0
comp=Z,3µm,26.4s
PRU Pruhonice 122.06 327 *e*PKPdf PKPdf 22 11 37.1 +0.2
PRU *ex* x 22 11 52.5
PRU *ex* x 22 22 56.3
PRU AMS AMS 23 05 20.0
comp=Z,2µm,20.1s
CLL Collm 122.15 329⇑ *i*PKIKP PKPdf 22 11 37.6 +0.6
CLL *e* 22 11 52.0
CLL pmax pmax
comp=Z,8.0nm,0.6s
CLL MLR MLR
comp=Z,3µm,19.6s,MS5.9
CLL Collm 122.15 329⇑ *i*PKPdf PKPdf 22 11 37.6 +0.6
comp=Z,8.0nm,0.6s
CLL *ex* x 22 11 52.0
CLL *e*PP PP 22 13 17.0 +5.1
CLL *e*PPP 22 15 49.0
CLL *e*PS PS 22 23 08.0 +1.0
CLL *es*PPS 22 24 47.0
CLL *e*SKKSdf SKKSdf 22 29 20.0 -0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CLL				*e*SS	SS	22 30 03.0	+16
CLL				*e*SSS		22 34 34.0	
CLL				*e*x	x	22 36 06.0	
CLL				LmH		23 05 00.0	
	comp=N,2µm,20.7s						
CLL				LmH		23 05 00.0	
	comp=E,2µm,21.8s						
CLL				LmV		23 07 00.0	
	comp=Z,3µm,19.6s						
CLL	**Collm**	**122.15**	**329**⇑	*i*PKP	PKPdf	22 11 37.6	+0.6
CLL				*e*		22 11 52.0	
CLL				LR	LR		
	comp=Z,3µm,19.6s,MS5.9						
LRAL	**Lakeview Retre**	**122.16**	**55**	PFAKE		22 11 50.0	+12
LRAL				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
CONA	**Conrad Observa**	**122.39**	**324**⇑	*i*PKiKP	PKiKP	22 11 37.9	+0.1
	comp=Z,7.9nm,0.7s						
CSNA	**Conrad Observa**	**122.40**	**324**⇑	*i*PKPdf	PKPdf	22 11 37.4	-0.3
	comp=Z,7.0nm,0.7s						
BRAL	**Brewton**	**122.60**	**57**	PFAKE		22 11 50.0	+11
BRAL				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
TIR	**Tirane**	**122.76**	**316**	PFAKE		22 11 50.0	+11
TIR				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
ACSO	**Alum Creek Sta**	**123.00**	**46**	PFAKE		22 11 50.0	+11
ACSO				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
NKC	**Novy Kostel**	**123.05**	**328**	*e*PKPdf	PKPdf	22 11 39.3	+0.5
NKC				*e*x	x	22 11 54.7	
KHC	**Kasperske Hory**	**123.06**	**326**	*e*PKPdf	PKPdf	22 11 39.5	+0.6
KHC				*e*x	x	22 11 55.0	
KHC				*e*PS	PS	22 23 15.4	+0.3
KHC				AMS	AMS	23 05 40.0	
	comp=Z,3µm,22.6s						
GEC2	**GERESS Array S**	**123.14**	**326**	*e*PKIKP	PKPdf	22 11 38.7	-0.3
GEC2				*e*		22 13 19.0	
GERES	**GERESS Array B**	**123.14**	**326**	PKP	PKPdf	22 11 38.3	-0.7
	comp=Z,5.6nm,0.6s,baz=81,slow=1.2,SNR=38						
PERS	**Pernice**	**123.48**	**323**	*i* PKPdf	PKPdf	22 11 39.7	0.0
LEGS	**Legarje**	**123.70**	**322**	*i* PKPdf	PKPdf	22 11 40.5	+0.3
BOJS	**Bojanci**	**123.96**	**322**	*e*PKPdf	PKPdf	22 11 41.4	+0.7
TKL	**Tuckaleechee C**	**123.98**	**51**	PKP	PKPdf	22 11 41.5	+0.5
	comp=Z,16nm,0.7s,baz=175,slow=3.2,SNR=13						
GRA1	**Grafenberg Arr**	**124.01**	**328**	*e*PKP	PKPdf	22 11 40.6	-0.1
GRA1				*e*pPKP	pPKPdf	22 11 56.3	+2.0
GRA1				LR	LR		
	comp=Z,2µm,19.6s,MS5.8						
GRF	**Grafenberg Arr**	**124.01**	**328**	*e*PKP	PKPdf	22 11 40.6	-0.1
GRF				*e*pPKP	pPKPdf	22 11 56.3	+2.0
GRF				*e*L		23 08 36.8	
	comp=Z,2µm,19.6s						
SCHQ	**Schefferville**	**124.01**	**24**	PKP	PKPdf	22 11 40.1	-0.4
	comp=Z,7.2nm,0.7s,baz=35,slow=7.6,SNR=8.3						
SCHQ	**Schefferville**	**124.01**	**24**	PKP	PKPdf	22 11 40.1	-0.4
SCHQ				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
TGUH	**Tegucigalpa,Un**	**124.63**	**77**	PFAKE		22 12 00.0	+17
TGUH				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
GOGA	**Godfrey**	**124.91**	**54**	PFAKE		22 12 00.0	+17
GOGA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
WTTA	**Wattenberg**	**125.17**	**325**⇑	*i*PKiKP	PKiKP	22 11 43.1	-0.2
	comp=Z,11nm,0.7s						
TSUM	**Tsumeb**	**125.43**	**241**	*e*PKPdf	PKPdf	22 11 44.6	+0.3
TSUM				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
MCWV	**Mont Chateau**	**125.44**	**45**	PFAKE		22 12 00.0	+16
MCWV				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
TIP	**Timpagrande**	**125.81**	**314**	PFAKE		22 12 00.0	+16
TIP				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
FETA	**Feichten**	**125.82**	**326**⇑	*i*PKiKP	PKiKP	22 11 45.2	+0.6
	comp=Z,8.2nm,0.8s						
BLA	**Blacksburg**	**125.98**	**48**	PFAKE		22 12 00.0	+15
BLA				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
MEM	**Membach**	**126.06**	**331**	PKP	PKPdf	22 11 45.4	+0.9
CUC	**Castrocucco**	**126.13**	**316**	PFAKE		22 12 00.0	+15
CUC				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
DAVA	**Damuels**	**126.14**	**326**⇓	*i*PKPdf	PKPdf	22 11 44.0	-0.8
	comp=Z,9.0nm,0.6s						
ESK	**Eskdalemuir**	**126.29**	**340**	PFAKE		22 12 00.0	+15
ESK				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BFO	**Black Forest**	**126.35**	**328**	PFAKE		22 12 00.0	+15
BFO				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
SSPA	**Standing Stone**	**126.38**	**43**	PFAKE		22 12 00.0	+15
SSPA				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
BCLA	**Clavier**	**126.52**	**332**	PKP	PKPdf	22 11 46.5	+1.0
AQU	**L'Aquila**	**126.67**	**319**⇑	*i*P	PKPdf	22 11 45.7	-0.3
AQU	**L'Aquila**	**126.67**	**319**	⇑P	PKPdf	22 11 45.7	-0.3
AQU				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
CEL	**Celeste**	**126.80**	**314**	PFAKE		22 12 00.0	+14
CEL				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
TUE	**Stuetta**	**126.91**	**326**	*e*PKPdf	PKPdf	22 11 46.4	+0.1
TUE				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
BINY	**Binghamton**	**126.91**	**41**	PFAKE		22 12 00.0	+14
BINY				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
GIVF	**Givet**	**126.96**	**332**	*e*PKIKP	PKPdf	22 11 47.5	+1.2
NCB	**Newcomb**	**127.12**	**38**	PFAKE		22 12 00.0	+13
NCB				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
BAIF	**Baives**	**127.28**	**332**	*e*PKIKP	PKPdf	22 11 48.1	+1.2
	comp=Z,30nm,1.2s						
HINF	**Hinteralfeld**	**127.45**	**328**⇑	*i*PKIKP	PKPdf	22 11 48.1	+0.8
	comp=Z,16nm,0.8s						
HAU	**Haudompre**	**127.59**	**329**⇑	*i*PKIKP	PKPdf	22 11 48.5	+0.9
	comp=Z,16nm,0.8s						
VLC	**Villacollemand**	**127.62**	**323**	PFAKE		22 12 00.0	+12
VLC				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
NHSC	**New Hope**	**127.62**	**53**	PFAKE		22 12 00.0	+12
NHSC				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
CBN	**Corbin**	**127.80**	**46**	PFAKE		22 12 00.0	+12
CBN				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
MEZF	**Maizieres J'vi**	**127.92**	**330**	*e*PKIKP	PKPdf	22 11 49.5	+1.3
DWPF	**Disney**	**128.05**	**59**	PFAKE		22 12 00.0	+11
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
LCO	**Las Campanas**	**128.33**	**135**	PFAKE		22 12 00.0	+10
LCO				LR	LR		
	comp=Z,718nm,22.0s,MS5.3						
LBNH	**Lisbon**	**128.35**	**37**	PFAKE		22 12 00.0	+11
LBNH				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
CABF	**La Chapelle**	**128.61**	**328**	*e*PKIKP	PKPdf	22 11 51.1	+1.5
	comp=Z,34nm,0.9s						
CNNC	**Cliffs of the**	**128.63**	**49**	PFAKE		22 12 00.0	+10
CNNC				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
WDD	**Wield Dalam**	**128.77**	**312**	PFAKE		22 12 00.0	+10
WDD				LR	LR		
	comp=Z,699nm,22.0s,MS5.3						
LPL	**La Plagne**	**128.94**	**326**	*e*PKIKP	PKPdf	22 11 50.8	+0.6
	comp=Z,9.5nm,0.7s						
LPG	**La Plagne**	**128.95**	**326**	*e*PKIKP	PKPdf	22 11 50.7	+0.5
	comp=Z,11nm,0.8s						
BNI	**Bardonecchia**	**129.26**	**326**	PFAKE		22 12 00.0	+9.2
BNI				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
PKME	**Peaks-Kenny Pk**	**129.26**	**34**	PFAKE		22 12 00.0	+9.2
PKME				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
LOR	**Lormes**	**129.34**	**329**	*e*PKIKP	PKPdf	22 11 52.3	+1.4
PGF	**Pioggiola**	**129.35**	**322**	*e*PKIKP	PKPdf	22 11 52.8	+1.7
MBDF	**Montbardon**	**129.41**	**325**	*e*PKIKP	PKPdf	22 11 52.1	+1.0
	comp=Z,11nm,0.8s						
SBF	**Sospel**	**129.54**	**324**	*e*PKIKP	PKPdf	22 11 51.7	+0.3
	comp=Z,40nm,0.8s						
SSF	**Saint Saulge**	**129.66**	**329**⇑	*i*PKIKP	PKPdf	22 11 53.0	+1.5
	comp=Z,26nm,1.1s						
SMF	**Signal de Mont**	**129.77**	**329**	*e*PKIKP	PKPdf	22 11 53.1	+1.3
ORIF	**Oris-en-Rattie**	**129.79**	**326**	*e*PKIKP	PKPdf	22 11 52.6	+0.7
	comp=Z,13nm,0.7s						
AVF	**Avril sur Loir**	**129.92**	**329**	*e*PKIKP	PKPdf	22 11 52.9	+0.9
	comp=Z,8.6nm,0.9s						
HYF	**Humbligny**	**129.95**	**330**	*e*PKIKP	PKPdf	22 11 53.4	+1.3
FRF	**La Foret Royal**	**130.18**	**324**	*e*PKIKP	PKPdf	22 11 53.7	+1.1
	comp=Z,34nm,1.0s						
LDF	**La Druitiere**	**130.31**	**333**	*e*PKIKP	PKPdf	22 11 53.7	+1.0
BGF	**Bois d'Agland**	**130.34**	**329**	*e*PKIKP	PKPdf	22 11 53.7	+0.9
	comp=Z,12nm,0.6s						
FLN	**La Foliniere**	**130.35**	**333**	*e*PKIKP	PKPdf	22 11 53.4	+0.6
LMR	**La Mourre**	**130.39**	**324**	*e*PKIKP	PKPdf	22 11 53.6	+0.5
VIVF	**Saint-Julien-l**	**130.49**	**327**	*e*PKIKP	PKPdf	22 11 54.0	+0.8
SMRF	**Simiane la Rot**	**130.54**	**325**	*e*PKIKP	PKPdf	22 11 55.0	+1.7
	comp=Z,55nm,1.0s						
GRR	**Gorron**	**130.79**	**333**	*e*PKIKP	PKPdf	22 11 54.9	+1.2
	comp=Z,22nm,0.8s						
TCF	**Toulx Ste Croi**	**130.84**	**329**⇑	*i*PKIKP	PKPdf	22 11 54.7	+0.9
	comp=Z,11nm,0.7s						
NNA	**Nana**	**131.27**	**112**	PFAKE		22 12 10.0	+14
NNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
ATAH	**Atahualpa**	**131.27**	**105**	PKP	PKPdf	22 11 58.4	+2.8
	comp=Z,17nm,0.8s,baz=325,slow=2.4,SNR=11						
ATAH				pPKP	pPKPdf	22 12 10.9	+1.6
	comp=Z,24nm,0.9s,baz=12,slow=2.4,SNR=6.3						
LASF	**Ste Croix**	**131.44**	**326**	*e*PKIKP	PKPdf	22 11 55.9	+0.9
	comp=Z,20nm,0.9s						
SGMF	**Saint Gilles**	**131.64**	**334**	*e*PKIKP	PKPdf	22 11 57.1	+1.8
MFF	**Saint Martin d**	**131.78**	**331**	*e*PKIKP	PKPdf	22 11 57.1	+1.5
RJF	**Les Rejaudoux**	**131.87**	**329**	*e*PKIKP	PKPdf	22 11 57.9	+2.1
KEST	**Kesra**	**132.61**	**314**	PKP	PKPdf	22 11 58.6	+1.1
	comp=Z,1.7nm,0.7s,baz=328,slow=4.1,SNR=6.9						
OTAV	**Otavalo**	**132.68**	**96**	*e*PKPdf	PKPdf	22 11 59.4	+1.1
OTAV				*e*		22 12 13.0	
OTAV				LR	LR		
	comp=Z,710nm,20.0s,MS5.4						
MTLF	**Montolieu**	**132.82**	**327**	*e*PKIKP	PKPdf	22 11 58.4	+0.7
	comp=Z,10nm,0.9s						
TRIS	**Tristan da Cun**	**133.18**	**201**	PFAKE		22 12 10.0	+11
TRIS				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
LVC	**Limon Verde**	**133.32**	**129**	PFAKE		22 12 10.0	+11
LVC				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
EPF	**Esparros**	**134.05**	**328**	*e*PKIKP	PKPdf	22 12 02.1	+2.1
	comp=Z,9.7nm,0.8s						
ETSF	**Etsaut**	**134.62**	**328**	*e*PKIKP	PKPdf	22 12 03.8	+2.8
	comp=Z,19nm,0.9s						
ROSC	**El Rosal**	**137.28**	**90**	PKP	PKPdf	22 12 08.9	+2.0
	comp=Z,14nm,0.6s,baz=117,slow=4.5,SNR=9.5						
ESDC	**Sonseca Array**	**138.71**	**327**	PKP	PKPdf	22 12 08.8	+0.1
	comp=Z,1.0nm,0.7s,baz=52,slow=2.2,SNR=3.6						
ESLA	**Sonseca Array**	**138.71**	**327**	PFAKE		22 12 20.0	+11
ESLA				LR	LR		
	comp=Z,15µm,20.0s,MS6.7						
PAB	**San Pablo**	**139.01**	**328**	PFAKE		22 12 20.0	+11
PAB				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
SDDR	**Presa de Saban**	**139.27**	**68**	*e*PKPdf	PKPdf	22 12 11.4	+1.1
SDDR				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
BBSR	**BB Station**	**139.68**	**46**	PFAKE		22 12 20.0	+9.3
BBSR				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
MTE	**Manteigas**	**139.98**	**331**	*e*PKPdf	PKPdf	22 12 12.4	+1.4
MTE	**Manteigas**	**139.98**	**331**	PFAKE		22 12 20.0	+9.0
MTE				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
PCBR	**Castelo Branco**	**140.38**	**331**	*e*PKPdf	PKPdf	22 12 13.0	+1.2
SDV	**Santo Domingo**	**141.08**	**84**	PKhKP		22 12 08.7	
	comp=Z,18nm,0.9s,baz=212,slow=1.1,SNR=15						
SDV				PKP	PKPdf	22 12 14.2	+0.5
	comp=Z,41nm,0.8s,baz=43,slow=0.2,SNR=33						
PBAR	**Barrancos**	**141.43**	**329**	*e*PKPdf	PKPdf	22 12 13.2	-0.5
EVO	**Evora**	**141.66**	**330**	*e*PKIKP	PKPdf	22 12 14.9	+0.8
	comp=Z,12nm,0.8s						
EVO	**Evora**	**141.66**	**330**	*e*PKPdf	PKPdf	22 12 10.4	-3.7
SFS	**San Fernando**	**142.24**	**326**	PFAKE		22 12 30.0	+15
SFS				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
PVAQ	**Vaqueiros**	**142.37**	**328**	*e*PKPdf	PKPdf	22 12 17.5	+2.1
CRPR	**Cabo Rojo, PR**	**143.35**	**68**	*e*PKPdf	PKPdf	22 12 13.4	-4.2
SJG	**San Juan**	**144.21**	**68**	PFAKE		22 12 30.0	+11
SJG				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
RTC	**Rabat Centre**	**144.38**	**324**	PFAKE		22 12 30.0	+11
RTC				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
SHEL	**Horse Pasture**	**146.22**	**229**	PFAKE		22 12 30.0	+7.3
SHEL				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
TOA0	**Torodi Ar. Sit**	**146.72**	**284**	*e*PKPdf	PKPdf	22 12 23.0	-0.6
TOA0				*e*PKPbc	PKPbc	22 12 25.7	+0.5
TORD	**Torodi Ar. Bea**	**146.72**	**284**	PKPbc	PKPbc	22 12 24.1	-1.2
	comp=Z,117nm,0.7s,baz=63,slow=2.5,SNR=813						
TORD				pPKPbc	pPKPbc	22 12 39.5	+0.7
	comp=Z,96nm,0.8s,baz=83,slow=2.0,SNR=11						
PCRV	**Puerto La Cruz**	**146.94**	**81**	PKPbc	PKPbc	22 12 25.1	-0.8
	comp=Z,40nm,0.6s,baz=255,slow=1.7,SNR=20						
ANWB	**Willy Bob**	**148.33**	**67**	*e*PKPdf	PKPdf	22 12 25.0	-1.1
ANWB				*e*PKPbc	PKPbc	22 12 30.3	+0.7
LZG	**Guadaloupe-1**	**148.75**	**69**	*e*P	PKPbc	22 12 31.0	+0.2
SCG	**Saint Claude**	**148.87**	**70**	*e*P	PKPbc	22 12 32.2	+1.2
DOG	**Dongo Capester**	**148.93**	**70**	*e*P	PKPbc	22 12 31.9	+0.7
TBG	**Guadaloupe-3**	**148.95**	**70**	*e*P	PKPbc	22 12 31.7	+0.5
DEG	**La Desirade**	**149.37**	**69**	*e*P	PKPbc	22 12 32.1	-0.2
GRGR	**Grenville**	**149.65**	**77**	*e*PKPdf	PKPdf	22 12 28.5	+0.1
GRGR				*e*PKPbc	PKPbc	22 12 32.4	-0.7
GRGR				*e*PKPab	PKPab	22 12 37.7	-0.5
FDF	**Fort de France**	**149.67**	**72**	*e*P	PKPbc	22 12 33.0	-0.1
TCE	**Chacachacare**	**149.72**	**80**	*e*P	PKPab	22 12 37.0	-1.6
BIM	**Bigot**	**149.79**	**72**⇑	*e*P	PKPbc	22 12 33.2	-0.2
TPP	**Pointe-a-Pierr**	**150.05**	**81**	*e*P	PKPab	22 12 37.4	-2.5
TRN	**Trinidad (W)**	**150.07**	**80**	*e*P	PKPab	22 12 36.1	-3.9
TBH	**Brigand Hill**	**150.41**	**80**	*e*P	PKPab	22 12 37.3	-4.2
TPR	**Prospect**	**150.62**	**79**	*e*P	PKPab	22 12 37.0	-5.3
BBGH	**Gun Hill**	**151.50**	**74**	PFAKE		22 12 40.0	+8.8
BBGH				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
BDFB	**Brasilia**	**152.60**	**143**	PKP	PKPdf	22 12 34.5	+1.6
	comp=Z,1.2nm,0.5s,baz=292,slow=5.4,SNR=4.9						
BDFB				PKPbc	PKPbc	22 12 40.1	+0.3
	comp=Z,3.9nm,0.7s,baz=238,slow=2.4,SNR=5.4						
BDFB				pPKPbc	pPKPbc	22 12 54.5	+1.1
	comp=Z,18nm,0.8s,baz=178,slow=7.9,SNR=14						
BDFB	**Brasilia**	**152.60**	**143**	PKP	PKPdf	22 12 34.5	+1.6
BDFB				PKPbc	PKPbc	22 12 40.1	+0.3
BDFB				pPKPbc	pPKPbc	22 12 54.5	+1.1
BDFB				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
KIC	**Kosan Boka**	**153.48**	**271**	*e*PKIKP	PKPdf	22 12 34.8	+0.5
	comp=Z,139nm,0.8s						
DBIC	**Dimbokro**	**153.61**	**272**	PKP	PKPdf	22 12 34.7	+0.3
	comp=Z,7.7nm,0.9s,baz=99,slow=3.9,SNR=10						
DBIC				PKPbc	PKPbc	22 12 42.3	+0.1
	comp=Z,28nm,0.7s,baz=60,slow=2.5,SNR=34						
DBIC				pPKPbc	pPKPbc	22 12 56.8	+1.0
	comp=Z,33nm,0.9s,baz=47,slow=2.0,SNR=8.0						
DBIC	**Dimbokro**	**153.61**	**272**	PKIKP	PKPdf	22 12 34.7	+0.3
DBIC						22 12 42.3	
LIC	**Lamto**	**153.76**	**271**	*e*PKIKP	PKPdf	22 12 35.4	+0.7
	comp=Z,26nm,0.9s						
LIC	**Lamto**	**153.76**	**271**	*e*PKIKP	PKPdf	22 12 34.9	+0.2
	comp=Z,126nm,0.9s						
TIC	**Toumodi**	**153.77**	**272**	*e*PKIKP	PKPdf	22 12 35.2	+0.5
	comp=Z,150nm,0.9s						
RCBR	**Riachuelo**	**167.03**	**160**	PFAKE		22 13 00.0	+11
RCBR				LR	LR		
	comp=Z,2µm,20.0s						

IDC 03 21:57:30.5±7.0**,610S**×**14783E,h0**km**,mb4.1**/2**,mb1 4.2**/2**, mb1mx3.7**/14**,mbtmp4.1**/2**,Error ellipse: s-maj=400.7km s-min=31.1km az=115.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**22.01**	**216**	P	P	22 02 27.1	+0.5
	5.0nm,0.7s,baz=52,slow=11,SNR=2.8						
PETK	**Petropavlovsk-**	**59.57**	**7**	P	P	22 07 36.1	+0.3
	1.3nm,0.6s,baz=167,slow=5.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**145.91**	**284**	PKPbc	PKPbc	22 17 11.7	-1.4
	6.6nm,0.6s,baz=72,slow=3.3,SNR=16						

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*ISCJB **03** 22:00:24.3±2.8, 633S±004×14871E±008, h6km±18km, mb4.4/17, Error ellipse: s-maj=13.0km s-min=6.8km az=6.5*
*IDC **03** 22:00:25.4±0.9, 630S×14873E, h0km, mb4.3/12, mb1 4.3/13, mb1mx4.3/18, mbtmp4.3/13, ML4.0/1, Error ellipse: s-maj=33.8km s-min=16.6km az=94.0*
*MOS **03** 22:00:28.6±1.0, 634S×14859E, h33km, mb5.0/2, Error ellipse: s-maj=15.6km s-min=8.5km az=88.2*
*NEIC **03** 22:00:30.3±0.3, 635S×14870E, h35km, mb4.8/6, Error ellipse: s-maj=8.6km s-min=4.9km az=87.0*
ISC 03 22:00:27.6±3.7**,635S**±004×**14868E**±008**,h15**km±24km**, n58,**σ**0**ˢ**82**/49**,mb4.4**/17**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.39**	**206**	*e*Pn	**Pn**	**22 01 21.7**	**+1.6**
PMG				*e*Sn	**Sn**	**22 01 59.3**	**-0.8**
HNR	**Honiara**	**11.57**	**106**	P	**Pn**	**22 03 11.2**	**-1.1**
CTA	**Charters Tower**	**13.86**	**190**	Pn	**Pn**	**22 03 43.1**	**-0.5**
	0.4nm,0.3s,baz=11,slow=17,SNR=3.4						
CTAO	**Charters Tower**	**13.86**	**190**	*e*P	**Pn**	**22 03 43.7**	**+0.1**
KAKA	**Kakadu**	**17.22**	**247**	*e*P	x	22 04 12.5	
	12nm,0.4s						
EIDS	**Eidsvold**	**19.05**	**173**	*e*P	**Pn**	**22 04 49.3**	**-0.9**
WRAB	**Tennant Creek**	**19.40**	**225**	*e*P	**Pn**	**22 04 53.9**	**-0.5**
WB2	**Warramunga Arr**	**19.40**	**225**	*e*P	**Pn**	**22 04 53.6**	**-0.8**
GUMO	**Guam**	**20.17**	**349**	*e*P	**P**	**22 05 01.3**	**-0.3**
ASAR	**Alice Springs**	**22.33**	**218**	P	**P**	**22 05 24.6**	**-0.3**
	15nm,0.6s,mb4.6,baz=58,slow=9.2,SNR=31						
ASAR				S	**S**	**22 09 26.0**	**-4.2**
	18nm,1.1s,baz=33,slow=21,SNR=12						
ASAR				ScP	ScP	22 12 60.0	+2.2
	0.8nm,0.6s,baz=16,slow=2.4,SNR=5.5						
ASAR	**Alice Springs**	**22.33**	**218**	P	**P**	**22 05 24.6**	**-0.3**
ASAR				S	**S**	**22 09 26.0**	**-4.2**
ARMA	**Armidale**	**24.10**	**174**	*e*P	**P**	**22 05 42.3**	**-0.4**
BATI	**Baumata**	**25.05**	**260**	P	**P**	**22 05 52.9**	**+1.3**
	23nm,0.5s,mb5.0,baz=175,slow=2.2,SNR=5.2						
STKA	**Stephens Creek**	**26.25**	**194**	*e*P	**P**	**22 06 03.1**	**+0.9**
	26nm,1.9s,mb4.4						
STKA				*e*		22 06 17.8	
STKA	**Stephens Creek**	**26.25**	**194**	P	**P**	**22 06 03.1**	**+0.9**
	12nm,0.9s,mb4.4,baz=18,slow=9.1,SNR=5.3						
STKA	**Stephens Creek**	**26.25**	**194**	*e*P	**P**	**22 06 03.3**	**+1.1**
	3.8nm,0.8s,mb4.0						
STKA				*e*		22 06 17.8	
TOO	**Toolangi**	**31.21**	**185**	*e*P	**P**	**22 06 46.5**	**+0.1**
TOO				*e*		22 06 59.1	
MBWA	**Marble Bar**	**31.66**	**239**	*e*P	**P**	**22 06 51.2**	**+0.7**
	13nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**38.29**	**225**	*e*P	**P**	**22 07 47.6**	**-0.1**
	27nm,1.0s,mb4.9						
KLBR				*e*		22 07 59.8	
RAO	**Raoul Island**	**38.87**	**130**	*e*P	**P**	**22 07 53.8**	**+1.2**
NWAO	**Narrogin (SRO)**	**39.41**	**224**	P	**P**	**22 07 58.6**	**+1.6**
	7.8nm,0.9s,mb4.4,baz=60,slow=11,SNR=3.1						
NWAO	**Narrogin (SRO)**	**39.41**	**224**	*e*P	**P**	**22 07 57.1**	**0.0**
NACB	**Ninganchiao**	**40.23**	**320**	P	**P**	**22 08 03.3**	**-0.6**
MAJO	**Matsushiro**	**43.78**	**348**	*e*P	**P**	**22 08 32.7**	**0.0**
QIZ	**Qiongzhong**	**45.83**	**304**	*e*P	**P**	**22 08 48.4**	**-1.0**
KSRS	**Korea Array**	**47.69**	**338**	P	**P**	**22 09 04.5**	**+0.8**
	3.6nm,0.7s,mb4.5,baz=152,slow=9.2,SNR=7.7						
CMAR	**Chiang Mai Arr**	**54.89**	**298**	P	**P**	**22 09 59.0**	**+1.0**
	0.5nm,0.6s,mb3.7,baz=125,slow=5.4,SNR=4.8						
BJT	**Baijiatuau**	**55.02**	**330**	*e*P	**P**	**22 09 58.1**	**-0.5**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
BJT	**Baijiatuau**	**55.02**	**330**	*e*P	**P**	**22 09 58.1**	**-0.4**
	comp=Z,9.2nm,0.4s,mb5.2						
PETK	**Petropavlovsk-**	**59.72**	**6**	P	**P**	**22 10 32.2**	**+0.7**
	comp=Z,2.5nm,0.5s,mb4.5,baz=153,slow=5.6,SNR=8.5						
ULN	**Ulaanbaatar**	**65.23**	**330**	*e*P	**P**	**22 11 08.2**	**-0.2**
CASY	**Casey**	**65.37**	**196**	*e*P	**P**	**22 11 08.2**	**-1.0**
SONM	**Songino Array**	**65.53**	**330**	P	**P**	**22 11 10.8**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.9,baz=159,slow=7.7,SNR=3.6						
LSA	**Lhasa**	**65.79**	**306**	*e*P	**P**	**22 11 13.2**	**+0.7**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LSA	**Lhasa**	**65.79**	**306**	*e*P	**P**	**22 11 13.2**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.3						
TLY	**Talaya**	**69.43**	**332**	P	**P**	**22 11 35.4**	**+0.4**
VNDA	**Vanda**	**71.47**	**177**	P	**P**	**22 11 48.0**	**+0.9**
	comp=Z,1.0nm,0.8s,mb3.8,baz=307,slow=4.9,SNR=4.3						
SBA	**Scott Base**	**72.09**	**176**	P	**P**	**22 11 50.5**	**-0.3**
MKAR	**Makanchi Array**	**78.83**	**320**	P	**P**	**22 12 29.1**	**-0.9**
	comp=Z,0.6nm,0.3s,mb4.0,baz=98,slow=8.0,SNR=17						
ZALV	**Zalesovo Beam**	**80.20**	**327**	P	**P**	**22 12 37.4**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.9,baz=116,slow=3.4,SNR=2.9						
TKM2	**Tokmak 2**	**82.08**	**315**	*e*P	**P**	**22 12 46.6**	**-1.0**
KURK	**Kurchatov**	**82.49**	**323**	*e*P	**P**	**22 12 49.9**	**+0.3**
AAK	**Ala-Archa**	**82.78**	**314**	*e*P	**P**	**22 12 51.0**	**-0.3**
EKS2	**Erkin-Say**	**83.30**	**314**	*e*P	**P**	**22 12 52.8**	**-1.2**
QSPA	**South Pole Qui**	**83.62**	**180**	*e*P	**P**	**22 12 56.0**	**+1.0**
	comp=Z,4.1nm,0.5s,mb4.8						
MCK	**McKinley**	**83.88**	**23**	*e*P	**P**	**22 12 57.6**	**+1.2**
BVAR	**Borovoye Array**	**88.04**	**324**	P	**P**	**22 13 15.6**	**-1.6**
	comp=Z,0.8nm,0.8s,mb4.0,baz=86,slow=4.5,SNR=3.9						
LSZ	**Lusaka**	**117.26**	**249**	*e*PKIKP	PKPdf	22 19 13.5	+0.1
GERES	**GERESS Array B**	**123.14**	**326**	PKP	PKPdf	22 19 23.9	+0.1
	comp=Z,1.0nm,0.6s,baz=90,slow=2.7,SNR=6.9						
SDV	**Santo Domingo**	**140.96**	**84**	*e*PKPdf	PKPdf	22 19 54.9	-3.4
TOA0	**Torodi Ar. Sit**	**146.80**	**284**	*e*PKPdf	PKPdf	22 20 10.2	+1.7
TORD	**Torodi Ar. Bea**	**146.80**	**284**	PKPbc	PKPbc	22 20 10.7	+0.5
	comp=Z,24nm,0.5s,baz=71,slow=2.6,SNR=482						
BDFB	**Brasilia**	**152.60**	**143**	PKPbc	PKPbc	22 20 24.9	+0.2
	comp=Z,1.1nm,0.6s,baz=348,slow=25,SNR=3.3						
KIC	**Kosan Boka**	**153.59**	**272**	*e*PKIKP	PKPbc	22 20 27.1	+0.2
	comp=Z,212nm,1.9s						
DBIC	**Dimbokro**	**153.71**	**272**	PKPbc	PKPbc	22 20 27.6	+0.4
	comp=Z,5.2nm,0.9s,baz=86,slow=3.3,SNR=8.5						
DBIC	**Dimbokro**	**153.71**	**272**	*e*PKPbc	PKPbc	22 20 27.2	0.0
LIC	**Lamto**	**153.87**	**271**	*e*PKIKP	PKPbc	22 20 27.6	+0.1
	comp=Z,76nm,2.0s						
TIC	**Toumodi**	**153.87**	**272**	*e*PKIKP	PKPbc	22 20 27.6	+0.1
	comp=Z,14nm,0.3s						

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*BJI **03** 22:33:09.7, 672S×14886E, h43km, mB5.5, mb4.9, Ms5.3, Msz5.2*
*ISCJB **03** 22:33:11.8±0.2, 649S±003×14869E±004, h39km, mb5.0/65, MS5.5/206, Error ellipse: s-maj=5.8km s-min=3.9km az=175.6*
*MOS **03** 22:33:12.1±1.1, 646S×14857E, h33km, mb5.3/17, MS5.3/23, Error ellipse: s-maj=10.7km s-min=6.7km az=94.5*
*NEIC **03** 22:33:13.4±0.5, 645S×14862E, h38km±4km, mb5.2/30, MS5.6/174, Error ellipse: s-maj=6.7km s-min=5.0km az=98.0*
*GCMT **03** 22:33:13.4±0.1, 673S×14874E, h25km, MW5.8/95, Moment Tensor Solution. s93,c187; s95,c264; Duration: 1ˢ8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.32±.05; $M_{\theta\theta}$-3.77±.04; $M_{\phi\phi}$0.44±.04; $M_{r\theta}$3.82±.11; $M_{\theta\phi}$-0.09±.03; $M_{\phi r}$-0.58±.10; Best double couple: $M_0$5.24900×10^{17} NP1:ϕ_s259.00000°,δ22.00000°, λ74.00000°. NP2:ϕ_s96.00000°,δ69.00000°,λ96.00000°. Principal axes: T 5.0580, Plg66.0000°, Azm17.0000°; N 0.3760, Plg6.0000°, Azm274.0000°; P -5.4400, Plg24.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **03** 22:33:14.5±0.5, 650S×14859E, h48km±4km, mb4.7/19, mb1 4.8/21, mb1mx4.8/22, mbtmp4.7/21, MS5.2/24, Ms1 5.2/24, ms1mx5.1/31 Error ellipse: s-maj=13.4km s-min=10.0km az=92.0*
*DJA **03** 22:33:22, 699S×14882E, h100km, Mw5.6/19*
ISC 03 22:33:13.8±0.2**,652S**±002×**14872E**±004**,h41**km**, h41**km±1.5km**:pP-P,n400,**σ**1**ˢ**34**/192**,mb5.0**/65**,MS5.5**/206**, 22C-10D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.26**	**208**	*d i*P	**Pn**	**22 34 03.1**	**+0.7**
PMG	**Port Moresby**	**3.26**	**208**⇓	*i*Pn	**Pn**	**22 34 03.1**	**+0.6**
PMG				*e*Sn	**Sn**	**22 34 41.3**	**+1.3**
COEN	**Coen**	**9.19**	**216**	*e*Pn	**Pn**	**22 35 23.6**	**-0.3**
	108nm,0.8s						
COEN				*e*Sn	**Sn**	**22 36 57.5**	**-8.4**
HNR	**Honiara**	**11.49**	**105**	P	**Pn**	**22 35 57.0**	**+1.6**
	baz=243,slow=3.9,SNR=13						

HNR Honiara 11.49 105 P Pn 22 35 57.0 +1.6
CTA Charters Tower 13.70 190 eP Pn 22 36 26.7 +1.1
41nm,0.9s
CTA Charters Tower 13.70 190 P Pn 22 36 24.7 -0.9
1.0nm,0.3s,baz=20,slow=13,SNR=40
CTA LR LR 22 41 42.1
comp=Z,15µm,18.9s,baz=11,slow=37
CTA Charters Tower 13.70 190 eP Pn 22 36 26.7 +1.1
CTA pmax pmax
comp=Z,41nm,0.9s
CTAO Charters Tower 13.70 190⇓iPn Pn 22 36 24.8 -0.8
CTAO eSn Sn 22 39 07.2 +11
KAKA Kakadu 17.18 248 eP x 22 36 52.7
comp=Z,190nm,1.2s
KAKA e 22 39 34.4
KAKA eS x 22 40 01.7
EIDS Eidsvold 18.88 173⇓iP Pn 22 37 30.1 -1.6
comp=Z,230nm,0.8s
EIDS eS S 22 41 01.9 -1.3
WRAB Tennant Creek 19.30 225 Pn Pn 22 37 37.3 +0.6
comp=Z,1µm,0.9s,SNR=23
WRAB Tennant Creek 19.30 225 i P Pn 22 37 35.3 -1.4
WRAB Tennant Creek 19.30 225⇓eP Pn 22 37 34.3 -2.4
comp=Z,258nm,1.0s
WRAB eS S 22 41 11.9 +0.1
WB2 Warramunga Arr 19.30 225 eP Pn 22 37 35.0 -1.8
WB2 e 22 39 38.3
WB2 eS S 22 41 02.9 -9.1
GUMO Guam 20.34 349 LR LR 22 44 43.4
comp=Z,5µm,19.5s,MS4.9,baz=130,slow=34
GUMO Guam 20.34 349 eP P 22 37 46.8 +0.1
GUMO S S 22 41 34.2 +1.6
GUMO MLR MLR
comp=Z,6µm,19.0s,MS5.0
ASAR Alice Springs 22.21 218 P P 22 38 06.3 -0.6
comp=Z,188nm,0.8s,mb5.6,baz=52,slow=9.5,SNR=369
ASAR S S 22 42 08.2 -1.2
comp=Z,92nm,1.0s,baz=34,slow=21,SNR=17
NOUC Port Laguerre 22.99 134 eP P 22 38 13.8 -1.3
DZM Mont Dzumac 23.07 134 eP P 22 38 15.2 -0.7
ARMA Armidale 23.93 174 eP P 22 38 22.9 -1.2
ARMA eS S 22 42 39.0 +1.1
BATI Baumata 25.05 260 P P 22 38 35.3 +0.8
comp=Z,247nm,0.8s,mb5.8,baz=124,slow=0.5,SNR=20
TARA Tarawa 25.40 73 eP P 22 38 36.9 -0.7
comp=Z,170nm,0.8s,mb5.6
TARA LR LR
comp=Z,3µm,20.0s,MS4.9
STKA Stephens Creek 26.09 194 eP P 22 38 43.9 +0.2
comp=Z,56nm,0.8s,mb5.1
STKA eS S 22 43 16.2 +3.8
STKA Stephens Creek 26.09 194 P P 22 38 43.9 +0.1
comp=Z,85nm,0.9s,mb5.3,baz=358,slow=8.8,SNR=45
STKA LR LR 22 50 13.2
comp=Z,15µm,18.5s,MS5.5,baz=104,slow=39
STKA Stephens Creek 26.09 194⇓eP P 22 38 42.6 -1.1
STKA PcP PcP 22 42 11.7 +0.9
STKA eS S 22 43 14.9 +2.6
DAV Davao City (W) 26.74 300 eP P 22 38 44.7 -5.1
DAV eS S 22 43 25.8 +2.8
DAV LR LR
comp=Z,4µm,19.0s,MS5.0
CNB Canberra Magne 28.67 179 eP P 22 39 08.2 +1.4
CNB eS S 22 43 48.0 -4.9
KAPI Kappang 28.85 271 P P 22 39 07.4 -1.3
comp=Z,56nm,1.0s,mb5.3,baz=88,slow=6.9,SNR=14
KAPI ScP ScP 22 45 54.3 -1.8
comp=Z,15nm,0.9s,baz=135,slow=5.7,SNR=1.9
KAPI Kappang 28.85 271 eP P 22 39 08.4 -0.3
KAPI e pP 22 39 19.1 -0.8
KAPI ePcP PcP 22 42 17.1 -0.7
KAPI eS S 22 44 01.5 +5.1
KAPI eScP ScP 22 45 56.9 +0.7
KAPI LR LR
comp=Z,4µm,20.0s,MS5.0
FUNA Funafuti 30.28 96 PFAKE 22 39 30.0 +8.6
FUNA LR LR
comp=Z,4µm,20.0s,MS5.1
FORT Forrest 30.95 216 eP P 22 39 27.6 +0.5
comp=Z,109nm,0.6s,mb5.9
TOO Toolangi 31.05 185 eP P 22 39 28.7 +0.9
TOO eS S 22 44 37.6 +7.4
MBWA Marble Bar 31.60 240 eP P 22 39 33.9 +1.0
comp=Z,74nm,0.6s,mb5.7
MBWA e pP 22 39 46.1 +2.0
MBWA ePP PP 22 40 47.8 +3.0
MBWA PcP PcP 22 42 18.8 -6.0
MBWA eS S 22 45 03.6 +24
MBWA LR LR
comp=Z,6µm,21.0s,MS5.3
MYLDM Lahad Datu 32.32 290 ⇓P pP 22 39 51.4 +0.8
TSM Tawau 32.61 288 ⇑P P 22 39 49.5 +7.6
CBIJ Chichi jima 34.01 350 LR LR 22 53 02.3
comp=Z,2µm,19.5s,MS4.9,baz=173,slow=35
KKM Kota Kinabalu 34.75 290 PFAKE 22 40 10.0 +9.5
KKM LR LR
comp=Z,2µm,21.0s,MS4.9
MOO Moorlands 35.80 182 eP P 22 40 07.7 -1.4
TAU Tasmania Unive 36.27 182 eP P 22 40 14.7 +1.6
TAU e 22 41 38.0
TAU pmax pmax
comp=Z,97nm,1.3s,mb5.6
TAU MLR MLR
comp=Z,11µm,19.0s,MS5.6
TAU Tasmania Unive 36.27 182 eP P 22 40 14.7 +1.6
comp=Z,97nm,1.3s,mb5.6
TAU ePP PP 22 41 38.0 +1.8
TAU LR LR
comp=Z,11µm,19.0s,MS5.6
SBUM Sibu 37.51 283 ⇑P sP 22 40 42.3 +1.9
KLBR Kellerberrin 38.20 225 eP P 22 40 29.6 -0.1
comp=Z,70nm,0.6s,mb5.6
RAO Raoul Island 38.74 130 LR LR 22 54 30.9
comp=Z,1µm,18.3s,MS4.8,baz=313,slow=33
RAO Raoul Island 38.74 130 PFAKE 22 40 50.0 +16
RAO LR LR
comp=Z,3µm,22.0s,MS5.0
KSM Kuching 39.15 280 P P 22 40 37.8 -0.1
NWAO Narrogin (SRO) 39.32 224 LR LR 22 58 12.4
comp=Z,9µm,18.1s,MS5.6,baz=169,slow=38
NWAO Narrogin (SRO) 39.32 224 eP P 22 40 39.5 +0.5
NWAO e 22 40 46.1
NWAO e 22 42 12.2
NWAO pmax pmax
comp=Z,27nm,0.9s
NWAO MLR MLR
comp=Z,7µm,19.0s
NWAO Narrogin (SRO) 39.32 224 eP P 22 40 39.5 +0.4
comp=Z,27nm,0.9s,mb5.0
NWAO e 22 40 46.0
NWAO ePP PP 22 42 12.2 +2.4
NWAO eS S 22 46 55.4 +18
NWAO LR LR
comp=Z,7µm,19.0s,MS5.5
MUN Mundaring 39.51 226 eP P 22 40 41.5 +0.8
AFI Afiamalu 39.52 104 P P 22 40 40.8 -0.2
comp=Z,41nm,0.7s,mb5.3,baz=73,slow=5.9,SNR=4.8
AFI LR LR 22 55 55.2
comp=Z,2µm,18.2s,MS5.0,baz=275,slow=34
AFI Afiamalu 39.52 104 eP P 22 40 40.9 -0.1
AFI S S 22 46 51.8 +11
AFI LR LR
comp=Z,2µm,22.0s,MS4.9
NACB Ninganchiao 40.37 320 eP P 22 40 41.8 -6.1
URZ Urewera 40.74 145 P P 22 40 50.7 -0.1
comp=Z,7.4nm,0.7s,mb4.4,baz=321,slow=8.0,SNR=7.9
URZ LR LR 22 56 37.4
comp=Z,6µm,18.2s,MS5.5,baz=322,slow=34
YHNB Yeheng 40.87 320 eP P 22 40 51.8 -0.2
YHNB LR LR
comp=Z,3µm,19.0s,MS5.1
TATO Taipei 41.02 321 PFAKE 22 41 00.0 +6.8
TATO LR LR
comp=Z,4µm,19.0s,MS5.3
SNZO South Karori 41.67 150 PFAKE 22 41 10.0 +12
SNZO LR LR
comp=Z,4µm,19.0s,MS5.3
RPZ Rata Peaks 41.92 156 P P 22 41 00.9 +0.6
comp=Z,28nm,0.8s,mb4.9,baz=192,slow=3.9,SNR=12
XMIS Christmas Isla 42.75 262 eP P 22 41 09.5 +2.0
XMIS epP pP 22 41 22.1 +3.0
QZH Quanzhou 42.87 318 i P P 22 41 10.0 +1.7
QZH S S 22 47 31.0 +0.7
QZH LR LR
comp=N,7µm,24.1s
QZH LR LR
comp=E,5µm,18.2s
QZH LR LR
comp=Z,3µm,22.0s,MS5.2
MJAR Matsushiro Arr 43.95 348 P P 22 41 16.2 -0.6
comp=Z,14nm,1.0s,mb4.7,baz=168,slow=8.4,SNR=16
MJAR LR LR 22 59 21.4
comp=Z,4µm,18.2s,MS5.4,baz=165,slow=36
MAJO Matsushiro 43.95 348 eP P 22 41 16.6 -0.2
MAJO e*PP pP 22 41 27.5 -0.9
MAJO pmax pmax
comp=Z,67nm,1.2s,mb5.2
MAJO MLR MLR
comp=Z,2µm,20.0s,MS5.1
MAJO Matsushiro 43.95 348 eP P 22 41 16.6 -0.3
comp=Z,67nm,1.2s,mb5.2
MAJO epP pP 22 41 27.5 -0.9
MAJO LR LR
comp=Z,2µm,20.0s,MS5.1
MAT Matsushiro 43.95 348 P P 22 41 16.4 -0.4
MAT S S 22 47 49.0 +3.2
SSE Sheshan 45.74 326 P P 22 41 33.6 +2.4
SSE AP pP 22 41 42.6 -0.2
SSE PP PP 22 43 21.1 +2.1
SSE S S 22 48 14.5 +2.6
SSE XS sS 22 48 29.4 -1.8
SSE AMB AMB
comp=Z,18nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,508nm,7.5s
SSE LR LR
comp=N,2µm,15.4s,MS5.2
SSE LR LR
comp=E,2µm,15.4s,MS5.2
SSE LR LR
comp=Z,3µm,12.9s,MS5.4
QIZ Qiongzhong 45.95 304 P P 22 41 33.4 +0.3
QIZ S S 22 48 14.1 -1.2
QIZ XS sS 22 48 34.4 -0.2
QIZ SS SS 22 51 30.5 -10
QIZ AMB AMB
comp=Z,646nm,13.2s
QIZ LR LR
comp=E,1µm,18.6s
QIZ LR LR
comp=Z,2µm,17.7s,MS5.1
QIZ Qiongzhong 45.95 304 PFAKE 22 41 40.0 +6.9
QIZ LR LR
comp=Z,2µm,19.0s,MS5.1
KGM Kluang 46.10 279 ⇑P P 22 41 38.4 +3.9
KTGM Kuala Trenggan 46.99 283 ⇑P P 22 41 44.0 +2.6
MIDW Midway 47.57 42 PFAKE 22 42 00.0 +14
MIDW LR LR
comp=Z,4µm,19.0s,MS5.4
NJ2 Nanjing 47.76 325 eP P 22 41 46.7 -0.3
NJ2 AP pP 22 41 57.0 -1.7
NJ2 XP sP 22 42 00.8 -2.7
NJ2 PP PP 22 43 38.1 -1.1
NJ2 S S 22 48 40.0 -0.8
NJ2 XS sS 22 48 58.0 -2.2
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.2
NJ2 AMB AMB
comp=Z,230nm,4.9s
NJ2 LR LR
comp=N,670nm,18.8s,MS5.0
NJ2 LR LR
comp=E,1µm,18.4s,MS5.0
NJ2 LR LR
comp=Z,1µm,17.5s,MS5.0
KSRS Korea Array 47.86 338 P P 22 41 46.5 -1.1
comp=Z,13nm,1.0s,mb4.9,baz=153,slow=9.1,SNR=19
KSRS pP pP 22 41 59.5 +0.2
comp=Z,8.0nm,0.8s,baz=154,slow=8.6,SNR=7.0
KSRS LR LR 23 01 03.8
comp=Z,3µm,20.8s,MS5.2,baz=131,slow=35
FRIM Kepong 48.00 280 ⇑P P 22 41 50.7 +1.5
INCN Inchon 48.38 336 PFAKE 22 42 00.0 +8.3
INCN LR LR
comp=Z,2µm,20.0s,MS5.2
ERM Erimo 48.56 354 PFAKE 22 42 00.0 +7.0
ERM LR LR
comp=Z,4µm,22.0s,MS5.3
IPM Ipoh 48.84 282 ⇓P P 22 41 58.3 +2.5
KULM Kulim 49.39 283 ⇑P P 22 42 00.5 +0.6
WHN Wuhan 49.41 320 P P 22 41 59.5 -0.2
COCO West Island 51.44 260 eP P 22 42 16.1 +0.7
COCO ePcP PcP 22 43 32.0 +2.5
COCO LR LR
comp=Z,2µm,20.0s,MS5.2
GYA Guiyang 52.30 311 P P 22 42 22.5 +0.9
GYA AP pP 22 42 38.3 +4.9
GYA XP sP 22 42 42.6 +4.4
GYA PP PP 22 44 22.5 +1.9
GYA SCP ScP 22 47 25.3 -1.2
GYA S S 22 49 46.1 +1.8
GYA XS sS 22 50 02.6 -1.3
GYA SS SS 22 53 22.7 0.0
GYA AMB AMB
comp=Z,90nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,190nm,6.2s
GYA LR LR
comp=N,4µm,18.9s,MS5.6
GYA LR LR
comp=E,3µm,19.2s,MS5.6
GYA LR LR
comp=Z,4µm,18.8s,MS5.5
YSS Yuzh-Sakhalins 53.50 355 eP P 22 42 32.0 +2.0
YSS e 22 43 36.5
YSS MLR MLR
comp=Z,900nm,18.0s,MS4.9
YSS Yuzh-Sakhalins 53.50 355 eP P 22 42 30.3 +0.3
YSS LR LR
comp=Z,882nm,21.0s,MS4.8
MDJ Mudanjiang 53.73 343 P P 22 42 32.5 +0.7
MDJ AP pP 22 42 44.2 +0.6
MDJ XP sP 22 42 49.5 +1.1
MDJ PP PP 22 44 39.1 +6.0
MDJ SCP ScP 22 47 29.4 -2.9
MDJ PCS PcS 22 47 37.3 +0.8
MDJ S S 22 50 07.3 +4.2
MDJ SS SS 22 53 43.8 -0.8
MDJ AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
MDJ AMB AMB
comp=Z,591nm,7.5s
MDJ LR LR
comp=N,1µm,17.4s,MS5.2
MDJ LR LR
comp=E,1µm,16.9s,MS5.2
MDJ LR LR
comp=Z,2µm,16.9s,MS5.3
MDJ Mudanjiang 53.73 343 P P 22 42 32.6 +0.8
comp=Z,17nm,0.9s,mb5.0
MDJ LR LR
comp=Z,2µm,19.0s,MS5.2
CN2 Changchun 54.33 339 eP P 22 42 37.8 +1.7
CN2 eAP pP 22 42 47.9 -0.1
CN2 eXP sP 22 42 51.6 -1.1
CN2 PCP PcP 22 43 39.1 -0.6
CN2 eS S 22 50 11.4 +0.3
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 LR LR
comp=N,2µm,19.0s,MS5.3
CN2 LR LR
comp=E,2µm,19.0s,MS5.3
CN2 LR LR
comp=Z,2µm,18.0s,MS5.3
XMAS Kiritimati 54.41 83 PFAKE 22 42 50.0 +13
XMAS LR LR
comp=Z,2µm,19.0s,MS5.3
KMI Kunming 54.66 307 P P 22 42 41.0 +2.1
KMI AP pP 22 42 50.9 +0.1
KMI XP sP 22 42 54.6 -1.0
KMI PP PP 22 44 46.9 +5.0
KMI S S 22 50 15.3 -1.1
KMI XS sS 22 50 32.7 -3.4
KMI SS SS 22 54 00.3 +0.3
KMI AMB AMB
comp=Z,9.0nm,0.8s,mb4.8
KMI AMB AMB
comp=Z,400nm,9.8s
KMI LR LR
comp=N,1µm,18.0s,MS5.2
KMI LR LR
comp=E,1µm,16.8s,MS5.2
KMI LR LR
comp=Z,2µm,14.4s,MS5.2
CM31 Chiang Mai Arr 55.00 298 eP P 22 42 42.5 +1.1
CM31 e pP 22 42 56.8 +3.4
CM31 LR LR
comp=Z,747nm,19.0s,MS4.8
CMAR Chiang Mai Arr 55.00 298 P P 22 42 41.7 +0.3
comp=Z,5.8nm,0.8s,mb4.7,baz=122,slow=5.6,SNR=20
CMAR LR LR 23 05 00.7
comp=Z,820nm,18.7s,MS4.8,baz=306,slow=35
CMAR Chiang Mai Arr 55.00 298 i P P 22 42 41.7 +0.3
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CHTO Chiang Mai 55.13 298 eP P 22 42 43.3 +0.9
CHTO pmax pmax
comp=Z,15nm,1.2s,mb4.9
CHTO MLR MLR
comp=Z,862nm,20.0s,MS4.8
CHTO Chiang Mai 55.13 298 eP P 22 42 43.3 +0.9
comp=Z,15nm,1.2s,mb4.9
CHTO LR LR
comp=Z,862nm,20.0s,MS4.8
XAN Xi'an 55.17 320 P P 22 42 40.6 -1.8
XAN AP pP 22 42 52.9 -1.4
XAN XP sP 22 42 58.8 -0.3
XAN PCP PcP 22 43 43.2 0.0
XAN PP PP 22 44 45.5 -0.8
XAN SCP ScP 22 47 37.6 -1.3
XAN PCS PcS 22 47 40.9 -2.3
XAN S S 22 50 14.8 -8.1
XAN SCS ScS 22 52 22.7 -5.8
XAN AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
XAN LR LR
comp=N,450nm,19.9s,MS4.9
XAN LR LR
comp=E,899nm,18.0s,MS4.9
XAN LR LR
comp=Z,2µm,18.8s,MS5.3
BJT Baijiatuau 55.18 330 PFAKE 22 42 50.0 +7.6
BJT LR LR
comp=Z,4µm,21.0s,MS5.5
HABR Khabarovsk 56.06 349 eP P 22 42 47.5 -1.0
HABR e*SP sP 22 43 00.4 -4.8
HABR e 22 43 45.3
HABR eS S 22 50 33.1 -1.1
HABR e 22 50 45.8
CD2 Chengdu 56.86 314 P P 22 42 57.1 +2.5
CD2 AP pP 22 43 07.2 +0.7
CD2 XP sP 22 43 11.1 -0.2
CD2 PP PP 22 45 05.3 +3.9
CD2 S S 22 50 47.2 +1.8
CD2 XS sS 22 51 04.1 -1.1
CD2 AMB AMB
comp=Z,40nm,0.7s,mb5.6
CD2 AMB AMB
comp=Z,630nm,13.6s
CD2 LR LR
comp=N,450nm,8.8s
CD2 LR LR
comp=Z,630nm,10.2s,MS5.0
KLR Kul'dur 57.46 347 eP P 22 42 55.8 -2.6
HHC Hu-ho-hao-te 58.17 327 eP P 22 43 03.2 -0.4
HHC AP pP 22 43 15.6 0.0
HHC XP sP 22 43 21.3 +1.0
HHC PP PP 22 45 13.0 +0.1
HHC PCS PcS 22 47 54.0 -2.2
HHC S S 22 50 59.5 -2.9
HHC XS sS 22 51 21.5 -0.7
HHC SCS ScS 22 52 45.9 -4.2
HHC SS SS 22 54 53.5 -1.2
HHC AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,403nm,5.2s
HHC LR LR
comp=N,2µm,20.2s,MS5.3
HHC LR LR
comp=E,2µm,19.0s,MS5.3
HHC LR LR
comp=Z,4µm,20.2s,MS5.5
LZH Lanzhou 59.72 319 eP P 22 43 14.1 -0.3
LZH AP pP 22 43 26.0 -0.4
LZH XP sP 22 43 32.1 +0.9
LZH PP PP 22 45 27.8 +1.1
LZH eS S 22 51 20.3 -2.2
LZH XS sS 22 51 41.2 -1.2
LZH AMB AMB
comp=Z,28nm,1.1s,mb5.2
LZH AMB AMB
comp=Z,308nm,6.2s
LZH LR LR
comp=N,2µm,17.8s
LZH LR LR
comp=Z,2µm,18.5s,MS5.3
PEA0B Petropavlovsk- 59.88 6 eP P 22 43 18.2 +2.9
PEA0B e pP 22 43 29.0 +1.8
PEA0B ePcP PcP 22 44 03.0 +1.7
PETK Petropavlovsk- 59.88 6 P P 22 43 16.8 +1.6
comp=Z,38nm,1.1s,mb5.3,baz=170,slow=4.1,SNR=11
PETK LR LR 23 10 26.8
comp=Z,1µm,18.2s,MS5.0,baz=205,slow=37
PET Petropavlovsk 59.91 7 eP P 22 43 19.1 +3.7
PET e 22 45 35.1
PET eS S 22 51 28.5 +4.1
PET eSS SS 22 55 23.7 +2.2
PET pmax pmax
comp=Z,26nm,0.9s,mb5.3
PET pmax pmax
comp=Z,600nm,18.6s
PET MLR MLR
comp=Z,2µm,18.0s,MS5.3
PET Petropavlovsk 59.91 7 PFAKE 22 43 30.0 +15
PET LR LR
comp=Z,2µm,20.0s,MS5.2
POHA Pohakuloa 60.74 63 PFAKE 22 43 30.0 +8.2
POHA LR LR
comp=Z,7µm,19.0s,MS5.8
HIA Hailar 61.04 339⇑eP P 22 43 24.3 +1.1
HIA Hailar 61.04 339 eP P 22 43 21.9 -1.3
comp=Z,30nm,1.1s,mb5.3
HIA e pP 22 43 34.5 -0.7
HIA LR LR
comp=Z,3µm,20.0s,MS5.4
PPT Papeete 61.12 106 eS S 22 51 40.3 -0.8
comp=Z,3µm,25.2s
PPT eLQ 22 58 49.8
comp=Z,6µm,32.0s
PPT eLR LR 23 01 35.7
comp=Z,2µm,24.2s
PPT Papeete 61.12 106 LR LR 23 07 15.6
comp=Z,660nm,18.2s,MS4.8,baz=271,slow=33
SHL Shillong 63.73 303 eP P 22 43 42.0 +0.3
GTA Gaotai 64.23 320 eP P 22 43 44.1 -0.6
GTA AP pP 22 43 54.4 -2.4
GTA XP sP 22 43 58.4 -3.1
GTA PCP PcP 22 44 18.0 -1.3
GTA PP PP 22 46 06.0 -0.5
GTA S S 22 52 14.5 -5.0
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb4.4
GTA LR LR
comp=N,999nm,17.0s,MS5.2
GTA LR LR
comp=E,728nm,16.6s,MS5.2
GTA LR LR
comp=Z,877nm,18.7s,MS5.0
CASY Casey 65.22 196 eP P 22 43 51.7 +1.0
CASY ePcP PcP 22 44 23.0 +0.1
CASY ePP PP 22 46 12.8 -1.7
CASY LR LR
comp=Z,4µm,20.0s,MS5.6
ADK Adak 65.26 23 PFAKE 22 44 00.0 +8.9
ADK LR LR
comp=Z,4µm,20.0s,MS5.6
ULN Ulaanbaatar 65.39 331 eP P 22 43 51.4 -0.6
comp=Z,7.8nm,0.9s,mb4.7
ULN LR LR
comp=Z,3µm,22.0s,MS5.5
SONM Songino Array 65.69 330 P P 22 43 53.7 -0.3
comp=Z,3.1nm,0.9s,mb4.3,baz=143,slow=3.3,SNR=16
SONM pP pP 22 44 07.7 +1.6

comp=Z,8.5nm,1.0s,baz=145,slow=6.1,SNR=9.1
SONM LR LR 23 11 09.7
comp=Z,4µm,22.0s,MS6.6,baz=134,slow=35
SONM Songino Array 65.69 330 P **P** **22 43 53.7 -0.3**
SONM *PP pP 22 44 07.7 +1.6
LSA Lhasa 65.91 306 P **P** **22 43 55.0 -0.8**
LSA Lhasa 65.91 306 *eP* **P** **22 43 55.1 -0.7**
LSA *e* 22 44 12.8
LSA *e* 22 46 19.4
LSA pmax pmax
comp=Z,19nm,0.8s,mb5.2
LSA MLR MLR
comp=Z,669nm,19.0s,MS4.9
LSA Lhasa 65.91 306 *eP* **P** **22 43 55.1 -0.8**
comp=Z,19nm,0.8s,mb5.2
LSA *e* 22 44 12.8
LSA *e*PP PP 22 46 19.4 -2.0
LSA LR LR
comp=Z,669nm,19.0s,MS4.9
CLNS Chul'man 66.08 346 *eP* **P** **22 43 55.6 -0.7**
CLNS *e* 22 44 24.5
CLNS *e*S S 22 52 41.9 +0.4
CLNS pmax pmax
comp=N,3.0nm,1.2s
CLNS pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=E,1.0nm,1.0s
CLNS smax
comp=N,612nm,14.7s
CLNS smax
comp=E,304nm,13.1s
CLNS MLR MLR
comp=E,362nm,17.0s,MS4.9
CLNS MLR MLR
comp=Z,767nm,17.0s,MS5.0
CLNS MLR MLR
comp=N,623nm,19.0s,MS4.9
TAPN Taplejung 67.86 303 *eP* **P** **22 44 06.8 -1.5**
comp=N,25nm,0.9s,mb5.3
ODAN Odare 67.96 302 *eP* **P** **22 44 06.5 -2.4**
comp=N,26nm,0.8s,mb5.3
RAMN Ramite 68.65 302 *eP* **P** **22 44 11.5 -1.8**
ZAK Zakamensk 68.91 331 *eP* **P** **22 44 13.2 -1.2**
ZAK pmax pmax
comp=Z,12nm,1.1s,mb4.7
JIRN Jiri 69.23 303 *eP* **P** **22 44 15.3 -1.6**
SEY Seymchan 69.31 2 *i* P **P** **22 44 17.2 +0.7**
GUN Gumba 69.58 303 *eP* **P** **22 44 17.5 -1.5**
TLY Talaya 69.59 332 *eP* **P** **22 44 20.4 +1.9**
TLY MLR MLR
comp=Z,2µm,21.0s,MS5.4
YAK Yakutsk 69.91 351 *eP* **P** **22 44 28.2 +7.9**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
YAK Yakutsk 69.91 351 P **P** **22 44 18.0 -2.3**
YAK *e* pP 22 44 27.9 -4.7
YAK LR LR
comp=Z,2µm,22.0s,MS5.3
BOD Bodaibo 70.01 341 *eP* **P** **22 44 18.5 -2.5**
BOD pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
KKN Kakani 70.04 303 *eP* **P** **22 44 19.3 -2.5**
DMN Daman 70.12 302 *eP* **P** **22 44 20.9 -1.5**
GKN Gorkha 70.64 303 *eP* **P** **22 44 23.8 -1.7**
comp=Z,19nm,0.6s,mb5.2
MOY Mondy 70.85 331 *eP* **P** **22 44 28.2 +2.0**
MIR Mirnyy 70.89 200 *eP* **P** **22 44 24.0 -2.3**
MIR *i* 22 44 43.0
MIR *e*S SKSac 22 54 20.0 -5.1
MIR pmax pmax
comp=Z,100nm,1.2s,mb5.6
VNDA Vanda 71.31 177 P **P** **22 44 29.9 +1.3**
comp=Z,7.7nm,0.8s,mb4.7,baz=321,slow=6.6,SNR=49
VNDA LR LR 23 12 22.8
comp=Z,2µm,19.2s,MS5.3,baz=352,slow=33
KOLN Koldanda 71.44 302 *eP* **P** **22 44 28.7 -1.7**
DANN Dangsing 71.49 303 *eP* **P** **22 44 28.4 -2.2**
SBA Scott Base 71.92 176 *eP* **P** **22 44 35.4 +3.0**
SBA pmax pmax
comp=Z,114nm,2.1s,mb5.4
SBA MLR MLR
comp=Z,2µm,20.0s,MS5.4
SBA Scott Base 71.92 176 *eP* **P** **22 44 35.4 +3.0**
comp=Z,114nm,2.1s,mb5.4
SBA LR LR
comp=Z,2µm,20.0s,MS5.4
HYB Hyderabad 73.24 290 *i* P **P** **22 44 42.5 +1.2**
WMQ Urumqi 74.30 319 P **P** **22 44 47.3 +0.4**
WMQ AMB AMB
comp=Z,14nm,1.5s,mb4.7
WMQ AMB AMB
comp=Z,634nm,15.0s
WMQ LR LR
comp=N,1µm,25.0s,MS5.1
WMQ LR LR
comp=E,450nm,24.0s,MS5.1
WMQ LR LR
comp=Z,600nm,21.0s,MS4.9
RKT Rikitea 74.90 112 *e*LQ 23 04 50.9
RKT comp=Z,1µm,29.5s *e*LR LR 23 08 02.1
comp=Z,1µm,30.0s
BILL Bilibino 75.41 7 *eP* **P** **22 44 53.4 +0.6**
BILL *i* 22 45 10.7
BILL pmax pmax
comp=Z,13nm,0.8s,mb4.9
BILL Bilibino 75.41 7 *eP* **P** **22 44 55.2 +2.3**
comp=Z,20nm,1.0s,mb5.0
BILL *e* pP 22 45 08.9 +3.8
BILL LR LR
comp=Z,2µm,21.0s,MS5.3
POO Poona 77.85 290 *eP* **P** **22 45 09.5 +1.8**
MK31 Makanchi Array 78.98 320 *eP* **P** **22 45 18.1 +4.8**
MK31 *e*PP pP 22 45 24.0 -1.7
MKAR Makanchi Array 78.98 320 P **P** **22 45 11.1 -2.2**
comp=Z,1.3nm,0.9s,mb3.9,baz=103,slow=6.1,SNR=9.3
MKAR LR LR 23 20 46.5
comp=Z,756nm,20.7s,MS5.0,baz=239,slow=36
TIXI Tiksi 79.10 354 *i* P **P** **22 45 16.0 +2.5**
TIXI MLR MLR
comp=Z,2µm,28.0s,MS5.2
TIXI Tiksi 79.10 354 *eP* **P** **22 45 14.4 +1.0**
TIXI *e*PP PP 22 48 12.4 -0.8
TIXI LR LR
comp=Z,931nm,19.0s,MS5.1
KDAK Kodiak Island 79.55 28 PFAKE 22 45 30.0 +14
KDAK LR LR
comp=Z,2µm,22.0s,MS5.5
ZALV Zalesovo Beam 80.36 327 P **P** **22 45 17.6 -3.0**
comp=Z,3.8nm,0.8s,mb4.4,baz=114,slow=6.8,SNR=15
ZALV LR LR 23 20 08.0
comp=Z,2µm,20.5s,MS5.5,baz=126,slow=35
NVS Novosibirsk 81.57 328 *i* P pP 22 45 38.7 -0.8
NIL Nilore 81.61 305 *eP* **P** **22 45 26.8 -1.0**
NIL *e* 22 45 43.8
NIL pmax pmax
comp=Z,13nm,0.8s,mb4.9
NIL Nilore 81.61 305 *eP* **P** **22 45 26.8 -1.0**
comp=Z,13nm,0.8s,mb4.9
NIL *e* 22 45 43.8
TKM2 Tokmak 2 82.21 315 *eP* **P** **22 45 29.9 -0.9**
TKM2 *e* 22 45 48.4
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TKM2 MLR MLR
comp=Z,693nm,19.0s,MS5.0
TKM2 Tokmak 2 82.21 315 *eP* **P** **22 45 29.9 -0.9**
comp=Z,5.4nm,0.8s,mb4.5
TKM2 *e* 22 45 48.4
TKM2 LR LR
comp=Z,693nm,19.0s,MS5.0
MAW Mawson 82.43 203 *eP* **P** **22 45 34.2 +2.8**
comp=Z,7.8nm,0.8s,mb4.7
MAW Mawson 82.43 203 P **P** **22 45 30.8 -0.6**
comp=Z,11nm,1.0s,mb4.8,baz=74,slow=6.3,SNR=8.4
MAW LR LR 23 21 58.3
comp=Z,2µm,18.1s,MS5.5,baz=79,slow=36
MAW Mawson 82.43 203 *eP* **P** **22 45 31.6 +0.1**
MAW *e*PcP PcP 22 45 35.0 -1.5
KURK Kurchatov 82.64 323 P **P** **22 45 31.0 -1.8**
comp=Z,2.5nm,0.8s,mb4.3,baz=107,slow=4.1,SNR=11
KURK LR LR 23 22 15.9
comp=Z,1µm,21.8s,MS5.2,baz=85,slow=36
KURK Kurchatov 82.64 323 *eP* **P** **22 45 31.4 -1.4**
KURK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KURK MLR MLR
comp=Z,1µm,20.0s,MS5.3
KURK Kurchatov 82.64 323 *eP* **P** **22 45 31.4 -1.4**
comp=Z,7.6nm,0.9s,mb4.7
KURK LR LR
comp=Z,1µm,20.0s,MS5.3
CHUM Lake Minchumin 82.78 22 *eP* **P** **22 45 33.1 -0.1**
comp=Z,11nm,0.9s,mb4.9
CHUM *e* pP 22 45 43.6 -2.1
UCH Uchtor 82.79 314 *eP* **P** **22 45 32.5 -1.3**
UCH LR LR
comp=Z,226nm,22.0s,MS4.5
AAK Ala-Archa 82.92 314 ‖ *eP* **P** **22 45 34.1 -0.3**
AAK pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
AAK MLR MLR
comp=Z,900nm,26.0s,MS5.0
AAK Ala-Archa 82.92 314 PFAKE 22 45 50.0 +16
AAK LR LR
comp=Z,1µm,19.0s,MS5.3
KTH Kantishna Hill 83.15 23 *eP* **P** **22 45 34.3 -0.8**
comp=Z,16nm,1.1s,mb5.0
KTH *e* pP 22 45 44.1 -3.5
TRF Thorofare Moun 83.35 23 *eP* **P** **22 45 36.9 +0.7**
comp=Z,14nm,0.9s,mb5.0
TRF *e* pP 22 45 48.2 -0.4
AML Almayashu 83.36 314 PFAKE 22 45 50.0 +13
AML LR LR
comp=Z,157nm,20.0s,MS4.4
EKS2 Erkin-Say 83.43 314 *eP* **P** **22 45 36.9 -0.2**
comp=Z,12nm,1.0s,mb4.9
EKS2 *e*PcP PcP 22 45 41.1 -0.3
EKS2 LR LR
comp=Z,742nm,20.0s,MS5.1
MCK McKinley 84.02 23 *eP* **P** **22 45 39.3 -0.3**
MCK *e* pP 22 45 50.7 -1.4
MCK pmax pmax
comp=Z,41nm,1.0s,mb5.5
MCK McKinley 84.02 23 *eP* **P** **22 45 39.3 -0.3**
comp=Z,41nm,1.0s,mb5.5
MCK *e* pP 22 45 50.7 -1.3
COLA College 84.96 23 *eP* **P** **22 45 44.5 +0.1**
COLA *e* pP 22 45 56.3 -0.5
COLA pmax pmax
comp=Z,15nm,1.0s,mb5.1
COLA MLR MLR
comp=Z,2µm,20.0s,MS5.6
COLA College 84.96 23 *eP* **P** **22 45 44.5 +0.1**
comp=Z,15nm,1.0s,mb5.1
COLA *e* pP 22 45 56.3 -0.6
COLA LR LR
comp=Z,2µm,20.0s,MS5.6
KBL Kabul 85.21 305 *eP* **P** **22 45 44.3 -2.0**
KBL pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KBL Kabul 85.21 305 *eP* **P** **22 45 44.3 -2.0**
comp=Z,3.9nm,0.8s,mb4.6
EGAK Eagle 87.54 24 *eP* **P** **22 45 58.5 +1.5**
comp=Z,22nm,1.0s,mb5.3
EGAK LR LR
comp=Z,4µm,22.0s,MS5.7
DAWY Dawson 88.02 25 *eP* **P** **22 46 00.8 +1.5**
BVAR Borovoye Array 88.19 324 P **P** **22 45 57.9 -2.4**
comp=Z,5.6nm,0.9s,mb4.8,baz=102,slow=3.6,SNR=23
BVAR LR LR 23 24 11.6
comp=Z,2µm,21.5s,MS5.4,baz=354,slow=35
BRVK Borovoye 88.26 324 *eP* **P** **22 45 59.9 -0.8**
BRVK MLR MLR
comp=Z,2µm,21.0s,MS5.5
WRAK Wrangell Islan 89.30 33 PFAKE 22 46 20.0 +14
WRAK LR LR
comp=Z,3µm,20.0s,MS5.7
BBB Bella Bella 90.92 38 LR LR 23 20 24.3
comp=Z,2µm,19.3s,MS5.6,baz=248,slow=31
DLBC Dease Lake 90.94 31 LR LR 23 23 43.0
comp=Z,2µm,18.6s,MS5.5,baz=303,slow=33
HOPS Hopland 92.67 51 *ep*P pP 22 46 33.9 -0.3
HOPS LR LR
comp=Z,3µm,20.0s,MS5.8
MSEY Mahe Island 92.68 265 PFAKE 22 46 30.0 +7.7
MSEY LR LR
comp=Z,777nm,20.0s,MS5.2
MCCM Marconi Confer 92.72 52 PFAKE 22 46 30.0 +8.1
MCCM LR LR
comp=Z,3µm,20.0s,MS5.7
COR Corvallis 93.09 46 PFAKE 22 46 30.0 +6.6
COR LR LR
comp=Z,5µm,19.0s,MS5.9
HUMO Hull Mountain 93.13 48 PFAKE 22 46 30.0 +6.3
HUMO LR LR
comp=Z,3µm,19.0s,MS5.8
YBH Yreka Blue Hor 93.22 49 LR LR 23 22 27.4
comp=Z,3µm,19.7s,MS5.7,baz=348,slow=32
YBH Yreka Blue Hor 93.22 49 PFAKE 22 46 40.0 +16
YBH LR LR
comp=Z,3µm,20.0s,MS5.7
WDC Whiskeytown Da 93.24 50 PFAKE 22 46 40.0 +16
WDC LR LR
comp=Z,3µm,19.0s,MS5.7
SAO San Andreas Ge 93.72 54 PFAKE 22 46 40.0 +13
SAO LR LR
comp=Z,3µm,20.0s,MS5.8
CMB Columbia Colle 94.67 52 PFAKE 22 46 40.0 +9.1
CMB LR LR
comp=Z,3µm,19.0s,MS5.7
MOD Modoc 95.03 49 PFAKE 22 46 40.0 +7.6
MOD LR LR
comp=Z,3µm,19.0s,MS5.8
ARU Arti 95.46 326 P **P** **22 46 34.5 +0.5**
ARU MLR MLR
comp=Z,1µm,19.0s,MS5.4
ARU Arti 95.46 326 P **P** **22 46 34.5 +0.5**
ARU LR LR
comp=Z,1µm,19.0s,MS5.4
WVOR Wild Horse Val 96.30 48 PFAKE 22 46 50.0 +12
WVOR LR LR
comp=Z,4µm,19.0s,MS5.9
NVAR Mina Array Bea 96.34 52 P **P** **22 46 39.8 +1.3**
comp=Z,2.8nm,0.9s,mb4.7,baz=260,slow=6.0,SNR=8.9
DAC Darwin (Calif) 96.78 54 PFAKE 22 46 50.0 +9.5
DAC LR LR
comp=Z,3µm,20.0s,MS5.7
TPH Tonopah 97.17 53 PFAKE 22 46 50.0 +7.8
TPH LR LR
comp=Z,2µm,20.0s,MS5.7
BMN Battle Mountai 97.27 50 PFAKE 22 46 50.0 +7.4
BMN LR LR
comp=Z,3µm,21.0s,MS5.7
BMO Blue Mountains 97.37 46 PFAKE 22 46 50.0 +7.0
BMO LR LR
comp=Z,3µm,20.0s,MS5.8
PFO Pinyon Flat Ob 97.58 57 PFAKE 22 47 00.0 +16
PFO LR LR
comp=Z,4µm,20.0s,MS5.9
NEW Newport 97.59 42 PFAKE 22 47 00.0 +16
NEW LR LR
comp=Z,2µm,21.0s,MS5.6
TPNV Topopah Spring 97.89 54 PFAKE 22 47 00.0 +14
TPNV LR LR
comp=Z,2µm,19.0s,MS5.7
ABPO Ambohimpanom 98.67 250 PFAKE 22 47 00.0 +11
ABPO LR LR
comp=Z,2µm,21.0s,MS5.5
LDFC Landfair 98.75 56 *ep*P pP 22 47 00.8 -1.3
ELK Elko 98.79 50 PFAKE 22 47 00.0 +11
ELK LR LR
comp=Z,3µm,21.0s,MS5.8
YKA Yellowknife Ar 98.83 28 P **P** **22 46 50.4 +1.3**
comp=Z,1.0nm,0.9s,mb4.3,baz=278,slow=4.9,SNR=6.4
YKA PKiKP PKiKP 22 51 19.2 -0.8
comp=Z,0.9nm,1.1s,baz=298,slow=1.3,SNR=3.8
YKA LR LR 23 29 14.3
comp=Z,763nm,20.6s,MS5.2,baz=160,slow=34
YKA Yellowknife Ar 98.83 28 *i* P **P** **22 46 51.7 +2.6**
YKA pmax pmax
comp=Z,1.0nm,0.9s
HLID Hailey 99.43 47 PFAKE 22 47 00.0 +7.8
HLID LR LR
comp=Z,2µm,20.0s,MS5.6
MSO Missoula 99.74 44 PFAKE 22 47 10.0 +17
MSO LR LR
comp=Z,1µm,22.0s,MS5.3
DUG Dugway 100.64 50 PFAKE 22 47 10.0 +13
DUG LR LR
comp=Z,3µm,19.0s,MS5.8
VNA3 Neumayer Olymp 101.08 187 *ePdiff* Pdif 22 47 01.0 +1.7
VNA3 *e* 22 47 10.1
VNA3 *e* 22 47 20.1
VNA2 Neumayer--Watz 101.08 188 *ePdiff* Pdif 22 47 01.3 +2.0
VNA2 *e* 22 47 10.9
VNA2 *e* 22 47 13.7
VNA2 *e* 22 47 21.5
MVU Marysvale 101.12 52 PFAKE 22 47 10.0 +10
MVU LR LR
comp=Z,2µm,20.0s,MS5.5
BOZ Bozeman (W) 101.38 45 PFAKE 22 47 10.0 +9.3
BOZ LR LR
comp=Z,2µm,19.0s,MS5.6
WUAZ Wupatki 101.81 55 PFAKE 22 47 10.0 +7.4
WUAZ LR LR
comp=Z,3µm,20.0s,MS5.8
AHID Auburn Hatcher 101.87 48 PFAKE 22 47 10.0 +7.2
AHID LR LR
comp=Z,3µm,20.0s,MS5.9
LKWY Lake 102.30 46 PFAKE 22 47 20.0 +15
LKWY LR LR
comp=Z,3µm,20.0s,MS5.8
TUC Tucson 102.32 58 PFAKE 22 47 20.0 +15
TUC LR LR
comp=Z,2µm,20.0s,MS5.7
EGMT Eagleton 102.53 42 PFAKE 22 47 20.0 +14
EGMT LR LR
comp=Z,2µm,19.0s,MS5.6
BW06 Boulder Array 103.00 48 PFAKE 22 47 20.0 +12
BW06 LR LR
comp=Z,3µm,19.0s,MS5.9
PDAR Pinedale Array 103.00 48 Pdiff Pdif 22 47 08.3 +0.5
comp=Z,0.9nm,0.9s,baz=218,slow=5.7,SNR=3.5
RLMT Red Lodge 103.07 45 PFAKE 22 47 20.0 +12
RLMT LR LR
comp=Z,2µm,20.0s,MS5.5
MVCO Mesa Verde 104.09 53 PFAKE 22 47 30.0 +17
MVCO LR LR
comp=Z,2µm,19.0s,MS5.7
KBS Kingsbay 104.51 352 PFAKE 22 47 30.0 +15
KBS LR LR
comp=Z,847nm,21.0s,MS5.3
GNI Garni 104.85 310 PFAKE 22 47 30.0 +14
GNI LR LR
comp=Z,541nm,20.0s,MS5.1
APA Apatity 105.49 339 ⇑ *iP* Pdif 22 47 33.5 +15
APA pmax pmax
comp=Z,34nm,1.0s
APA MLR MLR
comp=Z,2µm,22.0s,MS5.5
ANMO Albuquerque 105.85 56 PFAKE 22 51 50.0 +16
ANMO LR LR
comp=Z,3µm,19.0s,MS5.8
KIV Kislovodsk 106.03 314 PFAKE 22 51 50.0 +16
KIV LR LR
comp=Z,723nm,20.0s,MS5.2
DGMT Dagmar 106.17 41 PFAKE 22 51 50.0 +16
DGMT LR LR
comp=Z,2µm,20.0s,MS5.5
ISCO Idaho Springs 106.18 51 PFAKE 22 51 50.0 +16
ISCO LR LR
comp=Z,2µm,19.0s,MS5.7
FFC Flin Flon 106.40 35 PFAKE 22 51 50.0 +16
FFC LR LR
comp=Z,2µm,19.0s,MS5.7
SDCO Great Sand Dun 106.44 53 PFAKE 22 51 50.0 +15
SDCO LR LR
comp=Z,2µm,20.0s,MS5.7
KEV Kevo 106.71 342 PFAKE 22 51 50.0 +16
KEV LR LR
comp=Z,1µm,22.0s,MS5.5
OBN Obninsk 107.91 326 PFAKE 22 51 50.0 +13
OBN LR LR
comp=Z,2µm,20.0s,MS5.6
TXAR Lajitas Array 108.52 61 PKiKP PKiKP 22 51 38.8 +0.1
comp=Z,2.1nm,0.9s,baz=218,slow=1.6,SNR=13
TXAR PKKP PKKPbc 23 03 02.5 +14
comp=Z,0.9nm,0.9s,baz=122,slow=5.5,SNR=4.9
OGNE Ogallala 108.77 49 PFAKE 22 51 50.0 +11
OGNE LR LR
comp=Z,2µm,20.0s,MS5.7
AMTX Amarillo 109.77 55 PFAKE 22 51 50.0 +9.1
AMTX LR LR
comp=Z,3µm,20.0s,MS5.8
CBKS Cedar Bluff 110.82 51 PFAKE 22 51 50.0 +7.2
CBKS LR LR
comp=Z,2µm,20.0s,MS5.8
ULM Lac du Bonnet 111.11 38 PFAKE 22 51 50.0 +7.1
ULM LR LR
comp=Z,3µm,22.0s,MS5.8
JCT Junction City 111.78 60 PFAKE 22 52 00.0 +15
JCT LR LR
comp=Z,2µm,20.0s,MS5.8
WMOK Wichita Mounta 112.16 55 PFAKE 22 52 00.0 +15
WMOK LR LR
comp=Z,3µm,21.0s,MS5.8
ECSD EROS,Sioux Fal 112.23 45 PFAKE 22 52 00.0 +15
ECSD LR LR
comp=Z,2µm,19.0s,MS5.7
KSU1 Kansas State U 113.18 50 PFAKE 22 52 00.0 +13
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.8
BR131 Keskin Array S 113.36 310 PFAKE 22 52 00.0 +12
BR131 LR LR
comp=Z,450nm,20.0s,MS5.1
AKASG Malin Array Be 113.46 323 PKiKP PKiKP 22 51 45.8 -1.6
comp=Z,0.2nm,0.3s,baz=89,slow=3.1,SNR=5.0
AKASG Malin Array Be 113.46 323 *i* PKiKP PKiKP 22 51 47.4 0.0
KIEV Kiev 113.47 323 PFAKE 22 52 00.0 +13
KIEV LR LR
comp=Z,1µm,19.0s,MS5.5
KVTX Kingsville 113.71 63 PFAKE 22 52 00.0 +11
KVTX LR LR
comp=Z,3µm,20.0s,MS5.9
ANTO Ankara 113.97 311 PFAKE 22 52 00.0 +11
ANTO LR LR
comp=Z,680nm,22.0s,MS5.2
CSS Prodhromos 114.47 305 PFAKE 22 52 00.0 +10
CSS LR LR
comp=Z,758nm,21.0s,MS5.3
EYMN Ely 114.54 40 PFAKE 22 52 00.0 +10
EYMN LR LR
comp=Z,2µm,20.0s,MS5.7
SCIA State Center 115.09 47 PFAKE 22 52 00.0 +9.2
SCIA LR LR
comp=Z,2µm,22.0s,MS5.6
HKT Hockley 115.25 60 PFAKE 22 52 00.0 +8.5
HKT LR LR
comp=Z,4µm,19.0s,MS6.1
NATX Nacogdoches 116.00 58 PFAKE 22 52 00.0 +7.1
NATX LR LR
comp=Z,2µm,19.0s,MS5.7
ISP Isparta 116.15 309 PFAKE 22 52 00.0 +7.0
ISP LR LR
comp=Z,579nm,21.0s,MS5.2
MIAR Mount Ida 116.43 55 PFAKE 22 52 10.0 +16
MIAR LR LR
comp=Z,2µm,21.0s,MS5.8
LBTB Lobatse 116.43 238 PKiKP PKPdf 22 51 56.5 +2.6
LBTB MLR MLR
comp=Z,2µm,20.0s,MS5.8
JFWS Jewell Farm 116.93 45 PFAKE 22 52 10.0 +16
JFWS LR LR
comp=Z,2µm,20.0s,MS5.7
NOA NORSAR Array B 117.07 338 PKP PKPdf 22 51 53.6 -0.4
comp=Z,1.7nm,0.9s,baz=41,slow=2.2,SNR=3.8
LSZ Lusaka 117.23 249 *ePKiKP* PKPdf 22 51 56.5 +0.9
LSZ MLR MLR
comp=Z,877nm,20.0s,MS5.4
MLR Muntele Rosu 117.29 318 PKP PKPdf 22 51 54.6 -0.3
comp=Z,1.5nm,0.6s,baz=126,slow=3.2,SNR=4.7
MLR Muntele Rosu 117.29 318 ‖ *iP* PKPdf 22 51 55.2 +0.3
UALR University of 117.38 54 *ePKPdf* PKPdf 22 51 56.0 +0.5
CCM Cathedral Cave 117.51 50 PFAKE 22 52 10.0 +14
CCM LR LR
comp=Z,3µm,20.0s,MS5.9
KWP Kalwaria 117.74 324 ⇑ *iP* PKPdf 22 51 54.8 -0.9
KWP Kalwaria 117.74 324 ⇑ P PKPdf 22 51 54.8 -0.9
KWP LR LR
comp=Z,2µm,19.0s,MS5.7
VOIR 117.90 318 ⇑ *iP* PKPdf 22 51 57.0 +0.9
VOIR 117.90 318 ⇑ P PKPdf 22 51 57.0 +0.9
FVM French Village 118.15 50 *ePKiKP* PKPdf 22 51 57.3 +0.5
SFJD Kangerlussuaq 118.17 8 PFAKE 22 52 10.0 +14

SFJD LR LR
comp=Z,2µm,21.0s,MS5.7
KOLS Kolonicke sedl 118.29 323 ePKP PKPdf 22 51 55.9 -0.8
HDIL Hopedale 118.30 47 PFAKE 22 52 10.0 +13
HDIL LR LR
comp=Z,2µm,19.0s,MS5.7
KONO Kongsberg 118.59 338 PFAKE 22 52 10.0 +13
KONO LR LR
comp=Z,1µm,19.0s,MS5.6
STHS Stebnicka Huta 118.69 324 ePKP PKPdf 22 51 56.8 -0.7
CRVS Cervenica-Dubn 118.79 323 ePKP PKPdf 22 51 57.9 +0.2
DRGR 118.90 321 ⇑iP PKPdf 22 51 57.4 -0.6
DRGR 118.90 321 ⇑P PKPdf 22 51 57.4 -0.6
NIE Niedzica 119.24 324 ePKPdf PKPdf 22 51 59.2 +0.7
VBMS Vicksburg 119.38 57 PFAKE 22 52 10.0 +11
VBMS LR LR
comp=Z,2µm,20.0s,MS5.7
GZR Gura Zlata 119.40 319 ⇑iP PKPdf 22 51 58.7 -0.3
GZR Gura Zlata 119.40 319 ⇑P PKPdf 22 51 58.7 -0.3
OLIL Olney 119.71 49 ePKPdf PKPdf 22 51 60.0 +0.2
BZS Buzias 120.06 320 ⇑iP PKPdf 22 51 59.4 -0.9
BZS Buzias 120.06 320 ⇑P PKPdf 22 51 59.4 -0.8
GLMI Grayling 120.10 41 PFAKE 22 52 10.0 +10
GLMI LR LR
comp=Z,2µm,19.0s,MS5.8
PSZ Piszkesteto 120.16 323 PFAKE 22 52 10.0 +10
PSZ LR LR
comp=Z,1µm,19.0s,MS5.6
VYHS Vyhne 120.53 324 ePKP PKPdf 22 52 00.3 -0.8
WVT Waverly 120.64 52 PFAKE 22 52 10.0 +8.3
WVT LR LR
comp=Z,3µm,22.0s,MS5.8
PAYG Puerto Ayora 120.69 95 PFAKE 22 52 10.0 +7.6
PAYG LR LR
comp=Z,508nm,21.0s,MS5.1
KOLL Kolacno 120.74 324 ePKP PKPdf 22 52 01.2 -0.3
BLO Bloomington 120.75 48 ePKIKP PKPdf 22 52 02.2 +0.4
PLCA Paso Flores 120.75 146 PFAKE 22 52 10.0 +8.2
PLCA LR LR
comp=Z,828nm,19.0s,MS5.4
WCI Wyandotte Cave 121.21 49 PFAKE 22 52 10.0 +7.3
WCI LR LR
comp=Z,1µm,19.0s,MS5.6
ZST Bratislava 121.69 324 ePKP PKPdf 22 52 03.4 +0.1
PKSM Moragy 121.69 321 ⇑iP PKPdf 22 52 02.6 -0.8
PKSM Moragy 121.69 321 ⇑P PKPdf 22 52 02.6 -0.8
AAM Ann Arbor 121.71 44 PFAKE 22 52 20.0 +16
AAM LR LR
comp=Z,2µm,19.0s,MS5.8
BRG Berggiesshubel 122.05 328 ePKP PKPdf 22 52 04.0 +0.1
comp=Z,8.9nm,1.1s
BRG e 22 54 36.5
comp=Z,86nm,2.5s
BRG
comp=N,693nm,24.4s
BRG
comp=E,900nm,19.7s
BRG
comp=Z,2µm,18.2s
BRG Berggiesshubel 122.05 328 ePKP PKPdf 22 52 04.0 +0.1
BRG e 22 54 36.5
BRG LR LR
comp=Z,980nm,18.2s,MS5.5
LRAL Lakeview Retre 122.10 55 ePKPdf PKPdf 22 52 03.5 -1.0
LRAL LR LR
comp=Z,2µm,21.0s,MS5.8
CLL Collm 122.29 329 i PKIKP PKPdf 22 52 04.0 -0.4
CLL e 22 52 18.0
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL MLR MLR
comp=Z,2µm,21.0s,MS5.7
CLL Collm 122.29 329 i PKPdf PKPdf 22 52 04.0 -0.4
comp=Z,7.0nm,0.8s
CLL LmV 22 45 00.0
comp=Z,2µm,21.0s
CLL e(sPKPdf) 22 52 18.0
CLL Collm 122.29 329 i PKP PKPdf 22 52 04.0 -0.4
CLL e 22 52 18.0
CLL LR LR
comp=Z,2µm,21.0s,MS5.7
BRAL Brewton 122.53 57 PFAKE 22 52 20.0 +15
BRAL LR LR
comp=Z,2µm,20.0s,MS5.8
TIR Tirane 122.92 316 PFAKE 22 52 20.0 +14
TIR LR LR
comp=Z,1µm,22.0s,MS5.6
ACSO Alum Creek Sta 122.96 46 PFAKE 22 52 20.0 +14
ACSO LR LR
comp=Z,1µm,19.0s,MS5.6
KHC Kasperske Hory 123.20 326 ePKPDF PKPdf 22 52 05.5 -0.7
KHC epPKP pPKPdf 22 52 20.0 +0.9
GERES GERESS Array B 123.29 326 PKP PKPdf 22 52 05.7 -0.6
comp=Z,4.5nm,0.9s,baz=90,slow=0.4,SNR=12
GERES pPKP pPKPdf 22 52 19.6 +0.2
comp=Z,3.1nm,0.6s,baz=83,slow=2.1,SNR=8.9
CPCT Cooper Cave 123.41 52 ePKPdf PKPdf 22 52 07.1 +0.1
SOKA Soboth 123.66 323 ⇑iPKPdf PKPdf 22 52 06.0 -1.1
comp=Z,6.3nm,1.0s
SCHQ Schefferville 124.03 24 PKP PKPdf 22 52 07.7 +0.1
comp=Z,6.1nm,0.9s,baz=302,slow=3.2,SNR=4.4
SCHQ pPKP pPKPdf 22 52 21.5 +0.9
comp=Z,3.4nm,0.6s,baz=157,slow=16,SNR=1.8
SCHQ Schefferville 124.03 24 PKP PKPdf 22 52 07.7 +0.1
SCHQ pPKP pPKPdf 22 52 21.5 +0.9
SCHQ LR LR
comp=Z,3µm,19.0s,MS6.0
GRA1 Grafenberg Arr 124.16 328 ePKP PKPdf 22 52 07.9 -0.1
GRA1 epPKP pPKPdf 22 52 21.6 +0.6
GRA1 LR LR
comp=Z,2µm,19.9s,MS5.7
GRF Grafenberg Arr 124.16 328 ePKP PKPdf 22 52 07.9 -0.1
GRF epPKP pPKPdf 22 52 21.6 +0.6
GRF eL 23 48 53.9
comp=Z,2µm,19.9s
TGUH Tegucigalpa,Un 124.51 77 ePKPdf PKPdf 22 52 10.0 +0.4
TGUH e 22 52 21.9
TGUH LR LR
comp=Z,852nm,19.0s,MS5.4
VOY Vojsko 124.67 323 ePKP PKPdf 22 52 14.8 +5.7
VOY e 22 52 22.3
GOGA Godfrey 124.85 54 PFAKE 22 52 20.0 +10
GOGA LR LR
comp=Z,2µm,21.0s,MS5.7
MCWV Mont Chateau 125.40 45 PFAKE 22 52 20.0 +9.3
MCWV LR LR
comp=Z,3µm,19.0s,MS6.0
TSUM Tsumeb 125.51 241 ePKPdf PKPdf 22 52 13.5 +2.0
TSUM e 22 52 24.4
TSUM LR LR
comp=Z,1µm,20.0s,MS5.7
BLA Blacksburg 125.94 48 PFAKE 22 52 20.0 +8.2
BLA LR LR
comp=Z,2µm,21.0s,MS5.8
TIP Timpagrande 125.96 314 PFAKE 22 52 20.0 +8.2
TIP LR LR
comp=Z,828nm,20.0s,MS5.4
FETA Feichten 125.97 326 ⇑iPKPdf PKPdf 22 52 10.0 -1.5
comp=Z,14nm,1.1s
CUC Castrocucco 126.28 316 PFAKE 22 52 20.0 +7.6
CUC LR LR
comp=Z,873nm,19.0s,MS5.5
SSPA Standing Stone 126.35 43 PFAKE 22 52 20.0 +7.5
SSPA LR LR
comp=Z,2µm,20.0s,MS5.8
EKA Eskdalemuir Ar 126.39 340 PKP PKPdf 22 52 12.4 +0.3
comp=Z,4.0nm,0.8s,baz=56,slow=3.2,SNR=4.9
EKA pPKP pPKPdf 22 52 26.1 +1.0
comp=Z,2.9nm,0.7s,baz=22,slow=1.9,SNR=3.4
BFO Black Forest 126.50 328 PFAKE 22 52 20.0 +7.5
BFO LR LR
comp=Z,2µm,19.0s,MS5.7
DAVOX Davos/Dischmat 126.58 326 PKP PKPdf 22 52 12.9 +0.1
comp=Z,3.3nm,0.6s,baz=146,slow=17,SNR=6.2
DAVOX pPKP pPKPdf 22 52 26.9 +1.2
comp=Z,7.4nm,0.7s,baz=32,slow=10,SNR=4.8
DAVOS Davos 126.59 326 PKIKP PKPdf 22 52 12.9 +0.1
DAVOS 22 52 26.9
AQU L'Aquila 126.82 319 PFAKE 22 52 20.0 +6.7
AQU LR LR
comp=Z,1µm,20.0s,MS5.7
CEL Celeste 126.96 314 PFAKE 22 52 30.0 +16
CEL LR LR
comp=Z,883nm,21.0s,MS5.4
CDF Champ du Feu 126.99 329 ePKIKP PKPdf 22 52 13.0 -0.5

TUE Stuetta 127.06 326 PFAKE 22 52 30.0 +16
TUE LR LR
comp=Z,2µm,21.0s,MS5.7
GIVF Givet 127.10 332 ePKIKP PKPdf 22 52 13.8 +0.2
NCB Newcomb 127.10 38 PFAKE 22 52 30.0 +16
NCB LR LR
comp=Z,2µm,19.0s,MS5.9
BAIF Baives 127.42 332 ePKIKP PKPdf 22 52 14.3 +0.1
comp=Z,46nm,1.4s
NHSC New Hope 127.56 53 PFAKE 22 52 30.0 +15
NHSC LR LR
comp=Z,2µm,20.0s,MS5.8
HINF Hinteralfeld 127.59 328 ePKIKP PKPdf 22 52 14.2 -0.4
comp=Z,15nm,0.9s
HAU Haudompre 127.73 329 ePKIKP PKPdf 22 52 14.7 -0.2
comp=Z,16nm,0.9s
CBN Corbin 127.76 46 PFAKE 22 52 30.0 +15
CBN LR LR
comp=Z,2µm,20.0s,MS5.8
VLC Villacollemand 127.77 323 PFAKE 22 52 30.0 +15
VLC LR LR
comp=Z,1µm,19.0s,MS5.6
DWPF Disney 127.97 59 PFAKE 22 52 30.0 +14
DWPF LR LR
comp=Z,2µm,19.0s,MS5.7
LBNH Lisbon 128.34 37 PFAKE 22 52 30.0 +14
LBNH LR LR
comp=Z,3µm,20.0s,MS5.9
CNNC Cliffs of the 128.58 50 PFAKE 22 52 30.0 +13
CNNC LR LR
comp=Z,2µm,21.0s,MS5.8
CABF La Chapelle 128.76 328 ePKIKP PKPdf 22 52 17.3 +0.4
comp=Z,48nm,1.2s
WDD Wield Dalam 128.93 312 PFAKE 22 52 30.0 +12
WDD LR LR
comp=Z,945nm,20.0s,MS5.5
LPG La Plagne 129.09 326 ePKIKP PKPdf 22 52 16.8 -0.8
PKME Peaks-Kenny Pk 129.25 34 PFAKE 22 52 30.0 +12
PKME LR LR
comp=Z,2µm,20.0s,MS5.9
BNI Bardonecchia 129.41 326 PFAKE 22 52 30.0 +12
BNI LR LR
comp=Z,3µm,21.0s,MS5.9
LOR Lormes 129.49 329 ePKIKP PKPdf 22 52 18.5 +0.2
comp=Z,33nm,1.3s
MBDF Montbardon 129.55 325 ePKIKP PKPdf 22 52 18.0 -0.5
SBF Sospel 129.69 324 ePKIKP PKPdf 22 52 18.4 -0.3
comp=Z,98nm,1.2s
SSF Saint Saulge 129.80 329 ePKIKP PKPdf 22 52 19.1 +0.2
comp=Z,13nm,1.0s
SMF Signal de Mont 129.91 329 ePKIKP PKPdf 22 52 19.1 0.0
comp=Z,9.6nm,0.8s
AVF Avril sur Loir 130.06 329 ePKIKP PKPdf 22 52 19.9 +0.5
comp=Z,34nm,1.3s
VIVF Saint-Julien-l 130.64 327 ePKIKP PKPdf 22 52 20.6 +0.1
comp=Z,32nm,1.2s
TCF Toulx Ste Croi 130.98 330 ePKIKP PKPdf 22 52 20.9 -0.2
comp=Z,20nm,1.1s
NNA Nana 131.11 112 PFAKE 22 52 30.0 +7.7
NNA LR LR
comp=Z,847nm,21.0s,MS5.4
LASF Ste Croix 131.59 326 ePKIKP PKPdf 22 52 22.9 +0.6
OTAV Otavalo 132.53 96 PFAKE 22 52 40.0 +15
OTAV LR LR
comp=Z,676nm,21.0s,MS5.3
KEST Kesra 132.77 314 PKP PKPdf 22 52 25.3 +0.5
comp=Z,1.2nm,0.9s,baz=65,slow=4.2,SNR=2.8
LVC Limon Verde 133.16 129 PFAKE 22 52 40.0 +14
LVC LR LR
comp=Z,641nm,19.0s,MS5.3
ESLA Sonseca Array 138.85 327 ePKPdf PKPdf 22 52 34.9 -1.1
ESLA LR LR
comp=Z,9µm,21.0s,MS6.5
PAB San Pablo 139.15 328 PFAKE 22 52 50.0 +13
PAB LR LR
comp=Z,2µm,21.0s,MS5.8
SDDR Presa de Saban 139.17 69 PFAKE 22 52 50.0 +13
SDDR LR LR
comp=Z,1µm,19.0s,MS5.8
BBSR BB Station 139.64 46 PFAKE 22 52 50.0 +12
BBSR LR LR
comp=Z,2µm,22.0s,MS5.9
PVIS Viseu 140.04 332 ePKPdf PKPdf 22 52 37.7 -0.5
MTE Manteigas 140.12 331 ePKPdf PKPdf 22 52 37.2 -1.1
MTE Manteigas 140.12 331 PFAKE 22 52 50.0 +12
MTE LR LR
comp=Z,2µm,20.0s,MS5.9
PCBR Castelo Branco 140.52 331 ePKPdf PKPdf 22 52 38.6 -0.5
SDV Santo Domingo 140.95 84 ePKPdf PKPdf 22 52 39.7 -0.9
SDV LR LR
comp=Z,527nm,20.0s,MS5.3
PBAR Barrancos 141.57 329 ePKPdf PKPdf 22 52 39.6 -1.4
EVO Evora 141.80 330 ePKIKP PKPdf 22 52 40.8 -0.6
comp=Z,81nm,1.8s
PBEJ Beja 142.11 329 ePKPdf PKPdf 22 52 41.2 -0.8
SFS San Fernando 142.39 326 PFAKE 22 52 50.0 +7.5
SFS LR LR
comp=Z,3µm,22.0s,MS6.0
CRPR Cabo Rojo, PR 143.26 69 ePKPdf PKPdf 22 52 40.0 -4.5
SJG San Juan 144.12 68 PFAKE 22 53 00.0 +14
SJG LR LR
comp=Z,1µm,21.0s,MS5.7
RTC Rabat Centre 144.53 324 PFAKE 22 53 00.0 +14
RTC LR LR
comp=Z,1µm,19.0s,MS5.7
SHEL Horse Pasture 146.27 228 PFAKE 22 53 00.0 +10
SHEL LR LR
comp=Z,2µm,19.0s,MS5.8
TOA0 Torodi Ar. Sit 146.87 284 ePKPdf PKPdf 22 52 51.5 +0.6
TOA0 ePKPbc PKPbc 22 52 53.3 +0.5
TORD Torodi Ar. Bea 146.87 284 PKPbc PKPbc 22 52 50.6 -2.1
comp=Z,148nm,1.0s,baz=53,slow=2.9,SNR=192
TORD pPKPbc pPKPbc 22 53 06.5 +0.9
comp=Z,88nm,0.9s,baz=76,slow=3.5,SNR=10
LZG Guadaloupe-1 148.65 70 eP PKPbc 22 52 56.6 -1.0
SCG Saint Claude 148.77 70 eP PKPbc 22 52 58.8 +1.0
DOG Dongo Capester 148.83 70 eP PKPbc 22 52 58.5 +0.6
GRGR Grenville 149.53 77 ePKPdf PKPdf 22 52 55.6 +0.3
GRGR ePKPbc PKPbc 22 52 59.1 -0.7
GRGR LR LR
comp=Z,952nm,20.0s,MS5.6
FDF Fort de France 149.56 72 eP PKPdf 22 52 56.9 +1.6
BIM Bigot 149.68 72 eP PKPbc 22 52 59.6 -0.6
BBGH Gun Hill 151.39 75 PKPbc PKPdf 22 52 52.8 -5.3
BBGH LR LR
comp=Z,2µm,21.0s,MS5.9
BDFB Brasilia 152.45 143 PKP PKPdf 22 53 01.3 +1.6
comp=Z,6.1nm,0.9s,baz=216,slow=14,SNR=4.6
BDFB PKPbc PKPbc 22 53 07.0 +0.5
comp=Z,5.4nm,0.8s,baz=142,slow=4.0,SNR=13
BDFB Brasilia 152.45 143 PKP PKPdf 22 53 01.3 +1.6
BDFB PKPbc PKPbc 22 53 07.0 +0.5
BDFB LR LR
comp=Z,790nm,19.0s,MS5.5
KIC Kosan Boka 153.62 271 ePKIKP PKPdf 22 53 01.3 -0.2
comp=Z,206nm,0.9s
DBIC Dimbokro 153.75 272 PKP PKPdf 22 53 01.9 +0.2
comp=Z,14nm,1.0s,baz=178,slow=0.7,SNR=10.0
DBIC PKPbc PKPbc 22 53 09.5 -0.1
comp=Z,24nm,0.9s,baz=83,slow=2.5,SNR=21
DBIC Dimbokro 153.75 272 PKP PKPdf 22 53 01.9 +0.2
DBIC PKPbc PKPbc 22 53 09.5 -0.1
DBIC LR LR
comp=Z,1µm,19.0s,MS5.7
LIC Lamto 153.90 271 ePKIKP PKPdf 22 53 01.8 -0.1
comp=Z,53nm,1.2s
LIC Lamto 153.90 271 ePKIKP PKPdf 22 53 01.6 -0.3
comp=Z,110nm,1.0s
TIC Toumodi 153.91 272 ePKIKP PKPdf 22 53 01.6 -0.3
comp=Z,139nm,1.0s
RCBR Riachuelo 166.90 159 PFAKE 22 53 30.0 +14
RCBR LR LR
comp=Z,1µm,19.0s

IDC 03 22:47:19.7±2.2**,646S**×**14860E,h46**km±10km**,mb3.7**/2**, mb1 3.8**/2**,mb1mx3.3**/14**,mbtmp3.7**/2**,Error ellipse: s-maj=86.3km s-min=30.0km az=100.0,New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ASAR Alice Springs 22.19 218 P P 22 52 11.1 -1.1
1.6nm,0.4s,baz=56,slow=9.2,SNR=17
ASAR pP pP 22 52 23.9 +0.6
5.7nm,0.7s,baz=50,slow=10,SNR=15
STKA Stephens Creek 26.12 194 P P 22 52 50.0 +0.5
1.7nm,0.6s,baz=20,slow=13,SNR=3.8
STKA pP pP 22 53 02.1 +0.6
1.3nm,0.6s,baz=22,slow=11,SNR=1.8
TORD Torodi Ar. Bea 146.74 284 PKPbc PKPbc 23 06 57.1 -0.6
2.7nm,0.5s,baz=56,slow=3.0,SNR=63
TORD pPKPbc pPKPbc 23 07 10.8 -1.0
2.0nm,0.5s,baz=57,slow=2.9,SNR=9.2

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*NEIC **03** 22:56:55.7,5271N×16368W,h10km,mb3.9/1, ML3.7(AEIC),After AEIC.*
*ISCJB **03** 22:56:56.0±2.4,5270N±009×16368W±009,h21km±16km, mb4.0/15,Error ellipse: s-maj=16.1km s-min=7.0km az=21.8*
*IDC **03** 22:56:59.4±1.2,5262N×16368W,h35km±8km,mb3.8/15, mb1 4.0/15,mb1mx3.9/26,mbtmp3.9/15,MS4.6/1, Ms1 4.6/1,ms1mx3.4/33,Error ellipse: s-maj=38.1km s-min=14.1km az=11.0*
ISC 03 22:56:56.2±2.6**,5274N**±009×**16374W**±009**,h10**km±17km**, n29,**σ**0**s**64**/32**,mb4.0**/15**,South of Alaska**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AKA Akutan 1.86 320 P **Pn 22 57 28.0 0.0**
AKA S **Sn 22 57 51.9 +0.4**
AKUT Akutan 1.86 320 ePn **Pn 22 57 28.3 +0.2**
AKUT eSn **Sn 22 57 51.4 -0.1**
AKLV Akutan Long Va 1.95 318 P **Pn 22 57 29.5 +0.2**
AKLV S **Sn 22 57 53.6 -0.3**
AKGG Akutan Green G 1.99 318 P **Pn 22 57 29.7 -0.2**
UNV Unalaska Valle 2.00 305 P **Pn 22 57 29.7 -0.3**
UNV S **Sn 22 57 54.6 -0.5**
OKFG Magazine Ridge 2.61 287 P **Pn 22 57 37.9 -0.4**
SDPT Sand Point 3.25 35 P **Pn 22 57 46.7 -0.5**
EGAK Eagle 16.69 35 Pn **Pn 23 00 50.8 +0.9**
6.7nm,0.7s
DAWY Dawson 16.94 38 ePn **Pn 23 00 52.6 -0.4**
PETK Petropavlovsk- 23.07 286 P **P 23 02 02.9 +1.3**
2.4nm,0.6s,mb3.8,baz=80,slow=14,SNR=5.0
PETK pP 23 02 12.3
2.0nm,0.6s,baz=74,slow=12,SNR=2.3
YKA Yellowknife Ar 27.40 50 P **P 23 02 41.6 +0.2**
0.6nm,0.8s,mb3.2,baz=268,slow=8.7,SNR=4.5
ASAJ Asahikawa 35.88 278 LR LR 23 18 40.4
comp=Z,886nm,18.5s,baz=261,slow=36
PDAR Pinedale Array 36.95 83 P **P 23 04 05.4 +0.2**
2.1nm,0.7s,mb4.1,baz=308,slow=7.3,SNR=7.0
PDAR pP pP 23 04 15.1 +6.9
1.2nm,0.6s,baz=301,slow=4.8,SNR=3.1
ULM Lac du Bonnet 40.91 65 P **P 23 04 37.2 -1.1**
4.4nm,0.5s,mb4.3,baz=316,slow=8.4,SNR=4.9
ULM Lac du Bonnet 40.91 65 P **P 23 04 37.2 -1.1**
TXAR Lajitas Array 49.32 94 P **P 23 05 44.9 -0.5**
1.3nm,0.7s,mb4.1,baz=292,slow=6.0,SNR=5.9
TXAR pP pP 23 05 54.3 +5.9
0.6nm,0.5s,baz=300,slow=5.6,SNR=2.9
TXAR PcP PcP 23 07 06.6 -1.4
0.2nm,0.5s,baz=316,slow=5.0,SNR=2.4
SPITS Spitsbergen Ar 49.35 360 P **P 23 05 45.2 +0.3**
5.1nm,0.8s,mb4.6,baz=98,slow=8.1,SNR=3.9
SONM Songino Array 54.01 304 P **P 23 06 19.8 -0.3**
1.3nm,1.0s,mb3.8,baz=32,slow=7.7,SNR=4.7
ARCES ARCESS Array B 57.86 356 P **P 23 06 47.4 0.0**
3.6nm,1.0s,mb4.4,baz=354,slow=8.5,SNR=3.6
ARCES ARCESS Array B 57.86 356 P **P 23 06 47.4 0.0**
ZALV Zalesovo Beam 59.41 320 P **P 23 06 58.7 +0.3**
0.7nm,0.5s,mb3.9,baz=38,slow=7.5,SNR=4.4
ZALV Zalesovo Beam 59.41 320 P **P 23 06 58.7 +0.3**
BVAR Borovoye Array 65.33 327 P **P 23 07 38.7 +0.6**
1.0nm,0.6s,mb4.0,baz=47,slow=6.7,SNR=5.7
MKAR Makanchi Array 65.98 317 P **P 23 07 40.8 -1.6**
0.8nm,0.7s,mb3.9,baz=43,slow=5.5,SNR=5.8
AKTK Aktyubinsk 71.32 333 P **P 23 08 16.6 +1.0**
AKTO Aktyubinsk 71.32 333 P **P 23 08 16.6 +1.0**
2.6nm,0.7s,mb4.2,baz=15,slow=4.1,SNR=8.6
AKASG Malin Array Be 76.36 352 P **P 23 08 44.3 -0.8**
0.3nm,0.3s,mb3.6,baz=9.3,slow=5.9,SNR=4.4
CMAR Chiang Mai Arr 79.85 287 P **P 23 09 04.5 -0.5**
0.7nm,0.3s,mb4.0,baz=24,slow=5.8,SNR=4.9
BRTR Keskin Array B 86.69 347 P **P 23 09 41.0 +1.0**
0.6nm,0.8s,mb3.9,baz=34,slow=4.5,SNR=3.4

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*IDC **03** 23:34:57.1±1.2,3061N×14041E,h46km±13km,mb3.7/12, mb1 3.8/14,mb1mx3.7/25,mbtmp3.8/14,ML4.4/2,Error ellipse: s-maj=37.6km s-min=8.1km az=71.0*
*ISCJB **03** 23:34:58.1±0.7,3083N±004×14112E±008,h78km±6km, mb4.0/18,Error ellipse: s-maj=11.8km s-min=5.7km az=165.8*
*JMA **03** 23:34:58.0±0.2,3080N×14110E,h51km,M4.8*
*MOS **03** 23:35:01.7±1.0,3088N×14103E,h110km,mb4.2/11,Error ellipse: s-maj=19.3km s-min=8.0km az=114.5*
*NEIC **03** 23:35:03.2±1.8,3098N×14131E,h114km±14km,mb4.2/8, Error ellipse: s-maj=19.3km s-min=13.3km az=88.0*
ISC 03 23:34:59.3±0.6**,3081N**±003×**14116E**±008**,h73**km±5km**, n76,**σ**1**s**20**/89**,mb4.0**/18**,Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHJ2 Mitsune 2.56 334 P **Pn 23 35 37.8 -0.8**
JHJ2 S **Sn 23 36 06.6 -2.1**
JHJ Hachijo jima 2 2.58 333 P **Pn 23 35 38.0 -0.9**
133nm,0.3s,baz=232,slow=23,SNR=24
JHJ S **Sn 23 36 05.5 -3.6**
193nm,0.3s,baz=73,slow=23,SNR=7.5
CBIJ Chichi jima 3.81 166 P **Pn 23 35 55.5 -0.1**
56nm,0.3s,baz=105,slow=22,SNR=14
CBIJ S **Sn 23 36 37.2 -1.9**
34nm,0.3s,baz=288,slow=20,SNR=3.9
CBIJ Chichi jima 3.81 166 P **Pn 23 35 55.2 -0.4**
BSO1 Boso 1 3.83 358 P **Pn 23 35 55.7 -0.2**
BSO3 Boso 3 4.02 352 P **Pn 23 35 58.5 +0.2**
BSO3 S **Sn 23 36 43.5 -0.7**
BSO4 Boso 4 4.22 351 P **Pn 23 36 02.5 +1.3**
BSO4 S **Sn 23 36 51.4 +2.2**
JOD2 Odawara 2 4.77 339 P **Pn 23 36 09.7 +1.1**
JOD2 S **Sn 23 37 00.9 -1.6**
HMMJ Hamamatsu 2 4.96 325 P **Pn 23 36 10.9 -0.4**
JIE Ise 5.18 315 P **Pn 23 36 14.0 -0.3**
JIE S **Sn 23 37 13.2 +0.5**
JHU Hanno 5.27 343 P **Pn 23 36 16.3 +0.9**
JHU S **Sn 23 37 15.0 +0.3**
JNY Yasuok 5.31 329 P **Pn 23 36 18.4 +2.4**
JKN2 Miekihoku 5.36 311 P **Pn 23 36 15.9 -0.8**
JYT Yasato 5.46 352 P **Pn 23 36 18.7 +0.6**
JYT S **Sn 23 37 18.6 -0.9**
JAO Obara 5.52 325 P **Pn 23 36 20.2 +1.3**
JRY Ryogami san 5.52 341 P **Pn 23 36 19.9 +1.0**
JRY S **Sn 23 37 21.7 +0.7**
JAG Ashikaga 5.78 346 P **Pn 23 36 23.4 +1.0**
JHO Hitachi 5.80 355 P **Pn 23 36 22.6 -0.2**
JHO S **Sn 23 37 25.5 -2.4**
MJAR Matsushiro Arr 6.22 337 P **Pn 23 36 32.2 +3.7**
6.4nm,0.3s,baz=164,slow=13,SNR=49
MJAR Matsushiro Arr 6.22 337 P **Pn 23 36 32.2 +3.7**
MJAR pmax pmax
comp=Z,6.0nm,0.3s
MJAR Matsushiro Arr 6.22 337 P **Pn 23 36 32.2 +3.7**
MAJO Matsushiro 6.22 337 eP **Pn 23 36 30.7 +2.2**
MAJO e 23 37 37.6
MAJO pmax pmax
comp=Z,31nm,0.4s
MAJO Matsushiro 6.22 337 ePn **Pn 23 36 30.7 +2.3**
comp=Z,31nm,0.4s
MAJO eSn **Sn 23 37 37.6 -0.6**
MAT Matsushiro 6.22 337 P **Pn 23 36 30.8 +2.3**
MAT eS **Sn 23 37 37.4 -0.8**
MAT Matsushiro 6.22 337 P **Pn 23 36 32.6 +4.1**
JFK Kawauchi 6.54 358 P **Pn 23 36 32.1 -0.7**
JFK S **Sn 23 37 42.4 -3.6**
KSRS Korea Array 12.81 305 P **Pn 23 37 59.0 +0.7**
comp=Z,0.2nm,0.3s,baz=105,slow=14,SNR=4.3
YSS Yuzh-Sakhalins 16.17 4 P **Pn 23 38 41.8 0.0**
MDJ Mudanjiang 16.52 330 P **Pn 23 38 45.4 -0.8**
ENH Enshi 27.24 277 eP **P 23 40 38.4 +1.8**
ULN Ulaanbaatar 31.08 313 eP **P 23 41 11.1 +0.8**
ULN pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ULN Ulaanbaatar 31.08 313 eP **P 23 41 11.1 +0.7**
comp=Z,0.8nm,0.4s,mb3.8

SONM Songino Array 31.48 313 P P 23 41 13.2 -0.7
comp=Z,0.4nm,0.4s,mb3.5,baz=119,slow=7.9,SNR=4.9
YAK Yakutsk 32.11 350 P P 23 41 20.8 +1.5
TLY Talaya 34.54 318 P P 23 41 41.4 +0.9
CHTO Chiang Mai 39.92 263 eP P 23 42 28.3 +1.8
ZALV Zalesovo Beam 46.13 317 P P 23 43 15.3 -0.9
comp=Z,0.4nm,0.4s,mb3.5,baz=69,slow=7.9,SNR=3.4
ZALV PcP PcP 23 44 50.6 -0.4
comp=Z,0.6nm,0.5s,baz=126,slow=2.3,SNR=4.3
MKAR Makanchi Array 47.47 307 P P 23 43 24.0 -2.8
comp=Z,0.3nm,0.3s,mb3.5,baz=87,slow=9.2,SNR=7.6
KURK Kurchatov 49.79 312 P P 23 43 42.3 -2.1
comp=Z,0.6nm,0.4s,mb3.9,baz=93,slow=6.1,SNR=5.2
KURK Kurchatov 49.79 312 eP P 23 43 43.3 -1.1
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KURK Kurchatov 49.79 312 eP P 23 43 43.3 -1.1
comp=Z,1.8nm,0.7s,mb4.1
FITZ Fitzroy Crossi 50.87 199 P P 23 43 53.4 +0.5
WRAB Tennant Creek 50.88 188 eP P 23 43 52.3 -0.6
WRAB pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
WRAB Tennant Creek 50.88 188 eP P 23 43 52.3 -0.5
comp=Z,0.7nm,0.4s,mb4.0
UCH Uchtor 53.52 302 eP P 23 44 13.0 +0.7
comp=Z,1.6nm,0.4s,mb4.4
PMR Palmer 53.82 34 eP P 23 44 14.6 +0.3
comp=Z,24nm,1.5s,mb5.0
AML Almayashu 54.13 302 P P 23 44 18.0 +1.1
COLA College 54.51 30 P P 23 44 21.4 +2.2
ASAR Alice Springs 54.61 188 P P 23 44 18.2 -2.2
comp=Z,0.3nm,0.4s,mb3.7,baz=2.6,slow=6.3,SNR=7.6
BVAR Borovoye Array 54.74 316 P P 23 44 19.8 -1.2
comp=Z,0.6nm,0.3s,mb4.1,baz=93,slow=8.6,SNR=8.0
BVAR PcP PcP 23 45 22.6 -0.1
comp=Z,0.3nm,0.4s,baz=93,slow=6.2,SNR=2.5
BVAR Borovoye Array 54.74 316 P P 23 44 19.8 -1.2
BVAR 23 45 22.6
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 54.80 316 P P 23 44 21.1 -0.4
KBL Kabul 59.62 294 P P 23 44 55.8 0.0
ARU Arti 60.96 321 eP P 23 45 03.0 -1.6
ARU pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARU Arti 60.96 321 eP P 23 45 03.0 -1.6
comp=Z,1.3nm,0.4s,mb4.3
AKTK Aktyubinsk 62.77 314 P P 23 45 15.4 -1.4
AKTO Aktyubinsk 62.77 314 P P 23 45 15.4 -1.4
comp=Z,1.0nm,0.5s,mb4.0,baz=48,slow=12,SNR=4.9
AKTO Aktyubinsk 62.77 314 P P 23 45 15.5 -1.3
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
NWAO Narrogin (SRO) 67.31 202 eP P 23 45 46.4 +0.1
RES Resolute Bay 68.67 14 eP P 23 45 49.9 -4.5
ARCES ARCESS Array B 69.75 340 P P 23 46 01.1 0.0
comp=Z,1.7nm,0.7s,mb4.0,baz=74,slow=9.1,SNR=4.6
ARCES ARCESS Array B 69.75 340 P P 23 46 01.1 0.0
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARE0 ARCESS Array S 69.75 340 P P 23 45 56.1 -5.0
JOF Joensuu 71.37 333 ep P 23 46 10.2 -0.9
comp=Z,1.1nm,0.4s,mb4.0
JOF Joensuu 71.37 333 eP P 23 46 10.2 -0.9
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
OBN Obninsk 72.99 324 P P 23 46 22.5 +1.6
TAU Tasmania Unive 73.58 175 eP P 23 46 25.9 +1.7
AKASG Malin Array Be 79.11 323 P P 23 46 54.8 -0.9
comp=Z,2.4nm,0.4s,mb4.4,baz=50,slow=5.8,SNR=13
AKASG Malin Array Be 79.11 323 P P 23 46 54.8 -0.9
AKASG pmax pmax
comp=Z,2.0nm,0.4s
NOA NORSAR Array B 79.84 338 P P 23 47 00.0 +0.6
comp=Z,2.1nm,1.1s,mb3.9,baz=30,slow=6.0,SNR=2.8
NOA NORSAR Array B 79.84 338 P P 23 47 00.0 +0.5
NOA pmax pmax
comp=Z,2.0nm,1.1s
BR131 Keskin Array S 82.84 312 eP P 23 47 15.3 -0.5
comp=Z,0.7nm,0.4s,mb3.8
BRTR Keskin Array B 82.84 312 P P 23 47 15.5 -0.3
comp=Z,1.7nm,0.8s,mb3.9,baz=100,slow=4.9,SNR=9.4
BRTR Keskin Array B 82.84 312 P P 23 47 15.5 -0.3
BRTR pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 94.08 52 P P 23 48 15.5 +5.6
comp=Z,0.3nm,0.8s,mb3.7,baz=258,slow=2.6,SNR=3.0
TORD Torodi Ar. Bea 121.45 312 PKP PKPdf 23 53 44.0 -0.9
comp=Z,0.6nm,1.1s,baz=10,slow=1.0,SNR=10

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*DDA **04** 00:03:35.9, 38.35N×28.41E, h7km±5km, Md2.5*
*CSEM **04** 00:03:36.6±0.2, 38.35N×28.68E, h5km, MD2.6, Error ellipse: s-maj=4.0km s-min=2.3km az=155.0*
*ISCJB **04** 00:03:37.8±1.2, 38.35N±0.06×28.61E±0.05, h4km±8km, Error ellipse: s-maj=11.0km s-min=6.1km az=12.7*
*ISK **04** 00:03:38.3, 38.41N×28.61E, h7km, MD2.6*
ISC 04 00:03:38.3±1.3**, 38.37N**±0.08×**28.61E**±0.05**, h7**km±9km**, n8,** σ**0.49**/13**, 1C, Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MANT Manisa 0.13 343⇑iP Pg 00 03 41.1 0.0
MANT iS Sg 00 03 42.6 -0.3
KULA Kula-Manisa 0.15 16 PG Pg 00 03 41.4 -0.1
KULA eSG Sg 00 03 43.2 -0.4
KHAL Karahalli 0.70 89 iP Pg 00 03 52.1 +0.4
KHAL iS Sg 00 04 00.8 0.0
AKS Akhisar 0.80 310 ePG Pg 00 03 53.7 0.0
AKS eSG Sg 00 04 05.0 +0.8
GDZ Gediz 0.99 43 eP Pg 00 03 56.6 -0.8
GDZ eS Sg 00 04 11.4 +1.1
BLCB Balcova 1.23 271 ePN Pn 00 04 01.8 -0.1
DST Dursunbey 1.24 1 ePN Pn 00 04 01.6 -0.4
BALB Balikesir 1.39 336 ePN Pn 00 04 04.1 0.0

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*MOS **04** 00:04:58.0±0.9, 1.58N×126.96E, h40km, mb5.3/35, Error ellipse: s-maj=11.5km s-min=5.7km az=112.4*
*BJI **04** 00:05:00.8, 1.44N×126.96E, h72km, mB5.2, mb5.1, Ms4.7, Msz4.4*
*ISCJB **04** 00:05:01.9±0.2, 1.56N±0.02×127.03E±0.03, h76km, mb5.1/112, Error ellipse: s-maj=4.7km s-min=3.2km az=159.6*
*IDC **04** 00:05:02.9±1.2, 1.54N×127.06E, h71km±10km, mb4.8/29, mb1 4.8/31, mb1mx4.8/32, mbtmp4.8/31, MS3.8/5, Ms1 3.8/5, ms1mx3.5/25, Error ellipse: s-maj=15.7km s-min=8.4km az=77.0*
*NEIC **04** 00:05:02.1±0.8, 1.55N×127.00E, h65km±8km, mb5.2/53, Error ellipse: s-maj=6.1km s-min=3.7km az=72.0*
NEIC Felt [II] on Ternate, Indonesia.
*GCMT **04** 00:05:02.1±0.4, 1.72N×126.86E, h62km±2km, MW5.1/68, Moment Tensor Solution. s27,c37; s68,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.91±.30; $M_{\theta\theta}$-0.00±.22; $M_{\phi\phi}$-4.91±.26; $M_{r\theta}$-1.44±.13; $M_{\theta\phi}$-2.24±.23; $M_{\phi r}$-1.65±.21; Best double couple: $M_0$5.78800×10^{16} NP1:ϕ_s11.00000°,δ35.00000°,λ75.00000°. NP2: ϕ_s210.00000°,δ56.00000°,λ101.00000°. Principal axes: T 5.4110, Plg76.0000°, Azm153.0000°; N 0.7510, Plg9.0000°, Azm24.0000°; P -6.1640, Plg11.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **04** 00:05:06, 1.56N×127.03E, h90km, Mw5.2/5*
ISC 04 00:05:03.8±0.2**, 1.53N**±0.02×**127.03E**±0.03**, h78**km**, h78**km±2.2km**:pP-P, n279,** σ**1.09**/269**, mb5.1**/112**, 19C-11D, Halmahera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MNI Manado 2.19 268 P Pn 00 05 38.2 0.0
LBMI Labuha 2.20 168 P Pn 00 05 39.8 +1.4
LBMI S Sn 00 06 11.3 +6.6
SWI Sorong 4.85 119 P Pn 00 06 15.8 +1.5
AAI Ambon 5.31 167 P Pn 00 06 23.8 +3.2
734nm,0.9s,5μm2.0nm
DAV Davao City (W) 5.69 345 P Pn 00 06 25.1 -0.8
110nm,0.3s,baz=188,slow=11,SNR=15
DAV S Sn 00 07 33.7 +3.8
166nm,0.3s,baz=285,slow=20,SNR=3.7
DAV Davao City (W) 5.69 345 P Pn 00 06 28.3 +2.5
1μm,0.7s,7.3nm
KCP Kidapawan 5.78 341⇑iP Pn 00 06 27.2 +0.2
KCP iS Sn 00 07 30.5 -1.5
CTBH Cotabato--PC H 6.30 334⇑eP Pn 00 06 32.7 -1.4
KDI Kendari 7.01 219 P Pn 00 06 43.8 0.0
241nm,0.8s,3μm0.9nm
PCI Palu 7.59 251 P Pn 00 06 56.9 +5.2
212nm,1.0s,2μm0.6nm
SCPH Surigao 8.34 349⇓eP Pn 00 07 02.7 +0.6
MYLDM Lahad Datu 9.26 293 ⇓P Pn 00 07 17.2 +2.7
TSM Tawau 9.55 287 ⇑P Pn 00 07 18.5 0.0
KAPI Kappang 9.75 228 Pn Pn 00 07 21.6 +0.3
572nm,0.5s,SNR=9.4
KAPI Kappang 9.75 228 P Pn 00 07 20.6 -0.7
5.0nm,0.3s,baz=42,slow=12,SNR=13
KAPI S Sn 00 09 06.6 -2.6
5.8nm,0.3s,baz=127,slow=20,SNR=7.3
KAPI Kappang 9.75 228 ePn Pn 00 07 20.5 -0.8
KAPI eSn Sn 00 09 07.1 -2.0
KAPI Kappang 9.75 228 P Pn 00 07 21.4 +0.1
57nm,0.8s,450nm
SMKI Samarinda 10.01 259 P Pn 00 07 27.4 +2.5
SDKM Sandakan 10.63 293 ⇓P Pn 00 07 33.8 +0.5
RCP Roxas 10.84 337⇑iP Pn 00 07 36.0 -0.1
KKM Kota Kinabalu 11.69 293 ePn Pn 00 07 49.1 +1.5
145nm,0.8s
KKM Sn Sn 00 09 56.5 +0.1
KKM Kota Kinabalu 11.69 293 ⇓P Pn 00 07 51.0 +3.3
BATI Baumata 12.13 196 P Pn 00 07 57.3 +3.6
1.8nm,0.3s,baz=48,slow=15,SNR=5.3
SBUM Sibu 14.83 274 ⇑P Pn 00 08 34.7 +5.3
KAKA Kakadu 15.13 159 eP x 00 08 13.5
78nm,0.6s
KSM Kuching 16.72 270 ePn Pn 00 08 54.1 +0.9
95nm,0.8s
KSM eSn Sn 00 12 00.5 +2.0
FITZ Fitzroy Crossi 19.55 184 eP Pn 00 09 25.0 -2.4
GUMO Guam 21.33 55 P P 00 09 43.8 -0.9
84nm,0.7s,mb5.2,baz=232,slow=19,SNR=3.4
GUMO LR LR 00 16 09.0
comp=Z,195nm,20.8s,baz=270,slow=31
GUMO Guam 21.33 55 eP P 00 09 44.3 -0.3
GUMO pmax pmax
comp=Z,54nm,0.6s,mb5.0
GUMO Guam 21.33 55 eP P 00 09 44.3 -0.3
comp=Z,54nm,0.6s,mb5.0
TWG Pinlang 21.94 345 eP P 00 09 47.5 -3.5
comp=Z,78nm,0.5s,mb5.3
TWG ePcP PcP 00 13 47.2 -0.1
YULB Yu-li 22.43 346 eP P 00 09 51.8 -4.4
comp=Z,56nm,0.8s,mb5.0
YULB ePcP PcP 00 13 49.3 +1.0
WRAB Tennant Creek 22.50 162 P P 00 09 56.0 -1.0
comp=Z,2μm,0.7s,mb6.5
WRAB Tennant Creek 22.50 162⇑iP P 00 09 56.3 -0.7
WRAB Tennant Creek 22.50 162 eP P 00 09 56.2 -0.8
comp=Z,231nm,0.8s,mb5.6
WB2 Warramunga Arr 22.51 162 eP P 00 09 56.1 -1.0
WB2 eS S 00 13 57.0 -1.7
WB2 eSCP ScP 00 17 20.1 +0.7
WB2 ePCS PcS 00 17 25.1 -2.5
WB2 eSCS ScS 00 21 02.7 -2.2
TPUB Ta-pu 22.52 344 eP P 00 09 53.5 -3.6
comp=Z,123nm,0.8s,mb5.3
PMG Port Moresby 22.80 119 eP P 00 09 59.4 -0.8
PMG e 00 10 12.6
SSLB Suanglung 22.90 346 eP P 00 09 58.7 -2.4
comp=Z,46nm,0.7s,mb4.9
SSLB e 00 10 16.1
SSLB ePcP PcP 00 13 45.6 -3.7
SSLB eS S 00 14 03.7 -1.2
NACB Ninganchiao 23.12 347 P P 00 10 02.2 -1.0
YHNB Yeheng 23.65 347 eP P 00 10 06.7 -1.3
comp=Z,118nm,1.0s,mb5.2
MBWA Marble Bar 23.65 197 eP P 00 10 07.1 -1.0
comp=Z,65nm,0.8s,mb5.0
MBWA PcP PcP 00 13 52.9 +2.0
MBWA eS S 00 14 16.0 -1.2
KGM Kluang 23.70 272 ⇑P P 00 10 08.4 -0.3
KTGM Kuala Trenggan 24.15 280 ⇑P P 00 10 12.7 -0.1
QIZ Qiongzhong 24.21 317 P P 00 10 12.6 -0.7
QIZ AP 00 10 28.6
QIZ S S 00 14 24.2 -2.1
QIZ AMB AMB
comp=Z,90nm,1.1s,mb5.0
QIZ Qiongzhong 24.21 317 eP P 00 10 12.6 -0.7
comp=Z,59nm,1.0s,mb4.9
QIZ ePcP PcP 00 13 48.2 -3.9
XMIS Christmas Isla 24.39 240 eP P 00 10 12.4 -2.6
QZH Quanzhou 24.66 341⇓iP P 00 10 16.3 -1.0
QZH AMB AMB
comp=Z,110nm,0.7s,mb5.4
JOW Kunigami 25.19 3 P P 00 10 22.5 +0.4
comp=Z,46nm,0.6s,mb5.1,baz=172,slow=9.7,SNR=7.8
FRIM Kepong 25.44 274 ⇓P P 00 10 21.2 -3.4
ASAR Alice Springs 25.92 165 P P 00 10 28.2 -0.5
comp=Z,44nm,0.9s,mb4.9,baz=329,slow=5.6,SNR=106
ASAR PcP PcP 00 13 55.7 -0.2
comp=Z,4.3nm,0.5s,baz=350,slow=1.7,SNR=4.5
ASAR S S 00 15 01.5 +8.1
comp=Z,13nm,0.8s,baz=344,slow=20,SNR=14
ASAR ScP ScP 00 17 28.8 0.0
comp=Z,1.4nm,0.6s,baz=338,slow=2.7,SNR=4.1
ASAR ScS ScS 00 21 16.3 -2.2
comp=Z,0.9nm,0.8s,baz=340,slow=6.9,SNR=6.3
ASAR Alice Springs 25.92 165 P P 00 10 28.2 -0.5
ASAR 00 13 55.7
ASAR S S 00 15 01.5 +8.1
ASAR 00 21 16.3
IPM Ipoh 26.13 277 ⇑P P 00 10 30.0 -0.8
KKTK Khon Kaen 28.02 303 ⇓P P 00 10 46.5 -1.2
comp=Z,370nm,1.0s,mb5.9
CTA Charters Tower 28.58 140 eP P 00 10 53.4 +0.8
comp=Z,17nm,0.8s,mb4.7
CTA eSCP ScP 00 17 38.3 +1.5
CTA Charters Tower 28.58 140 P P 00 10 53.5 +0.8
comp=Z,26nm,1.0s,mb4.8,baz=322,slow=10,SNR=17
CTA ScP ScP 00 17 37.7 +0.9
comp=Z,11nm,0.7s,baz=305,slow=3.3,SNR=9.5
CTA Charters Tower 28.58 140 eP P 00 10 53.4 +0.8
CTA pmax pmax
comp=Z,17nm,0.8s
CTAO Charters Tower 28.58 140 eP P 00 10 53.2 +0.6
CTAO e 00 14 01.5
CTAO pmax pmax
comp=Z,24nm,0.8s,mb4.9
CTAO Charters Tower 28.58 140 eP P 00 10 53.2 +0.6
comp=Z,24nm,0.8s,mb4.9
CTAO ePcP PcP 00 14 01.5 -0.8
CBIJ Chichi jima 29.29 28 P P 00 10 57.2 -1.6
comp=Z,68nm,0.7s,mb5.4,baz=225,slow=16,SNR=3.6
WHN Wuhan 31.26 339 P P 00 11 16.5 +0.3
NJ2 Nanjing 31.33 347 eP P 00 11 19.2 +2.4
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
GYA Guiyang 31.59 323⇑iP P 00 11 20.1 +1.0
GYA AP pP 00 11 39.6 +2.1
GYA XP sP 00 11 49.2 +2.5
GYA PP PP 00 12 24.3 -7.6
GYA PPP 00 12 41.2
GYA PCP PcP 00 14 11.3 +1.3
GYA S S 00 16 24.5 +2.0
GYA XS sS 00 16 53.6 -0.5
GYA SCP ScP 00 17 46.0 -0.5
GYA PCS PcS 00 17 54.0 -0.7
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,170nm,5.0s
GYA LR LR
comp=N,980nm,16.3s
GYA LR LR
comp=E,750nm,17.8s
GYA LR LR
comp=Z,1μm,18.3s
FORT Forrest 32.14 178 eP P 00 11 23.4 -0.5
comp=Z,129nm,0.6s,mb5.8
FORT ePCP PcP 00 14 11.7 +0.3
FORT eS S 00 16 28.4 -2.5
CM31 Chiang Mai Arr 32.28 303 eP P 00 11 24.6 -0.8
CMAR Chiang Mai Arr 32.28 303 P P 00 11 24.4 -0.9
comp=Z,12nm,0.8s,mb4.7,baz=128,slow=7.4,SNR=66
CMAR ScP ScP 00 17 48.8 -0.2
comp=Z,1.8nm,0.9s,baz=160,slow=2.4,SNR=8.5
CMAR LR LR 00 24 09.7
comp=Z,82nm,19.2s,baz=115,slow=36
CMAR Chiang Mai Arr 32.28 303 iP P 00 11 24.5 -0.8
CMAR pmax pmax
comp=Z,12nm,0.8s
CHG Chiang Mai 32.45 304 P P 00 11 25.9 -0.9
comp=Z,40nm,0.7s,mb5.2
CHTO Chiang Mai 32.45 304 P P 00 11 26.3 -0.5
SNR=6.4
CHTO Chiang Mai 32.45 304 eP P 00 11 25.6 -1.2
CHTO pmax pmax
comp=Z,30nm,0.7s,mb5.1
CHTO Chiang Mai 32.45 304 eP P 00 11 25.6 -1.2
comp=Z,30nm,0.7s,mb5.1
COCO West Island 32.94 245 eP P 00 11 29.9 -1.2
comp=Z,68nm,0.8s,mb5.5
KMI Kunming 33.16 317 P P 00 11 33.6 +0.6
KMI AP pP 00 11 50.6 -0.8
KMI PP PP 00 12 49.4 0.0
KMI PPP 00 13 07.1
KMI S S 00 16 47.3 +0.3
KMI XS sS 00 17 16.9 -1.8
KMI SS SS 00 18 55.3 -18
KMI AMB AMB
comp=Z,24nm,0.8s,mb5.1
KMI AMB AMB
comp=Z,118nm,4.8s
KMI LR LR
comp=N,241nm,11.9s
KMI LR LR
comp=E,233nm,14.5s
KLBR Kellerberrin 34.09 194 eP P 00 11 40.7 -0.2
comp=E,105nm,0.7s,mb5.8
KLBR ePCP PcP 00 14 17.2 +0.3
MUN Mundaring 34.87 196 eP P 00 11 47.4 -0.2
EIDS Eidsvold 35.45 141 eP P 00 11 52.5 -0.3
comp=E,58nm,0.9s,mb5.4
NWAO Narrogin (SRO) 35.50 194 P P 00 11 53.0 0.0
comp=E,42nm,0.6s,mb5.4,baz=20,slow=8.9,SNR=52
NWAO PcP PcP 00 14 20.9 0.0
comp=E,9.4nm,0.7s,baz=340,slow=3.5,SNR=3.2
NWAO ScP ScP 00 18 00.2 +0.2
comp=E,12nm,1.0s,baz=29,slow=6.6,SNR=3.6
NWAO Narrogin (SRO) 35.50 194 P P 00 11 53.1 +0.1
NWAO 00 14 20.9
NWAO Narrogin (SRO) 35.50 194 P P 00 11 53.0 0.0
NWAO PcP PcP 00 14 20.9 0.0
NWAO ScP ScP 00 18 00.2 +0.2
KSRS Korea Array 35.76 1 P P 00 11 55.6 +0.4
comp=E,5.5nm,0.7s,mb4.6,baz=179,slow=9.9,SNR=11
KSRS PcP PcP 00 14 21.9 +0.3
comp=E,3.1nm,0.7s,baz=196,slow=1.5,SNR=6.2
KSRS LR LR 00 26 01.9
comp=E,61nm,21.3s,baz=0.0,slow=35
STKA Stephens Creek 35.98 159 eP P 00 11 56.9 -0.3
comp=E,57nm,0.6s,mb5.7
STKA Stephens Creek 35.98 159 P P 00 11 57.0 -0.2
comp=E,71nm,0.7s,mb5.7,baz=331,slow=8.4,SNR=133
STKA PcP PcP 00 14 22.0 -0.4
comp=E,8.4nm,0.7s,baz=323,slow=5.1,SNR=3.1
STKA Stephens Creek 35.98 159 eP P 00 11 57.0 -0.2
STKA e pP 00 12 15.6 -0.1
STKA ePcP PcP 00 14 21.7 -0.7
STKA S S 00 17 32.3 +2.1
STKA eScP ScP 00 18 00.9 -1.0
MAJO Matsushiro 36.34 15 eP P 00 11 58.8 -1.4
MAJO pmax pmax
comp=Z,14nm,0.6s,mb5.1
MAJO Matsushiro 36.34 15 eP P 00 11 58.8 -1.4
comp=Z,14nm,0.6s,mb5.1
MAT Matsushiro 36.34 15 P P 00 11 58.6 -1.6
MJAR Matsushiro Arr 36.34 15 P P 00 11 58.7 -1.5
comp=Z,10nm,0.6s,mb4.9,baz=186,slow=9.2,SNR=19
XAN Xi'an 36.51 334 P P 00 12 00.3 -1.4
XAN AP pP 00 12 20.0 -0.3
XAN PP PP 00 13 27.8 +1.5
XAN PCP PcP 00 14 24.1 +0.1
XAN S S 00 17 42.1 +3.8
XAN PCS PcS 00 18 12.3 +0.4
XAN AMB AMB
comp=Z,11nm,0.8s,mb4.8
CD2 Chengdu 36.60 325 P P 00 12 01.4 -1.1
CD2 AP pP 00 12 20.1 -1.0
CD2 XP sP 00 12 28.8 -1.4
CD2 PP PP 00 13 27.6 +0.3
CD2 PCP PcP 00 14 24.3 0.0
CD2 S S 00 17 40.6 +0.9
CD2 XS sS 00 18 11.5 -0.2
CD2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CD2 AMB AMB
comp=Z,160nm,5.1s
CD2 LR LR
comp=N,350nm,8.4s
CD2 LR LR
comp=Z,260nm,5.3s
ARMA Armidale 39.48 146 eP P 00 12 28.0 +1.3
BJT Baijiatuau 39.56 347 eP P 00 12 25.2 -2.1
BJT pmax pmax
comp=Z,91nm,0.8s
BJT Baijiatuau 39.56 347 eP P 00 12 25.2 -2.0
comp=Z,91nm,0.8s,mb5.7
BJI Beijing 39.59 347 P P 00 12 25.9 -1.5
BJI AMB AMB
comp=Z,114nm,0.9s,mb5.7
BJI AMB AMB
comp=Z,191nm,4.5s
BJI LR LR
comp=N,186nm,17.0s
BJI LR LR
comp=E,160nm,16.7s
SNY Shenyang 40.24 356 ⇑P P 00 12 33.1 +0.3
SNY AMB AMB
comp=Z,20nm,1.1s,mb4.9
SNY AMB AMB
comp=Z,325nm,4.7s
SNY LR LR
comp=Z,277nm,16.1s
LZH Lanzhou 40.55 331 eP P 00 12 35.3 -0.2
LZH AP pP 00 12 58.0 +3.6
LZH PP PP 00 14 13.6 +3.2
LZH S S 00 18 37.5 -1.6
LZH AMB AMB
comp=Z,145nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,467nm,6.7s
LZH LR LR
comp=N,675nm,14.8s
LZH LR LR
comp=Z,1μm,17.6s
SHL Shillong 41.44 308 iP P 00 12 44.0 +1.0
SHL ex x 00 18 25.0
HHC Hu-ho-hao-te 41.57 342 eP P 00 12 44.5 +0.7
HHC AP pP 00 13 02.8 +0.1
HHC XP sP 00 13 11.7 0.0
HHC PP PP 00 14 26.3 +4.9
HHC AMB AMB
comp=Z,45nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,268nm,4.2s
HHC LR LR
comp=N,224nm,16.6s
HHC LR LR
comp=E,154nm,16.7s
HHC LR LR
comp=Z,287nm,21.4s
CN2 Changchun 42.12 358 eP P 00 12 51.0 +2.8
CNB Canberra Magne 42.19 152 eP P 00 12 49.8 +0.9
TOO Toolangi 42.49 158 eP P 00 12 52.5 +1.1
MDJ Mudanjiang 42.97 3 P P 00 12 56.4 +1.3
MDJ AMB AMB
comp=Z,19nm,1.1s,mb4.7
MDJ AMB AMB
comp=Z,77nm,3.6s
MDJ Mudanjiang 42.97 3 eP P 00 12 55.9 +0.8
comp=Z,18nm,0.9s,mb4.8
LSA Lhasa 44.13 313 P P 00 13 05.2 +0.5
LSA Lhasa 44.13 313 eP P 00 13 05.1 +0.4
LSA e 00 14 46.9
LSA pmax pmax
comp=Z,19nm,0.6s,mb5.0
LSA Lhasa 44.13 313 eP P 00 13 05.1 +0.4
comp=Z,19nm,0.6s,mb5.0
LSA ePcP PcP 00 14 46.9 -1.7
ASAJ Asahikawa 44.60 16 P P 00 13 08.6 +0.3
comp=Z,13nm,0.9s,mb4.7,baz=229,slow=15,SNR=4.1
GTA Gaotai 45.13 330 P P 00 13 12.7 +0.2

GTA AP pP 00 13 30.0 -1.7
GTA XP sP 00 13 38.8 -1.8
GTA PCP PcP 00 14 56.4 +4.6
GTA SCP ScP 00 18 37.9 +0.3
GTA AMB AMB
comp=Z,13nm,1.1s,mb4.6
GTA AMB AMB
comp=Z,78nm,5.4s
GTA LR LR
comp=N,152nm,15.5s
GTA LR LR
comp=E,223nm,14.0s
GTA LR LR
comp=Z,172nm,16.7s
TAPN Taplejung 45.58 308 *e*P **P 00 13 15.5 -0.7**
comp=Z,16nm,0.5s,mb5.0
ODAN Odare 45.61 307 *e*P **P 00 13 15.7 -0.8**
comp=Z,50nm,0.8s,mb5.3
RAMN Ramite 46.28 307 *e*P **P 00 13 21.3 -0.5**
comp=Z,27nm,0.6s,mb5.2
JIRN Jiri 46.92 307 *e*P **P 00 13 26.2 -0.6**
comp=Z,35nm,0.7s,mb5.2
HABR Khabarovsk 47.27 7 *e*P **P 00 13 28.7 -0.4**
HABR *e**PP pP 00 13 37.3 -11
HABR *e*PPP 00 16 03.9
HABR *e*S **S 00 20 18.9 +2.3**
HABR *e**SS sS 00 20 37.5 -12
HABR *e* 00 23 18.3
GUN Gumba 47.28 308 *e*P **P 00 13 29.0 -0.5**
comp=Z,35nm,0.4s,mb5.4
YSS Yuzh-Sakhalins 47.28 15 P **P 00 13 28.6 -0.6**
PKI Pulchoki 47.50 307 *e*P **P 00 13 30.1 -1.2**
comp=Z,14nm,0.5s,mb5.1
PKI Pulchoki 47.50 307 *e*P **P 00 13 30.1 -1.2**
PKI pmax pmax
comp=Z,14nm,0.5s,mb5.0
KLR Kul'dur 47.69 4 *e*P **P 00 13 29.0 -3.4**
KKN Kakani 47.70 307 *e*P **P 00 13 31.8 -1.0**
comp=Z,19nm,0.5s,mb5.2
KKN Kakani 47.70 307 *e*P **P 00 13 31.8 -1.0**
KKN pmax pmax
comp=Z,19nm,0.5s,mb5.2
DMN Daman 47.76 307 *e*P **P 00 13 32.6 -0.7**
comp=Z,15nm,0.5s,mb5.0
TAU Tasmania Unive 47.86 160 *e*P **P 00 13 33.1 -0.7**
HIA Hailar 47.97 354 *e*P **P 00 13 34.5 0.0**
HIA *e* 00 15 00.9
HIA *e* 00 15 28.8
HIA pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 47.97 354 *e*P **P 00 13 34.5 0.0**
comp=Z,11nm,0.8s,mb4.7
HIA *e*PcP PcP 00 15 00.8 -0.7
HIA *e*PP PP 00 15 28.8 +1.5
HIA *e*ScP ScP 00 18 48.6 -0.6
GKN Gorkha 48.30 307 *e*P **P 00 13 36.4 -1.1**
comp=Z,14nm,0.4s,mb5.2
KOLN Koldanda 49.04 306 *e*P **P 00 13 42.6 -0.5**
comp=Z,65nm,0.5s,mb5.8
DANN Dangsing 49.15 307 *e*P **P 00 13 43.3 -0.7**
comp=Z,57nm,0.5s,mb5.8
ULN Ulaanbaatar 49.29 342 ⇓P **P 00 13 45.8 +1.1**
SNR=18
ULN Ulaanbaatar 49.29 342 *e*P **P 00 13 45.4 +0.7**
ULN *e* pP 00 14 05.7 +1.6
ULN pmax pmax
comp=Z,53nm,1.0s,mb5.4
ULN Ulaanbaatar 49.29 342 *e*P **P 00 13 45.4 +0.7**
comp=Z,53nm,1.0s,mb5.4
ULN *e* pP 00 14 05.7 +1.6
SONM Songino Array 49.47 342 P **P 00 13 46.8 +0.7**
comp=Z,20nm,0.8s,mb5.1,baz=157,slow=8.0,SNR=87
SONM LR LR 00 38 27.9
comp=Z,274nm,20.3s,baz=338,slow=40
HYB Hyderabad 50.17 291 *e*P **P 00 13 50.5 -1.4**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.4
HYB Hyderabad 50.17 291 *i*P **P 00 13 50.5 -1.4**
comp=Z,50nm,1.0s,mb5.4
HYB *e*pP pP 00 14 08.0 -3.3
HYB Hyderabad 50.17 291 *e*P **P 00 13 50.5 -1.4**
comp=Z,50nm,1.0s,mb5.4
ZAK Zakamensk 52.69 341 *e*P **P 00 14 11.5 +1.4**
ZAK pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
TLY Talaya 53.70 342 *e*P **P 00 14 19.7 +2.2**
TLY pmax pmax
comp=Z,13nm,0.8s,mb5.0
TLY MLR MLR
comp=Z,169nm,20.0s
TLY Talaya 53.70 342 *e*P **P 00 14 19.7 +2.2**
comp=Z,11nm,0.7s,mb5.0
DDI Dehra Dun 54.50 307 *ex* x 00 14 19.0
MOY Mondy 54.54 340 *e*P **P 00 14 24.9 +1.3**
MOY pmax pmax
comp=Z,4.0nm,1.9s,mb4.1
WMQ Urumqi 54.70 326 P **P 00 14 26.1 +1.2**
WMQ XP sP 00 14 52.7 -0.7
WMQ PCP PcP 00 15 29.6 +2.8
WMQ AMB AMB
comp=Z,50nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,172nm,5.5s
WMQ LR LR
comp=N,125nm,23.0s
WMQ LR LR
comp=E,110nm,26.0s
WMQ LR LR
comp=Z,243nm,23.0s
POO Poona 54.78 292 *ex* x 00 14 21.5
BOD Bodaibo 57.07 352 *e*P **P 00 14 41.7 +0.1**
BOD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
THN Thein Dam 57.15 308 *e*P **P 00 14 40.4 -2.2**
PETK Petropavlovsk- 57.35 21 P **P 00 14 44.0 +0.3**
comp=Z,9.5nm,0.7s,mb4.9,baz=178,slow=5.0,SNR=9.0
PETK S **S 00 22 44.9 +11**
comp=Z,1.4nm,0.8s,baz=241,slow=9.5,SNR=2.2
NIL Nilore 59.51 309 *e*P **P 00 14 58.6 -0.5**
NIL *e* 00 17 09.7
NIL pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
NIL Nilore 59.51 309 *e*P **P 00 14 58.5 -0.6**
comp=Z,6.6nm,0.6s,mb4.8
NIL *e*PP PP 00 17 09.7 -1.7
MK31 Makanchi Array 59.53 326 *e*P **P 00 14 59.5 +0.5**
MKAR Makanchi Array 59.53 326 P **P 00 14 59.4 +0.4**
comp=Z,32nm,0.4s,mb5.7,baz=120,slow=7.9,SNR=356
MKAR ScP ScP 00 19 39.1 -0.6
comp=Z,1.8nm,0.8s,baz=130,slow=4.5,SNR=5.1
MKAR S **S 00 23 04.8 +2.1**
comp=Z,2.9nm,1.1s,baz=144,slow=12,SNR=5.1
MKAR Makanchi Array 59.53 326 *i*P **P 00 14 59.4 +0.4**
MKAR pmax pmax
comp=Z,32nm,0.4s
KSH Kashi 59.81 316 P **P 00 15 02.8 +1.7**
KSH AP pP 00 15 22.1 +1.0
KSH XP sP 00 15 30.2 +0.4
KSH PCP PcP 00 15 48.4 +1.4
KSH PP PP 00 17 17.4 +3.5
KSH PPP 00 18 43.0
KSH SCP ScP 00 19 41.1 -0.1
KSH PCS PcS 00 19 49.2 0.0
KSH S **S 00 23 06.5 -0.2**
KSH XS sS 00 23 39.5 -1.2
KSH SCS ScS 00 24 42.7 -1.7
KSH SS SS 00 27 03.9 -0.2
KSH AMB AMB
comp=Z,16nm,1.2s,mb4.9
KSH AMB AMB
comp=Z,20nm,3.2s
KSH LR LR
comp=N,70nm,5.9s
KSH LR LR
comp=E,68nm,5.2s
KSH LR LR
comp=Z,67nm,5.2s
YAK Yakutsk 60.39 1 *e*P **P 00 15 03.4 -1.1**
YAK pmax pmax
comp=Z,36nm,0.7s,mb5.5
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.6s
YAK Yakutsk 60.39 1 *e*P **P 00 15 05.2 +0.6**

YAK *e* 00 15 33.4
URZ Urewera 60.75 136 P **P 00 15 06.5 -0.9**
comp=E,18nm,0.7s,mb5.2,baz=321,slow=3.3,SNR=18
KRAR Krasnoyarsk 60.89 339 *i*P **P 00 15 10.6 +2.5**
KRAR pmax pmax
comp=Z,16nm,0.3s,mb5.5
KZA Kyzart 61.44 318 P **P 00 15 13.7 +1.6**
SNR=32
TKM2 Tokmak 2 61.59 319 *e*P **P 00 15 13.6 +0.5**
TKM2 00 15 53.4
TKM2 pmax pmax
comp=Z,43nm,1.1s,mb5.4
TKM2 Tokmak 2 61.59 319 P **P 00 15 13.9 +0.9**
SNR=25
TKM2 Tokmak 2 61.59 319 *e*P **P 00 15 13.6 +0.5**
comp=Z,43nm,1.1s,mb5.4
TKM2 PcP PcP 00 15 53.4 -0.7
KBK Karagaybulak 61.90 319 P **P 00 15 16.3 +1.1**
SNR=18
UCH Uchtor 62.00 318 P **P 00 15 17.9 +2.0**
SNR=6.2
UCH Uchtor 62.00 318 *e*P **P 00 15 17.0 +1.2**
comp=Z,8.8nm,0.7s,mb4.9
CHMS Chumysh 62.18 319 P **P 00 15 17.7 +0.7**
SNR=9.7
AAK Ala-Archa 62.19 319 P **P 00 15 18.2 +1.1**
comp=Z,95nm,1.2s,mb5.7,SNR=10
AAK Ala-Archa 62.19 319 ⇑P **P 00 15 17.9 +0.8**
SNR=14
AAK Ala-Archa 62.19 319 *e*P **P 00 15 17.7 +0.6**
USP Ospenovka 62.47 319 P **P 00 15 19.5 +0.6**
SNR=43
EKS2 Erkin-Say 62.67 318 P **P 00 15 21.5 +1.2**
SNR=25
EKS2 Erkin-Say 62.67 318 *e*P **P 00 15 20.6 +0.3**
comp=Z,44nm,1.1s,mb5.3
ZALV Zalesovo Beam 62.68 333 P **P 00 15 19.3 -0.8**
comp=Z,14nm,0.7s,mb5.0,baz=116,slow=6.8,SNR=61
ZALV Zalesovo Beam 62.68 333 P **P 00 15 19.3 -0.8**
KBL Kabul 63.10 308 *e*P **P 00 15 23.2 -0.2**
KBL pmax pmax
comp=Z,23nm,0.8s,mb5.2
KBL Kabul 63.10 308 *e*P **P 00 15 23.2 -0.2**
comp=Z,22nm,0.8s,mb5.2
KURK Kurchatov 63.75 328 P **P 00 15 27.9 +0.6**
SNR=32
KURK Kurchatov 63.75 328 P **P 00 15 27.1 -0.1**
comp=Z,78nm,0.6s,mb5.7,baz=128,slow=6.2,SNR=95
KURK S **S 00 23 53.9 -2.1**
comp=Z,0.8nm,0.5s,baz=132,slow=15,SNR=4.3
KURK Kurchatov 63.75 328 P **P 00 15 27.5 +0.2**
KURK Kurchatov 63.75 328 *e*P **P 00 15 26.8 -0.5**
comp=Z,128nm,0.7s,mb5.9
NVS Novosibirsk 63.96 334 *i*P **P 00 15 28.0 -0.6**
NVS *i*S **S 00 23 50.7 -7.7**
NVS *i* 00 25 08.7
NVS pmax pmax
comp=Z,39nm,1.0s,mb5.2
NVS pmax pmax
comp=N,14nm,0.8s
NVS pmax pmax
comp=E,20nm,1.2s
NVS smax
comp=N,15nm,2.0s
NVS smax
comp=E,14nm,1.5s
SEY Seymchan 64.10 13⇑ *e*P **P 00 15 30.6 +1.3**
KK31 Karatay Array 65.04 318 *i*P **P 00 15 36.1 +0.2**
KK31 pmax pmax
comp=Z,54nm,1.0s,mb5.3
CASY Casey 68.68 187 *e*P **P 00 15 58.5 0.0**
CASY *e* pP 00 16 17.5 -1.4
VOSK Vostochnaya 68.86 327 P **P 00 15 59.3 -0.6**
VOSK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BVA0 Borovoye Array 69.32 327 *i*P **P 00 16 02.5 -0.2**
BVA0 pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
BVAR Borovoye Array 69.32 327 P **P 00 16 02.6 -0.2**
comp=Z,27nm,0.9s,mb5.1,baz=133,slow=7.9,SNR=100
BVAR S S 00 25 02.6 -0.6
comp=Z,4.2nm,1.1s,baz=123,slow=12,SNR=8.5
BRVK Borovoye 69.39 327 P **P 00 16 03.6 +0.4**
comp=Z,238nm,0.8s,mb6.1,SNR=18
BRVK Borovoye 69.39 327 P **P 00 16 04.0 +0.8**
SNR=12
BRVK Borovoye 69.39 327 *e*P **P 00 16 03.3 +0.1**
BRVK pmax pmax
comp=Z,44nm,1.0s,mb5.2
BRVK Borovoye 69.39 327 *e*P **P 00 16 03.3 +0.1**
comp=Z,44nm,1.0s,mb5.2
TIXI Tiksi 70.03 1⇑ *e*P **P 00 16 06.5 -0.2**
TIXI pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
TIXI Tiksi 70.03 1 *e*P **P 00 16 06.3 -0.5**
comp=Z,8.3nm,0.6s,mb4.7
ARQ Araqi 71.52 294 P **P 00 16 17.1 +0.4**
SNR=6.3
BILL Bilibino 71.59 15⇑ *e*P **P 00 16 16.3 0.0**
BILL *e*S S 00 25 33.7 +4.5
BILL pmax pmax
comp=Z,14nm,2.0s,mb4.5
BILL MLR MLR
comp=Z,100nm,19.0s
MIR Mirnyy 72.10 194⇑ *i*P **P 00 16 20.0 +0.7**
ABKT Ailbek 72.50 309 P **P 00 16 23.6 +1.2**
comp=Z,310nm,0.8s,mb6.2,SNR=19
WHFO Wadi Hawf 73.61 288 P **P 00 16 29.4 +0.2**
SNR=6.4
AB31 Akbulak array 74.04 321 P **P 00 16 30.9 -0.2**
AB31 pmax pmax
comp=Z,17nm,0.8s,mb4.8
AKTK Aktyubinsk 75.56 322 P **P 00 16 40.1 +0.2**
AKTK S S 00 26 12.8 -1.7
AKTO Aktyubinsk 75.56 322 P **P 00 16 40.1 +0.2**
comp=Z,15nm,0.7s,mb4.9,baz=111,slow=7.7,SNR=51
AKTO S S 00 26 12.8 -1.7
comp=Z,0.6nm,0.6s,baz=72,slow=19,SNR=6.7
SVE Sverdlovsk 75.98 329⇓ *e*P **P 00 16 42.2 0.0**
SVE pmax pmax
comp=Z,22nm,0.7s,mb5.0
ARU Arti 76.95 328 P **P 00 16 47.7 +0.1**
comp=Z,98nm,0.9s,mb5.5,SNR=6.9
ARU Arti 76.95 328 *i*P **P 00 16 46.4 -1.2**
ARU *e* 00 19 38.2
ARU *e*PPP 00 21 27.5
ARU *e*S S 00 26 32.4 +2.9
ARU SS SS 00 31 26.1 -1.6
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.6
ARU Arti 76.95 328 *e*P **P 00 16 47.1 -0.5**
SDPT Sand Point 78.84 34 *e*P **P 00 16 58.0 -0.2**
comp=Z,113nm,0.6s,mb5.9
UMR Umm Al-Rimmam 79.95 300 *e*P **P 00 17 05.2 +0.4**
baz=300
UMR AMb AMB 00 17 06.3
comp=Z,120nm,0.7s,mb5.8,baz=300
MIB Mutribah 80.30 300 *e*P **P 00 17 07.1 +0.4**
baz=300
MIB AMb AMB 00 17 08.1
comp=Z,170nm,0.8s,mb5.9,baz=300
NAY Al-Naaiem 80.34 299 *e*P **P 00 17 07.0 +0.1**
baz=299
NAY AMb AMB 00 17 08.2
comp=Z,64nm,0.8s,mb5.5,baz=299
VNDA Vanda 81.22 173 P **P 00 17 10.4 -0.2**
comp=Z,11nm,0.8s,mb4.8,baz=317,slow=6.3,SNR=58
VNDA S S 00 27 13.9 -0.2
comp=Z,0.3nm,0.4s,baz=270,slow=16,SNR=6.0
MAW Mawson 81.81 200⇑ *i*P **P 00 17 14.4 +0.6**
comp=Z,19nm,0.6s,mb5.1
MAW Mawson 81.81 200 P **P 00 17 14.2 +0.4**
comp=Z,20nm,0.6s,mb5.1,baz=76,slow=5.6,SNR=46
MAW Mawson 81.81 200⇑ *i*P **P 00 17 14.4 +0.6**
MAW pmax pmax
comp=Z,19nm,0.6s
SBA Scott Base 82.13 172 *e*P **P 00 17 15.5 +0.1**
SBA pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
SBA Scott Base 82.13 172 *e*P **P 00 17 15.5 +0.2**
comp=Z,7.7nm,0.8s,mb4.6
SVW2 Sparrevohn 82.58 29 *e*P **P 00 17 19.3 +1.3**
DGRG David-gareji 82.73 311 P **P 00 17 20.7 +1.4**
OHAK Old Harbor 83.13 33 *e*P **P 00 17 21.7 +0.8**
comp=Z,178nm,1.8s,mb5.6
MTA Mtatsminda 83.19 312 P **P 00 17 22.3 +0.7**

KDAK Kodiak Island 83.58 32 *e*P **P 00 17 23.7 +0.4**
comp=Z,17nm,0.6s,mb5.0
PPT Papeete 84.16 108 LR LR 00 49 07.5
comp=Z,99nm,19.6s,baz=249,slow=31
ONI Oni 84.24 312 P **P 00 17 30.7 +3.7**
KIV Kislovodsk 84.87 314 *e*P **P 00 17 31.3 +1.2**
KIV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIV Kislovodsk 84.87 314 *e*P **P 00 17 29.4 -0.7**
comp=Z,15nm,1.0s,mb4.9
KIV *e* 00 17 59.0
PMR Palmer 85.72 28 *e*P **P 00 17 34.0 +0.1**
PMR pmax pmax
comp=Z,30nm,1.0s,mb5.2
PMR Palmer 85.72 28 *e*P **P 00 17 34.0 +0.1**
comp=Z,30nm,1.0s,mb5.2
COLD Coldfoot 85.79 23 *e*P **P 00 17 34.7 +0.5**
comp=Z,14nm,0.8s,mb5.0
MCK McKinley 85.99 26 *e*P **P 00 17 35.0 -0.2**
MCK pmax pmax
comp=Z,12nm,0.7s,mb4.9
MCK McKinley 85.99 26 *e*P **P 00 17 35.0 -0.3**
comp=Z,12nm,0.7s,mb4.9
COLA College 86.55 25 *e*P **P 00 17 37.6 -0.3**
KLMR Klimovskoe 87.46 331 P **P 00 17 41.5 -0.9**
KLMR pmax pmax
comp=Z,57nm,1.7s,mb5.2
ANN Anapa 88.65 315 *e*P **P 00 17 53.8 +5.4**
ANN pmax pmax
comp=Z,362nm,7.3s
OBN Obninsk 89.02 325⇓ *e*P **P 00 17 49.1 -0.9**
OBN *e*S S 00 28 21.1 -11
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
OBN Obninsk 89.02 325 *e*P **P 00 17 49.5 -0.5**
ASF Jabal al Asfar 89.31 302 P **P 00 17 53.6 +1.8**
comp=Z,4.4nm,0.8s,mb4.6,baz=45,slow=5.8,SNR=8.4
DAWY Dawson 90.21 26 *e*P **P 00 17 55.9 +0.5**
MMAI Mount Meron Ar 90.54 303 P **P 00 17 58.8 +1.2**
comp=Z,4.7nm,0.9s,mb4.6,baz=87,slow=7.4,SNR=3.5
JOF Joensuu 91.26 333 *e*p **P 00 18 04.3 +4.1**
comp=Z,1.0nm,0.4s,mb4.3
JOF Joensuu 91.26 333 *e*P **P 00 18 04.3 +4.1**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
QSPA South Pole Qui 91.45 180 P **P 00 18 01.2 +0.4**
comp=Z,2.7nm,0.3s,mb4.9,baz=349,slow=1.8,SNR=12
BR131 Keskin Array S 91.65 310 *e*P **P 00 18 02.7 +0.1**
comp=Z,2.7nm,0.8s,mb4.5
BRTR Keskin Array B 91.65 310 P **P 00 18 02.1 -0.5**
comp=Z,0.9nm,0.8s,mb4.1,baz=104,slow=5.9,SNR=4.8
ARCES ARCESS Array B 92.61 340 P **P 00 18 05.3 -1.0**
comp=Z,3.4nm,0.7s,mb4.8,baz=56,slow=4.8,SNR=6.8
SPITS Spitsbergen Ar 92.68 349 P **P 00 18 06.2 -0.4**
comp=Z,6.2nm,0.8s,mb5.0,baz=76,slow=8.2,SNR=3.6
KAF Kangasniemi 93.67 332 *e*p **P 00 18 10.5 -0.9**
comp=Z,1.4nm,0.4s,mb4.6
KAF Kangasniemi 93.67 332 *e*P **P 00 18 10.5 -0.9**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.5
AKASG Malin Array Be 93.78 321 P **P 00 18 13.3 +1.2**
comp=Z,1.1nm,0.5s,mb4.5,baz=68,slow=4.5,SNR=4.1
DLBC Dease Lake 95.47 31 P **P 00 18 19.9 +0.3**
comp=Z,3.5nm,0.9s,mb4.8,baz=342,slow=6.4,SNR=5.5
DLBC Dease Lake 95.47 31 P **P 00 18 19.9 +0.2**
BUR08 Bucovina Ar. S 96.84 318 *e*P **P 00 18 28.7 +2.5**
UZH Uzhgorod 98.56 320 *e*P **P 00 18 31.0 -2.9**
LSZ Lusaka 98.93 255 *e*P **P 00 18 36.9 +0.7**
NB2 NORSAR Subarra100.88 334 P Pdif 00 18 47.3 +3.2
comp=Z,1.7nm,0.8s,baz=57,slow=5.9
NOA NORSAR Array B 100.88 334 P Pdif 00 18 42.8 -1.3
comp=Z,0.7nm,0.7s,baz=56,slow=5.5,SNR=2.7
NOA PP PP 00 22 48.1 -4.2
comp=Z,1.0nm,0.8s,baz=68,slow=7.7,SNR=3.4
YKA Yellowknife Ar 101.36 25 P Pdif 00 18 45.8 -0.4
comp=Z,1.2nm,0.7s,baz=297,slow=4.7,SNR=11
YKA PKiKP PKiKP 00 23 09.8 -0.1
comp=Z,0.5nm,0.6s,baz=302,slow=1.6,SNR=4.5
YKA PKKPbc PKKPbc 00 34 54.1 -3.2
comp=Z,0.8nm,0.7s,baz=116,slow=2.9,SNR=7.2
SNAA Sanae 103.17 194 *e*P Pdif 00 18 54.3 +0.1
GERES GERESS Array B 103.98 321 Pdiff Pdif 00 19 03.8 +6.0
comp=Z,0.6nm,0.7s,baz=64,slow=6.1,SNR=3.6
VNA2 Neumayer--Watz 104.78 194 *e*PKiKP PKiKP 00 23 16.8 +0.8
baz=10.0,slow=0.4
VNA2 *e* 00 23 29.5
VNA3 Neumayer Olymp 105.09 193 *e*PKiKP PKiKP 00 23 16.9 +0.3
VNA3 *e* 00 23 23.7
VNA3 *e* 00 23 30.2
NVAR Mina Array Bea 108.14 49 Pdiff Pdif 00 19 18.0 +1.7
comp=Z,0.2nm,0.5s,baz=282,slow=4.5,SNR=2.6
NVAR PP PP 00 23 47.1 +0.1
comp=Z,0.9nm,0.7s,baz=269,slow=9.0,SNR=4.6
PDAR Pinedale Array 112.80 42 PKiKP PKiKP 00 23 32.2 +0.4
comp=Z,0.5nm,0.7s,baz=334,slow=1.1,SNR=4.0
PDAR PKKPbc PKKPbc 00 34 19.4 -1.8
comp=Z,0.7nm,0.6s,baz=102,slow=3.0,SNR=7.4
PDAR PKKPab PKKPab 00 34 27.9 -0.8
comp=Z,0.7nm,0.8s,baz=151,slow=5.7,SNR=5.1
ULM Lac du Bonnet 116.73 29 PKP PKPdf 00 23 36.6 -2.5
comp=Z,3.4nm,0.8s,baz=325,slow=5.9,SNR=3.8
ANMO Albuquerque 118.26 49⇑ *i*PKiKP PKPdf 00 23 44.0 +1.4
SCHQ Schefferville 122.68 9 PKP PKPdf 00 23 50.3 -0.2
comp=Z,4.4nm,0.8s,baz=323,slow=5.1,SNR=3.9
TXAR Lajitas Array 122.68 53 PKP PKPdf 00 23 51.0 -0.3
comp=Z,1.8nm,0.7s,baz=212,slow=0.7,SNR=23
TOA0 Torodi Ar. Sit 123.86 287 *e*PKPdf PKPdf 00 23 53.4 -0.4
TOA0 *e*PP PP 00 25 38.6 +0.7
TORD Torodi Ar. Bea 123.86 287 PKP PKPdf 00 23 53.3 -0.5
comp=Z,4.7nm,0.8s,baz=61,slow=1.8,SNR=29
TORD PP PP 00 25 30.9 -7.1
comp=Z,1.0nm,0.8s,baz=65,slow=5.8,SNR=3.6
TORD PKKPbc PKKPbc 00 33 40.9 +0.6
comp=Z,1.4nm,0.7s,baz=249,slow=3.0,SNR=12
TORD Torodi Ar. Bea 123.86 287 PKP PKPdf 00 23 53.3 -0.5
TORD PP PP 00 25 30.9 -7.1
TORD PKKPbc PKKPbc 00 33 40.9 +0.6
JCT Junction City 125.24 50 *e*PKiKP PKPdf 00 23 55.9 -0.2
KIC Kosan Boka 131.22 280 *e*PKiKP PKPdf 00 24 08.6 +0.6
comp=Z,49nm,1.1s
DBIC Dimbokro 131.29 280 PKP PKPdf 00 24 08.1 0.0
comp=Z,3.0nm,0.6s,baz=71,slow=3.7,SNR=12
DBIC SKPbc SKPbc 00 27 26.0 -0.4
comp=Z,5.4nm,0.7s,baz=54,slow=4.1,SNR=11
DBIC Dimbokro 131.29 280 PKP PKPdf 00 24 08.1 0.0
DBIC SKPbc SKPbc 00 27 26.0 -0.4
TIC Toumodi 131.46 280 *e*PKiKP PKPdf 00 24 08.7 +0.3
comp=Z,71nm,1.4s
LIC Lamto 131.52 280 *e*PKiKP PKPdf 00 24 09.1 +0.6
comp=Z,77nm,2.1s
LRAL Lakeview Retre 132.97 40 *e*PKPdf PKPdf 00 24 11.2 +0.4
TKL Tuckaleechee C 133.15 35 PKP PKPdf 00 24 10.9 -0.1
comp=Z,8.2nm,0.7s,baz=260,slow=6.1,SNR=9.8
PLCA Paso Flores 137.85 160 PKP PKPdf 00 24 20.7 +1.1
comp=Z,5.2nm,0.6s,baz=132,slow=0.7,SNR=12
PLCA SKPbc SKPbc 00 27 47.5 +0.8
comp=Z,2.7nm,0.8s,baz=218,slow=5.5,SNR=4.2
LCO Las Campanas 147.86 150 *e*PKPdf PKPbc 00 24 39.9 -0.7
LVC Limon Verde 153.94 145 PKP PKPdf 00 24 48.4 +1.3
comp=Z,4.4nm,0.8s,baz=214,slow=11,SNR=5.9
LVC PKPbc PKPbc 00 24 55.9 +0.8
comp=Z,7.1nm,0.8s,baz=227,slow=4.1,SNR=5.1
LVC PKPab PKPab 00 25 09.0 +0.6
comp=Z,4.3nm,0.6s,baz=266,slow=9.1,SNR=4.3
LVC Limon Verde 153.94 145 PKP PKPdf 00 24 48.4 +1.3
LVC PKPbc PKPbc 00 24 55.9 +0.8
LVC PKPab PKPab 00 25 09.0 +0.6
SDV Santo Domingo 159.58 59 *e*PKPdf PKPdf 00 24 54.4 -0.2
BDFB Brasilia 165.15 199 PKP PKPdf 00 25 00.6 +0.5
comp=Z,1.5nm,0.7s,baz=135,slow=19,SNR=5.5
BDFB PKPab PKPab 00 25 57.2 +0.1
comp=Z,3.1nm,0.7s,baz=159,slow=14,SNR=9.6
BDFB Brasilia 165.15 199 *e*PKiKP PKPdf 00 24 59.9 -0.1
BDFB 00 25 57.2
BDFB Brasilia 165.15 199 *e*PKPdf PKPdf 00 24 59.9 -0.1
BDFB PKP PKPdf 00 25 00.6 +0.5
BDFB PKPab PKPab 00 25 57.2 +0.1
BDFB *e*PKPab PKPab 00 25 57.3 +0.2

*MOS **04** 00:14:09.1±1.0, 42.13N±133.80E, h419km, mb4.3/35, Error ellipse: s-maj=8.8km s-min=6.6km az=103.6*
*ISCJB **04** 00:14:10.2±0.2, 42.13N±0.03×133.81E±0.02, h426km±2km, mb4.3/70, Error ellipse: s-maj=4.5km s-min=2.7km az=166.0*

*JMA **04** 00:14:10.5±0.3, 4208N×13427E, h486km, M4.3*
*IDC **04** 00:14:11.7±0.9, 42.14N×13379E, h442km±9km, mb3.7/23, mb1 3.8/27, mb1mx3.8/30, mbtmp3.7/27, Error ellipse: s-maj=10.6km s-min=8.7km az=180.0*
*BJI **04** 00:14:11.5, 42.19N×13381E, h458km, mB4.8, mb4.9*
*NEIC **04** 00:14:12.5±0.4, 42.12N×13376E, h448km±4km, mb4.6/39, Error ellipse: s-maj=4.5km s-min=3.2km az=158.0*
ISC 04 00:14:10.9±0.2, **4212N**±003×**13382E**±002, **h422**km±2km, **h429**km±8.8km**:pP-P, n529,** σ**0.68**/552, **mb4.3**/70, **150C-144D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**3.97**	**310**	P	**P**	**00 15 27.2**	**+3.4**
MDJ				S	**S**	**00 16 28.0**	**+4.7**
MDJ				PCP	PcP	00 21 51.7	+0.4
MDJ				SCP	ScP	00 24 39.9	-1.8
MDJ				PCS	PcS	00 25 23.8	+0.3
MDJ				AMB	AMB		
	comp=Z,361nm,0.9s						
MDJ	**Mudanjiang**	**3.97**	**310**	*e*P	**P**	**00 15 27.0**	**+3.1**
MDJ				*e*S	**S**	**00 16 28.5**	**+5.2**
JOSM	**Okushiri--Mats**	**4.21**	**89**	P	**P**	**00 15 26.5**	**+0.4**
JOSM				S	**S**	**00 16 32.8**	**+5.5**
JSH	**Shimam**	**4.64**	**81**	P	**P**	**00 15 31.0**	**+0.8**
JSH				S	**S**	**00 16 35.9**	**+1.0**
JOG2	**Oga 2**	**5.02**	**114**	P	**P**	**00 15 34.9**	**+0.8**
JOG2				S	**S**	**00 16 44.6**	**+2.7**
JKB	**Kayabe**	**5.38**	**90**	P	**P**	**00 15 37.9**	**+0.3**
JKB				S	**S**	**00 16 46.7**	**-1.7**
JOT	**Ohata**	**5.45**	**95**	P	**P**	**00 15 38.4**	**0.0**
JRG	**Rokugo**	**5.84**	**115**	P	**P**	**00 15 42.8**	**+0.3**
JRG				S	**S**	**00 16 56.1**	**-1.2**
JHR	**Hokuryu**	**6.03**	**72**	P	**P**	**00 15 45.2**	**+0.9**
JHR				S	**S**	**00 16 59.4**	**-1.3**
CN2	**Changchun**	**6.37**	**288**	*e*P	**P**	**00 15 51.4**	**+3.4**
CN2				*e*XP		00 17 03.7	
CN2				*e*S	**S**	**00 17 08.1**	**+0.6**
CN2				AMB	AMB		
	comp=Z,130nm,0.9s						
HABR	**Khabarovsk**	**6.42**	**7**	*e*P	**P**	**00 15 49.5**	**+1.1**
HABR				*e*S	**S**	**00 17 09.4**	**+1.1**
JMK	**Ichinoseki**	**6.46**	**117**	P	**P**	**00 15 48.1**	**-1.0**
JMK				S	**S**	**00 17 06.2**	**-3.2**
KSRS	**Korea Array**	**6.50**	**226**	P	**P**	**00 15 53.1**	**+3.5**
	comp=Z,3.4nm,0.3s,baz=41,slow=11,SNR=56						
KSRS				S	**S**	**00 17 14.8**	**+4.5**
	baz=52,slow=20,SNR=4.6						
KSRS	**Korea Array**	**6.50**	**226**	P	**P**	**00 15 53.2**	**+3.6**
KSRS				S	**S**	**00 17 14.8**	**+4.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MAJO	**Matsushiro**	**6.52**	**147**	P	**P**	**00 15 53.5**	**+3.7**
MJAR	**Matsushiro Arr**	**6.52**	**147**	P	**P**	**00 15 50.7**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=330,slow=9.8,SNR=6.8						
MJAR				S	**S**	**00 17 15.5**	**+4.9**
	comp=Z,0.3nm,0.3s,baz=310,slow=24,SNR=3.1						
MJAR	**Matsushiro Arr**	**6.52**	**147**	P	**P**	**00 15 50.7**	**+0.9**
MJAR				S	**S**	**00 17 15.5**	**+4.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JNG	**Nsakai**	**6.59**	**148**	S	**S**	**00 17 12.6**	**+0.5**
JWK2	**Keihoku**	**6.67**	**59**	P	**P**	**00 15 52.3**	**+1.1**
ASAJ	**Asahikawa**	**6.72**	**70**	P	**P**	**00 15 51.6**	**-0.2**
	comp=Z,46nm,0.3s,baz=257,slow=8.7,SNR=102						
ASAJ				S	**S**	**00 17 11.8**	**-2.7**
	comp=Z,8.5nm,0.3s,baz=15,slow=20,SNR=4.1						
ASAJ	**Asahikawa**	**6.72**	**70**	P	**P**	**00 15 51.7**	**-0.1**
ASAJ				S	**S**	**00 17 11.8**	**-2.7**
ASAJ				pmax	pmax		
	comp=Z,46nm,0.3s						
ASAJ				smax			
	comp=N,9.0nm,0.3s						
JFT	**Otama**	**6.80**	**130**	P	**P**	**00 15 52.5**	**-0.3**
JFT				S	**S**	**00 17 12.9**	**-3.2**
JMM	**Marumori**	**6.83**	**126**	P	**P**	**00 15 51.9**	**-1.2**
JMM				S	**S**	**00 17 12.5**	**-4.2**
ERM	**Erimo**	**6.95**	**88**	⇑*i*P	**P**	**00 15 53.5**	**-0.8**
ERM	**Erimo**	**6.95**	**88**	*e*Pn	**P**	**00 15 53.7**	**-0.6**
ERM				*e*Sn	**S**	**00 17 12.3**	**-6.7**
JCH	**Churui**	**7.08**	**83**	P	**P**	**00 15 54.3**	**-1.5**
JCH				S	**S**	**00 17 15.3**	**-6.4**
JHS	**Saijyo**	**7.13**	**185**	P	**P**	**00 15 59.1**	**+2.7**
JFK	**Kawauchi**	**7.21**	**129**	P	**P**	**00 15 55.7**	**-1.6**
JFK				S	**S**	**00 17 18.6**	**-5.8**
INCN	**Inchon**	**7.21**	**232**	*e*P	**P**	**00 15 58.9**	**+1.6**
JRY	**Ryogami san**	**7.26**	**145**	P	**P**	**00 15 59.3**	**+1.5**
JRY				S	**S**	**00 17 25.2**	**-0.1**
JTKR	**Abashiri--Toko**	**7.62**	**73**	P	**P**	**00 16 00.7**	**-0.9**
JTKR				S	**S**	**00 17 28.4**	**-4.0**
SNY	**Shenyang**	**7.64**	**271**	⇓P	**P**	**00 16 05.7**	**+3.8**
SNY				AMB	AMB		
	comp=Z,58nm,0.9s						
JOD2	**Odawara 2**	**7.98**	**147**	S	**S**	**00 17 35.9**	**-4.1**
YSS	**Yuzh-Sakhalins**	**8.01**	**50**	⇑*i*P	**P**	**00 16 06.8**	**+1.0**
YSS				*e*S	**S**	**00 17 36.5**	**-3.7**
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				smax			
	comp=N,160nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.01**	**50**	*e*Pn	**P**	**00 16 07.2**	**+1.4**
	comp=N,83nm,0.6s						
NEM2	**Nemuro 2**	**8.86**	**78**	P	**P**	**00 16 12.9**	**-2.4**
NEM2				S	**S**	**00 17 50.6**	**-7.1**
BSO1	**Boso 1**	**9.33**	**141**	P	**P**	**00 16 18.6**	**-2.0**
BSO1				S	**S**	**00 18 02.1**	**-5.2**
KUR	**Kuril'sk**	**10.64**	**68**	*e*P	**P**	**00 16 31.0**	**-3.9**
KUR				*i* S	**S**	**00 18 28.0**	**-5.7**
KUR				pmax	pmax		
	comp=Z,320nm,1.0s						
KUR				smax			
	comp=N,800nm,1.2s						
KUR				smax			
	comp=E,640nm,1.2s						
HIA	**Hailar**	**12.16**	**311**	⇑*e*P	**P**	**00 16 55.0**	**+3.5**
HIA	**Hailar**	**12.16**	**311**	*e*P	**P**	**00 16 53.7**	**+2.2**
BJI	**Beijing**	**13.48**	**267**	P	**P**	**00 17 05.5**	**-0.6**
BJI				AMB	AMB		
	comp=Z,98nm,1.1s						
BJT	**Baijiatuau**	**13.49**	**267**	*e*P	**P**	**00 17 08.1**	**+1.9**
BJT				pmax	pmax		
	comp=Z,96nm,0.9s						
BJT	**Baijiatuau**	**13.49**	**267**	*e*P	**P**	**00 17 08.1**	**+1.9**
	comp=Z,96nm,0.9s						
NJ2	**Nanjing**	**15.59**	**235**	*e*P	**P**	**00 17 30.2**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**16.73**	**273**	*e*P	**P**	**00 17 40.7**	**-0.2**
HHC				S	**S**	**00 20 31.2**	**-3.4**
HHC				PCP	PcP	00 22 00.7	-3.5
HHC				PCS	PcS	00 25 41.8	+1.5
HHC				AMB	AMB		
	comp=Z,18nm,0.9s						
HHC				AMB	AMB		
	comp=Z,141nm,4.0s						
BTO	**Baotou**	**17.92**	**273**	*e*P	**P**	**00 17 53.0**	**-0.6**
PETK	**Petropavlovsk-**	**19.40**	**47**	P	**P**	**00 18 06.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=244,slow=3.7,SNR=4.3						
WHN	**Wuhan**	**19.43**	**240**	⇑P	**P**	**00 18 08.0**	**-0.7**
WHN				AMB	AMB		
	comp=Z,52nm,0.7s						
ULN	**Ulaanbaatar**	**19.73**	**296**	P	**P**	**00 18 11.9**	**+0.7**
PET	**Petropavlovsk**	**19.89**	**48**	*e*P	**P**	**00 18 03.7**	**-8.8**
PET	**Petropavlovsk**	**19.89**	**48**	P	**P**	**00 18 12.3**	**-0.2**
TATO	**Taipei**	**19.91**	**215**	*e*P	**P**	**00 18 13.8**	**+0.7**
	comp=Z,52nm,0.8s						
YAK	**Yakutsk**	**20.10**	**354**	⇑*e*P	**P**	**00 18 13.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,28nm,0.7s						
YAK	**Yakutsk**	**20.10**	**354**	*e*P	**P**	**00 18 13.8**	**-0.5**
	comp=Z,22nm,0.5s						
BOD	**Bodaibo**	**20.12**	**328**	*e*P	**P**	**00 18 13.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**20.17**	**296**	P	**P**	**00 18 15.4**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=101,slow=8.7,SNR=18						
SONM				ScP	ScP	00 25 02.7	-2.9
	comp=Z,1.2nm,0.9s,baz=110,slow=3.0,SNR=5.7						
SONM	**Songino Array**	**20.17**	**296**	P	**P**	**00 18 15.4**	**+0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SONM				pmax	pmax		
	comp=N,1.0nm,0.9s						
YHNB	**Yeheng**	**20.23**	**215**	P	**P**	**00 18 15.7**	**-0.3**
NACB	**Ninganchiao**	**20.57**	**213**	P	**P**	**00 18 19.6**	**+0.5**
XAN	**Xi'an**	**21.14**	**256**	P	**P**	**00 18 23.8**	**-0.4**
XAN				XP	sP	00 20 26.0	+5.7
XAN				S	**S**	**00 21 50.5**	**-0.1**
XAN				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.0						
QZH	**Quanzhou**	**21.26**	**221**	P	**P**	**00 18 26.2**	**+0.8**
TPUB	**Ta-pu**	**21.75**	**214**	P	**P**	**00 18 31.2**	**+1.4**
TWG	**Pinlang**	**22.00**	**213**	P	**P**	**00 18 30.5**	**-1.6**
ZAK	**Zakamensk**	**22.55**	**302**	*e*P	**P**	**00 18 36.6**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
TLY	**Talaya**	**22.59**	**305**	*e*P	**P**	**00 18 36.4**	**-0.7**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
TLY	**Talaya**	**22.59**	**305**	*e*P	**P**	**00 18 36.4**	**-0.7**
	comp=Z,8.9nm,1.0s,mb4.2						
ENH	**Enshi**	**22.84**	**247**	P	**P**	**00 18 39.1**	**-0.6**
SEY	**Seymchan**	**23.54**	**21**	⇓*e*P	**P**	**00 18 45.4**	**-0.1**
LZH	**Lanzhou**	**23.96**	**265**	⇓P	**P**	**00 18 50.3**	**+0.7**
LZH				PP		00 20 00.5	
LZH				S	**S**	**00 22 35.1**	**0.0**
LZH				AMB	AMB		
	comp=Z,63nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,308nm,6.2s						
GTA	**Gaotai**	**25.80**	**275**	⇓*i*P	**P**	**00 19 06.8**	**+0.8**
GTA				XP	sP	00 21 13.1	+3.3
GTA				S	**S**	**00 23 09.3**	**+5.3**
GTA				SCP	ScP	00 25 18.4	-2.4
GTA				SCS	ScS	00 29 07.5	-3.5
GTA				AMB	AMB		
	comp=Z,38nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,128nm,4.2s						
CD2	**Chengdu**	**26.50**	**255**	P	**P**	**00 19 12.7**	**+0.5**
CD2				PCP	PcP	00 22 25.9	+1.9
CD2				S	**S**	**00 23 15.7**	**+0.6**
CD2				AMB	AMB		
	comp=Z,30nm,0.4s,mb5.1						
CD2				AMB	AMB		
	comp=Z,300nm,8.8s						
GYA	**Guiyang**	**27.18**	**244**	⇓*i*P	**P**	**00 19 17.0**	**-1.4**
GYA				PCP	PcP	00 22 28.1	+2.4
GYA				S	**S**	**00 23 26.6**	**+0.6**
GYA				PCS	PcS	00 26 08.2	+0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				AMB	AMB		
	comp=Z,50nm,4.8s						
SMY	**Shemya**	**28.88**	**54**	*e*P	**P**	**00 19 33.2**	**+0.2**
SMY				pmax	pmax		
	comp=Z,26nm,0.6s,mb4.7						
SMY	**Shemya**	**28.88**	**54**	*e*P	**P**	**00 19 33.2**	**+0.2**
	comp=Z,26nm,0.6s,mb4.7						
TIXI	**Tiksi**	**29.71**	**357**	⇑*e*P	**P**	**00 19 38.6**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
TIXI	**Tiksi**	**29.71**	**357**	*e*P	**P**	**00 19 38.4**	**-1.6**
KMI	**Kunming**	**30.71**	**246**	⇓P	**P**	**00 19 48.6**	**-0.7**
KMI				AP	pP	00 21 07.2	+1.9
KMI				PP	PP	00 21 14.2	+4.1
KMI				S	**S**	**00 24 21.5**	**+0.5**
KMI				SS	SS	00 26 50.5	-4.9
KMI				AMB	AMB		
	comp=Z,19nm,0.9s,mb4.4						
KMI				AMB	AMB		
	comp=Z,55nm,3.1s						
BILL	**Bilibino**	**31.21**	**23**	⇑*e*P	**P**	**00 19 52.1**	**-0.9**
BILL				*e**PP	pP	00 21 06.1	-3.0
BILL				*e*		00 21 14.5	
BILL				*e*SS	SS	00 27 01.6	-2.6
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
BILL	**Bilibino**	**31.21**	**23**	*e*P	**P**	**00 19 52.4**	**-0.7**
	comp=Z,10nm,0.8s,mb4.2						
BILL				*e*pP	pP	00 21 11.7	+2.5
WMQ	**Urumqi**	**33.46**	**289**	P	**P**	**00 20 12.9**	**+0.2**
WMQ				PP	PP	00 21 44.0	+4.2
WMQ				PCP	PcP	00 22 42.8	+0.7
WMQ				S	**S**	**00 25 03.4**	**+0.6**
WMQ				SS	SS	00 27 46.1	-3.9
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,30nm,5.2s						
ZALV	**Zalesovo Beam**	**34.16**	**307**	P	**P**	**00 20 17.2**	**-1.2**
	comp=Z,5.1nm,0.5s,mb4.1,baz=79,slow=7.6,SNR=17						
ZALV				PcP	PcP	00 22 42.7	-1.2
	comp=Z,1.5nm,0.6s,baz=90,slow=2.9,SNR=4.1						
ZALV				ScP	ScP	00 25 43.8	-4.1
	comp=Z,4.6nm,0.7s,baz=94,slow=3.2,SNR=16						
ZALV	**Zalesovo Beam**	**34.16**	**307**	P	**P**	**00 20 17.2**	**-1.2**
ZALV				PcP	PcP	00 22 42.7	-1.2
ZALV				ScP	ScP	00 25 43.8	-4.1
LSA	**Lhasa**	**36.36**	**264**	P	**P**	**00 20 38.8**	**+1.6**
LSA	**Lhasa**	**36.36**	**264**	*e*P	**P**	**00 20 38.5**	**+1.3**
LSA				*e*		00 22 10.5	
LSA				*e*		00 25 53.5	
LSA				pmax	pmax		
	comp=Z,31nm,1.1s,mb4.5						
LSA	**Lhasa**	**36.36**	**264**	*e*P	**P**	**00 20 38.5**	**+1.2**
	comp=Z,31nm,1.1s,mb4.6						
LSA				*e*PP	PP	00 22 10.5	-0.8
LSA				*e*ScP	ScP	00 25 53.5	-3.0
MK31	**Makanchi Array**	**36.54**	**295**	*e*P	**P**	**00 20 38.3**	**-0.2**
MKAR	**Makanchi Array**	**36.54**	**295**	P	**P**	**00 20 37.9**	**-0.6**
	comp=Z,10.0nm,0.7s,mb4.2,baz=77,slow=12,SNR=25						
MKAR				ScP	ScP	00 25 52.2	-4.6
	comp=Z,1.1nm,0.8s,baz=73,slow=4.5,SNR=5.0						
MKAR	**Makanchi Array**	**36.54**	**295**	⇑*e*P	**P**	**00 20 38.0**	**-0.5**
CHTO	**Chiang Mai**	**37.59**	**243**	*e*P	**P**	**00 20 46.8**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**37.59**	**243**	*e*P	**P**	**00 20 46.8**	**-0.8**
	comp=Z,16nm,0.8s,mb4.4						
CM31	**Chiang Mai Arr**	**37.85**	**242**	*e*P	**P**	**00 20 49.1**	**-0.5**
	comp=Z,3.7nm,0.3s,mb4.2						
CMAR	**Chiang Mai Arr**	**37.85**	**242**	P	**P**	**00 20 49.4**	**-0.3**
	comp=Z,5.4nm,0.6s,mb4.0,baz=33,slow=7.3,SNR=25						
CMAR				ScP	ScP	00 25 59.4	-2.8
	comp=Z,3.6nm,0.8s,baz=17,slow=3.0,SNR=17						
CMAR	**Chiang Mai Arr**	**37.85**	**242**	*i* P	**P**	**00 20 49.5**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SHL	**Shillong**	**38.13**	**258**	*e*P	**P**	**00 20 53.0**	**+1.1**
KURK	**Kurchatov**	**38.22**	**302**	P	**P**	**00 20 51.8**	**-0.5**
	comp=Z,17nm,0.6s,mb4.6,baz=82,slow=8.5,SNR=27						
KURK				ScP	ScP	00 25 59.1	-4.0
	comp=Z,1.4nm,0.6s,baz=86,slow=3.8,SNR=5.3						
KURK	**Kurchatov**	**38.22**	**302**	P	**P**	**00 20 51.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.5						
KURK				pmax	pmax		
	comp=N,1.0nm,0.6s						
KURK	**Kurchatov**	**38.22**	**302**	*e*P	**P**	**00 20 51.3**	**-1.0**
	comp=N,18nm,0.6s,mb4.6						
TAPN	**Taplejung**	**40.17**	**264**	*e*P	**P**	**00 21 09.2**	**+0.7**
	comp=N,40nm,0.4s,mb5.1						
ODAN	**Odare**	**40.68**	**263**	*e*P	**P**	**00 21 12.9**	**+0.2**
	comp=N,38nm,0.5s,mb5.0						
JIRN	**Jiri**	**41.13**	**265**	*e*P	**P**	**00 21 16.8**	**+0.6**
	comp=N,27nm,0.3s,mb5.1						
JIRN				*e*P		00 26 12.1	
RAMN	**Ramite**	**41.22**	**264**	*e*P	**P**	**00 21 17.1**	**+0.2**
	comp=N,140nm,0.8s,mb5.3						
RAMN				*e*P		00 26 12.3	
GUN	**Gumba**	**41.22**	**266**	*e*P	**P**	**00 21 17.3**	**+0.3**
	comp=N,123nm,0.5s						
GUN				*e*P		00 26 12.9	
KKN	**Kakani**	**41.73**	**266**	*e*P	**P**	**00 21 21.2**	**+0.1**
KKN				*e*P		00 26 14.5	
PKI	**Pulchoki**	**41.75**	**266**	*e*P	**P**	**00 21 21.2**	**0.0**
PKI				pmax	pmax		
	comp=Z,35nm,0.3s,mb5.2						
PKI	**Pulchoki**	**41.75**	**266**	*e*P	**P**	**00 21 21.2**	**0.0**
	comp=Z,35nm,0.3s,mb5.2						
PKI				*e*P		00 26 14.0	
DMN	**Daman**	**41.96**	**266**	*e*P	**P**	**00 21 23.0**	**+0.1**
DMN				*e*P		00 26 15.2	
GKN	**Gorkha**	**42.09**	**267**	*e*P	**P**	**00 21 23.6**	**-0.3**
	comp=Z,50nm,0.3s,mb5.3						
TKM2	**Tokmak 2**	**42.17**	**292**	*e*P	**P**	**00 21 24.8**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.5						
TKM2	**Tokmak 2**	**42.17**	**292**	*e*P	**P**	**00 21 24.8**	**+0.5**
	comp=Z,26nm,1.0s,mb4.5						
DANN	**Dangsing**	**42.56**	**268**	*e*P	**P**	**00 21 28.3**	**+0.7**
	comp=Z,296nm,0.3s						
BVAR	**Borovoye Array**	**42.82**	**307**	P	**P**	**00 21 28.4**	**-0.9**
	comp=Z,2.4nm,0.5s,mb3.8,baz=85,slow=7.9,SNR=21						
BVAR				ScP	ScP	00 26 17.3	-3.9
	comp=Z,3.0nm,0.8s,baz=87,slow=3.3,SNR=13						
BVAR	**Borovoye Array**	**42.82**	**307**	P	**P**	**00 21 28.4**	**-0.9**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR				pmax	pmax		
	comp=N,3.0nm,0.8s						
BRVK	**Borovoye**	**42.88**	**307**	*e*P	**P**	**00 21 28.5**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
BRVK	**Borovoye**	**42.88**	**307**	*e*P	**P**	**00 21 28.5**	**-1.3**
	comp=Z,1.7nm,0.5s,mb3.6						
KOLN	**Koldanda**	**42.99**	**267**	*e*P	**P**	**00 21 31.3**	**+0.3**
AAK	**Ala-Archa**	**43.03**	**292**	⇑*e*P	**P**	**00 21 31.2**	**0.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb3.7						
AAK	**Ala-Archa**	**43.03**	**292**	*e*P	**P**	**00 21 31.0**	**-0.2**
UCH	**Uchtor**	**43.16**	**291**	P	**P**	**00 21 30.7**	**-1.5**
EKS2	**Erkin-Say**	**43.52**	**292**	*e*P	**P**	**00 21 34.6**	**-0.4**
	comp=Z,2.7nm,0.5s,mb3.8						
KTH	**Kantishna Hill**	**46.98**	**36**	*e*P	**P**	**00 22 02.0**	**+0.6**
	comp=Z,38nm,1.2s,mb4.6						
MCK	**McKinley**	**47.82**	**36**	*e*P	**P**	**00 22 08.0**	**+0.2**
RC01	**Rabbit Creek A**	**48.03**	**39**	*e*P	**P**	**00 22 08.9**	**-0.5**
COLA	**College**	**48.05**	**34**	*e*P	**P**	**00 22 09.8**	**+0.3**
PMR	**Palmer**	**48.20**	**39**	*e*P	**P**	**00 22 10.0**	**-0.7**
PMR				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
PMR	**Palmer**	**48.20**	**39**	*e*P	**P**	**00 22 10.0**	**-0.6**
	comp=Z,11nm,0.6s,mb4.4						
ARU	**Arti**	**48.65**	**314**	*d i*P	**P**	**00 22 13.2**	**-0.9**
ARU				*e*		00 24 07.9	
ARU				*e*S	**S**	**00 28 43.2**	**-0.1**
ARU				SS	SS	00 32 17.8	-1.6
ARU				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
ARU	**Arti**	**48.65**	**314**	*e*P	**P**	**00 22 13.4**	**-0.7**
	comp=Z,14nm,0.8s,mb4.3						
KBL	**Kabul**	**50.30**	**284**	*e*P	**P**	**00 22 25.0**	**-1.7**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
KBL	**Kabul**	**50.30**	**284**	*e*P	**P**	**00 22 24.9**	**-1.8**
	comp=Z,4.7nm,0.8s,mb3.9						
EGAK	**Eagle**	**50.85**	**33**	*e*P	**P**	**00 22 30.0**	**-0.3**
	comp=Z,38nm,1.3s,mb4.5						
AKTK	**Aktyubinsk**	**50.93**	**307**	P	**P**	**00 22 29.4**	**-1.7**
AKTO	**Aktyubinsk**	**50.93**	**307**	P	**P**	**00 22 29.4**	**-1.7**
	comp=Z,2.4nm,0.7s,mb3.5,baz=69,slow=15,SNR=7.0						
AKTO	**Aktyubinsk**	**50.93**	**307**	P	**P**	**00 22 29.4**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.5						
DAWY	**Dawson**	**51.80**	**34**	*e*P	**P**	**00 22 37.0**	**-0.3**
SPITS	**Spitsbergen Ar**	**54.34**	**347**	P	**P**	**00 22 54.4**	**-0.9**
	comp=Z,2.7nm,0.8s,mb3.6,baz=38,slow=9.8,SNR=8.2						
SPITS	**Spitsbergen Ar**	**54.34**	**347**	P	**P**	**00 22 54.4**	**-0.9**
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HNR	**Honiara**	**56.61**	**149**	P	**P**	**00 23 11.6**	**-0.4**
ARCES	**ARCESS Array B**	**57.10**	**337**	P	**P**	**00 23 13.9**	**-0.8**
	comp=Z,2.0nm,0.4s,mb3.8,baz=57,slow=8.8,SNR=9.8						
ARCES	**ARCESS Array B**	**57.10**	**337**	P	**P**	**00 23 13.9**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DLBC	**Dease Lake**	**58.24**	**38**	P	**P**	**00 23 23.0**	**+0.3**
	comp=Z,5.5nm,0.6s,mb4.1,baz=289,slow=9.7,SNR=8.3						
JOF	**Joensuu**	**58.65**	**328**	*e*p	**P**	**00 23 24.5**	**-0.9**
	comp=Z,3.4nm,0.3s,mb4.2						
JOF	**Joensuu**	**58.65**	**328**	*e*P	**P**	**00 23 24.5**	**-0.9**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.1						
RES	**Resolute Bay**	**59.09**	**13**	*e*P	**P**	**00 23 27.4**	**-0.9**
RES				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.2						
RES	**Resolute Bay**	**59.09**	**13**	*e*P	**P**	**00 23 27.4**	**-0.8**
	comp=Z,9.1nm,0.7s,mb4.2						
OBN	**Obninsk**	**60.47**	**319**	⇑*i*P	**P**	**00 23 37.1**	**-0.7**
OBN				*e**PP	pP	00 25 07.0	+1.2
OBN				*e*S	**S**	**00 31 14.5**	**-4.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.4						
OBN	**Obninsk**	**60.47**	**319**	*e*P	**P**	**00 23 37.2**	**-0.6**
	comp=Z,10nm,0.4s,mb4.6						
KAF	**Kangasniemi**	**61.03**	**329**	*e*p	**P**	**00 23 40.3**	**-1.1**
	comp=Z,2.6nm,0.3s,mb4.1,baz=52,slow=6.3						
KAF	**Kangasniemi**	**61.03**	**329**	*e*P	**P**	**00 23 40.3**	**-1.1**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.2						
WRAB	**Tennant Creek**	**61.73**	**179**	*e*P	**P**	**00 23 45.5**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.2						
YKA	**Yellowknife Ar**	**62.31**	**29**	P	**P**	**00 23 48.7**	**-1.0**
	comp=Z,4.7nm,0.6s,mb4.2,baz=308,slow=6.5,SNR=51						
YKA				PcP	PcP	00 24 24.3	-0.6
	comp=Z,1.3nm,0.7s,baz=312,slow=3.9,SNR=5.9						
YKA				ScP	ScP	00 27 43.5	-1.9
	comp=Z,0.8nm,0.8s,baz=309,slow=3.9,SNR=4.3						
YKA	**Yellowknife Ar**	**62.31**	**29**	P	**P**	**00 23 48.7**	**-1.1**
YKA						00 24 24.3	
YKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YKA	**Yellowknife Ar**	**62.31**	**29**	P	**P**	**00 23 48.7**	**-1.0**
YKA				PcP	PcP	00 24 24.3	-0.6
YKA				ScP	ScP	00 27 43.5	-1.9
POHA	**Pohakuloa**	**62.82**	**87**	P	**P**	**00 23 54.6**	**+0.7**
KIV	**Kislovodsk**	**63.16**	**306**	*e*P	**P**	**00 23 54.9**	**-0.8**
KIV				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
KIV	**Kislovodsk**	**63.16**	**306**	*e*P	**P**	**00 23 54.9**	**-0.8**
	comp=Z,9.2nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**65.45**	**180**	P	**P**	**00 24 09.0**	**-1.4**
	comp=Z,1.0nm,0.8s,mb3.5,baz=11,slow=7.3,SNR=8.5						
ASAR				PcP	PcP	00 24 37.5	-0.9
	comp=Z,0.4nm,0.7s,baz=14,slow=4.1,SNR=4.2						
ASAR	**Alice Springs**	**65.45**	**180**	P	**P**	**00 24 09.0**	**-1.4**
ASAR						00 24 37.5	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SUMG	**Summit**	**65.48**	**357**	*e*P	**P**	**00 24 10.3**	**+0.3**
AKASG	**Malin Array Be**	**66.65**	**318**	P	**P**	**00 24 16.1**	**-1.6**
	comp=Z,3.5nm,0.6s,mb4.2,baz=50,slow=6.3,SNR=17						
AKASG	**Malin Array Be**	**66.65**	**318**	P	**P**	**00 24 16.1**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NB2	**NORSAR Subarra**	**67.14**	**334**	P	**P**	**00 24 19.4**	**-1.1**
	comp=Z,1.3nm,0.5s,mb3.8,baz=41,slow=6.2						
NOA	**NORSAR Array B**	**67.14**	**334**	P	**P**	**00 24 19.1**	**-1.5**
	comp=Z,1.8nm,0.6s,mb3.9,baz=41,slow=6.1,SNR=9.0						
NOA	**NORSAR Array B**	**67.14**	**334**	P	**P**	**00 24 19.1**	**-1.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
B05A	**Bryant**	**67.91**	**44**	⇑P	**P**	**00 24 25.3**	**-0.2**
	baz=68						
D05A	**Enumclaw**	**68.64**	**45**	⇑P	**P**	**00 24 30.2**	**+0.1**
	baz=68						
B07A	**Winthrop**	**68.80**	**43**	⇑P	**P**	**00 24 30.9**	**-0.1**
	baz=68						
A08A	**Turner Farm, O**	**68.91**	**43**	⇓P	**P**	**00 24 31.5**	**-0.2**
	baz=69						
F04A	**Amboy**	**69.21**	**46**	⇑P	**P**	**00 24 33.2**	**-0.3**
	baz=69						
D06A	**Cle Elum**	**69.24**	**45**	⇑P	**P**	**00 24 33.6**	**-0.1**
	baz=69						
B08A	**Colville Reser**	**69.27**	**43**	⇓P	**P**	**00 24 33.9**	**+0.1**
	baz=69						
C07A	**Waterville**	**69.33**	**44**	⇓P	**P**	**00 24 34.1**	**-0.1**
	baz=69						
E06A	**Yakima**	**69.59**	**45**	⇑P	**P**	**00 24 35.8**	**0.0**
	baz=69						
A10A	**Northport**	**69.75**	**42**	⇓P	**P**	**00 24 37.0**	**+0.3**
	baz=69						
B09A	**Rice**	**69.82**	**42**	⇓P	**P**	**00 24 37.2**	**0.0**
	baz=70						
E07A	**Sunnyside**	**70.17**	**45**	⇓P	**P**	**00 24 39.5**	**+0.2**
	baz=70						
C09A	**Chrisman Ranch**	**70.17**	**43**	⇑P	**P**	**00 24 39.2**	**0.0**
	baz=70						
F06A	**Goldendale**	**70.19**	**46**	⇓P	**P**	**00 24 39.0**	**-0.4**
	baz=70						
D08A	**Wollman Farm,**	**70.33**	**44**	⇓P	**P**	**00 24 40.1**	**-0.1**

baz=70
NEW Newport 70.44 42 eP P 00 24 40.7 -0.2
NEW pmax pmax
comp=Z,147nm,2.7s
NEW Newport 70.44 42 eP P 00 24 40.7 -0.1
comp=Z,147nm,2.7s,mb5.0
HAWA Hanford 70.44 45 eP P 00 24 40.6 -0.3
F07A Phinny Hill Vi 70.56 45 ⇓P P 00 24 42.0 +0.3
baz=70
E08A Dider Farm, El 70.63 44 ⇓P P 00 24 42.2 +0.2
baz=70
D09A Jones Farm, Ri 70.64 44 ⇓P P 00 24 42.2 +0.1
baz=70
B11A Sandpoint 70.70 42 ⇓P P 00 24 42.5 +0.1
baz=70,SNR=7.8
A12A Yaak River Ran 70.72 41 ⇓P P 00 24 42.7 +0.2
baz=70
E09A Wood Farm, Sta 71.09 44 ⇑P P 00 24 45.0 +0.3
baz=71
BRTR Keskin Array B 71.11 307 P P 00 24 43.9 -1.1
comp=Z,1.7nm,0.8s,mb3.6,baz=52,slow=5.1,SNR=9.1
BRTR Keskin Array B 71.11 307 i P P 00 24 44.5 -0.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
F08A Pendleton 71.23 45 ⇓P P 00 24 46.0 +0.4
baz=71
D11A Klaveano Farm, 71.65 43 ⇑P P 00 24 47.8 -0.3
baz=71,SNR=5.9
B13A Whitefish 71.67 41 ⇓P P 00 24 48.0 -0.1
baz=71,SNR=6.4
I06A Prineville 71.69 47 ⇓P P 00 24 48.7 +0.3
baz=71
YBH Yreka Blue Hor 71.74 50 P P 00 24 48.4 -0.2
comp=Z,4.3nm,0.6s,mb4.2,baz=307,slow=1.9,SNR=4.9
YBH Yreka Blue Hor 71.74 50 P P 00 24 48.4 -0.3
YBH pmax pmax
comp=Z,4.0nm,0.6s
F09A S2 Ranch, Elgi 71.75 44 ⇑P P 00 24 49.0 +0.4
baz=71
A14A Double T Ranch 71.77 40 ⇓P P 00 24 49.3 +0.7
baz=71
F10A Beach Ranch, E 71.92 44 ⇓P P 00 24 50.1 +0.4
baz=72
FCC Fort Churchill 71.92 24 eP P 00 24 48.2 -1.2
comp=Z,1.3nm,1.3s,mb3.3
I07A Izee 71.98 47 ⇑P P 00 24 50.4 +0.4
baz=72
C13A Hot Springs 72.10 41 ⇓P P 00 24 50.5 -0.1
baz=72,SNR=7.4
G09A Cove 72.10 45 ⇑P P 00 24 51.1 +0.4
baz=72
K05A Summer Lake 72.11 48 ⇑P P 00 24 51.4 +0.6
baz=72
H08A Prairie City 72.14 46 ⇓P P 00 24 51.2 +0.3
baz=72
J06A Christmas Vall 72.18 48 ⇓P P 00 24 51.4 +0.2
baz=72
E11A Bogner Ranch, 72.19 43 ⇑P P 00 24 51.0 -0.2
baz=72
B14A Marquette Ranc 72.26 40 ⇑P P 00 24 51.6 0.0
baz=72,SNR=6.6
C14A Swan Lake 72.44 41 ⇓P P 00 24 52.8 +0.2
baz=72
FFC Flin Flon 72.44 30 eP P 00 24 51.5 -1.0
FFC pmax pmax
comp=Z,19nm,0.8s,mb4.7
FFC Flin Flon 72.44 30 eP P 00 24 51.5 -1.1
comp=Z,19nm,0.8s,mb4.7
J07A Hines 72.56 47 ⇑P P 00 24 53.7 +0.2
baz=72
D13A Huson 72.56 42 ⇑P P 00 24 53.1 -0.2
baz=72
H09A Durkee 72.57 45 ⇑P P 00 24 53.8 +0.3
baz=72
I08A Drewsey 72.60 46 ⇑P P 00 24 53.8 +0.1
baz=72
B15A Bradely Ranch, 72.63 40 ⇓P P 00 24 53.6 -0.2
baz=72,SNR=18
BMO Blue Mountains 72.64 45 eP P 00 24 53.6 -0.3
A16A West Butte Ran 72.64 39 ⇓P P 00 24 53.7 -0.1
baz=72
B16A M & M Farms, S 72.97 39 ⇓P P 00 24 55.4 -0.3
baz=73
I09A Lost Marbles R 73.00 46 ⇓P P 00 24 55.9 -0.1
baz=73,SNR=5.4
J08A Circle Bar Ran 73.02 47 ⇓P P 00 24 56.2 +0.2
baz=73,SNR=6.0
D14A Greenough 73.04 41 ⇑P P 00 24 55.8 -0.3
baz=73,SNR=8.4
K07A Rock Creek Ran 73.05 48 ⇑P P 00 24 56.4 +0.1
baz=73
A17A Triple J Farms 73.06 38 ⇑P P 00 24 56.1 -0.1
baz=73,SNR=9.7
E13A Victor 73.14 42 ⇓P P 00 24 56.4 -0.3
baz=73
C16A Fuhringer Ranc 73.38 40 ⇑P P 00 24 58.3 +0.2
baz=73
H11A Donnelly 73.41 44 ⇓P P 00 24 58.1 -0.3
baz=73
J09A Fry Pan Ranch, 73.42 46 ⇓P P 00 24 58.6 +0.2
baz=73,SNR=6.0
I10A Payette 73.42 45 ⇑P P 00 24 59.1 +0.7
baz=73
K08A Mann Creek Ran 73.44 47 ⇑P P 00 24 58.9 +0.4
baz=73
L07A Adell 73.44 48 ⇑P P 00 24 59.1 +0.5
baz=73,SNR=6.9
A18A Metzger Ranch, 73.47 38 ⇓P P 00 24 58.5 -0.1
baz=73,SNR=9.4
B17A L&G Farms, Che 73.48 39 ⇑P P 00 24 58.5 -0.1
baz=73,SNR=5.3
D15A Lincoln 73.55 41 ⇓P P 00 24 59.1 +0.1
baz=73
K09A Rome 73.87 47 ⇓P P 00 25 01.3 +0.3
baz=74
L08A Fields 73.88 47 ⇓P P 00 25 01.1 +0.1
baz=74
B18A Beardsley Farm 73.88 38 ⇓P P 00 25 01.3 +0.3
baz=74
E15A Deer Lodge 73.92 41 ⇑P P 00 25 01.2 0.0
baz=74,SNR=6.7
M07A Soldier Meadow 73.96 48 ⇓P P 00 25 01.8 +0.3
baz=74,SNR=8.3
STKA Stephens Creek 73.97 173 P P 00 25 01.1 -0.4
comp=Z,1.1nm,0.3s,mb3.9,baz=344,slow=14,SNR=4.4
STKA Stephens Creek 73.97 173 eP P 00 25 00.8 -0.7
comp=Z,0.3nm,0.5s,mb3.2
I11A Placerville 73.98 45 ⇑P P 00 25 01.5 -0.1
baz=74
N06A Buffalo Meadow 74.02 49 ⇑P P 00 25 01.6 -0.2
baz=74,SNR=8.3
G13A Cobalt 74.06 43 ⇑P P 00 25 01.2 -0.8
baz=74
HRY Holter Researc 74.11 41 eP P 00 25 02.7 +0.4
H12A Diamond D Ranc 74.12 44 ⇓P P 00 25 02.3 -0.1
baz=74,SNR=17
EGMT Eagleton 74.16 39 ⇑P P 00 25 02.5 -0.1
baz=74
EGMT Eagleton 74.16 39 eP P 00 25 02.4 -0.2
K10A MacKenzie Ranc 74.28 46 ⇑P P 00 25 03.2 -0.2
baz=74,SNR=7.2
BEKR Beckwourth 74.31 50 ⇑P P 00 25 03.1 -0.5
baz=74
E16A East Helena 74.32 41 ⇑P P 00 25 03.6 +0.1
baz=74
D17A Six Diamond Ra 74.35 40 ⇓P P 00 25 03.5 -0.1
baz=74
M08A Happy Creek Ra 74.36 48 ⇓P P 00 25 04.1 +0.3
baz=74
L09A Wilkinson Ranc 74.36 47 ⇑P P 00 25 04.1 +0.3
baz=74
MFID Camas Ranch 74.39 45 ⇑P P 00 25 03.8 -0.1
baz=74,SNR=11
F15A Butte 74.41 42 ⇓P P 00 25 04.2 +0.2
baz=74,SNR=8.2
O06A Flanigan 74.41 50 ⇓P P 00 25 04.3 +0.2
baz=74,SNR=7.2
H13A Challis 74.42 44 ⇑P P 00 25 03.9 -0.2
baz=74
N07B Gerlach 74.48 49 ⇓P P 00 25 04.8 +0.3
baz=74
DLMT Dillon 74.69 42 eP P 00 25 07.6 +2.0
comp=Z,24nm,0.6s,mb5.0
K11A Parker Ranch, 74.73 46 ⇑P P 00 25 06.1 +0.2
baz=74
D18A Linhart Farms, 74.74 39 ⇑P P 00 25 05.6 -0.2
baz=74
E17A Martinsdale 74.76 40 ⇑P P 00 25 06.4 +0.4
baz=74,SNR=11
LAVA Lava Cap Winer 74.83 51 ⇑P P 00 25 06.1 -0.5
baz=75,SNR=5.5
F16A Kennard Place, 74.87 41 ⇑P P 00 25 06.5 -0.1
baz=75,SNR=8.0
G15A Dillon 74.89 42 ⇑P P 00 25 06.9 +0.2
baz=75,SNR=21
M09A Mael Ranch, 74.89 48 ⇑P P 00 25 06.8 0.0
baz=75
J12A Stokes Ranch, 74.89 45 ⇓P P 00 25 06.8 0.0
baz=75
I13A Wildhorse Cree 74.94 44 ⇓P P 00 25 07.4 +0.3
baz=75,SNR=22
N08A GE Springer Mi 74.95 48 ⇑P P 00 25 06.9 -0.3
baz=75
O07A Toulon 74.95 49 ⇓P P 00 25 07.1 -0.1
baz=75
L10A Juniper Basin 74.97 47 ⇑P P 00 25 07.3 0.0
baz=75,SNR=11
WCN Washoe City 75.03 50 ⇓P P 00 25 07.7 +0.1
baz=75
HLID Hailey 75.03 44 ⇓P P 00 25 08.0 +0.4
baz=75
HLID Hailey 75.03 44 eP P 00 25 07.8 +0.2
E18A Harlowton 75.14 40 ⇓P P 00 25 08.3 +0.2
baz=75
G16A Moss Hill, Enn 75.18 42 ⇑P P 00 25 08.0 -0.4
baz=75,SNR=9.9
H15A Lima 75.20 43 ⇓P P 00 25 08.5 0.0
baz=75
GERES GERESS Array B 75.23 324 P P 00 25 07.7 -0.9
comp=Z,0.5nm,0.4s,mb3.5,baz=29,slow=6.0,SNR=9.4
GERES GERESS Array B 75.23 324 P P 00 25 07.7 -0.9
GERES pmax pmax
comp=Z,1.0nm,0.4s
F17A Fitzpatrick Pl 75.26 41 ⇑P P 00 25 09.0 +0.2
baz=75,SNR=6.4
O08A Rochester Mine 75.27 49 ⇑P P 00 25 09.4 +0.5
baz=75
I14A Mackay 75.27 44 ⇓P P 00 25 09.5 +0.6
baz=75
J13A Cove Ranch, Pi 75.27 44 ⇑P P 00 25 09.2 +0.3
baz=75,SNR=9.8
L11A Cat Creek Ranc 75.30 46 ⇓P P 00 25 09.5 +0.4
baz=75,SNR=12
M10A I.L. Ranch, Tu 75.32 47 ⇓P P 00 25 09.8 +0.6
baz=75,SNR=7.3
K12A Draper Farm, C 75.42 45 ⇓P P 00 25 10.1 +0.3
baz=75,SNR=8.2
CMB Columbia Colle 75.52 52 eP P 00 25 10.3 -0.1
G17A Pierce Place, 75.64 41 ⇓P P 00 25 11.5 +0.5
baz=75
QLMT Earthquake Lak 75.65 42 eP P 00 25 11.4 +0.4
J14A Carey 75.67 44 ⇑P P 00 25 11.6 +0.5
baz=75,SNR=6.5
BMN Battle Mountai 75.69 48 eP P 00 25 11.9 +0.6
L12A House Creek Ra 75.70 46 ⇓P P 00 25 11.7 +0.3
baz=75,SNR=8.7
F18A Big Timber 75.71 40 ⇑P P 00 25 11.5 +0.2
baz=75,SNR=6.7
R06C Coleville 75.73 51 ⇑P P 00 25 11.9 +0.3
baz=76
M11A Holland Ranch, 75.79 47 ⇓P P 00 25 12.4 +0.5
baz=76,SNR=5.4
H16A Russell Place, 75.83 42 ⇓P P 00 25 12.6 +0.5
baz=76,SNR=11
K13A Stover Farm, H 75.84 45 ⇑P P 00 25 12.8 +0.7
baz=76
S05C Merced 76.02 52 ⇓P P 00 25 12.8 -0.4
baz=76
J15A Blackfoot 76.17 43 ⇑P P 00 25 14.6 +0.6
baz=76
YFT Old Faithful 76.22 42 eP P 00 25 16.3 +2.1
M12A Wells 76.27 46 ⇑P P 00 25 14.8 +0.3
baz=76,SNR=5.5
I16A Newdale 76.31 43 ⇓P P 00 25 15.6 +0.9
baz=76,SNR=14
L13A Double Diamond 76.31 45 ⇑P P 00 25 15.6 +0.8
baz=76
DGMT Dagmar 76.33 36 ⇑P P 00 25 14.8 +0.1
baz=76
DGMT Dagmar 76.33 36 eP P 00 25 14.5 -0.2
comp=Z,33nm,0.6s,mb5.1
Q08A Gibbs 76.37 50 ⇑P P 00 25 15.5 +0.4
baz=76
H17A Grant Village 76.39 42 ⇓P P 00 25 16.4 +1.3
baz=76,SNR=7.3
K14A Jones Ranch, D 76.39 44 ⇓P P 00 25 15.3 +0.1
baz=76,SNR=5.8
NVAR Mina Array Bea 76.46 50 P P 00 25 15.7 +0.1
comp=Z,10nm,0.7s,mb4.6,baz=294,slow=5.2,SNR=54
RLMT Red Lodge 76.50 40 ⇑P P 00 25 16.1 +0.3
baz=76
IMW Indian Meadow 76.57 42 eP P 00 25 17.3 +1.2
N12A Clover Valley, 76.60 47 ⇑P P 00 25 16.9 +0.6
baz=76,SNR=9.5
T06C Millerton Lake 76.61 52 ⇑P P 00 25 16.2 -0.3
baz=76
J16A Bone 76.68 43 ⇑P P 00 25 17.4 +0.6
baz=76,SNR=7.2
M13A Montello 76.71 46 ⇓P P 00 25 17.1 +0.1
baz=76,SNR=5.4
L14A Malta 76.72 45 ⇑P P 00 25 17.9 +0.8
baz=76
I17A Pilgram Creek 76.73 42 ⇑P P 00 25 17.8 +0.8
baz=76,SNR=11
O11A Cowboy Ranch, 76.76 48 ⇓P P 00 25 17.8 +0.5
baz=76
MOOW Moose Ponds 76.77 42 eP P 00 25 17.9 +0.6
RRI2 Red Ridge 76.77 43 eP P 00 25 18.3 +1.0
TPAW Teton Pass 76.86 43 eP P 00 25 18.4 +0.7
LOHW Long Hollow 76.94 42 eP P 00 25 18.6 +0.4
K16A Soda Springs 77.01 43 ⇑P P 00 25 19.0 +0.4
baz=77,SNR=6.8
M14A Sheep Mountain 77.04 45 ⇑P P 00 25 19.2 +0.4
baz=77,SNR=6.8
J17A Brown Place, J 77.07 43 ⇓P P 00 25 19.7 +0.8
baz=77
O12A Currie 77.17 47 ⇓P P 00 25 19.6 +0.1
baz=77,SNR=6.4
L15A Malad City 77.19 44 ⇓P P 00 25 19.9 +0.3
baz=77
Q10A Clear Creek Ra 77.26 49 ⇓P P 00 25 20.4 +0.3
baz=77
I18A Diamond G Ranc 77.27 42 ⇓P P 00 25 20.2 +0.2
baz=77
R09A Tonopah 77.29 50 ⇑P P 00 25 20.0 -0.2
baz=77,SNR=7.6
AHID Auburn Hatcher 77.30 43 eP P 00 25 20.2 0.0
TPH Tonopah 77.32 50 eP P 00 25 20.7 +0.3
J18A Kendall Valley 77.53 42 ⇑P P 00 25 21.9 +0.4
baz=77,SNR=9.6
M15A Larsen Ranch, 77.55 45 ⇑P P 00 25 21.6 0.0
baz=77,SNR=5.1
S09A Goldfield 77.56 50 ⇑P P 00 25 21.8 0.0
baz=77,SNR=9.6
N14A Grayback Hills 77.59 46 ⇑P P 00 25 21.8 0.0
baz=77,SNR=7.8
P12A McGill 77.64 48 ⇑P P 00 25 21.9 -0.2
baz=77,SNR=6.6
Q11A Duckwater 77.66 48 ⇓P P 00 25 22.2 -0.1
baz=77
L16A Fish Haven 77.68 44 ⇑P P 00 25 22.3 0.0
baz=77
O13A Hicks Ranch, I 77.68 47 ⇓P P 00 25 22.5 +0.2
baz=77
R10A Warm Springs 77.69 49 ⇓P P 00 25 22.6 +0.2
baz=77
S10A Tonopah Range, 77.78 50 ⇓P P 00 25 23.1 +0.2
baz=78,SNR=8.0
L17A Cokeville 77.90 43 ⇓P P 00 25 23.8 +0.3
baz=78
N15A Stansbury Isla 77.92 45 ⇑P P 00 25 23.7 +0.1
baz=78,SNR=5.2
K18A Toltan Ranch, 77.93 43 ⇓P P 00 25 24.6 +0.9
baz=78
CWC Cottonwood Cre 77.95 52 ⇓P P 00 25 23.5 -0.3
baz=78
GRAC Grapevine Rang 77.98 51 ⇑P P 00 25 24.1 +0.1
baz=78
PKM Peak Mountain 77.98 54 ⇑P P 00 25 24.3 +0.2
baz=78
Q12A Willow Creek R 77.98 48 ⇓P P 00 25 24.1 +0.1
baz=78,SNR=7.6
R11A Troy Canyon, C 78.05 49 ⇑P P 00 25 24.5 +0.1
baz=78
M16A Huntsville 78.08 44 ⇑P P 00 25 24.8 +0.3
baz=78
BW06 Boulder Array 78.08 42 ⇑P P 00 25 24.3 -0.2
baz=78
BW06 Boulder Array 78.08 42 eP P 00 25 23.9 -0.5
PDAR Pinedale Array 78.08 42 P P 00 25 23.9 -0.6
comp=Z,13nm,0.8s,mb4.6,baz=48,slow=0.4,SNR=57
P13A Bates Ranch, G 78.14 47 ⇓P P 00 25 25.1 +0.2
baz=78,SNR=5.8
DUG Dugway 78.26 46 ⇓P P 00 25 25.7 +0.3
baz=78
DUG Dugway 78.26 46 eP P 00 25 25.3 -0.2
DUG pmax pmax
comp=Z,16nm,1.4s,mb4.5
DUG Dugway 78.26 46 eP P 00 25 25.3 -0.2
comp=Z,16nm,1.4s,mb4.5
ULM Lac du Bonnet 78.27 30 P P 00 25 23.6 -1.7
comp=Z,12nm,0.6s,mb4.8,baz=317,slow=6.1,SNR=12
CDF Champ du Feu 78.29 327 eP P 00 25 25.3 -0.1
O15A The Old Anders 78.38 46 ⇑P P 00 25 26.6 +0.5
baz=78
S11A Rachel 78.45 49 ⇓P P 00 25 27.2 +0.6
baz=78
L18A Fontenelle, Gr 78.46 43 ⇑P P 00 25 26.5 0.0
baz=78,SNR=8.8
M17A Scullys Gap (B 78.46 44 ⇑P P 00 25 26.5 -0.1
baz=78
N16A Rees Ranch, Co 78.49 45 ⇑P P 00 25 27.1 +0.4
baz=78
Q13A Wheeler Ranch, 78.49 47 ⇓P P 00 25 27.1 +0.4
baz=78,SNR=6.3
P14A Drum Mountains 78.55 46 ⇑P P 00 25 27.0 -0.1
baz=78,SNR=7.6
MPMC Manual Prospec 78.56 52 ⇑P P 00 25 27.0 -0.2
baz=78
R12A Pony Springs, 78.61 48 ⇑P P 00 25 27.6 +0.2
baz=78
FURC Furnace Creek, 78.64 51 ⇓P P 00 25 27.7 +0.1
baz=78
TPNV Topopah Spring 78.66 50 ⇓P P 00 25 27.4 -0.3
baz=78
TPNV Topopah Spring 78.66 50 eP P 00 25 27.6 -0.1
L19A Farson 78.67 43 ⇓P P 00 25 27.9 +0.2
baz=78,SNR=7.1
N17A Moffit Pass 78.76 44 ⇓P P 00 25 28.1 -0.1
baz=78,SNR=5.9
K20A Yellowstone Ra 78.77 42 ⇓P P 00 25 28.2 0.0
baz=78
M18A Lyman 78.81 44 ⇑P P 00 25 28.2 -0.2
baz=78,SNR=5.0
NLU North Lily Min 78.83 46 eP P 00 25 28.9 +0.4
LRMC Laurel Mountai 78.84 52 ⇓P P 00 25 28.2 -0.5
baz=79
Q14A Sevier Lake (B 78.87 47 ⇑P P 00 25 28.7 -0.1
baz=79,SNR=8.6
P15A Leamington 78.99 46 ⇑P P 00 25 29.2 -0.2
baz=79
MPU Maple Canyon 79.02 45 eP P 00 25 29.9 +0.3
T11A Corn Creek, Al 79.03 49 ⇓P P 00 25 29.7 0.0
baz=79,SNR=6.5
R13A O'Grain Ranch, 79.07 48 ⇑P P 00 25 29.9 0.0
baz=79
EDW2 Edwards Air Fo 79.08 53 ⇓P P 00 25 30.2 +0.2
baz=79
MEZF Maizieres J'vi 79.10 328 eP P 00 25 29.2 -0.6
Q15A Fillmore 79.35 47 ⇑P P 00 25 31.5 +0.2
baz=79,SNR=5.7
O17A Robinson Place 79.36 45 ⇓P P 00 25 31.7 +0.3
baz=79
SHOC Shoshone 79.37 51 ⇑P P 00 25 31.4 -0.1
baz=79
GSC Goldstone 79.48 52 ⇓P P 00 25 32.1 0.0
baz=79
S13A Holt Ranch, En 79.56 48 ⇓P P 00 25 32.7 +0.3
baz=79,SNR=5.1
N19A John Jarvie Ra 79.65 43 ⇑P P 00 25 32.4 -0.5
baz=79,SNR=6.1
O18A Roosevelt 79.69 44 ⇑P P 00 25 33.5 +0.4
baz=79
M20A Sweetwater, Wa 79.71 42 ⇑P P 00 25 33.2 0.0
baz=79
RSSD Black Hills 79.72 38 eP P 00 25 31.9 -1.3
BFSC Mount Baldy St 79.72 53 ⇑P P 00 25 32.9 -0.5
baz=80
TMUT Trail Mountain 79.76 46 eP P 00 25 34.1 +0.6
L21A Rawlins 79.77 42 ⇓P P 00 25 33.4 -0.1
baz=79
MSU Marysvale 79.81 47 eP P 00 25 34.5 +0.7
AGMN Agassiz Refuge 79.87 31 eP P 00 25 32.6 -1.3
P17A Butcher Ranch, 79.88 45 ⇓P P 00 25 34.3 +0.1
baz=80
TUQ Turquoise Moun 79.90 51 ⇓P P 00 25 34.2 -0.1
baz=80
T13A Saint George 79.93 49 ⇑P P 00 25 35.0 +0.5
baz=80,SNR=9.6
R15A Junction 79.97 47 ⇓P P 00 25 35.2 +0.6
baz=80
U12A Valley of Fire 79.99 50 ⇓P P 00 25 34.8 0.0
baz=80
P18A Preston Nutter 80.03 45 ⇑P P 00 25 35.2 +0.2
baz=80,SNR=10
M21A Separation Pea 80.04 42 ⇑P P 00 25 34.7 -0.2
baz=80,SNR=6.4
N20A Spence Gulch, 80.16 43 ⇓P P 00 25 36.0 +0.4
baz=80,SNR=8.2
SRU San Rafael 80.26 45 ⇑P P 00 25 36.1 0.0
baz=80
S15A Panguitch 80.31 47 ⇓P P 00 25 37.7 +1.2
baz=80
V12A Nelson 80.32 50 ⇑P P 00 25 36.9 +0.4
baz=80
U13A Pakoon Wash 80.33 49 ⇑P P 00 25 36.9 +0.3
baz=80,SNR=5.4
R16A Teasdale 80.35 46 ⇑P P 00 25 37.1 +0.5
baz=80
T14A Hurricane 80.36 48 ⇓P P 00 25 36.8 +0.1
baz=80
MURC Murrieta 80.44 53 ⇑P P 00 25 36.5 -0.7
baz=80
Q18A Rafter H Ranch 80.47 45 ⇓P P 00 25 37.4 +0.1
baz=80
GMRC Granite Mounta 80.52 51 ⇑P P 00 25 37.5 -0.1
baz=80
M22A Cedar Creek Ra 80.57 42 ⇓P P 00 25 38.3 +0.6
baz=80
LOR Lormes 80.58 328 eP P 00 25 36.6 -1.0
comp=Z,9.9nm,0.7s,mb4.4
LOR Lormes 80.58 328 eP P 00 25 36.6 -1.0
LOR pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
LOR Lormes 80.58 328 eP P 00 25 36.6 -1.0
comp=Z,4.9nm,0.7s,mb4.3
N21A Black Mountain 80.59 43 ⇓P P 00 25 38.2 +0.3
baz=80
LDFC Landfair 80.63 51 eP P 00 25 38.1 0.0
R17A Hanksville Air 80.67 46 ⇑P P 00 25 38.1 -0.3
baz=80,SNR=5.3
P19A Cripple Cowboy 80.69 44 ⇓P P 00 25 38.2 -0.2
baz=80,SNR=5.4
O20A White River Ci 80.69 43 ⇑P P 00 25 38.2 -0.2
baz=80
S16A Weppner Ranch, 80.70 47 ⇓P P 00 25 38.6 +0.1
baz=80,SNR=5.4
V13A Grand Canyon W 80.72 50 ⇑P P 00 25 38.7 +0.1
baz=80
U14A Mt Trumbull 80.77 49 ⇑P P 00 25 39.2 +0.3
baz=80,SNR=9.4
T15A Red Dirt Ranch 80.78 48 ⇓P P 00 25 39.0 +0.1
baz=80
LPL La Plagne 80.82 325 eP P 00 25 38.8 -0.1
comp=Z,4.6nm,0.5s,mb4.2
LPL La Plagne 80.82 325 eP P 00 25 38.8 -0.1
LPL pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
LPL La Plagne 80.82 325 eP P 00 25 38.8 -0.1
comp=Z,2.3nm,0.5s,mb4.2
LPG La Plagne 80.82 325 eP P 00 25 38.7 -0.3
comp=Z,9.8nm,0.6s,mb4.4
LPG La Plagne 80.82 325 eP P 00 25 38.7 -0.3
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
LPG La Plagne 80.82 325 eP P 00 25 38.7 -0.3
comp=Z,4.9nm,0.6s,mb4.4
BELC Belle Mtn. 80.87 52 ⇑P P 00 25 38.9 -0.6
baz=81
PFO Pinyon Flat Ob 80.88 53 ⇑P P 00 25 39.4 -0.1
baz=81
Q19A Hogan Spring (81.04 45 ⇓P P 00 25 39.5 -0.7
baz=81,SNR=7.1
SMF Signal de Mont 81.09 328 eP P 00 25 39.6 -0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
N22A	Wattenberg Ran	81.09	42	⇑P	P	00 25 40.4	0.0
	baz=81						
R18A	Canyonlands Na	81.13	45	⇑P	P	00 25 40.1	-0.6
	baz=81,SNR=5.3						
AVF	Avril sur Loir	81.17	328	eP	P	00 25 39.9	-0.8
	comp=Z,6.5nm,0.6s,mb4.2						
AVF	Avril sur Loir	81.17	328	eP	P	00 25 39.9	-0.8
AVF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
AVF	Avril sur Loir	81.17	328	eP	P	00 25 39.9	-0.8
	comp=Z,3.3nm,0.6s,mb4.2						
S17A	Black Ridge (B	81.19	47	⇑P	P	00 25 40.8	-0.2
	baz=81,SNR=8.3						
IRM	Iron Mountain	81.25	52	⇑P	P	00 25 41.5	+0.1
	baz=81						
U15A	North Rim	81.26	48	⇓P	P	00 25 41.9	+0.5
	baz=81,SNR=17						
T16A	Glen Canyon Da	81.28	47	⇑P	P	00 25 41.3	-0.2
	baz=81						
W13A	Hualapai Mount	81.31	50	⇑P	P	00 25 41.8	+0.1
	baz=81						
V14A	Boquillas Ranc	81.37	49	⇓P	P	00 25 42.5	+0.5
	baz=81,SNR=7.5						
MONP	Monument Peak	81.40	53	⇓P	P	00 25 42.0	-0.2
	baz=81						
MBDF	Montbardon	81.43	325	eP	P	00 25 41.0	-1.1
BC3	Big Chuckw Mtn	81.44	52	⇓P	P	00 25 42.2	-0.2
	baz=81						
R19A	Curley Farm, L	81.53	45	⇓P	P	00 25 42.7	-0.1
	baz=81						
Q20A	Ridgley Place,	81.55	44	⇑P	P	00 25 42.7	-0.2
	baz=81						
S18A	Hurst Farm, Bl	81.59	46	⇑P	P	00 25 42.9	-0.2
	baz=81,SNR=6.1						
ORIF	Oris-en-Rattie	81.66	326	eP	P	00 25 42.6	-0.7
T17A	Navajo Res., N	81.66	47	⇓P	P	00 25 43.0	-0.5
	baz=81						
W14A	Seligman	81.69	50	⇑P	P	00 25 43.9	+0.2
	baz=81,SNR=5.7						
X13A	Yucca	81.71	50	⇑P	P	00 25 43.8	0.0
	baz=81,SNR=8.7						
SWSC	Sam W. Stewart	81.74	53	⇓P	P	00 25 43.9	0.0
	baz=82						
PDMCI	Parker Dam,Lak	81.74	51	⇓P	P	00 25 43.8	-0.2
	baz=82						
V15A	Kaibab Nationa	81.76	49	⇓P	P	00 25 44.0	0.0
	baz=82						
SCHQ	Schefferville	81.83	12	P	P	00 25 42.8	-1.2
	comp=Z,5.3nm,0.7s,mb4.4,baz=353,slow=8.1,SNR=8.9						
Y12C	Blythe	81.91	51	⇓P	P	00 25 44.6	-0.3
	baz=82,SNR=5.4						
S19A	Harvey Farm, M	82.00	45	⇓P	P	00 25 44.8	-0.4
	baz=82						
U17A	Shonto	82.03	47	⇓P	P	00 25 45.3	-0.1
	baz=82						
SMCO	Snowmass	82.06	43	eP	P	00 25 42.6	-2.9
T18A	Mexican Hat	82.06	46	⇑P	P	00 25 45.0	-0.6
	baz=82,SNR=6.6						
U16A	Tuba City	82.11	48	⇑P	P	00 25 46.4	+0.6
	baz=82						
W15A	Williams	82.17	49	⇑P	P	00 25 46.9	+0.8
	baz=82						
VIVF	Saint-Julien-l	82.21	326	eP	P	00 25 45.3	-0.9
	comp=Z,5.4nm,0.7s,mb4.1						
VIVF	Saint-Julien-l	82.21	326	eP	P	00 25 45.3	-0.9
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
VIVF	Saint-Julien-l	82.21	326	eP	P	00 25 45.3	-0.9
	comp=Z,2.7nm,0.6s,mb4.2						
GLA	Glamis	82.23	52	⇑P	P	00 25 46.4	-0.1
	baz=82						
Y13A	Salome	82.27	51	⇓P	P	00 25 46.9	+0.2
	baz=82						
X14A	Yava	82.33	50	⇑P	P	00 25 47.1	+0.1
	baz=82,SNR=7.4						
R21A	Cimarron	82.37	44	⇑P	P	00 25 47.9	+0.8
	baz=82						
WUAZ	Wupatki	82.43	48	⇓P	P	00 25 48.0	+0.5
	baz=82						
U18A	Rough Rock, Ch	82.59	47	⇑P	P	00 25 48.7	+0.4
	baz=82						
W16A	Flagstaff	82.65	49	⇑P	P	00 25 49.1	+0.5
	baz=82						
Y14A	Wickenburg	82.65	50	⇑P	P	00 25 48.4	-0.2
	baz=82						
X15A	Humboldt	82.69	50	⇓P	P	00 25 49.2	+0.4
	baz=82,SNR=11						
MVCO	Mesa Verde	82.74	45	⇑P	P	00 25 49.2	+0.2
	baz=82						
T19A	Beclabito	82.74	46	⇓P	P	00 25 49.4	+0.3
	baz=82,SNR=6.9						
Y15A	Casa Rosa Ranc	83.03	50	⇑P	P	00 25 50.7	+0.2
	baz=83,SNR=6.9						
113A	Mohawk Valley,	83.06	52	⇓P	P	00 25 50.3	-0.3
	baz=83						
V18A	Ganado	83.08	47	⇓P	P	00 25 51.0	+0.2
	baz=83						
Z14A	Wintersburg	83.10	51	⇑P	P	00 25 50.8	-0.1
	baz=83						
X16A	Lo Mia Camp, P	83.19	49	⇓P	P	00 25 51.8	+0.4
	baz=83,SNR=8.9						
CAF	Calviac	83.21	328	eP	P	00 25 51.0	-0.2
ECSD	EROS,Sioux Fal	83.30	34	eP	P	00 25 50.4	-1.3
V19A	Window Rock	83.56	47	⇑P	P	00 25 53.5	+0.4
	baz=83						
Y16A	Circle Bar Ran	83.57	50	⇑P	P	00 25 53.7	+0.4
	baz=83						
RAO	Raoul Island	83.80	139	eP	P	00 25 53.9	-0.3
SDCO	Great Sand Dun	83.89	43	eP	P	00 25 54.5	-0.3
X18A	Snowflake	83.94	48	⇓P	P	00 25 55.3	+0.2
	baz=84						
Y17A	Roosevelt	84.06	49	⇑P	P	00 25 55.7	0.0
	baz=84,SNR=6.6						
214A	Organ Pipe Nat	84.20	52	⇓P	P	00 25 56.3	-0.2
	baz=84						
X19A	St. Johns	84.38	48	⇑P	P	00 25 57.5	+0.3
	baz=84,SNR=10.0						
116A	Eloy	84.40	51	⇓P	P	00 25 57.5	+0.1
	baz=84						
Y18A	Canyon Day Jun	84.45	49	⇓P	P	00 25 58.1	+0.5
	baz=84						
117A	Oracle	84.94	50	⇓P	P	00 26 00.3	+0.3
	baz=85						
118A	Homack Ranch,	85.33	49	⇓P	P	00 26 02.3	+0.3
	baz=85						
217A	Green Valley	85.49	51	⇓P	P	00 26 03.0	+0.3
	baz=85						
ANMO	Albuquerque	85.53	46	⇓eP	P	00 26 02.7	-0.2
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
119A	Ashpeak Ranch,	85.61	49	⇓P	P	00 26 04.0	+0.7
	baz=85						
218A	Dragoon	85.78	50	⇑P	P	00 26 04.6	+0.4
	baz=86						
219A	White Tail Can	86.21	49	⇓P	P	00 26 06.3	+0.1
	baz=86						
318A	Bisbee	86.21	50	⇓P	P	00 26 06.2	0.0
	baz=86						
319A	Douglas	86.66	50	⇓P	P	00 26 08.8	+0.4
	baz=86						
URZ	Urewera	89.18	147	P	P	00 26 18.1	-1.7
	comp=Z,5.1nm,0.8s,mb4.3,baz=346,slow=4.2,SNR=3.5						
TXAR	Lajitas Array	91.35	47	P	P	00 26 29.7	-0.6
	comp=Z,5.7nm,0.6s,mb4.6,baz=291,slow=3.0,SNR=40						
TXAR	Lajitas Array	91.35	47	P	P	00 26 29.7	-0.6
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TORD	Torodi Ar. Bea	109.58	310	PKiKP	PKiKP	00 31 50.2	-2.5
	comp=Z,0.3nm,0.8s,baz=13,slow=1.8,SNR=4.4						
TORD				PP	PP	00 32 23.9	-6.7
	comp=Z,1.0nm,1.1s,baz=28,slow=8.1,SNR=2.5						
TORD				PKKPbc	PKKPbc	00 42 54.9	-1.5
	comp=Z,0.5nm,0.9s,baz=229,slow=0.7,SNR=4.4						
TORD	Torodi Ar. Bea	109.58	310	PKPdf	PKiKP	00 31 50.2	-2.5
TORD				PP	PP	00 32 23.9	-6.7
TORD				PKKPbc	PKKPbc	00 42 54.9	-1.5
DBIC	Dimbokro	118.55	312	PKP	PKPdf	00 32 07.5	-2.4
	comp=Z,2.7nm,1.0s,baz=45,slow=1.4,SNR=3.1						
DBIC	Dimbokro	118.55	312	PKIKP	PKPdf	00 32 07.5	-2.4
DBIC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VNDA	Vanda	120.61	173	PKP	PKPdf	00 32 10.2	-1.8
	comp=Z,0.5nm,0.9s,baz=330,slow=5.2,SNR=3.6						
VNDA	Vanda	120.61	173	PKIKP	PKPdf	00 32 10.2	-1.7
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SNAA	Sanae	143.61	201	ePKPdf	PKPdf	00 32 52.0	-3.0
SNAA				e		00 32 55.9	
SNAA				e		00 35 49.0	
SNAA	Sanae	143.61	201	ePKPdf	PKPdf	00 32 52.2	-2.8
VNA2	Neumayer--Watz	145.25	201	ePKPdf	PKPdf	00 32 57.3	-0.6
	baz=84,slow=2.0						
VNA2				e		00 33 00.9	
VNA2				e		00 34 41.2	
VNA2				e		00 34 46.6	
VNA2				e		00 34 51.7	
VNA2				e		00 35 53.4	
VNA1	Neumayer--Stat	145.65	201	ePKPdf	PKPdf	00 32 58.4	-0.2
VNA1				e		00 33 01.6	
VNA1				e		00 34 42.8	
VNA1				e		00 34 48.3	
VNA1				e		00 34 53.2	
VNA1				e		00 35 54.4	
VNA3	Neumayer Olymp	145.66	200	ePKPdf	PKPdf	00 32 58.3	-0.3
VNA3				e		00 33 01.6	
VNA3				e		00 34 41.9	
VNA3				e		00 34 47.8	
VNA3				e		00 34 52.9	
VNA3				e		00 35 53.1	
BDFB	Brasilia	153.57	4	PKPbc	PKPbc	00 33 19.4	-1.3
	comp=Z,0.8nm,0.7s,baz=315,slow=20,SNR=3.5						
BDFB				PKPab	PKPab	00 33 33.9	-1.2
	comp=Z,0.4nm,0.4s,baz=344,slow=18,SNR=5.2						
BDFB	Brasilia	153.57	4	PKIKP	PKPbc	00 33 19.4	-1.3
BDFB						00 33 33.9	
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	Paso Flores	161.68	94	PKPab	PKPab	00 34 09.8	-0.1
	comp=Z,0.9nm,0.7s,baz=263,slow=8.1,SNR=3.8						
PLCA	Paso Flores	161.68	94	PKP2	PKPab	00 34 09.8	-0.1
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISK **04** 01:11:10.5, 3743N×3887E, h8km, MD2.6*
*CSEM **04** 01:11:10.4±0.1, 3749N×3880E, h3km, MD2.8, Error ellipse: s-maj=3.6km s-min=1.9km az=150.0*
*ISCJB **04** 01:11:11.3±0.9, 3743N±006×3880E±005, h10km, Error ellipse: s-maj=8.3km s-min=4.9km az=161.9*
*DDA **04** 01:11:11.2, 3746N×3878E, h7km±3km, Md2.8*
ISC 04 01:11:11.5±1.0**, 3744N**±005×**3880E**±005**, h6**km±7km**, n7, σ0.46**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.02	87	ePG	Pg	01 11 12.4	-0.3
URFA				eSG	Sg	01 11 13.7	+0.2
ATAB	Bozova	0.40	274	eP	Pg	01 11 19.2	0.0
ATAB				eS	Sg	01 11 24.7	+0.3
SVRC	Sivrice-ELAZID	1.02	23	ePG	Pg	01 11 30.2	-0.8
SVRC				eSG	Sg	01 11 44.5	+0.2
ELZG	Elazig	1.07	8	eP	Pg	01 11 30.9	-1.1
ELZG				eS	Sg	01 11 46.2	+0.4
AKCD	Akcadag	1.10	321	eP	Pg	01 11 32.4	-0.2
AKCD				eS	Sg	01 11 47.2	+0.4
DIYA	Diyarbakir	1.16	65	eP	Pg	01 11 33.9	+0.2
DIYA				eS	Sg	01 11 49.3	+0.6
GAZ	Gaziantep	1.29	259	ePN	Pn	01 11 36.1	+0.2

MAN 04 01:30:53, 988N×12590E, h14km, mb4.5, ML3.3, MS3.2, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.41	256	⇓eP	Pg	01 31 02.8	+1.5
SCPH				eS	Sg	01 31 12.5	+5.6
PLP	Palo	1.56	325	⇓eP	Pn	01 31 18.8	-1.6
PLP				eS	Sn	01 31 39.0	-1.4
TBP	Tagbilaran	2.02	265	eP	Pn	01 31 26.8	+0.2
TBP				eS	Sn	01 31 52.4	+0.8

*ISCJB **04** 01:35:58.9±0.7, 635S±005×1483E±0.1, h33km, mb3.9/9, MS3.7/4, Error ellipse: s-maj=20.4km s-min=7.5km az=5.9*
*NEIC **04** 01:36:00.7±0.7, 630S×14833E, h35km, mb4.1/5, Error ellipse: s-maj=22.7km s-min=7.9km az=90.0*
*IDC **04** 01:36:02.8±0.9, 639S×148.13E, h46km±6km, mb3.6/6, mb1 3.8/7, mb1mx3.6/15, mbtmp3.7/7, MS3.7/5, Ms1 3.7/5, ms1mx3.3/24, Error ellipse: s-maj=40.4km s-min=12.9km az=109.0*
ISC 04 01:36:01.5±1.4**, 638S**±007×**1483E**±01**, h40**km±13km**, n30, σ0.95**/27**, mb3.9**/9**, MS3.7**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.22	201	ePn	Pn	01 36 50.8	+1.3
PMG				eSn	Sn	01 37 25.6	-1.1
CTA	Charters Tower	13.78	188	P	Pn	01 39 14.6	+0.3
	0.3nm,0.3s,baz=353,slow=12,SNR=3.5						
CTA				LR	LR	01 44 41.4	
	comp=Z,220nm,18.4s,baz=81,slow=38						
CTA	Charters Tower	13.78	188	P	Pn	01 39 14.6	+0.3
CTA				LR	LR	01 44 41.4	
CTAO	Charters Tower	13.78	188	eP	Pn	01 39 14.4	+0.1
	6.0nm,0.8s						
WRAB	Tennant Creek	19.11	224	eP	Pn	01 40 22.6	+0.3
	7.9nm,0.8s						
WRAB				eS	S	01 43 56.6	+0.7
WB2	Warramunga Arr	19.12	224	eP	Pn	01 40 22.7	+0.3
WB2				eS	S	01 43 57.2	+1.1
ASAR	Alice Springs	22.07	217	P	P	01 40 53.8	+0.5
	3.7nm,0.6s,mb4.0,baz=52,slow=9.5,SNR=59						
ASAR				pP		01 41 05.8	
	12nm,0.8s,baz=54,slow=9.8,SNR=16						
ASAR				S	S	01 44 53.6	-1.0
	6.3nm,1.1s,baz=36,slow=21,SNR=14						
ASAR	Alice Springs	22.07	217	P	P	01 40 53.8	+0.5
ASAR				pP		01 41 05.8	
ASAR				S	S	01 44 53.6	-1.0
ARMA	Armidale	24.12	173	eP	P	01 41 11.3	-2.4
STKA	Stephens Creek	26.14	193	eP	P	01 41 31.3	-0.7
	3.1nm,0.7s,mb4.0						
STKA	Stephens Creek	26.14	193	P	P	01 41 31.1	-0.8
	3.7nm,0.7s,mb4.0,baz=14,slow=12,SNR=9.8						
STKA				pP	pP	01 41 44.1	+1.2
	3.2nm,0.6s,baz=15,slow=13,SNR=3.7						
STKA				LR	LR	01 53 09.3	
	comp=Z,219nm,18.2s,MS3.7,baz=22,slow=39						
DAV	Davao City (W)	26.31	300	P	P	01 41 33.1	-0.7
MBWA	Marble Bar	31.32	239	eP	P	01 42 17.4	-0.9
CBIJ	Chichi jima	33.80	350	LR	LR	01 53 12.8	
	comp=Z,126nm,20.3s,MS3.6,baz=74,slow=30						
TAU	Tasmania Unive	36.40	181	eP	P	01 43 01.9	-0.2
	1.5nm,0.4s,mb4.3						
MJAR	Matsushiro Arr	43.73	348	LR	LR	02 01 58.2	
	comp=Z,100nm,18.6s,MS3.8,baz=340,slow=36						
KSRS	Korea Array	47.57	338	LR	LR	02 02 50.2	
	comp=Z,80nm,20.5s,MS3.7,baz=17,slow=34						
ENH	Enshi	52.07	317	eP	P	01 45 06.9	-0.8
	0.6nm,0.3s,mb4.0						
YSS	Yuzh-Sakhalins	53.32	355	P	P	01 45 17.4	+0.9
PETK	Petropavlovsk-	59.79	7	P	P	01 46 03.9	+1.5
	1.3nm,0.7s,mb4.1,baz=170,slow=5.6,SNR=4.3						
PETK				pP	pP	01 46 17.3	+3.2
	1.7nm,0.7s,baz=147,slow=6.5,SNR=1.5						
PETK	Petropavlovsk-	59.79	7	pP	pP	01 46 17.3	+3.2
LSA	Lhasa	65.50	307	eP	P	01 46 39.9	-1.2
	2.8nm,0.4s,mb4.7						
VNDA	Vanda	71.47	177	P	P	01 47 19.1	+1.7
	0.4nm,0.7s,mb3.5,baz=344,slow=5.9,SNR=2.2						
MKAR	Makanchi Array	78.61	320	P	P	01 47 59.0	-0.2
	0.3nm,0.5s,mb3.5,baz=106,slow=5.9,SNR=3.1						
ZALV	Zalesovo Beam	80.02	328	P	P	01 48 06.8	+0.1
	0.2nm,0.3s,mb3.5,baz=107,slow=4.8,SNR=2.3						
AAK	Ala-Archa	82.52	314	P	P	01 48 19.9	-0.4
TOA0	Torodi Ar. Sit	146.44	284	ePKPdf	PKPdf	01 55 39.3	+1.3
TOA0				e		01 55 52.4	
TORD	Torodi Ar. Bea	146.44	284	PKPbc	PKPbc	01 55 39.0	-0.4
	9.0nm,0.6s,baz=81,slow=2.7,SNR=114						
TORD				pPKPbc	pPKPbc	01 55 52.8	+0.9
	12nm,0.8s,baz=52,slow=3.1,SNR=18						
BDFB	Brasilia	152.80	144	pPKPbc	pPKPbc	01 56 07.1	-0.8
	0.9nm,0.6s,baz=180,slow=19,SNR=2.3						
DBIC	Dimbokro	153.33	272	PKPbc	PKPbc	01 55 55.1	-1.4
	3.1nm,0.8s,baz=126,slow=3.0,SNR=4.0						
DBIC				pPKPbc	pPKPbc	01 56 09.6	+0.4
	4.5nm,0.9s,baz=16,slow=2.8,SNR=4.0						

*ISCJB **04** 02:17:03.5±0.5, 4255N±002×4352E±003, h2km±4km, Error ellipse: s-maj=4.4km s-min=3.6km az=30.5*
*TIF **04** 02:17:03.0, 4258N×4353E, h10km±2km*
*MOS **04** 02:17:04.3±0.9, 4254N×4369E, h16km, mb4.2/1, Error ellipse: s-maj=19.9km s-min=9.0km az=78.4*
*CSEM **04** 02:17:20.1, 4207N×4228E, h11km, MD3.2, After ERD*
*DDA **04** 02:17:20.1, 4207N×4228E, h11km, Md3.2*
ISC 04 02:17:04.1±0.4**, 4256N**±002×**4351E**±004**, h4**km±4km**, n20, σ0.95**/39**, 5C-3D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	Oni	0.05	290	P	Pg	02 17 05.3	0.0
ONI				S	Sg	02 17 06.7	+0.6
ZEI	Tsey	0.35	54	⇓iPG	Pg	02 17 10.8	-0.1
ZEI				i S	Sg	02 17 15.8	+0.3
LACR	Lac	0.63	65	⇑iPG	Pg	02 17 15.6	-0.7
LACR				i S	Sg	02 17 24.2	-0.3
KORR	Kora	0.66	38	⇑iPG	Pg	02 17 16.7	-0.2
KORR				i S	Sg	02 17 25.9	+0.4
GOR	Gori	0.73	142	P	Pg	02 17 17.9	-0.2
GOR				S	Sg	02 17 29.4	+1.9
LSNR	Lesken	0.74	17	⇓iPG	Pg	02 17 18.2	-0.2
LSNR				i S	Sg	02 17 28.8	+0.7
ARNR	Ardon	0.84	42	⇑iPG	Pg	02 17 19.9	-0.4
ARNR				eS	Sg	02 17 31.4	+0.2
MTA	Mtatsminda	1.29	132	P	Pg	02 17 27.9	-0.9
PRTR	Priterechnaya	1.31	25	ePG	Pg	02 17 28.6	-0.7
PRTR				eS	Sg	02 17 46.8	+0.4
TRKR	Terskaya	1.46	37	ePG	Pg	02 17 30.8	-1.4
TRKR				eS	Sb	02 17 50.2	-0.7
KIV	Kislovodsk	1.52	337	⇓ePG	Pg	02 17 32.5	-0.7
KIV				i S	Sn	02 17 53.0	+0.7
BEYR	Belyy Ugol+	1.54	341	⇑iPG	Pg	02 17 32.3	-1.3
BEYR				i S	Sn	02 17 52.8	+0.1
DOMR	Dombai	1.57	298	⇑ePN	Pn	02 17 33.9	+1.1
DOMR				i S	Sn	02 17 56.3	+2.8
DGRG	David-gareji	1.78	128	P	Pn	02 17 37.0	+1.4
DGRG				S	Sn	02 18 04.5	+5.9
ARTV	Artvin	1.82	221	i P	Pn	02 17 36.4	+0.2
ARTV				i S	Sn	02 17 59.0	-0.6
DBOC	Borcka	1.84	229	i P	Pn	02 17 36.0	-0.4
DBOC				i S	Sn	02 17 57.8	-2.4
DBOC	Borcka	1.84	229	i P	Pn	02 17 36.0	-0.5
DBOC				i S	Sn	02 17 57.8	-2.4
DAGI	Agillar	1.91	219	i P	Pn	02 17 38.1	+0.7
DAGI				i S	Sn	02 18 00.2	-1.7
DBAD	Bademkaya	2.06	222	i P	Pn	02 17 40.3	+0.8
DBAD				i S	Sn	02 18 00.0	-5.6
DDEM	Demirkent	2.13	219	i P	Pn	02 17 42.3	+1.9
DDEM				i S	Sn	02 18 07.0	-0.3

GUC 04 02:18:11.9±0.6**, 2207S×6997W, h43**km±2km**, MD3.7, ML3.2, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOCH	Tocopilla	0.22	263	eP	Pn	02 18 19.4	-0.3
TOCH				i S	Sn	02 18 25.2	+0.1
TOCH				AML	AML	02 18 25.6	
	comp=N,9μm,0.1s						
MACH	Maria Elena	0.23	124	eP	Pn	02 18 20.5	+0.7
MACH				i S	Sn	02 18 26.9	+1.6
PECH	Pedro de Valdi	0.59	153	eP	Pn	02 18 24.2	+0.2
PECH				i S	Sn	02 18 33.8	+1.1
PECH				AML	AML	02 18 34.6	
	comp=N,2μm,0.3s						
LVC	Limon Verde	1.12	119	eP	Pn	02 18 32.4	+1.3
LVC				i S	Sn	02 18 47.6	+2.3
CEN1	Los Morros	1.33	189	eP	Pn	02 18 37.1	+3.1
CEN1				i S	Sn	02 18 57.2	+6.6
ANCH	Antofagasta	1.66	194	eP	Pn	02 18 39.7	+1.2
ANCH				i S	Sn	02 19 00.8	+2.1

*CSEM **04** 02:28:35.4±0.1, 3691N×2935E, h2km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.3km az=176.0*
*ISK **04** 02:28:35.8, 3695N×2934E, h5km, MD3.1*
*ISCJB **04** 02:28:36.4±0.5, 3694N±003×2934E±003, h4km±6km, Error ellipse: s-maj=5.0km s-min=3.8km az=152.2*
*DDA **04** 02:28:36.2, 3694N×2932E, h7km±5km, Md3.3*
ISC 04 02:28:36.9±0.5**, 3695N**±003×**2934E**±003**, h4**km±5km**, n30, σ0.84**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.34	32	i P	Pg	02 28 43.3	-0.2
GOLH				i S	Sg	02 28 49.9	+2.0
FETY	Fethiye	0.37	213	ePG	Pg	02 28 43.3	-0.8
FETY				eSG	Sg	02 28 49.6	+0.7
ELL	Elmali	0.50	113	ePG	Pg	02 28 45.6	-0.9
ELL				eSG	Sg	02 28 53.6	+0.6
DALT	Dalyan (Mudla)	0.59	253	ePG	Pg	02 28 47.5	-0.7
DALT				eSG	Sg	02 28 56.4	+0.5
TURN	Turunc	0.59	263	i P	Pg	02 28 52.8	+4.5
TURN				i S	Sg	02 29 05.8	+10
AKAS	Kas	0.74	163	i P	Pg	02 28 50.6	-0.6
AKAS				i S	Sg	02 29 03.1	+2.3
KSL	Kastellorizon	0.82	166	eP	Pg	02 28 52.5	-0.1
DENT	Denizli	0.84	343	ePG	Pg	02 28 51.8	-1.3
YER	Yerkesik	0.86	283	ePG	Pg	02 28 53.6	+0.2
BCK	Bucak	1.12	62	ePN	Pn	02 28 57.7	-1.6
ARG	Arkhangelos	1.22	234	eP	Pg	02 28 58.7	-1.5
ISP	Isparta	1.29	46	ePN	Pn	02 29 01.6	0.0
MLSB	Milas	1.30	286	ePN	Pn	02 29 01.6	-0.1
AYDN	Tasoluk	1.36	302	i P	Pn	02 29 02.2	-0.4
AYDN				i S	Sb	02 29 22.2	+1.5
KHL	Karahalli	1.38	6	ePN	Pn	02 29 02.7	-0.1
KHAL	Karahalli	1.43	5	i P	Pn	02 29 02.1	-1.4
KHAL				i S	Sb	02 29 23.7	+1.2
DAT	Datca	1.43	262	ePN	Pn	02 29 03.5	0.0
BDRM	Kayabasi	1.52	275	i P	Pn	02 29 05.6	+0.9
BDRM				i S	Sn	02 29 25.4	+0.4
BODT	Bodrum	1.63	275	ePN	Pn	02 29 06.3	+0.1
KULA	Kula-Manisa	1.65	341	ePN	Pn	02 29 06.7	+0.1
SHUT	Suhut-Afyon	1.87	31	ePN	Pn	02 29 08.9	-0.6
SMG	Samos	2.13	292	eP	Pn	02 29 12.9	-0.4
GDZ	Gediz	2.14	3	eP	Pn	02 29 13.4	+0.1
KARP	Karpathos	2.25	232	eP	Pn	02 29 15.1	+0.4
AKS	Akhisar	2.27	328	ePN	Pn	02 29 15.0	-0.2
BLCB	Balcova	2.32	309	ePN	Pn	02 29 16.0	+0.2
HDMB	Hadim	2.52	89	ePN	Pn	02 29 18.9	+0.4
DST	Dursunbey	2.71	348	ePN	Pn	02 29 20.5	-0.6
KIZT	Kizilcal	2.79	45	ePN	Pn	02 29 22.8	+0.6
PRK	Paraskevi	3.33	314	eP	Pn	02 29 29.7	-0.1

IDC 04 02:31:11.4±35.0**, 1800S×17890W, h648**km±396km**, mb3.4**/2**, mb1 3.5**/2**, mb1mx2.9**/16**, mbtmp3.4**/2**, Error ellipse: s-maj=234.7km s-min=179.0km az=56.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.18	241	P	P	02 37 38.7	+0.2
	2.1nm,0.5s,baz=90,slow=11,SNR=4.9						
ASAR	Alice Springs	44.32	254	P	P	02 38 26.8	+0.1
	9.4nm,0.5s,baz=88,slow=8.2,SNR=158						
BRTR	Keskin Array B	144.52	314	PKP	PKPdf	02 49 35.9	-0.1
	0.6nm,0.7s,baz=20,slow=4.6,SNR=3.8						
GERES	GERESS Array B	147.58	344	PKPbc	PKPbc	02 49 44.6	0.0
	0.8nm,0.6s,baz=18,slow=3.5,SNR=4.3						
DAVOX	Davos/Dischmat	150.40	348	PKPbc	PKPbc	02 49 51.3	-0.2
	2.7nm,0.7s,baz=0.0,slow=5.1,SNR=3.9						

*IDC **04** 03:19:08.6±6.1, 3709N×7177E, h95km±50km, mb3.5/8, mb1 3.8/12, mb1mx3.6/23, mbtmp3.7/12, Error ellipse: s-maj=43.9km s-min=19.8km az=168.0*
*ISCJB **04** 03:19:11.0±0.4, 3720N±002×7197E±006, h141km±6km, mb3.8/11, Error ellipse: s-maj=7.4km s-min=3.4km az=165.8*
*MOS **04** 03:19:11.1±1.2, 3722N×7190E, h138km, mb4.0/7, Error ellipse: s-maj=12.1km s-min=6.2km az=88.7*
*NEIC **04** 03:19:12.0±0.6, 37.17N×7197E, h137km±8km, mb4.9/19, Error ellipse: s-maj=8.3km s-min=5.1km az=59.0*
*BJI **04** 03:19:12.7, 3731N×7193E, h136km, mb4.5*
*NNC **04** 03:19:20.9±4.6, 3793N×7159E, h169km±43km, mb3.6,*

mpv4.8, Error ellipse: s-maj=39.3km s-min=23.7km az=11.0

ISC 04 03:19:11.8±0.4**, 37.17N**±0.02×**71.96E**±0.06**, h133**km±6km**,**
n100, σ**1.25**/134**, mb3.8**/11**, 8C-7D,**
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.34	181	⇓P	Pn	03 20 04.9	+2.0
CEP				S	Sn	03 20 47.0	+4.6
KBL	Kabul	3.54	223	*e*Pn	Pn	03 20 06.3	+0.8
KBL				*e*Sn	Sn	03 20 41.4	-5.6
CHCP	Chirah Chowk	3.66	163	⇑P	Pn	03 20 11.0	+3.8
NIL	Nilore	3.67	163	*e*Pn	Pn	03 20 10.4	+3.1
NIL				Sn	Sn	03 20 46.3	-3.8
KSH	Kashi	3.93	52	P	Pn	03 20 14.9	+4.3
KSH				S	Sn	03 21 01.5	+5.3
KSH				Smax			
	comp=N,123nm,0.7s						
KSH				Smax			
	comp=E,112nm,0.6s						
SBDP	Sheikh Budin	4.95	191	P	Pn	03 20 25.6	+1.3
UCH	Uchtor	5.42	20	P	Pn	03 20 31.7	+1.3
	SNR=17						
UCH	Uchtor	5.42	20	*e*Pn	Pn	03 20 31.7	+1.3
	comp=E,101nm,0.6s						
UCH				*e*Sn	Sn	03 21 30.4	-1.4
KZA	Kyzart	5.52	26	P	Pn	03 20 32.7	+0.9
	SNR=55						
THN	Thein Dam	5.65	146	*e*P	Pn	03 20 35.2	+1.6
THN				*e*S	Sn	03 21 37.2	-0.1
EKS2	Erkin-Say	5.66	14	P	Pn	03 20 34.5	+0.9
	SNR=72						
EKS2	Erkin-Say	5.66	14	*e*Pn	Pn	03 20 34.1	+0.5
	comp=E,57nm,0.4s						
EKS2				*e*Sn	Sn	03 21 35.3	-2.1
DLH	Dalhousie	5.67	143	*e*P	Pn	03 20 35.0	+1.1
DLH				*e*S	Sn	03 21 37.0	-0.9
AAK	Ala-Archa	5.79	19	*e*PN	Pn	03 20 36.7	+1.3
AAK				*e*		03 21 39.9	
AAK				pmax	pmax		
	comp=Z,186nm,0.4s						
AAK	Ala-Archa	5.79	19	P	Pn	03 20 36.8	+1.4
	SNR=125						
AAK	Ala-Archa	5.79	19	*e*Pn	Pn	03 20 36.7	+1.3
	comp=Z,186nm,0.4s						
AAK				*e*Sn	Sn	03 21 39.9	-0.8
KBK	Karagaybulak	5.94	22	P	Pn	03 20 38.9	+1.5
	SNR=56						
KK31	Karatay Array	6.03	350	P	Pn	03 20 38.0	-0.6
	comp=Z,24nm,0.3s,baz=175,slow=12,SNR=993						
KK31				⇑S	Sn	03 21 39.6	-6.8
	comp=Z,110nm,0.3s,baz=173,slow=23						
KK31	Karatay Array	6.03	350	*e*PN	Pn	03 20 38.0	-0.6
KK31				pmax	pmax		
	comp=Z,52nm,0.3s						
ULHL	Ulahol	6.05	32	P	Pn	03 20 39.9	+1.1
	SNR=7.5						
CHMS	Chumysh	6.20	19	P	Pn	03 20 41.8	+0.9
	SNR=71						
TKM2	Tokmak 2	6.38	25	⇑P	Pn	03 20 44.6	+1.2
	comp=Z,108nm,0.6s						
TKM2				⇓S	Sn	03 21 52.3	-2.6
	comp=Z,46nm,0.8s						
TKM2	Tokmak 2	6.38	25	PN	Pn	03 20 44.7	+1.3
TKM2				pmax	pmax		
	comp=Z,108nm,0.6s						
TKM2	Tokmak 2	6.38	25	P	Pn	03 20 44.8	+1.4
	SNR=45						
TKM2	Tokmak 2	6.38	25	*e*Pn	Pn	03 20 44.6	+1.2
	comp=Z,132nm,0.6s						
TKM2				Sn	Sn	03 21 51.5	-3.5
USP	Ospenovka	6.39	17	P	Pn	03 20 43.6	+0.1
	SNR=73						
BHK	Bhakra	6.82	146	*e*S	Sn	03 22 01.2	-4.4
SDNR	Sundarnagar	7.01	142	*e*P	Pn	03 20 53.0	+1.1
SDNR				*e*S	Sn	03 22 06.3	-3.9
SMLA	Simla	7.41	143	*i*P	Pn	03 20 58.8	+1.5
SMLA				*i*S	Sn	03 22 17.4	-2.5
SMLA				*i*S	Sn	03 22 18.1	-1.8
SMLA				*e*x	x	03 22 21.6	
	comp=N,1μm,0.3s						
SMLA				*e*x	x	03 22 24.7	
	comp=E,2μm,0.4s						
KLP	Kalpa	7.66	135	*e*P	Pn	03 21 02.2	+1.5
KLP				*e*S	Sn	03 22 24.1	-1.7
KLP				AML	AML	03 22 30.2	
	comp=E,514nm,0.6s						
KLP				AML	AML	03 22 31.9	
	comp=N,763nm,0.6s						
DDI	Dehra Dun	8.51	142	*e*P	Pn	03 21 08.6	-3.5
DDI				*e*S	Sn	03 22 34.2	-12
JOSI	Joshimath	9.13	134	*e*P	Pn	03 21 21.5	+1.0
JOSI				*e*S	Sn	03 22 55.1	-6.4
JOSI				AML	AML	03 23 07.2	
	comp=E,443nm,0.7s						
JOSI				AML	AML	03 23 08.8	
	comp=N,406nm,0.6s						
KALG	Kalgarh	9.52	141	*e*P	Pn	03 21 26.8	+1.1
KALG				*e*x	x	03 22 59.1	
NDI	New Delhi	9.54	151	*e*P	Pn	03 21 25.0	-1.0
NDI				*e*S	Sn	03 23 06.0	-5.5
KHET	Khetri	9.63	159	*e*P	Pn	03 21 25.9	-1.3
KHET				*e*S	Sn	03 23 06.0	-7.7
AYAN	Aya Nagar	9.69	152	*e*P	Pn	03 21 28.4	+0.5
SONA	Sohna	9.88	153	*e*P	Pn	03 21 29.7	-0.8
SONA				*e*S	Sn	03 23 11.8	-8.0
AJM	Ajmer	10.90	167	*e*x	x	03 21 39.0	
AJM				*i*x	x	03 23 37.0	
AGRA	Agra	11.13	151	*e*P	Pn	03 21 46.8	-0.3
AGRA				*e*S	Sn	03 23 41.3	-8.5
AGRA				AML	AML	03 23 52.4	
	comp=N,130nm,0.3s						
AGRA				AML	AML	03 23 52.5	
	comp=E,109nm,0.3s						
MK31	Makanchi Array	12.30	35	⇑P	Pn	03 22 02.7	+0.5
	comp=E,20nm,1.2s,baz=210,slow=31,SNR=23						
MK31	Makanchi Array	12.30	35	P	Pn	03 22 02.7	+0.5
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK31	Makanchi Array	12.30	35	*e*Pn	Pn	03 22 02.7	+0.5
MKAR	Makanchi Array	12.30	35	P	Pn	03 22 01.2	-1.0
	comp=Z,0.4nm,0.3s,baz=224,slow=12,SNR=23						
DANN	Dangsing	13.25	128	*e*P	Pn	03 22 14.5	-0.3
	comp=Z,40nm,0.4s						
KOLN	Koldanda	13.57	130	*e*P	Pn	03 22 18.0	-0.8
	comp=Z,29nm,0.5s						
GKN	Gorkha	14.05	127	*e*P	Pn	03 22 24.4	-0.6
	comp=Z,38nm,0.4s						
KURBB	Kurchatov Arra	14.25	17	⇑P	Pn	03 22 30.4	+3.1
	comp=Z,2.9nm,0.6s						
KURK	Kurchatov	14.35	17	⇓P	Pn	03 22 31.7	+3.1
	comp=Z,36nm,1.7s						
KURK	Kurchatov	14.35	17	P	Pn	03 22 24.4	-4.2
	comp=Z,0.3nm,0.3s,baz=210,slow=12,SNR=9.9						
KURK	Kurchatov	14.35	17	Pn	Pn	03 22 26.1	-2.5
KURK				S	Sn	03 25 09.2	+1.9
KKN	Kakani	14.61	126	*e*P	Pn	03 22 31.0	-1.0
	comp=Z,35nm,0.5s						
KKN	Kakani	14.61	126	*e*P	Pn	03 22 31.0	-1.0
KKN				pmax	pmax		
	comp=Z,35nm,0.5s						
DMN	Daman	14.62	127	*e*P	Pn	03 22 32.3	+0.1
	comp=Z,65nm,0.6s						
PKI	Pulchoki	14.84	126	*e*P	Pn	03 22 34.3	-0.7
	comp=Z,12nm,0.3s						
PKI	Pulchoki	14.84	126	*e*P	Pn	03 22 34.3	-0.7
PKI				pmax	pmax		
	comp=Z,12nm,0.3s						
AB09	Akbulak array	14.91	328	⇑P	Pn	03 22 32.6	-3.1
	comp=Z,4.8nm,0.3s						
AB09				⇓S	Sn	03 25 06.4	-14
	comp=Z,15nm,0.6s						
GUN	Gumba	14.92	124	*e*P	Pn	03 22 34.8	-1.1
	comp=Z,46nm,0.6s						
JIRN	Jiri	15.29	124	*e*P	Pn	03 22 40.6	0.0
	comp=Z,88nm,0.4s						
VOSK	Vostochnaya	15.57	358	⇓P	Pn	03 22 41.7	-2.0
	comp=Z,3.5nm,0.6s						
VOSK				⇑S	S	03 25 25.5	-17
	comp=Z,4.3nm,0.8s						
VOSK	Vostochnaya	15.57	358	P	Pn	03 22 41.9	-1.9
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVA0	Borovoye Array	15.89	357	⇓P	Pn	03 22 46.2	-1.6
	comp=Z,1.0nm,0.6s,baz=281,slow=37,SNR=31						
BVA0				⇑S	S	03 25 31.0	-14
	comp=Z,1.1nm,0.8s						
BVA0	Borovoye Array	15.89	357	P	Pn	03 22 47.2	-0.6
BVA0				S	S	03 25 31.3	-14
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVA0				smax			
	comp=N,1.0nm,0.5s						
BVAR	Borovoye Array	15.89	357	P	Pn	03 22 46.0	-1.8
	comp=N,1.3nm,0.3s,baz=161,slow=14,SNR=17						
BVAR				S	S	03 25 34.2	-11
	comp=N,0.7nm,0.3s,baz=166,slow=24,SNR=8.2						
BVAR	Borovoye Array	15.89	357	P	Pn	03 22 46.0	-1.8
BVAR				S	S	03 25 34.2	-11
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	Borovoye	15.93	356	P	Pn	03 22 47.0	-1.2
BRVK				pmax	pmax		
	comp=Z,21nm,0.9s						
BRVK	Borovoye	15.93	356	*e*Pn	Pn	03 22 47.0	-1.2
	comp=Z,9.8nm,0.7s						
BRVK				*e*Sn	Sn	03 25 33.2	-12
RAMN	Ramite	16.04	125	*e*P	Pn	03 22 49.4	-0.4
	comp=Z,33nm,0.6s						
TAPN	Taplejung	16.51	122	*e*P	Pn	03 22 55.3	-0.3
	comp=Z,31nm,0.6s						
AKTK	Aktyubinsk	16.61	327	P	Pn	03 22 55.0	-1.6
AKTK				S	S	03 25 47.5	-14
AKTO	Aktyubinsk	16.61	327	⇓P	Pn	03 22 56.3	-0.3
	comp=Z,2.1nm,1.1s						
AKTO	Aktyubinsk	16.61	327	P	Pn	03 22 55.0	-1.6
	comp=Z,1.4nm,0.3s,baz=120,slow=12,SNR=29						
AKTO				S	S	03 25 47.5	-14
	comp=Z,0.6nm,0.3s,baz=39,slow=21,SNR=6.4						
AKTO	Aktyubinsk	16.61	327	P	Pn	03 22 55.0	-1.6
AKTO				S	S	03 25 47.5	-14
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
ODAN	Odare	16.62	124	*e*P	Pn	03 22 58.1	+1.2
	comp=N,22nm,0.5s						
LSA	Lhasa	17.65	109	*e*P	Pn	03 23 09.4	+0.1
LSA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
LSA	Lhasa	17.65	109	*e*P	Pn	03 23 09.4	+0.1
	comp=Z,3.5nm,0.3s						
ZALV	Zalesovo Beam	18.99	24	P	P	03 23 23.7	+1.0
	comp=Z,3.3nm,0.3s,baz=222,slow=11,SNR=61						
ZALV	Zalesovo Beam	18.99	24	P	P	03 23 23.7	+1.0
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
HYB	Hyderabad	20.52	162	*i*P	P	03 23 44.0	+4.4
ARU	Arti	21.27	339	*e*P	P	03 23 46.9	-0.3
ARU				*e*S	S	03 27 35.1	-0.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
ARU	Arti	21.27	339	*e*P	P	03 23 46.9	-0.3
	comp=Z,9.9nm,1.1s,mb4.0						
ARU				*e*S	S	03 27 35.1	-0.5
GTA	Gaotai	21.94	76	*e*P	P	03 23 59.5	+4.9
GTA				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.5						
SONM	Songino Array	27.32	56	P	P	03 24 47.3	+3.4
	comp=Z,1.6nm,0.9s,mb3.7,baz=253,slow=8.2,SNR=9.7						
SONM	Songino Array	27.32	56	P	P	03 24 47.3	+3.4
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	Ulaanbaatar	27.76	56	*e*P	P	03 24 49.8	+2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
ULN	Ulaanbaatar	27.76	56	*e*P	P	03 24 49.8	+2.0
	comp=Z,1.8nm,0.6s,mb4.0						
BR131	Keskin Array S	29.97	287	P	P	03 25 06.8	-0.7
BRTR	Keskin Array B	29.97	287	P	P	03 25 08.8	+1.3
	comp=Z,0.8nm,0.7s,mb3.6,baz=96,slow=8.7,SNR=5.4						
BRTR	Keskin Array B	29.97	287	P	P	03 25 08.8	+1.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	33.14	308	P	P	03 25 35.6	+0.5
	comp=Z,1.7nm,0.5s,mb4.1,baz=82,slow=7.8,SNR=7.8						
AKASG	Malin Array Be	33.14	308	P	P	03 25 35.6	+0.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KWP	Kalwaria	37.24	306	P	P	03 26 09.9	-0.3
ARCES	ARCESS Array B	40.82	337	P	P	03 26 40.5	+0.7
	comp=Z,1.4nm,0.6s,mb3.8,baz=120,slow=9.2,SNR=16						
ARCES	ARCESS Array B	40.82	337	P	P	03 26 40.5	+0.7
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YHNB	Yeheng	43.74	92	P	P	03 27 05.3	+1.4
NB2	NORSAR Subarra	44.31	323	P	P	03 27 08.2	+0.2
	comp=Z,1.2nm,0.6s,mb3.7,baz=99,slow=7.9						
NOA	NORSAR Array B	44.31	323	P	P	03 27 08.2	+0.2
	comp=Z,1.0nm,0.7s,mb3.6,baz=94,slow=7.9,SNR=3.7						
NOA	NORSAR Array B	44.31	323	P	P	03 27 08.3	+0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ESDC	Sonseca Array	57.83	298	P	P	03 28 49.5	+0.3
	comp=Z,0.4nm,0.5s,mb3.5,baz=54,slow=7.4,SNR=4.2						
TORD	Torodi Ar. Bea	66.50	269	P	P	03 29 46.5	-1.0
	comp=Z,0.4nm,0.5s,mb3.5,baz=50,slow=5.8,SNR=15						
YKA	Yellowknife Ar	80.54	3	P	P	03 31 09.6	+0.9
	comp=Z,0.6nm,0.4s,mb3.6,baz=351,slow=5.4,SNR=9.4						

*MOS **04** 03:37:02.8±1.0, 2.05N×126.11E, h54km, mb5.8/55, MS4.5/13, Error ellipse: s-maj=9.6km s-min=4.7km az=117.1*

*BJI **04** 03:37:05.8, 1.79N×126.28E, h102km, mB5.4, mb5.4*

*ISCJB **04** 03:37:07.0±0.1, 2.01N±0.02×126.19E±0.03, h94km, mb5.5/146, Error ellipse: s-maj=4.0km s-min=2.4km az=164.9*

*GCMT **04** 03:37:07.9±0.1, 2.19N×126.19E, h96km, MW5.6/104, Moment Tensor Solution. s98,c159; s104,c225; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.32±.04; $M_{\theta\theta}$-2.94±.04; $M_{\phi\phi}$0.62±.04; $M_{r\theta}$-0.08±.03; $M_{\theta\phi}$-0.98±.04; $M_{\phi r}$0.20±.03; Best double couple: $M_0$2.77100×10^{17} NP1:ϕ_s67.00000°, δ45.00000°, λ78.00000°. NP2:ϕ_s264.00000°, δ46.00000°, λ102.00000°. Principal axes: T 2.3510, Plg82.0000°, Azm254.0000°; N 0.8420, Plg8.0000°, Azm76.0000°; P -3.1900, Plg0.0000°, Azm346.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **04** 03:37:07.9±0.7, 2.02N×126.17E, h88km±6km, mb5.7/72 Error ellipse: s-maj=4.7km s-min=3.1km az=67.0*

NEIC Felt [IV] on Ternate, [III] at Bitung and [II] at Manado, Indonesia.

*IDC **04** 03:37:09.0±1.1, 1.97N×126.20E, h97km±9km, mb5.1/23, mb1 5.1/26, mb1mx5.1/27, mbtmp5.1/26, MS4.4/13, Ms1 4.5/13, ms1mx4.3/22, Error ellipse: s-maj=13.0km s-min=6.8km az=77.0*

*DJA **04** 03:37:10, 1.97N×126.31E, h59km, Mw6.1/5*

ISC 04 03:37:08.7±0.1**, 2.00N**±0.02×**126.21E**±0.03**, h96**km**,**
h96km±1.8km**:pP-P, n643,** σ**1.02**/462**, mb5.5**/146**,**
115C-137D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	Manado	1.48	248	P	Pn	03 37 36.2	+1.8
LBMI	Labuha	2.92	154	P	Pn	03 37 52.7	-0.6
GSPH	General Santos	4.25	343	⇓*e*P	Pn	03 38 10.7	-0.5
GSPH				*e*S	Sn	03 38 52.6	-7.1
DAV	Davao City (W)	5.07	353	P	Pn	03 38 22.2	-0.2
	105nm,0.3s,baz=188,slow=1.5,SNR=45						
DAV				S	Sn	03 39 21.2	+1.4
	187nm,0.3s,baz=55,slow=22,SNR=3.0						
DAV	Davao City (W)	5.07	353	⇓*e*P	Pn	03 38 21.3	-1.0
DAV	Davao City (W)	5.07	353	*e*Pn	Pn	03 38 22.7	+0.4
DAV				Sn	Sn	03 39 24.9	+5.2
DAV	Davao City (W)	5.07	353	P	Pn	03 38 23.7	+1.3
	6μm,0.8s,32nm						
DMPH	Davao City--Mi	5.09	352	⇑*i*P	Pn	03 38 24.0	+1.3
DMPH				*i*S	Px	03 38 45.0	
KCP	Kidapawan	5.10	347	⇓*e*P	Pn	03 38 24.0	+1.3
KCP				*i*S	Sn	03 39 22.8	+2.5
CTBH	Cotabato--PC H	5.54	339	⇑*e*P	Pn	03 38 29.3	+0.6
SWI	Sorong	5.79	119	P	Pn	03 38 32.3	+0.2
	846nm,1.0s,4.3nm						
MSAI	Masohi	5.97	153	P	Pn	03 38 36.8	+2.3
	814nm,1.4s,2.9nm						
AAI	Ambon	5.99	161	P	Pn	03 38 34.5	-0.3
	4μm,0.6s,22nm						
BIPH	Bislig	6.14	1	⇓*i*P	Pn	03 38 36.6	-0.3
BIPH				*i*S	Sn	03 39 47.6	+1.9
ZMPH	Zamboanga City	6.43	320	⇓*i*P	Pn	03 38 41.5	+0.7
ZMPH				*i*S	Sn	03 39 48.3	-4.4
KDI	Kendari	6.92	211	P	Pn	03 38 47.4	-0.2
	1μm,1.3s,4.3nm						
PCI	Palu	7.00	246	P	Pn	03 38 52.4	+3.8
SCPH	Surigao	7.76	355	⇑*e*P	Pn	03 38 58.0	-1.0
TBP	Tagbilaran	7.99	343	*e*P	Pn	03 39 02.0	-0.1
MSLP	Maasin	8.19	351	*e*P	Pn	03 39 04.3	-0.5
MYLDM	Lahad Datu	8.32	292	⇓P	Pn	03 39 11.3	+4.8
LLP	Lapu-Lapu	8.56	345	*e*P	Pn	03 39 09.2	-0.6
TSM	Tawau	8.63	285	⇓P	Pn	03 39 13.3	+2.5
OCLP	Ormoc	9.13	350	*e*P	Pn	03 39 17.4	-0.2
PLP	Palo	9.18	352	⇓*e*P	Pn	03 39 17.6	-0.8
GUIM	Jordan	9.29	337	*e*P	Pn	03 39 20.3	+0.5
KAPI	Kappang	9.50	223	Pn	Pn	03 39 23.2	+0.6
	802nm,0.5s,SNR=11						
KAPI	Kappang	9.50	223	⇓P	Pn	03 39 23.5	+0.8
	SNR=23						
KAPI	Kappang	9.50	223	P	Pn	03 39 22.9	+0.3
	12nm,0.3s,baz=54,slow=4.3,SNR=52						
KAPI				S	Sn	03 41 04.5	-3.2
	17nm,0.3s,baz=123,slow=21,SNR=8.3						
KAPI	Kappang	9.50	223	*e*Pn	Pn	03 39 23.6	+1.0
KAPI				Sn	Sn	03 41 07.4	-0.3
SDKM	Sandakan	9.70	292	⇓P	Pn	03 39 28.2	+2.9
RCP	Roxas	10.10	340	⇓*e*P	Pn	03 39 31.6	+0.9
CUYO	Cuyo Island	10.19	330	*e*P	Pn	03 39 33.2	+1.2
KDM	Kudat	10.55	298	⇓P	Pn	03 39 40.6	+3.7
MMPH	Masbate	10.60	346	*e*P	Pn	03 39 44.5	+6.8
KKM	Kota Kinabalu	10.75	292	*e*Pn	Pn	03 39 43.9	+4.3
	342nm,0.9s						
KKM				*e*S	Sn	03 41 43.8	+5.7
KKM	Kota Kinabalu	10.75	292	⇑P	Pn	03 39 43.2	+3.6
BATP	Bataraza	10.75	309	*e*P	Pn	03 39 40.8	+1.1
OTRP	Odiongan	11.10	338	*e*P	Pn	03 39 43.7	-0.6
ENPP	El Nido	11.36	324	*e*P	Pn	03 39 48.9	+1.0
SJMP	San Jose	11.55	334	*e*P	Pn	03 39 50.6	+0.1
PVCP	Virac	11.70	350	⇑*e*P	Pn	03 39 52.2	-0.3
BATI	Baumata	12.39	192	P	Pn	03 40 02.4	+0.6
	6.0nm,0.3s,baz=353,slow=1.5,SNR=13						
GQP	Guinayangan	12.40	343	⇑*e*P	Pn	03 40 02.6	+0.8
LUBP	Lubang	13.06	333	*e*P	Pn	03 40 11.6	+1.0
BTM	Bintulu	13.17	275	⇑P	Pn	03 40 15.4	+3.4
POLP	Polilio Island	13.33	342	*e*P	Pn	03 40 13.6	-0.4
SBUM	Sibu	13.99	272	⇑P	Pn	03 40 25.8	+3.1
PCPH	Palayan	14.39	340	⇓*e*P	Pn	03 40 25.5	-2.3
BALP	Baler	14.39	342	*e*P	Pn	03 40 27.4	-0.5
SCZP	Santa Cruz	15.03	336	*e*P	Pn	03 40 34.2	-1.8
PALP	Palanan	15.42	346	*e*P	Pn	03 40 39.8	-1.2
CAUP	Cauayan	15.46	344	*e*P	Pn	03 40 42.7	+1.2
BOLP	Bolinao	15.57	337	*e*P	Pn	03 40 41.1	-1.8
KAKA	Kakadu	15.87	157	⇓*i*P	x	03 40 25.5	
	342nm,0.7s						
KAKA				*e*		03 40 31.7	
KAKA				*e*		03 40 42.0	
KAKA				*e*S	x	03 43 26.1	
KSM	Kuching	15.91	268	*e*Pn	Pn	03 40 50.0	+2.9
	677nm,1.5s						
KSM	Kuching	15.91	268	⇓P	Pn	03 40 50.6	+3.4
CVP	Callao Caves	16.19	345	⇑*e*P	Pn	03 40 49.3	-1.3
ABRA	Dolores	16.46	341	*e*P	Pn	03 40 55.7	+1.8
APYP	Conner	16.50	343	*e*P	Pn	03 40 54.5	+0.1
TWG	Pinlang	21.29	347	*e*P	P	03 41 44.2	-3.3
	258nm,0.6s,mb5.7						
TWG				*e*S	S	03 45 26.7	-12
GUMO	Guam	21.75	57	P	P	03 41 53.0	+0.5
	361nm,0.9s,mb5.7,baz=187,slow=3.3,SNR=10						
GUMO				LR	LR	03 49 00.9	
	comp=Z,1μm,21.7s,baz=81,slow=33						
GUMO	Guam	21.75	57	P	P	03 41 53.0	+0.4
GUMO				pmax	pmax		
	comp=Z,361nm,0.9s,mb5.7						
GUMO				MLR	MLR		
	comp=Z,1μm,21.7s						
GUMO	Guam	21.75	57	*e*P	P	03 41 52.1	-0.5
	comp=Z,589nm,1.0s,mb5.9						
YULB	Yu-li	21.79	348	*e*P	P	03 41 49.6	-3.3
	comp=Z,189nm,0.7s,mb5.5						
YULB				*e*S	S	03 45 38.3	-10
TPUB	Ta-pu	21.85	346	*e*P	P	03 41 51.5	-2.0
	comp=Z,562nm,0.8s,mb6.0						
TPUB				*e*S	S	03 45 40.0	-10
SSLB	Suanglung	22.25	347	*e*P	P	03 41 55.5	-2.2
	comp=Z,375nm,0.8s,mb5.8						
MYKOM	Kota Tinggi	22.35	270	⇓P	P	03 41 59.3	+0.3
NACB	Ninganchiao	22.49	349	*e*P	P	03 41 58.7	-1.6
	comp=Z,49nm,0.4s,mb5.2						
NACB				*e*PcP	PcP	03 45 52.8	+1.7
KGM	Kluang	22.88	270	⇑P	P	03 42 04.8	+0.3
YHNB	Yeheng	23.01	349	*e*P	P	03 42 04.7	-0.9
	comp=Z,108nm,0.6s,mb5.4						
COEN	Coen	23.11	134	*e*P	P	03 42 05.1	-1.4
	comp=Z,413nm,1.4s,mb5.6						
COEN				*e*PcP	PcP	03 45 55.7	+3.1
COEN				*e*S	S	03 46 08.7	-1.8
WRAB	Tennant Creek	23.22	160	P	P	03 42 06.0	-1.4
	comp=Z,3μm,0.9s,mb6.6						
WRAB	Tennant Creek	23.22	160	*e*P	P	03 42 06.4	-1.0
WRAB				*e*		03 45 49.1	
WRAB				*e*S	S	03 46 08.6	-3.6
WRAB				pmax	pmax		
	comp=Z,539nm,1.0s,mb5.8						
WRAB	Tennant Creek	23.22	160	*e*P	P	03 42 06.4	-1.0
	comp=Z,539nm,1.0s,mb5.8						
WRAB				*e*PcP	PcP	03 45 49.1	-3.7
WRAB				*e*S	S	03 46 08.6	-3.5
WB2	Warramunga Arr	23.23	160	*e*P	P	03 42 06.1	-1.4
WB2				*e*S	S	03 46 07.7	-4.6
KTGM	Kuala Trenggan	23.27	279	⇑P	P	03 42 08.6	+0.6
QIZ	Qiongzhong	23.31	318	P	P	03 42 08.1	-0.2
QIZ				AP		03 42 29.2	
QIZ				XP	sP	03 42 40.5	+0.6
QIZ				S	S	03 46 09.0	-4.7
QIZ				XS	sS	03 46 45.7	-4.0
QIZ				SS		03 47 02.8	
QIZ				AMB	AMB		
	comp=Z,201nm,1.6s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,522nm,3.7s						
QIZ	Qiongzhong	23.31	318	*e*P	P	03 42 08.0	-0.4
	comp=Z,518nm,1.6s,mb5.6						
PMG	Port Moresby	23.75	119	*e*P	P	03 42 11.4	-1.0
MBWA	Marble Bar	23.88	195	P	P	03 42 13.7	+0.2
	SNR=7.7						
MBWA	Marble Bar	23.88	195	*e*P	P	03 42 13.7	+0.2
	comp=Z,297nm,1.6s,mb5.4						
XMIS	Christmas Isla	23.93	238	*e*P	P	03 42 12.0	-2.0
XMIS				*e*PcP	PcP	03 45 55.3	+0.9
QZH	Quanzhou	23.96	343	⇑*i*P	P	03 42 13.4	-0.8
QZH				XP	sP	03 42 43.2	-3.5
QZH				S	S	03 46 19.1	-5.1
QZH				AMB	AMB		
	comp=Z,210nm,1.0s,mb5.4						
QZH				AMB	AMB		
	comp=Z,2μm,4.1s						
QZH				LR	LR		
	comp=Z,2μm,16.2s						
GZH	Guangzhou	24.39	330	P	P	03 42 19.8	+1.6
GZH				S	S	03 46 33.4	+2.3
GZH				LR	LR		
	comp=N,1μm,13.3s						
GZH				LR	LR		
	comp=E,1μm,15.1s						
FRIM	Kepong	24.59	273	⇑P	P	03 42 20.4	+0.3
JOW	Kunigami	24.77	4	P	P	03 42 22.7	+1.2
	comp=E,508nm,0.8s,mb6.0,baz=195,slow=8.6,SNR=49						
IPM	Ipoh	25.27	276	⇑P	P	03 42 26.7	+0.4
KULM	Kulim	25.72	278	⇑P	P	03 42 30.8	+0.4
ASAR	Alice Springs	26.59	164	P	P	03 42 37.5	-0.5
	comp=E,18nm,0.4s,mb5.0,baz=341,slow=7.6,SNR=330						
ASAR				PcP	PcP	03 46 00.6	+0.4
	comp=E,26nm,0.7s,baz=343,slow=2.2,SNR=11						
ASAR				S	S	03 47 05.5	-0.4
	comp=E,19nm,0.9s,baz=349,slow=18,SNR=6.0						
ASAR				P3KPbc		04 15 19.2	
	comp=E,1.2nm,0.8s,baz=155,slow=4.6,SNR=8.8						

ASAR Alice Springs 26.59 164 P **P** **03 42 37.5 -0.5**
ASAR 03 46 00.6
ASAR S **S** **03 47 05.5 -0.4**
ASAR pmax pmax
comp=Z,18nm,0.4s
ASAR smax
comp=N,19nm,0.9s
ASAR Alice Springs 26.59 164 P **P** **03 42 37.5 -0.5**
ASAR PcP PcP 03 46 00.6 +0.4
ASAR S **S** **03 47 05.5 -0.4**
ASAR *e* 04 15 19.2
KKTK Khon Kaen 27.08 303 P **P** **03 42 43.0 +0.5**
comp=N,370nm,1.0s,mb5.9
NST Nakhon Sawan 29.07 299 P **P** **03 43 02.0 +1.7**
CBIJ Chichi jima 29.27 30 P **P** **03 43 01.5 -0.4**
comp=N,108nm,0.4s,mb5.8,baz=292,slow=6.5,SNR=15
CBIJ LR LR 03 54 44.0
comp=N,724nm,19.6s,baz=324,slow=36
SSE Sheshan 29.32 351 P **P** **03 43 03.9 +1.6**
SSE AP pP 03 43 25.6 +1.7
SSE S **S** **03 47 50.1 +1.3**
SSE XS sS 03 48 29.0 +2.8
SSE AMB AMB
comp=Z,65nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,208nm,4.3s
SSE LR LR
comp=N,314nm,15.2s
SSE LR LR
comp=E,690nm,15.2s
SSE LR LR
comp=Z,1μm,17.1s
CTA Charters Tower 29.47 139 *e*P **P** **03 43 04.0 +0.2**
comp=Z,25nm,1.0s,mb4.8
CTA Charters Tower 29.47 139 P **P** **03 43 04.3 +0.6**
comp=Z,21nm,0.8s,mb4.8,baz=321,slow=11,SNR=22
CTA Charters Tower 29.47 139 P **P** **03 43 04.4 +0.6**
CTA pmax pmax
comp=Z,21nm,0.8s
CTAO Charters Tower 29.47 139 *e*P **P** **03 43 04.4 +0.6**
CTAO pmax pmax
comp=Z,300nm,2.0s,mb5.6
CTAO Charters Tower 29.47 139 *e*P **P** **03 43 04.4 +0.6**
comp=Z,295nm,2.0s,mb5.6
WHN Wuhan 30.53 340 ⇑P **P** **03 43 13.5 +0.5**
WHN PCP PcP 03 46 10.5 +0.6
WHN S **S** **03 48 05.2 -2.5**
WHN LR LR
comp=Z,1μm,16.5s
NJ2 Nanjing 30.68 348 *e*P **P** **03 43 15.2 +0.9**
NJ2 AP pP 03 43 37.9 +1.9
NJ2 XP sP 03 43 49.4 +2.3
NJ2 PP PP 03 44 19.1 -6.3
NJ2 S **S** **03 48 08.5 -1.6**
NJ2 XS sS 03 48 46.0 -1.6
NJ2 AMB AMB
comp=Z,60nm,1.2s,mb5.2
NJ2 AMB AMB
comp=Z,330nm,10.0s
NJ2 LR LR
comp=N,530nm,22.8s
NJ2 LR LR
comp=E,1μm,36.2s
NJ2 LR LR
comp=Z,920nm,29.5s
GYA Guiyang 30.72 324 ⇓*i*P **P** **03 43 17.2 +2.4**
GYA AP pP 03 43 40.8 +4.4
GYA XP sP 03 43 51.7 +4.2
GYA PP PP 03 44 18.8 -7.1
GYA PPP 03 44 39.2
GYA PCP PcP 03 46 12.0 +1.5
GYA S **S** **03 48 08.6 -2.2**
GYA XS sS 03 48 47.0 -1.4
GYA SCP ScP 03 49 43.6 -1.1
GYA PCS PcS 03 49 57.3 +2.7
GYA SCS ScS 03 53 40.5 -1.0
GYA AMB AMB
comp=Z,70nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,450nm,4.5s
GYA LR LR
comp=N,2μm,18.0s
GYA LR LR
comp=E,2μm,16.7s
GYA LR LR
comp=Z,3μm,17.3s
CMAR Chiang Mai Arr 31.34 303 P **P** **03 43 20.9 +0.6**
comp=Z,16nm,0.7s,mb4.8,baz=121,slow=6.6,SNR=41
CMAR PcP PcP 03 46 14.2 +2.0
comp=Z,19nm,0.7s,baz=135,slow=1.3,SNR=9.8
CMAR ScP ScP 03 49 47.4 +0.5
comp=Z,2.6nm,0.3s,baz=150,slow=1.1,SNR=4.8
CMAR LR LR 03 54 47.5
comp=Z,905nm,21.5s,baz=312,slow=34
CHRT Chiangrai 31.35 306 ⇓P **P** **03 43 21.5 +1.2**
comp=Z,210nm,1.0s,mb5.8
CHG Chiang Mai 31.51 304 ⇑P **P** **03 43 22.0 +0.2**
comp=Z,43nm,0.7s,mb5.3
CHTO Chiang Mai 31.51 304 ⇑P **P** **03 43 22.3 +0.6**
SNR=8.2
CHTO Chiang Mai 31.51 304 *e*P **P** **03 43 22.0 +0.2**
CHTO pmax pmax
comp=Z,33nm,0.6s,mb5.2
CHTO Chiang Mai 31.51 304 *e*P **P** **03 43 22.0 +0.2**
comp=Z,33nm,0.6s,mb5.2
KMI Kunming 32.26 317 P **P** **03 43 29.8 +1.5**
KMI AP pP 03 43 51.8 +1.8
KMI XP sP 03 44 03.9 +2.8
KMI PP PP 03 44 41.6 -1.4
KMI PPP 03 44 58.0
KMI PCP PcP 03 46 16.7 +2.0
KMI S **S** **03 48 32.8 -2.1**
KMI XS sS 03 49 14.1 +1.6
KMI SS SS 03 50 37.7 -20
KMI SSS 03 51 04.2
KMI AMB AMB
comp=Z,24nm,0.6s,mb5.1
KMI AMB AMB
comp=Z,196nm,3.1s
KMI LR LR
comp=N,2μm,17.7s
KMI LR LR
comp=E,1μm,20.8s
KMI LR LR
comp=Z,2μm,22.5s
FORT Forrest 32.65 177 ⇑*i*P **P** **03 43 31.2 -0.4**
comp=Z,100nm,0.6s,mb5.8
FORT *e*pP pP 03 43 41.7 -12
KLBR Kellerberrin 34.36 193 *e*P **P** **03 43 46.3 -0.2**
comp=Z,20nm,0.4s,mb5.3
KLBR *e*PCP PcP 03 46 20.7 +0.3
MUN Mundaring 35.10 195 *e*P **P** **03 43 52.5 -0.3**
MUN *e*S **S** **03 49 18.6 0.0**
INCN Inchon 35.31 1 P **P** **03 43 52.9 -1.6**
KSRS Korea Array 35.31 2 P **P** **03 43 56.2 +1.6**
comp=Z,36nm,0.9s,mb5.2,baz=185,slow=9.5,SNR=40
KSRS PcP PcP 03 46 24.6 +1.5
comp=Z,12nm,0.8s,baz=188,slow=4.0,SNR=8.5
KSRS Korea Array 35.31 2 P **P** **03 43 56.2 +1.6**
KSRS 03 46 24.6
KSRS pmax pmax
comp=Z,36nm,0.9s,mb5.2
HNR Honiara 35.47 109 P **P** **03 43 55.3 -1.0**
comp=Z,146nm,0.7s,mb5.9,baz=226,slow=6.2,SNR=8.3
HNR Honiara 35.47 109 P **P** **03 43 55.3 -1.0**
HNR pmax pmax
comp=Z,146nm,0.7s,mb5.9
XAN Xi'an 35.73 335 P **P** **03 43 57.2 -1.0**
XAN AP pP 03 44 19.3 -0.9
XAN XP sP 03 44 30.1 -1.1
XAN PP PP 03 45 19.7 -1.6
XAN PCP PcP 03 46 25.5 +1.1
XAN S **S** **03 49 18.4 -10**
XAN SCP ScP 03 50 01.7 -0.3
XAN PCS PcS 03 50 11.5 -0.3
XAN SCS ScS 03 54 03.7 -3.5
XAN AMB AMB
comp=Z,105nm,1.0s,mb5.7
XAN AMB AMB
comp=Z,243nm,5.7s
XAN LR LR
comp=N,106nm,12.9s
XAN LR LR
comp=E,326nm,16.1s
XAN LR LR
comp=Z,835nm,17.6s
CD2 Chengdu 35.75 326 P **P** **03 43 58.5 +0.1**
CD2 AP pP 03 44 20.9 +0.6
CD2 XP sP 03 44 32.5 +1.1
CD2 PP PP 03 45 22.3 +0.8
CD2 PCP PcP 03 46 24.5 0.0
CD2 S **S** **03 49 22.0 -6.6**
CD2 XS sS 03 50 06.7 +0.2
CD2 SS SS 03 51 54.3 -14
CD2 AMB AMB
comp=Z,80nm,1.2s,mb5.5
CD2 AMB AMB
comp=Z,290nm,4.8s
CD2 LR LR
comp=N,1μm,15.6s
CD2 LR LR
comp=Z,1μm,24.0s
NWAO Narrogin (SRO) 35.76 193 *e*P **P** **03 43 58.7 +0.2**
NWAO *e* 03 46 23.7
NWAO *e*S **S** **03 49 25.3 -3.4**
NWAO pmax pmax
comp=Z,222nm,1.8s
NWAO Narrogin (SRO) 35.76 193 *e*P **P** **03 43 58.7 +0.2**
comp=Z,222nm,1.8s,mb5.8
NWAO *e*PcP PcP 03 46 23.7 -0.8
NWAO *e*S **S** **03 49 25.3 -3.4**
MJAR Matsushiro Arr 36.11 16 P **P** **03 44 00.9 -0.5**
comp=Z,19nm,1.0s,mb5.0,baz=193,slow=9.1,SNR=21
MJAR Matsushiro Arr 36.11 16 P **P** **03 44 00.9 -0.5**
MJAR pmax pmax
comp=Z,19nm,1.0s
MAJO Matsushiro 36.11 16 *e*P **P** **03 44 00.2 -1.2**
MAJO pmax pmax
comp=Z,67nm,1.0s,mb5.5
MAJO Matsushiro 36.11 16 *e*P **P** **03 44 00.2 -1.2**
comp=Z,67nm,1.0s,mb5.5
MAT Matsushiro 36.11 16 P **P** **03 44 00.6 -0.8**
MAT S **S** **03 49 32.0 -2.0**
EIDS Eidsvold 36.34 140 *e*P **P** **03 44 02.4 -1.1**
comp=Z,69nm,0.9s,mb5.6
STKA Stephens Creek 36.72 158⇑*i*P **P** **03 44 06.4 -0.3**
comp=Z,37nm,0.6s,mb5.5
STKA *e*pP pP 03 44 18.9 -10
STKA *i* PCP PcP 03 46 27.6 +0.2
STKA *e*S **S** **03 49 40.0 -3.3**
STKA Stephens Creek 36.72 158 P **P** **03 44 06.5 -0.2**
comp=Z,52nm,0.7s,mb5.6,baz=328,slow=8.2,SNR=99
STKA PcP PcP 03 46 27.4 0.0
comp=Z,30nm,0.8s,baz=352,slow=9.0,SNR=3.0
STKA S **S** **03 49 41.8 -1.6**
comp=Z,106nm,1.2s,baz=218,slow=23,SNR=23
STKA LR LR 03 58 40.9
comp=Z,649nm,18.6s,baz=130,slow=35
STKA Stephens Creek 36.72 158 *e*P **P** **03 44 06.2 -0.4**
STKA *e*pP pP 03 44 18.9 -10
STKA *e*PP PP 03 45 22.8 -9.4
STKA *i* PcP PcP 03 46 27.6 +0.2
STKA *e*S **S** **03 49 40.0 -3.3**
STKA *e*S **S** **03 49 41.5 -1.8**
DL2 Dalian 36.97 354 P **P** **03 44 09.1 +0.5**
DL2 XP sP 03 44 46.4 +4.7
DL2 S **S** **03 49 45.8 -1.1**
DL2 AMB AMB
comp=Z,100nm,0.7s,mb5.8
DL2 AMB AMB
comp=Z,200nm,4.0s
DL2 LR LR
comp=N,80nm,15.7s
DL2 LR LR
comp=Z,1μm,15.9s
IMP Imphal 38.51 309 *e*P **P** **03 44 20.0 -1.9**
IMP *e*S **S** **03 50 12.0 +1.3**
BJT Baijiatuau 38.92 348 *e*P **P** **03 44 25.1 0.0**
BJT *e* 03 46 33.8
BJT pmax pmax
comp=Z,146nm,0.7s
BJT Baijiatuau 38.92 348 *e*P **P** **03 44 25.1 0.0**
comp=Z,146nm,0.7s,mb5.9
BJT *e*PcP PcP 03 46 33.8 -0.2
BJI Beijing 38.94 348 P **P** **03 44 24.7 -0.6**
BJI S **S** **03 50 08.0 -8.8**
BJI AMB AMB
comp=Z,109nm,1.0s,mb5.6
BJI AMB AMB
comp=Z,453nm,3.7s
BJI LR LR
comp=N,906nm,14.7s
BJI LR LR
comp=E,631nm,19.4s
BJI LR LR
comp=Z,1μm,37.5s
SNY Shenyang 39.72 357 ⇓P **P** **03 44 32.9 +1.2**
SNY S **S** **03 50 25.6 -2.7**
SNY AMB AMB
comp=Z,100nm,0.8s,mb5.7
SNY AMB AMB
comp=Z,320nm,3.5s
SNY LR LR
comp=N,548nm,22.7s
SNY LR LR
comp=E,720nm,20.9s
SNY LR LR
comp=Z,754nm,27.5s
LZH Lanzhou 39.74 331 ⇑P **P** **03 44 32.9 +1.0**
LZH AP pP 03 44 56.0 +1.8
LZH XP sP 03 45 06.2 +1.0
LZH PP PP 03 46 10.3 +5.2
LZH PCP PcP 03 46 39.5 +2.8
LZH SCP ScP 03 50 18.0 +0.9
LZH S **S** **03 50 26.7 -2.1**
LZH PCS PcS 03 50 29.1 +2.2
LZH XS sS 03 51 06.3 -0.9
LZH SS SS 03 53 18.6 -10
LZH SCS ScS 03 54 29.5 -0.5
LZH AMB AMB
comp=Z,151nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,497nm,8.5s
LZH LR LR
comp=E,896nm,10.5s
LZH LR LR
comp=Z,1μm,16.7s
AGT Agartala 40.21 306 *i* x x 03 43 15.0
ARMA Armidale 40.34 145 *e*P **P** **03 44 37.2 +0.2**
ARMA *e*pP pP 03 44 50.0 -9.3
ARMA *e*S **S** **03 50 36.7 -1.2**
SHL Shillong 40.51 308 *i* P **P** **03 44 38.0 -0.5**
SHL *e*x x 03 50 34.0
HHC Hu-ho-hao-te 40.88 343 *e*P **P** **03 44 41.1 -0.1**
HHC AP pP 03 45 03.5 -0.1
HHC XP sP 03 45 15.6 +1.1
HHC PP PP 03 46 20.4 +3.0
HHC PCP PcP 03 46 37.4 -2.8
HHC S **S** **03 50 41.2 -4.4**
HHC XS sS 03 51 30.0 +5.9
HHC SS SS 03 53 51.5 +0.7
HHC SCS ScS 03 54 30.2 -6.3
HHC AMB AMB
comp=Z,45nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,180nm,5.8s
HHC LR LR
comp=N,823nm,15.5s
HHC LR LR
comp=E,457nm,14.3s
HHC LR LR
comp=Z,970nm,21.4s
BTO Baotou 41.13 341 *e*P **P** **03 44 43.6 +0.3**
CN2 Changchun 41.62 359 *e*P **P** **03 44 47.7 +0.4**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,460nm,16.0s
CN2 LR LR
comp=E,390nm,16.0s
CN2 LR LR
comp=Z,570nm,19.0s
MDJ Mudanjiang 42.54 4 P **P** **03 44 55.7 +1.0**
MDJ AP pP 03 45 16.9 -0.3
MDJ XP sP 03 45 27.0 -1.1
MDJ PP PP 03 46 36.1 +0.9
MDJ SCP ScP 03 50 27.8 -0.1
MDJ PCS PcS 03 50 38.7 +1.1
MDJ S **S** **03 51 11.0 +1.0**
MDJ XS sS 03 51 50.0 +1.3
MDJ SCS ScS 03 54 47.2 +0.7
MDJ AMB AMB
comp=Z,46nm,0.8s,mb5.3
MDJ AMB AMB
comp=Z,117nm,3.3s
MDJ LR LR
comp=N,770nm,19.1s
MDJ LR LR
comp=E,237nm,19.1s
MDJ LR LR
comp=Z,932nm,21.6s
MDJ Mudanjiang 42.54 4 *e*P **P** **03 44 54.9 +0.1**
comp=Z,58nm,0.9s,mb5.3
MDJ S **S** **03 51 05.9 -4.1**
ERM Erimo 42.64 19 *i* P **P** **03 44 56.2 +0.6**
CNB Canberra Magne 42.98 152 *e*P **P** **03 44 59.6 +1.1**
LSA Lhasa 43.21 313 P **P** **03 45 00.0 -0.4**
LSA S **S** **03 51 11.9 -8.5**
LSA LR LR
comp=N,680nm,28.2s
LSA Lhasa 43.21 313 *e*P **P** **03 45 01.5 +1.1**
LSA 03 46 42.9
LSA *e* 03 46 48.7
LSA *e*S **S** **03 51 23.0 +2.6**
LSA pmax pmax
comp=Z,68nm,0.6s,mb5.5
LSA Lhasa 43.21 313 *e*P **P** **03 45 01.5 +1.0**
comp=Z,68nm,0.6s,mb5.5
LSA PP PP 03 46 42.9 +0.2
LSA *e*PcP PcP 03 46 48.7 +0.5
LSA *e*ScP ScP 03 50 29.9 -1.2
LSA *e*S **S** **03 51 23.0 +2.6**
TOO Toolangi 43.24 157⇓*i*P **P** **03 45 02.3 +1.8**
TOO *e*pP pP 03 45 14.0 -9.0
TOO *e* 03 46 43.1
TOO *e*S **S** **03 51 10.0 -10**
TOO *e*SS SS 03 54 27.7 -10
TOO Toolangi 43.24 157⇓*i*P **P** **03 45 02.3 +1.8**
TOO *e**PP pP 03 45 14.0 -9.0
TOO *e* 03 46 43.1
TOO *e*SS SS 03 54 27.7 -10
GTA Gaotai 44.32 330 P **P** **03 45 09.9 +0.7**
GTA AP pP 03 45 32.1 +0.3
GTA XP sP 03 45 44.8 +2.2
GTA PCP PcP 03 46 54.0 +2.2
GTA SCP ScP 03 50 36.0 +0.7
GTA PCS PcS 03 50 45.7 +0.6
GTA S **S** **03 51 34.7 -1.5**
GTA XS sS 03 52 15.6 +0.5
GTA SS SS 03 54 46.1 -12
GTA SCS ScS 03 54 56.9 -1.0
GTA AMB AMB
comp=Z,33nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,197nm,4.2s
GTA LR LR
comp=N,803nm,20.8s
GTA LR LR
comp=E,538nm,21.1s
GTA LR LR
comp=Z,1μm,20.8s
BOK Bokaro 44.62 302 *e*P **P** **03 45 11.3 -0.5**
TAPN Taplejung 44.64 308 *e*P **P** **03 45 12.1 +0.2**
comp=Z,62nm,0.7s,mb5.5
ODAN Odare 44.67 307 *e*P **P** **03 45 12.4 +0.2**
comp=Z,89nm,0.7s,mb5.6
VIS Vishakhapatnam 44.89 293 *e*P **P** **03 45 13.8 -0.2**
RAMN Ramite 45.34 307 *e*P **P** **03 45 17.5 0.0**
comp=Z,126nm,1.0s,mb5.6
JIRN Jiri 45.98 308 *e*P **P** **03 45 22.7 +0.2**
comp=Z,43nm,0.4s,mb5.6
GUN Gumba 46.34 308 *e*P **P** **03 45 25.3 0.0**
comp=Z,82nm,0.4s,mb5.8
PKI Pulchoki 46.56 307 *e*P **P** **03 45 26.8 -0.3**
KKN Kakani 46.76 307 *e*P **P** **03 45 28.3 -0.3**
comp=Z,50nm,0.6s,mb5.4
KKN Kakani 46.76 307 *e*P **P** **03 45 28.3 -0.3**
KKN pmax pmax
comp=Z,50nm,0.6s,mb5.4
DMN Daman 46.82 307 *e*P **P** **03 45 28.8 -0.3**
comp=Z,86nm,1.0s,mb5.4
HABR Khabarovsk 46.91 8 *e*P **P** **03 45 29.1 -0.3**
HABR *e**PP pP 03 45 51.4 -0.9
HABR *e* 03 46 59.2
HABR *e* 03 47 19.2
HABR *i* S **S** **03 52 13.5 +0.3**
HABR *e* 03 55 12.0
HABR *e*SS SS 03 55 42.2 +1.0
HABR *e*SSS 03 56 51.8
YSS Yuzh-Sakhalins 47.03 15⇓*i*P **P** **03 45 30.2 -0.2**
YSS *e*S **S** **03 52 15.0 +0.1**
YSS pmax pmax
comp=Z,130nm,1.2s,mb5.5
YSS MLR MLR
comp=Z,500nm,16.0s
YSS Yuzh-Sakhalins 47.03 15⇑*e*P **P** **03 45 30.6 +0.2**
KLR Kul'dur 47.29 5 *e*P **P** **03 45 28.2 -4.1**
KLR *e*S **S** **03 52 11.5 -7.0**
KLR *e* 03 55 37.0
GKN Gorkha 47.37 307 *e*P **P** **03 45 32.9 -0.4**
comp=Z,92nm,1.0s,mb5.5
HIA Hailar 47.41 354 *e*P **P** **03 45 34.0 +0.7**
HIA *e* 03 47 03.3
HIA *e*S **S** **03 52 22.5 +2.3**
HIA pmax pmax
comp=Z,113nm,1.3s
HIA Hailar 47.41 354 *e*P **P** **03 45 34.0 +0.8**
comp=Z,113nm,1.3s,mb5.4
HIA *e*PcP PcP 03 47 03.3 +0.9
HIA *e*S **S** **03 52 22.4 +2.2**
KOLN Koldanda 48.10 306 *e*P **P** **03 45 38.9 -0.1**
comp=Z,156nm,0.7s,mb6.0
MOO Moorlands 48.13 159 *e*P **P** **03 45 40.3 +1.3**
DANN Dangsing 48.22 307 *e*P **P** **03 45 39.8 -0.1**
comp=Z,121nm,0.6s,mb5.9
ULN Ulaanbaatar 48.60 343 ⇓P **P** **03 45 43.5 +1.1**
SNR=28
ULN Ulaanbaatar 48.60 343⇓*e*P **P** **03 45 43.0 +0.6**
SONM Songino Array 48.77 342 P **P** **03 45 44.2 +0.4**
comp=Z,42nm,0.9s,mb5.4,baz=160,slow=8.7,SNR=57
SONM PcP PcP 03 47 08.5 +1.2
comp=Z,40nm,0.8s,baz=162,slow=3.7,SNR=12
SONM ScP ScP 03 50 53.4 -0.3
comp=Z,5.5nm,0.9s,baz=135,slow=4.0,SNR=5.5
SONM LR LR 04 08 06.3
comp=Z,531nm,19.9s,baz=168,slow=38
KOD Kodaikanal 49.10 282 *e*P **P** **03 45 45.8 -1.1**
HYB Hyderabad 49.23 291 *e*P **P** **03 45 47.0 -0.8**
HYB *e*S **S** **03 52 44.0 -2.9**
HYB pmax pmax
comp=Z,100nm,1.0s,mb5.7
HYB Hyderabad 49.23 291 *i* P **P** **03 45 47.0 -0.8**
comp=Z,100nm,1.0s,mb5.7
HYB *e*pP pP 03 46 07.5 -3.3
HYB *e*PcP PcP 03 47 09.0 -0.6
HYB *e*S **S** **03 52 44.0 -2.9**
HYB Hyderabad 49.23 291 *e*P **P** **03 45 47.0 -0.8**
comp=Z,100nm,1.0s,mb5.7
HYB *e*S **S** **03 52 44.0 -2.9**
TRD Trivandrum 49.43 279 *e*P **P** **03 45 49.6 +0.1**
NGP Nagpur 49.70 296 *e*P **P** **03 45 49.8 -1.6**
AKL Akola 51.42 295 *e*P **P** **03 46 03.3 -1.0**
LGTI Lohaghat 51.48 307 *e*P **P** **03 46 03.5 -1.1**
ZAK Zakamensk 51.98 342 *e*P **P** **03 46 08.3 +0.4**
ZAK *e* 03 47 19.6
ZAK pmax pmax
comp=Z,13nm,1.2s,mb4.8
TLY Talaya 53.00 343 ⇑P **P** **03 46 17.7 +2.2**
SNR=7.9
TLY Talaya 53.00 343 *e*P **P** **03 46 18.7 +3.2**
TLY *e*S **S** **03 53 34.3 -3.5**
TLY *e*PS 03 53 44.8
TLY pmax pmax
comp=Z,33nm,0.9s,mb5.4
TLY MLR MLR
comp=Z,754nm,20.0s
TLY Talaya 53.00 343 *i* P **P** **03 46 16.5 +1.0**
KAD Karad 53.30 290 *e*P **P** **03 46 18.1 -0.2**
IRK Irkutsk 53.32 343 *e*P **P** **03 46 09.5 -8.2**
IRK *e* 03 53 44.8
IRK pmax pmax

comp=Z,81nm,1.4s,mb5.6
GOA Goa 53.33 288 *ex* **P 03 46 10.0 -8.5**
DDI Dehra Dun 53.57 307 *eP* **P 03 46 14.0 -6.0**
DDI *eS* **S 03 53 39.0 -7.2**
NDI New Delhi 53.65 305 *eP* **P 03 46 20.0 -0.7**
NDI *ex* x 03 53 42.0
MOY Mondy 53.82 341 *eP* **P 03 46 22.7 +1.2**
MOY pmax pmax
comp=Z,6.0nm,1.9s,mb4.3
FUNA Funafuti 53.84 102 *eP* **P 03 46 22.0 -0.2**
comp=Z,82nm,0.8s,mb5.8
FUNA *ePcP* PcP 03 47 26.3 -0.6
POO Poona 53.84 291 *eP* **P 03 46 21.6 -0.6**
WMQ Urumqi 53.85 326 P **P 03 46 23.1 +1.3**
WMQ AP pP 03 46 48.7 +3.6
WMQ PCP PcP 03 47 27.2 +0.9
WMQ PP PP 03 48 28.6 +4.7
WMQ PPP 03 49 36.6
WMQ S **S 03 53 45.4 -4.1**
WMQ PS 03 54 14.2
WMQ XS sS 03 54 34.0 +4.5
WMQ SCS ScS 03 55 58.1 -3.9
WMQ SS SS 03 57 30.2 -1.7
WMQ AMB AMB
comp=Z,76nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,379nm,3.0s
WMQ LR LR
comp=N,2µm,28.0s
WMQ LR LR
comp=E,821nm,25.0s
WMQ LR LR
comp=Z,695nm,22.0s
NRGR Nerungri 54.50 359 *eP* **P 03 46 21.0 -5.3**
NRGR S **S 03 53 56.9 -1.0**
NRGR smax
comp=N,34nm,0.4s
SMLA Simla 54.58 307 *eP* **P 03 46 27.2 -0.1**
CLNS Chul'man 54.68 359 *eP* **P 03 46 28.4 +0.8**
CLNS *e* 03 47 29.8
CLNS *eS* **S 03 54 00.5 +0.3**
CLNS *e* 03 56 11.4
CLNS pmax pmax
comp=Z,40nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,22nm,0.9s
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS smax
comp=N,20nm,1.5s
CLNS smax
comp=E,32nm,1.3s
CLNS Chul'man 54.68 359 *eP* **P 03 46 28.5 +0.9**
DLH Dalhousie 56.05 308 *eP* **P 03 46 37.0 -0.9**
THN Thein Dam 56.21 308 *eP* **P 03 46 36.7 -2.3**
THN *ex* x 03 56 18.6
BOD Bodaibo 56.49 352 *eP* **P 03 46 40.6 +0.1**
BOD pmax pmax
comp=Z,43nm,1.3s,mb5.3
PEA0B Petropavlovsk- 57.21 22 *eP* **P 03 46 46.3 +0.6**
PEA0B *ePcP* PcP 03 47 38.8 -0.3
PETK Petropavlovsk- 57.21 22 P **P 03 46 46.5 +0.7**
comp=Z,37nm,0.8s,mb5.5,baz=194,slow=4.7,SNR=40
PETK LR LR 04 12 44.6
comp=Z,184nm,19.3s,baz=321,slow=37
PETK Petropavlovsk- 57.21 22 P **P 03 46 46.5 +0.7**
PETK LR LR 04 12 44.6
PET Petropavlovsk 57.51 23⇑ *iP* **P 03 46 48.4 +0.6**
PET *e* 03 48 58.8
PET *eS* **S 03 54 35.2 -2.6**
PET *e* 03 56 22.7
PET *eSS* SS 03 58 27.2 -2.0
PET pmax pmax
comp=Z,71nm,1.4s,mb5.5
PET pmax pmax
comp=Z,200nm,13.7s
PET MLR MLR
comp=Z,300nm,21.0s
PET Petropavlovsk 57.51 23⇓ *eP* **P 03 46 48.1 +0.3**
NIL Nilore 58.58 309 P **P 03 46 54.9 -0.8**
NIL pmax pmax
comp=Z,18nm,0.8s,mb5.2
NIL Nilore 58.58 309 *eP* **P 03 46 54.3 -1.3**
comp=Z,18nm,0.8s,mb5.1
NIL *eS* **S 03 54 51.3 -1.3**
MK31 Makanchi Array 58.68 326 *i P* **P 03 46 56.2 +0.1**
MKAR Makanchi Array 58.68 326 P **P 03 46 56.1 0.0**
comp=Z,38nm,0.5s,mb5.7,baz=120,slow=7.8,SNR=326
MKAR ScP ScP 03 51 36.8 -0.2
comp=Z,5.3nm,0.8s,baz=130,slow=5.2,SNR=4.2
MKAR S **S 03 54 52.7 -0.6**
comp=Z,3.7nm,0.9s,baz=320,slow=32,SNR=5.5
MKAR LR LR 04 13 46.6
comp=Z,551nm,21.1s,baz=133,slow=37
MKAR Makanchi Array 58.68 326 P **P 03 46 56.1 0.0**
MKAR S **S 03 54 52.7 -0.6**
MKAR pmax pmax
comp=Z,38nm,0.5s
MKAR smax
comp=N,4.0nm,0.9s
MKAR MLR MLR
comp=Z,551nm,21.1s
KSH Kashi 58.91 316 P **P 03 46 59.3 +1.5**
KSH AP pP 03 47 23.1 +1.6
KSH XP sP 03 47 34.1 +2.0
KSH PCP PcP 03 47 48.6 +2.4
KSH PP PP 03 49 13.2 +4.1
KSH PPP 03 50 37.5
KSH SCP ScP 03 51 38.1 -0.1
KSH PCS PcS 03 51 48.0 0.0
KSH S **S 03 54 55.7 -0.9**
KSH XS sS 03 55 37.4 +0.3
KSH SCS ScS 03 56 36.6 -2.3
KSH SS SS 03 58 52.2 +0.5
KSH AMB AMB
comp=Z,13nm,0.8s,mb5.0
KSH AMB AMB
comp=Z,25nm,2.9s,mb4.7
KSH LR LR
comp=N,62nm,6.2s
KSH LR LR
comp=E,54nm,5.6s
KSH LR LR
comp=Z,51nm,12.0s
YAK Yakutsk 59.94 2 *eP* **P 03 47 04.3 -0.2**
YAK *e*PP pP 03 47 24.3 -3.9
YAK *e* 03 47 48.7
YAK *e* 03 49 15.8
YAK *eS* **S 03 55 07.0 -2.0**
YAK *e* 03 56 43.4
YAK pmax pmax
comp=Z,167nm,0.9s,mb6.1
YAK pmax pmax
comp=N,33nm,0.9s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=Z,41nm,1.0s,mb5.4
YAK smax
comp=E,219nm,2.0s
YAK smax
comp=N,693nm,3.2s
YAK Yakutsk 59.94 2 *eP* **P 03 47 04.9 +0.4**
comp=N,202nm,0.8s,mb6.2
ULHL Ulahol 59.97 319 P **P 03 47 05.6 +0.5**
SNR=9.2
KRAR Krasnoyarsk 60.16 339 *i P* **P 03 47 05.9 -0.2**
KZA Kyzart 60.54 318 P **P 03 47 10.2 +1.2**
SNR=42
RPZ Rata Peaks 60.66 144 P **P 03 47 09.5 -0.2**
comp=N,59nm,0.9s,mb5.6,baz=330,slow=2.3,SNR=29
TKM2 Tokmak 2 60.70 319 P **P 03 47 10.5 +0.4**
SNR=35
TKM2 Tokmak 2 60.70 319 *eP* **P 03 47 10.3 +0.2**
TKM2 PcP PcP 03 47 52.3 -1.0
KBK Karagaybulak 61.00 319 P **P 03 47 12.7 +0.6**
SNR=22
UCH Uchtor 61.10 318 P **P 03 47 14.1 +1.4**
SNR=11
UCH Uchtor 61.10 318 *eP* **P 03 47 13.8 +1.1**
comp=N,25nm,0.8s,mb5.3
UCH *ePcP* PcP 03 47 55.7 +0.8
UCH *ePP* PP 03 49 28.3 -0.2
CHMS Chumysh 61.29 319 P **P 03 47 14.2 +0.1**
SNR=8.3
AAK Ala-Archa 61.29 319 P **P 03 47 14.7 +0.6**
comp=N,127nm,0.6s,mb6.1,SNR=17
AAK Ala-Archa 61.29 319 ⇑P **P 03 47 14.8 +0.7**
SNR=13
AAK Ala-Archa 61.29 319 P **P 03 47 14.6 +0.5**
AAK pmax pmax
comp=Z,41nm,1.4s,mb5.3
AAK Ala-Archa 61.29 319 P **P 03 47 14.7 +0.6**
SNR=20
AAK Ala-Archa 61.29 319⇓ *eP* **P 03 47 14.2 +0.1**
FRU Bishkek 61.30 319 *eP* **P 03 47 14.0 -0.1**
FRU *eS* **S 03 55 26.0 -1.1**
FRU pmax pmax
comp=Z,50nm,1.9s,mb5.2
FRU smax
comp=E,60nm,2.0s
USP Ospenovka 61.57 319 P **P 03 47 15.9 0.0**
SNR=50
EKS2 Erkin-Say 61.78 318 P **P 03 47 17.9 +0.6**
SNR=26
EKS2 Erkin-Say 61.78 318 *eP* **P 03 47 17.3 0.0**
comp=E,41nm,0.8s,mb5.5
EKS2 *e*PP PP 03 49 33.1 -1.3
EKS2 *e*ScP ScP 03 51 47.2 -3.7
ZALV Zalesovo Beam 61.89 334 P **P 03 47 17.3 -0.6**
comp=E,11nm,0.5s,mb5.2,baz=135,slow=7.3,SNR=41
ZALV S **S 03 55 26.6 -7.6**
comp=E,3.0nm,0.9s,baz=165,slow=6.2,SNR=3.7
ZALV LR LR 04 15 10.3
comp=E,320nm,20.3s,baz=324,slow=37
ZALV PKPPKP 04 16 29.8
comp=E,3.8nm,1.0s,baz=309,slow=2.8,SNR=8.2
ZALV Zalesovo Beam 61.89 334 P **P 03 47 17.3 -0.5**
ZALV S **S 03 55 26.6 -7.5**
ZALV pmax pmax
comp=Z,11nm,0.5s,mb5.1
ZALV smax
comp=N,3.0nm,0.9s
ZALV MLR MLR
comp=Z,320nm,20.3s
ZALV Zalesovo Beam 61.89 334 P **P 03 47 17.3 -0.6**
ZALV S **S 03 55 26.6 -7.6**
ZALV LR LR 04 15 10.3
ZALV P'P' 04 16 29.8
KBL Kabul 62.17 308 P **P 03 47 20.0 -0.1**
KBL pmax pmax
comp=Z,43nm,0.8s,mb5.5
KBL Kabul 62.17 308 *eP* **P 03 47 19.7 -0.4**
comp=Z,43nm,0.8s,mb5.5
KURK Kurchatov 62.92 328 P **P 03 47 24.6 -0.2**
comp=Z,931nm,0.5s
KURK Kurchatov 62.92 328⇓ P **P 03 47 25.0 +0.2**
SNR=47
KURK Kurchatov 62.92 328 *eP* **P 03 47 24.6 -0.1**
comp=Z,137nm,0.8s,mb5.9
SEY Seymchan 63.82 13⇑ *eP* **P 03 47 32.1 +1.6**
KK31 Karatay Array 64.14 318 *i P* **P 03 47 32.6 -0.4**
KK31 pmax pmax
comp=Z,37nm,0.9s,mb5.2
SMY Shemya 64.20 30 *eP* **P 03 47 34.4 +1.2**
comp=Z,340nm,1.1s,mb6.1
VOSK Vostochnaya 68.03 327 P **P 03 47 57.1 -0.5**
VOSK pmax pmax
comp=Z,14nm,0.7s,mb4.9
BVA0 Borovoye Array 68.48 328 P **P 03 48 00.6 +0.1**
BVA0 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BRVK Borovoye 68.56 328 P **P 03 48 01.4 +0.5**
comp=Z,332nm,0.4s,mb6.5,SNR=26
BRVK Borovoye 68.56 328 P **P 03 48 01.4 +0.4**
SNR=15
BRVK Borovoye 68.56 328 P **P 03 48 00.7 -0.2**
BRVK pmax pmax
comp=Z,33nm,1.1s,mb5.1
BRVK Borovoye 68.56 328 *i P* **P 03 48 00.7 -0.2**
JMDO Jabal Madar 69.02 293⇓ P **P 03 48 04.0 -0.5**
SNR=5.3
CASY Casey 69.05 187 *eP* **P 03 48 04.1 +0.4**
CASY *eS* S 03 57 01.0 0.0
BIDO Bidbid 69.14 294⇓ P **P 03 48 02.5 -2.7**
SNR=5.6
DRV Dumont d'Urvil 69.22 174 P **P 03 48 10.0 +5.2**
DRV S S 03 57 09.0 +6.0
DRV SS SS 04 01 30.0 -1.4
DRV R 04 10 00.0
TIXI Tiksi 69.56 1*c iP* **P 03 48 06.2 -0.6**
TIXI pmax pmax
comp=Z,65nm,0.7s,mb5.6
ARQ Araqi 70.58 294⇓ P **P 03 48 13.6 -0.4**
SNR=5.4
BILL Bilibino 71.34 15⇓ *eP* **P 03 48 18.0 +0.3**
BILL *e* 03 51 02.1
BILL *i* S S 03 57 24.3 -3.4
BILL *i* SS SS 04 02 09.0 +5.2
BILL pmax pmax
comp=Z,18nm,1.3s,mb4.7
BILL Bilibino 71.34 15⇑ *eP* **P 03 48 18.1 +0.4**
ABKT Ailbek 71.57 309 P **P 03 48 20.6 +0.9**
comp=Z,266nm,0.8s,mb6.1,SNR=9.5
MIR Mirnyy 72.37 193⇑ *iP* **P 03 48 25.0 +1.1**
MIR pmax pmax
comp=Z,300nm,1.2s,mb6.0
WHFO Wadi Hawf 72.68 288⇓ P **P 03 48 26.3 -0.4**
SNR=9.7
SVE Sverdlovsk 75.16 329⇓ *eP* **P 03 48 40.7 +0.3**
SVE *eS* S 03 58 10.2 -1.0
SVE *e* 03 58 59.2
SVE pmax pmax
comp=Z,168nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,530nm,22.0s
ARU Arti 76.11 328 P **P 03 48 45.7 -0.1**
comp=Z,644nm,0.8s,mb6.4,SNR=25
ARU Arti 76.11 328*d iP* **P 03 48 45.1 -0.7**
ARU *e*PP pP 03 49 11.2 +0.7
ARU *e* 03 51 37.3
ARU *eS* S 03 58 21.2 -0.6
ARU *eSSS* 04 06 40.0
ARU pmax pmax
comp=Z,114nm,1.0s,mb5.6
ARU Arti 76.11 328⇓ *eP* **P 03 48 45.1 -0.7**
QRN Al-Qurain 78.78 299 *eP* **P 03 49 00.3 -1.0**
baz=299
QRN AMb AMB 03 49 02.3
comp=Z,289nm,0.6s,mb6.3,baz=299
SDPT Sand Point 78.91 34 *eP* **P 03 49 01.6 +0.2**
comp=Z,266nm,0.6s,mb6.2
RDF Al-Radifah 79.11 299 *eP* **P 03 49 01.8 -1.4**
baz=299
RDF AMb AMB 03 49 04.5
comp=Z,166nm,1.5s,mb5.6,baz=299
MIB Mutribah 79.35 300 *eP* **P 03 49 03.4 -1.0**
baz=300
MIB AMb AMB 03 49 05.4
comp=Z,311nm,0.8s,mb6.2,baz=300
NAY Al-Naaiem 79.40 299 *eP* **P 03 49 03.4 -1.3**
baz=299
NAY AMb AMB 03 49 05.6
comp=Z,128nm,0.8s,mb5.8,baz=299
ABPO Ambohimpanom 80.25 250 *eP* **P 03 49 10.1 +0.6**
comp=Z,55nm,0.8s,mb5.4
ABPO *e*PP PP 03 52 10.9 -2.4
MAK Makhachkala 80.37 313 *eP* **P 03 49 07.2 -2.5**
MAK *i* 03 52 20.5
MAK *i* S S 03 59 05.8 -2.2
MAK *i* 03 59 18.6
MAK *i* *SS sS 03 59 50.7 0.0
MAK *eSS* SS 04 04 17.8 -3.7
MAK pmax pmax
comp=Z,192nm,1.2s,mb5.8
MAK MLR MLR
comp=Z,164nm,6.0s
VNDA Vanda 81.79 173 P **P 03 49 16.7 +0.3**
comp=Z,39nm,0.9s,mb5.2,baz=318,slow=5.7,SNR=157
VNDA LR LR 04 21 41.8
comp=Z,244nm,21.1s,baz=331,slow=33
DGRG David-gareji 81.81 311 P **P 03 49 18.2 +0.9**
MAW Mawson 81.97 200 *eP* **P 03 49 18.1 +0.6**
comp=Z,23nm,0.9s,mb5.0
MAW Mawson 81.97 200 P **P 03 49 18.4 +0.9**
comp=Z,36nm,1.0s,mb5.2,baz=63,slow=6.8,SNR=23
MAW Mawson 81.97 200 P **P 03 49 18.4 +0.9**
MAW pmax pmax
comp=Z,36nm,1.0s
MTA Mtatsminda 82.26 312 P **P 03 49 19.7 +0.1**
SVW2 Sparrevohn 82.55 29 *eP* **P 03 49 22.1 +1.4**
TTA Tatalina 82.66 27 *eP* **P 03 49 22.6 +1.3**
SBA Scott Base 82.71 172 *eP* **P 03 49 21.4 +0.2**
SBA 03 52 27.8
SBA pmax pmax
comp=Z,59nm,1.3s,mb5.3
SBA Scott Base 82.71 172 *eP* **P 03 49 21.4 +0.1**
comp=Z,59nm,1.3s,mb5.3
SBA PP PP 03 52 27.8 -4.5
GOR Gori 82.79 312 P **P 03 49 23.4 +1.0**
OHAK Old Harbor 83.17 33 *eP* **P 03 49 25.1 +1.1**
comp=Z,109nm,0.7s,mb5.8
KDAK Kodiak Island 83.61 32 *eP* **P 03 49 27.4 +1.1**
comp=Z,189nm,1.3s,mb5.8
KIV Kislovodsk 83.95 314 P **P 03 49 28.8 +0.5**
comp=Z,476nm,0.7s,mb6.4,SNR=11
KIV Kislovodsk 83.95 314 ⇑P **P 03 49 29.2 +0.9**
SNR=12
KIV Kislovodsk 83.95 314 *eP* **P 03 49 28.3 0.0**
KIV *eS* S 03 59 41.1 -3.5
KIV pmax pmax
comp=Z,273nm,6.1s
KIV pmax pmax
comp=Z,53nm,0.7s,mb5.5
KIV MLR MLR
comp=Z,290nm,19.0s
KIV Kislovodsk 83.95 314⇑ *iP* **P 03 49 28.3 0.0**
PPLA Purkeypile 84.39 27 *eP* **P 03 49 31.0 +0.9**
comp=Z,222nm,1.8s,mb5.7
VRHR Novokhopersk 85.05 321 *eP* **P 03 49 33.4 -0.3**
VRHR pmax pmax
comp=Z,250nm,0.8s,mb6.2
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=E,110nm,1.2s
PPT Papeete 85.08 108 *e*LR LR 04 18 37.2
comp=E,957nm,35.0s
PPT Papeete 85.08 108 LR LR 04 21 30.4
comp=E,195nm,20.5s,baz=255,slow=31
PPT Papeete 85.08 108 *eP* **P 03 49 36.7 +2.2**
PPT pmax pmax
comp=Z,59nm,1.2s
PPT Papeete 85.08 108 *eP* **P 03 49 36.7 +2.2**
comp=Z,59nm,1.2s,mb5.4
PPT *eS* S 03 59 42.4 -14
PAE Paea 85.08 108 *eP* **P 03 49 43.6 +9.1**
comp=Z,531nm,1.3s,mb6.3
TIAR Tiarei 85.30 108 *eP* **P 03 49 37.5 +1.9**
comp=Z,851nm,1.0s,mb6.6
RC01 Rabbit Creek A 85.37 29 *eP* **P 03 49 34.5 -0.5**
comp=Z,165nm,1.0s,mb5.9
TVO Taravao 85.40 108 *eP* **P 03 49 38.3 +2.2**
comp=Z,860nm,1.2s,mb6.6
SEW Seward 85.44 30 *eP* **P 03 49 36.0 +0.5**
comp=Z,248nm,1.4s,mb6.0
COLD Coldfoot 85.67 23 *eP* **P 03 49 35.6 -0.8**
comp=Z,41nm,0.7s,mb5.5
PMR Palmer 85.70 29 *eP* **P 03 49 35.7 -1.0**
SOC Sochi 86.09 313*c iP* **P 03 49 38.0 -1.0**
SOC *e* 03 52 56.7
SOC *eS* S 03 59 54.1 -12
SOC *e* 04 00 09.7
SOC pmax pmax
comp=Z,97nm,0.8s,mb5.8
COLA College 86.47 25⇓ *eP* **P 03 49 39.3 -1.1**
VORD Divnogorie 86.51 321 *eP* **P 03 49 40.2 -0.7**
VORD pmax pmax
comp=Z,130nm,1.5s,mb5.6
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
PMOR Pomariorio Ree 86.55 105 *eP* **P 03 49 43.8 +2.0**
VOR Voronezh 86.58 322⇓ *iP* **P 03 49 40.0 -1.3**
VOR *eS* S 04 00 06.0 -4.2
VOR pmax pmax
comp=Z,380nm,1.8s,mb6.0
VSR Storozhevoye 86.60 321 *eP* **P 03 49 40.6 -0.7**
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,50nm,1.5s
KLMR Klimovskoe 86.65 331⇑ *iP* **P 03 49 40.4 -1.0**
KLMR *e*PP pP 03 49 59.6 -7.0
KLMR *eS* S 04 00 04.7 -5.7
KLMR pmax pmax
comp=Z,117nm,1.4s,mb5.6
VAH Vaihoa 86.81 105 *eP* **P 03 49 45.0 +1.9**
comp=Z,188nm,1.1s,mb6.0
MOS Moscow 87.56 326 *eP* **P 03 49 44.1 -1.8**
MOS *i* *PP pP 03 50 04.4 -6.8
MOS *e* 04 00 02.4
MOS *i* S S 04 00 12.9 -6.5
MOS pmax pmax
comp=Z,73nm,0.8s,mb5.8
ANN Anapa 87.73 315 *eP* **P 03 49 46.9 -0.1**
ANN *e*PP pP 03 50 10.7 -1.6
ANN *eS* S 04 00 05.4 -16
ANN pmax pmax
comp=Z,231nm,0.9s,mb6.2
OBN Obninsk 88.17 325 P **P 03 49 48.0 -0.8**
comp=Z,464nm,0.7s,mb6.6,SNR=6.6
OBN Obninsk 88.17 325⇑ *eP* **P 03 49 48.2 -0.6**
OBN *e* 03 53 17.3
OBN *i* S S 04 00 10.5 -15
OBN *ePS* 04 01 26.1
OBN pmax pmax
comp=Z,44nm,0.5s,mb5.7
APA Apatity 89.24 337⇑ *iP* **P 03 49 52.0 -1.6**
APA *i* pP 03 50 18.0 -0.9
APA *i* S S 04 00 32.0 -2.8
APA MLR MLR
comp=Z,900nm,21.0s
EGAK Eagle 89.33 25 *eP* **P 03 49 53.8 -0.2**
comp=Z,14nm,0.8s,mb5.1
DAWY Dawson 90.14 26 *eP* **P 03 49 58.4 +0.5**
JOF Joensuu 90.47 333 *ep* **P 03 49 58.8 -0.6**
comp=Z,5.3nm,0.4s,mb5.0
JOF Joensuu 90.47 333 *eP* **P 03 49 58.8 -0.6**
JOF pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
SYO Syowa Base 90.64 201⇓ *eP* **P 03 50 00.8 +0.8**
SYO Syowa Base 90.64 201⇑ *eX* 03 50 34.4
BR131 Keskin Array S 90.72 310 *eP* **P 03 50 00.6 -0.5**
comp=Z,5.0nm,0.6s,mb4.8
BR131 *ePP* PP 03 53 37.4 -0.2
BRTR Keskin Array B 90.72 310 P **P 03 50 00.5 -0.6**
comp=Z,9.2nm,0.8s,mb4.9,baz=126,slow=5.4,SNR=49
BRTR LR LR 04 37 06.0
comp=Z,107nm,20.2s,baz=284,slow=40
BRTR Keskin Array B 90.72 310⇑ *eP* **P 03 50 00.5 -0.6**
CSS Prodhromos 91.23 305 *eP* **P 03 50 03.0 -0.5**
comp=Z,33nm,0.8s,mb5.5
KEV Kevo 91.32 340 *ep* **P 03 50 02.8 -0.4**
comp=Z,1.3nm,0.4s,mb4.4
KEV Kevo 91.32 340 *eP* **P 03 50 02.8 -0.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
ARCES ARCESS Array B 91.88 340 P **P 03 50 04.9 -0.9**
comp=Z,36nm,0.8s,mb5.6,baz=83,slow=6.6,SNR=54
ARCES PKKPbc PKKPbc 04 07 23.2 -3.0
comp=Z,1.1nm,0.6s,baz=249,slow=3.1,SNR=11
ARCES LR LR 04 32 58.6
comp=Z,317nm,20.1s,baz=93,slow=36
ARCES ARCESS Array B 91.88 340 P **P 03 50 04.9 -0.9**
ARCES 04 07 23.2
ARCES pmax pmax
comp=Z,36nm,0.8s
ARCES MLR MLR
comp=Z,317nm,20.1s
QSPA South Pole Qui 91.92 180 P **P 03 50 06.8 +1.0**
comp=Z,17nm,0.8s,mb5.3,baz=310,slow=1.9,SNR=33
SPITS Spitsbergen Ar 92.06 349 P **P 03 50 06.2 -0.3**
comp=Z,34nm,0.7s,mb5.7,baz=349,slow=7.9,SNR=38
SPITS Spitsbergen Ar 92.06 349 P **P 03 50 06.2 -0.3**
SPITS pmax pmax
comp=Z,34nm,0.7s
SPB4 Spitsbergen Ar 92.07 349 *eP* **P 03 50 06.2 -0.3**
SKAG Skagway 92.59 30 *eP* **P 03 50 10.5 +1.2**
comp=Z,57nm,1.0s,mb5.8
KAF Kangasniemi 92.88 332 *ep* **P 03 50 09.9 -0.7**
comp=Z,2.8nm,0.4s,mb5.0

KAF Kangasniemi 92.88 332 *e*P **P** 03 50 09.9 -0.7
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
AKASG Malin Array Be 92.90 321 P **P** 03 50 09.7 -1.2
comp=Z,2.4nm,0.4s,mb4.9,baz=75,slow=4.2,SNR=21
AKASG LR LR 04 34 26.8
comp=Z,216nm,21.7s,baz=320,slow=37
AKASG Malin Array Be 92.90 321 P **P** 03 50 09.7 -1.2
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,216nm,21.7s
AKBB Malin Array Si 92.90 321 *e*P **P** 03 50 09.7 -1.2
KIEV Kiev 92.91 321 *e*P **P** 03 50 10.0 -1.0
KIEV pmax pmax
comp=Z,28nm,1.4s,mb5.4
KIEV Kiev 92.91 321 *e*P **P** 03 50 10.0 -1.0
comp=Z,28nm,1.4s,mb5.4
VSU Vasula 93.27 329⇑ *e*P **P** 03 50 12.4 0.0
VSU pmax pmax
comp=Z,46nm,1.4s,mb5.6
TLCR 93.81 315⇑ *i*P **P** 03 50 15.2 0.0
TLCR 93.81 315 ⇑P **P** 03 50 15.2 -0.1
TIRR Tirgusor 94.18 315⇓ *i*P **P** 03 50 16.4 -0.6
TIRR Tirgusor 94.18 315 ⇓P **P** 03 50 16.4 -0.6
HARR Harsova 94.49 315⇓ *i*P **P** 03 50 18.3 -0.1
HARR Harsova 94.49 315 ⇓P **P** 03 50 18.3 -0.1
WRAK Wrangell Islan 94.66 33 *e*P **P** 03 50 19.9 +1.0
comp=Z,81nm,1.3s,mb6.0
VRI Vrincioaia 95.18 316⇓ *i*P **P** 03 50 21.7 +0.2
VRI Vrincioaia 95.18 316 ⇓P **P** 03 50 21.7 +0.2
PLOR Plostina 95.23 316⇓ *i*P **P** 03 50 21.9 +0.1
ALE Alert 95.47 1 P **P** 03 50 22.0 -0.2
comp=Z,48nm,1.1s,mb5.8,SNR=5.0
DLBC Dease Lake 95.48 31 P **P** 03 50 23.2 +0.6
comp=Z,14nm,0.9s,mb5.4,baz=276,slow=6.0,SNR=12
DLBC Dease Lake 95.48 31 P **P** 03 50 23.2 +0.6
MLR Muntele Rosu 95.78 316⇑ *i*P **P** 03 50 23.8 -0.4
MLR Muntele Rosu 95.78 316 ⇑P **P** 03 50 23.8 -0.4
BURAR Bucovina Array 95.94 318⇑ *i*P **P** 03 50 25.1 +0.2
BURAR Bucovina Array 95.94 318 ⇑P **P** 03 50 25.1 +0.2
BUR08 Bucovina Ar. S 95.94 318 *e*P **P** 03 50 25.3 +0.4
SUW Suwalki 96.03 325 *e*P **P** 03 50 24.9 -0.3
SUW Suwalki 96.03 325 *e*P **P** 03 50 24.9 -0.3
LVV L'vov 96.32 320 *e*P **P** 03 50 26.3 -0.3
VOIR 96.41 316⇑ *i*P **P** 03 50 26.7 -0.4
VOIR 96.41 316 ⇑P **P** 03 50 26.7 -0.4
KWP Kalwaria 97.20 320 *e*P **P** 03 50 30.9 +0.3
KWP Kalwaria 97.20 320 *e*P **P** 03 50 30.9 +0.3
TRPA Tarpa 97.61 319⇓ *i*P **P** 03 50 32.6 +0.1
KOLS Kolonicke sedl 97.62 320 *e*P **P** 03 50 32.2 -0.3
KOLS pmax pmax
comp=Z,12nm,1.3s,mb5.3
KOLS Kolonicke sedl 97.62 320 *e*P **P** 03 50 32.2 -0.3
comp=Z,12nm,1.3s,mb5.3
UZH Uzhgorod 97.67 319⇓ *i*P **P** 03 50 32.0 -0.7
UZH *e**PP pP 03 50 57.0 -1.2
DRGR 97.77 318⇑ *i*P **P** 03 50 33.0 -0.2
DRGR 97.77 318 ⇑P **P** 03 50 33.0 -0.2
GZR Gura Zlata 97.99 316⇑ *i*P **P** 03 50 35.0 +0.8
GZR Gura Zlata 97.99 316 ⇑P **P** 03 50 35.0 +0.7
CRVS Cervenica-Dubn 98.15 320 *e*P **P** 03 50 35.1 +0.2
CRVS pmax pmax
comp=Z,47nm,1.7s,mb5.7
CRVS Cervenica-Dubn 98.15 320 *e*P **P** 03 50 35.1 +0.2
comp=Z,47nm,1.7s,mb5.7
STHS Stebnicka Huta 98.18 320 *e*P **P** 03 50 35.5 +0.5
STHS pmax pmax
comp=Z,21nm,1.9s,mb5.3
STHS Stebnicka Huta 98.18 320 *e*P **P** 03 50 35.5 +0.5
comp=Z,21nm,1.9s,mb5.3
VTS Vitosha 98.20 313⇓ *i*P **P** 03 50 35.1 -0.2
VTS Vitosha 98.20 313 ⇓P **P** 03 50 35.1 -0.2
LSZ Lusaka 98.27 255 *e*P **P** 03 50 36.0 -0.1
LSZ pmax pmax
comp=Z,71nm,1.8s,mb5.9
LSZ Lusaka 98.27 255 *e*P **P** 03 50 36.0 -0.1
comp=Z,71nm,1.8s,mb5.9
BZS Buzias 98.75 317⇓ *i*P **P** 03 50 36.7 -0.9
BZS Buzias 98.75 317 ⇓P **P** 03 50 36.7 -0.9
NIE Niedzica 98.77 321 *e*P **P** 03 50 37.2 -0.4
RKT Rikitea 98.89 113 *e*LR LR 04 24 53.0
comp=Z,553nm,39.2s,baz=271
OJC Ojcow 98.91 321 *e*P **P** 03 50 37.7 -0.5
PSZ Piszkesteto 99.39 319 P Pdif 03 50 40.7 +0.4
PSZ pmax pmax
comp=Z,11nm,1.1s,mb5.3
PSZ Piszkesteto 99.39 319⇓ *e*P Pdif 03 50 40.6 +0.3
PSZ Piszkesteto 99.39 319 *e*P Pdif 03 50 40.1 -0.2
comp=Z,11nm,1.1s
PSZ *e*PP PP 03 54 44.3 -0.3
RES Resolute Bay 99.59 10 P Pdif 03 50 41.5 +0.3
RES pmax pmax
comp=Z,19nm,0.9s,mb5.7
RES Resolute Bay 99.59 10 *e*Pdif Pdif 03 50 40.8 -0.4
comp=Z,19nm,0.9s
VYHS Vyhne 99.94 320 *e*P Pdif 03 50 42.3 -0.4
VYHS pmax pmax
comp=Z,10.0nm,1.8s,mb5.1
VYHS Vyhne 99.94 320 PDIF Pdif 03 50 42.3 -0.4
VYHS Vyhne 99.94 320 *e*P Pdif 03 50 42.3 -0.4
comp=Z,9.5nm,1.8s
NOA NORSAR Array B 100.09 333 P Pdif 03 50 42.0 -1.3
comp=Z,6.9nm,1.0s,baz=67,slow=4.5,SNR=5.8
NOA PKKPbc PKKPbc 04 07 01.8 -2.0
comp=Z,1.8nm,0.7s,baz=248,slow=2.4,SNR=5.3
KSP Ksiaz 100.90 323 *e*P Pdif 03 50 47.3 +0.3
DPC Dobruska-Polom 101.02 322 *i*P Pdif 03 50 48.2 +0.7
DPC Dobruska-Polom 101.02 322 *e*PDIF Pdif 03 50 48.2 +0.7
YKA Yellowknife Ar 101.27 24 P Pdif 03 50 48.6 0.0
comp=Z,2.6nm,0.7s,baz=299,slow=4.3,SNR=29
YKA PKKPbc PKKPbc 04 06 57.4 -3.0
comp=Z,0.5nm,0.7s,baz=115,slow=2.5,SNR=4.1
YKA Yellowknife Ar 101.27 24 P Pdif 03 50 48.6 0.0
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA pmax pmax
comp=Z,1.0nm,0.7s
PVCC Panska Ves 102.04 323 *i*P Pdif 03 50 53.9 +1.9
PVCC Panska Ves 102.04 323 *e*PDIF Pdif 03 50 53.9 +1.9
PRU Pruhonice 102.22 322 *i*P Pdif 03 50 53.5 +0.6
PRU Pruhonice 102.22 322 *e*PDIF Pdif 03 50 53.5 +0.6
BRG Berggiesshubel 102.31 323 *e*P Pdif 03 50 53.1 -0.1
comp=Z,6.8nm,0.9s
BRG *e* 03 51 29.8
comp=Z,15nm,1.4s
CLL Collm 102.72 324 *e*Pdif Pdif 03 50 55.0 -0.1
CLL *e*Sdif Sdif 04 02 42.0 +10
CLL *e*SP SP 04 02 02.0 -4.8
CLL *e*PPS 04 05 18.0
CLL *e*SS SS 04 09 48.0 +6.1
CLL *ex* x 04 11 36.0
CLL *ex* x 04 19 12.0
KHC Kasperske Hory 103.09 322 *i*P Pdif 03 50 57.2 +0.5
KHC Kasperske Hory 103.09 322 *e*PDIF Pdif 03 50 57.2 +0.5
GERES GERESS Array B 103.10 321 Pdiff Pdif 03 50 57.6 +0.8
comp=Z,0.4nm,0.5s,baz=140,slow=6.9,SNR=4.0
GERES PKiKP PKiKP 03 55 17.2 +0.9
comp=Z,1.1nm,0.7s,baz=88,slow=3.1,SNR=4.6
GERES PKKPbc PKKPbc 04 06 53.5 -1.1
comp=Z,0.9nm,0.8s,baz=236,slow=2.4,SNR=4.3
GERES PKKPab 04 07 14.6
comp=Z,1.1nm,0.9s,baz=270,slow=2.7,SNR=3.7
BOJS Bojanci 103.11 318 *i*P Pdif 03 51 01.9 +5.1
VISS Visnje 103.30 318 *e*P Pdif 03 50 58.4 +0.8
SNAA Sanae 103.42 195 *e*Pdiff Pdif 03 50 58.6 +0.4
SNAA *e* 03 51 01.2
SNAA *e* 03 51 07.3
JAVS Javornik 103.79 318 *i*P Pdif 03 51 02.3 +2.5
E06A Yakima 104.02 41⇑P Pdif 03 51 01.7 +0.8
baz=104
A08A Turner Farm, O 104.31 38⇓P Pdif 03 51 02.7 +0.6
baz=104
B08A Colville Reser 104.48 39⇑P Pdif 03 51 03.6 +0.7
baz=104
A09A Danville 104.73 38⇑P Pdif 03 51 05.0 +1.0
baz=105
VNA2 Neumayer--Watz 105.03 194 *e*Pdiff Pdif 03 51 06.4 +1.0
VNA2 *e* 03 51 09.2
VNA2 *e* 03 51 15.3
VNA2 *e* 03 55 19.9
VNA3 Neumayer Olymp 105.36 194 *e*Pdiff Pdif 03 51 06.7 -0.1
VNA3 *e* 03 51 09.6
VNA3 *e* 03 51 15.7
VNA3 *e* 03 55 20.0
VNA1 Neumayer--Stat 105.43 194 *e*Pdiff Pdif 03 51 08.2 +1.1
VNA1 *e* 03 51 11.0
VNA1 *e* 03 51 17.4
J06A Christmas Vall 105.61 44⇑P PKiKP 03 55 22.4 +1.3
baz=106
DAVA Damuels 106.04 321⇑ *i*Pdiff Pdif 03 51 09.1 -0.7
comp=Z,9.1nm,1.2s
K07A Rock Creek Ran 106.41 44⇑P PKiKP 03 55 23.5 +0.9
baz=106
G09A Cove 106.55 41⇓P PKiKP 03 55 22.9 +0.1
baz=106
HINF Hinteralfeld 107.73 322 *e*PKiKP PKiKP 03 55 25.0 +0.2
T06C Millerton Lake 107.79 50⇓P PKiKP 03 55 26.4 +1.2
baz=108
H11A Donnelly 107.92 42⇓P PKiKP 03 55 26.0 +0.7
baz=108
HAU Haudompre 107.97 322 *e*PKiKP PKiKP 03 55 25.7 +0.4
comp=Z,8.2nm,0.8s
HAU *e*MLR MLR
comp=Z,310nm,21.5s
HAU Haudompre 107.97 322 *e*PKPdf PKiKP 03 55 25.7 +0.4
HAU LR LR
comp=Z,310nm,21.5s
PGF Pioggiola 108.32 316 *e*PKiKP PKiKP 03 55 26.8 +0.7
comp=Z,228nm,1.5s
NVAR Mina Array Bea 108.43 48 Pdiff Pdif 03 51 22.8 +2.4
comp=Z,1.4nm,0.7s,baz=271,slow=5.0,SNR=4.2
NVAR PKiKP PKiKP 03 55 27.4 +1.0
comp=Z,0.8nm,0.6s,baz=244,slow=6.1,SNR=3.6
NVAR PKKPbc PKKPbc 04 06 38.3 +0.4
comp=Z,1.9nm,0.8s,baz=136,slow=4.1,SNR=11
NVAR PKKPab PKKPab 04 06 50.6 -0.4
comp=Z,6.5nm,0.8s,baz=117,slow=7.3,SNR=18
MEZF Maizieres J'vi 108.54 323 *e*PKiKP PKiKP 03 55 27.1 +0.8
D14A Greenough 108.61 39⇓P PKiKP 03 55 26.4 -0.1
baz=108
CABF La Chapelle 108.70 321 *e*PKiKP PKiKP 03 55 28.1 +1.4
comp=Z,77nm,0.9s
LPG La Plagne 108.73 320 *e*PKiKP PKiKP 03 55 27.8 +1.0
comp=Z,16nm,0.9s
LPL La Plagne 108.73 320 *e*PKiKP PKiKP 03 55 27.7 +0.9
H12A Diamond D Ranc 108.75 41⇓P PKiKP 03 55 27.6 +0.7
baz=109
I12A Atlanta 108.85 42⇓P PKiKP 03 55 28.1 +1.1
baz=109
SBF Sospel 108.91 318 *e*PKiKP PKiKP 03 55 28.2 +1.0
comp=Z,235nm,1.6s
MBDF Montbardon 109.02 319 *e*PKiKP PKiKP 03 55 28.3 +1.0
L11A Cat Creek Ranc 109.02 44⇓P PKiKP 03 55 27.9 +0.4
baz=109
J12A Stokes Ranch, 109.08 43⇑P PKiKP 03 55 28.2 +0.7
baz=109
HLID Hailey 109.42 42⇑P PKiKP 03 55 29.3 +1.2
baz=109
K12A Draper Farm, C 109.44 43⇓P PKiKP 03 55 29.2 +1.0
baz=109
S09A Goldfield 109.46 49⇓P PKiKP 03 55 29.6 +1.2
baz=109
I13A Wildhorse Cree 109.48 42⇑P PKiKP 03 55 29.6 +1.3
baz=109
A17A Triple J Farms 109.49 36⇓P PKiKP 03 55 28.8 +0.7
baz=109
ORIF Oris-en-Rattie 109.52 319 *e*PKiKP PKiKP 03 55 29.0 +0.7
comp=Z,22nm,1.1s
ORIF *e*MLR MLR
comp=Z,455nm,21.5s
L12A House Creek Ra 109.54 44⇓P PKiKP 03 55 29.4 +1.0
baz=110
FRF La Foret Royal 109.55 318 *e*PKiKP PKiKP 03 55 28.8 +0.4
J13A Cove Ranch, Pi 109.64 42⇑P PKiKP 03 55 29.9 +1.3
baz=110
EDW2 Edwards Air Fo 109.74 52⇓P PKiKP 03 55 30.3 +1.3
baz=110
S10A Tonopah Range, 109.87 48⇑P PKiKP 03 55 30.5 +1.3
baz=110
M12A Wells 109.88 44⇓P PKiKP 03 55 30.7 +1.6
baz=110
K13A Stover Farm, H 109.99 43⇑P PKiKP 03 55 30.5 +1.3
baz=110
A18A Metzger Ranch, 110.00 36⇓P PKiKP 03 55 29.3 +0.2
baz=110
N12A Clover Valley, 110.00 45⇑P PKiKP 03 55 30.3 +1.0
baz=110
SMRF Simiane la Rot 110.10 319 *e*PKiKP PKiKP 03 55 30.0 +0.6
SSF Saint Saulge 110.11 322 *e*PKiKP PKiKP 03 55 29.9 +0.6
comp=Z,35nm,1.3s
H15A Lima 110.17 41⇑P PKiKP 03 55 31.4 +1.8
baz=110
L13A Double Diamond 110.30 44⇑P PKiKP 03 55 31.1 +1.3
baz=110
AVF Avril sur Loir 110.33 322 *e*PKiKP PKiKP 03 55 31.1 +1.4
comp=Z,34nm,1.3s
VIVF Saint-Julien-l 110.33 320 *e*PKiKP PKiKP 03 55 30.5 +0.7
F16A Kennard Place, 110.33 39⇓P PKiKP 03 55 30.4 +0.6
baz=110
O12A Crie 110.42 46⇓P PKiKP 03 55 31.2 +1.1
baz=110
M13A Montello 110.42 44⇑P PKiKP 03 55 31.0 +0.9
baz=110
TPNV Topopah Spring 110.45 49⇑P PKiKP 03 55 31.2 +0.9
baz=110
R11A Troy Canyon, C 110.48 48⇓P PKiKP 03 55 31.3 +1.1
baz=110
RRX Edison Barstow 110.52 52⇑P PKiKP 03 55 31.1 +0.6
baz=110
U10A Ash Meadows, A 110.56 50⇓P PKiKP 03 55 31.9 +1.4
baz=110
K14A Jones Ranch, D 110.65 43⇓P PKiKP 03 55 31.3 +0.8
baz=111
BGF Bois d'Agland 110.74 322 *e*PKiKP PKiKP 03 55 31.4 +0.9
comp=Z,26nm,0.9s
J15A Blackfoot 110.81 42⇓P PKiKP 03 55 32.2 +1.4
baz=111
F17A Fitzpatrick Pl 110.89 39⇑P PKiKP 03 55 31.6 +0.8
baz=111
M14A Sheep Mountain 110.94 44⇑P PKiKP 03 55 32.0 +0.9
baz=111
K15A Arbon 111.03 42⇑P PKiKP 03 55 32.5 +1.3
baz=111
G17A Pierce Place, 111.09 39⇑P PKiKP 03 55 32.7 +1.5
baz=111
T11A Corn Creek, Al 111.13 49⇓P PKiKP 03 55 33.0 +1.4
baz=111
LASF Ste Croix 111.19 319 *e*PKiKP PKiKP 03 55 32.2 +0.7
comp=Z,60nm,1.3s
I16A Newdale 111.24 41⇓P PKiKP 03 55 32.5 +0.9
baz=111
P13A Bates Ranch, G 111.24 46⇑P PKiKP 03 55 32.5 +0.8
baz=111
TCF Toulx Ste Croi 111.26 322 *e*PKiKP PKiKP 03 55 32.0 +0.5
comp=Z,45nm,1.3s
N14A Grayback Hills 111.30 44⇓P PKiKP 03 55 32.8 +1.0
baz=111
L15A Malad City 111.40 43⇑P PKiKP 03 55 33.6 +1.6
baz=111
Q13A Wheeler Ranch, 111.42 47⇓P PKiKP 03 55 33.0 +0.9
baz=111
F18A Big Timber 111.47 38⇑P PKiKP 03 55 33.3 +1.4
baz=111
BELC Belle Mtn. 111.58 52⇓P PKiKP 03 55 33.6 +1.1
baz=112
M15A Larsen Ranch, 111.58 44⇓P PKiKP 03 55 33.0 +0.8
baz=112
MONP Monument Peak 111.58 53⇓P PKiKP 03 55 33.7 +1.1
baz=112
GMRC Granite Mounta 111.60 51⇓P PKiKP 03 55 34.0 +1.4
baz=112
H17A Grant Village 111.61 40⇓P PKiKP 03 55 33.4 +1.2
baz=112
K16A Soda Springs 111.61 42⇓P PKiKP 03 55 33.8 +1.5
baz=112
N15A Stansbury Isla 111.75 44⇓P PKiKP 03 55 33.6 +1.0
baz=112
DUG Dugway 111.82 45⇓P PKiKP 03 55 34.2 +1.5
baz=112
P14A Drum Mountains 111.87 46⇓P PKiKP 03 55 34.1 +1.2
baz=112
V12A Nelson 111.92 50⇑P PKiKP 03 55 34.1 +1.0
baz=112
Q14A Sevier Lake (B 111.94 46⇑P PKiKP 03 55 34.0 +0.9
baz=112
J17A Brown Place, J 111.96 41⇓P PKiKP 03 55 34.3 +1.3
baz=112
CAF Calviac 111.97 321 *e*PKiKP PKiKP 03 55 34.1 +1.2
comp=Z,16nm,1.0s
S13A Holt Ranch, En 112.03 48⇑P PKiKP 03 55 34.4 +1.1
baz=112
L16A Fish Haven 112.05 43⇓P PKiKP 03 55 34.3 +1.1
baz=112
BC3 Big Chuckw Mtn 112.11 52⇑P PKiKP 03 55 34.7 +1.2
baz=112
T13A Saint George 112.19 49⇑P PKiKP 03 55 34.1 +0.5
baz=112
IRM Iron Mountain 112.19 52⇓P PKiKP 03 55 33.9 +0.2
baz=112
L17A Cokeville 112.39 43⇓P PKiKP 03 55 34.3 +0.5
baz=112
P15A Leamington 112.44 45⇓P PKiKP 03 55 35.2 +1.2
baz=112
J18A Kendall Valley 112.48 41⇑P PKiKP 03 55 35.0 +1.0
baz=112
V13A Grand Canyon W 112.54 50⇑P PKiKP 03 55 35.3 +1.0
baz=112
Q15A Fillmore 112.58 46⇓P PKiKP 03 55 35.3 +1.1
baz=112
K18A Toltan Ranch, 112.72 42⇓P PKiKP 03 55 35.6 +1.1
baz=113
M17A Scullys Gap (B 112.80 43⇓P PKiKP 03 55 35.6 +1.0
baz=113
Y12C Blythe 112.82 52⇓P PKiKP 03 55 35.2 +0.3
baz=113
W13A Hualapai Mount 112.87 50⇑P PKiKP 03 55 36.0 +1.1
baz=113
N17A Moffit Pass 112.90 44⇓P PKiKP 03 55 36.0 +1.2
baz=113
U14A Mt Trumbull 112.95 49⇓P PKiKP 03 55 36.7 +1.6
baz=113
BW06 Boulder Array 112.98 41⇓P PKiKP 03 55 35.6 +0.7
baz=113
PDAR Pinedale Array 112.98 41 PKiKP PKiKP 03 55 34.8 -0.2
comp=Z,2.2nm,1.1s,baz=90,slow=3.0,SNR=5.0
PDAR PKKPbc PKKPbc 04 06 22.4 -0.9
comp=Z,3.4nm,0.9s,baz=120,slow=5.4,SNR=20
PDAR PKKPab PKKPab 04 06 30.1 -0.6
comp=Z,11nm,0.8s,baz=123,slow=6.0,SNR=47
L18A Fontenelle, Gr 113.03 42⇓P PKiKP 03 55 36.0 +1.0
baz=113
X13A Yucca 113.08 51⇑P PKiKP 03 55 36.4 +1.1
baz=113
S15A Panguitch 113.10 47⇑P PKiKP 03 55 36.8 +1.5
baz=113
O17A Robinson Place 113.28 44⇑P PKiKP 03 55 37.0 +1.5
baz=113
V14A Boquillas Ranc 113.28 50⇑P PKiKP 03 55 36.9 +1.2
baz=113
T15A Red Dirt Ranch 113.33 48⇓P PKiKP 03 55 37.1 +1.4
baz=113
L19A Farson 113.41 42⇓P PKiKP 03 55 36.5 +0.8
baz=113
K19A Absolon Red Bu 113.43 41⇓P PKiKP 03 55 36.4 +0.7
baz=113
W14A Seligman 113.45 50⇓P PKiKP 03 55 37.4 +1.3
baz=113
DGMT Dagmar 113.45 34⇑P PKiKP 03 55 37.0 +1.4
baz=113
R16A Teasdale 113.51 46⇓P PKiKP 03 55 36.6 +0.5
baz=113
P17A Butcher Ranch, 113.57 45⇓P PKiKP 03 55 36.8 +0.7
baz=114
U15A North Rim 113.61 49⇓P PKiKP 03 55 37.1 +0.7
baz=114
S16A Weppner Ranch, 113.64 47⇑P PKiKP 03 55 37.1 +0.8
baz=114
N18A Larsen Ranch, 113.69 43⇓P PKiKP 03 55 38.9 +2.6
baz=114
113A Mohawk Valley, 113.74 53⇓P PKiKP 03 55 37.4 +0.8
baz=114
O18A Roosevelt 113.75 44⇓P PKiKP 03 55 37.7 +1.2
baz=114
K20A Yellowstone Ra 113.83 41⇑P PKiKP 03 55 37.7 +1.1
baz=114
X14A Yava 113.86 51⇓P PKiKP 03 55 38.3 +1.4
baz=114
SRU San Rafael 113.87 45⇓P PKiKP 03 55 37.7 +0.9
baz=114
V15A Kaibab Nationa 113.92 49⇑P PKiKP 03 55 38.4 +1.5
baz=114
EPF Esparros 113.94 319 *e*PKiKP PKiKP 03 55 37.3 +0.6
R17A Hanksville Air 114.01 46⇓P PKiKP 03 55 37.7 +0.7
baz=114
L20A Wamsutter 114.13 42⇓P PKiKP 03 55 38.1 +1.0
baz=114
Q18A Rafter H Ranch 114.15 45⇑P PKiKP 03 55 37.8 +0.6
baz=114
Z14A Wintersburg 114.19 52⇓P PKiKP 03 55 38.4 +0.9
baz=114
S17A Black Ridge (B 114.26 47⇑P PKiKP 03 55 38.4 +0.9
baz=114
X15A Humboldt 114.35 51⇓P PKiKP 03 55 38.6 +0.8
baz=114
Y15A Casa Rosa Ranc 114.47 51⇑P PKiKP 03 55 38.9 +0.9
baz=114
T17A Navajo Res., N 114.50 48⇑P PKiKP 03 55 39.1 +1.1
baz=114
ETSF Etsaut 114.59 320 *e*PKiKP PKiKP 03 55 39.4 +1.4
U16A Tuba City 114.59 49⇓P PKiKP 03 55 39.5 +1.3
baz=114
R18A Canyonlands Na 114.61 46⇓P PKiKP 03 55 39.0 +0.8
baz=114
WUAZ Wupatki 114.64 49⇓P PKiKP 03 55 39.3 +1.0
baz=115
N20A Spence Gulch, 114.71 43⇑P PKiKP 03 55 39.4 +1.1
baz=115
L21A Rawlins 114.79 41⇑P PKiKP 03 55 39.0 +0.6
baz=115
S18A Hurst Farm, Bl 114.82 47⇑P PKiKP 03 55 39.0 +0.4
baz=115
Q19A Hogan Spring (114.83 45⇓P PKiKP 03 55 39.6 +1.0
baz=115
SJPF Ste Jean 114.91 320 *e*PKiKP PKiKP 03 55 40.0 +1.4
comp=Z,176nm,1.5s
M21A Separation Pea 114.96 42⇓P PKiKP 03 55 39.5 +0.7
baz=115
115A Sonoran Desert 114.98 52⇓P PKiKP 03 55 39.8 +0.8
baz=115
X16A Lo Mia Camp, P 114.99 50⇑P PKiKP 03 55 39.5 +0.4
baz=115
O20A White River Ci 115.03 44⇑P PKiKP 03 55 39.5 +0.6
baz=115
T18A Mexican Hat 115.13 47⇓P PKiKP 03 55 40.1 +0.9
baz=115
N21A Black Mountain 115.25 43⇑P PKiKP 03 55 40.3 +1.0
baz=115
S19A Harvey Farm, M 115.42 46⇓P PKiKP 03 55 41.0 +1.2
baz=115
U18A Rough Rock, Ch 115.42 48⇓P PKiKP 03 55 40.9 +1.1
baz=115
116A Eloy 115.44 52⇓P PKiKP 03 55 41.1 +1.1
baz=115
Q20A Ridgley Place, 115.51 45⇑P PKiKP 03 55 40.8 +0.9
baz=115
O21A Pagoda 115.53 43⇑P PKiKP 03 55 40.6 +0.7
baz=115
M22A Cedar Creek Ra 115.57 42⇑P PKiKP 03 55 41.5 +1.6
baz=116
V18A Ganado 115.65 49⇑P PKiKP 03 55 41.7 +1.4
baz=116
Y17A Roosevelt 115.72 51⇑P PKiKP 03 55 41.6 +1.1
baz=116
T19A Beclabito 115.88 47⇑P PKPdf 03 55 41.8 +1.1
baz=116
N22A Wattenberg Ran 115.94 42⇑P PKPdf 03 55 41.4 +0.7
baz=116
X18A Snowflake 116.09 50⇓P PKPdf 03 55 42.2 +1.0
baz=116
MVCO Mesa Verde 116.11 47⇓P PKPdf 03 55 42.4 +1.3
baz=116
117A Oracle 116.20 52⇑P PKPdf 03 55 41.9 +0.5
baz=116
R21A Cimarron 116.29 45⇓P PKPdf 03 55 41.9 +0.5
baz=116
Y18A Canyon Day Jun 116.31 51⇑P PKPdf 03 55 42.7 +1.1
baz=116
217A Green Valley 116.42 53⇓P PKPdf 03 55 42.5 +0.6
baz=116
X19A St. Johns 116.64 50⇓P PKPdf 03 55 43.5 +1.3
baz=117
ULM Lac du Bonnet 116.71 29 PKP PKPdf 03 55 39.8 -2.1
comp=Z,6.3nm,0.8s,baz=323,slow=3.9,SNR=5.9
118A Homack Ranch, 116.78 52⇓P PKPdf 03 55 43.8 +1.2
baz=117
Y19A Nutrioso 116.85 50⇓P PKPdf 03 55 43.9 +1.3
baz=117
218A Dragoon 116.97 52⇑P PKPdf 03 55 43.9 +1.0
baz=117

318A	**Bisbee**	**117.20**	**53**	⇓P	PKPdf	03 55 44.6	+1.2
	baz=117						
TAM	**Tamanrasset**	**117.22**	**297**	*e*PKIKP	PKPdf	03 55 44.8	+1.2
119A	**Ashpeak Ranch,**	**117.26**	**51**	⇓P	PKPdf	03 55 44.3	+0.8
	baz=117						
219A	**White Tail Can**	**117.58**	**52**	⇑P	PKPdf	03 55 45.0	+0.9
	baz=118						
319A	**Douglas**	**117.79**	**53**	⇓P	PKPdf	03 55 45.7	+1.2
	baz=118						
ESDC	**Sonseca Array**	**118.39**	**318**	PKP	PKPdf	03 55 45.2	-0.2
	comp=Z,2.0nm,0.7s,baz=23,slow=5.0,SNR=7.2						
ESDC				PKKPab	PKKPab	04 06 06.2	-0.7
	comp=Z,0.2nm,0.4s,baz=204,slow=1.8,SNR=4.2						
ESDC	**Sonseca Array**	**118.39**	**318**	PKP	PKPdf	03 55 45.2	-0.2
ESDC				PKKPab	PKKPab	04 06 06.2	-0.7
ANMO	**Albuquerque**	**118.55**	**48**	⇓*i*PKIKP	PKPdf	03 55 46.6	+0.7
ANMO	**Albuquerque**	**118.55**	**48**	*e*PKPdf	PKPdf	03 55 46.8	+0.9
MVO	**Moncorvo**	**119.61**	**321**	*e*PKPdf	PKPdf	03 55 48.6	+0.9
PCAB	**Cabril**	**119.94**	**322**	*e*PKPdf	PKPdf	03 55 48.7	+0.4
MTE	**Manteigas**	**120.36**	**320**	*e*PKPdf	PKPdf	03 55 50.3	+1.1
PVIS	**Viseu**	**120.41**	**321**	*e*PKPdf	PKPdf	03 55 50.4	+1.1
ECSD	**EROS,Sioux Fal**	**120.49**	**35**	*e*PKPdf	PKPdf	03 55 49.1	-0.2
PCBR	**Castelo Branco**	**120.62**	**320**	*e*PKPdf	PKPdf	03 55 50.5	+0.8
PMRV	**Marv??o**	**120.79**	**319**	*e*PKPdf	PKPdf	03 55 50.4	+0.4
PESTR	**Estremoz**	**121.22**	**319**	*e*PKPdf	PKPdf	03 55 51.6	+0.7
PBAR	**Barrancos**	**121.22**	**318**	*e*PKPdf	PKPdf	03 55 51.8	+0.9
EVO	**Evora**	**121.68**	**319**	⇑*i*PKIKP	PKPdf	03 55 52.7	+0.9
	comp=Z,60nm,1.0s						
EVO				*e*MLR	MLR		
	comp=Z,354nm,21.0s						
EVO	**Evora**	**121.68**	**319**	*e*PKPdf	PKPdf	03 55 52.7	+0.9
PBEJ	**Beja**	**121.85**	**318**	*e*PKPdf	PKPdf	03 55 52.9	+0.8
PVAQ	**Vaqueiros**	**122.08**	**317**	*e*PKPdf	PKPdf	03 55 53.3	+0.7
PBDV	**Barranco-do-Ve**	**122.31**	**317**	*e*PKPdf	PKPdf	03 55 53.6	+0.6
SCHQ	**Schefferville**	**122.34**	**9**	PKP	PKPdf	03 55 52.5	0.0
	comp=Z,2.9nm,0.3s,baz=331,slow=2.6,SNR=18						
PTEO	**Sao Teotonio**	**122.69**	**318**	*e*PKPdf	PKPdf	03 55 53.7	0.0
MORF	**Marmelete**	**122.77**	**318**	*e*PKPdf	PKPdf	03 55 54.7	+0.8
TOA0	**Torodi Ar. Sit**	**122.94**	**287**	*e*PKPdf	PKPdf	03 55 54.5	-0.3
TORD	**Torodi Ar. Bea**	**122.94**	**287**	PKP	PKPdf	03 55 54.8	0.0
	comp=Z,48nm,0.7s,baz=55,slow=1.9,SNR=239						
TORD				PKKPbc	PKKPbc	04 05 48.3	+1.6
	comp=Z,11nm,0.9s,baz=282,slow=3.5,SNR=44						
TXAR	**Lajitas Array**	**123.05**	**53**	PKP	PKPdf	03 55 55.4	+0.7
	comp=Z,2.9nm,0.7s,baz=185,slow=1.3,SNR=10						
TXAR				PKKPbc	PKKPbc	04 05 47.5	+0.8
	comp=Z,3.2nm,0.8s,baz=120,slow=5.1,SNR=33						
KSU1	**Kansas State U**	**123.27**	**39**	*e*PKPdf	PKPdf	03 55 54.6	-0.2
JFWS	**Jewell Farm**	**124.54**	**32**	*e*PKIKP	PKPdf	03 55 56.6	-0.5
JCT	**Junction City**	**125.57**	**50**	*e*PKIKP	PKPdf	03 55 59.4	-0.1
OLIL	**Olney**	**128.61**	**34**	*e*PKPdf	PKPdf	03 56 04.2	-0.8
DBIC	**Dimbokro**	**130.41**	**280**	PKP	PKPdf	03 56 09.9	+0.8
	comp=Z,43nm,0.7s,baz=72,slow=2.3,SNR=56						
DBIC				SKPbc	SKPbc	03 59 23.8	-0.3
	comp=Z,12nm,1.0s,baz=95,slow=5.6,SNR=9.3						
DBIC	**Dimbokro**	**130.41**	**280**	PKIKP	PKPdf	03 56 09.9	+0.8
DBIC				pmax	pmax		
	comp=Z,43nm,0.7s						
DBIC				pmax	pmax		
	comp=N,12nm,1.0s						
LIC	**Lamto**	**130.64**	**280**	⇓*i*PKIKP	PKPdf	03 56 10.1	+0.5
	comp=N,143nm,0.8s						
TKL	**Tuckaleechee C**	**133.22**	**34**	*e*PKIKP	PKPdf	03 56 14.2	+0.3
TKL				*e*		03 58 40.7	
PLCA	**Paso Flores**	**138.57**	**161**	PKhKP		03 56 13.0	
	comp=N,3.2nm,0.9s,baz=238,slow=2.7,SNR=7.6						
PLCA				PKP	PKPdf	03 56 25.4	+1.7
	comp=N,13nm,0.9s,baz=217,slow=4.1,SNR=16						
PLCA	**Paso Flores**	**138.57**	**161**	PKHKP		03 56 13.0	
PLCA						03 56 25.4	
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PLCA				pmax	pmax		
	comp=Z,13nm,0.9s						
TGUH	**Tegucigalpa,Un**	**143.18**	**63**	*e*PKPdf	PKPdf	03 56 29.8	-2.8
CLCH	**Cerro Calan**	**145.05**	**155**	⇑*e*P	PKPbc	03 56 34.6	-0.4
FCH	**Farellones**	**145.21**	**155**	⇑*e*P	PKPbc	03 56 35.0	-0.5
LCO	**Las Campanas**	**148.68**	**151**	*e*PKPdf	PKPdf	03 56 42.7	+1.0
LCO				*e*PKPbc	PKPbc	03 56 46.3	+0.8
SDDR	**Presa de Saban**	**152.96**	**39**	*e*PKPdf	PKPdf	03 56 49.1	+0.6
SDDR				*e*PKPbc	PKPbc	03 56 59.5	+3.7
LVC	**Limon Verde**	**154.79**	**146**	*e*PKPdf	PKPdf	03 56 52.5	+1.5
LVC				*e*PKPbc	PKPbc	03 57 01.3	+1.6
NNA	**Nana**	**155.09**	**115**	*e*PKPdf	PKPdf	03 56 50.9	-0.7
NNA				*e*PKPab	PKPab	03 57 16.8	+0.3
OTAV	**Otavalo**	**155.24**	**85**	*e*PKPdf	PKPdf	03 56 52.6	+0.7
CAM4	**Nova Friburgo**	**157.02**	**207**	*e*P	PKPab	03 57 25.8	+1.4
CAM4				*i*		03 57 28.6	
CAM4				*i*		03 57 33.4	
CAM4				*i*		03 57 39.2	
CAM4				*i*		03 57 46.1	
ROSC	**El Rosal**	**158.37**	**72**	PKP	PKPdf	03 56 57.2	+1.3
	comp=Z,11nm,0.8s,baz=103,slow=24,SNR=11						
ROSC				PKPab	PKPab	03 57 32.8	+2.1
	comp=Z,36nm,0.9s,baz=162,slow=2.4,SNR=14						
SDV	**Santo Domingo**	**160.03**	**57**	PKP	PKPdf	03 56 57.8	0.0
	comp=Z,18nm,0.9s,baz=292,slow=6.5						
SDV				PKPab	PKPab	03 57 38.3	+0.5
	comp=Z,31nm,0.8s,baz=321,slow=3.4,SNR=8.7						
BDFB	**Brasilia**	**165.30**	**202**	PKP	PKPdf	03 57 03.0	+0.1
	comp=Z,2.6nm,0.9s,baz=175,slow=21,SNR=7.5						
BDFB				PKPab	PKPab	03 58 01.1	+0.5
	comp=Z,5.4nm,1.1s,baz=63,slow=6.7,SNR=6.0						
BDFB	**Brasilia**	**165.30**	**202**	PKIKP	PKPdf	03 57 03.0	+0.1
BDFB						03 58 01.1	
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BDFB				pmax	pmax		
	comp=Z,5.0nm,1.1s						

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*DDA **04** 03:41:58.6, 3952N×40.12E, h13km±2km, Md3.6*
*ISK **04** 03:41:58.9, 3950N×40.17E, h5km, MD3.5*
*ISCJB **04** 03:42:00.5±0.3, 3949N±002×4020E±003, h10km, Error ellipse: s-maj=3.4km s-min=2.8km az=43.7*
*CSEM **04** 03:42:00.0±0.1, 3948N×40.18E, h5km, MD3.6, Error ellipse: s-maj=2.4km s-min=1.4km az=154.0*
ISC 04 03:42:00.4±0.5**, 3952N**±002×**4019E**±003**, h2**km±4km**, n36,** σ**1.12**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.37**	**309**	*e*PG	**Sg**	**03 42 13.2**	**+0.8**
EZC				*e*SG	**Sg**	**03 42 23.6**	**+11**
KOPT	**Kop Dagi**	**0.56**	**25**	*i* P	**Pg**	**03 42 10.8**	**-0.3**
PTK	**Pertek**	**0.88**	**225**	*e*PG	**Pg**	**03 42 16.1**	**-1.2**
PTK				*e*SG	**Sg**	**03 42 29.0**	**+0.3**
BNGL	**BINGOL**	**0.93**	**127**	*i* P	**Pg**	**03 42 16.6**	**-1.7**
BNGL				*e*S	**Sg**	**03 42 34.2**	**+3.8**
EZM	**Erzurum**	**0.98**	**66**	*e*PG	**Pg**	**03 42 18.4**	**-0.9**
EZM				*e*SG	**Sg**	**03 42 34.8**	**+2.7**
ERZM	**Erzurum**	**0.99**	**66**	*i* P	**Pg**	**03 42 18.2**	**-1.2**
ERZM				*i* S	**Sg**	**03 42 36.0**	**+3.9**
GUMT	**Gumushane**	**1.09**	**330**	*e*PN	**Pn**	**03 42 20.3**	**-2.4**
GUMT				*e*SN	**Sn**	**03 42 37.3**	**-1.0**
SVRC	**Sivrice-ELAZID**	**1.33**	**212**	*e*PN	**Pn**	**03 42 24.1**	**-1.8**
KEMA	**Kemaliye**	**1.34**	**260**	*i* P	**Pn**	**03 42 23.1**	**-2.9**
KEMA				*i* S	**Sg**	**03 42 44.4**	**+1.0**
ELZG	**Elazig**	**1.38**	**223**	*i* P	**Pn**	**03 42 23.6**	**-3.1**
ELZG				*i* S	**Sg**	**03 42 43.5**	**-1.4**
ELZG	**Elazig**	**1.38**	**223**	*i* P	**Pn**	**03 42 23.5**	**-3.2**
ELZG				*i* S	**Sg**	**03 42 43.5**	**-1.4**
HOMI	**Horasan**	**1.42**	**68**	*i* P	**Pn**	**03 42 26.4**	**-0.9**
KTUT	**Trabzon**	**1.51**	**348**	*e*PN	**Pn**	**03 42 27.7**	**-0.6**
DIYA	**Diyarbakir**	**1.59**	**182**	*i* P	**Pn**	**03 42 28.7**	**-0.8**
DIYA				*i* S	**Sg**	**03 42 52.2**	**+0.7**
PZAR	**Pazar-Rize**	**1.75**	**18**	*e*PN	**Pn**	**03 42 31.6**	**-0.1**
ESPY	**Espiye-Giresun**	**1.79**	**322**	*e*PN	**Pn**	**03 42 32.3**	**0.0**
DDEM	**Demirkent**	**1.82**	**40**	*e*P	**Pn**	**03 42 33.0**	**+0.3**
BEST	**Besiri**	**1.83**	**152**	*e*P	**Pn**	**03 42 31.3**	**-1.5**
BEST				*e*S	**Sg**	**03 42 59.1**	**0.0**
DBAD	**Bademkaya**	**1.89**	**37**	*i* P	**Pn**	**03 42 34.2**	**+0.5**
DARE	**Darende-Malaty**	**1.94**	**254**	*e*PN	**Pg**	**03 42 39.6**	**+2.1**
GRSN	**GIRESUNGRSN**	**2.04**	**314**	*i* P	**Pn**	**03 42 35.8**	**+0.1**
GRSN				*e*S	**Sg**	**03 43 05.2**	**-0.7**
DAGI	**Agillar**	**2.04**	**40**	*i* P	**Pn**	**03 42 36.0**	**+0.2**
DAGI				*e*S	**Sg**	**03 43 05.6**	**-0.5**
AKCD	**Akcadag**	**2.15**	**236**	*i* P	**Pn**	**03 42 36.7**	**-0.5**
AKCD				*i* S	**Sn**	**03 43 04.7**	**+0.3**
AGRB	**Hanur-Agry**	**2.17**	**88**	*e*PN	**Pn**	**03 42 37.9**	**+0.5**
BCA	**Borcka**	**2.22**	**29**	*e*PN	**Pn**	**03 42 39.0**	**+0.9**
MARD	**Mardin**	**2.25**	**168**	*i* P	**Pn**	**03 42 38.0**	**-0.6**
MARD				*e*S	**Sn**	**03 43 07.6**	**+0.8**
URFA	**Urfa**	**2.33**	**208**	*e*PN	**Pn**	**03 42 39.9**	**+0.2**
KARS	**Kars**	**2.48**	**63**	*e*PN	**Pn**	**03 42 43.0**	**+1.2**
SVSK	**Karacayir**	**2.50**	**280**	*e*PN	**Pn**	**03 42 42.4**	**+0.4**
SARI	**SarD1z-Kayseri**	**2.84**	**254**	*e*PN	**Pn**	**03 42 51.5**	**+4.7**
KMRS	**Kahramanmaras**	**3.27**	**233**	*e*PN	**Pn**	**03 42 53.6**	**+1.0**
GAZ	**Gaziantep**	**3.31**	**226**	*e*PN	**Pn**	**03 42 54.4**	**+1.2**
BNN	**Bunyan**	**3.44**	**260**	*e*PN	**Pn**	**03 42 55.4**	**+0.4**
KVT	**Kavak**	**3.53**	**298**	*e*PN	**Pn**	**03 42 57.7**	**+1.4**
YOZ	**Yozgat**	**3.77**	**273**	*e*PN	**Pn**	**03 43 01.0**	**+1.6**
KOZT	**Kozan**	**3.98**	**241**	*e*PN	**Pn**	**03 43 03.4**	**+1.0**

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*NEIC **04** 03:44:36.9, 1707N×10026W, h4km, MD3.9(MEX), After MEX.*
MEX 04 03:44:37.0±0.8**, 1706N**×**10026W, h5**km±5km**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.01**	**217**	*i* P	Pg	03 44 36.9	-1.1
CAIG				*e*S	Sg	03 44 37.7	-0.9
ACX	**Acapulco**	**0.38**	**120**	*e*P	Pg	03 44 43.9	-0.4
ACX				*i* S	Sg	03 44 49.9	+0.6
ACX	**Acapulco**	**0.38**	**120**	*e*P	Pg	03 44 43.9	-0.4
ACX				*i* P		03 44 44.1	
ACX				*i* S	Sg	03 44 49.9	+0.6
ACX				*i* S	Sg	03 44 50.2	+0.9
MEIG	**Mezcala**	**1.06**	**35**	*i* P	Pg	03 44 54.1	-3.3
MEIG				*i* S	Sg	03 45 08.0	-3.1
ZIIG	**Zihuatanejo**	**1.27**	**296**	*i* P	Pn	03 44 57.9	-3.5
ZIIG				*i* S	Sg	03 45 13.7	-4.3
PLIG	**Platanillo**	**1.51**	**28**	*i* P	Pn	03 45 02.1	-2.6
PLIG				*i* S	Sn	03 45 19.8	-5.0
YAIG	**Yautepec**	**2.12**	**32**	*i* P	Pn	03 45 10.9	-2.2
YAIG				*i* S	Sn	03 45 35.1	-4.7
YAIG	**Yautepec**	**2.12**	**32**	*i* P	Pn	03 45 10.9	-2.2
YAIG				*i* S	Sn	03 45 36.4	-3.5
PNIG	**Pinotepa**	**2.15**	**108**	*i* P	Pn	03 45 10.5	-3.0
PNIG				*e*S	Sn	03 45 35.9	-4.5
PNIG	**Pinotepa**	**2.15**	**108**	*i* P	Pn	03 45 10.5	-3.0
PNIG				*e*S	Sn	03 45 37.1	-3.3
UTMO	**Huajuapan**	**2.47**	**71**	*e*P	Pn	03 45 16.1	-1.7
UTMO				*i* S	Sn	03 45 43.3	-5.0
PPM	**Popocatepetl**	**2.53**	**38**	*i* P	Pn	03 45 18.3	-0.4
PPM				*i* S	Sn	03 45 50.3	+0.4
TPIG	**Tehuac#an**	**3.08**	**63**	*e*P	Pn	03 45 24.1	-2.2
TPIG				*e*S	Sn	03 45 59.8	-3.6
VHO	**Vista Hermosa**	**3.37**	**89**	*i* P	Pn	03 45 28.9	-1.5
VHO				*i* S	Sn	03 46 07.3	-3.4
HUIG	**Huatulco**	**4.19**	**107**	*i* P	Pn	03 45 41.6	+0.1

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*SZGRF **04** 03:45:51.5, 5073N×166.14W, h33km, mb4.8, South of Aleutian Islands*
*ISCJB **04** 03:45:53.8±0.3, 5209N±004×16608W±006, h23km, mb4.7/76, MS4.4/3, Error ellipse: s-maj=6.1km s-min=5.0km az=163.9*
*MOS **04** 03:45:54.6±0.9, 5195N×16609W, h33km, mb5.1/33, Error ellipse: s-maj=15.9km s-min=5.8km az=93.6*
*BJI **04** 03:45:54.0, 5236N×16646W, h18km, mB5.0, mb4.8, Ms4.3, Msz4.3*
*IDC **04** 03:45:56.2±5.9, 5190N×16597W, h40km±51km, mb4.2/18, mb1 4.4/18, mb1mx4.3/25, mbtmp4.2/18, Error ellipse: s-maj=20.8km s-min=14.1km az=3.0*
*NEIC **04** 03:45:57.2±0.3, 5216N×16604W, h35km, mb4.8/39, ML4.1(AEIC), Error ellipse: s-maj=8.3km s-min=4.8km az=158.0*
ISC 04 03:45:52.9±1.7**, 5211N**±004×**16606W**±006**, h7**km±10km**, h18**km±3.9km**: pP-P, n200,** σ**0.89**/203**, mb4.7**/76**, MS4.4**/3**, 13C-13D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**1.72**	**320**	P	**Pn**	**03 46 23.4**	**+0.2**
OKFG				S	**Sn**	**03 46 46.0**	**+0.5**
UNV	**Unalaska Valle**	**1.76**	**351**	P	**Pn**	**03 46 22.9**	**-0.9**
UNV				S	**Sn**	**03 46 45.4**	**-1.1**
NIKO	**Nikolski**	**1.92**	**298**	P	**Pn**	**03 46 25.6**	**-0.3**
NIKO				*e*Sn	**Sn**	**03 46 48.0**	**-2.2**
AKUT	**Akutan**	**2.04**	**5**	P	**Pn**	**03 46 26.9**	**-0.6**
AKUT				S	**Sn**	**03 46 53.1**	**-0.1**
AKLV	**Akutan Long Va**	**2.06**	**2**	P	**Pn**	**03 46 27.1**	**-0.8**
FALS	**False Pass**	**3.17**	**29**	P	**Pn**	**03 46 42.4**	**-0.8**
SDPT	**Sand Point**	**4.64**	**43**	P	**Pn**	**03 47 02.1**	**-1.1**
SDPT				*e*Sn	**Sn**	**03 47 53.9**	**-3.5**
SPIA	**Saint Paul Isl**	**5.63**	**336**	P	**Pn**	**03 47 17.4**	**+0.5**
ADK	**Adak**	**6.57**	**272**	P	**Pn**	**03 47 30.8**	**+1.0**
ADK				*e*Sn	**Sn**	**03 48 42.5**	**-2.4**
OHAK	**Old Harbor**	**8.99**	**50**	P	**Pn**	**03 47 59.7**	**-3.3**
AMKA	**Amchitka**	**9.12**	**271**	*e*P	**Pn**	**03 48 05.0**	**+0.3**
	18nm,0.3s						
KDAK	**Kodiak Island**	**9.61**	**48**	P	**Pn**	**03 48 08.2**	**-3.1**
PPLA	**Purkeypile**	**13.10**	**29**	*e*Pn	**Pn**	**03 49 00.7**	**+1.7**
	17nm,0.7s						
KTH	**Kantishna Hill**	**13.97**	**29**	*e*Pn	**Pn**	**03 49 10.7**	**-0.3**
	92nm,1.6s						
TRF	**Thorofare Moun**	**14.09**	**30**	Pn	**Pn**	**03 49 12.2**	**-0.4**
	101nm,1.7s						
MCK	**McKinley**	**14.71**	**31**	P	**Pn**	**03 49 21.4**	**+0.3**
MCK				pmax	pmax		
	comp=Z,45nm,0.9s						
MCK	**McKinley**	**14.71**	**31**	Pn	**Pn**	**03 49 21.4**	**+0.3**
	comp=Z,45nm,0.9s						
BILL	**Bilibino**	**20.80**	**331**	⇑*e*P	**P**	**03 50 36.8**	**+2.5**
BILL				*e*S	**S**	**03 54 26.8**	**+0.4**
BILL				pmax	pmax		
	comp=Z,15nm,1.1s						
PEA0B	**Petropavlovsk-**	**21.89**	**287**	*e*P	**P**	**03 50 46.5**	**+0.4**
PETK	**Petropavlovsk-**	**21.89**	**287**	P	**P**	**03 50 46.2**	**0.0**
	comp=Z,13nm,0.6s,mb4.5,baz=83,slow=14,SNR=18						
PETK	**Petropavlovsk-**	**21.89**	**287**	P	**P**	**03 50 46.2**	**0.0**
YKA	**Yellowknife Ar**	**28.88**	**49**	PcP	PcP	03 54 58.8	-1.8
	comp=Z,1.0nm,0.5s,baz=273,slow=2.0,SNR=7.7						
NVAR	**Mina Array Bea**	**35.62**	**93**	P	**P**	**03 52 50.6**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.7,baz=273,slow=7.1,SNR=2.9						
NVAR				PcP	PcP	03 55 17.6	-1.9
	comp=Z,0.9nm,0.6s,baz=305,slow=3.2,SNR=3.2						
PDAR	**Pinedale Array**	**38.44**	**81**	P	**P**	**03 53 13.6**	**-1.4**
	comp=Z,0.8nm,0.7s,mb3.6,baz=309,slow=7.1,SNR=4.8						
MJAR	**Matsushiro Arr**	**41.73**	**271**	P	**P**	**03 53 41.9**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.2,baz=43,slow=6.7,SNR=9.7						
BOD	**Bodaibo**	**43.73**	**310**	*e*P	**P**	**03 53 56.8**	**-1.4**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
CN2	**Changchun**	**45.04**	**288**	*e*P	**P**	**03 54 08.6**	**-0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
HIA	**Hailar**	**45.19**	**297**	⇓*e*P	**P**	**03 54 10.6**	**+0.6**
KSRS	**Korea Array**	**47.46**	**279**	P	**P**	**03 54 27.2**	**-0.8**
	comp=Z,3.5nm,0.7s,mb4.4,baz=75,slow=10.0,SNR=17						
SPITS	**Spitsbergen Ar**	**49.97**	**359**	P	**P**	**03 54 46.5**	**-0.3**
	comp=Z,7.2nm,0.7s,mb4.8,baz=90,slow=5.8,SNR=13						
SUMG	**Summit**	**50.42**	**18**	*e*P	**P**	**03 54 50.2**	**0.0**
	comp=Z,6.1nm,1.0s,mb4.6						
TXAR	**Lajitas Array**	**50.71**	**91**	P	**P**	**03 54 51.2**	**-1.9**
	comp=Z,2.6nm,0.6s,mb4.3,baz=300,slow=6.0,SNR=46						
TXAR				PcP	PcP	03 56 08.3	-1.8
	comp=Z,2.3nm,0.9s,baz=123,slow=0.9,SNR=4.5						
TXAR	**Lajitas Array**	**50.71**	**91**	P	**P**	**03 54 51.2**	**-1.9**
TXAR				PcP	PcP	03 56 08.3	-1.8
TLY	**Talaya**	**52.12**	**308**	*e*P	**P**	**03 55 04.5**	**+1.2**
TLY				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BJI	**Beijing**	**52.79**	**290**	P	**P**	**03 55 07.1**	**-1.3**
BJI				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**52.81**	**302**	⇓*e*P	**P**	**03 55 08.9**	**+0.5**
ULN	**Ulaanbaatar**	**52.81**	**302**	*e*P	**P**	**03 55 08.7**	**+0.2**
	comp=Z,12nm,0.8s,mb4.9						
SONM	**Songino Array**	**53.17**	**303**	P	**P**	**03 55 12.1**	**+1.0**
	comp=Z,5.5nm,0.9s,mb4.5,baz=55,slow=5.7,SNR=15						
SONM				PcP	PcP	03 56 18.0	-1.1
	comp=Z,3.2nm,0.9s,baz=70,slow=3.2,SNR=5.6						
ARCES	**ARCESS Array B**	**58.38**	**355**	P	**P**	**03 55 48.0**	**-0.2**
	comp=Z,6.2nm,0.9s,mb4.7,baz=5.7,slow=8.1,SNR=9.4						
ARCES	**ARCESS Array B**	**58.38**	**355**	P	**P**	**03 55 48.0**	**-0.2**
ZALV	**Zalesovo Beam**	**58.97**	**319**	P	**P**	**03 55 53.0**	**+0.5**
	comp=Z,2.4nm,0.6s,mb4.4,baz=32,slow=8.7,SNR=3.8						
WHN	**Wuhan**	**60.39**	**283**	P	**P**	**03 56 05.7**	**+3.1**
XAN	**Xi'an**	**61.12**	**289**	P	**P**	**03 56 04.7**	**-2.8**
XAN				AP	pP	03 56 12.6	+2.9
XAN				PP	PP	03 58 20.7	-1.1
XAN				S	**S**	**04 04 24.6**	**-2.3**
XAN				SS	SS	04 08 25.6	-0.5
XAN				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb5.0						
XAN				LR	LR		
	comp=N,57nm,21.0s,MS3.9						
XAN				LR	LR		
	comp=E,76nm,20.5s,MS3.9						
XAN				LR	LR		
	comp=Z,252nm,24.4s,MS4.3						
GTA	**Gaotai**	**62.40**	**299**	*e*P	**P**	**03 56 16.3**	**+0.2**
GTA				AP	pP	03 56 21.7	+3.4
GTA				XP	sP	03 56 26.0	+6.9
GTA				AMB	AMB		
	comp=Z,12nm,0.7s,mb5.1						
LZH	**Lanzhou**	**62.56**	**294**	*e*P	**P**	**03 56 15.2**	**-2.1**
LZH				AP	pP	03 56 23.0	+3.5
LZH				XP	sP	03 56 27.1	+6.8
LZH				AMB	AMB		
	comp=Z,15nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,79nm,4.7s						
LZH				LR	LR		
	comp=E,163nm,17.6s						
LZH				LR	LR		
	comp=Z,275nm,19.0s,MS4.4						
JOF	**Joensuu**	**64.50**	**351**	*e*p	**P**	**03 56 29.5**	**-0.1**
	comp=Z,6.3nm,0.5s,mb4.9						
SVE	**Sverdlovsk**	**64.85**	**334**	*e*P	**P**	**03 56 33.1**	**+1.1**
SVE				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
BRVK	**Borovoye**	**65.09**	**326**	*e*P	**P**	**03 56 33.8**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BRVK	**Borovoye**	**65.09**	**326**	*e*P	**P**	**03 56 33.8**	**+0.2**
	comp=Z,6.3nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	**65.44**	**315**	P	**P**	**03 56 35.9**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.4,baz=39,slow=4.8,SNR=10						
KAF	**Kangasniemi**	**65.70**	**354**	*e*p	**P**	**03 56 37.2**	**-0.2**
	comp=Z,15nm,0.6s,mb5.2,baz=4.5,slow=6.1						
KAF	**Kangasniemi**	**65.70**	**354**	*e*P	**P**	**03 56 37.2**	**-0.2**
KAF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
ARU	**Arti**	**65.76**	**335**	*d i*P	**P**	**03 56 38.3**	**+0.4**
ARU				*e*		03 59 02.5	
ARU				*e*S	S	04 05 26.5	+2.4
ARU				SS	SS	04 09 45.6	+8.3
ARU				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
NB2	**NORSAR Subarra**	**67.18**	**1**	P	**P**	**03 56 46.9**	**0.0**
	comp=Z,8.6nm,0.9s,mb4.8,baz=359,slow=6.2						
NOA	**NORSAR Array B**	**67.18**	**1**	P	**P**	**03 56 47.2**	**+0.3**
	comp=Z,4.7nm,0.8s,mb4.6,baz=360,slow=6.3,SNR=11						
NOA	**NORSAR Array B**	**67.18**	**1**	P	**P**	**03 56 47.2**	**+0.3**
GYA	**Guiyang**	**67.97**	**285**	P	**P**	**03 56 51.2**	**-1.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
VSU	**Vasula**	**69.30**	**353**	⇓*e*P	**P**	**03 57 00.4**	**+0.2**
VSU				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
TKM2	**Tokmak 2**	**71.40**	**317**	*e*P	**P**	**03 57 13.4**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**71.40**	**317**	*e*P	**P**	**03 57 13.4**	**+0.1**
	comp=Z,3.1nm,0.5s,mb4.5						
OBN	**Obninsk**	**71.51**	**347**	⇑*e*P	**P**	**03 57 13.2**	**-0.6**
OBN				*e*		03 59 49.3	
OBN				*e*S	S	04 06 20.3	-12
OBN				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.5						
AAK	**Ala-Archa**	**72.10**	**318**	*e*P	**P**	**03 57 19.0**	**+1.5**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**72.10**	**318**	*e*P	**P**	**03 57 19.0**	**+1.4**
	comp=Z,8.6nm,0.8s,mb4.7						
SUW	**Suwalki**	**73.97**	**354**	*e*P	**P**	**03 57 28.6**	**+0.1**
SUW	**Suwalki**	**73.97**	**354**	*e*P	**P**	**03 57 28.5**	**+0.1**
AKASG	**Malin Array Be**	**76.75**	**350**	P	**P**	**03 57 43.9**	**-0.6**
	comp=Z,8.3nm,0.8s,mb4.7,baz=11,slow=5.6,SNR=16						
AKBB	**Malin Array Si**	**76.75**	**350**	*e*P	**P**	**03 57 43.3**	**-1.2**
KIEV	**Kiev**	**76.76**	**350**	*e*P	**P**	**03 57 43.4**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KIEV	**Kiev**	**76.76**	**350**	*e*P	**P**	**03 57 43.4**	**-1.1**
	comp=Z,6.8nm,0.9s,mb4.6						
CLL	**Collm**	**76.96**	**1**	*i* P	**P**	**03 57 45.7**	**+0.1**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CLL	**Collm**	**76.96**	**1**	*i* P	**P**	**03 57 45.7**	**+0.1**
	comp=Z,9.0nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**77.40**	**360**	*i* P	**P**	**03 57 48.4**	**+0.3**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BRG	**Berggiesshubel**	**77.40**	**360**	*i* P	**P**	**03 57 48.4**	**+0.3**
	comp=Z,5.5nm,0.7s,mb4.6						
PVCC	**Panska Ves**	**77.74**	**360**	*e*P	**P**	**03 57 50.7**	**+0.7**
UPC	**Upice**	**77.75**	**359**	*e*P	**P**	**03 57 50.6**	**+0.5**
GIVF	**Givet**	**77.87**	**6**	*e*P	**P**	**03 57 50.6**	**-0.2**
BAIF	**Baives**	**77.88**	**6**	*e*P	**P**	**03 57 50.9**	**+0.1**
	comp=Z,12nm,0.8s,mb4.6						
BAIF	**Baives**	**77.88**	**6**	*e*P	**P**	**03 57 50.9**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BAIF	**Baives**	**77.88**	**6**	*e*P	**P**	**03 57 50.9**	**+0.1**
	comp=Z,5.8nm,0.8s,mb4.6						
DPC	**Dobruska-Polom**	**77.90**	**358**	*e*P	**P**	**03 57 51.8**	**+0.9**
DPC				*e*x	x	03 58 01.9	
NKC	**Novy Kostel**	**78.03**	**1**	*e*P	**P**	**03 57 52.2**	**+0.6**
TAPN	**Taplejung**	**78.09**	**299**	*e*P	**P**	**03 57 52.2**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0						
PRU	**Pruhonice**	**78.28**	**360**	*e*P	**P**	**03 57 53.5**	**+0.5**
KWP	**Kalwaria**	**78.36**	**354**	*e*P	**P**	**03 57 54.2**	**+0.8**
KWP	**Kalwaria**	**78.36**	**354**	⇓*i*P	**P**	**03 57 54.8**	**+1.3**
KWP	**Kalwaria**	**78.36**	**354**	*e*P	**P**	**03 57 54.2**	**+0.7**
OKC	**Ostrava-Krasne**	**78.37**	**357**	*e*P	**P**	**03 57 54.5**	**+1.0**
GRA1	**Grafenberg Arr**	**78.55**	**2**	*e*P	**P**	**03 57 55.6**	**+1.1**
	comp=Z,15nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**78.55**	**2**	*e*P	**P**	**03 57 55.6**	**+1.1**
GRF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**78.55**	**2**	*e*P	**P**	**03 57 55.6**	**+1.1**
GRF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**78.55**	**2**	*e*P	**P**	**03 57 55.6**	**+1.1**
	comp=Z,15nm,1.1s,mb4.8						
GUN	**Gumba**	**78.62**	**301**	*e*P	**P**	**03 57 55.4**	**+0.1**
	comp=Z,30nm,0.9s,mb5.2						
CMAR	**Chiang Mai Arr**	**78.66**	**285**	P	**P**	**03 57 54.2**	**-1.4**
	comp=Z,2.0nm,0.3s,mb4.5,baz=23,slow=7.1,SNR=7.0						
JIRN	**Jiri**	**78.66**	**301**	*e*P	**P**	**03 57 55.8**	**+0.3**
	comp=Z,25nm,0.6s,mb5.3						
STHS	**Stebnicka Huta**	**78.66**	**355**	*i* P	**P**	**03 57 56.7**	**+1.6**
STHS				*e*	pP	03 58 00.0	+2.6
STHS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
STHS	**Stebnicka Huta**	**78.66**	**355**	*i* P	**P**	**03 57 56.7**	**+1.6**
	comp=Z,12nm,0.8s,mb4.9						
STHS				*e*	pP	03 58 00.0	+2.6
FLN	**La Foliniere**	**78.76**	**10**	*e*P	**P**	**03 57 55.4**	**-0.3**
VRAC	**Vranov**	**78.94**	**358**	⇓*i*P	**P**	**03 57 57.4**	**+0.7**
LDF	**La Druitiere**	**78.96**	**9**	*e*P	**P**	**03 57 56.3**	**-0.5**
TREC	**Trest**	**78.97**	**359**	*e*P	**P**	**03 57 57.1**	**+0.3**
RAMN	**Ramite**	**79.00**	**300**	*e*P	**P**	**03 57 57.2**	**-0.2**
	comp=Z,23nm,0.5s,mb5.4						
KKN	**Kakani**	**79.03**	**301**	*e*P	**P**	**03 57 57.5**	**-0.1**
GRR	**Gorron**	**79.09**	**10**	*e*P	**P**	**03 57 57.1**	**-0.4**
KOLS	**Kolonicke sedl**	**79.09**	**354**	*e*P	**P**	**03 57 56.8**	**-0.7**
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
KOLS	**Kolonicke sedl**	**79.09**	**354**	*e*P	**P**	**03 57 56.8**	**-0.7**
	comp=Z,9.7nm,1.3s,mb4.6						
KHC	**Kasperske Hory**	**79.14**	**0**	*e*P	**P**	**03 57 58.3**	**+0.5**
KHC				*e*x	x	03 58 08.8	
PKI	**Pulchoki**	**79.14**	**301**	*e*P	**P**	**03 57 58.0**	**-0.2**
CRVS	**Cervenica-Dubn**	**79.17**	**355**	*e*P	**P**	**03 57 56.0**	**-1.9**
CRVS				*e*		03 58 03.6	
CRVS				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
CRVS	**Cervenica-Dubn**	**79.17**	**355**	*e*P	**P**	**03 57 56.0**	**-1.9**
	comp=Z,12nm,1.4s,mb4.6						
CRVS				*e*	pP	03 57 58.8	-1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CRVS				e		03 58 03.6	
GKN	Gorkha	79.20	302	eP	P	03 57 58.2	-0.3
	comp=Z,29nm,1.0s,mb5.2						
DMN	Daman	79.27	301	eP	P	03 57 58.8	-0.1
	comp=Z,23nm,0.8s,mb5.2						
DANN	Dangsing	79.38	303	eP	P	03 57 59.7	+0.3
GERES	GERESS Array B	79.43	0	P	P	03 58 00.1	+0.8
	comp=Z,2.7nm,0.7s,mb4.3,baz=20,slow=4.3,SNR=12						
VYHS	Vyhne	79.69	357	i P	P	03 58 01.5	+0.7
VYHS				e		03 58 09.0	
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
VYHS	Vyhne	79.69	357	i P	P	03 58 01.4	+0.6
VYHS				ePCP	PcP	03 58 09.0	+0.4
VYHS	Vyhne	79.69	357	i P	P	03 58 01.5	+0.7
	comp=Z,6.4nm,1.1s,mb4.5						
VYHS				e		03 58 09.0	
CDF	Champ du Feu	79.70	5	eP	P	03 58 00.9	+0.1
TRPA	Tarpa	79.87	354	⇓iP	P	03 58 02.8	+1.0
KOLN	Koldanda	79.93	302	eP	P	03 58 02.2	-0.2
	comp=Z,24nm,1.0s,mb5.1						
ZST	Bratislava	80.04	358	eP	P	03 58 04.5	+1.8
ZST				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ZST	Bratislava	80.04	358	eP	P	03 58 04.5	+1.8
	comp=Z,10nm,0.7s,mb4.9						
HAU	Haudompre	80.06	5	eP	P	03 58 02.7	-0.1
BURAR	Bucovina Array	80.19	352	⇑iP	P	03 58 03.8	+0.3
BURAR	Bucovina Array	80.19	352	⇑P	P	03 58 03.8	+0.3
PSZ	Piszkesteto	80.22	356	⇑iP	P	03 58 05.0	+1.3
PSZ	Piszkesteto	80.22	356	⇑P	P	03 58 05.0	+1.3
HINF	Hinteralfeld	80.27	5	eP	P	03 58 03.8	-0.1
	comp=Z,4.7nm,0.6s,mb4.3						
HINF	Hinteralfeld	80.27	5	eP	P	03 58 03.8	-0.1
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
HINF	Hinteralfeld	80.27	5	eP	P	03 58 03.8	-0.1
	comp=Z,2.3nm,0.6s,mb4.3						
CONA	Conrad Observa	80.33	359	⇑iP	P	03 58 05.4	+1.1
	comp=Z,22nm,1.6s,mb4.8						
CSNA	Conrad Observa	80.33	359	⇑iP	P	03 58 05.3	+1.1
	comp=Z,21nm,1.5s,mb4.8						
LOR	Lormes	80.63	7	eP	P	03 58 05.7	-0.2
	comp=Z,12nm,0.9s,mb4.5						
LOR	Lormes	80.63	7	eP	P	03 58 05.7	-0.2
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LOR	Lormes	80.63	7	eP	P	03 58 05.7	-0.2
	comp=Z,6.1nm,0.9s,mb4.5						
SSF	Saint Saulge	80.81	7	eP	P	03 58 06.8	0.0
	comp=Z,16nm,0.7s,mb4.8						
SSF	Saint Saulge	80.81	7	eP	P	03 58 06.8	0.0
SSF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
SSF	Saint Saulge	80.81	7	eP	P	03 58 06.8	0.0
	comp=Z,7.8nm,0.7s,mb4.8						
MFF	Saint Martin d	80.93	10	eP	P	03 58 07.3	-0.2
	comp=Z,21nm,0.8s,mb4.8						
MFF	Saint Martin d	80.93	10	eP	P	03 58 07.3	-0.2
MFF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
MFF	Saint Martin d	80.93	10	eP	P	03 58 07.3	-0.2
	comp=Z,11nm,0.8s,mb4.8						
AVF	Avril sur Loir	81.06	7	eP	P	03 58 08.0	-0.2
	comp=Z,19nm,0.8s,mb4.8						
AVF	Avril sur Loir	81.06	7	eP	P	03 58 08.0	-0.2
AVF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
AVF	Avril sur Loir	81.06	7	eP	P	03 58 08.0	-0.2
	comp=Z,9.4nm,0.8s,mb4.8						
KIV	Kislovodsk	81.15	339	eP	P	03 58 10.1	+1.4
KIV				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
KBA	Koelnbreinsper	81.19	0	⇑iP	P	03 58 10.1	+1.2
	comp=Z,32nm,1.2s,mb5.1						
DRGR		81.19	354	⇓iP	P	03 58 08.9	0.0
DRGR		81.19	354	⇓P	P	03 58 08.9	0.0
FETA	Feichten	81.21	2	⇓iP	P	03 58 10.0	+1.0
	comp=Z,8.4nm,0.9s,mb4.7						
SMF	Signal de Mont	81.25	7	eP	P	03 58 08.9	-0.3
	comp=Z,37nm,1.1s,mb5.0						
SMF	Signal de Mont	81.25	7	eP	P	03 58 08.9	-0.3
SMF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
SMF	Signal de Mont	81.25	7	eP	P	03 58 08.9	-0.3
	comp=Z,19nm,1.1s,mb4.9						
BGF	Bois d'Agland	81.25	8	eP	P	03 58 09.2	0.0
	comp=Z,18nm,0.8s,mb4.8						
BGF	Bois d'Agland	81.25	8	eP	P	03 58 09.2	0.0
BGF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BGF	Bois d'Agland	81.25	8	eP	P	03 58 09.2	0.0
	comp=Z,8.9nm,0.8s,mb4.8						
CABF	La Chapelle	81.43	5	eP	P	03 58 10.3	+0.1
	comp=Z,39nm,1.1s,mb4.9						
CABF	La Chapelle	81.43	5	eP	P	03 58 10.3	+0.1
CABF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
CABF	La Chapelle	81.43	5	eP	P	03 58 10.3	+0.1
	comp=Z,20nm,1.1s,mb5.0						
TCF	Toulx Ste Croi	81.47	8	eP	P	03 58 10.1	-0.3
	comp=Z,13nm,0.9s,mb4.6						
TCF	Toulx Ste Croi	81.47	8	eP	P	03 58 10.1	-0.3
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TCF	Toulx Ste Croi	81.47	8	eP	P	03 58 10.1	-0.3
	comp=Z,6.5nm,0.9s,mb4.6						
ABTA	Abfaltersbach	81.52	1	⇑iP	P	03 58 11.3	+0.7
	comp=Z,11nm,1.1s,mb4.7						
SOKA	Soboth	81.59	359	⇓iP	P	03 58 11.9	+0.9
	comp=Z,11nm,0.8s,mb4.8						
OBKA	Obir	81.76	360	⇑iP	P	03 58 12.2	+0.2
	comp=Z,14nm,0.8s,mb5.0						
JAVS	Javornik	82.38	360	i P	P	03 58 14.9	-0.2
RJF	Les Rejaudoux	82.38	9	eP	P	03 58 15.4	+0.2
BZS	Buzias	82.43	355	⇑iP	P	03 58 12.9	-2.5
BZS	Buzias	82.43	355	⇑P	P	03 58 12.9	-2.5
LPL	La Plagne	82.56	5	eP	P	03 58 16.5	+0.4
LPG	La Plagne	82.58	5	eP	P	03 58 16.3	+0.1
GZR	Gura Zlata	82.58	354	⇓iP	P	03 58 16.6	+0.4
GZR	Gura Zlata	82.58	354	⇓P	P	03 58 16.6	+0.4
LFF	La Frestale	82.67	9	eP	P	03 58 16.6	-0.1
	comp=Z,18nm,0.6s,mb5.0						
LFF	La Frestale	82.67	9	eP	P	03 58 16.6	-0.1
LFF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
LFF	La Frestale	82.67	9	eP	P	03 58 16.6	-0.1
	comp=Z,8.9nm,0.6s,mb5.0						
BOJS	Bojanci	82.76	359	i P	P	03 58 17.5	+0.3
BOJS				i		03 58 27.9	
CAF	Calviac	82.81	8	eP	P	03 58 17.3	-0.1
VIVF	Saint-Julien-l	83.09	7	eP	P	03 58 19.1	+0.2
	comp=Z,8.5nm,0.8s,mb4.5						
VIVF	Saint-Julien-l	83.09	7	eP	P	03 58 19.1	+0.2
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
VIVF	Saint-Julien-l	83.09	7	eP	P	03 58 19.1	+0.2
	comp=Z,4.3nm,0.8s,mb4.5						
MBDF	Montbardon	83.35	5	eP	P	03 58 20.6	+0.4
	comp=Z,17nm,0.9s,mb4.8						
MBDF	Montbardon	83.35	5	eP	P	03 58 20.6	+0.4
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
MBDF	Montbardon	83.35	5	eP	P	03 58 20.6	+0.4
	comp=Z,8.7nm,0.9s,mb4.8						
SMRF	Simiane la Rot	84.02	6	eP	P	03 58 24.6	+0.9
	comp=Z,28nm,0.9s,mb5.1						
SMRF	Simiane la Rot	84.02	6	eP	P	03 58 24.6	+0.9
	comp=Z,28nm,0.9s,mb5.4						
SBF	Sospel	84.24	5	eP	P	03 58 24.9	+0.1
MTLF	Montolieu	84.39	9	eP	P	03 58 25.6	0.0
FRF	La Foret Royal	84.50	5	eP	P	03 58 26.2	+0.1
EPF	Esparros	84.51	10	eP	P	03 58 26.2	0.0
ETSF	Etsaut	84.54	11	eP	P	03 58 27.1	+0.7
	comp=Z,15nm,0.8s,mb4.9						
ETSF	Etsaut	84.54	11	eP	P	03 58 27.1	+0.7
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
ETSF	Etsaut	84.54	11	eP	P	03 58 27.1	+0.7
	comp=Z,7.6nm,0.8s,mb4.9						
PGF	Pioggiola	85.63	4	eP	P	03 58 31.9	+0.1
BR131	Keskin Array S	86.95	345	eP	P	03 58 37.4	-0.9
	comp=Z,1.4nm,0.6s,mb4.4						
BRTR	Keskin Array B	86.95	345	P	P	03 58 38.6	+0.3
	comp=Z,3.0nm,0.8s,mb4.6,baz=30,slow=2.3,SNR=11						
ESDC	Sonseca Array	87.27	14	P	P	03 58 38.3	-1.6
	comp=Z,2.7nm,0.8s,mb4.5,baz=348,slow=4.4,SNR=8.5						
ASAR	Alice Springs	91.82	233	P	P	03 58 59.3	-2.0
	comp=Z,3.7nm,0.7s,mb4.8,baz=35,slow=4.6,SNR=36						
TORD	Torodi Ar. Bea	114.16	13	PKP	PKiKP	04 04 30.2	-2.8
	comp=Z,0.4nm,0.5s,baz=340,slow=2.4,SNR=7.1						
MAW	Mawson	151.93	218	PKPbc	PKPbc	04 05 44.5	-2.4
	comp=Z,5.0nm,0.5s,baz=104,slow=4.1,SNR=7.9						
MAW				PKPab	PKPab	04 05 54.0	-2.4
	comp=Z,3.7nm,0.6s,baz=113,slow=10,SNR=5.5						
VNA3	Neumayer Olymp	158.07	160	ePKPdf	PKPdf	04 05 45.5	-3.3
VNA3				e		04 05 54.0	
VNA3				e		04 05 59.9	
VNA3				e		04 06 18.7	
VNA3				e		04 06 22.2	
VNA3				e		04 06 28.3	
VNA3				e		04 07 02.4	
VNA2	Neumayer--Watz	158.79	161	ePKPdf	PKPdf	04 05 45.1	-4.6
VNA2				e		04 05 54.0	
VNA2				e		04 05 59.6	
VNA2				e		04 06 22.6	
VNA2				e		04 06 26.0	
VNA2				e		04 06 32.2	
VNA2				e		04 07 03.9	

*ISCJB **04** 04:15:57.6±0.7, 3654N±003×2556E±0.10, h14km±5km, Error ellipse: s-maj=13.0km s-min=4.8km az=0.9*
*CSEM **04** 04:15:57.7±0.2, 3648N×2559E, h8km, MD2.9, Error ellipse: s-maj=5.6km s-min=2.7km az=105.0*
*THE **04** 04:15:57.5, 3652N×2562E, h6km±2km, Error ellipse: s-maj=3.9km s-min=1.0km az=291.0*
*NEIC **04** 04:15:58.0, 3654N×2558E, h22km, MD2.9(ATH), After ATH.*
*ATH **04** 04:15:58.0, 3654N×2557E, h23km±8km, MD2.9/4*
ISC 04 04:15:57.9±0.9**, 3650N**±004×**256E**±01**, h9**km±10km**, n13, σ0^{s}61**/23**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THR1	Thera Island	0.19	227	P	Pg	04 16 02.1	+0.3
THR1				S	Sg	04 16 04.7	+0.3
THR4	Thira Island,	0.19	259	P	Pg	04 16 01.7	-0.2
THR4				S	Sg	04 16 04.8	+0.3
THR3	Thira Island,	0.20	245	P	Pg	04 16 02.1	0.0
THR3				S	Sg	04 16 04.5	-0.4
THR6	Thira Island,	0.23	233	P	Pg	04 16 03.0	+0.4
THR6				S	Sg	04 16 05.7	-0.1
APE	Apeiranthos	0.58	352	P	Pg	04 16 08.4	-0.7
APE				S	Sg	04 16 16.1	-0.5
APE	Apeiranthos	0.58	352	ePn	Pg	04 16 08.7	-0.4
APE				S	Sg	04 16 16.1	-0.5
APE				eSn	Sg	04 16 16.7	+0.1
NPS	Neapolis	1.23	181	ePN	Pn	04 16 22.1	+0.8
LAST	Lasithi	1.34	185	P	Pn	04 16 21.6	-1.2
LAST				S	Sb	04 16 39.9	-0.5
ZKR	Zakros	1.46	161	P	Pn	04 16 23.8	-0.7
ZKR				S	Sn	04 16 43.1	-0.6
SMG	Samos	1.55	38	ePN	Pn	04 16 26.5	+0.8
KARP	Karpathos	1.56	127	ePN	Pn	04 16 27.1	+1.2
KARP	Karpathos	1.56	127	ePn	Pn	04 16 27.0	+1.1
SIVA	Sivas	1.62	205	P	Pn	04 16 26.4	-0.3
SIVA				S	Sn	04 16 48.5	+0.8

*ISCJB **04** 04:43:27.6±0.5, 1428S±006×763W±0.1, h23km, mb3.9/11, MS3.8/2, Error ellipse: s-maj=16.4km s-min=6.1km az=156.2*
*IDC **04** 04:43:30.3±1.0, 1409S×7620W, h21km±4km, mb3.8/8, mb1 3.9/11, mb1mx3.8/19, mbtmp3.8/11, ML4.1/2, MS3.8/3, Ms1 3.7/3, ms1mx3.2/29, Error ellipse: s-maj=33.8km s-min=13.8km az=56.0*
*NEIC **04** 04:43:31.3±0.5, 14.19S×7624W, h35km, mb4.1/3, Error ellipse: s-maj=16.2km s-min=7.3km az=62.0*
ISC 04 04:43:30.0±0.5**, 1429S**±006×**762W**±01**, h25**km±1.2km**:pP-P, n33, σ1^{s}13**/36**, mb3.9**/11**, MS3.8**/2**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.36	346	Pn	Pn	04 44 04.8	-2.4
	16nm,0.3s,baz=184,slow=14,SNR=35						
NNA				Pg	Pn	04 44 10.0	+2.9
	22nm,0.3s,baz=189,slow=14,SNR=34						
NNA				Lg		04 44 38.7	
	100nm,0.3s,baz=214,slow=16,SNR=21						
NNA	Nana	2.36	346	Pn	Pn	04 44 04.8	-2.4
NNA				Pg	Pn	04 44 10.0	+2.9
NNA				Lg		04 44 38.7	
NNA				eS	Sn	04 44 39.5	+4.1
ARE	Arequipa	5.07	116	eP	Pn	04 44 50.0	+5.6
ARE				eS	Sn	04 46 01.0	+19
ATAH	Atahualpa	7.54	344	Pn	Pn	04 45 18.1	-0.4
	0.4nm,0.3s,baz=48,slow=22,SNR=2.9						
ATAH				Sn	Sn	04 46 45.5	+2.2
	1.0nm,0.3s,baz=343,slow=15,SNR=1.4						
LVC	Limon Verde	10.81	141	Pn	Pn	04 46 04.0	+0.7
	0.3nm,0.3s,baz=296,slow=16,SNR=3.4						
LVC				Sn	Sn	04 48 02.7	-0.9
	0.4nm,0.3s,baz=86,slow=22,SNR=2.9						
LVC				Lg		04 49 07.2	
	0.3nm,0.3s,baz=255,slow=22,SNR=4.4						
LVC				LR	LR	04 50 45.1	
	comp=Z,277nm,18.9s,baz=84,slow=40						
OTAV	Otavalo	14.60	351	ePn	Pn	04 46 53.4	-1.7
	2.8nm,0.8s						
SIV	San Ignacio	14.75	99	Pn	Pn	04 46 57.0	-0.1
	0.2nm,0.3s,baz=289,slow=13,SNR=9.0						
CFAA	Coronel Fontan	18.73	158	P	Pn	04 47 46.0	-1.5
	0.0nm,0.3s,baz=338,slow=12,SNR=3.5						
SDV	Santo Domingo	23.69	14	P	P	04 48 40.5	+0.5
	3.6nm,0.8s,mb3.9,baz=210,slow=13,SNR=7.6						
SDV	Santo Domingo	23.69	14	eP	P	04 48 40.8	+0.8
	4.6nm,0.6s,mb4.1						
PLCA	Paso Flores	26.81	170	eP	P	04 49 10.0	+1.8
	0.9nm,0.7s,mb3.4						
PCRV	Puerto La Cruz	26.89	26	LR	LR	05 00 41.6	
	comp=Z,303nm,18.1s,MS3.9,baz=14,slow=39						
BDFB	Brasilia	27.30	96	P	P	04 49 12.1	-0.7
	1.1nm,0.8s,mb3.5,baz=218,slow=21,SNR=3.3						
BDFB				LR	LR	05 01 37.4	
	comp=Z,157nm,18.0s,MS3.6,baz=327,slow=40						
BBSR	BB Station	47.69	13	P	P	04 52 04.7	+0.1
TXAR	Lajitas Array	50.81	329	P	P	04 52 28.2	-0.3
	0.5nm,0.8s,mb3.5,baz=146,slow=9.1,SNR=5.4						
TXAR				pP	pP	04 52 34.9	-1.2
	1.0nm,0.7s,baz=149,slow=8.6,SNR=9.7						
TXAR				ScP	ScP	04 57 42.2	+2.2
	0.7nm,1.1s,baz=127,slow=3.3,SNR=3.5						
TXAR	Lajitas Array	50.81	329	P	P	04 52 28.2	-0.3
TXAR				pP	pP	04 52 34.9	-1.2
TXAR				ScP	ScP	04 57 42.2	+2.2
PMSA	Palmer Station	51.12	173	P	P	04 52 32.5	+2.1
	43nm,1.2s,mb5.2						
WMOK	Wichita Mounta	53.25	337	P	P	04 52 44.9	-1.6
ACSO	Alum Creek Sta	54.60	354	P	P	04 52 55.3	-1.0
SDCO	Great Sand Dun	58.60	333	eP	P	04 53 24.3	-0.6
PDAR	Pinedale Array	64.49	333	P	P	04 54 03.1	-1.4
	0.4nm,0.7s,mb3.6,baz=123,slow=13,SNR=2.8						
NVAR	Mina Array Bea	65.57	325	P	P	04 54 12.6	+0.9
	0.1nm,0.3s,mb3.4,baz=172,slow=2.7,SNR=2.6						
NVAR				pP	pP	04 54 18.8	-0.8
	0.8nm,0.8s,baz=136,slow=6.2,SNR=3.7						
VNA3	Neumayer Olymp	69.10	161	e	P	04 54 33.1	-0.5
VNA3				e	pP	04 54 41.0	-0.4
VNA2	Neumayer--Watz	69.72	161	e	P	04 54 38.1	+0.7
	baz=293,slow=7.3						
VNA2				e	pP	04 54 46.0	+0.7
SNAA	Sanae	71.32	161	e	P	04 54 47.3	+0.1
SNAA				e	pP	04 54 54.9	-0.2
SNAA	Sanae	71.32	161	eP	P	04 54 46.9	-0.3
	2.0nm,0.8s,mb4.1						
DBIC	Dimbokro	73.80	79	P	P	04 55 03.4	+0.4
	3.6nm,0.8s,mb4.3,baz=215,slow=9.1,SNR=4.6						
TOA0	Torodi Ar. Sit	81.84	74	eP	P	04 55 48.9	+1.2
TORD	Torodi Ar. Bea	81.84	74	P	P	04 55 48.9	+1.2
	7.4nm,0.7s,mb4.7,baz=267,slow=4.5,SNR=71						
YKA	Yellowknife Ar	82.20	343	P	P	04 55 47.6	-0.8
	0.3nm,0.5s,mb3.5,baz=143,slow=5.0,SNR=5.8						
DLBC	Dease Lake	84.68	335	eP	P	04 56 01.3	-0.1
LSZ	Lusaka	99.73	109	Pdif	Pdif	04 57 13.3	+1.6
SONM	Songino Array	146.48	357	PKPbc	PKPbc	05 03 09.2	+0.2
	1.0nm,0.8s,baz=323,slow=1.8,SNR=6.1						
SONM				pPKPbc	pPKPbc	05 03 16.3	-0.9
	1.5nm,0.7s,baz=332,slow=2.4,SNR=7.4						

*JMA **04** 05:03:52.5±0.2, 4358N×14752E, h7km±3km, M3.9*
*ISCJB **04** 05:03:53.2±1.5, 437N±0.1×1477E±0.1, h55km±15km, mb3.6/5, Error ellipse: s-maj=19.7km s-min=13.2km az=175.9*
*MOS **04** 05:03:53.1±3.4, 4407N×14767E, h43km, mb4.3/2, Error ellipse: s-maj=54.0km s-min=30.1km az=3.2*
*IDC **04** 05:03:59.4±4.2, 4373N×14757E, h97km±41km, mb3.3/5, mb1 3.5/6, mb1mx3.3/21, mbtmp3.3/6, MS3.8/1, Ms1 3.8/1, ms1mx2.7/21, Error ellipse: s-maj=122.5km s-min=27.3km az=2.0*
ISC 04 05:03:54.5±1.6**, 437N**±01×**1477E**±01**, h50**km±18km**, n20, σ0^{s}92**/28**, mb3.6**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.36	285	ePN	Pn	05 04 12.1	-5.0
YUK				i S	Sn	05 04 32.5	-1.5
YUK				smax			
	comp=N,2μm,0.4s						
YUK				smax			
	comp=E,3μm,0.4s						
YUK				smax			
	comp=N,6μm,1.0s						
YUK				smax			
	comp=E,5μm,1.0s						
NEM2	Nemuro 2	1.45	258	P	Pn	05 04 17.0	-1.2
NEM2				eS	Sn	05 04 34.1	-2.0
JRA	Rausu	1.87	278	P	Pn	05 04 23.6	-0.4
JRA				eS	Sn	05 04 46.8	+0.4
JNK	Nakash	2.15	268	eS	Sn	05 04 53.3	-0.1
JAK	Akkeshi	2.28	253	P	Pn	05 04 29.2	-0.5
JAK				eS	Sn	05 04 55.6	-1.0
JTKR	Abashiri--Toko	2.74	277	P	Pn	05 04 37.3	+1.3
JTKR				eS	Sn	05 05 09.7	+1.8
JAR	Ashorobuto	2.87	263	P	Pn	05 04 38.3	+0.5
JAR				eS	Sn	05 05 11.5	+0.4
JOB	Onbets	2.92	256	P	Pn	05 04 38.9	+0.6
JCH	Churui	3.34	253	P	Pn	05 04 44.7	+0.6
JCH				eS	Sn	05 05 23.7	+1.2
ASAJ	Asahikawa	3.70	278	P	Pn	05 04 53.2	+4.1
	comp=E,2.0nm,0.3s,baz=82,slow=15,SNR=8.1						
ASAJ				S	Sn	05 05 39.5	+8.1
	comp=E,0.8nm,0.3s,baz=353,slow=31,SNR=2.1						
ASAJ	Asahikawa	3.70	278	PN	Pn	05 04 53.2	+4.1
ASAJ				S	Sn	05 05 39.5	+8.1
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JNBK	Urakawa-nobuka	3.88	250	P	Pn	05 04 51.9	+0.3
JHJ	Hachijo jima 2	12.23	213	LR	LR	05 11 11.2	
	comp=N,468nm,19.6s,baz=97,slow=35						
MKAR	Makanchi Array	44.95	298	P	P	05 12 03.9	-0.4
	comp=N,0.6nm,0.6s,mb3.6,baz=82,slow=7.8,SNR=3.3						
MKAR	Makanchi Array	44.95	298	P	P	05 12 03.9	-0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	55.64	34	P	P	05 13 24.9	+0.1
	comp=Z,0.4nm,0.6s,mb3.6,baz=300,slow=7.2,SNR=3.6						
NVAR	Mina Array Bea	67.28	58	P	P	05 14 44.2	+0.4
	comp=Z,0.3nm,0.6s,mb3.5,baz=316,slow=5.0,SNR=3.0						
AKASG	Malin Array Be	71.86	324	P	P	05 15 10.8	-1.0
	comp=Z,0.7nm,0.4s,mb3.9,baz=37,slow=5.2,SNR=6.3						
AKASG	Malin Array Be	71.86	324	P	P	05 15 10.8	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	82.36	57	P	P	05 16 11.1	0.0
	comp=Z,0.3nm,0.7s,mb3.3,baz=310,slow=3.2,SNR=4.7						

*CSEM **04** 05:09:30.3±0.1, 3691N×2923E, h2km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.5km az=3.0*
*ISK **04** 05:09:30.9, 3694N×2923E, h7km, MD2.9*
*ISCJB **04** 05:09:31.5±0.5, 3695N±003×2923E±003, h5km±6km, Error ellipse: s-maj=5.6km s-min=3.8km az=168.4*
*NEIC **04** 05:09:31.0, 3694N×2924E, h8km, MD3.0(ISK), After ISK.*
*DDA **04** 05:09:31.7, 3698N×2922E, h7km±3km, Md3.0*
ISC 04 05:09:31.9±0.5**, 3695N**±003×**2923E**±003**, h7**km±5km**, n28, σ0^{s}91**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.34	200	ePG	Pg	05 09 37.4	-1.0
FETY				eSG	Sg	05 09 43.0	+0.1
FETY	Fethiye	0.34	200	ePg	Pg	05 09 37.4	-1.0
FETY				Sg	Sg	05 09 42.5	-0.4
FETY	Fethiye	0.34	200	Pg	Pg	05 09 37.5	-0.9
FETY				Sg	Sg	05 09 42.5	-0.3
GOLH	Golhisar	0.39	43	i P	Pg	05 09 38.5	-1.0
GOLH				i S	Sg	05 09 45.4	+0.7
DALT	Dalyan (Mudla)	0.51	249	ePG	Pg	05 09 40.6	-1.1
DALT				eSG	Sg	05 09 48.9	+0.5
DALT	Dalyan (Mudla)	0.51	249	Pg	Pg	05 09 40.8	-0.9
DALT				eSg	Sg	05 09 48.9	+0.5
DALT	Dalyan (Mudla)	0.51	249	Pg	Pg	05 09 40.8	-0.9
DALT				Sg	Sg	05 09 49.8	+1.4
TURN	Turunc	0.51	261	i P	Pg	05 09 45.7	+4.0
TURN				i S	Sg	05 09 57.6	+9.3
ELL	Elmali	0.58	110	ePG	Pg	05 09 42.0	-1.1
ELL				eSG	Sg	05 09 52.0	+1.3
ELL	Elmali	0.58	110	Pg	Pg	05 09 42.2	-0.9
ELL				eSg	Sg	05 09 52.0	+1.3
ELL	Elmali	0.58	110	Pg	Pg	05 09 42.2	-0.9
ELL				Sg	Sg	05 09 52.2	+1.5
AKAS	Kas	0.78	157	i P	Pg	05 09 47.6	+0.8
AKAS				i S	Sg	05 10 00.3	+3.4
YER	Yerkesik	0.78	284	ePG	Pg	05 09 46.7	-0.2
YER	Yerkesik	0.78	284	ePg	Pg	05 09 46.7	-0.2
YER				Sg	Sg	05 09 57.7	+0.7
YER	Yerkesik	0.78	284	Pn	Pg	05 09 46.7	-0.2
YER				Sg	Sg	05 09 57.7	+0.6
ANTB	Antalya	1.14	92	ePN	Pn	05 09 52.6	-1.6
MLSB	Milas	1.21	287	ePN	Pn	05 09 54.8	-0.4
MLSB	Milas	1.21	287	Pn	Pn	05 09 55.6	+0.4
AYDN	Tasoluk	1.29	304	i P	Pn	05 09 56.2	-0.1
AYDN				i S	Sb	05 10 13.4	+0.2
DAT	Datca	1.34	261	ePN	Pn	05 09 56.8	-0.2
ISP	Isparta	1.35	48	ePN	Pn	05 09 57.6	+0.4
KHL	Karahalli	1.39	10	ePN	Pn	05 09 57.2	-0.5
KHAL	Karahalli	1.43	8	i P	Pn	05 09 58.3	+0.1
KHAL				i S	Sn	05 10 18.7	+1.3
BDRM	Kayabasi	1.43	275	i P	Pn	05 09 58.2	-0.1
BDRM				i S	Sn	05 10 18.2	+0.8
BODT	Bodrum	1.54	275	ePN	Pn	05 09 60.0	+0.2
KULA	Kula-Manisa	1.62	344	ePN	Pn	05 09 60.0	-0.9
GCAM	G?zelcaml?	1.76	296	eP	Pn	05 09 59.8	-2.9
GCAM				i S	Sn	05 10 25.9	+0.5
HDMB	Hadim	2.61	89	ePN	Pn	05 10 14.7	+0.3

GUC 04 05:15:27.4±0.6**, 2285S**×**7067W, h0**km±6km**, MD3.7, ML2.6, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.33	142	eP	Pg	05 15 33.2	-0.5
MECH				i S	Sg	05 15 38.4	+0.4
MECH				AML	AML	05 15 39.2	
	comp=E,2μm,0.5s						
CEN1	Los Morros	0.69	141	⇓iP	Pg	05 15 39.0	-1.7
CEN1				i S	Sg	05 15 48.2	-1.5
TOCH	Tocopilla	0.86	30	eP	Pg	05 15 43.1	-0.9
TOCH				i S	Sg	05 15 54.7	-0.5
TOCH				AML	AML	05 15 55.8	
	comp=E,536nm,0.1s						
ANCH	Antofagasta	0.87	164	eP	Pg	05 15 43.0	-1.0
ANCH				i S	Sg	05 15 54.7	-0.6
LVC	Limon Verde	1.64	82	eP	Pn	05 15 53.1	-4.4
LVC				i S	Sn	05 16 12.1	-7.2
CPN1	Cerro Paranal	1.79	172	eP	Pn	05 15 54.6	-4.9
CPN1				i S	Sn	05 16 15.3	-7.6

*MOS **04** 05:16:30.8±1.4, 1704N×14753E, h33km, mb4.7/12, Error ellipse: s-maj=16.5km s-min=10.1km az=106.7*
*IDC **04** 05:16:33.7±3.7, 1701N×14742E, h43km±34km, mb3.9/14,*

mb1 4.1/14, mb1mx3.9/21, mbtmp3.9/14, ML4.8/1, MS3.8/6, Ms1 3.8/6, ms1mx3.4/26, Error ellipse: s-maj=28.0km s-min=15.3km az=81.0
*BJI **04** 05:16:33.9, 1700N×14740E, h65km, mb4.8*
*ISCJB **04** 05:16:35.2±2.3, 1697N±006×1473E±01, h72km±20km, mb4.3/30, Error ellipse: s-maj=20.8km s-min=10.2km az=173.1*
*NEIC **04** 05:16:35.9±1.9, 1696N×14743E, h65km±16km, mb4.6/11, Error ellipse: s-maj=16.6km s-min=8.2km az=83.0*
ISC 04 05:16:36.3±2.1**, 1697N**±006×**1473E**±01**, h67**km±18km**, n52, σ0.98**/49**, mb4.3**/30**, 3C-2D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.11**	**216**	P	**Pn**	**05 17 36.8**	**+0.1**
	61nm,0.3s,baz=143,slow=2.9,SNR=9.0						
GUMO				S	**Sn**	**05 18 23.5**	**0.0**
	64nm,0.3s,baz=34,slow=21,SNR=6.2						
GUMO				LR	LR	05 18 59.1	
	comp=Z,286nm,19.9s,baz=21,slow=35						
GUMO	**Guam**	**4.11**	**216**	*e*Pn	**Pn**	**05 17 37.4**	**+0.7**
GUMO				*e*Sn	**Sn**	**05 18 20.0**	**-3.5**
GUMO				S	**Sn**	**05 18 23.5**	**0.0**
JOW	**Kunigami**	**20.20**	**302**	LR	LR	05 27 38.9	
	comp=Z,322nm,20.0s,baz=289,slow=33						
MJAR	**Matsushiro Arr**	**21.10**	**339**	P	**P**	**05 21 13.8**	**-1.5**
	6.0nm,0.6s,mb4.1,baz=168,slow=9.6,SNR=8.3						
MAJO	**Matsushiro**	**21.11**	**339**	*e*P	**P**	**05 21 16.6**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.5						
MAJO	**Matsushiro**	**21.11**	**339**	*e*P	**P**	**05 21 16.6**	**+1.3**
	comp=Z,15nm,0.6s,mb4.5						
PMG	**Port Moresby**	**26.21**	**180**	⇑*e*P	**P**	**05 22 05.7**	**+0.8**
PMG	**Port Moresby**	**26.21**	**180**	*e*P	**P**	**05 22 04.6**	**-0.3**
	comp=Z,7.2nm,0.6s,mb4.3						
KSRS	**Korea Array**	**26.62**	**324**	P	**P**	**05 22 06.9**	**-1.6**
	comp=Z,1.4nm,0.7s,mb3.6,baz=156,slow=8.2,SNR=3.9						
KSRS				LR	LR	05 32 45.7	
	comp=Z,152nm,18.3s,baz=141,slow=36						
CTA	**Charters Tower**	**36.84**	**182**	P	**P**	**05 23 37.8**	**-0.4**
	comp=Z,3.2nm,0.9s,mb4.3,baz=353,slow=10,SNR=3.7						
WRAB	**Tennant Creek**	**38.82**	**200**	*e*P	**P**	**05 23 54.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**38.82**	**200**	*e*P	**P**	**05 23 54.9**	**+0.1**
	comp=Z,7.8nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**38.83**	**200**	*e*P	**P**	**05 23 55.2**	**+0.3**
ASAR	**Alice Springs**	**42.46**	**198**	P	**P**	**05 24 24.6**	**-0.2**
	comp=Z,1.1nm,0.4s,mb3.9,baz=16,slow=7.5,SNR=12						
ULN	**Ulaanbaatar**	**45.08**	**322**	⇑*e*P	**P**	**05 24 46.1**	**+0.5**
SONM	**Songino Array**	**45.45**	**322**	P	**P**	**05 24 48.8**	**+0.2**
	comp=Z,2.2nm,0.6s,mb4.1,baz=138,slow=8.2,SNR=14						
SONM				PcP	PcP	05 26 27.7	+1.1
	comp=Z,0.8nm,0.6s,baz=114,slow=2.6,SNR=3.1						
CMAR	**Chiang Mai Arr**	**46.01**	**279**	P	**P**	**05 24 54.8**	**+1.4**
	comp=Z,4.4nm,0.6s,mb4.3,baz=70,slow=6.6,SNR=23						
MBWA	**Marble Bar**	**46.56**	**217**	*e*P	**P**	**05 24 57.4**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.4						
YAK	**Yakutsk**	**46.70**	**349**	⇓*e*P	**P**	**05 25 01.6**	**+3.5**
BOD	**Bodaibo**	**47.70**	**337**	*e*P	**P**	**05 25 04.4**	**-1.6**
BOD				pmax	pmax		
	comp=Z,5.0nm,2.0s,mb4.0						
STKA	**Stephens Creek**	**48.88**	**186**	P	**P**	**05 25 14.6**	**-0.7**
	comp=Z,1.8nm,0.7s,mb4.1,baz=356,slow=11,SNR=3.7						
LSA	**Lhasa**	**52.66**	**295**	*e*P	**P**	**05 25 48.1**	**+4.1**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
LSA	**Lhasa**	**52.66**	**295**	*e*P	**P**	**05 25 48.0**	**+4.1**
	comp=Z,6.3nm,0.5s,mb4.9						
WMQ	**Urumqi**	**56.61**	**312**	*e*P	**P**	**05 26 11.7**	**-0.6**
WMQ				AMB	AMB		
	comp=Z,16nm,1.4s,mb4.9						
ZALV	**Zalesovo Beam**	**60.32**	**323**	P	**P**	**05 26 37.4**	**-0.6**
	comp=Z,2.4nm,0.4s,mb4.6,baz=116,slow=8.6,SNR=12						
ZALV				PcP	PcP	05 27 22.9	+0.3
	comp=Z,1.6nm,0.6s,baz=126,slow=3.8,SNR=4.2						
MKAR	**Makanchi Array**	**60.77**	**314**	P	**P**	**05 26 41.5**	**+0.3**
	comp=Z,2.3nm,0.5s,mb4.5,baz=92,slow=7.5,SNR=33						
MKAR				LR	LR	05 53 23.7	
	comp=Z,64nm,18.8s,baz=176,slow=36						
KURK	**Kurchatov**	**63.59**	**319**	⇑*i*P	**P**	**05 26 59.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,16nm,1.9s,mb4.5						
KURK	**Kurchatov**	**63.59**	**319**	*e*P	**P**	**05 26 59.4**	**-0.6**
	comp=Z,14nm,1.3s,mb4.6						
TKM2	**Tokmak 2**	**65.34**	**310**	*e*P	**P**	**05 27 12.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**65.34**	**310**	*e*P	**P**	**05 27 12.0**	**+0.4**
	comp=Z,4.7nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**66.16**	**310**	*e*P	**P**	**05 27 20.2**	**+3.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.9						
BRVK	**Borovoye**	**68.85**	**321**	*e*P	**P**	**05 27 33.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**68.85**	**321**	*e*P	**P**	**05 27 33.7**	**+0.1**
	comp=Z,4.5nm,0.8s,mb4.3						
PPT	**Papeete**	**70.97**	**116**	LR	LR	05 57 49.3	
	comp=Z,105nm,18.1s,baz=260,slow=35						
KBL	**Kabul**	**71.09**	**301**	*e*P	**P**	**05 27 48.2**	**+0.5**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
KBL	**Kabul**	**71.09**	**301**	*e*P	**P**	**05 27 48.2**	**+0.5**
	comp=Z,8.6nm,0.9s,mb4.6						
ARU	**Arti**	**75.36**	**325**	⇓*e*P	**P**	**05 28 14.8**	**+2.4**
ARU				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.4						
ARU	**Arti**	**75.36**	**325**	*e*P	**P**	**05 28 13.2**	**+0.8**
	comp=Z,4.8nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**78.78**	**28**	P	**P**	**05 28 30.7**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=284,slow=5.7,SNR=4.2						
YKA	**Yellowknife Ar**	**78.78**	**28**	P	**P**	**05 28 30.7**	**-0.8**
CMB	**Columbia Colle**	**81.50**	**53**	*e*P	**P**	**05 28 46.8**	**+0.2**
CMB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**81.50**	**53**	*e*P	**P**	**05 28 46.8**	**+0.1**
	comp=Z,3.4nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**82.98**	**52**	P	**P**	**05 28 55.3**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.7,baz=276,slow=5.6,SNR=4.4						
ARCES	**ARCESS Array B**	**84.60**	**343**	P	**P**	**05 29 03.0**	**+1.0**
	comp=Z,2.3nm,0.6s,mb4.3,baz=63,slow=5.6,SNR=14						
PDAR	**Pinedale Array**	**87.92**	**46**	P	**P**	**05 29 18.9**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=289,slow=5.5,SNR=2.8						
KIV	**Kislovodsk**	**88.51**	**316**	*e*P	Px	05 29 32.8	
KIV				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
NAY	**Al-Naaiem**	**90.31**	**301**	*e*P	**P**	**05 29 28.1**	**-2.2**
NAY				AMb	AMB	05 29 32.8	
	comp=Z,18nm,1.5s,mb5.0						
BRTR	**Keskin Array B**	**96.42**	**315**	P	**P**	**05 29 57.0**	**-1.2**
	comp=Z,0.6nm,0.9s,mb4.0,baz=92,slow=4.5,SNR=3.0						
BRTR	**Keskin Array B**	**96.42**	**315**	*i* P	**P**	**05 30 06.9**	**+8.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**97.52**	**56**	LR	LR	06 08 44.5	
	comp=Z,124nm,18.8s,baz=290,slow=32						
TORD	**Torodi Ar. Bea**	**134.74**	**309**	PKP	PKPdf	05 35 49.8	+1.5
	comp=Z,0.4nm,0.6s,baz=21,slow=1.6,SNR=8.3						
DBIC	**Dimbokro**	**143.83**	**308**	PKP	PKPdf	05 36 04.3	-0.6
	comp=Z,1.9nm,0.6s,baz=18,slow=5.1,SNR=4.8						

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*NNC **04** 05:29:56.9±2.9, 3794N×7160E, h248km±34km, mb2.5, mpv3.8, Error ellipse: s-maj=31.3km s-min=16.8km az=17.0*
ISC 04 05:29:56.3±2.6**, 379N**±02×**716E**±02**, h246**km±33km**, n8, σ0.26**/11**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**5.07**	**19**	P	**Pn**	**05 31 12.4**	**-0.1**
	SNR=22						
AAK	**Ala-Archa**	**5.25**	**24**	P	**Pn**	**05 31 14.7**	**-0.1**
	SNR=13						
KK31	**Karatay Array**	**5.28**	**352**	P	**Pn**	**05 31 15.7**	**+0.4**
	3.5nm,0.3s,baz=175,slow=12,SNR=130						
KK31				⇑S	**S**	**05 32 18.1**	**-0.2**
	6.0nm,0.3s,baz=182,slow=18,SNR=28						
CHMS	**Chumysh**	**5.66**	**24**	P	**Pn**	**05 31 19.8**	**-0.1**
	SNR=5.1						
USP	**Ospenovka**	**5.83**	**22**	P	**Pn**	**05 31 21.9**	**-0.1**
	SNR=5.5						
TKM2	**Tokmak 2**	**5.90**	**30**	⇑P	**Pn**	**05 31 22.5**	**-0.4**
	5.4nm,0.6s						
TKM2				⇑S	**S**	**05 32 32.5**	**+0.4**
	3.8nm,1.1s						
TKM2	**Tokmak 2**	**5.90**	**30**	P	**Pn**	**05 31 22.6**	**-0.3**
	SNR=8.0						
AB09	**Akbulak array**	**14.15**	**327**	⇑P	**Pn**	**05 33 06.5**	**+0.3**
	0.8nm,0.9s						
AB09				⇓S	**S**	**05 35 42.5**	**-0.2**
	1.3nm,0.5s						

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*IDC **04** 05:48:29.9±0.7, 1041N×6232W, h0km, mb3.9/12, mb1 4.1/15, mb1mx4.0/23, mbtmp4.0/15, ML3.4/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/26, Error ellipse: s-maj=19.1km s-min=15.6km az=0.0*
*TRN **04** 05:48:31.0, 1028N×6235W, h5km, MD4.3*
*ISCJB **04** 05:48:32.0±0.4, 1030N±002×6236W±002, h24km±4km, mb3.9/12, Error ellipse: s-maj=3.7km s-min=2.8km az=145.2*
*FUNV **04** 05:48:33.3, 1033N×6224W, h13km, MW4.0*
*NEIC **04** 05:48:33.4, 1036N×6225W, h18km, MW4.0(CAR), After CAR.*
ISC 04 05:48:32.5±0.4**, 1030N**±002×**6233W**±002**, h13**km±3km**, n85, σ0.95**/116**, mb3.9**/12**, 11C-12D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.36**	**16**	⇑*i*P	**Pg**	**05 48 39.1**	**-0.6**
GUIV				*e*S	**Sg**	**05 48 44.2**	**-0.5**
GUIV	**Guiria**	**0.36**	**16**	⇑*i*P	**Pg**	**05 48 39.1**	**-0.6**
GUIV				*e*S	**Sg**	**05 48 44.2**	**-0.5**
GUNV	**Guanoco**	**0.62**	**258**	⇓*e*P	**Pg**	**05 48 45.7**	**+1.1**
GUNV				*e*S	**Sg**	**05 48 56.5**	**+3.6**
GUNV	**Guanoco**	**0.62**	**258**	⇓*e*P	**Pg**	**05 48 45.8**	**+1.2**
GUNV				*e*S	**Sg**	**05 48 56.5**	**+3.6**
ALNG	**Atlantic LNG**	**0.64**	**100**	*e*P	**Pg**	**05 48 44.9**	**0.0**
ALNG				*e*S	**Sg**	**05 48 53.0**	**-0.4**
BUAY	**Buenos Aires**	**0.66**	**107**	*e*P	**Pg**	**05 48 43.7**	**-1.6**
BUAY				*e*S	**Sg**	**05 48 55.0**	**+1.0**
TCE	**Chacachacare**	**0.69**	**55**	⇓*i*P	**Pg**	**05 48 44.9**	**-1.0**
TPP	**Pointe-a-Pierr**	**0.86**	**89**	*e*P	**Pg**	**05 48 48.3**	**-0.9**
TPP				*e*S	**Sg**	**05 49 01.4**	**+0.9**
CRUV	**Carupano**	**0.97**	**293**	⇓*e*P	**Pb**	**05 48 50.6**	**-0.6**
CRUV				*e*S	**Sg**	**05 49 04.2**	**+0.3**
CRUV	**Carupano**	**0.97**	**293**	⇓*e*P	**Pb**	**05 48 50.5**	**-0.7**
CRUV				*e*S	**Sg**	**05 49 04.2**	**+0.3**
CRUV	**Carupano**	**0.97**	**293**	*e*P	**Pb**	**05 48 50.6**	**-0.6**
CRUV				*e*S	**Sg**	**05 49 04.2**	**+0.3**
TRN	**Trinidad (W)**	**0.97**	**69**	⇑*i*P	**Pb**	**05 48 49.7**	**-1.4**
TBH	**Brigand Hill**	**1.25**	**81**	⇑*e*P	**Pn**	**05 48 55.0**	**-0.7**
TBH				*e*S	**Sb**	**05 49 14.7**	**+2.7**
ITEV	**Isla Los Testi**	**1.32**	**323**	⇓*e*P	**Pn**	**05 48 56.2**	**-0.4**
ITEV				*e*S	**Sb**	**05 49 15.1**	**+1.2**
ITEV	**Isla Los Testi**	**1.32**	**323**	⇓*i*P	**Pn**	**05 48 56.4**	**-0.2**
ITEV				*e*S	**Sb**	**05 49 15.1**	**+1.2**
ITEV	**Isla Los Testi**	**1.32**	**323**	*e*P	**Pn**	**05 48 56.2**	**-0.3**
ITEV				*e*S	**Sb**	**05 49 13.2**	**-0.7**
ORIV	**Oritupano**	**1.62**	**221**	*e*P	**Pn**	**05 49 03.4**	**+2.7**
ORIV	**Oritupano**	**1.62**	**221**	*e*P	**Pn**	**05 49 02.5**	**+1.8**
TPR	**Prospect**	**1.76**	**60**	⇑*i*P	**Pn**	**05 49 02.4**	**-0.3**
TPR				*e*S	**Sn**	**05 49 26.6**	**+1.6**
BOT	**Bacolet**	**1.80**	**61**	*e*P	**Pn**	**05 49 03.3**	**+0.1**
BOT				*e*S	**Sn**	**05 49 26.7**	**+0.8**
GRGR	**Grenville**	**1.94**	**20**	*e*Pn	**Pn**	**05 49 04.0**	**-1.1**
GRW	**Mount Saint Ca**	**1.96**	**19**	⇑*e*P	**Pn**	**05 49 04.8**	**-0.6**
TOSP	**Speyside**	**2.02**	**60**	*e*P	**Pn**	**05 49 06.8**	**+0.5**
RIOV	**Rio Grande**	**2.27**	**167**	*e*P	**Pn**	**05 49 10.3**	**+0.6**
RIOV				*e*S	**Sn**	**05 49 37.2**	**-0.4**
RIOV	**Rio Grande**	**2.27**	**167**	*e*P	**Pn**	**05 49 10.8**	**+1.1**
RIOV				*e*S	**Sn**	**05 49 37.2**	**-0.4**
PCRV	**Puerto La Cruz**	**2.28**	**267**	Pn	**Pn**	**05 49 09.4**	**-0.4**
	24nm,0.3s,baz=86,slow=4.1,SNR=89						
PCRV	**Puerto La Cruz**	**2.28**	**267**	*e*P	**Pn**	**05 49 10.4**	**+0.6**
GURV	**El Guri**	**2.63**	**197**	*e*P	**Pn**	**05 49 14.7**	**+0.1**
GURV				*e*S	**Sn**	**05 49 46.1**	**-0.4**
GURV	**El Guri**	**2.63**	**197**	*e*P	**Pn**	**05 49 14.9**	**+0.3**
GURV				*e*S	**Sn**	**05 49 46.1**	**-0.4**
GURV	**El Guri**	**2.63**	**197**	*e*P	**Pn**	**05 49 14.5**	**-0.2**
GURV				*e*S	**Sn**	**05 49 46.1**	**-0.4**
IBAV	**Isla La Blanqu**	**2.68**	**305**	⇓*e*P	**Pn**	**05 49 15.2**	**-0.2**
IBAV	**Isla La Blanqu**	**2.68**	**305**	⇓*i*P	**Pn**	**05 49 15.4**	**0.0**
IBAV	**Isla La Blanqu**	**2.68**	**305**	*e*P	**Pn**	**05 49 15.1**	**-0.3**
PRGV	**PARIAGUAN**	**2.75**	**236**	*e*P	**Pn**	**05 49 17.7**	**+1.4**
SVB	**Belmont**	**3.14**	**19**	*e*P	**Pn**	**05 49 21.5**	**-0.1**
SVB				*e*S	**Sn**	**05 50 00.3**	**+1.3**
CUPV	**Cœpira**	**3.42**	**266**	*e*P	**Pn**	**05 49 27.3**	**+1.8**
CUPV				*e*S	**Sn**	**05 50 05.3**	**-0.6**
CUPV	**Cœpira**	**3.42**	**266**	*e*P	**Pn**	**05 49 27.1**	**+1.6**
CUPV				*e*S	**Sn**	**05 50 05.3**	**-0.6**
MCLT	**Moule a Chique**	**3.65**	**22**	⇑*e*P	**Pn**	**05 49 28.6**	**-0.1**
MCLT				*e*S	**Sn**	**05 50 12.9**	**+1.2**
SLW	**Petit Monier**	**3.94**	**20**	*e*P	**Pn**	**05 49 33.0**	**+0.3**
SLW				*e*S	**Sn**	**05 50 19.0**	**+0.2**
ORCV	**Isla La Orchil**	**4.08**	**292**	⇑*e*P	**Pn**	**05 49 34.8**	**+0.1**
BIM	**Bigot**	**4.37**	**16**	*e*P	**Pn**	**05 49 38.7**	**+0.1**
BIM				*e*S	**Sn**	**05 50 27.0**	**-2.4**
FUNV	**FUNVISIS**	**4.42**	**273**	*e*P	**Pn**	**05 49 39.9**	**+0.7**
MVM	**Montagne Vaucl**	**4.46**	**18**	*e*P	**Pn**	**05 49 40.3**	**+0.5**
MVM				*e*S	**Sn**	**05 50 34.0**	**+2.4**
LUEV	**Luepa**	**4.51**	**169**	*e*P	**Pn**	**05 49 39.6**	**-0.9**
LUEV	**Luepa**	**4.51**	**169**	*e*P	**Pn**	**05 49 39.8**	**-0.7**
FDF	**Fort de France**	**4.56**	**14**	⇓*i*P	**Pn**	**05 49 41.2**	**0.0**
FDF				⇓*i*S	**Sn**	**05 50 34.0**	**0.0**
CAOV	**Caicara del Or**	**4.93**	**234**	⇑*e*P	**Pn**	**05 49 46.8**	**+0.5**
CAOV				*e*S	**Sn**	**05 50 40.3**	**-3.0**
TURV	**Turiamo**	**5.43**	**272**	*e*P	**Pn**	**05 49 53.9**	**+0.7**
TBG	**Guadaloupe-3**	**5.56**	**7**	*e*P	**Pn**	**05 49 56.4**	**+1.4**
HMG	**Houelmont**	**5.68**	**6**	*e*P	**Pn**	**05 49 56.8**	**+0.2**
SCG	**Saint Claude**	**5.73**	**6**	*e*P	**Pn**	**05 49 57.7**	**+0.3**
DOG	**Dongo Capester**	**5.74**	**7**	*e*P	**Pn**	**05 49 57.8**	**+0.3**
BAUV	**El Baul**	**5.79**	**257**	⇑*e*P	**Pn**	**05 49 58.9**	**+0.7**
LZG	**Guadaloupe-1**	**5.83**	**5**	*e*P	**Pn**	**05 49 58.9**	**+0.1**
DEG	**La Desirade**	**6.11**	**12**	*e*P	**Pn**	**05 50 02.6**	**+0.1**
JACV	**Jacura**	**6.44**	**278**	*e*P	**Pn**	**05 50 07.6**	**+0.5**
TEPV	**Terepaima**	**6.77**	**268**	⇓*e*P	**Pn**	**05 50 11.7**	**+0.1**
SKI	**Saint Kitts**	**7.01**	**357**	⇑*e*P	**Pn**	**05 50 15.3**	**+0.5**
SKI				*e*S	**Sn**	**05 51 32.7**	**-1.8**
SANV	**Sanarito**	**7.15**	**264**	*e*P	**Pn**	**05 50 17.0**	**+0.2**
PAYV	**Puerto Ayacuch**	**7.17**	**228**	*e*P	**Pn**	**05 50 17.1**	**+0.1**
PAYV				*e*S	**Sn**	**05 51 33.0**	**-5.4**
SIQV	**Siquisique**	**7.37**	**273**	*e*P	**Pn**	**05 50 19.9**	**+0.1**
CURV	**Curarigua**	**7.52**	**269**	*e*P	**Pn**	**05 50 22.0**	**+0.1**
ELOV	**Elorza**	**7.80**	**246**	*e*P	**Pn**	**05 50 25.7**	**-0.1**
SDV	**Santo Domingo**	**8.31**	**261**	Pn	**Pn**	**05 50 32.4**	**-0.3**
	14nm,0.3s,baz=87,slow=7.5,SNR=92						
SDV				Sn	**Sn**	**05 52 02.2**	**-4.4**
	2.2nm,0.3s,baz=50,slow=12,SNR=2.5						
SOCV	**Socops**	**8.65**	**257**	*e*P	**Pn**	**05 50 37.3**	**-0.2**
VIGV	**El Vigia**	**9.03**	**262**	*e*P	**Pn**	**05 50 41.9**	**-0.8**
VIRV	**Villa del Rosa**	**9.92**	**272**	*e*P	**Pn**	**05 50 53.9**	**-1.0**
CAPV	**Capacho**	**10.16**	**257**	*e*P	**Pn**	**05 50 57.3**	**-0.8**
SDDR	**Presa de Saban**	**12.23**	**316**	*e*Pn	**Pn**	**05 51 26.0**	**-0.5**
	15nm,0.7s						
ROSC	**El Rosal**	**13.07**	**246**	Pn	**Pn**	**05 51 39.9**	**+2.0**
	2.2nm,0.3s,baz=89,slow=16,SNR=10						
SIV	**San Ignacio**	**26.15**	**177**	P	**P**	**05 54 06.9**	**+0.3**
	1.9nm,0.6s,mb3.8,baz=13,slow=9.8,SNR=11						
BDFB	**Brasilia**	**29.41**	**151**	P	**P**	**05 54 36.0**	**+0.1**
	0.4nm,0.4s,mb3.5,baz=101,slow=19,SNR=4.5						
TXAR	**Lajitas Array**	**42.97**	**302**	P	**P**	**05 56 30.9**	**-0.7**
	0.3nm,0.5s,mb3.3,baz=117,slow=9.5,SNR=14						
TXAR				PcP	PcP	05 58 21.9	-0.2
	0.9nm,0.6s,baz=121,slow=5.6,SNR=10						
TXAR	**Lajitas Array**	**42.97**	**302**	P	**P**	**05 56 30.9**	**-0.7**
TXAR				PcP	PcP	05 58 21.9	-0.2
PLCA	**Paso Flores**	**51.34**	**188**	LR	LR	06 20 44.5	
	comp=Z,96nm,18.5s,baz=22,slow=38						
PDAR	**Pinedale Array**	**52.25**	**317**	P	**P**	**05 57 41.4**	**-2.1**
	0.6nm,0.5s,mb3.8,baz=117,slow=9.6,SNR=6.7						
DBIC	**Dimbokro**	**56.90**	**89**	P	**P**	**05 58 17.4**	**-0.4**
	2.0nm,0.4s,mb4.5,baz=258,slow=7.5,SNR=8.1						
MDT	**Midelt**	**57.42**	**58**	P	**P**	**05 58 20.5**	**-0.7**
	1.3nm,0.9s,mb4.0,baz=314,slow=5.6,SNR=4.7						
ESDC	**Sonseca Array**	**59.25**	**50**	P	**P**	**05 58 32.4**	**-1.4**
	0.4nm,0.5s,mb3.7,baz=261,slow=6.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**62.61**	**80**	P	**P**	**05 58 55.9**	**-1.2**
	2.0nm,1.1s,mb4.2,baz=290,slow=6.5,SNR=10						
YKA	**Yellowknife Ar**	**64.10**	**336**	P	**P**	**05 59 03.0**	**-3.0**
	0.7nm,0.7s,mb3.8,baz=110,slow=7.4,SNR=5.5						
NOA	**NORSAR Array B**	**73.09**	**29**	P	**P**	**06 00 01.7**	**-0.6**
	1.0nm,0.8s,mb3.8,baz=264,slow=6.1,SNR=4.1						
ARCES	**ARCESS Array B**	**79.67**	**21**	P	**P**	**06 00 40.3**	**+0.9**
	3.3nm,0.9s,mb4.3,baz=291,slow=7.7,SNR=4.0						
BRTR	**Keskin Array B**	**88.04**	**50**	P	**P**	**06 01 22.6**	**-0.3**
	0.6nm,0.7s,mb4.0,baz=271,slow=3.7,SNR=4.9						
CMAR	**Chiang Mai Arr**	**145.97**	**33**	PKPbc	PKPbc	06 08 12.8	-0.1
	1.2nm,0.5s,baz=314,slow=5.8,SNR=4.3						

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*CSEM **04** 06:22:19.3±0.1, 3695N×2928E, h5km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.4km az=57.0*
*ISK **04** 06:22:19.3, 3696N×2930E, h9km, MD2.7*
*ISCJB **04** 06:22:20.3±0.5, 3694N±003×2931E±004, h10km, Error ellipse: s-maj=5.3km s-min=4.4km az=37.9*
*DDA **04** 06:22:21.2, 3700N×2932E, h7km±8km, Md3.0*
ISC 04 06:22:20.5±0.6**, 3696N**±003×**2929E**±005**, h5**km±10km**, n12, σ0.87**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**37**	*i* P	**Pg**	**06 22 26.8**	**-0.5**
GOLH				*i* S	**Sg**	**06 22 33.5**	**+1.5**
FETY	**Fethiye**	**0.36**	**208**	*e*PG	**Pg**	**06 22 26.8**	**-0.7**
FETY				*e*SG	**Sg**	**06 22 33.0**	**+0.8**
ELL	**Elmali**	**0.54**	**113**	*e*PG	**Pg**	**06 22 30.3**	**-0.5**
ELL				*e*SG	**Sg**	**06 22 37.9**	**+0.1**
TURN	**Turunc**	**0.56**	**262**	*i* P	**Pg**	**06 22 36.6**	**+5.4**
TURN				*i* S	**Sg**	**06 22 48.7**	**+10**
AKAS	**Kas**	**0.76**	**161**	*i* P	**Pg**	**06 22 35.4**	**+0.3**
AKAS				*i* S	**Sg**	**06 22 49.5**	**+4.4**
DENT	**Denizli**	**0.82**	**346**	*e*PG	**Pg**	**06 22 36.0**	**-0.3**
YER	**Yerkesik**	**0.83**	**283**	*e*PG	**Pg**	**06 22 35.4**	**-1.0**
DAT	**Datca**	**1.39**	**261**	*e*PN	**Pn**	**06 22 45.6**	**-0.9**
KHAL	**Karahalli**	**1.42**	**6**	*i* P	**Pn**	**06 22 46.5**	**-0.4**
KHAL				*i* S	**Sg**	**06 23 06.2**	**0.0**
BDRM	**Kayabasi**	**1.48**	**275**	*i* P	**Pn**	**06 22 48.2**	**+0.5**
BDRM				*i* S	**Sb**	**06 23 09.8**	**+2.2**
BDRM	**Kayabasi**	**1.48**	**275**	*i* P	**Pn**	**06 22 48.2**	**+0.4**
BODT	**Bodrum**	**1.59**	**274**	*e*PN	**Pn**	**06 22 48.3**	**-0.9**

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*CSEM **04** 06:43:52.8±0.2, 3834N×3881E, h10km, MD3.1, Error ellipse: s-maj=4.7km s-min=2.9km az=4.0*
*ISK **04** 06:43:52.5, 38.19N×3974E, h8km, MD2.9*
*ISCJB **04** 06:43:54.6±0.5, 3834N±003×3888E±003, h6km±6km, Error ellipse: s-maj=5.5km s-min=4.3km az=165.9*
*DDA **04** 06:43:54.5, 3836N×3889E, h14km±2km, Md3.1*
ISC 04 06:43:55.2±0.5**, 3835N**±003×**3890E**±003**, h10**km±7km**, n13, σ1.06**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.16**	**24**	*i* P	**Pg**	**06 43 58.8**	**0.0**
ELZG				*i* S	**Sg**	**06 44 01.5**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.32**	**85**	*e*PG	**Pg**	**06 44 00.9**	**-0.7**
SVRC				*e*SG	**Sg**	**06 44 06.8**	**+0.9**
PTK	**Pertek**	**0.66**	**35**	*e*PG	**Pg**	**06 44 07.3**	**-0.7**
PTK				*e*SG	**Sg**	**06 44 17.9**	**+1.1**
AKCD	**Akcadag**	**0.77**	**266**	*i* P	**Pg**	**06 44 09.5**	**-0.6**
AKCD				*i* S	**Sg**	**06 44 20.3**	**+0.1**
KEMA	**Kemaliye**	**0.97**	**341**	*i* P	**Pg**	**06 44 12.0**	**-1.9**
KEMA				*i* S	**Sg**	**06 44 27.0**	**+0.5**
DARE	**Darende-Malaty**	**1.05**	**305**	*e*PN	**Sb**	**06 44 24.4**	**-4.8**
DIYA	**Diyarbakir**	**1.05**	**114**	*i* P	**Pb**	**06 44 15.6**	**+0.2**
DIYA				*i* S	**Sb**	**06 44 30.5**	**+1.3**
GZT	**Gaziantep**	**1.45**	**227**	*i* P	**Pg**	**06 44 22.0**	**-1.1**
GZT				*i* S	**Sg**	**06 44 44.0**	**+2.2**
EZC	**Erzincan**	**1.57**	**27**	*e*PN	**Pn**	**06 44 22.6**	**-0.4**
GAZ	**Gaziantep**	**1.78**	**229**	*e*PN	**Pn**	**06 44 30.5**	**+4.5**
KMRS	**Kahramanmaras**	**1.79**	**243**	*e*PN	**Pn**	**06 44 32.1**	**+5.9**
MARD	**Mardin**	**1.81**	**124**	*i* P	**Pg**	**06 44 27.4**	**-2.5**
MARD				*i* S	**Sg**	**06 44 53.0**	**-0.4**
SVSK	**Karacayir**	**2.15**	**317**	*e*PN	**Pg**	**06 44 37.6**	**+1.1**

DJA 04 07:08:18, 888S×11100E, h17km**, MLv3.8**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.07**	**334**	P	Pb	07 08 37.6	-0.5
UGM				S	Sb	07 08 53.4	+1.6
SJI	**Sawahan**	**1.37**	**34**	P	Pn	07 08 40.9	-1.4
SJI				S	Sn	07 09 00.1	0.0
KRKI	**Karangkates**	**1.61**	**64**	P	Pn	07 08 47.2	+1.6
BJII	**Banjamegara**	**2.00**	**320**	P	Pn	07 08 51.3	+0.3

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*CSEM **04** 07:12:00.5, 3492N×2722E, h25km, MD3.5/3, After ATH*
ATH 04 07:12:00.6, 3493N×2722E, h27km**, MD3.5**/3**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.62**	**356**	*e*PB	Pb	07 12 12.4	-0.5
KARP				*e*SN	Sn	07 12 22.5	-0.1
KARP	**Karpathos**	**0.62**	**356**	*e*Pb	Pb	07 12 12.4	-0.5
KARP				*e*Sn	Sn	07 12 22.6	0.0
NPS	**Neapolis**	**1.36**	**285**	*e*PN	Pn	07 12 25.5	+1.7
ARG	**Arkhangelos**	**1.48**	**30**	*e*PN	Pn	07 12 27.8	+2.3

IDC 04 07:17:24.7±2.2**, 1624S**×**17314W, h0**km**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/17**, mbtmp3.6**/4**, ML1.4**/1**, Error ellipse: s-maj=126.1km s-min=27.2km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.66**	**30**	Pn	Pn	07 18 07.9	-1.0
	3.8nm,0.3s,baz=247,slow=18,SNR=3.0						
AFI				Sn	Sn	07 18 35.4	-6.5
	20nm,0.3s,baz=70,slow=21,SNR=10						
ASAR	**Alice Springs**	**50.09**	**253**	P	P	07 26 20.8	-1.0
	0.6nm,0.7s,baz=85,slow=8.9,SNR=7.1						
NVAR	**Mina Array Bea**	**74.78**	**42**	P	P	07 29 06.2	-0.6
	0.6nm,0.8s,baz=229,slow=8.2,SNR=2.7						
PDAR	**Pinedale Array**	**82.72**	**42**	P	P	07 29 51.5	+1.1
	0.7nm,0.8s,baz=217,slow=3.7,SNR=4.5						
BRTR	**Keskin Array B**	**146.96**	**320**	PKPbc	PKPbc	07 37 10.1	+0.6
	1.0nm,0.8s,baz=48,slow=1.8,SNR=4.5						
GERES	**GERESS Array B**	**147.00**	**352**	PKPbc	PKPbc	07 37 10.2	+0.8
	0.4nm,0.6s,baz=52,slow=1.6,SNR=4.4						

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*ISCJB **04** 07:26:33.3±0.8, 1742S±008×17890W±007, h524km±10km, mb4.3/26, Error ellipse: s-maj=13.0km s-min=8.8km az=142.3*
*IDC **04** 07:26:33.6±1.4, 1735S×17882W, h515km±16km, mb3.6/14, mb1 3.8/15, mb1mx3.8/18, mbtmp3.6/15, Error ellipse: s-maj=17.3km s-min=11.3km az=137.0*
*NEIC **04** 07:26:33.2±0.9, 1743S×17877W, h516km±10km, mb4.7/15, Error ellipse: s-maj=13.3km s-min=8.2km az=136.0*
*MOS **04** 07:26:33.1±1.6, 1737S×17891W, h513km, mb4.7/6, Error ellipse: s-maj=18.7km s-min=13.6km az=160.6*
*BJI **04** 07:26:33.6, 17.16S×17802W, h548km, mB4.9, mb4.2*
ISC 04 07:26:33.9±0.8**, 1742S**±008×**17883W**±007**, h521**km±10km**, n109, σ0.93**/57**, mb4.3**/26**, 3C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.64**	**64**	P	**P**	**07 28 25.7**	**-1.5**
	15nm,0.3s,baz=246,slow=4.8,SNR=19						
AFI				S	**S**	**07 30 01.0**	**+0.9**
	3.2nm,0.3s,baz=41,slow=20,SNR=2.4						
AFI	**Afiamalu**	**7.64**	**64**	*e*Pn	**P**	**07 28 25.5**	**-1.8**
FUNA	**Funafuti**	**9.04**	**347**	*e*Pn	**P**	**07 28 41.8**	**+0.1**
	170nm,0.8s						
URZ	**Urewera**	**21.07**	**189**	P	**P**	**07 30 38.3**	**-2.7**
	5.3nm,0.7s,mb4.3,baz=320,slow=11,SNR=3.3						
URZ				S	**S**	**07 33 53.8**	**-7.2**
	4.3nm,0.7s,baz=105,slow=16,SNR=3.9						
RPZ	**Rata Peaks**	**27.58**	**196**	P	**P**	**07 31 38.5**	**-0.2**
	5.4nm,0.6s,mb4.3,baz=43,slow=3.5,SNR=3.5						
EIDS	**Eidsvold**	**29.06**	**249**	*e*P	**P**	**07 31 51.4**	**-0.6**
	14nm,0.7s,mb4.7						
ARMA	**Armidale**	**29.84**	**239**	⇓*i*P	**P**	**07 32 00.0**	**+1.3**
CTA	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**07 32 27.0**	**0.0**
	14nm,0.8s,mb4.5						
CTA	**Charters Tower**	**33.13**	**260**	P	**P**	**07 32 26.8**	**-0.2**
	19nm,0.8s,mb4.7,baz=87,slow=11,SNR=26						
CTA	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**07 32 27.0**	**0.0**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**07 32 26.6**	**-0.4**
CTAO				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,19nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**07 32 26.6**	**-0.5**
	comp=Z,19nm,0.8s,mb4.7						
CNB	**Canberra Magne**	**33.41**	**232**	⇓*i*P	**P**	**07 32 30.3**	**+1.2**
PMG	**Port Moresby**	**33.98**	**279**	*e*P	**P**	**07 32 35.3**	**+1.1**
PMG				pmax	pmax		
	comp=Z,46nm,0.9s						
PMG	**Port Moresby**	**33.98**	**279**	*e*P	**P**	**07 32 35.3**	**+1.0**
	comp=Z,46nm,0.9s,mb5.0						
COEN	**Coen**	**36.70**	**270**	*e*P	**P**	**07 32 57.6**	**+0.8**
	comp=Z,30nm,0.8s,mb4.9						
TOO	**Toolangi**	**37.17**	**230**	⇓*i*P	**P**	**07 33 01.4**	**+1.0**
STKA	**Stephens Creek**	**38.52**	**240**	⇓*i*P	**P**	**07 33 12.4**	**+0.9**
	comp=Z,14nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**38.52**	**240**	P	**P**	**07 33 12.2**	**+0.7**
	comp=Z,28nm,0.8s,mb4.9,baz=90,slow=9.4,SNR=74						
WB2	**Warramunga Arr**	**44.32**	**259**	⇓*i*P	**P**	**07 33 56.6**	**-1.0**
WRAB	**Tennant Creek**	**44.32**	**259**	*e*P	**P**	**07 33 56.7**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**44.32**	**259**	*e*P	**P**	**07 33 56.7**	**-0.9**
	comp=Z,16nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**44.54**	**254**	P	**P**	**07 33 59.4**	**0.0**
	comp=Z,111nm,0.8s,baz=88,slow=8.0,SNR=1161						
ASAR				PcP	PcP	07 35 31.4	0.0
	comp=Z,3.6nm,0.7s,baz=99,slow=4.0,SNR=6.8						
ASAR				ScP	ScP	07 38 35.1	+1.2
	comp=Z,2.4nm,0.8s,baz=103,slow=3.9,SNR=9.0						
ASAR				S	**S**	**07 39 54.0**	**-2.9**
	comp=Z,1.8nm,1.0s,baz=86,slow=16,SNR=8.5						
ASAR	**Alice Springs**	**44.54**	**254**	P	**P**	**07 33 59.4**	**+0.1**
ASAR					pP	07 35 31.4	-3.5
ASAR				S	**S**	**07 39 54.1**	**-2.8**
KAKA	**Kakadu**	**47.19**	**269**	⇓*i*P	x	07 34 02.1	
	comp=Z,50nm,0.6s						
FORT	**Forrest**	**49.86**	**244**	⇓*i*P	**P**	**07 34 38.8**	**-0.5**
	comp=Z,48nm,0.6s,mb5.1						
MBWA	**Marble Bar**	**57.80**	**256**	*e*P	**P**	**07 35 35.1**	**-0.5**
	comp=Z,20nm,0.8s,mb4.4						
KLBR	**Kellerberrin**	**58.69**	**243**	⇓*i*P	**P**	**07 35 40.7**	**-0.8**
	comp=Z,30nm,0.7s,mb4.6						
MUN	**Mundaring**	**59.99**	**243**	*e*P	**P**	**07 35 50.4**	**+0.2**
VNDA	**Vanda**	**60.90**	**185**	P	**P**	**07 35 56.4**	**+1.0**
	comp=Z,1.5nm,0.8s,mb3.4,baz=345,slow=5.6,SNR=8.6						
VNDA	**Vanda**	**60.90**	**185**	P	**P**	**07 35 56.4**	**+1.0**
KAPI	**Kappang**	**61.26**	**274**	*e*P	**P**	**07 35 57.9**	**-1.0**
	comp=Z,13nm,0.9s,mb4.3						
MJAR	**Matsushiro Arr**	**67.27**	**323**	P	**P**	**07 36 36.2**	**-0.3**
	comp=Z,4.8nm,0.6s,mb4.2,baz=163,slow=6.5,SNR=11						
MJAR	**Matsushiro Arr**	**67.27**	**323**	P	**P**	**07 36 36.2**	**-0.3**
PETK	**Petropavlovsk-**	**73.10**	**345**	P	**P**	**07 37 10.4**	**-0.4**
	comp=Z,5.2nm,0.6s,mb4.1,baz=120,slow=9.0,SNR=6.7						
KSRS	**Korea Array**	**74.07**	**318**	P	**P**	**07 37 17.3**	**+0.6**
	comp=Z,2.5nm,1.0s,mb3.6,baz=115,slow=5.7,SNR=4.5						
NVAR	**Mina Array Bea**	**79.35**	**44**	P	**P**	**07 37 46.1**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.2,baz=224,slow=9.3,SNR=6.0						
CN2	**Changchun**	**79.39**	**323**	*e*P	**P**	**07 37 46.4**	**+0.8**
TRF	**Thorofare Moun**	**83.62**	**12**	*e*P	**P**	**07 38 05.2**	**-1.6**
	comp=Z,7.6nm,0.6s,mb4.4						
MCK	**McKinley**	**84.15**	**13**	*e*P	**P**	**07 38 08.5**	**-1.0**
MCK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.3						
MCK	**McKinley**	**84.15**	**13**	*e*P	**P**	**07 38 08.5**	**-1.0**
	comp=Z,12nm,1.1s,mb4.3						
MAW	**Mawson**	**84.19**	**200**	P	**P**	**07 38 10.3**	**+0.5**
	comp=Z,2.2nm,0.5s,mb3.9,baz=90,slow=9.1,SNR=3.5						
XAN	**Xi'an**	**85.64**	**308**	P	**P**	**07 38 18.3**	**+0.8**
XAN				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.6						
XAN				AMB	AMB		
	comp=Z,79nm,6.3s						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**07 38 21.1**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=218,slow=5.9,SNR=3.8						
PDAR	**Pinedale Array**	**87.27**	**44**	P	**P**	**07 38 25.1**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.3,baz=203,slow=2.1,SNR=6.4						
CMAR	**Chiang Mai Arr**	**88.34**	**290**	P	**P**	**07 38 32.1**	**+1.6**
	comp=Z,2.3nm,0.4s,mb4.2,baz=106,slow=3.0,SNR=14						
SNAA	**Sanae**	**91.10**	**179**	*e*	**P**	**07 38 41.3**	**-1.0**
SNAA				*e*		07 38 43.4	
SNAA	**Sanae**	**91.10**	**179**	*e*P	**P**	**07 38 41.1**	**-1.2**
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SNAA	**Sanae**	**91.10**	**179**	*e*P	**P**	**07 38 41.1**	**-1.2**
	comp=Z,2.1nm,0.7s,mb4.2						
VNA3	**Neumayer Olymp**	**91.25**	**177**	*e*	**P**	**07 38 43.0**	**0.0**
VNA3				*e*		07 38 45.1	
VNA2	**Neumayer--Watz**	**91.69**	**177**	*e*	**P**	**07 38 45.0**	**0.0**
	baz=193,slow=2.9						
VNA2				*e*		07 38 46.7	
VNA1	**Neumayer--Stat**	**91.92**	**177**	*e*	**P**	**07 38 46.9**	**+0.8**
VNA1				*e*		07 38 48.7	
SONM	**Songino Array**	**92.92**	**319**	P	**P**	**07 38 50.6**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=134,slow=5.1,SNR=5.4						
YKA	**Yellowknife Ar**	**94.05**	**25**	P	**P**	**07 38 55.1**	**-0.8**
	comp=Z,0.8nm,0.6s,mb4.0,baz=245,slow=4.3,SNR=7.5						
MKAR	**Makanchi Array**	**108.50**	**314**	PKiKP	PKiKP	07 44 01.7	-1.4
	comp=Z,0.4nm,0.6s,baz=42,slow=1.3,SNR=3.2						
ARCES	**ARCESS Array B**	**125.76**	**350**	PKP	PKPdf	07 44 34.6	-0.9
	comp=Z,3.0nm,0.8s,baz=23,slow=1.4,SNR=8.7						
KWP	**Kalwaria**	**143.46**	**336**	*e*PKIKP	PKPdf	07 45 06.8	-2.1
BR131	**Keskin Array S**	**144.15**	**315**	*e*P	PKPdf	07 45 09.8	-0.7
BRTR	**Keskin Array B**	**144.15**	**315**	PKP	PKPdf	07 45 09.2	-1.3
	comp=Z,2.7nm,0.7s,baz=109,slow=3.3,SNR=15						
STHS	**Stebnicka Huta**	**144.18**	**337**	*e*PKP	PKPdf	07 45 10.2	0.0
KOLS	**Kolonicke sedl**	**144.19**	**336**	*i* PKP	PKPdf	07 45 10.1	-0.1
UZH	**Uzhgorod**	**144.43**	**336**	⇓*i*PKIKP	PKPdf	07 45 10.7	0.0
NIE	**Niedzica**	**144.52**	**338**	*e*P	PKPdf	07 45 11.0	+0.2
CRVS	**Cervenica-Dubn**	**144.53**	**337**	*e*PKP	PKPdf	07 45 11.0	+0.2
CLL	**Collm**	**144.90**	**347**	⇓*i*PKIKP	PKPdf	07 45 11.3	-0.1
CLL				pmax	pmax		
	comp=Z,26nm,1.1s						
CLL	**Collm**	**144.90**	**347**	⇓*i*PKPbc	PKPdf	07 45 11.3	-0.1
	comp=Z,26nm,1.1s						
UPC	**Upice**	**144.91**	**343**	*e*PKP	PKPdf	07 45 12.0	+0.6
DPC	**Dobruska-Polom**	**144.96**	**343**	*e*PKP	PKPdf	07 45 12.2	+0.7
BRG	**Berggiesshubel**	**145.09**	**346**	*i* PKIKP	PKPdf	07 45 12.2	+0.5
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG	**Berggiesshubel**	**145.09**	**346**	*i* PKIKP	PKPdf	07 45 12.3	+0.6
BRG	**Berggiesshubel**	**145.09**	**346**	*i* P	PKPdf	07 45 12.2	+0.5
	comp=Z,8.0nm,0.8s						
PVCC	**Panska Ves**	**145.26**	**345**	*e*PKP	PKPdf	07 45 12.8	+0.8
PRU	**Pruhonice**	**145.77**	**345**	*e*PKP	PKPdf	07 45 13.6	+0.7
VYHS	**Vyhne**	**145.82**	**339**	*e*PKP	PKPbc	07 45 14.9	+0.2
ZST	**Bratislava**	**146.65**	**340**	*e*PKP	PKPbc	07 45 17.6	+0.6
GRF	**Grafenberg Arr**	**146.79**	**348**	*e*PKP2	PKPbc	07 45 17.3	0.0
KHC	**Kasperske Hory**	**146.80**	**345**	*e*PKP	PKPbc	07 45 17.2	-0.2
GERES	**GERESS Array B**	**147.03**	**345**	PKPbc	PKPbc	07 45 17.8	-0.2
	comp=Z,2.9nm,0.5s,baz=30,slow=3.2,SNR=22						
GIVF	**Givet**	**147.26**	**356**	*e*PKP1	PKPbc	07 45 18.1	-0.5
CONA	**Conrad Observa**	**147.27**	**342**	⇑*i*PKiKP	PKiKP	07 45 19.1	-1.3
	comp=Z,8.6nm,0.6s						
CSNA	**Conrad Observa**	**147.27**	**342**	⇑*i*PKiKP	PKiKP	07 45 19.0	-1.4
	comp=Z,8.8nm,0.6s						
BAIF	**Baives**	**147.34**	**356**	*e*PKP1	PKPbc	07 45 18.5	-0.3
CDF	**Champ du Feu**	**148.68**	**352**	*e*PKP1	PKPbc	07 45 21.7	-0.5
FLN	**La Foliniere**	**148.71**	**2**	*e*PKP1	PKPbc	07 45 21.5	-0.8
	comp=Z,22nm,0.8s						
LDF	**La Druitiere**	**148.88**	**2**	*e*PKP1	PKPbc	07 45 21.9	-0.8
ROSF	**Rostrenen**	**148.95**	**6**	*e*PKP1	PKPbc	07 45 22.0	-0.9
WTTA	**Wattenberg**	**149.01**	**346**	⇓*i*PKPbc	PKPbc	07 45 22.7	-0.4
	comp=Z,9.4nm,0.5s						
GRR	**Gorron**	**149.06**	**3**	*e*PKP1	PKPbc	07 45 22.5	-0.7
	comp=Z,18nm,0.7s						
SGMF	**Saint Gilles**	**149.09**	**5**	*e*PKP1	PKPbc	07 45 22.5	-0.7
HAU	**Haudompre**	**149.20**	**353**	*e*PKP1	PKPbc	07 45 22.8	-0.7
HINF	**Hinteralfeld**	**149.32**	**352**	*e*PKP1	PKPbc	07 45 23.7	-0.1
FETA	**Feichten**	**149.44**	**347**	⇑*i*PKPbc	PKPbc	07 45 23.7	-0.4
	comp=Z,6.2nm,0.7s						
LOR	**Lormes**	**150.15**	**356**	*e*PKP1	PKPbc	07 45 25.4	-0.4
	comp=Z,9.8nm,0.5s						
SSF	**Saint Saulge**	**150.37**	**357**	*e*PKP1	PKPbc	07 45 26.0	-0.3
	comp=Z,9.9nm,0.5s						
CABF	**La Chapelle**	**150.60**	**353**	*e*PKP1	PKPbc	07 45 27.0	+0.2
	comp=Z,47nm,1.2s						
AVF	**Avril sur Loir**	**150.65**	**357**	*e*PKP1	PKPbc	07 45 26.1	-0.8
	comp=Z,5.4nm,0.6s						
SMF	**Signal de Mont**	**150.77**	**356**	*e*PKP1	PKPbc	07 45 26.4	-0.8
MFF	**Saint Martin d**	**150.88**	**2**	*e*PKP1	PKPbc	07 45 26.9	-0.6
BGF	**Bois d'Agland**	**150.91**	**358**	*e*PKP1	PKPbc	07 45 26.9	-0.6
	comp=Z,9.4nm,0.7s						
TCF	**Toulx Ste Croi**	**151.20**	**359**	*e*PKP1	PKPbc	07 45 27.5	-0.7
	comp=Z,13nm,0.8s						
LPL	**La Plagne**	**151.60**	**352**	*e*PKP1	PKPbc	07 45 29.3	+0.2
LPG	**La Plagne**	**151.61**	**352**	*e*PKP1	PKPbc	07 45 29.3	+0.1
RJF	**Les Rejaudoux**	**152.19**	**359**	*e*PKP1	PKPbc	07 45 29.8	-0.7
MBDF	**Montbardon**	**152.37**	**351**	*e*PKP1	PKPbc	07 45 30.6	-0.3
VIVF	**Saint-Julien-l**	**152.48**	**355**	*e*PKP1	PKPbc	07 45 30.7	-0.4
CAF	**Calviac**	**152.56**	**359**	*e*PKP1	PKPbc	07 45 30.8	-0.5
SBF	**Sospel**	**153.11**	**350**	*e*PKP1	PKPbc	07 45 31.5	-1.0
TORD	**Torodi Ar. Bea**	**175.73**	**187**	PKP	PKPdf	07 45 43.3	-1.6
	comp=Z,0.5nm,0.8s,baz=350,slow=2.6,SNR=2.6						
TORD				PKPab	PKPab	07 47 25.8	-0.6
	comp=Z,0.3nm,0.6s,baz=184,slow=3.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**175.73**	**187**	PKP	PKPdf	07 45 43.3	-1.6
TORD				PKPab	PKPab	07 47 25.8	-0.6

*ISCJB **04** 07:41:20.3±0.5, 36.92N±0.04×21.56E±0.05, h58km±6km, Error ellipse: s-maj=6.2km s-min=5.9km az=142.9*
*NEIC **04** 07:41:22.6, 37.13N×21.59E, h39km, MD3.6(ATH), After ATH.*
*ATH **04** 07:41:22.8, 37.14N×21.62E, h40km±1km, MD3.5/11*
*CSEM **04** 07:41:22.1±0.1, 37.04N×21.56E, h30km, ML3.6/2, Error ellipse: s-maj=2.3km s-min=1.7km az=3.0*
*THE **04** 07:41:24.2, 37.05N×21.73E, h37km±3km, ML3.6/2, Error ellipse: s-maj=3.5km s-min=1.1km az=197.0*
*HLW **04** 07:41:27.3, 36.35N×21.61E, h33km, Mb3.4*
ISC 04 07:41:22.2±0.5**, 36.98N**±0.03×**21.58E**±0.04**, h46**km±7km**, n40, σ0.98/54, 3C, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.15**	**122**	P	**Pn**	**07 41 29.8**	**0.0**
PYL				S	**Sn**	**07 41 35.8**	**+0.7**
ITM	**Ithomi**	**0.34**	**53**	*e*P	**Pn**	**07 41 30.6**	**-0.8**
ITM				*e*S	**Sn**	**07 41 36.9**	**-1.0**
ITM	**Ithomi**	**0.34**	**53**	*e*Pb	**Pn**	**07 41 30.2**	**-1.2**
ITM				*e*Sb	**Sn**	**07 41 36.9**	**-1.0**
RLS	**Riolos of Patr**	**1.08**	**355**	*e*P	**Pn**	**07 41 40.8**	**-0.1**
RLS	**Riolos of Patr**	**1.08**	**355**	*e*Pn	**Pn**	**07 41 41.5**	**+0.6**
VLI	**Veliai**	**1.12**	**103**	*e*P	**Pn**	**07 41 43.6**	**+2.2**
VLI	**Veliai**	**1.12**	**103**	*e*Pb	**Pn**	**07 41 43.5**	**+2.1**
KFL	**Anninata**	**1.30**	**331**	P	**Pn**	**07 41 46.4**	**+2.6**
KYTH	**Kithira**	**1.36**	**120**	*e*P	**Pn**	**07 41 48.1**	**+3.4**
KYTH	**Kithira**	**1.36**	**120**	*e*Pn	**Pn**	**07 41 48.5**	**+3.8**
DID	**Didima**	**1.42**	**68**	P	**Pn**	**07 41 45.8**	**+0.2**
DID				S	**Sn**	**07 42 01.8**	**-1.3**
VLS	**Valsamata**	**1.44**	**327**	*e*P	**Pn**	**07 41 46.6**	**+0.9**
VLS				*e*S	**Sn**	**07 42 03.4**	**0.0**
VLS	**Valsamata**	**1.44**	**327**	P	**Pn**	**07 41 47.4**	**+1.7**
VLS				*e*Sn	**Sn**	**07 42 02.7**	**-0.7**
VLS	**Valsamata**	**1.44**	**327**	*e*Pn	**Pn**	**07 41 46.6**	**+0.9**
VLS				*e*Sn	**Sn**	**07 42 02.7**	**-0.7**
LTK	**Loutraki**	**1.52**	**46**	P	**Pn**	**07 41 47.0**	**+0.1**
LTK				S	**Sn**	**07 42 04.4**	**-1.1**
NAIG	**Nisos Aigina**	**1.71**	**62**	*e*P	**Pn**	**07 41 50.5**	**+1.0**
EVR	**Evrytania**	**1.95**	**5**	*e*P	**Pn**	**07 41 52.7**	**0.0**
EVR	**Evrytania**	**1.95**	**5**	*e*Pb	**Pn**	**07 41 53.7**	**+1.0**
LKR	**Lokris**	**2.02**	**33**	P	**Pn**	**07 41 54.2**	**+0.6**
LKR				S	**Sn**	**07 42 17.0**	**-0.6**
PTL	**Penteli**	**2.11**	**59**	*e*P	**Pn**	**07 41 55.1**	**+0.2**
PTL	**Penteli**	**2.11**	**59**	*e*Pn	**Pn**	**07 41 55.0**	**+0.1**
AGG	**Agios Georgios**	**2.13**	**16**	P	**Pn**	**07 41 56.1**	**+0.9**
AGG				S	**Sn**	**07 42 21.1**	**+0.7**
THL	**Klokotos Trika**	**2.61**	**7**	P	**Pn**	**07 42 02.2**	**+0.4**
THL				S	**Sn**	**07 42 32.3**	**+0.1**
THL	**Klokotos Trika**	**2.61**	**7**	*e*P	**Pn**	**07 42 02.2**	**+0.4**
XOR	**Xorichti**	**2.70**	**28**	P	**Pn**	**07 42 03.7**	**+0.6**
JAN	**Janina**	**2.74**	**348**	*e*P	**Pn**	**07 42 04.1**	**+0.5**
JAN	**Janina**	**2.74**	**348**	*e*Pn	**Pn**	**07 42 04.2**	**+0.6**
KEK	**Kerkira**	**3.07**	**333**	*e*P	**Pn**	**07 42 08.8**	**+0.7**
KEK	**Kerkira**	**3.07**	**333**	*e*Pn	**Pn**	**07 42 08.0**	**-0.1**
LAST	**Lasithi**	**3.64**	**119**	P	**Pn**	**07 42 17.4**	**+1.5**
KRUS	**Krusevo**	**4.39**	**357**	*i* Pn	**Pn**	**07 42 26.2**	**-0.1**
KRUS				*i* Sn	**Sn**	**07 43 13.7**	**-2.5**
PE1	**Pezze di Greco**	**5.01**	**321**	*e*Pn	**Pn**	**07 42 34.3**	**-0.5**
LTRZ	**Laterza**	**5.19**	**316**	Pn	**Pn**	**07 42 36.6**	**-0.6**
LTRZ				Sn	**Sn**	**07 43 30.9**	**-4.9**
SSY	**Sortino**	**5.21**	**274**	Pn	**Pn**	**07 42 36.8**	**-0.7**
SG1	**Sgolgore (BA)**	**5.43**	**317**	*e*Pn	**Pn**	**07 42 39.8**	**-0.7**
HMDC	**Modica**	**5.44**	**272**	Pn	**Pn**	**07 42 40.5**	**-0.2**
HVZN	**Vizzini**	**5.49**	**274**	Pn	**Pn**	**07 42 41.4**	**0.0**
	295nm,0.5s						
SLUM		**6.24**	**150**	⇑*e*P	**Pn**	**07 42 49.9**	**-1.7**
SLUM				S	**Sn**	**07 43 50.3**	**-11**
HMAT	**Matruh**	**7.44**	**140**	⇑*e*P	**Pn**	**07 43 07.5**	**-0.6**
HFRF	**Wahat Farafira**	**11.33**	**148**	⇑*e*P	**Pn**	**07 44 00.0**	**-1.4**

GUC 04 07:44:15.9±1.0**, 23.41S**×**70.36W, h36**km±6km**, MD3.9, ML2.8, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.15**	**83**	*e*P	Pn	07 44 22.1	-0.2
CEN1				*i* S	Sn	07 44 27.2	+0.4
CEN1				AML	AML	07 44 28.9	
	comp=N,1µm,0.4s						
ANCH	**Antofagasta**	**0.28**	**189**	⇑*e*P	Pn	07 44 23.4	-0.3
ANCH				*i* S	Sn	07 44 28.5	-0.4
MECH	**Mejillones**	**0.31**	**346**	*e*P	Pn	07 44 23.5	-0.5
MECH				*i* S	Sn	07 44 29.7	+0.1
MECH				AML	AML	07 44 30.5	
	comp=E,3µm,0.3s						
CPN1	**Cerro Paranal**	**1.21**	**182**	*e*P	Pn	07 44 37.2	+0.8
CPN1				*i* S	Sn	07 44 53.2	+1.7
CPN1				AML	AML	07 44 54.9	
	comp=E,280nm,0.2s						
TOCH	**Tocopilla**	**1.32**	**7**	*e*P	Pn	07 44 38.9	+1.1
TOCH				*i* S	Sn	07 44 55.8	+1.6
LVC	**Limon Verde**	**1.56**	**60**	*e*P	Pn	07 44 44.6	+3.5
LVC				*e*S	Sn	07 45 05.8	+5.8

*NEIC **04** 07:47:40.6, 32.94S×73.03W, h21km, ML3.3(GUC), After GUC.*
GUC 04 07:47:40.6±0.5**, 32.94S**×**73.03W, h21**km±2km**, MD3.7, ML3.3, 1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**1.69**	**127**	⇓*i*P	Pn	07 48 09.2	+0.3
LNV				*i* S	Sn	07 48 30.9	+1.0
PEL	**Peldehue**	**1.98**	**97**	*e*P	Pn	07 48 13.8	+0.9
PEL				*i* S	Sn	07 48 39.4	+2.4
PEL				AML	AML	07 48 41.4	
	comp=N,811nm,0.6s						
ANTU	**Antumapu**	**2.10**	**108**	*e*P	Pn	07 48 15.9	+1.3
ANTU				*i* S	Sn	07 48 42.7	+2.6
ANTU	**Antumapu**	**2.10**	**108**	*e*P	Pn	07 48 15.9	+1.3
ANTU				*i* S	Sn	07 48 42.7	+2.6
ANTU				AML	AML	07 48 44.6	
	comp=N,224nm,0.5s						
CLCH	**Cerro Calan**	**2.14**	**103**	*e*P	Pn	07 48 16.6	+1.5
CLCH				*i* S	Sn	07 48 43.8	+2.8
CLCH				AML	AML	07 48 46.1	
	comp=E,232nm,0.9s						
CHCH	**Chadas Angostu**	**2.22**	**117**	*e*P	Pn	07 48 16.8	+0.6
FCH	**Farellones**	**2.33**	**100**	*i* S	Sn	07 48 49.0	+3.3
FCH				AML	AML	07 48 50.1	
	comp=N,201nm,0.2s						
LMEL	**Las Melosas**	**2.53**	**112**	*e*P	Pn	07 48 22.0	+1.6
LMEL				*i* S	Sn	07 48 53.5	+2.9
LMEL	**Las Melosas**	**2.53**	**112**	*e*P	Pn	07 48 22.0	+1.6
LMEL				*i* S	Sn	07 48 53.5	+2.9
LMEL				AML	AML	07 48 56.6	
	comp=N,172nm,0.1s						
LCO	**Las Campanas**	**4.40**	**28**	*e*Pn	Pn	07 48 41.8	-4.3

*NEIC **04** 07:53:22.5, 17.05N×100.25W, h4km, MD3.8(MEX), After MEX.*
MEX 04 07:53:22.5±1.0**, 17.06N**×**100.25W, h5**km±7km**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.02**	**247**	*i* P	Pg	07 53 22.4	-1.1
CAIG				*i* S	Sg	07 53 23.2	-1.1
ACX	**Acapulco**	**0.37**	**121**	*i* P	Pg	07 53 29.3	-0.3
ACX				*i* S	Sg	07 53 35.1	+0.6
ACX	**Acapulco**	**0.37**	**121**	*i* P	Pg	07 53 29.3	-0.3
ACX				*i* S	Sg	07 53 34.8	+0.4
ACX				*i* S	Sg	07 53 35.1	+0.6
MEIG	**Mezcala**	**1.05**	**35**	*e*P	Pg	07 53 39.5	-3.2
MEIG				*i* S	Sg	07 53 53.8	-2.6
ZIIG	**Zihuatanejo**	**1.29**	**295**	*i* P	Pn	07 53 43.4	-3.7
ZIIG				*i* S	Sg	07 54 00.1	-3.8
PLIG	**Platanillo**	**1.51**	**28**	*e*P	Pn	07 53 47.6	-2.5
PLIG				*i* S	Sn	07 54 05.7	-4.5
PLIG	**Platanillo**	**1.51**	**28**	*e*P	Pn	07 53 47.5	-2.6
PLIG				*i* S	Sn	07 54 06.4	-3.8
YAIG	**Yautepec**	**2.12**	**32**	*e*P	Pn	07 53 56.1	-2.4
YAIG				*i* S	Sn	07 54 20.0	-5.2
YAIG	**Yautepec**	**2.12**	**32**	*e*P	Pn	07 53 56.1	-2.4
YAIG				*i* S	Sn	07 54 21.8	-3.5
PNIG	**Pinotepa**	**2.14**	**108**	*i* P	Pn	07 53 56.1	-2.6
PNIG				*i* S	Sn	07 54 20.7	-5.0
UTMO	**Huajuapan**	**2.46**	**71**	*i* P	Pn	07 54 00.9	-2.3
UTMO				*i* S	Sn	07 54 29.4	-4.2
PPM	**Popocatepetl**	**2.52**	**37**	*i* P	Pn	07 54 05.8	+1.7
PPM				*i* S	Sn	07 54 29.7	-5.6
TPIG	**Tehuac#an**	**3.07**	**63**	*e*P	Pn	07 54 08.7	-2.9
TPIG				*i* S	Sn	07 54 46.0	-2.6
VHO	**Vista Hermosa**	**3.36**	**89**	*e*P	Pn	07 54 10.0	-5.6
VHO				*i* S	Sn	07 54 52.5	-3.4
VHO	**Vista Hermosa**	**3.36**	**89**	*e*P	Pn	07 54 12.4	-3.3
VHO				*i* S	Sn	07 54 52.5	-3.4

MEX 04 07:57:06.7±0.5**, 17.03N**×**100.29W, h6**km±7km**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.03**	**60**	*i* P	Pg	07 57 07.2	-0.7
CAIG				*i* S	Sg	07 57 07.9	-0.9
ACX	**Acapulco**	**0.40**	**115**	*i* P	Pg	07 57 14.2	-0.2
ACX				*i* S	Sg	07 57 19.5	-0.1
ZIIG	**Zihuatanejo**	**1.26**	**297**	*e*P	Pn	07 57 27.3	-3.5
ZIIG				*i* S	Sg	07 57 41.8	-5.3
PNIG	**Pinotepa**	**2.17**	**107**	*i* P	Pn	07 57 41.0	-2.4
PNIG				*i* S	Sn	07 58 06.3	-4.3

*ISCJB **04** 07:59:11.7±1.0, 29.84N±0.03×36.21E±0.05, h0km, Error ellipse: s-maj=6.6km s-min=4.7km az=178.9*
*GII **04** 07:59:12.3±0.8, 29.88N×36.10E, h0km, ML2.5/3, EXPLOSION*
*SGS **04** 07:59:12.7, 29.95N×36.26E, h9km*
ISC 04 07:59:11.6±1.1**, 29.84N**±0.03×**36.26E**±0.06**, h0**km**, n16, σ0.67/24, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.06**	**264**	Pg	**Pg**	**07 59 31.7**	**-0.2**
AQBJ				Sg	**Sg**	**07 59 45.0**	**-0.7**
HRFI	**Mount Harif**	**1.08**	**281**	Pg	**Pg**	**07 59 31.6**	**-0.7**
HRFI				Sg	**Sg**	**07 59 46.4**	**0.0**
EIL	**Elat**	**1.15**	**262**	Pg	**Pg**	**07 59 33.4**	**-0.3**
EIL				Sg	**Sg**	**07 59 49.3**	**+0.6**
MBRI	**Mt Berech**	**1.17**	**268**	Pg	**Pg**	**07 59 33.8**	**-0.3**
MBRI				Sg	**Sg**	**07 59 50.1**	**+0.8**
HQLS		**1.18**	**243**	S	**Sg**	**07 59 50.2**	**+0.8**
HQLS		**1.18**	**243**	P	**Pg**	**07 59 34.1**	**-0.1**
ZFRI	**Zfri**	**1.18**	**308**	Sg	**Sg**	**07 59 49.7**	**+0.2**
PRNI	**Paran**	**1.21**	**295**	Pg	**Pg**	**07 59 33.7**	**-1.0**
PRNI				Sg	**Sg**	**07 59 50.3**	**0.0**
JLOS		**1.29**	**212**	S	**Sg**	**07 59 53.9**	**+0.9**
JLOS		**1.29**	**212**	P	**Pg**	**07 59 36.3**	**0.0**
KRMI	**Paran Flat**	**1.36**	**282**	Pg	**Pg**	**07 59 36.7**	**-1.1**
KRMI				Sg	**Sg**	**07 59 55.2**	**-0.2**
RMNI	**Mount Ramon**	**1.50**	**301**	Pn	**Pn**	**07 59 39.4**	**-0.5**
RMNI				Sn	**Sn**	**07 59 59.4**	**-0.7**
MZDA	**Masada**	**1.66**	**332**	Sn	**Sn**	**08 00 04.3**	**+0.3**
BDAS	**Al Bad'**	**1.73**	**216**	P	**Pn**	**07 59 42.8**	**-0.2**
RTMI	**Retamim**	**1.82**	**312**	Sn	**Sn**	**08 00 08.5**	**+0.5**
DSI	**Dead Sea**	**1.89**	**336**	Pn	**Pn**	**07 59 45.2**	**+0.1**
DSI				Sn	**Sn**	**08 00 11.7**	**+2.1**

GUC 04 08:10:41.3±0.8**, 23.19S**×**70.53W, h35**km±4km**, MD3.9, ML2.6, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.12**	**42**	⇓*e*P	Pb	08 10 46.9	-0.5
MECH				*i* S	Sb	08 10 51.7	+0.1
MECH				AML	AML	08 10 52.7	
	comp=E,2µm,0.5s						
CEN1	**Los Morros**	**0.36**	**123**	*e*P	Pb	08 10 50.6	+0.5
CEN1				*i* S	Sb	08 10 56.9	+0.9
ANCH	**Antofagasta**	**0.50**	**167**	*e*P	Pn	08 10 51.8	-0.3
ANCH				*i* S	Sb	08 10 58.7	-0.7
TOCH	**Tocopilla**	**1.14**	**16**	*e*P	Pn	08 11 01.2	+0.5
TOCH				*i* S	Sn	08 11 16.1	+1.0
TOCH				AML	AML	08 11 18.6	
	comp=E,320nm,0.4s						
CPN1	**Cerro Paranal**	**1.43**	**175**	*i* S	Sn	08 11 23.2	+0.8
LVC	**Limon Verde**	**1.60**	**69**	*e*P	Pn	08 11 09.6	+2.4
LVC				*e*S	Sn	08 11 30.8	+4.2

*PGC **04** 08:21:20.4±3.6, 49.13N×129.97W, h10km, ML3.6/7, 253km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **04** 08:21:22.5±1.0, 49.35N×129.64W, h0km, mb3.9/7, mb1 4.1/13, mb1mx3.9/27, mbtmp3.9/13, ML3.7/6, MS3.8/20, Ms1 3.8/20, ms1mx3.7/36, Error ellipse: s-maj=21.0km s-min=11.4km az=70.0*
*ISCJB **04** 08:21:23.8±0.4, 49.38N±0.03×129.53W±0.06, h10km, mb4.2/16, MS4.0/17, Error ellipse: s-maj=5.5km s-min=4.6km az=150.6*
*NEIC **04** 08:21:25.4±0.8, 49.47N×129.49W, h10km, mb4.3/16, ML3.6(PGC), Error ellipse: s-maj=12.3km s-min=5.7km az=72.0*
*BJI **04** 08:21:25.4, 49.50N×129.50W, h10km, mB5.1, mb4.6, Ms4.8, Msz4.5*
ISC 04 08:21:25.6±0.4**, 49.44N**±0.03×**129.49W**±0.05**, h10**km**, (h15**km±.3km**:pP-P), n72, σ1.30/66, mb4.2/16, MS4.0/17, 5D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.32**	**57**	⇑Pn	**Pn**	**08 21 48.9**	**-1.2**
BPBC				⇓Sn	**Sn**	**08 22 10.4**	**+2.7**
HOLB	**Holberg**	**1.48**	**36**	⇓Pn	**Pn**	**08 21 51.1**	**-1.2**
EDB	**Eliza Dome**	**1.60**	**73**	⇑Pn	**Pn**	**08 21 53.0**	**-0.9**
EDB				⇓Sn	**Sn**	**08 22 15.5**	**+1.0**
MAYB	**Maynard**	**1.78**	**56**	Pn	**Pn**	**08 21 55.1**	**-1.2**
PHC	**Port Hardy**	**1.83**	**46**	Pn	**Pn**	**08 21 56.1**	**-1.0**
PHC				⇓Sn	**Sn**	**08 22 22.1**	**+1.8**
WOSB	**Woss**	**2.02**	**68**	Pn	**Pn**	**08 21 59.1**	**-0.6**
GDR	**Gold River**	**2.27**	**80**	⇓Pn	**Pn**	**08 22 01.7**	**-1.4**
BBB	**Bella Bella**	**2.88**	**17**	Pn	**Pn**	**08 22 11.0**	**-0.5**
	31nm,0.3s,baz=220,slow=11,SNR=166						
BBB				Sn	**Sn**	**08 22 45.1**	**-1.0**
	10nm,0.3s,baz=290,slow=12,SNR=3.2						
BBB				LR	LR	08 22 49.0	
	comp=Z,2µm,19.3s,baz=151,slow=29						
BBB	**Bella Bella**	**2.88**	**17**	Pn	**Pn**	**08 22 10.8**	**-0.7**
BBB				Sn	**Sn**	**08 22 46.8**	**+0.7**
PGC	**Sidney**	**4.05**	**99**	*e*Pn	**Pn**	**08 22 27.0**	**-0.5**
PGC				*e*S	**Sn**	**08 23 13.9**	**-1.1**
JCW	**Jim Creek**	**5.15**	**101**	*e*Pn	**Pn**	**08 22 42.9**	**+0.3**
JCW				*e*Sn	**Sn**	**08 23 39.6**	**-2.4**
COR	**Corvallis**	**6.44**	**137**	*e*Pn	**Pn**	**08 22 59.4**	**-1.0**
DLBC	**Dease Lake**	**9.02**	**358**	Pn	**Pn**	**08 23 36.1**	**+0.4**
	0.8nm,0.3s,baz=162,slow=12,SNR=5.4						
DLBC				LR	LR	08 26 41.1	
	comp=Z,853nm,20.3s,baz=168,slow=35						
DLBC	**Dease Lake**	**9.02**	**358**	*e*Pn	**Pn**	**08 23 37.5**	**+1.8**
DLBC				LR	LR	08 26 41.1	
YBH	**Yreka Blue Hor**	**9.05**	**146**	Pn	**Pn**	**08 23 37.0**	**+0.8**
	0.1nm,0.3s,baz=354,slow=15,SNR=5.9						
YBH				LR	LR	08 26 28.7	
	comp=Z,550nm,21.2s,baz=58,slow=34						
BMO	**Blue Mountains**	**9.48**	**114**	*e*Pn	**Pn**	**08 23 41.0**	**-1.1**
	2.5nm,0.6s						
WDC	**Whiskeytown Da**	**10.13**	**148**	*e*Pn	**Pn**	**08 23 50.0**	**-1.0**
	59nm,1.8s						
EDM	**Edmonton**	**10.78**	**63**	*e*Pn	**Pn**	**08 24 03.1**	**+3.3**
YKU2	**Yakutat**	**11.68**	**334**	*e*Pn	**Pn**	**08 24 10.0**	**-2.1**
HLID	**Hailey**	**11.93**	**114**	*e*Pn	**Pn**	**08 24 16.5**	**+0.9**
MCMT	**McKenzie Canyo**	**12.23**	**106**	*e*Pn	**Pn**	**08 24 20.5**	**+0.8**
ELK	**Elko**	**13.28**	**126**	LR	LR	08 29 56.0	

	comp=Z,409nm,20.6s,baz=313,slow=39						
NVAR	Mina Array Bea	13.62	140	Pn	Pn	08 24 40.5	+1.7
	0.0nm,0.3s,baz=290,slow=14,SNR=3.8						
SPUT	South Promonto	14.45	118	Pn	Pn	08 24 53.9	+3.9
	23nm,1.5s						
DUG	Dugway	14.99	122	eP	Pn	08 24 58.5	+1.1
	7.8nm,1.1s						
PDAR	Pinedale Array	15.33	108	Pn	Pn	08 25 02.1	+0.3
	0.0nm,0.3s,baz=312,slow=11,SNR=11						
PDAR				LR	LR	08 31 09.0	
	comp=Z,825nm,21.0s,baz=347,slow=38						
YKA	Yellowknife Ar	15.45	27	Pn	Pn	08 25 01.4	-1.8
	0.1nm,0.3s,baz=216,slow=12,SNR=15						
YKA				LR	LR	08 31 17.5	
	comp=Z,195nm,20.2s,baz=145,slow=38						
YKA	Yellowknife Ar	15.45	27	Pn	Pn	08 25 01.4	-1.8
YKA				LR	LR	08 31 17.5	
JLU	Jordanelle	15.49	118	eP	Pn	08 25 05.2	+1.3
	18nm,1.4s						
NLU	North Lily Min	15.56	121	eP	Pn	08 25 06.9	+2.0
	21nm,1.6s						
DAWY	Dawson	15.60	344	eP	Pn	08 25 06.6	+1.4
TPNV	Topopah Spring	15.75	137	P	Pn	08 25 07.1	-0.3
	28nm,1.4s						
DGMT	Dagmar	16.62	84	P	Pn	08 25 20.5	+2.0
	23nm,1.3s						
SRU	San Rafael	17.01	120	eP	Pn	08 25 22.8	-0.7
	6.8nm,0.9s						
FFC	Flin Flon	17.65	62	eP	Pn	08 25 32.6	+1.4
	58nm,0.9s						
RSSD	Black Hills	18.18	97	eP	Pn	08 25 39.7	+1.8
	41nm,1.8s						
SMCO	Snowmass	19.03	114	eP	Pn	08 25 46.8	-1.5
	7.0nm,1.1s						
MVCO	Mesa Verde	19.48	121	eP	Pn	08 25 52.4	-1.4
	20nm,1.1s						
SDCO	Great Sand Dun	20.84	115	eP	P	08 26 08.9	+1.6
	36nm,2.1s						
ULM	Lac du Bonnet	21.59	75	P	P	08 26 13.9	-1.3
	2.5nm,0.5s,mb3.9,baz=254,slow=4.2,SNR=2.7						
ULM				LR	LR	08 34 53.9	
	comp=Z,876nm,21.8s,MS4.1,baz=90,slow=37						
ULM	Lac du Bonnet	21.59	75	eP	P	08 26 15.7	+0.5
	37nm,1.2s,mb4.7						
ULM				LR	LR	08 34 53.9	
AGMN	Agassiz Refuge	22.05	80	eP	P	08 26 20.4	+0.2
	25nm,1.1s,mb4.5						
TUC	Tucson	22.10	134	eP	P	08 26 21.6	+0.7
	5.6nm,1.1s,mb3.9						
ANMO	Albuquerque	22.26	122	P	P	08 26 23.1	+0.6
	7.7nm,1.1s,mb4.1,baz=335,slow=11,SNR=10						
ANMO				LR	LR	08 34 42.5	
	comp=Z,149nm,21.9s,MS3.4,baz=332,slow=36						
ANMO	Albuquerque	22.26	122	eP	P	08 26 21.0	-1.5
	14nm,1.2s,mb4.2						
FCC	Fort Churchill	22.50	52	eP	P	08 26 25.1	+0.2
	1.1nm,1.3s,mb3.1						
ECSD	EROS,Sioux Fal	23.18	92	eP	P	08 26 30.7	-1.5
	10nm,1.1s,mb4.2						
EYMN	Ely	24.95	79	eP	P	08 26 49.2	+0.4
	20nm,1.0s,mb4.6						
TXAR	Lajitas Array	28.08	126	P	P	08 27 15.1	-2.1
	1.1nm,1.1s,mb3.4,baz=314,slow=9.5,SNR=2.7						
TXAR				LR	LR	08 39 16.1	
	comp=Z,166nm,20.3s,MS3.6,baz=45,slow=38						
SCHQ	Schefferville	37.68	57	LR	LR	08 44 48.0	
	comp=Z,283nm,19.7s,MS4.1,baz=311,slow=37						
PETK	Petropavlovsk-	43.89	304	P	P	08 29 29.9	-2.0
	2.7nm,0.8s,mb4.0,baz=50,slow=8.0,SNR=3.8						
PETK				LR	LR	08 45 07.7	
	comp=Z,45nm,20.6s,MS3.4,baz=260,slow=32						
ARCES	ARCESS Array B	59.92	10	LR	LR	08 57 20.7	
	comp=Z,74nm,19.4s,MS3.8,baz=340,slow=36						
MJAR	Matsushiro Arr	64.66	297	LR	LR	08 55 12.4	
	comp=Z,46nm,21.9s,MS3.6,baz=90,slow=31						
NOA	NORSAR Array B	65.42	20	LR	LR	08 59 01.0	
	comp=Z,81nm,18.0s,MS4.0,baz=0.0,slow=34						
PPT	Papeete	69.05	201	LR	LR	08 54 55.4	
	comp=Z,156nm,19.3s,MS4.3,baz=271,slow=29						
KSRS	Korea Array	69.79	304	LR	LR	09 01 43.7	
	comp=Z,31nm,18.2s,MS3.6,baz=138,slow=35						
SONM	Songino Array	71.75	324	LR	LR	09 08 15.5	
	comp=Z,62nm,18.9s,MS3.9,baz=60,slow=39						
ZALV	Zalesovo Beam	73.00	340	LR	LR	09 07 01.2	
	comp=Z,49nm,20.4s,MS3.8,baz=55,slow=38						
BJI	Beijing	73.80	313	P	P	08 33 00.6	+0.6
BJI				S	S	08 42 31.2	+0.1
BJI				AMB	AMB		
	comp=Z,142nm,6.8s						
BJI				LR	LR		
	comp=N,187nm,16.6s,MS4.7						
BJI				LR	LR		
	comp=E,239nm,14.9s,MS4.7						
BJI				LR	LR		
	comp=Z,50nm,18.8s,MS3.8						
HHC	Hu-ho-hao-te	75.29	317	eP	P	08 33 10.2	+1.6
HHC				AMB	AMB		
	comp=Z,147nm,4.0s						
KURK	Kurchatov	77.36	342	P	P	08 33 18.7	-1.5
	comp=Z,1.8nm,0.9s,mb4.0,baz=18,slow=5.3,SNR=2.1						
AKASG	Malin Array Be	78.58	14	P	P	08 33 26.7	-0.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=352,slow=5.6,SNR=3.4						
AKASG				LR	LR	09 09 02.8	
	comp=Z,127nm,20.3s,MS4.2,baz=300,slow=36						
MKAR	Makanchi Array	80.26	338	P	P	08 33 34.9	-1.3
	comp=Z,0.9nm,0.8s,mb3.8,baz=356,slow=4.3,SNR=4.0						
MKAR				LR	LR	09 09 45.8	
	comp=Z,76nm,18.3s,MS4.1,baz=176,slow=36						
WMQ	Urumqi	81.59	334	eP	P	08 33 45.5	+2.2
XAN	Xi'an	82.06	314	P	P	08 33 45.7	-0.3
XAN				AP	pP	08 33 50.1	+0.8
XAN				PP	PP	08 36 53.9	+0.7
XAN				PPP		08 38 51.0	
XAN				S	S	08 44 01.2	+0.9
XAN				SS	SS	08 49 20.6	+2.3
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.0						
XAN				AMB	AMB		
	comp=Z,15nm,13.5s						
LZH	Lanzhou	82.62	319	eP	P	08 33 50.6	+1.7
LZH				AP	pP	08 33 55.3	+3.1
LZH				XP	sP	08 33 57.5	+4.1
LZH				ePP	PP	08 37 01.9	+4.2
LZH				AMB	AMB		
	comp=Z,15nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,78nm,4.9s						
LZH				LR	LR		
	comp=E,152nm,18.0s						
LZH				LR	LR		
	comp=Z,226nm,19.2s,MS4.5						
CD2	Chengdu	87.05	316	P	P	08 34 12.5	+1.2
CD2				AP	pP	08 34 17.3	+2.7
CD2				XP	sP	08 34 19.3	+3.5
CD2				PP	PP	08 37 38.2	+4.4
CD2				SKS		08 44 36.5	
CD2				S	S	08 44 48.7	-1.5
CD2				XS	sS	08 44 57.1	+1.4
CD2				SS	SS	08 50 36.9	+5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.2						
CD2				AMB	AMB		
	comp=Z,170nm,9.3s						
CD2				LR	LR		
	comp=N,30nm,4.9s						
CD2				LR	LR		
	comp=Z,100nm,10.2s,MS4.5						
GYA	Guiyang	89.44	312	P	P	08 34 22.6	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
VNA3	Neumayer Olymp	145.27	150	ePKPdf	PKPdf	08 40 59.6	-2.3
VNA3				e		08 41 03.2	
VNA1	Neumayer--Stat	145.80	150	ePKPdf	PKPdf	08 41 01.0	-1.8
VNA2	Neumayer--Watz	146.05	150	ePKPdf	PKPdf	08 41 01.9	-1.3
	baz=309,slow=3.9						
VNA2				e		08 41 05.7	
SNAA	Sanae	147.35	152	ePKPdf	PKPdf	08 41 05.4	0.0
SNAA				e		08 41 09.1	

MAN 04 08:23:29, 1611N×12174E, h14^{km}, mb4.2, ML3.0, MS2.8, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.40	203	eP	Pg	08 23 38.3	+1.2
BALP				eS	Sg	08 23 45.4	+2.9
PCPH	Palayan	0.83	229⇓	iP	Pg	08 23 45.7	+0.7
PCPH				iS	Sg	08 24 00.2	+4.3
CAUP	Cauayan	0.83	5	eP	Pg	08 23 44.1	-1.0
CAUP				eS	Sg	08 23 54.1	-1.9
PALP	Palanan	1.15	35⇑	iP	Pb	08 23 50.7	0.0
PALP				eS	Sb	08 24 04.5	-1.0
POLP	Polilio Island	1.39	172	eP	Pn	08 24 00.6	+6.6
CVP	Callao Caves	1.58	3	eP	Pn	08 23 55.0	-1.7
CVP				eS	Sn	08 24 14.2	-2.8
BOLP	Bolinao	1.77	279	eP	Pn	08 24 02.2	+2.9
ABRA	Dolores	1.82	327	eP	Pn	08 24 00.2	+0.4
ABRA				eS	Sn	08 24 24.1	+1.3
GQP	Guinayangan	2.30	163⇓	eP	Pn	08 24 07.4	+0.9
GQP				eS	Sn	08 24 35.7	+1.1

NEIC 04 08:31:59.7, 3893N×4102E, h2^{km}, MD3.0(ISK), After ISK.
DDA 04 08:31:59.8, 3889N×41.14E, h12^{km}±2^{km}, Md3.3
ISK 04 08:31:59.2, 3894N×4101E, h5^{km}, MD2.9
ISCJB 04 08:32:00.4±0.6, 3895N±003×4104E±004, h5^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=3.4km az=38.2
CSEM 04 08:32:00.2±0.1, 3892N×4104E, h10^{km}, MD2.9, Error ellipse: s-maj=3.4km s-min=2.1km az=136.0
ISC 04 08:32:00.8±0.5, 3895N±003×4106E±004, h7^{km}±4^{km}, n21, σ0^{s}77/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.07	85	iP	Pg	08 32 02.5	-0.2
BNGL				iS	Sg	08 32 04.1	+0.1
EZM	Erzurum	0.98	13	ePG	Pg	08 32 19.6	-0.2
EZM				eSG	Sg	08 32 34.6	+2.0
ERZM	Erzurum	0.99	14	iP	Pg	08 32 19.2	-0.6
ERZM				iS	Sg	08 32 30.4	-2.2
BEST	Besiri	1.07	171	iP	Pg	08 32 21.0	-0.3
BEST				iS	Sg	08 32 36.1	+1.0
DIY	Diyarbakir	1.24	212	ePn	Pn	08 32 23.5	-1.0
DIY				Sg	Sg	08 32 40.5	-0.1
DIY				eSn	Sn	08 32 40.9	-0.5
DIY	Diyarbakir	1.24	212	Pn	Pn	08 32 23.5	-1.0
DIY				Sg	Sg	08 32 40.5	-0.1
EZC	Erzincan	1.26	310	ePN	Pn	08 32 28.8	+4.1
DIYA	Diyarbakir	1.26	216	iP	Pn	08 32 24.6	-0.2
DIYA				iS	Sb	08 32 41.5	+0.2
HOMI	Horasan	1.28	30	iP	Pn	08 32 24.7	-0.3
HOMI				iS	Sb	08 32 41.8	+0.1
PTK	Pertek	1.31	268	ePN	Pn	08 32 24.4	-1.0
PTK				eSN	Sn	08 32 42.6	-0.4
PTK	Pertek	1.31	268	Pn	Pn	08 32 24.9	-0.5
PTK				eSn	Sn	08 32 42.6	-0.5
PTK				Sg	Sg	08 32 42.9	+0.1
PTK	Pertek	1.31	268	Pn	Pn	08 32 24.9	-0.6
PTK				Sg	Sg	08 32 42.9	0.0
TUTA	Tutak	1.43	71	iP	Pn	08 32 26.7	-0.5
TUTA				iS	Sn	08 32 46.6	+0.4
SVRC	Sivrice-ELAZID	1.49	248	ePN	Pn	08 32 28.0	+0.1
SVRC				eSN	Sn	08 32 48.9	+1.3
AGRB	Hanur-Agry	1.62	67	ePN	Pn	08 32 30.7	+0.9
MARD	Mardin	1.65	188	iP	Pn	08 32 30.1	0.0
MARD				iS	Sn	08 32 50.6	-0.8
ELZG	Elazig	1.69	255	iP	Pn	08 32 31.5	+0.8
ELZG				iS	Sn	08 32 57.6	+5.1
GUMT	Gumushane	1.94	322	ePN	Pn	08 32 34.6	+0.4
GUMT	Gumushane	1.94	322	Pn	Pn	08 32 35.3	+1.1
URFA	Urfa	2.32	230	ePN	Pn	08 32 39.4	0.0
HAKT	HAKKARI	2.50	123	iP	Pn	08 32 48.2	+6.4
HAKT				iS	Sn	08 33 21.7	+9.2

ISCJB 04 08:33:16.7±1.4, 3524N±009×3315E±006, h64^{km}±11^{km}, Error ellipse: s-maj=15.0km s-min=8.1km az=168.2
CSEM 04 08:33:16.0±0.1, 3508N×3320E, h60^{km}, Mw3.0, Error ellipse: s-maj=3.9km s-min=2.7km az=151.0
NIC 04 08:33:16.6±0.2, 3521N×3320E, h61^{km}, ML2.9, MW3.0
ISK 04 08:33:17.0, 3554N×3304E, h5^{km}, MD2.6
ISC 04 08:33:16.8±1.3, 3524N±009×3315E±006, h64^{km}±11^{km}, n10, σ0^{s}62/16, 1C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAMC	Mammari	0.09	139	P	Pn	08 33 26.0	-0.3
LEF	Lefka	0.24	241	ePG	Pn	08 33 27.1	+0.1
LEF				eSG	Sn	08 33 34.4	+0.1
CSS	Prodhromos	0.31	151⇑	iP	Pn	08 33 26.7	-0.8
	8.7nm,0.2s						
CSS				S	Sn	08 33 34.4	-0.8
LFK	Lefkose	0.32	82	ePG	Pn	08 33 27.4	-0.1
LFK				eSG	Sn	08 33 35.4	+0.2
ALFC	Alevga	0.46	260	P	Pn	08 33 28.9	+0.2
	19nm,0.2s						
ALFC				S	Sn	08 33 37.8	+0.4
SZAC	Souni-Zanaja	0.53	205	P	Pn	08 33 29.0	-0.4
	15nm,0.2s						
SZAC				S	Sn	08 33 39.0	+0.4
PPCY	Paphos	0.75	242	P	Pn	08 33 32.2	+0.3
PHNC	Paralimni	0.76	108	P	Pn	08 33 31.4	-0.6
PHNC				S	Sn	08 33 44.0	+0.8
EREN	Erenkoy	0.88	70	ePG	Pn	08 33 35.1	+1.6
IKL	Isikli	1.09	23	ePG	Pn	08 33 35.3	-0.9

IDC 04 08:46:12.2±0.9, 2545S×6987E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, MS3.0/1, Ms1 3.2/1, ms1mx2.9/24, Error ellipse: s-maj=34.1km s-min=24.4km az=80.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	52.01	36	P	P	08 55 24.6	+1.0
	0.9nm,0.3s,baz=210,slow=6.8,SNR=4.2						
CMAR				LR	LR	09 13 32.0	
	comp=Z,13nm,18.4s,baz=40,slow=32						
ASAR	Alice Springs	57.76	103	P	P	08 56 04.8	-0.6
	0.7nm,0.6s,baz=251,slow=6.5,SNR=9.4						
QSPA	South Pole Qui	64.68	180	P	P	08 56 52.1	+0.7
	1.2nm,0.2s,baz=167,slow=0.9,SNR=3.9						
VNDA	Vanda	65.77	166	P	P	08 56 58.6	+0.1
	0.7nm,0.9s,baz=261,slow=4.6,SNR=4.3						
MKAR	Makanchi Array	72.78	9	P	P	08 57 41.8	-0.4
	0.5nm,0.7s,baz=202,slow=6.2,SNR=2.4						
BRTR	Keskin Array B	73.12	332	P	P	08 57 43.4	-1.0
	0.5nm,0.7s,baz=163,slow=10,SNR=3.1						
TORD	Torodi Ar. Bea	76.65	292	P	P	08 58 06.1	+0.7
	0.4nm,0.7s,baz=107,slow=6.3,SNR=3.2						
SONM	Songino Array	80.00	24	P	P	08 58 24.1	+1.0
	0.6nm,0.9s,baz=204,slow=5.0,SNR=4.2						

CSEM 04 08:49:55.8±0.1, 3706N×2931E, h10^{km}, MD3.0, Error ellipse: s-maj=3.1km s-min=2.5km az=41.0
ISK 04 08:49:55.8, 3705N×2929E, h8^{km}, MD2.8
ISCJB 04 08:49:56.8±0.7, 3705N±004×2924E±005, h5^{km}±8^{km}, Error ellipse: s-maj=6.6km s-min=6.1km az=44.3
DDA 04 08:49:59.0, 3705N×2929E, h7^{km}±2^{km}, Md3.0
ISC 04 08:49:57.4±0.6, 3702N±004×2927E±005, h17^{km}±8^{km}, n12, σ0^{s}81/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.32	46	iP	Pg	08 50 04.6	+0.4
GOLH				iS	Sg	08 50 09.8	+1.0
FETY	Fethiye	0.41	201	ePG	Pg	08 50 04.9	-0.8
FETY				eSG	Sg	08 50 11.4	+0.2
DALT	Dalyan (Mudla)	0.56	244	ePG	Pg	08 50 08.5	-0.1
ELL	Elmali	0.58	117	ePG	Pg	08 50 07.4	-1.4
ELL				eSG	Sg	08 50 16.2	-0.3
YER	Yerkesik	0.80	279	ePG	Pg	08 50 12.1	-0.8
AKAS	Kas	0.82	161	iP	Pg	08 50 13.8	+0.3
AKAS				iS	Sg	08 50 27.9	+3.6
MLSB	Milas	1.23	284	ePN	Pn	08 50 19.8	+0.1
KHL	Karahalli	1.32	9	ePN	Pn	08 50 20.3	-0.8
DAT	Datca	1.39	259	ePN	Pn	08 50 22.5	+0.6
BDRM	Kayabasi	1.46	273	iP	Pn	08 50 26.8	+3.9
BDRM				iS	Sn	08 50 48.1	+6.4
BODT	Bodrum	1.57	272	ePN	Pn	08 50 25.2	+0.8
KULA	Kula-Manisa	1.57	342	ePN	Pn	08 50 23.9	-0.6

IDC 04 09:30:25.3±3.2, 488S×15351E, h0^{km}, mb3.8/4, mb1 3.8/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=123.5km s-min=30.7km az=110.0
ISCJB 04 09:30:27.2±3.9, 50S±04×1539E±09, h33^{km}, mb3.7/4, Error ellipse: s-maj=135.4km s-min=21.7km az=23.8
ISC 04 09:30:30.4±3.8, 49S±04×1536E±09, h35^{km}, n6, σ0^{s}33/5, mb3.7/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	23.98	230	eP	P	09 35 42.0	+0.2
ASAR	Alice Springs	26.62	224	P	P	09 36 05.7	-0.1
	0.3nm,0.5s,mb3.1,baz=55,slow=9.0,SNR=9.7						
PETK	Petropavlovsk-	57.93	3	P	P	09 40 19.0	+0.1
	3.1nm,0.9s,mb4.3,baz=165,slow=6.5,SNR=4.1						
SONM	Songino Array	66.89	327	P	P	09 41 19.2	+0.3
	0.4nm,0.5s,mb3.7,baz=148,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	80.98	319	P	P	09 42 41.1	-0.4
	0.7nm,0.6s,mb3.7,baz=111,slow=6.3,SNR=3.6						
TORD	Torodi Ar. Bea	151.15	288	PKPbc	PKPbc	09 50 20.6	-0.4
	2.3nm,0.6s,baz=80,slow=2.0,SNR=18						

NEIC 04 09:33:41.3, 1424N×9294W, h21^{km}, MD4.3(MEX), After MEX.
MEX 04 09:33:41.2±1.1, 1424N×9294W, h22^{km}±28^{km}, MD4.3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.93	44	iP	Pb	09 33 55.8	-2.9
THIG				iS	Sb	09 34 06.5	-4.1
PCIG		1.48	350	iP	Pn	09 34 03.4	-3.1
PCIG				iS	Sn	09 34 21.6	-3.6
SCX	San Cristobal	2.50	7	iP	Pn	09 34 20.7	+0.2
TGIG		2.53	356	iP	Pn	09 34 19.8	-1.1
TGIG				iS	Sn	09 34 48.4	-2.7
CMIG	Matias Romero	3.40	327	iP	Pn	09 34 30.4	-2.5
CMIG				iS	Sn	09 35 08.4	-4.1
VHO	Vista Hermosa	4.61	308	iP	Pn	09 34 48.0	-1.6
VHO				iS	Sn	09 35 40.6	-1.9
PNIG	Pinotepa	5.44	294	iP	Pn	09 34 58.6	-2.4
PNIG				iS	Sn	09 35 59.2	-3.8

GUC 04 09:36:14.4±0.6, 2294S×7045W, h38^{km}±3^{km}, MD3.5, ML2.4, 1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.17	180	eP	Pn	09 36 20.6	-0.6
MECH				iS	Sn	09 36 25.9	-0.1
MECH				AML	AML	09 36 26.7	
	comp=E,1μm,0.6s						
CEN1	Los Morros	0.50	153⇑	eP	Pn	09 36 26.7	+1.6
CEN1				iS	Sn	09 36 35.7	+3.0
ANCH	Antofagasta	0.74	177	eP	Pn	09 36 28.3	-0.1
ANCH				iS	Sn	09 36 37.8	-0.7
TOCH	Tocopilla	0.87	15	eP	Pn	09 36 30.2	+0.1
TOCH				iS	Sn	09 36 42.1	+0.5
TOCH				AML	AML	09 36 42.9	
	comp=E,511nm,0.2s						
LVC	Limon Verde	1.46	77	eP	Pn	09 36 40.4	+2.2
LVC				iS	Sn	09 36 59.5	+3.5
LVC				AML	AML	09 37 02.2	
	comp=E,54nm,0.5s						

ISCJB 04 09:44:42.7±0.7, 2846S±004×6763W±009, h134^{km}±10^{km}, mb4.5/8, Error ellipse: s-maj=12.6km s-min=6.8km az=177.5
IDC 04 09:44:42.9±1.5, 2842S×6750W, h111^{km}±16^{km}, mb4.0/5, mb1 3.9/9, mb1mx3.8/19, mbtmp3.8/9, MS3.2/1, Ms1 3.1/1, ms1mx2.5/21, Error ellipse: s-maj=23.9km s-min=13.8km az=97.0
NEIC 04 09:44:43.1±0.7, 2843S×6747W, h116^{km}±8^{km}, mb4.3/2, MD4.1(SJA), Error ellipse: s-maj=13.1km s-min=8.4km az=103.0
NEIC Felt [III] in the Tinogasta area.
GUC 04 09:44:45.5±0.9, 2842S×6783W, h140^{km}, ML4.9
ISC 04 09:44:43.6±0.7, 2845S±004×6760W±008, h125^{km}±10^{km}, n33, σ1^{s}01/37, mb4.6/8, 3C, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	2.67	293	eP	Pn	09 45 26.6	+0.9
CPCH				iS	Sn	09 45 56.8	-1.4
LCO	Las Campanas	2.78	258	eP	Pn	09 45 28.4	+1.1
LCO				eS	Sn	09 46 01.4	+0.6
LCO	Las Campanas	2.78	258⇑	eP	Pn	09 45 28.4	+1.2
LCO				iS	Sn	09 46 01.0	+0.2
LCO				AML	AML	09 46 03.8	
	comp=N,6μm,0.3s						
LCO				AML	AML	09 46 03.8	
	comp=N,6μm,0.3s						
CFAA	Coronel Fontan	3.19	190	P	Pn	09 45 33.5	+0.9
	comp=N,3.0nm,0.3s,baz=356,slow=13,SNR=622						
CFAA				S	Sn	09 46 10.4	0.0
	comp=N,50nm,0.3s,baz=287,slow=23,SNR=46						
TLL	Tololo Astrono	3.28	238⇑	eP	Pn	09 45 34.9	+1.1
TLL				iS	Sn	09 46 13.1	+0.6
TLL	Tololo Astrono	3.28	238⇑	eP	Pn	09 45 34.9	+1.1
TLL				iS	Sn	09 46 13.1	+0.6
TLL				AML	AML	09 46 17.4	
	comp=N,932nm,0.5s						
OVCH	Ovalle	3.81	235	eP	Pn	09 45 40.0	-0.7
OVCH				iS	Sn	09 46 23.3	-1.6
CPN1	Cerro Paranal	4.56	326	eP	Pn	09 45 51.1	+0.3
CHNG	Los Chungos	4.81	224	eP	Pn	09 45 52.6	-1.5
CHNG				iS	Sn	09 46 45.6	-3.2
PEL	Peldehue	5.38	209	eP	Pn	09 46 02.3	+0.6
FCH	Farellones	5.39	205	eP	Pn	09 46 03.9	+2.1
CLCH	Cerro Calan	5.54	206	eP	Pn	09 46 03.8	-0.1
CLCH				iS	Sn	09 47 05.4	-1.0
LVC	Limon Verde	5.93	348	P	Pn	09 46 09.8	+0.6
	comp=N,22nm,0.3s,baz=173,slow=9.3,SNR=216						
LVC				S	Sn	09 47 11.4	-4.5
	comp=N,3.5nm,0.3s,baz=255,slow=15,SNR=3.8						
PLCA	Paso Flores	12.49	190	P	Pn	09 47 37.0	+0.1
	comp=N,0.1nm,0.3s,baz=24,slow=20,SNR=3.0						
PLCA				LR	LR	09 52 60.0	
	comp=N,105nm,20.8s,baz=106,slow=40						
SIV	San Ignacio	13.79	27	P	Pn	09 47 52.9	-1.0
	comp=N,0.6nm,0.3s,baz=241,slow=9.7,SNR=18						
BDFB	Brasilia	22.14	59	P	P	09 49 27.7	-1.6
	comp=N,1.7nm,0.4s,mb3.7,baz=228,slow=14,SNR=6.6						
BDFB	Brasilia	22.14	59	eP	P	09 49 26.7	-2.6
	comp=N,2.9nm,0.6s,mb3.8						
SDV	Santo Domingo	37.23	355	P	P	09 51 42.1	-1.1
	comp=N,1.6nm,0.4s,mb4.3,baz=252,slow=20,SNR=4.4						
TXAR	Lajitas Array	67.01	326	P	P	09 55 23.9	+0.7
	comp=N,0.1nm,0.6s,baz=180,slow=7.9,SNR=2.6						
LIC	Lamto	69.37	71	eP	P	09 55 38.0	-0.3
	comp=N,37nm,1.4s,mb5.0						
TIC	Toumodi	69.61	70	eP	P	09 55 39.1	-0.6
	comp=N,11nm,0.2s,mb5.4						
KIC	Kosan Boka	69.69	71	eP	P	09 55 40.2	0.0
	comp=N,16nm,0.5s,mb5.1						
DBIC	Dimbokro	69.76	70	P	P	09 55 40.8	+0.1
	comp=N,4.2nm,0.4s,mb4.7,baz=220,slow=6.4,SNR=23						
DBIC	Dimbokro	69.76	70	eP	P	09 55 40.6	-0.1
	comp=N,11nm,0.9s,mb4.7						
TOA0	Torodi Ar. Sit	78.68	68	eP	P	09 56 32.8	+0.4
TORD	Torodi Ar. Bea	78.68	68	P	P	09 56 33.0	+0.6
	comp=N,10nm,0.5s,mb4.9,baz=269,slow=5.8,SNR=133						
PDAR	Pinedale Array	80.70	330	P	P	09 56 44.0	+1.4
	comp=N,0.4nm,0.5s,mb3.5,baz=128,slow=7.0,SNR=5.8						
ASAR	Alice Springs	124.20	204	PKP	PKPdf	10 03 27.9	-0.3
	comp=N,0.2nm,0.5s,baz=110,slow=1.6,SNR=4.4						
ASAR				pPKP	pPKPdf	10 04 02.3	+0.7
	comp=N,0.2nm,0.5s,baz=144,slow=1.9,SNR=2.4						
EKS2	Erkin-Say	145.83	55	ePKPbc	PKPbc	10 04 09.3	+1.1
AAK	Ala-Archa	146.36	55	ePKPbc	PKPbc	10 04 11.9	+2.2
ZALV	Zalesovo Beam	147.52	31	PKPbc	PKPbc	10 04 13.7	+1.0
	comp=N,6.3nm,0.4s,baz=270,slow=1.5,SNR=28						
MKAR	Makanchi Array	150.19	44	PKPbc	PKPbc	10 04 20.5	+0.9
	comp=N,3.9nm,0.7s,baz=310,slow=2.2,SNR=19						
MKAR				PKPab	PKPab	10 04 27.3	+1.2
	comp=N,1.6nm,0.7s,baz=323,slow=3.9,SNR=9.2						
SONM	Songino Array	160.09	12	PKPab	PKPab	10 05 09.6	+1.4
	comp=N,0.2nm,0.4s,baz=328,slow=3.9,SNR=3.6						

IDC 04 09:45:38.3±3.3, 1883S×17751W, h0^{km}, mb3.7/4, mb1 4.1/4, mb1mx3.9/16, mbtmp3.7/4, Error ellipse:

s-maj=304.8km s-min=29.5km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.37	255	P	P	09 53 58.7	-0.1
	1.2nm,0.8s,baz=86,slow=8.1,SNR=14						
NVAR	Mina Array Bea	79.50	43	P	P	09 57 47.5	+0.6
	0.4nm,0.6s,baz=222,slow=9.1,SNR=3.5						
TXAR	Lajitas Array	85.77	57	P	P	09 58 19.7	-0.1
	0.4nm,0.7s,baz=233,slow=6.8,SNR=6.1						
PDAR	Pinedale Array	87.44	43	P	P	09 58 28.1	+0.5
	0.4nm,0.7s,baz=199,slow=1.9,SNR=2.7						

MAN 04 09:51:35,919N×12571E, h10km, mb4.2, ML3.0, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.62	340	⇑eP	Pg	09 51 47.7	+0.6

ISCJB 04 10:14:06.6±4.9, 144S±0.1×765W±02, h14km±31km, mb3.8/6, Error ellipse: s-maj=34.8km s-min=12.1km az=144.6
IDC 04 10:14:10.8±0.9, 14.15S×76.37W, h22km±5km, mb3.7/7, mb1 3.8/11, mb1mx3.7/20, mbtmp3.6/11, ML3.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/25, Error ellipse: s-maj=35.2km s-min=14.6km az=63.0
NEIC 04 10:14:11.2±3.3, 1421S×7632W, h28km±24km, mb4.1/2, Error ellipse: s-maj=22.6km s-min=9.7km az=59.0
ISC 04 10:14:11.9±3.3, 143S±01×763W±02, h35km±25km, n16, σ1.02/16, mb3.8/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.34	347	Pn	Pn	10 14 47.0	-0.9
	26nm,0.3s,baz=174,slow=14,SNR=42						
NNA				Lg		10 15 19.4	
	148nm,0.3s,baz=230,slow=17,SNR=18						
ATAH	Atahualpa	7.52	344	Pn	Pn	10 15 58.7	-0.5
	1.5nm,0.3s,baz=237,slow=17,SNR=10						
ATAH				Sn	Sn	10 17 32.9	+10
	0.8nm,0.3s,baz=356,slow=19,SNR=2.5						
ATAH				LR	LR	10 19 03.3	
	comp=Z,78nm,19.4s,baz=19,slow=40						
LVC	Limon Verde	10.85	141	Pn	Pn	10 16 44.9	+0.1
	0.9nm,0.3s,baz=312,slow=9.6,SNR=7.2						
LVC				Sn	Sn	10 18 42.7	-2.4
	0.5nm,0.3s,baz=337,slow=14,SNR=4.0						
LVC				Lg		10 19 45.6	
	baz=343,slow=19,SNR=3.2						
SIV	San Ignacio	14.81	99	Pn	Pn	10 17 39.3	+0.4
	0.1nm,0.3s,baz=5.2,slow=11,SNR=3.6						
CFAA	Coronel Fontan	18.76	158	P	Pn	10 18 30.2	+1.6
	0.0nm,0.3s,baz=319,slow=9.2,SNR=3.1						
SDV	Santo Domingo	23.70	14	P	P	10 19 21.5	+0.8
	1.6nm,0.3s,mb3.9,baz=198,slow=13,SNR=3.7						
SDV	Santo Domingo	23.70	14	eP	P	10 19 21.0	+0.2
	3.5nm,0.5s,mb4.0						
BDFB	Brasilia	27.36	96	LR	LR	10 31 51.7	
	comp=Z,74nm,19.6s,baz=114,slow=39						
TXAR	Lajitas Array	50.78	329	P	P	10 23 09.2	+0.3
	0.6nm,0.9s,mb3.5,baz=151,slow=8.5,SNR=4.4						
TXAR				pP	pP	10 23 15.2	-4.0
	1.4nm,0.9s,baz=147,slow=8.6,SNR=8.2						
PDAR	Pinedale Array	64.46	333	P	P	10 24 46.0	+1.1
	0.3nm,0.6s,mb3.5,baz=143,slow=6.6,SNR=3.5						
NVAR	Mina Array Bea	65.53	325	P	P	10 24 50.6	-1.3
	0.1nm,0.4s,baz=141,slow=4.4,SNR=2.1						
NVAR				pP	pP	10 24 58.7	-3.9
	0.6nm,0.7s,baz=124,slow=4.4,SNR=3.0						
DBIC	Dimbokro	73.86	79	P	P	10 25 44.4	+0.7
	1.6nm,0.7s,mb4.0,baz=244,slow=3.6,SNR=2.6						
DBIC	Dimbokro	73.86	79	eP	P	10 25 44.0	+0.2
	1.3nm,0.6s,mb4.0						
TORD	Torodi Ar. Bea	81.90	74	P	P	10 26 29.3	+0.8
	4.3nm,0.7s,mb4.5,baz=265,slow=4.9,SNR=27						
YKA	Yellowknife Ar	82.18	343	P	P	10 26 28.0	-0.8
	0.2nm,0.4s,mb3.4,baz=153,slow=6.4,SNR=4.5						
SONM	Songino Array	146.47	357	PKPbc	PKPbc	10 33 49.7	+0.3
	0.4nm,0.6s,baz=340,slow=1.7,SNR=3.5						
SONM				pPKPbc	pPKPbc	10 33 57.5	-3.2
	0.8nm,0.6s,baz=322,slow=2.2,SNR=5.8						

DJA 04 10:15:58,098N×12634E, h25km, MLv4.4/1, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.05	101	P	Pn	10 16 16.1	-1.0
TNTI				S	Sb	10 16 31.6	+0.8
MNI	Manado	1.57	287	P	Pn	10 16 24.1	-0.2
MNI				S	Sn	10 16 45.2	+1.4
LBMI	Labuha	1.98	144	P	Pn	10 16 30.7	+0.7
LBMI				S	Sn	10 16 55.7	+1.7

MAN 04 10:44:13,610N×12589E, h120km, mb4.7, ML3.6, MS3.6, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.93	269	⇑eP	Pn	10 44 34.2	-0.2
GSPH				eS	Sn	10 44 49.2	-1.3
KCP	Kidapawan	1.20	319	⇑iP	Pn	10 44 38.1	+1.0
KCP				iS	Sn	10 44 57.0	+1.6
BIPH	Bislig	2.12	13	⇑eP	Pn	10 44 48.9	+0.9
BIPH				iS	Sn	10 45 16.9	+2.2

IDC 04 11:27:42.2±2.4, 376S×10056E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/18, mbtmp4.1/6, Error ellipse: s-maj=85.1km s-min=25.0km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.13	356	P	P	11 32 40.5	+1.0
	2.1nm,0.7s,baz=182,slow=9.8,SNR=6.5						
ASAR	Alice Springs	37.79	125	P	P	11 35 00.2	-0.2
	0.5nm,0.3s,baz=296,slow=7.5,SNR=6.5						
KSRS	Korea Array	48.26	29	P	P	11 36 24.2	-0.8
	3.7nm,1.1s,baz=220,slow=9.5,SNR=4.9						
SONM	Songino Array	51.63	5	P	P	11 36 50.7	+0.2
	2.0nm,0.6s,baz=190,slow=9.8,SNR=18						
MKAR	Makanchi Array	52.86	344	P	P	11 36 59.5	-0.1
	2.3nm,0.8s,baz=149,slow=8.1,SNR=13						
ZALV	Zalesovo Beam	58.99	349	P	P	11 37 42.9	-0.6
	2.8nm,0.8s,baz=180,slow=4.4,SNR=13						
TXAR	Lajitas Array	145.73	40	PKPbc	PKPbc	11 47 24.1	+0.2
	2.4nm,0.6s,baz=266,slow=0.7,SNR=52						

KRSC 04 12:00:58.4±0.6, 5615N×16369E, h22km±21km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.49	277	iP	Pb	12 01 08.0	-0.3
KBTR				iS	Sb	12 01 15.7	+0.6
SRKR	Sorokina	1.49	291	eP	Pn	12 01 23.5	-0.3
SRKR				iS	Sn	12 01 42.0	-0.5
ZLN	Zelenaya	1.62	266	iP	Pn	12 01 27.4	+1.8
ZLN				eS	Sn	12 01 49.0	+3.2
KLY	Klyuchi	1.70	277	iP	Pn	12 01 26.0	-0.7
KLY				iS	Sn	12 01 45.9	-1.9
KRSR	Krestovskiy	1.75	273	eP	Pn	12 01 28.2	+0.9
KRSR				eS	Sn	12 01 49.9	+1.0
BZMR	Bezymyannaya	1.81	264	eP	Pn	12 01 29.8	+1.6
BZMR				eS	Sn	12 01 52.9	+2.5
MKZ	Mys Kozlova	1.95	216	eP	Pn	12 01 31.6	+1.5
MKZ				eS	Sn	12 01 55.4	+1.5
KPT	Kopyto	1.95	266	eP	Pn	12 01 32.4	+2.2
KPT				eS	Sn	12 01 57.3	+3.3
KMNR	Kamenistaya	1.98	260	eP	Pn	12 01 32.7	+2.2
KMNR				eS	Sn	12 01 58.3	+3.6
KOZ	Kozyrevsk	2.14	269	iP	Pn	12 01 35.0	+2.3
KOZ				iS	Sn	12 02 01.4	+2.8
TUMR	Tumrok	2.19	248	eP	Pn	12 01 35.8	+2.5
SRDR	Sredinnyy	2.23	276	eP	Pn	12 01 35.1	+1.2
SRDR				iS	Sn	12 02 02.3	+1.7
KII	Karymskiy	3.23	231	P	Pn	12 01 50.7	+3.0
KII				iS	Sn	12 02 29.3	+3.9
SPN	Mys Shipunski	3.73	216	eP	Pn	12 01 55.6	+1.1
SPN				iS	Sn	12 02 36.0	-1.7
NLC	Nalytchevo	3.91	222	eP	Pn	12 01 59.2	+2.2
NLC				iS	Sn	12 02 42.9	+0.7
AVH	Avacha	4.08	227	eP	Pn	12 02 02.8	+3.5
GNL	Ganaly	4.13	236	eP	Pn	12 02 03.2	+3.2
PET	Petropavlovsk	4.29	225	P	Pn	12 02 04.5	+2.3
PET				iS	Sn	12 02 52.9	+1.4
RUS	Russkaya	4.80	221	eP	Pn	12 02 11.6	+2.3

SGS 04 12:11:03.4, 3039N×3639E, h4km
CSEM 04 12:11:07.5±0.3, 2974N×3638E, h2km, ML2.9, Error ellipse: s-maj=6.6km s-min=2.7km az=77.0
ISCJB 04 12:11:08.1±0.7, 2988N±003×3628E±004, h0km, Error ellipse: s-maj=6.1km s-min=4.2km az=147.9
GII 04 12:11:08.4±1.1, 2989N×36.18E, h0km, ML2.1/4, EXPLOSION
HLW 04 12:11:08.1, 2974N×3668E, h21km, Mb2.9
ISC 04 12:11:08.2±0.7, 2987N±004×3632E±005, h0km, n24, σ1.01/33, 3C-3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.11	263	Pg	Pg	12 11 28.8	-0.7
HRFI	Mount Harif	1.13	279	Pg	Pg	12 11 28.9	-1.0
HRFI				Sg	Sg	12 11 45.4	+1.0
ZFRI	Zfri	1.20	305	Pg	Pg	12 11 29.7	-1.6
ZFRI				Sg	Sg	12 11 46.4	-0.5
EIL	Elat	1.21	261	Pg	Pg	12 11 30.7	-0.7
EIL				Sg	Sg	12 11 47.5	+0.5
MBRI	Mt Berech	1.22	267	Pg	Pg	12 11 30.8	-0.9
MBRI				Sg	Sg	12 11 48.5	+1.0
HQLS		1.23	243	P	Pg	12 11 30.6	-1.3
PRNI	Paran	1.24	293	Pg	Pg	12 11 30.8	-1.2
PRNI				Sg	Sg	12 11 48.5	+0.5
JLOS		1.34	213	P	Pg	12 11 33.5	-0.4
KRMI	Paran Flat	1.41	281	Pg	Pg	12 11 33.8	-1.4
KRMI				Sg	Sg	12 11 53.3	-0.1
HBST	Basata	1.53	245	⇓eP	Pn	12 11 36.6	-0.2
TBKS	Tabuk	1.65	173	S	Sn	12 12 02.8	+2.5
TBKS	Tabuk	1.65	173	P	Pn	12 11 38.5	0.0
MZDA	Masada	1.66	330	Pn	Pn	12 11 38.7	+0.1
BDAS	Al Bad‘	1.78	217	P	Pn	12 11 39.7	-0.6
YTIR	Yattir	1.82	326	Pn	Pn	12 11 41.0	+0.3
DSI	Dead Sea	1.88	335	Pn	Pn	12 11 42.2	+0.6
DSI				Sn	Sn	12 12 07.5	+1.4
HNKL	Nakhl	2.03	272	⇑eP	Pn	12 11 43.9	+0.2
HNKL				S	Sn	12 12 11.1	+1.3
RSHS		2.05	221	P	Pn	12 11 42.7	-1.2
RSHS		2.05	221	P	Pn	12 11 42.7	-1.3
RSHS				S	Sn	12 12 12.8	+2.5
HKAT	Jabal Katrina	2.43	237	⇑eP	Pn	12 11 48.8	-0.5
RSH		2.50	297	P	Pn	12 11 51.2	+1.1
TR2		2.71	238	⇑eP	Pn	12 11 52.4	-0.6
AMAG	Maghara	2.80	287	⇓eP	Pn	12 11 55.6	+1.3
HRSH	Kfar Ka’horesh	2.96	343	⇓eP	Pn	12 11 51.2	-5.3

IDC 04 12:15:32.1±0.7, 15.14S×173.49W, h0km, mb4.1/8, mb1 4.4/9, mb1mx4.2/18, mbtmp4.1/9, MS3.8/2, Ms1 3.8/2, ms1mx3.0/27, Error ellipse: s-maj=40.2km s-min=16.6km az=134.0
ISCJB 04 12:15:35.7±0.6, 152S±02×1734W±02, h33km, mb4.0/9, Error ellipse: s-maj=29.4km s-min=11.9km az=138.4
NEIC 04 12:15:37.5±0.5, 1521S×17336W, h35km, mb4.0/1, Error ellipse: s-maj=24.1km s-min=10.3km az=139.0
ISC 04 12:15:37.5±0.6, 152S±02×1734W±02, h35km, n13, σ0.81/11, mb4.0/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.00	50	Pn	Pn	12 16 07.5	-1.4
	230nm,0.3s,baz=142,slow=0.6,SNR=407						
AFI				Sn	Sn	12 16 28.5	-4.3
	373nm,0.3s,baz=54,slow=21,SNR=12						
AFI				LR	LR	12 16 48.0	
	comp=Z,480nm,19.3s,baz=256,slow=37						
URZ	Urewera	24.45	198	P	P	12 20 52.3	-0.8
	9.6nm,0.5s,mb4.5,baz=60,slow=2.4,SNR=19						
PMG	Port Moresby	38.96	274	eP	P	12 23 00.9	+0.3
	1.1nm,0.4s,mb3.9						
STKA	Stephens Creek	44.16	240	P	P	12 23 42.4	-0.7
	0.9nm,0.5s,mb3.8,baz=52,slow=13,SNR=5.1						
ASAR	Alice Springs	50.21	252	P	P	12 24 29.6	-0.7
	1.9nm,0.5s,mb4.4,baz=86,slow=8.0,SNR=55						
VNDA	Vanda	63.57	186	P	P	12 26 04.9	+0.8
	1.3nm,0.8s,mb4.0,baz=345,slow=6.7,SNR=6.3						
NVAR	Mina Array Bea	74.16	42	P	P	12 27 11.5	+0.9
	1.5nm,0.7s,mb4.0,baz=228,slow=9.5,SNR=10						
TXAR	Lajitas Array	80.47	56	P	P	12 27 47.3	+1.1
	1.1nm,1.0s,mb3.8,baz=220,slow=6.8,SNR=8.1						
PDAR	Pinedale Array	82.10	42	P	P	12 27 55.0	+0.5
	1.6nm,0.9s,mb3.9,baz=204,slow=2.0,SNR=9.2						
PMSA	Palmer Station	84.33	156	LR	LR	13 00 55.5	
	comp=Z,215nm,18.5s,baz=129,slow=32						
YKA	Yellowknife Ar	89.91	23	P	P	12 28 32.8	+0.3
	0.4nm,0.8s,mb3.8,baz=236,slow=4.3,SNR=3.7						
GERES	GERESS Array B	145.96	352	PKPbc	PKPbc	12 35 13.7	+0.2
	0.2nm,0.2s,baz=276,slow=3.5,SNR=3.5						
BRTR	Keskin Array B	146.04	321	PKPbc	PKPbc	12 35 11.3	-2.7
	1.2nm,0.9s,baz=318,slow=1.9,SNR=3.6						

GRAL 04 12:19:51.7±0.3, 3436N×3655E, h9km±5km, MD3.0, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	Hawqa	0.51	261	eP	Pg	12 20 00.9	-0.7
HWQ				eS	Sg	12 20 07.8	-0.4
BHL	Bhannes	0.87	239	eP	Pg	12 20 07.3	-1.2
BHL				eS	Sg	12 20 18.8	-1.1
RCY	Rachaya	1.06	215	eP	Pg	12 20 10.2	-2.0
RCY	Rachaya	1.06	215	eP	Pg	12 20 10.1	-2.1

BJI 04 12:31:18.0, 2205N×11149E, h22km, mB4.5, mb4.8, ML4.6, Ms4.1, Msz4.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIZ	Qiongzhong	3.38	207	P	Pn	12 32 11.1	+1.7
QIZ				PG	Pn	12 32 17.9	+8.5
QIZ				SG	Sn	12 32 59.5	+11
QIZ				Smax			
	comp=N,825nm,0.7s						
GYA	Guiyang	6.22	316	P	Pn	12 32 51.5	+3.0
GYA				Smax			
	comp=N,440nm,1.0s						
GYA				Smax			
	comp=E,240nm,0.9s						
WHN	Wuhan	8.84	16	P	Pn	12 33 31.6	+7.2
WHN				S	Sn	12 35 08.6	+5.2
WHN				LR	LR		
	comp=N,896nm,2.6s						
WHN				LR	LR		
	comp=E,1μm,3.0s						
CD2	Chengdu	11.21	324	P	Pn	12 34 00.8	+3.8
CD2				S	Sn	12 36 06.7	+5.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=N,510nm,5.9s						
LZH	Lanzhou	15.49	336	eP	Pn	12 35 00.0	+4.9
LZH				AP	pP	12 35 02.4	-3.1
LZH				XP	sP	12 35 04.7	-3.6
LZH				PP		12 35 12.7	
LZH				eS	Sn	12 37 55.1	+9.0
LZH				XS	sS	12 37 59.6	-12
LZH				AMB	AMB		
	comp=Z,21nm,1.0s						
LZH				AMB	AMB		
	comp=Z,83nm,4.1s						
LZH				LR	LR		
	comp=N,363nm,8.5s						
LZH				LR	LR		
	comp=Z,472nm,11.2s						

CSEM 04 12:34:07.0, 3021N×3622E, h5km, ML2.7, After SNSN
SGS 04 12:34:07.0, 3021N×3622E, h5km
ISCJB 04 12:34:09.0±0.9, 2983N±004×3621E±005, h0km, Error ellipse: s-maj=7.2km s-min=4.9km az=149.3
GII 04 12:34:09.9±1.1, 2985N×36.10E, h0km, ML2.1/4, EXPLOSION
ISC 04 12:34:09.3±1.0, 2981N±004×3625E±006, h0km, n14, σ0.84/21, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.04	266	Pg	Pg	12 34 29.0	-0.4
HRFI	Mount Harif	1.07	282	Pg	Pg	12 34 29.6	-0.3
HRFI				Sg	Sg	12 34 44.1	+0.3
EIL	Elat	1.14	263	Pg	Pg	12 34 31.0	0.0
EIL				Sg	Sg	12 34 46.4	+0.6
HQLS		1.15	244	P	Pg	12 34 30.6	-0.8
MBRI	Mt Berech	1.16	269	Pg	Pg	12 34 30.9	-0.6
MBRI				Sg	Sg	12 34 47.6	+1.0
ZFRI	Zfri	1.18	309	Pg	Pg	12 34 31.3	-0.7
ZFRI				Sg	Sg	12 34 48.1	+0.7
PRNI	Paran	1.20	297	Pg	Pg	12 34 31.1	-1.3
PRNI				Sg	Sg	12 34 47.2	-0.7
JLOS		1.26	212	P	Pg	12 34 33.9	+0.4
KRMI	Paran Flat	1.35	283	Pg	Pg	12 34 34.1	-1.1
KRMI				Sg	Sg	12 34 52.9	0.0
TBKS	Tabuk	1.61	171	P	Pn	12 34 39.5	+0.5
BDAS	Al Bad‘	1.71	216	S	Sn	12 35 04.4	+1.6
BDAS	Al Bad‘	1.71	216	P	Pn	12 34 39.9	-0.4
DSI	Dead Sea	1.90	337	Pn	Pn	12 34 43.4	+0.4
DSI				Sn	Sn	12 35 09.7	+2.0
RSHS		1.97	220	P	Pn	12 34 43.1	-0.9

ISCJB 04 12:43:06.3±1.2, 4030N±005×1242W±0.1, h10km, Error ellipse: s-maj=15.9km s-min=6.4km az=171.7
IDC 04 12:43:09.4±4.4, 4044N×12389W, h0km, mb2.8/1, mb1 3.5/4, mb1mx3.4/23, mbtmp3.1/4, ML3.3/3, Error ellipse: s-maj=63.6km s-min=25.4km az=64.0
NEIC 04 12:43:09.8, 4035N×12422W, h28km, ML3.3(NCEDC), After NCEDC.
ISC 04 12:43:06.9±1.2, 4033N±005×1243W±02, h10km, n24, σ1.00/23, 2C-2D, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMB	Red Mountain	1.23	12	⇓P	Pn	12 43 29.1	-0.9
WDC	Whiskeytown Da	1.34	78	eP	Pn	12 43 30.7	-0.9
KSXB	Camp Six Broad	1.53	11	⇓P	Pn	12 43 33.4	-0.8
HOPS	Hopland	1.62	145	eP	Pn	12 43 34.6	-0.8
KTRM	Thompson Ridge	1.72	23	P	Pn	12 43 36.2	-0.6
LAMM	Antelope Mount	1.78	43	P	Pn	12 43 37.6	-0.1
YBH	Yreka Blue Hor	1.83	39	Lg		12 44 00.1	
	baz=108,slow=20						
YBH	Yreka Blue Hor	1.83	39	eP	Pn	12 43 37.2	-1.1
LHEM	Herd Peak	2.02	49	P	Pn	12 43 41.6	+0.6
LTIM	Timbered Crate	2.27	67	⇑P	Pn	12 43 44.5	+0.1
LBCM	Butte Creek Ri	2.27	76	⇑P	Pn	12 43 44.6	+0.2
LASM	Arnica Sink	2.40	57	P	Pn	12 43 46.2	+0.1
MCCM	Marconi Confer	2.43	153	eP	Pn	12 43 45.8	-0.8
BUOR	Burton Butte	2.47	37	P	Pn	12 43 48.6	+1.4
HUMO	Hull Mountain	2.48	23	P	Pn	12 43 47.0	-0.3
BBOR	Butler Butte	2.82	24	P	Pn	12 43 53.0	+1.1
MOD	Modoc	3.38	61	eP	Pn	12 43 59.1	-0.6
CMB	Columbia Colle	3.78	126	eP	Pn	12 44 04.5	-0.7
SAO	San Andreas Ge	4.18	147	eP	Pn	12 44 11.2	+0.4
WVOR	Wild Horse Val	4.72	62	eP	Pn	12 44 17.2	-0.9
NVAR	Mina Array Bea	4.99	110	Pn	Pn	12 44 23.2	+1.4
	2.2nm,0.3s,baz=291,slow=14,SNR=41						
PDAR	Pinedale Array	11.29	73	Pn	Pn	12 45 52.0	+3.9
	0.0nm,0.3s,baz=264,slow=13,SNR=4.6						
TXAR	Lajitas Array	20.10	117	P	P	12 47 43.6	+2.9
	0.0nm,0.3s,baz=289,slow=8.2,SNR=3.5						
YKA	Yellowknife Ar	22.95	12	P	P	12 48 13.0	+2.1
	0.1nm,0.4s,baz=199,slow=13,SNR=4.6						

ISCJB 04 12:54:56.2±0.8, 2133S±009×6822W±0.10, h124km±8km, mb3.8/7, Error ellipse: s-maj=18.8km s-min=10.0km az=43.1
IDC 04 12:54:57.5±1.0, 2135S×6824W, h117km±11km, mb3.6/7, mb1 3.8/9, mb1mx3.7/17, mbtmp3.6/9, MS3.2/1, Ms1 3.2/1, ms1mx2.4/23, Error ellipse: s-maj=23.6km s-min=14.7km az=131.0
NEIC 04 12:54:58.4±1.0, 2142S×6830W, h126km±10km, mb3.9/2, Error ellipse: s-maj=15.4km s-min=13.6km az=109.0
ISC 04 12:54:57.7±0.7, 2138S±008×6816W±009, h121km±8km, n21, σ1.15/22, mb3.8/7, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.42	209	P	Pn	12 55 24.3	+0.1
	36nm,0.3s,baz=10,slow=11,SNR=136						
LVC				S	Sn	12 55 44.0	-0.4
	41nm,0.3s,baz=284,slow=23,SNR=38						
LVC	Limon Verde	1.42	209	P	Pn	12 55 24.3	+0.1
LVC				S	Sn	12 55 44.0	-0.4
ARE	Arequipa	5.82	327	eP	Pn	12 56 16.0	-5.7
ARE				eS	Sn	12 57 15.0	-12
SIV	San Ignacio	8.59	53	P	Pn	12 57 00.5	+1.3
	3.0nm,0.3s,baz=253,slow=11,SNR=65						
SIV				S	Sn	12 58 33.2	-1.2
	0.2nm,0.3s,baz=300,slow=23,SNR=4.2						
CFAA	Coronel Fontan	10.19	180	S	Sn	12 59 07.8	-5.2
	0.1nm,0.3s,baz=149,slow=15,SNR=4.9						
NNA	Nana	12.50	317	P	Pn	12 57 52.1	+0.7
	4.1nm,0.6s						
PLCA	Paso Flores	19.40	185	P	P	12 59 15.5	+1.2
	0.1nm,0.3s,baz=344,slow=12,SNR=4.7						
PLCA	Paso Flores	19.40	185	P	P	12 59 15.1	+0.8
	2.5nm,0.8s						
BDFB	Brasilia	19.93	77	P	P	12 59 24.2	+4.0
	1.7nm,0.3s,baz=236,slow=16,SNR=11						
SDV	Santo Domingo	30.17	355	LR	LR	13 14 43.4	
	comp=Z,41nm,19.0s,baz=330,slow=39						
USHA	Ushuaia	33.41	180	P	P	13 01 23.1	-1.4
	2.5nm,0.3s,mb4.5,baz=346,slow=12,SNR=3.1						
TXAR	Lajitas Array	60.93	325	P	P	13 04 56.7	-1.3
	0.4nm,0.9s,mb3.4,baz=138,slow=12,SNR=2.7						
DBIC	Dimbokro	68.03	73	P	P	13 05 43.6	-0.9
	1.9nm,0.7s,mb4.0,baz=205,slow=11,SNR=3.6						
PDAR	Pinedale Array	74.35	330	P	P	13 06 24.0	+2.0
	1.3nm,1.2s,mb3.5,baz=249,slow=2.5,SNR=3.4						
NVAR	Mina Array Bea	75.83	322	P	P	13 06 30.0	-0.6
	0.3nm,0.5s,mb3.2,baz=173,slow=4.3,SNR=2.7						
TORD	Torodi Ar. Bea	76.66	70	P	P	13 06 37.5	+1.7
	1.6nm,0.7s,mb3.9,baz=252,slow=5.3,SNR=15						
TORD	Torodi Ar. Bea	76.66	70	P	P	13 06 37.5	+1.7
YKA	Yellowknife Ar	91.30	340	P	P	13 07 48.2	-0.8
	0.7nm,0.5s,mb4.1,baz=131,slow=4.6,SNR=11						
YKA				pP	pP	13 08 20.9	+0.6
	0.6nm,1.0s,baz=138,slow=4.6,SNR=2.5						
YKA	Yellowknife Ar	91.30	340	P	P	13 07 48.2	-0.8
YKA				pP	pP	13 08 20.9	+0.6
ASAR	Alice Springs	130.34	207	PKP	PKPdf	13 13 54.5	0.0
	0.2nm,0.7s,baz=109,slow=1.5,SNR=4.5						
MKAR	Makanchi Array	145.12	36	PKPbc	PKPbc	13 14 21.7	+1.1
	0.5nm,0.7s,baz=318,slow=1.9,SNR=3.3						

IDC 04 13:01:37.0±5.1, 1585S×17470W, h266km±19km, mb3.5/3, mb1 3.8/4, mb1mx3.3/17, mbtmp3.5/4, Error ellipse: s-maj=503.3km s-min=20.4km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.42	56	P	Pn	13 02 36.2	+1.1
	15nm,0.3s,baz=55,slow=2.6,SNR=27						
AFI				S	S	13 03 21.3	+0.1
	6.7nm,0.3s,baz=24,slow=20,SNR=5.1						
ASAR	Alice Springs	48.78	252	P	P	13 09 55.6	-0.1
	3.8nm,0.5s,baz=89,slow=7.5,SNR=105						
NVAR	Mina Array Bea	75.50	43	P	P	13 12 52.9	+0.7
	1.0nm,0.8s,baz=227,slow=8.2,SNR=5.6						
PDAR	Pinedale Array	83.43	42	P	P	13 13 34.8	0.0
	0.7nm,0.8s,baz=220,slow=3.9,SNR=5.3						

IDC 04 13:13:48.0±0.9, 656S×7583W, h0km, mb3.9/5, mb1 4.1/9, mb1mx3.9/20, mbtmp4.0/9, ML4.1/4, MS2.7/2, Ms1 2.7/2, ms1mx2.5/24, Error ellipse: s-maj=22.4km s-min=14.2km az=168.0
ISCJB 04 13:13:51.4±0.6, 667S±007×7567W±007, h33km, mb3.8/5, Error ellipse: s-maj=10.4km s-min=8.7km az=35.6
NEIC 04 13:13:51.8±3.4, 661S×7572W, h25km±26km, mb4.1/1,

Error ellipse: s-maj=16.5km s-min=10.6km az=88.0
ISC 04 13:13:53.2±0.6,**668S**±006×**7572W**±010,**h35**km,**n15**, σ**0s98**/18,**mb3.8**/5,**Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.68**	**263**	Pn	**Pn**	**13 14 33.3**	**-0.5**
	22nm,0.3s,baz=50,slow=9.6,SNR=88						
ATAH				Pg	**Pn**	**13 14 36.1**	**+2.3**
	23nm,0.3s,baz=68,slow=15,SNR=87						
ATAH				Lg		13 15 08.4	
	313nm,0.3s,baz=345,slow=19,SNR=58						
ATAH				LR	LR	13 15 44.7	
	comp=Z,292nm,19.0s,baz=84,slow=45						
NNA	**Nana**	**5.39**	**192**	Pn	**Pn**	**13 15 12.9**	**+1.7**
	16nm,0.3s,baz=40,slow=13,SNR=19						
NNA				Sn	**Sn**	**13 16 10.4**	**-1.7**
	2.6nm,0.3s,baz=344,slow=18,SNR=2.4						
NNA	**Nana**	**5.39**	**192**	*e*Pn	**Pn**	**13 15 11.9**	**+0.7**
NNA				Sn	**Sn**	**13 16 10.4**	**-1.7**
SDV	**Santo Domingo**	**16.27**	**18**	Pn	**Pn**	**13 17 38.4**	**-0.8**
	0.6nm,0.3s,baz=185,slow=11,SNR=3.9						
SDV				Lg		13 22 16.8	
	0.5nm,0.3s,baz=265,slow=22,SNR=3.8						
SDV	**Santo Domingo**	**16.27**	**18**	*e*P	**Pn**	**13 17 38.6**	**-0.6**
SDV				Lg		13 22 16.8	
SIV	**San Ignacio**	**17.07**	**124**	P	**Pn**	**13 17 48.8**	**-0.6**
	0.3nm,0.3s,baz=308,slow=11,SNR=6.4						
SIV				S	**S**	**13 20 55.7**	**-11**
	0.3nm,0.3s,baz=26,slow=18,SNR=3.1						
CFAA	**Coronel Fontan**	**25.77**	**165**	LR	LR	13 29 18.8	
	comp=Z,7.4nm,20.7s,baz=318,slow=36						
PLCA	**Paso Flores**	**34.23**	**173**	P	**P**	**13 20 36.8**	**+1.2**
	1.4nm,0.6s,mb4.1,baz=281,slow=6.0,SNR=3.2						
PLCA	**Paso Flores**	**34.23**	**173**	*e*P	**P**	**13 20 36.5**	**+0.9**
	2.0nm,0.8s,mb4.1						
TXAR	**Lajitas Array**	**44.77**	**324**	P	**P**	**13 22 03.1**	**-0.5**
	0.1nm,0.5s,mb2.9,baz=151,slow=13,SNR=3.0						
DBIC	**Dimbokro**	**71.93**	**81**	P	**P**	**13 25 14.3**	**+0.6**
	2.0nm,0.6s,mb4.2,baz=231,slow=8.1,SNR=5.7						
YKA	**Yellowknife Ar**	**75.12**	**342**	P	**P**	**13 25 30.4**	**-1.0**
	0.3nm,0.4s,mb3.6,baz=140,slow=6.0,SNR=5.5						
YKA	**Yellowknife Ar**	**75.12**	**342**	P	**P**	**13 25 30.4**	**-1.0**
TOA0	**Torodi Ar. Sit**	**79.35**	**75**	*e*P	**P**	**13 25 56.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**79.35**	**75**	P	**P**	**13 25 56.5**	**+0.4**
	0.7nm,0.3s,mb4.0,baz=275,slow=5.1,SNR=18						

NEIC ***04*** *13:29:11.3±2.6,2365N×12177E,h34km±13km,Error ellipse: s-maj=37.2km s-min=10.8km az=110.0*
ISCJB ***04*** *13:29:13.0±0.3,2370N±002×12166E±002,h29km±2km, Error ellipse: s-maj=3.5km s-min=2.1km az=43.6*
TAP ***04*** *13:29:13.1,2370N×12160E,h35km,ML3.7,B*
JMA ***04*** *13:29:13.6±0.3,2381N×12164E,h80km,M2.8*
ISC 04 13:29:13.4±0.3,**2371N**±002×**12164E**±002,**h28**km±2km, **n63**,σ**0s88**/104,**9C-6D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.09**	**271**	P	**Pb**	**13 29 19.1**	**+0.8**
	baz=277						
TEGC				*e*S	**Sb**	**13 29 23.7**	**+2.0**
	baz=277						
ESF	**Shoufeng Towns**	**0.20**	**323**	*e*P	**Pb**	**13 29 20.0**	**+0.6**
	baz=323						
ESF				*e*S	**Sb**	**13 29 25.3**	**+1.9**
	baz=323						
ESL	**Shilin**	**0.22**	**299**⇑	*i*P	**Pb**	**13 29 19.8**	**+0.2**
	baz=299						
ESL				*e*S	**Sb**	**13 29 24.3**	**+0.6**
	baz=299						
HWA	**Hwalien**	**0.27**	**353**	*e*P	**Pb**	**13 29 20.8**	**+0.5**
	baz=5.0						
HWA				*e*S	**Sb**	**13 29 28.1**	**+3.2**
	baz=5.0						
EHY	**Hungye**	**0.35**	**236**⇑	*i*P	**Pb**	**13 29 21.0**	**-0.4**
	baz=240						
EHY				S	**Sb**	**13 29 26.1**	**-0.7**
	baz=240						
TWD	**Chiawan**	**0.37**	**354**⇓	*i*P	**Pb**	**13 29 22.0**	**+0.3**
	baz=5.0						
TWD				S	**Sb**	**13 29 29.5**	**+2.1**
	baz=5.0						
YULB	**Yu-li**	**0.44**	**225**	*e*Pg	**Pb**	**13 29 22.0**	**-0.7**
YULB				*e*Sg	**Sb**	**13 29 28.1**	**-1.1**
NACB	**Ninganchiao**	**0.47**	**355**	*e*Pg	**Pb**	**13 29 22.8**	**-0.3**
NACB				*e*Sg	**Sb**	**13 29 29.4**	**-0.4**
TWF1	**Yuli**	**0.47**	**222**⇓	*i*P	**Pb**	**13 29 22.6**	**-0.6**
	baz=229						
TWF1				S	**Sb**	**13 29 28.9**	**-1.0**
	baz=229						
WHF	**Hehuan Shan**	**0.56**	**322**⇑	*i*P	**Pb**	**13 29 24.3**	**-0.3**
	baz=317						
WHF				*e*S	**Sb**	**13 29 32.0**	**-0.2**
	baz=317						
SSLB	**Suanglung**	**0.63**	**277**	*e*Pg	**Pb**	**13 29 24.7**	**-1.2**
CHKT	**Chengkung**	**0.66**	**203**	*e*P	**Pb**	**13 29 25.4**	**-0.9**
	baz=189						
CHKT				*e*S	**Sb**	**13 29 36.0**	**+1.0**
	baz=189						
YUS	**Yu-Shan**	**0.67**	**251**⇓	*i*P	**Pb**	**13 29 26.6**	**+0.1**
	baz=250						
YUS				S	**Sb**	**13 29 34.6**	**-0.8**
	baz=250						
TWT	**Tachien**	**0.69**	**322**⇑	*i*P	**Pb**	**13 29 26.9**	**0.0**
	baz=317						
TWT				*e*S	**Sb**	**13 29 36.0**	**-0.1**
	baz=317						
SMLT	**Sun Moon Lake**	**0.70**	**285**⇑	*i*P	**Pb**	**13 29 26.6**	**-0.4**
	baz=285						
SMLT				*e*S	**Sb**	**13 29 35.7**	**-0.6**
	baz=285						
ENA	**Nanau**	**0.72**	**7**	P	**Pb**	**13 29 27.0**	**-0.5**
	baz=18						
ENA				*e*S	**Sb**	**13 29 36.8**	**-0.2**
	baz=18						
TYC	**Yuchr**	**0.74**	**285**⇑	*i*P	**Pb**	**13 29 27.1**	**-0.6**
	baz=291						
TYC				S	**Sb**	**13 29 36.6**	**-0.9**
	baz=291						
ELDTW	**Lidau**	**0.77**	**228**⇓	*i*P	**Pb**	**13 29 26.7**	**-1.5**
	baz=227						
NNS	**Nan Shan**	**0.77**	**342**	P	**Pb**	**13 29 27.6**	**-0.6**
	baz=342						
NNS				*e*S	**Sb**	**13 29 38.0**	**-0.3**
	baz=342						
ALS	**Alishan**	**0.79**	**256**⇓	*i*P	**Pb**	**13 29 28.4**	**-0.1**
	baz=255						
ALS				*e*S	**Sb**	**13 29 37.8**	**-1.1**
	baz=255						
CHN5	**Tsauling**	**0.89**	**263**⇑	*i*P	**Pn**	**13 29 30.1**	**0.0**
	baz=263						
CHN5				S	**Sb**	**13 29 41.6**	**-0.1**
	baz=263						
WNT	**Mingjian**	**0.89**	**281**	*e*P	**Pn**	**13 29 30.1**	**+0.1**
	baz=281						
WNT				*e*S	**Sb**	**13 29 42.4**	**+0.6**
	baz=281						
TWC	**Suao**	**0.92**	**12**	*e*P	**Pn**	**13 29 30.4**	**0.0**
	baz=20						
ENTT	**Nioudou**	**0.93**	**356**	P	**Pn**	**13 29 30.0**	**-0.6**
	baz=347						
ENTT				*e*S	**Sb**	**13 29 42.2**	**-0.7**
	baz=347						
STYT	**Tauyuan**	**0.97**	**236**	*i* P	**Pn**	**13 29 30.7**	**-0.5**
	baz=231						
STYT				S	**Sn**	**13 29 43.4**	**-0.7**
	baz=231						
WGK	**Gukeng**	**0.99**	**269**	*e*P	**Pn**	**13 29 33.1**	**+1.7**
	baz=270						
YHNB	**Yeheng**	**0.99**	**346**	*e*P	**Pn**	**13 29 30.8**	**-0.6**
YHNB				*e*S	**Sn**	**13 29 43.2**	**-1.2**
NSK	**Sanguang**	**1.00**	**345**⇑	*i*P	**Pn**	**13 29 31.2**	**-0.3**
	baz=355						
NSK				S	**Sn**	**13 29 43.5**	**-1.2**
	baz=355						
TWE	**Neicheng**	**1.01**	**1**	*e*P	**Pn**	**13 29 31.3**	**-0.4**
	baz=353						
TWE				*e*S	**Sn**	**13 29 44.1**	**-0.9**
	baz=353						
TPUB	**Ta-pu**	**1.01**	**247**	*e*Pn	**Pn**	**13 29 31.4**	**-0.3**
TPUB				*e*S	**Sn**	**13 29 44.9**	**-0.1**
TWQ1	**Liyutan**	**1.02**	**309**⇑	*i*P	**Pn**	**13 29 32.5**	**+0.7**
	baz=308						
TWQ1				S	**Sn**	**13 29 46.3**	**+1.2**
	baz=308						
CHN4	**Tsaushan**	**1.02**	**250**	*e*P	**Pn**	**13 29 32.2**	**+0.3**
	baz=250						
CHN4				*e*S	**Sn**	**13 29 45.9**	**+0.6**
	baz=250						
TWG	**Pinlang**	**1.02**	**211**	*e*P	**Pn**	**13 29 29.2**	**-2.7**
TWG	**Pinlang**	**1.02**	**211**	*e*P	**Pn**	**13 29 29.3**	**-2.6**
	baz=198						
WTP	**Ta-pu**	**1.05**	**244**	*e*P	**Pn**	**13 29 31.7**	**-0.5**
	baz=250						
WTP				*e*S	**Sn**	**13 29 46.2**	**+0.3**
	baz=250						
ILA	**Ilan**	**1.06**	**5**	*e*P	**Pn**	**13 29 30.0**	**-2.4**
	baz=356						
NSTT	**Nanjuang**	**1.09**	**328**	*i* P	**Pn**	**13 29 33.3**	**+0.6**
	baz=327						
NSTT				S	**Sn**	**13 29 46.9**	**-0.1**
	baz=327						
CHY	**Chiayi**	**1.14**	**260**	*e*P	**Pn**	**13 29 33.4**	**0.0**
	baz=260						
CHY				*e*S	**Sn**	**13 29 49.0**	**+1.0**
	baz=260						
TWK	**Hsinying**	**1.15**	**248**	*e*P	**Pn**	**13 29 34.1**	**+0.5**
	baz=248						
TWK				*e*S	**Sn**	**13 29 49.0**	**+0.8**
	baz=248						
CHN1	**Nanshi**	**1.15**	**243**	*e*P	**Pn**	**13 29 33.5**	**0.0**
	baz=243						
CHN1				*e*S	**Sn**	**13 29 49.5**	**+1.1**
	baz=243						
SGST	**Jiashian**	**1.15**	**238**⇓	*i*P	**Pn**	**13 29 34.0**	**+0.4**
	baz=230						
SGST				*e*S	**Sn**	**13 29 49.5**	**+1.0**
	baz=230						
WTCT	**Ta-ch'eng**	**1.25**	**277**	*e*P	**Pn**	**13 29 35.1**	**+0.1**
	baz=267						
WTCT				*e*S	**Sn**	**13 29 52.2**	**+1.2**
	baz=267						
TWA	**Mucha**	**1.27**	**358**	*e*P	**Pn**	**13 29 35.4**	**+0.2**
	baz=358						
TATO	**Taipei**	**1.27**	**354**	*e*Pn	**Pn**	**13 29 33.2**	**-2.1**
ECL	**Taimali**	**1.27**	**210**	*e*P	**Pn**	**13 29 32.7**	**-2.6**
	baz=200						
WSF	**Szhu**	**1.30**	**267**	*e*P	**Pn**	**13 29 35.4**	**-0.3**
	baz=268						
SSD	**Sandimen**	**1.33**	**224**	*e*P	**Pn**	**13 29 35.5**	**-0.6**
	baz=225						
SSD				*e*S	**Sn**	**13 29 53.9**	**+0.9**
	baz=225						
TWB1	**Santiao Chiao**	**1.33**	**14**	*e*P	**Pn**	**13 29 37.9**	**+1.7**
	baz=15						
CHN8	**Yiju**	**1.36**	**255**	*e*P	**Pn**	**13 29 36.2**	**-0.3**
	baz=255						
CHN8				*e*S	**Sn**	**13 29 53.9**	**+0.3**
	baz=255						
NWF	**Wu-fen Shan**	**1.36**	**5**	*e*P	**Pn**	**13 29 37.1**	**+0.6**
	baz=5.0						
TWS1	**Kuangyinshan**	**1.40**	**352**	*e*P	**Pn**	**13 29 37.5**	**+0.4**
	baz=6.0						
TWM1	**Shoushan**	**1.42**	**232**	*e*P	**Pn**	**13 29 39.1**	**+1.7**
	baz=234						
SCLT	**Jiali**	**1.43**	**249**	*e*S	**Sn**	**13 29 56.8**	**+1.5**
	baz=249						
YOJ	**Yonaguni jima**	**1.46**	**59**	P	**Pn**	**13 29 38.1**	**+0.2**
YOJ				*e*S	**Sn**	**13 29 56.2**	**+0.1**
YOJ	**Yonaguni jima**	**1.46**	**59**	*e*P	**Pn**	**13 29 38.5**	**+0.6**
	baz=59						
SCZT	**Fangliau**	**1.63**	**215**	*e*P	**Pn**	**13 29 40.1**	**-0.1**
	baz=216						
PNG	**Penghu**	**1.92**	**266**	*e*P	**Pn**	**13 29 43.7**	**-0.5**
	baz=268						
TWK1	**Hengchun**	**1.92**	**204**	*e*P	**Pn**	**13 29 45.2**	**+1.1**
	baz=192						
IRIF	**Iriomote-Funau**	**2.01**	**71**	S	**Sn**	**13 30 10.3**	**+0.6**
HATJ	**Hateruma jima**	**2.01**	**80**	S	**Sn**	**13 30 09.8**	**+0.1**
JKRS	**Kuro-shima**	**2.23**	**76**	P	**Pn**	**13 29 49.0**	**+0.5**
JKRS				S	**Sn**	**13 30 16.0**	**+0.9**
JIJ	**Ishigaki jima**	**2.38**	**74**	P	**Pn**	**13 29 50.6**	**+0.1**
JIJ				S	**Sn**	**13 30 18.0**	**-0.8**
JTJ	**Tarama**	**2.95**	**71**	P	**Pn**	**13 29 58.6**	**+0.3**
JTJ				*e*S	**Sn**	**13 30 32.8**	**0.0**

DJA 04 13:37:04,332S×**12843E,h10**km,**MLv3.5**/4,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.43**	**213**	P	Pg	13 37 12.6	+0.1
AAI				S	Sg	13 37 19.8	+1.5
MSAI	**Masohi**	**0.50**	**93**	P	Pg	13 37 14.2	+0.5
MSAI				S	Sg	13 37 21.6	+1.3
LBMI	**Labuha**	**2.82**	**341**	P	Pn	13 37 50.0	+0.8
LBMI				S	Sn	13 38 24.2	+0.9

THR ***04*** *13:59:16.9±0.3,2833N×5244E,h14km±5km,ML3.1*
CSEM ***04*** *13:59:17.5±0.3,2824N×5248E,h16km,ML2.8,Error ellipse: s-maj=13.9km s-min=7.2km az=177.0*
ISCJB ***04*** *13:59:18.3±1.7,2828N±007×5247E±007,h17km±22km, Error ellipse: s-maj=12.8km s-min=9.8km az=17.5*
KISR ***04*** *13:59:20.8,2851N×5243E,h44km,ML2.8*
ISC 04 13:59:19.4±1.4,**2827N**±007×**5249E**±007,**h12**km±14km, **n16**,σ**1s04**/27,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.44**	**88**	*e*Pg	**Pg**	**13 59 26.6**	**-1.4**
GHIR				*e*Sg	**Sg**	**13 59 33.8**	**-0.1**
GHIR				AML	AML	13 59 39.3	
	comp=E,3μm,0.6s						
GHIR				AML	AML	13 59 42.1	
	comp=N,3μm,0.4s						
GHIR	**Ghir-Karzin**	**0.44**	**88**	*e*P	**Pg**	**13 59 26.6**	**-1.4**
	SNR=90						
GHIR				*e*Sg	**Sg**	**13 59 33.8**	**-0.1**
	comp=N,3μm,0.4s,SNR=90						
BNDS	**Bandar-Abbas**	**3.37**	**104**	*e*Pn	**Pn**	**14 00 12.2**	**+0.4**
BNDS				AML	AML	14 01 18.2	
	comp=N,30nm,0.7s						
KRBR	**Kerman**	**4.11**	**64**	*e*Pn	**Pn**	**14 00 21.9**	**0.0**
KRBR				*e*Sg	**Sg**	**14 01 25.2**	**-6.0**
KRBR				AML	AML	14 01 34.1	
	comp=E,17nm,0.7s						
KRBR				AML	AML	14 01 46.0	
	comp=N,17nm,1.1s						
KRBR	**Kerman**	**4.11**	**64**	*e*Pn	**Pn**	**14 00 21.9**	**0.0**
	SNR=52						
KRBR				*e*Sg	**Sg**	**14 01 25.2**	**-6.0**
	SNR=90						
RDF	**Al-Radifah**	**4.39**	**280**	*e*P	**Pn**	**14 00 27.2**	**+1.4**
RDF				*e*S	**Sn**	**14 01 16.2**	**-0.7**
	comp=N,8.2nm,0.3s						
RDF	**Al-Radifah**	**4.39**	**280**	*e*P	**Pn**	**14 00 27.2**	**+1.3**
	baz=277						
RDF				*e*S	**Sn**	**14 01 16.2**	**-0.7**
	baz=277						
RDF				AML	AML	14 01 27.0	
	comp=Z,8.0nm,0.3s,baz=277						
BTHS		**4.46**	**200**	P	**Pn**	**14 00 26.5**	**-0.3**
NAY	**Al-Naaiem**	**4.71**	**283**	*e*P	**Pn**	**14 00 31.2**	**+1.0**
NAY				*e*S	**Sn**	**14 01 24.8**	**+0.1**
NAY	**Al-Naaiem**	**4.71**	**283**	*e*P	**Pn**	**14 00 31.2**	**+1.0**
	baz=280						
NAY				*e*S	**Sn**	**14 01 24.8**	**+0.1**
	baz=280						
NAY				AML	AML	14 01 31.7	
	comp=Z,5.0nm,0.7s,baz=280						
MIB	**Mutribah**	**4.76**	**290**	*e*P	**Pn**	**14 00 31.7**	**+0.8**
MIB				*e*S	**Sn**	**14 01 24.6**	**-1.4**
	comp=Z,12nm,0.5s						
MIB	**Mutribah**	**4.76**	**290**	*e*P	**Pn**	**14 00 31.7**	**+0.8**
	baz=287						
MIB				*e*S	**Sn**	**14 01 24.6**	**-1.4**
	baz=287						
MIB				AML	AML	14 01 34.3	
	comp=Z,12nm,0.5s,baz=287						
HRDDS		**5.98**	**208**	P	**Pn**	**14 00 49.8**	**+2.0**
ASYS		**7.25**	**266**	P	**Pn**	**14 01 04.4**	**-0.7**
LYLS		**7.82**	**219**	P	**Pn**	**14 01 13.7**	**+0.8**
LYLS		**7.82**	**219**	P	**Pn**	**14 01 13.7**	**+0.8**
LYLS				S	**Sn**	**14 02 39.5**	**-1.8**

MAN 04 14:07:28,1337N×**12057E,h33**km,**mb4.1,ML2.9,MS2.6, 1D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.40**	**70**⇓	*e*P	Pb	14 07 39.5	+2.4

MAN 04 14:23:29,1611N×**12174E,h15**km,**mb4.3,ML3.1,MS2.9, Luzon**

JMA 04 14:23:43.2±0.2,**4401N**×**14831E,h0**km,**M3.5,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.97**	**252**	P	Pn	14 24 18.3	+0.5
NEM2				*e*S	Sn	14 24 43.8	+0.6
JNK	**Nakash**	**2.63**	**262**	P	Pn	14 24 27.9	+1.0
JNK				*e*S	Sn	14 25 00.4	+0.8
JAK	**Akkeshi**	**2.82**	**250**	P	Pn	14 24 30.5	+1.1
JAK				*e*S	Sn	14 25 05.4	+1.3
JAR	**Ashorobuto**	**3.37**	**259**	P	Pn	14 24 39.0	+1.9
JAR				*e*S	Sn	14 25 20.0	+2.3
JCH	**Churui**	**3.87**	**251**	*e*S	Sn	14 25 31.9	+1.8
JNBK	**Urakawa-nobuka**	**4.42**	**249**	P	Pn	14 24 53.4	+1.9
JKB	**Kayabe**	**5.75**	**251**	P	Pn	14 25 11.4	+1.7
JKB				*e*S	Sn	14 26 16.5	+0.2
JOT	**Ohata**	**5.96**	**246**	P	Pn	14 25 14.0	+1.4

ISCJB ***04*** *14:27:41.0±0.7,3011N±008×1392E±03,h446km±14km, mb3.3/6,Error ellipse: s-maj=38.5km s-min=8.5km az=166.3*
IDC ***04*** *14:27:41.2±1.2,3003N×13888E,h417km±27km,mb3.0/6, mb1 3.0/8,mb1mx2.8/24,mbtmp3.0/8,Error ellipse: s-maj=65.2km s-min=15.5km az=70.0*
JMA ***04*** *14:27:42.2±0.2,3002N×13910E,h422km,M3.5*
ISC 04 14:27:42.0±0.7,**3016N**±008×**1394E**±03,**h440**km±14km, **n16**,σ**1s07**/21,**mb3.2**/6,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.94**	**140**	P	**P**	**14 28 55.6**	**-0.5**
	9.8nm,0.3s,baz=270,slow=20,SNR=4.5						
CBIJ				S	**S**	**14 29 55.5**	**-0.8**
	23nm,0.3s,baz=295,slow=22,SNR=11						
CBIJ	**Chichi jima**	**3.94**	**140**	P	**P**	**14 28 55.6**	**-0.5**
CBIJ				*e*S	**S**	**14 29 55.3**	**-1.0**
BSO1	**Boso 1**	**4.69**	**17**	*e*S	**S**	**14 30 09.8**	**+1.2**
BSO3	**Boso 3**	**4.73**	**12**	*e*S	**S**	**14 30 09.9**	**+0.6**
JIE	**Ise**	**4.78**	**333**	P	**P**	**14 29 04.6**	**+1.0**
JHU	**Hanno**	**5.67**	**359**	*e*S	**S**	**14 30 26.0**	**-0.4**
JRY	**Ryogami san**	**5.85**	**356**	P	**P**	**14 29 16.2**	**+1.9**
JRY				*e*S	**S**	**14 30 28.5**	**-1.2**
JYT	**Yasato**	**6.09**	**6**	P	**P**	**14 29 17.7**	**+0.9**
JYT				*e*S	**S**	**14 30 32.7**	**-1.6**
JAG	**Ashikaga**	**6.25**	**1**	P	**P**	**14 29 19.4**	**+1.0**
JAG				S	**S**	**14 30 35.1**	**-2.1**
MJAR	**Matsushiro Arr**	**6.43**	**352**	P	**P**	**14 29 21.4**	**+1.0**
	0.6nm,0.3s,baz=171,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**45.55**	**318**	P	**P**	**14 35 19.9**	**-0.5**
	0.4nm,0.4s,mb3.1,baz=114,slow=6.5,SNR=2.4						
MKAR	**Makanchi Array**	**46.62**	**308**	P	**P**	**14 35 27.7**	**-1.1**
	0.3nm,0.6s,mb2.8,baz=98,slow=8.9,SNR=2.3						
KURK	**Kurchatov**	**49.07**	**313**	P	**P**	**14 35 46.6**	**-0.6**
	0.8nm,0.4s,mb3.4,baz=90,slow=8.1,SNR=3.6						
ASAR	**Alice Springs**	**53.77**	**186**	P	**P**	**14 36 22.1**	**+0.3**
	0.2nm,0.5s,mb2.6,baz=2.2,slow=5.9,SNR=7.7						
BVAR	**Borovoye Array**	**54.11**	**316**	P	**P**	**14 36 23.5**	**-0.4**
	1.6nm,0.4s,mb3.6,baz=96,slow=7.7,SNR=11						
ARCES	**ARCESS Array B**	**69.83**	**340**	P	**P**	**14 38 07.7**	**+1.2**
	3.0nm,1.0s,mb3.8,baz=63,slow=8.3,SNR=5.7						

CASC ***04*** *14:32:31.8±1.6,1282N×9045W,h3km±9km,MD3.9*
IDC ***04*** *14:32:33.0±8.2,1339N×8977W,h0km,mb3.7/4,mb1 4.0/5, mb1mx3.8/19,mbtmp3.7/5,ML2.9/1,Error ellipse: s-maj=164.6km s-min=38.3km az=8.0*
ISC 04 14:32:31.2±4.6,**130N**±04×**899W**±02,**h3**km±31km,**n19**, σ**0s95**/9,**mb3.9**/3,**6C-1D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJE	**San Jose**	**0.87**	**19**⇑	*e*P	x	14 32 56.4	
RTR	**El Retiro**	**0.89**	**17**⇑	*e*P	x	14 32 56.2	
BOQS	**Boqueron**	**0.92**	**41**⇑	*e*P	x	14 32 58.7	
BOQS				*e*S	x	14 33 20.1	
LFRS	**El Faro**	**1.00**	**55**	*e*P	x	14 32 59.8	
RBDL	**Robledal**	**1.09**	**11**⇑	*e*P	x	14 32 58.9	
LBRS	**Las Brisas**	**1.09**	**50**	*e*P	x	14 33 01.0	
SNVI	**San Vicente**	**1.18**	**61**⇓	*e*P	x	14 33 02.6	
MTO2	**Montecristo 2**	**1.45**	**21**⇑	*e*P	x	14 33 04.8	
MTO2				*e*S	x	14 33 30.8	
VSM	**San Miguel**	**1.64**	**76**	*e*P	x	14 33 09.4	
FUG	**Fuego 3**	**1.67**	**327**	*e*P	**Pn**	**14 33 02.1**	**+0.8**
FG6		**1.78**	**328**	*e*P	**Pn**	**14 33 02.8**	**-0.2**
CAHU	**Cacacuatique**	**1.80**	**66**	*e*P	x	14 33 11.1	
CNCH	**Conchagua**	**2.03**	**83**	*e*P	x	14 33 14.8	
JAT	**Jato**	**2.11**	**307**⇑	*e*P	**Pn**	**14 33 06.0**	**-1.4**
CMIG	**Matias Romero**	**6.27**	**311**	Pn	**Pn**	**14 34 04.6**	**-0.1**
	0.3nm,0.3s,baz=0.0,slow=13,SNR=3.6						
CMIG				Sn	**Sn**	**14 35 16.7**	**-0.2**
	0.6nm,0.3s,baz=22,slow=16,SNR=2.8						
TXAR	**Lajitas Array**	**20.64**	**324**	P	**P**	**14 37 12.9**	**+1.0**
	0.8nm,0.7s,baz=156,slow=12,SNR=9.7						
NVAR	**Mina Array Bea**	**35.70**	**320**	P	**P**	**14 39 32.7**	**+1.7**
	0.6nm,0.7s,mb3.7,baz=132,slow=7.4,SNR=5.2						
SCHQ	**Schefferville**	**45.44**	**19**	P	**P**	**14 40 50.8**	**-0.4**
	5.3nm,0.9s,mb4.4,baz=233,slow=10,SNR=5.2						
YKA	**Yellowknife Ar**	**52.44**	**346**	P	**P**	**14 41 43.5**	**-1.2**
	0.3nm,0.4s,mb3.5,baz=146,slow=7.6,SNR=5.6						

MAN 04 14:34:23,754N×**12486E,h1**km,**mb3.7,ML2.4,MS1.9, 1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.58**	**157**⇑	*i*P	Pg	14 34 33.3	-0.8
KCP				*i* S	Sg	14 34 40.5	-1.1
CTBH	**Cotabato--PC H**	**0.69**	**242**⇓	*e*P	Pg	14 34 37.3	+1.1
CTBH				*i* S	Sg	14 34 47.6	+2.5

ISCJB ***04*** *14:34:33.5±0.5,4337N±003×4349E±004,h2km±9km, Error ellipse: s-maj=6.7km s-min=4.1km az=41.5*
MOS ***04*** *14:34:33.2±0.3,4329N×4343E,h25km,mb4.2/1,Error ellipse: s-maj=19.4km s-min=10.9km az=36.3*
MOS Felt (II-III) at Nal'chik.
TIF ***04*** *14:34:34.6,4333N×4355E,h19km±2km*
ISC 04 14:34:33.7±0.5,**4336N**±004×**4346E**±004,**h15**km±6km,**n15**, σ**1s05**/25,**3C-1D,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KORR	**Kora**	**0.52**	**122**	*e*PG	**Pg**	**14 34 43.8**	**-0.2**
KORR				*i* S	**Sg**	**14 34 51.1**	**+0.2**
ARNR	**Ardon**	**0.62**	**106**⇑	*i*PG	**Pg**	**14 34 45.9**	**+0.1**
ARNR				*e*S	**Sg**	**14 34 54.7**	**+0.6**
ZEI	**Tsey**	**0.67**	**151**⇓	*i*PG	**Pg**	**14 34 45.9**	**-0.9**
ZEI				*i* S	**Sg**	**14 34 54.8**	**-0.9**
SHAR	**Shatzhatmas**	**0.69**	**304**	*i* PG	**Pg**	**14 34 47.9**	**+0.7**
ONI	**Oni**	**0.78**	**181**	P	**Pg**	**14 34 49.6**	**+0.7**
ONI				S	**Sg**	**14 35 01.2**	**+2.1**
BTKR	**Batakoyurt**	**0.79**	**89**⇑	*i*PG	**Pg**	**14 34 48.9**	**-0.1**
BTKR				*e*S	**Sg**	**14 35 00.3**	**+0.9**
BEYR	**Belyy Ugol+**	**0.80**	**324**	*i* PG	**Pg**	**14 34 49.0**	**-0.3**
LACR	**Lac**	**0.81**	**131**⇑	*i*PG	**Pg**	**14 34 48.7**	**-0.8**
LACR				*i* S	**Sb**	**14 34 59.4**	**-0.8**
KIV	**Kislovodsk**	**0.82**	**317**	*i* PG	**Pg**	**14 34 49.2**	**-0.4**
KIV				*i* S	**Sb**	**14 35 02.1**	**+1.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KIV				smax			
	comp=Z,44nm,1.0s						
TRKR	**Terskaya**	**0.99**	**68**	*e*PG	**Pg**	**14 34 52.6**	**-0.3**
TRKR				*e*S	**Sb**	**14 35 06.3**	**+0.9**
SNJR	**Sundja**	**1.03**	**106**	*e*PG	**Pg**	**14 34 52.5**	**-1.1**
SNJR				*e*S	**Sb**	**14 35 06.1**	**-0.4**
DOMR	**Dombai**	**1.34**	**268**	*e*PG	**Pg**	**14 34 56.6**	**-2.9**
DGRG	**David-gareji**	**2.38**	**143**	P	**Pb**	**14 35 17.8**	**+1.6**
DGRG				S	**Sb**	**14 35 50.7**	**+5.5**
VSU	**Vasula**	**18.35**	**331**	*i* P	**Pn**	**14 38 45.0**	**-2.3**
VSU				pmax	pmax		
	comp=Z,4.0nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**24.88**	**60**	*i* P	**P**	**14 39 50.7**	**-4.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						

IDC 04 15:04:47.0±2.3**, 127N×12574E, h0km, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=277.4km s-min=26.7km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.02**	**163**	P	P	15 10 21.3	-0.6
	0.4nm,0.5s,baz=343,slow=7.9,SNR=14						
STKA	**Stephens Creek**	**36.23**	**157**	P	P	15 11 52.5	+0.8
	0.4nm,0.4s,baz=353,slow=9.5,SNR=5.2						
MKAR	**Makanchi Array**	**59.03**	**327**	P	P	15 14 48.7	0.0
	0.2nm,0.3s,baz=113,slow=7.2,SNR=5.1						

*IDC **04** 15:23:33.7±2.1, 245N×9574E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.7/20, mbtmp4.0/7, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/33, Error ellipse: s-maj=86.2km s-min=26.6km az=60.0*

*NEIC **04** 15:23:39.6±0.9, 257N×9602E, h35km, mb4.6/11, Error ellipse: s-maj=23.7km s-min=14.1km az=60.0*

*ISCJB **04** 15:23:42.5±6.2, 27N±02×96.1E±03, h75km±51km, mb4.2/16, Error ellipse: s-maj=55.0km s-min=21.4km az=137.8*

ISC 04 15:23:44.1±5.9**, 27N**±02×**962E**±03**, h71**km±49km**, n24,** σ**0.68**/22**, mb4.2**/16**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.87**	**10**	Pn	**Pn**	**15 27 24.6**	**+1.3**
	0.1nm,0.3s,baz=197,slow=11,SNR=8.5						
CHTO	**Chiang Mai**	**16.22**	**9**	P	**Pn**	**15 27 25.8**	**-1.9**
KAPI	**Kappang**	**24.76**	**108**	LR	LR	15 38 55.8	
	comp=Z,35nm,19.6s,baz=223,slow=37						
ODAN	**Odare**	**25.44**	**341**	*e*P	**P**	**15 29 05.6**	**+0.2**
	9.5nm,0.7s,mb4.3						
RAMN	**Ramite**	**25.78**	**340**	*e*P	**P**	**15 29 09.4**	**+0.9**
	13nm,0.5s,mb4.6						
TAPN	**Taplejung**	**25.80**	**342**	*e*P	**P**	**15 29 08.9**	**+0.2**
JIRN	**Jiri**	**26.58**	**340**	*e*P	**P**	**15 29 16.3**	**+0.6**
	14nm,0.6s,mb4.6						
GUN	**Gumba**	**26.91**	**340**	*e*P	**P**	**15 29 19.0**	**+0.3**
	11nm,0.7s,mb4.5						
DMN	**Daman**	**26.92**	**338**	*e*P	**P**	**15 29 18.7**	**-0.1**
KKN	**Kakani**	**27.02**	**338**	*e*P	**P**	**15 29 19.3**	**-0.4**
	11nm,0.8s,mb4.5						
LSA	**Lhasa**	**27.25**	**350**	*e*P	**P**	**15 29 21.2**	**-0.5**
	2.6nm,0.6s,mb3.9						
GKN	**Gorkha**	**27.45**	**337**	*e*P	**P**	**15 29 23.3**	**-0.3**
	13nm,0.8s,mb4.5						
KOLN	**Koldanda**	**27.66**	**335**	*e*P	**P**	**15 29 25.5**	**+0.1**
	10nm,0.7s,mb4.5						
DANN	**Dangsing**	**28.11**	**336**	*e*P	**P**	**15 29 29.6**	**+0.2**
	7.6nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**45.12**	**128**	P	**P**	**15 31 53.8**	**+0.1**
	0.3nm,0.8s,mb3.1,baz=298,slow=8.5,SNR=5.8						
MKAR	**Makanchi Array**	**45.53**	**347**	P	**P**	**15 31 56.5**	**-0.2**
	1.3nm,0.6s,mb3.9,baz=157,slow=9.0,SNR=19						
SONM	**Songino Array**	**45.79**	**10**	P	**P**	**15 31 59.4**	**+0.7**
	1.3nm,0.5s,mb3.9,baz=189,slow=9.2,SNR=10						
ULN	**Ulaanbaatar**	**45.94**	**10**	*e*P	**P**	**15 32 00.2**	**+0.4**
	0.6nm,0.3s,mb3.8						
KURK	**Kurchatov**	**50.07**	**346**	P	**P**	**15 32 31.5**	**-0.2**
	1.1nm,0.7s,mb3.9,baz=165,slow=7.1,SNR=11						
KURK	**Kurchatov**	**50.07**	**346**	*e*P	**P**	**15 32 29.7**	**-2.0**
	0.9nm,0.6s,mb3.9						
ZALV	**Zalesovo Beam**	**51.91**	**351**	P	**P**	**15 32 45.2**	**-0.2**
	1.8nm,0.4s,mb4.4,baz=180,slow=6.9,SNR=12						
ZALV	**Zalesovo Beam**	**51.91**	**351**	P	**P**	**15 32 45.2**	**-0.2**
LSZ	**Lusaka**	**69.59**	**253**	LR	LR	15 59 25.8	
	comp=Z,59nm,20.9s,slow=31						
ARCES	**ARCESS Array B**	**80.77**	**340**	P	**P**	**15 35 49.1**	**-0.5**
	2.1nm,0.9s,mb4.0,baz=81,slow=5.7,SNR=3.9						

*ISCJB **04** 15:45:50.0±0.7, 2292S±006×6667W±007, h210km±7km, mb4.0/15, Error ellipse: s-maj=10.9km s-min=9.0km az=178.3*

*IDC **04** 15:45:50.8±1.0, 2291S×6663W, h203km±9km, mb3.7/11, mb1 3.9/16, mb1mx3.8/23, mbtmp3.8/16, Error ellipse: s-maj=14.6km s-min=12.6km az=38.0*

*NEIC **04** 15:45:50.8±0.6, 2295S×6661W, h204km±7km, mb4.6/5, Error ellipse: s-maj=9.9km s-min=7.8km az=98.0*

*GUC **04** 15:45:53.4±0.8, 2284S×6720W, h232km±9km, ML4.8*

ISC 04 15:45:51.1±0.6**, 2289S**±006×**6666W**±007**, h202**km±7km**, n46,** σ**1.15**/54**, mb4.0**/15**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.09**	**277**	P	**Pn**	**15 46 32.4**	**+1.7**
	43nm,0.3s,baz=99,slow=5.9,SNR=53						
LVC				S	**Sn**	**15 47 02.4**	**+1.0**
	58nm,0.3s,baz=246,slow=20,SNR=4.4						
LVC	**Limon Verde**	**2.09**	**277**	⇑*i*Pn	**Pn**	**15 46 32.3**	**+1.6**
LVC				S	**Sn**	**15 47 02.4**	**+0.9**
LVC				*e*Sn	**Sn**	**15 47 02.5**	**+1.1**
LVC	**Limon Verde**	**2.09**	**277**	⇑*i*P	**Pn**	**15 46 32.3**	**+1.6**
LVC				*i* S	**Sn**	**15 47 02.2**	**+0.8**
PECH	**Pedro de Valdi**	**2.79**	**275**	*e*P	**Pn**	**15 46 39.5**	**+1.1**
PECH				*i* S	**Sn**	**15 47 14.6**	**-0.7**
PECH				AML	AML	15 47 16.6	
	comp=E,2µm,0.2s						
MACH	**Maria Elena**	**2.94**	**283**	*e*P	**Pn**	**15 46 40.8**	**+0.6**
MACH				*i* S	**Sn**	**15 47 16.9**	**-1.5**
CEN1	**Los Morros**	**3.29**	**261**	⇓*i*P	**Pn**	**15 46 46.7**	**+2.5**
CEN1				*i* S	**Sn**	**15 47 27.0**	**+1.1**
TOCH	**Tocopilla**	**3.37**	**283**	*e*P	**Pn**	**15 46 45.3**	**+0.2**
TOCH				*i* S	**Sn**	**15 47 24.4**	**-3.1**
TOCH				AML	AML	15 47 27.1	
	comp=E,913nm,0.1s						
MECH	**Mejillones**	**3.49**	**266**	*e*P	**Pn**	**15 46 47.0**	**+0.3**
MECH				*i* S	**Sn**	**15 47 28.8**	**-1.4**
MECH				AML	AML	15 47 34.5	
	comp=N,1µm,0.7s						
ANCH	**Antofagasta**	**3.53**	**256**	⇑*e*P	**Pn**	**15 46 47.4**	**+0.3**
ANCH				*i* S	**Sn**	**15 47 28.4**	**-2.7**
ANCH	**Antofagasta**	**3.53**	**256**	⇑*e*P	**Pn**	**15 46 47.4**	**+0.3**
ANCH				*i* S	**Sn**	**15 47 28.4**	**-2.7**
ANCH				AML	AML	15 47 30.9	
	comp=N,1µm,0.2s						
LCO	**Las Campanas**	**7.09**	**210**	*e*Pn	**Pn**	**15 47 30.0**	**-2.5**
	comp=N,94nm,0.8s						
SIV	**San Ignacio**	**8.66**	**39**	P	**Pn**	**15 47 52.4**	**-0.6**
	comp=N,12nm,0.3s,baz=222,slow=13,SNR=168						
SIV				S	**Sn**	**15 49 22.7**	**-7.5**
	comp=N,0.7nm,0.3s,baz=255,slow=17,SNR=2.6						
CFAA	**Coronel Fontan**	**8.79**	**189**	P	**Pn**	**15 47 53.2**	**-1.3**
	comp=N,0.2nm,0.3s,baz=12,slow=12,SNR=12						
CFAA				S	**Sn**	**15 49 26.1**	**-7.1**
	comp=N,0.7nm,0.3s,baz=271,slow=16,SNR=13						
NNA	**Nana**	**14.55**	**317**	P	**Pn**	**15 49 09.4**	**+1.7**
	comp=N,1.2nm,0.3s,baz=154,slow=9.5,SNR=4.5						
NNA	**Nana**	**14.55**	**317**	*e*P	**Pn**	**15 49 09.4**	**+1.7**
PLCA	**Paso Flores**	**18.09**	**190**	P	**P**	**15 49 47.6**	**0.0**
	comp=N,0.5nm,0.3s,baz=15,slow=13,SNR=16						
PLCA	**Paso Flores**	**18.09**	**190**	*e*P	**P**	**15 49 47.7**	**+0.1**
BDFB	**Brasilia**	**19.02**	**71**	P	**P**	**15 49 58.5**	**+0.6**
	comp=N,1.8nm,0.3s,baz=237,slow=18,SNR=44						
SDV	**Santo Domingo**	**31.82**	**353**	P	**P**	**15 51 58.9**	**+1.9**
	comp=N,3.6nm,0.4s,mb4.3,baz=153,slow=2.3,SNR=7.2						
RCBR	**Riachuelo**	**34.17**	**65**	*e*P	**P**	**15 52 16.9**	**-0.6**
	comp=N,3.4nm,0.5s,mb4.1						
GRGR	**Grenville**	**35.15**	**9**	*e*P	**P**	**15 52 25.1**	**-0.6**
	comp=N,43nm,0.4s,mb5.3						
CMIG	**Matias Romero**	**48.38**	**323**	P	**P**	**15 54 11.9**	**-0.9**
	comp=N,3.3nm,0.7s,mb3.8,baz=97,slow=4.0,SNR=4.9						
VNA3	**Neumayer Olymp**	**58.10**	**161**	*e*	**P**	**15 55 23.6**	**+0.8**
VNA3				*e*		15 55 26.2	
VNA1	**Neumayer--Stat**	**58.28**	**161**	*e*	**P**	**15 55 25.4**	**+1.3**
VNA1				*e*		15 55 27.5	
VNA2	**Neumayer--Watz**	**58.65**	**161**	*e*	**P**	**15 55 27.7**	**+1.0**
VNA2				*e*		15 55 30.0	
SNAA	**Sanae**	**60.29**	**161**	*e*	**P**	**15 55 38.0**	**+0.1**
SNAA				*e*		15 55 40.6	
SNAA	**Sanae**	**60.29**	**161**	*e*P	**P**	**15 55 37.8**	**-0.1**
	comp=N,2.4nm,0.6s,mb4.0						
TXAR	**Lajitas Array**	**62.96**	**324**	P	**P**	**15 55 55.8**	**-0.5**
	comp=N,0.7nm,0.7s,mb3.4,baz=151,slow=8.9,SNR=10						
DBIC	**Dimbokro**	**67.16**	**72**	P	**P**	**15 56 22.2**	**-1.4**
	comp=N,2.8nm,0.6s,mb4.1,baz=242,slow=9.0,SNR=6.7						
DBIC	**Dimbokro**	**67.16**	**72**	*e*P	**P**	**15 56 22.6**	**-1.1**
QSPA	**South Pole Qui**	**67.31**	**180**	*e*P	**P**	**15 56 24.1**	**+0.6**
	comp=N,9.7nm,1.0s,mb4.4						
ANMO	**Albuquerque**	**68.81**	**326**	P	**P**	**15 56 34.0**	**+0.5**
	comp=N,2.2nm,0.6s,mb4.0,baz=166,slow=6.8,SNR=5.7						
VNDA	**Vanda**	**75.84**	**190**	P	**P**	**15 57 15.6**	**+1.1**
	comp=N,0.6nm,0.8s,mb3.3,baz=15,slow=3.6,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**75.89**	**69**	*e*P	**P**	**15 57 14.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**75.89**	**69**	P	**P**	**15 57 14.4**	**-1.4**
	comp=N,4.5nm,0.5s,mb4.4,baz=261,slow=5.8,SNR=29						
PDAR	**Pinedale Array**	**76.36**	**329**	P	**P**	**15 57 17.6**	**-0.2**
	comp=N,0.8nm,0.6s,mb3.5,baz=131,slow=7.6,SNR=9.4						
ELK	**Elko**	**77.75**	**324**	P	**P**	**15 57 25.5**	**-0.1**
	comp=N,1.5nm,0.8s,mb3.7,baz=127,slow=3.5,SNR=6.4						
NVAR	**Mina Array Bea**	**77.87**	**321**	P	**P**	**15 57 26.5**	**+0.2**
	comp=N,0.8nm,0.7s,mb3.4,baz=151,slow=6.4,SNR=5.2						
NVAR	**Mina Array Bea**	**77.87**	**321**	P	**P**	**15 57 26.5**	**+0.2**
YKA	**Yellowknife Ar**	**93.19**	**340**	P	**P**	**15 58 40.9**	**-0.9**
	comp=N,0.7nm,0.6s,mb3.9,baz=132,slow=4.6,SNR=9.8						
YKA	**Yellowknife Ar**	**93.19**	**340**	P	**P**	**15 58 40.9**	**-0.9**
ASAR	**Alice Springs**	**129.59**	**205**	PKP	PKPdf	16 04 35.5	-1.1
	comp=N,1.8nm,0.6s,baz=139,slow=2.0,SNR=3.2						
PETK	**Petropavlovsk-**	**134.91**	**323**	PKP	PKPdf	16 04 44.7	-0.9
	comp=N,3.3nm,1.0s,baz=82,slow=3.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**142.27**	**27**	PKhKP		16 04 55.4	
	comp=N,0.9nm,0.5s,baz=323,slow=2.2,SNR=3.0						
ZALV				PKP	PKPdf	16 04 58.8	-0.3
	comp=N,1.6nm,0.5s,baz=317,slow=3.2,SNR=4.2						
MKAR	**Makanchi Array**	**145.47**	**39**	PKPbc	PKPbc	16 05 04.7	-0.7
	comp=N,2.1nm,0.6s,baz=313,slow=2.8,SNR=8.6						
SONM	**Songino Array**	**154.50**	**11**	PKPab	PKPab	16 05 42.9	+0.2
	comp=N,0.7nm,0.7s,baz=348,slow=2.7,SNR=3.8						

*BJI **04** 15:48:34.9, 963S×12291E, h132km, mB5.2, mb5.1*

*MOS **04** 15:48:39.6±0.8, 860S×12234E, h102km, mb5.1/34, Error ellipse: s-maj=12.3km s-min=6.3km az=113.8*

*ISCJB **04** 15:48:43.5±0.2, 868S±003×12243E±005, h139km, mb5.0/91, Error ellipse: s-maj=6.8km s-min=3.6km az=156.3*

*GCMT **04** 15:48:44.5±0.2, 885S×12257E, h130km±2km, MW5.1/89, Moment Tensor Solution. s48,c59; s89,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.99±.18; $M_{\theta\theta}$0.95±.17; $M_{\phi\phi}$0.03±.19; $M_{r\theta}$4.89±.11; $M_{\theta\phi}$-1.84±.17; $M_{\phi r}$0.17±.12; Best double couple: $M_0$5.31700×10^{16} NP1:ϕ_s165.00000°,δ21.00000°,λ-16.00000°. NP2: ϕ_s270.00000°,δ84.00000°,λ-110.00000°. Principal axes: T 5.3070, Plg36.0000°, Azm18.0000°; N 0.0210, Plg20.0000°, Azm272.0000°; P -5.3270, Plg47.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **04** 15:48:44.0±0.8, 866S×12246E, h125km±6km, mb4.9/17, mb1 4.9/19, mb1mx4.9/20, mbtmp4.9/19, MS3.9/8, Ms1 3.9/8, ms1mx3.6/19 Error ellipse: s-maj=14.4km s-min=7.7km az=66.0*

*NEIC **04** 15:48:44.5±0.9, 868S×12238E, h132km±8km, mb5.3/54, Error ellipse: s-maj=7.2km s-min=4.1km az=62.0*

*DJA **04** 15:48:45, 904S×12250E, h118km, Mw5.4/26*

ISC 04 15:48:45.5±0.2**, 872S**±003×**12245E**±005**, h141**km**, h141**km±2.0km**:pP-P, n230,** σ**1.20**/214**, mb5.0**/91**, 15C-13D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.91**	**141**	P	**Pn**	**15 49 16.8**	**-2.2**
	418nm,0.3s,baz=336,slow=2.2,SNR=388						
BATI				S	**Sn**	**15 49 41.8**	**-2.9**
	3µm,0.3s,baz=303,slow=17,SNR=18						
KAPI	**Kappang**	**4.55**	**324**	Pn	**Pn**	**15 49 52.1**	**-0.7**
	7µm,0.7s						
KAPI	**Kappang**	**4.55**	**324**	P	**Pn**	**15 49 52.3**	**-0.6**
	92nm,0.3s,baz=153,slow=11,SNR=238						
KAPI	**Kappang**	**4.55**	**324**	*e*P	**Pn**	**15 49 52.6**	**-0.3**
KAKA	**Kakadu**	**10.59**	**113**	*e*P	x	15 50 51.4	
	567nm,0.4s						
KAKA				*e*S	x	15 52 40.5	
MBWA	**Marble Bar**	**12.64**	**192**	*e*P	**Pn**	**15 51 37.2**	**-3.2**
	167nm,0.9s						
TSM	**Tawau**	**13.71**	**340**	P	**Pn**	**15 51 56.3**	**+2.1**
MYLDM	**Lahad Datu**	**14.36**	**344**	⇑P	**Pn**	**15 52 06.0**	**+3.6**
SBUM	**Sibu**	**15.07**	**317**	⇓P	**Pn**	**15 52 14.5**	**+3.2**
BTM	**Bintulu**	**15.08**	**321**	⇑P	**Pn**	**15 52 14.4**	**+3.0**
SDKM	**Sandakan**	**15.19**	**340**	P	**Pn**	**15 52 15.6**	**+2.7**
SDKM	**Sandakan**	**15.19**	**340**	P	**Pn**	**15 52 17.6**	**+4.7**
KSM	**Kuching**	**15.77**	**309**	*e*P	**Pn**	**15 52 22.3**	**+2.3**
	54nm,1.0s						
KSM	**Kuching**	**15.77**	**309**	⇑P	**Pn**	**15 52 22.8**	**+2.7**
KKM	**Kota Kinabalu**	**15.93**	**337**	*e*P	**Pn**	**15 52 24.7**	**+2.8**
	121nm,0.9s						
KKM	**Kota Kinabalu**	**15.93**	**337**	P	**Pn**	**15 52 25.3**	**+3.4**
DAV	**Davao City (W)**	**15.99**	**11**	P	**Pn**	**15 52 24.3**	**+1.5**
	16nm,0.3s,baz=315,slow=4.5,SNR=8.6						
WRAB	**Tennant Creek**	**16.03**	**135**	Pn	**Pn**	**15 52 18.0**	**-5.2**
	1µm,0.5s						
WRAB	**Tennant Creek**	**16.03**	**135**	⇓*i*P	**Pn**	**15 52 18.2**	**-5.0**
WRAB	**Tennant Creek**	**16.03**	**135**	*e*P	**Pn**	**15 52 18.0**	**-5.1**
	255nm,1.0s						
WB2	**Warramunga Arr**	**16.04**	**135**	*e*P	**Pn**	**15 52 17.9**	**-5.3**
WB2				*e*S	**S**	**15 55 04.6**	**-17**
KDM	**Kudat**	**16.51**	**340**	⇓P	**Pn**	**15 52 32.0**	**+3.0**
XMIS	**Christmas Isla**	**16.65**	**263**	⇑*i*P	**Pn**	**15 52 31.3**	**+0.5**
XMIS				*e*S	S	15 55 12.1	-24
TBP	**Tagbilaran**	**18.34**	**4**	*e*P	**P**	**15 52 51.4**	**+2.1**
ASAR	**Alice Springs**	**18.47**	**145**	P	**P**	**15 52 50.2**	**-0.4**
	46nm,0.3s,baz=326,slow=12,SNR=4009						
ASAR				S	**S**	**15 56 04.5**	**-10**
	16nm,0.3s,baz=321,slow=23,SNR=14						
ASAR				ScP	ScP	16 00 38.1	+0.6
	baz=359,slow=2.3,SNR=5.1						
ASAR	**Alice Springs**	**18.47**	**145**	P	**P**	**15 52 50.3**	**-0.4**
ASAR				S	**S**	**15 56 04.5**	**-10**
SCPH	**Surigao**	**18.63**	**9**	⇑*e*P	**P**	**15 52 55.3**	**+3.0**
PLP	**Palo**	**19.91**	**7**	⇓*e*P	**P**	**15 53 08.1**	**+1.8**
COEN	**Coen**	**20.98**	**106**	*e*P	**P**	**15 53 17.1**	**-0.7**
	129nm,0.6s						
MYKOM	**Kota Tinggi**	**21.27**	**299**	⇓P	**P**	**15 53 23.2**	**+2.3**
KGM	**Kluang**	**21.84**	**298**	⇑P	**P**	**15 53 30.1**	**+3.1**
FORT	**Forrest**	**22.57**	**167**	*e*P	**P**	**15 53 32.8**	**-1.3**
	255nm,0.5s,mb5.9						
FORT				*e*S	**S**	**15 57 40.4**	**+10**
KLBR	**Kellerberrin**	**23.17**	**190**	⇓*i*P	**P**	**15 53 38.9**	**-0.8**
	286nm,0.6s,mb5.9						
KLBR				*e*S	**S**	**15 57 51.3**	**+11**
MUN	**Mundaring**	**23.86**	**193**	*e*P	**P**	**15 53 44.9**	**-1.0**
MUN				*e*S	**S**	**15 58 05.6**	**+14**
PMG	**Port Moresby**	**24.41**	**94**	*c i*P	**P**	**15 53 51.1**	**-0.1**
PMG				pmax	pmax		
	comp=Z,46nm,1.0s						
PMG	**Port Moresby**	**24.41**	**94**	*e*P	**P**	**15 53 50.4**	**-0.8**
	comp=Z,58nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**24.57**	**191**	P	**P**	**15 53 51.8**	**-0.6**
	comp=Z,148nm,0.4s,mb5.8,baz=23,slow=7.6,SNR=505						
NWAO	**Narrogin (SRO)**	**24.57**	**191**	*e*P	**P**	**15 53 51.4**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,151nm,0.6s						
NWAO	**Narrogin (SRO)**	**24.57**	**191**	*e*P	**P**	**15 53 51.4**	**-1.0**
	comp=Z,151nm,0.6s,mb5.7						
CTA	**Charters Tower**	**25.64**	**119**	*e*P	**P**	**15 54 02.8**	**+0.6**
	comp=Z,64nm,0.8s,mb5.3						
CTA				*e*S	sS	15 59 20.2	+7.5
CTA	**Charters Tower**	**25.64**	**119**	P	**P**	**15 54 02.7**	**+0.5**
	comp=Z,76nm,0.8s,mb5.4,baz=296,slow=11,SNR=101						
CTA	**Charters Tower**	**25.64**	**119**	*e*P	**P**	**15 54 02.8**	**+0.6**
CTA				pmax	pmax		
	comp=Z,64nm,0.8s						
CTAO	**Charters Tower**	**25.64**	**119**	*e*P	**P**	**15 54 02.7**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,76nm,0.8s,mb5.4						
CTAO	**Charters Tower**	**25.64**	**119**	*e*P	**P**	**15 54 02.7**	**+0.5**
	comp=Z,76nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**29.11**	**145**	*e*P	**P**	**15 54 33.0**	**-0.1**
	comp=Z,62nm,0.4s,mb5.7						
STKA				*e*S	sS	16 00 06.8	-0.7
STKA	**Stephens Creek**	**29.11**	**145**	P	**P**	**15 54 33.3**	**+0.2**
	comp=Z,73nm,0.3s,mb5.8,baz=317,slow=8.9,SNR=331						
STKA				LR	LR	16 06 21.8	
	comp=Z,379nm,21.1s,baz=128,slow=36						
QIZ	**Qiongzhong**	**30.24**	**336**	P	**P**	**15 54 44.6**	**+1.4**
QIZ				AP	pP	15 55 14.7	+1.4
QIZ				XP	sP	15 55 31.6	+2.1
QIZ				S	**S**	**15 59 33.6**	**+1.1**
QIZ				XS	sS	16 00 26.3	+0.9
QIZ				AMB	AMB		
	comp=Z,328nm,5.0s						
TPUB	**Ta-pu**	**31.87**	**357**	*e*P	**P**	**15 54 57.0**	**-0.5**
	comp=Z,56nm,0.8s,mb5.3						
EIDS	**Eidsvold**	**31.88**	**125**	*e*P	**P**	**15 54 57.3**	**-0.3**
	comp=Z,10.0nm,0.6s,mb4.7						
EIDS				*e*ScP	ScP	16 01 16.9	+1.4
YULB	**Yu-li**	**31.93**	**358**	*e*P	**P**	**15 54 55.6**	**-2.4**
	comp=Z,44nm,0.8s,mb5.2						
SSLB	**Suanglung**	**32.34**	**357**	*e*P	**P**	**15 55 00.4**	**-1.1**
	comp=Z,63nm,1.0s,mb5.3						
ARMA	**Armidale**	**34.77**	**132**	⇓*i*P	**P**	**15 55 24.7**	**+2.1**
ARMA				*e*SCP	ScP	16 01 28.3	+2.8
TOO	**Toolangi**	**35.49**	**148**	*e*P	**P**	**15 55 30.2**	**+1.6**
TOO				*e*SCP	ScP	16 01 29.7	+1.8
CMAR	**Chiang Mai Arr**	**35.59**	**319**	P	**P**	**15 55 29.8**	**0.0**
	comp=Z,4.3nm,0.5s,mb4.3,baz=145,slow=7.2,SNR=20						
CMAR				PcP	PcP	15 57 56.9	+1.3
	comp=Z,4.3nm,0.7s,baz=178,slow=2.4,SNR=8.0						
CMAR				ScP	ScP	16 01 30.3	+1.7
	comp=Z,6.6nm,0.8s,baz=167,slow=3.1,SNR=21						
CMAR				LR	LR	16 11 05.3	
	comp=Z,134nm,19.7s,baz=139,slow=38						
CMAR	**Chiang Mai Arr**	**35.59**	**319**	P	**P**	**15 55 29.8**	**+0.1**
CMAR						15 57 56.9	
CHG	**Chiang Mai**	**35.86**	**320**	P	**P**	**15 55 32.2**	**+0.3**
CHTO	**Chiang Mai**	**35.86**	**320**	*e*P	**P**	**15 55 31.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
CHTO	**Chiang Mai**	**35.86**	**320**	*e*P	**P**	**15 55 31.4**	**-0.6**
	comp=Z,7.3nm,0.6s,mb4.5						
CHTO				*e*ScP	ScP	16 01 30.8	+1.2
CAN	**Canberra**	**35.92**	**141**	*e*P	**P**	**15 55 33.7**	**+1.4**
CAN				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.1						
CAN	**Canberra**	**35.92**	**141**	*e*P	**P**	**15 55 33.7**	**+1.4**
	comp=Z,46nm,1.0s,mb5.1						
CNB	**Canberra Magne**	**36.14**	**141**	*e*P	**P**	**15 55 35.4**	**+1.2**
CNB				*e*SCP	ScP	16 01 31.5	+1.1
HNR	**Honiara**	**37.03**	**94**	P	**P**	**15 55 41.1**	**-0.9**
	comp=Z,75nm,1.0s,mb5.3,baz=15,slow=12,SNR=1.9						
HNR				ScP	ScP	16 01 37.2	+3.1
	comp=Z,68nm,1.0s,baz=225,slow=5.7,SNR=5.4						
GYA	**Guiyang**	**38.18**	**337**	P	**P**	**15 55 51.9**	**+0.4**
GYA				AP	pP	15 56 24.9	+2.5
GYA				XP	sP	15 56 39.4	+1.0
GYA				PP	PP	15 57 26.9	+5.1
GYA				PPP		15 57 52.0	
GYA				S	**S**	**16 01 34.0**	**-0.5**
GYA				XS	sS	16 02 28.9	+0.5
GYA				SCS	ScS	16 05 46.4	-1.8
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
GYA				AMB	AMB		
	comp=Z,270nm,5.7s						
GYA				LR	LR		
	comp=N,560nm,17.2s						
GYA				LR	LR		
	comp=E,480nm,16.0s						
GYA				LR	LR		
	comp=Z,520nm,17.6s						
KMI	**Kunming**	**38.73**	**331**	P	**P**	**15 55 58.9**	**+2.8**
KMI				AP	pP	15 56 30.8	+3.7
KMI				PP	PP	15 57 34.6	+6.8
KMI				PPP		15 58 02.3	
KMI				S	**S**	**16 01 44.5**	**+1.7**
KMI				XS	sS	16 02 39.2	+2.3
KMI				SSS		16 05 15.8	
KMI				AMB	AMB		
	comp=Z,113nm,4.9s						
KMI				LR	LR		
	comp=N,224nm,10.3s						
KMI				LR	LR		
	comp=E,169nm,12.9s						
KMI				LR	LR		
	comp=Z,238nm,15.2s						
WHN	**Wuhan**	**39.80**	**349**	P	**P**	**15 56 05.5**	**+0.6**
WHN				AP	pP	15 56 34.5	-1.6
WHN				XP	sP	15 56 49.3	-2.7
MOO	**Moorlands**	**40.02**	**151**	*e*P	**P**	**15 56 07.7**	**+1.1**
CBIJ	**Chichi jima**	**40.42**	**28**	P	**P**	**15 56 09.4**	**-0.7**
	comp=Z,216nm,0.7s,mb5.9,baz=85,slow=2.4,SNR=10						
TAU	**Tasmania Unive**	**40.44**	**152**	P	**P**	**15 56 11.9**	**+1.8**
	comp=Z,459nm,0.7s,mb6.2,SNR=12						
TAU	**Tasmania Unive**	**40.44**	**152**	*e*P	**P**	**15 56 11.5**	**+1.4**
TAU				pmax	pmax		
	comp=Z,99nm,1.1s,mb5.3						
TAU	**Tasmania Unive**	**40.44**	**152**	*e*P	**P**	**15 56 11.5**	**+1.5**
	comp=Z,99nm,1.1s,mb5.4						
NJ2	**Nanjing**	**40.68**	**355**	*e*P	**P**	**15 56 13.2**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.2						
CD2	**Chengdu**	**43.29**	**336**	P	**P**	**15 56 32.9**	**-0.4**
CD2				AP	pP	15 57 04.4	-0.5
CD2				XP	sP	15 57 20.6	-0.1
CD2				PP	PP	15 58 18.0	+1.1
CD2				S	**S**	**16 02 49.0**	**-1.1**
CD2				XS	sS	16 03 45.0	+0.1
CD2				AMB	AMB		
	comp=Z,30nm,0.4s,mb5.3						
CD2				AMB	AMB		
	comp=Z,180nm,6.1s						
XAN	**Xi'an**	**44.42**	**344**	P	**P**	**15 56 41.6**	**-0.7**
XAN				AMB	AMB		
	comp=Z,35nm,0.8s,mb5.0						
XAN				AMB	AMB		
	comp=Z,85nm,5.5s						
KSRS	**Korea Array**	**46.21**	**6**	P	**P**	**15 56 55.9**	**-0.5**
	comp=Z,4.2nm,0.6s,mb4.2,baz=185,slow=9.0,SNR=20						
KSRS				PcP	PcP	15 58 30.9	+1.2
	comp=Z,3.2nm,0.6s,baz=175,slow=2.8,SNR=6.4						
KSRS				LR	LR	16 14 59.9	
	comp=Z,36nm,22.0s,baz=185,slow=34						
MJAR	**Matsushiro Arr**	**47.39**	**17**	P	**P**	**15 57 04.5**	**-1.1**
	comp=Z,18nm,0.6s,mb4.8,baz=191,slow=8.8,SNR=35						
MJAR				ScP	ScP	16 02 14.2	-0.8
	comp=Z,1.6nm,0.6s,baz=186,slow=4.4,SNR=4.0						
MAJO	**Matsushiro**	**47.40**	**17**	*e*P	**P**	**15 57 04.4**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.1						
MAJO	**Matsushiro**	**47.40**	**17**	*e*P	**P**	**15 57 04.3**	**-1.2**
	comp=Z,60nm,1.1s,mb5.1						
MAT	**Matsushiro**	**47.40**	**17**	P	**P**	**15 57 04.3**	**-1.3**
LZH	**Lanzhou**	**47.88**	**340**	⇑P	**P**	**15 57 10.0**	**+0.6**
LZH				AP	pP	15 57 42.5	+1.0
LZH				XP	sP	15 57 58.6	+1.4
LZH				PP	PP	15 59 03.2	+0.5
LZH				S	**S**	**16 03 56.1**	**+0.2**
LZH				XS	sS	16 04 52.3	+0.7
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,116nm,5.4s						
LZH				LR	LR		
	comp=N,612nm,14.2s						
LZH				LR	LR		
	comp=Z,889nm,17.8s						
LSA	**Lhasa**	**48.64**	**323**	P	**P**	**15 57 15.4**	**+0.1**
LSA	**Lhasa**	**48.64**	**323**	*e*P	**P**	**15 57 15.2**	**-0.1**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.8						
LSA	**Lhasa**	**48.64**	**323**	*e*P	**P**	**15 57 15.2**	**-0.1**
	comp=Z,15nm,0.6s,mb4.8						
BJT	**Baijiatuau**	**48.84**	**354**	*e*P	**P**	**15 57 15.6**	**-1.0**
BJT				pmax	pmax		
	comp=Z,61nm,0.6s						
BJT	**Baijiatuau**	**48.84**	**354**	*e*P	**P**	**15 57 15.6**	**-1.0**
	comp=Z,60nm,0.6s,mb5.4						
BJI	**Beijing**	**48.86**	**354**	P	**P**	**15 57 15.7**	**-1.0**
BJI				S	**S**	**16 04 12.5**	**+3.1**
BJI				AMB	AMB		
	comp=Z,86nm,0.7s,mb5.5						
BJI				AMB	AMB		
	comp=Z,205nm,4.5s						
BJI				LR	LR		
	comp=N,220nm,24.7s						
BJI				LR	LR		
	comp=E,154nm,25.7s						
BJI				LR	LR		
	comp=Z,136nm,28.8s						
ODAN	**Odare**	**49.06**	**317**	*e*P	**P**	**15 57 17.9**	**-0.6**
	comp=Z,36nm,0.6s,mb5.2						
TAPN	**Taplejung**	**49.17**	**318**	*e*P	**P**	**15 57 19.0**	**-0.4**

comp=Z,71nm,0.5s,mb5.6
RAMN Ramite 49.65 317 *e*P **P** **15 57 23.0 0.0**
comp=Z,48nm,0.5s,mb5.4
HHC Hu-ho-hao-te 50.33 349 *e*P **P** **15 57 27.4 -0.5**
HHC AP pP 15 58 03.5 +3.2
HHC PCP PcP 15 58 43.6 -0.9
HHC PP PP 15 59 26.0 +1.1
HHC S **S** **16 04 26.3 -3.6**
HHC XS sS 16 05 30.6 +4.6
HHC SCS ScS 16 06 58.5 -6.1
HHC AMB AMB
comp=Z,26nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,165nm,3.8s
JIRN Jiri 50.39 317 *e*P **P** **15 57 28.3 -0.3**
comp=Z,34nm,0.5s,mb5.2
HYB Hyderabad 50.55 301 *i* P **P** **15 57 28.5 -1.5**
HYB Hyderabad 50.55 301 *e*P **P** **15 57 28.5 -1.5**
GUN Gumba 50.76 317 *e*P **P** **15 57 30.9 -0.5**
comp=Z,55nm,0.5s,mb5.4
PKI Pulchoki 50.86 316 *e*P **P** **15 57 31.1 -1.0**
comp=Z,36nm,0.4s,mb5.3
PKI Pulchoki 50.86 316 *e*P **P** **15 57 31.1 -1.0**
PKI pmax pmax
comp=Z,36nm,0.4s,mb5.3
KKN Kakani 51.09 317 *e*P **P** **15 57 33.6 -0.2**
comp=Z,27nm,0.5s,mb5.1
KKN Kakani 51.09 317 *e*P **P** **15 57 33.6 -0.2**
KKN pmax pmax
comp=Z,27nm,0.5s,mb5.1
DMN Daman 51.09 316 *e*P **P** **15 57 33.2 -0.7**
comp=Z,33nm,0.7s,mb5.1
GKN Gorkha 51.66 316 *e*P **P** **15 57 37.2 -0.9**
comp=Z,27nm,0.4s,mb5.3
KOLN Koldanda 52.23 315 *e*P **P** **15 57 41.6 -0.7**
comp=Z,20nm,0.5s,mb5.0
GTA Gaotai 52.29 338 ⇑P **P** **15 57 43.1 +0.6**
GTA AP pP 15 58 14.9 -0.2
GTA XP sP 15 58 30.4 -0.3
GTA PP PP 15 59 44.6 +2.0
GTA S **S** **16 04 52.7 -4.2**
GTA AMB AMB
comp=Z,14nm,0.7s,mb4.7
GTA AMB AMB
comp=Z,187nm,6.6s
GTA LR LR
comp=N,110nm,19.5s
GTA LR LR
comp=E,157nm,15.3s
GTA LR LR
comp=Z,85nm,14.4s
CN2 Changchun 52.34 3 *e*P **P** **15 57 46.5 +3.7**
CN2 *e*S **S** **16 05 00.9 +3.5**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
CN2 AMB AMB
comp=Z,310nm,4.0s
DANN Dangsing 52.48 316 *e*P **P** **15 57 43.4 -0.7**
comp=Z,85nm,0.5s,mb5.7
MDJ Mudanjiang 53.48 6 P **P** **15 57 50.8 -0.3**
MDJ AMB AMB
comp=Z,39nm,0.8s,mb5.2
MDJ AMB AMB
comp=Z,219nm,5.0s
MDJ Mudanjiang 53.48 6 *e*P **P** **15 57 50.6 -0.5**
comp=Z,59nm,1.0s,mb5.3
ASAJ Asahikawa 55.67 17 LR LR 16 20 25.8
comp=Z,88nm,20.2s,baz=187,slow=34
SNZO South Karori 56.30 134 *e*P **P** **15 58 11.9 +0.3**
comp=Z,249nm,1.3s,mb5.9
HIA Hailar 57.78 358 *e*P **P** **15 58 21.2 -0.6**
HIA pmax pmax
comp=Z,21nm,1.1s
HIA Hailar 57.78 358 *e*P **P** **15 58 21.2 -0.6**
comp=Z,21nm,1.1s,mb4.9
ULN Ulaanbaatar 57.96 348 *c i*P **P** **15 58 23.3 +0.3**
ULN Ulaanbaatar 57.96 348 *e*P **P** **15 58 23.0 0.0**
comp=Z,25nm,0.9s,mb5.0
HABR Khabarovsk 58.02 10 *de*P **P** **15 58 20.4 -3.0**
HABR *e**PP pP 15 58 52.1 -4.6
HABR *e* 15 59 10.2
HABR *e*PPP 16 01 50.8
HABR *e*S **S** **16 06 13.7 +0.8**
HABR *e* 16 07 57.1
HABR pmax pmax
comp=Z,22nm,0.7s,mb5.1
CASY Casey 58.06 186 *e*P **P** **15 58 23.5 0.0**
comp=Z,17nm,1.0s,mb4.8
SONM Songino Array 58.07 347 P **P** **15 58 24.0 +0.2**
comp=Z,24nm,0.7s,mb5.2,baz=163,slow=8.7,SNR=136
SONM ScP ScP 16 03 00.9 -0.2
comp=Z,0.9nm,0.7s,baz=157,slow=4.1,SNR=3.8
SONM LR LR 16 21 32.4
comp=Z,114nm,20.6s,baz=305,slow=34
SONM PKP2bc 16 28 12.9
comp=Z,0.7nm,1.0s,baz=90,slow=0.3,SNR=3.8
SONM Songino Array 58.07 347 P **P** **15 58 24.0 +0.2**
SONM ScP ScP 16 03 00.9 -0.2
SONM LR LR 16 21 32.4
SONM ⇑*e* 16 28 12.9
YSS Yuzh-Sakhalins 58.30 16 *e*P **P** **15 58 25.5 +0.1**
YSS pmax pmax
comp=Z,51nm,1.6s,mb5.1
SMLA Simla 58.73 315 *i* P **P** **15 58 27.6 -1.2**
SMLA *i* S pP 15 58 57.5 -4.6
SMLA *ex* x 15 59 00.2
comp=N,54nm,0.3s
SMLA *ex* x 15 59 04.6
comp=E,61nm,0.4s
DRV Dumont d'Urvil 59.10 172 P **P** **15 58 39.0 +8.3**
DRV L 16 13 00.0
DRV R 16 17 00.0
WMQ Urumqi 61.05 332 P **P** **15 58 44.7 +0.4**
WMQ PCP PcP 15 59 26.5 +0.4
WMQ XP sP 15 59 35.2 +2.0
WMQ PP PP 16 01 05.2 +4.6
WMQ PPP 16 02 33.2
WMQ S **S** **16 06 50.1 -1.9**
WMQ XS sS 16 07 50.0 +0.1
WMQ SCS ScS 16 08 18.1 -3.7
WMQ AMB AMB
comp=Z,38nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,117nm,3.0s
WMQ LR LR
comp=N,83nm,22.0s
WMQ LR LR
comp=E,74nm,26.0s
WMQ LR LR
comp=Z,78nm,26.0s
MIR Mirnyy 61.15 193 ⇑*i*P **P** **15 58 45.5 +0.9**
MIR *i* pP 15 59 19.0 +0.8
MIR pmax pmax
comp=Z,200nm,1.0s,mb5.9
ZAK Zakamensk 61.17 346 *e*P **P** **15 58 44.2 -0.8**
ZAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
TLY Talaya 62.30 347 *e*P **P** **15 58 52.5 0.0**
TLY pmax pmax
comp=Z,20nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,26nm,9.0s
TLY Talaya 62.30 347 *e*P **P** **15 58 52.5 0.0**
comp=Z,14nm,0.8s,mb4.8
MOY Mondy 62.92 345 *e*P **P** **15 58 56.9 +0.3**
AFI Afiamalu 64.54 101 P **P** **15 59 09.9 +1.8**
CLNS Chul'man 65.35 1 *e*P **P** **15 59 13.0 +0.6**
CLNS pmax pmax
comp=E,5.0nm,1.1s
CLNS pmax pmax
comp=Z,14nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,8.0nm,0.9s
MKAR Makanchi Array 65.81 331 P **P** **15 59 15.3 -0.3**
comp=N,15nm,0.6s,mb5.0,baz=140,slow=7.3,SNR=254
MKAR LR LR 16 27 04.1
comp=N,72nm,21.2s,baz=172,slow=35
MKAR Makanchi Array 65.81 331 *i* P **P** **15 59 15.3 -0.3**
MKAR pmax pmax
comp=Z,15nm,0.6s
KZA Kyzart 66.45 323 P **P** **15 59 20.1 +0.3**
SNR=16
BOD Bodaibo 66.66 355 *e*P **P** **15 59 20.3 -0.4**
BOD pmax pmax
comp=Z,17nm,0.9s,mb4.9
TKM2 Tokmak 2 66.76 324 *e*P **P** **15 59 21.4 -0.3**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
TKM2 Tokmak 2 66.76 324 P **P** **15 59 21.7 0.0**
SNR=18
TKM2 Tokmak 2 66.76 324 *e*P **P** **15 59 21.4 -0.4**
comp=Z,8.9nm,0.6s,mb4.8
KBK Karagaybulak 66.98 324 P **P** **15 59 23.1 0.0**
SNR=10
AAK Ala-Archa 67.23 324 P **P** **15 59 24.2 -0.5**
comp=Z,158nm,0.6s,mb6.0,SNR=15
AAK Ala-Archa 67.23 324 *e*P **P** **15 59 24.4 -0.3**
AAK pmax pmax
comp=Z,15nm,0.6s,mb5.0
AAK Ala-Archa 67.23 324 P **P** **15 59 24.9 +0.2**
SNR=22
AAK Ala-Archa 67.23 324 *e*P **P** **15 59 24.4 -0.3**
comp=Z,15nm,0.6s,mb5.0
USP Ospenovka 67.61 324 P **P** **15 59 26.7 -0.3**
SNR=11
EKS2 Erkin-Say 67.67 323 P **P** **15 59 27.6 +0.2**
SNR=16
EKS2 Erkin-Say 67.67 323 *e*P **P** **15 59 27.6 +0.2**
comp=Z,8.4nm,0.7s,mb4.6
PEA0B Petropavlovsk- 68.50 22 *e*P **P** **15 59 33.0 +0.6**
PETK Petropavlovsk- 68.50 22 P **P** **15 59 33.1 +0.7**
comp=Z,20nm,0.5s,mb5.1,baz=227,slow=1.5,SNR=61
PET Petropavlovsk 68.79 23 *e*P **P** **15 59 36.6 +2.4**
PET pmax pmax
comp=Z,39nm,0.5s,mb5.4
KRAR Krasnoyarsk 69.00 343 *e*P **P** **15 59 34.9 -0.5**
KK31 Karatay Array 69.88 322 *i* P **P** **15 59 40.4 -0.8**
KK31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ZALV Zalesovo Beam 70.04 337 P **P** **15 59 40.5 -1.3**
comp=Z,20nm,0.5s,mb5.1,baz=131,slow=4.5,SNR=68
ZALV PKPPKP 16 27 43.5
comp=Z,0.4nm,0.4s,baz=280,slow=4.4,SNR=4.3
KURK Kurchatov 70.29 332 P **P** **15 59 43.6 +0.1**
comp=Z,83nm,0.8s,mb5.5,SNR=11
KURK Kurchatov 70.29 332 P **P** **15 59 42.8 -0.6**
comp=Z,4.7nm,0.4s,mb4.6,baz=144,slow=5.4
KURK Kurchatov 70.29 332 *e*P **P** **15 59 42.6 -0.9**
KURK pmax pmax
comp=Z,35nm,1.0s,mb5.0
KURK Kurchatov 70.29 332 *e*P **P** **15 59 42.5 -0.9**
comp=Z,35nm,1.0s,mb5.0
MAW Mawson 70.67 200 P **P** **15 59 47.1 +1.5**
comp=Z,23nm,0.8s,mb5.0,baz=76,slow=7.5,SNR=13
MAW LR LR 16 27 03.7
comp=Z,148nm,21.8s,baz=303,slow=32
MAW Mawson 70.67 200 *e*P **P** **15 59 46.9 +1.3**
MAW *e* pP 16 00 20.2 +0.2
MAW pmax pmax
comp=Z,27nm,1.6s
MAW Mawson 70.67 200 *e*P **P** **15 59 46.9 +1.3**
comp=Z,27nm,1.6s,mb4.7
MAW *e* pP 16 00 20.2 +0.2
YAK Yakutsk 70.76 4 *e*P **P** **15 59 45.7 -0.3**
YAK pmax pmax
comp=Z,52nm,0.9s,mb5.3
YAK pmax pmax
comp=N,26nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK Yakutsk 70.76 4 *e*P **P** **15 59 45.6 -0.4**
comp=E,49nm,0.6s,mb5.4
NVS Novosibirsk 71.32 337 *e*P **P** **15 59 47.1 -2.5**
NVS *e*S S 16 08 52.1 -3.7
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=E,16nm,1.0s
NVS pmax pmax
comp=Z,25nm,1.0s,mb4.9
NVS smax
comp=N,32nm,2.1s
NVS smax
comp=E,22nm,2.0s
VNDA Vanda 71.75 172 P **P** **15 59 52.9 +1.0**
comp=E,11nm,0.6s,mb4.7,baz=317,slow=6.2,SNR=89
VNDA LR LR 16 29 56.7
comp=E,120nm,18.2s,baz=325,slow=34
VNDA Vanda 71.75 172 *e*P **P** **15 59 52.8 +0.9**
VNDA pmax pmax
comp=Z,26nm,1.0s
VNDA Vanda 71.75 172 *e*P **P** **15 59 52.8 +0.9**
comp=Z,26nm,1.0s,mb4.9
SBA Scott Base 72.72 171 *e*P **P** **15 59 59.3 +1.6**
SBA pmax pmax
comp=Z,13nm,0.9s,mb4.7
SBA Scott Base 72.72 171 *e*P **P** **15 59 59.3 +1.6**
comp=Z,13nm,0.9s,mb4.7
ABPO Ambohimpanom 73.30 253 *e*P **P** **16 00 03.2 +1.1**
comp=Z,22nm,1.2s,mb4.8
SEY Seymchan 75.05 14 ⇑*i*P **P** **16 00 12.1 +0.8**
VOSK Vostochnaya 75.22 331 P **P** **16 00 11.5 -1.0**
VOSK pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
BVA0 Borovoye Array 75.69 331 P **P** **16 00 14.6 -0.6**
ABKT Ailbek 75.73 313 P **P** **16 00 16.4 +0.6**
comp=Z,62nm,1.2s,mb5.1,SNR=6.9
BRVK Borovoye 75.76 331 P **P** **16 00 15.8 +0.2**
comp=Z,70nm,0.5s,mb5.5,SNR=5.9
BRVK Borovoye 75.76 331 *e*P **P** **16 00 14.9 -0.7**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
BRVK Borovoye 75.76 331 *e*P **P** **16 00 14.9 -0.7**
comp=Z,7.3nm,0.6s,mb4.5
AB31 Akbulak array 79.32 324 P **P** **16 00 34.0 -1.5**
AB31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
SYO Syowa Base 79.35 201 ⇑*e*P **P** **16 00 35.2 -0.1**
SYO Syowa Base 79.35 201 ⇓*i*X 16 01 08.9
TIXI Tiksi 80.31 2 *c i*P **P** **16 00 39.6 -0.7**
TIXI pmax pmax
comp=Z,41nm,1.3s,mb4.9
TIXI Tiksi 80.31 2 *e*P **P** **16 00 39.3 -1.0**
comp=Z,28nm,0.7s,mb5.0
QRN Al-Qurain 80.82 301 *e*P **P** **16 00 42.9 -1.1**
baz=301
QRN AMb AMB 16 00 43.7
comp=Z,48nm,0.9s,mb5.1,baz=301
AKTO Aktyubinsk 80.96 324 P **P** **16 00 42.8 -1.4**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
RDF Al-Radifah 81.18 301 *e*P **P** **16 00 44.7 -1.2**
baz=301
RDF AMb AMB 16 01 08.8
comp=Z,47nm,1.4s,mb4.9,baz=301
QSPA South Pole Qui 81.27 180 *e*P **P** **16 00 46.8 +1.4**
comp=Z,47nm,0.7s,mb5.2
NAY Al-Naaiem 81.52 301 *e*P **P** **16 00 46.9 -0.8**
baz=301
NAY AMb AMB 16 00 57.6
comp=Z,15nm,1.6s,mb4.4,baz=301
MIB Mutribah 81.58 302 *e*P **P** **16 00 47.2 -0.8**
baz=302
MIB AMb AMB 16 01 12.6
comp=Z,21nm,0.6s,mb4.9,baz=302
SVE Sverdlovsk 82.47 331 ⇓*e*P **P** **16 00 54.1 +2.1**
SVE pmax pmax
comp=Z,16nm,1.1s,mb4.6
BILL Bilibino 82.60 15 ⇓*e*P **P** **16 00 51.8 -0.6**
BILL pmax pmax
comp=Z,15nm,1.7s,mb4.5
BILL MLR MLR
comp=Z,100nm,21.0s
ARU Arti 83.31 330 *d i*P **P** **16 00 56.0 -0.3**
ARU *e**PP pP 16 01 29.5 -2.3
ARU *e* 16 04 05.4
ARU *e*S S 16 11 05.4 +0.3
ARU *e*SS SS 16 16 31.5 -2.1
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.5
ARU Arti 83.31 330 P **P** **16 00 55.1 -1.2**
comp=Z,6.3nm,0.6s,mb4.5
MAIT Maitri 88.50 198 *e*P **P** **16 01 21.7 +0.1**
KIV Kislovodsk 88.69 315 *e*P **P** **16 01 21.8 -1.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
SDPT Sand Point 89.85 34 *e*P **P** **16 01 28.4 +0.2**
comp=Z,81nm,0.6s,mb5.8
LSZ Lusaka 91.80 254 *e*P **P** **16 01 39.2 +1.1**
LSZ pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
LSZ Lusaka 91.80 254 *e*P **P** **16 01 39.2 +1.1**
comp=Z,6.5nm,0.6s,mb4.8
SNAA Sanae 92.17 195 *e*P **P** **16 01 39.6 +0.9**
SNAA *e* 16 01 43.8
SNAA *e* pP 16 02 15.1 +0.4
VNA2 Neumayer--Watz 93.78 195 *e*P **P** **16 01 47.9 +1.7**
baz=114,slow=3.6
VNA2 *e* 16 01 51.2
VNA2 *e* pP 16 02 24.8 +2.6
KLMR Klimovskoe 94.11 331 *e*P **P** **16 01 46.2 -1.6**
KLMR pmax pmax
comp=Z,21nm,1.3s,mb5.1
VNA3 Neumayer Olymp 94.13 194 *e*P **P** **16 01 48.9 +1.2**
VNA3 *e* 16 01 52.5
VNA3 *e* pP 16 02 26.2 +2.5
VNA1 Neumayer--Stat 94.18 195 *e*P **P** **16 01 50.1 +2.1**
VNA1 *e* 16 01 53.6
BR131 Keskin Array S 94.59 309 P **P** **16 01 49.5 -0.9**
BRTR Keskin Array B 94.59 309 P **P** **16 01 49.1 -1.3**
comp=Z,2.2nm,1.0s,mb4.3,baz=101,slow=2.5,SNR=7.5
OBN Obninsk 94.73 325 ⇓*e*P **P** **16 01 48.1 -2.6**
OBN *e*SS SS 16 19 32.9 +14
OBN pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
AKASG Malin Array Be 98.72 320 P **P** **16 02 07.0 -1.8**
comp=Z,0.4nm,0.4s,mb4.2,baz=79,slow=4.4,SNR=5.0
ARCES ARCESS Array B 100.54 339 P Pdif 16 02 15.9 -1.1
comp=Z,1.9nm,0.8s,baz=81,slow=5.8,SNR=2.5
GERES GERESS Array B 108.84 319 PKiKP PKiKP 16 06 57.2 -0.9
comp=Z,0.4nm,0.5s,baz=276,slow=1.9,SNR=3.1
YKA Yellowknife Ar 112.52 25 PKiKP PKiKP 16 07 04.3 -0.3
comp=Z,1.0nm,0.7s,baz=304,slow=1.8,SNR=8.7
YKA PKKPbc PKKPbc 16 17 52.8 -4.0
comp=Z,0.5nm,0.5s,baz=107,slow=3.1,SNR=8.6
YKA Yellowknife Ar 112.52 25 PKPdf PKiKP 16 07 04.3 -0.3
YKA PKKPbc PKKPbc 16 17 52.8 -4.0
NVAR Mina Array Bea 118.20 51 PKP PKPdf 16 07 18.1 +1.7
comp=Z,1.9nm,0.9s,baz=272,slow=2.3,SNR=5.1
NVAR PP PP 16 08 34.9 +1.2
comp=Z,1.6nm,0.8s,baz=262,slow=5.8,SNR=3.9
NVAR PKKPab PKKPab 16 17 38.4 0.0
comp=Z,0.9nm,0.8s,baz=130,slow=4.3,SNR=5.7
ELK Elko 119.96 48 PKP PKPdf 16 07 20.5 +0.9
comp=Z,1.8nm,0.8s,baz=275,slow=11,SNR=3.9
TOA0 Torodi Ar. Sit 121.76 280 *e*PKPdf PKPdf 16 07 23.6 -0.2
TORD Torodi Ar. Bea 121.76 280 PKP PKPdf 16 07 23.8 0.0
comp=Z,4.1nm,0.6s,baz=49,slow=1.9,SNR=48
TORD SKP 16 10 47.0
comp=Z,4.4nm,0.9s,baz=60,slow=2.1,SNR=9.3
TORD Torodi Ar. Bea 121.76 280 PKP PKPdf 16 07 23.8 0.0
TORD SKP 16 10 47.0
REDW Red Top Meadow 122.27 44 *e*PKPdf PKPdf 16 07 25.4 +1.4
PDAR Pinedale Array 123.37 44 PKP PKPdf 16 07 27.1 +1.0
comp=Z,0.7nm,0.6s,baz=222,slow=1.2,SNR=5.8
PDAR PKKPbc PKKPbc 16 17 17.4 +0.1
comp=Z,0.8nm,0.5s,baz=122,slow=7.0,SNR=9.5
PDAR PKKP PKKPdf 16 17 54.0 -1.2
comp=Z,0.7nm,0.7s,baz=107,slow=5.1,SNR=4.1
RSSD Black Hills 126.49 41 *e*PKiKP PKPdf 16 07 31.2 -0.9
DBIC Dimbokro 127.77 272 PKP PKPdf 16 07 36.1 +0.7
comp=Z,3.7nm,0.5s,baz=140,slow=4.1,SNR=9.3
ANMO Albuquerque 128.29 52 *i* PKiKP PKPdf 16 07 35.9 +0.1
PLCA Paso Flores 129.36 167 PKP PKPdf 16 07 36.5 -1.2
comp=Z,1.8nm,0.7s,baz=78,slow=3.0,SNR=4.1
PLCA SKPbc 16 10 49.3
comp=Z,9.0nm,0.9s,baz=213,slow=5.1,SNR=16
TXAR Lajitas Array 132.21 58 PKhKP 16 07 33.4
comp=Z,0.3nm,0.6s,baz=143,slow=3.2,SNR=3.9
TXAR PKP PKPdf 16 07 42.3 -1.1
comp=Z,0.2nm,0.4s,baz=198,slow=2.4,SNR=5.8
TXAR SKPbc SKPbc 16 10 57.2 +0.2
comp=Z,4.3nm,0.6s,baz=248,slow=1.9,SNR=23
TXAR PKKP 16 17 38.5
comp=Z,0.3nm,0.7s,baz=52,slow=1.5,SNR=4.4
TXAR Lajitas Array 132.21 58 PKHKP 16 07 33.4
TXAR 16 07 42.3
TXAR Lajitas Array 132.21 58 PKP 16 07 33.4
TXAR PKP PKPdf 16 07 42.3 -1.1
TXAR SKPbc SKPbc 16 10 57.2 +0.2
TXAR PKKP 16 17 38.5
SCHQ Schefferville 133.42 7 PKP PKPdf 16 07 45.4 +0.6
comp=Z,3.1nm,0.5s,baz=20,slow=6.9,SNR=8.8
SCHQ SKPbc SKPbc 16 10 59.5 -0.9
comp=Z,8.4nm,1.0s,baz=326,slow=5.6,SNR=4.5
SCHQ Schefferville 133.42 7 PKP PKPdf 16 07 45.4 +0.6
SCHQ SKPbc SKPbc 16 10 59.5 -0.9
JCT Junction City 135.05 55 PKiKP PKPdf 16 07 50.4 +1.7
LRAL Lakeview Retre 143.60 44 *e*PKPdf PKPdf 16 08 04.0 -0.1
GOGA Godfrey 145.72 40 *e*PKP2 PKPab 16 08 08.1 -0.9
LVC Limon Verde 146.94 161 PKPbc PKPbc 16 08 13.5 +1.2
comp=Z,25nm,0.7s,baz=266,slow=1.5,SNR=21
LVC Limon Verde 146.94 161 *e*PKPbc PKPbc 16 08 12.9 +0.6
ARE Arequipa 151.43 151 *e*PKiKP PKPbc 16 08 26.0 +2.3
NNA Nana 151.88 137 PKPbc PKPbc 16 08 25.8 +1.0
comp=Z,32nm,0.7s,baz=239,slow=5.5,SNR=16
NNA Nana 151.88 137 *e*PKPbc PKPbc 16 08 26.2 +1.4
BDFB Brasilia 154.02 201 PKP PKPdf 16 08 23.4 +2.1
comp=Z,1.1nm,0.5s,baz=157,slow=16,SNR=4.2
BDFB PKPab PKPab 16 08 44.8 +1.7
comp=Z,8.9nm,0.7s,baz=168,slow=9.3,SNR=18
SIV San Ignacio 155.21 172 PKP PKPdf 16 08 24.5 +1.6
comp=Z,2.4nm,0.9s,baz=153,slow=1.0,SNR=12
SIV PKPab PKPab 16 08 48.4 +0.2
comp=Z,12nm,0.5s,baz=188,slow=5.6,SNR=30
SIV PP PP 16 12 24.0 +0.9
comp=Z,2.2nm,1.0s,baz=153,slow=4.5,SNR=5.0
SDV Santo Domingo 167.07 88 PKPab PKPab 16 09 42.3 +1.9
comp=Z,5.5nm,0.7s,baz=301,slow=5.9,SNR=5.9

JMA 04 15:52:03.0±0.3, 4400N×14819E, h0km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.89**	**251**	P		Pn	15 52 37.0	+0.6
NEM2				eS		Sn	15 53 01.5	+0.6
JRA	**Rausu**	**2.22**	**269**	P		Pn	15 52 41.6	+0.6
JRA				eS		Sn	15 53 10.0	+1.0
JNK	**Nakash**	**2.55**	**262**	P		Pn	15 52 46.6	+1.1
JNK				eS		Sn	15 53 18.2	+1.0
JAK	**Akkeshi**	**2.73**	**250**	P		Pn	15 52 49.2	+1.1
JAK				eS		Sn	15 53 23.1	+1.3
JAR	**Ashorobuto**	**3.29**	**259**	P		Pn	15 52 57.8	+2.1
JAR				eS		Sn	15 53 37.6	+2.2
JCH	**Churui**	**3.79**	**250**	eS		Sn	15 53 49.7	+1.9
JNBK	**Urakawa-nobuka**	**4.33**	**249**	P		Pn	15 53 12.1	+2.0
JKB	**Kayabe**	**5.66**	**251**	eS		Sn	15 54 34.7	+0.7
JANG	**Nango**	**6.14**	**236**	eS		Sn	15 54 45.4	-0.4

*BJI **04** 16:09:33.6, 532N×12640E, h110km, mB5.0, mb4.8*
*ISCJB **04** 16:09:38.9±0.5, 600N±003×12627E±005, h110km±3km, mb4.8/82, Error ellipse: s-maj=8.9km s-min=4.1km az=159.1*
*MAN **04** 16:09:38, 591N×12631E, h60km, mb5.3, ML4.3, MS4.5*
*DJA **04** 16:09:39, 630N×12659E, h92km, Mw5.2/10*
*MOS **04** 16:09:40.0±1.4, 609N×12669E, h136km, mb4.6/20, Error ellipse: s-maj=24.3km s-min=10.0km az=116.5*
*IDC **04** 16:09:40.5±0.8, 597N×12614E, h107km±6km, mb4.3/18, mb1 4.4/20, mb1mx4.4/23, mbtmp4.3/20, MS3.3/6, Ms1 3.4/6, ms1mx3.1/24, Error ellipse: s-maj=21.0km s-min=8.8km az=76.0*
*NEIC **04** 16:09:40.7±0.8, 605N×12626E, h110km±7km, mb4.8/42, Error ellipse: s-maj=8.9km s-min=4.4km az=61.0*
ISC 04 16:09:40.3±0.4, 601N±003×12625E±005, h107km±3km, h110km±1.6km:pP-P, n156, σ1§04/159, mb4.8/82, 7C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.25**	**328**	P		Pn	**16 10 03.2**	**-0.8**
	286nm,0.3s,baz=226,slow=1.7,SNR=41							
DAV				S		Sn	**16 10 21.8**	**-0.2**
	787nm,0.3s,baz=270,slow=20,SNR=22							
DAV	**Davao City (W)**	**1.25**	**328**	*e*Pn		Pn	**16 10 03.2**	**-0.9**
GSPH	**General Santos**	**1.30**	**274**	‖*e*P		Pn	**16 10 01.5**	**-3.1**
GSPH				*e*S		Sn	**16 10 18.4**	**-4.6**
KCP	**Kidapawan**	**1.53**	**311**	‖*i*P		Pn	**16 10 06.2**	**-1.1**
KCP				*i* S		Sn	**16 10 26.5**	**-1.2**
CTBH	**Cotabato--PC H**	**2.33**	**301**	‖*e*P		Pn	**16 10 16.6**	**-0.8**
SCPH	**Surigao**	**3.83**	**349**	‖*e*P		Pn	**16 10 36.5**	**-0.8**
IPIL	**Ipil**	**4.06**	**296**	‖*e*P		Pn	**16 10 41.1**	**+0.6**

ZMPH Zamboanga City 4.27 283 eP P 16 10 42.9 -0.4
ZMPH eS Sn 16 11 27.0 -5.1
TBP Tagbilaran 4.36 327 eP Pn 16 10 44.6 +0.1
MNI Manado 4.75 197 P Pn 16 10 49.6 -0.2
LLP Lapu-Lapu 4.84 332 eP Pn 16 10 51.8 +0.8
LLP eS Sn 16 11 48.9 +2.9
PLP Palo 5.28 346 eP Pn 16 10 58.9 +2.0
TNTI Ternate 5.32 168 P Pn 16 10 56.7 -0.8
RCP Roxas 6.52 328 eP Pn 16 11 15.3 +1.6
LBMI Labuha 6.72 169 P Pn 16 11 16.3 -0.2
KKM Kota Kinabalu 9.98 271 eP Pn 16 12 02.8 +1.9
45nm,1.0s
KDI Kendari 10.54 200 P Pn 16 12 08.6 +0.1
KAPI Kappang 12.73 211 P Pn 16 12 37.3 -0.2
1.5nm,0.3s,baz=28,slow=10,SNR=16
KAPI LR LR 16 17 27.6
comp=Z,118nm,21.0s,baz=326,slow=37
KAPI Kappang 12.73 211 eP Pn 16 12 37.4 -0.1
45nm,0.8s
BATI Baumata 16.31 189 P Pn 16 13 24.2 +1.0
14nm,0.3s,baz=258,slow=0.4,SNR=24
BATI S **S** 16 16 30.4 +0.7
1.5nm,0.3s,baz=108,slow=20,SNR=3.6
BATI LR LR 16 19 38.8
comp=Z,91nm,20.2s,baz=135,slow=37
KSM Kuching 16.53 255 eP Pn 16 13 28.9 +2.9
44nm,1.1s
KAKA Kakadu 19.59 162 eP x 16 13 42.9
59nm,0.6s
QIZ Qiongzhong 20.57 310 P P 16 14 11.8 +1.1
QIZ AP 16 14 32.1
QIZ S **S** 16 17 52.2 -2.8
QIZ XS sS 16 18 25.5 -2.9
QIZ SS 16 18 31.3
QIZ AMB AMB
comp=Z,52nm,1.3s
QIZ AMB AMB
comp=Z,281nm,3.7s
QIZ Qiongzhong 20.57 310 eP P 16 14 11.5 +0.8
comp=Z,52nm,1.0s
PMG Port Moresby 25.85 126 eP P 16 14 57.4 -4.8
PMG Port Moresby 25.85 126 eP P 16 15 01.2 -1.0
comp=Z,6.9nm,0.9s,mb4.1
COEN Coen 25.99 140 eP P 16 15 02.7 -0.6
comp=Z,12nm,0.6s,mb4.5
NJ2 Nanjing 26.82 346 eP P 16 15 10.2 -0.4
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.6
WHN Wuhan 26.85 337 P P 16 15 13.0 +2.0
WRAB Tennant Creek 26.98 163 eP P 16 15 09.6 -2.6
WRAB Tennant Creek 26.98 163 eP P 16 15 11.7 -0.5
comp=Z,19nm,0.6s,mb4.8
WB2 Warramunga Arr 26.99 163 eP P 16 15 11.8 -0.5
GYA Guiyang 27.62 320 P P 16 15 21.8 +3.9
GYA AP pP 16 15 45.8 +4.4
GYA XP sP 16 15 58.8 +5.0
GYA PP PP 16 16 14.8 -7.5
GYA S **S** 16 19 56.4 +4.5
GYA XS sS 16 20 37.0 +4.0
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
GYA AMB AMB
comp=Z,70nm,5.9s
MBWA Marble Bar 27.75 193 eP P 16 15 18.6 -0.5
comp=Z,18nm,0.9s,mb4.6
CMAR Chiang Mai Arr 29.36 297 P P 16 15 34.1 +0.7
comp=Z,3.8nm,0.7s,mb4.1,baz=110,slow=6.9,SNR=26
CMAR PcP PcP 16 18 39.1 +1.7
comp=Z,2.9nm,0.8s,baz=126,slow=1.0,SNR=15
CMAR ScP ScP 16 22 10.8 +1.1
comp=Z,0.8nm,0.6s,baz=104,slow=1.9,SNR=5.8
CMAR LR LR 16 28 31.2
comp=Z,45nm,18.8s,baz=120,slow=39
CMAR Chiang Mai Arr 29.36 297 eP P 16 15 34.2 +0.7
KMI Kunming 29.47 313 P P 16 15 35.9 +1.6
KMI AP pP 16 16 00.1 +2.1
KMI XP sP 16 16 13.5 +3.1
KMI PP PP 16 16 37.0 -5.9
KMI PPP 16 16 51.5
KMI S **S** 16 20 21.3 +0.2
KMI AMB AMB
comp=Z,12nm,0.8s,mb4.6
KMI AMB AMB
comp=Z,138nm,4.1s
KMI LR LR
comp=Z,79nm,28.8s
CHTO Chiang Mai 29.49 298 eP P 16 15 34.7 +0.1
comp=Z,8.6nm,0.9s,mb4.4
ASAR Alice Springs 30.42 166 P P 16 15 42.6 -0.1
comp=Z,6.3nm,0.6s,mb4.4,baz=346,slow=6.6,SNR=95
ASAR PcP PcP 16 18 40.7 +0.7
comp=Z,3.5nm,0.5s,baz=359,slow=3.1,SNR=8.0
ASAR S **S** 16 20 32.3 -3.6
comp=Z,1.1nm,0.8s,baz=354,slow=23,SNR=4.2
ASAR ScP ScP 16 22 15.4 +2.5
comp=Z,1.4nm,0.9s,baz=0.0,slow=1.5,SNR=4.2
KSRS Korea Array 31.34 3 P P 16 15 50.8 +0.1
comp=Z,1.0nm,0.5s,mb3.9,baz=188,slow=9.6,SNR=5.6
KSRS PcP PcP 16 18 43.4 +1.1
comp=Z,1.3nm,0.6s,baz=182,slow=2.5,SNR=4.4
KSRS ScP ScP 16 22 20.4 +4.7
comp=Z,2.0nm,0.8s,baz=179,slow=1.7,SNR=4.9
KSRS LR LR 16 28 23.8
comp=Z,22nm,20.2s,baz=185,slow=36
XAN Xi'an 32.19 332 P P 16 15 56.9 -1.2
XAN AP pP 16 16 19.7 -2.2
XAN PP PP 16 17 11.9 -1.0
XAN S **S** 16 21 04.1 +0.8
XAN AMB AMB
comp=Z,13nm,0.8s,mb4.7
XAN LR LR
comp=N,51nm,25.1s
XAN LR LR
comp=E,34nm,18.8s
XAN LR LR
comp=Z,98nm,27.8s
CTA Charters Tower 32.55 143 eP P 16 16 03.3 +1.9
comp=Z,6.0nm,0.6s,mb4.6
CTA Charters Tower 32.55 143 P P 16 16 02.7 +1.2
comp=Z,7.5nm,0.6s,mb4.7,baz=327,slow=10,SNR=11
CD2 Chengdu 32.55 322 P P 16 16 03.0 +1.6
CD2 AP pP 16 16 27.6 +2.4
CD2 XP sP 16 16 40.8 +3.3
CD2 PP PP 16 17 15.8 -1.2
CD2 PCP PcP 16 18 47.0 +1.3
CD2 S **S** 16 21 09.5 +0.5
CD2 XS sS 16 21 52.6 +2.2
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,150nm,6.8s
CD2 LR LR
comp=N,594nm,9.9s
CD2 LR LR
comp=Z,732nm,9.8s
BJI Beijing 35.08 346 P P 16 16 23.5 +0.4
BJI AMB AMB
comp=Z,41nm,0.8s,mb5.3
LZH Lanzhou 36.32 329 P P 16 16 35.1 +1.3
LZH AP pP 16 17 00.2 +2.3
LZH XP sP 16 17 13.6 +3.4
LZH PP PP 16 18 02.7 +4.2
LZH AMB AMB
comp=Z,23nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,106nm,5.6s
LZH LR LR
comp=N,493nm,13.6s
LZH LR LR
comp=Z,635nm,17.8s
FORT Forrest 36.62 177 eP P 16 16 36.6 +0.2
comp=Z,20nm,0.5s,mb5.3
HHC Hu-ho-hao-te 37.10 341 eP P 16 16 42.2 +1.8
HHC AP pP 16 17 07.6 +3.0
HHC XP sP 16 17 20.4 +3.6
HHC PP PP 16 18 12.5 +5.4
HHC PCP PcP 16 19 00.1 +1.4
HHC S **S** 16 22 20.3 +1.6
HHC PCS PcS 16 22 47.2 +0.2
HHC XS sS 16 23 03.8 +3.2
HHC SCS ScS 16 26 42.7 -1.1
HHC AMB AMB
comp=Z,16nm,0.6s,mb5.1
HHC AMB AMB
comp=Z,96nm,4.2s

CN2 Changchun 37.65 359 eP P 16 16 47.3 +2.4
SHL Shillong 38.18 304 eP P 16 16 51.0 +1.3
KLBR Kellerberrin 38.26 192 eP P 16 16 50.0 -0.2
comp=Z,25nm,1.2s,mb4.9
MUN Mundaring 38.97 194 eP P 16 16 56.1 0.0
EIDS Eidsvold 39.44 143 eP P 16 17 01.5 +1.4
comp=Z,4.4nm,0.6s,mb4.5
NWAO Narrogin (SRO) 39.66 192 P P 16 17 01.3 -0.5
comp=Z,12nm,0.6s,mb4.9,baz=32,slow=7.4,SNR=10
STKA Stephens Creek 40.41 160 iP P 16 17 08.5 +0.4
comp=Z,12nm,0.5s,mb5.0
STKA ePCP PcP 16 19 07.6 -1.6
STKA Stephens Creek 40.41 160 P P 16 17 08.6 +0.5
comp=Z,20nm,0.7s,mb5.1,baz=335,slow=8.1,SNR=52
STKA PcP PcP 16 19 09.8 +0.6
comp=Z,7.7nm,0.5s,baz=328,slow=5.4,SNR=4.8
ASAJ Asahikawa 40.58 18 P P 16 17 09.7 +0.4
comp=Z,10nm,0.9s,mb4.6,baz=272,slow=17,SNR=5.0
LSA Lhasa 40.61 310 P P 16 17 11.2 +1.4
LSA Lhasa 40.61 310 eP P 16 17 11.5 +1.7
comp=Z,8.3nm,0.8s,mb4.6
GTA Gaotai 40.92 328 eP P 16 17 12.4 +0.2
GTA PCP PcP 16 19 12.4 +1.6
GTA AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
TAPN Taplejung 42.32 305 eP P 16 17 24.0 +0.2
comp=Z,19nm,0.6s,mb5.0
ODAN Odare 42.39 304 eP P 16 17 24.7 +0.2
comp=Z,26nm,0.5s,mb5.2
BOK Bokaro 42.62 299 eP P 16 17 26.3 -0.1
BOK AMb AMB 16 17 30.0
comp=Z,12nm,0.9s,mb4.6
HABR Khabarovsk 42.97 9 eP P 16 17 23.4 -5.3
HABR *i* 16 19 03.7
HABR *e* 16 19 13.4
RAMN Ramite 43.08 303 eP P 16 17 30.8 +0.8
comp=Z,41nm,0.6s,mb5.3
YSS Yuzh-Sakhalins 43.20 17 iP P 16 17 25.2 -5.4
YSS pmax pmax
comp=Z,19nm,1.2s,mb4.7
ARMA Armidale 43.62 148 eP P 16 17 34.7 +0.4
JIRN Jiri 43.68 304 eP P 16 17 35.1 +0.3
comp=Z,43nm,0.6s,mb5.3
GUN Gumba 44.03 304 eP P 16 17 37.8 +0.2
comp=Z,35nm,0.5s,mb5.3
PKI Pulchoki 44.29 304 eP P 16 17 39.9 +0.2
comp=Z,17nm,0.8s,mb4.8
KKN Kakani 44.48 304 eP P 16 17 41.3 +0.1
comp=Z,31nm,0.9s,mb5.0
DMN Daman 44.56 304 eP P 16 17 42.1 +0.3
comp=Z,34nm,0.9s,mb5.0
ULN Ulaanbaatar 44.82 342 eP P 16 17 41.9 -1.6
ULN Ulaanbaatar 44.82 342 eP P 16 17 43.5 -0.1
comp=Z,6.0nm,0.8s,mb4.4
SONM Songino Array 45.00 341 P P 16 17 45.3 +0.3
comp=Z,1.4nm,0.4s,mb4.0,baz=156,slow=9.2,SNR=11
SONM PcP PcP 16 19 25.5 +1.2
comp=Z,5.1nm,0.8s,baz=164,slow=4.0,SNR=14
GKN Gorkha 45.09 304 eP P 16 17 45.4 -0.6
comp=Z,8.5nm,0.4s,mb4.8
KOLN Kolanda 45.87 303 eP P 16 17 52.3 +0.1
comp=Z,36nm,0.5s,mb5.4
DANN Dangsing 45.93 304 eP P 16 17 52.5 -0.2
comp=Z,54nm,0.7s,mb5.4
CNB Canberra Magne 46.51 154 eP P 16 17 59.1 +2.1
TOO Toolangi 46.92 159 eP P 16 18 01.8 +1.6
HYB Hyderabad 47.94 288 *i* P P 16 18 09.0 +0.6
HYB Hyderabad 47.94 288 eP P 16 18 09.0 +0.6
NGP Nagpur 48.09 293 eP P 16 18 08.5 -1.0
ZAK Zakamensk 48.23 340 eP P 16 18 00.4 -10
ZAK *e* 16 19 36.3
KOD Kodaikanal 48.45 278 eP P 16 18 12.3 -0.1
KOD AMb AMB 16 18 17.4
comp=Z,17nm,0.9s,mb4.9
AKL Akola 49.87 292 eP P 16 18 23.9 +0.8
AKL AMb AMB 16 18 24.5
comp=Z,54nm,1.3s,mb5.3
BHPL Bhopal 49.98 295 eP P 16 18 24.2 +0.2
BHPL AMb AMB 16 18 24.9
comp=Z,37nm,0.5s,mb5.6
JOSI Joshimath 50.13 305 eP P 16 18 25.4 +0.4
WMQ Urumqi 50.60 324 eP P 16 18 29.0 +0.7
WMQ LR LR
comp=N,66nm,26.0s
WMQ LR LR
comp=E,14nm,23.0s
WMQ LR LR
comp=Z,48nm,24.0s
SONA Sohna 51.49 301 eP P 16 18 35.0 -0.2
SONA eP 16 18 35.0
SONA AMb AMB 16 18 35.4
comp=Z,25nm,0.7s,mb5.4
SONA AMb AMB 16 18 35.4
comp=Z,25nm,0.7s,mb5.4
KLP Kalpa 51.51 306 eP P 16 18 35.9 +0.5
KLP eP 16 18 35.9
KLP AMb AMB 16 18 37.9
comp=Z,17nm,0.3s,mb5.5
KLP AMb AMB 16 18 37.9
comp=Z,17nm,0.3s,mb5.5
SMLA Simla 52.26 305 eP P 16 18 41.0 +0.1
SMLA AMb AMB 16 18 43.4
comp=Z,49nm,1.4s,mb5.3
KHET Khetri 52.53 301 eP P 16 18 42.8 -0.1
KHET eP 16 18 42.8
KHET AMb AMB 16 18 44.1
comp=Z,30nm,0.7s,mb5.4
KHET AMb AMB 16 18 44.1
comp=Z,30nm,0.7s,mb5.4
BOD Bodaibo 52.56 352 eP P 16 18 42.9 +0.3
BOD pmax pmax
comp=Z,14nm,1.2s,mb4.9
PETK Petropavlovsk- 53.52 23 P P 16 18 49.9 +0.2
comp=Z,3.6nm,0.6s,mb4.6,baz=295,slow=0.3,SNR=15
PETK Petropavlovsk- 53.52 23 P P 16 18 49.9 +0.2
MKAR Makanchi Array 55.43 325 P P 16 19 03.2 -0.5
comp=Z,2.6nm,0.4s,mb4.6,baz=119,slow=7.6,SNR=76
MKAR PcP PcP 16 20 03.1 +0.4
comp=Z,5.7nm,0.5s,baz=120,slow=3.7,SNR=12
YAK Yakutsk 55.96 2 eP P 16 19 05.7 -1.5
YAK pmax pmax
comp=Z,17nm,0.8s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK Yakutsk 55.96 2 eP P 16 19 07.1 -0.1
comp=N,23nm,0.8s,mb5.3
TKM2 Tokmak 2 57.74 318 eP P 16 19 20.0 -0.2
comp=N,2.3nm,0.4s,mb4.6
ZALV Zalesovo Beam 58.36 333 P P 16 19 22.7 -1.5
comp=N,2.1nm,0.5s,mb4.4,baz=136,slow=6.9,SNR=9.9
ZALV PcP PcP 16 20 12.9 -1.1
comp=N,1.2nm,0.5s,baz=144,slow=2.7,SNR=3.8
ZALV LR LR 16 45 40.1
comp=N,37nm,20.0s,baz=48,slow=37
AAK Ala-Archa 58.37 317 eP P 16 19 24.3 -0.2
AAK pmax pmax
comp=Z,6.0nm,2.5s,mb4.2
AAK Ala-Archa 58.37 317 eP P 16 19 25.0 +0.5
comp=Z,1.7nm,0.5s,mb4.3
EKS2 Erkin-Say 58.87 317 eP P 16 19 28.0 0.0
comp=Z,3.0nm,0.6s,mb4.5
KURK Kurchatov 59.58 327 P P 16 19 31.3 -1.4
KURK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KURK Kurchatov 59.58 327 eP P 16 19 31.8 -0.9
comp=Z,7.4nm,0.6s,mb4.9
NVS Novosibirsk 59.64 333 eP P 16 19 30.9 -2.2
NVS *e* 16 20 17.6
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,4.0nm,1.1s
NVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
KBL Kabul 59.78 307 eP P 16 19 34.2 -0.2
comp=Z,8.6nm,0.7s,mb4.9
KK31 Karatay Array 61.26 316 *i* P P 16 19 43.5 -0.8
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
VOSK Vostochnaya 64.71 326 P P 16 20 04.4 -2.6
VOSK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BRVK Borovoye 65.24 327 P P 16 20 09.0 -1.4
BRVK pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
BRVK Borovoye 65.24 327 eP P 16 20 09.5 -0.9
comp=Z,5.8nm,0.7s,mb4.5
TIXI Tiksi 65.59 1 *d* iP P 16 20 12.1 -0.2
TIXI pmax pmax
comp=Z,21nm,1.6s,mb4.7
TIXI Tiksi 65.59 1 eP P 16 20 12.3 0.0
comp=Z,11nm,0.8s,mb4.7
AB31 Akbulak array 70.10 320 P P 16 20 39.7 -1.3
AB31 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SVE Sverdlovsk 71.79 328 eP P 16 20 50.7 -0.3
SVE eS S 16 30 06.4 +3.7
SVE pmax pmax
comp=Z,13nm,0.9s,mb4.8
ARU Arti 72.77 327 *c* iP P 16 20 55.8 -1.1
ARU *e* 16 23 40.4
ARU ePPP 16 25 24.5
ARU eS S 16 30 18.0 +4.0
ARU eSS SS 16 35 02.8 +7.0
ARU pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
ARU Arti 72.77 327 eP P 16 20 55.4 -1.6
comp=Z,6.4nm,0.4s,mb4.8
RDF Al-Radifah 77.24 298 eP P 16 21 20.7 -2.6
baz=298
RDF AMb AMB 16 21 24.4
comp=Z,44nm,1.3s,mb5.0,baz=298
MIB Mutribah 77.43 299 eP P 16 21 22.8 -1.5
baz=299
MIB AMb AMB 16 21 24.9
comp=Z,79nm,0.8s,mb5.5,baz=299
NAY Al-Naaiem 77.51 299 eP P 16 21 22.9 -1.9
baz=298
NAY AMb AMB 16 21 24.8
comp=Z,27nm,0.9s,mb5.0,baz=298
KIV Kislovodsk 81.23 313 eP P 16 21 44.6 0.0
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
RC01 Rabbit Creek A 81.88 29 eP P 16 21 48.3 +0.6
comp=Z,6.9nm,0.4s,mb4.8
COLD Coldfoot 81.99 23 eP P 16 21 49.2 +1.0
comp=Z,3.0nm,0.4s,mb4.5
COLA College 82.85 25 eP P 16 21 50.7 -1.9
KLMR Klimovskoe 83.20 331 eP P 16 21 53.2 -1.3
KLMR pmax pmax
comp=Z,33nm,1.5s,mb4.9
OBN Obninsk 84.94 325 iP P 16 22 02.6 -0.8
OBN eS S 16 32 18.9 -4.4
OBN pmax pmax
comp=Z,45nm,1.6s,mb5.2
ANN Anapa 84.98 314 eP P 16 22 05.8 +1.9
VNDA Vanda 85.73 173 P P 16 22 07.2 +0.3
comp=Z,2.3nm,0.5s,mb4.4,baz=317,slow=6.5,SNR=24
VNDA LR LR 17 00 34.3
comp=Z,42nm,20.6s,baz=340,slow=36
VNDA Vanda 85.73 173 eP P 16 22 07.5 +0.6
comp=Z,4.5nm,1.0s,mb4.3
JOF Joensuu 86.95 333 ep P 16 22 11.8 -1.4
comp=Z,3.7nm,0.4s,mb4.7
JOF Joensuu 86.95 333 eP P 16 22 11.8 -1.4
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
KEV Kevo 87.60 340 ep P 16 22 15.9 -0.3
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 87.60 340 eP P 16 22 15.9 -0.3
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ARCES ARCESS Array B 88.16 340 P P 16 22 18.7 -0.2
comp=Z,8.6nm,0.7s,mb4.9,baz=87,slow=6.3,SNR=43
ARE0 ARCESS Array S 88.16 340 eP P 16 22 18.6 -0.2
BR131 Keskin Array S 88.21 310 eP P 16 22 18.5 -1.2
comp=Z,4.1nm,0.8s,mb4.5
BRTR Keskin Array B 88.21 310 P P 16 22 18.6 -1.2
comp=Z,4.5nm,0.8s,mb4.5,baz=125,slow=4.7,SNR=23
BRTR Keskin Array B 88.21 310 *i* P P 16 22 18.6 -1.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
KAF Kangasniemi 89.37 332 ep P 16 22 23.8 -0.9
comp=Z,1.9nm,0.4s,mb4.5,baz=74,slow=4.3
KAF Kangasniemi 89.37 332 eP P 16 22 23.8 -0.9
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
AKASG Malin Array Be 89.84 321 P P 16 22 25.6 -1.5
comp=Z,1.3nm,0.5s,mb4.3,baz=68,slow=5.3,SNR=7.4
AKASG Malin Array Be 89.84 321 *i* P P 16 22 26.1 -1.0
AKASG pmax pmax
comp=Z,1.0nm,0.5s
NB2 NORSAR Subarra 96.55 334 P P 16 22 56.4 -1.4
comp=Z,1.7nm,0.6s,mb4.7,baz=66,slow=4.8
NOA NORSAR Array B 96.55 334 P P 16 22 56.6 -1.1
comp=Z,2.0nm,0.6s,mb4.7,baz=66,slow=4.6,SNR=7.6
YKA Yellowknife Ar 97.63 24 P P 16 23 02.8 +0.2
comp=Z,0.3nm,0.5s,mb4.1,baz=304,slow=4.9,SNR=5.7
YKA PKKPbc PKKPbc 16 39 37.0 -3.9
comp=Z,0.5nm,0.7s,baz=111,slow=2.3,SNR=6.1
YKA Yellowknife Ar 97.63 24 P P 16 23 02.8 +0.2
YKA PKKPbc PKKPbc 16 39 37.0 -3.9
GERES GERESS Array B 100.02 322 P Pdif 16 23 13.0 -0.5
comp=Z,0.6nm,0.9s,baz=53,slow=3.8,SNR=3.6
PDAR Pinedale Array 109.95 40 PKiKP PKiKP 16 28 02.3 +2.9
comp=Z,0.4nm,0.8s,baz=316,slow=3.8,SNR=2.6
SCHQ Schefferville 118.40 9 PKP PKPdf 16 28 15.7 +0.4
comp=Z,7.0nm,0.9s,baz=278,slow=16,SNR=5.6
TXAR Lajitas Array 120.56 51 PKP PKPdf 16 28 21.6 +1.5
comp=Z,0.7nm,0.6s,baz=203,slow=0.7,SNR=8.9
TXAR PKKPab PKKPab 16 38 26.3 -1.8
comp=Z,0.4nm,0.8s,baz=127,slow=3.3,SNR=4.0
TORD Torodi Ar. Bea 121.74 289 PKP PKPdf 16 28 22.6 -0.2
comp=Z,1.1nm,0.3s,baz=64,slow=1.8,SNR=22
TORD PP PP 16 29 42.8 -14
comp=Z,1.2nm,0.9s,baz=104,slow=6.1,SNR=2.7
DBIC Dimbokro 129.61 284 PKP PKPdf 16 28 36.9 -1.0
comp=Z,3.8nm,0.9s,baz=90,slow=1.0,SNR=3.2
PLCA Paso Flores 142.29 159 PKhKP 16 28 57.1
comp=Z,2.8nm,0.9s,baz=228,slow=5.2,SNR=5.7
PLCA PKP PKPdf 16 29 59.8 -0.8
comp=Z,2.3nm,0.7s,baz=210,slow=4.6,SNR=4.8
LCO Las Campanas 152.06 147 ePKPbc PKPbc 16 29 25.4 +1.5
SDV Santo Domingo 157.59 49 ePKPdf PKPdf 16 29 25.6 +0.4

*ISCJB **04** 16:11:00.9±0.9, 38.36N±0.03×25.90E±0.05, h11km±5km, Error ellipse: s-maj=7.2km s-min=4.7km az=168.5*
*CSEM **04** 16:11:00.5±0.1, 38.35N×25.96E, h15km, ML3.0/1, Error ellipse: s-maj=2.6km s-min=1.5km az=93.0*
*DDA **04** 16:11:00.8, 38.35N×25.93E, h7km±3km, Md2.9*
*ATH **04** 16:11:01.6, 38.36N×25.93E, h52km±4km, MD3.1/3*
*THE **04** 16:11:01.6, 38.34N×25.97E, h13km, ML3.0/1, Error ellipse: s-maj=0.9km s-min=0.4km az=93.0*

ISC 04 16:11:01.2±0.9, 38.35N±0.03×25.93E±0.06, h14km±5km, n12, σ0 42/24, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.11**	**69**	P	**Pg**	**16 11 04.4**	**-0.1**
CHOS				S	**Sg**	**16 11 06.2**	**-0.6**
URLA	**Izmir**	**0.53**	**89**	*i* P	**Pg**	**16 11 11.7**	**+0.1**
URLA				*i* S	**Sg**	**16 11 19.2**	**+0.6**
BLCB	**Balcova**	**0.88**	**87**	P	**Pg**	**16 11 17.8**	**-0.4**
BLCB				S	**Sg**	**16 11 29.6**	**-0.1**
PRK	**Paraskevi**	**0.94**	**17**	*e*P	**Pg**	**16 11 19.2**	**-0.1**
PRK				*e*S	**Sg**	**16 11 32.1**	**+0.5**
PRK	**Paraskevi**	**0.94**	**17**	P	**Pg**	**16 11 19.1**	**-0.2**
PRK				S	**Sg**	**16 11 32.5**	**+0.9**
SMG	**Samos**	**0.96**	**131**	*e*P	**Pb**	**16 11 19.9**	**+0.3**
SMG				*e*S	**Sg**	**16 11 33.1**	**+0.7**
AYVA	**Ayvalik**	**1.13**	**32**	*i* P	**Pb**	**16 11 22.0**	**-0.5**
AYVA				*i* S	**Sb**	**16 11 36.6**	**-0.4**
GCAM	**G?zelcaml?**	**1.22**	**122**	*i* P	**Pn**	**16 11 23.7**	**-0.1**
GCAM				*i* S	**Sb**	**16 11 39.2**	**-0.4**
APE	**Apeiranthos**	**1.31**	**194**	*e*P	**Pn**	**16 11 25.0**	**-0.1**
APE				*e*S	**Sb**	**16 11 42.1**	**-0.2**
APE	**Apeiranthos**	**1.31**	**194**	P	**Pn**	**16 11 24.6**	**-0.5**
APE				S	**Sb**	**16 11 42.6**	**+0.3**
LIA	**Limnos Island**	**1.65**	**340**	P	**Pn**	**16 11 29.6**	**-0.1**
LIA				S	**Sn**	**16 11 51.5**	**+0.8**
ALN	**Alexandroupoli**	**2.55**	**2**	P	**Pn**	**16 11 41.8**	**-0.2**
ALN				S	**Sn**	**16 12 12.8**	**0.0**

*ISCJB **04** 16:46:45.5±0.2, 45.35N±0.01×11.257W±0.02, h10km, Error ellipse: s-maj=2.3km s-min=2.1km az=5.7*
*NEIC **04** 16:46:45.0, 45.34N×11.255W, h10km, ML2.7(BUT), After BUT.*

ISC 04 16:46:45.6±0.2**, 4534N**±001×**11257W**±002**, h10km, n49, σ0.94**/72**, 21C-27D, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMT	Dillon	0.03	314	ePg	Pg	16 46 47.1	-0.2
G15A	Dillon	0.18	162	P	Pg	16 46 48.8	-0.8
	baz=0.2,SNR=1000						
G15A				⇑S	Sg	16 46 51.9	-0.3
	baz=0.2						
F15A	Butte	0.50	6	P	Pg	16 46 55.1	-0.2
	baz=0.5,SNR=264						
F15A				⇑S	Sg	16 47 02.0	+0.1
	baz=0.5						
G16A	Moss Hill, Enn	0.55	102	⇑P	Pg	16 46 55.6	-0.6
	baz=0.5,SNR=28						
G16A				⇑S	Sg	16 47 02.9	-0.6
	baz=0.5						
MCMT	McKenzie Canyo	0.55	201	⇑P	Pg	16 46 56.0	-0.3
G14A	Jackson	0.64	261	⇓P	Pg	16 46 57.7	-0.2
	baz=0.6,SNR=23						
G14A				⇓S	Sg	16 47 06.3	0.0
	baz=0.6						
LCCM	Lewis and Clar	0.69	44	⇑P	Pg	16 46 58.4	-0.6
BOZ	Bozeman (W)	0.73	65	⇓P	Pg	16 46 58.7	-1.0
	baz=0.7						
BOZ	Bozeman (W)	0.73	65	ePg	Pg	16 46 58.5	-1.1
H15A	Lima	0.73	184	P	Pg	16 46 58.9	-0.7
	baz=0.7,SNR=71						
H15A				⇓S	Sg	16 47 08.2	-0.9
	baz=0.7						
F14A	Wisdom	0.73	310	⇑P	Pg	16 46 59.6	-0.2
	baz=0.7,SNR=149						
F14A				⇓S	Sg	16 47 09.7	+0.4
	baz=0.7						
F16A	Kennard Place,	0.80	56	⇑P	Pg	16 47 00.1	-0.8
	baz=0.8,SNR=79						
H14A	Leadore	0.92	218	⇓P	Pg	16 47 02.5	-0.8
	baz=0.9,SNR=315						
E15A	Deer Lodge	1.08	357	P	Pg	16 47 05.8	-0.6
	baz=1.1,SNR=202						
E15A				⇓S	Sg	16 47 20.3	-0.2
	baz=1.1						
H16A	Russell Place,	1.13	124	P	Pb	16 47 06.3	-1.0
	baz=1.1,SNR=73						
H16A				⇑S	Sg	16 47 21.2	-0.9
	baz=1.1						
G13A	Cobalt	1.20	259	P	Pb	16 47 08.0	-0.5
	baz=1.2,SNR=749						
G13A				⇓S	Sb	16 47 23.7	-0.4
	baz=1.2						
G17A	Pierce Place,	1.29	90	⇓Pb	Pb	16 47 09.1	-0.9
	baz=1.3,SNR=16						
G17A				⇑S	Sb	16 47 25.7	-0.9
	baz=1.3						
F13A	Darby	1.32	290	⇓Pb	Pb	16 47 09.8	-0.6
	baz=1.3,SNR=169						
F13A				⇓S	Sb	16 47 27.2	-0.2
	baz=1.3						
E16A	East Helena	1.34	27	⇓Pb	Pb	16 47 10.5	-0.4
	baz=1.3,SNR=135						
E16A				⇓S	Sb	16 47 28.4	+0.3
	baz=1.3						
I15A	Monteview	1.34	177	⇓S	Sb	16 47 28.0	-0.1
	baz=1.3						
H13A	Challis	1.43	238	⇑Pb	Pb	16 47 11.8	-0.5
	baz=1.4,SNR=173						
H13A				⇓S	Sn	16 47 30.3	-0.2
	baz=1.4						
F17A	Fitzpatrick Pl	1.45	67	⇓Pb	Pb	16 47 12.2	-0.5
	baz=1.4,SNR=108						
F17A				⇓S	Sn	16 47 31.0	-0.1
	baz=1.4						
I14A	Mackay	1.55	204	⇓Pb	Pb	16 47 13.7	-0.6
	baz=1.5,SNR=78						
I14A				⇑Sb	Sb	16 47 34.5	+0.4
	baz=1.5						
E13A	Victor	1.58	315	⇓Pb	Pb	16 47 14.4	-0.5
	baz=1.6,SNR=173						
E17A	Martinsdale	1.64	46	⇓Pb	Pb	16 47 14.8	-1.0
	baz=1.6,SNR=104						
E17A				⇓Sb	Sb	16 47 37.1	+0.5
	baz=1.6						
CHMT	Chamberlain Mo	1.64	343	P	Pn	16 47 14.9	+0.3
I16A	Newdale	1.66	152	⇓Sb	Sb	16 47 37.6	+0.5
	baz=1.6						
D15A	Lincoln	1.70	1	⇑P	Pn	16 47 14.9	-0.4
	baz=1.7,SNR=228						
D15A				⇑Sb	Sb	16 47 39.9	+1.5
	baz=1.7						
MSO	Missoula	1.77	328	ePn	Pn	16 47 16.3	0.0
MSO				eS	Sn	16 47 42.0	+3.2
I13A	Wildhorse Cree	1.81	218	⇑Pb	Pb	16 47 17.5	-1.3
	baz=1.8,SNR=66						
H12A	Diamond D Ranc	1.81	245	⇓Pb	Pb	16 47 17.7	-1.1
	baz=1.8,SNR=20						
IMW	Indian Meadow	1.85	141	ePn	Pn	16 47 18.7	+1.3
D14A	Greenough	1.86	340	⇑P	Pn	16 47 17.1	-0.4
	baz=1.9,SNR=40						
D14A				⇑Sb	Sb	16 47 44.2	+1.3
	baz=1.9						
J15A	Blackfoot	1.94	177	Pb	Pb	16 47 20.3	-0.8
	baz=1.9,SNR=22						
J15A				⇓Sb	Sb	16 47 45.8	+0.4
	baz=1.9						
MOOW	Moose Ponds	2.06	140	ePn	Pn	16 47 22.2	+1.9
MOOW				eS	Sn	16 47 48.2	+2.2
TPAW	Teton Pass	2.19	147	eP	Pn	16 47 24.4	+2.4
RRI2	Red Ridge	2.19	155	ePn	Pn	16 47 24.1	+2.1
HLID	Hailey	2.22	217	ePn	Pn	16 47 23.5	+1.0
HLID				eS	Sn	16 47 53.1	+3.2
LOHW	Long Hollow	2.23	140	ePn	Pn	16 47 24.7	+2.1
D17A	Six Diamond Ra	2.23	35	⇓P	Pn	16 47 22.7	+0.1
	baz=2.2,SNR=18						
J13A	Cove Ranch, Pi	2.26	211	⇓P	Pn	16 47 23.5	+0.4
	baz=2.3,SNR=40						
REDW	Red Top Meadow	2.33	148	eP	Pn	16 47 26.8	+2.8
RLMT	Red Lodge	2.34	94	eP	Pn	16 47 27.5	+3.4
H11A	Donnelly	2.52	257	⇑P	Pn	16 47 27.0	+0.3
	baz=2.5,SNR=7.7						
C14A	Swan Lake	2.56	342	⇓P	Pn	16 47 27.5	+0.4
	baz=2.6,SNR=16						
C13A	Hot Springs	2.72	330	⇑P	Pn	16 47 29.7	+0.3
	baz=2.7,SNR=7.3						
E11A	Bogner Ranch,	2.74	293	⇑P	Pn	16 47 29.7	+0.1
	baz=2.7,SNR=14						
J12A	Stokes Ranch,	2.77	222	⇑P	Pn	16 47 30.9	+0.9
	baz=2.8,SNR=11						
BMO	Blue Mountains	3.39	263	ePn	Pn	16 47 37.9	-0.7
BMO				ePg	Pg	16 47 46.9	-3.6

*ISCJB **04** 17:03:56.6±0.7, 2469N±003×12261E±002, h12km±6km, Error ellipse: s-maj=5.7km s-min=3.1km az=20.6*
*JMA **04** 17:03:56.1±0.2, 2467N×12259E, h14km, M1.9*
*TAP **04** 17:03:57.9, 2468N×12242E, h3km, ML3.1, D*
ISC 04 17:03:56.3±0.4**, 2467N**±004×**12261E**±002**, h6km**±3km**, n32, σ0.73**/63**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	120	P	Pg	17 04 04.7	+0.3
YOJ				eS	Sg	17 04 10.7	+0.8
TWB1	Santiao Chiao	0.66	301	i P	Pg	17 04 09.5	+0.6
	baz=309						
TWB1				S	Sg	17 04 17.7	+0.3
	baz=309						
TWC	Suao	0.69	265	i P	Pg	17 04 09.6	0.0
	baz=262						
TWC				eS	Sg	17 04 18.3	-0.4
	baz=262						
ILA	Ilan	0.79	277	eP	Pg	17 04 11.9	+0.5
	baz=278						
ILA				eS	Sg	17 04 22.4	+0.7
	baz=278						
ENA	Nanau	0.83	253	P	Pg	17 04 12.3	+0.2
	baz=248						
ENA				S	Sg	17 04 22.6	-0.3
	baz=248						
NWF	Wu-fen Shan	0.85	298	i P	Pg	17 04 12.9	+0.3
	baz=303						
NWF				S	Sg	17 04 23.8	+0.1
	baz=303						
TWE	Neicheng	0.86	274	i P	Pg	17 04 12.6	-0.2
	baz=273						
TWE				S	Sg	17 04 23.4	-0.5
	baz=273						
ENTT	Nioudou	0.95	268	P	Pg	17 04 14.6	+0.1
	baz=267						
ENTT				eS	Sg	17 04 26.5	-0.3
	baz=267						
TWA	Mucha	0.98	289	P	Pg	17 04 14.9	-0.2
	baz=291						
TWA				S	Sg	17 04 27.7	-0.2
	baz=291						
IRIF	Iriomote-Funau	1.07	108	P	Pg	17 04 16.6	-0.3
IRIF				eS	Sg	17 04 30.1	-0.7
TWD	Chiawan	1.09	238	eP	Pg	17 04 17.6	+0.3
	baz=231						
TWD				eS	Sg	17 04 31.5	0.0
	baz=231						
TWY	Chenhua	1.10	304	P	Pg	17 04 17.3	0.0
	baz=308						
TWY				eS	Sg	17 04 31.6	0.0
	baz=308						
NSK	Sanguang	1.14	271	P	Pg	17 04 17.6	-0.5
	baz=269						
NSK				eS	Sg	17 04 32.1	-0.8
	baz=269						
NNS	Nan Shan	1.15	259	P	Pg	17 04 18.0	-0.3
	baz=256						
NNS				eS	Sg	17 04 32.7	-0.5
	baz=256						
HATJ	Hateruma jima	1.25	119	eS	Sg	17 04 36.3	-0.2
WHF	Hehuan Shan	1.33	247	eP	Pn	17 04 21.4	0.0
	baz=243						
WHF				eS	Sb	17 04 38.7	-0.3
	baz=243						
ESL	Shilin	1.37	232	eP	Pn	17 04 21.0	-1.0
	baz=226						
ESL				eS	Sb	17 04 40.0	-0.1
	baz=226						
TWT	Tachien	1.37	253	eP	Pn	17 04 22.6	+0.6
	baz=249						
TWT				eS	Sb	17 04 40.0	-0.1
	baz=249						
JIJ	Ishigaki jima	1.43	102	P	Pn	17 04 21.1	-1.7
JIJ				eS	Sb	17 04 41.2	-0.6
NSTT	Nanjuang	1.46	269	eP	Pn	17 04 22.2	-1.1
	baz=267						
NSTT				eS	Sn	17 04 42.0	-0.7
	baz=267						
EHY	Hungye	1.65	226	eP	Pn	17 04 26.6	+0.8
	baz=220						
EHY				eS	Sn	17 04 47.3	-0.1
	baz=220						
SMLT	Sun Moon Lake	1.75	244	eP	Pn	17 04 27.6	+0.4
	baz=240						
SMLT				eS	Sn	17 04 49.5	-0.2
	baz=240						
TYC	Yuchr	1.77	245	eP	Pn	17 04 27.8	+0.3
	baz=241						
TYC				eS	Sn	17 04 49.7	-0.6
	baz=241						
TWF1	Yuli	1.78	223	eP	Pn	17 04 27.3	-0.3
	baz=217						
TWF1				eS	Sn	17 04 49.4	-1.1
	baz=217						
YUS	Yu-Shan	1.92	233	eP	Pn	17 04 30.5	+1.1
	baz=228						
YUS				eS	Sn	17 04 54.3	+0.4
	baz=228						
ALS	Alishan	2.01	235	eP	Pn	17 04 31.5	+0.7
	baz=231						
ALS				eS	Sn	17 04 57.0	+0.7
	baz=231						
CHN5	Tsauling	2.06	239	eP	Pn	17 04 31.8	+0.3
	baz=235						
CHN5				eS	Sn	17 04 57.5	-0.1
	baz=235						
ELDTW	Lidau	2.07	225	eP	Pn	17 04 29.8	-1.8
	baz=220						
ELDTW				eS	Sn	17 04 55.7	-2.0
	baz=220						
CHN4	Tsaushan	2.26	235	eP	Pn	17 04 35.5	+1.2
	baz=231						
CHN4				eS	Sn	17 05 02.5	0.0
	baz=231						
STYT	Tauyuan	2.26	229	eP	Pn	17 04 35.6	+1.4
	baz=225						
STYT				eS	Sn	17 05 02.9	+0.4
	baz=225						
WTP	Ta-pu	2.31	233	eP	Pn	17 04 37.0	+2.1
	baz=229						
WTP				eS	Sn	17 05 04.6	+1.0
	baz=229						
SSD	Sandimen	2.64	224	eP	Pn	17 04 41.3	+1.9
	baz=220						
SSD				eS	Sn	17 05 11.8	0.0
	baz=220						

*CSEM **04** 17:22:59.6, 4268N×4307E, h7km, MD3.1, After ERD*
*DDA **04** 17:22:59.6, 4268N×4307E, h7km±2km, Md3.1*
ISC 04 17:22:55.9±2.3**, 427N**±01×**4334E**±006**, h10km, n6, σ0.52**/12**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.17	153	P	Pg	17 23 00.7	+1.1
ONI				S	Sg	17 23 02.1	0.0
DBOC	Borcka	1.87	222	i P	Pg	17 23 32.0	+0.3
DBOC				i S	Sg	17 23 56.5	+0.6
ARTV	Artvin	1.88	215	i P	Pg	17 23 31.8	0.0
ARTV				i S	Sg	17 23 55.9	-0.2
DAGI	Agillar	1.97	213	i P	Pg	17 23 33.6	0.0
DAGI				i S	Sg	17 23 59.4	+0.3
DGRG	David-gareji	1.98	130	P	Pg	17 23 33.2	-0.7
DGRG				S	Sg	17 23 59.6	0.0
DBAD	Bademkaya	2.11	216	i P	Pg	17 23 35.6	-0.7
DBAD				i S	Sg	17 24 03.0	-0.7

*ISCJB **04** 17:29:26.0±1.1, 14.1S±02×732W±0.1, h61km±18km, mb3.7/4, Error ellipse: s-maj=33.9km s-min=7.1km az=42.2*
*IDC **04** 17:29:26.2±6.8, 1456S×7338W, h62km±54km, mb3.5/4, mb1 3.8/5, mb1mx3.5/18, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=70.0km s-min=32.7km az=43.0*
*NEIC **04** 17:29:28.0±1.1, 1441S×7335W, h75km±12km, Error ellipse: s-maj=28.3km s-min=11.9km az=215.0*
ISC 04 17:29:28.0±0.8**, 142S**±01×**733W**±01**, h64km**±14km**, n14, σ0.82**/14**, mb3.7**/4**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.82	142	eP	Pn	17 30 11.0	+0.3
ARE				eS	Sn	17 30 44.0	+0.4
NNA	Nana	4.11	302	S	Sn	17 31 15.4	+0.3
	42nm,0.3s,baz=236,slow=15,SNR=3.6						
NNA	Nana	4.11	302	ePn	Pn	17 30 28.6	+0.4
NNA				eSn	Sn	17 31 13.6	-1.5
ATAH	Atahualpa	8.75	325	S	Sn	17 33 09.2	0.0
	0.4nm,0.3s,baz=130,slow=15,SNR=3.0						
LVC	Limon Verde	9.32	154	S	Sn	17 33 12.7	-10
	0.5nm,0.3s,baz=236,slow=15,SNR=8.0						
SIV	San Ignacio	11.94	100	P	Pn	17 32 14.4	-1.0
	0.6nm,0.3s,baz=281,slow=14,SNR=32						
SDV	Santo Domingo	23.11	7	P	P	17 34 30.7	+1.9
	3.0nm,0.7s,mb3.8,baz=280,slow=12,SNR=5.2						
TXAR	Lajitas Array	52.30	326	P	P	17 38 33.2	-0.1
	0.3nm,0.7s,mb3.3,baz=114,slow=7.4,SNR=4.3						
TXAR	Lajitas Array	52.30	326	P	P	17 38 33.2	-0.1
TORD	Torodi Ar. Bea	79.08	73	P	P	17 41 25.1	-1.0
	0.9nm,0.8s,mb3.8,baz=263,slow=4.2,SNR=4.9						
YKA	Yellowknife Ar	83.00	342	P	P	17 41 45.7	-0.1
	0.9nm,0.8s,mb3.8,baz=133,slow=5.0,SNR=9.3						
YKA	Yellowknife Ar	83.00	342	P	P	17 41 45.7	-0.2
ASAR	Alice Springs	133.89	216	PKP	PKPdf	17 48 35.8	-2.9
	0.5nm,0.7s,baz=113,slow=1.4,SNR=6.5						
SONM	Songino Array	146.49	0	PKPbc	PKPbc	17 49 02.1	+0.1
	1.2nm,0.6s,baz=339,slow=2.6,SNR=8.1						

*NEIC **04** 17:29:35.4, 3267N×116.12W, h10km, ML3.0(PAS), ML3.5(ECX), After PAS.*
NEIC Felt at Ocotillo.
ECX 04 17:29:35.9±0.8**, 3269N**×**11608W, h6km**±3km**, MD3.0, ML3.1, 8C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUH	Yuha Desert	0.14	108	⇑iP	Pg	17 29 38.3	-0.4
CRR	Carrizo Plain	0.22	25	⇓iP	Pg	17 29 39.9	-0.3
COK	Cook Ranch	0.34	62	⇑iP	Pg	17 29 42.6	+0.2
CPBX	Cerro Prieto	0.71	112	⇑eP	Pg	17 29 48.3	-1.1
CPBX				eS	Sg	17 29 57.1	-1.6
RDX	Rancho Dowling	0.76	172	⇓eP	Pg	17 29 49.2	-1.3
RDX				eS	Sg	17 29 59.3	-1.2
RDX				⇑e		17 30 03.2	
	comp=N,345nm,0.4s						
RDX				⇑e		17 30 04.0	
	comp=E,518nm,0.3s						
PFO	Pinyon Flat Ob	0.97	341	ePg	Pg	17 29 52.7	-1.9
PFO				eSg	Sg	17 30 06.2	-0.9
EMX	El Mayor	0.99	134	eP	Pg	17 29 53.3	-1.7
EMX				eS	Sg	17 30 06.9	-1.0
PBX	Punta Banda	1.09	210	⇓eP	Pg	17 29 55.2	-1.7
PBX				eS	Sg	17 30 09.8	-1.2
PBX				⇑e		17 30 13.1	
	comp=N,656nm,0.8s						
PBX				⇑e		17 30 13.8	
	comp=E,442nm,0.6s						
GLA	Glamis	1.11	71	ePg	Pg	17 29 54.6	-2.6
GLA				eSg	Sg	17 30 10.2	-1.5
ECNX	Esteban Cantu	1.12	203	eP	Pg	17 29 55.5	-1.9
ECNX				eS	Sg	17 30 10.5	-1.5
ECBX	El Chinero	1.49	144	eP	Pn	17 30 01.9	-1.4
ECBX				eS	Sn	17 30 21.9	-1.1
SPX	San Pedro Mart	1.72	162	⇑eP	Pn	17 30 05.1	-1.3
SPX				eS	Sn	17 30 29.0	+0.3
GSC	Goldstone	2.67	347	ePn	Pn	17 30 23.7	+4.2
GSC				eSn	Sn	17 30 58.2	+6.0
TPNV	Topopah Spring	4.25	358	ePn	Pn	17 30 39.7	-1.5
TPNV				eS	Sn	17 31 44.4	+13

*ISCJB **04** 17:34:02.7±0.6, 4241N±003×2378E±004, h10km, Error ellipse: s-maj=4.7km s-min=3.9km az=152.6*
*SOF **04** 17:34:02.9, 4235N×2385E, h12km, MD3.0*
*CSEM **04** 17:34:02.9±0.1, 4239N×2379E, h10km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.4km az=62.0*
*BEO **04** 17:34:04.4±1.3, 4243N×2380E, h8km±6km, ML2.3/4*
*THE **04** 17:34:07.1, 42.13N×2382E, h0km±1km, ML2.8/1, Error ellipse: s-maj=2.5km s-min=0.9km az=345.0*
ISC 04 17:34:03.2±0.6**, 4238N**±003×**2381E**±004**, h5km**±5km**, n18, σ0.65**/31**, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGB	Panagyurishte	0.31	58	i Pg	Pg	17 34 09.7	+0.5
VTS	Vitosha	0.49	295	ePg	Pg	17 34 13.2	+0.6
VTS				eSg	Sg	17 34 19.9	+1.0
VTS	Vitosha	0.49	295	i Pg	Pg	17 34 13.2	+0.6
VTS				eSg	Sg	17 34 19.9	+1.0
PLD	Plovdiv	0.72	112	i Pg	Pg	17 34 16.6	-0.4
KKB	Krupnik	0.75	226	i Pg	Pg	17 34 18.1	+0.6
MMB	Musomiste	0.80	184	i Pg	Pg	17 34 19.2	+0.8
RZN	Rozhen	0.97	135	Pg	Pg	17 34 21.4	-0.4
STIP	Stip	1.39	241	ePg	Pg	17 34 29.1	-0.7
STIP				i Sg	Sg	17 34 47.7	-0.1
STIP	Stip	1.39	241	ePg	Pg	17 34 29.1	-0.7
STIP				i Sg	Sg	17 34 47.8	0.0
KNT	Kendrikon	1.40	209	P	Pn	17 34 29.5	+0.2
KNT				S	Sb	17 34 46.5	-1.4
VAY	Valandovo	1.41	221	P	Pn	17 34 30.2	+0.7
VAY				i Sg	Sg	17 34 48.1	-0.3
VAY				S	Sb	17 34 48.3	+0.1
VAY	Valandovo	1.41	221	ePg	Pg	17 34 29.6	-0.5
VAY				i Sg	Sg	17 34 48.1	-0.3
BARS	Barje	1.53	287	ePg	Pg	17 34 32.1	-0.4
BARS				eSg	Sg	17 34 52.2	-0.2
SOH	Sokhos	1.60	192	P	Pn	17 34 32.4	+0.3
SOH				S	Sn	17 34 52.1	-1.0
GRG	Griva	1.77	217	P	Pn	17 34 35.5	+1.0
GRG				S	Sn	17 34 58.0	+0.6
BOLS	Boljevac	1.98	317	ePn	Pn	17 34 38.0	+0.6
BOLS				eSg	Sg	17 35 06.6	-0.2
OUR	Ouranopolis	2.05	176	P	Pn	17 34 38.5	+0.2
BZS	Buzias	3.60	335	ePn	Pn	17 34 58.9	-0.7
BZS				eSg	Sg	17 35 57.5	-1.2

NEIC 04 17:35:40.5, 3804S×**17766E, h72km, ML3.8**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	0.31	199	P	Pn	17 35 51.8	-0.2
MWZ				S	Sn	17 36 00.9	+0.5
PUZ	Puketiti	0.47	94	P	Pn	17 35 52.7	-0.5
PUZ				S	Sn	17 36 02.3	-0.3
URZ	Urewera	0.49	243	P	Pn	17 35 53.1	-0.2
MXZ	Matakaoa Point	0.70	47	P	Pn	17 35 55.7	+0.2

*IDC **04** 17:41:18.7±1.2, 644S×147.16E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.7/15, mbtmp3.7/7, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/21, Error ellipse: s-maj=40.3km s-min=16.3km az=106.0*
*ISCJB **04** 17:41:21.4±1.0, 641S±009×1472E±02, h33km, mb3.6/6, Error ellipse: s-maj=29.5km s-min=12.5km az=0.3*
*NEIC **04** 17:41:24.7±2.8, 648S×147.14E, h43km±26km, Error ellipse: s-maj=32.4km s-min=21.0km az=102.0*
ISC 04 17:41:20.3±3.2**, 640S**±009×**1472E**±02**, h9km**±20km**, n12, σ1.16**/12**, mb3.6**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.99	181	ePn	Pn	17 42 08.9	+1.1
PMG				eSg	Sg	17 42 56.3	-0.1
CTA	Charters Tower	13.64	184	Pn	Pn	17 44 34.0	+0.1
	0.2nm,0.3s,baz=2.9,slow=15,SNR=2.6						
CTA				LR	LR	17 49 02.2	
	comp=Z,77nm,19.9s,baz=161,slow=34						
WRAB	Tennant Creek	18.35	222	eP	Pn	17 45 32.4	-2.8
WB2	Warramunga Arr	18.36	222	eP	Pn	17 45 37.0	+1.8
ASAR	Alice Springs	21.41	215	P	P	17 46 08.4	-0.1
	0.6nm,0.5s,mb3.2,baz=44,slow=9.5,SNR=17						
ASAR				S	S	17 50 06.8	+0.5
	0.4nm,0.8s,baz=24,slow=28,SNR=4.1						
STKA	Stephens Creek	25.88	191	P	P	17 46 50.8	-1.7
	1.9nm,0.9s,mb3.6,baz=349,slow=10,SNR=2.9						
CMAR	Chiang Mai Arr	53.61	298	P	P	17 50 43.0	+0.8
	0.3nm,0.5s,mb3.5,baz=119,slow=5.6,SNR=3.0						
PETK	Petropavlovsk-	59.94	7	P	P	17 51 27.6	+1.0
	3.8nm,1.0s,mb4.4,baz=139,slow=8.7,SNR=3.1						
SONM	Songino Array	64.84	331	P	P	17 51 58.2	-1.4
	0.6nm,0.9s,mb3.6,baz=177,slow=5.6,SNR=3.7						
VNDA	Vanda	71.51	177	P	P	17 52 40.9	0.0
	0.2nm,0.5s,mb3.3,baz=336,slow=7.6,SNR=5.1						
TOA0	Torodi Ar. Sit	145.38	284	ePKPdf	PKPdf	18 00 59.5	-0.2
TORD	Torodi Ar. Bea	145.38	284	PKPbc	PKPbc	18 00 59.1	-0.5
	0.9nm,0.7s,baz=71,slow=4.2,SNR=6.0						

IDC 04 17:46:39.1±5.8**, 1041S**×**16115E, h114km**±34km**, mb3.3**/3**, mb1 3.3**/3**, mb1mx3.1**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=69.9km s-min=40.3km az=99.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.53	309	P	Pn	17 47 06.4	-0.2
	97nm,0.3s,baz=180,slow=4.5,SNR=28						
HNR				S	Sn	17 47 27.4	0.0
	118nm,0.3s,baz=130,slow=17,SNR=18						
ASAR	Alice Springs	29.12	240	P	P	17 52 29.6	+0.2
	0.3nm,0.9s,baz=64,slow=10,SNR=3.1						
SONM	Songino Array	75.53	325	P	P	17 58 11.8	+0.9
	0.7nm,0.7s,baz=134,slow=6.2,SNR=4.9						
MKAR	Makanchi Array	89.99	318	P	P	17 59 25.0	-0.7
	0.5nm,0.8s,baz=99,slow=6.1,SNR=6.6						

*ISCJB **04** 17:53:43.5±3.7, 560S±0.1×275W±03, h105km±35km, mb4.1/6, Error ellipse: s-maj=28.5km s-min=21.1km az=155.3*
*NEIC **04** 17:53:46.5±4.9, 5600S×2743W, h121km±46km, mb4.6/4, Error ellipse: s-maj=24.7km s-min=15.3km az=64.0*
*IDC **04** 17:53:52.5±10.0, 5598S×2740W, h174km±101km, mb3.7/5, mb1 3.8/5, mb1mx3.7/12, mbtmp3.7/5, MS3.3/1, Ms1 3.4/1,*

ms1mx3.0/10, Error ellipse: s-maj=49.4km s-min=20.5km az=81.0

ISC 04 17:53:43.4±3.6, 560S±01×277W±03, h89km±34km, n16, σ0s90/15, mb4.1/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.92	158	eP	Pn	17 57 34.6	+0.5
VNA1				e		17 57 36.7	
VNA1				e		17 57 39.4	
VNA3	Neumayer Olymp	17.11	160	eP	Pn	17 57 36.7	+0.3
VNA3				e		17 57 39.0	
VNA3				e		17 57 41.9	
VNA3				e		17 57 51.9	
VNA2	Neumayer--Watz	17.32	158	eP	Pn	17 57 39.4	+0.4
	baz=316,slow=13						
VNA2				e		17 57 41.9	
VNA2				e		17 57 44.5	
VNA2				e		17 57 54.4	
SNAA	Sanae	18.88	156	eP	Pn	17 57 56.3	-1.4
SNAA				e		17 57 58.3	
SNAA				e		17 58 01.5	
SNAA	Sanae	18.88	156	eP	Pn	17 57 56.1	-1.5
	14nm,0.5s						
PMSA	Palmer Station	19.73	229	P	Pn	17 58 06.7	-1.0
	53nm,1.1s						
MAIT	Maitri	22.40	147	eP	P	17 58 42.0	+8.0
QSPA	South Pole Qui	34.23	180	eP	P	18 00 21.0	+1.1
	6.5nm,0.6s,mb4.6						
MAW	Mawson	40.33	144	P	P	18 01 11.6	+0.1
	3.1nm,0.6s,mb4.3,baz=198,slow=7.1,SNR=4.0						
MAW	Mawson	40.33	144	P	P	18 01 11.3	-0.1
	1.2nm,0.7s,mb3.8						
BDFB	Brasilia	43.21	331	P	P	18 01 36.4	+1.0
	0.6nm,0.4s,mb3.7,baz=27,slow=25,SNR=2.6						
VNDA	Vanda	46.59	183	P	P	18 02 02.6	+1.0
	2.8nm,0.7s,mb4.1,baz=184,slow=6.1,SNR=27						
VNDA				LR	LR	18 20 16.3	
	comp=Z,34nm,19.4s,baz=38,slow=34						
VNDA	Vanda	46.59	183	P	P	18 02 02.6	+1.0
VNDA				LR	LR	18 20 16.3	
TORD	Torodi Ar. Bea	73.16	30	P	P	18 05 03.5	-0.6
	0.7nm,0.5s,mb3.8,baz=195,slow=6.8,SNR=8.3						
ASAR	Alice Springs	99.10	163	P	P	18 07 13.1	-1.3
	0.5nm,0.6s,mb4.2,baz=180,slow=3.7,SNR=12						
SONM	Songino Array	150.98	87	PKPbc	PKPbc	18 13 23.3	-1.4
	1.0nm,0.6s,baz=219,slow=3.2,SNR=7.7						

MOS 04 18:25:38.6±0.6, 5062N×15761E, h12km, mb4.3/1, Error ellipse: s-maj=37.8km s-min=11.4km az=74.4

KRSC 04 18:25:41.6±0.6, 5076N×15789E, h10km±10km, ML4.2, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.13	267⇓	iPN	Pn	18 25 57.5	-5.9
SKR				iS	Sb	18 26 08.8	-9.1
SKR				pmax	pmax		
	comp=Z,2µm,0.3s						
SKR				pmax	pmax		
	comp=N,920nm,0.3s						
SKR				pmax	pmax		
	comp=E,1µm,0.3s						
SKR				pmax	pmax		
	comp=Z,4µm,0.4s						
SKR				smax			
	comp=N,8µm,0.3s						
SKR				smax			
	comp=E,5µm,0.3s						
SKR				smax			
	comp=N,12µm,1.0s						
SKR				smax			
	comp=E,5µm,1.0s						
MIPR	Malaya Ipel'ka	1.68	335	iP	Pn	18 26 10.9	0.0
MIPR				eS	Sn	18 26 32.8	+0.4
RUS	Russkaya	1.72	13	iP	Pn	18 26 11.7	+0.1
RUS				iS	Sn	18 26 33.2	-0.3
GRL	Gorelyy	1.80	4	iP	Pn	18 26 13.7	+1.1
GRL				iS	Sn	18 26 37.5	+2.0
PET	Petropavlovsk	2.32	11	ePN	Pn	18 26 20.7	+1.0
PET				eS	Sn	18 26 50.2	+2.0
PET				pmax	pmax		
	comp=Z,28nm,0.3s						
PET				smax			
	comp=N,260nm,0.6s						
PET				smax			
	comp=E,185nm,0.6s						
PET	Petropavlovsk	2.32	11	iP	Pn	18 26 20.8	+1.1
PET				iS	Sn	18 26 49.1	+0.9
NLC	Nalytchevo	2.58	20	eP	Pn	18 26 24.2	+0.9
NLC				iS	Sn	18 26 55.5	+0.8
SDLR	Sedlovina	2.60	13	eP	Pn	18 26 25.1	+1.5
SDLR				iS	Sn	18 26 57.2	+2.1
SPN	Mys Shipunski	2.69	29	P	Pn	18 26 26.5	+1.7
SPN				iS	Sn	18 26 59.4	+2.0
GNL	Ganaly	2.94	1	iP	Pn	18 26 30.2	+1.9
GNL				iS	Sn	18 27 06.0	+2.4
KII	Karymskiy	3.42	16	P	Pn	18 26 37.3	+2.4
KII				iS	Sn	18 27 18.4	+3.0
MKZ	Mys Kozlova	4.46	30	P	Pn	18 26 51.1	+1.9
MKZ				iS	Sn	18 27 42.3	+1.2
TUMR	Tumrok	4.73	16	P	Pn	18 26 55.9	+3.0
KMNR	Kamenistaya	5.20	15	P	Pn	18 27 03.4	+4.1
KBTR	Krutoberegovo	6.20	26	P	Pn	18 27 15.1	+2.1

CSEM 04 18:32:57.7±1.0, 3929N×2979W, h5km, ML3.5, Error ellipse: s-maj=16.5km s-min=7.6km az=44.0, After PDA

PDA 04 18:32:57.7±1.0, 3929N×2979W, h5km, MD3.4, ML3.5, Error ellipse: s-maj=16.5km s-min=7.6km az=44.0, Azores Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CALA	Caldeira	1.11	129	eP	Pg	18 33 15.0	-3.9
CALA				eS	Sg	18 33 28.1	-5.1
HOR	Horta	1.18	130	eP	Pg	18 33 16.3	-4.1
HOR				eS	Sg	18 33 29.7	-6.0
PICO	Pico	1.33	126	eP	Pn	18 33 17.2	-5.6
PICO				eS	Sg	18 33 33.3	-7.0
ROSA	Rosais	1.34	115	eP	Pn	18 33 18.2	-4.8
ROSA				eS	Sb	18 33 33.0	-7.6
PMAN	Manadas	1.48	116	eP	Pn	18 33 20.5	-4.5
PMAN				eS	Sn	18 33 37.1	-7.6
PMAN				A		18 33 40.9	
	214nm,0.3s						
PMAN	Manadas	1.48	116	eP	Pn	18 33 20.5	-4.5
PMAN				eS	Sn	18 33 37.1	-7.6

NEIC 04 18:49:39.2, 4204S×17384E, h17km, ML4.3(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSWZ	Blackbirch Sta	0.33	5	P	Pg	18 49 45.6	-0.5
BSWZ				S	Sg	18 49 50.9	+0.2
KHZ	Kahutara	0.44	210	P	Pg	18 49 48.0	-0.1
KHZ				S	Sg	18 49 54.7	+0.6
THZ	Tophouse	0.75	291	P	Pb	18 49 53.3	-0.5
THZ				S	Sb	18 50 03.7	0.0
TCW	Tory Channel	0.89	22	P	Pb	18 49 55.6	-0.5
MRW	Makara Radio	1.03	39	P	Pb	18 49 58.3	-0.3
CAW	Cannon Point	1.31	45	P	Pn	18 50 01.3	-1.4
LTZ	Lake Taylor	1.38	237	P	Pn	18 50 03.5	-0.2
KIW	Kapiti Island	1.43	35	P	Pn	18 50 04.3	0.0
QRZ	Quartz Range	1.56	320	P	Pn	18 50 07.4	+1.3
MQZ	McQueen's Vall	1.88	207	P	Pn	18 50 08.3	-2.3

NEIC 04 19:23:12.7, 1724N×10126W, h2km, MD4.1(MEX), After MEX.

MEX 04 19:23:13.4±0.7, 1723N×10134W, h16km±8km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.40	343	iP	Pg	19 23 20.1	-1.4
ZIIG				iS	Sg	19 23 25.8	-1.2
CAIG	El Cayaco	1.04	100	iP	Pb	19 23 29.1	-3.9
CAIG				iS	Sb	19 23 41.5	-4.9
ACX	Acapulco	1.41	104	iP	Pn	19 23 35.3	-3.1
ACX				iS	Sn	19 23 52.0	-4.6
ACX	Acapulco	1.41	104	iP	Pn	19 23 35.3	-3.1
ACX				iP		19 23 37.0	
ACX				iS	Sn	19 23 52.0	-4.6
MEIG	Mezcala	1.78	67	iP	Pn	19 23 40.4	-3.2
MEIG				iS	Sn	19 24 00.6	-5.2
PLIG	Platanillo	2.10	56	eP	Pn	19 23 45.0	-2.9
PLIG				iS	Sn	19 24 09.5	-4.2
MMIG	Aquila	2.18	299	iP	Pn	19 23 45.4	-3.7
MMIG				iS	Sn	19 24 11.4	-4.4
MOIG	Morelia	2.44	3	iP	Pn	19 23 50.8	-1.8
MOIG				iS	Sn	19 24 17.5	-4.7
MOIG	Morelia	2.44	3	iP	Pn	19 23 51.5	-1.1
MOIG				iS	Sn	19 24 20.3	-1.8
PNIG	Pinotepa	3.19	105	eP	Pn	19 24 00.3	-2.6
PNIG				iS	Sn	19 24 37.2	-3.3
UTMO	Huajuapan	3.43	79	iP	Pn	19 24 03.6	-2.6
UTMO				iS	Sn	19 24 44.0	-2.5
VHO	Vista Hermosa	4.41	91	iP	Pn	19 24 17.6	-2.1
VHO				iS	Sn	19 25 08.6	-2.0
HUIG	Huatulco	5.22	105	iP	Pn	19 24 28.5	-2.4
HUIG				iS	Sn	19 25 29.6	-1.3
CMIG	Matias Romero	6.17	90	iP	Pn	19 24 41.8	-2.1
CMIG				iS	Sn	19 25 47.6	-6.6

MAN 04 19:28:59, 1356N×12338E, h25km, mb4.2, ML3.0, MS2.8, 2D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AUQP	San Andres	0.72	252	eP	Pb	19 29 13.3	+0.3
PVCP	Virac	0.75	87⇓	eP	Pb	19 29 14.3	+0.9
PVCP				eS	Sb	19 29 29.5	+6.2
GQP	Guinayangan	0.97	291⇓	eP	Pn	19 29 16.5	-0.6
GQP				eS	Sb	19 29 28.9	-0.8
POLP	Polilio Island	1.82	310	eP	Pn	19 29 30.3	+1.5
POLP				eS	Sn	19 29 52.2	+1.1

NEIC 04 19:47:16.7, 3123S×7055W, h108km, MD3.8(GUC), After GUC.

GUC 04 19:47:16.7±0.8, 3123S×7055W, h108km±8km, MD3.8, ML4.0, 3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.83	318	eP	Pn	19 47 36.5	+0.5
OVCH				iS	Sn	19 47 51.2	+0.6
OVCH				AML	AML	19 47 51.9	
	comp=N,5µm,0.4s						
CHNG	Los Chungos	1.04	231	eP	Pn	19 47 38.4	+0.3
CHNG				iS	Sn	19 47 54.6	+0.2
CHNG				AML	AML	19 47 55.5	
	comp=E,2µm,0.3s						
TLL	Tololo Astrono	1.08	348	eP	Pn	19 47 39.2	+0.6
TLL				iS	Sn	19 47 56.4	+1.3
PEL	Peldehue	1.92	183	eP	Pn	19 47 48.8	+0.3
PEL				iS	Sn	19 48 13.2	+0.4
PEL				AML	AML	19 48 14.7	
	comp=N,3µm,0.8s						
FCH	Farellones	2.11	174⇓	eP	Pn	19 47 52.2	+1.3
FCH				iS	Sn	19 48 19.3	+2.1
FCH				AML	AML	19 48 21.7	
	comp=E,1µm,0.3s						
CLCH	Cerro Calan	2.16	180	eP	Pn	19 47 52.2	+0.5
CLCH				iS	Sn	19 48 19.2	+0.7
CLCH				AML	AML	19 48 27.0	
	comp=E,970nm,0.5s						
LCO	Las Campanas	2.21	357	P	Pn	19 47 52.7	+0.3
LCO				S	Sn	19 48 19.9	+0.3
LCO	Las Campanas	2.21	357⇓	iP	Pn	19 47 52.7	+0.3
LCO				iS	Sn	19 48 19.9	+0.3
LCO				AML	AML	19 48 23.8	
	comp=E,1µm,0.5s						
ANTU	Antumapu	2.34	182	eP	Pn	19 47 54.3	+0.3
ANTU				iS	Sn	19 48 22.8	+0.3
ANTU	Antumapu	2.34	182	eP	Pn	19 47 54.3	+0.3
ANTU				iS	Sn	19 48 22.8	+0.3
ANTU				AML	AML	19 48 25.4	
	comp=E,1µm,0.4s						
SJCH	San Jose de Ma	2.41	176	eP	Pn	19 47 55.0	+0.1
SJCH				iS	Sn	19 48 24.8	+0.6
YECH	El Yeso	2.46	171	eP	Pn	19 47 56.9	+1.3
YECH				iS	Sn	19 48 27.5	+2.1
CHCH	Chadas Angostu	2.70	182⇓	iP	Pn	19 47 58.5	-0.2
LNV	Longovilo	2.82	195	eP	Pn	19 47 59.4	-0.8

CSEM 04 19:53:01.3±0.1, 3504N×379W, h15km, MD3.5, Error ellipse: s-maj=4.5km s-min=3.0km az=97.0
ISCJB 04 19:53:02.3±0.4, 3504N±002×384W±004, h17km±4km, Error ellipse: s-maj=5.2km s-min=3.1km az=11.1
CNRM 04 19:53:03.6, 3502N×381W, h7km, MD3.5
MDD 04 19:53:03.3±0.3, 3502N×380W, h9km±2km, mbLg2.1/8, Error ellipse: s-maj=4.5km s-min=3.0km az=74.0, PRXIMO
INMG 04 19:53:04.1±1.5, 3508N×372W, h10km, ML2.1, Error ellipse: s-maj=12.8km s-min=5.6km az=156.0

ISC 04 19:53:02.6±0.5, 3503N±002×381W±003, h14km±3km, n43, σ1s22/79, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOU	Touzarine	0.08	147	iP	Pg	19 53 05.0	-0.6
TOU	Touzarine	0.08	147	P	Pg	19 53 05.0	-0.6
TOU				S	Sg	19 53 07.0	-0.7
MPAL	Palemas	0.22	330	iP	Pg	19 53 08.0	+0.4
MPAL	Palemas	0.22	330	P	Pg	19 53 08.0	+0.4
MPAL				S	Sg	19 53 11.0	+0.1
ZAI	Zaio	0.87	94	iP	Pb	19 53 19.0	-0.5
ZAI				iS	Sb	19 53 32.0	+0.9
TZK	Tazeka	0.99	198	iP	Pb	19 53 21.0	-0.5
TZK				iS	Sb	19 53 34.0	-0.4
EALB	Alboran	1.10	35	P	Pb	19 53 22.8	-0.7
	8.2nm,0.2s,SNR=13						
EALB				S	Sb	19 53 35.9	-1.8
	36nm,0.3s,SNR=7.9						
EALB	Alboran	1.10	35	P	Pb	19 53 22.8	-0.7
	8.2nm,0.2s,SNR=13						
EALB				S	Sb	19 53 35.9	-1.8
	36nm,0.3s,SNR=7.9						
ECEU	Ceuta	1.54	304	P	Pn	19 53 27.4	-2.3
	1.6nm,0.2s,SNR=7.9						
ECEU	Ceuta	1.54	304	P	Pn	19 53 27.4	-2.2
	1.6nm,0.2s,SNR=7.9						
ECEU				S	Sn	19 53 43.0	-6.5
	4.8nm,0.2s,SNR=7.9						
RSA	Sarsar	1.67	265	iP	Pn	19 53 32.0	+0.7
RSA				iS	Sn	19 53 51.0	-1.5
EMIJ	Mijas	1.72	333	P	Pn	19 53 33.1	+1.0
	SNR=7.9						
EMIJ				S	Sn	19 53 52.1	-1.7
	13nm,0.4s,SNR=7.9						
EGUA	Guajares	1.81	6	P	Pn	19 53 31.6	-1.7
	2.1nm,0.1s,SNR=7.9						
EGUA				S	Sn	19 53 58.3	+2.3
	16nm,0.4s,SNR=7.9						
EGUA	Guajares	1.81	6	P	Pn	19 53 31.6	-1.7
	2.1nm,0.1s,SNR=7.9						
EGUA				S	Sn	19 53 58.3	+2.3
	16nm,0.4s,SNR=7.9						
IFR	Ifrane	1.86	216	P	Pn	19 53 35.7	+1.6
IFR				S	Sn	19 54 00.5	+3.1
EJIF	Jimena Fronter	1.96	317	P	Pn	19 53 37.8	+2.5
	1.6nm,0.2s,SNR=7.9						
EJIF				S	Sn	19 54 00.7	+1.0
	4.5nm,0.4s,SNR=7.9						
MIF	Mishlifen	2.00	216	iP	Pn	19 53 36.5	+0.5
MIF				iS	Sn	19 54 01.0	+0.2
EBER	Berja	2.00	22	P	Pn	19 53 35.7	-0.3
	0.9nm,0.2s,SNR=7.9						
EBER				S	Sn	19 53 59.5	-1.4
	10nm,0.3s,SNR=7.9						
EBER	Berja	2.00	22	P	Pn	19 53 35.7	-0.3
	0.9nm,0.2s,SNR=7.9						
EBER				S	Sn	19 53 59.5	-1.3
	10nm,0.3s,SNR=7.9						
EQUE	Quentar	2.19	8	P	Pn	19 53 39.6	+1.1
	1.1nm,0.3s,SNR=7.9						
EQUE				S	Sn	19 54 06.0	+0.6
	SNR=7.9						
CZD	Col de Zad	2.24	208	iP	Pn	19 53 40.0	+0.7
CZD				iS	Sn	19 54 05.0	-1.7
ESPR	Espera	2.47	318	P	Pn	19 53 44.6	+2.2
	4.1nm,0.4s,SNR=7.9						
ESPR				S	Sn	19 54 12.5	+0.1
	5.8nm,0.4s,SNR=7.9						
ESPR	Espera	2.47	318	P	Pn	19 53 44.6	+2.2
	4.1nm,0.4s,SNR=7.9						
ESPR				S	Sn	19 54 12.5	+0.1
	5.8nm,0.4s,SNR=7.9						
EQES	Quesada	2.83	12	P	Pn	19 53 49.3	+2.0
	1.7nm,0.3s,SNR=7.9						
EQES				S	Sn	19 54 20.5	-0.7
	3.8nm,0.3s,SNR=21						
EQES	Quesada	2.83	12	P	Pn	19 53 49.3	+1.9
	1.7nm,0.3s,SNR=7.9						
EQES				S	Sn	19 54 20.5	-0.6
	3.8nm,0.3s,SNR=21						
ZFT	Errachidia	3.02	189	eP	Pn	19 53 50.0	0.0
ZFT				iS	Sn	19 54 25.0	-1.0
KIB	El Ksiba	3.07	218	iP	Pn	19 53 52.0	+1.3
KIB				iS	Sn	19 54 27.0	-0.2
EADA	Adamuz	3.19	349	P	Pn	19 53 52.5	+0.2
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	19 54 31.6	+1.5
	SNR=7.9						
EADA	Adamuz	3.19	349	P	Pn	19 53 52.5	+0.2
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	19 54 31.6	+1.5
	SNR=7.9						
EMIN	Mina Concepcio	3.58	321	P	Pn	19 53 57.2	-0.4
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	19 54 36.2	-3.4
	SNR=7.9						
EMIN	Mina Concepcio	3.58	321	P	Pn	19 53 57.2	-0.4
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	19 54 36.2	-3.4
	SNR=7.9						
EGRO	El Granado	3.88	311	P	Pn	19 54 01.9	+0.1
	4.3nm,0.4s,SNR=5.4						
EGRO	El Granado	3.88	311	P	Pn	19 54 01.9	+0.1
	4.3nm,0.4s,SNR=5.4						
EGRO				S	Sn	19 54 42.1	-5.0
	SNR=7.9						
PVAQ	Vaqueiros	3.95	308	ePn	Pn	19 54 03.8	+1.1
PVAQ				eSn	Sn	19 54 44.7	-4.1
PVAQ				A		19 54 46.4	
	3.8nm,0.3s						
PVAQ	Vaqueiros	3.95	308	ePn	Pn	19 54 03.8	+1.1
PVAQ				eSn	Sn	19 54 44.7	-4.1
PVAQ	Vaqueiros	3.95	308	Pn	Pn	19 54 03.8	+1.1
PVAQ				Sn	Sn	19 54 44.7	-4.1
	3.8nm,0.3s						
PBDV	Barranco-do-Ve	4.00	305	ePn	Pn	19 54 02.7	-0.7
PBDV				eSn	Sn	19 54 49.6	-0.5
PBDV				A		19 54 51.3	
	2.3nm,0.5s						
PBDV	Barranco-do-Ve	4.00	305	ePn	Pn	19 54 02.7	-0.7
PBDV				eSn	Sn	19 54 49.6	-0.5
	2.3nm,0.5s						
PBAR	Barrancos	4.07	321	ePn	Pn	19 54 05.3	+0.9
PBAR				eSn	Sn	19 54 50.2	-1.7
EBAD	Badajoz	4.52	326	P	Pn	19 54 09.8	-0.7
	0.8nm,0.3s,SNR=5.3						
EBAD	Badajoz	4.52	326	P	Pn	19 54 09.8	-0.7
	0.8nm,0.3s,SNR=5.3						
EBAD				S	Sn	19 54 59.8	-3.0
	SNR=7.9						
PFVI	Vila Bisbo	4.57	299	ePn	Pn	19 54 10.8	-0.5
EVO	Evora	4.86	317	ePn	Pn	19 54 17.3	+2.1

MOS 04 19:56:55.2±1.1, 1743S×7028W, h33km, mb5.3/30, MS4.5/5, Error ellipse: s-maj=12.1km s-min=8.1km az=76.6
ISCJB 04 19:56:56.6±0.2, 1761S±004×7012W±003, h47km, mb5.1/93, MS4.4/31, Error ellipse: s-maj=6.1km s-min=3.4km az=38.2
DJA 04 19:56:56, 1790S×6968W, h10km, mb5.2/4
NEIC 04 19:56:57.6±0.2, 1756S×7021W, mb5.1/63, MS4.6/2, Error ellipse: s-maj=6.5km s-min=4.6km az=58.0
NEIC Felt [III] at Locumba and [II] at Arequipa. Felt at Ilo, Moquegua and Tacna. Also felt [III] at Arica, Chile.
IDC 04 19:56:57.8±0.4, 1758S×7015W, h44km±3km, mb4.7/21, mb1 4.9/23, mb1mx4.8/26, mbtmp4.7/23, MS4.3/21, Ms1 4.2/21, ms1mx4.1/36, Error ellipse: s-maj=14.3km s-min=9.1km az=70.0
BJI 04 19:56:58.4, 1725S×7035W, h54km, mB5.6, Ms5.1, Msz4.9
LDG 04 19:56:58.4±0.3, 1713S×7019W, h50km, Mb5.1/14, Ms4.2/9, Error ellipse: s-maj=19.5km s-min=9.7km az=45.0

ISC 04 19:56:58.8±0.2, 1758S±004×7006W±003, h49km, h49km±.5km:pP-P, n516, σ0s70/431, mb5.1/93, MS4.4/31, 119C-129D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.77	309⇓	iP	Pn	19 57 25.9	-1.0
ARE				eS	Sn	19 57 47.0	-1.2
LVC	Limon Verde	5.12	168	P	Pn	19 58 13.1	+0.2
	18nm,0.3s,baz=339,slow=10.0,SNR=60						
LVC				S	Sn	19 59 08.8	-1.9
	84nm,0.3s,baz=37,slow=20,SNR=6.8						
LVC				LR	LR	20 00 10.7	
	comp=Z,2µm,21.0s,baz=338,slow=38						
LVC	Limon Verde	5.12	168	ePn	Pn	19 58 12.7	-0.2
	552nm,0.6s						
LVC				eSn	Sn	19 59 09.9	-0.8
NNA	Nana	8.60	309	Pn	Pn	19 58 59.0	-1.7
	906nm,0.6s,SNR=5.8						
NNA	Nana	8.60	309	P	Pn	19 58 58.1	-2.6
	6.2nm,0.3s,baz=142,slow=12,SNR=12						
NNA				S	Sn	20 00 32.9	-3.6
	2.2nm,0.3s,baz=118,slow=8.0,SNR=2.9						
NNA	Nana	8.60	309	eP	Pn	19 58 58.6	-2.1
	91nm,0.6s						
SIV	San Ignacio	8.75	81	P	Pn	19 59 06.4	+3.7
	38nm,0.3s,baz=269,slow=11,SNR=432						
LCO	Las Campanas	11.39	183	ePn	Pn	19 59 33.0	-5.8
ATAH	Atahualpa	13.30	321	P	Pn	20 00 04.4	-0.5
	0.3nm,0.3s,baz=136,slow=22,SNR=1.8						
CFAA	Coronel Fontan	14.06	174	P	Pn	20 00 09.1	-6.2
	0.1nm,0.3s,baz=344,slow=17,SNR=4.6						
CFAA				LR	LR	20 05 40.5	
	comp=Z,125nm,21.7s,baz=336,slow=37						
OTAV	Otavalo	19.54	334	P	Pn	20 01 24.1	0.0
	49nm,1.2s						
BDFB	Brasilia	21.21	88	P	P	20 01 40.5	0.0
	15nm,0.5s,mb4.6,baz=254,slow=16,SNR=30						
BDFB				LR	LR	20 10 53.5	
	comp=Z,136nm,20.0s,MS3.3,baz=81,slow=39						
BDFB	Brasilia	21.21	88	eP	P	20 01 40.6	0.0
BDFB				pmax	pmax		
	comp=Z,21nm,0.5s						
BDFB	Brasilia	21.21	88	eP	P	20 01 40.6	+0.1
	comp=Z,21nm,0.5s,mb4.7						
BDFB				e		20 01 44.4	
ROSC	El Rosal	22.69	349	LR	LR	20 11 47.1	
	comp=Z,1µm,19.4s,MS4.3,baz=198,slow=39						
PLCA	Paso Flores	23.07	181	P	P	20 01 58.6	-1.5
	comp=Z,93nm,1.0s,mb5.2,baz=358,slow=12,SNR=84						
PLCA	Paso Flores	23.07	181	eP	P	20 01 58.2	-1.9
PLCA				pmax	pmax		
	comp=Z,156nm,1.1s						
PLCA	Paso Flores	23.07	181	eP	P	20 01 58.2	-1.9
	comp=Z,156nm,1.1s,mb5.3						
CAM4	Nova Friburgo	26.25	105⇑	iP	P	20 02 29.0	-0.5
CAM4				i		20 02 32.2	
CAM4				i		20 02 34.7	
CAM4				i	pP	20 02 44.6	+2.5
SDV	Santo Domingo	26.30	359	P	P	20 02 28.1	-1.9
	comp=Z,4.9nm,0.7s,mb4.1,baz=248,slow=6.2,SNR=10						
SDV				LR	LR	20 14 08.0	
	comp=Z,811nm,19.6s,MS4.3,baz=318,slow=39						
SDV	Santo Domingo	26.30	359	P	P	20 02 28.1	-1.9
SDV				LR	LR	20 14 08.0	
PCRV	Puerto La Cruz	28.10	11	LR	LR	20 15 02.4	
	comp=Z,2µm,18.0s,MS4.7,baz=187,slow=39						
RCBR	Riachuelo	35.35	75	eP	P	20 03 50.4	+0.5
	comp=Z,13nm,1.0s,mb4.8						
SDDR	Presa de Saban	36.35	358	eP	P	20 03 58.0	-0.2
	comp=Z,10nm,1.1s,mb4.7						
USHA	Ushuaia	37.20	178	P	P	20 04 04.7	-0.4
	comp=Z,9.7nm,0.5s,mb4.9,baz=353,slow=7.1,SNR=9.4						
USHA				LR	LR	20 20 23.3	
	comp=Z,349nm,18.8s,MS4.2,baz=36,slow=38						
USHA	Ushuaia	37.20	178	P	P	20 04 04.7	-0.4
USHA				LR	LR	20 20 23.2	

RPN Rapa Nui 37.42 248 LR LR 20 15 02.8
comp=Z,624nm,21.2s,MS4.4,baz=142,slow=29
CMIG Matias Romero 42.25 323 P **P** **20 04 47.3 -0.2**
comp=Z,8.2nm,0.5s,mb4.6,baz=137,slow=7.2,SNR=15
PMSA Palmer Station 47.33 177 P **P** **20 05 27.5 +0.2**
comp=Z,18nm,0.9s,mb5.0,baz=2.0,slow=17,SNR=2.1
BRAL Brewton 51.00 341 *e*P **P** **20 05 55.9 0.0**
comp=Z,85nm,0.8s,mb5.7
BRAL *e* pP 20 06 08.6 -0.6
LRAL Lakeview Retre 52.87 342 *e*P **P** **20 06 07.4 -2.3**
comp=Z,28nm,0.9s,mb5.2
LRAL *e* pP 20 06 20.1 -3.0
TKL Tuckaleechee C 54.52 346 LR LR 20 29 34.1
comp=Z,321nm,21.2s,MS4.4,baz=355,slow=36
TKL Tuckaleechee C 54.52 346 *e*P **P** **20 06 19.2 -2.5**
TKL *e* pP 20 06 33.3 -1.9
JCT Junction City 55.71 329 *e*P **P** **20 06 29.1 -1.3**
JCT pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
JCT Junction City 55.71 329 *e*P **P** **20 06 29.1 -1.3**
comp=Z,10nm,0.8s,mb4.9
WVT Waverly 56.01 343 *e*P **P** **20 06 29.3 -3.1**
WVT *e* pP 20 06 42.6 -3.3
WVT pmax pmax
comp=Z,41nm,0.9s,mb5.5
WVT Waverly 56.01 343 *e*P **P** **20 06 29.3 -3.1**
comp=Z,40nm,0.9s,mb5.5
WVT *e* pP 20 06 42.6 -3.3
MIAR Mount Ida 56.46 337 *e*P **P** **20 06 34.5 -1.2**
MIAR pmax pmax
comp=Z,37nm,0.9s,mb5.4
MIAR Mount Ida 56.46 337 *e*P **P** **20 06 34.5 -1.3**
comp=Z,36nm,0.9s,mb5.4
TXAR Lajitas Array 56.82 325 P **P** **20 06 36.8 -1.5**
comp=Z,3.9nm,0.9s,mb4.4,baz=147,slow=9.2,SNR=27
TXAR pP pP 20 06 48.9 -2.9
comp=Z,1.6nm,0.5s,baz=132,slow=8.6,SNR=7.8
TXAR Lajitas Array 56.82 325 P **P** **20 06 36.8 -1.5**
TXAR pP pP 20 06 48.9 -2.9
WCI Wyandotte Cave 57.57 345 *e*P **P** **20 06 41.2 -2.3**
WCI pmax pmax
comp=Z,36nm,0.8s,mb5.5
WCI Wyandotte Cave 57.57 345 *e*P **P** **20 06 41.2 -2.3**
comp=Z,36nm,0.8s,mb5.5
MCWV Mont Chateau 57.67 351 *e*P **P** **20 06 43.1 -1.0**
comp=Z,23nm,0.8s,mb5.3
SIUC Southern Illin 57.88 342 *e*P **P** **20 06 44.2 -1.5**
comp=Z,250nm,0.8s,mb6.3
SIUC *e*pP pP 20 06 56.9 -2.3
SIUC *e*sP sP 20 07 03.2 -1.5
FVM French Village 58.49 341 *e*P **P** **20 06 47.9 -2.0**
FVM *e**PP pP 20 07 01.2 -2.3
FVM pmax pmax
comp=Z,51nm,0.5s,mb5.8
FVM French Village 58.49 341 *e*P **P** **20 06 47.9 -2.1**
comp=Z,51nm,0.5s,mb5.8
FVM *e*pP pP 20 07 01.2 -2.3
OLIL Olney 58.52 343 *e*P **P** **20 06 47.4 -2.7**
comp=Z,14nm,0.5s,mb5.2
OLIL *e*pP pP 20 07 00.7 -2.9
WMOK Wichita Mounta 58.76 332 *e*P **P** **20 06 49.7 -2.2**
WMOK *e**PP pP 20 07 04.5 -1.0
WMOK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WMOK Wichita Mounta 58.76 332 *e*P **P** **20 06 49.7 -2.2**
comp=Z,9.0nm,0.8s,mb4.8
WMOK *e*pP pP 20 07 04.5 -1.0
CCM Cathedral Cave 58.81 341 *e*P **P** **20 06 49.8 -2.4**
CCM *e**PP pP 20 07 02.4 -3.3
CCM pmax pmax
comp=Z,17nm,0.8s,mb5.1
CCM Cathedral Cave 58.81 341 *e*P **P** **20 06 49.8 -2.4**
comp=Z,17nm,0.8s,mb5.1
CCM *e*pP pP 20 07 02.4 -3.3
HDIL Hopedale 60.54 343 *e*P **P** **20 07 01.3 -2.8**
comp=Z,64nm,0.8s,mb5.8
HDIL *e*pP pP 20 07 13.3 -4.4
HDIL *e*sP sP 20 07 20.0 -3.1
RKT Rikitea 60.69 253 *e*LR LR 20 24 43.6
comp=Z,232nm,28.2s
RKT Rikitea 60.69 253 *e*T 21 11 35.9
comp=Z,4.3nm,0.2s
319A Douglas 61.54 322 ⇓P **P** **20 07 10.9 -0.1**
baz=62
BBTS Babate 61.75 62 P **P** **20 07 13.0 +0.3**
comp=Z,26nm,0.7s,mb5.5,baz=328,slow=1.3,SNR=5.8
219A White Tail Can 61.98 323 ⇑P **P** **20 07 13.8 -0.2**
baz=62
318A Bisbee 62.01 322 ⇑P **P** **20 07 13.9 -0.2**
baz=62
218A Dragoon 62.43 322 ⇓P **P** **20 07 16.6 -0.3**
baz=62
SADO Sadowa 62.60 353 LR LR 20 34 24.6
comp=Z,332nm,20.4s,MS4.5,baz=179,slow=36
ANMO Albuquerque 62.65 327 *e*P **P** **20 07 17.3 -1.1**
ANMO *e**PP pP 20 07 30.0 -2.0
ANMO pmax pmax
comp=Z,7.0nm,1.0s
ANMO Albuquerque 62.65 327 *e*P **P** **20 07 17.3 -1.1**
comp=Z,6.8nm,1.0s,mb4.7
ANMO *e*pP pP 20 07 29.9 -2.1
217A Green Valley 62.74 321 ⇓P **P** **20 07 18.9 -0.1**
baz=63
118A Homack Ranch, 62.86 323 ⇑P **P** **20 07 19.3 -0.5**
baz=63
Z19A T-Link Ranch, 62.93 324 ⇓P **P** **20 07 20.5 +0.3**
baz=63
SCIA State Center 62.94 341 *e*P **P** **20 07 17.9 -2.2**
comp=Z,17nm,0.4s,mb5.5
JFWS Jewell Farm 63.00 343 *e*P **P** **20 07 18.7 -1.8**
JFWS *e**PP pP 20 07 31.6 -2.6
JFWS pmax pmax
comp=Z,48nm,0.8s,mb5.7
JFWS Jewell Farm 63.00 343 *e*P **P** **20 07 18.7 -1.8**
comp=Z,48nm,0.8s,mb5.7
JFWS *e*pP pP 20 07 31.6 -2.6
117A Oracle 63.26 322 ⇓P **P** **20 07 21.9 -0.6**
baz=63
216A Three Points, 63.28 321 ⇑P **P** **20 07 21.9 -0.7**
baz=63
Y19A Nutrioso 63.42 324 ⇑P **P** **20 07 23.8 +0.3**
baz=64
Y18A Canyon Day Jun 63.73 323 ⇑P **P** **20 07 25.5 0.0**
baz=64
X19A St. Johns 63.78 324 ⇑P **P** **20 07 25.9 +0.1**
baz=64
116A Eloy 63.83 321 ⇑P **P** **20 07 26.1 -0.1**
baz=64
214A Organ Pipe Nat 64.07 320 ⇓P **P** **20 07 27.6 -0.3**
baz=64
VNA3 Neumayer Olymp 64.11 162 ⇑*i*P **P** **20 07 27.4 -0.2**
VNA3 *e* 20 07 30.7
VNA3 *e* pP 20 07 40.5 -0.8
VNA3 *e* 20 07 46.3
VNA3 *e* 20 07 48.9
Y17A Roosevelt 64.13 323 ⇓P **P** **20 07 27.9 -0.3**
baz=64
X18A Snowflake 64.23 324 ⇑P **P** **20 07 28.7 -0.1**
baz=64
115A Sonoran Desert 64.24 321 ⇑P **P** **20 07 28.8 -0.1**
baz=64
VNA1 Neumayer--Stat 64.32 161 ⇑*i*P **P** **20 07 29.3 +0.4**
VNA1 *e* 20 07 32.9
VNA1 *e* pP 20 07 42.3 -0.3
VNA1 *e* 20 07 48.2
VNA1 *e* 20 07 51.4
W19A Sanders 64.34 325 ⇓P **P** **20 07 29.8 +0.2**
baz=64
W18A Petrified Fore 64.54 325 ⇓P **P** **20 07 31.2 +0.3**
baz=65
V19A Window Rock 64.60 325 ⇓P **P** **20 07 31.4 +0.1**
baz=65
Y16A Circle Bar Ran 64.63 322 ⇓P **P** **20 07 31.6 +0.1**
baz=65
Y16A ⇓P 20 07 31.7
baz=65
VNA2 Neumayer--Watz 64.69 161 ⇑*i*P **P** **20 07 31.3 0.0**
baz=300,slow=9.2
VNA2 *e* 20 07 35.2
VNA2 *e* pP 20 07 44.5 -0.5
VNA2 *e* 20 07 51.3
VNA2 *e* 20 07 54.2
X16A Lo Mia Camp, P 64.99 323 ⇓P **P** **20 07 33.8 0.0**
baz=65
V18A Ganado 65.08 325 ⇓P **P** **20 07 34.6 +0.2**
baz=65
Z14A Wintersburg 65.13 321 ⇓P **P** **20 07 34.4 -0.3**
baz=65
Y15A Casa Rosa Ranc 65.18 322 ⇓P **P** **20 07 34.6 -0.4**
baz=65
113A Mohawk Valley, 65.22 320 ⇓P **P** **20 07 35.2 -0.1**
baz=65
T19A Beclabito 65.43 326 ⇓P **P** **20 07 36.1 -0.4**
baz=66
MVCO Mesa Verde 65.44 327 ⇑P **P** **20 07 36.3 -0.3**
baz=66
MVCO Mesa Verde 65.44 327 *e*P **P** **20 07 35.6 -1.0**
comp=Z,5.6nm,0.6s,mb4.8
MVCO *e*pP pP 20 07 49.8 -0.6
X15A Humboldt 65.50 322 ⇓P **P** **20 07 36.6 -0.5**
baz=66
X15A ⇑P 20 07 36.7
baz=66
W16A Flagstaff 65.53 323 ⇑P **P** **20 07 37.3 0.0**
baz=66
Y14A Wickenburg 65.57 322 ⇓P **P** **20 07 37.4 -0.2**
baz=66
U18A Rough Rock, Ch 65.57 325 ⇑P **P** **20 07 37.3 -0.2**
baz=66
ECSD EROS,Sioux Fal 65.69 339 *e*P **P** **20 07 36.4 -1.7**
comp=Z,60nm,1.1s,mb5.5
ECSD *e*pP pP 20 07 49.8 -2.0
WUAZ Wupatki 65.74 324 ⇓P **P** **20 07 38.2 -0.4**
baz=66
WUAZ Wupatki 65.74 324 *e*P **P** **20 07 38.3 -0.4**
comp=Z,15nm,1.1s,mb4.9
WUAZ *e*pP pP 20 07 51.8 -0.6
R21A Cimarron 65.84 328 ⇑P **P** **20 07 38.7 -0.5**
baz=66
X14A Yava 65.87 322 ⇓P **P** **20 07 39.2 -0.3**
baz=66
W15A Williams 66.01 323 ⇓P **P** **20 07 40.5 +0.1**
baz=66
U16A Tuba City 66.06 324 ⇑P **P** **20 07 40.4 -0.3**
baz=66
T18A Mexican Hat 66.11 326 ⇑P **P** **20 07 40.6 -0.3**
baz=66
U17A Shonto 66.14 325 ⇓P **P** **20 07 41.0 -0.1**
baz=66
S19A Harvey Farm, M 66.17 327 ⇓P **P** **20 07 41.6 +0.2**
baz=66
SNAA Sanae 66.32 161 ⇑*i*P **P** **20 07 41.6 -0.2**
SNAA *e* 20 07 45.5
SNAA *e* pP 20 07 54.7 -0.9
SNAA *e* 20 08 00.2
SNAA Sanae 66.32 161 *c*/P **P** **20 07 41.4 -0.4**
SNAA Sanae 66.32 161 *e*P **P** **20 07 41.3 -0.5**
comp=Z,40nm,0.9s,mb5.5
SNAA *e*pP pP 20 07 54.1 -1.4
V15A Kaibab Nationa 66.41 324 ⇓P **P** **20 07 43.0 +0.1**
baz=66
PDMCI Parker Dam,Lak 66.50 321 ⇓P **P** **20 07 43.8 +0.3**
baz=67
T17A Navajo Res., N 66.50 325 ⇓P **P** **20 07 43.6 +0.1**
baz=67
W14A Seligman 66.51 322 ⇑P **P** **20 07 43.8 +0.3**
baz=67
X13A Yucca 66.51 322 ⇓P **P** **20 07 43.9 +0.3**
baz=67
S18A Hurst Farm, Bl 66.58 326 ⇓P **P** **20 07 44.0 +0.1**
baz=67
DVTC Desert V Tower 66.59 319 ⇑P **P** **20 07 44.3 +0.2**
baz=67
V14A Boquillas Ranc 66.81 323 ⇑P **P** **20 07 45.6 +0.1**
baz=67
BC3 Big Chuckw Mtn 66.85 320 ⇑P **P** **20 07 45.9 +0.1**
baz=67
T16A Glen Canyon Da 66.88 325 ⇓P **P** **20 07 45.9 0.0**
baz=67
W13A Hualapai Mount 66.90 322 ⇓P **P** **20 07 46.1 +0.1**
baz=67
U15A North Rim 66.92 324 ⇑P **P** **20 07 46.2 +0.1**
baz=67
MONP Monument Peak 66.95 319 ⇓P **P** **20 07 46.6 +0.2**
baz=67
S17A Black Ridge (B 66.97 326 ⇓P **P** **20 07 46.4 -0.1**
baz=67
IRM Iron Mountain 67.01 320 ⇓P **P** **20 07 46.6 -0.1**
baz=67
T15A Red Dirt Ranch 67.39 324 ⇓P **P** **20 07 49.8 +0.7**
baz=68
U14A Mt Trumbull 67.41 323 ⇑P **P** **20 07 49.7 +0.4**
baz=68
BELC Belle Mtn. 67.42 320 ⇑P **P** **20 07 49.5 +0.1**
baz=68
PFO Pinyon Flat Ob 67.44 319 ⇓P **P** **20 07 49.2 -0.4**
baz=68
S16A Weppner Ranch, 67.47 325 ⇑P **P** **20 07 49.8 +0.3**
baz=68
V13A Grand Canyon W 67.48 322 ⇓P **P** **20 07 49.6 -0.1**
baz=68
R17A Hanksville Air 67.50 326 ⇓P **P** **20 07 49.7 -0.1**
baz=68
W12A Cal Nev Ari 67.62 321 ⇑P **P** **20 07 51.1 +0.5**
baz=68
GMRC Granite Mounta 67.74 321 ⇑P **P** **20 07 51.5 +0.2**
baz=68
T14A Hurricane 67.81 324 ⇑P **P** **20 07 52.4 +0.6**
baz=68
S15A Panguitch 67.85 325 ⇑P **P** **20 07 52.4 +0.4**
baz=68
U13A Pakoon Wash 67.86 323 ⇓P **P** **20 07 52.6 +0.5**
baz=68
V12A Nelson 67.90 322 ⇓P **P** **20 07 52.5 +0.1**
baz=68
MURC Murrieta 67.91 319 ⇓P **P** **20 07 52.5 +0.1**
baz=68
EYMN Ely 68.00 345 *e*P **P** **20 07 50.2 -2.5**
comp=Z,15nm,0.8s,mb5.1
EYMN *e*pP pP 20 08 03.6 -2.9
HEC Hector,Ludlow 68.18 320 ⇓P **P** **20 07 54.4 +0.3**
baz=68
R15A Junction 68.19 325 ⇓P **P** **20 07 54.6 +0.5**
baz=68
U12A Valley of Fire 68.20 323 ⇑P **P** **20 07 54.3 0.0**
baz=68
T13A Saint George 68.25 323 ⇓P **P** **20 07 55.1 +0.6**
baz=68
TUQ Turquoise Moun 68.34 321 ⇑P **P** **20 07 55.2 +0.1**
baz=68
LIC Lamto 68.41 76 ⇑*i*P **P** **20 07 55.7 -0.3**
comp=Z,44nm,0.4s,mb5.5
LIC *e*MLR MLR
comp=Z,210nm,21.0s,MS4.0
LIC Lamto 68.41 76 *e*P **P** **20 07 55.6 -0.4**
comp=Z,133nm,0.7s,mb6.1
TAOE Nuku Hiva Isla 68.47 267 *e*LR LR 20 28 21.5
comp=Z,893nm,28.8s
TIC Tomodi 68.57 75 *e*P **P** **20 07 56.7 -0.3**
comp=Z,548nm,1.4s,mb6.3
BFSC Mount Baldy St 68.61 319 ⇑P **P** **20 07 57.1 +0.2**
baz=69
S13A Holt Ranch, En 68.62 324 ⇑P **P** **20 07 57.6 +0.8**
baz=69
KIC Kosan Boka 68.72 76 *e*P **P** **20 07 57.8 -0.2**
comp=Z,199nm,0.6s,mb6.2
DBIC Dimbokro 68.73 75 P **P** **20 07 58.0 0.0**
comp=Z,31nm,0.4s,mb5.6,baz=227,slow=6.1,SNR=145
DBIC LR LR 20 36 14.5
comp=Z,141nm,19.8s,MS4.2,baz=223,slow=34
DBIC Dimbokro 68.73 75 *e*P **P** **20 07 57.9 -0.1**
DBIC *e**PP pP 20 08 11.4 -0.5
DBIC pmax pmax
comp=Z,74nm,0.9s
DBIC Dimbokro 68.73 75 *e*P **P** **20 07 57.9 -0.2**
comp=Z,74nm,0.9s,mb5.6
DBIC *e*pP pP 20 08 11.4 -0.5
GSC Goldstone 68.78 320 ⇑P **P** **20 07 58.1 +0.2**
baz=69
R13A O'Grain Ranch, 69.10 324 ⇑P **P** **20 08 00.5 +0.7**
baz=69
T11A Corn Creek, Al 69.16 323 ⇑P **P** **20 08 00.4 +0.3**
baz=69
O16A Springville 69.23 327 ⇓P **P** **20 08 01.2 +0.6**
baz=69
EDW2 Edwards Air Fo 69.24 319 ⇑P **P** **20 08 00.5 -0.2**
baz=69
U10A Ash Meadows, A 69.25 321 ⇓P **P** **20 08 01.2 +0.5**
baz=69
Q14A Sevier Lake (B 69.29 325 ⇓P **P** **20 08 00.9 -0.1**
baz=69
N17A Moffit Pass 69.44 328 ⇓P **P** **20 08 02.1 +0.3**
baz=70
LRMC Laurel Mountai 69.44 320 ⇑P **P** **20 08 02.0 0.0**
baz=70
AGMN Agassiz Refuge 69.52 342 *e*P **P** **20 08 00.3 -1.9**
comp=Z,14nm,0.5s,mb5.2
AGMN *e*pP pP 20 08 13.7 -2.3
TPNV Topopah Spring 69.56 322 ⇓P **P** **20 08 03.0 +0.4**
baz=70
TPNV Topopah Spring 69.56 322 *e*P **P** **20 08 02.8 +0.2**
TPNV *e**PP pP 20 08 16.0 -0.5
TPNV pmax pmax
comp=Z,23nm,1.1s,mb5.0
TPNV Topopah Spring 69.56 322 *e*P **P** **20 08 02.8 +0.1**
comp=Z,23nm,1.1s,mb5.0
TPNV *e*pP pP 20 08 16.0 -0.5
R12A Pony Springs, 69.56 324 ⇑P **P** **20 08 03.1 +0.5**
baz=70,SNR=14
FURC Furnace Creek, 69.60 321 ⇑P **P** **20 08 03.1 +0.2**
baz=70
P14A Drum Mountains 69.61 326 ⇓P **P** **20 08 03.2 +0.3**
baz=70,SNR=7.7
Q13A Wheeler Ranch, 69.67 325 ⇓P **P** **20 08 03.6 +0.3**
baz=70,SNR=5.3
MPMC Manual Prospec 69.70 320 ⇑P **P** **20 08 03.4 -0.2**
baz=70
L18A Fontenelle, Gr 69.78 329 ⇓P **P** **20 08 03.7 -0.2**
baz=70
DUG Dugway 69.91 326 ⇑P **P** **20 08 05.3 +0.6**
baz=70
DUG Dugway 69.91 326 *e*P **P** **20 08 03.8 -1.0**
DUG *e**PP pP 20 08 17.6 -1.0
DUG pmax pmax
comp=Z,26nm,1.2s,mb5.0
DUG Dugway 69.91 326 *e*P **P** **20 08 03.8 -1.0**
comp=Z,26nm,1.2s,mb5.0
DUG *e*pP pP 20 08 17.6 -1.1
P13A Bates Ranch, G 70.03 325 ⇑P **P** **20 08 05.8 +0.3**
baz=70,SNR=7.8
R11A Troy Canyon, C 70.13 323 ⇓P **P** **20 08 06.7 +0.6**
baz=70,SNR=14
Q12A Willowcreek R 70.18 324 ⇑P **P** **20 08 06.4 0.0**
baz=70,SNR=8.1
PDAR Pinedale Array 70.19 330 LR LR 20 42 11.2
comp=Z,215nm,21.1s,MS4.4,baz=100,slow=39
CWC Cottonwood Cre 70.31 320 ⇑P **P** **20 08 07.6 +0.3**
baz=70
PKM Peak Mountain 70.40 318 ⇑P **P** **20 08 08.3 +0.4**
baz=70
S10A Tonopah Range, 70.42 322 ⇑P **P** **20 08 07.8 -0.1**
baz=70,SNR=14
R10A Warm Springs 70.50 323 ⇓P **P** **20 08 09.2 +0.8**
baz=71,SNR=7.8
Q11A Duckwater 70.51 324 ⇑P **P** **20 08 08.9 +0.5**
baz=71,SNR=8.7
VES Vestal, Richgr 70.54 319 ⇓P **P** **20 08 09.1 +0.4**
baz=71
N14A Grayback Hills 70.58 327 ⇑P **P** **20 08 09.1 +0.2**
baz=71
M15A Larsen Ranch, 70.64 328 ⇓P **P** **20 08 09.5 +0.3**
baz=71
S09A Goldfield 70.65 322 ⇓P **P** **20 08 09.2 -0.1**
baz=71,SNR=8.2
MAIT Maitri 70.83 160 *e*P **P** **20 08 07.3 -2.7**
NVL N'lazarevskaya 70.86 160 P **P** **20 08 10.6 +0.4**
NVL pmax pmax
comp=Z,48nm,1.1s,mb5.3
R09A Tonopah 70.91 322 ⇓P **P** **20 08 10.8 -0.1**
baz=71,SNR=7.8
Q10A Clear Creek Ra 70.92 323 ⇓P **P** **20 08 11.1 +0.2**
baz=71,SNR=8.3
O12A Currie 71.00 325 ⇓P **P** **20 08 11.5 +0.2**
baz=71,SNR=9.1
L15A Malad City 71.01 328 ⇓P **P** **20 08 11.6 +0.2**
baz=71
M14A Sheep Mountain 71.14 327 ⇑P **P** **20 08 12.4 +0.2**
baz=71
K16A Soda Springs 71.22 329 ⇑P **P** **20 08 13.2 +0.6**
baz=71
ULM Lac du Bonnet 71.27 343 P **P** **20 08 11.2 -1.6**
comp=Z,12nm,0.4s,mb5.2,baz=156,slow=6.6,SNR=18
ULM pP pP 20 08 24.6 -2.1
comp=Z,19nm,0.5s,baz=161,slow=5.7,SNR=8.8
ULM LR LR 20 38 35.1
comp=Z,204nm,18.1s,MS4.4,baz=163,slow=35
ULM Lac du Bonnet 71.27 343 *e*P **P** **20 08 11.0 -1.8**
comp=Z,16nm,0.6s,mb5.1
ULM *e*pP pP 20 08 24.4 -2.3
ULM *e*sP sP 20 08 30.9 -1.3
Q09A Carvers 71.37 323 ⇓P **P** **20 08 14.0 +0.3**
baz=72,SNR=5.4
O11A Cowboy Ranch, 71.40 325 ⇑P **P** **20 08 14.5 +0.6**
baz=72
L14A Malta 71.47 327 ⇑P **P** **20 08 14.4 +0.3**
baz=72
NVAR Mina Array Bea 71.76 322 P **P** **20 08 16.5 +0.5**
comp=Z,5.7nm,0.8s,mb4.5,baz=148,slow=6.9,SNR=31
NVAR pP pP 20 08 30.1 +0.2
comp=Z,4.8nm,0.8s,baz=156,slow=7.1,SNR=7.0
NVAR Mina Array Bea 71.76 322 P **P** **20 08 16.5 +0.5**
NVAR pP pP 20 08 30.1 +0.2
L13A Double Diamond 71.87 327 ⇑P **P** **20 08 17.6 +1.0**
baz=72
M12A Wells 71.90 326 ⇓P **P** **20 08 17.1 +0.3**
baz=72
O10A Cortez Mining, 71.98 324 ⇑P **P** **20 08 17.7 +0.4**
baz=72
V03C Hunter Liggett 72.00 318 ⇓P **P** **20 08 17.6 +0.1**
baz=72
J15A Blackfoot 72.06 329 ⇓P **P** **20 08 18.4 +0.7**
baz=72
SCHQ Schefferville 72.17 2 P **P** **20 08 16.2 -1.9**
comp=Z,7.1nm,0.9s,mb4.6,baz=176,slow=8.4,SNR=3.7
SCHQ LR LR 20 41 21.3
comp=Z,255nm,19.2s,MS4.5,baz=34,slow=37
S05C Merced 72.27 320 ⇓P **P** **20 08 18.9 -0.2**
baz=72,SNR=9.0
O09A Fish Creek Ran 72.28 324 ⇓P **P** **20 08 19.7 +0.6**
baz=72
K13A Stover Farm, H 72.34 327 ⇑P **P** **20 08 20.4 +1.0**
baz=72
M11A Holland Ranch, 72.38 326 ⇑P **P** **20 08 19.7 +0.1**
baz=72,SNR=7.2
H16A Russell Place, 72.46 330 ⇓P **P** **20 08 20.6 +0.5**
baz=73
L12A House Creek Ra 72.47 327 ⇓P **P** **20 08 20.1 0.0**
baz=73,SNR=11
R06C Coleville 72.50 321 ⇓P **P** **20 08 21.3 +0.9**
baz=73
I15A Monteview 72.53 329 ⇑P **P** **20 08 21.6 +1.1**
baz=73
J14A Carey 72.54 328 ⇓P **P** **20 08 21.1 +0.5**
baz=73
QSPA South Pole Qui 72.59 180 *e*P **P** **20 08 20.2 -0.2**
comp=Z,21nm,1.1s,mb5.0
QSPA *e*pP pP 20 08 33.1 -1.2
K12A Draper Farm, C 72.75 327 ⇑P **P** **20 08 22.1 +0.2**
baz=73,SNR=10
M10A I.L. Ranch, Tu 72.85 325 ⇓P **P** **20 08 22.8 +0.4**
baz=73,SNR=5.5
L11A Cat Creek Ranc 72.87 326 ⇑P **P** **20 08 23.0 +0.4**
baz=73,SNR=9.7
I14A Mackay 72.95 329 ⇑P **P** **20 08 23.9 +0.9**
baz=73
HLID Hailey 73.17 328 ⇓P **P** **20 08 24.9 +0.6**
baz=73
HLID Hailey 73.17 328 *e*P **P** **20 08 23.7 -0.6**
HLID *e*pP pP 20 08 37.7 -0.5
WCN Washoe City 73.18 322 ⇑P **P** **20 08 24.9 +0.4**
baz=73
L10A Juniper Basin 73.19 326 ⇑P **P** **20 08 25.2 +0.7**
baz=73,SNR=10.0
N08A GE Springer Mi 73.22 324 ⇓P **P** **20 08 23.9 -0.8**
baz=73
O07A Toulon 73.23 323 ⇓P **P** **20 08 24.8 +0.1**
baz=73,SNR=5.3
I13A Wildhorse Cree 73.27 328 ⇓P **P** **20 08 25.0 +0.2**
baz=73,SNR=5.7
M09A Marrel Ranch, 73.28 325 ⇑P **P** **20 08 25.2 +0.3**
baz=73,SNR=8.7
J12A Stokes Ranch, 73.29 327 ⇑P **P** **20 08 25.4 +0.4**
baz=73
H14A Leadore 73.41 329 ⇑P **P** **20 08 26.3 +0.6**
baz=74
LAVA Lava Cap Winer 73.42 321 ⇓P **P** **20 08 25.7 -0.2**
baz=74
K11A Parker Ranch, 73.44 326 ⇑P **P** **20 08 25.4 -0.5**
baz=74,SNR=5.7
N07B Gerlach 73.70 323 ⇑P **P** **20 08 27.6 +0.1**
baz=74
MFID Camas Ranch 73.79 327 ⇓P **P** **20 08 27.8 -0.1**

baz=74,SNR=16
O06A **Flanigan** 73.79 322 ⇑P P 20 08 27.7 -0.3
baz=74
H13A **Challis** 73.81 329 ⇓P P 20 08 29.0 +0.9
baz=74
M08A **Happy Creek Ra** 73.81 324 ⇓P P 20 08 28.6 +0.5
baz=74
K10A **MacKenzie Ranc** 73.89 326 ⇑P P 20 08 28.6 +0.1
baz=74,SNR=6.6
BEKR **Beckwourth** 73.90 322 ⇓P P 20 08 28.6 -0.1
baz=74
H12A **Diamond D Ranc** 74.09 328 ⇑P P 20 08 30.2 +0.5
baz=74
N06A **Buffalo Meadow** 74.17 323 ⇓P P 20 08 30.1 -0.2
baz=74,SNR=15
G13A **Cobalt** 74.18 329 ⇑P P 20 08 30.6 +0.4
baz=74,SNR=5.5
I11A **Placerville** 74.20 327 ⇑P P 20 08 30.2 -0.1
baz=74
M07A **Soldier Meadow** 74.21 324 ⇑P P 20 08 30.4 0.0
baz=74,SNR=5.6
F14A **Wisdom** 74.28 330 ⇑P P 20 08 31.3 +0.5
baz=74
J10A **Berg Farm, Mel** 74.28 327 ⇑P P 20 08 30.8 0.0
baz=74
L08A **Fields** 74.29 325 ⇓P P 20 08 30.7 -0.2
baz=74,SNR=7.9
K09A **Rome** 74.30 326 ⇓P P 20 08 31.3 +0.4
baz=74,SNR=11
D16A **Dana Ranch, Ca** 74.35 332 ⇓P P 20 08 32.2 +1.1
baz=74
L07A **Adell** 74.72 324 ⇑P P 20 08 33.7 +0.2
baz=75
F13A **Darby** 74.73 330 ⇓P P 20 08 33.7 +0.3
baz=75
J09A **Fry Pan Ranch,** 74.75 326 ⇑P P 20 08 34.4 +0.8
baz=75
C16A **Fuhringer Ranc** 75.02 332 ⇑P P 20 08 34.9 0.0
baz=75
K07A **Rock Creek Ran** 75.12 325 ⇑P P 20 08 35.6 -0.1
baz=75
E13A **Victor** 75.13 330 ⇓P P 20 08 36.0 +0.4
baz=75,SNR=6.4
J08A **Circle Bar Ran** 75.14 326 ⇑P P 20 08 36.3 +0.4
baz=75
I09A **Lost Marbles R** 75.17 326 ⇓P P 20 08 36.1 +0.1
baz=75
PPT **Papeete** 75.19 256 *e*LR LR 20 31 25.7
comp=Z,159nm,24.8s
D14A **Greenough** 75.28 331 ⇑P P 20 08 36.7 +0.1
baz=75
G11A **Walters Elk Ra** 75.40 328 ⇓P P 20 08 37.2 -0.1
baz=76,SNR=13
A17A **Triple J Farms** 75.44 334 ⇑P P 20 08 37.9 +0.5
baz=76
I08A **Drewsey** 75.57 326 ⇑P P 20 08 38.9 +0.7
baz=76
J07A **Hines** 75.61 325 ⇑P P 20 08 39.3 +0.8
baz=76
D13A **Huson** 75.73 330 ⇓P P 20 08 39.4 +0.3
baz=76
G10A **Bishop Farm, J** 75.76 328 ⇓P P 20 08 39.3 0.0
baz=76,SNR=30
B15A **Bradely Ranch,** 75.77 332 ⇓P P 20 08 38.8 -0.4
baz=76
E12A **Beaver Dam Sad** 75.78 329 ⇓P P 20 08 39.8 +0.5
baz=76
C14A **Swan Lake** 75.90 331 ⇓P P 20 08 40.3 +0.3
baz=76
J06A **Christmas Vall** 75.99 325 ⇑P P 20 08 40.8 +0.1
baz=76,SNR=6.3
H08A **Prairie City** 76.03 326 ⇓P P 20 08 41.2 +0.3
baz=76,SNR=7.0
K05A **Summer Lake** 76.06 324 ⇓P P 20 08 41.8 +0.7
baz=76,SNR=5.5
G09A **Cove** 76.09 327 ⇓P P 20 08 41.8 +0.6
baz=76,SNR=15
I07A **Izee** 76.19 326 ⇓P P 20 08 42.2 +0.4
baz=76,SNR=6.2
C13A **Hot Springs** 76.21 331 ⇑P P 20 08 42.7 +0.9
baz=76
F10A **Beach Ranch, E** 76.29 328 ⇑P P 20 08 43.3 +1.0
baz=76
F09A **S2 Ranch, Elgi** 76.45 328 ⇓P P 20 08 43.8 +0.6
baz=77,SNR=6.5
I06A **Prineville** 76.47 325 ⇓P P 20 08 43.8 +0.4
baz=77,SNR=8.2
E10A **Myers Farm, Un** 76.58 329 ⇓P P 20 08 44.5 +0.5
baz=77
D11A **Klaveano Farm,** 76.60 329 ⇑P P 20 08 44.6 +0.6
baz=77
A14A **Double T Ranch** 76.64 332 ⇓P P 20 08 44.4 +0.2
baz=77
C12B **Naegeli Ranch,** 76.66 330 ⇓P P 20 08 44.7 +0.4
baz=77
B13A **Whitefish** 76.67 331 ⇓P P 20 08 45.0 +0.7
baz=77
G08A **Pilot Rock** 76.71 327 ⇑P P 20 08 44.6 0.0
baz=77,SNR=5.3
G07A **Ruggs Ranch, H** 77.06 327 ⇓P P 20 08 47.4 +0.7
baz=77,SNR=7.1
H06A **Lindquist Farm** 77.06 326 ⇑P P 20 08 47.4 +0.7
baz=77,SNR=8.2
TOA0 **Torodi Ar. Sit** 77.11 72 *e*P P 20 08 46.7 -1.0
TOA0 *e*pP pP 20 09 00.5 -1.1
TORD **Torodi Ar. Bea** 77.11 72 P P 20 08 47.2 -0.4
comp=Z,42nm,0.5s,mb5.6,baz=257,slow=5.4,SNR=454
TORD pP pP 20 09 01.0 -0.7
comp=Z,33nm,0.9s,baz=259,slow=5.4,SNR=11
TORD LR LR 20 42 12.0
comp=Z,294nm,18.6s,MS4.6,baz=255,slow=35
E09A **Wood Farm, Sta** 77.12 328 ⇓P P 20 08 47.5 +0.5
baz=77,SNR=5.2
I05A **Bend** 77.20 325 ⇑P P 20 08 48.2 +0.8
baz=77
H05A **Madras** 77.49 325 ⇑P P 20 08 49.7 +0.6
baz=78
G06A **Carlson Farm,** 77.55 326 ⇓P P 20 08 50.1 +0.7
baz=78
E08A **Dider Farm, El** 77.57 328 ⇓P P 20 08 49.7 +0.2
baz=78
D09A **Jones Farm, Ri** 77.58 329 ⇓P P 20 08 50.1 +0.5
baz=78
A12A **Yaak River Ran** 77.62 331 ⇑P P 20 08 50.0 +0.3
baz=78,SNR=5.7
D08A **Wollman Farm,** 77.88 328 ⇓P P 20 08 51.7 +0.5
baz=78
G05A **Wamic** 77.92 326 ⇓P P 20 08 52.1 +0.7
baz=78
A11A **Hall Mountain,** 77.96 331 ⇑P P 20 08 52.0 +0.4
baz=78,SNR=5.4
F06A **Goldendale** 77.98 326 ⇑P P 20 08 52.6 +0.8
baz=78
E07A **Sunnyside** 78.02 327 ⇓P P 20 08 52.9 +0.9
baz=78
H04A **Detroit Lake** 78.03 325 ⇓P P 20 08 52.3 +0.1
baz=78
C09A **Chrisman Ranch** 78.07 329 ⇑P P 20 08 52.9 +0.7
baz=78
B09A **Rice** 78.44 330 ⇑P P 20 08 54.2 -0.1
baz=79
D07A **Quincy** 78.50 328 ⇓P P 20 08 55.2 +0.5
baz=79
E06A **Yakima** 78.59 327 ⇑P P 20 08 55.4 +0.2
baz=79
FCC **Fort Churchill** 78.59 347 *e*P P 20 08 53.5 -1.4
FCC *e**PP pP 20 09 07.6 -1.3
FCC pmax pmax
comp=Z,1.0nm,1.0s
FCC **Fort Churchill** 78.59 347 *e*P P 20 08 53.5 -1.4
comp=Z,0.7nm,1.0s
FCC *e*pP pP 20 09 07.6 -1.4
H03A **Soap Creek Ran** 78.64 324 ⇓P P 20 08 56.2 +0.7
baz=79
C07A **Waterville** 78.88 328 ⇓P P 20 08 56.8 +0.1
baz=79,SNR=10.0
D06A **Ole Elum** 78.95 327 ⇓P P 20 08 57.8 +0.7
baz=79
F04A **Amboy** 78.96 326 ⇓P P 20 08 57.5 +0.3
baz=79
B08A **Colville Reser** 78.97 329 ⇑P P 20 08 57.3 +0.2
baz=79
A09A **Danville** 79.03 330 ⇓P P 20 08 57.3 -0.2
baz=79,SNR=5.3
PFVI **Vila Bisbo** 79.25 45 *e*P P 20 08 59.6 +0.6
PFVI *e*pP pP 20 09 13.3 +0.2
A08A **Turner Farm, O** 79.34 329 ⇓P P 20 08 59.3 +0.1
baz=80,SNR=10

B07A **Winthrop** 79.42 329 ⇓P P 20 08 59.7 0.0
baz=80
MORF **Marmelete** 79.47 45 *e*P P 20 09 01.0 +0.8
comp=Z,40nm,2.4s,mb4.9
MORF *e*pP pP 20 09 14.2 -0.1
SBA **Scott Base** 79.47 190 *e*P P 20 08 59.6 0.0
SBA pmax pmax
comp=Z,18nm,1.2s,mb4.9
SBA **Scott Base** 79.47 190 *e*P P 20 08 59.5 0.0
comp=Z,18nm,1.2s,mb4.9
D05A **Enumclaw** 79.54 327 ⇑P P 20 09 00.3 -0.1
baz=80
PTEO **Sao Teotonio** 79.54 45 *e*P P 20 09 02.1 +1.5
comp=Z,102nm,1.1s,mb5.7
PTEO *e*pP pP 20 09 15.3 +0.6
PBDV **Barranco-do-Ve** 79.92 46 *e*P P 20 09 03.8 +1.1
comp=Z,40nm,1.9s,mb5.0
PBDV *e*pP pP 20 09 17.7 +0.9
MDT **Midelt** 80.10 51 LR LR 20 41 07.3
comp=Z,119nm,19.8s,MS4.2,baz=307,slow=33
B06A **Marblemount** 80.14 328 ⇓P P 20 09 03.2 -0.4
baz=80
PVAQ **Vaqueiros** 80.15 46 *e*P P 20 09 04.9 +1.0
comp=Z,34nm,2.2s,mb4.9
B05A **Bryant** 80.29 328 ⇓P P 20 09 04.2 -0.2
baz=80
PBEJ **Beja** 80.37 45 *e*P P 20 09 05.9 +0.8
comp=Z,22nm,1.1s,mb5.0
PBEJ *e*pP pP 20 09 19.6 +0.4
EGRO **El Granado** 80.38 46 P P 20 09 06.3 +1.2
comp=Z,15nm,0.8s,mb5.0
VNDA **Vanda** 80.50 190 P P 20 09 05.5 +0.3
comp=Z,6.0nm,0.8s,mb4.6,baz=128,slow=4.7,SNR=40
VNDA **Vanda** 80.50 190 *e*P P 20 09 05.1 -0.1
VNDA pmax pmax
comp=Z,17nm,1.4s
VNDA **Vanda** 80.50 190 *e*P P 20 09 05.1 -0.1
comp=Z,18nm,1.4s,mb4.8
SYO **Syowa Base** 80.53 160 ⇓*i*P P 20 09 03.8 -1.7
SYO **Syowa Base** 80.53 160 ⇓*i*pP pP 20 09 17.0 -2.6
EVO **Evora** 80.53 45 ⇑*i*P P 20 09 06.1 +0.2
comp=Z,53nm,1.0s,mb5.1
EVO *e*MLR MLR
comp=Z,191nm,19.8s,MS4.2
EVO **Evora** 80.53 45 *e*P P 20 09 06.5 +0.6
comp=Z,27nm,1.5s,mb5.0
EVO *e*pP pP 20 09 20.5 +0.5
A05A **Maple Falls** 80.76 328 ⇓P P 20 09 06.7 -0.1
baz=81
A04A **Legoe Bay, Lum** 80.89 328 ⇓P P 20 09 07.7 +0.1
baz=81
PESTR **Estremoz** 80.99 44 *e*P P 20 09 09.3 +0.9
comp=Z,35nm,1.3s,mb5.1
PBAR **Barrancos** 81.01 45 *e*P P 20 09 09.1 +0.6
comp=Z,18nm,1.5s,mb4.8
PBAR *e*pP pP 20 09 23.4 +0.8
EMIN **Mina Concepcio** 81.05 46 P P 20 09 09.4 +0.7
comp=Z,13nm,0.8s,mb4.9
ESPR **Espera** 81.17 47 P P 20 09 07.7 -1.7
comp=Z,11nm,1.0s,mb4.7
EJIF **Jimena Fronter** 81.23 47 P P 20 09 10.1 +0.4
EBAD **Badajoz** 81.32 45 P P 20 09 10.5 +0.4
comp=Z,13nm,0.8s,mb4.9
PMRV **Marv??o** 81.41 44 *e*P P 20 09 10.8 +0.2
SUR **Sutherland** 81.50 121 *e*P P 20 09 12.0 +0.6
SUR *e*pP pP 20 09 25.7 +0.2
PCBR **Castelo Branco** 81.57 44 *e*P P 20 09 11.7 +0.3
comp=Z,20nm,1.8s,mb4.7
PCBR *e*pP pP 20 09 25.3 -0.2
EMIJ **Mijas** 81.78 48 P P 20 09 12.4 -0.2
MTE **Manteigas** 81.81 43 *e*P P 20 09 13.1 +0.4
comp=Z,31nm,2.1s,mb4.9
MTE *e*pP pP 20 09 26.9 +0.1
MTE **Manteigas** 81.81 43 *e*P P 20 09 12.5 -0.1
comp=Z,7.3nm,0.7s,mb4.7
MTE *e*pP pP 20 09 26.6 -0.2
PCAB **Cabril** 82.19 42 *e*P P 20 09 14.9 +0.3
comp=Z,50nm,1.9s,mb5.1
PCAB *e*pP pP 20 09 28.4 -0.3
TSUM **Tsumeb** 82.23 108 *e*P P 20 09 15.9 +0.6
comp=Z,16nm,1.0s,mb4.9
TSUM *e*pP pP 20 09 29.2 -0.3
ELOJ **Sierra Loja** 82.49 47 P P 20 09 17.5 +1.2
ELOJ pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ELOJ **Sierra Loja** 82.49 47 P P 20 09 17.5 +1.2
comp=Z,7.6nm,0.6s,mb4.8
MVO **Moncorvo** 82.54 43 *e*P P 20 09 16.9 +0.4
comp=Z,29nm,1.1s,mb5.2
MVO *e*pP pP 20 09 31.0 +0.4
EADA **Adamuz** 82.69 46 P P 20 09 17.8 +0.5
comp=Z,5.1nm,0.9s,mb4.5
ERUA **La Rua** 83.10 42 P P 20 09 20.1 +0.7
EBAN **Banos Encina** 83.23 47 P P 20 09 20.4 +0.3
EBAN pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
EBAN **Banos Encina** 83.23 47 P P 20 09 20.4 +0.3
comp=Z,4.3nm,0.5s,mb4.7
EQES **Quesada** 83.56 47 P P 20 09 21.0 -0.8
comp=Z,5.9nm,0.6s,mb4.9
ENIJ **Nijar** 83.79 48 P P 20 09 22.7 -0.3
ENIJ pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
ENIJ **Nijar** 83.79 48 P P 20 09 22.7 -0.3
comp=Z,4.0nm,0.4s,mb4.9
ESDC **Sonseca Array** 83.83 45 P P 20 09 23.6 +0.4
comp=Z,9.0nm,0.8s,mb5.0,baz=248,slow=5.3,SNR=39
ESDC pP pP 20 09 37.2 -0.1
comp=Z,5.8nm,0.9s,baz=245,slow=5.5,SNR=6.7
ESDC LR LR 20 42 20.4
comp=Z,109nm,21.7s,MS4.2,baz=270,slow=32
ESDC **Sonseca Array** 83.83 45 P P 20 09 23.6 +0.4
ESDC pP pP 20 09 37.2 -0.1
ESDC LR LR 20 42 20.4
ESLA **Sonseca Array** 83.83 45 *e*P P 20 09 23.6 +0.5
comp=Z,34nm,1.5s,mb5.3
ESLA *e*pP pP 20 09 37.0 -0.4
TAM **Tamanrasset** 84.06 64 *e*P P 20 09 25.6 +0.9
TAM *e**PP pP 20 09 39.0 +0.1
TAM pmax pmax
comp=Z,43nm,1.3s,mb5.4
TAM **Tamanrasset** 84.06 64 *e*P P 20 09 25.6 +0.9
comp=Z,44nm,1.3s,mb5.4
TAM *e*pP pP 20 09 39.0 +0.2
GUD **Guadarrama** 84.17 44 P P 20 09 25.5 +0.6
EVIA **Vianos** 84.35 47 P P 20 09 26.1 +0.3
EVIA pmax pmax
comp=Z,12nm,0.8s,mb5.1
EVIA **Vianos** 84.35 47 P P 20 09 26.1 +0.3
comp=Z,12nm,0.8s,mb5.1
ETOB **Tobarra** 85.01 47 P P 20 09 29.2 0.0
comp=Z,8.0nm,0.7s,mb5.0
SFJD **Kangerlussuaq** 85.56 8 LR LR 20 50 43.2
comp=Z,202nm,18.6s,MS4.5,baz=241,slow=38
EMOS **Mosqueruela** 86.53 46 P P 20 09 37.4 +0.8
comp=Z,4.0nm,0.6s,mb4.8
YKA **Yellowknife Ar** 87.15 341 P P 20 09 38.4 -0.7
comp=Z,21nm,0.8s,mb5.4,baz=135,slow=4.8,SNR=230
YKA *e*pP pP 20 09 51.6 -1.7
comp=Z,11nm,0.8s,baz=134,slow=4.6,SNR=9.5
YKA LR LR 20 49 09.7
comp=Z,100nm,20.2s,MS4.2,baz=280,slow=36
YKA **Yellowknife Ar** 87.15 341 P P 20 09 38.4 -0.7
YKA *PP pP 20 09 51.7 -1.7
SJPF **Ste Jean** 87.26 43 *e*P P 20 09 40.6 +0.5
ETSF **Etsaut** 87.60 44 *e*P P 20 09 42.2 +0.4
comp=Z,8.7nm,0.5s,mb4.9
ETSF **Etsaut** 87.60 44 *e*P P 20 09 42.2 +0.4
ETSF pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
ETSF **Etsaut** 87.60 44 *e*P P 20 09 42.2 +0.4
comp=Z,4.3nm,0.5s,mb4.9
LBTB **Lobatse** 87.65 115 *e*P P 20 09 42.4 -0.2
LBTB *e**PP pP 20 09 55.2 -1.6
LBTB pmax pmax
comp=Z,21nm,1.2s,mb5.2
LBTB **Lobatse** 87.65 115 *e*P P 20 09 42.4 -0.1
comp=Z,21nm,1.2s,mb5.2
LBTB *e*pP pP 20 09 55.2 -1.6
EBIE **Bielsa** 87.97 44 P P 20 09 44.3 +0.8
comp=Z,6.7nm,0.8s,mb4.9
EPF **Esparros** 88.25 44 *e*P P 20 09 45.0 +0.1
comp=Z,7.6nm,0.6s,mb4.8
EPF **Esparros** 88.25 44 *e*P P 20 09 45.0 +0.1
EPF pmax pmax
comp=Z,4.0nm,0.6s,mb4.8

EPF **Esparros** 88.25 44 *e*P P 20 09 45.0 +0.1
comp=Z,3.8nm,0.6s,mb4.8
QUIF **Quistinic** 88.30 38 *e*P P 20 09 44.1 -0.9
MAW **Mawson** 88.38 164 P P 20 09 45.0 -0.1
comp=Z,13nm,0.6s,mb5.3,baz=226,slow=5.2,SNR=11
MAW LR LR 20 48 11.7
comp=Z,178nm,21.6s,MS4.5,baz=36,slow=35
ROSF **Rostrenen** 88.44 38 *e*P P 20 09 44.8 -0.8
SGMF **Saint Gilles** 88.82 38 *e*P P 20 09 46.4 -1.0
LFF **La Frestale** 89.34 42 *e*P P 20 09 49.6 -0.3
comp=Z,19nm,0.5s,mb5.3
LFF **La Frestale** 89.34 42 *e*P P 20 09 49.6 -0.3
LFF pmax pmax
comp=Z,9.0nm,0.5s,mb5.4
LFF **La Frestale** 89.34 42 *e*P P 20 09 49.6 -0.3
comp=Z,9.3nm,0.5s,mb5.4
MFF **Saint Martin d** 89.52 40 *e*P P 20 09 50.0 -0.7
MTLF **Montolieu** 89.62 44 *e*P P 20 09 50.9 -0.4
comp=Z,7.9nm,0.6s,mb4.9
MTLF **Montolieu** 89.62 44 *e*P P 20 09 50.9 -0.4
MTLF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
MTLF **Montolieu** 89.62 44 *e*P P 20 09 50.9 -0.4
comp=Z,4.0nm,0.6s,mb4.9
GRR **Gorron** 89.89 39 ⇑*i*P P 20 09 51.4 -1.0
comp=Z,19nm,0.6s,mb5.3
GRR **Gorron** 89.89 39 ⇑*i*P P 20 09 51.4 -1.0
GRR pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
GRR **Gorron** 89.89 39 ⇑*i*P P 20 09 51.4 -1.0
comp=Z,9.5nm,0.6s,mb5.3
RJF **Les Rejaudoux** 90.00 42 *e*P P 20 09 52.3 -0.7
comp=Z,9.9nm,0.7s,mb4.9
RJF *e*MLR MLR
comp=Z,212nm,17.2s,MS4.3
RJF **Les Rejaudoux** 90.00 42 *e*P P 20 09 52.3 -0.7
RJF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
RJF MLR MLR
comp=Z,210nm,17.3s,MS4.6
RJF **Les Rejaudoux** 90.00 42 *e*P P 20 09 52.3 -0.7
comp=Z,4.9nm,0.7s,mb5.0
RJF LR LR
comp=Z,210nm,17.3s,MS4.6
CAF **Calviac** 90.19 43 *e*P P 20 09 53.5 -0.4
FLN **La Foliniere** 90.28 38 *e*P P 20 09 53.4 -0.8
FLN *e*MLR MLR
comp=Z,188nm,18.0s,MS4.3
FLN **La Foliniere** 90.28 38 *e*P P 20 09 53.4 -0.8
FLN LR LR
comp=Z,190nm,18.0s,MS4.6
LDF **La Druitiere** 90.42 39 *e*P P 20 09 54.0 -0.9
TCF **Toulx Ste Croi** 90.85 41 *e*P P 20 09 56.2 -0.8
LASF **Ste Croix** 91.01 44 *e*P P 20 09 57.7 -0.1
BGF **Bois d'Agland** 91.36 41 *e*P P 20 09 58.6 -0.7
comp=Z,14nm,0.8s,mb5.0
BGF **Bois d'Agland** 91.36 41 *e*P P 20 09 58.6 -0.7
BGF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
BGF **Bois d'Agland** 91.36 41 *e*P P 20 09 58.6 -0.7
comp=Z,7.0nm,0.8s,mb5.0
HYF **Humbligny** 91.53 41 *e*P P 20 09 59.5 -0.6
AVF **Avril sur Loir** 91.78 41 *e*P P 20 10 00.2 -1.0
KEST **Kesra** 91.82 53 P P 20 10 01.8 0.0
comp=Z,5.8nm,1.0s,mb4.9,baz=8.3,slow=1.4,SNR=5.3
KEST LR LR 20 48 42.5
comp=Z,60nm,19.7s,MS4.0,baz=256,slow=34
VIVF **Saint-Julien-l** 91.86 43 *e*P P 20 10 01.7 +0.1
EKA **Eskdalemuir Ar** 91.86 32 P P 20 10 00.5 -0.9
comp=Z,3.0nm,0.8s,mb4.7,baz=247,slow=6.9,SNR=4.0
SMF **Signal de Mont** 92.03 41 *e*P P 20 10 01.6 -0.8
SUMG **Summit** 92.38 9 *e*P P 20 10 04.0 +0.5
comp=Z,28nm,1.5s,mb5.4
SUMG *e*pP pP 20 10 17.6 -0.2
ORIF **Oris-en-Rattie** 92.67 44 ⇑*i*P P 20 10 05.8 +0.4
comp=Z,15nm,0.7s,mb5.2
ORIF *e*MLR MLR
comp=Z,165nm,18.2s,MS4.2
ORIF **Oris-en-Rattie** 92.67 44 ⇑*i*P P 20 10 05.8 +0.4
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb5.2
ORIF **Oris-en-Rattie** 92.67 44 ⇑*i*P P 20 10 05.8 +0.4
comp=Z,7.4nm,0.7s,mb5.2
LSZ **Lusaka** 93.06 107 *e*P P 20 10 08.9 +0.9
LSZ pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
LSZ **Lusaka** 93.06 107 *e*P P 20 10 08.9 +0.9
comp=Z,5.6nm,1.0s,mb5.0
MBDF **Montbardon** 93.19 44 *e*P P 20 10 08.0 +0.2
LPL **La Plagne** 93.45 43 *e*P P 20 10 09.5 +0.5
LPG **La Plagne** 93.46 43 ⇑*i*P P 20 10 09.7 +0.7
MEZF **Maizieres J'vi** 93.51 40 *e*P P 20 10 08.4 -0.8
comp=Z,7.9nm,0.6s,mb5.0
MEZF **Maizieres J'vi** 93.51 40 *e*P P 20 10 08.4 -0.8
comp=Z,7.9nm,0.6s,mb5.3
HAU **Haudompre** 94.12 41 *e*P P 20 10 11.2 -0.8
HAU *e*MLR MLR
comp=Z,210nm,22.0s,MS4.2
HAU **Haudompre** 94.12 41 *e*P P 20 10 11.2 -0.8
HAU LR LR
comp=Z,210nm,22.0s,MS4.6
HINF **Hinteralfeld** 94.37 41 *e*P P 20 10 12.1 -1.1
CDF **Champ du Feu** 94.85 41 *e*P P 20 10 14.0 -1.4
DAVOS **Davos** 95.91 43 P P 20 10 20.0 -0.1
DAVOX **Davos/Dischmat** 95.94 43 P P 20 10 20.3 -0.1
comp=Z,1.0nm,0.4s,mb4.6,baz=254,slow=7.4,SNR=5.4
GERES **GERESS Array B** 99.03 42 P P 20 10 33.5 -0.8
comp=Z,0.3nm,0.5s,mb4.1,baz=225,slow=1.7,SNR=8.6
GERES LR LR 20 55 43.9
comp=Z,96nm,19.3s,MS4.3,baz=292,slow=36
CLL **Collm** 99.29 39 *e*P P 20 10 35.0 -0.3
BRTR **Keskin Array B** 111.43 54 PKiKP PKiKP 20 15 27.6 -0.1
comp=Z,0.7nm,0.8s,baz=235,slow=4.4,SNR=3.6
OBN **Obninsk** 113.74 37 ⇑*i*PKiKP PKiKP 20 15 31.5 -0.1
OBN pmax pmax
comp=Z,22nm,1.7s
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.5
KIV **Kislovodsk** 118.29 49 *i* PKiKP PKPdf 20 15 40.3 -0.5
KIV *e* 20 22 30.3
KIV pmax pmax
comp=Z,8.0nm,1.1s
STKA **Stephens Creek** 122.21 212 *e*P PKPdf 20 15 47.7 -1.1
comp=Z,2.5nm,0.7s
STKA **Stephens Creek** 122.21 212 PKP PKPdf 20 15 47.2 -1.6
comp=Z,3.0nm,0.7s,baz=183,slow=0.6,SNR=11
TIXI **Tiksi** 124.79 353 *i* PKiKP PKPdf 20 15 50.6 -1.9
ARU **Arti** 125.48 32 *i* PKiKP PKPdf 20 15 53.7 -0.5
ARU 20 17 46.0
ARU 20 22 53.3
ARU SS SS 20 34 45.1 +4.6
AKTK **Aktyubinsk** 127.37 39 PKP PKPdf 20 15 57.9 -0.1
AKTK pPKP pPKPdf 20 16 11.1 -1.7
AKTO **Aktyubinsk** 127.37 39 PKP PKPdf 20 15 57.9 -0.1
comp=Z,4.0nm,0.9s,baz=321,slow=2.3,SNR=12
AKTO pPKP pPKPdf 20 16 11.1 -1.7
comp=Z,1.8nm,0.7s,baz=264,slow=2.0,SNR=4.3
ASAR **Alice Springs** 132.79 210 PKP PKPdf 20 16 07.5 -1.7
comp=Z,2.4nm,0.7s,baz=137,slow=2.1,SNR=29
ASAR pPKP pPKPdf 20 16 21.3 -2.7
comp=Z,1.0nm,0.5s,baz=133,slow=2.0,SNR=5.3
BVAR **Borovoye Array** 133.12 32 PKP PKPdf 20 16 08.9 +0.1
comp=Z,0.7nm,0.5s,baz=270,slow=3.0,SNR=6.3
BVAR pPKP pPKPdf 20 16 23.1 -0.6
comp=Z,1.0nm,0.6s,baz=270,slow=1.5,SNR=4.0
WB2 **Warramunga Arr** 135.67 214 *e*P PKPdf 20 16 13.5 -1.2
WRAB **Tennant Creek** 135.68 214 *i* PKiKP PKPdf 20 16 13.1 -1.6
WRAB **Tennant Creek** 135.68 214 *e*PKPdf PKPdf 20 16 12.9 -1.8
NVS **Novosibirsk** 137.54 23 *e*PKiKP PKPdf 20 16 14.9 -2.1
NVS pmax pmax
comp=N,3.0nm,1.2s
NVS pmax pmax
comp=E,7.0nm,1.2s
NVS pmax pmax
comp=Z,11nm,1.2s
KURK **Kurchatov** 138.57 30 PKhKP 20 16 11.5
comp=Z,0.6nm,0.5s,baz=310,slow=3.2,SNR=3.9
KURK PKP PKPdf 20 16 19.5 +0.4
comp=Z,2.7nm,1.0s,baz=320,slow=1.9,SNR=7.8
KURK **Kurchatov** 138.57 30 *i* PKiKP PKPdf 20 16 20.0 +1.0
KURK **Kurchatov** 138.57 30 PKP 20 16 11.5
KURK *e*PKPdf PKPdf 20 16 19.8 +0.8
ZALV **Zalesovo Beam** 138.82 22 PKhKP 20 16 09.1
comp=Z,1.3nm,0.7s,baz=336,slow=3.3,SNR=5.3
ZALV PKP PKPdf 20 16 18.7 -0.7
comp=Z,11nm,0.9s,baz=300,slow=2.9,SNR=29

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV				pPKP	pPKPdf	20 16 32.9	-1.3
	comp=Z,5.1nm,0.7s,baz=285,slow=2.5,SNR=5.8						
ZALV				SKPbc	SKPbc	20 19 51.5	+1.1
	comp=Z,1.3nm,0.7s,baz=300,slow=2.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**138.82**	**22**	PKHKP		20 16 09.1	
ZALV						20 16 18.7	
ZALV						20 16 32.9	
ZALV	**Zalesovo Beam**	**138.82**	**22**	PKP		20 16 09.1	
ZALV				PKP	PKPdf	20 16 18.7	-0.7
ZALV				pPKP	pPKPdf	20 16 32.9	-1.3
ZALV				SKPbc	SKPbc	20 19 51.5	+1.1
EKS2	**Erkin-Say**	**140.42**	**43**	*e*PKPdf	PKPdf	20 16 20.2	-2.5
AAK	**Ala-Archa**	**140.90**	**43**	*e*PKIKP	PKPdf	20 16 21.7	-1.8
MKAR	**Makanchi Array**	**143.00**	**32**	PKhKP		20 16 22.7	
	comp=Z,5.1nm,0.9s,baz=328,slow=3.6,SNR=20						
MKAR	**Makanchi Array**	**143.00**	**32**	PKP		20 16 22.7	
HABR	**Khabarovsk**	**143.03**	**332**	*e*P	Pdif	20 13 47.7	-2.2
HABR				*e*		20 16 23.5	
HABR				*e*		20 19 33.9	
HABR				*e*PPP		20 22 42.3	
HABR				*e*SS	SS	20 38 10.0	-1.5
MOY	**Mondy**	**145.26**	**10**	*e*PKIKP	PKPdf	20 16 31.5	+0.6
CIT	**Chita**	**145.52**	**356**	*e*PKIKP	PKPdf	20 16 30.9	-0.5
CIT				pmax	pmax		
	comp=Z,112nm,1.7s						
TLY	**Talaya**	**145.61**	**7**	*e*PKIKP	PKPdf	20 16 31.8	+0.3
TLY				*i*		20 16 46.1	
TLY				pmax	pmax		
	comp=Z,45nm,1.3s						
TLY				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.6						
TLY	**Talaya**	**145.61**	**7**	*e*PKPdf	PKPdf	20 16 32.1	+0.5
TLY				*e*pPKPdf	pPKPdf	20 16 44.7	-1.6
POO	**Poona**	**145.71**	**83**	*e*P	PKPdf	20 16 30.5	-2.2
ZAK	**Zakamensk**	**146.84**	**8**	*e*PKP2	PKPdf	20 16 33.3	-0.4
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
HIA	**Hailar**	**147.41**	**348**	*e*PKPbc	PKPbc	20 16 35.9	-1.2
HIA				*e*pPKP	pPKPdf	20 16 49.4	-0.1
WMQ	**Urumqi**	**147.80**	**31**	PKP	PKPdf	20 16 34.6	-0.9
WMQ				PP	PP	20 20 04.3	-0.9
WMQ				LR	LR		
	comp=N,76nm,28.0s						
WMQ				LR	LR		
	comp=E,77nm,20.0s						
WMQ				LR	LR		
	comp=Z,63nm,21.0s						
NDI	**New Delhi**	**148.04**	**64**	*e*P	PKPdf	20 16 27.0	-9.4
MDJ	**Mudanjiang**	**148.40**	**333**	PKP	PKPdf	20 16 36.1	-0.3
MDJ				PP	PP		
	comp=Z,142nm,4.0s						
MJAR	**Matsushiro Arr**	**148.71**	**313**	PKPbc	PKPbc	20 16 40.5	-0.6
	comp=Z,10nm,0.9s,baz=97,slow=1.5,SNR=20						
MJAR				pPKPbc	pPKPbc	20 16 54.0	-1.7
	comp=Z,5.3nm,0.7s,baz=78,slow=2.3,SNR=6.3						
MJAR	**Matsushiro Arr**	**148.71**	**313**	PKPbc	PKPbc	20 16 40.5	-0.6
MJAR				pPKPbc	pPKPbc	20 16 54.0	-1.7
MAJO	**Matsushiro**	**148.71**	**313**	*e*PKP2	PKPbc	20 16 39.2	-1.8
MAT	**Matsushiro**	**148.71**	**313**	PKP	PKPdf	20 16 40.1	+2.9
BATI	**Baumata**	**149.24**	**207**	PKPbc	PKPbc	20 16 43.1	+0.1
	comp=Z,22nm,0.8s,baz=270,slow=4.1,SNR=6.5						
SONM	**Songino Array**	**149.69**	**5**	PKP	PKPdf	20 16 38.5	+0.1
	comp=Z,7.8nm,0.8s,baz=16,slow=1.2,SNR=11						
SONM				PKPbc	PKPbc	20 16 43.3	+0.2
	comp=Z,7.8nm,0.8s,baz=324,slow=1.5,SNR=39						
SONM				PP	PP	20 20 13.6	-2.0
	comp=Z,0.8nm,0.9s,baz=335,slow=6.7,SNR=3.6						
ULN	**Ulaanbaatar**	**149.71**	**4**	⇑*i*PKHKP	PKPdf	20 16 38.9	+0.5
ULN	**Ulaanbaatar**	**149.71**	**4**	*e*PKPdf	PKPdf	20 16 38.1	-0.3
ULN				*e*PKPbc	PKPbc	20 16 43.3	+0.1
HYB	**Hyderabad**	**150.08**	**86**	*i* PKP	PKPdf	20 16 40.0	+0.1
	comp=Z,70nm,1.0s						
HYB				*e*		20 16 45.0	
HYB				*e*		20 16 58.5	
HYB	**Hyderabad**	**150.08**	**86**	*e*P	PKPbc	20 16 45.0	+0.1
CN2	**Changchun**	**150.76**	**337**	*e*PKP	PKPdf	20 16 32.8	-7.4
DANN	**Dangsing**	**153.68**	**61**	*e*P	PKPdf	20 16 45.0	0.0
	comp=Z,59nm,0.8s						
KOLN	**Koldanda**	**153.72**	**63**	*e*P	PKPdf	20 16 44.2	-0.9
GKN	**Gorkha**	**154.52**	**61**	*e*P	PKPdf	20 16 45.0	-1.2
	comp=Z,47nm,0.8s						
KSRS	**Korea Array**	**154.67**	**325**	PKP	PKPdf	20 16 46.0	-0.1
	comp=Z,2.7nm,1.0s,baz=34,slow=30,SNR=3.4						
KSRS				PKPbc	PKPbc	20 16 54.0	-0.8
	comp=Z,1.5nm,0.9s,baz=76,slow=1.5,SNR=5.4						
KSRS				PKPab	PKPab	20 17 08.2	-1.3
	comp=Z,1.5nm,0.6s,baz=29,slow=2.9,SNR=3.8						
DMN	**Daman**	**155.04**	**62**	*e*P	PKPdf	20 16 46.0	-1.0
	comp=Z,26nm,0.7s						
KKN	**Kakani**	**155.13**	**62**	*e*P	PKPdf	20 16 45.8	-1.3
	comp=Z,20nm,0.6s						
KAPI	**Kappang**	**155.55**	**204**	PKPab	PKPab	20 17 11.9	-2.0
	comp=Z,25nm,1.1s,baz=148,slow=6.0,SNR=10						
KAPI	**Kappang**	**155.55**	**204**	*e*PKP	PKPdf	20 16 54.5	+6.4
KAPI				*e*PKPab	PKPab	20 17 11.8	-2.0
GUN	**Gumba**	**155.59**	**61**	*e*P	PKPdf	20 16 46.5	-1.2
	comp=Z,32nm,0.8s						
JIRN	**Jiri**	**155.93**	**61**	*e*P	PKPdf	20 16 47.1	-1.1
RAMN	**Ramite**	**156.51**	**63**	*e*P	PKPdf	20 16 47.7	-1.2
	comp=Z,12nm,0.7s						
GTA	**Gaotai**	**156.53**	**20**	*e*PKP	PKPdf	20 16 49.2	+0.6
GTA				PKP2	PKPab	20 17 16.6	-0.8
GTA				PP	PP	20 20 59.9	+5.4
GTA				PP	PP		
	comp=Z,221nm,6.0s						
GTA				LR	LR		
	comp=N,109nm,16.5s,MS4.9						
GTA				LR	LR		
	comp=E,99nm,12.9s,MS4.9						
GTA				LR	LR		
	comp=Z,111nm,15.6s,MS4.8						
HHC	**Hu-ho-hao-te**	**156.77**	**357**	*e*PKP	PKPdf	20 16 46.4	-2.5
HHC				PKP2	PKPab	20 17 17.8	-0.6
HHC				PKS		20 20 18.8	
HHC				PP	PP	20 20 57.2	+1.6
HHC				SKS	SKSdf	20 23 46.6	-4.4
HHC				SKKS	SKKSac	20 27 41.0	-1.0
HHC				SS	SS	20 40 42.9	-0.7
HHC				PP	PP		
	comp=Z,57nm,8.3s						
HHC				LR	LR		
	comp=N,113nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=E,74nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=Z,149nm,17.8s,MS4.9						
BJI	**Beijing**	**156.98**	**348**	PKP	PKPdf	20 16 48.2	-1.0
BJI				LR	LR		
	comp=N,211nm,25.1s,MS5.0						
BJI				LR	LR		
	comp=E,183nm,24.7s,MS5.0						
BJI				LR	LR		
	comp=Z,122nm,28.4s,MS4.6						
ODAN	**Odare**	**157.20**	**62**	*e*P	PKPdf	20 16 49.8	0.0
TAPN	**Taplejung**	**157.30**	**61**	*e*P	PKPdf	20 16 49.4	-0.6
LSA	**Lhasa**	**159.01**	**52**	PKP	PKPdf	20 16 52.7	+0.7
LSA	**Lhasa**	**159.01**	**52**	*e*PKPdf	PKPdf	20 16 52.5	+0.5
LSA				*e*pPKPdf	pPKPdf	20 17 05.4	-1.4
LSA				*e*PKPab	PKPab	20 17 29.2	+0.7
LSA				*e*PP	PP	20 21 10.2	+0.9
LZH	**Lanzhou**	**160.79**	**15**	*e*PKP	PKPdf	20 16 53.5	-0.3
LZH				APKP		20 17 07.6	
LZH				XPKP		20 17 12.8	
LZH				*e*PP	PP	20 21 22.5	+4.9
LZH				SKKS	SKKSac	20 28 03.6	+0.4
LZH				LR	LR		
	comp=E,179nm,18.3s						
LZH				LR	LR		
	comp=Z,264nm,20.5s						
NJ2	**Nanjing**	**163.49**	**332**	*e*PKP	PKPdf	20 16 57.4	+0.8
FRIM	**Kepong**	**163.57**	**149**	⇑P	PKPdf	20 16 56.8	-0.4
XAN	**Xi'an**	**163.59**	**3**	PKP	PKPdf	20 16 55.9	-0.8
XAN				PKP2	PKPab	20 17 46.2	-2.0
XAN				PKS		20 20 28.1	
XAN				LR	LR		
	comp=E,40nm,25.4s						
XAN				LR	LR		
	comp=Z,99nm,33.2s						
CD2	**Chengdu**	**165.59**	**22**	PKP	PKPdf	20 16 57.9	-0.6
CD2				APKP		20 17 08.7	
CD2				PKP2	PKPab	20 17 58.8	+1.7
CD2				PKS		20 20 29.2	
CD2				PP	PP	20 21 47.0	+3.9
CD2				SKS	SKSdf	20 23 56.6	-2.3
CD2				LR	LR		
	comp=N,128nm,11.4s						
CD2				LR	LR		
	comp=Z,300nm,16.7s						
WHN	**Wuhan**	**166.49**	**344**	PKP	PKPdf	20 16 58.9	-0.3
CMAR	**Chiang Mai Arr**	**169.50**	**84**	PKP	PKPdf	20 17 01.2	-0.4
	comp=Z,2.4nm,1.0s,baz=278,slow=1.7,SNR=14						
CMAR				PKPab	PKPab	20 18 14.6	-0.5
	comp=Z,4.5nm,0.9s,baz=275,slow=6.0,SNR=24						
CMAR				pPKPab	pPKPab	20 18 28.6	-0.9
	comp=Z,1.8nm,1.0s,baz=269,slow=5.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**169.50**	**84**	PKIKP	PKPdf	20 17 01.3	-0.3
CMAR						20 18 14.6	
KMI	**Kunming**	**169.94**	**41**	PKP	PKPdf	20 16 59.5	-2.2
KMI				APKP		20 17 14.5	
KMI				XPKP		20 17 19.7	
GYA	**Guiyang**	**170.66**	**18**	PKP	PKPdf	20 17 02.3	+0.2
GYA				APKP		20 17 17.7	
GYA				XPKP		20 17 22.5	
GYA				PKP2	PKPab	20 18 21.0	+1.4
GYA				PKS		20 20 33.3	
GYA				PP	PP	20 22 12.8	+3.9
GYA				SKKS	SKKSac	20 28 50.7	-2.3
GYA				SS	SS	20 43 05.0	-2.1
GYA				PP	PP		
	comp=Z,100nm,7.0s						
GYA				LR	LR		
	comp=N,200nm,23.0s						
GYA				LR	LR		
	comp=E,130nm,22.5s						
GYA				LR	LR		
	comp=Z,220nm,24.0s						
QIZ	**Qiongzhong**	**178.56**	**4**	PKP	PKPdf	20 17 06.3	+1.6
QIZ				LR	LR		
	comp=Z,74nm,20.9s						

ISCJB ***04*** *20:04:52.4±1.0, 17.59S±0.08×70.2W±0.1, h64km±12km, mb4.2/4, Error ellipse: s-maj=18.9km s-min=9.7km az=147.8*

IDC ***04*** *20:04:53.5±3.2, 17.71S×70.04W, h58km±33km, mb4.0/4, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, ML4.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/36, Error ellipse: s-maj=37.6km s-min=19.7km az=64.0*

NEIC ***04*** *20:04:53.7±1.0, 17.70S×70.27W, h63km±12km, mb3.9/1, Error ellipse: s-maj=18.7km s-min=12.3km az=50.0*

ISC 04 20:04:53.8±0.9**, 17.60S**±0.08×**70.3W**±0.1**, h63**km±11km**, n14,** σ**1.07**/15**, mb4.2**/4**, 1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.60**	**315**	⇓*i*P	**Pn**	**20 05 19.3**	**-0.6**
ARE				*i* S	**Sn**	**20 05 39.3**	**-0.3**
LVC	**Limon Verde**	**5.16**	**166**	P	**Pn**	**20 06 07.9**	**-0.6**
	1.9nm,0.3s,baz=359,slow=9.5,SNR=18						
LVC				S	**Sn**	**20 07 02.1**	**-4.6**
	7.9nm,0.3s,baz=34,slow=23,SNR=7.3						
LVC	**Limon Verde**	**5.16**	**166**	*e*Pn	**Pn**	**20 06 06.8**	**-1.6**
LVC				*e*Sn	**Sn**	**20 07 09.0**	**+2.3**
NNA	**Nana**	**8.43**	**311**	P	**Pn**	**20 06 56.4**	**+3.1**
	1.1nm,0.3s,baz=160,slow=14,SNR=2.3						
SIV	**San Ignacio**	**8.99**	**81**	P	**Pn**	**20 07 01.7**	**+0.8**
	3.9nm,0.3s,baz=274,slow=9.9,SNR=22						
SIV				LR	LR	20 10 54.4	
	comp=Z,135nm,20.5s,baz=195,slow=41						
PLCA	**Paso Flores**	**23.06**	**180**	P	**P**	**20 09 53.5**	**-0.4**
	1.2nm,0.8s,mb3.4,baz=354,slow=11,SNR=6.3						
PLCA	**Paso Flores**	**23.06**	**180**	*e*P	**P**	**20 09 53.1**	**-0.7**
	4.4nm,0.9s,mb3.9						
VNA2	**Neumayer--Watz**	**64.75**	**161**	*e*	**P**	**20 15 26.5**	**+1.4**
	baz=267,slow=5.8						
SNAA	**Sanae**	**66.38**	**161**	*e*	**P**	**20 15 35.8**	**+0.2**
SNAA				*e*		20 15 39.6	
DBIC	**Dimbokro**	**68.96**	**75**	P	**P**	**20 15 52.0**	**-0.9**
	2.1nm,0.4s,mb4.4,baz=221,slow=5.2,SNR=7.0						
TORD	**Torodi Ar. Bea**	**77.34**	**72**	P	**P**	**20 16 41.2**	**-1.0**
	2.6nm,0.5s,mb4.4,baz=260,slow=5.7,SNR=28						
TORD				pP	pP	20 16 55.2	-4.5
	1.1nm,0.6s,baz=253,slow=6.2,SNR=5.5						
YKA	**Yellowknife Ar**	**87.09**	**341**	P	**P**	**20 17 32.6**	**+0.5**
	1.2nm,0.7s,mb4.2,baz=134,slow=4.7,SNR=14						
YKA				pP	pP	20 17 45.9	-3.9
	0.4nm,0.6s,baz=136,slow=5.0,SNR=4.5						
ASAR	**Alice Springs**	**132.66**	**211**	PKP	PKPdf	20 24 02.2	+0.1
	0.1nm,0.5s,baz=137,slow=1.8,SNR=4.1						
SONM	**Songino Array**	**149.72**	**4**	PKPbc	PKPbc	20 24 37.7	+1.3
	0.5nm,0.6s,baz=328,slow=2.1,SNR=4.3						

ISCJB ***04*** *20:05:36.6±0.5, 37.12N±0.03×35.97E±0.05, h0km±7km, Error ellipse: s-maj=6.4km s-min=5.2km az=3.5*

CSEM ***04*** *20:05:36.1±0.1, 37.12N×35.97E, h20km, MD2.8, Error ellipse: s-maj=1.6km s-min=1.5km az=133.0*

DDA ***04*** *20:05:36.2, 37.10N×35.97E, h5km±4km, Md3.1*

ISK ***04*** *20:05:36.4, 37.15N×35.97E, h10km, MD2.8*

ISC 04 20:05:37.1±0.5**, 37.12N**±0.03×**35.95E**±0.05**, h6**km±7km**, n13,** σ**1.15**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.20**	**236**	*e*PG	**Pg**	**20 05 41.7**	**+0.7**
CEYT				*e*SG	**Sg**	**20 05 45.7**	**+2.1**
KOZT	**Kozan**	**0.37**	**344**	*e*PG	**Pg**	**20 05 44.0**	**-0.3**
KOZT				*e*SG	**Sg**	**20 05 49.1**	**-0.1**
ANDN	**Andirin**	**0.55**	**34**	*i* P	**Pg**	**20 05 46.6**	**-1.1**
ANDN				*i* S	**Sg**	**20 05 56.7**	**+1.8**
COBT	**Iskenderun**	**0.65**	**158**	*i* P	**Pg**	**20 05 48.5**	**-1.0**
COBT				*i* S	**Sg**	**20 05 57.8**	**-0.2**
KARA	**Karaisali**	**0.73**	**281**	*e*PG	**Pg**	**20 05 50.2**	**-0.9**
KMRS	**Kahramanmaras**	**0.85**	**63**	*e*PG	**Pg**	**20 05 52.7**	**-0.6**
GAZ	**Gaziantep**	**1.01**	**87**	*e*PG	**Pg**	**20 05 55.8**	**-0.6**
HTY	**Hatay**	**1.01**	**171**	*e*PG	**Pg**	**20 05 56.0**	**-0.4**
GZT	**Gaziantep**	**1.31**	**79**	*i* P	**Pn**	**20 06 00.1**	**-1.7**
GZT				*i* S	**Sb**	**20 06 19.3**	**+0.2**
NIG	**Nigde**	**1.45**	**313**	*e*PN	**Pn**	**20 06 03.0**	**-0.9**
SARI	**SarD1z-Kayseri**	**1.66**	**21**	*e*PN	**Pn**	**20 06 01.1**	**-5.7**
ATAB	**Bozova**	**1.90**	**79**	*i* P	**Pn**	**20 06 12.4**	**+2.3**
ATAB				*i* S	**Sn**	**20 06 36.5**	**+2.2**
URFA	**Urfa**	**2.31**	**81**	*e*PN	**Pn**	**20 06 15.8**	**+0.2**

IDC ***04*** *20:27:01.9±2.3, 3.42S×146.22E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/15, mbtmp3.9/6, MS3.6/5, Ms1 3.6/5, ms1mx3.3/34, Error ellipse: s-maj=60.7km s-min=25.6km az=89.0*

ISCJB ***04*** *20:27:05.0±1.4, 3.46S±0.09×146.2E±0.2, h33km, mb3.9/7, MS3.8/3, Error ellipse: s-maj=32.1km s-min=12.5km az=169.4*

NEIC ***04*** *20:27:07.6±1.3, 3.43S×146.16E, h35km, mb4.2/3, Error ellipse: s-maj=34.5km s-min=11.8km az=80.0*

ISC 04 20:27:08.2±1.3**, 3.49S**±0.09×**146.0E**±0.2**, h35**km**, n22,** σ**1.21**/16**, mb3.9**/7**, MS3.8**/3**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.00**	**169**	*e*Pn	**Pn**	**20 28 33.2**	**-1.4**
	21nm,0.6s						
COEN	**Coen**	**10.77**	**195**	*e*Pn	**Pn**	**20 29 41.3**	**+1.3**
	6.8nm,0.8s						
HNR	**Honiara**	**15.08**	**114**	LR	LR	20 35 34.3	
	comp=Z,144nm,18.8s,baz=188,slow=34						
KAKA	**Kakadu**	**16.22**	**235**	*e*P	x	20 30 37.1	
	14nm,0.6s						
CTA	**Charters Tower**	**16.50**	**179**	Pn	**Pn**	**20 30 59.9**	**+2.7**
	0.3nm,0.3s,baz=24,slow=13,SNR=4.8						
CTAO	**Charters Tower**	**16.50**	**179**	P	**Pn**	**20 30 59.0**	**+1.9**
	7.9nm,0.9s						
GUMO	**Guam**	**17.00**	**356**	LR	LR	20 36 53.4	
	comp=Z,114nm,18.3s,baz=174,slow=35						
WRAB	**Tennant Creek**	**19.90**	**214**	*e*P	**Pn**	**20 31 37.2**	**-1.4**
	58nm,1.2s						
WB2	**Warramunga Arr**	**19.90**	**214**	*e*P	**Pn**	**20 31 37.6**	**-1.1**
BATI	**Baumata**	**23.12**	**252**	P	**P**	**20 32 11.6**	**+0.1**
	26nm,1.1s,mb4.6,baz=132,slow=14,SNR=4.6						
ASAR	**Alice Springs**	**23.21**	**209**	P	**P**	**20 32 12.2**	**0.0**
	7.8nm,0.9s,mb4.2,baz=41,slow=8.8,SNR=61						
STKA	**Stephens Creek**	**28.54**	**188**	*e*P	**P**	**20 33 05.6**	**+4.9**
	2.6nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**28.54**	**188**	P	**P**	**20 33 01.1**	**+0.4**
	3.4nm,0.9s,mb4.1,baz=349,slow=10,SNR=2.2						
JOW	**Kunigami**	**34.66**	**331**	LR	LR	20 44 45.1	
	comp=Z,213nm,21.3s,MS3.9,baz=43,slow=31						
KSRS	**Korea Array**	**44.05**	**339**	LR	LR	20 49 57.4	
	comp=Z,74nm,21.4s,MS3.6,baz=157,slow=31						
CMAR	**Chiang Mai Arr**	**51.19**	**297**	P	**P**	**20 36 10.4**	**+2.0**
	0.4nm,0.7s,mb3.4,baz=104,slow=6.6,SNR=3.1						
SONM	**Songino Array**	**61.72**	**331**	P	**P**	**20 37 22.4**	**-0.6**
	0.3nm,0.7s,mb3.5,baz=148,slow=8.5,SNR=2.7						
SONM	**Songino Array**	**61.72**	**331**	P	**P**	**20 37 22.4**	**-0.6**
MKAR	**Makanchi Array**	**74.92**	**320**	P	**P**	**20 38 44.9**	**-0.7**
	1.2nm,1.1s,mb3.7,baz=94,slow=9.4,SNR=3.6						
MKAR	**Makanchi Array**	**74.92**	**320**	P	**P**	**20 38 44.9**	**-0.7**
ZALV	**Zalesovo Beam**	**76.35**	**328**	LR	LR	21 10 17.5	
	comp=Z,60nm,19.3s,MS3.9,baz=242,slow=34						
KURK	**Kurchatov**	**78.60**	**323**	P	**P**	**20 39 11.0**	**+4.8**
	2.6nm,1.0s,mb4.1						

NEIC ***04*** *20:31:18.5, 15.42N×92.17W, h188km, MD4.2(MEX), After MEX.*

MEX 04 20:31:18.7±0.7**, 15.42N**×**92.16W, h187**km±6km**, MD4.2, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.52**	**192**	*i* P	Pn	20 31 42.5	-1.9
THIG				*i* S	Sn	20 32 02.3	-1.9
CCIG	**Comitan**	**0.85**	**1**	*i* P	Pn	20 31 45.1	-1.0
CCIG				*i* S	Sn	20 32 04.8	-2.6
PCIG		**1.06**	**285**	*i* P	Pn	20 31 46.2	-1.3
PCIG				*i* S	Sn	20 32 07.5	-2.2
TGIG		**1.64**	**326**	*i* P	Pn	20 31 51.7	-0.9
TGIG				*i* S	Sn	20 32 17.1	-1.7
CMIG	**Matias Romero**	**3.10**	**303**	*e*P	Pn	20 32 08.0	-0.8
CMIG				*i* S	Sn	20 32 45.8	-2.2
HUIG	**Huatulco**	**3.82**	**276**	*i* P	Pn	20 32 15.9	-1.9
HUIG				*i* S	Sn	20 33 00.6	-3.4
VHO	**Vista Hermosa**	**4.69**	**291**	*i* P	Pn	20 32 29.2	+0.4
VHO				*i* S	Sn	20 33 20.6	-3.3
UTMO	**Huajuapan**	**5.92**	**295**	*i* P	Pn	20 32 44.8	+0.1
UTMO				*i* S	Sn	20 33 49.6	-2.9

IDC ***04*** *20:34:43.7±0.9, 22.26S×170.59E, h0km, mb4.3/10, mb1 4.5/12, mb1mx4.4/19, mbtmp4.4/12, ML3.9/2, MS3.9/7, Ms1 3.9/7, ms1mx3.6/29, Error ellipse: s-maj=24.9km s-min=22.6km az=97.0*

NEIC ***04*** *20:34:46.5±4.2, 22.35S×170.48E, h17km±25km, mb4.8/15, Error ellipse: s-maj=11.9km s-min=9.6km az=220.0*

BJI ***04*** *20:34:46.5, 22.40S×170.50E, h20km, mB5.1, mb4.6*

ISCJB ***04*** *20:34:47.0±0.4, 22.33S±0.07×170.44E±0.04, h33km, mb4.6/25, MS3.9/6, Error ellipse: s-maj=10.2km s-min=5.8km az=9.9*

NOU ***04*** *20:34:48.5±1.4, 20.87S×170.18E, h10km, MD2.8, ML3.8*

MOS ***04*** *20:34:50.0±1.4, 21.99S×170.27E, h33km, mb4.8/9, Error ellipse: s-maj=22.1km s-min=12.2km az=39.0*

ISC 04 20:34:48.9±0.4**, 22.35S**±0.07×**170.45E**±0.05**, h35**km**, (h36**km±1.2km**:pP-P), n123,** σ**1.04**/54**, mb4.6**/25**, MS3.9**/6**, 11C-9D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NORM	**Noumea**	**3.67**	**271**	*e*P	**Pn**	**20 35 43.5**	**+0.3**
NORM				*e*S	**Sn**	**20 36 24.1**	**-1.1**
NORM				AMP		20 36 26.8	
	comp=Z,322nm,1.8s						
DZM	**Mont Dzumac**	**3.72**	**273**	*e*P	**Pn**	**20 35 44.3**	**+0.5**
DZM				*e*S	**Sn**	**20 36 25.1**	**-1.3**
DZM				AMP		20 36 28.4	
	comp=Z,3µm,0.0s						
NOUC	**Port Laguerre**	**3.85**	**273**	*e*P	**Pn**	**20 35 46.0**	**+0.4**
NOUC				*e*S	**Sn**	**20 36 29.1**	**-0.5**
NOUC				AMP		20 36 32.3	
	comp=Z,190nm,1.4s						
RAO	**Raoul Island**	**12.53**	**126**	LR	LR	20 41 38.2	
	comp=Z,563nm,19.0s,baz=42,slow=33						
HNR	**Honiara**	**16.32**	**320**	Pn	**Pn**	**20 38 36.1**	**+0.5**
	comp=Z,3.0nm,0.3s,baz=229,slow=6.4,SNR=6.0						
URZ	**Urewera**	**16.86**	**162**	Pn	**Pn**	**20 38 41.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=4.9,slow=19,SNR=2.6						
EIDS	**Eidsvold**	**17.97**	**257**	*e*Pn	**Pn**	**20 38 59.5**	**+3.6**
	comp=Z,8.0nm,1.0s						
ARMA	**Armidale**	**18.66**	**241**	*e*P	**Pn**	**20 39 11.0**	**+6.6**
AFI	**Afiamalu**	**18.85**	**67**	P	**Pn**	**20 39 04.9**	**-1.9**
AFI				pmax	pmax		
	comp=Z,50nm,1.0s						
AFI	**Afiamalu**	**18.85**	**67**	P	**Pn**	**20 39 04.9**	**-1.8**
	comp=Z,50nm,1.0s						
RPZ	**Rata Peaks**	**21.32**	**179**	P	**P**	**20 39 33.4**	**+0.7**
	comp=Z,6.8nm,0.3s,mb4.5,baz=174,slow=2.0,SNR=3.4						
RPZ				LR	LR	20 46 55.9	
	comp=Z,357nm,18.9s,MS3.8,baz=27,slow=34						
CTA	**Charters Tower**	**22.66**	**271**	P	**P**	**20 39 48.5**	**+1.3**
	comp=Z,5.4nm,0.7s,mb4.1,baz=114,slow=11,SNR=5.8						
CTA				LR	LR	20 47 44.8	
	comp=Z,148nm,21.5s,MS3.4,baz=111,slow=34						
CTAO	**Charters Tower**	**22.66**	**271**	*e*P	**P**	**20 39 48.3**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
CTAO	**Charters Tower**	**22.66**	**271**	*e*P	**P**	**20 39 48.3**	**+1.1**
	comp=Z,6.8nm,0.7s,mb4.2						
PMG	**Port Moresby**	**25.78**	**296**	*e*P	**P**	**20 40 16.8**	**+0.1**
PMG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMG	**Port Moresby**	**25.78**	**296**	*e*P	**P**	**20 40 16.8**	**+0.1**
	comp=Z,7.9nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**27.31**	**243**	*e*P	**P**	**20 40 38.1**	**+7.7**
	comp=Z,3.9nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**27.31**	**243**	P	**P**	**20 40 32.1**	**+1.7**
	comp=Z,2.0nm,0.7s,mb3.8,baz=55,slow=8.3,SNR=5.6						
STKA				LR	LR	20 50 38.0	
	comp=Z,249nm,18.1s,MS3.8,baz=28,slow=35						
STKA	**Stephens Creek**	**27.31**	**243**	*e*P	**P**	**20 40 31.9**	**+1.5**
	comp=Z,1.1nm,0.8s,mb3.4						
STKA				LR	LR	20 50 38.0	
ASAR	**Alice Springs**	**33.61**	**261**	P	**P**	**20 41 26.6**	**+0.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=87,slow=8.9,SNR=28						
ASAR				PcP	PcP	20 44 06.3	+0.4
	comp=Z,1.2nm,0.9s,baz=112,slow=3.1,SNR=4.3						
WB2	**Warramunga Arr**	**33.70**	**267**	*e*P	**P**	**20 41 26.3**	**-0.7**
WRAB	**Tennant Creek**	**33.70**	**267**	*e*P	**P**	**20 41 24.0**	**-3.0**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**33.70**	**267**	*e*P	**P**	**20 41 24.0**	**-3.0**
	comp=Z,5.5nm,0.9s,mb4.5						
GUMO	**Guam**	**43.63**	**323**	LR	LR	20 59 34.0	
	comp=Z,103nm,18.0s,MS3.8,baz=84,slow=34						
MBWA	**Marble Bar**	**46.94**	**261**	P	**P**	**20 43 17.1**	**+0.6**
	comp=Z,8.8nm,0.7s,mb4.8						
KAPI	**Kappang**	**51.90**	**282**	P	**P**	**20 43 54.8**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.6,baz=160,slow=9.1,SNR=4.4						
VNDA	**Vanda**	**55.38**	**182**	LR	LR	21 05 24.0	
	comp=Z,138nm,19.1s,MS4.0,baz=337,slow=33						
SBA	**Scott Base**	**55.59**	**181**	P	**P**	**20 44 26.3**	**+5.8**
SBA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
SBA	**Scott Base**	**55.59**	**181**	P	**P**	**20 44 26.2**	**+5.7**
	comp=Z,6.7nm,1.0s,mb4.6						
KKM	**Kota Kinabalu**	**60.09**	**291**	P	**P**	**20 44 57.9**	**+4.8**
	comp=Z,63nm,1.4s,mb5.5						
KSM	**Kuching**	**63.18**	**284**	P	**P**	**20 45 14.1**	**+0.2**
	comp=Z,18nm,0.8s,mb5.2						
MJAR	**Matsushiro Arr**	**66.01**	**332**	P	**P**	**20 45 31.2**	**-0.6**
	comp=Z,3.2nm,0.8s,mb4.4,baz=165,slow=6.7,SNR=6.4						
MAJO	**Matsushiro**	**66.01**	**332**	*e*P	**P**	**20 45 30.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**66.01**	**332**	*e*P	**P**	**20 45 30.9**	**-1.0**
	comp=Z,9.4nm,0.8s,mb4.9						
QSPA	**South Pole Qui**	**67.72**	**180**	*e*P	**P**	**20 45 42.7**	**+0.4**
	comp=Z,11nm,1.1s,mb4.8						
KSRS	**Korea Array**	**71.69**	**325**	P	**P**	**20 46 07.7**	**+0.4**
	comp=Z,3.5nm,0.9s,mb4.3,baz=144,slow=5.3,SNR=6.9						
MAW	**Mawson**	**75.99**	**202**	*e*P	**P**	**20 46 30.5**	**-1.5**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAW	**Mawson**	**75.99**	**202**	*e*P	**P**	**20 46 30.5**	**-1.5**
	comp=Z,1.5nm,0.6s,mb4.1						
CMAR	**Chiang Mai Arr**	**80.80**	**294**	P	**P**	**20 47 01.8**	**+2.4**
	comp=Z,4.8nm,0.9s,mb4.4,baz=138,slow=4.2,SNR=28						
CHTO	**Chiang Mai**	**80.96**	**295**	*e*P	**P**	**20 47 02.0**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
CHTO	**Chiang Mai**	**80.96**	**295**	*e*P	**P**	**20 47 02.0**	**+1.7**
	comp=Z,12nm,1.1s,mb4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XAN	Xi'an	81.03	312	P	P	20 47 00.9	+0.6
XAN				XP	sP	20 47 10.4	-4.9
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
XAN				AMB	AMB		
	comp=Z,148nm,6.6s						
SNAA	Sanae	86.12	182	eP	P	20 47 25.1	-0.7
SNAA				e		20 47 31.0	
SNAA				e	pP	20 47 36.0	-0.9
SNAA	Sanae	86.12	182	eP	P	20 47 24.6	-1.2
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SNAA	Sanae	86.12	182	eP	P	20 47 24.9	-1.0
	comp=Z,17nm,1.3s,mb5.1						
VNA3	Neumayer Olymp	86.67	180	eP	P	20 47 27.6	-0.9
VNA3				e		20 47 33.7	
VNA3				e	pP	20 47 38.9	-0.7
VNA2	Neumayer--Watz	86.97	181	eP	P	20 47 29.6	-0.4
	baz=184,slow=3.7						
VNA2				e		20 47 35.8	
VNA2				e	pP	20 47 40.7	-0.4
VNA1	Neumayer--Stat	87.26	180	eP	P	20 47 31.9	+0.5
VNA1				e		20 47 37.0	
VNA1				e	pP	20 47 41.8	-0.7
NVAR	Mina Array Bea	90.01	48	P	P	20 47 46.1	+1.2
	comp=Z,0.9nm,0.7s,mb4.2,baz=224,slow=8.4,SNR=4.8						
ULN	Ulaanbaatar	90.02	323	eP	P	20 47 44.2	-0.5
ULN	Ulaanbaatar	90.02	323	eP	P	20 47 44.9	+0.2
	comp=Z,19nm,1.5s,mb5.2						
YAK	Yakutsk	90.16	342	eP	P	20 47 43.5	-1.5
YAK				pmax	pmax		
	comp=Z,24nm,2.3s,mb5.1						
SONM	Songino Array	90.37	323	P	P	20 47 46.8	+0.5
	comp=Z,4.2nm,0.9s,mb4.8,baz=138,slow=6.1,SNR=22						
ZAK	Zakamensk	93.46	324	eP	P	20 47 56.8	-3.8
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb5.0						
TXAR	Lajitas Array	97.25	61	LR	LR	21 22 59.5	
	comp=Z,127nm,18.4s,MS4.4,baz=275,slow=30						
ARCES	ARCESS Array B	128.34	345	PKP	PKPdf	20 53 49.8	-1.2
	comp=Z,2.9nm,0.8s,baz=64,slow=2.8,SNR=10						
KOLS	Kolonicke sedl	143.41	324	ePKP	PKPdf	20 54 22.5	+3.0
KOLS				ePP	PP	20 57 29.1	-1.8
STHS	Stebnicka Huta	143.67	326	ePKP	PKPdf	20 54 22.1	+2.2
STHS				ePP	PP	20 57 27.0	-5.4
TRPA	Tarpa	143.72	323	⇓iP	PKPdf	20 54 17.7	-2.4
CRVS	Cervenica-Dubn	143.86	325	ePKP	PKPdf	20 54 22.1	+1.8
DRGR		144.34	321	⇑iP	PKPdf	20 54 20.3	-0.9
DRGR		144.34	321	⇑P	PKPdf	20 54 20.3	-0.9
OKC	Ostrava-Krasne	144.97	328	ePKP	PKPdf	20 54 21.5	-0.7
GZR	Gura Zlata	145.03	319	⇓iP	PKPbc	20 54 23.0	+1.1
GZR	Gura Zlata	145.03	319	⇓P	PKPbc	20 54 23.0	+1.2
KSP	Ksiaz	145.14	331	ePKIKP	PKPdf	20 54 22.2	-0.3
PSZ	Piszkesteto	145.29	324	⇓ePKP	PKPdf	20 54 23.4	+0.6
PSZ	Piszkesteto	145.29	324	⇓iP	PKPbc	20 54 23.2	+0.6
PSZ	Piszkesteto	145.29	324	⇓P	PKPbc	20 54 23.2	+0.6
DPC	Dobruska-Polom	145.48	330	ePKP	PKPdf	20 54 23.6	+0.6
VYHS	Vyhne	145.49	326	ePKP	PKPdf	20 54 23.8	+0.7
UPC	Upice	145.51	331	ePKP	PKPdf	20 54 23.5	+0.4
BZS	Buzias	145.61	320	⇑iP	PKPdf	20 54 23.5	+0.1
BZS	Buzias	145.61	320	⇑P	PKPdf	20 54 23.4	0.0
KOLL	Kolacno	145.66	327	ePKP	PKPdf	20 54 24.4	+1.0
BUD	Budapest	146.02	325	⇓ePKP	PKPdf	20 54 25.7	+1.6
VRAC	Vranov	146.07	329	⇓iP	PKPdf	20 54 25.6	+1.5
VRAC	Vranov	146.07	329	⇓P	PKPdf	20 54 25.6	+1.5
PVCC	Panska Ves	146.13	332	ePKP	PKPdf	20 54 25.6	+1.4
BRG	Berggiesshubel	146.14	333	ePKP	PKPdf	20 54 25.2	+1.0
	comp=Z,17nm,1.0s						
BRG	Berggiesshubel	146.14	333	ePKP	PKPdf	20 54 25.2	+1.0
SMOL	Smolenice	146.19	327	ePKP	PKPab	20 54 26.4	+0.3
CLL	Collm	146.19	334	i PKPbc	PKPbc	20 54 25.1	-0.2
	comp=Z,13nm,0.7s						
CLL				epPKPbc	pPKPbc	20 54 30.0	-6.7
PRU	Pruhonice	146.54	331	ePKP	PKPdf	20 54 26.5	+1.6
TREC	Trest	146.60	330	ePKP	PKPdf	20 54 26.9	+1.9
EKA	Eskdalemuir Ar	146.71	353	PKPbc	PKPbc	20 54 25.9	-0.8
	comp=Z,9.5nm,0.8s,baz=336,slow=2.7,SNR=10						
PKSM	Moragy	146.99	323	⇑iP	PKPdf	20 54 27.5	+1.7
PKSM	Moragy	146.99	323	⇑P	PKPdf	20 54 27.5	+1.7
SOP	Sopron	147.18	327	⇑ePKP	PKPdf	20 54 26.3	+0.3
NKC	Novy Kostel	147.25	334	ePKP	PKPdf	20 54 27.9	+1.9
MOX	Moxa	147.26	335	ePKP	PKPdf	20 54 27.9	+1.8
	comp=Z,21nm,1.2s						
CONA	Conrad Observa	147.37	328	⇑iPKPbc	PKPbc	20 54 28.9	+0.1
	comp=Z,8.7nm,0.9s						
CSNA	Conrad Observa	147.37	328	⇑iPKPbc	PKPbc	20 54 29.1	+0.3
	comp=Z,8.1nm,0.9s						
KHC	Kasperske Hory	147.59	331	ePKP	PKPbc	20 54 29.4	+0.1
GERES	GERESS Array B	147.75	331	PKPbc	PKPbc	20 54 30.0	+0.2
	comp=Z,3.9nm,0.8s,baz=35,slow=3.3,SNR=25						
GRA1	Grafenberg Arr	148.17	334	ePKP	PKPbc	20 54 30.4	-0.5
GRA1				epPKP	pPKPdf	20 54 34.5	-4.6
GRF	Grafenberg Arr	148.17	334	ePKIKP	PKPbc	20 54 30.4	-0.5
GRF				e		20 54 34.5	
PERS	Pernice	148.61	326	i PKPdf	PKPbc	20 54 32.5	+0.3
MEM	Membach	149.27	340	PKPbc	PKPbc	20 54 33.7	0.0
BOJS	Bojanci	149.29	325	i PKPdf	PKPbc	20 54 33.9	0.0
VISS	Visnje	149.31	326	i PKPdf	PKPbc	20 54 34.4	+0.4
UCC	Uccle	149.59	342	PKPbc	PKPbc	20 54 34.4	0.0
JAVS	Javornik	149.65	326	i PKPdf	PKPbc	20 54 34.3	-0.5
BCLA	Clavier	149.65	341	PKPbc	PKPbc	20 54 35.4	+0.7
WTTA	Wattenberg	149.85	331	⇑iPKPbc	PKPbc	20 54 35.3	+0.1
	comp=Z,9.7nm,0.9s						
SNF	Seneffe	149.87	342	PKPbc	PKPdf	20 54 29.4	-0.9
WLF	Walferdange	150.05	339	PKPbc	PKPbc	20 54 36.3	+0.7
GIVF	Givet	150.08	341	ePKP1	PKPbc	20 54 35.6	-0.1
	comp=Z,54nm,1.0s						
DOU	Dourbes	150.15	342	PKPbc	PKPbc	20 54 36.2	+0.4
BAIF	Baives	150.30	342	ePKP1	PKPbc	20 54 36.2	0.0
	comp=Z,25nm,1.1s						
FETA	Feichten	150.44	331	⇑iPKPbc	PKPbc	20 54 36.6	-0.1
	comp=Z,14nm,1.1s						
CDF	Champ du Feu	150.73	337	ePKP1	PKPbc	20 54 37.1	-0.2
	comp=Z,30nm,1.2s						
HINF	Hinteralfeld	151.38	337	ePKP1	PKPbc	20 54 38.4	-0.4
	comp=Z,14nm,0.9s						
HAU	Haudompre	151.40	337	ePKP1	PKPbc	20 54 38.6	-0.3
	comp=Z,20nm,0.9s						
MEZF	Maizieres J'vi	151.42	339	ePKP1	PKPbc	20 54 39.1	+0.2
	comp=Z,38nm,1.0s						
TUE	Stuetta	151.47	332	ePKPbc	PKPbc	20 54 39.0	0.0
CABF	La Chapelle	152.68	336	ePKP1	PKPbc	20 54 42.0	+0.2
LOR	Lormes	152.89	340	ePKP1	PKPbc	20 54 41.9	-0.3
	comp=Z,12nm,0.9s						
SSF	Saint Saulge	153.18	340	ePKP1	PKPbc	20 54 42.6	-0.3
LPL	La Plagne	153.33	334	ePKP1	PKPbc	20 54 43.6	+0.3
	comp=Z,3.8nm,0.8s						
SGMF	Saint Gilles	153.55	349	ePKP1	PKPbc	20 54 42.8	-0.8
	comp=Z,86nm,1.4s						
TORD	Torodi Ar. Bea	165.92	231	PKP	PKPdf	20 54 50.5	-0.5
	comp=Z,1.6nm,1.0s,baz=76,slow=1.1,SNR=5.2						
TORD	Torodi Ar. Bea	165.92	231	PKP	PKPdf	20 54 50.5	-0.5

IDC 04 20:40:47.2±1.7, 321S×14526E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/15, mbtmp3.9/6, MS3.7/6, Ms1 3.7/6, ms1mx3.3/29, Error ellipse: s-maj=55.0km s-min=20.7km az=97.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	15.81	233	eP	x	20 44 18.8	
	14nm,0.6s						
HNR	Honiara	15.85	114	LR	LR	20 49 24.5	
	comp=Z,79nm,19.3s,baz=278,slow=33						
WB2	Warramunga Arr	19.75	212	eP	Pn	20 45 19.4	-0.8
BATI	Baumata	22.53	251	P	P	20 45 48.0	-0.9
	5.8nm,0.5s,baz=163,slow=9.4,SNR=2.4						
ASAR	Alice Springs	23.11	207	P	P	20 45 54.3	-0.6
	4.4nm,0.8s,baz=41,slow=8.8,SNR=36						
STKA	Stephens Creek	28.72	186	P	P	20 46 47.3	+1.0
	2.0nm,0.8s,baz=355,slow=12,SNR=4.8						
JOW	Kunigami	34.08	332	LR	LR	20 58 26.8	
	comp=Z,187nm,21.1s,baz=338,slow=31						
JHJ	Hachijo jima 2	36.50	352	LR	LR	21 01 19.8	
	comp=Z,255nm,20.4s,baz=120,slow=34						
MJAR	Matsushiro Arr	40.09	351	P	P	20 48 22.9	-1.7
	1.5nm,0.8s,baz=164,slow=10,SNR=3.3						
KSRS	Korea Array	43.55	340	LR	LR	21 04 02.8	
	comp=Z,69nm,21.2s,baz=145,slow=32						
AFI	Afiamalu	43.72	107	LR	LR	21 03 25.0	
	comp=Z,87nm,21.9s,baz=36,slow=31						
URZ	Urewera	45.42	144	LR	LR	21 04 48.4	
	comp=Z,166nm,20.1s,baz=314,slow=32						
SONM	Songino Array	61.14	331	P	P	20 51 04.7	+1.3
	0.4nm,0.8s,baz=125,slow=3.9,SNR=3.1						
MKAR	Makanchi Array	74.25	321	P	P	20 52 26.9	+0.6
	0.5nm,0.8s,baz=95,slow=7.4,SNR=4.1						

ISCJB 04 20:55:42.1±1.0, 2390N±004×12290E±002, h8km±7km, Error ellipse: s-maj=6.1km s-min=3.1km az=171.5
TAP 04 20:55:43.8, 2394N×12285E, h21km±1km, ML3.0, D
JMA 04 20:55:43.4±0.3, 2396N×12293E, h17km, M2.5
ISC 04 20:55:42.8±0.8, 2393N±004×12291E±003, h12km±6km, n28, σ1.05/47, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	10	P	Pg	20 55 53.4	+0.1
YOJ				S	Sg	20 56 00.1	-0.3
HATJ	Hateruma jima	0.83	81	P	Pg	20 55 58.5	-0.3
HATJ				S	Sg	20 56 10.1	+0.5
IRIF	Iriomote-Funau	0.85	62	P	Pg	20 55 58.6	-0.6
IRIF				eS	Sg	20 56 10.1	-0.2
JKRS	Kuro-shima	1.05	73	P	Pb	20 56 02.0	-0.8
JKRS				eS	Sb	20 56 17.1	+0.6
ENA	Nanau	1.18	295	P	Pn	20 56 04.4	-0.7
	baz=295						
ENA				eS	Sb	20 56 20.4	+0.2
	baz=295						
TWC	Suao	1.18	305	P	Pn	20 56 04.5	-0.5
	baz=299						
TWC				eS	Sb	20 56 18.6	-1.7
	baz=299						
JIJ	Ishigaki jima	1.20	69	P	Pn	20 56 04.9	-0.5
JIJ				eS	Sb	20 56 20.3	-0.7
TWE	Neicheng	1.38	305	P	Pn	20 56 08.1	+0.3
	baz=305						
TWE				eS	Sn	20 56 25.7	-0.3
	baz=305						
ENTT	Nioudou	1.42	300	P	Pn	20 56 08.9	+0.6
	baz=299						
ENTT				eS	Sn	20 56 27.3	+0.5
	baz=299						
NNS	Nan Shan	1.49	290	eP	Pn	20 56 10.6	+1.2
	baz=276						
NNS				eS	Sn	20 56 28.1	-0.7
	baz=276						
EHY	Hungye	1.52	254	eP	Pn	20 56 08.6	-1.2
	baz=252						
EHY				eS	Sn	20 56 27.8	-1.6
	baz=252						
WHF	Hehuan Shan	1.52	278	eP	Pn	20 56 09.0	-0.7
	baz=276						
TWF1	Yuli	1.59	249	P	Pn	20 56 09.5	-1.2
	baz=247						
TWF1				eS	Sn	20 56 29.8	-1.4
	baz=247						
NSK	Sanguang	1.60	298	eP	Pn	20 56 11.3	+0.5
	baz=280						
NSK				eS	Sn	20 56 31.4	0.0
	baz=280						
CHKT	Chengkung	1.65	240	eP	Pn	20 56 08.9	-2.6
	baz=237						
JTJ	Tarama	1.78	66	P	Pn	20 56 14.5	+1.2
SMLT	Sun Moon Lake	1.84	269	eP	Pn	20 56 14.6	+0.4
	baz=256						
NSTT	Nanjuang	1.88	292	eP	Pn	20 56 17.6	+2.9
	baz=289						
TYC	Yuchr	1.88	270	eP	Pn	20 56 15.9	+1.2
	baz=268						
TYC				eS	Sn	20 56 38.7	+0.3
	baz=268						
ELDTW	Lidau	1.89	247	eP	Pn	20 56 13.5	-1.4
	baz=245						
TWG	Pinlang	2.02	237	eP	Pn	20 56 15.0	-1.6
	baz=224						
CHN5	Tsauling	2.07	261	eP	Pn	20 56 18.3	+0.9
	baz=259						
CHN5				eS	Sn	20 56 44.5	+1.4
	baz=259						
STYT	Tauyuan	2.12	249	eP	Pn	20 56 18.6	+0.5
	baz=236						
STYT				eS	Sn	20 56 43.0	-1.3
	baz=236						
CHN4	Tsaushan	2.20	255	eP	Pn	20 56 22.1	+3.0
	baz=244						
CHN4				eS	Sn	20 56 47.2	+0.8
	baz=244						
WTP	Ta-pu	2.22	252	eP	Pn	20 56 20.6	+1.2
	baz=241						
WTP				eS	Sn	20 56 47.5	+0.9
	baz=241						
ECL	Taimali	2.24	234	eP	Pn	20 56 20.1	+0.5
	baz=244						
SGST	Jiashian	2.30	249	eP	Pn	20 56 22.4	+1.9
	baz=246						
CHN1	Nanshi	2.31	252	eP	Pn	20 56 22.3	+1.6
	baz=249						
CHN1				eS	Sn	20 56 48.3	-0.6
	baz=249						

ISCJB 04 21:20:25.7±0.4, 394S±006×12863E±007, h33km, mb4.0/15, MS3.5/3, Error ellipse: s-maj=11.0km s-min=7.1km az=153.4
NEIC 04 21:20:27.9±0.3, 394S×12865E, h35km, mb4.2/9, Error ellipse: s-maj=11.1km s-min=6.2km az=58.0
IDC 04 21:20:28.0±3.5, 388S×12866E, h35km±27km, mb3.8/12, mb1 4.0/14, mb1mx3.9/21, mbtmp3.9/14, ML4.2/2, MS3.4/4, Ms1 3.4/4, ms1mx3.1/25, Error ellipse: s-maj=31.5km s-min=14.5km az=63.0
ISC 04 21:20:24.4±7.0, 39S±01×12868E±009, h9km±45km, n35, σ0.99/30, mb4.0/15, MS3.5/3, Seram

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	8.02	218	Pn	Pn	21 22 22.6	+1.5
	3.5nm,0.3s,baz=108,slow=3.0,SNR=5.3						
BATI				LR	LR	21 25 59.2	
	comp=Z,209nm,18.0s,baz=148,slow=41						
KAPI	Kappang	8.97	262	Pn	Pn	21 22 34.9	+0.6
	2.9nm,0.3s,baz=137,slow=7.3,SNR=9.9						
KAKA	Kakadu	9.53	157	eP	x	21 22 23.8	
	17nm,0.4s						
FITZ	Fitzroy Crossi	14.44	192	Pn	Pn	21 23 49.8	+0.7
WRAB	Tennant Creek	16.89	161	ePn	Pn	21 24 19.3	-1.8
	7.7nm,0.6s						
WB2	Warramunga Arr	16.89	161	eP	Pn	21 24 18.4	-2.8
COEN	Coen	17.46	126	ePn	Pn	21 24 28.5	+0.3
	16nm,0.9s						
KSM	Kuching	19.12	286	P	Pn	21 24 47.5	-1.2
MBWA	Marble Bar	19.25	206	eP	Pn	21 24 48.9	-1.3
	7.0nm,0.8s						
ASAR	Alice Springs	20.31	166	P	P	21 25 01.9	+1.3
	21nm,0.7s,baz=349,slow=12,SNR=205						
ASAR				PcP	PcP	21 29 11.6	-2.7
	0.8nm,0.4s,baz=7.8,slow=1.5,SNR=7.7						
ASAR				ScP	ScP	21 32 48.4	-2.7
	0.4nm,0.9s,baz=335,slow=1.5,SNR=3.3						
CTA	Charters Tower	23.51	135	P	P	21 25 35.9	+0.8
	5.3nm,0.8s,mb4.0,baz=334,slow=11,SNR=7.0						
CTAO	Charters Tower	23.51	135	eP	P	21 25 35.8	+0.7
	4.5nm,0.6s,mb4.1						
STKA	Stephens Creek	30.38	158	P	P	21 26 37.1	+0.3
	1.3nm,0.6s,mb3.8,baz=299,slow=9.3,SNR=4.1						
STKA	Stephens Creek	30.38	158	eP	P	21 26 36.9	+0.1
	3.3nm,1.9s,mb3.7						
HNR	Honiara	31.53	102	eP	P	21 26 47.5	+0.4
CMAR	Chiang Mai Arr	36.76	308	P	P	21 27 32.8	+0.3
	1.3nm,0.6s,mb3.9,baz=128,slow=6.9,SNR=13						
CHTO	Chiang Mai	36.96	309	eP	P	21 27 34.1	-0.1
	5.0nm,1.1s,mb4.3						
KSRS	Korea Array	41.13	359	LR	LR	21 44 54.4	
	comp=Z,18nm,19.5s,MS2.9,baz=195,slow=36						
MJAR	Matsushiro Arr	41.19	12	LR	LR	21 42 24.8	
	comp=Z,39nm,22.0s,MS3.2,baz=115,slow=32						
SONM	Songino Array	55.09	342	P	P	21 29 55.8	-0.8
	0.2nm,0.5s,mb3.5,baz=145,slow=9.9,SNR=2.6						
PETK	Petropavlovsk-	61.81	19	P	P	21 30 44.0	+0.5
	4.0nm,1.0s,mb4.5,baz=196,slow=2.7,SNR=5.1						
MKAR	Makanchi Array	64.91	327	P	P	21 31 03.0	-1.2
	0.7nm,0.5s,mb3.9,baz=112,slow=8.1,SNR=9.4						
YAK	Yakutsk	65.73	1	eP	P	21 31 09.1	0.0
	15nm,0.8s,mb5.1						
TKM2	Tokmak 2	66.76	320	eP	P	21 31 16.6	+0.5
UCH	Uchtor	67.12	319	eP	P	21 31 18.7	+0.3
	1.7nm,0.3s,mb4.5						
EKS2	Erkin-Say	67.81	319	P	P	21 31 22.0	-0.8
ZALV	Zalesovo Beam	68.22	334	P	P	21 31 24.4	-0.8
	0.6nm,0.6s,mb3.8,baz=107,slow=4.8,SNR=4.5						
KURK	Kurchatov	69.19	329	P	P	21 31 30.0	-1.2
	1.0nm,0.6s,mb3.9,baz=139,slow=6.1,SNR=3.7						
BVAR	Borovoye Array	74.74	328	P	P	21 32 05.8	+1.3
	0.6nm,0.7s,mb3.6,baz=151,slow=3.4,SNR=3.8						
VNDA	Vanda	75.68	173	P	P	21 32 08.7	-0.9
	0.5nm,0.8s,mb3.5,baz=307,slow=9.6,SNR=4.4						
MAW	Mawson	77.36	201	LR	LR	22 05 32.4	
	comp=Z,120nm,20.4s,MS4.2,baz=219,slow=35						
AKTK	Aktyubinsk	80.82	322	P	P	21 32 39.8	+1.3
AKTO	Aktyubinsk	80.82	322	P	P	21 32 39.8	+1.3
	1.2nm,0.5s,mb4.1,baz=83,slow=8.1,SNR=2.9						
ARU	Arti	82.38	328	eP	P	21 32 46.6	0.0
	0.8nm,0.4s,mb4.0						
TORD	Torodi Ar. Bea	126.86	283	PKP	PKPdf	21 39 28.9	-0.7
	0.8nm,0.7s,baz=82,slow=1.4,SNR=4.7						

DDA 04 21:25:47.3, 3697N×2935E, h7km±5km, Md3.4
ISK 04 21:25:47.3, 3699N×2927E, h5km, MD3.3
NEIC 04 21:25:47.8, 3699N×2929E, h5km, ML3.5(ISK), After ISK.
CSEM 04 21:25:47.5±0.1, 3696N×2929E, h2km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.4km az=142.0
ISCJB 04 21:25:48.6±0.5, 3697N±003×2931E±003, h9km±4km, mb3.7/7, Error ellipse: s-maj=4.6km s-min=3.9km az=0.5
HLW 04 21:25:53.9, 3675N×2963E, h25km, Mb3.3
IDC 04 21:25:53.7±1.4, 3686N×2943E, h50km±21km, mb3.6/7, mb1 3.7/12, mb1mx3.5/26, mbtmp3.6/12, ML3.5/5, Error ellipse: s-maj=19.6km s-min=10.6km az=175.0
ISC 04 21:25:49.1±0.6, 3695N±003×2933E±003, h7km±4km, n70, σ1.07/90, mb3.7/7, 3C, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.37	212	ePG	Pg	21 25 55.4	-1.0
FETY				eSG	Sg	21 26 02.6	+1.3
FETY	Fethiye	0.37	212	Pg	Pg	21 25 56.0	-0.4
ELL	Elmali	0.51	114	ePG	Pg	21 25 58.7	-0.2
ELL				eSG	Sg	21 26 08.8	+3.3
ELL	Elmali	0.51	114	ePg	Pg	21 25 58.7	-0.2
ELL				Sg	Sg	21 26 08.0	+2.5
ELL	Elmali	0.51	114	Pg	Pg	21 25 58.0	-0.9
ELL				Sg	Sg	21 26 08.0	+2.5
DALT	Dalyan (Mudla)	0.58	252	ePG	Pg	21 25 58.9	-1.4
DALT	Dalyan (Mudla)	0.58	252	Pg	Pg	21 25 60.0	-0.4
DENT	Denizli	0.83	344	ePG	Pg	21 26 03.0	-2.0
DENT				eSG	Sg	21 26 15.4	-0.5
DENT	Denizli	0.83	344	ePg	Pg	21 26 03.1	-2.0
DENT				Sg	Sg	21 26 16.0	+0.1
DENT	Denizli	0.83	344	Pg	Pg	21 26 03.0	-2.0
DENT				Sg	Sg	21 26 16.1	+0.1
YER	Yerkesik	0.86	282	ePG	Pg	21 26 04.4	-1.1
YER	Yerkesik	0.86	282	ePg	Pg	21 26 04.4	-1.1
YER				Sg	Sg	21 26 17.0	+0.3
YER	Yerkesik	0.86	282	Pg	Pg	21 26 05.0	-0.5
YER				Sg	Sg	21 26 17.0	+0.3
ANTB	Antalya	1.06	93	ePN	Pn	21 26 09.8	-0.5
BCK	Bucak	1.13	63	ePN	Pn	21 26 10.3	-0.9
BCK	Bucak	1.13	63	Pn	Pn	21 26 10.7	-0.5
BCK	Bucak	1.13	63	Pn	Pn	21 26 10.7	-0.5
MLSB	Milas	1.29	286	ePN	Pn	21 26 12.4	-1.0
ISP	Isparta	1.29	46	ePN	Pn	21 26 13.3	-0.2
AYDN	Tasoluk	1.35	302	i P	Pn	21 26 13.7	-0.6
AYDN				i S	Sb	21 26 34.4	+2.2
KHL	Karahalli	1.38	6	ePN	Pn	21 26 14.2	-0.5
KHL	Karahalli	1.38	6	Pn	Pn	21 26 15.2	+0.5
KHAL	Karahalli	1.42	5	i P	Pn	21 26 14.8	-0.5
KHAL				i S	Sn	21 26 37.8	+3.7
DAT	Datca	1.42	261	ePN	Pn	21 26 14.9	-0.3
BDRM	Kayabasi	1.51	275	i P	Pn	21 26 16.6	0.0
BDRM	Kayabasi	1.51	275	i P	Pn	21 26 16.5	0.0
BODT	Bodrum	1.62	274	ePN	Pn	21 26 17.6	-0.4
BODT	Bodrum	1.62	274	Pn	Pn	21 26 18.9	+0.9
KULA	Kula-Manisa	1.65	341	ePN	Pn	21 26 18.4	0.0
GCAM	G?zelcaml?	1.83	295	i P	Pn	21 26 20.1	-0.8
SHUT	Suhut-Afyon	1.87	31	ePN	Pn	21 26 22.1	+0.7
GDZ	Gediz	2.13	3	i P	Pn	21 26 25.0	-0.1
BOLV	Bolvadin	2.18	36	i P	Pn	21 26 26.5	+0.8
ALT	Altintas	2.19	16	ePN	Pn	21 26 26.0	+0.2
ALT	Altintas	2.19	16	Pn	Pn	21 26 26.9	+1.1
AKS	Akhisar	2.27	328	ePN	Pn	21 26 26.1	-0.8
AKS	Akhisar	2.27	328	Pn	Pn	21 26 25.3	-1.6
KONT	Konya--Tatoy	2.61	67	ePN	Pn	21 26 32.7	+1.1
KONT	Konya--Tatoy	2.61	67	Pn	Pn	21 26 33.5	+1.9
LADK	Ladik-KONYA	2.71	62	ePN	Pn	21 26 34.2	+1.2
KIZT	Kizilcal	2.79	46	ePN	Pn	21 26 35.2	+1.1
IKL	Isikli	3.58	100	ePN	Pn	21 26 47.0	+2.1
IKL	Isikli	3.58	100	Pn	Pn	21 26 48.0	+3.0
GULT	Gulveren	3.59	15	ePN	Pn	21 26 46.4	+1.3
EZN	Ezine	3.71	321	ePN	Pn	21 26 47.0	+0.2
CSS	Prodhromos	3.81	120	ePn	Pn	21 26 48.2	+0.1
CSS				Sn	Sn	21 27 37.5	+4.5
CSS	Prodhromos	3.81	120	ePn	Pn	21 26 48.2	+0.1
CSS				Sn	Sn	21 27 37.5	+4.5
IDI	Anoyia	3.96	246	P	Pn	21 26 51.4	+1.3
	1.7nm,0.3s,baz=94,slow=6.6,SNR=13						
IDI				S	Sn	21 27 39.7	+2.9
	1.4nm,0.3s,baz=313,slow=7.1,SNR=2.8						
ANTO	Ankara	3.98	42	ePn	Pn	21 26 49.0	-1.5
ANTO	Ankara	3.98	42	ePn	Pn	21 26 49.0	-1.4
BR131	Keskin Array S	4.37	49	ePn	Pn	21 26 55.7	-0.1
BR131				eSn	Sn	21 27 44.9	-2.1
BR131	Keskin Array S	4.37	49	ePn	Pn	21 26 55.7	-0.1
BR131				eSn	Sn	21 27 44.9	-2.1
BRTR	Keskin Array B	4.37	49	P	Pn	21 26 56.9	+1.0
	0.8nm,0.3s,baz=229,slow=15,SNR=42						
BRTR				S	Sn	21 27 52.7	+5.7
	0.3nm,0.3s,baz=227,slow=21,SNR=5.9						
BRTR	Keskin Array B	4.37	49	P	Pn	21 26 56.8	+1.0
BRTR				S	Sn	21 27 52.7	+5.7
HMAT	Matruh	6.13	198	⇑eP	Pn	21 27 20.9	+0.9
HMAT				S	Sn	21 28 24.6	-5.8
MMAI	Mount Meron Ar	6.35	126	P	Pn	21 27 22.9	0.0
	4.4nm,0.3s,baz=313,slow=12,SNR=38						
MMAI				S	Sn	21 28 34.3	-1.4
	0.3nm,0.3s,baz=318,slow=29,SNR=2.2						
HRSH	Kfar Ka'horesh	6.48	129	⇑eP	Pn	21 27 30.6	+5.8
AMAG	Maghara	7.07	152	⇑P	Pn	21 27 31.4	-1.6
EIL	Elat	8.65	145	P	Pn	21 27 53.2	-1.4
	0.8nm,0.3s,baz=356,slow=10,SNR=7.4						
AKASG	Malin Array Be	13.74	360	P	Pn	21 29 13.2	+9.0
	0.1nm,0.3s,baz=188,slow=9.7,SNR=4.3						
GERES	GERESS Array B	16.46	321	P	Pn	21 29 43.9	+3.6
	0.1nm,0.3s,baz=136,slow=11,SNR=7.4						
AKTK	Aktyubinsk	24.55	48	P	P	21 31 09.1	-0.1
AKTK	Aktyubinsk	24.55	48	P	P	21 31 09.1	0.0
AKTO	Aktyubinsk	24.55	48	P	P	21 31 09.1	0.0
	1.0nm,0.5s,mb3.6,baz=262,slow=7.9,SNR=4.1						
HFS	Hagfors	25.27	342	P	P	21 31 16.2	+0.6
	1.9nm,0.7s,mb3.8,baz=142,slow=15,SNR=5.2						
ESDC	Sonseca Array	26.18	286	P	P	21 31 23.3	-0.8
	1.1nm,0.7s,mb3.5,baz=70,slow=9.0,SNR=5.0						
NOA	NORSAR Array B	26.69	340	P	P	21 31 28.8	+0.4
	1.3nm,0.8s,mb3.5,baz=145,slow=9.4,SNR=3.0						
TORD	Torodi Ar. Bea	34.25	233	P	P	21 32 34.9	-0.8
	1.2nm,0.6s,mb4.0,baz=36,slow=9.7,SNR=9.6						
KURK	Kurchatov	37.42	52	P	P	21 33 01.7	-0.8
	0.9nm,0.6s,mb3.8,baz=276,slow=8.9,SNR=3.3						
MKAR	Makanchi Array	39.96	59	P	P	21 33 22.9	-1.0
	0.9nm,0.8s,mb3.6,baz=282,slow=5.8,SNR=4.9						

ISCJB 04 21:41:20.5±0.5, 1041N±005×6232W±003, h23km±8km, Error ellipse: s-maj=9.1km s-min=5.2km az=173.0
TRN 04 21:41:20.2, 1057N×6233W, h3km, MD3.3
FUNV 04 21:41:21.6, 1042N×6235W, h9km, MW2.6
ISC 04 21:41:20.4±0.6, 1039N±004×6233W±003, h12km±6km, n15, σ0.94/21, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.27	21	⇓iP	Pg	21 41 26.4	+0.4
GUIV				eS	Sg	21 41 31.3	+1.4
TCE	Chacachacare	0.64	61	eP	Pg	21 41 32.1	-0.7
TCE				eS	Sg	21 41 39.8	-1.5
GUNV	Guanoco	0.65	250	eP	Pg	21 41 33.2	+0.2
GUNV				eS	Sg	21 41 43.0	+1.4
TPP	Pointe-a-Pierr	0.86	95	eP	Pg	21 41 37.9	+0.8
CRUV	Carupano	0.94	288	⇑iP	Pg	21 41 38.1	-0.4
CRUV				eS	Sg	21 41 48.9	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TRN	**Trinidad (W)**	**0.94**	**74**	eP	**Pg**	**21 41 37.1**	**-1.5**
TBH	**Brigand Hill**	**1.24**	**86**	eP	**Pn**	**21 41 44.6**	**+1.0**
ITEV	**Isla Los Testi**	**1.25**	**320**	eP	**Pn**	**21 41 42.7**	**-0.9**
ITEV				eS	**Sb**	**21 42 00.2**	**+0.3**
GRW	**Mount Saint Ca**	**1.88**	**20**	e	**Pg**	**21 41 56.0**	**-0.5**
GRW				eS	**Sg**	**21 42 22.5**	**+1.7**
PCRV	**Puerto La Cruz**	**2.29**	**265**	eP	**Pn**	**21 41 58.0**	**0.0**
GURV	**El Guri**	**2.72**	**196**	eS	**Sn**	**21 42 37.1**	**+0.3**
CUPV	**Cœpira**	**3.42**	**265**	eP	**Pn**	**21 42 13.9**	**+0.2**
BIRV	**Birongo**	**3.88**	**272**	eP	**Pn**	**21 42 20.1**	**+0.2**
CAOV	**Caicara del Or**	**4.99**	**233**	eP	**Pn**	**21 42 35.4**	**+0.2**
BAUV	**El Baul**	**5.82**	**256**	eP	**Pn**	**21 42 46.1**	**-0.5**

CASC 04 22:08:44.8±1.3**,1334N**×**8794W,h6**km±5km**,mb5.1,MD3.6, ML3.1,6C-7D,Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.12**	**119**	⇓iP	x	22 08 47.8	
CNCH				eS	x	22 08 51.2	
BLLM	**Bellamira**	**0.31**	**290**	⇓eP	x	22 08 51.3	
VSM	**San Miguel**	**0.34**	**286**	⇓eP	x	22 08 52.0	
VSM				eS	x	22 08 58.0	
CAHU	**Cacacuatique**	**0.51**	**329**	⇓eP	x	22 08 55.1	
CAHU				eS	x	22 09 04.1	
SNVI	**San Vicente**	**0.92**	**288**	⇑eP	x	22 09 02.1	
SNVI				eS	x	22 09 14.8	
SNVI				eS	x	22 09 15.6	
TGUH	**Tegucigalpa,Un**	**0.97**	**42**	⇑eP	Pg	22 09 02.9	-0.5
TGUH				eS	Sg	22 09 16.2	+0.2
LFRS	**El Faro**	**1.13**	**285**	eP	x	22 09 05.8	
LFRS				eS	x	22 09 21.7	
LBRS	**Las Brisas**	**1.15**	**291**	eP	x	22 09 06.0	
LBRS				eS	x	22 09 22.6	
TEL3	**Telica 3**	**1.31**	**125**	⇓eP	Pn	22 09 08.0	-1.6
BOQS	**Boqueron**	**1.36**	**287**	⇓iP	x	22 09 09.9	
	comp=Z,222nm,0.2s						
BOQS				eS	x	22 09 28.5	
BOQS				AML	x	22 09 31.9	
	comp=Z,222nm,0.2s						
MIRN	**Miramar**	**1.49**	**126**	⇓iP	Pn	22 09 10.9	-1.2
MIRN				AML	AML	22 09 32.4	
	comp=Z,451nm,0.4s						
MOMN	**Momotombo**	**1.65**	**124**	eP	Pn	22 09 14.2	-0.2
MTO2	**Montecristo 2**	**1.74**	**308**	⇑eP	x	22 09 15.9	
COPN	**Copaltepe**	**1.75**	**131**	⇑eP	Pn	22 09 14.2	-1.5
RBDL	**Robledal**	**1.86**	**295**	⇑eP	x	22 09 17.8	
CHI2		**16.46**	**120**	⇑eP	x	22 09 04.6	

*THR **04** 22:12:03.8±0.5,3181N×4925E,h16km±6km,ML3.1*
*KISR **04** 22:12:04.5,3193N×4931E,h33km,ML2.6*
*CSEM **04** 22:12:04.5±0.1,3198N×4931E,h8km,ML2.6,Error ellipse: s-maj=4.0km s-min=2.3km az=107.0*
*ISCJB **04** 22:12:05.3±0.6,3198N±004×4927E±010,h10km,Error ellipse: s-maj=12.3km s-min=4.4km az=19.4*
ISC 04 22:12:06.7±0.6**,3198N**±004×**4924E**±009**,h10**km**,n13, σ0s65**/21**,Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.39**	**289**	ePg	**Pg**	**22 12 13.4**	**-1.0**
SHGR				AML	AML	22 12 27.5	
	comp=N,1μm,0.2s						
SHGR				AML	AML	22 12 31.6	
	comp=E,2μm,0.5s						
ASAO	**Ashtian**	**2.65**	**14**	ePn	**Pn**	**22 12 50.6**	**+1.2**
ASAO				eSg	**Sg**	**22 13 31.6**	**0.0**
ASAO				AML	AML	22 13 37.2	
	comp=E,67nm,1.9s						
ASAO	**Ashtian**	**2.65**	**14**	ePn	**Pn**	**22 12 50.6**	**+1.2**
	SNR=52						
ASAO				eSg	**Sg**	**22 13 31.6**	**-0.1**
	SNR=90						
MIB	**Mutribah**	**2.72**	**217**	eP	**Pn**	**22 12 50.3**	**0.0**
	baz=219						
MIB				AML	AML	22 13 40.6	
	comp=Z,26nm,0.5s,baz=219						
UMR	**Umm Al-Rimmam**	**2.75**	**209**	eP	**Pn**	**22 12 50.3**	**-0.6**
KBD	**Kabd**	**3.10**	**206**	eP	**Pn**	**22 12 54.9**	**-0.7**
KBD				eS	**Sn**	**22 13 34.0**	**+1.3**
NASN	**Na'in**	**3.13**	**74**	ePn	**Pn**	**22 12 55.4**	**-0.6**
NAY	**Al-Naaiem**	**3.22**	**213**	eP	**Pn**	**22 12 57.2**	**-0.1**
NAY				eS	**Sn**	**22 13 36.2**	**+0.5**
NAY	**Al-Naaiem**	**3.22**	**213**	eP	**Pn**	**22 12 57.2**	**-0.1**
	baz=214						
NAY				eS	**Sn**	**22 13 36.2**	**+0.5**
	baz=214						
NAY				AML	AML	22 13 40.2	
	comp=Z,7.0nm,0.5s,baz=214						
RDF	**Al-Radifah**	**3.38**	**206**	eP	**Pn**	**22 12 59.3**	**-0.1**
RDF				eS	**Sn**	**22 13 39.8**	**+0.3**
	comp=Z,14nm,0.4s						
RDF	**Al-Radifah**	**3.38**	**206**	eP	**Pn**	**22 12 59.3**	**-0.2**
	baz=207						
RDF				eS	**Sn**	**22 13 39.8**	**+0.2**
	baz=207						
RDF				AML	AML	22 13 42.9	
	comp=Z,14nm,0.4s,baz=207						
QRN	**Al-Qurain**	**3.42**	**200**	eP	**Pn**	**22 12 59.7**	**-0.3**
	baz=201						
QRN				eS	**Sn**	**22 13 40.3**	**-0.3**
	baz=201						
QRN				AML	AML	22 13 42.6	
	comp=Z,16nm,0.4s,baz=201						
SNGE	**Sanandaj**	**3.48**	**334**	ePn	**Pn**	**22 13 01.6**	**+0.7**
SNGE				AML	AML	22 13 59.4	
	comp=N,19nm,0.6s						

IDC 04 22:20:37.2±1.6**,2540S**×**6993E,h0**km**,mb3.7**/4**,mb1 3.9**/4**, mb1mx3.6**/19**,mbtmp3.7**/4**,MS3.2**/1**,Ms1 3.4**/1**, ms1mx3.0**/22**,Error ellipse: s-maj=53.4km s-min=34.0km az=10.0,Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**51.93**	**36**	P	P	22 29 47.6	-0.4
	0.6nm,0.3s,baz=232,slow=7.6,SNR=5.7						
CMAR				LR	LR	22 47 24.1	
	comp=Z,22nm,20.7s,baz=25,slow=31						
ASAR	**Alice Springs**	**57.72**	**103**	P	P	22 30 30.2	+0.1
	0.6nm,0.8s,baz=253,slow=6.6,SNR=5.2						
MKAR	**Makanchi Array**	**72.71**	**9**	P	P	22 32 07.2	+0.5
	0.2nm,0.6s,baz=181,slow=4.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.68**	**292**	P	P	22 32 30.5	0.0
	1.5nm,1.2s,baz=146,slow=6.0,SNR=3.5						

*ISCJB **04** 22:21:56.8±0.5,4256N±003×4348E±004,h5km±4km, Error ellipse: s-maj=6.0km s-min=4.0km az=32.1*
*MOS **04** 22:21:56.1±1.4,4255N×4359E,h17km,mb3.8/1,Error ellipse: s-maj=40.5km s-min=11.4km az=67.2*
*TIF **04** 22:21:56.3,4258N×4352E,h9km±2km*
ISC 04 22:21:57.1±0.5**,4257N**±003×**4346E**±005**,h7**km±4km**,n17, σ0s71**/28**,2C-2D,Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.01**	**313**	P	**Pg**	**22 21 58.3**	**0.0**
ONI				S	**Sg**	**22 21 59.9**	**+0.8**
ZEI	**Tsey**	**0.38**	**58**	⇓iPG	**Pg**	**22 22 04.3**	**-0.1**
ZEI				i S	**Sg**	**22 22 09.7**	**+0.3**
LACR	**Lac**	**0.66**	**67**	⇑iPG	**Pg**	**22 22 09.1**	**-0.8**
LACR				i S	**Sg**	**22 22 18.1**	**-0.4**
KORR	**Kora**	**0.68**	**41**	⇑iPG	**Pg**	**22 22 10.0**	**-0.2**
KORR				i S	**Sg**	**22 22 19.5**	**+0.5**
LSNR	**Lesken**	**0.75**	**20**	⇓iPG	**Pg**	**22 22 11.4**	**-0.1**
LSNR				eS	**Sg**	**22 22 21.9**	**+0.7**
GOR	**Gori**	**0.76**	**140**	P	**Pg**	**22 22 10.8**	**-0.9**
GOR				S	**Sg**	**22 22 21.9**	**+0.5**
ARNR	**Ardon**	**0.86**	**44**	ePG	**Pg**	**22 22 13.2**	**-0.4**
ARNR				eS	**Sg**	**22 22 25.3**	**+0.5**
MTA	**Mtatsminda**	**1.32**	**131**	P	**Pn**	**22 22 20.9**	**-1.0**
MTA				S	**Sb**	**22 22 40.0**	**+0.6**
PRTR	**Priterechnaya**	**1.32**	**27**	ePG	**Pg**	**22 22 22.0**	**-0.5**
PRTR				eS	**Sb**	**22 22 39.9**	**+0.4**
TRKR	**Terskaya**	**1.48**	**38**	ePG	**Pg**	**22 22 24.0**	**-1.5**
TRKR				eS	**Sn**	**22 22 44.0**	**+0.2**
ARTV	**Artvin**	**1.80**	**220**	i P	**Pn**	**22 22 28.2**	**-0.3**
DGRG	**David-gareji**	**1.81**	**128**	P	**Pn**	**22 22 30.2**	**+1.5**
DGRG				S	**Sn**	**22 22 57.0**	**+5.1**
DBOC	**Borcka**	**1.81**	**228**	i P	**Pn**	**22 22 27.4**	**-1.4**
DAGI	**Agillar**	**1.89**	**218**	i P	**Pn**	**22 22 30.1**	**+0.3**
DBAD	**Bademkaya**	**2.04**	**221**	i P	**Pn**	**22 22 32.0**	**+0.2**
DDEM	**Demirkent**	**2.11**	**218**	i P	**Pn**	**22 22 34.0**	**+1.2**
GOF	**Gofitskoye**	**2.51**	**353**	ePN	**Pg**	**22 22 49.9**	**+4.8**

*TIF **04** 22:27:28.9,4256N×4352E,h9km±2km*
*ISCJB **04** 22:27:29.1±1.2,4256N±006×4344E±009,h10km,Error ellipse: s-maj=10.2km s-min=8.1km az=36.6*
*MOS **04** 22:27:31.3±0.5,4265N×4366E,h8km,mb3.7/1,Error ellipse: s-maj=36.0km s-min=11.6km az=58.5*
ISC 04 22:27:30.3±1.1**,4259N**±005×**4347E**±009**,h5**km±7km**,n9, σ0s74**/18**,1C-2D,Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.01**	**244**	P	**Pg**	**22 27 31.1**	**-0.2**
ONI				S	**Sg**	**22 27 32.7**	**+0.7**
ZEI	**Tsey**	**0.37**	**60**	⇓iPG	**Pg**	**22 27 37.1**	**-0.3**
ZEI				i S	**Sg**	**22 27 42.8**	**+0.6**
LACR	**Lac**	**0.66**	**68**	⇑iPG	**Pg**	**22 27 41.9**	**-1.0**
LACR				i S	**Sg**	**22 27 51.2**	**-0.2**
KORR	**Kora**	**0.67**	**41**	ePG	**Pg**	**22 27 42.7**	**-0.4**
KORR				eS	**Sg**	**22 27 52.5**	**+0.7**
LSNR	**Lesken**	**0.73**	**20**	⇓iPG	**Pg**	**22 27 44.2**	**-0.2**
LSNR				eS	**Sg**	**22 27 55.0**	**+1.1**
ARNR	**Ardon**	**0.85**	**44**	ePG	**Pg**	**22 27 45.9**	**-0.7**
ARNR				eS	**Sg**	**22 27 58.2**	**+0.6**
SNJR	**Sundja**	**1.10**	**64**	ePG	**Pg**	**22 27 50.3**	**-1.1**
SNJR				eS	**Sg**	**22 28 05.8**	**+0.1**
PRTR	**Priterechnaya**	**1.31**	**27**	ePG	**Pg**	**22 27 54.2**	**-1.2**
PRTR				eS	**Sg**	**22 28 12.5**	**+0.1**
DGRG	**David-gareji**	**1.82**	**128**	P	**Pn**	**22 28 03.2**	**+1.0**
DGRG				S	**Sn**	**22 28 29.5**	**+4.0**

TRN 04 22:33:18.3,1133N×**5943W,h65**km**,MD3.7,5C,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOT	**Bacolet**	**1.27**	**263**	⇑iP	Pn	22 33 39.9	-0.2
TPR	**Prospect**	**1.33**	**264**	⇑iP	Pn	22 33 40.7	-0.2
TPR				eS	Sn	22 33 58.1	+0.3
TBH	**Brigand Hill**	**1.81**	**242**	⇑iP	Pn	22 33 47.9	+0.5
TBH				eS	Sn	22 34 09.7	+0.2
TRN	**Trinidad (W)**	**2.05**	**251**	⇑eP	Pn	22 33 50.4	-0.2
TRN				eS	Sn	22 34 14.7	-0.5
TPP	**Pointe-a-Pierr**	**2.23**	**243**	eP	Pn	22 33 54.1	+1.1
TPP				eS	Sn	22 34 19.0	-0.4
TCE	**Chacachacare**	**2.36**	**255**	⇑eP	Pn	22 33 55.9	+1.0
TCE				eS	Sn	22 34 21.4	-1.4
MVM	**Montagne Vaucl**	**3.50**	**336**	eP	Pn	22 34 10.6	+0.2
MVM				eS	Sn	22 34 49.0	-1.7
BIM	**Bigot**	**3.54**	**333**	eP	Pn	22 34 11.5	+0.5
BIM				eS	Sn	22 34 51.0	-0.6
FDF	**Fort de France**	**3.77**	**334**	eP	Pn	22 34 14.9	+0.9
FDF				eS	Sn	22 34 56.0	-1.2
LZG	**Guadaloupe-1**	**5.29**	**335**	eP	Pn	22 34 35.0	+0.1

*IGQ **04** 23:05:39.2,084N×8040W,h11km±8km,Mb4.8,Ms4.7, Error ellipse: s-maj=7.0km s-min=3.2km az=25.8*
*ISCJB **04** 23:05:47.5±0.7,074N±005×8014W±006,h56km±8km, mb4.2/17,MS3.4/3,Error ellipse: s-maj=10.5km s-min=7.2km az=161.3*
*NEIC **04** 23:05:50.6±0.7,075N×8006W,h71km±6km,mb4.4/11, Error ellipse: s-maj=7.7km s-min=5.7km az=59.0*
*IDC **04** 23:05:51.1±2.4,079N×8009W,h72km±24km,mb3.7/10, mb1 4.0/15,mb1mx3.8/26,mbtmp3.9/15,MS3.5/3, Ms1 3.4/3,ms1mx3.0/27,Error ellipse: s-maj=22.9km s-min=13.5km az=65.0*
ISC 04 23:05:48.4±0.7**,064N**±005×**8019W**±007**,h50**km±8km**,n69, σ0s94**/69**,mb4.2**/17**,MS3.4**/3**,5C-3D,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.90**	**181**	P	**Pn**	**23 06 00.3**	**-4.4**
JAMA	**Jama**	**0.90**	**181**	S	**Sn**	**23 06 14.1**	**-2.6**
CHIS	**Cerro-Chispas-**	**1.76**	**198**	P	**Pn**	**23 06 13.2**	**-3.3**
PINO	**Pino**	**1.77**	**117**	⇑P	**Pn**	**23 06 15.5**	**-1.2**
TERV	**Terraza Guagua**	**1.78**	**117**	⇑P	**Pn**	**23 06 15.7**	**-1.1**
OTAV	**Otavalo**	**1.79**	**103**	ePn	**Pn**	**23 06 15.7**	**-1.1**
OTAV				eSn	**Sn**	**23 06 42.8**	**+4.4**
YANA	**Yana**	**1.79**	**115**	⇓P	**Pn**	**23 06 15.8**	**-1.1**
GGP	**Refugio Guagua**	**1.79**	**117**	P	**Pn**	**23 06 15.6**	**-1.3**
COTA	**Cotacachi**	**1.88**	**99**	P	**Pn**	**23 06 17.1**	**-1.0**
QIL2	**Quilotoa**	**1.97**	**140**	P	**Pn**	**23 06 17.1**	**-2.3**
CAMI	**Rancho Maria**	**2.14**	**128**	P	**Pn**	**23 06 21.4**	**-0.2**
VC1	**Cotopaxi 1**	**2.20**	**125**	⇓P	**Pn**	**23 06 23.1**	**+0.6**
TAMB	**Tambo**	**2.26**	**126**	⇓P	**Pn**	**23 06 24.1**	**+0.8**
CAYA	**Cayambe**	**2.27**	**104**	⇑P	**Pn**	**23 06 24.4**	**+0.9**
ANTI	**Antisana**	**2.30**	**118**	⇑P	**Pn**	**23 06 24.3**	**+0.4**
PISA	**Pisayambo**	**2.47**	**133**	P	**Pn**	**23 06 26.5**	**+0.3**
IGUA	**Igualata**	**2.63**	**144**	P	**Pn**	**23 06 29.8**	**+1.4**
CONE	**Cono NE Rev Vo**	**2.65**	**105**	⇑P	**Pn**	**23 06 30.7**	**+2.0**
LAV3	**Lava3-Reventad**	**2.66**	**106**	P	**Pn**	**23 06 30.4**	**+1.5**
JUI6	**Juive**	**2.68**	**140**	P	**Pn**	**23 06 29.5**	**+0.4**
BIL2	**Estacion Bilba**	**2.68**	**141**	P	**Pn**	**23 06 28.8**	**-0.3**
RUN5	**Runtun**	**2.70**	**139**	P	**Pn**	**23 06 30.0**	**+0.6**
RUN5	**Runtun**	**2.70**	**139**	S	**Sn**	**23 07 07.3**	**+6.4**
RETU	**Refugio**	**2.71**	**140**	P	**Pn**	**23 06 29.5**	**-0.1**
ULBA	**Ulba**	**2.74**	**139**	P	**Pn**	**23 06 30.1**	**+0.2**
ARRY	**Arrayan**	**2.75**	**141**	P	**Pn**	**23 06 30.0**	**-0.1**
ARRY	**Arrayan**	**2.75**	**141**	S	**Sn**	**23 07 05.8**	**+3.7**
PATA	**Patacocha**	**2.76**	**140**	P	**Pn**	**23 06 30.6**	**+0.4**
ROSC	**El Rosal**	**7.20**	**54**	P	**Pn**	**23 07 31.7**	**+0.6**
	1.7nm,0.3s,baz=259,slow=16,SNR=4.0						
ATAH	**Atahualpa**	**7.80**	**167**	P	**Pn**	**23 07 44.6**	**+5.3**
	1.2nm,0.3s,baz=351,slow=12,SNR=4.2						
BCIP	**Isla Barro Col**	**8.48**	**2**	ePn	**Pn**	**23 07 49.4**	**+0.7**
BCIP				Sn	**Sn**	**23 09 16.6**	**-6.4**
PAYG	**Puerto Ayora**	**10.18**	**263**	ePn	**Pn**	**23 08 16.0**	**+4.1**
SDV	**Santo Domingo**	**12.56**	**49**	P	**Pn**	**23 08 44.6**	**+0.2**
	2.1nm,0.3s,baz=239,slow=9.2,SNR=14						
NNA	**Nana**	**12.98**	**165**	P	**Pn**	**23 08 55.2**	**+5.0**
	1.1nm,0.3s,baz=329,slow=12,SNR=3.6						
NNA	**Nana**	**12.98**	**165**	ePn	**Pn**	**23 08 55.1**	**+4.9**
PCRV	**Puerto La Cruz**	**18.14**	**58**	P	**Pn**	**23 09 56.9**	**0.0**
	1.0nm,0.3s,baz=196,slow=8.2,SNR=4.8						
SDDR	**Presa de Saban**	**20.21**	**25**	eP	**P**	**23 10 18.4**	**-0.8**
	16nm,1.0s						
CMIG	**Matias Romero**	**21.83**	**319**	P	**P**	**23 10 37.5**	**+0.8**
	4.1nm,0.8s,mb3.9,baz=104,slow=3.1,SNR=3.8						
CMIG				LR	LR	23 17 28.3	
	comp=Z,102nm,20.0s,MS3.2,baz=335,slow=32						
SIV	**San Ignacio**	**25.09**	**132**	P	**P**	**23 11 08.8**	**+0.2**
	3.8nm,0.7s,mb4.0,baz=305,slow=9.2,SNR=20						
LVC	**Limon Verde**	**25.59**	**155**	P	**P**	**23 11 16.5**	**+3.4**
	4.0nm,0.7s,mb4.0,baz=317,slow=11,SNR=2.6						
LVC				LR	LR	23 22 49.0	
	comp=Z,121nm,19.7s,MS3.4,baz=225,slow=40						
LVC	**Limon Verde**	**25.59**	**155**	eP	**P**	**23 11 14.6**	**+1.6**
	23nm,1.4s,mb4.5						
LVC				LR	LR	23 22 49.0	
DWPF	**Disney**	**27.34**	**358**	eP	**P**	**23 11 27.4**	**-1.4**
BDFB	**Brasilia**	**35.67**	**118**	LR	LR	23 27 35.6	
	comp=Z,60nm,18.5s,MS3.4,baz=333,slow=37						
BDFB	**Brasilia**	**35.67**	**118**	eP	**P**	**23 12 42.0**	**-0.1**
	1.1nm,0.7s,mb3.9						
SIUC	**Southern Illin**	**37.82**	**348**	eP	**P**	**23 12 59.5**	**-0.6**
	15nm,0.4s,mb5.1						
WMOK	**Wichita Mounta**	**38.11**	**335**	P	**P**	**23 13 02.5**	**0.0**
KSU1	**Kansas State U**	**41.12**	**340**	eP	**P**	**23 13 27.8**	**+0.2**
ANMO	**Albuquerque**	**42.02**	**327**	P	**P**	**23 13 34.7**	**-0.3**
	4.7nm,1.0s,mb4.1,baz=145,slow=10,SNR=4.0						
ANMO	**Albuquerque**	**42.02**	**327**	eP	**P**	**23 13 35.1**	**+0.2**
	3.9nm,0.9s,mb4.0						
PLCA	**Paso Flores**	**42.10**	**169**	P	**P**	**23 13 36.7**	**+1.1**
	5.1nm,0.8s,mb4.2,baz=337,slow=9.8,SNR=8.9						
PLCA	**Paso Flores**	**42.10**	**169**	eP	**P**	**23 13 36.3**	**+0.7**
	6.9nm,0.9s,mb4.3						
SDCO	**Great Sand Dun**	**43.67**	**331**	P	**P**	**23 13 49.7**	**+1.4**
	1.8nm,0.6s,mb4.0						
WUAZ	**Wupatki**	**45.23**	**323**	eP	**P**	**23 14 01.2**	**+0.4**
	14nm,1.2s,mb4.7						
PV01	**Paradox Valley**	**45.52**	**328**	P	**P**	**23 14 02.7**	**-0.4**
RSSD	**Black Hills**	**48.21**	**337**	eP	**P**	**23 14 23.2**	**-0.8**
	2.8nm,0.6s,mb4.5						
PDAR	**Pinedale Array**	**49.51**	**332**	P	**P**	**23 14 33.9**	**-0.1**
	0.5nm,0.7s,mb3.7,baz=93,slow=7.4,SNR=4.3						
ISA	**Isabella**	**49.79**	**319**	P	**P**	**23 14 36.9**	**+0.7**
NVAR	**Mina Array Bea**	**51.33**	**322**	P	**P**	**23 14 48.9**	**+1.0**
	2.3nm,0.7s,mb4.2,baz=131,slow=7.8,SNR=12						
HLID	**Hailey**	**52.51**	**329**	eP	**P**	**23 14 56.7**	**+0.2**
	11nm,1.5s,mb4.6						
NEW	**Newport**	**57.16**	**331**	P	**P**	**23 15 29.3**	**-0.7**
YKA	**Yellowknife Ar**	**66.87**	**343**	P	**P**	**23 16 33.7**	**-1.2**
	1.0nm,0.8s,mb3.9,baz=133,slow=6.3,SNR=13						
YKA	**Yellowknife Ar**	**66.87**	**343**	P	**P**	**23 16 33.7**	**-1.2**
SUMG	**Summit**	**76.39**	**12**	eP	**P**	**23 17 31.4**	**-0.5**
	4.5nm,1.3s,mb4.2						
ESDC	**Sonseca Array**	**79.00**	**50**	P	**P**	**23 17 47.3**	**+0.1**
	0.9nm,0.8s,mb3.8,baz=243,slow=6.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**81.95**	**77**	P	**P**	**23 18 02.9**	**-0.6**
	1.7nm,0.6s,mb4.2,baz=281,slow=6.3,SNR=10						
TORD	**Torodi Ar. Bea**	**81.95**	**77**	P	**P**	**23 18 02.9**	**-0.6**
SNAA	**Sanae**	**86.63**	**162**	P	**P**	**23 18 25.7**	**-0.4**
TSUM	**Tsumeb**	**97.56**	**109**	eP	**P**	**23 19 17.6**	**-0.4**
ASAR	**Alice Springs**	**139.79**	**233**	PKP	PKPdf	23 25 10.6	-1.2
	0.4nm,0.8s,baz=117,slow=3.2,SNR=3.5						

*NIED **04** 23:13:00,3610N×13980E,h50km,Mw3.6 Best double couple: M₀2.38000×10^14 NP1:φs174.00000°,δ89.00000°, λ-78.00000°. NP2:φs267.00000°,δ12.00000°, λ-177.00000°.*
*JMA **04** 23:13:19.6±0.1,3608N×13983E,h48km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs247.00000°,δ11.00000°,λ152.00000°. NP2:φs4.00000°, δ85.00000°,λ80.00000°. Principal axes: T Plg49.0000°, Azm264.0000°; N Plg10.0000°, Azm5.0000°; P Plg39.0000°, Azm103.0000°;*
JMA Felt II J1.
*ISCJB **04** 23:13:20.2±1.4,3608N±005×13982E±007,h41km±19km Error ellipse: s-maj=10.1km s-min=8.3km az=6.7*
ISC 04 23:13:20.4±1.2**,3608N**±005×**13982E**±007**,h39**km±19km**, n8,σ0s46**/15**,1C-4D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.33**	**64**	⇑P	**Pn**	**23 13 28.8**	**-0.2**
JYT				eS	**Sn**	**23 13 35.2**	**+0.3**
JAG	**Ashikaga**	**0.46**	**319**	⇓P	**Pn**	**23 13 30.4**	**-0.1**
JAG				S	**Sn**	**23 13 38.0**	**+0.4**
JHU	**Hanno**	**0.50**	**243**	⇓P	**Pn**	**23 13 30.5**	**-0.5**
JHU				eS	**Sn**	**23 13 38.0**	**-0.5**
JRY	**Ryogami san**	**0.75**	**265**	⇓P	**Pn**	**23 13 33.9**	**-0.6**
JRY				eS	**Sn**	**23 13 44.3**	**-0.3**
JKT	**Katashina**	**0.83**	**326**	⇓P	**Pn**	**23 13 35.0**	**-0.5**
JKT				eS	**Sn**	**23 13 46.2**	**-0.3**
JOD2	**Odawara 2**	**1.01**	**216**	P	**Pn**	**23 13 38.2**	**+0.1**
JOD2				eS	**Sn**	**23 13 51.6**	**+0.5**
JYN	**Shimob**	**1.19**	**241**	P	**Pn**	**23 13 41.1**	**+0.6**
MAT	**Matsushiro**	**1.39**	**290**	P	**Pn**	**23 13 43.4**	**+0.2**
MAT				S	**Sn**	**23 14 01.2**	**+0.9**

IDC 04 23:34:23.9±3.1**,245S**×**10029E,h0**km**,mb3.4**/4**,mb1 3.6**/4**, mb1mx3.4**/18**,mbtmp3.4**/4**,Error ellipse: s-maj=131.1km s-min=24.6km az=61.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.82**	**356**	P	P	23 39 07.5	+0.4
	0.4nm,0.6s,baz=180,slow=9.9,SNR=4.2						
ASAR	**Alice Springs**	**38.75**	**126**	P	P	23 41 50.5	+0.2
	0.9nm,0.6s,baz=301,slow=8.0,SNR=22						
SONM	**Songino Array**	**50.36**	**5**	P	P	23 43 22.8	+0.2
	0.2nm,0.5s,baz=191,slow=9.6,SNR=2.7						
MKAR	**Makanchi Array**	**51.54**	**344**	P	P	23 43 31.6	0.0
	0.2nm,0.5s,baz=157,slow=9.0,SNR=3.0						
TXAR	**Lajitas Array**	**144.88**	**38**	PKP	PKPdf	23 54 02.2	-1.5
	0.9nm,0.6s,baz=294,slow=1.3,SNR=6.5						

IDC 04 23:40:39.4±0.9**,1755S**×**7009W,h47**km±7km**,mb3.7**/6**, mb1 3.9**/7**,mb1mx3.7**/18**,mbtmp3.7**/7**,ML4.5**/1**,Error ellipse: s-maj=27.5km s-min=14.7km az=78.0,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**5.16**	**168**	P	Pn	23 41 54.7	+0.7
	1.7nm,0.3s,baz=340,slow=10,SNR=27						
LVC				S	Sn	23 42 53.1	+0.9
	3.6nm,0.3s,baz=83,slow=23,SNR=3.8						
SIV	**San Ignacio**	**8.77**	**81**	P	Pn	23 42 49.1	+5.5
	1.9nm,0.3s,baz=273,slow=9.6,SNR=38						
PLCA	**Paso Flores**	**23.10**	**181**	P	P	23 45 41.1	-0.1
	3.9nm,0.9s,baz=335,slow=8.7,SNR=5.8						
TXAR	**Lajitas Array**	**56.77**	**325**	P	P	23 50 18.6	-0.3
	0.2nm,0.7s,baz=143,slow=11,SNR=3.7						
DBIC	**Dimbokro**	**68.75**	**75**	P	P	23 51 39.0	0.0
	1.5nm,0.5s,baz=238,slow=8.3,SNR=12						
DBIC				pP	pP	23 51 52.5	+0.1
	2.7nm,0.8s,baz=178,slow=9.4,SNR=2.6						
NVAR	**Mina Array Bea**	**71.72**	**322**	P	P	23 51 57.3	+0.7
	0.4nm,0.5s,baz=152,slow=7.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**77.13**	**72**	P	P	23 52 28.2	-0.3
	2.2nm,0.6s,baz=257,slow=5.3,SNR=41						
TORD				pP	pP	23 52 42.7	+0.6
	0.9nm,0.6s,baz=252,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**87.11**	**341**	P	P	23 53 19.7	0.0
	1.2nm,0.7s,baz=134,slow=4.6,SNR=17						
YKA				pP	pP	23 53 33.1	-0.5
	0.4nm,0.7s,baz=136,slow=5.3,SNR=4.0						
SONM	**Songino Array**	**149.66**	**5**	PKPbc	PKPbc	00 00 24.5	+0.6
	0.5nm,0.8s,baz=331,slow=0.1,SNR=3.9						

*IGQ **04** 23:47:18.8,055N×7994W,h12km±4km,Mb4.6,Ms4.4, Error ellipse: s-maj=6.8km s-min=1.7km az=57.3*
*ISCJB **04** 23:47:19.5±1.2,080N±007×8010W±009,h51km±13km, mb3.6/6,Error ellipse: s-maj=15.5km s-min=11.9km az=14.4*
*IDC **04** 23:47:21.9±3.6,077N×8002W,h58km±35km,mb3.4/6, mb1 3.7/8,mb1mx3.5/20,mbtmp3.5/8,ML3.6/1,Error ellipse: s-maj=36.0km s-min=18.1km az=66.0*
ISC 04 23:47:21.2±1.2**,076N**±007×**8006W**±010**,h51**km±13km**,n36, σ1s12**/37**,mb3.6**/6**,2C-1D,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**1.02**	**188**	P	**Pn**	**23 47 32.9**	**-6.4**
JAMA				S	**Sn**	**23 47 46.6**	**-6.0**
PINO	**Pino**	**1.71**	**122**	⇑P	**Pn**	**23 47 47.0**	**-1.7**
YANA	**Yana**	**1.73**	**120**	P	**Pn**	**23 47 47.4**	**-1.5**
TERV	**Terraza Guagua**	**1.73**	**122**	P	**Pn**	**23 47 47.1**	**-1.8**
TERV	**Terraza Guagua**	**1.73**	**122**	S	**Sn**	**23 48 15.2**	**+5.4**
GGP	**Refugio Guagua**	**1.73**	**122**	P	**Pn**	**23 47 47.3**	**-1.7**
COTA	**Cotacachi**	**1.77**	**104**	P	**Pn**	**23 47 48.9**	**-0.6**
CHIS	**Cerro-Chispas-**	**1.92**	**200**	P	**Pn**	**23 47 51.3**	**-0.1**
QIL2	**Quilotoa**	**1.98**	**145**	P	**Pn**	**23 47 49.6**	**-2.8**
QIL2	**Quilotoa**	**1.98**	**145**	S	**Sn**	**23 48 17.7**	**+1.7**
CAMI	**Rancho Maria**	**2.11**	**133**	P	**Pn**	**23 47 53.6**	**-0.5**
VC1	**Cotopaxi 1**	**2.17**	**130**	P	**Pn**	**23 47 54.5**	**-0.3**
CAYA	**Cayambe**	**2.18**	**108**	⇑P	**Pn**	**23 47 55.9**	**+0.8**
TAMB	**Tambo**	**2.23**	**130**	P	**Pn**	**23 47 55.8**	**+0.1**
ANTI	**Antisana**	**2.25**	**122**	P	**Pn**	**23 47 56.0**	**0.0**
PISA	**Pisayambo**	**2.46**	**137**	P	**Pn**	**23 47 59.4**	**+0.4**
CONE	**Cono NE Rev Vo**	**2.56**	**109**	P	**Pn**	**23 48 02.3**	**+2.1**
LAV3	**Lava3-Reventad**	**2.57**	**109**	⇓P	**Pn**	**23 48 02.9**	**+2.4**
IGUA	**Igualata**	**2.65**	**148**	P	**Pn**	**23 48 02.5**	**+1.0**
JUI6	**Juive**	**2.69**	**144**	P	**Pn**	**23 48 02.1**	**0.0**
RUN5	**Runtun**	**2.71**	**143**	P	**Pn**	**23 48 02.2**	**-0.1**
RUN5	**Runtun**	**2.71**	**143**	S	**Sn**	**23 48 39.1**	**+5.2**
RETU	**Refugio**	**2.73**	**144**	P	**Pn**	**23 48 02.9**	**+0.3**
ULBA	**Ulba**	**2.75**	**143**	P	**Pn**	**23 48 02.7**	**-0.2**
ARRY	**Arrayan**	**2.76**	**144**	P	**Pn**	**23 48 02.6**	**-0.5**
PATA	**Patacocha**	**2.77**	**144**	P	**Pn**	**23 48 03.3**	**+0.1**
ROSC	**El Rosal**	**7.02**	**54**	P	**Pn**	**23 49 08.0**	**+6.5**
	baz=286,slow=20,SNR=4.9						
ATAH	**Atahualpa**	**7.89**	**168**	P	**Pn**	**23 49 16.0**	**+2.6**
	0.4nm,0.3s,baz=306,slow=14,SNR=2.8						
ATAH				S	**Sn**	**23 50 49.8**	**+8.5**
	0.6nm,0.3s,baz=355,slow=12,SNR=3.6						
SDV	**Santo Domingo**	**12.38**	**49**	P	**Pn**	**23 50 16.2**	**+1.3**
	0.4nm,0.3s,baz=332,slow=6.8,SNR=4.5						
SIV	**San Ignacio**	**25.07**	**132**	P	**P**	**23 52 40.5**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.9nm,0.9s,mb3.8,baz=322,slow=9.3,SNR=7.7						
PLCA	**Paso Flores**	**42.20**	**169**	P	**P**	**23 55 09.6**	**+0.5**
	1.6nm,0.7s,mb3.8,baz=326,slow=7.3,SNR=2.6						
PDAR	**Pinedale Array**	**49.47**	**332**	P	**P**	**23 56 05.5**	**-1.0**
	0.1nm,0.4s,mb3.2,baz=85,slow=15,SNR=2.2						
NVAR	**Mina Array Bea**	**51.32**	**321**	P	**P**	**23 56 21.0**	**+0.4**
	0.8nm,0.6s,mb3.8,baz=136,slow=6.5,SNR=5.9						
YKA	**Yellowknife Ar**	**66.79**	**343**	P	**P**	**23 58 07.9**	**+0.7**
	0.7nm,0.8s,mb3.8,baz=137,slow=5.9,SNR=10						
TORD	**Torodi Ar. Bea**	**81.80**	**77**	P	**P**	**23 59 35.0**	**-0.6**
	0.5nm,0.7s,mb3.5,baz=278,slow=5.7,SNR=5.6						
ASAR	**Alice Springs**	**139.96**	**233**	PKP	PKPdf	00 06 46.4	+1.6
	0.6nm,1.0s,baz=202,slow=1.0,SNR=4.3						

IDC 05 00:01:15.1±4.6**,078S×1307W,h0^{km},mb3.8**/5**,mb1 3.9**/6**, mb1mx3.7**/19**,mbtmp3.8**/6**,ML3.3**/1**,MS3.7**/4**,Ms1 3.7**/4**, ms1mx3.3**/21**,Error ellipse: s-maj=136.3km s-min=62.5km az=157.0,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**10.62**	**49**	*e*P	Pn	00 03 49.2	+0.5
	45nm,1.5s						
TIC	**Toumodi**	**10.90**	**47**	*e*P	Pn	00 03 51.2	-1.4
	12nm,0.2s						
KIC	**Kosan Boka**	**10.92**	**49**	*e*P	Pn	00 03 47.8	-5.1
	47nm,1.2s						
DBIC	**Dimbokro**	**11.04**	**48**	Pn	Pn	00 03 52.7	-1.7
	0.2nm,0.3s,baz=200,slow=12,SNR=4.3						
DBIC				Sn	Sn	00 05 49.7	-9.0
	0.5nm,0.3s,baz=299,slow=18,SNR=3.6						
DBIC				LR	LR	00 07 32.9	
	comp=Z,254nm,20.6s,baz=246,slow=34						
TORD	**Torodi Ar. Bea**	**20.14**	**46**	P	P	00 05 50.8	-0.2
	1.8nm,0.5s,baz=227,slow=12,SNR=16						
TORD				LR	LR	00 13 09.7	
	comp=Z,155nm,18.6s,baz=225,slow=36						
GERES	**GERESS Array B**	**54.58**	**21**	P	P	00 10 45.8	+0.7
	0.4nm,0.7s,baz=232,slow=4.8,SNR=3.2						
GERES				LR	LR	00 35 08.8	
	comp=Z,117nm,19.7s,baz=293,slow=37						
BRTR	**Keskin Array B**	**58.65**	**41**	P	P	00 11 16.2	+1.8
	0.3nm,0.5s,baz=218,slow=8.5,SNR=3.6						
PLCA	**Paso Flores**	**65.34**	**225**	LR	LR	00 35 25.4	
	comp=Z,67nm,18.2s,baz=271,slow=31						
SCHQ	**Schefferville**	**70.67**	**330**	LR	LR	00 39 07.6	
	comp=Z,2.4nm,19.3s,baz=192,slow=32						
ARCES	**ARCESS Array B**	**74.79**	**13**	P	P	00 12 56.0	-0.8
	1.3nm,0.7s,baz=248,slow=6.1,SNR=3.8						
MKAR	**Makanchi Array**	**94.24**	**43**	P	P	00 14 35.4	-0.9
	0.5nm,0.7s,baz=291,slow=4.8,SNR=3.8						

IDC 05 00:11:51.4±3.0**,1548N×9603E,h0^{km},mb3.6**/2**,mb1 3.6**/3**, mb1mx3.3**/21**,mbtmp3.6**/3**,ML4.1**/1**,Error ellipse: s-maj=38.9km s-min=27.4km az=179.0,Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.07**	**43**	Pn	Pn	00 12 54.0	-1.0
	2.7nm,0.3s,baz=233,slow=15,SNR=56						
CMAR				Lg		00 14 01.5	
	1.2nm,0.3s,baz=232,slow=29,SNR=4.8						
MKAR	**Makanchi Array**	**33.26**	**343**	P	P	00 18 30.6	+0.3
	0.3nm,0.6s,baz=146,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**39.38**	**350**	P	P	00 19 22.4	-0.1
	0.8nm,0.6s,baz=168,slow=7.6,SNR=5.7						

BJI ***05*** *01:10:05.8, 14.16N×145.60E, h24^{km}, mB5.0, mb4.8, Ms4.9, Msz4.8*
IDC ***05*** *01:10:11.7±1.0, 14.83N×144.95E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx4.0/18, mbtmp4.0/10, MS3.8/12, Ms1 3.8/12, ms1mx3.6/30, Error ellipse: s-maj=40.9km s-min=15.2km az=83.0*
ISCJB ***05*** *01:10:15.3±0.7, 14.79N±0.06×144.7E±.02, h33^{km}, mb4.3/23, MS3.9/12, Error ellipse: s-maj=28.8km s-min=6.5km az=166.9*
MOS ***05*** *01:10:15.5±0.7, 14.76N×144.49E, h33^{km}, mb4.7/7, Error ellipse: s-maj=31.4km s-min=11.4km az=110.0*
NEIC ***05*** *01:10:15.5±4.1, 14.80N×144.84E, h24^{km}±30^{km}, mb4.5/7, Error ellipse: s-maj=26.1km s-min=8.6km az=82.0*
ISC 05 01:10:16.8±0.7**,1478N**±005×**1449E**±02**,h35^{km},n43, σ0.95**/34**,mb4.3**/23**,MS3.9**/12**,Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.19**	**179**	Pn	**Pn**	**01 10 35.9**	**-1.0**
	193nm,0.3s,baz=278,slow=2.9,SNR=25						
GUMO				Sn	**Sn**	**01 10 51.6**	**-0.2**
	313nm,0.3s,baz=145,slow=20,SNR=25						
CBIJ	**Chichi jima**	**12.50**	**349**	LR	LR	01 16 38.2	
	comp=Z,120nm,19.8s,baz=248,slow=31						
MJAR	**Matsushiro Arr**	**22.47**	**346**	P	**P**	**01 15 13.1**	**+0.2**
	2.3nm,0.8s,mb3.6,baz=156,slow=9.6,SNR=5.2						
MJAR				LR	LR	01 23 38.1	
	comp=Z,155nm,18.6s,MS3.5,baz=185,slow=36						
MAJO	**Matsushiro**	**22.47**	**346**	*e*P	**P**	**01 15 13.7**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MAJO	**Matsushiro**	**22.47**	**346**	*e*P	**P**	**01 15 13.7**	**+0.7**
	comp=Z,9.4nm,0.8s,mb4.3						
KSRS	**Korea Array**	**27.13**	**329**	P	**P**	**01 15 57.5**	**+0.9**
	comp=Z,0.9nm,0.4s,mb3.6,baz=150,slow=9.8,SNR=3.8						
KSRS				LR	LR	01 26 20.2	
	comp=Z,99nm,20.6s,MS3.4,baz=299,slow=36						
COEN	**Coen**	**28.60**	**183**	*e*P	**P**	**01 16 11.3**	**+1.3**
	comp=Z,3.1nm,0.8s,mb4.1						
ASAJ	**Asahikawa**	**29.30**	**357**	LR	LR	01 26 28.7	
	comp=Z,160nm,20.0s,MS3.6,baz=287,slow=33						
WRAB	**Tennant Creek**	**36.01**	**197**	*e*P	**P**	**01 17 14.7**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**36.01**	**197**	*e*P	**P**	**01 17 14.7**	**-0.1**
	comp=Z,5.1nm,0.8s,mb4.5						
PETK	**Petropavlovsk-**	**39.57**	**12**	LR	LR	01 31 59.3	
	comp=Z,67nm,19.0s,MS3.5,baz=225,slow=33						
ASAR	**Alice Springs**	**39.68**	**196**	P	**P**	**01 17 46.4**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.5,baz=23,slow=12,SNR=6.9						
LZH	**Lanzhou**	**42.27**	**308**	*e*P	**P**	**01 18 08.1**	**+1.1**
LZH				AMB	AMB		
	comp=Z,31nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,128nm,4.6s						
LZH				LR	LR		
	comp=N,516nm,9.2s						
LZH				LR	LR		
	comp=Z,783nm,12.0s,MS4.8						
CMAR	**Chiang Mai Arr**	**44.06**	**281**	P	**P**	**01 18 23.8**	**+2.1**
	comp=Z,1.5nm,0.4s,mb4.1,baz=81,slow=5.6,SNR=5.7						
CMAR				PcP	PcP	01 20 07.2	+0.4
	comp=Z,0.7nm,0.3s,baz=62,slow=4.2,SNR=2.9						
CMAR				LR	LR	01 37 57.9	
	comp=Z,95nm,18.1s,MS3.8,baz=90,slow=38						
CMAR	**Chiang Mai Arr**	**44.06**	**281**	P	**P**	**01 18 23.8**	**+2.1**
CMAR						01 20 07.2	
CMAR	**Chiang Mai Arr**	**44.06**	**281**	P	**P**	**01 18 23.8**	**+2.1**
CMAR				PcP	PcP	01 20 07.2	+0.4
CMAR				LR	LR	01 37 57.9	
SONM	**Songino Array**	**45.76**	**324**	P	**P**	**01 18 34.8**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=137,slow=7.5,SNR=3.0						
SONM				PcP	PcP	01 20 12.2	+0.1
	comp=Z,1.2nm,0.9s,baz=159,slow=1.2,SNR=3.3						
SONM				LR	LR	01 37 51.9	
	comp=Z,135nm,18.4s,MS3.9,baz=166,slow=36						
SONM	**Songino Array**	**45.76**	**324**	P	**P**	**01 18 34.8**	**0.0**
SONM						01 20 12.2	
GTA	**Gaotai**	**46.38**	**311**	*e*P	**P**	**01 18 39.7**	**-0.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**46.50**	**184**	P	**P**	**01 18 41.4**	**+0.7**
	comp=Z,1.3nm,0.5s,mb4.1,baz=345,slow=12,SNR=3.2						
STKA				LR	LR	01 37 58.4	
	comp=Z,79nm,18.1s,MS3.7,baz=23,slow=36						
AFI	**Afiamalu**	**51.52**	**122**	LR	LR	01 35 26.1	
	comp=Z,160nm,22.0s,MS4.0,baz=333,slow=29						
MKAR	**Makanchi Array**	**60.63**	**316**	P	**P**	**01 20 24.1**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.4,baz=93,slow=8.7,SNR=19						
ZALV	**Zalesovo Beam**	**60.65**	**324**	P	**P**	**01 20 23.5**	**-0.8**
	comp=Z,1.8nm,0.7s,mb4.3,baz=100,slow=7.3,SNR=8.5						
NVS	**Novosibirsk**	**61.79**	**325**	*e*P	**P**	**01 20 31.2**	**-0.7**
NVS				pmax	pmax		
	comp=N,6.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.6s						
NVS				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.8						
KURK	**Kurchatov**	**63.67**	**320**	LR	LR	01 48 39.5	
	comp=Z,158nm,19.1s,MS4.2,baz=115,slow=36						
KURK	**Kurchatov**	**63.67**	**320**	*e*P	**P**	**01 20 43.8**	**-0.7**
KURK				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
KURK	**Kurchatov**	**63.67**	**320**	*e*P	**P**	**01 20 43.8**	**-0.8**
	comp=Z,16nm,1.1s,mb5.0						
TKM2	**Tokmak 2**	**64.93**	**311**	*e*P	**P**	**01 20 52.9**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
TKM2	**Tokmak 2**	**64.93**	**311**	*e*P	**P**	**01 20 52.9**	**-0.1**
	comp=Z,1.4nm,0.7s,mb4.1						
BRVK	**Borovoye**	**69.06**	**321**	*e*P	**P**	**01 21 18.7**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
BRVK	**Borovoye**	**69.06**	**321**	*e*P	**P**	**01 21 18.7**	**-0.3**
	comp=Z,13nm,1.1s,mb4.8						
KBL	**Kabul**	**70.19**	**302**	*e*P	**P**	**01 21 26.2**	**-0.2**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KBL	**Kabul**	**70.19**	**302**	*e*P	**P**	**01 21 26.2**	**-0.2**
	comp=Z,2.6nm,0.7s,mb4.3						
PPT	**Papeete**	**72.20**	**114**	LR	LR	01 48 29.7	
	comp=Z,157nm,18.8s,MS4.3,baz=267,slow=32						
YKA	**Yellowknife Ar**	**81.81**	**27**	P	**P**	**01 22 32.8**	**+0.8**
	comp=Z,0.7nm,0.9s,mb3.6,baz=290,slow=5.1,SNR=4.9						
ARCES	**ARCESS Array B**	**85.95**	**342**	P	**P**	**01 22 53.3**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.5,baz=58,slow=4.8,SNR=14						
MIB	**Mutribah**	**89.12**	**300**	*e*P	**P**	**01 23 06.7**	**-2.4**
MIB				AMb	AMB	01 23 10.6	
	comp=Z,8.0nm,0.8s,mb5.1						
NAY	**Al-Naaiem**	**89.36**	**300**	*e*P	**P**	**01 23 07.3**	**-2.9**
NAY				AMb	AMB	01 23 11.6	
	comp=Z,10.0nm,0.7s,mb5.2						
PDAR	**Pinedale Array**	**91.14**	**45**	LR	LR	02 00 42.6	
	comp=Z,185nm,18.6s,MS4.5,baz=156,slow=33						
AKASG	**Malin Array Be**	**94.04**	**325**	P	**P**	**01 23 30.4**	**-1.0**
	comp=Z,0.3nm,0.3s,mb4.2,baz=44,slow=1.4,SNR=4.1						
VNA2	**Neumayer--Watz**	**121.39**	**190**	*e*	PKPdf	01 29 06.8	+1.1
	baz=300,slow=0.7						
VNA2				*e*		01 29 10.4	
VNA2				*e*		01 29 14.5	
VNA2				*e*		02 00 41.0	
VNA3	**Neumayer Olymp**	**121.49**	**189**	*e*	PKPdf	01 29 06.5	+0.6
VNA3				*e*		01 29 09.9	
VNA3				*e*		01 29 14.8	
VNA3				*e*		02 00 41.5	
TORD	**Torodi Ar. Bea**	**134.17**	**305**	PKP	PKPdf	01 29 33.0	+1.3
	comp=Z,0.8nm,1.1s,baz=29,slow=3.3,SNR=2.5						

MAN 05 01:22:43,998N×12210E,h66^{km},mb4.0,ML2.7,MS2.4, 1C,Negros

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.80**	**36**	*e*P	Pn	01 23 01.4	+2.6
GUIM				*e*S	Sn	01 23 13.5	+2.9
CUYO	**Cuyo Island**	**1.38**	**309**	*e*P	Pn	01 23 07.6	+1.4
CUYO				*e*S	Sn	01 23 21.2	-2.5
RCP	**Roxas**	**1.70**	**22**	⇑*e*P	Pn	01 23 06.4	-4.1
RCP				*e*S	Sn	01 23 23.2	-8.1
SJMP	**San Jose**	**2.65**	**339**	*e*P	Pn	01 23 24.8	+1.3
BUSP	**Coron**	**2.75**	**317**	*e*P	Pn	01 23 21.5	-3.2

NEIC ***05*** *01:29:12.1, 19.71N×65.38W, h43^{km}, MD3.5(RSPR), After RSPR.*
RSPR 05 01:29:12.1,1971N×6538W,h43^{km}±28^{km}**,MD3.5**/4**, MD3.5**/4**,12C,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**1.39**	**134**	*e*S	Sn	01 29 50.7	-1.5
ABV	**Anegada**	**1.39**	**134**	*e*S	Sn	01 29 50.7	-1.5
STVI	**Saint Thomas**	**1.41**	**163**	⇑*e*P	Pn	01 29 33.8	-1.5
STVI				*e*S	Sn	01 29 52.2	-0.5
TBVI	**Tortola**	**1.48**	**151**	⇑*e*P	Pn	01 29 35.5	-0.7
TBVI				*e*S	Sn	01 29 52.8	-1.4
HUMP	**Col San Antoni**	**1.62**	**196**	⇑*e*P	Pn	01 29 37.0	-1.2
HUMP	**Col San Antoni**	**1.62**	**196**	⇑*e*P	Pn	01 29 37.4	-0.8
HUMP				*e*S	Sn	01 29 56.6	-1.3
HUMP	**Col San Antoni**	**1.62**	**196**	⇑*e*P	Pn	01 29 37.0	-1.2
HUMP				*e*S	Sn	01 29 56.6	-1.3
SJG	**San Juan**	**1.75**	**205**	⇑*e*P	Pn	01 29 38.3	-1.7
SJG				*e*S	Sn	01 30 00.1	-1.0
SJG	**San Juan**	**1.75**	**205**	⇑*e*P	Pn	01 29 38.3	-1.7
SJG				*e*S	Sn	01 30 00.9	-0.1
AOPR	**Arecibo Observ**	**1.88**	**224**	⇑*e*P	Pn	01 29 40.5	-1.3
AOPR				*e*S	Sn	01 30 02.8	-1.4
CELP	**Cerrillos**	**1.98**	**215**	⇑*e*P	Pn	01 29 42.8	-0.4
CELP				*e*S	Sn	01 30 06.2	-0.6
ICM	**Isla Caja Muer**	**2.11**	**211**	⇑*e*P	Pn	01 29 44.5	-0.3
LSP	**Las Mesas**	**2.22**	**227**	⇑*e*P	Pn	01 29 46.5	+0.1
CRPR	**Cabo Rojo, PR**	**2.36**	**224**	⇑*e*P	Pn	01 29 47.9	-0.4

NIED ***05*** *01:41:00, 23.10N×121.20E, h17^{km}, Mw4.9   Best double couple: $M_0$2.26000×10^{16} NP1:ϕ_s177.00000°, δ88.00000°, λ-173.00000°.   NP2:ϕ_s87.00000°, δ83.00000°, λ-2.00000°.*
NEIC ***05*** *01:41:40.9±0.7, 22.98N×121.37E, h8^{km}±4^{km}, mb5.0/72, ML5.3(TAP), Error ellipse: s-maj=4.6km s-min=3.7km az=84.0*
NEIC Felt [II] at T'ai-chung. Felt at Kao-hsiung, Nan-t'ou and T'ai-nan. Recorded [4 TAP] in Hua-lien and T'ai-tung; [3 TAP] in Kao-hsiung; [2 TAP] in Chang-hua, Chia-i, Nan-t'ou, P'ing-tung, T'ai-nan, and Yun-lin; [1 TAP] in P'eng-hu and T'ai-chung Counties. Recorded [1 JMA] on Ishigaki-jima, Iriomote-jima and Miyako-jima, Ryukyu Islands.
GCMT ***05*** *01:41:40.9±0.3, 23.06N×121.13E, h21^{km}, MW5.0/74, Moment Tensor Solution.   s34,c40;   s74,c103;   Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}3.13±.17; $M_{\theta\theta}$-3.03±.11; $M_{\phi\phi}$-0.10±.11; $M_{r\theta}$0.65±.16; $M_{\theta\phi}$0.96±.07; $M_{\phi r}$-0.87±.20;   Best double couple: $M_0$3.40600×10^{16} NP1:ϕ_s275.00000°, δ39.00000°, λ72.00000°.   NP2: ϕ_s118.00000°, δ54.00000°, λ104.00000°.   Principal axes: T 3.3760, Plg76.0000°, Azm74.0000°; N 0.0560, Plg11.0000°, Azm290.0000°; P -3.4360, Plg8.0000°, Azm198.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***05*** *01:41:41.8±0.2, 22.98N±0.01×121.31E±0.01, h22^{km}±1^{km}, mb5.0/118, MS4.4/42   Error ellipse: s-maj=2.5km s-min=1.8km az=35.0*
TAP ***05*** *01:41:42.5, 23.08N×121.19E, h11^{km}, ML5.1, B*
BJI ***05*** *01:41:42.5, 23.24N×121.15E, h10^{km}, mB4.9, mb4.8, ML4.8, Ms4.8, Msz4.7*
MOS ***05*** *01:41:43.3±0.9, 23.06N×121.38E, h33^{km}, mb5.2/50, MS4.6/16, Error ellipse: s-maj=10.5km s-min=4.4km az=123.1*
JMA ***05*** *01:41:43.4±0.3, 23.12N×121.24E, h94^{km}, M4.3*
IDC ***05*** *01:41:44.5±3.3, 22.91N×121.28E, h33^{km}±24^{km}, mb4.6/17, mb1 4.7/20, mb1mx4.6/25, mbtmp4.6/20, ML4.1/2, MS4.2/23, Ms1 4.2/23, ms1mx4.1/37, Error ellipse: s-maj=17.6km s-min=13.0km az=71.0*
SZGRF ***05*** *01:41:49.0, 24.07N×122.01E, h33^{km}, mb5.1, Taiwan region*
DJA ***05*** *01:42:14, 23.13N×120.72E, h321^{km}, mb4.6/8*
ISC 05 01:41:41.6±0.3**,2301N**±001×**12131E**±001**,h9^{km}**±1^{km}**, n422,σ1.08**/485**,mb5.0**/118**,MS4.4**/42**,53C-29D,Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.10**	**31**	⇑P	**Pg**	**01 41 47.6**	**+3.5**
	baz=82						
CHKT				*e*S	**Sg**	**01 41 51.4**	**+5.6**
	baz=82						
TWG	**Pinlang**	**0.29**	**229**	*e*Pg	**Pg**	**01 41 48.0**	**+0.7**
TWG				*e*Sg	**Sg**	**01 41 52.4**	**+1.2**
TWG	**Pinlang**	**0.29**	**229**	⇑*i*P	**Pg**	**01 41 48.5**	**+1.1**
	baz=209						
TWG				*i* S	**Sg**	**01 41 52.9**	**+1.7**
	baz=209						
TTN	**Taitung**	**0.30**	**210**	⇑*i*P	**Pg**	**01 41 50.1**	**+2.7**
	baz=195						
TTN				S	**Sg**	**01 41 56.0**	**+4.5**
	baz=195						
ELDTW	**Lidau**	**0.32**	**303**	⇑*i*P	**Pg**	**01 41 47.2**	**-0.8**
	baz=306						
ELDTW				*i* S	**Sg**	**01 41 50.0**	**-2.2**
	baz=306						
TWF1	**Yuli**	**0.34**	**358**	⇑*i*P	**Pg**	**01 41 48.8**	**+0.6**
	baz=20						
YULB	**Yu-li**	**0.38**	**358**	*e*Pg	**Pg**	**01 41 48.6**	**-0.4**
YULB				*e*Sg	**Sg**	**01 41 53.4**	**-0.7**
EHY	**Hungye**	**0.49**	**1**	⇑*i*P	**Pg**	**01 41 51.1**	**-0.1**
	baz=3.0						
EHY				*e*S	**Sg**	**01 41 57.9**	**+0.2**
	baz=3.0						
ECL	**Taimali**	**0.53**	**219**	⇑*i*P	**Pg**	**01 41 51.9**	**+0.1**
	baz=208						
ECL				*e*S	**Sg**	**01 42 00.6**	**+1.9**
	baz=208						
STYT	**Tauyuan**	**0.53**	**287**	⇓*i*P	**Pg**	**01 41 51.0**	**-0.9**
	baz=282						
SGST	**Jiashian**	**0.67**	**276**	⇑*i*P	**Pg**	**01 41 54.4**	**-0.2**
	baz=271						
SGST				S	**Sg**	**01 42 02.3**	**-1.0**
	baz=271						
SSD	**Sandimen**	**0.68**	**247**	⇑*i*P	**Pg**	**01 41 54.1**	**-0.6**
	baz=234						
SSD				S	**Sg**	**01 42 01.5**	**-2.0**
	baz=234						
ALS	**Alishan**	**0.68**	**317**	⇑*i*P	**Pg**	**01 41 54.2**	**-0.5**
	baz=318						
ALS				S	**Sg**	**01 42 01.9**	**-1.7**
	baz=318						
WTP	**Ta-pu**	**0.68**	**290**	⇓*i*P	**Pg**	**01 41 54.1**	**-0.6**
	baz=290						
TPUB	**Ta-pu**	**0.69**	**295**	*e*Pg	**Pg**	**01 41 53.8**	**-1.1**
TPUB				*e*Sg	**Sg**	**01 42 00.9**	**-2.9**
TEGC	**Jichi Village**	**0.73**	**17**	*e*P	**Pg**	**01 41 57.1**	**+1.5**
	baz=10.0						
TEGC				*e*S	**Sg**	**01 42 07.2**	**+2.1**
	baz=10.0						
CHN1	**Nanshi**	**0.74**	**284**	⇓*i*P	**Pg**	**01 41 55.7**	**-0.1**
	baz=280						
CHN4	**Tsaushan**	**0.74**	**297**	⇓*i*P	**Pg**	**01 41 55.4**	**-0.5**
	baz=303						
CHN4				*e*S	**Sg**	**01 42 04.3**	**-1.3**
	baz=303						
TAW	**Tawu**	**0.75**	**210**	⇑*i*P	**Pg**	**01 41 55.9**	**-0.2**
	baz=204						
TAW				*e*S	**Sg**	**01 42 06.6**	**+0.6**
	baz=204						
EAST	**Anshuo**	**0.76**	**214**	*e*P	**Pg**	**01 41 56.2**	**0.0**
	baz=192						
EAST				*e*S	**Sg**	**01 42 07.0**	**+1.0**
	baz=192						
TWK	**Hsinying**	**0.80**	**289**	⇓*i*P	**Pg**	**01 41 56.4**	**-0.5**
	baz=295						
TWK				*e*S	**Sg**	**01 42 06.4**	**-1.0**
	baz=295						
SGLT	**Jiouru**	**0.81**	**249**	⇑P	**Pg**	**01 41 57.7**	**+0.6**
	baz=240						
ESL	**Shilin**	**0.81**	**8**	*e*P	**Pg**	**01 41 55.7**	**-1.4**
	baz=13						
ESL				*e*S	**Sg**	**01 42 07.7**	**0.0**
	baz=13						
CHN5	**Tsauling**	**0.82**	**315**	⇑*i*P	**Pg**	**01 41 57.1**	**-0.3**
	baz=308						
TWM1	**Shoushan**	**0.84**	**257**	⇑*i*P	**Pg**	**01 41 58.7**	**+1.0**
	baz=245						
SSLB	**Suanglung**	**0.84**	**337**	*e*Pg	**Pg**	**01 41 56.6**	**-1.2**
SSLB				*e*Sg	**Sg**	**01 42 06.5**	**-2.2**
CHN3	**Shinhua**	**0.87**	**274**	⇑P	**Pg**	**01 41 59.6**	**+1.2**
	baz=270						
CHN3				*e*S	**Sg**	**01 42 11.3**	**+1.6**
	baz=270						
ESF	**Shoufeng Towns**	**0.88**	**12**	*e*P	**Pg**	**01 41 58.5**	**+0.1**
	baz=20						
SCZT	**Fangliau**	**0.90**	**225**	⇑P	**Pg**	**01 41 58.8**	**-0.1**
	baz=225						
CHN2	**Minshiung**	**0.93**	**304**	*e*P	**Pg**	**01 41 59.4**	**0.0**
	baz=303						
SMLT	**Sun Moon Lake**	**0.95**	**337**	⇑*i*P	**Pg**	**01 41 59.2**	**-0.6**
	baz=344						
SMLT				S	**Sg**	**01 42 11.3**	**-0.8**
	baz=344						
CHY	**Chiayi**	**0.95**	**301**	⇓P	**Pg**	**01 41 59.4**	**-0.4**
	baz=299						
CHY				*e*S	**Sg**	**01 42 11.9**	**-0.2**
	baz=299						
WGK	**Gukeng**	**0.96**	**315**	P	**Pg**	**01 42 00.1**	**0.0**
	baz=314						
WGK				S	**Sg**	**01 42 12.9**	**+0.3**
	baz=314						
TYC	**Yuchr**	**0.98**	**335**	*i* P	**Pg**	**01 41 59.8**	**-0.7**
	baz=340						
LAY	**Lan-yu**	**0.99**	**167**	*e*P	**Pg**	**01 42 00.6**	**0.0**
	baz=146						
TAI1	**Yung-k'ang**	**1.00**	**272**	⇑P	**Pg**	**01 42 01.5**	**+0.7**
	baz=281						
TAI1				S	**Sg**	**01 42 14.9**	**+1.2**
	baz=281						
HWA	**Hwalien**	**1.00**	**16**	*e*P	**Pg**	**01 42 01.3**	**+0.5**
	baz=8.0						
HWA				*e*S	**Sg**	**01 42 14.7**	**+0.9**
	baz=8.0						
KAU	**Kaohsiung**	**1.02**	**245**	*e*P	**Pg**	**01 42 03.0**	**+1.7**
	baz=241						
WNT	**Mingjian**	**1.04**	**326**	⇑*i*P	**Pg**	**01 42 01.8**	**+0.3**
	baz=325						
WNT				S	**Sg**	**01 42 15.3**	**+0.3**
	baz=325						
SCLT	**Jiali**	**1.04**	**279**	P	**Pg**	**01 42 01.6**	**0.0**
	baz=288						
SCLT				S	**Sg**	**01 42 16.2**	**+1.1**
	baz=288						
CHN8	**Yiju**	**1.06**	**288**	P	**Pg**	**01 42 01.4**	**-0.7**
	baz=286						
CHN8				*e*S	**Sg**	**01 42 16.0**	**+0.1**
	baz=286						
TWD	**Chiawan**	**1.10**	**14**	*e*P	**Pg**	**01 42 00.8**	**-1.8**
	baz=15						
TWD				*e*S	**Sg**	**01 42 16.6**	**-0.4**
	baz=15						
TWP	**Hsiaoliuchiu**	**1.10**	**233**	⇑*i*P	**Pg**	**01 42 05.3**	**+2.7**
	baz=230						
WHF	**Hehuan Shan**	**1.13**	**358**	⇑*e*P	**Pb**	**01 42 01.9**	**-1.5**
	baz=10.0						
HEN	**Hengchun**	**1.13**	**208**	*e*P	**Pb**	**01 42 04.3**	**+0.9**
	baz=192						
HEN				*e*S	**Sg**	**01 42 19.6**	**+1.6**
	baz=192						
TWK1	**Hengchun**	**1.16**	**204**	*e*P	**Pb**	**01 42 01.9**	**-1.9**
	baz=183						
TSEB	**Hengchuen, Pin**	**1.17**	**199**	*e*P	**Pb**	**01 42 03.4**	**-0.6**
	baz=176						
WSF	**Szhu**	**1.18**	**302**	P	**Pb**	**01 42 03.2**	**-0.9**
	baz=300						
WSF				*i* S	**Sb**	**01 42 18.7**	**-0.8**
	baz=300						
NACB	**Ninganchiao**	**1.19**	**13**	*e*Pn	**Pn**	**01 42 03.8**	**-0.6**
NACB				*e*Sn	**Sn**	**01 42 18.4**	**-2.3**
TWT	**Tachien**	**1.24**	**354**	*e*P	**Pn**	**01 42 04.1**	**-1.1**
	baz=353						
TWT				S	**Sb**	**01 42 21.3**	**-0.1**
	baz=353						
WTCT	**Ta-ch'eng**	**1.27**	**312**	*e*P	**Pn**	**01 42 04.8**	**-0.7**
	baz=310						
WTCT				S	**Sb**	**01 42 21.4**	**-0.8**
	baz=310						
TWQ1	**Liyutan**	**1.42**	**340**	⇑*i*P	**Pn**	**01 42 08.5**	**+0.9**
	baz=324						
TWQ1				*e*S	**Sn**	**01 42 26.8**	**+0.4**
	baz=324						
NNS	**Nan Shan**	**1.42**	**2**	*e*P	**Pn**	**01 42 06.5**	**-1.2**
	baz=1.0						
NNS				*i* S	**Sn**	**01 42 26.6**	**+0.1**
	baz=1.0						
ENA	**Nanau**	**1.47**	**16**	*e*P	**Pn**	**01 42 06.0**	**-2.2**
	baz=15						
NSTT	**Nanjuang**	**1.64**	**350**	*e*P	**Pn**	**01 42 11.6**	**+1.0**
	baz=344						
NSTT				S	**Sn**	**01 42 33.3**	**+1.5**
	baz=344						
ENTT	**Nioudou**	**1.64**	**8**	*e*P	**Pn**	**01 42 10.3**	**-0.3**
	baz=32						
ENTT				*e*S	**Sn**	**01 42 31.1**	**-0.7**
	baz=32						
YHNB	**Yeheng**	**1.65**	**2**	*e*Pn	**Pn**	**01 42 10.4**	**-0.3**
YHNB				*e*Sn	**Sn**	**01 42 30.5**	**-1.6**

NSK Sanguang 1.66 2 eP Pn 01 42 10.6 -0.3
baz=358
NSK eS Sn 01 42 34.3 +2.0
baz=358
TWC Suao 1.67 17 eP Pn 01 42 11.3 +0.3
baz=26
TWC eS Sn 01 42 34.8 +2.3
baz=26
PNG Penghu 1.71 289 ⇓P Pn 01 42 10.1 -1.5
baz=277
PNG eS Sn 01 42 30.4 -3.1
baz=277
TWE Neicheng 1.73 11 eP Pn 01 42 11.6 -0.3
baz=34
TWE eS Sn 01 42 32.7 -1.5
baz=34
ILA Ilan 1.79 13 eP Pn 01 42 14.5 +1.8
baz=43
HSN Hsinchu 1.81 350 eP Pn 01 42 14.2 +1.2
HSN eS Sn 01 42 38.9 +2.8
NCU National Centr 1.95 357 eP Pn 01 42 16.2 +1.2
baz=350
NCU eS Sn 01 42 41.7 +2.1
baz=350
TATO Taipei 1.96 5 ePn Pn 01 42 16.4 +1.4
TATO eSn Sn 01 42 42.0 +2.2
TWA Mucha 1.98 7 eP Pn 01 42 16.7 +1.5
baz=39
TAP1 Taipei 2.03 5 eP Pn 01 42 18.3 +2.3
baz=31
TAP1 eS Sn 01 42 43.7 +2.3
baz=31
TWB1 Santiao Chiao 2.08 17 eP Pn 01 42 17.9 +1.2
baz=12
TWB1 eS Sn 01 42 43.6 +0.8
baz=12
TWS1 Kuangyinshan 2.08 3 eP Pn 01 42 18.8 +2.1
baz=33
TWS1 eS Sn 01 42 44.6 +1.8
baz=33
NWF Wu-fen Shan 2.10 12 eP Pn 01 42 17.6 +0.7
baz=32
NWF eS Sn 01 42 45.0 +1.9
baz=32
YOJ Yonaguni jima 2.12 47 P Pn 01 42 17.5 +0.2
YOJ S Sn 01 42 43.2 -0.6
YOJ Yonaguni jima 2.12 47 eP Pn 01 42 16.9 -0.3
baz=62
TWY Chenhua 2.27 7 eP Pn 01 42 21.4 +2.1
baz=46
HATJ Hateruma jima 2.52 65 P Pn 01 42 23.2 +0.5
HATJ S Sn 01 42 53.6 +0.1
IRIF Iriomote-Funau 2.58 59 P Pn 01 42 24.3 +0.7
IRIF eS Sn 01 42 55.8 +0.7
PCYT Pengchaiyu 2.70 15 eP Pn 01 42 26.4 +1.3
baz=52
JKRS Kuro-shima 2.76 63 P Pn 01 42 27.0 +1.0
JKRS S Sn 01 42 59.9 +0.4
JIJ Ishigaki jima 2.93 62 P Pn 01 42 28.5 +0.2
JIJ S Sn 01 43 02.1 -1.5
KNM Kinmen 2.98 299 eP Pn 01 42 29.0 -0.1
baz=296
QZH Quanzhou 3.14 308 ⇓iP Pn 01 42 29.8 -1.5
QZH S Sn 01 43 04.1 -4.9
QZH Smax
comp=N,5μm,0.7s
QZH Smax
comp=E,3μm,0.9s
QZH LR LR
comp=N,20μm,12.6s
QZH LR LR
comp=E,9μm,11.3s
QZH LR LR
comp=Z,16μm,15.2s
JTJ Tarama 3.50 62 P Pn 01 42 36.7 +0.4
JTJ S Sn 01 43 18.7 +0.8
JMJ Miyako jima 2 4.06 63 P Pn 01 42 44.6 +0.6
JMJ S Sn 01 43 31.6 -0.1
CVP Callao Caves 5.30 175 eP Pn 01 43 04.9 +3.8
JKE Kume jima 2 5.98 55 P Pn 01 43 09.5 -0.7
JOW Kunigami 7.38 58 Pn Pn 01 43 29.3 -0.2
comp=Z,7.1nm,0.3s,baz=171,slow=13,SNR=7.1
JOW Sn Sn 01 44 50.4 -3.0
comp=Z,3.6nm,0.3s,baz=135,slow=26,SNR=3.1
SSE Sheshan 8.05 359 P Pn 01 43 39.2 +0.4
SSE S Sn 01 45 06.2 -3.8
SSE Smax
comp=N,356nm,1.1s
SSE Smax
comp=E,153nm,1.1s
SSE LR LR
comp=N,4μm,11.5s
SSE LR LR
comp=E,1μm,11.7s
SSE LR LR
comp=Z,5μm,10.8s
NJ2 Nanjing 9.27 347 eP Pn 01 43 57.7 +2.3
NJ2 AMB AMB
comp=Z,30nm,0.6s
WHN Wuhan 9.74 322 ⇓P Pn 01 43 59.2 -2.7
WHN S Sn 01 45 45.2 -6.3
WHN LR LR
comp=N,8μm,8.5s
WHN LR LR
comp=E,9μm,8.0s
WHN LR LR
comp=Z,10μm,11.0s
QIZ Qiongzhong 11.42 252 P Pn 01 44 28.6 +3.7
QIZ eS Sn 01 46 38.3 +5.6
QIZ LR LR
comp=E,3μm,15.4s
QIZ LR LR
comp=Z,5μm,16.4s
QIZ Qiongzhong 11.42 252 ePn Pn 01 44 25.3 +0.4
comp=Z,67nm,0.6s
TIA Tai'an 13.65 346 eP Pn 01 44 54.6 -0.7
TIA S Sn 01 47 18.0 -9.1
TIA LR LR
comp=E,2μm,11.0s
GYA Guiyang 13.74 287 ⇓iP Pn 01 44 57.4 +0.7
GYA PP 01 45 06.5
GYA S Sn 01 47 32.6 +3.1
GYA AMB AMB
comp=Z,20nm,0.8s
GYA AMB AMB
comp=Z,50nm,3.7s
GYA LR LR
comp=N,1μm,9.9s
GYA LR LR
comp=E,3μm,11.2s
GYA LR LR
comp=Z,3μm,11.1s
XAN Xi'an 15.45 318 P Pn 01 45 17.8 -2.0
XAN PP 01 45 30.5
XAN S Sn 01 48 12.5 +1.4
XAN SS 01 48 29.7
XAN PCP PcP 01 50 20.4 -2.9
XAN AMB AMB
comp=Z,8.0nm,1.5s
XAN AMB AMB
comp=Z,124nm,8.8s
XAN LR LR
comp=N,1μm,13.6s
XAN LR LR
comp=E,2μm,14.6s
XAN LR LR
comp=Z,4μm,14.5s
KSRS Korea Array 15.48 20 Pn Pn 01 45 23.3 +3.2
comp=Z,0.5nm,0.3s,baz=199,slow=12,SNR=19
KSRS LR LR 01 51 53.8
comp=Z,1μm,19.9s,baz=186,slow=39
KMI Kunming 17.09 281 P Pn 01 45 44.0 +3.2
KMI AP pP 01 45 48.9 +3.8
KMI XP sP 01 45 51.5 +5.3
KMI PP 01 45 58.5
KMI S Sn 01 48 52.9 +1.9
KMI XS sS 01 49 00.2 -4.5
KMI AMB AMB
comp=Z,9.0nm,1.1s
KMI AMB AMB
comp=Z,39nm,3.1s
KMI LR LR
comp=N,1μm,8.7s
KMI LR LR
comp=E,2μm,13.3s
CD2 Chengdu 17.50 300 P Pn 01 45 47.8 +1.9
CD2 PP 01 45 59.1
CD2 S Sn 01 49 00.2 -0.7
CD2 SS 01 49 18.0
CD2 PCP PcP 01 50 29.9 +3.4
CD2 AMB AMB
comp=Z,50nm,1.1s
CD2 AMB AMB
comp=Z,280nm,3.9s
CD2 LR LR
comp=N,4μm,8.4s
CD2 LR LR
comp=Z,3μm,13.2s
BJT Baijiatuau 17.51 347 eP Pn 01 45 48.3 +2.4
BJT pmax pmax
comp=Z,39nm,0.7s
BJT Baijiatuau 17.51 347 eP Pn 01 45 48.3 +2.4
comp=Z,39nm,0.7s
BJI Beijing 17.53 347 P Pn 01 45 47.7 +1.5
BJI S Sn 01 49 03.5 +2.1
BJI AMB AMB
comp=Z,28nm,1.0s
BJI AMB AMB
comp=Z,677nm,4.3s
BJI LR LR
comp=N,3μm,13.2s
BJI LR LR
comp=E,2μm,14.7s
BJI LR LR
comp=Z,1μm,14.0s
KKM Kota Kinabalu 17.57 197 eP Pn 01 45 46.1 -0.7
comp=Z,58nm,1.1s
SNY Shenyang 18.86 5 P Pn 01 46 01.5 -1.0
SNY S Sn 01 49 37.0 +3.4
SNY AMB AMB
comp=Z,12nm,1.9s
SNY AMB AMB
comp=Z,298nm,12.0s
SNY LR LR
comp=N,2μm,12.6s
SNY LR LR
comp=E,356nm,9.3s
SNY LR LR
comp=Z,2μm,13.2s
JHJ Hachijo jima 2 19.14 54 LR LR 01 52 30.7
comp=Z,560nm,21.3s,baz=129,slow=34
CBIJ Chichi jima 19.34 74 LR LR 01 52 50.9
comp=Z,308nm,19.5s,baz=188,slow=34
HHC Hu-ho-hao-te 19.59 337 eP Pn 01 46 12.1 +0.8
HHC AP pP 01 46 15.5 +3.0
HHC PP 01 46 30.5
HHC eS Sn 01 49 46.7 -4.6
HHC XS sS 01 49 52.8 -2.3
HHC SS 01 50 13.0
HHC PCP PcP 01 50 31.8 +2.0
HHC SCP ScP 01 54 04.1 -2.1
HHC AMB AMB
comp=Z,58nm,0.9s
HHC AMB AMB
comp=Z,513nm,4.6s
HHC LR LR
comp=N,2μm,13.6s
HHC LR LR
comp=E,1μm,10.7s
HHC LR LR
comp=Z,2μm,15.2s
MAJO Matsushiro 19.88 43 eP Pn 01 46 13.7 -1.1
MAJO pmax pmax
comp=Z,29nm,1.0s
MAJO Matsushiro 19.88 43 eP Pn 01 46 13.7 -1.1
comp=Z,29nm,1.0s
MAT Matsushiro 19.88 43 P Pn 01 46 12.0 -2.8
MAT S Sn 01 49 59.0 +0.6
MJAR Matsushiro Arr 19.88 44 P Pn 01 46 15.3 +0.5
comp=Z,0.7nm,0.3s,baz=234,slow=8.2,SNR=20
MJAR LR LR 01 54 34.8
comp=Z,545nm,19.0s,baz=220,slow=38
BTO Baotou 19.96 334 eP Pn 01 46 13.1 -2.6
LZH Lanzhou 19.98 315 ⇑P Pn 01 46 15.7 -0.2
LZH AP pP 01 46 25.2 +8.5
LZH XP sP 01 46 29.3 +11
LZH PP 01 46 35.5
LZH S Sn 01 49 53.0 -7.7
LZH SS 01 50 22.3
LZH AMB AMB
comp=Z,125nm,1.2s
LZH AMB AMB
comp=Z,469nm,4.8s
LZH LR LR
comp=E,3μm,9.8s
LZH LR LR
comp=Z,4μm,11.2s
CN2 Changchun 21.02 8 eP P 01 46 26.0 +0.6
CN2 eS S 01 50 20.8 +1.3
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.4
CN2 AMB AMB
comp=Z,70nm,3.0s
CN2 LR LR
comp=N,2μm,15.0s,MS4.6
CN2 LR LR
comp=E,1μm,15.0s,MS4.6
CN2 LR LR
comp=Z,2μm,15.0s,MS4.6
CHTO Chiang Mai 21.30 263 ⇓P P 01 46 30.7 +1.9
SNR=6.4
CHTO Chiang Mai 21.30 263 eP P 01 46 29.7 +1.0
CHTO pmax pmax
comp=Z,21nm,0.9s,mb4.5
CHTO Chiang Mai 21.30 263 eP P 01 46 29.7 +1.0
comp=Z,21nm,0.9s,mb4.5
CMAR Chiang Mai Arr 21.40 262 P P 01 46 30.6 +0.8
comp=Z,17nm,0.9s,mb4.4,baz=68,slow=9.1,SNR=25
CMAR PcP PcP 01 50 33.6 +0.1
comp=Z,3.5nm,0.6s,baz=33,slow=0.8,SNR=14
CMAR LR LR 01 55 50.7
comp=Z,1μm,18.3s,MS4.4,baz=75,slow=40
CMAR Chiang Mai Arr 21.40 262 P P 01 46 30.6 +0.8
CMAR 01 50 33.7
MDJ Mudanjiang 22.60 16 P P 01 46 43.4 +1.0
MDJ AP 01 46 46.7
MDJ XP sP 01 46 48.3 +2.3
MDJ S S 01 50 46.9 -3.5
MDJ SCS ScS 01 57 58.5 -0.2
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.3
MDJ AMB AMB
comp=Z,105nm,4.8s
MDJ LR LR
comp=N,1μm,15.4s,MS4.6
MDJ LR LR
comp=E,955nm,15.4s,MS4.6
MDJ LR LR
comp=Z,2μm,15.4s,MS4.6
GUMO Guam 24.22 109 LR LR 01 54 56.6
comp=Z,279nm,19.4s,MS3.8,baz=293,slow=33
GTA Gaotai 24.50 317 ⇑P P 01 47 01.6 +0.4
GTA AP 01 47 05.5
GTA XP sP 01 47 06.8 +1.8
GTA PCP PcP 01 50 40.8 +1.1
GTA S S 01 51 23.1 +1.3
GTA XS sS 01 51 30.3 +4.1
GTA AMB AMB
comp=Z,41nm,1.6s,mb4.7
GTA AMB AMB
comp=Z,341nm,4.2s
GTA LR LR
comp=N,1μm,12.6s,MS4.8
GTA LR LR
comp=E,1μm,13.8s,MS4.8
GTA LR LR
comp=Z,2μm,15.3s,MS4.7
IMP Imphal 25.08 280 ex x 01 47 05.0
HIA Hailar 26.23 358 eP P 01 47 15.6 -1.2
HIA Hailar 26.23 358 eP P 01 47 16.5 -0.3
comp=Z,11nm,0.8s,mb4.5
SHL Shillong 26.92 281 eP P 01 47 24.0 +0.7
ULN Ulaanbaatar 27.29 339 ei P P 01 47 25.5 -0.9
ULN Ulaanbaatar 27.29 339 eP P 01 47 26.1 -0.2
comp=Z,44nm,1.0s,mb5.0
ASAJ Asahikawa 27.38 35 P P 01 47 29.0 +1.8
comp=Z,6.8nm,0.5s,mb4.4,baz=234,slow=8.7,SNR=3.2
ASAJ LR LR 01 58 59.3
comp=Z,1μm,18.9s,MS4.4,baz=194,slow=38
KLR Kul'dur 27.44 15 eP P 01 47 26.2 -1.4
KLR MLR MLR
comp=N,2μm,13.0s,MS4.9
KLR MLR MLR
comp=E,1μm,13.0s,MS4.9
KLR MLR MLR
comp=Z,5μm,13.0s,MS5.3
SONM Songino Array 27.49 338 P P 01 47 28.0 -0.1
comp=Z,17nm,0.8s,mb4.6,baz=159,slow=9.2,SNR=62
SONM PcP PcP 01 50 45.9 -0.4
comp=Z,1.0nm,0.6s,baz=158,slow=1.8,SNR=3.7
SONM LR LR 01 58 58.7
comp=Z,669nm,19.0s,MS4.2,baz=346,slow=38
SONM Songino Array 27.49 338 P P 01 47 28.0 -0.1
SONM 01 50 46.0
HABR Khabarovsk 27.66 20 eP P 01 47 35.7 +6.1
HABR e 01 50 44.0
HABR eS S 01 52 03.7 -7.9
HABR e*SS sS 01 52 21.3 +5.3
LSA Lhasa 27.78 290 P P 01 47 33.3 +2.3
LSA LR LR
comp=E,720nm,18.3s
LSA LR LR
comp=Z,1μm,17.3s,MS4.5
LSA Lhasa 27.78 290 eP P 01 47 33.0 +2.0
LSA pmax pmax
comp=Z,29nm,0.6s,mb5.1
LSA Lhasa 27.78 290 eP P 01 47 33.0 +2.0
comp=Z,29nm,0.6s,mb5.1
KAPI Kappang 27.89 183 P P 01 47 28.8 -3.2
comp=Z,2.9nm,0.4s,mb4.3,baz=236,slow=22,SNR=2.2
KAPI LR LR 01 59 07.5
comp=Z,318nm,21.1s,MS3.9,baz=167,slow=38
TAPN Taplejung 30.66 285 eP P 01 47 57.7 +1.2
comp=Z,81nm,1.1s,mb5.5
ZAK Zakamensk 30.74 337 eP P 01 47 55.9 -1.1
ZAK e 01 49 12.3
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
ODAN Odare 30.94 284 eP P 01 48 00.8 +1.7
RAMN Ramite 31.65 284 eP P 01 48 06.1 +0.8
comp=Z,100nm,1.2s,mb5.5
TLY Talaya 31.70 339 eP P 01 48 04.8 -0.7
TLY e 01 49 13.9
TLY eSS SS 01 55 32.2 +1.4
TLY pmax pmax
comp=Z,19nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,1μm,14.0s,MS4.8
TLY Talaya 31.70 339 eP P 01 48 03.7 -1.8
comp=Z,17nm,1.0s,mb4.8
JIRN Jiri 32.01 286 eP P 01 48 09.7 +1.2
comp=Z,48nm,0.8s,mb5.4
GUN Gumba 32.29 286 eP P 01 48 11.9 +1.0
comp=Z,126nm,1.3s,mb5.6
MOY Mondy 32.62 336 eP P 01 48 13.5 0.0
PKI Pulchoki 32.70 286 eP P 01 48 15.3 +0.8
PKI pmax pmax
comp=Z,18nm,0.6s,mb5.2
PKI Pulchoki 32.70 286 eP P 01 48 15.3 +0.8
comp=Z,18nm,0.6s,mb5.2
PKIN Phulchoki 32.71 286 eP P 01 48 15.3 +0.7
comp=Z,18nm,0.6s,mb5.2
KKN Kakani 32.82 286 eP P 01 48 16.2 +0.7
DMN Daman 32.97 286 eP P 01 48 17.4 +0.5
comp=Z,48nm,1.0s,mb5.4
GKN Gorkha 33.39 286 eP P 01 48 20.9 +0.4
DANN Dangsing 34.16 287 eP P 01 48 27.8 +0.5
comp=Z,101nm,1.2s,mb5.6
KOLN Koldanda 34.30 286 eP P 01 48 29.1 +0.6
comp=Z,81nm,1.2s,mb5.5
WMQ Urumqi 34.55 315 P P 01 48 30.8 +0.3
WMQ PP PP 01 49 47.5 -1.2
WMQ PCP PcP 01 51 04.6 -0.6
WMQ S S 01 54 00.3 +0.8
WMQ SCP ScP 01 54 51.3 +0.6
WMQ SS SS 01 56 10.0 -19
WMQ SCS ScS 01 58 52.5 -1.0
WMQ AMB AMB
comp=Z,17nm,1.5s,mb4.8
WMQ LR LR
comp=N,358nm,14.6s,MS4.3
WMQ LR LR
comp=E,285nm,16.0s,MS4.3
WMQ LR LR
comp=Z,383nm,16.0s,MS4.2
MKAR Makanchi Array 39.26 317 P P 01 49 10.9 +0.5
comp=Z,28nm,0.7s,mb5.1,baz=112,slow=9.9,SNR=220
MKAR PcP PcP 01 51 18.5 -0.8
comp=Z,9.9nm,0.8s,baz=96,slow=4.7,SNR=11
MKAR LR LR 02 06 12.9
comp=Z,201nm,21.4s,MS3.9,baz=110,slow=37
MKAR Makanchi Array 39.26 317⇑eP P 01 49 11.0 +0.5
MKAR Makanchi Array 39.26 317 P P 01 49 10.9 +0.5
MKAR PcP PcP 01 51 18.5 -0.8
MKAR LR LR 02 06 12.9
YAK Yakutsk 39.42 6 eP P 01 49 10.6 -0.9
YAK pmax pmax
comp=Z,15nm,1.5s,mb4.5
YAK MLR MLR
comp=Z,900nm,16.0s,MS4.7
PETK Petropavlovsk- 40.78 33 P P 01 49 23.9 +1.0
comp=Z,2.5nm,0.6s,mb4.0,baz=225,slow=1.0,SNR=6.3
PETK LR LR 02 07 30.9
comp=Z,450nm,18.1s,MS4.4,baz=224,slow=38
PETK Petropavlovsk- 40.78 33 P P 01 49 23.9 +1.0
PETK LR LR 02 07 30.9
PMG Port Moresby 40.97 139 eP P 01 49 23.8 -1.2
PMG pmax pmax
comp=Z,10.0nm,0.9s
PMG Port Moresby 40.97 139 eP P 01 49 23.8 -1.1
comp=Z,9.8nm,0.9s,mb4.4
PET Petropavlovsk 41.22 34 eP P 01 49 31.3 +4.7
PET eS S 01 55 41.9 +1.7
PET pmax pmax
comp=Z,59nm,1.2s,mb5.1
PET MLR MLR
comp=Z,600nm,17.0s,MS4.5
ZALV Zalesovo Beam 41.29 328 P P 01 49 26.9 -0.3
comp=Z,84nm,0.8s,mb5.5,baz=111,slow=8.1,SNR=326
ZALV PcP PcP 01 51 24.3 -1.4
comp=Z,5.2nm,0.9s,baz=108,slow=4.8,SNR=4.7
ZALV LR LR 02 07 31.3
comp=Z,289nm,20.2s,MS4.1,baz=218,slow=37
ZALV Zalesovo Beam 41.29 328 P P 01 49 26.9 -0.3
ZALV 01 51 24.3
ULHL Ulahol 41.97 308 P P 01 49 34.4 +1.5
SNR=10
COEN Coen 42.52 148 eP P 01 49 36.7 -1.0
comp=Z,33nm,0.8s,mb5.1
NVS Novosibirsk 42.56 328⇑iP P 01 49 36.1 -1.4
NVS pmax pmax
comp=N,53nm,1.9s
NVS pmax pmax
comp=E,63nm,1.9s
NVS pmax pmax
comp=Z,92nm,1.9s,mb5.2
TKM2 Tokmak 2 42.58 309 eP P 01 49 38.8 +0.9
TKM2 e 01 51 29.7
TKM2 pmax pmax
comp=Z,38nm,0.9s,mb5.1
TKM2 Tokmak 2 42.58 309 P P 01 49 39.3 +1.4
SNR=40
TKM2 Tokmak 2 42.58 309 eP P 01 49 38.8 +0.9
comp=Z,38nm,0.9s,mb5.1
TKM2 ePcP PcP 01 51 29.7 -0.5
KZA Kyzart 42.65 308 P P 01 49 40.7 +2.2
SNR=12
KBK Karagaybulak 42.99 308 P P 01 49 42.8 +1.6
SNR=22
KURK Kurchatov 43.06 321 ⇓P P 01 49 42.2 +0.5
SNR=23
KURK Kurchatov 43.06 321 P P 01 49 41.7 0.0
comp=Z,36nm,1.0s,mb5.0,baz=114,slow=7.1,SNR=100
KURK Kurchatov 43.06 321 eP P 01 49 41.4 -0.3
KURK e 01 51 30.5
KURK pmax pmax
comp=Z,57nm,1.1s,mb5.2
KURK Kurchatov 43.06 321 eP P 01 49 41.4 -0.3
comp=Z,57nm,1.1s,mb5.2
KURK ePcP PcP 01 51 30.5 -1.2
CHMS Chumysh 43.20 309 P P 01 49 43.9 +0.9
SNR=11
UCH Uchtor 43.22 308 P P 01 49 45.5 +2.4
SNR=6.2
UCH Uchtor 43.22 308 eP P 01 49 45.2 +2.1
comp=Z,44nm,1.4s,mb5.0
FRU Bishkek 43.27 309⇑iP P 01 49 44.0 +0.5
FRU pmax pmax

comp=Z,60nm,1.6s,mb5.1
AAK Ala-Archa 43.31 308 ⇑P **P 01 49 44.9 +1.0**
SNR=6.4
AAK Ala-Archa 43.31 308 ⇑*i*P **P 01 49 44.2 +0.4**
AAK pmax pmax
comp=Z,19nm,2.4s,mb4.4
AAK MLR MLR
comp=Z,200nm,17.0s,MS4.1
AAK Ala-Archa 43.31 308 P **P 01 49 45.5 +1.7**
SNR=9.8
AAK Ala-Archa 43.31 308 *e*P **P 01 49 44.5 +0.7**
comp=Z,12nm,0.9s,mb4.6
AAK *e*PcP PcP 01 51 32.2 -0.4
USP Ospenovka 43.44 309 P **P 01 49 45.7 +0.9**
SNR=11
EKS2 Erkin-Say 43.84 308 P **P 01 49 49.5 +1.4**
SNR=6.7
EKS2 Erkin-Say 43.84 308 *e*P **P 01 49 49.0 +0.9**
comp=Z,11nm,1.0s,mb4.5
EKS2 *e*PcP PcP 01 51 34.0 -0.5
MBWA Marble Bar 43.93 182 *e*P **P 01 49 47.0 -1.9**
comp=Z,10nm,0.9s,mb4.6
WRAB Tennant Creek 44.54 162 *e*P **P 01 49 53.2 -0.6**
WRAB pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
WRAB Tennant Creek 44.54 162 *e*P **P 01 49 53.2 -0.7**
comp=Z,7.7nm,0.9s,mb4.5
WB2 Warramunga Arr 44.55 162 *e*P **P 01 49 51.8 -2.1**
WB2 *e* 01 50 00.3
WB2 *e* 01 50 31.9
WB2 *e*PCP PcP 01 51 36.7 -0.4
KK31 Karatay Array 46.28 308 *i*P **P 01 50 07.3 -0.2**
KK31 pmax pmax
comp=Z,46nm,1.3s,mb5.2
KBL Kabul 46.78 296 *e*P **P 01 50 12.2 +0.7**
KBL *e* 01 51 44.1
KBL pmax pmax
comp=Z,54nm,1.0s,mb5.4
KBL Kabul 46.78 296 *e*P **P 01 50 12.2 +0.7**
comp=Z,54nm,1.0s,mb5.4
KBL *e*PcP PcP 01 51 44.1 -0.7
ASAR Alice Springs 47.98 164 P **P 01 50 19.8 -1.1**
comp=Z,1.9nm,0.6s,mb4.3,baz=355,slow=15,SNR=24
ASAR PcP PcP 01 51 47.5 -1.6
comp=Z,3.3nm,1.0s,baz=341,slow=3.6,SNR=5.3
ASAR ScP ScP 01 55 39.0 -4.9
comp=Z,1.9nm,1.0s,baz=354,slow=4.0,SNR=6.1
ASAR Alice Springs 47.98 164 P **P 01 50 19.8 -1.1**
ASAR 01 51 47.5
VOSK Vostochnaya 48.22 321 P **P 01 50 21.8 -0.7**
VOSK pmax pmax
comp=Z,20nm,1.1s,mb5.1
BVA0 Borovoye Array 48.65 321 *i*P **P 01 50 25.0 -0.8**
BVA0 pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
BRVK Borovoye 48.73 321 ⇑P **P 01 50 27.0 +0.7**
SNR=19
BRVK Borovoye 48.73 321 *e*P **P 01 50 26.4 +0.1**
BRVK pmax pmax
comp=Z,72nm,1.1s,mb5.6
BRVK Borovoye 48.73 321 *e*P **P 01 50 26.4 0.0**
comp=Z,72nm,1.1s,mb5.6
TIXI Tiksi 48.85 3 *e*P **P 01 50 26.3 -0.8**
TIXI pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
TIXI MLR MLR
comp=Z,700nm,17.0s,MS4.7
TIXI Tiksi 48.85 3 *e*P **P 01 50 25.4 -1.7**
comp=Z,8.8nm,0.9s,mb4.8
TIXI *e*PcP PcP 01 51 50.3 -1.2
CTA Charters Tower 49.27 148 *e*P **P 01 50 30.7 -0.2**
comp=Z,7.5nm,0.9s,mb4.7
CTA *e*PCP PcP 01 51 54.4 +0.6
CTA Charters Tower 49.27 148 LR LR 02 10 14.9
comp=Z,174nm,20.6s,MS4.0,baz=48,slow=35
CTA Charters Tower 49.27 148 *e*P **P 01 50 30.7 -0.2**
CTA *e* 01 51 54.4
CTA pmax pmax
comp=Z,8.0nm,0.9s
CTAO Charters Tower 49.27 148 *e*P **P 01 50 30.4 -0.5**
CTAO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CTAO Charters Tower 49.27 148 *e*P **P 01 50 30.4 -0.5**
comp=Z,9.4nm,0.8s,mb4.9
BILL Bilibino 52.74 20 *e*P **P 01 50 54.8 -1.6**
BILL *e* 01 52 06.5
BILL pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,700nm,18.0s,MS4.8
FORT Forrest 53.87 173 *e*P **P 01 51 04.5 -0.6**
comp=Z,16nm,0.6s,mb5.1
AB31 Akbulak array 54.34 315 P **P 01 51 07.7 -0.8**
AB31 pmax pmax
comp=Z,99nm,1.4s,mb5.5
KLBR Kellerberrin 54.40 184 *e*P **P 01 51 08.1 -0.9**
comp=Z,64nm,1.8s,mb5.2
SVE Sverdlovsk 55.06 324⇓*e*P **P 01 51 14.0 +0.5**
SVE *e*S **S 01 58 43.7 -12**
SVE pmax pmax
comp=Z,123nm,1.0s,mb5.9
SVE MLR MLR
comp=Z,473nm,14.0s,MS4.7
ABKT Ailbek 55.49 301 P **P 01 51 18.3 +1.3**
comp=Z,184nm,1.2s,mb6.0,SNR=13
AKTO Aktyubinsk 55.69 316 P **P 01 51 17.5 -0.7**
AKTO pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
ARU Arti 56.11 323*c* *i*P **P 01 51 20.8 -0.3**
ARU *e*S **S 01 59 07.1 -2.9**
ARU SS SS 02 02 53.9 -2.1
ARU pmax pmax
comp=Z,99nm,1.0s,mb5.8
ARU Arti 56.11 323 *e*P **P 01 51 20.8 -0.3**
comp=Z,68nm,0.8s,mb5.7
SOKR Solikamsk 57.56 327⇑*i*P **P 01 51 32.3 +0.9**
SOKR S **S 01 59 37.3 +8.2**
SOKR pmax pmax
comp=Z,100nm,1.7s,mb5.6
SOKR MLR MLR
comp=Z,750nm,16.0s,MS4.9
STKA Stephens Creek 57.93 160 *e*P **P 01 51 33.5 -0.7**
comp=Z,7.9nm,0.6s,mb4.9
STKA Stephens Creek 57.93 160 P **P 01 51 33.3 -0.9**
comp=Z,8.8nm,0.6s,mb5.0,baz=334,slow=6.3,SNR=20
STKA LR LR 02 13 49.8
comp=Z,81nm,21.2s,MS3.8,baz=205,slow=33
HOQ Hoqain 58.32 284⇓P **P 01 51 37.9 +0.6**
SNR=5.2
ARMA Armidale 60.58 150 *e*P **P 01 51 53.0 +0.4**
ARMA *e* 01 52 38.9
CNB Canberra Magne 63.81 155 *e*P **P 01 52 14.0 -0.2**
TOO Toolangi 64.41 159⇓*i*P **P 01 52 18.0 -0.1**
MIB Mutribah 65.58 293 *e*P **P 01 52 25.3 -0.8**
baz=293
MIB AMb AMB 01 52 26.7
comp=Z,36nm,1.1s,mb5.3,baz=293
RDF Al-Radifah 65.61 292 *e*P **P 01 52 25.6 -0.7**
baz=292
RDF AMb AMB 01 52 26.9
comp=Z,53nm,1.2s,mb5.5,baz=292
NAY Al-Naaiem 65.80 293 *e*P **P 01 52 26.6 -0.9**
baz=293
NAY AMb AMB 01 52 27.9
comp=Z,22nm,1.3s,mb5.0,baz=293
VRHR Novokhopersk 66.06 317 *e*P **P 01 52 28.2 -0.6**
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,20nm,1.2s
VRHR pmax pmax
comp=E,40nm,0.8s
KLMR Klimovskoe 66.21 328⇓*i*P **P 01 52 29.2 -0.4**
KLMR pmax pmax
comp=Z,61nm,1.0s,mb5.6
KIV Kislovodsk 66.42 309⇓P **P 01 52 32.2 +1.1**
SNR=21
KIV Kislovodsk 66.42 309 *e*P **P 01 52 31.8 +0.6**
KIV pmax pmax
comp=Z,130nm,1.1s,mb5.9
KIV MLR MLR
comp=Z,188nm,19.0s,MS4.3
KIV Kislovodsk 66.42 309 *e*P **P 01 52 31.8 +0.7**
comp=Z,144nm,1.1s,mb5.9
HAKT HAKKARI 66.85 302 *i*P **P 01 52 38.4 +4.3**
VORD Divnogorie 67.54 317 *e*P **P 01 52 37.6 -0.6**
VORD pmax pmax
comp=Z,20nm,0.9s,mb5.2
VORD pmax pmax
comp=N,80nm,0.7s
VORD pmax pmax
comp=E,60nm,0.6s
VSR Storozhevoye 67.58 318 *e*P **P 01 52 38.0 -0.4**
VSR pmax pmax
comp=Z,20nm,1.2s,mb5.0
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.1s
DBAD Bademkaya 67.68 306 *i*P **P 01 52 38.5 -0.7**
DBAD *i*P pP 01 52 39.9 -2.3
HOMI Horasan 67.72 305 *i*P **P 01 52 34.0 -5.5**
MOS Moscow 67.80 323 *e*P **P 01 52 38.1 -1.6**
MOS pmax pmax
comp=Z,104nm,1.2s,mb5.7
ERZM Erzurum 68.15 305 *i*P **P 01 52 43.8 +1.5**
APA Apatity 68.17 336⇓*i*P **P 01 52 41.0 -0.9**
APA pmax pmax
comp=Z,22nm,1.2s,mb5.1
APA MLR MLR
comp=Z,700nm,14.0s,MS5.0
OBN Obninsk 68.49 322⇓*i*P **P 01 52 43.6 -0.5**
OBN *e* 01 53 07.0
OBN pmax pmax
comp=Z,100nm,1.6s,mb5.6
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.5
OBN Obninsk 68.49 322 *e*P **P 01 52 42.9 -1.2**
comp=Z,31nm,0.8s,mb5.4
BNGL BINGOL 68.52 304 *i*P **P 01 52 44.8 +0.2**
BEST Besiri 68.67 303 *i*P **P 01 52 46.0 +0.5**
JOF Joensuu 69.78 331 *e*p **P 01 52 49.6 -2.4**
comp=Z,10nm,0.9s,mb4.8
JOF Joensuu 69.78 331 *e*P **P 01 52 49.6 -2.4**
JOF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ANN Anapa 69.94 311 *e*P **P 01 52 52.0 -1.3**
ANN *e*S S 02 02 00.7 -2.9
ANN pmax pmax
comp=Z,206nm,1.3s,mb5.9
KEV Kevo 70.10 338 *e*p **P 01 52 52.0 -1.8**
comp=Z,5.2nm,0.7s,mb4.6
KEV Kevo 70.10 338 *e*P **P 01 52 52.0 -1.8**
KEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ELZG Elazig 70.28 304 *i*P **P 01 52 54.1 -1.4**
ARCES ARCESS Array B 70.67 338 P **P 01 52 56.5 -0.8**
comp=Z,4.6nm,0.7s,mb4.5,baz=51,slow=2.7,SNR=13
ARCES LR LR 02 26 48.9
comp=Z,214nm,18.1s,MS4.4,baz=184,slow=38
AKCD Akcadag 71.13 304 *i*P **P 01 53 01.2 +0.5**
GZT Gaziantep 71.65 303 *i*P **P 01 53 04.6 +0.8**
SIM Simferopol' 72.20 312*c* *i*P **P 01 53 07.9 +0.9**
SIM pmax pmax
comp=Z,68nm,0.8s,mb5.6
SIM MLR MLR
comp=Z,170nm,19.2s,MS4.3
VSU Vasula 73.02 327 *e*P **P 01 53 10.8 -0.8**
VSU pmax pmax
comp=Z,82nm,1.0s,mb5.6
MNK Minsk 73.55 323⇑*e*P **P 01 53 13.0 -1.8**
MNK pmax pmax
comp=Z,210nm,2.0s,mb5.7
BALT Daday 73.63 309 *i*P **P 01 53 14.9 -0.7**
AKASG Malin Array Be 73.82 319 P **P 01 53 15.9 -0.6**
comp=Z,14nm,0.8s,mb5.0,baz=60,slow=5.9,SNR=45
AKASG LR LR 02 31 16.0
comp=Z,129nm,18.8s,MS4.2,baz=65,slow=40
AKASG Malin Array Be 73.82 319 *i*P **P 01 53 15.8 -0.7**
AKASG pmax pmax
comp=Z,14nm,0.8s
AKBB Malin Array Si 73.82 319 *e*P **P 01 53 15.4 -1.1**
KIEV Kiev 73.83 319 *e*P **P 01 53 15.4 -1.1**
KIEV pmax pmax
comp=Z,44nm,1.4s,mb5.2
KIEV Kiev 73.83 319 *e*P **P 01 53 15.4 -1.1**
comp=Z,44nm,1.4s,mb5.2
BR131 Keskin Array S 73.96 307 *e*P **P 01 53 17.8 +0.3**
comp=Z,14nm,0.8s,mb4.9
BRTR Keskin Array B 73.96 307 P **P 01 53 17.8 +0.2**
comp=Z,21nm,1.0s,mb5.0,baz=112,slow=6.1,SNR=69
BRTR LR LR 02 28 29.9
comp=Z,87nm,20.2s,MS4.0,baz=262,slow=38
BRTR Keskin Array B 73.96 307⇑*e*P **P 01 53 17.7 +0.2**
ANTO Ankara 74.54 307 P **P 01 53 21.6 +0.7**
ANTO Ankara 74.54 307⇓*i*P **P 01 53 21.5 +0.6**
ANTO Ankara 74.54 307 *e*P **P 01 53 21.3 +0.4**
comp=Z,69nm,1.3s,mb5.4
CSS Prodhromos 75.62 302 *e*P **P 01 53 27.4 +0.2**
comp=Z,25nm,0.9s,mb5.1
TLCR 75.73 313⇑*i*P **P 01 53 27.7 0.0**
TLCR 75.73 313⇑P **P 01 53 27.7 0.0**
IAS Iasi 75.92 315 P **P 01 53 29.1 +0.4**
SUW Suwalki 76.30 323 *e*P **P 01 53 30.8 +0.1**
SUW LMZ 02 31 23.5
comp=Z,300nm,18.1s
VRI Vrincioaia 76.90 314⇑*i*P **P 01 53 34.9 +0.6**
VRI Vrincioaia 76.90 314⇑P **P 01 53 34.9 +0.6**
PLOR Plostina 76.96 314⇑*i*P **P 01 53 34.9 +0.3**
LVV L'vov 77.26 319 *e*P **P 01 53 35.6 -0.6**
BUR08 Bucovina Array 77.29 316⇓*i*P **P 01 53 36.5 +0.1**
BUR08 Bucovina Ar. S 77.29 316 *e*P **P 01 53 36.4 -0.1**
MLR Muntele Rosu 77.55 314⇑*i*P **P 01 53 38.3 +0.4**
MLR Muntele Rosu 77.55 314⇑P **P 01 53 38.3 +0.4**
KWP Kalwaria 78.13 319 *e*P **P 01 53 41.4 +0.3**
KWP Kalwaria 78.13 319⇓*i*P **P 01 53 41.4 +0.3**
VOIR 78.16 314⇑*i*P **P 01 53 41.7 +0.4**
KOLS Kolonicke sedl 78.65 318 *e*P **P 01 53 44.0 0.0**
KOLS pmax pmax
comp=Z,14nm,1.4s,mb4.7
KOLS Kolonicke sedl 78.65 318 *e*P **P 01 53 44.0 0.0**
KOLS *e* 01 54 03.1
KOLS Kolonicke sedl 78.65 318 *e*P **P 01 53 44.0 0.0**
comp=Z,14nm,1.4s,mb4.7
KOLS *e* 01 54 03.1
UZH Uzhgorod 78.75 318 *e*P **P 01 53 39.3 -5.2**
UZH *i* 01 53 44.5
STHS Stebnicka Huta 79.09 319 *i*P **P 01 53 46.7 +0.3**
STHS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
STHS Stebnicka Huta 79.09 319 *i*P **P 01 53 46.7 +0.3**
comp=Z,9.5nm,1.2s,mb4.6
STHS *e* 01 54 09.8
CRVS Cervenica-Dubn 79.16 319 *e*P **P 01 53 46.6 -0.2**
CRVS pmax pmax
comp=Z,24nm,1.7s,mb4.8
CRVS Cervenica-Dubn 79.16 319 *e*P **P 01 53 46.6 -0.2**
comp=Z,24nm,1.7s,mb4.9
DRGR 79.18 316⇓*i*P **P 01 53 47.5 +0.6**
DRGR 79.18 316⇓P **P 01 53 47.5 +0.5**
NB2 NORSAR Subarra 79.31 332 P **P 01 53 45.6 -1.8**
comp=Z,6.3nm,0.8s,mb4.6,baz=61,slow=5.9
NOA NORSAR Array B 79.31 332 P **P 01 53 46.0 -1.4**
comp=Z,8.9nm,0.8s,mb4.8,baz=60,slow=5.5,SNR=24
NOA PP PP 01 56 47.2 +0.5
comp=Z,1.6nm,0.8s,baz=70,slow=8.9,SNR=3.4
NOA LR LR 02 33 00.5
comp=Z,370nm,19.6s,MS4.7,baz=60,slow=39
NOA NORSAR Array B 79.31 332 P **P 01 53 46.0 -1.4**
NOA 01 56 47.2
NOA NORSAR Array B 79.31 332 P **P 01 53 46.0 -1.4**
NOA PP PP 01 56 47.2 +0.5
NOA LR LR 02 33 00.5
NAO01 NORSAR Array S 79.55 332 *e*P **P 01 53 48.1 -0.6**
comp=Z,2.4nm,0.4s,mb4.5
OJC Ojcow 79.64 320 *e*P **P 01 53 49.3 -0.1**
NIE Niedzica 79.66 319 *e*P **P 01 53 50.2 +0.7**
GZR Gura Zlata 79.66 315 P **P 01 53 50.5 +0.9**
GZR Gura Zlata 79.66 315⇓*i*P **P 01 53 50.0 +0.4**
GZR Gura Zlata 79.66 315⇓P **P 01 53 50.0 +0.4**
BZS Buzias 80.33 315⇑*i*P **P 01 53 52.8 -0.4**
BZS Buzias 80.33 315⇑P **P 01 53 52.9 -0.3**
VTS Vitosha 80.43 312⇑*i*P **P 01 53 54.4 +0.6**
VTS Vitosha 80.43 312⇑P **P 01 53 54.4 +0.6**
PSZ Piszkesteto 80.51 318 *e*P **P 01 53 54.5 +0.4**
PSZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PSZ Piszkesteto 80.51 318⇓*i*P **P 01 53 55.2 +1.1**
PSZ Piszkesteto 80.51 318 *e*P **P 01 53 54.5 +0.4**
comp=Z,10nm,1.0s,mb4.7
OKC Ostrava-Krasne 80.77 320 *e*P **P 01 53 55.3 -0.2**
VYHS Vyhne 80.92 319 *e*P **P 01 53 56.3 0.0**
VYHS pmax pmax
comp=Z,17nm,1.0s,mb4.9
VYHS Vyhne 80.92 319 *e*P **P 01 53 56.3 0.0**
comp=Z,17nm,1.0s,mb4.9
KOLL Kolacno 81.15 319 *e*P **P 01 53 58.2 +0.7**
KOLL Kolacno 81.15 319 *e*P **P 01 53 58.3 +0.8**
KSP Ksiaz 81.42 322 *e*P **P 01 53 59.8 +0.9**
KSP LMZ 02 32 23.7
comp=Z,400nm,19.5s
DPC Dobruska-Polom 81.62 321 *e*P **P 01 54 00.2 +0.2**
UPC Upice 81.73 322 *e*P **P 01 53 59.3 -1.2**
SMOL Smolenice 81.76 319 *e*P **P 01 54 01.2 +0.4**
VRAC Vranov 81.91 320⇓P **P 01 54 02.1 +0.6**
PKSM Moragy 81.99 317⇑*i*P **P 01 54 02.1 +0.1**
ZST Bratislava 82.09 319 *e*P **P 01 54 03.0 +0.5**
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZST Bratislava 82.09 319 *e*P **P 01 54 03.0 +0.5**
comp=Z,5.9nm,0.9s,mb4.5
PVCC Panska Ves 82.54 322 *e*P **P 01 54 04.8 0.0**
TREC Trest 82.57 321 *e*P **P 01 54 05.0 0.0**
BRG Berggiesshubel 82.73 322 *e*P **P 01 54 04.9 -0.9**
BRG pmax pmax
comp=Z,19nm,1.9s,mb4.8
BRG pmax pmax
comp=Z,16nm,1.8s,mb4.8
BRG Berggiesshubel 82.73 322 *e*P **P 01 54 04.9 -0.9**
comp=Z,31nm,1.9s,mb5.0
BRG *e* 01 54 27.0
comp=Z,26nm,1.8s
PRU Pruhonice 82.80 321 *e*P **P 01 54 07.0 +0.8**
CONA Conrad Observa 82.96 319⇑*i*P **P 01 54 06.9 -0.1**
comp=Z,19nm,1.4s,mb4.9
CSNA Conrad Observa 82.96 319⇑*i*P **P 01 54 06.8 -0.3**
comp=Z,17nm,1.3s,mb4.9
CLL Collm 83.06 323 *i*P **P 01 54 06.7 -0.8**
CLL *e* 01 54 24.0
CLL pmax pmax
comp=Z,16nm,1.0s,mb5.0
CLL Collm 83.06 323 *i*P **P 01 54 06.7 -0.8**
comp=Z,16nm,1.0s,mb5.0
CLL *ex* x 01 54 24.0
ABPO Ambohimpanom 83.50 246 *e*P **P 01 54 11.3 +1.0**
comp=Z,50nm,1.9s,mb5.3
SUMG Summit 83.67 354 *e*P **P 01 54 09.7 -0.6**
comp=Z,7.3nm,0.8s,mb4.9
KHC Kasperske Hory 83.76 321 *e*P **P 01 54 10.8 -0.3**
GEC2 GERESS Array S 83.82 321 *e*P **P 01 54 11.0 -0.5**
comp=Z,3μm,1.1s
GERES GERESS Array B 83.82 321 P **P 01 54 10.7 -0.7**
comp=Z,5.4nm,0.8s,mb4.7,baz=57,slow=4.9,SNR=32
GERES LR LR 02 36 37.5
comp=Z,176nm,20.5s,MS4.4,baz=76,slow=39
NKC Novy Kostel 83.88 322 *e*P **P 01 54 12.2 +0.5**
MOA Molln 83.95 320⇓*i*pP pP 01 54 12.2 -2.9
comp=Z,20nm,1.5s
YKA Yellowknife Ar 84.00 23 P **P 01 54 11.0 -1.1**
comp=Z,3.1nm,0.6s,mb4.6,baz=314,slow=4.8,SNR=37
YKA PKKPbc PKKPbc 02 12 24.6 -3.5
comp=Z,0.2nm,0.6s,baz=131,slow=2.4,SNR=4.2
YKA LR LR 02 36 54.1
comp=Z,99nm,20.9s,MS4.2,baz=105,slow=39
YKA Yellowknife Ar 84.00 23 P **P 01 54 11.0 -1.1**
YKA PKKPbc PKKPbc 02 12 24.6 -3.5
YKA LR LR 02 36 54.1
SOKA Soboth 84.03 318⇑*i*P **P 01 54 11.6 -1.0**
comp=Z,14nm,1.0s,mb5.0
MOX Moxa 84.14 323 *e*P **P 01 54 13.5 +0.4**
comp=Z,17nm,1.5s,mb5.0
MOX
comp=Z,400nm,17.0s
MOX Moxa 84.14 323 *e*P **P 01 54 13.5 +0.4**
MOX pmax pmax
comp=Z,17nm,1.5s,mb5.0
MOX MLR MLR
comp=Z,400nm,17.0s,MS4.9
LEGS Legarje 84.18 318 *e*P **P 01 54 13.7 +0.3**
LJU Ljubljana 84.63 318 *e*P **P 01 54 15.3 -0.3**
GRA1 Grafenberg Arr 84.83 322 *e*P **P 01 54 17.4 +0.8**
comp=Z,12nm,1.0s,mb5.0
GRF Grafenberg Arr 84.83 322 *e*P **P 01 54 17.4 +0.8**
GRF pmax pmax
comp=Z,12nm,1.0s,mb5.0
GRF Grafenberg Arr 84.83 322 *e*P **P 01 54 17.4 +0.8**
GRF pmax pmax
comp=Z,12nm,1.0s,mb5.0
GRF Grafenberg Arr 84.83 322 *e*P **P 01 54 17.4 +0.8**
comp=Z,12nm,1.0s,mb5.0
CDF Champ du Feu 87.72 322 *e*P **P 01 54 29.7 -1.1**
GIVF Givet 88.12 325 *e*P **P 01 54 31.7 -1.0**
HINF Hinteralfeld 88.28 322 *e*P **P 01 54 32.9 -0.6**
HAU Haudompre 88.46 322 *e*P **P 01 54 33.0 -1.3**
comp=Z,24nm,1.1s,mb5.0
HAU *e*MLR MLR
comp=Z,345nm,19.0s,MS4.5
HAU Haudompre 88.46 322 *e*P **P 01 54 33.0 -1.3**
HAU pmax pmax
comp=Z,12nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,350nm,19.0s,MS4.8
HAU Haudompre 88.46 322 *e*P **P 01 54 33.0 -1.3**
comp=Z,12nm,1.1s,mb5.0
HAU LR LR
comp=Z,350nm,19.0s,MS4.8
BAIF Baives 88.47 325 *e*P **P 01 54 32.6 -1.8**
MEZF Maizieres J'vi 88.90 323 *e*P **P 01 54 36.5 +0.1**
comp=Z,11nm,0.7s,mb5.0
MEZF Maizieres J'vi 88.90 323 *e*P **P 01 54 36.5 +0.1**
comp=Z,11nm,0.7s,mb5.3
CABF La Chapelle 89.38 321 *e*P **P 01 54 37.5 -1.2**
LPG La Plagne 89.60 320 *e*P **P 01 54 39.4 -0.4**
comp=Z,9.2nm,0.6s,mb5.0
LPG La Plagne 89.60 320 *e*P **P 01 54 39.4 -0.4**
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
LPG La Plagne 89.60 320 *e*P **P 01 54 39.4 -0.4**
comp=Z,4.6nm,0.6s,mb5.0
LPL La Plagne 89.60 320 *e*P **P 01 54 39.3 -0.5**
comp=Z,7.8nm,0.6s,mb4.9
LPL La Plagne 89.60 320 *e*P **P 01 54 39.3 -0.5**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
LPL La Plagne 89.60 320 *e*P **P 01 54 39.3 -0.5**
comp=Z,3.9nm,0.6s,mb4.9
BNI Bardonecchia 89.89 320 *e*P **P 01 54 40.6 -0.5**
BNI pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
BNI Bardonecchia 89.89 320 *e*P **P 01 54 40.6 -0.5**
comp=Z,9.5nm,1.0s,mb5.1
MBDF Montbardon 90.01 320 *e*P **P 01 54 41.6 -0.1**
comp=Z,8.1nm,0.8s,mb4.8
MBDF Montbardon 90.01 320 *e*P **P 01 54 41.6 -0.1**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
MBDF Montbardon 90.01 320 *e*P **P 01 54 41.6 -0.1**
comp=Z,4.1nm,0.8s,mb4.8
SBF Sospel 90.08 319 *e*P **P 01 54 40.7 -1.3**
LOR Lormes 90.27 323 *e*P **P 01 54 42.3 -0.5**
comp=Z,37nm,1.3s,mb5.3
LOR *e*MLR MLR
comp=Z,194nm,21.5s,MS4.2
LOR Lormes 90.27 323 *e*P **P 01 54 42.3 -0.5**
LOR pmax pmax
comp=Z,19nm,1.3s,mb5.3
LOR MLR MLR
comp=Z,190nm,21.5s,MS4.5
LOR Lormes 90.27 323 *e*P **P 01 54 42.3 -0.5**
comp=Z,19nm,1.3s,mb5.3
LOR LR LR
comp=Z,190nm,21.5s,MS4.5
ORIF Oris-en-Rattie 90.43 320 *e*P **P 01 54 42.8 -0.9**
comp=Z,11nm,0.8s,mb4.9
ORIF *e*MLR MLR
comp=Z,278nm,20.0s,MS4.4
ORIF Oris-en-Rattie 90.43 320 *e*P **P 01 54 42.8 -0.9**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 90.43 320 *e*P **P 01 54 42.8 -0.9**
comp=Z,5.6nm,0.8s,mb5.0
SSF Saint Saulge 90.58 323 *e*P **P 01 54 44.2 -0.1**
comp=Z,9.4nm,0.9s,mb4.8
SSF Saint Saulge 90.58 323 *e*P **P 01 54 44.2 -0.1**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SSF	Saint Saulge	90.58	323	eP	P	01 54 44.2	-0.1
	comp=Z,4.7nm,0.9s,mb4.8						
SMF	Signal de Mont	90.64	322	eP	P	01 54 43.5	-1.1
	comp=Z,17nm,0.8s,mb5.2						
SMF	Signal de Mont	90.64	322	eP	P	01 54 43.5	-1.1
SMF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
SMF	Signal de Mont	90.64	322	eP	P	01 54 43.5	-1.1
	comp=Z,8.6nm,0.8s,mb5.1						
AVF	Avril sur Loir	90.83	323	eP	P	01 54 44.3	-1.1
	comp=Z,18nm,0.8s,mb5.2						
AVF	Avril sur Loir	90.83	323	eP	P	01 54 44.3	-1.1
AVF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
AVF	Avril sur Loir	90.83	323	eP	P	01 54 44.3	-1.1
	comp=Z,8.9nm,0.8s,mb5.2						
HYF	Humbligny	90.94	323	eP	P	01 54 44.8	-1.2
SMRF	Simiane la Rot	91.14	319	eP	P	01 54 46.8	-0.2
VIVF	Saint-Julien-l	91.18	321	eP	P	01 54 46.1	-1.0
	comp=Z,7.7nm,0.8s,mb4.8						
VIVF	Saint-Julien-l	91.18	321	eP	P	01 54 46.1	-1.0
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
VIVF	Saint-Julien-l	91.18	321	eP	P	01 54 46.1	-1.0
	comp=Z,3.8nm,0.8s,mb4.8						
BGF	Bois d'Agland	91.24	323	eP	P	01 54 45.6	-1.8
	comp=Z,13nm,0.9s,mb5.0						
BGF	Bois d'Agland	91.24	323	eP	P	01 54 45.6	-1.8
BGF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
BGF	Bois d'Agland	91.24	323	eP	P	01 54 45.6	-1.8
	comp=Z,6.4nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	91.76	323	eP	P	01 54 48.9	-0.9
	comp=Z,14nm,1.0s,mb4.9						
TCF	Toulx Ste Croi	91.76	323	eP	P	01 54 48.9	-0.9
TCF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
TCF	Toulx Ste Croi	91.76	323	eP	P	01 54 48.9	-0.9
	comp=Z,6.8nm,1.0s,mb4.9						
NEW	Newport	91.90	35	eP	P	01 54 50.3	-0.1
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	Newport	91.90	35	eP	P	01 54 50.3	-0.1
	comp=Z,4.4nm,0.8s,mb4.8						
CAF	Calviac	92.65	322	eP	P	01 54 52.8	-1.1
RJF	Les Rejaudoux	92.73	322	eP	P	01 54 54.0	-0.3
	comp=Z,22nm,0.8s,mb5.4						
RJF				eMLR	MLR		
	comp=Z,266nm,17.0s,MS4.5						
RJF	Les Rejaudoux	92.73	322	eP	P	01 54 54.0	-0.3
RJF				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
RJF				MLR	MLR		
	comp=Z,270nm,17.0s,MS4.8						
RJF	Les Rejaudoux	92.73	322	eP	P	01 54 54.0	-0.3
	comp=Z,11nm,0.8s,mb5.3						
RJF				LR	LR		
	comp=Z,270nm,17.0s,MS4.8						
FCC	Fort Churchill	93.42	18	eP	P	01 54 56.5	-0.7
	comp=Z,0.3nm,1.1s						
MTLF	Montolieu	93.50	320	eP	P	01 54 56.3	-1.6
PPT	Papeete	95.91	106	LR	LR	02 33 19.5	
	comp=Z,169nm,21.0s,MS4.5,baz=284,slow=32						
HLID	Hailey	96.33	37	eP	P	01 55 12.0	+1.1
	comp=Z,3.2nm,1.1s,mb4.7						
BOZ	Bozeman (W)	96.46	34	eP	P	01 55 11.3	-0.1
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.4						
BOZ	Bozeman (W)	96.46	34	eP	P	01 55 11.3	-0.1
	comp=Z,1.4nm,0.6s,mb4.6						
NVAR	Mina Array Bea	97.21	43	P	P	01 55 14.9	-0.1
	comp=Z,0.3nm,0.4s,mb4.1,baz=328,slow=3.2,SNR=3.4						
PDAR	Pinedale Array	99.51	35	LR	LR	02 37 50.9	
	comp=Z,153nm,20.6s,MS4.5,baz=166,slow=34						
MAW	Mawson	100.03	199	LR	LR	02 39 00.1	
	comp=Z,78nm,18.2s,MS4.2,baz=274,slow=34						
VNDA	Vanda	103.12	172	PKKPbc	PKKPbc	02 11 35.9	-3.1
	comp=Z,0.2nm,0.7s,baz=114,slow=3.6,SNR=3.6						
TORD	Torodi Ar. Bea	110.83	295	PKiKP	PKiKP	02 00 14.9	-1.0
	comp=Z,1.0nm,0.9s,baz=25,slow=2.1,SNR=5.6						
TORD				PKKPab	PKKPab	02 11 23.1	-1.9
	comp=Z,1.2nm,0.8s,baz=253,slow=3.7,SNR=6.0						
TXAR	Lajitas Array	112.31	42	PKiKP	PKiKP	02 00 18.3	-0.2
	comp=Z,0.6nm,0.8s,baz=328,slow=2.1,SNR=6.3						
QSPA	South Pole Qui	112.81	180	PKKPbc	PKKPbc	02 11 05.3	-3.0
	comp=Z,1.2nm,0.7s,baz=350,slow=1.5,SNR=3.8						
DBIC	Dimbokro	119.69	293	PKP	PKPdf	02 00 31.8	-1.2
	comp=Z,3.0nm,0.8s,baz=285,slow=3.6,SNR=5.8						
LIC	Lamto	120.06	292⇑	iPKIKP	PKPdf	02 00 32.4	-1.3
	comp=Z,12nm,0.8s						
SDV	Santo Domingo	146.21	22	ePKPbc	PKPbc	02 01 20.8	-2.5
OTAV	Otavalo	149.94	42	ePKPdf	PKPdf	02 01 28.5	0.0
OTAV				ePKPbc	PKPbc	02 01 33.5	+0.2
BDFB	Brasilia	167.54	304	PKP	PKPdf	02 01 48.7	-0.3
	comp=Z,2.8nm,1.0s,baz=90,slow=13,SNR=5.0						
BDFB				PKPab	PKPab	02 02 54.2	-0.5
	comp=Z,2.0nm,0.8s,baz=118,slow=17,SNR=5.0						

IDC 05 02:33:21.0±2.7, 277S×14196E, h0km, mb4.0/3, mb1 4.3/4, mb1mx3.9/15, mbtmp4.3/4, Error ellipse: s-maj=83.8km s-min=28.7km az=98.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	19.61	247	P	Pn	02 37 50.9	-1.5
	3.9nm,0.3s,baz=119,slow=4.4,SNR=4.0						
ASAR	Alice Springs	22.18	200	P	P	02 38 18.9	0.0
	2.7nm,0.6s,baz=31,slow=9.6,SNR=32						
ASAR				S	S	02 42 18.2	-6.1
	0.9nm,1.0s,baz=24,slow=16,SNR=4.4						
MKAR	Makanchi Array	71.84	321	P	P	02 44 46.2	+0.6
	1.1nm,0.7s,baz=114,slow=8.0,SNR=9.7						
ZALV	Zalesovo Beam	73.64	329	P	P	02 44 55.7	-0.5
	2.0nm,0.7s,baz=116,slow=5.1,SNR=9.6						
TORD	Torodi Ar. Bea	139.38	287	PKP	PKPdf	02 52 53.3	+1.9
	0.4nm,0.8s,baz=64,slow=2.9,SNR=2.4						

*IDC **05** 02:34:17.8±1.7, 3628N×626E, h0km, mb3.4/2, mb1 3.3/4, mb1mx3.1/22, mbtmp3.3/4, ML3.5/2, MS4.1/1, Ms1 4.1/1, ms1mx2.8/17, Error ellipse: s-maj=36.1km s-min=30.0km az=170.0*
*CSEM **05** 02:34:19.2±0.1, 3628N×638E, h15km, ML3.5, Error ellipse: s-maj=5.0km s-min=2.9km az=14.0*
*CRAAG **05** 02:34:19.9, 3628N×635E, Ml3.5*
*ISCJB **05** 02:34:20.3±0.5, 3630N±007×635E±005, h20km±6km, mb3.2/2, Error ellipse: s-maj=11.1km s-min=6.7km az=1.9*
*MDD **05** 02:34:21.5±0.4, 3627N×638E, h3km±13km, mb4.1/6, Error ellipse: s-maj=8.5km s-min=4.3km az=144.0*
*NEIC **05** 02:34:25.0, 3671N×630E, h0km, MG4.2(MDD), After MDD.*
ISC 05 02:34:20.8±0.5, 3628N±006×639E±004, h11km±5km, n30, σ1§15/32, mb3.2/2, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CASM	Ain Smara	0.08	103	P	Pg	02 34 23.0	-0.3
CTEI	Djebel Teioual	0.21	177	P	Pg	02 34 25.5	+0.1
CKFL	Kef-Lekhel	0.29	65	P	Pg	02 34 27.0	+0.3
DFRA	Djebel Bou Aff	0.49	303	P	Pg	02 34 27.6	-2.9
CAEH	'Ain El Ouahch	0.62	36	P	Pg	02 34 33.6	+0.7
CKHR	Kef el Ahmar	0.76	250	P	Pg	02 34 36.1	+0.6
SET	Setif	0.81	265	P	Pg	02 34 35.5	-0.9
ABSA	Djebel Ababsia	0.88	90	P	Pg	02 34 38.1	+0.4
CABS	Djebel Ababsia	0.88	90	P	Pg	02 34 38.1	+0.4
CMAH	Djebel Manchou	0.90	67	P	Pg	02 34 37.7	-0.4
KEST	Kesra	2.46	102	Pn	Pn	02 35 01.8	+1.1
	3.2nm,0.3s,baz=215,slow=2.9,SNR=59						
EMHD	Djebel Mahouad	2.78	269	P	Pg	02 35 15.5	+1.3
ETOS	Mallorca	4.49	322	P	Pn	02 35 28.1	-0.6
	6.2nm,0.5s,SNR=5.1						
ETOS	Mallorca	4.49	322	P	Pn	02 35 28.1	-0.6
	6.2nm,0.5s,SNR=5.1						
ETOS				S	Sn	02 36 14.0	-6.8
	23nm,1.0s,SNR=7.9						
EIBI	Ibiza	4.86	306	P	Pn	02 35 33.4	-0.4
	12nm,0.5s,SNR=12						
EIBI	Ibiza	4.86	306	P	Pn	02 35 33.4	-0.4
	12nm,0.5s,SNR=12						
EIBI				S	Sn	02 36 24.6	-5.4
	19nm,0.7s,SNR=7.9						
EMUR	La Murta	6.30	287	P	Pn	02 35 56.3	+2.7
	5.0nm,0.7s,SNR=7.9						
EMUR	La Murta	6.30	287	P	Pn	02 35 56.3	+2.7
	5.0nm,0.7s,SNR=7.9						
ECHE	Chera	6.69	302	P	Pn	02 35 59.2	+0.2
	0.9nm,0.6s,SNR=7.9						
ETOB	Tobarra	6.74	293	P	Pn	02 36 00.9	+1.2
	0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.74	293	P	Pn	02 36 00.9	+1.2
	0.2nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	6.76	309	P	Pn	02 36 00.2	+0.2
	4.7nm,0.6s,SNR=12						
EMOS	Mosqueruela	6.76	309	P	Pn	02 36 00.2	+0.3
	4.7nm,0.6s,SNR=12						
EMOS				S	Sn	02 37 10.2	-6.7
	6.7nm,0.7s,SNR=8.4						
EQES	Quesada	7.72	284	P	Pn	02 36 14.9	+1.8
	7.2nm,0.8s,SNR=8.2						
ESDC	Sonseca Array	8.85	296	Pn	Pn	02 36 26.8	-1.8
	0.3nm,0.3s,baz=98,slow=13,SNR=6.1						
TORD	Torodi Ar. Bea	23.42	192	P	P	02 39 28.0	-2.0
	0.5nm,0.9s,mb3.0,baz=14,slow=9.0,SNR=5.4						
TORD	Torodi Ar. Bea	23.42	192	P	P	02 39 28.0	-2.0
SFJD	Kangerlussuaq	44.39	332	LR	LR	02 58 58.1	
	comp=Z,234nm,21.9s,baz=61,slow=33						
MKAR	Makanchi Array	55.71	54	P	P	02 43 56.0	-1.2
	0.2nm,0.5s,mb3.4,baz=285,slow=7.3,SNR=3.9						
MKAR	Makanchi Array	55.71	54	P	P	02 43 56.0	-1.2

SKHL 05 02:54:13.9±0.6, 5289N×14260E, h10km, mb4.2/2, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	Okha	0.69	17⇓	iPg	Pg	02 54 28.2	+1.0
OKH				AMB	AMB	02 54 28.4	
	420nm,0.4s						
OKH				eSg	Sg	02 54 37.9	+1.6
OKH				A		02 54 39.0	
	2μm,0.4s						
OKH				A		02 54 39.0	
	4μm,0.4s						
NKL	Nikolayevsk	1.19	283	ePg	Pg	02 54 37.8	+1.1
NKL				AMB	AMB	02 54 38.7	
	53nm,0.4s						
NKL				eSg	Sg	02 54 55.0	+2.9
NKL				A		02 54 56.8	
	160nm,0.5s						
NKL				A		02 54 56.8	
	230nm,0.5s						
TYV	Tymovskoe	2.03	179	ePg	Pg	02 54 54.0	+1.2
TYV				eSg	Sg	02 55 21.9	+2.8
GRNR	Gornyy	4.38	243	eSg	Sg	02 56 40.0	+5.5
EKMR	Ekimchan	5.83	276	eS	Sn	02 56 48.2	+1.0
EKMR				eSg	Sg	02 57 33.0	+12
EKMR				A		02 57 42.5	
	20nm,1.0s						
EKMR				A		02 57 42.5	
	4.0nm,1.0s						

GUC 05 02:55:20.5±0.5, 2311S×7070W, h34km±3km, MD3.9, ML2.8, 1C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.23	88⇓	eP	Pb	02 55 26.8	-0.7
MECH				iS	Sb	02 55 32.1	-0.2
MECH				AML	AML	02 55 38.8	
	comp=N,3μm,0.2s						
CEN1	Los Morros	0.54	121⇑	iP	Pb	02 55 32.0	+0.3
CEN1				iS	Sb	02 55 39.9	+0.5
ANCH	Antofagasta	0.63	155	eP	Pn	02 55 35.7	+2.7
ANCH				iS	Sb	02 55 44.6	+2.8
ANCH				AML	AML	02 55 48.5	
	comp=N,681nm,0.1s						
PECH	Pedro de Valdi	1.08	62	eP	Pn	02 55 39.8	+0.6
PECH				iS	Sn	02 55 54.4	+1.5
PECH				AML	AML	02 55 57.8	
	comp=N,839nm,0.3s						
TOCH	Tocopilla	1.11	25	eP	Pn	02 55 40.1	+0.4
TOCH				iS	Sn	02 55 54.8	+0.9
LVC	Limon Verde	1.72	74	eP	Pn	02 55 51.5	+3.5
LVC				iS	Sn	02 56 14.5	+5.6

*ISCJB **05** 03:14:53.5±0.8, 3008N±003×7014E±002, h8km±5km, mb4.5/67, MS4.1/35, Error ellipse: s-maj=4.5km s-min=2.8km az=25.4*
*IDC **05** 03:14:53.4±0.7, 2999N×6998E, h0km, mb4.4/23, mb1 4.5/24, mb1mx4.4/29, mbtmp4.4/24, ML4.4/1, MS4.1/25, Ms1 4.1/25, ms1mx4.0/35, Error ellipse: s-maj=18.5km s-min=13.5km az=16.0*
*NNC **05** 03:14:56.9±1.9, 3038N×7004E, h0km, mb4.3, Error ellipse: s-maj=26.5km s-min=19.3km az=138.0*
*NEIC **05** 03:14:56.8±2.9, 3006N×7020E, h19km±18km, mb4.7/30, Error ellipse: s-maj=9.3km s-min=5.0km az=214.0*
*BJI **05** 03:14:56.8, 3029N×6999E, h25km, mB5.0, mb4.7, Ms4.5, Msz4.2*
*MOS **05** 03:14:57.5±1.2, 3017N×7022E, h33km, mb4.8/49, MS4.0/15, Error ellipse: s-maj=7.5km s-min=4.9km az=103.7*
*SZGRF **05** 03:15:13.0, 3121N×6977E, h33km, mb4.7, Pakistan*
ISC 05 03:14:55.6±0.9, 3003N±002×7008E±002, h11km±6km, n255, σ1§23/270, mb4.5/67, MS4.1/35, 19C-10D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBDP	Sheikh Budin	2.35	15	⇓P	Pn	03 15 36.0	+1.9
QUE	Quetta	2.72	274	eP	Pn	03 15 45.0	+5.8
QUE				eS	Sg	03 16 28.0	+5.1
SARP	Sargodha	2.92	49	⇑P	Pn	03 15 44.0	+2.0
JASL	Jaisalmer	3.18	167	eP	Pn	03 15 45.2	-0.4
CEP	Cherat	4.09	22	⇓P	Pn	03 16 00.3	+2.2
CHCP	Chirah Chowk	4.52	36	⇓P	Pg	03 16 18.0	-4.2
KBL	Kabul	4.58	349	eP	Pn	03 16 06.9	+2.1
JMU	Jammu	4.92	56	ex	x	03 16 18.5	
JMU				eS	Sn	03 17 10.0	+3.7
AJM	Ajmer	5.36	130	eP	Pn	03 16 17.0	+1.4
AJM				eS	Sn	03 17 16.8	-0.5
AJM				AML	AML	03 17 54.3	
	comp=N,633nm,0.8s						
AJM				AML	AML	03 17 54.8	
	comp=E,714nm,0.7s						
KHET	Khetri	5.38	110	eP	Pn	03 16 17.6	+1.8
KHET				eS	Sn	03 17 19.1	+1.3
KHET				AML	AML	03 17 33.0	
	comp=E,249nm,0.9s						
KHET				AML	AML	03 17 36.8	
	comp=N,297nm,0.5s						
THN	Thein Dam	5.39	62	eP	Pn	03 16 17.9	+1.9
THN				eS	Sn	03 17 18.9	+0.9
DLH	Dalhousie	5.63	62	eP	Pn	03 16 22.0	+2.8
DLH				ex	x	03 17 27.0	
BHK	Bhakra	5.63	74	eP	Pn	03 16 19.8	+0.5
BHK				ex	x	03 18 03.6	
SDNR	Sundarnagar	6.11	74	eP	Pn	03 16 27.4	+1.6
SDNR				ex	x	03 18 15.0	
SMLA	Simla	6.21	78⇓	iP	Pn	03 16 29.9	+2.7
SMLA				eS	Sn	03 17 40.2	+2.0
SMLA				ex	x	03 17 45.5	
	comp=N,7μm,0.4s						
SMLA				ex	x	03 17 45.8	
	comp=E,5μm,0.4s						
AYAN	Aya Nagar	6.35	102	eP	Pn	03 16 30.1	+0.9
AYAN				eS	Sn	03 17 42.4	+0.8
NDI	New Delhi	6.37	100	ex	Pn	03 16 29.0	-0.5
NDI				eS	Sn	03 17 41.0	-1.3
SONA	Sohna	6.38	104	eP	Pn	03 16 32.0	+2.5
SONA				eS	Sn	03 17 43.0	+0.6
SONA				AML	AML	03 17 45.8	
	comp=E,558nm,0.7s						
SONA				AML	AML	03 17 46.3	
	comp=N,464nm,0.6s						
BHJ	Bhuj	6.76	183	eP	Pn	03 16 33.2	-1.6
BHJ				eS	Sn	03 17 43.8	-8.1
KLP	Kalpa	7.19	76	eP	Pn	03 16 42.4	+1.7
KLP				eS	Sn	03 18 01.9	-0.5
KLP				AML	AML	03 18 45.8	
	comp=E,2μm,0.7s						
KLP				AML	AML	03 18 52.3	
	comp=N,2μm,0.5s						
JOSI	Joshimath	8.21	84	eP	Pn	03 16 55.3	+0.6
PTH	Pithoragarh	8.82	91	eP	Pn	03 17 05.0	+1.9
PTH				ex	x	03 17 43.1	
LGTI	Lohaghat	8.86	91	ex	Pn	03 17 07.5	+3.9
LGTI				eS	Sn	03 18 36.1	-7.4
BHPL	Bhopal	9.43	134	eP	Pn	03 17 11.5	+0.1
JBP	Jabalpur	11.19	125	ex	x	03 19 33.1	
JBP				ex	x	03 20 52.7	
AKL	Akola	11.20	144	eP	Pn	03 17 33.9	-1.8
AKL				ex	x	03 19 38.6	
BOM	Bombay	11.36	167	ex	x	03 18 48.6	
BOM				ex	x	03 20 05.1	
ALBI	Allahabad	11.41	112	ex	Pn	03 17 36.0	-2.6
ALBI				eS	Sn	03 19 41.0	-5.1
POO	Poona	11.95	162	ix	Sn	03 20 07.0	+7.5
POO				ix	x	03 20 21.0	
NGP	Nagpur	11.98	135	eP	Pn	03 17 43.0	-3.5
NGP				eS	Sn	03 19 45.2	-15
KOLN	Koldanda	12.06	97	eP	Pn	03 17 46.7	-0.8
	comp=N,234nm,0.8s						
DANN	Dangsing	12.07	95	eP	Pn	03 17 47.1	-0.5
	comp=N,359nm,0.8s						
AML	Almayashu	12.42	13	P	Pn	03 17 51.6	-0.7
	SNR=74						
AML	Almayashu	12.42	13	ePn	Pn	03 17 51.4	-0.9
	comp=N,64nm,0.5s						
AML				eSn	Sn	03 20 05.3	-5.4
UCH	Uchtor	12.69	15	P	Pn	03 17 58.2	+2.3
	SNR=5.1						
UCH	Uchtor	12.69	15	ePn	Pn	03 17 55.0	-0.9
	comp=N,19nm,0.6s						
UCH				eSn	Sn	03 20 10.9	-6.2
KZA	Kyzart	12.72	18	P	Pn	03 17 55.7	-0.8
	SNR=28						
GKN	Gorkha	12.90	95	eP	Pn	03 17 57.8	-1.2
	comp=N,115nm,0.5s						
EKS2	Erkin-Say	12.95	12	P	Pn	03 17 58.9	-0.7
	SNR=20						
EKS2	Erkin-Say	12.95	12	ePn	Pn	03 17 58.3	-1.3
	comp=N,31nm,0.8s						
EKS2				eSn	Sn	03 20 21.0	-2.7
LATR	Latur	12.98	152	ex	x	03 18 08.5	
KK31	Karatay Array	13.05	1	⇑P	Pn	03 17 59.3	-1.6
	comp=N,18nm,0.7s,baz=197,slow=15,SNR=209						
KK31				⇑S	Sn	03 20 20.8	-5.3
	comp=N,11nm,0.7s,baz=181,slow=19,SNR=4.6						
KK31	Karatay Array	13.05	1	iP	Pn	03 17 59.3	-1.6
KK31				iS	Sn	03 20 19.0	-7.1
KK31				pmax	pmax		
	comp=Z,23nm,0.6s						
KK31				smax			
	comp=N,32nm,1.0s						
AAK	Ala-Archa	13.07	15	P	Pn	03 18 00.6	-0.6
	SNR=22						
AAK	Ala-Archa	13.07	15	ePn	Pn	03 18 00.5	-0.6
AAK				eSn	Sn	03 20 20.7	-5.8
ULHL	Ulahol	13.16	20	P	Pn	03 18 02.3	-0.1
	SNR=10.0						
KBK	Karagaybulak	13.19	16	P	Pn	03 18 04.4	+1.6
	SNR=13						
KAD	Karad	13.21	163	iP	Pn	03 18 17.1	+14
KAD				iS	Sn	03 20 35.0	+4.8
FRU	Bishkek	13.29	15	eP	Pn	03 18 03.0	-1.1
FRU				eS	Sn	03 20 32.0	+0.2
FRU				pmax	pmax		
	comp=Z,50nm,1.6s						
FRU				smax			
	comp=N,190nm,1.8s						
DMN	Daman	13.39	97	eP	Pn	03 18 04.4	-1.3
	comp=N,207nm,0.8s						
CHMS	Chumysh	13.47	15	P	Pn	03 18 05.7	-0.9
	SNR=20						
KKN	Kakani	13.50	96	eP	Pn	03 18 06.0	-1.2
	comp=N,190nm,0.7s						
KKN	Kakani	13.50	96	eP	Pn	03 18 06.0	-1.2
KKN				pmax	pmax		
	comp=Z,190nm,0.7s						
TKM2	Tokmak 2	13.60	17	⇑P	Pn	03 18 07.2	-1.3
	comp=Z,35nm,1.2s						
TKM2				⇓S	Sn	03 20 38.7	-0.9
	comp=Z,23nm,1.4s						
TKM2	Tokmak 2	13.60	17	eP	Pn	03 18 07.3	-1.2
TKM2				pmax	pmax		
	comp=Z,25nm,0.8s						
TKM2	Tokmak 2	13.60	17	P	Pn	03 18 07.8	-0.6
	SNR=26						
TKM2	Tokmak 2	13.60	17	ePn	Pn	03 18 07.3	-1.1
	comp=Z,25nm,0.8s						
PKIN	Phulchoki	13.65	97	eP	Pn	03 18 08.7	-0.5
PKI	Pulchoki	13.66	97	eP	Pn	03 18 08.1	-1.3
	comp=Z,125nm,0.6s						
PKI	Pulchoki	13.66	97	eP	Pn	03 18 08.7	-0.7
GUN	Gumba	13.99	95	eP	Pn	03 18 12.3	-1.6
	comp=Z,1μm,0.8s						
JIRN	Jiri	14.32	96	eP	Pn	03 18 16.9	-1.4
	comp=Z,267nm,0.7s						
RAMN	Ramite	14.85	98	eP	Pn	03 18 23.2	-2.4
	comp=Z,176nm,0.6s						
ODAN	Odare	15.55	97	eP	Pn	03 18 33.0	-1.9
TAPN	Taplejung	15.70	95	eP	Pn	03 18 34.0	-2.8
	comp=Z,136nm,0.8s						
BWNR	Bhubaneshwar	17.21	121	eP	Pn	03 18 56.7	+0.7
BWNR				ex	x	03 22 01.6	
VIS	Vishakhapatnam	17.21	132	iP	Pn	03 18 56.2	+0.1
VIS				ix	x	03 21 59.0	
LSA	Lhasa	18.28	86	P	Pn	03 19 14.9	+5.6
LSA				LR	LR		
	comp=N,800nm,18.9s						
LSA	Lhasa	18.28	86	eP	Pn	03 19 09.0	-0.3
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	18.28	86	eP	Pn	03 19 09.0	-0.3
	comp=Z,35nm,0.9s						
MK31	Makanchi Array	19.24	26	⇓P	Pn	03 19 19.2	-1.6
	comp=Z,11nm,0.7s,baz=207,slow=11,SNR=80						
MKAR	Makanchi Array	19.24	26	P	Pn	03 19 19.0	-1.8
	comp=Z,1.0nm,0.3s,baz=209,slow=12,SNR=92						
MKAR				LR	LR	03 27 53.2	
	comp=Z,733nm,18.4s,baz=218,slow=40						
MKAR	Makanchi Array	19.24	26	P	Pn	03 19 19.0	-1.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,733nm,18.4s						
WMQ	Urumqi	19.64	41⇑	iP	Pn	03 19 26.3	+0.7
WMQ				AP	pP	03 19 31.0	+3.8
WMQ				PP		03 19 44.8	
WMQ				S	Sn	03 23 01.2	-4.8
WMQ				XS	sS	03 23 06.4	-4.1
WMQ				SS		03 23 29.1	
WMQ				PCP	PcP	03 23 45.7	+2.3
WMQ				AMB	AMB		
	comp=Z,90nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,287nm,3.5s						
WMQ				LR	LR		
	comp=N,344nm,22.0s						
WMQ				LR	LR		
	comp=E,187nm,20.0s						
WMQ				LR	LR		
	comp=Z,330nm,20.0s						
RDF	Al-Radifah	19.64	272	eP	Pn	03 19 22.1	-3.7
	baz=272						
RDF				AMb	AMB	03 19 30.6	
	comp=Z,56nm,0.9s,baz=272						
MIB	Mutribah	19.71	275	eP	Pn	03 19 23.7	-2.9
	baz=275						
MIB				AMb	AMB	03 19 31.6	
	comp=Z,95nm,1.0s,baz=275						
SHL	Shillong	19.79	98	eP	Pn	03 19 27.0	-0.5
SHL				ex	x	03 22 53.0	
AGT	Agartala	19.83	103	ex	x	03 22 01.0	
NAY	Al-Naaiem	19.86	273	eP	Pn	03 19 24.8	-3.6
	baz=273						
NAY				AMb	AMB	03 19 36.5	
	comp=Z,24nm,1.1s,baz=273						
AB31	Akbulak array	20.69	341	P	P	03 19 35.1	-0.5
	comp=Z,5.8nm,0.6s,baz=148,slow=12,SNR=135						
AB31	Akbulak array	20.69	341	P	P	03 19 34.6	-1.0
AB31				pmax	pmax		
	comp=Z,20nm,0.9s						
KURBB	Kurchatov Arra	21.53	15	⇓P	P	03 19 44.0	-0.6
	comp=Z,4.3nm,0.8s,mb4.0						
KURK	Kurchatov	21.63	15	P	P	03 19 43.7	-2.0
	comp=Z,18nm,0.6s,mb4.7,baz=209,slow=9.5,SNR=21						
KURK				LR	LR	03 30 14.3	
	comp=Z,81nm,21.2s,MS3.1,baz=205,slow=43						
KURK	Kurchatov	21.63	15⇑	iP	P	03 19 45.0	-0.7

KURK pmax pmax
comp=Z,35nm,1.4s,mb4.6
KURK Kurchatov 21.63 15 *e*P **P 03 19 45.0 -0.7**
comp=Z,98nm,1.6s,mb5.0
IMP Imphal 21.80 98 *e*P **P 03 19 50.0 +2.2**
IMP *ex* x 03 23 45.0
AKTK Aktyubinsk 22.31 339 P **P 03 19 51.9 -1.0**
AKTK LR LR 03 30 01.3
AKTO Aktyubinsk 22.31 339 ⇑P **P 03 19 52.5 -0.4**
comp=Z,8.2nm,1.1s,mb4.1
AKTO Aktyubinsk 22.31 339 P **P 03 19 51.9 -1.0**
comp=Z,11nm,0.6s,mb4.4,baz=152,slow=9.3,SNR=11
AKTO LR LR 03 30 01.3
comp=Z,459nm,18.4s,MS3.9,baz=150,slow=41
AKTO Aktyubinsk 22.31 339 P **P 03 19 51.9 -1.1**
AKTO pmax pmax
comp=Z,11nm,0.6s,mb4.5
AKTO MLR MLR
comp=Z,459nm,18.4s,MS3.9
VOSK Vostochnaya 22.68 1 ⇓P **P 03 19 56.1 -0.8**
comp=Z,20nm,0.9s,mb4.5
VOSK Vostochnaya 22.68 1 P **P 03 19 56.0 -0.9**
VOSK pmax pmax
comp=Z,20nm,0.9s,mb4.5
BVA0 Borovoye Array 22.98 0 ⇑P **P 03 19 59.1 -1.0**
comp=Z,7.3nm,1.4s,mb3.9
BVA0 Borovoye Array 22.98 0 P **P 03 19 58.8 -1.2**
BVA0 pmax pmax
comp=Z,7.0nm,1.5s,mb3.9
BVAR Borovoye Array 22.98 0 P **P 03 19 59.8 -0.2**
comp=Z,12nm,0.8s,mb4.4,baz=168,slow=11,SNR=70
BVAR LR LR 03 30 21.4
comp=Z,365nm,18.1s,MS3.9,baz=182,slow=40
BVAR Borovoye Array 22.98 0 P **P 03 19 59.8 -0.2**
BVAR pmax pmax
comp=Z,13nm,0.8s
BVAR MLR MLR
comp=Z,365nm,18.1s
DGRG David-gareji 22.98 306 P **P 03 20 02.6 +2.4**
BRVK Borovoye 23.01 0 *e*P **P 03 19 59.5 -0.9**
BRVK pmax pmax
comp=Z,43nm,0.9s,mb4.9
BRVK Borovoye 23.01 0 *e*P **P 03 19 59.5 -0.8**
comp=Z,43nm,0.9s,mb4.9
TBLG Delisi 23.53 307 P **P 03 20 07.0 +1.0**
GOR Gori 24.06 307 P **P 03 20 12.4 +1.5**
ONI Oni 24.73 308 P **P 03 20 16.6 -0.4**
KIV Kislovodsk 25.78 310 *e*P **P 03 20 27.1 +0.7**
KIV *e*S **S 03 24 54.3 -1.2**
KIV pmax pmax
comp=Z,22nm,1.0s,mb4.6
KIV Kislovodsk 25.78 310 *e*P **P 03 20 28.4 +1.9**
comp=Z,16nm,0.8s,mb4.6
GOF Gofitskoye 26.01 313 *e*P **P 03 20 30.1 +1.6**
GTA Gaotai 26.07 61 ⇑P **P 03 20 31.3 +2.1**
GTA AP pP 03 20 34.8 +2.4
GTA XP sP 03 20 36.4 +2.6
GTA S **S 03 25 05.4 +5.1**
GTA XS sS 03 25 13.2 +7.5
GTA AMB AMB
comp=Z,11nm,1.1s,mb4.3
GTA AMB AMB
comp=Z,202nm,5.7s
GTA LR LR
comp=N,536nm,18.9s
GTA LR LR
comp=E,361nm,13.8s
GTA LR LR
comp=Z,478nm,13.5s
ZAA0 Zalesovo Array 26.18 20 *e*P **P 03 20 29.1 -0.8**
ZALV Zalesovo Beam 26.18 20 P **P 03 20 29.2 -0.8**
comp=Z,8.1nm,0.5s,mb4.5,baz=224,slow=8.3,SNR=30
ZALV LR LR 03 32 54.7
comp=Z,26nm,22.0s,MS2.7,baz=58,slow=41
ZALV Zalesovo Beam 26.18 20 P **P 03 20 29.2 -0.8**
ZALV pmax pmax
comp=Z,8.0nm,0.5s,mb4.5
ZALV MLR MLR
comp=Z,26nm,22.0s,MS2.7
NVS Novosibirsk 26.54 17 *e*P **P 03 20 31.9 -1.3**
NVS pmax pmax
comp=N,25nm,1.7s
NVS pmax pmax
comp=E,14nm,1.7s
NVS pmax pmax
comp=Z,25nm,1.7s,mb4.5
SVE Sverdlovsk 27.60 349 *e*P **P 03 20 53.5 +11**
SVE pmax pmax
comp=Z,20nm,1.3s,mb4.6
SVE MLR MLR
comp=Z,649nm,15.0s,MS4.3
ARU Arti 27.61 346*c i*P **P 03 20 43.5 +0.7**
ARU 03 21 26.3
ARU *e*S **S 03 25 24.4 +0.3**
ARU SS 03 26 38.0
ARU pmax pmax
comp=Z,24nm,2.5s,mb4.4
ARU MLR MLR
comp=Z,447nm,18.0s,MS4.1
ARU Arti 27.61 346 *e*P **P 03 20 43.2 +0.4**
comp=Z,8.3nm,0.9s,mb4.4
ASF Jabal al Asfar 28.43 283 LR LR 03 34 15.0
comp=Z,214nm,19.7s,MS3.8,baz=126,slow=41
CHTO Chiang Mai 28.48 106 *e*P **P 03 20 51.8 +0.9**
CHTO pmax pmax
comp=Z,12nm,0.9s,mb4.5
CHTO Chiang Mai 28.48 106 *e*P **P 03 20 51.8 +0.8**
comp=Z,12nm,0.9s,mb4.5
CMAR Chiang Mai Arr 28.65 107 P **P 03 20 52.8 +0.3**
comp=Z,5.9nm,0.8s,mb4.4,baz=299,slow=8.1,SNR=18
CMAR LR LR 03 33 44.0
comp=Z,213nm,20.3s,MS3.7,baz=280,slow=39
CMAR Chiang Mai Arr 28.65 107 P **P 03 20 52.8 +0.3**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR MLR MLR
comp=Z,213nm,20.3s
LZH Lanzhou 28.84 69 *e*P **P 03 20 55.1 +1.1**
LZH AP pP 03 20 59.5 +2.2
LZH XP sP 03 21 02.3 +3.6
LZH PP PP 03 21 47.2 -12
LZH *e*S **S 03 25 42.0 -2.0**
LZH *e*SS SS 03 27 09.2 -37
LZH AMB AMB
comp=Z,27nm,1.4s,mb4.8
LZH AMB AMB
comp=Z,102nm,4.7s
LZH LR LR
comp=E,565nm,12.3s
LZH LR LR
comp=Z,843nm,16.0s,MS4.5
CD2 Chengdu 28.98 80 P **P 03 20 55.4 +0.1**
CD2 PP PP 03 21 47.5 -13
CD2 PCP PcP 03 24 05.4 +1.4
CD2 S **S 03 25 42.2 -4.1**
CD2 SS SS 03 27 13.0 -36
CD2 AMB AMB
comp=Z,10.0nm,0.4s,mb4.9
CD2 AMB AMB
comp=Z,220nm,4.8s
CD2 LR LR
comp=N,800nm,10.2s
CD2 LR LR
comp=Z,450nm,13.2s,MS4.3
KMI Kunming 29.30 92 P **P 03 21 00.1 +1.9**
KMI PP PP 03 21 54.3 -10
KMI S **S 03 25 50.9 -0.5**
KMI SS SS 03 27 21.5 -34
KMI AMB AMB
comp=Z,9.0nm,1.0s,mb4.5
KMI AMB AMB
comp=Z,124nm,3.9s
KMI LR LR
comp=N,648nm,17.8s,MS4.3
KMI LR LR
comp=E,242nm,19.0s,MS4.3
KMI LR LR
comp=Z,214nm,9.8s
MMAI Mount Meron Ar 29.63 285 LR LR 03 34 44.9
comp=Z,386nm,21.1s,MS4.0,baz=90,slow=40
EIL Elat 30.40 278 LR LR 03 35 38.2
comp=Z,332nm,18.4s,MS4.0,baz=269,slow=41
BR131 Keskin Array S 31.24 298 *e*P **P 03 21 15.0 -0.2**
comp=Z,2.1nm,0.6s,mb4.1
BRTR Keskin Array B 31.24 298 P **P 03 21 14.9 -0.3**
comp=Z,2.7nm,0.8s,mb4.1,baz=116,slow=8.7,SNR=12
BRTR LR LR 03 36 41.2
comp=Z,118nm,18.0s,MS3.6,baz=104,slow=42
BRTR Keskin Array B 31.24 298 *i* P **P 03 21 15.0 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
ZAK Zakamensk 32.10 41 *e*P **P 03 21 23.2 +0.5**
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
GYA Guiyang 32.34 87⇑*i*P **P 03 21 25.6 +0.6**
GYA PP PP 03 22 32.7 -5.4
GYA PCP PcP 03 24 13.6 +0.7
GYA S **S 03 26 38.8 -0.2**
GYA SCP ScP 03 27 55.8 -0.8
GYA SS SS 03 28 33.6 -24
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
GYA AMB AMB
comp=Z,80nm,5.7s
GYA LR LR
comp=N,580nm,12.0s,MS4.6
GYA LR LR
comp=E,450nm,11.8s,MS4.6
GYA LR LR
comp=Z,710nm,11.3s,MS4.6
SONM Songino Array 32.99 47 P **P 03 21 32.5 +2.0**
comp=Z,6.1nm,0.7s,mb4.6,baz=248,slow=9.1,SNR=42
SONM LR LR 03 37 08.1
comp=Z,479nm,18.6s,MS4.2,baz=265,slow=40
SONM Songino Array 32.99 47 P **P 03 21 32.5 +2.0**
SONM pmax pmax
comp=Z,6.0nm,0.7s
SONM MLR MLR
comp=Z,479nm,18.6s
XAN Xi'an 33.04 73 P **P 03 21 30.3 -0.8**
XAN PP PP 03 22 45.1 -0.6
XAN S **S 03 26 50.6 +0.9**
XAN AMB AMB
comp=Z,7.0nm,0.7s,mb4.7
XAN AMB AMB
comp=Z,13nm,13.2s
XAN LR LR
comp=N,259nm,22.1s,MS3.9
XAN LR LR
comp=E,104nm,24.4s,MS3.9
XAN LR LR
comp=Z,252nm,24.9s,MS3.8
ULN Ulaanbaatar 33.42 47⇑*i*P **P 03 21 34.8 +0.6**
ULN Ulaanbaatar 33.42 47 *e*P **P 03 21 36.3 +2.0**
comp=Z,3.9nm,0.7s,mb4.5
OBN Obninsk 34.62 326 *e*P **P 03 21 44.9 +0.4**
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,600nm,15.0s,MS4.5
HHC Hu-ho-hao-te 35.19 61 *e*P **P 03 21 48.8 -0.9**
HHC PP PP 03 23 06.4 -3.0
HHC PCP PcP 03 24 20.2 -0.5
HHC *e*S **S 03 27 18.9 -3.9**
HHC PCS PcS 03 28 06.8 -0.7
HHC SS SS 03 29 34.1 -21
HHC SCS ScS 03 32 06.9 -3.4
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,193nm,4.6s
HHC LR LR
comp=N,266nm,15.5s,MS4.2
HHC LR LR
comp=E,202nm,14.3s,MS4.2
HHC LR LR
comp=Z,261nm,14.3s,MS4.1
AKASG Malin Array Be 36.73 316 P **P 03 22 01.4 -1.4**
comp=Z,5.1nm,0.6s,mb4.5,baz=99,slow=6.9,SNR=16
AKASG LR LR 03 39 40.5
comp=Z,234nm,21.8s,MS3.9,baz=100,slow=40
AKASG Malin Array Be 36.73 316 P **P 03 22 01.4 -1.4**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG MLR MLR
comp=Z,234nm,21.8s
AKBB Malin Array Si 36.73 316 *e*P **P 03 22 01.7 -1.1**
KLMR Klimovskoe 36.89 336 P Px 03 22 17.9
KLMR pmax pmax
comp=Z,22nm,1.5s,mb4.8
MLR Muntele Rosu 37.65 307 P **P 03 22 11.8 +1.1**
comp=Z,9.4nm,0.7s,mb4.6,baz=71,slow=4.7,SNR=4.4
MLR LR LR 03 40 25.3
comp=Z,201nm,18.3s,MS4.0,baz=59,slow=41
MLR Muntele Rosu 37.65 307 P **P 03 22 11.8 +1.2**
MLR pmax pmax
comp=Z,9.0nm,0.7s
MLR MLR MLR
comp=Z,201nm,18.3s
MLR Muntele Rosu 37.65 307⇑*i*P **P 03 22 12.6 +2.0**
WHN Wuhan 38.05 78 P **P 03 22 13.7 -0.5**
VOIR 38.27 306⇓*i*P **P 03 22 16.1 +0.3**
BURAR Bucovina Array 38.51 310⇓*i*P **P 03 22 18.5 +0.7**
BJI Beijing 38.67 62 P **P 03 22 19.0 -0.3**
BJI S **S 03 28 16.7 +0.8**
BJI AMB AMB
comp=Z,8.0nm,0.5s,mb4.7
BJI AMB AMB
comp=Z,135nm,4.6s
BJI LR LR
comp=N,233nm,11.5s,MS4.3
BJI LR LR
comp=E,250nm,15.4s,MS4.3
BJI LR LR
comp=Z,148nm,20.5s
LVV L'vov 39.72 313 *e*P **P 03 22 29.4 +1.5**
DRGR 40.06 308⇑*i*P **P 03 22 37.1 +6.3**
KWP Kalwaria 40.52 313 *e*P **P 03 22 36.1 +1.5**
KWP pmax pmax
comp=Z,22nm,1.1s,mb4.7
KWP Kalwaria 40.52 313⇑*i*P **P 03 22 36.6 +2.0**
KWP Kalwaria 40.52 313 *e*P **P 03 22 36.1 +1.6**
comp=Z,22nm,1.1s,mb4.7
UZH Uzhgorod 40.61 311⇑*e*P **P 03 22 37.5 +2.2**
UZH *e* 03 22 51.0
BZS Buzias 40.69 306⇑*i*P **P 03 22 36.4 +0.4**
BOD Bodaibo 40.98 34 *e*P **P 03 22 38.4 +0.1**
BOD pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
JOF Joensuu 41.22 334 *e*p **P 03 22 37.5 -2.6**
comp=Z,3.4nm,0.6s,mb4.2
JOF Joensuu 41.22 334 *e*P **P 03 22 37.5 -2.6**
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
HIA Hailar 41.93 48 *e*P **P 03 22 46.7 +0.5**
PSZ Piszkesteto 42.10 310 *e*P **P 03 22 48.0 +0.4**
PSZ pmax pmax
comp=Z,11nm,1.1s,mb4.4
PSZ Piszkesteto 42.10 310⇑*i*P **P 03 22 46.9 -0.7**
PSZ Piszkesteto 42.10 310 *e*P **P 03 22 48.0 +0.5**
comp=Z,11nm,1.1s,mb4.4
KAF Kangasniemi 42.78 331 *e*p **P 03 22 53.5 +0.6**
comp=Z,1.6nm,0.5s,mb4.0
KAF Kangasniemi 42.78 331 *e*P **P 03 22 53.5 +0.6**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
OKC Ostrava-Krasne 43.47 312 *e*P **P 03 23 03.4 +4.7**
VRAC Vranov 44.42 311 LR LR 03 44 08.7
comp=Z,129nm,18.4s,MS3.9,baz=91,slow=40
DPC Dobruska-Polom 44.70 313 *e*P **P 03 23 09.4 +0.9**
UPC Upice 44.91 313 *e*P **P 03 23 11.7 +1.5**
TREC Trest 45.14 311 *e*P **P 03 23 18.7 +6.6**
PRU Pruhonice 45.81 312 *e*P **P 03 23 22.8 +5.5**
PVCC Panska Ves 45.83 313 *e*P **P 03 23 23.2 +5.7**
MOA Molln 45.87 309⇑*i*P **P 03 23 17.0 -0.9**
comp=Z,6.6nm,0.9s,mb4.5
BRG Berggiesshubel 46.26 313 *e*P **P 03 23 26.5 +5.6**
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BRG Berggiesshubel 46.26 313 *e*(P) **P 03 23 26.6 +5.7**
comp=Z,7.5nm,1.1s,mb4.5
GERES GERESS Array B 46.29 310 P **P 03 23 21.1 -0.1**
comp=Z,0.4nm,0.5s,mb3.6,baz=70,slow=1.6,SNR=3.6
GERES LR LR 03 47 03.9
comp=Z,199nm,18.2s,MS4.1,baz=99,slow=42
KHC Kasperske Hory 46.38 311 *e*P **P 03 23 25.1 +3.2**
KEV Kevo 46.58 341 *e*p **P 03 23 18.0 -5.1**
CLL Collm 46.88 314 *e*P **P 03 23 27.0 +1.2**
ARCES ARCESS Array B 46.89 340 P **P 03 23 25.4 -0.2**
comp=Z,2.5nm,0.6s,mb4.3,baz=128,slow=8.0,SNR=21
ARCES LR LR 03 43 05.1
comp=Z,192nm,18.8s,MS4.1,baz=124,slow=36
ARCES ARCESS Array B 46.89 340 P **P 03 23 25.4 -0.2**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES MLR MLR
comp=Z,192nm,18.8s
ARE0 ARCESS Array S 46.89 340 *e*P **P 03 23 26.1 +0.5**
MOX Moxa 47.72 313 *e*P **P 03 23 32.9 +0.6**
comp=Z,51nm,2.3s,mb5.2
MOX Moxa 47.72 313 *e*P **P 03 23 32.9 +0.6**
MOX pmax pmax
comp=Z,51nm,2.3s,mb5.2
HFS Hagfors 47.83 326 P **P 03 23 31.7 -1.2**
comp=Z,2.7nm,0.8s,mb4.3,baz=83,slow=12,SNR=3.6
HFS Hagfors 47.83 326 P **P 03 23 31.7 -1.3**
HFS pmax pmax
comp=Z,3.0nm,0.8s
GRA1 Grafenberg Arr 47.94 312 *e*P **P 03 23 40.1 +6.1**
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 47.94 312 *e*P **P 03 23 40.1 +6.1**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 47.94 312 *e*P **P 03 23 40.1 +6.1**
GRF pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
GRF Grafenberg Arr 47.94 312 *e*P **P 03 23 40.1 +6.1**
comp=Z,8.0nm,1.2s,mb4.6
KSRS Korea Array 48.02 65 P **P 03 23 34.9 0.0**
comp=Z,7.0nm,0.8s,mb4.8,baz=269,slow=7.5,SNR=15
KSRS LR LR 03 46 32.6
comp=Z,146nm,18.3s,MS4.0,baz=150,slow=40
KSRS Korea Array 48.02 65 P **P 03 23 34.9 0.0**
KSRS pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KSRS MLR MLR
comp=Z,146nm,18.3s,MS4.0
MDJ Mudanjiang 48.49 55 P **P 03 23 38.0 -0.3**
MDJ AMB AMB
comp=Z,4.0nm,0.7s,mb4.6
MDJ AMB AMB
comp=Z,104nm,4.8s
DAVOX Davos/Dischmat 48.86 308 LR LR 03 45 34.2
comp=Z,131nm,20.3s,MS3.9,baz=270,slow=38
NB2 NORSAR Subarra 49.21 327 P **P 03 23 43.4 -0.2**
comp=Z,3.7nm,0.8s,mb4.5,baz=103,slow=7.9
NOA NORSAR Array B 49.21 327 P **P 03 23 44.0 +0.4**
comp=Z,2.7nm,0.7s,mb4.4,baz=105,slow=7.6,SNR=8.0
NOA LR LR 03 47 47.5
comp=Z,360nm,19.5s,MS4.4,baz=110,slow=40
NOA NORSAR Array B 49.21 327 P **P 03 23 44.0 +0.4**
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA MLR MLR
comp=Z,360nm,19.5s
YAK Yakutsk 49.76 32 *e*P **P 03 23 46.0 -1.8**
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.1
YAK Yakutsk 49.76 32 *e*P **P 03 23 47.5 -0.3**
comp=Z,37nm,0.7s,mb5.5
KLR Kul'dur 49.77 49 *e*P **P 03 23 44.8 -3.3**
CDF Champ du Feu 50.55 310 *e*P **P 03 23 54.2 +0.2**
SBF Sospel 50.80 304 *e*P **P 03 23 56.5 +0.6**
comp=Z,35nm,1.0s,mb4.9
SBF Sospel 50.80 304 *e*P **P 03 23 56.5 +0.6**
SBF pmax pmax
comp=Z,17nm,1.0s,mb4.9
SBF Sospel 50.80 304 *e*P **P 03 23 56.5 +0.6**
comp=Z,17nm,1.0s,mb4.9
LPG La Plagne 51.12 306 *e*P **P 03 23 59.4 +1.1**
LPL La Plagne 51.13 306 *e*P **P 03 23 59.2 +0.8**
comp=Z,7.6nm,0.8s,mb4.4
LPL La Plagne 51.13 306 *e*P **P 03 23 59.2 +0.8**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LPL La Plagne 51.13 306 *e*P **P 03 23 59.2 +0.8**
comp=Z,3.8nm,0.8s,mb4.4
MBDF Montbardon 51.18 305 *e*P **P 03 24 01.5 +2.7**
comp=Z,22nm,1.3s,mb4.6
MBDF Montbardon 51.18 305 *e*P **P 03 24 01.5 +2.7**
MBDF pmax pmax
comp=Z,11nm,1.3s,mb4.6
MBDF Montbardon 51.18 305 *e*P **P 03 24 01.5 +2.7**
comp=Z,11nm,1.3s,mb4.6
TIXI Tiksi 52.07 20 *e*P **P 03 24 04.5 -0.6**
TIXI pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TIXI Tiksi 52.07 20 *e*P **P 03 24 04.4 -0.7**
comp=Z,3.7nm,0.8s,mb4.4
SMF Signal de Mont 53.01 308 *e*P **P 03 24 13.0 +0.6**
SSF Saint Saulge 53.19 308 *e*P **P 03 24 12.8 -0.9**
comp=Z,19nm,1.1s,mb4.6
SSF Saint Saulge 53.19 308 *e*P **P 03 24 12.8 -0.9**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SSF Saint Saulge 53.19 308 *e*P **P 03 24 12.8 -0.9**
comp=Z,9.3nm,1.1s,mb4.6
SPITS Spitsbergen Ar 53.62 348 P **P 03 24 15.7 -0.8**
comp=Z,5.8nm,0.6s,mb4.7,baz=348,slow=11,SNR=12
SPITS Spitsbergen Ar 53.62 348 P **P 03 24 15.7 -0.8**
SPITS pmax pmax
comp=Z,6.0nm,0.6s
SPB4 Spitsbergen Ar 53.63 348 *e*P **P 03 24 17.0 +0.5**
EKA Eskdalemuir Ar 56.53 319 P **P 03 24 36.1 -1.6**
comp=Z,1.8nm,0.5s,mb4.4,baz=92,slow=7.5,SNR=6.5
EKA Eskdalemuir Ar 56.53 319 P **P 03 24 36.1 -1.6**
EKA pmax pmax
comp=Z,2.0nm,0.5s
ESDC Sonseca Array 59.96 301 P **P 03 25 01.3 -0.7**
comp=Z,0.4nm,0.6s,mb3.6,baz=64,slow=6.4,SNR=2.9
SEY Seymchan 64.27 31 *e*P **P 03 25 03.9 +0.1**
TOA0 Torodi Ar. Sit 64.93 271 *e*P **P 03 25 35.0 -0.7**
TORD Torodi Ar. Bea 64.93 271 P **P 03 25 33.8 -1.8**
comp=Z,3.1nm,0.7s,mb4.4,baz=65,slow=4.2,SNR=23
TORD LR LR 03 56 49.7
comp=Z,133nm,19.3s,MS4.2,baz=65,slow=39
PETK Petropavlovsk- 65.23 42 P **P 03 25 38.4 +1.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=261,slow=7.2,SNR=3.0
PETK LR LR 03 57 15.7
comp=Z,94nm,19.2s,MS4.0,baz=290,slow=39
LBTB Lobatse 69.39 223 *e*P **P 03 26 03.8 +0.1**
LBTB pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LBTB Lobatse 69.39 223 *e*P **P 03 26 03.8 +0.2**
comp=Z,5.7nm,0.9s,mb4.5
DBIC Dimbokro 73.66 268 P **P 03 26 29.8 0.0**
comp=Z,4.5nm,0.9s,mb4.4,baz=18,slow=6.4,SNR=4.3
DBIC LR LR 04 02 33.3
comp=Z,107nm,19.2s,MS4.2,baz=30,slow=39
DBIC Dimbokro 73.66 268 P **P 03 26 29.8 0.0**
DBIC pmax pmax
comp=Z,5.0nm,0.9s
DBIC MLR MLR
comp=Z,107nm,19.2s
DBIC Dimbokro 73.66 268 *e*P **P 03 26 31.7 +1.9**
comp=Z,13nm,1.2s,mb4.7
LIC Lamto 74.03 268 *e*P **P 03 26 30.5 -1.4**
comp=Z,35nm,1.3s,mb4.8
LIC Lamto 74.03 268 *e*P **P 03 26 30.5 -1.4**
comp=Z,18nm,1.3s,mb4.8
NWAO Narrogin (SRO) 76.90 141 LR LR 03 55 56.3
comp=Z,173nm,21.2s,MS4.3,baz=343,slow=32
WRAB Tennant Creek 79.31 120 *e*P **P 03 27 02.0 +0.4**
WRAB pmax pmax
comp=Z,13nm,0.9s,mb4.9
WRAB Tennant Creek 79.31 120 *e*P **P 03 27 02.0 +0.4**
comp=Z,12nm,0.9s,mb4.8
WB2 Warramunga Arr 79.32 120 *e*P **P 03 27 01.1 -0.5**
ASAR Alice Springs 81.26 124 P **P 03 27 11.6 -0.4**
comp=Z,8.1nm,0.9s,mb4.7,baz=312,slow=5.2,SNR=43
ASAR Alice Springs 81.26 124 P **P 03 27 11.6 -0.4**
ASAR pmax pmax
comp=Z,8.0nm,0.9s
MCK McKinley 81.60 16 *e*P **P 03 27 12.7 -0.5**
MCK pmax pmax
comp=Z,15nm,1.1s,mb4.8
MCK McKinley 81.60 16 *e*P **P 03 27 12.7 -0.5**
comp=Z,15nm,1.1s,mb4.8
COEN Coen 82.79 111 *e*P **P 03 27 20.1 -0.1**
comp=Z,5.0nm,0.8s,mb4.6
PMG Port Moresby 83.66 105 *e*P **P 03 27 24.0 -0.8**
PMG pmax pmax
comp=Z,10.0nm,0.9s
PMG Port Moresby 83.66 105 *e*P **P 03 27 24.0 -0.8**
comp=Z,10.0nm,0.9s,mb5.0
SCHQ Schefferville 87.72 337 LR LR 04 11 59.1
comp=Z,229nm,20.5s,MS4.6,baz=165,slow=39
YKA Yellowknife Ar 87.72 2 P **P 03 27 43.7 -0.4**

	comp=Z,1.6nm,0.5s,mb4.5,baz=348,slow=5.0,SNR=43						
YKA	**Yellowknife Ar**	**87.72**	**2**	P	**P**	**03 27 43.7**	**-0.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**87.72**	**2**	P	**P**	**03 27 43.7**	**-0.4**
CTA	**Charters Tower**	**88.58**	**114**	LR	LR	04 09 45.5	
	comp=Z,201nm,18.6s,MS4.6,baz=52,slow=37						
CTAO	**Charters Tower**	**88.58**	**114**	*e*P	**P**	**03 27 47.6**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
CTAO	**Charters Tower**	**88.58**	**114**	*e*P	**P**	**03 27 47.5**	**-1.3**
	comp=Z,5.9nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**91.59**	**126**	P	**P**	**03 28 01.9**	**-0.8**
	comp=Z,1.3nm,0.3s,mb4.8,baz=326,slow=17,SNR=2.9						
STKA				LR	LR	04 12 11.8	
	comp=Z,117nm,19.4s,MS4.3,baz=216,slow=38						
SNAA	**Sanae**	**113.06**	**199**	*e*PKPdf	PKiKP	03 33 33.2	+1.2
VNA2	**Neumayer--Watz**	**114.11**	**201**	*e*PKPdf	PKiKP	03 33 33.8	-0.2
	baz=344,slow=2.6						
VNA2				*e*		03 33 35.8	
VNA2				*e*		03 33 39.5	
VNA3	**Neumayer Olymp**	**114.91**	**201**	*e*PKPdf	PKiKP	03 33 34.1	-1.4
VNA3				*e*		03 33 36.9	
VNA3				*e*		03 33 39.7	
TXAR	**Lajitas Array**	**120.67**	**354**	PKP	PKPdf	03 33 47.5	-0.5
	comp=Z,0.2nm,0.6s,baz=90,slow=2.5,SNR=3.5						
PLCA	**Paso Flores**	**146.42**	**241**	*e*PKP2	PKPab	03 34 35.8	-1.8

*BJI **05** 03:50:10.2, 8.50S×118.81E, h11km, mB5.2, mb4.6, Msz4.6*
*IDC **05** 03:50:13.7±1.0, 8.04S×118.54E, h0km, mb4.2/8, mb1 4.3/10, mb1mx4.1/17, mbtmp4.2/10, ML3.8/2, MS3.5/4, Ms1 3.6/4, ms1mx3.3/22, Error ellipse: s-maj=26.0km s-min=15.9km az=66.0*
*DJA **05** 03:50:13, 8.49S×119.13E, h100km, MLv5.1/7*
*ISCJB **05** 03:50:15.7±2.3, 8.08S±0.05×118.56E±0.05, h27km±18km, mb4.3/13, Error ellipse: s-maj=9.7km s-min=7.2km az=138.2*
*NEIC **05** 03:50:15.3±4.5, 8.07S×118.54E, h12km±29km, mb4.2/6, Error ellipse: s-maj=15.2km s-min=7.1km az=71.0*
ISC 05 03:50:16.6±3.7**, 8.08S**±0.06×**118.58E**±0.06**, h19**km±25km**, n38, σ1.s10**/40**, mb4.3**/13**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**2.96**	**264**	P	**Pn**	**03 51 01.0**	**-1.6**
KAPI	**Kappang**	**3.26**	**21**	Pn	**Pn**	**03 51 06.4**	**-0.3**
	6.8nm,0.3s,baz=210,slow=9.0,SNR=97						
KAPI				Sn	**Sn**	**03 51 43.5**	**-1.5**
	36nm,0.3s,baz=164,slow=20,SNR=12						
KAPI				Lg		03 51 54.0	
	25nm,0.3s,baz=35,slow=21,SNR=6.9						
KAPI				LR	LR	03 52 39.4	
	comp=Z,991nm,18.4s,baz=207,slow=45						
KAPI	**Kappang**	**3.26**	**21**	P	**Pn**	**03 51 06.3**	**-0.4**
KAPI	**Kappang**	**3.26**	**21**	P	**Pn**	**03 51 06.1**	**-0.6**
DNP	**Denpasar**	**3.39**	**260**	P	Px	03 51 16.1	
IGBI	**Denpasar**	**3.48**	**258**	P	**Pn**	**03 51 08.5**	**-1.2**
NBBI	**Negara**	**3.93**	**265**	P	Px	03 51 22.0	
NBBI	**Negara**	**3.93**	**265**	P	**Pn**	**03 51 17.5**	**+1.5**
BATI	**Baumata**	**5.45**	**113**	Pn	**Pn**	**03 51 38.9**	**+2.1**
	3.7nm,0.3s,baz=278,slow=12,SNR=4.9						
BATI				Sn	**Sn**	**03 52 42.4**	**+3.4**
	3.8nm,0.3s,baz=217,slow=20,SNR=1.9						
BATI				LR	LR	03 54 13.2	
	comp=Z,714nm,18.4s,baz=325,slow=44						
BATI	**Baumata**	**5.45**	**113**	P	**Pn**	**03 51 41.2**	**+4.4**
	36nm,0.8s,0.2nm						
BBKI	**Banjar Baru**	**5.90**	**321**	P	**Pn**	**03 51 44.2**	**+1.1**
BBKI	**Banjar Baru**	**5.90**	**321**	P	**Pn**	**03 51 45.1**	**+2.0**
	136nm,1.0s,0.5nm						
KRKI	**Karangkates**	**6.07**	**269**	P	**Pn**	**03 51 51.8**	**+6.4**
	300nm,0.8s,1.4nm						
KRKI	**Karangkates**	**6.07**	**269**	P	**Pn**	**03 51 51.9**	**+6.5**
	352nm,0.9s,1.5nm						
SJI	**Sawahan**	**6.76**	**272**	P	**Pn**	**03 52 03.3**	**+8.4**
SJI				S	**Sn**	**03 53 20.2**	**+8.8**
SJI	**Sawahan**	**6.76**	**272**	P	**Pn**	**03 52 02.3**	**+7.4**
MBWA	**Marble Bar**	**13.05**	**175**	*e*P	**Pn**	**03 53 20.8**	**-0.3**
	9.4nm,0.9s						
RGRI	**Rengat**	**17.92**	**295**	P	**Pn**	**03 54 30.5**	**+5.5**
WRAB	**Tennant Creek**	**19.29**	**129**	*e*P	**Pn**	**03 54 40.9**	**-0.6**
	23nm,1.4s						
WB2	**Warramunga Arr**	**19.30**	**129**	*e*P	**Pn**	**03 54 40.2**	**-1.5**
WB2				*e*S	**Sn**	**03 58 00.6**	**-17**
ASAR	**Alice Springs**	**21.35**	**138**	P	**P**	**03 55 03.8**	**+0.9**
	1.7nm,0.4s,mb3.7,baz=306,slow=8.7,SNR=20						
COEN	**Coen**	**24.83**	**106**	*e*P	**P**	**03 55 37.9**	**0.0**
	17nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**31.92**	**141**	*e*P	**P**	**03 56 41.0**	**-0.2**
	2.1nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**31.92**	**141**	P	**P**	**03 56 39.8**	**-1.4**
	1.3nm,0.6s,mb3.9,baz=322,slow=8.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**32.72**	**324**	P	**P**	**03 56 48.6**	**+0.4**
	1.3nm,0.3s,mb4.3,baz=150,slow=6.6,SNR=7.3						
CMAR				LR	LR	04 11 26.6	
	comp=Z,88nm,18.6s,baz=250,slow=39						
KMI	**Kunming**	**36.43**	**335**	P	**P**	**03 57 19.5**	**-0.8**
KMI				AMB	AMB		
	comp=Z,15nm,0.6s						
CD2	**Chengdu**	**41.29**	**341**	P	**P**	**03 58 01.8**	**+0.9**
CD2				AMB	AMB		
	comp=Z,50nm,1.0s						
KSRS	**Korea Array**	**46.13**	**10**	P	**P**	**03 58 40.4**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.4,baz=193,slow=8.5,SNR=12						
KSRS				LR	LR	04 17 07.7	
	comp=Z,22nm,21.3s,baz=95,slow=35						
GTA	**Gaotai**	**50.35**	**341**	*e*P	**P**	**03 59 14.0**	**+1.6**
GTA				AP	pP	03 59 18.7	+0.4
GTA				XP	sP	03 59 21.0	+0.4
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**56.62**	**351**	*e*P	**P**	**03 59 59.0**	**+0.7**
	comp=Z,1.7nm,0.9s,mb4.1						
ULN	**Ulaanbaatar**	**56.62**	**351**	P	**P**	**04 00 00.6**	**+2.3**
SONM	**Songino Array**	**56.70**	**350**	P	**P**	**03 59 59.1**	**+0.2**
	comp=Z,1.3nm,0.4s,mb4.3,baz=165,slow=7.6,SNR=13						
MKAR	**Makanchi Array**	**63.45**	**333**	P	**P**	**04 00 44.8**	**-0.4**
	comp=Z,1.1nm,0.7s,mb4.1,baz=151,slow=6.4,SNR=11						
KURK	**Kurchatov**	**67.99**	**334**	*e*P	**P**	**04 01 13.7**	**-0.7**
	comp=Z,1.5nm,0.6s,mb4.2						
ZAA0	**Zalesovo Array**	**68.04**	**339**	*e*P	**P**	**04 01 13.6**	**-1.0**
ZALV	**Zalesovo Beam**	**68.04**	**339**	P	**P**	**04 01 13.4**	**-1.2**
	comp=Z,2.2nm,0.7s,mb4.3,baz=135,slow=5.0,SNR=9.2						
PETK	**Petropavlovsk-**	**69.40**	**24**	P	**P**	**04 01 24.0**	**+0.8**
	comp=Z,3.5nm,0.8s,mb4.4,baz=234,slow=5.1,SNR=3.8						
SNAA	**Sanae**	**91.77**	**196**	*e*P	**P**	**04 03 23.4**	**+0.7**
	comp=Z,0.8nm,0.7s,mb4.2						

*NIED **05** 04:33:00, 25.80N×124.20E, h175km, Mw5.0 Best double couple: Mo3.75000×10^16 NP1:φs30.00000°, δ71.00000°, λ-95.00000°. NP2:φs225.00000°, δ19.00000°, λ-75.00000°.*
*SZGRF **05** 04:33:34.7, 25.18N×124.74E, h192km, mb5.4, Northeast of Taiwan*
*MOS **05** 04:33:34.9±0.8, 25.94N×124.18E, h166km, mb5.2/79, Error ellipse: s-maj=8.6km s-min=4.2km az=120.3*
*ISCJB **05** 04:33:36.0±0.2, 25.86N±0.02×124.14E±0.02, h172km±2km, mb5.0/190, Error ellipse: s-maj=3.9km s-min=2.4km az=169.5*
*GCMT **05** 04:33:37.2±0.3, 25.74N×124.23E, h192km±2km, MW5.0/85, Moment Tensor Solution. s37,c47; s85,c122; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.90±.12; Mθθ1.45±.17; Mφφ1.45±.19; Mrθ-1.83±.11; Mθφ0.23±.14; Mφr-3.44±.12; Best double couple: Mo4.51200×10^16 NP1:φs216.00000°, δ15.00000°, λ-83.00000°. NP2: φs29.00000°, δ75.00000°, λ-92.00000°. Principal axes: T 3.8850, Plg30.0000°, Azm121.0000°; N 1.2550, Plg2.0000°, Azm30.0000°; P -5.1400, Plg60.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*JMA **05** 04:33:37.5±0.2, 25.85N×124.19E, h167km, M5.1*
JMA Felt I J1.
*NEIC **05** 04:33:37.2±0.4, 25.82N×124.19E, h179km±3km, mb5.1/108, Error ellipse: s-maj=4.0km s-min=3.6km az=170.0*
NEIC Felt at Chatan, Ryukyu Islands. Recorded [2 JMA] on Miyako-jima and [1 JMA] on Iriomote-jima and Ishigaki-jima, Ryukyu Islands.
*IDC **05** 04:33:37.5±0.6, 25.87N×124.28E, h182km±5km, mb4.6/25, mb1 4.6/28, mb1mx4.6/31, mbtmp4.6/28, Error ellipse: s-maj=11.5km s-min=8.6km az=59.0*
*BJI **05** 04:33:37.2, 25.76N×124.33E, h204km, mB5.0, mb5.2*
*DJA **05** 04:33:42, 25.94N×123.75E, h197km, mb5.1/13*
ISC 05 04:33:37.1±0.2**, 25.84N**±0.02×**124.18E**±0.02**, h171**km±1km**, h188**km±1.5km**:pP-P, n757, σ0.s89**/774**, mb5.0**/190**, 131C-170D, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.28**	**158**	P	**Pn**	**04 34 06.8**	**+0.5**
JTJ				S	**Sn**	**04 34 28.4**	**+10**
JMJ	**Miyako jima 2**	**1.43**	**135**	P	**Pn**	**04 34 08.2**	**+0.5**
JMJ				S	**Sn**	**04 34 30.7**	**+8.5**
JIJ	**Ishigaki jima**	**1.47**	**181**	P	**Pn**	**04 34 07.9**	**-0.1**
JIJ				S	**Sn**	**04 34 30.6**	**+7.4**
JOGS	**Gusukube**	**1.54**	**134**	P	**Pn**	**04 34 09.6**	**+0.9**
JOGS				S	**Sn**	**04 34 33.0**	**+8.1**
IRIF	**Iriomote-Funau**	**1.55**	**195**	P	**Pn**	**04 34 08.8**	**-0.1**
IRIF				S	**Sn**	**04 34 33.5**	**+8.3**
JKRS	**Kuro-shima**	**1.60**	**186**	P	**Pn**	**04 34 09.5**	**+0.1**
JKRS				S	**Sn**	**04 34 33.6**	**+7.2**
YOJ	**Yonaguni jima**	**1.74**	**218**	P	**Pn**	**04 34 11.8**	**+1.1**
YOJ				S	**Sn**	**04 34 37.2**	**+7.7**
HATJ	**Hateruma jima**	**1.81**	**191**	P	**Pn**	**04 34 11.6**	**+0.1**
HATJ				S	**Sn**	**04 34 37.5**	**+6.2**
JKE	**Kume jima 2**	**2.39**	**78**	P	**Pn**	**04 34 18.0**	**+0.1**
JKE				S	**Sn**	**04 34 49.2**	**+4.1**
TATO	**Taipei**	**2.58**	**251**	⇑*i*Pn	**Pn**	**04 34 22.9**	**+2.6**
TATO				*e*Sn	**Sn**	**04 34 56.6**	**+6.8**
YHNB	**Yeheng**	**2.80**	**246**	⇑*i*Pn	**Pn**	**04 34 24.7**	**+1.9**
YHNB				*e*Sn	**Sn**	**04 35 03.8**	**+8.9**
JAGN	**Aguni-jima**	**2.85**	**74**	P	**Pn**	**04 34 23.1**	**-0.3**
JAGN				S	**Sn**	**04 34 57.7**	**+1.6**
NACB	**Ninganchiao**	**2.88**	**235**	⇑*i*Pn	**Pn**	**04 34 23.6**	**-0.2**
NAH1	**Naha**	**3.18**	**83**	P	**Pn**	**04 34 27.3**	**-0.2**
NAH1				S	**Sn**	**04 35 04.1**	**+0.1**
JJT2	**Tamagusuku 2**	**3.22**	**84**	P	**Pn**	**04 34 28.1**	**+0.1**
JJT2				S	**Sn**	**04 35 05.5**	**+0.4**
SSLB	**Suanglung**	**3.58**	**236**	*e*Pn	**Pn**	**04 34 32.8**	**+0.2**
SSLB				*e*Sn	**Sn**	**04 35 15.9**	**+2.2**
YULB	**Yu-li**	**3.58**	**228**	*e*Pn	**Pn**	**04 34 31.6**	**-1.1**
YULB				*e*Sn	**Sn**	**04 35 07.1**	**-6.7**
JIH	**Iheya**	**3.59**	**70**	P	**Pn**	**04 34 32.2**	**-0.5**
JIH				S	**Sn**	**04 35 12.7**	**-1.4**
JOW	**Kunigami**	**3.80**	**74**	P	**Pn**	**04 34 34.4**	**-1.0**
	343nm,0.3s,baz=193,slow=9.7,SNR=276						
JOW				S	**Sn**	**04 35 15.7**	**-3.3**
	964nm,0.3s,baz=128,slow=25,SNR=32						
JOW	**Kunigami**	**3.80**	**74**	P	**Pn**	**04 34 34.3**	**-1.0**
JOW				S	**Sn**	**04 35 15.7**	**-3.3**
TPUB	**Ta-pu**	**4.11**	**233**	⇑*e*Pn	**Pn**	**04 34 39.5**	**+0.2**
TPUB				*e*Sn	**Sn**	**04 35 28.3**	**+1.9**
TWG	**Pinlang**	**4.13**	**224**	⇑*e*Pn	**Pn**	**04 34 38.1**	**-1.6**
TWG				*e*Sn	**Sn**	**04 35 23.1**	**-4.0**
JTK	**Tokunoshima**	**4.68**	**64**	P	**Pn**	**04 34 44.8**	**-1.8**
JTK				S	**Sn**	**04 35 36.6**	**-3.5**
QZH	**Quanzhou**	**5.13**	**261**	⇑*i*P	**Pn**	**04 34 54.2**	**+1.6**
QZH				S	**Sn**	**04 35 51.1**	**0.0**
QZH				AMB	AMB		
	comp=Z,3µm,2.5s						
JAM	**Amami Oshima**	**5.47**	**61**	P	**Pn**	**04 34 54.8**	**-2.1**
JAM				S	**Sn**	**04 35 55.0**	**-4.0**
SSE	**Sheshan**	**5.86**	**334**	P	**Pn**	**04 35 04.5**	**+2.4**
SSE				AMB	AMB		
	comp=Z,283nm,0.8s						
SSE				AMB	AMB		
	comp=Z,227nm,2.6s						
JMZ	**Minamidaito 2**	**6.34**	**89**	P	**Pn**	**04 35 06.8**	**-1.7**
JMZ				S	**Sn**	**04 36 11.6**	**-8.4**
NJ2	**Nanjing**	**7.75**	**324**	*e*P	**Pn**	**04 35 29.6**	**+2.6**
NJ2				XP		04 36 12.4	
NJ2				S	**Sn**	**04 36 53.8**	**0.0**
NJ2				AMB	AMB		
	comp=Z,150nm,0.9s						
NJ2				AMB	AMB		
	comp=Z,50nm,3.5s						
NJ2				LR	LR		
	comp=N,150nm,14.4s						
NJ2				LR	LR		
	comp=E,250nm,15.2s						
NJ2				LR	LR		
	comp=Z,250nm,15.2s						
WHN	**Wuhan**	**9.86**	**301**	⇓P	**Pn**	**04 35 57.3**	**+2.5**
WHN				XP		04 36 43.5	
WHN				S	**Sn**	**04 37 51.9**	**+7.6**
WHN				AMB	AMB		
	comp=Z,105nm,0.9s						
WHN				LR	LR		
	comp=N,2µm,4.8s						
WHN				LR	LR		
	comp=E,2µm,3.5s						
WHN				LR	LR		
	comp=Z,2µm,4.6s						
KSRS	**Korea Array**	**12.01**	**14**	P	**Pn**	**04 36 25.9**	**+3.1**
	comp=Z,2.6nm,0.3s,baz=190,slow=13,SNR=57						
KSRS	**Korea Array**	**12.01**	**14**	P	**Pn**	**04 36 25.9**	**+3.2**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
DL2	**Dalian**	**13.21**	**351**	P	**Pn**	**04 36 43.7**	**+5.7**
DL2				XP		04 37 28.7	
DL2				S	**Sn**	**04 39 09.9**	**+5.4**
DL2				AMB	AMB		
	comp=Z,50nm,1.1s						
DL2				AMB	AMB		
	comp=Z,100nm,4.1s						
QIZ	**Qiongzhong**	**14.88**	**246**	P	**Pn**	**04 37 02.7**	**+3.5**
QIZ				XP	sP	04 37 51.2	+0.4
QIZ				S	**Sn**	**04 39 44.5**	**-0.6**
QIZ				AMB	AMB		
	comp=Z,102nm,1.1s						
QIZ				AMB	AMB		
	comp=Z,273nm,6.2s						
JHJ	**Hachijo jima 2**	**15.39**	**58**	P	**Pn**	**04 37 09.7**	**+4.4**
	comp=Z,24nm,0.3s,baz=222,slow=21,SNR=5.9						
XAN	**Xi'an**	**15.54**	**305**	P	**Pn**	**04 37 08.6**	**+1.5**
XAN				XP	sP	04 38 00.1	+2.1
XAN				S	**S**	**04 40 00.5**	**+0.6**
XAN				AMB	AMB		
	comp=Z,56nm,1.0s						
XAN				LR	LR		
	comp=E,59nm,24.5s						
XAN				LR	LR		
	comp=Z,82nm,18.8s						
BJT	**Baijiatuau**	**15.65**	**337**	*e*P	**Pn**	**04 37 10.5**	**+2.2**
BJT				pmax	pmax		
	comp=Z,112nm,0.9s						
BJT	**Baijiatuau**	**15.65**	**337**	*e*P	**Pn**	**04 37 10.5**	**+2.1**
	comp=Z,112nm,0.9s						
BJI	**Beijing**	**15.66**	**337**	P	**Pn**	**04 37 09.7**	**+1.2**
BJI				S	**S**	**04 40 03.7**	**+1.0**
BJI				AMB	AMB		
	comp=Z,129nm,1.0s						
BJI				AMB	AMB		
	comp=Z,679nm,3.6s						
BJI				LR	LR		
	comp=N,377nm,15.6s						
BJI				LR	LR		
	comp=E,169nm,17.1s						
BJI				LR	LR		
	comp=Z,92nm,15.3s						
GYA	**Guiyang**	**15.75**	**276**	⇓*i*P	**Pn**	**04 37 12.3**	**+2.6**
GYA				XP	sP	04 38 02.1	+1.7
GYA				S	**S**	**04 39 57.6**	**-7.3**
GYA				SCS	ScS	04 48 53.0	-2.3
GYA				AMB	AMB		
	comp=Z,40nm,1.0s						
GYA				AMB	AMB		
	comp=Z,190nm,5.7s						
SNY	**Shenyang**	**15.96**	**358**	⇓P	**Pn**	**04 37 14.1**	**+2.0**
SNY				XP	sP	04 38 03.9	+1.3
SNY				S	**S**	**04 40 11.0**	**+1.7**
SNY				AMB	AMB		
	comp=Z,106nm,0.8s						
SNY				AMB	AMB		
	comp=Z,248nm,3.5s						
MAT	**Matsushiro**	**16.04**	**45**	P	**Pn**	**04 37 12.0**	**-1.1**
MAT				S	**S**	**04 40 10.0**	**-1.3**
MJAR	**Matsushiro Arr**	**16.04**	**45**	P	**Pn**	**04 37 11.6**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=233,slow=12,SNR=5.9						
MJAR	**Matsushiro Arr**	**16.04**	**45**	P	**Pn**	**04 37 11.6**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CBIJ	**Chichi jima**	**16.17**	**82**	P	**Pn**	**04 37 14.3**	**-0.6**
	comp=Z,21nm,0.3s,baz=305,slow=21,SNR=5.5						
CN2	**Changchun**	**17.95**	**3**	⇓P	**Pn**	**04 37 35.7**	**-0.2**
CN2				AMB	AMB		
	comp=Z,180nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
HHC	**Hu-ho-hao-te**	**18.28**	**328**	*e*P	**P**	**04 37 39.8**	**+2.1**
HHC				S	**S**	**04 40 54.5**	**-3.3**
HHC				PCP	PcP	04 42 04.1	+2.1
HHC				PCS	PcS	04 45 39.6	+1.0
HHC				AMB	AMB		
	comp=Z,143nm,0.9s						
HHC				AMB	AMB		
	comp=Z,239nm,4.3s						
CD2	**Chengdu**	**18.66**	**290**	⇓*i*P	**P**	**04 37 43.1**	**+1.1**
CD2				XP	sP	04 38 38.3	+5.6
CD2				S	**S**	**04 41 02.0**	**-3.6**
CD2				AMB	AMB		
	comp=Z,500nm,1.0s						
CD2				AMB	AMB		
	comp=Z,410nm,5.3s						
CD2				LR	LR		
	comp=N,750nm,6.4s						
CD2				LR	LR		
	comp=Z,360nm,6.2s						
BTO	**Baotou**	**18.86**	**325**	*e*P	**P**	**04 37 44.3**	**+0.2**
MDJ	**Mudanjiang**	**19.24**	**12**	P	**P**	**04 37 49.4**	**+1.3**
MDJ				S	**S**	**04 41 17.1**	**+0.4**
MDJ				SCP	ScP	04 45 22.0	-1.5
MDJ				PCS	PcS	04 45 41.4	+0.8
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,107nm,4.8s						
MDJ	**Mudanjiang**	**19.24**	**12**	*e*P	**P**	**04 37 48.5**	**+0.4**
	comp=Z,11nm,0.8s						
KMI	**Kunming**	**19.37**	**273**	P	**P**	**04 37 51.9**	**+2.1**
KMI				XP	sP	04 38 44.9	+4.4
KMI				S	**S**	**04 41 15.8**	**-4.0**
KMI				AMB	AMB		
	comp=Z,106nm,0.9s						
KMI				AMB	AMB		
	comp=Z,263nm,3.3s						
KMI				LR	LR		
	comp=N,535nm,8.3s						
KMI				LR	LR		
	comp=E,219nm,6.6s						
KMI				LR	LR		
	comp=Z,191nm,9.2s						
LZH	**Lanzhou**	**20.18**	**305**	⇓P	**P**	**04 37 59.5**	**+1.2**
LZH				PP		04 38 29.6	
LZH				XP	sP	04 38 55.7	+6.4
LZH				S	**S**	**04 41 32.0**	**-3.3**
LZH				AMB	AMB		
	comp=Z,127nm,1.1s						
LZH				AMB	AMB		
	comp=Z,515nm,4.2s						
LZH				LR	LR		
	comp=E,1µm,10.0s						
LZH				LR	LR		
	comp=Z,2µm,12.3s						
KKM	**Kota Kinabalu**	**21.11**	**203**	*e*P	**P**	**04 38 08.8**	**+0.4**
	comp=Z,32nm,1.0s,mb4.6						
KKM	**Kota Kinabalu**	**21.11**	**203**	⇓P	**P**	**04 38 08.8**	**+0.4**
SDKM	**Sandakan**	**21.17**	**200**	⇑P	**P**	**04 38 09.2**	**+0.2**
MYLDM	**Lahad Datu**	**21.25**	**196**	⇑P	**P**	**04 38 11.8**	**+1.9**
KKTK	**Khon Kaen**	**22.03**	**249**	⇓P	**P**	**04 38 18.4**	**+0.3**
	comp=Z,864nm,0.5s,mb6.4						
TSM	**Tawau**	**22.26**	**197**	⇑P	**P**	**04 38 20.1**	**-0.2**
GUMO	**Guam**	**22.93**	**118**	P	**P**	**04 38 25.7**	**-0.7**
	comp=Z,76nm,0.6s,mb5.3,baz=22,slow=24,SNR=3.5						
GUMO	**Guam**	**22.93**	**118**	P	**P**	**04 38 25.7**	**-0.7**
GUMO				pmax	pmax		
	comp=Z,76nm,0.6s,mb5.3						
CHRT	**Chiangrai**	**23.24**	**260**	⇓P	**P**	**04 38 30.0**	**+0.8**
	comp=Z,632nm,0.8s,mb6.1						
ASAJ	**Asahikawa**	**23.57**	**35**	P	**P**	**04 38 30.4**	**-1.5**
	comp=Z,21nm,0.4s,mb5.0,baz=222,slow=9.6,SNR=20						
ASAJ	**Asahikawa**	**23.57**	**35**	P	**P**	**04 38 30.5**	**-1.5**
ASAJ				pmax	pmax		
	comp=Z,21nm,0.4s						
HIA	**Hailar**	**23.64**	**353**	*e*P	**P**	**04 38 31.8**	**-0.7**
HIA				*e*		04 42 12.1	
HIA				pmax	pmax		
	comp=Z,34nm,0.7s						
HIA	**Hailar**	**23.64**	**353**	*e*P	**P**	**04 38 31.8**	**-0.7**
	comp=Z,34nm,0.7s,mb5.0						
HIA				*e*PcP	PcP	04 42 12.1	-0.1
HIA				*e*ScP	ScP	04 45 32.5	-1.8
KLR	**Kul'dur**	**24.08**	**12**	*e*P	**P**	**04 38 32.0**	**-4.5**
KLR				*e*		04 39 12.6	
KLR				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.0						
HABR	**Khabarovsk**	**24.15**	**18**	*e*P	**P**	**04 38 36.2**	**-0.9**
HABR				*e**PP		04 39 08.3	
HABR				*e*		04 39 15.9	
HABR				*e**SP	sP	04 39 31.3	-0.6
HABR				*e*		04 42 09.7	
HABR				*e*S	**S**	**04 42 40.8**	**-1.6**
HABR				*e**SS	sS	04 43 43.3	-0.3
CHG	**Chiang Mai**	**24.35**	**258**	⇓P	**P**	**04 38 39.5**	**+0.2**
	comp=Z,65nm,0.9s,mb5.2						
CHTO	**Chiang Mai**	**24.35**	**258**	⇑P	**P**	**04 38 39.7**	**+0.5**
	SNR=13						
CHTO	**Chiang Mai**	**24.35**	**258**	*e*P	**P**	**04 38 39.8**	**+0.5**
CHTO				*e*		04 42 14.1	
CHTO				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.1						
CHTO	**Chiang Mai**	**24.35**	**258**	*e*P	**P**	**04 38 39.8**	**+0.5**
	comp=Z,50nm,0.8s,mb5.1						
CHTO				*e*PcP	PcP	04 42 14.1	-0.2
CM31	**Chiang Mai Arr**	**24.48**	**258**	*e*P	**P**	**04 38 40.7**	**+0.3**
	comp=Z,15nm,0.7s,mb4.6						
CMAR	**Chiang Mai Arr**	**24.48**	**258**	P	**P**	**04 38 40.6**	**+0.1**
	comp=Z,18nm,0.7s,mb4.7,baz=58,slow=7.8,SNR=49						
CMAR				PcP	PcP	04 42 15.2	+0.7
	comp=Z,7.7nm,0.8s,baz=44,slow=0.9,SNR=16						
CMAR	**Chiang Mai Arr**	**24.48**	**258**	P	**P**	**04 38 40.6**	**+0.1**
CMAR						04 42 15.2	
CMAR				pmax	pmax		
	comp=Z,18nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	**Gaotai**	**24.49**	**310**	⇓P	**P**	**04 38 40.4**	**0.0**
GTA				AP		04 39 15.4	
GTA				PCP	PcP	04 42 14.8	+0.6
GTA				S	**S**	**04 42 47.5**	**-0.6**
GTA				SCP	ScP	04 45 35.9	-1.0
GTA				PCS	PcS	04 45 50.8	-3.4
GTA				AMB	AMB		
	comp=Z,38nm,1.5s,mb4.7						
GTA				AMB	AMB		
	comp=Z,231nm,4.2s						
GTA				LR	LR		
	comp=N,191nm,13.2s						
GTA				LR	LR		
	comp=E,203nm,13.2s						
GTA				LR	LR		
	comp=Z,141nm,12.6s						
BTM	**Bintulu**	**24.91**	**207**	⇑P	**P**	**04 38 43.5**	**-0.9**
YSS	**Yuzh-Sakhalins**	**25.71**	**30**	*e*P	**P**	**04 38 52.0**	**+0.7**
YSS				*e*		04 44 22.0	
ULN	**Ulaanbaatar**	**25.79**	**333**	⇓P	**P**	**04 38 52.2**	**+0.1**
	SNR=17						
ULN	**Ulaanbaatar**	**25.79**	**333**	*d i*P	**P**	**04 38 51.5**	**-0.5**
ULN	**Ulaanbaatar**	**25.79**	**333**	*e*P	**P**	**04 38 51.8**	**-0.3**
	comp=Z,98nm,1.4s,mb5.2						
SBUM	**Sibu**	**25.95**	**208**	⇓P	**P**	**04 38 52.8**	**-1.0**
SONM	**Songino Array**	**26.04**	**332**	P	**P**	**04 38 54.0**	**-0.3**
	comp=Z,16nm,0.6s,mb4.8,baz=149,slow=9.4,SNR=85						
SONM				PcP	PcP	04 42 17.4	-0.1
	comp=Z,8.2nm,0.8s,baz=139,slow=4.5,SNR=8.3						
SONM				ScP	ScP	04 45 38.8	-2.3
	comp=Z,3.6nm,0.9s,baz=166,slow=5.7,SNR=8.6						
KSM	**Kuching**	**27.67**	**211**	*e*P	**P**	**04 39 08.7**	**-0.4**
	comp=Z,12nm,0.8s,mb4.7						
KTGM	**Kuala Trenggan**	**28.67**	**228**	⇑P	**P**	**04 39 19.5**	**+1.5**
SHL	**Shillong**	**29.07**	**277**	*e*P	**P**	**04 39 22.0**	**+0.5**
SHL				*e*x	x	04 42 05.0	
SHL				*e*x	x	04 45 50.0	
ZAK	**Zakamensk**	**29.31**	**332**	*e*P	**P**	**04 39 22.5**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						

LSA Lhasa 29.42 285 P **P** **04 39 25.7 +1.1**
LSA Lhasa 29.42 285 *e*P **P** **04 39 25.4 +0.8**
LSA pmax pmax
comp=Z,38nm,0.8s,mb5.2
LSA Lhasa 29.42 285 *e*P **P** **04 39 25.4 +0.8**
comp=Z,38nm,0.8s,mb5.2
TLY Talaya 30.16 334 *e*P **P** **04 39 30.7 -0.1**
TLY *e* 04 40 27.3
TLY *e* 04 46 03.1
TLY pmax pmax
comp=Z,20nm,0.6s,mb5.0
TLY MLR MLR
comp=Z,102nm,23.0s
TLY Talaya 30.16 334 *e*P **P** **04 39 30.6 -0.2**
comp=Z,26nm,0.6s,mb5.1
TLY *e*PcP PcP 04 42 27.7 +0.1
KULM Kulim 30.41 232 ⇑P **P** **04 39 32.1 -1.3**
IPM Ipoh 30.72 230 ⇓P **P** **04 39 36.5 +0.4**
MYKOM Kota Tinggi 30.90 223 ⇑P **P** **04 39 38.5 +0.7**
KAPI Kappang 30.97 189 P **P** **04 39 36.0 -2.3**
comp=Z,3.1nm,0.5s,mb4.3,baz=287,slow=11,SNR=4.2
KAPI PcP PcP 04 42 29.2 -1.2
comp=Z,6.6nm,0.7s,baz=132,slow=2.3,SNR=5.5
KAPI ScP ScP 04 45 54.6 -2.6
comp=Z,3.2nm,0.4s,baz=225,slow=14,SNR=5.4
KAPI Kappang 30.97 189 P **P** **04 39 36.0 -2.3**
KAPI PcP PcP 04 42 29.2 -1.2
KAPI ScP ScP 04 45 54.6 -2.6
CLNS Chul'man 30.98 1 *e*P **P** **04 39 37.9 0.0**
CLNS *e* 04 40 40.4
CLNS *e* 04 42 29.9
CLNS *e*S **S** **04 44 32.9 +3.3**
CLNS *e**SS sS 04 45 31.7 -0.9
CLNS *e*SS PcS 04 46 22.0 +8.4
CLNS pmax pmax
comp=Z,26nm,1.0s,mb4.9
CLNS pmax pmax
comp=N,22nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.2s
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=N,12nm,1.1s
CLNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
CLNS smax
comp=N,81nm,11.7s
CLNS smax
comp=E,65nm,17.5s
KGM Kluang 31.05 224 ⇓P **P** **04 39 39.6 +0.6**
FRIM Kepong 31.22 228 ⇓P **P** **04 39 40.2 -0.4**
MOY Mondy 31.23 332 *e*P **P** **04 39 39.7 -0.5**
MOY pmax pmax
comp=Z,10.0nm,2.0s,mb4.2
TAPN Taplejung 32.58 281 *e*P **P** **04 39 53.1 +0.8**
comp=Z,154nm,0.8s,mb5.8
BOD Bodaibo 32.77 350 *e*P **P** **04 39 52.1 -1.4**
BOD pmax pmax
comp=Z,15nm,1.1s,mb4.6
ODAN Odare 32.91 280 *e*P **P** **04 39 55.8 +0.5**
comp=Z,301nm,0.8s,mb6.0
RAMN Ramite 33.60 280 *e*P **P** **04 40 01.7 +0.5**
comp=Z,76nm,0.8s,mb5.5
JIRN Jiri 33.89 282 *e*P **P** **04 40 04.4 +0.7**
comp=Z,122nm,0.7s,mb5.7
GUN Gumba 34.14 282 *e*P **P** **04 40 06.5 +0.7**
comp=Z,273nm,0.9s,mb6.0
WMQ Urumqi 34.56 311 P **P** **04 40 09.2 0.0**
WMQ AP pP 04 40 49.8 +4.5
WMQ PP PP 04 41 31.7 +0.6
WMQ PCP PcP 04 42 39.8 -0.2
WMQ S **S** **04 45 23.7 -1.7**
WMQ SS SS 04 47 51.6 -7.4
WMQ AMB AMB
comp=Z,49nm,1.1s,mb5.0
WMQ AMB AMB
comp=Z,275nm,4.4s
WMQ LR LR
comp=N,28nm,17.0s
WMQ LR LR
comp=E,17nm,19.0s
WMQ LR LR
comp=Z,44nm,20.0s
PKI Pulchoki 34.59 282 *e*P **P** **04 40 09.9 +0.2**
comp=Z,234nm,0.9s,mb5.8
PKIN Phulchoki 34.60 282 *e*P **P** **04 40 09.8 0.0**
comp=Z,121nm,0.8s,mb5.6
KKN Kakani 34.68 282 *e*P **P** **04 40 11.0 +0.5**
comp=Z,278nm,0.8s,mb5.9
BOK Bokaro 34.74 275⇑ *i*P **P** **04 40 12.2 +1.2**
BOK AMb AMB 04 40 13.2
comp=Z,103nm,0.6s,mb5.6
DMN Daman 34.85 282 *e*P **P** **04 40 12.3 +0.3**
comp=Z,196nm,0.8s,mb5.8
GKN Gorkha 35.22 283 *e*P **P** **04 40 15.4 +0.3**
comp=Z,213nm,0.8s,mb5.8
DANN Dangsing 35.96 283 *e*P **P** **04 40 22.2 +0.8**
comp=Z,275nm,0.7s,mb6.0
KOLN Koldanda 36.16 282 *e*P **P** **04 40 23.7 +0.6**
comp=Z,193nm,0.9s,mb5.7
YAK Yakutsk 36.37 4 *e*P **P** **04 40 22.6 -1.8**
YAK *e* 04 41 48.0
YAK *e* 04 42 43.3
YAK *e*S **S** **04 45 48.7 -3.9**
YAK *e* 04 50 13.7
YAK pmax pmax
comp=Z,50nm,0.9s,mb5.1
YAK pmax pmax
comp=N,30nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,57nm,2.0s,mb4.8
YAK pmax pmax
comp=N,73nm,2.5s
YAK pmax pmax
comp=E,118nm,3.1s
YAK smax
comp=N,79nm,2.2s
YAK smax
comp=E,117nm,2.9s
YAK Yakutsk 36.37 4 *e*P **P** **04 40 23.4 -1.0**
comp=E,58nm,0.7s,mb5.3
PETK Petropavlovsk- 36.98 34 P **P** **04 40 27.9 -1.8**
comp=E,6.2nm,0.6s,mb4.4,baz=204,slow=4.4,SNR=6.0
PET Petropavlovsk 37.42 34 *e*P **P** **04 40 32.0 -1.4**
PET pmax pmax
comp=Z,36nm,0.6s,mb5.2
PET Petropavlovsk 37.42 34 *e*P **P** **04 40 32.0 -1.4**
comp=Z,36nm,0.6s,mb5.2
VIS Vishakhapatnam 38.66 266⇓ *i*P **P** **04 40 45.5 +1.2**
VIS AMb AMB 04 40 48.1
comp=Z,131nm,1.1s,mb5.5
PTH Pithoragarh 38.94 286 *e*P **P** **04 40 47.3 +0.9**
PTH *ex* x 04 42 09.3
MKAR Makanchi Array 39.12 313 P **P** **04 40 47.2 -0.4**
comp=Z,60nm,0.6s,mb5.4,baz=96,slow=10,SNR=364
MKAR PP PP 04 42 23.2 +2.3
comp=Z,11nm,1.0s,baz=102,slow=11,SNR=3.7
MKAR PcP PcP 04 42 53.4 -0.4
comp=Z,18nm,0.7s,baz=84,slow=4.3,SNR=13
MKAR ScP ScP 04 46 23.9 -2.2
comp=Z,2.2nm,1.0s,baz=83,slow=3.8,SNR=4.5
MKAR Makanchi Array 39.12 313 P **P** **04 40 47.2 -0.4**
MKAR PP PP 04 42 23.2 +2.3
MKAR PcP PcP 04 42 53.4 -0.4
MKAR ScP ScP 04 46 23.9 -2.2
KAKA Kakadu 39.15 167 *e*P x 04 40 29.1
comp=Z,18nm,0.6s
ZAA0 Zalesovo Array 40.41 325⇓ *i*P **P** **04 40 56.8 -1.4**
ZAA0 *e*pP pP 04 41 37.9 +2.7
ZAA0 *e*PcP PcP 04 42 56.1 -1.6
ZALV Zalesovo Beam 40.41 325 P **P** **04 40 57.0 -1.2**
comp=Z,56nm,0.5s,mb5.4,baz=111,slow=8.5,SNR=125
ZALV PcP PcP 04 42 56.4 -1.3
comp=Z,4.7nm,0.5s,baz=147,slow=3.0,SNR=5.6
ZALV ScP ScP 04 46 28.2 -2.7
comp=Z,4.5nm,0.8s,baz=123,slow=4.1,SNR=6.7
SMLA Simla 41.42 289 *e*P **P** **04 41 07.5 +0.7**
NGP Nagpur 41.50 273 *e*P **P** **04 41 06.7 -0.9**
NGP AMb AMB 04 41 08.4
comp=Z,127nm,1.7s,mb5.3
PMG Port Moresby 41.56 145 *e*P **P** **04 41 08.0 -0.1**
PMG pmax pmax
comp=Z,18nm,0.9s
comp=Z,18nm,0.9s,mb4.7
SDNR Sundarnagar 41.56 289 *e*P **P** **04 41 08.0 0.0**
SDNR *ex* x 04 43 01.0
NDI New Delhi 41.64 285 *e*P **P** **04 41 07.0 -1.7**
NDI *e*P 04 41 07.0
NVS Novosibirsk 41.64 325 *e*P **P** **04 41 06.7 -1.6**
NVS *e* 04 42 50.6
NVS pmax pmax
comp=N,34nm,1.5s
NVS pmax pmax
comp=E,52nm,1.5s
NVS pmax pmax
comp=Z,63nm,1.5s,mb5.0
KSH Kashi 42.33 301 P **P** **04 41 16.8 +2.7**
KSH AP pP 04 41 57.6 +6.3
KSH XP sP 04 42 18.7 +8.0
KSH PP PP 04 42 59.5 +3.8
KSH PCP PcP 04 43 06.2 +1.8
KSH SCP ScP 04 46 37.3 -1.6
KSH PCS PcS 04 46 57.5 +1.0
KSH S **S** **04 47 22.7 +0.5**
KSH XS sS 04 48 34.4 +7.1
KSH SS SS 04 50 31.2 -6.5
KSH SCS ScS 04 50 54.5 -3.1
KSH AMB AMB
comp=Z,15nm,1.1s,mb4.5
KSH AMB AMB
comp=Z,32nm,4.6s
KSH LR LR
comp=N,64nm,5.0s
KSH LR LR
comp=E,77nm,5.3s
KSH LR LR
comp=Z,55nm,6.1s
ULHL Ulahol 42.39 305 P **P** **04 41 16.3 +1.8**
SNR=30
BHPL Bhopal 42.44 277⇑ *i*P **P** **04 41 15.2 0.0**
BHPL AMb AMB 04 41 16.2
comp=Z,123nm,0.7s,mb5.6
THN Thein Dam 42.55 291 *e*P **P** **04 41 14.7 -1.3**
KURK Kurchatov 42.63 318 P **P** **04 41 15.5 -0.8**
comp=Z,944nm,0.4s
KURK Kurchatov 42.63 318⇑P **P** **04 41 15.9 -0.5**
SNR=34
KURK Kurchatov 42.63 318 P **P** **04 41 16.0 -0.4**
comp=Z,31nm,0.5s,mb5.2,baz=118,slow=4.3,SNR=99
KURK PP PP 04 43 01.2 +2.5
comp=Z,10nm,0.8s,baz=110,slow=10,SNR=4.7
KURK Kurchatov 42.63 318 P **P** **04 41 16.0 -0.3**
KURK 04 43 01.2
KURK pmax pmax
comp=Z,31nm,0.5s,mb5.2
KURK pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
KURK Kurchatov 42.63 318⇓ *e*P **P** **04 41 15.2 -1.2**
comp=Z,95nm,0.5s,mb5.7
KURK *e*PP PP 04 42 57.9 -0.8
KURK *e*PcP PcP 04 43 04.7 -0.4
TKM2 Tokmak 2 42.94 306⇓ *i*P **P** **04 41 19.6 +0.6**
TKM2 *e* 04 43 05.9
TKM2 pmax pmax
comp=Z,105nm,0.6s,mb5.6
TKM2 Tokmak 2 42.94 306 P **P** **04 41 19.9 +0.9**
SNR=130
TKM2 Tokmak 2 42.94 306⇓ *i*P **P** **04 41 19.6 +0.7**
comp=Z,105nm,0.6s,mb5.6
TKM2 *e*PcP PcP 04 43 05.9 -0.4
HYB Hyderabad 43.06 268 *e*P **P** **04 41 21.0 +0.7**
HYB pmax pmax
comp=Z,105nm,1.0s,mb5.4
HYB Hyderabad 43.06 268 *i* P **P** **04 41 21.0 +0.7**
comp=Z,105nm,1.0s,mb5.4
HYB Hyderabad 43.06 268 *e*P **P** **04 41 21.0 +0.7**
comp=Z,105nm,1.0s,mb5.4
KZA Kyzart 43.10 305 P **P** **04 41 22.0 +1.7**
SNR=40
KBK Karagaybulak 43.39 306 P **P** **04 41 23.4 +0.9**
SNR=32
AKL Akola 43.45 273 *e*P **P** **04 41 24.4 +1.1**
CHMS Chumysh 43.57 306 P **P** **04 41 24.8 +0.9**
SNR=32
FRU Bishkek 43.65 306⇓ *i*P **P** **04 41 24.8 +0.2**
FRU pmax pmax
comp=Z,92nm,1.6s,mb5.2
UCH Uchtor 43.66 305 P **P** **04 41 26.7 +1.9**
SNR=19
UCH Uchtor 43.66 305⇓ *i*P **P** **04 41 26.2 +1.5**
comp=Z,46nm,0.9s,mb5.1
UCH *e*pP pP 04 42 07.6 +5.4
COEN Coen 43.67 153⇑ *i*P **P** **04 41 24.5 -0.5**
comp=Z,32nm,1.0s,mb4.9
COEN *e*pP pP 04 42 03.5 +1.0
AAK Ala-Archa 43.72 305 P **P** **04 41 26.8 +1.6**
comp=Z,225nm,0.5s,mb6.0,SNR=12
AAK Ala-Archa 43.72 305⇑P **P** **04 41 26.4 +1.2**
SNR=7.5
AAK Ala-Archa 43.72 305⇓ *i*P **P** **04 41 25.6 +0.4**
AAK pmax pmax
comp=Z,26nm,1.4s,mb4.7
AAK Ala-Archa 43.72 305 P **P** **04 41 25.7 +0.5**
SNR=16
AAK Ala-Archa 43.72 305⇓ *i*P **P** **04 41 25.4 +0.3**
comp=Z,25nm,0.7s,mb5.0
AAK *e*PcP PcP 04 43 08.5 -0.5
USP Ospenovka 43.78 306 P **P** **04 41 25.9 +0.2**
SNR=20
AJM Ajmer 44.24 282⇓ *i*P **P** **04 41 29.3 -0.3**
EKS2 Erkin-Say 44.25 305 P **P** **04 41 30.4 +1.0**
SNR=16
EKS2 Erkin-Say 44.25 305⇓ *i*P **P** **04 41 29.7 +0.3**
comp=Z,23nm,0.7s,mb4.9
EKS2 *e*PcP PcP 04 43 10.8 0.0
AML Almayashu 44.26 305 P **P** **04 41 30.6 +1.1**
SNR=37
AML Almayashu 44.26 305⇓ *i*P **P** **04 41 30.6 +1.1**
comp=Z,44nm,0.6s,mb5.3
AML *e*PcP PcP 04 43 11.1 +0.2
AML *e*ScP ScP 04 46 47.6 +0.9
TIXI Tiksi 45.92 2 *e*P **P** **04 41 39.8 -2.3**
TIXI *e* 04 43 14.9
TIXI pmax pmax
comp=Z,60nm,1.2s,mb5.1
TIXI Tiksi 45.92 2 *e*P **P** **04 41 39.8 -2.3**
comp=Z,60nm,1.2s,mb5.1
TIXI *e*PcP PcP 04 43 14.9 -1.2
TIXI *e*ScP ScP 04 46 50.2 -2.8
WRAB Tennant Creek 46.56 167 P **P** **04 41 47.0 -0.7**
comp=Z,72nm,0.6s,mb5.5,SNR=9.7
WRAB Tennant Creek 46.56 167⇑ *i*P **P** **04 41 47.2 -0.5**
WRAB Tennant Creek 46.56 167 *e*P **P** **04 41 47.2 -0.5**
comp=Z,16nm,1.0s,mb4.6
WRAB *e*pP pP 04 42 27.4 +1.7
WRAB *e*S **S** **04 48 20.1 -3.3**
WB2 Warramunga Arr 46.57 167 *e*P **P** **04 41 47.1 -0.7**
WB2 *e* pP 04 42 26.3 +0.6
KK31 Karatay Array 46.67 306 *i* P **P** **04 41 48.8 +0.4**
KK31 pmax pmax
comp=Z,12nm,0.4s,mb4.9
KOD Kodaikanal 46.79 259 *e*P **P** **04 41 51.3 +1.5**
KOD AMb AMB 04 41 52.6
comp=Z,126nm,0.9s,mb5.6
MBWA Marble Bar 46.92 186 *e*P **P** **04 41 48.8 -1.7**
comp=Z,11nm,0.9s,mb4.5
MBWA *e*PcP PcP 04 43 19.3 -1.0
POO Poona 46.95 272⇑ *i*P **P** **04 41 51.5 +0.6**
VOSK Vostochnaya 47.75 319 P **P** **04 41 55.9 -0.7**
VOSK pmax pmax
comp=Z,12nm,0.6s,mb4.7
KBL Kabul 47.94 294⇓ *i*P **P** **04 41 58.8 +0.4**
KBL *e* 04 43 23.7
KBL pmax pmax
comp=Z,187nm,0.8s,mb5.8
KBL Kabul 47.94 294⇓ *i*P **P** **04 41 58.8 +0.4**
comp=Z,187nm,0.8s,mb5.8
KBL *e*PcP PcP 04 43 23.7 -0.3
GOA Goa 47.98 268 *e*P **P** **04 41 59.9 +1.0**
MNGI Mangalore 48.03 264 *e*P **P** **04 41 58.2 -1.2**
MNGI AMb AMB 04 42 01.4
comp=Z,152nm,1.9s,mb5.3
BVA0 Borovoye Array 48.16 319 *i* P **P** **04 41 59.7 -0.1**
BVA0 pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
BRVK Borovoye 48.23 319 P **P** **04 42 00.9 +0.6**
comp=Z,510nm,0.4s,SNR=25
BRVK Borovoye 48.23 319 P **P** **04 42 00.2 -0.1**
SNR=17
BRVK Borovoye 48.23 319⇓ *i*P **P** **04 41 59.8 -0.5**
BRVK *e* 04 43 23.9
BRVK pmax pmax
comp=Z,60nm,0.9s,mb5.2
BRVK Borovoye 48.23 319⇓ *i*P **P** **04 41 59.8 -0.5**
comp=Z,60nm,0.9s,mb5.2
BRVK *e*PcP PcP 04 43 23.9 -0.8
BILL Bilibino 49.22 19 *e*P **P** **04 42 06.2 -1.4**
BILL pmax pmax
comp=Z,36nm,2.0s,mb4.7
BILL Bilibino 49.22 19 *e*P **P** **04 42 06.6 -0.9**
BILL *e*PcP PcP 04 43 27.7 -0.2
ASAR Alice Springs 50.10 168 P **P** **04 42 14.5 -0.3**
comp=Z,3.0nm,0.6s,mb4.1,baz=354,slow=14,SNR=43
ASAR pP pP 04 42 54.2 +1.0
comp=Z,2.7nm,0.7s,baz=352,slow=9.1,SNR=3.9
ASAR PcP PcP 04 43 31.1 -0.7
comp=Z,4.7nm,0.8s,baz=8.3,slow=2.9,SNR=6.1
ASAR ScP ScP 04 47 08.6 -2.8
comp=Z,1.7nm,0.9s,baz=334,slow=3.6,SNR=5.9
ASAR S **S** **04 49 13.5 +0.4**
comp=Z,3.7nm,1.0s,baz=354,slow=15,SNR=14
ASAR Alice Springs 50.10 168 P **P** **04 42 14.5 -0.3**
ASAR *PP pP 04 42 54.3 +1.1
ASAR 04 43 31.2
ASAR S **S** **04 49 13.5 +0.4**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
ASAR smax
comp=N,4.0nm,1.0s
CTAO Charters Tower 50.44 153 *e*P **P** **04 42 17.3 0.0**
CTAO pmax pmax
comp=Z,21nm,1.4s,mb4.6
CTAO Charters Tower 50.44 153 *e*P **P** **04 42 17.2 -0.1**
comp=Z,20nm,1.4s,mb4.6
AB31 Akbulak array 54.26 313 P **P** **04 42 44.9 -0.3**
SVE Sverdlovsk 54.35 323⇑ *e*P **P** **04 42 45.4 -0.3**
SVE pmax pmax
comp=Z,135nm,1.1s,mb5.6
ARU Arti 55.45 322 *d* *i*P **P** **04 42 52.8 -0.8**
ARU *e* 04 43 48.1
ARU *e* 04 44 57.2
ARU PPP 04 46 13.9
ARU S **S** **04 50 25.8 +0.9**
ARU SS SS 04 54 17.7 +5.9
ARU pmax pmax
comp=Z,118nm,1.0s,mb5.6
ARU Arti 55.45 322 *e*P **P** **04 42 52.8 -0.8**
comp=Z,78nm,0.7s,mb5.5
AKTK Aktyubinsk 55.52 315 P **P** **04 42 54.0 -0.2**
AKTO Aktyubinsk 55.52 315 P **P** **04 42 54.0 -0.2**
comp=Z,54nm,0.7s,mb5.5,baz=91,slow=8.3,SNR=89
AKTO Aktyubinsk 55.52 315 P **P** **04 42 54.0 -0.2**
AKTO pmax pmax
comp=Z,55nm,0.7s,mb5.5
ABKT Ailbek 56.33 300 P **P** **04 43 01.5 +1.3**
comp=Z,1μm,0.7s,SNR=35
KLBR Kellerberrin 57.44 187 *e*P **P** **04 43 04.7 -3.2**
comp=Z,24nm,0.9s,mb5.0
WBK Wadi Bani Khal 59.02 282⇓P **P** **04 43 19.9 +0.7**
SNR=7.1
BIDO Bidbid 59.49 283⇑P **P** **04 43 19.4 -3.0**
SNR=9.4
SMDO Samad 59.69 283⇓P **P** **04 43 24.3 +0.5**
SNR=9.6
STKA Stephens Creek 59.75 163 *e*P **P** **04 43 22.9 -1.0**
comp=Z,2.1nm,0.6s,mb4.1
STKA *e* pP 04 44 05.5 +1.9
STKA Stephens Creek 59.75 163 P **P** **04 43 22.9 -1.0**
comp=Z,3.1nm,0.7s,mb4.3,baz=349,slow=6.8,SNR=8.7
STKA pP pP 04 44 04.6 +1.0
comp=Z,5.3nm,0.8s,baz=341,slow=7.4,SNR=4.8
JMDO Jabal Madar 59.85 282⇑P **P** **04 43 25.2 +0.3**
SNR=6.4
HOQ Hoqain 60.19 283⇑P **P** **04 43 28.0 +0.9**
SNR=16
BANOM Banah 60.40 286⇓P **P** **04 43 29.7 +1.2**
SNR=6.0
BSY Bisya 60.53 283⇓P **P** **04 43 29.9 +0.4**
SNR=12
HATD Hatta, Dubai 60.85 285⇑P **P** **04 43 32.4 +0.7**
SNR=6.0
ARQ Araqi 60.95 283⇓P **P** **04 43 32.7 +0.4**
SNR=7.9
CHUM Lake Minchumin 64.29 29 *e*P **P** **04 43 53.8 0.0**
comp=Z,5.6nm,0.5s,mb4.7
RBK Rabkut 64.91 278⇑P **P** **04 43 58.4 -0.2**
SNR=5.1
DGRG David-gareji 65.33 306 P **P** **04 44 01.8 +0.9**
TBLG Delisi 65.73 306 P **P** **04 44 04.7 +1.3**
VRHR Novokhopersk 65.79 317 *e*P **P** **04 44 02.5 -1.2**
VRHR pmax pmax
comp=Z,100nm,0.6s,mb5.8
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.7s
MCK McKinley 65.79 29 *e*P **P** **04 44 02.7 -0.7**
MCK *e* 04 44 32.1
MCK pmax pmax
comp=Z,12nm,1.0s,mb4.7
MCK McKinley 65.79 29 *e*P **P** **04 44 02.7 -0.8**
comp=Z,12nm,1.0s,mb4.7
MCK *e*PcP PcP 04 44 32.1 -1.0
COLA College 66.07 28 *e*P **P** **04 44 05.1 -0.1**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
COLA College 66.07 28 *e*P **P** **04 44 05.1 -0.1**
comp=Z,8.2nm,0.9s,mb4.6
GOF Gofitskoye 66.17 310 *i* P Px 04 43 51.4
GOF *i* PcP 04 44 34.9 -0.2
GOF pmax pmax
comp=N,150nm,1.3s
ONI Oni 66.46 307 P **P** **04 44 08.7 +0.6**
UMR Umm Al-Rimmam 66.64 293 *e*P **P** **04 44 08.7 -0.8**
baz=293
KIV Kislovodsk 66.67 309 P **P** **04 44 09.4 0.0**
comp=N,1μm,1.6s,mb6.4,SNR=25
KIV Kislovodsk 66.67 309⇓P **P** **04 44 10.0 +0.6**
SNR=31
KIV Kislovodsk 66.67 309 *d* *i*P **P** **04 44 09.7 +0.3**
KIV *e* 04 44 36.9
KIV *e**PP pP 04 44 53.0 +3.1
KIV *e* 04 46 38.5
KIV *e*S S 04 52 45.3 -1.8
KIV pmax pmax
comp=Z,194nm,1.0s,mb5.9
KIV pmax pmax
comp=Z,70nm,4.4s
KIV Kislovodsk 66.67 309⇓ *i*P **P** **04 44 09.7 +0.3**
comp=Z,187nm,1.0s,mb5.9
APA Apatity 66.70 335⇓ *i*P **P** **04 44 08.6 -0.5**
APA *e*S S 04 52 46.0 -0.7
APA pmax pmax
comp=Z,65nm,1.0s,mb5.4
APA MLR MLR
comp=Z,500nm,10.0s
KBD Kabd 66.78 292 *e*P **P** **04 44 09.5 -0.9**
baz=292
KBD AMb AMB 04 44 11.0
comp=Z,87nm,0.9s,mb5.6,baz=292
MIB Mutribah 66.88 293 *e*P **P** **04 44 10.1 -0.9**
baz=293
MIB AMb AMB 04 44 11.6
comp=Z,165nm,0.8s,mb5.9,baz=293
DYDN Diyadin 67.05 304 *i* P **P** **04 44 13.1 +1.2**
NAY Al-Naaiem 67.13 292 *e*P **P** **04 44 11.4 -1.1**
baz=292
NAY AMb AMB 04 44 13.0
comp=Z,92nm,0.8s,mb5.7,baz=292
MOS Moscow 67.16 322 *e*P **P** **04 44 10.5 -1.8**
MOS pmax pmax
comp=Z,134nm,1.4s,mb5.6
VORD Divnogorie 67.26 317 *e*P **P** **04 44 11.8 -1.2**
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 67.28 317 *e*P **P** **04 44 11.9 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VSR pmax pmax

comp=N,8.0nm,1.2s
VSR pmax pmax

comp=E,20nm,1.1s
HAKT HAKKARI 67.57 302 *i* P **P** **04 44 15.2 0.0**
TUTA Tutak 67.74 304 *i* P **P** **04 44 17.2 +1.0**
OBN Obninsk 67.89 322 ⇓*i* P **P** **04 44 15.7 -1.2**
OBN *i* pP 04 45 00.0 +2.5
OBN pmax pmax

comp=Z,39nm,0.8s,mb5.2
OBN Obninsk 67.89 322 *eP* **P** **04 44 16.1 -0.7**
comp=Z,34nm,0.6s,mb5.3
ARTV Artvin 67.91 306 *i* P **P** **04 44 12.9 -4.4**
DBOC Borcka 68.06 306 *i* P **P** **04 44 16.4 -1.7**
DDEM Demirkent 68.12 306 *i* P **P** **04 44 18.2 -0.4**
HOMI Horasan 68.24 305 *i* P **P** **04 44 13.2 -6.1**
MENT Mentasta 68.26 29 *eP* **P** **04 44 18.1 -0.9**
MSL Mosul 68.35 301 *eP* **P** **04 44 21.0 +0.9**
SPITS Spitsbergen Ar 68.45 348 P **P** **04 44 19.2 -0.8**
comp=Z,27nm,0.6s,mb5.1,baz=9.8,slow=10,SNR=27
SPITS Spitsbergen Ar 68.45 348 P **P** **04 44 19.2 -0.8**
SPITS pmax pmax

comp=Z,27nm,0.6s
SPB4 Spitsbergen Ar 68.45 348 *eP* **P** **04 44 19.3 -0.7**
KEV Kevo 68.46 338 *ep* **P** **04 44 18.5 -1.6**
comp=Z,18nm,0.7s,mb4.9
KEV Kevo 68.46 338 *eP* **P** **04 44 18.5 -1.6**
KEV pmax pmax

comp=Z,18nm,0.7s,mb4.9
JOF Joensuu 68.61 331 *ep* **P** **04 44 19.3 -1.9**
comp=Z,18nm,0.6s,mb5.0
JOF Joensuu 68.61 331 *eP* **P** **04 44 19.3 -1.9**
JOF pmax pmax

comp=Z,18nm,0.6s,mb5.0
SOC Sochi 68.84 309 *eP* **P** **04 44 21.2 -1.8**
SOC *e**PP pP 04 45 03.3 -0.5
SOC *e*PPP 04 48 33.6
SOC *e*S S 04 53 13.0 0.0
SOC *e* 04 54 03.5
SOC *e*SS SS 04 57 38.0 -3.1
SOC *e*SSS 05 00 49.8
SOC pmax pmax

comp=Z,104nm,0.9s,mb5.6
EGAK Eagle 68.88 27 *eP* **P** **04 44 22.1 -0.7**
ARCES ARCESS Array B 69.02 338 P **P** **04 44 22.9 -0.8**
comp=Z,8.9nm,0.8s,mb4.6,baz=76,slow=7.8,SNR=47
ARCES ARCESS Array B 69.02 338 P **P** **04 44 22.9 -0.7**
ARCES pmax pmax

comp=Z,9.0nm,0.8s
ARE0 ARCESS Array S 69.02 338 *eP* **P** **04 44 22.2 -1.4**
BNGL BINGOL 69.11 304 *i* P **P** **04 44 21.9 -2.8**
KOPT Kop Dagi 69.28 305 *i* P **P** **04 44 24.9 -0.9**
DAWY Dawson 69.82 28 *eP* **P** **04 44 28.0 -0.6**
MARD Mardin 69.87 302 *i* P **P** **04 44 28.8 -0.6**
ANN Anapa 70.08 311 *eP* **P** **04 44 29.8 -0.7**
ANN *e**PP pP 04 45 12.5 +1.1
ANN *e*S S 04 53 27.8 +0.4
ANN pmax pmax

comp=Z,182nm,1.0s,mb5.8
ELZG Elazig 70.86 304 *i* P **P** **04 44 34.5 -0.9**
KEMA Kemaliye 70.98 305 *i* P **P** **04 44 32.0 -4.1**
KAF Kangasniemi 71.06 331 *ep* **P** **04 44 33.7 -2.5**
comp=Z,14nm,0.6s,mb4.9,baz=69,slow=5.7
KAF Kangasniemi 71.06 331 *eP* **P** **04 44 33.7 -2.5**
KAF pmax pmax

comp=Z,14nm,0.6s,mb4.9
AKCD Akcadag 71.71 304 *i* P **P** **04 44 41.3 +0.7**
ALE Alert 71.81 1 P **P** **04 44 39.9 -0.5**
comp=Z,105nm,1.2s,mb5.4,SNR=6.5
VSU Vasula 72.10 327 ⇓*i* P **P** **04 44 41.3 -1.1**
VSU pmax pmax

comp=Z,91nm,1.3s,mb5.3
SIM Simferopol' 72.27 312 *d i* P **P** **04 44 43.9 +0.2**
SIM pmax pmax

comp=Z,66nm,0.8s,mb5.4
GZT Gaziantep 72.29 303 *i* P **P** **04 44 40.5 -3.4**
SKAG Skagway 73.21 32 *eP* **P** **04 44 48.9 0.0**
comp=Z,22nm,0.9s,mb4.9
AKASG Malin Array Be 73.44 319 P **P** **04 44 48.8 -1.7**
comp=Z,26nm,0.8s,mb5.0,baz=57,slow=5.9,SNR=57
AKASG pP pP 04 45 33.3 +1.6
comp=Z,0.9nm,0.3s,baz=57,slow=6.1,SNR=2.4
AKASG Malin Array Be 73.44 319 *i* P **P** **04 44 49.2 -1.3**
AKASG pmax pmax

comp=Z,26nm,0.8s
AKBB Malin Array Si 73.44 319 *eP* **P** **04 44 48.9 -1.6**
SIT Sitka 74.13 34 *eP* **P** **04 44 55.0 +0.6**
BR131 Keskin Array S 74.38 307 ⇓*i* P **P** **04 44 55.4 -0.7**
comp=Z,37nm,0.8s,mb5.2
BR131 *ep*P pP 04 45 42.6 +5.2
BRTR Keskin Array B 74.38 307 P **P** **04 44 55.6 -0.5**
comp=Z,48nm,0.9s,mb5.2,baz=94,slow=5.5,SNR=182
BRTR pP pP 04 45 40.8 +3.3
comp=Z,11nm,1.1s,baz=101,slow=6.7,SNR=2.0
BRTR Keskin Array B 74.38 307 P **P** **04 44 55.7 -0.4**
BRTR *PP pP 04 45 40.8 +3.3
BRTR pmax pmax

comp=Z,48nm,0.9s
BRTR pmax pmax

comp=Z,11nm,1.1s
ASF Jabal al Asfar 74.58 299 P **P** **04 44 57.9 +0.4**
comp=Z,24nm,0.9s,mb4.8,baz=311,slow=3.5,SNR=28
ASF Jabal al Asfar 74.58 299 P **P** **04 44 57.9 +0.4**
ASF pmax pmax

comp=Z,25nm,0.9s
ANTO Ankara 74.93 307 ⇑P **P** **04 44 59.3 -0.1**
SNR=5.2
ANTO Ankara 74.93 307 ⇓*i* P **P** **04 44 58.8 -0.5**
ANTO pmax pmax

comp=Z,26nm,0.6s,mb5.0
ANTO Ankara 74.93 307 ⇓*i* P **P** **04 44 58.8 -0.6**
comp=Z,26nm,0.6s,mb5.0
MMAI Mount Meron Ar 75.45 300 P **P** **04 45 02.2 -0.2**
comp=Z,13nm,0.8s,mb4.6,baz=59,slow=9.8,SNR=12
SUW Suwalki 75.61 323 *eP* **P** **04 45 02.1 -0.8**
SUW Suwalki 75.61 323 *eP* **P** **04 45 02.1 -0.8**
DLBC Dease Lake 76.13 31 *eP* **P** **04 45 07.1 +1.3**
DLBC *e*PcP PcP 04 45 16.2 -0.9
CSS Prodhromos 76.33 302 *eP* **P** **04 45 06.4 -1.0**
comp=Z,65nm,1.0s,mb5.2
RES Resolute Bay 76.58 10 *eP* **P** **04 45 07.0 -1.1**
LVV L'vov 76.86 319 *eP* **P** **04 45 08.6 -1.4**
ISP Isparta 77.34 306 *eP* **P** **04 45 11.5 -1.5**
ISP pmax pmax

comp=Z,77nm,1.0s,mb5.3
ISP Isparta 77.34 306 *eP* **P** **04 45 11.5 -1.5**
comp=Z,77nm,1.0s,mb5.3
KWP Kalwaria 77.72 319 *eP* **P** **04 45 14.7 -0.1**
KWP Kalwaria 77.72 319 *eP* **P** **04 45 14.7 -0.1**
NOA NORSAR Array B 78.02 333 P **P** **04 45 14.9 -1.4**
comp=Z,10nm,0.6s,mb4.6,baz=55,slow=5.5,SNR=34
NOA NORSAR Array B 78.02 333 P **P** **04 45 14.9 -1.4**
NOA pmax pmax

comp=Z,10.0nm,0.6s
NAO01 NORSAR Array S 78.26 333 *eP* **P** **04 45 16.0 -1.6**
comp=Z,5.1nm,0.6s,mb4.3
KOLS Kolonicke sedl 78.27 319 *i* P **P** **04 45 17.6 -0.3**
KOLS pmax pmax

comp=Z,8.0nm,0.8s,mb4.4
KOLS Kolonicke sedl 78.27 319 *i* P **P** **04 45 17.6 -0.3**
KOLS *e* 04 45 38.1
KOLS Kolonicke sedl 78.27 319 *i* P **P** **04 45 17.6 -0.3**
comp=Z,7.9nm,0.8s,mb4.4
KOLS *e* 04 45 38.1
UZH Uzhgorod 78.39 318 ⇓*i* P **P** **04 45 18.3 -0.3**
UZH *i* 04 45 25.0
STHS Stebnicka Huta 78.67 320 *eP* **P** **04 45 19.6 -0.5**
STHS pmax pmax

comp=Z,11nm,0.9s,mb4.5
STHS Stebnicka Huta 78.67 320 *eP* **P** **04 45 19.6 -0.5**
comp=Z,11nm,0.9s,mb4.5
STHS *e* 04 45 37.7
CRVS Cervenica-Dubn 78.77 319 *eP* **P** **04 45 20.7 +0.1**
CRVS *e* 04 45 30.3
CRVS pmax pmax

comp=Z,53nm,2.1s,mb4.8
CRVS Cervenica-Dubn 78.77 319 *eP* **P** **04 45 20.7 +0.1**
CRVS *e*PCP PcP 04 45 30.3 +1.5
CRVS Cervenica-Dubn 78.77 319 *eP* **P** **04 45 20.7 +0.1**
comp=Z,53nm,2.1s,mb4.8
CRVS *e* 04 45 30.3
GKP Gorka Klasztor 79.12 324 *eP* **P** **04 45 21.8 -0.7**
GKP Gorka Klasztor 79.12 324 *eP* **P** **04 45 21.8 -0.6**
OJC Ojcow 79.14 321 *eP* **P** **04 45 22.3 -0.3**
NIE Niedzica 79.21 320 *eP* **P** **04 45 23.1 +0.1**

RAC Raciborz 80.12 321 *eP* **P** **04 45 28.0 +0.1**
PSZ Piszkesteto 80.15 319 *eP* **P** **04 45 28.1 0.0**
PSZ pmax pmax

comp=Z,28nm,1.2s,mb4.8
PSZ Piszkesteto 80.15 319 *eP* **P** **04 45 28.1 0.0**
comp=Z,28nm,1.2s,mb4.8
PSZ Piszkesteto 80.15 319 *i* S **P** **04 45 28.6 +0.5**
OKC Ostrava-Krasne 80.26 321 ⇓*eP* **P** **04 45 27.6 -1.0**
YKA Yellowknife Ar 80.38 24 P **P** **04 45 27.8 -1.2**
comp=Z,10.0nm,0.7s,mb4.6,baz=306,slow=5.2,SNR=84
YKA PKKPbc PKKPbc 05 04 06.7 -4.1
comp=Z,1.6nm,0.7s,baz=130,slow=2.1,SNR=7.3
YKA Yellowknife Ar 80.38 24 ⇓*eP* **P** **04 45 27.7 -1.3**
YKA Yellowknife Ar 80.38 24 P **P** **04 45 27.8 -1.2**
YKA PKKPbc PKKPbc 05 04 06.7 -4.1
VYHS Vyhne 80.50 319 *i* P **P** **04 45 29.8 -0.2**
VYHS pmax pmax

comp=Z,19nm,0.9s,mb4.7
VYHS Vyhne 80.50 319 *i* P **P** **04 45 29.8 -0.2**
comp=Z,19nm,0.9s,mb4.7
KOLL Kolacno 80.72 320 *i* P **P** **04 45 31.5 +0.4**
KSP Ksiaz 80.81 322 *eP* **P** **04 45 31.4 -0.1**
KSP Ksiaz 80.81 322 *eP* **P** **04 45 31.0 -0.5**
DPC Dobruska-Polom 81.04 322 ⇓*i* P **P** **04 45 32.5 -0.3**
SUMG Summit 81.13 355 *eP* **P** **04 45 31.4 -1.4**
UPC Upice 81.13 322 ⇓*eP* **P** **04 45 32.7 -0.6**
RER Riviere de l'E 81.17 241 *eP* **P** **04 45 34.5 +0.6**
comp=Z,136nm,0.9s,mb5.6
SMOL Smolenice 81.31 320 *eP* **P** **04 45 34.7 +0.4**
RUE Ruedersdorf 81.33 325 *eP* **P** **04 45 34.0 -0.2**
comp=Z,44nm,1.0s,mb5.0
ZST Bratislava 81.66 320 *eP* **P** **04 45 36.4 +0.3**
ZST pmax pmax

comp=Z,9.0nm,0.7s,mb4.5
ZST Bratislava 81.66 320 *eP* **P** **04 45 36.4 +0.3**
comp=Z,8.5nm,0.7s,mb4.5
PKSM Moragy 81.71 317 *i* S **P** **04 45 35.7 -0.7**
PVCC Panska Ves 81.92 323 *eP* **P** **04 45 36.7 -0.7**
TREC Trest 82.04 321 ⇓*i* P **P** **04 45 37.6 -0.4**
BRG Berggiesshubel 82.08 323 *i* P **P** **04 45 37.6 -0.6**
BRG pmax pmax

comp=Z,10.0nm,1.0s,mb4.4
BRG Berggiesshubel 82.08 323 *eP* **P** **04 45 37.5 -0.7**
comp=Z,16nm,1.0s,mb4.6
BRG Berggiesshubel 82.08 323 *i* P **P** **04 45 37.6 -0.6**
comp=Z,16nm,1.0s,mb4.6
PRU Pruhonice 82.21 322 ⇓*eP* **P** **04 45 38.7 -0.2**
BSEG Bad Segeberg 82.30 327 *eP* **P** **04 45 39.0 -0.3**
BSEG pmax pmax

comp=Z,17nm,0.8s,mb4.7
BSEG Bad Segeberg 82.30 327 *eP* **P** **04 45 39.0 -0.3**
comp=Z,17nm,0.8s,mb4.7
CLL Collm 82.35 324 ⇓*iP* **P** **04 45 38.8 -0.8**
CLL pmax pmax

comp=Z,22nm,0.8s,mb4.8
CLL Collm 82.35 324 *eP* **P** **04 45 38.8 -0.8**
comp=Z,22nm,0.8s,mb4.8
CLL *ep*P pP 04 46 26.0 +4.2
CLL Collm 82.35 324 ⇓*iP* **P** **04 45 38.8 -0.8**
comp=Z,22nm,0.8s,mb4.8
CLL *i* pP pP 04 46 26.3 +4.5
CLL Collm 82.35 324 ⇓*iP* **P** **04 45 38.8 -0.8**
comp=Z,22nm,0.8s,mb4.8
CLL *i* pP pP 04 46 26.3 +4.5
FBE Freiberg 82.37 323 *eP* **P** **04 45 39.3 -0.4**
comp=Z,25nm,0.9s,mb4.8
CONA Conrad Observa 82.51 320 *iP* **P** **04 45 40.8 +0.3**
comp=Z,32nm,1.0s,mb5.0,SNR=18
CSNA Conrad Observa 82.52 320 ⇑*iP* **P** **04 45 40.8 +0.3**
comp=Z,30nm,1.0s,mb5.0
KOGS Kog 83.03 318 *eP* **P** **04 45 42.2 -1.1**
ARSA Arzberg 83.06 319 ⇑*iP* **P** **04 45 42.1 -1.3**
comp=Z,16nm,1.3s,mb4.6
TANN Tannenbergstha 83.12 323 *eP* **P** **04 45 43.0 -0.6**
comp=Z,12nm,1.2s,mb4.5
WERD Werda 83.19 323 *eP* **P** **04 45 43.2 -0.7**
comp=Z,11nm,1.5s,mb4.4
KHC Kasperske Hory 83.19 322 ⇓*iP* **P** **04 45 43.4 -0.6**
GUNZ Gunzen 83.22 323 *epP* pP 04 46 31.1 +4.8
NKC Novy Kostel 83.22 323 ⇓*eP* **P** **04 45 43.7 -0.5**
WERN Wernitzgruen 83.23 323 *eP* **P** **04 45 43.6 -0.6**
comp=Z,17nm,1.1s,mb4.7
GEC2 GERESS Array S 83.27 321 *eP* **P** **04 45 44.0 -0.4**
GEC2 pmax pmax

comp=Z,25nm,1.0s,mb4.9
GEC2 GERESS Array S 83.27 321 *eP* **P** **04 45 44.0 -0.4**
comp=Z,25nm,1.0s,mb4.9
GERES GERESS Array B 83.27 321 P **P** **04 45 43.6 -0.8**
comp=Z,18nm,0.9s,mb4.8,baz=57,slow=4.9,SNR=46
GERES pP pP 04 46 30.2 +3.5
comp=Z,2.3nm,0.9s,baz=54,slow=6.8,SNR=1.6
CLZ Clausthal 83.44 325 *eP* **P** **04 45 45.3 +0.1**
CLZ pmax pmax

comp=Z,33nm,0.9s,mb5.1
CLZ Clausthal 83.44 325 *eP* **P** **04 45 45.3 +0.1**
comp=Z,33nm,0.9s,mb5.1
MOX Moxa 83.45 324 *eP* **P** **04 45 44.9 -0.4**
comp=Z,6.0nm,0.9s,mb4.3
MOX Moxa 83.45 324 *eP* **P** **04 45 44.9 -0.4**
MOX pmax pmax

comp=Z,6.0nm,0.9s,mb4.3
GROS Grobnik 83.47 319 *eP* **P** **04 45 43.9 -1.6**
MOA Molln 83.48 320 *i* P **P** **04 45 45.5 0.0**
comp=Z,28nm,0.8s,mb5.0,SNR=22
MANZ Manzenberg 83.54 323 *eP* **P** **04 45 45.1 -0.7**
comp=Z,13nm,1.2s,mb4.5
ROTZ Rotzenmuhle 83.61 323 *eP* **P** **04 45 45.8 -0.3**
comp=Z,15nm,1.0s,mb4.7
SOKA Soboth 83.64 319 ⇓*iP* **P** **04 45 45.7 -0.6**
comp=Z,24nm,0.8s,mb5.0
OBKA Obir 84.01 319 ⇑*iP* **P** **04 45 47.7 -0.5**
comp=Z,31nm,0.9s,mb5.0
BOJS Bojanci 84.11 318 *i* P **P** **04 45 48.4 -0.4**
GRA1 Grafenberg Arr 84.19 323 *eP* **P** **04 45 48.4 -0.6**
GRA1 *ep*P pP 04 46 35.6 +4.2
GRF Grafenberg Arr 84.19 323 *eP* **P** **04 45 48.4 -0.6**
GRF *ep*P pP 04 46 35.6 +4.2
UBBA Unterbreizbach 84.21 324 *eP* **P** **04 45 48.3 -0.8**
comp=Z,35nm,1.6s,mb4.8
LJU Ljubljana 84.27 319 *eP* **P** **04 45 48.2 -1.3**
RJOB Jochberg 84.38 321 *eP* **P** **04 45 49.4 -0.6**
comp=Z,35nm,0.9s,mb5.1
KBA Koelnbreinsper 84.41 320 ⇑*iP* **P** **04 45 49.7 -0.6**
comp=Z,21nm,0.8s,mb4.9
MYKA Terra Mystica 84.48 320 ⇑*iP* **P** **04 45 49.5 -1.1**
comp=Z,14nm,0.9s,mb4.7
IBBN Ibbenburen 84.50 326 *eP* **P** **04 45 50.1 -0.5**
comp=Z,66nm,1.1s,mb5.3
VOY Vojsko 84.65 319 *eP* **P** **04 45 50.4 -1.0**
VOY *e* 04 45 53.7
A05A Maple Falls 84.99 37 ⇑P **P** **04 45 52.7 -0.4**
baz=85
FUR Furstenfeldbru 85.00 322 *eP* **P** **04 45 53.1 0.0**
FUR pmax pmax

comp=Z,61nm,0.9s,mb5.3
FUR Furstenfeldbru 85.00 322 *eP* **P** **04 45 53.1 0.0**
comp=Z,61nm,0.9s,mb5.3
ABTA Abfaltersbach 85.07 320 ⇑*iP* **P** **04 45 51.5 -2.1**
comp=Z,15nm,0.9s,mb4.7
MBW Mount Baker 85.21 37 P **P** **04 45 54.9 +0.7**
BUG Bochum--Univer 85.25 326 *eP* **P** **04 45 53.7 -0.6**
comp=Z,64nm,1.3s,mb5.2
WATA Walderalm 85.29 321 ⇑*iP* **P** **04 45 53.8 -0.8**
comp=Z,12nm,1.0s,mb4.6
WTTA Wattenberg 85.29 321 ⇓*iP* **P** **04 45 54.0 -0.7**
comp=Z,18nm,0.9s,mb4.8
B05A Bryant 85.40 38 ⇓P **P** **04 45 54.9 -0.3**
baz=85
TOD Tromm 85.53 324 *eP* **P** **04 45 55.3 -0.5**
B06A Marblemount 85.59 37 ⇑P **P** **04 45 56.1 0.0**
baz=85
RPW Rockport 85.61 37 P **P** **04 45 56.5 +0.3**
STU Stuttgart 85.80 323 *eP* **P** **04 45 56.5 -0.6**
STU pmax pmax

comp=Z,28nm,0.9s,mb5.0
STU Stuttgart 85.80 323 *eP* **P** **04 45 56.1 -1.0**
comp=Z,31nm,1.0s,mb5.0
STU Stuttgart 85.80 323 *eP* **P** **04 45 56.5 -0.6**
comp=Z,26nm,0.9s,mb5.0
A07A Ashnola River, 85.88 37 ⇑P **P** **04 45 57.4 -0.1**
baz=86,SNR=6.7
C05A Tolt Reservoir 85.94 38 ⇑P **P** **04 45 57.8 0.0**
baz=86
FETA Feichten 85.94 321 *i* PcP PcP 04 45 57.3 -3.0
comp=Z,11nm,0.9s,SNR=6.9
ABH Alteburg 86.03 325 *eP* **P** **04 45 58.3 +0.1**

D05A Enumclaw 86.06 39 ⇓P **P** **04 45 58.9 +0.5**
baz=86
KTD Kalmit 86.08 324 *eP* **P** **04 45 58.3 -0.2**
DAVA Damuels 86.27 322 ⇑*i*PcP PcP 04 45 59.0 -2.7
comp=Z,20nm,1.0s
G03A Yamhill 86.36 41 ⇓P **P** **04 46 00.4 +0.5**
baz=86
B07A Winthrop 86.36 37 ⇓P **P** **04 45 59.9 0.0**
baz=86,SNR=8.2
TIP Timpagrande 86.39 312 *eP* **P** **04 45 59.5 -0.7**
comp=Z,32nm,1.0s,mb5.0
RUP Ruppelstein 86.39 325 *eP* **P** **04 45 59.9 -0.1**
TDL Tradedollar La 86.40 39 P **P** **04 46 01.0 +0.9**
SPAK Spaichingen-Ko 86.41 323 *eP* **P** **04 45 59.4 -0.7**
LANF Langenberg 86.43 324 *eP* **P** **04 46 00.1 -0.1**
F04A Amboy 86.52 40 ⇓P **P** **04 46 00.9 +0.2**
baz=86
BFO Black Forest 86.53 323 *eP* **P** **04 45 59.7 -1.0**
BFO pmax pmax

comp=Z,21nm,1.1s,mb4.9
BFO Black Forest 86.53 323 *eP* **P** **04 45 59.7 -1.0**
comp=Z,21nm,1.1s,mb4.9
A08A Turner Farm, O 86.53 36 ⇓P **P** **04 46 01.1 +0.4**
baz=86,SNR=9.5
E05A Randle 86.55 39 ⇓P **P** **04 46 01.1 +0.3**
baz=86
H03A Soap Creek Ran 86.71 41 ⇓P **P** **04 46 02.5 +0.8**
baz=86
EDM Edmonton 86.82 31 *eP* **P** **04 46 02.1 +0.1**
EDM *ep*P pP 04 46 49.9 +5.3
C07A Waterville 86.85 38 ⇓P **P** **04 46 02.1 -0.1**
baz=87,SNR=7.6
B08A Colville Reser 86.85 37 ⇑P **P** **04 46 02.1 -0.1**
baz=87,SNR=21
TBM Table Mountain 86.85 38 P **P** **04 46 02.8 +0.5**
A09A Danville 86.88 36 ⇓P **P** **04 46 02.6 +0.3**
baz=87,SNR=14
G04A Mulino 86.89 41 ⇑P **P** **04 46 03.0 +0.5**
baz=87
AQU L'Aquila 86.91 316 *eP* **P** **04 46 02.5 -0.1**
AQU pmax pmax

comp=Z,37nm,0.9s,mb5.2
AQU L'Aquila 86.91 316 *eP* **P** **04 46 02.5 -0.2**
comp=Z,37nm,0.9s,mb5.2
E06A Yakima 87.00 39 ⇓P **P** **04 46 03.1 +0.1**
baz=87
ABPO Ambohimpanom 87.02 247 *eP* **P** **04 46 03.0 -0.5**
comp=Z,60nm,1.4s,mb5.2
EBG Ellensburg 87.02 38 P **P** **04 46 03.8 +0.7**
TUE Stuetta 87.04 321 *eP* **P** **04 46 02.7 -0.5**
comp=Z,11nm,0.8s,mb4.8
CDF Champ du Feu 87.05 323 *eP* **P** **04 46 02.1 -1.1**
comp=Z,86nm,1.1s,mb5.2
CDF Champ du Feu 87.05 323 *eP* **P** **04 46 02.1 -1.1**
CDF pmax pmax

comp=Z,43nm,1.1s,mb5.2
CDF Champ du Feu 87.05 323 *eP* **P** **04 46 02.1 -1.1**
comp=Z,43nm,1.1s,mb5.2
F05A White Salmon 87.10 40 ⇑P **P** **04 46 03.8 +0.3**
baz=87
D07A Quincy 87.18 38 ⇑P **P** **04 46 03.9 0.0**
baz=87,SNR=5.4
ECH Echery 87.23 323 *eP* **P** **04 46 03.3 -0.7**
C08A Higginbotham F 87.34 37 ⇑P **P** **04 46 04.7 0.0**
baz=87,SNR=8.2
MXC Moxie City 87.36 39 P **P** **04 46 05.5 +0.8**
A10A Northport 87.42 36 ⇑P **P** **04 46 05.2 +0.2**
baz=87,SNR=15
B09A Rice 87.45 36 ⇑P **P** **04 46 05.6 +0.5**
baz=87,SNR=6.9
MOF Molkenrain 87.46 323 *eP* **P** **04 46 04.4 -0.8**
G05A Wamic 87.55 40 ⇓P **P** **04 46 06.5 +0.8**
baz=87
F06A Goldendale 87.56 39 ⇓P **P** **04 46 06.4 +0.7**
baz=87,SNR=5.5
E07A Sunnyside 87.62 38 ⇓P **P** **04 46 06.5 +0.5**
baz=87,SNR=15
HINF Hinteralfeld 87.63 323 *eP* **P** **04 46 04.3 -1.7**
comp=Z,30nm,1.1s,mb4.7
HINF Hinteralfeld 87.63 323 *eP* **P** **04 46 04.3 -1.7**
HINF pmax pmax

comp=Z,15nm,1.1s,mb4.7
HINF Hinteralfeld 87.63 323 *eP* **P** **04 46 04.3 -1.7**
comp=Z,15nm,1.1s,mb4.7
C09A Chrisman Ranch 87.75 37 ⇓P **P** **04 46 06.8 +0.2**
baz=88,SNR=9.5
OD2 Odessa Site #2 87.76 37 P **P** **04 46 06.8 +0.1**
SNIWA Snively Ranch 87.78 38 P **P** **04 46 07.6 +0.8**
HAU Haudompre 87.79 324 *eP* **P** **04 46 05.2 -1.5**
comp=Z,44nm,1.1s,mb4.9
HAU Haudompre 87.79 324 *eP* **P** **04 46 05.2 -1.5**
HAU pmax pmax

comp=Z,22nm,1.1s,mb4.9
HAU Haudompre 87.79 324 *eP* **P** **04 46 05.2 -1.5**
comp=Z,22nm,1.1s,mb4.9
D08A Wollman Farm, 87.84 38 ⇑P **P** **04 46 07.4 +0.4**
baz=88,SNR=13
THEF They Montfort 87.84 324 *eP* **P** **04 46 06.1 -0.9**
WRD Warden 87.87 38 P **P** **04 46 07.4 +0.2**
H05A Madras 87.94 41 ⇑P **P** **04 46 08.1 +0.6**
baz=88
G06A Carlson Farm, 87.95 40 ⇑P **P** **04 46 08.2 +0.7**
baz=88,SNR=5.9
F07A Phinny Hill Vi 87.97 39 ⇓P **P** **04 46 08.3 +0.7**
baz=88,SNR=9.6
B10A Chitwood Farm, 88.01 36 ⇓P **P** **04 46 08.1 +0.3**
baz=88
A11A Hall Mountain, 88.06 35 ⇓P **P** **04 46 08.9 +1.0**
baz=88,SNR=24
NEW Newport 88.09 36 *eP* **P** **04 46 08.3 +0.2**
NEW pmax pmax

comp=Z,36nm,0.9s
NEW Newport 88.09 36 *eP* **P** **04 46 08.3 +0.1**
comp=Z,36nm,0.9s,mb5.2
E08A Dider Farm, El 88.11 38 ⇓P **P** **04 46 08.7 +0.4**
baz=88,SNR=12
MEZF Maizieres J'vi 88.17 324 *eP* **P** **04 46 07.5 -1.0**
D09A Jones Farm, Ri 88.18 37 ⇑P **P** **04 46 08.9 +0.3**
baz=88,SNR=8.5
I05A Bend 88.19 41 ⇓P **P** **04 46 09.3 +0.6**
baz=88
C10A Spilker Farm, 88.26 36 ⇑P **P** **04 46 09.6 +0.7**
baz=88
B11A Sandpoint 88.38 35 ⇓P **P** **04 46 10.5 +1.0**
baz=88,SNR=11
VIPM Ingram Point 88.38 40 P **P** **04 46 10.6 +1.0**
H06A Lindquist Farm 88.41 40 ⇓P **P** **04 46 10.2 +0.4**
baz=88
A12A Yaak River Ran 88.44 35 ⇑P **P** **04 46 10.9 +1.2**
baz=88,SNR=18
G07A Ruggs Ranch, H 88.48 39 ⇓P **P** **04 46 10.7 +0.6**
baz=88,SNR=6.6
E09A Wood Farm, Sta 88.60 38 ⇓P **P** **04 46 11.2 +0.7**
baz=88,SNR=9.7
F08A Pendleton 88.67 39 ⇓P **P** **04 46 11.8 +0.8**
baz=88,SNR=16
D10A Wagner Farm, O 88.74 37 ⇑P **P** **04 46 11.5 +0.3**
baz=88
B12A Libby 88.76 35 ⇓P **P** **04 46 12.0 +0.7**
baz=88,SNR=7.5
CABF La Chapelle 88.77 323 *eP* **P** **04 46 08.9 -2.5**
comp=Z,38nm,1.2s,mb4.9
CABF La Chapelle 88.77 323 *eP* **P** **04 46 08.9 -2.5**
CABF pmax pmax

comp=Z,19nm,1.2s,mb4.9
CABF La Chapelle 88.77 323 *eP* **P** **04 46 08.9 -2.5**
comp=Z,19nm,1.2s,mb4.9
C11A Tepee Creek (N 88.81 36 ⇓P **P** **04 46 12.2 +0.7**
baz=89,SNR=16
G08A Pilot Rock 88.87 39 ⇑P **P** **04 46 12.5 +0.7**
baz=89,SNR=5.1
H07A Lands Inn, Kim 88.94 40 ⇑P **P** **04 46 12.8 +0.5**
baz=89
I06A Prineville 88.94 41 ⇑P **P** **04 46 13.1 +0.8**
baz=89,SNR=8.7
A13A Flathead Natio 89.07 34 ⇑P **P** **04 46 13.1 +0.4**
baz=89
LPL La Plagne 89.07 321 *eP* **P** **04 46 12.0 -0.8**
comp=Z,68nm,0.8s,mb5.3
LPL La Plagne 89.07 321 *eP* **P** **04 46 12.0 -0.8**
LPL pmax pmax

comp=Z,34nm,0.8s,mb5.3
LPL La Plagne 89.07 321 *eP* **P** **04 46 12.0 -0.8**
comp=Z,34nm,0.8s,mb5.3
LPG La Plagne 89.08 321 *eP* **P** **04 46 12.2 -0.6**
comp=Z,91nm,0.8s,mb5.4
LPG La Plagne 89.08 321 *eP* **P** **04 46 12.2 -0.6**

LPG pmax pmax
comp=Z,45nm,0.8s,mb5.5
LPG La Plagne 89.08 321 *e*P **P** 04 46 12.2 -0.6
comp=Z,46nm,0.8s,mb5.5
E10A Myers Farm, Un 89.18 37 ⇓P **P** 04 46 13.9 +0.6
baz=89,SNR=8.3
F09A S2 Ranch, Elgi 89.21 38 ⇓P **P** 04 46 14.1 +0.6
baz=89,SNR=8.3
K05A Summer Lake 89.24 42 ⇓P **P** 04 46 14.7 +1.0
baz=89
WALA Waterton Lakes 89.24 34 *e*P **P** 04 46 14.2 +0.7
D11A Klaveano Farm, 89.25 37 ⇓P **P** 04 46 14.1 +0.4
baz=89,SNR=32
I07A Izee 89.28 40 ⇑P **P** 04 46 14.5 +0.7
baz=89,SNR=5.1
C12B Naegeli Ranch, 89.30 36 ⇓P **P** 04 46 14.5 +0.7
baz=89,SNR=14
J06A Christmas Vall 89.38 41 ⇓P **P** 04 46 15.2 +0.9
baz=89,SNR=8.7
BNI Bardonecchia 89.38 321⇓*e*P **P** 04 46 13.2 -1.1
BNI pmax pmax
comp=Z,26nm,0.9s,mb5.2
BNI Bardonecchia 89.38 321⇓*e*P **P** 04 46 13.2 -1.0
comp=Z,26nm,0.9s,mb5.2
B13A Whitefish 89.40 35 ⇑P **P** 04 46 15.3 +1.0
baz=89,SNR=24
F10A Beach Ranch, E 89.43 38 ⇑P **P** 04 46 15.1 +0.6
baz=89,SNR=7.5
H08A Prairie City 89.50 40 ⇑P **P** 04 46 15.8 +1.0
baz=89,SNR=5.5
PGF Pioggiola 89.50 318 *e*P **P** 04 46 13.7 -1.2
comp=Z,53nm,0.9s,mb5.2
PGF Pioggiola 89.50 318 *e*P **P** 04 46 13.7 -1.2
PGF pmax pmax
comp=Z,27nm,0.9s,mb5.2
PGF Pioggiola 89.50 318 *e*P **P** 04 46 13.7 -1.2
comp=Z,27nm,0.9s,mb5.2
SAOF Saorge 89.52 320 *e*P **P** 04 46 14.1 -0.8
MBDF Montbardon 89.53 321 *e*P **P** 04 46 13.3 -1.7
comp=Z,44nm,1.2s,mb5.0
MBDF Montbardon 89.53 321 *e*P **P** 04 46 13.3 -1.7
MBDF pmax pmax
comp=Z,22nm,1.2s,mb5.0
MBDF Montbardon 89.53 321 *e*P **P** 04 46 13.3 -1.7
comp=Z,22nm,1.2s,mb5.0
A14A Double T Ranch 89.55 34 ⇑P **P** 04 46 15.7 +0.8
baz=89,SNR=43
G09A Cove 89.55 39 ⇑P **P** 04 46 16.0 +0.9
baz=89,SNR=22
LOR Lormes 89.57 324 *e*P **P** 04 46 13.4 -1.7
BSMT Bassoo Peak 89.57 35 *e*P **P** 04 46 16.0 +0.9
AUTN L'Aution 89.58 320 *e*P **P** 04 46 15.3 +0.1
SBF Sospel 89.66 320 *e*P **P** 04 46 13.9 -1.7
comp=Z,108nm,0.7s,mb5.6
SBF Sospel 89.66 320 *e*P **P** 04 46 13.9 -1.7
comp=Z,54nm,0.7s,mb5.6
TOUF Mont Tournerai 89.68 320 *e*P **P** 04 46 14.6 -1.1
LUCF Luceram 89.69 320 *e*P **P** 04 46 15.1 -0.7
E11A Bogner Ranch, 89.75 37 ⇑P **P** 04 46 16.1 +0.1
baz=90,SNR=11
C13A Hot Springs 89.79 35 ⇑P **P** 04 46 16.7 +0.6
baz=90,SNR=17
MVIF Mont Vial 89.80 320 *e*P **P** 04 46 15.6 -0.7
J07A Hines 89.81 41 ⇑P **P** 04 46 17.3 +1.0
baz=90,SNR=7.8
SSF Saint Saulge 89.88 324 *e*P **P** 04 46 14.8 -1.8
comp=Z,11nm,1.0s,mb4.4
SSF Saint Saulge 89.88 324 *e*P **P** 04 46 14.8 -1.8
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SSF Saint Saulge 89.88 324 *e*P **P** 04 46 14.8 -1.8
comp=Z,5.5nm,1.0s,mb4.4
A15A Johnson Ranch, 89.89 34 ⇑P **P** 04 46 16.3 -0.3
baz=90,SNR=7.6
G10A Bishop Farm, J 89.91 38 ⇑P **P** 04 46 17.1 +0.4
baz=90,SNR=34
ORIF Oris-en-Rattie 89.92 321 *e*P **P** 04 46 15.7 -1.1
comp=Z,44nm,0.8s,mb5.1
ORIF Oris-en-Rattie 89.92 321 *e*P **P** 04 46 15.7 -1.1
ORIF pmax pmax
comp=Z,22nm,0.8s,mb5.1
ORIF Oris-en-Rattie 89.92 321 *e*P **P** 04 46 15.7 -1.1
comp=Z,22nm,0.8s,mb5.1
I08A Drewsey 89.92 40 ⇑P **P** 04 46 17.4 +0.6
baz=90,SNR=6.9
FCC Fort Churchill 89.93 19 *e*P **P** 04 46 15.2 -1.3
FCC pmax pmax
comp=Z,1.0nm,1.1s,mb3.7
FCC Fort Churchill 89.93 19 *e*P **P** 04 46 15.2 -1.3
comp=Z,0.9nm,1.1s
SMF Signal de Mont 89.97 324 *e*P **P** 04 46 15.6 -1.4
comp=Z,36nm,1.2s,mb4.9
SMF Signal de Mont 89.97 324 *e*P **P** 04 46 15.6 -1.4
SMF pmax pmax
comp=Z,18nm,1.2s,mb4.9
SMF Signal de Mont 89.97 324 *e*P **P** 04 46 15.6 -1.4
comp=Z,18nm,1.2s,mb4.9
H09A Durkee 89.98 39 ⇓P **P** 04 46 17.8 +0.7
baz=90,SNR=13
B14A Marquette Ranc 90.02 34 ⇓P **P** 04 46 18.0 +0.8
baz=90,SNR=19
E12A Beaver Dam Sad 90.06 37 ⇑P **P** 04 46 18.0 +0.5
baz=90,SNR=24
MOD Modoc 90.08 42 *e*P **P** 04 46 18.3 +0.7
comp=Z,12nm,1.0s,mb4.8
AVF Avril sur Loir 90.14 324 *e*P **P** 04 46 16.3 -1.5
comp=Z,106nm,1.8s,mb5.2
AVF Avril sur Loir 90.14 324 *e*P **P** 04 46 16.3 -1.5
AVF pmax pmax
comp=Z,53nm,1.8s,mb5.2
AVF Avril sur Loir 90.14 324 *e*P **P** 04 46 16.3 -1.5
comp=Z,53nm,1.8s,mb5.2
OG25 Le Caire 90.14 321 *e*P **P** 04 46 17.4 -0.4
C14A Swan Lake 90.16 35 ⇓P **P** 04 46 18.3 +0.5
baz=90,SNR=22
HYF Humbligny 90.21 325 *e*P **P** 04 46 18.2 +0.1
D13A Huson 90.22 36 ⇓P **P** 04 46 18.0 -0.1
baz=90
K07A Rock Creek Ran 90.25 41 ⇑P **P** 04 46 19.1 +0.8
baz=90,SNR=10
FRF La Foret Royal 90.30 320 *e*P **P** 04 46 17.0 -1.6
comp=Z,52nm,0.8s,mb5.2
FRF La Foret Royal 90.30 320 *e*P **P** 04 46 17.0 -1.6
FRF pmax pmax
comp=Z,26nm,0.8s,mb5.2
FRF La Foret Royal 90.30 320 *e*P **P** 04 46 17.0 -1.6
comp=Z,26nm,0.8s,mb5.2
J08A Circle Bar Ran 90.31 40 ⇑P **P** 04 46 19.5 +0.8
baz=90,SNR=14
G11A Walters Elk Ra 90.31 38 ⇓P **P** 04 46 18.7 +0.1
baz=90,SNR=15
I09A Lost Marbles R 90.36 40 ⇑P **P** 04 46 19.6 +0.7
baz=90,SNR=9.8
B15A Bradely Ranch, 90.41 34 ⇓P **P** 04 46 19.1 +0.1
baz=90,SNR=13
A16A West Butte Ran 90.47 33 ⇑P **P** 04 46 19.1 -0.1
baz=90,SNR=17
PLDF La Plantade 90.51 323 *e*P **P** 04 46 19.5 0.0
LMR La Mourre 90.51 320 *e*P **P** 04 46 18.3 -1.3
comp=Z,75nm,1.0s,mb5.4
LMR La Mourre 90.51 320 *e*P **P** 04 46 18.3 -1.3
LMR pmax pmax
comp=Z,37nm,1.0s,mb5.4
LMR La Mourre 90.51 320 *e*P **P** 04 46 18.3 -1.3
comp=Z,38nm,1.0s,mb5.4
FFC Flin Flon 90.52 25 P **P** 04 46 18.2 -1.1
comp=Z,199nm,0.9s,mb6.1,SNR=9.7
FFC Flin Flon 90.52 25⇓*e*P **P** 04 46 18.3 -1.0
FFC *e**PP pP 04 47 05.3 +3.2
FFC pmax pmax
comp=Z,41nm,1.1s,mb5.4
FFC Flin Flon 90.52 25⇓*e*P **P** 04 46 18.3 -1.1
comp=Z,41nm,1.1s,mb5.4
FFC *e*pP pP 04 47 05.3 +3.1
BGF Bois d'Agland 90.55 324 *e*P **P** 04 46 18.2 -1.5
L07A Adell 90.59 42 ⇓P **P** 04 46 21.0 +1.0
baz=90,SNR=8.8
TAVF Tavernes 90.61 320 *e*P **P** 04 46 18.7 -1.3
VIVF Saint-Julien-l 90.63 322 *e*P **P** 04 46 18.8 -1.3
comp=Z,56nm,0.9s,mb5.3
VIVF Saint-Julien-l 90.63 322 *e*P **P** 04 46 18.8 -1.3
VIVF pmax pmax
comp=Z,28nm,0.9s,mb5.3
VIVF Saint-Julien-l 90.63 322 *e*P **P** 04 46 18.8 -1.3
comp=Z,28nm,0.9s,mb5.3
SMRF Simiane la Rot 90.66 321 *e*P **P** 04 46 19.3 -1.0
comp=Z,58nm,1.1s,mb5.2
SMRF Simiane la Rot 90.66 321 *e*P **P** 04 46 19.3 -1.0
comp=Z,58nm,1.1s,mb5.5
K08A Mann Creek Ran 90.67 41 ⇓P **P** 04 46 21.2 +0.8
baz=90,SNR=8.4
D14A Greenough 90.73 35 ⇑P **P** 04 46 20.2 -0.3
baz=90,SNR=14
J09A Fry Pan Ranch, 90.73 40 ⇑P **P** 04 46 21.4 +0.8
baz=90,SNR=18
C15A Salmond Ranch, 90.74 34 ⇑P **P** 04 46 21.1 +0.6
baz=90,SNR=15
LDF La Druitiere 90.75 327 *e*P **P** 04 46 20.0 -0.6
WVOR Wild Horse Val 90.76 41 *e*P **P** 04 46 21.3 +0.5
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
WVOR Wild Horse Val 90.76 41 *e*P **P** 04 46 21.3 +0.5
comp=Z,10nm,1.1s,mb4.8
B16A M & M Farms, S 90.77 33 ⇓P **P** 04 46 20.4 -0.3
baz=90,SNR=7.3
E13A Victor 90.78 36 ⇓P **P** 04 46 20.8 0.0
baz=91
I10A Payette 90.83 39 ⇓P **P** 04 46 21.7 +0.7
baz=91,SNR=8.0
H11A Donnelly 90.89 38 ⇑P **P** 04 46 20.9 -0.4
baz=91,SNR=7.9
A17A Triple J Farms 90.91 33 ⇑P **P** 04 46 21.2 -0.1
baz=91,SNR=18
CHMT Chamberlain Mo 90.97 35 *e*P **P** 04 46 22.0 +0.4
PRAF Pradon 91.00 321 *e*P **P** 04 46 20.6 -1.2
BERF Bertagne 91.00 320 *e*P **P** 04 46 21.5 -0.4
N06A Buffalo Meadow 91.04 43 ⇑P **P** 04 46 22.1 0.0
baz=91
L08A Fields 91.08 41 ⇓P **P** 04 46 23.1 +0.8
baz=91,SNR=14
F13A Darby 91.12 37 ⇓P **P** 04 46 21.9 -0.5
baz=91,SNR=5.4
K09A Rome 91.14 41 ⇑P **P** 04 46 23.3 +0.7
baz=91,SNR=11
C16A Fuhringer Ranc 91.16 34 ⇓P **P** 04 46 22.3 -0.2
baz=91,SNR=14
LBL Lubilhac 91.18 323 *e*P **P** 04 46 21.8 -0.8
BEKR Beckwourth 91.22 44 ⇑P **P** 04 46 23.3 +0.4
baz=91
GRR Gorron 91.25 327 *e*P **P** 04 46 22.5 -0.4
J10A Berg Farm, Mel 91.25 40 ⇑P **P** 04 46 23.2 +0.2
baz=91
D15A Lincoln 91.27 35 ⇑P **P** 04 46 22.7 -0.3
baz=91
B17A L&G Farms, Che 91.30 33 ⇓P **P** 04 46 23.1 0.0
baz=91,SNR=28
A18A Metzger Ranch, 91.34 32 ⇑P **P** 04 46 22.9 -0.4
baz=91,SNR=16
O06A Flanigan 91.38 44 ⇑P **P** 04 46 23.7 0.0
baz=91
I11A Placerville 91.41 39 ⇑P **P** 04 46 24.2 +0.4
baz=91,SNR=22
M08A Happy Creek Ra 91.51 42 ⇑P **P** 04 46 24.8 +0.6
baz=91
N07B Gerlach 91.55 43 ⇑P **P** 04 46 24.9 +0.5
baz=91
LASF Ste Croix 91.57 322 *e*P **P** 04 46 23.6 -0.9
comp=Z,63nm,1.0s,mb5.3
L09A Wilkinson Ranc 91.59 41 ⇑P **P** 04 46 25.6 +1.0
baz=91,SNR=7.6
K10A MacKenzie Ranc 91.59 40 ⇑P **P** 04 46 25.3 +0.7
baz=91,SNR=11
E15A Deer Lodge 91.61 35 ⇑P **P** 04 46 24.6 0.0
baz=91
G13A Cobalt 91.62 37 ⇑P **P** 04 46 24.1 -0.6
baz=91,SNR=6.0
F14A Wisdom 91.62 36 ⇑P **P** 04 46 25.4 +0.7
baz=91,SNR=20
H12A Diamond D Ranc 91.63 38 ⇑P **P** 04 46 25.1 +0.4
baz=91,SNR=28
B18A Beardsley Farm 91.73 33 ⇓P **P** 04 46 24.9 -0.2
baz=92,SNR=13
C17A Wharram Farm, 91.76 34 ⇓P **P** 04 46 24.7 -0.5
baz=92,SNR=6.4
D16A Dana Ranch, Ca 91.77 34 ⇑P **P** 04 46 25.5 +0.2
baz=92,SNR=17
MFID Camas Ranch 91.80 39 ⇓P **P** 04 46 26.1 +0.6
baz=92,SNR=19
HRY Holter Researc 91.84 35 *e*P **P** 04 46 25.6 0.0
H13A Challis 91.95 38 ⇓P **P** 04 46 26.5 +0.3
baz=92,SNR=14
I12A Atlanta 91.95 39 ⇓P **P** 04 46 26.8 +0.6
baz=92,SNR=5.5
O07A Toulon 91.97 43 ⇑P **P** 04 46 26.5 +0.1
baz=92
EGMT Eagleton 92.00 33 ⇓P **P** 04 46 26.0 -0.3
baz=92
EGMT Eagleton 92.00 33⇓*e*P **P** 04 46 26.0 -0.4
comp=Z,20nm,1.0s,mb5.1
CAF Calviac 92.02 323 *e*P **P** 04 46 26.0 -0.5
comp=Z,23nm,0.8s,mb4.9
CAF Calviac 92.02 323 *e*P **P** 04 46 26.0 -0.5
CAF pmax pmax
comp=Z,11nm,0.8s,mb4.9
CAF Calviac 92.02 323 *e*P **P** 04 46 26.0 -0.5
comp=Z,11nm,0.8s,mb5.0
E16A East Helena 92.04 35 ⇓P **P** 04 46 26.8 +0.3
baz=92,SNR=5.7
N08A GE Springer Mi 92.06 42 ⇓P **P** 04 46 27.4 +0.6
baz=92,SNR=5.3
F15A Butte 92.07 36 ⇑P **P** 04 46 27.2 +0.4
baz=92,SNR=15
RJF Les Rejaudoux 92.07 324 *e*P **P** 04 46 26.4 -0.4
comp=Z,36nm,1.0s,mb5.1
RJF Les Rejaudoux 92.07 324 *e*P **P** 04 46 26.4 -0.4
RJF pmax pmax
comp=Z,18nm,1.0s,mb5.1
RJF Les Rejaudoux 92.07 324 *e*P **P** 04 46 26.4 -0.4
comp=Z,18nm,1.0s,mb5.1
M09A Marrel Ranch, 92.08 41 ⇓P **P** 04 46 27.5 +0.6
baz=92
K11A Parker Ranch, 92.08 40 ⇓P **P** 04 46 27.4 +0.5
baz=92,SNR=14
MFF Saint Martin d 92.09 325 *e*P **P** 04 46 25.1 -1.7
comp=Z,67nm,1.4s,mb5.2
MFF Saint Martin d 92.09 325 *e*P **P** 04 46 25.1 -1.7
MFF pmax pmax
comp=Z,33nm,1.4s,mb5.2
MFF Saint Martin d 92.09 325 *e*P **P** 04 46 25.1 -1.7
comp=Z,34nm,1.4s,mb5.2
LRM Hankin Ridge 92.11 36 *e*P **P** 04 46 27.6 +0.7
D17A Six Diamond Ra 92.13 34 ⇑P **P** 04 46 27.0 0.0
baz=92,SNR=8.7
L10A Juniper Basin 92.26 40 ⇑P **P** 04 46 28.5 +0.9
baz=92,SNR=9.8
J12A Stokes Ranch, 92.32 39 ⇓P **P** 04 46 28.3 +0.3
baz=92,SNR=8.6
DLMT Dillon 92.33 36 *e*P **P** 04 46 28.2 +0.3
comp=Z,33nm,1.1s,mb5.3
DLMT *e*pP pP 04 47 14.3 +3.5
O08A Rochester Mine 92.34 43 ⇑P **P** 04 46 29.0 +0.9
baz=92,SNR=5.7
N09A Rock Creek Ran 92.38 42 ⇑P **P** 04 46 29.0 +0.7
baz=92
H14A Leadore 92.40 37 ⇓P **P** 04 46 28.6 +0.3
baz=92
I13A Wildhorse Cree 92.44 38 ⇓P **P** 04 46 29.3 +0.8
baz=92,SNR=29
HLID Hailey 92.50 38 ⇓P **P** 04 46 29.6 +0.8
baz=92
HLID Hailey 92.50 38 *e*P **P** 04 46 29.9 +1.1
comp=Z,22nm,1.0s,mb5.2
E17A Martinsdale 92.50 35 ⇓P **P** 04 46 29.3 +0.5
baz=92,SNR=13
G15A Dillon 92.52 36 ⇓P **P** 04 46 29.2 +0.4
baz=92,SNR=36
D18A Linhart Farms, 92.54 34 ⇓P **P** 04 46 28.8 -0.1
baz=92
M10A LL Ranch, Tu 92.56 41 ⇓P **P** 04 46 29.9 +0.8
baz=92,SNR=6.1
F16A Kennard Place, 92.56 35 ⇓P **P** 04 46 29.6 +0.6
baz=92,SNR=8.1
R06C Coleville 92.58 45 ⇓P **P** 04 46 29.7 +0.5
baz=92
L11A Cat Creek Ranc 92.62 40 ⇓P **P** 04 46 30.3 +0.9
baz=92,SNR=22
BOZ Bozeman (W) 92.65 36 ⇑P **P** 04 46 29.4 -0.1
baz=92
BOZ Bozeman (W) 92.65 36 *e*P **P** 04 46 29.3 -0.1
BOZ pmax pmax
comp=Z,16nm,1.5s,mb4.9
BOZ Bozeman (W) 92.65 36 *e*P **P** 04 46 29.3 -0.1
comp=Z,16nm,1.5s,mb4.9
J13A Cove Ranch, Pi 92.74 38 ⇑P **P** 04 46 30.7 +0.8
baz=92,SNR=14
H15A Lima 92.79 37 ⇑P **P** 04 46 30.6 +0.5
baz=93,SNR=6.8
I14A Mackay 92.80 38 ⇑P **P** 04 46 31.3 +1.1
baz=93,SNR=22
K12A Draper Farm, C 92.81 39 ⇓P **P** 04 46 31.2 +0.9
baz=93,SNR=12
G16A Moss Hill, Enn 92.84 36 ⇓P **P** 04 46 30.8 +0.5
baz=93,SNR=6.8
E18A Harlowton 92.91 34 ⇓P **P** 04 46 31.1 +0.5
baz=93,SNR=8.0
MTLF Montolieu 92.96 322 *e*P **P** 04 46 29.8 -1.1
comp=Z,46nm,1.1s,mb5.2
MTLF Montolieu 92.96 322 *e*P **P** 04 46 29.8 -1.1
MTLF pmax pmax
comp=Z,23nm,1.1s,mb5.2
MTLF Montolieu 92.96 322 *e*P **P** 04 46 29.8 -1.1
comp=Z,23nm,1.1s,mb5.2
F17A Fitzpatrick Pl 92.98 35 ⇓P **P** 04 46 31.3 +0.4
baz=93,SNR=8.7
O09A Fish Creek Ran 93.00 42 ⇑P **P** 04 46 31.7 +0.5
baz=93,SNR=5.8
M11A Holland Ranch, 93.06 41 ⇓P **P** 04 46 32.6 +1.2
baz=93,SNR=8.9
L12A House Creek Ra 93.06 40 ⇓P **P** 04 46 32.6 +1.2
baz=93,SNR=14
J14A Carey 93.16 38 ⇑P **P** 04 46 33.1 +1.3
baz=93,SNR=6.5
KEST Kesra 93.21 312 P **P** 04 46 31.4 -0.8
comp=Z,3.9nm,1.0s,mb4.5,baz=260,slow=22,SNR=4.3
K13A Stover Farm, H 93.27 39 ⇑P **P** 04 46 33.1 +0.8
baz=93
I15A Monteview 93.28 37 ⇑P **P** 04 46 32.9 +0.5
baz=93
T06C Millerton Lake 93.31 46 ⇓P **P** 04 46 32.6 -0.1
baz=93
G17A Pierce Place, 93.33 35 ⇓P **P** 04 46 33.1 +0.5
baz=93
Q08A Gabbs 93.34 44 ⇓P **P** 04 46 33.0 +0.3
baz=93
NVAR Mina Array Bea 93.36 44 P **P** 04 46 33.3 +0.4
comp=Z,3.7nm,0.6s,mb4.7,baz=298,slow=4.9,SNR=26
F18A Big Timber 93.47 34 ⇑P **P** 04 46 33.4 +0.2
baz=93,SNR=5.2
H16A Russell Place, 93.48 36 ⇑P **P** 04 46 34.1 +0.9
baz=93,SNR=8.7
M12A Wells 93.58 40 ⇓P **P** 04 46 35.0 +1.2
baz=93,SNR=10
J15A Blackfoot 93.71 38 ⇑P **P** 04 46 35.1 +0.8
baz=94
L13A Double Diamond 93.71 39 ⇓P **P** 04 46 35.5 +1.2
baz=94,SNR=10
ELK Elko 93.81 41 *e*P **P** 04 46 35.4 +0.5
ELK pmax pmax
comp=Z,3.0nm,0.9s
ELK Elko 93.81 41 *e*P **P** 04 46 35.4 +0.5
comp=Z,2.6nm,0.9s,mb4.4
K14A Jones Ranch, D 93.85 39 ⇓P **P** 04 46 36.0 +1.0
baz=94,SNR=6.3
N12A Clover Valley, 93.86 41 ⇓P **P** 04 46 35.7 +0.6
baz=94
I16A Newdale 93.91 37 ⇓P **P** 04 46 36.4 +1.1
baz=94
O11A Cowboy Ranch, 93.95 42 ⇓P **P** 04 46 36.8 +1.3
baz=94
H17A Grant Village 94.05 36 ⇓P **P** 04 46 37.5 +1.6
baz=94
M13A Montello 94.05 40 ⇑P **P** 04 46 36.4 +0.5
baz=94,SNR=6.1
L14A Malta 94.15 39 ⇑P **P** 04 46 37.6 +1.2
baz=94,SNR=9.1
IMW Indian Meadow 94.19 36 *e*P **P** 04 46 37.7 +1.2
comp=Z,12nm,1.5s,mb4.8
J16A Bone 94.24 37 ⇑P **P** 04 46 37.3 +0.5
baz=94
R09A Tonopah 94.25 44 ⇓P **P** 04 46 37.2 +0.3
baz=94
DGMT Dagmar 94.29 30 ⇓P **P** 04 46 36.6 -0.3
baz=94
O12A Currie 94.40 41 ⇓P **P** 04 46 38.5 +0.9
baz=94
M14A Sheep Mountain 94.43 39 ⇑P **P** 04 46 38.4 +0.7
baz=94,SNR=12
TPAW Teton Pass 94.45 37 *e*P **P** 04 46 38.1 +0.3
comp=Z,3.3nm,1.1s,mb4.4
S09A Goldfield 94.47 44 ⇑P **P** 04 46 38.5 +0.5
baz=94
K16A Soda Springs 94.55 38 ⇓P **P** 04 46 39.0 +0.9
baz=94
L15A Malad City 94.65 39 ⇑P **P** 04 46 39.4 +0.7
baz=94
R10A Warm Springs 94.70 43 ⇓P **P** 04 46 39.4 +0.4
baz=94
S10A Tonopah Range, 94.74 44 ⇓P **P** 04 46 39.8 +0.6
baz=94
GRAC Grapevine Rang 94.81 45 ⇑P **P** 04 46 40.1 +0.5
baz=95
I18A Diamond G Ranc 94.92 36 ⇑P **P** 04 46 40.1 +0.2
baz=95
N14A Grayback Hills 94.94 40 ⇓P **P** 04 46 41.1 +1.1
baz=95
M15A Larsen Ranch, 94.97 39 ⇑P **P** 04 46 40.5 +0.3
baz=95
R11A Troy Canyon, C 95.10 43 ⇓P **P** 04 46 41.2 +0.4
baz=95
J18A Kendall Valley 95.14 37 ⇑P **P** 04 46 41.5 +0.6
baz=95
L16A Fish Haven 95.17 38 ⇑P **P** 04 46 41.7 +0.6
baz=95
N15A Stansbury Isla 95.30 40 ⇓P **P** 04 46 42.0 +0.3
baz=95
MPMC Manual Prospec 95.30 46 ⇓P **P** 04 46 42.2 +0.4
baz=95
P13A Bates Ranch, G 95.35 41 ⇓P **P** 04 46 42.3 +0.3
baz=95
LRMC Laurel Mountai 95.53 46 ⇑P **P** 04 46 43.2 +0.4
baz=95
DUG Dugway 95.58 40 ⇑P **P** 04 46 43.6 +0.6
baz=95
DUG Dugway 95.58 40 *e*P **P** 04 46 43.0 0.0
DUG pmax pmax
comp=Z,36nm,2.1s,mb5.3
DUG Dugway 95.58 40 *e*P **P** 04 46 43.0 0.0
comp=Z,36nm,2.1s,mb5.3
BW06 Boulder Array 95.69 37 *e*P **P** 04 46 42.9 -0.6
comp=Z,1.5nm,0.8s,mb4.4
PDAR Pinedale Array 95.69 37 P **P** 04 46 42.4 -1.0
comp=Z,0.9nm,0.9s,mb4.1,baz=297,slow=0.3,SNR=5.9
O15A The Old Anders 95.73 40 ⇓P **P** 04 46 44.0 +0.3
baz=96
P14A Drum Mountains 95.83 41 ⇑P **P** 04 46 44.8 +0.7
baz=96
L18A Fontenelle, Gr 96.01 38 ⇓P **P** 04 46 45.5 +0.7
baz=96
Q14A Sevier Lake (B 96.09 41 ⇓P **P** 04 46 45.6 +0.3
baz=96
N17A Moffit Pass 96.22 39 ⇓P **P** 04 46 46.2 +0.3
baz=96
L19A Farson 96.26 37 ⇓P **P** 04 46 46.6 +0.7
baz=96
ULM Lac du Bonnet 96.34 25 P **P** 04 46 45.2 -1.0
comp=Z,4.3nm,0.9s,mb4.8,baz=318,slow=4.4,SNR=2.8
ULM Lac du Bonnet 96.34 25 *e*P **P** 04 46 45.0 -1.2
comp=Z,6.2nm,1.0s,mb4.9
R16A Teasdale 97.62 41 ⇑P **P** 04 46 52.4 +0.2
baz=97
SRU San Rafael 97.63 40 ⇑P **P** 04 46 52.8 +0.6
baz=97
R17A Hanksville Air 97.98 40 ⇓P **P** 04 46 54.3 +0.5
baz=98
U15A North Rim 98.34 43 ⇓P **P** 04 46 55.8 +0.3
baz=98
EVO Evora 101.88 324 *e*P Pdif 04 47 10.7 -0.3
comp=Z,43nm,1.6s
TXAR Lajitas Array 108.47 43 Pdiff Pdif 04 47 43.4 +3.1
comp=Z,0.2nm,0.8s,baz=282,slow=2.4,SNR=3.5
TXAR PKiKP PKiKP 04 51 45.1 -0.6
comp=Z,0.6nm,0.7s,baz=205,slow=1.2,SNR=7.0
TXAR PKKPbc PKKPbc 05 02 55.9 0.0
comp=Z,0.4nm,0.8s,baz=161,slow=8.0,SNR=4.7
TXAR PKKP PKKPbc 05 03 08.4 +12
comp=Z,0.5nm,0.7s,baz=147,slow=8.0,SNR=5.6
TOA0 Torodi Ar. Sit 111.93 298 *e*PKP PKiKP 04 51 51.0 -1.6
TORD Torodi Ar. Bea 111.93 298 PKiKP PKiKP 04 51 51.0 -1.6
comp=Z,2.0nm,0.7s,baz=43,slow=1.6,SNR=23
TORD PP PP 04 52 38.7 +0.7
comp=Z,2.9nm,0.9s,baz=53,slow=6.3,SNR=7.5
TORD Torodi Ar. Bea 111.93 298 PKPdf PKiKP 04 51 51.0 -1.6
TORD PP PP 04 52 38.7 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	120.92	296	PKP	PKPdf	04 52 08.7	-1.2
	comp=Z,7.6nm,0.7s,baz=20,slow=2.2,SNR=19						
DBIC	Dimbokro	120.92	296	PKIKP	PKPdf	04 52 08.7	-1.2
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DBIC	Dimbokro	120.92	296	ePKPdf	PKPdf	04 52 08.7	-1.2
KIC	Kosan Boka	121.00	296	ePKIKP	PKPdf	04 52 08.7	-1.3
	comp=Z,78nm,0.9s						
TIC	Toumodi	121.06	296	ePKIKP	PKPdf	04 52 08.7	-1.4
	comp=Z,40nm,0.8s						
LIC	Lamto	121.31	296	ePKIKP	PKPdf	04 52 09.0	-1.6
	comp=Z,39nm,0.9s						
LIC	Lamto	121.31	296	ePKIKP	PKPdf	04 52 09.2	-1.4
	comp=Z,27nm,0.9s						
SNAA	Sanae	125.65	198	ePKPdf	PKPdf	04 52 16.0	-1.2
SNAA				e		04 52 18.2	
SNAA				e		04 52 21.4	
SNAA	Sanae	125.65	198	ePKPdf	PKPdf	04 52 15.7	-1.5
VNA2	Neumayer--Watz	127.30	198	ePKPdf	PKPdf	04 52 20.2	-0.1
	baz=58,slow=0.9						
VNA2				e		04 52 23.2	
VNA2				e		04 52 27.4	
VNA1	Neumayer--Stat	127.69	198	ePKPdf	PKPdf	04 52 21.0	-0.1
VNA1				e		04 52 23.8	
VNA1				e		04 52 27.2	
VNA3	Neumayer Olymp	127.75	197	ePKPdf	PKPdf	04 52 20.5	-0.7
VNA3				e		04 52 22.8	
VNA3				e		04 52 27.2	
SDV	Santo Domingo	142.59	25	ePKPpre	PKPdf	04 52 45.4	-5.1
ROSC	El Rosal	144.59	33	PKP	PKPdf	04 52 53.0	-1.1
	comp=Z,9.0nm,0.7s,baz=124,slow=15,SNR=7.8						
OTAV	Otavalo	146.09	44	ePKPbc	PKPbc	04 52 57.3	-0.5
OTAV				epPKPdf	pPKPdf	04 53 44.7	+3.1
RCBR	Riachuelo	152.46	313	ePKPbc	PKPbc	04 53 13.2	-0.6
PLCA	Paso Flores	160.75	144	PKP	PKPdf	04 53 16.1	-0.4
	comp=Z,1.8nm,0.9s,baz=221,slow=6.3,SNR=3.1						
PLCA				PKPab	PKPab	04 53 56.8	-2.7
	comp=Z,1.7nm,0.9s,baz=253,slow=9.0,SNR=3.4						
PLCA	Paso Flores	160.75	144	PKIKP	PKPdf	04 53 16.1	-0.4
PLCA						04 53 56.8	
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	Paso Flores	160.75	144	ePKPdf	PKPdf	04 53 16.1	-0.4
PLCA				ePKPab	PKPab	04 53 58.8	-0.7
BDFB	Brasilia	167.51	323	PKP	PKPdf	04 53 22.6	-0.8
	comp=Z,2.0nm,0.8s,baz=298,slow=27,SNR=6.4						
BDFB				PKPab	PKPab	04 54 28.8	-1.0
	comp=Z,6.9nm,0.9s,baz=7.4,slow=6.5,SNR=19						
BDFB	Brasilia	167.51	323	PKIKP	PKPdf	04 53 22.6	-0.7
BDFB						04 54 28.8	
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SIV	San Ignacio	169.04	28	PKP	PKPdf	04 53 23.7	-0.7
	comp=Z,6.9nm,0.9s,baz=109,slow=0.8,SNR=38						
SIV				PKPab	PKPab	04 54 34.7	-1.8
	comp=Z,3.0nm,0.9s,baz=354,slow=2.6,SNR=6.8						

*ISCJB **05** 04:43:20.0±0.5, 4561N±003×2639E±003, h89^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.6km az=21.4*
*SOF **05** 04:43:20.4, 4539N×2658E, h7^{km}, MD2.8*
*BUC **05** 04:43:20.1±0.7, 4562N×2639E, h89^{km}±9^{km}, MD3.9/3, Error ellipse: s-maj=6.4km s-min=5.2km az=22.0*
*CSEM **05** 04:43:20.5±0.1, 4561N×2638E, h64^{km}±1^{km}, MD3.9/3, Error ellipse: s-maj=1.8km s-min=1.4km az=17.0*
*NEIC **05** 04:43:21.8, 4559N×2633E, h70^{km}, MG3.2(BUC), After BUC.*
ISC 05 04:43:20.8±0.5, **4561N**±003×**2640E**±003, **h85**^{km}±5^{km}, **n51**, σ**0^{s}76**/84, **21C-19D, Romania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.29	36	⇓iP	Pn	04 43 32.8	-0.8
PLOR				iS	Sn	04 43 42.3	-0.8
MLR	Muntele Rosu	0.34	249	⇑iP	Pn	04 43 33.5	-0.4
MLR				iS	Sn	04 43 42.5	-1.1
MLR	Muntele Rosu	0.34	249	⇑P	Pn	04 43 33.5	-0.4
MLR				S	Sn	04 43 42.5	-1.1
VRI	Vrincioaia	0.34	42	⇓iP	Pn	04 43 33.4	-0.5
VRI				iS	Sn	04 43 43.1	-0.5
ODB	Odobesti	0.49	70	⇑iP	Pn	04 43 35.8	+0.9
ODB				iS	Sn	04 43 47.2	+1.8
ODB	Odobesti	0.49	70	⇑P	Pn	04 43 35.8	+0.8
SECR		0.62	202	⇑iP	Pn	04 43 36.8	+0.7
SECR				iS	Sn	04 43 48.7	+1.2
FULR		0.73	178	⇓iP	Pn	04 43 37.8	+0.6
FULR				iS	Sn	04 43 50.9	+1.6
SULR		0.94	186	⇑iP	Pn	04 43 40.0	+0.5
SULR				iS	Sn	04 43 54.5	+1.1
VOIR		0.97	260	⇑iP	Pn	04 43 39.3	-0.5
VOIR				iS	Sn	04 43 53.2	-0.7
VOIR		0.97	260	⇑P	Pn	04 43 39.3	-0.5
VOIR				S	Sn	04 43 53.2	-0.7
BUC1	Bucharest	1.29	192	⇑iP	Pn	04 43 44.0	+0.3
BUC1				iS	Sn	04 44 00.3	-0.6
BUC1	Bucharest	1.29	192	⇑P	Pn	04 43 44.0	+0.3
BUC1				S	Sn	04 44 00.3	-0.6
CFR	Carcaliu	1.30	109	⇑iP	Pn	04 43 43.2	-0.6
CFR	Carcaliu	1.30	109	S	Sn	04 44 00.0	-1.0
HARR	Harsova	1.42	130	⇓iP	Pn	04 43 45.5	+0.2
HARR				iS	Sn	04 44 03.1	-0.7
HARR	Harsova	1.42	130	⇓P	Pn	04 43 45.5	+0.1
HARR				S	Sn	04 44 03.1	-0.7
MDB	Medias	1.51	291	⇓P	Pn	04 43 46.1	-0.3
MDB				S	Sn	04 44 06.0	+0.3
MDB	Medias	1.51	291	⇓P	Pn	04 43 46.1	-0.3
MDB				S	Sn	04 44 06.0	+0.2
CVD	Cernavoda	1.74	138	⇓iP	Pn	04 43 49.5	+0.1
CVD				iS	Sn	04 44 10.6	-0.5
CVD	Cernavoda	1.74	138	⇓P	Pn	04 43 49.5	+0.1
CVD				S	Sn	04 44 10.6	-0.5
TLCR		1.75	103	⇓iP	Pn	04 43 50.3	+0.7
TLCR				iS	Sn	04 44 11.3	-0.1
TLCR		1.75	103	⇑P	Pn	04 43 50.3	+0.7
TLCR				S	Sn	04 44 11.3	-0.1
TIRR	Tirgusor	1.84	128	⇓iP	Pn	04 43 50.9	+0.2
TIRR				iS	Sn	04 44 12.0	-1.4
TIRR	Tirgusor	1.84	128	⇓P	Pn	04 43 50.9	+0.2
TIRR				S	Sn	04 44 12.0	-1.4
ZIMR		2.09	201	⇑iP	Pn	04 43 53.9	-0.1
ZIMR				iS	Sn	04 44 19.3	-0.1
ZIMR		2.09	201	⇑P	Pn	04 43 53.9	-0.1
BURAR	Bucovina Array	2.16	338	⇓iP	Pn	04 43 55.8	+0.8
BURAR				iS	Sn	04 44 22.0	+1.0
BURAR	Bucovina Array	2.16	338	⇓P	Pn	04 43 55.8	+0.8
BURAR				S	Sn	04 44 22.0	+0.9
KIS	Kishinev	2.17	50	⇓P	Pn	04 43 55.5	+0.4
KIS	Kishinev	2.17	50	⇑iP	Pn	04 43 55.5	+0.4
KIS				iS	Sn	04 44 20.3	-1.0
KIS	Kishinev	2.17	50	⇓P	Pn	04 43 55.5	+0.4
BUR08	Bucovina Ar. S	2.19	338	ePn	Pn	04 43 55.6	+0.2
BUR08	Bucovina Ar. S	2.19	338	ePn	Pn	04 43 55.6	+0.2
CRAR	CRAIOVA	2.25	236	iS	Sn	04 44 22.9	-0.3
PSN	Preselentsi	2.31	146	P	Pn	04 43 57.9	+0.9
SZH	Strazhica	2.37	188	P	Pn	04 43 57.9	+0.1
PRD	Provadia	2.52	163	P	Pn	04 44 01.0	+1.3
GZR	Gura Zlata	2.56	266	⇑iP	Pn	04 44 00.5	+0.3
GZR				iS	Sn	04 44 30.2	-0.3
GZR	Gura Zlata	2.56	266	⇓P	Pn	04 44 00.5	+0.3
GZR				S	Sn	04 44 30.2	-0.3
DRGR		2.82	296	⇑iP	Pn	04 44 03.2	-0.6
DRGR				iS	Sn	04 44 36.7	-0.1
DRGR		2.82	296	⇑P	Pn	04 44 03.2	-0.5
DRGR				S	Sn	04 44 36.7	-0.1
BZS	Buzias	3.36	272	iS	Sn	04 44 50.0	+0.2
VTS	Vitosha	3.80	218	⇓P	Pn	04 44 16.4	-0.6
VTS				S	Sn	04 44 58.9	-1.6
VTS	Vitosha	3.80	218	⇑iP	Pn	04 44 16.4	-0.6
VTS				iS	Sn	04 44 58.9	-1.6
VTS	Vitosha	3.80	218	⇓P	Pn	04 44 16.4	-0.6
VTS				S	Sn	04 44 58.9	-1.6
PSZ	Piszkesteto	5.03	300	ePn	Pn	04 44 33.1	-0.6
PSZ	Piszkesteto	5.03	300	⇑iP	Pn	04 44 33.4	-0.3
PSZ	Piszkesteto	5.03	300	⇑iP	Pn	04 44 33.4	-0.3
VYHS	Vyhne	5.92	302	eSG	Pn	04 44 46.0	+0.2
VRAC	Vranov	7.60	303	eP	Pn	04 45 12.7	+3.9

*TEH **05** 04:43:37.3, 3077N×5698E, h6^{km}, ML3.6*
*ISCJB **05** 04:44:59.3±0.6, 3071N±004×5697E±005, h10^{km}, Error ellipse: s-maj=6.8km s-min=5.7km az=15.2*
*CSEM **05** 04:45:00.0±0.1, 3076N×5698E, h16^{km}, ML3.6, Error ellipse: s-maj=3.3km s-min=1.5km az=159.0*
*THR **05** 04:45:02.7±0.3, 3055N×5668E, h14^{km}±6^{km}, ML3.1*
ISC 05 04:45:01.7±0.6, **3065N**±004×**5684E**±005, **h10**^{km}, **n29**, σ**1^{s}64**/38, **5C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRBR	Kerman	0.67	186	ePg	Pg	04 45 14.0	-0.6
KRBR				eSg	Sg	04 45 22.5	-0.9
KRBR				AML	AML	04 45 28.1	
	comp=E,1μm,0.2s						
KRBR	Kerman	0.67	186	ePg	Pg	04 45 14.0	-0.6
	SNR=90						
KRBR				eSg	Sg	04 45 22.5	-0.8
	comp=E,68nm,0.4s,SNR=90						
IBAF	Bafgh	1.44	311	⇑ePg	Pg	04 45 26.3	-3.0
IBAF				eSg	Sg	04 45 46.5	-1.5
IBAF	Bafgh	1.44	311	⇑ePg	Pg	04 45 26.3	-3.0
IBAF				e		04 45 31.4	
IBAF				eSg	Sg	04 45 46.5	-1.5
IMEH	Mehriz	2.05	292	⇑ePn	Pn	04 45 36.7	+0.5
IMEH	Mehriz	2.05	292	⇑ePn	Pn	04 45 36.7	+0.5
IMEH				e		04 46 07.7	
IKOO	Kooshah	2.56	46	eSg	Sn	04 46 14.7	+0.3
IKOO	Kooshah	2.56	46	ePn	Pn	04 45 39.7	-3.5
IKOO				eSg	Sn	04 46 16.2	+1.8
IKOO				e		04 46 17.5	
ICHK	Chekchek	2.62	308	ePn	Pn	04 45 44.4	+0.4
ICHK	Chekchek	2.62	308	ePn	Pn	04 45 44.4	+0.4
ICHK				e		04 46 29.1	
ITEG	Tejag	2.77	35	⇓ePn	Pn	04 45 42.5	-3.6
ITEG				eSg	Sn	04 46 21.9	+2.4
ITEG	Tejag	2.77	35	⇓ePn	Pn	04 45 42.5	-3.6
ITEG				eSg	Sn	04 46 21.9	+2.4
ITEG				e		04 46 25.0	
ISAD	Sadrabad	2.98	296	ePn	Pn	04 45 49.6	+0.6
ISAD	Sadrabad	2.98	296	ePn	Pn	04 45 49.6	+0.6
ISAD				e		04 46 39.4	
IDAH	Dahanechah	3.32	50	ePn	Pn	04 45 50.8	-2.8
IDAH	Dahanechah	3.32	50	ePn	Pn	04 45 50.7	-2.9
IDAH				e		04 46 44.9	
IPAR	Pars	3.38	257	ePn	Pn	04 45 56.3	+1.8
IPAR	Pars	3.38	257	ePn	Pn	04 45 56.3	+1.8
ISRV	Sarvestan	3.47	250	ePn	Pn	04 45 57.6	+1.9
ISRV	Sarvestan	3.47	250	ePn	Pn	04 45 57.6	+1.9
ISRV				e		04 46 11.9	
IMON	Monand	3.49	43	⇑ePn	Pn	04 45 53.0	-3.0
IMON	Monand	3.49	43	ePn	Pn	04 45 53.3	-2.7
IMON				e		04 46 10.0	
ZHSF	Zahedan	3.56	106	ePn	Pn	04 46 01.3	+4.3
ZHSF				AML	AML	04 47 07.0	
	comp=N,24nm,0.6s						
NASN	Na'in	4.05	303	ePn	Pn	04 46 05.9	+2.2
NASN				eSg	Sg	04 47 06.9	-4.8
NASN				AML	AML	04 47 20.2	
	comp=N,29nm,0.7s						
NASN	Na'in	4.05	303	ePn	Pn	04 46 05.9	+2.2
	SNR=52						
NASN				eSg	Sg	04 47 06.9	-4.8
	SNR=90						
IZEF	Zefreh	4.45	301	ePn	Pn	04 46 09.4	+0.3
IZEF	Zefreh	4.45	301	ePn	Pn	04 46 09.4	+0.3
IZEF				e		04 47 25.1	
IDMV	Damavand	6.36	322	ePn	Pn	04 46 33.9	-1.5
IDMV	Damavand	6.36	322	ePn	Pn	04 46 34.3	-1.1
IDMV				e		04 48 40.8	

IDC 05 05:06:17.2±5.3, **341S**×**10062E**, **h0**^{km}, **mb3.7**/2, **mb1 3.7**/2, **mb1mx3.3**/18, **mbtmp3.7**/2, **Error ellipse: s-maj=187.0km s-min=77.7km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	51.28	5	P	P	05 15 23.0	+0.1
	0.9nm,0.7s,baz=189,slow=8.7,SNR=7.7						
MKAR	Makanchi Array	52.54	344	P	P	05 15 32.4	+0.1
	0.3nm,0.3s,baz=159,slow=9.2,SNR=10.0						
TXAR	Lajitas Array	145.42	39	PKPbc	PKPbc	05 25 57.1	-0.8
	0.3nm,0.5s,baz=270,slow=0.9,SNR=5.4						

IDC 05 05:09:11.6±1.6, **735S**×**15530E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.6**/15, **mbtmp3.6**/4, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.4**/17, **Error ellipse: s-maj=52.0km s-min=41.2km az=86.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.40	214	LR	LR	05 17 21.1	
	comp=Z,23nm,18.3s,baz=232,slow=32						
ASAR	Alice Springs	26.16	229	P	P	05 14 48.2	+0.4
	0.3nm,0.5s,baz=55,slow=10,SNR=4.1						
CMAR	Chiang Mai Arr	61.20	296	P	P	05 19 28.9	+0.2
	1.2nm,0.7s,baz=132,slow=5.6,SNR=5.9						
SONM	Songino Array	69.79	327	P	P	05 20 25.1	+1.4
	0.3nm,0.5s,baz=136,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	83.86	319	P	P	05 21 42.4	-0.8
	0.4nm,0.7s,baz=89,slow=6.3,SNR=2.9						
BDFB	Brasilia	147.52	135	PKPbc	PKPbc	05 28 58.7	-0.1
	0.9nm,0.6s,baz=236,slow=18,SNR=4.7						
TORD	Torodi Ar. Bea	153.40	285	PKPbc	PKPbc	05 29 11.9	-1.1
	0.4nm,0.9s,baz=63,slow=3.2,SNR=3.3						
TORD				PKPab	PKPab	05 29 24.3	-0.8
	0.3nm,0.7s,baz=95,slow=2.3,SNR=3.3						

*ISCJB **05** 06:29:31.2±0.5, 3993N±002×2866E±004, h1^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=3.7km az=23.0*
*ISK **05** 06:29:31.1, 3992N×2866E, h5^{km}, MD2.9*
*CSEM **05** 06:29:31.0±0.1, 3992N×2866E, h5^{km}, MD2.8, Error ellipse: s-maj=1.5km s-min=1.5km az=175.0*
*DDA **05** 06:29:33.0, 3965N×2881E, h7^{km}±6^{km}, Md2.8*
ISC 05 06:29:31.7±0.4, **3992N**±002×**2866E**±003, **h5**^{km}±5^{km}, **n30**, σ**0^{s}68**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DST	Dursunbey	0.32	185	iPg	Pg	06 29 37.9	0.0
DST				eSg	Sg	06 29 42.4	+0.4
DST	Dursunbey	0.32	185	PG	Pg	06 29 37.9	+0.1
DST				eSG	Sg	06 29 42.4	+0.4
DURS	Dursunbey	0.35	204	iP	Pg	06 29 38.3	-0.2
DURS	Dursunbey	0.35	204	iP	Pg	06 29 38.3	-0.2
DURS				iS	Sg	06 29 43.2	+0.1
KCT	Karacabey	0.41	326	ePG	Pg	06 29 39.6	-0.1
KCT				eSG	Sg	06 29 45.8	+0.6
GEMT	Gemlik	0.65	38	ePG	Pg	06 29 44.9	+0.6
BALB	Balikesir	0.67	245	ePG	Pg	06 29 44.7	+0.2
BNT	Bandirma	0.71	308	ePG	Pg	06 29 45.5	0.0
EDC	Edincik	0.74	305	ePG	Pg	06 29 45.9	-0.1
YLV	Yalova	0.84	40	ePG	Pg	06 29 47.8	-0.1
CAVI	Cavuskoy	0.95	72	ePG	Pg	06 29 49.5	-0.4
ADVT	Abdulvahap	0.97	58	ePG	Pg	06 29 50.1	-0.3
GDZ	Gediz	1.05	142	iP	Pg	06 29 51.2	-0.5
MRMT	Marmara Adasi	1.06	310	ePG	Pg	06 29 52.1	0.0
ISK	Istanbul-Kandi	1.18	15	ePN	Pn	06 29 53.4	-1.5
HRT	Hereke	1.18	40	ePN	Pn	06 29 53.5	-1.4
AKHS	Akhisar	1.23	212	iP	Pg	06 29 54.1	-1.2
AKHS				iS	Sg	06 30 11.1	-0.2
AKS	Akhisar	1.23	213	ePN	Pn	06 29 54.2	-1.3
CTT	Catalca	1.24	352	ePN	Pn	06 29 55.0	-0.7
BGKT	Bogazkoy	1.26	4	ePN	Pn	06 29 55.3	-0.6
SLVT	Silivri	1.35	345	ePN	Pn	06 29 58.1	+0.8
TKR	Tekirdag	1.37	321	ePN	Pn	06 29 58.1	+0.6
BORA	Eskisehir	1.38	91	iP	Pn	06 29 57.7	+0.1
BORA				iS	Sg	06 30 17.8	+1.7
KULA	Kula-Manisa	1.41	180	ePN	Pn	06 29 58.1	+0.2
SILT	Sile	1.44	31	ePN	Pn	06 29 58.4	0.0
GULT	Gulveren	1.51	70	ePN	Pn	06 29 59.7	+0.3
LPK	Lapseki	1.53	288	ePN	Pn	06 29 59.6	0.0
CTYL	Yal??k??y-??at	1.58	350	ePN	Pn	06 30 00.5	+0.2
AYVA	Ayvalik	1.64	249	iP	Pn	06 30 02.0	+0.8
AYVA				iS	Sn	06 30 23.9	+1.3
ESKT	Eskisehir	1.73	103	ePN	Pn	06 30 03.0	+0.5

GUC 05 06:51:36.5±0.6, **2270S**×**7029W**, **h35**^{km}±4^{km}, **ML3.8**, **1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.43	200	⇑iP	Pn	06 51 45.7	-0.5
MECH				iS	Sn	06 51 52.4	-0.5
MECH				AML	AML	06 51 53.6	
	comp=N,8μm,0.3s						
TOCH	Tocopilla	0.61	8	eP	Pn	06 51 48.0	-0.6
TOCH				iS	Sn	06 51 56.7	-0.5
TOCH				AML	AML	06 51 57.0	
	comp=E,5μm,0.2s						
CEN1	Los Morros	0.70	173	eP	Pn	06 51 52.1	+2.3
CEN1				iS	Sn	06 52 03.7	+4.3
MACH	Maria Elena	0.70	45	⇓iP	Pn	06 51 50.2	+0.3
MACH				iS	Sn	06 52 00.2	+0.7
LVC	Limon Verde	1.28	87	⇓iP	Pn	06 51 59.5	+1.7
LVC				iS	Sn	06 52 16.4	+2.7
CPN1	Cerro Paranal	1.92	183	eP	Pn	06 52 06.5	-0.2
SPCH	San Pedro de A	1.94	97	eP	Pn	06 52 12.1	+5.1
SPCH				AML	AML	06 52 48.5	
	comp=E,980nm,0.6s						

*NEIC **05** 07:02:51.6, 3275N×11554W, h15^{km}, ML2.5(PAS), After PAS.*
NEIC Felt in the El Centro area.
ECX 05 07:02:52.4±0.6, **3278N**×**11556W**, **h9**^{km}, **MD2.5**, **ML2.6**, **6C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNR	Schaffner Ranc	0.13	52	⇑iP	Pg	07 02 55.0	-0.3
COK	Cook Ranch	0.16	295	⇑iP	Pg	07 02 55.7	-0.1
YUH	Yuha Desert	0.34	246	⇑iP	Pg	07 02 58.2	-0.8
COA	Coachella	0.37	77	⇑iP	Pg	07 02 59.1	-0.6
CPBX	Cerro Prieto	0.42	150	eP	Pg	07 02 59.7	-0.9
CPBX				eS	Sg	07 03 06.5	+0.3
CPBX				⇑e		07 03 09.2	
	comp=N,2μm,0.2s						
GLA	Glamis	0.67	66	ePg	Pg	07 03 03.6	-1.8
GLA				eSg	Sg	07 03 12.6	-1.5
RDX	Rancho Dowling	0.91	201	⇓eP	Pg	07 03 08.0	-1.9
RDX				eS	Sg	07 03 20.2	-1.5
RDX				⇑e		07 03 21.8	
	comp=N,98nm,0.8s						
PFO	Pinyon Flat Ob	1.12	318	ePn	Pn	07 03 10.3	-3.9
PFO				eSn	Sn	07 03 24.7	-5.0
ECNX	Esteban Cantu	1.43	218	eS	Sn	07 03 36.5	-0.9
SPX	San Pedro Mart	1.73	177	eP	Pn	07 03 22.1	-0.6
LDFC	Landfair	2.32	9	ePn	Pn	07 03 36.1	+5.4
MWC	Mount Wilson	2.54	305	Pn	Pn	07 03 33.1	-0.6
MWC				Sg	Sg	07 04 08.1	-5.8

MAN 05 07:14:04, 956N×**12540E, h1**^{km}, **mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.24	21	⇓eP	Pg	07 14 10.2	+1.6
SCPH				eS	Sg	07 14 12.5	+0.7
BUTP	Butuan	0.62	160	eP	Pg	07 14 24.8	+8.8
BUTP				eS	Sg	07 14 40.6	+17
MSLP	Maasin	0.78	317	eP	Pg	07 14 19.0	0.0
TBP	Tagbilaran	1.52	275	⇑iP	Pn	07 14 34.1	+1.8
TBP				iS	Sn	07 14 54.2	+1.4
PLP	Palo	1.65	345	⇑eP	Pn	07 14 33.9	-0.3
PLP				eS	Sn	07 14 54.7	-1.3
BUKP	Musuan	1.70	191	eP	Pn	07 14 35.0	+0.2

NEIC 05 07:16:20.8, 3759S×**17646E, h183**^{km}, **MG4.0**(WEL), **After WEL., North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.84	143	P	Pn	07 16 47.7	0.0
MWZ	Matawai	1.12	132	P	Pn	07 16 49.9	+0.2
MWZ				S	Sn	07 17 11.8	-0.3
MXZ	Matakaoa Point	1.47	90	P	Pn	07 16 52.6	-0.1
PUZ	Puketiti	1.50	109	P	Pn	07 16 52.7	-0.3
BKZ	Black Stump Fm	1.57	179	P	Pn	07 16 53.4	-0.3
WTVZ	West Tongariro	1.67	204	P	Pn	07 16 54.9	+0.3
KNZ	Kokohu	1.72	147	P	Pn	07 16 55.1	0.0
WPVZ	Whakapapa	1.77	204	P	Pn	07 16 55.8	+0.3
WNVZ	Wahianoa	1.86	201	P	Pn	07 16 56.6	+0.1
MOVZ	Moawhango	1.90	197	P	Pn	07 16 56.4	-0.5
WAZ	Wanganui	2.45	208	P	Pn	07 17 02.6	-0.4
TSZ	Takapari Road	2.50	189	P	Pn	07 17 02.4	-1.1
BFZ	Birch Farm	3.09	183	P	Pn	07 17 08.6	-2.0
MRZ	Mangatainoka R	3.14	192	P	Pn	07 17 08.9	-2.3
KIW	Kapiti Island	3.48	200	P	Pn	07 17 12.6	-2.8
CAW	Cannon Point	3.68	197	P	Pn	07 17 14.7	-3.1
MRW	Makara Radio	3.88	200	P	Pn	07 17 17.4	-3.0
WEL	Wellington	3.92	199	P	Pn	07 17 17.8	-3.0
MSWZ	Moikau Station	3.93	193	P	Pn	07 17 17.7	-3.4
SNZO	South Karori	3.96	200	P	Pn	07 17 17.9	-3.4
TCW	Tory Channel	3.99	204	P	Pn	07 17 18.5	-3.3
NNZ	Nelson	4.34	212	P	Pn	07 17 22.5	-3.7
QRZ	Quartz Range	4.45	222	P	Pn	07 17 23.7	-3.9
THZ	Tophouse	4.99	212	P	Pn	07 17 30.9	-3.7
KHZ	Kahutara	5.32	204	P	Pn	07 17 34.7	-4.1
DSZ	Denniston Nort	5.49	219	P	Pn	07 17 36.6	-4.5
LTZ	Lake Taylor	6.10	210	P	Pn	07 17 44.5	-4.5
MQZ	McQueen's Vall	6.76	204	P	Pn	07 17 51.4	-6.3

MAN 05 07:28:52, 1137N×**12377E, h8**^{km}, **mb4.2, ML3.0, MS2.7, 2C-1D, Cebu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.88	111	eP	Pg	07 29 08.8	-0.1
RCP	Roxas	1.02	281	⇓eP	Pg	07 29 11.5	-0.2
RCP				eS	Sg	07 29 26.7	+1.7
LLP	Lapu-Lapu	1.06	170	⇑eP	Pg	07 29 12.2	-0.3
LLP				eS	Sg	07 29 25.7	-0.6
PLP	Palo	1.20	100	⇑eP	Pb	07 29 14.5	-0.6
GUIM	Jordan	1.38	238	eP	Pn	07 29 16.9	-0.6
GUIM				eS	Sb	07 29 36.8	+1.1
MSLP	Maasin	1.63	139	eP	Pn	07 29 21.5	+0.5
MSLP				eS	Sn	07 29 44.5	+2.3
TBP	Tagbilaran	1.67	177	eP	Pn	07 29 21.0	-0.6
TBP				iS	Sn	07 29 43.4	+0.2
OTRP	Odiongan	1.98	300	eP	Pn	07 29 26.9	+1.2

*ISCJB **05** 07:40:19.5±0.6, 681N±007×7297W±007, h167^{km}±6^{km}, mb3.5/3, Error ellipse: s-maj=15.5km s-min=7.2km az=44.7*
*IDC **05** 07:40:19.9±0.8, 675N×7294W, h157^{km}±13^{km}, mb3.3/3, mb1 3.7/5, mb1mx3.4/20, mbtmp3.4/5, Error ellipse: s-maj=40.5km s-min=7.5km az=132.0*
*FUNV **05** 07:40:20.4, 682N×7312W, h169^{km}, MW3.6*
ISC 05 07:40:20.6±0.6, **679N**±007×**7295W**±007, **h161**^{km}±7^{km}, **n20**, σ**0^{s}64**/25, **mb3.5**/3, **10D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.24	31	⇓iP	Pn	07 40 49.0	+0.5
CAPV				eS	Sn	07 41 10.3	+0.4
ROSC	El Rosal	2.36	216	P	Pn	07 41 01.0	+0.4
	35nm,0.3s,baz=90,slow=10,SNR=56						
ROSC				S	Sn	07 41 30.8	-0.7
	56nm,0.3s,baz=77,slow=21,SNR=22						
SOCV	Socops	2.55	54	⇓eP	Pn	07 41 03.8	+0.9
SOCV				eS	Sn	07 41 35.5	-0.1
VIGV	El Vigia	2.57	38	⇓iP	Pn	07 41 03.6	+0.5
VIGV				eS	Sn	07 41 35.4	-0.6
SDV	Santo Domingo	3.10	48	P	Pn	07 41 10.2	+0.6
	30nm,0.3s,baz=220,slow=2.4,SNR=295						
SDV				S	Sn	07 41 47.7	0.0
	23nm,0.3s,baz=268,slow=22,SNR=26						
ELOV	Elorza	3.45	86	⇓iP	Pn	07 41 15.3	+1.2
VIRV	Villa del Rosa	3.73	8	⇓iP	Pn	07 41 16.1	-1.6
VIRV				eS	Sn	07 41 57.0	-5.1
SANV	Sanarito	4.32	51	eP	Pn	07 41 25.9	+0.6
CURV	Curarigua	4.36	43	⇓iP	Pn	07 41 25.8	+0.1
DABV	Dabajuro	4.70	29	eP	Pn	07 41 30.3	+0.1
TEPV	Terepaima	4.87	49	⇓iP	Pn	07 41 32.8	+0.2
SIQV	Siquisique	4.93	39	⇓iP	Pn	07 41 33.0	-0.3
BAUV	El Baul	5.31	66	eP	Pn	07 41 37.4	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TURV	Turiamo	6.22	54	eP	Pn	07 41 49.9	-0.5
CAOV	Caicara del Or	6.60	85⇓	eP	Pn	07 41 54.6	-0.7
CUPV	Cœpira	7.79	65⇓	eP	Pn	07 42 10.3	-0.9
TXAR	Lajitas Array	36.61	312	P	P	07 47 11.8	+0.4
	0.5nm,0.6s,mb3.3,baz=129,slow=8.4,SNR=9.7						
PDAR	Pinedale Array	48.20	324	P	P	07 48 45.0	+0.2
	0.6nm,0.7s,mb3.4,baz=125,slow=9.3,SNR=5.1						
YKA	Yellowknife Ar	63.35	340	P	P	07 50 32.2	0.0
	0.8nm,0.6s,mb3.8,baz=132,slow=6.6,SNR=16						
ASAR	Alice Springs	149.23	234	PKPbc	PKPbc	07 59 50.4	-0.5
	0.3nm,0.5s,baz=122,slow=3.5,SNR=6.1						

IDC 05 08:11:46.5±4.5**,1659S×17705W,h0**^{km}**,mb4.6**/2**, mb1 4.7**/2**,mb1mx3.8**/16**,mbtmp4.6**/2**,Error ellipse: s-maj=245.9km s-min=45.7km az=139.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.40	240	P	P	08 19 27.1	+0.6
	1.9nm,0.4s,baz=86,slow=9.3,SNR=7.3						
WB2	Warramunga Arr	46.15	258	eP	P	08 20 12.3	-0.8
ASAR	Alice Springs	46.40	253	P	P	08 20 14.6	-0.5
	12nm,0.5s,baz=88,slow=8.3,SNR=225						
BRTR	Keskin Array B	144.74	317	PKP	PKPdf	08 31 23.7	-1.9
	0.6nm,0.9s,baz=79,slow=3.1,SNR=3.5						
GERES	GERESS Array B	146.65	347	PKPbc	PKPbc	08 31 30.2	+0.2
	0.4nm,0.4s,baz=33,slow=2.3,SNR=3.6						

*IDC **05** 08:14:46.0±1.3,1267N×12593E,h0^{km},mb3.8/7, mb1 3.9/8,mb1mx3.8/20,mbtmp3.8/8,ML4.0/1,MS2.9/1, Ms1 2.9/1,ms1mx2.3/24,Error ellipse: s-maj=45.5km s-min=20.2km az=79.0*

*MAN **05** 08:14:49,1276N×12598E,h31^{km},mb4.4,ML3.2,MS3.1*

*ISCJB **05** 08:14:50.7±2.0,1268N±007×1259E±0.1,h50^{km}±17^{km}, mb3.7/7,Error ellipse: s-maj=25.1km s-min=9.7km az=161.7*

ISC 05 08:14:51.0±3.8**,1269N**±006×**12593E**±009**,h34**^{km}±29^{km}**, n14,**$\sigma0^{s}69$/15**,mb3.7**/7**,1C-2D,Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	Borongan	1.18	204	eP	Pn	08 15 10.9	-0.2
CNP	Catarman	1.25	262	eP	Pn	08 15 12.2	+0.2
PLP	Palo	1.77	212⇑	eP	Pn	08 15 19.1	-0.2
PLP				eS	Sn	08 15 40.9	+0.2
PVCP	Virac	1.95	298⇓	iP	Pn	08 15 20.8	-0.8
PVCP				i S	Sn	08 15 44.3	-0.7
RCP	Roxas	3.31	251⇓	eP	Pn	08 15 42.1	+1.8
KAPI	Kappang	18.62	200	P	Pn	08 19 05.1	-1.2
	0.5nm,0.3s,baz=44,slow=8.2,SNR=4.4						
KAPI				LR	LR	08 27 18.0	
	comp=Z,30nm,18.2s,baz=346,slow=40						
KSRS	Korea Array	24.73	4	P	P	08 20 09.3	+0.2
	0.9nm,0.5s,mb3.5,baz=194,slow=12,SNR=4.4						
KAKA	Kakadu	26.05	165	eP	x	08 20 08.5	
	11nm,0.5s						
CMAR	Chiang Mai Arr	26.60	286	P	P	08 20 26.8	+0.4
	0.8nm,0.3s,mb3.8,baz=98,slow=7.7,SNR=6.2						
ASAR	Alice Springs	36.96	168	P	P	08 21 56.9	-0.2
	0.3nm,0.5s,mb3.4,baz=345,slow=6.7,SNR=4.4						
SONM	Songino Array	38.65	339	P	P	08 22 11.9	+0.7
	0.4nm,0.5s,mb3.4,baz=139,slow=6.6,SNR=3.3						
MKAR	Makanchi Array	49.92	322	P	P	08 23 40.6	-0.7
	0.7nm,0.8s,mb3.8,baz=93,slow=11,SNR=7.1						
ZALV	Zalesovo Beam	52.36	331	P	P	08 23 59.5	-0.1
	0.8nm,0.4s,mb4.0,baz=126,slow=7.3,SNR=3.4						
KURK	Kurchatov	53.91	325	P	P	08 24 11.5	+0.6
	1.1nm,0.7s,mb3.9,baz=122,slow=7.0,SNR=4.7						

*ISCJB **05** 08:16:09.2±2.7,5657S±007×28.1W±0.1,h233^{km}±27^{km}, mb4.7/24,Error ellipse: s-maj=12.8km s-min=11.0km az=139.0*

*MOS **05** 08:16:11.9±1.1,5659S×2822W,h260^{km},mb4.9/4,Error ellipse: s-maj=31.4km s-min=14.3km az=97.6*

*IDC **05** 08:16:13.5±0.9,5653S×2824W,h262^{km}±7^{km},mb4.4/15, mb1 4.5/16,mb1mx4.4/19,mbtmp4.5/16,Error ellipse: s-maj=11.2km s-min=9.5km az=132.0*

*NEIC **05** 08:16:14.2±1.8,5656S×2820W,h272^{km}±17^{km},mb4.7/8, Error ellipse: s-maj=8.8km s-min=8.3km az=209.0*

ISC 05 08:16:10.3±2.3**,5660S**±007×**281W**±01**,h229**^{km}±24^{km}**,n85,** $\sigma0^{s}86$/51**,mb4.7**/24**,4C-2D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.48	157	ePn	Pn	08 19 48.4	-0.2
VNA1				e		08 19 50.3	
VNA1				e		08 19 55.0	
VNA1				e		08 22 58.8	
VNA1				eS	S	08 23 03.9	+16
VNA3	Neumayer Olymp	16.65	159	ePn	Pn	08 19 49.7	-0.8
VNA3				e		08 19 51.8	
VNA3				e		08 19 56.4	
VNA3				e		08 22 55.9	
VNA3				e		08 22 59.9	
VNA3				eS	S	08 23 05.2	+14
VNA2	Neumayer--Watz	16.88	156	ePn	Pn	08 19 52.5	-0.7
VNA2				e		08 19 54.6	
VNA2				e		08 19 58.7	
VNA2				e		08 23 00.9	
VNA2				e		08 23 04.9	
VNA2				eS	S	08 23 09.9	+14
SNAA	Sanae	18.45	155	ePn	P	08 20 09.0	+0.4
SNAA				e		08 20 10.9	
SNAA				e		08 20 15.3	
SNAA				e		08 23 39.3	
SNAA				eS	S	08 23 47.7	+21
SNAA	Sanae	18.45	155	eP	P	08 20 09.2	+0.6
SNAA				pmax	pmax		
	comp=Z,294nm,0.6s						
SNAA	Sanae	18.45	155	eP	P	08 20 09.2	+0.6
	comp=Z,294nm,0.6s						
PMSA	Palmer Station	19.16	230	P	P	08 20 18.2	+1.9
	comp=Z,12nm,0.3s,baz=70,slow=6.7,SNR=34						
PMSA	Palmer Station	19.16	230	eP	P	08 20 18.0	+1.7
	comp=Z,99nm,0.6s						
MAIT	Maitri	22.06	146	eP	P	08 20 44.8	-1.2
MAIT				eE		08 20 48.7	
NVL	N'lazarevskaya	22.09	146	P	P	08 20 46.6	+0.3
NVL				pmax	pmax		
	comp=Z,92nm,2.0s,mb5.0						
USHA	Ushuaia	22.57	257	P	P	08 20 49.8	-1.1
	comp=Z,14nm,0.8s,mb4.5,baz=2.1,slow=5.6,SNR=4.6						
SYO	Syowa Base	31.48	140⇓	eP	P	08 22 08.6	-1.4
PLCA	Paso Flores	31.62	282	P	P	08 22 09.6	-2.0
	comp=Z,7.9nm,0.9s,mb4.3,baz=139,slow=10,SNR=14						
PLCA				PcP	PcP	08 24 56.6	-1.1
	comp=Z,2.0nm,0.9s,baz=135,slow=5.3,SNR=3.0						
PLCA				ScP	ScP	08 28 13.1	-5.6
	comp=Z,5.9nm,0.7s,baz=119,slow=2.7,SNR=15						
PLCA	Paso Flores	31.62	282	P	P	08 22 09.6	-2.0
PLCA						08 24 56.6	
PLCA	Paso Flores	31.62	282	P	P	08 22 09.6	-2.0
PLCA				PcP	PcP	08 24 56.6	-1.1
PLCA				ScP	ScP	08 28 13.1	-5.6
QSPA	South Pole Qui	33.65	180	P	P	08 22 30.4	+1.6
	comp=Z,130nm,0.6s,mb5.6,baz=203,slow=3.6,SNR=319						
QSPA				ScP	ScP	08 28 21.1	-4.0
	comp=Z,9.7nm,0.6s,baz=198,slow=1.2,SNR=21						
QSPA	South Pole Qui	33.65	180	P	P	08 22 30.4	+1.6
QSPA				ScP	ScP	08 28 21.1	-4.0
CAM4	Nova Friburgo	35.82	337⇑	iP	P	08 22 49.3	+1.3
CAM4				i		08 22 50.2	
CAM4				i		08 22 51.0	
CAM4				i		08 22 56.4	
CAM4				i		08 23 01.0	
MAW	Mawson	40.00	143	P	P	08 23 22.9	+0.6
	comp=Z,29nm,0.7s,mb4.8,baz=232,slow=8.5,SNR=28						
MAW				ScP	ScP	08 28 45.6	-3.4
	comp=Z,3.9nm,0.8s,baz=311,slow=11,SNR=4.1						
MAW	Mawson	40.00	143	eP	P	08 23 22.8	+0.5
MAW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAW	Mawson	40.00	143	eP	P	08 23 22.8	+0.5
	comp=Z,6.0nm,0.8s,mb4.1						
BDFB	Brasilia	43.60	332	P	P	08 23 52.6	+0.7
	comp=Z,9.5nm,0.7s,mb4.3,baz=145,slow=9.8,SNR=24						
SBA	Scott Base	45.50	184	eP	P	08 24 07.6	+1.4
SBA				pmax	pmax		
	comp=Z,42nm,0.9s,mb4.8						
SBA	Scott Base	45.50	184	eP	P	08 24 07.6	+1.4
	comp=Z,42nm,0.9s,mb4.8						
VNDA	Vanda	46.00	183	P	P	08 24 11.2	+1.1
	comp=Z,57nm,0.7s,mb5.0,baz=186,slow=6.4,SNR=351						
VNDA				ScP	ScP	08 29 09.6	-3.6
	comp=Z,6.7nm,0.8s,baz=212,slow=3.0,SNR=14						
VNDA	Vanda	46.00	183	P	P	08 24 11.2	+1.1
VNDA				ScP	ScP	08 29 09.6	-3.6
BOSA	Boshof	46.59	76	P	P	08 24 15.7	+0.4
	comp=Z,12nm,0.8s,mb4.3,baz=231,slow=8.8,SNR=15						
BOSA				ScP	ScP	08 29 12.9	-3.5
	comp=Z,5.8nm,0.9s,baz=272,slow=21,SNR=4.0						
LBTB	Lobatse	49.64	74	P	P	08 24 38.7	+0.1
	comp=Z,21nm,0.8s,mb4.5,baz=223,slow=8.0,SNR=30						
LBTB	Lobatse	49.64	74	P	P	08 24 38.7	+0.1
TSUM	Tsumeb	50.38	61	P	P	08 24 44.7	+0.4
	comp=Z,12nm,0.7s,mb4.3,baz=188,slow=7.6,SNR=17						
CASY	Casey	53.56	161	eP	P	08 25 07.7	+0.7
	comp=Z,23nm,0.7s,mb4.8						
LSZ	Lusaka	59.03	69	eP	P	08 25 46.2	0.0
LSZ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
LSZ	Lusaka	59.03	69	eP	P	08 25 46.2	0.0
	comp=Z,14nm,1.1s,mb4.5						
LIC	Lamto	65.40	25	eP	P	08 26 28.3	-0.1
	comp=Z,61nm,0.4s,mb5.6						
KIC	Kosan Boka	65.60	26	eP	P	08 26 29.5	-0.1
	comp=Z,210nm,1.1s,mb5.7						
TIC	Toumodi	65.81	25	eP	P	08 26 30.8	-0.1
	comp=Z,51nm,0.4s,mb5.5						
DBIC	Dimbokro	65.87	25	P	P	08 26 31.2	-0.1
	comp=Z,12nm,0.4s,mb4.9,baz=169,slow=6.5,SNR=68						
DBIC	Dimbokro	65.87	25	eP	P	08 26 31.2	-0.1
DBIC				pmax	pmax		
	comp=Z,33nm,0.8s						
DBIC	Dimbokro	65.87	25	eP	P	08 26 31.1	-0.2
	comp=Z,33nm,0.8s,mb5.0						
OTAV	Otavalo	69.55	305	eP	P	08 26 54.4	0.0
	comp=Z,18nm,1.3s,mb4.5						
ROSC	El Rosal	71.88	311	P	P	08 27 07.9	-0.4
	comp=Z,14nm,1.1s,mb4.5,baz=240,slow=3.0,SNR=6.3						
TOA0	Torodi Ar. Sit	73.78	30	eP	P	08 27 19.6	+0.2
TORD	Torodi Ar. Bea	73.78	30	P	P	08 27 19.6	+0.2
	comp=Z,38nm,0.7s,mb5.1,baz=199,slow=6.5,SNR=398						
SDV	Santo Domingo	74.05	316	eP	P	08 27 20.4	-0.6
	comp=Z,1.3nm,0.4s,mb3.9						
RPZ	Rata Peaks	78.76	194	P	P	08 27 46.6	-0.5
	comp=Z,15nm,0.9s,mb4.6,baz=209,slow=4.7,SNR=5.3						
STKA	Stephens Creek	91.44	171	P	P	08 28 49.6	-0.6
	comp=Z,1.2nm,0.5s,mb4.1,baz=293,slow=3.2,SNR=5.2						
ASAR	Alice Springs	98.61	163	P	P	08 29 21.9	-1.1
	comp=Z,2.4nm,0.8s,mb4.6,baz=190,slow=3.6,SNR=26						
ASAR				pP	pP	08 30 23.6	+4.6
	comp=Z,3.4nm,0.8s,baz=188,slow=4.0,SNR=13						
ASAR				PP	PP	08 33 21.8	-4.1
	comp=Z,1.7nm,0.7s,baz=195,slow=6.8,SNR=9.8						
WRAB	Tennant Creek	102.34	163⇓	iP	Pdif	08 29 37.6	-2.1
ANMO	Albuquerque	112.56	299	i PKIKP	PKiKP	08 34 16.0	-2.5
SCHQ	Schefferville	115.47	336	PKP	PKPdf	08 34 21.2	-2.2
	comp=Z,4.4nm,1.1s,baz=202,slow=12,SNR=4.6						
AKASG	Malin Array Be	116.94	37	i PKIKP	PKPdf	08 34 19.5	-6.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	120.22	303	PKP	PKPdf	08 34 30.7	-2.3
	comp=Z,0.5nm,0.7s,baz=93,slow=4.7,SNR=4.9						
PDAR				PP	PP	08 36 01.1	-1.6
	comp=Z,0.3nm,0.8s,baz=104,slow=6.3,SNR=3.9						
PDAR				SKP		08 37 41.4	
	comp=Z,0.5nm,0.7s,baz=188,slow=4.5,SNR=4.1						
NVAR	Mina Array Bea	121.16	293	PKP	PKPdf	08 34 35.1	+0.1
	comp=Z,0.2nm,0.5s,baz=144,slow=2.1,SNR=4.5						
NVAR				SKP		08 37 44.4	
	comp=Z,0.7nm,0.7s,baz=136,slow=3.7,SNR=4.9						
OBN	Obninsk	123.08	38⇑	iPKIKP	PKPdf	08 34 36.4	-1.7
OBN				pmax	pmax		
	comp=Z,22nm,1.4s						
CMAR	Chiang Mai Arr	125.33	112	PKP	PKPdf	08 34 43.0	-0.5
	comp=Z,0.8nm,0.4s,baz=238,slow=3.6,SNR=5.6						
CMAR				SKP		08 37 52.6	
	comp=Z,0.9nm,0.4s,baz=226,slow=4.4,SNR=6.0						
KAF	Kangasniemi	125.72	28	ep	PKPdf	08 34 40.8	-2.1
	comp=Z,7.8nm,0.7s						
JOF	Joensuu	127.72	30	ep	PKPdf	08 34 44.6	-2.1
	comp=Z,4.0nm,0.7s						
JOF	Joensuu	127.72	30	ePKIKP	PKPdf	08 34 44.6	-2.1
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTK	Aktyubinsk	128.06	54	PKP	PKPdf	08 34 46.9	-0.8
AKTK				SKPbc		08 37 39.0	
AKTO	Aktyubinsk	128.06	54	PKP	PKPdf	08 34 46.9	-0.8
	comp=Z,5.3nm,0.9s,baz=191,slow=3.0,SNR=10						
AKTO				SKPbc		08 37 39.0	
	comp=Z,4.9nm,0.8s,baz=215,slow=3.8,SNR=10						
AAK	Ala-Archa	130.62	72⇑	iPKIKP	PKPdf	08 34 52.4	-0.5
ARCES	ARCESS Array B	131.64	22	PKhKP		08 34 39.1	
	comp=Z,2.0nm,0.8s,baz=226,slow=2.1,SNR=7.1						
ARCES				PKP	PKPdf	08 34 52.2	-1.8
	comp=Z,1.6nm,0.6s,baz=217,slow=3.1,SNR=12						
ARCES				SKPbc	SKPbc	08 37 52.1	-5.4
	comp=Z,4.1nm,0.9s,baz=209,slow=2.0,SNR=7.1						
ARCES	ARCESS Array B	131.64	22	PKP	PKPdf	08 34 52.2	-1.8
ARCES				SKPbc	SKPbc	08 37 52.1	-5.4
ARU	Arti	132.44	49	i PKIKP	PKPdf	08 34 52.6	-3.3
ARU				SS	SS	08 54 37.5	-5.9
BVAR	Borovoye Array	135.49	58	PKP	PKPdf	08 35 01.3	-0.4
	comp=Z,2.3nm,0.6s,baz=260,slow=1.6,SNR=12						
YKA	Yellowknife Ar	136.24	318	PKhKP		08 34 46.8	
	comp=Z,0.4nm,0.7s,baz=115,slow=3.5,SNR=5.8						
YKA				PKP	PKPdf	08 35 01.4	-1.4
	comp=Z,1.6nm,0.3s,baz=125,slow=2.3,SNR=30						
YKA				PP	PP	08 37 39.3	-7.7
	comp=Z,1.1nm,0.8s,baz=118,slow=5.8,SNR=8.7						
YKA				SKPbc	SKPbc	08 38 07.0	-5.7
	comp=Z,6.5nm,0.9s,baz=128,slow=2.5,SNR=26						
YKA				SKPab		08 38 12.9	
	comp=Z,3.1nm,1.0s,baz=113,slow=3.7,SNR=6.7						
YKA	Yellowknife Ar	136.24	318	PKP	PKPdf	08 35 01.4	-1.4
YKA				PP	PP	08 37 39.4	-7.7
YKA				SKPbc	SKPbc	08 38 07.0	-5.7
YKA				SKPab		08 38 12.9	
MKAR	Makanchi Array	137.53	73	PKhKP		08 34 55.9	
	comp=Z,0.4nm,0.9s,baz=187,slow=40,SNR=2.9						
MKAR				PKP	PKPdf	08 35 04.0	-1.6
	comp=Z,0.8nm,0.7s,baz=228,slow=0.5,SNR=5.9						
MKAR				SKPbc	SKPbc	08 38 12.1	-5.0
	comp=Z,3.0nm,0.8s,baz=236,slow=2.4,SNR=19						
MKAR	Makanchi Array	137.53	73	PKP	PKPdf	08 35 04.0	-1.6
MKAR				SKPbc	SKPbc	08 38 12.1	-5.0
KURK	Kurchatov	138.09	66	PKhKP		08 34 55.9	
	comp=Z,0.3nm,0.5s,baz=243,slow=3.5,SNR=2.6						
KURK				PKP	PKPdf	08 35 03.8	-2.8
	comp=Z,0.9nm,0.6s,baz=243,slow=3.0,SNR=3.9						
KURK				SKPbc	SKPbc	08 38 14.2	-4.4
	comp=Z,5.4nm,0.9s,baz=226,slow=3.1,SNR=15						
KURK	Kurchatov	138.09	66	i PKIKP	PKPdf	08 35 06.8	+0.2
KURK	Kurchatov	138.09	66	PKP	PKPdf	08 35 03.8	-2.8
KURK				SKPbc	SKPbc	08 38 14.2	-4.4
NVS	Novosibirsk	142.74	63	ePKHKP		08 35 09.9	
ZALV	Zalesovo Beam	143.06	65	PKhKP		08 35 11.6	
	comp=Z,3.2nm,0.7s,baz=226,slow=3.9,SNR=13						
ZALV				SKPbc	SKPbc	08 38 26.2	-5.2
	comp=Z,3.4nm,0.7s,baz=242,slow=3.2,SNR=9.7						
COLA	College	150.53	311	i PKIKP	PKPbc	08 35 31.7	-1.5
COLA	College	150.53	311	ePKPbc	PKPbc	08 35 32.0	-1.2
COLA				ePKPab	PKPab	08 35 39.7	-1.2
MCK	McKinley	150.73	309	ePKIKP	PKPbc	08 35 33.2	-0.5
ZAK	Zakamensk	150.93	81⇑	iPKIKP	PKPbc	08 35 34.0	-0.6
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TRF	Thorofare Moun	151.25	308	ePKPbc	PKPbc	08 35 34.1	-0.8
SONM	Songino Array	151.25	88	PKPbc	PKPbc	08 35 34.8	-0.6
	comp=Z,5.9nm,0.7s,baz=222,slow=3.2,SNR=38						
KTH	Kantishna Hill	151.55	308	ePKPbc	PKPbc	08 35 34.6	-1.0
ULN	Ulaanbaatar	151.63	89	i PKIKP	PKPbc	08 35 35.2	-1.1
BPAW	Bear Paw Mtn.	151.69	309	ePKPbc	PKPbc	08 35 34.6	-1.3
TLY	Talaya	151.78	79	ePKIKP	PKPbc	08 35 35.7	-0.8
TLY				e		08 35 42.5	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
COLD	Coldfoot	151.87	316	ePKPbc	PKPbc	08 35 35.8	-0.4

*SOF **05** 08:19:12.4,4530N×2631E,h6^{km},MD2.8*

*BUC **05** 08:19:12.6±0.7,4533N×26.17E,h131^{km}±7^{km},MD3.8/3, Error ellipse: s-maj=9.5km s-min=4.3km az=32.0*

*ISCJB **05** 08:19:13.1±0.9,4534N±006×26.19E±007,h127^{km}±7^{km}, Error ellipse: s-maj=10.9km s-min=6.0km az=40.0*

*CSEM **05** 08:19:13.8±0.2,4535N×2620E,h113^{km}±1^{km},MD3.8/3, Error ellipse: s-maj=2.8km s-min=1.8km az=41.0*

*NEIC **05** 08:19:14.2,4535N×2622E,h120^{km},MG3.2(BUC),After BUC.*

ISC 05 08:19:13.7±0.9**,4533N**±006×**2619E**±007**,h126**^{km}±8^{km}**, n22,**$\sigma0^{s}49$/39**,13C-6D,Romania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.23	313⇑	iP	Pn	08 19 31.4	+0.3
MLR				i S	Sn	08 19 44.4	+0.1
MLR	Muntele Rosu	0.23	313	⇑P	Pn	08 19 31.4	+0.3
MLR				S	Sn	08 19 44.4	+0.2
PLOR	Plostina	0.61	32⇑	iP	Pn	08 19 32.6	-0.4
PLOR				i S	Sn	08 19 48.5	+0.9
VRI	Vrincioaia	0.66	35⇑	iP	Pn	08 19 33.1	-0.2
VRI				i S	Sn	08 19 48.4	+0.2
VRI	Vrincioaia	0.66	35	⇑P	Pn	08 19 33.1	-0.2
VRI				S	Sn	08 19 48.4	+0.2
VOIR		0.81	278⇓	iP	Pn	08 19 34.3	-0.2
VOIR				i S	Sn	08 19 49.8	-0.4
VOIR		0.81	278	⇓P	Pn	08 19 34.3	-0.2
VOIR				S	Sn	08 19 49.8	-0.4
HARR	Harsova	1.39	117⇓	iP	Pn	08 19 40.3	0.0
HARR				i S	Sn	08 20 00.1	-0.4
HARR	Harsova	1.39	117	⇓P	Pn	08 19 40.3	0.0
HARR				S	Sn	08 20 00.1	-0.5
CVD	Cernavoda	1.66	127⇑	iP	Pn	08 19 43.5	+0.1
CVD				i S	Sn	08 20 05.5	-0.5
CVD	Cernavoda	1.66	127	⇑P	Pn	08 19 43.5	+0.1
CVD				S	Sn	08 20 05.5	-0.5
TIRR	Tirgusor	1.81	118⇓	iP	Pn	08 19 45.0	-0.1
TIRR				i S	Sn	08 20 08.5	-0.6
TIRR	Tirgusor	1.81	118	⇓P	Pn	08 19 45.0	-0.1
TIRR				S	Sn	08 20 08.5	-0.6
TLCR		1.86	94⇑	iP	Pn	08 19 46.1	+0.3
TLCR				i S	Sn	08 20 09.9	-0.3
TLCR		1.86	94	⇑P	Pn	08 19 46.1	+0.3
TLCR				S	Sn	08 20 09.9	-0.3
SZH	Strazhica	2.07	185	P	Pn	08 19 48.8	+0.4
PSN	Preselentsi	2.18	138	P	Pn	08 19 50.3	+0.6
PRD	Provadia	2.30	157	P	Pn	08 19 52.2	+1.0
BURAR	Bucovina Array	2.38	344⇑	iP	Pn	08 19 52.5	+0.3
BURAR				i S	Sn	08 20 21.8	+0.1
BURAR	Bucovina Array	2.38	344	⇑P	Pn	08 19 52.5	+0.4
BURAR				S	Sn	08 20 21.8	+0.1
DRGR		2.83	302⇑	iP	Pn	08 19 56.7	-1.2
DRGR		2.83	302	⇑P	Pn	08 19 56.7	-1.1

GUC 05 08:22:45.3±0.6**,2053S×6821W,h160**^{km}**,ML4.0,1C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.17	197⇑	eP	Pn	08 23 24.5	+1.5
LVC				i S	Sn	08 23 54.6	+2.4
MACH	Maria Elena	2.20	221	eP	Pn	08 23 25.0	+1.7
MACH				i S	Sn	08 23 55.0	+2.3
TOCH	Tocopilla	2.42	230	eP	Pn	08 23 27.1	+1.2
TOCH				i S	Sn	08 23 59.0	+1.6
TOCH				AML	AML	08 23 59.9	
	comp=N,680nm,0.2s						
CEN1	Los Morros	3.40	213	eP	Pn	08 23 41.0	+3.0
CEN1				i S	Sn	08 24 23.3	+4.3
ANCH	Antofagasta	3.74	213	i S	Sn	08 24 26.3	-0.7

*IDC **05** 08:40:10.2±0.6,263N×12690E,h0^{km},mb4.5/13, mb1 4.6/13,mb1mx4.5/19,mbtmp4.5/13,MS3.7/7, Ms1 3.8/7,ms1mx3.5/22,Error ellipse: s-maj=37.2km s-min=14.6km az=70.0*

*MOS **05** 08:40:13.8±1.4,269N×12685E,h33^{km},mb5.0/13,Error ellipse: s-maj=19.0km s-min=7.2km az=118.5*

*NEIC **05** 08:40:19.1±2.4,253N×12677E,h70^{km}±22^{km},mb4.9/18, Error ellipse: s-maj=19.4km s-min=5.9km az=58.0*

*ISCJB **05** 08:40:19.4±0.9,256N±005×12692E±006,h94^{km}±9^{km}, mb4.6/53,Error ellipse: s-maj=11.5km s-min=6.8km az=145.0*

*DJA **05** 08:40:20,257N×12704E,h27^{km},MLv4.4/4*

*BJI **05** 08:40:23.1,317N×12631E,h69^{km},mB5.1,mb4.6,Ms4.3, Msz4.1*

ISC 05 08:40:20.6±0.8**,254N**±005×**12694E**±006**,h89**^{km}±8^{km}**, n100,**$\sigma0^{s}96$/91**,mb4.6**/52**,8C-3D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.81	166	P	Pn	08 40 49.8	-0.5
MNI	Manado	2.36	243	P	Pn	08 40 58.9	+1.3
LBMI	Labuha	3.20	170	P	Pn	08 41 08.8	-0.1
SWI	Sorong	5.48	128	P	Pn	08 41 39.7	-0.1
	86nm,1.2s,1μm0.3nm						
KDI	Kendari	7.76	214	P	Pn	08 42 12.7	+1.8
	32nm,0.8s,3μm						
MYLDM	Lahad Datu	8.82	288	P	Pn	08 42 26.8	+1.4
	83nm,0.9s,1μm						
KAPI	Kappang	10.38	224	Pn	Pn	08 42 44.8	-1.9
	baz=187,slow=19,SNR=2.7						
KAKA	Kakadu	16.10	160	eP	x	08 43 43.6	
	16nm,0.6s						
GUMO	Guam	20.85	57	LR	LR	08 51 46.6	
	comp=Z,195nm,21.6s,baz=215,slow=33						
PMG	Port Moresby	23.38	121⇑	iP	P	08 45 20.9	-0.7
WRAB	Tennant Creek	23.48	162d	iP	P	08 45 22.2	-0.3
WRAB	Tennant Creek	23.48	162	eP	P	08 45 21.8	-0.7
	37nm,0.8s,mb4.8						
WB2	Warramunga Arr	23.50	162	eP	P	08 45 21.8	-0.8
MBWA	Marble Bar	24.59	196	eP	P	08 45 31.8	-0.8
	30nm,1.4s,mb4.5						
ASAR	Alice Springs	26.91	166	P	P	08 45 53.7	+0.2
	5.8nm,0.7s,mb4.2,baz=351,slow=7.6,SNR=47						
ASAR				PcP	PcP	08 49 16.0	+2.3
	0.7nm,0.5s,baz=358,slow=2.2,SNR=4.4						
CTA	Charters Tower	29.41	141	P	P	08 46 19.9	+4.1
	6.3nm,1.0s,mb4.2,baz=291,slow=3.6,SNR=3.6						
WHN	Wuhan	30.30	338	P	P	08 46 23.2	-0.4
CMAR	Chiang Mai Arr	31.66	302	P	P	08 46 35.9	+0.1
	2.0nm,0.6s,mb4.0,baz=112,slow=6.6,SNR=9.8						
CMAR				LR	LR	09 00 19.9	
	comp=Z,120nm,21.4s,baz=118,slow=38						
CMAR	Chiang Mai Arr	31.66	302	P	P	08 46 35.9	+0.1
CMAR				LR	LR	09 00 19.9	
CHTO	Chiang Mai	31.82	303	eP	P	08 46 36.5	-0.7
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
CHTO	Chiang Mai	31.82	303	eP	P	08 46 36.5	-0.7
	comp=Z,6.4nm,1.0s,mb4.3						
FORT	Forrest	33.15	178	eP	P	08 46 48.5	0.0
	comp=Z,19nm,0.6s,mb5.1						
KSRS	Korea Array	34.76	1	P	P	08 47 01.7	-0.7
	comp=Z,0.9nm,0.6s,mb3.8,baz=59,slow=25,SNR=3.5						
KLBR	Kellerberrin	35.05	194	eP	P	08 47 03.3	-1.7
	comp=Z,33nm,1.1s,mb5.1						
MJAR	Matsushiro Arr	35.40	16	LR	LR	08 59 33.1	
	comp=Z,114nm,20.6s,baz=160,slow=33						
XAN	Xi'an	35.57	334	P	P	08 47 07.6	-1.9
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
XAN				AMB	AMB		
	comp=Z,47nm,18.7s						
XAN				LR	LR		
	comp=E,120nm,49.0s						
XAN				LR	LR		
	comp=Z,232nm,29.9s						
EIDS	Eidsvold	36.29	141	eP	P	08 47 15.9	+0.2
	comp=Z,11nm,0.9s,mb4.8						
STKA	Stephens Creek	36.95	159	eP	P	08 47 21.5	+0.3
	comp=Z,13nm,0.8s,mb4.9						
STKA	Stephens Creek	36.95	159	P	P	08 47 21.6	+0.4
	comp=Z,20nm,0.9s,mb5.1,baz=338,slow=7.7,SNR=32						
BJT	Baijiatuau	38.57	347	eP	P	08 47 34.6	-0.1
BJT				pmax	pmax		
	comp=Z,25nm,0.8s						
BJT	Baijiatuau	38.57	347	eP	P	08 47 34.6	-0.1
	comp=Z,25nm,0.8s,mb5.1						
BJI	Beijing	38.59	347	P	P	08 47 34.5	-0.4
BJI				AMB	AMB		
	comp=Z,26nm,0.9s,mb5.1						

BJI				AMB	AMB		
	comp=Z,104nm,3.6s						
BJI				LR	LR		
	comp=N,203nm,25.7s						
BJI				LR	LR		
	comp=E,187nm,25.1s						
BJI				LR	LR		
	comp=Z,136nm,27.2s						
LZH	**Lanzhou**	**39.63**	**330**	⇓P	**P**	**08 47 43.5**	**-0.2**
LZH				AMB	AMB		
	comp=Z,26nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,126nm,6.3s						
LZH				LR	LR		
	comp=N,452nm,14.0s						
LZH				LR	LR		
	comp=Z,615nm,17.6s						
ARMA	**Armidale**	**40.36**	**146**	*e*P	**P**	**08 47 51.5**	**+1.7**
SHL	**Shillong**	**40.76**	**307**	*e*P	**P**	**08 47 53.0**	**-0.2**
LSA	**Lhasa**	**43.38**	**312**	P	**P**	**08 48 15.0**	**+0.5**
LSA	**Lhasa**	**43.38**	**312**	*e*P	**P**	**08 48 15.1**	**+0.6**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**43.38**	**312**	*e*P	**P**	**08 48 15.1**	**+0.6**
	comp=Z,9.3nm,0.6s,mb4.7						
ASAJ	**Asahikawa**	**43.67**	**16**	P	**P**	**08 48 16.4**	**-0.1**
	comp=Z,4.7nm,0.6s,mb4.4,baz=258,slow=25,SNR=5.3						
ASAJ				LR	LR	09 03 32.0	
	comp=Z,85nm,20.6s,baz=218,slow=32						
GTA	**Gaotai**	**44.22**	**330**	*e*P	**P**	**08 48 20.6**	**-0.4**
GTA				AP	pP	08 48 34.5	-7.8
GTA				AMB	AMB		
	comp=Z,2.0nm,0.9s,mb3.9						
TAPN	**Taplejung**	**44.89**	**307**	*e*P	**P**	**08 48 26.5**	**-0.1**
	comp=Z,21nm,0.7s,mb5.0						
ODAN	**Odare**	**44.94**	**306**	*e*P	**P**	**08 48 26.6**	**-0.3**
	comp=Z,24nm,0.6s,mb5.1						
RAMN	**Ramite**	**45.61**	**306**	*e*P	**P**	**08 48 32.2**	**-0.1**
JIRN	**Jiri**	**46.24**	**307**	*e*P	**P**	**08 48 37.1**	**-0.1**
	comp=Z,17nm,0.5s,mb5.0						
HABR	**Khabarovsk**	**46.29**	**7**	*e*P	**P**	**08 48 35.1**	**-2.1**
HABR				*e**PP	pP	08 48 45.0	-14
HABR				*e*		08 50 09.7	
HABR				*e*PPP		08 51 05.7	
HABR				*e*S	**S**	**08 55 20.2**	**+2.7**
HABR				*e**SS	sS	08 55 36.6	-18
HABR				*e*SSS		08 59 41.4	
YSS	**Yuzh-Sakhalins**	**46.33**	**15**	⇑*i*P	**P**	**08 48 37.9**	**+0.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
GUN	**Gumba**	**46.60**	**307**	*e*P	**P**	**08 48 39.7**	**-0.3**
	comp=Z,35nm,0.6s,mb5.3						
PKI	**Pulchoki**	**46.83**	**306**	*e*P	**P**	**08 48 41.2**	**-0.6**
HIA	**Hailar**	**46.96**	**354***c*	*i*P	**P**	**08 48 43.5**	**+1.1**
KKN	**Kakani**	**47.03**	**306**	*e*P	**P**	**08 48 42.6**	**-0.8**
DMN	**Daman**	**47.09**	**306**	*e*P	**P**	**08 48 43.4**	**-0.5**
GKN	**Gorkha**	**47.63**	**306**	*e*P	**P**	**08 48 47.2**	**-0.9**
	comp=Z,7.4nm,0.3s,mb5.0						
ULN	**Ulaanbaatar**	**48.31**	**342**	⇑*e*P	**P**	**08 48 53.9**	**+1.0**
ULN	**Ulaanbaatar**	**48.31**	**342**	*e*P	**P**	**08 48 53.2**	**+0.3**
	comp=Z,10.0nm,1.1s,mb4.6						
KOLN	**Koldanda**	**48.38**	**306**	*e*P	**P**	**08 48 53.4**	**-0.4**
	comp=Z,35nm,0.6s,mb5.3						
DANN	**Dangsing**	**48.48**	**306**	*e*P	**P**	**08 48 54.2**	**-0.4**
	comp=Z,48nm,0.6s,mb5.5						
SONM	**Songino Array**	**48.49**	**342**	P	**P**	**08 48 54.1**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.2,baz=158,slow=8.0,SNR=11						
SONM				PcP	PcP	08 50 21.2	+2.1
	comp=Z,1.1nm,0.8s,baz=154,slow=5.2,SNR=2.5						
SONM				LR	LR	09 10 57.4	
	comp=Z,170nm,19.2s,baz=138,slow=38						
SONM	**Songino Array**	**48.49**	**342**	P	**P**	**08 48 54.1**	**-0.2**
SONM						08 50 21.2	
ZAK	**Zakamensk**	**51.71**	**341**	*e*P	**P**	**08 49 15.6**	**-3.0**
ZAK				*e*		08 50 33.0	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
MOY	**Mondy**	**53.57**	**340**	*e*P	**P**	**08 49 33.5**	**+1.2**
BOD	**Bodaibo**	**56.07**	**352**	*e*P	**P**	**08 49 52.8**	**+2.6**
PETK	**Petropavlovsk-**	**56.45**	**22**	LR	LR	09 15 38.9	
	comp=Z,83nm,18.6s,baz=261,slow=38						
MK31	**Makanchi Array**	**58.65**	**326**	*e*P	**P**	**08 50 08.1**	**-0.5**
MKAR	**Makanchi Array**	**58.65**	**326**	P	**P**	**08 50 08.1**	**-0.5**
	comp=Z,5.7nm,0.5s,mb4.8,baz=120,slow=8.4,SNR=106						
MKAR				LR	LR	09 15 53.0	
	comp=Z,75nm,19.7s,baz=334,slow=37						
YAK	**Yakutsk**	**59.39**	**2**	⇑*i*P	**P**	**08 50 13.1**	**-0.3**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
TKM2	**Tokmak 2**	**60.77**	**319**	*e*P	**P**	**08 50 22.9**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
TKM2	**Tokmak 2**	**60.77**	**319**	*e*P	**P**	**08 50 22.9**	**-0.3**
	comp=Z,3.4nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**61.38**	**318**	⇑*e*P	**P**	**08 50 29.2**	**+1.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
AML	**Almayashu**	**61.70**	**317**	*e*P	**P**	**08 50 30.5**	**+0.9**
	comp=Z,6.6nm,0.7s,mb4.8						
ZALV	**Zalesovo Beam**	**61.74**	**333**	P	**P**	**08 50 29.0**	**-0.6**
	comp=Z,2.9nm,0.8s,mb4.4,baz=116,slow=6.8,SNR=6.7						
EKS2	**Erkin-Say**	**61.87**	**318**	*e*P	**P**	**08 50 31.2**	**+0.5**
	comp=Z,4.7nm,0.7s,mb4.6						
KURK	**Kurchatov**	**62.85**	**328**	P	**P**	**08 50 36.8**	**-0.2**
	comp=Z,8.3nm,0.5s,mb4.9,baz=133,slow=5.2,SNR=43						
KURK	**Kurchatov**	**62.85**	**328**	*e*P	**P**	**08 50 36.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	**Kurchatov**	**62.85**	**328**	*e*P	**P**	**08 50 36.6**	**-0.4**
	comp=Z,10nm,0.6s,mb4.9						
NVS	**Novosibirsk**	**63.02**	**333**	*e*P	**P**	**08 50 34.6**	**-3.5**
KK31	**Karatay Array**	**64.24**	**317**	*i* P	**P**	**08 50 45.8**	**-0.6**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
BVA0	**Borovoye Array**	**68.43**	**327**	*i* P	**P**	**08 51 12.6**	**-0.3**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
BRVK	**Borovoye**	**68.50**	**327**	*e*P	**P**	**08 51 13.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
BRVK	**Borovoye**	**68.50**	**327**	*e*P	**P**	**08 51 13.5**	**+0.2**
	comp=Z,10.0nm,0.9s,mb4.7						
TIXI	**Tiksi**	**69.02**	**1**	⇑*e*P	**P**	**08 51 16.5**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.2s,mb4.3						
AB31	**Akbulak array**	**73.20**	**321**	P	**P**	**08 51 42.0**	**+0.1**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
AKTK	**Aktyubinsk**	**74.72**	**322**	P	**P**	**08 51 51.4**	**+0.7**
AKTO	**Aktyubinsk**	**74.72**	**322**	P	**P**	**08 51 51.4**	**+0.7**
	comp=Z,8.7nm,0.6s,mb4.7,baz=105,slow=9.4,SNR=36						
SVE	**Sverdlovsk**	**75.08**	**329**	*e*P	**P**	**08 51 52.7**	**0.0**
SVE				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
ARU	**Arti**	**76.05**	**328***d*	*i*P	**P**	**08 51 58.1**	**-0.1**
ARU				*e*S	S	09 01 39.0	+4.6
ARU				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
ARU	**Arti**	**76.05**	**328**	*e*P	**P**	**08 51 58.5**	**+0.2**
	comp=Z,9.8nm,0.6s,mb4.7						
RDF	**Al-Radifah**	**79.49**	**299**	*e*P	**P**	**08 52 12.7**	**-5.2**
	baz=299						
RDF				AMb	AMB	08 52 25.9	
	comp=Z,19nm,1.0s,mb4.9,baz=299						
MIB	**Mutribah**	**79.72**	**300**	*e*P	**P**	**08 52 14.1**	**-5.1**
	baz=300						
MIB				AMb	AMB	08 52 30.2	
	comp=Z,20nm,1.0s,mb4.9,baz=300						
NAY	**Al-Naaiem**	**79.78**	**299**	*e*P	**P**	**08 52 14.4**	**-5.1**
	baz=299						
NAY				AMb	AMB	08 52 25.2	
	comp=Z,9.0nm,0.7s,mb4.7,baz=299						
VNDA	**Vanda**	**82.22**	**173**	P	**P**	**08 52 33.4**	**+1.9**
	comp=Z,1.7nm,0.8s,mb3.9,baz=318,slow=5.3,SNR=7.7						
KIV	**Kislovodsk**	**84.11**	**314**	*e*P	**P**	**08 52 44.6**	**+2.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
COLA	**College**	**85.68**	**25***c*	*i*P	**P**	**08 52 50.2**	**+0.9**
OBN	**Obninsk**	**88.15**	**325**	*e*P	**P**	**08 53 04.4**	**+2.9**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**91.63**	**340**	P	**P**	**08 53 17.1**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.6,baz=81,slow=6.0,SNR=15						
NOA	**NORSAR Array B**	**99.94**	**334**	P	Pdif	08 53 54.7	-0.7
	comp=Z,2.2nm,1.0s,baz=316,slow=15,SNR=3.1						
YKA	**Yellowknife Ar**	**100.49**	**25**	P	Pdif	08 53 58.4	+0.5
	comp=Z,0.3nm,1.0s,baz=298,slow=4.9,SNR=2.3						
TXAR	**Lajitas Array**	**122.15**	**53**	PKP	PKPdf	08 59 08.6	+2.9
	comp=Z,0.1nm,0.4s,baz=337,slow=11,SNR=3.3						
TORD	**Torodi Ar. Bea**	**123.48**	**287**	PKP	PKPdf	08 59 10.6	+2.0
	comp=Z,1.1nm,0.9s,baz=27,slow=2.2,SNR=5.8						
DBIC	**Dimbokro**	**131.02**	**281**	PKP	PKPdf	08 59 26.0	+2.9
	comp=Z,1.1nm,0.6s,baz=90,slow=1.0,SNR=2.6						
DBIC	**Dimbokro**	**131.02**	**281**	PKP	PKPdf	08 59 26.0	+2.9

GUC 05 09:20:47.8±0.6**, 2401S**×**6710W, h200**km**, MD3.3, ML3.8, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.17**	**309**	*e*P	Pn	09 21 29.6	+1.5
LVC				*i* S	Sn	09 22 01.8	+2.4
CEN1	**Los Morros**	**2.91**	**282**	*e*P	Pn	09 21 39.3	+3.0
CEN1				*i* S	Sn	09 22 18.2	+4.1
ANCH	**Antofagasta**	**3.04**	**275**	*e*P	Pn	09 21 39.9	+1.9
ANCH				*i* S	Sn	09 22 18.9	+1.8
CPN1	**Cerro Paranal**	**3.07**	**258**	*e*P	Pn	09 21 40.4	+2.1
CPN1				*i* S	Sn	09 22 20.9	+3.2
CPN1				*i* S	Sn	09 22 21.0	+3.2
CPN1				AML	AML	09 22 24.0	
	comp=E,138nm,0.5s						
MECH	**Mejillones**	**3.20**	**286**	⇑*i*P	Pn	09 21 42.0	+2.2
MECH				*i* S	Sn	09 22 22.4	+1.9
MECH				AML	AML	09 22 27.4	
	comp=N,105nm,0.3s						

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*ISCJB **05** 09:32:11.2±0.4, 40.15N±0.04×106.41E±0.05, h10km, mb3.8/8, Error ellipse: s-maj=5.9km s-min=5.1km az=143.8*

*BJI **05** 09:32:12.6, 40.23N×106.43E, h18km, mb4.3, ML4.4, Ms4.1, Msz3.7*

*IDC **05** 09:32:14.7±0.8, 40.05N×106.49E, h26km±5km, mb3.7/8, mb1 3.9/11, mb1mx3.7/24, mbtmp3.8/11, ML3.7/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/45, Error ellipse: s-maj=22.5km s-min=14.9km az=68.0*

*NEIC **05** 09:32:26.6±1.1, 40.93N×105.44E, mb4.3/2, Error ellipse: s-maj=19.6km s-min=11.2km az=182.0*

*MOS **05** 09:32:26.9±2.8, 40.93N×105.47E, h33km, mb4.1/6, Error ellipse: s-maj=20.0km s-min=11.1km az=110.1*

ISC 05 09:32:13.1±0.4**, 40.08N**±0.03×**106.43E**±0.05**, h10**km**, n33, σ1.17**/48**, mb3.8**/8**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.80**	**78**	*e*PG	**Pn**	**09 32 58.0**	**+0.1**
BTO				SG	**Sg**	**09 33 37.1**	**-5.9**
BTO				Smax			
	comp=N,502nm,0.4s						
BTO				Smax			
	comp=E,265nm,0.2s						
HHC	**Hu-ho-hao-te**	**3.99**	**77**	*e*P	**Pn**	**09 33 13.4**	**-1.0**
HHC				PG	**Pg**	**09 33 23.8**	**-5.8**
HHC				S	**Sn**	**09 33 59.8**	**-1.4**
HHC				SG	**Sg**	**09 34 14.0**	**-7.4**
HHC				Smax			
	comp=N,2μm,0.4s						
HHC				Smax			
	comp=E,2μm,0.5s						
LZH	**Lanzhou**	**4.48**	**208**	P	**Pn**	**09 33 23.1**	**+2.0**
LZH				PG	**Pg**	**09 33 37.7**	**-1.2**
LZH				S	**Sn**	**09 34 14.0**	**+0.8**
LZH				SG	**Sg**	**09 34 35.2**	**-1.8**
LZH				Smax			
	comp=N,465nm,1.0s						
LZH				Smax			
	comp=E,499nm,0.9s						
LZH				LR	LR		
	comp=E,1μm,6.2s						
LZH				LR	LR		
	comp=Z,1μm,7.8s						
GTA	**Gaotai**	**5.14**	**265**	P	**Pn**	**09 33 32.6**	**+2.5**
GTA				PG	**Pg**	**09 33 45.8**	**-5.7**
GTA				S	**Sn**	**09 34 29.1**	**-0.3**
GTA				SG	**Sg**	**09 34 48.7**	**-9.4**
GTA				Smax			
	comp=N,608nm,1.0s						
GTA				Smax			
	comp=E,375nm,0.9s						
GTA				LR	LR		
	comp=N,2μm,6.0s						
GTA				LR	LR		
	comp=E,666nm,5.1s						
GTA				LR	LR		
	comp=Z,343nm,6.9s						
XAN	**Xi'an**	**6.36**	**161**	P	**Pn**	**09 33 49.4**	**+2.6**
XAN				PG	**Pg**	**09 34 10.4**	**-4.4**
XAN				Smax			
	comp=N,126nm,0.6s						
XAN				Smax			
	comp=E,128nm,0.9s						
BJT	**Baijiatuau**	**7.48**	**87**	*e*P	**Pb**	**09 34 24.6**	**+1.7**
BJT				*e*	**Sb**	**09 35 58.9**	**+6.9**
BJT				pmax	pmax		
	comp=Z,46nm,0.4s						
BJT	**Baijiatuau**	**7.48**	**87**	*e*Pn	**Pb**	**09 34 24.6**	**+1.7**
	comp=Z,46nm,0.4s						
BJT				*e*Sn	**Sb**	**09 35 58.9**	**+6.8**
SONM	**Songino Array**	**7.75**	**360**	Pn	**Pn**	**09 34 06.7**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=180,slow=14,SNR=54						
SONM				Sn	**Sn**	**09 35 32.8**	**-0.8**
	comp=Z,6.6nm,0.3s,baz=188,slow=22,SNR=9.0						
SONM				Lg		09 36 14.8	
	comp=Z,13nm,0.3s,baz=198,slow=28,SNR=10.0						
SONM				LR	LR	09 37 37.2	
	comp=Z,174nm,18.1s,baz=176,slow=41						
ULN	**Ulaanbaatar**	**7.79**	**3**	*e*P	**Pn**	**09 34 06.9**	**+0.4**
ULN				*e*		09 35 26.0	
ULN				pmax	pmax		
	comp=Z,15nm,0.3s						
ULN	**Ulaanbaatar**	**7.79**	**3**	*e*Pn	**Pn**	**09 34 06.9**	**+0.4**
	comp=Z,15nm,0.3s						
ULN				*e*Sn	**Sn**	**09 35 26.0**	**-8.7**
ZAK	**Zakamensk**	**10.53**	**349**	*e*P	**Pn**	**09 34 45.1**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK				pmax	pmax		
	comp=E,119nm,1.0s						
KSRS	**Korea Array**	**16.97**	**92**	Pn	**Pn**	**09 36 10.8**	**+0.2**
	comp=E,0.1nm,0.3s,baz=286,slow=11,SNR=6.5						
KSRS				LR	LR	09 43 04.5	
	comp=E,52nm,18.8s,baz=164,slow=38						
MK31	**Makanchi Array**	**18.72**	**299**	P	**Pn**	**09 36 30.0**	**-2.1**
MKAR	**Makanchi Array**	**18.72**	**299**	P	**Pn**	**09 36 31.4**	**-0.7**
	comp=E,0.3nm,0.3s,baz=116,slow=9.0,SNR=12						
MKAR				Lg		09 42 14.9	
	comp=E,0.1nm,0.3s,baz=95,slow=25,SNR=5.4						
ZALV	**Zalesovo Beam**	**20.12**	**321**	P	**P**	**09 36 47.0**	**+0.1**
	comp=E,1.6nm,0.4s,baz=126,slow=9.8,SNR=9.1						
ZALV	**Zalesovo Beam**	**20.12**	**321**	P	**P**	**09 36 47.0**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURK	**Kurchatov**	**22.10**	**308**	P	**P**	**09 37 08.7**	**+0.4**
	comp=Z,5.6nm,0.9s,mb4.0,baz=111,slow=10,SNR=9.0						
KURK	**Kurchatov**	**22.10**	**308**	P	**P**	**09 37 08.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
CMAR	**Chiang Mai Arr**	**22.50**	**199**	P	**P**	**09 37 12.8**	**0.0**
	comp=Z,0.8nm,0.3s,mb3.6,baz=2.8,slow=8.7,SNR=4.2						
CMAR				pP		09 37 20.3	
	comp=Z,1.1nm,0.3s,baz=10,slow=9.3,SNR=2.1						
CMAR	**Chiang Mai Arr**	**22.50**	**199**	P	**P**	**09 37 12.8**	**0.0**
CMAR				*PP		09 37 20.3	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AML	**Almayashu**	**24.67**	**285**	*e*P	**P**	**09 37 35.9**	**+1.9**
	comp=Z,2.6nm,0.8s,mb3.8						
BVAR	**Borovoye Array**	**27.64**	**310**	P	**P**	**09 38 01.0**	**+0.3**
	comp=Z,2.1nm,0.6s,mb3.9,baz=104,slow=9.3,SNR=6.9						
BVAR	**Borovoye Array**	**27.64**	**310**	P	**P**	**09 38 01.0**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARU	**Arti**	**34.99**	**314**	P	**P**	**09 39 04.8**	**-0.5**
BRTR	**Keskin Array B**	**54.31**	**295**	P	**P**	**09 41 38.9**	**-0.7**
	comp=Z,1.3nm,0.8s,mb3.9,baz=89,slow=7.5,SNR=5.2						
BRTR	**Keskin Array B**	**54.31**	**295**	P	**P**	**09 41 38.9**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**58.24**	**325**	P	**P**	**09 42 06.6**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.2,baz=63,slow=7.0,SNR=3.5						
NOA	**NORSAR Array B**	**58.24**	**325**	P	**P**	**09 42 06.6**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**58.24**	**325**	P	**P**	**09 42 06.6**	**-0.7**
ASAR	**Alice Springs**	**68.40**	**153**	P	**P**	**09 43 13.7**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.5,baz=341,slow=6.2,SNR=9.8						
ASAR				pP	pP	09 43 21.3	+3.1
	comp=Z,1.9nm,0.5s,baz=341,slow=6.4,SNR=18						
YKA	**Yellowknife Ar**	**72.58**	**19**	P	**P**	**09 43 39.5**	**-0.6**
	comp=Z,0.9nm,0.8s,mb3.7,baz=329,slow=5.9,SNR=9.5						
YKA				pP	pP	09 43 48.0	+4.7
	comp=Z,0.7nm,0.8s,baz=328,slow=5.6,SNR=8.7						
YKA	**Yellowknife Ar**	**72.58**	**19**	P	**P**	**09 43 39.5**	**-0.6**
YKA				*PP	pP	09 43 48.0	+4.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**72.58**	**19**	P	**P**	**09 43 39.5**	**-0.6**
YKA				pP	pP	09 43 48.0	+4.6

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*ISCJB **05** 09:55:22.0±0.6, 40.86N±0.04×39.67E±0.04, h10km, Error ellipse: s-maj=6.1km s-min=4.4km az=174.1*

*CSEM **05** 09:55:21.4±0.1, 40.84N×39.67E, h12km, MD2.7, Error ellipse: s-maj=2.7km s-min=1.9km az=169.0*

*ISK **05** 09:55:21.8, 40.86N×39.65E, h12km, MD2.6*

*DDA **05** 09:55:22.8, 40.92N×39.89E, h7km±2km, Md2.7*

ISC 05 09:55:22.3±0.6**, 40.87N**±0.06×**39.66E**±0.05**, h13**km±5km**, n11, σ0.48**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.11**	**46**	*i* P	**Pg**	**09 55 24.9**	**-0.5**
MACK				*i* S	**Sg**	**09 55 27.6**	**-0.1**
KTUT	**Trabzon**	**0.14**	**33**	*e*PG	**Pg**	**09 55 25.8**	**-0.1**
KTUT				*e*SG	**Sg**	**09 55 28.8**	**+0.4**
ESPY	**Espiye-Giresun**	**0.71**	**274**	*e*PG	**Pg**	**09 55 35.8**	**-0.3**
ESPY				*e*SG	**Sg**	**09 55 46.0**	**+0.6**
PZAR	**Pazar-Rize**	**0.99**	**71**	*e*PG	**Pg**	**09 55 41.8**	**+0.4**
KOPT	**Kop Dagi**	**1.06**	**143**	*i* P	**Pb**	**09 55 41.8**	**-0.7**
KOPT				*i* S	**Sb**	**09 55 57.0**	**+0.7**
EZC	**Erzincan**	**1.12**	**174**	*e*PN	**Pn**	**09 55 43.7**	**-0.1**
DBAD	**Bademkaya**	**1.55**	**84**	*i* P	**Pn**	**09 55 49.2**	**-0.4**
DBAD				*i* S	**Sn**	**09 56 08.6**	**-1.0**
DDEM	**Demirkent**	**1.58**	**88**	*e*P	**Pn**	**09 55 49.6**	**-0.5**
DDEM				*i* S	**Sn**	**09 56 10.7**	**+0.2**
BCA	**Borcka**	**1.59**	**68**	*e*PN	**Pn**	**09 55 49.8**	**-0.3**
DAGI	**Agillar**	**1.72**	**82**	*i* P	**Pn**	**09 55 52.3**	**+0.4**
DAGI				*i* S	**Sn**	**09 56 14.2**	**+0.4**
ARTV	**Artvin**	**1.74**	**79**	*i* P	**Pn**	**09 55 52.5**	**+0.2**
ARTV				*i* S	**Sn**	**09 56 15.1**	**+0.7**

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*NIED **05** 09:59:00, 46.10N×152.50E, h26km, Mw4.2 Best double couple: $M_0$2.31000×10[15] NP1:ϕ_s108.00000°, δ66.00000°, λ-63.00000°. NP2:ϕ_s236.00000°, δ35.00000°, λ-136.00000°.*

*IDC **05** 09:59:15.4±0.8, 46.01N×152.05E, h0km, mb4.0/8, mb1 4.2/11, mb1mx4.0/24, mbtmp3.9/11, ML3.6/2, MS3.3/6, Ms1 3.3/6, ms1mx3.1/34, Error ellipse: s-maj=30.1km s-min=19.2km az=140.0*

*JMA **05** 09:59:18.4±0.6, 46.14N×152.52E, h30km, M4.8*

*ISCJB **05** 09:59:19.1±1.1, 46.1N±0.1×152.2E±0.1, h35km±11km, mb4.0/8, MS3.6/2, Error ellipse: s-maj=23.2km s-min=6.0km az=139.6*

*MOS **05** 09:59:21.6±2.9, 46.28N×152.32E, h43km, mb4.4/4, Error ellipse: s-maj=17.1km s-min=9.2km az=55.1*

ISC 05 09:59:21.8±0.9**, 46.1N**±0.1×**152.2E**±0.1**, h40**km±9km**, n45, σ1.33**/50**, mb4.0**/8**, MS3.6**/2**, 3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.14**	**256**	*e*PN	**Pn**	**10 00 05.5**	**-3.2**
KUR				pmax	pmax		
	comp=Z,380nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**4.92**	**248**	*e*PN	**Pn**	**10 00 36.0**	**+2.8**
YUK				pmax	pmax		
	comp=Z,170nm,0.5s						
SKR	**Severo-Kuril's**	**5.30**	**28**	*e*PN	**Pn**	**10 00 37.5**	**-0.9**
SKR				*e*S	**Sn**	**10 01 36.5**	**-1.7**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				smax			
	comp=N,100nm,0.6s						
SKR				smax			
	comp=E,80nm,0.6s						
NEM2	**Nemuro 2**	**5.33**	**242**	P	**Pn**	**10 00 38.3**	**-0.5**
NEM2				*e*S	**Sn**	**10 01 37.4**	**-1.4**
JRA	**Rausu**	**5.44**	**249**	P	**Pn**	**10 00 42.8**	**+2.5**
JNK	**Nakash**	**5.86**	**247**	P	**Pn**	**10 00 47.7**	**+1.6**
JAK	**Akkeshi**	**6.17**	**243**	P	**Pn**	**10 00 50.0**	**-0.3**
JAK				*e*S	**Sn**	**10 01 58.2**	**-1.4**
JTKR	**Abashiri--Toko**	**6.23**	**253**	P	**Pn**	**10 00 53.9**	**+2.8**
YSS	**Yuzh-Sakhalins**	**6.56**	**281**	⇓*i*PN	**Pn**	**10 01 01.1**	**+5.4**
JAR	**Ashorobuto**	**6.61**	**248**	P	**Pn**	**10 00 58.2**	**+1.9**
JOB	**Onbets**	**6.76**	**245**	P	**Pn**	**10 00 58.6**	**+0.2**
JOB				*e*S	**Sn**	**10 02 14.1**	**+0.1**
JKK2	**Kamakawa 2**	**7.04**	**255**	P	**Pn**	**10 01 05.4**	**+3.1**
ASAJ	**Asahikawa**	**7.06**	**257**	Pn	**Pn**	**10 01 04.6**	**+2.1**
	comp=E,2.1nm,0.3s,baz=139,slow=19,SNR=14						
ASAJ				LR	LR	10 03 48.1	
	comp=E,269nm,19.3s,baz=0.2,slow=39						
JCH	**Churui**	**7.20**	**244**	P	**Pn**	**10 01 04.5**	**0.0**
JCH				*e*S	**Sn**	**10 02 23.5**	**-1.5**
ERM	**Erimo**	**7.66**	**241**	⇑*i*PN	**Pn**	**10 01 20.6**	**+10**
JNBK	**Urakawa-nobuka**	**7.76**	**244**	P	**Pn**	**10 01 11.9**	**-0.3**
JNBK				*e*S	**Sn**	**10 02 35.2**	**-3.6**
PETK	**Petropavlovsk-**	**7.90**	**25**	Pn	**Pn**	**10 01 14.0**	**0.0**
	comp=E,0.5nm,0.3s,baz=184,slow=11,SNR=9.6						
PETK				LR	LR	10 04 49.3	
	comp=E,47nm,18.6s,baz=92,slow=42						
PET	**Petropavlovsk**	**8.13**	**29**	⇓*i*PN	**Pn**	**10 01 16.0**	**-1.1**
JNB	**Noboribetsu**	**8.77**	**250**	P	**Pn**	**10 01 26.7**	**+0.8**
JKB	**Kayabe**	**9.06**	**246**	P	**Pn**	**10 01 30.0**	**+0.1**
JKB				*e*S	**Sn**	**10 03 06.8**	**-3.8**
JANG	**Nango**	**9.64**	**238**	P	**Pn**	**10 01 35.8**	**-2.1**
JANG				*e*S	**Sn**	**10 03 18.2**	**-6.7**
JTM	**Tenmabayashi**	**9.65**	**241**	*e*S	**Sn**	**10 03 18.6**	**-6.6**
MJAR	**Matsushiro Arr**	**14.16**	**233**	Pn	**Pn**	**10 02 36.1**	**-3.6**
	baz=28,slow=15,SNR=3.6						
MJAR				LR	LR	10 08 10.4	
	comp=E,74nm,19.6s,baz=45,slow=38						
MJAR	**Matsushiro Arr**	**14.16**	**233**	*e*P	**Pn**	**10 02 48.6**	**+9.0**
KSRS	**Korea Array**	**19.98**	**253**	P	**Pn**	**10 03 50.3**	**-2.3**
	comp=E,0.2nm,0.3s,baz=50,slow=11,SNR=2.7						
KSRS				LR	LR	10 10 16.1	
	comp=E,82nm,20.9s,baz=353,slow=33						
KSRS	**Korea Array**	**19.98**	**253**	*e*P	**Pn**	**10 03 57.8**	**+5.2**
YAK	**Yakutsk**	**20.55**	**329**	⇑*i*P	**P**	**10 03 58.2**	**+1.6**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SONM	**Songino Array**	**30.95**	**290**	LR	LR	10 17 41.1	
	comp=Z,67nm,18.9s,MS3.3,baz=356,slow=36						
COLA	**College**	**37.07**	**38***d*	*i*P	**P**	**10 06 28.0**	**+0.4**
BVAR	**Borovoye Array**	**50.79**	**309**	LR	LR	10 29 03.4	
	comp=Z,87nm,18.2s,MS3.8,baz=61,slow=35						
YKA	**Yellowknife Ar**	**51.85**	**36**	P	**P**	**10 08 25.4**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=297,slow=7.1,SNR=9.1						
YKA	**Yellowknife Ar**	**51.85**	**36**	*e*P	**P**	**10 08 25.4**	**-0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**63.32**	**62**	P	**P**	**10 09 47.5**	**+1.0**
	comp=Z,2.7nm,0.8s,mb4.4,baz=289,slow=7.9,SNR=16						
PDAR	**Pinedale Array**	**65.67**	**53**	P	**P**	**10 10 02.4**	**+0.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=272,slow=1.4,SNR=12						
NOA	**NORSAR Array B**	**68.65**	**341**	P	**P**	**10 10 20.2**	**-0.2**
	comp=Z,2.1nm,1.0s,mb4.0,baz=28,slow=5.9,SNR=2.6						
NOA	**NORSAR Array B**	**68.65**	**341**	P	**P**	**10 10 20.2**	**-0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HFS	**Hagfors**	**68.86**	**339**	P	**P**	**10 10 20.7**	**-1.0**
	comp=Z,3.6nm,0.8s,mb4.3,baz=95,slow=1.8,SNR=4.3						
HFS	**Hagfors**	**68.86**	**339**	P	**P**	**10 10 20.7**	**-1.0**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
POO	**Poona**	**68.88**	**275**	*e*x	x	10 10 38.0	
ASAR	**Alice Springs**	**71.37**	**198**	P	**P**	**10 10 36.0**	**-1.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=20,slow=6.1,SNR=3.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANMO	**Albuquerque**	**72.74**	**57**⇑	*i*P	**P**	**10 10 46.2**	**+0.5**
TXAR	**Lajitas Array**	**78.39**	**60**	P	**P**	**10 11 18.6**	**+0.5**
	comp=Z,2.2nm,0.6s,mb4.2,baz=301,slow=4.2,SNR=36						
TXAR	**Lajitas Array**	**78.39**	**60**	*e*P	**P**	**10 11 18.6**	**+0.4**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	**GERESS Array B**	**78.77**	**333**	P	**P**	**10 11 19.6**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=20,slow=4.3,SNR=4.6						
GERES	**GERESS Array B**	**78.77**	**333**	P	**P**	**10 11 19.6**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*ISCJB **05** 10:00:02.5±0.7, 6469N±003×307E±0.1, h0km, Error ellipse: s-maj=8.0km s-min=4.3km az=1.6*
*HEL **05** 10:00:04.2±0.2, 6470N×3080E, h0km, ML2.2, ML2.4(NAO), Explosion*
*NAO **05** 10:00:05.6±0.9, 6466N×3038E, ML2.4*
*BER **05** 10:00:06.3±2.9, 6467N×3043E, h0km, ML2.4(NAO), Suspected explosion*
*IDC **05** 10:00:07.3±2.3, 6482N×3065E, h0km, mb1 3.7/4, mb1mx3.3/25, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=27.3km s-min=11.2km az=114.0*
ISC 05 10:00:03.5±0.7**, 6471N**±003×**307E**±01**, h0km, n22, σ1§12**/29**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.36**	**347**	*e*P	**Pg**	**10 00 29.4**	**-0.2**
KU6				*e*S	**Sg**	**10 00 46.5**	**-0.7**
MSF	**Maaselka**	**1.39**	**331**	*e*P	**Pg**	**10 00 29.8**	**-0.3**
MSF				*e*S	**Sg**	**10 00 47.4**	**-0.6**
KJN	**Kajaani**	**1.42**	**245**	*e*P	**Pn**	**10 00 30.3**	**-0.3**
KJN				*e*S	**Sg**	**10 00 49.6**	**+0.4**
JOF	**Joensuu**	**1.82**	**171**	*e*P	**Pn**	**10 00 35.6**	**-0.3**
JOF				*e*S	**Sn**	**10 00 59.4**	**-0.3**
JOF				MSG		10 01 06.7	
	comp=Z,24nm,0.2s						
OUL	**Oulu**	**2.07**	**283**	*e*P	**Pn**	**10 00 41.9**	**+2.5**
OUL				*e*S	**Sn**	**10 01 08.0**	**+2.2**
SUF	**Sumiainen**	**2.83**	**227**	MSG		10 01 35.6	
	comp=Z,11nm,0.3s						
APA0	**Apatity Array**	**3.06**	**17**	Pn	**Pn**	**10 00 54.6**	**+1.5**
	baz=200,slow=18						
APA0				Lg		10 01 44.5	
	baz=201,slow=37						
APA0	**Apatity Array**	**3.06**	**17**	*e*P	**Pn**	**10 00 54.6**	**+1.5**
APA0				*e*		10 01 44.5	
VRF	**Varrio**	**3.08**	**353**	MSG		10 01 46.1	
	comp=Z,7.5nm,0.2s						
KAF	**Kangasniemi**	**3.26**	**219**	MSG		10 01 48.1	
	comp=Z,6.0nm,0.2s						
FIA0	**FINESS Array S**	**3.88**	**215**	*e*P	**Pn**	**10 01 05.3**	**+1.0**
FIA0				*e*S	**Sn**	**10 01 50.4**	**-0.1**
FIA0	**FINESS Array S**	**3.88**	**215**	Pn	**Pn**	**10 01 05.2**	**+0.8**
	baz=28,slow=14						
FIA0				Lg		10 02 02.4	
	baz=39,slow=28						
ARA0	**ARCESS Array S**	**5.25**	**340**	Pn	**Pn**	**10 01 23.8**	**+0.7**
	baz=155,slow=16						
ARA0				Sn	**Sn**	**10 02 22.6**	**-1.5**
	baz=161,slow=22						
ARA0				Lg		10 02 45.9	
	baz=160,slow=28						
ARA0	**ARCESS Array S**	**5.25**	**340**	*e*P	**Pn**	**10 01 23.8**	**+0.7**
ARA0				*e*S	**Sn**	**10 02 22.6**	**-1.5**
ARA0				*e*SG	**Sg**	**10 02 45.9**	**-6.0**
ARCES	**ARCESS Array B**	**5.25**	**340**	Pn	**Pn**	**10 01 23.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=155,slow=14,SNR=36						
ARCES				Lg		10 02 46.4	
	comp=Z,1.8nm,0.3s,baz=152,slow=32,SNR=11						
HFS	**Hagfors**	**9.09**	**248**	Pn	**Pn**	**10 02 15.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=52,slow=12,SNR=8.1						
HFS				Sn	**Sn**	**10 03 56.9**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=70,slow=26,SNR=6.1						
HFS				Lg		10 04 50.9	
	comp=Z,0.4nm,0.3s,baz=60,slow=30,SNR=3.4						
HFS	**Hagfors**	**9.09**	**248**	*e*P	**Pn**	**10 02 13.5**	**-2.3**
HFS				*e*SG		10 04 45.6	
HFS	**Hagfors**	**9.09**	**248**	Pn	**Pn**	**10 02 13.5**	**-2.3**
	baz=62,slow=12						
HFS				Lg		10 04 45.6	
	baz=58,slow=37						
NB2	**NORSAR Subarra**	**9.59**	**256**	Pn	**Pn**	**10 02 23.3**	**+0.7**
	baz=59,slow=14						
NB2	**NORSAR Subarra**	**9.59**	**256**	*e*P	**Pn**	**10 02 23.3**	**+0.7**
NOA	**NORSAR Array B**	**9.59**	**256**	Pn	**Pn**	**10 02 23.7**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=62,slow=12,SNR=4.6						
NOA				Lg		10 05 09.8	
	comp=Z,0.4nm,0.3s,baz=239,slow=16,SNR=4.4						
GERES	**GERESS Array B**	**18.31**	**218**	Pn	**Pn**	**10 04 17.3**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=24,slow=11,SNR=12						

IDC 05 10:02:10.7±3.6**, 284N**×**12750E, h0km, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.8**/4**, Error ellipse: s-maj=410.5km s-min=22.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**23.62**	**164**	*e*P	P	10 07 23.7	-0.1
ASAR	**Alice Springs**	**27.07**	**167**	P	P	10 07 55.1	0.0
	0.4nm,0.5s,baz=350,slow=8.4,SNR=9.0						
STKA	**Stephens Creek**	**37.03**	**160**	P	P	10 09 22.4	0.0
	1.3nm,0.6s,baz=340,slow=8.6,SNR=3.5						
MKAR	**Makanchi Array**	**58.72**	**325**	P	P	10 12 10.4	+0.1
	0.7nm,0.5s,baz=125,slow=8.5,SNR=13						
KURK	**Kurchatov**	**62.90**	**327**	P	P	10 12 38.7	0.0
	0.6nm,0.5s,baz=127,slow=6.4,SNR=3.9						

GUC 05 10:16:05.5±0.8**, 2312S**×**7041W, h38km**±4km**, MD3.7, ML2.8, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.04**	**292**	*e*P	Pn	10 16 11.2	-0.5
MECH				*i* S	Sn	10 16 16.0	+0.1
MECH				AML	AML	10 16 16.5	
	comp=N,3μm,0.4s						
CEN1	**Los Morros**	**0.33**	**145**⇓	*i*P	Pn	10 16 15.6	+1.6
CEN1				*i* S	Sn	10 16 22.5	+2.6
ANCH	**Antofagasta**	**0.56**	**180**⇑	*e*P	Pn	10 16 16.8	-0.3
ANCH				*i* S	Sn	10 16 24.8	-0.4
ANCH				AML	AML	10 16 26.2	
	comp=E,694nm,0.1s						
TOCH	**Tocopilla**	**1.04**	**11**	*e*P	Pn	10 16 24.0	+0.4
TOCH				*i* S	Sn	10 16 38.2	+1.4
TOCH				AML	AML	10 16 39.3	
	comp=N,554nm,0.3s						
MACH	**Maria Elena**	**1.10**	**33**	*e*P	Pn	10 16 25.3	+1.0
MACH				*i* S	Sn	10 16 40.2	+1.9
LVC	**Limon Verde**	**1.47**	**70**	*e*P	Pn	10 16 32.0	+2.5
LVC				*i* S	Sn	10 16 51.5	+4.0

GUC 05 10:30:01.5±0.7**, 2301S**×**7016W, h37km**±5km**, MD3.6, ML2.6, 2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.28**	**251**⇓	*i*P	Pn	10 30 08.9	-0.4
MECH				*i* S	Sn	10 30 14.8	+0.1
MECH				AML	AML	10 30 16.1	
	comp=N,789nm,0.3s						
CEN1	**Los Morros**	**0.38**	**186**⇑	*i*P	Pn	10 30 13.2	+2.7
CEN1				*i* S	Sn	10 30 21.5	+4.7
ANCH	**Antofagasta**	**0.71**	**199**⇑	*i*P	Pn	10 30 14.8	-0.2
ANCH				*i* S	Sn	10 30 24.4	-0.3
ANCH				AML	AML	10 30 26.0	
	comp=N,567nm,0.1s						
MACH	**Maria Elena**	**0.89**	**25**	*e*P	Pn	10 30 18.2	+0.7
MACH				*i* S	Sn	10 30 30.9	+1.6
TOCH	**Tocopilla**	**0.91**	**358**	*e*P	Pn	10 30 17.8	-0.1
TOCH				*i* S	Sn	10 30 30.5	+0.7
LVC	**Limon Verde**	**1.22**	**71**	*e*P	Pn	10 30 24.9	+2.9
LVC				*i* S	Sn	10 30 41.6	+4.3

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*ISCJB **05** 10:49:26.9±0.5, 3999N±002×12132W±003, h10km, Error ellipse: s-maj=3.5km s-min=2.7km az=142.0*
*NEIC **05** 10:49:27.7, 4003N×121.16W, h3km, ML3.1(NCEDC), After NCEDC.*
ISC 05 10:49:27.5±0.4**, 4000N**±002×**12128W**±003**, h10km, n39, σ1§45**/66**, 17C-31D, Northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEKR	**Beckwourth**	**0.72**	**100**	⇓P	**Pg**	**10 49 39.6**	**-1.7**
	baz=0.2						
BEKR				⇓S	**Sg**	**10 49 48.0**	**-2.8**
	baz=0.2						
P06A	**Stead Airport,**	**1.11**	**106**	⇑P	**Pb**	**10 49 47.0**	**-1.7**
	baz=0.6						
P06A				⇓S	**Sg**	**10 50 01.3**	**-1.9**
	baz=0.6						
O06A	**Flanigan**	**1.12**	**81**	⇑P	**Pb**	**10 49 46.9**	**-2.1**
	baz=0.7,SNR=77						
O06A				⇑S	**Sb**	**10 50 00.6**	**-3.0**
	baz=0.7						
WDC	**Whiskeytown Da**	**1.13**	**301**	*e*Pg	**Pg**	**10 49 48.5**	**-0.8**
WDC				*e*Sg	**Sg**	**10 50 03.7**	**-0.3**
LAVA	**Lava Cap Winer**	**1.31**	**161**	⇓P	**Pn**	**10 49 51.1**	**-0.8**
	baz=1.1						
LAVA				⇑S	**Sb**	**10 50 10.6**	**+1.6**
	baz=1.1						
N06A	**Buffalo Meadow**	**1.33**	**55**	P	**Pn**	**10 49 50.3**	**-1.9**
	baz=1.1,SNR=350						
N06A				⇑S	**Sb**	**10 50 06.8**	**-2.9**
	baz=1.1						
WCN	**Washoe City**	**1.36**	**120**	⇓P	**Pn**	**10 49 51.6**	**-1.0**
	baz=0.9						
WCN				⇓S	**Sb**	**10 50 09.3**	**-1.3**
	baz=0.9						
O07A	**Toulon**	**1.85**	**84**	P	**Pn**	**10 49 58.1**	**-1.1**
	baz=1.4,SNR=287						
O07A				⇓S	**Sn**	**10 50 22.1**	**-0.6**
	baz=1.4						
P07A	**Fallon**	**1.90**	**103**	⇓P	**Pn**	**10 49 59.3**	**-0.6**
	baz=1.4,SNR=9.1						
P07A				⇓Sb	**Sb**	**10 50 26.1**	**+0.2**
	baz=1.4						
N07B	**Gerlach**	**1.93**	**65**	P	**Pn**	**10 49 58.9**	**-1.5**
	baz=1.6,SNR=26						
N07B				⇓Sb	**Sb**	**10 50 26.1**	**-0.7**
	baz=1.6						
MOD	**Modoc**	**2.04**	**21**	*e*Pn	**Pn**	**10 50 03.3**	**+1.4**
MOD				*e*Sn	**Sn**	**10 50 28.9**	**+1.5**
R06C	**Coleville**	**2.04**	**136**	⇓Pb	**Pb**	**10 50 03.8**	**-0.9**
	baz=1.7						
R06C				⇓Sb	**Sb**	**10 50 31.8**	**+1.6**
	baz=1.7						
YBH	**Yreka Blue Hor**	**2.05**	**328**	*e*Pn	**Pn**	**10 50 03.5**	**+1.5**
YBH				*e*Sn	**Sn**	**10 50 29.6**	**+2.1**
CMB	**Columbia Colle**	**2.08**	**160**	*e*Pn	**Pn**	**10 50 03.5**	**+1.1**
CMB				*e*Sn	**Sn**	**10 50 29.4**	**+1.0**
M07A	**Soldier Meadow**	**2.12**	**48**	⇑P	**Pn**	**10 50 02.0**	**-1.0**
	baz=1.9,SNR=120						
M07A				⇓Sb	**Sb**	**10 50 31.7**	**-0.6**
	baz=1.9						
Q07A	**Schurz**	**2.18**	**118**	⇓Sb	**Sb**	**10 50 35.9**	**+1.7**
	baz=1.7						
O08A	**Rochester Mine**	**2.41**	**82**	⇓P	**Pn**	**10 50 05.9**	**-1.1**
	baz=2.0						
O08A				⇓Sb	**Sb**	**10 50 40.3**	**-0.4**
	baz=2.0						
P08A	**Dixie Valley**	**2.48**	**96**	⇓Sb	**Sb**	**10 50 43.9**	**+1.2**
	baz=2.0						
L07A	**Adell**	**2.50**	**35**	⇑P	**Pn**	**10 50 08.0**	**-0.2**
	baz=2.4,SNR=5.5						
L07A				⇓Sb	**Sb**	**10 50 44.1**	**+0.9**
	baz=2.4						
N08A	**GE Springer Mi**	**2.52**	**71**	⇓P	**Pn**	**10 50 06.7**	**-1.8**
	baz=2.1,SNR=28						
N08A				⇑Sb	**Sb**	**10 50 43.9**	**-0.1**
	baz=2.1						
M08A	**Happy Creek Ra**	**2.63**	**56**	⇓P	**Pn**	**10 50 08.8**	**-1.3**
	baz=2.3,SNR=13						
M08A				⇑Sb	**Sb**	**10 50 47.7**	**+0.5**
	baz=2.3						
K05A	**Summer Lake**	**2.74**	**6**	⇓Pb	**Pb**	**10 50 15.6**	**-1.1**
	baz=2.9						
K05A				⇑Sb	**Sb**	**10 50 52.4**	**+2.1**
	baz=2.9						
S05C	**Merced**	**2.75**	**164**	⇓Sb	**Sb**	**10 50 53.9**	**+3.5**
	baz=2.5						
Q08A	**Gabbs**	**2.83**	**113**	⇓Sb	**Sb**	**10 50 54.6**	**+1.9**
	baz=2.4						
R08A	**Mina**	**2.96**	**123**	⇑Sb	**Sb**	**10 50 59.9**	**+3.3**
	baz=2.5						
N09A	**Rock Creek Ran**	**2.99**	**72**	⇓P	**Pn**	**10 50 13.7**	**-1.2**
	baz=2.6						
N09A				⇑Sb	**Sb**	**10 50 58.1**	**+0.8**
	baz=2.6						
K07A	**Rock Creek Ran**	**3.10**	**29**	⇓Sb	**Sb**	**10 51 01.9**	**+1.4**
	baz=3.0						
L08A	**Fields**	**3.12**	**44**	⇓Sb	**Sb**	**10 51 02.7**	**+1.7**
	baz=2.9						
BMN	**Battle Mountai**	**3.13**	**81**	*e*P	**Pn**	**10 50 21.6**	**+4.7**
BMN				*e*Sg	**Sg**	**10 51 02.8**	**-5.4**
O09A	**Fish Creek Ran**	**3.14**	**86**	⇑Pb	**Pb**	**10 50 21.7**	**-1.7**
	baz=2.7						
O09A				⇓Sb	**Sb**	**10 51 02.9**	**+1.2**
	baz=2.7						
WVOR	**Wild Horse Val**	**3.14**	**38**	*e*Pn	**Pn**	**10 50 17.9**	**+0.8**
WVOR				*e*Pg	**Pg**	**10 50 23.2**	**-4.6**
WVOR				*e*Sn	**Sn**	**10 51 00.6**	**+6.0**
P09A	**Austin**	**3.22**	**97**	⇑Pb	**Pb**	**10 50 23.4**	**-1.4**
	baz=2.7						
P09A				⇓Sb	**Sb**	**10 51 05.8**	**+1.8**
	baz=2.7						
T06C	**Millerton Lake**	**3.23**	**157**	⇓Sb	**Sb**	**10 51 07.9**	**+3.6**
	baz=3.0						
M09A	**Marrel Ranch,**	**3.24**	**63**	⇓Sb	**Sb**	**10 51 06.5**	**+2.0**
	baz=2.9						
J06A	**Christmas Vall**	**3.36**	**14**	⇑Pb	**Pb**	**10 50 25.9**	**-1.3**
	baz=3.4						
Q09A	**Carvers**	**3.38**	**109**	⇑Sb	**Sb**	**10 51 12.0**	**+3.5**
	baz=2.9						
L09A	**Wilkinson Ranc**	**3.40**	**52**	⇓Sb	**Sb**	**10 51 10.9**	**+1.8**
	baz=3.1						
O10A	**Cortez Mining,**	**3.67**	**84**	⇑Sb	**Sb**	**10 51 19.5**	**+2.4**
	baz=3.2						
ELK	**Elko**	**4.67**	**79**	*e*Pg	**Pg**	**10 50 51.8**	**-5.2**
ELK				*e*Sg	**Sg**	**10 51 51.4**	**-6.1**

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*MOS **05** 10:50:22.1±0.9, 174S×9990E, h33km, mb4.9/12, Error ellipse: s-maj=16.8km s-min=8.2km az=101.0*
*BJI **05** 10:50:23.8, 190S×9980E, h35km, mB5.0, mb4.9, Ms4.2, Msz3.8*
*NEIC **05** 10:50:23.8±0.4, 188S×9979E, h35km, mb4.6/20, Error ellipse: s-maj=11.9km s-min=5.4km az=50.0*
*IDC **05** 10:50:24.7±1.0, 188S×9979E, h40km±7km, mb4.1/15, mb1 4.3/15, mb1mx4.1/22, mbtmp4.2/15, MS3.7/9, Ms1 3.7/9, ms1mx3.6/26, Error ellipse: s-maj=27.4km s-min=12.0km az=49.0*
*ISCJB **05** 10:50:24.6±1.1, 187S±007×9970E±007, h62km±7km, mb4.6/34, Error ellipse: s-maj=14.1km s-min=7.2km az=135.5*
*DJA **05** 10:50:25, 185S×9963E, h30km, mb4.6/2*
ISC 05 10:50:26.4±1.0**, 187S**±007×**9975E**±007**, h60km**±7km**, h40km**±3.3km**:pP-P, n92, σ1§07**/84**, mb4.6**/34**, 9C-6D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.19**	**37**	P	**Pn**	**10 50 44.4**	**-2.6**
PPI	**Padang Panjang**	**1.54**	**25**	P	**Pn**	**10 50 50.3**	**-1.4**
RGRI	**Rengat**	**2.99**	**60**	P	**Pn**	**10 51 12.7**	**+1.2**
KSI	**Kapahiang**	**3.35**	**122**	P	**Pn**	**10 51 17.1**	**+0.7**
GSI	**Gunungsitoli**	**3.83**	**325**	P	**Pn**	**10 51 21.2**	**-1.7**
TRSI	**Tarutung**	**3.94**	**348**	P	**Pn**	**10 51 23.1**	**-1.4**
KGM	**Kluang**	**5.25**	**43**	⇑P	**Pn**	**10 51 43.3**	**+0.8**
FRIM	**Kepong**	**5.40**	**20**	⇓P	**Pn**	**10 51 46.4**	**+1.8**
MYKOM	**Kota Tinggi**	**5.48**	**49**	⇑P	**Pn**	**10 51 47.4**	**+1.8**
MYKOM	**Kota Tinggi**	**5.48**	**49**	P	**Pn**	**10 51 47.7**	**+2.2**
	71nm,1.2s						
IPM	**Ipoh**	**6.43**	**11**	⇓P	**Pn**	**10 52 01.2**	**+2.6**
IPM	**Ipoh**	**6.43**	**11**	P	**Pn**	**10 52 00.3**	**+1.7**
KULM	**Kulim**	**7.16**	**7**	⇑P	**Pn**	**10 52 08.8**	**+0.2**
SBUM	**Sibu**	**13.19**	**71**	⇓P	**Pn**	**10 53 35.6**	**+4.6**
KKM	**Kota Kinabalu**	**18.22**	**64**	*e*P	**Pn**	**10 54 35.2**	**-0.1**
	14nm,0.7s						
SDKM	**Sandakan**	**18.95**	**67**	⇑P	**Pn**	**10 54 45.0**	**+0.9**
MYLDM	**Lahad Datu**	**20.00**	**69**	⇓P	**Pn**	**10 55 00.9**	**+4.3**
KAPI	**Kappang**	**20.21**	**99**	P	**P**	**10 54 55.3**	**-1.3**
	8.8nm,0.4s,baz=287,slow=4.9,SNR=9.2						
KAPI				LR	LR	11 03 37.1	
	comp=Z,188nm,18.6s,baz=98,slow=39						
KAPI	**Kappang**	**20.21**	**99**	*e*P	**P**	**10 54 54.9**	**-1.7**
	30nm,1.0s						
CM31	**Chiang Mai Arr**	**20.21**	**358**	*e*P	**P**	**10 54 56.0**	**-0.5**
	5.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.21**	**358**	P	**P**	**10 54 56.0**	**-0.6**
	7.1nm,0.9s,baz=187,slow=10.0,SNR=32						
CMAR				LR	LR	11 02 57.5	
	comp=Z,205nm,18.7s,baz=153,slow=37						
CHTO	**Chiang Mai**	**20.56**	**358**	*e*P	**P**	**10 54 59.2**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**20.56**	**358**	*e*P	**P**	**10 54 59.1**	**-1.2**
	comp=Z,4.8nm,0.8s						
QIZ	**Qiongzhong**	**23.01**	**25**	*e*P	**P**	**10 55 25.8**	**-0.7**
	comp=Z,26nm,0.8s,mb4.7						
KMI	**Kunming**	**26.98**	**6**	P	**P**	**10 56 07.0**	**+4.3**
KMI				S	**S**	**11 00 43.2**	**+7.3**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.6s,mb4.0						
DAV	**Davao City (W)**	**27.26**	**71**	LR	LR	11 08 10.0	
	comp=Z,131nm,18.6s,baz=48,slow=39						
SHL	**Shillong**	**28.31**	**345**	*e*P	**P**	**10 56 13.0**	**-1.6**
LSA	**Lhasa**	**32.45**	**346**	P	**P**	**10 56 52.5**	**+1.5**
LSA	**Lhasa**	**32.45**	**346**	*e*P	**P**	**10 56 51.9**	**+0.9**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
LSA	**Lhasa**	**32.45**	**346**	*e*P	**P**	**10 56 51.9**	**+0.9**
	comp=Z,8.5nm,0.7s,mb4.7						
XAN	**Xi'an**	**36.74**	**13**	P	**P**	**10 57 26.4**	**-1.7**
XAN				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.9						
XAN				AMB	AMB		
	comp=Z,92nm,4.7s						
WRAB	**Tennant Creek**	**38.28**	**120**	*e*P	**P**	**10 57 40.7**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**38.28**	**120**	*e*P	**P**	**10 57 40.7**	**-0.7**
	comp=Z,8.6nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**38.29**	**120**	*e*P	**P**	**10 57 40.4**	**-1.0**
ASAR	**Alice Springs**	**39.53**	**126**	P	**P**	**10 57 51.5**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.2,baz=301,slow=7.7,SNR=50						
ASAR				PcP	PcP	10 59 59.9	+1.5
	comp=Z,2.4nm,0.7s,baz=311,slow=2.6,SNR=9.9						
ASAR				S	**S**	**11 03 50.1**	**-0.1**
	comp=Z,1.1nm,1.1s,baz=311,slow=16,SNR=5.9						
JOW	**Kunigami**	**39.63**	**42**	LR	LR	11 14 46.1	
	comp=Z,87nm,20.2s,baz=42,slow=37						
WMQ	**Urumqi**	**46.75**	**348**	P	**P**	**10 58 51.5**	**+1.9**
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.2						
KSRS	**Korea Array**	**47.03**	**31**	P	**P**	**10 58 51.9**	**-0.1**
	comp=Z,1.9nm,0.6s,mb4.2,baz=227,slow=7.7,SNR=9.7						
KSRS				pP	pP	10 59 04.5	-3.0
	comp=Z,2.1nm,0.7s,baz=221,slow=8.2,SNR=4.0						
KSRS				LR	LR	11 19 09.5	
	comp=Z,57nm,18.4s,baz=61,slow=37						
CTA	**Charters Tower**	**48.88**	**115**	*e*P	**P**	**10 59 05.7**	**-0.9**
	comp=Z,7.1nm,1.6s,mb4.5						
CTA	**Charters Tower**	**48.88**	**115**	*e*P	**P**	**10 59 05.7**	**-0.9**
CTA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
CTAO	**Charters Tower**	**48.88**	**115**	*e*P	**P**	**10 59 06.2**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
CTAO	**Charters Tower**	**48.88**	**115**	*e*P	**P**	**10 59 06.2**	**-0.4**
	comp=Z,22nm,1.4s,mb5.0						
STKA	**Stephens Creek**	**49.43**	**132**	*e*P	**P**	**10 59 11.1**	**+0.5**
	comp=Z,3.9nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**49.43**	**132**	P	**P**	**10 59 11.5**	**+0.9**
	comp=Z,2.4nm,0.4s,mb4.6,baz=308,slow=8.3,SNR=16						
STKA				LR	LR	11 19 39.5	
	comp=Z,102nm,19.6s,baz=5.7,slow=36						
TKM2	**Tokmak 2**	**49.61**	**337**	*e*P	**P**	**10 59 13.3**	**+1.6**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**49.61**	**337**	*e*P	**P**	**10 59 13.2**	**+1.5**
	comp=Z,6.5nm,0.8s,mb4.7						
AML	**Almayashu**	**49.74**	**335**	*e*P	**P**	**10 59 14.4**	**+1.7**
	comp=Z,4.5nm,0.7s,mb4.6						
AAK	**Ala-Archa**	**49.81**	**336**	*e*P	**P**	**10 59 14.2**	**+0.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**49.81**	**336**	*e*P	**P**	**10 59 14.2**	**+0.9**
	comp=Z,1.5nm,0.7s,mb4.1						
SONM	**Songino Array**	**49.84**	**6**	P	**P**	**10 59 14.1**	**+0.8**
	comp=Z,7.4nm,0.7s,mb4.8,baz=187,slow=9.2,SNR=66						
SONM				PcP	PcP	11 00 34.4	+1.2
	comp=Z,2.0nm,0.7s,baz=192,slow=3.7,SNR=3.7						
ULN	**Ulaanbaatar**	**49.94**	**6**⇑	*e*P	**P**	**10 59 14.6**	**+0.5**
ULN	**Ulaanbaatar**	**49.94**	**6**	*e*P	**P**	**10 59 14.4**	**+0.3**
	comp=Z,3.7nm,0.8s,mb4.5						
EKS2	**Erkin-Say**	**50.13**	**335**	*e*P	**P**	**10 59 17.1**	**+1.3**
	comp=Z,7.7nm,0.8s,mb4.8						
MK31	**Makanchi Array**	**50.83**	**345**	*e*P	**P**	**10 59 21.7**	**+0.8**
MKAR	**Makanchi Array**	**50.83**	**345**	P	**P**	**10 59 21.8**	**+0.9**
	comp=Z,7.9nm,0.6s,mb4.8,baz=151,slow=7.9,SNR=68						
MKAR	**Makanchi Array**	**50.83**	**345**	P	**P**	**10 59 21.8**	**+0.9**
ZAK	**Zakamensk**	**52.13**	**3**	*e*P	**P**	**10 59 30.5**	**-0.1**
ZAK				*e*		11 00 40.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MJAR	**Matsushiro Arr**	**52.33**	**39**	P	**P**	**10 59 31.8**	**-0.5**
	comp=Z,3.2nm,0.8s,mb4.3,baz=226,slow=6.8,SNR=7.0						
MJAR				LR	LR	11 21 01.2	
	comp=Z,98nm,18.1s,baz=65,slow=35						
HIA	**Hailar**	**53.78**	**16***d*	*i*P	**P**	**10 59 42.0**	**-0.7**
EIDS	**Eidsvold**	**54.64**	**120**	*e*P	**P**	**10 59 49.8**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.6						
KURK	**Kurchatov**	**55.41**	**344**	P	**P**	**10 59 54.7**	**+0.2**
	comp=Z,8.6nm,0.8s,mb4.8,baz=163,slow=7.2,SNR=44						
KURK	**Kurchatov**	**55.41**	**344**	*e*P	**P**	**10 59 54.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
KURK	**Kurchatov**	**55.41**	**344**	*e*P	**P**	**10 59 54.9**	**+0.4**
	comp=Z,16nm,0.8s,mb5.1						
NVS	**Novosibirsk**	**58.13**	**349**	*e*P	**P**	**11 00 12.8**	**-0.9**
HABR	**Khabarovsk**	**58.76**	**27**	*e*P	**P**	**11 00 15.9**	**-2.3**
HABR				*i* *PP	pP	11 00 25.9	-8.3
HABR				*i* *SP	sP	11 00 30.1	-11
HABR				*e*		11 01 07.1	
HABR				*e*S	**S**	**11 08 18.4**	**-0.4**
HABR				*e*		11 08 31.3	
HABR				*e*		11 10 03.0	
HABR				*e*SS	SS	11 12 13.0	0.0
BVAR	**Borovoye Array**	**59.97**	**340**	P	**P**	**11 00 26.7**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.4,baz=139,slow=8.8,SNR=15						
BRVK	**Borovoye**	**60.03**	**340**	*e*P	**P**	**11 00 26.0**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BRVK	**Borovoye**	**60.03**	**340**	*e*P	**P**	**11 00 26.0**	**-0.9**
	comp=Z,4.0nm,0.9s,mb4.5						
BOD	**Bodaibo**	**60.59**	**9**	*e*P	**P**	**11 00 30.8**	**+0.2**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
YSS	**Yuzh-Sakhalins**	**61.50**	**32**⇑	*e*P	**P**	**11 00 37.5**	**+0.5**
YSS				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.3						
AKTK	**Aktyubinsk**	**63.12**	**331**	P	**P**	**11 00 47.0**	**-0.8**
AKTO	**Aktyubinsk**	**63.12**	**331**	P	**P**	**11 00 47.0**	**-0.8**
	comp=Z,1.8nm,0.8s,mb4.3,baz=147,slow=7.9,SNR=6.6						
ARU	**Arti**	**66.98**	**337***d*	*i*P	**P**	**11 01 11.9**	**-0.8**
ARU				*e*		11 03 35.5	
ARU				*e*S	S	11 10 03.1	+1.7
ARU				*e*SS	SS	11 14 25.4	+4.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
YAK	**Yakutsk**	**67.68**	**15**	*e*P	**P**	**11 01 15.7**	**-1.3**
YAK				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,14nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK	**Yakutsk**	**67.68**	**15**	*e*P	**P**	**11 01 16.3**	**-0.7**
	comp=E,35nm,0.8s,mb5.4						
KIV	**Kislovodsk**	**68.28**	**319**	*e*P	**P**	**11 01 22.5**	**+1.4**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
PETK	**Petropavlovsk-**	**72.91**	**32**	P	**P**	**11 01 48.6**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.2,baz=120,slow=23,SNR=3.5						
BRTR	**Keskin Array B**	**73.05**	**313**	P	**P**	**11 01 50.6**	**+0.3**
	comp=Z,1.3nm,0.9s,mb3.9,baz=104,slow=5.2,SNR=4.3						
BRTR				pP	pP	11 02 02.0	-4.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.1nm,0.7s,baz=126,slow=6.3,SNR=4.2						
BOSA	**Boshof**	**75.50**	**241**	LR	LR	11 31 24.5	
	comp=Z,58nm,19.8s,baz=167,slow=33						
SEY	**Seymchan**	**75.60**	**22**	⇑iP	**P**	**11 02 05.7**	**+1.1**
TIXI	**Tiksi**	**75.77**	**9**	⇑eP	**P**	**11 02 04.8**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
TIXI	**Tiksi**	**75.77**	**9**	eP	**P**	**11 02 05.0**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.3						
ARCES	**ARCESS Array B**	**86.26**	**340**	P	**P**	**11 03 02.4**	**+1.2**
	comp=Z,3.3nm,0.7s,mb4.7,baz=96,slow=3.6,SNR=6.2						
GERES	**GERESS Array B**	**88.78**	**319**	P	**P**	**11 03 13.7**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.8,baz=46,slow=7.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**98.26**	**283**	LR	LR	11 48 59.0	
	comp=Z,50nm,18.4s,baz=295,slow=36						
NVAR	**Mina Array Bea**	**129.66**	**39**	PKP	PKPdf	11 09 31.6	+2.3
	comp=Z,0.2nm,0.5s,baz=292,slow=2.2,SNR=3.6						
PDAR	**Pinedale Array**	**131.58**	**29**	PKP	PKPdf	11 09 34.0	+1.3
	comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=2.9						
ANMO	**Albuquerque**	**139.03**	**34**	⇑iPKIKP	PKPdf	11 09 47.1	+0.2
TXAR	**Lajitas Array**	**144.75**	**37**	PKP	PKPdf	11 09 57.7	+0.5
	comp=Z,6.1nm,0.6s,baz=285,slow=1.3,SNR=106						
TXAR				pPKP	pPKPdf	11 10 10.4	-4.5
	comp=Z,4.4nm,0.7s,baz=185,slow=1.6,SNR=10						
MIAR	**Mount Ida**	**145.19**	**19**	ePKIKP	PKPdf	11 09 58.2	+0.3
TZTN	**Tazewell**	**145.36**	**5**	ePKPdf	PKPdf	11 09 57.8	-0.3
JCT	**Junction City**	**146.04**	**31**	ePKP2	PKPab	11 10 01.2	+0.3

GUC 05 11:02:08.2±0.7**,2309S**×**7047W,h37**km±3km**,MD3.5, ML2.5,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.02**	**125**	eP	Pn	11 02 13.7	-0.6
MECH				i S	Sn	11 02 18.4	+0.1
MECH				AML	AML	11 02 19.4	
	comp=E,2μm,0.5s						
CEN1	**Los Morros**	**0.38**	**141**	eP	Pn	11 02 18.7	+1.4
CEN1				i S	Sn	11 02 26.2	+2.6
ANCH	**Antofagasta**	**0.59**	**175**	eP	Pn	11 02 19.6	-0.5
ANCH				i S	Sn	11 02 28.4	-0.1
ANCH				AML	AML	11 02 31.0	
	comp=N,393nm,0.4s						
TOCH	**Tocopilla**	**1.02**	**14**	eP	Pn	11 02 26.3	+0.2
TOCH				i S	Sn	11 02 40.6	+1.4
LVC	**Limon Verde**	**1.51**	**72**	eP	Pn	11 02 35.2	+2.5
LVC				i S	Sn	11 02 54.9	+3.7

*NEIC **05** 11:03:11.5±6.0,2244N×12022E,h10km,ML4.4(TAP), Error ellipse: s-maj=57.0km s-min=27.7km az=24.0*
NEIC Recorded [2 TAP] in P'ing-tung and [1 TAP] in Kao-hsiung and T'ai-tung Counties.
*ISCJB **05** 11:03:18.8±0.4,2269N±002×12057E±002,h49km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=163.9*
*TAP **05** 11:03:19.0,2273N×12058E,h35km,ML3.9,B*
*JMA **05** 11:03:20.2±0.4,2264N×12075E,h116km,M3.2*
ISC 05 11:03:19.3±0.4**,2269N**±002×**12055E**±002**,h44**km±4km**, n64,σ0.77**/114**,12C-6D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGLT	**Jiouru**	**0.07**	**307**	⇓iP	**Pn**	**11 03 26.1**	**-0.2**
	baz=271						
SGLT				S	**Sn**	**11 03 32.0**	**+0.9**
	baz=271						
SSD	**Sandimen**	**0.10**	**52**	⇓iP	**Pn**	**11 03 25.2**	**-1.2**
	baz=80						
SSD				eS	**Sn**	**11 03 29.7**	**-1.7**
	baz=80						
TWM1	**Shoushan**	**0.18**	**320**	⇓iP	**Pn**	**11 03 26.7**	**-0.1**
	baz=312						
TWM1				eS	**Sn**	**11 03 33.6**	**+1.5**
	baz=312						
KAU	**Kaohsiung**	**0.25**	**242**	eP	**Pn**	**11 03 27.8**	**+0.4**
	baz=250						
KAU				eS	**Sn**	**11 03 34.5**	**+1.4**
	baz=250						
SCZT	**Fangliau**	**0.32**	**168**	⇑iP	**Pn**	**11 03 27.9**	**-0.2**
	baz=168						
SCZT				S	**Sn**	**11 03 34.5**	**+0.3**
	baz=168						
TWP	**Hsiaoliuchiu**	**0.38**	**207**	eP	**Pn**	**11 03 29.5**	**+0.8**
	baz=209						
ECL	**Taimali**	**0.39**	**103**	⇓iP	**Pn**	**11 03 28.3**	**-0.5**
	baz=109						
ECL				S	**Sn**	**11 03 34.7**	**-0.8**
	baz=109						
SGST	**Jiashian**	**0.40**	**5**	⇑iP	**Pn**	**11 03 28.4**	**-0.5**
SGST				S	**Sn**	**11 03 35.4**	**-0.4**
EAST	**Anshuo**	**0.41**	**137**	eP	**Pn**	**11 03 28.4**	**-0.7**
	baz=136						
EAST				eS	**Sn**	**11 03 36.0**	**0.0**
	baz=136						
CHN3	**Shinhua**	**0.42**	**337**	eP	**Pn**	**11 03 29.5**	**+0.2**
	baz=331						
CHN3				eS	**Sn**	**11 03 38.2**	**+1.9**
	baz=331						
TAW	**Tawu**	**0.46**	**135**	eP	**Pn**	**11 03 29.4**	**-0.3**
	baz=134						
TAW				eS	**Sn**	**11 03 36.8**	**-0.3**
	baz=134						
TAI1	**Yung-k'ang**	**0.46**	**320**	eP	**Pn**	**11 03 30.2**	**+0.5**
	baz=315						
TAI1				eS	**Sn**	**11 03 37.5**	**+0.4**
	baz=315						
CHN1	**Nanshi**	**0.50**	**358**	⇑iP	**Pn**	**11 03 29.8**	**-0.4**
	baz=354						
CHN1				S	**Sn**	**11 03 37.5**	**-0.4**
	baz=354						
TWG	**Pinlang**	**0.50**	**74**	ePg	**Pn**	**11 03 29.6**	**-0.6**
TWG				eSg	**Sn**	**11 03 37.6**	**-0.4**
TWG	**Pinlang**	**0.50**	**74**	⇓iP	**Pn**	**11 03 30.0**	**-0.2**
	baz=68						
TWG				i S	**Sn**	**11 03 37.5**	**-0.5**
	baz=68						
STYT	**Tauyuan**	**0.51**	**22**	⇑iP	**Pn**	**11 03 29.6**	**-0.7**
	baz=20						
STYT				S	**Sn**	**11 03 37.7**	**-0.5**
	baz=20						
TTN	**Taitung**	**0.56**	**83**	P	**Pn**	**11 03 30.9**	**0.0**
	baz=87						
TTN				eS	**Sn**	**11 03 41.0**	**+1.8**
	baz=87						
WTP	**Ta-pu**	**0.56**	**6**	⇑iP	**Pn**	**11 03 30.4**	**-0.6**
	baz=4.0						
WTP				eS	**Sn**	**11 03 39.0**	**-0.3**
	baz=4.0						
TWK	**Hsinying**	**0.58**	**355**	⇑iP	**Pn**	**11 03 30.7**	**-0.5**
TWK				eS	**Sn**	**11 03 39.2**	**-0.5**
SCLT	**Jiali**	**0.59**	**326**	eP	**Pn**	**11 03 31.0**	**-0.3**
	baz=322						
SCLT				eS	**Sn**	**11 03 40.5**	**+0.6**
	baz=322						
TPUB	**Ta-pu**	**0.62**	**7**	ePg	**Pn**	**11 03 30.8**	**-0.9**
TPUB				eSg	**Sn**	**11 03 39.8**	**-0.8**
ELDTW	**Lidau**	**0.66**	**41**	⇑iP	**Pn**	**11 03 31.9**	**-0.4**
	baz=40						
ELDTW				S	**Sn**	**11 03 41.2**	**-0.4**
	baz=40						
CHN4	**Tsaushan**	**0.66**	**4**	⇑iP	**Pn**	**11 03 31.8**	**-0.6**
	baz=1.0						
CHN4				eS	**Sn**	**11 03 41.4**	**-0.3**
	baz=1.0						
HEN	**Hengchun**	**0.70**	**165**	eP	**Pn**	**11 03 33.2**	**+0.4**
	baz=156						
HEN				eS	**Sn**	**11 03 42.7**	**+0.2**
	baz=156						
CHN8	**Yiju**	**0.73**	**335**	eP	**Pn**	**11 03 32.5**	**-0.7**
	baz=332						
TWK1	**Hengchun**	**0.78**	**162**	P	**Pn**	**11 03 34.1**	**+0.3**
	baz=153						
TWK1				S	**Sn**	**11 03 45.3**	**+0.9**
	baz=153						
CHY	**Chiayi**	**0.82**	**352**	⇑P	**Pn**	**11 03 33.8**	**-0.6**
	baz=349						
CHY				eS	**Sn**	**11 03 44.6**	**-0.7**
	baz=349						
CHN2	**Minshiung**	**0.84**	**355**	eP	**Pn**	**11 03 34.0**	**-0.8**
	baz=353						
CHN2				eS	**Sn**	**11 03 47.2**	**+1.2**
	baz=353						
TSEB	**Hengchuen, Pin**	**0.85**	**157**	eP	**Pn**	**11 03 34.1**	**-0.7**
	baz=161						
TSEB				eS	**Sn**	**11 03 47.1**	**+1.0**
	baz=161						
CHKT	**Chengkung**	**0.86**	**61**	eP	**Pn**	**11 03 34.9**	**-0.1**
	baz=75						
CHKT				eS	**Sn**	**11 03 46.7**	**+0.3**
	baz=75						
CHN5	**Tsauling**	**0.92**	**8**	⇑P	**Pn**	**11 03 35.2**	**-0.6**
	baz=355						
CHN5				eS	**Sn**	**11 03 48.0**	**+0.2**
	baz=355						
TWF1	**Yuli**	**0.96**	**46**	⇑iP	**Pn**	**11 03 36.5**	**+0.2**
	baz=46						
TWF1				S	**Sn**	**11 03 48.5**	**-0.3**
	baz=46						
YULB	**Yu-li**	**0.99**	**44**	ePg	**Pn**	**11 03 36.2**	**-0.5**
YULB				eSg	**Sn**	**11 03 48.2**	**-1.3**
WSF	**Szhu**	**0.99**	**343**	eP	**Pn**	**11 03 35.8**	**-1.0**
	baz=340						
WSF				eS	**Sn**	**11 03 49.2**	**-0.5**
	baz=340						
WGK	**Gukeng**	**1.00**	**1**	eP	**Pn**	**11 03 36.3**	**-0.5**
	baz=349						
WGK				eS	**Sn**	**11 03 50.4**	**+0.7**
	baz=349						
EHY	**Hungye**	**1.08**	**41**	i P	**Pn**	**11 03 38.2**	**+0.1**
	baz=40						
EHY				S	**Sn**	**11 03 52.1**	**+0.2**
	baz=40						
LAY	**Lan-yu**	**1.13**	**125**	eP	**Pn**	**11 03 37.8**	**-0.8**
	baz=126						
LAY				eS	**Sn**	**11 03 52.6**	**-0.4**
	baz=126						
SSLB	**Suanglung**	**1.16**	**19**	ePn	**Pn**	**11 03 38.0**	**-1.1**
WNT	**Mingjian**	**1.19**	**6**	eP	**Pn**	**11 03 38.7**	**-0.8**
	baz=4.0						
SMLT	**Sun Moon Lake**	**1.23**	**15**	⇓P	**Pn**	**11 03 40.1**	**0.0**
	baz=13						
SMLT				eS	**Sn**	**11 03 56.8**	**+1.2**
	baz=13						
TYC	**Yuchr**	**1.25**	**13**	⇑iP	**Pn**	**11 03 40.1**	**-0.1**
	baz=12						
TYC				eS	**Sn**	**11 03 57.3**	**+1.5**
	baz=12						
PNG	**Penghu**	**1.27**	**314**	eP	**Pn**	**11 03 39.3**	**-1.3**
	baz=312						
ESL	**Shilin**	**1.39**	**36**	eP	**Pn**	**11 03 42.5**	**+0.3**
	baz=24						
ESL				eS	**Sn**	**11 03 59.4**	**+0.1**
	baz=24						
WHF	**Hehuan Shan**	**1.60**	**24**	eP	**Pn**	**11 03 45.6**	**+0.6**
	baz=10.0						
TWT	**Tachien**	**1.66**	**20**	eP	**Pn**	**11 03 45.7**	**-0.3**
	baz=18						
TWQ1	**Liyutan**	**1.67**	**7**	eP	**Pn**	**11 03 45.9**	**-0.1**
	baz=6.0						
TWD	**Chiawan**	**1.69**	**35**	eP	**Pn**	**11 03 46.2**	**-0.1**
	baz=32						
TWD				eS	**Sn**	**11 04 06.8**	**0.0**
	baz=32						
NACB	**Ninganchiao**	**1.77**	**33**	ePn	**Pn**	**11 03 47.3**	**-0.1**
NACB				eSn	**Sn**	**11 04 07.7**	**-0.9**
NNS	**Nan Shan**	**1.90**	**23**	eP	**Pn**	**11 03 49.7**	**+0.5**
	baz=21						
NNS				eS	**Sn**	**11 04 12.8**	**+0.7**
	baz=21						
NSTT	**Nanjuang**	**1.98**	**12**	eP	**Pn**	**11 03 49.4**	**-0.9**
	baz=11						
ENA	**Nanau**	**2.05**	**32**	eP	**Pn**	**11 03 50.2**	**-1.0**
	baz=28						
NSK	**Sanguang**	**2.12**	**20**	eP	**Pn**	**11 03 52.6**	**+0.4**
	baz=8.0						
NSK				eS	**Sn**	**11 04 19.5**	**+2.3**
	baz=8.0						
YHNB	**Yeheng**	**2.12**	**21**	ePn	**Pn**	**11 03 52.2**	**0.0**
YHNB				eSn	**Sn**	**11 04 16.9**	**-0.3**
ENTT	**Nioudou**	**2.16**	**25**	eP	**Pn**	**11 03 53.7**	**+1.0**
	baz=22						
ENTT				eS	**Sn**	**11 04 20.3**	**+2.0**
	baz=22						
TWC	**Suao**	**2.26**	**32**	eP	**Pn**	**11 03 54.8**	**+0.7**
	baz=28						
TWE	**Neicheng**	**2.27**	**27**	eP	**Pn**	**11 03 55.8**	**+1.5**
	baz=16						
TWE				eS	**Sn**	**11 04 23.9**	**+2.8**
	baz=16						
KNM	**Kinmen**	**2.59**	**312**	eP	**Pn**	**11 03 58.7**	**0.0**
	baz=309						
NWF	**Wu-fen Shan**	**2.63**	**25**	eP	**Pn**	**11 03 58.9**	**-0.4**
	baz=11						
YOJ	**Yonaguni jima**	**2.87**	**51**	eS	**Sn**	**11 04 36.9**	**+1.1**
HATJ	**Hateruma jima**	**3.29**	**65**	P	**Pn**	**11 04 08.9**	**+0.6**
HATJ				eS	**Sn**	**11 04 46.1**	**-0.1**
IRIF	**Iriomote-Funau**	**3.35**	**60**	P	**Pn**	**11 04 09.9**	**+0.8**
IRIF				eS	**Sn**	**11 04 48.2**	**+0.5**
JKRS	**Kuro-shima**	**3.53**	**63**	P	**Pn**	**11 04 12.4**	**+0.7**
JKRS				eS	**Sn**	**11 04 52.3**	**+0.1**
JIJ	**Ishigaki jima**	**3.70**	**62**	P	**Pn**	**11 04 13.9**	**0.0**
JIJ				eS	**Sn**	**11 04 55.5**	**-0.8**
JTJ	**Tarama**	**4.28**	**62**	P	**Pn**	**11 04 22.7**	**+0.8**
JTJ				eS	**Sn**	**11 05 10.2**	**-0.3**

*ISCJB **05** 11:39:45.0±1.4,204S±02×1778W±02,h486km±20km, mb3.5/8,Error ellipse: s-maj=33.1km s-min=14.7km az=43.2*
*IDC **05** 11:39:46.8±1.8,2045S×17779W,h504km±22km,mb3.1/8, mb1 3.4/10,mb1mx3.2/19,mbtmp3.2/10,Error ellipse: s-maj=32.0km s-min=13.6km az=145.0*
ISC 05 11:39:45.3±1.4**,204S**±02×**1777W**±02**,h480**km±20km**,n12, σ0.59**/12**,mb3.5**/8**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.64**	**42**	P	**P**	**11 41 49.4**	**+1.3**
	2.8nm,0.3s,baz=26,slow=21,SNR=9.6						
AFI				S	**S**	**11 43 28.0**	**-1.0**
	3.5nm,0.3s,baz=270,slow=22,SNR=5.3						
URZ	**Urewera**	**18.30**	**193**	P	**P**	**11 43 29.1**	**-0.2**
	0.5nm,0.3s,baz=136,slow=23,SNR=4.7						
CTA	**Charters Tower**	**33.73**	**264**	P	**P**	**11 45 46.1**	**+0.1**
	1.5nm,0.4s,mb3.8,baz=75,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**44.76**	**257**	P	**P**	**11 47 15.3**	**0.0**
	1.1nm,0.5s,mb3.5,baz=93,slow=7.9,SNR=30						
ASAR				PcP	PcP	11 48 46.8	-0.7
	0.2nm,0.5s,baz=100,slow=4.4,SNR=4.9						
ASAR				S	**S**	**11 53 11.6**	**-5.2**
	0.4nm,0.9s,baz=98,slow=16,SNR=4.9						
WRA	**Warramunga Arr**	**44.84**	**262**	P	**P**	**11 47 15.4**	**-0.5**
	0.7nm,0.3s,mb3.5,baz=104,slow=7.9,SNR=45						
PETK	**Petropavlovsk-**	**76.28**	**345**	P	**P**	**11 50 43.3**	**-0.3**
	6.4nm,1.1s,mb4.1,baz=237,slow=22,SNR=5.4						
KSRS	**Korea Array**	**77.00**	**318**	P	**P**	**11 50 48.4**	**+0.5**
	0.5nm,0.3s,mb3.5,baz=114,slow=6.5,SNR=3.3						
NVAR	**Mina Array Bea**	**80.82**	**43**	P	**P**	**11 51 07.9**	**-0.4**
	0.1nm,0.3s,mb2.8,baz=246,slow=6.7,SNR=2.3						
PDAR	**Pinedale Array**	**88.76**	**43**	P	**P**	**11 51 47.7**	**+0.7**
	0.2nm,0.4s,mb3.3,baz=242,slow=13,SNR=3.4						
CMAR	**Chiang Mai Arr**	**90.32**	**289**	P	**P**	**11 51 54.8**	**-0.1**
	0.6nm,0.7s,mb3.5,baz=132,slow=2.6,SNR=5.8						
ARCES	**ARCESS Array B**	**128.91**	**350**	PKP	PKPdf	11 57 56.1	-0.9
	1.7nm,0.8s,baz=29,slow=2.8,SNR=4.3						
AKASG	**Malin Array Be**	**143.08**	**331**	PKP	PKPdf	11 58 20.5	-3.2
	2.3nm,0.5s,baz=41,slow=4.5,SNR=11						

IDC 05 11:53:19.5±13.0**,2376S**×**17783W,h561**km±143km**, mb3.1**/4**,mb1 3.2**/5**,mb1mx3.0**/18**,mbtmp3.1**/5**,Error ellipse: s-maj=230.3km s-min=77.6km az=66.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.09**	**195**	P	P	11 56 29.1	-0.4
	0.2nm,0.3s,baz=100,slow=18,SNR=2.7						
CTA	**Charters Tower**	**33.47**	**269**	eP	P	11 59 13.2	+0.2
	3.7nm,0.6s						
CTA	**Charters Tower**	**33.47**	**269**	P	P	11 59 13.2	+0.2
	3.7nm,0.5s,baz=102,slow=10,SNR=8.5						
STKA	**Stephens Creek**	**36.62**	**248**	eP	P	11 59 38.5	-0.5
	1.0nm,0.4s						
STKA	**Stephens Creek**	**36.62**	**248**	P	P	11 59 38.7	-0.4
	1.5nm,0.5s,baz=82,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**44.02**	**260**	P	P	12 00 38.5	+0.4
	0.5nm,0.5s,baz=94,slow=7.2,SNR=15						
WB2	**Warramunga Arr**	**44.39**	**265**	eP	P	12 00 41.4	+0.4
WB2	**Warramunga Arr**	**44.39**	**265**	eP	P	12 00 41.5	+0.5
WRA	**Warramunga Arr**	**44.40**	**265**	P	P	12 00 40.5	-0.6
	1.7nm,0.5s,baz=103,slow=8.3,SNR=40						

KRSC 05 11:53:53.3±0.5**,5446N**×**15935E,h219**km±31km**,ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.94**	**29**	eP	Pn	11 54 26.5	+1.9
GNL	**Ganaly**	**1.13**	**228**	i P	Pn	11 54 26.5	+0.7
AVH	**Avacha**	**1.25**	**197**	eP	Pn	11 54 28.6	+1.9
NLC	**Nalytchevo**	**1.29**	**180**	i P	Pn	11 54 28.4	+1.4
NLC				i S	S	11 54 54.3	+1.0
MKZ	**Mys Kozlova**	**1.39**	**85**	eP	Pn	11 54 28.4	+0.7
MKZ				i S	S	11 54 54.7	+0.1
KMNR	**Kamenistaya**	**1.40**	**21**	P	Pn	11 54 29.2	+1.5
SPN	**Mys Shipunski**	**1.42**	**163**	eP	Pn	11 54 29.3	+1.3
SPN				i S	S	11 54 54.9	-0.2
PET	**Petropavlovsk**	**1.50**	**196**	i P	Pn	11 54 30.1	+1.4
PET				eS	S	11 54 57.0	+0.8
KOZ	**Kozyrevsk**	**1.63**	**10**	P	Pn	11 54 30.9	+1.2
SRDR	**Sredinnyy**	**1.87**	**6**	P	Pn	11 54 32.8	+0.9
RUS	**Russkaya**	**2.09**	**194**	eP	Pn	11 54 34.8	+0.7
RUS				i S	S	11 55 04.9	-1.1
KBTR	**Krutoberegovo**	**2.65**	**47**	eP	Pn	11 54 41.4	+1.6
KBTR				eS	S	11 55 15.9	-0.5

*SZGRF **05** 12:11:04.9,14.17N×6107W,h33km,mb5.5,Windward Islands*
*LDG **05** 12:11:19.6,15.13N×6120W,h140km*
*ISCJB **05** 12:11:20.6±0.1,1509N±002×6125W±001,h152km, mb5.2/290,Error ellipse: s-maj=2.2km s-min=1.6km az=22.0*
*TRN **05** 12:11:20.3,15.13N×61.13W,h148km,MD5.1,M4.6(FDF)*
TRN Felt Martinique, Guadeloupe IIISt. L ucia and St. Vincent.
*MOS **05** 12:11:21.3±0.7,1520N×6127W,h154km,mb5.3/103, Error ellipse: s-maj=5.5km s-min=3.9km az=49.0*
*IDC **05** 12:11:21.7±0.4,1507N×6130W,h148km±3km,mb4.7/33, mb1 4.8/36,mb1mx4.8/37,mbtmp4.7/36,MS3.9/10, Ms1 3.8/10,ms1mx3.6/33,Error ellipse: s-maj=8.1km s-min=6.7km az=107.0*
*BJI **05** 12:11:21.0,15.10N×6130W,h160km,mB5.3*
*RSPR **05** 12:11:22.2,1532N×6138W,h192km±8km,MD5.2/10, MD5.2/10*
*GCMT **05** 12:11:23.1±0.3,1525N×61.14W,h144km±2km,MW5.2/79, Moment Tensor Solution. s41,c51; s79,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.30±.20; $M_{\theta\theta}$2.00±.20; $M_{\phi\phi}$0.30±.23; $M_{r\theta}$1.05±.14; $M_{\theta\phi}$2.91±.22; $M_{\phi r}$5.62±.15; Best double couple: $M_0$6.76800×10^{16} NP1:ϕ_s86.00000°,δ28.00000°,λ-24.00000°. NP2: ϕ_s198.00000°,δ79.00000°,λ-116.00000°. Principal axes: T 6.6500, Plg29.0000°, Azm308.0000°; N 0.2420, Plg25.0000°, Azm203.0000°; P -6.8860, Plg49.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **05** 12:11:23.1±0.1,1505N×6132W,mb5.3/207 Error ellipse: s-maj=3.5km s-min=2.0km az=187.0*
NEIC Felt [III] at Castries, Saint Lucia. Also felt at Willikies, Antigua; Castle Bruce, Dominica; Fort-de-France, Saint-Pierre and Sainte-Luce, Martinique; Cap Estate and Gros Islet, Saint Lucia; Kingstown and Layou, Saint Vincent.
ISC 05 12:11:22.5±0.1**,1503N**±002×**6128W**±001**,h154**km**, h154**km±2.1km**:pP-P,n1087,σ0.75**/1074**,mb5.2**/290**, 250C-336D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSHT	**Scott's Head**	**0.20**	**333**	eP	**Pn**	**12 11 42.4**	**-0.9**
DFBT	**Forest Bistro**	**0.22**	**340**	⇓iP	**Pn**	**12 11 42.2**	**-1.2**
DFBT				eS	**Sn**	**12 11 56.2**	**-3.1**
DBCT	**Belle View Cho**	**0.25**	**345**	⇑eP	**Pn**	**12 11 42.3**	**-1.1**
DBCT				eS	**Sn**	**12 11 56.2**	**-3.2**
DPMT	**Pointe Michel**	**0.25**	**337**	⇓iP	**Pn**	**12 11 42.4**	**-1.0**
DPMT				eS	**Sn**	**12 11 57.4**	**-2.0**
DLPL	**La Plaine**	**0.30**	**6**	⇑eP	**Pn**	**12 11 41.6**	**-2.0**
DLPL				eS	**Sn**	**12 11 56.4**	**-3.3**
MDN	**Morne-Daniel**	**0.31**	**339**	⇓iP	**Pn**	**12 11 42.7**	**-0.9**
MDN				eS	**Sn**	**12 11 58.4**	**-1.3**
FDF	**Fort de France**	**0.32**	**157**	⇓iP	**Pn**	**12 11 41.8**	**-1.9**
FDF	**Fort de France**	**0.32**	**157**	ePn	**Pn**	**12 11 41.8**	**-1.9**
FDF				eSn	**Sn**	**12 11 56.4**	**-3.3**
BBL	**Barber's Block**	**0.53**	**339**	⇓iP	**Pn**	**12 11 42.8**	**-1.7**
BBL				⇓iS	**Sn**	**12 11 59.0**	**-2.3**
DWS	**Wesley**	**0.54**	**357**	eP	**Pn**	**12 11 43.0**	**-1.5**
DWS				eS	**Sn**	**12 11 58.6**	**-2.8**
BIM	**Bigot**	**0.55**	**158**	eP	**Pn**	**12 11 42.7**	**-1.9**
MVM	**Montagne Vaucl**	**0.60**	**142**	⇓iP	**Pn**	**12 11 42.6**	**-2.3**
MGG	**Marie-Galante**	**0.88**	**358**	⇓eP	**Pn**	**12 11 44.3**	**-2.4**
TBG	**Guadaloupe-3**	**0.89**	**337**	⇓iP	**Pn**	**12 11 44.9**	**-1.9**
HMG	**Houelmont**	**1.03**	**337**	⇓iP	**Pn**	**12 11 46.3**	**-1.7**
DOG	**Dongo Capester**	**1.05**	**342**	⇓iP	**Pn**	**12 11 46.2**	**-1.9**
SLW	**Petit Monier**	**1.06**	**162**	⇑eP	**Pn**	**12 11 46.1**	**-2.1**
SLW	**Petit Monier**	**1.06**	**162**	⇑iP	**Pn**	**12 11 47.1**	**-1.1**
SLW				eS	**Sn**	**12 12 05.7**	**-2.1**
SCG	**Saint Claude**	**1.07**	**339**	⇓iP	**Pn**	**12 11 46.6**	**-1.7**
BCG	**Bois Riant Cap**	**1.10**	**343**	⇓eP	**Pn**	**12 11 46.5**	**-2.1**
LZG	**Guadaloupe-1**	**1.20**	**337**	⇓iP	**Pn**	**12 11 47.8**	**-1.7**
SLPE	**Piton Saint Es**	**1.21**	**167**	⇑iP	**Pn**	**12 11 48.9**	**-0.7**
SLPE				eS	**Sn**	**12 12 08.9**	**-1.4**
SLDE	**Delcer**	**1.24**	**170**	⇑iP	**Pn**	**12 11 49.4**	**-0.5**
DEG	**La Desirade**	**1.29**	**9**	⇓eP	**Pn**	**12 11 47.3**	**-3.1**
MCLT	**Moule a Chique**	**1.35**	**166**	⇓iP	**Pn**	**12 11 49.4**	**-1.6**
MCLT				eS	**Sn**	**12 12 09.6**	**-3.1**
SVB	**Belmont**	**1.75**	**179**	⇑eP	**Pn**	**12 11 54.2**	**-0.9**
SVB				eS	**Sn**	**12 12 19.2**	**-0.9**
BPA	**Boggy Peak**	**2.08**	**345**	eP	**Pn**	**12 11 57.6**	**-1.3**
BPA				eS	**Sn**	**12 12 23.4**	**-3.5**
BBGH	**Gun Hill**	**2.51**	**138**	ePn	**Pn**	**12 12 03.0**	**-1.0**
BBSP	**Saint Philip**	**2.60**	**137**	⇑iP	**Pn**	**12 12 03.7**	**-1.5**
BBSP				eS	**Sn**	**12 12 35.5**	**-2.5**
ANWB	**Willy Bob**	**2.67**	**350**	ePn	**Pn**	**12 12 02.5**	**-3.5**
ANWB				eSn	**Sn**	**12 12 33.7**	**-5.8**
SKI	**Saint Kitts**	**2.69**	**329**	⇑eP	**Pn**	**12 12 04.9**	**-1.3**
SKI				eS	**Sn**	**12 12 38.4**	**-1.5**
GRW	**Mount Saint Ca**	**2.88**	**187**	⇓iP	**Pn**	**12 12 08.9**	**+0.3**
SEUS	**St. Eustatius**	**2.94**	**326**	⇑eP	**Pn**	**12 12 08.0**	**-1.4**
SEUS	**St. Eustatius**	**2.94**	**326**	⇑eP	**Pn**	**12 12 08.1**	**-1.3**
SEUS				eS	**Sn**	**12 12 41.8**	**-3.9**
SABA	**Saba**	**3.19**	**324**	⇑iP	**Pn**	**12 12 11.3**	**-1.2**
SABA				eS	**Sn**	**12 12 48.8**	**-2.5**
SMRT	**St. Maarten**	**3.46**	**330**	⇑eP	**Pn**	**12 12 13.5**	**-2.4**
SMRT				eS	**Sn**	**12 12 53.4**	**-4.0**
TOSP	**Speyside**	**3.78**	**169**	eP	**Pn**	**12 12 19.1**	**-1.0**
TOSP	**Speyside**	**3.78**	**169**	e	**Sn**	**12 12 56.5**	**-8.2**
TOSP				eS	**Sn**	**12 13 00.6**	**-4.2**
TPR	**Prospect**	**3.85**	**173**	eP	**Pn**	**12 12 20.5**	**-0.5**
BOT	**Bacolet**	**3.88**	**172**	eP	**Pn**	**12 12 21.3**	**-0.1**
BOT	**Bacolet**	**3.88**	**172**	e	Px	12 12 45.8	
BOT				eS	**Sn**	**12 13 03.7**	**-3.4**
TCE	**Chacachacare**	**4.33**	**186**	⇑eP	**Pn**	**12 12 28.2**	**+1.0**
TCE				eS	**Sn**	**12 13 17.3**	**-0.4**
TRN	**Trinidad (W)**	**4.36**	**182**	⇑eP	**Pn**	**12 12 28.5**	**+0.9**
TRN				eS	**Sn**	**12 13 16.9**	**-1.4**
TBH	**Brigand Hill**	**4.52**	**177**	⇑eP	**Pn**	**12 12 29.5**	**-0.3**
TBH				eS	**Sn**	**12 13 20.4**	**-1.8**
TBVI	**Tortola**	**4.64**	**317**	⇓iP	**Pn**	**12 12 29.5**	**-1.8**
TPP	**Pointe-a-Pierr**	**4.69**	**182**	⇑eP	**Pn**	**12 12 32.5**	**+0.6**
TPP				eS	**Sn**	**12 13 25.0**	**-1.1**
ABV	**Anegada**	**4.70**	**322**	⇑eP	**Pn**	**12 12 30.5**	**-1.5**
ABV				eS	**Sn**	**12 13 22.5**	**-3.8**
STVI	**Saint Thomas**	**4.83**	**314**	⇑iP	**Pn**	**12 12 32.4**	**-1.4**
STVI				eS	**Sn**	**12 13 27.0**	**-2.3**
HUMP	**Col San Antoni**	**5.37**	**306**	⇑iP	**Pn**	**12 12 40.0**	**-0.8**
HUMP	**Col San Antoni**	**5.37**	**306**	⇑iP	**Pn**	**12 12 40.4**	**-0.5**
SJG	**San Juan**	**5.59**	**304**	⇑iP	**Pn**	**12 12 43.0**	**-0.8**
SJG	**San Juan**	**5.59**	**304**	⇑iP	**Pn**	**12 12 42.8**	**-1.0**
SJG	**San Juan**	**5.59**	**304**	⇑iP	**Pn**	**12 12 43.2**	**-0.6**
SJG				eS	**Sn**	**12 13 46.1**	**-1.2**
SJG	**San Juan**	**5.59**	**304**	⇑iP	**Pn**	**12 12 42.8**	**-1.0**
SJG				eS	**Sn**	**12 13 46.1**	**-1.2**
ICM	**Isla Caja Muer**	**5.78**	**300**	⇑iP	**Pn**	**12 12 45.5**	**-0.9**
ICM				eS	**Sn**	**12 13 50.4**	**-1.5**
PCRV	**Puerto La Cruz**	**5.83**	**215**	P	**Pn**	**12 12 47.3**	**+0.2**
	12nm,0.3s,baz=44,slow=3.3,SNR=30						

PCRV S Sn 12 13 52.0 -1.3
2.6nm,0.3s,baz=25,slow=5.6,SNR=2.2
CELP Cerrillos 5.92 302 ⇑*i*P Pn 12 12 47.3 -0.9
OBIP Obispado Ponce 5.92 301 ⇑*i*P Pn 12 12 47.4 -0.8
OBIP *e*S Sn 12 13 54.5 -0.9
OBIP Obispado Ponce 5.92 301 ⇑*i*P Pn 12 12 47.4 -0.8
OBIP *e*S Sn 12 13 54.5 -0.9
GBPR Guanica, Bosqu 6.12 299 ⇑*e*P Pn 12 12 50.6 -0.3
AOPR Arecibo Observ 6.20 303 ⇑*i*P Pn 12 12 51.4 -0.5
AOPR *e*S Sn 12 14 01.2 -0.7
LRS Lares 6.24 302 ⇑*e*P Pn 12 12 52.0 -0.5
CRPR Cabo Rojo, PR 6.33 299 ⇑*i*P Pn 12 12 52.9 -0.8
CRPR *e*S Sn 12 14 03.8 -1.3
LSP Las Mesas 6.39 300 ⇑*e*P Pn 12 12 54.1 -0.3
MPR Mayaguez 6.45 300 *e*Pn Pn 12 12 54.8 -0.5
AGPR Aguadilla, PR 6.55 302 ⇑*i*P Pn 12 12 56.1 -0.5
AGPR *e*S Sn 12 14 09.8 -0.6
SDDR Presa de Saban 10.35 294 ⇓*e*P Pn 12 13 47.4 +0.3
SDV Santo Domingo 11.00 237 P Pn 12 13 55.5 -0.2
0.7nm,0.3s,baz=81,slow=10,SNR=19
SDV S Sn 12 15 57.5 0.0
1.9nm,0.3s,baz=56,slow=8.9,SNR=1.9
SDV LR LR 12 18 35.9
comp=Z,348nm,19.3s,baz=75,slow=39
SDV Santo Domingo 11.00 237 *e*Pn Pn 12 13 55.5 -0.3
MASC Masc 13.36 294 *e*P Pn 12 14 23.6 -2.7
MOAC Moa 14.18 295 *e*P Pn 12 14 32.5 -4.0
RCC Rio Carpintero 14.61 292 *e*P Pn 12 14 40.2 -1.8
CMJ Castle Mountai 14.79 284 ⇑*e*P Pn 12 14 43.8 -0.6
GWJ Greenwich 15.12 284 ⇑*i*P Pn 12 14 49.1 +0.8
HOJ Hope 15.13 283 ⇑*e*P Pn 12 14 49.0 +0.6
STH Stony Hill 15.20 284 ⇑*e*P Pn 12 14 49.0 -0.3
BNJ Bonny Gate 15.37 284 ⇑*e*P Pn 12 14 50.4 -1.0
PCJ Portland Cotta 15.47 282 ⇑*e*P Pn 12 14 50.7 -2.0
ROSC El Rosal 16.34 233 P Pn 12 15 05.2 +1.8
33nm,0.3s,baz=84,slow=7.6,SNR=117
ROSC S S 12 18 08.3 +2.9
1.9nm,0.3s,baz=111,slow=22,SNR=4.7
BCIP Isla Barro Col 19.05 254 *e*Pn Pn 12 15 34.2 -1.4
135nm,0.6s
SOR Soroa 21.94 294 *e*P P 12 16 02.6 -1.3
OTAV Otavalo 22.45 231 *e*P P 12 16 08.0 -1.0
306nm,1.9s,mb5.4
OTAV *e* 12 16 40.0
OTAV *e*S S 12 20 07.1 +3.0
DWPF Disney 22.77 308 *e*P P 12 16 11.2 -0.7
177nm,1.1s,mb5.4
CNGN Cerro Negro 24.81 267 P P 12 16 31.9 +1.3
NHSC New Hope 24.86 320 *e*P P 12 16 31.0 +0.2
240nm,1.0s,mb5.7
NHSC *e* 12 17 03.2
CNNC Cliffs of the 25.05 326 *e*P P 12 16 32.3 -0.2
99nm,0.9s,mb5.3
CRIN San Cristobal 25.12 268 P P 12 16 34.9 +1.5
TGUH Tegucigalpa,Un 25.18 271 *e*P P 12 16 35.8 +1.9
206nm,0.8s,mb5.7
GOGA Godfrey 27.18 316 *e*P P 12 16 51.5 -0.2
GOGA pmax pmax
comp=Z,113nm,1.8s,mb5.2
GOGA Godfrey 27.18 316 *e*P P 12 16 51.5 -0.2
comp=Z,114nm,1.8s,mb5.2
ATAH Atahualpa 27.70 219 P P 12 16 58.6 +2.2
comp=Z,18nm,0.7s,mb4.9,baz=35,slow=4.8,SNR=16
ATAH pP pP 12 17 30.6 +1.9
comp=Z,30nm,0.8s,baz=102,slow=12,SNR=3.3
SDMD Soldier's Deli 27.86 334 *e*P P 12 16 57.4 -0.3
comp=Z,24nm,0.8s,mb5.0
BLA Blacksburg 27.88 326 *e*P P 12 16 58.0 +0.1
BLA pmax pmax
comp=Z,29nm,0.7s,mb5.1
BLA Blacksburg 27.88 326 *e*P P 12 16 58.0 +0.1
comp=Z,29nm,0.7s,mb5.1
MVL Millersville 28.15 335 *e*P P 12 17 00.4 +0.1
comp=Z,60nm,1.0s,mb5.3
BRAL Brewton 28.46 308 *e*P P 12 17 04.8 +1.7
comp=Z,176nm,1.0s,mb5.8
TKL Tuckaleechee C 28.77 320 P P 12 17 05.5 -0.3
comp=Z,7.0nm,0.8s,mb4.4,baz=106,slow=10,SNR=8.4
TKL pP pP 12 17 36.6 -1.6
comp=Z,5.7nm,0.8s,baz=146,slow=7.5,SNR=2.7
TKL sP sP 12 17 55.6 -0.4
comp=Z,88nm,0.8s,baz=132,slow=15,SNR=29
TKL LR LR 12 27 37.3
comp=Z,130nm,20.9s,baz=313,slow=34
TKL Tuckaleechee C 28.77 320 *e*P P 12 17 05.1 -0.7
CPCT Cooper Cave 29.11 319 *e*P P 12 17 08.3 -0.6
TZTN Tazewell 29.21 321 *e*P P 12 17 09.7 0.0
comp=Z,42nm,1.1s,mb5.1
SSPA Standing Stone 29.33 334 *e*P P 12 17 11.1 +0.5
comp=Z,31nm,1.0s,mb5.0
SSPA *e* 12 18 03.0
LRAL Lakeview Retre 29.42 312 *e*P P 12 17 12.0 +0.4
comp=Z,72nm,1.1s,mb5.3
SWET Sewanee 29.89 317 *e*P P 12 17 15.7 0.0
BINY Binghamton 29.90 338 *e*P P 12 17 16.4 +0.7
comp=Z,57nm,1.1s,mb5.2
MIV Mineville/With 30.77 343 *e*P P 12 17 15.9 -7.4
MIV *e*pP pP 12 17 50.3 -5.6
SIV San Ignacio 30.82 180 P P 12 17 24.9 +0.8
comp=Z,36nm,0.8s,mb5.2,baz=12,slow=8.9,SNR=167
SIV pP pP 12 17 56.9 +0.3
comp=Z,9.0nm,0.8s,baz=13,slow=11,SNR=1.8
NCB Newcomb 30.89 342 *e*P P 12 17 24.6 +0.3
comp=Z,494nm,2.9s,mb5.7
NNA Nana 30.95 211 *e*pP pP 12 17 58.3 +0.5
ALLY Alegheny Colle 31.15 332 *e*P P 12 17 27.1 +0.5
comp=Z,83nm,0.8s,mb5.5
ACSO Alum Creek Sta 31.45 327 *e*P P 12 17 29.8 +0.4
comp=Z,79nm,0.8s,mb5.5
VBMS Vicksburg 31.64 308 *e*P P 12 17 32.4 +1.2
WVT Waverly 31.68 316 *e*P P 12 17 30.4 -1.0
WVT pmax pmax
comp=Z,51nm,1.0s,mb5.2
WVT Waverly 31.68 316 *e*P P 12 17 30.4 -1.0
comp=Z,51nm,1.0s,mb5.2
WCI Wyandotte Cave 31.96 321 *e*P P 12 17 34.4 +0.5
WCI pmax pmax
comp=Z,60nm,1.0s,mb5.3
WCI Wyandotte Cave 31.96 321 *e*P P 12 17 34.4 +0.5
comp=Z,60nm,1.0s,mb5.3
UTMT University of 32.49 316 *e*P P 12 17 38.4 -0.1
comp=Z,297nm,1.0s,mb6.0
RCBR Riachuelo 32.59 128 *e*P P 12 17 40.5 +0.9
USIN University of 32.65 319 *e*P P 12 17 39.5 -0.4
comp=Z,119nm,1.1s,mb5.5
BLO Bloomington 32.70 322 *e*P P 12 17 40.7 +0.4
BLO pmax pmax
comp=Z,64nm,0.8s,mb5.4
BLO Bloomington 32.70 322 *e*P P 12 17 40.7 +0.4
comp=Z,64nm,0.8s,mb5.4
GNAR Gosnell 33.07 314 *e*P P 12 17 44.0 +0.3
comp=Z,2µm,1.1s,mb6.7
BDFB Brasilia 33.17 156 P P 12 17 45.7 +1.1
comp=Z,8.2nm,0.7s,mb4.5,baz=325,slow=16,SNR=21
BDFB LR LR 12 33 38.6
comp=Z,65nm,18.0s,baz=3.9,slow=40
BDFB Brasilia 33.17 156 *e*P P 12 17 45.1 +0.5
BDFB *e**PP pP 12 18 20.9 +3.5
BDFB pmax pmax
comp=Z,19nm,0.9s
BDFB Brasilia 33.17 156 *e*P P 12 17 45.1 +0.4
comp=Z,19nm,0.9s,mb4.8
BDFB *e*pP pP 12 18 20.9 +3.5
AAM Ann Arbor 33.32 329 *e*P P 12 17 46.0 +0.4
AAM pmax pmax
comp=Z,101nm,0.9s,mb5.5
AAM Ann Arbor 33.32 329 *e*P P 12 17 46.0 +0.4
comp=Z,101nm,0.9s,mb5.5
OLIL Olney 33.39 320 *e*P P 12 17 46.5 +0.2
comp=Z,195nm,1.2s,mb5.7
SIUC Southern Illin 33.49 318 *e*P P 12 17 47.4 +0.1
comp=Z,100nm,0.9s,mb5.5
UALR University of 34.14 311 *e*P P 12 17 53.5 +0.7
comp=Z,27nm,1.0s,mb4.9
FVM French Village 34.44 317 *e*P P 12 17 55.1 -0.3
FVM pmax pmax
comp=Z,154nm,1.7s,mb5.5
FVM French Village 34.44 317 *e*P P 12 17 55.1 -0.3
comp=Z,154nm,1.7s,mb5.5
NATX Nacogdoches 34.69 305 *e*P P 12 17 58.3 +0.7
comp=Z,125nm,0.9s,mb5.5
MIAR Mount Ida 34.95 310 *e*P P 12 17 59.5 -0.3
MIAR pmax pmax
comp=Z,53nm,1.0s,mb5.1
MIAR Mount Ida 34.95 310 *e*P P 12 17 59.5 -0.3
comp=Z,53nm,1.0s,mb5.1
CCM Cathedral Cave 35.02 317 *e*P P 12 17 59.7 -0.6
CCM pmax pmax
comp=Z,86nm,1.0s,mb5.3
CCM Cathedral Cave 35.02 317 *e*P P 12 17 59.7 -0.6
comp=Z,86nm,1.0s,mb5.3
HKT Hockley 35.05 301 *e*P P 12 18 00.1 -0.6
HKT pmax pmax
comp=Z,76nm,1.1s,mb5.2
HKT Hockley 35.05 301 *e*P P 12 18 00.1 -0.6
comp=Z,76nm,1.1s,mb5.2
GLMI Grayling 35.67 331 *e*P P 12 18 06.7 +0.9
comp=Z,295nm,0.9s,mb5.9
JFWS Jewell Farm 37.26 324 *e*P P 12 18 19.0 -0.4
JFWS pmax pmax
comp=Z,276nm,1.7s,mb5.6
JFWS Jewell Farm 37.26 324 *e*P P 12 18 19.0 -0.3
comp=Z,276nm,1.7s,mb5.6
LVC Limon Verde 38.15 191 P P 12 18 26.5 -0.5
comp=Z,6.5nm,0.6s,mb4.4,baz=1.2,slow=6.9,SNR=6.4
LVC Limon Verde 38.15 191 *e*P P 12 18 25.6 -1.4
comp=Z,5.8nm,0.5s,mb4.5
LVC *e*pP pP 12 18 58.4 -2.0
SCIA State Center 38.41 321 *e*P P 12 18 29.2 +0.2
comp=Z,100nm,0.9s,mb5.4
JCT Junction City 38.50 300 *e*P P 12 18 29.2 -0.7
JCT *e* 12 24 13.6
JCT pmax pmax
comp=Z,203nm,1.0s,mb5.7
JCT Junction City 38.50 300 *e*P P 12 18 29.2 -0.7
comp=Z,203nm,1.0s,mb5.7
JCT *e*ScP ScP 12 24 13.6 +0.2
WMOK Wichita Mounta 38.97 307 *e*P P 12 18 32.7 -1.1
WMOK pmax pmax
comp=Z,65nm,0.7s,mb5.4
WMOK Wichita Mounta 38.97 307 *e*P P 12 18 32.7 -1.1
comp=Z,65nm,0.7s,mb5.4
KSU1 Kansas State U 39.17 315 *e*P P 12 18 34.1 -1.3
comp=Z,90nm,0.7s,mb5.5
SCHQ Schefferville 39.95 355 P P 12 18 42.0 +0.5
comp=Z,18nm,0.5s,mb5.0,baz=173,slow=7.2,SNR=78
SCHQ ScP ScP 12 24 17.9 -0.6
comp=Z,8.2nm,0.9s,baz=164,slow=2.1,SNR=4.8
SCHQ Schefferville 39.95 355 *e*P P 12 18 41.4 -0.2
comp=Z,39nm,0.9s,mb5.0
EYMN Ely 41.23 329 *e*P P 12 18 51.5 -0.6
comp=Z,15nm,0.8s,mb4.7
CBKS Cedar Bluff 41.24 313 *e*P P 12 18 51.8 -0.6
CBKS pmax pmax
comp=Z,205nm,1.1s,mb5.7
CBKS Cedar Bluff 41.24 313 *e*P P 12 18 51.8 -0.6
comp=Z,205nm,1.1s,mb5.7
AMTX Amarillo 41.27 306 *e*P P 12 18 51.8 -1.0
comp=Z,59nm,0.7s,mb5.3
ECSD EROS,Sioux Fal 41.51 321 *e*P P 12 18 54.0 -0.5
comp=Z,79nm,0.8s,mb5.4
ECSD *e*PP PP 12 20 36.0 +2.4
ECSD *e*ScP ScP 12 24 25.0 +0.1
TXAR Lajitas Array 41.52 297 P P 12 18 54.2 -0.6
comp=Z,5.8nm,0.5s,mb4.5,baz=112,slow=7.9,SNR=91
TXAR pP pP 12 19 26.8 -1.9
comp=Z,3.6nm,0.8s,baz=82,slow=10,SNR=2.3
TXAR ScP ScP 12 24 26.1 +0.8
comp=Z,0.6nm,0.6s,baz=106,slow=4.4,SNR=5.2
TXAR Lajitas Array 41.52 297 P P 12 18 54.2 -0.6
TXAR *PP pP 12 19 26.8 -1.9
TXAR Lajitas Array 41.52 297 P P 12 18 54.2 -0.6
TXAR pP pP 12 19 26.8 -1.9
TXAR ScP ScP 12 24 26.1 +0.8
CHIE El Hierro 42.06 65 ⇑P P 12 18 59.3 +0.1
comp=Z,128nm,1.0s,mb5.5
EGOM La Gomera 42.78 65 P P 12 19 04.7 -0.4
comp=Z,32nm,1.1s,mb4.9
BBTS Babate 43.20 84 LR LR 12 31 41.2
comp=Z,185nm,22.0s,baz=275,slow=28
AGMN Agassiz Refuge 43.70 327 *e*P P 12 19 11.1 -1.0
comp=Z,94nm,0.8s,mb5.5
OGNE Ogallala 43.72 314 *e*P P 12 19 11.6 -0.8
comp=Z,65nm,0.8s,mb5.3
OGNE *e*sP sP 12 20 13.5 +10
ULM Lac du Bonnet 44.91 329 P P 12 19 20.5 -1.2
comp=Z,46nm,0.8s,mb5.2,baz=131,slow=8.3,SNR=37
ULM LR LR 12 38 50.0
comp=Z,173nm,19.4s,baz=358,slow=37
ULM Lac du Bonnet 44.91 329 *e*P P 12 19 20.1 -1.6
comp=Z,63nm,1.0s,mb5.2
LPM Los Pinos Muon 45.04 304 *e*P P 12 19 23.5 +0.5
ANMO Albuquerque 45.06 305 *e*P P 12 19 23.0 -0.1
ANMO *e**PP pP 12 19 56.0 -1.5
ANMO *e* 12 21 12.1
ANMO pmax pmax
comp=Z,61nm,1.3s
ANMO Albuquerque 45.06 305 *e*P P 12 19 23.0 -0.1
comp=Z,61nm,1.3s,mb5.1
ANMO *e*pP pP 12 19 56.0 -1.4
ANMO *e*PP PP 12 21 12.1 +0.5
SDCO Great Sand Dun 45.09 309 *e*P P 12 19 23.3 0.0
comp=Z,39nm,0.9s,mb5.0
Y22D IRIS PASSCAL I 45.22 303 ⇑P P 12 19 25.2 +0.8
baz=45
LENM Lemitar 45.28 303 *e*P P 12 19 25.3 +0.4
CFTV Fuerteventura 45.55 65 ⇑P P 12 19 27.5 +0.4
comp=Z,40nm,0.9s,mb5.0
ISCO Idaho Springs 45.84 311 *e*P P 12 19 29.2 0.0
ISCO pmax pmax
comp=Z,38nm,0.9s,mb5.0
ISCO Idaho Springs 45.84 311 *e*P P 12 19 29.2 0.0
comp=Z,38nm,0.9s,mb5.0
PHWY Pilot Hill 46.25 313 *e*P P 12 19 32.3 0.0
comp=Z,54nm,0.9s,mb5.2
RSSD Black Hills 46.39 318 *e*P P 12 19 32.8 -0.6
RSSD pmax pmax
comp=Z,19nm,0.9s,mb4.7
RSSD Black Hills 46.39 318 *e*P P 12 19 32.8 -0.7
comp=Z,19nm,0.9s,mb4.7
RSSD *e*ScP ScP 12 24 45.2 +0.3
SMCO Snowmass 46.63 310 *e*P P 12 19 32.2 -3.1
comp=Z,34nm,0.9s,mb5.0
319A Douglas 46.65 299 ⇓P P 12 19 36.6 +1.0
baz=47,SNR=52
219A White Tail Can 46.73 300 ⇓P P 12 19 37.3 +1.0
baz=47,SNR=40
N22A Wattenberg Ran 46.78 312 ⇓P P 12 19 37.2 +0.7
baz=47,SNR=22
R21A Cimarron 46.82 309 ⇓P P 12 19 37.5 +0.6
baz=47,SNR=60
CFAA Coronel Fontan 46.84 188 P P 12 19 35.9 -1.1
comp=Z,1.7nm,0.8s,mb3.7,baz=356,slow=8.4,SNR=19
CFAA pP pP 12 20 11.0 -0.6
comp=Z,2.0nm,0.7s,baz=353,slow=8.3,SNR=6.5
CFAA Coronel Fontan 46.84 188 P P 12 19 35.9 -1.1
CFAA pP pP 12 20 11.0 -0.6
119A Ashpeak Ranch, 46.90 301 ⇓P P 12 19 38.7 +1.1
baz=47,SNR=46
Z19A T-Link Ranch, 46.97 302 ⇑P P 12 19 39.1 +1.0
baz=47,SNR=10
Y19A Nutrioso 47.08 303 ⇑P P 12 19 40.3 +1.3
baz=47,SNR=142
M22A Cedar Creek Ra 47.09 313 ⇓P P 12 19 39.4 +0.5
baz=47,SNR=25
X19A St. Johns 47.21 303 ⇓P P 12 19 40.8 +0.9
baz=47,SNR=55
MVCO Mesa Verde 47.23 307 ⇓P P 12 19 40.2 +0.2
baz=47
MVCO Mesa Verde 47.23 307 *e*P P 12 19 39.8 -0.3
comp=Z,11nm,0.8s,mb4.5
318A Bisbee 47.26 299 ⇓P P 12 19 41.2 +0.8
baz=47,SNR=92
V19A Window Rock 47.29 305 ⇑P P 12 19 40.9 +0.3
baz=47,SNR=6.4
O21A Pagoda 47.32 311 ⇑P P 12 19 41.2 +0.5
baz=47,SNR=16
218A Dragoon 47.39 300 ⇓P P 12 19 42.3 +1.0
baz=47,SNR=56
W19A Sanders 47.43 304 ⇑P P 12 19 42.2 +0.6
baz=47,SNR=54
118A Homack Ranch, 47.43 301 ⇓P P 12 19 42.7 +1.0
baz=47,SNR=63
PV01 Paradox Valley 47.52 308 *e*P P 12 19 42.7 +0.4
comp=Z,4µm,1.0s
PV01 *e*PcP PcP 12 21 11.3 +1.3
N21A Black Mountain 47.53 312 ⇑P P 12 19 42.7 +0.4
baz=48,SNR=7.1
T19A Beclabito 47.54 306 ⇑P P 12 19 42.6 +0.2
baz=48,SNR=63
Q20A Ridgley Place, 47.55 309 ⇓P P 12 19 42.8 +0.3
baz=48,SNR=34
Z18A Geronimo 47.56 301 ⇑P P 12 19 43.9 +1.1
baz=48,SNR=34
RWWY Rawlins 47.62 313 *e*P P 12 19 43.3 +0.3
comp=Z,92nm,1.2s,mb5.3
Y18A Canyon Day Jun 47.69 302 ⇓P P 12 19 44.4 +0.7
baz=48,SNR=46
M21A Separation Pea 47.70 313 ⇑P P 12 19 43.8 +0.2
baz=48,SNR=20
W18A Petrified Fore 47.71 304 ⇓P P 12 19 44.2 +0.4
baz=48,SNR=21
X18A Snowflake 47.76 303 ⇓P P 12 19 45.1 +0.8
baz=48,SNR=66
L21A Rawlins 47.82 314 ⇓P P 12 19 44.5 -0.1
baz=48,SNR=36
O20A White River Ci 47.85 311 ⇓P P 12 19 45.1 +0.2
baz=48,SNR=8.2
S19A Harvey Farm, M 47.85 308 ⇑P P 12 19 44.9 +0.1
baz=48,SNR=47
PV10 Paradox Valley 47.95 308 *e*P P 12 19 45.5 -0.1
comp=Z,355nm,0.8s,mb6.0
V18A Ganado 47.99 305 ⇓P P 12 19 46.0 0.0
baz=48,SNR=13
217A Green Valley 48.00 299 ⇓P P 12 19 46.5 +0.3
baz=48,SNR=37
TUC Tucson 48.06 300 *e*P P 12 19 46.8 +0.3
TUC pmax pmax
comp=Z,57nm,1.0s,mb5.2
TUC Tucson 48.06 300 *e*P P 12 19 46.8 +0.3
comp=Z,57nm,1.0s,mb5.2
117A Oracle 48.06 300 ⇑P P 12 19 47.2 +0.6
baz=48,SNR=72
N20A Spence Gulch, 48.09 312 ⇓P P 12 19 46.9 +0.3
baz=48,SNR=26
R19A Curley Farm, L 48.09 308 ⇑P P 12 19 46.7 0.0
baz=48,SNR=6.6
U18A Rough Rock, Ch 48.10 306 ⇑P P 12 19 47.0 +0.2
baz=48,SNR=32
M20A Sweetwater, Wa 48.24 313 ⇑P P 12 19 48.3 +0.5
baz=48,SNR=26
P19A Cripple Cowboy 48.25 310 ⇑P P 12 19 47.7 -0.2
baz=48,SNR=16
Q19A Hogan Spring (48.27 309 ⇓P P 12 19 47.9 -0.1
baz=48,SNR=25
T18A Mexican Hat 48.27 307 ⇑P P 12 19 48.3 +0.2
baz=48,SNR=137
Y17A Roosvelt 48.34 302 ⇓P P 12 19 49.5 +0.8
baz=48,SNR=43
DGMT Dagmar 48.45 323 ⇓P P 12 19 49.6 +0.3
baz=48
DGMT Dagmar 48.45 323 *e*P P 12 19 49.4 +0.1
comp=Z,120nm,0.7s,mb5.6
W17A Winslow 48.49 304 ⇓P P 12 19 49.7 -0.1
baz=48
S18A Hurst Farm, Bl 48.50 307 ⇑P P 12 19 50.0 +0.1
baz=48,SNR=40
L20A Wamsutter 48.52 313 ⇑P P 12 19 50.5 +0.6
baz=48,SNR=60
216A Three Points, 48.58 300 ⇓P P 12 19 50.6 0.0
baz=48,SNR=19
R18A Canyonlands Na 48.60 308 ⇓P P 12 19 50.7 +0.1
baz=49,SNR=52
K20A Yellowstone Ra 48.74 314 ⇑P P 12 19 51.6 0.0
baz=49,SNR=67
Z16A Peralta Trail, 48.76 301 ⇓P P 12 19 52.7 +0.8
baz=49,SNR=29
U17A Shonto 48.76 306 ⇓P P 12 19 52.0 +0.1
baz=49,SNR=8.5
N19A John Jarvie Ra 48.77 312 ⇑P P 12 19 51.4 -0.4
baz=49,SNR=40
116A Eloy 48.87 300 ⇑P P 12 19 52.9 +0.2
baz=49,SNR=12
Y16A Circle Bar Ran 48.89 302 ⇑P P 12 19 53.8 +0.9
baz=49,SNR=36
FRB Frobisher Bay 48.92 356 P P 12 19 52.3 -0.3
comp=Z,17nm,0.5s,mb5.0,baz=169,slow=8.5,SNR=35
M19A Rock Springs 48.94 312 ⇑P P 12 19 52.7 -0.4
baz=49,SNR=7.2
X16A Lo Mia Camp, P 48.95 303 ⇓P P 12 19 54.3 +0.9
baz=49,SNR=47
Q18A Rafter H Ranch 48.96 309 ⇑P P 12 19 53.6 +0.2
baz=49,SNR=25
T17A Navajo Res., N 48.96 306 ⇓P P 12 19 54.0 +0.6
baz=49,SNR=39
U16A Tuba City 49.03 305 ⇓P P 12 19 54.5 +0.6
baz=49,SNR=21
WUAZ Wupatki 49.10 304 ⇓P P 12 19 55.4 +0.9
baz=49
WUAZ Wupatki 49.10 304 *e*P P 12 19 55.2 +0.8
comp=Z,94nm,0.9s,mb5.4
WUAZ *e*pP pP 12 20 27.6 -1.7
WUAZ *e*ScP ScP 12 24 58.3 +1.7
S17A Black Ridge (B 49.11 307 ⇑P P 12 19 55.3 +0.8
baz=49,SNR=85
K19A Absolon Red Bu 49.14 314 ⇑P P 12 19 54.3 -0.3
baz=49,SNR=70
N18A Larsen Ranch, 49.15 312 ⇓P P 12 19 54.2 -0.5
baz=49,SNR=25
W16A Flagstaff 49.15 304 ⇑P P 12 19 55.9 +1.1
baz=49,SNR=59
O18A Roosevelt 49.19 311 ⇑P P 12 19 55.2 +0.1
baz=49,SNR=14
P18A Preston Nutter 49.19 310 ⇑P P 12 19 55.6 +0.6
baz=49,SNR=7.9
R17A Hanksville Air 49.23 308 ⇑P P 12 19 55.6 +0.2
baz=49,SNR=42
SRU San Rafael 49.26 309 ⇓P P 12 19 56.0 +0.4
baz=49
L19A Farson 49.27 313 ⇓P P 12 19 55.9 +0.3
baz=49,SNR=60
115A Sonoran Desert 49.32 300 ⇓P P 12 19 56.7 +0.5
baz=49,SNR=8.2
Z15A Gila River Ind 49.35 301 ⇓P P 12 19 56.8 +0.4
baz=49
T16A Glen Canyon Da 49.51 306 ⇓P P 12 19 58.4 +0.8
baz=50,SNR=26
P17A Butcher Ranch, 49.52 309 ⇑P P 12 19 57.8 +0.3
baz=50,SNR=16
M18A Lyman 49.57 312 ⇑P P 12 19 57.9 0.0
baz=50,SNR=42
Y15A Casa Rosa Ranc 49.60 302 ⇑P P 12 19 58.8 +0.5
baz=50,SNR=31
X15A Humboldt 49.61 303 ⇓P P 12 19 59.4 +1.0
baz=50,SNR=44
PDAR Pinedale Array 49.62 314 P P 12 19 58.1 -0.2
comp=Z,54nm,0.9s,mb5.2,baz=116,slow=8.9,SNR=291
PDAR pP pP 12 20 32.5 -0.8
comp=Z,7.7nm,0.7s,baz=122,slow=8.4,SNR=1.7
PDAR ScP ScP 12 24 59.0 +0.4
comp=Z,9.5nm,0.9s,baz=104,slow=6.3,SNR=22
PDAR LR LR 12 43 08.6
comp=Z,86nm,19.1s,baz=35,slow=38
BW06 Boulder Array 49.62 314 ⇓P P 12 19 58.2 0.0
baz=50
BW06 Boulder Array 49.62 314 *e*P P 12 19 58.0 -0.2
comp=Z,74nm,1.0s,mb5.3
BW06 *e*pP pP 12 20 35.0 +1.8
L18A Fontenelle, Gr 49.69 313 ⇓P P 12 19 58.9 +0.1
baz=50,SNR=34
Q16A Castle Valley 49.70 309 ⇑P P 12 19 59.1 +0.2
baz=50,SNR=18
O17A Robinson Place 49.70 310 ⇓P P 12 19 59.7 +0.8
baz=50,SNR=114
214A Organ Pipe Nat 49.71 299 ⇑P P 12 19 59.5 +0.4
baz=50,SNR=8.5
S16A Weppner Ranch, 49.74 307 ⇑P P 12 19 59.7 +0.4
baz=50,SNR=40
W15A Williams 49.76 303 ⇑P P 12 20 00.5 +1.1
baz=50,SNR=20
R16A Teasdale 49.78 308 ⇓P P 12 20 00.2 +0.6
baz=50,SNR=42
V15A Kaibab Nationa 49.80 304 ⇑P P 12 20 00.9 +1.1
baz=50,SNR=37
K18A Toltan Ranch, 49.92 314 ⇓P P 12 20 01.1 +0.5
baz=50,SNR=60
FCC Fort Churchill 49.97 338 *e*P P 12 19 59.5 -1.1
comp=Z,0.3nm,0.6s
FCC *e*pP pP 12 20 31.4 -4.2
N17A Moffit Pass 49.98 311 ⇓P P 12 20 01.1 +0.1
baz=50,SNR=27
M17A Scullys Gap (B 50.01 312 ⇓P P 12 20 00.8 -0.4
baz=50,SNR=19
U15A North Rim 50.01 305 ⇑P P 12 20 02.4 +1.0
baz=50,SNR=49
Z14A Wintersburg 50.02 301 ⇑P P 12 20 01.9 +0.5
baz=50,SNR=13
J18A Kendall Valley 50.08 314 ⇑P P 12 20 01.5 -0.2
baz=50,SNR=20
I18A Diamond G Ranc 50.10 315 ⇓P P 12 20 02.2 +0.3

baz=50,SNR=100
X14A Yava 50.14 302 ⇓P P 12 20 03.1 +0.8
baz=50,SNR=54
Y14A Wickenburg 50.15 302 ⇓P P 12 20 03.0 +0.6
baz=50,SNR=49
T15A Red Dirt Ranch 50.20 306 ⇑P P 12 20 03.7 +0.9
baz=50,SNR=64
RLMT Red Lodge 50.22 317 ⇑P P 12 20 03.1 +0.4
baz=50
RLMT Red Lodge 50.22 317 *e*P P 12 20 02.9 +0.2
comp=Z,84nm,1.0s,mb5.3
RLMT *e*ScP ScP 12 25 01.9 +0.8
P16A Fountain Green 50.24 309 ⇑P P 12 20 03.6 +0.7
baz=50,SNR=18
O16A Springville 50.27 310 ⇑P P 12 20 03.6 +0.4
baz=50
S15A Panguitch 50.32 307 ⇓P P 12 20 04.3 +0.7
baz=50,SNR=37
L17A Cokeville 50.34 313 ⇑P P 12 20 03.3 -0.4
baz=50,SNR=13
R15A Junction 50.38 307 ⇑P P 12 20 04.9 +0.8
baz=50,SNR=28
N16A Rees Ranch, Co 50.41 311 ⇑P P 12 20 04.7 +0.4
baz=50,SNR=41
W14A Seligman 50.42 303 ⇓P P 12 20 05.4 +1.0
baz=50,SNR=22
G18A Lazy EL Ranch, 50.49 317 ⇑P P 12 20 04.6 -0.2
baz=50,SNR=17
V14A Boquillas Ranc 50.51 304 ⇑P P 12 20 06.1 +1.0
baz=50,SNR=26
K17A Gardner Place, 50.57 313 ⇑P P 12 20 05.2 -0.2
baz=50,SNR=14
FFC Flin Flon 50.59 331 P P 12 20 04.2 -1.2
comp=Z,138nm,1.1s,mb5.5,SNR=9.7
FFC Flin Flon 50.59 331 *e*P P 12 20 04.2 -1.2
FFC pmax pmax
comp=Z,31nm,1.1s,mb4.8
FFC Flin Flon 50.59 331 *e*P P 12 20 04.2 -1.2
comp=Z,31nm,1.1s,mb4.8
J17A Brown Place, J 50.61 314 ⇑P P 12 20 05.8 +0.1
baz=51,SNR=36
LOHW Long Hollow 50.62 315 *e*P P 12 20 05.2 -0.5
comp=Z,44nm,1.1s,mb5.0
113A Mohawk Valley, 50.62 300 ⇓P P 12 20 05.9 0.0
baz=51
Q15A Fillmore 50.63 308 ⇓P P 12 20 06.4 +0.5
baz=51,SNR=22
M16A Huntsville 50.66 311 ⇓P P 12 20 06.0 -0.1
baz=51,SNR=98
SNOW Snow King Moun 50.67 314 *e*P P 12 20 06.3 +0.1
comp=Z,124nm,1.5s,mb5.3
P15A Leamington 50.69 309 ⇑P P 12 20 06.6 +0.2
baz=51,SNR=24
I17A Pilgram Creek 50.69 315 ⇑P P 12 20 06.5 +0.2
baz=51,SNR=23
AHID Auburn Hatcher 50.70 313 *e*P P 12 20 06.2 -0.2
comp=Z,103nm,1.0s,mb5.4
REDW Red Top Meadow 50.71 314 *e*P P 12 20 06.2 -0.3
comp=Z,113nm,1.4s,mb5.3
L16A Fish Haven 50.71 312 ⇑P P 12 20 06.5 -0.1
baz=51,SNR=55
U14A Mt Trumbull 50.71 305 ⇓P P 12 20 07.7 +1.1
baz=51,SNR=41
MOOW Moose Ponds 50.76 315 *e*P P 12 20 06.3 -0.5
comp=Z,16nm,1.0s,mb4.6
T14A Hurricane 50.76 306 ⇑P P 12 20 07.0 +0.1
baz=51,SNR=14
F18A Big Timber 50.80 318 ⇑P P 12 20 07.4 +0.4
baz=51,SNR=38
Y13A Salome 50.81 301 ⇓P P 12 20 08.0 +0.6
baz=51,SNR=23
TPAW Teton Pass 50.82 314 *e*P P 12 20 07.2 -0.1
comp=Z,52nm,1.0s,mb5.1
H17A Grant Village 50.85 316 ⇑P P 12 20 08.5 +1.0
baz=51
X13A Yucca 50.93 302 ⇑P P 12 20 08.7 +0.5
baz=51,SNR=14
IMW Indian Meadow 50.94 315 *e*P P 12 20 07.9 -0.2
comp=Z,16nm,0.8s,mb4.7
R14A James Farms, M 50.97 307 ⇓P P 12 20 09.2 +0.8
baz=51
O15A The Old Anders 51.01 310 ⇑P P 12 20 09.2 +0.4
baz=51,SNR=9.9
DCID1 Drake Creek 51.01 314 *e*P P 12 20 08.8 +0.1
comp=Z,76nm,1.0s,mb5.3
DCID1 *e*ScP ScP 12 25 05.4 +0.9
RRI2 Red Ridge 51.03 314 *e*P P 12 20 08.9 0.0
comp=Z,57nm,1.1s,mb5.1
W13A Hualapai Mount 51.05 303 ⇑P P 12 20 10.2 +1.0
baz=51,SNR=37
K16A Soda Springs 51.06 313 ⇓P P 12 20 09.2 +0.1
baz=51,SNR=40
PDMCI Parker Dam,Lak 51.13 302 ⇑P P 12 20 10.0 +0.2
baz=51
E18A Harlowton 51.16 318 ⇓P P 12 20 10.2 +0.4
baz=51,SNR=21
N15A Stansbury Isla 51.20 311 ⇓P P 12 20 10.0 -0.1
baz=51,SNR=27
J16A Bone 51.21 314 ⇓P P 12 20 10.3 +0.1
baz=51,SNR=29
DUG Dugway 51.24 310 ⇑P P 12 20 10.9 +0.5
baz=51
DUG Dugway 51.24 310 *e*P P 12 20 10.5 0.0
DUG pmax pmax
comp=Z,126nm,1.2s,mb5.4
DUG Dugway 51.24 310 *e*P P 12 20 10.5 0.0
comp=Z,126nm,1.2s,mb5.4
V13A Grand Canyon W 51.25 304 ⇓P P 12 20 11.6 +1.0
baz=51
G17A Pierce Place, 51.27 317 ⇑P P 12 20 11.1 +0.5
baz=51,SNR=14
112A Yuma 51.27 300 ⇑P P 12 20 11.1 +0.3
baz=51
PFVI Vila Bisbo 51.28 54 *e*P P 12 20 11.3 +0.5
P14A Drum Mountains 51.29 309 ⇓P P 12 20 11.4 +0.5
baz=51,SNR=56
M15A Larsen Ranch, 51.29 311 ⇓P P 12 20 10.6 -0.2
baz=51,SNR=72
I16A Newdale 51.30 315 ⇑P P 12 20 11.2 +0.4
baz=51,SNR=60
Q14A Sevier Lake (B 51.31 308 ⇓P P 12 20 12.1 +1.1
baz=51,SNR=55
D18A Linhart Farms, 51.33 319 ⇑P P 12 20 11.6 +0.7
baz=51,SNR=56
U13A Pakoon Wash 51.34 305 ⇓P P 12 20 12.2 +1.0
baz=51,SNR=24
Y12C Blythe 51.37 301 ⇑P P 12 20 11.9 +0.3
baz=51,SNR=13
L15A Malad City 51.39 312 ⇓P P 12 20 11.5 -0.1
baz=51,SNR=102
T13A Saint George 51.40 306 ⇓P P 12 20 12.7 +1.0
baz=51,SNR=19
H16A Russell Place, 51.40 316 ⇓P P 12 20 12.4 +0.8
baz=51,SNR=40
F17A Fitzpatrick Pl 51.41 317 ⇓P P 12 20 12.2 +0.5
baz=51,SNR=35
PTEO Sao Teotonio 51.44 54 *e*P P 12 20 12.3 +0.3
comp=Z,58nm,1.1s,mb5.1
MORF Marmelete 51.45 54 *e*P P 12 20 12.4 +0.3
comp=Z,107nm,1.0s,mb5.4
S13A Holt Ranch, En 51.47 306 ⇑P P 12 20 13.0 +0.8
baz=51,SNR=41
GLA Glamis 51.54 300 ⇓P P 12 20 13.4 +0.6
baz=52
GLA Glamis 51.54 300 *e*P P 12 20 13.0 +0.2
GLA pmax pmax
comp=Z,116nm,1.7s,mb5.2
GLA Glamis 51.54 300 *e*P P 12 20 13.0 +0.2
comp=Z,116nm,1.7s,mb5.2
NEE2 Needles Airpor 51.59 303 ⇑P P 12 20 13.6 +0.4
baz=52
EGMT Eagleton 51.61 320 ⇑P P 12 20 13.6 +0.5
baz=52
EGMT Eagleton 51.61 320 *e*P P 12 20 13.3 +0.2
comp=Z,114nm,0.9s,mb5.5
R13A O'Grain Ranch, 51.67 307 ⇓P P 12 20 14.6 +0.9
baz=52,SNR=21
N14A Grayback Hills 51.68 310 ⇑P P 12 20 14.0 +0.3
baz=52,SNR=81
K15A Arbon 51.68 313 ⇑P P 12 20 13.8 +0.1
baz=52,SNR=39
E17A Martinsdale 51.74 318 ⇑P P 12 20 14.2 +0.1
baz=52,SNR=17
B18A Beardsley Farm 51.77 321 ⇓P P 12 20 14.8 +0.6
baz=52,SNR=46
U12A Valley of Fire 51.79 305 ⇓P P 12 20 15.2 +0.6
baz=52,SNR=15
J15A Blackfoot 51.82 314 ⇑P P 12 20 15.1 +0.4
baz=52,SNR=46
Q13A Wheeler Ranch, 51.87 308 ⇓P P 12 20 16.0 +0.9
baz=52,SNR=84
D17A Six Diamond Ra 51.87 319 ⇑P P 12 20 15.2 +0.2
baz=52,SNR=22
W12A Cal Nev Ari 51.88 303 ⇑P P 12 20 15.8 +0.5
baz=52
V12A Nelson 51.93 304 ⇓P P 12 20 16.2 +0.6
baz=52,SNR=23
IRM Iron Mountain 51.94 302 ⇑P P 12 20 16.6 +0.8
baz=52
G16A Moss Hill, Enn 51.95 316 ⇑P P 12 20 15.8 +0.2
baz=52,SNR=28
M14A Sheep Mountain 51.96 311 ⇓P P 12 20 15.6 -0.1
baz=52,SNR=51
BOZ Bozeman (W) 51.97 317 ⇑P P 12 20 15.9 +0.2
baz=52
BOZ Bozeman (W) 51.97 317 *e*P P 12 20 15.6 -0.2
BOZ pmax pmax
comp=Z,19nm,1.0s,mb4.7
BOZ Bozeman (W) 51.97 317 *e*P P 12 20 15.6 -0.1
comp=Z,19nm,1.0s,mb4.7
P13A Bates Ranch, G 51.97 309 ⇑P P 12 20 16.8 +0.9
baz=52,SNR=88
T12A Moapa 51.98 305 ⇑P P 12 20 16.7 +0.7
baz=52,SNR=16
PBDV Barranco-do-Ve 52.01 54 *e*P P 12 20 17.0 +0.8
comp=Z,76nm,1.2s,mb5.2
F16A Kennard Place, 52.01 317 ⇓P P 12 20 16.2 +0.1
baz=52,SNR=27
L14A Malta 52.02 312 ⇑P P 12 20 16.1 -0.1
baz=52,SNR=62
A18A Metzger Ranch, 52.02 321 ⇓P P 12 20 16.3 +0.2
baz=52,SNR=64
I15A Monteview 52.03 314 ⇓P P 12 20 17.1 +0.8
baz=52,SNR=39
LDFC Landfair 52.04 303 *e*P P 12 20 17.7 +1.2
comp=Z,61nm,1.1s,mb5.1
C17A Wharram Farm, 52.09 319 ⇑P P 12 20 16.8 +0.1
baz=52,SNR=47
O13A Hicks Ranch, I 52.10 309 ⇑P P 12 20 17.5 +0.6
baz=52,SNR=13
K14A Jones Ranch, D 52.10 313 ⇓P P 12 20 17.0 +0.1
baz=52,SNR=48
BC3 Big Chuckw Mtn 52.13 301 ⇑P P 12 20 17.7 +0.5
baz=52
EVO Evora 52.18 53 *e*P P 12 20 16.6 -0.9
comp=Z,42nm,0.9s,mb4.8
EVO Evora 52.18 53 *e*P P 12 20 17.4 -0.1
comp=Z,33nm,2.0s,mb4.6
EVO Evora 52.18 53 P P 12 20 17.6 +0.1
R12A Pony Springs, 52.19 307 ⇓P P 12 20 18.6 +1.0
baz=52,SNR=56
PBEJ Beja 52.20 53 *e*P P 12 20 18.0 +0.4
comp=Z,48nm,1.5s,mb4.9
PVAQ Vaqueiros 52.20 54 *e*P P 12 20 18.3 +0.6
comp=Z,63nm,1.3s,mb5.1
S12A Delamar Landin 52.24 306 ⇓P P 12 20 19.0 +1.0
baz=52,SNR=13
E16A East Helena 52.29 318 ⇑P P 12 20 18.0 -0.2
baz=52,SNR=17
PTO Porto 52.31 49 *e*P P 12 20 18.3 -0.1
H15A Lima 52.32 315 ⇑P P 12 20 19.3 +0.9
baz=52,SNR=38
SWSC Sam W. Stewart 52.33 300 ⇓P P 12 20 19.1 +0.4
baz=52
B17A L&G Farms, Che 52.36 320 ⇑P P 12 20 18.6 0.0
baz=52,SNR=37
D16A Dana Ranch, Ca 52.38 318 ⇓P P 12 20 18.9 +0.1
baz=52,SNR=23
G15A Dillon 52.38 316 ⇓P P 12 20 19.2 +0.4
baz=52,SNR=35
EGRO El Granado 52.41 54 ⇓P P 12 20 19.7 +0.5
comp=Z,68nm,0.9s,mb5.3
V11A Goodsprings 52.41 304 ⇑P P 12 20 19.7 +0.5
baz=52,SNR=14
GMRC Granite Mounta 52.45 302 ⇓P P 12 20 19.9 +0.4
baz=52
U11A Corn Creek 52.47 305 ⇑P P 12 20 20.2 +0.6
baz=52
T11A Corn Creek, Al 52.47 306 ⇑P P 12 20 20.3 +0.7
baz=52,SNR=15
Q12A Willow Creek R 52.51 308 ⇓P P 12 20 20.5 +0.6
baz=52,SNR=19
DLMT Dillon 52.52 316 *e*P P 12 20 20.1 +0.2
comp=Z,61nm,1.2s,mb5.2
M13A Montello 52.52 311 ⇓P P 12 20 20.0 +0.1
baz=52,SNR=60
L13A Double Diamond 52.54 312 ⇓P P 12 20 20.0 -0.1
baz=52,SNR=55
A17A Triple J Farms 52.55 321 ⇑P P 12 20 20.1 +0.1
baz=52,SNR=70
J14A Carey 52.56 313 ⇑P P 12 20 20.8 +0.6
baz=52,SNR=60
PESTR Estremoz 52.58 52 *e*P P 12 20 20.5 +0.1
comp=Z,92nm,1.4s,mb5.3
F15A Butte 52.60 317 ⇑P P 12 20 20.9 +0.5
baz=53,SNR=27
BELC Belle Mtn. 52.62 301 ⇑P P 12 20 21.3 +0.5
baz=53
I14A Mackay 52.68 314 ⇓P P 12 20 21.6 +0.5
baz=53,SNR=36
O12A Currie 52.70 309 ⇓P P 12 20 21.7 +0.5
baz=53,SNR=38
PVIS Viseu 52.73 50 *e*P P 12 20 21.5 0.0
comp=Z,63nm,1.5s,mb5.1
TUQ Turquoise Moun 52.75 303 ⇑P P 12 20 22.2 +0.5
baz=53
C16A Fuhringer Ranc 52.77 319 ⇓P P 12 20 21.6 -0.1
baz=53,SNR=42
K13A Stover Farm, H 52.78 312 ⇑P P 12 20 22.0 +0.2
baz=53,SNR=71
STS Santiago 52.78 47 P P 12 20 21.7 -0.1
STS pmax pmax
comp=Z,54nm,1.1s,mb5.2
STS Santiago 52.78 47 P P 12 20 21.7 -0.2
comp=Z,54nm,1.1s,mb5.2
H14A Leadore 52.82 315 ⇑P P 12 20 22.4 +0.4
baz=53,SNR=38
PMRV Marv??o 52.84 52 *e*P P 12 20 21.9 -0.4
comp=Z,49nm,1.3s,mb5.1
MONP Monument Peak 52.85 300 ⇑P P 12 20 23.4 +0.9
baz=53
PCBR Castelo Branco 52.86 51 *e*P P 12 20 22.4 0.0
comp=Z,51nm,1.5s,mb5.0
PCAB Cabril 52.87 49 *e*P P 12 20 22.5 0.0
comp=Z,72nm,1.7s,mb5.1
PBAR Barrancos 52.87 53 *e*P P 12 20 23.2 +0.6
comp=Z,53nm,1.4s,mb5.1
ELOB Lobios 52.88 49 P P 12 20 22.7 +0.1
comp=Z,233nm,1.9s,mb5.6
E15A Deer Lodge 52.88 317 ⇑P P 12 20 22.4 -0.1
baz=53,SNR=16
MTE Manteigas 52.92 51 *e*P P 12 20 23.0 +0.1
comp=Z,57nm,1.1s,mb5.2
MTE Manteigas 52.92 51 *e*P P 12 20 22.6 -0.3
comp=Z,42nm,1.0s,mb5.1
R11A Troy Canyon, C 52.95 307 ⇓P P 12 20 23.8 +0.7
baz=53,SNR=36
S11A Rachel 52.95 306 ⇑P P 12 20 24.3 +1.2
baz=53,SNR=12
PFO Pinyon Flat Ob 52.95 301 ⇑P P 12 20 23.6 +0.3
baz=53
PFO Pinyon Flat Ob 52.95 301 P P 12 20 24.6 +1.3
B16A M & M Farms, S 52.97 320 ⇑P P 12 20 23.1 0.0
baz=53,SNR=41
EBAD Badajoz 52.99 53 P P 12 20 23.8 +0.3
comp=Z,127nm,1.9s,mb5.3
HEC Hector,Ludlow 53.00 302 ⇓P P 12 20 24.3 +0.8
baz=53
D15A Lincoln 53.01 318 ⇑P P 12 20 23.6 +0.2
baz=53,SNR=46
J13A Cove Ranch, Pi 53.04 313 ⇓P P 12 20 23.9 +0.2
baz=53,SNR=48
N12A Clover Valley, 53.04 310 ⇑P P 12 20 24.2 +0.4
baz=53,SNR=52
G14A Jackson 53.06 316 ⇑P P 12 20 23.8 0.0
baz=53,SNR=12
M12A Wells 53.08 311 ⇓P P 12 20 24.2 +0.1
baz=53,SNR=58
EMIN Mina Concepcio 53.08 54 P P 12 20 24.1 0.0
comp=Z,38nm,0.9s,mb5.1
A16A West Butte Ran 53.09 321 ⇓P P 12 20 24.3 +0.3
baz=53,SNR=75
Q11A Duckwater 53.10 307 ⇑P P 12 20 24.4 +0.2
baz=53,SNR=32
SHOC Shoshone 53.10 304 ⇓P P 12 20 24.9 +0.5
baz=53
I13A Wildhorse Cree 53.14 314 ⇑P P 12 20 24.7 +0.3
baz=53,SNR=47
ELK Elko 53.17 310 *e*P P 12 20 24.8 +0.1
ELK pmax pmax
comp=Z,38nm,1.0s
ELK Elko 53.17 310 *e*P P 12 20 24.8 +0.1
comp=Z,38nm,1.0s,mb5.1
ELK *e*ScP ScP 12 25 15.1 +1.2
F14A Wisdom 53.17 316 ⇓P P 12 20 25.1 +0.5
baz=53,SNR=21
U10A Ash Meadows, A 53.22 304 ⇓P P 12 20 26.1 +1.0
baz=53,SNR=9.2
TPNV Topopah Spring 53.23 305 ⇑P P 12 20 26.2 +1.0
baz=53
TPNV Topopah Spring 53.23 305 *e*P P 12 20 26.1 +0.8
TPNV pmax pmax
comp=Z,42nm,0.9s,mb5.2
TPNV Topopah Spring 53.23 305 *e*P P 12 20 26.1 +0.9
comp=Z,42nm,0.9s,mb5.2
TPNV *e*ScP ScP 12 25 16.3 +1.9
HLID Hailey 53.25 313 ⇓P P 12 20 25.7 +0.5
baz=53
HLID Hailey 53.25 313 *e*P P 12 20 25.6 +0.4
comp=Z,38nm,1.1s,mb5.0
HLID *e*ScP ScP 12 25 15.9 +1.6
P11A Circle Ranch, 53.31 308 ⇑P P 12 20 26.2 +0.4
baz=53,SNR=11
C15A Salmond Ranch, 53.31 319 ⇑P P 12 20 25.9 +0.3
baz=53,SNR=36
L12A House Creek Ra 53.32 312 ⇑P P 12 20 25.8 0.0
baz=53,SNR=21
O11A Cowboy Ranch, 53.35 309 ⇑P P 12 20 26.6 +0.6
baz=53,SNR=91
K12A Draper Farm, C 53.36 312 ⇓P P 12 20 26.3 +0.3
baz=53,SNR=53
H13A Challis 53.41 315 ⇓P P 12 20 26.1 -0.3
baz=53,SNR=20
BBRC Big Bear Sol-O 53.41 302 ⇓P P 12 20 27.7 +1.1
baz=53
109C Camp Elliot, M 53.42 300 ⇓P P 12 20 26.7 0.0
baz=53
CHMT Chamberlain Mo 53.44 318 P P 12 20 26.6 +0.1
E14A Clinton 53.44 317 ⇑P P 12 20 26.8 +0.2
baz=53,SNR=25
GSC Goldstone 53.45 303 ⇑P P 12 20 27.4 +0.6
baz=53
GSC Goldstone 53.45 303 *e*P P 12 20 27.3 +0.4
comp=Z,0.3nm,0.5s
GSC *e*pP pP 12 21 04.1 +1.9
B15A Bradely Ranch, 53.47 320 ⇑P P 12 20 26.5 -0.2
baz=53,SNR=44
MVO Moncorvo 53.47 50 *e*P P 12 20 27.5 +0.6
comp=Z,60nm,1.2s,mb5.2
R10A Warm Springs 53.50 307 ⇓P P 12 20 28.3 +1.2
baz=53,SNR=23
G13A Cobalt 53.54 315 ⇑P P 12 20 26.9 -0.5
baz=54
RRX Edison Barstow 53.55 302 ⇑P P 12 20 28.4 +0.8
baz=54
N11A Elko Archery C 53.55 310 ⇑P P 12 20 27.8 +0.2
baz=54,SNR=6.6
MURC Murrieta 53.57 301 ⇓P P 12 20 28.2 +0.5
baz=54
ESPR Espera 53.58 55 ⇓P P 12 20 28.7 +0.9
comp=Z,139nm,0.9s,mb5.7
FURC Furnace Creek, 53.65 304 ⇑P P 12 20 28.9 +0.6
baz=54
J12A Stokes Ranch, 53.65 313 ⇓P P 12 20 28.3 +0.1
baz=54,SNR=32
D14A Greenough 53.66 318 ⇑P P 12 20 28.1 0.0
baz=54,SNR=21
S10A Tonopah Range, 53.66 306 ⇓P P 12 20 29.2 +0.8
baz=54,SNR=50
Q10A Clear Creek Ra 53.67 307 ⇑P P 12 20 29.0 +0.6
baz=54,SNR=20
M11A Holland Ranch, 53.73 311 ⇓P P 12 20 29.0 +0.3
baz=54,SNR=33
IFR Ifrane 53.75 59 P P 12 20 29.6 +0.5
A15A Johnson Ranch, 53.80 320 ⇑P P 12 20 29.1 0.0
baz=54,SNR=86
F13A Darby 53.81 316 ⇑P P 12 20 29.0 -0.2
baz=54,SNR=18
I12A Atlanta 53.81 314 ⇑P P 12 20 29.4 0.0
baz=54,SNR=22
PBRG Braganca 53.83 49 *e*P P 12 20 30.0 +0.5
EJIF Jimena Fronter 53.83 56 ⇓P P 12 20 30.8 +1.2
EJIF pmax pmax
comp=Z,79nm,0.9s,mb5.4
EJIF Jimena Fronter 53.83 56 ⇓P P 12 20 30.8 +1.3
comp=Z,79nm,0.9s,mb5.4
P10A Eureka 53.86 308 ⇑P P 12 20 30.2 +0.4
baz=54,SNR=12
L11A Cat Creek Ranc 53.86 311 ⇑P P 12 20 29.8 +0.1
baz=54,SNR=50
E13A Victor 53.91 317 ⇑P P 12 20 30.1 +0.2
baz=54,SNR=58
B14A Marquette Ranc 53.93 319 ⇓P P 12 20 29.7 -0.4
baz=54,SNR=8.0
EPLA Plasencia 53.95 51 P P 12 20 30.5 +0.1
EPLA pmax pmax
comp=Z,82nm,1.2s,mb5.3
EPLA Plasencia 53.95 51 P P 12 20 30.5 +0.1
comp=Z,82nm,1.2s,mb5.3
O10A Cortez Mining, 54.02 309 ⇑P P 12 20 31.1 +0.2
baz=54,SNR=11
BFSC Mount Baldy St 54.02 302 ⇑P P 12 20 31.0 0.0
baz=54
C14A Swan Lake 54.03 319 ⇓P P 12 20 31.1 +0.2
baz=54
R09A Tonopah 54.09 306 ⇓P P 12 20 31.8 +0.4
baz=54,SNR=24
MPMC Manual Prospec 54.10 304 ⇓P P 12 20 31.9 +0.3
baz=54
N10A Dunphy 54.11 310 ⇑P P 12 20 31.6 +0.1
baz=54,SNR=8.9
MDT Midelt 54.12 60 LR LR 12 37 28.5
comp=Z,137nm,20.8s,baz=317,slow=29
S09A Goldfield 54.12 306 ⇓P P 12 20 32.0 +0.3
baz=54,SNR=31
GRAC Grapevine Rang 54.13 305 ⇑P P 12 20 32.5 +0.7
baz=54
TPH Tonopah 54.18 306 *e*P P 12 20 32.4 +0.3
TPH pmax pmax
comp=Z,17nm,0.9s,mb4.8
TPH Tonopah 54.18 306 *e*P P 12 20 32.4 +0.3
comp=Z,17nm,0.9s,mb4.8
LRMC Laurel Mountai 54.18 303 ⇓P P 12 20 32.5 +0.3
baz=54
K11A Parker Ranch, 54.20 312 ⇑P P 12 20 32.1 0.0
baz=54,SNR=18
MFID Camas Ranch 54.21 313 ⇓P P 12 20 32.1 -0.1
baz=54,SNR=12
A14A Double T Ranch 54.23 320 ⇓P P 12 20 31.9 -0.3
baz=54,SNR=45
Q09A Carvers 54.27 307 ⇑P P 12 20 33.2 +0.5
baz=54,SNR=7.5
D13A Huson 54.28 318 ⇑P P 12 20 32.6 -0.1
baz=54,SNR=19
M10A I.L. Ranch, Tu 54.29 311 ⇓P P 12 20 33.3 +0.4
baz=54,SNR=18
MWC Mount Wilson 54.35 301 *e*P P 12 20 33.8 +0.4
MWC pmax pmax
comp=Z,45nm,1.3s,mb5.0
MWC Mount Wilson 54.35 301 *e*P P 12 20 33.8 +0.4
comp=Z,45nm,1.3s,mb5.0
EDW2 Edwards Air Fo 54.36 302 ⇑P P 12 20 34.0 +0.6
baz=54
P09A Austin 54.36 308 ⇓P P 12 20 33.7 +0.3
baz=54,SNR=15
L10A Juniper Basin 54.36 311 ⇓P P 12 20 33.7 +0.3
baz=54,SNR=58
EMIJ Mijas 54.40 56 ⇓P P 12 20 34.2 +0.4
comp=Z,24nm,0.7s,mb5.0
I11A Placerville 54.42 314 ⇓P P 12 20 33.6 -0.1
baz=54,SNR=59
PASC Pasadena Art C 54.45 301 *e*P P 12 20 34.4 +0.3
comp=Z,155nm,1.0s,mb5.7
O09A Fish Creek Ran 54.51 309 ⇑P P 12 20 35.0 +0.5
baz=54,SNR=60
C13A Hot Springs 54.53 318 ⇑P P 12 20 34.6 +0.1
baz=54,SNR=18
WALA Waterton Lakes 54.56 320 *e*P P 12 20 33.8 -0.9
comp=Z,1.3nm,1.3s
DECC Green Verdugo 54.57 301 ⇑P P 12 20 35.1 +0.1
baz=54
BMN Battle Mountai 54.58 309 *e*P P 12 20 35.2 +0.2
BMN pmax pmax
comp=Z,77nm,1.0s,mb5.4

BMN **Battle Mountai** 54.58 309 *e*P P 12 20 35.2 +0.2
comp=Z,77nm,1.0s,mb5.4
CWC **Cottonwood Cre** 54.62 304 ⇑P P 12 20 35.9 +0.6
baz=55
SCI **San Clemente I** 54.64 300 ⇑P P 12 20 36.0 +0.5
baz=55
H11A **Donnelly** 54.66 314 ⇑P P 12 20 34.8 -0.6
baz=55,SNR=22
B13A **Whitefish** 54.69 319 ⇓P P 12 20 35.4 -0.2
baz=55,SNR=21
EMAL **Malaga-Limoner** 54.70 55 P P 12 20 37.0 +1.1
EADA **Adamuz** 54.78 54 P P 12 20 36.4 0.0
comp=Z,25nm,1.2s,mb4.8
K10A **MacKenzie Ranc** 54.80 312 ⇑P P 12 20 36.5 0.0
baz=55,SNR=33
TIN **Tinemaha** 54.82 305 ⇓P P 12 20 37.2 +0.5
baz=55
Q08A **Gabbs** 54.85 307 ⇓P P 12 20 36.8 -0.1
baz=55,SNR=22
J10A **Berg Farm, Mel** 54.88 313 ⇓P P 12 20 36.7 -0.4
baz=55,SNR=18
N09A **Rock Creek Ran** 54.89 310 ⇑P P 12 20 37.5 +0.3
baz=55,SNR=27
R08A **Mina** 54.91 306 ⇑P P 12 20 37.8 +0.5
baz=55
ELUQ **Luque** 54.94 55 P P 12 20 38.2 +0.6
ELUQ pmax pmax
comp=Z,32nm,0.9s,mb5.0
ELUQ **Luque** 54.94 55 P P 12 20 38.2 +0.6
comp=Z,32nm,0.9s,mb5.0
M09A **Marrel Ranch,** 54.94 310 ⇓P P 12 20 37.9 +0.4
baz=55,SNR=31
ELOJ **Sierra Loja** 54.97 55 P P 12 20 39.1 +1.3
ELOJ pmax pmax
comp=Z,77nm,1.3s,mb5.3
ELOJ **Sierra Loja** 54.97 55 P P 12 20 39.1 +1.3
comp=Z,77nm,1.3s,mb5.3
G11A **Walters Elk Ra** 55.01 315 ⇑P P 12 20 37.2 -0.8
baz=55,SNR=18
I10A **Payette** 55.05 314 ⇓P P 12 20 37.7 -0.6
baz=55,SNR=5.5
ARVC **Arvin** 55.07 302 ⇓P P 12 20 39.3 +0.7
baz=55
NVAR **Mina Array Bea** 55.07 307 P P 12 20 38.8 +0.3
comp=Z,27nm,0.8s,mb5.0,baz=104,slow=6.5,SNR=183
NVAR pP pP 12 21 12.6 -1.5
comp=Z,5.8nm,0.8s,baz=105,slow=7.7,SNR=2.7
NVAR ScP ScP 12 25 24.2 +1.8
comp=Z,4.3nm,1.0s,baz=116,slow=5.6,SNR=9.1
C12B **Naegeli Ranch,** 55.12 318 ⇓P P 12 20 38.7 -0.1
baz=55,SNR=7.4
PAB **San Pablo** 55.17 52 P P 12 20 39.6 +0.4
L09A **Wilkinson Ranc** 55.22 311 ⇓P P 12 20 40.0 +0.4
baz=55
E11A **Bogner Ranch,** 55.22 316 ⇓P P 12 20 39.1 -0.4
baz=55,SNR=61
ERON **Agron** 55.23 55 P P 12 20 41.0 +1.3
comp=Z,31nm,1.2s,mb4.9
O08A **Rochester Mine** 55.26 309 ⇑P P 12 20 39.7 -0.1
baz=55,SNR=21
N08A **GE Springer Mi** 55.33 309 ⇑P P 12 20 40.6 +0.3
baz=55,SNR=41
VES **Vestal, Richgr** 55.35 303 ⇓P P 12 20 41.0 +0.4
baz=55
MLAC **Mammoth Lakes** 55.38 305 ⇑P P 12 20 41.6 +0.9
baz=55
EGUA **Guajares** 55.40 55 P P 12 20 41.3 +0.4
EGUA pmax pmax
comp=Z,48nm,0.8s,mb5.3
EGUA **Guajares** 55.40 55 P P 12 20 41.3 +0.4
comp=Z,48nm,0.8s,mb5.3
EBAN **Banos Encina** 55.40 54 ⇑P P 12 20 41.4 +0.5
EBAN pmax pmax
comp=Z,34nm,0.7s,mb5.2
EBAN **Banos Encina** 55.40 54 ⇑P P 12 20 41.4 +0.5
comp=Z,34nm,0.7s,mb5.2
B12A **Libby** 55.42 319 ⇓P P 12 20 41.0 +0.2
baz=55,SNR=12
ECOG **Cogollos-Vega** 55.45 55 P P 12 20 42.7 +1.4
ECOG pmax pmax
comp=Z,95nm,1.0s,mb5.5
ECOG **Cogollos-Vega** 55.45 55 P P 12 20 42.7 +1.4
comp=Z,95nm,1.0s,mb5.5
ESDC **Sonseca Array** 55.49 52 P P 12 20 42.2 +0.7
comp=Z,18nm,0.7s,mb4.9,baz=259,slow=7.6,SNR=73
ESDC PcP PcP 12 21 39.0 -0.8
comp=Z,4.1nm,0.7s,baz=280,slow=4.8,SNR=7.0
ESDC **Sonseca Array** 55.49 52 P P 12 20 41.9 +0.4
comp=Z,57nm,1.0s,mb5.3
ESLA **Sonseca Array** 55.49 52 *e*P P 12 20 41.8 +0.3
comp=Z,21nm,1.3s,mb4.7
D11A **Klaveano Farm,** 55.49 317 ⇓P P 12 20 41.0 -0.4
baz=56,SNR=38
GUD **Guadarrama** 55.51 51 P P 12 20 42.0 +0.4
GUD pmax pmax
comp=Z,32nm,0.9s,mb5.2
GUD **Guadarrama** 55.51 51 P P 12 20 42.0 +0.4
comp=Z,32nm,0.9s,mb5.2
RCTC **Rector, Farmer** 55.53 304 ⇓P P 12 20 41.7 -0.1
baz=56
Q07A **Schurz** 55.54 307 ⇓P P 12 20 41.7 -0.1
baz=56,SNR=5.1
J09A **Fry Pan Ranch,** 55.56 312 ⇑P P 12 20 41.2 -0.7
baz=56,SNR=8.2
G10A **Bishop Farm, J** 55.56 315 ⇑P P 12 20 41.0 -1.0
baz=56,SNR=16
BMO **Blue Mountains** 55.59 314 *e*P P 12 20 41.1 -1.0
BMO pmax pmax
comp=Z,29nm,1.1s,mb5.0
BMO **Blue Mountains** 55.59 314 *e*P P 12 20 41.1 -1.0
comp=Z,28nm,1.1s,mb5.0
A12A **Yaak River Ran** 55.61 319 ⇑P P 12 20 42.6 +0.5
baz=56,SNR=65
M08A **Happy Creek Ra** 55.63 310 ⇑P P 12 20 42.9 +0.4
baz=56,SNR=34
I09A **Lost Marbles R** 55.69 313 ⇑P P 12 20 41.9 -0.9
baz=56,SNR=5.6
EALB **Alboran** 55.72 57 P P 12 20 43.5 +0.3
comp=Z,76nm,0.9s,mb5.5
EDM **Edmonton** 55.73 325 *e*P P 12 20 42.0 -1.0
L08A **Fields** 55.75 311 ⇑P P 12 20 43.3 -0.1
baz=56,SNR=37
TIC **Toumodi** 55.75 92 *e*P P 12 20 43.0 -0.8
comp=Z,308nm,1.1s,mb6.1
O07A **Toulon** 55.78 309 ⇑P P 12 20 43.5 -0.1
baz=56,SNR=22
H09A **Durkee** 55.79 314 ⇑P P 12 20 43.1 -0.4
baz=56,SNR=17
F10A **Beach Ranch, E** 55.81 316 ⇓P P 12 20 42.5 -1.1
baz=56
LIC **Lamto** 55.84 93 *e*P P 12 20 43.8 -0.6
comp=Z,149nm,0.6s,mb6.0
LIC **Lamto** 55.84 93 ⇓*i*P P 12 20 43.8 -0.6
comp=Z,132nm,0.8s,mb5.5
LIC **Lamto** 55.84 93 ⇓*i*P P 12 20 43.8 -0.6
comp=Z,66nm,0.8s,mb5.5
PKM **Peak Mountain** 55.86 302 ⇓P P 12 20 44.6 +0.4
baz=56
E10A **Myers Farm, Un** 55.86 316 ⇓P P 12 20 43.3 -0.7
baz=56,SNR=7.2
DBIC **Dimbokro** 55.91 92 P P 12 20 44.4 -0.5
comp=Z,46nm,0.6s,mb5.5,baz=269,slow=7.2,SNR=112
DBIC **Dimbokro** 55.91 92 *e*P P 12 20 44.3 -0.6
DBIC pmax pmax
comp=Z,132nm,1.0s
DBIC **Dimbokro** 55.91 92 *e*P P 12 20 44.3 -0.6
comp=Z,132nm,1.0s,mb5.7
EQES **Quesada** 55.91 54 ⇓P P 12 20 45.3 +0.8
comp=Z,123nm,1.2s,mb5.6
B11A **Sandpoint** 55.91 319 ⇓P P 12 20 44.3 0.0
baz=56,SNR=23
EBER **Berja** 55.94 55 ⇓P P 12 20 46.2 +1.4
comp=Z,361nm,1.9s,mb5.9
N07B **Gerlach** 55.96 309 ⇑P P 12 20 44.7 -0.1
baz=56,SNR=28
K08A **Mann Creek Ran** 55.96 312 ⇓P P 12 20 44.5 -0.2
baz=56
R06C **Coleville** 55.98 306 ⇑P P 12 20 45.9 +0.9
baz=56,SNR=36
T06C **Millerton Lake** 55.99 305 ⇑P P 12 20 43.8 -1.3
baz=56,SNR=11
G09A **Cove** 56.01 315 ⇑P P 12 20 44.5 -0.6
baz=56,SNR=14
SMMC **Simmler** 56.04 303 ⇑P P 12 20 46.2 +0.7
baz=56
A11A **Hall Mountain,** 56.06 319 ⇑P P 12 20 45.7 +0.3
baz=56,SNR=18
J08A **Circle Bar Ran** 56.08 312 ⇑P P 12 20 45.0 -0.6
baz=56,SNR=21
KIC **Kosan Boka** 56.09 92 *e*P P 12 20 45.7 -0.5
comp=Z,402nm,0.9s,mb6.2
D10A **Wagner Farm, O** 56.12 317 ⇓P P 12 20 44.9 -0.9
baz=56,SNR=13
PLCA **Paso Flores** 56.14 188 P P 12 20 46.0 0.0
comp=Z,6.2nm,0.7s,mb4.6,baz=8.5,slow=6.7,SNR=26
PLCA LR LR 12 48 60.0
comp=Z,89nm,19.5s,baz=6.8,slow=40
PLCA **Paso Flores** 56.14 188 *e*P P 12 20 45.7 -0.2
PLCA pmax pmax
comp=Z,5.0nm,0.6s
PLCA **Paso Flores** 56.14 188 *e*P P 12 20 45.7 -0.3
comp=Z,4.7nm,0.6s,mb4.5
F09A **S2 Ranch, Elgi** 56.20 315 ⇑P P 12 20 45.7 -0.7
baz=56,SNR=6.6
M07A **Soldier Meadow** 56.21 310 ⇑P P 12 20 46.6 0.0
baz=56,SNR=38
I08A **Drewsey** 56.26 313 ⇑P P 12 20 46.2 -0.6
baz=56,SNR=9.2
WCN **Washoe City** 56.32 307 ⇓P P 12 20 48.4 +0.9
baz=56
C10A **Spilker Farm,** 56.34 318 ⇑P P 12 20 46.8 -0.6
baz=56,SNR=5.7
NEW **Newport** 56.34 318 *e*P P 12 20 46.7 -0.7
NEW pmax pmax
comp=Z,69nm,0.8s
NEW **Newport** 56.34 318 *e*P P 12 20 46.7 -0.7
comp=Z,69nm,0.8s,mb5.5
B10A **Chitwood Farm,** 56.42 318 ⇓P P 12 20 47.4 -0.6
baz=56
L07A **Adell** 56.45 311 ⇓P P 12 20 48.3 0.0
baz=56,SNR=14
H08A **Prairie City** 56.46 314 ⇓P P 12 20 48.2 -0.1
baz=56,SNR=35
EVIA **Vianos** 56.46 53 P P 12 20 49.3 +0.9
EVIA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
EVIA **Vianos** 56.46 53 P P 12 20 49.3 +0.9
comp=Z,6.2nm,0.8s,mb4.5
P06A **Stead Airport,** 56.48 308 ⇑P P 12 20 48.7 +0.1
baz=56
ENIJ **Nijar** 56.49 55 P P 12 20 49.3 +0.6
ENIJ pmax pmax
comp=Z,72nm,1.0s,mb5.5
ENIJ **Nijar** 56.49 55 P P 12 20 49.3 +0.6
comp=Z,72nm,1.0s,mb5.5
K07A **Rock Creek Ran** 56.50 311 ⇓P P 12 20 48.6 -0.1
baz=56
O06A **Flanigan** 56.50 308 ⇑P P 12 20 48.3 -0.4
baz=56,SNR=21
S05C **Merced** 56.52 305 ⇓P P 12 20 48.7 -0.1
baz=56,SNR=10
E09A **Wood Farm, Sta** 56.56 316 ⇑P P 12 20 48.2 -0.8
baz=56,SNR=5.9
N06A **Buffalo Meadow** 56.60 309 ⇓P P 12 20 49.0 -0.3
baz=56,SNR=34
CMB **Columbia Colle** 56.64 306 *e*P P 12 20 49.8 +0.1
CMB pmax pmax
comp=Z,22nm,1.3s,mb4.8
CMB **Columbia Colle** 56.64 306 *e*P P 12 20 49.8 0.0
comp=Z,22nm,1.3s,mb4.8
J07A **Hines** 56.68 312 ⇑P P 12 20 49.0 -0.9
baz=57
U04C **Hernandez Rese** 56.78 304 ⇓P P 12 20 50.0 -0.7
baz=57
D09A **Jones Farm, Ri** 56.80 317 ⇓P P 12 20 49.8 -0.8
baz=57,SNR=7.9
F08A **Pendleton** 56.81 315 ⇑P P 12 20 50.0 -0.8
baz=57,SNR=14
A10A **Northport** 56.82 319 ⇓P P 12 20 50.4 -0.4
baz=57,SNR=13
G08A **Pilot Rock** 56.83 315 ⇑P P 12 20 50.3 -0.6
baz=57,SNR=12
BEKR **Beckwourth** 56.86 308 ⇓P P 12 20 50.8 -0.4
baz=57
I07A **Izee** 56.95 313 ⇑P P 12 20 51.6 -0.2
baz=57,SNR=22
C09A **Chrisman Ranch** 56.97 318 ⇓P P 12 20 51.2 -0.6
baz=57,SNR=9.5
LAVA **Lava Cap Winer** 57.01 307 ⇑P P 12 20 52.4 +0.1
baz=57,SNR=17
B09A **Rice** 57.05 318 ⇑P P 12 20 51.6 -0.8
baz=57,SNR=30
H07A **Lands Inn, Kim** 57.10 314 ⇓P P 12 20 52.3 -0.5
baz=57,SNR=10
ETOR **Torete** 57.11 51 P P 12 20 53.5 +0.5
ETOR pmax pmax
comp=Z,71nm,1.4s,mb5.3
ETOR **Torete** 57.11 51 P P 12 20 53.5 +0.5
comp=Z,71nm,1.4s,mb5.3
MOD **Modoc** 57.13 310 *e*P P 12 20 52.3 -0.8
comp=Z,10.0nm,0.7s,mb4.8
ETOB **Tobarra** 57.20 54 P P 12 20 54.5 +0.9
comp=Z,69nm,1.2s,mb5.4
D08A **Wollman Farm,** 57.21 317 ⇑P P 12 20 52.9 -0.7
baz=57,SNR=7.5
J06A **Christmas Vall** 57.26 312 ⇑P P 12 20 53.5 -0.4
baz=57,SNR=18
G07A **Ruggs Ranch, H** 57.31 314 ⇓P P 12 20 53.7 -0.6
baz=57,SNR=7.0
EMUR **La Murta** 57.35 55 P P 12 20 55.1 +0.4
comp=Z,46nm,1.0s,mb5.3
I06A **Prineville** 57.43 313 ⇓P P 12 20 55.2 +0.1
baz=57,SNR=5.4
C08A **Higginbotham F** 57.46 317 ⇑P P 12 20 54.7 -0.6
baz=57,SNR=22
A09A **Danville** 57.47 319 ⇑P P 12 20 54.8 -0.5
baz=57,SNR=25
F07A **Phinny Hill Vi** 57.62 315 ⇑P P 12 20 56.1 -0.4
baz=58,SNR=5.1
MDW **Midway** 57.66 316 P P 12 20 56.8 +0.1
H06A **Lindquist Farm** 57.66 314 ⇑P P 12 20 56.8 0.0
baz=58,SNR=5.3
K05A **Summer Lake** 57.70 311 ⇓P P 12 20 57.3 +0.3
baz=58,SNR=20
E07A **Sunnyside** 57.72 316 ⇑P P 12 20 56.9 -0.2
baz=58,SNR=8.9
QUIF **Quistinic** 57.72 42 ⇓*i*P P 12 20 57.0 -0.1
comp=Z,70nm,0.8s,mb5.2
QUIF **Quistinic** 57.72 42 ⇓*i*P P 12 20 57.0 -0.1
QUIF pmax pmax
comp=Z,35nm,0.8s,mb5.2
QUIF **Quistinic** 57.72 42 ⇓*i*P P 12 20 57.0 -0.1
comp=Z,35nm,0.8s,mb5.2
ROSF **Rostrenen** 57.76 42 ⇓*i*P P 12 20 57.2 -0.1
comp=Z,93nm,1.0s,mb5.3
ROSF **Rostrenen** 57.76 42 ⇓*i*P P 12 20 57.2 -0.1
ROSF pmax pmax
comp=Z,47nm,1.0s,mb5.3
ROSF **Rostrenen** 57.76 42 ⇓*i*P P 12 20 57.2 -0.1
comp=Z,47nm,1.0s,mb5.3
ECHE **Chera** 57.77 53 P P 12 20 58.4 +0.8
ECHE pmax pmax
comp=Z,19nm,1.0s,mb4.9
ECHE **Chera** 57.77 53 P P 12 20 58.4 +0.8
comp=Z,19nm,1.0s,mb4.9
B08A **Colville Reser** 57.79 318 ⇑P P 12 20 56.8 -0.8
baz=58,SNR=12
ELIZ **Elizondo** 57.87 48 P P 12 20 58.7 +0.5
ELIZ pmax pmax
comp=Z,17nm,0.8s,mb4.9
ELIZ **Elizondo** 57.87 48 P P 12 20 58.7 +0.5
comp=Z,16nm,0.8s,mb4.9
EALK **Alkurruntz** 57.90 48 P P 12 20 59.1 +0.7
comp=Z,289nm,2.2s,mb5.7
A08A **Turner Farm, O** 57.90 319 ⇓P P 12 20 57.7 -0.7
baz=58,SNR=17
D07A **Quincy** 57.94 317 ⇑P P 12 20 58.4 -0.2
baz=58,SNR=7.7
G06A **Carlson Farm,** 57.97 314 ⇓P P 12 20 59.3 +0.4
baz=58,SNR=8.4
MXC **Moxie City** 58.02 316 P P 12 20 59.6 +0.4
SJPF **Ste Jean** 58.08 48 ⇓*i*P P 12 21 00.2 +0.5
comp=Z,196nm,1.1s,mb5.6
SJPF **Ste Jean** 58.08 48 ⇓*i*P P 12 21 00.2 +0.5
SJPF pmax pmax
comp=Z,98nm,1.1s,mb5.5
SJPF **Ste Jean** 58.08 48 ⇓*i*P P 12 21 00.2 +0.5
comp=Z,98nm,1.1s,mb5.5
C07A **Waterville** 58.11 317 ⇓P P 12 20 58.8 -1.0
baz=58,SNR=5.4
CROR **Criterion Ridg** 58.17 314 P P 12 21 01.2 +0.9
SGMF **Saint Gilles** 58.20 42 ⇓*i*P P 12 21 00.3 -0.1
comp=Z,96nm,1.0s,mb5.3
SGMF **Saint Gilles** 58.20 42 ⇓*i*P P 12 21 00.3 -0.1
SGMF pmax pmax
comp=Z,48nm,1.0s,mb5.3
SGMF **Saint Gilles** 58.20 42 ⇓*i*P P 12 21 00.3 -0.1
comp=Z,48nm,1.0s,mb5.3
I05A **Bend** 58.22 313 ⇓P P 12 21 01.5 +0.8
baz=58
HOG **Hogback Mounta** 58.22 311 P P 12 21 01.1 +0.5
EBEN **Beniarda** 58.24 54 P P 12 21 01.2 +0.3
comp=Z,268nm,2.3s,mb5.7
EMOS **Mosqueruela** 58.24 52 P P 12 21 02.1 +1.3
comp=Z,94nm,1.2s,mb5.5
H05A **Madras** 58.27 313 ⇓P P 12 21 01.9 +0.9
baz=58,SNR=5.2
B07A **Winthrop** 58.33 318 ⇑P P 12 21 00.7 -0.6
baz=58,SNR=28
VSP **Spence Mountai** 58.41 311 P P 12 21 03.0 +0.9
ESAC **San Caprasio** 58.42 50 P P 12 21 02.9 +0.8
comp=Z,176nm,1.0s,mb5.8
G05A **Wamic** 58.45 314 ⇑P P 12 21 02.5 +0.3
baz=58
E06A **Yakima** 58.47 316 ⇓P P 12 21 02.3 0.0
baz=58
D06A **Cle Elum** 58.52 316 ⇑P P 12 21 02.5 -0.1
baz=58,SNR=12
ETSF **Etsaut** 58.53 49 ⇓*i*P P 12 21 03.3 +0.5
comp=Z,32nm,0.9s,mb4.8
ETSF **Etsaut** 58.53 49 ⇓*i*P P 12 21 03.3 +0.5
ETSF pmax pmax
comp=Z,16nm,0.9s,mb4.8
ETSF **Etsaut** 58.53 49 ⇓*i*P P 12 21 03.3 +0.5
comp=Z,16nm,0.9s,mb4.8
BKCOR **Black Crater** 58.54 313 P P 12 21 03.7 +0.8
BUOR **Burton Butte** 58.62 311 P P 12 21 03.8 +0.3
A07A **Ashnola River,** 58.63 319 ⇓P P 12 21 03.8 +0.4
baz=59,SNR=31
F05A **White Salmon** 58.67 315 ⇑P P 12 21 04.1 +0.4
baz=59,SNR=9.6
REYF **Montagne du Re** 58.68 49 *e*P P 12 21 04.5 +0.7
C06A **Tall Timber Ra** 58.71 317 ⇓P P 12 21 03.4 -0.5
baz=59
ERTA **Horta de San J** 58.92 51 P P 12 21 06.4 +0.8
comp=Z,108nm,1.1s,mb5.6
E05A **Randle** 59.00 316 ⇓P P 12 21 05.6 -0.5
baz=59,SNR=5.3
EBIE **Bielsa** 59.01 49 P P 12 21 07.3 +1.2
comp=Z,70nm,1.1s,mb5.4
EANR **'Ain N'Sour** 59.06 57 P P 12 21 08.0 +1.4
SUMG **Summit** 59.07 8 *e*P P 12 21 06.7 +0.7
comp=Z,39nm,1.0s,mb5.2
RESF **Ens** 59.17 49 *e*P P 12 21 08.5 +1.3
ETRT **Tiaret** 59.19 58 P P 12 21 09.0 +1.5
EPF **Esparros** 59.20 49 ⇓*i*P P 12 21 08.1 +0.6
comp=Z,307nm,1.3s,mb5.7
EPF **Esparros** 59.20 49 ⇓*i*P P 12 21 08.1 +0.6
comp=Z,154nm,1.3s,mb5.7
ECHA **Ech Chlef** 59.29 57 P P 12 21 10.5 +2.3
GRR **Gorron** 59.33 42 ⇓*i*P P 12 21 08.0 -0.3
comp=Z,176nm,0.9s,mb5.6
GRR **Gorron** 59.33 42 ⇓*i*P P 12 21 08.0 -0.3
GRR pmax pmax
comp=Z,88nm,0.9s,mb5.6
GRR **Gorron** 59.33 42 ⇓*i*P P 12 21 08.0 -0.3
comp=Z,88nm,0.9s,mb5.6
EBNR **Beni Rached** 59.43 57 P P 12 21 11.0 +1.8
MFF **Saint Martin d** 59.45 45 ⇓*i*P P 12 21 09.1 0.0
comp=Z,41nm,0.7s,mb5.1
MFF **Saint Martin d** 59.45 45 ⇓*i*P P 12 21 09.1 0.0
MFF pmax pmax
comp=Z,20nm,0.7s,mb5.1
MFF **Saint Martin d** 59.45 45 ⇓*i*P P 12 21 09.1 0.0
comp=Z,20nm,0.7s,mb5.1
MELF **Melles** 59.48 49 *e*P P 12 21 10.6 +1.2
EIBI **Ibiza** 59.49 53 P P 12 21 09.8 +0.3
comp=Z,158nm,1.2s,mb5.7
B05A **Bryant** 59.57 317 ⇓P P 12 21 07.7 -2.2
baz=60,SNR=5.2
FLN **La Foliniere** 59.66 42 ⇓*i*P P 12 21 10.3 -0.2
comp=Z,203nm,0.9s,mb5.7
FLN **La Foliniere** 59.66 42 ⇓*i*P P 12 21 10.3 -0.2
FLN pmax pmax
comp=Z,102nm,0.9s,mb5.7
FLN **La Foliniere** 59.66 42 ⇓*i*P P 12 21 10.3 -0.2
comp=Z,102nm,0.9s,mb5.7
A05A **Maple Falls** 59.72 318 ⇓P P 12 21 09.4 -1.5
baz=60
H03A **Soap Creek Ran** 59.73 313 ⇑P P 12 21 10.5 -0.5
baz=60
ESK **Eskdalemuir** 59.77 34 *e*P P 12 21 11.0 -0.1
ESK pmax pmax
comp=Z,18nm,0.6s,mb5.1
ESK **Eskdalemuir** 59.77 34 *e*P P 12 21 11.0 -0.1
comp=Z,18nm,0.6s,mb5.1
LFF **La Frestale** 59.78 47 ⇓*i*P P 12 21 11.3 -0.1
comp=Z,181nm,1.1s,mb5.5
LFF **La Frestale** 59.78 47 ⇓*i*P P 12 21 11.3 -0.1
LFF pmax pmax
comp=Z,90nm,1.1s,mb5.5
LFF **La Frestale** 59.78 47 ⇓*i*P P 12 21 11.3 -0.1
comp=Z,90nm,1.1s,mb5.5
EKA **Eskdalemuir Ar** 59.80 34 P P 12 21 10.8 -0.4
comp=Z,18nm,0.7s,mb5.0,baz=258,slow=6.5,SNR=50
G03A **Yamhill** 59.83 314 ⇑P P 12 21 11.4 -0.3
baz=60
LDF **La Druitiere** 59.86 42 ⇓*i*P P 12 21 11.5 -0.3
comp=Z,152nm,1.2s,mb5.4
LDF **La Druitiere** 59.86 42 ⇓*i*P P 12 21 11.5 -0.3
LDF pmax pmax
comp=Z,76nm,1.2s,mb5.4
LDF **La Druitiere** 59.86 42 ⇓*i*P P 12 21 11.5 -0.3
comp=Z,76nm,1.2s,mb5.4
YKA **Yellowknife Ar** 60.25 335 P P 12 21 13.1 -1.2
comp=Z,12nm,0.6s,mb4.9,baz=106,slow=7.4,SNR=240
YKA pP pP 12 21 47.3 -3.2
comp=Z,5.5nm,0.8s,baz=108,slow=7.5,SNR=3.1
YKA S S 12 29 12.3 -3.6
comp=Z,0.7nm,0.8s,baz=110,slow=14,SNR=4.8
YKA **Yellowknife Ar** 60.25 335 ⇑*e*P P 12 21 13.1 -1.2
RJF **Les Rejaudoux** 60.38 46 ⇓*i*P P 12 21 15.1 -0.3
comp=Z,119nm,1.1s,mb5.3
RJF **Les Rejaudoux** 60.38 46 ⇓*i*P P 12 21 15.1 -0.3
RJF pmax pmax
comp=Z,60nm,1.1s,mb5.3
RJF **Les Rejaudoux** 60.38 46 ⇓*i*P P 12 21 15.1 -0.3
comp=Z,60nm,1.1s,mb5.3
EMHD **Djebel Mahouad** 60.58 57 P P 12 21 18.2 +1.2
MTLF **Montolieu** 60.60 49 ⇓*i*P P 12 21 16.8 -0.2
comp=Z,124nm,1.0s,mb5.4
MTLF **Montolieu** 60.60 49 ⇓*i*P P 12 21 16.8 -0.2
MTLF pmax pmax
comp=Z,62nm,1.0s,mb5.4
MTLF **Montolieu** 60.60 49 ⇓*i*P P 12 21 16.8 -0.2
comp=Z,62nm,1.0s,mb5.4
ETOS **Mallorca** 60.69 53 P P 12 21 17.8 +0.1
comp=Z,138nm,1.2s,mb5.7
CAF **Calviac** 60.70 47 ⇓*i*P P 12 21 17.5 -0.2
comp=Z,106nm,1.1s,mb5.3
CAF **Calviac** 60.70 47 ⇓*i*P P 12 21 17.5 -0.2
CAF pmax pmax
comp=Z,53nm,1.1s,mb5.3
CAF **Calviac** 60.70 47 ⇓*i*P P 12 21 17.5 -0.2
comp=Z,53nm,1.1s,mb5.3
FILF **Fillols** 60.76 49 *e*P P 12 21 18.1 0.0
TOA0 **Torodi Ar. Sit** 60.93 83 *e*P P 12 21 18.7 -0.9
TORD **Torodi Ar. Bea** 60.93 83 P P 12 21 18.9 -0.8
comp=Z,56nm,0.8s,mb5.4,baz=285,slow=6.1,SNR=238
TORD LR LR 12 42 36.0
comp=Z,195nm,21.3s,baz=325,slow=31
SJAF **Saint Jean de** 60.99 50 *e*P P 12 21 20.2 +0.5
EJON **La Jonquera** 60.99 50 P P 12 21 20.3 +0.7
comp=Z,125nm,1.2s,mb5.6
TCF **Toulx Ste Croi** 61.00 45 ⇓*i*P P 12 21 19.4 -0.3
comp=Z,59nm,0.9s,mb5.2
TCF **Toulx Ste Croi** 61.00 45 ⇓*i*P P 12 21 19.4 -0.3
TCF pmax pmax
comp=Z,34nm,0.9s,mb5.2
TCF **Toulx Ste Croi** 61.00 45 ⇓*i*P P 12 21 19.4 -0.3
comp=Z,34nm,0.9s,mb5.2
VERF **Verneugheol** 61.11 46 *e*P P 12 21 20.6 +0.2
HYF **Humbligny** 61.45 44 ⇓*i*P P 12 21 22.6 0.0
PYM **Petit Puy Mans** 61.48 46 *e*P P 12 21 23.0 +0.1
BGF **Bois d'Agland** 61.48 45 ⇓*i*P P 12 21 22.5 -0.3
comp=Z,123nm,1.2s,mb5.3
BGF **Bois d'Agland** 61.48 45 ⇓*i*P P 12 21 22.5 -0.3
BGF pmax pmax
comp=Z,61nm,1.2s,mb5.3
BGF **Bois d'Agland** 61.48 45 ⇓*i*P P 12 21 22.5 -0.3
comp=Z,62nm,1.2s,mb5.3
LBL **Lubilhac** 61.58 46 *e*P P 12 21 24.0 +0.5
AGO **Saint Agoulin** 61.60 46 *e*P P 12 21 23.5 -0.2

AVF Avril sur Loir 61.86 45⇓*iP* P 12 21 24.9 -0.5
comp=Z,134nm,1.1s,mb5.4
AVF Avril sur Loir 61.86 45⇓*iP* P 12 21 24.9 -0.5
AVF pmax pmax
comp=Z,67nm,1.1s,mb5.4
AVF Avril sur Loir 61.86 45⇓*iP* P 12 21 24.9 -0.5
comp=Z,67nm,1.1s,mb5.4
LASF Ste Croix 61.87 48⇓*iP* P 12 21 25.8 +0.3
comp=Z,118nm,1.3s,mb5.3
PLDF La Plantade 61.93 46 *eP* P 12 21 26.3 +0.4
SSF Saint Saulge 62.00 44⇓*iP* P 12 21 25.7 -0.6
comp=Z,77nm,0.8s,mb5.3
SSF Saint Saulge 62.00 44⇓*iP* P 12 21 25.7 -0.6
SSF pmax pmax
comp=Z,38nm,0.8s,mb5.3
SSF Saint Saulge 62.00 44⇓*iP* P 12 21 25.7 -0.6
comp=Z,38nm,0.8s,mb5.3
SMF Signal de Mont 62.17 45⇓*iP* P 12 21 27.0 -0.5
comp=Z,182nm,1.1s,mb5.5
SMF Signal de Mont 62.17 45⇓*iP* P 12 21 27.0 -0.5
SMF pmax pmax
comp=Z,91nm,1.1s,mb5.5
SMF Signal de Mont 62.17 45⇓*iP* P 12 21 27.0 -0.5
comp=Z,91nm,1.1s,mb5.5
LOR Lormes 62.27 44⇓*iP* P 12 21 27.5 -0.6
comp=Z,139nm,0.8s,mb5.5
LOR Lormes 62.27 44⇓*iP* P 12 21 27.5 -0.6
LOR pmax pmax
comp=Z,69nm,0.8s,mb5.5
LOR Lormes 62.27 44⇓*iP* P 12 21 27.5 -0.6
comp=Z,69nm,0.8s,mb5.5
RES Resolute Bay 62.47 350 *eP* P 12 21 28.8 -0.2
RES pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
RES Resolute Bay 62.47 350 *eP* P 12 21 28.8 -0.2
comp=Z,3.7nm,0.6s,mb4.4
SSB Saint Sauveur 62.49 47 *eP* P 12 21 30.1 +0.5
VIVF Saint-Julien-l 62.53 47⇓*iP* P 12 21 30.5 +0.6
comp=Z,68nm,0.9s,mb5.2
VIVF Saint-Julien-l 62.53 47⇓*iP* P 12 21 30.5 +0.6
VIVF pmax pmax
comp=Z,34nm,0.9s,mb5.2
VIVF Saint-Julien-l 62.53 47⇓*iP* P 12 21 30.5 +0.6
comp=Z,34nm,0.9s,mb5.2
PRAF Pradon 62.79 48 *eP* P 12 21 32.3 +0.7
BAIF Baives 62.91 41⇓*iP* P 12 21 31.6 -0.7
comp=Z,73nm,1.1s,mb5.1
BAIF Baives 62.91 41⇓*iP* P 12 21 31.6 -0.7
BAIF pmax pmax
comp=Z,37nm,1.1s,mb5.1
BAIF Baives 62.91 41⇓*iP* P 12 21 31.6 -0.7
comp=Z,37nm,1.1s,mb5.1
SNF Seneffe 63.03 41 P P 12 21 32.2 -0.8
comp=Z,25nm,1.3s,mb4.9
SMRF Simiane la Rot 63.09 48⇓*iP* P 12 21 34.2 +0.5
comp=Z,85nm,1.2s,mb5.2
SMRF Simiane la Rot 63.09 48⇓*iP* P 12 21 34.2 +0.5
comp=Z,85nm,1.2s,mb5.5
UCC Uccle 63.12 40 P P 12 21 33.3 -0.4
DOU Dourbes 63.16 41 P P 12 21 33.5 -0.5
comp=Z,10nm,0.8s,mb4.7
DOU AP pP 12 22 10.0 -0.5
VILF Villemus 63.19 48 *eP* P 12 21 34.9 +0.6
TAM Tamanrasset 63.22 72 *eP* P 12 21 36.0 +1.1
TAM pmax pmax
comp=Z,39nm,0.8s,mb5.3
TAM Tamanrasset 63.22 72 *eP* P 12 21 36.0 +1.1
comp=Z,39nm,0.8s,mb5.3
MEZF Maizieres J'vi 63.23 43⇓*iP* P 12 21 34.0 -0.4
comp=Z,165nm,0.7s,mb5.7
MEZF Maizieres J'vi 63.23 43⇓*iP* P 12 21 34.0 -0.4
comp=Z,165nm,0.7s,mb6.0
GIVF Givet 63.31 41⇓*iP* P 12 21 34.3 -0.6
comp=Z,122nm,0.8s,mb5.5
GIVF Givet 63.31 41⇓*iP* P 12 21 34.3 -0.6
GIVF pmax pmax
comp=Z,61nm,0.8s,mb5.5
GIVF Givet 63.31 41⇓*iP* P 12 21 34.3 -0.6
comp=Z,61nm,0.8s,mb5.5
ORIF Oris-en-Rattie 63.40 47⇓*iP* P 12 21 36.1 +0.5
comp=Z,86nm,1.2s,mb5.2
ORIF Oris-en-Rattie 63.40 47⇓*iP* P 12 21 36.1 +0.5
ORIF pmax pmax
comp=Z,43nm,1.2s,mb5.2
ORIF Oris-en-Rattie 63.40 47⇓*iP* P 12 21 36.1 +0.5
comp=Z,43nm,1.2s,mb5.2
OG25 Le Caire 63.49 48 *eP* P 12 21 37.1 +0.9
BCLA Clavier 63.66 41 P P 12 21 37.2 0.0
comp=Z,19nm,1.2s,mb4.8
CABF La Chapelle 63.70 45⇓*iP* P 12 21 37.3 -0.3
comp=Z,31nm,0.9s,mb4.8
CABF La Chapelle 63.70 45⇓*iP* P 12 21 37.3 -0.3
CABF pmax pmax
comp=Z,16nm,0.9s,mb4.8
CABF La Chapelle 63.70 45⇓*iP* P 12 21 37.3 -0.3
comp=Z,16nm,0.9s,mb4.8
LMR La Mourre 63.72 49⇓*iP* P 12 21 37.3 -0.5
THEF They Montfort 63.81 43 *eP* P 12 21 38.1 -0.2
FRF La Foret Royal 63.84 49⇓*iP* P 12 21 38.1 -0.4
BEBN Eben Emael 63.95 41 P P 12 21 39.3 +0.1
BNI Bardonecchia 63.97 47 *eP* P 12 21 40.0 +0.6
BNI pmax pmax
comp=Z,49nm,1.3s,mb5.2
BNI Bardonecchia 63.97 47 *eP* P 12 21 40.0 +0.6
comp=Z,49nm,1.3s,mb5.2
RSL Roselend 63.99 46 *eP* P 12 21 39.8 +0.3
MBDF Montbardon 64.01 47⇓*iP* P 12 21 40.1 +0.4
comp=Z,62nm,0.8s,mb5.2
MBDF Montbardon 64.01 47⇓*iP* P 12 21 40.1 +0.4
MBDF pmax pmax
comp=Z,31nm,0.8s,mb5.2
MBDF Montbardon 64.01 47⇓*iP* P 12 21 40.1 +0.4
comp=Z,31nm,0.8s,mb5.2
CALN Calern 64.03 48 *eP* P 12 21 39.9 +0.1
HAU Haudompre 64.03 44⇓*iP* P 12 21 38.8 -0.9
comp=Z,43nm,1.0s,mb4.9
HAU Haudompre 64.03 44⇓*iP* P 12 21 38.8 -0.9
HAU pmax pmax
comp=Z,22nm,1.0s,mb4.9
HAU Haudompre 64.03 44⇓*iP* P 12 21 38.8 -0.9
comp=Z,22nm,1.0s,mb4.9
LPL La Plagne 64.05 46⇓*iP* P 12 21 40.5 +0.6
comp=Z,117nm,1.0s,mb5.4
LPL La Plagne 64.05 46⇓*iP* P 12 21 40.5 +0.6
LPL pmax pmax
comp=Z,59nm,1.0s,mb5.4
LPL La Plagne 64.05 46⇓*iP* P 12 21 40.5 +0.6
comp=Z,58nm,1.0s,mb5.4
LPG La Plagne 64.06 46⇓*iP* P 12 21 40.7 +0.7
comp=Z,121nm,1.0s,mb5.4
LPG La Plagne 64.06 46⇓*iP* P 12 21 40.7 +0.7
LPG pmax pmax
comp=Z,61nm,1.0s,mb5.4
LPG La Plagne 64.06 46⇓*iP* P 12 21 40.7 +0.7
comp=Z,60nm,1.0s,mb5.4
BBB Bella Bella 64.08 321 P P 12 21 39.9 -0.1
comp=Z,36nm,0.9s,mb5.2,baz=97,slow=4.3,SNR=4.8
WLF Walferdange 64.10 42 P P 12 21 40.0 -0.1
comp=Z,36nm,1.0s,mb5.2
HGN Heimansgroeve 64.10 41 *eP* P 12 21 39.9 -0.3
comp=Z,66nm,1.1s,mb5.4
MEM Membach 64.13 41 P P 12 21 40.1 -0.2
comp=Z,33nm,1.2s,mb5.0
LOMF Lomont 64.28 44 *eP* P 12 21 41.4 0.0
TOUF Mont Tournerai 64.30 48 *eP* P 12 21 42.0 +0.4
HINF Hinteralfeld 64.35 44⇓*iP* P 12 21 40.7 -1.1
comp=Z,63nm,1.0s,mb5.1
HINF Hinteralfeld 64.35 44⇓*iP* P 12 21 40.7 -1.1
HINF pmax pmax
comp=Z,31nm,1.0s,mb5.1
HINF Hinteralfeld 64.35 44⇓*iP* P 12 21 40.7 -1.1
comp=Z,31nm,1.0s,mb5.1
LUCF Luceram 64.36 48 *eP* P 12 21 42.0 0.0
SBF Sospel 64.43 48⇓*iP* P 12 21 42.0 -0.4
comp=Z,73nm,1.0s,mb5.2
SBF Sospel 64.43 48⇓*iP* P 12 21 42.0 -0.4
SBF pmax pmax
comp=Z,36nm,1.0s,mb5.2
SBF Sospel 64.43 48⇓*iP* P 12 21 42.0 -0.4
comp=Z,36nm,1.0s,mb5.2
AUTN L'Aution 64.43 48 *eP* P 12 21 42.7 +0.3
SAOF Saorge 64.52 48 *eP* P 12 21 42.3 -0.7
MOF Molkenrain 64.54 44 *eP* P 12 21 42.5 -0.5
ECH Echery 64.59 44 *eP* P 12 21 42.9 -0.5
ECH Echery 64.59 44 *eP* P 12 21 42.6 -0.8
ECH pmax pmax
comp=Z,50nm,1.1s,mb5.3
ECH Echery 64.59 44 *eP* P 12 21 42.6 -0.7
comp=Z,50nm,1.1s,mb5.3
RUP Ruppelstein 64.69 42 *eP* P 12 21 44.0 +0.1
CDF Champ du Feu 64.69 43⇓*iP* P 12 21 43.3 -0.7
comp=Z,70nm,1.1s,mb5.1
CDF Champ du Feu 64.69 43⇓*iP* P 12 21 43.3 -0.7
CDF pmax pmax
comp=Z,35nm,1.0s,mb5.1
CDF Champ du Feu 64.69 43⇓*iP* P 12 21 43.3 -0.7
comp=Z,35nm,1.0s,mb5.1
BBS Basel-Blauen 64.75 44 *eP* P 12 21 44.0 -0.4
WTSB Winterswijk 64.81 39 *eP* P 12 21 44.4 -0.3
comp=Z,74nm,0.9s,mb5.5
LIBD Limburg 64.88 44 *eP* P 12 21 45.1 -0.1
ABH Alteburg 65.02 42 *eP* P 12 21 46.6 +0.5
LANF Langenberg 65.09 43 *eP* P 12 21 46.8 +0.2
FELD Feldberg im Sc 65.12 44 *eP* P 12 21 46.2 -0.6
KTD Kalmit 65.31 42 *eP* P 12 21 47.9 -0.1
BFO Black Forest 65.38 43 *eP* P 12 21 47.7 -0.8
BFO pmax pmax
comp=Z,45nm,1.6s,mb5.0
BFO Black Forest 65.38 43 *eP* P 12 21 47.7 -0.8
comp=Z,45nm,1.6s,mb5.0
IBBN Ibbenburen 65.44 39 *eP* P 12 21 48.8 +0.1
comp=Z,102nm,1.1s,mb5.6
PGF Pioggiola 65.51 50⇓*iP* P 12 21 48.9 -0.5
comp=Z,74nm,0.9s,mb5.2
PGF Pioggiola 65.51 50⇓*iP* P 12 21 48.9 -0.5
PGF pmax pmax
comp=Z,37nm,0.9s,mb5.2
PGF Pioggiola 65.51 50⇓*iP* P 12 21 48.9 -0.5
comp=Z,37nm,0.9s,mb5.2
SPAK Spaichingen-Ko 65.67 44 *eP* P 12 21 50.0 -0.3
KEST Kesra 65.75 57 P P 12 21 51.9 +0.8
comp=Z,30nm,0.8s,mb5.2,baz=198,slow=1.6,SNR=50
TOD Tromm 65.80 42 *eP* P 12 21 50.5 -0.6
TUE Stuetta 65.94 46 *eP* P 12 21 52.1 +0.1
comp=Z,59nm,1.4s,mb5.2
STU Stuttgart 65.99 43 *eP* P 12 21 51.3 -1.0
comp=Z,64nm,0.9s,mb5.5
DLBC Dease Lake 66.21 328 P P 12 21 54.2 +0.6
comp=Z,20nm,1.0s,mb4.9,baz=95,slow=4.4,SNR=17
DLBC Dease Lake 66.21 328 *eP* P 12 21 53.6 0.0
DLBC *epP* pP 12 22 32.6 +2.2
DLBC *esP* sP 12 22 59.0 +12
DAVOS Davos 66.26 45 P P 12 21 55.4 +1.3
DAVOX Davos/Dischmat 66.32 45 P P 12 21 55.4 +0.9
comp=Z,35nm,0.9s,mb5.2,baz=263,slow=6.6,SNR=29
DAVOX LR LR 12 46 10.1
comp=Z,138nm,18.3s,baz=259,slow=32
DAVA Damuels 66.35 45⇓*iP* P 12 21 54.9 +0.2
comp=Z,76nm,0.9s,mb5.5,SNR=14
FETA Feichten 66.91 45 *iP* P 12 21 58.3 +0.1
comp=Z,95nm,1.1s,mb5.5,SNR=41
RETA Reutte 66.96 45 *iP* P 12 21 58.3 -0.2
comp=Z,38nm,1.2s,mb5.1,SNR=8.9
CLZ Clausthal 67.00 40 *eP* P 12 21 58.5 -0.2
CLZ pmax pmax
comp=Z,54nm,1.0s,mb5.3
CLZ Clausthal 67.00 40 *eP* P 12 21 58.5 -0.2
comp=Z,54nm,1.0s,mb5.3
BSEG Bad Segeberg 67.16 38 *eP* P 12 21 59.2 -0.5
BSEG pmax pmax
comp=Z,66nm,1.0s,mb5.4
BSEG Bad Segeberg 67.16 38 *eP* P 12 21 59.2 -0.5
comp=Z,66nm,1.0s,mb5.4
GRA1 Grafenberg Arr 67.38 42 *eP* P 12 22 00.7 -0.4
comp=Z,52nm,1.4s,mb5.2
GRF Grafenberg Arr 67.38 42 *eP* P 12 22 00.7 -0.4
GRF pmax pmax
comp=Z,52nm,1.4s,mb5.2
GRF Grafenberg Arr 67.38 42 *eP* P 12 22 00.7 -0.4
GRF pmax pmax
comp=Z,52nm,1.4s,mb5.2
GRF Grafenberg Arr 67.38 42 *eP* P 12 22 00.7 -0.4
comp=Z,52nm,1.4s,mb5.2
KONO Kongsberg 67.50 31⇑*eP* P 12 22 02.2 +0.5
ALE Alert 67.52 360 P P 12 22 00.0 -1.5
comp=Z,236nm,1.1s,mb5.8,SNR=16
WTTA Wattenberg 67.54 45⇓*iP* P 12 22 01.9 -0.3
comp=Z,35nm,1.7s,mb4.8
MOX Moxa 67.69 41 *eP* P 12 22 02.3 -0.8
comp=Z,13nm,0.9s,mb4.7
MANZ Manzenberg 67.97 42 *eP* P 12 22 04.6 -0.2
comp=Z,61nm,1.1s,mb5.2
ROTZ Rotzenmuhle 68.02 42 *eP* P 12 22 04.7 -0.5
comp=Z,28nm,1.3s,mb4.8
WERD Werda 68.12 41 *eP* P 12 22 04.9 -0.8
comp=Z,27nm,1.3s,mb4.8
ABTA Abfaltersbach 68.13 45 *iP* P 12 22 05.3 -0.6
comp=Z,32nm,0.9s,mb5.0,SNR=9.8
GUNZ Gunzen 68.13 41 *eP* P 12 22 05.6 -0.2
comp=Z,15nm,0.8s,mb4.8
WERN Wernitzgruen 68.15 42 *eP* P 12 22 05.4 -0.6
comp=Z,29nm,1.2s,mb4.9
NKC Novy Kostel 68.20 42⇓*iP* P 12 22 06.0 -0.2
TANN Tannenbergstha 68.21 41 *eP* P 12 22 05.7 -0.6
comp=Z,54nm,1.4s,mb5.1
WET Wettzell 68.43 43 *eP* P 12 22 07.2 -0.5
WET pmax pmax
comp=Z,32nm,1.1s,mb5.0
WET Wettzell 68.43 43 *eP* P 12 22 07.2 -0.5
comp=Z,32nm,1.1s,mb5.0
NB2 NORSAR Subarra 68.50 30 P P 12 22 08.2 +0.3
comp=Z,2.8nm,0.8s,mb4.0,baz=260,slow=6.5
NB2 NORSAR Subarra 68.50 30 P P 12 22 04.0 -3.9
NOA NORSAR Array B 68.50 30 P P 12 22 08.3 +0.4
comp=Z,26nm,0.8s,mb5.0,baz=262,slow=6.3,SNR=44
NOA *pP* pP 12 22 43.7 -1.3
comp=Z,2.4nm,0.8s,baz=262,slow=6.3,SNR=1.6
NOA NORSAR Array B 68.50 30 P P 12 22 08.3 +0.4
NOA pP pP 12 22 43.7 -1.3
CLL Collm 68.60 40⇓*iP* P 12 22 08.2 -0.5
CLL pmax pmax
comp=Z,44nm,1.0s,mb5.1
CLL Collm 68.60 40 *eP* P 12 22 08.3 -0.4
comp=Z,43nm,1.0s,mb5.1
CLL Collm 68.60 40⇓*iP* P 12 22 08.2 -0.5
comp=Z,44nm,1.0s,mb5.1
CLL Collm 68.60 40⇓*iP* P 12 22 08.2 -0.5
comp=Z,44nm,1.0s,mb5.1
KBA Koelnbreinsper 68.70 45 *iP* P 12 22 09.0 -0.5
comp=Z,59nm,1.0s,mb5.3,SNR=14
FBE Freiberg 68.80 41 *eP* P 12 22 09.6 -0.4
comp=Z,32nm,0.9s,mb5.0
KHC Kasperske Hory 68.89 43⇓*iP* P 12 22 10.0 -0.6
KHC *ex* x 12 22 19.0
MYKA Terra Mystica 68.90 45⇓*iP* P 12 22 10.0 -0.7
comp=Z,35nm,1.1s,mb5.0
CADS Cadrg 68.97 46 *eP* P 12 22 10.6 -0.5
GEC2 GERESS Array S 68.97 43 *eP* P 12 22 10.3 -0.8
GEC2 pmax pmax
comp=Z,23nm,0.9s,mb4.9
GEC2 GERESS Array S 68.97 43 *eP* P 12 22 10.3 -0.8
comp=Z,23nm,0.9s,mb4.9
GERES GERESS Array B 68.97 43 P P 12 22 10.8 -0.3
comp=Z,9.9nm,0.7s,mb4.6,baz=261,slow=5.3,SNR=52
VOJS Vojsko 69.07 46 *eP* P 12 22 11.4 -0.3
VOY Vojsko 69.08 46 *eP* P 12 22 11.7 -0.1
VOY *e* 12 22 35.4
BRG Berggiesshubel 69.17 41 *iP* P 12 22 12.0 -0.3
BRG *e* 12 24 44.7
BRG pmax pmax
comp=Z,20nm,0.9s,mb4.8
BRG pmax pmax
comp=Z,8.0nm,1.6s,mb4.2
BRG Berggiesshubel 69.17 41 *eP* P 12 22 12.0 -0.3
comp=Z,33nm,0.9s,mb5.1
BRG Berggiesshubel 69.17 41 *i* P P 12 22 12.0 -0.3
comp=Z,33nm,0.9s,mb5.0
BRG *e* 12 24 44.6
comp=Z,13nm,1.6s
MOA Molln 69.33 44⇓*iP* P 12 22 12.5 -0.8
comp=Z,16nm,1.0s,mb4.7
LJU Ljubljana 69.52 46 *eP* P 12 22 14.6 +0.1
OBKA Obir 69.53 46⇑*iP* P 12 22 14.2 -0.4
comp=Z,38nm,0.8s,mb5.2,SNR=13
PRU Pruhonice 69.54 42⇓*iP* P 12 22 14.3 -0.2
PVCC Panska Ves 69.56 41⇓*iP* P 12 22 14.3 -0.4
HFA0 Hagfors New Ar 69.60 31 P P 12 22 14.0 -0.7
HFS Hagfors 69.61 31 P P 12 22 14.2 -0.5
comp=Z,12nm,0.8s,mb4.7,baz=264,slow=4.5,SNR=15
SOKA Soboth 69.86 45⇓*iP* P 12 22 15.5 -1.0
comp=Z,15nm,0.9s,mb4.7
TREC Trest 70.15 43⇓*iP* P 12 22 17.8 -0.5
DOBS Dobrina 70.17 46 *eP* P 12 22 18.0 -0.5
ARSA Arzberg 70.19 45⇓*iP* P 12 22 17.8 -0.8
comp=Z,29nm,0.9s,mb5.0,SNR=9.0
CSNA Conrad Observa 70.41 44⇓*iP* P 12 22 19.5 -0.4
comp=Z,23nm,1.2s,mb4.8
CONA Conrad Observa 70.41 44⇓*iP* P 12 22 19.4 -0.5
comp=Z,24nm,1.2s,mb4.8,SNR=5.7
UPC Upice 70.48 41⇓*iP* P 12 22 20.2 -0.1
KSP Ksiaz 70.66 41 *eP* P 12 22 21.5 +0.1
KSP Ksiaz 70.66 41 *eP* P 12 22 21.2 -0.2
DPC Dobruska-Polom 70.68 42⇓*iP* P 12 22 21.3 -0.2
KOGS Kog 70.70 46 *iP* P 12 22 21.2 -0.6
VRAC Vranov 70.87 43 P P 12 22 22.2 -0.5
comp=Z,28nm,0.9s,mb5.0,baz=274,slow=6.5,SNR=16
VRAC Vranov 70.87 43⇑*iP* P 12 22 22.3 -0.4
VRAC Vranov 70.87 43 ⇑P P 12 22 22.3 -0.4
ZST Bratislava 71.23 44 *eP* P 12 22 24.6 -0.3
ZST pmax pmax
comp=Z,64nm,1.4s,mb5.2
ZST Bratislava 71.23 44 *eP* P 12 22 24.6 -0.3
comp=Z,64nm,1.4s,mb5.2
DAWY Dawson 71.40 333 *eP* P 12 22 25.5 0.0
MORC Moravsky Berou 71.48 42⇓*iP* P 12 22 25.1 -1.2
OKC Ostrava-Krasne 71.87 42⇓*iP* P 12 22 28.7 +0.1
KOLL Kolacno 72.08 43 *eP* P 12 22 30.3 +0.3
EGAK Eagle 72.21 334 *eP* P 12 22 30.1 -0.2
comp=Z,78nm,1.6s,mb5.2
PKSM Moragy 72.37 46⇓*iP* P 12 22 31.5 -0.2
PKSM Moragy 72.37 46 ⇓P P 12 22 31.5 -0.2
VYHS Vyhne 72.38 43 *i* P P 12 22 31.8 +0.1
VYHS pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VYHS Vyhne 72.38 43 *i* P P 12 22 31.8 +0.1
comp=Z,10nm,0.9s,mb4.6
SPITS Spitsbergen Ar 72.86 12 P P 12 22 34.3 +0.3
comp=Z,17nm,0.7s,mb4.8,baz=224,slow=3.5,SNR=11
OJC Ojcow 72.92 42 *eP* P 12 22 34.7 -0.1
NIE Niedzica 73.30 42 *eP* P 12 22 37.7 +0.6
MENT Mentasta 73.30 332 *eP* P 12 22 37.6 +0.7
STHS Stebnicka Huta 73.90 42 *i* P P 12 22 41.9 +1.3
STHS pmax pmax
comp=Z,13nm,0.9s,mb4.7
STHS Stebnicka Huta 73.90 42 *i* P P 12 22 41.9 +1.3
comp=Z,13nm,0.9s,mb4.7
CRVS Cervenica-Dubn 74.08 43 *eP* P 12 22 42.6 +0.9
CRVS pmax pmax
comp=Z,17nm,1.0s,mb4.7
CRVS Cervenica-Dubn 74.08 43 *eP* P 12 22 42.6 +0.9
comp=Z,17nm,1.0s,mb4.7
BZS Buzias 74.49 46⇑*iP* P 12 22 44.6 +0.5
BZS Buzias 74.49 46 ⇑P P 12 22 44.6 +0.5
KOLS Kolonicke sedl 74.62 43 *eP* P 12 22 45.9 +1.1
KOLS pmax pmax
comp=Z,18nm,1.6s,mb4.5
KOLS Kolonicke sedl 74.62 43 *eP* P 12 22 45.9 +1.1
comp=Z,18nm,1.6s,mb4.4
SUW Suwalki 74.75 38 *eP* P 12 22 45.8 +0.3
SUW Suwalki 74.75 38 *eP* P 12 22 45.8 +0.4
KWP Kalwaria 74.83 42 *eP* P 12 22 47.0 +1.0
KWP Kalwaria 74.83 42 ⇑P P 12 22 47.1 +1.1
KWP Kalwaria 74.83 42⇑*iP* P 12 22 47.0 +1.0
KWP Kalwaria 74.83 42 ⇑P P 12 22 47.0 +1.0
ARCES ARCESS Array B 74.91 21 P P 12 22 45.7 -0.4
comp=Z,29nm,0.8s,mb5.0,baz=275,slow=5.6,SNR=57
ARCES ARCESS Array B 74.91 21 P P 12 22 45.7 -0.4
COLA College 75.07 334 *eP* P 12 22 46.6 -0.4
COLA pmax pmax
comp=Z,191nm,2.5s,mb5.3
COLA College 75.07 334 *eP* P 12 22 46.6 -0.5
comp=Z,191nm,2.5s,mb5.3
DRGR 75.12 45⇑*iP* P 12 22 47.8 +0.1
DRGR 75.12 45 ⇑P P 12 22 47.9 +0.1
GZR Gura Zlata 75.32 46⇓*iP* P 12 22 49.1 +0.2
GZR Gura Zlata 75.32 46 ⇓P P 12 22 49.1 +0.2
FINES FINESS Array B 75.67 30 P P 12 22 49.0 -1.6
KAF Kangasniemi 75.72 29 *ep* P 12 22 49.5 -1.3
comp=Z,11nm,0.6s,mb4.7,baz=275,slow=5.6
KAF Kangasniemi 75.72 29 *eP* P 12 22 49.5 -1.3
KAF pmax pmax
comp=Z,11nm,0.6s,mb4.7
COLD Coldfoot 75.85 336 *eP* P 12 22 51.5 0.0
comp=Z,2.0nm,0.6s,mb3.9
TRF Thorofare Moun 76.25 332 *eP* P 12 22 53.7 -0.1
comp=Z,13nm,0.6s,mb4.7
VSU Vasula 76.30 33*d iP* P 12 22 53.7 -0.5
VSU pmax pmax
comp=Z,156nm,1.5s,mb5.4
BPAW Bear Paw Mtn. 76.49 333 *eP* P 12 22 54.5 -0.7
comp=Z,15nm,1.0s,mb4.6
BPAW *ep*P pP 12 23 34.9 +1.9
KTH Kantishna Hill 76.52 333 *eP* P 12 22 54.8 -0.5
comp=Z,45nm,1.3s,mb4.9
BUR08 Bucovina Ar. S 76.70 44 *eP* P 12 22 57.3 +0.6
BURAR Bucovina Array 76.72 44⇑*iP* P 12 22 57.7 +0.9
BURAR Bucovina Array 76.72 44 ⇑P P 12 22 57.7 +0.9
CHUM Lake Minchumin 77.09 333 *eP* P 12 22 58.2 -0.3
comp=Z,18nm,1.3s,mb4.5
MLR Muntele Rosu 77.52 46 P P 12 23 01.0 -0.2
comp=Z,13nm,0.8s,mb4.6,baz=294,slow=2.9,SNR=8.8
MLR Muntele Rosu 77.52 46⇓*iP* P 12 23 01.6 +0.3
MLR Muntele Rosu 77.52 46 ⇓P P 12 23 01.6 +0.4
JOF Joensuu 77.93 28 *ep* P 12 23 00.9 -2.3
comp=Z,24nm,0.8s,mb4.9
JOF Joensuu 77.93 28 *eP* P 12 23 00.9 -2.3
JOF pmax pmax
comp=Z,24nm,0.8s,mb4.9
IDI Anoyia 78.40 56 P P 12 23 06.4 0.0
comp=Z,32nm,0.6s,mb5.1,baz=286,slow=8.1,SNR=17
KIEV Kiev 78.83 40 *eP* P 12 23 08.0 -0.4
KIEV pmax pmax
comp=Z,22nm,1.3s,mb4.6
KIEV Kiev 78.83 40 *eP* P 12 23 08.0 -0.4
comp=Z,22nm,1.3s,mb4.6
AKASG Malin Array Be 78.84 40 P P 12 23 07.6 -0.8
comp=Z,6.6nm,0.8s,mb4.3,baz=263,slow=5.1,SNR=27
AKBB Malin Array Si 78.84 40 *eP* P 12 23 08.0 -0.4
PMSA Palmer Station 79.59 181 *eP* P 12 23 12.8 +0.9
comp=Z,82nm,1.1s,mb5.3
KLMR Klimovskoe 82.18 29 *eP* P 12 23 24.9 -1.1
KLMR pmax pmax
comp=Z,37nm,1.0s,mb5.0
OBN Obninsk 82.23 35*d iP* P 12 23 26.2 -0.2
OBN *e*PP pP 12 24 05.6 +0.8
OBN pmax pmax
comp=Z,146nm,1.3s,mb5.5
OBN Obninsk 82.23 35 *eP* P 12 23 26.5 +0.1
comp=Z,82nm,0.9s,mb5.4
MOS Moscow 82.65 34 *eP* P 12 23 26.8 -1.8
MOS pmax pmax
comp=Z,54nm,1.0s,mb5.2
ANTO Ankara 83.58 51 *eP* P 12 23 34.1 +0.4
ANTO pmax pmax
comp=Z,21nm,0.8s,mb4.9
ANTO Ankara 83.58 51⇓*iP* P 12 23 34.0 +0.3
ANTO Ankara 83.58 51 *eP* P 12 23 34.1 +0.4
comp=Z,21nm,0.8s,mb4.9
BRTR Keskin Array B 84.25 51 P P 12 23 36.9 -0.2
comp=Z,12nm,0.8s,mb4.7,baz=271,slow=4.2,SNR=35
TSUM Tsumeb 84.71 111 *eP* P 12 23 40.5 +0.7
comp=Z,19nm,1.0s,mb4.8
VSR Storozhevoye 84.83 38 *eP* P 12 23 39.2 -0.5
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VORD Divnogorie 84.98 39 *eP* P 12 23 40.0 -0.5
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,30nm,0.8s
VRHR Novokhopersk 86.33 38 *eP* P 12 23 47.3 +0.1
VRHR pmax pmax
comp=Z,20nm,0.8s,mb4.9
VRHR pmax pmax
comp=N,30nm,1.5s
VRHR pmax pmax
comp=E,30nm,1.3s
SOC Sochi 87.53 46 *eP* P 12 23 53.2 +0.1
SOC *e*SP sP 12 24 45.9 -2.2
SOC *e* 12 27 18.6
SOC *e*PPP 12 29 15.2

SOC e S SKSac 12 34 05.2 -1.4
SOC e 12 34 22.6
SOC pmax pmax
comp=Z,50nm,1.0s,mb5.3
KIV Kislovodsk 89.44 44 *e*P **P 12 24 02.7 +0.6**
KIV *e* 12 34 17.2
KIV *e*SS SS 12 40 30.7 -6.9
KIV pmax pmax
comp=Z,50nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,52nm,5.7s
KIV Kislovodsk 89.44 44 *e*P **P 12 24 03.3 +1.3**
comp=Z,46nm,1.1s,mb5.3
SUR Sutherland 91.42 123 *e*P **P 12 24 12.4 +1.0**
comp=Z,30nm,0.8s,mb5.4
VNA1 Neumayer--Stat 92.82 165 *e*P **P 12 24 22.5 +5.5**
VNA3 Neumayer Olymp 92.85 165 *e*P **P 12 24 17.8 +0.7**
VNA3 *e* 12 24 22.0
ARU Arti 93.03 29*d i*P **P 12 24 18.2 -0.2**
ARU 12 28 02.5
ARU S SKSac 12 34 37.3 -0.5
ARU SS SS 12 41 29.6 +1.2
ARU pmax pmax
comp=Z,14nm,1.5s,mb4.9
VNA2 Neumayer--Watz 93.22 165 *e*P **P 12 24 20.0 +1.1**
baz=318,slow=11
VNA2 *e* 12 24 24.4
TIXI Tiksi 93.26 357*c i*P **P 12 24 18.6 -0.6**
TIXI *i* *PP pP 12 24 55.1 -3.1
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
TIXI Tiksi 93.26 357 *e*P **P 12 24 18.4 -0.8**
comp=Z,5.6nm,1.1s,mb4.6
LSZ Lusaka 93.37 105 *e*P **P 12 24 21.9 +1.1**
LSZ pmax pmax
comp=Z,15nm,1.4s,mb4.9
LSZ Lusaka 93.37 105 *e*P **P 12 24 21.9 +1.1**
comp=Z,15nm,1.4s,mb4.9
LBTB Lobatse 93.47 115 *e*P **P 12 24 21.4 +0.3**
LBTB pmax pmax
comp=Z,45nm,1.9s,mb5.3
LBTB Lobatse 93.47 115 *e*P **P 12 24 21.4 +0.3**
comp=Z,45nm,1.9s,mb5.3
BOSA Boshof 94.09 118 P **P 12 24 24.4 +0.5**
comp=Z,6.9nm,0.8s,mb4.8,baz=266,slow=2.6,SNR=8.9
SNAA Sanae 94.84 164 *e*P **P 12 24 26.7 +0.4**
SNAA *e* 12 24 31.3
SNAA Sanae 94.84 164⇑*e*P **P 12 24 27.2 +0.9**
SNAA Sanae 94.84 164 *e*P **P 12 24 27.0 +0.7**
comp=Z,2.9nm,0.9s,mb4.5
AKTK Aktyubinsk 95.98 34 P **P 12 24 32.2 +0.1**
AKTO Aktyubinsk 95.98 34 P **P 12 24 32.2 +0.1**
comp=Z,5.3nm,0.7s,mb5.0,baz=311,slow=3.8,SNR=15
BVAR Borovoye Array 100.52 27 P Pdif 12 24 52.0 -0.4
comp=Z,0.9nm,0.6s,baz=357,slow=3.0,SNR=4.0
MKAR Makanchi Array 110.30 26 PKKPbc PKKPbc 12 40 37.4 -1.5
comp=Z,0.8nm,0.8s,baz=134,slow=6.9,SNR=4.5
WMQ Urumqi 114.93 24 *e*PKP PKiKP 12 29 44.1 -1.2
SONM Songino Array 116.46 9 PKP PKPdf 12 29 47.6 -0.5
comp=Z,1.2nm,0.6s,baz=310,slow=1.5,SNR=8.7
SONM PKKPbc PKKPbc 12 40 15.8 -2.5
comp=Z,0.3nm,0.4s,baz=129,slow=4.2,SNR=4.6
MAW Mawson 116.48 159 PKP PKPdf 12 29 47.2 -0.2
comp=Z,4.8nm,0.8s,baz=94,slow=18,SNR=4.5
CN2 Changchun 121.14 354 *e*PKP PKPdf 12 29 56.1 -1.1
GTA Gaotai 123.04 17 *e*PKP PKPdf 12 30 00.8 -0.2
GTA XPKP 12 31 00.0
HHC Hu-ho-hao-te 124.01 7 *e*PKP PKPdf 12 30 00.1 -2.7
HHC XPKP 12 30 59.3
HHC PP PP 12 31 48.7 +1.4
HHC PKS 12 33 35.7
HHC SKS SKSdf 12 36 54.2 -6.3
HHC SKKS SKKSac 12 38 23.3 -8.7
HHC SS SS 12 48 20.3 -3.8
HHC PP PP
comp=Z,85nm,5.3s
BJI Beijing 125.17 2 PKP PKPdf 12 30 03.2 -1.9
BJI SS SS 12 48 35.2 -3.4
BJI LR LR
comp=N,157nm,27.1s
BJI LR LR
comp=E,174nm,25.6s
BJI LR LR
comp=Z,55nm,25.9s
DANN Dangsing 125.18 38 *e*P PKPdf 12 30 05.4 0.0
comp=Z,42nm,0.8s
MJAR Matsushiro Arr 125.51 341 PKP PKPdf 12 30 04.2 -1.6
comp=Z,3.8nm,0.8s,baz=96,slow=6.9,SNR=4.7
KOLN Koldanda 125.51 39 *e*P PKPdf 12 30 05.4 -0.7
comp=Z,13nm,0.8s
GKN Gorkha 125.96 38 *e*P PKPdf 12 30 06.3 -0.6
comp=Z,37nm,0.8s
KKN Kakani 126.50 37 *e*P PKPdf 12 30 07.4 -0.6
comp=Z,24nm,0.7s
DMN Daman 126.53 38 *e*P PKPdf 12 30 07.5 -0.5
PKIN Phulchoki 126.73 37 *e*P PKPdf 12 30 07.5 -0.9
comp=Z,16nm,0.8s
PKI Pulchoki 126.74 37 *e*P PKPdf 12 30 07.7 -0.7
GUN Gumba 126.76 37 *e*P PKPdf 12 30 08.2 -0.3
KSRS Korea Array 127.08 351 PKP PKPdf 12 30 08.0 -0.8
comp=Z,2.6nm,0.9s,baz=114,slow=1.0,SNR=7.8
JIRN Jiri 127.13 37 *e*P PKPdf 12 30 08.4 -0.8
comp=Z,8.6nm,0.6s
LZH Lanzhou 127.25 15 *e*PKP PKPdf 12 30 09.1 -0.1
LZH XPKP 12 31 08.3
LZH PP PP 12 32 13.3 +4.4
LZH SKS SKSdf 12 37 03.5 -3.2
LZH SKKS SKKSac 12 38 47.6 -5.1
LZH SS SS 12 49 05.2 +0.3
LZH PP PP
comp=Z,178nm,8.3s
LZH LR LR
comp=N,158nm,18.3s
LZH LR LR
comp=Z,235nm,20.5s
RAMN Ramite 127.90 37 *e*P PKPdf 12 30 10.1 -0.6
comp=Z,39nm,0.8s
LSA Lhasa 128.18 31 PKP PKPdf 12 30 11.7 +0.6
LSA Lhasa 128.18 31 *e*PKPdf PKPdf 12 30 11.8 +0.7
TAPN Taplejung 128.23 36 *e*P PKPdf 12 30 11.2 -0.1
ODAN Odare 128.43 36 *e*P PKPdf 12 30 11.5 -0.2
comp=Z,18nm,0.8s
CASY Casey 128.50 176 *e*PKPdf PKPdf 12 30 11.2 +0.7
CD2 Chengdu 132.11 17 PKP PKPdf 12 30 17.2 -1.4
NJ2 Nanjing 133.19 360 *e*PKP PKPdf 12 30 19.9 -0.7
WHN Wuhan 134.50 5 PKP PKPdf 12 30 15.5 -7.6
GYA Guiyang 137.13 16 PDIF Pdif 12 27 32.0 -3.1
GYA PKP PKPdf 12 30 27.6 -0.5
GYA XPKP 12 31 26.8
GYA PP PP 12 33 19.7 +7.5
GYA PKS 12 34 02.3
GYA SKKS SKKSac 12 39 51.7 -1.7
GYA PP PP
comp=Z,160nm,5.4s
GYA LR LR
comp=N,360nm,22.5s
GYA LR LR
comp=E,280nm,24.2s
GYA LR LR
comp=Z,390nm,25.7s
KMI Kunming 137.16 22 PKP PKPdf 12 30 25.5 -2.6
KMI XPKP 12 31 24.2
KMI PP PP 12 33 15.3 +2.8
KMI SS SS 12 51 05.7 +0.3
KMI PP PP
comp=Z,210nm,4.6s
KMI LR LR
comp=Z,24nm,23.3s
CMAR Chiang Mai Arr 141.44 31 PKhKP 12 30 29.8
comp=Z,1.0nm,0.6s,baz=312,slow=4.2,SNR=5.5
CMAR PKP PKPdf 12 30 34.8 -1.3
comp=Z,1.9nm,0.7s,baz=307,slow=4.2,SNR=5.5
CMAR PP PP 12 33 39.6 +0.5
comp=Z,0.9nm,0.4s,baz=321,slow=6.9,SNR=5.7
CMAR Chiang Mai Arr 141.44 31 PKP PKPdf 12 30 34.8 -1.3
CMAR PP PP 12 33 39.6 +0.5
NST Nakhon Sawan 144.39 32 P PKPdf 12 30 36.0 -5.3
comp=Z,81nm,0.8s
KKTK Khon Kaen 145.10 27 P PKPbc 12 30 42.1 -0.2
comp=Z,679nm,0.8s
CNB Canberra Magne 145.91 228 *e*P PKPab 12 30 45.5 +0.5
ARMA Armidale 146.16 237 *e*P PKPab 12 30 46.8 +0.6
ARMA *e* 12 31 28.0
TOO Toolangi 147.34 222 *e*P PKPbc 12 30 48.9 +0.5
STKA Stephens Creek 153.23 227 *e*P PKPbc 12 31 03.0 +0.3
comp=Z,4.5nm,0.9s
STKA Stephens Creek 153.23 227 PKP PKPdf 12 30 55.0 -0.1
comp=Z,1.9nm,0.8s,baz=125,slow=5.0,SNR=3.7
STKA PKPbc PKPbc 12 31 03.0 +0.3
comp=Z,4.8nm,0.8s,baz=115,slow=4.9,SNR=8.1
STKA pPKPbc pPKPbc 12 31 41.0 -2.3
comp=Z,1.5nm,0.6s,baz=125,slow=7.7,SNR=2.0
STKA Stephens Creek 153.23 227 PKP PKPdf 12 30 55.0 -0.1
STKA PKPbc PKPbc 12 31 03.0 +0.3
STKA pPKPbc pPKPbc 12 31 41.0 -2.3
CTA Charters Tower 153.29 255 *e*P PKPab 12 31 16.6 +0.9
comp=Z,9.3nm,1.1s
CTA Charters Tower 153.29 255 PKPbc PKPbc 12 31 02.6 -0.5
comp=Z,2.1nm,0.5s,baz=189,slow=2.6,SNR=4.3
CTA PKPab PKPab 12 31 15.1 -0.6
comp=Z,13nm,1.0s,baz=94,slow=4.3,SNR=8.8
CTA pPKPbc pPKPbc 12 31 40.5 -3.2
comp=Z,1.3nm,0.3s,baz=72,slow=3.2,SNR=1.7
CTAO Charters Tower 153.29 255 *e*PKIKP PKPbc 12 31 02.4 -0.7
CTAO *e* 12 31 15.4
ASAR Alice Springs 163.31 237 PKP PKPdf 12 31 06.6 -0.9
comp=Z,2.8nm,0.8s,baz=83,slow=1.0,SNR=24
ASAR pPKP pPKPdf 12 31 45.2 -3.2
comp=Z,0.7nm,0.8s,baz=98,slow=3.0,SNR=2.0
ASAR PKPab PKPab 12 31 57.5 -1.4
comp=Z,1.2nm,0.7s,baz=118,slow=3.2,SNR=4.8
WB2 Warramunga Arr 164.31 250⇓*i*P PKPab 12 32 03.6 +0.1
WB2 *e* 12 32 37.7
WRA Warramunga Arr 164.32 250 PKP PKPdf 12 31 07.8 -0.7
comp=Z,8.5nm,1.1s,baz=45,slow=0.5,SNR=27
WRA PKPab PKPab 12 32 03.7 +0.2
comp=Z,11nm,0.8s,baz=101,slow=4.2,SNR=63
WRA pPKPab pPKPab 12 32 38.8 -4.0
comp=Z,3.7nm,0.8s,baz=104,slow=4.4,SNR=4.4
WRA Warramunga Arr 164.32 250 PKIKP PKPdf 12 31 07.8 -0.7
WRA 12 32 03.7

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*NIED **05** 12:27:00, 39.10N×142.50E, h14km, Mw3.7 Best double couple: M₀4.20000×10^14 NP1:φs359.00000°, δ73.00000°, λ24.00000°. NP2:φs261.00000°, δ67.00000°, λ161.00000°.*
*ISCJB **05** 12:27:27.3±1.7, 39.10N±0.04×142.5E±0.1, h22km±9km, mb3.8/3, Error ellipse: s-maj=14.3km s-min=6.5km az=12.6*
*NEIC **05** 12:27:27.1, 39.12N×142.53E, h27km, MG4.1(JMA), After JMA.*
NEIC Recorded [1 JMA] in Iwate and Miyagi Prefectures.
*JMA **05** 12:27:27.1±0.1, 39.12N×142.53E, h27km±1km, M4.1*
JMA Felt I J1.
*IDC **05** 12:27:32.1±2.7, 39.03N×142.43E, h50km±27km, mb3.6/3, mb1 3.7/5, mb1mx3.3/23, mbtmp3.6/5, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/40, Error ellipse: s-maj=43.1km s-min=18.4km az=96.0*
ISC 05 12:27:28.1±1.4**, 39.13N**±0.04×**142.44E**±0.08**, h16**km±7km**, n16, σ1.16**/24**, mb3.8**/3**, 4C-1D, Near east coast of eastern Honshu**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
OFUJ Ofunato 0.60 265 ⇑P **Pg 12 27 39.9 0.0**
OFUJ S **Sg 12 27 48.9 +1.0**
MIYJ Miyakonagasawa 0.65 313 ⇓P **Pg 12 27 40.5 -0.4**
MIYJ S **Sg 12 27 50.1 +0.6**
JTH Tanohata 0.92 331 P **Pb 12 27 44.2 -1.4**
JOM Ohasama 0.95 291 ⇑P **Pb 12 27 45.8 -0.4**
JOM S **Sb 12 27 58.9 +0.4**
JMK Ichinoseki 0.97 260 ⇑P **Pb 12 27 45.8 -0.6**
JMK S **Sb 12 27 59.1 +0.2**
JIO Ouri 1.09 232 ⇑P **Pb 12 27 46.6 -1.9**
JIO *e*S **Sb 12 28 00.4 -2.1**
JKZ Kuzumaki 1.21 315 P **Pn 12 27 49.6 -0.7**
JKZ S **Sb 12 28 05.1 -0.8**
JANG Nango 1.43 330 P **Pn 12 27 52.3 -1.0**
MJAR Matsushiro Arr 4.23 234 P **Pn 12 28 33.1 +1.3**
2.4nm,0.3s,baz=36,slow=13,SNR=21
MAJO Matsushiro 4.23 234 *e*Pn **Pn 12 28 33.2 +1.3**
MAT Matsushiro 4.23 234 P **Pn 12 28 33.1 +1.2**
MAT *e*S **Sn 12 29 24.0 +3.1**
ASAJ Asahikawa 4.98 1 P **Pn 12 28 45.2 +3.1**
0.8nm,0.3s,baz=229,slow=11,SNR=7.3
ASAJ S **Sn 12 29 44.0 +4.7**
1.1nm,0.3s,baz=300,slow=25,SNR=1.9
ASAJ LR LR 12 31 01.7
comp=Z,96nm,19.7s,baz=196,slow=41
MKAR Makanchi Array 43.72 300 P **P 12 35 32.7 +0.4**
0.6nm,0.8s,mb3.4,baz=80,slow=7.8,SNR=4.2
MKAR Makanchi Array 43.72 300 P **P 12 35 32.7 +0.4**
KURK Kurchatov 45.30 307 P **P 12 35 45.8 +0.9**
1.0nm,0.4s,mb4.0,baz=82,slow=8.2,SNR=5.1
WRA Warramunga Arr 59.25 189 P **P 12 37 27.5 -1.2**
0.8nm,0.4s,mb4.1,baz=6.4,slow=7.1,SNR=23

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*SGS **05** 12:30:15.7, 30.27N×36.21E, h2km*
*CSEM **05** 12:30:15.7, 30.27N×36.21E, h0km, ML3.4, After SNSN*
*ISCJB **05** 12:30:18.6±0.7, 29.88N±0.04×36.26E±0.05, h0km, Error ellipse: s-maj=6.1km s-min=5.2km az=174.7*
*GII **05** 12:30:20.4±0.0, 29.90N×36.20E, h0km, ML2.5/3, EXPLOSION*
ISC 05 12:30:18.8±0.8**, 29.88N**±0.04×**36.30E**±0.05**, h0**km**, n21, σ0.95**/26**, Western Arabian Peninsula**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AQBJ Aqaba 1.10 262 Pg **Pg 12 30 39.5 -0.3**
HRFI Mount Harif 1.11 278 Pg **Pg 12 30 39.1 -0.9**
ZFRI Zfri 1.18 305 Pg **Pg 12 30 40.6 -0.9**
EIL Elat 1.19 260 Pg **Pg 12 30 41.3 -0.3**
EIL Sg **Sg 12 30 58.1 +1.0**
MBRI Mt Berech 1.21 266 Pg **Pg 12 30 41.2 -0.7**
MBRI Sg **Sg 12 30 59.0 +1.4**
PRNI Paran 1.22 293 Pg **Pg 12 30 41.3 -0.9**
HQLS 1.22 242 P **Pg 12 30 41.0 -1.3**
HQLS 1.22 242 P **Pg 12 30 41.0 -1.3**
HQLS S **Sg 12 30 59.3 +1.2**
JLOS 1.34 212 P **Pg 12 30 44.2 -0.3**
KRMI Paran Flat 1.39 280 Pg **Pg 12 30 44.2 -1.2**
KRMI Sg **Sg 12 31 02.8 -0.6**
RMNI Mount Ramon 1.51 299 Pn **Pn 12 30 46.6 -0.5**
MZDA Masada 1.64 331 Pn **Pn 12 30 49.1 +0.2**
TBKS Tabuk 1.67 173 P **Pn 12 30 49.1 -0.1**
BDAS Al Bad‘ 1.79 216 S **Sn 12 31 16.1 +1.9**
BDAS Al Bad‘ 1.79 216 P **Pn 12 30 50.2 -0.7**
YTIR Yattir 1.80 326 Pn **Pn 12 30 51.2 +0.2**
RTMI Retamim 1.82 311 Pn **Pn 12 30 52.0 +0.7**
DSI Dead Sea 1.86 335 Pn **Pn 12 30 52.9 +1.0**
DSI Sn **Sn 12 31 17.8 +1.6**
RSHS 2.05 220 P **Pn 12 30 53.3 -1.2**
HMDT Nahal Hemdat 2.46 344 Pn **Pn 12 31 04.2 +4.1**
BIDS Bi’r al Bayda’ 3.06 169 P **Pn 12 31 09.4 +1.0**

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*DDA **05** 12:44:12.3, 39.27N×43.00E, h7km±5km, Md2.9*
*CSEM **05** 12:44:17.6±0.1, 39.58N×42.78E, h5km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.2km az=20.0*
*ISCJB **05** 12:44:19.0±0.8, 39.49N±0.05×42.84E±0.08, h4km±6km, Error ellipse: s-maj=11.1km s-min=7.5km az=21.3*
*ISK **05** 12:44:18.8, 39.54N×42.83E, h5km, MD2.7*
ISC 05 12:44:17.8±1.2**, 39.41N**±0.06×**42.95E**±0.07**, h6**km±6km**, n8, σ1.31**/14**, Turkey**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
TUTA Tutak 0.10 265 *i* P **Pg 12 44 15.9 -4.2**
TUTA *i* S **Sg 12 44 20.2 -1.4**
AGRB Hanur-Agry 0.17 12 PG **Pg 12 44 21.9 +0.8**
AGRB *e*SG **Sg 12 44 24.5 +1.0**
DYDN Diyadin 0.59 77 *i* P **Pg 12 44 24.1 -5.0**
DYDN *i* S **Sg 12 44 33.5 -3.3**
VANB Van 0.89 157 *e*PG **Pg 12 44 40.1 +5.3**
VANB *e*SG **Sg 12 44 55.2 +9.0**
HOMI Horasan 1.02 309 *i* P **Pg 12 44 33.0 -4.4**
HOMI *i* S **Sg 12 44 51.4 +0.7**
VANT Van 1.02 160 *e*PN **Pn 12 44 41.5 +2.9**
KARS Kars 1.21 5 *e*PN **Pn 12 44 41.0 -0.1**
KARS *e*SN **Sn 12 44 56.5 -1.2**
EZM Erzurum 1.32 292 *e*PN **Pn 12 44 42.3 -0.3**

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*BJI **05** 12:55:01.4, 5.66S×148.56E, h190km, mB4.9, mb4.8*
*ISCJB **05** 12:55:02.0±0.2, 5.62S±0.03×148.41E±0.04, h183km, mb4.9/82, Error ellipse: s-maj=5.9km s-min=4.0km az=178.0*
*DJA **05** 12:55:02, 5.53S×148.65E, h154km, Mw5.4/4*
*MOS **05** 12:55:03.0±0.8, 5.59S×148.42E, h193km, mb4.7/18, Error ellipse: s-maj=11.3km s-min=6.9km az=94.1*
*GCMT **05** 12:55:03.5±0.4, 5.75S×148.47E, h184km±3km, MW5.0/63, Moment Tensor Solution. s16,c17; s63,c82; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.63±.17; Mθθ0.45±.20; Mφφ3.18±.23; Mrθ0.31±.15; Mθφ-1.28±.16; Mφr1.64±.19; Best double couple: M₀4.02000×10^16 NP1:φs326.00000°, δ36.00000°, λ-110.00000°. NP2: φs171.00000°, δ57.00000°, λ-76.00000°. Principal axes: T 3.9560, Plg11.0000°, Azm251.0000°; N 0.1290, Plg12.0000°, Azm343.0000°; P -4.0830, Plg74.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **05** 12:55:03.6±0.5, 5.67S×148.48E, h184km±4km, mb4.6/16, mb1 4.7/20, mb1mx4.7/21, mbtmp4.7/20 Error ellipse: s-maj=10.5km s-min=7.2km az=92.0*
*NEIC **05** 12:55:03.5±0.1, 5.60S×148.40E, mb5.0/52, Error ellipse: s-maj=5.6km s-min=3.7km az=93.0*
ISC 05 12:55:03.9±0.2**, 5.64S**±0.02×**148.41E**±0.04**, h185**km**, h185**km±1.5km**: pP-P, n185, σ0.85**/175**, mb4.9**/82**, 10C-3D, New Britain region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PMG Port Moresby 3.94 198 *e*P **Pn 12 56 04.3 -0.1**
COEN Coen 9.74 212 *e*Pn **Pn 12 57 21.1 +1.1**
308nm,0.9s
COEN *e*Sn **Sn 12 59 06.0 -2.7**
HNR Honiara 12.04 109 P **Pn 12 57 48.6 -1.2**
31nm,0.3s,baz=227,slow=2.2,SNR=55
HNR S **Sn 13 00 14.0 +10**
16nm,0.3s,baz=205,slow=17,SNR=5.5
HNR Honiara 12.04 109 *e*P **Pn 12 57 48.6 -1.1**
HNR pmax pmax
comp=Z,595nm,0.8s
HNR Honiara 12.04 109 *e*Pn **Pn 12 57 48.6 -1.1**
comp=Z,595nm,0.8s
CTA Charters Tower 14.51 188 *e*P **Pn 12 58 21.8 +1.0**
comp=Z,10nm,0.6s
CTA Charters Tower 14.51 188 P **Pn 12 58 21.6 +0.7**
comp=Z,0.9nm,0.3s,baz=11,slow=12,SNR=12
CTA S **Sn 13 01 02.0 -0.8**
comp=Z,0.9nm,0.3s,baz=279,slow=20,SNR=2.6
CTA Charters Tower 14.51 188 *e*P **Pn 12 58 21.8 +1.0**
CTA pmax pmax
comp=Z,10.0nm,0.6s
CTAO Charters Tower 14.51 188 *e*P **Pn 12 58 22.0 +1.2**
KAKA Kakadu 17.26 245 *e*P x 12 58 34.6
comp=Z,1μm,0.6s
GUMO Guam 19.43 350 P **P 12 59 16.5 +0.2**
comp=Z,5.4nm,0.3s,baz=48,slow=20,SNR=2.9
GUMO Guam 19.43 350 *e*P **P 12 59 17.2 +0.9**
GUMO pmax pmax
comp=Z,198nm,1.1s
GUMO Guam 19.43 350 *e*P **P 12 59 17.2 +0.9**
comp=Z,198nm,1.1s
WRAB Tennant Creek 19.72 223 P **P 12 59 20.0 +0.6**
comp=Z,2μm,0.5s
WRAB Tennant Creek 19.72 223 *e*P **P 12 59 20.2 +0.8**
WRAB *e*S **S 13 02 51.3 -0.5**
WRAB pmax pmax
comp=Z,240nm,0.8s
WRAB Tennant Creek 19.72 223 *e*P **P 12 59 20.2 +0.8**
comp=Z,240nm,0.8s
WRAB *e*S **S 13 02 51.3 -0.5**
WB2 Warramunga Arr 19.73 223⇑*i*P **P 12 59 20.2 +0.7**
WB2 *e*S **S 13 02 51.5 -0.4**
WB2 *e*SCS ScS 13 10 35.0 +3.3
WRA Warramunga Arr 19.73 223 P **P 12 59 20.2 +0.6**
comp=Z,34nm,0.3s,baz=48,slow=11,SNR=487
WRA S **S 13 02 52.3 +0.2**
comp=Z,2.1nm,0.3s,baz=40,slow=20,SNR=14
EIDS Eidsvold 19.78 173 *e*P **P 12 59 21.0 +0.9**
comp=Z,36nm,0.8s
EIDS *e*S **S 13 02 56.6 +3.7**
ASAR Alice Springs 22.73 216 P **P 12 59 51.3 +1.1**
comp=Z,50nm,0.5s,mb5.2,baz=52,slow=8.9,SNR=541
ASAR S **S 13 03 46.2 +1.4**
comp=Z,24nm,1.0s,baz=48,slow=14,SNR=7.6
NOUC Port Laguerre 23.81 135 *e*P **P 12 59 58.1 -1.9**
DZM Mont Dzumac 23.89 135 *e*P **P 13 00 00.4 -0.4**
DZM Mont Dzumac 23.89 135 *e*P **P 13 00 00.7 -0.1**
comp=Z,230nm,0.9s,mb5.7
DZM *e*PcP PcP 13 03 39.3 +0.7
ARMA Armidale 24.83 173⇓*i*P **P 13 00 09.9 +0.7**
ARMA *e*pP 13 00 47.6
BATI Baumata 24.92 258 P **P 13 00 11.1 +0.8**
comp=Z,39nm,0.6s,mb5.1,baz=154,slow=3.8,SNR=12
STKA Stephens Creek 26.87 193 *e*P **P 13 00 27.3 -0.2**
comp=Z,8.9nm,1.0s,mb4.3
STKA *e*pP pP 13 01 04.1 -1.1
STKA Stephens Creek 26.87 193 P **P 13 00 27.6 +0.1**
comp=Z,3.0nm,0.4s,mb4.2,baz=28,slow=14,SNR=6.0
STKA pP pP 13 01 04.8 -0.4
comp=Z,18nm,0.7s,baz=11,slow=9.2,SNR=5.5
CAN Canberra 29.54 179 *e*P **P 13 00 51.9 +0.7**
CAN pmax pmax
comp=Z,14nm,0.6s,mb4.9
CAN Canberra 29.54 179 *e*P **P 13 00 51.9 +0.8**
comp=Z,14nm,0.6s,mb4.9
CNB Canberra Magne 29.54 178 *e*P **P 13 00 52.0 +0.8**
FORT Forrest 31.48 215 *e*P **P 13 01 08.5 +0.2**
comp=Z,19nm,0.6s,mb5.0
MBWA Marble Bar 31.79 238 *e*P **P 13 01 10.8 -0.3**
comp=Z,37nm,0.7s,mb5.2
TOO Toolangi 31.89 184 *e*P **P 13 01 12.6 +0.8**
JOW Kunigami 37.71 330 P **P 13 02 03.0 +1.2**
comp=Z,40nm,0.5s,mb5.3,baz=151,slow=14,SNR=14
KLBR Kellerberrin 38.60 224 *e*P **P 13 02 08.8 -0.4**
comp=Z,26nm,0.8s,mb4.9
KLBR *e* 13 02 19.9
KLBR *e* 13 03 39.3
MUN Mundaring 39.91 225 *e*P **P 13 02 20.4 +0.4**
AFI Afiamalu 40.03 105 P **P 13 02 21.1 -0.1**
comp=Z,41nm,0.9s,mb5.0,baz=79,slow=16,SNR=3.8
URZ Urewera 41.63 145 P **P 13 02 32.8 -1.2**
comp=Z,25nm,0.7s,mb4.9,baz=328,slow=2.9,SNR=21
URZ PcP PcP 13 04 25.0 -2.4
comp=Z,17nm,0.7s,baz=312,slow=2.4,SNR=4.8
RPZ Rata Peaks 42.84 156 P **P 13 02 43.9 +0.3**
comp=Z,33nm,0.6s,mb5.2,baz=288,slow=1.6,SNR=29
MJAR Matsushiro Arr 43.04 348 P **P 13 02 45.6 +0.3**
comp=Z,13nm,0.7s,mb4.7,baz=169,slow=8.1,SNR=33
MJAR pP pP 13 03 26.4 +1.1
comp=Z,4.2nm,0.9s,baz=179,slow=6.8,SNR=1.7
MAJO Matsushiro 43.04 348 *e*P **P 13 02 45.5 +0.2**
MAJO pmax pmax
comp=Z,38nm,1.0s,mb5.0
MAJO Matsushiro 43.04 348 *e*P **P 13 02 45.5 +0.1**
comp=Z,38nm,1.0s,mb5.0
MAT Matsushiro 43.04 348 P **P 13 02 45.3 0.0**
MAT *e*S **S 13 08 50.0 -7.0**
NJ2 Nanjing 46.88 325 *e*P **P 13 03 16.8 +1.1**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb4.9
KSRS Korea Array 46.94 338 P **P 13 03 17.1 +1.1**
comp=Z,31nm,0.7s,mb5.1,baz=153,slow=8.3,SNR=118
INCN Inchon 47.47 336 *e*P **P 13 03 20.9 +0.7**
comp=Z,58nm,0.6s,mb5.4
WHN Wuhan 48.55 320 P **P 13 03 23.8 -4.8**
GYA Guiyang 51.51 310 P **P 13 03 51.7 +0.7**
GYA AP pP 13 04 34.0 +1.7
GYA XP sP 13 04 55.1 +2.3
GYA PCP PcP 13 05 04.7 +2.2
GYA PP PP 13 05 51.6 +1.3
GYA SCP ScP 13 08 39.7 -2.1
GYA PCS PcS 13 08 59.6 -1.2
GYA S **S 13 10 55.9 -1.3**
GYA XS sS 13 12 10.7 +1.3
GYA SS SS 13 14 33.2 -2.8
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
GYA AMB AMB
comp=Z,190nm,6.9s
GYA LR LR
comp=N,430nm,19.0s
GYA LR LR
comp=E,640nm,18.4s
GYA LR LR

comp=Z,540nm,18.8s
YSS Yuzh-Sakhalins 52.60 355⇑*e*P P **13 03 58.9 +0.3**
YSS pmax pmax
comp=Z,55nm,1.3s,mb5.1
YSS Yuzh-Sakhalins 52.60 355 *e*P **P** **13 03 59.0 +0.4**
comp=Z,52nm,1.2s,mb5.1
MDJ Mudanjiang 52.81 343 P **P** **13 04 01.2 +1.0**
MDJ AP pP 13 04 41.3 -0.5
MDJ XP sP 13 05 01.5 -0.7
MDJ PP PP 13 06 02.6 +0.9
MDJ SCP ScP 13 08 43.6 -3.3
MDJ S **S** **13 11 14.6 +0.4**
MDJ XS sS 13 12 23.9 -2.8
MDJ SCS ScS 13 13 30.8 0.0
MDJ SS SS 13 14 54.9 -1.0
MDJ AMB AMB
comp=Z,32nm,0.9s,mb5.0
MDJ LR LR
comp=N,29nm,19.1s
MDJ LR LR
comp=E,24nm,18.5s
MDJ LR LR
comp=Z,48nm,16.8s
MDJ Mudanjiang 52.81 343 *e*P **P** **13 04 00.8 +0.7**
comp=Z,37nm,1.1s,mb5.0
CN2 Changchun 53.41 339 *e*P **P** **13 04 04.9 +0.4**
CN2 *e*AP pP 13 04 47.5 +1.3
CN2 *e*S **S** **13 11 21.3 -1.0**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
KMI Kunming 53.90 307 P **P** **13 04 08.6 +0.1**
KMI AP pP 13 04 51.6 +1.3
KMI XP sP 13 05 13.0 +2.4
KMI PP PP 13 06 16.0 +4.1
KMI S **S** **13 11 31.3 +1.7**
KMI XS sS 13 12 44.8 +2.4
KMI SS SS 13 15 15.5 +1.8
KMI AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
KMI AMB AMB
comp=Z,110nm,4.2s
KMI LR LR
comp=N,167nm,17.2s
KMI LR LR
comp=E,122nm,15.9s
KMI LR LR
comp=Z,89nm,19.1s
BJI Beijing 54.29 330 P **P** **13 04 06.2 -4.8**
XAN Xi'an 54.31 319 P **P** **13 04 10.9 -0.4**
XAN AP pP 13 04 51.6 -1.5
XAN PCP PcP 13 05 12.7 -0.3
XAN XP sP 13 05 15.0 +1.6
XAN PP PP 13 06 15.1 -0.3
XAN SCP ScP 13 08 51.6 -2.2
XAN PCS PcS 13 09 11.4 -1.3
XAN S **S** **13 11 30.3 -4.5**
XAN XS sS 13 12 45.0 -2.7
XAN SCS ScS 13 13 37.0 -5.0
XAN SS SS 13 15 15.0 -4.9
XAN AMB AMB
comp=Z,11nm,1.0s,mb4.5
XAN AMB AMB
comp=Z,145nm,4.9s
XAN LR LR
comp=E,41nm,25.9s
XAN LR LR
comp=Z,69nm,21.0s
CMAR Chiang Mai Arr 54.33 297 P **P** **13 04 12.1 +0.4**
comp=Z,0.7nm,0.5s,baz=120,slow=5.9,SNR=4.3
CMAR pP pP 13 04 54.0 +0.5
comp=Z,8.5nm,0.8s,baz=119,slow=5.4,SNR=14
CMAR Chiang Mai Arr 54.33 297⇑*e*P **P** **13 04 12.1 +0.4**
HABR Khabarovsk 55.15 349*de*P **P** **13 04 18.0 +1.0**
HABR *e**PP pP 13 04 57.2 -1.7
HABR *e**SP sP 13 05 18.5 -0.7
HABR *e* 13 06 20.1
HABR *e*S **S** **13 11 47.1 +1.7**
HABR *e* 13 13 44.0
HABR pmax pmax
comp=Z,170nm,1.5s,mb5.5
CD2 Chengdu 56.04 313 P **P** **13 04 25.3 +1.5**
HHC Hu-ho-hao-te 57.28 327 *e*P **P** **13 04 32.8 +0.5**
HHC AP pP 13 05 12.8 -1.7
HHC PCP PcP 13 05 24.7 +0.3
HHC XP sP 13 05 33.0 -1.7
HHC PP PP 13 06 44.4 +2.7
HHC PCS PcS 13 09 24.4 -1.1
HHC S **S** **13 12 13.8 0.0**
HHC XS sS 13 13 24.0 -3.4
HHC SCS ScS 13 13 59.8 -3.3
HHC SS SS 13 16 08.1 +1.7
HHC AMB AMB
comp=Z,12nm,1.0s,mb4.7
HHC AMB AMB
comp=Z,136nm,5.2s
LZH Lanzhou 58.87 318 *e*P **P** **13 04 44.5 +1.1**
LZH AP pP 13 05 28.3 +2.4
LZH XP sP 13 05 49.0 +3.0
LZH PP PP 13 06 59.2 +3.4
LZH *e*S **S** **13 12 34.5 -0.1**
LZH XS sS 13 13 50.6 +2.1
LZH *e*SS SS 13 16 33.1 +1.6
LZH AMB AMB
comp=Z,21nm,1.5s,mb4.8
LZH AMB AMB
comp=Z,145nm,7.2s
LZH LR LR
comp=E,428nm,16.5s
LZH LR LR
comp=Z,607nm,18.3s
PETK Petropavlovsk- 59.05 7 P **P** **13 04 45.4 +1.1**
comp=Z,70nm,0.7s,mb5.6,baz=153,slow=6.2,SNR=225
PETK Petropavlovsk- 59.05 7 P **P** **13 04 45.4 +1.1**
PET Petropavlovsk 59.08 7 *i* P **P** **13 04 45.1 +0.6**
PET pmax pmax
comp=Z,85nm,0.9s,mb5.6
PET Petropavlovsk 59.08 7 *e*P **P** **13 04 45.1 +0.6**
comp=Z,63nm,0.9s,mb5.5
HIA Hailar 60.12 339 *e*P **P** **13 04 52.3 +0.6**
HIA *e**PP pP 13 05 34.0 -0.3
HIA pmax pmax
comp=Z,53nm,1.1s
HIA Hailar 60.12 339 *e*P **P** **13 04 52.3 +0.6**
comp=Z,53nm,1.1s,mb5.3
HIA *e*pP pP 13 05 34.0 -0.3
TIAR Tiarei 61.87 107 *e*P **P** **13 05 04.9 +0.8**
comp=Z,408nm,0.8s
TVO Taravao 61.97 107 *e*P **P** **13 05 05.6 +0.8**
PMOR Pomariorio Ree 63.17 104 *e*P **P** **13 05 13.4 +0.6**
GTA Gaotai 63.38 319 P **P** **13 05 14.1 +0.4**
GTA AP pP 13 05 58.0 +1.3
GTA XP sP 13 06 19.2 +2.5
GTA S **S** **13 13 31.1 -0.4**
GTA XS sS 13 14 48.4 +2.0
GTA AMB AMB
comp=Z,6.0nm,1.0s,mb4.4
GTA AMB AMB
comp=Z,114nm,7.2s
GTA LR LR
comp=N,156nm,15.6s
GTA LR LR
comp=E,89nm,17.7s
GTA LR LR
comp=Z,157nm,16.5s
VAH Vaihoa 63.43 104 *e*P **P** **13 05 14.8 +0.3**
ULN Ulaanbaatar 64.48 330⇑*e*P **P** **13 05 21.5 +0.8**
ULN *i* *PP pP 13 06 04.9 +1.0
ULN Ulaanbaatar 64.48 330 *e*P **P** **13 05 21.3 +0.6**
comp=Z,11nm,0.9s,mb4.7
ULN *e*pP pP 13 06 03.2 -0.7
SONM Songino Array 64.79 330 P **P** **13 05 23.3 +0.7**
comp=Z,3.4nm,0.5s,mb4.5,baz=143,slow=5.4,SNR=38
SONM pP pP 13 06 05.3 -0.6
comp=Z,8.9nm,0.9s,baz=141,slow=7.7,SNR=6.9
LSA Lhasa 65.16 306 P **P** **13 05 25.4 -0.1**
LSA Lhasa 65.16 306 *e*P **P** **13 05 25.6 +0.1**
LSA *e**PP pP 13 06 09.0 +0.3
LSA *e**SP sP 13 06 28.7 0.0
LSA pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
LSA Lhasa 65.16 306 *e*P **P** **13 05 25.6 +0.1**
comp=Z,6.3nm,0.6s,mb4.6
LSA *e*pP pP 13 06 09.0 +0.3
LSA *e*sP sP 13 06 28.7 0.0

CASY Casey 65.98 196 *e*P **P** **13 05 29.7 -0.3**
comp=Z,14nm,0.6s,mb5.0
TAPN Taplejung 67.14 303 *e*P **P** **13 05 37.5 -0.6**
comp=Z,9.1nm,0.6s,mb4.8
ODAN Odare 67.24 302 *e*P **P** **13 05 37.9 -0.9**
comp=Z,13nm,0.7s,mb4.9
RAMN Ramite 67.94 302 *e*P **P** **13 05 42.3 -0.8**
comp=Z,5.9nm,0.4s,mb4.7
ZAK Zakamensk 68.01 331 *e*P **P** **13 05 43.4 +0.4**
ZAK pmax pmax
comp=Z,12nm,1.0s,mb4.6
SEY Seymchan 68.45 2⇑*e*P **P** **13 05 45.7 +0.2**
JIRN Jiri 68.51 302 *e*P **P** **13 05 45.9 -0.8**
comp=Z,9.0nm,0.6s,mb4.7
TLY Talaya 68.69 332 *e*P **P** **13 05 48.2 +1.0**
TLY pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
TLY Talaya 68.69 332 *e*P **P** **13 05 47.7 +0.5**
comp=Z,6.9nm,0.6s,mb4.6
GUN Gumba 68.85 303 *e*P **P** **13 05 48.3 -0.5**
comp=Z,16nm,0.4s,mb5.1
YAK Yakutsk 69.01 351 *e*P **P** **13 05 48.6 -0.4**
YAK pmax pmax
comp=Z,29nm,1.3s,mb4.8
YAK pmax pmax
comp=N,13nm,1.1s
YAK Yakutsk 69.01 351 *e*P **P** **13 05 48.0 -1.0**
comp=N,16nm,0.6s,mb4.9
BOD Bodaibo 69.09 341 *e*P **P** **13 05 48.7 -0.9**
BOD pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
KKN Kakani 69.32 302 *e*P **P** **13 05 50.8 -0.9**
comp=Z,13nm,0.7s,mb4.8
KKN Kakani 69.32 302 *e*P **P** **13 05 50.8 -0.9**
KKN pmax pmax
comp=Z,13nm,0.7s,mb4.8
DMN Daman 69.41 302 *e*P **P** **13 05 51.7 -0.5**
GKN Gorkha 69.93 302 *e*P **P** **13 05 54.5 -0.9**
comp=Z,16nm,0.6s,mb4.9
UNV Unalaska Valle 70.26 26 *e*P **P** **13 05 57.1 +0.3**
comp=Z,54nm,0.7s,mb5.4
KOLN Koldanda 70.73 302 *e*P **P** **13 05 59.3 -1.0**
comp=Z,15nm,0.7s,mb4.8
DANN Dangsing 70.77 302 *e*P **P** **13 05 58.9 -1.6**
comp=Z,14nm,0.7s,mb4.8
VNDA Vanda 72.19 177 P **P** **13 06 08.5 +0.4**
comp=Z,16nm,0.8s,mb4.8,baz=330,slow=6.4,SNR=84
VNDA pP pP 13 06 50.0 -2.2
comp=Z,3.2nm,0.8s,baz=296,slow=7.5,SNR=2.6
WMQ Urumqi 73.44 319 *e*P **P** **13 06 16.4 +0.4**
WMQ AP pP 13 07 00.8 +0.5
WMQ AMB AMB
comp=Z,8.0nm,1.0s,mb4.4
WMQ AMB AMB
comp=Z,118nm,4.0s
SDPT Sand Point 73.93 28 *e*P **P** **13 06 19.2 +0.6**
comp=Z,65nm,0.5s,mb5.6
BILL Bilibino 74.58 7⇑*i* P **P** **13 06 22.3 +0.2**
BILL pmax pmax
comp=Z,15nm,0.8s,mb4.7
BILL Bilibino 74.58 7 *e*P **P** **13 06 22.5 +0.4**
comp=Z,13nm,0.8s,mb4.6
CHGN Chignik 75.44 27 *e*P **P** **13 06 27.7 +0.5**
MK31 Makanchi Array 78.12 320 *e*P **P** **13 06 41.7 -0.8**
MK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
MK31 Makanchi Array 78.12 320 *e*P **P** **13 06 41.6 -0.9**
MK31 *e*pP pP 13 07 28.0 +0.7
MKAR Makanchi Array 78.12 320 P **P** **13 06 41.9 -0.6**
comp=Z,7.0nm,0.7s,mb4.4,baz=99,slow=7.7,SNR=48
MKAR pP pP 13 07 25.5 -1.8
comp=Z,3.4nm,0.9s,baz=113,slow=5.9,SNR=3.5
MKAR Makanchi Array 78.12 320⇑*e*P **P** **13 06 41.9 -0.6**
MKAR Makanchi Array 78.12 320 P **P** **13 06 41.9 -0.6**
MKAR pP pP 13 07 25.5 -1.8
TIXI Tiksi 78.20 354⇑*e*P **P** **13 06 40.8 -1.6**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
TIXI Tiksi 78.20 354 *e*P **P** **13 06 40.7 -1.7**
comp=Z,6.2nm,0.7s,mb4.3
OHAK Old Harbor 78.31 28 *e*P **P** **13 06 44.1 +0.8**
comp=Z,23nm,0.6s,mb5.0
NVS Novosibirsk 80.68 328 *e*P **P** **13 06 49.2 -6.9**
NVS *i* pP 13 07 38.4 -2.8
NVS pmax pmax
comp=N,8.0nm,1.7s
NVS pmax pmax
comp=E,7.0nm,1.7s
NVS pmax pmax
comp=Z,12nm,1.7s,mb4.2
TKM2 Tokmak 2 81.39 315 *e*P **P** **13 06 59.5 -0.6**
TKM2 pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
TKM2 Tokmak 2 81.39 315 P **P** **13 06 59.9 -0.3**
SNR=14
TKM2 Tokmak 2 81.39 315 *e*P **P** **13 06 59.5 -0.6**
comp=Z,6.3nm,0.5s,mb4.5
KZA Kyzart 81.41 314 P **P** **13 07 01.1 +0.8**
SNR=22
SEW Seward 81.46 27 *e*P **P** **13 07 00.3 +0.2**
comp=Z,74nm,0.9s,mb5.3
PPLA Purkeypile 81.65 23 *e*P **P** **13 07 01.1 0.0**
comp=Z,20nm,0.8s,mb4.8
KURK Kurchatov 81.77 323 P **P** **13 07 01.9 0.0**
comp=Z,56nm,0.5s,mb5.5,SNR=7.6
KURK Kurchatov 81.77 323 *e*P **P** **13 07 01.0 -0.9**
KURK *e**PP pP 13 07 44.8 -2.3
KURK pmax pmax
comp=Z,11nm,1.1s,mb4.4
KURK Kurchatov 81.77 323 *e*P **P** **13 07 01.0 -1.0**
comp=Z,11nm,1.1s,mb4.4
KURK *e*pP pP 13 07 44.8 -2.3
KBK Karagaybulak 81.78 314 P **P** **13 07 01.8 -0.4**
SNR=5.4
AAK Ala-Archa 82.09 314 P **P** **13 07 03.7 -0.1**
comp=Z,60nm,0.8s,mb5.3,SNR=7.6
AAK Ala-Archa 82.09 314⇑*e*P **P** **13 07 03.7 -0.1**
AAK *i* *PP pP 13 07 50.0 +0.9
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
AAK Ala-Archa 82.09 314 *e*P **P** **13 07 03.5 -0.4**
comp=Z,6.8nm,0.7s,mb4.4
AAK *e*pP pP 13 07 48.5 -0.6
CHUM Lake Minchumin 82.09 23 *e*P **P** **13 07 03.0 -0.4**
comp=Z,62nm,0.6s,mb5.4
USP Ospenovka 82.26 315 P **P** **13 07 04.2 -0.5**
SNR=9.8
PMR Palmer 82.28 25 *e*P **P** **13 07 04.2 -0.2**
PMR pmax pmax
comp=Z,49nm,0.9s,mb5.1
PMR Palmer 82.28 25 *e*P **P** **13 07 04.2 -0.2**
comp=Z,49nm,0.9s,mb5.1
KTH Kantishna Hill 82.47 23 *e*P **P** **13 07 04.4 -0.9**
comp=Z,46nm,0.8s,mb5.2
AML Almayashu 82.54 314 P **P** **13 07 06.5 +0.3**
SNR=9.9
AML Almayashu 82.54 314 *e*P **P** **13 07 06.5 +0.3**
comp=Z,13nm,0.9s,mb4.7
EKS2 Erkin-Say 82.61 314 P **P** **13 07 06.6 0.0**
SNR=12
EKS2 Erkin-Say 82.61 314 *e*P **P** **13 07 06.1 -0.4**
comp=Z,6.8nm,0.7s,mb4.5
TRF Thorofare Moun 82.67 23 *e*P **P** **13 07 05.4 -0.9**
comp=Z,26nm,0.5s,mb5.2
BPAW Bear Paw Mtn. 82.71 23 *e*P **P** **13 07 06.0 -0.6**
comp=Z,17nm,0.6s,mb5.0
MAW Mawson 83.12 203 P **P** **13 07 08.4 -0.3**
comp=Z,3.7nm,0.5s,mb4.3,baz=76,slow=6.5,SNR=13
MCK McKinley 83.34 23 *e*P **P** **13 07 08.3 -1.5**
MCK pmax pmax
comp=Z,101nm,0.9s,mb5.5
MCK McKinley 83.34 23 *e*P **P** **13 07 08.3 -1.4**
comp=Z,101nm,0.9s,mb5.5
COLA College 84.28 23 *e*P **P** **13 07 12.9 -1.6**
COLA pmax pmax
comp=Z,46nm,0.6s,mb5.4
COLA College 84.28 23 *e*P **P** **13 07 12.9 -1.6**
comp=Z,46nm,0.6s,mb5.4
COLD Coldfoot 84.51 20 *e*P **P** **13 07 15.4 -0.2**
comp=Z,28nm,0.5s,mb5.2
KK31 Karatay Array 85.05 314 *i* P **P** **13 07 17.8 -1.1**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
MENT Mentasta 85.14 25 *e*P **P** **13 07 19.6 +0.7**
EGAK Eagle 86.87 24 *e*P **P** **13 07 26.9 -0.4**
comp=Z,67nm,1.1s,mb5.4
BVA0 Borovoye Array 87.31 324 *i* P **P** **13 07 27.7 -2.0**
BVA0 pmax pmax
comp=Z,2.0nm,1.1s,mb3.9
DAWY Dawson 87.36 25 *e*P **P** **13 07 29.6 -0.1**
BRVK Borovoye 87.38 324 *e*P **P** **13 07 28.0 -2.0**
BRVK pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
BRVK Borovoye 87.38 324 *e*P **P** **13 07 28.0 -2.0**
comp=Z,6.7nm,1.1s,mb4.4
SKAG Skagway 87.89 30 *e*P **P** **13 07 33.4 +1.1**
comp=Z,49nm,1.0s,mb5.3
AB31 Akbulak array 93.23 319 P **P** **13 07 55.0 -2.4**
AB31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
ARU Arti 94.57 326*d* *i* P **P** **13 08 00.0 -3.3**
ARU 13 11 50.3
ARU S SKSac 13 18 16.5 -4.3
ARU SP SP 13 20 13.2 -3.3
ARU SS SS 13 25 20.4 -6.9
ARU pmax pmax
comp=Z,10.0nm,2.5s,mb4.6
NVAR Mina Array Bea 96.04 52 P **P** **13 08 10.7 +0.2**
comp=Z,1.6nm,0.7s,mb4.4,baz=255,slow=6.1,SNR=10
YKA Yellowknife Ar 98.20 28 P **P** **13 08 18.8 -0.8**
comp=Z,3.0nm,0.7s,mb4.8,baz=274,slow=5.0,SNR=47
YKA pP pP 13 09 04.4 -1.4
comp=Z,1.2nm,1.0s,baz=268,slow=4.1,SNR=2.7
YKA PKKPbc PKKPbc 13 24 48.8 -5.0
comp=Z,1.7nm,0.6s,baz=89,slow=2.6,SNR=41
YKA Yellowknife Ar 98.20 28 P **P** **13 08 18.8 -0.8**
YKA *PP pP 13 09 04.4 -1.4
SNAA Sanae 100.57 189 *e*Pdiff Pdif 13 08 29.6 -0.9
SNAA Sanae 100.57 189⇑*i*P Pdif 13 08 28.7 -1.7
VNA2 Neumayer--Watz 101.90 188 *e*Pdiff Pdif 13 08 36.1 -0.2
baz=154,slow=2.4
VNA3 Neumayer Olymp 101.91 187 *e*Pdiff Pdif 13 08 35.4 -0.9
VNA1 Neumayer--Stat 102.27 188 *e*Pdiff Pdif 13 08 37.6 -0.4
PDAR Pinedale Array 102.64 48 P Pdif 13 08 39.0 -0.6
comp=Z,1.7nm,0.9s,baz=252,slow=2.5,SNR=10
PDAR PKKPbc PKKPbc 13 24 38.4 -1.9
comp=Z,0.3nm,0.4s,baz=81,slow=5.3,SNR=5.7
ARCES ARCESS Array B 106.35 342 Pdiff Pdif 13 08 53.9 -2.2
comp=Z,2.5nm,0.8s,baz=69,slow=6.6,SNR=7.3
ARCES PKiKP PKiKP 13 13 04.9 -1.0
comp=Z,1.9nm,0.8s,baz=113,slow=2.1,SNR=7.1
ARCES PKKPbc PKKPbc 13 24 25.7 -4.4
comp=Z,1.1nm,0.4s,baz=248,slow=2.5,SNR=14
AKASG Malin Array Be 112.58 323 PKKPbc PKKPbc 13 24 05.7 -3.9
comp=Z,1.0nm,0.4s,baz=267,slow=3.8,SNR=5.7
NB2 NORSAR Subarra116.15 338 PKKP PKKPbc 13 23 53.6 -4.1
comp=Z,1.2nm,0.8s,baz=229,slow=3.5
NOA NORSAR Array B 116.15 338 PKP PKPdf 13 13 23.5 -1.3
comp=Z,1.0nm,0.8s,baz=42,slow=1.3,SNR=2.8
NOA PKKPbc PKKPbc 13 23 54.5 -3.2
comp=Z,1.3nm,0.7s,baz=37,slow=3.7,SNR=4.9
BRG Berggiesshubel 121.15 328 *e*PKIKP PKPdf 13 13 34.1 -0.6
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG Berggiesshubel 121.15 328 *e*(P) PKPdf 13 13 34.1 -0.6
comp=Z,7.2nm,1.1s
CLL Collm 121.39 329 *e*PKPdf PKPdf 13 13 34.0 -1.1
PLCA Paso Flores 121.64 146 PKP PKPdf 13 13 35.9 -0.1
comp=Z,4.8nm,0.7s,baz=226,slow=2.6,SNR=19
PLCA Paso Flores 121.64 146 *e*PKP PKPdf 13 13 35.7 -0.3
GERES GERESS Array B 122.40 326 PKP PKPdf 13 13 35.8 -1.4
comp=Z,1.5nm,0.6s,baz=52,slow=1.8,SNR=8.0
GERES PKKPbc PKKPbc 13 23 32.2 -2.3
comp=Z,1.1nm,0.6s,baz=188,slow=2.0,SNR=8.1
SCHQ Schefferville 123.36 24 PKP PKPdf 13 13 37.4 -1.4
comp=Z,7.9nm,1.0s,baz=240,slow=13,SNR=3.7
EKA Eskdalemuir Ar 125.47 340 PKP PKPdf 13 13 41.5 -1.3
comp=Z,2.8nm,0.5s,baz=25,slow=2.4,SNR=9.2
EKA PKKPbc 13 23 20.1
comp=Z,0.9nm,0.5s,baz=212,slow=4.4,SNR=4.3
DAVOX Davos/Dischmat 125.69 326 PKP PKPdf 13 13 41.7 -1.8
comp=Z,3.4nm,0.6s,baz=180,slow=9.1,SNR=3.2
DAVOS Davos 125.71 326 PKIKP PKPdf 13 13 41.7 -1.9
KEST Kesra 131.95 314 PKP PKPdf 13 13 55.0 -0.8
comp=Z,1.9nm,0.9s,baz=74,slow=19,SNR=2.6
ROSC El Rosal 137.43 89 PKhKP 13 13 59.7
comp=Z,14nm,0.6s,baz=101,slow=23,SNR=6.1
ROSC PKP PKPdf 13 14 07.8 +1.1
comp=Z,22nm,0.5s,baz=111,slow=21,SNR=6.5
ROSC El Rosal 137.43 89 PKP PKPdf 13 14 07.8 +1.1
TOA0 Torodi Ar. Sit 146.36 285 *e*PKPdf PKPdf 13 14 22.2 -0.3
TORD Torodi Ar. Bea 146.36 285 PKPbc PKPbc 13 14 22.3 -1.7
comp=Z,8.2nm,0.4s,baz=80,slow=2.7,SNR=114
TORD pPKPbc pPKPbc 13 15 11.7 +0.1
comp=Z,3.6nm,0.7s,baz=68,slow=3.2,SNR=2.9
FDF Fort de France 149.57 70 *e*PKP2 PKPbc 13 14 32.2 -0.3
BDFB Brasilia 153.32 143 PKP PKPdf 13 14 33.3 -0.1
comp=Z,2.1nm,0.7s,baz=173,slow=9.5,SNR=5.8
BDFB PKPbc PKPbc 13 14 40.6 -0.5
comp=Z,7.8nm,0.8s,baz=204,slow=5.5,SNR=18
BDFB PKPab PKPab 13 14 53.6 0.0
comp=Z,22nm,0.7s,baz=193,slow=5.3,SNR=32
DBIC Dimbokro 153.41 274 PKPbc PKPbc 13 14 39.4 -1.9
comp=Z,1.9nm,0.6s,baz=43,slow=6.4,SNR=5.2

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*CSEM **05** 13:02:43.0±0.2, 3991N×4175E, h8km, ML3.0, Error ellipse: s-maj=4.7km s-min=3.2km az=16.0*
*ISK **05** 13:02:43.8, 3998N×4180E, h8km, MD2.7*
*ISCJB **05** 13:02:44.6±0.7, 3987N±004×4179E±004, h10km±5km, Error ellipse: s-maj=6.3km s-min=5.1km az=30.8*
*DDA **05** 13:02:44.3, 3991N×4180E, h6km±4km, Md3.0, Ml3.0*

ISC 05 13:02:44.9±0.6**, 3989N**±004×**4178E**±004**, h14**km±4km**, n12,** σ1**§19/20, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.18**	**32**	*i* P		**Pg**	**13 02 47.6**	**-1.6**
HOMI				*i* S		**Sg**	**13 02 53.1**	**+0.9**
ERZM	**Erzurum**	**0.32**	**273**	*i* P		**Pg**	**13 02 50.6**	**-0.9**
ERZM				*i* S		**Sg**	**13 02 57.4**	**+1.5**
TUTA	**Tutak**	**0.94**	**121**	*i* P		**Pb**	**13 03 01.4**	**-1.5**
TUTA				*i* S		**Sb**	**13 03 16.9**	**+1.8**
AGRB	**Hanur-Agry**	**0.99**	**108**	*e*PG		**Pg**	**13 03 03.5**	**-0.4**
AGRB				*e*SG		**Sg**	**13 03 17.8**	**+0.9**
KOPT	**Kop Dagi**	**0.99**	**278**	*i* P		**Pb**	**13 03 03.4**	**-0.5**
KOPT				*i* S		**Sb**	**13 03 21.9**	**+5.1**
KOPT	**Kop Dagi**	**0.99**	**278**	*i* P		**Pb**	**13 03 03.3**	**-0.6**
DDEM	**Demirkent**	**1.00**	**359**	*i* P		**Pb**	**13 03 02.5**	**-1.5**
DDEM				*i* S		**Sb**	**13 03 18.2**	**+1.3**
DBAD	**Bademkaya**	**1.13**	**357**	*i* P		**Pb**	**13 03 05.3**	**-0.9**
DBAD				*i* S		**Sb**	**13 03 21.5**	**+0.9**
DAGI	**Agillar**	**1.19**	**5**	*i* P		**Pn**	**13 03 06.0**	**-1.1**
DAGI				*i* S		**Sb**	**13 03 23.9**	**+1.5**
KARS	**Kars**	**1.24**	**54**	*e*PN		**Pn**	**13 03 07.0**	**-0.7**
BCA	**Borcka**	**1.56**	**356**	*e*PN		**Pn**	**13 03 11.1**	**-1.0**
PTK	**Pertek**	**2.10**	**242**	*e*PN		**Pn**	**13 03 21.1**	**+1.5**

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*NEIC **05** 13:09:36.0, 32.14N×115.79W, h2km, ML2.8(PAS), ML2.9(ECX), After ECX.*

ECX 05 13:09:36.0±0.5**, 3214N×11579W, h2**km±2km**, MD2.8, ML2.9, 4C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RDX	**Rancho Dowling**	**0.24**	**214**⇑	*i* P		Pg	13 09 40.6	-0.1
RDX				*e* S		Sg	13 09 44.2	+0.3
RDX				⇓*e*			13 09 45.0	
	comp=N,2μm,0.3s							
EMX	**El Mayor**	**0.49**	**107**⇑	*e* P		Pg	13 09 45.1	-0.2
EMX				*e* S		Sg	13 09 51.9	+0.2
CPBX	**Cerro Prieto**	**0.50**	**56**	*e* P		Pg	13 09 45.0	-0.6
ECNX	**Esteban Cantu**	**0.84**	**235**⇑	*e* P		Pg	13 09 51.2	-0.8
ECNX				*e* S		Sg	13 10 02.4	-0.5
PBX	**Punta Banda**	**0.89**	**244**	*e* P		Pg	13 09 51.8	-1.2
PBX				*e* S		Sg	13 10 04.0	-0.5
PBX				⇑*e*			13 10 06.1	
	comp=E,338nm,0.2s							
PBX	**Punta Banda**	**0.89**	**244**	*e* P		Pg	13 09 51.8	-1.2
PBX				*e* S		Sg	13 10 04.0	-0.5
ECBX	**El Chinero**	**0.91**	**136**⇓	*e* P		Pg	13 09 52.1	-1.3
ECBX				*e* S		Sg	13 10 04.5	-0.8
SPX	**San Pedro Mart**	**1.12**	**166**	*e* P		Pg	13 09 56.2	-1.3
SPX				*e* S		Sg	13 10 11.6	-0.5
GLA	**Glamis**	**1.22**	**41**	*e* P		Pg	13 09 56.1	-3.3
GLA				*e* S		Sg	13 10 11.2	-4.0
PFO	**Pinyon Flat Ob**	**1.57**	**339**	*e* Pn		Pn	13 10 01.3	-3.6
PFO				*e* Sn		Sn	13 10 23.7	-2.1
MWC	**Mount Wilson**	**2.82**	**318**	*e* P		Pn	13 10 24.9	+2.9

ISCJB ***05*** *13:38:03.0±2.3, 3.34S±0.08×143.6E±0.1, h42km±23km, mb4.0/10, MS3.8/1, Error ellipse: s-maj=24.3km s-min=13.0km az=10.6*
NEIC ***05*** *13:38:08.3±2.0, 3.47S×143.64E, h79km±22km, mb4.5/3, Error ellipse: s-maj=21.7km s-min=13.6km az=108.0*
IDC ***05*** *13:38:10.6±3.9, 3.47S×143.65E, h102km±34km, mb3.7/9, mb1 3.7/10, mb1mx3.6/16, mbtmp3.6/10, MS3.3/4, Ms1 3.3/4, ms1mx3.0/23, Error ellipse: s-maj=34.1km s-min=13.6km az=96.0*
ISC 05 13:38:08.3±1.7**, 3.49S**±0.08×**143.6E**±0.1**, h79**km±18km**, n20, σ0.94**/17**, mb3.9**/10**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.84	149	eP	Pn	13 39 44.8	-1.3
	17nm,0.8s						
COEN	Coen	10.41	182	eP	Pn	13 40 36.3	+1.5
KAKA	Kakadu	14.37	230	eP	x	13 41 05.9	
	10nm,0.6s						
CTA	Charters Tower	16.70	171	P	Pn	13 41 58.7	+1.3
	0.1nm,0.3s,baz=353,slow=16,SNR=2.6						
CTA				LR	LR	13 48 19.1	
	comp=Z,66nm,20.9s,baz=303,slow=36						
GUMO	Guam	17.01	4	LR	LR	13 47 46.6	
	comp=Z,70nm,20.8s,baz=93,slow=34						
HNR	Honiara	17.25	111	LR	LR	13 47 44.6	
	comp=Z,86nm,18.9s,baz=132,slow=33						
WRAB	Tennant Creek	18.69	208	eP	Pn	13 42 20.8	-0.9
	9.1nm,0.9s						
WB2	Warramunga Arr	18.69	208	eP	Pn	13 42 19.7	-2.0
BATI	Baumata	20.91	250	P	P	13 42 45.7	+1.1
	18nm,0.8s,baz=104,slow=7.4,SNR=3.7						
ASAR	Alice Springs	22.15	204	P	P	13 42 58.4	+0.6
	1.2nm,0.9s,mb3.2,baz=36,slow=7.1,SNR=13						
ASAR				S	S	13 46 57.2	-0.1
	0.7nm,0.9s,baz=22,slow=18,SNR=4.7						
KSRS	Korea Array	43.27	342	P	P	13 46 01.6	-0.5
	1.1nm,0.7s,mb3.7,baz=149,slow=8.9,SNR=3.7						
CMAR	Chiang Mai Arr	49.11	298	P	P	13 46 48.5	+0.1
	0.3nm,0.3s,mb3.7,baz=117,slow=5.9,SNR=5.0						
PETK	Petropavlovsk-	57.62	10	P	P	13 47 50.3	+0.2
	4.3nm,0.8s,mb4.5,baz=180,slow=6.8,SNR=3.3						
SONM	Songino Array	60.61	332	P	P	13 48 10.9	+0.1
	0.7nm,0.8s,mb3.7,baz=152,slow=7.3,SNR=4.0						
MKAR	Makanchi Array	73.44	321	P	P	13 49 31.7	-0.5
	1.9nm,0.9s,mb3.9,baz=108,slow=7.8,SNR=7.8						
VNDA	Vanda	74.62	176	P	P	13 49 38.1	-0.4
	1.5nm,0.9s,mb3.7,baz=335,slow=4.7,SNR=5.4						
VNDA				LR	LR	14 20 47.3	
	comp=Z,50nm,21.2s,baz=100,slow=34						
ZALV	Zalesovo Beam	75.12	328	P	P	13 49 40.8	-1.0
	2.4nm,0.8s,mb4.0,baz=91,slow=5.9,SNR=8.3						
CHUM	Lake Minchumin	82.00	24	eP	P	13 50 20.5	+1.1
	9.2nm,1.0s,mb4.6						
BRVK	Borovoye	82.85	324	eP	P	13 50 24.6	+0.6
	4.2nm,0.9s,mb4.3						
DBIC	Dimbokro	148.46	277	PKPbc	PKPbc	13 57 47.0	-0.1
	1.6nm,0.6s,baz=21,slow=2.7,SNR=3.8						

ISCJB ***05*** *13:51:01.5±0.2, 49.33N±0.01×6.73E±0.02, h0km, Error ellipse: s-maj=1.5km s-min=1.5km az=4.4*
BGR ***05*** *13:51:03.0±0.4, 49.42N×6.80E, h1km, ML3.2/7, Error ellipse: s-maj=5.6km s-min=3.3km az=115.0*
NEIC ***05*** *13:51:03.6, 49.39N×6.85E, h1km, ML3.2(STR), ML3.8(LDG), After LDG.*
BNS ***05*** *13:51:03.8±1.8, 49.36N×6.88E, h1km, ML2.7*
LDG ***05*** *13:51:03.6±0.1, 49.39N×6.85E, h1km, Md3.6/3, Ml3.8/32, Error ellipse: s-maj=1.1km s-min=1.0km az=174.0, Suspected Mining induced.*
CSEM ***05*** *13:51:03.6±0.0, 49.39N×6.84E, h1km, ML3.8/30, Error ellipse: s-maj=0.7km s-min=0.6km az=38.0*
STR ***05*** *13:51:03.5±0.2, 49.37N×6.78E, h1km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
LEDBW ***05*** *13:51:04.0±0.2, 49.370N±0.009×6.840E±0.009, h1km, ML3.0, Error ellipse: s-maj=4.0km s-min=2.0km az=103.0*
PRU ***05*** *13:51:07.8, 49.26N×7.19E, h1km*
ISC 05 13:51:02.5±0.2**, 49.366N**±0.009×**6.76E**±0.01**, h0**km**, n175, σ1.20**/331**, 7C-7D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.39	30	⇑iP*	Pg	13 51 11.1	+1.2
RUP	Ruppelstein	0.39	30	⇑iPg	Pg	13 51 11.1	+1.2
RUP	Ruppelstein	0.39	30	Pg	Pg	13 51 11.0	+1.1
RUP				Sg	Sg	13 51 16.2	+1.3
WLF	Walferdange	0.50	307	P	Pg	13 51 14.2	+2.2
ABH	Alteburg	0.73	44	P*	Pb	13 51 16.9	-1.1
ABH	Alteburg	0.73	44	Pg	Pg	13 51 16.7	+0.3
ABH				Sg	Sg	13 51 26.5	+0.7
LANF	Langenberg	0.79	119	Pg	Pg	13 51 17.8	+0.3
LANF				Sg	Sg	13 51 29.8	+2.1
LANF	Langenberg	0.79	119	Pg	Pg	13 51 18.0	+0.5
KTD	Kalmit	0.86	93	P*	Pb	13 51 19.8	-0.5
KTD	Kalmit	0.86	93	Pg	Pg	13 51 19.9	+0.9
KTD				Sg	Sg	13 51 32.0	+1.8
BGG	Burgeitz	0.92	24	ePg	Pg	13 51 20.5	+0.5
HILG	Hillesheim	0.93	357	ePg	Pg	13 51 21.9	+1.6
CDF	Champ du Feu	1.01	160	ePn	Pn	13 51 23.4	-0.5
	SNR=1.0						
CDF				eSg	Sg	13 51 36.2	+1.2
	362nm,0.4s,SNR=1.0						
CDF	Champ du Feu	1.01	160	ePn	Pn	13 51 23.4	-0.5
	SNR=1.0						
CDF				eSg	Sg	13 51 36.2	+1.2
	181nm,0.4s,SNR=1.0						
CDF	Champ du Feu	1.01	160	ePg	Pg	13 51 22.3	+0.4
CDF				ePn	Pn	13 51 23.4	-0.5
CDF				eSg	Sg	13 51 36.2	+1.2
RFYF	Reffroy	1.12	229	ePg	Pg	13 51 25.9	+1.9
	baz=47						
RFYF				eSg	Sg	13 51 41.4	+2.8
	804nm,0.3s,baz=48						
RFYF	Reffroy	1.12	229	ePg	Pg	13 51 25.9	+1.9
RFYF				eSg	Sg	13 51 41.4	+2.8
	402nm,0.3s						
ECH	Echery	1.18	167	Pg	Pg	13 51 26.3	+1.2
ECH				Sg	Sg	13 51 42.0	+1.6
ECH	Echery	1.18	167	P	Pg	13 51 25.7	+0.6
ECH	Echery	1.18	167	Pg	Pg	13 51 26.3	+1.2
ECH				eSg	Sg	13 51 41.5	+1.1
ECH	Echery	1.18	167	ePg	Pg	13 51 25.6	+0.5
ECH				eSg	Sg	13 51 41.5	+1.2
STB	Steinbach	1.23	2	ePg	Pg	13 51 26.8	+0.7
STB				eSg	Sg	13 51 43.3	+1.3
	104nm,1.0s						
KOE	Koeppel	1.23	30	ePg	Pg	13 51 25.8	-0.3
THEF	They Montfort	1.25	205	Pg	Pg	13 51 27.5	+1.1
THEF				Sg	Sg	13 51 44.1	+1.5
THEF	They Montfort	1.25	205	⇓Pn	Pn	13 51 27.5	+0.4
SWS	Schriesheim-Wi	1.27	84	P	Pg	13 51 26.3	-0.5
SWS				Sg	Sg	13 51 43.0	-0.3
KLL	Kalltalsperre	1.31	347	ePg	Pg	13 51 26.9	-0.8
MEM	Membach	1.34	339	P	Pg	13 51 28.4	+0.3
MEM	Membach	1.34	339	P	Pg	13 51 28.3	+0.2
LIBD	Limburg	1.34	155	P*	Pb	13 51 29.6	+1.3
LIBD	Limburg	1.34	155	Pg	Pg	13 51 29.4	+1.3
LIBD				Sg	Sg	13 51 46.9	+1.5
DREG	Dreilaegerbach	1.34	345	ePg	Pg	13 51 28.3	+0.1
TOD	Tromm	1.35	79	P	Pg	13 51 27.2	-1.1
TOD				Pg	Pg	13 51 28.3	0.0
TOD				Sg	Sg	13 51 46.6	+0.7
TOD	Tromm	1.35	79	P	Pg	13 51 28.3	0.0
TOD	Tromm	1.35	79	Pg	Pg	13 51 28.3	-0.1
TOD				Sg	Sg	13 51 46.4	+0.5
HAU	Haudompre	1.39	192	ePg	Pg	13 51 30.0	+0.9
HAU				eSn	Sn	13 51 46.8	-1.3
	448nm,0.4s,SNR=1.0						
HAU	Haudompre	1.39	192	ePg	Pg	13 51 30.0	+0.9
HAU				eSn	Sn	13 51 46.8	-1.3
	224nm,0.4s,SNR=1.0						
HAU	Haudompre	1.39	192	ePn	Pn	13 51 28.9	-0.2
HAU				ePg	Pg	13 51 30.0	+0.9
HAU				eSn	Sn	13 51 46.8	-1.3
BCLA	Clavier	1.42	319	P	Pn	13 51 30.5	+1.0
BCLA	Clavier	1.42	319	P	Pn	13 51 30.4	+1.0
MEZF	Maizieres J'vi	1.42	233	ePn	Pn	13 51 29.4	-0.1
	baz=53,SNR=1.0						
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	13 51 31.0	+1.3
	baz=50						
MEZF				eSn	Sn	13 51 48.8	-0.1
	269nm,0.4s,baz=50,SNR=1.0						
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	13 51 31.0	+1.3
MEZF				eSn	Sn	13 51 48.8	-0.1
	134nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.42	233	ePn	Pn	13 51 29.4	-0.1
MEZF				ePg	Pg	13 51 31.0	+1.3
MEZF				eSn	Sn	13 51 48.8	-0.1
GIVF	Givet	1.46	301	ePg	Pg	13 51 31.2	+0.8
GIVF				eSn	Sn	13 51 48.6	-1.2
	SNR=1.0						
GIVF				eSg	Sg	13 51 50.8	+1.5
	351nm,0.4s,SNR=1.0						
GIVF	Givet	1.46	301	ePg	Pg	13 51 31.2	+0.8
GIVF				eSn	Sn	13 51 48.6	-1.2
	SNR=1.0						
GIVF				eSg	Sg	13 51 50.8	+1.5
	175nm,0.4s,SNR=1.0						
GIVF	Givet	1.46	301	ePn	Pn	13 51 29.6	-0.4
GIVF				ePg	Pg	13 51 31.2	+0.8
GIVF				eSn	Sn	13 51 48.6	-1.2
GIVF				eSg	Sg	13 51 50.8	+1.5
BFO	Black Forest	1.47	134	ePn	Pn	13 51 29.4	-0.7
	SNR=6.4						
BFO				eSg	Sg	13 51 49.7	+0.2
	SNR=3.8						
BFO	Black Forest	1.47	134	ePn	Pn	13 51 29.4	-0.7
BFO				eSg	Sg	13 51 49.7	+0.2
HGN	Heimansgroeve	1.50	339	ePn	Pn	13 51 30.9	+0.3
	39nm,1.2s						
HGN	Heimansgroeve	1.50	339	ePg	Pg	13 51 33.1	+1.9
	79nm,0.6s						
HGN				eSn	Sn	13 51 50.0	-0.8
HGN				eSg	Sg	13 51 52.0	+1.4
HGN	Heimansgroeve	1.50	339	ePg	Pg	13 51 33.1	+1.9
	79nm,0.6s						
HGN	Heimansgroeve	1.50	339	eRg		13 52 13.4	
LBG	Lerchenberg	1.51	117	Pg	Pg	13 51 31.7	+0.2
MOF	Molkenrain	1.54	171	Pg	Pg	13 51 32.8	+0.9
MOF				Sg	Sg	13 51 52.7	+0.9
MOF	Molkenrain	1.54	171	P	Pg	13 51 33.0	+1.1
MOF				S	Sn	13 51 53.5	+1.8
MOF	Molkenrain	1.54	171	Pg	Pg	13 51 33.0	+1.1
MOF				Sg	Sg	13 51 52.7	+0.9
HINF	Hinteralfeld	1.55	178	ePg	Pg	13 51 32.9	+0.7
	SNR=1.0						
HINF				eSn	Sn	13 51 50.9	-1.2
	274nm,0.4s,SNR=1.0						
HINF	Hinteralfeld	1.55	178	ePg	Pg	13 51 32.9	+0.7
	SNR=1.0						
HINF				eSn	Sn	13 51 50.9	-1.2
	137nm,0.4s,SNR=1.0						
HINF	Hinteralfeld	1.55	178	ePn	Pn	13 51 31.1	-0.2
HINF				ePg	Pg	13 51 32.9	+0.7
HINF				eSn	Sn	13 51 50.9	-1.2
DOU	Dourbes	1.58	298	P	Pn	13 51 32.3	+0.6
BEBN	Eben Emael	1.59	334	P	Pn	13 51 33.0	+1.2
KIZ	Kirchzarten	1.61	151	Pg	Pg	13 51 33.5	+0.3
KIZ				Sg	Sg	13 51 55.0	+1.0
SFTF	Sexfontaines	1.63	225	ePg	Pg	13 51 34.7	+1.1
	baz=56						
SFTF				eSg	Sg	13 51 56.9	+2.2
	238nm,0.5s,baz=49						
SFTF	Sexfontaines	1.63	225	ePg	Pg	13 51 34.7	+1.1
SFTF				eSg	Sg	13 51 56.9	+2.2
	119nm,0.5s						
SFTF	Sexfontaines	1.63	225	ePn	Pn	13 51 32.5	+0.2
SFTF				ePg	Pg	13 51 34.7	+1.1
SFTF				eSg	Sg	13 51 56.9	+2.2
HOBG	Hohbusch	1.66	13	ePg	Pg	13 51 34.5	+0.3
FELD	Feldberg im Sc	1.70	151	Pg	Pg	13 51 35.6	+0.6
FELD				Sg	Sg	13 51 57.5	+0.3
FELD	Feldberg im Sc	1.70	151	Pg	Pg	13 51 35.4	+0.3
STU	Stuttgart	1.71	109	Pg	Pg	13 51 33.0	-2.1
STU	Stuttgart	1.71	109	ePg	Pg	13 51 32.7	-2.4
BAIF	Baives	1.80	294	ePg	Pg	13 51 38.2	+1.3
BAIF				eSn	Sn	13 51 57.1	-1.1
	SNR=1.0						
BAIF				eSg	Sg	13 52 01.5	+1.3
	315nm,0.7s						
BAIF	Baives	1.80	294	ePg	Pg	13 51 38.2	+1.3
BAIF				eSn	Sn	13 51 57.1	-1.1
	SNR=1.0						
BAIF				eSg	Sg	13 52 01.5	+1.3
	157nm,0.7s						
BAIF	Baives	1.80	294	ePn	Pn	13 51 34.2	-0.5
BAIF				ePg	Pg	13 51 38.2	+1.3
BAIF				eSn	Sn	13 51 57.1	-1.1
BAIF				eSg	Sg	13 52 01.5	+1.3
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	13 51 38.2	+0.5
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	13 51 38.2	+0.5
SPAK				Sg	Sg	13 52 03.5	+1.9
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	13 51 38.0	+0.3
SPAK				Sg	Sg	13 52 03.5	+1.9
SIND	Sindeldorf	1.86	89	P	Pn	13 51 34.3	-1.2
BUCH	Bad Urach	1.94	117	Pg	Pg	13 51 39.7	0.0
BUCH				Sg	Sg	13 52 05.8	+1.1
BBS	Basel-Blauen	1.97	165	Px	Px	13 51 40.1	
BBS	Basel-Blauen	1.97	165	Pg	Pg	13 51 40.1	0.0
BBS				Sg	Sg	13 52 07.9	+2.3
BBS	Basel-Blauen	1.97	165	Pg	Pg	13 51 41.3	+1.2
BBS				Sg	Sg	13 52 07.9	+2.3
SNF	Seneffe	1.97	306	P	Pn	13 51 38.6	+1.6
LOMF	Lomont	2.02	179	Pg	Pg	13 51 41.7	+0.6
LOMF				Sg	Sg	13 52 08.5	+1.3
LOMF	Lomont	2.02	179	Pg	Pg	13 51 41.9	+0.7
LOMF				Sg	Sg	13 52 08.9	+1.6
LOMF	Lomont	2.02	179	Pg	Pg	13 51 41.8	+0.7
LOMF				Sg	Sg	13 52 08.5	+1.3
LOMF	Lomont	2.02	179	Pn	Pn	13 51 37.7	0.0
LOMF				Pg	Pg	13 51 41.7	+0.6
LOMF				Sg	Sg	13 52 08.5	+1.3
GUT	Gutenstein	2.03	129	P	Pn	13 51 38.0	+0.1
GUT				Pg	Pg	13 51 41.5	+0.2
GUT				Sg	Sg	13 52 07.3	-0.3
GUT	Gutenstein	2.03	129	P	Pg	13 51 41.5	+0.2
BUG	Bochum--Univer	2.10	9	eSg	Sg	13 52 07.5	-2.5
	SNR=3.1						
HDH	Heidenheim-Cha	2.40	108	Sg	Sg	13 52 19.9	+0.4
WTSB	Winterswijk	2.60	0	⇑iPg	Pg	13 51 54.5	+2.2
	67nm,0.8s						
WTSB				eSg	Sg	13 52 24.7	-1.4
WTSB	Winterswijk	2.60	0	ePn	Pn	13 51 52.0	+6.2
	23nm,0.8s						
WTSB	Winterswijk	2.60	0	⇑iPg	Pg	13 51 54.5	+2.2
	67nm,0.8s						
WTSB				eSg	Sg	13 52 24.7	-1.3
UBR	Ueberruh	2.79	126	P*	Pb	13 51 48.8	-4.4
CABF	La Chapelle	2.79	190	ePg	Pg	13 51 56.1	+0.1
	SNR=1.0						
CABF				eSg	Sg	13 52 32.1	-0.1
	138nm,0.5s,SNR=1.0						
CABF	La Chapelle	2.79	190	ePg	Pg	13 51 56.1	+0.1
	SNR=1.0						
CABF				eSg	Sg	13 52 32.1	-0.1
	69nm,0.5s,SNR=1.0						
CABF	La Chapelle	2.79	190	ePn	Pn	13 51 47.8	-0.6
CABF				ePg	Pg	13 51 56.1	+0.1
CABF				eSg	Sg	13 52 32.1	-0.1
LOR	Lormes	2.86	224	ePn	Pn	13 51 49.3	+0.1
	baz=51,SNR=1.0						
LOR				eSn	Sn	13 52 23.6	-0.7
LOR				eSg	Sg	13 52 35.3	+1.1
	146nm,0.4s,baz=42						
LOR	Lormes	2.86	224	ePn	Pn	13 51 49.3	+0.1
	SNR=1.0						
LOR				eSn	Sn	13 52 23.6	-0.7
LOR				eSg	Sg	13 52 35.3	+1.1
	73nm,0.4s						
DAVA	Damuels	2.94	134	⇓iPn	Pn	13 51 51.5	+1.1
DAVA				⇓iSn	Sn	13 52 25.2	-1.2
DAVA				⇓iSg	Sg	13 52 35.2	-1.7
	23nm,0.3s						
DAVA	Damuels	2.94	134	Pn	Pn	13 51 51.9	+1.5
DAVA				Sn	Sn	13 52 25.2	-1.2
DAVA				Sg	Sg	13 52 35.2	-1.7
	23nm,0.3s						
SSF	Saint Saulge	3.17	225	ePn	Pn	13 51 53.3	-0.3
	SNR=1.0						
SSF				eSn	Sn	13 52 30.0	-2.1
	SNR=1.0						
SSF				eSg	Sg	13 52 45.2	+0.9
	106nm,0.4s						
SSF	Saint Saulge	3.17	225	ePn	Pn	13 51 53.3	-0.3
	SNR=1.0						
SSF				eSn	Sn	13 52 30.0	-2.1
	SNR=1.0						
SSF				eSg	Sg	13 52 45.2	+0.9
	53nm,0.4s						
SMF	Signal de Mont	3.36	217	ePg	Pg	13 52 07.1	+0.4
	SNR=1.0						
SMF				eSn	Sn	13 52 34.1	-2.5
	SNR=1.0						
SMF				eSg	Sg	13 52 50.1	-0.1
	55nm,0.4s,SNR=1.0						
SMF	Signal de Mont	3.36	217	ePg	Pg	13 52 07.1	+0.4
	SNR=1.0						
SMF				eSn	Sn	13 52 34.1	-2.5
	SNR=1.0						
SMF				eSg	Sg	13 52 50.1	-0.1
	27nm,0.4s,SNR=1.0						
SMF	Signal de Mont	3.36	217	ePn	Pn	13 51 55.4	-0.7
SMF				ePg	Pg	13 52 07.1	+0.4
SMF				eSn	Sn	13 52 34.1	-2.5
SMF				eSg	Sg	13 52 50.1	-0.1
TUE	Stuetta	3.38	148	ePn	Pn	13 51 58.3	+1.9
TUE	Stuetta	3.38	148	ePn	Pn	13 51 58.3	+1.9
CLZ	Clausthal	3.38	41	eSg	Sg	13 52 47.6	-3.4
	SNR=3.9						
MOX	Moxa	3.38	66	ePg	Pg	13 52 04.9	-2.3
	SNR=2.4						
MOX				eSg	Sg	13 52 49.9	-1.1
MOX	Moxa	3.38	66	ePG	Pg	13 52 05.1	-2.1
MOX				eSG	Sg	13 52 49.9	-1.1
AVF	Avril sur Loir	3.44	223	ePn	Pn	13 51 56.9	-0.4
	SNR=1.0						
AVF				eSn	Sn	13 52 36.5	-2.3
	SNR=1.0						
AVF				eSg	Sg	13 52 53.5	+0.4
	62nm,0.6s,SNR=1.0						
AVF	Avril sur Loir	3.44	223	ePn	Pn	13 51 56.9	-0.4
	SNR=1.0						
AVF				eSn	Sn	13 52 36.5	-2.3
	SNR=1.0						
AVF				eSg	Sg	13 52 53.5	+0.4
	31nm,0.6s,SNR=1.0						
HYF	Humbligny	3.46	234	ePn	Pn	13 51 57.4	-0.1
HYF				eSg	Sg	13 52 53.8	+0.2
FETA	Feichten	3.54	130	⇑iPn	Pn	13 52 00.3	+1.7
FETA				⇓iSg	Sg	13 52 55.6	-0.6
	13nm,0.8s						
GUNZ	Gunzen	3.74	72	eSg	Sg	13 53 00.5	-2.0
	SNR=3.1						
WERD	Werda	3.74	71	ePg	Pg	13 52 12.4	-1.8
	SNR=3.0						
WERD				eSg	Sg	13 53 01.0	-1.6
	SNR=3.9						
NKC	Novy Kostel	3.78	75	ePN	Pn	13 52 03.3	+1.3
NKC				eSG	Sg	13 53 01.3	-2.6
	comp=Z,33nm,0.8s						
TANN	Tannenbergstha	3.83	72	ePg	Pg	13 52 13.7	-2.1
	SNR=3.1						
TANN				eSg	Sg	13 53 02.6	-2.9
	SNR=3.9						
BGF	Bois d'Agland	3.85	225	ePn	Pn	13 52 02.7	-0.2
	SNR=1.0						
BGF				eSn	Sn	13 52 46.0	-2.8
	SNR=1.0						
BGF				eSg	Sg	13 53 06.3	+0.2
	comp=Z,274nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.85	225	ePn	Pn	13 52 02.7	-0.2
	SNR=1.0						
BGF				eSn	Sn	13 52 46.0	-2.8
	SNR=1.0						
BGF				eSg	Sg	13 53 06.3	+0.2
	comp=Z,137nm,0.4s,SNR=1.0						
LPL	La Plagne	3.85	180	ePg	Pg	13 52 15.5	-0.8
LPL				eSg	Sg	13 53 05.8	-0.4
	comp=Z,23nm,0.6s						
LPL	La Plagne	3.85	180	ePg	Pg	13 52 15.5	-0.8
LPL				eSg	Sg	13 53 05.8	-0.4
	comp=Z,12nm,0.6s						
LPL	La Plagne	3.85	180	ePn	Pn	13 52 03.5	+0.6
LPL				ePg	Pg	13 52 15.5	-0.8
LPL				eSg	Sg	13 53 05.8	-0.4
LPG	La Plagne	3.87	180	ePg	Pg	13 52 15.9	-0.7
LPG				eSn	Sn	13 52 47.3	-2.0
	SNR=1.0						
LPG				eSg	Sg	13 53 05.8	-1.0
	comp=Z,34nm,0.6s						
LPG	La Plagne	3.87	180	ePg	Pg	13 52 15.9	-0.7
LPG				eSn	Sn	13 52 47.3	-2.0
	SNR=1.0						
LPG				eSg	Sg	13 53 05.8	-1.0
	comp=Z,17nm,0.6s						
LPG	La Plagne	3.87	180	ePn	Pn	13 52 03.0	-0.2
LPG				ePg	Pg	13 52 15.9	-0.7
LPG				eSn	Sn	13 52 47.3	-2.0
LPG				eSg	Sg	13 53 05.8	-1.0
WTTA	Wattenberg	3.87	121	⇑iPn	Pn	13 52 04.4	+1.2
WTTA				⇑iSg	Sg	13 53 06.7	-0.1
	comp=Z,16nm,0.7s						
TCF	Toulx Ste Croi	4.35	227	eSn	Sn	13 52 59.1	-1.9
	SNR=1.0						
TCF				eSg	Sg	13 53 21.5	-0.5
	comp=Z,66nm,0.5s						
TCF	Toulx Ste Croi	4.35	227	eSn	Sn	13 52 59.1	-1.9
	SNR=1.0						
TCF				eSg	Sg	13 53 21.5	-0.5
	comp=Z,33nm,0.5s						
SSB	Saint Sauveur	4.36	201	ePg	Pg	13 52 26.5	+0.5
SSB	Saint Sauveur	4.36	201	ePg	Pg	13 52 26.5	+0.5
CLL	Collm	4.44	62	ePg	Pg	13 52 30.0	+2.4
CLL				eSn	Sn	13 52 46.0	-17
CLL				i Sg	Sg	13 53 22.0	-3.1
	comp=Z,26nm,1.2s						
KHC	Kasperske Hory	4.47	90	Pn	Pn	13 52 11.6	+0.2
KHC				Sn	Sn	13 53 01.2	-2.9
KHC	Kasperske Hory	4.47	90	ePN	Pn	13 52 11.6	+0.2
KHC				ex	x	13 52 30.0	
KHC				eSN	Sn	13 53 01.2	-2.9
KHC				eSG	Sg	13 53 20.1	-5.9
ORIF	Oris-en-Rattie	4.49	188	ePg	Pg	13 52 27.2	-1.3
	SNR=1.0						
ORIF				eSg	Sg	13 53 25.2	-1.5
	comp=Z,38nm,0.6s,SNR=1.0						
ORIF	Oris-en-Rattie	4.49	188	ePg	Pg	13 52 27.2	-1.3
	SNR=1.0						
ORIF				eSg	Sg	13 53 25.2	-1.5
	comp=Z,19nm,0.6s,SNR=1.0						
ORIF	Oris-en-Rattie	4.49	188	ePn	Pn	13 52 11.4	-0.3
ORIF				ePg	Pg	13 52 27.2	-1.3
ORIF				eSg	Sg	13 53 25.2	-1.5
GEC2	GERESS Array S	4.59	94	ePn	Pn	13 52 13.4	+0.4
	SNR=22						
GEC2	GERESS Array S	4.59	94	ePn	Pn	13 52 13.4	+0.4
LDF	La Druitiere	4.60	263	ePg	Pg	13 52 29.7	-0.9
LDF				eSn	Sn	13 53 04.6	-2.7
	SNR=1.0						
LDF				eSg	Sg	13 53 30.7	+0.5
	comp=Z,48nm,0.5s,SNR=1.0						
LDF	La Druitiere	4.60	263	ePg	Pg	13 52 29.7	-0.9
LDF				eSn	Sn	13 53 04.6	-2.7
	SNR=1.0						
LDF				eSg	Sg	13 53 30.7	+0.5
	comp=Z,24nm,0.5s,SNR=1.0						
LDF	La Druitiere	4.60	263	ePn	Pn	13 52 12.9	-0.3
LDF				ePg	Pg	13 52 29.7	-0.9
LDF				eSn	Sn	13 53 04.6	-2.7
LDF				eSg	Sg	13 53 30.7	+0.5
MBDF	Montbardon	4.64	180	ePn	Pn	13 52 13.4	-0.4
MBDF				eSg	Sg	13 53 30.5	-1.0
	comp=Z,24nm,0.9s						
MBDF	Montbardon	4.64	180	ePn	Pn	13 52 13.4	-0.4
MBDF				eSg	Sg	13 53 30.5	-1.0
	comp=Z,12nm,0.9s						
VIVF	Saint-Julien-l	4.73	198	eSn	Sn	13 53 07.9	-2.6
	SNR=1.0						
VIVF				eSg	Sg	13 53 33.5	-0.9
	comp=Z,50nm,0.7s						
VIVF	Saint-Julien-l	4.73	198	eSn	Sn	13 53 07.9	-2.6
	SNR=1.0						
VIVF				eSg	Sg	13 53 33.5	-0.9
	comp=Z,25nm,0.7s						
FLN	La Foliniere	4.80	266	eSn	Sn	13 53 09.1	-3.1
	comp=Z,26nm,0.4s,SNR=1.0						
FLN				eSg	Sg	13 53 36.0	-0.6
	comp=Z,39nm,0.4s						
FLN	La Foliniere	4.80	266	eSn	Sn	13 53 09.1	-3.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,13nm,0.4s,SNR=1.0						
FLN				eSg	Sg	13 53 36.0	-0.6
	comp=Z,20nm,0.4s						
BRG	Berggiesshubel	4.86	69	eSg	Sg	13 53 37.2	-1.3
	SNR=2.5						
BRG	Berggiesshubel	4.86	69	PG	Pg	13 52 31.9	-3.6
BRG				SG	Sg	13 53 36.8	-1.7
	comp=Z,13nm,0.8s						
KBA	Koelnbreinsper	4.96	115	Pn	Pn	13 52 19.5	+1.4
PRU	Pruhonice	5.09	80	eSG	Sg	13 53 41.4	-4.4
	comp=Z,42nm,1.6s						
GRR	Gorron	5.12	262	ePn	Pn	13 52 20.0	-0.4
GRR				eSn	Sn	13 53 17.2	-3.0
GRR				eSg	Sg	13 53 45.9	-1.1
	comp=Z,32nm,0.5s						
GRR	Gorron	5.12	262	ePn	Pn	13 52 20.0	-0.4
GRR				eSn	Sn	13 53 17.2	-3.0
GRR				eSg	Sg	13 53 45.9	-1.1
	comp=Z,16nm,0.5s						
MOA	Molln	5.20	104	⇑iPn	Pn	13 52 22.6	+1.1
MOA	Molln	5.20	104	Pn	Pn	13 52 22.3	+0.8
MFF	Saint Martin d	5.40	242	ePn	Pn	13 52 23.9	-0.3
MFF				eSg	Sg	13 53 54.8	-1.0
	comp=Z,46nm,0.7s						
MFF	Saint Martin d	5.40	242	ePn	Pn	13 52 23.9	-0.3
MFF				eSg	Sg	13 53 54.8	-1.0
	comp=Z,23nm,0.7s						
RJF	Les Rejaudoux	5.41	223	ePn	Pn	13 52 23.9	-0.4
RJF				eSg	Sg	13 53 55.2	-0.8
	comp=Z,48nm,0.8s						
RJF	Les Rejaudoux	5.41	223	ePn	Pn	13 52 23.9	-0.4
RJF				eSg	Sg	13 53 55.2	-0.8
	comp=Z,24nm,0.8s						
CAF	Calviac	5.48	218	ePn	Pn	13 52 24.6	-0.6
	SNR=1.0						
CAF				eSg	Sg	13 53 57.3	-1.0
	comp=Z,30nm,0.5s						
CAF	Calviac	5.48	218	ePn	Pn	13 52 24.6	-0.6
	SNR=1.0						
CAF				eSg	Sg	13 53 57.3	-1.0
	comp=Z,15nm,0.5s						
LASF	Ste Croix	5.66	202	eSg	Sg	13 54 02.6	-1.5
	comp=Z,26nm,0.5s						
LASF	Ste Croix	5.66	202	eSg	Sg	13 54 02.6	-1.5
	comp=Z,13nm,0.5s						
LFF	La Frestale	6.04	225	eSg	Sg	13 54 15.1	-1.2
	comp=Z,71nm,0.7s						
LFF	La Frestale	6.04	225	eSg	Sg	13 54 15.1	-1.2
	comp=Z,36nm,0.7s						
CSNA	Conrad Observa	6.20	100	⇓iPn	Pn	13 52 36.1	+1.0
CONA	Conrad Observa	6.20	100	⇓iPn	Pn	13 52 36.1	+1.0
SGMF	Saint Gilles	6.26	263	ePn	Pn	13 52 35.9	0.0
VRAC	Vranov	6.43	87	eSg	Sg	13 54 26.2	-2.5
ROSF	Rostrenen	6.70	265	ePn	Pn	13 52 41.8	-0.3
MTLF	Montolieu	6.80	209	eSg	Sg	13 54 38.2	-2.5
	comp=Z,14nm,0.6s						
MTLF	Montolieu	6.80	209	eSg	Sg	13 54 38.2	-2.5
	comp=Z,6.8nm,0.6s						

*IGQ **05** 13:51:55.4, 068N×80.17W, h12km±10km, Mb4.5, Ms4.3, Error ellipse: s-maj=9.5km s-min=3.2km az=47.5*
*ISCJB **05** 13:51:58.0±1.1, 065N±007×8034W±007, h44km±13km, mb3.8/8, MS3.5/3, Error ellipse: s-maj=13.1km s-min=9.6km az=135.1*
*NEIC **05** 13:52:00.4±2.4, 062N×80.19W, h50km±23km, mb4.1/2, Error ellipse: s-maj=25.5km s-min=13.9km az=54.0*
*IDC **05** 13:52:04.8±2.4, 075N×80.11W, h91km±25km, mb3.4/8, mb1 3.7/12, mb1mx3.6/24, mbtmp3.6/12, MS3.6/4, Ms1 3.5/4, ms1mx3.2/20, Error ellipse: s-maj=24.5km s-min=14.4km az=70.0*
ISC 05 13:51:59.5±1.0**, 063N**±007×**8030W**±007**, h41**km±13km**, n42, σ1s24**/42**, mb3.8**/8**, MS3.5**/3**, 11C-2D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.89	174	P	Pn	13 52 12.7	-2.9
JAMA				S	Sn	13 52 25.4	-1.9
CHIS	Cerro-Chispas-	1.72	194	P	Pn	13 52 26.4	-0.6
PINO	Pino	1.87	115	⇑P	Pn	13 52 27.6	-1.4
TERV	Terraza Guagua	1.88	115	⇑P	Pn	13 52 27.7	-1.4
YANA	Yana	1.88	113	⇑P	Pn	13 52 27.9	-1.3
GGP	Refugio Guagua	1.89	115	⇑P	Pn	13 52 27.9	-1.4
OTAV	Otavalo	1.89	102	ePn	Pn	13 52 27.7	-1.7
OTAV				eSn	Sn	13 52 54.4	+2.4
COTA	Cotacachi	1.99	98	⇓P	Pn	13 52 29.1	-1.5
QIL2	Quilotoa	2.03	137	⇑P	Pn	13 52 29.8	-1.5
CAMI	Rancho Maria	2.22	126	⇑P	Pn	13 52 34.0	+0.1
VC1	Cotopaxi 1	2.28	124	⇑P	Pn	13 52 35.0	+0.3
TAMB	Tambo	2.34	124	⇑P	Pn	13 52 36.1	+0.6
CAYA	Cayambe	2.38	103	⇑P	Pn	13 52 36.5	+0.4
ANTI	Antisana	2.39	117	⇑P	Pn	13 52 36.5	+0.3
PISA	Pisayambo	2.55	131	⇑P	Pn	13 52 39.5	+1.1
IGUA	Igualata	2.68	142	P	Pn	13 52 41.3	+1.1
JUI6	Juive	2.74	138	P	Pn	13 52 42.0	+0.9
BIL2	Estacion Bilba	2.74	139	P	Pn	13 52 44.8	+3.8
RUN5	Runtun	2.77	137	P	Pn	13 52 42.5	+1.1
RETU	Refugio	2.78	138	P	Pn	13 52 44.4	+2.9
ULBA	Ulba	2.80	137	P	Pn	13 52 42.6	+0.8
ARRY	Arrayan	2.81	139	⇓P	Pn	13 52 42.7	+0.7
PATA	Patacocha	2.82	139	P	Pn	13 52 43.3	+1.1
ROSC	El Rosal	7.30	55	P	Pn	13 53 47.8	+4.2
	2.7nm,0.3s,baz=334,slow=1.0,SNR=6.0						
ATAH	Atahualpa	7.81	166	P	Pn	13 53 58.7	+7.9
	0.5nm,0.3s,baz=27,slow=6.8,SNR=3.0						
ATAH				S	Sn	13 55 29.9	+12
	0.3nm,0.3s,baz=336,slow=20,SNR=2.1						
SDV	Santo Domingo	12.65	49	P	Pn	13 54 57.4	+0.4
	0.8nm,0.3s,baz=235,slow=12,SNR=4.5						
SDV				LR	LR	13 59 53.0	
	comp=Z,216nm,20.4s,baz=190,slow=38						
SDV	Santo Domingo	12.65	49	ePn	Pn	13 54 59.2	+2.2
SDV				LR	LR	13 59 53.0	
PCRV	Puerto La Cruz	18.24	58	P	Pn	13 56 08.2	-1.5
	0.7nm,0.3s,baz=248,slow=5.4,SNR=3.4						
CMIG	Matias Romero	21.77	320	P	P	13 56 48.4	+0.5
	1.8nm,0.7s,mb3.6,baz=129,slow=14,SNR=3.1						
CMIG				LR	LR	14 03 40.6	
	comp=Z,185nm,19.1s,MS3.5,baz=131,slow=32						
CMIG	Matias Romero	21.77	320	P	P	13 56 48.4	+0.5
CMIG				LR	LR	14 03 40.6	
SIV	San Ignacio	25.16	132	P	P	13 57 20.8	-0.4
	0.9nm,0.4s,mb3.6,baz=304,slow=12,SNR=7.5						
LVC	Limon Verde	25.63	155	LR	LR	14 07 19.3	
	comp=Z,85nm,20.1s,MS3.3,baz=328,slow=36						
BDFB	Brasilia	35.76	118	LR	LR	14 13 47.4	
	comp=Z,94nm,18.4s,MS3.6,baz=115,slow=36						
ANMO	Albuquerque	41.97	327	P	P	13 59 46.8	+0.1
	2.6nm,0.9s,mb3.9,baz=128,slow=9.9,SNR=4.8						
ANMO	Albuquerque	41.97	327	eP	P	13 59 47.8	+1.2
	3.8nm,1.0s,mb4.0						
PLCA	Paso Flores	42.11	169	P	P	13 59 48.4	+0.7
	2.1nm,0.8s,mb3.8,baz=356,slow=9.3,SNR=3.9						
PLCA	Paso Flores	42.11	169	eP	P	13 59 48.1	+0.4
	4.6nm,1.0s,mb4.1						
PDAR	Pinedale Array	49.47	332	P	P	14 00 45.4	-0.4
	0.5nm,0.8s,mb3.6,baz=129,slow=7.1,SNR=2.8						
NVAR	Mina Array Bea	51.27	322	P	P	14 01 01.1	+1.7
	1.5nm,0.8s,mb4.0,baz=137,slow=7.1,SNR=10.0						
YKA	Yellowknife Ar	66.85	343	P	P	14 02 45.8	-1.1
	0.6nm,0.8s,mb3.7,baz=135,slow=6.2,SNR=9.2						
TORD	Torodi Ar. Bea	82.06	77	P	P	14 04 15.4	-0.9
	1.3nm,1.1s,mb3.8,baz=283,slow=5.4,SNR=4.0						
ASAR	Alice Springs	139.69	233	PKP	PKPdf	14 11 25.3	+1.5
	0.6nm,1.0s,baz=114,slow=2.2,SNR=3.9						

*CSEM **05** 14:24:09.3±1.3, 3584N×3977E, h2km, MD3.6, Error ellipse: s-maj=29.2km s-min=18.7km az=154.0*
ISK 05 14:24:12.4, 3604N×3962E, h5km, MD3.6, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	Urfa	1.54	336	eP	Pn	14 24 40.8	+0.2
URFA				eS	Sg	14 25 03.7	+1.8
URFA	Urfa	1.54	336	ePn	Pn	14 24 41.7	+1.2
URFA				eSn	Sg	14 25 03.7	+1.7
MARD	Mardin	1.58	36	iP	Pn	14 24 37.8	-3.3
ATAB	Bozova	1.78	324	iP	Pn	14 24 43.8	0.0
ATAB	Bozova	1.78	324	iP	Pn	14 24 43.8	0.0
ATAB				iS	Sg	14 25 12.2	+2.5
GZT	Gaziantep	2.11	309	iP	Pn	14 24 50.6	+2.2
GAZ	Gaziantep	2.25	301	eP	Pn	14 24 52.3	+2.1
BEST	Besiri	2.27	35	iP	Pn	14 24 46.6	-4.0
SVRC	Sivrice-ELAZID	2.35	354	eP	Pn	14 24 53.9	+2.2
KMRS	Kahramanmaras	2.63	305	eP	Pn	14 24 57.9	+2.4
AKCD	Akcadag	2.63	329	iP	Pn	14 24 53.3	-2.2
PTK	Pertek	2.86	356	eP	Pn	14 25 01.1	+2.5
DARE	Darende-Malaty	3.25	334	eP	Pn	14 25 03.1	-0.9

*IDC **05** 14:40:15.1±5.4, 4091S×8836W, h0km, mb4.2/3, mb1 4.5/4, mb1mx4.1/15, mbtmp4.0/4, ML3.3/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/27, Error ellipse: s-maj=162.3km s-min=36.2km az=13.0*
*NEIC **05** 14:40:17.2±2.0, 4082S×8830W, h10km, mb4.3/3, Error ellipse: s-maj=63.2km s-min=12.3km az=197.0*
ISC 05 14:40:17.7±2.4**, 408S**±05×**883W**±02**, h10km, n10, σ0s23**/8**, mb4.2**/6**, MS3.2**/2**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	13.43	96	Pn	Pn	14 43 28.3	+0.1
	0.1nm,0.3s,baz=310,slow=18,SNR=2.0						
PLCA				LR	LR	14 47 31.9	
	comp=Z,259nm,20.0s,baz=227,slow=32						
CFAA	Coronel Fontan	18.52	67	P	Pn	14 44 34.3	-0.1
	0.0nm,0.3s,baz=233,slow=11,SNR=4.3						
CFAA				LR	LR	14 50 09.1	
	comp=Z,32nm,21.4s,baz=244,slow=32						
LVC	Limon Verde	24.36	48	LR	LR	14 51 58.9	
	comp=Z,41nm,20.1s,MS2.9,baz=214,slow=29						
ATAH	Atahualpa	34.74	17	LR	LR	14 58 17.1	
	comp=Z,92nm,21.1s,MS3.5,baz=212,slow=31						
TXAR	Lajitas Array	71.18	346	P	P	14 51 36.8	+0.3
	2.6nm,1.0s,mb4.1,baz=165,slow=10,SNR=18						
ANMO	Albuquerque	77.17	345	eP	P	14 52 11.6	+0.3
	2.5nm,0.9s,mb4.1						
NVAR	Mina Array Bea	83.45	337	P	P	14 52 45.1	+0.1
	1.6nm,0.8s,mb4.1,baz=169,slow=6.9,SNR=13						
BW06	Boulder Array	85.33	344	eP	P	14 52 54.1	-0.4
	1.8nm,1.0s,mb4.2						
PDAR	Pinedale Array	85.33	344	P	P	14 52 54.2	-0.3
	1.5nm,0.9s,mb4.1,baz=152,slow=5.8,SNR=10						
HLID	Hailey	87.18	341	eP	P	14 53 03.7	+0.1
	3.2nm,1.0s,mb4.5						

*IGQ **05** 14:55:48.4, 138S×8054W, h44km±5km, Mb4.6, Ms4.4, Error ellipse: s-maj=8.4km s-min=1.6km az=152.3*
*ISCJB **05** 14:55:49.2±0.8, 138S±005×8057W±007, h54km±7km, mb3.6/9, Error ellipse: s-maj=11.4km s-min=7.7km az=156.4*
*NEIC **05** 14:55:52.0±1.4, 141S×8037W, h66km±13km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=10.6km az=79.0*
*IDC **05** 14:55:53.2±2.3, 141S×8036W, h77km±24km, mb3.4/9, mb1 3.8/14, mb1mx3.7/24, mbtmp3.7/14, Error ellipse: s-maj=24.8km s-min=14.4km az=72.0*
ISC 05 14:55:51.9±1.1**, 135S**±006×**8041W**±009**, h62**km±10km**, n43, σ0s99**/48**, mb3.6**/9**, 5C-2D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.43	314	⇓P	Pn	14 55 57.9	-5.5
JAMA	Jama	1.10	11	P	Pn	14 56 08.9	-2.5
JAMA	Jama	1.10	11	S	Sn	14 56 25.4	-0.4
QIL2	Quilotoa	1.57	72	P	Pn	14 56 15.9	-1.7
IGUA	Igualata	1.78	94	P	Pn	14 56 19.9	-0.5
BIL2	Estacion Bilba	1.91	93	P	Pn	14 56 22.2	0.0
JUI6	Juive	1.94	92	P	Pn	14 56 22.4	-0.2
ARRY	Arrayan	1.96	94	⇑P	Pn	14 56 22.5	-0.4
RETU	Refugio	1.97	93	P	Pn	14 56 23.1	+0.2
PATA	Patacocha	1.98	94	⇑P	Pn	14 56 23.2	0.0
RUN5	Runtun	1.99	92	⇓P	Pn	14 56 23.3	+0.1
CAMI	Rancho Maria	2.02	71	P	Pn	14 56 23.7	0.0
PISA	Pisayambo	2.05	82	P	Pn	14 56 24.6	+0.5
VC1	Cotopaxi 1	2.13	71	P	Pn	14 56 25.6	+0.4
TAMB	Tambo	2.15	72	P	Pn	14 56 25.7	+0.3
TERV	Terraza Guagua	2.15	57	P	Pn	14 56 24.9	-0.6
PINO	Pino	2.16	57	⇑P	Pn	14 56 24.7	-0.9
GGP	Refugio Guagua	2.16	57	⇑P	Pn	14 56 25.1	-0.5
YANA	Yana	2.21	56	⇑P	Pn	14 56 25.8	-0.5
ANTI	Antisana	2.42	68	P	Pn	14 56 29.8	+0.6
OTAV	Otavalo	2.52	51	ePn	Pn	14 56 29.8	-0.6
OTAV				eSn	Sn	14 57 05.2	+5.2
COTA	Cotacachi	2.67	51	P	Pn	14 56 33.0	+0.6
CAYA	Cayambe	2.80	60	P	Pn	14 56 36.0	+1.6
LAV3	Lava3-Reventad	3.05	66	P	Pn	14 56 40.6	+2.9
CONE	Cono NE Rev Vo	3.05	65	P	Pn	14 56 40.9	+3.2
ATAH	Atahualpa	5.96	160	P	Pn	14 57 19.8	+2.2
	2.5nm,0.3s,baz=352,slow=11,SNR=11						
ATAH				S	Sn	14 58 28.4	+3.9
	6.2nm,0.3s,baz=301,slow=16,SNR=4.2						
ROSC	El Rosal	8.66	45	P	Pn	14 57 56.1	+1.6
	1.8nm,0.3s,baz=259,slow=22,SNR=3.5						
NNA	Nana	11.14	162	P	Pn	14 58 27.3	-1.2
	3.3nm,0.3s,baz=318,slow=15,SNR=3.5						
NNA				S	Sn	15 00 23.6	-7.9
	3.8nm,0.3s,baz=293,slow=15,SNR=8.0						
NNA	Nana	11.14	162	ePn	Pn	14 58 27.4	-1.1
NNA				S	Sn	15 00 23.6	-7.9
NNA				eSn	Sn	15 00 24.8	-6.8
SDV	Santo Domingo	14.09	44	P	Pn	14 59 09.0	+0.5
	0.3nm,0.3s,baz=217,slow=4.2,SNR=4.8						
SDV	Santo Domingo	14.09	44	eP	Pn	14 59 14.8	+6.3
	8.8nm,0.6s						
PCRV	Puerto La Cruz	19.43	54	P	Pn	15 00 15.2	0.0
	2.1nm,0.3s,baz=204,slow=12,SNR=4.9						
SIV	San Ignacio	23.98	128	P	P	15 01 00.9	0.0
	1.7nm,0.7s,mb3.6,baz=311,slow=13,SNR=7.8						
TXAR	Lajitas Array	37.76	326	P	P	15 03 03.1	+1.1
	0.2nm,0.5s,mb3.1,baz=160,slow=8.3,SNR=3.3						
PLCA	Paso Flores	40.20	168	P	P	15 03 22.5	+0.2
	1.8nm,0.9s,mb3.8,baz=350,slow=15,SNR=3.7						
ANMO	Albuquerque	43.58	328	P	P	15 03 51.0	+1.0
	1.8nm,0.6s,mb4.0,baz=116,slow=6.3,SNR=4.7						
ANMO	Albuquerque	43.58	328	eP	P	15 03 51.2	+1.3
	2.5nm,0.8s,mb4.0						
PDAR	Pinedale Array	51.16	333	P	P	15 04 49.4	+0.6
	0.2nm,0.7s,mb3.2,baz=165,slow=3.7,SNR=4.0						
NVAR	Mina Array Bea	52.76	323	P	P	15 05 00.6	-0.1
	0.2nm,0.3s,mb3.6,baz=121,slow=8.5,SNR=3.6						
YKA	Yellowknife Ar	68.70	344	P	P	15 06 48.4	-0.3
	0.5nm,0.8s,mb3.5,baz=138,slow=6.2,SNR=7.9						
DBIC	Dimbokro	75.82	83	P	P	15 07 30.9	-1.3
	1.0nm,0.7s,mb3.9,baz=236,slow=8.8,SNR=3.1						
TOA0	Torodi Ar. Sit	82.62	77	eP	P	15 08 08.6	-0.6
TORD	Torodi Ar. Bea	82.62	77	P	P	15 08 07.8	-1.5
	0.3nm,0.5s,mb3.6,baz=271,slow=7.1,SNR=4.0						

*DDA **05** 15:03:44.9, 3969N×4034E, h26km, Md2.8*
*ISCJB **05** 15:03:50.8±0.7, 3941N±005×4038E±006, h10km, Error ellipse: s-maj=7.8km s-min=6.1km az=169.4*
*CSEM **05** 15:03:53.6±0.1, 3946N×4009E, h15km, MD2.8, Error ellipse: s-maj=4.0km s-min=2.6km az=158.0*
*ISK **05** 15:03:53.0, 3948N×40.15E, h7km, MD2.8*
ISC 05 15:03:51.5±0.7**, 3942N**±005×**4037E**±005**, h10km, n11, σ1s07**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.54	308	ePG	Pg	15 04 06.7	+4.8
EZC				eSG	Sg	15 04 16.4	+7.4
KOPT	Kop Dagi	0.61	10	iP	Pg	15 04 03.2	-0.1
BNGL	BINGOL	0.77	127	iP	Pg	15 04 01.6	-4.7
BNGL				iS	Sg	15 04 15.6	-0.7
EZM	Erzurum	0.91	57	ePG	Pg	15 04 13.3	+4.3
ERZM	Erzurum	0.91	57	iP	Pg	15 03 56.2	-13
ERZM				iS	Sg	15 04 11.5	-9.5
PTK	Pertek	0.92	236	ePG	Pg	15 04 09.1	-0.2
PTK				eSG	Sg	15 04 21.7	+0.5
GUMT	Gumushane	1.24	327	ePN	Pn	15 04 14.0	-0.9
SVRC	Sivrice-ELAZID	1.33	219	ePN	Pn	15 04 17.4	+1.3
KEMA	Kemaliye	1.46	265	iP	Pn	15 04 15.6	-2.3
ESPY	Espiye-Giresun	1.95	321	ePN	Pn	15 04 25.7	+1.0
AGRB	Hanur-Agry	2.04	85	ePN	Pg	15 04 31.6	+1.0

*ISCJB **05** 15:23:08.4±0.7, 2004S±005×6923W±008, h91km±9km, mb3.7/5, Error ellipse: s-maj=12.6km s-min=7.9km az=163.6*
*IDC **05** 15:23:09.7±2.3, 2005S×69.19W, h88km±24km, mb3.4/7, mb1 3.7/9, mb1mx3.6/20, mbtmp3.5/9, Error ellipse: s-maj=25.9km s-min=18.5km az=109.0*
*GUC **05** 15:23:09.0±0.9, 20.18S×6928W, h118km±54km, ML4.5*
*NEIC **05** 15:23:09.6±1.1, 20.14S×6922W, h91km±13km, MG4.5(GUC), Error ellipse: s-maj=18.8km s-min=12.8km az=93.0*
ISC 05 15:23:09.8±0.6**, 2007S**±005×**6924W**±008**, h88**km±8km**, n25, σ1s00**/33**, mb3.7**/5**, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.99	193	⇓eP	Pn	15 23 28.4	-0.9
PB01				iS	Sn	15 23 42.3	-1.6
PB01				AML	AML	15 23 43.2	
	comp=N,24μm,0.3s						
TOCH	Tocopilla	2.20	204	⇑eP	Pn	15 23 44.4	-0.2
TOCH				iS	Sn	15 24 10.8	-0.4
TOCH				AML	AML	15 24 16.8	
	comp=N,2μm,0.2s						
PECH	Pedro de Valdi	2.55	189	eP	Pn	15 23 49.0	-0.2
PECH				iS	Sn	15 24 19.6	+0.2
PECH				AML	AML	15 24 23.9	
	comp=E,4μm,0.4s						
LVC	Limon Verde	2.55	173	P	Pn	15 23 50.2	+1.0
	comp=E,64nm,0.3s,baz=351,slow=8.9,SNR=652						
LVC				S	Sn	15 24 20.7	+1.2
	comp=E,131nm,0.3s,baz=270,slow=20,SNR=26						
LVC	Limon Verde	2.55	173	eP	Pn	15 23 49.8	+0.6
LVC				S	Sn	15 24 20.7	+1.2
LVC	Limon Verde	2.55	173	eP	Pn	15 23 49.8	+0.6
LVC				iS	Sn	15 24 20.5	+1.1
LVC				AML	AML	15 24 26.8	
	comp=E,1μm,0.3s						
ANCH	Antofagasta	3.75	197	eP	Pn	15 24 02.0	-3.4
ANCH				iS	Sn	15 24 44.3	-4.3
ARE	Arequipa	4.18	329	eP	Pn	15 24 13.0	+1.8
ARE				eS	Sn	15 25 11.0	+12
SIV	San Ignacio	8.77	64	P	Pn	15 25 13.7	0.0
	comp=E,1.9nm,0.3s,baz=249,slow=11,SNR=29						
LCO	Las Campanas	9.00	188	ePn	Pn	15 25 18.9	+2.0
NNA	Nana	10.86	317	S	Sn	15 27 42.0	0.0
	comp=E,1.4nm,0.3s,baz=223,slow=19,SNR=2.7						
CFAA	Coronel Fontan	11.52	176	P	Pn	15 25 46.9	-4.3
	comp=E,0.1nm,0.3s,baz=350,slow=6.1,SNR=3.8						
CFAA				S	Sn	15 28 02.7	+4.8
	comp=E,0.1nm,0.3s,baz=222,slow=16,SNR=3.1						
CFAA	Coronel Fontan	11.52	176	P	Pn	15 25 46.9	-4.3
CFAA				S	Sn	15 28 02.7	+4.7
PLCA	Paso Flores	20.62	183	P	P	15 27 42.6	+0.5
	comp=E,1.2nm,0.7s,baz=148,slow=9.3,SNR=3.8						
BDFB	Brasilia	20.67	81	P	P	15 27 43.4	+0.6
	comp=E,1.0nm,0.5s,baz=234,slow=18,SNR=3.2						
SDV	Santo Domingo	28.81	357	P	P	15 28 58.3	-1.4
	comp=E,0.9nm,0.4s,mb3.8,baz=221,slow=20,SNR=3.1						
TXAR	Lajitas Array	59.28	325	P	P	15 33 02.9	+0.5
	comp=E,0.3nm,0.5s,mb3.5,baz=148,slow=8.0,SNR=6.9						
NVAR	Mina Array Bea	74.18	322	P	P	15 34 36.8	-0.2
	comp=E,0.4nm,0.6s,mb3.4,baz=176,slow=9.1,SNR=4.3						
TOA0	Torodi Ar. Sit	77.17	71	eP	P	15 34 53.5	-1.0
TORD	Torodi Ar. Bea	77.17	71	P	P	15 34 53.4	-1.1
	comp=E,0.4nm,0.4s,mb3.5,baz=255,slow=5.2,SNR=9.6						
TORD	Torodi Ar. Bea	77.17	71	P	P	15 34 53.4	-1.1
YKA	Yellowknife Ar	89.74	341	P	P	15 35 58.2	+0.4
	comp=E,1.7nm,0.8s,mb4.2,baz=133,slow=4.7,SNR=26						
YKA	Yellowknife Ar	89.74	341	P	P	15 35 58.2	+0.4
MKAR	Makanchi Array	144.65	34	PKP	PKPdf	15 42 35.5	-0.7
	comp=E,0.4nm,0.6s,baz=324,slow=3.0,SNR=6.3						
SONM	Songino Array	152.08	6	PKPbc	PKPbc	15 42 55.7	+0.8
	comp=E,0.5nm,0.4s,baz=302,slow=1.3,SNR=7.8						

IDC 05 15:38:43.6±22.0**, 513N×9314E, h252**km±147km**, mb3.2**/3**, mb1 3.2**/4**, mb1mx2.9**/21**, mbtmp3.1**/4**, Error ellipse: s-maj=210.5km s-min=96.1km az=179.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.41	23	P	Pn	15 41 56.9	+0.2
	0.5nm,0.3s,baz=218,slow=12,SNR=8.8						
MKAR	Makanchi Array	42.55	349	P	P	15 46 14.9	+0.2
	0.6nm,0.4s,baz=164,slow=8.4,SNR=6.7						
SONM	Songino Array	44.04	13	P	P	15 46 26.5	0.0
	0.7nm,0.5s,baz=196,slow=7.4,SNR=6.4						
ZALV	Zalesovo Beam	49.14	354	P	P	15 47 05.7	-0.2
	0.6nm,0.4s,baz=180,slow=7.2,SNR=5.5						

IDC 05 15:49:04.5±2.8**, 200N×9635E, h0km, mb3.7**/5**, mb1 3.7**/6**, mb1mx3.5**/21**, mbtmp3.7**/6**, ML4.2**/1**, Error ellipse: s-maj=110.6km s-min=28.6km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.55	9	Pn	Pn	15 52 57.8	-0.4
	0.3nm,0.3s,baz=198,slow=10,SNR=6.9						
ASAR	Alice Springs	44.55	127	P	P	15 57 18.4	-0.1
	0.2nm,0.8s,baz=299,slow=7.5,SNR=3.8						
MKAR	Makanchi Array	46.27	347	P	P	15 57 31.8	0.0
	0.9nm,0.5s,baz=158,slow=8.9,SNR=11						
SONM	Songino Array	46.48	9	P	P	15 57 33.7	+0.4
	0.2nm,0.4s,baz=180,slow=8.8,SNR=3.3						
KURK	Kurchatov	50.81	346	P	P	15 58 05.9	-0.7
	0.5nm,0.2s,baz=163,slow=6.6,SNR=2.0						
ZALV	Zalesovo Beam	52.64	351	P	P	15 58 20.2	-0.1
	2.1nm,0.6s,baz=181,slow=7.1,SNR=9.9						

*INET **05** 15:52:37.8, 1252N×8758W, h80km, MD3.4*
*SSS **05** 15:52:38.5, 1241N×8762W, h13km, MD3.4*
CASC 05 15:52:38.1±2.1**, 1273N×8741W, h90**km±12km**, MD3.7, 1C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEL3	Telica 3	0.57	105	eP	Pn	15 52 53.4	0.0
CNCH	Conchagua	0.69	323	⇓eP	x	15 52 54.6	
CNCH				eS	x	15 53 07.9	
CNGN	Cerro Negro	0.73	108	eP	Pn	15 52 54.9	+0.1
MIRN	Miramar	0.74	113	eP	Pn	15 52 54.7	-0.2
MIRN				eS	Sn	15 53 08.2	+0.7
MOMN	Momotombo	0.90	110	eP	Pn	15 52 57.4	+0.7
COPN	Copaltepe	0.96	124	⇑eP	Pn	15 52 56.9	-0.5
COPN				eS	Sn	15 53 10.2	-1.6
BLLM	Bellamira	1.08	311	eP	x	15 52 58.7	
BLLM				eS	x	15 53 15.0	
VSM	San Miguel	1.10	310	⇓eP	x	15 52 59.5	
CSAN		1.10	119	eP	Pn	15 52 59.4	+0.4
CSAN				eS	Sn	15 53 15.1	+0.5
APYN	Apoyeque	1.14	115	eP	Pn	15 52 59.9	+0.5
APYN				eS	Sn	15 53 15.7	+0.2
CAHU	Cacacuatique	1.30	323	eP	x	15 53 02.5	
SSN	San Juan del S	2.08	133	eP	Pn	15 53 13.4	+2.0
CHI2		15.71	120	eP	x	15 52 51.5	
CHI2				eS	x	15 53 03.7	

*PRU **05** 15:58:43.5, 5033N×1876E, h0km*
WAR 05 15:58:42.7, 5026N×1889E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.58	94	ePg	Pg	15 58 54.7	+0.8
OJC				eSg	Sg	15 59 02.7	+1.2
OKC	Ostrava-Krasne	0.64	229	ePG	Pg	15 58 55.4	+0.5
OKC				eSG	Sg	15 59 04.0	+0.8
	comp=Z,25nm,0.4s						
NIE	Niedzica	1.25	132	ePg	Pg	15 59 07.0	+0.4
NIE				eSg	Sg	15 59 24.6	+1.8
DPC	Dobruska-Polom	1.65	274	ePG	Pg	15 59 12.0	-2.3
DPC				eSG	Sg	15 59 32.3	-3.3
	comp=Z,25nm,0.6s						
KOLL	Kolacno	1.71	191	ePN	Pn	15 59 16.7	+3.0
KOLL				eSN	Sn	15 59 38.9	+2.6
STHS	Stebnicka Huta	1.74	118	ePN	Pn	15 59 16.1	+2.0
STHS				eSN	Sn	15 59 40.3	+3.3
KSP	Ksiaz	1.76	290	ePn	Pn	15 59 15.9	+1.6
KSP				eSn	Sn	15 59 38.7	+1.4
KSP				eSg	Sg	15 59 40.9	+1.8
VYHS	Vyhne	1.77	181	ePN	Pn	15 59 16.1	+1.6
VYHS				eSN	Sn	15 59 38.2	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UPC	Upice	1.86	279	eSG	Sg	15 59 39.7	-2.7
	comp=Z,5.4nm,0.6s						
CRVS	Cervenica-Dubn	2.16	128	ePN	Pn	15 59 22.7	+2.9
CRVS				eSN	Sn	15 59 51.9	+4.7
PRU	Pruhonice	2.81	266	eSG	Sg	16 00 09.6	-3.4
	comp=Z,6.2nm,0.6s						
BRG	Berggiesshubel	3.21	283	SG	Sg	16 00 23.1	-2.8
	comp=Z,5.8nm,0.6s						
KHC	Kasperske Hory	3.63	254	ePG	Pg	15 59 46.0	-6.2
KHC				ex	x	15 59 54.5	
KHC				eSG	Sg	16 00 36.0	-3.2
	comp=Z,7.3nm,0.5s						
CLL	Collm	3.88	288	eSg	Sg	16 00 47.0	-0.3

KRSC 05 16:10:27.5±0.6, 5571N×16240E, h17km±17km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.55	25	eP	Pg	16 10 38.4	-0.1
KBTR				i S	Sg	16 10 46.9	+1.0
ZLN	Zelenaya	0.95	290	i P	Pb	16 10 45.9	+0.4
ZLN				i S	Sb	16 10 59.0	+1.2
BZMR	Bezymyannaya	1.10	283	eP	Pb	16 10 47.6	-0.4
BZMR				i S	Sb	16 11 02.7	+0.6
KRSR	Krestovskiy	1.15	297	eP	Pn	16 10 48.1	-0.7
KRSR				i S	Sb	16 11 03.3	-0.2
KLY	Klyuchi	1.15	302	eP	Pn	16 10 46.6	-2.2
KLY				i S	Sb	16 11 01.4	-2.2
SRKR	Sorokina	1.17	324	i P	Pn	16 10 48.6	-0.5
SRKR				i S	Sb	16 11 04.7	+0.6
MKZ	Mys Kozlova	1.22	199	eP	Pn	16 10 49.9	+0.2
MKZ				i S	Sb	16 11 06.7	+1.2
KMNR	Kamenistaya	1.22	273	eP	Pn	16 10 50.7	+0.9
KMNR				i S	Sb	16 11 07.7	+2.1
KPT	Kopyto	1.25	283	eP	Pn	16 10 50.7	+0.5
KPT				i S	Sb	16 11 07.9	+1.4
TUMR	Tumrok	1.35	252	i P	Pn	16 10 52.6	+1.1
TUMR				i S	Sn	16 11 10.6	+1.6
KOZ	Kozyrevsk	1.47	285	i P	Pn	16 10 54.5	+1.4
KOZ				i S	Sn	16 11 14.5	+2.6
SRDR	Sredinnyy	1.62	293	eP	Pn	16 10 56.4	+1.1
SRDR				i S	Sn	16 11 17.5	+1.7
SPN	Mys Shipunski	2.96	209	P	Pn	16 11 13.7	0.0
SPN				i S	Sn	16 11 48.1	-0.7
NLC	Nalytchevo	3.11	216	P	Pn	16 11 16.5	+0.8
NLC				i S	Sn	16 11 52.5	+0.2
AVH	Avacha	3.25	223	P	Pn	16 11 19.3	+1.7
AVH				i S	Sn	16 11 56.3	+0.4
GNL	Ganaly	3.28	234	eP	Pn	16 11 19.5	+1.5
PET	Petropavlovsk	3.47	221	P	Pn	16 11 23.1	+2.5
PET				i S	Sn	16 12 02.5	+1.2

CASC 05 16:42:28.8±2.1, 1316N×9002W, h31km±6km, MD3.7, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.78	30⇑	eP	x	16 42 43.5	
RTR	El Retiro	0.82	26	eP	x	16 42 44.1	
RTR				eS	x	16 42 57.3	
BOQS	Boqueron	0.92	51	eP	x	16 42 45.8	
BOQS				eS	x	16 42 59.7	
RBDL	Robledal	1.00	19	eP	x	16 42 47.2	
RBDL				eS	x	16 43 01.4	
LFRS	El Faro	1.04	63	eP	x	16 42 46.9	
LFRS				eS	x	16 43 01.2	
IXG	Ixpaco	1.10	337⇑	eP	Pn	16 42 47.9	-0.1
LBRS	Las Brisas	1.11	59	eP	x	16 42 48.3	
SNVI	San Vicente	1.23	68⇓	eP	x	16 42 49.9	
NBG	Las Nubes	1.46	347⇓	eP	Pn	16 42 56.5	+3.6
FUG	Fuego 3	1.51	328	eP	Pn	16 42 54.5	+0.7
FUG				eS	Sn	16 43 12.4	0.0
FG6		1.63	329⇓	eP	Pn	16 42 55.5	+0.2
FG6				eS	Sn	16 43 16.7	+1.5
VSM	San Miguel	1.72	81	eP	x	16 42 57.1	
CAHU	Cacacuatique	1.86	71	eP	x	16 42 58.7	

JMA 05 16:59:06.3±0.2, 3776N×14461E, h42km, M3.9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.66	301	P	Pn	16 59 48.1	+1.5
JIO	Ouri	2.66	286	P	Pn	16 59 48.2	+1.5
JIO				eS	Sn	17 00 19.2	+1.5
JMK	Ichinoseki	2.92	295	P	Pn	16 59 52.0	+1.8
JMK				eS	Sn	17 00 26.6	+2.6
JOT	Ohata	4.54	324	P	Pn	17 00 15.1	+2.6
JRY	Ryogami san	4.89	251	P	Pn	17 00 18.6	+1.3
JRY				eS	Sn	17 01 12.4	-0.3
JCH	Churui	4.94	349	P	Pn	17 00 18.0	+0.1
JCH				eS	Sn	17 01 10.7	-3.1
JKB	Kayabe	4.96	327	P	Pn	17 00 20.7	+2.5
JOD2	Odawara 2	5.10	242	P	Pn	17 00 22.0	+1.9
JOD2				eS	Sn	17 01 16.3	-1.4
MAT	Matsushiro	5.26	259	P	Pn	17 00 24.2	+1.9
MAT				S	Sn	17 01 26.0	+4.4
NEM2	Nemuro 2	5.67	8	P	Pn	17 00 25.4	-2.5
NEM2				eS	Sn	17 01 25.4	-6.2
JTKR	Abashiri--Toko	6.23	355	P	Pn	17 00 35.5	-0.1
JTKR				eS	Sn	17 01 41.8	-3.6

*NIED **05** 17:07:00, 2960N×13060E, h23km, Mw4.0 Best double couple: Mo1.16000×10^{15} NP1:φs22.00000°, δ90.00000°, λ92.00000°. NP2:φs117.00000°, δ2.00000°, λ5.00000°.*
*IDC **05** 17:07:22.4±12.0, 2869N×13349E, h0km, mb3.6/2, mb1 3.5/4, mb1mx3.3/21, mbtmp3.6/4, ML3.3/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/29, Error ellipse: s-maj=212.6km s-min=46.1km az=117.0*
*ISCJB **05** 17:07:47.2±0.8, 2957N±004×13060E±010, h47km±10km, mb3.4/2, Error ellipse: s-maj=14.7km s-min=4.8km az=18.5*
*JMA **05** 17:07:47.1±0.1, 2960N×13062E, h45km±4km, M3.5*
ISC 05 17:07:48.0±2.5, 2958N±004×13060E±009, h34km±22km, n13, σ0s66/20, mb3.4/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.68	293	P	Pn	17 08 00.5	-0.7
JNN				eS	Sn	17 08 11.1	+0.5
JKC	Kuchinoerabu	0.95	339	P	Pn	17 08 04.0	-0.9
JKC				eS	Sn	17 08 16.9	-0.3
JTN	Tanegashima 3	1.12	17	P	Pn	17 08 06.6	-0.7
JTN				eS	Sn	17 08 21.6	0.0
JZK	Kikaishima	1.37	204	eS	Sn	17 08 27.8	+0.2
JAM	Amami Oshima	1.45	217	P	Pn	17 08 12.1	+0.3
JAM				eS	Sn	17 08 29.3	-0.3
JTSR	Tashiro 2	1.61	10	P	Pn	17 08 13.8	-0.2
JTSR				eS	Sn	17 08 34.0	+0.5
JSU	Suzuyama	1.93	356	P	Pn	17 08 17.9	-0.4
JSU				eS	Sn	17 08 41.4	0.0
JTK	Tokunoshima	2.30	219	P	Pn	17 08 24.1	+0.7
JOW	Kunigami	3.42	217	Pn	Pn	17 08 38.7	-0.1
	3.1nm,0.3s,baz=95,slow=20,SNR=25						
JOW				Sn	Sn	17 09 17.6	-0.5
	3.9nm,0.3s,baz=119,slow=26,SNR=3.9						
JOW	Kunigami	3.42	217	P	Pn	17 08 39.1	+0.3
KSRS	Korea Array	8.17	345	Pn	Pn	17 09 46.0	+1.9
	0.2nm,0.3s,baz=152,slow=21,SNR=3.0						
SONM	Songino Array	26.08	321	P	P	17 13 19.1	+0.9
	1.1nm,0.7s,mb3.5,baz=138,slow=8.9,SNR=9.0						
SONM				LR	LR	17 23 39.1	
	comp=Z,97nm,19.4s,baz=191,slow=34						
MKAR	Makanchi Array	40.98	309	P	P	17 15 26.6	-0.9
	0.3nm,0.5s,mb3.2,baz=89,slow=8.9,SNR=7.0						

*IDC **05** 17:26:56.3±1.2, 37.19N×2930E, h0km, mb3.6/2, mb1 3.8/8, mb1mx3.6/26, mbtmp3.7/8, ML3.7/6, MS2.7/1, Ms1 2.7/1, ms1mx2.2/39, Error ellipse: s-maj=20.5km s-min=18.7km az=162.0*
*CSEM **05** 17:26:56.8±0.1, 3688N×2926E, h1km±1km, MD3.1, Error ellipse: s-maj=2.1km s-min=1.5km az=73.0*
*ISCJB **05** 17:26:58.6±0.6, 3687N±002×2933E±003, h10km±4km, mb3.5/2, Error ellipse: s-maj=3.6km s-min=3.4km az=12.4*
*ISK **05** 17:26:58.7, 3702N×2923E, h3km, MD3.2*
*DDA **05** 17:26:59.4, 3701N×2923E, h5km±5km, Md3.1*
*NEIC **05** 17:26:59.0, 3702N×2924E, h6km, ML3.3(ISK), ML3.6(ATH), After ISK.*
*HLW **05** 17:27:05.6, 3673N×2927E, h30km, Mb3.0*
ISC 05 17:26:59.4±0.5, 3696N±002×2927E±002, h6km±4km, n63, σ0s98/79, mb3.5/2, 2C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.36	39⇑	iP	Pg	17 27 06.2	-0.2
GOLH				i S	Sg	17 27 12.9	+1.7
GOLH	Golhisar	0.36	39	i P	Pg	17 27 06.2	-0.3
DALT	Dalyan (Mudla)	0.54	250	ePG	Pg	17 27 09.4	-0.5
DALT				eSG	Sg	17 27 17.9	+1.0
TURN	Turunc	0.54	262	eP	Pg	17 27 14.3	+4.4
TURN				eS	Sg	17 27 28.2	+11
ELL	Elmali	0.55	112	ePG	Pg	17 27 10.8	+0.8
ELL				eSG	Sg	17 27 20.1	+2.9
YER	Yerkesik	0.81	283	ePG	Pg	17 27 14.0	-1.0
DENT	Denizli	0.82	347	ePG	Pg	17 27 13.5	-1.7
DENT				eSG	Sg	17 27 24.8	-1.0
KSL	Kastellorizon	0.84	163	eP	Pg	17 27 16.0	+0.4
ANTB	Antalya	1.11	92	ePN	Pn	17 27 21.7	+0.2
BCK	Bucak	1.17	64	ePN	Pn	17 27 21.9	-0.4
ARG	Arkhangelos	1.18	232	eP	Pg	17 27 21.0	-1.1
ARG	Arkhangelos	1.18	232	P	Pg	17 27 21.7	-0.4
MLSB	Milas	1.24	286	ePN	Pn	17 27 22.4	-1.0
AYDN	Tasoluk	1.32	303	eP	Pn	17 27 24.0	-0.4
AYDN				eS	Sb	17 27 41.8	+0.2
ISP	Isparta	1.32	48	ePN	Pn	17 27 24.2	-0.3
ISP	Isparta	1.32	48	P	Pn	17 27 24.5	0.0
ISP	Isparta	1.32	48	P	Pn	17 27 24.5	0.0
DAT	Datca	1.38	261	ePN	Pn	17 27 25.5	+0.3
KHL	Karahalli	1.38	8	ePN	Pn	17 27 24.6	-0.6
KHAL	Karahalli	1.42	7	eP	Pn	17 27 25.6	-0.2
KHAL				eS	Sb	17 27 45.3	+0.6
BDRM	Kayabasi	1.47	275	eP	Pn	17 27 26.2	-0.2
BDRM				eS	Sn	17 27 46.5	+0.5
BODT	Bodrum	1.57	274	ePN	Pn	17 27 28.1	+0.2
KULA	Kula-Manisa	1.63	343	ePN	Pn	17 27 28.3	-0.4
MANT	Manisa	1.64	340	eP	Pn	17 27 28.2	-0.5
MANT				eS	Sn	17 27 50.3	+0.2
SMG	Samos	2.08	292	eP	Pn	17 27 35.0	+0.1
SMG	Samos	2.08	292	P	Pn	17 27 35.4	+0.5
ALT	Altintas	2.20	17	ePN	Pn	17 27 36.5	+0.1
KARP	Karpathos	2.21	231	eP	Pn	17 27 38.0	+1.4
AKS	Akhisar	2.24	329	ePN	Pn	17 27 36.4	-0.7
BLCB	Balcova	2.27	310	ePN	Pn	17 27 37.2	-0.3
KONT	Konya--Tatoy	2.65	67	ePN	Pn	17 27 44.6	+2.0
KIZT	Kizilcal	2.82	46	ePN	Pn	17 27 45.2	+0.2
ESKT	Eskisehir	2.85	25	ePN	Pn	17 27 46.5	+1.1
PRK	Paraskevi	3.29	315	eP	Pn	17 27 51.5	0.0
NPS	Neapolis	3.41	241	eP	Pn	17 27 55.0	+1.8
NPS	Neapolis	3.41	241	P	Pn	17 27 55.7	+2.5
LAST	Lasithi	3.56	241	P	Pn	17 27 57.4	+2.2
IDI	Anoyia	3.92	246	Pn	Pn	17 28 01.2	+1.1
	3.5nm,0.3s,baz=64,slow=14,SNR=19						
IDI				Sn	Sn	17 28 47.8	+1.3
	8.4nm,0.3s,baz=294,slow=16,SNR=7.2						
ANTO	Ankara	4.01	42	eP	Pn	17 28 01.6	+0.2
ANTO	Ankara	4.01	42	eP	Pn	17 28 01.6	+0.2
BRTR	Keskin Array B	4.41	50	Pn	Pn	17 28 04.4	-2.5
	1.6nm,0.3s,baz=231,slow=15,SNR=34						
BRTR				Sn	Sn	17 29 00.8	+2.4
	1.1nm,0.3s,baz=223,slow=26,SNR=6.4						
VLI	Veliai	5.09	269	eP	Pn	17 28 19.5	+3.3
MMAI	Mount Meron Ar	6.38	126	Pn	Pn	17 28 34.2	+0.2
	6.3nm,0.3s,baz=324,slow=11,SNR=18						
MMAI				Sn	Sn	17 29 46.5	-0.7
	4.4nm,0.3s,baz=306,slow=27,SNR=5.6						
HRSH	Kfar Ka'horesh	6.51	129⇓	eP	Pn	17 28 42.7	+6.9
HRSH				S	Sn	17 29 55.2	+4.8
RSH		7.03	147	P	Pn	17 28 42.7	-0.2
	185nm,0.4s						
AMAG	Maghara	7.09	151	P	Pn	17 28 43.2	-0.6
AMAG				S	Sn	17 29 56.8	-8.0
HSAF	As Saff	7.56	165	P	Pn	17 28 49.6	-0.5
GLL	Jalalah	7.63	164	P	Pn	17 28 51.3	+0.1
GLL	Jalalah	7.63	164	P	Pn	17 28 51.3	+0.1
	232nm,0.3s						
SUZ		7.69	156	P	Pn	17 28 52.1	+0.1
ASF	Jabal al Asfar	7.89	125	Pn	Pn	17 28 53.8	-0.9
	0.3nm,0.3s,baz=149,slow=14,SNR=2.6						
ASF				Sn	Sn	17 30 24.4	+0.1
	0.2nm,0.3s,baz=323,slow=5.3,SNR=1.6						
ZAF		8.13	159	P	Pn	17 28 57.7	-0.3
EIL	Elat	8.68	145	Pn	Pn	17 29 04.5	-1.0
	1.0nm,0.3s,baz=327,slow=6.4,SNR=5.1						
EIL				Sn	Sn	17 30 39.2	-4.5
	1.0nm,0.3s,baz=302,slow=20,SNR=3.6						
EIL	Elat	8.68	145	Pn	Pn	17 29 04.5	-1.0
EIL				Sn	Sn	17 30 39.2	-4.5
MLR	Muntele Rosu	8.89	345	Pn	Pn	17 29 03.3	-5.0
	0.3nm,0.3s,baz=128,slow=19,SNR=2.2						
HKAT	Jabal Katrina	9.30	153	P	Pn	17 29 13.9	-0.1
TR2		9.33	155	P	Pn	17 29 13.9	-0.5
TR1		9.76	155	P	Pn	17 29 19.6	-0.7
HFRF	Wahat Farafira	9.81	185⇓	eP	Pn	17 29 19.9	-1.2
GTR	Jabal at Tayr	11.46	174⇑	iP	Pn	17 29 42.5	-1.2
GNI	Garni	12.52	71	LR	LR	17 34 35.8	
	comp=Z,31nm,18.6s,baz=290,slow=37						
TORD	Torodi Ar. Bea	34.21	233	P	P	17 33 45.0	-1.0
	1.6nm,0.9s,mb4.0,baz=34,slow=7.8,SNR=11						
MKAR	Makanchi Array	40.00	59	P	P	17 34 31.4	-3.5
	0.2nm,0.5s,mb3.1,baz=262,slow=10.0,SNR=3.1						

*CSEM **05** 17:31:38.8±1.2, 3709N×2443W, h5km, ML3.1, Error ellipse: s-maj=8.2km s-min=6.1km az=83.0, After PDA*
PDA 05 17:31:38.8±1.2, 3709N×2443W, h5km, MD4.0, ML3.1, Error ellipse: s-maj=8.2km s-min=6.1km az=83.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.52	260	i P	Pg	17 31 47.3	-1.4
PSMN				eS	Sg	17 31 54.4	-1.0
PSMN	Pico do Norte,	0.52	260	eS	Sg	17 31 54.4	-1.0
PDA	Ponta Delgada	1.18	304	eP	Pg	17 31 56.3	-5.1
PDA				eS	Sg	17 32 10.2	-6.4
PSET	Sete Cidades	1.26	306	eP	Pg	17 31 57.9	-5.0
PSET				eS	Sg	17 32 12.7	-6.5
PSET				A		17 32 15.4	
	88nm,0.3s						
PSET	Sete Cidades	1.26	306	eP	Pg	17 31 57.9	-5.0
PSET				eS	Sg	17 32 12.7	-6.5
PSCM	Serra do Cume	2.66	308	eP	Pn	17 32 17.8	-4.5
PSCM				eS	Sn	17 32 47.0	-8.0
PSCM				A		17 32 51.1	
	18nm,0.2s						
PSCM	Serra do Cume	2.66	308	eP	Pn	17 32 17.8	-4.5
PSCM				eS	Sn	17 32 47.0	-8.0
PMAN	Manadas	3.28	299	eP	Pn	17 32 26.6	-4.2
PMAN				eS	Sn	17 33 01.9	-8.2
PMAN				A		17 33 05.6	
	30nm,0.2s						
PMAN	Manadas	3.28	299	eP	Pn	17 32 26.6	-4.2
PMAN				eS	Sn	17 33 01.9	-8.2
ROSA	Rosais	3.42	299	eP	Pn	17 32 28.5	-4.3
ROSA				eS	Sn	17 33 05.8	-7.9
PICO	Pico	3.46	295	eP	Pn	17 32 29.0	-4.3
PICO				eS	Sn	17 33 06.1	-8.6
CALA	Caldeira	3.69	295	eP	Pn	17 32 32.4	-4.1
CALA				eS	Sn	17 33 11.8	-8.6

IDC 05 17:40:06.9±9.8, 200N×9597E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.6/21, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=194.4km s-min=102.9km az=149.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.61	10	Pn	Pn	17 44 01.6	+0.1
	0.1nm,0.3s,baz=200,slow=11,SNR=16						
MKAR	Makanchi Array	46.18	347	P	P	17 48 33.5	0.0
	1.8nm,0.5s,baz=161,slow=8.8,SNR=43						
SONM	Songino Array	46.54	10	P	P	17 48 36.1	-0.1
	0.4nm,0.3s,baz=199,slow=6.8,SNR=5.8						
KURK	Kurchatov	50.71	346	P	P	17 49 07.5	-0.8
	0.4nm,0.4s,baz=162,slow=7.5,SNR=4.4						
ZALV	Zalesovo Beam	52.59	352	P	P	17 49 22.5	+0.2
	1.9nm,0.6s,baz=179,slow=8.1,SNR=13						

IDC 05 17:48:47.6±3.4, 174N×12710E, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.6/15, mbtmp4.0/3, Error ellipse: s-maj=396.7km s-min=27.6km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	22.70	162	eP	P	17 53 49.8	-1.2
ASAR	Alice Springs	26.11	166	P	P	17 54 23.6	+0.2
	2.0nm,0.4s,baz=346,slow=11,SNR=54						
STKA	Stephens Creek	36.15	159	eP	P	17 55 51.6	-0.2
	2.0nm,0.9s						
STKA	Stephens Creek	36.15	159	P	P	17 55 51.6	-0.1
	1.4nm,0.4s,baz=326,slow=8.2,SNR=9.4						
MKAR	Makanchi Array	59.39	326	P	P	17 58 51.9	0.0
	0.3nm,0.4s,baz=123,slow=7.7,SNR=3.8						

*GCMT **05** 18:07:11.8±0.2, 4922S×16427E, h35km±1km, MW5.2/79, Moment Tensor Solution. s57,c81; s79,c133; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; Mrr0.41±.03; Mθθ0.42±.02; Mφφ-0.82±.02; Mrθ0.54±.03; Mθφ0.24±.02; Mφr-0.09±.02; Best double couple: Mo0.93100×10^{17} NP1:φs25.00000°, δ53.00000°, λ152.00000°. NP2: φs133.00000°, δ68.00000°, λ41.00000°. Principal axes: T 0.9590, Plg44.0000°, Azm355.0000°; N -0.0560, Plg45.0000°, Azm156.0000°; P -0.9030, Plg9.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **05** 18:07:11.7, 4940S×16480E, h10km, mb5.3, Msz4.7*
*NEIC **05** 18:07:11.8±0.4, 4941S×16479E, h10km, mb5.2/10, Error ellipse: s-maj=9.2km s-min=4.6km az=146.0*
*ISCJB **05** 18:07:12.4±2.0, 4925S±006×16473E±009, h19km±15km, mb5.0/19, MS4.6/15, Error ellipse: s-maj=10.7km s-min=9.1km az=36.6*
*MOS **05** 18:07:14.7±1.6, 4926S×16452E, h33km, mb5.5/5, Error ellipse: s-maj=20.4km s-min=10.9km az=104.2*
*IDC **05** 18:07:19.6±3.0, 4882S×16502E, h60km±27km, mb4.5/9, mb1 4.5/11, mb1mx4.5/12, mbtmp4.5/11, ML4.0/2, MS4.6/12, Ms1 4.6/12, ms1mx4.6/14, Error ellipse: s-maj=23.2km s-min=15.5km az=91.0*
*DJA **05** 18:07:24, 4877S×164.12E, h54km, Mw5.6/8*
ISC 05 18:07:15.2±2.2, 4920S±006×16467E±009, h23km±17km, h23km±2.5km:pP-P, n116, σ1s19/66, mb5.0/19, MS4.6/15, 6C-1D, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	3.99	35	P	Pn	18 08 14.9	+0.1
DCZ	Deep Cove	4.09	25	P	Pn	18 08 15.3	-1.0
MLZ	Mavora Lakes	4.54	33	P	Pn	18 08 22.6	+0.2
TUZ	Tuapeka	4.67	48	P	Pn	18 08 24.7	+0.4
MSZ	Milford Sound	5.05	27	P	Pn	18 08 30.6	+1.1
EAZ	Earnscleugh	5.08	40	P	Pn	18 08 29.6	-0.2
WKZ	Wanaka	5.29	36	P	Pn	18 08 33.6	+0.8
ODZ	Otahua Downs	5.83	47	P	Pn	18 08 39.4	-0.7
JCZ	Jackson Bay	5.85	30	P	Pn	18 08 42.0	+1.5
LBZ	Lake Benmore	6.13	40	P	Pn	18 08 42.4	-1.8
MCQ	Macquarie Isla	6.37	212	eP	Pn	18 08 46.5	-1.1
MCQ				pmax	pmax		
	comp=Z,10μm,0.5s						
MCQ	Macquarie Isla	6.37	212	eP	Pn	18 08 46.5	-1.1
	comp=Z,14μm,0.5s						
FOZ	Fox Glacier	6.62	33	P	Pn	18 08 52.6	+1.6
RPZ	Rata Peaks	7.04	41	P	Pn	18 08 54.1	-2.7
	comp=Z,4.7nm,0.3s,baz=218,slow=2.7,SNR=23						
RPZ				S	Sn	18 10 06.9	-9.1
	comp=Z,28nm,0.3s,baz=25,slow=23,SNR=3.6						
RPZ	Rata Peaks	7.04	41	P	Pn	18 08 54.4	-2.4
WVZ	Waitaha Valley	7.44	37	P	Pn	18 09 01.7	-0.5
MQZ	McQueen's Vall	7.78	48	P	Pn	18 09 06.2	-0.8
CRLZ	Canterbury Las	7.87	47	P	Pn	18 09 08.0	-0.1
LTZ	Lake Taylor	8.32	42	P	Px	18 09 12.3	
DSZ	Denniston Nort	8.98	37	P	Px	18 09 23.0	
KHZ	Kahutara	9.19	46	P	Px	18 09 29.6	
THZ	Tophouse	9.42	41	P	Px	18 09 29.2	
QRZ	Quartz Range	10.05	36	P	Px	18 09 37.2	
NNZ	Nelson	10.07	41	P	Px	18 09 38.4	
TAU	Tasmania Unive	13.58	291	eP	Pn	18 10 22.9	-3.3
TAU				pmax	pmax		
	comp=Z,97nm,0.6s						
TAU	Tasmania Unive	13.58	291	eP	Pn	18 10 22.9	-3.3
	comp=Z,97nm,0.6s						
MOO	Moorlands	13.92	292	eP	Pn	18 10 28.0	-2.9
MOO				eS	Sx	18 12 47.5	
MOO				eT		18 23 50.9	
URZ	Urewera	14.14	44	P	Px	18 10 32.6	
	comp=Z,0.4nm,0.3s,baz=133,slow=17,SNR=2.7						
URZ				S	Sx	18 13 01.0	
	comp=Z,0.4nm,0.3s,baz=337,slow=4.8,SNR=3.0						
CNB	Canberra Magne	17.86	315	eP	Pn	18 11 23.2	+1.1
CNB				eS	Sx	18 14 22.8	
CAN	Canberra	18.03	314	eP	Pn	18 11 25.8	+1.7
TOO	Toolangi	18.09	303	eP	Pn	18 11 26.1	+1.3
TOO				eS	Sn	18 14 50.9	+5.0
ARMA	Armidale	21.21	327	eP	P	18 12 00.2	+1.0
ARMA				eS	S	18 16 02.1	+8.3
DRV	Dumont d'Urvil	21.59	207	P	P	18 12 07.0	+4.1
DRV				SS		18 16 13.0	
DRV				R		18 17 00.0	
RAO	Raoul Island	23.95	40	LR	LR	18 21 48.1	
	comp=Z,2μm,18.8s,MS4.7,baz=311,slow=37						
STKA	Stephens Creek	24.48	306	eP	P	18 12 33.1	+0.7
	comp=Z,26nm,0.9s,mb4.7						
STKA				eS	S	18 16 47.9	-3.5
STKA	Stephens Creek	24.48	306	P	P	18 12 32.5	+0.1
	comp=Z,32nm,0.9s,mb4.8,baz=135,slow=10.0,SNR=40						
STKA				LR	LR	18 20 10.8	
	comp=Z,2μm,19.1s,MS4.7,baz=141,slow=32						
EIDS	Eidsvold	26.05	331	eP	P	18 12 46.9	+0.3
	comp=Z,207nm,1.9s,mb5.3						
DZM	Mont Dzumac	27.11	4	eP	P	18 12 57.7	+1.4
DZM	Mont Dzumac	27.11	4	eP	P	18 12 58.5	+2.2
VNDA	Vanda	28.44	181	P	P	18 13 11.9	+4.2
	comp=Z,3.4nm,1.0s,mb4.0,baz=355,slow=8.0,SNR=11						
VNDA				LR	LR	18 22 05.7	
	comp=Z,1μm,19.7s,MS4.6,baz=11,slow=31						
CTA	Charters Tower	32.58	327	eP	P	18 13 44.7	0.0
	comp=Z,11nm,1.0s,mb4.8						
CTA				ePCP	PcP	18 16 29.7	-1.1
CTA	Charters Tower	32.58	327	eP	P	18 13 44.7	0.0
CTA				e		18 16 29.7	
CTA				pmax	pmax		
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	35.11	305	P	P	18 14 06.2	-0.5
	comp=Z,28nm,0.9s,mb5.2,baz=136,slow=7.9,SNR=176						
ASAR				PcP	PcP	18 16 37.1	-0.8
	comp=Z,3.8nm,0.9s,baz=142,slow=2.8,SNR=5.8						
WB2	Warramunga Arr	37.95	309	eP	P	18 14 29.5	-1.4
WB2				i PCP	PcP	18 16 46.1	-0.4
WB2				eS	Sx	18 20 06.2	
WRAB	Tennant Creek	37.95	309	P	P	18 14 29.0	-2.0
	comp=Z,390nm,0.9s,mb6.1,SNR=17						
WRAB	Tennant Creek	37.95	309	eP	P	18 14 29.6	-1.4
WRAB				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.3						
WRAB	Tennant Creek	37.95	309	eP	P	18 14 29.6	-1.4
	comp=Z,63nm,0.9s,mb5.3						
COEN	Coen	39.34	326	eP	P	18 14 42.5	-0.1
	comp=Z,106nm,1.8s,mb5.3						
HNR	Honiara	39.84	353	P	P	18 14 44.0	-2.8
	comp=Z,36nm,0.8s,mb5.2,baz=173,slow=6.9,SNR=4.6						
HNR				LR	LR	18 28 06.7	
	comp=Z,954nm,21.8s,MS4.6,baz=7.3,slow=32						
QSPA	South Pole Qui	40.92	180	P	P	18 14 58.2	+3.1
	comp=Z,1.5nm,0.6s,mb3.8,baz=16,slow=1.4,SNR=3.9						
QSPA				PcP	PcP	18 16 55.7	+0.7
	comp=Z,6.1nm,0.9s,baz=42,slow=1.6,SNR=4.9						
PMG	Port Moresby	42.29	334⇑	eP	P	18 15 05.8	-1.1
PMG	Port Moresby	42.29	334	eP	P	18 15 07.9	+1.0
	comp=Z,202nm,1.9s,mb5.4						
KAKA	Kakadu	45.05	313	eP	x	18 15 10.5	
	comp=Z,30nm,1.1s						
MBWA	Marble Bar	45.23	292	eP	P	18 15 29.6	-1.0
	comp=Z,142nm,1.9s,mb5.5						
PPT	Papeete	48.47	66	LR	LR	18 31 18.9	
	comp=Z,590nm,19.8s,MS4.6,baz=247,slow=30						
MAW	Mawson	49.77	209	P	P	18 16 10.5	+5.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,11nm,1.1s,mb4.8,baz=61,slow=14,SNR=2.1						
MAW				LR	LR	18 35 18.5	
	comp=Z,1μm,19.4s,MS4.9,baz=114,slow=33						
SYO	Syowa Base	55.37	201⇓	eP	P	18 16 53.2	+6.5
KAPI	Kappang	58.11	304	eP	P	18 17 06.1	-0.8
	comp=Z,22nm,1.3s,mb5.0						
SNAA	Sanae	59.10	185	eP	P	18 17 14.8	+1.8
SNAA				e		18 17 19.3	
SNAA				e	pP	18 17 22.4	+2.2
SNAA				e		18 17 26.5	
SNAA	Sanae	59.10	185	eP	P	18 17 10.6	-2.4
SNAA				pmax	pmax		
	comp=Z,19nm,1.1s						
SNAA	Sanae	59.10	185	eP	P	18 17 10.6	-2.4
	comp=Z,19nm,1.1s,mb5.0						
VNA3	Neumayer Olymp	59.79	182	eP	P	18 17 19.4	+1.6
VNA3				e	pP	18 17 24.9	-0.1
VNA3				e	pP	18 17 27.3	+2.3
VNA3				e		18 17 31.2	
VNA2	Neumayer--Watz	60.05	183	eP	P	18 17 20.4	+0.9
VNA2				e	pP	18 17 26.1	-0.6
VNA2				e	pP	18 17 28.7	+2.0
VNA2				e		18 17 32.5	
VNA1	Neumayer--Stat	60.35	183	eP	P	18 17 21.5	-0.1
VNA1				e	pP	18 17 27.6	-1.2
VNA1				e		18 17 31.4	
VNA1				e		18 17 36.0	
PLCA	Paso Flores	78.09	140	LR	LR	18 46 22.8	
	comp=Z,246nm,18.6s,MS4.6,baz=199,slow=30						
QIZ	Qiongzhong	83.52	309	P	P	18 19 47.8	+6.7
QIZ				PP	PP	18 22 54.3	+0.4
QIZ				S	S	18 30 06.0	+4.5
QIZ				LR	LR		
	comp=Z,113nm,22.3s,MS4.2						
MJAR	Matsushiro Arr	88.54	339	P	P	18 20 04.9	-0.5
	comp=Z,7.7nm,1.1s,mb5.0,baz=176,slow=5.7,SNR=8.7						
MJAR				LR	LR	18 54 29.6	
	comp=Z,86nm,20.9s,MS4.2,baz=200,slow=32						
MAT	Matsushiro	88.55	339	P	P	18 20 06.2	+0.8
CMAR	Chiang Mai Arr	88.94	300	P	P	18 20 07.5	-0.2
	comp=Z,5.9nm,0.9s,mb4.9,baz=162,slow=3.7,SNR=35						
CMAR				LR	LR	19 00 37.2	
	comp=Z,317nm,18.8s,MS4.8,baz=349,slow=36						
CHTO	Chiang Mai	89.23	300	eP	P	18 20 09.4	+0.3
CHTO				pmax	pmax		
	comp=Z,42nm,2.1s,mb5.4						
CHTO	Chiang Mai	89.23	300	eP	P	18 20 09.4	+0.3
	comp=Z,42nm,2.1s,mb5.4						
KSRS	Korea Array	92.22	332	P	P	18 20 22.4	-0.1
	comp=Z,8.8nm,1.0s,mb5.0,baz=151,slow=5.7,SNR=18						
KSRS				LR	LR	19 00 13.1	
	comp=Z,220nm,18.8s,MS4.6,baz=166,slow=34						
BOSA	Boshof	94.49	215	LR	LR	18 56 10.9	
	comp=Z,316nm,18.7s,MS4.8,baz=158,slow=31						
ASAJ	Asahikawa	94.92	344	LR	LR	18 58 13.7	
	comp=Z,381nm,19.9s,MS4.9,baz=188,slow=32						
XAN	Xi'an	96.55	316	P	P	18 20 42.6	+0.1
XAN				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.9						
TLY	Talaya	113.13	324	i PKIKP	PKiKP	18 25 41.5	-8.1
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,204nm,19.0s,MS4.7						
YAK	Yakutsk	114.35	343	i PKIKP	PKiKP	18 25 50.5	-1.1
MKAR	Makanchi Array	119.25	309	PKP	PKPdf	18 26 00.4	-1.1
	comp=Z,1.9nm,0.9s,baz=96,slow=1.2,SNR=9.4						
AAK	Ala-Archa	120.72	301⇑	iPKIKP	PKPdf	18 26 04.8	+0.3
ZALV	Zalesovo Beam	122.72	316	PKP	PKPdf	18 26 05.6	-2.3
	comp=Z,1.9nm,1.0s,baz=119,slow=1.9,SNR=5.3						
ZALV	Zalesovo Beam	122.72	316	PKP	PKPdf	18 26 05.6	-2.3
TIXI	Tiksi	123.19	347⇑	iPKIKP	PKPdf	18 26 07.1	-1.2
TIXI				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.8						
KURK	Kurchatov	123.64	310⇑	iPKIKP	PKPdf	18 26 08.4	-1.4
YKA	Yellowknife Ar	128.28	36	PKP	PKPdf	18 26 17.3	-1.0
	comp=Z,0.7nm,0.9s,baz=217,slow=2.4,SNR=6.9						
YKA	Yellowknife Ar	128.28	36	PKP	PKPdf	18 26 17.3	-1.0
FFC	Flin Flon	129.58	49	ePKIKP	PKPdf	18 26 18.2	-2.8
LIC	Lamto	136.29	195	ePKP1	PKPdf	18 26 33.9	-1.1
	comp=Z,28nm,1.1s						
KIC	Kosan Boka	136.38	195	ePKP1	PKPdf	18 26 34.3	-0.9
	comp=Z,26nm,0.9s						
DBIC	Dimbokro	136.70	195	PKP	PKPdf	18 26 33.3	-2.5
	comp=Z,5.9nm,0.9s,baz=104,slow=2.8,SNR=6.9						
TIC	Toumodi	136.70	195	ePKP1	PKPdf	18 26 34.9	-0.9
	comp=Z,5.1nm,0.2s						
ARU	Arti	136.78	309	i PKIKP	PKPdf	18 26 33.7	-0.8
ARU						18 29 13.3	
KIV	Kislovodsk	140.62	285	ePKIKP	PKPdf	18 26 42.6	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TOA0	Torodi Ar. Sit	141.40	207	ePKPdf		18 26 36.9	
TORD	Torodi Ar. Bea	141.40	207	PKhKP		18 26 37.2	
	comp=Z,1.1nm,0.8s,baz=187,slow=1.8,SNR=5.0						
TORD				PKP	PKPdf	18 26 42.8	-1.5
	comp=Z,1.3nm,0.6s,baz=141,slow=2.6,SNR=7.6						
TORD	Torodi Ar. Bea	141.40	207	PKP		18 26 37.2	
TORD				PKP	PKPdf	18 26 42.8	-1.5
VRHR	Novokhopersk	144.23	295	ePKIKP	PKPdf	18 26 45.9	-2.2
VRHR				pmax	pmax		
	comp=Z,30nm,1.2s						
VRHR				pmax	pmax		
	comp=N,9.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,40nm,1.5s						
BRTR	Keskin Array B	144.35	273	PKP	PKPdf	18 26 46.9	-1.9
	comp=E,4.4nm,0.9s,baz=120,slow=2.8,SNR=11						
ANN	Anapa	144.35	283	i PKHKP		18 26 43.7	
ANN				pmax	pmax		
	comp=Z,103nm,1.3s						
VSR	Storozhevoye	145.73	295	ePKP2	PKPab	18 26 50.4	-1.2
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VSR				pmax	pmax		
	comp=N,10.0nm,1.2s						
VSR				pmax	pmax		
	comp=E,30nm,1.0s						
KLMR	Klimovskoe	147.47	312	i PKP2	PKPbc	18 26 55.5	-0.4
OBN	Obninsk	148.25	301⇑	iPKIKP	PKPdf	18 26 55.5	+0.7
OBN				e		18 27 06.7	
OBN				pmax	pmax		
	comp=Z,86nm,1.5s						
OBN	Obninsk	148.25	301	ePKPbc	PKPbc	18 26 57.8	-0.4
TAM	Tamanrasset	148.91	220	ePKPdf	PKPbc	18 27 01.6	+0.7
TAM				ePKPbc	PKPab	18 27 09.1	+4.2
LVZ	Lovozero	149.13	326⇑	iPKP2	PKPbc	18 26 59.9	-0.2
KEV	Kevo	151.21	331	ep	PKPbc	18 27 03.1	-1.9
	comp=Z,28nm,1.0s						
KEV	Kevo	151.21	331	ePKIKP	PKPbc	18 27 03.1	-1.9
KEV				pmax	pmax		
	comp=Z,28nm,1.0s						
AKASG	Malin Array Be	151.61	290	PKPbc	PKPbc	18 27 05.5	-1.0
	comp=Z,16nm,0.8s,baz=85,slow=2.5,SNR=34						
AKASG				PKPab	PKPab	18 27 13.7	-1.7
	comp=Z,6.8nm,0.6s,baz=85,slow=2.4,SNR=14						
AKBB	Malin Array Si	151.61	290	ePKIKP	PKPbc	18 27 05.8	-0.7
AKBB				e		18 27 13.8	
KIEV	Kiev	151.62	290	ePKIKP	PKPbc	18 27 05.8	-0.8
KIEV				e		18 27 13.5	
ARCES	ARCESS Array B	151.78	331	PKPbc	PKPbc	18 27 06.0	-0.3
	comp=Z,23nm,0.9s,baz=76,slow=1.5,SNR=25						
ARCES				PKPab	PKPab	18 27 14.9	-0.6
	comp=Z,15nm,0.8s,baz=90,slow=2.0,SNR=19						
ARE0	ARCESS Array S	151.78	331	ePKPdf	PKPdf	18 27 00.0	0.0
MLR	Muntele Rosu	152.04	278	PKPbc	PKPbc	18 27 06.4	-1.2
	comp=Z,13nm,0.9s,baz=122,slow=1.8,SNR=6.1						
KEST	Kesra	157.48	243	PKPab	PKPab	18 27 42.1	+1.3
	comp=Z,2.9nm,1.0s,baz=214,slow=7.3,SNR=3.1						
HFS	Hagfors	160.14	314	PKPab	PKPab	18 27 51.0	-0.6
	comp=Z,7.7nm,0.9s,baz=151,slow=3.4,SNR=4.3						
NOA	NORSAR Array B	160.91	318	PKPab	PKPab	18 27 53.9	-1.0
	comp=Z,4.7nm,0.9s,baz=63,slow=4.6,SNR=5.6						
GERES	GERESS Array B	161.00	280	PKPab	PKPab	18 27 55.3	-0.5
	comp=Z,2.0nm,0.9s,baz=119,slow=4.7,SNR=12						

*DDA **05** 18:36:50.9, 3738N×3625E, h19km±1km, Md3.0*
*ISCJB **05** 18:36:51.6±0.5, 3734N±004×3626E±003, h10km, Error ellipse: s-maj=6.2km s-min=3.5km az=2.8*
*CSEM **05** 18:36:51.0±0.1, 3734N×3624E, h5km, MD3.0, Error ellipse: s-maj=3.0km s-min=1.6km az=177.0*
*ISK **05** 18:36:51.1, 3734N×3625E, h5km, MD3.2*
ISC 05 18:36:51.6±0.6**, 3732N**±004×**3625E**±003**, h5**km±5km**, n22,**
σ**0§99**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.27	16	i P	Pg	18 36 56.5	-0.4
ANDN				i S	Sg	18 37 00.9	+0.4
KOZT	Kozan	0.38	296	PG	Pg	18 36 58.3	-0.6
KOZT				eSG	Sg	18 37 04.4	+0.6
KMRS	Kahramanmaras	0.55	70	PG	Pg	18 37 01.5	-0.7
KMRS				eSG	Sg	18 37 09.5	+0.2
GAZ	Gaziantep	0.78	101	PG	Pg	18 37 07.0	+0.5
GAZ				eSG	Sg	18 37 18.2	+1.6
KARA	Karaisali	0.96	267	ePG	Pg	18 37 10.0	0.0
HTY	Hatay	1.20	184	ePN	Pn	18 37 15.1	+0.1
PINB	Pinarbasi	1.36	5	i P	Pn	18 37 17.4	+0.2
PINB				i S	Sb	18 37 38.6	+3.4
SARI	SarD1z-Kayseri	1.40	14	ePG	Pg	18 37 12.3	-6.2
SARI				eSG	Sg	18 37 27.4	-9.3
MERS	Mersin	1.45	252	ePN	Pn	18 37 18.2	-0.3
NIG	Nigde	1.52	302	ePN	Pn	18 37 19.6	+0.2
BNN	Bunyan	1.56	348	ePN	Pn	18 37 20.1	+0.1
ATAB	Bozova	1.63	84	i P	Pn	18 37 21.6	+0.7
ATAB				i S	Sn	18 37 43.5	+1.2
AKCD	Akcadag	1.64	53	i P	Pn	18 37 22.0	+0.9
AKCD				i S	Sn	18 37 41.8	-0.8
DARE	Darende-Malaty	2.04	36	ePN	Pn	18 37 20.4	-6.1
URFA	Urfa	2.05	86	ePN	Pn	18 37 27.4	+0.7
ELZG	Elazig	2.46	61	i P	Pn	18 37 29.8	-2.5
ELZG				i S	Sn	18 37 57.6	-5.2
KEMA	Kemaliye	2.63	41	i P	Pn	18 37 35.0	+0.4
KEMA				i S	Sn	18 38 16.4	+10
SVRC	Sivrice-ELAZID	2.64	65	ePN	Pn	18 37 35.6	+0.8
DIYA	Diyarbakir	3.13	78	i P	Pg	18 37 50.2	-1.4
DIYA				i S	Sg	18 38 33.0	+0.8
MARD	Mardin	3.61	89	i P	Pn	18 37 46.6	-1.5
MARD				i S	Sg	18 38 45.6	-1.8
EZC	Erzincan	3.70	48	ePN	Pn	18 37 47.0	-2.4
BEST	Besiri	4.03	80	i P	Pb	18 38 03.7	+0.8
BEST				i S	Sg	18 39 00.8	-0.1

*NEIC **05** 18:47:19.0, 1864N×10222W, h5km, MD4.1(MEX), After MEX.*
MEX 05 18:47:19.1±0.8**, 1865N**×**10223W, h6**km±7km**, MD4.1, Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG	Aquila	1.12	252	i P	Pg	18 47 37.1	-3.5
MMIG				i S	Sg	18 47 51.9	-3.4
ZIIG	Zihuatanejo	1.26	145	i P	Pn	18 47 39.8	-3.5
ZIIG				i S	Sg	18 47 55.2	-4.5
MOIG	Morelia	1.42	44	i P	Pn	18 47 42.0	-3.4
MOIG				i S	Sb	18 47 59.8	-4.5
EZ5V		1.54	303	eP	Pn	18 47 44.1	-3.1
EZ5V				i S	Sn	18 48 04.2	-3.3
R15V		1.74	288	eP	Pn	18 47 46.3	-3.6
R15V				i S	Sn	18 48 07.8	-4.6
SFJM	Santa Fe	1.98	337	i P	Pn	18 47 49.2	-4.0
SFJM				i S	Sn	18 48 13.0	-5.4
CAIG	El Cayaco	2.45	130	i P	Pn	18 47 56.3	-3.3
CAIG				i S	Sn	18 48 25.2	-4.7
MEIG	Mezcala	2.58	106	i P	Pn	18 47 58.4	-2.9
MEIG				i S	Sn	18 48 28.9	-4.1
CJM	Chamela	2.80	288	i P	Pn	18 48 02.6	-1.7
CJM				i S	Sn	18 48 35.6	-2.8
ACX	Acapulco	2.82	128	i P	Pn	18 48 02.5	-2.3
ANIG	Ahuacatlan	3.22	318	i P	Pn	18 48 08.7	-1.6
ZAIG	Zacatecas	4.11	356	i P	Pn	18 48 19.0	-3.5
UTMO	Huajuapan	4.28	100	eP	Pn	18 48 22.2	-2.6
UTMO				i S	Sn	18 49 11.8	-3.2
PNIG	Pinotepa	4.51	119	i P	Pn	18 48 25.1	-2.9
LNIG	Linares	6.73	22	i P	Pn	18 48 56.5	-1.9

*NEIC **05** 19:22:25.8, 1695N×9505W, h121km, MD4.0(MEX), After MEX.*
MEX 05 19:22:25.9±1.3**, 1694N**×**9504W, h120**km±10km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.21	45	i P	Pn	19 22 41.1	-1.4
CMIG				i S	Sn	19 22 53.0	-2.0
HUIG	Huatulco	1.55	222	i P	Pn	19 22 51.8	-2.1
HUIG				i S	Sn	19 23 14.1	-1.2
OXX	Oaxaca	1.62	275	i P	Pn	19 22 54.8	+0.1
VHO	Vista Hermosa	1.62	275	i P	Pn	19 22 54.6	-0.1
VHO				i S	Sn	19 23 15.9	-0.8
TGIG		1.84	95	i P	Pn	19 22 56.5	-0.9
TGIG				i S	Sn	19 23 18.9	-2.6
PCIG		2.14	125	eP	Pn	19 23 01.0	-0.1
PCIG				i S	Sn	19 23 25.3	-2.7
UTMO	Huajuapan	2.78	289	i P	Pn	19 23 08.5	-0.9
UTMO				i S	Sn	19 23 40.5	-2.3
CCIG	Comitan	2.86	103	i P	Pn	19 23 09.6	-0.7
CCIG				i S	Sn	19 23 43.1	-1.5
PNIG	Pinotepa	3.01	260	i P	Pn	19 23 09.8	-2.5
PNIG				i S	Sn	19 23 44.6	-3.5
LVIG	Laguna Verde	3.06	335	i P	Pn	19 23 09.0	-4.0
LVIG				i S	Sn	19 23 39.1	-10

*BJI **05** 19:41:31.9, 098S×12473E, h19km, mB5.2, mb4.3*
*ISCJB **05** 19:41:44.9±0.6, 038S±005×12405E±006, h84km±7km, mb4.1/14, Error ellipse: s-maj=10.1km s-min=6.9km az=28.5*
*IDC **05** 19:41:44.1±3.5, 028S×12404E, h54km±34km, mb3.8/12, mb1 4.0/13, mb1mx3.9/19, mbtmp3.9/13, ML4.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=23.9km s-min=14.1km az=70.0*
*DJA **05** 19:41:46, 051S×12426E, h34km, MLv4.6/6*
*NEIC **05** 19:41:49.4±1.2, 044S×12387E, h110km±12km, mb4.4/2, Error ellipse: s-maj=16.9km s-min=9.0km az=80.0*
ISC 05 19:41:46.2±0.6**, 037S**±005×**12409E**±005**, h77**km±7km**, n32,**
σ**1§01**/33**, mb4.1**/14**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNI	Manado	1.95	23	P	Pn	19 42 19.1	+1.7
MNI				S	Sn	19 42 41.3	+0.1
LBMI	Labuha	3.42	94	P	Pn	19 42 36.4	-0.9
LBMI				S	Sn	19 43 13.3	-3.5
TNTI	Ternate	3.47	71	P	Pn	19 42 37.6	-0.3
KDI	Kendari	3.85	202	P	Pn	19 42 42.1	-1.0
PCI	Palu	4.29	263	P	Pn	19 42 50.2	+1.2
AAI	Ambon	5.26	129	P	Pn	19 43 02.9	+0.5
KAPI	Kappang	6.33	223	P	Pn	19 43 16.9	0.0
	9.0nm,0.3s,baz=60,slow=6.0,SNR=40						
KAPI				S	Sn	19 44 27.0	-0.8
	5.0nm,0.3s,baz=69,slow=22,SNR=3.4						
KAPI	Kappang	6.33	223	P	Pn	19 43 16.9	0.0
KAPI				S	Sn	19 44 27.0	-0.8
KAPI	Kappang	6.33	223	P	Pn	19 43 16.5	-0.4
	27nm,0.6s,372nm0.1nm						
DAV	Davao City (W)	7.54	11	P	Pn	19 43 39.1	+5.6
	baz=222,slow=16,SNR=3.9						
MYLDM	Lahad Datu	7.85	315	P	Pn	19 43 43.6	+5.9
BATI	Baumata	9.78	182	LR	LR	19 47 54.8	
	comp=Z,142nm,21.7s,baz=310,slow=38						
WSI	Waingapu	9.98	202	P	Px	19 44 24.6	
WRA	Warramunga Arr	21.89	153	P	P	19 46 33.0	0.0
	1.0nm,0.5s,mb3.4,baz=328,slow=12,SNR=19						
WB2	Warramunga Arr	21.89	153	eP	P	19 46 34.9	+1.9
ASAR	Alice Springs	25.04	158	P	P	19 47 03.7	+0.4
	1.7nm,0.7s,mb3.6,baz=333,slow=6.8,SNR=18						
ASAR				PcP	PcP	19 50 38.0	+1.5
	1.2nm,0.6s,baz=348,slow=2.2,SNR=11						
CMAR	Chiang Mai Arr	31.00	308	P	P	19 47 57.2	+0.6
	1.0nm,0.8s,mb3.6,baz=140,slow=7.5,SNR=9.3						
CMAR				PcP	PcP	19 50 53.2	+2.1
	1.3nm,0.8s,baz=175,slow=2.2,SNR=11						
STKA	Stephens Creek	35.44	154	eP	P	19 48 36.2	+1.1
	2.7nm,0.9s,mb4.1						
STKA	Stephens Creek	35.44	154	P	P	19 48 36.2	+1.1
	2.4nm,0.8s,mb4.1,baz=342,slow=9.3,SNR=3.7						
KSRS	Korea Array	37.80	5	P	P	19 48 55.1	0.0
	0.8nm,0.4s,mb3.9,baz=180,slow=10,SNR=5.6						
MJAR	Matsushiro Arr	39.00	18	P	P	19 49 04.5	-0.7
	2.3nm,0.7s,mb4.2,baz=190,slow=8.8,SNR=6.8						
MJAR				LR	LR	20 02 58.3	
	comp=Z,38nm,19.6s,baz=220,slow=33						
GTA	Gaotai	45.40	333	eP	P	19 49 58.2	+1.0
GTA				AP	pP	19 50 01.8	-14
GTA				AMB	AMB		
	comp=Z,2.0nm,0.9s,mb3.9						
SONM	Songino Array	50.42	345	P	P	19 50 34.9	-0.9
	comp=Z,1.5nm,0.7s,mb4.0,baz=160,slow=8.4,SNR=12						
MK31	Makanchi Array	59.50	328	eP	P	19 51 40.7	-0.6
MKAR	Makanchi Array	59.50	328	P	P	19 51 40.1	-1.2
	comp=Z,2.1nm,0.4s,mb4.5,baz=126,slow=8.3,SNR=28						
PETK	Petropavlovsk-	60.20	23	P	P	19 51 47.3	+1.3
	comp=Z,6.3nm,0.8s,mb4.7,baz=207,slow=4.2,SNR=5.3						
ZALV	Zalesovo Beam	63.10	335	P	P	19 52 03.6	-1.9
	comp=Z,0.5nm,0.3s,mb3.9,baz=126,slow=4.2,SNR=4.5						
KURK	Kurchatov	63.84	330	P	P	19 52 09.2	-1.2
	comp=Z,2.8nm,0.4s,mb4.5,baz=185,slow=3.8,SNR=30						
TIXI	Tiksi	71.97	2	eP	P	19 53 00.8	-0.2
	comp=Z,3.7nm,0.3s,mb4.7						
ARCES	ARCESS Array B	93.36	340	P	P	19 54 53.4	+1.0
	comp=Z,2.1nm,0.8s,mb4.5,baz=81,slow=5.8,SNR=4.1						
ARCES	ARCESS Array B	93.36	340	P	P	19 54 53.4	+1.0
TORD	Torodi Ar. Bea	121.56	285	PKP	PKPdf	20 00 31.8	-0.2
	comp=Z,0.3nm,0.6s,baz=107,slow=1.6,SNR=5.6						

NEIC 05 19:42:15.7, 3846S×**17805E, h59**km**, ML4.2**(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.42	23	P	Pn	19 42 26.4	-0.3
PUZ				S	Sn	19 42 34.2	-0.5
MWZ	Matawai	0.43	287	P	Pn	19 42 25.5	-1.3
MWZ				S	Sn	19 42 33.0	-1.9
KNZ	Kokohu	0.63	208	P	Pn	19 42 28.7	-0.4
URZ	Urewera	0.77	285	P	Pn	19 42 30.5	-0.2
MXZ	Matakaoa Point	0.92	13	P	Pn	19 42 32.7	+0.1
EDRZ	Edgecumbe	1.09	288	P	Pn	19 42 35.0	+0.1
WIZ	White Island	1.15	324	P	Pn	19 42 35.4	-0.3
TAZ	Tarawera	1.23	280	P	Pn	19 42 37.3	+0.6
LIRZ	Lichensteins R	1.39	289	P	Pn	19 42 38.8	0.0
BKZ	Black Stump Fm	1.41	239	P	Pn	19 42 39.0	-0.1
KARZ	Kaharoa	1.49	287	P	Pn	19 42 40.0	-0.2
HATZ	Hinemaiaia	1.59	254	P	Pn	19 42 41.5	-0.1
WHTZ	Whakaora	1.65	262	P	Pn	19 42 42.3	-0.1
RITZ	Rihia Road	1.79	253	P	Pn	19 42 44.7	+0.4
RATZ	Rangitukua	1.83	256	P	Pn	19 42 45.0	+0.2
WATZ	Wairara	1.83	261	P	Pn	19 42 45.1	+0.3
KATZ	Kakaramea	1.91	254	P	Pn	19 42 46.4	+0.5
MOVZ	Moawhango	2.03	241	P	Pn	19 42 47.4	-0.1
WTVZ	West Tongariro	2.03	250	P	Pn	19 42 47.7	+0.2
TUVZ	Tukino	2.04	246	P	Pn	19 42 47.8	+0.2
NGZ	Ngauruhoe	2.04	249	P	Pn	19 42 47.8	+0.1
WNVZ	Wahianoa	2.10	245	P	Pn	19 42 48.6	+0.1
TSZ	Takapari Road	2.28	225	P	Pn	19 42 49.6	-1.3
HIZ	Hauiti	2.51	268	P	Pn	19 42 54.9	+0.9
KUZ	Kuaotunu	2.52	312	P	Pn	19 42 53.2	-1.0
WAZ	Wanganui	2.71	241	P	Pn	19 42 57.3	+0.5
RAEZ	Rainy Point	2.97	253	P	Pn	19 43 01.7	+1.3
NEZ	North Egmont	3.19	254	P	Pn	19 43 05.2	+1.8
PKE	Pukeiti	3.26	256	P	Pn	19 43 05.5	+1.2
NWEZ	Newall Road	3.37	255	P	Pn	19 43 07.3	+1.6
KIW	Kapiti Island	3.41	224	P	Pn	19 43 04.0	-2.4
CAW	Cannon Point	3.50	220	P	Pn	19 43 04.7	-2.9
PAWZ	Paruwai Farm	3.55	214	P	Pn	19 43 05.3	-2.9
MSWZ	Moikau Station	3.65	215	P	Pn	19 43 06.3	-3.4
MRW	Makara Radio	3.78	222	P	Pn	19 43 08.3	-3.1
SNZO	South Karori	3.84	221	P	Pn	19 43 08.8	-3.4
WCZ	Waipu Caves	3.88	309	P	Pn	19 43 13.0	+0.2
TCW	Tory Channel	4.00	225	P	Pn	19 43 11.2	-3.2
NNZ	Nelson	4.53	231	P	Pn	19 43 18.7	-3.0
BSWZ	Blackbirch Sta	4.56	223	P	Pn	19 43 18.5	-3.6
QRZ	Quartz Range	4.87	239	P	Pn	19 43 23.4	-3.0
THZ	Tophouse	5.14	228	P	Pn	19 43 26.9	-3.2
KHZ	Kahutara	5.24	220	P	Pn	19 43 27.2	-4.2
LTZ	Lake Taylor	6.16	224	P	Pn	19 43 38.8	-5.2
MQZ	McQueen's Vall	6.64	216	P	Pn	19 43 45.4	-5.2
FOZ	Fox Glacier	8.12	228	P	Pn	19 44 04.9	-5.9
ODZ	Otahua Downs	8.60	218	P	Pn	19 44 12.1	-5.2

NEIC 05 19:46:02.4, 3776S×**17682E, h11**km**, ML3.9**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.25	207	P	Pg	19 46 07.8	+0.1
MARZ				S	Sg	19 46 11.3	+0.1
EDRZ	Edgecumbe	0.35	190	P	Pg	19 46 14.1	+4.6
WIZ	White Island	0.37	52	P	Pg	19 46 10.8	+1.0
WIZ				S	Sg	19 46 14.4	-0.5
LIRZ	Lichensteins R	0.42	234	P	Pg	19 46 11.3	+0.5
LIRZ				S	Sg	19 46 17.5	+1.1
KARZ	Kaharoa	0.53	240	P	Pg	19 46 13.3	+0.6
TAZ	Tarawera	0.53	207	P	Pg	19 46 14.0	+1.1
URZ	Urewera	0.55	155	P	Pg	19 46 13.2	0.0
MWZ	Matawai	0.80	136	P	Pg	19 46 18.1	+0.1
KUZ	Kuaotunu	1.34	319	P	Pn	19 46 27.1	+0.1

*NEIC **05** 20:21:22.9±5.3, 634S×14869E, h49km±34km, mb4.1/1, Error ellipse: s-maj=49.0km s-min=32.4km az=218.0*
*IDC **05** 20:21:25.3±1.7, 640S×14826E, h51km±9km, mb3.6/2, mb1 3.7/2, mb1mx3.3/14, mbtmp3.7/2, Error ellipse: s-maj=62.1km s-min=23.0km az=113.0*
ISC 05 20:21:26.3±4.6**, 66S**±04×**1486E**±02**, h61**km±22km**, n7,**
σ**1§19**/7**, mb3.7**/2**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.12	208	eP	Pn	20 22 13.7	+0.6
EIDS	Eidsvold	18.79	173	eP	Pn	20 25 40.9	-0.9
	16nm,1.2s						
WB2	Warramunga Arr	19.16	225	eP	Pn	20 25 45.3	-1.0
ASAR	Alice Springs	22.07	218	P	P	20 26 16.2	0.0
	1.9nm,0.6s,mb3.7,baz=50,slow=9.3,SNR=33						
ASAR				pP		20 26 28.6	
	6.3nm,0.6s,baz=56,slow=9.2,SNR=18						
ASAR				S	S	20 30 16.4	+0.1
	1.4nm,0.8s,baz=30,slow=24,SNR=7.8						
STKA	Stephens Creek	25.96	194	P	P	20 26 54.5	+1.3
	1.9nm,0.8s,mb3.7,baz=48,slow=12,SNR=3.2						
STKA				pP	pP	20 27 07.2	-0.9
	4.9nm,1.0s,baz=3.0,slow=8.3,SNR=4.0						
STKA	Stephens Creek	25.96	194	P	P	20 26 54.5	+1.3
STKA				pP	pP	20 27 07.2	-0.9
TORD	Torodi Ar. Bea	146.80	284	PKPbc	PKPbc	20 41 01.1	-1.5
	5.4nm,0.8s,baz=56,slow=3.3,SNR=34						
TORD				pPKPbc	pPKPbc	20 41 15.8	-4.6
	1.0nm,0.5s,baz=82,slow=2.7,SNR=4.4						

*IDC **05** 20:39:12.7±2.0, 2415S×17978W, h497km±21km, mb3.5/10, mb1 3.7/11, mb1mx3.6/16, mbtmp3.5/11, Error ellipse: s-maj=25.6km s-min=17.2km az=148.0*
*ISCJB **05** 20:39:14.4±3.3, 242S±01×1800W±01, h523km±38km, mb4.1/14, Error ellipse: s-maj=21.8km s-min=14.9km az=146.1*
*NEIC **05** 20:39:15.9±3.6, 2420S×17988W, h538km±47km, mb4.3/4, Error ellipse: s-maj=40.5km s-min=17.3km az=180.0*
ISC 05 20:39:14.9±2.9**, 243S**±01×**1799W**±01**, h520**km±33km**, n28,**
σ**1§11**/24**, mb4.1**/14**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.18	190	P	P	20 42 17.0	+0.9
	1.2nm,0.3s,baz=191,slow=20,SNR=7.2						
URZ				S	S	20 44 43.2	-2.2
	0.8nm,0.3s,baz=115,slow=17,SNR=6.9						
ARMA	Armidale	25.99	250	eP	P	20 44 07.5	+1.5
CNB	Canberra Magne	28.76	240	eP	P	20 44 31.6	+1.4
CTA	Charters Tower	31.58	271⇓	iP	P	20 44 55.1	+0.3
	32nm,0.3s,mb5.3						
CTAO	Charters Tower	31.58	271	eP	P	20 44 55.1	+0.3
	40nm,0.4s,mb5.3						
STKA	Stephens Creek	34.68	249	eP	P	20 45 21.0	+0.1
	2.7nm,0.4s,mb4.1						
STKA	Stephens Creek	34.68	249	P	P	20 45 21.3	+0.4
	4.1nm,0.5s,mb4.2,baz=90,slow=8.6,SNR=28						
ASAR	Alice Springs	42.08	261	P	P	20 46 20.9	-0.2
	5.8nm,0.5s,mb4.4,baz=93,slow=7.2,SNR=101						
ASAR				ScP	ScP	20 51 08.6	+3.8
	1.5nm,0.9s,baz=99,slow=3.9,SNR=7.2						
WB2	Warramunga Arr	42.47	267⇓	iP	P	20 46 23.4	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	42.48	267	eP	P	20 46 23.3	-1.0
	6.7nm,0.5s,mb4.4						
FORT	Forrest	46.28	250	eP	P	20 46 50.9	-2.6
	27nm,0.6s,mb5.0						
KAKA	Kakadu	46.45	275	eP	x	20 46 35.9	
	9.7nm,0.3s						
BATI	Baumata	55.36	274	P	P	20 48 00.9	+1.0
	10nm,0.5s,mb4.3,baz=170,slow=3.4,SNR=6.9						
MBWA	Marble Bar	55.41	260	eP	P	20 47 59.0	-1.2
	3.2nm,0.5s,mb3.8						
MJAR	Matsushiro Arr	72.26	326	P	P	20 49 46.3	-0.9
	1.5nm,0.7s,mb3.5,baz=156,slow=4.6,SNR=4.2						
KSRS	Korea Array	78.59	320	P	P	20 50 22.7	+0.2
	1.1nm,0.7s,mb3.3,baz=118,slow=5.6,SNR=3.7						
PETK	Petropavlovsk-	79.48	346	P	P	20 50 25.8	-1.0
	4.2nm,0.9s,mb3.8,baz=142,slow=7.3,SNR=2.7						
SNAA	Sanae	84.30	179	e	P	20 50 51.1	-0.2
VNA3	Neumayer Olymp	84.50	177	e	P	20 50 53.9	+1.6
VNA2	Neumayer--Watz	84.92	178	e	P	20 50 54.6	+0.3
	baz=192,slow=3.4						
NVAR	Mina Array Bea	84.94	44	P	P	20 50 55.0	0.0
	0.6nm,0.7s,mb3.2,baz=227,slow=8.7,SNR=4.4						
CMAR	Chiang Mai Arr	89.75	290	P	P	20 51 19.8	+1.8
	1.1nm,0.9s,mb3.7,baz=140,slow=4.2,SNR=5.9						
TXAR	Lajitas Array	90.54	58	P	P	20 51 21.8	+0.4
	2.0nm,0.7s,mb4.1,baz=211,slow=6.6,SNR=25						
PDAR	Pinedale Array	92.88	44	P	P	20 51 30.9	-1.0
	0.6nm,0.7s,mb3.8,baz=189,slow=3.2,SNR=4.8						
ARCES	ARCESS Array B	132.27	348	SKPbc	SKPbc	21 00 07.8	+1.1
	1.6nm,0.8s,baz=8.5,slow=2.5,SNR=5.2						
AKASG	Malin Array Be	145.34	327	PKPbc	PKPdf	20 57 50.9	-2.1
	0.7nm,0.4s,baz=45,slow=4.1,SNR=4.5						
AKASG				SKPbc	SKPbc	21 00 44.8	+1.3
	0.6nm,0.5s,baz=44,slow=3.0,SNR=4.1						
BRTR	Keskin Array B	147.88	307	PKPbc	PKPbc	20 58 00.8	-0.6
	0.4nm,0.4s,baz=68,slow=1.9,SNR=4.2						
BRTR				PKPab	PKPab	20 58 06.0	+0.2
	1.3nm,0.6s,baz=80,slow=1.6,SNR=5.8						
TORD	Torodi Ar. Bea	168.84	188	PKPab	PKPab	20 59 36.5	-0.4
	0.5nm,0.6s,baz=187,slow=3.2,SNR=3.8						

*ISCJB **05** 20:44:06.8±0.6, 2468N±006×12262E±002, h2^{km}±5^{km}, Error ellipse: s-maj=10.0km s-min=3.0km az=8.5*
*TAP **05** 20:44:07.6, 2469N×12258E, h16^{km}, ML3.0, C*
*JMA **05** 20:44:07.3±0.1, 2473N×12263E, h10^{km}, M1.9*
ISC 05 20:44:07.2±0.5**, 2468N**±006×**12262E**±002**, h5**^{km}±4^{km}**, n22, σ0^{s}57**/35**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	121	P	Pg	20 44 15.8	+0.5
YOJ				eS	Sg	20 44 21.7	+1.0
TWB1	Santiao Chiao	0.66	300	P	Pg	20 44 20.3	+0.4
	baz=302						
TWB1				S	Sg	20 44 29.2	+0.6
	baz=302						
TWC	Suao	0.71	264	P	Pg	20 44 20.5	-0.3
	baz=264						
TWC				eS	Sg	20 44 29.9	0.0
	baz=264						
ENA	Nanau	0.84	253	P	Pg	20 44 23.3	0.0
	baz=252						
ENA				eS	Sg	20 44 34.0	-0.3
	baz=252						
NWF	Wu-fen Shan	0.86	297	P	Pg	20 44 23.9	+0.2
	baz=300						
TWE	Neicheng	0.87	273	P	Pg	20 44 23.6	-0.3
	baz=274						
TWE				eS	Sg	20 44 35.4	+0.2
	baz=274						
ENTT	Nioudou	0.96	268	i P	Pg	20 44 25.7	0.0
	baz=269						
ENTT				eS	Sg	20 44 38.3	+0.1
	baz=269						
TWA	Mucha	0.99	288	P	Pg	20 44 26.0	-0.2
	baz=290						
IRIF	Iriomote-Funau	1.07	109	P	Pg	20 44 27.4	-0.3
IRIF				eS	Sg	20 44 41.9	+0.3
TWD	Chiawan	1.11	238	eP	Pg	20 44 28.6	+0.1
	baz=245						
NSK	Sanguang	1.15	270	P	Pg	20 44 28.9	-0.3
	baz=272						
NSK				eS	Sg	20 44 43.6	-0.6
	baz=272						
NNS	Nan Shan	1.16	258	P	Pg	20 44 29.2	-0.3
	baz=248						
NNS				eS	Sg	20 44 44.1	-0.5
	baz=248						
HATJ	Hateruma jima	1.25	120	P	Pg	20 44 30.8	-0.3
JKRS	Kuro-shima	1.34	109	P	Pn	20 44 31.2	-1.4
WHF	Hehuan Shan	1.35	247	eP	Pn	20 44 31.9	-0.8
	baz=245						
WHF				eS	Sb	20 44 50.1	-0.4
	baz=245						
JIJ	Ishigaki jima	1.42	102	P	Pn	20 44 33.4	-0.3
JIJ				eS	Sb	20 44 52.1	-0.6
NSTT	Nanjuang	1.48	268	eP	Pn	20 44 35.1	+0.6
	baz=270						
NSTT				eS	Sn	20 44 54.1	-0.1
	baz=270						
SMLT	Sun Moon Lake	1.76	244	eP	Pn	20 44 38.9	+0.5
	baz=225						
TYC	Yuchr	1.79	245	eP	Pn	20 44 39.9	+1.1
	baz=229						
TYC				eS	Sn	20 45 02.6	+0.8
	baz=229						
TWF1	Yuli	1.79	223	eP	Pn	20 44 38.4	-0.4
	baz=208						
CHN5	Tsauling	2.08	239	eP	Pn	20 44 44.2	+1.4
	baz=237						
CHN1	Nanshi	2.42	233	eP	Pn	20 44 47.3	-0.3
	baz=228						

MAN 05 20:58:40, 1227N×12376E, h4^{km}, mb4.2, ML3.0, MS2.8, 4C-2D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.16	303	⇑iP	Pg	20 58 47.5	+4.3
MMPH				i S	Sg	20 58 50.5	+5.3
CNP	Catarman	0.91	75	eP	Pg	20 58 58.2	+0.7
CNP				eS	Sg	20 59 11.5	+2.1
RCP	Roxas	1.22	235	⇓eP	Pg	20 59 03.9	+0.5
RCP				eS	Sg	20 59 20.4	+1.1
PVCP	Virac	1.37	16	eP	Pn	20 59 05.7	-0.3
PVCP				eS	Sg	20 59 25.0	+0.9
OCLP	Ormoc	1.47	146	eP	Pn	20 59 07.1	-0.2
OCLP				eS	Sb	20 59 29.9	+3.0
AUQP	San Andres	1.49	315	eP	Pn	20 59 09.2	+1.7
AUQP				eS	Sn	20 59 32.1	+4.7
KALP	Kalibo	1.51	247	⇑eP	Pn	20 59 00.9	-7.0
KALP				i S	Sn	20 59 09.1	-19
PLP	Palo	1.62	133	⇓eP	Pn	20 59 09.4	0.0
PLP				eS	Sn	20 59 32.9	+2.1
OTRP	Odiongan	1.70	273	eP	Pn	20 59 11.0	+0.5
OTRP				eS	Sn	20 59 33.5	+0.8
BESP	Borongan	1.77	112	eP	Pn	20 59 13.4	+2.0
BESP				eS	Sn	20 59 35.2	+0.7
LLP	Lapu-Lapu	1.95	174	⇑eP	Pn	20 59 14.0	+0.1
LLP				eS	Sn	20 59 39.8	+0.9
GUIM	Jordan	2.00	215	eP	Pn	20 59 16.0	+1.4
GUIM				eS	Sn	20 59 42.7	+2.6
GQP	Guinayangan	2.07	322	eP	Pn	20 59 14.5	-1.0
GQP				i S	Sn	20 59 43.0	+1.2
MSLP	Maasin	2.38	153	eP	Pn	20 59 20.2	+0.4
MSLP				eS	Sn	20 59 52.0	+2.5
TBP	Tagbilaran	2.57	178	⇑eP	Pn	20 59 22.6	+0.3
TBP				eS	Sn	20 59 52.9	-1.2
SJMP	San Jose	2.59	274	eP	Pn	20 59 24.7	+2.0
SJMP				eS	Sn	20 59 56.1	+1.5
POLP	Polilio Island	3.02	324	eP	Pn	20 59 32.9	+4.3
CUYO	Cuyo Island	3.04	243	eP	Pn	20 59 30.1	+1.3
PAGZ	Pagadian	4.41	185	eP	Pn	20 59 49.3	+1.5
PAGZ				eS	Sn	21 00 42.3	+2.7
IPIL	Ipil	4.61	195	eP	Pn	20 59 52.0	+1.5

*IDC **05** 21:29:07.1±4.9, 3643N×7097E, h179^{km}±45^{km}, mb3.6/9, mb1 3.7/14, mb1mx3.5/27, mbtmp3.6/14, MS3.2/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=24.9km s-min=13.1km az=31.0*
*MOS **05** 21:29:08.3±1.0, 3660N×7104E, h199^{km}, mb4.5/3, Error ellipse: s-maj=13.0km s-min=7.6km az=88.5*
*BJI **05** 21:29:09.2, 3653N×7105E, h224^{km}*
*ISCJB **05** 21:29:09.2±0.3, 3663N±002×7109E±005, h209^{km}±4^{km}, mb3.8/9, Error ellipse: s-maj=6.1km s-min=3.6km az=165.0*
*NEIC **05** 21:29:10.1±0.6, 3662N×7106E, h204^{km}±6^{km}, mb4.9/12, Error ellipse: s-maj=8.2km s-min=4.6km az=59.0*
*NNC **05** 21:29:14.1±9.6, 3704N×7071E, h188^{km}±82^{km}, mb3.0, mpv4.1, Error ellipse: s-maj=80.1km s-min=52.1km az=19.0*
ISC 05 21:29:10.3±0.3**, 3665N**±003×**7108E**±005**, h202**^{km}±4^{km}**, n84, σ1^{s}07**/102**, mb3.8**/9**, 6C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.68	219	ePN	Pn	21 29 56.7	+0.4
KBL				eS	Sn	21 30 31.5	-0.7
CEP	Cherat	2.90	166	⇓P	Pn	21 30 00.0	+1.1
CEP				S	Sn	21 30 34.0	-2.9
SBDP	Sheikh Budin	4.35	183	⇓P	Pn	21 30 16.7	+0.2
KSH	Kashi	4.81	52	⇑iP	Pn	21 30 23.4	+1.2
KSH				S	Sn	21 31 19.2	+0.3
KSH				Smax			
	comp=N,59nm,0.3s						
KSH				Smax			
	comp=E,46nm,0.2s						
THN	Thein Dam	5.69	136	eP	Pn	21 30 33.1	-0.5
THN				eS	Sn	21 31 34.6	-4.7
DLH	Dalhousie	5.75	134	eP	Pn	21 30 36.0	+1.7
DLH				ex	x	21 31 41.0	
AML	Almayashu	5.84	20	P	Pn	21 30 35.8	+0.5
	SNR=85						
AML	Almayashu	5.84	20	ePn	Pn	21 30 35.7	+0.3
AML				eSn	Sn	21 31 40.4	-2.3
UCH	Uchtor	6.17	24	P	Pn	21 30 41.3	+1.6
	SNR=7.2						
UCH	Uchtor	6.17	24	ePn	Pn	21 30 40.5	+0.9
UCH				eSn	Sn	21 31 48.8	-1.7
KZA	Kyzart	6.31	30	P	Pn	21 30 41.5	0.0
	SNR=7.5						
EKS2	Erkin-Say	6.35	18	P	Pn	21 30 42.6	+0.6
	SNR=8.9						
EKS2	Erkin-Say	6.35	18	ePn	Pn	21 30 42.6	+0.5
EKS2				eSn	Sn	21 31 51.6	-3.2
KK31	Karatay Array	6.46	356	⇑P	Pn	21 30 43.7	+0.3
	comp=E,2.6nm,0.2s,baz=175,slow=12						
KK31				⇓S	Sn	21 31 52.6	-4.6
	comp=E,26nm,0.5s,baz=189,slow=24						
AAK	Ala-Archa	6.53	23	P	Pn	21 30 45.1	+0.8
	SNR=32						
AAK	Ala-Archa	6.53	23	ePn	Pn	21 30 44.7	+0.3
AAK				eSn	Sn	21 31 51.7	-7.2
KBK	Karagaybulak	6.70	25	P	Pn	21 30 47.8	+1.3
	SNR=20						
BHK	Bhakra	6.85	138	eS	Sn	21 32 02.0	-4.5
ULHL	Ulahol	6.87	34	P	Pn	21 30 41.8	-6.9
	SNR=15						
CHMS	Chumysh	6.94	23	P	Pn	21 30 50.4	+0.8
	SNR=9.6						
SDNR	Sundarnagar	7.09	135	eP	Pn	21 30 51.0	-0.7
SDNR				eS	Sn	21 32 06.0	-6.2
USP	Ospenovka	7.11	21	P	Pn	21 30 52.2	+0.4
	SNR=14						
TKM2	Tokmak 2	7.16	28	⇓P	Pn	21 30 52.9	+0.4
	comp=E,17nm,0.6s						
TKM2				⇑S	Sn	21 32 11.7	-2.1
	comp=E,26nm,1.0s						
TKM2	Tokmak 2	7.16	28	P	Pn	21 30 52.7	+0.2
	SNR=30						
TKM2	Tokmak 2	7.16	28	ePn	Pn	21 30 52.8	+0.2
TKM2				eSn	Sn	21 31 58.8	-15
SMLA	Simla	7.48	136	i P	Pn	21 30 56.6	-0.1
SMLA				i S	Sn	21 32 16.5	-5.0
SMLA				i S	Sn	21 32 17.0	-4.4
SMLA				ex	x	21 32 19.4	
	comp=N,804nm,0.3s						
SMLA				ex	x	21 32 20.3	
	comp=E,661nm,0.3s						
JOSI	Joshimath	9.32	128	eP	Pn	21 31 21.0	+0.3
JOSI				eS	Sn	21 32 57.1	-8.1
KHET	Khetri	9.44	154	eS	Sn	21 32 58.5	-9.4
NDI	New Delhi	9.48	145	ex	Sn	21 32 58.0	-11
SONA	Sohna	9.79	147	eS	Sn	21 33 06.1	-10
MK31	Makanchi Array	13.13	36	P	Pn	21 32 09.5	+0.3
	comp=E,8.3nm,0.8s,baz=210,slow=12,SNR=40						
MK31	Makanchi Array	13.13	36	ePn	Pn	21 32 09.2	0.0
MKAR	Makanchi Array	13.13	36	P	Pn	21 32 08.8	-0.4
	comp=E,0.5nm,0.3s,baz=217,slow=8.8,SNR=26						
MKAR	Makanchi Array	13.13	36	P	Pn	21 32 08.8	-0.4
DANN	Dangsing	13.52	124	eP	Pn	21 32 13.4	-0.8
	comp=E,18nm,0.2s						
KOLN	Koldanda	13.80	126	eP	Pn	21 32 18.3	+0.6
	comp=E,12nm,0.3s						
GKN	Gorkha	14.33	123	eP	Pn	21 32 23.5	-0.8
	comp=E,19nm,0.2s						
DMN	Daman	14.90	123	eP	Pn	21 32 31.2	-0.1
KKN	Kakani	14.90	122	eP	Pn	21 32 30.9	-0.4
	comp=E,12nm,0.2s						
KKN	Kakani	14.90	122	eP	Pn	21 32 30.9	-0.4
KKN				pmax	pmax		
	comp=Z,12nm,0.2s						
AB09	Akbulak array	15.00	331	⇓P	Pn	21 32 33.4	+1.2
	comp=Z,1.9nm,0.8s						
AB09				⇑S	S	21 35 12.7	-5.9
	comp=Z,1.2nm,0.7s						
KURK	Kurchatov	15.07	19	P	Pn	21 32 30.7	-2.3
	comp=Z,0.2nm,0.3s,baz=209,slow=10,SNR=8.6						
PKIN	Phulchoki	15.12	123	eP	Pn	21 32 32.9	-1.0
	comp=Z,10nm,0.2s						
PKI	Pulchoki	15.13	123	eP	Pn	21 32 33.8	-0.2
	comp=Z,8.4nm,0.2s						
PKI	Pulchoki	15.13	123	eP	Pn	21 32 33.8	-0.2
PKI				pmax	pmax		
	comp=Z,8.0nm,0.2s						
GUN	Gumba	15.24	121	eP	Pn	21 32 34.8	-0.5
	comp=Z,9.7nm,0.2s						
JIRN	Jiri	15.61	121	eP	Pn	21 32 40.1	+0.3
	comp=Z,54nm,0.4s						
VOSK	Vostochnaya	16.07	360	⇓P	P	21 32 43.3	-1.3
	comp=Z,3.0nm,0.6s						
RAMN	Ramite	16.34	122	eP	P	21 32 48.3	+0.5
	comp=Z,9.3nm,0.2s						
BVA0	Borovoye Array	16.38	359	P	P	21 32 48.8	+0.8
	comp=Z,1.1nm,1.0s,baz=164,slow=10,SNR=45						
BVA0				⇑S	S	21 35 44.2	-4.7
	comp=Z,1.2nm,1.4s,baz=234,slow=39,SNR=3.5						
BVAR	Borovoye Array	16.38	359	P	P	21 32 49.1	+1.1
	comp=Z,1.7nm,0.3s,baz=163,slow=11,SNR=27						
BRVK	Borovoye	16.42	358	eP	P	21 32 49.5	+1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BRVK	Borovoye	16.42	358	eP	P	21 32 49.5	+1.1
	comp=Z,4.0nm,0.4s						
AKTK	Aktyubinsk	16.68	330	P	P	21 32 52.2	+0.9
AKTO	Aktyubinsk	16.68	330	⇑P	P	21 32 52.1	+0.7
	comp=Z,0.8nm,0.9s						
AKTO				⇓S	S	21 35 52.5	-2.6
	comp=Z,0.7nm,1.4s						
AKTO	Aktyubinsk	16.68	330	P	P	21 32 52.2	+0.9
	comp=Z,0.7nm,0.3s,baz=136,slow=10,SNR=13						
TAPN	Taplejung	16.86	119	eP	P	21 32 55.6	+2.0
	comp=Z,18nm,0.3s						
ODAN	Odare	16.94	121	eP	P	21 32 55.6	+1.2
LSA	Lhasa	18.16	107	P	P	21 33 07.8	+0.1
LSA	Lhasa	18.16	107	eP	P	21 33 07.1	-0.6
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSA	Lhasa	18.16	107	eP	P	21 33 07.1	-0.6
	comp=Z,2.9nm,0.6s						
ZAA0	Zalesovo Array	19.75	25	eP	P	21 33 24.6	-0.1
ZALV	Zalesovo Beam	19.75	25	P	P	21 33 24.4	-0.2
	comp=Z,1.8nm,0.3s,baz=218,slow=11,SNR=49						
ZALV				LR	LR	21 41 24.5	
	comp=Z,58nm,18.1s,baz=140,slow=37						
NVS	Novosibirsk	20.02	21	⇓iP	P	21 33 27.1	-0.3
NVS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.1s						
GNI	Garni	20.91	288	eP	P	21 33 39.8	+2.7
SONM	Songino Array	28.20	56	P	P	21 34 45.3	+1.4
	comp=E,1.7nm,0.8s,mb3.8,baz=269,slow=9.9,SNR=13						
BR131	Keskin Array S	29.45	288	P	P	21 34 50.9	-4.2
OBN	Obninsk	29.87	319	P	P	21 34 57.7	-0.9
CMAR	Chiang Mai Arr	30.47	119	P	P	21 35 04.8	+0.4
	comp=E,0.9nm,0.9s,baz=304,slow=9.2,SNR=7.1						
JOF	Joensuu	35.77	330	ep	P	21 35 50.0	+0.4
	comp=E,2.9nm,0.4s,mb4.2						
JOF	Joensuu	35.77	330	eP	P	21 35 50.0	+0.4
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
PSZ	Piszkesteto	38.84	303	P	P	21 36 13.6	-2.0
KEV	Kevo	40.69	338	ep	P	21 36 30.2	-0.3
	comp=Z,3.4nm,0.7s,mb3.9						
KEV	Kevo	40.69	338	eP	P	21 36 30.2	-0.3
KEV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
ARCES	ARCESS Array B	41.03	338	P	P	21 36 34.3	+1.0
	comp=Z,1.5nm,0.5s,mb3.7,baz=112,slow=7.6,SNR=18						
TIP	Timpagrande	42.39	291	eP	P	21 36 40.9	-4.0
HFS	Hagfors	42.99	322	P	P	21 36 49.8	+0.5
	comp=Z,2.1nm,0.4s,mb3.9,baz=105,slow=11,SNR=14						
NB2	NORSAR Subarra	44.30	323	P	P	21 36 59.5	-0.2
	comp=Z,1.3nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.30	323	P	P	21 36 59.8	+0.1
	comp=Z,1.5nm,0.5s,mb3.6,baz=97,slow=7.7,SNR=5.8						
TORD	Torodi Ar. Bea	65.78	269	P	P	21 39 32.1	-1.9
	comp=Z,0.7nm,0.5s,baz=47,slow=5.9,SNR=26						
YKA	Yellowknife Ar	81.09	3	P	P	21 41 02.6	+0.2
	comp=Z,0.9nm,0.4s,mb3.7,baz=349,slow=5.6,SNR=17						
YKA	Yellowknife Ar	81.09	3	P	P	21 41 02.6	+0.1
WRA	Warramunga Arr	82.02	122	P	P	21 41 06.4	-1.5
	comp=Z,1.4nm,0.7s,mb3.7,baz=324,slow=4.8,SNR=12						
ASAR	Alice Springs	84.29	125	P	P	21 41 18.4	-1.1
	comp=Z,1.2nm,0.7s,mb3.8,baz=311,slow=5.3,SNR=16						

*NIED **05** 22:03:00, 3370N×13740E, h400^{km}, Mw4.7 Best double couple: M₀1.21000×10^{16} NP1:ϕ_s61.00000°, δ74.00000°, λ161.00000°. NP2:ϕ_s157.00000°, δ72.00000°, λ17.00000°.*
*JMA **05** 22:03:55.8±0.2, 3371N×13745E, h349^{km}±3^{km}, M3.5*
*ISCJB **05** 22:03:56.1±0.5, 3383N±008×13744E±008, h349^{km}±5^{km}, mb3.4/7, Error ellipse: s-maj=13.0km s-min=10.2km az=175.8*
*IDC **05** 22:03:57.5±0.7, 3387N×13722E, h338^{km}±12^{km}, mb3.3/7, mb1 3.4/10, mb1mx3.1/26, mbtmp3.3/10, Error ellipse: s-maj=25.1km s-min=11.6km az=64.0*
ISC 05 22:03:57.1±0.5**, 3384N**±008×**13744E**±008**, h342**^{km}±5^{km}**, n28, σ0^{s}83**/37**, mb3.4**/7**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIE	Ise	0.82	312	P	Pn	22 04 41.6	+0.3
HMMJ	Hamamatsu 2	1.04	13	P	Pn	22 04 42.5	+0.4
HMMJ				S	S	22 05 18.1	-0.1
JKN2	Miekihoku	1.05	293	P	Pn	22 04 42.1	-0.1
JAO	Obara	1.43	354	P	Pn	22 04 44.5	+0.5
JNY	Yasuok	1.55	13	P	Pn	22 04 45.3	+0.6
JNY				S	S	22 05 23.3	+0.4
JEG	Eigenji	1.56	326	P	Pn	22 04 45.0	+0.3
JWY	Kouya	1.58	284	P	Pn	22 04 44.8	-0.1
JGM	Miyama	1.95	342	P	Pn	22 04 47.5	+0.3
JOD2	Odawara 2	1.96	43	P	Pn	22 04 48.1	+0.8
JOD2				eS	S	22 05 29.0	+1.3
JHJ	Hachijo jima 2	2.08	110	P	Pn	22 04 49.0	+0.7
	13nm,0.3s,baz=249,slow=17,SNR=6.8						
JHJ				S	S	22 05 34.5	+5.1
	9.9nm,0.3s,baz=84,slow=21,SNR=2.8						
JWT	Wachi	2.21	311	P	Pn	22 04 48.9	-0.3
JRY	Ryogami san	2.48	29	P	Pn	22 04 52.4	+1.1
JRY				eS	S	22 05 36.2	+1.4
JAI	Aioi	2.49	270	P	Pn	22 04 50.8	-0.6
JHU	Hanno	2.51	37	P	Pn	22 04 51.9	+0.4
BSO4	Boso 4	2.65	64	P	Pn	22 04 52.9	+0.1
BSO3	Boso 3	2.71	68	P	Pn	22 04 52.6	-0.7
MJAR	Matsushiro Arr	2.77	13	P	Pn	22 04 53.8	+0.2
	1.7nm,0.3s,baz=187,slow=9.9,SNR=18						
MJAR				S	S	22 05 38.1	-1.0
	1.0nm,0.3s,baz=197,slow=17,SNR=8.1						
MAT	Matsushiro	2.77	13	P	Pn	22 04 53.7	0.0
MAT				S	S	22 05 38.3	-0.9
BSO1	Boso 1	3.04	74	P	Pn	22 04 54.8	-1.4
BSO1				S	S	22 05 42.3	-1.4
JAG	Ashikaga	3.06	32	P	Pn	22 04 55.6	-0.7
JAG				S	S	22 05 41.4	-2.6
KSRS	Korea Array	8.54	298	P	Pn	22 05 57.2	-0.3
	0.5nm,0.3s,baz=110,slow=13,SNR=8.8						
SONM	Songino Array	27.12	310	P	P	22 09 09.9	+0.3
	0.8nm,0.4s,mb3.3,baz=119,slow=10,SNR=8.5						
CMAR	Chiang Mai Arr	37.56	256	P	P	22 10 38.9	-1.0
	0.7nm,0.4s,mb3.3,baz=50,slow=7.2,SNR=7.6						
MKAR	Makanchi Array	43.16	304	P	P	22 11 25.0	+0.1
	0.9nm,0.4s,mb3.2,baz=85,slow=9.8,SNR=26						
KURK	Kurchatov	45.43	310	P	P	22 11 42.5	-0.2
	0.8nm,0.6s,mb3.0,baz=97,slow=8.1,SNR=7.9						
BATI	Baumata	45.72	199	P	P	22 11 44.3	-1.1
	8.1nm,0.4s,mb4.2,baz=45,slow=5.7,SNR=2.7						
ASAR	Alice Springs	57.29	184	P	P	22 13 10.4	+0.4
	0.6nm,0.6s,mb3.1,baz=14,slow=13,SNR=7.1						
TXAR	Lajitas Array	94.64	50	P	P	22 16 41.8	+1.8
	0.3nm,0.6s,mb3.5,baz=318,slow=2.6,SNR=4.3						

*ISCJB **05** 22:09:00.9±1.0, 3979N±004×2063E±009, h6^{km}±12^{km}, Error ellipse: s-maj=11.2km s-min=7.0km az=172.3*
*NEIC **05** 22:09:01.0, 3984N×2067E, h4^{km}, MD3.0(ATH), After ATH.*
*ATH **05** 22:09:01.0, 3984N×2067E, h4^{km}, MD3.0/3*
*CSEM **05** 22:09:01.0, 3984N×2067E, h4^{km}, MD2.9/3, After ATH*
ISC 05 22:09:01.4±1.0**, 3975N**±005×**2063E**±009**, h11**^{km}±9^{km}**, n6, σ1^{s}07**/9**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.19	119	ePG	Pg	22 09 05.1	-0.4
JAN				eSG	Sg	22 09 08.8	+0.5
KEK	Kerkira	0.64	267	ePG	Pg	22 09 14.1	+0.2
KZN	Kozani	1.04	57	ePG	Pg	22 09 19.4	-1.9
EVR	Evrytania	1.23	132	ePN	Pn	22 09 26.0	+1.4
BIA	Bitola	1.37	22	ePn	Pn	22 09 25.5	-1.1
BIA				i Sn	Sg	22 09 47.2	+1.5
KRUS	Krusevo	1.68	16	i Pn	Pg	22 09 32.9	-0.9
KRUS				i Sn	Sg	22 09 56.2	+0.6

*IDC **05** 22:09:19.9±6.6, 3669N×7148E, h76^{km}±58^{km}, mb3.3/5, mb1 3.6/10, mb1mx3.4/25, mbtmp3.5/10, ML3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=41.2km s-min=25.7km az=4.0*
*ISCJB **05** 22:09:22.9±0.5, 3687N±003×7158E±005, h120^{km}±7^{km}, mb3.7/7, Error ellipse: s-maj=6.6km s-min=4.2km az=167.8*
*NEIC **05** 22:09:24.1±0.7, 3683N×7163E, h118^{km}±9^{km}, mb4.4/16, Error ellipse: s-maj=9.0km s-min=5.5km az=60.0*
*MOS **05** 22:09:24.0±1.2, 3689N×7161E, h125^{km}, mb4.4/1, Error ellipse: s-maj=13.4km s-min=8.1km az=83.7*
*BJI **05** 22:09:24.2, 3691N×7156E, h113^{km}*
*NNC **05** 22:09:31.0±7.3, 3742N×7118E, h157^{km}±79^{km}, mb3.1, mpv4.5, Error ellipse: s-maj=62.4km s-min=33.0km az=19.0*
ISC 05 22:09:24.0±0.5**, 3684N**±003×**7157E**±005**, h117**^{km}±6^{km}**, n73, σ1^{s}14**/85**, mb3.7**/7**, 3C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.09	223	ePn	Pn	22 10 14.8	+3.5
KBL				eSn	Sn	22 10 47.5	-0.3
KSH	Kashi	4.38	51	P	Pn	22 10 31.2	+2.8
KSH				S	Sn	22 11 18.9	+0.5
KSH				Smax			
	comp=N,17nm,0.2s						
KSH				Smax			
	comp=E,18nm,0.2s						
AML	Almayashu	5.53	17	P	Pn	22 10 44.7	+0.7
	SNR=236						
AML	Almayashu	5.53	17	ePn	Pn	22 10 44.2	+0.3
	comp=E,75nm,0.5s						
AML				eSn	Sn	22 11 38.4	-7.8
THN	Thein Dam	5.57	141	eP	Pn	22 10 46.5	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THN				eS	Sn	22 11 48.2	+0.9
DLH	Dalhousie	5.61	139	ex	x	22 11 51.0	
UCH	Uchtor	5.84	22	P	Sn	22 11 51.2	-2.5
	SNR=8.7						
UCH	Uchtor	5.84	22	ePn	Pn	22 10 48.9	+0.8
	comp=E,9.6nm,0.7s						
UCH				eSn	Sn	22 11 51.2	-2.4
KZA	Kyzart	5.95	27	P	Pn	22 10 50.1	+0.5
	SNR=16						
EKS2	Erkin-Say	6.05	16	P	Pn	22 10 51.5	+0.5
	SNR=39						
EKS2	Erkin-Say	6.05	16	ePn	Pn	22 10 51.6	+0.6
	comp=E,32nm,0.6s						
EKS2				eSn	Sn	22 11 57.8	-1.1
AAK	Ala-Archa	6.20	20	ePN	Pn	22 10 53.7	+0.7
AAK				pmax	pmax		
	comp=Z,54nm,0.5s						
AAK	Ala-Archa	6.20	20	P	Pn	22 10 53.9	+0.9
	SNR=41						
AAK	Ala-Archa	6.20	20	ePn	Pn	22 10 53.7	+0.7
	comp=Z,54nm,0.5s						
AAK				eSn	Sn	22 12 00.8	-1.8
KK31	Karatay Array	6.30	353	P	Pn	22 10 54.2	-0.2
	comp=Z,20nm,0.3s,baz=175,slow=12,SNR=944						
KK31				⇓S	Sn	22 11 59.6	-5.4
	comp=Z,6.5nm,0.4s,baz=171,slow=22,SNR=6.1						
KBK	Karagaybulak	6.36	23	P	Pn	22 10 56.2	+1.0
	SNR=22						
ULHL	Ulahol	6.49	32	P	Pn	22 10 57.6	+0.7
	SNR=14						
CHMS	Chumysh	6.61	21	P	Pn	22 10 59.0	+0.5
	SNR=40						
USP	Ospenovka	6.80	18	P	Pn	22 11 00.9	-0.2
	SNR=25						
TKM2	Tokmak 2	6.81	26	⇓P	Pn	22 11 02.0	+0.7
	comp=Z,29nm,0.7s						
TKM2				⇓S	Sn	22 12 17.7	+0.4
	comp=Z,4.8nm,0.8s						
TKM2	Tokmak 2	6.81	26	ePN	Pn	22 11 01.9	+0.6
TKM2				pmax	pmax		
	comp=Z,33nm,0.6s						
TKM2	Tokmak 2	6.81	26	P	Pn	22 11 01.9	+0.6
	SNR=39						
TKM2	Tokmak 2	6.81	26	ePn	Pn	22 11 01.9	+0.7
	comp=Z,33nm,0.6s						
TKM2				eSn	Sn	22 12 16.6	-0.7
SMLA	Simla	7.35	139	i P	Pn	22 11 10.5	+1.8
SMLA				i S	Sn	22 12 27.3	-3.2
SMLA				i S	Sn	22 12 27.8	-2.7
SMLA				ex	x	22 12 32.0	
	comp=E,391nm,0.4s						
SMLA				ex	x	22 12 34.1	
	comp=N,348nm,0.3s						
JOSI	Joshimath	9.14	131	eS	Sn	22 13 10.2	-3.7
JOSI				AML	AML	22 13 19.4	
	comp=N,85nm,1.0s						
JOSI				AML	AML	22 13 19.7	
	comp=E,76nm,0.7s						
KHET	Khetri	9.45	157	eS	Sn	22 13 14.3	-7.1
SONA	Sohna	9.75	150	eS	Sn	22 13 20.1	-8.6
MK31	Makanchi Array	12.74	35	⇓P	Pn	22 12 20.0	-0.7
	comp=E,6.7nm,1.1s,baz=204,slow=12,SNR=9.8						
MK31	Makanchi Array	12.74	35	ePn	Pn	22 12 20.3	-0.5
MKAR	Makanchi Array	12.74	35	P	Pn	22 12 19.7	-1.1
	comp=E,0.1nm,0.3s,baz=224,slow=12,SNR=11						
MKAR	Makanchi Array	12.74	35	P	Pn	22 12 19.7	-1.1
DANN	Dangsing	13.31	126	eP	Pn	22 12 27.6	-0.7
	comp=E,5.5nm,0.3s						
KOLN	Koldanda	13.60	128	eP	Pn	22 12 30.3	-1.8
	comp=E,10nm,0.5s						
GKN	Gorkha	14.11	125	eP	Pn	22 12 37.3	-1.3
	comp=E,22nm,0.7s						
KURBB	Kurchatov Arra	14.65	18	⇓P	Pn	22 12 48.2	+2.9
	comp=E,0.5nm,0.6s						
KKN	Kakani	14.68	124	eP	Pn	22 12 44.4	-1.4
DMN	Daman	14.68	125	eP	Pn	22 12 45.0	-0.9
KURK	Kurchatov	14.76	18	P	Pn	22 12 47.0	+0.4
	comp=E,0.2nm,0.3s,baz=206,slow=10,SNR=21						
KURK	Kurchatov	14.76	18	eP	Pn	22 12 48.7	+2.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	14.76	18	eP	Pn	22 12 48.7	+2.1
	comp=Z,2.5nm,0.8s						
PKIN	Phulchoki	14.89	124	eP	Pn	22 12 48.4	-0.2
PKI	Pulchoki	14.91	124	eP	Pn	22 12 48.4	-0.3
GUN	Gumba	15.00	122	eP	Pn	22 12 49.3	-0.6
AB09	Akbulak array	15.03	329	⇓P	Pn	22 12 48.5	-1.6
	comp=Z,1.0nm,0.3s						
AB09				⇓S	Sn	22 15 20.4	-16
	comp=Z,1.6nm,0.7s						
JIRN	Jiri	15.37	122	eP	Pn	22 12 53.6	-1.0
	comp=Z,20nm,0.6s						
RAMN	Ramite	16.11	123	eP	Pn	22 13 02.9	-0.8
	comp=Z,11nm,0.6s						
BVA0	Borovoye Array	16.20	357	⇑P	Pn	22 13 04.1	-0.5
	comp=Z,0.5nm,1.2s,baz=159,slow=12,SNR=6.8						
BVAR	Borovoye Array	16.20	357	P	Pn	22 13 03.6	-1.0
	comp=Z,0.4nm,0.3s,baz=167,slow=13,SNR=6.5						
BRVK	Borovoye	16.24	357	eP	Pn	22 13 04.3	-0.8
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	16.24	357	ePn	Pn	22 13 04.2	-0.8
	comp=Z,5.9nm,1.0s						
TAPN	Taplejung	16.61	120	eP	Pn	22 13 10.1	+0.2
	comp=Z,8.9nm,0.5s						
ODAN	Odare	16.70	122	eP	Pn	22 13 11.7	+0.7
AKTK	Aktyubinsk	16.72	329	P	Pn	22 13 10.1	-0.9
AKTO	Aktyubinsk	16.72	329	⇑P	Pn	22 13 11.2	+0.2
	comp=Z,0.7nm,0.8s						
AKTO				⇑S	Sn	22 16 04.2	-13
	comp=Z,0.3nm,1.0s						
AKTO	Aktyubinsk	16.72	329	P	Pn	22 13 10.1	-0.9
	comp=Z,0.3nm,0.3s,baz=134,slow=11,SNR=14						
LSA	Lhasa	17.84	108	eP	Pn	22 13 26.6	+1.9
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LSA	Lhasa	17.84	108	eP	Pn	22 13 26.6	+1.9
	comp=Z,1.8nm,0.6s						
ZAA0	Zalesovo Array	19.41	24	eP	P	22 13 40.9	+0.1
ZALV	Zalesovo Beam	19.41	24	P	P	22 13 40.9	+0.2
	comp=Z,0.7nm,0.3s,baz=224,slow=10,SNR=14						
ZALV	Zalesovo Beam	19.41	24	P	P	22 13 40.9	+0.2
GNI	Garni	21.23	287	P	P	22 14 00.7	+0.3
GTA	Gaotai	22.33	75	eP	P	22 14 15.6	+3.5
KIV	Kislovodsk	23.04	297	eP	P	22 14 18.1	-0.8
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.1						
KIV	Kislovodsk	23.04	297	eP	P	22 14 18.1	-0.8
	comp=Z,13nm,1.2s,mb4.1						
SONM	Songino Array	27.76	56	P	P	22 15 03.9	+2.3
	comp=Z,0.4nm,0.7s,mb3.1,baz=268,slow=11,SNR=3.7						
EIL	Elat	31.31	268	LR	LR	22 28 12.6	
	comp=Z,39nm,20.1s,baz=6.6,slow=36						
ARCES	ARCESS Array B	41.00	337	P	P	22 16 56.9	+1.9
	comp=Z,3.1nm,0.8s,mb4.2,baz=106,slow=8.0,SNR=2.8						
TIP	Timpagrande	42.70	290	eP	P	22 17 09.5	+0.3
NACB	Ninganchiao	44.45	92	eP	P	22 17 23.8	+0.3
	comp=Z,12nm,0.7s,mb4.7						
TORD	Torodi Ar. Bea	66.19	269	P	P	22 19 59.4	0.0
	comp=Z,0.2nm,0.8s,mb3.0,baz=46,slow=6.5,SNR=3.2						
YKA	Yellowknife Ar	80.88	3	P	P	22 21 24.9	+0.3
	comp=Z,0.2nm,0.5s,mb3.2,baz=349,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	80.88	3	P	P	22 21 24.9	+0.3
ASAR	Alice Springs	84.07	125	P	P	22 21 42.1	+0.4
	comp=Z,0.5nm,0.6s,mb3.5,baz=307,slow=5.1,SNR=6.8						

*BJI **05** 22:35:01.5, 9.03S×127.82E, h39km, mb4.7*
*MOS **05** 22:35:04.8±0.8, 8.68S×127.36E, h33km, mb4.9/12, Error ellipse: s-maj=17.4km s-min=9.1km az=128.4*
*ISCJB **05** 22:35:04.5±1.5, 8.71S±0.06×127.43E±0.06, h33km±13km, mb4.7/36, MS3.4/3, Error ellipse: s-maj=10.6km s-min=7.7km az=135.6*
*NEIC **05** 22:35:07.2±1.1, 8.72S×127.42E, h40km±10km, mb4.8/26, Error ellipse: s-maj=8.9km s-min=5.0km az=50.0*
*IDC **05** 22:35:08.2±3.0, 8.75S×127.34E, h43km±27km, mb4.2/10, mb1 4.3/12, mb1mx4.2/18, mbtmp4.3/12, ML4.3/2, MS3.4/4, Ms1 3.4/4, ms1mx3.1/19, Error ellipse: s-maj=22.1km s-min=14.5km az=59.0*
*DJA **05** 22:35:12, 8.98S×126.94E, h34km, mb4.4/3*
ISC 05 22:35:03.9±3.4**, 8.74S**±0.05×**127.45E**±0.05**, h16**km±21km**, n89,** $\sigma 0^{s}$**85**/88**, mb4.7**/36**, MS3.4**/3**, 2C, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.01	248	P	Pn	22 36 05.2	+0.6
	61nm,0.3s,baz=118,slow=2.8,SNR=37						
BATI				S	Sn	22 36 50.8	-0.5
	58nm,0.3s,baz=101,slow=14,SNR=3.9						
KAKA	Kakadu	6.29	129	eP	x	22 36 19.0	
	67nm,0.6s						
KAPI	Kappang	8.49	295	P	Pn	22 37 09.0	+2.7
	1.1nm,0.3s,baz=152,slow=11,SNR=8.3						
KAPI				LR	LR	22 40 14.4	
	comp=Z,147nm,21.9s,baz=232,slow=36						
WRAB	Tennant Creek	12.97	150	eP	Pn	22 38 02.9	-4.8
WRAB				pmax	pmax		
	comp=Z,22nm,0.6s						
WRAB	Tennant Creek	12.97	150	ePn	Pn	22 38 02.9	-4.8
	comp=Z,22nm,0.6s						
WRAB				eSn	Sn	22 40 11.7	-20
WB2	Warramunga Arr	12.98	150	eP	Pn	22 38 03.0	-4.8
WB2				eS	Sn	22 40 19.3	-13
MBWA	Marble Bar	14.41	210	ePn	Pn	22 38 21.8	-5.5
MBWA				eSn	Sn	22 40 51.3	-16
ASAR	Alice Springs	16.07	158	P	Pn	22 38 44.5	-4.8
	comp=Z,1.5nm,0.3s,baz=330,slow=9.8,SNR=54						
ASAR				S	Sn	22 41 37.4	-10
	comp=Z,1.8nm,0.3s,baz=330,slow=20,SNR=6.2						
COEN	Coen	16.26	110	ePn	Pn	22 38 51.0	-0.7
	comp=Z,21nm,0.8s						
KKM	Kota Kinabalu	18.47	322	P	Pn	22 39 20.4	+1.0
PMG	Port Moresby	19.48	93	P	Pn	22 39 31.4	-0.1
PMG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMG	Port Moresby	19.48	93	P	Pn	22 39 31.4	-0.1
	comp=Z,8.4nm,0.7s						
KSM	Kuching	19.87	300	eP	Pn	22 39 34.8	-1.5
	comp=Z,16nm,0.8s						
CTA	Charters Tower	21.39	124	eP	P	22 39 54.4	+3.4
	comp=Z,7.8nm,0.8s,mb4.1						
CTA	Charters Tower	21.39	124	P	P	22 39 54.0	+3.0
	comp=Z,10.0nm,0.8s,mb4.2,baz=301,slow=12,SNR=8.0						
CTA				LR	LR	22 48 35.6	
	comp=Z,101nm,20.0s,MS3.2,baz=42,slow=38						
CTA	Charters Tower	21.39	124	eP	P	22 39 54.4	+3.4
CTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTAO	Charters Tower	21.39	124	eP	P	22 39 53.3	+2.3
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
CTAO	Charters Tower	21.39	124	eP	P	22 39 53.3	+2.3
	comp=Z,10nm,0.8s,mb4.2						
FORT	Forrest	21.93	179	eP	P	22 39 58.4	+1.7
	comp=Z,23nm,0.5s,mb4.9						
FORT				eS	S	22 43 47.3	-11
KLBR	Kellerberrin	24.46	200	eP	P	22 40 21.3	-0.8
	comp=Z,32nm,1.1s,mb4.7						
KLBR				eS	S	22 44 45.2	+3.5
NWAO	Narrogin (SRO)	25.85	200	eP	P	22 40 34.3	-0.5
STKA	Stephens Creek	26.51	152	eP	P	22 40 41.4	+0.7
	comp=Z,16nm,0.9s,mb4.5						
STKA	Stephens Creek	26.51	152	P	P	22 40 41.5	+0.8
	comp=Z,15nm,0.8s,mb4.6,baz=330,slow=9.5,SNR=16						
STKA				LR	LR	22 51 32.3	
	comp=Z,74nm,19.4s,MS3.2,baz=22,slow=37						
STKA	Stephens Creek	26.51	152	eP	P	22 40 41.3	+0.7
STKA				ePcP	PcP	22 44 05.5	+0.1
NACB	Ninganchiao	33.21	350	P	P	22 41 40.8	+0.6
CM31	Chiang Mai Arr	39.01	314	eP	P	22 42 30.6	+0.7
CMAR	Chiang Mai Arr	39.01	314	P	P	22 42 30.4	+0.5
	comp=Z,11nm,0.7s,mb4.7,baz=143,slow=6.8,SNR=75						
CHG	Chiang Mai	39.24	314	⇑P	P	22 42 32.2	+0.3
	comp=Z,18nm,1.1s,mb4.7						
CHTO	Chiang Mai	39.24	314	eP	P	22 42 31.8	-0.1
CHTO				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
CHTO	Chiang Mai	39.24	314	eP	P	22 42 31.8	0.0
	comp=Z,23nm,1.1s,mb4.8						
CHRT	Chiangrai	39.38	316	⇑P	P	22 42 34.0	+1.0
	comp=Z,171nm,0.9s,mb5.8						
PALK	Pallekele	49.23	287	eP	P	22 43 51.5	-0.5
BJT	Baijiatuau	49.63	349	eP	P	22 43 54.3	-0.3
BJT				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BJT	Baijiatuau	49.63	349	eP	P	22 43 54.3	-0.2
	comp=Z,10nm,0.4s,mb5.2						
LSA	Lhasa	51.78	319	P	P	22 44 12.0	+1.0
LSA	Lhasa	51.78	319	eP	P	22 44 10.0	-1.0
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LSA	Lhasa	51.78	319	eP	P	22 44 10.0	-1.0
	comp=Z,5.1nm,0.6s,mb4.6						
ODAN	Odare	52.55	314	eP	P	22 44 16.3	-0.5
	comp=Z,17nm,0.7s,mb5.1						
TAPN	Taplejung	52.62	314	eP	P	22 44 17.2	-0.1
	comp=Z,8.6nm,0.5s,mb5.0						
RAMN	Ramite	53.17	313	eP	P	22 44 21.6	+0.2
	comp=Z,36nm,0.6s,mb5.5						
JIRN	Jiri	53.88	314	eP	P	22 44 26.6	0.0
	comp=Z,11nm,0.6s,mb4.9						
GUN	Gumba	54.26	314	eP	P	22 44 28.7	-0.6
	comp=Z,19nm,0.6s,mb5.2						
GTA	Gaotai	54.34	334	eP	P	22 44 30.3	+0.6
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
PKI	Pulchoki	54.40	313	eP	P	22 44 29.9	-0.5
KKN	Kakani	54.62	313	eP	P	22 44 31.4	-0.5
	comp=Z,6.6nm,0.5s,mb4.9						
KKN	Kakani	54.62	313	eP	P	22 44 31.4	-0.5
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
DMN	Daman	54.64	313	eP	P	22 44 31.8	-0.3
RAO	Raoul Island	55.01	120	eP	P	22 44 35.4	+0.5
GKN	Gorkha	55.20	313	eP	P	22 44 35.8	-0.4
	comp=Z,13nm,0.6s,mb5.1						
KOLN	Koldanda	55.83	312	eP	P	22 44 40.5	-0.2
	comp=Z,24nm,0.7s,mb5.4						
DANN	Dangsing	56.03	313	eP	P	22 44 41.8	-0.4
	comp=Z,14nm,0.6s,mb5.2						
YSS	Yuzh-Sakhalins	57.10	12	P	P	22 44 49.9	+0.5
ULN	Ulaanbaatar	59.19	344	P	P	22 45 01.3	-2.7
SONM	Songino Array	59.34	344	P	P	22 45 06.0	+1.0
	comp=Z,0.6nm,0.5s,mb3.9,baz=165,slow=6.6,SNR=7.7						
PETK	Petropavlovsk-	66.78	19	P	P	22 45 55.8	+1.5
	comp=Z,4.1nm,0.9s,mb4.5,baz=188,slow=4.5,SNR=2.4						
MK31	Makanchi Array	68.33	328	eP	P	22 46 04.3	0.0
MKAR	Makanchi Array	68.33	328	P	P	22 46 04.6	+0.2
	comp=Z,6.2nm,0.8s,mb4.7,baz=130,slow=8.1,SNR=51						
MKAR	Makanchi Array	68.33	328	P	P	22 46 04.6	+0.2
TKM2	Tokmak 2	69.75	322	eP	P	22 46 13.4	+0.2
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TKM2	Tokmak 2	69.75	322	eP	P	22 46 13.4	+0.2
	comp=Z,1.8nm,0.8s,mb4.0						
KBL	Kabul	69.98	312	P	P	22 46 14.8	-0.1
KBL				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KBL	Kabul	69.98	312	P	P	22 46 14.8	-0.1
	comp=Z,1.8nm,0.5s,mb4.3						
EKS2	Erkin-Say	70.73	321	eP	P	22 46 20.0	+0.7
VNDA	Vanda	71.04	173	P	P	22 46 21.0	+0.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=345,slow=5.5,SNR=3.6						
VNDA				LR	LR	23 14 23.8	
	comp=Z,46nm,19.4s,MS3.8,baz=322,slow=33						
ZAA0	Zalesovo Array	72.06	335	eP	P	22 46 26.2	-0.8
ZALV	Zalesovo Beam	72.06	335	P	P	22 46 26.5	-0.5
	comp=Z,13nm,0.7s,mb5.0,baz=129,slow=4.6,SNR=61						
KURK	Kurchatov	72.72	330	eP	P	22 46 31.2	+0.2
KURK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KURK	Kurchatov	72.72	330	eP	P	22 46 31.2	+0.2
	comp=Z,13nm,0.9s,mb4.9						
VOSK	Vostochnaya	77.75	329	P	P	22 46 59.4	-0.5
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OPO	Ambohidratompo	78.09	253	P	P	22 47 03.4	+0.8
	comp=Z,1.8nm,0.7s,mb4.1,baz=233,slow=3.0,SNR=4.2						
BVA0	Borovoye Array	78.21	329	i P	P	22 47 02.2	-0.3
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BRVK	Borovoye	78.28	329	eP	P	22 47 02.5	-0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
BRVK	Borovoye	78.28	329	eP	P	22 47 02.5	-0.4
	comp=Z,7.4nm,0.9s,mb4.6						
TIXI	Tiksi	80.22	0	eP	P	22 47 12.4	-0.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TIXI	Tiksi	80.22	0	eP	P	22 47 12.4	-0.7
	comp=Z,5.5nm,0.8s,mb4.5						
QSPA	South Pole Qui	81.25	180	P	P	22 47 19.7	+1.1
	comp=Z,1.2nm,0.4s,mb4.2,baz=269,slow=0.5,SNR=5.9						
AB31	Akbulak array	82.32	322	P	P	22 47 22.7	-2.0
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ARU	Arti	85.86	329	eP	P	22 47 42.6	0.0
ARU				pmax	pmax		
	comp=Z,18nm,2.2s,mb4.9						
ARU	Arti	85.86	329	eP	P	22 47 42.6	0.0
	comp=Z,18nm,2.2s,mb4.9						
SNAA	Sanae	93.38	194	eP	P	22 48 19.0	+1.1
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SNAA	Sanae	93.38	194	eP	P	22 48 19.0	+1.0
	comp=Z,1.1nm,0.6s,mb4.5						
BOSA	Boshof	96.41	240	eP	P	22 48 32.6	-0.1
YKA	Yellowknife Ar	110.42	26	PKiKP	PKiKP	22 53 34.1	-0.9
	comp=Z,0.2nm,0.6s,baz=304,slow=1.9,SNR=4.1						
GERES	GERESS Array B	112.11	319	PKiKP	PKiKP	22 53 38.4	-0.2
	comp=Z,0.3nm,0.7s,baz=45,slow=2.1,SNR=4.1						
TORD	Torodi Ar. Bea	126.64	280	PKP	PKPdf	22 54 08.6	+1.1
	comp=Z,0.9nm,0.8s,baz=78,slow=1.7,SNR=5.4						
TORD	Torodi Ar. Bea	126.64	280	PKP	PKPdf	22 54 08.6	+1.1
PLCA	Paso Flores	128.04	163	PKP	PKPdf	22 54 11.6	+2.0
	comp=Z,2.5nm,0.8s,baz=241,slow=6.9,SNR=3.8						
ATAH	Atahualpa	149.86	120	PKPbc	PKPbc	22 54 54.1	-0.3
	comp=Z,4.8nm,0.8s,baz=110,slow=15,SNR=3.1						
SIV	San Ignacio	154.02	161	PKPbc	PKPbc	22 55 05.4	+1.7
	comp=Z,0.5nm,0.5s,baz=221,slow=15,SNR=4.3						

IDC 05 23:06:43.8±2.1**, 8.79S**×**127.56E, h0**km**, mb3.8**/3**, mb1 3.9**/5**, mb1mx3.7**/15**, mbtmp3.8**/5**, ML3.4**/2**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.2**/25**, Error ellipse: s-maj=43.2km s-min=35.6km az=116.0, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.10	250	Pn	Pn	23 07 49.5	+1.7
	2.6nm,0.3s,baz=71,slow=8.5,SNR=1.9						
BATI				Sn	Sn	23 08 35.5	-1.0
	4.4nm,0.3s,baz=62,slow=13,SNR=2.7						
WRA	Warramunga Arr	12.88	150	LR	LR	23 14 57.9	
	comp=Z,36nm,19.6s,baz=335,slow=38						
ASAR	Alice Springs	15.99	158	Pn	Pn	23 10 29.6	-0.7
	0.1nm,0.3s,baz=331,slow=12,SNR=7.9						
CMAR	Chiang Mai Arr	39.12	314	P	P	23 14 12.5	-0.8
	1.0nm,0.6s,baz=138,slow=6.5,SNR=8.6						
MKAR	Makanchi Array	68.43	328	P	P	23 17 48.2	+0.7
	0.5nm,0.7s,baz=116,slow=7.1,SNR=5.2						
ZALV	Zalesovo Beam	72.14	335	P	P	23 18 10.1	0.0
	0.2nm,0.4s,baz=116,slow=5.0,SNR=5.5						

GUC 05 23:33:36.3±0.8**, 24.04S**×**67.41W, h216**km±13km**, ML4.1, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.98	316	⇑iP	Pn	23 34 17.4	+1.6
LVC				i S	S	23 34 49.1	+2.4
PECH	Pedro de Valdi	2.53	304	eP	Pn	23 34 23.4	+1.8
PECH				i S	S	23 34 59.0	+2.1
PECH				AML	AML	23 35 02.0	
	comp=N,496nm,0.7s						
CEN1	Los Morros	2.64	284	⇓iP	Pn	23 34 25.6	+2.9
CEN1				i S	S	23 35 02.8	+3.8
CEN1				AML	AML	23 35 05.3	
	comp=N,293nm,0.5s						
CPN1	Cerro Paranal	2.79	257	eP	Pn	23 34 25.3	+0.9
CPN1				i S	S	23 35 03.2	+1.1
CPN1				AML	AML	23 35 07.7	
	comp=E,211nm,0.3s						
TOCH	Tocopilla	3.22	306	eP	Pn	23 34 31.3	+2.0
TOCH				i S	S	23 35 13.0	+2.0
TOCH				AML	AML	23 35 15.1	
	comp=E,187nm,0.2s						
PB01	Plate Boundary	3.55	327	⇑iP	Pn	23 34 34.2	+1.0
PB01				i S	S	23 35 19.4	+1.3
PB01				AML	AML	23 35 20.2	
	comp=E,151nm,0.3s						

*GCG **05** 23:58:59.8, 14.37N×89.20W, h50km, MD3.7*
*SSS **05** 23:59:00.0, 13.21N×89.81W, h23km, MD3.0*
CASC 05 23:58:59.9±1.9**, 13.20N**×**89.83W, h26**km±5km**, MD3.5, 1C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTR	El Retiro	0.72	15	⇓eP	x	23 59 14.2	
BOQS	Boqueron	0.76	45	eP	x	23 59 13.4	
LFRS	El Faro	0.86	61	⇓eP	x	23 59 15.7	
LFRS				eS	x	23 59 27.8	
LFU	La Fuente	0.89	52	eP	x	23 59 16.5	
RBDL	Robledal	0.92	9	⇓eP	x	23 59 17.2	
LBRS	Las Brisas	0.94	55	eP	x	23 59 17.3	
LBRS				eS	x	23 59 30.9	
SNVI	San Vicente	1.05	67	eP	x	23 59 18.4	
SNVI				eS	x	23 59 32.9	
SNVI				eS	x	23 59 33.0	
IXG	Ixpaco	1.14	328	⇑eP	Pn	23 59 20.3	+0.1
IXG				eS	Sn	23 59 37.0	+2.0
MTO2	Montecristo 2	1.28	21	eP	x	23 59 22.4	
MTO2				eS	x	23 59 40.2	
VSM	San Miguel	1.54	81	eP	x	23 59 25.7	
BLLM	Bellamira	1.57	81	eP	x	23 59 26.4	
BLLM				eS	x	23 59 47.2	
FUG	Fuego 3	1.58	322	eP	Pn	23 59 26.6	+0.4
FUG				eS	Sn	23 59 47.1	+1.3
CAHU	Cacacuatique	1.68	70	eP	x	23 59 28.3	

*IDC **06** 00:04:18.9±2.6, 39.45N×74.41E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.3/23, mbtmp3.4/5, ML3.0/2, Error ellipse: s-maj=53.3km s-min=28.3km az=138.0*
*ISCJB **06** 00:04:24.1±1.6, 39.51N±0.08×74.2E±0.1, h46km±15km, mb3.5/3, Error ellipse: s-maj=15.9km s-min=13.4km az=155.0*
*NEIC **06** 00:04:24.2±1.6, 39.46N×74.29E, h35km, Error ellipse: s-maj=27.8km s-min=11.6km az=135.0*
ISC 06 00:04:24.7±1.6**, 39.46N**±0.09×**74.3E**±0.1**, h39**km±17km**, n22,** $\sigma 0^{s}$**73**/30**, mb3.5**/3**, 3C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	2.70	351	P	Pn	00 05 06.0	+0.4
	SNR=44						
AML	Almayashu	2.70	351	ePn	Pn	00 05 05.4	-0.2
AML				eSn	Sn	00 05 37.0	0.0
KZA	Kyzart	2.72	16	P	Pn	00 05 06.4	+0.5
	SNR=8.4						
UCH	Uchtor	2.77	4	P	Pn	00 05 06.7	+0.2
	SNR=9.9						
UCH	Uchtor	2.77	4	ePn	Pn	00 05 06.7	+0.1
UCH				eSn	Sn	00 05 38.0	-0.7
ULHL	Ulahol	3.17	28	P	Pn	00 05 12.0	0.0
	SNR=16						
AAK	Ala-Archa	3.17	3	P	Pn	00 05 12.5	+0.4
	SNR=44						
AAK	Ala-Archa	3.17	3	ePn	Pn	00 05 12.6	+0.5
AAK				eSn	Sn	00 05 49.9	+1.2
EKS2	Erkin-Say	3.21	354	P	Pn	00 05 13.3	+0.6
	SNR=11						
EKS2	Erkin-Say	3.21	354	ePn	Pn	00 05 12.5	-0.2
EKS2				Sn	Sn	00 05 49.4	-0.4
KBK	Karagaybulak	3.23	9	P	Pn	00 05 13.5	+0.5
	SNR=47						
CHMS	Chumysh	3.55	6	P	Pn	00 05 17.6	+0.3
	SNR=6.8						
TKM2	Tokmak 2	3.60	16	⇑Pn	Pn	00 05 18.0	0.0
	13nm,0.7s						
TKM2				⇑Sn	Sn	00 06 06.5	+7.3
	17nm,0.6s						
TKM2	Tokmak 2	3.60	16	P	Pn	00 05 18.4	+0.4
	SNR=30						
TKM2	Tokmak 2	3.60	16	ePn	Pn	00 05 17.8	-0.2
TKM2				Sn	Sn	00 05 59.5	+0.2
KK31	Karatay Array	4.60	323	Pn	Pn	00 05 30.2	-1.5
	1.0nm,0.3s,baz=125,slow=13,SNR=68						
KK31				⇑Pg	Pn	00 05 41.7	+10
	2.1nm,0.5s,baz=131,slow=14,SNR=5.6						

KK31 ⇓Sn Sn 00 06 23.7 -0.1
2.4nm,0.4s,baz=124,slow=22,SNR=4.2
KK31 ⇓Lg 00 06 42.8
7.7nm,0.6s,baz=126,slow=28,SNR=5.3
MKAR Makanchi Array 9.39 36 Pn **Pn 00 06 36.1 -1.3**
0.1nm,0.3s,baz=222,slow=14,SNR=3.0
BVAR Borovoye Array 13.82 350 Pn **Pn 00 07 34.2 -3.7**
0.1nm,0.3s,baz=160,slow=14,SNR=4.0
GNI Garni 22.63 281 P **P 00 09 21.6 -0.5**
ARCES ARCESS Array B 39.45 335 P **P 00 11 50.4 -0.3**
3.1nm,0.9s,mb4.0,baz=110,slow=10.0,SNR=7.0
TORD Torodi Ar. Bea 68.33 269 P **P 00 15 23.8 +1.6**
0.2nm,0.6s,mb3.4,baz=48,slow=4.7,SNR=2.3
YKA Yellowknife Ar 78.14 4 P **P 00 16 18.6 -0.7**
0.1nm,0.3s,mb3.2,baz=349,slow=5.6,SNR=2.1

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*SZGRF **06** 00:10:05.0, 54.18N×160.88E, h33km, mb5.0, Near east coast of Kamchatka Peninsula, Russia*
*ISCJB **06** 00:10:14.1±0.1, 54.49N±0.02×160.41E±0.02, h118km, mb4.7/183, Error ellipse: s-maj=2.7km s-min=1.8km az=159.6*
*MOS **06** 00:10:14.0±1.1, 54.54N×160.27E, h117km, mb4.8/75, Error ellipse: s-maj=8.3km s-min=4.3km az=87.2*
*KRSC **06** 00:10:15.7±0.6, 54.42N×160.65E, h105km±55km, ML4.8*
*NEIC **06** 00:10:15.3±0.1, 54.52N×160.28E, mb4.8/121, Error ellipse: s-maj=4.6km s-min=3.0km az=166.0*
*IDC **06** 00:10:16.4±0.5, 54.69N×160.20E, h123km±4km, mb4.2/25, mb1 4.4/27, mb1mx4.4/30, mbtmp4.3/27, MS3.5/6, Ms1 3.6/6, ms1mx3.2/31, Error ellipse: s-maj=11.9km s-min=6.9km az=144.0*
*BJI **06** 00:10:17.0, 54.97N×159.43E, h116km, mB4.9, mb4.6*
ISC 06 00:10:16.0±0.1**, 54.51N**±0.02×**160.28E**±0.02**, h120**km**, h120**km±1.7km**: pP-P, n794, σ0.80**/825**, mb4.7**/183**, 193C-183D, Near east coast of Kamchatka Peninsula**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KII Karymskiy 0.68 226 *i* P **Pn 00 10 36.3 +1.2**
TUMR Tumrok 0.78 354 *i* P **Pn 00 10 37.4 +1.5**
TUMR *i* S **Sn 00 10 53.5 +2.5**
MKZ Mys Kozlova 0.85 86 *i* P **Pn 00 10 34.1 -2.4**
KMNR Kamenistaya 1.25 359 *i* P **Pn 00 10 42.1 +1.6**
KMNR *i* S **Sn 00 11 01.5 +2.3**
SPN Mys Shipunski 1.42 186 *e*P **Pn 00 10 41.1 -1.3**
BZMR Bezymyannaya 1.44 5 *i* P **Pn 00 10 43.9 +1.3**
BZMR *i* S **Sn 00 11 04.0 +1.2**
NLC Nalytchevo 1.45 203 *i* P **Pn 00 10 42.9 +0.1**
NLC *i* S **Sn 00 11 03.0 -0.1**
KPT Kopyto 1.46 359 *e*P **Pn 00 10 44.2 +1.3**
KPT *i* S **Sn 00 11 04.9 +1.5**
ZLN Zelenaya 1.54 11 *i* P **Pn 00 10 45.1 +1.3**
ZLN *i* S **Sn 00 11 06.2 +1.2**
AVH Avacha 1.54 217 *i* P **Pn 00 10 45.6 +1.7**
AVH *i* S **Sn 00 11 07.8 +2.8**
KOZ Kozyrevsk 1.57 352 *i* P **Pn 00 10 45.8 +1.7**
KOZ *i* S **Sn 00 11 07.6 +2.0**
KOZR Kozyr 1.58 352 PN **Pn 00 10 45.8 +1.6**
KOZR S **Sn 00 11 07.6 +1.9**
GNL Ganaly 1.60 240 *i* P **Pn 00 10 47.1 +2.6**
GNL *i* S **Sn 00 11 10.6 +4.4**
KRSR Krestovskiy 1.72 5 *e*P **Pn 00 10 46.8 +0.9**
KRSR *i* S **Sn 00 11 09.5 +0.7**
INSR Institute 1.75 215 P **Pn 00 10 47.2 +0.9**
INSR *i* S **Sn 00 11 10.0 +0.5**
PET Petropavlovsk 1.77 214⇓*e*PN **Pn 00 10 47.3 +0.7**
PET *i* S **Sn 00 11 11.1 +1.2**
PET pmax pmax
comp=Z,4μm,0.4s
PET pmax pmax
comp=Z,100nm,0.3s
PET pmax pmax
comp=Z,5μm,0.3s
PET smax
comp=N,3μm,2.8s
PET smax
comp=E,20μm,0.7s
PET smax
comp=E,3μm,2.0s
PET smax
comp=E,19μm,0.6s
PET smax
comp=N,18μm,0.6s
PET Petropavlovsk 1.77 214 *i* P **Pn 00 10 47.6 +1.0**
PET *i* S **Sn 00 11 11.3 +1.4**
PET Petropavlovsk 1.77 214 *e*Pn **Pn 00 10 47.5 +0.9**
KLY Klyuchi 1.82 7 *i* P **Pn 00 10 48.3 +1.2**
KLY *i* S **Sn 00 11 12.0 +1.0**
SRDR Sredinnyy 1.84 350 *i* P **Pn 00 10 48.8 +1.4**
SRDR *i* S **Sn 00 11 12.6 +1.2**
PEA0B Petropavlovsk- 2.08 229 *e*Pn **Pn 00 10 52.2 +1.9**
PEA0B *e*Sn **Sn 00 11 17.9 +1.3**
PETK Petropavlovsk- 2.08 229 P **Pn 00 10 52.3 +2.0**
comp=N,117nm,0.3s,baz=69,slow=18,SNR=1154
PETK S **Sn 00 11 20.3 +3.7**
comp=N,104nm,0.3s,baz=71,slow=23,SNR=10
SRKR Sorokina 2.21 13 *i* P **Pn 00 10 53.0 +1.1**
SRKR *i* S **Sn 00 11 20.7 +1.1**
KBTR Krutoberegovo 2.24 39 *i* P **Pn 00 10 51.4 -0.9**
KBTR *i* S **Sn 00 11 17.1 -3.1**
RUS Russkaya 2.33 208 *i* P **Pn 00 10 53.5 -0.1**
RUS *i* S **Sn 00 11 21.5 -0.9**
GRL Gorelyy 2.36 215 *i* P **Pn 00 10 55.5 +1.6**
GRL *i* S **Sn 00 11 25.3 +2.3**
MIPR Malaya Ipel'ka 3.07 225 *i* P **Pn 00 11 05.5 +2.3**
SKR Severo-Kuril's 4.59 215 *e*PN **Pn 00 11 23.5 +0.1**
SKR *e*S **Sn 00 12 15.0 -0.8**
SKR pmax pmax
comp=N,80nm,0.5s
SKR pmax pmax
comp=E,150nm,0.5s
SKR pmax pmax
comp=Z,390nm,0.5s
SKR smax
comp=N,590nm,0.5s
SKR smax
comp=E,540nm,0.5s
FX1 Attu Island--F 7.82 97 P **Pn 00 12 03.4 -3.6**
comp=E,52nm,0.3s,baz=331,slow=3.5,SNR=55
FX1 S **Sn 00 13 24.4 -9.3**
comp=E,130nm,0.3s,baz=258,slow=20,SNR=13
YSS Yuzh-Sakhalins 13.40 243⇑*i*PN **Pn 00 13 21.9 +0.6**
YSS Yuzh-Sakhalins 13.40 243 Pn **Pn 00 13 20.7 -0.6**
BILL Bilibino 13.87 9*ce*P **Pn 00 13 28.1 +1.1**
BILL pmax pmax
comp=Z,41nm,0.9s
BILL Bilibino 13.87 9 *e*Pn **Pn 00 13 28.0 +0.9**
comp=Z,29nm,0.8s
BILL *e*Sn **Sn 00 16 02.2 +2.4**
ASAJ Asahikawa 15.48 235 P **Pn 00 13 49.0 +1.4**
comp=Z,2.0nm,0.3s,baz=71,slow=6.3,SNR=9.7
ASAJ Asahikawa 15.48 235 P **Pn 00 13 49.0 +1.4**
ASAJ pmax pmax
comp=Z,2.0nm,0.3s
HABR Khabarovsk 16.78 259 *e*P **Pn 00 14 05.9 +2.4**
HABR *e*S **S 00 17 12.6 +2.1**
ERM Erimo 16.86 229⇓*i*P **Pn 00 14 03.8 -0.8**
ERM Erimo 16.86 229 *e*P **Pn 00 14 03.6 -1.0**
comp=Z,37nm,0.5s
YAK Yakutsk 17.62 308 *e*P **Pn 00 14 12.2 -1.4**
YAK *e*S **S 00 17 27.0 -2.4**
YAK pmax pmax
comp=Z,86nm,0.9s
YAK pmax pmax
comp=E,22nm,0.9s
YAK pmax pmax
comp=N,13nm,1.1s
YAK smax
comp=N,333nm,3.2s
YAK smax
comp=E,100nm,2.7s
YAK Yakutsk 17.62 308 *e*Pn **Pn 00 14 12.9 -0.7**
comp=E,126nm,0.7s
YAK S **S 00 17 27.3 -2.2**
KLR Kul'dur 18.32 265 *e*P **P 00 14 18.8 -1.8**
KLR pmax pmax
comp=E,92nm,1.4s
KLR pmax pmax
comp=Z,52nm,1.4s
UNV Unalaska Valle 19.36 78 *e*P **P 00 14 31.9 0.0**
comp=Z,152nm,0.8s
CLNS Chul'man 19.95 291 *e*P **P 00 14 38.4 +0.1**
CLNS pmax pmax
comp=Z,22nm,0.9s
CLNS pmax pmax
comp=N,16nm,0.8s
CLNS pmax pmax
comp=E,25nm,0.9s
TIXI Tiksi 21.85 334⇑*e*P **P 00 14 57.4 -1.0**
TIXI pmax pmax
comp=Z,15nm,0.8s,mb4.4
TIXI MLR MLR
comp=Z,100nm,16.0s
TIXI Tiksi 21.85 334 *e*P **P 00 14 57.6 -0.8**
comp=Z,25nm,1.1s,mb4.5
MDJ Mudanjiang 22.06 256 P **P 00 15 00.7 -0.2**
MDJ S **S 00 18 53.1 -2.9**
MDJ AMB AMB
comp=Z,16nm,1.0s,mb4.3
MDJ AMB AMB
comp=Z,154nm,5.6s
MAJO Matsushiro 23.54 229 *e*P **P 00 15 16.2 +1.1**
MAJO pmax pmax
comp=Z,60nm,0.7s,mb5.0
MAJO Matsushiro 23.54 229 *e*P **P 00 15 16.2 +1.1**
comp=Z,60nm,0.7s,mb5.0
MAT Matsushiro 23.54 229 P **P 00 15 15.5 +0.4**
MJAR Matsushiro Arr 23.54 229 P **P 00 15 15.8 +0.7**
comp=Z,21nm,0.6s,mb4.6,baz=28,slow=8.0,SNR=51
TTA Tatalina 23.77 52 *e*P **P 00 15 16.7 -0.3**
CN2 Changchun 24.92 259 ⇓P **P 00 15 26.1 -1.5**
CN2 *e*AP 00 15 51.0
CN2 *e*S **S 00 19 38.5 -3.5**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.2
HIA Hailar 25.30 275 *e*P **P 00 15 30.1 -0.9**
HIA pmax pmax
comp=Z,13nm,0.7s
HIA Hailar 25.30 275 *e*P **P 00 15 30.1 -0.9**
comp=Z,13nm,0.7s,mb4.5
CHUM Lake Minchumin 25.43 49 P **P 00 15 23.5 -8.5**
comp=Z,14nm,0.6s,mb4.6
PPLA Purkeypile 25.52 52 *e*P **P 00 15 33.1 +0.3**
comp=Z,50nm,1.3s,mb4.8
BOD Bodaibo 25.59 296 *e*P **P 00 15 31.1 -2.4**
BOD pmax pmax
comp=Z,6.0nm,1.2s,mb3.9
KTH Kantishna Hill 26.06 50 *e*P **P 00 15 37.4 -0.4**
comp=Z,53nm,1.7s,mb4.7
TRF Thorofare Moun 26.35 50 *e*P **P 00 15 39.9 -0.4**
comp=Z,37nm,1.1s,mb4.7
COLD Coldfoot 26.41 42 *e*P **P 00 15 39.6 -1.2**
comp=Z,5.5nm,0.9s,mb4.0
MCK McKinley 26.93 50 *e*P **P 00 15 45.0 -0.6**
MCK pmax pmax
comp=Z,14nm,1.0s,mb4.5
MCK McKinley 26.93 50 *e*P **P 00 15 44.7 -0.8**
COLA College 27.34 47 *e*P **P 00 15 48.5 -0.7**
COLA pmax pmax
comp=Z,25nm,1.2s,mb4.6
COLA College 27.34 47 *e*P **P 00 15 48.5 -0.7**
comp=Z,25nm,1.2s,mb4.6
KSRS Korea Array 27.88 246 P **P 00 15 56.0 +1.7**
comp=Z,4.0nm,0.8s,mb4.0,baz=40,slow=9.0,SNR=12
KSRS LR LR 00 27 33.9
comp=Z,38nm,18.4s,baz=177,slow=37
KSRS Korea Array 27.88 246 P **P 00 15 56.0 +1.7**
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
KSRS MLR MLR
comp=Z,38nm,18.4s
EGAK Eagle 30.19 47 *e*P **P 00 16 13.2 -1.2**
comp=Z,24nm,0.6s,mb5.0
DAWY Dawson 31.07 48 *e*P **P 00 16 21.6 -0.6**
BJI Beijing 32.65 262 P **P 00 16 35.2 -1.0**
BJI AMB AMB
comp=Z,9.0nm,0.5s,mb4.9
ULN Ulaanbaatar 33.31 281⇑*i*P **P 00 16 42.6 +0.6**
ULN Ulaanbaatar 33.31 281 P **P 00 16 41.3 -0.7**
TLY Talaya 33.34 289 *e*P **P 00 16 38.6 -3.6**
TLY pmax pmax
comp=Z,13nm,1.2s,mb4.6
SONM Songino Array 33.71 281 P **P 00 16 44.3 -1.0**
comp=Z,0.1nm,0.2s,mb3.4,baz=58,slow=7.9,SNR=9.9
SONM PcP PcP 00 19 22.4 +0.3
comp=Z,2.3nm,0.6s,baz=62,slow=1.6,SNR=9.4
SONM ScP ScP 00 22 56.5 +1.1
comp=Z,4.0nm,0.7s,baz=64,slow=2.0,SNR=23
SONM LR LR 00 31 58.8
comp=Z,87nm,19.9s,baz=9.8,slow=39
SONM Songino Array 33.71 281 P **P 00 16 44.3 -1.1**
SONM 00 19 22.4
SONM Songino Array 33.71 281 P **P 00 16 44.3 -1.0**
SONM PcP PcP 00 19 22.4 +0.3
SONM ScP ScP 00 22 56.5 +1.1
SONM LR LR 00 31 58.8
ZAK Zakamensk 34.17 287 *e*P **P 00 16 47.9 -1.4**
ZAK *e* pP 00 17 17.7 +2.1
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb3.9
HHC Hu-ho-hao-te 34.80 267 *e*P **P 00 16 54.8 0.0**
HHC AP pP 00 17 19.2 -2.0
HHC XP sP 00 17 32.7 -2.2
HHC PP PP 00 18 15.1 -0.8
HHC *e*S **S 00 22 14.6 -1.8**
HHC XS sS 00 22 58.2 -4.1
HHC SS SS 00 24 34.5 -18
HHC AMB AMB
comp=Z,11nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,89nm,5.6s
HHC LR LR
comp=N,123nm,13.1s
HHC LR LR
comp=E,165nm,17.8s
HHC LR LR
comp=Z,176nm,14.3s
SIT Sitka 35.11 59 *e*P **P 00 16 56.9 -0.4**
SIT pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
SIT Sitka 35.11 59 *e*P **P 00 16 56.9 -0.4**
comp=Z,8.8nm,0.5s,mb4.8
NJ2 Nanjing 36.84 250 *e*P **P 00 17 13.5 +1.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
XAN Xi'an 40.97 262 P **P 00 17 45.1 -1.7**
XAN AP pP 00 18 12.3 -1.4
XAN XP sP 00 18 25.1 -2.2
XAN PP PP 00 19 23.7 +0.2
XAN S **S 00 23 51.1 +1.4**
XAN XS sS 00 24 35.2 -1.2
XAN SCS ScS 00 27 40.4 +1.9
XAN AMB AMB
comp=Z,3.0nm,0.9s,mb4.1
XAN AMB AMB
comp=Z,72nm,4.5s
XAN LR LR
comp=E,22nm,17.7s
XAN LR LR
comp=Z,44nm,21.5s
NACB Ninganchiao 41.71 239 P **P 00 17 52.9 +0.1**
RES Resolute Bay 41.97 23 *e*P **P 00 17 54.8 +0.4**
RES Resolute Bay 41.97 23 *e*P **P 00 17 54.0 -0.4**
comp=Z,1.4nm,0.4s,mb4.0
YKA Yellowknife Ar 42.05 44 P **P 00 17 54.7 -0.5**
comp=Z,8.6nm,0.7s,mb4.6,baz=299,slow=7.8,SNR=93
YKA pP pP 00 18 21.5 -0.7
comp=Z,3.8nm,0.7s,baz=300,slow=7.8,SNR=6.0
YKA PcP PcP 00 19 47.2 -0.5
comp=Z,0.8nm,0.6s,baz=306,slow=3.5,SNR=5.9
YKA ScP ScP 00 23 25.6 -1.1
comp=Z,0.5nm,0.7s,baz=302,slow=4.0,SNR=7.5
YKA Yellowknife Ar 42.05 44 P **P 00 17 54.7 -0.5**
YKA *PP pP 00 18 21.5 -0.8
YKA 00 19 47.2
YKA Yellowknife Ar 42.05 44 P **P 00 17 54.7 -0.5**
YKA pP pP 00 18 21.5 -0.8
YKA PcP PcP 00 19 47.2 -0.5
YKA ScP ScP 00 23 25.6 -1.1
ZALV Zalesovo Beam 42.12 301 P **P 00 17 53.5 -2.3**
comp=Z,1.7nm,0.5s,mb4.0,baz=54,slow=7.5,SNR=8.5
ZALV PcP PcP 00 19 47.5 -0.5
comp=Z,5.2nm,0.8s,baz=42,slow=3.2,SNR=7.7
NVS Novosibirsk 42.42 303⇑*i*P **P 00 17 55.7 -2.5**
NVS *i* *PP pP 00 18 25.7 +0.4
NVS *e* 00 19 47.0
NVS *e*S **S 00 24 06.0 -4.5**
NVS *e* 00 24 57.6
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=E,15nm,1.6s
NVS pmax pmax
comp=Z,15nm,1.6s,mb4.5
NVS smax
comp=N,28nm,2.6s
NVS smax
comp=E,13nm,2.6s
LZH Lanzhou 42.48 268 P **P 00 17 59.0 0.0**
LZH AP pP 00 18 24.6 -1.5
LZH XP sP 00 18 37.5 -2.1
LZH PP PP 00 19 42.3 +2.7
LZH AMB AMB
comp=Z,23nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,82nm,4.3s
LZH LR LR
comp=N,576nm,14.5s
LZH LR LR
comp=Z,875nm,18.0s
GTA Gaotai 42.58 275 ⇓P **P 00 17 59.4 -0.3**
GTA AP pP 00 18 25.8 -1.1
GTA XP sP 00 18 38.3 -2.1
GTA S **S 00 24 11.5 -1.7**
GTA XS sS 00 24 56.9 -3.3
GTA AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
GTA AMB AMB
comp=Z,196nm,6.0s
GTA LR LR
comp=N,121nm,16.5s
GTA LR LR
comp=E,107nm,15.9s
GTA LR LR
comp=Z,124nm,17.1s
SPB4 Spitsbergen Ar 45.76 350 *e*P **P 00 18 24.1 -0.5**
B04A Port Angeles 45.92 65 ⇓P **P 00 18 25.7 -0.5**
baz=46
A04A Legoe Bay, Lum 45.94 64 ⇓P **P 00 18 26.2 -0.2**
baz=46
A05A Maple Falls 46.09 63 ⇓P **P 00 18 27.0 -0.6**
baz=46
CD2 Chengdu 46.23 263 P **P 00 18 30.3 +1.4**
CD2 AP pP 00 18 56.2 -0.2
CD2 XP sP 00 19 09.0 -0.8
CD2 PCP PcP 00 20 05.6 +3.1
CD2 PP PP 00 20 21.4 +2.0
CD2 S **S 00 25 07.6 +1.3**
CD2 XS sS 00 25 52.7 -1.1
CD2 SS SS 00 28 26.6 -6.2
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,230nm,4.7s
CD2 LR LR
comp=E,420nm,5.3s
CD2 LR LR
comp=Z,310nm,5.6s
CMW Cultus Mountai 46.43 64 P **P 00 18 30.3 +0.1**
B05A Bryant 46.54 64 ⇓P **P 00 18 30.4 -0.7**
baz=46,SNR=6.8
WMQ Urumqi 46.62 288 P **P 00 18 30.9 -0.9**
WMQ AP pP 00 18 53.5 -5.8
WMQ AMB AMB
comp=Z,12nm,1.1s,mb4.5
WMQ AMB AMB
comp=Z,97nm,5.0s
B06A Marblemount 46.70 63 ⇑P **P 00 18 31.7 -0.6**
baz=46
RPW Rockport 46.73 64 P **P 00 18 32.0 -0.5**
A07A Ashnola River, 46.94 62 ⇓P **P 00 18 33.6 -0.6**
baz=47,SNR=9.7
KURK Kurchatov 47.09 301 P **P 00 18 34.0 -1.3**
comp=Z,3.1nm,0.5s,mb4.3,baz=56,slow=8.0,SNR=19
KURK pP pP 00 19 04.7 +1.8
comp=Z,5.1nm,0.7s,baz=55,slow=7.4,SNR=3.7
KURK PcP PcP 00 20 04.9 -0.3
comp=Z,6.1nm,0.7s,baz=52,slow=3.3,SNR=11
KURK LR LR 00 39 55.6
comp=Z,42nm,20.9s,baz=230,slow=38
KURK Kurchatov 47.09 301 P **P 00 18 34.1 -1.2**
KURK *PP pP 00 19 04.7 +1.8
KURK 00 20 04.9
C05A Tolt Reservoir 47.11 64 ⇑P **P 00 18 35.2 -0.3**
baz=47
D05A Enumclaw 47.27 65 ⇑P **P 00 18 36.7 -0.1**
baz=47
C06A Tall Timber Ra 47.38 64 ⇓P **P 00 18 37.4 -0.2**
baz=47
B07A Winthrop 47.45 63 ⇑P **P 00 18 37.5 -0.6**
baz=47
NLW Nelson Butte 47.57 63 P **P 00 18 39.0 -0.1**
A08A Turner Farm, O 47.57 62 ⇑P **P 00 18 38.5 -0.6**
baz=47,SNR=7.3
MK31 Makanchi Array 47.65 295 *e*P **P 00 18 37.1 -2.6**
MKAR Makanchi Array 47.65 295 P **P 00 18 37.7 -2.0**
comp=Z,1.8nm,0.6s,mb4.0,baz=56,slow=6.1,SNR=37
MKAR pP pP 00 19 08.4 +1.1
comp=Z,5.1nm,0.8s,baz=50,slow=6.5,SNR=7.8
MKAR PcP PcP 00 20 06.7 -0.6
comp=Z,1.7nm,0.6s,baz=64,slow=5.5,SNR=4.4
MKAR ScP ScP 00 23 51.1 +1.0
comp=Z,0.5nm,0.8s,baz=355,slow=2.8,SNR=2.9
MKAR Makanchi Array 47.65 295 *i* P **P 00 18 37.7 -2.0**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 47.65 295 P **P 00 18 37.7 -2.0**
MKAR pP pP 00 19 08.4 +1.1
MKAR PcP PcP 00 20 06.7 -0.6
MKAR ScP ScP 00 23 51.1 +1.0
E05A Randle 47.79 66 ⇓P **P 00 18 40.2 -0.5**
baz=48
EDM Edmonton 47.84 54 *e*P **P 00 18 40.7 -0.3**
EDM *e**PP pP 00 19 07.9 -0.8
F04A Amboy 47.84 67 ⇓P **P 00 18 40.8 -0.4**
baz=48
D06A Cle Elum 47.87 64 ⇑P **P 00 18 41.1 -0.3**
baz=48
A09A Danville 47.91 61 ⇑P **P 00 18 41.1 -0.6**
baz=48,SNR=9.6
B08A Colville Reser 47.92 62 ⇓P **P 00 18 41.0 -0.7**
baz=48,SNR=12
GYA Guiyang 47.92 256⇑*i*P **P 00 18 42.2 +0.1**
GYA AP pP 00 19 08.8 -1.0
GYA XP sP 00 19 21.2 -1.9
GYA PCP PcP 00 20 07.3 -1.3
GYA SCP ScP 00 23 50.5 -1.1
GYA PCS PcS 00 24 02.2 -2.3
GYA S **S 00 25 32.9 +2.5**
GYA XS sS 00 26 18.7 +0.6
GYA SCS ScS 00 28 22.0 -1.0
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
GYA AMB AMB
comp=Z,100nm,5.0s
C07A Waterville 47.96 63 ⇑P **P 00 18 41.4 -0.7**
baz=48
TBM Table Mountain 48.01 64 P **P 00 18 42.0 -0.4**
EBG Ellensburg 48.19 65 P **P 00 18 43.8 -0.1**
E06A Yakima 48.21 65 ⇓P **P 00 18 43.7 -0.3**
baz=48
D07A Quincy 48.33 64 ⇓P **P 00 18 44.4 -0.4**
baz=48
F05A White Salmon 48.38 66 ⇓P **P 00 18 44.8 -0.5**
baz=48
EPH Ephrata 48.42 64 P **P 00 18 44.8 -0.8**
C08A Higginbotham F 48.43 63 ⇑P **P 00 18 44.8 -0.9**
baz=48,SNR=8.2
A10A Northport 48.43 61 ⇑P **P 00 18 45.0 -0.7**
baz=48,SNR=6.6
B09A Rice 48.48 62 ⇓P **P 00 18 45.4 -0.7**
baz=48,SNR=6.1
SSOR Sweet Springs 48.51 68 P **P 00 18 46.6 +0.2**
VFP Flag Point 48.74 67 P **P 00 18 48.0 -0.1**
H04A Detroit Lake 48.77 68 ⇑P **P 00 18 48.1 -0.2**
baz=48
E07A Sunnyside 48.80 65 ⇑P **P 00 18 48.2 -0.3**
baz=48
F06A Goldendale 48.82 66 ⇓P **P 00 18 48.3 -0.4**
baz=49
C09A Chrisman Ranch 48.82 62 ⇑P **P 00 18 48.2 -0.5**
baz=48
G05A Wamic 48.87 67 ⇑P **P 00 18 48.9 -0.3**

baz=49
D08A Wollman Farm, 48.96 63 ⇑P P **00 18 49.1 -0.7**
baz=49
A11A Hall Mountain, 49.05 60 ⇑P P **00 18 50.1 -0.4**
baz=49,SNR=5.0
NEW Newport 49.11 61 *eP* P **00 18 50.3 -0.6**
NEW pmax pmax
comp=Z,7.0nm,0.8s
NEW Newport 49.11 61 *eP* P **00 18 50.3 -0.6**
comp=Z,6.7nm,0.8s,mb4.6
F07A Phinny Hill Vi 49.19 65 ⇑P P **00 18 51.1 -0.4**
baz=49,SNR=11
CROR Criterion Ridg 49.22 67 P P **00 18 51.6 -0.2**
G06A Carlson Farm, 49.24 66 ⇓P P **00 18 51.3 -0.6**
baz=49
E08A Dider Farm, El 49.26 64 ⇓P P **00 18 51.6 -0.4**
baz=49
D09A Jones Farm, Ri 49.28 63 ⇑P P **00 18 51.5 -0.7**
baz=49
H05A Madras 49.31 67 ⇑P P **00 18 52.1 -0.4**
baz=49
B11A Sandpoint 49.39 61 ⇓P P **00 18 52.7 -0.3**
baz=49
A12A Yaak River Ran 49.43 60 ⇓P P **00 18 53.0 -0.3**
baz=49
BVAR Borovoye Array 49.60 308 P P **00 18 52.7 -1.9**
comp=Z,4.2nm,0.4s,mb4.7,baz=64,slow=7.4,SNR=43
BVAR pP pP 00 19 23.1 +0.7
comp=Z,3.3nm,0.8s,baz=54,slow=7.5,SNR=2.3
BVAR PcP PcP 00 20 13.7 -0.5
comp=Z,8.5nm,0.5s,baz=73,slow=2.6,SNR=18
BVAR LR LR 00 44 07.3
comp=Z,94nm,20.8s,baz=308,slow=41
BVAR Borovoye Array 49.60 308 P P **00 18 52.7 -1.9**
BVAR *PP pP 00 19 23.1 +0.7
BVAR 00 20 13.7
BVAR Borovoye Array 49.60 308 P P **00 18 52.7 -1.9**
BVAR pP pP 00 19 23.1 +0.7
BVAR PcP PcP 00 20 13.7 -0.5
BVAR LR LR 00 44 07.3
I05A Bend 49.61 68 ⇓P P **00 18 54.4 -0.3**
baz=49
BRVK Borovoye 49.63 308 *eP* P **00 18 52.9 -1.9**
BRVK *e*PP pP 00 19 22.9 +0.3
BRVK *e* 00 20 13.6
BRVK pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
BRVK Borovoye 49.63 308 *eP* P **00 18 52.9 -1.9**
comp=Z,4.4nm,0.4s,mb4.7
BRVK *ep*P pP 00 19 22.9 +0.3
BRVK *e*PcP PcP 00 20 13.6 -0.7
E09A Wood Farm, Sta 49.72 64 ⇓P P **00 18 54.8 -0.8**
baz=49,SNR=19
VIPM Ingram Point 49.73 67 P P **00 18 55.5 -0.1**
H06A Lindquist Farm 49.73 67 ⇓P P **00 18 54.8 -0.8**
baz=50,SNR=7.1
G07A Ruggs Ranch, H 49.74 66 ⇓P P **00 18 55.2 -0.5**
baz=50
D10A Wagner Farm, O 49.82 63 ⇓P P **00 18 55.3 -0.9**
baz=50,SNR=14
C11A Tepee Creek (N 49.83 61 ⇓P P **00 18 55.5 -0.8**
baz=50,SNR=12
F08A Pendleton 49.86 65 ⇓P P **00 18 56.0 -0.6**
baz=50,SNR=5.1
A13A Flathead Natio 50.05 59 ⇓P P **00 18 57.5 -0.4**
baz=50
G08A Pilot Rock 50.10 65 ⇓P P **00 18 57.5 -0.9**
baz=50,SNR=9.1
WALA Waterton Lakes 50.22 59 *eP* P **00 18 58.7 -0.6**
comp=Z,0.3nm,0.6s,mb3.4
WALA *ep*P pP 00 19 26.3 -0.8
WALA *e*PcP PcP 00 20 15.6 -0.9
E10A Myers Farm, Un 50.28 63 ⇓P P **00 18 59.0 -0.7**
baz=50
D11A Klaveano Farm, 50.31 62 ⇑P P **00 18 58.9 -1.1**
baz=50,SNR=14
C12B Naegeli Ranch, 50.31 61 ⇓P P **00 18 59.6 -0.4**
baz=50,SNR=8.7
I06A Prineville 50.32 67 ⇑P P **00 19 00.0 -0.1**
baz=50
F09A S2 Ranch, Elgi 50.38 64 ⇑P P **00 18 60.0 -0.5**
baz=50,SNR=5.1
B13A Whitefish 50.39 60 ⇑P P **00 18 59.8 -0.8**
baz=50,SNR=9.2
A14A Double T Ranch 50.52 58 ⇓P P **00 19 00.7 -0.8**
baz=50,SNR=5.5
F10A Beach Ranch, E 50.56 64 ⇓P P **00 19 01.3 -0.5**
baz=50,SNR=6.8
BSMT Bassoo Peak 50.57 60 P P **00 19 02.0 +0.1**
I07A Izee 50.61 67 ⇓P P **00 19 01.9 -0.4**
baz=50
G09A Cove 50.73 65 ⇑P P **00 19 02.5 -0.7**
baz=50
H08A Prairie City 50.76 66 ⇑P P **00 19 02.8 -0.6**
baz=50,SNR=7.8
K05A Summer Lake 50.77 69 ⇑P P **00 19 03.7 +0.2**
baz=50,SNR=5.4
C13A Hot Springs 50.79 60 ⇓P P **00 19 03.2 -0.4**
baz=50,SNR=16
J06A Christmas Vall 50.82 68 ⇑P P **00 19 03.9 +0.1**
baz=51,SNR=17
E11A Bogner Ranch, 50.83 63 ⇓P P **00 19 02.7 -1.2**
baz=51,SNR=12
A15A Johnson Ranch, 50.85 58 ⇑P P **00 19 02.6 -1.4**
baz=51,SNR=5.6
B14A Marquette Ranc 50.99 59 ⇑P P **00 19 04.3 -0.8**
baz=51,SNR=6.3
G10A Bishop Farm, J 51.07 64 ⇑P P **00 19 05.2 -0.5**
baz=51,SNR=6.2
E12A Beaver Dam Sad 51.12 62 ⇑P P **00 19 05.4 -0.7**
baz=51,SNR=12
C14A Swan Lake 51.15 60 ⇑P P **00 19 05.6 -0.6**
baz=51,SNR=10
KMI Kunming 51.19 259 P P **00 19 09.7 +2.8**
KMI AP pP 00 19 35.4 +0.6
KMI XP sP 00 19 49.2 +1.1
KMI PP PP 00 21 07.8 +3.2
KMI PPP 00 22 11.0
KMI S **S 00 26 16.6 +0.7**
KMI XS sS 00 27 04.4 +0.2
KMI SS SS 00 29 50.2 -2.2
KMI SSS 00 31 32.4
KMI AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,141nm,5.3s
KMI LR LR
comp=Z,44nm,21.0s
H09A Durkee 51.20 65 ⇓P P **00 19 06.4 -0.2**
baz=51,SNR=7.2
I08A Drewsey 51.23 66 ⇑P P **00 19 06.7 -0.2**
baz=51,SNR=7.1
D13A Huson 51.24 61 ⇑P P **00 19 06.2 -0.7**
baz=51,SNR=8.2
BMO Blue Mountains 51.26 65 *eP* P **00 19 06.7 -0.5**
comp=Z,17nm,1.0s,mb5.0
BMO *ep*P pP 00 19 33.8 -1.3
B15A Bradely Ranch, 51.38 59 ⇓P P **00 19 07.0 -1.0**
baz=51,SNR=7.6
A16A West Butte Ran 51.44 57 ⇓P P **00 19 07.4 -1.0**
baz=51
G11A Walters Elk Ra 51.44 64 ⇓P P **00 19 07.7 -0.8**
baz=51,SNR=15
LTIM Timbered Crate 51.50 71 P P **00 19 09.5 +0.5**
I09A Lost Marbles R 51.62 66 ⇑P P **00 19 09.4 -0.5**
baz=51,SNR=5.6
J08A Circle Bar Ran 51.65 67 ⇑P P **00 19 09.7 -0.3**
baz=51,SNR=5.5
MOD Modoc 51.65 69 *eP* P **00 19 10.5 +0.4**
comp=Z,13nm,0.5s,mb5.2
MOD *ep*P pP 00 19 37.4 -0.7
K07A Rock Creek Ran 51.69 68 ⇑P P **00 19 10.3 0.0**
baz=51,SNR=7.3
C15A Salmond Ranch, 51.72 59 ⇑P P **00 19 10.1 -0.4**
baz=51,SNR=11
F12A Elk City 51.73 63 ⇓P P **00 19 10.3 -0.3**
baz=51,SNR=12
D14A Greenough 51.73 60 ⇑P P **00 19 10.1 -0.5**
baz=51,SNR=17
B16A M & M Farms, S 51.74 58 ⇓P P **00 19 09.7 -0.9**
baz=51
E13A Victor 51.81 61 ⇓P P **00 19 10.7 -0.5**
baz=52
A17A Triple J Farms 51.88 57 ⇑P P **00 19 10.9 -0.7**
baz=52
FFC Flin Flon 51.97 47 *eP* P **00 19 11.5 -0.7**
FFC pmax pmax
comp=Z,22nm,1.4s,mb5.0
FFC Flin Flon 51.97 47 *eP* P **00 19 11.5 -0.7**
comp=Z,22nm,1.4s,mb5.0
ARE0 ARCESS Array S 51.98 342 P P **00 19 11.3 -0.8**
J09A Fry Pan Ranch, 52.04 66 ⇓P P **00 19 12.9 -0.1**
baz=52,SNR=18
H11A Donnelly 52.04 64 ⇑P P **00 19 12.3 -0.6**
baz=52,SNR=23
I10A Payette 52.05 65 ⇓P P **00 19 13.0 0.0**
baz=52
K08A Mann Creek Ran 52.07 67 ⇓P P **00 19 13.2 0.0**
baz=52
L07A Adell 52.09 69 ⇓P P **00 19 13.1 -0.3**
baz=52
G12A Big Creek, Yel 52.11 63 ⇓P P **00 19 12.6 -0.9**
baz=52,SNR=10
C16A Fuhringer Ranc 52.13 59 ⇓P P **00 19 12.3 -1.3**
baz=52,SNR=5.4
F13A Darby 52.18 62 ⇓P P **00 19 13.1 -0.8**
baz=52,SNR=8.8
E14A Clinton 52.19 61 ⇓P P **00 19 13.5 -0.5**
baz=52
WVOR Wild Horse Val 52.19 68 *eP* P **00 19 13.0 -1.1**
WVOR pmax pmax
comp=Z,12nm,0.9s,mb4.9
WVOR Wild Horse Val 52.19 68 *eP* P **00 19 13.0 -1.0**
comp=Z,12nm,0.9s,mb4.9
D15A Lincoln 52.26 60 ⇑P P **00 19 13.6 -0.9**
baz=52,SNR=7.1
B17A L&G Farms, Che 52.27 58 ⇓P P **00 19 14.1 -0.5**
baz=52
FCC Fort Churchill 52.31 39 *eP* P **00 19 13.6 -1.1**
FCC *e*PP pP 00 19 42.0 -0.8
A18A Metzger Ranch, 52.31 56 ⇓P P **00 19 14.2 -0.6**
baz=52
ARU Arti 52.44 317 *c iP* P **00 19 13.9 -1.8**
ARU *e* 00 20 23.4
ARU *e* 00 21 11.8
ARU *eS* **S 00 26 31.0 -1.1**
ARU SS SS 00 30 07.5 -3.3
ARU pmax pmax
comp=Z,16nm,0.7s,mb5.2
ARU Arti 52.44 317 *eP* P **00 19 13.8 -1.9**
comp=Z,17nm,0.6s,mb5.2
ARU *e*PcP PcP 00 20 23.6 -1.1
K09A Rome 52.50 67 ⇑P P **00 19 16.2 -0.2**
baz=52,SNR=8.4
SUMG Summit 52.54 7 *eP* P **00 19 16.7 +0.5**
comp=Z,30nm,0.9s,mb5.3
I11A Placerville 52.61 65 ⇓P P **00 19 16.4 -0.7**
baz=52,SNR=11
E15A Deer Lodge 52.61 60 ⇓P P **00 19 16.4 -0.7**
baz=52,SNR=9.1
M07A Soldier Meadow 52.62 69 ⇑P P **00 19 17.6 +0.4**
baz=52,SNR=18
F14A Wisdom 52.66 61 ⇓P P **00 19 17.0 -0.5**
baz=52
N06A Buffalo Meadow 52.70 70 ⇑P P **00 19 18.0 +0.2**
baz=52,SNR=14
B18A Beardsley Farm 52.70 57 ⇓P P **00 19 16.8 -0.9**
baz=52,SNR=12
G13A Cobalt 52.71 63 ⇓P P **00 19 16.9 -0.9**
baz=52,SNR=13
C17A Wharram Farm, 52.73 58 ⇑P P **00 19 17.0 -1.0**
baz=52,SNR=13
D16A Dana Ranch, Ca 52.75 59 ⇑P P **00 19 18.3 +0.1**
baz=52,SNR=8.0
H12A Diamond D Ranc 52.75 63 ⇓P P **00 19 17.9 -0.3**
baz=52
K10A MacKenzie Ranc 52.91 66 ⇓P P **00 19 19.1 -0.2**
baz=53,SNR=11
EGMT Eagleton 52.96 57 ⇓P P **00 19 19.0 -0.7**
baz=53
L09A Wilkinson Ranc 53.00 68 ⇑P P **00 19 20.2 +0.2**
baz=53
M08A Happy Creek Ra 53.01 69 ⇑P P **00 19 20.6 +0.5**
baz=53,SNR=8.2
MFID Camas Ranch 53.02 65 ⇓P P **00 19 19.7 -0.5**
baz=53,SNR=6.5
BEKR Beckwourth 53.02 71 ⇑P P **00 19 20.3 0.0**
baz=53
E16A East Helena 53.03 60 ⇓P P **00 19 19.9 -0.2**
baz=53,SNR=7.9
H13A Challis 53.06 63 ⇑P P **00 19 19.8 -0.7**
baz=53,SNR=16
F15A Butte 53.09 61 ⇓P P **00 19 20.4 -0.2**
baz=53
D17A Six Diamond Ra 53.10 59 ⇑P P **00 19 20.4 -0.3**
baz=53,SNR=7.8
O06A Flanigan 53.11 71 ⇑P P **00 19 20.9 0.0**
baz=53
I12A Atlanta 53.13 64 ⇓P P **00 19 20.4 -0.5**
baz=53,SNR=8.2
N07B Gerlach 53.15 69 ⇓P P **00 19 21.4 +0.3**
baz=53,SNR=14
K11A Parker Ranch, 53.36 66 ⇑P P **00 19 22.5 -0.1**
baz=53
P06A Stead Airport, 53.41 71 ⇓P P **00 19 23.3 +0.3**
baz=53
H14A Leadore 53.48 62 ⇑P P **00 19 22.8 -0.7**
baz=53,SNR=6.1
E17A Martinsdale 53.49 59 ⇓P P **00 19 23.5 0.0**
baz=53,SNR=12
J12A Stokes Ranch, 53.52 65 ⇑P P **00 19 23.7 -0.1**
baz=53,SNR=9.8
M09A Marrel Ranch, 53.53 68 ⇑P P **00 19 24.4 +0.5**
baz=53,SNR=5.9
G15A Dillon 53.55 61 ⇓P P **00 19 23.5 -0.6**
baz=53,SNR=10
F16A Kennard Place, 53.57 60 ⇑P P **00 19 23.7 -0.4**
baz=53
I13A Wildhorse Cree 53.58 64 ⇑P P **00 19 23.9 -0.3**
baz=53,SNR=26
LAVA Lava Lap Winer 53.59 72 ⇓P P **00 19 24.2 -0.1**
baz=53,SNR=11
L10A Juniper Basin 53.60 67 ⇓P P **00 19 24.8 +0.3**
baz=53,SNR=14
N08A GE Springer Mi 53.61 69 ⇓P P **00 19 24.6 +0.1**
baz=53,SNR=12
O07A Toulon 53.63 70 ⇓P P **00 19 25.1 +0.4**
baz=53,SNR=21
BOZ Bozeman (W) 53.66 61 ⇑P P **00 19 24.8 0.0**
baz=53
HLID Hailey 53.66 64 ⇑P P **00 19 24.6 -0.3**
baz=53
HLID Hailey 53.66 64 *eP* P **00 19 24.8 -0.1**
comp=Z,5.1nm,1.0s,mb4.5
HLID *ep*P pP 00 19 52.5 -0.6
HLID *e*PcP PcP 00 20 30.0 +0.4
WCN Washoe City 53.75 71 ⇑P P **00 19 25.5 -0.1**
baz=54
TKM2 Tokmak 2 53.78 295 P P **00 19 24.3 -1.4**
TKM2 *e* 00 20 29.7
H15A Lima 53.85 62 ⇓P P **00 19 25.6 -0.7**
baz=54,SNR=5.5
G16A Moss Hill, Enn 53.86 61 ⇓P P **00 19 26.1 -0.2**
baz=54,SNR=16
N09A Rock Creek Ran 53.89 68 ⇑P P **00 19 26.8 +0.2**
baz=54,SNR=7.6
E18A Harlowton 53.89 59 ⇑P P **00 19 26.1 -0.3**
baz=54
J13A Cove Ranch, Pi 53.90 64 ⇓P P **00 19 26.3 -0.3**
baz=54
I14A Mackay 53.91 63 ⇓P P **00 19 26.6 0.0**
baz=54,SNR=15
L11A Cat Creek Ranc 53.92 66 ⇑P P **00 19 26.8 +0.1**
baz=54,SNR=13
O08A Rochester Mine 53.94 69 ⇓P P **00 19 27.4 +0.5**
baz=54,SNR=12
M10A I.L. Ranch, Tu 53.95 67 ⇓P P **00 19 27.3 +0.3**
baz=54,SNR=11
F17A Fitzpatrick Pl 53.97 60 ⇓P P **00 19 27.2 +0.1**
baz=54,SNR=7.2
K12A Draper Farm, C 54.05 65 ⇓P P **00 19 28.0 +0.3**
baz=54,SNR=12
CMB Columbia Colle 54.29 73 *eP* P **00 19 29.1 -0.4**
CMB pmax pmax
comp=Z,29nm,1.3s,mb5.2
CMB Columbia Colle 54.29 73 *eP* P **00 19 29.1 -0.4**
comp=Z,29nm,1.3s,mb5.1
J14A Carey 54.30 64 ⇓P P **00 19 30.3 +0.9**
baz=54,SNR=17
L12A House Creek Ra 54.33 66 ⇓P P **00 19 29.9 +0.2**
baz=54,SNR=7.3
G17A Pierce Place, 54.34 60 ⇑P P **00 19 30.1 +0.4**
baz=54,SNR=5.5
BMN Battle Mountai 54.35 69 *eP* P **00 19 30.1 +0.2**
BMN *e*PP pP 00 19 58.1 0.0
BMN pmax pmax
comp=Z,29nm,1.1s,mb5.2
BMN Battle Mountai 54.35 69 *eP* P **00 19 30.1 +0.3**
comp=Z,29nm,1.1s,mb5.2
BMN *ep*P pP 00 19 58.1 -0.1
P08A Dixie Valley 54.40 70 ⇓P P **00 19 31.0 +0.8**
baz=54
M11A Holland Ranch, 54.42 67 ⇓P P **00 19 31.1 +0.7**
baz=54,SNR=7.0
F18A Big Timber 54.45 59 ⇑P P **00 19 30.8 +0.3**
baz=54,SNR=10.0
LSA Lhasa 54.47 273 P P **00 19 30.2 -0.7**
LSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
LSA Lhasa 54.47 273 P P **00 19 30.2 -0.7**
comp=Z,2.4nm,0.6s,mb4.4
R06C Coleville 54.47 72 ⇓P P **00 19 31.9 +1.1**
baz=54,SNR=19
H16A Russell Place, 54.51 61 ⇓P P **00 19 31.2 +0.2**
baz=54,SNR=18
N10A Dunphy 54.53 68 ⇑P P **00 19 32.0 +0.8**
baz=54
O09A Fish Creek Ran 54.55 69 ⇑P P **00 19 32.2 +0.9**
baz=54,SNR=20
AAK Ala-Archa 54.56 295 ⇑*eP* P **00 19 30.0 -1.4**
AAK pmax pmax
comp=Z,4.0nm,1.9s,mb4.1
AAK Ala-Archa 54.56 295 P P **00 19 29.7 -1.6**
comp=Z,2.2nm,0.9s,mb4.2
AAK *e*PcP PcP 00 20 32.9 -0.1
S05C Merced 54.81 73 ⇑P P **00 19 33.8 +0.5**
baz=55
O10A Cortez Mining, 54.84 68 ⇓P P **00 19 34.0 +0.6**
baz=55
N11A Elko Archery C 54.88 67 ⇓P P **00 19 34.3 +0.6**
baz=55
M12A Wells 54.90 66 ⇑P P **00 19 34.4 +0.6**
baz=55,SNR=9.6
EKS2 Erkin-Say 54.92 296 *eP* P **00 19 32.3 -1.6**
comp=Z,3.8nm,0.8s,mb4.5
G18A Lazy EL Ranch, 54.93 60 ⇓P P **00 19 33.8 -0.3**
baz=55
L13A Double Diamond 54.94 65 ⇑P P **00 19 34.8 +0.7**
baz=55,SNR=8.0
I16A Newdale 54.97 62 ⇓P P **00 19 34.9 +0.6**
baz=55,SNR=10
P09A Austin 55.01 69 ⇑P P **00 19 35.7 +1.0**
baz=55,SNR=6.1
K14A Jones Ranch, D 55.02 64 ⇓P P **00 19 35.5 +0.8**
baz=55,SNR=11
Q08A Gabbs 55.07 70 ⇓P P **00 19 36.0 +0.9**
baz=55,SNR=26
H17A Grant Village 55.07 61 ⇑P P **00 19 36.3 +1.3**
baz=55
NVAR Mina Array Bea 55.17 71 P P **00 19 36.5 +0.7**
comp=Z,17nm,0.6s,mb5.2,baz=302,slow=7.4,SNR=109
NVAR pP pP 00 20 04.5 +0.4
comp=Z,5.9nm,0.8s,baz=294,slow=7.5,SNR=3.7
ELK Elko 55.20 67 *eP* P **00 19 36.6 +0.6**
ELK *e*PP pP 00 20 03.7 -0.6
ELK *e* 00 20 33.3
ELK pmax pmax
comp=Z,8.0nm,0.7s
ELK Elko 55.20 67 *eP* P **00 19 36.6 +0.6**
comp=Z,8.3nm,0.7s,mb4.9
ELK *ep*P pP 00 20 03.7 -0.6
ELK *e*PcP PcP 00 20 33.3 -2.2
RLMT Red Lodge 55.22 60 ⇑P P **00 19 36.6 +0.5**
baz=55
RLMT Red Lodge 55.22 60 *eP* P **00 19 36.3 +0.2**
comp=Z,16nm,0.8s,mb5.1
RLMT *ep*P pP 00 20 04.2 -0.2
N12A Clover Valley, 55.23 67 ⇑P P **00 19 37.0 +0.8**
baz=55,SNR=27
IMW Indian Meadow 55.23 62 *eP* P **00 19 36.7 +0.5**
comp=Z,9.4nm,0.8s,mb4.9
IMW *ep*P pP 00 20 04.9 +0.4
U04C Hernandez Rese 55.26 75 ⇓P P **00 19 37.2 +0.7**
baz=55
K15A Arbon 55.26 64 ⇑P P **00 19 37.4 +1.0**
baz=55,SNR=20
J16A Bone 55.33 63 ⇑P P **00 19 37.2 +0.3**
baz=55
P10A Eureka 55.33 69 ⇑P P **00 19 37.7 +0.7**
baz=55
R08A Mina 55.33 71 ⇓P P **00 19 37.5 +0.5**
baz=55,SNR=6.2
M13A Montello 55.34 66 ⇑P P **00 19 37.5 +0.5**
baz=55
L14A Malta 55.35 65 ⇓P P **00 19 37.8 +0.8**
baz=55,SNR=21
T06C Millerton Lake 55.40 73 ⇓P P **00 19 37.8 +0.3**
baz=55,SNR=9.4
I17A Pilgram Creek 55.40 61 ⇑P P **00 19 38.3 +0.9**
baz=55
O11A Cowboy Ranch, 55.41 68 ⇑P P **00 19 38.1 +0.6**
baz=55,SNR=11
Q09A Carvers 55.50 70 ⇑P P **00 19 38.9 +0.8**
baz=55
TPAW Teton Pass 55.51 62 *eP* P **00 19 39.1 +0.9**
comp=Z,4.8nm,0.6s,mb4.7
TPAW *ep*P pP 00 20 05.5 -1.0
TPAW *e*PcP PcP 00 20 36.7 0.0
K16A Soda Springs 55.65 63 ⇓P P **00 19 40.6 +1.4**
baz=55,SNR=12
M14A Sheep Mountain 55.67 65 ⇑P P **00 19 39.8 +0.4**
baz=55,SNR=14
J17A Brown Place, J 55.73 62 ⇓P P **00 19 40.8 +1.0**
baz=55
P11A Circle Ranch, 55.76 68 ⇑P P **00 19 41.0 +1.0**
baz=56
O12A Currie 55.80 67 ⇓P P **00 19 40.8 +0.5**
baz=56,SNR=14
L15A Malad City 55.82 64 ⇑P P **00 19 40.8 +0.4**
baz=56,SNR=12
Q10A Clear Creek Ra 55.93 69 ⇓P P **00 19 41.4 +0.2**
baz=56,SNR=13
I18A Diamond G Ranc 55.95 61 ⇑P P **00 19 42.2 +0.9**
baz=56
AHID Auburn Hatcher 55.95 63 *eP* P **00 19 41.4 0.0**
comp=Z,13nm,1.1s,mb4.9
R09A Tonopah 55.98 70 ⇓P P **00 19 41.7 +0.1**
baz=56,SNR=17
TPH Tonopah 56.02 71 *eP* P **00 19 41.6 -0.3**
TPH pmax pmax
comp=Z,12nm,0.9s,mb4.9
TPH Tonopah 56.02 71 *eP* P **00 19 41.6 -0.2**
comp=Z,12nm,0.9s,mb4.9
K17A Gardner Place, 56.05 63 ⇑P P **00 19 42.2 +0.1**
baz=56
V05C Boulder Hill, 56.11 74 ⇑P P **00 19 42.9 +0.3**
baz=56
M15A Larsen Ranch, 56.17 65 ⇑P P **00 19 43.4 +0.4**
baz=56,SNR=14
J18A Kendall Valley 56.19 62 ⇓P P **00 19 43.1 +0.1**
baz=56,SNR=6.3
N14A Grayback Hills 56.22 66 ⇑P P **00 19 43.6 +0.3**
baz=56,SNR=13
S09A Goldfield 56.27 71 ⇑P P **00 19 44.2 +0.6**
baz=56
O13A Hicks Ranch, I 56.31 67 ⇑P P **00 19 44.4 +0.5**
baz=56,SNR=5.1
L16A Fish Haven 56.31 64 ⇑P P **00 19 44.4 +0.5**
baz=56,SNR=5.6
Q11A Duckwater 56.32 69 ⇓P P **00 19 44.6 +0.5**
baz=56
JOF Joensuu 56.33 335 *ep* P **00 19 42.1 -1.6**
comp=Z,2.9nm,0.4s,mb4.7
JOF Joensuu 56.33 335 *eP* P **00 19 42.1 -1.6**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
R10A Warm Springs 56.37 70 ⇑P P **00 19 44.9 +0.5**
baz=56
S10A Tonopah Range, 56.47 70 ⇑P P **00 19 45.2 +0.1**
baz=56,SNR=7.3
L17A Cokeville 56.54 63 ⇑P P **00 19 45.9 +0.4**
baz=56,SNR=7.8
N15A Stansbury Isla 56.54 65 ⇓P P **00 19 46.0 +0.4**
baz=56,SNR=17
K18A Toltan Ranch, 56.59 62 ⇑P P **00 19 46.5 +0.6**
baz=56,SNR=22
VES Vestal, Richgr 56.59 74 ⇑P P **00 19 45.9 -0.1**
baz=56
SFJD Kangerlussuaq 56.61 14 P P **00 19 43.8 -1.8**
comp=Z,5.6nm,0.4s,mb4.9,baz=298,slow=4.2,SNR=6.9
Q12A Willow Creek R 56.63 68 ⇓P P **00 19 47.0 +0.8**
baz=56,SNR=5.7
GRAC Grapevine Rang 56.71 72 ⇑P P **00 19 47.5 +0.8**

baz=56
M16A Huntsville 56.71 64 ⇑P P **P 00 19 46.9 +0.2**
baz=56,SNR=6.2
R11A Troy Canyon, C 56.72 69 ⇓P P **P 00 19 47.0 +0.2**
baz=56,SNR=9.7
BW06 Boulder Array 56.74 62 ⇑P P **P 00 19 47.5 +0.6**
baz=56
BW06 Boulder Array 56.74 62 *e*P P **P 00 19 46.7 -0.2**
comp=Z,18nm,1.0s,mb5.1
BW06 *ep*P pP 00 20 15.4 0.0
PDAR Pinedale Array 56.74 62 P **P 00 19 47.1 +0.2**
comp=Z,10.0nm,0.7s,mb5.0,baz=322,slow=2.6,SNR=89
PDAR pP pP 00 20 15.6 +0.1
comp=Z,5.0nm,1.1s,baz=321,slow=2.1,SNR=4.0
P13A Bates Ranch, G 56.77 67 ⇓P P **P 00 19 47.4 +0.1**
baz=56,SNR=11
PKM Peak Mountain 56.86 75 ⇑P P **P 00 19 48.8 +0.9**
baz=57
DUG Dugway 56.89 66 ⇑P P **P 00 19 48.4 +0.4**
baz=57
DUG Dugway 56.89 66 *e*P P **P 00 19 48.2 +0.2**
DUG *e**PP pP 00 20 15.9 -0.6
DUG pmax pmax
comp=Z,12nm,0.9s,mb4.9
DUG Dugway 56.89 66 *e*P P **P 00 19 48.2 +0.2**
comp=Z,12nm,0.9s,mb4.9
DUG *ep*P pP 00 20 15.9 -0.6
AKTK Aktyubinsk 56.95 312 P **P 00 19 46.8 -1.6**
AKTK PcP PcP 00 20 41.7 -0.5
AKTK LR LR 00 45 38.1
AKTO Aktyubinsk 56.95 312 P **P 00 19 46.8 -1.6**
comp=Z,2.0nm,0.4s,mb4.5,baz=66,slow=6.9,SNR=9.9
AKTO PcP PcP 00 20 41.7 -0.5
comp=Z,19nm,0.6s,baz=65,slow=5.4,SNR=27
AKTO LR LR 00 45 38.1
comp=Z,82nm,19.3s,baz=198,slow=37
AKTO Aktyubinsk 56.95 312 P **P 00 19 46.8 -1.5**
AKTO 00 20 41.7
O15A The Old Anders 57.01 66 ⇓P P **P 00 19 49.4 +0.5**
baz=57
M17A Scullys Gap (B 57.10 63 ⇓P P **P 00 19 49.6 +0.1**
baz=57,SNR=11
L18A Fontenelle, Gr 57.10 63 ⇓P P **P 00 19 49.5 0.0**
baz=57,SNR=11
N16A Rees Ranch, Co 57.12 64 ⇑P P **P 00 19 50.1 +0.5**
baz=57
Q13A Wheeler Ranch, 57.13 68 ⇑P P **P 00 19 50.4 +0.6**
baz=57
P14A Drum Mountains 57.18 67 ⇓P P **P 00 19 50.4 +0.2**
baz=57,SNR=8.1
R12A Pony Springs, 57.26 69 ⇓P P **P 00 19 51.2 +0.5**
baz=57
MPMC Manual Prospec 57.32 73 ⇑P P **P 00 19 51.5 +0.4**
baz=57
L19A Farson 57.33 62 ⇑P P **P 00 19 51.2 +0.1**
baz=57
TPNV Topopah Spring 57.36 71 *e*P P **P 00 19 51.1 -0.3**
TPNV pmax pmax
comp=Z,16nm,0.9s,mb5.0
TPNV Topopah Spring 57.36 71 *e*P P **P 00 19 51.1 -0.3**
comp=Z,16nm,0.9s,mb5.0
FURC Furnace Creek, 57.37 72 ⇑P P **P 00 19 52.2 +0.7**
baz=57
N17A Moffit Pass 57.39 64 ⇓P P **P 00 19 52.1 +0.5**
baz=57
M18A Lyman 57.45 63 ⇓P P **P 00 19 52.5 +0.6**
baz=57
K20A Yellowstone Ra 57.45 61 ⇑P P **P 00 19 51.8 -0.1**
baz=57
Q14A Sevier Lake (B 57.51 67 ⇑P P **P 00 19 52.8 +0.4**
baz=57,SNR=11
O16A Springville 57.57 65 ⇑P P **P 00 19 53.4 +0.6**
baz=57,SNR=9.7
P15A Leamington 57.62 66 ⇑P P **P 00 19 53.4 +0.2**
baz=57,SNR=8.2
LRMC Laurel Mountai 57.63 73 ⇑P P **P 00 19 53.5 +0.2**
baz=57
S12A Delamar Landin 57.65 69 ⇓P P **P 00 19 54.1 +0.7**
baz=57,SNR=15
OSI Osito Adit 57.68 75 ⇑P P **P 00 19 54.0 +0.3**
baz=58
T11A Corn Creek, Al 57.72 70 ⇑P P **P 00 19 54.2 +0.3**
baz=58,SNR=23
R13A O'Grain Ranch, 57.72 68 ⇑P P **P 00 19 54.4 +0.5**
baz=58,SNR=5.2
ULM Lac du Bonnet 57.77 47 P **P 00 19 53.6 -0.4**
comp=Z,10nm,0.5s,mb5.1,baz=326,slow=7.0,SNR=9.1
ULM pP pP 00 20 22.2 -0.5
comp=Z,4.6nm,0.6s,baz=299,slow=8.2,SNR=2.8
M19A Rock Springs 57.86 62 ⇑P P **P 00 19 54.9 +0.1**
baz=58
EDW2 Edwards Air Fo 57.90 74 ⇓P P **P 00 19 55.5 +0.3**
baz=58
L20A Wamsutter 57.92 62 ⇓P P **P 00 19 55.3 +0.1**
baz=58,SNR=12
N18A Larsen Ranch, 57.98 63 ⇑P P **P 00 19 55.6 0.0**
baz=58
Q15A Fillmore 57.98 67 ⇑P P **P 00 19 55.8 +0.1**
baz=58
O17A Robinson Place 57.98 65 ⇓P P **P 00 19 56.9 +1.2**
baz=58,SNR=6.2
R14A James Farms, M 58.14 68 ⇑P P **P 00 19 57.0 +0.1**
baz=58
S13A Holt Ranch, En 58.21 69 ⇓P P **P 00 19 57.5 +0.2**
baz=58,SNR=7.7
KAF Kangasniemi 58.23 337 *ep* P **P 00 19 55.7 -1.4**
comp=Z,2.6nm,0.3s,mb4.7,baz=30,slow=6.5
KAF Kangasniemi 58.23 337 *e*P P **P 00 19 55.7 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
GSC Goldstone 58.25 73 ⇑P P **P 00 19 57.7 0.0**
baz=58
GSC Goldstone 58.25 73 *e*P P **P 00 19 57.2 -0.5**
GSC pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
GSC Goldstone 58.25 73 *e*P P **P 00 19 57.1 -0.5**
comp=Z,0.5nm,0.2s,mb4.2
N19A John Jarvie Ra 58.29 63 ⇑P P **P 00 19 57.6 -0.2**
baz=58,SNR=7.3
CHTO Chiang Mai 58.31 258 *e*P P **P 00 19 57.0 -1.2**
CHTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
CHTO Chiang Mai 58.31 258 *e*P P **P 00 19 57.0 -1.2**
comp=Z,3.2nm,0.6s,mb4.5
O18A Roosevelt 58.32 64 ⇓P P **P 00 19 58.9 +0.9**
baz=58
M20A Sweetwater, Wa 58.37 62 ⇑P P **P 00 19 58.6 +0.2**
baz=58,SNR=8.1
L21A Rawlins 58.45 61 ⇑P P **P 00 19 58.6 -0.3**
baz=58,SNR=6.9
S14A Cedar City 58.46 68 ⇑P P **P 00 19 59.3 +0.3**
baz=58
P17A Butcher Ranch, 58.51 65 ⇓P P **P 00 19 59.8 +0.4**
baz=58
RSSD Black Hills 58.54 57 *e*P P **P 00 19 59.3 -0.2**
RSSD *e**PP pP 00 20 27.4 -0.7
RSSD pmax pmax
comp=Z,18nm,0.9s,mb5.1
RSSD Black Hills 58.54 57 *e*P P **P 00 19 59.3 -0.2**
comp=Z,18nm,0.9s,mb5.1
RSSD *ep*P pP 00 20 27.4 -0.8
BFSC Mount Baldy St 58.55 74 ⇑P P **P 00 19 59.9 +0.1**
baz=58
CMAR Chiang Mai Arr 58.59 257 P **P 00 20 00.2 0.0**
comp=Z,1.4nm,0.3s,mb4.4,baz=24,slow=6.8,SNR=9.1
CMAR Chiang Mai Arr 58.59 257 ⇑*e*P P **P 00 20 01.1 +0.9**
T13A Saint George 58.60 69 ⇑P P **P 00 20 00.3 +0.3**
baz=58,SNR=8.3
V11A Goodsprings 58.62 71 ⇑P P **P 00 20 00.5 +0.3**
baz=58,SNR=6.4
TUQ Turquoise Moun 58.65 72 ⇓P P **P 00 20 00.8 +0.4**
baz=58
P18A Preston Nutter 58.66 65 ⇑P P **P 00 20 00.8 +0.5**
baz=58,SNR=8.6
U12A Valley of Fire 58.68 70 ⇓P P **P 00 20 01.6 +1.0**
baz=58
Q16A Castle Valley 58.68 66 ⇑P P **P 00 20 01.1 +0.5**
baz=58,SNR=5.5
M21A Separation Pea 58.71 61 ⇓P P **P 00 20 00.5 -0.3**
baz=58,SNR=13
N20A Spence Gulch, 58.81 62 ⇓P P **P 00 20 02.0 +0.5**
baz=58,SNR=18
HEC Hector,Ludlow 58.86 73 ⇑P P **P 00 20 02.2 +0.3**
baz=59
SRU San Rafael 58.89 65 ⇑P P **P 00 20 02.7 +0.7**
baz=59
S15A Panguitch 58.95 68 ⇓P P **P 00 20 03.9 +1.4**
baz=59
R16A Teasdale 58.98 67 ⇑P P **P 00 20 03.3 +0.6**
baz=59,SNR=11
U13A Pakoon Wash 59.01 70 ⇑P P **P 00 20 03.3 +0.5**
baz=59,SNR=11
T14A Hurricane 59.01 69 ⇑P P **P 00 20 03.6 +0.7**
baz=59
V12A Nelson 59.02 71 ⇓P P **P 00 20 03.1 +0.2**
baz=59,SNR=7.6
Q18A Rafter H Ranch 59.10 65 ⇑P P **P 00 20 03.4 0.0**
baz=59,SNR=7.0
AGMN Agassiz Refuge 59.24 49 *e*P P **P 00 20 02.9 -1.4**
comp=Z,7.3nm,0.7s,mb4.8
M22A Cedar Creek Ra 59.25 61 ⇓P P **P 00 20 04.6 +0.1**
baz=59,SNR=5.4
GMRC Granite Mounta 59.27 72 ⇓P P **P 00 20 05.1 +0.4**
baz=59
MURC Murrieta 59.28 74 ⇓P P **P 00 20 05.1 +0.3**
baz=59
R17A Hanksville Air 59.30 66 ⇓P P **P 00 20 05.2 +0.4**
baz=59,SNR=11
P19A Cripple Cowboy 59.32 64 ⇓P P **P 00 20 04.8 -0.2**
baz=59,SNR=7.9
S16A Weppner Ranch, 59.33 67 ⇓P P **P 00 20 05.7 +0.7**
baz=59,SNR=5.3
O20A White River Ci 59.34 63 ⇑P P **P 00 20 05.1 0.0**
baz=59,SNR=6.9
V13A Grand Canyon W 59.41 70 ⇑P P **P 00 20 05.9 +0.3**
baz=59,SNR=18
T15A Red Dirt Ranch 59.42 68 ⇓P P **P 00 20 05.9 +0.2**
baz=59,SNR=10
U14A Mt Trumbull 59.43 69 ⇓P P **P 00 20 06.3 +0.5**
baz=59,SNR=5.5
BELC Belle Mtn. 59.66 73 ⇓P P **P 00 20 07.2 -0.2**
baz=59
Q19A Hogan Spring (59.67 65 ⇓P P **P 00 20 07.1 -0.3**
baz=59,SNR=19
O21A Pagoda 59.68 62 ⇓P P **P 00 20 07.6 +0.2**
baz=59,SNR=6.2
PFO Pinyon Flat Ob 59.69 74 ⇓P P **P 00 20 07.6 -0.1**
baz=60
R18A Canyonlands Na 59.75 65 ⇑P P **P 00 20 07.8 -0.1**
baz=60,SNR=25
N22A Wattenberg Ran 59.77 61 ⇓P P **P 00 20 08.5 +0.5**
baz=60,SNR=9.4
S17A Black Ridge (B 59.82 67 ⇑P P **P 00 20 08.6 +0.2**
baz=60,SNR=24
KKM Kota Kinabalu 59.89 233 P **P 00 20 08.4 -0.7**
U15A North Rim 59.91 69 ⇑P P **P 00 20 09.4 +0.3**
baz=60,SNR=7.2
T16A Glen Canyon Da 59.92 68 ⇓P P **P 00 20 09.1 -0.1**
baz=60
IRM Iron Mountain 60.01 72 ⇓P P **P 00 20 09.8 0.0**
baz=60
W13A Hualapai Mount 60.02 71 ⇓P P **P 00 20 09.9 0.0**
baz=60,SNR=8.2
V14A Boquillas Ranc 60.05 70 ⇓P P **P 00 20 10.7 +0.6**
baz=60,SNR=19
R19A Curley Farm, L 60.16 65 ⇓P P **P 00 20 10.7 0.0**
baz=60
Q20A Ridgley Place, 60.18 64 ⇑P P **P 00 20 10.8 -0.1**
baz=60
PV10 Paradox Valley 60.21 65 *e*P P **P 00 20 11.9 +0.8**
comp=Z,396nm,0.9s
PV10 *ep*P pP 00 20 40.8 +0.9
S18A Hurst Farm, Bl 60.21 66 ⇓P P **P 00 20 11.0 -0.1**
baz=60,SNR=17
BC3 Big Chuckw Mtn 60.22 73 ⇑P P **P 00 20 11.0 -0.2**
baz=60
MONP Monument Peak 60.25 74 ⇑P P **P 00 20 11.4 0.0**
baz=60
T17A Navajo Res., N 60.29 67 ⇓P P **P 00 20 11.2 -0.4**
baz=60,SNR=5.4
W14A Seligman 60.38 70 ⇓P P **P 00 20 12.8 +0.5**
baz=60,SNR=13
V15A Kaibab Nationa 60.42 69 ⇑P P **P 00 20 13.1 +0.5**
baz=60,SNR=11
X13A Yucca 60.42 71 ⇓P P **P 00 20 12.4 -0.2**
baz=60,SNR=8.3
PDMCI Parker Dam,Lak 60.47 72 ⇑P P **P 00 20 13.1 +0.1**
baz=60
SWSC Sam W. Stewart 60.56 74 ⇑P P **P 00 20 13.1 -0.4**
baz=60
S19A Harvey Farm, M 60.63 65 ⇓P P **P 00 20 13.8 -0.1**
baz=60,SNR=17
PV01 Paradox Valley 60.64 65 *e*P P **P 00 20 14.0 0.0**
U17A Shonto 60.66 67 ⇓P P **P 00 20 14.6 +0.4**
baz=60
Y12C Blythe 60.67 72 ⇑P P **P 00 20 14.4 +0.2**
baz=60
T18A Mexican Hat 60.69 66 ⇑P P **P 00 20 14.0 -0.3**
baz=60,SNR=25
SMCO Snowmass 60.70 63 *e*P P **P 00 20 11.9 -2.5**
comp=Z,11nm,0.9s,mb4.9
U16A Tuba City 60.75 68 ⇓P P **P 00 20 15.1 +0.3**
baz=60,SNR=5.6
ISCO Idaho Springs 60.94 62 *e*P P **P 00 20 16.8 +0.8**
ISCO pmax pmax
comp=Z,17nm,1.1s,mb5.0
ISCO Idaho Springs 60.94 62 *e*P P **P 00 20 16.8 +0.8**
comp=Z,17nm,1.1s,mb5.0
R21A Cimarron 61.00 64 ⇑P P **P 00 20 17.2 +0.7**
baz=61,SNR=22
Y13A Salome 61.00 72 ⇓P P **P 00 20 16.4 -0.1**
baz=61,SNR=6.3
GLA Glamis 61.02 73 ⇑P P **P 00 20 17.5 +0.9**
baz=61
X14A Yava 61.03 71 ⇓P P **P 00 20 17.0 +0.3**
baz=61,SNR=7.1
BORG Borgarnes 61.07 1 *e*P P **P 00 20 15.9 -0.6**
WUAZ Wupatki 61.08 69 ⇑P P **P 00 20 17.7 +0.7**
baz=61
U18A Rough Rock, Ch 61.22 67 ⇓P P **P 00 20 18.0 0.0**
baz=61
W16A Flagstaff 61.31 69 ⇓P P **P 00 20 19.2 +0.6**
baz=61
VSU Vasula 61.32 334 ⇓*i*P P **P 00 20 17.7 -0.6**
VSU pmax pmax
comp=Z,47nm,1.5s,mb5.3
MVCO Mesa Verde 61.37 65 ⇑P P **P 00 20 19.2 +0.2**
baz=61
MVCO Mesa Verde 61.37 65 *e*P P **P 00 20 18.6 -0.3**
comp=Z,8.0nm,0.7s,mb4.9
Y14A Wickenburg 61.37 71 ⇑P P **P 00 20 19.4 +0.4**
baz=61
T19A Beclabito 61.37 66 ⇓P P **P 00 20 19.2 +0.3**
baz=61,SNR=17
X15A Humboldt 61.38 70 ⇑P P **P 00 20 19.6 +0.6**
baz=61,SNR=11
OBN Obninsk 61.38 327 P **P 00 20 18.0 -0.7**
OBN *PP pP 00 20 44.0 -3.6
OBN *SP sP 00 20 57.0 -3.7
OBN 00 20 58.0
OBN pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
OBN MLR MLR
comp=Z,100nm,12.0s
OBN Obninsk 61.38 327 *e*P P **P 00 20 17.8 -1.0**
comp=Z,5.8nm,0.5s,mb4.9
OBN *ep*P pP 00 20 48.7 +1.1
OBN *e*PcP PcP 00 20 58.8 -1.0
EYMN Ely 61.40 47 *e*P P **P 00 20 18.0 -0.9**
comp=Z,9.7nm,0.6s,mb5.0
V18A Ganado 61.72 68 ⇓P P **P 00 20 21.7 +0.4**
baz=62,SNR=5.3
Y15A Casa Rosa Ranc 61.73 71 ⇓P P **P 00 20 21.6 +0.2**
baz=62,SNR=8.7
113A Mohawk Valley, 61.82 72 ⇓P P **P 00 20 22.3 +0.2**
baz=62
Z14A Wintersburg 61.83 71 ⇑P P **P 00 20 22.5 +0.4**
baz=62
X16A Lo Mia Camp, P 61.87 70 ⇑P P **P 00 20 22.6 +0.3**
baz=62,SNR=12
V19A Window Rock 62.19 67 ⇑P P **P 00 20 25.0 +0.6**
baz=62
NB2 NORSAR Subarra 62.21 344 P **P 00 20 23.1 -1.1**
comp=Z,2.0nm,0.4s,mb4.5,baz=23,slow=6.9
NOA NORSAR Array B 62.21 344 P **P 00 20 23.1 -1.0**
comp=Z,1.3nm,0.4s,mb4.3,baz=15,slow=5.5,SNR=23
NOA LR LR 00 48 06.1
comp=Z,47nm,21.3s,baz=265,slow=37
Y16A Cinco Bar Ran 62.25 70 ⇑P P **P 00 20 25.5 +0.7**
baz=62
ECSD EROS,Sioux Fal 62.37 53 *e*P P **P 00 20 24.4 -1.2**
comp=Z,5.8nm,0.6s,mb4.8
ECSD *e*PcP PcP 00 21 05.0 +1.0
W19A Sanders 62.46 68 ⇓P P **P 00 20 27.4 +1.1**
baz=62
SDCO Great Sand Dun 62.54 63 *e*P P **P 00 20 27.0 +0.2**
comp=Z,6.6nm,1.0s,mb4.5
X18A Snowflake 62.59 68 ⇑P P **P 00 20 27.6 +0.4**
baz=62,SNR=8.2
Z16A Peralta Trail, 62.68 70 ⇑P P **P 00 20 28.4 +0.7**
baz=62
115A Sonoran Desert 62.72 71 ⇑P P **P 00 20 28.4 +0.4**
baz=62,SNR=11
Y17A Roosevelt 62.73 70 ⇑P P **P 00 20 28.3 +0.2**
baz=62,SNR=7.6
214A Organ Pipe Nat 62.96 72 ⇑P P **P 00 20 29.8 +0.2**
baz=63,SNR=6.8
X19A St. Johns 63.03 68 ⇓P P **P 00 20 30.9 +0.9**
baz=63
Y18A Canyon Day Jun 63.12 69 ⇓P P **P 00 20 31.1 +0.4**
baz=63,SNR=6.9
116A Eloy 63.12 71 ⇑P P **P 00 20 31.2 +0.6**
baz=63
KBL Kabul 63.38 293 *e*P P **P 00 20 29.4 -2.9**
Y19A Nutrioso 63.40 68 ⇓P P **P 00 20 33.3 +0.8**
baz=63,SNR=7.4
117A Oracle 63.64 70 ⇑P P **P 00 20 34.5 +0.4**
baz=63,SNR=6.2
216A Three Points, 63.68 71 ⇑P P **P 00 20 34.7 +0.4**
baz=63
Z19A T-Link Ranch, 63.90 69 ⇓P P **P 00 20 36.5 +0.7**
baz=64
118A Homack Ranch, 64.01 70 ⇑P P **P 00 20 36.9 +0.4**
baz=64,SNR=8.5
ANMO Albuquerque 64.15 66 ⇓*i*P P **P 00 20 37.7 +0.3**
ANMO Albuquerque 64.15 66 *e*P P **P 00 20 37.2 -0.2**
comp=Z,10nm,0.9s,mb4.7
119A Ashpeak Ranch, 64.28 69 ⇓P P **P 00 20 39.0 +0.7**
baz=64
SCHQ Schefferville 64.34 28 P **P 00 20 38.0 -0.3**
comp=Z,4.2nm,0.9s,mb4.3,baz=22,slow=3.6,SNR=5.7
218A Dragoon 64.48 70 ⇓P P **P 00 20 40.0 +0.4**
baz=64,SNR=8.9
219A White Tail Can 64.89 70 ⇑P P **P 00 20 42.5 +0.3**
baz=65,SNR=22
318A Bisbee 64.91 71 ⇑P P **P 00 20 42.6 +0.2**
baz=65,SNR=12
319A Douglas 65.35 70 ⇓P P **P 00 20 45.5 +0.3**
baz=65,SNR=10
SCIA State Center 65.36 52 *e*P P **P 00 20 44.4 -0.8**
comp=Z,49nm,0.8s,mb4.4
KSM Kuching 66.69 236 *e*P P **P 00 20 52.8 -1.1**
comp=Z,21nm,1.1s,mb4.9
AKASG Malin Array Be 67.46 329 P **P 00 20 57.0 -1.3**
comp=Z,4.2nm,0.5s,mb4.5,baz=28,slow=6.3,SNR=13
AKASG PcP PcP 00 21 23.4 -1.4
comp=Z,3.4nm,0.7s,baz=30,slow=4.4,SNR=6.8
AKASG Malin Array Be 67.46 329 *i* P **P 00 20 57.0 -1.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 67.46 329 P **P 00 20 57.0 -1.3**
AKASG PcP PcP 00 21 23.4 -1.4
HDIL Hopedale 68.22 50 *e*P P **P 00 21 01.8 -1.5**
comp=Z,14nm,0.6s,mb5.0
WMOK Wichita Mounta 68.31 60 *e*P P **P 00 21 03.3 -0.6**
WMOK 00 21 27.4
WMOK *e**PP pP 00 21 32.3 -1.0
WMOK pmax pmax
comp=Z,19nm,0.8s,mb5.0
WMOK Wichita Mounta 68.31 60 *e*P P **P 00 21 03.3 -0.6**
comp=Z,19nm,0.8s,mb5.0
WMOK PcP PcP 00 21 27.4 -1.3
WMOK *ep*P pP 00 21 32.3 -1.1
KIV Kislovodsk 68.48 317 *e*P P **P 00 21 02.9 -2.0**
KIV pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
KIV Kislovodsk 68.48 317 *e*P P **P 00 21 03.5 -1.4**
CCM Cathedral Cave 69.34 53 *e*P P **P 00 21 08.7 -1.6**
CCM pmax pmax
comp=Z,23nm,1.3s,mb4.8
CCM Cathedral Cave 69.34 53 *e*P P **P 00 21 08.7 -1.6**
comp=Z,24nm,1.3s,mb4.9
TXAR Lajitas Array 69.99 68 P **P 00 21 14.5 +0.2**
comp=Z,18nm,0.7s,mb5.0,baz=298,slow=4.7,SNR=199
KWP Kalwaria 70.29 332 *e*P P **P 00 21 16.3 +0.4**
KWP Kalwaria 70.29 332 ⇓*i*P P **P 00 21 16.3 +0.4**
KSP Ksiaz 70.78 337 *e*P P **P 00 21 19.1 +0.3**
KSP Ksiaz 70.78 337 *e*P P **P 00 21 18.5 -0.3**
GNI Garni 70.79 313 P **P 00 21 19.8 +0.7**
comp=Z,2.8nm,0.5s,mb4.4,baz=14,slow=8.3,SNR=3.5
STHS Stebnicka Huta 70.88 333 *e*P P **P 00 21 20.4 +1.0**
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
STHS Stebnicka Huta 70.88 333 *e*P P **P 00 21 20.4 +1.0**
STHS Stebnicka Huta 70.88 333 *e*P P **P 00 21 20.4 +1.0**
comp=Z,6.0nm,1.2s,mb4.3
KAKA Kakadu 71.00 209 *e*P x 00 21 02.6
comp=Z,6.7nm,0.4s
KOLS Kolonicke sedl 71.04 332 *e*P P **P 00 21 19.7 -0.8**
KOLS pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
KOLS Kolonicke sedl 71.04 332 *e*P P **P 00 21 19.7 -0.8**
comp=Z,6.9nm,1.2s,mb4.4
MIAR Mount Ida 71.06 57 *e*P P **P 00 21 19.7 -1.1**
MIAR 00 21 39.5
MIAR pmax pmax
comp=Z,17nm,1.0s,mb4.8
MIAR Mount Ida 71.06 57 *e*P P **P 00 21 19.7 -1.0**
comp=Z,17nm,1.0s,mb4.8
MIAR PcP PcP 00 21 39.5 -0.9
CLL Collm 71.07 339 ⇑*i*P P **P 00 21 19.7 -0.9**
CLL pmax pmax
comp=Z,18nm,1.0s,mb4.9
CLL Collm 71.07 339 ⇑*i*P P **P 00 21 19.7 -0.9**
comp=Z,18nm,1.0s,mb4.9
JCT Junction City 71.14 64 *e*P P **P 00 21 20.5 -0.8**
JCT pmax pmax
comp=Z,27nm,0.9s,mb5.1
JCT Junction City 71.14 64 *e*P P **P 00 21 20.5 -0.8**
comp=Z,27nm,0.9s,mb5.1
UPC Upice 71.16 337 *e*P P **P 00 21 21.1 0.0**
DPC Dobruska-Polom 71.24 337 *e*P P **P 00 21 22.0 +0.4**
OKC Ostrava-Krasne 71.28 335 *e*P P **P 00 21 21.9 +0.1**
BRG Berggiesshubel 71.28 338 *e*P P **P 00 21 21.5 -0.3**
BRG pmax pmax
comp=Z,8.0nm,1.4s,mb4.4
BRG Berggiesshubel 71.28 338 *e*P P **P 00 21 21.5 -0.4**
comp=Z,14nm,1.4s,mb4.6
CRVS Cervenica-Dubn 71.29 333 *e*P P **P 00 21 22.3 +0.4**
BUR08 Bucovina Ar. S 71.38 330 *e*P P **P 00 21 22.1 -0.5**
BUR08 *e*PcP PcP 00 21 40.7 -0.8
BURAR Bucovina Array 71.41 330 ⇑*i*P P **P 00 21 22.3 -0.4**
WCI Wyandotte Cave 71.46 50 *e*P P **P 00 21 21.8 -1.3**
WCI pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
WCI Wyandotte Cave 71.46 50 *e*P P **P 00 21 21.8 -1.3**
comp=Z,8.5nm,0.6s,mb4.8
PVCC Panska Ves 71.47 338 *e*P P **P 00 21 21.6 -1.4**
MORC Moravsky Berou 71.48 336 *e*P P **P 00 21 23.1 0.0**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
MORC Moravsky Berou 71.48 336 ⇑*i*P P **P 00 21 23.6 +0.5**
MORC Moravsky Berou 71.48 336 *e*P P **P 00 21 23.1 0.0**
comp=Z,3.0nm,0.8s,mb4.2
TRPA Tarpa 71.70 332 ⇓*i*P P **P 00 21 24.7 +0.3**
PRU Pruhonice 71.98 338 *e*P P **P 00 21 25.5 -0.6**
MOX Moxa 71.98 340 *e*P P **P 00 21 26.1 0.0**
comp=Z,25nm,1.6s,mb4.8
MOX Moxa 71.98 340 *e*P P **P 00 21 26.1 0.0**
MOX pmax pmax
comp=Z,25nm,1.6s,mb4.8
VRAC Vranov 72.14 336 ⇓*i*P P **P 00 21 27.8 +0.8**
NKC Novy Kostel 72.20 339 *e*P P **P 00 21 27.3 -0.1**
VYHS Vyhne 72.35 334 *e*P P **P 00 21 28.0 -0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
VYHS Vyhne 72.35 334 *e*P P **P 00 21 28.0 -0.3**
comp=Z,2.8nm,1.0s,mb4.0
KOLL Kolacno 72.38 335 *e*P P **P 00 21 27.8 -0.7**
TREC Trest 72.42 337 *e*P P **P 00 21 28.5 -0.2**
TLCR 72.47 326 ⇓*i*P P **P 00 21 28.4 -0.6**
ODB Odobesti 72.50 328 ⇑*i*P P **P 00 21 30.3 +1.1**
PSZ Piszkesteto 72.61 333 ⇑*i*P P **P 00 21 31.0 +1.2**
PSZ Piszkesteto 72.61 333 *e*P P **P 00 21 29.5 -0.3**
DRGR 72.88 331 ⇓*i*P P **P 00 21 31.2 -0.2**
BEBN Eben Emael 72.94 343 P **P 00 21 31.5 -0.2**
GRA1 Grafenberg Arr 72.97 340 *e*P P **P 00 21 32.1 +0.2**
comp=Z,12nm,0.9s,mb4.7
GRF Grafenberg Arr 72.97 340 *e*P P **P 00 21 32.1 +0.2**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.7

GRF Grafenberg Arr 72.97 340 *e*P P 00 21 32.1 +0.2
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.7
GRF Grafenberg Arr 72.97 340 *e*P P 00 21 32.1 +0.2
comp=Z,12nm,0.9s,mb4.7
KHC Kasperske Hory 73.00 338 *e*P P 00 21 32.6 +0.5
ZST Bratislava 73.06 335 *e*P P 00 21 31.6 -0.9
ZST pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
ZST Bratislava 73.06 335 *e*P P 00 21 31.6 -0.9
comp=Z,3.5nm,0.5s,mb4.5
MEM Membach 73.06 343 P P 00 21 32.5 0.0
comp=Z,13nm,0.8s,mb4.8
MLR Muntele Rosu 73.10 328⇓ *i*P P 00 21 33.4 +0.6
UCC Uccle 73.15 344 P P 00 21 31.4 -1.5
GERES GERESS Array B 73.24 338 P P 00 21 33.7 +0.2
comp=Z,3.9nm,0.6s,mb4.4,baz=34,slow=5.0,SNR=35
BCLA Clavier 73.36 344 P P 00 21 33.8 -0.4
VOIR 73.42 329⇓ *i*P P 00 21 35.2 +0.6
SNF Seneffe 73.44 344 P P 00 21 34.0 -0.6
CONA Conrad Observa 73.61 336⇓ *i*P P 00 21 36.1 +0.4
comp=Z,6.1nm,0.8s,mb4.4,SNR=5.8
CSNA Conrad Observa 73.61 336⇑ *i*P P 00 21 36.2 +0.5
comp=Z,6.1nm,0.8s,mb4.4
GIVF Givet 73.75 344 *e*P P 00 21 36.0 -0.5
DOU Dourbes 73.79 344 P P 00 21 36.5 -0.2
comp=Z,12nm,1.9s,mb4.3
BAIF Baives 73.89 344 *e*P P 00 21 37.0 -0.3
comp=Z,16nm,0.6s,mb4.6
BAIF Baives 73.89 344 *e*P P 00 21 37.0 -0.3
BAIF pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
BAIF Baives 73.89 344 *e*P P 00 21 37.0 -0.3
comp=Z,7.8nm,0.6s,mb4.6
WLF Walferdange 73.95 343 P P 00 21 37.8 +0.2
GZR Gura Zlata 74.13 330⇓ *i*P P 00 21 38.9 +0.1
BZS Buzias 74.26 331⇑ *i*P P 00 21 38.8 -0.7
LANF Langenberg 74.31 342 *e*P P 00 21 39.7 -0.1
CDF Champ du Feu 74.96 342 *e*P P 00 21 43.4 -0.1
comp=Z,26nm,0.7s,mb4.8
CDF Champ du Feu 74.96 342 *e*P P 00 21 43.4 -0.1
CDF pmax pmax
comp=Z,13nm,0.7s,mb4.8
CDF Champ du Feu 74.96 342 *e*P P 00 21 43.4 -0.1
comp=Z,13nm,0.7s,mb4.8
SOKA Soboth 74.98 336⇑ *i*P P 00 21 43.8 +0.1
comp=Z,5.0nm,0.6s,mb4.4
KBA Koelnbreinsper 74.99 337 *i* P P 00 21 44.7 +1.0
comp=Z,28nm,1.0s,mb5.0,SNR=7.3
WATA Walderalm 75.13 339⇓ *i*P P 00 21 44.9 +0.3
comp=Z,12nm,1.1s,mb4.5
ECH Echery 75.17 342 *e*P P 00 21 44.9 +0.2
WTTA Wattenberg 75.19 338⇑ *i*P P 00 21 45.6 +0.7
comp=Z,11nm,0.8s,mb4.6
OBKA Obir 75.25 336⇑ *i*P P 00 21 45.3 +0.1
comp=Z,19nm,1.1s,mb4.7
MEZF Maizieres J'vi 75.26 343 *e*P P 00 21 45.2 0.0
CTA Charters Tower 75.26 194 P P 00 21 46.0 +0.5
comp=Z,3.4nm,0.9s,mb4.1,baz=26,slow=9.6,SNR=3.8
THEF They Montfort 75.36 343 *e*P P 00 21 45.6 -0.2
HAU Haudompre 75.52 342 *e*P P 00 21 46.4 -0.3
BR131 Keskin Array S 75.60 320 *e*P P 00 21 46.1 -1.2
comp=Z,1.6nm,0.5s,mb4.0
BRTR Keskin Array B 75.60 320 P P 00 21 47.2 -0.1
comp=Z,2.2nm,0.5s,mb4.1,baz=29,slow=3.4,SNR=15
HINF Hinteralfeld 75.61 342 *e*P P 00 21 46.8 -0.4
comp=Z,5.7nm,0.6s,mb4.2
HINF Hinteralfeld 75.61 342 *e*P P 00 21 46.8 -0.4
HINF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
HINF Hinteralfeld 75.61 342 *e*P P 00 21 46.8 -0.4
comp=Z,2.8nm,0.6s,mb4.2
FETA Feichten 75.61 339⇑ *i*P P 00 21 47.7 +0.5
comp=Z,16nm,1.0s,mb4.7
FLN La Foliniere 75.83 347 *e*P P 00 21 47.8 -0.7
comp=Z,35nm,0.7s,mb4.9
FLN La Foliniere 75.83 347 *e*P P 00 21 47.8 -0.7
FLN pmax pmax
comp=Z,17nm,0.7s,mb4.9
FLN La Foliniere 75.83 347 *e*P P 00 21 47.8 -0.7
comp=Z,17nm,0.7s,mb4.9
VISS Visnje 75.85 336 *i* P P 00 21 48.5 -0.2
LDF La Druitiere 75.95 347 *e*P P 00 21 49.2 0.0
comp=Z,12nm,0.7s,mb4.5
LDF La Druitiere 75.95 347 *e*P P 00 21 49.2 0.0
LDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
LDF La Druitiere 75.95 347 *e*P P 00 21 49.2 0.0
comp=Z,6.2nm,0.6s,mb4.5
LOMF Lomont 76.06 342 *e*P P 00 21 49.5 -0.3
GRR Gorron 76.25 347 *e*P P 00 21 50.4 -0.5
comp=Z,37nm,0.7s,mb4.9
GRR Gorron 76.25 347 *e*P P 00 21 50.4 -0.5
GRR pmax pmax
comp=Z,18nm,0.7s,mb4.9
GRR Gorron 76.25 347 *e*P P 00 21 50.4 -0.5
comp=Z,18nm,0.7s,mb4.9
TUE Stuetta 76.42 340 *e*P P 00 21 52.5 +0.6
comp=Z,11nm,0.5s,mb4.8
SGMF Saint Gilles 76.59 348 *e*P P 00 21 52.5 -0.3
comp=Z,47nm,0.8s,mb5.0
SGMF Saint Gilles 76.59 348 *e*P P 00 21 52.5 -0.3
SGMF pmax pmax
comp=Z,24nm,0.8s,mb5.0
SGMF Saint Gilles 76.59 348 *e*P P 00 21 52.5 -0.3
comp=Z,24nm,0.8s,mb5.0
ROSF Rostrenen 76.59 349 *e*P P 00 21 52.5 -0.3
comp=Z,45nm,0.9s,mb4.9
ROSF Rostrenen 76.59 349 *e*P P 00 21 52.5 -0.3
ROSF pmax pmax
comp=Z,23nm,0.9s,mb4.9
ROSF Rostrenen 76.59 349 *e*P P 00 21 52.5 -0.3
comp=Z,23nm,0.9s,mb4.9
LOR Lormes 76.65 344 *e*P P 00 21 52.8 -0.4
comp=Z,36nm,0.7s,mb4.9
LOR Lormes 76.65 344 *e*P P 00 21 52.8 -0.4
LOR pmax pmax
comp=Z,18nm,0.7s,mb4.9
LOR Lormes 76.65 344 *e*P P 00 21 52.8 -0.4
comp=Z,18nm,0.7s,mb4.9
CABF La Chapelle 76.91 342 *e*P P 00 21 54.8 +0.2
comp=Z,12nm,0.6s,mb4.5
CABF La Chapelle 76.91 342 *e*P P 00 21 54.8 +0.2
CABF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
CABF La Chapelle 76.91 342 *e*P P 00 21 54.8 +0.2
comp=Z,6.3nm,0.6s,mb4.5
SSF Saint Saulge 76.91 344 *e*P P 00 21 54.3 -0.3
comp=Z,18nm,0.7s,mb4.6
SSF Saint Saulge 76.91 344 *e*P P 00 21 54.3 -0.3
SSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
SSF Saint Saulge 76.91 344 *e*P P 00 21 54.3 -0.3
comp=Z,8.9nm,0.7s,mb4.6
QUIF Quistinic 77.00 349 *e*P P 00 21 54.6 -0.5
comp=Z,103nm,1.1s,mb5.2
QUIF Quistinic 77.00 349 *e*P P 00 21 54.6 -0.5
QUIF pmax pmax
comp=Z,51nm,1.1s,mb5.2
QUIF Quistinic 77.00 349 *e*P P 00 21 54.6 -0.5
comp=Z,51nm,1.1s,mb5.2
AVF Avril sur Loir 77.20 344 *e*P P 00 21 56.0 -0.2
comp=Z,36nm,0.8s,mb4.9
AVF Avril sur Loir 77.20 344 *e*P P 00 21 56.0 -0.2
AVF pmax pmax
comp=Z,18nm,0.8s,mb4.8
AVF Avril sur Loir 77.20 344 *e*P P 00 21 56.0 -0.2
comp=Z,18nm,0.8s,mb4.9
SMF Signal de Mont 77.26 344 *e*P P 00 21 56.3 -0.3
comp=Z,22nm,0.9s,mb4.6
SMF Signal de Mont 77.26 344 *e*P P 00 21 56.3 -0.3
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.6
SMF Signal de Mont 77.26 344 *e*P P 00 21 56.3 -0.3
comp=Z,11nm,0.9s,mb4.6
WRAB Tennant Creek 77.40 205⇑ *i*P P 00 21 57.2 -0.3
WRAB Tennant Creek 77.40 205 *e*P P 00 21 57.3 -0.2
WRAB pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
WRAB Tennant Creek 77.40 205 *e*P P 00 21 57.3 -0.2
comp=Z,4.1nm,0.4s,mb4.5
WB2 Warramunga Arr 77.41 205 *e*P P 00 21 57.4 -0.2
BGF Bois d'Agland 77.51 344 *e*P P 00 21 57.8 -0.1
comp=Z,20nm,0.9s,mb4.6
BGF Bois d'Agland 77.51 344 *e*P P 00 21 57.8 -0.1
BGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
BGF Bois d'Agland 77.51 344 *e*P P 00 21 57.8 -0.1
comp=Z,10.0nm,0.9s,mb4.5
LPL La Plagne 77.85 341 *e*P P 00 22 00.9 +1.1
comp=Z,35nm,0.7s,mb4.9
LPL La Plagne 77.85 341 *e*P P 00 22 00.9 +1.1
LPL pmax pmax
comp=Z,17nm,0.7s,mb4.9
LPL La Plagne 77.85 341 *e*P P 00 22 00.9 +1.1
comp=Z,17nm,0.7s,mb4.9
LPG La Plagne 77.86 341 *e*P P 00 22 01.1 +1.2
comp=Z,59nm,0.8s,mb5.0
LPG La Plagne 77.86 341 *e*P P 00 22 01.1 +1.2
LPG pmax pmax
comp=Z,29nm,0.8s,mb5.1
LPG La Plagne 77.86 341 *e*P P 00 22 01.1 +1.2
comp=Z,29nm,0.8s,mb5.1
TCF Toulx Ste Croi 77.87 345 *e*P P 00 21 59.8 -0.2
comp=Z,12nm,0.6s,mb4.5
TCF Toulx Ste Croi 77.87 345 *e*P P 00 21 59.8 -0.2
TCF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
TCF Toulx Ste Croi 77.87 345 *e*P P 00 21 59.8 -0.2
comp=Z,6.3nm,0.6s,mb4.5
MFF Saint Martin d 77.91 346 *e*P P 00 22 00.1 -0.1
comp=Z,41nm,1.0s,mb4.8
MFF Saint Martin d 77.91 346 *e*P P 00 22 00.1 -0.1
MFF pmax pmax
comp=Z,21nm,1.0s,mb4.8
MFF Saint Martin d 77.91 346 *e*P P 00 22 00.1 -0.1
comp=Z,21nm,1.0s,mb4.8
AGO Saint Agoulin 77.95 344 *e*P P 00 22 01.0 +0.6
PLDF La Plantade 77.95 344 *e*P P 00 22 00.8 +0.4
PALK Pallekele 78.06 266 *e*P P 00 22 00.8 -0.7
comp=Z,7.8nm,0.7s,mb4.5
MIB Mutribah 78.22 305 *e*P P 00 21 60.0 -2.2
baz=305
MIB AMb AMB 00 22 01.6
comp=Z,34nm,1.0s,mb5.0,baz=305
PYM Petit Puy Mans 78.27 344 *e*P P 00 22 02.4 +0.2
BNI Bardonecchia 78.30 341 *e*P P 00 22 03.3 +0.9
BNI pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
BNI Bardonecchia 78.30 341 *e*P P 00 22 03.2 +0.9
comp=Z,8.4nm,0.8s,mb4.5
ORIF Oris-en-Rattie 78.58 342 *e*P P 00 22 04.8 +0.9
MBDF Montbardon 78.60 341 *e*P P 00 22 04.4 +0.4
comp=Z,12nm,0.6s,mb4.6
MBDF Montbardon 78.60 341 *e*P P 00 22 04.4 +0.4
MBDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
MBDF Montbardon 78.60 341 *e*P P 00 22 04.4 +0.4
comp=Z,6.2nm,0.6s,mb4.6
NAY Al-Naaiem 78.73 305 *e*P P 00 22 02.9 -2.1
baz=305
NAY AMb AMB 00 22 13.4
comp=Z,20nm,1.7s,mb4.7,baz=305
LBL Lubilhac 78.73 344 *e*P P 00 22 05.2 +0.5
QRN Al-Qurain 78.83 304 *e*P P 00 22 03.9 -1.7
baz=304
QRN AMb AMB 00 22 14.2
comp=Z,101nm,1.5s,mb5.4,baz=304
VIVF Saint-Julien-l 78.86 343 *e*P P 00 22 06.0 +0.6
RJF Les Rejaudoux 78.94 345 *e*P P 00 22 05.8 0.0
comp=Z,31nm,1.0s,mb4.8
RJF Les Rejaudoux 78.94 345 *e*P P 00 22 05.8 0.0
RJF pmax pmax
comp=Z,15nm,1.0s,mb4.8
RJF Les Rejaudoux 78.94 345 *e*P P 00 22 05.8 0.0
comp=Z,15nm,1.0s,mb4.8
SAOF Saorge 79.16 340 *e*P P 00 22 06.3 -0.8
AUTN L'Aution 79.18 340 *e*P P 00 22 06.8 -0.4
TOUF Mont Tournerai 79.20 341 *e*P P 00 22 06.8 -0.5
CAF Calviac 79.22 344 *e*P P 00 22 08.0 +0.6
comp=Z,32nm,0.8s,mb4.9
CAF Calviac 79.22 344 *e*P P 00 22 08.0 +0.6
CAF pmax pmax
comp=Z,16nm,0.8s,mb4.9
CAF Calviac 79.22 344 *e*P P 00 22 08.0 +0.6
comp=Z,16nm,0.8s,mb4.9
SBF Sospel 79.30 340 *e*P P 00 22 07.8 -0.1
MVIF Mont Vial 79.33 341 *e*P P 00 22 07.6 -0.4
LFF La Frestale 79.41 345 *e*P P 00 22 08.7 +0.3
comp=Z,23nm,0.5s,mb5.0
LFF La Frestale 79.41 345 *e*P P 00 22 08.7 +0.3
LFF pmax pmax
comp=Z,12nm,0.5s,mb5.0
LFF La Frestale 79.41 345 *e*P P 00 22 08.7 +0.3
comp=Z,12nm,0.5s,mb5.0
REVF Revere 79.44 340 *e*P P 00 22 08.7 +0.1
CALN Calern 79.52 341 *e*P P 00 22 09.3 +0.3
FRF La Foret Royal 79.75 341 *e*P P 00 22 10.1 -0.2
comp=Z,37nm,1.1s,mb4.8
FRF La Foret Royal 79.75 341 *e*P P 00 22 10.1 -0.2
FRF pmax pmax
comp=Z,19nm,1.1s,mb4.8
FRF La Foret Royal 79.75 341 *e*P P 00 22 10.1 -0.2
comp=Z,18nm,1.1s,mb4.8
LASF Ste Croix 79.75 343 *e*P P 00 22 11.1 +0.8
comp=Z,13nm,0.8s,mb4.5
LMR La Mourre 79.99 341 *e*P P 00 22 11.8 +0.2
comp=Z,14nm,0.5s,mb4.8
LMR La Mourre 79.99 341 *e*P P 00 22 11.8 +0.2
LMR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
LMR La Mourre 79.99 341 *e*P P 00 22 11.8 +0.2
comp=Z,6.9nm,0.5s,mb4.7
PGF Pioggiola 80.25 339 *e*P P 00 22 12.9 -0.1
comp=Z,24nm,0.7s,mb4.8
PGF Pioggiola 80.25 339 *e*P P 00 22 12.9 -0.1
PGF pmax pmax
comp=Z,12nm,0.7s,mb4.8
PGF Pioggiola 80.25 339 *e*P P 00 22 12.9 -0.1
comp=Z,12nm,0.7s,mb4.8
MTLF Montolieu 80.74 344 *e*P P 00 22 16.4 +0.8
comp=Z,16nm,0.7s,mb4.7
MTLF Montolieu 80.74 344 *e*P P 00 22 16.4 +0.8
MTLF pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
MTLF Montolieu 80.74 344 *e*P P 00 22 16.4 +0.8
comp=Z,8.0nm,0.7s,mb4.7
ASAR Alice Springs 81.09 204 P P 00 22 18.0 +0.5
comp=Z,3.0nm,0.5s,mb4.4,baz=16,slow=5.0,SNR=40
ASAR pP pP 00 22 49.0 +1.2
comp=Z,1.6nm,0.6s,baz=15,slow=5.5,SNR=4.2
EPF Esparros 81.33 345 *e*P P 00 22 18.7 -0.1
comp=Z,10nm,0.7s,mb4.5
EPF Esparros 81.33 345 *e*P P 00 22 18.7 -0.1
EPF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
EPF Esparros 81.33 345 *e*P P 00 22 18.7 -0.1
comp=Z,5.2nm,0.7s,mb4.5
SJPF Ste Jean 81.48 346 *e*P P 00 22 20.6 +1.1
comp=Z,21nm,0.6s,mb4.8
SJPF Ste Jean 81.48 346 *e*P P 00 22 20.6 +1.1
SJPF pmax pmax
comp=Z,11nm,0.6s,mb4.9
SJPF Ste Jean 81.48 346 *e*P P 00 22 20.6 +1.1
comp=Z,10nm,0.6s,mb4.8
ETSF Etsaut 81.60 346 *e*P P 00 22 21.0 +0.9
comp=Z,29nm,0.7s,mb4.9
ETSF Etsaut 81.60 346 *e*P P 00 22 21.0 +0.9
ETSF pmax pmax
comp=Z,14nm,0.7s,mb4.9
ETSF Etsaut 81.60 346 *e*P P 00 22 21.0 +0.9
comp=Z,14nm,0.7s,mb4.9
ELAN Lanestosa 81.65 348 P P 00 22 20.9 +0.5
comp=Z,31nm,0.8s,mb5.2
EBIE Bielsa 81.70 345 P P 00 22 22.1 +1.4
comp=Z,12nm,0.6s,mb4.9
EPON Pontenova 81.95 351 P P 00 22 20.8 -1.2
comp=Z,11nm,1.6s,mb4.4
ECRI Cripan 82.14 347 P P 00 22 24.0 +1.0
ECRI pmax pmax
comp=Z,90nm,2.4s,mb5.2
ECRI Cripan 82.14 347 P P 00 22 24.0 +1.0
comp=Z,90nm,2.4s,mb5.2
ESAC San Caprasio 82.74 346 P P 00 22 26.3 +0.2
comp=Z,31nm,0.6s,mb5.3
EPOB Poblet 82.86 344 P P 00 22 27.4 +0.6
comp=Z,26nm,0.7s,mb5.2
MBWA Marble Bar 82.99 218 P P 00 22 26.3 -1.1
PBRG Braganca 83.42 350 *e*P P 00 22 29.9 +0.3
comp=Z,20nm,1.2s,mb4.8
ETOR Torete 83.84 347 P P 00 22 31.4 -0.4
ETOR pmax pmax
comp=Z,13nm,2.8s,mb4.3
ETOR Torete 83.84 347 P P 00 22 31.4 -0.4
comp=Z,13nm,2.8s,mb4.3
EMOS Mosqueruela 84.07 345 P P 00 22 34.2 +1.3
comp=Z,33nm,0.8s,mb5.2
MVO Moncorvo 84.08 350 *e*P P 00 22 33.4 +0.4
comp=Z,26nm,1.1s,mb5.0
GUD Guadarrama 84.29 348 P P 00 22 32.9 -1.1
GUD pmax pmax
comp=Z,5.0nm,2.0s,mb4.0
GUD Guadarrama 84.29 348 P P 00 22 32.9 -1.2
comp=Z,5.3nm,2.0s,mb4.0
PVIS Viseu 84.61 351 *e*P P 00 22 36.1 +0.4
comp=Z,44nm,1.6s,mb5.1
MTE Manteigas 84.89 351 *e*P P 00 22 37.9 +0.8
comp=Z,46nm,1.1s,mb5.3
ECHE Chera 84.90 346 P P 00 22 38.4 +1.3
ECHE pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
ECHE Chera 84.90 346 P P 00 22 38.4 +1.3
comp=Z,5.3nm,0.5s,mb4.7
ESDC Sonseca Array 85.22 348 P P 00 22 38.8 +0.1
comp=Z,12nm,0.7s,mb5.0,baz=3.3,slow=5.1,SNR=84
PCBR Castelo Branco 85.44 351 *e*P P 00 22 39.8 0.0
comp=Z,19nm,1.3s,mb4.9
EBEN Beniarda 85.66 345 P P 00 22 39.6 -1.4
comp=Z,19nm,2.2s,mb4.6
PMRV Marv??o 85.84 350 *e*P P 00 22 41.7 -0.1
comp=Z,18nm,1.5s,mb4.8
ETOB Tobarra 85.91 346 P P 00 22 43.7 +1.5
comp=Z,11nm,0.7s,mb4.9
EVIA Vianos 86.05 347 P P 00 22 43.4 +0.5
EVIA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
EVIA Vianos 86.05 347 P P 00 22 43.4 +0.6
comp=Z,9.1nm,0.6s,mb4.9
PESTR Estremoz 86.41 351 *e*P P 00 22 43.8 -0.8
EBAN Banos Encina 86.68 347 P P 00 22 46.4 +0.4
EBAN pmax pmax
comp=Z,12nm,0.9s,mb4.8
EBAN Banos Encina 86.68 347 P P 00 22 46.4 +0.5
comp=Z,12nm,0.9s,mb4.8
KEST Kesra 86.70 337 P P 00 22 45.8 -0.3
comp=Z,6.7nm,0.6s,mb4.7,baz=302,slow=1.7,SNR=36
EADA Adamuz 86.78 348 P P 00 22 48.0 +1.6
comp=Z,5.5nm,0.8s,mb4.5
EVO Evora 86.78 351 *e*P P 00 22 45.9 -0.6
comp=Z,5.0nm,0.5s,mb4.4
EVO Evora 86.78 351 *e*P P 00 22 46.3 -0.2
comp=Z,7.9nm,0.9s,mb4.6
EQES Quesada 86.95 347 P P 00 22 48.1 +0.9
comp=Z,31nm,2.5s,mb4.8
PBAR Barrancos 87.04 350 *e*P P 00 22 47.4 -0.3
comp=Z,11nm,0.9s,mb4.8
EMIN Mina Concepcio 87.41 350 P P 00 22 49.0 -0.5
comp=Z,380nm,3.6s
EBER Berja 87.81 347 P P 00 22 56.6 +5.2
comp=Z,453nm,4.4s
NWAO Narrogin (SRO) 94.65 215 *e*P P 00 23 21.7 -1.2
TAU Tasmania Unive 97.67 190 *e*P P 00 23 34.8 -1.5
DBIC Dimbokro 117.79 343 PKP PKPdf 00 28 47.9 -0.4
comp=Z,0.6nm,0.4s,baz=270,slow=3.0,SNR=2.9
BOSA Boshof 138.57 290 PKP PKPdf 00 29 25.7 -1.4
comp=Z,1.4nm,0.5s,baz=343,slow=1.5,SNR=3.7
BOSA Boshof 138.57 290 PKP PKPdf 00 29 25.7 -1.4
PLCA Paso Flores 143.90 89 PKhKP 00 29 32.5
comp=Z,1.2nm,0.5s,baz=251,slow=5.2,SNR=4.6
QSPA South Pole Qui 144.26 180 PKP PKPdf 00 29 33.5 -2.2
comp=Z,9.1nm,0.6s,baz=344,slow=0.7,SNR=34
USHA Ushuaia 152.28 111 PKPbc PKPbc 00 29 55.3 -1.0
comp=Z,3.7nm,0.6s,baz=194,slow=4.2,SNR=3.4

CSEM ***06*** *00:16:50.8±0.8,3857N×2923W,h5km,ML3.1, Error ellipse: s-maj=12.5km s-min=6.4km az=1.0, After PDA*
PDA 06 00:16:50.8±0.8, 3857N×2923W, h5km, MD3.5, ML3.1, Error ellipse: s-maj=12.5km s-min=6.4km az=1.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.41**	**88**	*e*P	Pg	00 16 57.9	-0.8
CALA				*e*S	Sg	00 17 03.4	-0.7
HOR	**Horta**	**0.47**	**95**	*e*P	Pg	00 16 58.8	-1.0
HOR				*e*S	Sg	00 17 05.1	-0.9
PICO	**Pico**	**0.63**	**96**	*e*P	Pg	00 17 02.1	-0.8
PICO				*e*S	Sg	00 17 09.7	-1.4
ROSA	**Rosais**	**0.79**	**79**	*i* P	Pg	00 17 03.5	-2.4
ROSA				*e*S	Sg	00 17 13.4	-2.7
PMAN	**Manadas**	**0.89**	**86**	*e*P	Pg	00 17 04.9	-3.0
PMAN				*e*S	Sg	00 17 16.1	-3.4
PMAN				A		00 17 17.9	
	190nm,0.2s						
PMAN	**Manadas**	**0.89**	**86**	*e*P	Pg	00 17 04.9	-3.0
PMAN				*e*S	Sg	00 17 16.1	-3.4

BJI ***06*** *00:31:26.6,3727N×7176E,h210km,mb4.0*
IDC ***06*** *00:31:29.0±5.9,3708N×7232E,h195km±50km,mb3.3/3, mb1 3.4/8,mb1mx3.1/25,mbtmp3.3/8,Error ellipse: s-maj=54.7km s-min=28.5km az=144.0*
ISCJB ***06*** *00:31:31.4±0.4,3738N±003×7224E±006,h214km±6km, mb3.4/3,Error ellipse: s-maj=7.9km s-min=5.3km az=8.6*
NEIC ***06*** *00:31:43.2±4.5,3833N×7243E,h246km±40km,mb2.5, mpv4.1,Error ellipse: s-maj=47.3km s-min=22.4km az=10.0*
ISC 06 00:31:32.2±0.4, 3740N±003×7218E±007, h208km±6km, n41,σ1§03/55, mb3.4/3, 5C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.65**	**53**	P	**Pn**	**00 32 31.4**	**+1.5**
KSH				S	**Sn**	**00 33 14.4**	**-0.9**
KSH				Smax			
	comp=N,68nm,0.3s						
KSH				Smax			
	comp=E,69nm,0.6s						
KBL	**Kabul**	**3.83**	**223**	*e*Pn	**Pn**	**00 32 32.9**	**+0.7**
KBL				*e*S	**Sn**	**00 33 18.4**	**-0.8**
AML	**Almayashu**	**4.86**	**13**	P	**Pn**	**00 32 45.9**	**+0.9**
	SNR=182						
AML	**Almayashu**	**4.86**	**13**	*e*Pn	**Pn**	**00 32 45.5**	**+0.5**
AML				*e*S	**Sn**	**00 33 40.0**	**-2.6**
UCH	**Uchtor**	**5.14**	**20**	*e*Pn	**Pn**	**00 32 47.2**	**-1.3**
UCH				*e*S	**Sn**	**00 33 47.8**	**-1.1**
KZA	**Kyzart**	**5.23**	**26**	P	**Pn**	**00 32 50.1**	**+0.5**
	SNR=6.5						
EKS2	**Erkin-Say**	**5.39**	**13**	P	**Pn**	**00 32 52.5**	**+0.8**
	SNR=16						
EKS2	**Erkin-Say**	**5.39**	**13**	*e*Pn	**Pn**	**00 32 52.3**	**+0.6**
	comp=E,14nm,0.6s						
EKS2				*e*S	**Sn**	**00 33 53.9**	**-0.8**
AAK	**Ala-Archa**	**5.52**	**18**	P	**Pn**	**00 32 54.4**	**+1.1**
	SNR=38						
AAK	**Ala-Archa**	**5.52**	**18**	*e*Pn	**Pn**	**00 32 54.0**	**+0.7**
	comp=E,30nm,0.6s						
AAK				*e*S	**Sn**	**00 33 57.3**	**-0.2**
KBK	**Karagaybulak**	**5.66**	**21**	P	**Pn**	**00 32 56.6**	**+1.5**
	SNR=13						
THN	**Thein Dam**	**5.75**	**149**	*e*P	**Pn**	**00 32 55.1**	**-1.3**
THN				*ex*	x	00 34 01.4	
ULHL	**Ulahol**	**5.76**	**32**	P	**Pn**	**00 32 56.8**	**+0.4**
	SNR=19						
DLH	**Dalhousie**	**5.76**	**146**	*e*P	**Pn**	**00 32 57.0**	**+0.5**
DLH				*ex*	x	00 34 04.0	
KK31	**Karatay Array**	**5.84**	**348**	P	**Pn**	**00 32 57.8**	**+0.4**
	comp=E,8.2nm,0.4s,baz=156,slow=10,SNR=292						
KK31				⇑S	**Sn**	**00 34 00.1**	**-4.8**
	comp=E,8.8nm,0.3s,baz=173,slow=16,SNR=3.6						
TKM2	**Tokmak 2**	**6.10**	**24**	⇓P	**Pn**	**00 33 01.6**	**+0.8**
	comp=E,20nm,0.6s						
TKM2				⇑S	**Sn**	**00 34 02.9**	**-8.2**
	comp=E,6.1nm,0.6s						
TKM2	**Tokmak 2**	**6.10**	**24**	P	**Pn**	**00 33 01.7**	**+1.0**
	SNR=11						
TKM2	**Tokmak 2**	**6.10**	**24**	*e*Pn	**Pn**	**00 33 01.4**	**+0.6**
	comp=E,28nm,0.6s						
TKM2				*e*S	**Sn**	**00 34 03.4**	**-7.7**
SMLA	**Simla**	**7.50**	**145**	*i* P	**Pn**	**00 33 18.2**	**-0.7**
SMLA				*i* S	**Sn**	**00 34 37.6**	**-6.3**
SMLA				*ex*	x	00 34 43.3	
	comp=E,243nm,0.3s						
SMLA				*ex*	x	00 34 44.3	

	comp=N,323nm,0.4s						
JOSI	Joshimath	9.17	136	eP	Pn	00 33 40.6	0.0
JOSI				eS	Sn	00 35 15.4	-8.2
SONA	Sohna	10.01	154	eS	Sn	00 35 31.7	-12
MK31	Makanchi Array	12.01	35	P	Pn	00 34 17.4	+0.6
	comp=N,0.3nm,0.4s,baz=210,slow=9.3,SNR=8.7						
MK31	Makanchi Array	12.01	35	ePn	Pn	00 34 16.1	-0.7
MKAR	Makanchi Array	12.01	35	P	Pn	00 34 16.4	-0.4
	comp=N,0.2nm,0.3s,baz=229,slow=10,SNR=8.4						
KURK	Kurchatov	14.08	17	P	Pn	00 34 42.9	+0.3
	comp=N,0.3nm,0.3s,baz=206,slow=11,SNR=5.4						
KURK	Kurchatov	14.08	17	ePn	Pn	00 34 43.1	+0.4
AB01	Akbulak array	14.80	327	⇑P	Pn	00 34 50.4	-1.0
	comp=N,1.6nm,0.6s						
AB01				⇑S	S	00 37 27.9	-7.5
	comp=N,1.3nm,0.6s						
BVA0	Borovoye Array	15.67	356	⇑P	Pn	00 35 03.2	+1.2
	comp=N,1.6nm,2.3s,baz=168,slow=13,SNR=16						
BVAR	Borovoye Array	15.67	356	P	Pn	00 35 02.3	+0.3
	comp=N,0.7nm,0.3s,baz=164,slow=10.0,SNR=14						
BRVK	Borovoye	15.71	356	eP	Pn	00 35 03.6	+1.1
	comp=N,2.0nm,0.4s						
AKTK	Aktyubinsk	16.51	327	P	P	00 35 12.6	+1.5
AKTK				S	S	00 38 10.5	-2.3
AKTO	Aktyubinsk	16.51	327	⇓P	P	00 35 12.3	+1.3
	comp=N,0.4nm,0.6s						
AKTO	Aktyubinsk	16.51	327	P	P	00 35 12.6	+1.5
	comp=N,0.5nm,0.3s,baz=135,slow=9.6,SNR=13						
AKTO				S	S	00 38 10.5	-2.3
	comp=N,0.1nm,0.3s,baz=198,slow=20,SNR=2.5						
ZAA0	Zalesovo Array	18.71	24	eP	P	00 35 35.1	+0.3
ZALV	Zalesovo Beam	18.71	24	P	P	00 35 35.3	+0.4
	comp=N,2.8nm,0.3s,baz=210,slow=9.9,SNR=42						
GNI	Garni	21.54	286	P	P	00 36 05.0	-0.1
KIV	Kislovodsk	23.23	296	P	P	00 36 20.7	-0.1
ULN	Ulaanbaatar	27.49	57	P	P	00 36 57.3	-1.8
ARCES	ARCESS Array B	40.68	337	P	P	00 38 52.7	+0.8
	comp=N,0.8nm,0.7s,mb3.3,baz=108,slow=8.6,SNR=2.9						
TORD	Torodi Ar. Bea	66.68	269	P	P	00 41 59.9	-1.2
	comp=N,0.8nm,0.4s,mb3.8,baz=49,slow=5.8,SNR=36						
YKA	Yellowknife Ar	80.30	3	P	P	00 43 19.5	0.0
	comp=N,0.3nm,0.5s,mb3.2,baz=352,slow=5.6,SNR=7.8						

MAN 06 00:39:51,1453N×12424E,h61km,mb4.2,ML3.0,MS2.8, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	Virac	0.93	185	⇓iP	Pn	00 40 10.2	+2.0
PVCP				i S	Sn	00 40 24.1	+3.2
GQP	Guinayangan	1.85	251	⇑iP	Pn	00 40 22.6	+2.1
GQP				i S	Sn	00 40 44.5	+1.7
POLP	Polilio Island	2.24	275	eP	Pn	00 40 27.6	+1.8
POLP				eS	Sn	00 40 54.7	+2.4

GUC 06 01:05:49.0±0.8,2147S×6817W,h173km±10km,ML3.6, 3C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.30	289	AML	AML	01 06 43.8	
	comp=N,250nm,0.2s						
LVC	Limon Verde	1.33	211	⇓iP	Pn	01 06 19.7	+1.0
LVC				i S	Sn	01 06 44.0	+2.2
MACH	Maria Elena	1.64	244	⇑iP	Pn	01 06 23.0	+1.2
MACH				i S	Sn	01 06 48.7	+1.7
PECH	Pedro de Valdi	1.79	231	⇑iP	Pn	01 06 24.8	+1.5
PECH				i S	Sn	01 06 52.0	+2.2
PECH				i		01 06 52.0	
PECH				AML	AML	01 06 53.1	
	comp=E,407nm,0.3s						
TOCH	Tocopilla	1.99	251	⇑iP	Pn	01 06 26.4	+0.9
TOCH				i S	Sn	01 06 54.5	+1.0
TOCH				AML	AML	01 06 55.7	
	comp=N,361nm,0.1s						
CEN1	Los Morros	2.68	224	⇓iP	Pn	01 06 37.6	+4.2
CEN1				AML	AML	01 07 16.4	
	comp=N,80nm,0.3s						
ANCH	Antofagasta	3.02	223	i P	Pn	01 06 39.6	+2.0
ANCH				i S	Sn	01 07 16.5	+1.1
ANCH				AML	AML	01 07 19.1	
	comp=N,330nm,0.1s						

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*GUC **06** 01:11:09.0±0.8,2352S×7074W,h33km±5km,ML5.2*
*GCMT **06** 01:11:09.0±0.3,2344S×7088W,h18km±1km,MW5.1/60, Moment Tensor Solution. s26,c32; s60,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.58±.27; $M_{\theta\theta}$-0.86±.16; $M_{\phi\phi}$-2.72±.19; $M_{r\theta}$2.49±.42; $M_{\theta\phi}$1.48±.10; $M_{\phi r}$-4.37±.50; Best double couple: $M_0$6.16100×10^{16} NP1:ϕ_s332.00000°,δ18.00000°,λ91.00000°. NP2: ϕ_s150.00000°,δ72.00000°,λ90.00000°. Principal axes: T 6.1830, Plg63.0000°, Azm60.0000°; N -0.0390, Plg0.0000°, Azm151.0000°; P -6.1390, Plg27.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **06** 01:11:09.0,2352S×7074W,h33km,mb5.1/65, ML5.2(GUC),After GUC.*
NEIC Felt [III] at Mejillones and [II] at Antofagasta.
*ISCJB **06** 01:11:11.1±0.5,2345S±003×7053W±004,h32km±3km, mb5.0/90,MS4.6/16,Error ellipse: s-maj=6.1km s-min=4.3km az=165.3*
*IDC **06** 01:11:11.7±3.1,2342S×7055W,h25km±19km,mb4.5/15, mb1 4.6/17,mb1mx4.6/19,mbtmp4.5/17,ML4.0/2,MS4.4/16, Ms1 4.4/16,ms1mx4.2/24,Error ellipse: s-maj=17.3km s-min=13.2km az=73.0*
*MOS **06** 01:11:12.9±1.1,2293S×7044W,h33km,mb5.3/30,Error ellipse: s-maj=17.5km s-min=8.5km az=106.0*
*BJI **06** 01:11:14.0,2350S×7070W,h33km,mB5.3,Ms5.4,Msz5.1*
ISC 06 01:11:12.1±0.5,**2346S**±003×**7049W**±004,**h26**km±3km, **h28**km±.9km**:pP-P,n528,**σ0.73/474,**mb5.0**/89,**MS4.6**/16, **154C-155D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	Antofagasta	0.24	162	⇓eP	Pb	01 11 18.6	+0.2
ANCH				i S	Sb	01 11 24.1	+1.5
ANCH	Antofagasta	0.24	162	⇓eP	Pb	01 11 18.6	+0.2
ANCH				i S	Sb	01 11 24.1	+1.5
ANCH				AML	AML	01 11 27.7	
	comp=N,98μm,0.6s						
CEN1	Los Morros	0.28	76	⇓eP	Pb	01 11 17.3	-1.6
CEN1				i S	Sb	01 11 23.6	+0.1
MECH	Mejillones	0.35	6	⇓iP	Pb	01 11 18.7	-1.3
MECH				eS	Sb	01 11 26.4	+1.1
MECH				AML	AML	01 11 36.1	
	comp=N,500μm,0.7s						
PECH	Pedro de Valdi	1.14	42	⇓iP	Pn	01 11 32.9	+0.5
PECH				i S	Sn	01 11 50.5	+3.4
PECH				AML	AML	01 11 54.2	
	comp=E,334μm,0.5s						
CPN1	Cerro Paranal	1.17	176	eP	Pn	01 11 30.0	-2.8
CPN1				i S	Sn	01 11 46.3	-1.5
CPN1				AML	AML	01 11 49.2	
	comp=E,22μm,0.7s						
TOCH	Tocopilla	1.38	11	⇑iP	Pn	01 11 34.4	-1.3
TOCH				i S	Sn	01 11 53.8	+0.6
TOCH				AML	AML	01 12 00.7	
	comp=N,44μm,0.7s						
MACH	Maria Elena	1.42	29	eP	Pn	01 11 36.6	+0.3
MACH				i S	Sn	01 11 58.1	+3.9
LVC	Limon Verde	1.68	60	Pg	Pn	01 11 43.3	+3.5
	comp=N,2μm,0.3s,baz=240,slow=12,SNR=1425						
LVC				Lg		01 12 07.3	
	comp=N,2μm,0.3s,baz=341,slow=12,SNR=26						
LVC	Limon Verde	1.68	60	ePn	Pn	01 11 42.5	+2.7
LVC				eSn	Sn	01 12 07.0	+6.5
LVC	Limon Verde	1.68	60	⇓iP	Pn	01 11 42.8	+3.0
LVC				i S	Sn	01 12 07.7	+7.2
SPCH	San Pedro de A	2.18	76	eP	Pn	01 11 53.6	+6.9
SPCH				AML	AML	01 12 35.8	
	comp=E,82μm,0.8s						
PB01	Plate Boundary	2.57	21	⇑iP	Pn	01 11 51.7	-0.4
PB01				AML	AML	01 12 36.9	
	comp=E,21μm,0.6s						
ARE	Arequipa	7.02	352	⇑iP	Pn	01 12 49.9	-3.4
ARE				i S	Pb	01 13 07.8	-5.6
CFAA	Coronel Fontan	8.36	167	Pn	Pn	01 13 10.0	-1.6
	comp=E,0.5nm,0.3s,baz=335,slow=13,SNR=20						
CFAA				Sn	Sn	01 15 01.0	+16
	comp=E,0.9nm,0.3s,baz=201,slow=16,SNR=14						
CFAA				LR	LR	01 16 33.4	
	comp=E,495nm,19.4s,baz=332,slow=38						
SIV	San Ignacio	11.56	52	Pn	Pn	01 13 54.0	-1.6
	comp=E,1.3nm,0.3s,baz=240,slow=11,SNR=53						
SIV				Sn	Sn	01 16 05.0	+1.1
	baz=238,slow=22,SNR=2.9						
NNA	Nana	12.90	331	Pn	Pn	01 14 14.3	+0.4
	comp=E,2.0nm,0.3s,baz=182,slow=15,SNR=6.9						
NNA				Sn	Sn	01 16 26.5	-10
	comp=E,3.3nm,0.3s,baz=357,slow=22,SNR=4.7						
NNA	Nana	12.90	331	ePn	Pn	01 14 14.6	+0.6
NNA				eSn	Sn	01 16 26.0	-11
LPA	La Plata	15.81	139	deP	Pn	01 14 55.0	+2.0
LPA				esP	sP	01 15 10.0	+3.0
PLCA	Paso Flores	17.23	180	P	Pn	01 15 07.7	-3.2
	comp=E,0.3nm,0.3s,baz=4.4,slow=13,SNR=9.9						
PLCA				LR	LR	01 21 54.5	
	comp=E,1μm,21.9s,baz=354,slow=37						
PLCA	Paso Flores	17.23	180	eP	Pn	01 15 07.8	-3.1
PLCA				pmax	pmax		
	comp=Z,68nm,1.5s						
PLCA	Paso Flores	17.23	180	ePn	Pn	01 15 07.8	-3.1
	comp=Z,68nm,1.5s						
ATAH	Atahualpa	18.04	334	P	Pn	01 15 22.1	+1.0
	comp=Z,0.4nm,0.3s,baz=135,slow=9.7,SNR=5.4						
BDFB	Brasilia	22.54	74	P	P	01 16 10.5	+0.3
	comp=Z,14nm,1.2s,mb4.3,baz=243,slow=17,SNR=14						
BDFB				LR	LR	01 25 43.4	
	comp=Z,450nm,20.1s,MS3.9,baz=60,slow=39						
BDFB	Brasilia	22.54	74	eP	P	01 16 09.7	-0.6
BDFB				pmax	pmax		
	comp=Z,13nm,0.8s						
BDFB	Brasilia	22.54	74	eP	P	01 16 09.7	-0.5
	comp=Z,13nm,0.8s,mb4.4						
OTAV	Otavalo	24.79	341	eP	P	01 16 33.3	+1.3
	comp=Z,47nm,1.0s,mb5.0						
OTAV				epP		01 16 46.2	
ROSC	El Rosal	28.39	352	P	P	01 17 04.7	+0.2
	comp=Z,13nm,0.8s,mb4.6,baz=277,slow=22,SNR=9.5						
ROSC				LR	LR	01 28 06.0	
	comp=Z,394nm,20.9s,MS4.0,baz=21,slow=36						
USHA	Ushuaia	31.37	178	P	P	01 17 31.5	+1.0
	comp=Z,6.1nm,0.9s,mb4.4,baz=11,slow=8.7,SNR=2.3						
USHA				LR	LR	01 31 06.5	
	comp=Z,2μm,18.6s,MS4.7,baz=349,slow=38						
SDV	Santo Domingo	32.14	360	eP	P	01 17 36.0	-1.6
	comp=Z,56nm,2.0s,mb5.0						
RCBR	Riachuelo	37.62	68	eP	P	01 18 25.6	+0.5
	comp=Z,156nm,1.2s,mb5.6						
TGUH	Tegucigalpa,Un	40.74	335	eP	P	01 18 50.6	-0.4
	comp=Z,40nm,1.0s,mb5.0						
CRPR	Cabo Rojo, PR	41.34	5	eP	P	01 18 53.6	-2.3
	comp=Z,33nm,1.1s,mb4.9						
CPD	Cerro la Pandu	41.48	7	eP	P	01 18 54.5	-2.5
CPD				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.0						
CPD	Cerro la Pandu	41.48	7	eP	P	01 18 54.5	-2.5
	comp=Z,38nm,0.9s,mb5.0						
PMSA	Palmer Station	41.53	176	LR	LR	01 36 46.7	
	comp=Z,739nm,18.1s,MS4.6,baz=84,slow=37						
SJG	San Juan	41.53	6	eP	P	01 18 55.0	-2.4
SJG				pmax	pmax		
	comp=Z,79nm,0.8s						
SJG	San Juan	41.53	6	eP	P	01 18 55.0	-2.5
	comp=Z,79nm,0.8s,mb5.4						
MTP	Monte Pirata	41.58	7	eP	P	01 18 54.3	-3.5
	comp=Z,53nm,1.0s,mb5.1						
HUMP	Col San Antoni	41.59	7	eP	P	01 18 55.3	-2.7
	comp=Z,43nm,1.1s,mb5.0						
AOPR	Arecibo Observ	41.70	5	eP	P	01 18 56.9	-1.9
	comp=Z,46nm,1.4s,mb4.9						
CBYP	Canovanas	41.72	7	eP	P	01 18 55.7	-3.2
	comp=Z,96nm,1.0s,mb5.4						
HKT	Hockley	58.41	334	eP	P	01 21 04.2	-1.3
HKT				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
HKT	Hockley	58.41	334	eP	P	01 21 04.2	-1.4
	comp=Z,4.4nm,0.9s,mb4.5						
VNA3	Neumayer Olymp	58.71	161	eP	P	01 21 07.3	+0.2
VNA3				e		01 21 11.5	
VNA3				e	pP	01 21 15.5	+0.2
VNA3				e		01 21 18.8	
RKT	Rikitea	58.75	256	eS	S	01 29 08.8	-3.1
RKT				eLR	LR	01 38 42.3	
	comp=Z,1μm,24.8s						
VNA1	Neumayer--Stat	58.95	160	eP	P	01 21 09.5	+0.7
VNA1				e		01 21 13.6	
VNA1				e	pP	01 21 17.7	+0.8
VNA1				e		01 21 20.8	
VNA2	Neumayer--Watz	59.31	160	eP	P	01 21 11.3	0.0
	baz=289,slow=7.8						
VNA2				e		01 21 15.4	
VNA2				e	pP	01 21 19.6	+0.2
VNA2				e		01 21 23.1	
TKL	Tuckaleechee C	60.12	348	eP	P	01 21 15.2	-2.0
JCT	Junction City	60.56	331	eP	P	01 21 18.9	-1.4
JCT				e*PP	pP	01 21 27.7	-0.8
JCT				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						
JCT	Junction City	60.56	331	eP	P	01 21 18.9	-1.4
	comp=Z,19nm,0.9s,mb5.2						
JCT				epP	pP	01 21 27.7	-0.8
SNAA	Sanae	60.93	160	eP	P	01 21 21.9	-0.4
SNAA				e		01 21 25.5	
SNAA				e	pP	01 21 30.6	+0.1
SNAA				e		01 21 33.8	
SNAA	Sanae	60.93	160	d iP	P	01 21 22.1	-0.2
SNAA	Sanae	60.93	160	eP	P	01 21 22.1	-0.2
	comp=Z,19nm,1.2s,mb5.1						
TXAR	Lajitas Array	61.43	327	P	P	01 21 25.5	-0.7
	comp=Z,3.3nm,0.9s,mb4.5,baz=148,slow=8.3,SNR=32						
TXAR	Lajitas Array	61.43	327	P	P	01 21 25.5	-0.7
WVT	Waverly	61.49	344	eP	P	01 21 24.1	-2.4
WVT				e*PP	pP	01 21 31.6	-3.1
WVT				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.5						
WVT	Waverly	61.49	344	eP	P	01 21 24.1	-2.4
	comp=Z,38nm,1.0s,mb5.5						
WVT				epP	pP	01 21 31.6	-3.1
MIAR	Mount Ida	61.71	338	eP	P	01 21 26.3	-1.7
MIAR				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
MIAR	Mount Ida	61.71	338	eP	P	01 21 26.2	-1.8
	comp=Z,23nm,1.0s,mb5.3						
WCI	Wyandotte Cave	63.12	346	eP	P	01 21 35.0	-2.4
WCI				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.4						
WCI	Wyandotte Cave	63.12	346	eP	P	01 21 35.0	-2.4
	comp=Z,29nm,0.9s,mb5.4						
USIN	University of	63.19	345	eP	P	01 21 35.9	-2.0
	comp=Z,20nm,0.8s,mb5.3						
USIN				epP	pP	01 21 43.3	-2.8
WMOK	Wichita Mounta	63.80	334	eP	P	01 21 40.1	-1.9
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WMOK	Wichita Mounta	63.80	334	eP	P	01 21 40.1	-1.9
	comp=Z,2.3nm,0.6s,mb4.4						
FVM	French Village	63.92	343	eP	P	01 21 40.8	-1.9
FVM				e*PP	pP	01 21 48.3	-2.6
FVM				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.4						
FVM	French Village	63.92	343	eP	P	01 21 40.8	-1.9
	comp=Z,42nm,1.0s,mb5.4						
FVM				epP	pP	01 21 48.3	-2.6
SSPA	Standing Stone	64.13	354	eP	P	01 21 43.3	-0.7
	comp=Z,9.8nm,1.1s,mb4.8						
SSPA				epP	pP	01 21 50.2	-2.1
CCM	Cathedral Cave	64.22	342	eP	P	01 21 42.4	-2.2
CCM				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.2						
CCM	Cathedral Cave	64.22	342	eP	P	01 21 42.4	-2.2
	comp=Z,36nm,1.3s,mb5.2						
ACSO	Alum Creek Sta	64.42	349	eP	P	01 21 44.0	-1.9
	comp=Z,39nm,1.1s,mb5.3						
AMTX	Amarillo	65.13	332	eP	P	01 21 49.6	-1.1
	comp=Z,6.7nm,0.8s,mb4.7						
319A	Douglas	65.97	324	⇓P	P	01 21 56.3	+0.1
	baz=66,SNR=10						
318A	Bisbee	66.40	324	⇓P	P	01 21 58.8	-0.2
	baz=66,SNR=13						
219A	White Tail Can	66.44	325	⇓P	P	01 21 59.2	0.0
	baz=66,SNR=9.0						
QSPA	South Pole Qui	66.75	180	P	P	01 22 00.8	+0.3
	comp=Z,7.4nm,0.7s,mb4.8,baz=141,slow=3.9,SNR=14						
218A	Dragoon	66.84	324	⇑P	P	01 22 01.9	+0.1
	baz=67,SNR=5.5						
Y22D	IRIS PASSCAL I	66.88	328	⇓P	P	01 22 02.8	+0.8
	baz=67						
119A	Ashpeak Ranch,	67.06	325	⇓P	P	01 22 03.9	+0.7
	baz=67						
217A	Green Valley	67.11	323	⇓P	P	01 22 03.3	-0.2
	baz=67,SNR=9.8						
118A	Homack Ranch,	67.32	324	⇑P	P	01 22 04.7	0.0
	baz=67,SNR=8.5						
ANMO	Albuquerque	67.36	328	c iP	P	01 22 04.5	-0.5
ANMO	Albuquerque	67.36	328	eP	P	01 22 04.4	-0.6
	comp=Z,19nm,1.4s,mb4.9						
Z19A	T-Link Ranch,	67.45	325	⇑P	P	01 22 06.2	+0.6
	baz=68						
TUC	Tucson	67.50	324	eP	P	01 22 06.0	0.0
TUC				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
TUC	Tucson	67.50	324	eP	P	01 22 06.0	0.0
	comp=Z,11nm,1.2s,mb4.8						
216A	Three Points,	67.64	323	⇓P	P	01 22 07.1	+0.3
	baz=68						
117A	Oracle	67.68	324	⇓P	P	01 22 07.1	+0.1
	baz=68,SNR=14						
CBKS	Cedar Bluff	67.73	336	eP	P	01 22 06.7	-0.5
CBKS				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.4						
CBKS	Cedar Bluff	67.73	336	eP	P	01 22 06.7	-0.5
	comp=Z,41nm,1.1s,mb5.4						
Y19A	Nutrioso	67.97	326	⇓P	P	01 22 09.1	+0.2
	baz=68,SNR=24						
116A	Eloy	68.20	323	⇓P	P	01 22 10.9	+0.6
	baz=68						
Y18A	Canyon Day Jun	68.23	325	⇑P	P	01 22 10.7	+0.2
	baz=68,SNR=6.8						
SCIA	State Center	68.35	342	eP	P	01 22 09.1	-2.0
	comp=Z,29nm,1.0s,mb5.3						
X19A	St. Johns	68.35	326	⇑P	P	01 22 11.9	+0.6
	baz=68						
214A	Organ Pipe Nat	68.36	322	⇑P	P	01 22 11.6	+0.2
	baz=68,SNR=5.7						
115A	Sonoran Desert	68.59	323	⇑P	P	01 22 13.4	+0.6
	baz=69						
Y17A	Roosevelt	68.60	325	⇓P	P	01 22 13.4	+0.6
	baz=69,SNR=17						
Z16A	Peralta Trail,	68.64	324	⇑P	P	01 22 13.4	+0.3
	baz=69						
X18A	Snowflake	68.77	326	⇓P	P	01 22 14.2	+0.4
	baz=69						
Y16A	Circle Bar Ran	69.08	324	⇑P	P	01 22 16.2	+0.5
	baz=69,SNR=10						
SDCO	Great Sand Dun	69.20	331	eP	P	01 22 16.4	-0.1
	comp=Z,18nm,1.0s,mb5.0						
V19A	Window Rock	69.24	327	⇑P	P	01 22 17.5	+0.7
	baz=69						
X16A	Lo Mia Camp, P	69.47	325	⇓P	P	01 22 18.5	+0.4
	baz=70,SNR=12						
113A	Mohawk Valley,	69.50	322	⇑P	P	01 22 18.8	+0.3
	baz=70						
W17A	Winslow	69.59	326	⇑P	P	01 22 19.8	+0.9
	baz=70						
Y15A	Casa Rosa Ranc	69.59	324	⇑P	P	01 22 19.3	+0.3
	baz=70,SNR=6.1						
V18A	Ganado	69.68	327	⇑P	P	01 22 20.0	+0.5
	baz=70						
X15A	Humboldt	69.94	324	⇓P	P	01 22 21.4	+0.2
	baz=70,SNR=9.5						
Y14A	Wickenburg	69.95	323	⇓P	P	01 22 21.6	+0.5
	baz=70						
W16A	Flagstaff	70.03	325	⇑P	P	01 22 22.3	+0.6
	baz=70,SNR=11						
T19A	Beclabito	70.11	328	⇑P	P	01 22 22.4	+0.3
	baz=70,SNR=10						
MVCO	Mesa Verde	70.16	328	⇑P	P	01 22 22.9	+0.5
	baz=70						
U18A	Rough Rock, Ch	70.21	327	⇓P	P	01 22 23.1	+0.4
	baz=70,SNR=10						
WUAZ	Wupatki	70.27	325	⇓P	P	01 22 23.6	+0.5
	baz=70						
WUAZ	Wupatki	70.27	325	eP	P	01 22 23.3	+0.2
	comp=Z,18nm,0.9s,mb5.0						
WUAZ				epP	pP	01 22 32.0	+0.6
X14A	Yava	70.28	324	⇑P	P	01 22 23.7	+0.5
	baz=70,SNR=6.2						
GLA	Glamis	70.32	321	⇑P	P	01 22 24.0	+0.6
	baz=70						
LIC	Lamto	70.33	74	eP	P	01 22 23.7	-0.3
	comp=Z,49nm,1.1s,mb5.3						
LIC	Lamto	70.33	74	eP	P	01 22 23.8	-0.2
	comp=Z,42nm,1.1s,mb5.0						
LIC	Lamto	70.33	74	eP	P	01 22 23.8	-0.2
	comp=Z,21nm,1.1s,mb5.0						
W15A	Williams	70.48	325	⇑P	P	01 22 25.3	+0.9
	baz=71						
TIC	Toumodi	70.53	73	eP	P	01 22 25.0	-0.2
	comp=Z,194nm,1.2s,mb5.9						
U16A	Tuba City	70.63	326	⇑P	P	01 22 25.5	+0.2
	baz=71,SNR=8.1						
R21A	Cimarron	70.64	330	⇓P	P	01 22 25.6	+0.3
	baz=71,SNR=8.7						
KIC	Kosan Boka	70.65	74	eP	P	01 22 25.9	0.0
	comp=Z,177nm,1.1s,mb5.9						
Y12C	Blythe	70.66	322	⇓P	P	01 22 26.2	+0.7
	baz=71						
DBIC	Dimbokro	70.69	73	P	P	01 22 26.2	0.0
	comp=Z,23nm,0.8s,mb5.2,baz=212,slow=5.6,SNR=34						
DBIC				LR	LR	01 52 46.8	
	comp=Z,594nm,19.1s,MS4.9,baz=194,slow=35						
DBIC	Dimbokro	70.69	73	eP	P	01 22 25.9	-0.3
DBIC				pmax	pmax		
	comp=Z,44nm,1.0s						
DBIC	Dimbokro	70.69	73	eP	P	01 22 25.9	-0.3
	comp=Z,44nm,1.0s,mb5.3						
U17A	Shonto	70.75	327	⇓P	P	01 22 26.5	+0.5
	baz=71,SNR=6.7						
T18A	Mexican Hat	70.77	328	⇑P	P	01 22 25.6	-0.5
	baz=71,SNR=18						
S19A	Harvey Farm, M	70.89	328	⇓P	P	01 22 26.7	-0.1
	baz=71,SNR=19						
V15A	Kaibab Nationa	70.92	325	⇓P	P	01 22 27.4	+0.4
	baz=71,SNR=8.2						
W14A	Seligman	70.95	324	⇓P	P	01 22 27.6	+0.4
	baz=71,SNR=6.1						
ECSD	EROS,Sioux Fal	71.03	340	eP	P	01 22 25.6	-1.9
	comp=Z,30nm,1.2s,mb5.1						
SMCO	Snowmass	71.04	331	eP	P	01 22 25.1	-2.6
	comp=Z,18nm,1.1s,mb4.9						
BC3	Big Chuckw Mtn	71.11	321	⇓P	P	01 22 28.7	+0.5
	baz=71						
MONP	Monument Peak	71.12	320	⇑P	P	01 22 28.7	+0.3
	baz=71						
T17A	Navajo Res., N	71.12	327	⇑P	P	01 22 28.9	+0.6
	baz=71,SNR=13						
S18A	Hurst Farm, Bl	71.27	328	⇑P	P	01 22 29.9	+0.8
	baz=71,SNR=27						
V14A	Boquillas Ranc	71.28	324	⇑P	P	01 22 29.8	+0.6
	baz=71,SNR=11						
W13A	Hualapai Mount	71.30	324	⇑P	P	01 22 30.0	+0.6
	baz=71,SNR=6.0						
IRM	Iron Mountain	71.31	322	⇓P	P	01 22 30.0	+0.6
	baz=71						
R19A	Curley Farm, L	71.39	329	⇑P	P	01 22 30.0	+0.1
	baz=72,SNR=6.5						
U15A	North Rim	71.45	325	⇓P	P	01 22 30.9	+0.6
	baz=72,SNR=12						
Q20A	Ridgley Place,	71.46	330	⇑P	P	01 22 30.7	+0.4
	baz=72						
T16A	Glen Canyon Da	71.47	326	⇓P	P	01 22 31.2	+0.9
	baz=72						
S17A	Black Ridge (B	71.62	327	⇓P	P	01 22 31.8	+0.5
	baz=72,SNR=8.5						
BELC	Belle Mtn.	71.67	321	⇓P	P	01 22 32.1	+0.5
	baz=72						
R18A	Canyonlands Na	71.76	328	⇑P	P	01 22 32.0	-0.1
	baz=72,SNR=7.3						
U14A	Mt Trumbull	71.91	325	⇓P	P	01 22 33.5	+0.5
	baz=72,SNR=17						
V13A	Grand Canyon W	71.91	324	⇓P	P	01 22 33.5	+0.5
	baz=72,SNR=9.4						
Q19A	Hogan Spring (	71.91	329	⇓P	P	01 22 33.1	+0.2
	baz=72,SNR=7.2						
T15A	Red Dirt Ranch	71.95	326	⇓P	P	01 22 33.6	+0.4
	baz=72,SNR=8.4						
LDFC	Landfair	71.96	323	eP	P	01 22 34.2	+0.9
	comp=Z,28nm,1.4s,mb5.0						
GMRC	Granite Mounta	72.05	322	⇓P	P	01 22 34.0	+0.1
	baz=72						
S16A	Weppner Ranch,	72.08	327	⇓P	P	01 22 34.3	+0.3

baz=72,SNR=8.0
O21A Pagoda 72.11 331 ⇑P P 01 22 34.4 +0.3
baz=72
N22A Wattenberg Ran 72.14 332 ⇑P P 01 22 34.7 +0.4
baz=72,SNR=8.8
R17A Hanksville Air 72.19 328 ⇓P P 01 22 34.9 +0.3
baz=72,SNR=17
V12A Nelson 72.29 323 ⇓P P 01 22 35.4 +0.1
baz=72,SNR=6.1
P19A Cripple Cowboy 72.32 330 ⇓P P 01 22 35.8 +0.4
baz=72,SNR=20
U13A Pakoon Wash 72.32 324 ⇓P P 01 22 36.1 +0.6
baz=72
T14A Hurricane 72.34 325 ⇑P P 01 22 36.0 +0.4
baz=72,SNR=6.3
O20A White River Ci 72.39 330 ⇓P P 01 22 36.1 +0.3
baz=72,SNR=8.9
Q18A Rafter H Ranch 72.44 329 ⇓P P 01 22 36.3 +0.1
baz=72,SNR=9.1
HEC Hector,Ludlow 72.46 322 ⇑P P 01 22 37.1 +0.7
baz=72
R16A Teasdale 72.46 327 ⇑P P 01 22 37.0 +0.8
baz=72
N21A Black Mountain 72.57 331 ⇓P P 01 22 37.8 +0.9
baz=73
SRU San Rafael 72.64 328 ⇑P P 01 22 37.5 +0.1
baz=73
U12A Valley of Fire 72.64 324 ⇑P P 01 22 38.0 +0.6
baz=73
TUQ Turquoise Moun 72.67 322 ⇑P P 01 22 38.2 +0.6
baz=73
V11A Goodsprings 72.69 323 ⇑P P 01 22 38.1 +0.3
baz=73
M22A Cedar Creek Ra 72.70 332 ⇑P P 01 22 38.3 +0.7
baz=73
T13A Saint George 72.74 325 ⇓P P 01 22 38.6 +0.6
baz=73
Q16A Castle Valley 72.80 328 ⇑P P 01 22 39.3 +1.0
baz=73
R15A Junction 72.80 327 ⇓P P 01 22 38.9 +0.6
baz=73
P18A Preston Nutter 72.91 329 ⇓P P 01 22 39.1 +0.2
baz=73,SNR=16
S14A Cedar City 72.92 326 ⇓P P 01 22 39.6 +0.6
baz=73
N20A Spence Gulch, 72.96 331 ⇑P P 01 22 39.5 +0.3
baz=73,SNR=7.5
P17A Butcher Ranch, 73.03 328 ⇑P P 01 22 39.7 +0.1
baz=73,SNR=9.0
GSC Goldstone 73.07 322 ⇑P P 01 22 40.6 +0.6
baz=73
S13A Holt Ranch, En 73.14 325 ⇑P P 01 22 40.6 +0.2
baz=73,SNR=9.1
M21A Separation Pea 73.19 332 ⇑P P 01 22 40.3 -0.2
baz=73,SNR=6.3
RWWY Rawlins 73.19 332 eP P 01 22 40.8 +0.2
comp=Z,17nm,1.1s,mb4.9
R14A James Farms, M 73.25 326 ⇓P P 01 22 41.8 +0.9
baz=73
N19A John Jarvie Ra 73.42 330 ⇑P P 01 22 41.6 -0.3
baz=74,SNR=14
EDW2 Edwards Air Fo 73.45 321 ⇑P P 01 22 42.6 +0.3
baz=74
M20A Sweetwater, Wa 73.46 331 ⇓P P 01 22 42.0 -0.1
baz=74,SNR=5.9
Q15A Fillmore 73.46 327 ⇑P P 01 22 42.4 +0.3
baz=74
PPT Papeete 73.46 258 eS S 01 32 22.7 +12
PPT Papeete 73.46 258 LR LR 01 46 05.9
comp=Z,428nm,21.1s,MS4.7,baz=220,slow=28
L21A Rawlins 73.49 332 ⇑P P 01 22 42.1 -0.2
baz=74,SNR=14
O17A Robinson Place 73.59 329 ⇓P P 01 22 43.4 +0.5
baz=74,SNR=19
T11A Corn Creek, Al 73.61 324 ⇓P P 01 22 43.5 +0.4
baz=74,SNR=13
R13A O'Grain Ranch, 73.65 326 ⇑P P 01 22 44.2 +0.9
baz=74
S12A Delamar Landin 73.68 325 ⇑P P 01 22 44.4 +0.9
baz=74
N18A Larsen Ranch, 73.71 330 ⇓P P 01 22 43.8 +0.2
baz=74,SNR=10.0
P15A Leamington 73.85 328 ⇓P P 01 22 44.8 +0.4
baz=74
M19A Rock Springs 73.90 331 ⇑P P 01 22 45.1 +0.4
baz=74
Q14A Sevier Lake (B 73.90 327 ⇓P P 01 22 45.3 +0.5
baz=74,SNR=10
RSSD Black Hills 73.94 336 eP P 01 22 44.7 -0.2
RSSD e*PP pP 01 22 52.0 -1.2
RSSD pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
RSSD Black Hills 73.94 336 eP P 01 22 44.7 -0.2
comp=Z,9.1nm,1.0s,mb4.7
RSSD epP pP 01 22 52.0 -1.2
L20A Wamsutter 73.94 332 ⇓P P 01 22 45.0 0.0
baz=74,SNR=7.1
FURC Furnace Creek, 73.94 323 ⇑P P 01 22 45.4 +0.3
baz=74
TPNV Topopah Spring 73.95 323 ⇓P P 01 22 45.5 +0.4
baz=74
TPNV Topopah Spring 73.95 323 eP P 01 22 46.1 +1.0
TPNV pmax pmax
comp=Z,26nm,1.3s,mb5.0
TPNV Topopah Spring 73.95 323 eP P 01 22 46.1 +1.0
comp=Z,26nm,1.3s,mb5.0
O16A Springville 73.96 328 ⇑P P 01 22 45.8 +0.6
baz=74
MPMC Manual Prospec 74.00 322 ⇓P P 01 22 45.9 +0.5
baz=74
R12A Pony Springs, 74.09 325 ⇑P P 01 22 46.5 +0.6
baz=74,SNR=5.4
S11A Rachel 74.19 324 ⇑P P 01 22 46.8 +0.4
baz=74
N17A Moffit Pass 74.22 329 ⇑P P 01 22 47.1 +0.5
baz=74,SNR=12
P14A Drum Mountains 74.26 327 ⇑P P 01 22 47.2 +0.4
baz=74,SNR=8.6
Q13A Wheeler Ranch, 74.26 326 ⇓P P 01 22 47.2 +0.4
baz=74,SNR=5.9
N16A Rees Ranch, Co 74.46 329 ⇓P P 01 22 48.4 +0.4
baz=75
L19A Farson 74.47 331 ⇓P P 01 22 48.2 +0.2
baz=75,SNR=8.3
K20A Yellowstone Ra 74.47 332 ⇑P P 01 22 47.4 -0.6
baz=75,SNR=9.4
PKM Peak Mountain 74.54 320 ⇑P P 01 22 49.1 +0.5
baz=75
M17A Scullys Gap (B 74.56 330 ⇑P P 01 22 49.5 +0.9
baz=75
DUG Dugway 74.59 328 ⇑P P 01 22 49.0 +0.3
baz=75
DUG Dugway 74.59 328 eP P 01 22 48.8 0.0
DUG pmax pmax
comp=Z,14nm,1.1s,mb4.8
DUG Dugway 74.59 328 eP P 01 22 48.8 0.0
comp=Z,14nm,1.1s,mb4.8
R11A Troy Canyon, C 74.62 325 ⇓P P 01 22 49.1 +0.1
baz=75,SNR=11
P13A Bates Ranch, G 74.63 326 ⇑P P 01 22 49.3 +0.3
baz=75,SNR=8.7
L18A Fontenelle, Gr 74.63 330 ⇓P P 01 22 48.9 -0.1
baz=75,SNR=12
VNDA Vanda 74.68 190 P P 01 22 49.6 +0.8
comp=Z,1.8nm,0.9s,mb4.0,baz=109,slow=2.8,SNR=4.7
VNDA LR LR 01 56 17.1
comp=Z,185nm,18.0s,MS4.4,baz=145,slow=36
Q12A Willow Creek R 74.74 326 ⇓P P 01 22 49.6 0.0
baz=75
K19A Absolon Red Bu 74.82 332 ⇓P P 01 22 49.6 -0.4
baz=75,SNR=6.5
S10A Tonopah Range, 74.85 324 ⇑P P 01 22 50.4 +0.1
baz=75,SNR=7.5
R10A Warm Springs 74.96 324 ⇑P P 01 22 51.5 +0.6
baz=75,SNR=5.8
N15A Stansbury Isla 74.98 328 ⇓P P 01 22 51.2 +0.1
baz=75
Q11A Duckwater 75.02 325 ⇑P P 01 22 51.5 +0.2
baz=75,SNR=9.7
S09A Goldfield 75.05 323 ⇓P P 01 22 51.6 +0.1
baz=75
BW06 Boulder Array 75.09 331 ⇓P P 01 22 51.8 +0.2
baz=75
BW06 Boulder Array 75.09 331 eP P 01 22 51.1 -0.4
comp=Z,5.3nm,0.9s,mb4.5
PDAR Pinedale Array 75.09 331 P P 01 22 51.3 -0.3
comp=Z,1.5nm,0.9s,mb3.9,baz=157,slow=8.0,SNR=11
L17A Cokeville 75.15 330 ⇓P P 01 22 51.6 -0.3
baz=75,SNR=7.3
SYO Syowa Base 75.19 160⇑ eP P 01 22 51.3 -0.6
K18A Toltan Ranch, 75.20 331 ⇓P P 01 22 52.0 -0.2
baz=75,SNR=13
N14A Grayback Hills 75.28 328 ⇓P P 01 22 52.4 -0.4
baz=75,SNR=7.1
R09A Tonopah 75.34 324 ⇓P P 01 22 53.1 0.0
baz=75
L16A Fish Haven 75.34 330 ⇓P P 01 22 52.8 -0.2
baz=75,SNR=7.9
M15A Larsen Ranch, 75.39 329 ⇓P P 01 22 53.1 -0.2
baz=76,SNR=11
Q10A Clear Creek Ra 75.40 325 ⇓P P 01 22 53.7 +0.2
baz=76
O12A Currie 75.61 327 ⇓P P 01 22 54.5 -0.1
baz=76,SNR=6.1
J18A Kendall Valley 75.65 331 ⇓P P 01 22 54.5 -0.3
baz=76,SNR=14
K17A Gardner Place, 75.69 330 ⇓P P 01 22 54.8 -0.2
baz=76,SNR=7.4
L15A Malad City 75.78 329 ⇓P P 01 22 55.1 -0.5
baz=76,SNR=9.9
M14A Sheep Mountain 75.85 328 ⇓P P 01 22 55.5 -0.5
baz=76,SNR=6.9
I18A Diamond G Ranc 75.95 332 ⇑P P 01 22 56.0 -0.4
baz=76,SNR=12
O11A Cowboy Ranch, 75.97 326 ⇑P P 01 22 57.0 +0.3
baz=76,SNR=5.7
K16A Soda Springs 76.05 330 ⇑P P 01 22 57.4 +0.3
baz=76,SNR=16
J17A Brown Place, J 76.08 331 ⇑P P 01 22 57.6 +0.4
baz=76,SNR=6.9
REDW Red Top Meadow 76.14 331 eP P 01 22 57.8 +0.3
comp=Z,9.2nm,0.9s,mb4.7
M13A Montello 76.14 328 ⇓P P 01 22 58.0 +0.4
baz=76
NVAR Mina Array Bea 76.15 323 P P 01 22 58.0 +0.2
comp=Z,1.7nm,0.6s,mb4.2,baz=142,slow=7.4,SNR=14
SNOW Snow King Moun 76.17 331 eP P 01 22 58.0 +0.2
comp=Z,11nm,0.9s,mb4.8
SNOW epP pP 01 23 06.2 0.0
N12A Clover Valley, 76.20 327 ⇓P P 01 22 57.9 -0.1
baz=76
L14A Malta 76.21 329 ⇑P P 01 22 58.0 0.0
baz=76,SNR=5.6
ELK Elko 76.22 327 eP P 01 22 58.2 +0.1
ELK pmax pmax
comp=Z,7.0nm,1.1s
ELK Elko 76.22 327 eP P 01 22 58.2 +0.2
comp=Z,7.5nm,1.1s,mb4.5
LOHW Long Hollow 76.22 331 eP P 01 22 57.7 -0.4
comp=Z,4.8nm,0.8s,mb4.5
Q08A Gabbs 76.25 324 ⇑P P 01 22 58.4 +0.1
baz=76
TPAW Tenpas Pass 76.28 331 eP P 01 22 58.1 -0.3
comp=Z,9.0nm,0.9s,mb4.7
RRI2 Red Ridge 76.34 331 eP P 01 22 58.9 +0.2
comp=Z,10.0nm,0.9s,mb4.8
K15A Arbon 76.37 329 ⇑P P 01 22 59.0 0.0
baz=76
MOOW Moose Ponds 76.39 331 eP P 01 22 59.0 -0.1
comp=Z,2.9nm,0.8s,mb4.3
J16A Bone 76.41 330 ⇑P P 01 22 59.5 +0.4
baz=76
I17A Pilgram Creek 76.46 331 ⇑P P 01 23 00.0 +0.7
baz=76
O10A Cortez Mining, 76.53 326 ⇑P P 01 23 00.2 +0.4
baz=77
M12A Wells 76.56 327 ⇑P P 01 23 00.0 0.0
baz=77,SNR=5.3
K14A Jones Ranch, D 76.57 329 ⇓P P 01 22 59.7 -0.3
baz=77
ULM Lac du Bonnet 76.75 344 P P 01 22 58.9 -2.0
comp=Z,10nm,1.0s,mb4.7,baz=148,slow=5.1,SNR=5.5
ULM Lac du Bonnet 76.75 344 eP P 01 22 58.9 -2.0
comp=Z,38nm,1.5s,mb5.1
I16A Newdale 76.83 331 ⇑P P 01 23 01.9 +0.4
baz=77
R06C Coleville 76.85 323 ⇑P P 01 23 02.3 +0.6
baz=77
RLMT Red Lodge 76.86 333 ⇑P P 01 23 01.5 -0.1
baz=77
RLMT Red Lodge 76.86 333 eP P 01 23 01.3 -0.3
comp=Z,48nm,1.7s,mb5.2
J15A Blackfoot 76.88 330 ⇑P P 01 23 01.8 0.0
baz=77,SNR=6.1
M11A Holland Ranch, 77.01 327 ⇓P P 01 23 02.8 +0.3
baz=77,SNR=6.4
K13A Stover Farm, H 77.08 329 ⇑P P 01 23 03.3 +0.4
baz=77
G18A Lazy EL Ranch, 77.14 333 ⇓P P 01 23 03.1 -0.1
baz=77,SNR=12
L12A House Creek Ra 77.15 328 ⇑P P 01 23 03.4 0.0
baz=77,SNR=8.8
J14A Carey 77.33 329 ⇓P P 01 23 04.9 +0.7
baz=77
H16A Russell Place, 77.37 332 ⇑P P 01 23 04.9 +0.4
baz=78,SNR=9.3
I15A Monteview 77.37 330 ⇑P P 01 23 04.9 +0.4
baz=78
O08A Rooster Mine 77.40 325 ⇓P P 01 23 04.9 +0.1
baz=78
M10A I.L. Ranch, Tu 77.45 326 ⇑P P 01 23 05.4 +0.4
baz=78
K12A Draper Farm, C 77.47 328 ⇓P P 01 23 05.4 +0.3
baz=78,SNR=10
L11A Cat Creek Ranc 77.53 327 ⇓P P 01 23 05.5 0.0
baz=78,SNR=7.5
G17A Pierce Place, 77.64 332 ⇑P P 01 23 06.4 +0.4
baz=78
F18A Big Timber 77.67 333 ⇓P P 01 23 06.2 +0.1
baz=78,SNR=16
O07A Toulon 77.69 324 ⇓P P 01 23 06.8 +0.4
baz=78
J13A Cove Ranch, Pi 77.69 329 ⇓P P 01 23 06.7 +0.4
baz=78
DGMT Dagmar 77.70 338 ⇑P P 01 23 06.1 -0.2
baz=78
DGMT Dagmar 77.70 338 eP P 01 23 05.9 -0.3
comp=Z,35nm,0.9s,mb5.3
I14A Mackay 77.76 330 ⇓P P 01 23 07.1 +0.4
baz=78,SNR=6.0
L10A Juniper Basin 77.83 327 ⇓P P 01 23 07.5 +0.4
baz=78,SNR=14
M09A Marrel Ranch, 77.85 326 ⇑P P 01 23 07.4 +0.1
baz=78
H15A Lima 77.92 331 ⇓P P 01 23 08.1 +0.5
baz=78
HLID Hailey 77.93 329 ⇑P P 01 23 08.2 +0.5
baz=78
HLID Hailey 77.93 329 eP P 01 23 08.1 +0.5
comp=Z,21nm,1.4s,mb4.9
SCHQ Schefferville 78.03 2 P P 01 23 07.2 -0.8
comp=Z,5.4nm,0.8s,mb4.5,baz=213,slow=5.7,SNR=3.6
SCHQ LR LR 01 58 25.1
comp=Z,229nm,19.8s,MS4.5,baz=263,slow=36
G16A Moss Hill, Enn 78.03 332 ⇓P P 01 23 08.4 +0.3
baz=78
I13A Wildhorse Cree 78.06 329 ⇑P P 01 23 08.8 +0.4
baz=78,SNR=11
F17A Fitzpatrick Pl 78.07 333 ⇓P P 01 23 08.7 +0.3
baz=78,SNR=8.7
K11A Parker Ranch, 78.12 328 ⇓P P 01 23 09.0 +0.3
baz=78,SNR=6.9
N07B Gerlach 78.18 324 ⇑P P 01 23 09.6 +0.5
baz=78,SNR=11
H14A Leadore 78.25 330 ⇓P P 01 23 09.6 +0.2
baz=78,SNR=5.5
BOZ Bozeman (W) 78.28 332 ⇑P P 01 23 09.3 -0.2
baz=78
BOZ Bozeman (W) 78.28 332 eP P 01 23 09.3 -0.2
BOZ pmax pmax
comp=Z,26nm,1.8s,mb4.9
BOZ Bozeman (W) 78.28 332 eP P 01 23 09.3 -0.2
comp=Z,26nm,1.8s,mb4.9
G15A Dillon 78.28 331 ⇑P P 01 23 09.7 +0.2
baz=78,SNR=8.1
E18A Harlowton 78.29 333 ⇓P P 01 23 09.7 +0.2
baz=78,SNR=9.0
BEKR Beckwourth 78.29 323 ⇑P P 01 23 10.0 +0.2
baz=78
M08A Happy Creek Ra 78.35 325 ⇓P P 01 23 10.5 +0.5
baz=78
F16A Kennard Place, 78.39 332 ⇓P P 01 23 10.5 +0.4
baz=78
L09A Wilkinson Ranc 78.39 326 ⇑P P 01 23 10.6 +0.4
baz=78
I12A Atlanta 78.45 329 ⇓P P 01 23 10.7 +0.1
baz=78,SNR=10.0
MFID Camas Ranch 78.50 328 ⇑P P 01 23 10.9 +0.1
baz=79,SNR=5.8
K10A MacKenzie Ranc 78.54 327 ⇓P P 01 23 11.2 +0.1
baz=79
E17A Martinsdale 78.60 333 ⇓P P 01 23 11.4 +0.2
baz=79,SNR=9.0
H13A Challis 78.62 330 ⇑P P 01 23 11.7 +0.3
baz=79,SNR=19
N06A Buffalo Meadow 78.62 324 ⇓P P 01 23 11.4 -0.2
baz=79,SNR=7.3
M07A Soldier Meadow 78.72 325 ⇓P P 01 23 12.2 +0.1
baz=79,SNR=7.2
D18A Linhart Farms, 78.75 334 ⇑P P 01 23 12.0 -0.1
baz=79,SNR=8.3
G14A Jackson 78.78 331 ⇓P P 01 23 12.3 0.0
baz=79
F15A Butte 78.81 332 ⇑P P 01 23 12.6 +0.2
baz=79,SNR=10.0
L08A Fields 78.86 326 ⇓P P 01 23 12.9 +0.1
baz=79
H12A Diamond D Ranc 78.89 329 ⇑P P 01 23 12.9 0.0
baz=79,SNR=8.2
K09A Rome 78.91 327 ⇓P P 01 23 12.9 -0.3
baz=79
E16A East Helena 79.00 332 ⇓P P 01 23 13.5 0.0
baz=79,SNR=6.8
G13A Cobalt 79.01 330 ⇓P P 01 23 14.0 +0.4
baz=79,SNR=35
D17A Six Diamond Ra 79.08 333 ⇓P P 01 23 13.9 0.0
baz=79,SNR=18
F14A Wisdom 79.17 331 ⇑P P 01 23 15.0 +0.5
baz=79,SNR=6.0
WVOR Wild Horse Val 79.19 326 eP P 01 23 13.2 -1.4
WVOR pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
WVOR Wild Horse Val 79.19 326 eP P 01 23 13.2 -1.5
comp=Z,7.8nm,1.3s,mb4.5
L07A Adell 79.26 325 ⇓P P 01 23 15.5 +0.5
baz=79
K08A Mann Creek Ran 79.32 326 ⇓P P 01 23 15.2 -0.1
baz=79
E15A Deer Lodge 79.33 332 ⇑P P 01 23 15.4 +0.2
baz=79,SNR=7.1
D16A Dana Ranch, Ca 79.34 333 ⇑P P 01 23 15.6 +0.3
baz=79,SNR=17
TOA0 Torodi Ar. Sit 79.38 71 eP P 01 23 15.9 -0.4
TOA0 epP pP 01 23 26.1 +1.4
TORD Torodi Ar. Bea 79.38 71 P P 01 23 16.2 -0.1
comp=Z,72nm,1.0s,mb5.6,baz=254,slow=5.1,SNR=239
TORD LR LR 01 58 11.2
comp=Z,526nm,18.8s,MS4.9,baz=240,slow=36
EGMT Eagleton 79.40 334 ⇑P P 01 23 15.3 -0.3
baz=80
C17A Wharram Farm, 79.49 334 ⇓P P 01 23 15.7 -0.5
baz=80,SNR=14
H11A Donnelly 79.55 329 ⇑P P 01 23 16.5 0.0
baz=80
F13A Darby 79.59 330 ⇓P P 01 23 16.7 0.0
baz=80,SNR=29
K07A Rock Creek Ran 79.69 326 ⇓P P 01 23 17.7 +0.3
baz=80
E14A Clinton 79.69 331 ⇓P P 01 23 17.3 0.0
baz=80,SNR=9.1
B18A Beardsley Farm 79.71 335 ⇓P P 01 23 17.1 -0.2
baz=80,SNR=16
D15A Lincoln 79.76 332 ⇓P P 01 23 17.8 +0.2
baz=80,SNR=7.6
J08A Circle Bar Ran 79.77 327 ⇑P P 01 23 17.6 -0.1
baz=80
I09A Lost Marbles R 79.85 327 ⇑P P 01 23 18.2 0.0
baz=80
F12A Elk City 79.98 330 ⇓P P 01 23 18.7 -0.1
baz=80,SNR=7.6
E13A Victor 80.02 331 ⇑P P 01 23 18.8 -0.2
baz=80,SNR=13
C16A Fuhringer Ranc 80.03 333 ⇑P P 01 23 18.6 -0.5
baz=80,SNR=6.9
B17A L&G Farms, Che 80.03 334 ⇑P P 01 23 18.1 -1.0
baz=80,SNR=6.1
A18A Metzger Ranch, 80.16 335 ⇑P P 01 23 18.9 -0.8
baz=80,SNR=7.8
G11A Walters Elk Ra 80.19 329 ⇓P P 01 23 19.7 -0.3
baz=80,SNR=21
J07A Hines 80.21 326 ⇓P P 01 23 20.3 +0.2
baz=80
D14A Greenough 80.21 332 ⇑P P 01 23 19.5 -0.6
baz=80,SNR=7.8
I08A Drewsey 80.22 327 ⇑P P 01 23 20.5 +0.3
baz=80,SNR=9.1
C15A Salmond Ranch, 80.37 333 ⇑P P 01 23 21.1 +0.3
baz=80,SNR=21
B16A M & M Farms, S 80.50 334 ⇓P P 01 23 21.7 +0.1
baz=81
A17A Triple J Farms 80.51 334 ⇑P P 01 23 21.4 -0.2
baz=81,SNR=6.4
G10A Bishop Farm, J 80.51 329 ⇓P P 01 23 21.8 +0.1
baz=81,SNR=15
J06A Christmas Vall 80.55 326 ⇓P P 01 23 21.8 -0.2
baz=81,SNR=7.6
K05A Summer Lake 80.57 325 ⇑P P 01 23 22.1 0.0
baz=81
E12A Beaver Dam Sad 80.62 330 ⇓P P 01 23 21.9 -0.4
baz=81,SNR=8.4
D13A Huson 80.64 331 ⇓P P 01 23 22.4 0.0
baz=81,SNR=15
H08A Prairie City 80.70 327 ⇑P P 01 23 22.9 +0.1
baz=81
B15A Bradely Ranch, 80.77 333 ⇓P P 01 23 22.3 -0.7
baz=81,SNR=18
I07A Izee 80.81 327 ⇑P P 01 23 23.3 0.0
baz=81,SNR=7.4
G09A Cove 80.82 328 ⇑P P 01 23 23.1 -0.3
baz=81,SNR=18
E11A Bogner Ranch, 80.87 330 ⇑P P 01 23 22.9 -0.8
baz=81,SNR=8.2
A16A West Butte Ran 80.87 334 ⇓P P 01 23 23.1 -0.5
baz=81,SNR=6.6
TSUM Tsumeb 80.88 107 eP P 01 23 25.1 +0.7
comp=Z,25nm,1.1s,mb5.1
F10A Beach Ranch, E 81.06 329 ⇓P P 01 23 24.3 -0.4
baz=81,SNR=7.2
I06A Prineville 81.07 326 ⇓P P 01 23 24.6 -0.2
baz=81
B14A Marquette Ranc 81.10 333 ⇑P P 01 23 24.4 -0.4
baz=81,SNR=11
C13A Hot Springs 81.14 332 ⇓P P 01 23 24.8 -0.2
baz=81,SNR=11
F09A S2 Ranch, Elgi 81.19 329 ⇑P P 01 23 25.1 -0.3
baz=81
A15A Johnson Ranch, 81.36 333 ⇓P P 01 23 25.5 -0.6
baz=81,SNR=7.5
E10A Myers Farm, Un 81.39 329 ⇓P P 01 23 26.2 -0.1
baz=82,SNR=10
G08A Pilot Rock 81.40 328 ⇑P P 01 23 26.2 -0.3
baz=82,SNR=5.5
D11A Klaveano Farm, 81.45 330 ⇑P P 01 23 26.4 -0.3
baz=82
C12B Naegeli Ranch, 81.56 331 ⇑P P 01 23 27.2 0.0
baz=82,SNR=6.4
B13A Whitefish 81.62 332 ⇑P P 01 23 27.2 -0.4
baz=82,SNR=8.6
A14A Double T Ranch 81.64 333 ⇑P P 01 23 27.0 -0.6
baz=82,SNR=7.9
F08A Pendleton 81.68 328 ⇑P P 01 23 27.3 -0.7
baz=82
H06A Lindquist Farm 81.69 327 ⇑P P 01 23 27.8 -0.2
baz=82
G07A Ruggs Ranch, H 81.73 327 ⇓P P 01 23 28.1 -0.2
baz=82,SNR=7.6
D10A Wagner Farm, O 81.88 330 ⇓P P 01 23 28.2 -0.8
baz=82,SNR=9.5
E09A Wood Farm, Sta 81.89 329 ⇑P P 01 23 28.8 -0.3
baz=82
C11A Tepee Creek (N 82.00 331 ⇓P P 01 23 28.8 -0.8
baz=82,SNR=14
H05A Madras 82.08 326 ⇑P P 01 23 29.5 -0.6
baz=82
B12A Libby 82.18 332 ⇑P P 01 23 30.2 -0.3
baz=82
G06A Carlson Farm, 82.20 327 ⇓P P 01 23 30.7 +0.1
baz=82
D09A Jones Farm, Ri 82.37 329 ⇑P P 01 23 31.1 -0.4
baz=82,SNR=6.1
FFC Flin Flon 82.42 342 eP P 01 23 30.3 -1.3
FFC pmax pmax
comp=Z,18nm,1.2s,mb4.9
FFC Flin Flon 82.42 342 eP P 01 23 30.3 -1.3

comp=Z,18nm,1.2s,mb4.9
B11A Sandpoint 82.50 331 ⇑P **P** **01 23 31.8 -0.4**
baz=83
A12A Yaak River Ran 82.56 332 ⇑P **P** **01 23 32.2 -0.3**
baz=83,SNR=11
F06A Goldendale 82.64 327 ⇓P **P** **01 23 32.7 -0.3**
baz=83
D08A Wollman Farm, 82.66 329 ⇓P **P** **01 23 32.7 -0.3**
baz=83
NEW Newport 82.71 331 *e*P **P** **01 23 32.4 -0.8**
NEW pmax pmax
comp=Z,7.0nm,1.3s
NEW Newport 82.71 331 *e*P **P** **01 23 32.4 -0.8**
comp=Z,7.0nm,1.3s,mb4.5
MAW Mawson 82.88 164 P **P** **01 23 33.6 -0.4**
comp=Z,9.8nm,1.0s,mb4.8,baz=244,slow=7.3,SNR=6.8
MAW LR LR 01 59 30.6
comp=Z,351nm,21.2s,MS4.7,baz=229,slow=35
A11A Hall Mountain, 82.89 332 ⇑P **P** **01 23 33.5 -0.6**
baz=83,SNR=13
C09A Chrisman Ranch 82.89 330 ⇑P **P** **01 23 33.6 -0.7**
baz=83,SNR=5.4
D07A Quincy 83.25 329 ⇑P **P** **01 23 36.1 -0.1**
baz=83
B09A Rice 83.29 330 ⇓P **P** **01 23 35.3 -0.9**
baz=83,SNR=6.5
A10A Northport 83.43 331 ⇑P **P** **01 23 36.6 -0.4**
baz=84
F04A Amboy 83.58 326 ⇓P **P** **01 23 37.4 -0.5**
baz=84
C07A Waterville 83.65 329 ⇑P **P** **01 23 37.5 -0.7**
baz=84,SNR=5.0
B08A Colville Reser 83.79 330 ⇓P **P** **01 23 38.0 -0.8**
baz=84
BOSA Boshof 83.82 118 P **P** **01 23 39.5 -0.1**
comp=Z,6.3nm,0.6s,mb5.0,baz=238,slow=3.3,SNR=26
BOSA LR LR 01 58 01.8
comp=Z,316nm,18.4s,MS4.7,baz=35,slow=34
BOSA Boshof 83.82 118 *e*P **P** **01 23 39.6 0.0**
BOSA pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
BOSA Boshof 83.82 118 *e*P **P** **01 23 39.5 -0.1**
comp=Z,7.2nm,0.5s,mb5.1
MORF Marmelete 83.87 45 *e*P **P** **01 23 41.3 +1.8**
comp=Z,76nm,1.8s,mb5.5
A09A Danville 83.89 330 ⇓P **P** **01 23 38.5 -0.8**
baz=84,SNR=5.3
A08A Turner Farm, O 84.19 330 ⇑P **P** **01 23 39.8 -1.1**
baz=84,SNR=9.4
FCC Fort Churchill 84.21 348 *e*P **P** **01 23 39.6 -1.1**
FCC pmax pmax
comp=Z,1.0nm,1.6s,mb3.7
FCC Fort Churchill 84.21 348 *e*P **P** **01 23 39.6 -1.2**
comp=Z,1.4nm,1.6s,mb3.8
B07A Winthrop 84.23 329 ⇑P **P** **01 23 40.4 -0.7**
baz=84
PBDV Barranco-do-Ve 84.31 45 *e*P **P** **01 23 43.7 +2.0**
comp=Z,83nm,1.7s,mb5.6
PVAQ Vaqueiros 84.54 45 *e*P **P** **01 23 44.2 +1.3**
comp=Z,72nm,1.6s,mb5.5
A07A Ashnola River, 84.77 330 ⇓P **P** **01 23 42.9 -0.8**
baz=85,SNR=8.2
PBEJ Beja 84.80 45 *e*P **P** **01 23 45.1 +0.9**
comp=Z,45nm,1.2s,mb5.5
EDM Edmonton 84.92 336 *e*P **P** **01 23 42.9 -1.5**
EVO Evora 84.99 44 *e*P **P** **01 23 45.7 +0.5**
comp=Z,86nm,1.2s,mb5.4
EVO Evora 84.99 44 *e*P **P** **01 23 46.5 +1.3**
comp=Z,32nm,1.4s,mb5.3
B05A Bryant 85.03 328 ⇓P **P** **01 23 44.3 -0.8**
baz=85
PBAR Barrancos 85.42 45 *e*P **P** **01 23 47.7 +0.4**
comp=Z,50nm,1.3s,mb5.5
PESTR Estremoz 85.45 44 *e*P **P** **01 23 48.4 +0.9**
comp=Z,41nm,1.3s,mb5.4
LBTB Lobatse 85.52 115 *e*P **P** **01 23 49.1 +0.8**
LBTB pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LBTB Lobatse 85.52 115 *e*P **P** **01 23 49.0 +0.7**
comp=Z,4.9nm,0.7s,mb4.8
A05A Maple Falls 85.53 329 ⇑P **P** **01 23 47.0 -0.6**
baz=86
PMRV Marv??o 85.90 44 *e*P **P** **01 23 50.0 +0.3**
comp=Z,33nm,2.0s,mb5.2
TAM Tamanrasset 87.00 64 *e*P **P** **01 23 55.7 +0.2**
TAM pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
TAM Tamanrasset 87.00 64 *e*P **P** **01 23 55.7 +0.2**
comp=Z,5.8nm,0.9s,mb4.8
MVO Moncorvo 87.12 43 *e*P **P** **01 23 56.2 +0.6**
comp=Z,31nm,1.6s,mb5.3
DRV Dumont d'Urvil 87.26 192 P **P** **01 24 01.0 +5.0**
DRV S S 01 34 23.0 -11
DRV SS SS 01 40 08.0 -9.1
DRV R 01 53 08.0
PBRG Braganca 87.66 42 *e*P **P** **01 23 58.9 +0.7**
comp=Z,41nm,1.6s,mb5.4
ESDC Sonseca Array 88.24 45 P **P** **01 24 01.8 +0.7**
comp=Z,1.3nm,0.9s,mb4.2,baz=237,slow=4.2,SNR=7.1
ESDC LR LR 02 01 30.9
comp=Z,158nm,20.1s,MS4.4,baz=235,slow=34
LSZ Lusaka 91.73 107 *e*P **P** **01 24 19.0 +1.0**
LSZ pmax pmax
comp=Z,14nm,1.5s,mb5.1
LSZ Lusaka 91.73 107 *e*P **P** **01 24 19.0 +1.0**
comp=Z,14nm,1.5s,mb5.1
YKA Yellowknife Ar 92.54 341 P **P** **01 24 19.1 -1.4**
comp=Z,5.8nm,0.8s,mb5.1,baz=137,slow=4.6,SNR=95
YKA LR LR 02 07 58.1
comp=Z,90nm,18.8s,MS4.2,baz=125,slow=37
KEST Kesra 95.64 54 LR LR 02 08 52.8
comp=Z,305nm,19.5s,MS4.8,baz=84,slow=36
BGF Bois d'Agland 96.01 42 *e*P **P** **01 24 34.4 -2.5**
comp=Z,41nm,1.2s,mb5.4
BGF Bois d'Agland 96.01 42 *e*P **P** **01 24 34.4 -2.5**
BGF pmax pmax
comp=Z,20nm,1.2s,mb5.4
BGF Bois d'Agland 96.01 42 *e*P **P** **01 24 34.4 -2.5**
comp=Z,20nm,1.2s,mb5.4
SSF Saint Saulge 96.65 41 *e*P **P** **01 24 38.6 -1.1**
comp=Z,32nm,1.3s,mb5.3
SSF Saint Saulge 96.65 41 *e*P **P** **01 24 38.6 -1.1**
SSF pmax pmax
comp=Z,16nm,1.3s,mb5.3
SSF Saint Saulge 96.65 41 *e*P **P** **01 24 38.6 -1.1**
comp=Z,16nm,1.3s,mb5.3
SMF Signal de Mont 96.66 42 *e*P **P** **01 24 39.4 -0.4**
comp=Z,20nm,1.0s,mb5.2
SMF Signal de Mont 96.66 42 *e*P **P** **01 24 39.4 -0.4**
SMF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
SMF Signal de Mont 96.66 42 *e*P **P** **01 24 39.4 -0.4**
comp=Z,9.9nm,1.0s,mb5.2
DOU Dourbes 98.66 39 P **P** **01 24 48.8 +0.1**
UCC Uccle 98.83 38 P **P** **01 24 50.4 +0.9**
comp=Z,42nm,3.1s
WLF Walferdange 99.38 40 P **P** **01 24 51.6 -0.4**
MEM Membach 99.70 39 P Pdif 01 24 53.0 -0.6
comp=Z,16nm,2.4s
OBN Obninsk 118.60 39 *i* PKIKP PKPdf 01 29 58.0 +0.8
OBN 01 31 13.0
OBN *e*PS PS 01 40 56.0 -6.2
OBN pmax pmax
comp=Z,7.0nm,1.4s
OBN MLR MLR
comp=Z,300nm,20.0s,MS4.9
ANN Anapa 118.63 51 *i* PKIKP PKPdf 01 29 53.5 -4.1
KIV Kislovodsk 122.33 52 *i* PKIKP PKPdf 01 30 03.2 -1.6
KIV pmax pmax
comp=Z,7.0nm,1.0s
ASAR Alice Springs 127.51 209 PKP PKPdf 01 30 14.6 -0.8
comp=Z,2.0nm,0.6s,baz=133,slow=1.7,SNR=21
TIXI Tiksi 130.53 352 ⇑*i*PKIKP PKPdf 01 30 18.6 -1.0
WRAB Tennant Creek 130.54 211 ⇑*i*PKIKP PKPdf 01 30 20.8 -0.5
WRAB Tennant Creek 130.54 211 *e*PKIKP PKPdf 01 30 21.5 +0.2
WRAB Tennant Creek 130.54 211 *e*PKPdf PKPdf 01 30 21.5 +0.2
ARU Arti 130.58 35 *i* PKIKP PKPdf 01 30 20.2 +0.1
ARU 01 32 33.9
ARU SS SS 01 49 52.6 -9.3
ARU Arti 130.58 35 *e*PKPdf PKPdf 01 30 20.1 0.0
AKTK Aktyubinsk 132.06 42 PKP PKPdf 01 30 24.3 +1.2
AKTO Aktyubinsk 132.06 42 PKP PKPdf 01 30 24.3 +1.2
comp=Z,1.6nm,0.9s,baz=309,slow=2.3,SNR=4.8
PET Petropavlovsk 132.71 322 *i* PKIKP PKPdf 01 30 25.4 +1.1
BRVK Borovoye 138.15 35 *e*PKIKP PKPdf 01 30 35.0 +0.6
BVAR Borovoye Array 138.23 35 PKP PKPdf 01 30 35.3 +0.7
comp=Z,2.2nm,0.8s,baz=280,slow=2.6,SNR=12

BVAR Borovoye Array 138.23 35 PKP PKPdf 01 30 35.3 +0.7
NVS Novosibirsk 143.05 25 *e*PKIKP PKPdf 01 30 38.9 -4.3
NVS *e* 01 33 53.0
NVS pmax pmax
comp=Z,22nm,1.6s
NVS pmax pmax
comp=N,6.0nm,1.5s
NVS pmax pmax
comp=E,9.0nm,1.5s
KURK Kurchatov 143.76 34 PKP PKPdf 01 30 42.5 -2.1
comp=E,6.6nm,0.9s,baz=304,slow=3.2,SNR=28
KURK Kurchatov 143.76 34 *e*PKPdf PKPdf 01 30 42.2 -2.4
ZAA0 Zalesovo Array 144.34 25 *e*PKPdf PKPdf 01 30 43.5 -2.0
ZALV Zalesovo Beam 144.34 25 PKP PKPdf 01 30 43.9 -1.6
comp=E,14nm,0.8s,baz=316,slow=4.1,SNR=54
YSS Yuzh-Sakhalins 144.53 320 ⇑*i*PKIKP PKPdf 01 30 47.0 +0.9
EKS2 Erkin-Say 144.80 48 P PKPdf 01 30 46.7 0.0
SNR=20
EKS2 Erkin-Say 144.80 48 *e*PKPdf PKPdf 01 30 46.6 -0.1
CLNS Chul'man 144.81 345 *e*PKIKP PKPdf 01 30 45.1 -1.1
CLNS pmax pmax
comp=Z,25nm,1.0s
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,0.8s
AML Almayashu 144.93 49 P PKPdf 01 30 47.7 +0.8
SNR=21
AML Almayashu 144.93 49 *e*PKPdf PKPdf 01 30 47.1 +0.2
USP Ospenovka 145.06 47 P PKPbc 01 30 46.9 +0.4
SNR=20
KRAR Krasnoyarsk 145.25 16 *i* PKIKP PKPdf 01 30 46.2 -0.8
AAK Ala-Archa 145.30 48 *e*PKIKP PKPdf 01 30 48.5 +1.0
FRU Bishkek 145.31 48 ⇑*i*PKIKP PKPdf 01 30 48.0 +0.5
FRU pmax pmax
comp=Z,225nm,2.0s
UCH Uchtor 145.46 49 P PKPbc 01 30 50.2 +2.3
SNR=5.4
UCH Uchtor 145.46 49 *e*PKPbc PKPbc 01 30 50.0 +2.1
BOD Bodaibo 145.52 356 *e*PKIKP PKPdf 01 30 45.9 -1.5
BOD pmax pmax
comp=E,61nm,1.0s
KBK Karagaybulak 145.60 48 P PKPdf 01 30 49.5 +1.4
SNR=21
TKM2 Tokmak 2 145.93 47 P PKPdf 01 30 49.9 +1.2
SNR=20
TKM2 Tokmak 2 145.93 47 *e*PKPbc PKPbc 01 30 49.5 +0.2
ASAJ Asahikawa 145.97 315 PKPbc PKPbc 01 30 49.1 -0.3
comp=Z,26nm,1.2s,baz=62,slow=18,SNR=3.6
KZA Kyzart 146.03 49 P PKPab 01 30 51.5 +1.2
SNR=15
ULHL Ulahol 146.64 48 P PKPdf 01 30 51.5 +1.7
SNR=15
MK31 Makanchi Array 148.07 36 *e*PKIKP PKPdf 01 30 52.4 +0.3
MK31 *e* 01 30 55.2
MKAR Makanchi Array 148.07 36 PKP PKPdf 01 30 52.6 +0.6
comp=Z,18nm,0.8s,baz=294,slow=1.2,SNR=37
MKAR PKPbc PKPbc 01 30 55.2 -0.1
comp=Z,18nm,0.8s,baz=325,slow=2.3,SNR=68
KAPI Kappang 149.99 201 PKPbc PKPbc 01 31 01.3 +0.2
comp=Z,7.4nm,0.7s,baz=215,slow=4.1,SNR=8.5
KAPI Kappang 149.99 201 *e*PKPbc PKPbc 01 31 01.4 +0.3
HYB Hyderabad 150.41 96 *i* PKP PKPbc 01 31 02.5 +0.5
HYB *e* 01 31 09.5
HYB Hyderabad 150.41 96 *e*PKP PKPbc 01 31 02.5 +0.5
TLY Talaya 151.46 8 *e*PKIKP PKPbc 01 31 05.9 +2.5
TLY *i* 01 31 12.8
TLY *e*SS SS 01 54 04.8 +0.7
TLY pmax pmax
comp=Z,9.0nm,0.9s
MJAR Matsushiro Arr 152.05 304 PKPbc PKPbc 01 31 04.3 -0.9
comp=Z,5.0nm,0.8s,baz=130,slow=0.6,SNR=9.0
MJAR PKPab PKPab 01 31 12.9 -1.9
comp=Z,2.2nm,0.6s,baz=64,slow=0.7,SNR=28
MAT Matsushiro 152.05 304 *e*PKP PKPbc 01 31 05.0 -0.3
ZAK Zakamensk 152.69 9 *e*PKIKP PKPbc 01 31 06.4 +0.2
ZAK pmax pmax
comp=Z,10.0nm,1.2s
HIA Hailar 153.00 345 ⇑*i*PKIKP PKPbc 01 31 05.7 -1.3
MDJ Mudanjiang 153.25 327 PKP PKPdf 01 30 59.9 -0.3
MDJ PP PP 01 34 53.0 +0.2
MDJ SS SS 01 54 28.1 +3.2
MDJ PP PP
comp=Z,111nm,4.9s
MDJ LR LR
comp=N,45nm,31.2s
MDJ LR LR
comp=E,58nm,25.3s
MDJ LR LR
comp=Z,71nm,23.8s
SONM Songino Array 155.54 5 PKP PKPdf 01 31 03.7 +0.4
comp=Z,1.5nm,0.9s,baz=324,slow=4.1,SNR=7.4
SONM PKPab PKPab 01 31 28.7 -0.4
comp=Z,4.2nm,1.1s,baz=344,slow=3.1,SNR=3.6
SONM PP PP 01 35 01.5 -3.5
comp=Z,1.2nm,1.0s,baz=336,slow=3,SNR=4.2
ULN Ulaanbaatar 155.56 4 *e*PKP2 PKPab 01 31 28.9 -0.2
CN2 Changchun 155.83 331 *e*PKP PKPdf 01 31 02.0 -1.8
CN2 *e*APKP 01 31 12.0
CN2 PP PP 01 35 09.0 +1.9
CN2 *e*SS SS 01 54 50.6 -2.1
CN2 PP PP
comp=Z,100nm,5.0s
CN2 LR LR
comp=N,200nm,21.0s,MS5.2
CN2 LR LR
comp=E,300nm,21.0s,MS5.2
CN2 LR LR
comp=Z,400nm,22.0s,MS5.2
KSRS Korea Array 158.92 316 PKP PKPdf 01 31 08.4 +0.5
comp=Z,1.5nm,0.8s,baz=20,slow=3.0,SNR=4.8
KSRS PKPab PKPab 01 31 43.2 -0.9
comp=Z,0.7nm,0.4s,baz=77,slow=5.3,SNR=2.9
GTA Gaotai 162.09 25 PKP PKPdf 01 31 11.8 +0.5
GTA APKP 01 31 22.7
GTA XPKP 01 31 26.4
GTA PKP2 PKPab 01 32 01.1 +3.4
GTA PP PP 01 35 46.3 +5.3
GTA SS SS 01 56 01.4 +2.6
GTA PP PP
comp=Z,105nm,6.0s
GTA LR LR
comp=N,154nm,17.7s
GTA LR LR
comp=E,126nm,17.7s
GTA LR LR
comp=Z,183nm,18.6s
HHC Hu-ho-hao-te 162.57 355 *e*PKP PKPdf 01 31 10.0 -1.7
HHC PKP2 PKPab 01 31 59.6 -0.1
HHC PKS 01 34 41.9
HHC PP PP 01 35 43.7 +0.5
HHC SKS SKSdf 01 38 10.0 -4.8
HHC PP PP
comp=Z,175nm,7.6s
HHC LR LR
comp=N,201nm,15.5s
HHC LR LR
comp=E,172nm,14.3s
HHC LR LR
comp=Z,198nm,16.6s
LZH Lanzhou 166.49 20 *e*PKP PKPdf 01 31 13.3 -2.0
LZH APKP 01 31 26.5
LZH XPKP 01 31 29.5
LZH LR LR
comp=N,145nm,18.9s
LZH LR LR
comp=Z,248nm,20.0s
NJ2 Nanjing 168.10 318 *e*PKP PKPdf 01 31 14.1 -2.5
CMAR Chiang Mai Arr 168.95 115 PKP PKPdf 01 31 17.7 +0.2
comp=Z,1.0nm,0.3s,baz=265,slow=2.6,SNR=4.6
CMAR PKPab PKPab 01 32 28.1 -0.5
comp=Z,1.2nm,0.3s,baz=274,slow=4.1,SNR=6.1
CD2 Chengdu 170.98 33 PKP PKPdf 01 31 16.5 -1.9
CD2 APKP 01 31 27.4
CD2 PKP2 PKPab 01 32 37.3 +0.1
CD2 PKS 01 34 47.5
CD2 PP PP 01 36 28.7 +1.5
CD2 SKS SKSdf 01 38 15.0 -5.3
CD2 SKKS SKKSac 01 43 10.6 -2.4
CD2 SS SS 01 57 25.8 -3.6
CD2 PP PP
comp=Z,160nm,9.6s
CD2 LR LR
comp=N,30nm,9.2s
CD2 LR LR
comp=Z,150nm,13.4s
KMI Kunming 173.60 74 PKP PKPdf 01 31 19.3 -0.4
KMI APKP 01 31 27.0
KMI XPKP 01 31 30.3
GYA Guiyang 176.05 40 PKP PKPdf 01 31 18.5 -1.9
GYA APKP 01 31 28.3
GYA XPKP 01 31 32.5
GYA PKP2 PKPab 01 33 01.4 +1.5
GYA PKS 01 34 49.2
GYA PP PP 01 36 57.4 +5.3
GYA SKKS SKKSac 01 43 36.3 -1.1
GYA SS SS 01 58 17.5 -1.4
GYA PP PP
comp=Z,150nm,7.2s
GYA LR LR
comp=N,160nm,20.0s
GYA LR LR
comp=E,120nm,19.7s
GYA LR LR
comp=Z,170nm,20.5s

*BEO **06** 01:31:17.3±1.3,3982N×2059E,ML2.6/1*
*ATH **06** 01:31:20.1,40.19N×2055E,h5km±3km,MD3.2/5*
*NEIC **06** 01:31:20.0,4020N×2054E,h5km,MD3.2(ATH),After ATH.*
*CSEM **06** 01:31:20.8±0.2,4020N×2072E,h8km,MD3.2,Error ellipse: s-maj=5.6km s-min=3.2km az=85.0*
*THE **06** 01:31:20.4,40.19N×2068E,h1km±2km,ML3.2/4,Error ellipse: s-maj=2.7km s-min=0.9km az=25.0*
*ISCJB **06** 01:31:20.3±0.4,40.18N±002×2066E±004,h10km,Error ellipse: s-maj=4.9km s-min=2.8km az=13.7*
*SKO **06** 01:31:22.2,40.13N×2084E,h2km,M2.0,ML2.4*

ISC 06 01:31:21.1±0.4,4018N±002×2065E±004,h10km,n26,σ1§19/45,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.54**	**163**	*e*PG		**Pg**	**01 31 31.0 -0.6**
JAN				*e*SB		**Sg**	**01 31 40.0 +1.3**
JAN	**Janina**	**0.54**	**163**	*e*Pb		**Pg**	**01 31 31.0 -0.6**
JAN				*e*Sb		**Sg**	**01 31 40.8 +2.1**
IGT	**Igoumenitsa**	**0.69**	**201**	P		**Pg**	**01 31 33.0 -1.4**
IGT				S		**Sg**	**01 31 43.7 +0.4**
KEK	**Kerkira**	**0.80**	**235**	*e*PB		**Pg**	**01 31 34.6 -1.9**
FNA	**Florina**	**0.82**	**42**	P		**Pg**	**01 31 35.4 -1.5**
FNA				S		**Sg**	**01 31 46.5 -1.1**
KZN	**Kozani**	**0.87**	**81**	*e*PB		**Pg**	**01 31 38.5 +0.7**
BIA	**Bitola**	**0.99**	**31**	P		**Pg**	**01 31 37.9 -2.1**
BIA				S		**Sg**	**01 31 52.5 -0.4**
BIA	**Bitola**	**0.99**	**31**	*i* Pg		**Pg**	**01 31 37.8 -2.2**
BIA				S		**Sg**	**01 31 52.6 -0.4**
BIA				*i* Sg		**Sb**	**01 31 53.7 +0.4**
BIA	**Bitola**	**0.99**	**31**	*i* Pg		**Pg**	**01 31 37.8 -2.2**
BIA				*i* Sg		**Sb**	**01 31 53.8 +0.5**
THL	**Klokotos Trika**	**1.22**	**120**	P		**Pg**	**01 31 43.3 -1.1**
THL				S		**Sg**	**01 32 00.3 +0.1**
THL	**Klokotos Trika**	**1.22**	**120**	*e*Pg		**Pg**	**01 31 44.3 -0.1**
THL				S		**Sg**	**01 32 00.3 +0.1**
KRUS	**Krusevo**	**1.27**	**21**	*i* Pg		**Pg**	**01 31 44.0 -1.5**
KRUS				*i* Sg		**Sg**	**01 32 03.0 +0.9**
KRUS	**Krusevo**	**1.27**	**21**	*i* Pg		**Pg**	**01 31 44.1 -1.5**
KRUS				*i* Sg		**Sg**	**01 32 03.0 +0.9**
TIR	**Tirane**	**1.31**	**333**	P		**Pn**	**01 31 45.5 +0.1**
TIR				S		**Sn**	**01 32 04.5 +1.5**
TIR	**Tirane**	**1.31**	**333**	*e*Pn		**Pn**	**01 31 46.9 +1.5**
TIR				S		**Sn**	**01 32 04.5 +1.5**
TIR				*e*Sg		**Sg**	**01 32 08.7 +5.4**
LIT	**Litokhoron**	**1.41**	**93**	P		**Pn**	**01 31 46.7 -0.1**
LIT				S		**Sn**	**01 32 06.2 +0.7**
VAY	**Valandovo**	**1.85**	**51**	*i* Pg		**Pn**	**01 31 52.3 -0.6**
VAY				*i* Sg		**Sn**	**01 32 18.7 +2.3**
VAY	**Valandovo**	**1.85**	**51**	*i* Pg		**Pn**	**01 31 52.3 -0.5**
VAY				*i* Sg		**Sn**	**01 32 18.8 +2.4**
VAY				*e*Lg			01 32 20.0
	comp=E,24nm,0.8s						
SKO	**Skopje**	**1.89**	**18**	*e*Pn		**Pg**	**01 31 56.1 -1.2**
SKO	**Skopje**	**1.89**	**18**	*e*Pn		**Pg**	**01 31 56.8 -0.5**
SKO				*e*Lg			01 32 22.1
	comp=E,34nm,0.6s						
STIP	**Stip**	**1.91**	**37**	*e*Pg		**Pg**	**01 31 56.4 -1.3**
VLS	**Valsamata**	**2.00**	**181**	P		**Pn**	**01 31 55.7 +0.9**
VLS				S		**Sn**	**01 32 20.5 +0.6**
VLS	**Valsamata**	**2.00**	**181**	*e*PN		**Pg**	**01 31 58.2 -1.2**
BARS	**Barje**	**2.78**	**18**	*e*Pn		**Pn**	**01 32 07.3 +1.7**
TREB	**Trebinje**	**3.07**	**327**	*e*Pn		**Pn**	**01 32 10.7 +1.1**
VTS	**Vitosha**	**3.09**	**38**	*e*Pn		**Pn**	**01 32 11.4 +1.6**

TRN 06 01:55:50.9,1508N×6127W,h142km,MD3.8,M3.1(FDF),6C-5D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.37**	**162**	⇓*e*P		Pn	01 56 12.2 +1.4
FDF				⇓*e*S		Sn	01 56 27.0 +1.2
DWS	**Wesley**	**0.48**	**355**	*e*P		Pn	01 56 13.5 +2.2
DWS				*e*S		Sn	01 56 27.9 +1.1
BIM	**Bigot**	**0.59**	**161**	⇑*e*P		Pn	01 56 13.1 +1.2
BIM				⇑*e*S		Sn	01 56 31.0 +3.1
MVM	**Montagne Vaucl**	**0.64**	**146**	*e*P		Pn	01 56 13.2 +1.1
MGG	**Marie-Galante**	**0.83**	**357**	⇑*i*P		Pn	01 56 14.3 +0.8
TBG	**Guadaloupe-3**	**0.85**	**335**	⇑*e*P		Pn	01 56 14.7 +1.1
HMG	**Houelmont**	**0.99**	**335**	*e*P		Pn	01 56 16.2 +1.4
DOG	**Dongo Capester**	**1.00**	**340**	⇑*i*P		Pn	01 56 16.1 +1.1
SCG	**Saint Claude**	**1.02**	**337**	*e*P		Pn	01 56 16.5 +1.4
SCG				*e*S		Sn	01 56 35.0 +1.4
BCG	**Bois Riant Cap**	**1.05**	**341**	*e*P		Pn	01 56 16.5 +1.1
SLW	**Petit Monier**	**1.10**	**163**	⇑*i*P		Pn	01 56 16.6 +0.7
SLW				⇓*e*S		Sn	01 56 35.4 +0.5
LZG	**Guadaloupe-1**	**1.16**	**335**	*e*P		Pn	01 56 17.7 +1.3
LZG				*e*S		Sn	01 56 37.0 +1.1
SLPE	**Piton Saint Es**	**1.26**	**168**	*e*P		Pn	01 56 18.3 +0.9
SLPE				*e*S		Sn	01 56 38.6 +1.0
SLB	**Belfond**	**1.27**	**170**	⇓*e*P		Pn	01 56 18.9 +1.4
SLB				*e*S		Sn	01 56 39.3 +1.6
SLDE	**Delcer**	**1.29**	**171**	*e*S		Sn	01 56 39.0 +0.8
SVV	**Soufriere Volc**	**1.75**	**178**	⇓*e*P		Pn	01 56 24.3 +1.5
SVV				*e*S		Sn	01 56 48.6 +1.5
FCV	**Fort Charlotte**	**1.92**	**179**	*e*P		Pn	01 56 25.7 +1.1
FCV				*e*S		Sn	01 56 51.0 +0.6
BPA	**Boggy Peak**	**2.03**	**344**	*e*P		Pn	01 56 26.9 +1.0
BPA				*e*S		Sn	01 56 52.8 -0.1
GRSS	**Sisters**	**2.79**	**187**	*e*P		Pn	01 56 36.0 +0.7
GRIC	**Isle de Caille**	**2.80**	**186**	*e*P		Pn	01 56 36.2 +0.8
GRIC				*e*S		Sn	01 57 08.3 -1.5
GRHS	**Sauteurs**	**2.87**	**187**	*e*P		Pn	01 56 37.0 +0.7
GRHS	**Sauteurs**	**2.87**	**187**	*e*		Pn	01 56 46.8 +10
GRHS				*e*S		Sn	01 57 09.1 -2.2
GRW	**Mount Saint Ca**	**2.93**	**188**	*e*P		Pn	01 56 38.2 +1.2
GRW	**Mount Saint Ca**	**2.93**	**188**	*e*		Pn	01 56 54.5 +17
GRW				*e*S		Sn	01 57 12.8 0.0
TPR	**Prospect**	**3.90**	**173**	*e*P		Pn	01 56 50.7 +1.0
TPR				*e*S		Sn	01 57 34.7 -0.6
TCE	**Chacachacare**	**4.38**	**186**	*e*P		Pn	01 56 57.6 +1.6
TRN	**Trinidad (W)**	**4.41**	**182**	⇓*e*P		Pn	01 56 57.9 +1.5
TBH	**Brigand Hill**	**4.58**	**178**	*e*P		Pn	01 56 59.5 +0.9

TAP 06 02:26:35.6,2207N×12038E,h35km,ML3.8,4D,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWP	**Hsiaoliuchiu**	**0.28**	**357**	*e*P		Pb	02 26 44.5 +1.2
	baz=347						
TWP				*e*S		Sb	02 26 51.9 +3.5
	baz=347						
HEN	**Hengchun**	**0.34**	**100**	⇓*i*P		Pb	02 26 44.7 +0.7
	baz=88						
HEN				*i* S		Sb	02 26 52.3 +2.5
	baz=88						
SCZT	**Fangliau**	**0.38**	**37**	⇓*i*P		Pb	02 26 45.0 +0.4
	baz=37						
SCZT				*i* S		Sb	02 26 51.9 +1.2
	baz=37						
TWK1	**Hengchun**	**0.42**	**107**	⇓*i*P		Pb	02 26 45.8 +0.8
	baz=106						
TWK1				*i* S		Sb	02 26 53.3 +1.8
	baz=106						
KAU	**Kaohsiung**	**0.50**	**353**	*e*P		Pn	02 26 47.2 +0.9

	baz=5.0						
KAU				eS	Sn	02 26 56.5	+2.8
	baz=5.0						
TSEB	Hengchuen, Pin	0.51	109	i P	Pn	02 26 46.6	+0.2
	baz=108						
TSEB				i S	Sn	02 26 55.3	+1.4
	baz=108						
EAST	Anshuo	0.54	54	eP	Pn	02 26 46.6	-0.1
	baz=43						
EAST				eS	Sn	02 26 55.9	+1.3
	baz=43						
TAW	Tawu	0.56	59	P	Pn	02 26 47.5	+0.4
	baz=59						
TAW				eS	Sn	02 26 55.9	+0.7
	baz=59						
SSD	Sandimen	0.72	19	eP	Pn	02 26 49.7	+0.5
	baz=19						
SSD				eS	Sn	02 26 59.9	+0.9
	baz=19						
ECL	Taimali	0.75	45	⇓P	Pn	02 26 50.3	+0.6
	baz=45						
ECL				S	Sn	02 26 59.9	0.0
	baz=45						
TWM1	Shoushan	0.75	3	eP	Pn	02 26 50.5	+0.8
	baz=3.0						
TTN	Taitung	0.99	46	eP	Pn	02 26 56.0	+3.0
	baz=45						
TWG	Pinlang	0.99	41	eP	Pn	02 26 53.9	+0.9
	baz=53						
TWG				S	Sn	02 27 06.7	+1.0
	baz=53						
CHN3	Shinhua	1.00	359	eP	Pn	02 26 54.1	+0.9
	baz=359						
SGST	Jiashian	1.03	11	eP	Pn	02 26 54.4	+0.9
	baz=11						
SGST				eS	Sn	02 27 07.8	+1.1
	baz=11						
LAY	Lan-yu	1.09	91	eP	Pn	02 26 54.0	-0.3
	baz=91						
LAY				eS	Sn	02 27 08.9	+0.7
	baz=91						
SCLT	Jiali	1.11	351	eP	Pn	02 26 55.6	+0.9
	baz=352						
SCLT				eS	Sn	02 27 10.2	+1.4
	baz=352						
CHN1	Nanshi	1.12	7	eP	Pn	02 26 54.8	0.0
	baz=6.0						
STYT	Tauyuan	1.15	18	eP	Pn	02 26 55.8	+0.7
	baz=3.0						
WTP	Ta-pu	1.19	11	eP	Pn	02 26 56.2	+0.4
	baz=10.0						
TWK	Hsinying	1.20	5	eP	Pn	02 26 56.5	+0.6
	baz=5.0						
TWK				eS	Sn	02 27 11.9	+1.1
	baz=5.0						
CHN4	Tsaushan	1.29	9	eP	Pn	02 26 56.6	-0.5
	baz=8.0						
TWF1	Yuli	1.54	33	eP	Pn	02 27 01.8	+1.3
	baz=25						
TWF1				eS	Sn	02 27 20.9	+1.7
	baz=25						
CHN5	Tsauling	1.55	10	eP	Pn	02 27 01.1	+0.4
	baz=11						
CHN5				eS	Sn	02 27 19.8	+0.3
	baz=11						
PNG	Penghu	1.67	333	eP	Pn	02 27 01.2	-1.2
	baz=333						
EHY	Hungye	1.68	31	eP	Pn	02 27 03.6	+1.2
	baz=29						
SMLT	Sun Moon Lake	1.87	15	eP	Pn	02 27 05.5	+0.4
	baz=15						
SMLT				eS	Sn	02 27 28.9	+1.4
	baz=15						
TYC	Yuchr	1.88	14	eP	Pn	02 27 05.5	+0.2
	baz=12						
WHF	Hehuan Shan	2.22	21	eP	Pn	02 27 12.2	+2.2
	baz=6.0						
TWQ1	Liyutan	2.30	9	eP	Pn	02 27 11.6	+0.6
	baz=7.0						
NSK	Sanguang	2.75	19	eP	Pn	02 27 18.8	+1.6
	baz=6.0						
NSK				eS	Sn	02 27 51.6	+2.4
	baz=6.0						
ENTT	Nioudou	2.79	23	eP	Pn	02 27 19.6	+1.9
	baz=12						
ENTT				eS	Sn	02 27 52.4	+2.4
	baz=12						

*ISCJB **06** 02:28:42.0±0.5, 3974N±002×2771E±004, h8^{km}±4^{km}, Error ellipse: s-maj=4.9km s-min=3.3km az=15.6*
*CSEM **06** 02:28:41.5±0.1, 3973N×2771E, h10^{km}, MD2.9, Error ellipse: s-maj=2.0km s-min=1.4km az=104.0*
*DDA **06** 02:28:41.7, 3972N×2776E, h8^{km}±4^{km}, Md3.0*
*ISK **06** 02:28:41.8, 3973N×2773E, h9^{km}, MD2.9*
ISC 06 02:28:42.5±0.4, **3973N**±002×**2771E**±004, **h12**^{km}±3^{km}, **n27**, σ**0^{s}61**/39, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.16	125	ePG	Pg	02 28 45.8	-0.3
BALB				eSG	Sg	02 28 48.3	-0.4
BNT	Bandirma	0.65	14	ePG	Pg	02 28 54.5	-0.5
BNT				eSG	Sg	02 29 04.0	+0.4
KCT	Karacabey	0.73	42	ePG	Pg	02 28 56.1	-0.5
KCT				eSG	Sg	02 29 06.5	+0.4
AKHS	Akhisar	0.85	175	i P	Pg	02 28 58.5	-0.5
AKHS				i S	Sg	02 29 09.9	-0.2
AKHS	Akhisar	0.85	175	i P	Pg	02 28 58.5	-0.5
AKHS				i S	Sg	02 29 09.9	-0.2
AKS	Akhisar	0.85	175	ePG	Pg	02 28 58.7	-0.3
AKS				eSG	Sg	02 29 10.9	+0.8
AYVA	Ayvalik	0.90	242	i P	Pg	02 28 59.8	0.0
AYVA				i S	Sg	02 29 12.6	+1.1
LPK	Lapseki	0.97	312	ePG	Pg	02 29 01.6	+0.3
RKY	Sarkoy-Tekirda	1.04	337	ePG	Pg	02 29 02.1	-0.4
EZN	Ezine	1.07	276	ePN	Pn	02 29 02.7	-0.7
ULDT	Uludag	1.17	69	i P	Pb	02 29 04.1	-0.5
ULDT				i S	Sb	02 29 19.8	+0.1
TKR	Tekirdag	1.27	354	ePN	Pn	02 29 07.1	+1.0
KDAG	Bornova	1.37	195	i P	Pn	02 29 06.9	-0.6
KDAG				i S	Sn	02 29 24.1	-1.4
KULA	Kula-Manisa	1.42	148	ePN	Pn	02 29 08.0	-0.2
BLCB	Balcova	1.44	202	ePN	Pn	02 29 09.2	+0.8
GDZ	Gediz	1.51	114	i P	Pn	02 29 10.3	+0.9
GDZ				i S	Sn	02 29 29.5	+0.5
CTT	Catalca	1.52	21	ePN	Pn	02 29 09.7	+0.2
ELBA	Catalca	1.52	21	i P	Pn	02 29 08.3	-1.2
ELBA				i S	Sn	02 29 28.4	-0.8
YLV	Yalova	1.52	56	ePN	Pn	02 29 09.3	-0.2
CTKS	Kestanelik-??a	1.62	22	ePN	Pn	02 29 11.2	+0.2
BGKT	Bogazkoy	1.66	29	ePN	Pn	02 29 11.9	+0.4
ADVT	Abdulvahap	1.71	65	ePN	Pn	02 29 12.7	+0.6
CTYL	Yal??k??y-??at	1.80	14	ePN	Pn	02 29 13.0	-0.4
HRT	Hereke	1.85	53	ePN	Pn	02 29 14.7	+0.6
GPA	Golpazari	2.07	74	ePN	Pn	02 29 17.1	0.0
BORA	Eskisehir	2.12	85	i P	Pn	02 29 22.0	+4.3
BORA				i S	Sn	02 29 48.8	+4.9
GULT	Gulveren	2.26	71	ePN	Pn	02 29 20.3	+0.6

*IDC **06** 02:56:43.9±0.8, 3332S×1433W, h0^{km}, mb4.1/11, mb1 4.2/11, mb1mx4.1/17, mbtmp4.1/11, MS4.1/11, Ms1 4.0/11, ms1mx4.0/18, Error ellipse: s-maj=25.8km s-min=17.6km az=147.0*
*ISCJB **06** 02:56:44.1±0.7, 333S±0.1×143W±0.1, h10^{km}, mb4.5/23, MS4.1/11, Error ellipse: s-maj=19.9km s-min=13.2km az=143.3*
*NEIC **06** 02:56:45.0±0.4, 3352S×1421W, h10^{km}, mb4.7/14, Error ellipse: s-maj=13.4km s-min=11.0km az=102.0*
ISC 06 02:56:45.9±0.7, **333S**±01×**143W**±01, **h10**^{km}, **n46**, σ**0^{s}68**/41, **mb4.5**/23, **MS4.1**/11, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	Tristan da Cun	4.08	157	ePn	Pn	02 57 42.3	-6.0
TSUM	Tsumeb	31.73	72	P	P	03 03 09.2	-1.0
	1.7nm,0.4s,mb4.2,baz=245,slow=6.7,SNR=4.3						
TSUM	Tsumeb	31.73	72	eP	P	03 03 08.9	-1.3
	21nm,1.4s,mb4.8						
BOSA	Boshof	34.11	93	LR	LR	03 15 39.6	
	comp=Z,819nm,18.1s,MS4.5,baz=249,slow=33						
BDFB	Brasilia	35.15	292	P	P	03 03 39.6	-0.4
	7.0nm,1.1s,mb4.5,baz=111,slow=14,SNR=6.3						
BDFB				LR	LR	03 15 51.4	
	comp=Z,265nm,18.3s,MS4.0,baz=290,slow=33						
LIC	Lamto	40.31	14	eP	P	03 04 23.0	-0.6
	53nm,1.2s,mb5.1						
LIC	Lamto	40.31	14	eP	P	03 04 23.5	-0.1
	38nm,1.1s,mb4.7						
LIC	Lamto	40.31	14	eP	P	03 04 23.5	-0.1
	19nm,1.1s,mb4.7						
KIC	Kosan Boka	40.50	15	eP	P	03 04 24.4	-0.8
	149nm,1.4s,mb5.4						
TIC	Toumodi	40.72	14	eP	P	03 04 26.2	-0.8
	64nm,0.9s,mb5.2						
DBIC	Dimbokro	40.78	14	P	P	03 04 26.8	-0.6
	7.1nm,0.8s,mb4.3,baz=171,slow=9.0,SNR=11						
DBIC				LR	LR	03 16 53.8	
	comp=Z,136nm,21.9s,MS3.8,baz=157,slow=30						
DBIC	Dimbokro	40.78	14	eP	P	03 04 26.6	-0.8
	9.4nm,0.9s,mb4.4						
DBIC				LR	LR	03 16 53.8	
LSZ	Lusaka	42.37	75	P	P	03 04 40.8	+0.3
	3.3nm,1.1s,mb3.9,baz=257,slow=4.5,SNR=5.6						
LSZ	Lusaka	42.37	75	eP	P	03 04 40.5	-0.1
	11nm,1.4s,mb4.3						
PLCA	Paso Flores	44.84	244	P	P	03 05 00.0	-0.2
	1.2nm,0.7s,mb3.8,baz=100,slow=4.8,SNR=2.9						
PLCA				LR	LR	03 20 54.4	
	comp=Z,160nm,19.5s,MS4.0,baz=92,slow=32						
PLCA	Paso Flores	44.84	244	eP	P	03 05 00.6	+0.4
	3.6nm,0.7s,mb4.3						
PLCA				LR	LR	03 20 54.4	
SIV	San Ignacio	45.46	281	P	P	03 05 04.8	-0.6
	3.9nm,0.8s,mb4.3,baz=118,slow=9.3,SNR=23						
TOA0	Torodi Ar. Sit	48.67	21	eP	P	03 05 29.6	-0.8
TORD	Torodi Ar. Bea	48.67	21	P	P	03 05 29.7	-0.7
	11nm,0.9s,mb4.9,baz=197,slow=7.5,SNR=54						
TORD				LR	LR	03 21 52.3	
	comp=Z,281nm,20.2s,MS4.2,baz=185,slow=31						
TORD	Torodi Ar. Bea	48.67	21	P	P	03 05 29.7	-0.7
TORD				LR	LR	03 21 52.3	
MAW	Mawson	54.81	153	LR	LR	03 22 40.0	
	comp=Z,82nm,20.8s,MS3.8,baz=91,slow=28						
TAM	Tamanrasset	58.93	21	eP	P	03 06 46.2	+0.9
	22nm,1.8s,mb4.9						
MDT	Midelt	66.42	9	LR	LR	03 31 10.2	
	comp=Z,190nm,21.6s,MS4.3,baz=291,slow=31						
VNDA	Vanda	69.39	179	P	P	03 07 53.0	-0.4
	0.7nm,0.9s,mb3.6,baz=207,slow=4.2,SNR=2.2						
VNDA				LR	LR	03 33 50.7	
	comp=Z,111nm,21.5s,MS4.1,baz=189,slow=32						
KEST	Kesra	72.18	20	P	P	03 08 11.3	+0.5
	1.9nm,0.9s,mb4.0,baz=246,slow=12,SNR=3.4						
KEST				LR	LR	03 37 20.4	
	comp=Z,92nm,21.1s,MS4.0,baz=213,slow=34						
ESDC	Sonseca Array	73.27	8	P	P	03 08 16.7	-0.5
	0.2nm,0.5s,mb3.3,baz=179,slow=6.4,SNR=3.4						
PGF	Pioggiola	78.48	17	eP	P	03 08 47.3	+0.5
	27nm,1.0s,mb4.8						
PGF	Pioggiola	78.48	17	eP	P	03 08 47.3	+0.5
	13nm,1.0s,mb4.8						
LMR	La Mourre	78.64	15	eP	P	03 08 48.3	+0.6
FRF	La Foret Royal	78.88	15	eP	P	03 08 50.4	+1.4
	28nm,1.2s,mb4.8						
FRF	La Foret Royal	78.88	15	eP	P	03 08 50.4	+1.4
	14nm,1.2s,mb4.8						
TCF	Toulx Ste Croi	80.64	12	eP	P	03 08 58.2	-0.3
	19nm,1.0s,mb4.7						
TCF	Toulx Ste Croi	80.64	12	eP	P	03 08 58.2	-0.3
	9.6nm,1.0s,mb4.7						
LPG	La Plagne	80.75	15	eP	P	03 08 59.9	+0.8
	16nm,1.1s,mb4.6						
LPG	La Plagne	80.75	15	eP	P	03 08 59.9	+0.8
	8.1nm,1.1s,mb4.6						
LPL	La Plagne	80.76	15	eP	P	03 08 59.7	+0.5
	14nm,1.1s,mb4.5						
LPL	La Plagne	80.76	15	eP	P	03 08 59.7	+0.5
	6.8nm,1.1s,mb4.5						
SMF	Signal de Mont	81.27	13	eP	P	03 09 03.0	+1.1
	22nm,1.0s,mb4.7						
SMF	Signal de Mont	81.27	13	eP	P	03 09 03.0	+1.1
	11nm,1.0s,mb4.7						
AVF	Avril sur Loir	81.33	12	eP	P	03 09 02.6	+0.4
	14nm,0.9s,mb4.6						
AVF	Avril sur Loir	81.33	12	eP	P	03 09 02.6	+0.4
	7.1nm,0.9s,mb4.6						
CDF	Champ du Feu	83.63	14	eP	P	03 09 14.0	-0.2
GERES	GERESS Array B	85.54	18	P	P	03 09 23.5	-0.3
	0.8nm,0.9s,mb3.9,baz=206,slow=8.5,SNR=4.2						
GERES				LR	LR	03 45 29.0	
	comp=Z,144nm,20.3s,MS4.4,baz=92,slow=34						
PSZ	Piszkesteto	86.50	22	eP	P	03 09 29.4	+0.9
	3.0nm,0.8s,mb4.6						
NOA	NORSAR Array B	96.32	12	LR	LR	03 52 49.2	
	comp=Z,62nm,20.8s,MS4.1,baz=275,slow=35						
YKA	Yellowknife Ar	123.62	327	PKP	PKPdf	03 15 41.2	-1.6
	0.6nm,0.9s,baz=105,slow=2.0,SNR=6.7						

CASC 06 03:03:51.8±1.1, **1235N**×**8719W**, **h80**^{km}±7^{km}, **MD3.8**, **ML3.4**, **2D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.37	21	eP	Pn	03 04 04.5	-0.1
CRIN				AML	AML	03 04 15.4	
	comp=N,10μm,0.2s						
TEL3	Telica 3	0.40	57	eP	Pn	03 04 04.6	-0.1
TELN	Telica	0.43	54	eP	Pn	03 04 05.2	+0.3
MIRN	Miramar	0.47	79	⇓iP	Pn	03 04 05.2	-0.1
CNGN	Cerro Negro	0.50	73	eP	Pn	03 04 05.4	-0.1
CNGN				eS	Sn	03 04 16.1	+0.4
CNGN				AML	AML	03 04 19.9	
	comp=E,3μm,0.4s						
CNGN				AML	AML	03 04 20.6	
	comp=N,3μm,0.2s						
COPN	Copaltepe	0.60	106	⇓iP	Pn	03 04 06.2	-0.2
MOMN	Momotombo	0.63	85	eP	Pn	03 04 07.0	+0.3
APYN	Apoyeque	0.82	98	eP	Pn	03 04 09.0	+0.2
APYN				eS	Sn	03 04 21.7	+0.2
APYN				AML	AML	03 04 26.2	
	comp=Z,2μm,0.3s						
TISN	Laguna Tiscapa	0.92	103	eP	Pn	03 04 10.0	+0.1
MGAN	Managua	0.94	102	eP	Pn	03 04 10.5	+0.4
MGAN				eS	Sn	03 04 24.6	+0.8
MGAN				eS	Sn	03 04 24.6	+0.8
TICN	Ticuantepe	0.98	109	eP	Pn	03 04 11.2	+0.5
HUEN		0.99	91	eP	Pn	03 04 10.8	+0.1
CNCH	Conchagua	1.12	326	eP	x	03 04 11.7	
CNCH				eS	x	03 04 28.7	
BLLM	Bellamira	1.49	317	eP	x	03 04 16.6	
SSN	San Juan del S	1.67	129	eP	Pn	03 04 19.5	+0.1
CONN	Concepcion	1.71	117	eP	Pn	03 04 20.1	+0.2
CAHU	Cacacuatique	1.73	325	eP	x	03 04 20.1	
LFRS	El Faro	2.22	305	eP	x	03 04 26.7	
BOQS	Boqueron	2.46	304	eP	x	03 04 30.1	
BOQS				eS	x	03 05 01.4	
RTR	El Retiro	2.85	303	eP	x	03 04 36.3	
CHI2		15.34	119	eP	x	03 04 04.0	

IGQ 06 03:11:56.2, **038S**×**8016W**, **h10**^{km}±4^{km}, **Mb4.4**, **Ms4.2**, **1D**, **Error ellipse: s-maj=4.1km s-min=2.0km az=44.4**, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.13	341	⇓P	Pg	03 12 00.2	+1.0
CHIS	Cerro-Chispas-	0.87	220	P	Pg	03 12 10.7	-2.2
CHIS	Cerro-Chispas-	0.87	220	S	Sg	03 12 23.6	-0.7
QIL2	Quilotoa	1.34	111	P	Pn	03 12 22.2	+1.3
QIL2	Quilotoa	1.34	111	S	Sb	03 12 41.8	+3.2
PINO	Pino	1.57	82	P	Pn	03 12 24.8	+0.7
TERV	Terraza Guagua	1.57	82	P	Pn	03 12 25.3	+1.1
TERV	Terraza Guagua	1.57	82	S	Sn	03 12 50.5	+5.9
GGP	Refugio Guagua	1.58	82	P	Pn	03 12 25.0	+0.7
YANA	Yana	1.61	81	P	Pn	03 12 25.8	+1.0
CAMI	Rancho Maria	1.69	100	P	Pn	03 12 28.5	+2.8
VC1	Cotopaxi 1	1.78	98	P	Pn	03 12 30.0	+3.0
TAMB	Tambo	1.82	100	P	Pn	03 12 30.8	+3.2
IGUA	Igualata	1.88	126	P	Pn	03 12 31.5	+3.1
IGUA	Igualata	1.88	126	S	Sn	03 12 58.9	+6.7
PISA	Pisayambo	1.90	111	P	Pn	03 12 32.2	+3.6
COTA	Cotacachi	1.96	69	P	Pn	03 12 30.9	+1.4
JUI6	Juive	1.99	121	P	Pn	03 12 33.3	+3.5
ANTI	Antisana	2.00	92	P	Pn	03 12 33.2	+3.1
RETU	Refugio	2.02	122	P	Pn	03 12 34.0	+3.7
RUN5	Runtun	2.02	121	P	Pn	03 12 33.6	+3.3
RUN5	Runtun	2.02	121	S	Sn	03 13 03.6	+8.0
ARRY	Arrayan	2.04	123	P	Pn	03 12 33.7	+3.1
ULBA	Ulba	2.05	121	P	Pn	03 12 34.0	+3.2
ULBA	Ulba	2.05	121	S	Sn	03 13 04.1	+7.7
PATA	Patacocha	2.06	123	P	Pn	03 12 34.1	+3.3
CAYA	Cayambe	2.22	78	P	Pn	03 12 35.6	+2.5
CAYA	Cayambe	2.22	78	S	Sn	03 13 06.7	+6.1
CONE	Cono NE Rev Vo	2.54	83	P	Pn	03 12 42.3	+4.8
LAV3	Lava3-Reventad	2.55	84	P	Pn	03 12 42.5	+4.9

*CSEM **06** 03:18:47.9±0.1, 3736N×3776E, h8^{km}, MD2.7, Error ellipse: s-maj=4.9km s-min=2.3km az=164.0*
*ISCJB **06** 03:18:48.0±0.6, 3730N±006×3778E±003, h3^{km}±7^{km}, Error ellipse: s-maj=9.6km s-min=3.5km az=170.6*
*ISK **06** 03:18:48.0, 3732N×3777E, h8^{km}, MD2.7*
*DDA **06** 03:18:49.2, 3738N×3772E, h7^{km}, Md3.0*
ISC 06 03:18:48.8±0.5, **3731N**±005×**3776E**±003, **h9**^{km}±5^{km}, **n17**, σ**0^{s}86**/28, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	Gaziantep	0.17	288	i P	Pg	03 18 52.0	-0.4
ATAB	Bozova	0.45	69	i P	Pg	03 18 57.9	+0.3
ATAB				i S	Sg	03 19 04.5	+0.9
GAZ	Gaziantep	0.46	253	ePG	Pg	03 18 57.9	+0.2
GAZ				eSG	Sg	03 19 04.0	+0.2
KMRS	Kahramanmaras	0.72	286	ePG	Pg	03 19 01.8	-0.8
KMRS				eSG	Sg	03 19 13.1	+1.1
URFA	Urfa	0.85	81	ePG	Pg	03 19 04.8	-0.3
URFA				eSG	Sg	03 19 17.0	+0.7
URFA	Urfa	0.85	81	ePg	Pg	03 19 04.8	-0.4
URFA				eSg	Sg	03 19 17.0	+0.7
AKCD	Akcadag	1.00	7	i P	Pg	03 19 06.7	-1.3
AKCD				i S	Sg	03 19 22.4	+1.5
ANDN	Andirin	1.16	284	i P	Pb	03 19 10.0	-1.0
ANDN				i S	Sg	03 19 26.0	-0.2
ELZG	Elazig	1.53	39	i P	Pn	03 19 16.0	-0.4
ELZG				i S	Sn	03 19 36.4	-0.1
ELZG	Elazig	1.53	39	i P	Pn	03 19 16.0	-0.4
ELZG				i S	Sn	03 19 36.3	-0.1
SARI	SarD1z-Kayseri	1.61	329	ePN	Pn	03 19 16.9	-0.5
SVRC	Sivrice-ELAZID	1.62	48	ePN	Pn	03 19 16.8	-0.8
DARE	Darende-Malaty	1.65	1	ePN	Pn	03 19 12.1	-5.8
HTY	Hatay	1.76	228	ePN	Pn	03 19 20.4	+0.9
DIYA	Diyarbakir	1.97	71	i P	Pn	03 19 22.8	+0.4
DIYA				i S	Sg	03 19 51.8	-0.3
MARD	Mardin	2.40	89	i P	Pn	03 19 30.6	+2.2
MARD				i S	Sg	03 20 04.7	-1.3
BEST	Besiri	2.84	77	i P	Pg	03 19 42.6	-0.7

*ISCJB **06** 03:35:35.5±0.4, 2387N±002×12255E±002, h20^{km}±4^{km}, mb3.6/7, Error ellipse: s-maj=4.1km s-min=2.6km az=162.7*
*TAP **06** 03:35:35.5, 2396N×12255E, h27^{km}±1^{km}, ML3.8, D*
*NEIC **06** 03:35:35.8±3.2, 2399N×12253E, h24^{km}±26^{km}, mb3.8/1, Error ellipse: s-maj=14.8km s-min=12.0km az=139.0*
*JMA **06** 03:35:36.5±0.3, 2403N×12248E, h33^{km}, M3.2*
*IDC **06** 03:35:38.7±5.0, 2427N×12265E, h43^{km}±50^{km}, mb3.4/6, mb1 3.5/7, mb1mx3.4/20, mbtmp3.4/7, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/21, Error ellipse: s-maj=33.9km s-min=22.3km az=56.0*
ISC 06 03:35:34.8±0.6, **2388N**±003×**12254E**±002, **h10**^{km}±4^{km}, **n60**, σ**1^{s}19**/92, **mb3.6**/7, **2C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.72	36	P	Pg	03 35 49.1	+0.3
YOJ				S	Sg	03 35 57.9	-0.3
TWD	Chiawan	0.89	283	eP	Pg	03 35 51.9	+0.1
	baz=278						
TWD				eS	Sg	03 36 02.9	-0.6
	baz=278						
ENA	Nanau	0.91	307	eP	Pg	03 35 51.9	-0.4
	baz=308						
ENA				eS	Sg	03 36 05.6	+1.3
	baz=308						
TWC	Suao	0.96	319	⇑iP	Pg	03 35 52.5	-0.8
	baz=315						
TWC				S	Sg	03 36 05.3	-0.6
	baz=315						
ESL	Shilin	1.01	267	eP	Pg	03 35 53.3	-1.0
	baz=263						
ESL				eS	Sg	03 36 06.9	-0.7
	baz=263						
ILA	Ilan	1.14	321	eP	Pb	03 35 57.2	+0.6
	baz=305						
ILA				eS	Sg	03 36 13.1	+1.5
	baz=305						
TWE	Neicheng	1.16	317	P	Pb	03 35 56.4	-0.4
	baz=301						
TWE				eS	Sg	03 36 12.9	+0.8
	baz=301						
ENTT	Nioudou	1.17	311	P	Pb	03 35 56.3	-0.7
	baz=292						
HATJ	Hateruma jima	1.17	81	P	Pb	03 35 57.4	+0.3
HATJ				S	Sb	03 36 13.5	+1.2
EHY	Hungye	1.18	252	i P	Pb	03 35 56.4	-0.8
	baz=257						
EHY				S	Sb	03 36 12.0	-0.4
	baz=257						
IRIF	Iriomote-Funau	1.18	67	P	Pb	03 35 57.5	+0.3
WHF	Hehuan Shan	1.20	283	⇑P	Pb	03 35 56.8	-0.7
	baz=267						
WHF				S	Sb	03 36 12.7	-0.3
	baz=267						
NNS	Nan Shan	1.20	298	P	Pb	03 35 56.9	-0.7
	baz=294						
TWB1	Santiao Chiao	1.23	336	eP	Pn	03 35 57.0	-1.0
	baz=333						
YULB	Yu-li	1.24	247	ePn	Pn	03 35 57.1	-1.0
YULB				eSn	Sn	03 36 11.9	-2.9
TWF1	Yuli	1.25	246	P	Pn	03 35 57.7	-0.6
	baz=243						
TWF1				S	Sb	03 36 13.3	-1.4
	baz=243						
TWT	Tachien	1.30	287	eP	Pn	03 35 58.8	-0.2
	baz=272						
TWT				eS	Sb	03 36 15.9	-0.1
	baz=272						
YHNB	Yeheng	1.32	307	ePn	Pn	03 35 58.2	-1.1
CHKT	Chengkung	1.33	235	eP	Pn	03 35 59.1	-0.2
	baz=220						
CHKT				eS	Sb	03 36 13.9	-2.9
	baz=220						
NSK	Sanguang	1.34	307	P	Pn	03 35 58.9	-0.6
	baz=289						
NWF	Wu-fen Shan	1.37	330	P	Pn	03 35 59.3	-0.7
	baz=327						
NWF				eS	Sb	03 36 18.5	+0.3
	baz=327						
JKRS	Kuro-shima	1.39	75	P	Pn	03 36 00.7	+0.5
JKRS				eS	Sb	03 36 18.6	0.0
TWA	Mucha	1.40	322	P	Pn	03 36 00.9	+0.6
	baz=319						
TATO	Taipei	1.45	319	ePn	Pn	03 36 01.1	0.0
SSLB	Suanglung	1.46	267	ePn	Pn	03 36 00.4	-0.7
SSLB				eSn	Sn	03 36 17.5	-2.7
SMLT	Sun Moon Lake	1.50	271	eP	Pn	03 36 01.7	0.0
	baz=268						
SMLT				S	Sn	03 36 21.2	-0.1
	baz=268						
TYC	Yuchr	1.54	271	eP	Pn	03 36 02.1	-0.1
	baz=269						
TYC				S	Sn	03 36 22.2	-0.1
	baz=269						
JIJ	Ishigaki jima	1.54	71	P	Pn	03 36 02.0	-0.3
JIJ				eS	Sn	03 36 21.6	-0.8
TWS1	Kuangyinshan	1.59	320	eP	Pn	03 36 01.8	-1.2
	baz=334						
NSTT	Nanjuang	1.59	298	eP	Pn	03 36 03.3	+0.4
	baz=294						
NSTT				eS	Sn	03 36 23.3	-0.3
	baz=294						
TWY	Chenhua	1.63	329	eP	Pn	03 36 04.5	+0.9
	baz=326						
TWQ1	Liyutan	1.68	287	eP	Pn	03 36 05.2	+1.0
	baz=284						
TWQ1				eS	Sn	03 36 27.1	+1.3
	baz=284						
TWG	Pinlang	1.71	232	ePn	Pn	03 36 03.5	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWG	Pinlang	1.71	232	eP	Pn	03 36 03.8	-0.8
	baz=241						
CHN5	Tsauling	1.73	261	eP	Pn	03 36 05.9	+1.1
	baz=258						
STYT	Tauyuan	1.78	247	eP	Pn	03 36 06.8	+1.2
	baz=234						
TPUB	Ta-pu	1.84	252	ePn	Pn	03 36 07.2	+0.7
TPUB				eSn	Sn	03 36 30.2	+0.4
CHN4	Tsaushan	1.86	254	eP	Pn	03 36 08.9	+2.2
	baz=252						
CHN4				eS	Sn	03 36 32.9	+2.6
	baz=252						
WTP	Ta-pu	1.88	251	eP	Pn	03 36 08.8	+1.9
	baz=240						
WTP				eS	Sn	03 36 32.5	+1.9
	baz=240						
ECL	Taimali	1.94	229	eP	Pn	03 36 07.4	-0.3
	baz=228						
ECL				eS	Sn	03 36 29.9	-2.2
	baz=228						
SGST	Jiashian	1.96	247	eP	Pn	03 36 10.8	+2.8
	baz=235						
CHN1	Nanshi	1.97	250	eP	Pn	03 36 10.1	+1.9
	baz=249						
CHN1				eS	Sn	03 36 35.1	+2.2
	baz=249						
TWK	Hsinying	1.98	253	eP	Pn	03 36 09.7	+1.4
	baz=251						
TWK				eS	Sn	03 36 34.6	+1.5
	baz=251						
LAY	Lan-yu	2.04	207	P	Pn	03 36 07.8	-1.4
	baz=206						
LAY				eS	Sn	03 36 32.2	-2.5
	baz=206						
SSD	Sandimen	2.08	238	eP	Pn	03 36 12.7	+3.0
	baz=229						
JTJ	Tarama	2.12	69	P	Pn	03 36 10.5	+0.3
SCZT	Fangliau	2.32	230	eP	Pn	03 36 14.7	+1.7
	baz=221						
TSEB	Hengchuen, Pin	2.48	218	eP	Pn	03 36 19.7	+4.5
	baz=218						
TSEB				eS	Sn	03 36 46.2	+0.7
	baz=218						
TWK1	Hengchun	2.50	220	eP	Pn	03 36 16.7	+1.2
	baz=220						
TWK1				eS	Sn	03 36 45.9	-0.2
	baz=220						
PNG	Penghu	2.75	264	eS	Sn	03 36 51.8	-0.4
	baz=263						
JKE	Kume jima 2	4.56	57	P	Pn	03 36 43.5	-0.2
JOW	Kunigami	5.96	59	P	Pn	03 37 01.6	-1.5
	2.2nm,0.3s,baz=56,slow=27,SNR=7.4						
JOW				S	Sn	03 38 05.0	-6.4
	0.3nm,0.3s,baz=313,slow=19,SNR=1.8						
KSRS	Korea Array	14.30	18	P	Pn	03 38 60.0	+2.7
	0.4nm,0.3s,baz=198,slow=11,SNR=8.7						
KSRS				LR	LR	03 45 16.8	
	comp=Z,36nm,18.5s,baz=200,slow=42						
SONM	Songino Array	27.14	336	P	P	03 41 14.7	-3.3
	0.2nm,0.4s,mb3.0,baz=156,slow=11,SNR=3.7						
MKAR	Makanchi Array	39.42	316	P	P	03 43 02.9	-1.9
	0.5nm,0.5s,mb3.5,baz=102,slow=11,SNR=10						
ZALV	Zalesovo Beam	41.18	327	P	P	03 43 16.3	-2.9
	0.6nm,0.5s,mb3.5,baz=141,slow=7.4,SNR=3.2						
TKM2	Tokmak 2	42.93	308	eP	P	03 43 33.7	0.0
	0.9nm,0.4s,mb3.9						
ASAR	Alice Springs	48.53	166	P	P	03 44 20.1	+2.0
	0.6nm,0.5s,mb3.9,baz=354,slow=14,SNR=10.0						
BRTR	Keskin Array B	74.35	307	P	P	03 47 11.3	-1.5
	1.6nm,1.2s,mb3.8,baz=64,slow=6.6,SNR=2.8						
YKA	Yellowknife Ar	82.77	23	P	P	03 47 56.1	-2.6
	0.3nm,0.6s,mb3.5,baz=309,slow=5.0,SNR=8.4						

DJA 06 03:57:03, 903S×11266E, h25^{km}, MLv4.1/8, South of Jawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRKI	Karangkates	0.89	347	P	Pb	03 57 20.0	+0.2
SJI	Sawahan	1.56	325	P	Pn	03 57 29.0	-0.2
NBBI	Negara	2.05	71	P	Pn	03 57 37.0	+1.2
KMMI	Kalianget	2.35	33	P	Pn	03 57 40.9	+0.8
UGM	Wanagama	2.39	298	P	Pn	03 57 41.0	+0.4
IGBI	Denpasar	2.46	85	P	Pn	03 57 42.6	+1.0
SMRI	Semarang	2.95	312	P	Pn	03 57 49.7	+1.4
KHKI	Kahang-Kahang	2.99	77	P	Pn	03 57 49.4	+0.6

*BJI **06** 04:45:26.8, 202N×129.19E, h249^{km}, mB4.7, mb4.6*
*IDC **06** 04:45:31.9±1.8, 243N×12855E, h230^{km}±17^{km}, mb3.9/11, mb1 4.0/14, mb1mx3.9/19, mbtmp4.0/14, Error ellipse: s-maj=19.2km s-min=9.5km az=83.0*
*NEIC **06** 04:45:31.5±1.0, 245N×12860E, h225^{km}±9^{km}, mb4.5/22, Error ellipse: s-maj=10.1km s-min=5.6km az=64.0*
*ISCJB **06** 04:45:31.0±0.7, 250N±004×12856E±005, h231^{km}±6^{km}, mb4.3/32, Error ellipse: s-maj=9.2km s-min=6.9km az=159.1*
*MOS **06** 04:45:32.0±0.9, 249N×12857E, h247^{km}, mb4.5/6, Error ellipse: s-maj=27.4km s-min=11.5km az=108.8*
*DJA **06** 04:45:34, 245N×12843E, h204^{km}, MLv4.8/5*
ISC 06 04:45:32.1±0.7, **244N**±004×**12853E**±006, **h226**^{km}±6^{km}, **n69,** σ**1§02**/71, **mb4.3**/32, **Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.02	215	P	Pn	04 46 13.3	+0.4
LBMI	Labuha	3.22	199	P	Pn	04 46 26.7	+0.9
MNI	Manado	3.82	255	P	Pn	04 46 31.9	-0.8
MNI				S	S	04 47 19.6	-1.0
SWI	Sorong	4.26	140	P	Pn	04 46 39.9	+1.8
DAV	Davao City (W)	5.46	328	P	Pn	04 46 53.5	+0.5
	33nm,0.3s,baz=24,slow=8.2,SNR=14						
DAV	Davao City (W)	5.46	328	P	Pn	04 46 52.9	-0.1
	404nm,1.5s,1.4nm						
KDI	Kendari	8.68	223	P	Pn	04 47 32.4	-1.7
	37nm,0.9s						
PCI	Palu	9.31	249	P	Pn	04 47 40.9	-1.3
	131nm,0.9s,1μm						
MYLDM	Lahad Datu	10.37	286	P	Pn	04 47 56.9	+1.1
	38nm,1.1s						
KAPI	Kappang	11.48	230	P	Pn	04 48 08.7	-1.1
	2.7nm,0.3s,baz=35,slow=8.6,SNR=18						
KAPI				S	S	04 50 15.3	-2.8
	1.2nm,0.3s,baz=114,slow=20,SNR=2.9						
KAPI	Kappang	11.48	230	P	Pn	04 48 08.7	-1.1
KAPI				S	S	04 50 15.3	-2.8
KAPI	Kappang	11.48	230	P	Pn	04 48 10.7	+0.9
	30nm,1.4s						
KKM	Kota Kinabalu	12.79	287	ePn	Pn	04 48 24.9	-1.3
BATI	Baumata	13.46	201	P	Pn	04 48 36.2	+1.7
	8.5nm,0.3s,baz=51,slow=1.7,SNR=5.0						
BATI				S	S	04 51 03.6	-0.7
	1.7nm,0.3s,baz=300,slow=20,SNR=2.2						
BBKI	Banjar Baru	14.89	247	P	Pn	04 48 52.7	+0.7
	112nm,1.2s						
KAKA	Kakadu	15.54	166	eP	x	04 48 40.6	
	16nm,0.6s						
KAKA				eS	x	04 51 23.8	
KHKI	Kahang-Kahang	16.77	230	P	P	04 49 16.1	+3.2
	38nm,0.9s						
KMMI	Kalianget	17.32	237	P	P	04 49 22.3	+3.3
KSM	Kuching	18.24	267	eP	P	04 49 30.3	+1.3
	31nm,1.0s						
KSM	Kuching	18.24	267	P	P	04 49 31.0	+2.1
COEN	Coen	21.82	139	eP	P	04 50 05.5	-1.0
	7.8nm,0.8s,mb4.3						
WRAB	Tennant Creek	22.95	166	eP	P	04 50 16.7	-0.1
WRAB				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.1						
WRAB	Tennant Creek	22.95	166	eP	P	04 50 16.6	-0.2
	comp=Z,58nm,1.0s,mb5.1						
WB2	Warramunga Arr	22.96	166	eP	P	04 50 16.9	0.0
WB2				eS	S	04 54 11.1	+1.1
ASAR	Alice Springs	26.47	169	P	P	04 50 48.0	-0.6
	comp=Z,6.5nm,0.5s,mb4.5,baz=358,slow=8.5,SNR=98						
ASAR				ScP	ScP	04 57 25.4	-0.5
	comp=Z,1.7nm,0.9s,baz=324,slow=2.3,SNR=8.9						
CMAR	Chiang Mai Arr	33.07	301	P	P	04 51 47.6	+0.9
	comp=Z,4.2nm,0.8s,mb4.0,baz=119,slow=7.0,SNR=19						
CHTO	Chiang Mai	33.23	301	eP	P	04 51 48.6	+0.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
CHTO	Chiang Mai	33.23	301	eP	P	04 51 48.6	+0.5
	comp=Z,3.0nm,0.8s,mb3.9						
KSRS	Korea Array	34.85	359	P	P	04 52 01.3	-0.5
	comp=Z,5.8nm,0.7s,mb4.2,baz=174,slow=9.7,SNR=15						
MJAR	Matsushiro Arr	35.09	14	P	P	04 52 02.4	-1.5
	comp=Z,7.4nm,0.8s,mb4.3,baz=187,slow=9.5,SNR=17						
MAJO	Matsushiro	35.09	14	eP	P	04 52 02.7	-1.2
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
MAJO	Matsushiro	35.09	14	eP	P	04 52 02.7	-1.1
	comp=Z,16nm,0.9s,mb4.5						
STKA	Stephens Creek	36.31	161	eP	P	04 52 14.0	-0.3
	comp=Z,10nm,0.9s,mb4.3						
STKA	Stephens Creek	36.31	161	P	P	04 52 13.9	-0.4
	comp=Z,8.8nm,0.6s,mb4.5,baz=344,slow=6.8,SNR=16						
BJT	Baijiatuau	39.05	345	eP	P	04 52 36.7	-0.4
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
BJT	Baijiatuau	39.05	345	eP	P	04 52 36.7	-0.4
	comp=Z,12nm,0.6s,mb4.6						
ARMA	Armidale	39.41	148	eP	P	04 52 39.9	-0.3
LZH	Lanzhou	40.53	329	eP	P	04 52 50.5	+1.2
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,98nm,5.0s						
GTA	Gaotai	45.13	328	eP	P	04 53 26.4	+0.3
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.0						
TAPN	Taplejung	46.23	306	eP	P	04 53 35.7	+0.8
	comp=Z,16nm,0.8s,mb4.4						
ODAN	Odare	46.28	306	eP	P	04 53 36.1	+0.8
	comp=Z,23nm,0.7s,mb4.6						
RAMN	Ramite	46.96	305	eP	P	04 53 41.7	+1.1
	comp=Z,25nm,0.5s,mb4.8						
JIRN	Jiri	47.58	306	eP	P	04 53 46.3	+0.9
	comp=Z,14nm,0.4s,mb4.7						
GUN	Gumba	47.94	306	eP	P	04 53 48.9	+0.8
	comp=Z,21nm,0.7s,mb4.6						
DMN	Daman	48.44	305	eP	P	04 53 52.1	+0.1
	comp=Z,20nm,1.0s,mb4.4						
ULN	Ulaanbaatar	48.91	341	eP	P	04 53 55.5	+0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
ULN	Ulaanbaatar	48.91	341	eP	P	04 53 55.5	+0.4
	comp=Z,4.4nm,0.8s,mb3.8						
SONM	Songino Array	49.10	340	P	P	04 53 56.4	-0.2
	comp=Z,2.0nm,0.8s,mb3.5,baz=152,slow=8.3,SNR=14						
KOLN	Koldanda	49.73	305	eP	P	04 54 02.2	+0.4
	comp=Z,26nm,0.6s,mb4.7						
DANN	Dangsing	49.83	306	eP	P	04 54 02.9	+0.5
	comp=Z,32nm,0.6s,mb4.8						
PETK	Petropavlovsk-	55.97	21	P	P	04 54 47.6	+0.9
	comp=Z,3.3nm,0.7s,mb4.0,baz=174,slow=4.3,SNR=3.4						
MKAR	Makanchi Array	59.64	325	P	P	04 55 11.9	-0.5
	comp=Z,3.0nm,0.4s,mb4.2,baz=121,slow=8.4,SNR=37						
TKM2	Tokmak 2	61.90	318	eP	P	04 55 27.1	-0.6
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
TKM2	Tokmak 2	61.90	318	eP	P	04 55 27.1	-0.7
	comp=Z,2.0nm,0.9s,mb3.8						
ZALV	Zalesovo Beam	62.55	333	P	P	04 55 30.5	-1.3
	comp=Z,1.2nm,0.6s,mb3.7,baz=93,slow=5.9,SNR=5.8						
ZALV	Zalesovo Beam	62.55	333	P	P	04 55 30.5	-1.3
EKS2	Erkin-Say	63.01	317	eP	P	04 55 35.4	+0.3
	comp=Z,3.0nm,0.7s,mb4.0						
KURK	Kurchatov	63.79	327	eP	P	04 55 39.1	-0.9
KURK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.6						
KURK	Kurchatov	63.79	327	eP	P	04 55 39.1	-0.9
	comp=Z,11nm,0.7s,mb4.6						
BRVK	Borovoye	69.45	327	eP	P	04 56 15.1	-0.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
BRVK	Borovoye	69.45	327	eP	P	04 56 15.1	-0.6
	comp=Z,6.1nm,0.9s,mb4.2						
VNDA	Vanda	81.93	173	P	P	04 57 25.4	-0.5
	comp=Z,1.8nm,0.8s,mb3.7,baz=306,slow=5.3,SNR=4.8						
VNDA	Vanda	81.93	173	eP	P	04 57 26.0	+0.1
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VNDA	Vanda	81.93	173	eP	P	04 57 25.9	+0.1
	comp=Z,2.8nm,0.9s,mb3.9						
ARCES	ARCESS Array B	92.27	340	P	P	04 58 13.9	-2.1
	comp=Z,2.7nm,0.8s,mb4.2,baz=87,slow=5.8,SNR=7.1						
RES	Resolute Bay	98.75	11	eP	P	04 58 45.0	-0.4
RES				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.2						
RES	Resolute Bay	98.75	11	eP	P	04 58 45.0	-0.3
	comp=Z,1.2nm,0.7s,mb4.3						
TORD	Torodi Ar. Bea	125.03	288	PKP	PKPdf	05 04 05.3	-1.1
	comp=Z,0.2nm,0.3s,baz=90,slow=1.8,SNR=7.3						
TORD	Torodi Ar. Bea	125.03	288	PKP	PKPdf	05 04 05.3	-1.1

*TAP **06** 05:35:10.5, 2492N×122.18E, h116^{km}, ML3.7, C*
*JMA **06** 05:35:10.0±0.4, 2489N×12209E, h107^{km}, M2.5*
*ISCJB **06** 05:35:11.2±0.7, 2486N±004×12221E±003, h112^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=3.7km az=171.7*
ISC 06 05:35:11.7±0.7, **2487N**±004×**12221E**±003, **h110**^{km}±5^{km}, **n38,** σ**0§70**/67, **4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.24	304	⇓iP	Pn	05 35 27.0	-0.2
	baz=303						
TWB1				eS	Sn	05 35 38.4	-0.5
	baz=303						
TWC	Suao	0.42	232	⇓iP	Pn	05 35 27.8	-0.2
	baz=227						
TWC				eS	Sn	05 35 39.6	-0.7
	baz=227						
NWF	Wu-fen Shan	0.44	297	⇓iP	Pn	05 35 28.0	-0.1
	baz=285						
NWF				S	Sn	05 35 40.5	0.0
	baz=285						
TWE	Neicheng	0.52	253	P	Pn	05 35 28.5	-0.1
	baz=250						
TWE				eS	Sn	05 35 42.2	+0.9
	baz=250						
TWA	Mucha	0.58	281	P	Pn	05 35 28.7	-0.4
	baz=272						
TWA				eS	Sn	05 35 41.3	-0.9
	baz=272						
ENA	Nanau	0.61	224	P	Pn	05 35 29.6	+0.3
	baz=214						
ENA				eS	Sn	05 35 43.2	+0.6
	baz=214						
ENTT	Nioudou	0.63	249	⇓iP	Pn	05 35 29.5	0.0
	baz=244						
ENTT				S	Sn	05 35 44.0	+1.1
	baz=244						
TWY	Chenhua	0.69	306	P	Pn	05 35 29.6	-0.3
	baz=305						
TWY				S	Sn	05 35 43.5	-0.2
	baz=305						
TWS1	Kuangyinshan	0.76	288	P	Pn	05 35 30.2	-0.3
	baz=288						
TWS1				eS	Sn	05 35 44.2	-0.5
	baz=288						
NSK	Sanguang	0.80	256	P	Pn	05 35 30.8	-0.1
	baz=253						
NSK				eS	Sn	05 35 45.0	-0.4
	baz=253						
YOJ	Yonaguni jima	0.83	119	P	Pn	05 35 30.3	-0.9
YOJ				eS	Sn	05 35 46.5	+0.6
NNS	Nan Shan	0.88	241	P	Pn	05 35 32.2	+0.6
	baz=237						
NNS				eS	Sn	05 35 47.2	+0.6
	baz=237						
NCU	National Centr	0.94	276	eP	Pn	05 35 32.4	+0.2
	baz=274						
NCU				eS	Sn	05 35 48.1	+0.4
	baz=274						
TWD	Chiawan	0.97	216	P	Pn	05 35 32.3	-0.2
	baz=222						
TWD				eS	Sn	05 35 47.5	-0.8
	baz=222						
WHF	Hehuan Shan	1.13	230	P	Pn	05 35 34.9	+0.7
	baz=227						
WHF				eS	Sn	05 35 52.4	+1.1
	baz=227						
NSTT	Nanjuang	1.13	258	eP	Pn	05 35 33.6	-0.6
	baz=249						
NSTT				eS	Sn	05 35 50.4	-0.8
	baz=249						
TWT	Tachien	1.13	237	eS	Sn	05 35 51.9	+0.7
	baz=235						
ESL	Shilin	1.27	214	P	Pn	05 35 34.7	-1.1
	baz=217						
ESL				eS	Sn	05 35 52.4	-1.6
	baz=217						
TWQ1	Liyutan	1.41	249	eP	Pn	05 35 37.3	-0.1
	baz=247						
TWQ1				eS	Sn	05 35 56.8	-0.1
	baz=247						
IRIF	Iriomote-Funau	1.48	111	P	Pn	05 35 37.8	-0.4
IRIF				eS	Sn	05 35 58.4	0.0
SMLT	Sun Moon Lake	1.55	231	P	Pn	05 35 39.6	+0.5
	baz=235						
SMLT				eS	Sn	05 36 01.1	+1.2
	baz=235						
TYC	Yuchr	1.57	232	P	Pn	05 35 39.6	+0.3
	baz=240						
TYC				S	Sn	05 36 01.0	+0.8
	baz=240						
EHY	Hungye	1.58	211	eP	Pn	05 35 38.2	-1.3
	baz=207						
HATJ	Hateruma jima	1.66	119	eS	Sn	05 36 02.9	+0.6
TWF1	Yuli	1.73	209	P	Pn	05 35 40.3	-0.9
	baz=210						
JKRS	Kuro-shima	1.75	111	P	Pn	05 35 41.9	+0.4
JKRS				S	Sn	05 36 04.8	+0.5
JIJ	Ishigaki jima	1.83	106	P	Pn	05 35 42.4	-0.1
JIJ				S	Sn	05 36 05.8	-0.2
CHN5	Tsauling	1.89	228	P	Pn	05 35 43.6	+0.3
	baz=228						
CHN5				eS	Sn	05 36 08.3	+0.9
	baz=228						
CHKT	Chengkung	1.93	204	eP	Pn	05 35 43.7	-0.1
	baz=191						
CHKT				eS	Sn	05 36 06.3	-1.9
	baz=191						
CHN4	Tsaushan	2.12	225	eP	Pn	05 35 46.4	+0.2
	baz=225						
CHN4				eS	Sn	05 36 13.3	+0.8
	baz=225						
STYT	Tauyuan	2.16	218	eP	Pn	05 35 47.1	+0.4
	baz=216						
WTP	Ta-pu	2.18	222	P	Pn	05 35 47.1	+0.1
	baz=230						
TWK	Hsinying	2.24	225	eP	Pn	05 35 47.6	-0.2
	baz=224						
JTJ	Tarama	2.27	95	P	Pn	05 35 48.7	+0.5
JTJ				eS	Sn	05 36 16.9	+0.8
CHN1	Nanshi	2.28	223	P	Pn	05 35 48.2	-0.1
	baz=224						
CHN1				S	Sn	05 36 16.9	+0.6
	baz=224						
ECL	Taimali	2.54	207	eP	Pn	05 35 52.0	+0.3
	baz=200						
LAY	Lan-yu	2.88	192	eP	Pn	05 35 55.0	-1.1
	baz=184						
LAY				eS	Sn	05 36 28.8	-1.6
	baz=184						
SCZT	Fangliau	2.88	211	eP	Pn	05 35 57.7	+1.6
	baz=219						

*CSEM **06** 06:13:30.9±0.1, 3937N×2055E, h8^{km}, ML3.6/6, Error ellipse: s-maj=2.2km s-min=1.9km az=76.0*
*ATH **06** 06:13:30.6, 3935N×2054E, h4^{km}, MD3.2/7*
*ISCJB **06** 06:13:31.2±0.5, 3934N±003×2054E±004, h10^{km}, Error ellipse: s-maj=4.6km s-min=3.7km az=153.9*
*NEIC **06** 06:13:31.1, 3934N×2059E, h0^{km}, MD3.2(ATH), ML3.7(THE), After THE.*
*THE **06** 06:13:31.1, 3934N×2059E, h0^{km}±2^{km}, ML3.6/6, Error ellipse: s-maj=2.3km s-min=0.9km az=222.0*
ISC 06 06:13:31.5±0.5, **3932N**±003×**2055E**±004, **h10**^{km}, **n31,** σ**1§06**/48, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.27	322	P	Pg	06 13 35.6	-1.4
IGT				S	Sg	06 13 40.1	-0.6
IGT	Igoumenitsa	0.27	322	P	Pg	06 13 35.6	-1.4
IGT				S	Sg	06 13 40.3	-0.4
JAN	Janina	0.41	34	ePG	Pg	06 13 37.7	-1.8
JAN				eSG	Sg	06 13 43.2	-1.8
JAN	Janina	0.41	34	ePg	Pg	06 13 37.3	-2.2
JAN				eSg	Sg	06 13 43.2	-1.8
KEK	Kerkira	0.70	304	ePG	Pg	06 13 43.6	-1.4
EVR	Evrytania	1.06	112	ePG	Pg	06 13 51.0	-0.8
VLS	Valsamata	1.14	178	ePb	Pb	06 13 52.5	-0.8
VLS				S	Sb	06 14 10.5	+2.4
THL	Klokotos Trika	1.16	77	P	Pb	06 13 51.3	-2.3
THL				S	Sb	06 14 08.4	-0.3
THL	Klokotos Trika	1.16	77	ePn	Pn	06 13 53.8	+0.1
THL				S	Sb	06 14 08.4	-0.3
KFL	Anninata	1.22	171	P	Pn	06 13 54.2	-0.4
KZN	Kozani	1.36	43	ePG	Pg	06 13 55.4	-2.2
AGG	Agios Georgios	1.42	102	P	Pn	06 13 57.1	-0.1
AGG				S	Sn	06 14 16.3	+0.4
RLS	Riolos of Patr	1.45	150	ePB	Pb	06 13 58.9	+0.4
RLS	Riolos of Patr	1.45	150	ePb	Pb	06 13 59.5	+1.0
FNA	Florina	1.59	23	P	Pn	06 13 59.4	-0.3
FNA				S	Sn	06 14 22.0	+1.6
LIT	Litokhoron	1.69	62	P	Pn	06 14 01.0	0.0
LIT				S	Sn	06 14 23.4	+0.7
BIA	Bitola	1.80	19	P	Pn	06 14 02.6	+0.1
BIA				S	Sn	06 14 26.3	+0.9
BIA	Bitola	1.80	19	i Pn	Pn	06 14 02.3	-0.2
BIA				S	Sn	06 14 26.3	+0.9
BIA	Bitola	1.80	19	i Pn	Pn	06 14 02.4	-0.2
TIR	Tirane	2.09	346	P	Pn	06 14 07.2	+0.6
TIR				S	Sn	06 14 34.6	+1.9
TIR	Tirane	2.09	346	ePn	Pn	06 14 06.6	0.0
TIR	Tirane	2.09	346	P	Pn	06 14 07.2	+0.6
TIR				S	Sn	06 14 34.6	+1.9
KRUS	Krusevo	2.12	14	i Pn	Pn	06 14 07.5	+0.6
KRUS				i Sn	Sn	06 14 34.9	+1.7
KRUS	Krusevo	2.12	14	i Pn	Pn	06 14 07.5	+0.6
KRUS				i Sn	Sn	06 14 35.0	+1.7
GRG	Griva	2.17	40	P	Pn	06 14 08.0	+0.4
VAY	Valandovo	2.53	37	i Pn	Pn	06 14 12.6	+0.1
KNT	Kendrikon	2.57	44	P	Pn	06 14 13.4	+0.2
SOH	Sokhos	2.62	54	P	Pn	06 14 14.4	+0.5
SOH				S	Sn	06 14 46.6	+0.9
OUR	Ouranopolis	2.83	68	P	Pn	06 14 16.7	0.0
BARS	Barje	3.62	15	ePn	Pn	06 14 27.5	-0.1
BBLS	Lazići	4.62	350	ePn	Pn	06 14 42.1	+0.7

*ATH **06** 06:19:40.6, 4034N×2064E, h5^{km}, MD3.2/3*
*CSEM **06** 06:19:42.0, 4029N×2060E, h5^{km}, MD3.2/3, After ATH*
*ISCJB **06** 06:19:43.7±0.7, 4020N±004×2061E±008, h10^{km}, Error ellipse: s-maj=9.8km s-min=5.7km az=22.2*
ISC 06 06:19:43.5±0.7, **4018N**±005×**2060E**±008, **h10**^{km}, **n7,** σ**1§19**/10, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.56	160	ePB	Pb	06 19 54.1	-1.2
JAN				eSB	Sb	06 20 03.6	+0.4
KEK	Kerkira	0.77	233	ePB	Pb	06 19 57.7	-1.3
KEK				eSB	Sb	06 20 10.6	+1.1
BIA	Bitola	1.01	33	i Pn	Pn	06 20 01.2	-2.4
KRUS	Krusevo	1.29	22	i Pn	Pn	06 20 07.8	+0.3
KRUS				i Sn	Sn	06 20 25.7	+0.9
EVR	Evrytania	1.57	143	ePB	Pb	06 20 12.8	+0.2
EVR	Evrytania	1.57	143	ePb	Pb	06 20 15.4	+2.8
VAY	Valandovo	1.88	52	ePn	Pn	06 20 16.3	+0.6

NEIC 06 07:35:45.6, 4002S×17674E, h46^{km}**, ML4.0**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BFZ	Birch Farm	0.76	210	P	Pn	07 36 00.2	+0.2
BKZ	Black Stump Fm	0.87	347	P	Pn	07 36 00.6	-0.9
MRZ	Mangatainoka R	1.09	234	P	Pn	07 36 04.0	-0.5
WNVZ	Wahianoa	1.12	308	P	Pn	07 36 04.9	+0.1
TUVZ	Tukino	1.12	311	P	Pn	07 36 05.0	+0.1
FWVZ	Far West T-bar	1.19	309	P	Pn	07 36 05.7	-0.1
KNZ	Kokohu	1.23	36	P	Pn	07 36 05.7	-0.7
HATZ	Hinemaiaia	1.23	336	P	Pn	07 36 06.0	-0.4
RITZ	Rihia Road	1.24	326	P	Pn	07 36 06.5	0.0
KATZ	Kakaramea	1.32	322	P	Pn	07 36 07.0	-0.6
RATZ	Rangitukua	1.37	327	P	Pn	07 36 08.4	+0.1
WAZ	Wanganui	1.38	280	P	Pn	07 36 09.0	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWVZ	Taurewa	1.38	313	P	Pn	07 36 08.2	-0.2
KIW	Kapiti Island	1.63	238	P	Pn	07 36 11.1	-0.7
CAW	Cannon Point	1.68	229	P	Pn	07 36 11.3	-1.1
PAWZ	Paruwai Farm	1.69	216	P	Pn	07 36 11.5	-1.1
URZ	Urewera	1.78	9	P	Pn	07 36 12.3	-1.6
MWZ	Matawai	1.79	20	P	Pn	07 36 12.8	-1.2
MSWZ	Moikau Station	1.80	219	P	Pn	07 36 12.6	-1.5
MRW	Makara Radio	1.97	231	P	Pn	07 36 15.1	-1.3
SNZO	South Karori	2.01	230	P	Pn	07 36 15.5	-1.6
TCW	Tory Channel	2.22	237	P	Pn	07 36 18.4	-1.5
PUZ	Puketiti	2.27	32	P	Pn	07 36 19.1	-1.5
MXZ	Matakaoa Point	2.74	27	P	Pn	07 36 26.2	-0.8
BSWZ	Blackbirch Sta	2.75	231	P	Pn	07 36 25.2	-2.0
NNZ	Nelson	2.82	244	P	Pn	07 36 25.6	-2.6
QRZ	Quartz Range	3.31	255	P	Pn	07 36 33.3	-1.6
THZ	Tophouse	3.39	238	P	Pn	07 36 32.5	-3.4
LTZ	Lake Taylor	4.35	229	P	Pn	07 36 45.1	-4.0
MQZ	McQueen's Vall	4.78	218	P	Pn	07 36 52.7	-2.4

*NEIC **06** 07:43:41.1, 1674N×9972W, h12km, MD3.5(MEX), After MEX.*

MEX 06 07:43:41.1±0.6, 1675N×9971W, h10km±3km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.23	302	i P	Pg	07 43 45.5	-0.3
ACX				i S	Sg	07 43 48.7	-0.4
ACX				i S	Sg	07 43 48.8	-0.3
CAIG	El Cayaco	0.61	300	i P	Pg	07 43 51.9	-1.1
CAIG				i S	Sg	07 44 00.1	-0.9
MEIG	Mezcala	1.18	4	i P	Pb	07 43 59.9	-3.6
MEIG				i S	Sb	07 44 14.6	-4.2
PNIG	Pinotepa	1.56	103	i P	Pn	07 44 05.8	-3.1
PNIG				i S	Sn	07 44 23.4	-5.7
ZIIG	Zihuatanejo	1.88	297	i P	Pn	07 44 08.9	-4.3
ZIIG				i S	Sn	07 44 31.6	-5.4
UTMO	Huajuapan	2.12	59	i P	Pn	07 44 12.8	-3.7
UTMO				i S	Sn	07 44 38.3	-4.5

*ISCJB **06** 07:49:29.3±0.6, 2322S±004×68.18W±007, h136km±5km, mb3.4/4, Error ellipse: s-maj=10.1km s-min=7.1km az=16.6*
*IDC **06** 07:49:29.9±1.1, 23.17S×6803W, h121km±8km, mb3.3/6, mb1 3.7/7, mb1mx3.5/17, mbtmp3.5/7, Error ellipse: s-maj=25.9km s-min=19.2km az=18.0*
*GUC **06** 07:49:31.3±0.9, 23.10S×6832W, h130km±5km, ML4.0*
*NEIC **06** 07:49:31.3, 23.10S×6832W, h130km, MG4.0(GUC), After GUC.*

ISC 06 07:49:29.9±0.6, 2321S±004×6812W±007, h126km±6km, n23, σ1.29/38, mb3.5/4, 7C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.31	346	⇑i P	Pn	07 49 49.9	+2.3
SPCH				i S	Sn	07 50 04.0	+3.1
SPCH	San Pedro de A	0.31	346	⇑i P	Pn	07 49 49.9	+2.3
SPCH				i S	Sn	07 50 04.0	+3.1
SPCH				AML	AML	07 50 04.6	
	comp=E,6μm,0.5s						
LVC	Limon Verde	0.94	309	P	Pn	07 49 53.1	+1.2
	comp=E,79nm,0.3s,baz=122,slow=9.8,SNR=2227						
LVC				S	Sn	07 50 09.3	+0.7
	comp=E,526nm,0.3s,baz=220,slow=21,SNR=215						
LVC	Limon Verde	0.94	309	P	Pn	07 49 53.1	+1.2
LVC				S	Sn	07 50 09.3	+0.7
LVC	Limon Verde	0.94	309	eP	Pn	07 49 53.0	+1.1
LVC				i S	Sn	07 50 09.5	+0.9
MACH	Maria Elena	1.82	303	⇑i P	Pn	07 50 01.6	+0.1
MACH				i S	Sn	07 50 25.1	-0.4
CEN1	Los Morros	1.92	264	⇓i P	Pn	07 50 05.3	+2.6
CEN1				i S	Sn	07 50 30.6	+2.8
CEN1				AML	AML	07 50 32.2	
	comp=N,587nm,0.2s						
MECH	Mejillones	2.15	272	⇓i P	Pn	07 50 05.8	+0.4
MECH				i S	Sn	07 50 31.4	-1.3
MECH				AML	AML	07 50 37.9	
	comp=N,1μm,0.3s						
ANCH	Antofagasta	2.16	257	⇑i P	Pn	07 50 06.1	+0.5
ANCH				i S	Sn	07 50 32.2	-0.7
ANCH	Antofagasta	2.16	257	⇑i P	Pn	07 50 06.1	+0.5
ANCH				i S	Sn	07 50 32.2	-0.7
ANCH				AML	AML	07 50 38.1	
	comp=N,1μm,0.1s						
TOCH	Tocopilla	2.22	300	⇓i P	Pn	07 50 05.9	-0.5
TOCH				i S	Sn	07 50 31.9	-2.4
TOCH				AML	AML	07 50 36.5	
	comp=N,1μm,0.2s						
PB01	Plate Boundary	2.50	329	⇑i P	Pn	07 50 09.4	-0.6
PB01				eS	Sn	07 50 38.9	-1.9
PB01				AML	AML	07 50 41.5	
	comp=E,786nm,0.4s						
CPN1	Cerro Paranal	2.52	236	⇑i P	Pn	07 50 11.1	+0.9
CPN1				i S	Sn	07 50 41.6	+0.5
CPN1				AML	AML	07 50 42.1	
	comp=E,695nm,0.5s						
LCO	Las Campanas	6.22	201	ePn	Pn	07 50 57.8	-1.6
LCO				eSn	Sn	07 52 07.4	-1.8
CFAA	Coronel Fontan	8.36	181	P	Pn	07 51 27.5	-0.7
	comp=E,0.1nm,0.3s,baz=16,slow=14,SNR=6.0						
CFAA				S	Sn	07 52 54.8	-6.1
	comp=E,0.1nm,0.3s,baz=289,slow=18,SNR=2.7						
SIV	San Ignacio	9.78	44	P	Pn	07 51 44.4	-3.1
	comp=E,9.0nm,0.3s,baz=232,slow=11,SNR=157						
SIV				S	Sn	07 53 26.9	-8.5
	comp=E,1.4nm,0.3s,baz=145,slow=18,SNR=8.9						
BDFB	Brasilia	20.39	72	P	P	07 53 57.1	+0.2
	comp=E,3.0nm,0.4s,baz=230,slow=18,SNR=13						
TXAR	Lajitas Array	62.45	325	P	P	07 59 40.0	+0.2
	comp=E,0.0nm,0.3s,baz=146,slow=7.1,SNR=2.7						
PDAR	Pinedale Array	75.95	330	P	P	08 01 03.7	+0.9
	comp=E,0.2nm,0.5s,mb3.1,baz=152,slow=6.0,SNR=3.1						
TORD	Torodi Ar. Bea	77.25	70	P	P	08 01 11.0	+0.3
	comp=E,1.1nm,0.5s,mb3.9,baz=256,slow=5.7,SNR=31						
NVAR	Mina Array Bea	77.28	322	P	P	08 01 11.7	+1.4
	comp=E,0.3nm,0.6s,mb3.2,baz=162,slow=9.2,SNR=2.9						
YKA	Yellowknife Ar	93.04	340	P	P	08 02 28.7	+0.1
	comp=E,0.3nm,0.5s,mb3.9,baz=137,slow=4.7,SNR=15						
ASAR	Alice Springs	128.72	206	PKP	PKPdf	08 08 23.5	+0.5
	comp=E,0.4nm,0.6s,baz=148,slow=2.2,SNR=4.8						

IDC 06 08:13:29.6±5.9, 369S×2818E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/20, mbtmp3.7/3, Error ellipse: s-maj=144.4km s-min=43.3km az=177.0, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	31.17	303	P	P	08 19 50.6	0.0
	0.3nm,0.5s,baz=106,slow=7.9,SNR=4.6						
BRTR	Keskin Array B	43.49	6	P	P	08 21 34.9	+0.2
	0.9nm,0.7s,baz=186,slow=9.7,SNR=4.1						
MKAR	Makanchi Array	69.17	37	P	P	08 24 38.1	+0.1
	0.8nm,0.7s,baz=240,slow=6.3,SNR=8.9						

*KRSC **06** 08:31:31.4±1.6, 4993N×15704E, h10km±10km, ML4.3*
*IDC **06** 08:31:36.1±1.2, 5052N×15971E, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.6/23, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=38.4km s-min=27.7km az=126.0*
*MOS **06** 08:31:39.4±1.1, 5066N×15680E, h16km, mb4.2/1, Error ellipse: s-maj=38.7km s-min=11.2km az=70.2*

ISC 06 08:31:30.2±1.1, 4962N±007×1571E±02, h35km, n21, σ1.23/27, mb3.6/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.23	330	ePN	Pn	08 31 49.0	-1.9
SKR				e		08 31 54.5	
SKR				pmax	pmax		
	comp=N,160nm,0.4s						
SKR				pmax	pmax		
	comp=Z,330nm,0.4s						
SKR				pmax	pmax		
	comp=N,100nm,0.3s						
SKR				smax			
	comp=N,4μm,0.2s						
SKR				smax			
	comp=E,4μm,0.2s						
SKR				smax			
	comp=N,5μm,1.0s						
SKR				smax			
	comp=E,5μm,1.0s						
MIPR	Malaya Ipel'ka	2.67	356	eP	Pn	08 32 10.0	-0.6
RUS	Russkaya	2.96	17	eP	Pn	08 32 15.4	+0.8
RUS				i S	Sn	08 32 47.4	-1.4
GRL	Gorelyy	3.00	12	eP	Pn	08 32 16.8	+1.6
PETK	Petropavlovsk-	3.52	6	Pn	Pn	08 32 23.1	+0.9
	comp=E,8.7nm,0.3s,baz=188,slow=11,SNR=130						
PET	Petropavlovsk	3.55	16	ePN	Pn	08 32 23.9	+1.2
PET				eS	Sn	08 33 02.4	-1.0
PET				pmax	pmax		
	comp=Z,42nm,0.7s						
PET				smax			
	comp=N,105nm,0.5s						
PET				smax			
	comp=E,82nm,0.5s						
PET	Petropavlovsk	3.55	16	eP	Pn	08 32 23.7	+1.0
PET				i S	Sn	08 33 02.2	-1.2
SDLR	Sedlovina	3.83	16	i P	Pn	08 32 28.0	+1.4
SDLR				i S	Sn	08 33 09.8	-0.6
SPN	Mys Shipunski	3.94	27	eP	Pn	08 32 29.9	+1.8
SPN				i S	Sn	08 33 12.7	-0.3
GNL	Ganaly	4.12	7	i P	Pn	08 32 31.4	+0.9
KII	Karymskiy	4.66	17	eP	Pn	08 32 37.9	-0.1
KII				i S	Sn	08 33 26.9	-3.9
MKZ	Mys Kozlova	5.71	28	eP	Pn	08 32 52.9	+0.5
MKZ				eS	Sn	08 33 52.0	-4.7
TUMR	Tumrok	5.97	17	P	Pn	08 32 57.8	+1.8
KBTR	Krutoberegovo	7.45	26	P	Pn	08 33 16.8	+0.5
YKA	Yellowknife Ar	47.03	39	P	P	08 39 55.0	-2.5
	comp=E,0.4nm,0.7s,mb3.4,baz=298,slow=7.6,SNR=6.7						
YKA	Yellowknife Ar	47.03	39	P	P	08 39 55.0	-2.6
NVAR	Mina Array Bea	58.79	66	P	P	08 41 24.2	-0.4
	comp=E,0.2nm,0.5s,mb3.5,baz=286,slow=6.5,SNR=3.2						
PDAR	Pinedale Array	60.93	57	P	P	08 41 38.4	-1.0
	comp=E,0.7nm,0.9s,mb3.8,baz=316,slow=4.1,SNR=5.2						
TXAR	Lajitas Array	73.80	64	P	P	08 42 59.2	-1.7
	comp=E,0.9nm,0.6s,mb3.9,baz=300,slow=4.7,SNR=15						
TXAR	Lajitas Array	73.80	64	P	P	08 42 59.3	-1.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	75.82	202	P	Px	08 43 32.6	
	comp=Z,0.2nm,0.6s,baz=7.1,slow=5.5,SNR=3.6						

*ISCJB **06** 08:36:22.8±0.5, 4260N±003×4345E±005, h9km±4km, Error ellipse: s-maj=6.8km s-min=4.6km az=38.4*
*TIF **06** 08:36:22.4, 4259N×4350E, h10km±1km*
*MOS **06** 08:36:22.2±0.4, 4264N×4346E, h15km, mb3.8/1, Error ellipse: s-maj=29.8km s-min=16.7km az=54.6*

ISC 06 08:36:23.2±0.5, 4258N±003×4346E±005, h9km±4km, n16, σ0.84/27, 1C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ONI	Oni	0.01	238	P	Pg	08 36 24.5	-0.1
ONI				S	Sg	08 36 26.2	+0.6
DIGR	Digorskoe uzhe	0.33	16	⇓iPG	Pg	08 36 29.5	-0.1
DIGR				i S	Sg	08 36 34.8	+0.8
ZEI	Tsey	0.37	60	⇓iPG	Pg	08 36 30.6	+0.1
ZEI				i S	Sg	08 36 36.5	+1.0
LACR	Lac	0.66	68	⇑iPG	Pg	08 36 35.4	-0.6
LACR				i S	Sg	08 36 44.9	+0.3
KORR	Kora	0.67	42	ePG	Pg	08 36 35.5	-0.7
KORR				eS	Sg	08 36 45.0	+0.1
GOR	Gori	0.77	141	P	Pg	08 36 37.1	-0.8
GOR				S	Sg	08 36 48.5	+0.6
ARNR	Ardon	0.85	45	ePG	Pg	08 36 38.6	-1.0
ARNR				eS	Sg	08 36 50.5	-0.2
TBLG	Delisi	1.28	131	ePG	Pg	08 36 46.0	-1.7
TBLG				i S	Sb	08 37 03.5	-0.4
TBLG	Delisi	1.28	131	P	Pn	08 36 46.0	-1.2
TBLG				S	Sb	08 37 03.5	-0.4
MTA	Mtatsminda	1.33	131	P	Pn	08 36 47.1	-0.8
MTA				S	Sb	08 37 07.2	+1.6
ARTV	Artvin	1.81	220	i P	Pn	08 36 54.5	0.0
DBOC	Borcka	1.82	228	i P	Pn	08 36 54.2	-0.5
DGRG	David-gareji	1.82	128	P	Pn	08 36 56.5	+1.8
DGRG				S	Sn	08 37 22.6	+4.7
DAGI	Agillar	1.90	218	i P	Pn	08 36 56.4	+0.6
DBAD	Bademkaya	2.05	221	i P	Pn	08 36 57.6	-0.2
DDEM	Demirkent	2.12	218	i P	Pn	08 36 59.8	+1.0

*TRN **06** 08:59:52.8, 19.17N×6453W, h52km*
*NEIC **06** 08:59:54.3, 1922N×6451W, h58km, MD3.6(RSPR), After RSPR.*
*RSPR **06** 08:59:54.3, 1922N×6451W, h58km±5km, MD3.6/14, MD3.6/14*

ISC 06 08:59:53.9±1.4, 192N±02×645W±01, h63km±31km, n21, σ0.38/33, 13C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.46	161	eS	Sn	09 00 14.5	+0.2
ABV	Anegada	0.46	161	⇑eP	Pn	09 00 05.5	-0.2
ABV	Anegada	0.46	161	⇑eP	Pn	09 00 05.5	-0.2
ABV				eS	Sn	09 00 14.5	+0.2
TBVI	Tortola	0.76	189	⇓eP	Pn	09 00 08.8	-0.2
TBVI				eS	Sn	09 00 20.2	0.0
STVI	Saint Thomas	0.93	208	⇑eP	Pn	09 00 10.6	-0.5
STVI				eS	Sn	09 00 24.2	+0.4
MTP	Monte Pirata	1.47	223	⇑eP	Pn	09 00 18.3	+0.1
CBYP	Canovanas	1.57	236	⇑eP	Pn	09 00 19.3	-0.3
CBYP				eS	Sn	09 00 38.3	-0.8
HUMP	Col San Antoni	1.65	232	⇑eP	Pn	09 00 20.6	0.0
HUMP				eS	Sn	09 00 41.1	+0.3
CPD	Cerro la Pandu	1.76	230	⇑eP	Pn	09 00 22.3	+0.1
CPD				eS	Sn	09 00 43.9	+0.3
SJG	San Juan	1.90	236	⇑eP	Pn	09 00 23.6	-0.4
SJG				eS	Sn	09 00 47.0	+0.2
CELP	Cerrillos	2.26	242	⇑eP	Pn	09 00 28.9	0.0
CELP				eS	Sn	09 00 55.0	-0.7
CELP	Cerrillos	2.26	242	⇑eP	Pn	09 00 28.9	0.0
CELP				eS	Sn	09 00 55.4	-0.3
AOPR	Arecibo Observ	2.30	249	⇑eP	Pn	09 00 29.0	-0.4
OBIP	Obispado Ponce	2.30	241	eS	Sn	09 00 56.8	+0.1
OBIP	Obispado Ponce	2.30	241	eS	Sn	09 00 56.8	+0.1
ICM	Isla Caja Muer	2.31	237	⇓eP	Pn	09 00 30.6	+1.0
ICM				eS	Sn	09 00 56.7	-0.2
ICM	Isla Caja Muer	2.31	237	⇓eP	Pn	09 00 30.6	+1.0
ICM				eS	Sn	09 00 56.1	-0.8
AGPR	Aguadilla, PR	2.58	255	⇑eP	Pn	09 00 33.3	0.0
LSP	Las Mesas	2.65	248	⇓eP	Pn	09 00 34.7	+0.4
CRPR	Cabo Rojo, PR	2.74	245	⇑eP	Pn	09 00 35.5	0.0
CRPR				eS	Sn	09 01 08.0	+0.5
SDDR	Presa de Saban	6.43	269	ePn	Pn	09 01 26.2	+0.2
	13nm,0.6s						

*NEIC **06** 09:13:39.5, 3277S×71.16W, h49km, MD3.5(GUC), After GUC.*

GUC 06 09:13:39.5±0.9, 3277S×7116W, h49km±8km, MD3.5, ML3.2, 4C-10D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.48	237	⇓i P	Pn	09 13 50.6	+0.2
IHA				i S	Sn	09 13 58.6	+0.3
JACH	Jahuel	0.49	80	⇓i P	Pn	09 13 51.2	+0.7
PEL	Peldehue	0.55	133	⇑i P	Pn	09 13 52.0	+0.7
PEL				i S	Sn	09 14 01.1	+1.3
PEL				AML	AML	09 14 01.8	
	comp=E,11μm,0.3s						
RCDM	Rinconada Maip	0.78	158	eP	Pn	09 13 54.5	+0.2
RCDM				i S	Sn	09 14 05.6	+0.6
RCDM	Rinconada Maip	0.78	158	eP	Pn	09 13 54.5	+0.2
RCDM				i S	Sn	09 14 05.6	+0.6
RCDM				AML	AML	09 14 06.3	
	comp=E,4μm,0.1s						
CLCH	Cerro Calan	0.82	140	⇓i P	Pn	09 13 55.4	+0.6
CLCH				i S	Sn	09 14 07.3	+1.4
CLCH				AML	AML	09 14 08.2	
	comp=E,2μm,0.5s						
CLCH				AML	AML	09 14 08.8	
	comp=E,2μm,0.4s						
FSR	Penalolen	0.89	143	AML	AML	09 14 11.4	
	comp=E,246nm,0.3s						
TACH	Talagante	0.91	168	⇓i P	Pn	09 13 56.3	+0.4
ANTU	Antumapu	0.92	151	⇓i P	Pn	09 13 56.5	+0.4
ANTU				i S	Sn	09 14 08.9	+0.7
ANTU	Antumapu	0.92	151	⇓i P	Pn	09 13 56.5	+0.4
ANTU				i S	Sn	09 14 08.9	+0.7
ANTU				AML	AML	09 14 10.2	
	comp=N,2μm,0.2s						
FCH	Farellones	0.92	128	⇓i P	Pn	09 13 56.8	+0.6
FCH				i S	Sn	09 14 09.7	+1.3
FCH				AML	AML	09 14 11.0	
	comp=N,617nm,0.3s						
CHNG	Los Chungos	0.93	342	⇓i P	Pn	09 13 56.8	+0.6
CHNG				i S	Sn	09 14 08.8	+0.4
CHNG				AML	AML	09 14 10.2	
	comp=N,333nm,0.3s						
PCH	Pirque	1.01	148	⇑i P	Pn	09 13 57.9	+0.5
PCH				i S	Sn	09 14 11.7	+1.2
SJCH	San Jose de Ma	1.10	142	AML	AML	09 14 14.3	
	comp=N,617nm,0.3s						
LNV	Longovilo	1.21	190	⇑i P	Pn	09 14 00.7	+0.7
LNV				i S	Sn	09 14 16.9	+1.7
CHCH	Chadas Angostu	1.24	160	eP	Pn	09 14 01.1	+0.6
YECH	El Yeso	1.27	135	⇑i P	Pn	09 14 02.2	+1.3
YECH				i S	Sn	09 14 19.1	+2.2
YECH				AML	AML	09 14 21.3	
	comp=N,588nm,0.2s						
LMEL	Las Melosas	1.34	144	⇓i P	Pn	09 14 02.8	+1.0
LMEL				i S	Sn	09 14 20.5	+1.9
LMEL	Las Melosas	1.34	144	⇓i P	Pn	09 14 02.8	+1.0
LMEL				i S	Sn	09 14 20.5	+1.9
LMEL				AML	AML	09 14 21.4	
	comp=N,958nm,0.1s						

IDC 06 09:18:50.9±2.1, 1016S×16148E, h70km±7km, mb3.4/4, mb1 3.6/5, mb1mx3.4/17, mbtmp3.5/5, Error ellipse: s-maj=70.6km s-min=24.7km az=129.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	17.70	234	P	Pn	09 22 54.7	+1.9
	0.2nm,0.3s,baz=59,slow=11,SNR=4.7						
ASAR	Alice Springs	29.53	239	P	P	09 24 48.3	-0.8
	0.3nm,0.6s,baz=65,slow=9.5,SNR=7.1						
ASAR				pP	pP	09 25 06.2	+0.5
	0.3nm,0.6s,baz=65,slow=10.0,SNR=2.4						
SONM	Songino Array	75.51	325	P	P	09 30 28.7	+1.0
	0.7nm,0.6s,baz=138,slow=5.8,SNR=5.5						
SONM				pP	pP	09 30 47.4	+0.9
	1.1nm,0.5s,baz=141,slow=6.5,SNR=6.7						
MKAR	Makanchi Array	90.03	318	P	P	09 31 42.1	-0.8
	0.2nm,0.4s,baz=97,slow=6.9,SNR=5.3						
MKAR				pP	pP	09 32 00.8	-1.4
	0.1nm,0.4s,baz=79,slow=7.5,SNR=1.6						
YKA	Yellowknife Ar	96.12	28	P	P	09 32 10.7	+0.1
	0.1nm,0.6s,baz=263,slow=4.7,SNR=5.6						
YKA				pP	pP	09 32 29.8	-0.1
	0.2nm,0.7s,baz=264,slow=6.0,SNR=3.3						

*ISCJB **06** 09:39:23.1±0.9, 2984N±004×3628E±005, h0km, Error ellipse: s-maj=6.2km s-min=5.2km az=167.5*
*GII **06** 09:39:23.7±1.0, 2988N×36.18E, h0km, ML2.5/4, EXPLOSION*
*CSEM **06** 09:39:24.2, 30.19N×3625E, h49km, ML2.7, After SNSN*
*SGS **06** 09:39:24.2, 30.19N×3625E, h3km*

ISC 06 09:39:23.4±0.9, 2984N±004×3631E±005, h0km, n15, σ0.77/24, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.10	265	Pg	Pg	09 39 44.1	-0.4
HRFI	Mount Harif	1.13	281	Pg	Pg	09 39 44.2	-0.8
HRFI				Sg	Sg	09 40 00.6	+1.0
EIL	Elat	1.20	262	Pg	Pg	09 39 46.0	-0.3
EIL				Sg	Sg	09 40 02.7	+0.9
HQLS		1.21	244	P	Pg	09 39 46.1	-0.5
HQLS		1.21	244	P	Pg	09 39 46.1	-0.6
HQLS				S	Sg	09 40 02.5	+0.1
MBRI	Mt Berech	1.22	268	Pg	Pg	09 39 46.4	-0.4
MBRI				Sg	Sg	09 40 03.6	+1.0
ZFRI	Zfri	1.22	306	Pg	Pg	09 39 45.4	-1.4
ZFRI				Sg	Sg	09 40 01.7	-0.8
PRNI	Paran	1.25	295	Pg	Pg	09 39 46.3	-1.0
PRNI				Sg	Sg	09 40 04.2	+0.8
JLOS		1.31	213	P	Pg	09 39 49.2	+0.7
KRMI	Paran Flat	1.41	282	Pg	Pg	09 39 49.4	-1.0
KRMI				Sg	Sg	09 40 07.8	-0.9
MZDA	Masada	1.68	331	Pn	Pn	09 39 54.3	+0.2
MZDA				Sn	Sn	09 40 17.1	+0.7
DSI	Dead Sea	1.91	335	Pn	Pn	09 39 57.2	+0.1
DSI				Sn	Sn	09 40 23.1	+1.2
KZIT	Kziot	1.97	303	Sn	Sn	09 40 24.0	+0.5
RSHS		2.03	221	P	Pn	09 39 58.3	-0.5
WJHS		3.09	179	P	Pn	09 40 14.4	+0.9

*IDC **06** 09:49:36.2±2.7, 092S×100.13E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=125.1km s-min=27.5km az=57.0*
*ISCJB **06** 09:49:50.3±0.7, 06S±02×1006E±02, h115km±8km, mb3.8/5, Error ellipse: s-maj=49.0km s-min=15.1km az=143.3*
*DJA **06** 09:49:53, 068S×10036E, h86km, MLv3.4/4*

ISC 06 09:49:51.3±0.7, 06S±02×1005E±02, h111km±7km, n9, σ0.92/11, mb3.8/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	0.20	314	P	Pn	09 50 07.7	+0.9
PPI				S	Sn	09 50 17.8	-0.6
PDSI	Padang	0.32	194	P	Pn	09 50 06.7	-0.6
PDSI				S	Sn	09 50 18.9	-0.4
GSI	Gunungsitoli	3.51	302	P	Pn	09 50 44.7	+0.5
KSI	Kapahiang	3.66	146	P	Pn	09 50 48.7	+2.5
ASAR	Alice Springs	39.66	128	P	P	09 57 11.2	-1.4
	0.3nm,0.5s,mb3.3,baz=299,slow=7.4,SNR=6.1						
SONM	Songino Array	48.50	5	P	P	09 58 23.6	+0.8
	0.3nm,0.5s,mb3.5,baz=185,slow=8.7,SNR=3.3						
MKAR	Makanchi Array	49.84	344	P	P	09 58 32.9	-0.1
	1.0nm,0.6s,mb3.9,baz=145,slow=7.4,SNR=12						
ZALV	Zalesovo Beam	55.90	349	P	P	09 59 16.9	-0.6
	0.8nm,0.5s,mb4.0,baz=159,slow=4.3,SNR=3.7						
ARCES	ARCESS Array B	85.35	340	P	P	10 02 15.7	0.0
	2.7nm,0.9s,mb4.2,baz=103,slow=8.1,SNR=5.6						

*IDC **06** 10:10:57.0±15.0, 10.13N×8476W, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.7/19, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=351.8km s-min=79.4km az=4.0*
*ISCJB **06** 10:11:12.7±0.5, 1067N±006×8569W±008, h56km±8km, mb3.5/3, Error ellipse: s-maj=16.2km s-min=4.5km az=141.6*
*CASC **06** 10:11:13.4±1.9, 1069N×8567W, h45km±4km, MD3.6, ML3.3*

ISC 06 10:11:13.5±0.5, 1068N±006×8567W±008, h50km±10km, n36, σ0.75/39, mb3.5/3, 8C-12D, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIM1	Limonal	0.41	87	i P	Pn	10 11 22.9	-0.9
LIM1				i S	Sn	10 11 30.8	-0.3
2RIO	Dos Rios de Up	0.46	109	i P	Pn	10 11 23.4	-0.8
CUI	Cuipilapa	0.49	92	⇓i P	Pn	10 11 24.1	-0.6
CUI				i S	Sn	10 11 32.8	+0.2
VCR	Vista de Mar	0.55	176	⇑eP	Pn	10 11 24.1	-1.4
SSN	San Juan del S	0.64	344	⇓i P	Pn	10 11 25.9	-0.6
CONN	Concepcion	0.88	3	⇓eP	Pn	10 11 29.4	-0.3
JCR	Jicaral	0.99	146	⇓eP	Pn	10 11 30.0	-1.1
JCR				eS	Sn	10 11 46.0	+1.9
FORC	Fortuna	1.01	102	⇓i P	Pn	10 11 30.8	-0.6
FORC				i P		10 11 30.8	
FORC				eS	Sn	10 11 48.1	+3.6
APON	Apoyo	1.29	343	⇓eP	Pn	10 11 35.6	+0.4
CGA2	Cerro Gallo 2	1.36	119	eP	Pn	10 11 35.9	-0.2
CRUN	El Crucero	1.43	335	⇓eP	Pn	10 11 38.1	+1.0
TICN	Ticuantepe	1.45	338	⇑eP	Pn	10 11 37.6	+0.3
PRS1	Puriscal	1.51	117	eP	Pn	10 11 38.0	-0.2
MGAN	Managua	1.56	339	⇓eP	Pn	10 11 38.9	0.0
MGAN				AML	AML	10 12 00.6	
	comp=E,75nm,0.4s						

TISN Laguna Tiscapa 1.57 338⇑ eP Pn 10 11 39.0 +0.1
XAVN Gruta Xavier 1.59 336⇑ eP Pn 10 11 39.4 +0.1
CSAN 1.66 334⇓ eP Pn 10 11 40.2 -0.1
HUEN 1.72 343⇑ eP Pn 10 11 40.9 -0.1
LAJ Bijagual 1.73 118 eP Pn 10 11 36.7 -4.5
COPN Copaltepe 1.74 329⇓ eP Pn 10 11 41.3 0.0
LCR2 La Lucha 2 1.89 119 eP Pn 10 11 44.8 +1.4
MOMN Momotombo 1.92 334 eP Pn 10 11 44.1 +0.4
QCR Quepos 1.94 130 eP Pn 10 11 43.8 -0.3
MIRN Miramar 2.02 330⇑ eP Pn 10 11 45.5 +0.3
MIRN eS Sn 10 12 08.9 -0.4
URSC Urasca 2.04 114 eP Pn 10 11 46.0 +0.5
CNGN Cerro Negro 2.07 331⇑ eP Pn 10 11 45.9 +0.1
CNGN AML AML 10 12 23.3
comp=N,717nm,0.4s
TEL3 Telica 3 2.20 329⇓ eP Pn 10 11 48.2 +0.6
CRIN San Cristobal 2.42 326⇑ eP Pn 10 11 50.8 +0.2
CRIN AML AML 10 12 26.0
comp=N,1μm,0.4s
BAR1 2.73 121 eP Pn 10 11 55.2 +0.4
ACR Cerro Adams 3.19 129 eP Pn 10 12 01.7 +0.5
CMIG Matias Romero 10.98 306 Pn Pn 10 13 49.1 +1.2
comp=N,0.4nm,0.3s,baz=137,slow=10,SNR=8.0
CHI2 13.26 116⇓ eP x 10 11 50.5
LAPE La Pedrera 14.26 101 i P x 10 11 21.0
LAPE i S x 10 11 27.3
TXAR Lajitas Array 25.04 320 P P 10 16 32.8 -0.3
comp=N,3.1nm,0.8s,mb3.9,baz=143,slow=9.6,SNR=29
NVAR Mina Array Bea 40.17 319 P P 10 18 43.3 -1.6
comp=N,0.5nm,0.5s,mb3.5,baz=132,slow=7.0,SNR=8.4
YKA Yellowknife Ar 55.77 344 P P 10 20 40.9 -4.1
comp=N,0.1nm,0.4s,mb3.2,baz=135,slow=7.9,SNR=4.4

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*ISCJB **06** 10:25:44.1±0.3, 9.35S±0.06×66.88E±0.06, h10km, mb4.7/53, MS4.5/15, Error ellipse: s-maj=10.7km s-min=6.2km az=141.7*
*IDC **06** 10:25:44.2±0.7, 9.29S×66.82E, h0km, mb4.4/20, mb1 4.4/20, mb1mx4.4/26, mbtmp4.4/20, MS4.4/11, Ms1 4.4/11, ms1mx4.2/27, Error ellipse: s-maj=22.3km s-min=11.1km az=145.0*
*MOS **06** 10:25:44.1±1.4, 9.26S×66.88E, h10km, mb5.0/20, Error ellipse: s-maj=11.8km s-min=7.8km az=70.5*
*SZGRF **06** 10:25:45.5, 10.82S×65.17E, h33km, mb4.7, Mid-Indian Ridge*
*BJI **06** 10:25:45.9, 9.40S×66.90E, h25km, mB5.1, mb4.8, Ms4.7, Msz4.4*
*NEIC **06** 10:25:46.0±0.4, 9.37S×66.91E, h10km, mb4.9/15, Error ellipse: s-maj=12.1km s-min=7.0km az=144.0*
*GCMT **06** 10:25:46.0±0.1, 9.37S×66.89E, h20km, MW5.4/100, Moment Tensor Solution. s66,c106; s100,c181; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.23±.03; $M_{\theta\theta}$-1.53±.03; $M_{\phi\phi}$1.77±.03; $M_{r\theta}$-0.27±.05; $M_{\theta\phi}$0.36±.02; $M_{\phi r}$0.31±.06; Best double couple: $M_0$1.74200×10^{17} NP1:ϕ_s51.00000°,δ76.00000°, λ-3.00000°. NP2:ϕ_s142.00000°,δ87.00000°, λ-166.00000°. Principal axes: T 1.8480, Plg8.0000°, Azm275.0000°; N -0.2060, Plg75.0000°, Azm154.0000°; P -1.6360, Plg12.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **06** 10:25:52, 9.38S×66.89E, h48km, mb4.9/12*
ISC 06 10:25:46.1±0.3, **9.37S**±0.06×**66.89E**±0.06, **h10km**, **(h21km**±4.2km**:pP-P)**, **n136**, σ1s09/111, **mb4.7**/53, **MS4.5**/15, **2C-6D, Mid-Indian Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSEY Mahe Island 12.24 292 eP Pn 10 28 42.9 +2.3
MSEY e 10 30 49.7
MSEY pmax pmax
comp=Z,216nm,0.7s
MSEY Mahe Island 12.24 292 ePn Pn 10 28 42.9 +2.3
comp=Z,216nm,0.7s
MSEY eSn Sn 10 30 49.7 -7.5
OPO Ambohidratompo 21.17 242 P P 10 30 32.1 +0.4
comp=Z,7.7nm,0.9s,mb4.0,baz=55,slow=11,SNR=13
OPO S S 10 34 27.5 +0.1
comp=Z,0.6nm,0.5s,baz=331,slow=21,SNR=2.3
ABPO Ambohimpanom 21.32 241 eP P 10 30 35.3 +2.0
ABPO pmax pmax
comp=Z,53nm,1.1s,mb4.8
ABPO Ambohimpanom 21.32 241 ePn P 10 30 35.3 +2.0
comp=Z,53nm,1.1s,mb4.8
HYB Hyderabad 29.00 23 eP P 10 31 47.0 +0.8
LSZ Lusaka 38.22 257 P P 10 33 07.0 +0.5
comp=Z,20nm,0.9s,mb4.8,baz=86,slow=7.8,SNR=15
KOLN Koldanda 40.31 23 eP P 10 33 24.3 +0.6
comp=Z,46nm,1.0s,mb5.2
LGTI Lohaghat 40.68 18 eP P 10 33 26.0 -0.8
DMN Daman 40.77 25 eP P 10 33 28.4 +0.8
comp=Z,67nm,1.2s,mb5.2
RAMN Ramite 40.85 27 eP P 10 33 29.4 +1.1
PKI Pulchoki 40.87 26 eP P 10 33 28.7 +0.3
comp=Z,45nm,1.2s,mb5.0
PKI Pulchoki 40.87 26 eP P 10 33 28.7 +0.3
PKI pmax pmax
comp=Z,45nm,1.2s,mb5.0
PKIN Phulchoki 40.87 26 eP P 10 33 28.5 +0.1
DANN Dangsing 40.89 23 eP P 10 33 29.0 +0.5
comp=Z,44nm,1.0s,mb5.1
GKN Gorkha 40.93 24 eP P 10 33 29.4 +0.6
comp=Z,67nm,1.1s,mb5.2
KKN Kakani 41.01 25 eP P 10 33 30.1 +0.6
ODAN Odare 41.14 28 eP P 10 33 31.7 +1.1
JIRN Jiri 41.28 26 eP P 10 33 32.5 +0.7
GUN Gumba 41.37 26 eP P 10 33 33.4 +1.0
TAPN Taplejung 41.71 28 eP P 10 33 36.1 +0.8
CMAR Chiang Mai Arr 42.01 49 P P 10 33 37.5 -0.3
comp=Z,4.4nm,0.7s,mb4.2,baz=244,slow=9.6,SNR=23
CMAR LR LR 10 49 02.2
comp=Z,240nm,19.1s,MS4.1,baz=236,slow=33
CMAR Chiang Mai Arr 42.01 49 i P P 10 33 38.7 +0.8
CMAR pmax pmax
comp=Z,4.0nm,0.7s
LBTB Lobatse 42.20 243 P P 10 33 38.4 -1.1
comp=Z,6.8nm,0.8s,mb4.3,baz=89,slow=11,SNR=8.6
CHTO Chiang Mai 42.23 48 eP P 10 33 38.8 -0.9
CHTO pmax pmax
comp=Z,15nm,1.2s,mb4.5
CHTO Chiang Mai 42.23 48 eP P 10 33 38.8 -0.9
comp=Z,15nm,1.2s,mb4.5
SHL Shillong 42.40 34 eP P 10 33 42.5 +1.5
SHL eS S 10 40 06.0 +3.4
BOSA Boshof 43.48 238 P P 10 33 48.9 -0.9
comp=Z,7.4nm,1.1s,mb4.3,baz=87,slow=9.2,SNR=4.2
BOSA LR LR 10 50 55.2
comp=Z,404nm,18.0s,MS4.4,baz=77,slow=35
KBL Kabul 43.71 3 eP P 10 33 52.5 +1.1
KBL pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KBL Kabul 43.71 3 eP P 10 33 52.5 +1.0
comp=Z,6.4nm,0.9s,mb4.3
LSA Lhasa 45.33 30 P P 10 34 05.6 +1.2
LSA Lhasa 45.33 30 eP P 10 34 06.1 +1.7
LSA pmax pmax
comp=Z,19nm,0.9s,mb4.9
LSA Lhasa 45.33 30 eP P 10 34 06.1 +1.6
comp=Z,19nm,0.9s,mb4.9
ASF Jabal al Asfar 50.27 327 LR LR 10 52 46.5
comp=Z,388nm,19.2s,MS4.4,baz=12,slow=32
QIZ Qiongzhong 50.89 56 P P 10 34 46.8 -0.8
QIZ AP pP 10 34 55.8 +5.0
QIZ S S 10 42 06.7 +2.3
QIZ XS sS 10 42 21.0 +11
QIZ AMB AMB
comp=Z,28nm,1.6s,mb4.9
QIZ LR LR
comp=N,724nm,15.9s
QIZ LR LR
comp=Z,422nm,22.3s
AAK Ala-Archa 52.21 7⇓ iP P 10 34 57.1 0.0
AAK pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
FRU Bishkek 52.42 7 eP P 10 34 58.0 -0.7
KAPI Kappang 52.59 89 LR LR 10 54 40.1
comp=Z,228nm,18.4s,MS4.2,baz=241,slow=33
TKM2 Tokmak 2 52.64 8 eP P 10 34 59.6 -0.7
TKM2 pmax pmax
comp=Z,12nm,0.9s,mb4.8
TKM2 Tokmak 2 52.64 8 eP P 10 34 59.6 -0.7
comp=Z,12nm,0.9s,mb4.8
CD2 Chengdu 53.42 40 P P 10 35 06.0 -0.3
CD2 S S 10 42 34.6 -4.2
CD2 AMB AMB
comp=Z,30nm,1.1s,mb5.1
CD2 LR LR
comp=N,550nm,24.0s
CD2 LR LR
comp=Z,480nm,22.2s,MS4.5
WMQ Urumqi 56.21 18 P P 10 35 26.4 +0.1
WMQ AMB AMB
comp=Z,11nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,243nm,4.0s
WMQ LR LR
comp=N,608nm,26.0s,MS4.9
WMQ LR LR
comp=E,1μm,25.0s,MS4.9
WMQ LR LR
comp=Z,729nm,27.0s,MS4.6
LZH Lanzhou 57.05 35 eP P 10 35 36.5 +4.1
LZH AP pP 10 35 40.0 +4.4
LZH XP sP 10 35 42.3 +5.5
LZH AMB AMB
comp=Z,19nm,1.5s,mb4.9
LZH AMB AMB
comp=Z,87nm,4.5s
GTA Gaotai 57.35 30 P P 10 35 34.7 +0.2
GTA AP pP 10 35 39.2 +1.5
GTA S S 10 43 36.8 +5.7
GTA XS sS 10 43 43.7 +7.3
GTA AMB AMB
comp=Z,9.0nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,96nm,3.9s
GTA LR LR
comp=N,330nm,18.6s,MS4.6
GTA LR LR
comp=E,334nm,21.9s,MS4.6
GTA LR LR
comp=Z,449nm,21.6s,MS4.5
MK31 Makanchi Array 57.57 12 eP P 10 35 34.6 -1.3
MKAR Makanchi Array 57.57 12 P P 10 35 34.2 -1.7
comp=Z,3.4nm,0.7s,mb4.5,baz=201,slow=7.7,SNR=28
MKAR Makanchi Array 57.57 12 P P 10 35 34.2 -1.7
BRTR Keskin Array B 57.75 330 P P 10 35 36.8 -0.5
comp=Z,1.9nm,1.0s,mb4.1,baz=153,slow=8.3,SNR=5.4
MAW Mawson 58.23 182 LR LR 10 55 40.7
comp=Z,254nm,19.4s,MS4.3,baz=354,slow=31
XAN Xi'an 58.76 41 P P 10 35 43.5 -1.0
XAN AP pP 10 35 51.1 +3.4
XAN S S 10 43 47.6 -2.2
XAN XS sS 10 44 00.0 +4.9
XAN AMB AMB
comp=Z,8.0nm,0.7s,mb4.9
XAN AMB AMB
comp=Z,118nm,4.9s
XAN LR LR
comp=N,175nm,23.9s,MS4.3
XAN LR LR
comp=E,197nm,19.1s,MS4.3
XAN LR LR
comp=Z,312nm,20.9s,MS4.4
AKTK Aktyubinsk 60.05 353 P P 10 35 51.5 -1.5
AKTO Aktyubinsk 60.05 353 P P 10 35 51.5 -1.5
comp=Z,7.2nm,0.9s,mb4.7,baz=157,slow=6.6,SNR=18
KURK Kurchatov 60.70 9 P P 10 35 55.1 -2.3
comp=Z,8.3nm,0.7s,mb5.0,baz=206,slow=7.2,SNR=18
KURK Kurchatov 60.70 9⇓ iP P 10 35 56.4 -1.0
KURK pmax pmax
comp=Z,26nm,1.3s,mb5.2
DAV Davao City (W) 60.71 76 LR LR 11 01 14.5
comp=Z,201nm,19.2s,MS4.3,baz=253,slow=35
BVAR Borovoye Array 62.22 2 P P 10 36 07.1 -0.6
comp=Z,5.4nm,0.7s,mb4.8,baz=157,slow=8.0,SNR=26
BRVK Borovoye 62.24 2 eP P 10 36 07.3 -0.6
BRVK pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
BRVK Borovoye 62.24 2 eP P 10 36 07.3 -0.6
comp=Z,9.1nm,0.9s,mb4.9
KAKA Kakadu 64.29 100 eP x 10 36 03.9
comp=Z,9.7nm,0.8s
NJ2 Nanjing 64.47 48 eP P 10 36 24.1 +1.0
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
ZAA0 Zalesovo Array 64.88 12 eP P 10 36 24.0 -1.2
ZALV Zalesovo Beam 64.88 12 P P 10 36 23.0 -2.2
comp=Z,4.9nm,0.7s,mb4.7,baz=208,slow=5.7,SNR=25
ZALV Zalesovo Beam 64.88 12 P P 10 36 23.0 -2.2
ASAR Alice Springs 65.30 112 P P 10 36 28.3 -0.4
comp=Z,5.7nm,0.9s,mb4.6,baz=275,slow=5.9,SNR=41
NVS Novosibirsk 65.42 10 i P P 10 36 26.7 -2.1
NVS e 10 40 30.3
NVS pmax pmax
comp=Z,27nm,1.5s,mb5.1
NVS pmax pmax
comp=N,16nm,1.4s
NVS pmax pmax
comp=E,12nm,1.4s
VRI Vrincioaia 65.71 330⇓ iP P 10 36 32.7 +1.9
PLOR Plostina 65.74 330⇑ iP P 10 36 32.5 +1.5
WRAB Tennant Creek 65.75 108 eP P 10 36 31.5 -0.2
WRAB pmax pmax
comp=Z,26nm,1.3s,mb5.1
WRAB Tennant Creek 65.75 108 eP P 10 36 31.5 -0.2
comp=Z,26nm,1.3s,mb5.1
WB2 Warramunga Arr 65.76 108 eP P 10 36 31.6 -0.1
ARU Arti 65.92 355 d iP P 10 36 30.0 -2.0
ARU e 10 38 53.0
ARU eS S 10 45 18.3 -0.8
ARU eSS SS 10 49 31.5 -3.0
ARU pmax pmax
comp=Z,24nm,1.2s,mb5.1
VOIR 66.24 329⇑ iP P 10 36 37.8 +3.5
SONM Songino Array 66.83 28 P P 10 36 38.0 +0.1
comp=Z,6.0nm,0.8s,mb4.7,baz=217,slow=7.0,SNR=32
ULN Ulaanbaatar 67.15 28 eP P 10 36 39.5 -0.5
ZAK Zakamensk 67.40 24 eP P 10 36 41.3 -0.2
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb4.0
AKASG Malin Array Be 68.16 335 P P 10 36 45.4 -1.0
comp=Z,1.9nm,0.6s,mb4.3,baz=140,slow=5.8,SNR=5.5
AKASG Malin Array Be 68.16 335 i P P 10 36 50.0 +3.7
AKASG pmax pmax
comp=Z,1.0nm,0.5s
TORD Torodi Ar. Bea 68.48 288 P P 10 36 48.6 -0.5
comp=Z,0.5nm,0.7s,mb3.7,baz=94,slow=4.5,SNR=4.5
TLY Talaya 68.55 24 eP P 10 36 54.5 +5.8
TLY pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TRPA Tarpa 69.34 330⇓ iP P 10 36 59.0 +5.2
KWP Kalwaria 70.28 331⇓ iP P 10 36 59.8 +0.3
STKA Stephens Creek 72.16 120 LR LR 11 06 21.0
comp=Z,378nm,18.6s,MS4.7,baz=246,slow=34
KIC Kosan Boka 73.06 280 eP P 10 37 16.7 -0.4
comp=Z,38nm,0.9s,mb5.3
DBIC Dimbokro 73.23 280 P P 10 37 18.1 0.0
comp=Z,3.5nm,0.7s,mb4.4,baz=84,slow=7.4,SNR=8.6
KLMR Klimovskoe 73.26 346 eP P 10 37 14.4 -2.8
KLMR pmax pmax
comp=Z,53nm,2.0s,mb5.1
LIC Lamto 73.31 279 eP P 10 37 18.2 -0.3
comp=Z,34nm,1.1s,mb5.2
TIC Toumodi 73.39 280 eP P 10 37 18.6 -0.4
comp=Z,9.9nm,0.2s,mb5.3
KSRS Korea Array 73.60 47 P P 10 37 21.1 +1.4
comp=Z,1.7nm,0.8s,mb4.0,baz=215,slow=6.1,SNR=4.5
KSRS LR LR 11 10 34.4
comp=Z,192nm,18.6s,MS4.4,baz=300,slow=37
DPC Dobruska-Polom 73.89 329 eP P 10 37 22.7 +1.6
GERES GERESS Array B 74.38 327 P P 10 37 25.4 +1.4
comp=Z,0.2nm,0.4s,mb3.4,baz=347,slow=23,SNR=2.1
HIA Hailar 74.44 33 i P P 10 37 24.8 +0.4
KHC Kasperske Hory 74.61 327 eP P 10 37 30.9 +5.5
SNAA Sanae 74.84 198 eP P 10 37 26.2 -0.2
SNAA e 10 37 34.7
SNAA e 10 37 38.6
SNAA e 10 37 47.1
SNAA e 10 37 53.7
BRG Berggiesshubel 75.42 329 eP P 10 37 38.0 +8.0
BRG pmax pmax
comp=Z,13nm,1.6s,mb4.6
BRG Berggiesshubel 75.42 329 eP P 10 37 38.0 +8.0
comp=Z,21nm,1.6s,mb4.8
NKC Novy Kostel 75.84 327 eP P 10 37 39.6 +7.2
VNA2 Neumayer--Watz 76.08 199 eP P 10 37 33.6 +0.1
baz=88,slow=2.1
VNA2 e 10 37 42.4
VNA2 e 10 37 46.3
VNA2 e 10 37 53.5
VNA2 e 10 38 04.5
CLL Collm 76.16 329 e(sP) P 10 37 40.0 +5.8
CLL eS S 10 47 18.0 -0.1
CLL eSS SS 10 52 12.0 +0.1
CLL eSSS 10 55 36.0
CLL eSSSS 10 57 30.0
CLL Collm 76.16 329 P P 10 37 40.0 +5.8
CLL eS S 10 47 18.0 -0.1
GRA1 Grafenberg Arr 76.20 326 eP P 10 37 33.5 -1.0
comp=Z,7.0nm,1.0s,mb4.5
GRF Grafenberg Arr 76.20 326 eP P 10 37 33.5 -1.0
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GRF Grafenberg Arr 76.20 326 eP P 10 37 33.5 -1.0
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GRF Grafenberg Arr 76.20 326 eP P 10 37 33.5 -1.0
comp=Z,7.0nm,1.0s,mb4.5
VNA1 Neumayer--Stat 76.31 199 eP PcP 10 37 49.6 +2.9
VNA1 e 10 38 06.2
VNA1 e 10 38 11.7
VNA1 e 10 38 21.6
VNA3 Neumayer Olymp 76.87 199 eP P 10 37 38.4 +0.4
VNA3 e 10 37 47.3
VNA3 e 10 37 51.1
VNA3 e 10 37 59.0
VNA3 e 10 38 06.3
QSPA South Pole Qui 80.68 180 LR LR 11 10 04.5
comp=Z,334nm,18.8s,MS4.7,baz=109,slow=33
MJAR Matsushiro Arr 80.87 51 P P 10 38 02.2 +1.6
comp=Z,3.7nm,1.0s,mb4.3,baz=254,slow=6.2,SNR=6.0
ESDC Sonseca Array 81.54 313 P P 10 38 03.7 -0.4
comp=Z,0.2nm,0.4s,mb3.4,baz=102,slow=5.3,SNR=3.3
ESDC Sonseca Array 81.54 313 P P 10 38 03.7 -0.4
VNDA Vanda 82.00 167 LR LR 11 10 57.2
comp=Z,166nm,19.1s,MS4.4,baz=270,slow=33
ARCES ARCESS Array B 83.74 346 P P 10 38 11.1 -3.8
comp=Z,3.5nm,0.8s,mb4.5,baz=23,slow=22,SNR=2.7
YAK Yakutsk 85.98 25 i P P 10 38 26.7 +0.4
YAK pmax pmax
comp=Z,33nm,2.6s,mb5.1
TIXI Tiksi 90.37 16 i P P 10 38 45.4 -1.7
TIXI pmax pmax
comp=Z,9.0nm,1.7s,mb4.8
URZ Urewera 99.72 131 LR LR 11 18 32.7
comp=Z,184nm,19.6s,MS4.6,baz=98,slow=32
YKA Yellowknife Ar 126.96 1 PKP PKPdf 10 44 49.1 -0.8
comp=Z,0.2nm,0.7s,baz=347,slow=2.4,SNR=4.0
YKA PP PP 10 46 44.3 -2.9
comp=Z,0.5nm,0.9s,baz=359,slow=6.8,SNR=4.6
YKA Yellowknife Ar 126.96 1 PKP PKPdf 10 44 49.1 -0.8
YKA PP PP 10 46 44.3 -2.9
DLMT Dillon 144.13 359 ePKPdf PKPdf 10 45 22.4 +0.1
RLMT Red Lodge 144.22 355 ePKPdf 10 45 27.4
OTAV Otavalo 144.33 257 ePKPdf PKPdf 10 45 24.2 +0.6
RSSD Black Hills 144.49 349 ePKIKP PKPdf 10 45 21.3 -1.7
LOHW Long Hollow 145.81 357 ePKPbc PKPbc 10 45 27.4 +1.6
HLID Hailey 145.92 2 ePKPdf PKPdf 10 45 26.6 +1.1
TPAW Teton Pass 145.96 357 ePKPbc PKPbc 10 45 27.9 +1.7
SNOW Snow King Moun 145.97 357 ePKPbc PKPbc 10 45 28.1 +1.9
REDW Red Top Meadow 146.08 357 ePKPbc PKPbc 10 45 28.1 +1.6
RRI2 Red Ridge 146.11 358 ePKPbc PKPbc 10 45 27.8 +1.2
LRAL Lakeview Retre 146.31 318 ePKPbc PKPbc 10 45 27.2 -0.4
PDAR Pinedale Array 146.59 355 PKPbc PKPbc 10 45 28.2 +0.2
comp=Z,2.5nm,0.9s,baz=318,slow=2.0,SNR=7.9
WVOR Wild Horse Val 146.71 7 ePKP2 PKPab 10 45 27.3 -2.2
MOD Modoc 146.98 10 ePKPbc PKPbc 10 45 29.7 +0.5
UALR University of 148.36 326 ePKPbc PKPbc 10 45 32.8 -0.4
MIAR Mount Ida 149.20 327 ePKP2 PKPab 10 45 36.9 -2.8
DUG Dugway 149.30 360 ePKP2 PKPab 10 45 36.6 -3.3
SMCO Snowmass 149.81 350 ePKPbc PKPbc 10 45 35.8 -1.0
NVAR Mina Array Bea 150.69 8 PKPbc PKPbc 10 45 39.7 +0.8
comp=Z,2.8nm,0.9s,baz=310,slow=1.5,SNR=12
NVAR PKPab PKPab 10 45 45.2 -0.5
comp=Z,2.6nm,0.7s,baz=323,slow=1.4,SNR=15
TXAR Lajitas Array 158.25 337 PKPab PKPab 10 46 18.2 +0.2
comp=Z,0.7nm,0.8s,baz=111,slow=2.8,SNR=3.7

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*CSEM **06** 10:34:55.2±0.3, 40.84N×20.13E, h10km, ML2.6, Error ellipse: s-maj=4.8km s-min=1.4km az=21.0*
*ISCJB **06** 10:34:59.9±0.6, 41.15N±0.04×20.27E±0.04, h10km, Error ellipse: s-maj=6.1km s-min=2.8km az=31.9*
*NEIC **06** 10:34:59.7, 41.11N×20.11E, h2km, ML2.8(PDG), After PDG.*
*PDG **06** 10:34:59.7±0.1, 41.11N×20.11E, h2km, ML2.8/9, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*SKO **06** 10:34:59.8, 41.12N×20.21E, h8km, M2.2, ML2.6*
ISC 06 10:34:60.0±0.9, **41.13N**±0.04×**20.23E**±0.05, **h5km**±6km, **n27**, σ1s26/48, **8C-4D, Albania**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KBN Korca 0.66 140 ePG Sg 10 35 22.1 +0.9
KRUS Krusevo 0.81 72 i Pg Pg 10 35 14.3 -1.1
KRUS i Sg Sg 10 35 26.1 +0.2
KRUS eLg 10 35 26.4
comp=N,57nm,0.3s
KRUS eLg 10 35 27.4
comp=E,55nm,0.2s
BIA Bitola 0.84 97 i Pg Pg 10 35 14.3 -1.7
BIA i Sg Sg 10 35 27.6 +0.7
BIA Bitola 0.84 97 i Pg Pg 10 35 14.3 -1.7
BIA i Sg Sg 10 35 27.7 +0.8
BIA eLg 10 35 28.3
comp=E,26nm,0.2s
BIA eLg 10 35 28.3
comp=N,43nm,0.2s
ULC Ulcinj 1.11 319⇑ iPg Pn 10 35 19.4 -2.8
ULC eSg Sn 10 35 36.5 -1.3
SKO Skopje 1.24 47 i Pg Pg 10 35 23.3 -0.4
SKO Skopje 1.24 47 i Pg Pg 10 35 23.4 -0.4
SKO i Sg Sg 10 35 39.4 -0.4
SKO eLg 10 35 40.0
comp=E,120nm,0.7s
SKO eLg 10 35 40.3
comp=N,162nm,0.5s
PVY Plav 1.48 353⇑ iPg Pn 10 35 27.0 -0.2
PVY eSg Sg 10 35 50.3 +2.9
PDG Podgorica 1.49 331 ePN Pn 10 35 26.4 -0.9
PDG i SN Sg 10 35 49.7 +2.0
PDG Podgorica 1.49 331⇑ iPg Pn 10 35 26.4 -0.9
PDG eSg Sg 10 35 49.7 +2.0
TTG Podgorica 1.49 331⇑ iPg Pn 10 35 26.4 -0.9
TTG eSg Sg 10 35 49.7 +2.0
BUM Brajici-Budva 1.54 320⇑ iPg Pn 10 35 27.6 -0.4
BUM eSg Sg 10 35 50.7 +1.4
BUM Brajici-Budva 1.54 320 ePN Pn 10 35 26.7 -1.3
BUM i SN Sg 10 35 50.7 +1.4
STIP Stip 1.58 68 ePg Pn 10 35 28.3 -0.3
BEY Berane 1.76 352 ePN Pn 10 35 32.0 +0.9
BEY Berane 1.76 352⇓ iPn Pn 10 35 32.3 +1.2
BEY eSn Sg 10 35 58.3 +1.8
IVA Berane 1.76 352⇓ iPn Pn 10 35 32.3 +1.2
IVA eSn Sg 10 35 58.3 +1.8
VAY Valandovo 1.78 83 i Pg Pn 10 35 31.8 +0.5
VAY Valandovo 1.78 83 i Pg Pn 10 35 31.9 +0.6
VAY i Sg Sg 10 35 56.7 -0.4
VAY eLg 10 35 57.7
comp=N,34nm,0.7s
VAY eLg 10 35 57.8
comp=E,23nm,0.6s
HCY Herceg Novi 1.84 316⇓ iPn Pn 10 35 32.6 +0.3
HCY eSn Sg 10 35 58.8 -0.5
HCY Herceg Novi 1.84 316 ePN Pn 10 35 32.6 +0.3
NKY Niksic 1.92 332⇑ iPn Pn 10 35 34.0 +0.8
NKY eSn Sg 10 36 01.5 0.0
NKY Niksic 1.92 332 ePN Pn 10 35 34.0 +0.8
NKY i SN Sg 10 36 01.5 0.0
BRY Bratogost 2.17 325⇓ iPn Pn 10 35 37.8 +1.1
BRY eSn Sg 10 36 07.1 -2.6
BRY Bratogost 2.17 325 ePN Pn 10 35 37.8 +1.1
BRY i SN Sg 10 36 07.1 -2.6
PLE Pljevlja 2.28 345⇑ iPn Pn 10 35 39.4 +1.1
PLE eSn Sg 10 36 10.4 -2.9
UPM Unac-Piva 2.29 335⇑ iPn Pn 10 35 39.4 +1.0
UPM eSn Sg 10 36 10.4 -3.2

*CSEM **06** 10:52:30.5±0.0, 71.37N×9.49W, h10^{km}, mb5.2/99, Ms4.6, Mw5.4, Error ellipse: s-maj=1.6km s-min=0.8km az=47.0*
*MOS **06** 10:52:31.1±1.1, 71.37N×9.39W, h10^{km}, mb5.3/116, MS4.6/67, Error ellipse: s-maj=13.3km s-min=3.0km az=98.8*
*IDC **06** 10:52:31.1±0.4, 71.36N×9.42W, h0^{km}, mb4.7/23, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.4/5, MS4.5/31, Ms1 4.5/31, ms1mx4.5/35, Error ellipse: s-maj=11.0km s-min=6.1km az=49.0*
*ISCJB **06** 10:52:31.2±0.1, 71.34N±0.01×9.39W±0.04, h10^{km}, mb5.1/292, MS4.7/192, Error ellipse: s-maj=2.4km s-min=1.2km az=42.8*
*BJI **06** 10:52:32.8, 71.81N×8.95W, h10^{km}, mB5.3, mb4.9, Ms5.1, Msz4.8*
*BER **06** 10:52:32.6±3.6, 71.16N×9.66W, h20^{km}, MD3.7, ML3.7, MW3.7*
*NAO **06** 10:52:33.4±3.8, 71.35N×8.75W, h11^{km}±45^{km}, ML3.9*
*NEIC **06** 10:52:33.1±0.1, 71.33N×9.34W, h10^{km}, mb5.2/204, MS4.7/148, MW5.4, Error ellipse: s-maj=2.7km s-min=1.7km az=224.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.33; $M_{\theta\theta}$1.08; $M_{\phi\phi}$-0.75; $M_{r\theta}$0.05; $M_{\theta\phi}$1.14; $M_{\phi r}$0.33; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s200.00000°, δ83.00000°, λ-165.00000°. NP2:ϕ_s109.00000°, δ76.00000°, λ-7.00000°. Principal axes: T 1.6400, Plg5.0000°, Azm333.0000°; N -0.2800, Plg74.0000°, Azm224.0000°; P -1.3700, Plg14.0000°, Azm65.0000°;*
*GCMT **06** 10:52:33.1±0.2, 71.33N×9.26W, h24^{km}, MW5.4/96, Moment Tensor Solution. s62,c95; s96,c188; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.03±.03; $M_{\theta\theta}$1.18±.04; $M_{\phi\phi}$-1.15±.03; $M_{r\theta}$0.04±.07; $M_{\theta\phi}$1.28±.03; $M_{\phi r}$0.33±.07; Best double couple: $M_0$1.76300×10^{17} NP1:ϕ_s111.00000°, δ79.00000°, λ-3.00000°. NP2: ϕ_s201.00000°, δ87.00000°, λ-169.00000°. Principal axes: T 1.7620, Plg5.0000°, Azm336.0000°; N 0.0010, Plg79.0000°, Azm216.0000°; P -1.7650, Plg10.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BGS **06** 10:52:33.0±2.0, 71.28N×8.34W, h10^{km}, mb5.3, MS4.6*
*SZGRF **06** 10:52:46.9, 70.40N×7.16W, h33^{km}, mb5.1, MS4.1, Jan Mayen Island region*
*REY **06** 10:53:00.1, 71.16N×9.49W, h10^{km}, ML4.6, ML4.7*
ISC 06 10:52:33.2±0.1**, 71.32N**±0.01×**9.30W**±0.04**, h10^{km}, (h15^{km}**±1.1^{km}**:pP-P), n1330, σ0^{s}82**/1292**, mb5.1**/292**, MS4.7**/192**, 256C-188D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.41**	**135**	⇑*i*P	**Pg**	**10 52 40.8**	**-0.3**
JMIC	**Jan Mayen**	**0.42**	**142**	Pg	**Pg**	**10 52 40.9**	**-0.4**
JMIC				Lg		10 52 46.5	
JMIC	**Jan Mayen**	**0.42**	**142**	Pg	**Pg**	**10 52 40.6**	**-0.7**
	9µm,0.3s,baz=180,slow=1.4,SNR=1316						
JMIC				Lg		10 52 46.7	
	8µm,0.3s,baz=244,slow=23,SNR=80						
JMIC	**Jan Mayen**	**0.42**	**142**	⇑*i*P	**Pg**	**10 52 40.9**	**-0.5**
JMIC				*e*S	**Sg**	**10 52 47.0**	**+0.1**
JMI	**Jan Mayen**	**0.43**	**154**	⇑*i*P	**Pg**	**10 52 41.1**	**-0.5**
JNE	**Jan Mayen East**	**0.46**	**135**	⇑*i*P	**Pg**	**10 52 41.5**	**-0.8**
DAG	**Danmarks Havn**	**6.05**	**339**	κ*e*P	**Pn**	**10 53 59.4**	**-3.1**
DAG				pmax	pmax		
	comp=Z,2µm,1.4s						
DAG				MLR	MLR		
	comp=Z,6µm,20.0s						
DAG	**Danmarks Havn**	**6.05**	**339**	κ *i*P	**Pn**	**10 53 59.4**	**-3.1**
	comp=Z,2µm,1.4s						
DAG							
	comp=Z,7µm,20.0s						
IHRN	**Hraun**	**6.54**	**222**	P	**Pn**	**10 54 07.0**	**-2.2**
BORG	**Borgarnes**	**7.97**	**220**	Pn	**Pn**	**10 54 29.0**	**+0.1**
	comp=Z,2µm,0.8s,SNR=8.1						
BORG	**Borgarnes**	**7.97**	**220**	Pn	**Pn**	**10 54 29.3**	**+0.4**
	comp=Z,8.5nm,0.3s,baz=45,slow=6.7,SNR=20						
BORG				Sn	**Sn**	**10 55 58.7**	**-0.2**
	comp=Z,5.3nm,0.3s,baz=176,slow=23,SNR=6.7						
BORG				LR	LR	10 56 30.2	
	comp=Z,1µm,19.4s,baz=184,slow=30						
BORG	**Borgarnes**	**7.97**	**220**	*e*Pn	**Pn**	**10 54 29.2**	**+0.4**
LOF	**Lofoten**	**8.52**	**101**	*e*Pn	**Pn**	**10 54 35.7**	**-0.7**
LOF				AML	AML	10 56 16.1	
	comp=Z,18nm,0.6s						
HSP	**Hornsund**	**8.79**	**38**	*e*P	**Pn**	**10 54 38.3**	**-1.7**
BJO1	**Bjornoya**	**8.86**	**56**	*e*P	**Pn**	**10 54 41.1**	**+0.2**
BJO1	**Bjornoya**	**8.86**	**56**	*e*P	**Pn**	**10 54 41.1**	**+0.1**
BJO	**Bjornoya**	**8.91**	**56**	*e*Pn	**Pn**	**10 54 41.1**	**-0.6**
SUMG	**Summit**	**9.08**	**292**	*e*Pn	**Pn**	**10 54 43.1**	**-1.0**
SUMG				*e*Sn	**Sn**	**10 56 19.3**	**-6.9**
STEI	**Steigen**	**9.17**	**100**	*e*Pn	**Pn**	**10 54 43.1**	**-2.1**
STEI				AML	AML	10 56 38.2	
	comp=Z,21nm,0.7s						
KBS	**Kingsbay**	**9.30**	**26**	Pn	**Pn**	**10 54 45.3**	**-1.7**
KBS				Sn	**Sn**	**10 56 21.8**	**-10**
KBS	**Kingsbay**	**9.30**	**26**	*e*P	**Pn**	**10 54 45.6**	**-1.3**
KBS	**Kingsbay**	**9.30**	**26**	*e*Pn	**Pn**	**10 54 45.6**	**-1.4**
KBS	**Kingsbay**	**9.30**	**26**	*i* P	**Pn**	**10 54 45.4**	**-1.6**
KBS	**Kingsbay**	**9.30**	**26**	*e*Pn	**Pn**	**10 54 45.5**	**-1.5**
KBS				*e*Sn	**Sn**	**10 56 22.8**	**-8.6**
KONS	**Konsvik**	**9.37**	**110**	*e*Pn	**Pn**	**10 54 45.7**	**-2.3**
KONS				AML	AML	10 56 40.6	
	comp=Z,53nm,0.5s						
STOK	**Stokkvaagen**	**9.45**	**111**	*e*Pn	**Pn**	**10 54 46.5**	**-2.6**
STOK				*e*Sn	**Sn**	**10 56 25.2**	**-10**
STOK				AML	AML	10 56 31.3	
	comp=Z,68nm,0.1s						
STOK	**Stokkvaagen**	**9.45**	**111**	*e*Pn	**Pn**	**10 54 46.5**	**-2.6**
	SNR=55						
STOK				*e*Sn	**Sn**	**10 56 25.2**	**-10**
	comp=Z,68nm,0.1s,SNR=55						
STOK	**Stokkvaagen**	**9.45**	**111**	*e*P	**Pn**	**10 54 46.5**	**-2.6**
STOK				*e*S	**Sn**	**10 56 25.2**	**-10**
SPB4	**Spitsbergen Ar**	**9.53**	**33**	*e*Pn	**Pn**	**10 54 49.8**	**-0.3**
SPB4				*e*Sn	**Sn**	**10 56 34.8**	**-2.2**
SPB4	**Spitsbergen Ar**	**9.53**	**33**	*e*Pn	**Pn**	**10 54 49.8**	**-0.3**
SPB4				*e*Sn	**Sn**	**10 56 34.8**	**-2.2**
SPA0	**Spitsbergen Ar**	**9.53**	**33**	Pn	**Pn**	**10 54 49.7**	**-0.4**
	baz=232,slow=12						
SPA0				Sn	**Sn**	**10 56 34.1**	**-3.0**
	baz=216,slow=28						
SPITS	**Spitsbergen Ar**	**9.53**	**33**	Pn	**Pn**	**10 54 50.8**	**+0.6**
	baz=224,slow=14,SNR=551						
SPITS				Sn	**Sn**	**10 56 36.0**	**-1.1**
	baz=207,slow=27,SNR=3.9						
SPITS	**Spitsbergen Ar**	**9.53**	**33**	Sn	**Sn**	**10 56 36.0**	**-1.1**
TRO	**Tromso**	**9.55**	**87**	*e*Pn	**Pn**	**10 54 47.9**	**-2.5**
TRO				*i*		10 54 50.0	
TRO	**Tromso**	**9.55**	**87**	*i* P	**Pn**	**10 54 50.0**	**-0.4**
TRO	**Tromso**	**9.55**	**87**	*i* P	**Pn**	**10 54 50.0**	**-0.4**
FLOS	**Flostrand**	**9.55**	**110**	*e*Pn	**Pn**	**10 54 48.0**	**-2.5**
FLOS				*e*Sn	**Sn**	**10 56 28.8**	**-8.9**
FLOS				AML	AML	10 56 37.8	
	comp=Z,93nm,0.5s						
MOR8	**Moi Rana**	**9.99**	**109**	*e*Pn	**Pn**	**10 54 54.4**	**-2.0**
MOR8				*e*Sn	**Sn**	**10 56 41.8**	**-6.5**
MOR8				AML	AML	10 56 48.9	
	comp=Z,66nm,0.4s						
MOR8	**Moi Rana**	**9.99**	**109**	*e*Pn	**Pn**	**10 54 54.4**	**-2.0**
	SNR=55						
MOR8				*e*Sn	**Sn**	**10 56 41.8**	**-6.6**
	comp=Z,66nm,0.4s,SNR=55						
MOR8	**Moi Rana**	**9.99**	**109**	*e*P	**Pn**	**10 54 54.4**	**-2.0**
MOR8				*e*S	**Sn**	**10 56 41.8**	**-6.5**
NSS	**Namsos**	**10.44**	**120**	*e*Pn	**Pn**	**10 54 58.6**	**-4.1**
NSS				AML	AML	10 57 00.4	
	comp=Z,60nm,0.3s						
MOL	**Molde**	**10.93**	**135**	*e*Pn	**Pn**	**10 55 07.3**	**-2.1**
KTK1	**Kautokeino**	**11.20**	**86**	*e*Pn	**Pn**	**10 55 12.3**	**-0.7**
WAL1	**Walls**	**11.53**	**161**	*e*P	**Pn**	**10 55 15.8**	**-1.8**
ARA0	**ARCESS Array S**	**11.70**	**82**	Pn	**Pn**	**10 55 18.6**	**-1.2**
	baz=292,slow=12						
ARCES	**ARCESS Array B**	**11.70**	**82**	Pn	**Pn**	**10 55 19.4**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=305,slow=8.8,SNR=44						
ARCES				LR	LR	10 59 22.1	
	comp=Z,2µm,18.8s,baz=297,slow=35						
ARE0	**ARCESS Array S**	**11.70**	**82**	*e*Pn	**Pn**	**10 55 20.9**	**+1.1**
LRW	**Lerwick**	**11.70**	**160**	*e*P	**Pn**	**10 55 18.6**	**-1.3**
LRW				AMb	AMB	10 55 22.0	
	comp=Z,198nm,1.8s						
LRW				AMS	AMS	10 59 13.7	
	comp=Z,4µm,19.0s						
SUE	**Sulen**	**11.72**	**144**	*e*Pn	**Pn**	**10 55 16.5**	**-3.6**
SUE				AML	AML	10 57 25.2	
	comp=Z,14nm,0.6s						
DOMB	**Dombas**	**11.74**	**133**	*e*Pn	**Pn**	**10 55 20.5**	**+0.1**
DOMB				AML	AML	10 57 29.5	
	comp=Z,20nm,0.6s						
HYA	**Hoyanger**	**11.89**	**141**	*e*Pn	**Pn**	**10 55 20.5**	**-2.0**
HYA				AML	AML	10 57 33.7	
	comp=Z,55nm,0.4s						
KEV	**Kevo**	**12.08**	**80**	*e*Pn	**Pn**	**10 55 25.0**	**-0.1**
KEV	**Kevo**	**12.08**	**80**	*e*P	**Pn**	**10 55 24.6**	**-0.5**
KEV				pmax	pmax		
	comp=Z,762nm,1.8s						
KEV	**Kevo**	**12.08**	**80**	*e*Pn	**Pn**	**10 55 24.6**	**-0.5**
	comp=Z,762nm,1.8s						
SGF	**Sodankyl**	**13.05**	**90**	P	**Pn**	**10 55 38.4**	**+0.1**
NB2	**NORSAR Subarra**	**13.13**	**131**	Pn	**Pn**	**10 55 34.2**	**-5.2**
	comp=Z,33nm,1.7s,baz=331,slow=14						
NB2	**NORSAR Subarra**	**13.13**	**131**	Pn	**Pn**	**10 55 31.9**	**-7.5**
NOA	**NORSAR Array B**	**13.13**	**131**	Pn	**Pn**	**10 55 38.0**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=335,slow=13,SNR=7.1						
NOA				Sn	**Sn**	**10 58 07.5**	**+2.3**
	comp=Z,1.3nm,0.3s,baz=52,slow=15,SNR=4.0						
NOA				LR	LR	11 00 14.3	
	comp=Z,1µm,20.3s,baz=330,slow=35						
NOA	**NORSAR Array B**	**13.13**	**131**	P	**Pn**	**10 55 38.0**	**-1.4**
NOA						10 58 07.5	
BLS5	**Blasjo**	**13.55**	**144**	*e*Pn	**Pn**	**10 55 43.3**	**-1.8**
MVH1	**Achvaich**	**13.62**	**168**	*e*P	**Pn**	**10 55 44.6**	**-1.5**
KAC	**Achnashellach**	**13.98**	**171**	*e*P	**Pn**	**10 55 50.1**	**-0.9**
KONO	**Kongsberg**	**13.99**	**137**	*i* P	**Pn**	**10 55 50.3**	**-0.8**
MCD	**Coleburn Disti**	**14.02**	**166**	*e*P	**Pn**	**10 55 50.8**	**-0.7**
MDO	**Dochfour**	**14.09**	**169**	*e*P	**Pn**	**10 55 51.0**	**-1.4**
OUL	**Oulu**	**14.29**	**98**	P	**Pn**	**10 55 54.8**	**-0.3**
MME1	**Meikle Cairn**	**14.31**	**166**	*e*P	**Pn**	**10 55 52.9**	**-2.6**
HFA0	**Hagfors New Ar**	**14.52**	**129**	Pn	**Pn**	**10 55 55.0**	**-3.3**
HFS	**Hagfors**	**14.53**	**129**	Pn	**Pn**	**10 55 54.7**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=327,slow=11,SNR=9.2						
HFS				LR	LR	11 00 57.9	
	comp=Z,2µm,21.4s,baz=330,slow=35						
HFS	**Hagfors**	**14.53**	**129**	P	**Pn**	**10 55 55.3**	**-3.1**
	baz=311,slow=14						
KAR1	**Arisaig**	**14.53**	**172**	*e*P	**Pn**	**10 55 57.6**	**-0.9**
VAF	**Ylistaro**	**14.71**	**108**	P	**Pn**	**10 56 02.9**	**+2.0**
MSF	**Maaselka**	**14.77**	**92**	P	**Pn**	**10 56 00.9**	**-0.7**
SFJD	**Kangerlussuaq**	**15.07**	**274**	Pn	**Pn**	**10 56 02.7**	**-3.1**
	comp=Z,2.2nm,0.3s,baz=40,slow=11,SNR=19						
SFJD				LR	LR	11 01 00.7	
	comp=Z,3µm,18.5s,baz=31,slow=34						
SFJD	**Kangerlussuaq**	**15.07**	**274**	P	**Pn**	**10 56 02.7**	**-3.1**
SFJD				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SFJD				MLR	MLR		
	comp=Z,3µm,18.5s						
SFJD	**Kangerlussuaq**	**15.07**	**274**	*i* P	**Pn**	**10 56 02.4**	**-3.4**
	comp=Z,87nm,0.8s						
SFJD							
	comp=Z,2µm,20.0s						
APA	**Apatity**	**15.19**	**83**	⇑*i*P	**Pn**	**10 56 04.9**	**-2.5**
APA				*i* S	**Sn**	**10 58 57.0**	**+1.6**
APA				pmax	pmax		
	comp=Z,83nm,1.2s						
APA				MLR	MLR		
	comp=Z,1µm,16.0s						
EBH	**Black Hill**	**15.33**	**168**	*e*P	**Pn**	**10 56 09.1**	**-0.2**
EAB	**Aberfoyle**	**15.34**	**169**	*e*P	**Pn**	**10 56 09.6**	**+0.2**
LVZ	**Lovozero**	**15.41**	**81**	*i* P	**Pn**	**10 56 09.1**	**-1.1**
ALE	**Alert**	**15.44**	**337**	Pn	**Pn**	**10 56 05.0**	**-5.6**
	comp=Z,2µm,0.7s						
EDI	**Edinburgh**	**15.68**	**167**	P	**Pn**	**10 56 12.0**	**-1.7**
EDI				AMb	AMB	10 56 16.9	
	comp=Z,242nm,1.8s						
EDI				AMS	AMS	11 01 48.1	
	comp=Z,4µm,18.5s						
EDI	**Edinburgh**	**15.68**	**167**	*e*P	**Pn**	**10 56 12.0**	**-1.7**
EDI				AMb	AMB	10 56 16.9	
	comp=Z,242nm,1.8s						
EDI				AMS	AMS	11 01 48.1	
	comp=Z,4µm,18.5s						
EDI	**Edinburgh**	**15.68**	**167**	*e*P	**Pn**	**10 56 12.0**	**-1.8**
	comp=Z,242nm,1.8s						
ESY	**Stoneypath**	**15.72**	**166**	*e*P	**Pn**	**10 56 13.6**	**-0.8**
EAU	**Auchinoon**	**15.74**	**168**	*e*P	**Pn**	**10 56 13.3**	**-1.2**
EBL	**Broad Law**	**15.84**	**167**	*e*P	**Pn**	**10 56 15.8**	**-0.1**
SUF	**Sumiainen**	**16.03**	**105**	P	**Pn**	**10 56 21.1**	**+2.8**
EKA	**Eskdalemuir Ar**	**16.27**	**167**	Pn	**Pn**	**10 56 20.2**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=350,slow=13,SNR=16						
ESK	**Eskdalemuir**	**16.28**	**167**	Pn	**Pn**	**10 56 21.5**	**0.0**
	comp=Z,492nm,1.6s,SNR=5.0						
ESK	**Eskdalemuir**	**16.28**	**167**	*e*P	**Pn**	**10 56 20.3**	**-1.2**
ESK				AMb	AMB	10 56 26.1	
	comp=Z,303nm,1.7s						
ESK				AMS	AMS	11 02 15.6	
	comp=Z,4µm,17.6s						
ESK	**Eskdalemuir**	**16.28**	**167**	*e*P	**Pn**	**10 56 20.0**	**-1.5**
ESK				pmax	pmax		
	comp=Z,324nm,1.7s						
ESK	**Eskdalemuir**	**16.28**	**167**	*e*Pn	**Pn**	**10 56 20.0**	**-1.5**
	comp=Z,324nm,1.7s						
ESK	**Eskdalemuir**	**16.28**	**167**	*e*P	**Pn**	**10 56 20.3**	**-1.2**
	comp=Z,303nm,1.7s						
ECK	**Cauldkaine Hil**	**16.42**	**167**	*e*P	**Pn**	**10 56 21.7**	**-1.7**
XAL	**Allendale**	**16.80**	**166**	*e*P	**Pn**	**10 56 26.9**	**-1.3**
FIA0	**FINESS Array S**	**16.97**	**108**	P	**Pn**	**10 56 29.8**	**-0.4**
	baz=315,slow=12						
JOF	**Joensuu**	**17.51**	**98**	P	**Pn**	**10 56 38.3**	**+1.3**
DMUB	**Kingscourt**	**17.52**	**175**	*e*P	**Pn**	**10 56 38.6**	**+1.5**
DLF	**Lyons Farm**	**18.13**	**175**	*e*P	**Pn**	**10 56 44.6**	**-0.1**
LHO	**Holmfirth**	**18.14**	**166**	*e*P	**Pn**	**10 56 43.5**	**-1.3**
DSB	**Dublin**	**18.19**	**174**	*e*Pn	**Pn**	**10 56 45.6**	**+0.2**
	comp=Z,225nm,1.6s						
DSB	**Dublin**	**18.19**	**174**	*e*Pn	**Pn**	**10 56 45.6**	**+0.2**
	comp=Z,225nm,1.6s						
KBI1	**Birley Grange**	**18.46**	**165**	*e*P	**Pn**	**10 56 47.1**	**-1.6**
KWE	**Weaver Farm**	**18.67**	**166**	*e*P	**Pn**	**10 56 49.4**	**-1.9**
CWF	**Charnwood Fore**	**18.99**	**165**	*e*P	**Pn**	**10 56 53.3**	**-1.8**
CWF				AMb	AMB	10 56 55.7	
	comp=Z,101nm,2.0s						
CWF				AMS	AMS	11 03 58.3	
	comp=Z,3µm,18.4s						
CWF	**Charnwood Fore**	**18.99**	**165**	*e*P	**Pn**	**10 56 53.3**	**-1.8**
	comp=Z,101nm,2.0s						
BSD	**Bornholm Skovb**	**19.32**	**135**	*i* P	**Pn**	**10 56 59.4**	**+0.3**
BSD				*i* S	**Sn**	**11 00 25.3**	**-10**
BSD							
	comp=Z,1µm,16.0s						
BSD	**Bornholm Skovb**	**19.32**	**135**	*e*P	**Pn**	**10 56 59.4**	**+0.3**
BSD				*i* S	**Sn**	**11 00 25.3**	**-10**
BSEG	**Bad Segeberg**	**19.45**	**143**	*e*P	**Pn**	**10 56 59.6**	**-1.1**
BSEG				pmax	pmax		
	comp=Z,352nm,2.2s						
BSEG	**Bad Segeberg**	**19.45**	**143**	*e*P	**Pn**	**10 56 59.6**	**-1.1**
	comp=Z,352nm,2.2s						
VSU	**Vasula**	**19.56**	**113**	P	**Pn**	**10 57 03.4**	**+1.5**
MCH1	**Michaelchurch**	**19.60**	**168**	*e*P	**Pn**	**10 56 59.2**	**-3.2**
MCH1				AMb	AMB	10 57 13.9	
	comp=Z,147nm,1.7s						
MCH1				AMS	AMS	11 04 05.7	
	comp=Z,3µm,18.8s						
SSW	**Stow on the Wo**	**19.71**	**166**	*e*P	**Pn**	**10 57 01.3**	**-2.5**
SKP1	**Kophill**	**20.04**	**164**	*e*P	**P**	**10 57 03.9**	**-2.0**
WTSB	**Winterswijk**	**20.73**	**151**	⇑*i*P	**P**	**10 57 12.8**	**-0.6**
	comp=Z,239nm,2.0s						
NRDL	**Niedersach Rie**	**20.78**	**145**	*e*P	**P**	**10 57 13.8**	**-0.2**
	comp=Z,128nm,1.3s						
BUG	**Bochum--Univer**	**21.31**	**151**	*e*P	**P**	**10 57 19.2**	**-0.5**
	comp=Z,432nm,1.5s,mb5.6						
MENF	**Mencas**	**21.48**	**160**	*e*P	**P**	**10 57 21.1**	**-0.4**
UCC	**Uccle**	**21.51**	**156**	P	**P**	**10 57 20.9**	**-1.0**
	comp=Z,142nm,1.7s,mb5.1						
UCC	**Uccle**	**21.51**	**156**	P	**P**	**10 57 20.8**	**-1.1**
	comp=Z,142nm,1.7s,mb5.1						
RUE	**Ruedersdorf**	**21.52**	**139**	*e*P	**P**	**10 57 21.8**	**-0.1**
	comp=Z,232nm,1.6s,mb5.4						
GKP	**Gorka Klasztor**	**21.56**	**133**	*e*P	**P**	**10 57 22.3**	**0.0**
GKP				LMZ		11 07 06.7	
	comp=Z,3µm,14.8s						
GKP	**Gorka Klasztor**	**21.56**	**133**	*e*P	**P**	**10 57 22.3**	**0.0**
GKP				LR	LR		
	comp=Z,3µm,14.8s,MS4.9						
KLMR	**Klimovskoe**	**21.67**	**94**	*i* P	**P**	**10 57 22.6**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,461nm,1.3s,mb5.8						
BEBN	**Eben Emael**	**21.70**	**154**	P	**P**	**10 57 23.6**	**-0.2**
	comp=Z,116nm,1.7s,mb5.0						
BEBN	**Eben Emael**	**21.70**	**154**	P	**P**	**10 57 23.5**	**-0.3**
	comp=Z,116nm,1.7s,mb5.0						
HGN	**Heimansgroeve**	**21.77**	**153**	⇑*i*P	**P**	**10 57 24.4**	**-0.1**
	comp=Z,363nm,2.0s,mb5.5						
HGN	**Heimansgroeve**	**21.77**	**153**	*e*S	**S**	**11 01 33.0**	**+8.1**
SNF	**Seneffe**	**21.79**	**156**	P	**P**	**10 57 24.1**	**-0.7**
	comp=Z,99nm,1.6s,mb5.0						
SNF				AP		10 57 27.5	
BCLA	**Clavier**	**22.01**	**155**	P	**P**	**10 57 27.0**	**-0.2**
	comp=Z,118nm,2.0s,mb5.0						
BAIF	**Baives**	**22.22**	**157**	⇑*i*P	**P**	**10 57 28.1**	**-1.3**
	comp=Z,378nm,1.3s,mb5.3						
BAIF	**Baives**	**22.22**	**157**	⇑*i*P	**P**	**10 57 28.1**	**-1.3**
BAIF				pmax	pmax		
	comp=Z,189nm,1.3s,mb5.4						
BAIF	**Baives**	**22.22**	**157**	⇑*i*P	**P**	**10 57 28.1**	**-1.3**
	comp=Z,189nm,1.3s,mb5.3						
DOU	**Dourbes**	**22.23**	**156**	P	**P**	**10 57 28.7**	**-0.9**
	comp=Z,64nm,2.0s,mb4.7						
DOU				AP		10 57 32.3	
DOU	**Dourbes**	**22.23**	**156**	P	**P**	**10 57 28.6**	**-0.9**
GIVF	**Givet**	**22.26**	**155**	⇑*i*P	**P**	**10 57 29.0**	**-0.8**
	comp=Z,504nm,1.5s,mb5.4						
GIVF	**Givet**	**22.26**	**155**	⇑*i*P	**P**	**10 57 29.0**	**-0.8**
GIVF				pmax	pmax		
	comp=Z,252nm,1.5s,mb5.4						
GIVF	**Givet**	**22.26**	**155**	⇑*i*P	**P**	**10 57 29.0**	**-0.8**
	comp=Z,252nm,1.5s,mb5.4						
UBBA	**Unterbreizbach**	**22.37**	**147**	*e*P	**P**	**10 57 30.6**	**-0.4**
	comp=Z,193nm,1.8s,mb5.2						
SUW	**Suwalki**	**22.39**	**124**	*e*P	**P**	**10 57 30.6**	**-0.6**
SUW				LMZ		11 05 38.2	
	comp=Z,2µm,19.3s						
SUW	**Suwalki**	**22.39**	**124**	*e*P	**P**	**10 57 30.5**	**-0.7**
SUW				MLR	MLR		
	comp=Z,2µm,19.3s,MS4.7						
JSA	**Saint Aubin**	**22.45**	**168**	*e*P	**P**	**10 57 31.6**	**-0.3**
JSA				AMb	AMB	10 57 34.1	
	comp=Z,414nm,1.6s,mb5.6						
JSA	**Saint Aubin**	**22.45**	**168**	*e*P	**P**	**10 57 31.6**	**-0.3**
	comp=Z,414nm,1.6s,mb5.6						
CLL	**Collm**	**22.47**	**141**	⇑*i*P	**P**	**10 57 31.3**	**-0.8**
CLL				*e*S	**S**	**11 01 40.0**	**+1.4**
CLL				pmax	pmax		
	comp=Z,87nm,1.2s,mb5.1						
CLL				MLR	MLR		
	comp=Z,3µm,14.4s,MS4.9						
CLL	**Collm**	**22.47**	**141**	*e*P	**P**	**10 57 31.3**	**-0.8**
	comp=Z,145nm,1.5s,mb5.2						
CLL	**Collm**	**22.47**	**141**	⇑*i*P	**P**	**10 57 31.3**	**-0.8**
	comp=Z,87nm,1.2s,mb5.1						
CLL				*i* x	x	10 57 45.6	
CLL				*i* x	x	10 58 13.7	
CLL				*e*S	**S**	**11 01 40.0**	**+1.4**
	comp=N,900nm,26.5s						
CLL				*e*S	**S**	**11 01 40.0**	**+1.4**
	comp=E,2µm,27.9s						
CLL				*e*x	x	11 02 40.0	
CLL	**Collm**	**22.47**	**141**	⇑*i*P	**P**	**10 57 31.3**	**-0.8**
	comp=E,87nm,1.2s,mb5.1						
CLL				*i*		10 57 45.6	
CLL				*e*S	**S**	**11 01 40.0**	**+1.4**
CLL				LR	LR		
	comp=Z,3µm,14.4s,MS4.9						
MOX	**Moxa**	**22.83**	**144**	*e*P	**P**	**10 57 35.8**	**-0.1**
	comp=Z,79nm,1.6s,mb4.9						
MOX				*e*		10 57 43.0	
MOX							
	comp=Z,1µm,16.0s						
MOX	**Moxa**	**22.83**	**144**	*e*P	**P**	**10 57 35.8**	**-0.1**
MOX				*e*		10 57 43.0	
MOX				pmax	pmax		
	comp=Z,79nm,1.6s,mb4.9						
MOX				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.5						
MOX	**Moxa**	**22.83**	**144**	*e*P	**P**	**10 57 35.0**	**-0.9**
	comp=Z,64nm,1.5s,mb4.8						
ABH	**Alteburg**	**22.87**	**151**	*e*P	**P**	**10 57 36.3**	**0.0**
WLF	**Walferdange**	**22.87**	**154**	P	**P**	**10 57 36.7**	**+0.4**
	comp=Z,52nm,1.8s,mb4.7						
WLF				AP		10 57 39.6	
WLF	**Walferdange**	**22.87**	**154**	*e*P	**P**	**10 57 36.3**	**0.0**
WLF				pmax	pmax		
	comp=Z,129nm,1.6s,mb5.1						
WLF				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.6						
WLF	**Walferdange**	**22.87**	**154**	*e*P	**P**	**10 57 36.0**	**-0.3**
	comp=Z,104nm,1.5s,mb5.0						
WLF	**Walferdange**	**22.87**	**154**	*e*P	**P**	**10 57 36.2**	**-0.1**
	comp=Z,129nm,1.6s,mb5.1						
WLF	**Walferdange**	**22.87**	**154**	*e*P	**P**	**10 57 36.2**	**-0.1**
	comp=Z,129nm,1.6s,mb5.1						
WLF				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
FRB	**Frobisher Bay**	**22.90**	**281**	P	**P**	**10 57 34.0**	**-2.6**
	comp=Z,21nm,0.8s,mb4.6,baz=45,slow=10.0,SNR=12						
FRB				LR	LR	11 06 00.3	
	comp=Z,3µm,18.2s,MS4.7,baz=46,slow=35						
FRB	**Frobisher Bay**	**22.90**	**281**	P	**P**	**10 57 34.0**	**-2.6**
FRB				LR	LR	11 06 00.3	
FBE	**Freiberg**	**22.91**	**141**	*e*P	**P**	**10 57 35.7**	**-1.0**
	comp=Z,110nm,1.3s,mb5.1						
RUP	**Ruppelstein**	**22.97**	**152**	*e*P	**P**	**10 57 37.4**	**+0.1**
FLN	**La Foliniere**	**23.00**	**165**	*e*P	**P**	**10 57 36.1**	**-1.6**
	comp=Z,479nm,1.7s,mb5.3						
FLN				*e*MLR	MLR		
	comp=Z,2µm,21.5s,MS4.3						
FLN	**La Foliniere**	**23.00**	**165**	*e*P	**P**	**10 57 36.1**	**-1.6**
FLN				pmax	pmax		
	comp=Z,239nm,1.7s,mb5.3						
FLN				MLR	MLR		
	comp=Z,2µm,21.5s,MS4.6						
FLN	**La Foliniere**	**23.00**	**165**	*e*P	**P**	**10 57 36.1**	**-1.6**
	comp=Z,239nm,1.7s,mb5.3						
FLN				LR	LR		
	comp=Z,2µm,21.5s,MS4.6						
BRG	**Berggiesshubel**	**23.07**	**140**	*i* P	**P**	**10 57 37.6**	**-0.9**
BRG				S	**S**	**11 01 52.0**	**+3.0**
BRG				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.5						
BRG				MLR	MLR		
	comp=N,555nm,10.2s,MS4.4						
BRG				MLR	MLR		
	comp=E,529nm,10.5s,MS4.4						
BRG				MLR	MLR		
	comp=Z,1µm,10.5s,MS4.6						
BRG	**Berggiesshubel**	**23.07**	**140**	*e*P	**P**	**10 57 37.4**	**-1.1**
	comp=Z,84nm,2.0s,mb4.8						
BRG	**Berggiesshubel**	**23.07**	**140**	*i* P	**P**	**10 57 37.6**	**-0.8**
	comp=Z,40nm,1.3s,mb4.7						
BRG				S	**S**	**11 01 52.0**	**+3.0**
BRG							
	comp=N,927nm,10.2s						
BRG							
	comp=E,883nm,10.5s						
BRG							
	comp=Z,2µm,10.5s						
WERD	**Werda**	**23.15**	**143**	*e*P	**P**	**10 57 38.6**	**-0.7**
	comp=Z,73nm,1.2s,mb5.0						
RES	**Resolute Bay**	**23.19**	**318**	*e*P	**P**	**10 57 38.3**	**-1.2**
RES				pmax	pmax		
	comp=Z,261nm,0.9s,mb5.7						
RES	**Resolute Bay**	**23.19**	**318**	*e*P	**P**	**10 57 38.3**	**-1.2**
	comp=Z,261nm,0.9s,mb5.7						
RES	**Resolute Bay**	**23.19**	**318**	*e*P	**P**	**10 57 38.3**	**-1.3**
	comp=Z,261nm,0.9s,mb5.7						
LDF	**La Druitiere**	**23.20**	**164**	*e*P	**P**	**10 57 37.8**	**-2.0**
	comp=Z,498nm,1.5s,mb5.4						
LDF	**La Druitiere**	**23.20**	**164**	*e*P	**P**	**10 57 37.8**	**-2.0**
LDF				pmax	pmax		
	comp=Z,249nm,1.5s,mb5.4						
LDF	**La Druitiere**	**23.20**	**164**	*e*P	**P**	**10 57 37.8**	**-2.0**
	comp=Z,249nm,1.5s,mb5.4						
TANN	**Tannenbergstha**	**23.21**	**143**	*e*P	**P**	**10 57 39.4**	**-0.5**
	comp=Z,93nm,1.3s,mb5.0						
ROSF	**Rostrenen**	**23.23**	**170**	⇑*i*P	**P**	**10 57 39.6**	**-0.5**
	comp=Z,288nm,1.4s,mb5.2						
ROSF	**Rostrenen**	**23.23**	**170**	⇑*i*P	**P**	**10 57 39.6**	**-0.5**
ROSF				pmax	pmax		
	comp=Z,144nm,1.4s,mb5.2						
ROSF	**Rostrenen**	**23.23**	**170**	⇑*i*P	**P**	**10 57 39.6**	**-0.5**
	comp=Z,144nm,1.4s,mb5.2						
GUNZ	**Gunzen**	**23.24**	**143**	*e*P	**P**	**10 57 39.5**	**-0.7**
	comp=Z,386nm,2.4s,mb5.4						
MNK	**Minsk**	**23.25**	**117**	*e*P	**P**	**10 57 42.0**	**+1.7**

MNK pmax pmax
comp=Z,330nm,1.0s,mb5.7
WERN Wernitzgruen 23.32 143 *eP* **P 10 57 40.4 -0.6**
comp=Z,513nm,2.5s,mb5.5
TOD Tromm 23.34 149 *eP* **P 10 57 40.5 -0.7**
GRR Gorron 23.34 166 *eP* **P 10 57 39.1 -2.2**
comp=Z,188nm,1.3s,mb5.1
GRR Gorron 23.34 166 *eP* **P 10 57 39.1 -2.2**
GRR pmax pmax
comp=Z,94nm,1.3s,mb5.1
GRR Gorron 23.34 166 *eP* **P 10 57 39.1 -2.2**
comp=Z,94nm,1.3s,mb5.1
SGMF Saint Gilles 23.35 169 *eP* **P 10 57 40.3 -1.1**
comp=Z,163nm,1.2s,mb5.0
SGMF Saint Gilles 23.35 169 *eP* **P 10 57 40.3 -1.1**
SGMF pmax pmax
comp=Z,82nm,1.2s,mb5.0
SGMF Saint Gilles 23.35 169 *eP* **P 10 57 40.3 -1.1**
comp=Z,82nm,1.2s,mb5.0
NKC Novy Kostel 23.39 143 *eP* **P 10 57 41.9 +0.2**
NKC *eS* **S 11 01 56.7 +2.6**
NKC AMS AMS 11 08 50.0
comp=Z,2µm,11.8s
NKC Novy Kostel 23.39 143 *eP* **P 10 57 41.9 +0.2**
NKC *eS* **S 11 01 56.7 +2.6**
KTD Kalmit 23.50 151 *eP* **P 10 57 42.8 -0.1**
PVCC Panska Ves 23.53 140 *eP* **P 10 57 43.9 +0.7**
PVCC *eS* **S 11 02 04.4 +8.0**
PVCC AMS AMS 11 10 00.0
comp=Z,2µm,14.5s
MANZ Manzenberg 23.56 144 *eP* **P 10 57 43.1 -0.4**
comp=Z,270nm,2.6s,mb5.2
KSP Ksiaz 23.60 137 *eP* **P 10 57 44.3 +0.4**
KSP LMZ 11 04 21.6
comp=Z,2µm,33.2s
KSP Ksiaz 23.60 137 *eP* **P 10 57 43.6 -0.3**
KSP *eS* **S 11 01 55.0 -2.6**
QUIF Quistinic 23.65 170 *eP* **P 10 57 43.5 -0.9**
comp=Z,300nm,1.6s,mb5.2
QUIF Quistinic 23.65 170 *eP* **P 10 57 43.5 -0.9**
QUIF pmax pmax
comp=Z,150nm,1.6s,mb5.2
QUIF Quistinic 23.65 170 *eP* **P 10 57 43.5 -0.9**
comp=Z,150nm,1.6s,mb5.2
GRA1 Grafenberg Arr 23.67 145 *eP* **P 10 57 44.0 -0.6**
comp=Z,236nm,1.6s,mb5.4
GRA1 LR LR
comp=Z,700nm,19.8s,MS4.1
GRF Grafenberg Arr 23.67 145 *eP* **P 10 57 44.0 -0.6**
GRF pmax pmax
comp=Z,236nm,1.6s,mb5.4
GRF MLR MLR
comp=Z,700nm,19.8s,MS4.1
GRF Grafenberg Arr 23.67 145 *eP* **P 10 57 44.0 -0.6**
GRF pmax pmax
comp=Z,236nm,1.6s,mb5.4
GRF MLR MLR
comp=Z,700nm,19.8s,MS4.1
GRF Grafenberg Arr 23.67 145 *eP* **P 10 57 44.0 -0.6**
comp=Z,236nm,1.6s,mb5.4
GRF *eL* 11 07 04.8
comp=Z,737nm,19.8s
GRFO Grafenberg 23.67 145 P **P 10 57 46.1 +1.5**
LANF Langenberg 23.78 151 *eP* **P 10 57 46.0 +0.4**
ROTZ Rotzenmuhle 23.78 144 *eP* **P 10 57 44.9 -0.7**
comp=Z,123nm,1.8s,mb5.0
MEZF Maizieres J'vi 23.86 156⇑ *iP* **P 10 57 45.9 -0.4**
comp=Z,668nm,1.8s,mb5.5
MEZF Maizieres J'vi 23.86 156⇑ *iP* **P 10 57 45.9 -0.4**
comp=Z,334nm,1.8s,mb5.5
UPC Upice 23.86 138 *eP* **P 10 57 46.6 +0.4**
PRU Pruhonice 24.04 140 *eP* **P 10 57 48.6 +0.7**
PRU *eS* **S 11 02 14.2 +10**
PRU AMS AMS 11 09 00.0
comp=Z,1µm,11.7s
DPC Dobruska-Polom 24.07 137 *eP* **P 10 57 48.9 +0.7**
DPC *eS* **S 11 02 14.6 +9.4**
DPC AMS AMS 11 08 50.0
comp=Z,2µm,13.5s
STU Stuttgart 24.21 149 *eP* **P 10 57 50.3 +0.8**
STU pmax pmax
comp=Z,150nm,1.9s,mb5.1
STU Stuttgart 24.21 149 *eP* **P 10 57 49.9 +0.4**
comp=Z,192nm,2.1s,mb5.2
STU Stuttgart 24.21 149 *eP* **P 10 57 50.3 +0.8**
comp=Z,150nm,1.9s,mb5.1
THEF They Montfort 24.25 155 *eP* **P 10 57 50.1 +0.2**
CDF Champ du Feu 24.26 152⇑ *iP* **P 10 57 49.9 0.0**
comp=Z,378nm,1.9s,mb5.2
CDF Champ du Feu 24.26 152⇑ *iP* **P 10 57 49.9 0.0**
CDF pmax pmax
comp=Z,189nm,1.9s,mb5.2
CDF Champ du Feu 24.26 152⇑ *iP* **P 10 57 49.9 0.0**
comp=Z,189nm,1.9s,mb5.2
ECH Echery 24.43 153 *eP* **P 10 57 52.6 +1.1**
ECH Echery 24.43 153 *eP* **P 10 57 52.7 +1.2**
ECH pmax pmax
comp=Z,115nm,1.6s,mb5.1
ECH Echery 24.43 153 *eP* **P 10 57 52.7 +1.2**
comp=Z,115nm,1.6s,mb5.1
ECH Echery 24.43 153 *eP* **P 10 57 52.7 +1.2**
comp=Z,115nm,1.6s,mb5.1
BFO Black Forest 24.50 151 P **P 10 57 53.7 +1.6**
comp=Z,201nm,1.3s,mb5.4,SNR=7.5
BFO Black Forest 24.50 151 *eP* **P 10 57 52.3 +0.2**
comp=Z,120nm,1.5s,mb5.1
BFO LR LR
comp=Z,1µm,22.0s,MS4.4
WET Wettzell 24.51 143 *eP* **P 10 57 52.8 +0.6**
WET pmax pmax
comp=Z,121nm,2.1s,mb5.1
WET Wettzell 24.51 143 *eP* **P 10 57 52.8 +0.6**
comp=Z,121nm,2.1s,mb5.1
HAU Haudompre 24.52 154⇑ *iP* **P 10 57 52.4 +0.1**
comp=Z,318nm,1.7s,mb5.3
HAU *eM* MLR MLR
comp=Z,2µm,18.2s,MS4.3
HAU Haudompre 24.52 154⇑ *iP* **P 10 57 52.4 +0.1**
HAU pmax pmax
comp=Z,159nm,1.7s,mb5.3
HAU MLR MLR
comp=Z,2µm,18.3s,MS4.6
HAU Haudompre 24.52 154⇑ *iP* **P 10 57 52.4 +0.1**
comp=Z,159nm,1.7s,mb5.3
HAU LR LR
comp=Z,2µm,18.3s,MS4.6
KHC Kasperske Hory 24.66 142 *eP* **P 10 57 54.6 +1.0**
KHC *epP* 10 57 58.0
KHC *ex* x 10 58 52.5
KHC *eS* **S 11 02 21.6 +6.9**
KHC AMS AMS 11 10 30.0
comp=Z,2µm,11.8s
HINF Hinteralfeld 24.78 153 *eP* **P 10 57 54.5 -0.1**
comp=Z,105nm,1.4s,mb4.9
HINF Hinteralfeld 24.78 153 *eP* **P 10 57 54.5 -0.1**
HINF pmax pmax
comp=Z,52nm,1.4s,mb4.9
HINF Hinteralfeld 24.78 153 *eP* **P 10 57 54.5 -0.1**
comp=Z,52nm,1.4s,mb4.9
MOF Molkenrain 24.78 153 *eP* **P 10 57 54.6 -0.1**
SPAK Spaichingen-Ko 24.79 150 *eP* **P 10 57 56.1 +1.3**
KIZ Kirchzarten 24.80 152 P **P 10 57 56.0 +1.2**
GUT Gutenstein 24.88 150 P **P 10 57 56.9 +1.4**
MORC Moravsky Berou 24.88 136 *eP* **P 10 57 56.9 +1.3**
MORC pmax pmax
comp=Z,40nm,1.3s,mb4.8
MORC Moravsky Berou 24.88 136 *eP* **P 10 57 56.3 +0.7**
MORC Moravsky Berou 24.88 136‖ *iP* **P 10 57 57.4 +1.8**
MORC Moravsky Berou 24.88 136 *eP* **P 10 57 56.9 +1.3**
comp=Z,40nm,1.3s,mb4.8
FELD Feldberg im Sc 24.89 152 P **P 10 57 56.7 +1.0**
TREC Trest 24.89 139 *eP* **P 10 57 56.4 +0.7**
TREC AMS AMS 11 08 50.0
comp=Z,2µm,11.0s
LOR Lormes 24.92 158 *eP* **P 10 57 55.8 -0.2**
comp=Z,69nm,1.0s,mb4.8
LOR *eM* MLR MLR
comp=Z,996nm,19.5s,MS4.0
LOR Lormes 24.92 158 *eP* **P 10 57 55.8 -0.2**
LOR pmax pmax
comp=Z,35nm,1.0s,mb4.8
LOR MLR MLR
comp=Z,1µm,19.5s,MS4.3
LOR Lormes 24.92 158 *eP* **P 10 57 55.8 -0.2**
comp=Z,35nm,1.0s,mb4.8
LOR LR LR
comp=Z,1µm,19.5s,MS4.3
GEC2 GERESS Array S 24.95 142 *eP* **P 10 57 56.9 +0.6**
GEC2 pmax pmax
comp=Z,62nm,1.3s,mb5.0
GEC2 GERESS Array S 24.95 142 *eP* **P 10 57 56.9 +0.6**
comp=Z,62nm,1.3s,mb5.0
GERES GERESS Array B 24.95 142 P **P 10 57 56.7 +0.4**
comp=Z,14nm,1.0s,mb4.4,baz=342,slow=8.4,SNR=38
OKC Ostrava-Krasne 24.96 135 *eP* **P 10 57 57.6 +1.3**
OKC *eS* **S 11 02 33.6 +14**
OKC AMS AMS 11 09 40.0
comp=Z,2µm,12.8s
OKC Ostrava-Krasne 24.96 135 *eP* **P 10 57 57.6 +1.3**
OKC *eS* **S 11 02 33.6 +14**
OJC Ojcow 24.99 132 *eP* **P 10 57 57.3 +0.7**
OJC *eS* **S 11 02 18.4 -1.6**
OJC L 11 08 25.4
comp=Z,2.0nm,17.8s
OJC Ojcow 24.99 132 *eP* **P 10 57 57.3 +0.7**
OJC *eS* **S 11 02 18.4 -1.6**
SSF Saint Saulge 25.08 159 *eP* **P 10 57 57.0 -0.4**
comp=Z,38nm,0.8s,mb4.7
SSF Saint Saulge 25.08 159 *eP* **P 10 57 57.0 -0.4**
SSF pmax pmax
comp=Z,19nm,0.8s,mb4.7
SSF Saint Saulge 25.08 159 *eP* **P 10 57 57.0 -0.4**
comp=Z,19nm,0.8s,mb4.7
VRAC Vranov 25.11 138 P **P 10 57 57.9 +0.2**
comp=Z,3.6nm,0.5s,mb4.2,baz=339,slow=13,SNR=12
VRAC Vranov 25.11 138 *eP* **P 10 57 58.3 +0.6**
VRAC Vranov 25.11 138⇑ *iP* **P 10 57 58.5 +0.8**
VRAC Vranov 25.11 138⇑ *iP* **P 10 57 58.5 +0.8**
FUR Furstenfeldbru 25.15 146 *eP* **P 10 58 00.4 +2.4**
FUR pmax pmax
comp=Z,166nm,1.5s,mb5.3
FUR Furstenfeldbru 25.15 146 *eP* **P 10 58 00.4 +2.4**
comp=Z,166nm,1.5s,mb5.3
MOS Moscow 25.15 104 *eP* **P 10 57 58.5 +0.5**
MOS *e* 10 58 40.9
MOS pmax pmax
comp=Z,97nm,1.5s,mb5.1
MOS MLR MLR
comp=Z,1µm,16.0s,MS4.5
MFF Saint Martin d 25.18 165 *eP* **P 10 57 58.1 -0.2**
comp=Z,445nm,1.6s,mb5.5
MFF Saint Martin d 25.18 165 *eP* **P 10 57 58.1 -0.2**
MFF pmax pmax
comp=Z,223nm,1.6s,mb5.4
MFF Saint Martin d 25.18 165 *eP* **P 10 57 58.1 -0.2**
comp=Z,223nm,1.6s,mb5.5
BBS Basel-Blauen 25.22 153 *eP* **P 10 58 00.1 +1.5**
LOMF Lomont 25.23 154 *eP* **P 10 58 00.1 +1.4**
KRUC Moravsky 25.30 138 P **P 10 58 00.0 +0.6**
AVF Avril sur Loir 25.33 159 *eP* **P 10 57 59.5 -0.2**
comp=Z,231nm,1.8s,mb5.1
AVF Avril sur Loir 25.33 159 *eP* **P 10 57 59.5 -0.2**
AVF pmax pmax
comp=Z,115nm,1.8s,mb5.1
AVF Avril sur Loir 25.33 159 *eP* **P 10 57 59.5 -0.2**
comp=Z,115nm,1.8s,mb5.1
OBN Obninsk 25.35 106 P **P 10 57 59.0 -0.8**
OBN *e* 10 58 33.4
OBN pmax pmax
comp=Z,50nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,1µm,15.0s,MS4.5
OBN Obninsk 25.35 106 PFAKE 10 58 10.0 +10
OBN LR LR
comp=Z,870nm,19.0s,MS4.3
BGF Bois d'Agland 25.51 160 *eP* **P 10 58 00.4 -0.9**
SMF Signal de Mont 25.53 159 *eP* **P 10 58 00.7 -0.8**
comp=Z,473nm,1.6s,mb5.5
SMF Signal de Mont 25.53 159 *eP* **P 10 58 00.7 -0.8**
SMF pmax pmax
comp=Z,236nm,1.6s,mb5.5
SMF Signal de Mont 25.53 159 *eP* **P 10 58 00.7 -0.8**
comp=Z,236nm,1.6s,mb5.5
TCF Toulx Ste Croi 25.70 161⇑ *iP* **P 10 58 02.1 -1.0**
comp=Z,144nm,1.2s,mb5.1
TCF Toulx Ste Croi 25.70 161⇑ *iP* **P 10 58 02.1 -1.0**
TCF pmax pmax
comp=Z,72nm,1.2s,mb5.1
TCF Toulx Ste Croi 25.70 161⇑ *iP* **P 10 58 02.1 -1.0**
comp=Z,72nm,1.2s,mb5.1
RETA Reutte 25.72 148⇑ *iP* **P 10 58 03.3 +0.1**
comp=Z,30nm,1.2s,mb4.7
DAVA Damuels 25.76 149⇑ *iP* **P 10 58 04.1 +0.6**
comp=Z,70nm,1.3s,mb5.0
RJOB Jochberg 25.84 144 *eP* **P 10 58 04.7 +0.4**
comp=Z,32nm,1.4s,mb4.7
CABF La Chapelle 25.85 155 *eP* **P 10 58 04.1 -0.3**
comp=Z,388nm,1.6s,mb5.4
CABF La Chapelle 25.85 155 *eP* **P 10 58 04.1 -0.3**
CABF pmax pmax
comp=Z,194nm,1.6s,mb5.4
CABF La Chapelle 25.85 155 *eP* **P 10 58 04.1 -0.3**
comp=Z,194nm,1.6s,mb5.4
NIE Niedzica 25.86 132 P **P 10 58 06.2 +1.8**
MOA Molln 26.02 142⇑ *iP* **P 10 58 06.9 +1.0**
comp=Z,57nm,1.6s,mb4.9
AGO Saint Agoulin 26.04 160 *eP* **P 10 58 06.5 +0.4**
STHS Stebnicka Huta 26.09 131 *eP* **P 10 58 07.3 +0.8**
STHS *e* pP 10 58 10.2 +0.7
STHS pmax pmax
comp=Z,15nm,0.9s,mb4.5
STHS Stebnicka Huta 26.09 131 *eP* **P 10 58 10.2 +3.7**
STHS pmax pmax
comp=Z,15nm,0.9s,mb4.5
STHS Stebnicka Huta 26.09 131 *eP* **P 10 58 07.3 +0.8**
comp=Z,15nm,0.9s,mb4.5
STHS Stebnicka Huta 26.09 131 *eP* **P 10 58 07.3 +0.8**
STHS *epP* pP 10 58 10.2 +0.7
STHS Stebnicka Huta 26.09 131 *eP* **P 10 58 10.2 +3.7**
comp=Z,15nm,0.9s,mb4.5
WTTA Wattenberg 26.09 146⇑ *iP* **P 10 58 07.5 +1.0**
comp=Z,76nm,1.6s,mb5.0
FETA Feichten 26.16 148⇑ *iP* **P 10 58 08.2 +1.0**
comp=Z,42nm,2.2s,mb4.6
PLDF La Plantade 26.17 159 *eP* **P 10 58 07.2 -0.1**
DAVOS Davos 26.18 149 P **P 10 58 08.8 +1.4**
KOLL Kolacno 26.20 136 *eP* **P 10 58 06.8 -0.8**
KOLL *e* 10 58 11.7
KOLL Kolacno 26.20 136 *eP* **P 10 58 06.8 -0.8**
KOLL *epP* pP 10 58 11.7 +1.1
KOLL *e* 10 58 21.5
OG01 Vacheresse 26.21 154 *eP* **P 10 58 10.7 +3.1**
KWP Kalwaria 26.25 129 *eP* **P 10 58 12.3 +4.4**
KWP LMZ 11 06 46.3
comp=Z,2µm,26.1s
KWP Kalwaria 26.25 129‖ *iP* **P 10 58 12.2 +4.2**
KWP Kalwaria 26.25 129 *eP* **P 10 58 12.3 +4.3**
KWP LR LR
comp=Z,1µm,19.0s,MS4.5
DAVOX Davos/Dischmat 26.25 149 P **P 10 58 08.8 +0.8**
comp=Z,4.9nm,0.7s,mb4.2,baz=321,slow=8.8,SNR=5.0
ZST Bratislava 26.28 138 *eP* **P 10 58 06.7 -1.5**
ZST *e* pP 10 58 10.8 -0.5
ZST pmax pmax
comp=Z,99nm,2.0s,mb5.0
ZST MLR MLR
comp=Z,1µm,16.0s,MS4.6
ZST Bratislava 26.28 138 *eP* **P 10 58 06.7 -1.5**
ZST *epP* pP 10 58 10.8 -0.5
ZST Bratislava 26.28 138 *eP* **P 10 58 06.7 -1.5**
comp=Z,99nm,2.0s,mb5.0
ZST *e* pP 10 58 10.8 -0.5
ZST LR LR
comp=Z,1µm,16.0s,MS4.6
PYM Petit Puy Mans 26.32 160 *eP* **P 10 58 08.5 -0.2**
VYHS Vyhne 26.38 135 *eP* **P 10 58 08.4 -0.8**
VYHS *e* pP 10 58 11.8 -0.4
VYHS pmax pmax
comp=Z,20nm,1.3s,mb4.5
VYHS MLR MLR
comp=Z,800nm,15.7s,MS4.4
VYHS Vyhne 26.38 135 *eP* **P 10 58 08.4 -0.8**
VYHS *epP* pP 10 58 11.8 -0.4
VYHS Vyhne 26.38 135 *eP* **P 10 58 08.4 -0.8**
comp=Z,20nm,1.3s,mb4.5
VYHS *e* pP 10 58 11.8 -0.4
VYHS LR LR
comp=Z,800nm,15.7s,MS4.4
LVV L'vov 26.41 127 *eP* **P 10 58 09.8 +0.4**
TUE Stuetta 26.47 150 *eP* **P 10 58 11.1 +1.1**
comp=Z,48nm,1.3s,mb4.9
TUE Stuetta 26.47 150 *eP* **P 10 58 11.1 +1.1**
comp=Z,48nm,1.3s,mb4.9
TUE LR LR
comp=Z,2µm,22.0s,MS4.5
KBA Koelnbreinsper 26.58 144‖ *ipP* pP 10 58 12.3 -1.7
comp=Z,28nm,1.5s
RJF Les Rejaudoux 26.61 163⇑ *iP* **P 10 58 10.4 -0.9**
comp=Z,205nm,1.3s,mb5.2
RJF *eM* MLR MLR
comp=Z,1µm,17.8s,MS4.3
RJF Les Rejaudoux 26.61 163⇑ *iP* **P 10 58 10.4 -0.9**
RJF pmax pmax
comp=Z,103nm,1.3s,mb5.2
RJF MLR MLR
comp=Z,1µm,17.8s,MS4.6
RJF Les Rejaudoux 26.61 163⇑ *iP* **P 10 58 10.4 -0.9**
comp=Z,102nm,1.3s,mb5.2
RJF LR LR
comp=Z,1µm,17.8s,MS4.6
CRVS Cervenica-Dubn 26.62 131 *epP* pP 10 58 14.1 -0.2
CRVS *e* 10 58 40.1
CRVS Cervenica-Dubn 26.62 131 *eP* **P 10 58 14.1 +2.8**
CRVS *e* 10 58 40.1
CRVS LR LR
comp=Z,1µm,22.0s,MS4.4
SOP Sopron 26.65 139⇑ *esP* sP 10 58 23.8 +7.9
SEST Monte Rota 26.69 146 P **P 10 58 16.4 +4.4**
APPI Appiano 26.77 147 P **P 10 58 14.3 +1.6**
LBL Lubilhac 26.86 160 *eP* **P 10 58 15.9 +2.4**
LFF La Frestale 26.90 164 *eP* **P 10 58 13.3 -0.6**
comp=Z,132nm,1.3s,mb5.0
LFF La Frestale 26.90 164 *eP* **P 10 58 13.3 -0.6**
LFF pmax pmax
comp=Z,66nm,1.3s,mb5.0
LFF La Frestale 26.90 164 *eP* **P 10 58 13.3 -0.6**
comp=Z,66nm,1.3s,mb5.0
SSB Saint Sauveur 26.96 158 *eP* **P 10 58 13.9 -0.5**
SSB pmax pmax
comp=Z,115nm,1.7s,mb5.1
SSB Saint Sauveur 26.96 158 *eP* **P 10 58 13.9 -0.5**
comp=Z,115nm,1.7s,mb5.1
SSB Saint Sauveur 26.96 158 *eP* **P 10 58 13.9 -0.5**
comp=Z,115nm,1.7s,mb5.1
VAI Varese 26.96 151 P **P 10 58 15.3 +0.8**
VAI pmax pmax
comp=Z,333nm,2.4s,mb5.4
VAI Varese 26.96 151 P **P 10 58 15.3 +0.8**
comp=Z,333nm,2.4s,mb5.4
LPL La Plagne 27.01 155 *eP* **P 10 58 15.2 +0.3**
comp=Z,74nm,1.1s,mb4.8
LPL La Plagne 27.01 155 *eP* **P 10 58 15.2 +0.3**
LPL pmax pmax
comp=Z,37nm,1.1s,mb4.8
LPL La Plagne 27.01 155 *eP* **P 10 58 15.2 +0.3**
comp=Z,37nm,1.1s,mb4.8
AKASG Malin Array Be 27.01 119 P **P 10 58 13.7 -1.1**
comp=Z,6.0nm,0.6s,mb4.3,baz=332,slow=9.5,SNR=12
AKASG LR LR 11 08 24.9
comp=Z,1µm,18.3s,MS4.5,baz=320,slow=35
AKBB Malin Array Si 27.01 119 *eP* **P 10 58 14.3 -0.6**
KIEV Kiev 27.01 119 *eP* **P 10 58 13.4 -1.5**
KIEV pmax pmax
comp=Z,45nm,1.2s,mb4.9
KIEV MLR MLR
comp=Z,1µm,21.0s,MS4.4
KIEV Kiev 27.01 119 *eP* **P 10 58 13.4 -1.5**
comp=Z,45nm,1.2s,mb4.9
KIEV Kiev 27.01 119 *eP* **P 10 58 13.4 -1.5**
comp=Z,45nm,1.2s,mb4.9
KIEV LR LR
comp=Z,1µm,21.0s,MS4.4
LPG La Plagne 27.03 155 *eP* **P 10 58 14.5 -0.6**
comp=Z,74nm,1.1s,mb4.8
LPG La Plagne 27.03 155 *eP* **P 10 58 14.5 -0.6**
LPG pmax pmax
comp=Z,37nm,1.1s,mb4.8
LPG La Plagne 27.03 155 *eP* **P 10 58 14.5 -0.6**
comp=Z,37nm,1.1s,mb4.8
CAF Calviac 27.04 162 *eP* **P 10 58 14.8 -0.3**
comp=Z,117nm,1.4s,mb4.9
CAF Calviac 27.04 162 *eP* **P 10 58 14.8 -0.3**
CAF pmax pmax
comp=Z,59nm,1.4s,mb4.9
CAF Calviac 27.04 162 *eP* **P 10 58 14.8 -0.3**
comp=Z,59nm,1.4s,mb4.9
ORO Oropa 27.08 153 P **P 10 58 16.8 +1.3**
ORO pmax pmax
comp=Z,30nm,0.9s,mb4.8
ORO Oropa 27.08 153 P **P 10 58 16.8 +1.3**
comp=Z,30nm,0.9s,mb4.8
PSZ Piszkesteto 27.16 134 *eP* **P 10 58 17.2 +1.0**
comp=Z,72nm,1.5s,mb5.0
PSZ Piszkesteto 27.16 134 *eP* **P 10 58 17.8 +1.6**
PSZ Piszkesteto 27.16 134‖ *iP* **P 10 58 18.1 +1.9**
PSZ Piszkesteto 27.16 134 *eP* **P 10 58 17.2 +1.0**
comp=Z,72nm,1.5s,mb5.0
PSZ LR LR
comp=Z,1µm,19.0s,MS4.5
CTI Castel Tesino 27.26 147 P **P 10 58 18.4 +1.3**
CTI pmax pmax
comp=Z,149nm,1.6s,mb5.3
CTI Castel Tesino 27.26 147 P **P 10 58 18.4 +1.3**
comp=Z,149nm,1.6s,mb5.3
SOKA Soboth 27.29 142⇑ *iP* **P 10 58 18.0 +0.6**
comp=Z,12nm,1.6s,mb4.2
BUD Budapest 27.38 136‖ *epP* pP 10 58 24.6 +3.4
VIVF Saint-Julien-l 27.39 158 *eP* **P 10 58 18.1 -0.2**
comp=Z,164nm,1.7s,mb5.0
VIVF Saint-Julien-l 27.39 158 *eP* **P 10 58 18.1 -0.2**
VIVF pmax pmax
comp=Z,82nm,1.7s,mb5.0
VIVF Saint-Julien-l 27.39 158 *eP* **P 10 58 18.1 -0.2**
comp=Z,82nm,1.7s,mb5.0
BNI Bardonecchia 27.46 155 *eP* **P 10 58 20.5 +1.6**
BNI pmax pmax
comp=Z,46nm,1.1s,mb4.9
BNI MLR MLR
comp=Z,3µm,20.0s,MS4.8
BNI Bardonecchia 27.46 155 *eP* **P 10 58 20.5 +1.6**
comp=Z,46nm,1.1s,mb4.9
BNI Bardonecchia 27.46 155 *eP* **P 10 58 20.5 +1.6**
comp=Z,46nm,1.1s,mb4.9
BNI LR LR
comp=Z,3µm,20.0s,MS4.8
ORIF Oris-en-Rattie 27.48 156 *eP* **P 10 58 19.0 -0.1**
comp=Z,128nm,1.3s,mb5.0
ORIF *eM* MLR MLR
comp=Z,1µm,20.2s,MS4.2
ORIF Oris-en-Rattie 27.48 156 *eP* **P 10 58 19.0 -0.1**
ORIF pmax pmax
comp=Z,64nm,1.3s,mb5.0
ORIF Oris-en-Rattie 27.48 156 *eP* **P 10 58 19.0 -0.1**
comp=Z,64nm,1.3s,mb5.0
TRPA Tarpa 27.60 130⇑ *iP* **P 10 58 22.9 +2.8**
MBDF Montbardon 27.79 155 *eP* **P 10 58 22.6 +0.7**
comp=Z,76nm,1.0s,mb5.0
MBDF Montbardon 27.79 155 *eP* **P 10 58 22.6 +0.7**
MBDF pmax pmax
comp=Z,38nm,1.0s,mb5.0
MBDF Montbardon 27.79 155 *eP* **P 10 58 22.6 +0.7**
comp=Z,38nm,1.0s,mb5.0
LASF Ste Croix 28.07 160⇑ *iP* **P 10 58 24.8 +0.4**
comp=Z,138nm,1.4s,mb5.1
LASF Ste Croix 28.07 160⇑ *iP* **P 10 58 24.8 +0.4**
comp=Z,69nm,1.4s,mb5.1
EPON Pontenova 28.09 177 P **P 10 58 24.5 0.0**
comp=Z,417nm,2.2s,mb5.7
EPON Pontenova 28.09 177 P **P 10 58 24.5 0.0**
comp=Z,417nm,2.2s,mb5.7
EARI Arriondas 28.16 174 P **P 10 58 25.0 -0.2**
comp=Z,193nm,1.7s,mb5.5
EARI Arriondas 28.16 174 P **P 10 58 25.0 -0.2**
comp=Z,193nm,1.7s,mb5.5
SOKR Solikamsk 28.20 80*c iP* **P 10 58 26.2 +0.8**
SOKR pmax pmax
comp=Z,50nm,1.3s,mb5.0
SOKR MLR MLR
comp=Z,1µm,20.0s,MS4.5
SMRF Simiane la Rot 28.37 157 *eP* **P 10 58 27.2 +0.1**
comp=Z,213nm,1.8s,mb5.2
SMRF Simiane la Rot 28.37 157 *eP* **P 10 58 27.2 +0.1**
comp=Z,107nm,1.8s,mb5.2
EALK Alkurruntz 28.44 168 P **P 10 58 26.8 -0.8**
comp=Z,240nm,3.2s
EALK Alkurruntz 28.44 168 P **P 10 58 26.8 -0.8**
comp=Z,240nm,3.2s
EMAZ Mazaricos 28.44 179 P **P 10 58 26.6 -1.1**

comp=Z,494nm,3.0s
EMAZ Mazaricos 28.44 179 P **P** **10 58 26.6 -1.1**
comp=Z,494nm,3.0s
ELIZ Elizondo 28.49 168 P **P** **10 58 28.3 +0.2**
ELIZ pmax pmax
comp=Z,49nm,1.6s,mb4.9
ELIZ Elizondo 28.49 168 P **P** **10 58 28.3 +0.2**
comp=Z,49nm,1.6s,mb4.9
ELIZ Elizondo 28.49 168 P **P** **10 58 28.3 +0.2**
comp=Z,49nm,1.6s,mb4.9
PKSM Moragy 28.49 137 *e*P **P** **10 58 26.7 -1.4**
STS Santiago 28.51 179 P **P** **10 58 28.7 +0.4**
STS pmax pmax
comp=Z,11nm,1.0s,mb4.5
STS Santiago 28.51 179 P **P** **10 58 28.7 +0.4**
comp=Z,11nm,1.0s,mb4.5
STS Santiago 28.51 179 P **P** **10 58 28.7 +0.4**
comp=Z,11nm,1.0s,mb4.5
SJPF Ste Jean 28.56 168 *e*P **P** **10 58 29.3 +0.5**
comp=Z,103nm,1.5s,mb5.0
SJPF Ste Jean 28.56 168 *e*P **P** **10 58 29.3 +0.5**
SJPF pmax pmax
comp=Z,51nm,1.5s,mb5.0
SJPF Ste Jean 28.56 168 *e*P **P** **10 58 29.3 +0.5**
comp=Z,51nm,1.5s,mb5.0
MTLF Montolieu 28.62 162 *e*P **P** **10 58 29.1 -0.2**
comp=Z,116nm,1.6s,mb5.1
MTLF Montolieu 28.62 162 *e*P **P** **10 58 29.1 -0.2**
MTLF pmax pmax
comp=Z,58nm,1.6s,mb5.1
MTLF Montolieu 28.62 162 *e*P **P** **10 58 29.1 -0.2**
comp=Z,58nm,1.6s,mb5.1
BUR08 Bucovina Ar. S 28.72 127 *e*P **P** **10 58 32.4 +2.3**
BUR08 Bucovina Ar. S 28.72 127 ⇓P **P** **10 58 32.4 +2.3**
SBF Sospel 28.73 154 *e*P **P** **10 58 30.3 +0.1**
comp=Z,141nm,1.3s,mb5.2
SBF Sospel 28.73 154 *e*P **P** **10 58 30.3 +0.1**
SBF pmax pmax
comp=Z,71nm,1.3s,mb5.2
SBF Sospel 28.73 154 *e*P **P** **10 58 30.3 +0.1**
comp=Z,71nm,1.3s,mb5.2
BURAR Bucovina Array 28.75 127 ⇓*i*P **P** **10 58 32.8 +2.4**
BURAR Bucovina Array 28.75 127 ⇓P **P** **10 58 32.8 +2.4**
EPF Esparros 28.76 165 *e*P **P** **10 58 30.1 -0.4**
comp=Z,155nm,1.3s,mb5.3
EPF Esparros 28.76 165 *e*P **P** **10 58 30.1 -0.4**
EPF pmax pmax
comp=Z,78nm,1.3s,mb5.3
EPF Esparros 28.76 165 *e*P **P** **10 58 30.1 -0.4**
comp=Z,78nm,1.3s,mb5.3
ETSF Etsaut 28.82 167 *e*P **P** **10 58 31.6 +0.5**
comp=Z,86nm,1.4s,mb5.0
ETSF Etsaut 28.82 167 *e*P **P** **10 58 31.6 +0.5**
ETSF pmax pmax
comp=Z,43nm,1.4s,mb5.0
ETSF Etsaut 28.82 167 *e*P **P** **10 58 31.6 +0.5**
comp=Z,43nm,1.4s,mb5.0
VLC Villacollemand 28.89 150 PFAKE 10 58 40.0 +8.4
VLC LR LR
comp=Z,2µm,22.0s,MS4.6
EBIE Bielsa 29.09 166 P **P** **10 58 33.8 +0.4**
comp=Z,165nm,2.6s,mb5.3
EBIE Bielsa 29.09 166 P **P** **10 58 33.8 +0.3**
comp=Z,165nm,2.6s,mb5.3
LMR La Mourre 29.12 156 *e*P **P** **10 58 34.2 +0.5**
SCHQ Schefferville 29.28 266 P **P** **10 58 34.5 -0.6**
comp=Z,16nm,0.7s,mb4.9,baz=33,slow=8.3,SNR=17
SCHQ LR LR 11 08 47.2
comp=Z,2µm,20.9s,MS4.7,baz=242,slow=33
SCHQ Schefferville 29.28 266 *e*P **P** **10 58 34.4 -0.7**
comp=Z,32nm,0.8s,mb5.1
SCHQ Schefferville 29.28 266 *e*P **P** **10 58 34.4 -0.7**
comp=Z,32nm,0.8s,mb5.1
SCHQ LR LR
comp=Z,3µm,22.0s,MS4.9
ECAL Calabor 29.48 176 P **P** **10 58 37.1 +0.2**
comp=Z,70nm,1.8s,mb5.1
ECAL Calabor 29.48 176 P **P** **10 58 37.1 +0.2**
comp=Z,70nm,1.8s,mb5.1
VSR Storozhevoye 29.50 107 *e*P **P** **10 58 36.6 -0.4**
VSR pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
VSR pmax pmax
comp=N,9.0nm,0.9s
VSR pmax pmax
comp=E,3.0nm,0.5s
EJON La Jonquera 29.57 162 P **P** **10 58 40.3 +2.6**
comp=E,49nm,1.8s,mb4.9
EJON La Jonquera 29.57 162 P **P** **10 58 40.3 +2.6**
comp=E,49nm,1.8s,mb4.9
VORD Divnogorie 29.76 107 *e*P **P** **10 58 34.9 -4.4**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,80nm,0.7s
ESAC San Caprasio 30.00 167 P **P** **10 58 41.2 -0.3**
comp=E,398nm,2.1s,mb5.8
ESAC San Caprasio 30.00 167 P **P** **10 58 41.2 -0.4**
comp=E,398nm,2.1s,mb5.8
GZR Gura Zlata 30.22 132 ⇓*i*P **P** **10 58 48.2 +4.8**
GZR Gura Zlata 30.22 132 ⇓P **P** **10 58 48.2 +4.8**
PGF Pioggiola 30.24 153 *e*P **P** **10 58 43.9 +0.2**
comp=E,50nm,1.1s,mb4.8
PGF Pioggiola 30.24 153 *e*P **P** **10 58 43.9 +0.2**
PGF pmax pmax
comp=Z,25nm,1.1s,mb4.9
PGF Pioggiola 30.24 153 *e*P **P** **10 58 43.9 +0.2**
comp=Z,25nm,1.1s,mb4.8
MVO Moncorvo 30.25 177 *e*P **P** **10 58 44.4 +0.7**
comp=Z,44nm,1.2s,mb5.1
MVO A 11 10 57.5
comp=Z,2µm,17.7s
MVO Moncorvo 30.25 177 *e*P **P** **10 58 44.9 +1.2**
EPOB Poblet 30.49 164 P **P** **10 58 45.3 -0.6**
comp=Z,45nm,1.3s,mb5.0
EPOB Poblet 30.49 164 P **P** **10 58 45.4 -0.5**
comp=Z,45nm,1.3s,mb5.0
PVIS Viseu 30.68 178 *e*P **P** **10 58 48.5 +0.9**
PVIS Viseu 30.68 178 *e*P **P** **10 58 48.8 +1.2**
ETOR Torete 30.79 169 P **P** **10 58 47.1 -1.4**
ETOR pmax pmax
comp=Z,21nm,1.4s,mb4.8
ETOR Torete 30.79 169 P **P** **10 58 47.1 -1.4**
comp=Z,21nm,1.4s,mb4.8
ETOR Torete 30.79 169 P **P** **10 58 47.1 -1.5**
comp=Z,21nm,1.4s,mb4.8
ERTA Horta de San J 30.82 166 P **P** **10 58 49.3 +0.5**
comp=Z,176nm,1.6s,mb5.6
ERTA Horta de San J 30.82 166 P **P** **10 58 49.3 +0.5**
comp=Z,176nm,1.6s,mb5.6
GUD Guadarrama 30.86 172 P **P** **10 58 49.4 +0.3**
GUD pmax pmax
comp=Z,27nm,1.0s,mb5.0
GUD Guadarrama 30.86 172 P **P** **10 58 49.4 +0.3**
comp=Z,27nm,1.0s,mb5.0
GUD Guadarrama 30.86 172 P **P** **10 58 49.4 +0.3**
comp=Z,27nm,1.0s,mb5.0
MTE Manteigas 31.00 177 *e*P **P** **10 58 51.4 +1.0**
comp=Z,64nm,1.7s,mb5.2
MTE A 11 11 18.7
comp=Z,2µm,19.6s
MTE Manteigas 31.00 177 *e*P **P** **10 58 51.6 +1.2**
MTE LR LR
comp=Z,3µm,19.0s,MS4.9
AQU L'Aquila 31.15 146 PFAKE 10 59 00.0 +8.3
AQU LR LR
comp=Z,791nm,21.0s,MS4.4
ARU Arti 31.29 82*d* *i*P **P** **10 58 52.6 -0.1**
ARU *e* 10 59 53.9
ARU *e*S **S** **11 04 00.8 +1.9**
ARU *e*SS SS 11 05 42.0 -30
ARU pmax pmax
comp=Z,35nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,880nm,17.0s,MS4.5
ARU Arti 31.29 82 *e*P **P** **10 58 53.1 +0.4**
comp=Z,40nm,1.4s,mb5.1
ARU Arti 31.29 82 *e*P **P** **10 58 53.1 +0.3**
comp=Z,40nm,1.4s,mb5.1
ARU LR LR
comp=Z,999nm,21.0s,MS4.5
EMOS Mosqueruela 31.35 167 P **P** **10 58 54.0 +0.6**
comp=Z,147nm,2.3s,mb5.4
EMOS Mosqueruela 31.35 167 P **P** **10 58 54.0 +0.6**
comp=Z,147nm,2.3s,mb5.4
EPLA Plasencia 31.37 175 P **P** **10 58 54.7 +1.1**
comp=Z,427nm,2.8s,mb5.8
EPLA Plasencia 31.37 175 P **P** **10 58 54.7 +1.1**
comp=Z,427nm,2.8s,mb5.8
PCBR Castelo Branco 31.56 177 *e*P **P** **10 58 56.1 +0.8**
PCBR Castelo Branco 31.56 177 *e*P **P** **10 58 56.5 +1.2**
ESDC Sonseca Array 31.83 172 P **P** **10 58 57.6 0.0**
comp=Z,8.1nm,0.8s,mb4.6,baz=359,slow=8.9,SNR=39
ESDC Sonseca Array 31.83 172 P **P** **10 58 57.2 -0.5**
comp=Z,10nm,1.2s,mb4.5
ESDC Sonseca Array 31.83 172 P **P** **10 58 57.2 -0.5**
comp=Z,10nm,1.2s,mb4.5
ESLA Sonseca Array 31.83 172 *e*P **P** **10 58 58.0 +0.3**
comp=Z,18nm,1.5s,mb4.7
ESLA Sonseca Array 31.83 172 *e*P **P** **10 58 58.0 +0.4**
comp=Z,18nm,1.5s,mb4.7
ESLA LR LR
comp=Z,7µm,20.0s,MS5.4
PAB San Pablo 31.95 173 *e*P **P** **10 58 59.3 +0.6**
PAB pmax pmax
comp=Z,53nm,1.4s,mb5.2
PAB MLR MLR
comp=Z,1µm,20.0s,MS4.5
PAB San Pablo 31.95 173 *e*P **P** **10 58 59.3 +0.6**
comp=Z,53nm,1.4s,mb5.2
PAB San Pablo 31.95 173 *e*P **P** **10 58 59.3 +0.6**
comp=Z,53nm,1.4s,mb5.2
PAB LR LR
comp=Z,1µm,20.0s,MS4.5
PMRV Marv??o 31.98 177 *e*P **P** **10 58 59.8 +0.8**
comp=Z,87nm,1.7s,mb5.3
PMRV A 11 11 30.6
comp=Z,2µm,16.9s
PMRV Marv??o 31.98 177 *e*P **P** **10 59 00.1 +1.1**
ECHE Chera 32.08 168 P **P** **10 59 00.5 +0.6**
ECHE pmax pmax
comp=Z,23nm,1.0s,mb5.0
ECHE Chera 32.08 168 P **P** **10 59 00.5 +0.6**
comp=Z,23nm,1.0s,mb5.0
ECHE Chera 32.08 168 P **P** **10 59 00.5 +0.6**
comp=Z,23nm,1.0s,mb5.0
ETOS Mallorca 32.22 162 P **P** **10 58 58.5 -2.6**
comp=Z,174nm,2.1s,mb5.5
PESTR Estremoz 32.53 178 *e*P **P** **10 59 04.7 +0.9**
comp=Z,41nm,1.3s,mb5.2
PESTR A 11 11 46.5
comp=Z,2µm,19.0s
EBAD Badajoz 32.65 177 P **P** **10 59 05.4 +0.5**
comp=Z,66nm,1.6s,mb5.3
EBAD Badajoz 32.65 177 P **P** **10 59 05.4 +0.5**
comp=Z,66nm,1.6s,mb5.3
EVO Evora 32.86 178⇑ *i*P **P** **10 59 07.9 +1.2**
comp=Z,129nm,1.8s,mb5.3
EVO *e*MLR MLR
comp=Z,2µm,17.8s,MS4.6
EVOP Sao Brissos 32.87 178⇑ *i*P **P** **10 59 07.9 +1.1**
comp=Z,64nm,1.8s,mb5.3
EVIA Vianos 32.94 170 P **P** **10 59 08.5 +1.1**
EVIA pmax pmax
comp=Z,50nm,1.3s,mb5.3
EVIA Vianos 32.94 170 P **P** **10 59 08.5 +1.1**
comp=Z,50nm,1.3s,mb5.3
EVIA Vianos 32.94 170 P **P** **10 59 08.5 +1.1**
comp=Z,50nm,1.3s,mb5.3
ETOB Tobarra 32.99 169 P **P** **10 59 09.4 +1.6**
comp=Z,17nm,1.4s,mb4.8
ETOB Tobarra 32.99 169 P **P** **10 59 09.4 +1.6**
comp=Z,17nm,1.4s,mb4.8
EBEN Beniarda 33.02 167 P **P** **10 59 09.0 +0.9**
comp=Z,69nm,1.8s,mb5.3
EBEN Beniarda 33.02 167 P **P** **10 59 09.0 +0.9**
comp=Z,69nm,1.8s,mb5.3
PBAR Barrancos 33.23 177 *e*P **P** **10 59 10.4 +0.4**
comp=Z,33nm,1.6s,mb5.0
PBAR A 11 12 28.8
comp=Z,2µm,20.7s
EADA Adamuz 33.31 173 P **P** **10 59 10.4 -0.2**
comp=Z,71nm,1.5s,mb5.4
EADA Adamuz 33.31 173 P **P** **10 59 10.4 -0.3**
comp=Z,71nm,1.5s,mb5.4
EBAN Banos Encina 33.35 172 P **P** **10 59 12.4 +1.4**
EBAN pmax pmax
comp=Z,50nm,1.4s,mb5.2
EBAN Banos Encina 33.35 172 P **P** **10 59 12.4 +1.4**
comp=Z,50nm,1.4s,mb5.2
EBAN Banos Encina 33.35 172 P **P** **10 59 12.4 +1.4**
comp=Z,50nm,1.4s,mb5.2
PBEJ Beja 33.37 178 *e*P **P** **10 59 11.9 +0.7**
comp=Z,55nm,1.7s,mb5.2
TIR Tirane 33.40 138 PFAKE 10 59 20.0 +8.6
TIR LR LR
comp=Z,785nm,21.0s,MS4.4
EQES Quesada 33.74 171 P **P** **10 59 15.7 +1.3**
comp=Z,26nm,1.2s,mb5.0
EQES Quesada 33.74 171 P **P** **10 59 15.7 +1.3**
comp=Z,26nm,1.2s,mb5.0
EMUR La Murta 33.80 168 P **P** **10 59 15.7 +0.7**
comp=Z,111nm,1.5s,mb5.6
CUC Castrocucco 33.88 144 PFAKE 10 59 30.0 +14
CUC LR LR
comp=Z,837nm,19.0s,MS4.5
ELUQ Luque 33.93 173 P **P** **10 59 17.2 +1.2**
ELUQ pmax pmax
comp=Z,38nm,1.1s,mb5.2
ELUQ Luque 33.93 173 P **P** **10 59 17.2 +1.2**
comp=Z,38nm,1.1s,mb5.2
ELUQ Luque 33.93 173 P **P** **10 59 17.2 +1.2**
comp=Z,38nm,1.1s,mb5.2
ELOJ Sierra Loja 34.34 173 P **P** **10 59 20.8 +1.2**
ELOJ pmax pmax
comp=Z,18nm,1.3s,mb4.8
ELOJ Sierra Loja 34.34 173 P **P** **10 59 20.8 +1.2**
comp=Z,18nm,1.3s,mb4.8
ELOJ Sierra Loja 34.34 173 P **P** **10 59 20.8 +1.1**
comp=Z,18nm,1.3s,mb4.8
ESPR Espera 34.56 175 P **P** **10 59 21.5 0.0**
comp=Z,196nm,2.2s,mb5.7
ESPR Espera 34.56 175 P **P** **10 59 21.5 -0.1**
comp=Z,196nm,2.2s,mb5.7
EBER Berja 34.65 171 P **P** **10 59 22.3 0.0**
comp=Z,19nm,0.8s,mb5.1
EBER Berja 34.65 171 P **P** **10 59 22.3 0.0**
comp=Z,19nm,0.8s,mb5.1
EGUA Guajares 34.68 172 P **P** **10 59 23.4 +0.8**
comp=Z,184nm,1.0s,mb6.0
EGUA Guajares 34.68 172 P **P** **10 59 23.4 +0.8**
comp=Z,184nm,1.0s,mb6.0
ANN Anapa 34.71 114 *e*P **P** **10 59 15.5 -7.2**
ANN *e*S **S** **11 04 42.6 -10**
ANN pmax pmax
comp=Z,128nm,1.7s,mb5.6
TIXI Tiksi 34.73 22⇑ *e*P **P** **10 59 23.7 +1.1**
TIXI pmax pmax
comp=Z,29nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,400nm,15.0s,MS4.3
TIXI Tiksi 34.73 22 *e*P **P** **10 59 24.5 +1.9**
comp=Z,37nm,1.4s,mb5.1
TIXI Tiksi 34.73 22 *e*P **P** **10 59 24.5 +1.8**
comp=Z,37nm,1.4s,mb5.1
TIXI LR LR
comp=Z,438nm,21.0s,MS4.2
TIP Timpagrande 34.85 143 PFAKE 10 59 40.0 +16
TIP LR LR
comp=Z,883nm,19.0s,MS4.5
EMIJ Mijas 34.90 174 P **P** **10 59 25.2 +0.7**
comp=Z,82nm,1.3s,mb5.5
EMIJ Mijas 34.90 174 P **P** **10 59 25.2 +0.8**
comp=Z,82nm,1.3s,mb5.5
SFS San Fernando 34.96 176 PFAKE 10 59 40.0 +15
SFS LR LR
comp=Z,4µm,21.0s,MS5.2
EJIF Jimena Fronter 34.99 175 P **P** **10 59 26.0 +0.8**
EJIF pmax pmax
comp=Z,52nm,1.4s,mb5.3
EJIF Jimena Fronter 34.99 175 P **P** **10 59 26.0 +0.8**
comp=Z,52nm,1.4s,mb5.3
EJIF Jimena Fronter 34.99 175 P **P** **10 59 25.9 +0.7**
comp=Z,52nm,1.4s,mb5.3
EBNR Beni Rached 35.55 165 P **P** **10 59 36.0 +5.9**
CEL Celeste 35.58 145 PFAKE 10 59 40.0 +10
CEL LR LR
comp=Z,728nm,19.0s,MS4.5
EMHD Djebel Mahouad 35.77 163 P **P** **10 59 32.5 +0.6**
EANR 'Ain N'Sour 35.86 166 P **P** **10 59 33.4 +0.7**
SET Setif 36.02 160 P **P** **10 59 37.0 +2.9**
GOF Gofitskoye 36.16 108 *e*P **P** **10 59 40.9 +5.7**
GOF pmax pmax
comp=Z,40nm,1.3s,mb5.2
AKTO Aktyubinsk 36.17 89 LR LR 11 14 03.7
comp=Z,861nm,19.3s,MS4.5,baz=161,slow=36
ETRT Tiaret 36.43 165 P **P** **10 59 38.0 +0.4**
ZAI Zaio 36.58 171 *i* P **P** **10 59 39.0 +0.2**
YKA Yellowknife Ar 36.97 312 P **P** **10 59 41.1 -0.8**
comp=Z,39nm,0.7s,mb5.3,baz=29,slow=8.7,SNR=452
YKA PcP PcP 11 02 00.7 -1.9
comp=Z,2.4nm,0.8s,baz=37,slow=2.8,SNR=3.8
YKA LR LR 11 14 36.0
comp=Z,849nm,18.6s,MS4.6,baz=95,slow=36
YKA Yellowknife Ar 36.97 312 P **P** **10 59 41.1 -0.8**
YKA 11 02 00.7
YKA Yellowknife Ar 36.97 312 PcP PcP 11 02 00.7 -1.9
YKA Yellowknife Ar 36.97 312 P **P** **10 59 41.1 -0.8**
YKA PcP PcP 11 02 00.7 -1.9
YKA LR LR 11 14 36.0
KEST Kesra 36.98 154 P **P** **10 59 43.4 +1.1**
comp=Z,4.7nm,1.1s,mb4.2,baz=316,slow=3.3,SNR=4.8
KEST LR LR 11 14 30.5
comp=Z,386nm,19.7s,MS4.2,baz=344,slow=36
KIV Kislovodsk 37.05 109 *e*P **P** **10 59 42.4 -0.4**
KIV *e*S **S** **11 05 27.7 -0.5**
KIV *e*SS SS 11 07 56.2 -14
KIV pmax pmax
comp=Z,20nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,446nm,16.0s,MS4.3
KIV Kislovodsk 37.05 109 PFAKE 10 59 50.0 +7.2
KIV LR LR
comp=Z,623nm,21.0s,MS4.4
TZK Tazeka 37.39 173 *i* P **P** **10 59 45.0 -0.8**
RTC Rabat Centre 37.41 177 PFAKE 11 00 00.0 +14
RTC LR LR
comp=Z,1µm,19.0s,MS4.7
WDD Wield Dalam 37.66 148 PFAKE 11 00 00.0 +12
WDD LR LR
comp=Z,838nm,21.0s,MS4.5
AB31 Akbulak array 37.82 88 P **P** **10 59 48.9 -0.3**
AB31 pmax pmax
comp=Z,24nm,1.0s,mb4.9
BRVK Borovoye 37.82 75 *e*P **P** **10 59 49.6 +0.4**
BRVK pmax pmax
comp=Z,29nm,1.4s,mb4.8
BRVK MLR MLR
comp=Z,569nm,21.0s,MS4.3
BRVK Borovoye 37.82 75 *e*P **P** **10 59 49.6 +0.4**
comp=Z,29nm,1.4s,mb4.8
BRVK Borovoye 37.82 75 *e*P **P** **10 59 49.6 +0.4**
comp=Z,29nm,1.4s,mb4.8
BRVK LR LR
comp=Z,569nm,21.0s,MS4.3
BVA0 Borovoye Array 37.88 75 *i* P **P** **10 59 50.0 +0.3**
BVA0 pmax pmax
comp=Z,13nm,1.8s,mb4.4
BVAR Borovoye Array 37.88 75 LR LR 11 17 15.3
comp=Z,471nm,18.5s,MS4.3,baz=322,slow=39
ANTO Ankara 37.96 123 PFAKE 11 00 00.0 +9.5
ANTO LR LR
comp=Z,980nm,20.0s,MS4.6
BR131 Keskin Array S 38.32 122 PFAKE 11 00 10.0 +16
BR131 LR LR
comp=Z,680nm,19.0s,MS4.5
BRTR Keskin Array B 38.32 122 P **P** **10 59 53.6 +0.1**
comp=Z,2.2nm,0.7s,mb4.0,baz=331,slow=5.5,SNR=8.4
BRTR LR LR 11 17 00.2
comp=Z,671nm,19.1s,MS4.5,baz=338,slow=38
VOSK Vostochnaya 38.33 75 P **P** **10 59 53.6 +0.1**
VOSK pmax pmax
comp=Z,49nm,1.4s,mb5.0
PKME Peaks-Kenny Pk 38.37 260 *e*P **P** **10 59 54.7 +0.8**
comp=Z,71nm,1.1s,mb5.3
PKME Peaks-Kenny Pk 38.37 260 *e*P **P** **10 59 54.7 +0.8**
comp=Z,71nm,1.1s,mb5.3
PKME LR LR
comp=Z,2µm,19.0s,MS4.8
CZD Col de Zad 38.41 174 *i* P **P** **10 59 56.0 +1.6**
COLD Coldfoot 39.23 337 *e*P **P** **11 00 00.8 -0.1**
comp=Z,28nm,1.3s,mb4.8
COLD Coldfoot 39.23 337 *e*P **P** **11 00 00.8 -0.1**
comp=Z,28nm,1.3s,mb4.8
MAK Makhachkala 39.44 105 *e*P **P** **11 00 03.0 +0.1**
MAK *i* 11 01 35.7
MAK *e* 11 02 10.2
MAK *e*S **S** **11 06 03.8 -0.4**
MAK *e*SS SS 11 08 47.9 -10
MAK *e* 11 10 08.1
MAK pmax pmax
comp=Z,117nm,0.6s,mb5.8
MAK MLR MLR
comp=Z,1µm,14.0s,MS4.8
LBNH Lisbon 40.12 262 PFAKE 11 00 20.0 +11
LBNH LR LR
comp=Z,2µm,22.0s,MS4.8
NVS Novosibirsk 40.19 64⇓ *i*P **P** **11 00 08.9 -0.1**
NVS *e* 11 01 40.9
NVS *e*S **S** **11 06 08.1 -7.1**
NVS pmax pmax
comp=Z,57nm,1.5s,mb5.1
NVS pmax pmax
comp=N,52nm,1.8s
NVS pmax pmax
comp=Z,37nm,1.6s,mb4.9
NVS pmax pmax
comp=N,33nm,1.5s
NVS smax
comp=N,26nm,1.8s
EGAK Eagle 40.25 330 *e*P **P** **11 00 08.7 -0.7**
comp=N,49nm,1.3s,mb5.1
EGAK Eagle 40.25 330 *e*P **P** **11 00 08.7 -0.7**
comp=N,49nm,1.3s,mb5.1
EGAK LR LR
comp=Z,803nm,19.0s,MS4.6
FFC Flin Flon 40.33 296 P **P** **11 00 10.3 +0.2**
comp=Z,591nm,0.7s,mb6.4,SNR=33
FFC Flin Flon 40.33 296 *e*P **P** **11 00 09.9 -0.2**
FFC pmax pmax
comp=Z,71nm,0.8s,mb5.5
FFC MLR MLR
comp=Z,971nm,20.0s,MS4.7
FFC Flin Flon 40.33 296 *e*P **P** **11 00 09.9 -0.2**
comp=Z,71nm,0.8s,mb5.5
FFC Flin Flon 40.33 296 *e*P **P** **11 00 09.9 -0.2**
comp=Z,71nm,0.8s,mb5.5
FFC LR LR
comp=Z,971nm,20.0s,MS4.7
DAWY Dawson 40.63 329 *e*P **P** **11 00 12.2 -0.3**
DAWY Dawson 40.63 329 *e*P **P** **11 00 12.2 -0.4**
MDV Middlebury 40.74 263 *e*P **P** **11 00 14.8 +1.1**
MDV Middlebury 40.74 263 *e*P **P** **11 00 14.8 +1.1**
BILL Bilibino 40.86 3*ce*P **P** **11 00 14.8 +0.4**
BILL *e* 11 00 21.2
BILL pmax pmax
comp=Z,56nm,1.6s,mb4.9
BILL MLR MLR
comp=Z,500nm,15.0s,MS4.5
BILL Bilibino 40.86 3 *e*P **P** **11 00 14.2 -0.2**
comp=Z,74nm,1.6s,mb5.1
BILL Bilibino 40.86 3 *e*P **P** **11 00 14.2 -0.2**
comp=Z,74nm,1.6s,mb5.1
BILL LR LR
comp=Z,632nm,21.0s,MS4.5
NCB Newcomb 41.10 264 PFAKE 11 00 30.0 +13
NCB LR LR
comp=Z,722nm,20.0s,MS4.5
GNI Garni 41.15 109 LR LR 11 17 44.9
comp=Z,650nm,19.1s,MS4.5,baz=158,slow=37
GNI Garni 41.15 109 *e*P **P** **11 00 21.2 +4.1**
GNI pmax pmax
comp=Z,160nm,1.8s
GNI MLR MLR
comp=Z,716nm,19.0s
GNI Garni 41.15 109 *e*P **P** **11 00 21.2 +4.1**
comp=Z,160nm,1.8s,mb5.3
GNI LR LR
comp=Z,716nm,19.0s,MS4.6
COLA College 41.16 335 *e*P **P** **11 00 17.9 +1.0**
COLA pmax pmax
comp=Z,81nm,1.1s,mb5.3
COLA MLR MLR
comp=Z,435nm,19.0s,MS4.3
COLA College 41.16 335 *e*P **P** **11 00 17.9 +1.0**
comp=Z,81nm,1.1s,mb5.3
COLA College 41.16 335 *e*P **P** **11 00 17.9 +1.0**
comp=Z,81nm,1.1s,mb5.3

COLA LR LR
comp=Z,435nm,19.0s,MS4.3
ZAA0 Zalesovo Array 41.42 63 *e*P **P 11 00 19.5 +0.3**
ZAA0 Zalesovo Array 41.42 63 *e*P **P 11 00 19.4 +0.3**
ZAA0 *e*PP PP 11 01 57.8 +3.3
ZALV Zalesovo Beam 41.42 63 P **P 11 00 19.7 +0.5**
comp=Z,7.3nm,0.8s,mb4.3,baz=332,slow=9.1,SNR=26
ZALV LR LR 11 19 58.9
comp=Z,607nm,20.4s,MS4.5,baz=335,slow=40
ZALV Zalesovo Beam 41.42 63 P **P 11 00 19.7 +0.5**
ZALV LR LR 11 19 58.9
ACCN Adirondack Com 41.45 263 *e*P **P 11 00 24.2 +4.7**
BPAW Bear Paw Mtn. 42.32 336 *e*P **P 11 00 26.7 +0.3**
comp=Z,89nm,1.1s,mb5.3
BPAW Bear Paw Mtn. 42.32 336 *e*P **P 11 00 26.7 +0.4**
comp=Z,89nm,1.1s,mb5.3
MENT Mentasta 42.38 331 *e*P **P 11 00 27.1 +0.2**
MENT Mentasta 42.38 331 *e*P **P 11 00 27.1 +0.2**
MCK McKinley 42.40 335 *e*P **P 11 00 27.4 +0.4**
MCK pmax pmax
comp=Z,109nm,1.0s,mb5.4
MCK McKinley 42.40 335 *e*P **P 11 00 27.4 +0.4**
comp=Z,109nm,1.0s,mb5.4
ULM Lac du Bonnet 42.42 288 P **P 11 00 26.6 -0.8**
comp=Z,19nm,1.0s,mb4.7,baz=27,slow=8.7,SNR=11
ULM LR LR 11 17 11.2
comp=Z,922nm,19.7s,MS4.7,baz=32,slow=35
ULM Lac du Bonnet 42.42 288 *e*P **P 11 00 26.2 -1.2**
comp=Z,25nm,1.1s,mb4.8
ULM Lac du Bonnet 42.42 288 *e*P **P 11 00 26.2 -1.1**
comp=Z,25nm,1.1s,mb4.8
ULM LR LR
comp=Z,1μm,20.0s,MS4.9
KURK Kurchatov 42.42 70 P **P 11 00 27.8 +0.4**
comp=Z,113nm,1.2s,mb5.4,SNR=10
KURK Kurchatov 42.42 70 LR LR 11 20 40.3
comp=Z,726nm,18.1s,MS4.6,baz=315,slow=40
KURK Kurchatov 42.42 70 *e*P **P 11 00 27.4 0.0**
KURK *e* 11 02 02.8
KURK pmax pmax
comp=Z,28nm,1.1s,mb4.8
KURK MLR MLR
comp=Z,785nm,20.0s,MS4.6
KURK Kurchatov 42.42 70 *e*P **P 11 00 27.4 0.0**
comp=Z,28nm,1.1s,mb4.8
KURK Kurchatov 42.42 70 *e*PP PP 11 02 02.8 -2.6
KURK Kurchatov 42.42 70 *e*P **P 11 00 27.4 -0.1**
comp=Z,28nm,1.1s,mb4.8
KURK *e*PP PP 11 02 02.8 -2.6
KURK LR LR
comp=Z,785nm,20.0s,MS4.6
CHUM Lake Minchumin 42.70 337 *e*P **P 11 00 29.5 0.0**
CHUM Lake Minchumin 42.70 337 *e*P **P 11 00 29.5 +0.1**
comp=Z,95nm,0.9s,mb5.5
CHUM *e* 11 02 15.5
KTH Kantishna Hill 42.84 336 *e*P **P 11 00 30.8 +0.2**
comp=Z,29nm,0.9s,mb5.0
KTH Kantishna Hill 42.84 336 *e*P **P 11 00 30.8 +0.2**
comp=Z,29nm,0.9s,mb5.0
TRF Thorofare Moun 42.85 335 *e*P **P 11 00 31.7 +1.0**
comp=Z,34nm,1.1s,mb5.0
TRF Thorofare Moun 42.85 335 *e*P **P 11 00 31.7 +1.0**
comp=Z,34nm,1.1s,mb5.0
EYMN Ely 43.10 283 *e*P **P 11 00 32.5 -0.4**
comp=Z,38nm,1.1s,mb5.0
EYMN Ely 43.10 283 *e*P **P 11 00 32.5 -0.4**
comp=Z,38nm,1.1s,mb5.0
EYMN LR LR
comp=Z,1μm,21.0s,MS4.8
BINY Binghamton 43.26 265 *e*P **P 11 00 35.8 +1.6**
comp=Z,51nm,1.2s,mb5.1
BINY Binghamton 43.26 265 *e*P **P 11 00 35.9 +1.6**
comp=Z,51nm,1.2s,mb5.1
BINY LR LR
comp=Z,1μm,21.0s,MS4.8
PPLA Purkeypile 43.63 336 *e*P **P 11 00 37.5 +0.5**
comp=Z,55nm,1.2s,mb5.2
PPLA Purkeypile 43.63 336 *e*P **P 11 00 37.5 +0.5**
comp=Z,55nm,1.2s,mb5.2
GLMI Grayling 43.68 275 *e*P **P 11 00 38.3 +0.7**
comp=Z,118nm,1.0s,mb5.6
GLMI Grayling 43.68 275 *e*P **P 11 00 38.3 +0.7**
comp=Z,118nm,1.0s,mb5.6
GLMI LR LR
comp=Z,1μm,20.0s,MS4.8
YAK Yakutsk 43.93 26 *e*P **P 11 00 38.7 -0.7**
YAK *e*PP pP 11 00 46.2 +3.7
YAK *e* 11 02 20.9
YAK *e*S **S 11 07 09.9 -0.4**
YAK *e*SS SS 11 10 37.2 +11
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
YAK pmax pmax
comp=N,8.0nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=E,302nm,3.2s
YAK pmax pmax
comp=Z,411nm,3.5s
YAK pmax pmax
comp=N,324nm,3.6s
YAK smax
comp=N,443nm,3.4s
YAK smax
comp=E,237nm,3.6s
YAK MLR MLR
comp=E,142nm,13.0s,MS4.4
YAK MLR MLR
comp=Z,405nm,21.0s
YAK MLR MLR
comp=N,318nm,17.0s,MS4.4
YAK Yakutsk 43.93 26 *e*P **P 11 00 39.1 -0.3**
comp=N,25nm,0.8s,mb5.0
YAK Yakutsk 43.93 26 *e*P **P 11 00 39.1 -0.3**
comp=N,25nm,0.8s,mb5.0
YAK LR LR
comp=Z,629nm,22.0s,MS4.5
TTA Tatalina 44.07 339 *e*P **P 11 00 41.5 +1.0**
DLBC Dease Lake 44.07 319 *e*P **P 11 00 41.4 +0.8**
DLBC Dease Lake 44.07 319 *e*P **P 11 00 41.4 +0.8**
AGMN Agassiz Refuge 44.15 287 *e*P **P 11 00 40.6 -0.7**
comp=Z,41nm,1.2s,mb5.0
AGMN Agassiz Refuge 44.15 287 *e*P **P 11 00 40.6 -0.7**
comp=Z,41nm,1.2s,mb5.0
AGMN LR LR
comp=Z,823nm,21.0s,MS4.6
SKAG Skagway 44.18 324 *e*P **P 11 00 41.6 +0.1**
comp=Z,60nm,1.4s,mb5.1
PMR Palmer 44.47 334 *e*P **P 11 00 44.0 +0.2**
PMR pmax pmax
comp=Z,52nm,1.1s,mb5.2
PMR Palmer 44.47 334 *e*P **P 11 00 44.0 +0.2**
comp=Z,52nm,1.1s,mb5.2
ERPA Erie 44.62 269 PFAKE 11 01 00.0 +15
ERPA LR LR
comp=Z,785nm,20.0s,MS4.6
EDM Edmonton 44.82 304 *e*P **P 11 00 46.5 -0.1**
EDM Edmonton 44.82 304 *e*P **P 11 00 46.5 -0.2**
ALLY Alegheny Colle 45.09 268 *e*P **P 11 00 50.7 +1.8**
ALLY Alegheny Colle 45.09 268 *e*P **P 11 00 50.7 +1.7**
MMAI Mount Meron Ar 45.11 123 LR LR 11 20 59.0
comp=Z,465nm,20.6s,MS4.4,baz=20,slow=38
BOD Bodaibo 45.17 39 *e*P **P 11 00 46.7 -2.7**
BOD pmax pmax
comp=Z,17nm,1.2s,mb4.8
SSPA Standing Stone 45.28 266 *e*P **P 11 00 51.5 +1.1**
comp=Z,81nm,1.4s,mb5.4
SSPA Standing Stone 45.28 266 *e*P **P 11 00 51.5 +1.1**
comp=Z,81nm,1.4s,mb5.4
SSPA LR LR
comp=Z,1μm,20.0s,MS4.8
MVL Millersville 45.36 264 *e*P **P 11 00 58.9 +7.8**
SEY Seymchan 45.43 12⇑ *e*P **P 11 00 52.2 +0.9**
AAM Ann Arbor 45.63 272 PFAKE 11 01 00.0 +6.8
AAM LR LR
comp=Z,721nm,19.0s,MS4.6
SEW Seward 45.94 333 *e*P **P 11 00 55.2 -0.3**
comp=Z,34nm,0.9s,mb5.3
SEW Seward 45.94 333 *e*P **P 11 00 55.2 -0.2**
comp=Z,34nm,0.9s,mb5.3
SDMD Soldier's Deli 46.05 264 *e*P **P 11 01 04.3 +7.7**
ASF Jabal al Asfar 46.31 122 LR LR 11 22 56.4
comp=Z,313nm,18.6s,MS4.3,baz=42,slow=39
WRAK Wrangell Islan 46.42 320 PFAKE 11 01 10.0 +11
WRAK LR LR
comp=Z,1μm,20.0s,MS4.9
DGMT Dagmar 46.51 294 ⇓P **P 11 01 00.3 +0.3**
baz=46
DGMT Dagmar 46.51 294 *e*P **P 11 00 58.8 -1.2**
comp=Z,24nm,1.2s,mb5.0
DGMT Dagmar 46.51 294 *e*P **P 11 00 58.8 -1.2**
comp=Z,24nm,1.2s,mb5.0
DGMT LR LR
comp=Z,822nm,19.0s,MS4.7
MCWV Mont Chateau 46.80 267 PFAKE 11 01 10.0 +7.6
MCWV LR LR
comp=Z,2μm,19.0s,MS5.0
MK31 Makanchi Array 47.03 70 *e*P **P 11 01 04.1 0.0**
MK31 Makanchi Array 47.03 70 *e*P **P 11 01 04.1 0.0**
MKAR Makanchi Array 47.03 70 P **P 11 01 04.2 0.0**
comp=Z,19nm,1.0s,mb5.0,baz=339,slow=6.5,SNR=79
MKAR LR LR 11 23 03.5
comp=Z,770nm,18.8s,MS4.7,baz=320,slow=39
JFWS Jewell Farm 47.20 279 *e*P **P 11 01 05.7 +0.2**
JFWS pmax pmax
comp=Z,30nm,1.0s,mb5.2
JFWS MLR MLR
comp=Z,983nm,21.0s,MS4.8
JFWS Jewell Farm 47.20 279 *e*P **P 11 01 05.7 +0.2**
comp=Z,30nm,1.0s,mb5.2
JFWS Jewell Farm 47.20 279 *e*P **P 11 01 05.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
JFWS LR LR
comp=Z,983nm,21.0s,MS4.8
ACSO Alum Creek Sta 47.28 270 *e*P **P 11 01 06.9 +0.7**
comp=Z,33nm,0.9s,mb5.3
ACSO Alum Creek Sta 47.28 270 *e*P **P 11 01 06.9 +0.7**
comp=Z,33nm,0.9s,mb5.3
ACSO LR LR
comp=Z,1μm,20.0s,MS4.8
CBN Corbin 47.32 264 PFAKE 11 01 20.0 +13
CBN LR LR
comp=Z,2μm,22.0s,MS5.0
ABKT Ailbek 47.37 97 P **P 11 01 08.9 +2.0**
comp=Z,134nm,1.3s,mb5.7,SNR=5.1
A18A Metzger Ranch, 47.73 299 ⇓P **P 11 01 08.9 -0.7**
baz=48,SNR=13
USP Ospenovka 47.78 79 P **P 11 01 11.2 +1.1**
SNR=8.6
MOY Mondy 47.85 52 *e*P **P 11 01 12.4 +1.9**
MOY pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
A17A Triple J Farms 47.95 299 ⇑P **P 11 01 10.6 -0.7**
baz=48
EKS2 Erkin-Say 48.10 80 *e*P **P 11 01 14.4 +1.9**
comp=Z,9.8nm,0.9s,mb4.8
EKS2 Erkin-Say 48.10 80 *e*P **P 11 01 14.3 +1.8**
comp=Z,9.8nm,0.9s,mb4.8
EKS2 LR LR
comp=Z,496nm,20.0s,MS4.5
CLNS Chul'man 48.13 32 *e*P **P 11 01 12.5 -0.1**
CLNS pmax pmax
comp=Z,27nm,1.2s,mb5.2
CLNS pmax pmax
comp=N,11nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,1.2s
IRK Irkutsk 48.14 49 *e*P **P 11 01 12.0 -0.7**
IRK pmax pmax
comp=Z,52nm,1.1s,mb5.5
EIL Elat 48.16 125 LR LR 11 23 14.0
comp=Z,479nm,20.0s,MS4.5,baz=170,slow=38
B18A Beardsley Farm 48.19 298 ⇓P **P 11 01 12.8 -0.4**
baz=48,SNR=16
A16A West Butte Ran 48.20 300 ⇓P **P 11 01 11.9 -1.3**
baz=48,SNR=16
FRU Bishkek 48.21 79 *e*P **P 11 01 14.5 +1.1**
FRU *e* 11 03 04.0
AAK Ala-Archa 48.35 79 P **P 11 01 15.5 +1.0**
comp=Z,77nm,1.3s,mb5.6,SNR=8.9
AAK Ala-Archa 48.35 79*d i* P **P 11 01 15.6 +1.1**
AAK pmax pmax
comp=Z,14nm,1.4s,mb4.8
AAK Ala-Archa 48.35 79 P **P 11 01 15.8 +1.3**
SNR=10
AAK Ala-Archa 48.35 79 *e*P **P 11 01 15.7 +1.2**
comp=Z,40nm,1.5s,mb5.2
AAK Ala-Archa 48.35 79 *e*P **P 11 01 15.7 +1.2**
comp=Z,40nm,1.5s,mb5.2
AAK LR LR
comp=Z,708nm,21.0s,MS4.6
TKM2 Tokmak 2 48.44 78 *e*P **P 11 01 16.4 +1.2**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TKM2 MLR MLR
comp=Z,464nm,20.0s,MS4.5
TKM2 Tokmak 2 48.44 78 P **P 11 01 16.6 +1.5**
SNR=16
TKM2 Tokmak 2 48.44 78 *e*P **P 11 01 16.4 +1.2**
comp=Z,7.9nm,0.8s,mb4.8
TKM2 Tokmak 2 48.44 78 *e*P **P 11 01 16.4 +1.2**
comp=Z,7.9nm,0.8s,mb4.8
TKM2 LR LR
comp=Z,464nm,20.0s,MS4.5
ECSD EROS,Sioux Fal 48.47 285 *e*P **P 11 01 15.0 -0.3**
comp=Z,19nm,1.0s,mb5.1
ECSD EROS,Sioux Fal 48.47 285 *e*P **P 11 01 15.0 -0.3**
comp=Z,19nm,1.0s,mb5.1
ECSD LR LR
comp=Z,1μm,21.0s,MS4.9
KBK Karagaybulak 48.48 79 P **P 11 01 17.2 +1.8**
SNR=6.1
A15A Johnson Ranch, 48.49 301 ⇑P **P 11 01 14.3 -1.1**
baz=48,SNR=25
TLY Talaya 48.51 50 *e*P **P 11 01 16.0 +0.5**
TLY *e*S **S 11 08 07.1 -9.1**
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,336nm,16.0s,MS4.4
TLY Talaya 48.51 50 PFAKE 11 01 30.0 +14
TLY LR LR
comp=Z,402nm,19.0s,MS4.4
EGMT Eagleton 48.52 298 ⇓P **P 11 01 15.6 0.0**
baz=48
EGMT Eagleton 48.52 298 *e*P **P 11 01 15.5 -0.2**
comp=Z,150nm,1.3s,mb5.9
EGMT Eagleton 48.52 298 *e*P **P 11 01 15.5 -0.2**
comp=Z,150nm,1.3s,mb5.9
EGMT LR LR
comp=Z,1μm,22.0s,MS4.8
AML Almayashu 48.55 80 P **P 11 01 18.1 +2.1**
SNR=5.4
AML Almayashu 48.55 80 PFAKE 11 01 30.0 +14
AML LR LR
comp=Z,651nm,19.0s,MS4.6
B17A L&G Farms, Che 48.57 299 ⇑P **P 11 01 15.4 -0.7**
baz=48,SNR=26
KDAK Kodiak Island 48.63 335 *e*P **P 11 01 16.0 -0.4**
comp=Z,84nm,1.0s,mb5.7
KDAK Kodiak Island 48.63 335 *e*P **P 11 01 16.1 -0.3**
comp=Z,84nm,1.0s,mb5.7
A14A Double T Ranch 48.68 302 ⇓P **P 11 01 16.4 -0.5**
baz=48,SNR=47
B16A M & M Farms, S 48.72 300 ⇑P **P 11 01 16.5 -0.6**
baz=48,SNR=30
UCH Uchtor 48.73 79 PFAKE 11 01 30.0 +13
UCH LR LR
comp=Z,329nm,19.0s,MS4.3
WALA Waterton Lakes 48.74 302 *e*P **P 11 01 16.6 -0.7**
comp=Z,1.1nm,1.0s,mb3.8
WALA Waterton Lakes 48.74 302 *e*P **P 11 01 16.6 -0.7**
comp=Z,1.1nm,1.0s,mb3.8
A13A Flathead Natio 48.99 302 ⇑P **P 11 01 18.6 -0.6**
baz=49
B15A Bradely Ranch, 49.04 301 ⇑P **P 11 01 18.8 -0.8**
baz=49,SNR=30
SCIA State Center 49.05 281 *e*P **P 11 01 19.4 -0.4**
comp=Z,52nm,1.1s,mb5.5
SCIA State Center 49.05 281 *e*P **P 11 01 19.4 -0.4**
comp=Z,52nm,1.1s,mb5.5
SCIA LR LR
comp=Z,1μm,19.0s,MS5.0
C17A Wharram Farm, 49.16 299 ⇑P **P 11 01 20.0 -0.6**
baz=49,SNR=35
B14A Marquette Ranc 49.20 301 ⇑P **P 11 01 20.2 -0.7**
baz=49,SNR=8.5
BLA Blacksburg 49.21 266 *e*P **P 11 01 21.6 +0.5**
BLA pmax pmax
comp=Z,29nm,1.0s,mb5.3
BLA MLR MLR
comp=Z,1μm,21.0s,MS4.8
BLA Blacksburg 49.21 266 *e*P **P 11 01 21.6 +0.5**
comp=Z,30nm,1.0s,mb5.3
BLA Blacksburg 49.21 266 *e*P **P 11 01 21.6 +0.5**
comp=Z,30nm,1.0s,mb5.3
BLA LR LR
comp=Z,1μm,21.0s,MS4.8
ULHL Ulahol 49.26 78 P **P 11 01 23.2 +1.8**
SNR=6.6
C16A Fuhringer Ranc 49.28 300 ⇓P **P 11 01 20.8 -0.8**
baz=49,SNR=17
D18A Linhart Farms, 49.28 298 ⇑P **P 11 01 21.5 0.0**
baz=49,SNR=30
TAM Tamanrasset 49.30 162 *e*P **P 11 01 23.0 +1.1**
TAM pmax pmax
comp=Z,36nm,1.1s,mb5.3
TAM MLR MLR
comp=Z,574nm,20.0s,MS4.6
TAM Tamanrasset 49.30 162 *e*P **P 11 01 23.0 +1.1**
comp=Z,36nm,1.1s,mb5.3
TAM Tamanrasset 49.30 162 *e*P **P 11 01 23.0 +1.1**
comp=Z,36nm,1.1s,mb5.3
TAM LR LR
comp=Z,574nm,20.0s,MS4.6
A12A Yaak River Ran 49.32 303 ⇓P **P 11 01 21.5 -0.3**
baz=49,SNR=22
BLO Bloomington 49.39 273 *e*P **P 11 01 22.9 +0.5**
BLO Bloomington 49.39 273 *e*P **P 11 01 22.9 +0.5**
A11A Hall Mentain, 49.49 304 ⇑P **P 11 01 23.4 +0.3**
baz=49,SNR=64
B13A Whitefish 49.51 302 ⇑P **P 11 01 22.5 -0.8**
baz=49,SNR=11
C15A Salmond Ranch, 49.55 300 ⇑P **P 11 01 23.0 -0.6**
baz=49
D17A Six Diamond Ra 49.57 298 ⇓P **P 11 01 23.6 -0.2**
baz=49
ZAK Zakamensk 49.61 51 *e*P **P 11 01 24.3 +0.3**
ZAK *e* 11 03 25.8
ZAK pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
B12A Libby 49.73 303 ⇑P **P 11 01 24.7 -0.3**
baz=49,SNR=21
A10A Northport 49.79 305 ⇓P **P 11 01 25.4 +0.1**
baz=50,SNR=46
C14A Swan Lake 49.87 301 ⇑P **P 11 01 25.4 -0.6**
baz=50
E18A Harlowton 49.89 298 ⇑P **P 11 01 26.4 +0.2**
baz=50,SNR=18
D16A Dana Ranch, Ca 49.93 299 ⇓P **P 11 01 25.4 -1.0**
baz=50,SNR=16
B11A Sandpoint 49.97 304 ⇑P **P 11 01 26.4 -0.3**
baz=50,SNR=9.8
A09A Danville 50.06 306 ⇑P **P 11 01 27.7 +0.3**
baz=50,SNR=39
BSMT Bassoo Peak 50.08 302 *e*P **P 11 01 27.4 -0.2**
BSMT Bassoo Peak 50.08 302 *e*P **P 11 01 27.4 -0.1**
WCI Wyandotte Cave 50.17 272 *e*P **P 11 01 28.7 +0.3**
WCI pmax pmax
comp=Z,26nm,0.9s,mb5.3
WCI MLR MLR
comp=Z,635nm,19.0s,MS4.7
WCI Wyandotte Cave 50.17 272 *e*P **P 11 01 28.7 +0.3**
comp=Z,26nm,0.9s,mb5.3
WCI LR LR
comp=Z,635nm,19.0s,MS4.7
C13A Hot Springs 50.17 302 ⇑P **P 11 01 28.2 -0.1**
baz=50,SNR=53
D15A Lincoln 50.19 300 ⇑P **P 11 01 27.7 -0.8**
baz=50,SNR=33
CNNC Cliffs of the 50.20 263 PFAKE 11 01 40.0 +11
CNNC LR LR
comp=Z,769nm,19.0s,MS4.7
E17A Martinsdale 50.25 298 ⇓P **P 11 01 28.9 0.0**
baz=50,SNR=34
A08A Turner Farm, O 50.26 306 ⇓P **P 11 01 29.3 +0.4**
baz=50,SNR=39
OLIL Olney 50.29 274 *e*P **P 11 01 29.6 +0.3**
comp=Z,34nm,0.9s,mb5.4
OLIL Olney 50.29 274 *e*P **P 11 01 29.6 +0.2**
comp=Z,34nm,0.9s,mb5.4
HRY Holter Researc 50.30 299 *e*P **P 11 01 28.8 -0.5**
HRY Holter Researc 50.30 299 *e*P **P 11 01 28.8 -0.5**
B10A Chitwood Farm, 50.32 304 ⇑P **P 11 01 29.5 0.0**
baz=50,SNR=5.8
NEW Newport 50.33 304 *e*P **P 11 01 28.9 -0.6**
NEW pmax pmax
comp=Z,26nm,1.0s
NEW MLR MLR
comp=Z,1μm,20.0s
NEW Newport 50.33 304 *e*P **P 11 01 28.9 -0.6**
comp=Z,26nm,1.0s,mb5.2
NEW Newport 50.33 304 *e*P **P 11 01 28.9 -0.6**
comp=Z,26nm,1.0s,mb5.2
NEW LR LR
comp=Z,1μm,20.0s,MS4.9
RSSD Black Hills 50.39 291 *e*P **P 11 01 29.7 -0.3**
RSSD pmax pmax
comp=Z,19nm,1.2s,mb5.0
RSSD Black Hills 50.39 291 *e*P **P 11 01 29.7 -0.3**
comp=Z,19nm,1.2s,mb5.0
RSSD Black Hills 50.39 291 *e*P **P 11 01 29.7 -0.3**
comp=Z,19nm,1.2s,mb5.0
C12B Naegeli Ranch, 50.39 303 ⇓P **P 11 01 29.8 -0.1**
baz=50,SNR=34
E16A East Helena 50.42 299 ⇓P **P 11 01 29.5 -0.7**
baz=50,SNR=5.5
D14A Greenough 50.43 301 ⇓P **P 11 01 29.7 -0.6**
baz=50,SNR=44
F18A Big Timber 50.43 297 ⇑P **P 11 01 30.6 +0.3**
baz=50,SNR=29
B09A Rice 50.45 305 ⇓P **P 11 01 30.7 +0.3**
baz=50,SNR=70
A07A Ashnola River, 50.46 307 ⇓P **P 11 01 30.4 -0.1**
baz=50,SNR=20
CHMT Chamberlain Mo 50.51 300 *e*P **P 11 01 30.1 -0.8**
CHMT Chamberlain Mo 50.51 300 *e*P **P 11 01 30.1 -0.7**
D13A Huson 50.68 302 ⇑P **P 11 01 32.0 -0.1**
baz=50,SNR=24
F17A Fitzpatrick Pl 50.70 298 ⇑P **P 11 01 32.8 +0.4**
baz=50,SNR=45
MSO Missoula 50.78 301 *e*P **P 11 01 32.5 -0.4**
comp=Z,66nm,1.3s,mb5.4
MSO Missoula 50.78 301 *e*P **P 11 01 32.5 -0.4**
comp=Z,66nm,1.3s,mb5.4
MSO LR LR
comp=Z,685nm,19.0s,MS4.7
C10A Spilker Farm, 50.79 304 ⇑P **P 11 01 32.9 0.0**
baz=50,SNR=32
E15A Deer Lodge 50.79 300 ⇓P **P 11 01 32.3 -0.7**
baz=50,SNR=8.3
B08A Colville Reser 50.82 306 ⇓P **P 11 01 33.1 -0.1**
baz=50,SNR=36
TZTN Tazewell 50.83 269 *e*P **P 11 01 34.3 +0.9**
comp=Z,53nm,1.3s,mb5.3
TZTN Tazewell 50.83 269 *e*P **P 11 01 34.3 +0.9**
comp=Z,53nm,1.3s,mb5.3
USIN University of 50.85 273 *e*P **P 11 01 33.1 -0.5**
comp=Z,74nm,1.4s,mb5.4
USIN University of 50.85 273 *e*P **P 11 01 33.1 -0.5**
comp=Z,74nm,1.4s,mb5.4
G18A Lazy EL Ranch, 50.93 297 ⇑P **P 11 01 33.4 -0.6**
baz=51,SNR=7.4
B07A Winthrop 50.93 307 ⇑P **P 11 01 34.0 0.0**
baz=51,SNR=70
RLMT Red Lodge 51.02 296 ⇑P **P 11 01 34.9 +0.2**
baz=51
RLMT Red Lodge 51.02 296 *e*P **P 11 01 34.8 +0.1**
comp=Z,29nm,1.4s,mb5.0
RLMT Red Lodge 51.02 296 *e*P **P 11 01 34.8 +0.1**
comp=Z,29nm,1.4s,mb5.0
RLMT LR LR
comp=Z,776nm,20.0s,MS4.7
E14A Clinton 51.03 300 ⇓P **P 11 01 34.4 -0.5**
baz=51,SNR=25
C09A Chrisman Ranch 51.06 305 ⇓P **P 11 01 34.2 -0.8**
baz=51,SNR=7.9
F16A Kennard Place, 51.09 299 ⇑P **P 11 01 34.5 -0.7**
baz=51
E13A Victor 51.20 301 ⇓P **P 11 01 35.6 -0.5**
baz=51,SNR=57
BOZ Bozeman (W) 51.22 298 ⇑P **P 11 01 36.3 +0.1**
baz=51
BOZ Bozeman (W) 51.22 298 *e*P **P 11 01 36.0 -0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BOZ MLR MLR
comp=Z,742nm,19.0s,MS4.7
BOZ Bozeman (W) 51.22 298 *e*P **P 11 01 36.0 -0.2**
comp=Z,3.7nm,0.7s,mb4.4

BOZ Bozeman (W) 51.22 298 *e*P P 11 01 36.0 -0.2
comp=Z,3.7nm,0.7s,mb4.4
BOZ LR LR
comp=Z,742nm,19.0s,MS4.7
B06A Marblemount 51.23 308 ⇓P P 11 01 35.6 -0.7
baz=51
D11A Klaveano Farm, 51.23 303 ⇓P P 11 01 35.4 -0.9
baz=51,SNR=79
G17A Pierce Place, 51.26 298 ⇑P P 11 01 36.9 +0.4
baz=51,SNR=21
C08A Higginbotham F 51.28 306 ⇓P P 11 01 35.9 -0.7
baz=51,SNR=14
F15A Butte 51.28 299 ⇑P P 11 01 36.3 -0.3
baz=51,SNR=12
LRM Limekiln Ridge 51.29 299 *e*P P 11 01 36.9 +0.2
LRM Limekiln Ridge 51.29 299 *e*P P 11 01 36.9 +0.2
WMQ Urumqi 51.34 67 *e*P P 11 01 38.5 +1.4
WMQ AP pP 11 01 42.7 +2.4
WMQ PCP PcP 11 02 51.6 -0.2
WMQ PP PP 11 03 36.3 +2.6
WMQ S **S** 11 08 56.2 +0.4
WMQ XS sS 11 09 03.6 +2.6
WMQ SCS ScS 11 11 26.4 -0.6
WMQ SS SS 11 12 29.2 -1.6
WMQ AMB AMB
comp=Z,18nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,368nm,4.0s
WMQ LR LR
comp=N,799nm,16.0s,MS5.1
WMQ LR LR
comp=E,1μm,16.0s,MS5.1
WMQ LR LR
comp=Z,874nm,23.5s
D10A Wagner Farm, O 51.48 304 ⇓P P 11 01 37.3 -0.8
baz=51,SNR=31
F14A Wisdom 51.55 300 ⇑P P 11 01 38.3 -0.4
baz=51,SNR=9.9
SIUC Southern Illin 51.58 275 *e*P P 11 01 38.7 -0.3
comp=Z,35nm,0.9s,mb5.3
SIUC Southern Illin 51.58 275 *e*P P 11 01 38.7 -0.3
comp=Z,35nm,0.9s,mb5.3
C07A Waterville 51.63 306 ⇑P P 11 01 38.1 -1.2
baz=51,SNR=13
G16A Moss Hill, Enn 51.65 298 ⇑P P 11 01 39.4 0.0
baz=51,SNR=16
TKL Tuckaleechee C 51.71 269 *e*P P 11 01 40.7 +0.7
TKL Tuckaleechee C 51.71 269 *e*P P 11 01 40.7 +0.7
FVM French Village 51.72 276 *e*P P 11 01 38.8 -1.3
FVM pmax pmax
comp=Z,16nm,0.8s,mb5.0
FVM French Village 51.72 276 *e*P P 11 01 38.8 -1.3
comp=Z,16nm,0.8s,mb5.0
FVM French Village 51.72 276 *e*P P 11 01 38.8 -1.3
comp=Z,16nm,0.8s,mb5.0
DLMT Dillon 51.75 299 *e*P P 11 01 39.7 -0.5
comp=Z,9.6nm,0.8s,mb4.8
DLMT Dillon 51.75 299 *e*P P 11 01 39.7 -0.5
comp=Z,9.6nm,0.8s,mb4.8
D09A Jones Farm, Ri 51.75 305 ⇑P P 11 01 39.5 -0.7
baz=52,SNR=28
E11A Bogner Ranch, 51.84 303 ⇓P P 11 01 39.6 -1.3
baz=52,SNR=32
F13A Darby 51.84 301 ⇓P P 11 01 40.4 -0.5
baz=52,SNR=15
LKWY Lake 51.85 297 PFAKE 11 01 50.0 +9.0
LKWY LR LR
comp=Z,2μm,19.0s,MS5.2
G15A Dillon 51.90 299 ⇑P P 11 01 41.1 -0.2
baz=52,SNR=16
D08A Wollman Farm, 51.91 305 ⇑P P 11 01 40.6 -0.8
baz=52,SNR=19
CCM Cathedral Cave 51.92 277 *e*P P 11 01 40.3 -1.3
CCM pmax pmax
comp=Z,21nm,0.9s,mb5.1
CCM MLR MLR
comp=Z,785nm,20.0s,MS4.7
CCM Cathedral Cave 51.92 277 *e*P P 11 01 40.3 -1.3
comp=Z,21nm,0.9s,mb5.1
CCM Cathedral Cave 51.92 277 *e*P P 11 01 40.3 -1.3
comp=Z,21nm,0.9s,mb5.1
CCM LR LR
comp=Z,785nm,20.0s,MS4.7
E10A Myers Farm, Un 51.96 303 ⇑P P 11 01 40.5 -1.3
baz=52,SNR=10.0
H16A Russell Place, 51.97 298 ⇓P P 11 01 42.1 +0.2
baz=52,SNR=22
H17A Grant Village 52.06 297 ⇑P P 11 01 44.0 +1.4
baz=52,SNR=14
D07A Quincy 52.06 306 ⇑P P 11 01 41.5 -1.0
baz=52,SNR=14
G14A Jackson 52.10 300 ⇑P P 11 01 42.5 -0.3
baz=52
B04A Port Angeles 52.17 309 ⇑P P 11 01 42.8 -0.4
baz=52
E09A Wood Farm, Sta 52.21 304 ⇑P P 11 01 42.6 -1.1
baz=52,SNR=13
D06A Ole Elum 52.29 307 ⇑P P 11 01 42.8 -1.4
baz=52
C04A Brinnon 52.35 309 ⇓P P 11 01 44.5 -0.1
baz=52
H15A Lima 52.45 299 ⇓P P 11 01 45.6 +0.2
baz=52,SNR=37
G13A Cobalt 52.45 300 ⇓P P 11 01 45.5 0.0
baz=52,SNR=60
F10A Beach Ranch, E 52.46 303 ⇓P P 11 01 44.6 -0.9
baz=52,SNR=22
E08A Dider Farm, El 52.48 305 ⇓P P 11 01 45.2 -0.4
baz=52,SNR=21
I18A Diamond G Ranc 52.48 296 ⇓P P 11 01 45.7 +0.1
baz=52,SNR=10.0
GBL Gable Mountain 52.48 305 P P 11 01 45.5 -0.1
GBL Gable Mountain 52.48 305 P P 11 01 45.5 -0.1
I17A Pilgram Creek 52.50 297 ⇑P P 11 01 46.6 +0.9
baz=52
C03A Quillayute Air 52.53 310 ⇓P P 11 01 46.9 +0.9
baz=52
D05A Enumclaw 52.59 308 ⇓P P 11 01 45.1 -1.3
baz=52
IMW Indian Meadow 52.62 297 *e*P P 11 01 47.1 +0.4
comp=Z,29nm,1.1s,mb5.1
IMW Indian Meadow 52.62 297 *e*P P 11 01 47.1 +0.4
comp=Z,29nm,1.1s,mb5.1
E07A Sunnyside 52.62 306 ⇑P P 11 01 46.6 -0.1
baz=52,SNR=44
H14A Leadore 52.65 299 ⇓P P 11 01 47.2 +0.3
baz=52,SNR=50
KSU1 Kansas State U 52.67 282 *e*P P 11 01 45.6 -1.5
comp=Z,33nm,1.0s,mb5.2
KSU1 Kansas State U 52.67 282 *e*P P 11 01 45.6 -1.5
comp=Z,33nm,1.0s,mb5.2
KSU1 LR LR
comp=Z,2μm,20.0s,MS5.1
HAWA Hanford 52.69 305 *e*P P 11 01 46.8 -0.4
comp=Z,31nm,0.9s,mb5.2
HAWA Hanford 52.69 305 *e*P P 11 01 46.8 -0.4
comp=Z,31nm,0.9s,mb5.2
HAWA LR LR
comp=Z,942nm,19.0s,MS4.8
BRVW Black Rock Val 52.73 306 P P 11 01 47.7 +0.3
G11A Walters Elk Ra 52.73 302 ⇓P P 11 01 45.9 -1.6
baz=52,SNR=9.1
SONM Songino Array 52.74 50 P P 11 01 47.4 -0.1
comp=Z,5.2nm,1.2s,mb4.3,baz=331,slow=6.3,SNR=18
SONM LR LR 11 27 05.4
comp=Z,817nm,18.6s,MS4.8,baz=151,slow=39
I16A Newdale 52.80 297 ⇓P P 11 01 48.8 +0.8
baz=52,SNR=19
ULN Ulaanbaatar 52.88 49*d i*P P 11 01 48.7 +0.2
ULN Ulaanbaatar 52.88 49 *e*P P 11 01 49.2 +0.7
comp=Z,28nm,1.4s,mb5.0
ULN Ulaanbaatar 52.88 49 *e*P P 11 01 49.1 +0.6
comp=Z,28nm,1.4s,mb5.0
ULN LR LR
comp=Z,749nm,20.0s,MS4.7
F09A S2 Ranch, Elgi 52.89 304 ⇓P P 11 01 48.2 -0.5
baz=53,SNR=27
NHSC New Hope 52.90 264 PFAKE 11 02 00.0 +11
NHSC LR LR
comp=Z,800nm,22.0s,MS4.7
E06A Yakima 52.93 306 ⇓P P 11 01 47.9 -1.0
baz=53,SNR=10
H13A Challis 52.95 300 ⇑P P 11 01 49.0 -0.1
baz=53,SNR=36
LON Longmire 52.95 307 *e*P P 11 01 48.1 -1.0
LON pmax pmax
comp=Z,32nm,1.3s,mb5.1
LON Longmire 52.95 307 *e*P P 11 01 48.1 -1.0
comp=Z,32nm,1.3s,mb5.1
I15A Monteview 52.97 298 ⇓P P 11 01 49.7 +0.4
baz=53,SNR=9.8
DCID1 Drake Creek 52.97 297 *e*P P 11 01 50.4 +1.1
comp=Z,25nm,0.3s,mb5.6
DCID1 Drake Creek 52.97 297 *e*P P 11 01 50.4 +1.1
comp=Z,25nm,0.3s,mb5.6
J18A Kendall Valley 52.99 296 ⇓P P 11 01 49.4 0.0
baz=53,SNR=32
K19A Absolon Red Bu 53.00 295 ⇑P P 11 01 48.2 -1.3
baz=53,SNR=28
TPAW Teton Pass 53.00 297 *e*P P 11 01 49.8 +0.3
comp=Z,26nm,1.5s,mb4.9
TPAW Teton Pass 53.00 297 *e*P P 11 01 49.8 +0.4
comp=Z,26nm,1.5s,mb4.9
K20A Yellowstone Ra 53.00 294 ⇑P P 11 01 48.6 -1.0
baz=53,SNR=20
F08A Pendleton 53.04 304 ⇑P P 11 01 49.7 -0.1
baz=53,SNR=24
J17A Brown Place, J 53.05 297 ⇑P P 11 01 50.2 +0.4
baz=53,SNR=8.9
G10A Bishop Farm, J 53.06 303 ⇓P P 11 01 48.9 -1.1
baz=53,SNR=26
E05A Randle 53.12 307 ⇑P P 11 01 49.6 -0.7
baz=53,SNR=14
H12A Diamond D Ranc 53.13 301 ⇓P P 11 01 50.2 -0.3
baz=53,SNR=40
RRI2 Red Ridge 53.24 297 *e*P P 11 01 51.9 +0.7
comp=Z,10.0nm,0.7s,mb4.8
F07A Phinny Hill Vi 53.26 305 ⇑P P 11 01 52.0 +0.7
baz=53,SNR=30
G09A Cove 53.26 303 ⇑P P 11 01 50.7 -0.7
baz=53,SNR=40
BW06 Boulder Array 53.26 295 ⇓P P 11 01 51.0 -0.4
baz=53
BW06 Boulder Array 53.26 295 *e*P P 11 01 50.5 -0.9
comp=Z,27nm,1.1s,mb5.1
BW06 Boulder Array 53.26 295 *e*P P 11 01 50.5 -0.9
comp=Z,27nm,1.1s,mb5.1
BW06 LR LR
comp=Z,1μm,19.0s,MS5.0
PDAR Pinedale Array 53.26 295 P P 11 01 50.5 -0.9
comp=Z,16nm,0.9s,mb4.9,baz=44,slow=4.4,SNR=92
PDAR LR LR 11 24 27.8
comp=Z,1μm,19.1s,MS4.9,baz=31,slow=36
H11A Donnelly 53.30 302 ⇑P P 11 01 50.8 -0.9
baz=53,SNR=66
I14A Mackay 53.31 299 ⇓P P 11 01 51.6 -0.1
baz=53,SNR=20
L21A Rawlins 53.35 293 ⇓P P 11 01 51.5 -0.6
baz=53,SNR=20
J16A Bone 53.39 297 ⇓P P 11 01 52.6 +0.2
baz=53,SNR=7.7
PHWY Pilot Hill 53.39 291 *e*P P 11 01 52.2 -0.2
comp=Z,32nm,1.3s,mb5.1
PHWY Pilot Hill 53.39 291 *e*P P 11 01 52.2 -0.1
comp=Z,32nm,1.3s,mb5.1
J15A Blackfoot 53.51 298 ⇑P P 11 01 53.9 +0.7
baz=53,SNR=28
I13A Wildhorse Cree 53.51 300 ⇓P P 11 01 53.1 -0.1
baz=53,SNR=34
K18A Toltan Ranch, 53.52 296 ⇑P P 11 01 53.1 -0.3
baz=53,SNR=17
BMO Blue Mountains 53.52 303 *e*P P 11 01 52.2 -1.1
comp=Z,34nm,0.9s,mb5.3
BMO Blue Mountains 53.52 303 *e*P P 11 01 52.2 -1.1
comp=Z,34nm,0.9s,mb5.3
BMO LR LR
comp=Z,768nm,19.0s,MS4.8
RWWY Rawlins 53.56 293 *e*P P 11 01 53.1 -0.5
comp=Z,23nm,1.2s,mb5.0
RWWY Rawlins 53.56 293 *e*P P 11 01 53.1 -0.6
comp=Z,23nm,1.2s,mb5.0
G08A Pilot Rock 53.56 304 ⇑P P 11 01 53.8 +0.2
baz=53,SNR=57
F06A Goldendale 53.60 306 ⇓P P 11 01 54.1 +0.2
baz=53,SNR=8.9
L20A Wamsutter 53.60 294 ⇑P P 11 01 53.7 -0.2
baz=53,SNR=11
JBO Jordan Butte 53.63 305 P P 11 01 55.0 +0.9
JBO Jordan Butte 53.63 305 P P 11 01 55.0 +0.9
M22A Cedar Creek Ra 53.64 292 ⇓P P 11 01 53.7 -0.5
baz=53,SNR=15
F05A White Salmon 53.66 307 ⇓P P 11 01 54.5 +0.2
baz=53,SNR=9.5
K17A Gardner Place, 53.67 296 ⇓P P 11 01 54.1 -0.3
baz=53
GOGA Godfrey 53.67 267 *e*P P 11 01 54.7 +0.1
GOGA pmax pmax
comp=Z,39nm,1.3s,mb5.2
GOGA MLR MLR
comp=Z,564nm,20.0s,MS4.6
GOGA Godfrey 53.67 267 *e*P P 11 01 54.7 +0.1
comp=Z,39nm,1.3s,mb5.2
GOGA LR LR
comp=Z,564nm,20.0s,MS4.6
M21A Separation Pea 53.68 293 ⇑P P 11 01 53.6 -0.9
baz=53,SNR=16
AHID Auburn Hatcher 53.71 297 PFAKE 11 02 10.0 +15
AHID LR LR
comp=Z,1μm,20.0s,MS5.0
LVP Lakeview Peak 53.74 307 P P 11 01 55.2 +0.3
LVP Lakeview Peak 53.74 307 P P 11 01 55.2 +0.3
G07A Ruggs Ranch, H 53.77 305 ⇑P P 11 01 55.5 +0.3
baz=54,SNR=24
K16A Soda Springs 53.79 297 ⇓P P 11 01 55.7 +0.4
baz=54,SNR=18
H09A Durkee 53.79 303 ⇓P P 11 01 54.6 -0.6
baz=54,SNR=33
L19A Farson 53.81 295 ⇑P P 11 01 54.8 -0.7
baz=54,SNR=8.4
F04A Amboy 53.87 307 ⇑P P 11 01 55.4 -0.4
baz=54,SNR=9.2
J14A Carey 53.88 299 ⇓P P 11 01 56.0 0.0
baz=54,SNR=14
I12A Atlanta 53.90 300 ⇓P P 11 01 55.5 -0.6
baz=54,SNR=30
CBKS Cedar Bluff 53.91 285 *e*P P 11 01 55.6 -0.7
CBKS pmax pmax
comp=Z,52nm,1.4s,mb5.3
CBKS MLR MLR
comp=Z,2μm,20.0s,MS5.0
CBKS Cedar Bluff 53.91 285 *e*P P 11 01 55.6 -0.7
comp=Z,52nm,1.4s,mb5.3
CBKS Cedar Bluff 53.91 285 *e*P P 11 01 55.6 -0.7
comp=Z,52nm,1.4s,mb5.3
CBKS LR LR
comp=Z,2μm,20.0s,MS5.0
HLID Hailey 53.91 300 ⇓P P 11 01 55.9 -0.3
baz=54
HLID Hailey 53.91 300 *e*P P 11 01 55.7 -0.5
comp=Z,25nm,1.0s,mb5.1
HLID Hailey 53.91 300 *e*P P 11 01 55.7 -0.5
comp=Z,25nm,1.0s,mb5.1
HLID LR LR
comp=Z,615nm,19.0s,MS4.7
J13A Cove Ranch, Pi 54.00 299 ⇓P P 11 01 56.6 -0.3
baz=54,SNR=18
I11A Placerville 54.02 301 ⇑P P 11 01 55.6 -1.4
baz=54,SNR=22
M20A Sweetwater, Wa 54.03 293 ⇓P P 11 01 56.7 -0.3
baz=54
G06A Carlson Farm, 54.05 306 ⇓P P 11 01 57.6 +0.4
baz=54,SNR=18
I10A Payette 54.09 302 ⇓P P 11 01 57.0 -0.5
baz=54
N22A Wattenberg Ran 54.15 292 ⇓P P 11 01 57.8 -0.2
baz=54,SNR=22
F03A Seaside 54.16 308 ⇑P P 11 01 58.7 +0.8
baz=54
L18A Fontenelle, Gr 54.17 295 ⇓P P 11 01 57.7 -0.4
baz=54,SNR=23
K15A Arbon 54.19 298 ⇑P P 11 01 58.7 +0.5
baz=54,SNR=9.0
VFP Flag Point 54.19 306 P P 11 01 58.5 +0.3
VFP Flag Point 54.19 306 P P 11 01 58.5 +0.3
G05A Wamic 54.23 306 ⇓P P 11 01 58.4 0.0
baz=54
L17A Cokeville 54.25 296 ⇓P P 11 01 57.9 -0.8
baz=54
M19A Rock Springs 54.30 294 ⇓P P 11 01 58.4 -0.7
baz=54
HIA Hailar 54.39 39 *e*P P 11 01 59.9 +0.3
HIA pmax pmax
comp=Z,4.0nm,0.5s
HIA MLR MLR
comp=Z,539nm,21.0s
HIA Hailar 54.39 39 *e*P P 11 01 59.9 +0.3
comp=Z,4.3nm,0.5s,mb4.6
HIA Hailar 54.39 39 *e*P P 11 01 59.9 +0.4
comp=Z,4.3nm,0.5s,mb4.6
HIA LR LR
comp=Z,539nm,21.0s,MS4.6
J12A Stokes Ranch, 54.39 300 ⇑P P 11 01 59.2 -0.5
baz=54,SNR=18
H06A Lindquist Farm 54.44 305 ⇑P P 11 02 00.2 +0.2
baz=54,SNR=26
MFID Camas Ranch 54.44 301 ⇓P P 11 01 58.9 -1.2
baz=54,SNR=9.8
I09A Lost Marbles R 54.45 303 ⇓P P 11 01 59.0 -1.1
baz=54,SNR=24
L16A Fish Haven 54.49 296 ⇑P P 11 02 00.4 0.0
baz=54,SNR=8.8
N21A Black Mountain 54.50 293 ⇑P P 11 02 00.2 -0.3
baz=54
K14A Jones Ranch, D 54.50 298 ⇓P P 11 02 00.9 +0.4
baz=54,SNR=22
G04A Mulino 54.56 307 ⇑P P 11 02 00.4 -0.5
baz=54
M18A Lyman 54.64 295 ⇓P P 11 02 01.0 -0.5
baz=54,SNR=12
N20A Spence Gulch, 54.66 293 ⇑P P 11 02 01.4 -0.2
baz=54,SNR=58
G03A Yamhill 54.66 308 ⇓P P 11 02 02.2 +0.6
baz=54,SNR=9.9
K13A Stover Farm, H 54.66 299 ⇑P P 11 02 02.1 +0.4
baz=54,SNR=36
J10A Berg Farm, Mel 54.69 302 ⇑P P 11 01 01.5 -0.4
baz=54,SNR=16
I08A Drewsey 54.73 303 ⇓P P 11 02 02.4 +0.3
baz=54
H05A Madras 54.76 306 ⇑P P 11 02 02.7 +0.4
baz=54,SNR=6.9
M17A Scullys Gap (B 54.77 296 ⇑P P 11 02 02.2 -0.3
baz=54,SNR=20
L15A Malad City 54.78 297 ⇑P P 11 02 02.4 -0.2
baz=54,SNR=38
ISCO Idaho Springs 54.81 290 *e*P P 11 02 02.8 0.0
ISCO pmax pmax
comp=Z,23nm,1.1s,mb5.1
ISCO MLR MLR
comp=Z,1μm,22.0s,MS5.0
ISCO Idaho Springs 54.81 290 *e*P P 11 02 02.8 0.0
comp=Z,23nm,1.1s,mb5.1
ISCO Idaho Springs 54.81 290 *e*P P 11 02 02.8 0.0
comp=Z,23nm,1.1s,mb5.1
ISCO LR LR
comp=Z,1μm,22.0s,MS5.0
I07A Izee 54.83 304 ⇑P P 11 02 03.1 +0.2
baz=54,SNR=26
N19A John Jarvie Ra 54.87 294 ⇑P P 11 02 03.3 +0.1
baz=55,SNR=26
K12A Draper Farm, C 54.91 300 ⇓P P 11 02 03.2 -0.3
baz=55,SNR=8.1
N18A Larsen Ranch, 54.94 295 ⇑P P 11 02 03.2 -0.4
baz=55,SNR=8.9
H04A Detroit Lake 54.97 307 ⇓P P 11 02 03.6 -0.3
baz=55,SNR=9.0
O21A Pagoda 54.99 292 ⇑P P 11 02 04.2 +0.2
baz=55,SNR=16
L14A Malta 54.99 298 ⇓P P 11 02 04.5 +0.4
baz=55,SNR=40
J09A Fry Pan Ranch, 55.04 302 ⇑P P 11 02 03.7 -0.6
baz=55,SNR=77
I06A Prineville 55.14 305 ⇓P P 11 02 06.0 +0.9
baz=55,SNR=24
L13A Double Diamond 55.14 299 ⇓P P 11 02 05.7 +0.5
baz=55,SNR=21
LRAL Lakeview Retre 55.16 270 PFAKE 11 02 20.0 +15
LRAL LR LR
comp=Z,1μm,19.0s,MS5.0
M16A Huntsville 55.20 296 ⇑P P 11 02 05.4 -0.1
baz=55,SNR=44
I05A Bend 55.22 306 ⇑P P 11 02 06.2 +0.5
baz=55,SNR=5.1
J08A Circle Bar Ran 55.22 303 ⇓P P 11 02 05.0 -0.7
baz=55
H03A Soap Creek Ran 55.26 308 ⇑P P 11 02 06.5 +0.5
baz=55,SNR=9.5
UALR University of 55.28 276 *e*P P 11 02 06.1 -0.1
comp=Z,13nm,0.9s,mb5.0
UALR University of 55.28 276 *e*P P 11 02 06.1 -0.1
comp=Z,13nm,0.9s,mb5.0
O20A White River Ci 55.29 293 ⇓P P 11 02 06.3 +0.1
baz=55,SNR=92
M15A Larsen Ranch, 55.30 297 ⇑P P 11 02 06.2 -0.1
baz=55,SNR=19
N17A Moffit Pass 55.31 295 ⇑P P 11 02 06.3 0.0
baz=55,SNR=32
K10A MacKenzie Ranc 55.32 301 ⇓P P 11 02 06.3 -0.1
baz=55,SNR=23
COR Corvallis 55.35 307 PFAKE 11 02 20.0 +13
COR LR LR
comp=Z,1μm,22.0s,MS4.9
L12A House Creek Ra 55.39 300 ⇓P P 11 02 06.9 -0.1
baz=55,SNR=6.7
J07A Hines 55.43 304 ⇓P P 11 02 07.2 0.0
baz=55,SNR=8.9
M14A Sheep Mountain 55.52 298 ⇑P P 11 02 07.9 +0.1
baz=55,SNR=14
PETK Petropavlovsk- 55.53 9 P P 11 02 07.0 -0.8
comp=Z,9.0nm,0.8s,mb4.9,baz=63,slow=8.0,SNR=8.6
N16A Rees Ranch, Co 55.54 296 ⇑P P 11 02 08.2 +0.2
baz=55,SNR=21
L11A Cat Creek Ranc 55.58 300 ⇑P P 11 02 08.2 -0.1
baz=55,SNR=12
K09A Rome 55.63 302 ⇑P P 11 02 08.5 -0.2
baz=55,SNR=48
PET Petropavlovsk 55.66 9 *e*P P 11 02 08.0 -0.7
PET *e*S **S** 11 09 47.9 -6.4
PET pmax pmax
comp=Z,20nm,0.9s,mb5.2
O18A Roosevelt 55.69 294 ⇑P P 11 02 09.2 +0.1
baz=55
J06A Christmas Vall 55.77 304 ⇓P P 11 02 10.7 +1.1
baz=56,SNR=29
SMCO Snowmass 55.80 291 *e*P P 11 02 07.4 -2.4
comp=Z,33nm,1.0s,mb5.3
K08A Mann Creek Ran 55.81 303 ⇓P P 11 02 09.9 -0.1
baz=56
N15A Stansbury Isla 55.84 297 ⇑P P 11 02 10.1 -0.1
baz=56,SNR=6.7
L10A Juniper Basin 55.86 301 ⇓P P 11 02 10.7 +0.4
baz=56,SNR=66
M13A Montello 55.88 298 ⇑P P 11 02 10.7 +0.3
baz=56
MIAR Mount Ida 55.88 277 *e*P P 11 02 09.9 -0.7
MIAR pmax pmax
comp=Z,15nm,0.9s,mb5.0
MIAR MLR MLR
comp=Z,648nm,20.0s,MS4.7
MIAR Mount Ida 55.88 277 *e*P P 11 02 09.9 -0.7
comp=Z,15nm,0.9s,mb5.0
MIAR Mount Ida 55.88 277 *e*P P 11 02 09.9 -0.6
comp=Z,15nm,0.9s,mb5.0
MIAR LR LR
comp=Z,648nm,20.0s,MS4.7
I03A Eugene 55.91 307 ⇓P P 11 02 11.1 +0.4
baz=56
O17A Robinson Place 55.97 295 ⇓P P 11 02 11.6 +0.5
baz=56,SNR=53
P19A Cripple Cowboy 55.97 293 ⇓P P 11 02 11.2 0.0
baz=56,SNR=35
I02A Mapleton 56.03 308 ⇑P P 11 02 11.9 +0.4
baz=56
M12A Wells 56.04 299 ⇑P P 11 02 11.9 +0.3
baz=56,SNR=13
K07A Rock Creek Ran 56.05 303 ⇑P P 11 02 11.2 -0.5
baz=56,SNR=6.2
N14A Grayback Hills 56.07 297 ⇑P P 11 02 12.0 +0.2
baz=56,SNR=28
WVOR Wild Horse Val 56.12 303 PFAKE 11 02 20.0 +7.8
WVOR LR LR
comp=Z,716nm,19.0s,MS4.8
NIL Nilore 56.16 85 PFAKE 11 02 20.0 +7.5
NIL LR LR
comp=Z,108nm,20.0s,MS3.9
O16A Springville 56.18 296 ⇑P P 11 02 13.0 +0.4
baz=56,SNR=32
L09A Wilkinson Ranc 56.24 302 ⇓P P 11 02 13.3 +0.3
baz=56,SNR=18
L08A Fields 56.27 302 ⇓P P 11 02 13.0 -0.2
baz=56,SNR=19
M11A Holland Ranch, 56.27 300 ⇑P P 11 02 14.0 +0.7
baz=56,SNR=28

P18A Preston Nutter 56.35 294 ⇓P **P** **11 02 14.0 +0.1**
baz=56,SNR=23
O15A The Old Anders 56.39 297 ⇓P **P** **11 02 14.9 +0.7**
baz=56,SNR=17
Q20A Ridgley Place, 56.40 292 ⇑P **P** **11 02 13.7 -0.5**
baz=56,SNR=14
K05A Summer Lake 56.46 305 ⇑P **P** **11 02 15.6 +1.1**
baz=56,SNR=41
DUG Dugway 56.57 297 ⇑P **P** **11 02 16.1 +0.7**
baz=56
DUG Dugway 56.57 297 *e*P **P** **11 02 15.8 +0.4**
DUG pmax pmax
comp=Z,42nm,0.9s,mb5.5
DUG MLR MLR
comp=Z,865nm,19.0s,MS4.9
DUG Dugway 56.57 297 *e*P **P** **11 02 15.8 +0.4**
comp=Z,42nm,0.9s,mb5.5
DUG Dugway 56.57 297 *e*P **P** **11 02 15.8 +0.3**
comp=Z,42nm,0.9s,mb5.5
DUG LR LR
comp=Z,865nm,19.0s,MS4.9
N12A Clover Valley, 56.60 299 ⇑P **P** **11 02 15.9 +0.3**
baz=56,SNR=14
P17A Butcher Ranch, 56.64 295 ⇓P **P** **11 02 15.7 -0.2**
baz=56,SNR=12
SDCO Great Sand Dun 56.67 289 *e*P **P** **11 02 15.4 -0.7**
comp=Z,11nm,1.1s,mb4.8
SDCO Great Sand Dun 56.67 289 *e*P **P** **11 02 15.4 -0.7**
comp=Z,11nm,1.1s,mb4.8
SDCO LR LR
comp=Z,1μm,19.0s,MS4.9
Q19A Hogan Spring (56.68 293 ⇑P **P** **11 02 15.6 -0.6**
baz=56,SNR=21
L07A Adell 56.70 303 ⇑P **P** **11 02 16.5 +0.2**
baz=56,SNR=14
R21A Cimarron 56.71 291 ⇓P **P** **11 02 16.8 +0.4**
baz=56,SNR=41
M09A Marrel Ranch, 56.74 301 ⇓P **P** **11 02 17.2 +0.6**
baz=56,SNR=17
ELK Elko 56.75 299 *e*P **P** **11 02 16.9 +0.2**
ELK pmax pmax
comp=Z,20nm,1.3s
ELK MLR MLR
comp=Z,553nm,20.0s
ELK Elko 56.75 299 *e*P **P** **11 02 16.9 +0.2**
comp=Z,20nm,1.3s,mb5.0
ELK Elko 56.75 299 *e*P **P** **11 02 16.9 +0.2**
comp=Z,20nm,1.3s,mb5.0
ELK LR LR
comp=Z,553nm,20.0s,MS4.7
P16A Fountain Green 56.78 296 ⇓P **P** **11 02 17.9 +1.0**
baz=56,SNR=24
Q18A Rafter H Ranch 56.80 294 ⇑P **P** **11 02 16.9 -0.2**
baz=56,SNR=65
N11A Elko Archery C 56.83 300 ⇑P **P** **11 02 17.6 +0.4**
baz=56
SRU San Rafael 56.91 294 ⇓P **P** **11 02 17.8 0.0**
baz=57
O13A Hicks Ranch, I 56.97 298 ⇓P **P** **11 02 18.9 +0.7**
baz=57,SNR=10
M08A Happy Creek Ra 56.97 302 ⇑P **P** **11 02 18.9 +0.7**
baz=57,SNR=34
P15A Leamington 57.00 296 ⇓P **P** **11 02 18.9 +0.5**
baz=57,SNR=18
BRAL Brewton 57.04 270 PFAKE 11 02 30.0 +11
BRAL LR LR
comp=Z,903nm,21.0s,MS4.8
VBMS Vicksburg 57.04 273 *e*P **P** **11 02 18.5 -0.4**
comp=Z,23nm,0.7s,mb5.3
VBMS LR LR
comp=Z,937nm,20.0s,MS4.9
O12A Currie 57.06 298 ⇓P **P** **11 02 19.2 +0.3**
baz=57,SNR=16
MOD Modoc 57.07 304 *e*P **P** **11 02 19.2 +0.3**
comp=Z,34nm,0.9s,mb5.4
MOD Modoc 57.07 304 *e*P **P** **11 02 19.2 +0.3**
comp=Z,34nm,0.9s,mb5.4
MOD LR LR
comp=Z,824nm,20.0s,MS4.8
HUMO Hull Mountain 57.11 306 PFAKE 11 02 30.0 +11
HUMO LR LR
comp=Z,1μm,21.0s,MS5.0
N10A Dunphy 57.13 300 ⇑P **P** **11 02 19.7 +0.3**
baz=57,SNR=6.1
PV10 Paradox Valley 57.15 293 *e*P **P** **11 02 20.3 +0.8**
comp=Z,700nm,0.9s
PV10 Paradox Valley 57.15 293 *e*P **P** **11 02 20.3 +0.8**
comp=Z,700nm,0.9s
P14A Drum Mountains 57.21 297 ⇑P **P** **11 02 20.7 +0.8**
baz=57,SNR=34
PV01 Paradox Valley 57.23 292 *e*P **P** **11 02 20.1 0.0**
comp=Z,5μm,1.0s
PV01 Paradox Valley 57.23 292 *e*P **P** **11 02 20.1 0.0**
comp=Z,5μm,1.0s
M07A Soldier Meadow 57.24 303 ⇑P **P** **11 02 20.8 +0.6**
baz=57,SNR=20
Q16A Castle Valley 57.28 295 ⇓P **P** **11 02 20.6 +0.2**
baz=57,SNR=21
N09A Rock Creek Ran 57.29 301 ⇑P **P** **11 02 20.6 +0.1**
baz=57,SNR=8.9
R19A Curley Farm, L 57.30 293 ⇓P **P** **11 02 20.8 +0.2**
baz=57,SNR=15
WMOK Wichita Mounta 57.36 282 *e*P **P** **11 02 20.5 -0.6**
WMOK pmax pmax
comp=Z,15nm,1.0s,mb5.0
WMOK MLR MLR
comp=Z,1μm,20.0s,MS5.1
WMOK Wichita Mounta 57.36 282 *e*P **P** **11 02 20.5 -0.6**
comp=Z,15nm,1.0s,mb5.0
WMOK Wichita Mounta 57.36 282 *e*P **P** **11 02 20.5 -0.5**
comp=Z,15nm,1.0s,mb5.0
WMOK LR LR
comp=Z,1μm,20.0s,MS5.1
R18A Canyonlands Na 57.40 294 ⇓P **P** **11 02 21.4 +0.2**
baz=57,SNR=90
O11A Cowboy Ranch, 57.44 299 ⇓P **P** **11 02 21.9 +0.3**
baz=57,SNR=32
N08A GE Springer Mi 57.52 302 ⇓P **P** **11 02 22.5 +0.3**
baz=57,SNR=12
O10A Cortez Mining, 57.53 300 ⇓P **P** **11 02 22.5 +0.3**
baz=57,SNR=7.3
Q15A Fillmore 57.55 296 ⇓P **P** **11 02 22.9 +0.5**
baz=57,SNR=16
BMN Battle Mountai 57.60 301 *e*P **P** **11 02 22.5 -0.2**
BMN pmax pmax
comp=Z,17nm,1.2s,mb5.0
BMN MLR MLR
comp=Z,889nm,20.0s,MS4.9
BMN Battle Mountai 57.60 301 *e*P **P** **11 02 22.5 -0.2**
comp=Z,17nm,1.2s,mb5.0
BMN Battle Mountai 57.60 301 *e*P **P** **11 02 22.5 -0.2**
comp=Z,17nm,1.2s,mb5.0
BMN LR LR
comp=Z,889nm,20.0s,MS4.9
P13A Bates Ranch, G 57.60 298 ⇑P **P** **11 02 23.1 +0.4**
baz=57,SNR=16
R17A Hanksville Air 57.61 294 ⇓P **P** **11 02 22.5 -0.2**
baz=57,SNR=33
N07B Gerlach 57.76 302 ⇑P **P** **11 02 24.2 +0.4**
baz=58,SNR=21
S19A Harvey Farm, M 57.76 293 ⇓P **P** **11 02 24.0 +0.2**
baz=58,SNR=48
Q14A Sevier Lake (B 57.83 297 ⇓P **P** **11 02 25.4 +1.2**
baz=58,SNR=69
O09A Fish Creek Ran 57.83 301 ⇑P **P** **11 02 24.5 +0.2**
baz=58,SNR=15
YBH Yreka Blue Hor 57.86 306 PFAKE 11 02 40.0 +15
YBH LR LR
comp=Z,1μm,20.0s,MS5.0
DWPF Disney 57.92 263 PFAKE 11 02 40.0 +15
DWPF LR LR
comp=Z,997nm,22.0s,MS4.9
R16A Teasdale 57.96 295 ⇑P **P** **11 02 25.4 +0.2**
baz=58,SNR=28
MVU Marysvale 57.97 296 PFAKE 11 02 40.0 +15
MVU LR LR
comp=Z,1μm,19.0s,MS5.0
O08A Rochester Mine 57.99 301 ⇑P **P** **11 02 25.9 +0.5**
baz=58,SNR=39
P11A Circle Ranch, 58.01 299 ⇓P **P** **11 02 25.6 +0.1**
baz=58
N06A Buffalo Meadow 58.02 303 ⇑P **P** **11 02 26.0 +0.4**
baz=58,SNR=33
MVCO Mesa Verde 58.07 292 ⇑P **P** **11 02 26.6 +0.6**
baz=58
MVCO Mesa Verde 58.07 292 *e*P **P** **11 02 26.4 +0.4**
comp=Z,86nm,1.0s,mb5.7
MVCO Mesa Verde 58.07 292 *e*P **P** **11 02 26.4 +0.4**
comp=Z,86nm,1.0s,mb5.7
MVCO LR LR
comp=Z,1μm,19.0s,MS5.0
Q13A Wheeler Ranch, 58.07 297 ⇑P **P** **11 02 26.9 +0.9**
baz=58,SNR=38
S18A Hurst Farm, Bl 58.07 293 ⇑P **P** **11 02 26.2 +0.2**
baz=58,SNR=47
AMTX Amarillo 58.13 285 PFAKE 11 02 40.0 +14
AMTX LR LR
comp=Z,1μm,19.0s,MS5.0
P10A Eureka 58.14 300 ⇓P **P** **11 02 26.8 +0.3**
baz=58,SNR=15
Q12A Willow Creek R 58.22 298 ⇓P **P** **11 02 27.6 +0.6**
baz=58,SNR=11
R15A Junction 58.26 295 ⇑P **P** **11 02 28.3 +0.9**
baz=58,SNR=21
O07A Toulon 58.31 302 ⇑P **P** **11 02 28.0 +0.4**
baz=58,SNR=9.4
S17A Black Ridge (B 58.36 294 ⇓P **P** **11 02 28.1 0.0**
baz=58,SNR=38
R14A James Farms, M 58.39 296 ⇑P **P** **11 02 29.4 +1.2**
baz=58
P09A Austin 58.40 300 ⇑P **P** **11 02 28.5 +0.2**
baz=58,SNR=7.0
S16A Weppner Ranch, 58.51 295 ⇑P **P** **11 02 29.4 +0.3**
baz=58,SNR=22
P08A Dixie Valley 58.52 301 ⇑P **P** **11 02 29.6 +0.4**
baz=58
TOA0 Torodi Ar. Sit 58.53 167 *e*P **P** **11 02 28.7 -0.7**
TOA0 Torodi Ar. Sit 58.53 167 *e*P **P** **11 02 28.7 -0.7**
TORD Torodi Ar. Bea 58.53 167 P **P** **11 02 28.8 -0.6**
comp=Z,27nm,1.0s,mb5.2,baz=349,slow=8.0,SNR=96
TORD LR LR 11 26 27.7
comp=Z,392nm,20.4s,MS4.5,baz=310,slow=35
TORD Torodi Ar. Bea 58.53 167 P **P** **11 02 28.8 -0.6**
TORD LR LR 11 26 27.7
T18A Mexican Hat 58.55 293 ⇓P **P** **11 02 29.1 -0.2**
baz=58,SNR=52
O06A Flanigan 58.56 303 ⇓P **P** **11 02 29.8 +0.4**
baz=58,SNR=31
T19A Beclabito 58.58 292 ⇑P **P** **11 02 29.3 -0.2**
baz=58,SNR=42
Q11A Duckwater 58.64 299 ⇑P **P** **11 02 30.4 +0.4**
baz=58,SNR=39
R13A O'Grain Ranch, 58.77 297 ⇑P **P** **11 02 32.1 +1.2**
baz=58,SNR=38
S15A Panguitch 58.78 295 ⇑P **P** **11 02 32.3 +1.4**
baz=58,SNR=33
NATX Nacogdoches 58.80 277 *e*P **P** **11 02 31.0 -0.2**
comp=Z,32nm,0.9s,mb5.3
NATX Nacogdoches 58.80 277 *e*P **P** **11 02 31.0 -0.2**
comp=Z,32nm,0.9s,mb5.3
NATX LR LR
comp=Z,771nm,22.0s,MS4.8
R12A Pony Springs, 58.82 298 ⇓P **P** **11 02 31.7 +0.5**
baz=58,SNR=13
Q10A Clear Creek Ra 58.87 299 ⇑P **P** **11 02 32.2 +0.7**
baz=59,SNR=54
GTA Gaotai 58.88 59 P **P** **11 02 32.1 +0.5**
GTA AP pP 11 02 36.1 +1.2
GTA XP sP 11 02 37.9 +1.8
GTA S **S** **11 10 36.7 -0.3**
GTA XS sS 11 10 44.1 +1.8
GTA AMB AMB
comp=Z,16nm,1.3s,mb4.9
GTA AMB AMB
comp=Z,265nm,5.7s
GTA LR LR
comp=N,571nm,19.5s,MS4.9
GTA LR LR
comp=E,550nm,18.3s,MS4.9
GTA LR LR
comp=Z,590nm,21.0s,MS4.7
P07A Fallon 58.89 302 ⇓P **P** **11 02 32.6 +0.9**
baz=59
WDC Whiskeytown Da 58.90 305 *e*P **P** **11 02 30.9 -0.9**
WDC pmax pmax
comp=Z,35nm,1.2s,mb5.3
WDC Whiskeytown Da 58.90 305 *e*P **P** **11 02 30.9 -0.9**
comp=Z,35nm,1.2s,mb5.3
WDC Whiskeytown Da 58.90 305 *e*P **P** **11 02 30.9 -0.8**
comp=Z,35nm,1.2s,mb5.3
S14A Cedar City 58.93 296 ⇓P **P** **11 02 33.1 +1.1**
baz=59,SNR=30
T17A Navajo Res., N 58.95 294 ⇑P **P** **11 02 31.7 -0.4**
baz=59,SNR=30
BEKR Beckwourth 58.98 303 ⇑P **P** **11 02 32.5 +0.1**
baz=59
P06A Stead Airport, 59.03 303 ⇑P **P** **11 02 33.1 +0.3**
baz=59,SNR=7.2
Q09A Carvers 59.08 300 ⇑P **P** **11 02 33.2 +0.2**
baz=59
R11A Troy Canyon, C 59.08 298 ⇑P **P** **11 02 33.5 +0.4**
baz=59,SNR=64
T16A Glen Canyon Da 59.17 294 ⇑P **P** **11 02 33.0 -0.7**
baz=59,SNR=6.5
U18A Rough Rock, Ch 59.21 293 ⇓P **P** **11 02 34.1 +0.2**
baz=59,SNR=19
Q08A Gabbs 59.26 301 ⇓P **P** **11 02 34.3 0.0**
baz=59,SNR=55
U17A Shonto 59.28 293 ⇑P **P** **11 02 34.3 -0.1**
baz=59,SNR=22
S13A Holt Ranch, En 59.30 297 ⇓P **P** **11 02 35.5 +0.9**
baz=59,SNR=28
R10A Warm Springs 59.34 299 ⇑P **P** **11 02 35.6 +0.7**
baz=59,SNR=32
WCN Washoe City 59.35 302 ⇓P **P** **11 02 35.6 +0.7**
baz=59
T15A Red Dirt Ranch 59.40 295 ⇑P **P** **11 02 34.9 -0.3**
baz=59,SNR=30
Q07A Schurz 59.43 301 ⇑P **P** **11 02 35.9 +0.4**
baz=59
ANMO Albuquerque 59.55 289 *e*P **P** **11 02 36.6 +0.3**
comp=Z,13nm,1.0s,mb4.9
ANMO Albuquerque 59.55 289 *e*PP PP 11 04 47.5 +0.2
ANMO Albuquerque 59.55 289 *e*P **P** **11 02 36.6 +0.3**
comp=Z,13nm,1.0s,mb4.9
ANMO *e*PP PP 11 04 47.5 +0.1
ANMO LR LR
comp=Z,696nm,20.0s,MS4.8
S12A Delamar Landin 59.56 297 ⇑P **P** **11 02 37.4 +1.1**
baz=59,SNR=20
T14A Hurricane 59.56 296 ⇓P **P** **11 02 37.0 +0.6**
baz=59,SNR=54
R09A Tonopah 59.60 300 ⇓P **P** **11 02 36.3 -0.4**
baz=59,SNR=11
V19A Window Rock 59.62 292 ⇓P **P** **11 02 36.4 -0.4**
baz=59
S10A Tonopah Range, 59.76 299 ⇑P **P** **11 02 37.8 +0.1**
baz=60,SNR=35
NVAR Mina Array Bea 59.77 301 P **P** **11 02 37.6 -0.2**
comp=Z,8.2nm,0.9s,mb4.8,baz=34,slow=4.8,SNR=48
S11A Rachel 59.78 298 ⇑P **P** **11 02 38.4 +0.6**
baz=60,SNR=14
R08A Mina 59.79 301 ⇓P **P** **11 02 37.8 -0.1**
baz=60
TPH Tonopah 59.80 300 *e*P **P** **11 02 38.1 +0.1**
TPH pmax pmax
comp=Z,14nm,1.1s,mb4.9
TPH MLR MLR
comp=Z,726nm,20.0s,MS4.8
TPH Tonopah 59.80 300 *e*P **P** **11 02 38.0 0.0**
comp=Z,14nm,1.1s,mb4.9
TPH Tonopah 59.80 300 *e*P **P** **11 02 38.0 +0.1**
comp=Z,14nm,1.1s,mb4.9
TPH LR LR
comp=Z,726nm,20.0s,MS4.8
T13A Saint George 59.84 296 ⇑P **P** **11 02 39.2 +0.9**
baz=60,SNR=27
U16A Tuba City 59.84 294 ⇓P **P** **11 02 38.4 0.0**
baz=60,SNR=48
V18A Ganado 59.89 292 ⇑P **P** **11 02 38.0 -0.7**
baz=60,SNR=12
U15A North Rim 59.92 295 ⇑P **P** **11 02 38.5 -0.4**
baz=60,SNR=29
R06C Coleville 59.99 302 ⇑P **P** **11 02 39.8 +0.5**
baz=60,SNR=12
T11A Corn Creek, Al 60.01 298 ⇑P **P** **11 02 40.3 +0.9**
baz=60,SNR=82
S09A Goldfield 60.12 300 ⇑P **P** **11 02 40.0 -0.2**
baz=60,SNR=38
LAVA Lava Cap Winer 60.13 303 ⇑P **P** **11 02 39.7 -0.5**
baz=60,SNR=9.4
U14A Mt Trumbull 60.19 296 ⇑P **P** **11 02 40.7 0.0**
baz=60,SNR=14
W19A Sanders 60.28 292 ⇓P **P** **11 02 40.9 -0.4**
baz=60
T12A Moapa 60.34 297 ⇑P **P** **11 02 42.5 +0.7**
baz=60
W18A Petrified Fore 60.38 292 ⇓P **P** **11 02 42.0 -0.1**
baz=60,SNR=6.2
U13A Pakoon Wash 60.42 296 ⇑P **P** **11 02 43.0 +0.8**
baz=60,SNR=41
V15A Kaibab Nationa 60.45 294 ⇑P **P** **11 02 42.7 +0.2**
baz=60,SNR=49
WUAZ Wupatki 60.49 294 ⇓P **P** **11 02 43.0 +0.1**
baz=60
WUAZ Wupatki 60.49 294 *e*P **P** **11 02 42.6 -0.2**
comp=Z,36nm,1.1s,mb5.3
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.2
Y22D IRIS PASSCAL I 60.50 289 ⇑P **P** **11 02 43.4 +0.5**
baz=60
U12A Valley of Fire 60.56 297 ⇓P **P** **11 02 43.7 +0.5**
baz=60,SNR=6.4
HHC Hu-ho-hao-te 60.57 48 *e*P **P** **11 02 43.8 +0.5**
HHC AP pP 11 02 48.6 +2.1
HHC PCP PcP 11 03 29.3 +1.7
HHC PP PP 11 04 58.1 +1.9
HHC S **S** **11 10 55.1 -3.6**
HHC XS sS 11 11 03.0 -1.0
HHC SCS ScS 11 12 29.6 -4.0
HHC SS SS 11 14 53.6 -2.4
HHC AMB AMB
comp=Z,21nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,187nm,3.7s
HHC LR LR
comp=N,255nm,17.8s,MS4.8
HHC LR LR
comp=E,569nm,19.0s,MS4.8
HHC LR LR
comp=Z,340nm,21.4s,MS4.5
TPNV Topopah Spring 60.57 298 ⇑P **P** **11 02 43.4 0.0**
baz=60
TPNV Topopah Spring 60.57 298 *e*P **P** **11 02 42.8 -0.5**
TPNV pmax pmax
comp=Z,39nm,0.9s,mb5.5
TPNV MLR MLR
comp=Z,762nm,19.0s,MS4.9
TPNV Topopah Spring 60.57 298 *e*P **P** **11 02 42.8 -0.5**
comp=Z,39nm,0.9s,mb5.5
TPNV Topopah Spring 60.57 298 *e*P **P** **11 02 42.8 -0.5**
comp=Z,39nm,0.9s,mb5.5
TPNV LR LR
comp=Z,762nm,19.0s,MS4.9
MLAC Mammoth Lakes 60.66 301 ⇓P **P** **11 02 45.0 +1.0**
baz=60
W17A Winslow 60.71 293 ⇑P **P** **11 02 44.1 -0.2**
baz=60,SNR=7.3
CMB Columbia Colle 60.71 302 *e*P **P** **11 02 44.0 -0.2**
CMB pmax pmax
comp=Z,28nm,1.2s,mb5.3
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.0
CMB Columbia Colle 60.71 302 *e*P **P** **11 02 44.0 -0.2**
comp=Z,28nm,1.2s,mb5.3
CMB Columbia Colle 60.71 302 *e*P **P** **11 02 44.0 -0.3**
comp=Z,28nm,1.2s,mb5.3
CMB LR LR
comp=Z,1μm,19.0s,MS5.0
MDJ Mudanjiang 60.71 33 P **P** **11 02 42.8 -1.4**
MDJ PP PP 11 04 56.1 -1.3
MDJ S **S** **11 10 59.1 -1.3**
MDJ AMB AMB
comp=Z,12nm,1.8s,mb4.7
MDJ AMB AMB
comp=Z,113nm,6.1s
MDJ LR LR
comp=N,186nm,39.4s
MDJ LR LR
comp=E,446nm,33.2s
MDJ LR LR
comp=Z,217nm,24.9s
MDJ Mudanjiang 60.71 33 PFAKE 11 03 00.0 +16
MDJ LR LR
comp=Z,373nm,19.0s,MS4.5
CN2 Changchun 60.75 36 *e*P **P** **11 02 44.8 +0.4**
CN2 *e*XP sP 11 02 51.9 +3.0
CN2 *e*S **S** **11 10 58.2 -2.7**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.3
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s,MS5.0
CN2 LR LR
comp=E,900nm,16.0s,MS5.0
CN2 LR LR
comp=Z,400nm,17.0s,MS4.6
DDI Dehra Dun 60.77 82 *ex* x 11 02 44.0
U11A Corn Creek 60.82 297 ⇓P **P** **11 02 45.8 +0.8**
baz=60
GRAC Grapevine Rang 60.84 299 ⇓P **P** **11 02 45.2 0.0**
baz=61
HKT Hockley 60.85 277 PFAKE 11 03 00.0 +15
HKT LR LR
comp=Z,949nm,20.0s,MS4.9
X19A St. Johns 60.89 291 ⇑P **P** **11 02 45.2 -0.3**
baz=61,SNR=24
V14A Boquillas Ranc 60.89 295 ⇓P **P** **11 02 46.1 +0.6**
baz=61,SNR=40
W16A Flagstaff 60.93 294 ⇑P **P** **11 02 45.7 -0.1**
baz=61,SNR=12
V13A Grand Canyon W 60.95 296 ⇑P **P** **11 02 46.4 +0.5**
baz=61,SNR=27
X18A Snowflake 60.99 292 ⇑P **P** **11 02 45.3 -0.9**
baz=61
W15A Williams 61.07 294 ⇑P **P** **11 02 47.0 +0.3**
baz=61,SNR=10
U10A Ash Meadows, A 61.09 298 ⇓P **P** **11 02 46.8 -0.1**
baz=61,SNR=5.3
FURC Furnace Creek, 61.19 299 ⇑P **P** **11 02 47.6 +0.1**
baz=61
W14A Seligman 61.28 295 ⇓P **P** **11 02 48.7 +0.5**
baz=61,SNR=22
V12A Nelson 61.31 297 ⇓P **P** **11 02 48.9 +0.5**
baz=61,SNR=20
Y19A Nutrioso 61.31 291 ⇑P **P** **11 02 48.6 +0.2**
baz=61,SNR=15
S05C Merced 61.34 302 ⇑P **P** **11 02 48.9 +0.4**
baz=61,SNR=37
V11A Goodsprings 61.38 297 ⇓P **P** **11 02 49.2 +0.4**
baz=61,SNR=11
T06C Millerton Lake 61.48 301 ⇑P **P** **11 02 49.8 +0.3**
baz=61,SNR=28
X16A Lo Mia Camp, P 61.54 293 ⇑P **P** **11 02 50.1 +0.2**
baz=61,SNR=33
SHOC Shoshone 61.56 298 ⇑P **P** **11 02 50.4 +0.4**
baz=61
DAC Darwin (Calif) 61.58 299 PFAKE 11 03 00.0 +10
DAC LR LR
comp=Z,542nm,20.0s,MS4.7
JCT Junction City 61.62 281 *e*P **P** **11 02 50.0 -0.5**
JCT pmax pmax
comp=Z,22nm,1.0s,mb5.2
JCT MLR MLR
comp=Z,930nm,21.0s,MS4.9
JCT Junction City 61.62 281 *e*P **P** **11 02 50.0 -0.5**
comp=Z,22nm,1.0s,mb5.2
JCT Junction City 61.62 281 *e*P **P** **11 02 50.0 -0.5**
comp=Z,22nm,1.0s,mb5.2
JCT LR LR
comp=Z,930nm,21.0s,MS4.9
W13A Hualapai Mount 61.62 296 ⇓P **P** **11 02 50.6 +0.1**
baz=61,SNR=15
X15A Humboldt 61.71 294 ⇑P **P** **11 02 51.2 +0.2**
baz=62,SNR=14
Y18A Canyon Day Jun 61.71 292 ⇑P **P** **11 02 51.2 +0.1**
baz=62,SNR=17
W12A Cal Nev Ari 61.72 297 ⇑P **P** **11 02 51.3 +0.2**
baz=62
MPMC Manual Prospec 61.75 299 ⇑P **P** **11 02 51.7 +0.4**
baz=62
ANWB Willy Bob 61.79 239 PFAKE 11 03 00.0 +8.2
ANWB LR LR
comp=Z,472nm,22.0s,MS4.6
TUQ Turquoise Moun 61.89 297 ⇓P **P** **11 02 52.5 +0.2**
baz=62
X14A Yava 61.92 294 ⇓P **P** **11 02 52.5 0.0**
baz=62,SNR=13
Z19A T-Link Ranch, 61.94 291 ⇑P **P** **11 02 52.7 +0.1**
baz=62
LDFC Landfair 61.99 297 *e*P **P** **11 02 53.5 +0.5**
comp=Z,48nm,1.0s,mb5.6

Code	Station	Δ	AZ	Op	ISC	Time	Res
LDFC	**Landfair**	**61.99**	**297**	*e*P	**P**	**11 02 53.5**	**+0.5**
	comp=Z,48nm,1.0s,mb5.6						
RCTC	**Rector, Farmer**	**62.01**	**301**	⇑P	**P**	**11 02 52.9**	**-0.2**
	baz=62						
NDI	**New Delhi**	**62.02**	**83**	*e*P	**P**	**11 02 52.0**	**-1.2**
Y17A	**Roosevelt**	**62.03**	**292**	⇑P	**P**	**11 02 53.2**	**0.0**
	baz=62,SNR=6.7						
Y16A	**Circle Bar Ran**	**62.05**	**293**	⇓P	**P**	**11 02 53.4**	**0.0**
	baz=62,SNR=6.0						
X13A	**Yucca**	**62.08**	**295**	⇓P	**P**	**11 02 53.8**	**+0.2**
	baz=62,SNR=22						
U05C	**Westside ANR,**	**62.23**	**301**	⇓P	**P**	**11 02 55.2**	**+0.7**
	baz=62						
Y15A	**Casa Rosa Ranc**	**62.23**	**294**	⇓P	**P**	**11 02 54.3**	**-0.3**
	baz=62,SNR=7.4						
GSC	**Goldstone**	**62.27**	**298**	⇑P	**P**	**11 02 54.9**	**+0.1**
	baz=62						
LRMC	**Laurel Mountai**	**62.35**	**299**	⇑P	**P**	**11 02 55.8**	**+0.4**
	baz=62						
Z18A	**Geronimo**	**62.36**	**291**	⇓P	**P**	**11 02 55.8**	**+0.3**
	baz=62						
U04C	**Hernandez Rese**	**62.38**	**302**	⇑P	**P**	**11 02 56.1**	**+0.5**
	baz=62,SNR=5.8						
VES	**Vestal, Richgr**	**62.41**	**300**	⇑P	**P**	**11 02 55.2**	**-0.5**
	baz=62						
BJI	**Beijing**	**62.42**	**45**	P	**P**	**11 02 56.3**	**+0.5**
BJI				PP	PP	11 05 10.2	-2.3
BJI				S	**S**	**11 11 16.7**	**-5.5**
BJI				SS	SS	11 15 25.5	+0.5
BJI				AMB	AMB		
	comp=Z,14nm,0.9s,mb5.1						
BJI				AMB	AMB		
	comp=Z,165nm,5.0s						
BJI				LR	LR		
	comp=N,330nm,13.7s						
BJI				LR	LR		
	comp=E,1μm,23.5s						
BJI				LR	LR		
	comp=Z,564nm,34.2s						
GMRC	**Granite Mounta**	**62.43**	**297**	⇑P	**P**	**11 02 56.4**	**+0.5**
	baz=62						
119A	**Ashpeak Ranch,**	**62.44**	**291**	⇓P	**P**	**11 02 56.2**	**+0.2**
	baz=62,SNR=20						
BJT	**Baijiatuau**	**62.44**	**45**	PFAKE		11 03 10.0	+14
BJT				LR	LR		
	comp=Z,830nm,19.0s,MS4.9						
PDMCI	**Parker Dam,Lak**	**62.44**	**295**	⇑P	**P**	**11 02 56.2**	**+0.2**
	baz=62						
Y14A	**Wickenburg**	**62.45**	**294**	⇓P	**P**	**11 02 55.7**	**-0.3**
	baz=62,SNR=12						
MTP	**Monte Pirata**	**62.45**	**243**	*e*P	**P**	**11 02 56.5**	**+0.3**
	comp=Z,22nm,1.0s,mb5.2						
MTP	**Monte Pirata**	**62.45**	**243**	*e*P	**P**	**11 02 56.5**	**+0.4**
	comp=Z,22nm,1.0s,mb5.2						
Z16A	**Peralta Trail,**	**62.54**	**293**	⇓P	**P**	**11 02 56.5**	**-0.1**
	baz=62						
HEC	**Hector,Ludlow**	**62.58**	**298**	⇓P	**P**	**11 02 57.4**	**+0.5**
	baz=62						
SJG	**San Juan**	**62.61**	**244**	PFAKE		11 03 10.0	+13
SJG				LR	LR		
	comp=Z,478nm,19.0s,MS4.7						
V05C	**Boulder Hill,**	**62.61**	**301**	⇑P	**P**	**11 02 56.9**	**-0.2**
	baz=62						
118A	**Homack Ranch,**	**62.75**	**291**	⇓P	**P**	**11 02 58.2**	**+0.1**
	baz=62						
Z15A	**Gila River Ind**	**62.80**	**293**	⇓P	**P**	**11 02 58.3**	**-0.1**
	baz=62						
Y13A	**Salome**	**62.80**	**295**	⇓P	**P**	**11 02 58.7**	**+0.3**
	baz=62,SNR=11						
Z14A	**Wintersburg**	**62.97**	**294**	⇓P	**P**	**11 02 59.6**	**+0.1**
	baz=63,SNR=7.3						
EDW2	**Edwards Air Fo**	**63.00**	**299**	⇑P	**P**	**11 02 59.9**	**+0.2**
	baz=63						
117A	**Oracle**	**63.05**	**292**	⇓P	**P**	**11 03 00.2**	**+0.1**
	baz=63,SNR=32						
Y12C	**Blythe**	**63.06**	**296**	⇓P	**P**	**11 03 00.4**	**+0.3**
	baz=63,SNR=16						
LZH	**Lanzhou**	**63.09**	**57**	⇓P	**P**	**11 03 01.0**	**+0.7**
LZH				AP	pP	11 03 04.4	+0.9
LZH				XP	sP	11 03 06.0	+1.3
LZH				*e*PP	PP	11 05 23.0	+4.4
LZH				*e*S	**S**	**11 11 25.0**	**-5.8**
LZH				XS	sS	11 11 34.0	-2.1
LZH				SS	SS	11 15 34.1	-1.6
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,200nm,5.4s						
LZH				LR	LR		
	comp=E,904nm,15.3s						
LZH				LR	LR		
	comp=Z,1μm,16.0s,MS5.2						
219A	**White Tail Can**	**63.14**	**290**	⇓P	**P**	**11 03 01.0**	**+0.4**
	baz=63,SNR=17						
SMMC	**Simmler**	**63.16**	**301**	⇑P	**P**	**11 03 00.7**	**0.0**
	baz=63						
BELC	**Belle Mtn.**	**63.26**	**297**	⇑P	**P**	**11 03 02.3**	**+0.9**
	baz=63						
BBRC	**Big Bear Sol-O**	**63.27**	**298**	⇓P	**P**	**11 03 01.7**	**+0.1**
	baz=63						
SDDR	**Presa de Saban**	**63.30**	**249**	PFAKE		11 03 10.0	+8.2
SDDR				LR	LR		
	comp=Z,444nm,22.0s,MS4.6						
TUC	**Tucson**	**63.31**	**292**	*e*P	**P**	**11 03 01.7**	**-0.1**
TUC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
TUC				MLR	MLR		
	comp=Z,686nm,21.0s,MS4.8						
TUC	**Tucson**	**63.31**	**292**	*e*P	**P**	**11 03 01.7**	**-0.1**
	comp=Z,11nm,1.0s,mb5.0						
TUC	**Tucson**	**63.31**	**292**	*e*P	**P**	**11 03 01.7**	**0.0**
	comp=Z,11nm,1.0s,mb5.0						
TUC				LR	LR		
	comp=Z,686nm,21.0s,MS4.8						
116A	**Eloy**	**63.35**	**293**	⇓P	**P**	**11 03 02.2**	**+0.1**
	baz=63,SNR=18						
115A	**Sonoran Desert**	**63.37**	**293**	⇑P	**P**	**11 03 02.5**	**+0.3**
	baz=63,SNR=15						
218A	**Dragoon**	**63.40**	**291**	⇑P	**P**	**11 03 02.6**	**+0.2**
	baz=63,SNR=7.5						
BC3	**Big Chuckw Mtn**	**63.42**	**296**	⇑P	**P**	**11 03 03.0**	**+0.5**
	baz=63						
PKM	**Peak Mountain**	**63.50**	**301**	⇓P	**P**	**11 03 03.6**	**+0.6**
	baz=63						
MWC	**Mount Wilson**	**63.63**	**299**	*e*P	**P**	**11 03 04.4**	**+0.5**
MWC				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.3						
MWC	**Mount Wilson**	**63.63**	**299**	*e*P	**P**	**11 03 04.4**	**+0.5**
	comp=Z,45nm,1.3s,mb5.3						
MWC	**Mount Wilson**	**63.63**	**299**	*e*P	**P**	**11 03 04.4**	**+0.5**
	comp=Z,45nm,1.3s,mb5.3						
PASC	**Pasadena Art C**	**63.72**	**299**	*e*P	**P**	**11 03 05.3**	**+0.8**
	comp=Z,103nm,1.1s,mb5.8						
PASC	**Pasadena Art C**	**63.72**	**299**	*e*P	**P**	**11 03 05.3**	**+0.8**
	comp=Z,103nm,1.1s,mb5.8						
319A	**Douglas**	**63.73**	**290**	⇑P	**P**	**11 03 04.7**	**+0.1**
	baz=64,SNR=12						
PFO	**Pinyon Flat Ob**	**63.75**	**297**	⇓P	**P**	**11 03 04.8**	**+0.1**
	baz=64						
PFO	**Pinyon Flat Ob**	**63.75**	**297**	*e*P	**P**	**11 03 05.7**	**+1.0**
PFO				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
PFO	**Pinyon Flat Ob**	**63.75**	**297**	*e*P	**P**	**11 03 05.7**	**+1.0**
	comp=Z,11nm,1.1s,mb4.8						
PFO	**Pinyon Flat Ob**	**63.75**	**297**	*e*P	**P**	**11 03 05.7**	**+1.0**
	comp=Z,11nm,1.1s,mb4.8						
113A	**Mohawk Valley,**	**63.76**	**295**	⇑P	**P**	**11 03 04.6**	**-0.2**
	baz=64,SNR=10						
216A	**Three Points,**	**63.79**	**292**	⇑P	**P**	**11 03 05.2**	**+0.2**
	baz=64,SNR=9.7						
GLA	**Glamis**	**63.81**	**296**	⇑P	**P**	**11 03 05.2**	**+0.1**
	baz=64						
217A	**Green Valley**	**63.81**	**292**	⇑P	**P**	**11 03 05.2**	**+0.1**
	baz=64,SNR=26						
318A	**Bisbee**	**63.88**	**291**	⇓P	**P**	**11 03 05.3**	**-0.2**
	baz=64,SNR=11						
TXAR	**Lajitas Array**	**63.90**	**284**	P	**P**	**11 03 05.2**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.6,baz=48,slow=4.9,SNR=64						
TXAR				LR	LR	11 30 26.8	
	comp=Z,980nm,19.0s,MS5.0,baz=5.0,slow=36						
TXAR	**Lajitas Array**	**63.90**	**284**	P	**P**	**11 03 05.2**	**-0.5**
MURC	**Murrieta**	**63.98**	**298**	⇑P	**P**	**11 03 06.0**	**-0.1**
	baz=64						
BLG	**Laguna Peak**	**64.02**	**300**	⇓P	**P**	**11 03 06.5**	**0.0**
	baz=64						
SWSC	**Sam W. Stewart**	**64.19**	**296**	⇑P	**P**	**11 03 08.0**	**+0.4**
	baz=64						
112A	**Yuma**	**64.22**	**295**	⇑P	**P**	**11 03 08.1**	**+0.3**
	baz=64						
214A	**Organ Pipe Nat**	**64.24**	**293**	⇑P	**P**	**11 03 07.7**	**-0.2**
	baz=64						
BSC	**Santa Cruz Isl**	**64.29**	**300**	⇑P	**P**	**11 03 08.5**	**+0.3**
	baz=64						
DANN	**Dangsing**	**64.41**	**77**	*e*P	**P**	**11 03 09.5**	**+0.5**
	comp=Z,100nm,1.4s,mb5.7						
MONP	**Monument Peak**	**64.42**	**297**	⇓P	**P**	**11 03 09.3**	**+0.2**
	baz=64						
DVTC	**Desert V Tower**	**64.54**	**297**	⇑P	**P**	**11 03 09.9**	**0.0**
	baz=64						
109C	**Camp Elliot, M**	**64.61**	**298**	⇑P	**P**	**11 03 10.5**	**+0.1**
	baz=64						
DBIC	**Dimbokro**	**64.64**	**175**	P	**P**	**11 03 10.7**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.4,baz=347,slow=12,SNR=4.6						
DBIC				LR	LR	11 29 18.8	
	comp=Z,495nm,19.2s,MS4.7,baz=345,slow=34						
DBIC	**Dimbokro**	**64.64**	**175**	P	**P**	**11 03 10.6**	**0.0**
TIC	**Toumodi**	**64.66**	**175**	*e*PKP2	**P**	**11 03 11.0**	**+0.2**
	comp=Z,9.1nm,0.2s,mb5.5						
KOLN	**Koldanda**	**64.89**	**78**	*e*P	**P**	**11 03 12.2**	**0.0**
	comp=Z,108nm,1.5s,mb5.6						
SCI	**San Clemente I**	**64.94**	**299**	⇑P	**P**	**11 03 12.8**	**+0.3**
	baz=65						
KIC	**Kosan Boka**	**64.95**	**175**	*e*PKP2	**P**	**11 03 11.8**	**-0.9**
	comp=Z,328nm,2.1s,mb6.0						
SNCC	**San Nicolas Is**	**64.96**	**300**	⇑P	**P**	**11 03 12.9**	**+0.3**
	baz=65						
GKN	**Gorkha**	**65.00**	**77**	*e*P	**P**	**11 03 12.9**	**-0.1**
	comp=Z,105nm,1.5s,mb5.7						
LIC	**Lamto**	**65.07**	**175**	*e*PKP2	**P**	**11 03 12.7**	**-0.8**
	comp=Z,31nm,1.0s,mb5.3						
LIC	**Lamto**	**65.07**	**175**	*e*P	**P**	**11 03 12.7**	**-0.8**
LIC				*e*MLR	MLR		
	comp=Z,617nm,22.8s,MS4.4						
LIC	**Lamto**	**65.07**	**175**	*e*P	**P**	**11 03 12.7**	**-0.8**
LIC				LR	LR		
	comp=Z,310nm,22.8s,MS4.4						
KKN	**Kakani**	**65.40**	**76**	*e*P	**P**	**11 03 15.4**	**-0.2**
LSA	**Lhasa**	**65.43**	**70**	P	**P**	**11 03 17.4**	**+1.7**
LSA	**Lhasa**	**65.43**	**70**	*e*P	**P**	**11 03 17.7**	**+2.0**
LSA				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.2						
LSA				MLR	MLR		
	comp=Z,316nm,20.0s,MS4.5						
LSA	**Lhasa**	**65.43**	**70**	*e*P	**P**	**11 03 17.7**	**+2.0**
	comp=Z,36nm,1.4s,mb5.2						
LSA	**Lhasa**	**65.43**	**70**	*e*P	**P**	**11 03 17.7**	**+2.0**
	comp=Z,36nm,1.4s,mb5.2						
LSA				LR	LR		
	comp=Z,316nm,20.0s,MS4.5						
GUN	**Gumba**	**65.48**	**76**	*e*P	**P**	**11 03 16.4**	**+0.4**
	comp=Z,75nm,1.2s,mb5.6						
DMN	**Daman**	**65.52**	**76**	*e*P	**P**	**11 03 16.2**	**-0.1**
	comp=Z,54nm,1.3s,mb5.4						
PKIN	**Phulchoki**	**65.64**	**76**	*e*P	**P**	**11 03 17.0**	**-0.1**
PKI	**Pulchoki**	**65.65**	**76**	*e*P	**P**	**11 03 17.3**	**+0.2**
JIRN	**Jiri**	**65.81**	**75**	*e*P	**P**	**11 03 18.5**	**+0.3**
	comp=Z,103nm,1.5s,mb5.6						
XAN	**Xi'an**	**66.37**	**53**	P	**P**	**11 03 20.5**	**-1.2**
XAN				AP	pP	11 03 25.5	+0.6
XAN				XP	sP	11 03 28.0	+1.9
XAN				PPP		11 07 22.6	
XAN				S	S	11 12 06.8	-4.3
XAN				XS	sS	11 12 15.0	-1.5
XAN				SCS	ScS	11 13 13.4	-4.6
XAN				SS	SS	11 16 23.8	-2.9
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.7						
XAN				AMB	AMB		
	comp=Z,67nm,6.1s						
XAN				LR	LR		
	comp=N,305nm,18.2s,MS4.9						
XAN				LR	LR		
	comp=E,702nm,20.2s,MS4.9						
XAN				LR	LR		
	comp=Z,838nm,19.0s,MS5.0						
TAPN	**Taplejung**	**66.57**	**74**	*e*P	**P**	**11 03 23.4**	**+0.3**
	comp=Z,55nm,1.2s,mb5.5						
RAMN	**Ramite**	**66.60**	**75**	*e*P	**P**	**11 03 22.9**	**-0.4**
ODAN	**Odare**	**66.93**	**75**	*e*P	**P**	**11 03 25.6**	**+0.2**
	comp=Z,76nm,1.3s,mb5.6						
GRGR	**Grenville**	**67.03**	**237**	PFAKE		11 03 40.0	+14
GRGR				LR	LR		
	comp=Z,276nm,19.0s,MS4.5						
INCN	**Inchon**	**67.08**	**37**	PFAKE		11 03 40.0	+14
INCN				LR	LR		
	comp=Z,246nm,19.0s,MS4.4						
KSRS	**Korea Array**	**67.36**	**36**	P	**P**	**11 03 27.2**	**-0.7**
	comp=Z,0.8nm,0.8s,mb3.8,baz=263,slow=39,SNR=3.3						
KSRS				LR	LR	11 38 58.8	
	comp=Z,195nm,18.4s,MS4.4,baz=177,slow=41						
CD2	**Chengdu**	**67.95**	**59**	P	**P**	**11 03 32.4**	**+0.6**
CD2				AP	pP	11 03 37.1	+2.1
CD2				XP	sP	11 03 39.4	+3.2
CD2				PP	PP	11 06 04.5	+3.4
CD2				S	S	11 12 29.8	-0.5
CD2				XS	sS	11 12 35.4	-0.2
CD2				SCS	ScS	11 13 28.5	-1.9
CD2				SS	SS	11 16 51.9	+0.5
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,270nm,5.5s						
CD2				LR	LR		
	comp=N,570nm,14.3s,MS5.1						
CD2				LR	LR		
	comp=E,790nm,18.8s,MS5.1						
CD2				LR	LR		
	comp=Z,740nm,26.9s						
SHL	**Shillong**	**69.52**	**71**	*e*P	**P**	**11 03 42.0**	**+0.4**
MJAR	**Matsushiro Arr**	**69.98**	**27**	P	**P**	**11 03 42.9**	**-1.5**
	comp=Z,4.3nm,0.9s,mb4.4,baz=348,slow=5.1,SNR=6.4						
MJAR				LR	LR	11 35 17.4	
	comp=Z,195nm,18.2s,MS4.4,baz=355,slow=37						
POO	**Poona**	**70.40**	**90**	*e*x	x	11 03 53.5	
NJ2	**Nanjing**	**70.68**	**45**	*e*P	**P**	**11 03 53.1**	**+4.5**
NJ2				AP	pP	11 03 57.7	+5.8
NJ2				XP	sP	11 04 00.1	+7.0
NJ2				S	S	11 13 08.5	+6.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,150nm,5.3s						
NJ2				LR	LR		
	comp=N,300nm,20.0s,MS4.9						
NJ2				LR	LR		
	comp=E,590nm,23.2s,MS4.9						
NJ2				LR	LR		
	comp=Z,470nm,16.7s						
SDV	**Santo Domingo**	**72.66**	**245**	*e*P	**P**	**11 04 01.3**	**+0.6**
	comp=Z,12nm,0.9s,mb4.8						
SDV				LR	LR		
	comp=Z,185nm,19.0s,MS4.4						
TGUH	**Tegucigalpa,Un**	**72.92**	**263**	PFAKE		11 04 10.0	+7.7
TGUH				LR	LR		
	comp=Z,435nm,19.0s,MS4.8						
GYA	**Guiyang**	**72.96**	**57**	P	**P**	**11 04 02.5**	**+0.1**
GYA				PP	PP	11 06 45.8	+1.5
GYA				S	S	11 13 25.0	-3.8
GYA				SKS		11 14 02.7	
GYA				SS	SS	11 18 07.6	-0.9
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,130nm,5.6s						
GYA				LR	LR		
	comp=N,560nm,19.0s,MS5.0						
GYA				LR	LR		
	comp=E,420nm,18.7s,MS5.0						
GYA				LR	LR		
	comp=Z,470nm,18.5s,MS4.8						
KMI	**Kunming**	**73.14**	**61**	P	**P**	**11 04 03.6**	**+0.1**
KMI				AP	pP	11 04 08.4	+1.6
KMI				XP	sP	11 04 10.2	+2.2
KMI				PP	PP	11 06 50.4	+4.5
KMI				S	S	11 13 29.5	-1.4
KMI				XS	sS	11 13 36.0	-0.3
KMI				SS	SS	11 18 10.0	-1.2
KMI				SSS		11 21 22.5	
KMI				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.5						
KMI				AMB	AMB		
	comp=Z,62nm,3.7s						
KMI				LR	LR		
	comp=N,535nm,23.6s,MS4.8						
KMI				LR	LR		
	comp=E,222nm,24.5s,MS4.8						
KMI				LR	LR		
	comp=Z,766nm,29.2s,MS4.8						
BCIP	**Isla Barro Col**	**75.18**	**254**	PFAKE		11 04 30.0	+15
BCIP				LR	LR		
	comp=Z,321nm,19.0s,MS4.6						
ROSC	**El Rosal**	**77.57**	**248**	P	**P**	**11 04 30.3**	**+1.2**
	comp=Z,5.4nm,0.4s,mb4.9,baz=90,slow=20,SNR=4.0						
CHTO	**Chiang Mai**	**78.00**	**67**	*e*P	**P**	**11 04 31.2**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
CHTO				MLR	MLR		
	comp=Z,318nm,21.0s,MS4.6						
CHTO	**Chiang Mai**	**78.00**	**67**	*e*P	**P**	**11 04 31.2**	**-0.2**
	comp=Z,26nm,1.4s,mb5.0						
CHTO	**Chiang Mai**	**78.00**	**67**	*e*P	**P**	**11 04 31.2**	**-0.3**
	comp=Z,26nm,1.4s,mb5.0						
CHTO				LR	LR		
	comp=Z,318nm,21.0s,MS4.6						
CMAR	**Chiang Mai Arr**	**78.34**	**67**	P	**P**	**11 04 31.8**	**-1.5**
	comp=Z,2.7nm,0.9s,mb4.2,baz=323,slow=6.7,SNR=12						
CMAR				LR	LR	11 44 07.0	
	comp=Z,215nm,20.1s,MS4.5,baz=161,slow=40						
CMAR	**Chiang Mai Arr**	**78.34**	**67**	P	**P**	**11 04 31.8**	**-1.5**
CMAR				LR	LR	11 44 07.0	
YHNB	**Yeheng**	**78.36**	**45**	PFAKE		11 04 40.0	+6.7
YHNB				LR	LR		
	comp=Z,593nm,20.0s,MS4.9						
RCBR	**Riachuelo**	**78.98**	**207**	PFAKE		11 04 50.0	+13
RCBR				LR	LR		
	comp=Z,357nm,20.0s,MS4.7						
QIZ	**Qiongzhong**	**80.89**	**57**	P	**P**	**11 04 46.5**	**-0.7**
QIZ				AP	pP	11 04 49.8	-0.7
QIZ				PP	PP	11 07 49.4	-1.7
QIZ				S	S	11 14 52.5	-2.9
QIZ				SS	SS	11 20 10.6	+2.2
QIZ				AMB	AMB		
	comp=Z,27nm,1.6s,mb4.9						
QIZ				LR	LR		
	comp=E,585nm,18.5s						
QIZ				LR	LR		
	comp=Z,540nm,17.8s,MS5.0						
QIZ	**Qiongzhong**	**80.89**	**57**	PFAKE		11 05 00.0	+13
QIZ				LR	LR		
	comp=Z,505nm,19.0s,MS4.9						
OTAV	**Otavalo**	**83.19**	**250**	*e*P	**P**	**11 05 00.7**	**+1.5**
	comp=Z,35nm,1.5s,mb5.2						
OTAV				LR	LR		
	comp=Z,321nm,19.0s,MS4.7						
MSEY	**Mahe Island**	**86.55**	**115**	PFAKE		11 05 30.0	+14
MSEY				LR	LR		
	comp=Z,234nm,22.0s,MS4.5						
LSZ	**Lusaka**	**90.06**	**144**	PFAKE		11 05 40.0	+7.3
LSZ				LR	LR		
	comp=Z,360nm,20.0s,MS4.8						
BDFB	**Brasilia**	**90.65**	**217**	LR	LR	11 39 12.1	
	comp=Z,150nm,18.8s,MS4.5,baz=190,slow=31						
BDFB	**Brasilia**	**90.65**	**217**	PFAKE		11 05 50.0	+15
BDFB				LR	LR		
	comp=Z,282nm,21.0s,MS4.7						
TSUM	**Tsumeb**	**92.17**	**155**	PFAKE		11 05 50.0	+7.6
TSUM				LR	LR		
	comp=Z,495nm,21.0s,MS4.9						
NNA	**Nana**	**94.29**	**245**	LR	LR	11 44 11.7	
	comp=Z,171nm,21.0s,MS4.5,baz=5.0,slow=33						
DGAR	**Diego Garcia**	**94.33**	**100**	PFAKE		11 06 00.0	+7.5
DGAR				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
KKM	**Kota Kinabalu**	**95.00**	**54**	PFAKE		11 06 10.0	+14
KKM				LR	LR		
	comp=Z,451nm,22.0s,MS4.9						
RER	**Riviere de l'E**	**102.29**	**120**	PFAKE		11 06 40.0	+11
RER				LR	LR		
	comp=Z,93nm,19.0s,MS4.3						
BOSA	**Boshof**	**102.57**	**149**	PFAKE		11 06 40.0	+10
BOSA				LR	LR		
	comp=Z,353nm,22.0s,MS4.8						
SUR	**Sutherland**	**105.58**	**154**	PFAKE		11 11 10.0	+14
SUR				LR	LR		
	comp=Z,795nm,21.0s,MS5.2						
KAPI	**Kappang**	**106.53**	**54**	PFAKE		11 11 10.0	+12
KAPI				LR	LR		
	comp=Z,123nm,20.0s,MS4.5						
PMG	**Port Moresby**	**116.44**	**26**	PFAKE		11 11 30.0	+13
PMG				LR	LR		
	comp=Z,146nm,22.0s,MS4.5						
FUNA	**Funafuti**	**117.04**	**351**	PFAKE		11 11 30.0	+12
FUNA				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
HNR	**Honiara**	**117.81**	**12**	PFAKE		11 11 30.0	+11
HNR				LR	LR		
	comp=Z,226nm,20.0s,MS4.8						
PLCA	**Paso Flores**	**119.84**	**230**	PFAKE		11 11 30.0	+7.7
PLCA				LR	LR		
	comp=Z,175nm,19.0s,MS4.7						
CTAO	**Charters Tower**	**126.80**	**29**	PFAKE		11 11 50.0	+14
CTAO				LR	LR		
	comp=Z,115nm,21.0s,MS4.5						
ASAR	**Alice Springs**	**127.91**	**44**	PKP	PKPdf	11 11 38.0	-0.4
	comp=Z,0.8nm,1.0s,baz=358,slow=2.6,SNR=3.8						
STKA	**Stephens Creek**	**137.48**	**38**	PKP	PKPdf	11 11 57.8	+1.7
	comp=Z,5.2nm,1.0s,baz=297,slow=4.5,SNR=4.0						
CASY	**Casey**	**158.53**	**107**	PFAKE		11 12 40.0	+11
CASY				LR	LR		
	comp=Z,223nm,19.0s,MS5.0						
QSPA	**South Pole Qui**	**161.26**	**180**	PFAKE		11 12 40.0	+8.5
QSPA				LR	LR		
	comp=Z,292nm,21.0s						
VNDA	**Vanda**	**173.34**	**163**	PFAKE		11 12 50.0	+10
VNDA				LR	LR		
	comp=Z,292nm,20.0s						
SBA	**Scott Base**	**173.35**	**173**	PFAKE		11 12 50.0	+10
SBA				LR	LR		
	comp=Z,232nm,20.0s						

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*IDC **06** 11:04:32.8±1.3, 4104N×6783E, h0km, mb3.8/5, mb1 3.8/10, mb1mx3.7/27, mbtmp3.7/10, ML3.5/5, Error ellipse: s-maj=18.4km s-min=13.7km az=149.0*

*ISCJB **06** 11:04:35.4±1.3, 4159N±006×6779E±005, h12km±9km, mb3.7/5, Error ellipse: s-maj=10.3km s-min=5.9km az=8.7*

*NEIC **06** 11:04:35.3±1.0, 4136N×6784E, h10km, Error ellipse: s-maj=20.1km s-min=9.3km az=178.0*

*NNC **06** 11:04:38.0±3.4, 4146N×6784E, h21km±14km, mb4.0, mpv3.6, Error ellipse: s-maj=24.5km s-min=13.9km az=29.0*

*MOS **06** 11:04:38.4±1.6, 4166N×6782E, h33km, mb4.0/1, Error ellipse: s-maj=22.2km s-min=10.4km az=67.1*

ISC 06 11:04:36.3±1.4**, 4145N**±005×**6777E**±005**, h10**km±10km**,**
n43, σ1**§04**/55**, mb3.7**/5**, 7C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**2.62**	**50**	⇓Pn	**Pn**	**11 05 19.3**	**+0.6**
	2.0nm,0.3s,baz=228,slow=16,SNR=311						
KK31				⇑Pg	**Pg**	**11 05 25.6**	**-1.0**
	22nm,0.3s,baz=228,slow=18,SNR=86						
KK31				⇓Lg		11 06 00.3	
	215nm,0.7s,baz=223,slow=32,SNR=6.2						
KK31	**Karatay Array**	**2.62**	**50**	*i* PN	**Pn**	**11 05 19.2**	**+0.5**
KK31						11 05 25.7	
KK31						11 06 01.3	
KK31				pmax	pmax		
	comp=Z,4.0nm,0.2s						
KK31				pmax	pmax		
	comp=Z,28nm,0.2s						
KK31				smax			
	comp=N,74nm,0.3s						
AML	**Almayashu**	**4.48**	**79**	P	**Pn**	**11 05 44.4**	**+0.1**
	SNR=8.2						
AML	**Almayashu**	**4.48**	**79**	*e*Pn	**Pn**	**11 05 43.9**	**-0.3**
AML				*e*Sg	**Sb**	**11 06 54.2**	**+5.1**
EKS2	**Erkin-Say**	**4.63**	**73**	P	**Pn**	**11 05 47.6**	**+1.2**
	SNR=7.5						
EKS2	**Erkin-Say**	**4.63**	**73**	*e*Pn	**Pn**	**11 05 47.3**	**+1.0**
EKS2				*e*Sg	**Sb**	**11 07 01.4**	**+7.9**
UCH	**Uchtor**	**5.10**	**79**	*e*Pn	**Pn**	**11 05 51.0**	**-1.7**
UCH				*e*Sg	**Sb**	**11 07 14.7**	**+7.8**
AAK	**Ala-Archa**	**5.15**	**74**	P	**Pn**	**11 05 54.6**	**+1.2**
	SNR=12						
USP	**Ospenovka**	**5.31**	**68**	P	**Pn**	**11 05 55.6**	**-0.1**
	SNR=6.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBK	**Karagaybulak**	5.48	75	P	Pn	11 05 58.9	+0.9
	SNR=16						
KZA	**Kyzart**	5.63	81	P	Pn	11 06 00.1	+0.1
	SNR=5.9						
TKM2	**Tokmak 2**	6.00	73	⇓Pn	Pn	11 06 04.0	-1.1
	comp=N,6.1nm,0.7s						
TKM2				⇑Pg	Pb	11 06 23.4	+2.5
	comp=N,11nm,0.6s						
TKM2				⇑Lg		11 07 43.9	
	comp=N,51nm,0.9s						
TKM2	**Tokmak 2**	6.00	73	PN	Pn	11 06 04.9	-0.2
TKM2						11 06 28.0	
TKM2						11 07 41.1	
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TKM2				pmax	pmax		
	comp=Z,11nm,0.6s						
TKM2				smax			
	comp=N,51nm,0.9s						
TKM2	**Tokmak 2**	6.00	73	P	Pn	11 06 05.2	+0.1
	SNR=6.1						
TKM2	**Tokmak 2**	6.00	73	*e*Pn	Pn	11 06 03.5	-1.6
TKM2	**Tokmak 2**	6.00	73	*e*Sg	Sg	11 07 43.3	-5.5
AB01	**Akbulak array**	9.55	327	⇑Pn	Pn	11 06 54.5	+0.7
	comp=N,2.6nm,0.5s						
AB01				⇑Sn	Sn	11 08 41.1	-0.1
	comp=N,3.9nm,0.3s						
AB31	**Akbulak array**	9.55	327	P	Pn	11 06 54.5	+0.7
AB31						11 08 38.0	
AB31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AB31				smax			
	comp=N,6.0nm,0.3s						
AKTK	**Aktyubinsk**	11.26	326	Pn	Pn	11 07 18.1	+0.9
AKTK				Sn	Sn	11 09 22.6	-0.3
AKTK				Lg		11 10 45.2	
AKTO	**Aktyubinsk**	11.26	326	Pn	Pn	11 07 18.1	+0.9
	comp=N,0.7nm,0.3s,baz=146,slow=11,SNR=11						
AKTO				Sn	Sn	11 09 22.6	-0.3
	comp=N,0.5nm,0.3s,baz=11,slow=21,SNR=3.0						
AKTO				Lg		11 10 45.2	
	comp=N,0.3nm,0.3s,baz=223,slow=14,SNR=2.5						
AKTO	**Aktyubinsk**	11.26	326	P	Pn	11 07 18.1	+1.0
AKTO						11 09 22.7	
VOSK	**Vostochnaya**	11.49	10	⇓Pn	Pn	11 07 20.3	0.0
	comp=N,2.3nm,0.7s						
VOSK	**Vostochnaya**	11.49	10	P	Pn	11 07 20.2	-0.1
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVA0	**Borovoye Array**	11.72	8	⇓Pn	Pn	11 07 22.9	-0.6
	comp=Z,0.5nm,0.6s,baz=173,slow=13,SNR=13						
BVA0				⇑Sn	Sn	11 09 32.0	-2.3
	comp=Z,2.3nm,1.1s,baz=191,slow=24,SNR=3.6						
BVA0	**Borovoye Array**	11.72	8	*i* P	Pn	11 07 22.8	-0.7
BVA0						11 09 31.9	
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVA0				smax			
	comp=N,1.0nm,0.6s						
BVAR	**Borovoye Array**	11.72	8	Pn	Pn	11 07 23.6	+0.1
	comp=N,0.9nm,0.3s,baz=177,slow=12,SNR=13						
BVAR				Sn	Sn	11 09 35.5	+1.3
	comp=N,1.0nm,0.3s,baz=176,slow=25,SNR=5.2						
BVAR				Lg		11 11 01.3	
	baz=214,slow=33,SNR=2.9						
BVAR	**Borovoye Array**	11.72	8	P	Pn	11 07 23.6	+0.1
BVAR						11 09 35.5	
MK31	**Makanchi Array**	11.72	58	⇑Pn	Pn	11 07 22.0	-1.5
	comp=N,1.1nm,0.6s,baz=246,slow=14,SNR=7.5						
MK31	**Makanchi Array**	11.72	58	*i* P	Pn	11 07 21.9	-1.6
MK31				pmax	pmax		
	comp=Z,482µm,0.1s						
MKAR	**Makanchi Array**	11.72	58	Pn	Pn	11 07 21.7	-1.8
	comp=Z,0.1nm,0.3s,baz=249,slow=16,SNR=4.3						
MKAR				Sn	Sn	11 09 35.1	+0.8
	comp=Z,0.1nm,0.3s,baz=246,slow=26,SNR=2.6						
MKAR				Lg		11 10 50.8	
	comp=Z,0.2nm,0.3s,baz=246,slow=28,SNR=3.6						
MKAR	**Makanchi Array**	11.72	58	P	Pn	11 07 21.7	-1.8
MKAR						11 09 35.2	
KURK	**Kurchatov**	11.93	35	Pn	Pn	11 07 23.5	-2.9
	comp=Z,0.0nm,0.3s,baz=255,slow=10,SNR=2.8						
KURK				Sn	Sn	11 09 39.7	+0.2
	comp=Z,0.1nm,0.3s,baz=217,slow=31,SNR=3.3						
KURK				Lg		11 10 54.9	
	comp=Z,0.1nm,0.3s,baz=170,slow=28,SNR=5.6						
KURK	**Kurchatov**	11.93	35	P	Pn	11 07 23.5	-2.9
KURK						11 09 39.7	
ZALV	**Zalesovo Beam**	16.92	37	P	Pn	11 08 33.7	+0.8
	comp=Z,0.3nm,0.3s,baz=233,slow=12,SNR=6.1						
BRTR	**Keskin Array B**	25.88	278	P	P	11 10 08.7	+0.5
	comp=Z,1.1nm,0.6s,mb3.6,baz=94,slow=8.0,SNR=6.7						
NB2	**NORSAR Subarra**	38.95	320	P	P	11 12 02.4	+0.3
	comp=Z,1.6nm,0.8s,mb3.8,baz=96,slow=9.3						
NOA	**NORSAR Array B**	38.95	320	P	P	11 12 02.5	+0.4
	comp=Z,1.0nm,0.5s,mb3.8,baz=95,slow=8.4,SNR=4.2						
NOA	**NORSAR Array B**	38.95	320	P	P	11 12 02.5	+0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	38.95	320	P	P	11 12 02.5	+0.4
DAVOX	**Davos/Dischmat**	41.09	298	P	P	11 12 20.1	0.0
	comp=Z,1.6nm,0.5s,mb3.9,baz=24,slow=15,SNR=3.7						
DAVOS	**Davos**	41.14	298	P	P	11 12 20.1	-0.3
TORD	**Torodi Ar. Bea**	63.51	264	P	P	11 15 04.7	-2.2
	comp=Z,0.3nm,0.5s,mb3.6,baz=44,slow=6.5,SNR=3.7						
YKA	**Yellowknife Ar**	76.39	1	P	P	11 16 25.6	+0.2
	comp=Z,0.5nm,0.5s,mb3.7,baz=354,slow=5.7,SNR=16						

*NEIC **06** 11:04:52.3, 38.15N×20.25E, h10km, MD3.7(ATH), After ATH.*
*CSEM **06** 11:04:52.3, 38.15N×20.25E, h10km, MD3.6/4, After ATH*
ATH 06 11:04:52.5, 38.14N×20.29E, h17km±2km, MD3.7/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	0.24	81	*e*PB	Pg	11 04 58.1	+0.2
VLS				*e*SB	Sg	11 05 02.3	+0.7
RLS	**Riolos of Patr**	0.93	95	*e*PN	Pn	11 05 10.3	-0.5
EVR	**Evrytania**	1.42	56	*e*PN	Pn	11 05 19.6	+2.1
EVR	**Evrytania**	1.42	56	*e*Pb	Pb	11 05 20.7	+2.2
KEK	**Kerkira**	1.62	346	*e*PN	Pn	11 05 22.3	+2.1

KRSC 06 11:11:20.3±0.2, 53.52N×162.76E, h43km±42km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	1.20	330	*e*P	Pn	11 11 41.4	+0.8
MKZ				*i* S	Sn	11 11 55.9	+0.2
SPN	**Mys Shipunski**	1.70	257	*e*P	Pn	11 11 49.0	+1.6
SPN				*i* S	Sn	11 12 09.1	+1.3
KII	**Karymskiy**	2.03	286	*e*P	Pn	11 11 54.5	+2.5
KII				*i* S	Sn	11 12 20.3	+4.2
NLC	**Nalytchevo**	2.08	262	*e*P	Pn	11 11 54.6	+2.0
NLC				*i* S	Sn	11 12 20.0	+2.8
TUMR	**Tumrok**	2.34	320	P	Pn	11 12 00.0	+3.9
AVH	**Avacha**	2.42	266	*i* P	Pn	11 12 00.2	+2.9
AVH				*i* S	Sn	11 12 29.1	+3.4
PET	**Petropavlovsk**	2.52	260	*e*P	Pn	11 12 00.9	+2.3
PET				*i* S	Sn	11 12 30.5	+2.5
KMNR	**Kamenistaya**	2.68	328	*e*P	Pn	11 12 03.9	+3.1
KMNR				*e*S	Sn	11 12 35.5	+3.5
KBTR	**Krutoberegovo**	2.69	1	P	Pn	11 12 00.3	-0.7
ZLN	**Zelenaya**	2.75	336	P	Pn	11 12 04.8	+3.0
RUS	**Russkaya**	2.79	249	*e*P	Pn	11 12 03.9	+1.5
RUS				*i* S	Sn	11 12 36.3	+1.6
GNL	**Ganaly**	2.88	275	*i* P	Pn	11 12 07.2	+3.7
GNL				*i* S	Sn	11 12 40.9	+4.0

IGQ 06 12:27:49.3, 2.14S×79.79W, h28km±6km, Mb4.2, Ms4.0, 7C, Error ellipse: s-maj=7.1km s-min=1.9km az=93.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	1.32	61	⇑P	Pn	12 28 14.4	+2.7
IGUA	**Igualata**	1.32	61	⇑S	Sn	12 28 31.5	+3.1
CHIS	**Cerro-Chispas-**	1.44	319	P	Pn	12 28 16.1	+2.7
BIL2	**Estacion Bilba**	1.45	62	P	Pn	12 28 16.6	+2.9
BIL2	**Estacion Bilba**	1.45	62	S	Sn	12 28 35.5	+3.8
ARRY	**Arrayan**	1.47	65	⇑P	Pn	12 28 16.2	+2.3
PATA	**Patacocha**	1.49	65	⇑P	Pn	12 28 16.8	+2.6
JUI6	**Juive**	1.50	62	P	Pn	12 28 16.9	+2.6
JUI6	**Juive**	1.50	62	S	Sn	12 28 35.6	+2.8
RETU	**Refugio**	1.50	63	P	Pn	12 28 17.3	+2.9
QIL2	**Quilotoa**	1.53	34	P	Pn	12 28 16.1	+1.4
QIL2	**Quilotoa**	1.53	34	S	Sn	12 28 34.0	+0.2
RUN5	**Runtun**	1.54	62	P	Pn	12 28 17.4	+2.6
RUN5	**Runtun**	1.54	62	S	Sn	12 28 37.8	+3.9
PISA	**Pisayambo**	1.77	52	P	Pn	12 28 21.1	+3.1
PISA	**Pisayambo**	1.77	52	S	Sn	12 28 43.3	+3.8
JAMA	**Jama**	1.92	347	P	Pn	12 28 23.1	+3.1
CAMI	**Rancho Maria**	1.94	41	⇑P	Pn	12 28 23.5	+3.1
CAMI	**Rancho Maria**	1.94	41	⇑S	Sn	12 28 48.9	+5.1
TAMB	**Tambo**	2.02	45	P	Pn	12 28 24.2	+2.8
VC1	**Cotopaxi 1**	2.03	43	P	Pn	12 28 24.7	+3.1
TERV	**Terraza Guagua**	2.28	31	P	Pn	12 28 27.7	+2.6
TERV	**Terraza Guagua**	2.28	31	S	Sn	12 28 56.0	+3.7
GGP	**Refugio Guagua**	2.29	31	⇑P	Pn	12 28 27.5	+2.4
PINO	**Pino**	2.30	31	P	Pn	12 28 27.5	+2.3
PINO	**Pino**	2.30	31	S	Sn	12 28 55.8	+3.2
ANTI	**Antisana**	2.34	44	P	Pn	12 28 28.2	+2.4
YANA	**Yana**	2.35	31	P	Pn	12 28 28.3	+2.3
YANA	**Yana**	2.35	31	S	Sn	12 28 57.0	+3.1
CAYA	**Cayambe**	2.84	39	P	Pn	12 28 34.9	+2.2
COTA	**Cotacachi**	2.85	30	P	Pn	12 28 35.3	+2.4

*CSEM **06** 12:38:13.2, 30.19N×36.29E, h3km, ML3.1, After SNSN*
*SGS **06** 12:38:13.2, 30.19N×36.29E, h3km*
*ISCJB **06** 12:38:14.9±0.8, 29.83N±0.03×36.26E±0.05, h0km, Error ellipse: s-maj=6.0km s-min=5.0km az=171.3*
*GII **06** 12:38:15.9±0.6, 29.88N×36.14E, h0km, ML2.2/6, EXPLOSION*
ISC 06 12:38:15.1±0.9, 29.84N±0.03×36.30E±0.05, h0km, n17, σ0.74/27, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	1.09	265	Pg	Pg	12 38 35.8	-0.2
HRFI	**Mount Harif**	1.11	281	Pg	Pg	12 38 35.7	-0.8
HRFI				Sg	Sg	12 38 50.9	0.0
EIL	**Elat**	1.18	262	Pg	Pg	12 38 37.7	-0.1
EIL				Sg	Sg	12 38 53.3	+0.1
HQLS		1.20	244	P	Pg	12 38 37.5	-0.7
HQLS		1.20	244	P	Pg	12 38 37.5	-0.7
HQLS				S	Sg	12 38 55.7	+2.0
MBRI	**Mt Berech**	1.21	268	Pg	Pg	12 38 37.9	-0.3
MBRI				Sg	Sg	12 38 55.0	+1.2
ZFRI	**Zfri**	1.21	307	Pg	Pg	12 38 37.2	-1.1
ZFRI				Sg	Sg	12 38 54.1	+0.2
PRNI	**Paran**	1.23	295	Pg	Pg	12 38 37.8	-1.0
PRNI				Sg	Sg	12 38 54.6	-0.2
JLOS		1.30	213	P	Pg	12 38 40.5	+0.4
KRMI	**Paran Flat**	1.40	282	Pg	Pg	12 38 40.8	-1.1
KRMI				Sg	Sg	12 38 59.3	-0.6
MZDA	**Masada**	1.68	331	Pn	Pn	12 38 45.6	-0.1
MZDA				Sn	Sn	12 39 08.7	+0.8
YTIR	**Yattir**	1.83	326	Pn	Pn	12 38 47.9	0.0
RTMI	**Retamim**	1.85	312	Pn	Pn	12 38 48.3	+0.3
RTMI				Sn	Sn	12 39 12.0	0.0
DSI	**Dead Sea**	1.90	336	Pn	Pn	12 38 49.4	+0.6
DSI				Sn	Sn	12 39 14.5	+1.1
KZIT	**Kziot**	1.96	303	Sn	Sn	12 39 15.3	+0.4
RSHS		2.02	221	P	Pn	12 38 49.2	-1.1
WJHS		3.09	178	P	Pn	12 39 05.9	+0.7

*ISCJB **06** 12:39:25.6±0.4, 46.96N±0.06×145.6E±0.1, h421km±5km, mb3.5/11, Error ellipse: s-maj=12.5km s-min=9.4km az=25.4*
*MOS **06** 12:39:25.6±1.1, 47.28N×145.50E, h413km, mb4.0/5, Error ellipse: s-maj=26.0km s-min=12.9km az=77.5*
*IDC **06** 12:39:26.9±1.6, 47.37N×145.43E, h402km±18km, mb3.2/11, mb1 3.3/15, mb1mx3.2/26, mbtmp3.1/15, Error ellipse: s-maj=16.8km s-min=13.7km az=159.0*
*JMA **06** 12:39:27.0±0.5, 46.72N×145.86E, h427km, M3.9*
*NEIC **06** 12:39:27.1, 46.72N×145.86E, h427km, MG3.9(JMA), After JMA.*
ISC 06 12:39:26.6±0.4, 46.97N±0.07×145.5E±0.1, h418km±6km, n39, σ1.23/50, mb3.5/11, 1D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	1.90	271	⇓*i*PN	P	12 40 23.5	0.0
YSS				*i* S	S	12 41 07.5	-2.1
YSS				pmax	pmax		
	comp=Z,40nm,0.2s						
YSS				smax			
	comp=N,110µm,0.9s						
YSS	**Yuzh-Sakhalins**	1.90	271	*e*P	P	12 40 23.9	+0.4
JSE	**Soyaes**	2.87	227	P	P	12 40 32.0	+1.8
YUK	**Yuzh-Kuril'sk**	2.94	175	*e*PN	P	12 40 30.7	-0.1
YUK				*e*S	S	12 41 23.6	+0.9
YUK				pmax	pmax		
	comp=Z,140nm,0.4s						
YUK				smax			
	comp=E,170nm,0.5s						
YUK				smax			
	comp=N,250nm,0.4s						
JWK2	**Keihoku**	3.02	238	P	P	12 40 33.1	+1.8
JWK2				*e*S	S	12 41 25.1	+1.4
JRA	**Rausu**	3.04	186	P	P	12 40 32.0	+0.5
JTKR	**Abashiri--Toko**	3.21	201	P	P	12 40 33.6	+0.7
ASAJ	**Asahikawa**	3.52	217	P	P	12 40 36.9	+1.4
	comp=N,0.7nm,0.3s,baz=17,slow=24,SNR=6.0						
ASAJ	**Asahikawa**	3.52	217	PN	P	12 40 36.9	+1.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NEM2	**Nemuro 2**	3.61	178	P	P	12 40 34.4	-1.9
NEM2				*e*S	S	12 41 29.1	-3.6
JAR	**Ashorobuto**	3.88	199	P	P	12 40 39.4	+0.7
JAK	**Akkeshi**	4.01	189	P	P	12 40 38.9	-1.0
JAK				*e*S	S	12 41 36.2	-3.3
JCH	**Churui**	4.62	200	P	P	12 40 45.0	-0.7
JCH				*e*S	S	12 41 46.0	-3.9
JEW	**Eniwo**	5.04	217	P	P	12 40 51.1	+1.2
JEW				*e*S	S	12 41 57.5	-0.1
JNBK	**Urakawa-nobuka**	5.09	204	P	P	12 40 50.1	-0.3
JNBK				*e*S	S	12 41 55.5	-3.0
ERM	**Erimo**	5.23	200	PN	P	12 40 53.1	+1.3
JKB	**Kayabe**	6.01	214	P	P	12 40 59.9	-0.1
JKB				*e*S	S	12 42 12.7	-3.4
JOT	**Ohata**	6.45	212	P	P	12 41 04.5	-0.1
JOT				*e*S	S	12 42 20.8	-3.8
JANG	**Nango**	7.20	205	P	P	12 41 13.1	+0.2
JANG				*e*S	S	12 42 35.7	-4.2
PETK	**Petropavlovsk-**	9.95	47	P	P	12 41 41.6	-1.3
	comp=Z,0.1nm,0.3s,baz=233,slow=6.3,SNR=5.4						
MJAR	**Matsushiro Arr**	11.76	210	P	P	12 42 07.9	+4.7
	comp=Z,0.3nm,0.3s,baz=12,slow=14,SNR=3.7						
KSRS	**Korea Array**	16.11	240	P	P	12 42 53.6	+3.4
	comp=Z,0.3nm,0.3s,baz=40,slow=10,SNR=9.6						
MKAR	**Makanchi Array**	42.16	294	P	P	12 46 40.0	-0.1
	comp=Z,0.4nm,0.4s,mb3.1,baz=72,slow=8.6,SNR=7.3						
KURK	**Kurchatov**	42.84	301	P	P	12 46 45.6	+0.1
	comp=Z,0.7nm,0.2s,mb3.6,baz=68,slow=8.0,SNR=7.8						
YKA	**Yellowknife Ar**	53.78	35	P	P	12 48 06.7	-0.9
	comp=Z,0.8nm,0.6s,mb3.2,baz=304,slow=7.0,SNR=19						
YKA				PcP	PcP	12 49 07.8	+0.7
	comp=Z,0.2nm,0.4s,baz=308,slow=3.6,SNR=7.2						
ARCES	**ARCESS Array B**	55.83	338	P	P	12 48 20.9	-1.1
	comp=Z,2.7nm,0.9s,mb3.6,baz=33,slow=6.7,SNR=5.6						
NB2	**NORSAR Subarra**	66.19	338	P	P	12 49 29.8	-0.9
	comp=Z,1.3nm,0.5s,mb3.8,baz=31,slow=6.5						
NOA	**NORSAR Array B**	66.19	338	P	P	12 49 29.9	-0.8
	comp=Z,2.1nm,0.4s,mb4.1,baz=31,slow=6.5,SNR=6.6						
NOA	**NORSAR Array B**	66.19	338	P	P	12 49 29.9	-0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	66.28	336	P	P	12 49 30.4	-0.9
	comp=Z,1.8nm,0.3s,mb4.1,baz=35,slow=5.4,SNR=13						
HFS	**Hagfors**	66.28	336	P	P	12 49 30.4	-0.9
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	**Mina Array Bea**	66.84	58	P	P	12 49 36.4	+1.2
	comp=Z,0.5nm,0.7s,mb3.3,baz=323,slow=5.3,SNR=5.2						
AKASG	**Malin Array Be**	68.32	322	P	P	12 49 43.4	-0.6
	comp=Z,0.8nm,0.5s,mb3.6,baz=40,slow=6.1,SNR=5.5						
AKASG	**Malin Array Be**	68.32	322	P	P	12 49 43.4	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	68.70	50	P	P	12 49 47.4	+0.9
	comp=Z,0.9nm,0.5s,mb3.7,baz=51,slow=0.4,SNR=14						
ASAR	**Alice Springs**	71.08	191	P	P	12 50 04.8	+3.9
	comp=Z,0.5nm,0.6s,mb3.2,baz=360,slow=5.0,SNR=11						
ASAR	**Alice Springs**	71.08	191	P	P	12 50 04.8	+3.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	81.79	56	P	P	12 51 01.9	+1.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=294,slow=4.0,SNR=13						
TXAR	**Lajitas Array**	81.79	56	P	P	12 51 01.9	+1.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*ISCJB **06** 13:18:15.9±0.9, 35.09S±0.07×178.90E±0.09, h178km±6km, mb4.6/19, Error ellipse: s-maj=13.4km s-min=9.9km az=148.6*
*IDC **06** 13:18:15.2±1.7, 34.92S×178.87E, h161km±14km, mb4.3/11, mb1 4.4/12, mb1mx4.3/16, mbtmp4.3/12, MS3.5/4, Ms1 3.5/4, ms1mx3.2/23, Error ellipse: s-maj=14.5km s-min=14.0km az=173.0*
*NEIC **06** 13:18:15.8±1.1, 35.05S×179.01E, h170km±9km, mb4.7/12, Error ellipse: s-maj=15.8km s-min=11.5km az=50.0*
*GCMT **06** 13:18:21.3±0.4, 34.91S×179.19E, h183km±3km, MW5.1/69, Moment Tensor Solution. s25,c29; s69,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.26±.26; $M_{\theta\theta}$2.15±.26; $M_{\phi\phi}$-3.41±.24; $M_{r\theta}$1.97±.24; $M_{\theta\phi}$-1.77±.23; $M_{\phi r}$4.53±.21; Best double couple: $M_0$5.63300×10^{16} NP1:ϕ_s161.00000°, δ19.00000°, λ42.00000°. NP2: ϕ_s30.00000°, δ78.00000°, λ104.00000°. Principal axes: T 4.3790, Plg55.0000°, Azm318.0000°; N 2.5090, Plg14.0000°, Azm207.0000°; P -6.8880, Plg31.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 06 13:18:16.6±0.9, 35.07S±0.07×178.93E±0.09, h171km±6km, n117, σ1.21/62, mb4.6/19, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	2.54	191	P	Pn	13 18 58.5	-0.6
MXZ				S	Sn	13 19 32.5	+0.3
WIZ	**White Island**	2.83	209	P	Pn	13 19 03.9	+1.3
PUZ	**Puketiti**	3.04	190	P	Pn	13 19 04.5	-0.8
KUZ	**Kuaotunu**	3.10	236	P	Pn	13 19 07.3	+1.4
MARZ	**Manawahe**	3.43	211	P	Pn	13 19 11.2	+1.1
MWZ	**Matawai**	3.45	199	P	Pn	13 19 09.7	-0.6
URZ	**Urewera**	3.50	204	P	Pn	13 19 11.2	+0.2
	114nm,0.3s,baz=127,slow=0.5,SNR=177						
URZ				S	Sn	13 19 52.9	-0.6
	209nm,0.3s,baz=154,slow=19,SNR=20						
URZ	**Urewera**	3.50	204	P	Pn	13 19 10.1	-0.9
LIRZ	**Lichensteins R**	3.57	214	P	Pn	13 19 13.3	+1.4
TAZ	**Tarawera**	3.71	211	P	Pn	13 19 15.4	+1.8
OTAZ	**Otara**	3.75	239	P	Pn	13 19 16.3	+2.2
WCZ	**Waipu Caves**	3.84	256	P	Pn	13 19 16.6	+1.3
KNZ	**Kokohu**	4.07	194	P	Pn	13 19 16.1	-2.1
BKZ	**Black Stump Fm**	4.53	205	P	Pn	13 19 22.7	-1.4
RITZ	**Rihia Road**	4.61	211	P	Pn	13 19 24.6	-0.6
HIZ	**Hauiti**	4.74	222	P	Pn	13 19 28.5	+1.6
TWVZ	**Taurewa**	4.87	214	P	Pn	13 19 27.8	-0.8
TUVZ	**Tukino**	4.94	211	P	Pn	13 19 28.3	-1.1
FWVZ	**Far West T-bar**	4.97	212	P	Pn	13 19 29.0	-0.9
WNVZ	**Wahianoa**	5.01	211	P	Pn	13 19 29.1	-1.3
MOVZ	**Moawhango**	5.01	209	P	Pn	13 19 28.4	-2.0
VRZ	**Vera Road**	5.24	218	P	Pn	13 19 33.6	+0.2
TSZ	**Takapari Road**	5.51	204	P	Pn	13 19 33.1	-3.8
WAZ	**Wanganui**	5.63	213	P	Pn	13 19 37.1	-1.4
NEZ	**North Egmont**	5.70	221	P	Pn	13 19 41.0	+1.6
BFZ	**Birch Farm**	5.99	200	P	Px	13 19 39.3	
MRZ	**Mangatainoka R**	6.18	204	P	Px	13 19 41.5	
RAO	**Raoul Island**	6.39	26	LR	Px	13 21 48.1	
	comp=Z,271nm,20.1s,baz=347,slow=34						
KIW	**Kapiti Island**	6.59	208	P	Px	13 19 46.7	
CAW	**Cannon Point**	6.75	206	P	Px	13 19 48.5	
PAWZ	**Paruwai Farm**	6.88	203	P	Px	13 19 50.3	
MSWZ	**Moikau Station**	6.96	203	P	Px	13 19 51.2	
MRW	**Makara Radio**	6.99	207	P	Px	13 19 52.2	
WEL	**Wellington**	7.01	207	P	Px	13 19 52.3	
SNZO	**South Karori**	7.06	207	P	Px	13 19 52.6	
BHW	**Baring Head**	7.09	206	P	Px	13 19 52.8	
TCW	**Tory Channel**	7.14	209	P	Px	13 19 53.4	
NNZ	**Nelson**	7.53	214	P	Px	13 19 58.8	
QRZ	**Quartz Range**	7.65	219	P	Px	13 20 00.3	
BSWZ	**Blackbirch Sta**	7.73	209	P	Px	13 20 01.8	
THZ	**Tophouse**	8.18	213	P	Px	13 20 07.3	
KHZ	**Kahutara**	8.46	208	P	Px	13 20 10.3	
DSZ	**Denniston Nort**	8.70	218	P	Px	13 20 13.7	
LTZ	**Lake Taylor**	9.28	212	P	Px	13 20 20.5	
CRLZ	**Canterbury Las**	9.79	208	P	Px	13 20 27.0	
MQZ	**McQueen's Vall**	9.89	207	P	Px	13 20 27.7	
WVZ	**Waitaha Valley**	10.21	216	P	Px	13 20 32.5	
RPZ	**Rata Peaks**	10.56	213	P	Px	13 20 37.8	
	3.6nm,0.3s,baz=233,slow=1.9,SNR=46						
RPZ				S	Sx	13 22 28.6	
	8.5nm,0.3s,baz=39,slow=21,SNR=8.9						
RPZ	**Rata Peaks**	10.56	213	P	Px	13 20 37.7	
FOZ	**Fox Glacier**	11.09	217	P	Px	13 20 43.2	
LBZ	**Lake Benmore**	11.48	213	P	Px	13 20 49.5	
ODZ	**Otahua Downs**	11.80	210	P	Px	13 20 53.8	
JCZ	**Jackson Bay**	11.92	218	P	Px	13 20 54.5	
WKZ	**Wanaka**	12.35	215	P	Px	13 21 00.3	
EAZ	**Earnscleugh**	12.53	213	P	Px	13 21 03.2	
MSZ	**Milford Sound**	12.77	218	P	Px	13 21 07.4	
TUZ	**Tuapeka**	12.96	210	P	Px	13 21 10.4	
MLZ	**Mavora Lakes**	13.14	215	P	Px	13 21 11.5	
WHZ	**Wether Hill Ro**	13.65	214	P	Px	13 21 18.1	
DZM	**Mont Dzumac**	16.95	317	*e*P	Pn	13 22 03.5	-0.2
	35nm,1.1s						
AFI	**Afiamalu**	22.68	24	P	P	13 23 03.1	-0.5
	23nm,0.6s,mb4.8,baz=260,slow=17,SNR=5.4						
AFI	**Afiamalu**	22.68	24	*e*P	P	13 23 02.4	-1.1
	29nm,0.6s,mb4.9						
CNB	**Canberra Magne**	24.13	261	*e*P	P	13 23 21.6	+5.0
TOO	**Toolangi**	26.98	255	*e*P	P	13 23 46.6	+4.3
HNR	**Honiara**	30.86	321	LR	LR	13 34 45.6	
	comp=Z,150nm,18.0s,baz=95,slow=32						
STKA	**Stephens Creek**	31.19	265	*e*P	P	13 24 23.5	+3.9
	9.6nm,0.9s,mb4.5						
STKA	**Stephens Creek**	31.19	265	P	P	13 24 20.2	+0.6
	15nm,1.0s,mb4.7,baz=86,slow=7.2,SNR=10						
CTA	**Charters Tower**	32.41	289	*e*P	P	13 24 31.1	+0.8
	9.7nm,0.9s,mb4.5						
CTA	**Charters Tower**	32.41	289	P	P	13 24 30.9	+0.5
	14nm,0.9s,mb4.7,baz=107,slow=7.9,SNR=8.4						
CTA				LR	LR	13 36 47.5	
	comp=Z,103nm,19.6s,baz=56,slow=34						
CTAO	**Charters Tower**	32.41	289	*e*P	P	13 24 31.0	+0.6
	16nm,0.9s,mb4.8						
COEN	**Coen**	38.43	294	*e*P	P	13 25 21.9	+0.2
	9.5nm,0.8s,mb4.5						
ASAR	**Alice Springs**	40.55	274	P	P	13 25 38.7	-0.5
	14nm,0.7s,mb4.7,baz=116,slow=7.5,SNR=56						
ASAR				S	S	13 31 35.5	0.0
	1.0nm,0.9s,baz=118,slow=14,SNR=5.9						
WB2	**Warramunga Arr**	41.96	279	*e*P	P	13 25 49.4	-1.4
WRAB	**Tennant Creek**	41.97	279	*e*P	P	13 25 49.7	-1.1
	14nm,0.6s,mb4.8						
FORT	**Forrest**	42.54	261	*e*P	P	13 25 56.8	+1.4
	26nm,0.7s,mb5.0						
SBA	**Scott Base**	43.21	184	*e*P	P	13 26 03.1	+3.0
	10.0nm,0.8s,mb4.5						
VNDA	**Vanda**	43.21	185	P	P	13 26 02.6	+2.5
	3.9nm,1.1s,mb4.0,baz=341,slow=11,SNR=5.6						
VNDA				LR	LR	13 42 26.0	
	comp=Z,44nm,19.0s,baz=22,slow=34						
CASY	**Casey**	49.81	209	*e*P	P	13 26 49.8	-1.7
	15nm,0.9s,mb4.6						
NWAO	**Narrogin (SRO)**	50.46	254	P	P	13 26 55.6	-1.3
KLBR	**Kellerberrin**	50.53	256	*e*P	P	13 26 57.4	-0.1
	32nm,1.2s,mb4.8						
MUN	**Mundaring**	51.61	254	*e*P	P	13 27 05.6	+0.1
MBWA	**Marble Bar**	53.32	269	*e*P	P	13 27 16.6	-1.6
	6.8nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	55.05	180	P	P	13 27 32.3	+2.5
	36nm,0.9s,mb5.1,baz=39,slow=2.1,SNR=85						
SYO	**Syowa Base**	71.98	194	⇑*e*P	P	13 29 19.4	-1.5
SNAA	**Sanae**	73.55	179	*e*	P	13 29 30.3	+0.2
SNAA				*e*		13 29 32.7	
SNAA	**Sanae**	73.55	179	*e*P	P	13 29 29.8	-0.3
	27nm,1.4s,mb4.8						
VNA3	**Neumayer Olymp**	73.81	177	*e*	P	13 29 31.7	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3				e		13 29 34.5	
VNA3				e		13 30 18.7	
VNA2	**Neumayer--Watz**	**74.21**	**178**	e	**P**	**13 29 34.8**	**+0.8**
	baz=196,slow=5.0						
VNA2				e		13 29 37.2	
VNA2				e	pP	13 30 20.5	+5.3
VNA1	**Neumayer--Stat**	**74.45**	**178**	e	**P**	**13 29 36.5**	**+1.1**
VNA1				e		13 29 39.0	
PLCA	**Paso Flores**	**81.18**	**134**	P	**P**	**13 30 14.2**	**+1.1**
	1.5nm,0.5s,mb3.9,baz=214,slow=7.3,SNR=9.7						
KSRS	**Korea Array**	**86.31**	**322**	P	**P**	**13 30 38.6**	**-0.3**
	2.0nm,0.6s,mb4.0,baz=141,slow=5.7,SNR=7.0						
PETK	**Petropavlovsk-**	**89.74**	**347**	P	**P**	**13 30 53.8**	**-0.9**
	15nm,0.6s,mb5.1,baz=117,slow=5.7,SNR=36						
CMAR	**Chiang Mai Arr**	**92.56**	**291**	P	**P**	**13 31 08.8**	**+0.1**
	0.6nm,0.6s,mb3.9,baz=156,slow=2.7,SNR=4.4						
CMAR				PP	PP	13 34 54.0	+1.3
	0.5nm,0.6s,baz=142,slow=8.2,SNR=4.2						
NVAR	**Mina Array Bea**	**93.40**	**44**	P	**P**	**13 31 12.9**	**+0.8**
	2.4nm,0.8s,mb4.4,baz=219,slow=8.4,SNR=17						
YKA	**Yellowknife Ar**	**110.77**	**27**	PKiKP	PKiKP	13 36 26.6	-1.5
	0.3nm,0.5s,baz=253,slow=1.6,SNR=9.6						
YKA				PKKPbc	PKKPbc	13 47 25.9	-2.4
	0.3nm,0.5s,baz=43,slow=3.8,SNR=6.6						
YKA	**Yellowknife Ar**	**110.77**	**27**	PKPdf	PKiKP	13 36 26.6	-1.5
YKA				PKKPbc	PKKPbc	13 47 25.9	-2.4
MKAR	**Makanchi Array**	**118.73**	**309**	PKP	PKPdf	13 36 41.4	-2.4
	0.4nm,0.5s,baz=64,slow=2.8,SNR=4.7						
ARCES	**ARCESS Array B**	**142.51**	**345**	PKhKP		13 37 22.0	
	1.1nm,0.4s,baz=40,slow=1.5,SNR=21						
ARCES				PKP	PKPdf	13 37 27.0	-0.9
	3.0nm,0.7s,baz=42,slow=2.5,SNR=14						
JOF	**Joensuu**	**145.65**	**334**	epkp	PKPdf	13 37 32.0	-1.5
KAF	**Kangasniemi**	**147.92**	**336**	epkp	PKPdf	13 37 37.8	+0.4
	4.6nm,0.3s,baz=45,slow=2.6						
LIC	**Lamto**	**151.06**	**172**	ePKIKP	PKPbc	13 37 49.0	-0.8
	60nm,1.1s						
LIC	**Lamto**	**151.06**	**172**	ePKIKP	PKPbc	13 37 49.4	-0.4
	14nm,0.5s						
KIC	**Kosan Boka**	**151.23**	**172**	ePKIKP	PKPbc	13 37 48.7	-1.5
	34nm,0.7s						
TIC	**Toumodi**	**151.48**	**172**	ePKIKP	PKPbc	13 37 49.4	-1.4
	28nm,0.3s						
BRTR	**Keskin Array B**	**152.15**	**290**	PKPbc	PKPbc	13 37 49.3	-2.2
	1.9nm,0.6s,baz=146,slow=3.7,SNR=7.2						
BRTR				PKPab	PKPab	13 37 59.9	-2.0
	0.7nm,0.5s,baz=152,slow=4.0,SNR=2.7						
NB2	**NORSAR Subarra**	**152.84**	**347**	PKPdf	PKPbc	13 37 50.2	-2.2
	comp=Z,0.9nm,0.4s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**152.84**	**347**	PKPbc	PKPbc	13 37 50.5	-1.8
	comp=Z,3.2nm,0.6s,baz=28,slow=2.0,SNR=6.9						
NOA				PKPab	PKPab	13 38 01.8	-2.3
	comp=Z,2.4nm,0.8s,baz=24,slow=3.4,SNR=4.9						
AKASG	**Malin Array Be**	**153.10**	**315**	PKPbc	PKPbc	13 37 51.1	-2.1
	comp=Z,1.5nm,0.4s,baz=48,slow=2.7,SNR=6.6						
AKASG				PKPab	PKPab	13 38 03.8	-1.7
	comp=Z,2.6nm,0.6s,baz=50,slow=4.3,SNR=7.1						
AKASG	**Malin Array Be**	**153.10**	**315**	PKPbc	PKPbc	13 37 51.1	-2.1
AKASG				PKPab	PKPab	13 38 03.8	-1.7
TORD	**Torodi Ar. Bea**	**158.03**	**187**	PKP	PKPdf	13 37 52.4	-1.0
	comp=Z,1.2nm,1.1s,baz=49,slow=1.5,SNR=4.3						
TORD				PKPab	PKPab	13 38 26.4	-1.0
	comp=Z,3.0nm,0.6s,baz=168,slow=4.2,SNR=16						
TORD	**Torodi Ar. Bea**	**158.03**	**187**	PKP	PKPdf	13 37 52.4	-1.0
TORD				PKPab	PKPab	13 38 26.4	-1.0
ROSF	**Rostrenen**	**166.65**	**6**	ePKP2	PKPab	13 38 59.2	-5.2
LOR	**Lormes**	**167.27**	**345**	ePKP2	PKPab	13 39 04.3	-2.9
	comp=Z,9.0nm,0.8s						
SSF	**Saint Saulge**	**167.54**	**345**	ePKP2	PKPab	13 39 05.6	-2.8
AVF	**Avril sur Loir**	**167.83**	**345**	ePKP2	PKPab	13 39 06.1	-3.6
SMF	**Signal de Mont**	**167.86**	**344**	ePKP2	PKPab	13 39 06.4	-3.4
VIVF	**Saint-Julien-l**	**169.28**	**337**	ePKP2	PKPab	13 39 14.0	-2.2
	comp=Z,4.3nm,0.5s						

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*CSEM **06** 13:25:47.2, 3841N×3944E, h20km, MD2.6, After ISK*

ISK 06 13:25:47.2, 3841N×3944E, h20km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.11**	**255**	ePg	Pb	13 25 52.0	+0.8
SVRC				eSg	Sb	13 25 54.2	+0.2
PTK	**Pertek**	**0.49**	**356**	ePG	Pb	13 25 57.5	+0.4
PTK				eSG	Sb	13 26 05.0	+1.2
URFA	**Urfa**	**1.08**	**207**	ePN	Pn	13 26 07.3	+0.2
DARE	**Darende-Malaty**	**1.39**	**294**	ePN	Pn	13 26 14.6	+3.2

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*ISCJB **06** 13:53:34.9±0.9, 3292N±005×478E±0.1, h10km, Error ellipse: s-maj=13.5km s-min=5.7km az=21.4*
*KISR **06** 13:53:35.5, 3260N×4742E, h33km, ML2.4*
*CSEM **06** 13:53:38.3±0.3, 3282N×4771E, h25km, ML2.7, Error ellipse: s-maj=10.8km s-min=5.3km az=100.0*
*THR **06** 13:53:39.1±0.4, 3290N×4783E, h14km±5km, ML2.7*

ISC 06 13:53:36.6±0.9, **3290N**±005×**478E**±01, **h10**km, **n8, σ0§69**/14, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.18**	**131**	ePg	**Pg**	**13 54 00.3**	**+1.0**
SHGR				AML	AML	13 54 24.2	
	comp=N,166nm,0.4s						
SHGR				AML	AML	13 54 27.0	
	comp=E,180nm,0.7s						
SNGE	**Sanandaj**	**2.22**	**351**	ePg	**Pg**	**13 54 19.5**	**+0.4**
SNGE				AML	AML	13 54 58.1	
	comp=E,65nm,0.5s						
SNGE				AML	AML	13 55 00.8	
	comp=N,50nm,0.7s						
ASAO	**Ashtian**	**2.51**	**48**	ePn	**Pn**	**13 54 21.1**	**+3.7**
ASAO				eSg	**Sg**	**13 54 56.4**	**-0.8**
ASAO				AML	AML	13 55 04.0	
	comp=E,32nm,0.1s						
ASAO				AML	AML	13 55 04.7	
	comp=N,35nm,0.5s						
ASAO	**Ashtian**	**2.51**	**48**	ePn	**Pn**	**13 54 21.1**	**+3.7**
	SNR=52						
ASAO				eSg	**Sg**	**13 54 56.4**	**-0.8**
	SNR=90						
MIB	**Mutribah**	**3.10**	**187**	eP	**Pn**	**13 54 25.4**	**-0.2**
MIB				eS	**Sn**	**13 55 02.5**	**-0.3**
	comp=N,21nm,0.4s						
MIB	**Mutribah**	**3.10**	**187**	eP	**Pn**	**13 54 25.4**	**-0.3**
	baz=181						
MIB				eS	**Sn**	**13 55 02.5**	**-0.3**
	baz=181						
MIB				AML	AML	13 55 06.7	
	comp=Z,21nm,0.4s,baz=181						
NAY	**Al-Naaiem**	**3.66**	**187**	eP	**Pn**	**13 54 33.0**	**-0.3**
NAY				eS	**Sn**	**13 55 16.4**	**-0.2**
	comp=Z,5.8nm,0.7s						
NAY	**Al-Naaiem**	**3.66**	**187**	eP	**Pn**	**13 54 33.0**	**-0.3**
	baz=183						
NAY				eS	**Sn**	**13 55 16.4**	**-0.1**
	baz=183						
NAY				AML	AML	13 55 21.1	
	comp=Z,6.0nm,0.7s,baz=183						

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*BJI **06** 13:59:10.2, 023S×12082E, h85km, mB5.1, mb5.1, Ms4.5, Msz4.4*
*ISCJB **06** 13:59:13.8±0.4, 023N±002×12066E±003, h83km±4km, mb5.1/116, Error ellipse: s-maj=4.8km s-min=3.9km az=173.9*
*DJA **06** 13:59:13, 060N×12074E, h10km, Mw5.4/13*
*NEIC **06** 13:59:15.1±0.2, 021N×12064E, mb5.2/50, Error ellipse: s-maj=6.7km s-min=4.2km az=67.0*
NEIC Felt [II] at Palu.
*GCMT **06** 13:59:15.1±0.2, 038N×12080E, h78km±4km, MW5.1/72, Moment Tensor Solution. s32,c38; s72,c118; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.33±.26; Mθθ-1.17±.21; Mϕϕ2.50±.25; Mrθ-2.20±.10; Mθϕ 1.32±.19; Mϕr-4.42±.16; Best double couple: Mo5.39900×10^16 NP1:ϕs172.00000°, δ14.00000°, λ-125.00000°. NP2: ϕs28.00000°, δ79.00000°, λ-82.00000°. Principal axes: T 6.1440, Plg33.0000°, Azm111.0000°; N -1.4910, Plg8.0000°, Azm207.0000°; P -4.6530, Plg55.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **06** 13:59:15.3±0.5, 022N×12064E, h86km±4km, mb4.6/26, mb1 4.6/28, mb1mx4.6/30, mbtmp4.7/28, MS3.8/10, Ms1 3.8/10, ms1mx3.6/22 Error ellipse: s-maj=14.1km s-min=8.0km az=87.0*
*MOS **06** 13:59:17.4±1.0, 028N×12075E, h120km, mb5.3/30, Error ellipse: s-maj=14.5km s-min=5.9km az=115.7*

ISC 06 13:59:15.6±0.4, **023N**±002×**12066E**±003, **h84**km±3km, **h84**km±1.1km**:pP-P, n272, σ1§06**/280, **mb5.1**/116, **16C-15D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	**Palu**	**1.40**	**216**	P	**Pn**	**13 59 38.5**	**-1.2**
MNI	**Manado**	**4.35**	**74**	P	**Pn**	**14 00 20.0**	**+0.7**
KDI	**Kendari**	**4.59**	**155**	P	**Pn**	**14 00 23.5**	**+0.9**
TSM	**Tawau**	**4.91**	**325**	⇑P	**Pn**	**14 00 25.5**	**-1.5**
KAPI	**Kappang**	**5.28**	**190**	P	**Pn**	**14 00 32.0**	**-0.1**
	12nm,0.3s,baz=356,slow=8.4,SNR=54						
KAPI				S	**Sn**	**14 01 31.6**	**0.0**
	15nm,0.3s,baz=234,slow=22,SNR=3.9						
KAPI				LR	LR	14 02 28.8	
	comp=Z,811nm,20.8s,baz=9.6,slow=37						
KAPI	**Kappang**	**5.28**	**190**	ePn	**Pn**	**14 00 31.8**	**-0.3**
KAPI	**Kappang**	**5.28**	**190**	P	**Pn**	**14 00 32.6**	**+0.5**
	116nm,0.8s,2μm0.7nm						
MYLDM	**Lahad Datu**	**5.37**	**336**	⇑P	**Pn**	**14 00 32.2**	**-1.1**
MYLDM	**Lahad Datu**	**5.37**	**336**	P	**Pn**	**14 00 33.4**	**+0.1**
	3μm,0.8s,36nm						
SDKM	**Sandakan**	**6.40**	**327**	⇑P	**Pn**	**14 00 45.8**	**-1.4**
ZMPH	**Zamboanga City**	**6.83**	**12**	⇓iP	**Pn**	**14 00 51.8**	**-1.4**
ZMPH				iS	**Sn**	**14 02 01.9**	**-7.4**
BBKI	**Banjar Baru**	**6.88**	**238**	P	**Pn**	**14 00 53.8**	**0.0**
	536nm,0.9s,6μm1.8nm						
LBMI	**Labuha**	**6.89**	**97**	P	**Pn**	**14 00 54.4**	**+0.4**
	460nm,0.8s,4.7nm						
PLKI	**Palangkaraya**	**7.14**	**250**	P	**Pn**	**14 01 07.6**	**+10**
	400nm,1.0s,6μm1.9nm						
KKM	**Kota Kinabalu**	**7.29**	**323**	ePn	**Pn**	**14 00 58.4**	**-1.0**
	152nm,0.6s						
KKM				eSn	**Sn**	**14 02 04.3**	**-16**
KKM	**Kota Kinabalu**	**7.29**	**323**	⇓P	**Pn**	**14 00 57.1**	**-2.3**
KKM	**Kota Kinabalu**	**7.29**	**323**	P	**Pn**	**14 00 58.7**	**-0.7**
	326nm,0.9s,10μm3.4nm						
KDM	**Kudat**	**7.67**	**330**	⇓P	**Pn**	**14 01 02.6**	**-1.9**
IPIL	**Ipil**	**7.75**	**14**	⇓iP	**Pn**	**14 01 06.2**	**+0.5**
IPIL				iS	**Sn**	**14 02 26.7**	**-5.2**
PAGZ	**Pagadian**	**8.04**	**20**	eP	**Pn**	**14 01 09.6**	**-0.1**
BTM	**Bintulu**	**8.13**	**291**	⇓P	**Pn**	**14 01 10.2**	**-0.8**
DAV	**Davao City (W)**	**8.38**	**36**	P	**Pn**	**14 01 16.0**	**+1.7**
	31nm,0.3s,baz=272,slow=6.8,SNR=1.6						
DAV				S	**Sn**	**14 02 49.6**	**+2.2**
	68nm,0.3s,baz=233,slow=20,SNR=2.2						
DAV	**Davao City (W)**	**8.38**	**36**	P	**Pn**	**14 01 16.0**	**+1.7**
DAV				S	**Sn**	**14 02 49.6**	**+2.2**
AAI	**Ambon**	**8.47**	**117**	P	**Pn**	**14 01 19.9**	**+4.3**
	818nm,0.7s,5μm2.1nm						
SBUM	**Sibu**	**8.72**	**285**	⇓P	**Pn**	**14 01 19.1**	**+0.1**
SBUM	**Sibu**	**8.72**	**285**	P	**Pn**	**14 01 19.1**	**+0.1**
	228nm,1.3s,2μm0.5nm						
BUKP	**Musuan**	**8.78**	**30**	eP	**Pn**	**14 01 18.7**	**-1.1**
BATP	**Bataraza**	**8.98**	**342**	eP	**Pn**	**14 01 22.3**	**-0.2**
STKI	**Sintang**	**9.19**	**269**	P	**Pn**	**14 01 25.0**	**-0.3**
	208nm,0.8s						
KMMI	**Kalianget**	**9.84**	**223**	P	**Pn**	**14 01 39.6**	**+5.3**
	68nm,1.3s						
KHKI	**Kahang-Kahang**	**9.91**	**210**	P	**Pn**	**14 01 41.5**	**+6.3**
	37nm,1.1s						
KSM	**Kuching**	**10.43**	**277**	ePn	**Pn**	**14 01 40.6**	**-1.7**
	50nm,0.9s						
KSM	**Kuching**	**10.43**	**277**	⇓P	**Pn**	**14 01 43.7**	**+1.4**
KSM	**Kuching**	**10.43**	**277**	P	**Pn**	**14 01 42.7**	**+0.4**
	68nm,1.1s,782nm						
BATI	**Baumata**	**10.79**	**164**	P	**Pn**	**14 01 50.6**	**+3.5**
	4.6nm,0.3s,baz=334,slow=1.1,SNR=16						
BATI				LR	LR	14 06 53.5	
	comp=Z,1μm,19.4s,baz=17,slow=42						
BATI	**Baumata**	**10.79**	**164**	P	**Pn**	**14 01 53.2**	**+6.1**
	101nm,0.9s,924nm						
ENPP	**El Nido**	**10.98**	**354**	eP	**Pn**	**14 01 50.4**	**+0.7**
KRKI	**Karangkates**	**11.68**	**224**	P	**Pn**	**14 02 09.0**	**+10**
	112nm,0.8s						
SJI	**Sawahan**	**11.88**	**228**	P	**Pn**	**14 02 14.5**	**+12**
	80nm,1.5s						
TPI	**Tanjungpandan**	**13.34**	**257**	P	**Pn**	**14 02 23.2**	**+1.6**
	50nm,0.8s						
PPBI	**Pangkal Pinang**	**14.72**	**261**	P	**Pn**	**14 02 43.4**	**+3.9**
	31nm,0.6s						
CBJI	**Citeko**	**15.29**	**244**	P	**Pn**	**14 02 54.0**	**+7.2**
	242nm,0.8s						
DBJI	**Dramaga**	**15.43**	**244**	P	**Pn**	**14 02 58.3**	**+10**
	67nm,1.5s						
KAKA	**Kakadu**	**17.37**	**138**	⇑iP	x	14 02 55.2	
	138nm,0.8s						
KGM	**Kluang**	**17.43**	**276**	⇑P	**Pn**	**14 03 15.2**	**+1.7**
KTGM	**Kuala Trenggan**	**18.22**	**286**	⇑P	**Pn**	**14 03 22.7**	**-0.4**
XMIS	**Christmas Isla**	**18.33**	**234**	ePn	**Pn**	**14 03 23.9**	**-0.5**
XMIS	**Christmas Isla**	**18.33**	**234**	P	**Pn**	**14 03 27.2**	**+2.8**
	103nm,1.2s						
KSI	**Kapahiang**	**18.46**	**258**	P	**Pn**	**14 03 28.9**	**+2.9**
	92nm,1.6s						
FRIM	**Kepong**	**19.26**	**279**	⇑P	**Pn**	**14 03 35.1**	**-0.3**
IPM	**Ipoh**	**20.07**	**282**	⇑P	**P**	**14 03 44.0**	**+1.6**
IPM	**Ipoh**	**20.07**	**282**	P	**P**	**14 03 43.2**	**+0.8**
	132nm,1.4s						
PDSI	**Padang**	**20.23**	**267**	P	**P**	**14 03 44.8**	**+0.6**
PPI	**Padang Panjang**	**20.28**	**268**	P	**P**	**14 03 46.2**	**+1.5**
	168nm,1.0s,2μm						
KULM	**Kulim**	**20.61**	**284**	⇓P	**P**	**14 03 49.3**	**+1.1**
KULM	**Kulim**	**20.61**	**284**	P	**P**	**14 03 48.3**	**+0.1**
	144nm,1.3s,1μm						
MBWA	**Marble Bar**	**21.27**	**182**	eP	**P**	**14 03 54.3**	**-0.9**
	75nm,1.4s,mb4.8						
MBWA				epP		14 04 11.9	
MBWA	**Marble Bar**	**21.27**	**182**	P	**P**	**14 03 58.0**	**+2.7**
QIZ	**Qiongzhong**	**21.49**	**331**	P	**P**	**14 03 56.8**	**-0.8**
QIZ				S	**S**	**14 07 51.9**	**+0.6**
QIZ	**Qiongzhong**	**21.49**	**331**	eP	**P**	**14 03 56.9**	**-0.8**
	17nm,0.7s,mb4.5						
TWG	**Pinlang**	**22.46**	**1**	eP	**P**	**14 04 09.2**	**+1.3**
	51nm,0.8s,mb4.9						
TPUB	**Ta-pu**	**22.94**	**360**	eP	**P**	**14 04 13.6**	**+0.7**
	34nm,0.6s,mb4.9						
YULB	**Yu-li**	**23.04**	**1**	eP	**P**	**14 04 14.0**	**+0.2**
	40nm,0.9s,mb4.8						
SSLB	**Suanglung**	**23.42**	**1**	eP	**P**	**14 04 18.6**	**+1.3**
	56nm,1.2s,mb4.8						
WRAB	**Tennant Creek**	**24.11**	**147**	P	**P**	**14 04 23.0**	**-0.6**
	919nm,0.6s,mb6.3,SNR=89						
WRAB	**Tennant Creek**	**24.11**	**147**	eP	**P**	**14 04 23.4**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,96nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**24.11**	**147**	eP	**P**	**14 04 23.4**	**-0.3**
	comp=Z,96nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**24.11**	**147**	P	**P**	**14 04 23.3**	**-0.3**
WB2	**Warramunga Arr**	**24.12**	**147**	eP	**P**	**14 04 23.0**	**-0.7**
YHNB	**Yeheng**	**24.31**	**2**	eP	**P**	**14 04 25.8**	**+0.4**
	comp=Z,103nm,1.4s,mb5.0						
COEN	**Coen**	**26.37**	**123**	eP	**P**	**14 04 43.6**	**-0.6**
	comp=Z,17nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**27.01**	**152**	P	**P**	**14 04 50.0**	**+0.2**
	comp=Z,23nm,0.5s,mb4.9,baz=344,slow=13,SNR=158						
ASAR				pP	pP	14 05 10.3	+1.3
	comp=Z,14nm,0.9s,baz=326,slow=9.9,SNR=7.0						
ASAR				ScP	ScP	14 11 39.8	-2.8
	comp=Z,2.0nm,0.7s,baz=336,slow=2.1,SNR=10						
BDT	**Bhumibol Dam**	**27.22**	**310**	P	**P**	**14 04 52.0**	**+0.2**
	comp=Z,24nm,0.8s,mb4.8						
JOW	**Kunigami**	**27.45**	**15**	P	**P**	**14 04 53.7**	**0.0**
	comp=Z,9.2nm,0.7s,mb4.4,baz=260,slow=5.3,SNR=6.2						
CMAR	**Chiang Mai Arr**	**27.99**	**312**	P	**P**	**14 04 58.6**	**-0.1**
	comp=Z,8.6nm,0.7s,mb4.4,baz=138,slow=7.2,SNR=50						
CMAR				PcP	PcP	14 08 11.7	-0.3
	comp=Z,1.4nm,0.8s,baz=190,slow=2.2,SNR=5.4						
CMAR				ScP	ScP	14 11 44.4	-1.2
	comp=Z,0.6nm,0.3s,baz=157,slow=2.5,SNR=6.1						
CMAR				LR	LR	14 15 50.9	
	comp=Z,289nm,21.5s,baz=117,slow=36						
CMAR	**Chiang Mai Arr**	**27.99**	**312**	P	**P**	**14 04 58.6**	**-0.1**
CMAR						14 08 11.7	
PMG	**Port Moresby**	**28.06**	**111**	eP	**P**	**14 04 59.1**	**-0.3**
PMG				pmax	pmax		
	comp=Z,18nm,0.8s						
PMG	**Port Moresby**	**28.06**	**111**	eP	**P**	**14 04 59.1**	**-0.3**
	comp=Z,18nm,0.8s,mb4.7						
CHG	**Chiang Mai**	**28.21**	**312**	⇓P	**P**	**14 05 01.4**	**+0.8**
	comp=Z,24nm,0.5s,mb5.0						
CHTO	**Chiang Mai**	**28.21**	**312**	P	**P**	**14 05 02.4**	**+1.7**
	SNR=6.7						
CHTO	**Chiang Mai**	**28.21**	**312**	eP	**P**	**14 05 00.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
CHTO	**Chiang Mai**	**28.21**	**312**	eP	**P**	**14 05 00.8**	**+0.2**
	comp=Z,18nm,0.8s,mb4.6						
CHRT	**Chiangrai**	**28.27**	**315**	⇑P	**P**	**14 05 00.0**	**-1.2**
	comp=Z,145nm,0.8s,mb5.6						
GYA	**Guiyang**	**29.36**	**334**	⇑iP	**P**	**14 05 11.5**	**+0.8**
GYA				AP	pP	14 05 29.6	-0.5
GYA				XP	sP	14 05 38.4	-1.5
GYA				PP	PP	14 06 09.5	-9.1
GYA				PPP		14 06 23.6	
GYA				PCP	PcP	14 08 17.5	+2.2
GYA				S	**S**	**14 09 56.8**	**-1.6**
GYA				SS	SS	14 11 37.5	-29
GYA				SCP	ScP	14 11 51.0	+1.2
GYA				PCS	PcS	14 11 59.5	+1.1
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
GYA				AMB	AMB		
	comp=Z,240nm,6.6s						
GYA				LR	LR		
	comp=N,1μm,11.5s						
GYA				LR	LR		
	comp=E,970nm,12.0s						
GYA				LR	LR		
	comp=Z,2μm,11.7s						
KMI	**Kunming**	**30.21**	**326**	P	**P**	**14 05 20.7**	**+2.4**
KMI				PPP		14 06 30.0	
KMI				S	**S**	**14 10 13.0**	**+1.2**
KMI				SSS		14 12 06.5	
KMI				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,32nm,4.4s						
FORT	**Forrest**	**31.62**	**168**	eP	**P**	**14 05 30.4**	**-0.3**
	comp=Z,20nm,0.5s,mb5.1						
NJ2	**Nanjing**	**31.70**	**357**	eP	**P**	**14 05 34.6**	**+3.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CTAO	**Charters Tower**	**32.18**	**130**	P	**P**	**14 05 35.2**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
CTAO	**Charters Tower**	**32.18**	**130**	P	**P**	**14 05 35.2**	**-0.5**
	comp=Z,7.3nm,0.9s,mb4.4						
NWAO	**Narrogin (SRO)**	**33.13**	**185**	P	**P**	**14 05 43.6**	**-0.2**
	comp=Z,12nm,0.8s,mb4.8,baz=3.8,slow=11,SNR=4.7						
NWAO				LR	LR	14 19 05.0	
	comp=Z,103nm,20.8s,baz=212,slow=36						
CBIJ	**Chichi jima**	**33.79**	**36**	P	**P**	**14 05 48.0**	**-1.6**
	comp=Z,135nm,0.6s,mb6.0,baz=196,slow=3.2,SNR=7.9						
CD2	**Chengdu**	**34.48**	**334**	P	**P**	**14 05 55.3**	**-0.2**
CD2				AP	pP	14 06 14.6	-0.5
CD2				XP	sP	14 06 24.2	-0.6
CD2				PP	PP	14 07 13.4	-1.9
CD2				PCP	PcP	14 08 27.8	-1.3
CD2				S	**S**	**14 11 18.6**	**+0.6**
CD2				AMB	AMB		
	comp=Z,170nm,0.8s,mb5.9						
CD2				AMB	AMB		
	comp=Z,140nm,4.7s						
CD2				LR	LR		
	comp=N,270nm,4.9s						
CD2				LR	LR		
	comp=Z,320nm,5.4s						
XAN	**Xi'an**	**35.39**	**343**	P	**P**	**14 06 02.9**	**-0.5**
XAN				AP	pP	14 06 22.9	-0.1
XAN				XP	sP	14 06 32.2	-0.5
XAN				PP	PP	14 07 27.2	+1.9
XAN				PPP		14 07 37.2	
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
XAN				AMB	AMB		
	comp=Z,138nm,6.1s						
XAN				LR	LR		
	comp=N,80nm,12.7s						
XAN				LR	LR		
	comp=E,165nm,13.5s						
XAN				LR	LR		
	comp=Z,211nm,15.9s						
SHL	**Shillong**	**37.50**	**314**	⇓iP	**P**	**14 06 22.0**	**+0.5**
STKA	**Stephens Creek**	**37.57**	**150**	⇑iP	**P**	**14 06 22.7**	**+0.7**
	comp=Z,47nm,0.6s,mb5.5						
STKA	**Stephens Creek**	**37.57**	**150**	P	**P**	**14 06 22.7**	**+0.7**
	comp=Z,58nm,0.6s,mb5.6,baz=323,slow=8.7,SNR=170						
STKA				pP	pP	14 06 42.4	+0.7
	comp=Z,19nm,0.7s,baz=289,slow=10,SNR=3.2						
STKA				LR	LR	14 24 37.8	
	comp=Z,144nm,18.2s,baz=256,slow=40						
KSRS	**Korea Array**	**37.65**	**9**	P	**P**	**14 06 23.2**	**+0.8**
	comp=Z,8.1nm,0.7s,mb4.7,baz=192,slow=9.4,SNR=27						
KSRS				pP	pP	14 06 42.2	0.0
	comp=Z,4.0nm,0.7s,baz=192,slow=8.6,SNR=4.8						
KSRS				LR	LR	14 22 35.9	
	comp=Z,56nm,18.7s,baz=91,slow=37						
LZH	**Lanzhou**	**38.95**	**338**	eP	**P**	**14 06 34.5**	**+1.0**
LZH				AP	pP	14 06 56.5	+3.1
LZH				XP	sP	14 07 04.0	+1.0
LZH				PP	PP	14 08 11.0	+6.6
LZH				PCP	PcP	14 08 41.5	-1.1
LZH				S	**S**	**14 12 22.2**	**-3.8**
LZH				SS	SS	14 15 18.0	-3.1
LZH				AMB	AMB		
	comp=Z,51nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,247nm,6.4s						
LZH				LR	LR		
	comp=N,712nm,14.4s						
LZH				LR	LR		
	comp=Z,963nm,15.4s						
MAJO	**Matsushiro**	**39.63**	**22**	eP	**P**	**14 06 37.3**	**-1.8**
MAT	**Matsushiro**	**39.63**	**22**	P	**P**	**14 06 37.1**	**-2.0**
MAT				eS	**S**	**14 12 37.0**	**+0.9**
MJAR	**Matsushiro Arr**	**39.63**	**22**	P	**P**	**14 06 36.9**	**-2.2**
	comp=Z,4.0nm,0.8s,mb4.3,baz=200,slow=8.6,SNR=8.2						
MJAR				pP	pP	14 06 58.0	-1.0
	comp=Z,1.9nm,0.5s,baz=192,slow=8.5,SNR=3.6						
MJAR				ScP	ScP	14 12 24.1	-2.1
	comp=Z,3.7nm,0.9s,baz=189,slow=4.1,SNR=5.9						
MJAR	**Matsushiro Arr**	**39.63**	**22**	P	**P**	**14 06 36.9**	**-2.2**
MJAR				pP	pP	14 06 58.0	-1.0
MJAR				ScP	ScP	14 12 24.1	-2.1
BJT	**Baijiatuau**	**39.81**	**355**	eP	**P**	**14 06 41.0**	**+0.4**
BJT				pmax	pmax		
	comp=Z,75nm,0.6s						
BJT	**Baijiatuau**	**39.81**	**355**	eP	**P**	**14 06 41.0**	**+0.4**
	comp=Z,75nm,0.6s,mb5.7						
BJI	**Beijing**	**39.84**	**355**	P	**P**	**14 06 41.3**	**+0.5**
BJI				S	**S**	**14 12 40.6**	**+1.5**
BJI				AMB	AMB		
	comp=Z,111nm,0.6s,mb5.9						
BJI				LR	LR		
	comp=N,170nm,16.0s						
BJI				LR	LR		
	comp=E,212nm,20.1s						
PALK	**Pallekele**	**40.46**	**281**	eP	**P**	**14 06 46.2**	**-0.1**
	comp=E,14nm,0.8s,mb4.8						
LSA	**Lhasa**	**40.62**	**319**	P	**P**	**14 06 49.0**	**+1.6**
LSA				AMB	AMB		
	comp=Z,140nm,0.7s,mb5.9						
LSA	**Lhasa**	**40.62**	**319**	eP	**P**	**14 06 48.8**	**+1.4**
LSA				pmax	pmax		
	comp=Z,91nm,0.6s,mb5.8						
LSA	**Lhasa**	**40.62**	**319**	eP	**P**	**14 06 48.8**	**+1.4**
	comp=Z,91nm,0.6s,mb5.8						
LSA				epP	pP	14 07 05.9	-1.5
VIS	**Vishakhapatnam**	**40.62**	**297**	eP	**P**	**14 06 46.9**	**-0.7**
VIS				AMb	AMB	14 06 53.0	
	comp=Z,79nm,1.7s,mb5.3						
BOK	**Bokaro**	**41.07**	**307**	eP	**P**	**14 06 51.2**	**0.0**
HHC	**Hu-ho-hao-te**	**41.27**	**350**	eP	**P**	**14 06 53.1**	**+0.5**
HHC				AP	pP	14 07 11.3	-1.3
HHC				XP	sP	14 07 20.7	-1.5
HHC				PP	PP	14 08 32.5	+3.0
HHC				eS	**S**	**14 13 02.3**	**+1.9**
HHC				XS	sS	14 13 41.2	+6.4
HHC				SS	SS	14 16 03.2	-3.9
HHC				AMB	AMB		
	comp=Z,33nm,0.8s,mb5.2						
HHC				AMB	AMB		
	comp=Z,123nm,4.0s						
HHC				LR	LR		
	comp=N,118nm,13.1s						
HHC				LR	LR		
	comp=E,172nm,15.5s						
HHC				LR	LR		

comp=Z,156nm,14.3s
BTO Baotou 41.34 348 *e*P **P** **14 06 53.5 +0.4**
BTO AMB AMB
comp=Z,15nm,0.9s,mb4.8
SNY Shenyang 41.49 3 ⇓P **P** **14 06 54.5 +0.1**
SNY AP pP 14 07 15.0 +0.6
SNY AMB AMB
comp=Z,33nm,0.7s,mb5.3
ODAN Odare 41.53 312 *e*P **P** **14 06 55.4 +0.5**
TAPN Taplejung 41.57 313 *e*P **P** **14 06 55.7 +0.4**
comp=Z,52nm,0.6s,mb5.4
MDRS Chennai 42.03 289 *ex* x 14 08 25.1
RAMN Ramite 42.16 312 *e*P **P** **14 07 00.8 +0.7**
ARMA Armidale 42.38 139 *e*P **P** **14 07 04.0 +2.2**
JIRN Jiri 42.86 312 *e*P **P** **14 07 06.2 +0.5**
comp=Z,113nm,0.6s,mb5.8
GUN Gumba 43.23 313 *e*P **P** **14 07 09.1 +0.4**
comp=Z,188nm,0.7s,mb5.9
PKI Pulchoki 43.39 312 *e*P **P** **14 07 10.2 +0.2**
comp=Z,61nm,0.7s,mb5.5
PKI Pulchoki 43.39 312 *e*P **P** **14 07 10.2 +0.2**
PKI pmax pmax
comp=Z,61nm,0.7s,mb5.4
PKIN Phulchoki 43.40 312 *e*P **P** **14 07 10.1 0.0**
comp=Z,48nm,0.7s,mb5.4
GTA Gaotai 43.41 336 P **P** **14 07 11.1 +1.1**
GTA AP pP 14 07 31.4 +1.3
GTA XP sP 14 07 41.7 +2.0
GTA PCP PcP 14 08 57.6 +0.6
GTA S **S** **14 13 32.9 +0.9**
GTA AMB AMB
comp=Z,31nm,0.8s,mb5.1
GTA AMB AMB
comp=Z,119nm,4.5s
GTA LR LR
comp=N,132nm,14.4s
GTA LR LR
comp=E,107nm,15.9s
CN2 Changchun 43.59 5 *e*P **P** **14 07 10.7 -0.7**
CN2 *e*XP sP 14 07 40.6 -0.5
CN2 *e*S **S** **14 13 35.3 +0.8**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.5
CN2 AMB AMB
comp=Z,200nm,5.0s
KKN Kakani 43.60 312 *e*P **P** **14 07 12.0 +0.3**
comp=Z,45nm,0.6s,mb5.3
KKN Kakani 43.60 312 *e*P **P** **14 07 12.0 +0.3**
KKN pmax pmax
comp=Z,45nm,0.6s,mb5.4
DMN Daman 43.64 312 *e*P **P** **14 07 12.4 +0.4**
comp=Z,69nm,0.6s,mb5.5
TOO Toolangi 44.05 151 ⇑*i*P **P** **14 07 16.4 +1.3**
CAN Canberra 44.15 146 *e*P **P** **14 07 17.6 +1.6**
CAN pmax pmax
comp=Z,71nm,0.6s,mb5.6
CAN Canberra 44.15 146 *e*P **P** **14 07 17.6 +1.6**
comp=Z,71nm,0.6s,mb5.6
CAN *e*pP pP 14 07 36.9 +0.7
GKN Gorkha 44.20 312 *e*P **P** **14 07 16.7 +0.2**
comp=Z,80nm,0.7s,mb5.6
TRD Trivandrum 44.30 282 *e*P **P** **14 07 18.6 +1.0**
TRD AMb AMB 14 07 21.4
comp=Z,131nm,1.3s,mb5.5
CNB Canberra Magne 44.35 146 *e*P **P** **14 07 19.0 +1.4**
HYB Hyderabad 44.81 295 *e*P **P** **14 07 21.5 0.0**
HYB pmax pmax
comp=Z,92nm,0.8s,mb5.6
HYB Hyderabad 44.81 295 *i* P **P** **14 07 21.5 0.0**
comp=Z,92nm,0.8s,mb5.6
HYB *e*pP pP 14 07 42.0 +0.2
HYB Hyderabad 44.81 295 *e*P **P** **14 07 21.5 0.0**
comp=Z,92nm,0.8s,mb5.6
HYB *e* pP 14 07 42.0 +0.2
KOLN Koldanda 44.85 311 *e*P **P** **14 07 22.0 +0.3**
comp=Z,109nm,0.8s,mb5.6
MDJ Mudanjiang 44.91 9 P **P** **14 07 22.3 +0.5**
MDJ AP pP 14 07 41.8 -0.3
MDJ PP PP 14 09 07.2 -1.1
MDJ S **S** **14 13 55.1 +1.6**
MDJ AMB AMB
comp=Z,34nm,1.2s,mb5.0
MDJ AMB AMB
comp=Z,101nm,5.2s
DANN Dangsing 45.04 312 *e*P **P** **14 07 23.4 +0.2**
comp=Z,125nm,0.6s,mb5.8
NGP Nagpur 45.63 300 *e*P **P** **14 07 27.3 -0.7**
AKL Akola 47.25 298 *e*P **P** **14 07 40.7 +0.1**
AKL AMb AMB 14 07 42.9
comp=Z,52nm,0.8s,mb5.3
KAD Karad 48.78 293 *e*P **P** **14 07 52.0 -0.5**
KAD AMb AMB 14 07 53.0
comp=Z,37nm,0.5s,mb5.6
HIA Hailar 48.86 359 *e*P **P** **14 07 52.6 +0.1**
HIA pmax pmax
comp=Z,6.0nm,0.6s
HIA Hailar 48.86 359 *e*P **P** **14 07 52.6 +0.1**
comp=Z,5.9nm,0.6s,mb4.7
ULN Ulaanbaatar 48.90 348 P **P** **14 07 53.9 +1.0**
SNR=18
ULN Ulaanbaatar 48.90 348 ⇑*e*P **P** **14 07 53.9 +1.0**
ULN Ulaanbaatar 48.90 348 *e*P **P** **14 07 53.6 +0.7**
comp=Z,62nm,0.8s,mb5.6
ULN Ulaanbaatar 48.90 348 P **P** **14 07 53.5 +0.6**
comp=Z,98nm,1.4s,comp=Z,782nm,mb5.6
SONM Songino Array 49.02 347 P **P** **14 07 54.2 +0.5**
comp=Z,35nm,0.7s,mb5.4,baz=164,slow=8.3,SNR=213
SONM pP pP 14 08 14.1 -0.3
comp=Z,8.5nm,0.8s,baz=159,slow=11,SNR=4.1
TAU Tasmania Unive 49.16 154 *e*P **P** **14 07 56.0 +1.0**
POO Poona 49.42 294 *ex* x 14 07 55.0
POO *e*P 14 07 57.1
POO AMb AMB 14 07 57.9
comp=Z,38nm,0.4s,mb5.7
HABR Khabarovsk 49.65 13 *e*P **P** **14 07 54.8 -3.8**
HABR *e* 14 09 16.7
HABR *e* 14 09 51.1
HABR *e*S **S** **14 15 00.5 -0.2**
HABR *e*SSS 14 19 56.8
KLR Kul'dur 49.74 10 *e*P **P** **14 07 54.6 -4.7**
NDI New Delhi 50.23 308 *e*P **P** **14 08 01.0 -2.3**
AJM Ajmer 51.38 304 *e*P **P** **14 08 12.1 0.0**
AJM AMb AMB 14 08 13.6
comp=Z,30nm,1.0s,mb5.3
SMLA Simla 51.38 311 *e*P **P** **14 08 12.1 +0.1**
SMLA AMb AMB 14 08 14.1
comp=Z,85nm,1.1s,mb5.7
CIT Chita 51.96 354 *e*P **P** **14 08 17.8 +1.9**
ZAK Zakamensk 52.12 346 *e*P **P** **14 08 17.2 +0.1**
ZAK pmax pmax
comp=Z,17nm,1.2s,mb5.0
WMQ Urumqi 52.41 330 P **P** **14 08 20.7 +1.3**
WMQ XP sP 14 08 49.3 -0.3
WMQ PCP PcP 14 09 31.6 +2.4
WMQ S **S** **14 15 39.0 -0.1**
WMQ PS 14 16 00.5
WMQ XS sS 14 16 13.0 -1.6
WMQ SCS ScS 14 18 00.2 -1.1
WMQ AMB AMB
comp=Z,57nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,109nm,3.0s
WMQ LR LR
comp=N,84nm,23.0s
WMQ LR LR
comp=E,102nm,21.0s
THN Thein Dam 53.09 312 *e*P **P** **14 08 23.4 -1.2**
TLY Talaya 53.24 347 P **P** **14 08 26.0 +0.6**
comp=E,281nm,0.7s,mb6.4,SNR=5.2
TLY Talaya 53.24 347 P **P** **14 08 27.4 +2.1**
SNR=6.3
TLY Talaya 53.24 347 *e*P **P** **14 08 27.1 +1.7**
TLY pmax pmax
comp=Z,38nm,0.8s,mb5.5
TLY Talaya 53.24 347 *e*P **P** **14 08 25.9 +0.5**
comp=Z,36nm,0.8s,mb5.5
IRK Irkutsk 53.63 348 *e*P **P** **14 08 28.4 +0.2**
IRK pmax pmax
comp=Z,41nm,1.5s,mb5.2
MOY Mondy 53.88 345 *e*P **P** **14 08 31.8 +1.8**
MOY pmax pmax
comp=Z,8.0nm,2.2s,mb4.4
CLNS Chul'man 56.54 3 *e*P **P** **14 08 49.5 +0.5**
CLNS pmax pmax
comp=Z,37nm,0.8s,mb5.5
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=N,18nm,0.8s
MK31 Makanchi Array 57.21 330 *i* P **P** **14 08 54.3 +0.3**
MKAR Makanchi Array 57.21 330 P **P** **14 08 54.4 +0.3**
comp=N,28nm,0.7s,mb5.4,baz=130,slow=8.0,SNR=240
MKAR pP pP 14 09 14.5 -0.6
comp=N,6.9nm,0.7s,baz=141,slow=7.8,SNR=3.9
MKAR LR LR 14 33 49.8
comp=N,72nm,19.8s,baz=122,slow=36
MKAR Makanchi Array 57.21 330 P **P** **14 08 54.4 +0.3**
MKAR pP pP 14 09 14.5 -0.6
MKAR LR LR 14 33 49.8
BOD Bodaibo 57.66 356 *e*P **P** **14 08 56.6 -0.4**
BOD pmax pmax
comp=Z,36nm,1.2s,mb5.3
KZA Kyzart 58.32 321 P **P** **14 09 03.5 +1.6**
SNR=11
TKM2 Tokmak 2 58.57 322 *e*P **P** **14 09 04.0 +0.4**
TKM2 pmax pmax
comp=Z,21nm,1.0s,mb5.1
TKM2 Tokmak 2 58.57 322 P **P** **14 09 04.4 +0.8**
SNR=17
TKM2 Tokmak 2 58.57 322 *e*P **P** **14 09 04.0 +0.4**
comp=Z,21nm,1.0s,mb5.1
KBK Karagaybulak 58.82 322 P **P** **14 09 06.7 +1.4**
SNR=21
KBL Kabul 59.02 311 *e*P **P** **14 09 06.7 -0.2**
KBL pmax pmax
comp=Z,39nm,0.7s,mb5.5
KBL Kabul 59.02 311 *e*P **P** **14 09 06.7 -0.2**
comp=Z,39nm,0.7s,mb5.5
KBL *e*pP pP 14 09 28.0 -0.1
AAK Ala-Archa 59.09 322 P **P** **14 09 08.8 +1.6**
comp=Z,87nm,1.2s,mb5.7,SNR=9.9
AAK Ala-Archa 59.09 322 P **P** **14 09 09.3 +2.0**
SNR=9.8
AAK Ala-Archa 59.09 322 ⇓*i*P **P** **14 09 08.0 +0.8**
AAK pmax pmax
comp=Z,13nm,1.2s,mb4.8
AAK Ala-Archa 59.09 322 P **P** **14 09 08.1 +0.9**
SNR=6.6
AAK Ala-Archa 59.09 322 *e*P **P** **14 09 08.0 +0.8**
comp=Z,31nm,1.3s,mb5.2
AAK *e*pP pP 14 09 29.1 +0.7
AAK Ala-Archa 59.09 322 P **P** **14 09 08.3 +1.1**
FRU Bishkek 59.12 322 *e*P **P** **14 09 04.0 -3.4**
AML Almayashu 59.32 321 P **P** **14 09 10.5 +1.7**
SNR=6.6
AML Almayashu 59.32 321 *e*P **P** **14 09 09.8 +1.0**
comp=Z,23nm,1.0s,mb5.2
AML *e*pP pP 14 09 30.6 +0.6
USP Ospenovka 59.43 322 P **P** **14 09 10.8 +1.2**
SNR=9.6
EKS2 Erkin-Say 59.55 321 P **P** **14 09 12.2 +1.8**
SNR=5.8
EKS2 Erkin-Say 59.55 321 *e*P **P** **14 09 11.7 +1.3**
comp=Z,15nm,1.1s,mb4.9
EKS2 *e*pP pP 14 09 31.3 -0.2
EKS2 *e*PcP PcP 14 09 57.5 +0.5
PETK Petropavlovsk- 61.03 25 P **P** **14 09 20.2 0.0**
comp=Z,16nm,0.8s,mb5.1,baz=194,slow=4.2,SNR=12
ZAA0 Zalesovo Array 61.16 337 *e*P **P** **14 09 20.1 -1.0**
ZAA0 *e*pP pP 14 09 41.5 -1.0
ZALV Zalesovo Beam 61.16 337 P **P** **14 09 20.3 -0.8**
comp=Z,32nm,0.8s,mb5.4,baz=129,slow=6.1,SNR=107
ZALV pP pP 14 09 41.8 -0.6
comp=Z,17nm,0.9s,baz=120,slow=7.4,SNR=5.3
ZALV LR LR 14 36 31.8
comp=Z,50nm,18.4s,baz=247,slow=37
KURK Kurchatov 61.63 331 P **P** **14 09 24.9 +0.5**
comp=Z,385nm,0.7s,mb6.5,SNR=43
KURK Kurchatov 61.63 331 P **P** **14 09 24.7 +0.4**
SNR=20
KURK Kurchatov 61.63 331 P **P** **14 09 23.6 -0.8**
comp=Z,20nm,0.6s,mb5.3,baz=139,slow=6.6,SNR=102
KURK pP pP 14 09 44.8 -0.9
comp=Z,14nm,0.9s,baz=135,slow=6.3,SNR=7.1
KURK Kurchatov 61.63 331 ⇑*e*P **P** **14 09 24.2 -0.2**
KURK pmax pmax
comp=Z,69nm,1.0s,mb5.6
KURK Kurchatov 61.63 331 *e*P **P** **14 09 24.2 -0.2**
comp=Z,54nm,0.9s,mb5.6
KURK *e*pP pP 14 09 45.2 -0.5
KURK *e*sP sP 14 09 52.2 -2.8
KK31 Karatay Array 61.84 320 P **P** **14 09 25.4 -0.5**
KK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KK31 Karatay Array 61.84 320 *i* P **P** **14 09 25.4 -0.5**
YAK Yakutsk 62.02 5 *e*P **P** **14 09 26.0 -0.8**
YAK pmax pmax
comp=Z,154nm,0.9s,mb6.0
YAK pmax pmax
comp=N,40nm,1.1s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK Yakutsk 62.02 5 *e*P **P** **14 09 25.6 -1.2**
comp=E,181nm,0.8s,mb6.2
YAK *e*pP pP 14 09 48.6 +0.5
NVS Novosibirsk 62.45 337 *e*P **P** **14 09 27.8 -2.0**
NVS pmax pmax
comp=Z,57nm,1.3s,mb5.4
NVS pmax pmax
comp=N,46nm,1.5s
NVS pmax pmax
comp=E,33nm,1.4s
CASY Casey 66.75 184 P **P** **14 09 56.5 -1.1**
SEY Seymchan 66.88 15 ⇑*e*P **P** **14 09 58.2 -0.2**
BVA0 Borovoye Array 67.10 330 *i* P **P** **14 09 59.7 -0.3**
BVA0 pmax pmax
comp=Z,17nm,1.3s,mb4.7
BVAR Borovoye Array 67.10 330 P **P** **14 09 60.0 0.0**
comp=Z,20nm,0.8s,mb5.0,baz=134,slow=8.6,SNR=97
BRVK Borovoye 67.17 330 P **P** **14 10 00.4 -0.1**
comp=Z,266nm,1.0s,mb6.0,SNR=27
BRVK Borovoye 67.17 330 P **P** **14 10 01.2 +0.8**
SNR=20
BRVK Borovoye 67.17 330 *e*P **P** **14 10 00.3 -0.2**
BRVK *e*PP pP 14 10 22.0 -0.1
BRVK pmax pmax
comp=Z,46nm,1.0s,mb5.3
BRVK Borovoye 67.17 330 *e*P **P** **14 10 00.3 -0.2**
comp=Z,46nm,1.0s,mb5.3
BRVK *e*pP pP 14 10 22.0 -0.1
DRV Dumont d'Urvil 68.14 172 S S 14 18 57.0 -2.5
DRV SS SS 14 23 21.0 -2.7
DRV R 14 32 00.0
AB31 Akbulak array 71.13 323 P **P** **14 10 24.4 -0.7**
AB31 pmax pmax
comp=Z,16nm,0.7s,mb5.0
TIXI Tiksi 71.50 3 ⇓*i*P **P** **14 10 25.5 -1.4**
TIXI pmax pmax
comp=Z,67nm,1.0s,mb5.4
TIXI Tiksi 71.50 3 *e*P **P** **14 10 25.3 -1.5**
comp=Z,53nm,0.9s,mb5.4
AKTK Aktyubinsk 72.73 324 P **P** **14 10 34.5 -0.1**
AKTO Aktyubinsk 72.73 324 P **P** **14 10 34.5 -0.1**
comp=Z,16nm,0.8s,mb4.9,baz=108,slow=7.2,SNR=64
SVE Sverdlovsk 73.86 330 ⇓*e*P **P** **14 10 41.0 -0.1**
SVE pmax pmax
comp=Z,69nm,1.0s,mb5.3
OPO Ambohidratompo 74.42 251 P **P** **14 10 43.4 -1.8**
comp=Z,4.4nm,0.8s,mb4.2,baz=76,slow=5.6,SNR=9.1
OPO pP pP 14 11 07.3 +0.1
comp=Z,2.8nm,0.9s,baz=95,slow=4.2,SNR=3.1
BILL Bilibino 74.53 16 P **P** **14 10 43.0 -1.8**
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
BILL Bilibino 74.53 16 *e*P **P** **14 10 43.1 -1.7**
comp=Z,4.4nm,0.9s,mb4.2
ARU Arti 74.74 329 P **P** **14 10 45.3 -0.9**
comp=Z,202nm,0.9s,mb5.8,SNR=13
ARU Arti 74.74 329 *d* *i*P **P** **14 10 45.6 -0.6**
ARU pmax pmax
comp=Z,49nm,1.1s,mb5.2
ARU Arti 74.74 329 *e*P **P** **14 10 45.3 -0.9**
comp=Z,35nm,0.9s,mb5.1
ARU *e*pP pP 14 11 05.3 -2.9
UMR Umm Al-Rimmam 75.08 300 *e*P **P** **14 10 47.4 -1.4**
baz=300
UMR AMb AMB 14 10 49.0
comp=Z,68nm,1.1s,mb5.3,baz=300
MIB Mutribah 75.44 301 *e*P **P** **14 10 49.5 -1.4**
baz=301
MIB AMb AMB 14 10 51.0
comp=Z,82nm,0.8s,mb5.5,baz=301
NAY Al-Naaiem 75.45 300 *e*P **P** **14 10 48.8 -2.1**
baz=300
NAY AMb AMB 14 10 50.8
comp=Z,23nm,1.4s,mb4.7,baz=300
MAW Mawson 78.43 199 P **P** **14 11 05.5 -1.3**
comp=Z,5.6nm,0.9s,mb4.3,baz=84,slow=5.7,SNR=4.6
MAW LR LR 14 39 53.6
comp=Z,48nm,19.0s,baz=288,slow=31
GNI Garni 79.11 311 P **P** **14 11 12.4 +1.2**
comp=Z,7.2nm,0.7s,mb4.6,baz=70,slow=12,SNR=4.1
GNI Garni 79.11 311 *e*P **P** **14 11 11.5 +0.4**
GNI pmax pmax
comp=Z,14nm,0.9s
GNI Garni 79.11 311 *e*P **P** **14 11 11.4 +0.3**
comp=Z,14nm,0.9s,mb4.8
TBLG Delisi 79.36 312 *i* P **P** **14 11 13.1 +0.6**
TBLG Delisi 79.36 312 P **P** **14 11 13.1 +0.6**
VNDA Vanda 80.80 172 P **P** **14 11 18.6 -1.0**
comp=Z,2.6nm,0.7s,mb4.2,baz=283,slow=7.4,SNR=13
VNDA LR LR 14 46 41.1
comp=Z,87nm,20.4s,baz=330,slow=35
VNDA Vanda 80.80 172 *e*P **P** **14 11 18.1 -1.4**
VNDA pmax pmax
comp=Z,5.0nm,1.0s
VNDA Vanda 80.80 172 *e*P **P** **14 11 18.1 -1.4**
comp=Z,5.1nm,1.0s,mb4.3
KIV Kislovodsk 81.19 314 *e*P **P** **14 11 23.9 +1.6**
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.7
KIV Kislovodsk 81.19 314 P **P** **14 11 20.7 -1.6**
VRHR Novokhopersk 82.94 321 *e*P **P** **14 11 30.5 -0.7**
VRHR pmax pmax
comp=Z,30nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VORD Divnogorie 84.38 321 *e*P **P** **14 11 37.7 -0.9**
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=Z,40nm,0.8s,mb5.3
VORD pmax pmax
comp=E,20nm,0.6s
VSR Storozhevoye 84.49 321 *e*P **P** **14 11 37.9 -1.2**
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,0.5s
ASF Jabal al Asfar 84.60 302 P **P** **14 11 41.0 +0.9**
comp=E,28nm,0.8s,mb5.2,baz=326,slow=2.8,SNR=20
KLMR Klimovskoe 85.48 331 *e*P **P** **14 11 42.0 -1.9**
KLMR pmax pmax
comp=Z,49nm,1.3s,mb5.3
MMAI Mount Meron Ar 85.90 303 P **P** **14 11 47.2 +0.6**
comp=Z,9.3nm,0.6s,mb4.9,baz=72,slow=8.2,SNR=5.1
EIL Elat 86.16 300 P **P** **14 11 48.4 +0.4**
comp=Z,12nm,0.8s,mb4.9,baz=10,slow=2.7,SNR=8.4
OBN Obninsk 86.43 325 ⇑*i*P **P** **14 11 48.0 -0.7**
OBN *e**SP sP 14 12 19.5 -0.7
OBN pmax pmax
comp=Z,77nm,1.6s,mb5.4
OBN Obninsk 86.43 325 *e*P **P** **14 11 48.0 -0.7**
comp=Z,42nm,0.9s,mb5.4
SIM Simferopol' 87.39 315 *e*P **P** **14 11 53.0 -0.6**
SIM pmax pmax
comp=Z,26nm,0.9s,mb5.2
BRTR Keskin Array B 87.56 310 P **P** **14 11 53.4 -1.2**
comp=Z,15nm,0.7s,mb5.1,baz=130,slow=6.0,SNR=70
MCK McKinley 89.98 26 *e*P **P** **14 12 03.2 -2.2**
MCK pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
MCK McKinley 89.98 26 *e*P **P** **14 12 03.2 -2.2**
comp=Z,7.3nm,0.9s,mb4.8
QSPA South Pole Qui 90.16 180 P **P** **14 12 05.8 -0.1**
comp=Z,7.9nm,0.9s,mb4.8
COLA College 90.43 25 P **P** **14 12 06.6 -0.9**
COLA pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
COLA College 90.43 25 P **P** **14 12 06.6 -0.9**
comp=Z,1.1nm,0.5s,mb4.2
AKASG Malin Array Be 90.74 321 P **P** **14 12 07.4 -1.8**
comp=Z,7.8nm,0.6s,mb5.0,baz=74,slow=4.7,SNR=17
KIEV Kiev 90.75 321 *e*P **P** **14 12 06.6 -2.7**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
KIEV Kiev 90.75 321 *e*P **P** **14 12 06.6 -2.7**
comp=Z,5.1nm,0.6s,mb4.8
ARCES ARCESS Array B 91.60 339 P **P** **14 12 12.8 -0.1**
comp=Z,2.2nm,0.8s,mb4.4,baz=74,slow=5.2,SNR=6.9
LSZ Lusaka 92.45 255 *e*P **P** **14 12 11.1 -6.8**
LSZ *e**PP pP 14 12 40.6 +0.1
LSZ pmax pmax
comp=Z,15nm,1.3s,mb5.1
LSZ Lusaka 92.45 255 *e*P **P** **14 12 11.1 -6.8**
comp=Z,15nm,1.3s,mb5.1
LSZ *e*pP pP 14 12 40.6 +0.1
SPITS Spitsbergen Ar 92.70 348 P **P** **14 12 16.1 -1.7**
comp=Z,1.7nm,0.4s,mb4.7,baz=359,slow=7.5,SNR=18
BUR08 Bucovina Ar. S 93.53 318 *e*P **P** **14 12 21.4 -0.8**
NOA NORSAR Array B 99.13 332 P **P** **14 12 45.4 -1.9**
comp=Z,1.0nm,0.7s,mb4.5,baz=74,slow=4.7,SNR=2.8
YKA Yellowknife Ar 105.13 23 Pdiff Pdif 14 13 13.5 -0.6
comp=Z,0.3nm,0.6s,baz=296,slow=4.7,SNR=5.6
YKA PKiKP PKiKP 14 17 27.0 -1.0
comp=Z,0.4nm,0.6s,baz=304,slow=1.8,SNR=7.7
PDAR Pinedale Array 117.94 40 PKP PKPdf 14 17 52.4 -0.5
comp=Z,0.4nm,0.8s,baz=349,slow=3.0,SNR=3.7
PDAR PKKPbc PKKPbc 14 28 14.3 -0.2
comp=Z,0.7nm,0.8s,baz=104,slow=6.3,SNR=5.7
TORD Torodi Ar. Bea 118.09 285 PKP PKPdf 14 17 51.7 -2.1
comp=Z,0.8nm,0.6s,baz=70,slow=1.5,SNR=8.7
TORD Torodi Ar. Bea 118.09 285 PKP PKPdf 14 17 51.7 -2.1
ULM Lac du Bonnet 120.85 26 PKP PKPdf 14 17 55.4 -2.8
comp=Z,2.1nm,0.6s,baz=313,slow=2.0,SNR=3.5
ULM Lac du Bonnet 120.85 26 PKP PKPdf 14 17 55.4 -2.8
DBIC Dimbokro 125.22 278 PKIKP PKPdf 14 18 05.7 -1.9

*ISCJB **06** 14:05:18.4±2.0, 1045N±005×12681E±005, h8km±13km, mb3.9/11, Error ellipse: s-maj=8.5km s-min=8.0km az=3.8*
*MAN **06** 14:05:19, 1043N×12668E, h1km, mb4.4, ML3.2, MS3.1*
*NEIC **06** 14:05:24.3±0.8, 1046N×12672E, h35km, mb4.0/3, Error ellipse: s-maj=26.8km s-min=12.8km az=76.0*
*IDC **06** 14:05:25.6±1.0, 1038N×12634E, h38km±6km, mb3.8/10, mb1 3.9/10, mb1mx3.7/21, mbtmp3.8/10, MS3.1/1, Ms1 3.1/1, ms1mx2.7/21, Error ellipse: s-maj=44.1km s-min=15.4km az=72.0*
ISC 06 14:05:19.7±2.5, 1044N±005×12672E±006, h2km±16km, n28, σ1$11/29, mb3.9/11, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.38**	**242**	⇑*e*P		**P**	**n**	**14 05 43.6**	**-2.3**
BUTP	**Butuan**	**1.82**	**217**	*e*P		**P**	**n**	**14 05 50.9**	**-1.2**
PLP	**Palo**	**1.85**	**293**	⇑*e*P		**P**	**n**	**14 05 51.8**	**-0.8**
PLP				*e*S		**S**	**n**	**14 06 16.4**	**-0.2**
MSLP	**Maasin**	**1.86**	**261**	*e*P		**P**	**n**	**14 05 51.0**	**-1.5**
MSLP				*e*S		**S**	**n**	**14 06 16.6**	**-0.1**
OCLP	**Ormoc**	**2.16**	**286**	*e*P		**P**	**n**	**14 05 57.5**	**+0.8**
LLP	**Lapu-Lapu**	**2.71**	**268**	*e*P		**P**	**n**	**14 06 04.4**	**+0.1**
LLP				*e*S		**S**	**n**	**14 06 41.2**	**+3.4**
TBP	**Tagbilaran**	**2.91**	**255**	*e*P		**P**	**n**	**14 06 07.8**	**+0.7**
BUKP	**Musuan**	**3.03**	**213**	*e*P		**P**	**n**	**14 06 09.6**	**+0.9**
BUKP				*e*S		**S**	**n**	**14 06 46.1**	**+0.6**
PVCP	**Virac**	**4.01**	**322**	*e*P		**P**	**n**	**14 06 23.3**	**+1.0**
RCP	**Roxas**	**4.06**	**286**	⇓*e*P		**P**	**n**	**14 06 23.7**	**+0.8**
GUIM	**Jordan**	**4.07**	**273**	*e*P		**P**	**n**	**14 06 22.9**	**0.0**
JOW	**Kunigami**	**16.37**	**5**	LR		LR		14 14 46.9	
comp=Z,64nm,21.2s,baz=3.9,slow=34									
KSM	**Kuching**	**18.58**	**242**	P		**P**	**n**	**14 09 40.5**	**+2.1**
5.2nm,0.7s									
BATI	**Baumata**	**20.74**	**189**	P		**P**		**14 10 02.6**	**+0.8**
20nm,0.7s,baz=323,slow=2.1,SNR=7.6									
KSRS	**Korea Array**	**26.92**	**2**	P		**P**		**14 11 04.3**	**+2.0**
1.1nm,0.8s,mb3.4,baz=186,slow=9.9,SNR=3.8									
CMAR	**Chiang Mai Arr**	**28.02**	**290**	P		**P**		**14 11 10.5**	**-2.0**
0.7nm,0.6s,mb3.5,baz=105,slow=7.1,SNR=6.0									
MBWA	**Marble Bar**	**32.15**	**192**	P		**P**		**14 11 47.4**	**-1.5**
8.3nm,0.8s,mb4.6									
ASAR	**Alice Springs**	**34.62**	**168**	P		**P**		**14 12 11.1**	**+0.6**

	0.4nm,0.6s,mb3.5,baz=347,slow=6.4,SNR=5.3						
ASAR				PcP	PcP	14 14 46.6	+1.5
	0.3nm,0.9s,baz=338,slow=3.1,SNR=2.7						
ASAR				pPcP		14 14 56.8	
	0.8nm,0.7s,baz=345,slow=2.5,SNR=7.5						
ULN	Ulaanbaatar	40.81	340	P	P	14 13 04.3	+1.7
	1.8nm,0.9s,mb3.7						
STKA	Stephens Creek	44.42	162	P	P	14 13 32.3	+0.2
	1.7nm,0.7s,mb3.9,baz=315,slow=21,SNR=3.6						
MKAR	Makanchi Array	52.16	322	P	P	14 14 31.0	-0.8
	0.7nm,0.5s,mb3.9,baz=121,slow=7.7,SNR=7.0						
MKAR				pP		14 14 42.7	
	0.6nm,0.6s,baz=110,slow=8.0,SNR=3.7						
MKAR				PcP	PcP	14 15 43.2	-0.3
	1.1nm,0.7s,baz=104,slow=5.1,SNR=4.7						
MKAR				pPcP		14 15 55.0	
	1.5nm,0.7s,baz=105,slow=5.0,SNR=6.0						
ZAA0	Zalesovo Array	54.69	331	eP	P	14 14 49.3	-0.9
ZALV	Zalesovo Beam	54.69	331	P	P	14 14 49.3	-0.9
	2.3nm,0.6s,mb4.4,baz=119,slow=6.9,SNR=9.4						
ZALV				pP		14 15 01.3	
	2.4nm,0.8s,baz=104,slow=6.3,SNR=4.8						
KURK	Kurchatov	56.18	325	P	P	14 15 00.3	-0.7
	1.6nm,0.7s,mb4.2,baz=124,slow=6.5,SNR=8.3						
KURK				pP		14 15 11.9	
	1.0nm,0.6s,baz=125,slow=6.2,SNR=2.9						
BVAR	Borovoye Array	61.78	325	P	P	14 15 39.7	-0.1
	0.5nm,0.6s,mb3.8,baz=139,slow=7.7,SNR=3.3						
BVAR				PcP	PcP	14 16 19.9	-1.1
	0.9nm,0.8s,baz=125,slow=2.3,SNR=3.7						
BVAR				pPcP		14 16 32.3	
	0.7nm,0.7s,baz=134,slow=4.2,SNR=3.1						
ARCES	ARCESS Array B	84.19	340	P	P	14 17 52.0	-0.3
	1.2nm,0.5s,mb4.3,baz=75,slow=6.9,SNR=9.8						
TORD	Torodi Ar. Bea	120.61	292	PKP	PKPdf	14 24 12.8	-1.5
	0.4nm,0.6s,baz=80,slow=2.6,SNR=2.9						
TORD				pPKP	pPKPdf	14 24 24.8	+10
	0.7nm,0.8s,baz=58,slow=2.4,SNR=4.5						
TORD	Torodi Ar. Bea	120.61	292	PKP	PKPdf	14 24 12.8	-1.5
TORD				pPKP	pPKPdf	14 24 24.8	+10

*ISCJB **06** 14:09:51.5±3.3, 1044N±006×12670E±008, h22^{km}±23^{km}, mb4.1/14, Error ellipse: s-maj=13.0km s-min=9.7km az=154.3*

*NEIC **06** 14:09:55.4±0.6, 1046N×12660E, h35^{km}, mb4.2/2, Error ellipse: s-maj=21.8km s-min=11.2km az=77.0*

*IDC **06** 14:09:56.3±0.7, 1040N×12638E, h39^{km}±5^{km}, mb3.9/14, mb1 4.0/14, mb1mx3.8/22, mbtmp3.9/14, Error ellipse: s-maj=35.7km s-min=12.3km az=73.0*

ISC 06 14:09:53.4±3.4**, 1044N**±006×**12663E**±007**, h21**^{km}±24^{km}**, h41**^{km}±1.0^{km}**:pP-P, n29, σ0^{s}94**/27**, mb4.1**/14**, 2C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.30	240	⇑eP	Pn	14 10 14.3	-2.1
SCPH				eS	Sn	14 10 33.3	+0.1
PLP	Palo	1.78	294	⇑eP	Pn	14 10 22.5	-0.4
PLP				eS	Sn	14 10 45.0	0.0
LLP	Lapu-Lapu	2.63	268	eP	Pn	14 10 35.1	+0.5
TBP	Tagbilaran	2.83	255	eP	Pn	14 10 38.7	+1.3
DCPH	Dipolog City	3.73	241	eP	Pn	14 10 48.6	-1.1
RCP	Roxas	3.98	287	⇓eP	Pn	14 10 54.2	+1.0
KSM	Kuching	18.50	242	P	Pn	14 14 11.1	+2.4
	7.3nm,0.9s						
BATI	Baumata	20.72	188	P	P	14 14 33.1	+0.5
	22nm,0.7s,baz=10,slow=3.9,SNR=8.8						
CMAR	Chiang Mai Arr	27.94	290	P	P	14 15 40.5	-2.1
	1.0nm,0.8s,mb3.5,baz=98,slow=8.8,SNR=4.7						
MBWA	Marble Bar	32.12	192	P	P	14 16 18.7	-0.8
	7.9nm,0.9s,mb4.5						
ASAR	Alice Springs	34.63	168	P	P	14 16 41.1	-0.2
	0.4nm,0.5s,mb3.6,baz=347,slow=7.1,SNR=6.3						
ASAR				PcP	PcP	14 19 15.4	-0.1
	0.3nm,0.6s,baz=347,slow=3.8,SNR=3.7						
ASAR				pPcP		14 19 27.6	
	0.8nm,0.8s,baz=351,slow=2.5,SNR=5.4						
SONM	Songino Array	40.99	339	P	P	14 17 35.0	+0.2
	0.4nm,0.4s,mb3.4,baz=142,slow=12,SNR=3.6						
SONM				PcP	PcP	14 19 34.9	+0.2
	0.4nm,0.6s,baz=174,slow=2.9,SNR=2.9						
SONM				pPcP		14 19 47.3	
	0.4nm,0.6s,baz=166,slow=3.0,SNR=2.9						
NWAO	Narrogin (SRO)	44.04	191	P	P	14 17 59.9	+0.1
	7.8nm,1.0s,mb4.4,baz=22,slow=10,SNR=3.4						
NWAO				pP	pP	14 18 11.6	+5.4
	5.3nm,0.7s,baz=118,slow=14,SNR=1.4						
NWAO	Narrogin (SRO)	44.04	191	P	P	14 17 59.9	+0.1
NWAO				pP	pP	14 18 11.6	+5.4
STKA	Stephens Creek	44.45	162	P	P	14 18 02.6	-0.4
	2.8nm,0.7s,mb4.1,baz=9.8,slow=12,SNR=5.7						
PETK	Petropavlovsk-	49.34	24	pP	pP	14 18 55.2	+7.7
	5.0nm,0.9s,baz=213,slow=9.6,SNR=2.9						
MKAR	Makanchi Array	52.11	323	P	P	14 19 01.4	-0.7
	1.0nm,0.6s,mb4.0,baz=115,slow=8.2,SNR=12						
MKAR				pP	pP	14 19 13.4	+4.8
	1.0nm,0.7s,baz=116,slow=7.7,SNR=6.2						
MKAR				PcP	PcP	14 20 13.9	+0.1
	1.2nm,0.7s,baz=105,slow=4.8,SNR=7.6						
MKAR				pPcP		14 20 25.6	
	1.5nm,0.6s,baz=102,slow=5.4,SNR=6.6						
ZALV	Zalesovo Beam	54.65	331	P	P	14 19 20.1	-0.5
	1.8nm,0.5s,mb4.4,baz=118,slow=6.9,SNR=12						
ZALV				pP	pP	14 19 32.4	+5.3
	2.2nm,0.7s,baz=116,slow=6.8,SNR=6.2						
KURK	Kurchatov	56.13	325	P	P	14 19 30.9	-0.4
	1.2nm,0.4s,mb4.3,baz=124,slow=7.2,SNR=14						
KURK				pP	pP	14 19 42.8	+5.0
	1.3nm,0.5s,baz=127,slow=6.8,SNR=6.7						
BVAR	Borovoye Array	61.73	325	P	P	14 20 09.9	-0.2
	0.5nm,0.6s,mb3.8,baz=126,slow=8.2,SNR=4.4						
BVAR				PcP	PcP	14 20 51.0	-0.4
	0.8nm,0.7s,baz=100,slow=6.2,SNR=4.5						
BVAR				pPcP		14 21 03.1	
	0.7nm,0.6s,baz=129,slow=4.0,SNR=3.9						
SPITS	Spitsbergen Ar	83.92	349	P	P	14 22 22.7	+1.3
	7.6nm,0.9s,mb4.8,baz=348,slow=2.0,SNR=3.5						
ARCES	ARCESS Array B	84.16	340	P	P	14 22 22.9	+0.2
	2.1nm,0.6s,mb4.5,baz=74,slow=5.3,SNR=12						
ARCES				pP	pP	14 22 34.4	+4.9
	3.1nm,0.8s,baz=90,slow=6.7,SNR=2.6						
VNDA	Vanda	90.05	173	P	P	14 22 51.9	+0.9
	0.8nm,0.6s,mb4.2,baz=44,slow=7.3,SNR=3.6						
VNDA	Vanda	90.05	173	P	P	14 22 51.9	+0.9
YKA	Yellowknife Ar	93.46	24	P	P	14 23 07.6	+0.4
	0.2nm,0.7s,mb3.7,baz=304,slow=4.8,SNR=5.1						
YKA				pP	pP	14 23 19.7	+5.7
	0.3nm,0.7s,baz=302,slow=4.5,SNR=3.3						
YKA	Yellowknife Ar	93.46	24	P	P	14 23 07.6	+0.4
YKA				pP	pP	14 23 19.8	+5.7
TORD	Torodi Ar. Bea	120.54	292	PKP	PKPdf	14 28 43.7	-0.8
	0.7nm,0.7s,baz=54,slow=1.9,SNR=3.9						
TORD				pPKP	pPKPdf	14 28 55.4	+3.8
	0.6nm,0.7s,baz=33,slow=0.9,SNR=4.0						
TORD	Torodi Ar. Bea	120.54	292	PKP	PKPdf	14 28 43.7	-0.8
TORD				pPKP	pPKPdf	14 28 55.4	+3.8
PLCA	Paso Flores	146.22	156	PKPbc	PKPbc	14 29 34.1	+1.5
	2.4nm,1.0s,baz=199,slow=4.5,SNR=3.7						

*BJI **06** 14:15:26.2, 2429N×12115E, h11^{km}, mb4.1, ML4.2*

*NEIC **06** 14:15:27.5±0.3, 2401N×12152E, h70^{km}±3^{km}, mb4.2/3, Error ellipse: s-maj=7.4km s-min=5.1km az=98.0*

NEIC Recorded [3 TAP] in I-lan and Nan-t'ou; [2 TAP] in Chang-hua, Hua-lien, T'ai-chung and Yun-lin; [1 TAP] in Chia-i, Miao-li, P'eng-hu, T'ai-tung and T'ao-yuan Counties.

*ISCJB **06** 14:15:27.4±0.2, 2408N±002×12140E±002, h77^{km}±2^{km}, mb3.8/10, Error ellipse: s-maj=3.1km s-min=2.0km az=40.2*

*TAP **06** 14:15:27.8, 2407N×12136E, h69^{km}, ML4.8, B*

*JMA **06** 14:15:28.6±0.2, 2424N×12146E, h87^{km}, M4.3*

*IDC **06** 14:15:28.8±1.0, 2403N×12157E, h83^{km}±8^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.6/23, mbtmp3.6/11, Error ellipse: s-maj=23.2km s-min=15.7km az=59.0*

ISC 06 14:15:28.3±0.2**, 2408N**±002×**12139E**±002**, h71**^{km}±2^{km}**, h85**^{km}±2.4^{km}**:pP-P, n110, σ0^{s}75**/170**, mb3.8**/10**, 31C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHF	Hehuan Shan	0.14	300	⇑iP	Pn	14 15 39.7	+0.9
	baz=312						
TWD	Chiawan	0.18	89	⇑iP	Pn	14 15 38.4	-0.5
	baz=96						
TWD				iS	Sn	14 15 45.4	-1.4
	baz=96						
NACB	Ninganchiao	0.21	62	ePn	Pn	14 15 38.2	-0.8
NACB				eSn	Sn	14 15 44.5	-2.4
HWA	Hwalien	0.22	117	⇑iP	Pn	14 15 38.7	-0.4
	baz=102						
HWA				eS	Sn	14 15 46.8	-0.2
	baz=102						
ESF	Shoufeng Towns	0.23	153	eP	Pn	14 15 38.9	-0.3
	baz=136						
ESF				eS	Sn	14 15 47.4	+0.3
	baz=136						
ESL	Shilin	0.26	172	⇑iP	Pn	14 15 38.7	-0.7
	baz=154						
ESL				eS	Sn	14 15 45.8	-1.6
	baz=154						
TWT	Tachien	0.27	311	⇓iP	Pn	14 15 39.8	+0.4
	baz=303						
TWT				eS	Sn	14 15 47.3	-0.2
	baz=303						
NNS	Nan Shan	0.36	357	⇓iP	Pn	14 15 40.8	+0.7
	baz=358						
NNS				eS	Sn	14 15 49.4	+0.8
	baz=358						
TEGC	Jichi Village	0.39	160	eP	Pn	14 15 39.7	-0.6
	baz=148						
TEGC				eS	Sn	14 15 49.4	+0.4
	baz=148						
EHP	Heping Village	0.39	54	eP	Pn	14 15 39.6	-0.6
	baz=61						
ENA	Nanau	0.47	42	⇑iP	Pn	14 15 40.7	-0.3
	baz=51						
SMLT	Sun Moon Lake	0.49	247	⇑iP	Pn	14 15 41.4	+0.3
	baz=253						
SMLT				S	Sn	14 15 51.0	+0.4
	baz=253						
SSLB	Suanglung	0.49	235	ePn	Pn	14 15 40.6	-0.6
SSLB				eSn	Sn	14 15 50.1	-0.5
TYC	Yuchr	0.52	251	⇑iP	Pn	14 15 41.4	0.0
	baz=251						
TYC				eS	Sn	14 15 50.8	-0.2
	baz=251						
EHY	Hungye	0.57	187	⇑iP	Pn	14 15 41.0	-1.0
	baz=173						
EHY				eS	Sn	14 15 52.4	+0.5
	baz=173						
ENTT	Nioudou	0.58	16	⇑iP	Pn	14 15 42.5	+0.5
	baz=28						
YHNB	Yeheng	0.59	358	ePn	Pn	14 15 42.1	0.0
YHNB				eSn	Sn	14 15 52.8	+0.5
NSK	Sanguang	0.60	357	⇓iP	Pn	14 15 42.5	+0.3
	baz=356						
NSK				iS	Sn	14 15 53.5	+1.1
	baz=356						
TWQ1	Liyutan	0.63	296	⇓iP	Pn	14 15 42.1	-0.4
	baz=298						
TWQ1				S	Sn	14 15 51.9	-1.1
	baz=298						
NSTT	Nanjuang	0.66	327	⇓iP	Pn	14 15 42.4	-0.4
	baz=323						
NSTT				S	Sn	14 15 52.8	-0.7
	baz=323						
TWC	Suao	0.67	38	⇑P	Pn	14 15 42.9	0.0
	baz=34						
TWC				eS	Sn	14 15 54.0	+0.2
	baz=34						
WNT	Mingjian	0.68	253	⇑iP	Pn	14 15 43.1	+0.1
	baz=263						
WNT				eS	Sn	14 15 54.1	+0.2
	baz=263						
YULB	Yu-li	0.69	187	ePn	Pn	14 15 41.8	-1.3
YULB				eSn	Sn	14 15 54.2	+0.1
TWE	Neicheng	0.69	21	⇑iP	Pn	14 15 43.6	+0.5
	baz=33						
TWE				eS	Sn	14 15 53.6	-0.5
	baz=33						
TWF1	Yuli	0.73	187	⇑P	Pn	14 15 42.6	-1.0
	baz=177						
TWF1				eS	Sn	14 15 56.0	+1.1
	baz=177						
ILA	Ilan	0.76	25	eP	Pn	14 15 44.9	+0.9
	baz=34						
ILA				eS	Sn	14 15 57.0	+1.5
	baz=34						
ALS	Alishan	0.78	224	⇑eP	Pn	14 15 44.6	+0.4
	baz=231						
CHN5	Tsauling	0.81	234	⇑iP	Pn	14 15 44.7	+0.2
	baz=240						
CHN5				eS	Sn	14 15 56.6	0.0
	baz=240						
HSN	Hsinchu	0.82	332	P	Pn	14 15 44.6	-0.1
	baz=326						
HSN				S	Sn	14 15 56.7	-0.1
	baz=326						
WGK	Gukeng	0.85	243	⇑iP	Pn	14 15 45.2	+0.2
	baz=254						
WGK				eS	Sn	14 15 57.8	+0.3
	baz=254						
TATO	Taipei	0.90	5	ePn	Pn	14 15 45.4	-0.2
TATO				eSn	Sn	14 15 59.1	+0.7
NCU	National Centr	0.91	348	iP	Pn	14 15 45.7	0.0
	baz=351						
NCU				S	Sn	14 15 58.6	0.0
	baz=351						
TWA	Mucha	0.92	11	⇓iP	Pn	14 15 46.3	+0.5
	baz=12						
TWA				eS	Sn	14 15 59.0	+0.2
	baz=12						
ELDTW	Lidau	0.95	201	⇑iP	Pn	14 15 46.6	+0.4
	baz=192						
ELDTW				eS	Sn	14 16 01.4	+1.8
	baz=192						
TAP1	Taipei	0.96	7	eP	Pn	14 15 45.9	-0.5
	baz=19						
TAP1				eS	Sn	14 15 59.7	-0.2
	baz=19						
CHKT	Chengkung	0.97	182	⇓P	Pn	14 15 46.2	-0.3
	baz=170						
CHN2	Minshiung	1.00	237	P	Pn	14 15 47.2	+0.4
	baz=248						
CHN2				S	Sn	14 16 01.8	+1.1
	baz=248						
TWS1	Kuangyinshan	1.02	1	⇓iP	Pn	14 15 47.4	+0.3
	baz=3.0						
TWS1				eS	Sn	14 16 01.4	+0.3
	baz=3.0						
CHN4	Tsaushan	1.03	226	⇑iP	Pn	14 15 47.5	+0.3
	baz=224						
CHN4				eS	Sn	14 16 02.0	+0.7
	baz=224						
WTCT	Ta-ch'eng	1.04	258	⇑iP	Pn	14 15 46.9	-0.4
	baz=268						
WTCT				S	Sn	14 16 00.9	-0.6
	baz=268						
TPUB	Ta-pu	1.04	222	ePn	Pn	14 15 47.1	-0.2
TPUB				eSn	Sn	14 16 01.6	0.0
NWF	Wu-fen Shan	1.05	20	⇑P	Pn	14 15 48.0	+0.5
	baz=21						
NWF				S	Sn	14 16 02.0	+0.2
	baz=21						
CHY	Chiayi	1.06	237	⇑iP	Pn	14 15 47.6	+0.1
	baz=248						
CHY				eS	Sn	14 16 02.0	0.0
	baz=248						
TWB1	Santiao Chiao	1.07	30	⇑P	Pn	14 15 48.4	+0.6
	baz=20						
TWB1				S	Sn	14 16 03.1	+0.8
	baz=20						
WTP	Ta-pu	1.09	221	⇑iP	Pn	14 15 48.2	+0.2
	baz=229						
TWK	Hsinying	1.16	226	⇑iP	Pn	14 15 49.0	+0.1
	baz=224						
WSF	Szhu	1.16	248	P	Pn	14 15 48.6	-0.2
	baz=257						
WSF				eS	Sn	14 16 04.1	-0.1
	baz=257						
CHN1	Nanshi	1.19	222	⇑iP	Pn	14 15 49.4	+0.1
	baz=229						
CHN1				eS	Sn	14 16 04.7	-0.3
	baz=229						
TWY	Chenhua	1.21	9	⇓iP	Pn	14 15 49.6	+0.1
	baz=10.0						
TWY				eS	Sn	14 16 04.7	-0.6
	baz=10.0						
SGST	Jiashian	1.24	217	⇑iP	Pn	14 15 50.4	+0.5
	baz=224						
SGST				eS	Sn	14 16 06.2	+0.2
	baz=224						
TWG	Pinlang	1.28	193	ePn	Pn	14 15 49.3	-1.2
TWG	Pinlang	1.28	193	eP	Pn	14 15 49.6	-0.9
	baz=198						
CHN8	Yiju	1.31	236	P	Pn	14 15 50.6	-0.2
	baz=237						
CHN8				eS	Sn	14 16 07.5	-0.1
	baz=237						
TTN	Taitung	1.34	190	eP	Pn	14 15 50.9	-0.2
	baz=178						
SCLT	Jiali	1.42	231	eP	Pn	14 15 51.8	-0.4
	baz=232						
SCLT				eS	Sn	14 16 10.6	+0.3
	baz=232						
TAI1	Yung-k'ang	1.49	226	eP	Pn	14 15 53.3	+0.2
	baz=237						
SSD	Sandimen	1.50	208	⇑P	Pn	14 15 54.0	+0.7
	baz=217						
YOJ	Yonaguni jima	1.52	75	P	Pn	14 15 53.8	+0.2
YOJ				S	Sn	14 16 12.5	-0.2
YOJ	Yonaguni jima	1.52	75	eP	Pn	14 15 53.7	+0.1
	baz=75						
YOJ				eS	Sn	14 16 14.1	+1.4
	baz=75						
ECL	Taimali	1.53	195	eP	Pn	14 15 52.6	-1.0
	baz=181						
ECL				eS	Sn	14 16 15.7	+2.9
	baz=181						
TWM1	Shoushan	1.53	216	⇑P	Pn	14 15 55.0	+1.3
	baz=213						
SGLT	Jiouru	1.58	212	eP	Pn	14 15 55.5	+1.1
	baz=221						
PCYT	Pengchaiyu	1.66	22	⇑P	Pn	14 15 55.5	0.0
	baz=22						
PCYT				eS	Sn	14 16 15.8	-0.2
	baz=22						
EAST	Anshuo	1.76	197	eP	Pn	14 15 57.6	+0.8
	baz=192						
PNG	Penghu	1.76	254	⇑iP	Pn	14 15 55.3	-1.4
	baz=255						
TAW	Tawu	1.77	195	eP	Pn	14 15 56.9	0.0
	baz=182						
SCZT	Fangliau	1.84	203	⇓iP	Pn	14 15 58.6	+0.8
	baz=210						
TWP	Hsiaoliuchiu	1.97	209	eP	Pn	14 15 59.6	+0.1
	baz=204						
LAY	Lan-yu	2.03	176	eP	Pn	14 15 60.0	-0.5
	baz=167						
LAY				eS	Sn	14 16 25.3	+0.5
	baz=167						
HEN	Hengchun	2.15	196	eP	Pn	14 16 01.1	-0.8
	baz=191						
IRIF	Iriomote-Funau	2.15	83	P	Pn	14 16 02.0	+0.1
IRIF				S	Sn	14 16 27.7	+0.1
TWK1	Hengchun	2.19	194	eP	Pn	14 16 02.5	0.0
	baz=189						
HATJ	Hateruma jima	2.20	90	P	Pn	14 16 03.4	+0.7
HATJ				S	Sn	14 16 29.7	+0.7
TSEB	Hengchuen, Pin	2.21	192	eP	Pn	14 16 02.5	-0.4
	baz=187						
JKRS	Kuro-shima	2.39	86	P	Pn	14 16 06.0	+0.7
JKRS				S	Sn	14 16 34.0	+0.4
JIJ	Ishigaki jima	2.53	83	P	Pn	14 16 06.9	-0.1
JIJ				S	Sn	14 16 36.0	-0.8
QZH	Quanzhou	2.69	289	⇓iP	Pn	14 16 07.6	-1.7
QZH				S	Sn	14 16 36.3	-4.6
QZH				Smax			
	comp=N,4μm,0.2s						
QZH				Smax			
	comp=E,1μm,0.2s						
KNM	Kinmen	2.72	278	⇑iP	Pn	14 16 10.0	+0.3
	baz=280						
KNM				eS	Sn	14 16 40.3	-1.3
	baz=280						
JTJ	Tarama	3.07	79	P	Pn	14 16 14.8	+0.4
JTJ				eS	Sn	14 16 50.1	+0.1
JMJ	Miyako jima 2	3.63	78	P	Pn	14 16 22.7	+0.7
JMJ				eS	Sn	14 17 04.1	+0.4
JMJ	Miyako jima 2	3.63	78	eP	Pn	14 16 22.1	0.0
	baz=78						
JOGS	Gusukube	3.72	79	P	Pn	14 16 24.2	+0.9
JKE	Kume jima 2	5.37	64	P	Pn	14 16 46.2	+0.3
JAGN	Aguni-jima	5.85	63	P	Pn	14 16 52.5	+0.1
JAGN				eS	Sn	14 17 58.5	+0.4
JOW	Kunigami	6.80	65	P	Pn	14 17 04.3	-1.0
	comp=E,25nm,0.3s,baz=175,slow=11,SNR=299						
JOW				S	Sn	14 18 15.2	-6.0
	baz=108,slow=20,SNR=1.6						
JOW	Kunigami	6.80	65	P	Pn	14 17 04.2	-1.1
JOW	Kunigami	6.80	65	eP	Pn	14 17 04.3	-1.0
	baz=74						
JTK	Tokunoshima	7.74	60	P	Pn	14 17 16.8	-1.4
JTK				eS	Sn	14 18 40.8	-3.6
JAM	Amami Oshima	8.54	58	P	Pn	14 17 27.5	-1.7
JZK	Kikaishima	8.78	59	P	Pn	14 17 30.9	-1.6
WHN	Wuhan	8.98	317	eP	Pn	14 17 33.5	-1.7
WHN				S	Sn	14 19 09.1	-5.7
JMZ	Minamidaito 2	9.09	77	P	Pn	14 17 32.5	-4.1
KSRS	Korea Array	14.46	21	P	Pn	14 18 50.1	+1.0
	comp=E,0.2nm,0.3s,baz=205,slow=12,SNR=3.0						
CMAR	Chiang Mai Arr	21.65	259	P	P	14 20 14.2	+1.3
	comp=E,1.4nm,0.7s,mb3.4,baz=63,slow=8.5,SNR=9.7						
ULN	Ulaanbaatar	26.34	338	P	P	14 20 57.7	+0.4
SONM	Songino Array	26.54	337	P	P	14 20 59.6	+0.4
	comp=E,1.0nm,1.1s,mb3.3,baz=142,slow=7.3,SNR=3.0						
SONM				pP	pP	14 21 18.5	+2.5
	comp=E,1.2nm,0.8s,baz=145,slow=10,SNR=6.5						
KAKA	Kakadu	38.12	162	eP	x	14 22 19.8	
	comp=E,4.5nm,1.1s						
MKAR	Makanchi Array	38.55	316	P	P	14 22 44.7	+0.8
	comp=E,2.2nm,0.7s,mb4.1,baz=108,slow=9.7,SNR=18						
MKAR				pP	pP	14 23 04.5	+3.3
	comp=E,0.7nm,0.8s,baz=117,slow=6.9,SNR=3.2						
MKAR	Makanchi Array	38.55	316	P	P	14 22 44.7	+0.8
MKAR				pP	pP	14 23 04.5	+3.3
ZALV	Zalesovo Beam	40.44	327	P	P	14 22 59.2	-0.3
	comp=E,1.3nm,0.5s,mb4.0,baz=120,slow=9.0,SNR=6.1						
ZALV				pP	pP	14 23 18.3	+1.4
	comp=E,0.4nm,0.3s,baz=102,slow=8.5,SNR=2.0						
TKM2	Tokmak 2	41.98	308	eP	P	14 23 13.7	+1.4
	comp=E,2.0nm,0.5s,mb4.1						
KURK	Kurchatov	42.30	320	P	P	14 23 15.2	+0.5
	comp=E,0.9nm,0.5s,mb3.8,baz=109,slow=9.7,SNR=8.1						
KURK				pP	pP	14 23 36.3	+4.0
	comp=E,0.3nm,0.5s,baz=112,slow=9.5,SNR=1.8						
KURK	Kurchatov	42.30	320	eP	P	14 23 15.0	+0.2
	comp=E,1.3nm,0.5s,mb3.9						
KURK				pP	pP	14 23 36.3	+4.0
WB2	Warramunga Arr	45.54	163	eP	P	14 23 39.3	-1.7
BVAR	Borovoye Array	47.88	321	P	P	14 23 59.8	+0.8
	comp=E,0.7nm,0.5s,mb3.8,baz=94,slow=10,SNR=7.9						
ASAR	Alice Springs	48.99	165	P	P	14 24 06.5	-1.2
	comp=E,0.5nm,0.4s,mb3.8,baz=344,slow=7.2,SNR=20						
STKA	Stephens Creek	58.90	160	eP	P	14 25 18.4	-1.4
	comp=E,3.4nm,1.4s,mb4.2						
STKA	Stephens Creek	58.90	160	P	P	14 25 18.3	-1.6
	comp=E,3.4nm,1.0s,mb4.3,baz=342,slow=9.6,SNR=5.0						
YKA	Yellowknife Ar	82.99	23	P	P	14 27 44.5	-0.8
	comp=E,0.5nm,0.8s,mb3.4,baz=313,slow=4.8,SNR=7.0						
YKA	Yellowknife Ar	82.99	23	P	P	14 27 44.5	-0.8

*NIED **06** 14:40:00, 2540N×12830E, h11^{km}, Mw4.0 Best double couple: $M_0$1.14000×10^{15} NP1:ϕ_s213.00000°, δ55.00000°, λ-100.00000°. NP2:ϕ_s50.00000°, δ36.00000°, λ-76.00000°.*

*NEIC **06** 14:40:31.5±4.4, 2543N×12822E, h10^{km}±28^{km}, mb4.3/3, Error ellipse: s-maj=12.9km s-min=8.1km az=81.0*

*JMA **06** 14:40:33.4±0.3, 2544N×12827E, h61^{km}±4^{km}, M4.0*

*ISCJB **06** 14:40:33.4±0.5, 2539N±003×12816E±004, h42^{km}, mb4.0/13, Error ellipse: s-maj=5.3km s-min=3.6km az=39.5*

*BJI **06** 14:40:35.5, 2621N×12829E, h20^{km}, mb4.4*

*IDC **06** 14:40:36.3±0.8, 2555N×12831E, h43^{km}±5^{km}, mb3.7/10, mb1 3.7/10, mb1mx3.7/21, mbtmp3.7/10, Error ellipse: s-maj=23.8km s-min=8.0km az=91.0*

ISC 06 14:40:35.4±0.5**, 2545N**±003×**12812E**±004**, h44**^{km}**, h44**^{km}±2.3^{km}**:pP-P, n41, σ1^{s}22**/57**, mb4.0**/13**, Ryukyu Islands**

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

JJT2	Tamagusuku 2	0.77	334	P	Pn	14 40 49.6	-0.2
JJT2				eS	Sn	14 41 01.6	+1.4
NAH1	Naha	0.85	333	P	Pn	14 40 50.6	-0.3
NAH1				eS	Sn	14 41 03.5	+1.3
JAGN	Aguni-jima	1.38	325	P	Pn	14 40 58.5	+0.3
JAGN				S	Sn	14 41 16.6	+1.3
JOW	Kunigami	1.38	6	P	Pn	14 40 57.0	-1.2
	69nm,0.3s,baz=162,slow=18,SNR=358						
JOW				S	Sn	14 41 13.3	-2.0
	146nm,0.3s,baz=104,slow=24,SNR=8.8						
JOW	Kunigami	1.38	6	P	Pn	14 40 57.0	-1.2
JOW				S	Sn	14 41 13.1	-2.2
JKE	Kume jima 2	1.49	306	P	Pn	14 40 59.8	+0.1
JKE				eS	Sn	14 41 19.0	+1.1
JIH	Iheya	1.58	355	P	Pn	14 41 00.7	-0.3
JIH				S	Sn	14 41 19.5	-0.8
JTK	Tokunoshima	2.44	17	P	Pn	14 41 11.1	-1.7
JTK				S	Sn	14 41 38.0	-3.4
JOGS	Gusukube	2.56	255	P	Pn	14 41 14.9	+0.6
JOGS				eS	Sn	14 41 44.9	+0.7
JMJ	Miyako jima 2	2.64	257	P	Pn	14 41 15.8	+0.3
JMJ				eS	Sn	14 41 47.5	+1.2
JMZ	Minamidaito 2	2.82	82	P	Pn	14 41 13.0	-4.9
JMZ				eS	Sn	14 41 42.4	-8.3
JTJ	Tarama	3.21	256	P	Pn	14 41 23.2	-0.1
JTJ				eS	Sn	14 41 59.8	-0.4
JAM	Amami Oshima	3.23	24	P	Pn	14 41 21.6	-2.0
JZK	Kikaishima	3.30	30	P	Pn	14 41 22.8	-1.7
JIJ	Ishigaki jima	3.77	254	P	Pn	14 41 30.5	-0.5
JIJ				eS	Sn	14 42 12.1	-2.1
JKRS	Kuro-shima	3.93	253	P	Pn	14 41 32.5	-0.7
JKRS				eS	Sn	14 42 17.5	-0.5
IRIF	Iriomote-Funau	4.14	255	P	Pn	14 41 35.6	-0.5
IRIF				eS	Sn	14 42 22.0	-1.3
HATJ	Hateruma jima	4.16	251	eS	Sn	14 42 21.8	-2.0
JNN	Nakanoshima	4.64	19	P	Pn	14 41 41.9	-1.1
YOJ	Yonaguni jima	4.74	259	P	Pn	14 41 43.6	-0.8
YOJ				eS	Sn	14 42 36.1	-2.0
TATO	Taipei	6.03	267	ePn	Pn	14 42 03.1	+1.1
NACB	Ninganchiao	6.07	259	ePn	Pn	14 42 00.8	-1.7
	39nm,0.3s						
YHNB	Yeheng	6.17	264	ePn	Pn	14 42 04.8	+0.8
TWG	Pinlang	6.95	249	ePn	Pn	14 42 11.6	-3.1
	26nm,0.3s						
GTA	Gaotai	27.52	307	eP	P	14 46 19.5	+1.7
GTA				AP	pP	14 46 27.6	-1.9
GTA				XP	sP	14 46 32.2	-2.6
GTA				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.3						
SONM	Songino Array	28.16	328	P	P	14 46 25.1	+1.8
	comp=Z,1.4nm,0.7s,mb3.7,baz=140,slow=11,SNR=8.6						
SONM				pP	pP	14 46 37.3	+2.2
	comp=Z,0.6nm,0.4s,baz=142,slow=11,SNR=5.7						
MK31	Makanchi Array	41.98	313	P	P	14 48 16.3	-5.8
MKAR	Makanchi Array	41.98	313	P	P	14 48 23.2	+1.1
	comp=Z,0.8nm,0.4s,mb3.7,baz=95,slow=10,SNR=8.2						
MKAR				pP	pP	14 48 34.5	+0.4
	comp=Z,1.6nm,0.7s,baz=102,slow=9.5,SNR=5.3						
ZALV	Zalesovo Beam	42.81	323	P	P	14 48 29.2	+0.5
	comp=Z,0.8nm,0.4s,mb3.8,baz=106,slow=9.5,SNR=5.5						
ZALV				pP	pP	14 48 42.3	+1.5
	comp=Z,0.8nm,0.5s,baz=112,slow=7.9,SNR=3.6						
KURK	Kurchatov	45.32	317	P	P	14 48 50.5	+1.6
	comp=Z,0.7nm,0.4s,mb3.8,baz=105,slow=9.1,SNR=5.9						
KURK				pP	pP	14 49 02.4	+1.3
	comp=Z,1.4nm,0.6s,baz=105,slow=9.0,SNR=5.9						
KURK	Kurchatov	45.32	317	eP	P	14 48 49.8	+0.9
	comp=Z,1.0nm,0.6s,mb3.8						
KURK				pP	pP	14 49 02.4	+1.3
WRAB	Tennant Creek	45.51	172	eP	P	14 48 50.8	+0.2
	comp=Z,2.9nm,0.7s,mb4.3						
WB2	Warramunga Arr	45.52	172	eP	P	14 48 50.9	+0.2
CTAO	Charters Tower	48.57	157	P	P	14 49 15.4	+0.9
	comp=Z,8.7nm,1.0s,mb4.7						
ASAR	Alice Springs	49.15	173	P	P	14 49 19.6	+0.8
	comp=Z,1.7nm,0.8s,mb4.1,baz=1.1,slow=8.1,SNR=31						
ASAR				pP	pP	14 49 32.3	+1.1
	comp=Z,0.5nm,0.6s,baz=0.8,slow=8.8,SNR=3.3						
BVAR	Borovoye Array	50.79	319	P	P	14 49 33.0	+1.9
	comp=Z,0.6nm,0.5s,mb3.8,baz=92,slow=9.5,SNR=6.6						
BVAR				pP	pP	14 49 45.8	+2.3
	comp=Z,1.0nm,0.5s,baz=77,slow=8.4,SNR=6.1						
STKA	Stephens Creek	58.44	167	P	P	14 50 27.3	+0.6
	comp=Z,4.4nm,1.0s,mb4.5,baz=352,slow=15,SNR=4.3						
STKA	Stephens Creek	58.44	167	P	P	14 50 27.3	+0.6
AKASG	Malin Array Be	76.06	320	P	P	14 52 19.1	+0.9
	comp=Z,1.2nm,0.5s,mb4.1,baz=62,slow=6.3,SNR=5.7						
BRTR	Keskin Array B	77.44	308	P	P	14 52 28.6	+2.4
	comp=Z,0.3nm,0.5s,mb3.5,baz=35,slow=4.5,SNR=2.6						
BRTR				pP	pP	14 52 39.3	+0.1
	comp=Z,1.6nm,0.9s,baz=105,slow=2.9,SNR=4.2						
YKA	Yellowknife Ar	79.27	25	P	P	14 52 37.2	+1.4
	comp=Z,0.6nm,0.7s,mb3.6,baz=302,slow=5.3,SNR=8.5						
YKA				pP	pP	14 52 49.9	+1.0
	comp=Z,0.4nm,0.6s,baz=297,slow=5.5,SNR=4.1						

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*BJI **06** 14:59:08.2, 670N×7290W, h155km, mB4.9*
*ISCJB **06** 14:59:09.5±0.4, 673N±004×7289W±003, h172km±3km, mb4.4/33, Error ellipse: s-maj=6.3km s-min=4.7km az=161.7*
*IDC **06** 14:59:09.7±0.5, 672N×7291W, h159km±4km, mb3.9/13, mb1 4.1/16, mb1mx3.9/22, mbtmp3.9/16, Error ellipse: s-maj=11.3km s-min=7.2km az=133.0*
*FUNV **06** 14:59:09.8, 673N×73.15W, h168km, MW4.3*
*NEIC **06** 14:59:10.2±0.5, 673N×7294W, h165km±5km, mb4.5/20, Error ellipse: s-maj=6.8km s-min=6.6km az=193.0*
ISC 06 14:59:10.5±0.4**, 672N**±004×**7288W**±003**, h165**km±3km**,** **n278,** σ0^s**55**/276**, mb4.4**/33**, 89C-109D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.27	26	⇓iP	Pn	14 59 39.4	+0.4
CAPV				eS	Sn	15 00 00.8	-0.1
ROSC	El Rosal	2.35	218	P	Pn	14 59 51.6	+1.0
	260nm,0.3s,baz=306,slow=4.3,SNR=250						
ROSC				S	Sn	15 00 20.8	-0.9
	178nm,0.3s,baz=87,slow=17,SNR=7.7						
SOCV	Socops	2.53	52	⇓iP	Pn	14 59 54.2	+1.4
SOCV				eS	Sn	15 00 25.9	+0.4
VIGV	El Vigia	2.58	35	⇓iP	Pn	14 59 54.0	+0.6
VIGV				eS	Sn	15 00 26.6	0.0
SDV	Santo Domingo	3.09	46	P	Pn	15 00 00.8	+1.2
	106nm,0.3s,baz=234,slow=3.6,SNR=413						
SDV				S	Sn	15 00 37.8	0.0
	177nm,0.3s,baz=283,slow=21,SNR=39						
SDV	Santo Domingo	3.09	46	ePn	Pn	15 00 00.7	+1.1
SDV				eSn	Sn	15 00 38.7	+0.9
ELOV	Elorza	3.38	85	⇓eP	Pn	15 00 05.5	+2.3
VIRV	Villa del Rosa	3.79	7	eP	Pn	15 00 06.3	-2.1
VIRV				eS	Sn	15 00 48.8	-4.8
QARV	Quebrada Arrib	4.17	34	⇑iP	Pn	15 00 13.9	+0.5
SANV	Sanarito	4.31	50	⇑iP	Pn	15 00 15.8	+0.6
SANV				eS	Sn	15 01 04.1	-1.5
CURV	Curarigua	4.36	41	⇑iP	Pn	15 00 16.2	+0.4
CURV				eS	Sn	15 01 05.7	-1.2
DABV	Dabajuro	4.72	28	eP	Pn	15 00 20.4	-0.2
TEPV	Terepaima	4.86	48	⇑iP	Pn	15 00 22.9	+0.5
TEPV				eS	Sn	15 01 17.1	-1.5
SIQV	Siquisique	4.94	38	⇑iP	Pn	15 00 23.2	-0.2
BAUV	El Baul	5.27	65	⇓eP	Pn	15 00 27.6	-0.2
JACV	Jacura	5.90	42	eP	Pn	15 00 35.8	-0.3
TURV	Turiamo	6.21	53	⇑eP	Pn	15 00 39.9	-0.2
CAOV	Caicara del Or	6.53	84	eP	Pn	15 00 44.5	0.0
BCIP	Isla Barro Col	7.31	290	ePn	Pn	15 00 49.0	-5.8
BIRV	Birongo	7.52	60	⇓eP	Pn	15 00 57.4	-0.1
CUPV	Cœpira	7.75	64	eP	Pn	15 01 00.5	-0.1
PRGV	PARIAGUAN	8.40	76	eP	Pn	15 01 10.1	+0.9
OTAV	Otavalo	8.51	221	ePn	Pn	15 01 09.0	-1.7
	7.6nm,0.8s						
PCRV	Puerto La Cruz	8.84	67	P	Pn	15 01 16.1	+1.0
	2.2nm,0.3s,baz=3.9,slow=9.6,SNR=11						
PCRV				S	Sn	15 02 54.1	+0.5
	2.9nm,0.3s,baz=90,slow=20,SNR=3.9						
PCRV	Puerto La Cruz	8.84	67	eP	Pn	15 01 14.7	-0.3
GUNV	Guanoco	10.40	70	eP	Pn	15 01 35.2	-0.4
TRN	Trinidad (W)	11.99	70	eP	Pn	15 02 05.4	+9.1
TBH	Brigand Hill	12.26	71	eP	Pn	15 02 09.7	+10
SDDR	Presa de Saban	12.29	7	ePn	Pn	15 01 60.0	-0.1
SDDR				eSn	Sn	15 04 08.2	-8.0
TPR	Prospect	12.75	69	eP	Pn	15 02 05.6	-0.4
MTP	Monte Pirata	13.37	32	ePn	Pn	15 02 12.9	-1.0
RCC	Rio Carpintero	13.48	349	eP	Pn	15 02 15.9	+0.7
CCCC	Cccc	15.15	342	eP	Pn	15 02 36.4	+0.2
TGUH	Tegucigalpa,Un	15.92	298	eP	Pn	15 02 43.1	-2.5
SIV	San Ignacio	25.41	153	P	P	15 04 23.3	+0.3
	0.8nm,0.4s,mb3.6,baz=318,slow=8.9,SNR=8.6						
WVT	Waverly	32.32	337	P	P	15 05 23.1	-0.9
BDFB	Brasilia	33.17	132	P	P	15 05 30.8	-0.8
	2.3nm,0.6s,mb4.1,baz=304,slow=18,SNR=5.3						
MIAR	Mount Ida	33.64	328	P	P	15 05 33.4	-2.1
	9.9nm,1.2s,mb4.4						
CCM	Cathedral Cave	35.37	335	eP	P	15 05 49.9	-0.4
	15nm,0.7s,mb4.7						
WMOK	Wichita Mounta	36.71	323	eP	P	15 05 59.9	-1.8
	2.6nm,0.6s,mb4.0						
TXAR	Lajitas Array	36.71	312	P	P	15 06 00.8	-1.1
	2.8nm,0.7s,mb4.0,baz=126,slow=9.1,SNR=25						
ANMO	Albuquerque	41.76	317	eP	P	15 06 44.7	+1.1
	3.6nm,1.1s,mb3.9						
319A	Douglas	41.93	311	⇑P	P	15 06 45.1	0.0
	baz=42						
219A	White Tail Can	42.21	311	⇓P	P	15 06 46.9	-0.5
	baz=42						
318A	Bisbee	42.50	310	⇑P	P	15 06 49.6	0.0
	baz=42						
SDCO	Great Sand Dun	42.78	321	eP	P	15 06 52.5	+0.6
	85nm,3.0s						
218A	Dragoon	42.79	311	⇑P	P	15 06 52.0	0.0
	baz=43,SNR=5.9						
118A	Homack Ranch,	43.05	312	⇑P	P	15 06 54.1	+0.1
	baz=43,SNR=6.9						
Y19A	Nutrioso	43.17	314	⇓P	P	15 06 55.4	+0.3
	baz=43						
217A	Green Valley	43.28	310	⇑P	P	15 06 55.6	-0.3
	baz=43						
117A	Oracle	43.59	311	⇓P	P	15 06 58.4	0.0
	baz=44						
W19A	Sanders	43.86	315	⇓P	P	15 07 01.2	+0.6
	baz=44						
V19A	Window Rock	43.94	316	⇑P	P	15 07 01.7	+0.6
	baz=44						
EYMN	Ely	44.04	342	eP	P	15 07 00.8	-0.9
	6.9nm,0.5s,mb4.5						
W18A	Petrified Fore	44.11	315	⇓P	P	15 07 02.9	+0.4
	baz=44						
ISCO	Idaho Springs	44.13	323	eP	P	15 07 02.5	-0.1
	4.8nm,1.0s,mb4.1						
116A	Eloy	44.30	311	⇓P	P	15 07 03.7	-0.4
	baz=44						
MVCO	Mesa Verde	44.39	318	⇑P	P	15 07 04.9	+0.2
	baz=44						
T19A	Beclabito	44.53	318	⇓P	P	15 07 06.1	+0.3
	baz=45						
Y16A	Circle Bar Ran	44.74	312	⇑P	P	15 07 07.8	+0.2
	baz=45						
115A	Sonoran Desert	44.76	311	⇑P	P	15 07 07.6	-0.1
	baz=45						
214A	Organ Pipe Nat	44.88	309	⇑P	P	15 07 08.8	+0.2
	baz=45						
PV01	Paradox Valley	44.96	319	eP	P	15 07 09.1	-0.1
	246nm,0.8s						
X16A	Lo Mia Camp, P	44.98	313	⇑P	P	15 07 09.7	+0.3
	baz=45						
S19A	Harvey Farm, M	45.11	319	⇓P	P	15 07 10.4	0.0
	baz=45						
Q20A	Ridgley Place,	45.26	320	⇑P	P	15 07 12.3	+0.7
	baz=45						
T18A	Mexican Hat	45.27	317	⇓P	P	15 07 11.5	-0.1
	baz=45						
W16A	Flagstaff	45.37	314	⇓P	P	15 07 13.0	+0.6
	baz=45						
Y15A	Casa Rosa Ranc	45.41	312	⇑P	P	15 07 12.8	0.0
	baz=45						
WUAZ	Wupatki	45.46	315	⇓P	P	15 07 13.4	+0.2
	baz=46						
WUAZ	Wupatki	45.46	315	eP	P	15 07 12.9	-0.3
	13nm,0.9s,mb4.5						
O21A	Pagoda	45.51	322	⇓P	P	15 07 14.2	+0.7
	baz=46						
U17A	Shonto	45.52	316	⇓P	P	15 07 14.0	+0.3
	baz=46						
X15A	Humboldt	45.59	313	⇑P	P	15 07 14.2	0.0
	baz=46						
Z14A	Wintersburg	45.59	311	⇑P	P	15 07 14.1	-0.2
	baz=46						
U16A	Tuba City	45.61	315	⇓P	P	15 07 14.5	+0.2
	baz=46						
M22A	Cedar Creek Ra	45.73	324	⇓P	P	15 07 16.0	+0.8
	baz=46						
T17A	Navajo Res., N	45.82	317	⇓P	P	15 07 16.7	+0.7
	baz=46						
N21A	Black Mountain	45.87	323	⇓P	P	15 07 16.8	+0.5
	baz=46						
Q19A	Hogan Spring (	45.88	320	⇓P	P	15 07 16.6	+0.2
	baz=46						
Y14A	Wickenburg	45.90	312	⇓P	P	15 07 16.7	+0.1
	baz=46						
O20A	White River Ci	45.93	322	⇑P	P	15 07 16.8	+0.1
	baz=46						
R18A	Canyonlands Na	45.97	319	⇑P	P	15 07 17.0	-0.1
	baz=46						
X14A	Yava	46.05	312	⇓P	P	15 07 17.8	0.0
	baz=46						
P19A	Cripple Cowboy	46.09	321	⇑P	P	15 07 18.3	+0.2
	baz=46						
S17A	Black Ridge (B	46.16	317	⇑P	P	15 07 18.5	-0.1
	baz=46						
V15A	Kaibab Nationa	46.18	314	⇑P	P	15 07 19.2	+0.3
	baz=46,SNR=8.9						
T16A	Glen Canyon Da	46.30	316	⇓P	P	15 07 20.3	+0.6
	baz=46						
M21A	Separation Pea	46.30	324	⇓P	P	15 07 20.5	+0.8
	baz=46						
N20A	Spence Gulch,	46.36	323	⇑P	P	15 07 21.1	+1.0
	baz=46						
Y13A	Salome	46.45	311	⇓P	P	15 07 21.0	0.0
	baz=46						
Q18A	Rafter H Ranch	46.52	320	⇑P	P	15 07 21.3	-0.1
	baz=47						
R17A	Hanksville Air	46.52	318	⇓P	P	15 07 21.9	+0.5
	baz=47						
W14A	Seligman	46.54	313	⇓P	P	15 07 21.7	0.0
	baz=47						
U15A	North Rim	46.56	315	⇑P	P	15 07 22.1	+0.3
	baz=47,SNR=5.7						
M20A	Sweetwater, Wa	46.72	323	⇑P	P	15 07 23.1	+0.3
	baz=47						
V14A	Boquillas Ranc	46.76	314	⇓P	P	15 07 23.5	+0.2
	baz=47,SNR=5.0						
SRU	San Rafael	46.78	319	⇓P	P	15 07 23.8	+0.4
	baz=47						
X13A	Yucca	46.80	312	⇓P	P	15 07 23.4	-0.3
	baz=47						
P18A	Preston Nutter	46.89	320	⇑P	P	15 07 24.6	+0.3
	baz=47						
PDMCI	Parker Dam,Lak	46.90	312	⇓P	P	15 07 24.3	-0.2
	baz=47						
R16A	Teasdale	46.96	318	⇓P	P	15 07 25.3	+0.4
	baz=47,SNR=5.6						
W13A	Hualapai Mount	47.07	313	⇑P	P	15 07 25.9	+0.1
	baz=47						
U14A	Mt Trumbull	47.18	315	⇑P	P	15 07 26.7	+0.1
	baz=47						
N18A	Larsen Ranch,	47.30	322	⇓P	P	15 07 27.6	+0.2
	baz=47						
ULM	Lac du Bonnet	47.46	340	P	P	15 07 27.4	-1.1
	3.8nm,0.4s,mb4.4,baz=143,slow=6.7,SNR=8.9						
V13A	Grand Canyon W	47.49	314	⇑P	P	15 07 28.9	-0.1
	baz=48						
O17A	Robinson Place	47.52	320	⇑P	P	15 07 29.1	0.0
	baz=48,SNR=6.5						
IRM	Iron Mountain	47.59	311	⇓P	P	15 07 29.7	-0.1
	baz=48						
U13A	Pakoon Wash	47.74	314	⇓P	P	15 07 31.3	+0.5
	baz=48						
L19A	Farson	47.78	323	⇓P	P	15 07 31.5	+0.4
	baz=48						
M18A	Lyman	47.81	322	⇓P	P	15 07 31.2	-0.2
	baz=48						
K19A	Absolon Red Bu	47.92	324	⇑P	P	15 07 32.5	+0.3
	baz=48						
N17A	Moffit Pass	48.00	321	⇓P	P	15 07 33.2	+0.4
	baz=48						
O16A	Springville	48.01	320	⇓P	P	15 07 33.0	+0.1
	baz=48						
V12A	Nelson	48.06	313	⇓P	P	15 07 33.2	-0.1
	baz=48						
L18A	Fontenelle, Gr	48.08	323	⇑P	P	15 07 33.8	+0.3
	baz=48						
BELC	Belle Mtn.	48.17	310	⇑P	P	15 07 33.8	-0.4
	baz=48						
M17A	Scullys Gap (B	48.20	322	⇑P	P	15 07 34.0	-0.3
	baz=48						
SCHQ	Schefferville	48.22	5	P	P	15 07 35.0	+0.7
	23nm,0.7s,mb4.9,baz=186,slow=4.6,SNR=13						
SCHQ	Schefferville	48.22	5	P	P	15 07 35.0	+0.7
S13A	Holt Ranch, En	48.22	316	⇓P	P	15 07 35.0	+0.4
	baz=48,SNR=5.2						
BW06	Boulder Array	48.30	324	⇓P	P	15 07 35.0	-0.1
	baz=48						
BW06	Boulder Array	48.30	324	eP	P	15 07 35.0	-0.1
	74nm,2.9s,mb4.8						
PDAR	Pinedale Array	48.30	324	P	P	15 07 34.7	-0.4
	1.7nm,0.7s,mb3.8,baz=124,slow=9.1,SNR=9.5						
N16A	Rees Ranch, Co	48.35	321	⇑P	P	15 07 36.2	+0.7
	baz=48						
K18A	Toltan Ranch,	48.51	323	⇓P	P	15 07 37.1	+0.4
	baz=49						
Q14A	Sevier Lake (B	48.52	318	⇑P	P	15 07 37.5	+0.7
	baz=49,SNR=6.1						
R13A	O'Grain Ranch,	48.59	316	⇓P	P	15 07 38.0	+0.6
	baz=49						
L17A	Cokeville	48.69	322	⇓P	P	15 07 37.8	-0.3
	baz=49,SNR=11						
P14A	Drum Mountains	48.70	318	⇑P	P	15 07 38.1	0.0
	baz=49						
M16A	Huntsville	48.71	321	⇑P	P	15 07 37.7	-0.5
	baz=49						
TUQ	Turquoise Moun	48.72	312	⇓P	P	15 07 38.5	+0.1
	baz=49						
J18A	Kendall Valley	48.84	324	⇑P	P	15 07 39.1	-0.1
	baz=49,SNR=6.1						
DUG	Dugway	48.85	319	⇑P	P	15 07 39.6	+0.3
	baz=49						
DUG	Dugway	48.85	319	eP	P	15 07 40.2	+0.9
	53nm,2.8s,mb4.7						
L16A	Fish Haven	48.98	322	⇓P	P	15 07 39.7	-0.6
	baz=49,SNR=5.7						
Q13A	Wheeler Ranch,	49.01	317	⇑P	P	15 07 41.1	+0.5
	baz=49						
I18A	Diamond G Ranc	49.02	325	⇓P	P	15 07 40.7	+0.1
	baz=49						
R12A	Pony Springs,	49.10	316	⇑P	P	15 07 41.6	+0.3
	baz=49						
P13A	Bates Ranch, G	49.26	318	⇓P	P	15 07 43.0	+0.5
	baz=49						
M15A	Larsen Ranch,	49.30	321	⇓P	P	15 07 42.5	-0.3
	baz=49						
GSC	Goldstone	49.31	312	⇓P	P	15 07 42.7	-0.2
	baz=49						
J17A	Brown Place, J	49.34	324	⇑P	P	15 07 43.0	0.0
	baz=49						
DGMT	Dagmar	49.35	333	⇓P	P	15 07 43.3	+0.3
	baz=50						
DGMT	Dagmar	49.35	333	eP	P	15 07 43.5	+0.6
	14nm,0.5s,mb4.9						
REDW	Red Top Meadow	49.42	324	eP	P	15 07 43.8	+0.2
	5.0nm,0.6s,mb4.3						
LOHW	Long Hollow	49.42	324	eP	P	15 07 44.1	+0.4
	52nm,2.5s,mb4.7						
N14A	Grayback Hills	49.44	320	⇑P	P	15 07 43.6	-0.2
	baz=50						
BFSC	Mount Baldy St	49.52	310	⇑P	P	15 07 44.3	-0.3
	baz=50						
L15A	Malad City	49.56	321	⇑P	P	15 07 44.1	-0.6
	baz=50,SNR=5.3						
O13A	Hicks Ranch, I	49.58	319	⇓P	P	15 07 44.7	-0.2
	baz=50						
Q12A	Willow Creek R	49.60	317	⇓P	P	15 07 45.4	+0.4
	baz=50						
RLMT	Red Lodge	49.60	327	⇓P	P	15 07 45.4	+0.4
	baz=50						
TPNV	Topopah Spring	49.61	314	⇓P	P	15 07 45.6	+0.4
	baz=50						
R11A	Troy Canyon, C	49.78	316	⇓P	P	15 07 46.6	+0.2
	baz=50						
IMW	Indian Meadow	49.79	324	eP	P	15 07 46.6	+0.2
	3.5nm,0.6s,mb4.2						
J16A	Bone	49.81	323	⇓P	P	15 07 46.5	-0.1
	baz=50,SNR=7.2						
G18A	Lazy EL Ranch,	49.88	327	⇓P	P	15 07 47.1	+0.1
	baz=50						
M14A	Sheep Mountain	49.89	320	⇑P	P	15 07 47.1	0.0
	baz=50,SNR=5.7						
EDW2	Edwards Air Fo	50.03	311	⇓P	P	15 07 48.1	-0.2
	baz=50						
I16A	Newdale	50.09	324	⇓P	P	15 07 49.2	+0.5
	baz=50						
L14A	Malta	50.11	321	⇓P	P	15 07 48.5	-0.4
	baz=50						
O12A	Currie	50.15	318	⇓P	P	15 07 49.1	0.0
	baz=50						
S10A	Tonopah Range,	50.30	315	⇑P	P	15 07 50.6	+0.2
	baz=50						
M13A	Montello	50.34	320	⇑P	P	15 07 50.5	-0.1
	baz=50						
F18A	Big Timber	50.34	327	⇓P	P	15 07 50.7	+0.2
	baz=50						
K14A	Jones Ranch, D	50.35	322	⇓P	P	15 07 50.4	-0.2
	baz=50						
J15A	Blackfoot	50.38	323	⇑P	P	15 07 50.8	0.0
	baz=50						
GRAC	Grapevine Rang	50.44	313	⇓P	P	15 07 51.6	+0.1
	baz=50						
H16A	Russell Place,	50.45	325	⇑P	P	15 07 51.7	+0.3
	baz=51						
S09A	Goldfield	50.65	314	⇑P	P	15 07 53.0	0.0
	baz=51						
O11A	Cowboy Ranch,	50.69	318	⇑P	P	15 07 53.5	+0.3
	baz=51						
R09A	Tonopah	50.77	315	⇓P	P	15 07 53.8	-0.1
	baz=51						
M12A	Wells	50.84	319	⇓P	P	15 07 54.0	-0.3
	baz=51						
F17A	Fitzpatrick Pl	50.85	327	⇑P	P	15 07 54.9	+0.6
	baz=51						
E18A	Harlowton	50.87	328	⇑P	P	15 07 55.0	+0.6
	baz=51						
J14A	Carey	50.99	322	⇑P	P	15 07 55.5	+0.1
	baz=51,SNR=6.9						
G16A	Moss Hill, Enn	51.08	325	⇓P	P	15 07 56.6	+0.6
	baz=51						
BOZ	Bozeman (W)	51.23	326	⇓P	P	15 07 57.4	+0.3
	baz=51						
I14A	Mackay	51.29	323	⇑P	P	15 07 58.3	+0.7
	baz=51						
E17A	Martinsdale	51.31	327	⇓P	P	15 07 58.0	+0.3
	baz=51						
M11A	Holland Ranch,	51.42	319	⇑P	P	15 07 58.7	0.0
	baz=52						
J13A	Cove Ranch, Pi	51.43	322	⇓P	P	15 07 58.7	+0.1
	baz=52						
D17A	Six Diamond Ra	51.65	328	⇑P	P	15 08 00.6	+0.4
	baz=52						
HLID	Hailey	51.66	322	⇑P	P	15 08 00.7	+0.3
	baz=52						
HLID	Hailey	51.66	322	eP	P	15 07 59.9	-0.5
	2.1nm,0.7s,mb3.9						
I13A	Wildhorse Cree	51.68	323	⇑P	P	15 08 00.7	+0.2
	baz=52						
NVAR	Mina Array Bea	51.73	315	P	P	15 08 01.2	+0.3
	1.4nm,0.7s,mb3.7,baz=123,slow=7.0,SNR=11						
O09A	Fish Creek Ran	51.74	317	⇓P	P	15 08 00.9	-0.1
	baz=52,SNR=5.9						
L11A	Cat Creek Ranc	51.77	320	⇓P	P	15 08 01.0	-0.2
	baz=52,SNR=5.6						
F15A	Butte	51.83	325	⇑P	P	15 08 01.6	0.0
	baz=52						
J12A	Stokes Ranch,	51.92	321	⇑P	P	15 08 02.2	-0.1
	baz=52						
B18A	Beardsley Farm	51.97	329	⇓P	P	15 08 03.0	+0.3
	baz=52						
C17A	Wharram Farm,	51.99	328	⇑P	P	15 08 03.0	+0.3
	baz=52						
D16A	Dana Ranch, Ca	52.03	327	⇑P	P	15 08 03.0	0.0
	baz=52						
G14A	Jackson	52.04	324	⇓P	P	15 08 03.0	-0.2
	baz=52						
H13A	Challis	52.12	323	⇑P	P	15 08 03.6	-0.1
	baz=52						
L10A	Juniper Basin	52.18	319	⇑P	P	15 08 04.6	+0.3
	baz=52,SNR=8.0						
I12A	Atlanta	52.23	322	⇓P	P	15 08 04.5	-0.1
	baz=52,SNR=6.2						
F14A	Wisdom	52.31	325	⇓P	P	15 08 05.1	0.0
	baz=52						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
A18A	Metzger Ranch,	52.35	330	⇓P	P	15 08 05.4	0.0
	baz=52						
G13A	Cobalt	52.40	324	⇓P	P	15 08 05.6	-0.2
	baz=52						
MFID	Camas Ranch	52.46	321	⇓P	P	15 08 06.2	-0.1
	baz=52						
H12A	Diamond D Ranc	52.47	323	⇓P	P	15 08 06.6	+0.2
	baz=53						
D15A	Lincoln	52.56	327	⇓P	P	15 08 07.3	+0.3
	baz=53						
E14A	Clinton	52.73	326	⇓P	P	15 08 08.0	-0.2
	baz=53						
S05C	Merced	52.74	312	⇑P	P	15 08 07.8	-0.6
	baz=53						
K10A	MacKenzie Ranc	52.79	320	⇓P	P	15 08 08.8	+0.1
	baz=53						
A17A	Triple J Farms	52.80	329	⇑P	P	15 08 08.4	-0.3
	baz=53						
F13A	Darby	52.85	324	⇓P	P	15 08 08.7	-0.4
	baz=53						
C15A	Salmond Ranch,	53.06	327	⇓P	P	15 08 10.9	+0.3
	baz=53						
WCN	Washoe City	53.12	315	⇑P	P	15 08 10.9	-0.4
	baz=53						
M08A	Happy Creek Ra	53.13	318	⇓P	P	15 08 11.5	+0.2
	baz=53						
H11A	Donnelly	53.25	323	⇑P	P	15 08 12.0	-0.1
	baz=53						
K09A	Rome	53.30	320	⇑P	P	15 08 12.2	-0.2
	baz=53,SNR=7.2						
L08A	Fields	53.46	319	⇓P	P	15 08 13.6	0.0
	baz=54,SNR=16						
O06A	Flanigan	53.54	316	⇑P	P	15 08 14.0	-0.3
	baz=54						
J09A	Fry Pan Ranch,	53.63	320	⇓P	P	15 08 14.3	-0.6
	baz=54,SNR=5.5						
M07A	Soldier Meadow	53.63	318	⇓P	P	15 08 14.7	-0.2
	baz=54						
C14A	Swan Lake	53.67	327	⇑P	P	15 08 15.2	+0.2
	baz=54						
D13A	Huson	53.67	326	⇑P	P	15 08 14.9	-0.1
	baz=54						
G11A	Walters Elk Ra	53.77	323	⇑P	P	15 08 15.5	-0.4
	baz=54						
BEKR	Beckwourth	53.78	315	⇓P	P	15 08 15.8	-0.2
	baz=54						
N06A	Buffalo Meadow	53.80	317	⇓P	P	15 08 15.4	-0.8
	baz=54						
K08A	Mann Creek Ran	53.81	319	⇑P	P	15 08 15.8	-0.4
	baz=54						
A15A	Johnson Ranch,	53.86	328	⇓P	P	15 08 16.6	+0.2
	baz=54						
L07A	Adell	54.03	318	⇑P	P	15 08 17.8	-0.1
	baz=54,SNR=5.7						
C13A	Hot Springs	54.07	326	⇓P	P	15 08 18.4	+0.4
	baz=54						
J08A	Circle Bar Ran	54.10	320	⇑P	P	15 08 17.9	-0.3
	baz=54						
A14A	Double T Ranch	54.21	328	⇑P	P	15 08 19.1	+0.1
	baz=54						
G10A	Bishop Farm, J	54.23	323	⇓P	P	15 08 18.2	-0.9
	baz=54,SNR=5.0						
E11A	Bogner Ranch,	54.25	324	⇓P	P	15 08 19.1	-0.2
	baz=54						
K07A	Rock Creek Ran	54.28	319	⇑P	P	15 08 19.1	-0.5
	baz=54						
FCC	Fort Churchill	54.42	347	eP	P	15 08 19.3	-1.0
G09A	Cove	54.62	322	⇓P	P	15 08 21.2	-0.8
	baz=55						
F10A	Beach Ranch, E	54.65	323	⇓P	P	15 08 21.7	-0.5
	baz=55						
D11A	Klaveano Farm,	54.70	325	⇓P	P	15 08 22.1	-0.4
	baz=55						
H08A	Prairie City	54.79	321	⇓P	P	15 08 23.9	+0.7
	baz=55						
I07A	Izee	55.10	320	⇑P	P	15 08 25.4	-0.1
	baz=55						
D10A	Wagner Farm, O	55.25	324	⇓P	P	15 08 25.9	-0.6
	baz=55						
G08A	Pilot Rock	55.34	322	⇑P	P	15 08 26.7	-0.5
	baz=55,SNR=6.6						
A12A	Yaak River Ran	55.38	327	⇓P	P	15 08 27.8	+0.4
	baz=56						
C09A	Chrisman Ranch	56.22	325	⇓P	P	15 08 33.4	+0.1
	baz=56						
G06A	Carlson Farm,	56.36	321	⇓P	P	15 08 34.9	+0.5
	baz=56						
A10A	Northport	56.45	326	⇑P	P	15 08 34.5	-0.5
	baz=56						
EDM	Edmonton	56.83	332	eP	P	15 08 36.4	-1.1
HOOD	Mount Hood Mea	57.03	321	eP	P	15 08 33.9	-5.2
	15nm,0.5s,mb5.1						
YKA	Yellowknife Ar	63.44	340	P	P	15 09 21.6	-0.8
	2.1nm,0.4s,mb4.3,baz=133,slow=6.6,SNR=70						
YKA				pP	pP	15 10 00.1	-1.2
	1.0nm,0.6s,baz=131,slow=6.7,SNR=3.0						
YKA	Yellowknife Ar	63.44	340	P	P	15 09 21.6	-0.8
YKA				pP	pP	15 10 00.1	-1.2
TIC	Toumodi	67.34	86	eP	P	15 09 48.3	-0.1
	7.9nm,0.2s,mb5.2						
LIC	Lamto	67.36	86	eP	P	15 09 47.9	-0.6
	32nm,0.7s,mb5.3						
DBIC	Dimbokro	67.50	86	P	P	15 09 49.3	-0.1
	8.5nm,0.7s,mb4.7,baz=277,slow=5.8,SNR=18						
DBIC	Dimbokro	67.50	86	eP	P	15 09 49.0	-0.4
	7.0nm,0.6s,mb4.7						
KIC	Kosan Boka	67.64	86	eP	P	15 09 50.2	0.0
	68nm,0.7s,mb5.5						
SUMG	Summit	69.04	11	eP	P	15 09 58.3	+0.4
	11nm,1.0s,mb4.5						
RES	Resolute Bay	69.10	354	P	P	15 09 56.4	-1.8
	6.3nm,1.4s,mb4.2						
TORD	Torodi Ar. Bea	73.52	78	P	P	15 10 25.1	-0.7
	0.7nm,0.3s,mb3.9,baz=285,slow=6.6,SNR=28						
NB2	NORSAR Subarra	81.30	29	P	P	15 11 08.7	+0.6
	comp=Z,1.2nm,0.6s,mb3.7,baz=268,slow=5.3						
NOA	NORSAR Array B	81.30	29	P	P	15 11 09.2	+1.0
	comp=Z,2.1nm,0.7s,mb3.9,baz=267,slow=5.3,SNR=4.3						
GERES	GERESS Array B	82.73	42	P	P	15 11 16.1	+0.2
	comp=Z,0.3nm,0.4s,mb3.4,baz=302,slow=5.6,SNR=3.0						
ARCES	ARCESS Array B	86.68	20	P	P	15 11 35.3	+0.1
	comp=Z,5.1nm,1.0s,mb4.3,baz=277,slow=4.1,SNR=22						
ARCES				pP	pP	15 12 15.5	-0.9
	comp=Z,2.2nm,0.9s,baz=292,slow=7.4,SNR=1.4						
VNA3	Neumayer Olymp	88.00	163	eP	P	15 11 41.0	-0.4
VNA2	Neumayer--Watz	88.53	163	eP	P	15 11 43.7	-0.2
ZALV	Zalesovo Beam	116.71	15	PKP	PKPdf	15 17 35.1	0.0
	comp=Z,1.2nm,0.3s,baz=238,slow=1.6,SNR=8.3						
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	15 17 45.8	-0.4
	comp=Z,0.8nm,0.4s,baz=300,slow=2.6,SNR=36						
MDJ	Mudanjiang	125.04	341	PKP	PKPdf	15 17 51.1	-0.3
SONM	Songino Array	125.68	1	PKP	PKPdf	15 17 53.3	+0.8
	comp=Z,1.2nm,0.6s,baz=320,slow=1.3,SNR=10						
WMQ	Urumqi	126.71	17	ePKP	PKPdf	15 17 53.4	-1.2
GTA	Gaotai	133.61	8	ePKP	PKPdf	15 18 09.6	+1.8
LZH	Lanzhou	137.31	4	ePKP	PKPdf	15 18 10.0	-4.8
LZH				XPKP		15 19 09.5	
CD2	Chengdu	142.45	5	PKP	PKPdf	15 18 20.8	-3.5
GYA	Guiyang	147.02	1	PKP	PKPdf	15 18 31.8	-0.5
GYA				PKP2	PKPab	15 18 37.4	+1.1
GYA				APKP		15 19 11.2	
GYA				XPKP		15 19 23.5	
GYA				PP	PP	15 22 00.7	+2.1
GYA				PP	PP		
	comp=Z,90nm,7.9s						
KMI	Kunming	148.06	8	PKP	PKPdf	15 18 32.4	-1.7
ASAR	Alice Springs	149.25	234	PKP	PKPdf	15 18 36.0	0.0
	comp=Z,2.3nm,0.5s,baz=114,slow=3.3,SNR=24						
ASAR				PKPbc	PKPbc	15 18 39.8	-0.7
	comp=Z,2.3nm,0.5s,baz=115,slow=3.6,SNR=24						
ASAR				pPKPbc	pPKPbc	15 19 20.2	-3.4
	comp=Z,2.2nm,0.8s,baz=127,slow=3.2,SNR=4.9						
WB2	Warramunga Arr	150.49	241	eP	PKPbc	15 18 42.9	-0.6
WB2				e		15 19 24.6	
CMAR	Chiang Mai Arr	153.71	18	PKP	PKPdf	15 18 44.0	+1.1
	comp=Z,0.4nm,0.4s,baz=313,slow=1.4,SNR=6.5						
CMAR				PKPbc	PKPbc	15 18 51.0	+0.2
	comp=Z,2.7nm,0.7s,baz=312,slow=2.9,SNR=13						
CMAR				PKPab	PKPab	15 19 01.8	-2.2
	comp=Z,0.7nm,0.5s,baz=330,slow=3.4,SNR=3.1						
CMAR	Chiang Mai Arr	153.71	18	PKP	PKPdf	15 18 44.0	+1.1
CMAR				PKPbc	PKPbc	15 18 51.0	+0.2
CMAR				PKPab	PKPab	15 19 01.8	-2.2

IDC 06 15:03:46.8±3.9**,166N×9734E,h0km,mb3.5**/4**,mb1 3.5**/4**, mb1mx3.4**/19**,mbtmp3.5**/4**,Error ellipse: s-maj=165.4km s-min=27.2km az=60.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.56	128	P	P	15 11 52.7	0.0
	0.2nm,0.7s,baz=308,slow=8.1,SNR=2.7						
SONM	Songino Array	46.66	8	P	P	15 12 17.3	+0.3
	0.6nm,0.6s,baz=188,slow=8.4,SNR=6.3						
MKAR	Makanchi Array	46.83	346	P	P	15 12 18.6	+0.2
	0.8nm,0.6s,baz=155,slow=8.9,SNR=9.4						
ZALV	Zalesovo Beam	53.13	351	P	P	15 13 05.5	-0.6
	0.5nm,0.3s,baz=154,slow=5.5,SNR=4.5						

IDC ***06*** *15:12:23.9±0.9,2036S×7041W,h0km,mb3.9/6,mb1 4.2/8, mb1mx4.0/19,mbtmp4.1/8,ML4.9/1,MS3.6/6,Ms1 3.6/6, ms1mx3.2/33,Error ellipse: s-maj=26.6km s-min=20.7km az=49.0*
GUC ***06*** *15:12:24.8±0.5,2050S×7085W,h41km±4km,ML4.5*
ISCJB ***06*** *15:12:27.9±0.8,2043S±004×7033W±006,h41km±8km, mb4.2/10,MS3.7/4,Error ellipse: s-maj=9.7km s-min=6.4km az=172.3*
NEIC ***06*** *15:12:29.0±1.0,2061S×7036W,h40km±9km,mb4.5/7, Error ellipse: s-maj=13.1km s-min=9.2km az=87.0*
NEIC Felt [III] at Alto Hospicio, Iquique and Pica.
ISC 06 15:12:25.6±1.5**,2046S**±004×**7043W**±006**,h11km**±**9km,n42, σ1§16**/45**,mb4.2**/10**,MS3.7**/4**,2C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.05	124	⇓iP	Pg	15 12 46.1	+0.2
PB01				iS	Sg	15 12 59.6	0.0
PB01				AML	AML	15 13 04.2	
	comp=N,26μm,0.1s						
TOCH	Tocopilla	1.64	173	iP	Pn	15 12 53.3	-1.1
TOCH				iS	Sn	15 13 13.8	-1.7
TOCH				AML	AML	15 13 21.0	
	comp=E,5μm,0.2s						
MACH	Maria Elena	1.84	160	eP	Pn	15 12 57.4	+0.3
MACH				iS	Sn	15 13 22.7	+2.3
LVC	Limon Verde	2.57	147	Pn	Pn	15 13 09.1	+2.0
	comp=E,118nm,0.3s,baz=310,slow=8.8,SNR=761						
LVC				Sn	Sn	15 13 42.3	+3.9
	comp=E,338nm,0.3s,baz=129,slow=16,SNR=16						
LVC				LR	LR	15 14 20.7	
	comp=E,990nm,21.6s,baz=355,slow=44						
LVC	Limon Verde	2.57	147	ePn	Pn	15 13 08.8	+1.7
LVC				Pn	Pn	15 13 09.1	+2.0
LVC				eSn	Sn	15 13 39.5	+1.1
LVC				Sn	Sn	15 13 42.3	+3.9
LVC				LR	LR	15 14 20.7	
LVC	Limon Verde	2.57	147	⇑iP	Pn	15 13 09.1	+2.0
LVC				iS	Sn	15 13 42.3	+4.0
LVC				AML	AML	15 13 51.6	
	comp=N,3μm,0.6s						
CEN1	Los Morros	2.93	176	⇑iP	Pn	15 13 13.2	+1.1
CEN1				AML	AML	15 14 07.3	
	comp=E,888nm,0.2s						
ANCH	Antofagasta	3.21	180	⇓iP	Pn	15 13 14.1	-1.8
ARE	Arequipa	4.10	346	eP	Pn	15 13 32.0	+3.8
ARE				eS	Sn	15 14 16.0	-0.1
LCO	Las Campanas	8.52	182	ePn	Pn	15 14 27.0	-1.9
LCO				eSn	Sn	15 16 29.0	+24
SIV	San Ignacio	9.94	65	Pn	Pn	15 14 48.7	+0.4
	comp=E,5.9nm,0.3s,baz=270,slow=12,SNR=40						
SIV				Sn	Sn	15 16 39.1	-0.8
	baz=274,slow=19,SNR=1.8						
NNA	Nana	10.43	323	LR	LR	15 18 58.6	
	comp=E,108nm,21.9s,baz=138,slow=38						
CFAA	Coronel Fontan	11.28	170	Pn	Pn	15 15 11.0	+4.4
	comp=E,0.1nm,0.3s,baz=23,slow=13,SNR=3.2						
CFAA				Sn	Sn	15 17 23.7	+11
	comp=E,0.1nm,0.3s,baz=204,slow=3.4,SNR=3.8						
CFAA	Coronel Fontan	11.28	170	Pn	Pn	15 15 11.0	+4.4
CFAA				Sn	Sn	15 17 23.7	+11
PLCA	Paso Flores	20.21	180	P	P	15 17 00.7	+0.3
	comp=E,1.9nm,0.8s,baz=347,slow=11,SNR=3.5						
PLCA				LR	LR	15 24 13.4	
	comp=E,128nm,18.4s,MS3.3,baz=3.2,slow=35						
PLCA	Paso Flores	20.21	180	eP	P	15 16 57.9	-2.6
	comp=E,8.8nm,1.1s						
PLCA				LR	LR	15 24 13.4	
BDFB	Brasilia	21.83	81	P	P	15 17 18.5	+0.4
	comp=E,1.4nm,0.5s,mb3.6,baz=227,slow=19,SNR=3.2						
BDFB				LR	LR	15 27 07.8	
	comp=E,245nm,19.2s,MS3.6,baz=9.5,slow=40						
BCIP	Isla Barro Col	30.86	342	P	P	15 18 35.5	-6.5
FDF	Fort de France	36.14	15	P	P	15 19 29.4	+1.5
RCBR	Riachuelo	36.52	71	eP	P	15 19 29.7	-1.6
	comp=E,19nm,1.2s,mb4.8						
TXAR	Lajitas Array	58.97	326	P	P	15 22 25.7	+0.5
	comp=E,0.1nm,0.5s,mb3.1,baz=155,slow=6.7,SNR=2.7						
VNA3	Neumayer Olymp	61.52	161	e	P	15 22 42.1	0.0
VNA3				e		15 22 50.3	
VNA3				e		15 23 00.7	
VNA2	Neumayer--Watz	62.10	161	e	P	15 22 46.0	0.0
	baz=302,slow=6.9						
VNA2				e		15 22 54.6	
VNA2				e		15 23 05.5	
SNAA	Sanae	63.72	161	e	P	15 22 56.1	-0.7
SNAA				e		15 23 05.1	
SNAA	Sanae	63.72	161	eP	P	15 22 56.1	-0.7
	comp=E,7.6nm,1.4s,mb4.5						
SDCO	Great Sand Dun	66.64	330	eP	P	15 23 16.5	+0.4
	comp=E,2.0nm,1.0s,mb4.1						
DBIC	Dimbokro	69.81	74	P	P	15 23 37.5	+0.9
	comp=E,2.5nm,1.0s,mb4.1,baz=190,slow=7.9,SNR=3.1						
DBIC				LR	LR	15 52 34.7	
	comp=E,93nm,21.6s,MS4.0,baz=304,slow=35						
DBIC	Dimbokro	69.81	74	P	P	15 23 35.2	-1.4
	comp=E,9.8nm,1.3s,mb4.6						
DBIC				LR	LR	15 52 34.7	
PPT	Papeete	74.18	257	LR	LR	15 50 16.6	
	comp=E,54nm,18.6s,MS3.9,baz=88,slow=31						
HLID	Hailey	75.41	329	eP	P	15 24 10.6	+1.4
	comp=E,7.3nm,1.6s,mb4.4						
TOA0	Torodi Ar. Sit	78.35	71	eP	P	15 24 24.8	-1.7
TOA0				e		15 24 34.9	
TORD	Torodi Ar. Bea	78.35	71	P	P	15 24 25.1	-1.4
	comp=E,4.7nm,0.8s,mb4.4,baz=251,slow=5.4,SNR=23						
WALA	Waterton Lakes	79.29	333	P	P	15 24 31.9	+1.0
	comp=E,0.1nm,1.0s						
TSUM	Tsumeb	81.70	107	eP	P	15 24 45.1	+0.5
	comp=E,3.3nm,0.8s,mb4.3						
YKA	Yellowknife Ar	89.74	341	P	P	15 25 23.1	-0.3
	comp=E,2.1nm,1.0s,mb4.4,baz=137,slow=4.9,SNR=21						
BVAR	Borovoye Array	135.72	33	PKP	PKPdf	15 31 46.1	+0.2
	comp=E,0.8nm,0.6s,baz=308,slow=3.4,SNR=5.1						
ZAA0	Zalesovo Array	141.59	23	ePKPdf	PKPdf	15 31 56.4	-0.2
ZALV	Zalesovo Beam	141.59	23	PKP	PKPdf	15 31 56.4	-0.2
	comp=E,2.9nm,0.7s,baz=321,slow=2.1,SNR=14						
MK31	Makanchi Array	145.59	34	ePKPdf	PKPdf	15 32 00.5	-3.4
MKAR	Makanchi Array	145.59	34	PKPbc	PKPbc	15 32 04.0	-0.1
	comp=E,5.6nm,0.8s,baz=322,slow=3.7,SNR=38						
MJAR	Matsushiro Arr	150.31	309	PKPbc	PKPbc	15 32 17.2	0.0
	comp=E,1.3nm,0.6s,baz=100,slow=2.5,SNR=3.9						
SONM	Songino Array	152.57	5	PKP	PKPdf	15 32 15.6	+0.6
	comp=E,1.0nm,1.0s,baz=330,slow=1.4,SNR=3.4						
SONM				PKPbc	PKPbc	15 32 22.0	0.0
	comp=E,0.8nm,0.7s,baz=9.8,slow=3.2,SNR=5.8						
SONM				PKPab	PKPab	15 32 31.2	-1.1
	comp=E,0.5nm,0.5s,baz=50,slow=0.7,SNR=5.0						

NEIC 06 15:13:08.0,3983N×**12266W,h5km,ML3.5**(NCEDC)**, After NCEDC.,Northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WDC	Whiskeytown Da	0.76	7	ePg	Pg	15 13 21.6	-1.0
WDC				eSg	Sg	15 13 33.6	+1.3
HOPS	Hopland	0.89	201	ePg	Pg	15 13 25.5	+0.3
HOPS				eSg	Sg	15 13 36.6	-0.1
MCCM	Marconi Confer	1.69	186	ePn	Pn	15 13 36.4	-1.8
YBH	Yreka Blue Hor	1.90	359	ePn	Pn	15 13 39.4	-1.6
YBH				eSn	Sn	15 14 07.0	+1.6
CMB	Columbia Colle	2.52	135	ePn	Pn	15 13 47.9	-1.6
MOD	Modoc	2.74	40	ePn	Pn	15 13 51.3	-1.2
MOD				ePg	Pg	15 13 58.5	-2.0
HUMO	Hull Mountain	2.78	356	ePn	Pn	15 13 54.1	+1.0
SAO	San Andreas Ge	3.21	162	ePn	Pn	15 13 58.0	-1.0
WVOR	Wild Horse Val	4.00	48	ePn	Pn	15 14 09.4	-0.5
WVOR				ePg	Pg	15 14 22.8	-1.8
BMN	Battle Mountai	4.21	80	ePn	Pn	15 14 20.3	+7.5
TPH	Tonopah	4.59	111	ePn	Pn	15 14 17.5	-0.5
ELK	Elko	5.75	78	ePn	Pn	15 14 36.6	+2.7
	3.4nm,0.5s						
ELK				ePg	Pg	15 14 56.2	-1.9
TPNV	Topopah Spring	5.80	118	ePn	Pn	15 14 35.0	+0.4
	11nm,0.8s						

ISCJB ***06*** *16:01:29.4±0.2,731S±004×15590E±004,h31km, mb5.1/86,MS4.4/30,Error ellipse: s-maj=5.6km s-min=5.2km az=3.9*
IDC ***06*** *16:01:30.8±0.5,738S×15588E,h29km±2km,mb4.7/20, mb1 4.7/22,mb1mx4.7/23,mbtmp4.7/22,ML4.0/2,MS4.3/18, Ms1 4.3/18,ms1mx4.2/26,Error ellipse: s-maj=15.0km s-min=11.8km az=85.0*
MOS ***06*** *16:01:30.7±1.1,724S×15578E,h33km,mb5.4/30,Error ellipse: s-maj=8.9km s-min=7.2km az=105.4*
GCMT ***06*** *16:01:31.8±0.2,749S×15605E,h31km,MW5.1/61, Moment Tensor Solution. s51,c64; s61,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.72±.22; $M_{\theta\theta}$-3.83±.15; $M_{\phi\phi}$-1.90±.16; $M_{r\theta}$-0.64±.20; $M_{\theta\phi}$3.65±.11; $M_{\phi r}$-0.91±.20; Best double couple: $M_0$6.30300×10^{16} NP1:ϕ_s295.00000°,δ46.00000°,λ73.00000°. NP2: ϕ_s140.00000°,δ47.00000°,λ107.00000°. Principal axes: T 5.9650, Plg78.0000°, Azm127.0000°; N 0.6660, Plg12.0000°, Azm308.0000°; P -6.6410, Plg0.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***06*** *16:01:31.8±0.6,728S×15594E,h39km±5km,mb5.2/49 Error ellipse: s-maj=6.2km s-min=5.5km az=112.0*
BJI ***06*** *16:01:32.1,694S×15583E,h39km,mB5.1,mb4.9,Ms4.7, Msz4.5*
DJA ***06*** *16:02:31,8.11S×15169E,h278km,Mw5.3/5*
ISC 06 16:01:31.4±0.2**,731S**±003×**15593E**±004**,h33km, h33km**±.8km**:pP-P,n309,σ1§02**/182**,mb5.1**/86**,MS4.4**/30**, 15C-6D,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.50	118	Pn	Pn	16 02 38.6	+1.3
	30nm,0.3s,baz=242,slow=4.5,SNR=18						
HNR				Sn	Sn	16 03 33.9	+5.3
	69nm,0.3s,baz=241,slow=19,SNR=2.7						
HNR				LR	LR	16 04 21.5	
	comp=Z,10μm,18.2s,baz=305,slow=38						
HNR	Honiara	4.50	118	ePn	Pn	16 02 38.1	+0.8
HNR				eSn	Sn	16 03 26.9	-1.7
PMG	Port Moresby	8.92	256	ePn	Pn	16 03 40.3	+2.2
PMG				eSn	Sn	16 05 17.9	+0.4
COEN	Coen	14.16	241	ePn	Pn	16 04 51.7	+1.9
	45nm,1.0s						
CTA	Charters Tower	15.79	215	eP	Pn	16 05 14.5	+3.1
	12nm,0.6s						
CTA				eS	Sn	16 08 19.6	+14
CTA	Charters Tower	15.79	215	Pn	Pn	16 05 11.0	-0.4
	0.2nm,0.3s,baz=48,slow=15,SNR=2.8						
CTA				Sn	Sn	16 08 17.8	+12
	0.1nm,0.3s,baz=4.3,slow=19,SNR=1.6						
CTA				LR	LR	16 10 44.9	
	comp=Z,2μm,18.6s,baz=25,slow=35						
CTA	Charters Tower	15.79	215	Pn	Pn	16 05 11.0	-0.4
CTA				eP		16 05 14.5	
CTA				Sn	Sn	16 08 17.8	+12
CTA				eS	Sn	16 08 19.6	+14
CTAO	Charters Tower	15.79	215	eP	Pn	16 05 11.9	+0.5
CTAO				pmax	pmax		
	comp=Z,279nm,2.3s						
CTAO	Charters Tower	15.79	215	ePn	Pn	16 05 11.8	+0.4
	comp=Z,279nm,2.3s						
EIDS	Eidsvold	18.55	194	eP	Pn	16 05 44.1	-1.7
	comp=Z,24nm,0.9s						
ARMA	Armidale	23.34	189	eP	P	16 06 36.9	-0.2
ARMA				eS	S	16 10 47.7	+0.3
GUMO	Guam	23.49	332	LR	LR	16 14 45.2	
	comp=Z,495nm,21.0s,MS4.0,baz=256,slow=34						
KAKA	Kakadu	23.73	255	eP	x	16 06 22.7	
	comp=Z,54nm,0.6s						
WRAB	Tennant Creek	24.39	237	P	P	16 06 47.6	+0.6
	comp=Z,264nm,0.5s,mb5.9,SNR=39						
WRAB	Tennant Creek	24.39	237	c iP	P	16 06 47.5	+0.5
WRAB	Tennant Creek	24.39	237	⇑iP	P	16 06 47.1	+0.2
	comp=Z,29nm,0.8s,mb4.8						
WB2	Warramunga Arr	24.40	237	eP	P	16 06 47.3	+0.3
WB2				eS	S	16 11 04.9	+0.1
ASAR	Alice Springs	26.67	230	P	P	16 07 07.0	-0.5
	comp=Z,6.1nm,0.8s,mb4.2,baz=63,slow=8.9,SNR=78						
ASAR				PcP	PcP	16 10 30.9	0.0
	comp=Z,2.3nm,0.7s,baz=68,slow=2.6,SNR=5.0						
ASAR				pPcP		16 10 40.2	
	comp=Z,3.8nm,0.7s,baz=66,slow=2.3,SNR=7.1						
ASAR	Alice Springs	26.67	230	P	P	16 07 07.1	-0.4
ASAR						16 10 31.0	
STKA	Stephens Creek	27.86	207	eP	P	16 07 18.4	+0.3
	comp=Z,8.6nm,0.6s,mb4.6						
STKA				eS	S	16 12 02.7	+3.3
STKA	Stephens Creek	27.86	207	P	P	16 07 16.6	-1.5
	comp=Z,7.7nm,0.8s,mb4.4,baz=27,slow=14,SNR=9.1						
STKA				PcP	PcP	16 10 33.1	-0.6
	comp=Z,3.3nm,0.7s,baz=350,slow=6.1,SNR=3.5						
STKA				LR	LR	16 18 24.2	
	comp=Z,2μm,18.0s,MS4.7,baz=27,slow=36						
CNB	Canberra Magne	28.52	191	eP	P	16 07 24.4	+0.5
CNB				eS	S	16 12 15.0	+5.3
TOO	Toolangi	31.58	196	eP	P	16 07 59.0	+8.0
BATI	Baumata	32.01	262	P	P	16 07 53.1	-2.0
	comp=Z,16nm,0.8s,mb4.9,baz=76,slow=19,SNR=3.5						
AFI	Afiamalu	32.39	104	P	P	16 07 57.7	-0.8
	comp=Z,41nm,1.0s,mb5.2,baz=145,slow=5.6,SNR=3.6						
AFI				LR	LR	16 18 45.1	
	comp=Z,360nm,18.9s,MS4.1,baz=176,slow=32						
AFI	Afiamalu	32.39	104	P	P	16 07 57.7	-0.7
	comp=Z,64nm,1.0s,mb5.4						
FORT	Forrest	35.00	225	eP	P	16 08 20.8	-0.2
	comp=Z,45nm,0.7s,mb5.5						
KAPI	Kappang	36.03	272	eP	P	16 08 28.2	-1.9
	comp=Z,39nm,0.8s,mb5.4						
TAU	Tasmania Unive	36.26	191	eP	P	16 08 32.1	+0.5
TAU				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3						
TAU	Tasmania Unive	36.26	191	eP	P	16 08 32.1	+0.5
	comp=Z,34nm,0.8s,mb5.3						
MBWA	Marble Bar	37.57	245	eP	P	16 08 42.4	-0.7
	comp=Z,15nm,0.6s,mb4.9						
MBWA				e		16 09 00.5	
RPZ	Rata Peaks	38.61	162	P	P	16 08 51.2	-0.3
	comp=Z,30nm,0.8s,mb5.1,baz=350,slow=0.1,SNR=11						
KKM	Kota Kinabalu	41.78	288	eP	P	16 09 18.0	-0.2
	comp=Z,24nm,0.8s,mb4.9						
KLBR	Kellerberrin	43.00	231	eP	P	16 09 27.1	-0.8
	comp=Z,44nm,0.6s,mb5.4						
KLBR				e	pP	16 09 35.7	-1.9
NWAO	Narrogin (SRO)	43.98	229	P	P	16 09 34.1	-1.7
	comp=Z,20nm,0.9s,mb4.8,baz=50,slow=10.0,SNR=10						
NWAO	Narrogin (SRO)	43.98	229	eP	P	16 09 35.5	-0.3
NWAO				pmax	pmax		
	comp=Z,12nm,0.7s						
NWAO	Narrogin (SRO)	43.98	229	eP	P	16 09 35.5	-0.4
	comp=Z,12nm,0.7s,mb4.7						
MUN	Mundaring	44.35	231	eP	P	16 09 38.9	+0.1
MUN				e	pP	16 09 47.5	-1.0
RAR	Rarotonga	44.94	113	LR	LR	16 24 58.8	
	comp=Z,435nm,19.1s,MS4.4,baz=275,slow=31						
YULB	Yu-li	45.57	313	eP	P	16 09 46.7	-1.9
	comp=Z,17nm,0.7s,mb5.1						
NACB	Ninganchiao	45.84	314	eP	P	16 09 46.0	-4.6
	comp=Z,31nm,0.9s,mb5.2						
YHNB	Yeheng	46.30	314	eP	P	16 09 54.5	+0.2
	comp=Z,16nm,0.8s,mb5.0						
KSM	Kuching	46.34	279	eP	P	16 09 53.6	-1.2
	comp=Z,25nm,0.9s,mb5.2						
MJAR	Matsushiro Arr	46.68	340	P	P	16 09 56.5	-0.5
	comp=Z,4.4nm,0.5s,mb4.6,baz=164,slow=7.4,SNR=13						
MJAR				PcP	PcP	16 11 30.6	+0.2
	comp=Z,3.2nm,0.8s,baz=164,slow=4.0,SNR=3.2						
MJAR				pPcP		16 11 40.0	
	comp=Z,5.0nm,0.8s,baz=164,slow=3.4,SNR=4.5						
MAJO	Matsushiro	46.68	340	eP	P	16 09 55.6	-1.5
MAJO				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						

MAJO Matsushiro 46.68 340 *e*P P **16 09 55.6 -1.4**
comp=Z,22nm,0.9s,mb5.1
MAT Matsushiro 46.68 340 P P **16 09 56.3 -0.8**
SSE Sheshan 50.63 321 P P **16 10 24.3 -3.3**
SSE AMB AMB
comp=Z,44nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,81nm,5.4s
SSE LR LR
comp=N,92nm,21.6s,MS3.9
SSE LR LR
comp=E,89nm,21.6s,MS3.9
SSE LR LR
comp=Z,167nm,23.0s,MS4.0
KSRS Korea Array 51.65 332 P P **16 10 35.5 +0.5**
comp=Z,9.3nm,0.9s,mb4.7,baz=145,slow=7.1,SNR=16
KSRS PcP PcP 16 11 49.0 +0.5
comp=Z,2.2nm,0.7s,baz=145,slow=4.4,SNR=4.4
KSRS pPcP 16 11 58.6
comp=Z,4.5nm,0.7s,baz=163,slow=3.3,SNR=8.3
KSRS LR LR 16 29 24.7
comp=Z,144nm,21.2s,MS4.0,baz=128,slow=32
QIZ Qiongzhong 52.41 301 P P **16 10 41.4 +0.3**
QIZ S S **16 18 06.1 +0.8**
QIZ AMB AMB
comp=Z,54nm,1.3s,mb5.3
QIZ LR LR
comp=E,440nm,18.2s
QIZ LR LR
comp=Z,636nm,23.5s
NJ2 Nanjing 52.75 320 *e*P P **16 10 44.6 +1.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
PPT Papeete 54.02 106 LR LR 16 29 32.3
comp=Z,311nm,20.3s,MS4.4,baz=260,slow=31
YSS Yuzh-Sakhalins 55.28 349 *e*P P **16 11 02.4 +0.9**
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.6
YSS Yuzh-Sakhalins 55.28 349 *e*P P **16 11 01.7 +0.2**
comp=Z,16nm,0.9s,mb5.0
PMOR Pomariorio Ree 55.52 103 *e*P P **16 11 04.7 +0.8**
comp=Z,145nm,1.2s,mb5.9
MDJ Mudanjiang 56.88 338 P P **16 11 13.6 +0.6**
MDJ AP pP 16 11 25.2 +2.2
MDJ XP sP 16 11 30.5 +3.7
MDJ PCP PcP 16 12 08.1 -0.2
MDJ PCS PcS 16 16 09.3 +0.3
MDJ AMB AMB
comp=Z,15nm,1.7s,mb4.8
MDJ AMB AMB
comp=Z,62nm,6.6s
MDJ LR LR
comp=N,84nm,30.4s,MS3.7
MDJ LR LR
comp=E,49nm,32.3s,MS3.7
MDJ LR LR
comp=Z,137nm,22.8s
CN2 Changchun 57.87 334 *e*P P **16 11 20.5 +0.5**
CN2 *e*AP pP 16 11 29.9 -0.1
CN2 *e*S S **16 19 15.9 -1.7**
CN2 AMB AMB
comp=Z,10.0nm,1.6s,mb4.6
CN2 LR LR
comp=N,200nm,14.0s,MS4.5
CN2 LR LR
comp=E,200nm,14.0s,MS4.5
CN2 LR LR
comp=Z,300nm,15.0s,MS4.5
GYA Guiyang 58.38 307 ⇑ *i*P P **16 11 24.8 +0.8**
GYA AP pP 16 11 37.3 +3.3
GYA XP sP 16 11 41.8 +4.0
GYA PP PP 16 13 35.9 +2.4
GYA PPP 16 15 00.3
GYA SCP ScP 16 16 09.8 -3.0
GYA PCS PcS 16 16 14.7 -1.6
GYA S S **16 19 23.3 -1.5**
GYA XS sS 16 19 44.8 +3.5
GYA SS SS 16 23 16.8 -0.8
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,140nm,6.3s
GYA LR LR
comp=N,610nm,15.7s,MS4.9
GYA LR LR
comp=E,320nm,15.9s,MS4.9
GYA LR LR
comp=Z,610nm,16.2s,MS4.8
HABR Khabarovsk 58.50 344 *e*P P **16 11 22.2 -2.2**
HABR *e**PP pP 16 11 32.3 -2.1
HABR *e* 16 12 12.2
HABR *e*S S **16 19 24.1 -1.5**
HABR *e* 16 21 09.0
HABR *e*SS SS 16 23 17.9 -0.9
BJI Beijing 59.70 325 P P **16 11 33.0 +0.1**
BJI S S **16 19 43.7 +2.2**
BJI AMB AMB
comp=Z,20nm,0.8s,mb5.2
BJI AMB AMB
comp=Z,90nm,4.5s
BJI LR LR
comp=N,301nm,19.4s,MS4.5
BJI LR LR
comp=E,247nm,23.1s,MS4.5
BJI LR LR
comp=Z,168nm,23.8s,MS4.1
PET Petropavlovsk 60.15 2 *e*P P **16 11 39.9 +4.3**
PET *e*S S **16 19 50.1 +3.4**
PET pmax pmax
comp=Z,22nm,1.1s,mb5.1
KLR Kul'dur 60.15 342 *e*P P **16 11 36.7 +1.0**
PETK Petropavlovsk- 60.20 1 P P **16 11 36.9 +0.9**
comp=Z,6.8nm,0.8s,mb4.7,baz=157,slow=4.2,SNR=9.3
PETK pP pP 16 11 46.1 0.0
comp=Z,15nm,0.8s,baz=161,slow=7.3,SNR=6.8
PETK LR LR 16 34 07.8
comp=Z,324nm,19.4s,MS4.5,baz=177,slow=32
PETK Petropavlovsk- 60.20 1 P P **16 11 36.9 +0.9**
PETK pP pP 16 11 46.1 0.0
XAN Xi'an 60.57 316 P P **16 11 38.0 -1.0**
XAN AP pP 16 11 50.0 +1.0
XAN XP sP 16 11 54.5 +1.6
XAN PP PP 16 13 52.9 +0.1
XAN PPP 16 15 30.2
XAN S S **16 19 47.2 -5.7**
XAN XS sS 16 20 08.0 -1.5
XAN SCS ScS 16 21 20.8 -6.9
XAN AMB AMB
comp=Z,11nm,0.9s,mb5.0
XAN AMB AMB
comp=Z,113nm,6.9s
XAN LR LR
comp=N,85nm,17.1s,MS4.3
XAN LR LR
comp=E,160nm,18.3s,MS4.3
XAN LR LR
comp=Z,384nm,19.6s,MS4.5
KMI Kunming 60.96 304 P P **16 11 42.8 +1.0**
KMI AP pP 16 11 53.0 +1.2
KMI XP sP 16 11 58.0 +2.4
KMI PP PP 16 14 01.0 +4.6
KMI S S **16 19 57.7 -0.5**
KMI XS sS 16 20 15.3 +0.6
KMI SS SS 16 23 58.6 +0.4
KMI SSS 16 26 38.8
KMI AMB AMB
comp=Z,15nm,1.4s,mb4.9
KMI AMB AMB
comp=Z,178nm,4.5s
KMI LR LR
comp=N,151nm,23.2s,MS4.3
KMI LR LR
comp=E,239nm,23.9s,MS4.3
KMI LR LR
comp=Z,324nm,22.5s,MS4.4
CM31 Chiang Mai Arr 61.75 295 *e*P P **16 11 48.1 +0.9**
comp=Z,14nm,0.7s,mb5.2
CM31 *e* pP 16 11 57.2 -0.1
CMAR Chiang Mai Arr 61.75 295 P P **16 11 48.1 +0.9**
comp=Z,17nm,0.9s,mb5.2,baz=120,slow=5.2,SNR=93
CMAR pP pP 16 11 57.3 0.0
comp=Z,14nm,0.8s,baz=128,slow=5.3,SNR=22
CMAR LR LR 16 36 54.3
comp=Z,114nm,18.7s,MS4.1,baz=314,slow=34
CMAR Chiang Mai Arr 61.75 295 P P **16 11 48.1 +0.9**
CMAR pP pP 16 11 57.3 0.0
CHTO Chiang Mai 61.87 296 *e*P P **16 11 48.2 +0.2**
CHTO *e* pP 16 11 57.7 -0.4
CHTO pmax pmax
comp=Z,21nm,1.0s,mb5.2
CHTO Chiang Mai 61.87 296 *e*P P **16 11 48.2 +0.2**
comp=Z,21nm,1.0s,mb5.2
CHTO *e* pP 16 11 57.7 -0.3
CD2 Chengdu 62.72 310 ⇑ P P **16 11 53.6 +0.1**
CD2 AP pP 16 12 03.8 +0.2
CD2 XP sP 16 12 07.7 +0.3
CD2 PCP PcP 16 12 31.1 -0.9
CD2 PP PP 16 14 13.5 +1.6
CD2 S S **16 20 20.2 -0.1**
CD2 XS sS 16 20 37.3 +0.4
CD2 PS 16 20 41.0
CD2 SCS ScS 16 21 39.7 -4.3
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,160nm,5.1s
CD2 LR LR
comp=N,300nm,7.2s
CD2 LR LR
comp=E,310nm,5.1s
CD2 LR LR
comp=Z,320nm,21.1s,MS4.5
HHC Hu-ho-hao-te 62.89 323 *e*P P **16 11 55.0 +0.6**
HHC AP pP 16 12 05.2 +0.7
HHC XP sP 16 12 09.2 +0.8
HHC PP PP 16 14 15.9 +2.7
HHC PCS PcS 16 16 34.6 -1.2
HHC XS sS 16 20 38.6 -0.1
HHC AMB AMB
comp=Z,20nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,153nm,5.2s
HHC LR LR
comp=N,173nm,18.2s,MS4.5
HHC LR LR
comp=E,196nm,17.8s,MS4.5
HHC LR LR
comp=Z,256nm,14.3s,MS4.5
TAOE Nuku Hiva Isla 63.24 96 *e*P P **16 11 57.6 +0.3**
comp=Z,164nm,0.9s,mb6.2
LZH Lanzhou 65.19 315 *e*P P **16 12 10.2 +0.6**
LZH AP pP 16 12 23.0 +3.2
LZH XP sP 16 12 26.0 +2.4
LZH PP PP 16 14 38.1 +4.7
LZH *e*S S 16 20 50.0 -0.7
LZH XS sS 16 21 09.1 +1.7
LZH SS SS 16 25 02.2 -1.7
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,88nm,4.0s
LZH LR LR
comp=N,754nm,15.2s
LZH LR LR
comp=Z,945nm,16.2s,MS5.1
GTA Gaotai 69.60 317 P P **16 12 37.9 +0.4**
GTA AP pP 16 12 50.3 +2.6
GTA XP sP 16 12 54.2 +2.7
GTA S S 16 21 44.7 +1.1
GTA AMB AMB
comp=Z,5.0nm,1.1s,mb4.4
GTA AMB AMB
comp=Z,65nm,4.5s
GTA LR LR
comp=N,152nm,18.6s,MS4.5
GTA LR LR
comp=E,207nm,18.6s,MS4.5
GTA LR LR
comp=Z,256nm,20.4s,MS4.5
ULN Ulaanbaatar 69.76 327 *e*P P **16 12 39.6 +1.3**
ULN pmax pmax
comp=Z,24nm,0.7s,mb5.2
ULN Ulaanbaatar 69.76 327 *e*P P **16 12 39.6 +1.3**
comp=Z,24nm,0.7s,mb5.2
SEY Seymchan 70.09 358 ⇑ *e*P P **16 12 41.8 +1.8**
SONM Songino Array 70.10 327 P P **16 12 41.4 +1.1**
comp=Z,25nm,0.8s,mb5.2,baz=132,slow=6.1,SNR=53
SONM pP pP 16 12 50.3 -0.3
comp=Z,31nm,0.8s,baz=132,slow=6.7,SNR=18
SONM LR LR 16 43 38.6
comp=Z,214nm,19.3s,MS4.4,baz=130,slow=36
SONM Songino Array 70.10 327 P P **16 12 41.4 +1.1**
SONM pP pP 16 12 50.3 -0.3
VNDA Vanda 70.24 179 P P **16 12 40.7 -0.1**
comp=Z,6.3nm,0.9s,mb4.5,baz=331,slow=6.8,SNR=18
VNDA LR LR 16 38 01.9
comp=Z,244nm,19.5s,MS4.5,baz=360,slow=31
VNDA Vanda 70.24 179 *e*P P **16 12 40.8 0.0**
VNDA pmax pmax
comp=Z,11nm,1.0s
VNDA Vanda 70.24 179 *e*P P **16 12 40.8 0.0**
comp=Z,11nm,1.0s,mb4.7
SBA Scott Base 70.74 178 P P **16 12 44.3 +0.5**
SBA pmax pmax
comp=Z,25nm,1.2s,mb5.0
SBA Scott Base 70.74 178 P P **16 12 44.2 +0.4**
comp=Z,25nm,1.2s,mb5.0
YAK Yakutsk 72.06 347 *e*P P **16 12 51.7 -0.3**
YAK pmax pmax
comp=Z,27nm,1.2s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK Yakutsk 72.06 347 *e*P P **16 12 53.6 +1.7**
comp=N,30nm,1.0s,mb5.2
LSA Lhasa 72.21 304 P P **16 12 55.0 +1.4**
BOD Bodaibo 73.25 338 *e*P P **16 12 57.3 -1.8**
BOD pmax pmax
comp=Z,10.0nm,1.9s,mb4.4
ZAK Zakamensk 73.25 328 *e*P P **16 12 59.6 +0.3**
ZAK pmax pmax
comp=Z,16nm,1.1s,mb4.9
TLY Talaya 73.80 329 *e*P P **16 13 02.8 +0.3**
TLY *e* pP 16 13 12.4 -0.4
TLY pmax pmax
comp=Z,14nm,1.0s,mb4.8
TLY Talaya 73.80 329 *e*P P **16 13 02.9 +0.4**
comp=Z,12nm,0.9s,mb4.8
TLY *e* pP 16 13 12.3 -0.4
IRK Irkutsk 73.81 330 *e*P P **16 13 02.5 -0.1**
IRK *e* pP 16 13 12.0 -0.8
IRK pmax pmax
comp=Z,31nm,1.6s,mb5.0
TAPN Taplejung 74.36 301 *e*P P **16 13 06.4 +0.1**
comp=Z,82nm,0.9s,mb5.7
ODAN Odare 74.49 300 *e*P P **16 13 07.6 +0.5**
comp=Z,128nm,0.8s,mb5.9
MOY Mondy 75.16 328 *e*P P **16 13 11.3 +0.9**
RAMN Ramite 75.19 300 *e*P P **16 13 11.3 +0.2**
comp=Z,23nm,0.8s,mb5.1
BILL Bilibino 75.53 4 *ce*P P **16 13 12.3 +0.2**
BILL *i* pP 16 13 21.7 -0.7
BILL 16 13 26.0
BILL pmax pmax
comp=Z,12nm,1.1s,mb4.7
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.5
BILL Bilibino 75.53 4 *e*P P **16 13 11.8 -0.3**
comp=Z,34nm,1.1s,mb5.2
BILL *e* pP 16 13 20.4 -2.1
JIRN Jiri 75.74 301 *e*P P **16 13 14.8 +0.5**
comp=Z,37nm,0.7s,mb5.4
GUN Gumba 76.07 301 *e*P P **16 13 16.7 +0.5**
comp=Z,96nm,0.8s,mb5.8
PKI Pulchoki 76.38 301 *e*P P **16 13 18.0 +0.1**
PKI Pulchoki 76.38 301 *e*P P **16 13 18.1 +0.2**
PKIN Phulchoki 76.39 301 *e*P P **16 13 18.1 +0.1**
KKN Kakani 76.55 301 *e*P P **16 13 19.0 +0.1**
comp=Z,44nm,0.8s,mb5.5
KKN Kakani 76.55 301 *e*P P **16 13 19.0 +0.1**
KKN pmax pmax
comp=Z,45nm,0.8s,mb5.5
DMN Daman 76.65 301 *e*P P **16 13 20.0 +0.6**
comp=Z,109nm,1.0s,mb5.8
GKN Gorkha 77.15 301 *e*P P **16 13 22.3 0.0**
comp=Z,105nm,1.0s,mb5.7
KOLN Koldanda 77.98 300 *e*P P **16 13 26.8 -0.1**
comp=Z,51nm,0.8s,mb5.5
DANN Dangsing 77.99 301 *e*P P **16 13 26.8 -0.2**
comp=Z,34nm,0.7s,mb5.4
WMQ Urumqi 79.68 317 P P **16 13 36.1 +0.2**
WMQ PCP PcP 16 13 44.7 +1.1
WMQ XP sP 16 13 54.1 +4.1
WMQ PP PP 16 16 38.4 +1.2
WMQ S S 16 23 33.1 -3.0
WMQ SS SS 16 28 44.2 -1.2
WMQ AMB AMB
comp=Z,12nm,1.4s,mb4.6
WMQ AMB AMB
comp=Z,3.0nm,3.0s
WMQ LR LR
comp=N,120nm,21.0s,MS4.4
WMQ LR LR
comp=E,146nm,22.0s,MS4.4
WMQ LR LR
comp=Z,178nm,20.0s,MS4.4
TIXI Tiksi 80.80 352 ⇑ *e*P P **16 13 41.6 +0.3**
TIXI pmax pmax
comp=Z,13nm,2.2s,mb4.5
TIXI Tiksi 80.80 352 *e*P P **16 13 39.9 -1.4**
comp=Z,2.8nm,0.6s,mb4.4
MCK McKinley 82.00 22 *e*P P **16 13 47.1 -0.7**
MCK pmax pmax
comp=Z,19nm,1.0s,mb5.0
MCK McKinley 82.00 22 *e*P P **16 13 47.1 -0.7**
comp=Z,19nm,1.0s,mb5.0
QSPA South Pole Qui 82.67 180 P P **16 13 51.6 +0.4**
comp=Z,30nm,1.0s,mb5.3,baz=350,slow=1.2,SNR=58
QSPA South Pole Qui 82.67 180 ⇑ *i*P P **16 13 51.2 +0.1**
QSPA *e* pP 16 14 00.1 -1.4
COLA College 83.04 21 *i* P P **16 13 52.5 -0.7**
COLA College 83.04 21 *e*P P **16 13 50.9 -2.3**
comp=Z,5.7nm,0.8s,mb4.7
DDI Dehra Dun 83.30 302 *ex* x 16 13 53.0
MK31 Makanchi Array 84.25 319 *i* P P **16 14 00.0 +0.2**
MK31 pmax pmax
comp=Z,62nm,0.7s,mb5.8
MK31 Makanchi Array 84.25 319 *e*P P **16 13 59.6 -0.2**
MK31 *e* pP 16 14 09.1 -1.1
MKAR Makanchi Array 84.25 319 P P **16 13 60.0 +0.1**
comp=Z,59nm,0.7s,mb5.8,baz=102,slow=5.9,SNR=503
MKAR pP pP 16 14 09.4 -0.8
comp=Z,61nm,0.8s,baz=107,slow=3.7,SNR=26
MKAR LR LR 16 49 44.6
comp=Z,113nm,20.5s,MS4.2,baz=276,slow=34
MKAR Makanchi Array 84.25 319 *i* P P **16 14 00.0 +0.2**
MKAR pmax pmax
comp=Z,59nm,0.7s
MKAR Makanchi Array 84.25 319 P P **16 13 60.0 +0.1**
MKAR pP pP 16 14 09.4 -0.8
MAW Mawson 84.46 203 *e*P P **16 14 00.7 +0.2**
comp=Z,18nm,0.8s,mb5.2
MAW *e* pP 16 14 09.9 -1.0
MAW Mawson 84.46 203 P P **16 14 01.0 +0.4**
comp=Z,26nm,0.9s,mb5.4,baz=95,slow=5.5,SNR=21
MAW Mawson 84.46 203 *e*P P **16 14 00.7 +0.2**
MAW *e* pP 16 14 09.9 -1.0
MAW pmax pmax
comp=Z,18nm,0.8s
POO Poona 84.85 289 *ex* x 16 14 09.0
ZAA0 Zalesovo Array 84.96 326 *e*P P **16 14 02.1 -1.1**
ZAA0 *e* pP 16 14 11.3 -2.3
ZALV Zalesovo Beam 84.96 326 P P **16 14 02.4 -0.9**
comp=Z,29nm,0.7s,mb5.5,baz=104,slow=6.3,SNR=112
ZALV pP pP 16 14 11.9 -1.7
comp=Z,37nm,0.7s,baz=106,slow=5.3,SNR=27
ZALV LR LR 16 52 47.1
comp=Z,131nm,19.4s,MS4.3,baz=72,slow=36
ZALV Zalesovo Beam 84.96 326 P P **16 14 02.4 -0.9**
ZALV pP pP 16 14 11.9 -1.7
EGAK Eagle 85.45 23 *e*P P **16 14 04.9 -0.6**
comp=Z,12nm,1.0s,mb5.0
DAWY Dawson 85.81 23 *e*pP pP 16 14 17.6 -0.1
NVS Novosibirsk 86.12 326 ⇑ *i*P P **16 14 07.2 -1.8**
NVS pmax pmax
comp=Z,59nm,1.6s,mb5.6
NVS pmax pmax
comp=N,19nm,1.7s
NVS pmax pmax
comp=E,27nm,1.6s
KURK Kurchatov 87.65 322 P P **16 14 15.9 -0.6**
comp=E,170nm,0.7s,mb6.4,SNR=14
KURK Kurchatov 87.65 322 LR LR 16 53 30.9
comp=E,108nm,20.2s,MS4.2,baz=320,slow=36
KURK Kurchatov 87.65 322 P P **16 14 15.6 -0.9**
KURK pmax pmax
comp=Z,25nm,1.0s,mb5.4
KURK Kurchatov 87.65 322 *e*P P **16 14 15.2 -1.3**
comp=Z,22nm,0.8s,mb5.4
KURK *e* pP 16 14 25.8 -1.2
TKM2 Tokmak 2 87.90 314 *e*P P **16 14 17.9 0.0**
TKM2 *e* pP 16 14 26.4 -2.0
TKM2 pmax pmax
comp=Z,11nm,0.7s,mb5.2
TKM2 Tokmak 2 87.90 314 P P **16 14 18.6 +0.6**
SNR=14
TKM2 Tokmak 2 87.90 314 *e*P P **16 14 17.9 -0.1**
comp=Z,11nm,0.7s,mb5.2
TKM2 *e* pP 16 14 26.4 -2.0
KZA Kyzart 87.98 313 P P **16 14 20.1 +1.8**
SNR=7.8
KBK Karagaybulak 88.31 313 P P **16 14 20.5 +0.6**
SNR=9.7
CHMS Chumysh 88.52 314 P P **16 14 20.9 0.0**
SNR=11
AAK Ala-Archa 88.64 313 P P **16 14 21.7 +0.3**
comp=Z,76nm,1.0s,mb6.0,SNR=10
AAK Ala-Archa 88.64 313 *e*P P **16 14 21.4 0.0**
AAK pmax pmax
comp=Z,12nm,0.9s,mb5.2
AAK Ala-Archa 88.64 313 *e*P P **16 14 21.4 0.0**
comp=Z,12nm,0.9s,mb5.2
USP Ospenovka 88.76 314 P P **16 14 22.4 +0.4**
SNR=12
EKS2 Erkin-Say 89.16 313 P P **16 14 24.4 +0.4**
SNR=7.7
EKS2 Erkin-Say 89.16 313 *e*P P **16 14 24.1 +0.2**
comp=Z,9.1nm,0.9s,mb5.1
EKS2 *e* pP 16 14 33.2 -1.1
MWC Mount Wilson 90.78 56 *e*P P **16 14 33.4 +1.7**
NVAR Mina Array Bea 91.19 52 P P **16 14 35.5 +2.0**
comp=Z,0.9nm,0.7s,mb4.2,baz=248,slow=6.3,SNR=7.9
NVAR pP pP 16 14 43.7 -0.2
comp=Z,2.0nm,0.9s,baz=261,slow=7.3,SNR=6.0
KBL Kabul 91.54 304 *e*P P **16 14 33.9 -1.3**
KBL pmax pmax
comp=Z,6.0nm,0.6s,mb5.1
KBL Kabul 91.54 304 *e*P P **16 14 33.9 -1.3**
comp=Z,5.7nm,0.6s,mb5.1
KK31 Karatay Array 91.60 313 *i* P P **16 14 34.1 -1.2**
KK31 pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
SYO Syowa Base 92.33 199 ⇓ *i*P P **16 14 36.0 -2.1**
SYO Syowa Base 92.33 199 ⇓ *i*PcP PcP 16 14 38.4 -0.5
TPNV Topopah Spring 92.61 53 *e*P P **16 14 41.9 +1.8**
TPNV *e**PP pP 16 14 50.3 -0.2
VOSK Vostochnaya 92.70 323 P P **16 14 38.6 -1.5**
VOSK pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
BVA0 Borovoye Array 93.10 323 *i* P P **16 14 40.1 -1.8**
BVA0 pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
BVAR Borovoye Array 93.10 323 LR LR 16 55 16.2
comp=Z,137nm,18.8s,MS4.4,baz=96,slow=35
BRVK Borovoye 93.17 323 P P **16 14 41.6 -0.7**
comp=Z,123nm,1.0s,mb6.3,SNR=8.9
BRVK Borovoye 93.17 323 ⇑ *e*P P **16 14 40.9 -1.4**
BRVK *e* pP 16 14 50.1 -2.6
BRVK pmax pmax
comp=Z,17nm,0.7s,mb5.6
BRVK Borovoye 93.17 323 ⇑ *e*P P **16 14 40.9 -1.3**
comp=Z,17nm,0.7s,mb5.6
BRVK *e* pP 16 14 50.1 -2.6
ELK Elko 93.83 50 P P **16 14 47.0 +1.4**
comp=Z,0.3nm,0.4s,mb4.1,baz=253,slow=14,SNR=3.5
YKA Yellowknife Ar 96.18 28 P P **16 14 55.2 -0.6**
comp=Z,1.2nm,0.7s,mb4.4,baz=264,slow=4.6,SNR=25
YKA pP pP 16 15 05.2 -1.1
comp=Z,2.2nm,0.7s,baz=266,slow=4.5,SNR=11
YKA PKKPbc PKKPbc 16 31 41.3 -3.9
comp=Z,0.3nm,0.5s,baz=82,slow=2.7,SNR=6.9
YKA LR LR 16 56 54.5
comp=Z,66nm,18.0s,MS4.2,baz=215,slow=34
YKA Yellowknife Ar 96.18 28 P P **16 14 55.2 -0.6**
YKA *PP pP 16 15 05.2 -1.1
YKA Yellowknife Ar 96.18 28 P P **16 14 55.2 -0.6**
YKA pP pP 16 15 05.2 -1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA				PKKPbc	PKKPbc	16 31 41.3	-3.9
PDAR	**Pinedale Array**	**98.22**	**48**	P	**P**	**16 15 05.3**	**-0.2**
	comp=Z,1.0nm,0.8s,mb4.4,baz=242,slow=3.2,SNR=8.0						
PDAR				LR	LR	16 56 44.4	
	comp=Z,262nm,19.2s,MS4.7,baz=17,slow=34						
AB31	**Akbulak array**	**99.39**	**319**	P	**P**	**16 15 07.9**	**-2.7**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb5.0						
ARU	**Arti**	**100.12**	**326**	d *i*P	Pdif	16 15 11.2	-2.6
ARU						16 19 17.1	
ARU				*e*S	SKSac	16 25 47.3	-2.6
ARU				SS	SS	16 33 37.2	-3.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARU	**Arti**	**100.12**	**326**	*e*Pdif	Pdif	16 15 11.5	-2.3
ARU				*e*		16 15 19.6	
AKTO	**Aktyubinsk**	**100.63**	**320**	P	Pdif	16 15 13.6	-2.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,1.6s						
VNA3	**Neumayer Olymp**	**101.02**	**185**	*e*Pdiff	Pdif	16 15 17.2	-0.6
VNA3				*e*		16 15 22.2	
VNA3				*e*		16 15 29.6	
VNA2	**Neumayer--Watz**	**101.13**	**186**	*e*Pdiff	Pdif	16 15 17.6	-0.6
VNA2				*e*		16 15 23.5	
VNA2				*e*		16 15 30.8	
TXAR	**Lajitas Array**	**102.59**	**62**	P	Pdif	16 15 28.8	+4.1
	comp=Z,0.3nm,0.8s,baz=22,slow=1.3,SNR=3.4						
ARCES	**ARCESS Array B**	**110.15**	**343**	PKiKP	PKiKP	16 19 58.9	-0.4
	comp=Z,2.5nm,0.8s,baz=57,slow=4.5,SNR=6.0						
PLCA	**Paso Flores**	**115.91**	**142**	PKKPbc	PKKPbc	16 30 43.0	-0.5
	comp=Z,2.1nm,0.7s,baz=275,slow=3.2,SNR=3.5						
AKASG	**Malin Array Be**	**118.33**	**325**	PKP	PKPdf	16 20 14.7	-0.8
	comp=Z,3.7nm,0.7s,baz=61,slow=2.5,SNR=12						
AKASG				pPKP	pPKPdf	16 20 24.3	-2.0
	comp=Z,7.5nm,0.8s,baz=65,slow=2.2,SNR=11						
BRTR	**Keskin Array B**	**119.28**	**312**	PKP	PKPdf	16 20 17.0	-0.7
	comp=Z,1.0nm,0.7s,baz=121,slow=1.8,SNR=4.6						
BRTR				pPKP	pPKPdf	16 20 26.1	-2.4
	comp=Z,2.6nm,1.0s,baz=103,slow=3.9,SNR=4.7						
BRTR				PKKPbc	PKKPbc	16 30 31.4	0.0
	comp=Z,0.9nm,0.8s,baz=219,slow=3.2,SNR=4.0						
BRTR	**Keskin Array B**	**119.28**	**312**	PKIKP	PKPdf	16 20 17.0	-0.7
BRTR						16 20 26.1	
SUW	**Suwalki**	**119.96**	**330**	*e*PKP	PKPdf	16 20 19.4	+0.8
SUW	**Suwalki**	**119.96**	**330**	*e*PKP	PKPdf	16 20 19.4	+0.9
HFS	**Hagfors**	**120.13**	**339**	PKP	PKPdf	16 20 17.8	-0.8
	comp=Z,6.2nm,1.0s,baz=186,slow=30,SNR=4.2						
NOA	**NORSAR Array B**	**120.30**	**341**	PKP	PKPdf	16 20 18.0	-1.0
	comp=Z,1.1nm,0.9s,baz=98,slow=5.0,SNR=3.3						
NOA				pPKP	pPKPdf	16 20 28.0	-1.7
	comp=Z,4.3nm,0.8s,baz=42,slow=1.9,SNR=5.8						
NOA	**NORSAR Array B**	**120.30**	**341**	PKP	PKPdf	16 20 18.0	-1.0
NOA				pPKP	pPKPdf	16 20 28.0	-1.7
BOSA	**Boshof**	**120.54**	**231**	PKP	PKPdf	16 20 19.9	-0.6
	comp=Z,3.5nm,0.7s,baz=159,slow=4.6,SNR=5.7						
SUR	**Sutherland**	**121.83**	**225**	*e*PKPdf	PKPdf	16 20 23.5	+0.7
LBTB	**Lobatse**	**121.96**	**235**	PKP	PKPdf	16 20 22.8	-0.5
	comp=Z,3.2nm,0.7s,baz=173,slow=16,SNR=4.9						
LBTB	**Lobatse**	**121.96**	**235**	*e*PKPdf	PKPdf	16 20 23.3	0.0
KWP	**Kalwaria**	**122.53**	**326**	*e*PKP	PKPdf	16 20 24.0	+0.4
KWP	**Kalwaria**	**122.53**	**326**	*e*PKP	PKPdf	16 20 24.0	+0.4
KOLS	**Kolonicke sedl**	**123.13**	**325**	*e*PKP	PKPdf	16 20 25.1	+0.3
KOLS				*e*	pPKPdf	16 20 34.3	-1.2
KOLS	**Kolonicke sedl**	**123.13**	**325**	*e*PKP	PKPdf	16 20 25.1	+0.3
KOLS				*e*	pPKPdf	16 20 34.4	-1.1
STHS	**Stebnicka Huta**	**123.45**	**326**	*e*PKP	PKPdf	16 20 26.1	+0.7
STHS				*e*	pPKPdf	16 20 35.7	-0.4
LSZ	**Lusaka**	**123.56**	**246**	PKP	PKPdf	16 20 25.7	-0.9
	comp=Z,0.7nm,0.3s,baz=137,slow=7.6,SNR=3.6						
LSZ	**Lusaka**	**123.56**	**246**	*e*PKPdf	PKPdf	16 20 25.8	-0.8
CRVS	**Cervenica-Dubn**	**123.61**	**326**	*e*PKP	PKPdf	16 20 24.9	-0.8
CRVS				*e*	pPKPdf	16 20 35.1	-1.3
OJC	**Ojcow**	**123.80**	**328**	*e*PKPdf	PKPdf	16 20 25.8	-0.2
NIE	**Niedzica**	**123.96**	**327**	*e*PKPdf	PKPdf	16 20 27.4	+1.0
OKC	**Ostrava-Krasne**	**124.89**	**328**	*e*PKPDF	PKPdf	16 20 28.1	0.0
OKC				*e*pPKP	pPKPdf	16 20 38.1	-0.8
KSP	**Ksiaz**	**125.23**	**330**	*e*PKP	PKPdf	16 20 35.8	+7.1
VYHS	**Vyhne**	**125.29**	**326**	*e*PKP	PKPdf	16 20 28.2	-0.7
VYHS				*e*		16 20 38.5	
KOLL	**Kolacno**	**125.48**	**327**	*e*PKP	PKPdf	16 20 29.2	-0.1
KOLL				*e*		16 20 39.1	
DPC	**Dobruska-Polom**	**125.52**	**329**	*e*PKPDF	PKPdf	16 20 29.8	+0.5
DPC				*e*pPKP	pPKPdf	16 20 39.4	-0.7
UPC	**Upice**	**125.58**	**330**	*e*PKPDF	PKPdf	16 20 30.4	+1.0
UPC				*e*pPKP	pPKPdf	16 20 39.6	-0.6
PVCC	**Panska Ves**	**126.29**	**330**	*e*PKPDF	PKPdf	16 20 31.7	+0.9
PVCC				*e*pPKP	pPKPdf	16 20 40.9	-0.6
BRG	**Berggiesshubel**	**126.37**	**331**	*i* PKIKP	PKPdf	16 20 31.2	+0.3
BRG				*i*	pPKPdf	16 20 40.9	-0.8
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG	**Berggiesshubel**	**126.37**	**331**	*i* PKP	PKPdf	16 20 31.2	+0.3
	comp=Z,8.0nm,0.8s						
BRG				*i*	pPKPdf	16 20 40.9	-0.8
	comp=Z,20nm,0.9s						
CLL	**Collm**	**126.53**	**332**	*i* PKIKP	PKPdf	16 20 31.2	0.0
CLL				*i*	pPKPdf	16 20 40.8	-1.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**126.53**	**332**	*i* PKPdf	PKPdf	16 20 31.2	0.0
	comp=Z,9.0nm,0.8s						
CLL				*i* pPKPdf	pPKPdf	16 20 40.8	-1.2
	comp=Z,18nm,0.9s						
TREC	**Trest**	**126.60**	**329**	*e*PKIKP	pPKPdf	16 20 41.7	-0.5
TREC	**Trest**	**126.60**	**329**	*e*pPKP	pPKPdf	16 20 41.7	-0.5
PRU	**Pruhonice**	**126.64**	**330**	*e*PKPDF	PKPdf	16 20 31.7	+0.2
PRU				*e*pPKP	pPKPdf	16 20 41.2	-1.0
CONA	**Conrad Observa**	**127.24**	**327**	⇑*i*PKiKP	PKiKP	16 20 33.3	+0.1
	comp=Z,5.7nm,1.0s						
CONA				⇓*i*pPKPdf	pPKPdf	16 20 43.1	-0.3
	comp=Z,8.3nm,0.8s						
CSNA	**Conrad Observa**	**127.24**	**327**	⇑*i*PKiKP	PKiKP	16 20 33.4	+0.2
	comp=Z,5.6nm,1.0s						
CSNA				⇓*i*pPKPdf	pPKPdf	16 20 43.0	-0.4
	comp=Z,7.8nm,0.8s						
NKC	**Novy Kostel**	**127.51**	**331**	*e*PKPDF	PKPdf	16 20 34.0	+0.9
NKC				*e*pPKP	pPKPdf	16 20 43.3	-0.6
MOX	**Moxa**	**127.62**	**332**	*e*PKP	PKPdf	16 20 33.9	+0.6
	comp=Z,10.0nm,1.1s						
MOX	**Moxa**	**127.62**	**332**	*e*PKIKP	PKPdf	16 20 33.9	+0.6
MOX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KHC	**Kasperske Hory**	**127.68**	**330**	*e*PKPDF	PKPdf	16 20 33.8	+0.3
KHC				*e*pPKP	pPKPdf	16 20 43.5	-0.7
GEC2	**GERESS Array S**	**127.80**	**329**	*e*PKIKP	PKPdf	16 20 33.1	-0.6
GEC2				*e*	pPKPdf	16 20 41.9	-2.6
GERES	**GERESS Array B**	**127.80**	**329**	PKP	PKPdf	16 20 32.9	-0.8
	comp=Z,3.6nm,0.8s,baz=43,slow=2.4,SNR=19						
GERES				pPKP	pPKPdf	16 20 43.3	-1.1
	comp=Z,8.3nm,0.8s,baz=75,slow=1.5,SNR=21						
PERS	**Pernice**	**128.42**	**326**	*i* PKPdf	PKPdf	16 20 37.6	+2.7
PERS				*i* PKPbc	pPKPdf	16 20 45.2	-0.6
SOKA	**Soboth**	**128.44**	**326**	⇑*i*PKiKP	PKiKP	16 20 35.3	-0.3
	comp=Z,12nm,1.7s						
SOKA				⇓*i*pPKPdf	pPKPdf	16 20 45.0	-0.8
	comp=Z,11nm,1.1s						
GRA1	**Grafenberg Arr**	**128.46**	**331**	*e*PKP	PKPdf	16 20 34.8	-0.1
GRA1				*e*pPKP	pPKPdf	16 20 44.8	-0.9
GRF	**Grafenberg Arr**	**128.46**	**331**	*e*PKPdf	PKPdf	16 20 34.8	-0.1
GRF				*e*pPKPdf	pPKPdf	16 20 44.8	-0.9
BOJS	**Bojanci**	**129.01**	**325**	*i* PKPdf	PKPdf	16 20 37.1	+1.0
BOJS				*i* PKPbc	pPKPdf	16 20 46.9	0.0
VISS	**Visnje**	**129.07**	**326**	*i* PKPdf	PKPdf	16 20 36.8	+0.6
VISS				*i* PKPbc	pPKPdf	16 20 46.8	-0.2
EKA	**Eskdalemuir Ar**	**129.29**	**345**	PKP	PKPdf	16 20 35.7	-0.7
	comp=Z,1.1nm,0.6s,baz=26,slow=4.0,SNR=3.9						
MEM	**Membach**	**130.12**	**335**	aPKPdf	pPKPdf	16 20 48.9	+0.1
FETA	**Feichten**	**130.50**	**329**	⇑*i*PKiKP	PKiKP	16 20 39.5	-0.2
	comp=Z,5.4nm,0.9s						
BCLA	**Clavier**	**130.55**	**336**	aPKPdf	pPKPdf	16 20 49.9	+0.2
WLF	**Walferdange**	**130.77**	**334**	aPKPdf	pPKPdf	16 20 51.0	+0.9
GIVF	**Givet**	**130.99**	**336**	*e*PKIKP	PKPdf	16 20 40.0	+0.3
DOU	**Dourbes**	**131.09**	**336**	aPKPdf	pPKPdf	16 20 51.1	+0.5
CDF	**Champ du Feu**	**131.20**	**333**	*e*PKIKP	PKPdf	16 20 39.9	-0.3
TSUM	**Tsumeb**	**131.23**	**237**	PKP	PKPdf	16 20 41.2	+0.1
	comp=Z,2.0nm,0.7s,baz=117,slow=9.0,SNR=3.6						
TSUM	**Tsumeb**	**131.23**	**237**	*e*PKPdf	PKPdf	16 20 41.5	+0.3
BAIF	**Baives**	**131.28**	**336**	*e*PKIKP	PKPdf	16 20 40.6	+0.3
	comp=Z,36nm,1.1s						
HINF	**Hinteralfeld**	**131.83**	**332**	*e*PKIKP	PKPdf	16 20 41.3	-0.1
	comp=Z,34nm,0.9s						
HAU	**Haudompre**	**131.92**	**333**	*e*PKIKP	PKPdf	16 20 41.6	0.0
	comp=Z,27nm,0.8s						
MEZF	**Maizieres J'vi**	**132.12**	**334**	*e*PKIKP	PKPdf	16 20 42.5	+0.6
	comp=Z,33nm,0.8s						
CABF	**La Chapelle**	**133.07**	**332**	*e*PKIKP	PKPdf	16 20 43.8	0.0
	comp=Z,36nm,1.0s						
LPL	**La Plagne**	**133.55**	**330**	*e*PKIKP	PKPdf	16 20 44.6	-0.1
	comp=Z,19nm,0.9s						
LPG	**La Plagne**	**133.55**	**330**	*e*PKIKP	PKPdf	16 20 44.5	-0.2
	comp=Z,22nm,1.0s						
LOR	**Lormes**	**133.59**	**334**	*e*PKIKP	PKPdf	16 20 45.2	+0.5
	comp=Z,16nm,0.9s						
SSF	**Saint Saulge**	**133.90**	**334**	*e*PKIKP	PKPdf	16 20 45.9	+0.6
	comp=Z,23nm,0.9s						
SDV	**Santo Domingo**	**133.90**	**85**	*e*PKPdf	PKPdf	16 20 45.8	-0.5
SDV				*e*	pPKPdf	16 20 55.6	-1.5
BNI	**Bardonecchia**	**133.90**	**330**	*e*PKIKP	PKPdf	16 20 43.9	-1.5
SMF	**Signal de Mont**	**134.07**	**333**	*e*PKIKP	PKPdf	16 20 45.9	+0.2
	comp=Z,25nm,0.9s						
MBDF	**Montbardon**	**134.09**	**329**	*e*PKIKP	PKPdf	16 20 45.7	-0.1
AVF	**Avril sur Loir**	**134.17**	**334**	*e*PKIKP	PKPdf	16 20 45.9	0.0
	comp=Z,21nm,1.1s						
SBF	**Sospel**	**134.35**	**328**	*e*PKIKP	PKPdf	16 20 46.0	-0.3
PGF	**Pioggiola**	**134.38**	**326**	*e*PKIKP	PKPdf	16 20 46.7	+0.3
	comp=Z,72nm,1.2s						
ORIF	**Oris-en-Rattie**	**134.40**	**330**	*e*PKIKP	PKPdf	16 20 46.7	+0.4
	comp=Z,15nm,0.8s						
BGF	**Bois d'Agland**	**134.57**	**334**	*e*PKIKP	PKPdf	16 20 46.1	-0.5
TCF	**Toulx Ste Croi**	**135.06**	**334**	*e*PKIKP	PKPdf	16 20 48.3	+0.8
	comp=Z,41nm,1.0s						
LMR	**La Mourre**	**135.20**	**328**	*e*PKIKP	PKPdf	16 20 46.9	-1.0
ECHE	**Chera**	**141.75**	**331**	PKIKP	PKPdf	16 20 59.5	-0.5
GUD	**Guadarrama**	**142.34**	**335**	PKIKP	PKPdf	16 20 57.3	-3.7
MVO	**Moncorvo**	**143.03**	**338**	*e*PKP	PKPdf	16 20 59.9	-2.3
MVO				*e*pPKP	pPKPdf	16 21 09.5	-3.5
ESDC	**Sonseca Array**	**143.06**	**334**	PKP	PKPdf	16 20 59.4	-3.0
	comp=Z,2.6nm,0.8s,baz=18,slow=2.5,SNR=13						
EVIA	**Vianos**	**143.23**	**331**	PKIKP	PKPdf	16 20 59.8	-2.9
PVIS	**Viseu**	**143.74**	**339**	*e*PKP	PKPdf	16 21 01.6	-1.9
PVIS				*e*pPKP	pPKPdf	16 21 11.3	-3.0
MTE	**Manteigas**	**143.89**	**338**	*e*PKP	PKPdf	16 21 02.3	-1.5
MTE				*e*pPKP	pPKPdf	16 21 12.4	-2.2
MTE	**Manteigas**	**143.89**	**338**	*e*PKPdf	PKPdf	16 21 02.1	-1.6
MTE				*e*	pPKPdf	16 21 11.9	-2.7
EBAN	**Banos Encina**	**144.21**	**332**	PKIKP	PKPdf	16 21 02.3	-2.1
PCBR	**Castelo Branco**	**144.35**	**338**	*e*PKP	PKPdf	16 21 03.0	-1.6
PCBR				*e*pPKP	pPKPdf	16 21 13.0	-2.4
ENIJ	**Nijar**	**144.39**	**329**	PKIKP	PKPdf	16 21 02.6	-2.2
EADA	**Adamuz**	**144.57**	**333**	PKP	PKPdf	16 21 03.7	-1.3
PMRV	**Marv??o**	**144.68**	**337**	*e*PKP	PKPdf	16 21 04.0	-1.2
PMRV				*e*pPKP	pPKPdf	16 21 14.2	-1.8
EBER	**Berja**	**144.79**	**330**	PKP	PKPdf	16 21 03.2	-2.2
ECOG	**Cogollos-Vega**	**144.82**	**331**	PKIKP	PKPdf	16 21 03.5	-2.0
ELUQ	**Luque**	**144.93**	**332**	PKIKP	PKPdf	16 21 03.6	-2.1
EBAD	**Badajoz**	**145.11**	**336**	PKP	PKPdf	16 21 01.3	-4.7
ERON	**Agron**	**145.14**	**331**	PKP	PKPdf	16 21 04.3	-1.7
EGUA	**Guajares**	**145.17**	**331**	PKP2	PKPab	16 21 04.5	-1.2
ELOJ	**Sierra Loja**	**145.21**	**332**	PKP2	PKPab	16 21 04.0	-1.9
PESTR	**Estremoz**	**145.24**	**337**	*e*PKP	PKPdf	16 21 05.6	-0.6
PESTR				*e*pPKP	pPKPdf	16 21 15.5	-1.5
CAM4	**Nova Friburgo**	**145.40**	**149**	*e*P	PKPbc	16 21 07.1	+0.2
CAM4				*i*		16 21 09.3	
CAM4				*i*		16 21 12.1	
CAM4				*i*		16 21 16.3	
CAM4				*i*		16 21 19.0	
CAM4				*i*		16 21 23.5	
EALB	**Alboran**	**145.61**	**329**	PKP	PKPdf	16 21 05.9	-1.0
PBAR	**Barrancos**	**145.62**	**336**	*e*PKP	PKPdf	16 21 07.1	+0.2
PBAR				*e*pPKP	pPKPdf	16 21 16.8	-0.8
EVO	**Evora**	**145.70**	**337**	*e*PKIKP	PKPdf	16 21 07.6	+0.6
	comp=Z,24nm,0.7s						
EVO	**Evora**	**145.70**	**337**	*e*PKP	PKPdf	16 21 07.8	+0.8
EVO				*e*pPKP	pPKPdf	16 21 17.5	-0.2
EMIN	**Mina Concepcio**	**145.82**	**335**	PKP	PKPdf	16 21 06.9	-0.3
EMIJ	**Mijas**	**145.97**	**332**	PKP	PKPdf	16 21 06.8	-0.7
PBEJ	**Beja**	**146.08**	**337**	*e*PKP	PKPdf	16 21 08.9	+1.3
PBEJ				*e*pPKP	pPKPdf	16 21 18.5	+0.1
EGRO	**El Granado**	**146.35**	**336**	PKP	PKPdf	16 21 09.4	+1.2
EJIF	**Jimena Fronter**	**146.39**	**332**	PKP2	PKPab	16 21 08.6	-1.7
PVAQ	**Vaqueiros**	**146.56**	**336**	*e*PKP	PKPdf	16 21 10.2	+1.7
PVAQ				*e*pPKP	pPKPdf	16 21 20.0	+0.8
PBDV	**Barranco-do-Ve**	**146.78**	**336**	*e*PKP	PKPdf	16 21 09.6	+0.8
PBDV				*e*pPKP	pPKPdf	16 21 21.1	+1.5
PTEO	**Sao Teotonio**	**146.83**	**337**	*e*PKP	PKPab	16 21 11.6	-0.4
PTEO				*e*pPKP	pPKPdf	16 21 20.7	+1.0
MORF	**Marmelete**	**147.01**	**337**	*e*pPKP	pPKPdf	16 21 21.8	+1.8
BDFB	**Brasilia**	**147.10**	**134**	PKPbc	PKPbc	16 21 11.1	-1.0
	comp=Z,17nm,0.8s,baz=199,slow=5.3,SNR=35						
PFVI	**Vila Bisbo**	**147.23**	**337**	*e*pPKP	pPKPdf	16 21 21.8	+1.4
TAM	**Tamanrasset**	**147.64**	**302**	*e*PKIKP	PKPdf	16 21 10.9	+0.2
TAM				*e*		16 21 14.0	
TAM				*e*		16 21 24.3	
CAM3	**Guarapari**	**147.79**	**150**	*e*P	PKPdf	16 21 11.8	+0.8
CAM3				*i*		16 21 20.0	
CAM3				*i*		16 21 25.7	
CAM3				*i*		16 21 35.5	
CAM3				*i*		16 21 58.9	
MDT	**Midelt**	**148.84**	**327**	PKPbc	PKPbc	16 21 16.2	-0.1
	comp=Z,18nm,0.8s,baz=77,slow=2.5,SNR=40						
TOA0	**Torodi Ar. Sit**	**154.00**	**285**	*e*PKPbc	PKPbc	16 21 27.6	-1.1
TORD	**Torodi Ar. Bea**	**154.00**	**285**	PKP	PKPdf	16 21 18.8	-1.9
	comp=Z,1.1nm,0.7s,baz=40,slow=1.8,SNR=4.7						
TORD				PKPbc	PKPbc	16 21 27.6	-1.1
	comp=Z,4.0nm,0.7s,baz=41,slow=1.6,SNR=15						
KIC	**Kosan Boka**	**160.78**	**268**	*e*PKIKP	PKPdf	16 21 28.3	-1.0
	comp=Z,53nm,1.2s						
DBIC	**Dimbokro**	**160.91**	**269**	PKP	PKPdf	16 21 28.2	-1.2
	comp=Z,4.7nm,0.9s,baz=187,slow=2.8,SNR=6.1						
DBIC				PKPab	PKPab	16 22 12.1	0.0
	comp=Z,8.8nm,0.8s,baz=79,slow=5.0,SNR=13						
DBIC	**Dimbokro**	**160.91**	**269**	*e*PKIKP	PKPdf	16 21 27.9	-1.5
DBIC				*e*		16 21 38.5	
DBIC				*e*		16 22 11.7	
DBIC	**Dimbokro**	**160.91**	**269**	*e*PKPdf	PKPdf	16 21 27.9	-1.5
DBIC				*e*		16 21 38.5	
DBIC				*e*PKPab	PKPab	16 22 11.7	-0.4
DBIC				*e*		16 22 21.7	
LIC	**Lamto**	**161.06**	**268**	*e*PKIKP	PKPdf	16 21 28.5	-1.1
	comp=Z,18nm,0.8s						
LIC	**Lamto**	**161.06**	**268**	*e*PKIKP	PKPdf	16 21 29.0	-0.6
	comp=Z,4.6nm,0.4s						
TIC	**Toumodi**	**161.08**	**269**	*e*PKIKP	PKPdf	16 21 28.5	-1.1
	comp=Z,62nm,1.3s						

MAN 06 16:03:32, 1469N×12127E, h14km, mb4.7, ML3.6, MS3.5, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.65**	**86**	*e*P	Pg	16 03 43.6	-1.0
POLP				*e*S	Sg	16 03 53.0	-0.1
TGY	**Tagaytay City**	**0.67**	**209**	⇓*i*P	Pg	16 03 45.6	+0.6
TGY				*i* S	Sg	16 04 03.1	+9.3
PCPH	**Palayan**	**0.89**	**349**	⇑*e*P	Pb	16 03 48.9	-0.3
PCPH				*e*S	Sg	16 04 02.3	+1.4
BALP	**Baler**	**1.09**	**15**	*e*P	Pb	16 03 51.8	-0.9
BALP				*e*S	Sb	16 04 08.2	+1.5
PGP	**Puerto Galera**	**1.22**	**195**	*e*P	Pn	16 03 53.5	-1.1
LUBP	**Lubang**	**1.38**	**227**	*e*P	Pn	16 03 55.0	-1.7
LUBP				*e*S	Sn	16 04 14.0	-0.8
GQP	**Guinayangan**	**1.38**	**124**	⇑*i*P	Pn	16 03 55.8	-1.0
GQP				*i* S	Sn	16 04 14.8	-0.1
SCZP	**Santa Cruz**	**1.71**	**310**	*e*P	Pn	16 04 01.4	+0.1
BCPH	**Baguio City Da**	**1.81**	**338**	⇓*i*P	Pn	16 04 03.6	+0.8
AUQP	**San Andres**	**1.92**	**135**	*e*P	Pn	16 04 06.1	+1.8
AUQP				*e*S	Sn	16 04 33.6	+5.3
BOLP	**Bolinao**	**2.14**	**322**	*e*P	Pn	16 04 07.0	-0.3
BOLP				*e*S	Sn	16 04 39.0	+5.4
SJMP	**San Jose**	**2.22**	**184**	*e*P	Pn	16 04 10.6	+2.2
SJMP				*e*S	Sn	16 04 38.9	+3.3
CAUP	**Cauayan**	**2.31**	**13**	*e*P	Pn	16 04 11.0	+1.4
CAUP				*e*S	Sn	16 04 47.7	+10
BUSP	**Coron**	**2.87**	**202**	*e*P	Pn	16 04 18.0	+0.7
BUSP				*e*S	Sn	16 04 52.8	+1.2
ABRA	**Dolores**	**3.00**	**350**	*e*P	Pn	16 04 21.6	+2.5
PVCP	**Virac**	**3.00**	**111**	*e*P	Pn	16 04 20.1	+1.0
PVCP				*e*S	Sn	16 04 57.1	+2.3

*ISCJB **06** 16:06:40.0±1.7, 2140S±007×17628W±009, h83km±17km, mb4.2/17, Error ellipse: s-maj=15.5km s-min=9.1km az=34.8*
*NEIC **06** 16:06:42.5±1.4, 2137S×17624W, h99km±13km, mb4.6/9, Error ellipse: s-maj=13.7km s-min=9.0km az=141.0*
*IDC **06** 16:06:43.3±3.3, 2138S×17628W, h102km±29km, mb4.0/13, mb1 4.2/15, mb1mx4.0/21, mbtmp4.0/15, Error ellipse: s-maj=22.4km s-min=13.9km az=133.0*
ISC 06 16:06:42.0±1.4, **2139S**±007×**17626W**±009, **h88**km±14km, **n40**, σ0.93/32, **mb4.2**/17, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.97**	**190**	S	**Sn**	**16 10 03.9**	**+0.3**
	11nm,0.3s,baz=90,slow=20,SNR=2.1						
AFI	**Afiamalu**	**8.58**	**31**	P	**Pn**	**16 08 43.8**	**+0.4**
	3.5nm,0.3s,baz=41,slow=23,SNR=6.2						
AFI				S	**Sn**	**16 10 08.7**	**-10**
	2.9nm,0.3s,baz=216,slow=19,SNR=3.8						
AFI	**Afiamalu**	**8.58**	**31**	*e*Pn	**Pn**	**16 08 42.8**	**-0.6**
AFI				S	**Sn**	**16 10 08.7**	**-10**
AFI				*e*Sn	**Sn**	**16 10 10.5**	**-8.1**
RAR	**Rarotonga**	**15.37**	**92**	*e*P	**Pn**	**16 10 13.7**	**-0.3**
	42nm,0.9s						
DZM	**Mont Dzumac**	**16.09**	**264**	*e*P	**Pn**	**16 10 31.1**	**+8.2**
	14nm,0.8s						
URZ	**Urewera**	**17.76**	**197**	P	**Pn**	**16 10 43.1**	**-0.3**
	1.0nm,0.3s,baz=16,slow=14,SNR=6.4						
URZ				S	**S**	**16 13 47.2**	**-14**
	0.9nm,0.3s,baz=45,slow=20,SNR=4.7						
SNZO	**South Karori**	**21.28**	**199**	P	**P**	**16 11 20.9**	**-0.3**
RPZ	**Rata Peaks**	**24.64**	**202**	P	**P**	**16 11 53.6**	**-0.6**
	20nm,0.6s,mb4.7,baz=146,slow=1.0,SNR=10						
ARMA	**Armidale**	**30.17**	**246**	*e*P	**P**	**16 12 47.1**	**+3.3**
EIDS	**Eidsvold**	**30.19**	**256**	*e*P	**P**	**16 12 45.6**	**+1.4**
	4.4nm,0.7s,mb4.2						
CTA	**Charters Tower**	**35.03**	**265**	*e*P	**P**	**16 13 28.1**	**+1.7**
	4.6nm,0.7s,mb4.4						
CTA	**Charters Tower**	**35.03**	**265**	P	**P**	**16 13 26.6**	**+0.3**
	5.0nm,0.7s,mb4.5,baz=104,slow=10,SNR=9.7						
CTAO	**Charters Tower**	**35.03**	**265**	*e*P	**P**	**16 13 26.9**	**+0.5**
	5.4nm,0.6s,mb4.5						
PMG	**Port Moresby**	**37.12**	**283**	*e*P	**P**	**16 13 44.5**	**+0.1**
	24nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**38.88**	**245**	P	**P**	**16 13 59.0**	**+0.1**
	3.0nm,0.7s,mb4.2,baz=108,slow=9.6,SNR=3.8						
ASAR	**Alice Springs**	**45.90**	**257**	P	**P**	**16 14 56.2**	**+0.2**
	7.8nm,0.7s,mb4.5,baz=100,slow=7.9,SNR=48						
WRAB	**Tennant Creek**	**46.08**	**263**	*e*P	**P**	**16 14 55.7**	**-1.8**
	4.3nm,0.8s,mb4.2						
KAKA	**Kakadu**	**49.62**	**271**	*e*P	x	16 15 06.7	
	3.7nm,0.6s						
KAKA				*e*		16 15 23.4	
MBWA	**Marble Bar**	**59.25**	**257**	P	**P**	**16 16 31.8**	**-2.7**
	9.2nm,1.1s,mb4.7						
QSPA	**South Pole Qui**	**68.68**	**180**	P	**P**	**16 17 36.3**	**+0.9**
	6.6nm,0.7s,mb4.6,baz=356,slow=1.5,SNR=7.7						
QSPA	**South Pole Qui**	**68.68**	**180**	*e*P	**P**	**16 17 35.9**	**+0.5**
	6.8nm,0.7s,mb4.6						
PETK	**Petropavlovsk-**	**77.55**	**344**	P	**P**	**16 18 28.1**	**+0.2**
	3.6nm,0.9s,mb4.1,baz=126,slow=7.3,SNR=4.3						
YBH	**Yreka Blue Hor**	**79.98**	**38**	P	**P**	**16 18 42.0**	**+0.5**
	1.9nm,0.7s,mb4.0,baz=246,slow=3.2,SNR=7.2						
NVAR	**Mina Array Bea**	**80.57**	**42**	P	**P**	**16 18 45.5**	**+0.8**
	0.9nm,0.8s,mb3.6,baz=222,slow=8.7,SNR=4.7						
TXAR	**Lajitas Array**	**86.18**	**57**	P	**P**	**16 19 14.9**	**+1.2**
	1.2nm,1.0s,mb3.8,baz=215,slow=8.2,SNR=7.0						
PLCA	**Paso Flores**	**87.48**	**133**	P	**P**	**16 19 19.6**	**-0.4**
	0.8nm,0.5s,mb4.0,baz=204,slow=12,SNR=5.2						
PDAR	**Pinedale Array**	**88.50**	**43**	P	**P**	**16 19 24.2**	**-0.4**
	0.2nm,0.4s,mb3.5,baz=196,slow=1.7,SNR=3.3						
CMAR	**Chiang Mai Arr**	**91.94**	**289**	P	**P**	**16 19 40.3**	**-0.9**
	0.6nm,0.7s,mb3.9,baz=134,slow=3.1,SNR=4.3						
YKA	**Yellowknife Ar**	**96.64**	**24**	P	**P**	**16 20 00.8**	**-0.8**
	0.4nm,0.7s,mb3.9,baz=239,slow=4.7,SNR=8.2						
MK31	**Makanchi Array**	**112.99**	**313**	*e*PKPdf	PKiKP	16 25 07.3	-1.4
MKAR	**Makanchi Array**	**112.99**	**313**	PKiKP	PKiKP	16 25 06.5	-2.2
	0.4nm,0.6s,baz=48,slow=1.8,SNR=4.4						
ARCES	**ARCESS Array B**	**130.08**	**350**	PKP	PKPdf	16 25 39.5	-1.4
	3.1nm,0.9s,baz=24,slow=3.3,SNR=6.4						
ARCES	**ARCESS Array B**	**130.08**	**350**	PKP	PKPdf	16 25 39.5	-1.4
AKASG	**Malin Array Be**	**144.57**	**332**	PKP	PKPdf	16 26 05.0	-3.0
	7.3nm,0.5s,baz=42,slow=4.2,SNR=6.3						
BR131	**Keskin Array S**	**148.64**	**312**	*e*PKPbc	PKPbc	16 26 18.1	-1.0
BRTR	**Keskin Array B**	**148.64**	**312**	PKPbc	PKPbc	16 26 18.1	-0.9
	2.2nm,0.5s,baz=143,slow=3.8,SNR=17						
CLL	**Collm**	**149.27**	**349**	*e*PKPbc	PKPbc	16 26 19.0	-1.2
	comp=Z,7.0nm,0.7s						
CLL				*e*PKPab	PKPab	16 26 24.0	-1.0
MMAI	**Mount Meron Ar**	**149.66**	**299**	PKPbc	PKPbc	16 26 21.1	-0.7
	comp=Z,7.5nm,0.8s,baz=54,slow=8.5,SNR=6.7						
KHC	**Kasperske Hory**	**151.23**	**347**	*e*P	PKPdf	16 26 20.0	+1.0
GERES	**GERESS Array B**	**151.47**	**346**	PKPbc	PKPbc	16 26 24.6	-1.0
	comp=Z,0.6nm,0.5s,baz=236,slow=1.4,SNR=3.2						

*IDC **06** 16:33:41.5±0.8, 1540N×11947E, h0km, mb4.1/12, mb1 4.1/13, mb1mx4.0/24, mbtmp4.0/13, ML3.4/1, MS3.9/1, Ms1 3.9/1, ms1mx2.9/38, Error ellipse: s-maj=44.1km s-min=17.3km az=66.0*
*NEIC **06** 16:33:42.6±0.5, 1512N×11903E, h10km, mb4.3/3, Error ellipse: s-maj=23.1km s-min=10.1km az=56.0*
*MAN **06** 16:33:44, 1532N×11923E, h23km, mb4.0, ML2.8, MS2.4*
*ISCJB **06** 16:33:45.7±0.9, 1531N±004×11923E±007, h40km±10km, mb4.1/12, Error ellipse: s-maj=12.1km s-min=7.3km az=10.6*
ISC 06 16:33:45.6±1.6, **1534N**±004×**11924E**±005, **h24**km±12km, **n38**, σ0.96/38, **mb4.1**/12, **1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.78**	**56**	*e*P	**Pb**	**16 33 59.6**	**-0.9**
BOLP	**Bolinao**	**1.22**	**32**	*e*P	**Pn**	**16 34 06.0**	**-1.3**
BCPH	**Baguio City Da**	**1.66**	**51**	⇓*i*P	**Pn**	**16 34 13.0**	**-0.2**
PCPH	**Palayan**	**1.81**	**83**	⇑*e*P	**Pn**	**16 34 15.0**	**-0.3**
PCPH				*e*S	**Sn**	**16 34 37.1**	**-0.3**
LUBP	**Lubang**	**1.87**	**148**	*e*P	**Pn**	**16 34 15.3**	**-0.8**
BALP	**Baler**	**2.29**	**80**	*e*P	**Pn**	**16 34 22.1**	**+0.3**
POLP	**Polilio Island**	**2.68**	**103**	*e*P	**Pn**	**16 34 29.2**	**+1.9**
ABRA	**Dolores**	**2.70**	**31**	*e*P	**Pn**	**16 34 28.2**	**+0.7**
CAUP	**Cauayan**	**2.95**	**57**	*e*P	**Pn**	**16 34 33.3**	**+2.2**
SJMP	**San Jose**	**3.39**	**147**	*e*P	**Pn**	**16 34 38.9**	**+1.9**
BUSP	**Coron**	**3.44**	**164**	*e*P	**Pn**	**16 34 37.8**	**0.0**
ENPP	**El Nido**	**4.11**	**177**	*e*P	**Pn**	**16 34 46.5**	**-0.5**
CUYO	**Cuyo Island**	**4.78**	**159**	*e*P	**Pn**	**16 34 55.1**	**-1.2**
QIZ	**Qiongzhong**	**9.70**	**294**	*e*Pn	**Pn**	**16 36 00.2**	**-3.6**
KSM	**Kuching**	**16.35**	**213**	P	**Pn**	**16 37 35.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**19.67**	**282**	P	**Pn**	**16 38 15.0**	**+0.5**
	0.1nm,0.3s,baz=79,slow=10,SNR=6.8						
JHJ	**Hachijo jima 2**	**25.69**	**43**	LR	LR	16 47 40.5	
	comp=Z,328nm,21.8s,baz=77,slow=33						
BATI	**Baumata**	**25.75**	**170**	P	**P**	**16 39 15.6**	**+0.9**
	12nm,0.8s,mb4.4,baz=92,slow=9.4,SNR=4.4						
SONM	**Songino Array**	**34.10**	**345**	P	**P**	**16 40 28.8**	**+0.5**
	0.8nm,0.6s,mb3.8,baz=164,slow=10,SNR=5.9						
WRAB	**Tennant Creek**	**38.07**	**157**	*e*P	**P**	**16 40 59.9**	**-2.7**
	4.9nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**41.33**	**159**	P	**P**	**16 41 28.6**	**-1.1**
	0.9nm,0.5s,baz=332,slow=7.2,SNR=24						
MKAR	**Makanchi Array**	**43.88**	**323**	P	**P**	**16 41 50.8**	**+0.6**
	0.6nm,0.6s,baz=111,slow=9.3,SNR=8.5						
MKAR				PcP	PcP	16 43 35.5	-0.7
	0.6nm,0.7s,baz=212,slow=4.3,SNR=4.3						
MKAR	**Makanchi Array**	**43.88**	**323**	P	**P**	**16 41 50.8**	**+0.6**
MKAR				PcP	PcP	16 43 35.5	-0.7
ZALV	**Zalesovo Beam**	**46.96**	**333**	P	**P**	**16 42 13.9**	**-0.5**
	0.5nm,0.4s,mb3.8,baz=140,slow=7.6,SNR=3.5						
ZALV				PcP	PcP	16 43 45.7	-1.0
	0.4nm,0.4s,baz=140,slow=3.2,SNR=3.0						
ZALV	**Zalesovo Beam**	**46.96**	**333**	P	**P**	**16 42 13.9**	**-0.5**
ZALV				PcP	PcP	16 43 45.7	-1.0
KURK	**Kurchatov**	**48.05**	**326**	P	**P**	**16 42 23.3**	**+0.3**
	1.0nm,0.5s,mb4.1,baz=118,slow=7.7,SNR=7.9						
KURK	**Kurchatov**	**48.05**	**326**	*e*P	**P**	**16 42 23.2**	**+0.2**
	2.6nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**53.63**	**326**	P	**P**	**16 43 05.4**	**+0.4**
	0.6nm,0.5s,mb3.8,baz=124,slow=8.5,SNR=5.7						
BVAR				PcP	PcP	16 44 10.1	-1.1
	0.6nm,0.6s,baz=115,slow=5.6,SNR=4.3						
BRVK	**Borovoye**	**53.70**	**326**	P	**P**	**16 43 05.1**	**-0.4**
	1.8nm,0.7s,mb4.1						
AKTK	**Aktyubinsk**	**60.06**	**320**	P	**P**	**16 43 50.8**	**+0.1**
AKTO	**Aktyubinsk**	**60.06**	**320**	P	**P**	**16 43 50.8**	**+0.1**
	1.2nm,0.6s,mb4.1,baz=110,slow=8.1,SNR=6.2						
ARCES	**ARCESS Array B**	**77.06**	**339**	P	**P**	**16 45 36.4**	**-0.1**
	4.6nm,1.0s,mb4.3,baz=48,slow=5.4,SNR=4.1						
SPITS	**Spitsbergen Ar**	**77.71**	**348**	P	**P**	**16 45 39.8**	**-0.2**
	9.6nm,1.0s,mb4.7,baz=88,slow=16,SNR=4.8						
SPITS	**Spitsbergen Ar**	**77.71**	**348**	P	**P**	**16 45 39.8**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NOA	**NORSAR Array B**	**85.16**	**332**	P	**P**	**16 46 18.8**	**-0.8**
	0.8nm,0.8s,mb3.9,baz=78,slow=5.3,SNR=2.4						
NOA	**NORSAR Array B**	**85.16**	**332**	P	**P**	**16 46 18.8**	**-0.8**
YKA	**Yellowknife Ar**	**91.81**	**22**	P	**P**	**16 46 51.3**	**0.0**
	0.3nm,0.7s,mb3.7,baz=310,slow=4.6,SNR=6.8						
YKA	**Yellowknife Ar**	**91.81**	**22**	P	**P**	**16 46 51.3**	**0.0**

FUNV 06 16:43:48.6,6.81N×73.12W,h170km,MW3.7,1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.31**	**37**	⇓*i*P	Pn	16 44 17.2	-0.8
CAPV				*e*S	Sn	16 44 38.9	-1.8
SOCV	**Socops**	**2.68**	**57**	*e*P	Pn	16 44 32.0	-0.9
SOCV				*e*S	Sn	16 45 04.0	-3.2
ELOV	**Elorza**	**3.62**	**87**	*e*P	Pn	16 44 43.7	-0.8
VIRV	**Villa del Rosa**	**3.73**	**11**	*e*P	Pn	16 44 44.1	-1.9
VIRV				*e*S	Sn	16 45 26.4	-4.4
QARV	**Quebrada Arrib**	**4.24**	**37**	*e*P	Pn	16 44 51.7	-0.8
QARV				*e*S	Sn	16 45 37.2	-5.2
SANV	**Sanarito**	**4.44**	**53**	*e*P	Pn	16 44 53.8	-1.3
SANV				*e*S	Sn	16 45 42.3	-4.8
CURV	**Curarigua**	**4.46**	**44**	*e*P	Pn	16 44 54.0	-1.3
CURV				*e*S	Sn	16 45 42.5	-5.0
DABV	**Dabajuro**	**4.76**	**31**	*e*P	Pn	16 44 58.2	-1.1
TEPV	**Terepaima**	**4.99**	**51**	*e*P	Pn	16 45 01.0	-1.2
TEPV				*e*S	Sn	16 45 53.3	-6.7
SIQV	**Siquisique**	**5.02**	**40**	*e*P	Pn	16 45 01.0	-1.7
BAUV	**El Baul**	**5.46**	**67**	*e*P	Pn	16 45 05.6	-2.8
BAUV				*e*S	Sn	16 46 04.3	-6.6

*IDC **06** 16:45:07.8±0.8,2.04S×139.09E,h0km,mb4.2/11, mb1 4.3/12,mb1mx4.2/16,mbtmp4.2/12,ML4.4/2,MS3.6/7, Ms1 3.6/7,ms1mx3.4/23,Error ellipse: s-maj=25.6km s-min=17.0km az=73.0*
*NEIC **06** 16:45:09.0±0.3,2.07S×138.99E,h10km,mb4.6/16,Error ellipse: s-maj=11.2km s-min=6.3km az=83.0*
*ISCJB **06** 16:45:11.2±1.3,2.07S±0.06×139.10E±0.06,h39km±13km, mb4.4/24,MS3.6/5,Error ellipse: s-maj=10.2km s-min=9.2km az=165.2*
*DJA **06** 16:45:12,2.12S×139.19E,h16km,mb4.8/7*
ISC 06 16:45:13.1±1.2**,2.10S**±0.06×**139.14E**±0.06**,h40**km±12km**, n50,**σ1.01/47**,mb4.4**/24**,MS3.6**/5**,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.62**	**105**	P	**Pn**	**16 45 38.8**	**-0.4**
PMG	**Port Moresby**	**10.79**	**133**	Pn	**Pn**	**16 47 39.0**	**-6.2**
AAI	**Ambon**	**11.04**	**262**	P	**Pn**	**16 47 48.9**	**+0.3**
	31nm,1.0s						
KAKA	**Kakadu**	**12.46**	**212**	*e*P	x	16 47 47.4	
	24nm,0.5s						
KAKA				*e*S	x	16 50 02.7	
GUMO	**Guam**	**16.59**	**20**	LR	LR	16 54 55.5	
	comp=Z,185nm,18.7s,baz=132,slow=36						
KDI	**Kendari**	**16.59**	**263**	P	**Pn**	**16 49 03.0**	**0.0**
	15nm,2.1s,1μm						
BATI	**Baumata**	**17.35**	**242**	P	**Pn**	**16 49 11.6**	**-0.9**
	3.4nm,0.3s,baz=153,slow=1.5,SNR=25						
BATI	**Baumata**	**17.35**	**242**	P	**Pn**	**16 49 14.2**	**+1.7**
	79nm,0.9s						
WRAB	**Tennant Creek**	**18.34**	**194**	*e*Pn	**Pn**	**16 49 23.3**	**-1.2**
	28nm,0.7s						
WRAB				*e*Sn	**Sn**	**16 52 35.9**	**-12**
WRAB	**Tennant Creek**	**18.34**	**194**	P	**Pn**	**16 49 24.0**	**-0.5**
	43nm,0.8s						
WB2	**Warramunga Arr**	**18.34**	**194**	*e*P	**Pn**	**16 49 23.5**	**-1.1**
WB2				*e*S	**S**	**16 52 37.8**	**-14**
CTA	**Charters Tower**	**19.19**	**159**	LR	LR	16 57 43.3	
	comp=Z,197nm,19.7s,baz=226,slow=39						
PCI	**Palu**	**19.33**	**273**	P	**Pn**	**16 49 38.0**	**+1.5**
	50nm,1.1s						
KAPI	**Kappang**	**19.56**	**261**	P	**Pn**	**16 49 38.0**	**-1.3**
	0.5nm,0.3s,baz=105,slow=12,SNR=3.3						
KAPI	**Kappang**	**19.56**	**261**	*e*P	**Pn**	**16 49 35.3**	**-4.0**
	9.9nm,0.9s						
KAPI	**Kappang**	**19.56**	**261**	P	**Pn**	**16 49 45.0**	**+5.7**
HNR	**Honiara**	**21.94**	**110**	P	**P**	**16 50 04.0**	**+0.6**
	28nm,0.7s,mb4.8,baz=293,slow=7.7,SNR=4.4						
HNR	**Honiara**	**21.94**	**110**	P	**P**	**16 50 04.0**	**+0.6**
ASAR	**Alice Springs**	**22.03**	**193**	P	**P**	**16 50 04.2**	**-0.1**
	11nm,0.7s,mb4.4,baz=21,slow=12,SNR=17						
ASAR				S	**S**	**16 54 00.9**	**-4.4**
	1.6nm,0.9s,baz=15,slow=26,SNR=3.6						
KKM	**Kota Kinabalu**	**24.27**	**290**	P	**P**	**16 50 22.2**	**-4.6**
	45nm,1.3s,mb4.7						
BBKI	**Banjar Baru**	**24.30**	**266**	P	**P**	**16 50 28.5**	**+1.4**
	121nm,1.0s,mb5.3						
KMMI	**Kalianget**	**25.56**	**258**	P	**P**	**16 50 40.0**	**+1.4**
EIDS	**Eidsvold**	**25.85**	**155**	*e*P	**P**	**16 50 42.7**	**+1.7**
	19nm,1.2s,mb4.5						
MBWA	**Marble Bar**	**26.77**	**224**	*e*P	**P**	**16 50 47.8**	**-1.6**
	12nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**29.71**	**176**	*e*P	**P**	**16 51 17.3**	**+1.8**
	3.0nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**29.71**	**176**	P	**P**	**16 51 16.2**	**+0.7**
	3.8nm,0.7s,mb4.2,baz=316,slow=14,SNR=6.3						
STKA				LR	LR	17 04 31.1	
	comp=Z,192nm,19.2s,MS3.7,baz=18,slow=39						
STKA	**Stephens Creek**	**29.71**	**176**	*e*P	**P**	**16 51 16.2**	**+0.7**
	0.9nm,0.7s,mb3.6						
FORT	**Forrest**	**30.39**	**199**	*e*P	**P**	**16 51 22.5**	**+0.9**
	19nm,0.6s,mb5.0						
NWAO	**Narrogin (SRO)**	**36.92**	**211**	P	**P**	**16 52 16.1**	**-2.2**
	12nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**38.45**	**359**	LR	LR	17 05 45.6	
	comp=Z,56nm,18.5s,MS3.4,baz=120,slow=32						
KSRS	**Korea Array**	**40.70**	**346**	LR	LR	17 07 17.3	
	comp=Z,52nm,20.7s,MS3.4,baz=155,slow=33						
CMAR	**Chiang Mai Arr**	**44.51**	**299**	P	**P**	**16 53 20.9**	**-0.1**
	1.6nm,0.6s,mb4.0,baz=120,slow=6.7,SNR=10						
CHTO	**Chiang Mai**	**44.65**	**300**	P	**P**	**16 53 21.5**	**-0.7**
MDJ	**Mudanjiang**	**47.28**	**351**	P	**P**	**16 53 42.3**	**-0.2**
	3.8nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**57.09**	**335**	*e*P	**P**	**16 54 55.0**	**-0.3**
	3.1nm,0.9s,mb4.3						
PETK	**Petropavlovsk-**	**57.17**	**13**	P	**P**	**16 54 56.4**	**+0.6**
	4.2nm,0.9s,mb4.5,baz=207,slow=11,SNR=2.8						
PETK				LR	LR	17 18 16.4	
	comp=Z,48nm,20.2s,MS3.6,baz=218,slow=35						
SONM	**Songino Array**	**57.35**	**334**	P	**P**	**16 54 57.5**	**+0.3**
	0.5nm,0.5s,mb3.8,baz=152,slow=8.8,SNR=5.3						
SONM				LR	LR	17 21 00.4	
	comp=Z,104nm,18.1s,MS4.0,baz=133,slow=38						
YAK	**Yakutsk**	**64.36**	**355**	P	**P**	**16 55 42.6**	**-1.9**
	13nm,0.6s,mb5.2						
MK31	**Makanchi Array**	**69.56**	**322**	P	**P**	**16 56 18.3**	**+0.3**
MKAR	**Makanchi Array**	**69.56**	**322**	P	**P**	**16 56 18.1**	**+0.1**
	1.6nm,0.8s,mb4.0,baz=115,slow=8.2,SNR=9.2						
ZALV	**Zalesovo Beam**	**71.62**	**330**	P	**P**	**16 56 29.7**	**-0.6**
	0.7nm,0.6s,mb3.8,baz=120,slow=8.7,SNR=4.5						
TKM2	**Tokmak 2**	**72.39**	**316**	*e*P	**P**	**16 56 35.7**	**+0.5**
	3.9nm,1.1s,mb4.2						
KURK	**Kurchatov**	**73.46**	**325**	*e*P	**P**	**16 56 39.4**	**-2.0**
	2.5nm,0.9s,mb4.1						
VNDA	**Vanda**	**76.35**	**175**	P	**P**	**16 56 58.7**	**+1.0**
	0.8nm,0.6s,mb3.9,baz=348,slow=5.9,SNR=5.9						
VNDA	**Vanda**	**76.35**	**175**	P	**P**	**16 56 57.1**	**-0.5**
	2.3nm,0.9s,mb4.1						
BVAR	**Borovoye Array**	**79.05**	**325**	P	**P**	**16 57 13.7**	**+0.6**
	2.3nm,0.7s,mb4.2,baz=114,slow=7.2,SNR=16						
BRVK	**Borovoye**	**79.12**	**325**	*e*P	**P**	**16 57 12.8**	**-0.7**
	4.3nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**87.85**	**180**	*e*P	**P**	**16 57 58.3**	**+0.5**
	6.1nm,1.2s,mb4.7						
YKA	**Yellowknife Ar**	**99.33**	**27**	P	**P**	**16 58 51.6**	**+0.8**
	0.2nm,0.7s,mb3.8,baz=277,slow=4.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**136.49**	**287**	PKP	PKPdf	17 04 33.2	+1.4
	0.6nm,0.8s,baz=58,slow=1.4,SNR=3.4						

*TEH **06** 17:01:55.7,34.90N×60.41E,h10km,ML4.1*
*CSEM **06** 17:03:09.8±0.2,34.87N×60.36E,h16km,mb4.1,Error ellipse: s-maj=4.3km s-min=2.8km az=116.0*
*ISCJB **06** 17:03:10.8±2.0,34.94N±0.04×60.30E±0.06,h19km±18km, mb3.5/6,Error ellipse: s-maj=8.5km s-min=5.8km az=23.2*
*IDC **06** 17:03:11.4±1.2,35.11N×60.40E,h0km,mb3.4/7,mb1 3.7/9, mb1mx3.5/23,mbtmp3.5/9,ML3.4/2,Error ellipse: s-maj=24.9km s-min=20.8km az=177.0*
*NEIC **06** 17:03:11.0,34.90N×60.40E,h10km,ML3.8(THR), MN4.1(TEH),After TEH.*
*THR **06** 17:03:12.2±0.5,35.02N×60.13E,h18km±20km,ML3.8*
*NNC **06** 17:03:19.3±5.2,35.37N×61.06E,h0km,mb3.6,Error ellipse: s-maj=65.6km s-min=36.2km az=173.0*
ISC 06 17:03:10.1±1.6**,34.91N**±0.04×**60.34E**±0.05**,h0**km±10km**,n82, σ1.18**/94**,mb3.5**/6**,2C-3D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMYA	**Miami**	**1.44**	**352**	Pn	**Pn**	**17 03 37.4**	**0.0**
IMYA	**Miami**	**1.44**	**352**	*e*Pn	**Pn**	**17 03 37.5**	**+0.1**
IMYA				*e*		17 04 03.9	
IMOG	**Moghan**	**1.44**	**326**	Pn	**Pn**	**17 03 37.3**	**-0.2**
IMOG				*e*Sg	**Sg**	**17 03 57.6**	**+1.0**
IMOG	**Moghan**	**1.44**	**326**	*e*Pn	**Pn**	**17 03 37.4**	**-0.1**
IMOG				*e*		17 03 44.5	
IMOG				*e*Sg	**Sg**	**17 03 57.6**	**+1.0**
ISRO	**Mashad**	**1.56**	**333**	*e*Pg	**Pg**	**17 03 39.1**	**-1.0**
MHI	**Mashad**	**1.56**	**333**	Pn	**Pn**	**17 03 39.6**	**+0.5**
MHI	**Mashad**	**1.56**	**333**	*e*Pn	**Pn**	**17 03 39.6**	**+0.5**
MHI				*e*		17 04 01.7	
IMON	**Monand**	**1.81**	**198**	*e*Pn	**Pn**	**17 03 43.0**	**+0.6**
IMON	**Monand**	**1.81**	**198**	*e*Pn	**Pn**	**17 03 43.0**	**+0.6**
IPAY	**Payeh**	**1.88**	**325**	*e*Pn	**Pn**	**17 03 44.4**	**+0.9**
IPAY				*e*		17 04 15.6	
IAKL	**Akhelmad**	**2.12**	**323**	Pn	**Pn**	**17 03 47.3**	**+0.5**
IAKL				Sg	**Sg**	**17 04 19.1**	**+0.8**
IAKL	**Akhelmad**	**2.12**	**323**	*e*Pn	**Pn**	**17 03 47.4**	**+0.6**
IAKL				*e*Sg	**Sg**	**17 04 19.2**	**+0.9**
IAKL				*e*		17 04 21.4	
IKRD	**Kardeh**	**2.38**	**322**	Pn	**Pn**	**17 03 45.3**	**-5.0**
IKRD				Sn	**Sn**	**17 04 10.6**	**-10**
IKRD	**Kardeh**	**2.38**	**322**	*e*Pn	**Pn**	**17 03 45.4**	**-4.9**
IKRD				*e*Sn	**Sn**	**17 04 10.6**	**-10**
IKRD				*e*		17 04 19.2	
ITEG	**Tejag**	**2.41**	**214**	*e*Pn	**Pn**	**17 03 50.5**	**-0.2**
ITEG	**Tejag**	**2.41**	**214**	*e*Pn	**Pn**	**17 03 50.5**	**-0.2**
ITEG				*e*		17 04 28.1	
IKOO	**Kooshah**	**2.72**	**205**	*e*Pn	**Pn**	**17 03 55.1**	**+0.1**
IKOO	**Kooshah**	**2.72**	**205**	*e*Pn	**Pn**	**17 03 55.1**	**+0.1**
IKOO				*e*		17 04 49.0	
IEMG	**Emamgholi**	**2.84**	**332**	*e*Pn	**Pn**	**17 03 57.7**	**+1.0**
IEMG				*e*		17 04 05.9	
ISFR	**Sfrayin**	**2.86**	**319**	Pn	**Pn**	**17 03 57.6**	**+0.7**
ISFR	**Sfrayin**	**2.86**	**319**	*e*Pn	**Pn**	**17 03 57.7**	**+0.8**
ISFR				*e*		17 05 03.5	
ISHV	**Shirvan**	**3.37**	**322**	*e*Pn	**Pn**	**17 04 03.7**	**-0.3**
ISHV				*e*		17 05 26.0	
MRVT	**Maraveh tapeh**	**4.39**	**310**	*e*Pn	**Pn**	**17 04 17.4**	**-0.6**
IBAF	**Bafgh**	**5.19**	**232**	*e*Pn	**Pn**	**17 04 28.3**	**-0.7**
IBAF				*e*		17 06 06.7	
IANJ	**Anjilo**	**5.29**	**278**	Pn	**Pn**	**17 04 28.1**	**-2.2**
IANJ	**Anjilo**	**5.29**	**278**	*e*Pn	**Pn**	**17 04 28.2**	**-2.1**
IANJ				*e*		17 05 57.8	
ZHSF	**Zahedan**	**5.30**	**176**	*e*P	**Pn**	**17 04 34.7**	**+4.2**
IGLO	**Ghaloghah**	**5.53**	**289**	Pn	**Pn**	**17 04 33.4**	**-0.2**
IGLO	**Ghaloghah**	**5.53**	**289**	*e*Pn	**Pn**	**17 04 33.4**	**-0.2**
IGLO				*e*		17 05 05.0	
IKIA	**Kiasar**	**5.58**	**285**	Pn	**Pn**	**17 04 31.7**	**-2.6**
IKIA	**Kiasar**	**5.58**	**285**	*e*Pn	**Pn**	**17 04 31.8**	**-2.5**
ICHK	**Chekchek**	**5.62**	**243**	*e*Pn	**Pn**	**17 04 32.9**	**-2.0**
ICHK				*e*		17 06 07.4	
KRBR	**Kerman**	**5.77**	**213**	*e*Pn	**Pn**	**17 04 38.9**	**+1.9**
KRBR				AML	AML	17 06 26.4	
	comp=N,38nm,0.4s						
ISHM	**Shahmirzad**	**5.83**	**281**	*e*Pn	**Pn**	**17 04 37.5**	**-0.2**
ISHM	**Shahmirzad**	**5.83**	**281**	Pn	**Pn**	**17 04 37.4**	**-0.3**
ISHM	**Shahmirzad**	**5.83**	**281**	*e*Pn	**Pn**	**17 04 37.5**	**-0.2**
IMEH	**Mehriz**	**5.95**	**235**	Pn	**Pn**	**17 04 45.7**	**+6.3**
IMEH	**Mehriz**	**5.95**	**235**	*e*Pn	**Pn**	**17 04 45.7**	**+6.3**
ILAS	**Lasjerd**	**6.07**	**277**	Pn	**Pn**	**17 04 34.4**	**-6.6**
ILAS	**Lasjerd**	**6.07**	**277**	*e*Pn	**Pn**	**17 04 34.5**	**-6.5**
IFIR	**Firoozkooh**	**6.25**	**279**	*e*Pn	**Pn**	**17 04 42.1**	**-1.4**
IFIR	**Firoozkooh**	**6.25**	**279**	Pn	**Pn**	**17 04 38.7**	**-4.8**
IFIR	**Firoozkooh**	**6.25**	**279**	*e*Pn	**Pn**	**17 04 38.8**	**-4.7**
IFIR				*e*		17 04 45.6	
ISAD	**Sadrabad**	**6.32**	**244**	Pn	**Pn**	**17 04 45.6**	**+1.1**
ISAD	**Sadrabad**	**6.32**	**244**	*e*Pn	**Pn**	**17 04 45.7**	**+1.2**
ISAD				*e*		17 06 30.5	
NASN	**Na'in**	**6.61**	**254**	*e*Pn	**Pn**	**17 04 49.1**	**+0.6**
NASN				*e*Sg	**Sg**	**17 06 32.2**	**-10**
NASN				AML	AML	17 06 45.0	
	comp=N,25nm,0.5s						
NASN	**Na'in**	**6.61**	**254**	*e*Pn	**Pn**	**17 04 49.1**	**+0.6**
	SNR=52						
NASN				*e*Sg	**Sg**	**17 06 32.2**	**-10**
	SNR=90						
IPRN	**Peran**	**6.65**	**284**	Pn	**Pn**	**17 04 49.8**	**+0.7**
IPRN	**Peran**	**6.65**	**284**	*e*Pn	**Pn**	**17 04 49.8**	**+0.7**
ISFB	**Sefidab**	**6.70**	**267**	*e*Pn	**Pn**	**17 04 48.7**	**-1.0**
ISFB	**Sefidab**	**6.70**	**267**	*e*Pn	**Pn**	**17 04 48.7**	**-1.0**
IDMV	**Damavand**	**6.83**	**278**	*e*Pn	**Pn**	**17 04 51.3**	**-0.2**
IDMV				*e*		17 07 13.3	
DAMV	**Damavand**	**6.88**	**278**	*e*Pn	**Pn**	**17 04 52.1**	**-0.1**
IZEF	**Zefreh**	**6.96**	**255**	*e*Pn	**Pn**	**17 04 53.0**	**-0.2**
IZEF	**Zefreh**	**6.96**	**255**	*e*Pn	**Pn**	**17 04 53.0**	**-0.2**
IVRN	**Varamin**	**7.07**	**273**	Pn	**Pn**	**17 04 52.5**	**-2.3**
IVRN	**Varamin**	**7.07**	**273**	*e*Pn	**Pn**	**17 04 52.6**	**-2.2**
IKLH	**Kolahrood**	**7.44**	**260**	*e*Pn	**Pn**	**17 04 58.9**	**-0.9**
IKLH	**Kolahrood**	**7.44**	**260**	*e*Pn	**Pn**	**17 04 58.9**	**-0.9**
IPIR	**Pirpir**	**8.17**	**257**	Pn	**Pn**	**17 05 13.6**	**+3.7**
IPIR	**Pirpir**	**8.17**	**257**	*e*Pn	**Pn**	**17 05 13.6**	**+3.7**
ASAO	**Ashtian**	**8.50**	**270**	*e*Pn	**Pn**	**17 05 14.8**	**+0.4**
IRAZ	**Razeghan**	**8.54**	**276**	Pn	**Pn**	**17 05 10.4**	**-4.6**
IRAZ	**Razeghan**	**8.54**	**276**	*e*Pn	**Pn**	**17 05 10.5**	**-4.5**
KK31	**Karatay Array**	**11.37**	**41**	⇑P	**Pn**	**17 05 52.8**	**-0.9**
	comp=N,0.6nm,0.4s,baz=233,slow=16,SNR=9.7						
KK31				⇑S	**Sn**	**17 07 54.6**	**-6.7**
	comp=N,4.2nm,0.8s,baz=228,slow=25,SNR=4.5						
AML	**Almayashu**	**12.69**	**51**	*e*P	**Pn**	**17 06 11.2**	**-0.5**
TKM2	**Tokmak 2**	**14.30**	**51**	⇓P	**Pn**	**17 06 32.3**	**-1.4**
	comp=N,1.4nm,0.5s						
AB01	**Akbulak array**	**14.33**	**359**	⇓P	**Pn**	**17 06 36.4**	**+2.2**
	comp=N,0.8nm,0.5s						
AKTK	**Aktyubinsk**	**15.60**	**354**	Pn	**Pn**	**17 06 48.9**	**-2.3**
AKTK				Sn	**Sn**	**17 09 33.9**	**-11**
AKTO	**Aktyubinsk**	**15.60**	**354**	Pn	**Pn**	**17 06 48.9**	**-2.3**
	comp=N,0.1nm,0.3s,baz=200,slow=16,SNR=2.8						
AKTO				Sn	**Sn**	**17 09 33.9**	**-11**
	comp=N,0.1nm,0.3s,baz=14,slow=19,SNR=2.4						
BVA0	**Borovoye Array**	**19.46**	**18**	⇓P	**Pn**	**17 07 41.7**	**+2.4**
	comp=N,1.2nm,1.4s,baz=196,slow=11,SNR=8.7						
BVAR	**Borovoye Array**	**19.46**	**18**	P	**Pn**	**17 07 38.6**	**-0.7**
	comp=N,0.1nm,0.3s,baz=190,slow=13,SNR=5.1						
BVAR				S	**Sn**	**17 11 08.8**	**-9.2**
	comp=N,0.2nm,0.3s,baz=193,slow=19,SNR=5.1						
MKAR	**Makanchi Array**	**20.33**	**48**	P	**P**	**17 07 47.9**	**+0.2**
	comp=N,0.5nm,0.8s,baz=230,slow=9.4,SNR=4.7						
MKAR	**Makanchi Array**	**20.33**	**48**	P	**P**	**17 07 47.8**	**+0.1**
BRTR	**Keskin Array B**	**21.74**	**291**	P	**P**	**17 08 05.4**	**+2.5**
	comp=N,0.7nm,0.5s,mb3.3,baz=128,slow=13,SNR=4.2						
ZALV	**Zalesovo Beam**	**25.62**	**35**	P	**P**	**17 08 41.4**	**+0.5**
	comp=N,0.5nm,0.4s,mb3.5,baz=224,slow=9.5,SNR=4.9						
CMAR	**Chiang Mai Arr**	**37.92**	**105**	P	**P**	**17 10 30.2**	**+1.0**
	comp=N,1.3nm,0.8s,mb3.7,baz=298,slow=8.7,SNR=12						
CMAR	**Chiang Mai Arr**	**37.92**	**105**	P	**P**	**17 10 30.2**	**+1.0**
ESDC	**Sonseca Array**	**50.41**	**296**	P	**P**	**17 12 11.1**	**+1.9**
	comp=N,0.2nm,0.4s,mb3.4,baz=62,slow=7.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**56.95**	**263**	P	**P**	**17 12 58.3**	**+0.8**
	comp=N,0.3nm,0.5s,mb3.6,baz=52,slow=6.0,SNR=4.3						
YKA	**Yellowknife Ar**	**82.85**	**358**	P	**P**	**17 15 35.3**	**-0.6**
	comp=N,0.2nm,0.7s,mb3.4,baz=359,slow=5.6,SNR=5.8						
YKA	**Yellowknife Ar**	**82.85**	**358**	P	**P**	**17 15 35.3**	**-0.6**

TAP 06 17:10:43.8,23.83N×121.73E,h40km,ML2.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.18**	**323**	P	Pn	17 10 51.2	+0.2
	baz=322						
HWA				S	Sn	17 10 56.7	+0.8
	baz=322						
ESL	**Shilin**	**0.27**	**266**	*i* P	Pn	17 10 52.0	+0.3
	baz=266						
ESL				*i* S	Sn	17 10 57.9	+0.6
	baz=266						
TWD	**Chiawan**	**0.27**	**334**	*i* P	Pn	17 10 52.4	+0.6
	baz=334						
TWD				*i* S	Sn	17 10 58.5	+1.1
	baz=334						
EHY	**Hungye**	**0.49**	**229**	*e*P	Pn	17 10 53.9	-0.5
	baz=228						
EHY				*e*S	Sn	17 11 01.1	-0.8
	baz=228						
WHF	**Hehuan Shan**	**0.52**	**307**	*i* P	Pn	17 10 55.5	+0.6
	baz=306						
WHF				*i* S	Sn	17 11 03.8	+1.1
	baz=306						
ENA	**Nanau**	**0.59**	**1**	P	Pn	17 10 56.2	+0.4
	baz=1.0						
ENA				S	Sn	17 11 05.1	+0.8
	baz=1.0						
TWF1	**Yuli**	**0.62**	**220**	*e*P	Pn	17 10 55.4	-0.8
	baz=219						
TWF1				*e*S	Sn	17 11 03.8	-1.1
	baz=219						
TWT	**Tachien**	**0.66**	**310**	*e*P	Pn	17 10 57.5	+0.8
	baz=308						
TWT				*e*S	Sn	17 11 07.2	+1.4
	baz=308						
NNS	**Nan Shan**	**0.69**	**332**	P	Pn	17 10 57.6	+0.6
	baz=331						
NNS				S	Sn	17 11 07.5	+0.9
	baz=331						
SMLT	**Sun Moon Lake**	**0.76**	**274**	P	Pn	17 10 58.6	+0.6
	baz=273						
SMLT				S	Sn	17 11 09.6	+1.3
	baz=273						
TWC	**Suao**	**0.78**	**8**	P	Pn	17 10 58.9	+0.5
	baz=8.0						
TWC				S	Sn	17 11 10.4	+1.4
	baz=8.0						
TYC	**Yuchr**	**0.80**	**275**	P	Pn	17 10 59.3	+0.7
	baz=275						
TYC				S	Sn	17 11 10.3	+1.0
	baz=275						
CHKT	**Chengkung**	**0.80**	**204**	*e*P	Pn	17 10 56.6	-2.0
	baz=204						
CHKT				*e*S	Sn	17 11 07.6	-1.8
	baz=204						
ENTT	**Nioudou**	**0.82**	**350**	P	Pn	17 10 59.5	+0.6
	baz=349						
ENTT				S	Sn	17 11 11.0	+1.3
	baz=349						
TWE	**Neicheng**	**0.89**	**357**	*e*P	Pn	17 11 00.6	+0.8
	baz=356						
TWE				*e*S	Sn	17 11 12.8	+1.3
	baz=356						
NSK	**Sanguang**	**0.91**	**338**	*e*P	Pn	17 10 59.3	-0.8
	baz=338						
NSK				*e*S	Sn	17 11 12.6	+0.7
	baz=338						
ELDTW	**Lidau**	**0.91**	**226**	*e*P	Pn	17 10 59.3	-0.8
	baz=225						
ELDTW				*e*S	Sn	17 11 11.1	-1.1
	baz=225						
WNT	**Mingjian**	**0.95**	**273**	*e*P	Pn	17 11 02.2	+1.5
	baz=272						
WNT				*e*S	Sn	17 11 15.7	+2.5
	baz=272						
CHN5	**Tsauling**	**0.99**	**257**	*e*P	Pn	17 11 01.8	+0.6
	baz=256						
CHN5				*e*S	Sn	17 11 16.1	+2.1
	baz=256						
TWQ1	**Liyutan**	**1.01**	**301**	P	Pn	17 11 02.9	+1.4
	baz=300						
TWQ1				S	Sn	17 11 16.9	+2.4
	baz=300						
NSTT	**Nanjuang**	**1.03**	**320**	*e*P	Pn	17 11 02.6	+0.8
	baz=320						
NSTT				*e*S	Sn	17 11 17.0	+1.9
	baz=320						
WGK	**Gukeng**	**1.08**	**262**	*e*P	Pn	17 11 03.2	+0.8
	baz=262						
WGK				*e*S	Sn	17 11 17.7	+1.6
	baz=262						
CHN4	**Tsaushan**	**1.14**	**245**	*e*P	Pn	17 11 04.5	+1.1
	baz=245						
CHN4				*e*S	Sn	17 11 19.6	+1.8
	baz=245						
TWG	**Pinlang**	**1.17**	**211**	*e*P	Pn	17 11 03.0	-0.7
	baz=210						
TWG				*e*S	Sn	17 11 16.2	-2.2
	baz=210						
WTP	**Ta-pu**	**1.18**	**240**	*e*P	Pn	17 11 04.6	+0.9
	baz=240						
WTP				*e*S	Sn	17 11 20.3	+1.7
	baz=240						
TWK	**Hsinying**	**1.27**	**244**	*e*P	Pn	17 11 05.5	+0.5
	baz=243						
TWK				*e*S	Sn	17 11 22.5	+1.7
	baz=243						
CHN1	**Nanshi**	**1.27**	**240**	*e*P	Pn	17 11 05.9	+0.8
	baz=239						
CHN1				*e*S	Sn	17 11 21.8	+0.7
	baz=239						
SGST	**Jiashian**	**1.29**	**235**	*e*P	Pn	17 11 06.5	+1.2
	baz=234						
SGST				*e*S	Sn	17 11 22.7	+1.3
	baz=234						
SSD	**Sandimen**	**1.48**	**223**	*e*P	Pn	17 11 09.1	+1.2
	baz=222						
SSD				*e*S	Sn	17 11 27.4	+1.4
	baz=222						

JMA 06 17:10:51.0±0.1**,24.54N×123.70E,h61**km±1km**,M2.2, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.21**	**172**	P	Pn	17 11 00.5	-0.1
IRIF				*e*S	Sn	17 11 07.6	+0.1
JKRS	**Kuro-shima**	**0.41**	**137**	P	Pn	17 11 02.4	+0.2
JKRS				S	Sn	17 11 10.9	+0.6
JIJ	**Ishigaki jima**	**0.44**	**113**	P	Pn	17 11 02.3	-0.1
JIJ				*e*S	Sn	17 11 10.6	-0.1
HATJ	**Hateruma jima**	**0.49**	**169**	P	Pn	17 11 02.9	-0.1
HATJ				*e*S	Sn	17 11 11.9	+0.3
YOJ	**Yonaguni jima**	**0.63**	**263**	P	Pn	17 11 04.8	+0.3
YOJ				S	Sn	17 11 14.4	0.0
JTJ	**Tarama**	**0.92**	**84**	P	Pn	17 11 08.4	+0.4
JTJ				*e*S	Sn	17 11 20.9	+0.3
JMJ	**Miyako jima 2**	**1.48**	**79**	*e*S	Sn	17 11 34.2	+0.5

*BGS **06** 17:11:48.7±1.8,21.33N×46.49W,h10km,mb5.6,MS5.3*
*IDC **06** 17:12:00.9±0.4,22.69N×45.09W,h0km,mb5.1/33, mb1 5.2/33,mb1mx5.2/33,mbtmp5.1/33,MS5.3/30, Ms1 5.3/30,ms1mx5.1/36,Error ellipse: s-maj=12.4km s-min=10.1km az=158.0*
*MOS **06** 17:12:01.4±0.9,22.77N×45.17W,h10km,mb5.6/143, MS5.1/34,Error ellipse: s-maj=7.7km s-min=3.3km az=48.1*
*BJI **06** 17:12:01.2,23.05N×45.92W,h10km,mB5.8,Ms5.6,Msz5.4*
*ISCJB **06** 17:12:02.5±0.2,22.75N±0.04×45.14W±0.01,h16km, mb5.4/324,MS5.4/234,Error ellipse: s-maj=5.2km s-min=1.7km az=173.2*
*GCMT **06** 17:12:03.2±0.1,22.75N×45.00W,h12km,MW5.7/106, Moment Tensor Solution. s61,c90; s106,c288; Duration: 1.7 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.53±.05; $M_{\theta\theta}$0.65±.04; $M_{\phi\phi}$3.88±.04; $M_{r\theta}$-0.32±.16; $M_{\theta\phi}$1.51±.04; $M_{\phi r}$-0.55±.15; Best double couple: $M_0$4.54800×10^{17} NP1:ϕ_s200.00000°,δ41.00000°, λ-92.00000°. NP2:ϕ_s23.00000°,δ49.00000°,λ-88.00000°. Principal axes: T 4.5200, Plg4.0000°, Azm112.0000°; N 0.0550, Plg1.0000°, Azm202.0000°; P -4.5760, Plg86.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IGIL **06** 17:12:03.1,22.70N×44.98W,h10km,MS5.3*
*NEIC **06** 17:12:03.2±0.2,22.69N×45.11W,h10km,mb5.5/223, MS5.4/184,MW5.8,Error ellipse: s-maj=5.4km s-min=2.2km az=170.0,Moment Tensor Solution. s71 Moment tensor: Scale 10^{17}Nm; M_{rr}0.82; $M_{\theta\theta}$-3.89; $M_{\phi\phi}$3.07; $M_{r\theta}$0.19; $M_{\theta\phi}$5.37; $M_{\phi r}$0.48; Best double couple: $M_0$6.50000×10^{17} NP1:ϕ_s343.00000°,δ86.00000°, λ176.00000°. NP2:ϕ_s74.00000°,δ86.00000°,λ4.00000°. Principal axes: T 6.0400, Plg5.0000°, Azm298.0000°; N 0.7700, Plg84.0000°, Azm123.0000°; P -6.8100, Plg0.0000°, Azm28.0000°;*
*DJA **06** 17:12:06,22.32N×44.37W,h0km,mb5.4/5*

*SZGRF **06** 17:12:08.5, 2238N×4441W, h33km, mb5.5, MS5.0, Northern Mid-Atlantic Ridge*

ISC 06 17:12:03.5±1.5**, 2273N**±004×**4511W**±001**, h10**km±9km**, h12**km±2.3km**: pP-P, n1186, σ0.81**/1101**, mb5.4**/325**, MS5.4**/234**, 202C-163D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDF	**Fort de France**	**17.13**	**245**	eP	**Pn**	**17 16 08.0**	**+4.8**
FDF	**Fort de France**	**17.13**	**245**	eP	**Pn**	**17 16 06.3**	**+3.0**
	485nm,1.3s						
GRGR	**Grenville**	**18.95**	**239**	eP	**Pn**	**17 16 26.9**	**+1.2**
	878nm,1.3s						
MTP	**Monte Pirata**	**19.70**	**260**	eP	**Pn**	**17 16 34.2**	**-0.4**
	928nm,1.7s						
CBYP	**Canovanas**	**19.93**	**261**	eP	**Pn**	**17 16 36.4**	**-0.9**
	302nm,1.4s						
SJG	**San Juan**	**20.24**	**261**	eP	**P**	**17 16 42.5**	**+3.5**
SJG				pmax	pmax		
	comp=Z,420nm,1.1s						
SJG	**San Juan**	**20.24**	**261**	eP	**P**	**17 16 40.6**	**+1.6**
	comp=Z,424nm,1.1s						
SJG				LR	LR		
	comp=Z,17µm,22.0s,MS5.3						
ICM	**Isla Caja Muer**	**20.64**	**260**	eP	**P**	**17 16 44.7**	**+1.3**
AGPR	**Aguadilla, PR**	**21.02**	**262**	eP	**P**	**17 16 47.7**	**+0.2**
	comp=Z,466nm,1.4s,mb5.6						
CRPR	**Cabo Rojo, PR**	**21.14**	**261**	eP	**P**	**17 16 50.4**	**+1.5**
	comp=Z,424nm,1.7s,mb5.5						
PDA	**Ponta Delgada**	**22.44**	**44**	eLQ		17 21 34.5	
PDA				eLR	LR	17 22 10.5	
PSET	**Sete Cidades**	**22.45**	**44**	eS	**S**	**17 21 07.6**	**-1.8**
PCRV	**Puerto La Cruz**	**22.46**	**239**	P	**P**	**17 17 01.0**	**-2.1**
	comp=Z,32nm,0.9s,mb4.7,baz=355,slow=7.8,SNR=3.2						
PCRV				LR	LR	17 24 30.1	
	comp=Z,5µm,21.1s,MS4.9,baz=56,slow=33						
SDDR	**Presa de Saban**	**24.73**	**266**	eP	**P**	**17 17 28.2**	**+2.9**
	comp=Z,626nm,1.8s,mb5.8						
SDDR				LR	LR		
	comp=Z,7µm,20.0s,MS5.2						
CHIE	**El Hierro**	**25.04**	**73**	P	**P**	**17 17 27.9**	**-0.1**
	comp=Z,390nm,1.4s,mb5.7						
PMAR	**Madeira**	**26.80**	**62**	eP	**P**	**17 17 43.8**	**-0.2**
	comp=Z,266nm,1.3s,mb5.6						
PMAR				eT		17 45 01.1	
SDV	**Santo Domingo**	**28.08**	**245**	P	**P**	**17 17 55.3**	**-0.3**
	comp=Z,25nm,1.0s,mb4.8,baz=103,slow=4.7,SNR=17						
SDV				LR	LR	17 27 56.1	
	comp=Z,4µm,20.8s,MS5.0,baz=82,slow=34						
BBTS	**Babate**	**28.20**	**102**	LR	LR	17 25 50.0	
	comp=Z,17µm,22.0s,MS5.6,baz=124,slow=29						
RCC	**Rio Carpintero**	**28.59**	**270**	eP	**P**	**17 18 00.0**	**-0.1**
RCBR	**Riachuelo**	**29.77**	**161**	eP	**P**	**17 18 10.9**	**+0.3**
	comp=Z,103nm,1.8s,mb5.3						
RCBR				LR	LR		
	comp=Z,9µm,22.0s,MS5.3						
LMGC	**Las Mercedes**	**29.78**	**271**	eP	**P**	**17 18 13.6**	**+2.9**
PKME	**Peaks-Kenny Pk**	**29.91**	**325**	eP	**P**	**17 18 12.1**	**+0.6**
	comp=Z,100nm,1.4s,mb5.3						
PKME				LR	LR		
	comp=Z,7µm,21.0s,MS5.2						
LBNH	**Lisbon**	**30.76**	**321**	PFAKE		17 18 30.0	+11
LBNH				LR	LR		
	comp=Z,10µm,20.0s,MS5.5						
CNNC	**Cliffs of the**	**31.12**	**301**	PFAKE		17 18 30.0	+7.6
CNNC				LR	LR		
	comp=Z,11µm,21.0s,MS5.5						
CBN	**Corbin**	**31.61**	**307**	PFAKE		17 18 40.0	+13
CBN				LR	LR		
	comp=Z,9µm,22.0s,MS5.4						
NCB	**Newcomb**	**31.98**	**318**	eP	**P**	**17 18 30.2**	**+0.4**
	comp=Z,109nm,1.4s,mb5.5						
NCB				LR	LR		
	comp=Z,8µm,21.0s,MS5.3						
MGV	**Manicaragua**	**32.20**	**276**	eP	**P**	**17 18 25.4**	**-6.6**
BINY	**Binghamton**	**32.23**	**314**	eP	**P**	**17 18 33.5**	**+1.4**
	comp=Z,63nm,1.1s,mb5.4						
BINY				LR	LR		
	comp=Z,7µm,21.0s,MS5.3						
NHSC	**New Hope**	**32.53**	**296**	PFAKE		17 18 50.0	+15
NHSC				LR	LR		
	comp=Z,10µm,19.0s,MS5.5						
SSPA	**Standing Stone**	**32.86**	**311**	eP	**P**	**17 18 37.8**	**+0.2**
	comp=Z,41nm,1.4s,mb5.2						
SSPA				LR	LR		
	comp=Z,6µm,22.0s,MS5.3						
DWPF	**Disney**	**33.16**	**287**	PFAKE		17 18 50.0	+10
DWPF				LR	LR		
	comp=Z,8µm,22.0s,MS5.4						
ROSC	**El Rosal**	**33.36**	**242**	P	**P**	**17 18 43.8**	**+1.7**
	comp=Z,8.5nm,0.3s,mb5.1,baz=87,slow=21,SNR=4.1						
BLA	**Blacksburg**	**33.61**	**304**	P	**P**	**17 18 46.4**	**+2.2**
BLA				pmax	pmax		
	comp=Z,79nm,1.2s,mb5.5						
BLA	**Blacksburg**	**33.61**	**304**	eP	**P**	**17 18 44.9**	**+0.7**
	comp=Z,79nm,1.2s,mb5.5						
BLA				LR	LR		
	comp=Z,10µm,22.0s,MS5.5						
MCWV	**Mont Chateau**	**33.91**	**308**	PFAKE		17 19 00.0	+13
MCWV				LR	LR		
	comp=Z,8µm,21.0s,MS5.4						
PFVI	**Vila Bisbo**	**34.34**	**57**	eLQ		17 26 25.4	
PFVI				eLR	LR	17 27 40.4	
	comp=Z,4µm,18.9s						
MORF	**Marmelete**	**34.52**	**57**	eP	**P**	**17 18 51.8**	**-0.3**
	comp=Z,96nm,1.5s,mb5.5						
MORF				eS	**S**	**17 24 32.0**	**+11**
MORF				eLQ		17 26 29.0	
MORF				eLR	LR	17 27 50.3	
	comp=Z,4µm,17.7s						
LIS	**Lisbon**	**34.53**	**54**	eP	**P**	**17 18 51.8**	**-0.3**
LIS				eS	**S**	**17 24 19.5**	**-1.4**
LIS				eS	**S**	**17 24 19.8**	**-1.1**
LIS				AMS	AMS	17 30 06.5	
	comp=Z,6µm,15.2s,MS5.5						
LIS	**Lisbon**	**34.53**	**54**	eP	**P**	**17 18 51.8**	**-0.3**
LIS				eS	**S**	**17 24 19.5**	**-1.4**
LIS				A		17 30 06.5	
	comp=Z,6µm,15.2s						
SOR	**Soroa**	**34.88**	**278**	eP	**P**	**17 18 57.2**	**+1.8**
ERPA	**Erie**	**34.89**	**312**	PFAKE		17 19 10.0	+15
ERPA				LR	LR		
	comp=Z,8µm,22.0s,MS5.4						
PBDV	**Barranco-do-Ve**	**35.06**	**57**	eP	**P**	**17 18 57.0**	**+0.2**
PBDV				eS	**S**	**17 24 37.4**	**+8.1**
PBDV				eLQ		17 26 51.0	
PBDV				eLR	LR	17 28 02.9	
	comp=Z,4µm,20.7s						
PVAQ	**Vaqueiros**	**35.27**	**57**	eP	**P**	**17 18 58.5**	**0.0**
	comp=Z,100nm,1.6s,mb5.5						
PVAQ				eS	**S**	**17 24 41.3**	**+8.9**
PVAQ				eLQ		17 26 57.3	
PVAQ				eLR	LR	17 28 07.7	
	comp=Z,4µm,19.8s						
RTC	**Rabat Centre**	**35.30**	**63**	PFAKE		17 19 10.0	+11
RTC				LR	LR		
	comp=Z,7µm,20.0s,MS5.4						
GOGA	**Godfrey**	**35.30**	**296**	PFAKE		17 19 10.0	+11
GOGA				LR	LR		
	comp=Z,7µm,20.0s,MS5.4						
PBEJ	**Beja**	**35.31**	**56**	eP	**P**	**17 18 59.0**	**+0.1**
	comp=Z,75nm,1.5s,mb5.4						
EVO	**Evora**	**35.33**	**55**⇑	iP	**P**	**17 18 57.6**	**-1.4**
	comp=Z,126nm,1.3s,mb5.4						
EVO				eMLR	MLR		
	comp=Z,6µm,21.5s,MS5.0						
EVO	**Evora**	**35.33**	**55**	eP	**P**	**17 18 58.7**	**-0.3**
	comp=Z,82nm,1.3s,mb5.5						
EVO	**Evora**	**35.33**	**55**	P	**P**	**17 18 59.0**	**0.0**
SADO	**Sadowa**	**35.45**	**317**	LR	LR	17 31 40.5	
	comp=Z,7µm,19.9s,MS5.5,baz=172,slow=33						
EGRO	**El Granado**	**35.48**	**57**	P	**P**	**17 18 59.5**	**-0.8**
	comp=Z,174nm,1.4s,mb5.8						
PESTR	**Estremoz**	**35.74**	**54**	eP	**P**	**17 19 02.5**	**0.0**
	comp=Z,46nm,2.6s,mb4.9						
PESTR				eS	**S**	**17 24 43.0**	**+3.4**
PESTR				eLQ		17 27 00.8	
PESTR				eLR	LR	17 28 22.5	
	comp=Z,5µm,17.4s						
TZTN	**Tazewell**	**35.89**	**301**	eP	**P**	**17 19 04.2**	**+0.3**
	comp=Z,76nm,1.3s,mb5.5						
BCIP	**Isla Barro Col**	**35.90**	**254**	PFAKE		17 19 20.0	+16
BCIP				LR	LR		
	comp=Z,3µm,22.0s,MS4.9						
TKL	**Tuckaleechee C**	**35.90**	**300**	P	**P**	**17 19 04.7**	**+0.7**
	comp=Z,16nm,1.0s,mb4.9,baz=126,slow=7.6,SNR=6.8						
TKL				LR	LR	17 31 51.6	
	comp=Z,9µm,19.0s,MS5.5,baz=86,slow=33						
TKL	**Tuckaleechee C**	**35.90**	**300**	P	**P**	**17 19 04.7**	**+0.7**
TKL				LR	LR	17 31 51.6	
SCHQ	**Schefferville**	**35.95**	**339**	P	**P**	**17 19 04.9**	**+0.8**
	comp=Z,18nm,1.2s,mb4.9,baz=135,slow=14,SNR=3.8						
SCHQ				LR	LR	17 32 04.1	
	comp=Z,5µm,20.1s,MS5.3,baz=322,slow=33						
PBAR	**Barrancos**	**35.98**	**56**	eP	**P**	**17 19 04.3**	**-0.3**
	comp=Z,68nm,1.6s,mb5.3						
PBAR				eS	**S**	**17 24 54.5**	**+11**
PBAR				eLQ		17 27 18.4	
PBAR				eLR	LR	17 28 42.9	
	comp=Z,4µm,17.6s						
PMRV	**Marv??o**	**36.04**	**54**	eP	**P**	**17 19 04.8**	**-0.3**
	comp=Z,91nm,1.2s,mb5.6						
PMRV				eLQ		17 27 07.0	
PMRV				eLR	LR	17 28 34.9	
	comp=Z,4µm,19.5s						
PVIS	**Viseu**	**36.05**	**51**	eP	**P**	**17 19 05.3**	**+0.1**
	comp=Z,66nm,1.7s,mb5.3						
PCBR	**Castelo Branco**	**36.09**	**53**	eP	**P**	**17 19 05.3**	**-0.3**
	comp=Z,105nm,1.3s,mb5.6						
EBAD	**Badajoz**	**36.14**	**55**	P	**P**	**17 19 05.1**	**-0.9**
	comp=Z,190nm,1.4s,mb5.8						
EMIN	**Mina Concepcio**	**36.16**	**57**	P	**P**	**17 19 05.8**	**-0.4**
	comp=Z,403nm,2.8s,mb5.9						
MTE	**Manteigas**	**36.21**	**52**	eP	**P**	**17 19 06.2**	**-0.4**
	comp=Z,162nm,1.4s,mb5.8						
MTE				eS	**S**	**17 24 51.6**	**+4.8**
MTE				eLQ		17 27 22.8	
MTE				eLR	LR	17 28 37.8	
	comp=Z,4µm,20.5s						
MTE	**Manteigas**	**36.21**	**52**	eP	**P**	**17 19 05.8**	**-0.8**
	comp=Z,114nm,1.3s,mb5.6						
MTE				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
SFS	**San Fernando**	**36.25**	**59**	PFAKE		17 19 20.0	+13
SFS				LR	LR		
	comp=Z,7µm,20.0s,MS5.4						
PCAB	**Cabril**	**36.28**	**50**	eP	**P**	**17 19 07.2**	**0.0**
	comp=Z,118nm,1.6s,mb5.6						
ELOB	**Lobios**	**36.31**	**49**	P	**P**	**17 19 06.9**	**-0.5**
	comp=Z,194nm,1.9s,mb5.7						
ACSO	**Alum Creek Sta**	**36.38**	**308**	eP	**P**	**17 19 08.8**	**+0.7**
	comp=Z,45nm,1.1s,mb5.3						
ACSO				LR	LR		
	comp=Z,7µm,22.0s,MS5.4						
ESPR	**Espera**	**36.60**	**58**	P	**P**	**17 19 09.9**	**-0.1**
	comp=Z,263nm,2.1s,mb5.7						
IFR	**Ifrane**	**36.67**	**64**	P	**P**	**17 19 10.7**	**+0.1**
MVO	**Moncorvo**	**36.82**	**51**	eP	**P**	**17 19 12.2**	**+0.5**
	comp=Z,77nm,1.8s,mb5.2						
MVO				eS	**S**	**17 25 06.0**	**+10**
MVO				eLQ		17 27 27.2	
MVO				eLR	LR	17 28 59.4	
	comp=Z,3µm,19.0s						
EJIF	**Jimena Fronter**	**36.83**	**59**	P	**P**	**17 19 12.0**	**+0.1**
EJIF				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.1						
EJIF	**Jimena Fronter**	**36.83**	**59**	P	**P**	**17 19 12.0**	**+0.1**
	comp=Z,50nm,1.5s,mb5.1						
EPLA	**Plasencia**	**37.19**	**53**	P	**P**	**17 19 14.4**	**-0.5**
EPLA				pmax	pmax		
	comp=Z,581nm,3.8s						
EPLA	**Plasencia**	**37.19**	**53**	P	**P**	**17 19 14.4**	**-0.5**
	comp=Z,581nm,3.8s						
PBRG	**Braganca**	**37.22**	**50**	eP	**P**	**17 19 15.0**	**-0.2**
	comp=Z,59nm,1.9s,mb5.1						
ECAL	**Calabor**	**37.27**	**50**	P	**P**	**17 19 15.4**	**-0.1**
	comp=Z,1µm,4.9s						
EMIJ	**Mijas**	**37.40**	**59**	P	**P**	**17 19 16.2**	**-0.5**
	comp=Z,155nm,3.1s						
EPON	**Pontenova**	**37.46**	**48**	P	**P**	**17 19 16.8**	**-0.3**
	comp=Z,1µm,4.4s						
AAM	**Ann Arbor**	**37.51**	**311**	eP	**P**	**17 19 20.1**	**+2.5**
AAM				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.3						
AAM				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.5						
AAM	**Ann Arbor**	**37.51**	**311**	eP	**P**	**17 19 20.1**	**+2.5**
	comp=Z,62nm,1.0s,mb5.3						
AAM				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
EMAL	**Malaga-Limoner**	**37.71**	**59**	P	**P**	**17 19 19.9**	**+0.5**
EADA	**Adamuz**	**37.86**	**57**	P	**P**	**17 19 20.2**	**-0.4**
	comp=Z,392nm,2.8s,mb5.7						
ELUQ	**Luque**	**37.98**	**58**	P	**P**	**17 19 21.3**	**-0.4**
ELUQ				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.0						
ELUQ	**Luque**	**37.98**	**58**	P	**P**	**17 19 21.3**	**-0.4**
	comp=Z,43nm,1.4s,mb5.0						
ELOJ	**Sierra Loja**	**37.99**	**58**	P	**P**	**17 19 21.9**	**+0.1**
ELOJ				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.3						
ELOJ	**Sierra Loja**	**37.99**	**58**	P	**P**	**17 19 21.9**	**+0.2**
	comp=Z,87nm,1.3s,mb5.3						
BRAL	**Brewton**	**38.14**	**292**	PFAKE		17 19 30.0	+6.9
BRAL				LR	LR		
	comp=Z,7µm,22.0s,MS5.5						
LRAL	**Lakeview Retre**	**38.20**	**295**	eP	**P**	**17 19 25.0**	**+1.4**
	comp=Z,32nm,1.1s,mb5.0						
LRAL				LR	LR		
	comp=Z,11µm,21.0s,MS5.7						
BDFB	**Brasilia**	**38.23**	**185**	P	**P**	**17 19 23.0**	**-0.9**
	comp=Z,19nm,1.1s,mb4.8,baz=358,slow=17,SNR=20						
BDFB				LR	LR	17 33 35.5	
	comp=Z,2µm,20.0s,MS5.0,baz=1.0,slow=34						
ERON	**Agron**	**38.24**	**59**	P	**P**	**17 19 23.8**	**-0.1**
	comp=Z,116nm,1.9s,mb5.3						
PAB	**San Pablo**	**38.34**	**54**	P	**P**	**17 19 23.9**	**-0.8**
PAB				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.2						
PAB	**San Pablo**	**38.34**	**54**	eP	**P**	**17 19 23.7**	**-1.0**
	comp=Z,55nm,1.3s,mb5.1						
PAB				LR	LR		
	comp=Z,5µm,20.0s,MS5.3						
WCI	**Wyandotte Cave**	**38.37**	**303**	eP	**P**	**17 19 26.6**	**+1.6**
	comp=Z,51nm,1.2s,mb5.1						
WCI				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
EBAN	**Banos Encina**	**38.47**	**57**	P	**P**	**17 19 25.1**	**-0.7**
EBAN				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.9						
EBAN	**Banos Encina**	**38.47**	**57**	P	**P**	**17 19 25.1**	**-0.7**
	comp=Z,36nm,1.3s,mb4.9						
ECOG	**Cogollos-Vega**	**38.48**	**58**	P	**P**	**17 19 25.9**	**0.0**
ECOG				pmax	pmax		
	comp=Z,70nm,1.5s,mb5.2						
ECOG	**Cogollos-Vega**	**38.48**	**58**	P	**P**	**17 19 25.9**	**0.0**
	comp=Z,70nm,1.5s,mb5.2						
ESDC	**Sonseca Array**	**38.66**	**54**	P	**P**	**17 19 26.4**	**-0.9**
	comp=Z,16nm,1.1s,mb4.7,baz=254,slow=7.9,SNR=45						
ESDC				PcP	PcP	17 21 39.1	-0.3
	comp=Z,7.3nm,0.9s,baz=275,slow=2.9,SNR=14						
ESDC				LR	LR	17 32 45.4	
	comp=Z,4µm,18.4s,MS5.3,baz=255,slow=32						
ESDC	**Sonseca Array**	**38.66**	**54**	P	**P**	**17 19 26.4**	**-1.0**
	comp=Z,37nm,2.1s,mb4.7						
ESLA	**Sonseca Array**	**38.66**	**54**	PFAKE		17 19 40.0	+13
ESLA				LR	LR		
	comp=Z,24µm,19.0s,MS6.0						
EALB	**Alboran**	**38.69**	**60**	P	**P**	**17 19 27.2**	**-0.4**
	comp=Z,622nm,3.1s						
BLO	**Bloomington**	**38.75**	**305**	eP	**P**	**17 19 30.6**	**+2.5**
BLO				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
BLO	**Bloomington**	**38.75**	**305**	eP	**P**	**17 19 30.6**	**+2.6**
	comp=Z,23nm,0.8s,mb5.0						
GUD	**Guadarrama**	**38.76**	**53**	P	**P**	**17 19 27.4**	**-0.8**
GUD				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.0						
GUD	**Guadarrama**	**38.76**	**53**	P	**P**	**17 19 27.4**	**-0.7**
	comp=Z,43nm,1.2s,mb5.1						
EARI	**Arriondas**	**38.78**	**48**	P	**P**	**17 19 28.1**	**-0.2**
	comp=Z,656nm,2.7s,mb5.9						
EBER	**Berja**	**38.95**	**59**	P	**P**	**17 19 29.9**	**0.0**
	comp=Z,128nm,1.8s,mb5.3						
EQES	**Quesada**	**38.96**	**58**	P	**P**	**17 19 29.5**	**-0.4**
	comp=Z,703nm,4.6s						
GLMI	**Grayling**	**39.03**	**314**	PFAKE		17 19 40.0	+10
GLMI				LR	LR		
	comp=Z,7µm,20.0s,MS5.5						
WVT	**Waverly**	**39.23**	**300**	P	**P**	**17 19 33.8**	**+1.6**
WVT				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.1						
WVT	**Waverly**	**39.23**	**300**	eP	**P**	**17 19 32.6**	**+0.4**
	comp=Z,46nm,1.1s,mb5.1						
WVT				LR	LR		
	comp=Z,7µm,21.0s,MS5.5						
OTAV	**Otavalo**	**39.38**	**240**	eP	**P**	**17 19 33.4**	**-0.3**
	comp=Z,41nm,1.3s,mb5.0						
OTAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
USIN	**University of**	**39.39**	**303**	eP	**P**	**17 19 36.1**	**+2.6**
	comp=Z,94nm,1.1s,mb5.4						
ENIJ	**Nijar**	**39.50**	**59**	P	**P**	**17 19 34.1**	**-0.3**
ENIJ				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.3						
ENIJ	**Nijar**	**39.50**	**59**	P	**P**	**17 19 34.1**	**-0.3**
	comp=Z,98nm,1.6s,mb5.3						
EVIA	**Vianos**	**39.55**	**56**	P	**P**	**17 19 34.2**	**-0.7**
EVIA				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.0						
EVIA	**Vianos**	**39.55**	**56**	P	**P**	**17 19 34.2**	**-0.6**
	comp=Z,33nm,1.1s,mb5.0						
OLIL	**Olney**	**39.86**	**304**	eP	**P**	**17 19 38.8**	**+1.3**
	comp=Z,102nm,1.1s,mb5.5						
ELAN	**Lanestosa**	**39.99**	**49**	P	**P**	**17 19 38.4**	**0.0**
	comp=Z,309nm,1.3s,mb5.9						
UTMT	**University of**	**40.08**	**300**	eP	**P**	**17 19 39.8**	**+0.5**
ETOB	**Tobarra**	**40.29**	**57**	P	**P**	**17 19 40.0**	**-1.0**
	comp=Z,262nm,2.2s,mb5.6						
ETOR	**Torete**	**40.35**	**53**	P	**P**	**17 19 41.5**	**+0.1**
ETOR				pmax	pmax		
	comp=Z,61nm,1.7s,mb5.0						
ETOR	**Torete**	**40.35**	**53**	P	**P**	**17 19 41.5**	**+0.1**
	comp=Z,61nm,1.7s,mb5.0						
EMUR	**La Murta**	**40.40**	**58**	P	**P**	**17 19 40.0**	**-1.8**
	comp=Z,331nm,2.7s,mb5.6						
ECRI	**Cripan**	**40.47**	**50**	P	**P**	**17 19 42.5**	**+0.1**
ECRI				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.3						
ECRI	**Cripan**	**40.47**	**50**	P	**P**	**17 19 42.5**	**+0.2**
	comp=Z,75nm,1.2s,mb5.3						
SIUC	**Southern Illin**	**40.56**	**302**	eP	**P**	**17 19 43.8**	**+0.6**
	comp=Z,76nm,1.0s,mb5.3						
CNGN	**Cerro Negro**	**40.80**	**263**	P	**P**	**17 19 48.1**	**+2.7**
TGUH	**Tegucigalpa,Un**	**40.81**	**265**	eP	**P**	**17 19 47.3**	**+1.7**
	comp=Z,19nm,0.6s,mb4.9						
TGUH				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
ECHE	**Chera**	**40.91**	**55**	P	**P**	**17 19 46.1**	**0.0**
ECHE				pmax	pmax		
	comp=Z,91nm,1.7s,mb5.1						
ECHE	**Chera**	**40.91**	**55**	P	**P**	**17 19 46.1**	**0.0**
	comp=Z,91nm,1.7s,mb5.1						
HDIL	**Hopedale**	**41.13**	**306**	eP	**P**	**17 19 49.2**	**+1.4**
	comp=Z,60nm,1.1s,mb5.1						
HDIL				LR	LR		
	comp=Z,6µm,22.0s,MS5.4						
VBMS	**Vicksburg**	**41.13**	**293**	PFAKE		17 20 00.0	+12
VBMS				LR	LR		
	comp=Z,7µm,20.0s,MS5.5						
EBEN	**Beniarda**	**41.32**	**57**	P	**P**	**17 19 49.4**	**-0.1**
	comp=Z,535nm,2.3s,mb5.8						
EMOS	**Mosqueruela**	**41.43**	**54**	P	**P**	**17 19 50.6**	**+0.2**
	comp=Z,118nm,1.6s,mb5.3						
SJPF	**Ste Jean**	**41.51**	**50**	eP	**P**	**17 19 51.4**	**+0.4**
	comp=Z,255nm,1.3s,mb5.4						
SJPF	**Ste Jean**	**41.51**	**50**	eP	**P**	**17 19 51.4**	**+0.4**
SJPF				pmax	pmax		
	comp=Z,128nm,1.3s,mb5.4						
SJPF	**Ste Jean**	**41.51**	**50**	eP	**P**	**17 19 51.4**	**+0.4**
	comp=Z,128nm,1.3s,mb5.4						
OSSF	**Osses**	**41.52**	**50**	eP	**P**	**17 19 51.1**	**+0.1**
SIV	**San Ignacio**	**41.53**	**204**	P	**P**	**17 19 49.7**	**-1.6**
	comp=Z,12nm,1.1s,mb4.4,baz=50,slow=8.4,SNR=24						
FVM	**French Village**	**41.54**	**302**	P	**P**	**17 19 52.4**	**+1.1**
FVM				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.9						
FVM	**French Village**	**41.54**	**302**	eP	**P**	**17 19 52.4**	**+1.1**
	comp=Z,41nm,1.0s,mb5.0						
LARF	**Larrau**	**41.66**	**50**	eP	**P**	**17 19 53.1**	**+0.9**
ESAC	**San Caprasio**	**41.72**	**52**	P	**P**	**17 19 53.0**	**+0.3**
	comp=Z,438nm,1.3s,mb5.9						
QUIF	**Quistinic**	**41.74**	**42**	eP	**P**	**17 19 52.7**	**-0.1**
	comp=Z,581nm,1.8s,mb5.6						
QUIF	**Quistinic**	**41.74**	**42**	eP	**P**	**17 19 52.7**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,291nm,1.8s,mb5.6						
QUIF	**Quistinic**	**41.74**	**42**	eP	**P**	**17 19 52.7**	**-0.1**
	comp=Z,290nm,1.8s,mb5.6						
TIC	**Toumodi**	**41.77**	**106**	eP	**P**	**17 19 50.1**	**-3.4**
	comp=Z,331nm,1.2s,mb5.8						
ROSF	**Rostrenen**	**41.83**	**42**	eP	**P**	**17 19 53.6**	**+0.1**
	comp=Z,369nm,1.6s,mb5.5						
ROSF	**Rostrenen**	**41.83**	**42**	eP	**P**	**17 19 53.6**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,184nm,1.6s,mb5.5						
ROSF	**Rostrenen**	**41.83**	**42**	eP	**P**	**17 19 53.6**	**+0.1**
	comp=Z,184nm,1.6s,mb5.5						
ATE	**Arette**	**41.87**	**50**	eP	**P**	**17 19 53.5**	**-0.4**
DBIC	**Dimbokro**	**41.91**	**106**	P	**P**	**17 19 52.1**	**-2.5**
	comp=Z,40nm,0.8s,mb5.1,baz=271,slow=8.6,SNR=52						
DBIC				PcP	PcP	17 21 49.5	-0.8
	comp=Z,9.5nm,1.0s,baz=318,slow=5.4,SNR=3.4						
DBIC				LR	LR	17 34 02.5	
	comp=Z,8µm,21.5s,MS5.6,baz=260,slow=32						
DBIC	**Dimbokro**	**41.91**	**106**	P	**P**	**17 19 52.1**	**-2.5**
DBIC						17 21 49.5	
DBIC	**Dimbokro**	**41.91**	**106**	P	**P**	**17 19 52.1**	**-2.4**
DBIC				PcP	PcP	17 21 49.5	-0.8
DBIC				LR	LR	17 34 02.5	
ETSF	**Etsaut**	**41.93**	**50**	eP	**P**	**17 19 55.1**	**+0.7**
	comp=Z,289nm,1.3s,mb5.5						
ETSF	**Etsaut**	**41.93**	**50**	eP	**P**	**17 19 55.1**	**+0.7**
ETSF				pmax	pmax		
	comp=Z,144nm,1.3s,mb5.4						
ETSF	**Etsaut**	**41.93**	**50**	eP	**P**	**17 19 55.1**	**+0.7**
	comp=Z,144nm,1.3s,mb5.5						
LIC	**Lamto**	**41.96**	**107**	eP	**P**	**17 19 51.5**	**-3.5**
	comp=Z,189nm,1.2s,mb5.6						
LIC	**Lamto**	**41.96**	**107**	eP	**P**	**17 19 51.9**	**-3.1**
	comp=Z,176nm,1.2s,mb5.3						
LIC				eMLR	MLR		
	comp=Z,9µm,20.5s,MS5.4						
LIC	**Lamto**	**41.96**	**107**	eP	**P**	**17 19 51.9**	**-3.1**
	comp=Z,88nm,1.2s,mb5.3						
LIC				LR	LR		
	comp=Z,5µm,20.5s,MS5.4						
EANR	**'Ain N'Sour**	**42.02**	**61**	P	**P**	**17 19 55.4**	**+0.1**
REYF	**Montagne du Re**	**42.09**	**50**	eP	**P**	**17 19 56.4**	**+0.7**
ETRT	**Tiaret**	**42.13**	**62**	P	**P**	**17 19 56.6**	**+0.4**
ERTA	**Horta de San J**	**42.15**	**54**	P	**P**	**17 19 56.6**	**+0.4**
	comp=Z,376nm,1.7s,mb5.7						
KIC	**Kosan Boka**	**42.15**	**106**	eP	**P**	**17 19 53.1**	**-3.4**
	comp=Z,542nm,1.3s,mb6.0						
CCM	**Cathedral Cave**	**42.19**	**302**	eP	**P**	**17 19 56.3**	**-0.3**
CCM				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.2						
CCM				MLR	MLR		
	comp=Z,10µm,20.0s,MS5.7						
CCM	**Cathedral Cave**	**42.19**	**302**	eP	**P**	**17 19 56.3**	**-0.3**
	comp=Z,67nm,1.1s,mb5.2						
CCM				LR	LR		
	comp=Z,10µm,20.0s,MS5.7						
DLF	**Lyons Farm**	**42.23**	**34**	eP	**P**	**17 19 57.1**	**+0.4**
SGMF	**Saint Gilles**	**42.25**	**42**	eP	**P**	**17 19 57.2**	**+0.3**
	comp=Z,277nm,1.3s,mb5.4						
SGMF	**Saint Gilles**	**42.25**	**42**	eP	**P**	**17 19 57.2**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,139nm,1.3s,mb5.4						
SGMF	**Saint Gilles**	**42.25**	**42**	eP	**P**	**17 19 57.2**	**+0.3**
	comp=Z,139nm,1.3s,mb5.4						
ECHA	**Ech Chlef**	**42.25**	**61**	P	**P**	**17 19 57.0**	**-0.2**
VIEF	**Viey**	**42.34**	**51**	eP	**P**	**17 19 58.5**	**+0.7**
JFWS	**Jewell Farm**	**42.35**	**309**	eP	**P**	**17 19 58.6**	**+0.8**
JFWS				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
JFWS	**Jewell Farm**	**42.35**	**309**	eP	**P**	**17 19 58.3**	**+0.5**
	comp=Z,34nm,1.0s,mb4.9						
JFWS				LR	LR		
	comp=Z,7µm,22.0s,MS5.5						
DMUB	**Kingscourt**	**42.35**	**33**	eP	**P**	**17 19 58.3**	**+0.6**
EBIE	**Bielsa**	**42.38**	**51**	P	**P**	**17 19 58.7**	**+0.6**
	comp=Z,229nm,1.3s,mb5.7						
EBNR	**Beni Rached**	**42.40**	**61**	P	**P**	**17 19 58.0**	**-0.3**
LABF	**Labassere**	**42.41**	**50**	eP	**P**	**17 19 59.3**	**+0.9**
COWI	**Conover**	**42.45**	**314**	eP	**P**	**17 19 59.1**	**+0.5**
	comp=Z,45nm,0.9s,mb5.1						
RESF	**Ens**	**42.55**	**51**	eP	**P**	**17 20 00.5**	**+1.1**
EIBI	**Ibiza**	**42.58**	**57**	P	**P**	**17 19 59.7**	**-0.1**
	comp=Z,229nm,1.6s,mb5.7						

EPF Esparros 42.60 51 *e*P **P 17 20 00.5 +0.6**
comp=Z,282nm,1.4s,mb5.5
EPF Esparros 42.60 51 *e*P **P 17 20 00.5 +0.6**
EPF pmax pmax
comp=Z,141nm,1.4s,mb5.5
EPF Esparros 42.60 51 *e*P **P 17 20 00.5 +0.6**
comp=Z,141nm,1.4s,mb5.5
UALR University of 42.76 297 *e*P **P 17 20 02.3 +1.0**
comp=Z,47nm,1.1s,mb5.1
EPOB Poblet 42.78 53 P **P 17 20 01.4 +0.1**
comp=Z,155nm,1.7s,mb5.5
MELF Melles 42.86 51 *e*P **P 17 20 03.1 +1.1**
MLS Moulis 43.12 51 *e*P **P 17 20 04.9 +0.8**
MFF Saint Martin d 43.23 45 *e*P **P 17 20 05.2 +0.3**
comp=Z,437nm,1.4s,mb5.7
MFF Saint Martin d 43.23 45 *e*P **P 17 20 05.2 +0.3**
MFF pmax pmax
comp=Z,218nm,1.4s,mb5.7
MFF Saint Martin d 43.23 45 *e*P **P 17 20 05.2 +0.3**
comp=Z,218nm,1.4s,mb5.7
GRR Gorron 43.35 43 *e*P **P 17 20 06.0 +0.1**
comp=Z,205nm,1.3s,mb5.4
GRR Gorron 43.35 43 *e*P **P 17 20 06.0 +0.1**
GRR pmax pmax
comp=Z,102nm,1.3s,mb5.4
GRR Gorron 43.35 43 *e*P **P 17 20 06.0 +0.1**
comp=Z,102nm,1.3s,mb5.4
LFF La Frestale 43.35 48 *e*P **P 17 20 05.9 0.0**
comp=Z,323nm,1.3s,mb5.6
LFF La Frestale 43.35 48 *e*P **P 17 20 05.9 0.0**
LFF pmax pmax
comp=Z,162nm,1.3s,mb5.6
LFF La Frestale 43.35 48 *e*P **P 17 20 05.9 0.0**
comp=Z,162nm,1.3s,mb5.6
CAM3 Guarapari 43.42 174 (P) **P 17 20 03.6 -3.0**
WME Myndd Eilian 43.44 35⇑ *e*P **P 17 20 06.5 0.0**
MCH1 Michaelchurch 43.50 37 *e*P **P 17 20 06.9 -0.1**
MCH1 AMb AMB 17 20 16.1
comp=Z,154nm,1.5s,mb5.5
MCH1 *e* 17 30 52.0
MCH1 AMS AMS 17 34 21.9
comp=Z,3µm,18.7s,MS5.2
EMHD Djebel Mahouad 43.54 61 P **P 17 20 02.0 -5.6**
WPM1 Penmaenmawr 43.58 35⇑ *e*P **P 17 20 07.7 0.0**
WIM Isle of Man 43.61 34 P **P 17 20 08.2 +0.3**
WIM Isle of Man 43.61 34⇑ *e*P **P 17 20 08.2 +0.3**
VALF Valcebollere 43.67 52 *e*P **P 17 20 09.4 +0.9**
FLN La Foliniere 43.72 42 *e*P **P 17 20 08.9 +0.1**
comp=Z,214nm,1.3s,mb5.4
FLN *e*MLR MLR
comp=Z,4µm,21.5s,MS5.0
FLN La Foliniere 43.72 42 *e*P **P 17 20 08.9 +0.1**
FLN pmax pmax
comp=Z,107nm,1.3s,mb5.4
FLN MLR MLR
comp=Z,4µm,21.5s,MS5.3
FLN La Foliniere 43.72 42 *e*P **P 17 20 08.9 +0.1**
comp=Z,107nm,1.3s,mb5.4
FLN LR LR
comp=Z,4µm,21.5s,MS5.3
MIAR Mount Ida 43.76 297 P **P 17 20 10.0 +0.6**
MIAR pmax pmax
comp=Z,40nm,1.2s,mb5.0
MIAR Mount Ida 43.76 297 *e*P **P 17 20 09.4 +0.1**
comp=Z,40nm,1.3s,mb5.0
MIAR LR LR
comp=Z,5µm,22.0s,MS5.4
CARF Carcanieres 43.80 51 *e*P **P 17 20 09.9 +0.3**
FRB Frobisher Bay 43.88 345 P **P 17 20 09.1 -0.8**
comp=Z,21nm,1.1s,mb4.8,baz=161,slow=9.3,SNR=7.0
LDF La Druitiere 43.88 43 *e*P **P 17 20 10.1 -0.1**
comp=Z,147nm,1.2s,mb5.3
LDF La Druitiere 43.88 43 *e*P **P 17 20 10.1 -0.1**
LDF pmax pmax
comp=Z,73nm,1.2s,mb5.3
LDF La Druitiere 43.88 43 *e*P **P 17 20 10.1 -0.1**
comp=Z,73nm,1.2s,mb5.3
GAL1 Galloway 43.96 33 AMS AMS 17 34 58.7
comp=Z,3µm,18.0s,MS5.2
RJF Les Rejaudoux 43.98 48 *e*P **P 17 20 10.6 -0.4**
comp=Z,212nm,1.6s,mb5.3
RJF *e*MLR MLR
comp=Z,5µm,19.5s,MS5.2
RJF Les Rejaudoux 43.98 48 *e*P **P 17 20 10.6 -0.4**
RJF pmax pmax
comp=Z,106nm,1.6s,mb5.3
RJF MLR MLR
comp=Z,5µm,19.5s,MS5.5
RJF Les Rejaudoux 43.98 48 *e*P **P 17 20 10.6 -0.4**
comp=Z,106nm,1.6s,mb5.3
RJF LR LR
comp=Z,5µm,19.5s,MS5.5
MTLF Montolieu 44.01 51 *e*P **P 17 20 11.1 -0.1**
comp=Z,212nm,1.1s,mb5.5
MTLF Montolieu 44.01 51 *e*P **P 17 20 11.1 -0.1**
MTLF pmax pmax
comp=Z,106nm,1.1s,mb5.5
MTLF Montolieu 44.01 51 *e*P **P 17 20 11.1 -0.1**
comp=Z,106nm,1.1s,mb5.5
FILF Fillols 44.10 52 *e*P **P 17 20 11.6 -0.4**
CAF Calviac 44.26 48 *e*P **P 17 20 13.1 -0.1**
comp=Z,144nm,1.2s,mb5.3
CAF Calviac 44.26 48 *e*P **P 17 20 13.1 -0.1**
CAF pmax pmax
comp=Z,72nm,1.2s,mb5.3
CAF Calviac 44.26 48 *e*P **P 17 20 13.1 -0.1**
comp=Z,72nm,1.2s,mb5.3
SCIA State Center 44.29 307 *e*P **P 17 20 13.4 -0.1**
comp=Z,91nm,1.1s,mb5.4
SCIA LR LR
comp=Z,6µm,22.0s,MS5.5
EJON La Jonquera 44.31 52 P **P 17 20 14.3 +0.6**
comp=Z,74nm,1.1s,mb5.3
SJAF Saint Jean de 44.31 52 *e*P **P 17 20 13.9 +0.2**
SFJD Kangerlussuaq 44.41 357 P **P 17 20 14.1 +0.1**
comp=Z,28nm,1.0s,mb5.0,baz=164,slow=7.5,SNR=6.9
SFJD LR LR 17 35 17.1
comp=Z,3µm,20.0s,MS5.2,baz=158,slow=31
SFJD Kangerlussuaq 44.41 357 *i* P **P 17 20 15.5 +1.4**
SFJD *i* S **S 17 26 51.5 +3.0**
SFJD pmax pmax
comp=Z,26nm,0.9s,mb5.0
SFJD MLR MLR
comp=Z,2µm,20.0s,MS5.1
SFJD Kangerlussuaq 44.41 357 *i* P **P 17 20 15.5 +1.4**
comp=Z,26nm,0.9s,mb5.0
SFJD *i* S **S 17 26 51.5 +3.0**
SFJD
comp=Z,2µm,20.0s
KAR1 Arisaig 44.51 30 *e*P **P 17 20 15.1 +0.1**
EYMN Ely 44.56 316 *e*P **P 17 20 15.4 -0.2**
comp=Z,33nm,1.0s,mb5.1
EYMN LR LR
comp=Z,5µm,20.0s,MS5.5
KWE Weaver Farm 44.58 36⇑ *e*P **P 17 20 15.7 0.0**
SKP1 Kophill 44.62 38 *e*P **P 17 20 16.1 +0.1**
NATX Nacogdoches 44.64 293 *e*P **P 17 20 17.6 +1.1**
comp=Z,125nm,1.2s,mb5.6
NATX LR LR
comp=Z,5µm,21.0s,MS5.4
TCF Toulx Ste Croi 44.70 46 *e*P **P 17 20 16.9 +0.1**
comp=Z,245nm,1.2s,mb5.6
TCF Toulx Ste Croi 44.70 46 *e*P **P 17 20 16.9 +0.1**
TCF pmax pmax
comp=Z,123nm,1.2s,mb5.6
TCF Toulx Ste Croi 44.70 46 *e*P **P 17 20 16.9 +0.1**
comp=Z,122nm,1.2s,mb5.6
VERF Verneugheol 44.75 47 *e*P **P 17 20 17.6 +0.5**
CWF Charnwood Fore 44.76 37 *e*P **P 17 20 17.2 +0.1**
CWF AMb AMB 17 20 26.4
comp=Z,153nm,1.5s,mb5.6
CWF *e* 17 32 49.9
CWF AMS AMS 17 35 01.7
comp=Z,2µm,19.0s,MS5.2
LHO Holmfirth 44.81 35⇑ *e*P **P 17 20 17.7 +0.3**
KPL Plockton 44.83 29 *e*P **P 17 20 17.1 -0.5**
KPL AMb AMB 17 20 24.9
comp=Z,169nm,1.6s,mb5.6
KPL *e* 17 32 42.4
KPL AMS AMS 17 34 39.4
comp=Z,4µm,20.5s,MS5.3
KBI1 Birley Grange 44.86 36⇑ *e*P **P 17 20 18.2 +0.3**
CAM4 Nova Friburgo 44.88 177 (P) **P 17 20 13.4 -4.9**
CAM4 *i* pP 17 20 14.4 -6.9
CAM4 *i* 17 20 32.9
CAM4 *i* 17 20 41.0

CAM4 Nova Friburgo 44.88 177 (P) **P 17 20 13.0 -5.3**
ECK Cauldkaine Hil 44.91 33⇑ *e*P **P 17 20 18.0 -0.2**
ESK Eskdalemuir 44.93 33 *e*P **P 17 20 18.0 -0.4**
ESK AMb AMB 17 20 20.5
comp=Z,94nm,1.3s,mb5.5
ESK AMS AMS 17 35 25.9
comp=Z,2µm,19.1s,MS5.0
ESK Eskdalemuir 44.93 33 P **P 17 20 19.0 +0.6**
ESK pmax pmax
comp=Z,100nm,1.4s,mb5.5
ESK Eskdalemuir 44.93 33 *e*P **P 17 20 18.4 -0.1**
comp=Z,100nm,1.4s,mb5.5
ESK LR LR
comp=Z,2µm,19.0s,MS5.1
EAU Auchinoon 45.07 32 *e*P **P 17 20 19.4 -0.2**
HPK Haverah Park 45.11 35 *e*P **P 17 20 19.8 0.0**
HPK AMb AMB 17 20 22.4
comp=Z,312nm,1.4s,mb6.0
HPK *e* 17 32 36.7
HPK AMS AMS 17 36 24.7
comp=Z,2µm,17.9s,MS5.2
LBL Lubilhac 45.15 48 *e*P **P 17 20 21.0 +0.7**
BGF Bois d'Agland 45.20 46 *e*P **P 17 20 20.7 0.0**
comp=Z,214nm,1.3s,mb5.5
BGF Bois d'Agland 45.20 46 *e*P **P 17 20 20.7 0.0**
BGF pmax pmax
comp=Z,107nm,1.3s,mb5.5
BGF Bois d'Agland 45.20 46 *e*P **P 17 20 20.7 0.0**
comp=Z,107nm,1.3s,mb5.5
XAL Allendale 45.22 34 *e*P **P 17 20 19.7 -1.0**
EBL Broad Law 45.24 32⇑ *e*P **P 17 20 20.8 0.0**
EDI Edinburgh 45.24 32 AMS AMS 17 35 49.3
comp=Z,3µm,17.5s,MS5.2
HYF Humbligny 45.25 45 *e*P **P 17 20 21.5 +0.4**
AGO Saint Agoulin 45.26 47 *e*P **P 17 20 21.9 +0.7**
LASF Ste Croix 45.32 50 *e*P **P 17 20 22.2 +0.5**
comp=Z,258nm,1.3s,mb5.6
TOA0 Torodi Ar. Sit 45.38 94 *e*P **P 17 20 19.3 -3.3**
TORD Torodi Ar. Bea 45.38 94 P **P 17 20 19.4 -3.1**
comp=Z,45nm,0.9s,mb5.3,baz=293,slow=3.7,SNR=91
TORD PcP PcP 17 22 02.3 +0.3
comp=Z,7.8nm,1.0s,baz=318,slow=5.0,SNR=2.8
TORD LR LR 17 37 22.6
comp=Z,9µm,19.7s,MS5.7,baz=280,slow=34
MDO Dochfour 45.47 30⇑ *e*P **P 17 20 22.3 -0.3**
SET Setif 45.51 61 P **P 17 20 25.0 +1.6**
PLDF La Plantade 45.57 47 *e*P **P 17 20 24.4 +0.7**
AVF Avril sur Loir 45.59 46 *e*P **P 17 20 23.9 +0.1**
comp=Z,250nm,1.1s,mb5.7
AVF Avril sur Loir 45.59 46 *e*P **P 17 20 23.9 +0.1**
AVF pmax pmax
comp=Z,125nm,1.1s,mb5.8
AVF Avril sur Loir 45.59 46 *e*P **P 17 20 23.9 +0.1**
comp=Z,125nm,1.1s,mb5.8
CKHR Kef el Ahmar 45.59 61 P **P 17 20 24.0 0.0**
HKT Hockley 45.72 290 *e*P **P 17 20 27.3 +2.2**
HKT pmax pmax
comp=Z,182nm,2.3s,mb5.6
HKT MLR MLR
comp=Z,6µm,19.0s,MS5.6
HKT Hockley 45.72 290 *e*P **P 17 20 27.3 +2.2**
comp=Z,182nm,2.3s,mb5.6
HKT LR LR
comp=Z,6µm,19.0s,MS5.6
SSF Saint Saulge 45.77 46 *e*P **P 17 20 25.2 0.0**
comp=Z,230nm,1.2s,mb5.7
SSF Saint Saulge 45.77 46 *e*P **P 17 20 25.2 0.0**
SSF pmax pmax
comp=Z,115nm,1.2s,mb5.7
SSF Saint Saulge 45.77 46 *e*P **P 17 20 25.2 0.0**
comp=Z,115nm,1.2s,mb5.7
SMF Signal de Mont 45.88 46 *e*P **P 17 20 26.4 +0.3**
comp=Z,434nm,1.6s,mb5.8
SMF Signal de Mont 45.88 46 *e*P **P 17 20 26.4 +0.3**
SMF pmax pmax
comp=Z,217nm,1.6s,mb5.8
SMF Signal de Mont 45.88 46 *e*P **P 17 20 26.4 +0.3**
comp=Z,217nm,1.6s,mb5.8
DFRA Djebel Bou Aff 45.91 61 P **P 17 20 27.0 +0.5**
MENF Mencas 45.94 41 *e*P **P 17 20 26.7 +0.2**
SSB Saint Sauveur 46.05 48 P **P 17 20 28.6 +1.1**
LOR Lormes 46.05 46 *e*P **P 17 20 27.4 0.0**
comp=Z,183nm,1.4s,mb5.5
LOR *e*MLR MLR
comp=Z,4µm,22.2s,MS5.0
LOR Lormes 46.05 46 *e*P **P 17 20 27.4 0.0**
LOR pmax pmax
comp=Z,92nm,1.4s,mb5.5
LOR MLR MLR
comp=Z,4µm,22.3s,MS5.3
LOR Lormes 46.05 46 *e*P **P 17 20 27.4 0.0**
comp=Z,92nm,1.4s,mb5.5
LOR LR LR
comp=Z,4µm,22.3s,MS5.3
VIVF Saint-Julien-l 46.05 49 *e*P **P 17 20 28.2 +0.7**
comp=Z,146nm,1.2s,mb5.5
VIVF Saint-Julien-l 46.05 49 *e*P **P 17 20 28.2 +0.7**
VIVF pmax pmax
comp=Z,73nm,1.2s,mb5.5
VIVF Saint-Julien-l 46.05 49 *e*P **P 17 20 28.2 +0.7**
comp=Z,73nm,1.2s,mb5.5
CTEI Djebel Teioual 46.32 61 P **P 17 20 30.0 +0.3**
CASM Ain Smara 46.40 61 P **P 17 20 31.0 +0.7**
NNA Nana 46.44 225 *e*P **P 17 20 29.7 -1.1**
comp=Z,41nm,1.2s,mb5.2
NNA LR LR
comp=Z,2µm,22.0s,MS5.0
OCF Saint Nazaire 46.44 49 *e*P **P 17 20 32.3 +1.8**
OG26 St.-Nazaire-De 46.44 49 *e*P **P 17 20 32.3 +1.8**
KSU1 Kansas State U 46.49 303 *e*P **P 17 20 30.7 -0.3**
comp=Z,68nm,1.0s,mb5.5
KSU1 LR LR
comp=Z,12µm,22.0s,MS5.8
TAM Tamanrasset 46.50 80 P **P 17 20 31.0 -0.3**
SMRF Simiane la Rot 46.52 50 *e*P **P 17 20 32.6 +1.4**
comp=Z,260nm,1.4s,mb5.7
SMRF Simiane la Rot 46.52 50 *e*P **P 17 20 32.6 +1.4**
comp=Z,260nm,1.4s,mb6.0
OG05 Jujurieux 46.84 48 *e*P **P 17 20 34.5 +0.9**
ORIF Oris-en-Rattie 46.91 49 *e*P **P 17 20 35.4 +1.2**
comp=Z,95nm,1.2s,mb5.3
ORIF *e*MLR MLR
comp=Z,4µm,21.2s,MS5.0
ORIF Oris-en-Rattie 46.91 49 *e*P **P 17 20 35.4 +1.2**
ORIF pmax pmax
comp=Z,48nm,1.2s,mb5.3
ORIF Oris-en-Rattie 46.91 49 *e*P **P 17 20 35.4 +1.2**
comp=Z,48nm,1.2s,mb5.3
OG25 Le Caire 46.94 50 *e*P **P 17 20 36.1 +1.6**
BAIF Baives 47.03 42 *e*P **P 17 20 34.9 -0.2**
comp=Z,209nm,1.4s,mb5.6
BAIF Baives 47.03 42 *e*P **P 17 20 34.9 -0.2**
BAIF pmax pmax
comp=Z,105nm,1.4s,mb5.6
BAIF Baives 47.03 42 *e*P **P 17 20 34.9 -0.2**
comp=Z,105nm,1.4s,mb5.6
ECSD EROS,Sioux Fal 47.06 309 *e*P **P 17 20 33.4 -2.0**
comp=Z,22nm,1.2s,mb5.0
ECSD LR LR
comp=Z,5µm,20.0s,MS5.4
LMR La Mourre 47.09 51 *e*P **P 17 20 35.9 +0.3**
comp=Z,132nm,1.3s,mb5.4
LMR La Mourre 47.09 51 *e*P **P 17 20 35.9 +0.3**
LMR pmax pmax
comp=Z,66nm,1.3s,mb5.4
LMR La Mourre 47.09 51 *e*P **P 17 20 35.9 +0.3**
comp=Z,66nm,1.3s,mb5.4
MEZF Maizieres J'vi 47.14 44 *e*P **P 17 20 36.1 +0.1**
comp=Z,414nm,1.1s,mb6.0
MEZF Maizieres J'vi 47.14 44 *e*P **P 17 20 36.1 +0.1**
comp=Z,414nm,1.1s,mb6.3
CMAH Djebel Manchou 47.16 61 P **P 17 20 36.0 -0.3**
ABSA Djebel Ababsia 47.19 61 P **P 17 20 37.0 +0.4**
SNF Seneffe 47.21 41 P **P 17 20 36.2 -0.2**
comp=Z,30nm,1.7s,mb4.9
FRF La Foret Royal 47.22 51 *e*P **P 17 20 36.9 +0.2**
comp=Z,142nm,1.4s,mb5.4
FRF La Foret Royal 47.22 51 *e*P **P 17 20 36.9 +0.2**
FRF pmax pmax
comp=Z,71nm,1.4s,mb5.4
FRF La Foret Royal 47.22 51 *e*P **P 17 20 36.9 +0.2**
comp=Z,71nm,1.4s,mb5.4
DOU Dourbes 47.28 42 P **P 17 20 37.0 0.0**
UCC Uccle 47.34 41 P **P 17 20 37.6 +0.1**
comp=Z,72nm,1.6s,mb5.3
CABF La Chapelle 47.38 47 *e*P **P 17 20 38.4 +0.5**

comp=Z,251nm,1.1s,mb5.7
CABF La Chapelle 47.38 47 *e*P **P 17 20 38.4 +0.5**
CABF pmax pmax
comp=Z,125nm,1.1s,mb5.8
CABF La Chapelle 47.38 47 *e*P **P 17 20 38.4 +0.5**
comp=Z,125nm,1.1s,mb5.8
GIVF Givet 47.43 42 *e*P **P 17 20 37.9 -0.3**
comp=Z,291nm,1.4s,mb5.7
GIVF Givet 47.43 42 *e*P **P 17 20 37.9 -0.3**
GIVF pmax pmax
comp=Z,145nm,1.4s,mb5.7
GIVF Givet 47.43 42 *e*P **P 17 20 37.9 -0.3**
comp=Z,145nm,1.4s,mb5.7
AGMN Agassiz Refuge 47.47 315 *e*P **P 17 20 37.5 -1.0**
comp=Z,46nm,1.0s,mb5.4
AGMN LR LR
comp=Z,5µm,20.0s,MS5.5
BNI Bardonecchia 47.49 49 P **P 17 20 40.3 +1.6**
BNI pmax pmax
comp=Z,190nm,1.2s,mb5.9
BNI Bardonecchia 47.49 49 *e*P **P 17 20 40.1 +1.4**
comp=Z,185nm,1.3s,mb5.8
BNI LR LR
comp=Z,4µm,19.0s,MS5.4
MBDF Montbardon 47.50 50 *e*P **P 17 20 40.1 +1.3**
comp=Z,396nm,1.2s,mb5.9
MBDF Montbardon 47.50 50 P **P 17 20 40.1 +1.3**
MBDF pmax pmax
comp=Z,198nm,1.2s,mb5.9
MBDF Montbardon 47.50 50 *e*P **P 17 20 40.1 +1.3**
comp=Z,198nm,1.2s,mb5.9
RSL Roselend 47.57 48 *e*P **P 17 20 40.3 +1.0**
LPL La Plagne 47.61 48 *e*P **P 17 20 40.9 +1.2**
comp=Z,152nm,1.2s,mb5.6
LPL La Plagne 47.61 48 *e*P **P 17 20 40.9 +1.2**
LPL pmax pmax
comp=Z,76nm,1.2s,mb5.6
LPL La Plagne 47.61 48 *e*P **P 17 20 40.9 +1.2**
comp=Z,76nm,1.2s,mb5.6
LPG La Plagne 47.62 48 *e*P **P 17 20 41.2 +1.5**
comp=Z,161nm,1.2s,mb5.6
LPG La Plagne 47.62 48 *e*P **P 17 20 41.2 +1.5**
LPG pmax pmax
comp=Z,81nm,1.2s,mb5.6
LPG La Plagne 47.62 48 *e*P **P 17 20 41.2 +1.5**
comp=Z,81nm,1.2s,mb5.6
MVIF Mont Vial 47.63 51 *e*P **P 17 20 40.8 +0.9**
OG22 Abries 47.63 49 *e*P **P 17 20 41.3 +1.4**
THEF They Montfort 47.68 45 *e*P **P 17 20 40.1 0.0**
TOUF Mont Tournerai 47.72 51 *e*P **P 17 20 40.5 0.0**
OG01 Vacheresse 47.73 47 *e*P **P 17 20 42.3 +1.7**
KVTX Kingsville 47.73 287 PFAKE 17 20 50.0 +9.1
KVTX LR LR
comp=Z,7µm,22.0s,MS5.6
LUCF Luceram 47.77 51 *e*P **P 17 20 41.5 +0.6**
DOI San Damiano 47.80 50 P **P 17 20 41.4 +0.3**
BCLA Clavier 47.81 42 P **P 17 20 41.6 +0.4**
comp=Z,63nm,2.1s,mb5.3
SBF Sospel 47.83 51 *e*P **P 17 20 41.7 +0.3**
comp=Z,151nm,1.2s,mb5.6
SBF Sospel 47.83 51 *e*P **P 17 20 41.7 +0.3**
SBF pmax pmax
comp=Z,75nm,1.2s,mb5.6
SBF Sospel 47.83 51 *e*P **P 17 20 41.7 +0.3**
comp=Z,75nm,1.2s,mb5.6
HAU Haudompre 47.86 45 *e*P **P 17 20 41.3 -0.3**
comp=Z,138nm,1.1s,mb5.6
HAU *e*MLR MLR
comp=Z,3µm,21.5s,MS5.0
HAU Haudompre 47.86 45 *e*P **P 17 20 41.3 -0.3**
HAU pmax pmax
comp=Z,69nm,1.1s,mb5.6
HAU MLR MLR
comp=Z,3µm,21.5s,MS5.3
HAU Haudompre 47.86 45 *e*P **P 17 20 41.3 -0.3**
comp=Z,69nm,1.1s,mb5.6
HAU LR LR
comp=Z,3µm,21.5s,MS5.3
SAOF Saorge 47.93 51 *e*P **P 17 20 42.5 +0.3**
ULM Lac du Bonnet 47.98 318 P **P 17 20 41.1 -1.3**
comp=Z,38nm,1.0s,mb5.4,baz=99,slow=7.2,SNR=16
ULM LR LR 17 38 16.4
comp=Z,8µm,21.0s,MS5.7,baz=108,slow=33
LOMF Lomont 48.03 46 *e*P **P 17 20 43.4 +0.5**
WMOK Wichita Mounta 48.06 297 P **P 17 20 42.7 -0.6**
WMOK pmax pmax
comp=Z,47nm,1.0s,mb5.5
WMOK Wichita Mounta 48.06 297 *e*P **P 17 20 41.7 -1.7**
comp=Z,47nm,1.1s,mb5.4
WMOK LR LR
comp=Z,4µm,22.0s,MS5.4
WLF Walferdange 48.14 43 P **P 17 20 44.1 +0.5**
comp=Z,52nm,1.6s,mb5.3
WLF Walferdange 48.14 43 P **P 17 20 44.3 +0.6**
WLF pmax pmax
comp=Z,41nm,1.0s,mb5.4
WLF Walferdange 48.14 43 *e*P **P 17 20 44.0 +0.3**
comp=Z,82nm,1.2s,mb5.6
WLF Walferdange 48.14 43 *e*P **P 17 20 44.0 +0.3**
WLF LR LR
comp=Z,3µm,20.0s,MS5.3
BEBN Eben Emael 48.14 41 P **P 17 20 44.4 +0.7**
comp=Z,20nm,1.4s,mb5.0
HINF Hinteralfeld 48.15 45 *e*P **P 17 20 43.4 -0.4**
comp=Z,77nm,1.1s,mb5.3
HINF Hinteralfeld 48.15 45 *e*P **P 17 20 43.4 -0.4**
HINF pmax pmax
comp=Z,39nm,1.1s,mb5.3
HINF Hinteralfeld 48.15 45 *e*P **P 17 20 43.4 -0.4**
comp=Z,38nm,1.1s,mb5.3
HGN Heimansgroeve 48.29 41 *e*P **P 17 20 45.0 +0.2**
comp=Z,55nm,3.3s
HGN Heimansgroeve 48.29 41 *e*S **S 17 27 39.4 -5.3**
comp=Z,34nm,13.8s
MEM Membach 48.29 42 P **P 17 20 45.6 +0.8**
comp=Z,58nm,1.5s,mb5.4
MOF Molkenrain 48.34 45 *e*P **P 17 20 45.0 -0.3**
FIN Finale Ligure 48.43 50 P **P 17 20 46.5 +0.4**
ECH Echery 48.44 45 *e*P **P 17 20 45.9 -0.1**
ECH Echery 48.44 45 P **P 17 20 44.5 -1.5**
ECH Echery 48.44 45 *e*P **P 17 20 44.4 -1.7**
comp=Z,44nm,1.1s,mb5.4
ORO Oropa 48.49 49 P **P 17 20 47.2 +0.7**
ORO pmax pmax
comp=Z,122nm,1.7s,mb5.7
ORO Oropa 48.49 49 P **P 17 20 47.2 +0.7**
comp=Z,122nm,1.7s,mb5.7
BBS Basel-Blauen 48.51 46 *e*P **P 17 20 46.5 -0.1**
CDF Champ du Feu 48.56 45 *e*P **P 17 20 46.7 -0.3**
comp=Z,135nm,1.2s,mb5.5
CDF Champ du Feu 48.56 45 *e*P **P 17 20 46.7 -0.3**
CDF pmax pmax
comp=Z,67nm,1.2s,mb5.5
CDF Champ du Feu 48.56 45 *e*P **P 17 20 46.7 -0.3**
comp=Z,67nm,1.2s,mb5.5
KEST Kesra 48.70 62 P **P 17 20 47.2 -1.0**
comp=Z,52nm,0.9s,mb5.5,baz=194,slow=3.9,SNR=56
KEST LR LR 17 38 50.4
comp=Z,1µm,20.6s,MS4.9,baz=198,slow=33
RUP Ruppelstein 48.72 43 *e*P **P 17 20 48.8 +0.7**
PGF Pioggiola 48.80 53 *e*P **P 17 20 48.8 -0.1**
comp=Z,125nm,1.2s,mb5.5
PGF Pioggiola 48.80 53 *e*P **P 17 20 48.8 -0.1**
PGF pmax pmax
comp=Z,62nm,1.2s,mb5.5
PGF Pioggiola 48.80 53 *e*P **P 17 20 48.8 -0.1**
comp=Z,62nm,1.2s,mb5.5
KIZ Kirchzarten 48.88 45 P **P 17 20 50.3 +0.9**
CBKS Cedar Bluff 48.90 302 P **P 17 20 49.7 -0.1**
CBKS pmax pmax
comp=Z,53nm,1.0s,mb5.5
CBKS Cedar Bluff 48.90 302 *e*P **P 17 20 48.8 -1.0**
comp=Z,53nm,1.1s,mb5.5
CBKS LR LR
comp=Z,9µm,20.0s,MS5.8
FELD Feldberg im Sc 48.92 46 *e*P **P 17 20 49.5 -0.3**
LANF Langenberg 49.02 44 *e*P **P 17 20 50.6 +0.1**
ABH Alteburg 49.07 43 *e*P **P 17 20 51.5 +0.7**
VAI Varese 49.08 48 P **P 17 20 51.5 +0.5**
VAI pmax pmax
comp=Z,216nm,1.1s,mb6.1
VAI Varese 49.08 48 P **P 17 20 51.5 +0.5**
comp=Z,216nm,1.1s,mb6.1
JCT Junction City 49.11 291 P **P 17 20 51.7 +0.2**
JCT pmax pmax

comp=Z,33nm,1.2s,mb5.2
JCT Junction City 49.11 291 *e*P P **17 20 49.0 -2.5**
comp=Z,33nm,1.2s,mb5.2
JCT LR LR
comp=Z,5µm,22.0s,MS5.5
WTSB Winterswijk 49.15 40 *e*P P **17 20 51.6 +0.2**
comp=Z,61nm,2.2s,mb5.2
BFO Black Forest 49.23 45 P P **17 20 52.5 +0.4**
comp=Z,328nm,1.1s,mb6.3,SNR=12
BFO Black Forest 49.23 45 *e*P P **17 20 52.3 +0.2**
comp=Z,80nm,1.2s,mb5.6
BFO LR LR
comp=Z,2µm,20.0s,MS5.1
BUG Bochum-Univer 49.28 41 *e*P P **17 20 53.0 +0.5**
comp=Z,65nm,1.3s,mb5.5
SPAK Spaichingen-Ko 49.48 45 *e*P P **17 20 54.4 +0.4**
SISB Singen-Schiene 49.52 46 P P **17 20 55.9 +1.6**
TUE Stuetta 49.57 48 *e*P P **17 20 55.2 +0.5**
comp=Z,149nm,1.6s,mb5.8
TUE LR LR
comp=Z,3µm,19.0s,MS5.3
LBG Lerchenberg 49.60 45 P P **17 20 54.9 0.0**
GUT Gutenstein 49.69 46 P P **17 20 56.1 +0.5**
SWS Schriesheim-Wi 49.71 44 P P **17 20 56.1 +0.4**
PAYG Puerto Ayora 49.73 248 PFAKE 17 21 10.0 +14
PAYG LR LR
comp=Z,2µm,20.0s,MS5.0
TOD Tromm 49.80 44 *e*P P **17 20 56.4 0.0**
IBBN Ibbenbüren 49.81 40 *e*P P **17 20 57.1 +0.7**
comp=Z,121nm,1.4s,mb5.7
STU Stuttgart 49.88 45 P P **17 20 56.6 -0.5**
STU pmax pmax
comp=Z,62nm,0.9s,mb5.6
STU Stuttgart 49.88 45 *e*P P **17 20 56.8 -0.3**
comp=Z,81nm,1.0s,mb5.7
STU Stuttgart 49.88 45 *e*P P **17 20 56.6 -0.4**
comp=Z,62nm,0.9s,mb5.6
BUCH Bad Urach 49.92 45 P P **17 20 57.8 +0.4**
FCC Fort Churchill 49.93 329 P P **17 20 56.4 -0.9**
FCC pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
FCC Fort Churchill 49.93 329 *e*P P **17 20 56.1 -1.2**
comp=Z,3.8nm,1.1s,mb4.3
VLC Villacollemand 49.98 51 *e*P P **17 20 58.6 +0.7**
comp=Z,59nm,1.2s,mb5.5
VLC LR LR
comp=Z,4µm,20.0s,MS5.4
SUMG Summit 50.02 3 *e*P P **17 20 58.3 +0.5**
comp=Z,28nm,1.0s,mb5.2
ERBM Eremo 50.03 50 P P **17 20 59.3 +1.0**
PII Pisa 50.03 51 P P **17 20 58.6 +0.3**
PII pmax pmax
comp=Z,77nm,1.2s,mb5.6
PII Pisa 50.03 51 P P **17 20 58.6 +0.3**
comp=Z,77nm,1.2s,mb5.6
DAVA Damuels 50.06 47⇑ *i*P P **17 20 59.1 +0.6**
comp=Z,98nm,1.1s,mb5.8,SNR=23
DAVA Damuels 50.06 47 P P **17 20 59.5 +1.0**
GSCL Gusciola 50.15 51 P P **17 20 59.6 +0.4**
comp=Z,187nm,1.3s,mb6.0
SIND Sindeldorf 50.26 44 P P **17 21 00.2 +0.3**
UBR Ueberruh 50.28 46 P P **17 21 00.8 +0.7**
MABI Malga Bissina 50.31 48 P P **17 20 59.8 -0.6**
AMTX Amarillo 50.44 297 *e*P P **17 21 01.2 -0.4**
comp=Z,127nm,1.0s,mb5.9
AMTX LR LR
comp=Z,5µm,22.0s,MS5.5
HDH Heidenheim-Cha 50.50 45 P P **17 21 02.6 +0.8**
FNVD Fontana Vidola 50.51 51 P P **17 21 02.4 +0.5**
FETA Feichten 50.59 47⇓ *i*P P **17 21 02.9 +0.4**
comp=Z,122nm,1.1s,mb5.8,SNR=41
LVC Limon Verde 50.67 209 LR LR 17 42 43.1
comp=Z,2µm,20.0s,MS5.0,baz=4.8,slow=36
LVC Limon Verde 50.67 209 *e*P P **17 21 01.9 -1.4**
comp=Z,161nm,1.4s,mb5.8
LVC LR LR
comp=Z,2µm,20.0s,MS5.0
RETA Reutte 50.69 47⇑ *i*P P **17 21 03.2 0.0**
comp=Z,29nm,1.1s,mb5.1,SNR=8.6
VMG Vicchio 50.79 51 P P **17 21 04.1 +0.1**
comp=Z,30nm,0.9s,mb5.2
UBBA Unterbreizbach 50.81 42 *e*P P **17 21 04.6 +0.5**
comp=Z,41nm,1.3s,mb5.2
APPI Appiano 50.86 48 P P **17 21 04.2 -0.3**
CTI Castel Tesino 51.09 48 P P **17 21 06.2 -0.1**
CTI pmax pmax
comp=Z,187nm,1.1s,mb5.9
CTI Castel Tesino 51.09 48 P P **17 21 06.2 -0.1**
comp=Z,186nm,1.1s,mb5.9
WATA Walderalm 51.21 47⇑ *i*P P **17 21 07.2 +0.1**
comp=Z,89nm,0.9s,mb5.7,SNR=11
WATA Walderalm 51.21 47 P P **17 21 07.6 +0.5**
WTTA Wattenberg 51.24 47⇓ *i*P P **17 21 07.6 +0.2**
comp=Z,132nm,1.1s,mb5.8,SNR=22
WTTA Wattenberg 51.24 47 P P **17 21 08.2 +0.8**
NRDL Niedersach Rie 51.25 40 *e*P P **17 21 08.3 +1.0**
comp=Z,94nm,1.1s,mb5.6
CLZ Clausthal 51.26 41 *e*P P **17 21 08.0 +0.6**
CLZ pmax pmax
comp=Z,64nm,1.1s,mb5.5
CLZ Clausthal 51.26 41 *e*P P **17 21 08.0 +0.6**
comp=Z,64nm,1.1s,mb5.5
GRA1 Grafenberg Arr 51.36 44 *e*P P **17 21 08.4 +0.2**
comp=Z,89nm,1.2s,mb5.6
GRA1 LR LR
comp=Z,2µm,21.7s,MS5.0
GRF Grafenberg Arr 51.36 44 *e*P P **17 21 08.4 +0.2**
GRF pmax pmax
comp=Z,89nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,2µm,21.7s,MS5.0
GRF Grafenberg Arr 51.36 44 *e*P P **17 21 08.4 +0.2**
GRF pmax pmax
comp=Z,89nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,2µm,21.7s,MS5.0
GRF Grafenberg Arr 51.36 44 *e*P P **17 21 08.4 +0.2**
comp=Z,89nm,1.2s,mb5.6
GRF *e*L 17 37 30.7
comp=Z,2µm,21.7s
MURB Monte Urbino 51.44 52 P P **17 21 08.0 -0.9**
BSEG Bad Segeberg 51.72 38 *e*P P **17 21 11.5 +0.7**
BSEG pmax pmax
comp=Z,168nm,1.1s,mb5.9
BSEG Bad Segeberg 51.72 38 *e*P P **17 21 11.5 +0.7**
comp=Z,168nm,1.1s,mb5.9
SNTG Esanatoglia 51.74 52 P P **17 21 10.9 -0.3**
comp=Z,63nm,1.0s,mb5.5
ABTA Abfaltersbach 51.77 48⇑ *i*P P **17 21 11.1 -0.2**
comp=Z,85nm,1.0s,mb5.6,SNR=32
MUD Monsted U'grnd 51.78 35 *i*P P **17 21 09.0 -2.2**
comp=Z,38nm,1.2s,mb5.2
MUD *e*S S **17 28 40.5 +7.4**
MUD
comp=Z,1µm,17.0s
MUD Monsted U'grnd 51.78 35 *i*P P **17 21 09.0 -2.2**
comp=Z,38nm,1.2s,mb5.2
MUD *e*S S **17 28 40.5 +7.4**
MOX Moxa 51.78 43 *e*P P **17 21 11.7 +0.4**
comp=Z,88nm,1.6s,mb5.4
MOX
comp=Z,3µm,21.0s
MOX Moxa 51.78 43 *e*P P **17 21 11.7 +0.4**
MOX pmax pmax
comp=Z,88nm,1.6s,mb5.4
MOX MLR MLR
comp=Z,3µm,21.0s,MS5.2
MOX Moxa 51.78 43 *e*P P **17 21 11.6 +0.3**
comp=Z,49nm,1.2s,mb5.3
MANZ Manzenberg 51.97 44 *e*P P **17 21 13.1 +0.3**
comp=Z,23nm,1.0s,mb5.1
ROTZ Rotzenmuhle 52.00 44 *e*P P **17 21 13.3 +0.3**
comp=Z,47nm,1.3s,mb5.3
PTQR Pietraquaria 52.01 54 P P **17 21 13.3 +0.1**
comp=Z,165nm,1.1s,mb5.9
AQU L'Aquila 52.03 53 P P **17 21 14.2 +0.8**
AQU pmax pmax
comp=Z,150nm,1.2s,mb5.8
AQU L'Aquila 52.03 53 *e*P P **17 21 13.7 +0.3**
comp=Z,153nm,1.2s,mb5.8
AQU LR LR
comp=Z,2µm,20.0s,MS5.1
RJOB Jochberg 52.08 46 *e*P P **17 21 13.6 -0.1**
comp=Z,61nm,1.1s,mb5.4
WERD Werda 52.18 43 *e*P P **17 21 14.6 +0.3**
comp=Z,160nm,2.1s,mb5.6
GUNZ Gunzen 52.18 43 *e*P P **17 21 15.1 +0.8**
comp=Z,47nm,1.4s,mb5.2
WERN Wernitzgruen 52.19 43 *e*P P **17 21 15.2 +0.8**
comp=Z,219nm,1.6s,mb5.8
GMNA Gemona 52.21 48 P P **17 21 12.2 -2.5**
comp=Z,371nm,1.0s,mb6.3
NKC Novy Kostel 52.23 43 *e*P P **17 21 14.1 -0.6**
NKC *e*pP pP 17 21 15.6 -2.2
NKC *ex* x 17 21 22.0
NKC *eS* S **17 28 47.6 +8.1**
NKC AMS AMS 17 38 40.0
comp=Z,2µm,20.6s
NKC Novy Kostel 52.23 43 *e*P P **17 21 14.1 -0.6**
NKC *e*pP pP 17 21 15.6 -2.2
NKC *e* 17 21 22.0
NKC *eS* S **17 28 47.6 +8.1**
TANN Tannenbergstha 52.27 43 *e*P P **17 21 15.2 +0.2**
comp=Z,96nm,1.5s,mb5.5
PTCC Patocco-Chiusa 52.31 48 P P **17 21 13.9 -1.4**
comp=Z,67nm,1.0s,mb5.5
WET Wettzell 52.33 45 *e*P P **17 21 15.5 0.0**
WET pmax pmax
comp=Z,61nm,1.3s,mb5.4
WET Wettzell 52.33 45 *e*P P **17 21 15.5 0.0**
comp=Z,61nm,1.3s,mb5.4
KBA Koelnbreinsper 52.37 47⇓ *i*P P **17 21 15.4 -0.4**
comp=Z,76nm,1.0s,mb5.6,SNR=25
KBA Koelnbreinsper 52.37 47 P P **17 21 15.6 -0.2**
RSSD Black Hills 52.43 309 P P **17 21 16.3 0.0**
RSSD pmax pmax
comp=Z,25nm,1.3s,mb5.0
RSSD Black Hills 52.43 309 *e*P P **17 21 15.6 -0.7**
comp=Z,25nm,1.3s,mb5.0
RSSD LR LR
comp=Z,5µm,20.0s,MS5.5
MYKA Terra Mystica 52.53 48⇑ *i*P P **17 21 16.5 -0.5**
comp=Z,104nm,1.2s,mb5.7
TXAR Lajitas Array 52.57 290 P P **17 21 16.4 -1.2**
comp=Z,7.5nm,1.0s,mb4.6,baz=99,slow=7.7,SNR=22
TXAR LR LR 17 42 32.3
comp=Z,4µm,21.1s,MS5.4,baz=5.0,slow=35
VOY Vojsko 52.64 49 *e*P P **17 21 17.7 -0.1**
VOY *e* 17 21 24.2
VOY *e* 17 21 43.2
JMIC Jan Mayen 52.71 14 LR LR 17 38 36.9
comp=Z,2µm,18.1s,MS5.1,baz=87,slow=30
FFC Flin Flon 52.73 322 P P **17 21 18.3 0.0**
comp=Z,212nm,0.9s,mb6.1,SNR=13
FFC Flin Flon 52.73 322 *e*P P **17 21 16.7 -1.6**
FFC pmax pmax
comp=Z,43nm,1.0s,mb5.3
FFC MLR MLR
comp=Z,5µm,21.0s,MS5.5
FFC Flin Flon 52.73 322 *e*P P **17 21 16.7 -1.6**
comp=Z,43nm,1.0s,mb5.3
FFC LR LR
comp=Z,5µm,21.0s,MS5.5
JAVS Javornik 52.75 49 *i*P P **17 21 18.4 -0.2**
JAVS *i* 17 21 25.8
CLL Collm 52.76 42⇑ *i*P P **17 21 18.6 0.0**
CLL *i* 17 21 24.0
CLL *eS* S **17 28 48.0 +1.2**
CLL pmax pmax
comp=Z,59nm,1.0s,mb5.5
CLL MLR MLR
comp=Z,3µm,18.6s,MS5.3
CLL Collm 52.76 42 *e*P P **17 21 18.8 +0.2**
comp=Z,73nm,1.2s,mb5.5
CLL Collm 52.76 42⇑ *i*P P **17 21 18.6 0.0**
comp=Z,59nm,1.0s,mb5.5
CLL *i* (sP) sP 17 21 24.0 +1.1
CLL *ex* x 17 21 46.0
CLL *eS* S **17 28 48.0 +1.2**
comp=N,600nm,23.0s
CLL *eS* S **17 28 48.0 +1.2**
comp=E,800nm,24.0s
CLL *e*SSSS 17 34 33.0
CLL LmH 17 39 00.0
comp=N,800nm,21.6s
CLL LmH 17 39 00.0
comp=E,2µm,20.0s
CLL LmV 17 40 00.0
comp=Z,3µm,18.6s
CLL Collm 52.76 42⇑ *i*P P **17 21 18.6 0.0**
comp=Z,59nm,1.0s,mb5.5
CLL *i* 17 21 24.0
CLL *eS* S **17 28 48.0 +1.2**
CLL LR LR
comp=Z,3µm,18.6s,MS5.3
KHC Kasperske Hory 52.79 45 *e*P P **17 21 17.6 -1.3**
KHC *e*pP pP 17 21 19.2 -2.7
KHC *es*P sP 17 21 25.6 +2.5
KHC *eS* S **17 28 51.4 +4.2**
KHC AMS AMS 17 43 10.0
comp=Z,2µm,19.5s
GEC2 GERESS Array S 52.83 45 *e*P P **17 21 19.3 +0.1**
GEC2 pmax pmax
comp=Z,112nm,1.4s,mb5.6
GEC2 GERESS Array S 52.83 45 *e*P P **17 21 19.3 +0.1**
comp=Z,112nm,1.4s,mb5.6
GERES GERESS Array B 52.83 45 P P **17 21 18.4 -0.8**
comp=Z,27nm,1.0s,mb5.1,baz=251,slow=6.5,SNR=51
GERES LR LR 17 41 29.2
comp=Z,1µm,19.2s,MS5.0,baz=28,slow=34
WDD Wield Dalam 52.91 61 PFAKE 17 21 30.0 +10
WDD LR LR
comp=Z,2µm,19.0s,MS5.2
FBE Freiberg 52.91 43 *e*P P **17 21 20.2 +0.4**
comp=Z,115nm,1.4s,mb5.6
DGMT Dagmar 52.96 314⇑ P P **17 21 20.1 -0.1**
baz=53
DGMT Dagmar 52.96 314 *e*P P **17 21 20.5 +0.3**
comp=Z,53nm,1.1s,mb5.4
DGMT LR LR
comp=Z,4µm,19.0s,MS5.5
HVZN Vizzini 53.00 60 P P **17 21 21.5 +0.8**
KONO Kongsberg 53.00 31 AMS AMS 17 40 07.7
comp=Z,3µm,21.6s,MS5.3
KONO Kongsberg 53.00 31⇑ *e*P P **17 21 19.4 -0.9**
KONO LR LR
comp=Z,4µm,20.0s,MS5.4
MOZS Mozjanca 53.05 48 *e*P P **17 21 20.8 -0.1**
MOA Molln 53.08 46⇑ *i*P P **17 21 20.4 -0.7**
comp=Z,48nm,1.2s,mb5.3,SNR=16
MOA Molln 53.08 46 P P **17 21 21.0 -0.1**
LJU Ljubljana 53.08 49 P P **17 21 21.4 +0.3**
OBKA Obir 53.14 48 *i*P P **17 21 21.3 -0.3**
comp=Z,92nm,1.1s,mb5.6,SNR=26
OBKA Obir 53.14 48 P P **17 21 21.2 -0.3**
MRB1 Monte Rocchett 53.16 55 P P **17 21 22.6 +0.8**
BRG Berggiesshubel 53.27 43 *i*P P **17 21 21.4 -1.0**
BRG *i* 17 21 29.1
BRG S S **17 29 01.0 +7.2**
BRG pmax pmax
comp=Z,31nm,1.2s,mb5.1
BRG MLR MLR
comp=N,545nm,19.3s,MS5.0
BRG MLR MLR
comp=E,1µm,20.7s,MS5.0
BRG MLR MLR
comp=Z,2µm,24.8s,MS5.0
BRG Berggiesshubel 53.27 43 *e*P P **17 21 22.8 +0.4**
comp=Z,74nm,1.3s,mb5.5
BRG Berggiesshubel 53.27 43 *i*P P **17 21 21.4 -1.1**
comp=Z,52nm,1.2s,mb5.3
BRG *i* 17 21 29.1
comp=Z,74nm,1.3s
BRG *i* 17 21 43.6
comp=Z,42nm,1.4s
BRG S S **17 29 01.0 +7.2**
BRG
comp=N,910nm,19.3s
BRG
comp=E,2µm,20.7s
BRG
comp=Z,3µm,24.8s
BRG Berggiesshubel 53.27 43 *i*P P **17 21 21.4 -1.1**
comp=Z,31nm,1.2s,mb5.1
BRG *i* 17 21 29.1
BRG *i* 17 21 43.6
BRG S S **17 29 01.0 +7.2**
BRG LR LR
comp=Z,2µm,24.8s,MS5.0
VISS Visnje 53.28 49 *i*P P **17 21 22.5 -0.1**
VISS *i* 17 21 28.7
COP Copenhagen 53.33 37 *e*P P **17 21 23.1 +0.3**
COP *i*S S **17 29 03.1 +8.7**
COP pmax pmax
comp=Z,50nm,0.9s,mb5.4
COP MLR MLR
comp=Z,940nm,20.0s,MS4.8
COP Copenhagen 53.33 37 *i*P P **17 21 23.1 +0.3**
comp=Z,50nm,0.9s,mb5.4
COP *i*S S **17 29 03.1 +8.7**
COP
comp=Z,940nm,20.0s
COP Copenhagen 53.33 37 *e*P P **17 21 23.1 +0.3**
comp=Z,50nm,0.9s,mb5.4
COP *i*S S **17 29 03.1 +8.7**
COP LR LR
comp=Z,940nm,20.0s,MS4.8
PHWY Pilot Hill 53.36 305 P P **17 21 22.6 -0.7**
comp=Z,24nm,1.1s,mb5.0
SDCO Great Sand Dun 53.43 301 *e*P P **17 21 25.6 +1.8**
comp=Z,17nm,1.3s,mb4.8
SDCO LR LR
comp=Z,7µm,20.0s,MS5.7
RUE Ruedersdorf 53.44 41 *e*P P **17 21 24.0 +0.4**
comp=Z,253nm,1.4s,mb6.0
RUE Ruedersdorf 53.44 41 *e*P P **17 21 22.1 -1.5**
comp=Z,153nm,1.1s,mb5.8
ISCO Idaho Springs 53.48 303 P P **17 21 25.5 +1.4**
ISCO pmax pmax
comp=Z,34nm,1.4s,mb5.1
ISCO Idaho Springs 53.48 303 *e*P P **17 21 24.7 +0.6**
comp=Z,34nm,1.4s,mb5.1
ISCO LR LR
comp=Z,11µm,21.0s,MS5.9
SOKA Soboth 53.49 48⇑ *i*P P **17 21 23.2 -0.9**
comp=Z,24nm,1.2s,mb5.0
PRU Pruhonice 53.53 44 *e*P P **17 21 25.0 +0.7**
PRU *ex* x 17 21 31.6
PRU *eS* S **17 29 01.1 +3.9**
PRU AMS AMS 17 42 00.0
comp=Z,1µm,19.1s
PERS Pernice 53.54 48 *i*P P **17 21 22.9 -1.6**
BOJS Bojanci 53.55 49 *i*P P **17 21 24.4 -0.1**
PVCC Panska Ves 53.62 43 *e*P P **17 21 23.9 -1.1**
PVCC *e*pP pP 17 21 26.0 -2.0
PVCC *ex* x 17 21 32.8
PVCC *eS* S **17 29 07.7 +9.3**
PVCC AMS AMS 17 39 40.0
comp=Z,3µm,18.5s
CRES Cresnjev 53.71 49 P P **17 21 26.4 +0.7**
CUC Castrocucco 53.80 56 *e*P P **17 21 26.6 +0.1**
comp=Z,87nm,1.0s,mb5.6
CUC LR LR
comp=Z,3µm,22.0s,MS5.3
ARSA Arzberg 53.87 47⇑ *i*P P **17 21 25.8 -1.1**
comp=Z,93nm,1.1s,mb5.6,SNR=34
ARSA Arzberg 53.87 47 P P **17 21 26.2 -0.7**
CEL Celeste 53.90 58 PFAKE 17 21 40.0 +13
CEL LR LR
comp=Z,1µm,19.0s,MS5.0
TREC Trest 54.05 45 *e*P P **17 21 28.2 +0.1**
TREC *e*pP pP 17 21 34.2 +3.0
TREC *eS* S **17 29 12.7 +8.4**
TREC AMS AMS 17 39 00.0
comp=Z,2µm,19.5s
N22A Wattenberg Ran 54.11 305⇓ P P **17 21 28.2 -0.5**
baz=54,SNR=9.9
CSNA Conrad Observa 54.16 47⇓ *i*P P **17 21 28.6 -0.4**
comp=Z,55nm,1.1s,mb5.4
CONA Conrad Observa 54.16 47⇓ *i*P P **17 21 28.5 -0.5**
comp=Z,61nm,1.1s,mb5.4,SNR=22
NB2 NORSAR Subarra 54.22 30 P P **17 21 27.7 -1.5**
comp=Z,85nm,1.2s,mb5.5,baz=251,slow=7.4
NOA NORSAR Array B 54.22 30 P P **17 21 28.1 -1.0**
comp=Z,38nm,0.9s,mb5.3,baz=250,slow=7.4,SNR=34
NOA LR LR 17 40 01.6
comp=Z,3µm,20.9s,MS5.3,baz=255,slow=31
M22A Cedar Creek Ra 54.22 305⇑ P P **17 21 28.8 -0.7**
baz=54
KOGS Kog 54.31 48 P P **17 21 30.1 0.0**
ANMO Albuquerque 54.36 297 P P **17 21 31.2 +0.6**
ANMO pmax pmax
comp=Z,38nm,1.2s
ANMO Albuquerque 54.36 297 *e*P P **17 21 31.0 +0.3**
comp=Z,38nm,1.2s,mb5.2
ANMO LR LR
comp=Z,2µm,21.0s,MS5.2
SHEL Horse Pasture 54.43 131 PFAKE 17 21 40.0 +8.7
SHEL LR LR
comp=Z,3µm,20.0s,MS5.4
UPC Upice 54.53 43 *e*P P **17 21 31.3 -0.3**
UPC *e*pP pP 17 21 32.8 -1.9
UPC *es*P sP 17 21 39.3 +3.4
TIP Timpagrande 54.55 57 *e*P P **17 21 30.4 -1.6**
comp=Z,28nm,1.0s,mb5.2
TIP LR LR
comp=Z,3µm,19.0s,MS5.3
SOP Sopron 54.61 47⇓ *e*P P **17 21 32.2 0.0**
KRUC Moravsky 54.62 45 P P **17 21 31.7 -0.6**
RWWY Rawlins 54.68 306 *e*P P **17 21 33.3 +0.5**
comp=Z,62nm,1.1s,mb5.5
DPC Dobruska-Polom 54.71 44 *e*P P **17 21 32.2 -0.7**
DPC *e*pP pP 17 21 34.0 -2.0
DPC *ex* x 17 21 40.2
DPC *eS* S **17 29 17.3 +4.1**
DPC AMS AMS 17 40 10.0
comp=Z,2µm,26.7s
KSP Ksiaz 54.75 43 *e*P P **17 21 33.4 +0.2**
KSP *e**PP pP 17 21 36.7 +0.4
KSP *eS* S **17 29 14.0 +0.3**
KSP MLR MLR
comp=Z,5µm,20.1s,MS5.6
KSP LMZ 17 40 36.3
comp=Z,4µm,20.1s
KSP Ksiaz 54.75 43 *e*P P **17 21 33.9 +0.7**
VRAC Vranov 54.77 45⇑ *i*P P **17 21 33.3 -0.1**
VRAC Vranov 54.77 45⇑ P P **17 21 33.3 -0.1**
M21A Separation Pea 54.80 306⇓ P P **17 21 34.1 +0.4**
baz=55
L21A Rawlins 54.80 306⇓ P P **17 21 33.6 -0.1**
baz=55,SNR=26
N21A Black Mountain 54.92 305⇑ P P **17 21 34.8 +0.1**
baz=55,SNR=7.3
ZST Bratislava 55.01 46 *i*P P **17 21 35.1 0.0**
ZST *e* 17 21 40.1
ZST pmax pmax
comp=Z,38nm,1.1s,mb5.3
ZST MLR MLR
comp=Z,2µm,15.7s,MS5.2
ZST Bratislava 55.01 46 *i*P P **17 21 35.1 0.0**
ZST *ep*P pP 17 21 40.1 +1.9
ZST Bratislava 55.01 46 *i*P P **17 21 35.1 0.0**
comp=Z,38nm,1.1s,mb5.3
ZST *e* 17 21 40.1
ZST LR LR
comp=Z,2µm,15.7s,MS5.2
R21A Cimarron 55.02 302⇓ P P **17 21 36.5 +1.1**
baz=55,SNR=13
SMOL Smolenice 55.25 46 *e*P P **17 21 36.8 -0.1**
M20A Sweetwater, Wa 55.41 306⇓ P P **17 21 38.8 +0.6**
baz=55,SNR=12
N20A Spence Gulch, 55.49 305⇑ P P **17 21 39.2 +0.5**
baz=56
O20A White River Ci 55.49 304⇑ P P **17 21 38.9 +0.2**
baz=56
K20A Yellowstone Ra 55.52 307⇑ P P **17 21 38.3 -0.7**
baz=56
L20A Wamsutter 55.52 306⇓ P P **17 21 39.8 +0.9**
baz=56
Q20A Ridgley Place, 55.58 302⇑ P P **17 21 39.9 +0.5**
baz=56,SNR=13
GKP Gorka Klasztor 55.63 40 *e*P P **17 21 39.3 -0.3**
GKP LMZ 17 40 05.1
comp=Z,2µm,23.5s
GKP Gorka Klasztor 55.63 40 *e*P P **17 21 39.3 -0.3**
GKP LR LR
comp=Z,2µm,23.5s,MS5.2
DAG Danmarks Havn 55.66 7⇑ *e*P P **17 21 37.4 -2.0**
DAG pmax pmax
comp=Z,31nm,1.3s,mb5.2
DAG Danmarks Havn 55.66 7⇑ *i*P P **17 21 37.4 -2.0**
comp=Z,31nm,1.3s,mb5.2
DAG Danmarks Havn 55.66 7⇑ *e*P P **17 21 37.4 -2.0**
comp=Z,31nm,1.3s,mb5.2
OKC Ostrava-Krasne 55.83 44 *e*P P **17 21 40.7 -0.3**
OKC *ep*P pP 17 21 42.2 -1.9
OKC *es*P sP 17 21 46.7 +1.4
OKC *eS* S **17 29 33.4 +5.2**
OKC AMS AMS 17 47 20.0

comp=Z,900nm,14.2s
OKC Ostrava-Krasne 55.83 44 *e*P **P** **17 21 40.7 -0.3**
OKC *ep*P pP 17 21 42.2 -1.9
OKC *e* 17 21 46.7
OKC *eS* **S** **17 29 33.4 +5.2**
MVCO Mesa Verde 55.84 300 ⇓P **P** **17 21 42.4 +1.1**
baz=56
MVCO Mesa Verde 55.84 300 *e*P **P** **17 21 42.4 +1.1**
comp=Z,49nm,1.3s,mb5.4
MVCO LR LR
comp=Z,5µm,19.0s,MS5.6
KOLL Kolacno 55.90 46 *e*P **P** **17 21 41.0 -0.6**
KOLL *ep*P pP 17 21 47.6 +3.0
PKSM Moragy 55.95 49⇑*i*P **P** **17 21 41.3 -0.6**
PKSM Moragy 55.95 49 ⇑P **P** **17 21 41.3 -0.6**
P19A Cripple Cowboy 56.08 303 ⇑P **P** **17 21 42.9 -0.1**
baz=56,SNR=16
M19A Rock Springs 56.14 306 ⇑P **P** **17 21 43.6 +0.2**
baz=56
N19A John Jarvie Ra 56.18 305 ⇓P **P** **17 21 43.4 -0.3**
baz=56
VYHS Vyhne 56.18 46 *e*P **P** **17 21 41.1 -2.5**
VYHS *e* 17 21 49.0
VYHS pmax pmax
comp=Z,33nm,1.2s,mb5.2
VYHS Vyhne 56.18 46 *e*P **P** **17 21 41.1 -2.5**
VYHS *ep*P pP 17 21 49.0 +2.3
VYHS *e*PCS PcS 17 26 39.3 -2.3
VYHS Vyhne 56.18 46 *e*P **P** **17 21 41.1 -2.5**
comp=Z,33nm,1.2s,mb5.2
VYHS *e* 17 21 49.0
VYHS *e*PcS PcS 17 26 39.3 -2.3
VYHS LR LR
comp=Z,500nm,23.0s,MS4.5
RLMT Red Lodge 56.20 310 ⇑P **P** **17 21 43.6 -0.1**
baz=56
RLMT Red Lodge 56.20 310 *e*P **P** **17 21 43.9 +0.1**
comp=Z,50nm,1.1s,mb5.5
RLMT LR LR
comp=Z,5µm,22.0s,MS5.5
BUD Budapest 56.26 47⇓*e*P **P** **17 21 44.4 +0.3**
L19A Farson 56.28 306 ⇓P **P** **17 21 44.2 -0.2**
baz=56
T19A Beclabito 56.29 300 ⇓P **P** **17 21 45.3 +0.8**
baz=56,SNR=12
S19A Harvey Farm, M 56.31 301 ⇓P **P** **17 21 44.8 +0.1**
baz=56
Q19A Hogan Spring (56.33 303 ⇑P **P** **17 21 45.1 +0.3**
baz=56
R19A Curley Farm, L 56.37 302 ⇑P **P** **17 21 45.1 0.0**
baz=56
V19A Window Rock 56.40 299 ⇓P **P** **17 21 46.3 +0.9**
baz=56
PDAR Pinedale Array 56.41 307 P **P** **17 21 44.5 -0.9**
comp=Z,24nm,0.9s,mb5.2,baz=72,slow=4.8,SNR=30
PDAR PKP2bc 17 51 56.6
comp=Z,0.5nm,0.9s,baz=40,slow=2.5,SNR=3.7
PDAR Pinedale Array 56.41 307 P **P** **17 21 44.5 -0.9**
PDAR ⇑*e* 17 51 56.6
BW06 Boulder Array 56.42 307 ⇑P **P** **17 21 45.0 -0.3**
baz=56
BW06 Boulder Array 56.42 307 PFAKE 17 22 00.0 +15
BW06 LR LR
comp=Z,4µm,20.0s,MS5.5
G18A Lazy EL Ranch, 56.42 310 ⇓P **P** **17 21 45.0 -0.3**
baz=56
BBLS Lazići 56.46 52 P **P** **17 21 46.2 +0.6**
F18A Big Timber 56.53 311 ⇑P **P** **17 21 46.2 +0.1**
baz=56,SNR=35
I18A Diamond G Ranc 56.59 308 ⇓P **P** **17 21 47.1 +0.5**
baz=57
EGMT Eagleton 56.62 313 ⇓P **P** **17 21 46.8 +0.1**
baz=57
EGMT Eagleton 56.62 313 *e*P **P** **17 21 46.3 -0.4**
comp=Z,85nm,1.1s,mb5.7
EGMT LR LR
comp=Z,4µm,22.0s,MS5.5
D18A Linhart Farms, 56.62 312 ⇓P **P** **17 21 46.9 +0.2**
baz=57
B18A Beardsley Farm 56.66 314 ⇑P **P** **17 21 46.8 -0.1**
baz=57
E18A Harlowton 56.68 312 ⇑P **P** **17 21 48.0 +0.8**
baz=57,SNR=32
A18A Metzger Ranch, 56.73 314 ⇑P **P** **17 21 46.8 -0.6**
baz=57,SNR=22
X19A St. Johns 56.73 297 ⇓P **P** **17 21 48.0 +0.3**
baz=57,SNR=7.0
W19A Sanders 56.74 298 ⇑P **P** **17 21 47.8 0.0**
baz=57,SNR=12
J18A Kendall Valley 56.75 308 ⇑P **P** **17 21 46.9 -0.8**
baz=57
K18A Toltan Ranch, 56.77 307 ⇑P **P** **17 21 47.0 -0.9**
baz=57
L18A Fontenelle, Gr 56.79 306 ⇑P **P** **17 21 47.7 -0.4**
baz=57
O18A Roosevelt 56.84 304 ⇓P **P** **17 21 48.1 -0.2**
baz=57,SNR=7.4
Z19A T-Link Ranch, 56.84 296 ⇓P **P** **17 21 49.3 +0.8**
baz=57
TIR Tirane 56.85 55 P **P** **17 21 50.3 +1.8**
TIR pmax pmax
comp=Z,59nm,1.0s,mb5.6
TIR Tirane 56.85 55 *e*P **P** **17 21 50.2 +1.8**
comp=Z,59nm,1.0s,mb5.6
TIR LR LR
comp=Z,1µm,20.0s,MS5.1
R18A Canyonlands Na 56.86 302 ⇑P **P** **17 21 48.6 +0.1**
baz=57
PSZ Piszkesteto 56.87 47 *e*P **P** **17 21 49.0 +0.6**
PSZ pmax pmax
comp=Z,65nm,1.5s,mb5.4
PSZ MLR MLR
comp=Z,2µm,20.0s,MS5.1
PSZ Piszkesteto 56.87 47⇓*e*P **P** **17 21 48.8 +0.4**
PSZ Piszkesteto 56.87 47⇑*i*P **P** **17 21 51.3 +2.9**
PSZ Piszkesteto 56.87 47 *e*P **P** **17 21 49.0 +0.5**
comp=Z,65nm,1.5s,mb5.4
PSZ LR LR
comp=Z,2µm,20.0s,MS5.1
OJC Ojcow 56.92 44 *e*P **P** **17 21 49.3 +0.5**
119A Ashpeak Ranch, 56.94 295 ⇓P **P** **17 21 50.6 +1.4**
baz=57
T18A Mexican Hat 56.94 300 ⇑P **P** **17 21 49.5 +0.4**
baz=57,SNR=12
S18A Hurst Farm, Bl 56.99 301 ⇑P **P** **17 21 49.9 +0.3**
baz=57
Q18A Rafter H Ranch 57.00 303 ⇑P **P** **17 21 49.7 +0.1**
baz=57,SNR=20
219A White Tail Can 57.00 294 ⇓P **P** **17 21 51.2 +1.6**
baz=57
U18A Rough Rock, Ch 57.00 300 ⇑P **P** **17 21 50.0 +0.4**
baz=57
LKWY Lake 57.01 309 PFAKE 17 22 00.0 +10
LKWY LR LR
comp=Z,9µm,22.0s,MS5.8
W18A Petrified Fore 57.02 298 ⇓P **P** **17 21 50.2 +0.4**
baz=57
LCO Las Campanas 57.04 207 PFAKE 17 22 00.0 +10
LCO LR LR
comp=Z,1µm,19.0s,MS5.0
P18A Preston Nutter 57.05 303 ⇓P **P** **17 21 50.1 +0.2**
baz=57
319A Douglas 57.10 294 ⇓P **P** **17 21 51.4 +1.0**
baz=57
H17A Grant Village 57.13 309 ⇑P **P** **17 21 50.0 -0.4**
baz=57
I17A Pilgram Creek 57.14 309 ⇑P **P** **17 21 50.1 -0.3**
baz=57
LOHW Long Hollow 57.17 308 *e*P **P** **17 21 50.0 -0.6**
comp=Z,32nm,1.2s,mb5.2
F17A Fitzpatrick Pl 57.19 311 ⇓P **P** **17 21 50.9 +0.1**
baz=57
NIE Niedzica 57.20 45 *e*P **P** **17 21 52.4 +1.6**
D17A Six Diamond Ra 57.23 312 ⇓P **P** **17 21 51.0 0.0**
baz=57
G17A Pierce Place, 57.25 310 ⇓P **P** **17 21 51.8 +0.7**
baz=57
J17A Brown Place, J 57.25 308 ⇓P **P** **17 21 51.2 0.0**
baz=57
MOOW Moose Ponds 57.27 308 *e*P **P** **17 21 50.4 -0.9**
comp=Z,43nm,1.7s,mb5.2
M17A Scullys Gap (B 57.28 306 ⇓P **P** **17 21 50.8 -0.7**
baz=57
A17A Triple J Farms 57.29 314 ⇓P **P** **17 21 51.1 -0.3**
baz=57
C17A Wharram Farm, 57.29 313 ⇓P **P** **17 21 51.4 0.0**
baz=57
SRU San Rafael 57.30 303 ⇓P **P** **17 21 51.6 -0.1**
baz=57
B17A L&G Farms, Che 57.33 314 ⇑P **P** **17 21 50.7 -1.0**
baz=57
E17A Martinsdale 57.33 312 ⇑P **P** **17 21 51.3 -0.5**
baz=57
REDW Red Top Meadow 57.35 308 *e*P **P** **17 21 51.0 -0.9**
comp=Z,49nm,1.4s,mb5.3
O17A Robinson Place 57.40 304 ⇓P **P** **17 21 52.4 0.0**
baz=57
IMW Indian Meadow 57.40 308 *e*P **P** **17 21 51.6 -0.7**
comp=Z,58nm,1.3s,mb5.5
GRUS Gruza 57.41 52 P **P** **17 21 53.0 +0.7**
L17A Cokeville 57.41 306 ⇑P **P** **17 21 51.6 -0.7**
baz=57
Y18A Canyon Day Jun 57.42 296 ⇑P **P** **17 21 53.5 +0.9**
baz=57
TPAW Teton Pass 57.42 308 *e*P **P** **17 21 52.0 -0.5**
comp=Z,17nm,1.1s,mb5.0
N17A Moffit Pass 57.43 305 ⇓P **P** **17 21 52.2 -0.4**
baz=57
P17A Butcher Ranch, 57.44 303 ⇓P **P** **17 21 52.6 -0.1**
baz=57
R17A Hanksville Air 57.50 302 ⇓P **P** **17 21 53.8 +0.7**
baz=58
118A Homack Ranch, 57.51 295 ⇑P **P** **17 21 55.2 +1.9**
baz=58
AHID Auburn Hatcher 57.55 307 PFAKE 17 22 10.0 +17
AHID LR LR
comp=Z,4µm,19.0s,MS5.5
DCID1 Drake Creek 57.59 308 *e*P **P** **17 21 53.5 -0.1**
comp=Z,54nm,1.0s,mb5.5
H16A Russell Place, 57.61 309 ⇑P **P** **17 21 54.0 +0.3**
baz=58
S17A Black Ridge (B 57.63 301 ⇓P **P** **17 21 54.3 +0.2**
baz=58
218A Dragoon 57.66 294 ⇓P **P** **17 21 55.7 +1.3**
baz=58
RRI2 Red Ridge 57.69 308 *e*P **P** **17 21 53.4 -0.9**
comp=Z,60nm,1.1s,mb5.5
T17A Navajo Res., N 57.69 300 ⇓P **P** **17 21 54.7 +0.2**
baz=58
318A Bisbee 57.70 294 ⇓P **P** **17 21 56.3 +1.7**
baz=58
I16A Newdale 57.80 308 ⇑P **P** **17 21 54.6 -0.5**
baz=58
STHS Stebnicka Huta 57.81 45 *e*P **P** **17 21 54.8 -0.3**
STHS *e* 17 22 02.0
STHS pmax pmax
comp=Z,21nm,1.0s,mb5.1
STHS Stebnicka Huta 57.81 45 *e*P **P** **17 21 54.8 -0.3**
comp=Z,20nm,1.0s,mb5.1
STHS *e* 17 22 02.0
D16A Dana Ranch, Ca 57.81 312 ⇓P **P** **17 21 54.6 -0.6**
baz=58
L16A Fish Haven 57.83 306 ⇑P **P** **17 21 55.1 -0.2**
baz=58
F16A Kennard Place, 57.87 311 ⇓P **P** **17 21 55.1 -0.4**
baz=58
BOZ Bozeman (W) 57.87 311 ⇑P **P** **17 21 54.7 -0.9**
baz=58
BOZ Bozeman (W) 57.87 311 P **P** **17 21 54.3 -1.3**
BOZ pmax pmax
comp=Z,23nm,1.1s,mb5.1
BOZ Bozeman (W) 57.87 311 *e*P **P** **17 21 52.8 -2.8**
comp=Z,23nm,1.1s,mb5.1
BOZ LR LR
comp=Z,3µm,20.0s,MS5.4
A16A West Butte Ran 57.88 314 ⇑P **P** **17 21 55.3 -0.3**
baz=58
N16A Rees Ranch, Co 57.89 305 ⇓P **P** **17 21 55.4 -0.4**
baz=58
KRUS Krusevo 57.89 54 *i*P **P** **17 21 56.9 +1.1**
E16A East Helena 57.90 312 ⇑P **P** **17 21 55.1 -0.6**
baz=58
K16A Soda Springs 57.91 307 ⇑P **P** **17 21 55.5 -0.4**
baz=58
J16A Bone 57.91 308 ⇑P **P** **17 21 55.3 -0.6**
baz=58
CRVS Cervenica-Dubn 57.94 46 *e*P **P** **17 21 55.6 -0.4**
CRVS *ep*P pP 17 22 02.2 +3.1
CRVS Cervenica-Dubn 57.94 46 *e*P **P** **17 21 55.6 -0.4**
comp=Z,72nm,1.2s,mb5.6
CRVS *e* 17 22 02.2
CRVS LR LR
comp=Z,800nm,18.5s,MS4.9
B16A M & M Farms, S 57.94 314 ⇓P **P** **17 21 55.4 -0.6**
baz=58
BIA Bitola 57.97 55 *i*P **P** **17 21 56.3 -0.1**
O16A Springville 57.98 304 ⇓P **P** **17 21 56.1 -0.3**
baz=58
G16A Moss Hill, Enn 58.00 310 ⇑P **P** **17 21 56.0 -0.5**
baz=58
SKO Skopje 58.00 54 *i*P **P** **17 21 57.7 +1.1**
M16A Huntsville 58.01 305 ⇓P **P** **17 21 56.3 -0.3**
baz=58
BZS Buzias 58.02 49⇑*i*P **P** **17 21 56.1 -0.5**
BZS Buzias 58.02 49 ⇑P **P** **17 21 56.1 -0.6**
U16A Tuba City 58.04 299 ⇓P **P** **17 21 57.4 +0.4**
baz=58
RES Resolute Bay 58.08 346 P **P** **17 21 56.0 -0.6**
comp=Z,11nm,1.0s,mb4.8,baz=120,slow=4.0,SNR=15
RES LR LR 17 45 55.6
comp=Z,4µm,18.5s,MS5.5,baz=126,slow=35
RES Resolute Bay 58.08 346 P **P** **17 21 56.4 -0.2**
RES pmax pmax
comp=Z,33nm,1.3s,mb5.2
Y17A Roosevelt 58.10 296 ⇑P **P** **17 21 58.0 +0.7**
baz=58
R16A Teasdale 58.11 302 ⇑P **P** **17 21 57.3 -0.1**
baz=58
117A Oracle 58.16 295 ⇑P **P** **17 21 58.9 +1.0**
baz=58
TUC Tucson 58.24 295 P **P** **17 21 58.6 +0.2**
TUC pmax pmax
comp=Z,28nm,1.1s,mb5.2
TUC Tucson 58.24 295 *e*P **P** **17 21 58.4 0.0**
comp=Z,28nm,1.1s,mb5.2
TUC LR LR
comp=Z,5µm,20.0s,MS5.6
BARS Barje 58.24 53 P **P** **17 21 58.7 +0.5**
S16A Weppner Ranch, 58.25 301 ⇓P **P** **17 21 58.6 +0.2**
baz=58
T16A Glen Canyon Da 58.25 300 ⇑P **P** **17 21 58.5 +0.1**
baz=58
WUAZ Wupatki 58.31 299 ⇓P **P** **17 21 59.0 +0.2**
baz=58
WUAZ Wupatki 58.31 299 *e*P **P** **17 21 58.7 -0.1**
comp=Z,52nm,1.1s,mb5.5
WUAZ LR LR
comp=Z,5µm,22.0s,MS5.6
217A Green Valley 58.34 294 ⇓P **P** **17 22 00.2 +1.1**
baz=58
F15A Butte 58.47 311 ⇑P **P** **17 21 59.3 -0.5**
baz=58
KOLS Kolonicke sedl 58.48 46 *e*P **P** **17 21 58.9 -0.8**
KOLS pmax pmax
comp=Z,35nm,1.4s,mb5.2
KOLS Kolonicke sedl 58.48 46 *e*P **P** **17 21 58.9 -0.8**
comp=Z,35nm,1.4s,mb5.2
D15A Lincoln 58.48 312 ⇓P **P** **17 21 59.3 -0.5**
baz=58
G15A Dillon 58.48 310 ⇓P **P** **17 21 59.5 -0.4**
baz=58
UZH Uzhgorod 58.48 46 *e*P **P** **17 21 59.0 -0.8**
UZH *i* pP 17 22 00.7 -2.2
UZH *i* 17 22 06.7
UZH *eS* **S** **17 29 59.0 -4.2**
W16A Flagstaff 58.48 298 ⇑P **P** **17 22 00.9 +0.9**
baz=58
X16A Lo Mia Camp, P 58.49 297 ⇑P **P** **17 22 01.1 +1.0**
baz=58
J15A Blackfoot 58.50 308 ⇓P **P** **17 21 59.6 -0.4**
baz=58
B15A Bradely Ranch, 58.51 314 ⇑P **P** **17 21 59.2 -0.8**
baz=58
C15A Salmond Ranch, 58.54 313 ⇑P **P** **17 21 59.7 -0.5**
baz=58
L15A Malad City 58.54 306 ⇑P **P** **17 21 59.3 -1.0**
baz=58
DLMT Dillon 58.55 310 *e*P **P** **17 22 00.3 0.0**
comp=Z,38nm,1.4s,mb5.2
E15A Deer Lodge 58.57 311 ⇓P **P** **17 21 59.8 -0.6**
baz=58
STIP Stip 58.58 54 *i*P **P** **17 22 00.6 0.0**
LPA La Plata 58.59 192 *ce*P **P** **17 22 00.0 -0.6**
LPA *es*P sP 17 22 05.0 +0.1
LPA
comp=Z,3µm,19.0s
Y16A Circle Bar Ran 58.60 297 ⇓P **P** **17 22 01.7 +0.8**
baz=59
K15A Arbon 58.61 307 ⇓P **P** **17 22 00.6 -0.1**
baz=59
H15A Lima 58.61 309 ⇓P **P** **17 21 59.9 -0.9**
baz=59
M15A Larsen Ranch, 58.62 306 ⇓P **P** **17 22 00.2 -0.7**
baz=59
P15A Leamington 58.62 303 ⇑P **P** **17 22 01.2 +0.2**
baz=59
A15A Johnson Ranch, 58.63 314 ⇓P **P** **17 22 00.6 -0.2**
baz=59
MVU Marysvale 58.66 302 PFAKE 17 22 10.0 +8.7
MVU LR LR
comp=Z,8µm,21.0s,MS5.8
O15A The Old Anders 58.71 304 ⇓P **P** **17 22 01.7 +0.2**
baz=59
R15A Junction 58.74 302 ⇑P **P** **17 22 02.3 +0.5**
baz=59
Q15A Fillmore 58.75 303 ⇓P **P** **17 22 02.3 +0.4**
baz=59
DRGR 58.77 48⇓*i*P **P** **17 22 02.0 +0.2**
DRGR 58.77 48 ⇓P **P** **17 22 02.0 +0.2**
KWP Kalwaria 58.77 45 *e*P **P** **17 22 02.9 +1.1**
KWP MLR MLR
comp=Z,1µm,23.9s,MS5.0
KWP Kalwaria 58.77 45 ⇓P **P** **17 22 03.0 +1.2**
KWP Kalwaria 58.77 45⇓*i*P **P** **17 22 03.0 +1.2**
KWP LMZ 17 44 29.9
comp=Z,1µm,23.9s
KWP Kalwaria 58.77 45 *e*P **P** **17 22 02.9 +1.1**
GZR Gura Zlata 58.84 50⇑*i*P **P** **17 22 03.0 +0.6**
GZR Gura Zlata 58.84 50 ⇑P **P** **17 22 03.0 +0.6**
216A Three Points, 58.85 295 ⇑P **P** **17 22 03.9 +1.2**
baz=59
S15A Panguitch 58.86 301 ⇑P **P** **17 22 03.0 +0.3**
baz=59
VAY Valandovo 58.89 54 *i*P **P** **17 22 03.0 +0.2**
VAY Valandovo 58.89 54 P **P** **17 22 03.3 +0.5**
DEV Deva 58.92 49⇑*i*P **P** **17 22 03.9 +1.0**
DEV Deva 58.92 49 ⇑P **P** **17 22 03.9 +1.0**
V15A Kaibab Nationa 58.92 299 ⇑P **P** **17 22 03.7 +0.6**
baz=59
U15A North Rim 58.94 300 ⇑P **P** **17 22 03.7 +0.5**
baz=59
T15A Red Dirt Ranch 58.95 300 ⇑P **P** **17 22 03.8 +0.6**
baz=59
116A Eloy 58.97 295 ⇓P **P** **17 22 04.5 +1.0**
baz=59
DUG Dugway 58.98 304 ⇑P **P** **17 22 03.4 -0.1**
baz=59
DUG Dugway 58.98 304 P **P** **17 22 03.2 -0.2**
DUG pmax pmax
comp=Z,40nm,1.1s,mb5.4
DUG Dugway 58.98 304 *e*P **P** **17 22 02.7 -0.7**
comp=Z,40nm,1.1s,mb5.4
DUG LR LR
comp=Z,11µm,22.0s,MS5.9
B14A Marquette Ranc 58.98 314 ⇓P **P** **17 22 03.0 -0.3**
baz=59
W15A Williams 59.07 298 ⇑P **P** **17 22 04.6 +0.5**
baz=59
A14A Double T Ranch 59.08 314 ⇑P **P** **17 22 03.4 -0.6**
baz=59
F14A Wisdom 59.09 311 ⇑P **P** **17 22 04.1 0.0**
baz=59
K14A Jones Ranch, D 59.09 307 ⇓P **P** **17 22 04.0 -0.1**
baz=59
H14A Leadore 59.13 309 ⇑P **P** **17 22 04.6 +0.3**
baz=59
X15A Humboldt 59.14 298 ⇓P **P** **17 22 05.6 +1.0**
baz=59
D14A Greenough 59.15 312 ⇓P **P** **17 22 04.0 -0.5**
baz=59
EDM Edmonton 59.15 319 P **P** **17 22 03.7 -0.7**
EDM Edmonton 59.15 319 *e*P **P** **17 22 03.0 -1.4**
E14A Clinton 59.16 311 ⇑P **P** **17 22 04.4 -0.1**
baz=59
G14A Jackson 59.17 310 ⇓P **P** **17 22 04.5 -0.1**
baz=59
L14A Malta 59.17 306 ⇓P **P** **17 22 04.4 -0.4**
baz=59
N14A Grayback Hills 59.22 305 ⇓P **P** **17 22 04.8 -0.3**
baz=59
I14A Mackay 59.22 309 ⇓P **P** **17 22 04.7 -0.3**
baz=59
SUW Suwalki 59.23 40 *e*P **P** **17 22 05.0 +0.1**
SUW MLR MLR
comp=Z,2µm,25.0s,MS5.2
SUW LMZ 17 41 57.9
comp=Z,2µm,25.0s
SUW Suwalki 59.23 40 *e*P **P** **17 22 05.0 +0.1**
P14A Drum Mountains 59.23 304 ⇑P **P** **17 22 05.2 0.0**
baz=59
KKB Krupnik 59.23 54 *e*P **P** **17 22 06.4 +1.2**
VTS Vitosha 59.28 53 *e*P **P** **17 22 06.2 +0.7**
VTS Vitosha 59.28 53 P **P** **17 22 06.8 +1.3**
M14A Sheep Mountain 59.29 306 ⇑P **P** **17 22 05.0 -0.6**
baz=59
Y15A Casa Rosa Ranc 59.29 297 ⇓P **P** **17 22 06.4 +0.7**
baz=59
J14A Carey 59.30 308 ⇑P **P** **17 22 05.4 -0.2**
baz=59
115A Sonoran Desert 59.38 295 ⇑P **P** **17 22 07.7 +1.3**
baz=59
WALA Waterton Lakes 59.41 315 *e*P **P** **17 22 05.2 -1.0**
comp=Z,1.0nm,1.1s
Q14A Sevier Lake (B 59.45 303 ⇓P **P** **17 22 06.7 0.0**
baz=59
MSO Missoula 59.45 312 *e*P **P** **17 22 04.4 -2.2**
comp=Z,3.5nm,1.0s,mb4.3
MSO LR LR
comp=Z,4µm,20.0s,MS5.6
T14A Hurricane 59.50 301 ⇓P **P** **17 22 07.4 +0.3**
baz=60
LVV L'vov 59.63 45 *e*P **P** **17 22 08.4 +0.6**
LVV *eS* **S** **17 30 20.2 +2.1**
LVV *eP*S 17 30 44.2
E13A Victor 59.64 312 ⇓P **P** **17 22 07.4 -0.5**
baz=60
U14A Mt Trumbull 59.66 300 ⇑P **P** **17 22 08.6 +0.4**
baz=60
X14A Yava 59.67 298 ⇓P **P** **17 22 09.4 +1.1**
baz=60
L13A Double Diamond 59.69 306 ⇑P **P** **17 22 08.0 -0.3**
baz=60
V14A Boquillas Ranc 59.69 299 ⇑P **P** **17 22 08.8 +0.4**
baz=60
I13A Wildhorse Cree 59.70 309 ⇑P **P** **17 22 08.0 -0.3**
baz=60
G13A Cobalt 59.72 310 ⇑P **P** **17 22 08.2 -0.2**
baz=60
W14A Seligman 59.73 298 ⇓P **P** **17 22 09.4 +0.7**
baz=60
MMB Musomiste 59.73 54 *e*P **P** **17 22 10.0 +1.4**
F13A Darby 59.76 311 ⇑P **P** **17 22 08.5 -0.2**
baz=60
J13A Cove Ranch, Pi 59.77 308 ⇑P **P** **17 22 08.5 -0.3**
baz=60
B13A Whitefish 59.78 314 ⇓P **P** **17 22 08.5 -0.3**
baz=60
D13A Huson 59.80 312 ⇑P **P** **17 22 08.5 -0.5**
baz=60
Y14A Wickenburg 59.84 297 ⇑P **P** **17 22 10.0 +0.4**
baz=60
C13A Hot Springs 59.87 313 ⇑P **P** **17 22 08.6 -0.8**
baz=60
O13A Hicks Ranch, I 59.88 304 ⇓P **P** **17 22 09.2 -0.4**
baz=60
Z14A Wintersburg 59.88 296 ⇓P **P** **17 22 10.7 +0.9**
baz=60
TRO Tromso 59.91 21 *e*P **P** **17 22 08.3 -1.1**
TRO *eS* **S** **17 30 25.9 +4.8**
HLID Hailey 59.93 308 ⇑P **P** **17 22 09.4 -0.5**
baz=60
HLID Hailey 59.93 308 *e*P **P** **17 22 08.0 -2.0**
comp=Z,26nm,1.1s,mb5.2
HLID LR LR
comp=Z,7µm,21.0s,MS5.8
P13A Bates Ranch, G 59.97 303 ⇓P **P** **17 22 10.3 0.0**
baz=60
PGB Panagyurishte 59.99 53 *e*P **P** **17 22 11.6 +1.3**
214A Organ Pipe Nat 59.99 295 ⇑P **P** **17 22 11.5 +1.0**
baz=60
Q13A Wheeler Ranch, 60.03 303 ⇓P **P** **17 22 10.6 -0.1**

baz=60
S13A **Holt Ranch, En** 60.06 301 ⇑P P 17 22 11.0 +0.1
baz=60
R13A **O'Grain Ranch,** 60.07 302 ⇑P P 17 22 11.3 +0.3
baz=60
T13A **Saint George** 60.16 301 ⇑P P 17 22 11.9 +0.3
baz=60
H12A **Diamond D Ranc** 60.19 309 ⇓P P 17 22 11.0 -0.7
baz=60
ALE **Alert** 60.23 357 P P 17 22 09.0 -2.4
comp=Z,248nm,1.4s,mb6.0,SNR=17
U13A **Pakoon Wash** 60.28 300 ⇓P P 17 22 12.9 +0.4
baz=60
K12A **Draper Farm, C** 60.36 307 ⇓P P 17 22 12.6 -0.2
baz=60
V13A **Grand Canyon W** 60.37 299 ⇑P P 17 22 13.5 +0.4
baz=60
W13A **Hualapai Mount** 60.40 298 ⇑P P 17 22 14.0 +0.7
baz=60
PLD **Plovdiv** 60.42 53 P P 17 22 14.8 +1.5
X13A **Yucca** 60.42 298 ⇓P P 17 22 14.2 +0.7
baz=60
VOIR 60.44 50⇓*iP* P 17 22 13.4 0.0
VOIR 60.44 50 ⇓P P 17 22 13.3 0.0
I12A **Atlanta** 60.44 309 ⇑P P 17 22 12.9 -0.5
baz=60
BUR08 **Bucovina Ar. S** 60.44 47 *eP* P 17 22 12.8 -0.6
O12A **Currie** 60.45 304 ⇓P P 17 22 13.2 -0.3
baz=60
J12A **Stokes Ranch,** 60.45 308 ⇑P P 17 22 12.9 -0.6
baz=60
BURAR **Bucovina Array** 60.45 47⇑*iP* P 17 22 13.9 +0.5
BURAR **Bucovina Array** 60.45 47 ⇑P P 17 22 13.9 +0.4
RZN **Rozhen** 60.47 54 *eP* P 17 22 14.9 +1.3
M12A **Wells** 60.47 306 ⇓P P 17 22 13.4 -0.3
baz=60
L12A **House Creek Ra** 60.48 307 ⇑P P 17 22 13.1 -0.6
baz=60
B12A **Libby** 60.52 314 ⇑P P 17 22 13.5 -0.4
baz=60
Y13A **Salome** 60.54 297 ⇓P P 17 22 14.9 +0.6
baz=60
R12A **Pony Springs,** 60.55 302 ⇑P P 17 22 14.3 0.0
baz=60
N12A **Clover Valley,** 60.62 305 ⇑P P 17 22 14.3 -0.4
baz=61
YKA **Yellowknife Ar** 60.63 330 P P 17 22 11.9 -2.5
comp=Z,13nm,0.9s,mb5.1,baz=97,slow=7.5,SNR=48
YKA LR LR 17 47 23.8
comp=Z,2μm,19.2s,MS5.2,baz=115,slow=35
YKA PKP2bc 17 51 34.6
comp=Z,0.1nm,0.3s,baz=271,slow=2.2,SNR=4.3
YKA **Yellowknife Ar** 60.63 330 P P 17 22 11.9 -2.5
YKA LR LR 17 47 23.8
YKA ⇑*e* 17 51 34.6
Q12A **Willow Creek R** 60.65 303 ⇓P P 17 22 14.8 -0.1
baz=61
113A **Mohawk Valley,** 60.66 296 ⇓P P 17 22 16.0 +0.9
baz=61
PDMCI **Parker Dam,Lak** 60.72 298 ⇓P P 17 22 16.4 +0.9
baz=61
U12A **Valley of Fire** 60.74 300 ⇑P P 17 22 15.9 +0.3
baz=61
ELK **Elko** 60.78 305 P P 17 22 15.3 -0.5
ELK pmax pmax
comp=Z,42nm,1.0s
ELK **Elko** 60.78 305 *eP* P 17 22 15.0 -0.8
comp=Z,42nm,1.1s,mb5.5
ELK LR LR
comp=Z,7μm,22.0s,MS5.8
S12A **Delamar Landin** 60.83 301 ⇑P P 17 22 16.2 0.0
baz=61
T12A **Moapa** 60.84 300 ⇓P P 17 22 16.6 +0.3
baz=61
MFID **Camas Ranch** 60.97 308 ⇓P P 17 22 16.5 -0.5
baz=61
H11A **Donnelly** 61.01 310 ⇑P P 17 22 16.8 -0.4
baz=61
A11A **Hall Mountain,** 61.02 314 ⇑P P 17 22 16.5 -0.8
baz=61
I11A **Placerville** 61.02 309 ⇑P P 17 22 16.7 -0.7
baz=61
L11A **Cat Creek Ranc** 61.02 307 ⇑P P 17 22 17.2 -0.2
baz=61
E11A **Bogner Ranch,** 61.04 312 ⇑P P 17 22 17.1 -0.3
baz=61
B11A **Sandpoint** 61.04 314 ⇓P P 17 22 17.2 -0.3
baz=61
MLR **Muntele Rosu** 61.06 49 P P 17 22 17.0 -0.7
comp=Z,136nm,1.1s,mb6.0,baz=175,slow=3.5,SNR=53
MLR **Muntele Rosu** 61.06 49⇑*iP* P 17 22 18.8 +1.2
D11A **Klaveano Farm,** 61.09 312 ⇑P P 17 22 17.1 -0.7
baz=61
V12A **Nelson** 61.09 299 ⇓P P 17 22 18.4 +0.4
baz=61
M11A **Holland Ranch,** 61.12 306 ⇑P P 17 22 17.7 -0.4
baz=61
Y12C **Blythe** 61.12 297 ⇑P P 17 22 19.0 +0.7
baz=61
G11A **Walters Elk Ra** 61.14 310 ⇑P P 17 22 17.3 -0.8
baz=61
O11A **Cowboy Ranch,** 61.16 304 ⇓P P 17 22 18.3 0.0
baz=61
T11A **Corn Creek, Al** 61.17 301 ⇓P P 17 22 18.6 0.0
baz=61
SZH **Strazhica** 61.22 52 *eP* P 17 22 19.0 +0.2
Q11A **Duckwater** 61.31 303 ⇓P P 17 22 19.0 -0.4
baz=61
R11A **Troy Canyon, C** 61.31 302 ⇓P P 17 22 19.1 -0.4
baz=61
IDI **Anoyia** 61.37 61 P P 17 22 20.3 +0.4
comp=Z,80nm,1.0s,mb5.8,baz=304,slow=6.8,SNR=11
LDFC **Landfair** 61.39 299 *eP* P 17 22 20.9 +0.8
comp=Z,89nm,1.4s,mb5.7
VSU **Vasula** 61.45 35⇑*eP* P 17 22 18.6 -1.4
GLA **Glamis** 61.49 296 ⇑P P 17 22 21.7 +1.0
baz=61
GLA **Glamis** 61.49 296 P P 17 22 21.9 +1.2
GLA pmax pmax
comp=Z,42nm,1.2s,mb5.4
GLA **Glamis** 61.49 296 *eP* P 17 22 19.7 -1.0
comp=Z,42nm,1.2s,mb5.5
KAF **Kangasniemi** 61.49 30 *ep* P 17 22 18.8 -1.4
comp=Z,17nm,0.7s,mb5.3,baz=265,slow=6.6
KAF **Kangasniemi** 61.49 30 *eP* P 17 22 18.8 -1.4
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.3
ISR **Istrita** 61.51 50⇓*iP* P 17 22 22.4 +1.7
PLOR **Plostina** 61.53 49⇓*iP* P 17 22 22.3 +1.5
S11A **Rachel** 61.53 302 ⇓P P 17 22 21.4 +0.5
baz=62
NEW **Newport** 61.55 314 P P 17 22 20.3 -0.6
NEW pmax pmax
comp=Z,67nm,1.0s
NEW **Newport** 61.55 314 *eP* P 17 22 20.1 -0.8
comp=Z,67nm,1.0s,mb5.7
NEW LR LR
comp=Z,6μm,20.0s,MS5.7
L10A **Juniper Basin** 61.56 307 ⇑P P 17 22 21.0 -0.1
baz=62
IRM **Iron Mountain** 61.57 298 ⇓P P 17 22 21.9 +0.6
baz=62
VRI **Vrincioaia** 61.59 49⇓*iP* P 17 22 21.2 0.0
VRI **Vrincioaia** 61.59 49 ⇓P P 17 22 21.2 0.0
APE **Apeiranthos** 61.62 59⇑*iP* P 17 22 21.2 -0.4
APE **Apeiranthos** 61.62 59 ⇑P P 17 22 21.2 -0.4
E10A **Myers Farm, Un** 61.65 312 ⇑P P 17 22 21.8 +0.2
baz=62
KBS **Kingsbay** 61.71 11 *eP* P 17 22 21.5 0.0
KBS AMS AMS 17 43 36.3
comp=Z,749nm,21.2s,MS4.8
KBS **Kingsbay** 61.71 11 P P 17 22 22.3 +0.8
KBS pmax pmax
comp=Z,17nm,0.9s,mb5.2
KBS **Kingsbay** 61.71 11 *eP* P 17 22 20.4 -1.0
comp=Z,16nm,0.9s,mb5.2
KBS LR LR
comp=Z,903nm,20.0s,MS4.9
D10A **Wagner Farm, O** 61.73 312 ⇑P P 17 22 21.2 -0.9
baz=62
G10A **Bishop Farm, J** 61.74 310 ⇓P P 17 22 21.8 -0.4
baz=62
F10A **Beach Ranch, E** 61.77 311 ⇓P P 17 22 22.2 -0.2
baz=62
JMB **Yambol** 61.77 53 P P 17 22 24.4 +1.9
K10A **MacKenzie Ranc** 61.79 307 ⇑P P 17 22 22.1 -0.5
baz=62
A10A **Northport** 61.81 315 ⇑P P 17 22 22.4 -0.2
baz=62
ODB **Odobesti** 61.82 49⇑*iP* P 17 22 24.3 +1.5
ODB **Odobesti** 61.82 49 ⇑P P 17 22 24.3 +1.5
GMRC **Granite Mounta** 61.89 298 ⇑P P 17 22 23.8 +0.4
baz=62
Q10A **Clear Creek Ra** 61.89 303 ⇓P P 17 22 23.3 0.0
baz=62
BC3 **Big Chuckw Mtn** 61.90 297 ⇑P P 17 22 24.0 +0.5
baz=62
BMO **Blue Mountains** 61.91 310 P P 17 22 22.7 -0.7
BMO pmax pmax
comp=Z,26nm,1.3s,mb5.2
BMO **Blue Mountains** 61.91 310 *eP* P 17 22 21.5 -1.9
comp=Z,26nm,1.4s,mb5.2
BMO LR LR
comp=Z,3μm,19.0s,MS5.4
MNK **Minsk** 61.97 39 *eP* P 17 22 21.0 -2.6
TUQ **Turquoise Moun** 62.00 299 ⇑P P 17 22 24.4 +0.3
baz=62
TPNV **Topopah Spring** 62.03 301 ⇑P P 17 22 24.5 +0.2
baz=62
TPNV **Topopah Spring** 62.03 301 P P 17 22 24.9 +0.6
TPNV pmax pmax
comp=Z,51nm,1.1s,mb5.6
TPNV **Topopah Spring** 62.03 301 *eP* P 17 22 24.0 -0.3
comp=Z,51nm,1.2s,mb5.5
TPNV LR LR
comp=Z,4μm,21.0s,MS5.5
ARCES **ARCESS Array B** 62.14 22 P P 17 22 22.2 -2.3
comp=Z,52nm,0.8s,mb5.7,baz=263,slow=4.8,SNR=46
ARCES LR LR 17 44 30.7
comp=Z,1μm,18.9s,MS5.0,baz=252,slow=31
ARCES **ARCESS Array B** 62.14 22 P P 17 22 22.2 -2.3
ARCES LR LR 17 44 30.7
ARE0 **ARCESS Array S** 62.14 22 *eP* P 17 22 24.2 -0.2
S10A **Tonopah Range,** 62.16 302 ⇑P P 17 22 25.0 -0.2
baz=62
H09A **Burke** 62.18 310 ⇓P P 17 22 24.6 -0.6
baz=62
NEF **NEVSHA** 62.20 52 *eP* P 17 22 25.5 +0.1
G09A **Cove** 62.21 310 ⇓P P 17 22 24.8 -0.5
baz=62
B09A **Rice** 62.23 314 ⇓P P 17 22 24.7 -0.8
baz=62
F09A **S2 Ranch, Elgi** 62.27 311 ⇑P P 17 22 25.2 -0.5
baz=62
BELC **Belle Mtn.** 62.29 298 ⇓P P 17 22 26.5 +0.4
baz=62
I09A **Lost Marbles R** 62.30 309 ⇑P P 17 22 25.4 -0.6
baz=62
BMN **Battle Mountai** 62.31 305 P P 17 22 29.0 +2.8
BMN pmax pmax
comp=Z,21nm,1.1s,mb5.2
BMN **Battle Mountai** 62.31 305 *eP* P 17 22 25.5 -0.7
comp=Z,21nm,1.1s,mb5.2
BMN LR LR
comp=Z,6μm,21.0s,MS5.8
O09A **Fish Creek Ran** 62.32 305 ⇑P P 17 22 25.7 -0.5
baz=62
C09A **Chrisman Ranch** 62.35 313 ⇑P P 17 22 25.3 -1.0
baz=62
E09A **Wood Farm, Sta** 62.36 312 ⇓P P 17 22 25.6 -0.8
baz=62
P09A **Austin** 62.36 304 ⇑P P 17 22 26.3 -0.2
baz=62
M09A **Marrel Ranch,** 62.36 306 ⇓P P 17 22 26.2 -0.2
baz=62
J09A **Fry Pan Ranch,** 62.38 308 ⇓P P 17 22 26.0 -0.5
baz=62
HEC **Hector,Ludlow** 62.42 299 ⇓P P 17 22 27.5 +0.5
baz=62
D09A **Jones Farm, Ri** 62.43 312 ⇑P P 17 22 26.1 -0.8
baz=62
R09A **Tonopah** 62.49 302 ⇑P P 17 22 27.3 -0.1
baz=62
Q09A **Carvers** 62.49 303 ⇑P P 17 22 27.2 -0.1
baz=62
HARR **Harsova** 62.53 50⇓*iP* P 17 22 26.6 -0.9
TPH **Tonopah** 62.63 302 *eP* P 17 22 31.3 +3.0
TPH pmax pmax
comp=Z,30nm,1.3s,mb5.3
TPH MLR MLR
comp=Z,6μm,20.0s,MS5.8
TPH **Tonopah** 62.63 302 *eP* P 17 22 31.3 +2.9
comp=Z,30nm,1.3s,mb5.3
TPH LR LR
comp=Z,6μm,20.0s,MS5.8
S09A **Goldfield** 62.68 302 ⇑P P 17 22 28.8 +0.1
baz=63
KEV **Kevo** 62.69 22 *ep* P 17 22 27.4 -0.8
comp=Z,46nm,0.8s,mb5.7
KEV **Kevo** 62.69 22 P P 17 22 27.8 -0.4
GSC **Goldstone** 62.73 299 P P 17 22 32.7 +3.7
GSC **Goldstone** 62.73 299 *eP* P 17 22 29.3 +0.2
comp=Z,0.9nm,1.1s
PFO **Pinyon Flat Ob** 62.73 297 PFAKE 17 22 40.0 +11
PFO LR LR
comp=Z,3μm,22.0s,MS5.4
D08A **Wollman Farm,** 62.85 312 ⇓P P 17 22 29.0 -0.6
baz=63
F08A **Pendleton** 62.86 311 ⇓P P 17 22 29.0 -0.8
baz=63
C08A **Higginbotham F** 62.87 313 ⇓P P 17 22 29.1 -0.6
baz=63
J08A **Circle Bar Ran** 62.90 308 ⇓P P 17 22 29.0 -1.0
baz=63
TIRR **Tirgusor** 62.90 50⇑*iP* P 17 22 29.9 -0.1
TIRR **Tirgusor** 62.90 50 ⇑P P 17 22 29.9 -0.1
KIEV **Kiev** 62.93 43 P P 17 22 29.3 -0.8
KIEV pmax pmax
comp=Z,48nm,1.0s,mb5.6
KIEV **Kiev** 62.93 43 *eP* P 17 22 29.2 -0.9
comp=Z,48nm,1.0s,mb5.6
KIEV LR LR
comp=Z,1μm,20.0s,MS5.1
A08A **Turner Farm, O** 62.94 315 ⇑P P 17 22 29.6 -0.6
baz=63
L08A **Fields** 62.94 307 ⇓P P 17 22 29.6 -0.7
baz=63
AKASG **Malin Array Be** 62.94 43 P P 17 22 27.7 -2.5
comp=Z,42nm,0.9s,mb5.6,baz=271,slow=5.9,SNR=54
AKASG LR LR 17 46 08.8
comp=Z,1μm,19.4s,MS5.1,baz=285,slow=32
AKASG **Malin Array Be** 62.94 43 *i* P P 17 22 27.7 -2.4
AKASG pmax pmax
comp=Z,42nm,0.9s
AKASG **Malin Array Be** 62.94 43 P P 17 22 27.7 -2.5
AKASG LR LR 17 46 08.8
AKBB **Malin Array Si** 62.94 43 P P 17 22 29.3 -0.8
AKBB **Malin Array Si** 62.94 43 *eP* P 17 22 29.1 -1.1
KIS **Kishinev** 62.94 48⇓*iP* P 17 22 29.0 -1.2
KIS *i* 17 22 35.0
KIS *eS* S 17 30 53.0 -7.2
KIS *ePS* 17 31 12.0
KIS pmax pmax
comp=Z,185nm,1.0s,mb6.2
KIS **Kishinev** 62.94 48 *iP* P 17 22 29.0 -1.2
comp=Z,200nm,1.0s,mb6.2
KIS **Kishinev** 62.94 48 *ePP* PP 17 25 10.0 +22
KIS *eS* S 17 30 53.0 -7.2
N08A **GE Springer Mi** 62.96 305 ⇑P P 17 22 30.1 -0.3
baz=63
K08A **Mann Creek Ran** 62.98 308 ⇑P P 17 22 30.0 -0.6
baz=63
E08A **Dider Farm, El** 62.99 312 ⇓P P 17 22 29.7 -0.9
baz=63
B08A **Colville Reser** 63.02 314 ⇑P P 17 22 30.6 -0.1
baz=63
G08A **Pilot Rock** 63.04 310 ⇓P P 17 22 30.2 -0.8
baz=63
WVOR **Wild Horse Val** 63.12 307 P P 17 22 33.2 +1.7
WVOR pmax pmax
comp=Z,26nm,1.4s,mb5.2
WVOR **Wild Horse Val** 63.12 307 *eP* P 17 22 31.7 +0.2
comp=Z,26nm,1.4s,mb5.2
WVOR LR LR
comp=Z,5μm,22.0s,MS5.6
MPMC **Manual Prospec** 63.15 300 ⇓P P 17 22 31.9 +0.1
baz=63
DAC **Darwin (Calif)** 63.20 300 PFAKE 17 22 40.0 +7.8
DAC LR LR
comp=Z,2μm,19.0s,MS5.3
H2OWA **Water** 63.25 312 P P 17 22 32.5 +0.2
HAWA **Hanford** 63.33 312 *eP* P 17 22 32.0 -0.8
comp=Z,67nm,1.2s,mb5.7
HAWA LR LR
comp=Z,4μm,19.0s,MS5.6
NVAR **Mina Array Bea** 63.42 303 P P 17 22 32.8 -0.8
comp=Z,5.4nm,1.0s,mb4.6,baz=82,slow=6.1,SNR=15
NVAR PKP2bc 17 51 37.1
comp=Z,3.0nm,1.0s,baz=250,slow=4.0,SNR=9.2
NVAR **Mina Array Bea** 63.42 303 P P 17 22 32.8 -0.8
NVAR ⇑*e* 17 51 37.1
WTV **Waterville** 63.49 313 P P 17 22 32.2 -1.6
E07A **Sunnyside** 63.53 312 ⇑P P 17 22 33.8 -0.4
baz=64
B07A **Winthrop** 63.53 314 ⇓P P 17 22 33.9 -0.2
baz=64
K07A **Rock Creek Ran** 63.54 308 ⇓P P 17 22 33.6 -0.7
baz=64
G07A **Ruggs Ranch, H** 63.54 311 ⇑P P 17 22 34.0 -0.2
baz=64
I07A **Izee** 63.56 309 ⇓P P 17 22 33.4 -1.0
baz=64
C07A **Waterville** 63.56 313 ⇑P P 17 22 33.6 -0.7
baz=64
N07B **Gerlach** 63.59 305 ⇓P P 17 22 34.6 0.0
baz=64
O07A **Toulon** 63.60 305 ⇑P P 17 22 34.8 0.0
baz=64
BFSC **Mount Baldy St** 63.60 298 ⇑P P 17 22 35.4 +0.5
baz=64
F07A **Phinny Hill Vi** 63.65 311 ⇓P P 17 22 34.6 -0.4
baz=64
M07A **Soldier Meadow** 63.65 306 ⇑P P 17 22 34.8 -0.2
baz=64
A07A **Ashnola River,** 63.66 315 ⇓P P 17 22 34.8 -0.2
baz=64
EDW2 **Edwards Air Fo** 63.76 299 ⇓P P 17 22 36.4 +0.5
baz=64
JOF **Joensuu** 63.85 30 *ep* P 17 22 33.9 -2.1
comp=Z,20nm,1.0s,mb5.1
JOF **Joensuu** 63.85 30 *eP* P 17 22 33.9 -2.1
JOF pmax pmax
comp=Z,20nm,1.0s,mb5.1
H06A **Lindquist Farm** 64.07 310 ⇑P P 17 22 37.4 -0.3
baz=64
G06A **Carlson Farm,** 64.22 311 ⇑P P 17 22 38.3 -0.5
baz=64
N06A **Buffalo Meadow** 64.24 306 ⇓P P 17 22 38.5 -0.4
baz=64
F06A **Goldendale** 64.26 311 ⇓P P 17 22 38.4 -0.6
baz=64
R06C **Coleville** 64.29 303 ⇑P P 17 22 39.5 +0.2
baz=64
E06A **Yakima** 64.31 312 ⇑P P 17 22 38.8 -0.5
baz=64
O06A **Flanigan** 64.32 305 ⇑P P 17 22 39.8 +0.3
baz=64
OSI **Osito Adit** 64.40 299 *eP* P 17 22 43.3 +3.2
comp=Z,76nm,1.3s,mb5.6
MOD **Modoc** 64.42 307 *eP* P 17 22 39.2 -0.9
comp=Z,27nm,1.1s,mb5.2
MOD LR LR
comp=Z,5μm,21.0s,MS5.7
RPW **Rockport** 64.46 314 P P 17 22 37.8 -2.5
G05A **Wamic** 64.70 311 ⇓P P 17 22 42.0 +0.2
baz=65
H05A **Madras** 64.71 310 ⇓P P 17 22 42.1 +0.2
baz=65
F05A **White Salmon** 64.72 311 ⇑P P 17 22 42.1 +0.2
baz=65
K05A **Summer Lake** 64.74 308 ⇓P P 17 22 42.1 0.0
baz=65
APA **Apatity** 64.83 25⇓*iP* P 17 22 41.5 -0.8
APA *i* 17 22 50.5
APA *i* 17 32 00.0
APA pmax pmax
comp=Z,54nm,1.2s,mb5.5
B05A **Bryant** 64.87 314 ⇓P P 17 22 42.6 -0.3
baz=65
CMB **Columbia Colle** 65.10 303 P P 17 22 45.3 +0.7
CMB pmax pmax
comp=Z,22nm,1.0s,mb5.1
CMB **Columbia Colle** 65.10 303 *eP* P 17 22 44.8 +0.1
comp=Z,22nm,1.1s,mb5.1
CMB LR LR
comp=Z,9μm,20.0s,MS6.0
LVZ **Lovozero** 65.31 24 PFAKE 17 23 00.0 +15
LVZ LR LR
comp=Z,1μm,20.0s,MS5.1
LBCM **Butte Creek Ri** 65.36 306 P P 17 22 46.2 0.0
H04A **Detroit Lake** 65.39 310 ⇑P P 17 22 46.8 +0.5
baz=65
PGC **Sidney** 65.72 315 *eP* P 17 22 49.0 +0.7
comp=Z,2.1nm,1.1s,mb4.1
U04C **Hernandez Rese** 65.72 301 ⇓P P 17 22 49.4 +0.7
baz=66
B04A **Port Angeles** 65.83 314 ⇑P P 17 22 49.0 -0.1
baz=66
G03A **Yamhill** 66.06 311 ⇑P P 17 22 51.2 +0.5
baz=66
SAO **San Andreas Ge** 66.17 301 PFAKE 17 23 00.0 +8.5
SAO LR LR
comp=Z,5μm,19.0s,MS5.7
COR **Corvallis** 66.19 310 PFAKE 17 23 00.0 +8.5
COR LR LR
comp=Z,4μm,22.0s,MS5.5
YBH **Yreka Blue Hor** 66.22 307 P P 17 22 51.3 -0.5
YBH pmax pmax
comp=Z,25nm,1.1s
YBH **Yreka Blue Hor** 66.22 307 *eP* P 17 22 51.0 -0.8
comp=Z,25nm,1.1s,mb5.2
YBH LR LR
comp=Z,4μm,20.0s,MS5.6
HUMO **Hull Mountain** 66.26 308 *eP* P 17 22 51.3 -0.7
comp=Z,17nm,1.1s,mb5.0
HUMO LR LR
comp=Z,3μm,20.0s,MS5.6
WDC **Whiskeytown Da** 66.30 306 P P 17 22 52.3 0.0
WDC pmax pmax
comp=Z,16nm,1.0s,mb5.0
WDC **Whiskeytown Da** 66.30 306 *eP* P 17 22 51.1 -1.2
comp=Z,16nm,1.1s,mb5.0
WDC LR LR
comp=Z,3μm,22.0s,MS5.5
ANTO **Ankara** 66.79 55⇑*iP* P 17 22 56.3 +0.9
ANTO **Ankara** 66.79 55 *eP* P 17 22 55.9 +0.5
comp=Z,107nm,1.5s,mb5.7
ANTO LR LR
comp=Z,755nm,21.0s,MS4.9
SIM **Simferopol'** 66.86 49 *eP* P 17 22 54.8 -1.0
SIM pmax pmax
comp=Z,24nm,1.2s,mb5.1
SIM MLR MLR
comp=Z,1μm,17.4s,MS5.2
OBN **Obninsk** 66.98 38 P P 17 22 56.8 +0.5
comp=Z,554nm,1.0s,mb6.5,SNR=5.5
OBN **Obninsk** 66.98 38⇑*eP* P 17 22 55.2 -1.1
OBN *i* 17 23 00.6
OBN *e* 17 23 21.3
OBN *eSS* SS 17 36 02.4 -5.3
OBN pmax pmax
comp=Z,111nm,1.0s,mb5.8
OBN **Obninsk** 66.98 38 *eP* P 17 22 55.2 -1.1
comp=Z,105nm,1.0s,mb5.8
OBN LR LR
comp=Z,3μm,19.0s,MS5.5
HOPS **Hopland** 67.00 304 *eP* P 17 22 57.3 +0.5
comp=Z,113nm,1.3s,mb5.7
HOPS LR LR
comp=Z,5μm,22.0s,MS5.7
MCCM **Marconi Confer** 67.01 303 PFAKE 17 23 10.0 +13
MCCM LR LR
comp=Z,9μm,20.0s,MS6.0
TRIS **Tristan da Cun** 67.03 152 PFAKE 17 23 10.0 +13
TRIS LR LR
comp=Z,2μm,21.0s,MS5.4
PLCA **Paso Flores** 67.42 201 P P 17 22 57.8 -1.4
comp=Z,9.2nm,1.0s,mb4.8,baz=21,slow=11,SNR=8.9
PLCA LR LR 17 52 38.3
comp=Z,1μm,20.0s,MS5.1,baz=23,slow=36
PLCA **Paso Flores** 67.42 201 P P 17 22 58.2 -1.0
PLCA pmax pmax
comp=Z,93nm,1.8s
BR131 **Keskin Array S** 67.46 55 PFAKE 17 23 10.0 +10
BR131 LR LR
comp=Z,579nm,19.0s,MS4.8
BRTR **Keskin Array B** 67.46 55 P P 17 22 58.2 -1.4
comp=Z,19nm,1.0s,mb5.1,baz=262,slow=4.9,SNR=40
BRTR LR LR 17 51 49.5
comp=Z,505nm,18.4s,MS4.8,baz=81,slow=35
MOS **Moscow** 67.49 37 *eP* P 17 22 57.2 -2.4

MOS pmax pmax
comp=Z,129nm,1.2s,mb5.8
KLMR Klimovskoe 67.84 32 *e*P **P 17 23 00.0 -1.7**
KLMR pmax pmax
comp=Z,109nm,1.2s,mb5.8
BBB Bella Bella 68.16 319 LR LR 17 51 53.8
comp=Z,5µm,18.2s,MS5.8,baz=79,slow=35
CSS Prodhromos 68.22 60 PFAKE 17 23 20.0 +15
CSS LR LR
comp=Z,1µm,20.0s,MS5.1
DLBC Dease Lake 68.30 326 LR LR 17 53 27.8
comp=Z,2µm,18.2s,MS5.3,baz=92,slow=36
DLBC Dease Lake 68.30 326 *e*P **P 17 23 04.7 +0.1**
VOR Voronezh 69.04 42 P **P 17 23 08.0 -1.4**
VOR pmax pmax
comp=Z,150nm,1.5s,mb5.7
VSR Storozhevoye 69.11 42 *e*P **P 17 23 09.4 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,8.0nm,1.1s
VSR pmax pmax
comp=E,40nm,1.0s
ANN Anapa 69.21 49 *e*P **P 17 23 10.0 -0.5**
ANN *e*S S 17 32 13.4 -3.2
ANN pmax pmax
comp=Z,98nm,1.3s,mb5.6
ANN MLR MLR
comp=Z,606nm,16.0s,MS4.9
VORD Divnogorie 69.24 42 *e*P **P 17 23 09.6 -1.0**
VORD pmax pmax
comp=Z,60nm,1.4s,mb5.3
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,50nm,1.0s
WRAK Wrangell Islan 69.87 324 PFAKE 17 23 30.0 +16
WRAK LR LR
comp=Z,4µm,19.0s,MS5.7
MMAI Mount Meron Ar 70.36 62 P **P 17 23 18.6 +0.8**
comp=Z,33nm,1.0s,mb5.2,baz=264,slow=5.4,SNR=6.4
EIL Elat 70.86 65 P **P 17 23 21.5 +0.5**
comp=Z,20nm,1.0s,mb5.0,baz=325,slow=5.0,SNR=5.8
SOC Sochi 71.08 50*d i*P **P 17 23 21.0 -1.0**
SOC *e**PP pP 17 23 28.5 +3.3
SOC *e* 17 23 38.8
SOC *e*PPP 17 27 46.7
SOC *e*S S 17 32 36.4 -2.2
SOC *e* 17 33 23.9
SOC *e*SS SS 17 37 11.4 0.0
SOC pmax pmax
comp=Z,49nm,0.8s,mb5.5
SOC MLR MLR
comp=Z,419nm,16.0s,MS4.8
DAWY Dawson 71.66 332 *e*P **P 17 23 22.7 -2.5**
ASF Jabal al Asfar 71.80 62 P **P 17 23 27.4 +0.8**
comp=Z,17nm,1.0s,mb4.9,baz=158,slow=2.9,SNR=7.8
EGAK Eagle 72.22 333 PFAKE 17 23 40.0 +11
EGAK LR LR
comp=Z,4µm,20.0s,MS5.7
GOF Gofitskoye 73.02 48 *e*P **P 17 23 40.7 +7.1**
GOF pmax pmax
comp=Z,80nm,1.0s,mb5.6
KIV Kislovodsk 73.07 49 P **P 17 23 35.6 +1.6**
comp=Z,516nm,1.2s,mb6.3,SNR=10
KIV Kislovodsk 73.07 49 ⇑P **P 17 23 34.9 +1.0**
SNR=20
KIV Kislovodsk 73.07 49 *e*P **P 17 23 34.3 +0.3**
KIV *e* 17 23 53.0
KIV *e*PPP 17 27 57.2
KIV *e*S S 17 32 54.4 -7.0
KIV *e*SS SS 17 37 38.5 -3.4
KIV pmax pmax
comp=Z,180nm,6.0s
KIV pmax pmax
comp=Z,123nm,1.2s,mb5.7
KIV MLR MLR
comp=Z,625nm,19.0s,MS4.9
KIV Kislovodsk 73.07 49 *e*P **P 17 23 34.3 +0.3**
comp=Z,145nm,1.3s,mb5.8
KIV LR LR
comp=Z,750nm,19.0s,MS5.0
MENT Mentasta 73.84 332 *e*P **P 17 23 37.0 -1.1**
TSUM Tsumeb 74.06 119 *e*P **P 17 23 39.9 -0.2**
comp=Z,57nm,1.5s,mb5.3
TSUM LR LR
comp=Z,3µm,20.0s,MS5.6
COLA College 74.91 334 P **P 17 23 43.5 -0.8**
COLA pmax pmax
comp=Z,24nm,1.1s,mb5.0
COLA College 74.91 334 *e*P **P 17 23 43.2 -1.1**
comp=Z,24nm,1.1s,mb5.0
COLA LR LR
comp=Z,6µm,19.0s,MS5.9
EFI East Falkland 74.94 188 PFAKE 17 24 00.0 +15
EFI LR LR
comp=Z,2µm,20.0s,MS5.3
GNI Garni 75.61 52 ⇓P **P 17 23 49.1 +0.2**
SNR=14
GNI Garni 75.61 52⇑ *e*P **P 17 23 49.1 +0.2**
GNI pmax pmax
comp=Z,62nm,1.0s
GNI Garni 75.61 52 *e*P **P 17 23 48.7 -0.2**
comp=Z,150nm,1.4s,mb5.7
GNI LR LR
comp=Z,599nm,21.0s,MS4.9
TRF Thorofare Moun 76.44 334 *e*P **P 17 23 53.5 +0.4**
comp=Z,140nm,1.8s,mb5.6
SOKR Solikamsk 76.49 31*c i*P **P 17 23 53.5 0.0**
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.4
KTH Kantishna Hill 76.66 334 *e*P **P 17 23 52.9 -1.5**
comp=Z,31nm,1.0s,mb5.2
MAK Makhachkala 76.71 49 *e*P **P 17 23 57.6 +2.5**
MAK *e*PPP 17 28 37.1
MAK *e*S S 17 33 40.8 -1.3
MAK *e*SS SS 17 38 38.4 +1.1
MAK *e*SSS 17 41 59.9
MAK pmax pmax
comp=Z,502nm,1.4s,mb6.2
MAK MLR MLR
comp=Z,948nm,15.0s,MS5.2
CHUM Lake Minchumin 77.08 334 *e*P **P 17 23 55.1 -1.7**
comp=Z,34nm,1.2s,mb5.2
ARU Arti 78.57 33 P **P 17 24 05.9 +0.7**
comp=Z,160nm,1.2s,mb5.8,SNR=5.6
ARU Arti 78.57 33*c i*P **P 17 24 04.7 -0.5**
ARU *e* 17 26 59.5
ARU *e*S S 17 33 59.9 -1.9
ARU SS SS 17 39 03.8 -0.8
ARU pmax pmax
comp=Z,12nm,0.6s,mb5.0
ARU Arti 78.57 33 *e*P **P 17 24 04.2 -1.0**
comp=Z,99nm,1.6s,mb5.5
ARU LR LR
comp=Z,2µm,21.0s,MS5.4
SVE Sverdlovsk 79.45 33⇓ *e*P **P 17 24 09.3 -0.7**
SVE *e*S S 17 34 14.0 +2.9
SVE pmax pmax
comp=Z,86nm,1.3s,mb5.5
KDAK Kodiak Island 79.87 329 PFAKE 17 24 20.0 +7.7
KDAK LR LR
comp=Z,4µm,20.0s,MS5.8
LSZ Lusaka 81.06 111 P **P 17 24 18.5 -0.8**
LSZ pmax pmax
comp=Z,27nm,1.0s,mb5.1
LSZ Lusaka 81.06 111 *e*P **P 17 24 18.4 -1.0**
comp=Z,27nm,1.0s,mb5.1
LSZ LR LR
comp=Z,2µm,19.0s,MS5.5
LBTB Lobatse 83.38 120 P **P 17 24 30.0 -1.3**
LBTB pmax pmax
comp=Z,67nm,1.2s,mb5.5
LBTB Lobatse 83.38 120 *e*P **P 17 24 29.8 -1.6**
comp=Z,67nm,1.3s,mb5.5
LBTB LR LR
comp=Z,4µm,20.0s,MS5.8
SUR Sutherland 83.45 129 PFAKE 17 24 40.0 +8.5
SUR LR LR
comp=Z,3µm,22.0s,MS5.6
BOSA Boshof 84.85 124 P **P 17 24 37.6 -1.1**
comp=Z,18nm,1.0s,mb5.2,baz=294,slow=4.2,SNR=12
BOSA LR LR 17 58 26.8
comp=Z,2µm,18.5s,MS5.5,baz=316,slow=33
BOSA Boshof 84.85 124 P **P 17 24 38.3 -0.5**
BOSA pmax pmax
comp=Z,57nm,1.3s,mb5.5
TIXI Tiksi 85.79 2⇑ *e*P **P 17 24 41.6 -1.1**
TIXI pmax pmax
comp=Z,58nm,1.4s,mb5.6
TIXI MLR MLR
comp=Z,400nm,17.0s,MS4.9
TIXI Tiksi 85.79 2 *e*P **P 17 24 41.4 -1.3**
comp=Z,48nm,1.2s,mb5.6
TIXI LR LR
comp=Z,535nm,20.0s,MS4.9
BRVK Borovoye 86.14 33 P **P 17 24 45.9 +1.1**
comp=Z,139nm,1.1s,mb6.1,SNR=9.7
BRVK Borovoye 86.14 33 P **P 17 24 44.3 -0.5**
BRVK pmax pmax
comp=Z,60nm,1.1s,mb5.7
BRVK Borovoye 86.14 33 *e*P **P 17 24 44.1 -0.7**
comp=Z,38nm,1.1s,mb5.5
BRVK LR LR
comp=Z,2µm,20.0s,MS5.5
BVAR Borovoye Array 86.22 33 P **P 17 24 44.7 -0.5**
comp=Z,17nm,0.9s,mb5.3,baz=282,slow=3.1,SNR=38
BILL Bilibino 86.59 349 P **P 17 24 45.0 -1.8**
BILL *e* 17 24 51.4
BILL *e* 17 35 22.4
BILL PS 17 36 26.0
BILL pmax pmax
comp=Z,36nm,2.0s,mb5.3
BILL MLR MLR
comp=Z,1µm,17.0s,MS5.3
BILL Bilibino 86.59 349 *e*P **P 17 24 45.0 -1.8**
BILL LR LR
comp=Z,1µm,19.0s,MS5.3
PMSA Palmer Station 88.44 188 PFAKE 17 25 10.0 +15
PMSA LR LR
comp=Z,1µm,19.0s,MS5.3
HATD Hatta, Dubai 90.19 63 ⇑P **P 17 25 04.3 -0.5**
SNR=7.2
NVS Novosibirsk 91.03 27 *e*P **P 17 25 04.6 -3.4**
NVS pmax pmax
comp=Z,55nm,1.7s,mb5.6
NVS pmax pmax
comp=N,33nm,2.2s
HOQ Hoqain 91.69 64 P **P 17 25 11.4 -0.3**
SNR=7.8
KURK Kurchatov 91.69 32 P **P 17 25 11.0 -0.2**
comp=N,109nm,1.2s,mb6.1,SNR=7.1
KURK Kurchatov 91.69 32 P **P 17 25 09.7 -1.5**
SNR=11
KURK Kurchatov 91.69 32 P **P 17 25 10.1 -1.1**
comp=N,12nm,0.9s,mb5.2,baz=310,slow=4.3,SNR=27
KURK LR LR 18 05 52.5
comp=N,699nm,18.2s,MS5.1,baz=315,slow=35
KURK Kurchatov 91.69 32 P **P 17 25 10.1 -1.1**
KURK LR LR 18 05 52.5
ZAA0 Zalesovo Array 92.32 27 *e*P **P 17 25 12.4 -1.6**
ZALV Zalesovo Beam 92.32 27 P **P 17 25 12.5 -1.5**
comp=N,11nm,0.9s,mb5.2,baz=316,slow=4.1,SNR=28
ZALV PP PP 17 28 49.4 -4.5
comp=N,3.4nm,1.0s,baz=302,slow=8.5,SNR=4.3
ZALV LR LR 18 04 29.3
comp=N,726nm,20.0s,MS5.1,baz=300,slow=34
ZALV Zalesovo Beam 92.32 27 P **P 17 25 12.5 -1.5**
ZALV 17 28 49.4
ZALV Zalesovo Beam 92.32 27 P **P 17 25 12.5 -1.5**
ZALV PP PP 17 28 49.4 -4.5
ZALV LR LR 18 04 29.3
EKS2 Erkin-Say 94.00 40 *e*P **P 17 25 21.2 -0.8**
comp=N,7.9nm,1.1s,mb5.1
EKS2 LR LR
comp=Z,1µm,20.0s,MS5.3
FRU Bishkek 94.39 40 *e*P **P 17 25 19.0 -4.8**
AAK Ala-Archa 94.44 40⇑ *i*P **P 17 25 24.4 +0.4**
AAK pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
AAK Ala-Archa 94.44 40 *e*P **P 17 25 23.4 -0.7**
comp=Z,18nm,1.6s,mb5.3
AAK LR LR
comp=Z,1µm,21.0s,MS5.3
ADK Adak 94.49 332 PFAKE 17 25 40.0 +16
ADK LR LR
comp=Z,2µm,19.0s,MS5.7
TKM2 Tokmak 2 94.92 39 P **P 17 25 26.5 +0.3**
TKM2 pmax pmax
comp=Z,23nm,1.6s,mb5.4
TKM2 Tokmak 2 94.92 39 *e*P **P 17 25 25.6 -0.6**
comp=Z,23nm,1.7s,mb5.3
TKM2 LR LR
comp=Z,992nm,20.0s,MS5.3
YAK Yakutsk 95.44 2 *i*P **P 17 25 30.2 +2.0**
YAK pmax pmax
comp=Z,51nm,2.4s,mb5.5
YAK Yakutsk 95.44 2 PFAKE 17 25 40.0 +12
YAK LR LR
comp=Z,717nm,20.0s,MS5.1
MK31 Makanchi Array 96.10 33 *e*P **P 17 25 30.6 -0.9**
MKAR Makanchi Array 96.10 33 P **P 17 25 31.1 -0.5**
comp=Z,3.5nm,1.0s,mb4.7,baz=318,slow=3.3,SNR=6.4
MKAR PKKPbc PKKPbc 17 42 17.2 -2.2
comp=Z,1.2nm,1.1s,baz=57,slow=8.8,SNR=4.3
MKAR LR LR 18 06 32.8
comp=Z,2µm,20.6s,MS5.5,baz=310,slow=34
VNA1 Neumayer--Stat 96.65 168 *e*P **P 17 25 34.4 +1.1**
VNA1 *e* 17 25 39.6
VNA1 *e* 17 25 51.0
VNA3 Neumayer Olymp 96.90 169 *e*P **P 17 25 35.8 +1.4**
VNA3 *e* pP 17 25 40.4 +2.8
VNA3 *e* 17 25 50.8
VNA2 Neumayer--Watz 97.05 168 *e*P **P 17 25 36.0 +1.0**
baz=357,slow=1.6
VNA2 *e* 17 25 41.2
VNA2 *e* 17 25 51.8
BOD Bodaibo 97.89 11 *e*P **P 17 25 34.7 -4.6**
BOD pmax pmax
comp=Z,8.0nm,1.3s,mb5.1
SNAA Sanae 98.52 168 *e*P **P 17 25 42.2 +0.5**
SNAA *e* 17 25 47.7
SNAA *e* 17 25 57.8
NIL Nilore 98.86 48 PFAKE 17 26 00.0 +16
NIL LR LR
comp=Z,150nm,21.0s,MS4.5
ABPO Ambohimpanom 99.21 107 PFAKE 17 26 00.0 +14
ABPO LR LR
comp=Z,2µm,20.0s,MS5.6
WMQ Urumqi 100.90 33 *e*P Pdif 17 25 53.0 +0.1
WMQ PP PP 17 30 03.4 +3.1
WMQ PPP 17 32 10.5
WMQ SKS 17 36 30.3
WMQ S Sdif 17 37 26.6 -4.6
WMQ SS SS 17 44 28.0 0.0
WMQ LR LR
comp=N,1µm,26.0s,MS5.4
WMQ LR LR
comp=E,1µm,25.0s,MS5.4
WMQ LR LR
comp=Z,1µm,26.0s,MS5.4
TLY Talaya 101.01 19 PFAKE 17 26 00.0 +6.6
TLY LR LR
comp=Z,607nm,20.0s,MS5.1
MSEY Mahe Island 101.55 90 PFAKE 17 26 10.0 +14
MSEY LR LR
comp=Z,3µm,19.0s,MS5.8
PET Petropavlovsk 101.79 346 PFAKE 17 26 10.0 +13
PET LR LR
comp=Z,1µm,19.0s,MS5.4
ULN Ulaanbaatar 105.42 19 PFAKE 17 30 40.0 +13
ULN LR LR
comp=Z,747nm,19.0s,MS5.2
HIA Hailar 107.07 10 PFAKE 17 30 40.0 +10
HIA LR LR
comp=Z,820nm,19.0s,MS5.3
HABR Khabarovsk 109.13 360 *e*P Pdif 17 26 22.2 -7.3
HABR *e* 17 30 59.5
HABR *e*PS PS 17 40 23.7 -3.7
GTA Gaotai 110.03 28 *e*PKP PKiKP 17 30 38.1 +2.5
GTA PP PP
comp=Z,219nm,7.5s
GTA LR LR
comp=N,641nm,22.8s,MS5.3
GTA LR LR
comp=E,710nm,23.4s,MS5.3
GTA LR LR
comp=Z,1µm,24.0s,MS5.3
YSS Yuzh-Sakhalins 110.29 354 PFAKE 17 30 50.0 +14
YSS LR LR
comp=Z,578nm,21.0s,MS5.1
MIDW Midway 111.55 315 PFAKE 17 30 50.0 +11
MIDW LR LR
comp=Z,3µm,19.0s,MS5.9
QSPA South Pole Qui 112.66 180 PFAKE 17 30 50.0 +11
QSPA LR LR
comp=Z,597nm,20.0s,MS5.2
MDJ Mudanjiang 112.81 4 PFAKE 17 30 50.0 +9.2
MDJ LR LR
comp=Z,727nm,20.0s,MS5.3
LSA Lhasa 113.02 41 PKP PKiKP 17 30 42.0 +0.4
LSA Lhasa 113.02 41 PFAKE 17 30 50.0 +8.4
LSA LR LR
comp=Z,585nm,22.0s,MS5.1
HHC Hu-ho-hao-te 113.14 19 *e*PKP PKiKP 17 30 36.0 -5.5
HHC PP PP 17 31 29.2 -0.6
HHC PKS 17 34 11.6
HHC SKS SKSdf 17 37 43.8 -10
HHC PP PP
comp=Z,69nm,4.7s
HHC LR LR
comp=N,496nm,16.7s,MS5.4
HHC LR LR
comp=E,662nm,16.6s,MS5.4
HHC LR LR
comp=Z,942nm,20.2s,MS5.4
LZH Lanzhou 114.55 27 *e*PKP PKiKP 17 30 41.0 -3.4
LZH XPKP 17 30 47.5
LZH PP PP 17 31 44.5 +4.5
LZH SKKS SKKSac 17 38 31.2 -12
LZH PP PP
comp=Z,304nm,6.8s
LZH LR LR
comp=N,927nm,17.9s
LZH LR LR
comp=Z,1µm,20.5s,MS5.6
ERM Erimo 115.14 353 PFAKE 17 31 00.0 +15
ERM LR LR
comp=Z,903nm,20.0s,MS5.4
BJI Beijing 115.17 16 PKP PKiKP 17 30 42.1 -3.3
BJI PP PP 17 31 42.7 -1.4
BJI SS SS 17 47 35.0 -5.2
BJI LR LR
comp=N,630nm,24.5s,MS5.3
BJI LR LR
comp=E,747nm,23.4s,MS5.3
BJI LR LR
comp=Z,835nm,25.6s,MS5.2
BJT Baijiatuau 115.19 16 PFAKE 17 31 00.0 +15
BJT LR LR
comp=Z,917nm,20.0s,MS5.4
MAW Mawson 117.65 156 PFAKE 17 31 00.0 +11
MAW LR LR
comp=Z,2µm,22.0s,MS5.7
CD2 Chengdu 118.88 30 PKP PKPdf 17 30 53.4 +0.6
CD2 PP PP 17 32 15.8 +5.4
CD2 PKS 17 34 29.1
CD2 PPP 17 34 46.5
CD2 SKS SKSdf 17 38 04.2 -1.1
CD2 SS SS 17 48 30.1 +0.8
CD2 PP PP
comp=Z,240nm,7.2s
CD2 LR LR
comp=N,550nm,19.6s
CD2 LR LR
comp=Z,820nm,22.1s,MS5.3
INCN Inchon 119.61 8 PFAKE 17 31 10.0 +16
INCN LR LR
comp=Z,721nm,20.0s,MS5.3
MAJO Matsushiro 120.97 357 PFAKE 17 31 10.0 +13
MAJO LR LR
comp=Z,689nm,20.0s,MS5.3
MJAR Matsushiro Arr 120.97 357 PKP PKPdf 17 30 55.1 -1.6
comp=Z,3.5nm,0.9s,baz=20,slow=2.4,SNR=5.7
SBA Scott Base 122.78 188 PFAKE 17 31 10.0 +11
SBA LR LR
comp=Z,575nm,21.0s,MS5.2
KMI Kunming 123.12 35 PKP PKPdf 17 31 00.2 -0.9
VNDA Vanda 123.64 187 PKP PKPdf 17 30 59.5 -1.0
comp=Z,4.8nm,1.0s,baz=300,slow=2.3,SNR=9.4
VNDA Vanda 123.64 187 PKP PKPdf 17 30 59.5 -1.0
VNDA LR LR
comp=Z,501nm,19.0s,MS5.2
SSE Sheshan 124.90 14 PKP PKPdf 17 31 02.6 -1.8
SSE LR LR
comp=N,488nm,26.4s,MS5.1
SSE LR LR
comp=E,298nm,26.9s,MS5.1
SSE LR LR
comp=Z,566nm,27.2s,MS5.1
CHTO Chiang Mai 125.80 43 PFAKE 17 31 20.0 +14
CHTO LR LR
comp=Z,769nm,21.0s,MS5.3
CM31 Chiang Mai Arr 126.06 44 PFAKE 17 31 20.0 +13
CM31 LR LR
comp=Z,539nm,22.0s,MS5.2
CMAR Chiang Mai Arr 126.06 44 PKP PKPdf 17 31 04.8 -2.1
comp=Z,12nm,0.9s,baz=297,slow=2.8,SNR=32
CMAR PP PP 17 32 57.4 -2.2
comp=Z,3.4nm,1.0s,baz=311,slow=6.9,SNR=4.8
TATO Taipei 130.83 16 PFAKE 17 31 30.0 +14
TATO LR LR
comp=Z,1µm,20.0s,MS5.6
YHNB Yeheng 131.10 16 PFAKE 17 31 30.0 +14
YHNB LR LR
comp=Z,828nm,19.0s,MS5.5
QIZ Qiongzhong 131.82 33 PKP PKPdf 17 31 13.3 -4.6
QIZ LR LR
comp=N,546nm,20.3s,MS5.4
QIZ LR LR
comp=E,498nm,20.3s,MS5.4
QIZ LR LR
comp=Z,760nm,18.8s,MS5.4
QIZ Qiongzhong 131.82 33 PFAKE 17 31 30.0 +12
QIZ LR LR
comp=Z,876nm,20.0s,MS5.5
CASY Casey 133.75 167 PFAKE 17 31 30.0 +10
CASY LR LR
comp=Z,1µm,21.0s,MS5.6
FUNA Funafuti 135.24 281 PFAKE 17 31 40.0 +16
FUNA LR LR
comp=Z,4µm,19.0s,MS6.2
TARA Tarawa 135.89 298 PFAKE 17 31 40.0 +14
TARA LR LR
comp=Z,2µm,20.0s,MS5.8
DRV Dumont d'Urvil 135.94 183 Pdif Pdif 17 28 26.0 -2.7
DRV SKS SKSac 17 38 49.0 +12
DRV L 18 08 00.0
DRV R 18 19 00.0
SNZO South Karori 141.89 231 PFAKE 17 31 50.0 +14
SNZO LR LR
comp=Z,606nm,20.0s,MS5.3
COCO West Island 142.32 80 PFAKE 17 31 50.0 +13
COCO LR LR
comp=Z,2µm,22.0s,MS5.7
GUMO Guam 142.61 344 PFAKE 17 31 50.0 +12
GUMO LR LR
comp=Z,780nm,19.0s,MS5.5
RPZ Rata Peaks 143.61 226 PKP PKPdf 17 31 36.2 -2.5
comp=Z,27nm,1.1s,baz=185,slow=1.1,SNR=3.7
KDM Kudat 145.65 33 ⇓P PKPdf 17 31 45.1 +1.9
KSM Kuching 146.05 48 ⇑P PKPab 17 31 49.8 +4.6
KKM Kota Kinabalu 146.07 35 PFAKE 17 32 00.0 +16
KKM LR LR
comp=Z,820nm,20.0s,MS5.5
BTM Bintulu 146.58 42 ⇓P PKPab 17 31 49.0 +1.8
SBUM Sibu 146.60 44 ⇓P PKPab 17 31 49.3 +2.0
SDKM Sandakan 146.92 34 ⇓P PKPbc 17 31 47.5 +0.3
TSM Tawau 148.41 34 ⇓P PKPbc 17 31 50.2 -1.1
DAV Davao City (W) 149.02 18 PFAKE 17 32 00.0 +11
DAV LR LR
comp=Z,1µm,22.0s,MS5.6
DZM Mont Dzumac 150.84 265 *e*P PKPbc 17 31 56.0 -1.0
HNR Honiara 152.59 295 PFAKE 17 32 10.0 +16
HNR LR LR
comp=Z,1µm,22.0s,MS5.6
KAPI Kappang 157.11 42 PKP PKPdf 17 31 59.3 -1.2
comp=Z,2.0nm,0.3s,baz=218,slow=14,SNR=4.4
KAPI PP PP 17 36 07.8 -0.8
comp=Z,6.2nm,1.0s,baz=271,slow=4.2,SNR=5.8
KAPI Kappang 157.11 42 PKP PKPdf 17 31 59.3 -1.2
KAPI PP PP 17 36 07.8 -0.8
KAPI LR LR
comp=Z,948nm,20.0s,MS5.6
TAU Tasmania Unive 157.37 204 PFAKE 17 32 10.0 +10
TAU LR LR

	comp=Z,783nm,19.0s,MS5.6						
NWAO	**Narrogin (SRO)**	**161.40**	**127**	PFAKE		17 32 20.0	+15
NWAO				LR	LR		
	comp=Z,2µm,22.0s						
PMG	**Port Moresby**	**162.28**	**316**	PFAKE		17 32 20.0	+14
PMG				LR	LR		
	comp=Z,2µm,21.0s						
ARMA	**Armidale**	**163.19**	**239**	*e*PKP	PKPdf	17 32 09.2	+2.4
ARMA				*e*		17 32 56.5	
MBWA	**Marble Bar**	**165.85**	**87**	PFAKE		17 32 20.0	+11
MBWA				LR	LR		
	comp=Z,2µm,20.0s						
CTAO	**Charters Tower**	**169.09**	**282**	PFAKE		17 32 20.0	+8.2
CTAO				LR	LR		
	comp=Z,2µm,21.0s						
STKA	**Stephens Creek**	**169.11**	**212**	*e*PKP	PKPdf	17 32 12.6	+1.2
	comp=Z,6.4nm,1.1s						
STKA	**Stephens Creek**	**169.11**	**212**	PKP	PKPdf	17 32 10.6	-0.9
	comp=Z,12nm,1.2s,baz=249,slow=6.3,SNR=4.3						
KAKA	**Kakadu**	**169.77**	**14**	*e*PKP	x	17 31 52.3	
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	**177.18**	**10**	PFAKE		17 32 30.0	+15
WRAB				LR	LR		
	comp=Z,2µm,20.0s						
WB2	**Warramunga Arr**	**177.19**	**10**	*e*PKP	PKPdf	17 32 15.5	+0.5
WB2				*e*		17 33 56.2	
ASAR	**Alice Springs**	**178.70**	**136**	PKP	PKPdf	17 32 13.1	-1.9
	comp=Z,3.8nm,1.0s,baz=36,slow=0.1,SNR=11						
ASAR				PKPab		17 34 03.5	
	comp=Z,7.5nm,1.0s,baz=205,slow=4.1,SNR=13						
ASAR				PP	PP	17 38 03.2	+4.4
	comp=Z,1.6nm,1.0s,baz=242,slow=2.0,SNR=5.4						

ISCJB ***06*** *17:30:06.8±0.8, 227N±02×450W±0.1, h10km, mb4.0/13, Error ellipse: s-maj=23.9km s-min=13.5km az=177.0*
IDC ***06*** *17:30:07.5±1.3, 2280N×4489W, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/21, mbtmp4.0/12, MS4.4/1, Ms1 4.4/1, ms1mx3.5/33, Error ellipse: s-maj=39.9km s-min=17.9km az=11.0*
NEIC ***06*** *17:30:08.5±0.7, 2267N×4493W, h10km, mb4.8/1, Error ellipse: s-maj=22.1km s-min=12.4km az=177.0*
ISC 06 17:30:08.8±0.8**, 227N**±02×**449W**±01**, h10km, n19, σ0.90**/17**, mb4.0**/13**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBTS	**Babate**	**28.02**	**102**	LR	LR	17 44 28.2	
	comp=Z,653nm,18.3s,baz=131,slow=31						
SDV	**Santo Domingo**	**28.22**	**245**	*e*P	**P**	**17 36 01.4**	**-0.7**
	8.7nm,0.5s,mb4.6						
ESDC	**Sonseca Array**	**38.54**	**54**	P	**P**	**17 37 33.1**	**+1.5**
	0.1nm,0.4s,mb2.9,baz=335,slow=30,SNR=5.1						
DBIC	**Dimbokro**	**41.73**	**106**	P	**P**	**17 37 58.5**	**+0.1**
	2.1nm,0.8s,mb3.8,baz=233,slow=14,SNR=3.7						
DBIC	**Dimbokro**	**41.73**	**106**	P	**P**	**17 37 58.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**45.21**	**94**	P	**P**	**17 38 26.9**	**+0.5**
	3.4nm,1.0s,mb4.1,baz=296,slow=6.4,SNR=11						
ULM	**Lac du Bonnet**	**48.11**	**318**	P	**P**	**17 38 49.6**	**+0.8**
	3.0nm,0.7s,mb4.5,baz=63,slow=3.7,SNR=3.2						
KHC	**Kasperske Hory**	**52.69**	**45**	*e*P	**P**	**17 39 23.5**	**+0.1**
GERES	**GERESS Array B**	**52.73**	**45**	P	**P**	**17 39 23.6**	**-0.1**
	0.9nm,0.6s,mb3.9,baz=239,slow=10,SNR=5.0						
TXAR	**Lajitas Array**	**52.74**	**290**	P	**P**	**17 39 26.0**	**+1.9**
	0.9nm,0.9s,mb3.7,baz=60,slow=5.5,SNR=2.2						
TXAR	**Lajitas Array**	**52.74**	**290**	P	**P**	**17 39 26.0**	**+1.9**
NOA	**NORSAR Array B**	**54.16**	**30**	P	**P**	**17 39 34.3**	**+0.3**
	2.2nm,0.8s,mb4.1,baz=250,slow=7.9,SNR=3.1						
PDAR	**Pinedale Array**	**56.57**	**307**	P	**P**	**17 39 51.4**	**-0.3**
	1.7nm,1.1s,mb4.0,baz=98,slow=3.0,SNR=5.7						
YKA	**Yellowknife Ar**	**60.75**	**330**	P	**P**	**17 40 19.1**	**-1.3**
	1.0nm,0.8s,mb4.0,baz=97,slow=7.2,SNR=14						
YKA	**Yellowknife Ar**	**60.75**	**330**	P	**P**	**17 40 19.1**	**-1.3**
ARCES	**ARCESS Array B**	**62.10**	**22**	P	**P**	**17 40 29.0**	**-0.5**
	1.9nm,0.7s,mb4.3,baz=308,slow=6.0,SNR=4.2						
AKASG	**Malin Array Be**	**62.84**	**43**	P	**P**	**17 40 33.9**	**-0.9**
	2.3nm,0.7s,mb4.4,baz=275,slow=5.9,SNR=10						
BRTR	**Keskin Array B**	**67.33**	**55**	P	**P**	**17 41 03.0**	**-1.2**
	1.2nm,0.8s,mb4.0,baz=257,slow=6.2,SNR=2.7						
CMAR	**Chiang Mai Arr**	**125.97**	**44**	PKP	PKPdf	17 49 10.4	-1.5
	0.8nm,0.3s,baz=300,slow=3.7,SNR=5.2						

ISCJB ***06*** *17:39:35.3±0.6, 527N±02×17392W±009, h198km±7km, mb3.3/6, Error ellipse: s-maj=25.1km s-min=8.6km az=173.6*
IDC ***06*** *17:39:36.9±2.4, 53.15N×17390W, h189km±26km, mb3.2/6, mb1 3.6/9, mb1mx3.3/27, mbtmp3.3/9, Error ellipse: s-maj=39.9km s-min=13.9km az=180.0*
NEIC ***06*** *17:39:36.6±0.9, 5272N×17381W, h193km±12km, mb4.4/3, Error ellipse: s-maj=32.4km s-min=12.7km az=168.0*
ISC 06 17:39:36.4±0.6**, 527N**±02×**17396W**±009**, h194**km±7km**, n19, σ0.99**/23**, mb3.3**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.51**	**197**	P	**Pn**	**17 40 02.7**	**-0.2**
ATKA				S	**Sn**	**17 40 22.5**	**-0.6**
ADK	**Adak**	**1.86**	**245**	P	**Pn**	**17 40 13.6**	**+0.6**
ADK				S	**Sn**	**17 40 41.4**	**+0.1**
UNV	**Unalaska Valle**	**4.62**	**73**	P	**Pn**	**17 40 45.4**	**-0.4**
FX1	**Attu Island--F**	**7.81**	**277**	P	**Pn**	**17 41 29.1**	**+2.0**
	6.5nm,0.3s,baz=86,slow=2.9,SNR=62						
FX1				S	**Sn**	**17 42 53.9**	**-1.1**
	0.4nm,0.3s,baz=323,slow=20,SNR=3.2						
FX1	**Attu Island--F**	**7.81**	**277**	P	**Pn**	**17 41 29.5**	**+2.5**
KDAK	**Kodiak Island**	**13.19**	**59**	P	**Pn**	**17 42 32.6**	**-3.6**
	1.8nm,0.3s,baz=314,slow=22,SNR=20						
KDAK				S	**Sn**	**17 44 52.6**	**-11**
	0.3nm,0.3s,baz=267,slow=19,SNR=3.2						
KTH	**Kantishna Hill**	**16.21**	**39**	*e*P	**Pn**	**17 43 13.8**	**+0.6**
	10nm,0.7s						
BPAW	**Bear Paw Mtn.**	**16.48**	**37**	*e*P	**Pn**	**17 43 17.0**	**+0.6**
	3.7nm,0.4s						
PETK	**Petropavlovsk-**	**17.06**	**283**	P	**Pn**	**17 43 24.2**	**+0.7**
	0.1nm,0.3s,baz=89,slow=15,SNR=5.5						
PETK	**Petropavlovsk-**	**17.06**	**283**	P	**Pn**	**17 43 24.2**	**+0.7**
MCK	**McKinley**	**17.07**	**40**	*e*P	**Pn**	**17 43 18.6**	**-4.8**
	7.6nm,0.4s						
MENT	**Mentasta**	**18.90**	**45**	*e*P	**P**	**17 43 43.4**	**+1.3**
YKA	**Yellowknife Ar**	**32.14**	**49**	P	**P**	**17 45 44.5**	**-0.6**
	0.2nm,0.4s,mb3.0,baz=282,slow=7.6,SNR=4.1						
NVAR	**Mina Array Bea**	**40.47**	**88**	P	**P**	**17 46 56.4**	**+0.6**
	0.7nm,0.6s,mb3.2,baz=299,slow=7.8,SNR=5.0						
NVAR	**Mina Array Bea**	**40.47**	**88**	P	**P**	**17 46 56.4**	**+0.6**
PDAR	**Pinedale Array**	**43.08**	**77**	P	**P**	**17 47 17.1**	**+0.2**
	1.3nm,0.5s,mb3.6,baz=310,slow=2.8,SNR=13						
FRB	**Frobisher Bay**	**50.31**	**34**	P	**P**	**17 48 11.5**	**-1.2**
	1.9nm,0.4s,mb3.8,baz=333,slow=9.0,SNR=5.2						
TXAR	**Lajitas Array**	**55.53**	**86**	P	**P**	**17 48 51.3**	**0.0**
	0.6nm,0.5s,mb3.4,baz=293,slow=4.3,SNR=7.9						
MKAR	**Makanchi Array**	**61.51**	**311**	P	**P**	**17 49 30.3**	**-2.0**
	0.1nm,0.5s,mb2.7,baz=28,slow=6.5,SNR=2.7						

MAN ***06*** *17:46:52, 1384N×12047E, h114km, mb4.6, ML3.5, MS3.4*
ISCJB ***06*** *17:46:52.6±0.2, 1384N±003×12055E±005, h129km±2km, mb4.2/31, Error ellipse: s-maj=7.5km s-min=4.5km az=174.3*
MOS ***06*** *17:46:53.7±1.0, 1389N×12083E, h152km, mb4.5/9, Error ellipse: s-maj=22.3km s-min=9.5km az=116.1*
BJI ***06*** *17:46:55.0, 1373N×12160E, h221km, mB4.8, mb4.4*
IDC ***06*** *17:46:59.5±3.8, 1378N×12070E, h191km±38km, mb3.8/14, mb1 3.8/16, mb1mx3.7/24, mbtmp3.8/16, Error ellipse: s-maj=24.1km s-min=11.8km az=70.0*
NEIC ***06*** *17:46:59.3±1.4, 1380N×12070E, h190km±15km, mb4.3/9, Error ellipse: s-maj=8.3km s-min=6.7km az=79.0*
ISC 06 17:46:53.6±0.2**, 1384N**±003×**12057E**±005**, h123**km±2km**, n75, σ1.14**/87**, mb4.3**/31**, 6C-5D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.33**	**252**	*e*P	**Pn**	**17 47 10.4**	**-0.6**
LUBP				*e*S	**Sn**	**17 47 23.4**	**-0.7**
TGY	**Tagaytay City**	**0.44**	**53**	⇓*i*P	**Pn**	**17 47 11.9**	**+0.4**
TGY				*i* S	**Sn**	**17 47 26.2**	**+1.1**
PGP	**Puerto Galera**	**0.50**	**132**	⇑*i*P	**Pn**	**17 47 11.2**	**-0.7**
PGP				*i* S	**Sn**	**17 47 24.1**	**-1.6**
SJMP	**San Jose**	**1.47**	**159**	*e*P	**Pn**	**17 47 20.9**	**-0.1**
SJMP				*e*S	**Sn**	**17 47 41.1**	**-0.6**
POLP	**Polilio Island**	**1.60**	**56**	*e*P	**Pn**	**17 47 22.6**	**+0.2**
PCPH	**Palayan**	**1.79**	**16**	⇓*e*P	**Pn**	**17 47 23.4**	**-1.3**
PCPH				*e*S	**Sn**	**17 47 51.1**	**+2.7**
GQP	**Guinayangan**	**1.82**	**88**	⇓*i*P	**Pn**	**17 47 25.5**	**+0.4**
BUSP	**Coron**	**1.86**	**191**	*e*P	**Pn**	**17 47 25.1**	**-0.4**
BUSP				*e*S	**Sn**	**17 47 48.8**	**-1.1**
SCZP	**Santa Cruz**	**2.03**	**342**	*e*P	**Pn**	**17 47 26.9**	**-0.8**
SCZP				*e*S	**Sn**	**17 47 52.5**	**-1.2**
OTRP	**Odiongan**	**2.04**	**136**	*e*P	**Pn**	**17 47 28.0**	**+0.3**
OTRP				*e*S	**Sn**	**17 47 55.7**	**+1.9**
AUQP	**San Andres**	**2.11**	**104**	*e*P	**Pn**	**17 47 30.5**	**+1.9**
BALP	**Baler**	**2.13**	**27**	*e*P	**Pn**	**17 47 28.8**	**-0.1**
BALP				*e*S	**Sn**	**17 47 56.1**	**+0.3**
BOLP	**Bolinao**	**2.61**	**346**	*e*P	**Pn**	**17 47 34.6**	**-0.4**
BOLP				*e*S	**Sn**	**17 48 03.5**	**-3.2**
ENPP	**El Nido**	**2.84**	**203**	*e*P	**Pn**	**17 47 38.4**	**+0.4**
ENPP				*e*S	**Sn**	**17 48 05.6**	**-6.6**
CUYO	**Cuyo Island**	**3.00**	**172**	*e*P	**Pn**	**17 47 40.0**	**-0.1**
CAUP	**Cauayan**	**3.32**	**21**	*e*P	**Pn**	**17 47 45.1**	**+0.9**
CAUP				*e*S	Sn	17 48 49.7	+26
PVCP	**Virac**	**3.49**	**93**	*e*P	**Pn**	**17 47 47.5**	**+1.0**
ABRA	**Dolores**	**3.79**	**2**	*e*P	**Pn**	**17 47 50.1**	**-0.4**
JOW	**Kunigami**	**14.80**	**28**	P	**Pn**	**17 50 19.4**	**+2.5**
	0.2nm,0.3s,baz=185,slow=6.3,SNR=4.3						
KSM	**Kuching**	**15.93**	**220**	*e*P	**Pn**	**17 50 33.5**	**+2.4**
	16nm,0.8s						
NJ2	**Nanjing**	**18.20**	**355**	*e*P	**P**	**17 50 56.1**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s						
KAPI	**Kappang**	**18.75**	**183**	P	**P**	**17 51 05.0**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=15,slow=4.2,SNR=8.8						
CMAR	**Chiang Mai Arr**	**21.27**	**285**	P	**P**	**17 51 32.3**	**+2.0**
	comp=Z,2.1nm,0.6s,mb3.6,baz=99,slow=7.0,SNR=11						
XAN	**Xi'an**	**22.72**	**334**	P	**P**	**17 51 44.5**	**-0.8**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.2						
XAN				AMB	AMB		
	comp=Z,92nm,5.8s						
CD2	**Chengdu**	**22.98**	**320**	P	**P**	**17 51 47.7**	**+0.1**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
BATI	**Baumata**	**24.08**	**173**	P	**P**	**17 51 56.8**	**-1.0**
	comp=Z,7.6nm,0.5s,mb4.3,baz=262,slow=1.2,SNR=5.2						
LZH	**Lanzhou**	**26.76**	**329**	*e*P	**P**	**17 52 23.2**	**+1.3**
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.5						
LZH				AMB	AMB		
	comp=Z,129nm,6.2s						
GTA	**Gaotai**	**31.36**	**328**	*e*P	**P**	**17 53 02.8**	**+0.2**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.2						
TAPN	**Taplejung**	**33.45**	**299**	*e*P	**P**	**17 53 22.4**	**+1.4**
	comp=Z,4.5nm,0.5s,mb4.5						
ODAN	**Odare**	**33.59**	**298**	*e*P	**P**	**17 53 23.3**	**+1.1**
RAMN	**Ramite**	**34.29**	**298**	*e*P	**P**	**17 53 28.7**	**+0.4**
JIRN	**Jiri**	**34.83**	**299**	*e*P	**P**	**17 53 34.1**	**+1.1**
GUN	**Gumba**	**35.17**	**299**	*e*P	**P**	**17 53 37.1**	**+1.3**
KKN	**Kakani**	**35.65**	**299**	*e*P	**P**	**17 53 40.2**	**+0.3**
ULN	**Ulaanbaatar**	**35.74**	**344**	⇑*e*P	**P**	**17 53 40.0**	**-0.5**
ULN	**Ulaanbaatar**	**35.74**	**344**	*e*P	**P**	**17 53 39.9**	**-0.5**
	comp=Z,1.7nm,0.4s,mb4.3						
DMN	**Daman**	**35.75**	**298**	*e*P	**P**	**17 53 40.8**	**0.0**
SONM	**Songino Array**	**35.89**	**344**	P	**P**	**17 53 41.7**	**0.0**
	comp=Z,5.4nm,0.6s,mb4.7,baz=163,slow=9.6,SNR=45						
WB2	**Warramunga Arr**	**36.20**	**158**	*e*P	**P**	**17 53 42.8**	**-1.9**
GKN	**Gorkha**	**36.25**	**299**	*e*P	**P**	**17 53 45.4**	**+0.3**
DANN	**Dangsing**	**37.09**	**299**	*e*P	**P**	**17 53 52.2**	**0.0**
	comp=Z,6.3nm,0.6s,mb4.7						
YSS	**Yuzh-Sakhalins**	**37.88**	**25**	⇑*e*P	**P**	**17 53 51.8**	**-6.8**
YSS				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.0						
ZAK	**Zakamensk**	**39.08**	**342**	*e*P	**P**	**17 54 07.7**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
ASAR	**Alice Springs**	**39.49**	**161**	P	**P**	**17 54 10.1**	**-2.1**
	comp=Z,1.0nm,0.5s,mb3.9,baz=335,slow=7.0,SNR=45						
MK31	**Makanchi Array**	**45.85**	**324**	*e*P	**P**	**17 55 03.4**	**0.0**
MKAR	**Makanchi Array**	**45.85**	**324**	P	**P**	**17 55 03.9**	**+0.5**
	comp=Z,2.4nm,0.5s,mb4.2,baz=126,slow=8.8,SNR=26						
KZA	**Kyzart**	**48.15**	**315**	P	**P**	**17 55 23.3**	**+1.9**
	SNR=5.5						
TKM2	**Tokmak 2**	**48.24**	**316**	P	**P**	**17 55 23.3**	**+1.3**
	SNR=6.3						
YAK	**Yakutsk**	**48.57**	**6**	⇑*e*P	**P**	**17 55 20.6**	**-3.6**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
KBK	**Karagaybulak**	**48.58**	**315**	P	**P**	**17 55 26.2**	**+1.6**
	SNR=12						
ZALV	**Zalesovo Beam**	**48.88**	**333**	P	**P**	**17 55 26.0**	**-0.7**
	comp=Z,3.5nm,0.5s,mb4.6,baz=128,slow=6.6,SNR=18						
AAK	**Ala-Archa**	**48.88**	**315**	⇑*e*P	**P**	**17 55 28.5**	**+1.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,2.2s,mb4.0						
AAK	**Ala-Archa**	**48.88**	**315**	*e*P	**P**	**17 55 28.2**	**+1.3**
	comp=Z,2.3nm,0.8s,mb4.2						
PETK	**Petropavlovsk-**	**48.97**	**29**	P	**P**	**17 55 26.4**	**-1.0**
	comp=Z,3.6nm,0.9s,mb4.3,baz=257,slow=13,SNR=3.4						
USP	**Ospenovka**	**49.11**	**316**	P	**P**	**17 55 29.6**	**+0.9**
	SNR=6.2						
EKS2	**Erkin-Say**	**49.38**	**315**	P	**P**	**17 55 32.0**	**+1.2**
	SNR=7.3						
EKS2	**Erkin-Say**	**49.38**	**315**	*e*P	**P**	**17 55 31.7**	**+0.9**
	comp=Z,3.8nm,0.8s,mb4.4						
KURK	**Kurchatov**	**50.01**	**326**	P	**P**	**17 55 35.5**	**+0.2**
	comp=Z,7.3nm,0.6s,mb4.8,baz=133,slow=7.7,SNR=52						
KURK	**Kurchatov**	**50.01**	**326**	*e*P	**P**	**17 55 35.5**	**+0.2**
NVS	**Novosibirsk**	**50.16**	**333**	*e*P	**P**	**17 55 34.3**	**-2.1**
BRVK	**Borovoye**	**55.66**	**326**	*e*P	**P**	**17 56 16.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
BRVK	**Borovoye**	**55.66**	**326**	*e*P	**P**	**17 56 16.7**	**-0.1**
	comp=Z,16nm,1.1s,mb5.0						
TIXI	**Tiksi**	**58.00**	**3**	⇓*i*P	**P**	**17 56 30.5**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
TIXI	**Tiksi**	**58.00**	**3**	*e*P	**P**	**17 56 30.9**	**-2.2**
	comp=Z,1.2nm,0.6s,mb4.1						
BILL	**Bilibino**	**61.62**	**18**	⇓*e*P	**P**	**17 56 57.0**	**-0.8**
BILL						17 57 40.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
SVE	**Sverdlovsk**	**62.22**	**327**	*e*P	**P**	**17 57 02.0**	**-0.1**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ARU	**Arti**	**63.20**	**327**	*c i*P	**P**	**17 57 07.9**	**-0.7**
ARU				*e*		17 59 32.1	
ARU				*e*S	**S**	**18 05 41.1**	**+11**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**78.91**	**339**	P	**P**	**17 58 42.2**	**-0.9**
	comp=Z,1.7nm,0.5s,mb4.2,baz=72,slow=7.3,SNR=19						
ARCES	**ARCESS Array B**	**78.91**	**339**	P	**P**	**17 58 42.2**	**-0.9**
BRTR	**Keskin Array B**	**78.97**	**308**	P	**P**	**17 58 43.5**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=131,slow=5.6,SNR=5.6						
AKASG	**Malin Array Be**	**80.28**	**320**	P	**P**	**17 58 49.1**	**-1.8**
	comp=Z,0.5nm,0.4s,mb3.7,baz=69,slow=5.2,SNR=3.5						
HFS	**Hagfors**	**86.30**	**331**	P	**P**	**17 59 19.7**	**-1.8**
	comp=Z,6.2nm,0.9s,mb4.5,baz=103,slow=6.4,SNR=6.0						
NOA	**NORSAR Array B**	**87.08**	**333**	P	**P**	**17 59 23.6**	**-1.7**
	comp=Z,0.6nm,0.6s,mb3.7,baz=64,slow=7.5,SNR=2.5						
YKA	**Yellowknife Ar**	**92.70**	**22**	P	**P**	**17 59 50.3**	**-1.2**
	comp=Z,0.4nm,0.5s,mb4.0,baz=308,slow=4.2,SNR=9.8						
YKA	**Yellowknife Ar**	**92.70**	**22**	*i* P	**P**	**17 59 50.7**	**-0.8**

IDC ***06*** *18:06:29.4±1.2, 36.13N×8193E, h0km, mb3.4/6, mb1 3.6/9, mb1mx3.5/24, mbtmp3.5/9, ML3.7/3, Error ellipse: s-maj=31.6km s-min=19.7km az=64.0*
NEIC ***06*** *18:06:31.7±6.5, 36.12N×8196E, h13km±42km, mb3.6/1, Error ellipse: s-maj=18.4km s-min=12.0km az=206.0*
ISCJB ***06*** *18:06:33.0±3.2, 3636N±007×8208E±0.10, h32km±24km, mb3.4/7, Error ellipse: s-maj=13.5km s-min=10.7km az=20.7*
BJI ***06*** *18:06:34.6, 3662N×82.18E, h14km, ML4.0*
NNC ***06*** *18:06:35.9±7.5, 3654N×8206E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=82.5km s-min=46.5km az=1.0*
ISC 06 18:06:35.5±1.7**, 3625N**±009×**8204E**±009**, h39**km±17km**, n23, σ1.14**/26**, mb3.4**/7**, 4C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**8.32**	**325**	⇓Pn	**Pn**	**18 08 35.5**	**+2.1**
	4.0nm,0.9s						
TKM2				⇓Pg	**Pn**	**18 09 03.2**	**+30**
	4.0nm,0.6s						
TKM2				⇑Lg		18 10 53.5	
	11nm,0.6s						
TKM2	**Tokmak 2**	**8.32**	**325**	*e*P	**Pn**	**18 08 34.1**	**+0.7**
	4.5nm,0.5s						
WMQ	**Urumqi**	**8.72**	**28**	*e*P	**Pn**	**18 08 38.8**	**-0.1**
WMQ				S	**Sn**	**18 10 15.5**	**-0.3**
WMQ				Smax			
	comp=N,35nm,1.1s						
WMQ				Smax			
	comp=E,28nm,0.8s						
EKS2	**Erkin-Say**	**9.05**	**318**	*e*P	**Pn**	**18 08 43.6**	**+0.1**
	comp=E,2.5nm,0.7s						
MK31	**Makanchi Array**	**10.54**	**1**	⇓Pn	**Pn**	**18 09 02.7**	**-1.2**
	comp=E,4.9nm,0.4s,baz=188,slow=46,SNR=162						
MK31	**Makanchi Array**	**10.54**	**1**	*e*P	**Pn**	**18 09 02.8**	**-1.0**
MKAR	**Makanchi Array**	**10.54**	**1**	Pn	**Pn**	**18 09 02.9**	**-1.0**
	comp=E,1.9nm,0.3s,baz=183,slow=12,SNR=60						
MKAR				Sn	**Sn**	**18 10 59.4**	**-1.1**
	comp=E,0.8nm,0.3s,baz=187,slow=24,SNR=5.7						
KK31	**Karatay Array**	**11.21**	**311**	⇑Pn	**Pn**	**18 09 14.2**	**+1.1**
	comp=E,0.2nm,0.3s						
KK31				⇑Pg	Pn	18 09 59.0	+46
	comp=E,1.6nm,0.8s						
KK31				⇓Lg		18 12 24.1	
	comp=E,3.3nm,0.7s,baz=140,slow=11,SNR=4.6						
KURBB	**Kurchatov Arra**	**14.59**	**351**	⇑Pn	**Pn**	**18 10 02.1**	**+2.9**
	comp=E,0.2nm,0.5s						
KURK	**Kurchatov**	**14.67**	**351**	Pn	**Pn**	**18 09 55.7**	**-4.5**
	comp=E,0.0nm,0.3s,baz=170,slow=12,SNR=4.4						
KURK	**Kurchatov**	**14.67**	**351**	*e*P	**Pn**	**18 09 56.3**	**-3.9**
ZALV	**Zalesovo Beam**	**17.81**	**5**	Pn	**Pn**	**18 10 36.2**	**-3.8**
	comp=E,0.2nm,0.3s,baz=189,slow=12,SNR=9.1						
ZALV	**Zalesovo Beam**	**17.81**	**5**	Pn	**Pn**	**18 10 36.2**	**-3.8**
BVAR	**Borovoye Array**	**18.67**	**338**	P	**Pn**	**18 10 50.8**	**+0.2**
	comp=E,0.4nm,0.3s,baz=140,slow=10,SNR=6.7						
SONM	**Songino Array**	**21.38**	**50**	P	**P**	**18 11 21.3**	**+1.9**
	comp=E,3.2nm,0.7s,mb3.8,baz=240,slow=12,SNR=24						
ULN	**Ulaanbaatar**	**21.80**	**50**	*e*P	**P**	**18 11 25.9**	**+2.0**
	comp=E,1.9nm,0.8s,mb3.6						
AKTK	**Aktyubinsk**	**22.37**	**317**	P	**P**	**18 11 29.4**	**-0.6**
AKTO	**Aktyubinsk**	**22.37**	**317**	P	**P**	**18 11 29.4**	**-0.6**
	comp=E,1.2nm,0.7s,mb3.4,baz=113,slow=12,SNR=2.6						
CMAR	**Chiang Mai Arr**	**23.16**	**135**	P	**P**	**18 11 37.1**	**-1.5**
	comp=E,0.5nm,0.8s,mb3.0,baz=324,slow=11,SNR=4.3						
TORD	**Torodi Ar. Bea**	**74.63**	**275**	P	**P**	**18 18 10.6**	**-0.4**
	comp=E,0.4nm,0.9s,mb3.3,baz=35,slow=6.3,SNR=3.0						
ASAR	**Alice Springs**	**77.13**	**132**	P	**P**	**18 18 24.6**	**-0.4**
	comp=E,0.3nm,0.9s,mb3.2,baz=328,slow=5.9,SNR=3.2						
YKA	**Yellowknife Ar**	**80.69**	**8**	P	**P**	**18 18 44.5**	**+0.5**
	comp=E,0.2nm,0.6s,mb3.2,baz=344,slow=5.5,SNR=5.8						
YKA	**Yellowknife Ar**	**80.69**	**8**	P	**P**	**18 18 44.5**	**+0.5**

IDC ***06*** *18:17:14.2±2.5, 454S×10151E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/20, mbtmp3.7/7, MS3.8/1, Ms1 3.8/1, ms1mx3.2/31, Error ellipse: s-maj=93.3km s-min=20.3km az=51.0*
ISCJB ***06*** *18:17:19.4±1.6, 44S±03×1018E±02, h33km, mb4.0/9, MS3.9/1, Error ellipse: s-maj=52.0km s-min=11.1km az=40.3*
NEIC ***06*** *18:17:21.7±1.3, 420S×102.19E, h35km, mb4.7/2, Error ellipse: s-maj=56.1km s-min=14.3km az=50.0*
ISC 06 18:17:28.3±3.9**, 42S**±03×**1021E**±03**, h96**km±37km**, n17, σ0.80**/16**, mb4.0**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**22.21**	**107**	P	**P**	**18 22 17.6**	**+0.5**
	2.7nm,0.3s,mb4.1,baz=268,slow=16,SNR=4.2						
BATI				S	**S**	**18 26 16.3**	**+0.7**
	4.8nm,0.5s,baz=74,slow=19,SNR=5.3						
CMAR	**Chiang Mai Arr**	**22.72**	**352**	P	**P**	**18 22 21.4**	**-0.9**
	0.6nm,0.7s,mb3.0,baz=179,slow=9.5,SNR=7.0						
TAPN	**Taplejung**	**34.29**	**337**	*e*P	**P**	**18 24 06.7**	**+1.2**
JIRN	**Jiri**	**35.18**	**335**	*e*P	**P**	**18 24 14.1**	**+0.9**
GUN	**Gumba**	**35.53**	**335**	*e*P	**P**	**18 24 17.0**	**+0.8**
DMN	**Daman**	**35.61**	**334**	*e*P	**P**	**18 24 17.2**	**+0.4**
KKN	**Kakani**	**35.69**	**334**	*e*P	**P**	**18 24 16.9**	**-0.6**
GKN	**Gorkha**	**36.16**	**333**	*e*P	**P**	**18 24 21.5**	**0.0**
	2.1nm,0.3s,mb4.6						
ASAR	**Alice Springs**	**36.29**	**125**	P	**P**	**18 24 22.0**	**-0.7**
	0.3nm,0.5s,mb3.5,baz=303,slow=8.2,SNR=10.0						
DANN	**Dangsing**	**36.85**	**332**	*e*P	**P**	**18 24 28.2**	**+0.8**
	8.2nm,0.4s,mb5.0						
SONM	**Songino Array**	**51.94**	**4**	P	**P**	**18 26 27.1**	**-0.1**
	1.2nm,0.9s,mb3.9,baz=180,slow=9.1,SNR=7.1						
MKAR	**Makanchi Array**	**53.70**	**343**	P	**P**	**18 26 39.7**	**-0.5**
	0.4nm,0.4s,mb3.8,baz=155,slow=8.6,SNR=8.7						
MKAR	**Makanchi Array**	**53.70**	**343**	P	**P**	**18 26 39.7**	**-0.5**
KURK	**Kurchatov**	**58.29**	**343**	LR	LR	18 53 14.8	
	comp=Z,97nm,21.8s,baz=0.0,slow=37						
ZALV	**Zalesovo Beam**	**59.71**	**348**	P	**P**	**18 27 21.6**	**-0.9**
	1.0nm,0.4s,mb4.2,baz=145,slow=5.4,SNR=7.7						
BVAR	**Borovoye Array**	**62.95**	**339**	P	**P**	**18 27 43.0**	**-1.5**
	0.3nm,0.3s,mb3.6,baz=128,slow=9.6,SNR=3.6						
TXAR	**Lajitas Array**	**145.06**	**41**	PKPbc	PKPbc	18 36 55.3	+0.6
	0.6nm,0.4s,baz=268,slow=1.0,SNR=12						

LDG ***06*** *18:22:57.5±0.3, 3667N×756W, h56km±5km, Ml3.8/3, Error ellipse: s-maj=7.7km s-min=4.2km az=24.0*
CNRM ***06*** *18:22:57.3, 3606N×817W, h30km, MD3.2*
MDD ***06*** *18:22:57.8±0.6, 3650N×765W, h30km, mbLg2.5/28, Error ellipse: s-maj=6.4km s-min=3.4km az=34.0, PRXIMO*
NEIC ***06*** *18:22:58.8, 3655N×761W, h39km, MG2.5(MDD), After MDD.*
CSEM ***06*** *18:23:00.3±0.1, 3680N×733W, h35km, ML2.3, Error ellipse: s-maj=3.1km s-min=1.4km az=36.0*
INMG 06 18:22:58.1±1.4**, 3647N×767W, h32**km±9km**, ML2.3, 7C, Error ellipse: s-maj=4.7km s-min=4.0km az=31.0, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.80**	**345**	*i* P	Pn	18 23 11.9	-1.3
PBDV				*e*S	Sn	18 23 22.0	-2.0
PBDV				A		18 23 26.8	
	56nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.80**	**345**	⇑P	Pn	18 23 11.9	-1.3
PBDV				S	Sn	18 23 22.0	-2.0
	56nm,0.3s						
PVAQ	**Vaqueiros**	**0.93**	**358**	*e*P	Pn	18 23 13.6	-1.4
PVAQ				*e*S	Sn	18 23 24.9	-2.4
PVAQ				A		18 23 26.1	
	84nm,0.5s						
PVAQ	**Vaqueiros**	**0.93**	**358**	⇑P	Pn	18 23 13.6	-1.4
PVAQ				S	Sn	18 23 24.9	-2.4
	84nm,0.5s						
EGRO	**El Granado**	**1.07**	**8**	P	Pn	18 23 15.7	-1.2
	22nm,0.4s,SNR=18						
EGRO				S	Sn	18 23 28.3	-2.5
	32nm,0.1s,SNR=8.3						
EGRO	**El Granado**	**1.07**	**8**	⇑P	Pn	18 23 15.7	-1.3
	26nm,0.1s,SNR=18						
EGRO				S	Sn	18 23 28.3	-2.5
	32nm,0.1s,SNR=8.3						
PFVI	**Vila Bisbo**	**1.14**	**306**	*e*P	Pn	18 23 16.5	-1.3
PFVI				*e*S	Sn	18 23 30.2	-2.2
PFVI				A		18 23 30.8	
	33nm,0.3s						
PFVI	**Vila Bisbo**	**1.14**	**306**	P	Pn	18 23 16.5	-1.3
PFVI				S	Sn	18 23 30.2	-2.2
	17nm,0.3s						
MORF	**Marmelete**	**1.15**	**317**	*e*P	Pn	18 23 16.5	-1.4
MORF				*e*S	Sn	18 23 30.2	-2.3
MORF				A		18 23 33.2	
	52nm,0.2s						
MORF	**Marmelete**	**1.15**	**317**	P	Pn	18 23 16.4	-1.5
MORF				S	Sn	18 23 29.3	-3.3
PTEO	**Sao Teotonio**	**1.36**	**322**	*e*P	Pn	18 23 19.8	-1.1
PTEO				*e*S	Sn	18 23 35.8	-2.1
PTEO				A		18 23 36.6	
	24nm,0.2s						
PTEO	**Sao Teotonio**	**1.36**	**322**	⇑P	Pn	18 23 19.8	-1.1
PTEO				S	Sn	18 23 35.8	-2.1
	12nm,0.2s						
ESPR	**Espera**	**1.51**	**74**	P	Pn	18 23 21.8	-1.2
	12nm,0.2s,SNR=18						
ESPR				S	Sn	18 23 38.9	-2.7
	101nm,0.3s,SNR=10						
ESPR	**Espera**	**1.51**	**74**	⇑P	Pn	18 23 21.8	-1.2
	12nm,0.2s,SNR=18						
ESPR				S	Sn	18 23 38.9	-2.7
	101nm,0.3s,SNR=10						
EMIN	**Mina Concepcio**	**1.52**	**31**	P	Pn	18 23 21.4	-1.7

	2.5nm,0.1s,SNR=18						
EMIN				S	Sn	18 23 38.2	-3.6
	20nm,0.1s,SNR=9.1						
EMIN	**Mina Concepcio**	**1.52**	**31**	⇑P	Pn	18 23 21.4	-1.7
	2.5nm,0.1s,SNR=18						
EMIN				S	Sn	18 23 38.2	-3.6
	20nm,0.1s,SNR=9.1						
PBEJ	**Beja**	**1.56**	**354**	*e*P	Pn	18 23 22.5	-1.2
PBEJ				*e*S	Sn	18 23 40.3	-2.5
PBEJ				A		18 23 43.8	
	15nm,0.2s						
PBEJ	**Beja**	**1.56**	**354**	*e*P	Pn	18 23 22.5	-1.2
PBEJ				*e*S	Sn	18 23 40.3	-2.5
	15nm,0.2s						
EJIF	**Jimena Fronter**	**1.78**	**90**	P	Pn	18 23 26.0	-0.6
	1.4nm,0.2s,SNR=18						
EJIF				S	Sn	18 23 45.1	-3.0
	5.1nm,0.3s,SNR=7.9						
PBAR	**Barrancos**	**1.78**	**16**	*e*P	Pn	18 23 25.2	-1.4
PBAR				*e*S	Sn	18 23 44.9	-3.2
PBAR				A		18 23 50.0	
	13nm,0.1s						
PBAR	**Barrancos**	**1.78**	**16**	*e*P	Pn	18 23 25.2	-1.4
PBAR				*e*S	Sn	18 23 44.9	-3.2
	13nm,0.1s						
EVO	**Evora**	**2.08**	**353**	*e*Pn	Pn	18 23 29.5	-1.2
EVO				*e*Sn	Sn	18 23 50.7	-4.8
	15nm,0.2s						
EVO	**Evora**	**2.08**	**353**	*e*P	Pn	18 23 29.6	-1.1
EVOP	**Sao Brissos**	**2.09**	**350**	*e*Pn	Pn	18 23 29.5	-1.4
EVOP				*e*Sn	Sn	18 23 50.7	-5.0
MOE	**Montemor**	**2.12**	**345**	*e*P	Pn	18 23 30.9	-0.4
MOE				*e*S	Sn	18 23 54.2	-2.4
EMIJ	**Mijas**	**2.34**	**87**	P	Pn	18 23 33.6	-0.7
	0.3nm,0.1s,SNR=7.9						
EMIJ				S	Sn	18 23 58.5	-3.4
	3.1nm,0.2s,SNR=4.0						
EBAD	**Badajoz**	**2.34**	**13**	P	Pn	18 23 32.7	-1.7
	3.9nm,0.0s,SNR=18						
EBAD				S	Sn	18 23 58.0	-4.0
	11nm,0.1s,SNR=9.6						
EBAD	**Badajoz**	**2.34**	**13**	⇑P	Pn	18 23 32.7	-1.6
	3.9nm,0.0s,SNR=18						
EBAD				S	Sn	18 23 58.0	-4.0
	11nm,0.1s,SNR=9.6						
PESTR	**Estremoz**	**2.40**	**2**	*e*P	Pn	18 23 33.6	-1.5
PESTR				*e*S	Sn	18 24 00.5	-2.8
PMAFR	**Mafra**	**2.79**	**333**	*e*P	Pn	18 23 39.7	-0.8
PMAFR				*e*S	Sn	18 24 09.2	-3.9
PMAFR				A		18 24 11.8	
	27nm,0.4s						
PMAFR	**Mafra**	**2.79**	**333**	Pn	Pn	18 23 39.7	-0.8
PMAFR				Sn	Sn	18 24 09.2	-3.9
	14nm,0.4s						
ELOJ	**Sierra Loja**	**2.90**	**75**	P	Pn	18 23 42.4	+0.3
	0.8nm,0.2s,SNR=7.9						
ELOJ				S	Sn	18 24 12.3	-3.6
	1.6nm,0.2s,SNR=4.9						
ELUQ	**Luque**	**2.94**	**67**	S	Sn	18 24 13.1	-3.6
	4.8nm,0.2s,SNR=4.0						
PMRV	**Marv??o**	**2.96**	**4**	*e*P	Pn	18 23 41.5	-1.4
PMRV				*e*S	Sn	18 24 12.7	-4.6
PMRV				A		18 24 15.4	
	6.6nm,0.4s						
PMRV	**Marv??o**	**2.96**	**4**	*e*P	Pn	18 23 41.5	-1.4
PMRV				*e*S	Sn	18 24 12.7	-4.6
	6.6nm,0.4s						
EADA	**Adamuz**	**2.99**	**55**	P	Pn	18 23 42.0	-1.3
	2.4nm,0.1s,SNR=16						
EADA				S	Sn	18 24 14.8	-3.3
	7.9nm,0.1s						
EADA	**Adamuz**	**2.99**	**55**	P	Pn	18 23 42.0	-1.3
	2.4nm,0.1s,SNR=16						
EADA				S	Sn	18 24 14.8	-3.3
	7.9nm,0.1s						
ERON	**Agron**	**3.15**	**79**	P	Pn	18 23 45.1	-0.4
	0.8nm,0.4s,SNR=4.0						
ERON				S	Sn	18 24 17.1	-4.9
	1.9nm,0.4s,SNR=4.0						
EGUA	**Guajares**	**3.32**	**82**	P	Pn	18 23 47.0	-0.8
	1.7nm,0.1s,SNR=4.0						
EGUA				S	Sn	18 24 21.8	-4.4
	4.7nm,0.2s,SNR=4.0						
PCBR	**Castelo Branco**	**3.37**	**3**	*e*P	Pn	18 23 47.1	-1.4
PCBR				*e*S	Sn	18 24 23.8	-3.6
PCBR				A		18 24 25.0	
	4.9nm,0.2s						
PCBR	**Castelo Branco**	**3.37**	**3**	*e*P	Pn	18 23 47.1	-1.4
PCBR				*e*S	Sn	18 24 23.8	-3.6
	4.9nm,0.2s						
ECOG	**Cogollos-Vega**	**3.39**	**75**	P	Pn	18 23 48.7	-0.1
	1.4nm,0.1s,SNR=7.9						
ECOG				S	Sn	18 24 25.1	-2.8
	4.3nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**3.47**	**77**	S	Sn	18 24 25.6	-4.3
	1.6nm,0.2s,SNR=4.0						
EBAN	**Banos Encina**	**3.53**	**60**	P	Pn	18 23 49.3	-1.4
	1.9nm,0.1s,SNR=7.9						
EBAN				S	Sn	18 24 25.8	-5.5
	4.6nm,0.1s,SNR=8.6						
MIF	**Mishlifen**	**3.65**	**146**	P	Pn	18 23 50.5	-1.9
MIF				S	Sn	18 24 30.0	-4.4
TZK	**Tazeka**	**3.71**	**129**	*i* P	Pn	18 23 53.0	-0.2
TZK	**Tazeka**	**3.71**	**129**	P	Pn	18 23 53.0	-0.2
TZK				S	Sn	18 24 34.0	-1.8
EALB	**Alboran**	**3.79**	**97**	S	Sn	18 24 32.0	-5.7
	3.0nm,0.3s,SNR=4.0						
EALB	**Alboran**	**3.79**	**97**	S	Sn	18 24 32.0	-5.7
	3.0nm,0.3s,SNR=4.0						
EBER	**Berja**	**3.87**	**82**	P	Pn	18 23 54.9	-0.4
	1.2nm,0.2s,SNR=7.9						
EBER				S	Sn	18 24 38.3	-1.4
	2.4nm,0.3s,SNR=6.0						
EBER	**Berja**	**3.87**	**82**	P	Pn	18 23 54.9	-0.4
	1.2nm,0.2s,SNR=7.9						
EBER				S	Sn	18 24 38.3	-1.4
	2.4nm,0.3s,SNR=6.0						
EQES	**Quesada**	**3.91**	**69**	P	Pn	18 23 54.6	-1.3
	1.1nm,0.1s,SNR=7.9						
EQES				S	Sn	18 24 37.1	-3.6
	2.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.91**	**69**	P	Pn	18 23 54.6	-1.4
	1.1nm,0.1s,SNR=7.9						
EQES				S	Sn	18 24 37.1	-3.6
	2.8nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**3.93**	**1**	*e*P	Pn	18 23 55.0	-1.1
MTE				*e*S	Sn	18 24 37.5	-3.6
CZD	**Col de Zad**	**4.05**	**147**	P	Pn	18 23 56.0	-1.9
CZD				S	Sn	18 24 39.0	-5.3
KIB	**El Ksiba**	**4.11**	**160**	P	Pn	18 23 54.0	-4.7
KIB				S	Sn	18 24 36.0	-10
PVIS	**Viseu**	**4.24**	**358**	*e*P	Pn	18 23 58.9	-1.6
PVIS				*e*S	Sn	18 24 45.2	-3.7
ESDC	**Sonseca Array**	**4.34**	**41**	P	Pn	18 24 00.3	-1.5
	3.9nm,0.1s,SNR=3.7						
ESDC				S	Sn	18 24 45.4	-5.8
	3.0nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.34**	**41**	P	Pn	18 24 00.3	-1.4
	3.9nm,0.1s,baz=225,slow=13,SNR=3.7						
ESDC				S	Sn	18 24 45.4	-5.8
	3.0nm,0.2s,baz=225,slow=24,SNR=7.9						
ESBB	**Sonseca Array**	**4.34**	**41**	P	Pn	18 24 00.4	-1.4
	69µm,0.1s,SNR=7.9						
ESBB				S	Sn	18 24 44.4	-6.8
	1.4nm,0.1s,SNR=7.9						
ESBB	**Sonseca Array**	**4.34**	**41**	P	Pn	18 24 00.4	-1.4
ESBB				S	Sn	18 24 44.4	-6.9
EVIA	**Vianos**	**4.64**	**61**	P	Pn	18 24 04.0	-2.0
	0.7nm,0.1s,SNR=7.9						
EVIA				S	Sn	18 24 52.7	-6.1
	4.2nm,0.2s,SNR=6.9						
MVO	**Moncorvo**	**4.71**	**6**	*e*P	Pn	18 24 05.4	-1.6
MVO				*e*S	Sn	18 24 55.3	-5.2
MVO				A		18 24 57.6	
	6.5nm,0.5s						
MVO	**Moncorvo**	**4.71**	**6**	*e*P	Pn	18 24 05.4	-1.6
MVO				*e*S	Sn	18 24 55.3	-5.2
	6.5nm,0.5s						
GUD	**Guadarrama**	**5.00**	**32**	P	Pn	18 24 09.8	-1.0
	1.2nm,0.1s,SNR=7.9						
GUD				S	Sn	18 25 02.6	-4.9
	1.3nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**5.24**	**357**	*e*P	Pn	18 24 12.8	-1.4
PCAB				*e*S	Sn	18 25 09.2	-4.3
EMUR	**La Murta**	**5.32**	**73**	P	Pn	18 24 14.5	-0.8
	0.2nm,0.1s,SNR=4.0						
EMUR				S	Sn	18 25 09.9	-5.5
	2.0nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**5.32**	**73**	P	Pn	18 24 14.5	-0.7
	0.2nm,0.1s,SNR=4.0						
EMUR				S	Sn	18 25 09.9	-5.5
	2.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.33**	**64**	P	Pn	18 24 13.1	-2.3
	0.4nm,0.1s,SNR=5.7						
ETOB				S	Sn	18 25 10.5	-5.2
	1.6nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.33**	**64**	P	Pn	18 24 13.1	-2.3
	0.4nm,0.1s,SNR=5.7						
ETOB				S	Sn	18 25 10.5	-5.1
	1.6nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.38**	**7**	*e*P	Pn	18 24 14.6	-1.5
PBRG				*e*S	Sn	18 25 11.6	-5.2
PBRG				A		18 25 12.3	
	2.3nm,0.3s						
PBRG	**Braganca**	**5.38**	**7**	*e*P	Pn	18 24 14.6	-1.5
PBRG				*e*S	Sn	18 25 11.6	-5.2
	2.3nm,0.3s						
ELOB	**Lobios**	**5.40**	**357**	P	Pn	18 24 14.9	-1.5
	1.1nm,0.1s,SNR=7.4						
ELOB				S	Sn	18 25 12.2	-5.2
	3.8nm,0.2s,SNR=5.6						
ELOB	**Lobios**	**5.40**	**357**	P	Pn	18 24 14.9	-1.5
	1.1nm,0.1s,SNR=7.4						
ELOB				S	Sn	18 25 12.2	-5.2
	3.8nm,0.2s,SNR=5.6						
ECAL	**Calabor**	**5.51**	**7**	P	Pn	18 24 16.5	-1.4
	1.7nm,0.1s,SNR=19						
ECAL				S	Sn	18 25 14.5	-5.7
	6.9nm,0.3s,SNR=4.8						
ECAL	**Calabor**	**5.51**	**7**	P	Pn	18 24 16.5	-1.4
	1.7nm,0.1s,SNR=19						
ECAL				S	Sn	18 25 14.5	-5.7
	6.9nm,0.3s,SNR=4.8						
EZAM	**Zamans**	**5.73**	**352**	P	Pn	18 24 19.6	-1.3
	1.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.18**	**44**	P	Pn	18 24 25.9	-1.2
	4.4nm,0.2s,SNR=7.9						
ETOR				S	Sn	18 25 29.0	-7.6
	6.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**6.32**	**67**	S	Sn	18 25 33.7	-6.4
	1.7nm,0.2s,SNR=4.0						
EARI	**Arriondas**	**7.08**	**15**	P	Pn	18 24 38.6	-0.8
	0.4nm,0.2s,SNR=4.0						
EARI	**Arriondas**	**7.08**	**15**	P	Pn	18 24 38.6	-0.9
	0.4nm,0.2s,SNR=4.0						
EALK	**Alkurruntz**	**8.24**	**33**	P	Pn	18 24 54.3	-1.1
	0.6nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**8.28**	**35**	*e*P	Pn	18 24 54.8	-1.1
SJPF				*e*Sn	Sn	18 26 16.1	-12
	128nm,1.6s						
SJPF	**Ste Jean**	**8.28**	**35**	P	Pn	18 24 54.8	-1.1
SJPF				Sn	Sn	18 26 16.1	-12
	64nm,1.6s						
ETSF	**Etsaut**	**8.44**	**38**	*e*P	Pn	18 24 57.1	-1.0
ETSF				*e*Sn	Sn	18 26 19.7	-13
	69nm,1.7s						
ETSF	**Etsaut**	**8.44**	**38**	P	Pn	18 24 57.1	-1.0
ETSF				Sn	Sn	18 26 19.7	-13
	34nm,1.7s						
EBIE	**Bielsa**	**8.65**	**42**	P	Pn	18 25 00.4	-0.6
	0.3nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**8.65**	**42**	P	Pn	18 25 00.4	-0.6
	0.3nm,0.1s,SNR=7.9						

*ISCJB **06** 18:37:45.9±0.5, 3701N±003×2925E±003, h8^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=4.3km az=167.8*
*CSEM **06** 18:37:45.2±0.1, 3701N×2927E, h5^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.6km az=178.0*
*DDA **06** 18:37:45.2, 3699N×2926E, h24^{km}±1^{km}, Md3.3*
*ISK **06** 18:37:45.5, 3701N×2925E, h10^{km}, MD2.9*
ISC 06 18:37:46.3±0.5**, 3700N**±003×**2926E**±003**, h10**^{km}±4^{km}**, n23, σ0^{s}95**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.34**	**45**	*i* P	**Pg**	**18 37 52.4**	**-0.5**
GOLH				*i* S	**Sg**	**18 37 58.8**	**+1.4**
TURN	**Turunc**	**0.54**	**257**	*i* P	**Pg**	**18 38 01.0**	**+4.2**
TURN				*i* S	**Sg**	**18 38 14.0**	**+10**
DALT	**Dalyan (Mudla)**	**0.55**	**245**	*e*PG	**Pg**	**18 37 56.4**	**-0.6**
DALT				*e*SG	**Sg**	**18 38 04.5**	**+0.3**
ELL	**Elmali**	**0.58**	**116**	*e*PG	**Pg**	**18 37 56.6**	**-0.9**
ELL				*e*SG	**Sg**	**18 38 06.2**	**+1.1**
DENT	**Denizli**	**0.77**	**346**	*e*PG	**Pg**	**18 38 00.2**	**-1.0**
DENT				*e*SG	**Sg**	**18 38 11.5**	**+0.2**
YER	**Yerkesik**	**0.80**	**280**	*e*PG	**Pg**	**18 38 01.4**	**-0.3**
AKAS	**Kas**	**0.81**	**160**	*i* P	**Pg**	**18 38 00.8**	**-1.2**
AKAS				*i* S	**Sg**	**18 38 16.4**	**+3.8**
ANTB	**Antalya**	**1.12**	**95**	*e*PN	**Pn**	**18 38 08.2**	**+0.3**
BCK	**Bucak**	**1.15**	**66**	*e*PN	**Pn**	**18 38 08.2**	**-0.2**
MLSB	**Milas**	**1.22**	**284**	*e*PN	**Pn**	**18 38 09.1**	**-0.2**
AYDN	**Tasoluk**	**1.28**	**301**	*i* P	**Pn**	**18 38 10.1**	**-0.1**
AYDN				*i* S	**Sb**	**18 38 29.2**	**+2.1**
KHL	**Karahalli**	**1.33**	**9**	*e*PN	**Pn**	**18 38 10.9**	**0.0**
KHAL	**Karahalli**	**1.38**	**7**	*i* P	**Pn**	**18 38 11.5**	**0.0**
KHAL				*i* S	**Sb**	**18 38 31.1**	**+1.4**
DAT	**Datca**	**1.38**	**259**	*e*PN	**Pn**	**18 38 11.9**	**+0.4**
BDRM	**Kayabasi**	**1.46**	**273**	*i* P	**Pn**	**18 38 12.7**	**+0.1**
BDRM				*i* S	**Sn**	**18 38 33.7**	**+2.0**
BODT	**Bodrum**	**1.56**	**273**	*e*PN	**Pn**	**18 38 13.5**	**-0.6**
KULA	**Kula-Manisa**	**1.58**	**343**	*e*PN	**Pn**	**18 38 13.7**	**-0.7**
GCAM	**G?zelcaml?**	**1.76**	**294**	*i* P	**Pn**	**18 38 16.8**	**0.0**
GCAM				*i* S	**Sn**	**18 38 39.7**	**+0.5**
SHUT	**Suhut-Afyon**	**1.85**	**33**	*e*PN	**Pn**	**18 38 18.4**	**+0.4**
GDZ	**Gediz**	**2.09**	**5**	*i* P	**Pn**	**18 38 22.0**	**+0.7**
GDZ				*i* S	**Sn**	**18 38 44.9**	**-2.4**
KDAG	**Bornova**	**2.11**	**312**	*i* P	**Pn**	**18 38 22.0**	**+0.4**
KDAG				*i* S	**Sn**	**18 38 46.0**	**-1.9**
AKS	**Akhisar**	**2.20**	**329**	*e*PN	**Pn**	**18 38 22.1**	**-0.7**
BLCB	**Balcova**	**2.24**	**309**	*e*PN	**Pn**	**18 38 22.8**	**-0.5**

KRSC 06 18:55:40.9±0.7**, 5571N**×**16204E, h40**^{km}±29^{km}**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.66**	**41**	*i* P	Pn	18 55 51.9	-1.9
KBTR				*e*S	Sn	18 56 01.2	-1.9
ZLN	**Zelenaya**	**0.76**	**294**	*i* P	Pn	18 55 55.4	+0.3
ZLN				*e*S	Sn	18 56 06.5	+1.1
BZMR	**Bezymyannaya**	**0.90**	**285**	*e*P	Pn	18 55 57.4	+0.3
BZMR				*e*S	Sn	18 56 10.1	+1.2
KRSR	**Krestovskiy**	**0.97**	**302**	*e*P	Pn	18 55 57.6	-0.4
KRSR				*e*S	Sn	18 56 09.8	-0.8
KLY	**Klyuchi**	**0.99**	**308**	*i* P	Pn	18 55 56.5	-1.7
KLY				*e*S	Sn	18 56 09.0	-1.9
KMNR	**Kamenistaya**	**1.02**	**273**	*i* P	Pn	18 55 59.7	+1.0
KMNR				*e*S	Sn	18 56 14.3	+2.5
KPT	**Kopyto**	**1.06**	**285**	*i* P	Pn	18 56 00.0	+0.8
KPT				*e*S	Sn	18 56 13.8	+1.1
SRKR	**Sorokina**	**1.06**	**333**	*i* P	Pn	18 55 58.8	-0.5
SRKR				*e*S	Sn	18 56 12.1	-0.8
TUMR	**Tumrok**	**1.16**	**249**	*i* P	Pn	18 56 01.6	+1.0
TUMR				*e*S	Sn	18 56 16.8	+1.6
MKZ	**Mys Kozlova**	**1.17**	**189**	*i* P	Pn	18 56 00.1	-0.6
MKZ				*e*S	Sn	18 56 14.6	-0.8
KOZ	**Kozyrevsk**	**1.27**	**287**	*e*P	Pn	18 56 03.8	+1.7
KOZ				*e*S	Sn	18 56 19.9	+2.0
SRDR	**Sredinnyy**	**1.44**	**296**	*i* P	Pn	18 56 05.3	+0.9
SRDR				*e*S	Sn	18 56 23.4	+1.3
KII	**Karymskiy**	**2.25**	**223**	*e*P	Pn	18 56 16.8	+1.3
SPN	**Mys Shipunski**	**2.87**	**205**	P	Pn	18 56 23.9	-0.2
SPN				*e*S	Sn	18 56 56.0	-1.3
NLC	**Nalytchevo**	**2.99**	**213**	S	Sn	18 57 00.8	+0.5
GNL	**Ganaly**	**3.12**	**231**	*i* P	Pn	18 56 29.2	+1.7
PET	**Petropavlovsk**	**3.34**	**218**	P	Pn	18 56 30.6	+0.1
RUS	**Russkaya**	**3.88**	**214**	P	Pn	18 56 38.6	+0.6

*CRAAG **06** 18:57:00.2, 3646N×136E, Ml2.2*
*CSEM **06** 18:57:01.8±0.1, 3628N×147E, h15^{km}, mb2.7/6, Error ellipse: s-maj=3.2km s-min=2.7km az=140.0*
*ISCJB **06** 18:57:02.7±0.8, 3634N±005×143E±008, h10^{km}, Error ellipse: s-maj=9.8km s-min=6.1km az=148.7*
*MDD **06** 18:57:02.5±2.2, 3624N×162E, h7^{km}±19^{km}, mb2.7/6, Error ellipse: s-maj=36.4km s-min=15.5km az=140.0, PRXIMO SIN SOLUCIN*
*NEIC **06** 18:57:04.1, 3644N×153E, h0^{km}, MG2.7(MDD), After MDD.*
ISC 06 18:57:03.2±0.9**, 3632N**±005×**147E**±008**, h10**^{km}**, n16, σ0^{s}86**/23**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.05**	**120**	P	**Pg**	**18 57 05.2**	**0.0**
ECHA	**Ech Chlef**	**0.19**	**207**	P	**Pg**	**18 57 07.0**	**-0.1**
ECHF	**Ech Chlef**	**0.19**	**214**	P	**Pg**	**18 57 07.0**	**-0.2**
EANR	**'Ain N'Sour**	**0.47**	**220**	P	**Pg**	**18 57 11.8**	**-0.6**
EMUR	**La Murta**	**2.65**	**306**	P	**Pn**	**18 57 46.2**	**+0.3**
	0.1nm,0.1s,SNR=4.0						
EMUR	**La Murta**	**2.65**	**306**	P	**Pn**	**18 57 46.2**	**+0.3**
	0.1nm,0.1s,SNR=4.0						
EMUR				S	**Sn**	**18 58 18.1**	**0.0**
	0.3nm,0.2s,SNR=4.0						
EIBI	**Ibiza**	**2.71**	**358**	P	**Pn**	**18 57 46.3**	**-0.4**
	0.2nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**2.71**	**358**	P	**Pn**	**18 57 46.3**	**-0.5**
	0.2nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**18 58 15.4**	**-4.1**
	0.7nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.74**	**331**	P	**Pn**	**18 57 47.2**	**+0.1**
	0.1nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**2.74**	**331**	P	**Pn**	**18 57 47.2**	**0.0**
	0.1nm,0.1s,SNR=4.0						
ETOB	**Tobarra**	**3.34**	**315**	P	**Pn**	**18 57 56.8**	**+1.3**
	0.4nm,0.1s,SNR=7.3						
ETOB	**Tobarra**	**3.34**	**315**	P	**Pn**	**18 57 56.8**	**+1.4**
	0.4nm,0.1s,SNR=7.3						
ETOB				S	**Sn**	**18 58 32.5**	**-2.7**
	0.3nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.56**	**281**	P	**Pn**	**18 57 58.2**	**-0.2**
	0.2nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**18 58 40.8**	**+0.3**
	0.4nm,0.2s,SNR=4.0						
EBER	**Berja**	**3.56**	**281**	P	**Pn**	**18 57 58.2**	**-0.2**
	0.2nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**18 58 40.8**	**+0.3**
	0.4nm,0.2s,SNR=4.0						
EQES	**Quesada**	**3.93**	**294**	P	**Pn**	**18 58 05.1**	**+1.6**
	0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**18 58 49.7**	**+0.1**
	0.2nm,0.1s,SNR=7.9						
EQES	**Quesada**	**3.93**	**294**	P	**Pn**	**18 58 05.1**	**+1.6**
	0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**18 58 49.7**	**+0.1**
	0.2nm,0.1s,SNR=7.9						

*DDA **06** 18:59:51.2, 3911N×4093E, h16^{km}±1^{km}, Md3.5*
*CSEM **06** 18:59:52.9±0.1, 3900N×4108E, h5^{km}, MD3.5, Error ellipse: s-maj=2.4km s-min=2.0km az=126.0*
*ISCJB **06** 18:59:53.8±0.5, 3902N±002×4113E±004, h10^{km}±3^{km}, Error ellipse: s-maj=5.1km s-min=3.7km az=33.0*
*ISK **06** 18:59:53.1, 3901N×4110E, h5^{km}, MD3.5*
ISC 06 18:59:53.4±0.7**, 3898N**±002×**4111E**±003**, h1**^{km}±5^{km}**, n31, σ1^{s}12**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.04**	**133**	*i* P	**Pg**	**18 59 55.7**	**+1.6**
BNGL				*i* S	**Sg**	**18 59 58.5**	**+3.8**
EZM	**Erzurum**	**0.94**	**12**	*e*PG	**Pg**	**19 00 10.7**	**-0.8**
EZM				*e*SG	**Sg**	**19 00 23.9**	**+0.1**
ERZM	**Erzurum**	**0.94**	**12**	*i* P	**Pg**	**19 00 08.5**	**-3.0**
ERZM				*i* S	**Sg**	**19 00 19.7**	**-4.1**
BEST	**Besiri**	**1.09**	**173**	*i* P	**Pg**	**19 00 07.9**	**-6.4**
BEST				*i* S	**Sg**	**19 00 20.1**	**-8.4**
HOMI	**Horasan**	**1.23**	**30**	*i* P	**Pg**	**19 00 09.3**	**-7.7**
HOMI				*i* S	**Sg**	**19 00 26.6**	**-6.3**
EZC	**Erzincan**	**1.26**	**308**	*e*PN	**Pn**	**19 00 21.6**	**+3.3**
DIY	**Diyarbakir**	**1.29**	**213**	*e*PN	**Pn**	**19 00 18.9**	**+0.4**
DIY				*e*SN	**Sn**	**19 00 36.3**	**-0.1**
DIYA	**Diyarbakir**	**1.31**	**217**	*i* P	**Pg**	**19 00 18.0**	**-0.5**
DIYA				*i* S	**Sg**	**19 00 35.9**	**+0.4**
TUTA	**Tutak**	**1.39**	**72**	*i* P	**Pn**	**19 00 14.0**	**-6.0**
TUTA				*i* S	**Sg**	**19 00 25.9**	**-12**
SVRC	**Sivrice-ELAZID**	**1.54**	**248**	*e*PN	**Pn**	**19 00 22.1**	**+0.1**
AGRB	**Hanur-Agry**	**1.58**	**67**	*e*PN	**Pn**	**19 00 21.7**	**-0.8**
MARD	**Mardin**	**1.68**	**189**	*i* P	**Pn**	**19 00 22.9**	**-1.1**
MARD				*i* S	**Sn**	**19 00 46.5**	**+0.3**
VANB	**Van**	**1.82**	**101**	*e*PN	**Pn**	**19 00 25.9**	**0.0**
TVAN	**Van**	**1.85**	**103**	*i* P	**Pn**	**19 00 24.7**	**-1.6**
TVAN				*i* S	**Sn**	**19 00 48.0**	**-2.3**
VANT	**Van**	**1.86**	**106**	*e*PN	**Pn**	**19 00 25.8**	**-0.6**
GUMT	**Gumushane**	**1.94**	**320**	*e*PN	**Pn**	**19 00 27.7**	**+0.1**
DDEM	**Demirkent**	**1.97**	**14**	*i* P	**Pn**	**19 00 22.8**	**-5.2**
DDEM				*i* S	**Sn**	**19 00 47.4**	**-5.9**
KEMA	**Kemaliye**	**2.06**	**279**	*i* S	**Sn**	**19 00 56.5**	**+1.1**
DYDN	**Diyadin**	**2.08**	**73**	*i* P	**Pn**	**19 00 30.1**	**+0.7**
DYDN				*i* S	**Sn**	**19 00 57.9**	**+2.0**
DAGI	**Agillar**	**2.18**	**16**	*i* P	**Pn**	**19 00 28.6**	**-2.3**
DAGI				*i* S	**Sn**	**19 01 00.3**	**+1.7**
PZAR	**Pazar-Rize**	**2.20**	**356**	*e*PN	**Pn**	**19 00 31.0**	**-0.2**
KARS	**Kars**	**2.23**	**42**	*e*PN	**Pn**	**19 00 31.5**	**-0.1**
KTUT	**Trabzon**	**2.25**	**333**	*e*PN	**Pn**	**19 00 32.3**	**+0.5**
DIGO	**Kars**	**2.26**	**50**	*i* P	**Pn**	**19 00 32.1**	**+0.2**
DIGO				*i* S	**Sg**	**19 01 07.2**	**+1.3**
URFA	**Urfa**	**2.37**	**230**	*e*PN	**Pn**	**19 00 33.5**	**+0.1**
AKCD	**Akcadag**	**2.59**	**256**	*i* P	**Pn**	**19 00 32.6**	**-3.8**
AKCD				*i* S	**Sn**	**19 01 07.4**	**-1.2**
CUKT	**Cukurca**	**2.62**	**131**	*e*PN	**Pn**	**19 00 38.0**	**+1.1**
ESPY	**Espiye-Giresun**	**2.66**	**317**	*e*PN	**Pn**	**19 00 37.2**	**-0.3**
MSL	**Mosul**	**3.02**	**148**	*e*Pn	**Pg**	**19 00 55.0**	**+3.6**
MSL				*e*Sn	**Sg**	**19 01 30.0**	**-0.6**
GNI	**Garni**	**3.04**	**66**	*e*PN	**Pn**	**19 00 43.6**	**+1.0**
SVSK	**Karacayir**	**3.32**	**288**	*e*PN	**Pn**	**19 00 47.4**	**+0.9**

*IDC **06** 19:07:25.6±1.9, 4351N×10532W, h0^{km}, mb4.1/1, mb1 3.7/5, mb1mx3.5/24, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=49.0km s-min=9.0km az=152.0*
*ISCJB **06** 19:07:26.0±0.5, 4376N±005×10521W±006, h0^{km}, Error ellipse: s-maj=7.5km s-min=5.7km az=167.7*
*NEIC **06** 19:07:27.6±0.5, 4372N×10522W, h0^{km}, ML3.1, Error ellipse: s-maj=7.6km s-min=5.6km az=165.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 06 19:07:27.6±0.5**, 4373N**±005×**10521W**±006**, h0**^{km}**, n27, σ0^{s}96**/28**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**65**	*e*P	**Pg**	**19 07 45.7**	**+0.2**
PHWY	**Pilot Hill**	**2.44**	**184**	*e*P	**Pn**	**19 08 08.7**	**+0.1**
RWWY	**Rawlins**	**2.52**	**217**	*e*P	**Pn**	**19 08 09.5**	**-0.2**
RLMT	**Red Lodge**	**3.22**	**297**	*e*P	**Pn**	**19 08 19.3**	**-0.1**
BW06	**Boulder Array**	**3.32**	**255**	*e*P	**Pn**	**19 08 19.8**	**-0.9**
PDAR	**Pinedale Array**	**3.32**	**255**	Pn	**Pn**	**19 08 20.0**	**-0.7**
	3.2nm,0.3s,baz=78,slow=17,SNR=52						
PDAR				Pg	**Pg**	**19 08 25.1**	**-6.0**
	10.0nm,0.3s,baz=66,slow=20,SNR=90						
PDAR				Lg		19 09 06.2	
	16nm,0.3s,baz=65,slow=31,SNR=19						
OGNE	**Ogallala**	**3.65**	**139**	*e*P	**Pn**	**19 08 26.7**	**+1.5**
LOHW	**Long Hollow**	**3.91**	**270**	*e*P	**Pn**	**19 08 28.7**	**-0.2**
ISCO	**Idaho Springs**	**3.94**	**185**	*e*P	**Pn**	**19 08 28.1**	**-1.2**
MOOW	**Moose Ponds**	**4.01**	**272**	*e*P	**Pn**	**19 08 30.6**	**+0.4**
SNOW	**Snow King Moun**	**4.04**	**268**	P	**Pn**	**19 08 31.1**	**+0.5**
REDW	**Red Top Meadow**	**4.12**	**267**	*e*P	**Pn**	**19 08 30.0**	**-1.7**
IMW	**Indian Meadow**	**4.15**	**274**	*e*P	**Pn**	**19 08 32.8**	**+0.6**
TPAW	**Teton Pass**	**4.17**	**269**	*e*P	**Pn**	**19 08 34.1**	**+1.6**
AHID	**Auburn Hatcher**	**4.41**	**259**	*e*P	**Pn**	**19 08 38.6**	**+2.8**
RRI2	**Red Ridge**	**4.46**	**267**	*e*P	**Pn**	**19 08 36.6**	**+0.2**
DGMT	**Dagmar**	**4.79**	**8**	*e*P	**Pn**	**19 08 42.7**	**+1.7**
BOZ	**Bozeman (W)**	**4.96**	**295**	*e*P	**Pn**	**19 08 42.4**	**-0.9**
EGMT	**Eagleton**	**5.34**	**325**	*e*P	**Pn**	**19 08 47.4**	**-1.0**
	14nm,0.7s						
DLMT	**Dillon**	**5.53**	**290**	*e*P	**Pn**	**19 08 51.8**	**+0.7**
	7.8nm,1.0s						
ECSD	**EROS,Sioux Fal**	**6.23**	**87**	*e*P	**Pn**	**19 09 00.6**	**-0.1**
	2.2nm,0.3s						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**19 09 39.4**	**-0.9**
	1.1nm,0.3s,baz=233,slow=12,SNR=5.1						
ULM				Lg		19 12 02.4	
	1.6nm,0.3s,baz=50,slow=23,SNR=6.3						
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**19 09 39.4**	**-0.9**
ULM				Lg		19 12 02.4	
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**19 10 09.1**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	0.1nm,0.3s,baz=57,slow=12,SNR=2.3						
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**Pn**	**19 11 58.2**	**+0.1**
	0.1nm,0.3s,baz=161,slow=12,SNR=5.7						
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**Pn**	**19 11 58.2**	**+0.1**
ARCES	**ARCESS Array B**	**61.41**	**18**	P	**P**	**19 17 43.8**	**-1.2**
	1.9nm,0.8s,baz=326,slow=5.9,SNR=3.9						

IDC 06 19:38:22.7±3.2**,2019S**×**17666W,h203**km±33km**,mb3.3**/3**, mb1 3.7**/5**,mb1mx3.4**/18**,mbtmp3.5**/5**,Error ellipse: s-maj=41.5km s-min=18.9km az=137.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.80**	**38**	P	Pn	19 40 13.4	+0.1
	2.6nm,0.3s,baz=180,slow=20,SNR=2.9						
AFI				S	Sn	19 41 32.5	-9.0
	6.0nm,0.3s,baz=54,slow=23,SNR=5.2						
URZ	**Urewera**	**18.80**	**195**	P	P	19 42 26.9	0.0
	1.0nm,0.3s,baz=34,slow=18,SNR=4.3						
URZ				S	S	19 45 42.1	-7.7
	0.3nm,0.3s,baz=336,slow=15,SNR=2.8						
ASAR	**Alice Springs**	**45.81**	**256**	P	P	19 46 24.4	0.0
	1.8nm,0.7s,baz=91,slow=8.5,SNR=41						
NVAR	**Mina Array Bea**	**79.94**	**43**	P	P	19 50 09.6	+0.5
	0.4nm,0.6s,baz=216,slow=7.7,SNR=3.7						
TXAR	**Lajitas Array**	**85.83**	**57**	P	P	19 50 39.6	+0.1
	0.5nm,0.8s,baz=226,slow=8.6,SNR=4.9						

*CSEM **06** 19:42:42.5,37.13N×57.24E,h9km,ML3.5,After TEH*
*ISCJB **06** 19:43:10.8±1.1,37.12N±0.07×57.28E±0.07,h10km,Error ellipse: s-maj=10.1km s-min=7.6km az=147.0*
ISC 06 19:43:11.9±1.1**,3711N**±006×**5731E**±007**,h10**km**,n8, σ1s53**/10**,1C-2D,Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHV	**Shirvan**	**0.52**	**36**	*e*Sg	**Sg**	**19 43 29.2**	**+0.2**
ISFR	**Sfrayin**	**0.55**	**96⇓**	*e*Pg	**Pg**	**19 43 22.3**	**-0.3**
ISFR				*e*Sg	**Sg**	**19 43 30.8**	**+1.0**
IEMG	**Emamgholi**	**1.11**	**74**	*e*Pg	**Pg**	**19 43 31.8**	**-1.4**
IPAY	**Payeh**	**1.50**	**116**	*e*Pg	**Pg**	**19 43 39.1**	**-1.6**
IPAY				*e*Sg	**Sg**	**19 43 58.7**	**-1.5**
IMOG	**Moghan**	**1.91**	**121**	*e*Pg	**Pn**	**19 43 46.4**	**+1.9**
IMYA	**Miami**	**2.37**	**108⇑**	*e*Pg	**Pn**	**19 43 53.4**	**+2.7**
ILAS	**Lasjerd**	**3.92**	**245**	*e*Pn	**Pn**	**19 44 10.8**	**-1.3**
ITEG	**Tejag**	**4.37**	**164⇓**	*e*Pn	**Pn**	**19 44 21.2**	**+3.0**

*IDC **06** 19:53:32.8±2.0,10.50N×125.81E,h0km,mb3.4/4, mb1 3.4/4,mb1mx3.3/18,mbtmp3.4/4,Error ellipse: s-maj=202.8km s-min=25.3km az=70.0*
*ISCJB **06** 19:53:35.5±1.4,10.6N±0.1×126.1E±0.3,h33km,mb3.3/4, Error ellipse: s-maj=41.4km s-min=17.1km az=2.1*
ISC 06 19:53:38.0±1.4**,105N**±01×**1259E**±03**,h35**km**,n5,**σ**0s51**/5**, mb3.3**/4**,1C,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.87**	**211⇑**	*e*P	**Pn**	**19 53 53.8**	**0.0**
ASAR	**Alice Springs**	**34.88**	**167**	P	**P**	**20 00 26.2**	**0.0**
	0.1nm,0.5s,mb3.0,baz=344,slow=7.3,SNR=6.8						
SONM	**Songino Array**	**40.66**	**340**	P	**P**	**20 01 15.0**	**+0.2**
	0.3nm,0.7s,mb3.0,baz=165,slow=6.0,SNR=2.2						
MKAR	**Makanchi Array**	**51.62**	**323**	P	**P**	**20 02 41.5**	**+0.4**
	0.4nm,0.6s,mb3.5,baz=119,slow=6.5,SNR=7.1						
MKAR				PcP	PcP	20 03 53.5	-1.1
	0.3nm,0.5s,baz=99,slow=5.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**54.23**	**331**	P	**P**	**20 02 59.6**	**-0.7**
	0.4nm,0.4s,mb3.7,baz=129,slow=8.5,SNR=3.8						

*THR **06** 20:30:53.0±1.5,37.66N×48.56E,h14km±16km,ML3.5*
*ISCJB **06** 20:30:54.3±0.4,37.57N±0.04×48.58E±0.05,h10km,Error ellipse: s-maj=7.1km s-min=3.6km az=38.4*
*CSEM **06** 20:30:54.5±0.1,37.59N×48.60E,h16km,ML3.5,Error ellipse: s-maj=3.1km s-min=1.4km az=33.0*
*NNC **06** 20:31:03.0±10.0,38.33N×49.79E,h0km,mb3.4,Error ellipse: s-maj=189.7km s-min=113.5km az=109.0*
*TEH **06** 20:31:09.3,37.56N×48.51E,h18km,ML3.5*
ISC 06 20:30:55.4±0.4**,3759N**±004×**4859E**±005**,h10**km**,n38, σ0s99**/43**,2D,Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.77**	**288**	*e*Pg	**Pg**	**20 31 09.3**	**-0.9**
ISRB	**Sarab**	**0.77**	**288**	*e*Pg	**Pg**	**20 31 09.3**	**-0.9**
ISRB				*e*		20 31 14.6	
ZNJK	**Zanjan**	**0.92**	**175**	*e*Pg	**Pg**	**20 31 10.4**	**-2.6**
GRMI	**Germi**	**1.34**	**336**	*e*Pg	**Pg**	**20 31 16.4**	**-4.7**
GRMI				AML	AML	20 31 36.3	
	comp=N,836nm,0.2s						
IBST	**Bostanabad**	**1.35**	**275**	*e*Sg	**Sg**	**20 31 39.1**	**+0.3**
IBST	**Bostanabad**	**1.35**	**275⇓**	*e*Pg	**Pn**	**20 31 19.6**	**-0.6**
IBST				*e*Sg	**Sg**	**20 31 39.1**	**+0.3**
IBST				*e*		20 31 39.9	
IHRS	**Heris**	**1.42**	**301**	*e*Pg	**Pn**	**20 31 20.5**	**-0.7**
IHRS				*e*		20 31 24.5	
IHRS				*e*Sg	**Sg**	**20 31 40.8**	**-0.3**
GLBA	**Clilabad**	**1.66**	**355**	P	**Pn**	**20 31 23.0**	**-1.5**
	SNR=96						
GLBA				S	**Sn**	**20 31 46.9**	**+1.0**
ITBZ	**Tabriz**	**2.03**	**289**	*e*Pg	**Pn**	**20 31 32.1**	**+2.4**
ITBZ				*e*		20 31 34.1	
IRAZ	**Razeghan**	**2.43**	**153⇓**	*e*Pn	**Pn**	**20 31 34.9**	**-0.2**
IRAZ	**Razeghan**	**2.43**	**153**	*e*Pn	**Pn**	**20 31 35.3**	**+0.2**
IRAZ				*e*		20 32 12.1	
ISHB	**Shabestar**	**2.45**	**287**	*e*Pn	**Pg**	**20 31 37.6**	**-4.7**
ISHB				*e*		20 32 17.2	
IMHD	**Mahdasht**	**2.53**	**138**	*e*Pn	**Pn**	**20 31 37.2**	**+0.7**
IMHD	**Mahdasht**	**2.53**	**138**	*e*Pn	**Pn**	**20 31 37.2**	**+0.7**
IMHD				*e*		20 32 16.7	
IMRD	**Marand**	**2.54**	**297**	*e*Pn	**Pg**	**20 31 39.2**	**-4.8**
IMRD	**Marand**	**2.54**	**297**	*e*Pn	**Pg**	**20 31 39.2**	**-4.8**
IMRD				*e*		20 31 50.8	
CHTH	**Charan**	**2.64**	**129**	*e*Pn	**Pn**	**20 31 38.6**	**+0.6**
SNGE	**Sanandaj**	**2.68**	**202**	*e*Pn	**Pn**	**20 31 39.0**	**+0.4**
SNGE				*e*Sg	**Sn**	**20 32 19.3**	**+8.2**
SNGE				AML	AML	20 32 20.2	
	comp=E,157nm,0.5s						
SNGE	**Sanandaj**	**2.68**	**202**	*e*Pn	**Pn**	**20 31 39.0**	**+0.4**
	SNR=52						
SNGE				*e*Sg	**Sn**	**20 32 19.3**	**+8.2**
	comp=E,157nm,0.5s,SNR=90						
ASAO	**Ashtian**	**3.25**	**159**	*e*Pn	**Pn**	**20 31 47.1**	**+0.7**
IPRN	**Peran**	**3.29**	**113**	*e*Pn	**Pn**	**20 31 44.8**	**-2.2**
IPRN				*e*		20 32 28.1	
DAMV	**Damavand**	**3.35**	**125**	*e*Pn	**Pn**	**20 31 48.3**	**+0.6**
IDHR	**Dehrash**	**3.39**	**212**	*e*	**Sg**	**20 32 59.6**	**+16**
IDMV	**Damavand**	**3.42**	**125**	*e*Pn	**Pn**	**20 31 49.3**	**+0.6**
IDMV	**Damavand**	**3.42**	**125**	*e*Pn	**Pn**	**20 31 49.3**	**+0.6**
GANJ	**Ganja**	**3.53**	**331**	P	**Pn**	**20 31 51.0**	**+0.8**
	SNR=4.7						
IVRN	**Varamin**	**3.62**	**135**	*e*Pn	**Pn**	**20 31 56.0**	**+4.5**
IVRN				*e*		20 32 01.7	
SEKA	**Sheki**	**3.77**	**344**	P	**Pn**	**20 31 53.6**	**0.0**
	SNR=6.5						
GHVR	**GHOM**	**3.80**	**144**	*e*Pn	**Pn**	**20 31 54.1**	**+0.2**
IFIR	**Firoozkooh**	**3.87**	**119**	*e*Pn	**Pn**	**20 31 55.5**	**+0.5**
IFIR	**Firoozkooh**	**3.87**	**119**	*e*Pn	**Pn**	**20 31 55.5**	**+0.5**
IFIR				*e*		20 32 10.4	
ILAS	**Lasjerd**	**4.15**	**121**	*e*Pn	**Pn**	**20 31 59.1**	**+0.3**
ILAS	**Lasjerd**	**4.15**	**121**	*e*Pn	**Pn**	**20 31 59.1**	**+0.3**
ILAS				*e*		20 33 17.3	
IGLO	**Ghaloghah**	**4.33**	**103**	*e*Pn	**Pn**	**20 31 59.7**	**-1.6**
IGLO				*e*		20 33 02.4	
IKLH	**Kolahrood**	**4.91**	**149**	*e*Pn	**Pn**	**20 32 09.3**	**+0.1**
IKLH	**Kolahrood**	**4.91**	**149**	*e*Pn	**Pn**	**20 32 09.3**	**+0.1**
IKLH				*e*		20 32 23.2	
IPIR	**Pirpir**	**5.24**	**158**	*e*Pn	**Pn**	**20 32 13.7**	**-0.1**
IPIR	**Pirpir**	**5.24**	**158**	*e*Pn	**Pn**	**20 32 13.7**	**-0.1**
IPIR				*e*		20 32 36.5	

*ISCJB **06** 21:02:03.1±0.5,31.42N±0.04×56.46E±0.04,h10km,Error ellipse: s-maj=6.3km s-min=4.6km az=35.0*
*CSEM **06** 21:02:03.3±0.1,31.47N×56.48E,h25km,ML3.6,Error ellipse: s-maj=3.9km s-min=3.5km az=1.0*
*THR **06** 21:02:04.1±0.5,31.38N×56.29E,h14km±6km,ML3.6*
*TEH **06** 21:02:16.7,31.42N×56.44E,h5km,ML3.9*
ISC 06 21:02:04.3±0.5**,3143N**±004×**5645E**±004**,h10**km**,n32, σ1s29**/38**,1C-3D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**0.77**	**282**	*e*Sg	**Sg**	**21 02 26.9**	**-2.4**
IBAF	**Bafgh**	**0.77**	**282⇑**	*e*Pg	**Pg**	**21 02 16.7**	**-2.5**
IBAF				*e*Sg	**Sg**	**21 02 26.9**	**-2.4**
IBAF				*e*		21 02 27.4	
KRBR	**Kerman**	**1.47**	**170**	*e*Pg	**Pg**	**21 02 30.9**	**-1.6**
KRBR				*e*Sg	**Sg**	**21 02 50.6**	**-0.9**
KRBR				AML	AML	21 02 57.3	
	comp=N,904nm,0.6s						
KRBR				AML	AML	21 02 57.3	
	comp=E,1μm,0.3s						
KRBR	**Kerman**	**1.47**	**170**	*e*Pg	**Pg**	**21 02 30.9**	**-1.6**
	SNR=90						
KRBR				*e*Sg	**Sg**	**21 02 50.7**	**-0.9**
	SNR=90						
IMEH	**Mehriz**	**1.57**	**269⇓**	*e*Pn	**Pn**	**21 02 31.7**	**-0.5**
IMEH				*e*Sn	**Sn**	**21 02 52.4**	**-0.3**
IMEH	**Mehriz**	**1.57**	**269⇓**	*e*Pn	**Pn**	**21 02 31.7**	**-0.5**
IMEH				*e*Sn	**Sn**	**21 02 52.4**	**-0.3**
IMEH				*e*		21 02 54.9	
ICHK	**Chekchek**	**1.92**	**295**	*e*Sn	**Sn**	**21 03 00.1**	**-1.1**
ICHK	**Chekchek**	**1.92**	**295⇓**	*e*Pn	**Pn**	**21 02 36.9**	**-0.1**
ICHK				*e*		21 02 38.2	
ICHK				*e*Sn	**Sn**	**21 03 00.1**	**-1.1**
IKOO	**Kooshah**	**2.38**	**65**	*e*Pn	**Pn**	**21 02 42.1**	**-1.3**
IKOO	**Kooshah**	**2.38**	**65**	*e*Pn	**Pn**	**21 02 42.1**	**-1.3**
IKOO				*e*		21 03 20.5	
ISAD	**Sadrabad**	**2.41**	**282**	*e*Pn	**Pn**	**21 02 43.9**	**+0.2**
ISAD	**Sadrabad**	**2.41**	**282**	*e*Pn	**Pn**	**21 02 43.9**	**+0.2**
ISAD				*e*		21 03 21.0	
ITEG	**Tejag**	**2.43**	**53**	*e*Pn	**Pn**	**21 02 42.7**	**-1.4**
ITEG	**Tejag**	**2.43**	**53**	*e*Pn	**Pn**	**21 02 42.7**	**-1.4**
ITEG				*e*		21 03 23.3	
IMON	**Monand**	**3.24**	**56**	*e*Pn	**Pn**	**21 02 54.9**	**-0.2**
IMON	**Monand**	**3.24**	**56**	*e*Pn	**Pn**	**21 02 54.9**	**-0.2**
IMON				*e*		21 03 05.0	
NASN	**Na'in**	**3.38**	**295**	*e*Pn	**Pn**	**21 02 57.4**	**+0.3**
NASN				AML	AML	21 03 51.3	
	comp=N,107nm,0.2s						
ISRV	**Sarvestan**	**3.54**	**236**	*e*Pn	**Pn**	**21 03 01.2**	**+2.0**
ISRV	**Sarvestan**	**3.54**	**236**	*e*Pn	**Pn**	**21 03 01.2**	**+2.0**
ISRV				*e*		21 04 05.9	
IZEF	**Zefreh**	**3.79**	**294**	*e*Pn	**Pn**	**21 03 03.2**	**+0.5**
IZEF	**Zefreh**	**3.79**	**294**	*e*Pn	**Pn**	**21 03 03.2**	**+0.5**
IZEF				*e*		21 04 05.2	
IGAR	**Gharneh**	**3.87**	**286**	*e*Pn	**Pn**	**21 03 09.9**	**+6.0**
IGAR				*e*		21 04 08.8	
IMOK	**Mouk**	**4.01**	**235**	*e*Pn	**Pn**	**21 03 07.3**	**+1.5**
IMOK	**Mouk**	**4.01**	**235**	*e*Pn	**Pn**	**21 03 07.3**	**+1.5**
IMOK				*e*		21 04 34.4	
BNDS	**Bandar-Abbas**	**4.03**	**184**	*e*Pn	**Pn**	**21 03 06.7**	**+0.7**
ZHSF	**Zahedan**	**4.15**	**115**	*e*Pn	**Pn**	**21 03 10.7**	**+3.1**
GHIR	**Ghir-Karzin**	**4.35**	**225**	*e*Pn	**Pn**	**21 03 10.1**	**-0.3**
IKLH	**Kolahrood**	**4.53**	**296**	*e*Pn	**Pn**	**21 03 14.5**	**+1.6**
IKLH	**Kolahrood**	**4.53**	**296**	*e*Pn	**Pn**	**21 03 14.5**	**+1.6**
IKLH				*e*		21 04 37.5	
IPIR	**Pirpir**	**4.88**	**286**	*e*Pn	**Pn**	**21 03 20.4**	**+2.7**
IPIR				*e*		21 03 34.6	
GHVR	**GHOM**	**5.29**	**306**	*e*Pn	**Pn**	**21 03 24.8**	**+1.4**
ASAO	**Ashtian**	**6.23**	**302**	*e*Pn	**Pn**	**21 03 36.6**	**+0.4**

*IDC **06** 21:14:47.6±1.8,33.77N×141.61E,h0km,mb3.5/4, mb1 3.6/6,mb1mx3.5/22,mbtmp3.6/6,ML3.5/2,Error ellipse: s-maj=33.6km s-min=21.0km az=73.0*
*ISCJB **06** 21:14:49.8±2.1,33.75N±0.05×141.69E±0.10,h33km±19km, mb3.5/4,Error ellipse: s-maj=14.0km s-min=8.7km az=164.8*
*NEIC **06** 21:14:50.9,33.79N×141.55E,h34km,MG3.3(JMA),After JMA.*
*JMA **06** 21:14:50.9±0.6,33.79N×141.55E,h34km,M3.3*
ISC 06 21:14:48.9±1.6**,3374N**±005×**1416E**±01**,h9**km±11km**,n18, σ0s78**/23**,mb3.5**/4**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.05**	**331**	P	**Pg**	**21 15 08.6**	**-0.5**
BSO3	**Boso 3**	**1.40**	**320**	P	**Pn**	**21 15 14.1**	**-0.5**
JHJ2	**Mitsune**	**1.62**	**248**	P	**Pn**	**21 15 17.9**	**+0.3**
BSO4	**Boso 4**	**1.63**	**320**	P	**Pn**	**21 15 18.0**	**+0.2**
JHJ	**Hachijo jima 2**	**1.64**	**248**	Pn	**Pn**	**21 15 18.1**	**+0.2**
	49nm,0.3s,baz=235,slow=22,SNR=38						
JHJ				Sn	**Sn**	**21 15 39.3**	**+0.1**
	61nm,0.3s,baz=71,slow=23,SNR=9.4						
JIM2	**Oshima 3**	**2.05**	**299**	P	**Pn**	**21 15 23.3**	**-0.2**
JIZS	**Izushimoda**	**2.46**	**294**	P	**Pn**	**21 15 29.3**	**+0.1**
JOD2	**Odawara 2**	**2.57**	**307**	P	**Pn**	**21 15 30.1**	**-0.7**
JOD2				S	**Sn**	**21 16 01.0**	**-1.2**
JYN	**Shimob**	**3.07**	**306**	P	**Pn**	**21 15 38.8**	**+1.2**
JAG	**Ashikaga**	**3.21**	**327**	P	**Pn**	**21 15 39.5**	**0.0**
MJAR	**Matsushiro Arr**	**3.94**	**316**	Pn	**Pn**	**21 15 49.8**	**+0.2**
	1.7nm,0.3s,baz=156,slow=13,SNR=12						
MJAR				Sn	**Sn**	**21 16 34.9**	**-1.1**
	2.1nm,0.3s,baz=154,slow=16,SNR=6.5						
MAJO	**Matsushiro**	**3.95**	**316**	*e*Pn	**Pn**	**21 15 51.4**	**+1.7**
MAT	**Matsushiro**	**3.95**	**316**	P	**Pn**	**21 15 50.3**	**+0.6**
MAT				S	**Sn**	**21 16 37.0**	**+0.9**
CBIJ	**Chichi jima**	**6.64**	**175**	Pn	**Pn**	**21 16 25.1**	**-1.5**
	3.9nm,0.3s,baz=253,slow=20,SNR=4.8						
CBIJ				Sn	**Sn**	**21 17 34.1**	**-8.4**
	4.7nm,0.3s,baz=0.0,slow=20,SNR=2.0						
SONM	**Songino Array**	**29.86**	**309**	P	**P**	**21 20 57.0**	**+0.4**
	0.6nm,0.8s,mb3.4,baz=102,slow=8.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**44.30**	**315**	P	**P**	**21 22 58.5**	**-0.4**
	0.5nm,0.6s,mb3.4,baz=91,slow=8.6,SNR=3.2						
MKAR	**Makanchi Array**	**46.06**	**305**	P	**P**	**21 23 12.2**	**-0.8**
	0.6nm,0.6s,mb3.7,baz=87,slow=8.7,SNR=11						
ASAR	**Alice Springs**	**57.55**	**188**	P	**P**	**21 24 39.9**	**+1.0**
	0.2nm,0.5s,mb3.4,baz=19,slow=12,SNR=5.2						

*NIED **06** 21:21:00,31.80N×142.10E,h5km,Mw5.1 Best double couple: $M_0$5.33000×10^16 NP1:ϕ_s48.00000°,δ62.00000°, λ131.00000°. NP2:ϕ_s167.00000°,δ48.00000°,λ39.00000°.*
*IDC **06** 21:21:22.2±0.5,31.72N×141.83E,h0km,mb4.7/24, mb1 4.8/28,mb1mx4.8/31,mbtmp4.7/28,ML4.4/4,MS5.0/11, Ms1 5.0/11,ms1mx4.6/43,Error ellipse: s-maj=16.5km s-min=12.6km az=63.0*
*JMA **06** 21:21:23.4±0.3,31.85N×142.08E,h28km,M4.8*
*BJI **06** 21:21:25.4,31.82N×141.79E,h42km,mB5.2,mb4.8,Ms5.3, Msz5.2*
*MOS **06** 21:21:26.9±1.1,31.80N×141.64E,h33km,mb5.3/68, MS5.2/23,Error ellipse: s-maj=8.5km s-min=4.5km az=117.4*
*ISCJB **06** 21:21:26.3±0.1,31.78N±0.02×141.69E±0.02,h32km, mb5.0/171,MS5.2/40,Error ellipse: s-maj=3.0km s-min=2.1km az=16.2*
*GCMT **06** 21:21:28.5±0.2,31.69N×142.03E,h18km,MW5.3/90, Moment Tensor Solution. s45,c66; s90,c166; Duration: 1s1 Moment tensor: Scale 10^17Nm; M_{rr}0.93±.03; $M_{\theta\theta}$0.02±.02; $M_{\phi\phi}$-0.95±.02; $M_{r\theta}$0.03±.05; $M_{\theta\phi}$-0.02±.01; $M_{\phi r}$0.60±.05; Best double couple: $M_0$1.11600×10^17 NP1:ϕ_s180.00000°,δ29.00000°,λ88.00000°. NP2: ϕ_s2.00000°,δ61.00000°,λ91.00000°. Principal axes: T 1.1060, Plg74.0000°, Azm275.0000°; N 0.0200, Plg1.0000°, Azm182.0000°; P -1.1260, Plg16.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **06** 21:21:28.5±0.2,31.77N×141.70E,h35km,mb5.1/115, MW5.1(NIED) Error ellipse: s-maj=5.6km s-min=3.7km az=164.0*
*DJA **06** 21:21:40,31.76N×141.63E,h130km,Mw5.5/11*
*SZGRF **06** 21:21:49.3,35.75N×141.52E,h33km,mb5.3,Near east coast of eastern Honshu, Japan*
ISC 06 21:21:28.1±0.1**,3176N**±002×**14174E**±002**,h34**km**, h34**km±1.5km**:pP-P,n688,**σ**0s89**/719**,mb5.0**/171**,MS5.2**/40**, 144C-144D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.11**	**310**	P	**Pn**	**21 21 59.6**	**-1.4**
JHJ2				S	**Sn**	**21 22 27.9**	**+1.9**
JHJ	**Hachijo jima 2**	**2.13**	**310**	Pn	**Pn**	**21 21 59.5**	**-1.8**
	132nm,0.3s,baz=256,slow=22,SNR=58						
JHJ				Sn	**Sn**	**21 22 27.1**	**+0.5**
	188nm,0.3s,baz=60,slow=20,SNR=9.9						
BSO1	**Boso 1**	**2.95**	**348**	P	**Pn**	**21 22 09.8**	**-2.8**
BSO1				*e*S	**Sn**	**21 22 43.0**	**-3.8**
BSO3	**Boso 3**	**3.20**	**342**	P	**Pn**	**21 22 14.0**	**-2.0**
BSO3				*e*S	**Sn**	**21 22 51.9**	**-1.0**
JKO	**Kozu shima**	**3.26**	**319**	P	**Pn**	**21 22 16.6**	**-0.2**
JKO				*e*S	**Sn**	**21 22 54.9**	**+0.6**
NJJJ	**Nii jima 2**	**3.34**	**323**	P	**Pn**	**21 22 20.4**	**+2.5**
NJJJ				*e*S	**Sn**	**21 22 58.2**	**+1.8**
BSO4	**Boso 4**	**3.42**	**340**	P	**Pn**	**21 22 17.8**	**-1.3**
BSO4				*e*S	**Sn**	**21 22 59.4**	**+1.0**
JOD2	**Odawara 2**	**4.13**	**328**	P	**Pn**	**21 22 27.6**	**-1.2**
JHU	**Hanno**	**4.56**	**334**	P	**Pn**	**21 22 33.6**	**-1.1**
JHU				*e*S	**Sn**	**21 23 25.2**	**-1.3**
HMMJ	**Hamamatsu 2**	**4.56**	**314**	P	**Pn**	**21 22 37.0**	**+2.3**
JYN	**Shimob**	**4.58**	**325**	P	**Pn**	**21 22 35.5**	**+0.6**
JYT	**Yasato**	**4.63**	**344**	P	**Pn**	**21 22 33.8**	**-1.9**
JYT				*e*S	**Sn**	**21 23 27.0**	**-1.2**
CBIJ	**Chichi jima**	**4.67**	**175**	Pn	**Pn**	**21 22 34.0**	**-2.1**
	74nm,0.3s,baz=248,slow=1.0,SNR=53						
CBIJ				Sn	**Sn**	**21 23 26.9**	**-2.2**
	48nm,0.3s,baz=296,slow=22,SNR=7.6						
CBIJ				LR	LR	21 24 10.3	
	comp=Z,12μm,18.9s,baz=3.8,slow=36						
CBIJ	**Chichi jima**	**4.67**	**175**	P	**Pn**	**21 22 33.8**	**-2.4**
JRY	**Ryogami san**	**4.85**	**332**	P	**Pn**	**21 22 37.8**	**-0.9**
JRY				*e*S	**Sn**	**21 23 34.0**	**+0.3**
JHO	**Hitachi**	**4.93**	**349**	P	**Pn**	**21 22 36.9**	**-2.9**
JHO				*e*S	**Sn**	**21 23 29.8**	**-5.8**
JIE	**Ise**	**4.97**	**303**	P	**Pn**	**21 22 40.5**	**+0.2**
JAG	**Ashikaga**	**5.02**	**338**	P	**Pn**	**21 22 39.1**	**-1.9**
JAG				*e*S	**Sn**	**21 23 37.3**	**-0.5**
JHHJ	**Haha-jima-NKT**	**5.13**	**176**	P	**Pn**	**21 22 40.8**	**-1.7**
JHHJ				*e*S	**Sn**	**21 23 37.7**	**-2.8**
MJAR	**Matsushiro Arr**	**5.59**	**329**	Pn	**Pn**	**21 22 48.8**	**0.0**
	8.0nm,0.3s,baz=149,slow=10,SNR=53						
MJAR				Sn	**Sn**	**21 23 54.4**	**+2.5**
	3.3nm,0.3s,baz=298,slow=17,SNR=5.0						
MAJO	**Matsushiro**	**5.59**	**329**	Pn	**Pn**	**21 22 48.1**	**-0.8**
MAJO				Sn	**Sn**	**21 23 48.0**	**-3.9**
MAT	**Matsushiro**	**5.59**	**329**	P	**Pn**	**21 22 47.8**	**-1.1**
MAT				S	**Sn**	**21 23 51.4**	**-0.5**
MAT	**Matsushiro**	**5.59**	**329**	P	**Pn**	**21 22 48.3**	**-0.6**
JFK	**Kawauchi**	**5.63**	**353**	P	**Pn**	**21 22 45.8**	**-3.6**
JFK				*e*S	**Sn**	**21 23 45.6**	**-7.3**
JMK	**Ichinoseki**	**7.18**	**357**	P	**Pn**	**21 23 07.2**	**-3.5**
JMK				S	**Sn**	**21 24 24.2**	**-6.9**
ERM	**Erimo**	**10.29**	**6**	*e*P	**Pn**	**21 23 50.1**	**-3.2**
ASAJ	**Asahikawa**	**12.35**	**3**	Pn	**Pn**	**21 24 19.1**	**-2.3**
	2.3nm,0.3s,baz=235,slow=23,SNR=4.3						
ASAJ				Sn	**Sn**	**21 26 32.2**	**-5.5**
	1.2nm,0.3s,baz=55,slow=29,SNR=5.2						
ASAJ	**Asahikawa**	**12.35**	**3**	P	**Pn**	**21 24 19.1**	**-2.3**
ASAJ						21 26 32.3	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
KSRS	**Korea Array**	**12.71**	**300**	Pn	**Pn**	**21 24 28.4**	**+2.0**
	comp=N,0.3nm,0.3s,baz=112,slow=13,SNR=22						
KSRS				LR	LR	21 29 22.2	
	comp=N,6μm,18.6s,baz=108,slow=37						
JOW	**Kunigami**	**12.73**	**251**	Pn	**Pn**	**21 24 28.5**	**+1.7**
	comp=N,0.3nm,0.3s,baz=91,slow=17,SNR=4.3						
JOW				LR	LR	21 29 20.6	
	comp=N,4μm,18.2s,baz=70,slow=37						
YSS	**Yuzh-Sakhalins**	**15.19**	**3⇑**	*e*P	**Pn**	**21 24 57.0**	**-3.0**
YSS				*e*S	**Sn**	**21 27 41.0**	**-6.0**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,3μm,14.0s						
YSS				MLR	MLR		
	comp=Z,8μm,14.0s						
YSS				MLR	MLR		
	comp=N,7μm,15.0s						
YSS	**Yuzh-Sakhalins**	**15.19**	**3**	*e*Pn	**Pn**	**21 24 57.9**	**-2.1**
	comp=N,144nm,1.5s						
MDJ	**Mudanjiang**	**15.97**	**327**	P	**Pn**	**21 25 09.3**	**-0.8**
MDJ				AP	pP	21 25 18.9	-3.4
MDJ				XP	sP	21 25 23.6	-3.1
MDJ				S	**Sn**	**21 28 04.0**	**-1.9**
MDJ				SS		21 28 20.8	
MDJ				AMB	AMB		
	comp=Z,39nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,510nm,11.3s						
MDJ				LR	LR		
	comp=N,6μm,13.8s						
MDJ				LR	LR		
	comp=E,4μm,14.6s						
MDJ				LR	LR		
	comp=Z,6μm,15.0s						
MDJ	**Mudanjiang**	**15.97**	**327**	*e*Pn	**Pn**	**21 25 09.2**	**-0.9**
	comp=Z,31nm,0.9s						
UGL	**Uglegorsk**	**17.30**	**1**	P	**Pn**	**21 25 30.0**	**+3.2**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				MLR	MLR		
	comp=Z,7μm,20.0s						
UGL				MLR	MLR		
	comp=N,4μm,15.0s						
UGL				MLR	MLR		
	comp=E,2μm,15.0s						
HABR	**Khabarovsk**	**17.44**	**345**	*de*P	**Pn**	**21 25 30.3**	**+1.7**
HABR				*e*		21 28 45.9	
HABR				pmax	pmax		
	comp=Z,84nm,1.2s						
SSE	**Sheshan**	**17.55**	**273**	P	**Pn**	**21 25 28.5**	**-1.6**
SSE				S	**Sn**	**21 28 46.2**	**+1.6**
SSE				AMB	AMB		
	comp=Z,47nm,0.6s						
SSE				AMB	AMB		
	comp=Z,2μm,13.6s						
SSE				LR	LR		
	comp=N,4μm,12.0s						
SSE				LR	LR		
	comp=E,2μm,12.1s						
SSE				LR	LR		
	comp=Z,6μm,13.7s						
SNY	**Shenyang**	**17.64**	**310**	⇑P	**Pn**	**21 25 28.1**	**-3.0**
SNY				AP	pP	21 25 39.2	-1.6
SNY				S	**Sn**	**21 28 50.8**	**+4.2**
SNY				AMB	AMB		
	comp=Z,82nm,1.6s						
SNY				AMB	AMB		
	comp=Z,1μm,7.7s						
SNY				LR	LR		
	comp=N,10μm,13.7s						
SNY				LR	LR		
	comp=Z,9μm,12.5s						
DL2	**Dalian**	**17.87**	**299**	*i* P	**Pn**	**21 25 35.7**	**+1.8**
DL2				S	**Sn**	**21 28 54.3**	**+2.2**
DL2				XS	sS	21 29 07.2	-4.8
DL2				AMB	AMB		
	comp=Z,30nm,0.8s						
DL2				AMB	AMB		
	comp=Z,1μm,9.0s						
DL2				LR	LR		
	comp=N,6μm,15.2s						
DL2				LR	LR		
	comp=Z,7μm,14.0s						
GUMO	**Guam**	**18.32**	**170**	P	**Pn**	**21 25 40.1**	**+0.6**
	comp=Z,6.7nm,0.3s,baz=116,slow=5.8,SNR=4.9						
GUMO	**Guam**	**18.32**	**170**	*e*P	**Pn**	**21 25 41.4**	**+1.9**
GUMO				pmax	pmax		
	comp=Z,2μm,1.3s						
GUMO	**Guam**	**18.32**	**170**	*e*P	**Pn**	**21 25 41.4**	**+1.9**
	comp=Z,2μm,1.3s						
KLR	**Kul'dur**	**19.00**	**340**	*e*P	**Pn**	**21 25 42.2**	**-5.4**
KLR				MLR	MLR		
	comp=N,4μm,13.0s						
KLR				MLR	MLR		
	comp=Z,26μm,13.0s						
TATO	**Taipei**	**19.05**	**254**	*e*P	**Pn**	**21 25 48.0**	**-0.3**
	comp=Z,242nm,1.3s						
YHNB	**Yeheng**	**19.27**	**254**	*e*P	**Pn**	**21 25 50.3**	**-0.8**
	comp=Z,313nm,1.7s						
NACB	**Ninganchiao**	**19.31**	**252**	*e*P	**Pn**	**21 25 50.9**	**-0.6**
	comp=Z,30nm,0.9s						
NJ2	**Nanjing**	**19.43**	**277**	*e*P	**Pn**	**21 25 53.0**	**+0.1**
NJ2				AP	pP	21 26 01.4	+0.8
NJ2				XP	sP	21 26 05.8	+0.8

NJ2 S **Sn** **21 29 31.0 +1.2**
NJ2 XS sS 21 29 41.0 -2.7
NJ2 AMB AMB
comp=Z,10.0nm,0.8s
NJ2 AMB AMB
comp=Z,1μm,8.9s
NJ2 LR LR
comp=N,2μm,15.8s
NJ2 LR LR
comp=E,3μm,12.7s
NJ2 LR LR
comp=Z,3μm,12.7s
YULB Yu-li 19.92 250 *e*P **Pn** **21 25 57.1 -1.7**
comp=Z,274nm,1.5s
SSLB Suanglung 20.01 252 *e*P **P** **21 25 57.5 -0.4**
comp=Z,184nm,1.3s
TWG Pinlang 20.39 249 *e*P **P** **21 26 01.7 -0.3**
comp=Z,79nm,0.9s
QZH Quanzhou 21.45 257⇑*i*P **P** **21 26 11.7 -1.8**
QZH S **S** **21 30 04.4 -5.2**
QZH AMB AMB
comp=Z,1μm,3.8s
QZH LR LR
comp=N,3μm,13.6s,MS5.0
QZH LR LR
comp=E,3μm,14.4s,MS5.0
QZH LR LR
comp=Z,9μm,17.2s,MS5.2
SKR Severo-Kuril's 21.71 25 P sP 21 26 27.0 -2.5
SKR *e* 21 26 56.0
SKR *e*S **S** **21 30 14.0 -0.2**
SKR pmax pmax
comp=Z,6μm,4.0s
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,6μm,10.0s
SKR MLR MLR
comp=N,3μm,16.0s,MS5.1
SKR MLR MLR
comp=E,6μm,16.0s,MS5.1
SKR MLR MLR
comp=Z,6μm,16.0s,MS5.1
BJI Beijing 22.24 299 P **P** **21 26 19.7 -2.1**
BJI S **S** **21 30 23.7 -1.0**
BJI AMB AMB
comp=Z,32nm,1.1s,mb4.7
BJI AMB AMB
comp=Z,614nm,7.8s
BJI LR LR
comp=N,5μm,15.4s,MS5.1
BJI LR LR
comp=E,4μm,19.5s,MS5.1
BJI LR LR
comp=Z,3μm,20.2s,MS4.7
BJT Baijiatuau 22.24 299 *e*P **P** **21 26 19.9 -1.9**
BJT *e*S **S** **21 30 24.2 -0.5**
BJT pmax pmax
comp=Z,31nm,0.8s
BJT Baijiatuau 22.24 299 *e*P **P** **21 26 19.9 -1.9**
comp=Z,31nm,0.8s,mb4.8
BJT *e*S **S** **21 30 24.2 -0.5**
WHN Wuhan 23.45 274⇑P **P** **21 26 31.8 -2.8**
WHN PP 21 26 59.8
WHN S **S** **21 30 42.8 -2.7**
WHN AMB AMB
comp=Z,200nm,1.6s,mb5.3
WHN AMB AMB
comp=Z,999nm,5.6s
WHN LR LR
comp=N,5μm,12.9s,MS5.5
WHN LR LR
comp=E,10μm,15.4s,MS5.5
WHN LR LR
comp=Z,12μm,15.3s,MS5.5
HIA Hailar 24.05 323 *e*P **P** **21 26 38.8 -1.1**
HIA pmax pmax
comp=Z,94nm,1.1s
HIA Hailar 24.05 323 *e*P **P** **21 26 38.8 -1.2**
comp=Z,94nm,1.1s,mb5.1
PETK Petropavlovsk- 24.26 24 P **P** **21 26 45.3 +3.5**
comp=Z,2.4nm,0.9s,baz=198,slow=9.3,SNR=3.5
PET Petropavlovsk 24.53 25 *e*P **P** **21 26 44.3 +0.1**
PET *e*S **S** **21 31 00.3 -2.1**
PET pmax pmax
comp=Z,200nm,12.8s
PET MLR MLR
comp=Z,3μm,17.0s,MS4.9
HHC Hu-ho-hao-te 25.85 299 *e*P **P** **21 26 55.5 -0.9**
HHC AP pP 21 27 04.9 -1.3
HHC XP sP 21 27 08.8 -1.6
HHC PP 21 27 36.0
HHC PCP PcP 21 30 27.1 +2.1
HHC S **S** **21 31 18.7 -5.0**
HHC XS sS 21 31 33.5 -6.5
HHC SS 21 32 22.7
HHC PCS PcS 21 34 05.4 -0.2
HHC AMB AMB
comp=Z,44nm,1.2s,mb4.9
HHC AMB AMB
comp=Z,643nm,7.7s
HHC LR LR
comp=N,3μm,13.1s,MS5.4
HHC LR LR
comp=E,7μm,13.1s,MS5.4
HHC LR LR
comp=Z,9μm,13.1s,MS5.5
GZH Guangzhou 26.58 258 P **P** **21 27 04.8 +1.6**
GZH LR LR
comp=N,3μm,13.0s,MS5.1
GZH LR LR
comp=E,2μm,13.1s,MS5.1
GZH LR LR
comp=Z,4μm,17.2s,MS5.1
BTO Baotou 26.96 298 *e*P **P** **21 27 05.1 -1.3**
BTO S **S** **21 31 32.1 -9.2**
BTO AMB AMB
comp=Z,25nm,1.0s,mb4.7
BTO LR LR
comp=N,2μm,14.7s,MS4.9
BTO LR LR
comp=E,854nm,12.0s,MS4.9
NRGR Nerungri 27.56 340 *e*P **P** **21 27 12.9 +1.3**
XAN Xi'an 27.58 284 P **P** **21 27 09.5 -2.6**
XAN AP pP 21 27 19.1 -2.8
XAN XP sP 21 27 23.0 -3.1
XAN PP 21 27 55.1
XAN PPP 21 28 06.8
XAN S **S** **21 31 42.0 -9.3**
XAN PCS PcS 21 34 11.4 +0.4
XAN AMB AMB
comp=Z,32nm,1.2s,mb4.8
XAN AMB AMB
comp=Z,467nm,8.1s
XAN LR LR
comp=N,1μm,12.7s,MS5.0
XAN LR LR
comp=E,2μm,13.7s,MS5.0
XAN LR LR
comp=Z,4μm,13.9s,MS5.1
CLNS Chul'man 27.66 340 *e*P **P** **21 27 11.4 -1.1**
CLNS *e* 21 30 30.4
CLNS *e*S **S** **21 31 47.4 -4.6**
CLNS pmax pmax
comp=Z,21nm,1.1s,mb4.7
CLNS pmax pmax
comp=N,19nm,1.1s
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS smax
comp=E,861nm,12.2s
CLNS smax
comp=N,807nm,12.6s
CLNS MLR MLR
comp=Z,2μm,15.0s,MS4.8
CLNS MLR MLR
comp=N,2μm,15.0s,MS4.9
CLNS MLR MLR
comp=E,2μm,13.0s,MS4.9
CIT Chita 28.86 323 *e*P **P** **21 27 22.1 -1.1**
CIT *e* 21 27 37.0
CIT pmax pmax
comp=Z,236nm,2.5s,mb5.5
ULN Ulaanbaatar 30.80 312⇓P **P** **21 27 43.0 +2.5**
SNR=19
ULN Ulaanbaatar 30.80 312 *e*P **P** **21 27 42.8 +2.3**
ULN pmax pmax
comp=Z,39nm,1.0s,mb5.2
ULN Ulaanbaatar 30.80 312 *e*P **P** **21 27 42.8 +2.4**
comp=Z,39nm,1.0s,mb5.2
GYA Guiyang 31.01 269 P **P** **21 27 43.5 +1.0**
GYA AP pP 21 27 53.2 +0.8
GYA XP sP 21 27 59.4 +2.8
GYA PP PP 21 28 46.2 -6.6
GYA PPP 21 29 01.3
GYA PCP PcP 21 30 39.5 +1.5
GYA S **S** **21 32 43.9 -1.3**
GYA XS sS 21 33 01.0 -0.6
GYA SCP ScP 21 34 16.4 -1.8
GYA SS SS 21 34 29.5 -29
GYA AMB AMB
comp=Z,20nm,0.7s,mb5.1
GYA AMB AMB
comp=Z,260nm,6.0s
GYA LR LR
comp=N,3μm,15.5s,MS5.1
GYA LR LR
comp=E,1μm,13.5s,MS5.1
GYA LR LR
comp=Z,3μm,15.9s,MS5.0
SONM Songino Array 31.21 311 P **P** **21 27 45.0 +0.9**
comp=Z,16nm,0.9s,mb4.8,baz=120,slow=4.7,SNR=98
SONM LR LR 21 41 05.7
comp=Z,4μm,19.1s,MS5.1,baz=96,slow=38
YAK Yakutsk 31.27 349 *e*P **P** **21 27 42.6 -1.8**
YAK *e**PP pP 21 27 54.5 +0.2
YAK *e*PPP 21 28 52.4
YAK *e*S **S** **21 32 44.2 -4.3**
YAK *e**SS sS 21 33 04.5 -0.4
YAK *e*SSS 21 34 50.5
YAK pmax pmax
comp=Z,19nm,1.2s,mb4.8
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK smax
comp=N,534nm,4.1s
YAK smax
comp=E,412nm,4.4s
YAK MLR MLR
comp=Z,2μm,14.0s,MS5.0
YAK MLR MLR
comp=E,874nm,14.0s,MS4.9
YAK MLR MLR
comp=N,2μm,17.0s,MS4.9
YAK Yakutsk 31.27 349 *e*P **P** **21 27 43.8 -0.6**
comp=N,58nm,1.0s,mb5.4
QIZ Qiongzhong 31.36 254 P **P** **21 27 45.2 -0.4**
QIZ AP pP 21 27 54.2 -1.4
QIZ S **S** **21 32 48.1 -2.6**
QIZ XS sS 21 33 06.2 -0.9
QIZ AMB AMB
comp=Z,288nm,5.5s
QIZ LR LR
comp=E,2μm,13.3s
QIZ LR LR
comp=Z,2μm,13.3s,MS4.9
LZH Lanzhou 31.60 288 *e*P **P** **21 27 45.0 -2.7**
LZH AP pP 21 27 56.0 -1.6
LZH XP sP 21 27 59.0 -2.8
LZH PP PP 21 28 47.0 -12
LZH S **S** **21 32 47.0 -7.3**
LZH SS SS 21 34 43.0 -27
LZH AMB AMB
comp=Z,50nm,1.6s,mb5.1
LZH AMB AMB
comp=Z,307nm,6.0s
LZH LR LR
comp=N,3μm,14.2s
LZH LR LR
comp=Z,4μm,15.6s,MS5.2
BOD Bodaibo 32.22 332 *e*P **P** **21 27 51.6 -1.2**
BOD pmax pmax
comp=Z,21nm,1.5s,mb4.8
CD2 Chengdu 32.34 279 P **P** **21 27 55.2 +1.0**
CD2 AP pP 21 28 01.9 -2.3
CD2 XP sP 21 28 05.5 -2.8
CD2 PP PP 21 28 59.8 -7.8
CD2 S **S** **21 33 02.1 -3.9**
CD2 XS sS 21 33 20.0 -2.4
CD2 PCS PcS 21 34 28.7 +2.1
CD2 SS SS 21 34 56.6 -29
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,430nm,5.4s
CD2 LR LR
comp=N,7μm,16.8s,MS5.6
CD2 LR LR
comp=E,7μm,13.7s,MS5.6
CD2 LR LR
comp=Z,7μm,17.2s,MS5.4
ZAK Zakamensk 33.96 315 *e*P **P** **21 28 08.7 +0.6**
ZAK pmax pmax
comp=Z,19nm,1.6s,mb4.8
IRK Irkutsk 34.02 318 *e*P **P** **21 28 09.3 +0.7**
IRK pmax pmax
comp=Z,53nm,1.7s,mb5.2
TLY Talaya 34.18 317 P **P** **21 28 11.6 +1.6**
comp=Z,179nm,1.0s,mb6.0,SNR=6.2
TLY Talaya 34.18 317⇑P **P** **21 28 11.4 +1.4**
SNR=8.3
TLY Talaya 34.18 317 *e*P **P** **21 28 10.9 +0.9**
TLY *e* 21 29 38.0
TLY *e*S **S** **21 33 40.1 +6.2**
TLY pmax pmax
comp=Z,44nm,1.1s,mb5.3
TLY MLR MLR
comp=Z,5μm,15.0s,MS5.4
TLY Talaya 34.18 317 *e*P **P** **21 28 11.0 +1.0**
comp=Z,30nm,0.9s,mb5.2
GTA Gaotai 34.69 295 P **P** **21 28 13.4 -1.2**
GTA AP pP 21 28 23.2 -1.3
GTA XP sP 21 28 27.1 -1.6
GTA PP PP 21 29 30.5 -3.0
GTA S **S** **21 33 39.6 -2.6**
GTA XS sS 21 33 56.1 -2.5
GTA SS SS 21 35 52.5 -21
GTA AMB AMB
comp=Z,13nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,328nm,5.7s
GTA LR LR
comp=N,3μm,16.5s,MS5.3
GTA LR LR
comp=E,4μm,16.5s,MS5.3
GTA LR LR
comp=Z,5μm,15.6s,MS5.3
KMI Kunming 34.79 269 P **P** **21 28 16.7 +1.1**
KMI AP pP 21 28 26.6 +1.1
KMI XP sP 21 28 31.0 +1.3
KMI PP PP 21 29 35.2 +0.5
KMI S **S** **21 33 41.8 -2.1**
KMI XS sS 21 34 00.4 0.0
KMI SS SS 21 35 56.2 -19
KMI SSS 21 36 23.4
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.4
KMI AMB AMB
comp=Z,185nm,6.1s
KMI LR LR
comp=N,2μm,14.8s,MS5.2
KMI LR LR
comp=E,2μm,15.4s,MS5.2
KMI LR LR
comp=Z,3μm,15.5s,MS5.2
MOY Mondy 35.73 316 *e*P **P** **21 28 23.6 +0.3**
MOY pmax pmax
comp=Z,7.0nm,3.1s
BILL Bilibino 39.03 14 P **P** **21 28 50.0 -1.1**
BILL 21 30 24.0
BILL *i* S **S** **21 34 48.1 +0.6**
BILL pmax pmax
comp=Z,20nm,1.6s,mb4.6
BILL MLR MLR
comp=Z,2μm,18.0s,MS4.9
BILL Bilibino 39.03 14 P **P** **21 28 50.2 -0.8**
comp=Z,14nm,0.9s,mb4.7
CHRT Chiangrai 39.36 263⇓P **P** **21 28 54.0 -0.4**
CHG Chiang Mai 40.53 262⇓P **P** **21 29 03.2 -1.0**
comp=Z,14nm,1.0s,mb4.6
CHTO Chiang Mai 40.53 262 *e*P **P** **21 29 03.2 -1.0**
CHTO pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CHTO Chiang Mai 40.53 262 *e*P **P** **21 29 03.2 -1.1**
comp=Z,10.0nm,0.9s,mb4.5
TIXI Tiksi 40.54 354 *e*P **P** **21 29 03.2 -0.4**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
TIXI Tiksi 40.54 354 *e*P **P** **21 29 03.2 -0.4**
comp=Z,22nm,1.4s,mb4.6
CM31 Chiang Mai Arr 40.70 261 *e*P **P** **21 29 05.0 -0.6**
comp=Z,3.1nm,0.7s,mb4.0
CM31 pP pP 21 29 13.3 -2.4
CMAR Chiang Mai Arr 40.70 261 P **P** **21 29 04.5 -1.1**
comp=Z,3.9nm,0.8s,mb4.1,baz=47,slow=7.7,SNR=36
CMAR Chiang Mai Arr 40.70 261 *i* P **P** **21 29 04.5 -1.1**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
KAPI Kappang 42.15 214 P **P** **21 29 16.3 -1.1**
comp=Z,3.4nm,0.4s,mb4.3,baz=106,slow=15,SNR=4.0
KAPI Kappang 42.15 214 *e*P **P** **21 29 15.9 -1.5**
comp=Z,6.9nm,1.1s,mb4.2
KSM Kuching 42.27 231 *e*P **P** **21 29 19.0 +0.5**
comp=Z,30nm,1.3s,mb4.8
LSA Lhasa 43.22 281 *e*P **P** **21 29 26.8 +0.8**
LSA pmax pmax
comp=Z,13nm,1.1s,mb4.6
LSA Lhasa 43.22 281 *e*P **P** **21 29 26.8 +0.8**
comp=Z,13nm,1.1s,mb4.6
WMQ Urumqi 43.66 302 P **P** **21 29 29.7 +0.3**
WMQ AP pP 21 29 41.1 +1.5
WMQ PP PP 21 31 14.5 +3.3
WMQ PCP PcP 21 31 17.3 +1.1
WMQ PPP 21 31 50.4
WMQ S **S** **21 35 57.4 +0.6**
WMQ XS sS 21 36 13.5 0.0
WMQ SS SS 21 39 04.4 -8.1
WMQ SCS ScS 21 39 24.0 -2.0
WMQ AMB AMB
comp=Z,39nm,1.7s,mb4.9
WMQ AMB AMB
comp=Z,511nm,4.0s
WMQ LR LR
comp=N,2μm,14.0s,MS5.4
WMQ LR LR
comp=E,3μm,14.0s,MS5.4
WMQ LR LR
comp=Z,2μm,16.0s,MS5.0
SHL Shillong 43.87 275 *e*P **P** **21 29 32.0 +0.6**
SHL *e*S **S** **21 36 04.0 +3.6**
HNR Honiara 44.51 154 LR LR 21 45 24.3
comp=Z,594nm,20.2s,MS4.5,baz=136,slow=32
KAKA Kakadu 45.11 193 *e*P x 21 29 21.7
comp=Z,13nm,0.9s
KAKA *e*pP x 21 29 34.5
COEN Coen 45.48 178 *e*P **P** **21 29 44.7 +0.6**
comp=Z,42nm,1.2s,mb5.2
ZAA0 Zalesovo Array 45.78 316 *e*P **P** **21 29 45.8 -0.3**
ZALV Zalesovo Beam 45.78 316 P **P** **21 29 45.4 -0.8**
comp=Z,11nm,1.0s,mb4.7,baz=97,slow=6.4,SNR=32
ZALV LR LR 21 49 52.6
comp=Z,2μm,18.2s,MS5.0,baz=320,slow=37
ZALV Zalesovo Beam 45.78 316 P **P** **21 29 45.4 -0.8**
ZALV LR LR 21 49 52.6
NVS Novosibirsk 46.78 317⇑*i*P **P** **21 29 52.8 -1.2**
NVS *e*S **S** **21 36 42.1 +0.4**
NVS pmax pmax
comp=Z,38nm,1.3s,mb5.2
NVS pmax pmax
comp=E,50nm,1.7s
NVS smax
comp=E,63nm,2.3s
TAPN Taplejung 46.81 279 *e*P **P** **21 29 53.6 -1.0**
comp=E,66nm,1.2s,mb5.4
ODAN Odare 47.24 279 *e*P **P** **21 29 56.9 -1.1**
comp=E,44nm,0.9s,mb5.4
MK31 Makanchi Array 47.30 306 *e*P **P** **21 29 58.3 +0.1**
MKAR Makanchi Array 47.30 306 P **P** **21 29 57.5 -0.7**
comp=E,31nm,0.8s,mb5.3,baz=89,slow=8.6,SNR=157
MKAR LR LR 21 50 57.4
comp=E,1μm,18.9s,MS4.9,baz=272,slow=38
MKAR Makanchi Array 47.30 306 P **P** **21 29 57.5 -0.7**
MKAR LR LR 21 50 57.4
RAMN Ramite 47.87 279 *e*P **P** **21 30 01.6 -1.3**
comp=E,49nm,0.8s,mb5.6
JIRN Jiri 47.98 280 *e*P **P** **21 30 03.6 -0.2**
comp=E,100nm,0.9s,mb5.8
CAL Calcutta 48.00 273 *e*P **P** **21 30 06.5 +2.5**
CAL *ex* x 21 39 54.0
CAL *ex* x 21 50 46.9
CAL *i* x x 21 51 57.0
GUN Gumba 48.16 281 *e*P **P** **21 30 04.8 -0.3**
comp=E,60nm,0.9s,mb5.6
PKI Pulchoki 48.67 280 *e*P **P** **21 30 08.3 -0.7**
KKN Kakani 48.70 281 *e*P **P** **21 30 09.0 -0.3**
comp=E,48nm,0.9s,mb5.5
KKN Kakani 48.70 281 *e*P **P** **21 30 09.0 -0.3**
KKN pmax pmax
comp=Z,49nm,0.9s,mb5.5
DMN Daman 48.91 280 *e*P **P** **21 30 10.6 -0.3**
comp=Z,14nm,0.6s,mb5.1
GKN Gorkha 49.17 281 *e*P **P** **21 30 12.3 -0.6**
comp=Z,162nm,1.5s,mb5.8
KURK Kurchatov 49.52 312 P **P** **21 30 15.0 -0.2**
comp=Z,495nm,1.0s,SNR=46
KURK Kurchatov 49.52 312⇑P **P** **21 30 15.2 0.0**
SNR=39
KURK Kurchatov 49.52 312 P **P** **21 30 14.4 -0.8**
comp=Z,45nm,0.9s,mb5.5,baz=88,slow=7.8,SNR=127
KURK LR LR 21 52 25.2
comp=Z,4μm,18.9s,MS5.5,baz=85,slow=38
KURK Kurchatov 49.52 312*c i*P **P** **21 30 15.0 -0.2**
KURK pmax pmax
comp=Z,117nm,1.2s,mb5.8
KURK MLR MLR
comp=Z,4μm,15.0s,MS5.5
KURK Kurchatov 49.52 312 *e*P **P** **21 30 14.5 -0.7**
comp=Z,86nm,1.0s,mb5.7
DANN Dangsing 49.79 282 *e*P **P** **21 30 18.2 +0.6**
KOLN Koldanda 50.12 281 *e*P **P** **21 30 20.2 +0.1**
comp=Z,94nm,1.2s,mb5.7
WRAB Tennant Creek 51.89 189 P **P** **21 30 32.2 -1.1**
comp=Z,249nm,1.1s,mb6.0,SNR=14
WRAB Tennant Creek 51.89 189 *e*P **P** **21 30 32.6 -0.7**
WRAB pmax pmax
comp=Z,41nm,1.0s,mb5.3
WRAB Tennant Creek 51.89 189 *e*P **P** **21 30 32.6 -0.7**
comp=Z,41nm,1.0s,mb5.3
WB2 Warramunga Arr 51.90 189 *e*P **P** **21 30 32.4 -1.0**
WB2 *e*pP pP 21 30 43.9 +0.2
WB2 *e*PCP PcP 21 31 42.1 -3.7
WB2 *e*S **S** **21 37 53.8 0.0**
WB2 *e*SCS ScS 21 40 20.9 0.0
ULHL Ulahol 52.18 301 P **P** **21 30 36.4 +1.0**
SNR=5.7
PTH Pithoragarh 52.34 285 *e*P **P** **21 30 37.3 +0.5**
LGTI Lohaghat 52.35 285 *e*P **P** **21 30 37.5 +0.7**
TKM2 Tokmak 2 52.52 302 *e*P **P** **21 30 38.9 +1.0**
TKM2 pmax pmax
comp=Z,31nm,1.3s,mb5.1
TKM2 Tokmak 2 52.52 302 P **P** **21 30 39.0 +1.1**
SNR=12
TKM2 Tokmak 2 52.52 302 *e*P **P** **21 30 38.9 +1.0**
comp=Z,31nm,1.3s,mb5.1
JOSI Joshimath 52.56 286 *e*P **P** **21 30 38.9 +0.6**
COLD Coldfoot 52.67 27 *e*P **P** **21 30 39.5 +0.9**
comp=Z,12nm,1.2s,mb4.7
KZA Kyzart 52.93 301 P pP 21 30 43.2 -8.1
SNR=11
KSH Kashi 52.95 298 P **P** **21 30 41.9 +0.8**
KSH AP pP 21 30 51.9 +0.4
KSH XP sP 21 30 55.9 +0.3
KSH PCP PcP 21 31 51.0 +1.3
KSH PP PP 21 32 42.0 +1.2
KSH PPP 21 33 48.2
KSH SCP ScP 21 35 43.3 -1.3
KSH PCS PcS 21 35 48.9 +0.5
KSH S **S** **21 38 06.3 -1.9**
KSH XS sS 21 38 23.6 -1.7
KSH SCS ScS 21 40 25.3 -2.9
KSH SS SS 21 41 44.3 -2.9
KSH AMB AMB
comp=Z,54nm,1.0s,mb5.4
KSH AMB AMB

comp=Z,925nm,3.4s
KBK Karagaybulak 53.03 302 P **P** **21 30 41.5 -0.2**
SNR=36
CHMS Chumysh 53.11 302 P **P** **21 30 43.0 +0.8**
SNR=6.4
USP Ospenovka 53.24 303 P **P** **21 30 43.5 +0.3**
SNR=12
FRU Bishkek 53.24 302 *eP* **P** **21 30 42.0 -1.2**
FRU pmax pmax
comp=Z,100nm,2.0s,mb5.4
AAK Ala-Archa 53.37 302 P **P** **21 30 44.5 +0.4**
comp=Z,76nm,1.0s,mb5.6,SNR=9.1
AAK Ala-Archa 53.37 302 ⇓P **P** **21 30 44.9 +0.8**
SNR=6.0
AAK Ala-Archa 53.37 302 *eP* **P** **21 30 44.5 +0.4**
AAK pmax pmax
comp=Z,12nm,0.9s,mb4.8
AAK Ala-Archa 53.37 302 *eP* **P** **21 30 44.5 +0.3**
comp=Z,12nm,0.9s,mb4.8
UCH Uchtor 53.44 302 *eP* **P** **21 30 46.7 +2.1**
comp=Z,11nm,1.0s,mb4.7
COLA College 53.44 30 *eP* **P** **21 30 44.4 +0.1**
COLA pmax pmax
comp=Z,17nm,1.2s,mb4.8
COLA College 53.44 30 *eP* **P** **21 30 44.4 0.0**
comp=Z,17nm,1.2s,mb4.8
DDI Dehra Dun 53.86 286 *eP* **P** **21 30 47.0 -1.0**
EKS2 Erkin-Say 53.88 302 P **P** **21 30 48.8 +0.9**
SNR=14
EKS2 Erkin-Say 53.88 302 *eP* **P** **21 30 48.7 +0.8**
comp=Z,9.8nm,0.9s,mb4.7
AML Almayashu 54.05 302 P **P** **21 30 50.6 +1.5**
SNR=28
AML Almayashu 54.05 302 *eP* **P** **21 30 50.8 +1.6**
comp=Z,43nm,0.9s,mb5.4
VOSK Vostochnaya 54.09 315 P **P** **21 30 48.6 -0.6**
VOSK pmax pmax
comp=Z,14nm,1.2s,mb4.8
BVA0 Borovoye Array 54.41 315 *i* P **P** **21 30 51.1 -0.5**
BVA0 pmax pmax
comp=Z,41nm,2.6s,mb4.9
BVAR Borovoye Array 54.41 315 LR LR 21 55 18.0
comp=Z,2µm,18.3s,MS5.1,baz=87,slow=37
BRVK Borovoye 54.47 315 P **P** **21 30 52.2 +0.2**
comp=Z,97nm,1.0s,mb5.7,SNR=13
BRVK Borovoye 54.47 315 ⇓P **P** **21 30 52.4 +0.4**
SNR=14
BRVK Borovoye 54.47 315 *eP* **P** **21 30 52.4 +0.4**
BRVK pmax pmax
comp=Z,27nm,1.1s,mb5.1
BRVK Borovoye 54.47 315 *eP* **P** **21 30 52.4 +0.4**
comp=Z,27nm,1.1s,mb5.1
AGRA Agra 55.01 283 *eP* **P** **21 30 55.2 -1.2**
THN Thein Dam 55.09 290 *ex* x 21 30 53.8
AYAN Aya Nagar 55.25 285 *eP* **P** **21 30 58.0 -0.1**
AYAN AMb AMB 21 31 02.0
comp=Z,64nm,1.9s,mb5.3
SONA Sohna 55.36 284 *eP* **P** **21 30 58.6 -0.2**
SONA AMb AMB 21 31 03.0
comp=Z,64nm,1.9s,mb5.3
ASAR Alice Springs 55.62 189 P **P** **21 30 58.8 -1.8**
comp=Z,5.8nm,0.8s,mb4.6,baz=8.8,slow=4.3,SNR=26
KK31 Karatay Array 56.12 303 *i* P **P** **21 31 04.2 +0.1**
KK31 pmax pmax
comp=Z,71nm,1.3s,mb5.5
EGAK Eagle 56.30 30 *eP* **P** **21 31 06.5 +1.5**
comp=Z,31nm,1.6s,mb5.1
KHET Khetri 56.48 285 *eP* **P** **21 31 07.0 +0.1**
KHET AMb AMB 21 31 12.2
comp=Z,52nm,1.7s,mb5.3
DAWY Dawson 57.13 31 *eP* **P** **21 31 11.3 +0.4**
HYT Haines Junctio 58.42 35 *eP* **P** **21 31 20.9 +0.9**
HYB Hyderabad 58.48 272 *i* P **P** **21 31 21.0 -0.1**
DZM Mont Dzumac 58.53 153 *eP* **P** **21 31 22.9 +1.8**
comp=Z,48nm,1.4s,mb5.3
SVE Sverdlovsk 59.33 321⇑ *eP* **P** **21 31 26.2 -0.2**
SVE *e* 21 33 38.3
SVE *eS* **S** **21 39 31.3 -1.1**
SVE pmax pmax
comp=Z,30nm,1.3s,mb5.2
SVE MLR MLR
comp=Z,2µm,16.0s,MS5.4
KBL Kabul 59.68 294 *eP* **P** **21 31 29.3 +0.1**
KBL pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 59.68 294 *eP* **P** **21 31 29.3 +0.1**
comp=Z,14nm,0.8s,mb5.0
ARU Arti 60.54 321 P **P** **21 31 34.6 -0.1**
comp=Z,133nm,1.0s,mb6.0,SNR=12
ARU Arti 60.54 321 *c i* P **P** **21 31 34.2 -0.5**
ARU *e* 21 33 45.6
ARU *eS* **S** **21 39 49.7 +1.8**
ARU *eSS* SS 21 43 51.8 +6.0
ARU pmax pmax
comp=Z,2µm,16.0s
ARU Arti 60.54 321 *eP* **P** **21 31 34.4 -0.3**
comp=Z,182nm,2.1s,mb5.8
SOKR Solikamsk 60.72 324 *eP* **P** **21 31 37.3 +1.4**
SOKR S **S** **21 39 56.5 +6.4**
SOKR pmax pmax
comp=Z,30nm,1.4s,mb5.2
SOKR MLR MLR
comp=Z,3µm,22.0s,MS5.3
AB31 Akbulak array 61.61 313 P **P** **21 31 41.9 -0.2**
AB31 pmax pmax
comp=Z,24nm,1.0s,mb5.3
AKTK Aktyubinsk 62.46 314 P **P** **21 31 47.9 +0.1**
AKTO Aktyubinsk 62.46 314 P **P** **21 31 47.9 +0.1**
comp=Z,16nm,1.0s,mb5.1,baz=53,slow=5.9,SNR=14
DLBC Dease Lake 62.66 36 *eP* **P** **21 31 50.3 +1.4**
STKA Stephens Creek 63.30 180 P **P** **21 31 53.6 +0.3**
comp=Z,2.0nm,0.8s,mb4.3,baz=8.7,slow=13,SNR=2.5
ABKT Ailbek 66.70 301 P **P** **21 32 16.0 +0.3**
comp=Z,76nm,0.9s,mb5.7,SNR=6.8
APA Apatity 67.61 337⇓ *i* P **P** **21 32 21.5 +0.6**
APA pmax pmax
comp=Z,16nm,0.8s,mb5.1
APA MLR MLR
comp=Z,1µm,20.0s,MS5.2
YKA Yellowknife Ar 68.25 29 P **P** **21 32 23.4 -1.6**
comp=Z,4.9nm,1.0s,mb4.5,baz=294,slow=6.1,SNR=22
YKA Yellowknife Ar 68.25 29 *i* P **P** **21 32 27.0 +2.0**
YKA pmax pmax
comp=Z,5.0nm,1.0s
YKA Yellowknife Ar 68.25 29 P **P** **21 32 23.4 -1.6**
KLMR Klimovskoe 68.38 329 P **P** **21 32 25.3 -0.5**
KLMR pmax pmax
comp=Z,21nm,1.3s,mb5.0
NWAO Narrogin (SRO) 68.38 202 *eP* **P** **21 32 26.4 +0.3**
NWAO *PP pP 21 32 32.7 -4.0
NWAO pmax pmax
comp=Z,250nm,2.2s
NWAO Narrogin (SRO) 68.38 202 *eP* **P** **21 32 26.4 +0.3**
comp=Z,250nm,2.2s,mb5.8
NWAO pP pP 21 32 32.7 -4.1
ARCES ARCESS Array B 69.03 340 P **P** **21 32 29.8 +0.1**
comp=Z,7.1nm,0.9s,mb4.6,baz=69,slow=6.8,SNR=9.0
JOF Joensuu 70.75 333 *ep* **P** **21 32 40.8 +0.4**
comp=Z,5.5nm,0.8s,mb4.5
JOF Joensuu 70.75 333 *eP* **P** **21 32 40.8 +0.4**
JOF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
JCW Jim Creek 70.95 45 *eP* **P** **21 32 44.1 +2.2**
DAG Danmarks Havn 71.04 355⇓ *eP* **P** **21 32 42.9 +0.9**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DAG Danmarks Havn 71.04 355⇓ *i* P **P** **21 32 42.9 +0.9**
comp=Z,9.7nm,0.8s,mb4.8
DAG Danmarks Havn 71.04 355⇓ *eP* **P** **21 32 42.9 +0.9**
comp=Z,9.7nm,0.8s,mb4.8
A07A Ashnola River, 71.48 43 ⇓P **P** **21 32 45.4 +0.2**
baz=71
MOS Moscow 71.67 325 *eP* **P** **21 32 44.6 -1.5**
MOS *e* pP 21 32 56.3 -0.5
MOS MLR MLR
comp=Z,2µm,18.0s,MS5.3
VRHR Novokhopersk 71.81 319 *eP* **P** **21 32 47.2 +0.2**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.1
VRHR pmax pmax
comp=E,10.0nm,0.6s
B07A Winthrop 71.90 44 ⇑P **P** **21 32 48.0 +0.3**
baz=72
MAK Makhachkala 71.97 310 *eP* **P** **21 32 46.7 -1.5**
MAK *i* 21 33 09.7
MAK *e* 21 35 30.5
MAK *iS* S 21 42 08.0 +0.9
MAK pmax pmax
comp=Z,512nm,1.5s,mb6.2
MAK MLR MLR
comp=Z,4µm,14.0s,MS5.8
A08A Turner Farm, O 72.17 43 ⇓P **P** **21 32 49.2 0.0**
baz=72
ETW Entiat 72.17 45 *eP* **P** **21 32 50.1 +0.8**
E06A Yakima 72.27 46 ⇓P **P** **21 32 49.9 0.0**
baz=72
C07A Waterville 72.30 45 ⇓P **P** **21 32 50.9 +0.8**
baz=72
H04A Detroit Lake 72.38 48 ⇓P **P** **21 32 51.0 +0.4**
baz=72
B08A Colville Reser 72.42 44 ⇑P **P** **21 32 51.1 +0.3**
baz=72
OBN Obninsk 72.50 324⇑ *eP* **P** **21 32 51.8 +0.7**
OBN *e* 21 33 10.9
OBN *eS* S 21 42 15.5 +2.7
OBN *ePS* 21 43 08.0
OBN pmax pmax
comp=Z,40nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,2µm,19.0s,MS5.3
WBK Wadi Bani Khal 72.58 286 ⇑P **P** **21 32 52.4 +0.2**
SNR=6.2
G05A Wamic 72.67 47 ⇑P **P** **21 32 53.3 +1.0**
baz=72
HUMO Hull Mountain 72.83 50 *eP* **P** **21 32 53.4 0.0**
comp=Z,56nm,1.9s,mb5.2
BIDO Bidbid 72.85 287 ⇓P **P** **21 32 55.5 +1.7**
SNR=7.7
C08A Higginbotham F 72.86 44 ⇓P **P** **21 32 53.3 -0.1**
baz=73
E07A Sunnyside 72.95 46 ⇓P **P** **21 32 54.3 +0.3**
baz=73
H05A Madras 73.00 48 ⇑P **P** **21 32 54.5 +0.2**
baz=73
B09A Rice 73.08 43 ⇑P **P** **21 32 54.7 0.0**
baz=73
G06A Carlson Farm, 73.09 47 ⇑P **P** **21 32 54.9 +0.1**
baz=73
VSR Storozhevoye 73.10 320 *eP* **P** **21 32 54.9 +0.1**
VSR pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.7s
KAF Kangasniemi 73.12 334 *ep* **P** **21 32 54.6 -0.1**
comp=E,6.4nm,0.8s,mb4.6
KAF Kangasniemi 73.12 334 *eP* **P** **21 32 54.6 -0.1**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
A10A Northport 73.15 43 ⇓P **P** **21 32 55.1 0.0**
baz=73
BANOM Banah 73.22 290 ⇑P **P** **21 32 57.6 +1.7**
SNR=5.3
HAWA Hanford 73.23 46 *eP* **P** **21 32 58.3 +2.7**
comp=Z,31nm,1.6s,mb5.0
D08A Wollman Farm, 73.28 45 ⇑P **P** **21 32 55.6 -0.3**
baz=73
C09A Chrisman Ranch 73.31 44 ⇓P **P** **21 32 56.1 0.0**
baz=73
EDM Edmonton 73.34 37 *eP* **P** **21 32 55.9 -0.2**
YBH Yreka Blue Hor 73.40 51 *eP* **P** **21 32 57.0 +0.3**
YBH pmax pmax
comp=Z,39nm,1.6s
YBH Yreka Blue Hor 73.40 51 *eP* **P** **21 32 57.0 +0.3**
comp=Z,39nm,1.6s,mb5.1
HOQ Hoqain 73.48 288 P **P** **21 32 58.9 +1.4**
SNR=17
H06A Lindquist Farm 73.52 47 ⇑P **P** **21 32 57.2 -0.2**
baz=73
D09A Jones Farm, Ri 73.64 45 ⇑P **P** **21 32 58.0 0.0**
baz=73
G07A Ruggs Ranch, H 73.68 47 ⇑P **P** **21 32 58.6 +0.3**
baz=74
NEW Newport 73.75 43 *eP* **P** **21 32 58.4 -0.3**
NEW pmax pmax
comp=Z,21nm,1.3s
NEW Newport 73.75 43 *eP* **P** **21 32 58.4 -0.2**
comp=Z,22nm,1.3s,mb4.9
A11A Hall Mountain, 73.85 42 ⇑P **P** **21 32 59.3 +0.1**
baz=74
HATD Hatta, Dubai 73.86 289 P **P** **21 33 01.3 +1.6**
SNR=10
BSY Bisya 73.96 287 P **P** **21 33 01.7 +1.4**
SNR=15
F08A Pendleton 73.97 46 ⇓P **P** **21 33 00.4 +0.4**
baz=74
I06A Prineville 73.97 48 ⇓P **P** **21 33 00.4 +0.3**
baz=74
E09A Wood Farm, Sta 74.01 45 ⇓P **P** **21 33 00.3 +0.1**
baz=74
WDC Whiskeytown Da 74.05 52 *eP* **P** **21 33 02.8 +2.2**
WDC pmax pmax
comp=Z,16nm,1.3s,mb4.8
WDC Whiskeytown Da 74.05 52 *eP* **P** **21 33 02.8 +2.2**
comp=Z,16nm,1.3s,mb4.8
B11A Sandpoint 74.11 43 ⇑P **P** **21 33 00.9 +0.2**
baz=74
G08A Pilot Rock 74.11 46 ⇓P **P** **21 33 00.6 -0.2**
baz=74
ARQ Aragi 74.24 288 P **P** **21 33 03.2 +1.3**
SNR=20
LNOR Lincton Mounta 74.24 46 *eP* **P** **21 33 02.7 +1.2**
D10A Wagner Farm, O 74.26 44 ⇑P **P** **21 33 01.4 -0.3**
baz=74
A12A Yaak River Ran 74.27 42 ⇓P **P** **21 33 02.0 +0.3**
baz=74
J06A Christmas Vall 74.34 49 ⇓P **P** **21 33 02.4 +0.2**
baz=74
I07A Izee 74.36 48 ⇑P **P** **21 33 02.3 +0.1**
baz=74
C11A Tepee Creek (N 74.47 43 ⇓P **P** **21 33 03.1 +0.2**
baz=74
F09A S2 Ranch, Elgi 74.55 46 ⇑P **P** **21 33 03.8 +0.5**
baz=74
KIV Kislovodsk 74.60 312 P **P** **21 33 05.6 +1.9**
SNR=5.5
KIV Kislovodsk 74.60 312 *eP* **P** **21 33 04.8 +1.1**
KIV *eS* S 21 42 39.4 +2.5
KIV pmax pmax
comp=Z,22nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,938nm,19.0s,MS5.1
KIV Kislovodsk 74.60 312 *eP* **P** **21 33 05.6 +1.9**
comp=Z,108nm,1.9s,mb5.5
D11A Klaveano Farm, 74.82 44 ⇓P **P** **21 33 04.6 -0.3**
baz=75
F10A Beach Ranch, E 74.83 45 ⇓P **P** **21 33 05.1 +0.1**
baz=75
G09A Ione 74.84 46 ⇑P **P** **21 33 04.8 -0.3**
baz=75
I08A Drewsey 75.03 48 ⇑P **P** **21 33 06.2 0.0**
baz=75
GNI Garni 75.11 308 P **P** **21 33 07.6 +0.9**
comp=Z,7.2nm,0.8s,mb4.6,baz=268,slow=9.5,SNR=6.3
GNI Garni 75.11 308 *eP* **P** **21 33 08.8 +2.1**
GNI pmax pmax
comp=Z,70nm,1.4s
GNI Garni 75.11 308 *eP* **P** **21 33 08.8 +2.1**
comp=Z,70nm,1.4s,mb5.4
WALA Waterton Lakes 75.19 41 P **P** **21 33 06.6 -0.4**
comp=Z,1.1nm,1.5s,mb3.6
K07A Rock Creek Ran 75.20 49 ⇑P **P** **21 33 06.7 -0.4**
baz=75
B13A Whitefish 75.23 42 ⇓P **P** **21 33 07.3 0.0**
baz=75
G10A Bishop Farm, J 75.23 46 ⇑P **P** **21 33 06.9 -0.4**
baz=75,SNR=5.3
E11A Bogner Ranch, 75.25 44 ⇑P **P** **21 33 06.8 -0.6**
baz=75
BSMT Bassoo Peak 75.31 43 *eP* **P** **21 33 09.0 +1.3**
BMO Blue Mountains 75.34 46 *eP* **P** **21 33 07.9 -0.1**
comp=Z,30nm,1.7s,mb5.0
J08A Circle Bar Ran 75.36 48 ⇑P **P** **21 33 07.4 -0.7**
baz=75
OHCM Honcut 75.36 53 *eP* **P** **21 33 08.6 +0.5**
L07A Adell 75.47 50 ⇑P **P** **21 33 08.6 -0.2**
baz=75
A14A Double T Ranch 75.51 41 ⇓P **P** **21 33 08.8 -0.1**
baz=75,SNR=13
I09A Lost Marbles R 75.52 47 ⇑P **P** **21 33 09.2 +0.2**
baz=75
C13A Hot Springs 75.53 43 ⇑P **P** **21 33 08.9 0.0**
baz=75,SNR=13
E12A Beaver Dam Sad 75.60 44 ⇓P **P** **21 33 09.2 -0.2**
baz=75,SNR=14
JTMT Jette 75.66 43 *eP* **P** **21 33 10.2 +0.5**
K08A Mann Creek Ran 75.67 49 ⇓P **P** **21 33 09.9 0.0**
baz=75
G11A Walters Elk Ra 75.70 45 ⇓P **P** **21 33 09.9 -0.1**
baz=76
WVOR Wild Horse Val 75.72 49 *eP* **P** **21 33 11.5 +1.3**
WVOR pmax pmax
comp=Z,78nm,2.0s,mb5.3
WVOR Wild Horse Val 75.72 49 *eP* **P** **21 33 11.5 +1.4**
comp=Z,78nm,2.0s,mb5.3
YBMT Yellow Bay 75.75 42 *eP* **P** **21 33 12.8 +2.5**
N06A Buffalo Meadow 75.77 51 ⇑P **P** **21 33 10.4 -0.1**
baz=76
J09A Fry Pan Ranch, 75.82 48 ⇓P **P** **21 33 10.5 -0.2**
baz=76,SNR=5.9
BEKR Beckwourth 75.86 52 ⇓P **P** **21 33 10.8 -0.2**
baz=76
A15A Johnson Ranch, 75.89 41 ⇑P **P** **21 33 10.3 -0.7**
baz=76,SNR=5.1
M07A Soldier Meadow 75.89 50 ⇓P **P** **21 33 11.4 +0.2**
baz=76
D13A Huson 75.90 43 ⇑P **P** **21 33 10.7 -0.4**
baz=76
B14A Marquette Ranc 75.91 42 ⇓P **P** **21 33 10.9 -0.3**
baz=76,SNR=14
SUMG Summit 75.94 0 *eP* **P** **21 33 11.6 +0.7**
comp=Z,177nm,2.9s,mb5.5
SWMT Swartz Lake 75.95 43 *eP* **P** **21 33 11.4 +0.1**
O06A Flanigan 76.07 51 ⇑P **P** **21 33 12.2 0.0**
baz=76
LAVA Lava Cap Winer 76.15 53 ⇑P **P** **21 33 12.4 -0.3**
baz=76
H11A Donnelly 76.21 46 ⇑P **P** **21 33 12.1 -0.8**
baz=76
N07B Gerlach 76.33 50 ⇓P **P** **21 33 13.4 -0.3**
baz=76
MSO Missoula 76.34 43 *eP* **P** **21 33 13.3 -0.3**
comp=Z,14nm,1.3s,mb4.7
B15A Bradely Ranch, 76.34 41 ⇑P **P** **21 33 13.3 -0.3**
baz=76,SNR=24
M08A Happy Creek Ra 76.38 50 ⇑P **P** **21 33 13.5 -0.5**
baz=76
SLMT Seeley Lake 76.38 43 *eP* **P** **21 33 13.6 -0.3**
E13A Victor 76.40 44 ⇓P **P** **21 33 13.3 -0.6**
baz=76
D14A Greenough 76.46 43 ⇓P **P** **21 33 13.5 -0.8**
baz=76
A16A West Butte Ran 76.54 40 ⇓P **P** **21 33 14.0 -0.6**
baz=76
PAHR Pah Rah Range 76.59 52 *eP* **P** **21 33 14.7 -0.5**
comp=Z,15nm,1.2s,mb4.8
C15A Salmond Ranch, 76.60 42 ⇑P **P** **21 33 15.2 +0.1**
baz=76,SNR=16
SOC Sochi 76.65 313 *eP* **P** **21 33 14.4 -1.0**
SOC *e* pP 21 33 23.7 -2.5
SOC *ePPP* 21 37 53.9
SOC *eS* S 21 42 59.1 -0.4
SOC *e* 21 43 26.5
SOC *eSSS* 21 51 16.2
SOC pmax pmax
comp=Z,24nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,601nm,15.0s,MS5.0
I11A Placerville 76.65 47 ⇑P **P** **21 33 15.1 -0.3**
baz=76
F13A Darby 76.66 44 ⇓P **P** **21 33 14.8 -0.6**
baz=76
K10A MacKenzie Ranc 76.67 48 ⇓P **P** **21 33 15.7 +0.2**
baz=76,SNR=5.6
CHMT Chamberlain Mo 76.70 43 *eP* **P** **21 33 15.4 -0.2**
O07A Toulon 76.70 51 ⇓P **P** **21 33 15.7 0.0**
baz=76
CMB Columbia Colle 76.75 53 *eP* **P** **21 33 15.9 -0.2**
CMB pmax pmax
comp=Z,30nm,1.3s,mb5.1
CMB Columbia Colle 76.75 53 *eP* **P** **21 33 15.9 -0.2**
comp=Z,30nm,1.3s,mb5.1
B16A M & M Farms, S 76.77 41 ⇑P **P** **21 33 15.6 -0.4**
baz=76
MFID Camas Ranch 76.99 47 ⇓P **P** **21 33 17.5 +0.2**
baz=77,SNR=10
H12A Diamond D Ranc 77.00 46 ⇓P **P** **21 33 17.3 -0.1**
baz=77
A17A Triple J Farms 77.03 40 ⇓P **P** **21 33 17.3 -0.2**
baz=77,SNR=11
MNK Minsk 77.05 327 *eP* **P** **21 33 18.0 +0.6**
D15A Lincoln 77.05 42 ⇓P **P** **21 33 17.5 -0.2**
baz=77
C16A Fuhringer Ranc 77.08 42 ⇓P **P** **21 33 17.4 -0.4**
baz=77,SNR=14
G13A Cobalt 77.09 45 ⇑P **P** **21 33 17.5 -0.4**
baz=77
S05C Merced 77.13 54 ⇓P **P** **21 33 18.4 +0.1**
baz=77
WAKR Walker 77.16 53 *eP* **P** **21 33 20.8 +2.4**
F14A Wisdom 77.22 44 ⇓P **P** **21 33 18.4 -0.1**
baz=77
I12A Atlanta 77.22 46 ⇓P **P** **21 33 18.4 -0.2**
baz=77,SNR=10
L10A Juniper Basin 77.28 48 ⇓P **P** **21 33 19.1 +0.1**
baz=77,SNR=5.4
E15A Deer Lodge 77.31 43 ⇑P **P** **21 33 18.7 -0.5**
baz=77,SNR=12
B17A L&G Farms, Che 77.34 41 ⇓P **P** **21 33 19.2 0.0**
baz=77
H13A Challis 77.35 45 ⇑P **P** **21 33 19.5 +0.1**
baz=77
ANN Anapa 77.41 315 *eP* **P** **21 33 18.9 -0.8**
ANN *eS* S 21 43 07.1 -0.6
ANN pmax pmax
comp=Z,113nm,1.8s,mb5.5
A18A Metzger Ranch, 77.51 40 ⇑P **P** **21 33 20.0 -0.2**
baz=77
J12A Stokes Ranch, 77.53 47 ⇑P **P** **21 33 20.3 -0.1**
baz=77,SNR=5.6
D16A Dana Ranch, Ca 77.61 42 ⇓P **P** **21 33 20.3 -0.5**
baz=77,SNR=13
HRY Holter Researc 77.63 43 *eP* **P** **21 33 20.7 -0.1**
BMN Battle Mountai 77.65 50 *eP* **P** **21 33 22.0 +0.9**
BMN pmax pmax
comp=Z,17nm,1.3s,mb4.8
BMN Battle Mountai 77.65 50 *eP* **P** **21 33 22.0 +0.9**
comp=Z,17nm,1.3s,mb4.8
L11A Cat Creek Ranc 77.69 48 ⇑P **P** **21 33 21.0 -0.3**
baz=78,SNR=12
F15A Butte 77.72 44 ⇓P **P** **21 33 20.8 -0.6**
baz=78,SNR=31
C17A Wharram Farm, 77.72 41 ⇓P **P** **21 33 20.7 -0.7**
baz=78
LRM Limekiln Ridge 77.75 44 *eP* **P** **21 33 21.4 -0.2**
I13A Wildhorse Cree 77.78 46 ⇑P **P** **21 33 21.6 -0.1**
baz=78
HLID Hailey 77.79 46 ⇓P **P** **21 33 21.4 -0.4**
baz=78
HLID Hailey 77.79 46 *eP* **P** **21 33 21.9 +0.1**
comp=Z,13nm,1.1s,mb4.8
O09A Fish Creek Ran 77.81 50 ⇑P **P** **21 33 22.0 0.0**
baz=78
E16A East Helena 77.81 43 ⇑P **P** **21 33 21.6 -0.3**
baz=78,SNR=15
B18A Beardsley Farm 77.85 40 ⇑P **P** **21 33 21.6 -0.4**
baz=78
H14A Leadore 77.86 45 ⇑P **P** **21 33 21.9 -0.3**
baz=78
DLMT Dillon 77.92 44 *eP* **P** **21 33 22.6 +0.1**
comp=Z,46nm,1.5s,mb5.2
NVAR Mina Array Bea 77.96 52 P **P** **21 33 21.7 -1.2**
comp=Z,5.6nm,0.9s,mb4.5,baz=285,slow=5.8,SNR=18
K12A Draper Farm, C 77.98 47 ⇓P **P** **21 33 22.7 -0.2**
baz=78
Q08A Gabbs 77.99 52 ⇑P **P** **21 33 22.8 -0.3**
baz=78
FFC Flin Flon 78.00 32 *eP* **P** **21 33 22.4 -0.4**
FFC pmax pmax
comp=Z,21nm,1.2s,mb4.9
FFC Flin Flon 78.00 32 *eP* **P** **21 33 22.4 -0.4**
comp=Z,21nm,1.2s,mb4.9
J13A Cove Ranch, Pi 78.03 46 ⇑P **P** **21 33 22.6 -0.5**
baz=78
D17A Six Diamond Ra 78.03 42 ⇓P **P** **21 33 22.8 -0.3**
baz=78,SNR=22
EGMT Eagleton 78.07 41 ⇓P **P** **21 33 22.8 -0.4**

baz=78
EGMT Eagleton 78.07 41 *e*P P 21 33 23.1 -0.1
comp=Z,39nm,1.4s,mb5.1
G15A Dillon 78.09 44 ⇑P P 21 33 22.9 -0.6
baz=78
L12A House Creek Ra 78.17 48 ⇓P P 21 33 24.0 0.0
baz=78
UMR Umm Al-Rimmam 78.17 297 *e*P P 21 33 23.9 -0.4
baz=297
UMR AMb AMB 21 33 28.2
comp=Z,34nm,1.1s,mb5.2,baz=297
I14A Mackay 78.18 46 ⇓P P 21 33 24.0 0.0
baz=78,SNR=32
F16A Kennard Place, 78.25 43 ⇑P P 21 33 23.9 -0.4
baz=78,SNR=15
E17A Martinsdale 78.32 42 ⇓P P 21 33 24.8 +0.1
baz=78,SNR=18
BOZ Bozeman (W) 78.33 43 ⇑P P 21 33 24.5 -0.3
baz=78
BOZ Bozeman (W) 78.33 43 *e*P P 21 33 24.8 0.0
BOZ pmax pmax
comp=Z,14nm,1.3s,mb4.7
BOZ Bozeman (W) 78.33 43 *e*P P 21 33 24.8 +0.1
comp=Z,14nm,1.3s,mb4.7
MIB Mutribah 78.33 298 *e*P P 21 33 25.1 0.0
baz=298
MIB AMb AMB 21 33 29.1
comp=Z,35nm,0.8s,mb5.3,baz=298
KBD Kabd 78.37 297 *e*P P 21 33 25.3 0.0
baz=297
KBD AMb AMB 21 33 30.2
comp=Z,39nm,1.8s,mb5.0,baz=297
QRN Al-Qurain 78.42 297 *e*P P 21 33 24.7 -0.8
baz=297
QRN AMb AMB 21 33 27.5
comp=Z,87nm,1.2s,mb5.6,baz=297
G16A Moss Hill, Enn 78.46 44 ⇑P P 21 33 25.4 -0.1
baz=78
J14A Carey 78.47 46 ⇑P P 21 33 25.8 +0.2
baz=78,SNR=20
K13A Stover Farm, H 78.48 47 ⇓P P 21 33 25.7 0.0
baz=78
D18A Linhart Farms, 78.51 41 ⇓P P 21 33 25.5 -0.2
baz=78
FCC Fort Churchill 78.60 26 *e*P P 21 33 26.3 +0.3
FCC pmax pmax
comp=Z,2.0nm,1.8s,mb3.8
FCC Fort Churchill 78.60 26 *e*P P 21 33 26.2 +0.3
comp=Z,1.8nm,1.8s,mb3.7
M12A Wells 78.62 48 ⇓P P 21 33 26.4 -0.1
baz=78,SNR=16
AKASG Malin Array Be 78.65 323 P P 21 33 25.8 -0.7
comp=Z,6.4nm,0.7s,mb4.6,baz=47,slow=5.7,SNR=22
AKASG PP PP 21 36 22.1 -2.0
comp=Z,2.5nm,0.9s,baz=48,slow=9.2,SNR=4.1
AKASG Malin Array Be 78.65 323 *i* P P 21 33 26.2 -0.2
AKASG pmax pmax
comp=Z,6.0nm,0.7s
KIEV Kiev 78.66 323 P P 21 33 26.5 0.0
KIEV pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIEV Kiev 78.66 323 P P 21 33 26.5 0.0
comp=Z,18nm,1.1s,mb4.9
F17A Fitzpatrick Pl 78.75 43 ⇓P P 21 33 27.0 -0.1
baz=78
ELK Elko 78.77 49 *e*P P 21 33 27.3 0.0
ELK pmax pmax
comp=Z,14nm,1.3s
ELK Elko 78.77 49 *e*P P 21 33 27.3 0.0
comp=Z,14nm,1.3s,mb4.7
E18A Harlowton 78.80 42 ⇑P P 21 33 27.2 -0.2
baz=78,SNR=19
O11A Cowboy Ranch, 78.83 50 ⇑P P 21 33 27.3 -0.3
baz=79
N12A Clover Valley, 78.84 49 ⇑P P 21 33 27.7 0.0
baz=79
L13A Double Diamond 78.87 47 ⇑P P 21 33 27.8 0.0
baz=79
TPH Tonopah 78.88 52 *e*P P 21 33 30.7 +2.8
TPH pmax pmax
comp=Z,15nm,1.3s,mb4.8
TPH Tonopah 78.88 52 *e*P P 21 33 30.7 +2.7
comp=Z,15nm,1.3s,mb4.8
R09A Tonopah 78.89 52 ⇓P P 21 33 28.5 +0.4
baz=79,SNR=6.6
QLMT Earthquake Lak 78.90 44 *e*P P 21 33 28.5 +0.6
HFS Hagfors 79.00 336 P P 21 33 28.4 +0.2
comp=Z,6.6nm,0.8s,mb4.6,baz=106,slow=3.2,SNR=5.0
G17A Pierce Place, 79.03 43 ⇑P P 21 33 28.4 -0.2
baz=79
Q10A Clear Creek Ra 79.03 51 ⇑P P 21 33 28.8 0.0
baz=79
S09A Goldfield 79.06 52 ⇑P P 21 33 29.0 +0.1
baz=79
H16A Russell Place, 79.08 44 ⇓P P 21 33 28.8 -0.1
baz=79,SNR=13
K14A Jones Ranch, D 79.10 47 ⇓P P 21 33 29.1 0.0
baz=79
M13A Montello 79.13 48 ⇓P P 21 33 29.1 -0.1
baz=79,SNR=5.8
NOA NORSAR Array B 79.15 338 P P 21 33 29.1 +0.1
comp=Z,6.3nm,0.9s,mb4.6,baz=40,slow=5.2,SNR=11
F18A Big Timber 79.29 42 ⇑P P 21 33 29.8 -0.3
baz=79,SNR=16
L14A Malta 79.34 47 ⇑P P 21 33 30.3 -0.2
baz=79
O12A Currie 79.34 49 ⇑P P 21 33 30.5 0.0
baz=79
S10A Tonopah Range, 79.38 52 ⇓P P 21 33 30.4 -0.3
baz=79,SNR=6.8
I16A Newdale 79.40 45 ⇑P P 21 33 30.7 0.0
baz=79,SNR=9.4
YNR Norris Junctio 79.41 44 *e*P P 21 33 33.5 +2.8
K15A Arbon 79.42 46 ⇑P P 21 33 31.1 +0.2
baz=79,SNR=5.7
YFT Old Faithful 79.46 44 *e*P P 21 33 32.8 +1.8
SUW Suwalki 79.48 328 *e*P P 21 33 31.3 +0.4
SUW Suwalki 79.48 328 *e*P P 21 33 31.3 +0.4
Q11A Duckwater 79.51 51 ⇓P P 21 33 31.5 +0.1
baz=79
M14A Sheep Mountain 79.56 48 ⇓P P 21 33 31.3 -0.4
baz=79,SNR=19
H17A Grant Village 79.65 44 ⇑P P 21 33 32.2 +0.1
baz=79,SNR=6.8
J16A Bone 79.66 45 ⇓P P 21 33 32.2 +0.1
baz=79,SNR=14
IMW Indian Meadow 79.71 45 *e*P P 21 33 33.3 +0.9
comp=Z,26nm,1.3s,mb5.0
G18A Lazy EL Ranch, 79.72 43 ⇓P P 21 33 32.3 -0.1
baz=80
DCID1 Drake Creek 79.74 45 *e*P P 21 33 33.4 +0.8
comp=Z,38nm,1.1s,mb5.2
MPMC Manual Prospec 79.75 54 ⇓P P 21 33 32.7 -0.1
baz=80
HVU Hansel Valley 79.77 47 *e*P P 21 33 33.7 +1.0
HVU pmax pmax
comp=Z,12nm,0.9s,mb4.8
HVU Hansel Valley 79.77 47 *e*P P 21 33 33.7 +1.0
comp=Z,12nm,0.9s,mb4.8
RRI2 Red Ridge 79.79 45 *e*P P 21 33 33.6 +0.7
comp=Z,59nm,1.8s,mb5.2
R11A Troy Canyon, C 79.82 51 ⇓P P 21 33 33.2 +0.1
baz=80
L15A Malad City 79.89 47 ⇑P P 21 33 33.2 -0.2
baz=80
O13A Hicks Ranch, I 79.91 49 ⇓P P 21 33 33.6 0.0
baz=80
MOOW Moose Ponds 79.91 45 *e*P P 21 33 34.3 +0.8
comp=Z,24nm,1.5s,mb4.9
I17A Pilgram Creek 79.92 44 ⇓P P 21 33 33.9 +0.4
baz=80,SNR=14
K16A Soda Springs 79.92 46 ⇓P P 21 33 34.1 +0.6
baz=80,SNR=22
TPAW Teton Pass 79.94 45 *e*P P 21 33 34.5 +0.9
comp=Z,33nm,1.5s,mb5.0
Q12A Willow Creek R 79.95 50 ⇓P P 21 33 33.7 -0.1
baz=80
RLMT Red Lodge 80.00 43 ⇓P P 21 33 33.9 0.0
baz=80
RLMT Red Lodge 80.00 43 *e*P P 21 33 34.5 +0.5
comp=Z,19nm,1.1s,mb4.9
EDW2 Edwards Air Fo 80.02 55 ⇑P P 21 33 34.4 +0.2
baz=80
N14A Grayback Hills 80.02 48 ⇓P P 21 33 34.2 +0.1
baz=80
REDW Red Top Meadow 80.07 45 *e*P P 21 33 35.0 +0.7
comp=Z,23nm,1.4s,mb4.9
LOHW Long Hollow 80.07 45 *e*P P 21 33 35.0 +0.6
comp=Z,15nm,1.3s,mb4.8
TPNV Topopah Spring 80.13 53 ⇓P P 21 33 34.7 -0.1
baz=80
J17A Brown Place, J 80.15 45 ⇓P P 21 33 34.9 +0.1
baz=80
M15A Larsen Ranch, 80.15 47 ⇑P P 21 33 35.0 +0.2
baz=80
SPUT South Promonto 80.23 47 *e*P P 21 33 35.8 +0.6
AHID Auburn Hatcher 80.25 46 *e*P P 21 33 36.3 +1.0
comp=Z,17nm,1.1s,mb4.9
P13A Bates Ranch, G 80.26 50 ⇓P P 21 33 35.4 0.0
baz=80
N15A Stansbury Isla 80.42 48 ⇑P P 21 33 36.2 -0.1
baz=80,SNR=6.6
I18A Diamond G Ranc 80.49 44 ⇑P P 21 33 36.4 -0.3
baz=80
Q13A Wheeler Ranch, 80.53 50 ⇑P P 21 33 36.9 0.0
baz=80
DUG Dugway 80.62 48 ⇑P P 21 33 37.2 -0.1
baz=80
DUG Dugway 80.62 48 *e*P P 21 33 37.7 +0.3
DUG pmax pmax
comp=Z,15nm,1.0s,mb4.9
DUG Dugway 80.62 48 *e*P P 21 33 37.7 +0.3
comp=Z,15nm,1.0s,mb4.9
J18A Kendall Valley 80.65 45 ⇑P P 21 33 37.2 -0.3
baz=80,SNR=22
T11A Corn Creek, Al 80.66 52 ⇑P P 21 33 37.5 -0.1
baz=80
L17A Cokeville 80.77 46 ⇑P P 21 33 38.0 -0.1
baz=80
P14A Drum Mountains 80.79 49 ⇑P P 21 33 38.0 -0.3
baz=81,SNR=17
DGMT Dagmar 80.80 38 ⇓P P 21 33 38.2 0.0
baz=80
DGMT Dagmar 80.80 38 *e*P P 21 33 37.9 -0.3
comp=Z,39nm,1.3s,mb5.2
Q14A Sevier Lake (B 80.99 50 ⇓P P 21 33 39.1 -0.2
baz=81
SHPR Sheep Range 81.10 53 *e*P P 21 33 40.2 +0.2
SFJD Kangerlussuaq 81.10 5 LR LR 22 15 23.9
comp=Z,750nm,18.8s,MS5.1,baz=358,slow=40
BW06 Boulder Array 81.19 45 ⇑P P 21 33 40.1 -0.3
baz=81
BW06 Boulder Array 81.19 45 *e*P P 21 33 40.0 -0.3
comp=Z,6.7nm,1.0s,mb4.5
PDAR Pinedale Array 81.19 45 P P 21 33 39.9 -0.5
comp=Z,3.8nm,0.9s,mb4.3,baz=265,slow=1.5,SNR=17
HEC Hector,Ludlow 81.20 55 ⇓P P 21 33 40.5 -0.1
baz=81
NLU North Lily Min 81.23 48 *e*P P 21 33 41.0 +0.4
M17A Scullys Gap (B 81.25 46 ⇑P P 21 33 40.5 -0.2
baz=81
JLU Jordanelle 81.26 48 *e*P P 21 33 41.7 +1.0
V11A Goodsprings 81.28 53 ⇓P P 21 33 41.3 +0.3
baz=81
L18A Fontenelle, Gr 81.38 46 ⇑P P 21 33 41.0 -0.4
baz=81
S13A Holt Ranch, En 81.39 51 ⇓P P 21 33 41.6 +0.1
baz=81
O16A Springville 81.45 48 ⇓P P 21 33 41.6 -0.2
baz=81
N17A Moffit Pass 81.45 47 ⇑P P 21 33 41.6 -0.2
baz=81,SNR=7.0
MPU Maple Canyon 81.47 48 *e*P P 21 33 42.8 +0.8
comp=Z,18nm,1.1s,mb4.9
DAU Daniels Canyon 81.49 48 *e*P P 21 33 42.1 +0.1
K19A Absolon Red Bu 81.58 45 ⇓P P 21 33 42.1 -0.3
baz=81
M18A Lyman 81.65 46 ⇓P P 21 33 42.8 0.0
baz=81
T13A Saint George 81.66 52 ⇑P P 21 33 42.9 0.0
baz=81
L19A Farson 81.69 45 ⇓P P 21 33 42.5 -0.5
baz=81
GMRC Granite Mounta 81.69 54 ⇑P P 21 33 43.0 -0.1
baz=82
V12A Nelson 81.73 53 ⇑P P 21 33 43.2 -0.2
baz=82,SNR=5.3
PFO Pinyon Flat Ob 81.77 56 ⇑P P 21 33 43.7 +0.1
baz=82
PFO Pinyon Flat Ob 81.77 56 *e*P P 21 33 44.5 +0.9
PFO pmax pmax
comp=Z,22nm,1.3s,mb4.9
PFO Pinyon Flat Ob 81.77 56 *e*P P 21 33 44.5 +0.9
comp=Z,22nm,1.3s,mb4.9
LVV L'vov 81.80 325 *e*P P 21 33 46.8 +3.4
BELC Belle Mtn. 81.88 55 ⇑P P 21 33 44.3 +0.2
baz=82
O17A Robinson Place 81.94 48 ⇓P P 21 33 44.1 -0.3
baz=82,SNR=19
U13A Pakoon Wash 81.96 52 ⇓P P 21 33 44.4 -0.1
baz=82
MSU Marysvale 81.97 50 *e*P P 21 33 45.2 +0.6
K20A Yellowstone Ra 81.98 44 ⇓P P 21 33 44.1 -0.4
baz=82
PPT Papeete 82.06 116 *e*S S 21 43 37.5 -20
PPT Papeete 82.06 116 *e*LR LR 21 58 52.9
comp=Z,1μm,22.0s,baz=325
R15A Junction 82.08 50 ⇑P P 21 33 44.9 -0.3
baz=82
N18A Larsen Ranch, 82.15 46 ⇓P P 21 33 44.7 -0.7
baz=82
V13A Grand Canyon W 82.25 53 ⇓P P 21 33 46.0 -0.1
baz=82
P17A Butcher Ranch, 82.35 48 ⇑P P 21 33 46.3 -0.2
baz=82
O18A Roosevelt 82.35 47 ⇑P P 21 33 46.5 0.0
baz=82
IRM Iron Mountain 82.38 55 ⇓P P 21 33 46.6 -0.2
baz=82
BC3 Big Chuckw Mtn 82.45 55 ⇓P P 21 33 47.3 +0.2
baz=82
U14A Mt Trumbull 82.48 52 ⇓P P 21 33 47.4 +0.1
baz=82
N19A John Jarvie Ra 82.50 46 ⇓P P 21 33 47.0 -0.3
baz=82
R16A Teasdale 82.55 49 ⇑P P 21 33 47.7 +0.1
baz=82
BR131 Keskin Array S 82.57 312 *e*P P 21 33 48.4 +0.7
comp=Z,6.7nm,1.0s,mb4.6
BRTR Keskin Array B 82.57 312 P P 21 33 47.5 -0.1
comp=Z,7.4nm,0.9s,mb4.7,baz=95,slow=3.6,SNR=22
BRTR Keskin Array B 82.57 312 *i* P P 21 33 48.4 +0.8
BRTR pmax pmax
comp=Z,7.0nm,0.9s
P18A Preston Nutter 82.57 48 ⇓P P 21 33 47.6 -0.1
baz=82,SNR=8.8
KWP Kalwaria 82.58 325 *e*P P 21 33 48.6 +1.1
KWP Kalwaria 82.58 325 ⇓*i*P P 21 33 49.1 +1.6
BUR08 Bucovina Ar. S 82.61 322 *e*P P 21 33 48.3 +0.6
BURAR Bucovina Array 82.62 322 ⇑*i*P P 21 33 49.0 +1.2
BURAR Bucovina Array 82.62 322 ⇑P P 21 33 49.0 +1.2
T15A Red Dirt Ranch 82.68 51 ⇓P P 21 33 48.2 -0.1
baz=82
SRU San Rafael 82.69 48 ⇓P P 21 33 48.0 -0.3
baz=82
SRU San Rafael 82.69 48 *e*P P 21 33 48.0 -0.3
SRU pmax pmax
comp=Z,19nm,1.2s,mb5.0
SRU San Rafael 82.69 48 *e*P P 21 33 48.0 -0.3
comp=Z,19nm,1.2s,mb5.0
W13A Hualapai Mount 82.74 53 ⇓P P 21 33 48.7 0.0
baz=82
M20A Sweetwater, Wa 82.76 45 ⇑P P 21 33 48.7 +0.1
baz=82
S16A Weppner Ranch, 82.80 50 ⇓P P 21 33 49.1 +0.2
baz=83
Q18A Rafter H Ranch 82.95 48 ⇑P P 21 33 49.1 -0.6
baz=83
L21A Rawlins 82.97 45 ⇑P P 21 33 49.6 -0.1
baz=83
V14A Boquillas Ranc 82.97 52 ⇑P P 21 33 49.6 -0.3
baz=83
R17A Hanksville Air 82.97 49 ⇑P P 21 33 49.2 -0.6
baz=83
PDMCI Parker Dam,Lak 83.01 54 ⇓P P 21 33 49.6 -0.4
baz=83
X13A Yucca 83.06 54 ⇑P P 21 33 50.2 -0.1
baz=83
U15A North Rim 83.07 51 ⇓P P 21 33 50.1 -0.2
baz=83
N20A Spence Gulch, 83.10 46 ⇓P P 21 33 49.6 -0.8
baz=83
M21A Separation Pea 83.19 45 ⇓P P 21 33 50.4 -0.4
baz=83
GLA Glamis 83.22 55 ⇓P P 21 33 51.1 -0.1
baz=83
W14A Seligman 83.22 53 ⇑P P 21 33 51.1 0.0
baz=83
RWWY Rawlins 83.23 45 *e*P P 21 33 53.8 +2.8
comp=Z,23nm,1.1s,mb5.1
KOLS Kolonicke sedl 83.25 325 *e*P P 21 33 51.8 +0.8
KOLS *e* pP 21 34 01.4 -0.5
KOLS pmax pmax
comp=Z,23nm,1.6s,mb5.0
KOLS Kolonicke sedl 83.25 325 *e*P P 21 33 51.8 +0.8
comp=Z,23nm,1.6s,mb5.0
KOLS *e* pP 21 34 01.4 -0.5
T16A Glen Canyon Da 83.27 51 ⇑P P 21 33 50.6 -0.7
baz=83
S17A Black Ridge (B 83.36 50 ⇓P P 21 33 51.5 -0.3
baz=83
P19A Cripple Cowboy 83.36 47 ⇑P P 21 33 51.6 -0.1
baz=83
STHS Stebnicka Huta 83.43 325 *e*P P 21 33 53.0 +1.1
STHS *e* 21 34 11.8
STHS pmax pmax
comp=Z,13nm,1.1s,mb4.9
STHS Stebnicka Huta 83.43 325 *e*P P 21 33 53.0 +1.1
comp=Z,13nm,1.1s,mb4.9
STHS *e* 21 33 56.1
STHS *e* 21 34 11.8
UZH Uzhgorod 83.44 324 ⇑*i*P P 21 33 56.0 +4.0
UZH *i* 21 34 10.5
UZH MLR MLR
comp=N,2μm,15.0s,MS5.7
UZH MLR MLR
comp=E,2μm,15.0s,MS5.7
UZH MLR MLR
comp=Z,1μm,15.0s,MS5.4
V15A Kaibab Nationa 83.49 52 ⇑P P 21 33 52.2 -0.3
baz=83
R18A Canyonlands Na 83.51 49 ⇓P P 21 33 52.0 -0.6
baz=83,SNR=6.0
OJC Ojcow 83.57 327 *e*P P 21 33 53.1 +0.5
OJC *e*PcP PcP 21 34 01.7 +4.9
OJC Ojcow 83.57 327 *e*P P 21 33 53.2 +0.6
OJC *e*PcP PcP 21 34 01.7 +4.9
Q19A Hogan Spring (83.58 48 ⇓P P 21 33 52.2 -0.7
baz=83
RSSD Black Hills 83.59 41 *e*P P 21 33 53.2 +0.4
RSSD pmax pmax
comp=Z,21nm,1.6s,mb5.0
RSSD Black Hills 83.59 41 *e*P P 21 33 53.2 +0.4
comp=Z,21nm,1.6s,mb5.0
MLR Muntele Rosu 83.59 320 P P 21 33 53.1 +0.3
comp=Z,5.1nm,0.9s,mb4.6,baz=135,slow=23,SNR=5.7
MLR Muntele Rosu 83.59 320 ⇓*i*P P 21 33 55.2 +2.4
MLR Muntele Rosu 83.59 320 ⇓P P 21 33 55.2 +2.3
N21A Black Mountain 83.60 46 ⇑P P 21 33 52.5 -0.4
baz=83,SNR=6.2
CRVS Cervenica-Dubn 83.67 325 *e*P P 21 33 53.2 0.0
comp=Z,65nm,1.9s,mb5.4
CRVS LR LR
comp=Z,800nm,20.5s,MS5.1
T17A Navajo Res., N 83.73 50 ⇓P P 21 33 52.8 -0.9
baz=84
ULM Lac du Bonnet 83.76 33 P P 21 33 54.0 +0.4
comp=Z,1.4nm,0.4s,mb4.5,baz=359,slow=3.6,SNR=3.7
X14A Yava 83.77 53 ⇑P P 21 33 53.5 -0.5
baz=84
M22A Cedar Creek Ra 83.77 45 ⇑P P 21 33 53.5 -0.3
baz=84,SNR=5.2
W15A Williams 83.79 52 ⇑P P 21 33 53.9 -0.2
baz=84
S18A Hurst Farm, Bl 83.85 49 ⇓P P 21 33 53.8 -0.6
baz=84
NIE Niedzica 83.88 326 *e*P P 21 33 55.0 +0.8
NIE *e*PcP PcP 21 34 03.1 +4.9
O21A Pagoda 83.95 46 ⇓P P 21 33 54.4 -0.4
baz=84
R19A Curley Farm, L 83.97 48 ⇓P P 21 33 54.8 -0.1
baz=84
Y14A Wickenburg 83.99 54 ⇑P P 21 33 55.0 -0.1
baz=84
U16A Tuba City 84.00 51 ⇓P P 21 33 55.0 -0.1
baz=84
U17A Shonto 84.05 50 ⇓P P 21 33 55.1 -0.2
baz=84,SNR=5.9
VOIR 84.11 321 ⇑*i*P P 21 33 56.6 +1.1
VOIR 84.11 321 ⇑P P 21 33 56.6 +1.2
113A Mohawk Valley, 84.11 55 ⇓P P 21 33 55.3 -0.5
baz=84
PV04 Paradox Valley 84.14 48 *e*P P 21 33 56.0 +0.3
Q20A Ridgley Place, 84.19 47 ⇑P P 21 33 55.4 -0.6
baz=84
WUAZ Wupatki 84.20 52 ⇓P P 21 33 55.6 -0.6
baz=84
X15A Humboldt 84.20 53 ⇓P P 21 33 56.0 -0.1
baz=84
N22A Wattenberg Ran 84.22 45 ⇑P P 21 33 55.3 -0.8
baz=84
T18A Mexican Hat 84.25 50 ⇑P P 21 33 56.5 +0.1
baz=84,SNR=5.2
S19A Harvey Farm, M 84.37 49 ⇓P P 21 33 56.4 -0.6
baz=84
Y15A Casa Rosa Ranc 84.44 53 ⇓P P 21 33 57.1 -0.3
baz=84,SNR=7.3
OKC Ostrava-Krasne 84.60 327 *e*P P 21 33 58.2 +0.3
OKC *e*S S 21 44 27.1 +4.7
OKC AMS AMS 22 20 50.0
comp=Z,2μm,14.4s
OKC Ostrava-Krasne 84.60 327 *e*P P 21 33 58.2 +0.3
OKC *e*S S 21 44 27.1 +4.7
TAOE Nuku Hiva Isla 84.65 104 *e*LR LR 22 00 05.0
comp=Z,3μm,21.8s
U18A Rough Rock, Ch 84.67 50 ⇑P P 21 33 58.5 0.0
baz=84
KSP Ksiaz 84.73 329 *e*P P 21 33 59.4 +0.9
KSP Ksiaz 84.73 329 *e*P P 21 33 58.8 +0.3
KSP *e*S S 21 44 26.0 +2.4
X16A Lo Mia Camp, P 84.78 53 ⇑P P 21 33 59.2 +0.1
baz=85
SMCO Snowmass 84.88 47 *e*P P 21 33 57.2 -2.3
comp=Z,24nm,1.3s,mb5.2
W17A Winslow 84.89 52 ⇑P P 21 33 59.7 0.0
baz=85
T19A Beclabito 84.98 50 ⇑P P 21 33 59.6 -0.5
baz=85,SNR=5.4
R21A Cimarron 85.01 48 ⇓P P 21 34 00.1 0.0
baz=85,SNR=13
V18A Ganado 85.04 51 ⇓P P 21 34 00.1 -0.3
baz=85
Y16A Circle Bar Ran 85.07 53 ⇑P P 21 34 00.4 -0.1
baz=85
DPC Dobruska-Polom 85.07 328 *e*P P 21 34 01.1 +0.9
DPC *e*S S 21 44 29.0 +2.0
DPC AMS AMS 22 21 10.0
comp=Z,2μm,19.9s
UPC Upice 85.09 329 *e*P P 21 34 01.7 +1.4
MVCO Mesa Verde 85.10 49 ⇑P P 21 34 00.3 -0.3
baz=85
MVCO Mesa Verde 85.10 49 *e*P P 21 34 01.3 +0.7
comp=Z,17nm,1.3s,mb5.0
PSZ Piszkesteto 85.11 325 *e*P P 21 34 01.7 +1.2
PSZ pmax pmax
comp=Z,26nm,1.3s,mb5.2
PSZ Piszkesteto 85.11 325 ⇑*e*P P 21 34 01.6 +1.1
PSZ Piszkesteto 85.11 325 ⇓*i*P P 21 34 01.4 +0.9
PSZ Piszkesteto 85.11 325 *e*P P 21 34 01.7 +1.3
comp=Z,26nm,1.3s,mb5.2
AGMN Agassiz Refuge 85.12 34 *e*P P 21 34 01.6 +1.1
comp=Z,38nm,1.9s,mb5.2
VYHS Vyhne 85.22 326 *e*P P 21 34 01.4 +0.4
comp=Z,12nm,1.2s,mb4.9
VYHS LR LR
comp=Z,1μm,16.3s,MS5.4
115A Sonoran Desert 85.22 54 ⇓P P 21 34 01.2 -0.2
baz=85
214A Organ Pipe Nat 85.24 55 ⇑P P 21 34 01.4 0.0
baz=85
ISCO Idaho Springs 85.34 46 *e*P P 21 34 02.6 +0.8
ISCO pmax pmax
comp=Z,28nm,1.6s,mb5.1
ISCO Idaho Springs 85.34 46 *e*P P 21 34 02.6 +0.8
comp=Z,28nm,1.6s,mb5.1
KOLL Kolacno 85.37 326 *e*P P 21 34 02.4 +0.7
Y17A Roosevelt 85.60 53 ⇑P P 21 34 03.1 -0.2
baz=85
V19A Window Rock 85.63 50 ⇑P P 21 34 03.1 -0.2
baz=85
VRAC Vranov 85.69 328 P P 21 34 03.9 +0.6
comp=Z,7.4nm,0.9s,mb4.9,baz=40,slow=6.0,SNR=7.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VRAC	**Vranov**	**85.69**	**328**	⇑*i*P	**P**	**21 34 04.4**	**+1.1**
PVCC	**Panska Ves**	**85.71**	**329**	*e*P	**P**	**21 34 05.8**	**+2.4**
PVCC				AMS	AMS	22 21 50.0	
	comp=Z,2μm,8.6s						
BRG	**Berggiesshubel**	**85.72**	**330**	*i* P	**P**	**21 34 06.6**	**+3.1**
BRG				S	S	21 44 36.0	+2.5
BRG				*i*		21 45 32.0	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
BRG	**Berggiesshubel**	**85.72**	**330**	*i* P	**P**	**21 34 06.6**	**+3.1**
	comp=Z,8.9nm,1.1s,mb4.9						
BRG				S	S	21 44 36.0	+2.5
BRG				*i*		21 45 32.0	
W19A	**Sanders**	**85.75**	**51**	⇓P	**P**	**21 34 03.8**	**-0.1**
	baz=86						
CLL	**Collm**	**85.80**	**331**	*e*P	**P**	**21 34 04.0**	**+0.2**
CLL				*e*S	S	21 44 32.0	-2.2
CLL				pmax	pmax		
	comp=Z,56nm,1.8s,mb5.5						
CLL	**Collm**	**85.80**	**331**	*e*P	**P**	**21 34 04.0**	**+0.2**
	comp=Z,56nm,1.8s,mb5.5						
CLL				*e*x	x	21 34 29.0	
CLL				*e*S	S	21 44 32.0	-2.2
BUD	**Budapest**	**85.83**	**325**	⇑*e*PcP	pP	21 34 09.1	-5.9
SMOL	**Smolenice**	**85.87**	**327**	*e*P	**P**	**21 34 05.5**	**+1.2**
SMOL	**Smolenice**	**85.87**	**327**	*e*P	**P**	**21 34 05.6**	**+1.3**
PRU	**Pruhonice**	**86.12**	**329**	*e*P	**P**	**21 34 11.5**	**+6.1**
PRU				*e*S	S	21 44 38.4	+1.0
PRU				AMS	AMS	22 21 50.0	
	comp=Z,2μm,10.7s						
TREC	**Trest**	**86.20**	**328**	*e*P	**P**	**21 34 08.1**	**+2.2**
TREC				AMS	AMS	22 20 50.0	
	comp=Z,1μm,17.3s						
X19A	**St. Johns**	**86.22**	**52**	⇓P	**P**	**21 34 06.4**	**+0.1**
	baz=86						
ZST	**Bratislava**	**86.25**	**327**	*e*P	**P**	**21 34 07.5**	**+1.4**
ZST				LR	LR		
	comp=Z,1μm,18.1s,MS5.3						
117A	**Oracle**	**86.33**	**54**	⇑P	**P**	**21 34 06.6**	**-0.2**
	baz=86						
TUC	**Tucson**	**86.44**	**54**	*e*P	**P**	**21 34 06.5**	**-0.9**
TUC				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
TUC	**Tucson**	**86.44**	**54**	*e*P	**P**	**21 34 06.5**	**-0.9**
	comp=Z,10nm,1.3s,mb4.9						
Y19A	**Nutrioso**	**86.52**	**52**	⇓P	**P**	**21 34 07.4**	**-0.3**
	baz=86						
SDCO	**Great Sand Dun**	**86.67**	**47**	*e*P	**P**	**21 34 10.8**	**+2.4**
	comp=Z,12nm,1.3s,mb5.0						
217A	**Green Valley**	**86.73**	**54**	⇓P	**P**	**21 34 08.4**	**-0.4**
	baz=86						
118A	**Homack Ranch,**	**86.81**	**53**	⇑P	**P**	**21 34 09.1**	**-0.1**
	baz=87						
NKC	**Novy Kostel**	**86.84**	**330**	*e*P	**P**	**21 34 10.8**	**+1.8**
NKC				*e*S	S	21 44 47.8	+3.4
NKC				AMS	AMS	22 21 30.0	
	comp=Z,1μm,15.4s						
NKC	**Novy Kostel**	**86.84**	**330**	*e*P	**P**	**21 34 10.8**	**+1.8**
NKC				*e*S	S	21 44 47.8	+3.4
PKSM	**Moragy**	**86.91**	**324**	⇑*i*P	**P**	**21 34 09.3**	**-0.1**
PKSM	**Moragy**	**86.91**	**324**	⇑P	**P**	**21 34 09.3**	**-0.1**
CONA	**Conrad Observa**	**87.02**	**327**	⇑*i*PcP	PcP	21 34 11.0	-1.1
	comp=Z,15nm,1.6s						
CSNA	**Conrad Observa**	**87.02**	**327**	⇑*i*PcP	PcP	21 34 11.0	-1.1
	comp=Z,16nm,1.7s						
KHC	**Kasperske Hory**	**87.17**	**329**	*e*P	**P**	**21 34 12.6**	**+2.0**
KHC				*e*x	x	21 34 56.0	
KHC				*e*x	x	21 37 23.5	
KHC				*e*PP	PP	21 37 39.5	+5.7
KHC				*e*S	S	21 44 51.1	+3.4
KHC				AMS	AMS	22 22 30.0	
	comp=Z,2μm,15.0s						
119A	**Ashpeak Ranch,**	**87.19**	**53**	⇑P	**P**	**21 34 10.5**	**-0.5**
	baz=87						
GERES	**GERESS Array B**	**87.33**	**329**	P	**P**	**21 34 13.0**	**+1.6**
	comp=Z,1.0nm,0.8s,mb4.1,baz=64,slow=6.7,SNR=3.1						
318A	**Bisbee**	**87.50**	**54**	⇑P	**P**	**21 34 12.2**	**-0.3**
	baz=87						
219A	**White Tail Can**	**87.67**	**54**	⇓P	**P**	**21 34 13.6**	**+0.2**
	baz=88						
GRA1	**Grafenberg Arr**	**87.77**	**330**	*e*P	**P**	**21 34 16.4**	**+2.9**
	comp=Z,40nm,2.1s,mb5.3						
GRF	**Grafenberg Arr**	**87.77**	**330**	*e*P	**P**	**21 34 16.4**	**+2.9**
GRF				pmax	pmax		
	comp=Z,40nm,2.1s,mb5.3						
GRF	**Grafenberg Arr**	**87.77**	**330**	*e*P	**P**	**21 34 16.4**	**+2.9**
GRF				pmax	pmax		
	comp=Z,40nm,2.1s,mb5.3						
GRF	**Grafenberg Arr**	**87.77**	**330**	*e*P	**P**	**21 34 16.4**	**+2.9**
	comp=Z,40nm,2.1s,mb5.3						
ANMO	**Albuquerque**	**87.77**	**50**	*e*P	**P**	**21 34 13.1**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	**Albuquerque**	**87.77**	**50**	*e*P	**P**	**21 34 13.1**	**-0.7**
	comp=Z,5.7nm,1.1s,mb4.7						
ECSD	**EROS,Sioux Fal**	**87.89**	**38**	*e*P	**P**	**21 34 13.0**	**-1.2**
	comp=Z,94nm,2.1s,mb5.7						
ABTA	**Abfaltersbach**	**89.43**	**328**	⇑*i*P	**P**	**21 34 20.6**	**-0.8**
	comp=Z,4.4nm,1.0s,mb4.7						
FETA	**Feichten**	**90.02**	**329**	⇑*i*P	**P**	**21 34 23.4**	**-0.8**
	comp=Z,9.0nm,1.0s,mb5.0						
DAVOS	**Davos**	**90.57**	**329**	P	**P**	**21 34 27.1**	**+0.4**
DAVOX	**Davos/Dischmat**	**90.58**	**329**	P	**P**	**21 34 27.1**	**+0.3**
	comp=Z,5.2nm,0.9s,mb4.8,baz=1.2,slow=6.4,SNR=4.2						
TUE	**Stuetta**	**91.05**	**329**	*e*P	**P**	**21 34 29.0**	**0.0**
	comp=Z,17nm,1.3s,mb5.2						
LPIG	**La Paz**	**91.56**	**60**	LR	LR	22 11 09.0	
	comp=Z,816nm,20.2s,MS5.2,baz=187,slow=33						
WMOK	**Wichita Mounta**	**92.76**	**46**	*e*P	**P**	**21 34 39.0**	**+1.9**
WMOK				pmax	pmax		
	comp=Z,21nm,1.7s,mb5.3						
WMOK	**Wichita Mounta**	**92.76**	**46**	*e*P	**P**	**21 34 39.0**	**+2.0**
	comp=Z,21nm,1.7s,mb5.3						
LPL	**La Plagne**	**92.92**	**330**	*e*P	**P**	**21 34 37.3**	**-0.3**
LPG	**La Plagne**	**92.93**	**330**	*e*P	**P**	**21 34 37.4**	**-0.3**
	comp=Z,24nm,1.1s,mb5.2						
LPG	**La Plagne**	**92.93**	**330**	*e*P	**P**	**21 34 37.4**	**-0.3**
LPG				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.2						
LPG	**La Plagne**	**92.93**	**330**	*e*P	**P**	**21 34 37.4**	**-0.3**
	comp=Z,12nm,1.1s,mb5.2						
SSF	**Saint Saulge**	**92.98**	**333**	*e*P	**P**	**21 34 36.3**	**-1.6**
	comp=Z,31nm,1.3s,mb5.3						
SSF	**Saint Saulge**	**92.98**	**333**	*e*P	**P**	**21 34 36.3**	**-1.6**
SSF				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.3						
SSF	**Saint Saulge**	**92.98**	**333**	*e*P	**P**	**21 34 36.3**	**-1.6**
	comp=Z,15nm,1.3s,mb5.3						
TXAR	**Lajitas Array**	**93.11**	**53**	P	**P**	**21 34 38.2**	**-0.6**
	comp=Z,12nm,1.1s,mb5.3,baz=303,slow=3.0,SNR=31						
SMF	**Signal de Mont**	**93.19**	**332**	*e*P	**P**	**21 34 37.0**	**-1.8**
AVF	**Avril sur Loir**	**93.27**	**333**	*e*P	**P**	**21 34 38.5**	**-0.7**
	comp=Z,50nm,1.4s,mb5.5						
AVF	**Avril sur Loir**	**93.27**	**333**	*e*P	**P**	**21 34 38.5**	**-0.7**
AVF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.5						
AVF	**Avril sur Loir**	**93.27**	**333**	*e*P	**P**	**21 34 38.5**	**-0.7**
	comp=Z,25nm,1.4s,mb5.5						
MBDF	**Montbardon**	**93.54**	**330**	*e*P	**P**	**21 34 39.1**	**-1.4**
	comp=Z,13nm,0.9s,mb5.1						
MBDF	**Montbardon**	**93.54**	**330**	*e*P	**P**	**21 34 39.1**	**-1.4**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
MBDF	**Montbardon**	**93.54**	**330**	*e*P	**P**	**21 34 39.1**	**-1.4**
	comp=Z,6.6nm,0.9s,mb5.1						
ORIF	**Oris-en-Rattie**	**93.77**	**330**	*e*P	**P**	**21 34 40.8**	**-0.7**
CCM	**Cathedral Cave**	**94.78**	**39**	*e*P	**P**	**21 34 47.3**	**+1.0**
CCM				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.3						
CCM	**Cathedral Cave**	**94.78**	**39**	*e*P	**P**	**21 34 47.2**	**+0.9**
	comp=Z,20nm,1.4s,mb5.4						
JCT	**Junction City**	**94.94**	**50**	*e*P	**P**	**21 34 47.6**	**+0.4**
JCT				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
JCT	**Junction City**	**94.94**	**50**	*e*P	**P**	**21 34 47.6**	**+0.4**
	comp=Z,8.9nm,0.8s,mb5.2						
MIAR	**Mount Ida**	**96.00**	**43**	*e*P	**P**	**21 34 52.6**	**+0.7**
MIAR				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
MIAR	**Mount Ida**	**96.00**	**43**	*e*P	**P**	**21 34 52.6**	**+0.6**
	comp=Z,11nm,1.1s,mb5.2						
RKT	**Rikitea**	**96.48**	**113**	*e*LR	LR	22 04 48.8	
	comp=Z,1μm,23.5s						
ESDC	**Sonseca Array**	**102.12**	**334**	PP	PP	21 39 20.8	-9.4
	comp=Z,1.2nm,1.0s,baz=32,slow=8.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**121.17**	**313**	PKP	PKPdf	21 40 18.1	+0.1
	comp=Z,0.9nm,0.9s,baz=0.3,slow=1.5,SNR=4.0						
TORD				PP	PP	21 41 47.4	-0.2
	comp=Z,1.7nm,1.0s,baz=37,slow=8.2,SNR=5.3						
SNAA	**Sanae**	**135.77**	**195**	*e*PKPdf	PKPdf	21 40 45.0	+1.0
SNAA				*e*		21 40 56.8	
VNA2	**Neumayer--Watz**	**137.32**	**194**	*e*PKPdf	PKPdf	21 40 48.0	+1.1
	baz=97,slow=0.7						
VNA2				*e*		21 40 50.1	
VNA2				*e*		21 40 58.0	
VNA2				*e*		21 41 00.2	
VNA2				*e*		22 02 46.0	
VNA3	**Neumayer Olymp**	**137.53**	**193**	*e*PKPdf	PKPdf	21 40 48.5	+1.2
VNA3				*e*		21 40 50.1	
VNA3				*e*		21 40 57.8	
VNA3				*e*		21 41 00.2	
VNA3				*e*		22 02 46.5	
VNA1	**Neumayer--Stat**	**137.71**	**194**	*e*PKPdf	PKPdf	21 40 48.3	+0.7
VNA1				*e*		21 40 50.2	
VNA1				*e*		21 41 00.2	
VNA1				*e*		21 41 03.3	
VNA1				*e*		22 02 47.8	
PLCA	**Paso Flores**	**152.59**	**118**	PKPbc	PKPbc	21 41 21.1	+0.2
	comp=Z,8.7nm,1.2s,baz=301,slow=2.5,SNR=3.8						
PLCA				PKPab	PKPab	21 41 31.0	-0.5
	comp=Z,3.5nm,1.1s,baz=268,slow=12,SNR=2.9						
PLCA	**Paso Flores**	**152.59**	**118**	PKIKP	PKPbc	21 41 21.1	+0.2
PLCA						21 41 31.0	
PLCA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PLCA				pmax	pmax		
	comp=Z,4.0nm,1.1s						

*ISCJB **06** 21:25:25.8±0.3, 4086N±002×1515E±003, h10km, Error ellipse: s-maj=3.4km s-min=2.5km az=143.4*
*CSEM **06** 21:25:25.8±0.1, 4085N×15.17E, h12km, MD2.9/35, Error ellipse: s-maj=1.3km s-min=0.8km az=56.0*
*ROM **06** 21:25:26.3±0.1, 4086N×15.18E, h10km, Md2.9/35, Ml2.8/28, Error ellipse: s-maj=1.3km s-min=0.9km az=72.0*
*NEIC **06** 21:25:26.3, 4086N×15.18E, h10km, ML2.8(ROM), After ROM.*
ISC 06 21:25:26.1±0.4**, 4085N**±002×**1515E**±003**, h16**km±4km**, n76, σ0^{s}75**/90**, Southern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCRV	**Calabrutti - M**	**0.07**	**165**	Pg	**Pg**	**21 25 29.1**	**0.0**
MCRV				Sg	**Sg**	**21 25 31.1**	**0.0**
	31μm,0.1s						
MCRV	**Calabrutti - M**	**0.07**	**165**	Pg	**Pg**	**21 25 29.1**	**0.0**
MCRV				Sg	**Sg**	**21 25 31.1**	**0.0**
	31μm,0.1s						
SNAL	**S. Angelo Dei**	**0.09**	**34**	Pg	**Pg**	**21 25 29.0**	**-0.3**
SNAL				Sg	**Sg**	**21 25 31.2**	**-0.3**
	12μm,0.5s						
SNAL	**S. Angelo Dei**	**0.09**	**34**	Pg	**Pg**	**21 25 29.0**	**-0.3**
SNAL				Sg	**Sg**	**21 25 31.2**	**-0.3**
	12μm,0.5s						
CSSN	**Cassano Irpino**	**0.09**	**276**	Pg	**Pg**	**21 25 29.5**	**+0.2**
CAFE	**Carife**	**0.19**	**22**	Pg	**Pg**	**21 25 30.8**	**+0.2**
CAFE				Sg	**Sg**	**21 25 33.8**	**+0.1**
	8μm,0.4s						
CAFE	**Carife**	**0.19**	**22**	Pg	**Pg**	**21 25 30.8**	**+0.2**
CAFE				Sg	**Sg**	**21 25 33.8**	**+0.1**
	8μm,0.4s						
MRLC	**Muro Lucano**	**0.28**	**110**	Pg	**Pg**	**21 25 32.1**	**+0.1**
MRLC				Sg	**Sg**	**21 25 36.8**	**+0.7**
MRB1	**Monte Rocchett**	**0.30**	**335**	Pg	**Pg**	**21 25 32.7**	**+0.2**
	1μm,0.4s						
MRB1	**Monte Rocchett**	**0.30**	**335**	Pg	**Pg**	**21 25 32.7**	**+0.2**
	1μm,0.4s						
SGO	**Sicignano**	**0.32**	**157**	Pg	**Pg**	**21 25 33.0**	**+0.3**
VULT	**Monte Vulture**	**0.37**	**74**	Pg	**Pg**	**21 25 33.7**	**0.0**
VULT				Sg	**Sg**	**21 25 40.0**	**+1.2**
	1μm,0.3s						
VULT	**Monte Vulture**	**0.37**	**74**	Pg	**Pg**	**21 25 33.7**	**0.0**
VULT				Sg	**Sg**	**21 25 40.0**	**+1.2**
	1μm,0.3s						
CDRU	**Civita di Ruta**	**0.38**	**161**	Pg	**Pg**	**21 25 34.0**	**+0.1**
CDRU				Sg	**Sg**	**21 25 40.0**	**+0.9**
	729nm,0.2s						
CDRU	**Civita di Ruta**	**0.38**	**161**	Pg	**Pg**	**21 25 34.0**	**+0.1**
CDRU				Sg	**Sg**	**21 25 40.0**	**+0.9**
	729nm,0.2s						
FG5	**Orsara di Pugl**	**0.44**	**12**	Pg	**Pg**	**21 25 35.1**	**+0.2**
	260nm,0.3s						
FG5	**Orsara di Pugl**	**0.44**	**12**	Pg	**Pg**	**21 25 35.1**	**+0.2**
	260nm,0.3s						
MOCO	**Biccari - m.te**	**0.52**	**1**	Pg	**Pg**	**21 25 36.6**	**+0.2**
	180nm,0.6s						
CMPR	**Campora**	**0.55**	**167**	Pg	**Pg**	**21 25 36.6**	**-0.3**
	475nm,0.3s						
CMPR	**Campora**	**0.55**	**167**	Pg	**Pg**	**21 25 36.6**	**-0.3**
	475nm,0.3s						
PALZ	**Palazzo San Ge**	**0.62**	**81**	Pg	**Pg**	**21 25 37.6**	**-0.7**
	616nm,0.9s						
PALZ	**Palazzo San Ge**	**0.62**	**81**	Pg	**Pg**	**21 25 37.6**	**-0.7**
	616nm,0.9s						
SACR	**S. Croce Del S**	**0.64**	**329**	Pg	**Pg**	**21 25 39.1**	**+0.5**
	133nm,0.7s						
SACR	**S. Croce Del S**	**0.64**	**329**	Pg	**Pg**	**21 25 39.1**	**+0.5**
	133nm,0.7s						
PTRJ	**Pietraroja**	**0.69**	**318**	Pg	**Pg**	**21 25 40.4**	**+0.8**
	347nm,0.5s						
PTRJ	**Pietraroja**	**0.69**	**318**	Pg	**Pg**	**21 25 40.4**	**+0.8**
	347nm,0.5s						
MCEL	**Monticello**	**0.73**	**136**	Pg	**Pg**	**21 25 39.9**	**-0.3**
	310nm,0.4s						
MCEL	**Monticello**	**0.73**	**136**	Pg	**Pg**	**21 25 39.9**	**-0.3**
	310nm,0.4s						
MTSN	**Montesano sull**	**0.75**	**141**	Pg	**Pg**	**21 25 40.4**	**-0.2**
	382nm,0.3s						
MTSN	**Montesano sull**	**0.75**	**141**	Pg	**Pg**	**21 25 40.4**	**-0.2**
	382nm,0.3s						
PTRP	**Pietrapertosa**	**0.77**	**115**	Pg	**Pg**	**21 25 41.1**	**0.0**
	671nm,2.0s						
PTRP	**Pietrapertosa**	**0.77**	**115**	Pg	**Pg**	**21 25 41.1**	**0.0**
	671nm,2.0s						
MGR	**Morigerati**	**0.78**	**156**	Pg	**Pg**	**21 25 41.1**	**-0.1**
	388nm,0.3s						
MGR	**Morigerati**	**0.78**	**156**	Pg	**Pg**	**21 25 41.1**	**-0.1**
	388nm,0.3s						
SGG	**Gregorio Mates**	**0.79**	**313**	Pg	**Pg**	**21 25 42.0**	**+0.6**
	237nm,0.4s						
SGG	**Gregorio Mates**	**0.79**	**313**	Pg	**Pg**	**21 25 42.0**	**+0.6**
	237nm,0.4s						
BSSO	**Busso**	**0.81**	**329**	Pg	**Pg**	**21 25 42.0**	**+0.2**
	190nm,0.7s						
BSSO	**Busso**	**0.81**	**329**	Pg	**Pg**	**21 25 42.0**	**+0.2**
	190nm,0.7s						
MRVN	**Minervino Murg**	**0.82**	**75**	Pg	**Pg**	**21 25 41.1**	**-1.0**
	201nm,0.5s						
MRVN	**Minervino Murg**	**0.82**	**75**	Pg	**Pg**	**21 25 41.1**	**-1.0**
	201nm,0.5s						
SIRI	**Monte Sirino -**	**0.87**	**140**	Pg	**Pg**	**21 25 42.1**	**-0.8**
	331nm,0.2s						
SIRI	**Monte Sirino -**	**0.87**	**140**	Pg	**Pg**	**21 25 42.1**	**-0.8**
	331nm,0.2s						
RGNG	**Rignano Grg**	**0.89**	**22**	Pg	**Pg**	**21 25 42.7**	**-0.6**
VAGA	**Valle Agricola**	**0.89**	**310**	Pg	**Pg**	**21 25 44.1**	**+0.8**
	439nm,1.0s						
VAGA	**Valle Agricola**	**0.89**	**310**	Pg	**Pg**	**21 25 44.1**	**+0.8**
	439nm,1.0s						
FG2	**Serracapriola**	**0.95**	**1**	Pg	**Pg**	**21 25 43.7**	**-0.8**
	557nm,0.3s						
FG2	**Serracapriola**	**0.95**	**1**	Pg	**Pg**	**21 25 43.7**	**-0.8**
	557nm,0.3s						
SCHR	**S. Chirico Rap**	**0.96**	**132**	Pg	**Pg**	**21 25 43.8**	**-0.9**
	84nm,0.5s						
SCHR	**S. Chirico Rap**	**0.96**	**132**	Pg	**Pg**	**21 25 43.8**	**-0.9**
	84nm,0.5s						
CUC	**Castrocucco**	**1.00**	**149**	Pg	**Pg**	**21 25 45.4**	**0.0**
	325nm,0.6s						
CUC	**Castrocucco**	**1.00**	**149**	*e*Pg	**Pg**	**21 25 45.5**	**+0.1**
CUC	**Castrocucco**	**1.00**	**149**	Pg	**Pg**	**21 25 45.4**	**0.0**
	325nm,0.6s						
MODR	**Mondragone**	**1.00**	**287**	Pg	**Pg**	**21 25 45.3**	**-0.2**
	83nm,0.7s						
MODR	**Mondragone**	**1.00**	**287**	Pg	**Pg**	**21 25 45.3**	**-0.2**
	83nm,0.7s						
SGRT	**San Giovanni R**	**1.01**	**26**	Pg	**Pg**	**21 25 44.1**	**-1.5**
	470nm,0.4s						
SGRT	**San Giovanni R**	**1.01**	**26**	Pg	**Pg**	**21 25 44.1**	**-1.5**
	470nm,0.4s						
MSAG	**Monte S. Angel**	**1.03**	**34**	Pg	**Pg**	**21 25 44.6**	**-1.5**
	646nm,0.3s						
MSAG	**Monte S. Angel**	**1.03**	**34**	Pg	**Pg**	**21 25 44.6**	**-1.5**
	646nm,0.3s						
MIDA	**Miranda**	**1.04**	**320**	Pg	**Pg**	**21 25 46.3**	**+0.2**
MS1	**Monte Sant'Ang**	**1.04**	**35**	*e*Pg	**Pg**	**21 25 45.5**	**-0.7**
MS1				*e*Sg	**Sg**	**21 26 01.4**	**+1.5**
FGMS	**Monte Sant'Ang**	**1.05**	**35**	Pg	**Pg**	**21 25 46.0**	**-0.4**
	177nm,0.3s						
FGMS	**Monte Sant'Ang**	**1.05**	**35**	Pg	**Pg**	**21 25 46.0**	**-0.4**
	177nm,0.3s						
CRAC	**Craco**	**1.10**	**116**	Pg	**Pg**	**21 25 46.6**	**-0.6**
	171nm,0.3s						
CRAC	**Craco**	**1.10**	**116**	Pg	**Pg**	**21 25 46.6**	**-0.6**
	171nm,0.3s						
AMUR	**Altamura**	**1.11**	**87**	Pg	**Pg**	**21 25 47.1**	**-0.4**
	143nm,0.2s						
AMUR	**Altamura**	**1.11**	**87**	Pg	**Pg**	**21 25 47.1**	**-0.4**
	143nm,0.2s						
CERA	**Filignano**	**1.13**	**312**	Pg	**Pg**	**21 25 47.9**	**0.0**
	176nm,0.8s						
CERA	**Filignano**	**1.13**	**312**	Pg	**Pg**	**21 25 47.9**	**0.0**
	176nm,0.8s						
SG1	**Sgolgore (BA)**	**1.16**	**90**	*e*Pg	**Pg**	**21 25 47.6**	**-0.9**
SG1				*e*Sg	**Sg**	**21 26 04.1**	**+0.4**
SDI	**San Donato**	**1.32**	**311**	Pg	**Pg**	**21 25 50.2**	**-1.3**
	20nm,0.3s						
SDI	**San Donato**	**1.32**	**311**	Pg	**Pg**	**21 25 50.2**	**-1.3**
	20nm,0.3s						
PE1	**Pezze di Greco**	**1.73**	**91**	*e*Pg	**Pg**	**21 26 00.1**	**+0.8**
PE1				*e*Sg	**Sg**	**21 26 24.1**	**+2.3**
AQU	**L'Aquila**	**1.99**	**320**	*e*Pn	**Pn**	**21 26 00.7**	**+1.6**
AQU	**L'Aquila**	**1.99**	**320**	*e*Pn	**Pn**	**21 26 00.7**	**+1.7**
TIP	**Timpagrande**	**2.08**	**143**	*e*Pn	**Pn**	**21 26 04.1**	**+3.8**
TIP	**Timpagrande**	**2.08**	**143**	*e*Pn	**Pn**	**21 26 04.1**	**+3.8**

*IDC **06** 21:26:02.7±0.9, 3182N×14195E, h0km, mb3.8/11, mb1 3.9/14, mb1mx3.9/25, mbtmp3.8/14, ML3.8/3, MS4.3/1, Ms1 4.3/1, ms1mx3.6/40, Error ellipse: s-maj=27.2km s-min=18.6km az=48.0*
*JMA **06** 21:26:03.2±0.4, 3185N×14209E, h28km, M3.7*
*ISCJB **06** 21:26:05.3±0.6, 3186N±005×14196E±010, h33km, mb3.9/12, Error ellipse: s-maj=13.2km s-min=5.2km az=152.8*
*NEIC **06** 21:26:08.7±0.9, 3185N×14178E, h35km, MG3.7(JMA), Error ellipse: s-maj=34.0km s-min=16.1km az=61.0*
ISC 06 21:26:03.2±3.2**, 3190N**±007×**14195E**±010**, h2**km±20km**, n26, σ1^{s}19**/31**, mb3.9**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.17**	**304**	P	**Pn**	**21 26 40.7**	**+0.3**
JHJ2				*e*S	**Sn**	**21 27 07.6**	**-0.3**
JHJ	**Hachijo jima 2**	**2.20**	**304**	Pn	**Pn**	**21 26 40.5**	**-0.3**
	42nm,0.3s,baz=248,slow=16,SNR=7.3						
JHJ				Sn	**Sn**	**21 27 04.5**	**-4.1**
	25nm,0.3s,baz=139,slow=20,SNR=3.4						
JHJ				LR	LR	21 27 10.0	
	comp=Z,6μm,19.2s,baz=155,slow=30						
JHU	**Hanno**	**4.53**	**331**	*e*S	**Sn**	**21 28 05.6**	**-0.4**
JYN	**Shimob**	**4.58**	**323**	*e*S	**Sn**	**21 28 07.2**	**-0.1**
CBIJ	**Chichi jima**	**4.79**	**178**	Pn	**Pn**	**21 27 14.2**	**-2.1**
	19nm,0.3s,baz=258,slow=23,SNR=13						
CBIJ				Sn	**Sn**	**21 28 05.3**	**-7.1**
	17nm,0.3s,baz=285,slow=22,SNR=4.4						
CBIJ	**Chichi jima**	**4.79**	**178**	P	**Pn**	**21 27 14.7**	**-1.7**
JRY	**Ryogami san**	**4.83**	**329**	*e*S	**Sn**	**21 28 15.9**	**+2.5**
JHO	**Hitachi**	**4.84**	**347**	P	**Pn**	**21 27 17.4**	**+0.3**
JHO				*e*S	**Sn**	**21 28 11.8**	**-1.9**
JAG	**Ashikaga**	**4.97**	**336**	*e*S	**Sn**	**21 28 15.4**	**-1.5**
JFK	**Kawauchi**	**5.53**	**351**	*e*S	**Sn**	**21 28 26.8**	**-3.9**
MJAR	**Matsushiro Arr**	**5.58**	**327**	Pn	**Pn**	**21 27 27.3**	**+0.2**
	0.9nm,0.3s,baz=151,slow=11,SNR=4.1						
MJAR				Sn	**Sn**	**21 28 34.4**	**+2.5**
	baz=154,slow=20,SNR=3.0						
JMK	**Ichinoseki**	**7.07**	**355**	*e*S	**Sn**	**21 29 04.8**	**-3.7**
SONM	**Songino Array**	**31.27**	**311**	P	**P**	**21 32 25.6**	**+1.3**
	1.2nm,0.5s,mb4.0,baz=120,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**45.82**	**316**	P	**P**	**21 34 26.9**	**+0.6**
	0.8nm,0.5s,mb3.9,baz=139,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**47.37**	**306**	P	**P**	**21 34 38.7**	**+0.1**
	1.3nm,0.7s,mb4.0,baz=85,slow=9.4,SNR=9.6						
KURK	**Kurchatov**	**49.57**	**312**	P	**P**	**21 34 55.7**	**+0.2**
	1.7nm,0.7s,mb4.2,baz=91,slow=8.3,SNR=7.5						
BVAR	**Borovoye Array**	**54.44**	**315**	P	**P**	**21 35 31.9**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=95,slow=6.4,SNR=7.5						
BVAR	**Borovoye Array**	**54.44**	**315**	P	**P**	**21 35 31.9**	**+0.2**
ASAR	**Alice Springs**	**55.78**	**189**	P	**P**	**21 35 41.1**	**-0.6**
	0.2nm,0.5s,mb3.5,baz=3.1,slow=5.4,SNR=4.1						
YKA	**Yellowknife Ar**	**68.05**	**29**	P	**P**	**21 37 02.1**	**-1.7**
	0.1nm,0.3s,mb3.3,baz=292,slow=6.6,SNR=3.9						
NVAR	**Mina Array Bea**	**77.74**	**52**	P	**P**	**21 38 02.9**	**+1.1**
	0.4nm,0.5s,mb3.6,baz=289,slow=5.6,SNR=2.7						
NVAR	**Mina Array Bea**	**77.74**	**52**	P	**P**	**21 38 02.9**	**+1.1**
PDAR	**Pinedale Array**	**80.96**	**45**	P	**P**	**21 38 20.6**	**+1.4**
	0.4nm,0.7s,mb3.4,baz=332,slow=7.2,SNR=2.6						
MLR	**Muntele Rosu**	**83.61**	**320**	P	**P**	**21 38 31.5**	**-1.5**
	4.5nm,0.9s,mb4.6,baz=119,slow=13,SNR=3.7						
GERES	**GERESS Array B**	**87.31**	**329**	P	**P**	**21 38 52.1**	**+0.6**
	0.9nm,0.6s,mb4.2,baz=65,slow=5.1,SNR=5.2						
TXAR	**Lajitas Array**	**92.89**	**53**	P	**P**	**21 39 19.3**	**+1.3**
	0.5nm,0.7s,mb4.1,baz=284,slow=3.6,SNR=4.0						

IDC 06 21:34:40.9±2.0**, 772S**×**12703E, h0**km**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/14**, mbtmp3.5**/3**, ML3.6**/1**, Error ellipse: s-maj=216.1km s-min=38.4km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**17.17**	**158**	P	Pn	21 38 42.2	-0.1
	0.2nm,0.3s,baz=334,slow=11,SNR=12						
ASAR				S	Sn	21 41 48.4	-5.6
	0.1nm,0.3s,baz=328,slow=17,SNR=4.0						
SONM	**Songino Array**	**58.25**	**344**	P	P	21 44 37.2	+0.1
	0.2nm,0.5s,baz=163,slow=5.4,SNR=3.0						
MKAR	**Makanchi Array**	**67.25**	**328**	P	P	21 45 37.3	+0.2
	0.2nm,0.4s,baz=119,slow=8.2,SNR=10.0						

*TAP **06** 21:40:43.9, 2489N×12222E, h115km, ML3.4, C*
*JMA **06** 21:40:43.8±0.3, 2502N×12227E, h110km, M2.2*
*ISCJB **06** 21:40:44.3±0.7, 2485N±004×12225E±003, h111km±5km, Error ellipse: s-maj=7.2km s-min=3.6km az=168.2*
ISC 06 21:40:44.8±0.7**, 2487N**±004×**12225E**±003**, h109**km±5km**, n37, σ0^{s}56**/66**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.28**	**301**	P	**Pn**	**21 41 00.3**	**0.0**
	baz=291						
TWB1				*e*S	**Sn**	**21 41 11.9**	**-0.1**
	baz=291						
TWC	**Suao**	**0.45**	**235**	*i* P	**Pn**	**21 41 01.1**	**-0.2**
	baz=234						
TWC				S	**Sn**	**21 41 13.2**	**-0.4**
	baz=234						
NWF	**Wu-fen Shan**	**0.47**	**296**	P	**Pn**	**21 41 01.3**	**-0.1**
	baz=287						
NWF				S	**Sn**	**21 41 14.1**	**+0.2**
	baz=287						
TWE	**Neicheng**	**0.55**	**255**	*i* P	**Pn**	**21 41 01.8**	**-0.1**
	baz=254						
TWE				S	**Sn**	**21 41 14.7**	**-0.1**
	baz=254						
TWA	**Mucha**	**0.62**	**281**	*i* P	**Pn**	**21 41 02.1**	**-0.3**
	baz=272						
TWA				*e*S	**Sn**	**21 41 14.9**	**-0.7**
	baz=272						
ENA	**Nanau**	**0.64**	**227**	*i* P	**Pn**	**21 41 02.8**	**+0.2**
	baz=215						
ENA				S	**Sn**	**21 41 16.5**	**+0.6**
	baz=215						
ENTT	**Nioudou**	**0.66**	**250**	*i* P	**Pn**	**21 41 02.8**	**+0.1**
	baz=246						
ENTT				S	**Sn**	**21 41 17.6**	**+1.4**
	baz=246						
TWY	**Chenhua**	**0.72**	**305**	*e*P	**Pn**	**21 41 02.8**	**-0.4**
	baz=297						
TWS1	**Kuangyinshan**	**0.79**	**287**	P	**Pn**	**21 41 03.8**	**-0.1**
	baz=287						
YOJ	**Yonaguni jima**	**0.80**	**120**	P	**Pn**	**21 41 03.7**	**-0.2**
YOJ				*e*S	**Sn**	**21 41 19.3**	**+0.9**
NSK	**Sanguang**	**0.83**	**257**	*i* P	**Pn**	**21 41 04.2**	**0.0**
	baz=254						

NSK				i S	Sn	21 41 18.6	-0.3
	baz=254						
NNS	**Nan Shan**	**0.91**	**242**	i P	**Pn**	**21 41 05.4**	**+0.5**
	baz=239						
NNS				i S	**Sn**	**21 41 20.6**	**+0.4**
	baz=239						
TWD	**Chiawan**	**0.98**	**217**	P	**Pn**	**21 41 05.5**	**-0.3**
	baz=210						
TWD				eS	**Sn**	**21 41 21.3**	**-0.3**
	baz=210						
WHF	**Hehuan Shan**	**1.15**	**232**	P	**Pn**	**21 41 08.1**	**+0.6**
	baz=233						
WHF				S	**Sn**	**21 41 25.1**	**+0.4**
	baz=233						
TWT	**Tachien**	**1.15**	**238**	i P	**Pn**	**21 41 08.4**	**+0.8**
	baz=235						
TWT				S	**Sn**	**21 41 25.4**	**+0.6**
	baz=235						
NSTT	**Nanjuang**	**1.16**	**259**	i P	**Pn**	**21 41 07.3**	**-0.3**
	baz=249						
NSTT				S	**Sn**	**21 41 24.0**	**-0.9**
	baz=249						
ESL	**Shilin**	**1.29**	**216**	eP	**Pn**	**21 41 07.8**	**-1.2**
	baz=218						
ESL				eS	**Sn**	**21 41 25.6**	**-1.9**
	baz=218						
TWQ1	**Liyutan**	**1.44**	**249**	P	**Pn**	**21 41 10.4**	**-0.4**
	baz=247						
IRIF	**Iriomote-Funau**	**1.45**	**111**	P	**Pn**	**21 41 10.3**	**-0.6**
IRIF				S	**Sn**	**21 41 30.6**	**-0.1**
SMLT	**Sun Moon Lake**	**1.57**	**232**	P	**Pn**	**21 41 12.9**	**+0.5**
	baz=234						
SMLT				eS	**Sn**	**21 41 33.9**	**+0.4**
	baz=234						
TYC	**Yuchr**	**1.59**	**233**	i P	**Pn**	**21 41 12.9**	**+0.2**
	baz=239						
TYC				S	**Sn**	**21 41 34.2**	**+0.3**
	baz=239						
EHY	**Hungye**	**1.60**	**212**	eP	**Pn**	**21 41 13.2**	**+0.4**
	baz=209						
HATJ	**Hateruma jima**	**1.63**	**119**	P	**Pn**	**21 41 13.5**	**+0.4**
HATJ				S	**Sn**	**21 41 35.8**	**+1.1**
JKRS	**Kuro-shima**	**1.72**	**111**	P	**Pn**	**21 41 14.3**	**+0.1**
JKRS				S	**Sn**	**21 41 36.6**	**0.0**
WNT	**Mingjian**	**1.74**	**236**	eP	**Pn**	**21 41 14.6**	**+0.2**
	baz=241						
TWF1	**Yuli**	**1.74**	**210**	eP	**Pn**	**21 41 14.9**	**+0.4**
	baz=213						
JIJ	**Ishigaki jima**	**1.79**	**106**	P	**Pn**	**21 41 14.7**	**-0.4**
JIJ				S	**Sn**	**21 41 37.3**	**-0.9**
CHN5	**Tsauling**	**1.91**	**229**	P	**Pn**	**21 41 17.0**	**+0.4**
	baz=225						
CHN5				eS	**Sn**	**21 41 41.4**	**+0.4**
	baz=225						
CHKT	**Chengkung**	**1.94**	**205**	eP	**Pn**	**21 41 17.1**	**+0.1**
	baz=194						
CHKT				eS	**Sn**	**21 41 39.5**	**-2.0**
	baz=194						
ELDTW	**Lidau**	**2.02**	**214**	P	**Pn**	**21 41 17.6**	**-0.3**
	baz=205						
ELDTW				eS	**Sn**	**21 41 43.5**	**+0.2**
	baz=205						
CHN4	**Tsaushan**	**2.14**	**225**	eP	**Pn**	**21 41 19.8**	**+0.3**
	baz=221						
CHN4				eS	**Sn**	**21 41 46.0**	**-0.1**
	baz=221						
WTP	**Ta-pu**	**2.20**	**223**	eP	**Pn**	**21 41 20.2**	**-0.1**
	baz=229						
JTJ	**Tarama**	**2.24**	**95**	P	**Pn**	**21 41 21.1**	**+0.3**
JTJ				S	**Sn**	**21 41 48.2**	**-0.2**
TWK	**Hsinying**	**2.27**	**226**	eP	**Pn**	**21 41 21.0**	**-0.1**
	baz=222						
CHN1	**Nanshi**	**2.30**	**224**	eP	**Pn**	**21 41 21.9**	**+0.3**
	baz=218						
CHN1				eS	**Sn**	**21 41 49.9**	**+0.1**
	baz=218						
SGST	**Jiashian**	**2.34**	**221**	eP	**Pn**	**21 41 21.9**	**-0.2**
	baz=225						
SGST				eS	**Sn**	**21 41 50.7**	**-0.1**
	baz=225						
SSD	**Sandimen**	**2.58**	**215**	eP	**Pn**	**21 41 25.8**	**+0.6**
	baz=210						
SSD				eS	**Sn**	**21 41 56.1**	**-0.2**
	baz=210						

*MOS **06** 21:43:44.8±0.9, 12.30N×125.42E, h33km, mb5.6/58, MS5.5/48, Error ellipse: s-maj=9.6km s-min=4.3km az=119.6*

*IDC **06** 21:43:45.3±1.8, 12.22N×125.26E, h25km±10km, mb5.0/28, mb1 5.0/31, mb1mx5.0/33, mbtmp5.0/31, ML4.8/3, MS5.3/24, Ms1 5.4/24, ms1mx5.3/28, Error ellipse: s-maj=14.7km s-min=7.8km az=90.0*

*BJI **06** 21:43:45.5, 12.21N×125.56E, h54km, mB5.7, mb5.2, Ms5.8, Msz5.6*

*ISCJB **06** 21:43:45.7±0.1, 12.42N±0.01×125.55E±0.02, h39km, mb5.4/155, MS5.5/237, Error ellipse: s-maj=3.2km s-min=2.1km az=2.3*

*MAN **06** 21:43:46, 12.42N×125.55E, h61km, mb5.8, ML4.9, MS5.4*

MAN INTENSITY IV - BORONGAN, CATUBIG, SAMAR; INTENSITY III - PALO, TACLOBAN, LEYTE, CATARMAN, N.SAMAR; INTENSITY II - LIGNON HILL, ALBAY, BULUSAN, SORSOGON.

*NEIC **06** 21:43:47.0±0.1, 12.26N×125.39E, mb5.4/80, MS5.6/183, MW5.8, Error ellipse: s-maj=4.8km s-min=3.1km az=72.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}4.25; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-5.14; $M_{r\theta}$0.29; $M_{\theta\phi}$1.54; $M_{\phi r}$3.86; Best double couple: $M_0$6.30000×10^{17} NP1: ϕ_s150.00000°, δ28.00000°, λ63.00000°. NP2: ϕ_s360.00000°, δ65.00000°, λ104.00000°. Principal axes: T 5.7700, Plg67.0000°, Azm295.0000°; N 0.9900, Plg12.0000°, Azm173.0000°; P -6.7600, Plg18.0000°, Azm79.0000°;*

NEIC Felt [IV PIVS] at Borongan and Catubig; [III PIVS] at Catarman. Also felt [III PIVS] at Palo and Tacloban, Leyte. Felt [II PIVS] at Bulusan, Luzon. Felt at Legaspi, Luzon.

*GCMT **06** 21:43:47.0±0.1, 12.42N×125.60E, h20km, MW5.9/102, Moment Tensor Solution. s101,c226; s102,c300; Duration: 2.2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.52±.01; $M_{\theta\theta}$0.02±.01; $M_{\phi\phi}$-0.53±.01; $M_{r\theta}$-0.04±.01; $M_{\theta\phi}$0.16±.00; $M_{\phi r}$0.69±.02; Best double couple: $M_0$0.88500×10^{18} NP1: ϕ_s153.00000°, δ20.00000°, λ70.00000°. NP2: ϕ_s355.00000°, δ71.00000°, λ97.00000°. Principal axes: T 0.8640, Plg63.0000°, Azm276.0000°; N 0.0420, Plg7.0000°, Azm172.0000°; P -0.9060, Plg26.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*DJA **06** 21:43:56, 12.48N×125.29E, h118km, Mw5.7/21*

ISC 06 21:43:47.6±0.1, **12.37N**±0.02×**125.52E**±0.02, **h41**km, **h41**km±1.7km**:pP-P, n643,** σ1.11/513, **mb5.4**/155, **MS5.5**/237, **66C-42D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.77**	**186**	eP	**Pn**	**21 44 02.5**	**+0.5**
CNP	**Catarman**	**0.85**	**279**	eP	**Pn**	**21 44 01.3**	**-1.8**
PLP	**Palo**	**1.31**	**204**	⇓ iP	**Pn**	**21 44 07.8**	**-1.6**
PLP				i S	**Sn**	**21 44 25.5**	**-0.3**
OCLP	**Ormoc**	**1.59**	**214**	eP	**Pn**	**21 44 13.6**	**+0.3**
PVCP	**Virac**	**1.80**	**313**	⇓ iP	**Pn**	**21 44 15.5**	**-0.6**
PVCP				i S	**Sn**	**21 44 43.6**	**+5.8**
MMPH	**Masbate**	**1.85**	**270**	⇑ eP	**Pn**	**21 44 18.4**	**+1.6**
MMPH				i S	**Sn**	**21 44 44.8**	**+5.8**
MSLP	**Maasin**	**2.32**	**196**	eP	**Pn**	**21 44 24.9**	**+1.6**
LLP	**Lapu-Lapu**	**2.55**	**217**	⇑ eP	**Pn**	**21 44 25.8**	**-0.7**
LLP				eS	**Sn**	**21 45 01.4**	**+5.1**
SCPH	**Surigao**	**2.58**	**181**	⇑ eP	**Pn**	**21 44 24.7**	**-2.1**
RCP	**Roxas**	**2.83**	**254**	⇑ eP	**Pn**	**21 44 31.1**	**+0.7**
RCP				eS	**Sn**	**21 45 06.8**	**+3.6**
AUQP	**San Andres**	**2.93**	**289**	eP	**Pn**	**21 44 34.1**	**+2.4**
AUQP				eS	**Sn**	**21 45 16.8**	**+11**
TBP	**Tagbilaran**	**3.12**	**212**	eP	**Pn**	**21 44 34.2**	**-0.1**
TBP				eS	**Sn**	**21 45 13.3**	**+2.9**
KALP	**Kalibo**	**3.19**	**258**	⇑ eP	**Pn**	**21 44 37.1**	**+1.9**
GUIM	**Jordan**	**3.36**	**239**	eP	**Pn**	**21 44 38.0**	**+0.5**
GUIM				eS	**Sn**	**21 45 19.7**	**+3.5**
GQP	**Guinayangan**	**3.36**	**297**	⇓ eP	**Pn**	**21 44 37.1**	**-0.5**
BUTP	**Butuan**	**3.38**	**178**	eP	**Pn**	**21 44 38.8**	**+0.9**
OTRP	**Odiongan**	**3.42**	**270**	eP	**Pn**	**21 44 38.2**	**-0.2**
SNPH	**Sibulan**	**3.75**	**217**	eP	**Pn**	**21 44 45.0**	**+2.0**
POLP	**Polilio Island**	**4.20**	**304**	eP	**Pn**	**21 44 51.6**	**+2.5**
SJMP	**San Jose**	**4.30**	**272**	eP	**Pn**	**21 44 52.5**	**+2.0**
DCPH	**Dipolog City**	**4.33**	**210**	eP	**Pn**	**21 44 50.5**	**-0.4**
DCPH				eS	**Sn**	**21 45 44.4**	**+4.2**
BUKP	**Musuan**	**4.49**	**186**	eP	**Pn**	**21 44 54.6**	**+1.5**
PGP	**Puerto Galera**	**4.59**	**285**	⇓ eP	**Pn**	**21 44 55.9**	**+1.3**
CUYO	**Cuyo Island**	**4.66**	**252**	eP	**Pn**	**21 44 57.0**	**+1.5**
TGY	**Tagaytay City**	**4.78**	**292**	⇑ eP	**Pn**	**21 45 06.2**	**+9.1**
PAGZ	**Pagadian**	**4.96**	**205**	eP	**Pn**	**21 45 01.8**	**+2.1**
BALP	**Baler**	**5.08**	**312**	eP	**Pn**	**21 45 02.2**	**+0.9**
BALP				eS	**Sn**	**21 45 58.4**	**-0.4**
BUSP	**Coron**	**5.22**	**267**	eP	**Pn**	**21 45 03.8**	**+0.7**
DMPH	**Davao City--Mi**	**5.26**	**180**	⇓ iP	**Pn**	**21 45 07.5**	**+3.8**
DAV	**Davao City (W)**	**5.27**	**179**	Pn	**Pn**	**21 45 06.7**	**+2.8**
	125nm,0.3s,baz=61,slow=4.1,SNR=4.0						
DAV				Sn	**Sn**	**21 46 06.9**	**+3.5**
	44nm,0.3s,baz=96,slow=19,SNR=4.3						
DAV				LR	LR	21 47 23.3	
	comp=Z,81µm,19.2s,baz=271,slow=42						
DAV	**Davao City (W)**	**5.27**	**179**	P	**Pn**	**21 45 07.5**	**+3.7**
DAV	**Davao City (W)**	**5.27**	**179**	Pn	**Pn**	**21 45 02.5**	**-1.4**
DAV				Sn	**Sn**	**21 46 06.9**	**+3.5**
DAV				LR	LR	21 47 23.3	
LUBP	**Lubang**	**5.31**	**285**	eP	**Pn**	**21 45 06.6**	**+2.2**
PCPH	**Palayan**	**5.34**	**307**	⇑ iP	**Pn**	**21 45 02.5**	**-2.2**
PCPH				i S	**Sn**	**21 46 00.0**	**-5.0**
KCP	**Kidapawan**	**5.35**	**185**	⇓ eP	**Pn**	**21 45 13.1**	**+8.1**
KCP				i S	Sn	21 46 25.7	+20
IPIL	**Ipil**	**5.40**	**213**	⇓ iP	**Pn**	**21 45 08.8**	**+3.1**
IPIL				i S	**Sn**	**21 46 08.9**	**+2.2**
MATI	**Mati**	**5.44**	**172**	eP	**Pn**	**21 45 10.2**	**+4.0**
PALP	**Palanan**	**5.54**	**328**	⇓ iP	**Pn**	**21 45 06.7**	**-0.9**
PALP				i S	**Sn**	**21 46 11.2**	**+1.1**
CAUP	**Cauayan**	**5.78**	**322**	eP	**Pn**	**21 45 10.6**	**-0.3**
ENPP	**El Nido**	**6.08**	**260**	eP	**Pn**	**21 45 15.8**	**+0.8**
GSPH	**General Santos**	**6.27**	**185**	⇑ iP	**Pn**	**21 45 19.4**	**+1.8**
BOLP	**Bolinao**	**6.74**	**307**	eP	**Pn**	**21 45 25.3**	**+1.3**
ABRA	**Dolores**	**7.00**	**319**	eP	**Pn**	**21 45 30.2**	**+2.6**
PPR	**Puerto Princes**	**7.15**	**250**	⇑ eP	**Pn**	**21 45 35.0**	**+5.4**
BATP	**Bataraza**	**8.38**	**246**	eP	**Pn**	**21 45 50.4**	**+3.9**
MYLDM	**Lahad Datu**	**9.96**	**225**	⇓ P	**Pn**	**21 46 12.7**	**+4.5**
KDM	**Kudat**	**10.13**	**238**	⇑ P	**Pn**	**21 46 16.7**	**+6.1**
SDKM	**Sandakan**	**10.60**	**232**	⇑ P	**Pn**	**21 46 21.7**	**+4.8**
TSM	**Tawau**	**11.03**	**224**	⇓ P	**Pn**	**21 46 27.1**	**+4.3**
KKM	**Kota Kinabalu**	**11.13**	**236**	ePn	**Pn**	**21 46 21.0**	**-3.2**
	271nm,1.1s						
KKM	**Kota Kinabalu**	**11.13**	**236**	⇓ P	**Pn**	**21 46 28.7**	**+4.5**
TWG	**Pinlang**	**11.22**	**338**	ePn	**Pn**	**21 46 25.4**	**0.0**
	182nm,1.1s						
YULB	**Yu-li**	**11.67**	**340**	ePn	**Pn**	**21 46 31.1**	**-0.5**
	144nm,1.2s						
YULB				eSn	**Sn**	**21 48 39.5**	**-1.1**
TPUB	**Ta-pu**	**11.82**	**338**	ePn	**Pn**	**21 46 34.9**	**+1.3**
	181nm,0.9s						
SSLB	**Suanglung**	**12.15**	**340**	ePn	**Pn**	**21 46 40.7**	**+2.5**
	78nm,0.7s						
SSLB				Sn	**Sn**	**21 48 50.2**	**-2.2**
NACB	**Ninganchiao**	**12.31**	**343**	ePn	**Pn**	**21 46 40.1**	**-0.2**
	68nm,0.9s						
NACB				Sn	**Sn**	**21 48 52.8**	**-3.5**
YHNB	**Yeheng**	**12.84**	**343**	ePn	**Pn**	**21 46 48.5**	**+0.8**
	263nm,1.4s						
YHNB				Sn	**Sn**	**21 49 05.3**	**-4.0**
QZH	**Quanzhou**	**14.12**	**333**	⇑ iP	**Pn**	**21 47 07.2**	**+2.2**
QZH				S	**Sn**	**21 49 50.1**	**+10**
QZH				LR	LR		
	comp=N,10µm,14.2s						
QZH				LR	LR		
	comp=E,22µm,14.4s						
QZH				LR	LR		
	comp=Z,25µm,16.5s						
JOW	**Kunigami**	**14.62**	**10**	Pn	**Pn**	**21 47 11.8**	**+0.1**
	comp=Z,4.5nm,0.3s,baz=193,slow=10,SNR=79						
JOW				Sn	**Sn**	**21 50 02.4**	**+10**
	comp=Z,1.2nm,0.3s,baz=167,slow=24,SNR=2.6						
JOW				LR	LR	21 51 27.8	
	comp=Z,12µm,20.1s,baz=191,slow=31						
BTM	**Bintulu**	**15.32**	**234**	⇓ P	**Pn**	**21 47 24.6**	**+3.6**
GZH	**Guangzhou**	**15.74**	**314**	P	**Pn**	**21 47 29.0**	**+2.6**
GZH				S	**S**	**21 50 29.7**	**-3.5**
GZH				LR	LR		
	comp=N,38µm,18.4s						
GZH				LR	LR		
	comp=E,26µm,17.1s						
GZH				LR	LR		
	comp=Z,29µm,15.2s						
SBUM	**Sibu**	**16.45**	**234**	⇓ P	**Pn**	**21 47 37.6**	**+1.9**
QIZ	**Qiongzhong**	**16.47**	**296**	P	**Pn**	**21 47 34.9**	**-0.9**
QIZ				XP	sP	21 47 49.7	-3.5
QIZ				S	**S**	**21 50 36.5**	**-12**
QIZ				AMB	AMB		
	comp=Z,6µm,12.6s						
QIZ				LR	LR		
	comp=E,24µm,18.8s						
QIZ				LR	LR		
	comp=Z,39µm,18.8s						
QIZ	**Qiongzhong**	**16.47**	**296**	ePn	**Pn**	**21 47 34.1**	**-1.7**
	comp=Z,89nm,1.0s						
KAPI	**Kappang**	**18.20**	**199**	Pn	**Pn**	**21 47 58.1**	**+0.8**
	comp=Z,1µm,1.1s,SNR=18						
KAPI	**Kappang**	**18.20**	**199**	⇑ P	**Pn**	**21 47 57.9**	**+0.7**
	SNR=70						
KAPI	**Kappang**	**18.20**	**199**	P	**Pn**	**21 47 55.7**	**-1.6**
	comp=Z,2.5nm,0.3s,baz=22,slow=6.9,SNR=20						
KAPI				S	**S**	**21 51 14.4**	**-9.1**
	comp=Z,0.6nm,0.3s,baz=187,slow=23,SNR=1.6						
KAPI	**Kappang**	**18.20**	**199**	eP	**Pn**	**21 47 57.7**	**+0.4**
	comp=Z,248nm,1.0s						
KAPI				Sn	**Sn**	**21 51 11.5**	**-8.1**
KSM	**Kuching**	**18.56**	**235**	eP	**Pn**	**21 48 01.4**	**-0.3**
	comp=Z,149nm,1.0s						
KSM	**Kuching**	**18.56**	**235**	⇓ P	**Pn**	**21 48 02.6**	**+0.9**
GUMO	**Guam**	**18.89**	**84**	P	**Pn**	**21 48 07.4**	**+1.7**
	comp=Z,8.3nm,0.3s,baz=177,slow=15,SNR=5.2						
GUMO				LR	LR	21 53 48.4	
	comp=Z,12µm,20.3s,baz=267,slow=32						
GUMO	**Guam**	**18.89**	**84**	eP	**Pn**	**21 48 06.8**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,381nm,1.1s						
GUMO	**Guam**	**18.89**	**84**	eP	**Pn**	**21 48 06.8**	**+1.1**
	comp=Z,381nm,1.1s						
SSE	**Sheshan**	**19.06**	**349**	P	**Pn**	**21 48 07.7**	**+0.2**
SSE				S	**S**	**21 51 39.2**	**-1.4**
SSE				AMB	AMB		
	comp=Z,60nm,0.7s						
SSE				AMB	AMB		
	comp=Z,3µm,7.5s						
SSE				LR	LR		
	comp=N,3µm,16.1s						
SSE				LR	LR		
	comp=E,12µm,15.9s						
SSE				LR	LR		
	comp=Z,10µm,17.5s						
UBT	**Ubonrachathani**	**20.11**	**281**	⇓ P	**P**	**21 48 18.4**	**+0.3**
NJ2	**Nanjing**	**20.52**	**344**	eP	**P**	**21 48 23.2**	**+0.8**
NJ2				AP		21 48 36.7	
NJ2				XP	sP	21 48 44.4	+6.7
NJ2				PP		21 48 46.6	
NJ2				S	**S**	**21 52 02.0**	**-7.9**
NJ2				XS	sS	21 52 24.5	-1.6
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,3µm,6.7s						
NJ2				LR	LR		
	comp=N,3µm,16.0s,MS5.2						
NJ2				LR	LR		
	comp=E,7µm,15.4s,MS5.2						
NJ2				LR	LR		
	comp=Z,7µm,16.1s,MS5.1						
WHN	**Wuhan**	**20.83**	**332**	⇑ P	**P**	**21 48 27.2**	**+1.5**
WHN				AP		21 48 40.7	
WHN				S	**S**	**21 52 18.4**	**+2.4**
WHN				AMB	AMB		
	comp=Z,130nm,1.2s						
WHN				AMB	AMB		
	comp=Z,4µm,6.8s						
WHN				LR	LR		
	comp=N,25µm,16.9s,MS5.8						
WHN				LR	LR		
	comp=E,26µm,17.0s,MS5.8						
WHN				LR	LR		
	comp=Z,27µm,16.0s,MS5.7						
CBIJ	**Chichi jima**	**21.42**	**44**	P	**P**	**21 48 35.1**	**+3.0**
	comp=Z,201nm,1.1s,mb5.4,baz=245,slow=9.2,SNR=3.9						
CBIJ				LR	LR	21 55 10.3	
	comp=Z,8µm,20.6s,MS5.1,baz=219,slow=32						
KKTK	**Khon Kaen**	**22.33**	**283**	⇑ P	**P**	**21 48 40.0**	**-2.0**
	comp=Z,3µm,0.4s						
BATI	**Baumata**	**22.51**	**185**	P	**P**	**21 48 42.4**	**-1.4**
	comp=Z,266nm,0.5s,mb5.9,baz=331,slow=0.1,SNR=53						
BATI				S	**S**	**21 52 47.0**	**-1.7**
	comp=Z,13nm,0.4s,baz=286,slow=23,SNR=6.2						
BATI				ScP	ScP	21 56 11.4	-0.1
	comp=Z,16nm,0.3s,baz=126,slow=3.3,SNR=5.5						
BATI				LR	LR	21 59 54.4	
	comp=Z,6µm,18.0s,MS5.1,baz=196,slow=43						
GYA	**Guiyang**	**22.60**	**311**	⇑ iP	**P**	**21 48 45.3**	**+0.6**
GYA				AP		21 48 57.5	
GYA				XP	sP	21 49 04.8	+4.7
GYA				PP		21 49 14.7	
GYA				PPP		21 49 25.3	
GYA				PCP	PcP	21 52 37.6	+0.6
GYA				S	**S**	**21 52 42.8**	**-7.3**
GYA				XS	sS	21 53 07.3	+0.2
GYA				SS		21 53 31.4	
GYA				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,2µm,11.4s						
GYA				LR	LR		
	comp=N,23µm,19.4s,MS5.7						
GYA				LR	LR		
	comp=E,21µm,21.2s,MS5.7						
GYA				LR	LR		
	comp=Z,25µm,18.0s,MS5.7						
KTGM	**Kuala Trenggan**	**23.19**	**254**	⇓ P	**P**	**21 48 50.6**	**-0.4**
KGM	**Kluang**	**24.28**	**247**	⇑ P	**P**	**21 49 01.4**	**+0.1**
JHJ	**Hachijo jima 2**	**24.43**	**30**	LR	LR	21 56 51.3	
	comp=Z,7µm,20.8s,MS5.1,baz=18,slow=32						
NST	**Nakhon Sawan**	**24.84**	**281**	P	**P**	**21 49 06.0**	**-0.4**
TIA	**Tai'an**	**24.91**	**344**	eP	**P**	**21 49 06.2**	**-0.6**
TIA				S	**S**	**21 53 21.0**	**-6.4**
TIA				AMB	AMB		
	comp=Z,52nm,1.0s,mb5.0						
TIA				AMB	AMB		
	comp=Z,403nm,5.0s						
TIA				LR	LR		
	comp=E,4µm,11.0s						
KMI	**Kunming**	**24.97**	**304**	P	**P**	**21 49 08.3**	**+0.8**
KMI				AP		21 49 23.2	
KMI				XP	sP	21 49 29.9	+6.4
KMI				PP		21 49 48.2	
KMI				PPP		21 49 59.1	
KMI				S	**S**	**21 53 27.1**	**-1.5**
KMI				XS	sS	21 53 51.8	+4.7
KMI				SS		21 54 28.0	
KMI				AMB	AMB		
	comp=Z,72nm,1.1s,mb5.1						
KMI				AMB	AMB		
	comp=Z,2µm,8.8s						
KMI				LR	LR		
	comp=N,9µm,16.9s,MS5.8						
KMI				LR	LR		
	comp=E,22µm,16.9s,MS5.8						
KMI				LR	LR		
	comp=Z,26µm,15.1s,MS5.8						
INCN	**Inchon**	**25.02**	**2**	PFAKE		21 49 20.0	+12
INCN				LR	LR		
	comp=Z,6µm,19.0s,MS5.1						
KSRS	**Korea Array**	**25.07**	**5**	P	**P**	**21 49 08.6**	**+0.4**
	comp=Z,27nm,1.0s,mb4.8,baz=181,slow=10,SNR=35						
KSRS				LR	LR	21 58 53.8	
	comp=Z,5µm,19.7s,MS5.0,baz=67,slow=36						
NNT	**Nongplab**	**25.18**	**273**	P	**P**	**21 49 08.0**	**-1.4**
FRIM	**Kepong**	**25.33**	**251**	⇑ P	**P**	**21 49 10.9**	**+0.1**
IPM	**Ipoh**	**25.45**	**254**	⇑ P	**P**	**21 49 11.6**	**-0.3**
CHRT	**Chiangrai**	**25.80**	**290**	⇑ P	**P**	**21 49 14.0**	**-1.0**
	comp=Z,263nm,0.9s,mb5.8						
KAKA	**Kakadu**	**25.85**	**164**	⇓ iP	x	21 48 54.9	
	comp=Z,88nm,0.6s						
KAKA				ePCP	x	21 52 26.3	
KAKA				eS	x	21 53 25.7	
BDT	**Bhumibol Dam**	**26.08**	**284**	P	**P**	**21 49 17.0**	**-0.6**
CM31	**Chiang Mai Arr**	**26.31**	**287**	eP	**P**	**21 49 18.8**	**-0.9**
	comp=Z,78nm,1.0s,mb5.2						
CM31				LR	LR		
	comp=Z,13µm,19.0s,MS5.5						
CMAR	**Chiang Mai Arr**	**26.31**	**287**	P	**P**	**21 49 18.6**	**-1.0**
	comp=Z,76nm,0.9s,mb5.2,baz=95,slow=7.4,SNR=227						
CMAR				PcP	PcP	21 52 45.9	+0.6
	comp=Z,13nm,0.9s,baz=71,slow=1.1,SNR=8.3						
CMAR				ScP	ScP	21 56 23.5	+1.5
	comp=Z,1.4nm,0.7s,baz=134,slow=2.6,SNR=6.4						
CMAR				PKiKP	PKiKP	22 00 23.9	-0.6
	comp=Z,1.6nm,0.9s,baz=280,slow=1.0,SNR=7.4						
CMAR				LR	LR	22 00 50.8	
	comp=Z,15µm,18.1s,MS5.6,baz=91,slow=39						
CMAR	**Chiang Mai Arr**	**26.31**	**287**	P	**P**	**21 49 18.7**	**-0.9**
CMAR						21 52 45.9	
CMAR	**Chiang Mai Arr**	**26.31**	**287**	P	**P**	**21 49 18.6**	**-1.0**
CMAR				PcP	PcP	21 52 45.9	+0.6
CMAR				ScP	ScP	21 56 23.5	+1.5
XAN	**Xi'an**	**26.34**	**328**	P	**P**	**21 49 19.2**	**-0.6**
XAN				XP	sP	21 49 41.3	+5.5
XAN				PPP		21 50 32.3	
XAN				AMB	AMB		
	comp=Z,32nm,1.2s,mb4.7						
XAN				AMB	AMB		
	comp=Z,2µm,12.7s						
XAN				LR	LR		
	comp=N,4µm,14.3s,MS5.4						
XAN				LR	LR		
	comp=E,6µm,14.3s,MS5.4						
XAN				LR	LR		
	comp=Z,13µm,14.9s,MS5.6						
CHTO	**Chiang Mai**	**26.37**	**287**	⇓ P	**P**	**21 49 16.3**	**-3.8**
	SNR=15						
CHTO	**Chiang Mai**	**26.37**	**287**	eP	**P**	**21 49 19.2**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.9						
CHTO				MLR	MLR		
	comp=Z,9µm,19.0s,MS5.3						
CHTO	**Chiang Mai**	**26.37**	**287**	eP	**P**	**21 49 19.2**	**-1.0**
	comp=Z,31nm,0.8s,mb4.9						
CHTO				ScP	ScP	21 56 25.0	+2.8
CHTO				LR	LR		
	comp=Z,9µm,19.0s,MS5.3						
MAJO	**Matsushiro**	**26.64**	**23**	PFAKE		21 49 40.0	+18
MAJO				LR	LR		
	comp=Z,9µm,20.0s,MS5.3						
MAT	**Matsushiro**	**26.64**	**23**	P	**P**	**21 49 25.0**	**+2.6**
MAT				S	**S**	**21 53 50.0**	**-4.7**
MJAR	**Matsushiro Arr**	**26.64**	**23**	P	**P**	**21 49 25.4**	**+3.0**
	comp=Z,8.4nm,1.0s,mb4.2,baz=199,slow=8.9,SNR=8.2						
MJAR				PcP	PcP	21 52 47.6	+1.9
	comp=Z,2.5nm,0.7s,baz=184,slow=2.4,SNR=4.5						
MJAR				ScP	ScP	21 56 23.3	+0.7
	comp=Z,1.4nm,0.8s,baz=180,slow=3.1,SNR=3.6						
MJAR				LR	LR	21 58 25.4	
	comp=Z,9µm,20.8s,MS5.3,baz=220,slow=33						
MJAR	**Matsushiro Arr**	**26.64**	**23**	P	**P**	**21 49 25.4**	**+3.0**
MJAR						21 52 47.6	
DL2	**Dalian**	**26.65**	**353**	P	**P**	**21 49 26.5**	**+4.0**
DL2				S	**S**	**21 54 00.5**	**+5.7**
DL2				XS	sS	21 54 16.4	+3.0
DL2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.1						
DL2				AMB	AMB		
	comp=Z,670nm,6.3s						
DL2				LR	LR		
	comp=N,2µm,16.7s						
DL2				LR	LR		
	comp=Z,3µm,14.7s,MS4.9						
CD2	**Chengdu**	**27.28**	**316**	⇑ P	**P**	**21 49 27.8**	**-0.5**
CD2				AP	pP	21 49 42.4	+3.0
CD2				XP	sP	21 49 49.7	+5.4
CD2				PP		21 50 17.1	
CD2				PCP	PcP	21 52 47.0	-0.3
CD2				S	**S**	**21 54 02.8**	**-2.2**
CD2				XS	sS	21 54 25.3	+1.7
CD2				SS		21 55 20.1	
CD2				PCS	PcS	21 56 26.2	-2.9
CD2				AMB	AMB		
	comp=Z,100nm,1.1s,mb5.3						
CD2				AMB	AMB		
	comp=Z,5µm,12.0s						

CD2 LR LR
comp=N,32μm,21.1s,MS6.0
CD2 LR LR
comp=E,34μm,20.1s,MS6.0
CD2 LR LR
comp=Z,15μm,16.1s,MS5.7
BJT Baijiatuau 28.75 345 *e*P **P 21 49 41.3 +0.1**
BJT pmax pmax
comp=Z,60nm,1.0s
BJT MLR MLR
comp=Z,5μm,20.0s
BJT Baijiatuau 28.75 345 *e*P **P 21 49 41.3 0.0**
comp=Z,60nm,1.0s,mb5.3
BJT LR LR
comp=Z,5μm,20.0s,MS5.1
BJI Beijing 28.77 345 P **P 21 49 41.1 -0.3**
BJI S **S 21 54 31.1 +3.0**
BJI AMB AMB
comp=Z,25nm,1.0s,mb4.9
BJI AMB AMB
comp=Z,904nm,8.6s
BJI LR LR
comp=N,5μm,19.7s,MS5.3
BJI LR LR
comp=E,5μm,18.4s,MS5.3
BJI LR LR
comp=Z,4μm,21.1s,MS5.0
SNY Shenyang 29.39 357 ⇓P **P 21 49 46.3 -0.6**
SNY S **S 21 54 39.9 +2.0**
SNY AMB AMB
comp=Z,24nm,1.2s,mb4.8
SNY AMB AMB
comp=Z,2μm,12.0s
SNY LR LR
comp=E,6μm,19.4s
SNY LR LR
comp=Z,3μm,22.4s,MS4.9
XMIS Christmas Isla 30.08 222 ⇑*i*P **P 21 49 51.8 -1.5**
PMG Port Moresby 30.50 134 *e*P **P 21 49 56.5 -0.6**
PMG *e**PP pP 21 50 07.6 -0.7
PMG pmax pmax
comp=Z,84nm,1.1s
PMG MLR MLR
comp=Z,4μm,19.0s
PMG Port Moresby 30.50 134 *e*P **P 21 49 56.5 -0.5**
comp=Z,84nm,1.1s,mb5.5
PMG *e*pP pP 21 50 07.6 -0.7
PMG LR LR
comp=Z,4μm,19.0s,MS5.1
LZH Lanzhou 30.65 324 ⇑P **P 21 49 59.3 +1.2**
LZH AP pP 21 50 13.4 +4.1
LZH PP PP 21 51 03.1 -4.7
LZH S **S 21 54 57.2 -0.6**
LZH XS sS 21 55 23.0 +6.5
LZH SS SS 21 56 41.0 -29
LZH AMB AMB
comp=Z,98nm,1.2s,mb5.5
LZH AMB AMB
comp=Z,556nm,5.6s
LZH LR LR
comp=N,25μm,15.1s
LZH LR LR
comp=Z,28μm,16.0s,MS6.0
HHC Hu-ho-hao-te 30.90 339 *e*P **P 21 50 00.5 +0.2**
HHC AP pP 21 50 15.3 +3.8
HHC XP sP 21 50 22.8 +6.4
HHC PP PP 21 51 04.2 -6.4
HHC PCP PcP 21 52 54.8 -1.5
HHC S **S 21 55 00.8 -0.8**
HHC XS sS 21 55 24.6 +4.3
HHC SS SS 21 56 46.7 -28
HHC SCS ScS 22 00 26.6 -6.1
HHC AMB AMB
comp=Z,30nm,0.9s,mb5.1
HHC AMB AMB
comp=Z,1μm,8.5s
HHC LR LR
comp=N,4μm,15.5s,MS5.2
HHC LR LR
comp=E,2μm,19.0s,MS5.2
HHC LR LR
comp=Z,5μm,15.5s,MS5.3
BTO Baotou 31.25 337 *e*P **P 21 50 02.6 -0.8**
CN2 Changchun 31.32 360 *e*P **P 21 50 06.9 +3.0**
CN2 *e*AP pP 21 50 22.0 +6.9
CN2 *e*S **S 21 55 10.3 +2.3**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,900nm,7.0s
CN2 LR LR
comp=N,4μm,15.0s,MS5.3
CN2 LR LR
comp=E,4μm,15.0s,MS5.3
CN2 LR LR
comp=Z,5μm,16.0s,MS5.3
COEN Coen 31.47 146 *e*P **P 21 50 04.1 -1.5**
comp=Z,68nm,1.0s,mb5.4
IMP Imphal 32.30 297 *e*P **P 21 50 11.0 -1.8**
IMP *ex* x 21 53 00.0
MDJ Mudanjiang 32.32 5 P **P 21 50 09.3 -3.4**
MDJ AP pP 21 50 22.2 -1.7
MDJ S **S 21 55 15.4 -8.3**
MDJ AMB AMB
comp=Z,17nm,2.4s,mb4.5
MDJ AMB AMB
comp=Z,1μm,12.6s
MDJ LR LR
comp=N,3μm,19.1s,MS5.2
MDJ LR LR
comp=E,3μm,19.7s,MS5.2
MDJ LR LR
comp=Z,4μm,19.1s,MS5.1
MDJ Mudanjiang 32.32 5 *e*P **P 21 50 14.2 +1.5**
comp=Z,58nm,1.3s,mb5.2
MDJ LR LR
comp=Z,4μm,20.0s,MS5.1
WRAB Tennant Creek 33.26 165 P **P 21 50 19.5 -1.7**
comp=Z,207nm,0.7s,mb6.2,SNR=7.8
WRAB Tennant Creek 33.26 165 *e*P **P 21 50 18.8 -2.4**
WRAB *e*S **S 21 55 33.7 -5.0**
WRAB pmax pmax
comp=Z,55nm,1.2s,mb5.4
WRAB MLR MLR
comp=Z,4μm,20.0s,MS5.1
WRAB Tennant Creek 33.26 165 *e*P **P 21 50 18.8 -2.4**
comp=Z,55nm,1.2s,mb5.4
WRAB *e*S **S 21 55 33.7 -5.0**
WRAB *e*ScP ScP 21 56 42.5 -1.7
WRAB LR LR
comp=Z,4μm,20.0s,MS5.1
WB2 Warramunga Arr 33.27 165 *e*P **P 21 50 18.0 -3.2**
WB2 *e*PCP PcP 21 53 02.8 -0.2
WB2 *e*S **S 21 55 32.0 -6.9**
ERM Erimo 33.29 24 PFAKE 21 50 30.0 +8.7
ERM LR LR
comp=Z,6μm,21.0s,MS5.2
MBWA Marble Bar 33.80 190 *e*P **P 21 50 24.1 -1.7**
comp=Z,15nm,0.8s,mb5.0
MBWA *e*pP pP 21 50 34.6 -2.5
MBWA LR LR
comp=Z,3μm,19.0s,MS5.0
SHL Shillong 34.30 297 *e*P **P 21 50 31.0 +0.8**
SHL *e*S **S 21 55 56.0 +1.1**
SHL *e*SCS ScS 22 00 50.0 -0.6
AGT Agartala 34.43 294 *i* x x 21 50 26.0
AGT *i* x x 21 51 04.0
ASAJ Asahikawa 34.87 22 P **P 21 50 36.4 +1.4**
comp=Z,11nm,1.0s,mb4.8,baz=293,slow=18,SNR=2.7
ASAJ LR LR 22 03 13.9
comp=Z,4μm,20.9s,MS5.2,baz=209,slow=33
GTA Gaotai 35.25 324 ⇑P **P 21 50 39.3 +1.1**
GTA AP pP 21 50 54.4 +4.9
GTA XP sP 21 51 01.5 +7.1
GTA PP PP 21 52 00.9 +2.1
GTA PCP PcP 21 53 09.2 +0.8
GTA S **S 21 56 10.5 +1.3**
GTA XS sS 21 56 36.0 +8.0
GTA SS SS 21 58 32.6 -11
GTA AMB AMB
comp=Z,47nm,1.0s,mb5.4
GTA AMB AMB
comp=Z,1μm,4.8s
GTA LR LR
comp=N,9μm,18.3s,MS5.6
GTA LR LR
comp=E,7μm,18.3s,MS5.6
GTA LR LR
comp=Z,11μm,17.4s,MS5.7
LSA Lhasa 36.23 304 P **P 21 50 48.0 +1.2**
LSA AP pP 21 50 55.2 -2.9
LSA PP PP 21 52 12.0 +2.2
LSA SCS ScS 22 00 56.6 -4.4
LSA AMB AMB
comp=Z,50nm,1.2s,mb5.3
LSA LR LR
comp=N,6μm,18.0s,MS5.6
LSA LR LR
comp=E,7μm,15.3s,MS5.6
LSA LR LR
comp=Z,15μm,18.5s,MS5.8
LSA Lhasa 36.23 304 *e*P **P 21 50 47.8 +1.0**
LSA *e* 21 53 12.0
LSA S **S 21 56 26.9 +2.4**
LSA pmax pmax
comp=Z,93nm,1.1s,mb5.6
LSA MLR MLR
comp=Z,15μm,19.0s,MS5.8
LSA Lhasa 36.23 304 *e*P **P 21 50 47.8 +0.9**
comp=Z,93nm,1.1s,mb5.6
LSA *e*PcP PcP 21 53 12.0 +0.5
LSA S **S 21 56 26.9 +2.4**
LSA LR LR
comp=Z,15μm,19.0s,MS5.8
ASAR Alice Springs 36.74 167 P **P 21 50 49.5 -1.7**
comp=Z,14nm,0.6s,mb4.9,baz=351,slow=6.8,SNR=81
ASAR S **S 21 56 32.4 +0.1**
comp=Z,6.0nm,0.8s,baz=354,slow=20,SNR=6.3
ASAR ScP ScP 21 56 55.9 -0.9
comp=Z,14nm,1.0s,baz=0.9,slow=5.7,SNR=8.2
ASAR Alice Springs 36.74 167 P **P 21 50 49.5 -1.7**
ASAR S **S 21 56 32.4 +0.1**
HABR Khabarovsk 36.85 11 *e*P **P 21 50 50.2 -1.6**
HABR *e**SP sP 21 51 03.7 -4.3
HABR *e* 21 52 15.1
HABR *e*S **S 21 56 34.2 +0.7**
HABR *e*S **S 21 56 34.5 +1.0**
HABR *e**SS sS 21 56 50.6 -1.7
HABR *e*SS SS 21 59 10.2 -5.7
HABR *e* 22 01 02.7
HIA Hailar 37.09 354 *e*P **P 21 50 54.0 +0.1**
HIA pmax pmax
comp=Z,33nm,1.0s
HIA MLR MLR
comp=Z,4μm,19.0s
HIA Hailar 37.09 354 *e*P **P 21 50 54.0 +0.1**
comp=Z,33nm,1.0s,mb5.1
HIA LR LR
comp=Z,4μm,19.0s,MS5.2
YSS Yuzh-Sakhalins 37.40 20 *e*P **P 21 51 01.4 +4.9**
YSS *e* 21 51 16.0
YSS *e*S **S 21 56 46.0 +4.1**
YSS *e*SSS 21 59 42.0
YSS MLR MLR
comp=Z,2μm,17.0s,MS5.1
YSS MLR MLR
comp=N,2μm,18.0s
YSS Yuzh-Sakhalins 37.40 20 *i* P **P 21 50 58.0 +1.5**
YSS LR LR
comp=Z,1μm,20.0s,MS4.7
COCO West Island 37.49 230 PFAKE 21 51 10.0 +12
COCO LR LR
comp=Z,4μm,20.0s,MS5.2
CTA Charters Tower 38.17 147 ⇓*i*P **P 21 51 02.6 -0.7**
comp=Z,17nm,1.0s,mb4.7
CTA *e*PCP PcP 21 53 19.0 +1.5
CTA *e*S **S 21 56 47.7 -6.3**
CTA *e*SCP sS 21 57 13.3 +0.4
CTA *e*SCS SS 21 59 45.0 +2.1
CTA Charters Tower 38.17 147 ⇓*i*P **P 21 51 02.6 -0.7**
CTA *e* 21 53 19.0
CTA *e*S **S 21 56 47.7 -6.3**
CTA pmax pmax
comp=Z,17nm,1.0s
CTAO Charters Tower 38.17 147 P **P 21 51 01.9 -1.4**
CTAO *e**PP pP 21 51 13.8 -0.9
CTAO pmax pmax
comp=Z,56nm,1.2s,mb5.2
CTAO MLR MLR
comp=Z,5μm,21.0s,MS5.3
CTAO Charters Tower 38.17 147 P **P 21 51 01.9 -1.4**
comp=Z,56nm,1.2s,mb5.2
CTAO *e*pP pP 21 51 13.8 -0.8
CTAO LR LR
comp=Z,5μm,21.0s,MS5.3
TAPN Taplejung 38.38 299 *e*P **P 21 51 04.7 -0.4**
comp=Z,232nm,1.1s,mb5.8
ODAN Odare 38.53 298 *e*P **P 21 51 05.8 -0.6**
comp=Z,424nm,1.0s,mb6.1
ULN Ulaanbaatar 38.61 340 ⇑P **P 21 51 07.3 +0.6**
SNR=16
ULN Ulaanbaatar 38.61 340 *e*P **P 21 51 07.0 +0.3**
ULN *e* 21 53 19.9
ULN pmax pmax
comp=Z,66nm,1.2s,mb5.2
ULN MLR MLR
comp=Z,3μm,20.0s,MS5.1
ULN Ulaanbaatar 38.61 340 *e*P **P 21 51 07.0 +0.3**
comp=Z,66nm,1.2s,mb5.2
ULN *e*PcP PcP 21 53 19.9 +1.5
ULN LR LR
comp=Z,3μm,20.0s,MS5.1
SONM Songino Array 38.80 339 P **P 21 51 08.2 -0.1**
comp=Z,38nm,1.0s,mb5.1,baz=157,slow=6.4,SNR=124
SONM LR LR 22 08 23.5
comp=Z,6μm,18.3s,MS5.5,baz=152,slow=38
BWNR Bhubaneshwar 38.84 287 *ex* x 21 51 05.6
BWNR *ex* x 21 57 10.2
BOK Bokaro 39.22 292 *e*P **P 21 51 12.2 0.0**
BOK AMb AMB 21 51 16.4
comp=Z,127nm,1.3s,mb5.5
RAMN Ramite 39.24 298 *e*P **P 21 51 12.0 -0.3**
comp=Z,292nm,0.9s,mb6.0
JIRN Jiri 39.76 298 *e*P **P 21 51 16.4 -0.3**
comp=Z,247nm,0.8s,mb6.0
GUN Gumba 40.09 299 *e*P **P 21 51 19.1 -0.3**
comp=Z,720nm,1.0s,mb6.3
PKI Pulchoki 40.41 298 *e*P **P 21 51 21.2 -0.9**
comp=Z,217nm,0.9s,mb5.9
PKI Pulchoki 40.41 298 *e*P **P**
PKIN Phulchoki 40.43 298 *e*P **P 21 51 21.8 -0.3**
HNR Honiara 40.49 121 PFAKE 21 51 30.0 +7.2
HNR LR LR
comp=Z,10μm,22.0s,MS5.6
KKN Kakani 40.58 298 *e*P **P 21 51 22.5 -0.9**
comp=Z,308nm,1.0s,mb5.9
KKN Kakani 40.58 298 *e*P **P 21 51 22.5 -0.9**
KKN pmax pmax
comp=Z,308nm,1.0s,mb5.9
DMN Daman 40.69 298 *e*P **P 21 51 23.6 -0.7**
comp=Z,400nm,1.1s,mb6.0
CIT Chita 40.71 349 *e*P **P 21 51 24.5 +0.4**
VIS Vishakhapatnam 41.03 283 *e*P **P 21 51 26.3 -0.9**
VIS AMb AMB 21 51 41.4
comp=Z,105nm,2.2s,mb5.1
VIS *i* x x 21 57 42.4
GKN Gorkha 41.18 298 *e*P **P 21 51 27.3 -1.1**
comp=Z,241nm,0.9s,mb5.8
DANN Dangsing 42.02 299 *e*P **P 21 51 34.5 -0.7**
comp=Z,328nm,0.8s,mb6.0
KOLN Koldanda 42.02 298 *e*P **P 21 51 34.8 -0.5**
comp=Z,435nm,0.8s,mb6.1
ZAK Zakamensk 42.05 339 *e*P **P 21 51 34.9 -0.2**
ZAK *e* 21 53 27.1
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.4
FORT Forrest 42.97 177 *e*P **P 21 51 41.5 -1.3**
comp=Z,194nm,0.7s,mb5.9
FORT *e*SCP ScP 21 57 25.9 +5.1
FORT *e*S **S 21 58 02.0 -3.3**
TLY Talaya 43.02 340 P **P 21 51 43.8 +0.8**
comp=Z,108nm,0.8s,mb5.6,SNR=7.5
TLY Talaya 43.02 340 ⇑P **P 21 51 44.0 +1.1**
SNR=6.2
TLY Talaya 43.02 340 *e*P **P 21 51 43.6 +0.6**
TLY *e*S **S 21 58 08.4 +2.8**
TLY *e*SSS 22 01 55.6
TLY pmax pmax
comp=Z,23nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,2μm,15.0s,MS5.2
TLY Talaya 43.02 340 *e*P **P 21 51 44.0 +1.0**
comp=Z,20nm,0.9s,mb4.8
TLY LR LR
comp=Z,3μm,19.0s,MS5.2
ALBI Allahabad 43.13 294 *ex* x 21 52 41.5
IRK Irkutsk 43.29 341 *e*P **P 21 51 44.7 -0.5**
IRK pmax pmax
comp=Z,36nm,1.8s,mb4.8
MOY Mondy 43.93 338 *e*P **P 21 51 51.2 +0.9**
MOY pmax pmax
comp=Z,12nm,3.8s
NRGR Nerungri 44.19 359 *e*P **P 21 51 50.1 -2.2**
NRGR S **S 21 58 24.2 +1.6**
NRGR smax
comp=E,39nm,0.5s
KLBR Kellerberrin 44.34 189 *e*P **P 21 51 51.8 -2.0**
comp=E,46nm,1.2s,mb5.1
CLNS Chul'man 44.37 360 *e*P **P 21 51 54.3 +0.6**
CLNS *e**PP pP 21 52 04.0 -1.3
CLNS *e* 21 53 40.5
CLNS *e*S **S 21 58 17.6 -7.6**
CLNS *e*SS SS 22 01 35.7 -9.2
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS pmax pmax
comp=N,16nm,1.1s
CLNS pmax pmax
comp=Z,23nm,0.9s,mb4.9
CLNS smax
comp=E,823nm,13.0s
CLNS smax
comp=N,682nm,13.4s
CLNS MLR MLR
comp=E,2μm,14.0s,MS5.2
CLNS MLR MLR
comp=N,1μm,14.0s,MS5.2
CLNS MLR MLR
comp=Z,2μm,16.0s,MS5.0
MUN Mundaring 44.99 191 *e*P **P 21 51 57.2 -1.8**
MUN *e*S **S 21 58 23.6 -11**
EIDS Eidsvold 45.03 147 *e*P **P 21 51 58.7 -0.7**
comp=Z,23nm,0.8s,mb5.0
WMQ Urumqi 45.13 321 P **P 21 52 00.9 +0.9**
WMQ XP sP 21 52 16.2 -0.2
WMQ PCP PcP 21 53 42.0 +2.0
WMQ PP PP 21 53 48.7 +2.7
WMQ S **S 21 58 37.0 +0.4**
WMQ XS sS 21 58 58.4 +2.6
WMQ SS SS 22 01 51.7 -8.3
WMQ AMB AMB
comp=Z,39nm,1.3s,mb5.1
WMQ AMB AMB
comp=Z,1μm,5.4s
WMQ LR LR
comp=N,13μm,15.0s,MS6.2
WMQ LR LR
comp=E,18μm,15.0s,MS6.2
WMQ LR LR
comp=Z,10μm,17.0s,MS5.8
NGP Nagpur 45.21 288 ⇑*i*P **P 21 51 59.0 -2.0**
NGP *ex* x 21 52 02.2
comp=Z,64nm,1.2s
NGP *e*S **S 21 58 38.0 -0.4**
LGTI Lohaghat 45.26 299 *e*P **P 21 52 01.3 0.0**
LGTI *ex* x 21 53 41.5
PTH Pithoragarh 45.31 299 *e*P **P 21 52 01.5 -0.2**
PTH *ex* x 21 53 32.5
HYB Hyderabad 45.58 282 *e*P **P 21 52 03.0 -1.0**
HYB *e*S **S 21 58 46.0 +2.2**
HYB pmax pmax
comp=Z,75nm,1.0s,mb5.6
HYB Hyderabad 45.58 282 *i* P **P 21 52 03.0 -1.0**
comp=Z,75nm,1.0s,mb5.6
HYB *e*pP pP 21 52 13.0 -2.5
HYB *e*PcP PcP 21 53 42.0 -0.1
HYB *e*PP PP 21 53 56.0 +4.8
HYB *e*S **S 21 58 46.0 +2.2**
HYB Hyderabad 45.58 282 *e*P **P 21 52 03.0 -1.0**
comp=Z,75nm,1.0s,mb5.6
HYB *e*S **S 21 58 46.0 +2.2**
NWAO Narrogin (SRO) 45.73 190 P **P 21 52 03.0 -1.9**
comp=Z,52nm,1.0s,mb5.4,baz=10,slow=7.0,SNR=6.7
NWAO Narrogin (SRO) 45.73 190 P **P 21 52 04.6 -0.3**
NWAO *e**PP pP 21 52 14.6 -1.8
NWAO pmax pmax
comp=Z,67nm,1.0s
NWAO MLR MLR
comp=Z,3μm,20.0s
NWAO Narrogin (SRO) 45.73 190 P **P 21 52 04.5 -0.3**
comp=Z,66nm,1.0s,mb5.5
NWAO *e*pP pP 21 52 14.6 -1.8
NWAO LR LR
comp=Z,3μm,20.0s,MS5.2
BOD Bodaibo 46.19 351 *e*P **P 21 52 07.8 -0.4**
BOD pmax pmax
comp=Z,30nm,1.0s,mb5.2
STKA Stephens Creek 46.62 161 *e*P **P 21 52 11.4 -0.4**
comp=Z,122nm,1.9s,mb5.5
STKA *e*PCP PcP 21 53 33.6 -12
STKA *e*S **S 21 58 57.2 -1.0**
STKA *e*SCS ScS 22 02 05.7 +2.2
STKA Stephens Creek 46.62 161 P **P 21 52 11.5 -0.3**
comp=Z,29nm,0.7s,mb5.3,baz=339,slow=7.8,SNR=23
BHPL Bhopal 46.86 290 *e*P **P 21 52 12.7 -1.3**
BHPL AMb AMB 21 52 17.4
comp=Z,76nm,1.3s,mb5.5
AKL Akola 47.09 287 *e*P **P 21 52 15.7 -0.1**
AKL AMb AMB 21 52 19.6
comp=Z,110nm,0.5s,mb6.1
DDI Dehra Dun 47.30 300 *e*P **P 21 52 16.0 -1.4**
LATR Latur 47.47 284 *e*P **P 21 52 18.5 -0.3**
NDI New Delhi 47.72 298 *ex* x 21 52 17.0
TRD Trivandrum 47.86 270 *e*P **P 21 52 20.5 -1.4**
TRD AMb AMB 21 52 37.0
comp=Z,147nm,1.3s,mb5.8
TRD *ex* x 21 59 36.0
PEA0B Petropavlovsk- 48.05 26 *e*P **P 21 52 25.0 +2.2**
PETK Petropavlovsk- 48.05 26 P **P 21 52 24.5 +1.7**
comp=Z,14nm,0.8s,mb5.0,baz=196,slow=4.0,SNR=5.9
PETK LR LR 22 10 06.0
comp=Z,3μm,21.9s,MS5.2,baz=221,slow=33
SMLA Simla 48.22 301 *i* P **P 21 52 23.8 -0.7**
SMLA *ex* x 21 52 26.1
comp=Z,397nm,0.8s
TARA Tarawa 48.23 99 PFAKE 21 52 40.0 +15
TARA LR LR
comp=Z,6μm,20.0s,MS5.6
PET Petropavlovsk 48.40 26 *e*P **P 21 52 32.3 +6.9**
PET *e*S **S 21 59 26.0 +2.9**
PET pmax pmax
comp=Z,57nm,0.9s,mb5.6
PET Petropavlovsk 48.40 26 ⇑*e*P **P 21 52 26.3 +0.9**
PET LR LR
comp=Z,4μm,21.0s,MS5.3
BHK Bhakra 48.90 301 *e*P **P 21 52 28.4 -1.3**
MNGI Mangalore 49.40 276 *e*P **P 21 52 32.4 -1.4**
MNGI AMb AMB 21 52 35.6
comp=Z,64nm,0.8s,mb5.7
ARMA Armidale 49.41 150 *e*P **P 21 52 34.6 +1.1**
ARMA *e*S **S 21 59 39.1 +1.3**
DLH Dalhousie 49.51 302 *e*P **P 21 52 35.0 +0.7**
YAK Yakutsk 49.67 3 *e*P **P 21 52 34.2 -0.8**
YAK *e**PP pP 21 52 44.7 -2.0
YAK *e* 21 53 52.9
YAK *e* 21 54 35.5
YAK *e*S **S 21 59 39.3 -1.3**
YAK *e* 22 02 26.0
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=Z,30nm,1.2s,mb5.2
YAK pmax pmax
comp=E,1.0nm,0.9s
YAK pmax pmax
comp=Z,574nm,4.2s
YAK pmax pmax
comp=N,576nm,3.7s
YAK pmax pmax
comp=E,223nm,4.8s
YAK smax
comp=N,401nm,4.2s
YAK smax
comp=E,243nm,3.7s
YAK MLR MLR

comp=Z,3µm,21.0s,MS5.2
YAK MLR MLR
comp=E,3µm,16.0s,MS5.5
YAK MLR MLR
comp=N,2µm,16.0s,MS5.5
YAK Yakutsk 49.67 3 *eP* **P 21 52 35.3 +0.3**
comp=N,80nm,0.8s,mb5.8
YAK LR LR
comp=Z,3µm,20.0s,MS5.2
AJM Ajmer 49.68 294 *eP* **P 21 52 35.6 -0.1**
AJM AMb AMB 21 52 37.4
comp=Z,110nm,1.1s,mb5.8
THN Thein Dam 49.69 302 *eP* **P 21 52 33.8 -1.9**
KAD Karad 49.75 282 *eP* **P 21 52 35.8 -0.6**
KAD AMb AMB 21 52 37.4
comp=Z,72nm,1.1s,mb5.6
MK31 Makanchi Array 49.92 322 *eP* **P 21 52 37.7 +0.5**
MKAR Makanchi Array 49.92 322 P **P 21 52 37.4 +0.2**
comp=Z,55nm,0.9s,mb5.6,baz=119,slow=7.3,SNR=202
MKAR ScP ScP 21 57 52.4 +2.8
comp=Z,0.6nm,0.6s,baz=111,slow=6.3,SNR=2.5
MKAR LR LR 22 15 58.7
comp=Z,4µm,18.4s,MS5.5,baz=240,slow=39
MKAR Makanchi Array 49.92 322 P **P 21 52 37.4 +0.2**
MKAR ScP ScP 21 57 52.4 +2.7
MKAR LR LR 22 15 58.7
POO Poona 50.05 284 *eP* **P 21 52 37.8 -0.8**
POO AMb AMB 21 52 41.7
comp=Z,94nm,1.2s,mb5.7
KRAR Krasnoyarsk 50.34 337⇑ *eP* **P 21 52 40.9 +0.7**
KRAR pmax pmax
comp=Z,53nm,2.1s,mb5.2
KSH Kashi 51.30 311 P **P 21 52 49.5 +1.8**
KSH AP pP 21 52 59.9 +0.5
KSH XP sP 21 53 03.4 -0.8
KSH PCP PcP 21 54 04.9 +2.6
KSH PP PP 21 54 47.9 +3.0
KSH PPP 21 55 48.4
KSH PCS PcS 21 58 01.2 +1.2
KSH S **S** **22 00 04.3 +0.4**
KSH XS sS 22 00 21.7 -1.7
KSH SCS ScS 22 02 34.0 -1.0
KSH SS SS 22 03 37.9 -2.0
KSH AMB AMB
comp=Z,145nm,1.2s,mb5.8
KSH AMB AMB
comp=Z,3µm,5.0s
KSH LR LR
comp=N,14µm,13.8s,MS6.4
KSH LR LR
comp=E,24µm,14.1s,MS6.4
KSH LR LR
comp=Z,21µm,16.1s,MS6.2
AAA Alma-Ata 51.86 316 *eP* **P 21 52 42.4 -9.4**
AAA pmax pmax
comp=Z,2µm,17.3s
AAA MLR MLR
comp=Z,13µm,16.0s,MS6.1
NIL Nilore 51.96 303 PFAKE 21 53 00.0 +7.2
NIL LR LR
comp=Z,163nm,22.0s
ULHL Ulahol 51.98 314 P **P 21 52 53.7 +1.0**
SNR=16
CAN Canberra 52.39 156 *eP* **P 21 52 56.8 +1.0**
CAN pmax pmax
comp=Z,56nm,1.2s,mb5.4
CAN MLR MLR
comp=Z,4µm,19.0s,MS5.4
CAN Canberra 52.39 156 *eP* **P 21 52 56.8 +1.1**
comp=Z,56nm,1.2s,mb5.4
CAN LR LR
comp=Z,4µm,19.0s,MS5.4
ZAA0 Zalesovo Array 52.44 331 *eP* **P 21 52 56.0 0.0**
ZALV Zalesovo Beam 52.44 331 P **P 21 52 55.9 0.0**
comp=Z,23nm,0.9s,mb5.1,baz=112,slow=6.6,SNR=76
ZALV LR LR 22 16 05.4
comp=Z,3µm,20.0s,MS5.4,baz=134,slow=37
ZALV Zalesovo Beam 52.44 331 P **P 21 52 55.9 0.0**
ZALV LR LR 22 16 05.4
CNB Canberra Magne 52.53 155 *eP* **P 21 52 57.6 +0.8**
KZA Kyzart 52.62 314 P **P 21 52 58.9 +1.4**
SNR=22
TKM2 Tokmak 2 52.66 315 *eP* **P 21 52 58.3 +0.5**
TKM2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
TKM2 MLR MLR
comp=Z,10µm,21.0s,MS5.8
TKM2 Tokmak 2 52.66 315 P **P 21 52 58.6 +0.8**
SNR=19
TKM2 Tokmak 2 52.66 315 *eP* **P 21 52 58.3 +0.5**
comp=Z,20nm,0.9s,mb5.0
TKM2 LR LR
comp=Z,10µm,21.0s,MS5.8
DZM Mont Dzumac 52.75 130 *eP* **P 21 52 59.1 +0.3**
comp=Z,45nm,1.0s,mb5.3
KBK Karagaybulak 53.02 314 P **P 21 53 01.3 +0.8**
SNR=26
TOO Toolangi 53.10 160 *eP* **P 21 53 01.6 +0.6**
UCH Uchtor 53.19 314 P **P 21 53 03.5 +1.8**
SNR=10
UCH Uchtor 53.19 314 PFAKE 21 53 10.0 +8.3
UCH LR LR
comp=Z,3µm,19.0s,MS5.3
CHMS Chumysh 53.27 315 P **P 21 53 02.7 +0.4**
SNR=19
FRU Bishkek 53.31 315 *eP* **P 21 53 02.5 -0.1**
FRU pmax pmax
comp=Z,80nm,2.0s,mb5.3
FRU MLR MLR
comp=E,10µm,16.0s
FRU MLR MLR
comp=Z,8µm,16.0s,MS5.9
AAK Ala-Archa 53.33 314 P **P 21 53 03.5 +0.8**
comp=Z,86nm,1.3s,mb5.5,SNR=10
AAK Ala-Archa 53.33 314 ⇓P **P 21 53 03.8 +1.0**
SNR=14
AAK Ala-Archa 53.33 314⇑ *iP* **P 21 53 03.9 +1.2**
AAK pmax pmax
comp=Z,24nm,1.8s,mb4.8
AAK Ala-Archa 53.33 314 *eP* **P 21 53 03.8 +1.1**
comp=Z,59nm,1.5s,mb5.3
AAK LR LR
comp=Z,10µm,20.0s,MS5.8
USP Ospennovka 53.53 315 P **P 21 53 04.2 0.0**
SNR=27
NVS Novosibirsk 53.72 331⇑ *iP* **P 21 53 04.4 -0.9**
NVS *eS* **S** **22 00 30.0 -6.5**
NVS *e* 22 02 49.0
NVS pmax pmax
comp=Z,89nm,1.8s,mb5.4
NVS pmax pmax
comp=N,76nm,1.9s
NVS pmax pmax
comp=E,53nm,1.5s
NVS smax
comp=E,55nm,1.9s
NVS smax
comp=N,26nm,2.1s
AML Almayashu 53.74 314 P **P 21 53 07.1 +1.3**
SNR=20
AML Almayashu 53.74 314 PFAKE 21 53 20.0 +14
AML LR LR
comp=Z,7µm,21.0s,MS5.7
EKS2 Erkin-Say 53.84 314 P **P 21 53 07.4 +0.9**
SNR=28
EKS2 Erkin-Say 53.84 314 *eP* **P 21 53 07.5 +1.0**
comp=Z,41nm,1.1s,mb5.3
EKS2 LR LR
comp=Z,9µm,19.0s,MS5.8
KURK Kurchatov 53.93 325 P **P 21 53 07.3 +0.3**
comp=Z,910nm,1.1s,mb6.6
KURK Kurchatov 53.93 325 ⇓P **P 21 53 07.4 +0.4**
SNR=64
KURK Kurchatov 53.93 325 P **P 21 53 06.2 -0.8**
comp=Z,69nm,0.7s,mb5.7,baz=124,slow=7.6,SNR=98
KURK Kurchatov 53.93 325*c iP* **P 21 53 07.2 +0.2**
KURK pmax pmax
comp=Z,188nm,1.1s,mb5.9
KURK Kurchatov 53.93 325 *eP* **P 21 53 07.1 +0.1**
comp=Z,156nm,0.9s,mb5.9
KURK LR LR
comp=Z,2µm,19.0s,MS5.3
SEY Seymchan 53.98 15⇑ *eP* **P 21 53 08.2 +1.1**
SEY Seymchan 53.98 15⇑ *eP* **P 21 53 08.3 +1.2**
BHJ Bhuj 54.00 290 *eP* **P 21 53 07.4 -0.5**
BHJ AMb AMB 21 53 12.2
comp=Z,165nm,1.9s,mb5.6
MIDW Midway 55.36 64 PFAKE 21 53 30.0 +12
MIDW LR LR
comp=Z,5µm,21.0s,MS5.6
FX1 Attu Island--F 55.37 33 P **P 21 53 20.4 +3.0**
comp=Z,60nm,0.9s,mb5.6,baz=68,slow=17,SNR=6.8
FX1 LR LR 22 11 58.8
comp=Z,2µm,20.6s,MS5.1,baz=259,slow=30
KBL Kabul 55.55 303 *eP* **P 21 53 18.8 -0.3**
KBL pmax pmax
comp=Z,70nm,0.9s,mb5.7
KBL Kabul 55.55 303 *eP* **P 21 53 18.8 -0.3**
comp=Z,70nm,0.9s,mb5.7
KK31 Karatay Array 56.27 314 *i* P **P 21 53 24.0 0.0**
KK31 pmax pmax
comp=Z,23nm,0.8s,mb5.3
FUNA Funafuti 57.24 109 PFAKE 21 53 40.0 +8.6
FUNA LR LR
comp=Z,7µm,21.0s,MS5.7
TAU Tasmania Unive 58.53 161 PFAKE 21 53 50.0 +10
TAU LR LR
comp=Z,3µm,21.0s,MS5.5
VOSK Vostochnaya 59.09 325 P **P 21 53 42.4 -1.2**
VOSK pmax pmax
comp=Z,14nm,0.6s,mb5.2
TIXI Tiksi 59.28 1⇑ *eP* **P 21 53 43.5 -1.1**
TIXI pmax pmax
comp=Z,37nm,1.0s,mb5.4
TIXI Tiksi 59.28 1 *eP* **P 21 53 44.4 -0.2**
comp=Z,76nm,1.0s,mb5.7
TIXI *eS* **S** **22 01 44.4 -5.2**
TIXI LR LR
comp=Z,3µm,19.0s,MS5.4
BVA0 Borovoye Array 59.53 325 *i* P **P 21 53 46.4 -0.3**
BVA0 pmax pmax
comp=Z,68nm,2.5s,mb5.2
BVAR Borovoye Array 59.53 325 P **P 21 53 46.4 -0.3**
comp=Z,67nm,0.9s,mb5.7,baz=111,slow=8.1,SNR=156
BRVK Borovoye 59.60 325 P **P 21 53 47.7 +0.5**
comp=Z,644nm,0.9s,mb6.7
BRVK Borovoye 59.60 325 ⇑P **P 21 53 47.4 +0.2**
SNR=45
BRVK Borovoye 59.60 325⇑ *eP* **P 21 53 46.8 -0.4**
BRVK LR LR
comp=Z,5µm,19.0s,MS5.7
ADK Adak 60.67 37 PFAKE 21 54 10.0 +15
ADK LR LR
comp=Z,2µm,20.0s,MS5.3
BILL Bilibino 61.60 16 P **P 21 54 01.0 +0.5**
BILL *e* 21 54 06.6
BILL *e* pP 21 54 15.1 +2.6
BILL 21 54 47.0
BILL *e* 22 02 23.5
BILL SS SS 22 06 20.0 -0.9
BILL pmax pmax
comp=Z,48nm,1.6s,mb5.4
BILL MLR MLR
comp=Z,1µm,15.0s,MS5.2
BILL Bilibino 61.60 16 *eP* **P 21 54 00.7 +0.2**
comp=Z,47nm,1.4s,mb5.4
BILL LR LR
comp=Z,2µm,20.0s,MS5.2
BIDO Bidbid 64.58 290 ⇓P **P 21 54 20.3 -0.8**
SNR=5.7
ABKT Ailbek 64.71 306 P **P 21 54 22.3 +0.6**
comp=Z,456nm,1.0s,mb6.5,SNR=28
AB31 Akbulak array 64.81 319 P **P 21 54 21.7 -0.5**
AB31 pmax pmax
comp=Z,82nm,1.2s,mb5.6
HOQ Hoqain 65.33 290 P **P 21 54 25.5 -0.5**
SNR=6.5
BSY Bisya 65.48 289 P **P 21 54 26.5 -0.5**
SNR=6.5
SVE Sverdlovsk 66.06 327⇑ *eP* **P 21 54 30.0 -0.1**
SVE *eS* S 22 03 19.3 +4.2
SVE *e* 22 04 17.4
SVE *eSSS* 22 10 31.0
SVE pmax pmax
comp=Z,103nm,1.0s,mb5.8
SVE MLR MLR
comp=Z,6µm,18.0s,MS5.8
ARQ Araqi 66.06 290 P **P 21 54 30.1 -0.7**
SNR=9.0
AKTK Aktyubinsk 66.25 320 P **P 21 54 31.1 -0.4**
AKTO Aktyubinsk 66.25 320 P **P 21 54 31.1 -0.4**
comp=Z,17nm,0.9s,mb5.1,baz=97,slow=6.6,SNR=42
ARU Arti 67.08 326 P **P 21 54 35.0 -1.6**
comp=Z,363nm,0.6s,mb6.6,SNR=23
ARU Arti 67.08 326 *eP* **P 21 54 35.6 -1.0**
ARU *PP pP 21 54 46.9 -1.8
ARU pmax pmax
comp=Z,29nm,0.5s,mb5.6
ARU MLR MLR
comp=Z,4µm,19.0s,MS5.7
ARU Arti 67.08 326 *eP* **P 21 54 35.6 -1.0**
comp=Z,29nm,0.5s,mb5.6
ARU pP pP 21 54 46.9 -1.8
ARU LR LR
comp=Z,4µm,19.0s,MS5.7
AFI Afiamalu 67.40 111 PFAKE 21 54 50.0 +11
AFI LR LR
comp=Z,4µm,19.0s,MS5.6
RAO Raoul Island 68.47 128 PFAKE 21 55 00.0 +14
RAO LR LR
comp=Z,1µm,20.0s,MS5.2
SOKR Solikamsk 68.67 329*c iP* **P 21 54 46.4 -0.2**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.3
SOKR MLR MLR
comp=Z,7µm,19.0s,MS5.9
WHFO Wadi Hawf 69.12 285 P **P 21 54 49.5 -0.6**
SNR=8.0
SNZO South Karori 70.06 143 PFAKE 21 55 10.0 +15
SNZO LR LR
comp=Z,3µm,20.0s,MS5.5
MSEY Mahe Island 71.63 261 PFAKE 21 55 20.0 +14
MSEY LR LR
comp=Z,3µm,20.0s,MS5.6
MAK Makhachkala 72.93 311 *eP* **P 21 55 12.4 -0.4**
MAK *e* 21 55 27.3
MAK *i* 21 57 53.2
MAK *ePPP* 21 59 39.9
MAK *iS* S 22 04 36.9 +0.3
MAK *eSS* SS 22 09 16.6 -0.8
MAK pmax pmax
comp=Z,860nm,1.6s,mb6.4
QRN Al-Qurain 73.38 296 *eP* **P 21 55 14.5 -1.2**
baz=296
QRN AMb AMB 21 55 16.0
comp=Z,130nm,0.9s,mb5.9,baz=296
UMR Umm Al-Rimmam 73.48 297 *eP* **P 21 55 15.2 -1.1**
baz=297
UMR AMb AMB 21 55 16.7
comp=Z,119nm,0.9s,mb5.8,baz=297
KBD Kabd 73.53 297 *eP* **P 21 55 15.6 -1.0**
baz=297
KBD AMb AMB 21 55 17.1
comp=Z,78nm,0.9s,mb5.6,baz=297
MIB Mutribah 73.79 298 *eP* **P 21 55 16.9 -1.2**
baz=298
MIB AMb AMB 21 55 18.8
comp=Z,154nm,0.8s,mb6.0,baz=298
GNI Garni 75.12 308 P **P 21 55 27.8 +2.1**
SNR=14
GNI Garni 75.12 308 *eP* **P 21 55 27.1 +1.4**
GNI pmax pmax
comp=Z,55nm,1.0s
GNI MLR MLR
comp=Z,2µm,21.0s
GNI Garni 75.12 308 *eP* **P 21 55 27.1 +1.4**
comp=Z,55nm,1.0s,mb5.4
GNI LR LR
comp=Z,2µm,21.0s,MS5.5
KDAK Kodiak Island 75.31 33 P **P 21 55 26.6 +0.3**
comp=Z,8.3nm,0.5s,mb4.9,baz=86,slow=11,SNR=7.5
KDAK LR LR 22 30 16.4
comp=Z,1µm,18.6s,MS5.2,baz=261,slow=37
BPAW Bear Paw Mtn. 76.12 27 *eP* **P 21 55 32.1 +1.2**
comp=Z,55nm,0.8s,mb5.5
KIV Kislovodsk 76.39 312 P **P 21 55 33.0 +0.2**
comp=Z,394nm,0.9s,mb6.3,SNR=12
KIV Kislovodsk 76.39 312 P **P 21 55 33.9 +1.1**
SNR=15
KIV Kislovodsk 76.39 312*c iP* **P 21 55 33.5 +0.7**
KIV *e* 21 58 24.4
KIV *ePPP* 22 00 13.8
KIV *eS* S 22 05 17.9 +2.7
KIV pmax pmax
comp=Z,74nm,1.1s,mb5.5
KIV pmax pmax
comp=Z,1µm,9.4s
KIV MLR MLR
comp=Z,6µm,18.0s,MS5.9
KIV Kislovodsk 76.39 312 *eP* **P 21 55 33.8 +1.0**
comp=Z,67nm,0.9s,mb5.6
KIV LR LR
comp=Z,3µm,19.0s,MS5.7
COLD Coldfoot 76.47 23 *eP* **P 21 55 34.6 +1.8**
comp=Z,25nm,0.9s,mb5.1
VRHR Novokhopersk 76.66 320*c iP* **P 21 55 33.5 -0.7**
VRHR *i* *PP pP 21 55 44.5 -2.0
VRHR pmax pmax
comp=Z,80nm,1.0s,mb5.6
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,70nm,0.8s
XMAS Kiritimati 76.90 91 PFAKE 21 55 50.0 +14
XMAS LR LR
comp=Z,3µm,21.0s,MS5.6
PMR Palmer 77.00 29 *eP* **P 21 55 34.9 -1.0**
PMR pmax pmax
comp=Z,33nm,1.1s,mb5.2
PMR Palmer 77.00 29 *eP* **P 21 55 34.9 -1.1**
comp=Z,33nm,1.1s,mb5.2
MCK McKinley 77.03 27 *eP* **P 21 55 36.4 +0.4**
MCK pmax pmax
comp=Z,35nm,0.8s,mb5.3
MCK McKinley 77.03 27 *eP* **P 21 55 36.4 +0.3**
comp=Z,35nm,0.8s,mb5.3
KLMR Klimovskoe 77.35 330 *eP* **P 21 55 37.0 -0.9**
KLMR pmax pmax
comp=Z,181nm,1.8s,mb5.7
COLA College 77.46 26 *i P* **P 21 55 39.5 +1.1**
COLA College 77.46 26 *eP* **P 21 55 39.2 +0.8**
comp=Z,21nm,0.9s,mb5.1
COLA *ePcP* PcP 21 55 48.9 +0.2
COLA LR LR
comp=Z,1µm,20.0s,MS5.2
VOR Voronezh 78.13 321 P **P 21 55 41.0 -1.4**
VOR pmax pmax
comp=Z,150nm,1.5s,mb5.7
VORD Divnogorie 78.14 320 *eP* **P 21 55 41.7 -0.8**
VORD *i* *PP pP 21 55 52.9 -1.9
VSR Storozhevoye 78.19 320*c iP* **P 21 55 42.0 -0.8**
VSR *i* *PP pP 21 55 53.2 -1.9
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.1s
VSR MLR MLR
comp=Z,860nm,18.0s,MS5.1
VSR MLR MLR
comp=N,1µm,24.0s
VSR MLR MLR
comp=E,890nm,14.0s
SOC Sochi 78.57 312 *eP* **P 21 55 46.2 +1.2**
SOC *e* 21 55 51.6
SOC *e**SP sP 21 55 56.4 -5.6
SOC *e* 21 58 42.2
SOC *ePPP* 22 00 29.6
SOC *eS* S 22 05 38.9 +0.1
SOC *e* 22 06 05.0
SOC *eSS* SS 22 10 43.7 +1.0
SOC *eSSS* 22 14 09.3
SOC pmax pmax
comp=Z,30nm,0.8s,mb5.3
SOC MLR MLR
comp=Z,4µm,17.0s,MS5.8
MOS Moscow 78.70 325 *eP* **P 21 55 44.5 -1.0**
MOS *e* pP 21 55 54.5 -3.3
MOS pmax pmax
comp=Z,100nm,1.0s,mb5.7
MOS MLR MLR
comp=E,3µm,18.0s
MOS MLR MLR
comp=Z,3µm,18.0s,MS5.7
LVZ Lovozero 78.96 337 PFAKE 21 56 00.0 +13
LVZ LR LR
comp=Z,3µm,19.0s,MS5.6
CASY Casey 79.21 186 *eP* **P 21 55 47.2 -0.7**
CASY *eS* S 22 05 39.8 -4.7
CASY Casey 79.21 186 *eP* **P 21 55 47.2 -0.7**
CASY *eS* S 22 05 39.8 -4.7
CASY LR LR
comp=Z,1µm,20.0s,MS5.3
OBN Obninsk 79.37 324*oeP* **P 21 55 48.7 -0.4**
OBN *e* pP 21 56 01.4 -0.1
OBN pmax pmax
comp=Z,66nm,0.9s,mb5.6
OBN MLR MLR
comp=Z,1µm,15.0s,MS5.4
OBN Obninsk 79.37 324⇑ *iP* **P 21 55 48.8 -0.3**
OBN LR LR
comp=Z,4µm,19.0s,MS5.8
APA Apatity 79.47 337⇑ *iP* **P 21 55 50.0 +0.5**
APA *e**PP pP 21 56 00.0 -1.8
APA *e* 21 58 49.0
APA *eS* S 22 06 02.0 +14
APA *ePS* 22 06 58.0
APA pmax pmax
comp=Z,27nm,1.0s,mb5.1
APA MLR MLR
comp=Z,3µm,22.0s,MS5.6
DRV Dumont d'Urvil 79.54 174 P **P 21 55 55.0 +5.3**
DRV S S 22 05 45.0 -3.0
DRV SS SS 22 10 48.0 -8.9
DRV L 22 17 00.0
DRV R 22 22 00.0
ANN Anapa 80.05 314 *eP* **P 21 55 51.4 -1.7**
ANN *eS* S 22 05 54.3 -0.2
ANN pmax pmax
comp=Z,119nm,1.1s,mb5.7
EGAK Eagle 80.32 26 *eP* **P 21 55 55.2 +1.1**
comp=Z,14nm,0.8s,mb5.0
EGAK LR LR
comp=Z,1µm,20.0s,MS5.2
RAR Rarotonga 80.57 114 PFAKE 21 56 10.0 +14
RAR LR LR
comp=Z,3µm,20.0s,MS5.7
JOF Joensuu 81.00 332 *ep* **P 21 55 57.1 -0.7**
comp=Z,15nm,0.7s,mb5.0
DAWY Dawson 81.19 26 *eP* **P 21 56 00.1 +1.3**
KEV Kevo 81.42 340 *eP* **P 21 56 00.6 +0.7**
KEV pmax pmax
comp=Z,14nm,0.8s,mb4.9
KEV MLR MLR
comp=Z,2µm,21.0s,MS5.5
KEV Kevo 81.42 340 *eP* **P 21 56 00.6 +0.7**
comp=Z,14nm,0.8s,mb5.0
KEV LR LR
comp=Z,2µm,21.0s,MS5.5
SPB4 Spitsbergen Ar 81.83 349 *eP* **P 21 56 03.8 +1.8**
ARCES ARCESS Array B 81.98 340 P **P 21 56 02.7 -0.1**
comp=Z,37nm,0.9s,mb5.3,baz=78,slow=6.3,SNR=33
ARCES LR LR 22 38 03.9
comp=Z,2µm,18.1s,MS5.5,baz=80,slow=40
ARE0 ARCESS Array S 81.98 340 *eP* **P 21 56 03.3 +0.5**
MIR Mirnyy 82.26 193⇓ *iP* **P 21 56 03.0 -1.2**
MIR *i* pP 21 56 13.0 -3.6
MIR pmax pmax
comp=Z,200nm,1.0s,mb6.0
KBS Kingsbay 82.34 350 PFAKE 21 56 20.0 +15
KBS LR LR
comp=Z,2µm,19.0s,MS5.4
SIM Simferopol' 82.36 314⇑ *eP* **P 21 56 04.3 -1.1**
SIM *eS* S 22 06 18.7 +0.2
SIM *ePS* 22 07 25.0
SIM pmax pmax
comp=Z,31nm,0.8s,mb5.3
SIM MLR MLR
comp=Z,2µm,18.2s,MS5.6
ABPO Ambohimpanom 83.19 249 *eP* **P 21 56 09.0 -1.1**
ABPO *e**PP pP 21 56 19.5 -3.0
ABPO pmax pmax
comp=Z,21nm,0.9s,mb5.2
ABPO MLR MLR
comp=Z,2µm,20.0s,MS5.4
ABPO Ambohimpanom 83.19 249 *eP* **P 21 56 08.9 -1.1**

comp=Z,20nm,0.9s,mb5.2
ABPO ep P pP 21 56 19.5 -3.0
ABPO LR LR
comp=Z,2µm,20.0s,MS5.4
KAF Kangasniemi 83.43 332 ep **P 21 56 09.8 -0.7**
comp=Z,19nm,0.7s,mb5.2
KAF Kangasniemi 83.43 332 eP **P 21 56 09.8 -0.7**
KAF pmax pmax
comp=Z,19nm,0.7s,mb5.2
BR131 Keskin Array S 83.64 309 eP **P 21 56 11.6 -0.5**
comp=Z,6.6nm,0.7s,mb4.9
BR131 LR LR
comp=Z,1µm,20.0s,MS5.3
BRTR Keskin Array B 83.64 309 P **P 21 56 11.6 -0.5**
comp=Z,7.7nm,0.8s,mb4.9,baz=123,slow=4.4,SNR=30
SKAG Skagway 84.05 30 eP **P 21 56 15.7 +2.0**
comp=Z,32nm,1.1s,mb5.4
VSU Vasula 84.11 329⇑ *i*P **P 21 56 13.3 -0.7**
MNK Minsk 84.45 324 eP **P 21 56 15.0 -0.9**
AKASG Malin Array Be 84.48 321 P **P 21 56 14.9 -1.2**
comp=Z,38nm,0.9s,mb5.5,baz=64,slow=4.8,SNR=84
AKASG LR LR 22 38 01.1
comp=Z,3µm,21.2s,MS5.7,baz=105,slow=39
AKBB Malin Array Si 84.48 321 eP **P 21 56 15.6 -0.5**
KIEV Kiev 84.49 321 eP **P 21 56 15.7 -0.5**
KIEV pmax pmax
comp=Z,44nm,1.0s,mb5.5
KIEV MLR MLR
comp=Z,3µm,21.0s,MS5.7
KIEV Kiev 84.49 321 eP **P 21 56 15.7 -0.5**
comp=Z,44nm,1.0s,mb5.5
KIEV LR LR
comp=Z,3µm,21.0s,MS5.7
CSS Prodhromos 84.79 304 eP **P 21 56 18.2 +0.1**
comp=Z,138nm,0.9s,mb6.1
CSS LR LR
comp=Z,3µm,20.0s,MS5.6
KIS Kishinev 85.57 317 eP **P 21 56 20.0 -1.7**
KIS e pP 21 56 31.0 -3.1
KIS e 21 56 39.0
KIS e 21 59 46.0
KIS ePPP 22 01 40.0
KIS e 22 06 41.0
KIS eS S 22 06 48.0 -2.7
KIS ePS 22 07 48.0
KIS pmax pmax
comp=Z,144nm,1.6s,mb6.0
KIS pmax pmax
comp=Z,900nm,15.0s
KIS MLR MLR
comp=E,2µm,20.0s
KIS MLR MLR
comp=Z,2µm,20.0s,MS5.5
KIS MLR MLR
comp=Z,2µm,20.0s
KIS Kishinev 85.57 317 eP **P 21 56 20.0 -1.7**
comp=Z,100nm,1.6s,mb5.8
KIS Kishinev 85.57 317 ePP PP 21 59 46.0 +5.6
TLCR 86.00 315⇓ *i*P **P 21 56 23.3 -0.5**
TLCR 86.00 315 ⇓P **P 21 56 23.3 -0.5**
WRAK Wrangell Islan 86.39 33 PFAKE 21 56 40.0 +14
WRAK LR LR
comp=Z,2µm,22.0s,MS5.3
TIRR Tirgusor 86.44 315⇓ *i*P **P 21 56 25.0 -1.0**
TIRR Tirgusor 86.44 315 ⇓P **P 21 56 25.0 -1.1**
DLBC Dease Lake 86.97 31 P **P 21 56 29.6 +1.3**
comp=Z,2.9nm,0.9s,mb4.5,baz=303,slow=9.6,SNR=2.3
DLBC LR LR 22 29 22.4
comp=Z,942nm,21.9s,MS5.2,baz=26,slow=31
SUW Suwalki 87.21 325 eP **P 21 56 28.8 -0.8**
SUW Suwalki 87.21 325 eP **P 21 56 28.8 -0.8**
VRI Vrincioaia 87.25 316⇑ *i*P **P 21 56 32.7 +2.8**
VRI Vrincioaia 87.25 316 ⇑P **P 21 56 32.7 +2.7**
PLOR Plostina 87.31 316⇓ *i*P **P 21 56 30.6 +0.4**
BURAR Bucovina Array 87.79 318⇑ *i*P **P 21 56 32.5 0.0**
BURAR Bucovina Array 87.79 318 ⇑P **P 21 56 32.5 0.0**
BUR08 Bucovina Ar. S 87.79 318 eP **P 21 56 32.6 +0.1**
MLR Muntele Rosu 87.88 316 P **P 21 56 32.3 -0.7**
comp=Z,11nm,0.9s,mb5.1,baz=119,slow=19,SNR=9.0
MLR Muntele Rosu 87.88 316⇓ *i*P **P 21 56 33.3 +0.3**
MLR Muntele Rosu 87.88 316 ⇓P **P 21 56 33.3 +0.3**
LVV L'vov 87.93 321 eP **P 21 56 32.8 -0.3**
LVV eS S 22 07 08.8 -4.5
VOIR 88.50 316⇑ *i*P **P 21 56 41.0 +5.1**
VOIR 88.50 316 ⇑P **P 21 56 41.0 +5.1**
DAG Danmarks Havn 88.58 352⇓ *i*P **P 21 56 34.7 -1.0**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
DAG Danmarks Havn 88.58 352⇓ *i*P **P 21 56 34.7 -1.0**
comp=Z,10nm,0.8s,mb5.2
KWP Kalwaria 88.81 321 eP **P 21 56 37.6 +0.3**
KWP Kalwaria 88.81 321⇑ *i*P **P 21 56 37.7 +0.5**
KWP Kalwaria 88.81 321 eP **P 21 56 37.6 +0.4**
KWP LR LR
comp=Z,5µm,20.0s,MS5.9
PPT Papeete 88.92 108 eLQ 22 21 15.3
comp=Z,2µm,27.8s
PPT eLR LR 22 24 38.8
comp=Z,3µm,22.2s,baz=291
PPT Papeete 88.92 108 LR LR 22 29 02.9
comp=Z,2µm,20.2s,MS5.5,baz=265,slow=30
KOLS Kolonicke sedl 89.29 320 eP **P 21 56 39.8 +0.3**
KOLS pmax pmax
comp=Z,54nm,2.0s,mb5.5
KOLS Kolonicke sedl 89.29 320 eP **P 21 56 39.8 +0.3**
comp=Z,54nm,2.0s,mb5.5
TRPA Tarpa 89.37 319⇓ *i*P **P 21 56 43.7 +3.8**
UZH Uzhgorod 89.37 320⇓ *i*P **P 21 56 40.3 +0.4**
UZH *i* 21 56 47.3
UZH *i* pP 21 56 53.0 +0.6
UZH MLR MLR
comp=N,2µm,17.0s,MS5.8
UZH MLR MLR
comp=E,2µm,17.0s,MS5.8
UZH MLR MLR
comp=Z,2µm,17.0s,MS5.5
RES Resolute Bay 89.57 10 eP **P 21 56 40.7 +0.4**
RES pmax pmax
comp=Z,17nm,0.9s,mb5.4
RES Resolute Bay 89.57 10 eP **P 21 56 40.7 +0.4**
comp=Z,17nm,0.9s,mb5.4
STHS Stebnicka Huta 89.78 321 eP **P 21 56 42.5 +0.7**
STHS e pP 21 56 53.5 -0.8
STHS pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
STHS Stebnicka Huta 89.78 321 eP **P 21 56 42.5 +0.7**
comp=Z,10nm,1.0s,mb5.1
STHS e pP 21 56 53.5 -0.8
CRVS Cervenica-Dubn 89.81 320 *i* P **P 21 56 41.0 -1.0**
CRVS e pP 21 56 55.2 +0.7
CRVS pmax pmax
comp=Z,45nm,1.1s,mb5.7
CRVS MLR MLR
comp=Z,2µm,19.3s,MS5.5
CRVS Cervenica-Dubn 89.81 320 *i* P **P 21 56 41.0 -1.0**
CRVS ep P pP 21 56 55.2 +0.7
CRVS eS S 22 07 18.2 -13
CRVS Cervenica-Dubn 89.81 320 *i* P **P 21 56 41.0 -1.0**
comp=Z,45nm,1.1s,mb5.7
CRVS e pP 21 56 55.2 +0.7
CRVS eS S 22 07 18.2 -13
CRVS LR LR
comp=Z,2µm,19.3s,MS5.5
NIE Niedzica 90.35 321 eP **P 21 56 44.9 +0.4**
OJC Ojcow 90.40 322 eP **P 21 56 44.5 -0.2**
OJC Ojcow 90.40 322 eP **P 21 56 44.6 -0.1**
NOA NORSAR Array B 90.56 334 P **P 21 56 43.6 -1.6**
comp=Z,14nm,0.8s,mb5.3,baz=64,slow=4.7,SNR=27
NOA LR LR 22 41 15.9
comp=Z,3µm,18.6s,MS5.8,baz=50,slow=38
BZS Buzias 90.75 317⇑ *i*P **P 21 56 46.3 -0.1**
BZS Buzias 90.75 317 ⇑P **P 21 56 46.2 -0.2**
PSZ Piszkesteto 91.12 320 eP **P 21 56 48.4 +0.3**
PSZ pmax pmax
comp=Z,40nm,1.5s,mb5.5
PSZ MLR MLR
comp=Z,3µm,20.0s,MS5.7
PSZ Piszkesteto 91.12 320⇑ eP **P 21 56 48.1 0.0**
PSZ Piszkesteto 91.12 320⇑ *i*P **P 21 56 48.4 +0.3**
PSZ Piszkesteto 91.12 320 eP **P 21 56 48.4 +0.3**
comp=Z,40nm,1.5s,mb5.5
PSZ LR LR
comp=Z,3µm,20.0s,MS5.7
BSD Bornholm Skovb 91.33 327 *i* P **P 21 56 48.6 -0.3**
comp=Z,40nm,0.9s,mb5.7
BSD
comp=Z,4µm,17.0s
OKC Ostrava-Krasne 91.53 322 eP **P 21 56 50.0 +0.1**
OKC eSKS 22 07 16.5
OKC eS S 22 07 46.3 -0.5
OKC AMS AMS 22 40 50.0
comp=Z,3µm,19.4s
OKC Ostrava-Krasne 91.53 322 eP **P 21 56 50.0 +0.1**
OKC eSKS 22 07 16.5
OKC eS S 22 07 46.3 -0.5
VYHS Vyhne 91.58 320 *i* P **P 21 56 50.2 0.0**
VYHS e pP 21 56 59.7 -3.0
VYHS eS S 22 07 40.3 -7.0
VYHS pmax pmax
comp=Z,40nm,2.2s,mb5.4
VYHS MLR MLR
comp=Z,1µm,19.5s,MS5.4
VYHS Vyhne 91.58 320 *i* P **P 21 56 50.2 0.0**
VYHS ep P pP 21 56 59.7 -3.0
VYHS eS S 22 07 40.3 -7.0
VYHS Vyhne 91.58 320 *i* P **P 21 56 50.2 0.0**
comp=Z,40nm,2.2s,mb5.4
VYHS e pP 21 56 59.7 -3.0
VYHS eS S 22 07 40.3 -7.0
VYHS LR LR
comp=Z,1µm,19.5s,MS5.4
BUD Budapest 91.82 319⇓ *e*P **P 21 56 52.0 +0.7**
KOLL Kolacno 91.82 321 eP **P 21 56 51.3 0.0**
KOLL ep P pP 21 57 03.0 -0.9
KONO Kongsberg 91.92 333 PFAKE 21 57 00.0 +8.5
KONO LR LR
comp=Z,4µm,20.0s,MS5.9
VNDA Vanda 92.10 173 P **P 21 56 51.2 -0.7**
comp=Z,4.7nm,0.7s,mb5.0,baz=315,slow=5.7,SNR=27
VNDA PP PP 22 00 32.5 +0.3
comp=Z,2.1nm,0.8s,baz=335,slow=7.9,SNR=2.8
VNDA LR LR 22 40 26.8
comp=Z,1µm,18.7s,MS5.3,baz=342,slow=37
VNDA Vanda 92.10 173 P **P 21 56 51.2 -0.7**
VNDA 22 00 32.5
YKA Yellowknife Ar 92.14 24 P **P 21 56 53.0 +0.5**
comp=Z,2.2nm,0.9s,mb4.5,baz=299,slow=4.6,SNR=17
YKA PP PP 22 00 35.5 +3.2
comp=Z,1.3nm,1.0s,baz=298,slow=7.6,SNR=3.8
YKA PKKP PKKPbc 22 14 07.4 -2.9
comp=Z,0.2nm,0.7s,baz=128,slow=2.8,SNR=5.4
YKA LR LR 22 45 08.5
comp=Z,324nm,18.5s,MS4.8,baz=155,slow=40
YKA Yellowknife Ar 92.14 24 P **P 21 56 53.0 +0.5**
YKA 22 00 35.5
YKA 22 14 07.4
YKA Yellowknife Ar 92.14 24 P **P 21 56 53.0 +0.5**
YKA PP PP 22 00 35.5 +3.2
YKA PKKP PKKPbc 22 14 07.4 -2.9
YKA LR LR 22 45 08.5
KSP Ksiaz 92.25 323 eP **P 21 56 53.0 -0.3**
KSP eS S 22 08 00.0 +6.7
KSP ePS PS 22 09 11.0 +2.3
KSP MLR MLR
comp=Z,7µm,17.2s,MS6.2
DPC Dobruska-Polom 92.43 323 eP **P 21 56 53.9 -0.2**
DPC e 22 07 24.9
DPC MLR MLR
comp=Z,3µm,18.1s,MS5.8
DPC Dobruska-Polom 92.43 323 eP **P 21 56 53.9 -0.2**
DPC eSKS 22 07 24.9
DPC eS S 22 08 04.2 +9.4
DPC AMS AMS 22 42 10.0
comp=Z,3µm,18.1s
PKSM Moragy 92.51 318⇑ *i*P **P 21 56 54.3 -0.3**
PKSM Moragy 92.51 318 ⇑P **P 21 56 54.3 -0.2**
UPC Upice 92.55 323 eP **P 21 56 54.7 0.0**
VRAC Vranov 92.66 322⇓ *i*P **P 21 56 56.4 +1.2**
VRAC Vranov 92.66 322 ⇓P **P 21 56 56.4 +1.2**
SBA Scott Base 93.01 172 PFAKE 21 57 10.0 +14
SBA LR LR
comp=Z,834nm,19.0s,MS5.2
TREC Trest 93.34 322 eP pP 21 57 08.1 -2.7
TREC MLR MLR
comp=Z,3µm,19.6s,MS5.8
TREC Trest 93.34 322 epP pP 21 57 08.1 -2.7
TREC AMS AMS 22 41 50.0
comp=Z,3µm,19.6s
TIR Tirane 93.35 313 PFAKE 21 57 10.0 +11
TIR LR LR
comp=Z,2µm,21.0s,MS5.6
PVCC Panska Ves 93.39 323 eP **P 21 56 58.4 -0.1**
PVCC eS S 22 08 11.4 +8.1
PVCC AMS AMS 22 42 10.0
comp=Z,4µm,16.1s
BRG Berggiesshubel 93.61 324 *i* P **P 21 56 59.5 0.0**
BRG *i* pP 21 57 11.4 -0.6
BRG S S 22 08 00.0 -5.3
BRG PS PS 22 09 22.0 -1.6
BRG pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
BRG MLR MLR
comp=Z,2µm,17.4s,MS5.7
BRG Berggiesshubel 93.61 324 *i* P **P 21 56 59.5 0.0**
comp=Z,13nm,1.1s,mb5.2
BRG *i* pP 21 57 11.4 -0.7
comp=Z,35nm,1.7s
BRG PP PP 22 00 39.0 -5.2
BRG S S 22 08 00.0 -5.3
BRG PS PS 22 09 22.0 -1.6
BRG SS SS 22 14 14.0 -8.7
BRG
comp=N,3µm,20.0s
BRG
comp=E,2µm,20.9s
BRG
comp=Z,4µm,17.4s
BRG Berggiesshubel 93.61 324 *i* P **P 21 56 59.5 0.0**
comp=Z,7.7nm,1.1s,mb5.0
BRG *i* pP 21 57 11.4 -0.7
BRG PP PP 22 00 39.0 -5.2
BRG S S 22 08 00.0 -5.3
BRG PS PS 22 09 22.0 -1.6
BRG SS SS 22 14 14.0 -8.7
BRG LR LR
comp=Z,2µm,17.4s,MS5.7
PRU Pruhonice 93.62 323 eP **P 21 56 59.8 +0.2**
PRU e 22 07 33.5
PRU MLR MLR
comp=Z,3µm,13.0s,MS5.9
PRU Pruhonice 93.62 323 eP **P 21 56 59.8 +0.2**
PRU eSKS 22 07 33.5
PRU ex x 22 08 15.3
PRU AMS AMS 22 42 10.0
comp=Z,3µm,13.0s
CONA Conrad Observa 93.64 321⇓ *i*PcP PcP 21 57 00.8 +0.5
comp=Z,23nm,1.4s
CSNA Conrad Observa 93.64 321⇓ *i*PcP PcP 21 57 00.8 +0.5
comp=Z,21nm,1.3s
CLL Collm 93.97 324⇑ *i*P **P 21 57 00.7 -0.5**
CLL pmax pmax
comp=Z,23nm,1.4s,mb5.4
CLL MLR MLR
comp=Z,4µm,17.9s,MS5.9
CLL Collm 93.97 324⇑ *i*P **P 21 57 00.7 -0.5**
comp=Z,23nm,1.4s,mb5.4
CLL ePP PP 22 00 54.0 +7.0
CLL ePPPP 22 04 42.0
CLL eSS SS 22 14 48.0 +20
CLL LmH 22 40 00.0
comp=N,2µm,21.5s
CLL LmH 22 40 00.0
comp=E,2µm,19.4s
KHC Kasperske Hory 94.55 322 eP **P 21 57 02.8 -1.1**
KHC ex x 21 57 23.5
KHC eSKS 22 07 44.6
KHC eS S 22 08 23.2 +10
KHC AMS AMS 22 42 50.0
comp=E,3µm,12.6s
SUMG Summit 94.58 355 eP **P 21 57 04.5 +0.9**
comp=E,8.0nm,1.0s,mb5.1
GERES GERESS Array B 94.59 322 P **P 21 57 03.7 -0.4**
comp=E,2.8nm,0.9s,mb4.7,baz=86,slow=5.5,SNR=9.8
GERES LR LR 22 43 14.6
comp=E,3µm,18.9s,MS5.7,baz=346,slow=38
PERS Pernice 94.61 320 *i* P **P 21 57 04.1 -0.2**
SOKA Soboth 94.65 320⇑ *i*PcP PcP 21 57 04.2 -0.6
comp=E,7.7nm,1.0s
NKC Novy Kostel 94.74 324 eP **P 21 57 05.3 +0.5**
NKC eSKS 22 07 59.0
NKC eS S 22 08 22.6 +7.4
NKC ex x 22 07 59.0
NKC AMS AMS 22 43 00.0
comp=E,4µm,15.5s
NKC Novy Kostel 94.74 324 eP **P 21 57 05.3 +0.5**
NKC eSKS 22 07 59.0
NKC eS S 22 08 22.6 +7.4
BOJS Bojanci 94.97 319 eP **P 21 57 08.2 +2.3**
MOX Moxa 95.04 324 eP **P 21 57 04.5 -1.6**
comp=E,11nm,1.1s,mb5.2
MOX
comp=Z,3µm,18.0s
MOX Moxa 95.04 324 eP **P 21 57 04.5 -1.6**
MOX pmax pmax
comp=Z,11nm,1.1s,mb5.2
MOX MLR MLR
comp=Z,3µm,18.0s,MS5.8
VISS Visnje 95.12 319 *i* P **P 21 57 06.6 0.0**
CEY Cerknica 95.41 319 eP **P 21 57 07.6 -0.3**
KBA Koelnbreinsper 95.55 321⇑ *i*P **P 21 57 07.4 -1.1**
comp=Z,8.1nm,1.1s,mb5.0
JAVS Javornik 95.58 319 *i* P **P 21 57 07.9 -0.8**
VOY Vojsko 95.63 319 eP **P 21 57 08.1 -0.8**
VOY e pP 21 57 22.5 +1.1
GRA1 Grafenberg Arr 95.69 323 eP **P 21 57 09.2 +0.1**
comp=Z,11nm,1.2s,mb5.2
GRA1 epP pP 21 57 20.7 -0.9
GRF Grafenberg Arr 95.69 323 eP **P 21 57 09.2 +0.1**
GRF e*PP pP 21 57 20.7 -0.9
GRF pmax pmax
comp=Z,11nm,1.2s,mb5.2
GRF Grafenberg Arr 95.69 323 eP **P 21 57 09.2 +0.1**
GRF e*PP pP 21 57 20.7 -0.9
GRF pmax pmax
comp=Z,11nm,1.2s,mb5.2
GRF Grafenberg Arr 95.69 323 eP **P 21 57 09.2 +0.1**
comp=Z,11nm,1.2s,mb5.2
GRF epP pP 21 57 20.7 -0.9
COR Corvallis 95.93 42 PFAKE 21 57 20.0 +10
COR LR LR
comp=Z,3µm,22.0s,MS5.7
TAOE Nuku Hiva Isla 96.06 98 eLR LR 22 28 18.1
comp=Z,12µm,21.3s,baz=272
WTTA Wattenberg 96.52 321⇑ *i*PcP PcP 21 57 12.7 -0.3
comp=Z,19nm,1.1s
CUC Castrocucco 96.71 313 PFAKE 21 57 30.0 +16
CUC LR LR
comp=Z,3µm,20.0s,MS5.7
HUMO Hull Mountain 96.95 44 PFAKE 21 57 30.0 +15
HUMO LR LR
comp=Z,2µm,20.0s,MS5.7
CEL Celeste 97.30 312 PFAKE 21 57 30.0 +13
CEL LR LR
comp=Z,1µm,21.0s,MS5.3
AQU L'Aquila 97.46 316 PFAKE 21 57 30.0 +13
AQU LR LR
comp=Z,2µm,19.0s,MS5.7
YBH Yreka Blue Hor 97.47 45 PFAKE 21 57 30.0 +13
YBH LR LR
comp=Z,2µm,21.0s,MS5.6
HAWA Hanford 97.56 39 PFAKE 21 57 30.0 +12
HAWA LR LR
comp=Z,1µm,20.0s,MS5.5
DAVOX Davos/Dischmat 97.81 321 P **P 21 57 18.7 0.0**
comp=Z,7.6nm,0.9s,mb5.2,baz=123,slow=5.2,SNR=7.6
DAVOS Davos 97.84 321 P **P 21 57 18.7 -0.2**
BFO Black Forest 98.01 323 PFAKE 21 57 30.0 +10
BFO LR LR
comp=Z,2µm,20.0s,MS5.7
WDC Whiskeytown Da 98.05 46 PFAKE 21 57 30.0 +10
WDC LR LR
comp=Z,3µm,22.0s,MS5.8
NEW Newport 98.14 37 PFAKE 21 57 30.0 +10
NEW LR LR
comp=Z,2µm,21.0s,MS5.5
MEM Membach 98.20 326 P **P 21 57 20.5 +0.1**
TUE Stuetta 98.28 321 PFAKE 21 57 30.0 +9.1
TUE LR LR
comp=Z,5µm,20.0s,MS6.0
HOPS Hopland 98.31 47 PFAKE 21 57 30.0 +8.8
HOPS LR LR
comp=Z,2µm,19.0s,MS5.7
CDF Champ du Feu 98.59 324 eP **P 21 57 20.6 -1.6**
comp=Z,58nm,1.4s,mb5.6
CDF Champ du Feu 98.59 324 eP **P 21 57 20.6 -1.6**
CDF pmax pmax
comp=Z,29nm,1.4s,mb5.6
CDF Champ du Feu 98.59 324 eP **P 21 57 20.6 -1.6**
comp=Z,29nm,1.4s,mb5.6
WLF Walferdange 98.60 325 P **P 21 57 23.5 +1.3**
comp=Z,27nm,1.6s,mb5.5
WLF Walferdange 98.60 325 PFAKE 21 57 30.0 +7.8
WLF LR LR
comp=Z,3µm,20.0s,MS5.8
VLC Villacollemand 98.68 319 PFAKE 21 57 30.0 +7.3
VLC LR LR
comp=Z,2µm,19.0s,MS5.7
MCCM Marconi Confer 98.78 48 PFAKE 21 57 40.0 +17
MCCM LR LR
comp=Z,2µm,21.0s,MS5.7
UCC Uccle 98.99 327 P **P 21 57 23.2 -0.8**
MOD Modoc 99.04 44 PFAKE 21 57 40.0 +16
MOD LR LR
comp=Z,2µm,21.0s,MS5.5
HINF Hinteralfeld 99.13 323 eP **P 21 57 24.3 -0.3**
WDD Wield Dalam 99.22 310 PFAKE 21 57 40.0 +15
WDD LR LR
comp=Z,966nm,21.0s,MS5.3
DOU Dourbes 99.24 326 P **P 21 57 25.2 +0.2**
comp=Z,29nm,3.4s
HAU Haudompre 99.33 324 eP **P 21 57 25.0 -0.5**
BMO Blue Mountains 99.66 40 PFAKE 21 57 40.0 +13
BMO LR LR
comp=Z,2µm,21.0s,MS5.6
MEZF Maizieres J'vi 99.82 324 eP Pdif 21 57 26.4 -1.1
WVOR Wild Horse Val 99.92 43 PFAKE 21 57 40.0 +12
WVOR LR LR
comp=Z,2µm,21.0s,MS5.5
SYO Syowa Base 100.00 201⇓ *es*Pdiff 21 57 44.0
ESK Eskdalemuir 100.06 333 PFAKE 21 57 40.0 +11
ESK LR LR
comp=Z,4µm,20.0s,MS5.9
LSZ Lusaka 100.14 257 PFAKE 21 57 40.0 +11
LSZ LR LR
comp=Z,3µm,21.0s,MS5.8
CABF La Chapelle 100.18 322 eP Pdif 21 57 30.2 +1.0
LPG La Plagne 100.33 321 eP Pdif 21 57 29.9 +0.1
comp=Z,29nm,1.1s
LPG La Plagne 100.33 321 eP Pdif 21 57 29.9 +0.1
LPG pmax pmax
comp=Z,14nm,1.1s
LPG La Plagne 100.33 321 eP Pdif 21 57 29.9 +0.1
comp=Z,14nm,1.1s
LPL La Plagne 100.34 321 eP Pdif 21 57 29.9 +0.1
comp=Z,35nm,1.3s
LPL La Plagne 100.34 321 eP Pdif 21 57 29.9 +0.1
LPL pmax pmax
comp=Z,18nm,1.3s
LPL La Plagne 100.34 321 eP Pdif 21 57 29.9 +0.1
comp=Z,18nm,1.3s
SAO San Andreas Ge 100.38 49 PFAKE 21 57 40.0 +10
SAO LR LR
comp=Z,3µm,21.0s,MS5.7
BNI Bardonecchia 100.60 321 PFAKE 21 57 40.0 +9.0
BNI LR LR
comp=Z,3µm,19.0s,MS5.8
CMB Columbia Colle 100.62 47 PFAKE 21 57 40.0 +8.9
CMB LR LR
comp=Z,2µm,20.0s,MS5.6
SBF Sospel 100.70 320 eP Pdif 21 57 31.3 -0.2
comp=Z,31nm,1.0s
SBF Sospel 100.70 320 eP Pdif 21 57 31.3 -0.2
SBF pmax pmax
comp=Z,16nm,1.0s
SBF Sospel 100.70 320 eP Pdif 21 57 31.3 -0.2
comp=Z,16nm,1.0s
MSO Missoula 100.73 37 PFAKE 21 57 40.0 +8.4
MSO LR LR
comp=Z,794nm,21.0s,MS5.2
LOR Lormes 101.15 324 eP Pdif 21 57 33.5 0.0
comp=Z,48nm,1.4s
LOR Lormes 101.15 324 eP Pdif 21 57 33.5 0.0
LOR pmax pmax
comp=Z,24nm,1.4s
LOR Lormes 101.15 324 eP Pdif 21 57 33.5 0.0

comp=Z,24nm,1.4s
SSF Saint Saulge 101.46 324 *e*P Pdif 21 57 34.8 -0.1
SMF Signal de Mont 101.49 323 *e*P Pdif 21 57 35.4 +0.4
AVF Avril sur Loir 101.70 324 *e*P Pdif 21 57 37.0 +1.1
BMN Battle Mountai 101.77 44 PFAKE 21 57 50.0 +14
BMN LR LR
comp=Z,2μm,22.0s,MS5.5
NVAR Mina Array Bea 101.93 46 P Pdif 21 57 40.0 +3.1
comp=Z,0.6nm,0.7s,baz=280,slow=7.0,SNR=4.0
FFC Flin Flon 102.09 26 PFAKE 21 57 50.0 +12
FFC LR LR
comp=Z,1μm,21.0s,MS5.4
HLID Hailey 102.10 40 PFAKE
HLID LR LR
comp=Z,2μm,20.0s,MS5.6
BGF Bois d'Agland 102.12 324 *e*P Pdif 21 57 36.2 -1.6
comp=Z,10nm,0.7s
BGF Bois d'Agland 102.12 324 *e*P Pdif 21 57 36.2 -1.6
BGF pmax pmax
comp=Z,5.0nm,0.7s
BGF Bois d'Agland 102.12 324 *e*P Pdif 21 57 36.2 -1.6
comp=Z,5.1nm,0.7s
EGMT Eagleton 102.47 34 PFAKE 21 57 50.0 +11
EGMT LR LR
comp=Z,1μm,21.0s,MS5.4
BOZ Bozeman (W) 102.71 37 PFAKE 21 57 50.0 +10
BOZ LR LR
comp=Z,796nm,22.0s,MS5.2
TPH Tonopah 102.85 46 PFAKE 21 57 50.0 +9.0
TPH LR LR
comp=Z,2μm,22.0s,MS5.6
ELK Elko 102.96 43 PFAKE 21 57 50.0 +8.5
ELK LR LR
comp=Z,2μm,20.0s,MS5.7
DAC Darwin (Calif) 103.39 48 PFAKE 21 58 00.0 +17
DAC LR LR
comp=Z,3μm,22.0s,MS5.8
RKT Rikitea 103.40 111 *e*S Sdif 22 09 36.1 +7.9
comp=Z,1μm,23.5s
RKT Rikitea 103.40 111 *e*LQ 22 27 21.2
comp=Z,1μm,35.5s
RKT *e*LR LR 22 31 31.0
comp=Z,3μm,27.2s,baz=294
LBTB Lobatse 104.02 247 PFAKE 21 58 00.0 +14
LBTB LR LR
comp=Z,3μm,21.0s,MS5.8
LKWY Lake 104.03 38 PFAKE 21 58 00.0 +14
LKWY LR LR
comp=Z,1μm,22.0s,MS5.4
TPNV Topopah Spring 104.05 47 PFAKE 21 58 00.0 +14
TPNV LR LR
comp=Z,2μm,19.0s,MS5.6
RLMT Red Lodge 104.39 37 PFAKE 21 58 00.0 +12
RLMT LR LR
comp=Z,1μm,21.0s,MS5.5
AHID Auburn Hatcher 104.59 39 PFAKE 21 58 00.0 +11
AHID LR LR
comp=Z,2μm,19.0s,MS5.6
BOSA Boshof 104.74 243 PFAKE 21 58 00.0 +11
BOSA LR LR
comp=Z,2μm,21.0s,MS5.7
DUG Dugway 104.84 42 PFAKE 22 02 20.0 +15
DUG LR LR
comp=Z,1μm,20.0s,MS5.5
DGMT Dagmar 105.16 32 PFAKE 22 02 20.0 +14
DGMT LR LR
comp=Z,1μm,22.0s,MS5.5
PFO Pinyon Flat Ob 105.42 50 PFAKE 22 02 20.0 +13
PFO LR LR
comp=Z,2μm,21.0s,MS5.6
BW06 Boulder Array 105.54 39 PFAKE 22 02 20.0 +13
BW06 LR LR
comp=Z,2μm,22.0s,MS5.6
PDAR Pinedale Array 105.54 39 PP PP 22 02 14.4 -0.6
comp=Z,1.0nm,0.9s,baz=292,slow=4.3,SNR=4.7
MVU Marysvale 106.10 44 PFAKE 22 02 20.0 +12
MVU LR LR
comp=Z,1μm,19.0s,MS5.5
ULM Lac du Bonnet 107.90 26 PFAKE 22 02 20.0 +9.3
ULM LR LR
comp=Z,2μm,22.0s,MS5.6
RSSD Black Hills 107.99 35 PFAKE 22 02 20.0 +8.9
RSSD LR LR
comp=Z,739nm,19.0s,MS5.3
WUAZ Wupatki 108.19 46 PFAKE 22 02 20.0 +8.3
WUAZ LR LR
comp=Z,2μm,21.0s,MS5.6
SUR Sutherland 108.87 240 PFAKE 22 02 20.0 +7.0
SUR LR LR
comp=Z,2μm,20.0s,MS5.8
MVCO Mesa Verde 109.28 43 PFAKE 22 02 30.0 +16
MVCO LR LR
comp=Z,2μm,21.0s,MS5.7
AGMN Agassiz Refuge 109.33 28 PFAKE 22 02 30.0 +17
AGMN LR LR
comp=Z,1μm,21.0s,MS5.5
ISCO Idaho Springs 109.67 40 PFAKE 22 02 30.0 +16
ISCO LR LR
comp=Z,2μm,20.0s,MS5.7
ESDC Sonseca Array 110.13 321 PP PP 22 02 41.1 -7.5
comp=Z,0.8nm,0.7s,baz=40,slow=8.4,SNR=4.5
ESLA Sonseca Array 110.13 321 PFAKE 22 02 30.0 +15
ESLA LR LR
comp=Z,8μm,20.0s,MS6.3
TUC Tucson 110.23 49 PFAKE 22 02 30.0 +14
TUC LR LR
comp=Z,2μm,20.0s,MS5.7
PAB San Pablo 110.44 321 PFAKE 22 02 30.0 +14
PAB LR LR
comp=Z,1μm,21.0s,MS5.5
TSUM Tsumeb 110.73 254 PFAKE 22 02 30.0 +13
TSUM LR LR
comp=Z,2μm,19.0s,MS5.7
SDCO Great Sand Dun 110.94 41 PFAKE 22 02 30.0 +13
SDCO LR LR
comp=Z,2μm,22.0s,MS5.6
OGNE Ogallala 111.13 37 PFAKE 22 02 30.0 +13
OGNE LR LR
comp=Z,1μm,21.0s,MS5.5
EYMN Ely 111.53 26 PFAKE 22 02 30.0 +12
EYMN LR LR
comp=Z,2μm,22.0s,MS5.5
TAM Tamanrasset 111.64 301 PFAKE 22 02 30.0 +11
TAM LR LR
comp=Z,1μm,21.0s,MS5.4
MTE Manteigas 111.84 323 PFAKE 22 02 30.0 +12
MTE LR LR
comp=Z,2μm,19.0s,MS5.8
ANMO Albuquerque 111.90 44 PFAKE 22 02 30.0 +11
ANMO LR LR
comp=Z,2μm,21.0s,MS5.6
ECSD EROS,Sioux Fal 112.25 32 PFAKE 22 02 30.0 +11
ECSD LR LR
comp=Z,1μm,20.0s,MS5.4
SCHQ Schefferville 112.25 8 PFAKE 22 02 30.0 +11
SCHQ LR LR
comp=Z,2μm,21.0s,MS5.7
SFS San Fernando 113.47 319 PFAKE 22 02 30.0 +8.3
SFS LR LR
comp=Z,3μm,19.0s,MS5.9
CBKS Cedar Bluff 113.86 37 PFAKE 22 02 30.0 +7.7
CBKS LR LR
comp=Z,1μm,22.0s,MS5.5
AMTX Amarillo 115.12 42 PFAKE 22 02 40.0 +15
AMTX LR LR
comp=Z,3μm,22.0s,MS5.8
SCIA State Center 115.29 31 PFAKE 22 02 40.0 +15
SCIA LR LR
comp=Z,1μm,19.0s,MS5.5
RTC Rabat Centre 115.39 317 PFAKE 22 02 40.0 +15
RTC LR LR
comp=Z,902nm,20.0s,MS5.4
KSU1 Kansas State U 115.47 35 PFAKE 22 02 40.0 +15
KSU1 LR LR
comp=Z,1μm,19.0s,MS5.5
JFWS Jewell Farm 115.97 29 PFAKE 22 02 40.0 +14
JFWS LR LR
comp=Z,2μm,21.0s,MS5.6
GLMI Grayling 116.86 24 PFAKE 22 02 40.0 +12
GLMI LR LR
comp=Z,1μm,20.0s,MS5.5
TXAR Lajitas Array 116.99 48 PKP PKPdf 22 02 28.7 +0.1
comp=Z,1.2nm,0.7s,baz=135,slow=0.5,SNR=12
TXAR PKKPbc PKKPbc 22 12 54.5 +0.2
comp=Z,0.6nm,1.0s,baz=179,slow=5.0,SNR=4.5
WMOK Wichita Mounta 117.07 40 PFAKE 22 02 40.0 +11
WMOK LR LR
comp=Z,2μm,21.0s,MS5.8
HDIL Hopedale 118.25 30 PFAKE 22 02 40.0 +9.2
HDIL LR LR
comp=Z,1μm,20.0s,MS5.5
TOA0 Torodi Ar. Sit 118.80 293 *e*PKPdf PKPdf 22 02 31.3 -1.2
TORD Torodi Ar. Bea 118.80 293 PKP PKPdf 22 02 31.1 -1.4
comp=Z,3.7nm,0.9s,baz=42,slow=1.8,SNR=20
TORD PP PP 22 03 40.3 -11
comp=Z,2.8nm,0.9s,baz=71,slow=6.5,SNR=3.6
TORD PKKPbc PKKPbc 22 12 51.4 +3.8
comp=Z,1.2nm,0.9s,baz=239,slow=2.8,SNR=4.4
TORD PKKPab PKKPab 22 13 00.3 +9.4
comp=Z,2.6nm,1.0s,baz=268,slow=3.7,SNR=4.1
TORD Torodi Ar. Bea 118.80 293 PKP PKPdf 22 02 31.1 -1.4
TORD PP PP 22 03 40.3 -11
TORD PKKPbc PKKPbc 22 12 51.4 +3.8
TORD PKKPab PKKPab 22 13 00.3 +9.4
JCT Junction City 119.05 45 *e*PKIKP PKPdf 22 02 32.8 +0.2
JCT *e* 22 02 44.2
JCT MLR MLR
comp=Z,1μm,22.0s,MS5.5
CCM Cathedral Cave 119.16 33 PFAKE 22 02 40.0 +7.4
CCM LR LR
comp=Z,1μm,19.0s,MS5.5
AAM Ann Arbor 119.35 25 PFAKE 22 02 40.0 +7.2
AAM LR LR
comp=Z,2μm,20.0s,MS5.7
MIAR Mount Ida 120.38 37 *e*PKIKP PKPdf 22 02 35.5 +0.5
MIAR MLR MLR
comp=Z,2μm,20.0s,MS5.6
ERPA Erie 120.92 22 PFAKE 22 02 50.0 +14
ERPA LR LR
comp=Z,1μm,20.0s,MS5.5
PKME Peaks-Kenny Pk 121.09 12 PFAKE 22 02 50.0 +14
PKME LR LR
comp=Z,1μm,19.0s,MS5.5
NCB Newcomb 121.11 17 PFAKE 22 02 50.0 +14
NCB LR LR
comp=Z,1μm,22.0s,MS5.5
ACSO Alum Creek Sta 121.36 25 PFAKE 22 02 50.0 +13
ACSO LR LR
comp=Z,1μm,21.0s,MS5.6
LBNH Lisbon 121.46 15 PFAKE 22 02 50.0 +13
LBNH LR LR
comp=Z,1μm,20.0s,MS5.6
WCI Wyandotte Cave 121.51 29 PFAKE 22 02 50.0 +13
WCI LR LR
comp=Z,890nm,20.0s,MS5.4
NATX Nacogdoches 121.63 40 PFAKE 22 02 50.0 +12
NATX LR LR
comp=Z,3μm,21.0s,MS5.8
HKT Hockley 122.06 43 PFAKE 22 02 50.0 +12
HKT LR LR
comp=Z,1μm,21.0s,MS5.6
KVTX Kingsville 122.16 46 PFAKE 22 02 50.0 +11
KVTX LR LR
comp=Z,1μm,19.0s,MS5.5
BINY Binghamton 122.21 19 PFAKE 22 02 50.0 +12
BINY LR LR
comp=Z,1μm,20.0s,MS5.6
WVT Waverly 122.40 32 *e*PKIKP PKPdf 22 02 38.7 -0.2
WVT MLR MLR
comp=Z,1μm,21.0s,MS5.5
SSPA Standing Stone 122.97 21 PFAKE 22 02 50.0 +10
SSPA LR LR
comp=Z,1μm,19.0s,MS5.5
MCWV Mont Chateau 123.11 23 PFAKE 22 02 50.0 +10
MCWV LR LR
comp=Z,1μm,20.0s,MS5.6
VBMS Vicksburg 123.83 37 PFAKE 22 02 50.0 +8.3
VBMS LR LR
comp=Z,880nm,19.0s,MS5.4
BLA Blacksburg 124.98 25 PFAKE 22 03 00.0 +16
BLA LR LR
comp=Z,1μm,22.0s,MS5.5
LRAL Lakeview Retre 125.21 34 PFAKE 22 03 00.0 +16
LRAL LR LR
comp=Z,1μm,21.0s,MS5.6
CBN Corbin 125.31 22 PFAKE 22 03 00.0 +16
CBN LR LR
comp=Z,1μm,20.0s,MS5.6
BRAL Brewton 126.71 35 PFAKE 22 03 00.0 +13
BRAL LR LR
comp=Z,2μm,21.0s,MS5.7
RPN Rapa Nui 126.72 115 PFAKE 22 03 00.0 +13
RPN LR LR
comp=Z,2μm,20.0s,MS5.8
GOGA Godfrey 126.74 30 PFAKE 22 03 00.0 +13
GOGA LR LR
comp=Z,1μm,20.0s,MS5.6
DBIC Dimbokro 127.17 288 PKP PKPdf 22 02 47.9 -0.7
comp=Z,10nm,0.9s,baz=13,slow=0.8,SNR=14
DBIC Dimbokro 127.17 288 *e*PKPdf PKPdf 22 02 48.3 -0.3
DBIC LR LR
comp=Z,1μm,20.0s,MS5.5
KIC Kosan Boka 127.17 288 *e*PKIKP PKPdf 22 02 47.9 -0.7
comp=Z,94nm,1.1s
PMSA Palmer Station 127.25 175 PFAKE 22 03 00.0 +13
PMSA LR LR
comp=Z,1μm,19.0s,MS5.6
TIC Toumodi 127.33 288 *e*PKIKP PKPdf 22 02 48.0 -0.9
comp=Z,58nm,1.0s
LIC Lamto 127.48 288 *e*PKIKP PKPdf 22 02 48.3 -0.9
comp=Z,53nm,1.1s
LIC Lamto 127.48 288 *e*PKIKP PKPdf 22 02 48.4 -0.8
comp=Z,44nm,1.1s
CNNC Cliffs of the 127.71 24 PFAKE 22 03 00.0 +11
CNNC LR LR
comp=Z,2μm,21.0s,MS5.7
NHSC New Hope 128.55 28 PFAKE 22 03 00.0 +9.3
NHSC LR LR
comp=Z,1μm,22.0s,MS5.6
CMIG Matias Romero 130.50 55 PKP PKPdf 22 02 56.0 +1.2
comp=Z,1.2nm,0.4s,baz=6.2,slow=5.9,SNR=6.1
CMIG SKPbc SKPbc 22 06 19.5 +4.3
comp=Z,1.1nm,0.4s,baz=321,slow=3.6,SNR=5.0
DWPF Disney 132.03 33 PFAKE 22 03 10.0 +13
DWPF LR LR
comp=Z,2μm,21.0s,MS5.7
SHEL Horse Pasture 132.69 260 PFAKE 22 03 10.0 +11
SHEL LR LR
comp=Z,1μm,19.0s,MS5.6
TRIS Tristan da Cun 135.00 229 PFAKE 22 03 10.0 +7.3
TRIS LR LR
comp=Z,935nm,20.0s,MS5.5
TGUH Tegucigalpa,Un 138.22 52 PFAKE 22 03 20.0 +11
TGUH LR LR
comp=Z,1μm,22.0s,MS5.6
EFI East Falkland 140.70 176 PFAKE 22 03 20.0 +7.3
EFI LR LR
comp=Z,877nm,21.0s,MS5.5
PAYG Puerto Ayora 142.64 75 PFAKE 22 03 30.0 +13
PAYG LR LR
comp=Z,1μm,19.0s,MS5.6
SDDR Presa de Saban 144.71 28 *e*PKPdf PKPdf 22 03 20.4 -0.5
SDDR LR LR
comp=Z,2μm,21.0s,MS5.8
BCIP Isla Barro Col 146.94 51 PFAKE 22 03 40.0 +15
BCIP LR LR
comp=Z,793nm,20.0s,MS5.5
SJG San Juan 147.59 21 PFAKE 22 03 40.0 +14
SJG LR LR
comp=Z,1μm,22.0s,MS5.7
PLCA Paso Flores 148.42 156 PKPbc PKPbc 22 03 28.1 -1.9
comp=Z,39nm,0.9s,baz=201,slow=4.1,SNR=24
PLCA Paso Flores 148.42 156 *e*PKPbc PKPbc 22 03 31.1 +1.2
PLCA LR LR
comp=Z,952nm,20.0s,MS5.6
ANWB Willy Bob 149.29 14 PFAKE 22 03 40.0 +11
ANWB LR LR
comp=Z,1μm,22.0s,MS5.7
OTAV Otavalo 153.12 64 PFAKE 22 03 50.0 +15
OTAV LR LR
comp=Z,892nm,20.0s,MS5.6
SDV Santo Domingo 153.47 38 *e*PKPdf PKPdf 22 03 36.0 +1.0
SDV LR LR
comp=Z,455nm,21.0s,MS5.3
BBGH Gun Hill 154.15 11 PFAKE 22 03 50.0 +14
BBGH LR LR
comp=Z,1μm,20.0s,MS5.8
GRGR Grenville 154.63 17 PFAKE 22 03 50.0 +13
GRGR LR LR
comp=Z,797nm,20.0s,MS5.5
LPA La Plata 157.35 173 *ce*PKP PKPdf 22 03 41.0 +1.4
LPA La Plata 157.35 173 *e*PKP PKPab 22 04 09.0 -1.8
LCO Las Campanas 157.59 140 PFAKE 22 03 50.0 +10
LCO LR LR
comp=Z,1μm,20.0s,MS5.8
NNA Nana 158.14 91 PFAKE 22 03 50.0 +8.8
NNA LR LR
comp=Z,2μm,22.0s,MS5.8
RCBR Riachuelo 160.54 288 PFAKE 22 03 50.0 +6.0
RCBR LR LR
comp=Z,2μm,21.0s
LVC Limon Verde 162.89 128 PFAKE 22 04 00.0 +14
LVC LR LR
comp=Z,1μm,20.0s
BDFB Brasilia 172.93 242 PKP PKPdf 22 03 53.2 -0.1
comp=Z,4.7nm,1.0s,baz=23,slow=26,SNR=7.3
BDFB Brasilia 172.93 242 PKP PKPdf 22 03 53.2 -0.1
BDFB LR LR
comp=Z,2μm,21.0s

MAN 06 22:10:45,1231N×12515E,h14km,mb4.2,ML3.0,MS2.8, 2C-1D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.51**	**292**	*e*P	Pg	22 10 56.1	+1.0
CNP				*e*S	Sg	22 11 07.5	+5.5
PLP	**Palo**	**1.15**	**188**	*e*P	Pn	22 11 04.4	-2.3
PLP				*e*S	Sb	22 11 21.6	0.0
PVCP	**Virac**	**1.60**	**323**	*e*P	Pn	22 11 12.9	0.0
PVCP				*e*S	Sn	22 11 41.4	+8.1
MSLP	**Maasin**	**2.19**	**188**	*e*P	Pn	22 11 21.9	+1.0
MSLP				*e*S	Sn	22 11 57.3	+10
RCP	**Roxas**	**2.47**	**253**	*e*P	Sg	22 12 04.2	-0.2
SCPH	**Surigao**	**2.54**	**172**	*e*P	Pn	22 11 21.4	-4.4
GUIM	**Jordan**	**3.02**	**236**	*e*P	Pn	22 11 33.9	+1.5
GUIM				*e*S	Sn	22 12 10.5	+2.1
CAUP	**Cauayan**	**5.62**	**325**	*e*P	Sn	22 13 07.0	-5.5

*MAN **06** 22:23:50,1250N×12569E,h1km,mb4.4,ML3.3,MS3.1*
*ISCJB **06** 22:23:54.5±1.1,1240N±006×12564E±009,h33km, mb3.6/4,Error ellipse: s-maj=12.4km s-min=8.4km az=168.7*
*IDC **06** 22:23:55.4±1.7,1267N×12509E,h0km,mb3.8/4, mb1 3.9/4,mb1mx3.6/18,mbtmp3.8/4,Error ellipse: s-maj=64.4km s-min=26.3km az=66.0*

ISC 06 22:23:56.5±1.1,1235N±006×12555E±010,h35km,n11, σ0.94/15,mb3.6/4,1C-3D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.88**	**280**	*e*P	**Pn**	**22 24 09.4**	**-3.0**
CNP				*e*S	**Sn**	**22 24 23.9**	**-0.1**
PLP	**Palo**	**1.31**	**206**	*e*P	**Pn**	**22 24 17.2**	**-1.1**
PLP				*e*S	**Sn**	**22 24 34.3**	**-0.3**
PVCP	**Virac**	**1.84**	**312**	*i*P	**Pn**	**22 24 26.0**	**+0.3**
MSLP	**Maasin**	**2.31**	**197**	*e*P	**Pn**	**22 24 33.1**	**+1.0**
MSLP				*e*S	**Sn**	**22 25 09.6**	**+10**
SCPH	**Surigao**	**2.56**	**181**	*e*P	**Pn**	**22 24 35.2**	**-0.3**
RCP	**Roxas**	**2.86**	**254**	*e*P	**Pn**	**22 24 41.0**	**+1.3**
RCP				*e*S	**Sn**	**22 25 18.1**	**+5.2**
GUIM	**Jordan**	**3.37**	**240**	*e*P	**Pn**	**22 24 47.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**26.34**	**287**	P	**P**	**22 29 28.4**	**-1.0**
	1.0nm,0.5s,mb3.6,baz=106,slow=8.2,SNR=7.1						
ASAR	**Alice Springs**	**36.72**	**167**	P	**P**	**22 31 08.0**	**+7.5**
	0.3nm,0.5s,mb3.4,baz=348,slow=8.5,SNR=4.7						
SONM	**Songino Array**	**38.83**	**339**	P	**P**	**22 31 18.0**	**-0.1**
	0.4nm,0.5s,mb3.4,baz=150,slow=9.9,SNR=3.4						
MKAR	**Makanchi Array**	**49.96**	**322**	P	**P**	**22 32 47.7**	**+0.6**
	1.3nm,0.8s,mb4.0,baz=116,slow=8.4,SNR=12						

MAN 06 22:29:42,1228N×12527E,h10km,mb4.2,ML3.0,MS2.8, 2C-1D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.64**	**291**	*e*P	Pg	22 29 54.6	+0.3
CNP				*e*S	Sg	22 30 07.7	+5.0
PLP	**Palo**	**1.14**	**194**	*e*P	Pb	22 30 02.7	-1.2
PLP				*e*S	Sb	22 30 20.2	+1.4
PVCP	**Virac**	**1.70**	**320**	*e*P	Pn	22 30 11.5	-0.3
PVCP				*e*S	Sn	22 30 43.8	+10
MSLP	**Maasin**	**2.17**	**191**	*e*P	Pn	22 30 19.0	+0.8
MSLP				*e*S	Sn	22 30 53.4	+8.2
SCPH	**Surigao**	**2.49**	**175**	*e*P	Pn	22 30 20.3	-2.3
RCP	**Roxas**	**2.57**	**254**	*e*P	Pn	22 30 25.2	+1.5

*ISCJB **06** 22:40:12.3±5.4,3388S±008×1796E±0.1,h12km±34km, mb4.4/7,MS4.2/4,Error ellipse: s-maj=19.9km s-min=13.6km az=15.1*
*IDC **06** 22:40:12.0±1.0,3390S×17965E,h0km,mb4.5/5, mb1 4.6/6,mb1mx4.3/15,mbtmp4.5/6,ML4.2/1,MS4.2/5, Ms1 4.2/5,ms1mx3.8/20,Error ellipse: s-maj=29.1km s-min=25.7km az=36.0*
*NEIC **06** 22:40:17.5±0.8,3395S×17958E,h35km,mb4.4/1,Error ellipse: s-maj=21.2km s-min=17.3km az=224.0*

ISC 06 22:40:13.8±6.6,3385S±008×1797E±01,h11km±40km, h9km±.4km:pP-P,n23,σ1.1s04/16,mb4.4/7,MS4.2/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**4.86**	**204**	Pn	**Pn**	**22 41 27.1**	**+0.4**
	10nm,0.3s,baz=31,slow=4.7,SNR=31						
URZ				Sn	**Sn**	**22 42 23.7**	**+0.7**
	baz=45,slow=19,SNR=1.8						
RAO	**Raoul Island**	**5.03**	**25**	LR	LR	22 42 59.6	
	comp=Z,1μm,20.9s,baz=266,slow=33						
HNR	**Honiara**	**30.32**	**319**	LR	LR	22 55 23.5	
	comp=Z,277nm,19.1s,MS3.9,baz=309,slow=30						
STKA	**Stephens Creek**	**31.92**	**263**	LR	LR	22 58 28.6	
	comp=Z,707nm,18.6s,MS4.4,baz=270,slow=34						
CTA	**Charters Tower**	**32.62**	**286**	P	**P**	**22 46 47.3**	**+1.7**
	3.7nm,0.6s,mb4.5,baz=116,slow=7.5,SNR=4.1						
ASAR	**Alice Springs**	**41.09**	**272**	P	**P**	**22 47 56.7**	**-1.0**
	4.4nm,0.9s,mb4.1,baz=112,slow=7.4,SNR=26						
WB2	**Warramunga Arr**	**42.39**	**277**	*e*P	**P**	**22 48 06.8**	**-1.5**
WRAB	**Tennant Creek**	**42.40**	**277**	*e*P	**P**	**22 48 08.8**	**+0.5**
	7.2nm,0.8s,mb4.3						
VNDA	**Vanda**	**44.48**	**185**	LR	LR	23 04 10.8	
	comp=Z,337nm,19.1s,MS4.3,baz=118,slow=32						
KAKA	**Kakadu**	**47.72**	**285**	*e*P	x	22 48 30.6	
	5.5nm,0.6s						
QSPA	**South Pole Qui**	**56.27**	**180**	P	**P**	**22 49 54.3**	**+0.7**
	13nm,0.7s,mb5.0,baz=35,slow=5.3,SNR=24						
QSPA	**South Pole Qui**	**56.27**	**180**	P	**P**	**22 49 54.3**	**+0.7**
MAW	**Mawson**	**68.38**	**202**	LR	LR	23 21 01.5	
	comp=Z,222nm,18.5s,MS4.4,baz=11,slow=36						
SNAA	**Sanae**	**74.76**	**179**	*e*	**P**	**22 51 52.3**	**-0.9**
SNAA				*e*	pP	22 51 54.7	-2.2
SNAA				*e*		22 52 00.1	
SNAA	**Sanae**	**74.76**	**179**	*e*P	**P**	**22 51 51.6**	**-1.6**
	13nm,1.4s,mb4.7						
VNA3	**Neumayer Olymp**	**74.99**	**177**	*e*	**P**	**22 51 53.3**	**-1.3**
VNA3				*e*	pP	22 51 56.2	-2.1
VNA3				*e*		22 52 01.6	
VNA3				*e*		22 52 06.9	
VNA2	**Neumayer--Watz**	**75.40**	**178**	*e*	**P**	**22 51 56.1**	**-0.8**
	baz=174,slow=4.6						
VNA2				*e*	pP	22 51 59.1	-1.5
VNA2				*e*		22 52 05.3	
VNA2				*e*		22 52 10.8	
VNA1	**Neumayer--Stat**	**75.64**	**177**	*e*	**P**	**22 51 58.0**	**-0.3**
VNA1				*e*	pP	22 52 00.6	-1.4
VNA1				*e*		22 52 06.8	
VNA1				*e*		22 52 12.4	
PLCA	**Paso Flores**	**81.59**	**134**	P	**P**	**22 52 32.4**	**+0.7**
	2.9nm,0.7s,mb4.3,baz=225,slow=5.0,SNR=6.3						
NVAR	**Mina Array Bea**	**92.10**	**44**	P	**P**	**22 53 24.4**	**+1.5**
	0.9nm,0.8s,mb4.2,baz=223,slow=7.3,SNR=5.9						
NVAR	**Mina Array Bea**	**92.10**	**44**	P	**P**	**22 53 24.4**	**+1.5**
DBIC	**Dimbokro**	**152.63**	**170**	PKPbc	PKPbc	23 00 09.6	-1.4
	0.7nm,0.6s,baz=153,slow=6.8,SNR=2.4						
DBIC				PKPab	PKPab	23 00 20.9	-0.5
	1.4nm,0.7s,baz=123,slow=4.9,SNR=4.0						
TORD	**Torodi Ar. Bea**	**159.31**	**186**	PKPab	PKPab	23 00 47.9	-2.0
	1.0nm,1.1s,baz=166,slow=3.4,SNR=3.3						

*NEIC **06** 22:55:08.5, 3838N×2634E, h31^{km}, MD3.2(ATH), After ATH.*
*THE **06** 22:55:08.7, 3836N×2643E, h16^{km}±1^{km}, ML3.8/1, Error ellipse: s-maj=2.0km s-min=1.4km az=144.0*
*DDA **06** 22:55:08.2, 3839N×2640E, h7^{km}±3^{km}, Md3.3*
*ISCJB **06** 22:55:08.7±0.6, 3836N±002×2635E±003, h15^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.8km az=146.2*
*ATH **06** 22:55:08.4, 3838N×2634E, h31^{km}±11^{km}, MD3.2/4*
*CSEM **06** 22:55:08.1±0.1, 3839N×2640E, h10^{km}, MD3.3, Error ellipse: s-maj=3.4km s-min=2.7km az=55.0*
ISC 06 22:55:08.6±0.5, **3838N**±003×**2636E**±003, **h14**^{km}±3^{km}, **n20**, σ**1^{s}05**/40, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**94**	iP	**Pg**	**22 55 12.5**	**-0.4**
URLA				iS	**Sg**	**22 55 15.4**	**-0.6**
CHOS	**Chios island**	**0.24**	**273**	P	**Pg**	**22 55 15.3**	**+1.5**
CHOS				S	**Sg**	**22 55 19.4**	**+2.0**
BLCB	**Balcova**	**0.54**	**89**	P	**Pg**	**22 55 17.8**	**-1.3**
BLCB				S	**Sg**	**22 55 25.7**	**-0.6**
KDAG	**Bornova**	**0.71**	**87**	iP	**Pg**	**22 55 21.7**	**-0.8**
KDAG				iS	**Sg**	**22 55 31.5**	**-0.4**
SMG	**Samos**	**0.76**	**150**	ePN	**Pn**	**22 55 24.3**	**-0.6**
SMG				eSN	**Sn**	**22 55 35.3**	**-0.8**
PRK	**Paraskevi**	**0.87**	**355**	P	**Pb**	**22 55 24.8**	**-0.7**
PRK				S	**Sg**	**22 55 37.9**	**+0.9**
PRK	**Paraskevi**	**0.87**	**355**	ePB	**Pb**	**22 55 24.5**	**-1.0**
PRK				eSN	**Sn**	**22 55 37.8**	**-1.1**
PRK	**Paraskevi**	**0.87**	**355**	ePb	**Pb**	**22 55 24.8**	**-0.7**
PRK				eSn	**Sn**	**22 55 37.8**	**-1.1**
GCAM	**G?zelcaml?**	**0.96**	**134**	iP	**Pb**	**22 55 27.2**	**+0.2**
GCAM				iS	**Sb**	**22 55 40.5**	**+0.9**
AYVA	**Ayvalik**	**0.97**	**15**	iP	**Pb**	**22 55 26.1**	**-1.0**
AYVA				iS	**Sb**	**22 55 40.6**	**+0.9**
AKHS	**Akhisar**	**1.24**	**66**	iP	**Pn**	**22 55 31.7**	**+0.2**
AKHS				iS	**Sb**	**22 55 48.2**	**+0.6**
AYDN	**Tasoluk**	**1.40**	**120**	iP	**Pn**	**22 55 33.7**	**+0.2**
AYDN				iS	**Sn**	**22 55 53.2**	**+1.5**
APE	**Apeiranthos**	**1.46**	**207**	P	**Pn**	**22 55 34.6**	**+0.1**
APE				S	**Sn**	**22 55 52.0**	**-1.3**
APE	**Apeiranthos**	**1.46**	**207**	ePn	**Pn**	**22 55 34.5**	**0.0**
APE				S	**Sn**	**22 55 52.0**	**-1.3**
BDRM	**Kayabasi**	**1.56**	**146**	iP	**Pn**	**22 55 36.6**	**+0.7**
BDRM				iS	**Sn**	**22 55 56.0**	**+0.1**
BALY	**Balya**	**1.68**	**35**	eP	**Pn**	**22 55 37.2**	**-0.3**
BALY				iS	**Sn**	**22 56 02.4**	**+3.7**
MANT	**Manisa**	**1.73**	**85**	eP	**Pn**	**22 55 41.3**	**+3.2**
MANT				iS	**Sn**	**22 56 02.6**	**+2.6**
LIA	**Limnos Island**	**1.78**	**329**	ePb	**Pb**	**22 55 39.2**	**-1.7**
LIA				S	**Sn**	**22 56 00.6**	**-0.5**
TURN	**Turunc**	**2.33**	**129**	iP	**Pn**	**22 55 45.2**	**-1.2**
TURN				iS	**Sn**	**22 56 10.7**	**-4.0**
KHAL	**Karahalli**	**2.46**	**89**	iP	**Pn**	**22 55 48.8**	**+0.6**
KHAL				iS	**Sn**	**22 56 25.0**	**+7.0**

*ISK **06** 23:18:33.8, 3502N×2688E, h31^{km}, MD3.7*
*ISCJB **06** 23:18:37.9±0.3, 3517N±002×2729E±004, h33^{km}, mb3.6/7, Error ellipse: s-maj=4.3km s-min=3.1km az=10.3*
*CSEM **06** 23:18:37.5±0.1, 3519N×2740E, h25^{km}, MD3.7, Error ellipse: s-maj=3.1km s-min=2.0km az=76.0*
*ATH **06** 23:18:40.4, 3544N×2710E, h37^{km}, MD3.7/9*
*HLW **06** 23:18:40.1, 3497N×2738E, h4^{km}, Mb3.5*
*IDC **06** 23:18:40.0±1.6, 3529N×2722E, h49^{km}±19^{km}, mb3.5/7, mb1 3.6/11, mb1mx3.5/23, mbtmp3.5/11, ML3.2/4, Error ellipse: s-maj=22.6km s-min=14.4km az=163.0*
*NEIC **06** 23:18:40.4, 3545N×2710E, h36^{km}, MG3.7(ATH), After ATH.*
*DDA **06** 23:18:42.0, 3562N×2765E, h13^{km}±1^{km}, Md3.5*
ISC 06 23:18:39.2±0.7, **3521N**±002×**2726E**±004, **h29**^{km}±6^{km}, **n58**, σ**1^{s}13**/76, **mb3.6**/7, **2C-3D**, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.35**	**347**	ePB	**Pb**	**23 18 46.8**	**-0.4**
KARP				eSB	**Sb**	**23 18 52.2**	**-0.5**
KARP	**Karpathos**	**0.35**	**347**	ePb	**Pb**	**23 18 45.9**	**-1.3**
KARP				eSb	**Sb**	**23 18 52.2**	**-0.5**
ARG	**Arkhangelos**	**1.23**	**35**	ePN	**Pn**	**23 19 01.5**	**+1.1**
ARG				eSN	**Sn**	**23 19 17.3**	**+1.2**
NPS	**Neapolis**	**1.35**	**273**	ePN	**Pn**	**23 19 02.7**	**+0.7**
NPS	**Neapolis**	**1.35**	**273**	ePn	**Pn**	**23 19 03.7**	**+1.7**
DAT	**Datca**	**1.54**	**10**	ePN	**Pn**	**23 19 03.9**	**-0.9**
DAT				eSN	**Sn**	**23 19 24.4**	**+0.6**
BODT	**Bodrum**	**1.85**	**1**	ePN	**Pn**	**23 19 07.3**	**-1.6**
BODT				eSN	**Sn**	**23 19 32.5**	**+1.0**
BDRM	**Kayabasi**	**1.86**	**5**	iP	**Pn**	**23 19 09.5**	**+0.4**
BDRM				eS	**Sn**	**23 19 29.5**	**-2.1**
DALT	**Dalyan (Mudla)**	**1.92**	**35**	ePN	**Pn**	**23 19 10.4**	**+0.6**
IDI	**Anoyia**	**1.94**	**273**	P	**Pn**	**23 19 11.6**	**+1.4**
	18nm,0.3s,baz=88,slow=15,SNR=77						
IDI				S	**Sn**	**23 19 40.9**	**+7.3**
	52nm,0.3s,baz=297,slow=21,SNR=9.7						
IDI	**Anoyia**	**1.94**	**273**	ePn	**Pn**	**23 19 11.9**	**+1.7**
IDI				S	**Sn**	**23 19 40.9**	**+7.3**
IDI	**Anoyia**	**1.94**	**273**	ePn	**Pn**	**23 19 11.9**	**+1.8**
IDI				S	**Sn**	**23 19 40.9**	**+7.3**
TURN	**Turunc**	**1.99**	**33**	iP	**Pn**	**23 19 07.7**	**-3.1**
TURN				eS	**Sn**	**23 19 30.4**	**-4.3**
YER	**Yerkesik**	**2.10**	**23**	ePN	**Pn**	**23 19 11.3**	**-1.1**
MLSB	**Milas**	**2.13**	**11**	ePN	**Pn**	**23 19 12.5**	**-0.3**
AKAS	**Kas**	**2.17**	**61**	iP	**Pn**	**23 19 13.6**	**+0.3**
AKAS				iS	**Sn**	**23 19 41.4**	**+2.2**
APE	**Apeiranthos**	**2.33**	**324**	ePN	**Pn**	**23 19 14.6**	**-0.9**
GCAM	**G?zelcaml?**	**2.49**	**360**	iP	**Pn**	**23 19 18.0**	**+0.3**
GCAM				iS	**Sn**	**23 19 46.7**	**-0.5**
AYDN	**Tasoluk**	**2.50**	**11**	iP	**Pn**	**23 19 19.1**	**+1.2**
AYDN				eS	**Sn**	**23 19 46.8**	**-0.6**
VAM	**Vamos**	**2.51**	**275**	ePN	**Pn**	**23 19 19.0**	**+1.0**
SMG	**Samos**	**2.52**	**352**	ePN	**Pn**	**23 19 17.1**	**-1.1**
SMG	**Samos**	**2.52**	**352**	ePn	**Pn**	**23 19 16.9**	**-1.3**
GVD	**Gavdhos**	**2.63**	**263**	ePN	**Pn**	**23 19 21.0**	**+1.4**
ELL	**Elmali**	**2.64**	**54**	ePN	**Pn**	**23 19 20.6**	**+0.7**
GOLH	**Golhisar**	**2.75**	**42**	iP	**Pn**	**23 19 22.4**	**+1.1**
GOLH				iS	**Sn**	**23 20 05.8**	**+12**
DENT	**Denizli**	**2.92**	**29**	ePN	**Pn**	**23 19 24.0**	**+0.3**
BLCB	**Balcova**	**3.18**	**357**	ePN	**Pn**	**23 19 25.1**	**-2.1**
URLA	**Izmir**	**3.19**	**351**	iP	**Pn**	**23 19 27.1**	**-0.3**
URLA				iS	**Sn**	**23 20 05.7**	**+1.2**
URLA	**Izmir**	**3.19**	**351**	iP	**Pn**	**23 19 27.1**	**-0.3**
URLA				iS	**Sn**	**23 20 05.7**	**+1.2**
KYTH	**Kithira**	**3.60**	**289**	ePN	**Pn**	**23 19 33.5**	**+0.5**
KHAL	**Karahalli**	**3.63**	**29**	iP	**Pn**	**23 19 32.8**	**-0.6**
AKHS	**Akhisar**	**3.69**	**7**	iP	**Pn**	**23 19 35.2**	**+0.9**
AKS	**Akhisar**	**3.69**	**7**	ePN	**Pn**	**23 19 33.8**	**-0.5**
VLI	**Veliai**	**3.82**	**295**	ePN	**Pn**	**23 19 35.8**	**-0.2**
ATH	**Athens Observa**	**3.97**	**315**	P	**Pn**	**23 19 40.0**	**+1.9**
SLUM		**4.08**	**205**	P	**Pn**	**23 19 40.4**	**+0.8**
SLUM				S	**Sn**	**23 20 24.6**	**-1.9**
HMAT	**Matruh**	**4.10**	**182**	P	**Pn**	**23 19 39.9**	**-0.1**
HMAT	**Matruh**	**4.10**	**182**	P	**Pn**	**23 19 39.8**	**-0.2**
ITM	**Ithomi**	**4.74**	**296**	P	**Pn**	**23 19 51.0**	**+2.3**
LKR	**Lokris**	**4.84**	**316**	P	**Pn**	**23 19 51.6**	**+1.5**
VLS	**Valsamata**	**6.12**	**301**	P	**Pn**	**23 20 08.3**	**+0.6**
SWA2		**6.14**	**195**	⇓eP	**Pn**	**23 20 08.5**	**+0.6**
SWA2				S	**Sn**	**23 21 13.2**	**-4.0**
GLL	**Jalalah**	**6.76**	**145**	⇑eP	**Pn**	**23 20 16.7**	**+0.3**
AMAG	**Maghara**	**6.76**	**131**	⇓P	**Pn**	**23 20 16.9**	**+0.4**
BRTR	**Keskin Array B**	**6.79**	**46**	P	**Pn**	**23 20 16.7**	**-0.1**
	0.1nm,0.3s,baz=218,slow=13,SNR=3.7						
MMAI	**Mount Meron Ar**	**7.10**	**106**	P	**Pn**	**23 20 20.6**	**-0.6**
	0.5nm,0.3s,baz=323,slow=12,SNR=3.0						
SUZ		**7.12**	**137**	⇑eP	**Pn**	**23 20 21.8**	**+0.3**
HFRF	**Wahat Farafira**	**8.08**	**173**	⇓eP	**Pn**	**23 20 34.9**	**+0.3**
EIL	**Elat**	**8.53**	**128**	P	**Pn**	**23 20 40.0**	**-0.7**
	0.3nm,0.3s,baz=225,slow=22,SNR=10						
GERES	**GERESS Array B**	**16.91**	**328**	P	**Pn**	**23 22 32.2**	**-1.3**
	0.1nm,0.3s,baz=141,slow=12,SNR=8.1						
KHC	**Kasperske Hory**	**17.18**	**328**	eP	**Pn**	**23 22 35.0**	**-1.9**
ESDC	**Sonseca Array**	**25.12**	**290**	P	**P**	**23 23 59.3**	**-2.2**
	0.6nm,0.4s,mb3.4,baz=82,slow=9.3,SNR=12						
TORD	**Torodi Ar. Bea**	**31.86**	**233**	P	**P**	**23 25 01.1**	**-0.7**
	1.5nm,0.6s,mb4.0,baz=36,slow=8.0,SNR=27						
ARCES	**ARCESS Array B**	**34.40**	**359**	P	**P**	**23 25 20.2**	**-3.2**
	1.2nm,0.8s,mb3.9,baz=165,slow=7.5,SNR=4.1						
DBIC	**Dimbokro**	**40.96**	**234**	P	**P**	**23 26 18.0**	**-1.5**
	1.9nm,0.7s,mb3.8,baz=23,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	**42.31**	**57**	P	**P**	**23 26 29.8**	**-0.5**
	0.7nm,0.6s,mb3.4,baz=277,slow=6.4,SNR=12						
SONM	**Songino Array**	**58.12**	**51**	P	**P**	**23 28 29.8**	**-0.2**
	0.6nm,0.7s,mb3.8,baz=282,slow=9.1,SNR=4.1						
YKA	**Yellowknife Ar**	**77.92**	**343**	P	**P**	**23 30 30.2**	**-3.8**
	0.1nm,0.3s,mb3.2,baz=39,slow=5.9,SNR=3.7						

*IDC **07** 00:00:60.0±2.1, 219N×9668E, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx3.8/21, mbtmp4.1/6, ML4.3/1, Error ellipse: s-maj=80.8km s-min=25.4km az=59.0*
*NEIC **07** 00:01:04.6±0.6, 214N×9680E, h35^{km}, mb4.3/10, Error ellipse: s-maj=20.2km s-min=6.7km az=49.0*
*ISCJB **07** 00:01:06.5±6.4, 22N±02×970E±03, h69^{km}±54^{km}, mb4.2/15, Error ellipse: s-maj=63.6km s-min=10.7km az=141.9*
ISC 07 00:01:08.2±5.1, **23N**±02×**970E**±03, **h65**^{km}±43^{km}, **n27**, σ**0^{s}72**/27, **mb4.2**/15, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**13.32**	**93**	Pn	**Pn**	**00 04 14.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**16.20**	**7**	Pn	**Pn**	**00 04 50.9**	**-0.9**
	0.4nm,0.3s,baz=197,slow=11,SNR=27						
ODAN	**Odare**	**26.13**	**340**	eP	**P**	**00 06 36.7**	**+0.4**
TAPN	**Taplejung**	**26.48**	**341**	eP	**P**	**00 06 39.7**	**+0.2**
RAMN	**Ramite**	**26.49**	**339**	eP	**P**	**00 06 40.6**	**+1.0**
	50nm,1.5s,mb4.8						
JIRN	**Jiri**	**27.28**	**339**	eP	**P**	**00 06 47.4**	**+0.7**
GUN	**Gumba**	**27.62**	**338**	eP	**P**	**00 06 50.2**	**+0.4**
	9.8nm,0.6s,mb4.6						
LSA	**Lhasa**	**27.84**	**349**	eP	**P**	**00 06 51.5**	**-0.2**
	2.8nm,0.6s,mb4.1						
GKN	**Gorkha**	**28.18**	**336**	eP	**P**	**00 06 54.9**	**+0.1**
KOLN	**Koldanda**	**28.41**	**334**	eP	**P**	**00 06 57.1**	**+0.3**
	9.7nm,0.7s,mb4.6						
DANN	**Dangsing**	**28.85**	**335**	eP	**P**	**00 07 00.9**	**+0.2**
	6.4nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**34.71**	**127**	eP	**P**	**00 07 51.8**	**-0.5**
WRAB	**Tennant Creek**	**42.77**	**123**	eP	**P**	**00 08 57.6**	**-2.1**
	1.9nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**44.20**	**128**	P	**P**	**00 09 12.7**	**+1.6**
	0.3nm,0.6s,mb3.2,baz=304,slow=8.7,SNR=3.9						
TKM2	**Tokmak 2**	**44.76**	**338**	eP	**P**	**00 09 14.2**	**-1.1**
	4.6nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**44.95**	**336**	P	**P**	**00 09 17.0**	**+0.2**
EKS2	**Erkin-Say**	**45.26**	**336**	eP	**P**	**00 09 18.5**	**-0.8**
	2.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**46.11**	**9**	P	**P**	**00 09 27.0**	**+1.1**
	3.2nm,0.9s,mb4.3,baz=185,slow=8.4,SNR=18						
MK31	**Makanchi Array**	**46.16**	**346**	eP	**P**	**00 09 26.2**	**-0.1**
MKAR	**Makanchi Array**	**46.16**	**346**	P	**P**	**00 09 26.3**	**0.0**
	4.1nm,0.7s,mb4.5,baz=161,slow=7.9,SNR=48						
KURK	**Kurchatov**	**50.71**	**345**	eP	**P**	**00 10 01.4**	**+0.1**
	2.5nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**52.48**	**351**	P	**P**	**00 10 14.5**	**+0.2**
	5.9nm,0.7s,mb4.6,baz=182,slow=6.6,SNR=33						
STKA	**Stephens Creek**	**54.22**	**133**	P	**P**	**00 10 28.1**	**+0.6**
BRVK	**Borovoye**	**55.24**	**341**	eP	**P**	**00 10 34.3**	**-0.2**
	1.2nm,0.6s,mb4.1						
AKTK	**Aktyubinsk**	**58.20**	**332**	P	**P**	**00 10 55.2**	**-0.3**
AKTO	**Aktyubinsk**	**58.20**	**332**	P	**P**	**00 10 55.2**	**-0.3**
	1.7nm,0.8s,mb4.1,baz=123,slow=9.4,SNR=4.6						
ARU	**Arti**	**62.13**	**337**	P	**P**	**00 11 21.3**	**-1.1**

*NEIC **07** 00:07:49.3±1.6, 5037N×1909E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=24.2km s-min=8.9km az=184.0*
*PRU **07** 00:07:50.1, 5035N×1911E, h0^{km}*
WAR 07 00:07:49.5, 5029N×**1924E, ML2.5, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.36**	**101**	ePg	Pg	00 07 56.7	+0.2
OJC				eSg	Sg	00 08 02.0	+0.8
OKC	**Ostrava-Krasne**	**0.84**	**238**	ePG	Pg	00 08 04.8	-0.7
OKC				eSG	Sg	00 08 14.7	-1.7
	comp=Z,9.8nm,0.4s						
NIE	**Niedzica**	**1.11**	**141**	ePg	Pg	00 08 11.5	+0.7
NIE				eSg	Sg	00 08 27.3	+2.0
STHS	**Stebnicka Huta**	**1.56**	**123**	ePN	Pn	00 08 19.5	+1.0
STHS				eSN	Sn	00 08 42.4	+3.0
STHS	**Stebnicka Huta**	**1.56**	**123**	ePn	Pn	00 08 19.5	+1.0
STHS				eSn	Sn	00 08 42.4	+3.0
KOLL	**Kolacno**	**1.80**	**198**	ePN	Pn	00 08 23.0	+1.3
KOLL				eSN	Sn	00 08 45.8	+0.6
KOLL	**Kolacno**	**1.80**	**198**	ePn	Pn	00 08 23.0	+1.3
KOLL				eSn	Sn	00 08 45.8	+0.6
VYHS	**Vyhne**	**1.82**	**189**	ePN	Pn	00 08 20.9	-1.1
VYHS				eSN	Sn	00 08 44.1	-1.6
VYHS	**Vyhne**	**1.82**	**189**	ePn	Pn	00 08 20.9	-1.1
VYHS				eSn	Sn	00 08 44.1	-1.6
DPC	**Dobruska-Polom**	**1.87**	**273**	ePG	Pg	00 08 21.8	-3.5
DPC				eSG	Sg	00 08 46.3	-3.3
	comp=Z,9.7nm,0.6s						
CRVS	**Cervenica-Dubn**	**2.00**	**133**	ePN	Pn	00 08 28.2	+3.6
CRVS				eSN	Sn	00 08 54.8	+4.5
CRVS	**Cervenica-Dubn**	**2.00**	**133**	ePn	Pn	00 08 28.2	+3.6
CRVS				eSn	Sn	00 08 54.8	+4.5
KWP	**Kalwaria**	**2.33**	**105**	ePn	Pn	00 08 31.0	+1.9
KWP				eSn	Sn	00 08 57.9	-0.6
PRU	**Pruhonice**	**3.04**	**266**	eSG	Sg	00 09 24.4	-2.6
KHC	**Kasperske Hory**	**3.85**	**255**	ePN	Pn	00 08 49.5	-0.5
KHC				ex	x	00 09 37.0	
KHC				eSG	Sg	00 09 49.3	-3.9
CLL	**Collm**	**4.09**	**287**	eSg	Sg	00 10 04.0	+3.3

*IDC **07** 00:16:11.1±1.6, 1223N×12520E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=66.8km s-min=25.2km az=67.0*
*ISCJB **07** 00:16:12.5±1.6, 1246N±005×12563E±009, h26^{km}±10^{km}, mb3.6/6, Error ellipse: s-maj=14.4km s-min=7.8km az=170.4*
*MAN **07** 00:16:17, 1221N×125.19E, h4^{km}, mb4.2, ML3.0, MS2.8*
ISC 07 00:16:14.2±1.7, **1242N**±005×**12553E**±008, **h22**^{km}±11^{km}, **n14**, σ**1^{s}08**/20, **mb3.6**/6, **1C-3D**, **Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.81**	**186**	eP	**Pb**	**00 16 29.8**	**+0.1**
CNP	**Catarman**	**0.85**	**276**	eP	**Pb**	**00 16 28.9**	**-1.4**
CNP				eS	**Sb**	**00 16 41.8**	**+0.5**
PLP	**Palo**	**1.35**	**204**	⇓eP	**Pn**	**00 16 36.9**	**-0.8**
PLP				eS	**Sn**	**00 16 55.1**	**0.0**
PVCP	**Virac**	**1.78**	**311**	⇓iP	**Pn**	**00 16 43.8**	**+0.1**
PVCP				iS	**Sn**	**00 17 17.9**	**+12**
MSLP	**Maasin**	**2.36**	**196**	eP	**Pn**	**00 16 53.7**	**+2.1**
MSLP				eS	**Sn**	**00 17 20.3**	**+0.4**
SCPH	**Surigao**	**2.62**	**181**	⇑eP	**Pn**	**00 16 53.8**	**-1.3**
RCP	**Roxas**	**2.85**	**253**	⇓eP	**Pn**	**00 16 59.8**	**+1.4**
RCP				eS	**Sn**	**00 17 37.6**	**+5.4**
GUIM	**Jordan**	**3.39**	**239**	eP	**Pn**	**00 17 06.9**	**+1.1**
GUIM				eS	**Sn**	**00 17 42.3**	**-3.0**
CMAR	**Chiang Mai Arr**	**26.30**	**287**	P	**P**	**00 21 46.4**	**-2.1**
	1.0nm,0.4s,mb3.7,baz=91,slow=6.8,SNR=5.6						
ASAR	**Alice Springs**	**36.78**	**167**	P	**P**	**00 23 19.8**	**-0.6**
	0.3nm,0.4s,mb3.5,baz=343,slow=7.3,SNR=5.1						
SONM	**Songino Array**	**38.77**	**339**	P	**P**	**00 23 37.6**	**+0.7**
	0.7nm,1.0s,mb3.4,baz=155,slow=7.9,SNR=4.4						
MKAR	**Makanchi Array**	**49.90**	**322**	P	**P**	**00 25 06.1**	**+0.1**
	0.7nm,0.8s,mb3.8,baz=119,slow=9.1,SNR=8.5						
KURK	**Kurchatov**	**53.90**	**325**	P	**P**	**00 25 35.8**	**0.0**
	1.1nm,0.7s,mb3.9,baz=125,slow=7.3,SNR=11						
BVAR	**Borovoye Array**	**59.50**	**325**	P	**P**	**00 26 16.0**	**+0.4**
	0.5nm,0.6s,mb3.7,baz=116,slow=9.8,SNR=4.2						

*NEIC **07** 00:28:00.8, 1578N×9503W, h25^{km}, MD4.2(MEX), After MEX.*
MEX 07 00:28:00.8±0.7, **1579N**×**9503W**, **h25**^{km}±15^{km}, **MD4.2**, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.04**	**269**	eP	Pn	00 28 16.9	-2.9
HUIG				iS	Sb	00 28 29.6	-3.8
CMIG	**Matias Romero**	**1.31**	**6**	iP	Pn	00 28 20.6	-2.9
CMIG				iS	Sn	00 28 36.2	-3.9
PCIG		**1.74**	**92**	eP	Pn	00 28 26.8	-2.8
PCIG				iS	Sn	00 28 47.0	-4.0
VHO	**Vista Hermosa**	**2.08**	**308**	iP	Pn	00 28 32.9	-1.2
VHO				iS	Sn	00 28 56.8	-2.4
TGIG		**2.08**	**61**	eP	Pn	00 28 32.8	-1.3
TGIG				iS	Sn	00 28 56.6	-2.7
TUIG	**Tuzandepetl**	**2.31**	**14**	iP	Pn	00 28 35.0	-2.3
TUIG				iS	Sn	00 29 01.1	-3.8
TUIG	**Tuzandepetl**	**2.31**	**14**	iP	Pn	00 28 35.0	-2.3
TUIG				iS	Sn	00 28 57.4	-7.6
SCX	**San Cristobal**	**2.49**	**67**	iP	Pn	00 28 38.3	-1.4
SCX				iS	Sn	00 29 06.8	-2.5
SCX	**San Cristobal**	**2.49**	**67**	iP	Pn	00 28 34.7	-5.1
SCX				eP		00 28 41.8	
SCX				iS	Sn	00 29 06.8	-2.5
THIG		**2.81**	**108**	iP	Pn	00 28 41.5	-2.6
THIG				iS	Sn	00 29 14.2	-3.0
CCIG	**Comitan**	**2.82**	**80**	eP	Pn	00 28 43.2	-1.1
CCIG				iS	Sn	00 29 15.5	-2.2
PNIG	**Pinotepa**	**3.04**	**282**	iP	Pn	00 28 45.3	-2.1
PNIG				iS	Sn	00 29 19.1	-3.9
UTMO	**Huajuapan**	**3.35**	**308**	iP	Pn	00 28 50.9	-0.7
UTMO				iS	Sn	00 29 28.1	-2.4
TPIG	**Tehuac#an**	**3.44**	**320**	iP	Pn	00 28 57.2	+4.3
TPIG				iS	Sn	00 29 29.9	-3.0
LVIG	**Laguna Verde**	**4.13**	**342**	iS	Sn	00 29 45.4	-4.6

*IDC **07** 00:28:46.4±1.4, 1241N×12542E, h0^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.6/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/30, Error ellipse: s-maj=62.7km s-min=23.3km az=68.0*
*ISCJB **07** 00:28:48.4±0.8, 1246N±005×12567E±007, h33^{km}, mb3.6/7, Error ellipse: s-maj=10.1km s-min=6.8km az=6.2*
ISC 07 00:28:51.0±0.8, **1241N**±005×**12553E**±009, **h35**^{km}, **n13**, σ**0^{s}96**/17, **mb3.6**/7, **1C-2D**, **Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.85**	**277**	eP	**Pn**	**00 29 04.0**	**-2.5**
CNP				eS	**Sn**	**00 29 18.5**	**+0.8**
PLP	**Palo**	**1.35**	**204**	⇓eP	**Pn**	**00 29 11.9**	**-1.5**
PLP				eS	**Sn**	**00 29 30.4**	**+0.3**
PVCP	**Virac**	**1.79**	**311**	⇓iP	**Pn**	**00 29 18.0**	**-1.3**
PVCP				iS	**Sn**	**00 29 49.7**	**+9.0**
MSLP	**Maasin**	**2.36**	**196**	eP	**Pn**	**00 29 27.7**	**+0.5**
MSLP				eS	**Sn**	**00 29 54.5**	**-0.4**
RCP	**Roxas**	**2.85**	**253**	⇑eP	**Pn**	**00 29 35.7**	**+1.7**
RCP				eS	**Sn**	**00 30 12.0**	**+4.8**
DAV	**Davao City (W)**	**5.31**	**179**	LR	LR	00 32 26.5	
	comp=Z,111nm,20.0s,baz=23,slow=42						
CMAR	**Chiang Mai Arr**	**26.31**	**287**	P	**P**	**00 34 23.0**	**-0.6**
	0.7nm,0.3s,mb3.6,baz=106,slow=6.7,SNR=3.4						
ASAR	**Alice Springs**	**36.78**	**167**	P	**P**	**00 35 56.1**	**+0.7**
	0.2nm,0.4s,mb3.3,baz=345,slow=8.2,SNR=3.0						
SONM	**Songino Array**	**38.77**	**339**	P	**P**	**00 36 12.3**	**+0.3**
	0.4nm,0.6s,mb3.4,baz=167,slow=7.3,SNR=4.3						
MKAR	**Makanchi Array**	**49.90**	**322**	P	**P**	**00 37 41.6**	**+0.6**
	0.8nm,0.8s,mb3.8,baz=111,slow=7.9,SNR=8.4						
ZALV	**Zalesovo Beam**	**52.41**	**331**	P	**P**	**00 37 59.6**	**-0.1**
	0.4nm,0.6s,mb3.6,baz=139,slow=7.3,SNR=3.0						
KURK	**Kurchatov**	**53.91**	**325**	P	**P**	**00 38 10.6**	**-0.2**
	1.4nm,0.6s,mb4.0,baz=124,slow=7.5,SNR=15						
BVAR	**Borovoye Array**	**59.50**	**325**	P	**P**	**00 38 51.2**	**+0.7**
	0.4nm,0.4s,mb3.8,baz=127,slow=6.0,SNR=3.4						

*NEIC **07** 00:43:18.8, 3336S×6894W, h8^{km}, ML2.8(GUC), After GUC.*
GUC 07 00:43:18.8±0.6, **3336S**×**6894W**, **h8**^{km}±11^{km}, **MD3.7**, **ML2.8**, **3C-4D**, **Mendoza Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YECH	**El Yeso**	**1.00**	**252**	⇓iP	Pg	00 43 37.5	-0.6
YECH				iS	Sg	00 43 52.3	+1.2
YECH				AML	AML	00 43 53.5	
	comp=N,1μm,0.4s						
FCH	**Farellones**	**1.13**	**271**	⇓iP	Pg	00 43 40.2	-0.4
FCH				iS	Sg	00 43 56.1	+0.9
FCH				AML	AML	00 43 58.0	
	comp=N,258nm,0.2s						
LMEL	**Las Melosas**	**1.16**	**245**	⇓iP	Pg	00 43 40.4	-0.7
LMEL				iS	Sg	00 43 57.0	+0.8
LMEL	**Las Melosas**	**1.16**	**245**	⇓iP	Pg	00 43 40.4	-0.7
LMEL				iS	Sg	00 43 57.0	+0.8
LMEL				AML	AML	00 43 59.3	
	comp=E,404nm,0.2s						
CLCH	**Cerro Calan**	**1.34**	**268**	eP	Pn	00 43 43.8	0.0
CLCH				iS	Sb	00 44 02.1	+0.7
CLCH				AML	AML	00 44 12.4	
	comp=E,435nm,0.6s						
PCH	**Pirque**	**1.34**	**258**	⇑iP	Pn	00 43 43.7	-0.1
PCH				iS	Sb	00 44 02.5	+0.9
ANTU	**Antumapu**	**1.43**	**261**	eP	Pn	00 43 44.6	-0.5
ANTU				iS	Sn	00 44 05.0	+0.9
ANTU	**Antumapu**	**1.43**	**261**	eP	Pn	00 43 44.6	-0.5
ANTU				iS	Sn	00 44 05.0	+0.9
ANTU				AML	AML	00 44 11.8	
	comp=E,216nm,0.5s						
PEL	**Peldehue**	**1.48**	**278**	⇑iP	Pn	00 43 46.0	+0.3
PEL				iS	Sn	00 44 06.6	+1.3
PEL				AML	AML	00 44 13.2	
	comp=N,464nm,0.7s						
CHCH	**Chadas Angostu**	**1.54**	**248**	eP	Pn	00 43 46.8	+0.2
CHCH				iS	Sn	00 44 08.4	+1.6
JACH	**Jahuel**	**1.54**	**295**	eP	Pn	00 43 47.1	+0.4
RCDM	**Rinconada Maip**	**1.57**	**265**	eP	Pn	00 43 47.9	+0.9
RCDM				eS	Sn	00 44 09.3	+1.8
RCDM	**Rinconada Maip**	**1.57**	**265**	eP	Pn	00 43 47.9	+0.9
RCDM				eS	Sn	00 44 09.3	+1.8
RCDM				AML	AML	00 44 12.7	
	comp=E,125nm,0.5s						
CACH	**El Canelo**	**1.58**	**241**	eP	Pn	00 43 47.8	+0.7
CACH				eS	Sn	00 44 10.0	+2.2
TACH	**Talagante**	**1.70**	**259**	⇑iP	Pn	00 43 49.8	+1.1
TACH				iS	Sn	00 44 13.1	+2.4
LNV	**Longovilo**	**2.15**	**253**	eP	Pn	00 43 57.1	+2.1
LNV				iS	Sn	00 44 26.2	+4.4

*NIED **07** 00:47:00, 3010N×14160E, h89^{km}, Mw6.0 Best double couple: M$_0$9.85000×10^{17} NP1:ϕ_s178.00000°, δ79.00000°, λ44.00000°. NP2:ϕ_s78.00000°, δ47.00000°, λ165.00000°.*
*MOS **07** 00:47:31.6±1.2, 3008N×14098E, h33^{km}, mb6.0/132, MS5.0/65, Error ellipse: s-maj=7.5km s-min=4.2km az=114.4*
*BJI **07** 00:47:31.6, 2995N×14140E, h75^{km}, mB5.6, mb5.6, Ms5.4, Msz5.1*
*BGS **07** 00:47:33.2±1.7, 2932N×14212E, h86^{km}, mb5.7*
*JMA **07** 00:47:34.6, 3006N×14162E, h75^{km}, M6.0*
JMA Felt II J1.
*ISCJB **07** 00:47:35.2±0.1, 3001N±001×14097E±001, h71^{km}, mb5.7/272, Error ellipse: s-maj=1.8km s-min=1.8km az=4.2*
*IDC **07** 00:47:35.3±0.4, 2990N×14101E, h66^{km}±3^{km}, mb5.2/27, mb1 5.3/30, mb1mx5.3/31, mbtmp5.3/30, MS5.0/31, Ms1 5.0/31, ms1mx4.9/37, Error ellipse: s-maj=10.5km s-min=6.0km az=81.0*
*GCMT **07** 00:47:37.6±0.1, 3002N×14124E, h81^{km}, MW5.9/112, Moment Tensor Solution. s102,c216; s112,c339; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.38±.07; M$_{\theta\theta}$0.20±.07; M$_{\phi\phi}$-3.58±.08; M$_{r\theta}$-3.67±.05; M$_{\theta\phi}$-6.01±.06; M$_{\phi r}$2.37±.06; Best double couple: M$_0$8.19900×10^{17} NP1:ϕ_s359.00000°, δ61.00000°, λ31.00000°. NP2:ϕ_s253.00000°, δ64.00000°, λ147.00000°. Principal axes: T 8.4020, Plg41.0000°, Azm215.0000°; N -0.4030, Plg49.0000°, Azm39.0000°; P -7.9960, Plg2.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **07** 00:47:37.6±0.7, 2994N×14100E, h86^{km}±5^{km}, mb5.8/180, MW5.8, MW5.9(NIED) Error ellipse: s-maj=3.3km s-min=2.8km az=147.0, Moment Tensor Solution. s93 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.14; M$_{\theta\theta}$-0.72; M$_{\phi\phi}$-2.42; M$_{r\theta}$-3.27; M$_{\theta\phi}$-5.36; M$_{\phi r}$2.28; Best double couple: M$_0$7.30000×10^{17} NP1:ϕ_s4.00000°, δ59.00000°, λ31.00000°. NP2:ϕ_s257.00000°, δ64.00000°, λ145.00000°. Principal axes: T 7.4900, Plg42.0000°, Azm219.0000°;*

N -0.4700, Plg47.0000°, Azm44.0000°; P -7.0200, Plg2.0000°, Azm311.0000°;

NEIC Recorded [2 JMA] in Fukushima and Miyagi; [1 JMA] in Chiba, Ibaraki, Iwate, Kanagawa, Nagano, Niigata, Saitama, Tochigi and Tokyo Prefectures, Honshu.

*SZGRF **07** 00:47:39.1, 30.63N×140.83E, h73km, mb5.6, Southeast of Honshu, Japan*

*DJA **07** 00:47:44, 30.00N×141.24E, h166km, Mw6.1/21*

ISC 07 00:47:36.8±0.1**, 29.99N**±0.01×**140.98E**±0.01**, h73km, h73km**±.5km**:pP-P, n1417,** σ0.92/1450**, mb5.7**/272**, 284C-253D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.07**	**160**	P	**Pn**	**00 48 21.0**	**-2.0**
	3μm,0.3s,baz=346,slow=12,SNR=492						
CBIJ				S	**Sn**	**00 48 53.9**	**-4.7**
	baz=285,slow=20						
CBIJ	**Chichi jima**	**3.07**	**160**	⇓P	**Pn**	**00 48 20.6**	**-2.4**
CBIJ				S	**Sn**	**00 48 54.9**	**-3.7**
JHJ2	**Mitsune**	**3.27**	**343**	P	**Pn**	**00 48 26.7**	**+1.0**
JHJ2				S	**Sn**	**00 49 05.0**	**+1.6**
JHJ	**Hachijo jima 2**	**3.29**	**342**	P	**Pn**	**00 48 26.4**	**+0.6**
	1μm,0.3s,baz=178,slow=14,SNR=257						
JHJ				S	**Sn**	**00 49 02.4**	**-1.4**
	3μm,0.3s,baz=112,slow=19,SNR=11						
JHHJ	**Haha-jima-NKT**	**3.51**	**162**	P	**Pn**	**00 48 27.5**	**-1.4**
JHHJ				S	**Sn**	**00 49 05.8**	**-3.5**
JMY	**Miyakejima3**	**4.26**	**343**	P	**Pn**	**00 48 40.6**	**+1.5**
JMY				S	**Sn**	**00 49 26.9**	**-0.7**
JKO	**Kozu shima**	**4.47**	**340**	P	**Pn**	**00 48 44.4**	**+2.4**
JKO				S	**Sn**	**00 49 37.5**	**+4.8**
NJJJ	**Nii jima 2**	**4.63**	**342**	P	**Pn**	**00 48 46.1**	**+1.9**
BSO1	**Boso 1**	**4.65**	**360**	P	**Pn**	**00 48 42.9**	**-1.6**
TK01	**Tokai 1**	**4.74**	**323**	P	**Pn**	**00 48 49.7**	**+4.0**
JIM2	**Oshima 3**	**4.89**	**345**	P	**Pn**	**00 48 49.0**	**+1.2**
JIM2				S	**Sn**	**00 49 42.5**	**-0.6**
JIZS	**Izushimoda**	**5.04**	**340**	P	**Pn**	**00 48 51.3**	**+1.5**
JIZS				S	**Sn**	**00 49 49.0**	**+2.3**
TATJ	**Tateyama 2**	**5.11**	**350**	P	**Pn**	**00 48 50.7**	**-0.1**
TATJ				S	**Sn**	**00 49 50.0**	**+1.5**
JSG	**Sagara**	**5.24**	**334**	P	**Pn**	**00 48 55.5**	**+3.0**
JYO	**Yokosk**	**5.34**	**348**	P	**Pn**	**00 48 55.4**	**+1.5**
JYO				S	**Sn**	**00 49 54.2**	**+0.2**
JCN	**Nagara**	**5.46**	**353**	P	**Pn**	**00 48 56.4**	**+0.9**
JCN				S	**Sn**	**00 49 57.5**	**+0.7**
JOD2	**Odawara 2**	**5.50**	**344**	P	**Pn**	**00 48 57.1**	**+1.1**
JOD2				S	**Sn**	**00 49 59.8**	**+1.9**
SHZ3	**Shizuoka 3**	**5.58**	**336**	P	**Pn**	**00 48 59.4**	**+2.3**
HMMJ	**Hamamatsu 2**	**5.58**	**331**	P	**Pn**	**00 48 59.6**	**+2.4**
JAA	**Atsumi**	**5.66**	**326**	P	**Pn**	**00 49 01.4**	**+3.2**
JIE	**Ise**	**5.69**	**322**	⇓P	**Pn**	**00 49 02.8**	**+4.1**
CHOJ	**Chosi**	**5.70**	**359**	P	**Pn**	**00 48 57.9**	**-0.9**
CHOJ				S	**Sn**	**00 50 00.0**	**-2.8**
JWZ	**Kozaga**	**5.71**	**310**	P	**Pn**	**00 49 02.2**	**+3.3**
TOK	**Tokyo**	**5.78**	**350**	P	**Pn**	**00 49 01.3**	**+1.5**
TOK				S	**Sn**	**00 50 02.9**	**-1.8**
JKN2	**Miekihoku**	**5.82**	**318**	⇓P	**Pn**	**00 49 04.3**	**+3.8**
JYN	**Shimob**	**5.87**	**340**	P	**Pn**	**00 49 03.0**	**+1.9**
JNY	**Yasuok**	**5.97**	**335**	P	**Pn**	**00 49 04.8**	**+2.4**
JHU	**Hanno**	**6.02**	**347**	P	**Pn**	**00 49 03.8**	**+0.6**
JHU				S	**Sn**	**00 50 09.0**	**-1.7**
TSUJ	**Tsu 2**	**6.09**	**322**	P	**Pn**	**00 49 08.4**	**+4.3**
TSUJ				S	**Sn**	**00 50 19.4**	**+7.1**
JAO	**Obara**	**6.13**	**330**	P	**Pn**	**00 49 07.2**	**+2.5**
JAO				S	**Sn**	**00 50 19.2**	**+5.9**
JWM	**Minabe**	**6.14**	**310**	P	**Pn**	**00 49 08.6**	**+3.8**
JWY	**Kouya**	**6.22**	**314**	P	**Pn**	**00 49 10.3**	**+4.4**
JYT	**Yasato**	**6.26**	**354**	P	**Pn**	**00 49 06.5**	**+0.1**
JYT				S	**Sn**	**00 50 14.5**	**-2.0**
JRY	**Ryogami san**	**6.26**	**344**	P	**Pn**	**00 49 07.6**	**+1.1**
JRY				S	**Sn**	**00 50 16.8**	**+0.2**
JNT	**Takato**	**6.34**	**339**	P	**Pn**	**00 49 09.6**	**+2.1**
JNT				S	**Sn**	**00 50 22.5**	**+4.0**
JGF	**Kuroka**	**6.37**	**332**	P	**Pn**	**00 49 11.4**	**+3.4**
JEG	**Eigenji**	**6.43**	**324**	P	**Pn**	**00 49 12.8**	**+4.0**
JEG				S	**Sn**	**00 50 27.8**	**+7.1**
JHE	**Heguri**	**6.46**	**317**	P	**Pn**	**00 49 13.3**	**+4.1**
JAG	**Ashikaga**	**6.55**	**349**	P	**Pn**	**00 49 09.4**	**-1.0**
JAG				S	**Sn**	**00 50 21.4**	**-2.1**
JHO	**Hitachi**	**6.62**	**357**	P	**Pn**	**00 49 10.0**	**-1.3**
JHO				S	**Sn**	**00 50 20.4**	**-4.8**
JAI	**Aioi**	**6.72**	**306**	P	**Pn**	**00 49 17.1**	**+4.3**
JGM	**Miyama**	**6.73**	**329**	P	**Pn**	**00 49 16.5**	**+3.6**
MRT2	**Murotomisaki 2**	**6.74**	**302**	P	**Pn**	**00 49 17.8**	**+4.8**
JAJ2	**Tsuna**	**6.80**	**312**	P	**Pn**	**00 49 18.6**	**+4.8**
JNG	**Nsakai**	**6.84**	**340**	P	**Pn**	**00 49 16.3**	**+1.9**
JGK	**Kuni**	**6.84**	**344**	P	**Pn**	**00 49 16.3**	**+1.9**
JGK				S	**Sn**	**00 50 32.5**	**+1.7**
JKT	**Katashina**	**6.91**	**348**	⇑P	**Pn**	**00 49 14.7**	**-0.7**
JGN	**Niukaw**	**6.94**	**335**	P	**Pn**	**00 49 18.0**	**+2.3**
MJAR	**Matsushiro Arr**	**6.94**	**341**	P	**Pn**	**00 49 16.4**	**+0.7**
	178nm,0.3s,baz=163,slow=10,SNR=242						
MJAR				S	**Sn**	**00 50 27.6**	**-5.5**
	baz=164,slow=28,SNR=3.0						
MJAR	**Matsushiro Arr**	**6.94**	**341**	P	**Pn**	**00 49 16.4**	**+0.7**
MJAR				S	**Sn**	**00 50 27.6**	**-5.5**
MJAR				pmax	pmax		
	comp=Z,178nm,0.3s						
MAJO	**Matsushiro**	**6.94**	**341**	⇓*e*P	**Pn**	**00 49 15.7**	**0.0**
MAJO				*e*S	**Sn**	**00 50 33.7**	**+0.6**
MAT	**Matsushiro**	**6.94**	**341**	P	**Pn**	**00 49 17.1**	**+1.4**
MAT				S	**Sn**	**00 50 33.1**	**0.0**
JMIK	**Miki**	**6.94**	**315**	P	**Pn**	**00 49 20.9**	**+5.1**
JFM	**Mihama**	**6.94**	**324**	P	**Pn**	**00 49 19.6**	**+3.8**
JSB	**Shiboa**	**7.02**	**353**	P	**Pn**	**00 49 16.6**	**-0.2**
JSB				S	**Sn**	**00 50 31.3**	**-3.8**
JWT	**Wachi**	**7.07**	**320**	⇓P	**Pn**	**00 49 21.9**	**+4.4**
ONAJ	**Iwakimizuishiy**	**7.10**	**359**	⇓P	**Pn**	**00 49 15.8**	**-2.1**
JMN	**Monobe**	**7.10**	**304**	⇓P	**Pn**	**00 49 22.9**	**+5.0**
JKS	**Kasai**	**7.19**	**315**	P	**Pn**	**00 49 24.6**	**+5.5**
JTT	**Ttatey**	**7.27**	**336**	P	**Pn**	**00 49 25.2**	**+4.9**
JFK	**Kawauchi**	**7.36**	**359**	P	**Pn**	**00 49 18.9**	**-2.6**
JJS	**Sakaide**	**7.40**	**308**	P	**Pn**	**00 49 26.7**	**+4.6**
JHK	**Hiroka**	**7.42**	**348**	P	**Pn**	**00 49 21.4**	**-1.0**
JHK				S	**Sn**	**00 50 41.2**	**-3.8**
JFY	**Yanaizu**	**7.48**	**352**	P	**Pn**	**00 49 21.9**	**-1.2**
JFY				S	**Sn**	**00 50 42.8**	**-3.5**
JJN	**Nakama**	**7.48**	**342**	P	**Pn**	**00 49 24.1**	**+1.0**
JKY	**Yasaka**	**7.49**	**320**	P	**Pn**	**00 49 27.4**	**+4.1**
JKU	**Kubokawa**	**7.52**	**298**	⇓P	**Pn**	**00 49 28.8**	**+5.1**
JFT	**Otama**	**7.53**	**356**	P	**Pn**	**00 49 22.3**	**-1.5**
JTO	**Tosashimizu**	**7.55**	**294**	⇓P	**Pn**	**00 49 29.4**	**+5.3**
JKSM	**Kasumi**	**7.71**	**318**	⇓P	**Pn**	**00 49 30.9**	**+4.6**
JET	**Tanbara**	**7.73**	**301**	P	**Pn**	**00 49 32.2**	**+5.6**
JJH	**Hakui**	**7.76**	**334**	P	**Pn**	**00 49 31.7**	**+4.8**
JIZZ	**Izumozaki**	**7.76**	**347**	P	**Pn**	**00 49 27.3**	**+0.4**
UWA2	**Uwa jima 2**	**7.82**	**296**	P	**Pn**	**00 49 34.2**	**+6.4**
JMM	**Marumori**	**7.86**	**359**	P	**Pn**	**00 49 26.2**	**-2.1**
JMM				S	**Sn**	**00 50 49.6**	**-6.1**
JNS	**Sasagawa**	**7.93**	**350**	P	**Pn**	**00 49 28.5**	**-0.8**
JNS				S	**Sn**	**00 50 53.0**	**-4.4**
JNA	**Nagahama**	**8.06**	**298**	P	**Pn**	**00 49 37.0**	**+5.9**
JKR	**Kurayoshi**	**8.08**	**314**	P	**Pn**	**00 49 36.4**	**+5.1**
JJG	**Jouge**	**8.09**	**307**	P	**Pn**	**00 49 37.2**	**+5.8**
JYS	**Shirataka**	**8.25**	**355**	P	**Pn**	**00 49 32.6**	**-1.0**
JHM	**Kurahashi**	**8.28**	**302**	P	**Pn**	**00 49 39.5**	**+5.4**
JHS	**Saijyo**	**8.31**	**309**	P	**Pn**	**00 49 38.8**	**+4.3**
JSD	**Sado**	**8.34**	**345**	P	**Pn**	**00 49 33.1**	**-1.8**
JOU	**Okura**	**8.36**	**358**	P	**Pn**	**00 49 33.2**	**-2.0**
JTSN	**Tsuno**	**8.43**	**288**	P	**Pn**	**00 49 40.8**	**+4.7**
JIO	**Ouri**	**8.45**	**2**	P	**Pn**	**00 49 33.5**	**-2.9**
JUS	**Usuki**	**8.45**	**294**	P	**Pn**	**00 49 41.7**	**+5.2**
JHG	**Hegura jima**	**8.53**	**338**	P	**Pn**	**00 49 39.1**	**+1.6**
JKIT	**Kitakata**	**8.56**	**290**	P	**Pn**	**00 49 43.2**	**+5.2**
JAW	**Awa shima**	**8.57**	**351**	P	**Pn**	**00 49 36.7**	**-1.3**
JHT	**Toyohira**	**8.61**	**305**	P	**Pn**	**00 49 43.5**	**+4.9**
JYA	**Atsumi**	**8.65**	**353**	P	**Pn**	**00 49 38.0**	**-1.1**
JNM	**Ikuma**	**8.66**	**311**	P	**Pn**	**00 49 45.4**	**+6.2**
JKD	**Kudamatsu**	**8.73**	**300**	P	**Pn**	**00 49 45.8**	**+5.6**
JGT	**Gotsu**	**8.86**	**307**	P	**Pn**	**00 49 48.1**	**+6.1**
JHIK	**Hikimi**	**8.90**	**303**	P	**Pn**	**00 49 47.9**	**+5.3**
JYK	**Kaneyama**	**8.92**	**357**	P	**Pn**	**00 49 41.1**	**-1.7**
JMK	**Ichinoseki**	**8.95**	**1**	P	**Pn**	**00 49 41.2**	**-1.9**
OFUJ	**Ofunato**	**9.09**	**3**	P	**Pn**	**00 49 42.1**	**-3.0**
JTB	**Tobi-shima**	**9.26**	**353**	P	**Pn**	**00 49 46.1**	**-1.3**
JRG	**Rokugo**	**9.39**	**358**	P	**Pn**	**00 49 47.6**	**-1.6**
JRG				S	**Sn**	**00 51 27.4**	**-5.7**
JOM	**Ohasama**	**9.47**	**1**	P	**Pn**	**00 49 48.0**	**-2.2**
JYW	**Yuwa**	**9.55**	**356**	P	**Pn**	**00 49 50.1**	**-1.3**
MIYJ	**Miyakonagasawa**	**9.59**	**4**	P	**Pn**	**00 49 49.1**	**-2.8**
JFI	**Itaya**	**9.65**	**294**	P	**Pn**	**00 49 59.4**	**+6.6**
JOG2	**Oga 2**	**9.95**	**355**	P	**Pn**	**00 49 55.2**	**-1.6**
JTH	**Tanohata**	**9.96**	**4**	P	**Pn**	**00 49 53.7**	**-3.2**
JTH				S	**Sn**	**00 51 35.8**	**-11**
JKZ	**Kuzumaki**	**9.98**	**2**	P	**Pn**	**00 49 54.7**	**-2.5**
JAH	**Hinai**	**10.18**	**359**	P	**Pn**	**00 49 58.0**	**-2.0**
JANG	**Nango**	**10.37**	**2**	P	**Pn**	**00 49 59.9**	**-2.7**
JIW	**Iwasaki**	**10.61**	**356**	P	**Pn**	**00 50 03.8**	**-2.0**
JTM	**Tenmabayashi**	**10.78**	**0**	P	**Pn**	**00 50 05.3**	**-2.8**
JTM				S	**Sn**	**00 51 58.7**	**-8.2**
JSI2	**Shiura 2**	**11.06**	**358**	P	**Pn**	**00 50 09.5**	**-2.4**
JOT	**Ohata**	**11.37**	**0**	P	**Pn**	**00 50 14.0**	**-2.2**
JOW	**Kunigami**	**11.62**	**257**	P	**Pn**	**00 50 24.9**	**+5.3**
	comp=Z,13nm,0.3s,baz=79,slow=11,SNR=51						
JOW				LR	LR	00 54 25.5	
	comp=Z,9μm,19.8s,baz=92,slow=35						
JOW	**Kunigami**	**11.62**	**257**	P	**Pn**	**00 50 24.8**	**+5.1**
ERM	**Erimo**	**12.13**	**8**	Pn	**Pn**	**00 50 22.4**	**-4.1**
	comp=Z,4μm,0.6s,SNR=65						
ERM	**Erimo**	**12.13**	**8**	*e*Pn	**Pn**	**00 50 22.7**	**-3.9**
ERM				*e*S	**Sn**	**00 52 28.2**	**-12**
KSRS	**Korea Array**	**13.17**	**308**	P	**Pn**	**00 50 44.9**	**+4.3**
	comp=Z,6.1nm,0.3s,baz=117,slow=13,SNR=193						
KSRS				LR	LR	00 55 37.8	
	comp=Z,4μm,21.1s,baz=114,slow=36						
KSRS				PcP	PcP	00 56 07.3	+1.0
	baz=131,slow=0.8,SNR=5.9						
KSRS				ScP	ScP	00 59 31.8	-1.3
	comp=Z,0.5nm,0.3s,baz=138,slow=1.7,SNR=19						
KSRS	**Korea Array**	**13.17**	**308**	P	**Pn**	**00 50 44.9**	**+4.3**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,4μm,21.1s						
KSRS				pmax	pmax		
	comp=N,1.0nm,0.3s						
INCN	**Inchon**	**14.08**	**306**	⇓*i*Pn	**Pn**	**00 50 56.1**	**+3.6**
INCN				*e*S	**Sn**	**00 53 37.5**	**+10**
ASAJ	**Asahikawa**	**14.16**	**5**	P	**Pn**	**00 50 50.7**	**-3.0**
	comp=N,52nm,0.3s,baz=214,slow=12,SNR=136						
ASAJ				S	**Sn**	**00 53 19.4**	**-10**
	comp=N,22nm,0.3s,baz=143,slow=20,SNR=6.2						
ASAJ				LR	LR	00 56 34.3	
	comp=N,4μm,22.0s,baz=358,slow=38						
ASAJ	**Asahikawa**	**14.16**	**5**	P	**Pn**	**00 50 50.7**	**-3.0**
ASAJ				S	**Sn**	**00 53 19.4**	**-10**
ASAJ				pmax	pmax		
	comp=Z,52nm,0.3s						
ASAJ				smax			
	comp=N,22nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4μm,22.0s						
YUK	**Yuzh-Kuril'sk**	**14.55**	**14**	*e*P	**Pn**	**00 50 53.9**	**-4.8**
YUK				pmax	pmax		
	comp=Z,4μm,2.0s						
YUK				pmax	pmax		
	comp=N,8μm,3.0s						
YUK				pmax	pmax		
	comp=E,5μm,2.0s						
YUK				pmax	pmax		
	comp=Z,1μm,0.5s						
YUK				pmax	pmax		
	comp=N,950nm,0.6s						
YUK				pmax	pmax		
	comp=E,470nm,0.6s						
YUK				MLR	MLR		
	comp=Z,8μm,18.0s						
YUK				MLR	MLR		
	comp=N,9μm,19.0s						
YUK				MLR	MLR		
	comp=E,12μm,17.0s						
YUK	**Yuzh-Kuril'sk**	**14.55**	**14**	*e*P	**Pn**	**00 50 54.9**	**-3.8**
JMJ	**Miyako jima 2**	**14.85**	**253**	P	**Pn**	**00 51 13.1**	**+10**
JTJ	**Tarama**	**15.41**	**254**	P	**Pn**	**00 51 17.2**	**+7.2**
JIJ	**Ishigaki jima**	**15.99**	**254**	P	**Pn**	**00 51 23.2**	**+5.9**
JKRS	**Kuro-shima**	**16.15**	**253**	P	**Pn**	**00 51 25.3**	**+6.0**
KUR	**Kuril'sk**	**16.16**	**18**	*e*P	**Pn**	**00 51 17.0**	**-2.2**
KUR				pmax	pmax		
	comp=N,620nm,1.1s						
KUR				pmax	pmax		
	comp=E,620nm,1.1s						
KUR				pmax	pmax		
	comp=Z,1μm,1.1s						
KUR				pmax	pmax		
	comp=N,6μm,4.0s						
KUR				pmax	pmax		
	comp=Z,6μm,4.0s						
IRIF	**Iriomote-Funau**	**16.35**	**254**	P	**Pn**	**00 51 26.9**	**+5.2**
GUMO	**Guam**	**16.71**	**167**	P	**Pn**	**00 51 25.9**	**-0.3**
	comp=Z,68nm,0.3s,baz=358,slow=8.5,SNR=23						
GUMO				S	**S**	**00 54 36.8**	**-1.4**
	comp=Z,13nm,0.3s,baz=336,slow=20,SNR=7.0						
GUMO				LR	LR	00 56 07.1	
	comp=Z,4μm,21.8s,baz=168,slow=31						
GUMO	**Guam**	**16.71**	**167**	*e*P	**Pn**	**00 51 26.0**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,2μm,1.0s						
GUMO	**Guam**	**16.71**	**167**	⇑*e*Pn	**Pn**	**00 51 25.5**	**-0.7**
	comp=Z,2μm,1.0s						
GUMO				Sn	**Sn**	**00 54 28.4**	**-3.0**
YOJ	**Yonaguni jima**	**16.90**	**255**	P	**Pn**	**00 51 33.0**	**+4.4**
YSS	**Yuzh-Sakhalins**	**17.00**	**4**	⇑*i*P	**Pn**	**00 51 28.0**	**-1.6**
YSS				*e*		00 54 36.0	
YSS				pmax	pmax		
	comp=N,5μm,4.0s						
YSS				pmax	pmax		
	comp=Z,4μm,4.0s						
YSS				pmax	pmax		
	comp=N,730nm,0.9s						
YSS				pmax	pmax		
	comp=Z,860nm,0.9s						
YSS				MLR	MLR		
	comp=Z,5μm,16.0s						
YSS				MLR	MLR		
	comp=N,5μm,14.0s						
YSS				MLR	MLR		
	comp=E,6μm,14.0s						
YSS	**Yuzh-Sakhalins**	**17.00**	**4**	⇑*e*Pn	**Pn**	**00 51 28.4**	**-1.2**
	comp=E,819nm,0.9s						
YSS				*e*S	**S**	**00 54 27.1**	**-16**
SSE	**Sheshan**	**17.09**	**279**	P	**Pn**	**00 51 30.5**	**-0.4**
SSE				XP	sP	00 51 55.7	+0.1
SSE				S	**S**	**00 54 40.9**	**-4.9**
SSE				AMB	AMB		
	comp=Z,170nm,1.0s						
SSE				AMB	AMB		
	comp=Z,4μm,11.5s						
SSE				LR	LR		
	comp=N,6μm,25.4s						
SSE				LR	LR		
	comp=E,5μm,25.5s						
SSE				LR	LR		
	comp=Z,6μm,29.3s						
MDJ	**Mudanjiang**	**17.16**	**331**	P	**Pn**	**00 51 31.1**	**-0.5**
MDJ				AP	pP	00 51 46.4	-0.5
MDJ				XP	sP	00 51 55.5	-0.8
MDJ				S	**S**	**00 54 41.4**	**-5.5**
MDJ				AMB	AMB		
	comp=Z,996nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,3μm,7.2s						
MDJ				LR	LR		
	comp=N,7μm,29.8s						
MDJ				LR	LR		
	comp=E,8μm,28.6s						
MDJ				LR	LR		
	comp=Z,6μm,35.3s						
MDJ	**Mudanjiang**	**17.16**	**331**	⇓*i*Pn	**Pn**	**00 51 30.5**	**-1.1**
	comp=Z,1μm,0.7s						
MDJ				*e*Sn	**Sn**	**00 54 38.6**	**-3.1**
TATO	**Taipei**	**18.00**	**259**	⇑*i*Pn	**Pn**	**00 51 44.7**	**+2.7**
	comp=Z,2μm,0.9s						
TATO				*e*S	**S**	**00 55 04.1**	**+1.0**
NACB	**Ninganchiao**	**18.20**	**256**	⇑*e*P	**Pn**	**00 51 45.3**	**+0.8**
	comp=Z,395nm,0.9s						
NACB				*e*S	**S**	**00 55 10.4**	**+2.6**
YHNB	**Yeheng**	**18.20**	**258**	⇑*e*P	**Pn**	**00 51 45.6**	**+1.1**
	comp=Z,727nm,0.8s						
YHNB				*e*S	**S**	**00 55 05.7**	**-2.2**
DL2	**Dalian**	**18.25**	**304**	P	**Pn**	**00 51 45.5**	**+0.6**
DL2				AP	pP	00 51 57.4	-1.7
DL2				XP	sP	00 52 08.8	+0.5
DL2				S	**S**	**00 55 10.3**	**+1.6**
DL2				AMB	AMB		
	comp=Z,580nm,0.8s						
DL2				AMB	AMB		
	comp=Z,650nm,4.3s						
DL2				LR	LR		
	comp=N,5μm,14.3s						
DL2				LR	LR		
	comp=Z,4μm,17.6s						
SNY	**Shenyang**	**18.35**	**315**	⇓P	**Pn**	**00 51 44.8**	**-1.4**
SNY				S	**S**	**00 55 05.9**	**-5.2**
SNY				AMB	AMB		
	comp=Z,292nm,1.0s						
SNY				AMB	AMB		
	comp=Z,2μm,3.5s						
SNY				LR	LR		
	comp=N,6μm,14.6s						
SNY				LR	LR		
	comp=Z,5μm,14.7s						
CN2	**Changchun**	**18.52**	**322**	⇑P	**Pn**	**00 51 48.3**	**+0.2**
CN2				PP		00 52 06.7	
CN2				AMB	AMB		
	comp=Z,200nm,0.9s						
CN2				AMB	AMB		
	comp=Z,3μm,6.0s						
YULB	**Yu-li**	**18.76**	**254**	⇑*i*P	**Pn**	**00 51 52.4**	**+1.2**
	comp=Z,576nm,0.9s						
YULB				*e*S	**S**	**00 55 17.2**	**-2.5**
SSLB	**Suanglung**	**18.89**	**256**	⇑*i*P	**Pn**	**00 51 54.2**	**+1.5**
	comp=Z,1μm,1.0s						
SSLB				*e*S	**S**	**00 55 23.8**	**+1.6**
HABR	**Khabarovsk**	**19.01**	**348**	*d i*P	**Pn**	**00 51 51.5**	**-2.5**
HABR				*e*S	**S**	**00 55 26.6**	**+2.3**
HABR				pmax	pmax		
	comp=Z,1μm,0.8s						
NJ2	**Nanjing**	**19.07**	**282**	*e*P	**Pn**	**00 51 55.6**	**+0.7**
NJ2				AP	pP	00 52 09.0	+0.7
NJ2				PP		00 52 14.2	
NJ2				XP	sP	00 52 15.6	-1.9
NJ2				S	**S**	**00 55 24.5**	**-1.3**
NJ2				XS	sS	00 55 46.5	-3.7
NJ2				AMB	AMB		
	comp=Z,290nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,1μm,6.5s						
NJ2				LR	LR		
	comp=N,4μm,21.5s						
NJ2				LR	LR		
	comp=E,5μm,28.4s						
NJ2				LR	LR		
	comp=Z,5μm,28.4s						
UGL	**Uglegorsk**	**19.08**	**2**	*d i*P	**Pn**	**00 51 54.0**	**-0.8**
UGL				*i* S	**S**	**00 55 27.0**	**+1.3**
UGL				pmax	pmax		
	comp=Z,13μm,4.0s						
UGL				pmax	pmax		
	comp=Z,360nm,0.8s						
UGL				smax			
	comp=N,16μm,6.0s						
UGL				smax			
	comp=E,10μm,6.0s						
UGL				MLR	MLR		
	comp=N,4μm,18.0s						
UGL				MLR	MLR		
	comp=Z,6μm,18.0s						
UGL				MLR	MLR		
	comp=E,5μm,16.0s						
TWG	**Pinlang**	**19.19**	**253**	⇑*i*P	**Pn**	**00 51 56.5**	**+0.2**
	comp=E,3μm,1.6s						
TWG				*e*S	**S**	**00 55 27.9**	**-0.5**
TPUB	**Ta-pu**	**19.36**	**255**	⇑*i*P	**Pn**	**00 51 59.3**	**+1.0**
	comp=E,709nm,0.9s						
TPUB				*e*S	**S**	**00 55 36.0**	**+4.3**
KLR	**Kul'dur**	**20.46**	**342**	⇑*e*P	**P**	**00 52 03.3**	**-4.9**
KLR				pmax	pmax		
	comp=N,5μm,9.0s						
KLR				pmax	pmax		
	comp=E,2μm,9.0s						
KLR				pmax	pmax		
	comp=Z,6μm,9.0s						
KLR				MLR	MLR		
	comp=Z,10μm,13.0s						
TIA	**Tai'an**	**20.90**	**294**	*e*P	**P**	**00 52 12.2**	**-0.9**
TIA				S	**S**	**00 56 00.1**	**-2.0**
TIA				AMB	AMB		
	comp=Z,163nm,0.9s						
TIA				LR	LR		
	comp=E,3μm,11.0s						
PALP	**Palanan**	**21.29**	**237**	*e*P	**P**	**00 52 19.9**	**+2.4**
APYP	**Conner**	**21.67**	**241**	*e*P	**P**	**00 52 21.3**	**-0.2**
CAUP	**Cauayan**	**21.81**	**238**	*e*P	**P**	**00 52 26.1**	**+3.2**
PIP	**Pasuquin**	**21.87**	**243**	⇑*e*P	**P**	**00 52 23.5**	**-0.1**
PVCP	**Virac**	**22.54**	**227**	⇑*i*P	**P**	**00 52 32.4**	**+1.7**
BJT	**Baijiatuau**	**22.59**	**303**	⇓*e*P	**P**	**00 52 28.5**	**-2.6**
BJT				*e*S	**S**	**00 56 31.1**	**-2.3**
BJT				pmax	pmax		
	comp=Z,496nm,0.7s						
BJT				MLR	MLR		
	comp=Z,7μm,22.0s						
BJT	**Baijiatuau**	**22.59**	**303**	⇓*e*P	**P**	**00 52 28.5**	**-2.6**
	comp=Z,496nm,0.7s,mb6.0						
BJT				*e*S	**S**	**00 56 31.1**	**-2.3**
BJT				LR	LR		
	comp=Z,7μm,22.0s						
BJI	**Beijing**	**22.59**	**303**	P	**P**	**00 52 30.0**	**-1.1**
BJI				S	**S**	**00 56 27.0**	**-6.4**
BJI				AMB	AMB		
	comp=Z,484nm,1.1s,mb5.7						
BJI				LR	LR		
	comp=N,6μm,16.5s						
BJI				LR	LR		
	comp=E,7μm,19.8s						
BJI				LR	LR		
	comp=Z,6μm,22.6s						
BALP	**Baler**	**22.77**	**236**	*e*P	**P**	**00 52 33.5**	**+0.4**
WHN	**Wuhan**	**22.99**	**278**	⇑P	**P**	**00 52 35.9**	**+0.5**
WHN				XP	sP	00 52 58.5	-1.5
WHN				S	**S**	**00 56 33.2**	**-6.9**
WHN				AMB	AMB		
	comp=Z,249nm,1.0s,mb5.5						
WHN				AMB	AMB		
	comp=Z,2μm,6.6s						
WHN				LR	LR		
	comp=N,15μm,14.0s						
WHN				LR	LR		
	comp=E,3μm,9.6s						
WHN				LR	LR		
	comp=Z,9μm,15.6s						
CNP	**Catarman**	**23.05**	**224**	*e*P	**P**	**00 52 37.3**	**+1.2**
POLP	**Polilio Island**	**23.20**	**233**	*e*P	**P**	**00 52 38.9**	**+1.5**
PCPH	**Palayan**	**23.23**	**236**	⇓*e*P	**P**	**00 52 38.2**	**+0.5**
GQP	**Guinayangan**	**23.43**	**231**	⇑*i*P	**P**	**00 52 40.0**	**+0.5**
BOLP	**Bolinao**	**23.58**	**240**	*e*P	**P**	**00 52 41.2**	**+0.3**
SKR	**Severo-Kuril's**	**23.59**	**25**	*e*P	**P**	**00 52 39.5**	**-1.1**
SKR				*e*		00 52 56.4	
SKR				*e*		00 53 13.0	
SKR				*e*PPP		00 53 26.0	
SKR				*e*		00 56 22.0	
SKR				*e*S	**S**	**00 56 40.0**	**-9.3**
SKR				*e*SS		00 57 46.0	
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s,mb5.3						
SKR				pmax	pmax		
	comp=E,4μm,4.0s						
SKR				smax			
	comp=N,90nm,0.7s						
SKR				smax			
	comp=E,60nm,0.7s						
SKR				smax			
	comp=N,6μm,20.0s						
SKR				smax			
	comp=E,12μm,14.0s						
SKR				MLR	MLR		
	comp=E,6μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
SKR				MLR	MLR		
	comp=N,4μm,10.0s						
PLP	**Palo**	**23.93**	**222**	⇓*e*P	**P**	**00 52 44.3**	**+0.2**
SCZP	**Santa Cruz**	**23.96**	**238**	*e*P	**P**	**00 52 43.7**	**-0.7**
PGP	**Puerto Galera**	**24.73**	**233**	⇓*i*P	**P**	**00 52 51.9**	**+0.5**
SCPH	**Surigao**	**24.77**	**219**	⇓*e*P	**P**	**00 52 51.8**	**0.0**
MSLP	**Maasin**	**24.83**	**221**	*e*P	**P**	**00 52 52.6**	**+0.3**
OTRP	**Odiongan**	**24.84**	**229**	*e*P	**P**	**00 52 53.1**	**+0.7**

RCP Roxas 24.97 227⇑eP P 00 52 54.0 +0.4
LUBP Lubang 25.07 234 eP P 00 52 54.2 -0.3
HIA Hailar 25.11 326⇓iP P 00 52 54.4 -0.2
HIA eS S **00 57 07.7 -6.2**
HIA pmax pmax
comp=Z,624nm,0.8s
HIA MLR MLR
comp=Z,3μm,19.0s
HIA Hailar 25.11 326⇓iP P 00 52 54.4 -0.2
comp=Z,624nm,0.8s,mb6.1
HIA eS S **00 57 07.7 -6.2**
HIA LR LR
comp=Z,3μm,19.0s
HKC Hong Kong Obse 25.21 259 P P 00 52 58.0 +2.3
SJMP San Jose 25.36 231 eP P 00 52 57.9 +0.8
BUTP Butuan 25.37 218 eP P 00 52 57.6 +0.3
GZH Guangzhou 25.62 261 P P 00 52 56.4 -3.1
GZH S S **00 57 25.8 +3.4**
GZH LR LR
comp=N,6μm,25.6s
GZH LR LR
comp=E,3μm,15.6s
GZH LR LR
comp=Z,9μm,26.5s
BIPH Bislig 25.66 215⇑iP P 00 52 59.0 -0.9
TBP Tagbilaran 25.76 222 eP P 00 52 59.6 -1.1
GUIM Jordan 25.78 225 eP P 00 53 00.8 -0.2
PEA0B Petropavlovsk- 26.14 23 eP P 00 53 03.2 -0.6
PETK Petropavlovsk- 26.14 23 P P 00 53 03.4 -0.5
comp=Z,11nm,0.8s,mb4.4,baz=193,slow=4.9,SNR=10
PETK LR LR 01 02 24.2
comp=Z,4μm,20.7s,baz=212,slow=34
PETK ScS ScS 01 03 51.6 -0.6
comp=Z,1.8nm,0.8s,baz=251,slow=9.0,SNR=3.0
HHC Hu-ho-hao-te 26.19 302 eP P 00 53 04.1 -0.3
HHC PP 00 53 46.6
HHC S S **00 57 29.4 -1.7**
HHC PCS PcS 01 00 12.5 +2.0
HHC AMB AMB
comp=Z,135nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,370nm,4.3s
HHC LR LR
comp=N,4μm,13.9s
HHC LR LR
comp=E,4μm,16.9s
HHC LR LR
comp=Z,7μm,22.8s
BUSP Coron 26.31 232 eP P 00 53 06.1 +0.4
PET Petropavlovsk 26.41 24 eP P 00 53 05.6 -0.6
PET e 00 53 46.6
PET eS S **00 57 35.2 +1.0**
PET pmax pmax
comp=Z,98nm,1.0s,mb5.2
PET pmax pmax
comp=Z,1μm,8.2s
PET pmax pmax
comp=Z,2μm,6.6s
PET MLR MLR
comp=Z,4μm,22.0s
PET MLR MLR
comp=Z,2μm,20.0s
PET Petropavlovsk 26.41 24 eP P 00 53 05.6 -0.6
comp=Z,399nm,1.7s,mb5.6
PET eS S **00 57 40.9 +6.6**
PET LR LR
comp=Z,3μm,20.0s
BUKP Musuan 26.59 217 eP P 00 53 07.7 -0.5
CUYO Cuyo Island 26.61 228 eP P 00 53 08.7 +0.3
MATI Mati 26.78 214 eP P 00 53 09.7 -0.2
DAV Davao City (W) 27.01 215 P P 00 53 11.4 -0.5
comp=Z,937nm,0.8s,mb6.4,baz=37,slow=3.7,SNR=26
DAV LR LR 01 01 54.0
comp=Z,3μm,21.9s,baz=40,slow=32
DAV Davao City (W) 27.01 215⇑eP P 00 53 09.6 -2.4
DAV Davao City (W) 27.01 215 eP P 00 53 11.3 -0.7
comp=Z,2μm,1.1s,mb6.4
DAV S S **00 57 48.8 +4.4**
DAV LR LR
comp=Z,4μm,20.0s
BTO Baotou 27.27 301 eP P 00 53 13.9 -0.2
BTO AMB AMB
comp=Z,134nm,0.8s,mb5.5
BTO LR LR
comp=N,1μm,17.2s
BTO LR LR
comp=E,602nm,13.7s
ENPP El Nido 27.41 232 eP P 00 53 15.8 +0.3
XAN Xi'an 27.42 287 P P 00 53 14.4 -1.2
XAN AP pP 00 53 31.0 -1.8
XAN XP sP 00 53 40.0 -1.4
XAN PPP 00 54 12.5
XAN AMB AMB
comp=Z,65nm,1.0s,mb5.1
XAN AMB AMB
comp=Z,136nm,5.3s
XAN LR LR
comp=N,2μm,19.3s
XAN LR LR
comp=E,2μm,21.9s
XAN LR LR
comp=Z,4μm,22.7s
PAGZ Pagadian 27.53 220 eP P 00 53 16.7 +0.1
CTBH Cotabato--PC H 27.57 218⇑eP P 00 53 17.4 +0.4
PPR Puerto Princes 28.91 231⇑eP P 00 53 32.0 +3.0
NRGR Nerungri 29.01 341 iP P 00 53 31.1 +1.7
NRGR S S **00 58 19.6 +4.5**
NRGR smax
comp=N,344nm,1.1s
CLNS Chul'man 29.12 342 eP P 00 53 31.2 +0.8
CLNS e 00 54 26.3
CLNS e 00 56 38.3
CLNS eS S **00 58 15.3 -1.5**
CLNS eSS SS 00 59 52.0 -31
CLNS pmax pmax
comp=Z,250nm,1.0s,mb5.8
CLNS pmax pmax
comp=E,68nm,0.9s
CLNS pmax pmax
comp=N,163nm,1.0s
CLNS pmax pmax
comp=Z,190nm,1.0s,mb5.7
CLNS pmax pmax
comp=N,117nm,1.0s
CLNS pmax pmax
comp=E,71nm,0.9s
CLNS smax
comp=N,3μm,13.9s
CLNS smax
comp=E,2μm,15.9s
CLNS MLR MLR
comp=E,1μm,15.0s
CLNS MLR MLR
comp=Z,1μm,14.0s
CLNS MLR MLR
comp=N,929nm,15.0s
CIT Chita 29.91 325 eP P 00 53 38.5 +1.1
CIT e pP 00 53 55.0 +0.2
CIT pmax pmax
comp=Z,492nm,1.0s,mb6.1
BATP Bataraza 30.25 231 eP P 00 53 42.1 +1.3
QIZ Qiongzhong 30.27 256 P P 00 53 42.3 +1.3
QIZ XP sP 00 54 06.7 -0.2
QIZ S S **00 58 33.8 -1.8**
QIZ XS sS 00 59 03.3 -2.1
QIZ AMB AMB
comp=Z,94nm,1.5s,mb5.2
QIZ AMB AMB
comp=Z,665nm,7.2s
QIZ LR LR
comp=N,8μm,20.2s
QIZ LR LR
comp=Z,5μm,31.3s
QIZ Qiongzhong 30.27 256 eP P 00 53 42.3 +1.3
QIZ ePcP PcP 00 56 48.7 +8.7
QIZ eS S **00 58 30.1 -5.5**
QIZ LR LR
comp=Z,3μm,22.0s
GYA Guiyang 30.37 272⇑iP P 00 53 43.1 +1.2
GYA AP pP 00 53 59.6 +0.4
GYA XP sP 00 54 08.7 +0.9
GYA PP PP 00 54 44.6 -7.0
GYA PPP 00 54 57.1
GYA S S **00 58 32.2 -5.0**
GYA SCP ScP 01 00 17.1 +0.9
GYA PCS PcS 01 00 25.2 +1.2
GYA SCS ScS 01 04 11.0 -1.4
GYA AMB AMB
comp=Z,70nm,0.8s,mb5.3
GYA AMB AMB
comp=Z,580nm,6.2s
GYA LR LR
comp=N,5μm,18.0s
GYA LR LR
comp=E,3μm,17.7s
GYA LR LR
comp=Z,4μm,17.0s
ULN Ulaanbaatar 31.53 314⇓iP P 00 53 51.7 -0.1
ULN e 00 55 02.9
ULN eS S **00 58 58.7 +3.9**
ULN pmax pmax
comp=Z,126nm,1.0s,mb5.6
ULN MLR MLR
comp=Z,3μm,20.0s
ULN Ulaanbaatar 31.53 314⇓iP P 00 53 51.7 0.0
comp=Z,126nm,1.0s,mb5.6
ULN ePP PP 00 55 02.9 -1.2
ULN eS S **00 58 58.7 +4.0**
ULN eScP ScP 01 00 16.7 -2.9
ULN LR LR
comp=Z,3μm,20.0s
LZH Lanzhou 31.59 291 P P 00 53 51.5 -0.9
LZH AP pP 00 54 08.7 -1.1
LZH XP sP 00 54 23.0 +4.6
LZH PP PP 00 55 02.1 -2.8
LZH S S **00 58 51.2 -4.8**
LZH AMB AMB
comp=Z,43nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,195nm,4.0s
LZH LR LR
comp=N,5μm,14.9s
LZH LR LR
comp=Z,7μm,16.1s
SONM Songino Array 31.93 314 P P 00 53 55.5 +0.2
comp=Z,60nm,0.7s,mb5.4,baz=124,slow=8.6,SNR=342
SONM ScP ScP 01 00 18.9 -2.1
comp=Z,8.8nm,1.0s,baz=100,slow=1.7,SNR=4.4
SONM LR LR 01 06 14.1
comp=Z,3μm,21.6s,baz=109,slow=35
SONM PKKP 01 19 10.2
comp=Z,0.8nm,0.9s,baz=357,slow=7.7,SNR=3.9
SONM P3KPbc 01 25 26.9
comp=Z,1.5nm,0.8s,baz=268,slow=4.6,SNR=9.3
SONM Songino Array 31.93 314 P P 00 53 55.5 +0.2
SONM ScP ScP 01 00 18.9 -2.1
SONM LR LR 01 06 14.1
SONM PKKP 01 19 10.2
SONM e 01 25 26.9
CD2 Chengdu 32.01 281⇑iP P 00 53 55.7 -0.5
CD2 AP pP 00 54 13.5 -0.1
CD2 XP sP 00 54 21.3 -0.9
CD2 PP PP 00 55 04.5 -5.1
CD2 PCP PcP 00 56 42.1 -2.4
CD2 S S **00 58 56.4 -6.3**
CD2 XS sS 00 59 31.6 -0.9
CD2 PCS PcS 01 00 27.7 -1.7
CD2 AMB AMB
comp=Z,70nm,0.9s,mb5.4
CD2 AMB AMB
comp=Z,610nm,7.8s
CD2 LR LR
comp=N,9μm,16.5s
CD2 LR LR
comp=E,5μm,20.1s
CD2 LR LR
comp=Z,7μm,20.6s
KDM Kudat 32.28 230⇓P P 00 53 59.6 +0.9
MYLDM Lahad Datu 32.54 225⇑P P 00 54 03.4 +2.4
FX1 Attu Island--F 32.80 37 P P 00 54 03.6 +0.8
comp=Z,90nm,0.6s,mb5.8,baz=222,slow=1.9,SNR=52
FX1 LR LR 01 04 50.6
comp=Z,3μm,20.5s,baz=262,slow=32
YAK Yakutsk 32.90 350*diP P 00 54 03.0 -0.5
YAK e*PP pP 00 54 11.3 -10
YAK e pP 00 54 21.2 +0.2
YAK e 00 55 13.2
YAK eS S **00 59 12.8 -2.9**
YAK eSS SS 01 01 40.1 +0.2
YAK pmax pmax
comp=Z,278nm,1.0s,mb6.0
YAK pmax pmax
comp=N,117nm,1.1s
YAK pmax pmax
comp=E,38nm,1.0s
YAK pmax pmax
comp=Z,189nm,0.9s,mb5.9
YAK pmax pmax
comp=N,115nm,1.3s
YAK pmax pmax
comp=E,140nm,1.4s
YAK smax
comp=N,1μm,1.9s
YAK smax
comp=E,604nm,2.2s
YAK MLR MLR
comp=Z,2μm,17.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK Yakutsk 32.90 350⇓iP P 00 54 02.7 -0.8
comp=N,469nm,0.9s,mb6.3
YAK ePP PP 00 55 19.3 +0.3
YAK ePcP PcP 00 56 50.4 +4.1
YAK eS S **00 59 09.6 -6.1**
YAK LR LR
comp=Z,2μm,19.0s
SDKM Sandakan 33.00 227⇓P P 00 54 05.5 +0.5
SMY Shemya 33.21 37 eP P 00 54 06.9 +0.5
SMY e 00 56 42.9
KKM Kota Kinabalu 33.33 229⇑iP P 00 54 08.8 +0.9
comp=Z,242nm,0.9s,mb6.0
KKM ePP PP 00 55 24.3 -0.3
KKM LR LR
comp=Z,5μm,22.0s
KKM Kota Kinabalu 33.33 229⇓P P 00 54 09.2 +1.3
BOD Bodaibo 33.50 334 eP P 00 54 08.5 -0.4
BOD pmax pmax
comp=Z,142nm,1.0s,mb5.8
TSM Tawau 33.62 225⇓P P 00 54 11.1 +0.7
SEY Seymchan 33.77 9⇑eP P 00 54 10.7 -0.5
KMI Kunming 34.14 271 P P 00 54 15.3 +0.5
KMI AP pP 00 54 33.7 +1.4
KMI XP sP 00 54 42.8 +1.9
KMI PP PP 00 55 30.6 -2.7
KMI PPP 00 55 48.9
KMI PCP PcP 00 56 52.2 +1.6
KMI S S **00 59 32.1 -3.7**
KMI SCP ScP 01 00 30.3 +1.2
KMI PCS PcS 01 00 38.5 +1.5
KMI SSS 01 02 08.8
KMI SCS ScS 01 04 30.2 -1.4
KMI AMB AMB
comp=Z,26nm,0.9s,mb5.1
KMI AMB AMB
comp=Z,502nm,5.1s
KMI LR LR
comp=N,6μm,19.2s
KMI LR LR
comp=E,2μm,21.9s
KMI LR LR
comp=Z,3μm,32.6s
ZAK Zakamensk 34.77 317⇑iP P 00 54 20.0 +0.1
ZAK pmax pmax
comp=Z,77nm,0.9s,mb5.5
GTA Gaotai 34.87 297 P P 00 54 19.9 -1.1
GTA AP pP 00 54 38.0 -0.5
GTA XP sP 00 54 47.1 0.0
GTA PP PP 00 55 39.8 -1.4
GTA PPP 00 55 58.4
GTA PCP PcP 00 56 52.3 -0.1
GTA S S **00 59 44.3 -2.5**
GTA XS sS 01 00 14.9 -2.0
GTA SCP ScP 01 00 30.1 -1.4
GTA SCS ScS 01 04 31.1 -3.9
GTA AMB AMB
comp=Z,21nm,1.1s,mb4.9
GTA AMB AMB
comp=Z,260nm,4.2s
GTA LR LR
comp=N,4μm,18.9s
GTA LR LR
comp=E,3μm,20.1s
GTA LR LR
comp=Z,4μm,22.2s
IRK Irkutsk 34.93 320 eP P 00 54 21.5 +0.2
IRK e pP 00 54 39.7 +0.8
IRK eS S **00 59 48.6 +1.2**
IRK pmax pmax
comp=Z,223nm,1.0s,mb6.0
TLY Talaya 35.05 319 P P 00 54 23.1 +0.7
comp=Z,1μm,0.8s,mb6.7,SNR=34
TLY Talaya 35.05 319⇑P P 00 54 23.9 +1.6
SNR=32
TLY Talaya 35.05 319 eP P 00 54 23.2 +0.8
TLY e 00 55 53.0
TLY eS S **00 59 45.4 -3.9**
TLY pmax pmax
comp=Z,148nm,0.9s,mb5.8
TLY MLR MLR
comp=Z,3μm,17.0s
TLY Talaya 35.05 319⇓iP P 00 54 23.2 +0.8
comp=Z,140nm,0.9s,mb5.8
TLY e 00 54 48.5
TLY ePP PP 00 55 46.0 +3.0
TLY eS S **00 59 50.3 +1.0**
TLY LR LR
comp=Z,3μm,20.0s
UBT Ubonrachathani 36.12 254 P P 00 54 33.5 +1.6
comp=Z,347nm,1.0s,mb6.2
MOY Mondy 36.58 318 eP P 00 54 35.7 +0.3
MOY pmax pmax
comp=Z,14nm,3.0s
KKTK Khon Kaen 37.44 257 P P 00 54 43.0 -0.1
comp=Z,4μm,0.5s
BTM Bintulu 37.52 230⇑P P 00 54 44.9 +1.1
ADK Adak 38.02 43 eP P 00 54 47.1 -0.5
ADK pmax pmax
comp=Z,120nm,0.9s,mb5.7
ADK Adak 38.02 43 eP P 00 54 47.1 -0.6
comp=Z,116nm,0.9s,mb5.7
ADK epP pP 00 55 06.0 +0.7
ADK ePP PP 00 56 15.0 -0.7
CHRT Chiangrai 38.52 265⇑P P 00 54 53.0 +0.8
comp=Z,1μm,0.6s,mb6.9
SBUM Sibu 38.65 230⇓P P 00 54 53.6 +0.3
PMG Port Moresby 39.61 170⇑iP P 00 54 58.8 -2.5
PMG e 00 56 33.6
PMG e 00 57 04.9
PMG eS S **01 00 55.7 -3.4**
PMG pmax pmax
comp=Z,133nm,1.0s
PMG MLR MLR
comp=Z,3μm,20.0s
PMG Port Moresby 39.61 170⇑iP P 00 54 58.8 -2.5
comp=Z,132nm,1.0s,mb5.7
PMG epP pP 00 55 20.9 +1.8
PMG ePP PP 00 56 33.5 -0.1
PMG ePcP PcP 00 57 04.9 -2.3
PMG eS S **01 00 55.7 -3.3**
PMG LR LR
comp=Z,3μm,20.0s
CHG Chiang Mai 39.67 264⇑P P 00 55 02.0 +0.2
comp=Z,326nm,0.8s,mb6.2
CHTO Chiang Mai 39.67 264⇑iP P 00 55 01.9 +0.1
CHTO 00 56 36.3
CHTO 00 57 07.1
CHTO pmax pmax
comp=Z,264nm,0.9s,mb6.1
CHTO MLR MLR
comp=Z,2μm,22.0s
CHTO Chiang Mai 39.67 264⇑iP P 00 55 01.9 +0.1
comp=Z,264nm,0.9s,mb6.1
CHTO PP PP 00 56 36.3 +2.1
CHTO PcP PcP 00 57 07.1 -0.3
CHTO eScP ScP 01 00 48.1 -1.6
CHTO LR LR
comp=Z,2μm,22.0s
CM31 Chiang Mai Arr 39.81 263 eP P 00 55 00.6 -2.5
CM31 ePcP PcP 00 57 04.2 -3.7
CM31 eScP ScP 01 00 48.3 -2.0
CM31 LR LR
comp=Z,2μm,19.0s
CMAR Chiang Mai Arr 39.81 263 P P 00 55 03.4 +0.3
comp=Z,73nm,0.8s,mb5.6,baz=52,slow=7.2,SNR=224
CMAR PcP PcP 00 57 08.2 +0.4
comp=Z,21nm,0.9s,baz=33,slow=0.8,SNR=4.7
CMAR ScP ScP 01 00 49.8 -0.5
comp=Z,35nm,1.0s,baz=44,slow=2.3,SNR=19
CMAR LR LR 01 13 41.8
comp=Z,3μm,18.5s,baz=77,slow=39
CMAR PKPPKP 01 27 35.5
comp=Z,1.0nm,0.3s,baz=298,slow=4.0,SNR=5.1
CMAR Chiang Mai Arr 39.81 263 P P 00 55 03.4 +0.4
CMAR 00 57 08.3
CMAR pmax pmax
comp=Z,73nm,0.8s
CMAR pmax pmax
comp=Z,21nm,0.9s
CMAR MLR MLR
comp=Z,3μm,18.5s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
NST Nakhon Sawan 40.03 258 P P 00 55 06.0 +1.2
BDT Bhumibol Dam 40.28 261⇓P P 00 55 07.5 +0.6
comp=Z,84nm,0.8s,mb5.6
KAPI Kappang 40.32 214 P P 00 55 05.5 -1.6
comp=Z,2μm,0.9s,mb7.0,SNR=76
KAPI Kappang 40.32 214 P P 00 55 05.8 -1.3
comp=Z,307nm,0.9s,mb6.1,baz=38,slow=4.8,SNR=136
KAPI PcP PcP 00 57 08.9 -0.6
comp=Z,68nm,0.8s,baz=45,slow=7.1,SNR=3.9
KAPI ScP ScP 01 00 49.0 -3.3
comp=Z,36nm,1.0s,baz=9.4,slow=2.2,SNR=8.6
KAPI pScP 01 01 28.7
comp=Z,43nm,1.1s,baz=31,slow=6.8,SNR=3.5
KAPI LR LR 01 09 55.7
comp=Z,1μm,21.7s,baz=32,slow=33
KAPI Kappang 40.32 214⇑iP P 00 55 05.5 -1.7
comp=Z,406nm,1.0s,mb6.2
KAPI epP pP 00 56 40.5 -0.8
KAPI PcP PcP 00 57 08.5 -1.0
KAPI eScP ScP 01 00 49.5 -2.7
KSM Kuching 40.65 232⇑iP P 00 55 10.1 +0.1
comp=Z,117nm,0.7s,mb5.8
KSM ePP PP 00 56 42.6 -2.3
KSM ePcP PcP 00 57 10.6 0.0
KSM eScP ScP 01 00 51.8 -1.8
KSM eS S 01 01 35.5 +21
KSM Kuching 40.65 232⇑P P 00 55 11.1 +1.1
BILL Bilibino 40.90 14diP P 00 55 10.6 -0.8
BILL i pP 00 55 26.1 -3.1
BILL e 00 56 53.6
BILL i SS SS 01 04 22.9 +1.8
BILL pmax pmax
comp=Z,70nm,1.1s,mb5.4
BILL MLR MLR
comp=Z,900nm,17.0s
BILL Bilibino 40.90 14 eP P 00 55 12.5 +1.2
BILL ePP PP 00 56 55.4 +8.7
BILL eScP ScP 01 00 48.9 -4.8
BILL LR LR
comp=Z,3μm,19.0s
IMP Imphal 41.87 275 ex x 00 55 23.0
NNT Nongplab 41.88 255 P P 00 55 20.7 +0.7
TIXI Tiksi 42.24 354 eP P 00 55 21.2 -1.0
TIXI pmax pmax
comp=Z,140nm,0.9s,mb5.7
TIXI Tiksi 42.24 354⇓eP P 00 55 21.1 -1.1
comp=Z,137nm,0.9s,mb5.7
TIXI epP pP 00 55 40.7 +0.5
TIXI ePP PP 00 56 57.3 -3.8
TIXI eScP ScP 01 01 05.9 +7.0
TIXI eS S **01 01 33.7 -3.2**
KRAR Krasnoyarsk 42.54 322⇓iP P 00 55 25.1 +0.2
KRAR pmax pmax
comp=Z,443nm,0.9s,mb6.2
NIKO Nikolski 42.94 43 eP P 00 55 27.6 -0.5
LSA Lhasa 42.94 283 P P 00 55 30.0 +1.5
LSA Lhasa 42.94 283⇑iP P 00 55 29.3 +0.8
LSA e 00 57 18.5
LSA eS S **01 01 45.4 -2.9**
LSA pmax pmax
comp=Z,39nm,1.0s,mb5.1
LSA MLR MLR
comp=Z,3μm,19.0s

LSA Lhasa 42.94 283 ⇑*iP* **P 00 55 29.3 +0.8**
comp=Z,39nm,1.0s,mb5.1
LSA *e*PcP PcP 00 57 18.5 +0.6
LSA *e*ScP ScP 01 01 02.2 -0.4
LSA *e*S **S 01 01 45.4 -2.9**
LSA LR LR
comp=Z,3μm,19.0s
HNR Honiara 43.23 152 LR LR 01 11 43.3
comp=Z,2μm,20.2s,baz=326,slow=34
KAKA Kakadu 43.24 192 ⇑*iP* x 00 55 10.5
comp=Z,208nm,0.9s
KAKA *e* 00 57 00.3
KTGM Kuala Trenggan 43.28 243 ⇓P **P 00 55 32.0 +0.6**
BATI Baumata 43.30 205 P **P 00 55 30.0 -1.4**
comp=Z,955nm,0.8s,mb6.6,baz=34,slow=2.5,SNR=154
BATI ScP ScP 01 01 02.5 -1.6
comp=Z,42nm,0.6s,baz=57,slow=7.2,SNR=4.9
BATI pScP 01 01 39.8
comp=Z,46nm,0.9s,baz=280,slow=4.8,SNR=4.3
BATI S **S 01 01 47.4 -6.2**
comp=Z,122nm,0.9s,baz=342,slow=20,SNR=13
BATI ScS ScS 01 05 20.7 -4.0
comp=Z,25nm,0.7s,baz=18,slow=9.6,SNR=4.6
BATI LR LR 01 10 59.4
comp=Z,3μm,22.0s,baz=222,slow=32
SHL Shillong 43.40 277 *e*P **P 00 55 33.0 +0.7**
SHL *ex* x 01 05 05.0
COEN Coen 43.74 177 ⇑*iP* **P 00 55 33.7 -1.2**
comp=Z,128nm,0.8s,mb5.7
COEN pP pP 00 55 53.6 +0.6
COEN *e*S **S 01 01 54.2 -5.8**
WMQ Urumqi 44.06 303 ⇑*iP* **P 00 55 37.8 +0.4**
WMQ XP sP 00 56 03.5 -0.3
WMQ PP PP 00 57 23.0 +1.9
WMQ PPP 00 58 02.4
WMQ PCS PcS 01 01 14.0 -0.6
WMQ S **S 01 02 03.2 -1.2**
WMQ XS sS 01 02 34.0 -1.2
WMQ SCS ScS 01 05 25.1 -3.8
WMQ AMB AMB
comp=Z,146nm,1.2s,mb5.6
WMQ AMB AMB
comp=Z,592nm,4.0s
WMQ LR LR
comp=N,4μm,16.0s
WMQ LR LR
comp=E,2μm,18.0s
WMQ LR LR
comp=Z,3μm,24.0s
AGT Agartala 44.48 275 *e*P **P 00 55 43.0 +2.1**
UNV Unalaska Valle 44.49 42 *e*P **P 00 55 40.5 0.0**
UNV *e*pP pP 00 55 57.0 -1.7
MYKOM Kota Tinggi 45.02 239 P **P 00 55 46.9 +1.6**
KGM Kluang 45.27 239 ⇓P **P 00 55 48.8 +1.5**
IPM Ipoh 45.44 244 ⇓P **P 00 55 49.1 +0.5**
FRIM Kepong 45.76 242 ⇑P **P 00 55 51.9 +0.8**
TAPN Taplejung 46.47 280 *e*P **P 00 55 56.4 -0.2**
comp=Z,58nm,0.6s,mb5.5
ZAA0 Zalesovo Array 46.63 318 ⇓*i*P **P 00 55 56.8 -0.7**
ZAA0 *e*PcP PcP 00 57 29.7 -0.5
ZAA0 *e*PP PP 00 57 51.0 +2.9
ZAA0 *e*ScP ScP 01 01 14.2 -3.1
ZAA0 *e*S **S 01 02 36.2 -4.9**
ZALV Zalesovo Beam 46.63 318 P **P 00 55 57.1 -0.4**
comp=Z,173nm,0.9s,mb5.8,baz=103,slow=6.4,SNR=518
ZALV PcP PcP 00 57 29.2 -1.0
comp=Z,36nm,0.5s,baz=111,slow=4.2,SNR=8.0
ZALV pPcP 00 57 56.3
comp=Z,42nm,0.6s,baz=99,slow=4.6,SNR=3.8
ZALV ScP ScP 01 01 15.8 -1.5
comp=Z,7.6nm,0.6s,baz=108,slow=3.3,SNR=3.8
ZALV pScP 01 01 53.0
comp=Z,20nm,1.0s,baz=74,slow=6.3,SNR=4.0
ZALV ScS ScS 01 05 40.4 -4.6
comp=Z,7.0nm,1.0s,baz=90,slow=2.9,SNR=4.0
ZALV LR LR 01 15 36.6
comp=Z,2μm,21.4s,baz=94,slow=36
ZALV PKPPKP 01 27 31.2
comp=Z,0.9nm,0.6s,baz=329,slow=1.7,SNR=3.9
ZALV Zalesovo Beam 46.63 318 P **P 00 55 57.1 -0.4**
ZALV 00 57 29.2
ZALV 01 05 40.4
ZALV pmax pmax
comp=Z,173nm,0.9s,mb5.8
ZALV MLR MLR
comp=Z,2μm,21.4s
ODAN Odare 46.88 280 *e*P **P 00 56 00.1 +0.3**
comp=Z,74nm,0.5s,mb5.6
CAL Calcutta 47.46 274 *e*P **P 00 56 04.2 -0.2**
CAL *e*S **S 01 02 53.0 -0.6**
RAMN Ramite 47.53 280 *e*P **P 00 56 04.8 -0.1**
comp=Z,167nm,0.8s,mb5.9
NVS Novosibirsk 47.66 319 *i* P **P 00 56 04.7 -0.8**
NVS *i* S **S 01 02 51.4 -4.3**
NVS *i* SS SS 01 06 25.0 +0.6
NVS pmax pmax
comp=Z,697nm,1.0s,mb6.4
NVS pmax pmax
comp=N,145nm,1.0s
NVS pmax pmax
comp=E,611nm,1.0s
NVS smax
comp=N,283nm,2.1s
NVS smax
comp=E,188nm,2.1s
JIRN Jiri 47.67 281 *e*P **P 00 56 06.1 +0.1**
comp=E,108nm,0.4s,mb6.1
MK31 Makanchi Array 47.85 308 ⇓*i*P **P 00 56 06.5 -0.6**
MK31 *e* 00 57 35.7
MK31 *e*S **S 01 02 53.8 -4.8**
MK31 Makanchi Array 47.85 308 ⇓*i*P **P 00 56 06.5 -0.6**
MK31 *e*PcP PcP 00 57 35.7 +1.0
MK31 *e*ScP ScP 01 01 20.6 -2.0
MK31 *e*S **S 01 02 53.8 -4.8**
MKAR Makanchi Array 47.85 308 P **P 00 56 06.6 -0.5**
comp=E,91nm,0.8s,mb5.7,baz=91,slow=9.2,SNR=650
MKAR PcP PcP 00 57 35.6 +0.9
comp=E,15nm,0.5s,baz=116,slow=3.4,SNR=6.1
MKAR ScP ScP 01 01 20.7 -1.9
comp=E,30nm,1.0s,baz=92,slow=6.1,SNR=7.4
MKAR LR LR 01 17 06.9
comp=E,3μm,20.0s,baz=90,slow=37
MKAR PKPPKP 01 27 21.1
comp=E,0.5nm,0.9s,baz=309,slow=0.9,SNR=2.8
MKAR Makanchi Array 47.85 308 P **P 00 56 06.6 -0.5**
MKAR 00 57 35.6
MKAR pmax pmax
comp=Z,91nm,0.8s
MKAR MLR MLR
comp=Z,3μm,20.0s
GUN Gumba 47.87 282 *e*P **P 00 56 07.8 +0.3**
comp=Z,143nm,0.5s,mb6.1
SDPT Sand Point 48.18 41 *e*P **P 00 56 08.2 -1.3**
comp=Z,130nm,0.7s,mb5.9
PKI Pulchoki 48.37 282 *e*P **P 00 56 10.9 -0.4**
comp=Z,26nm,0.5s,mb5.3
PKI Pulchoki 48.37 282 *e*P **P 00 56 10.9 -0.4**
PKI pmax pmax
comp=Z,27nm,0.5s,mb5.3
PKIN Phulchoki 48.37 282 *e*P **P 00 56 10.9 -0.5**
comp=Z,35nm,0.6s,mb5.4
KKN Kakani 48.41 282 *e*P **P 00 56 11.2 -0.5**
comp=Z,159nm,0.8s,mb5.9
KKN Kakani 48.41 282 *e*P **P 00 56 11.2 -0.5**
KKN pmax pmax
comp=Z,159nm,0.8s,mb5.9
DMN Daman 48.61 282 *e*P **P 00 56 12.8 -0.4**
comp=Z,50nm,0.4s,mb5.8
GKN Gorkha 48.90 282 *e*P **P 00 56 15.0 -0.4**
comp=Z,129nm,0.8s,mb5.9
BOK Bokaro 49.14 277 *e*P **P 00 56 17.5 +0.2**
CHGN Chignik 49.44 40 *e*P **P 00 56 18.2 -1.0**
DANN Dangsing 49.54 283 *e*P **P 00 56 20.3 0.0**
comp=Z,126nm,0.5s,mb6.1
KOLN Koldanda 49.84 282 *e*P **P 00 56 22.3 -0.3**
comp=Z,162nm,0.8s,mb6.0
WRAB Tennant Creek 50.04 188 P **P 00 56 21.0 -3.0**
comp=Z,1μm,0.6s,mb7.0,SNR=93
WRAB Tennant Creek 50.04 188 ⇑*iP* **P 00 56 21.6 -2.4**
WRAB *e* 00 57 42.5
WRAB *e* 00 58 19.1
WRAB *e*S **S 01 03 26.8 -2.8**
WRAB pmax pmax
comp=Z,190nm,0.8s,mb6.1
WRAB MLR MLR
comp=Z,3μm,22.0s
WRAB Tennant Creek 50.04 188 ⇑*iP* **P 00 56 21.6 -2.4**
comp=Z,190nm,0.8s,mb6.1
WRAB *e*PcP PcP 00 57 42.5 -0.4
WRAB *e*PP PP 00 58 19.1 -0.8
WRAB *e*ScP ScP 01 01 30.7 -1.4
WRAB *e*S **S 01 03 26.8 -2.8**
WRAB LR LR
comp=Z,3μm,22.0s
CTA Charters Tower 50.04 174 ⇑*iP* **P 00 56 22.4 -1.6**
comp=Z,93nm,0.9s,mb5.7
CTA *e*S **S 01 03 25.3 -4.4**
CTA Charters Tower 50.04 174 P **P 00 56 22.7 -1.3**
comp=Z,108nm,0.9s,mb5.8,baz=354,slow=7.7,SNR=72
CTA Charters Tower 50.04 174 ⇑*iP* **P 00 56 22.4 -1.6**
CTA *e*S **S 01 03 25.3 -4.4**
CTA pmax pmax
comp=Z,93nm,0.9s
CTAO Charters Tower 50.04 174 ⇑*iP* **P 00 56 22.7 -1.3**
CTAO *e* 00 57 43.6
CTAO *e* 00 58 18.6
CTAO *e*S **S 01 03 26.5 -3.2**
CTAO pmax pmax
comp=Z,197nm,1.1s,mb6.0
CTAO MLR MLR
comp=Z,1μm,19.0s
CTAO Charters Tower 50.04 174 ⇑*iP* **P 00 56 22.7 -1.3**
comp=Z,197nm,1.1s,mb6.0
CTAO *e*pP pP 00 56 46.0 +3.6
CTAO *e*PcP PcP 00 57 43.6 +0.7
CTAO *e*PP PP 00 58 18.6 -1.3
CTAO *e*ScP ScP 01 01 30.3 -1.9
CTAO *e*S **S 01 03 26.5 -3.2**
CTAO LR LR
comp=Z,1μm,19.0s
WB2 Warramunga Arr 50.05 188 ⇑*iP* **P 00 56 21.4 -2.7**
WB2 *e* 01 01 29.8
WB2 *e*S **S 01 03 22.2 -7.6**
WB2 *e*SCS ScS 01 06 08.3 -0.2
KURK Kurchatov 50.23 313 P **P 00 56 24.3 -0.9**
comp=Z,1μm,0.9s,mb6.8,SNR=61
KURK Kurchatov 50.23 313 ⇓*iP* **P 00 56 24.4 -0.8**
KURK *e*S **S 01 03 24.1 -7.7**
KURK pmax pmax
comp=Z,132nm,0.8s,mb5.9
KURK MLR MLR
comp=Z,2μm,20.0s
KURK Kurchatov 50.23 313 ⇓*iP* **P 00 56 24.4 -0.8**
comp=Z,132nm,0.8s,mb5.9
KURK *e*ScP ScP 01 01 29.7 -2.9
KURK *e*S **S 01 03 24.1 -7.7**
KURK LR LR
comp=Z,2μm,20.0s
SVW2 Sparrevohn 51.45 34 *e*P **P 00 56 34.6 +0.4**
PTH Pithoragarh 52.18 286 *e*P **P 00 56 40.5 +0.4**
PTH *ex* x 00 59 47.2
LGTI Lohaghat 52.18 286 *e*P **P 00 56 41.1 +1.0**
LGTI *ex* x 01 01 40.5
OHAK Old Harbor 52.32 39 *e*P **P 00 56 40.1 -0.7**
OHAK *e*pP pP 00 56 57.6 -1.6
OHAK *e*PP PP 00 58 39.7 0.0
ULHL Ulahol 52.55 302 P **P 00 56 43.4 +0.7**
SNR=9.2
XMIS Christmas Isla 52.68 226 ⇑*iP* **P 00 56 40.9 -2.9**
XMIS *e* pP 00 57 02.9 +0.5
XMIS *e*PP PP 00 58 52.0 +8.2
KDAK Kodiak Island 52.72 38 P **P 00 56 42.6 -1.1**
comp=Z,44nm,0.7s,mb5.6,baz=269,slow=5.0,SNR=69
KDAK Kodiak Island 52.72 38 *e*P **P 00 56 42.0 -1.6**
comp=Z,391nm,1.2s,mb6.3
TKM2 Tokmak 2 52.92 303 ⇓*e*P **P 00 56 45.3 -0.1**
TKM2 *e**PP pP 00 57 01.8 -2.2
TKM2 *e* 00 57 54.5
TKM2 *e* 00 58 47.7
TKM2 *e*S **S 01 04 05.7 -3.4**
TKM2 pmax pmax
comp=Z,128nm,1.3s,mb5.8
TKM2 MLR MLR
comp=Z,1μm,21.0s
TKM2 Tokmak 2 52.92 303 P **P 00 56 45.8 +0.4**
TKM2 Tokmak 2 52.92 303 ⇓*e*P **P 00 56 45.3 -0.1**
SNR=81
comp=Z,128nm,1.3s,mb5.8
TKM2 *e*pP pP 00 57 01.8 -2.2
TKM2 *e*PcP PcP 00 57 54.5 +1.0
TKM2 *e*PP PP 00 58 47.7 +2.2
TKM2 *e*ScP ScP 01 01 41.0 -3.4
TKM2 *e*S **S 01 04 05.7 -3.4**
TKM2 LR LR
comp=Z,1μm,21.0s
FUNA Funafuti 53.06 130 *e*P **P 00 56 46.1 -0.6**
FUNA *e* pP 00 57 05.7 +0.4
FUNA *e*PcP PcP 00 57 53.0 -1.4
FUNA *e*PP PP 00 58 42.4 -4.9
KSH Kashi 53.22 299 P **P 00 56 49.0 +1.3**
KSH AP pP 00 57 08.3 +2.1
KSH XP sP 00 57 17.3 +2.8
KSH PCP PcP 00 57 56.9 +2.2
KSH PP PP 00 58 51.6 +3.4
KSH PPP 00 59 59.6
KSH SCP ScP 01 01 45.5 -0.4
KSH PCS PcS 01 01 53.4 -0.2
KSH S **S 01 04 12.5 -0.8**
KSH XS sS 01 04 45.5 +0.6
KSH SCS ScS 01 06 28.2 -2.2
KSH SS SS 01 07 52.1 -1.4
KSH AMB AMB
comp=Z,430nm,1.1s,mb6.4
KSH AMB AMB
comp=Z,764nm,4.1s
KSH LR LR
comp=N,2μm,9.5s
KSH LR LR
comp=E,4μm,10.2s
KSH LR LR
comp=Z,4μm,21.1s
PPLA Purkeypile 53.25 32 *e*P **P 00 56 48.0 +0.5**
comp=Z,101nm,0.8s,mb5.9
PPLA *e* pP 00 57 04.5 -1.5
CHUM Lake Minchumin 53.29 30 *e*P **P 00 56 48.7 +1.0**
comp=Z,97nm,1.0s,mb5.8
CHUM *e*pP pP 00 57 06.4 +0.1
CHUM *e*PcP PcP 00 57 54.2 -0.2
CHUM *e*PP PP 00 58 46.6 -1.7
CHUM *e*ScP ScP 01 01 44.5 -1.1
KZA Kyzart 53.31 302 P **P 00 56 50.1 +1.8**
SNR=34
KBK Karagaybulak 53.44 303 P **P 00 56 49.4 +0.2**
SNR=123
CHMS Chumysh 53.52 303 P **P 00 56 49.9 +0.1**
SNR=36
VIS Vishakhapatnam 53.64 271 *e*P **P 00 56 50.8 -0.2**
VIS *i* S **S 01 04 18.1 -1.2**
FRU Bishkek 53.65 303 *e*P **P 00 56 50.0 -0.7**
FRU *e* 01 04 15.5
FRU *e* 01 06 28.0
FRU pmax pmax
comp=Z,210nm,1.6s,mb5.9
USP Ospenovka 53.66 304 P **P 00 56 50.6 -0.3**
SNR=38
DDI Dehra Dun 53.75 287 *e*P **P 00 56 50.0 -1.7**
DDI *ex* x 01 01 46.2
AAK Ala-Archa 53.77 303 P **P 00 56 51.0 -0.6**
comp=Z,409nm,0.9s,mb6.5,SNR=50
AAK Ala-Archa 53.77 303 ⇓*iP* **P 00 56 52.1 +0.5**
SNR=34
AAK Ala-Archa 53.77 303 *e*P **P 00 56 51.5 -0.1**
comp=Z,58nm,0.9s,mb5.6
AAK *e*PcP PcP 00 57 56.5 -0.2
AAK *e*ScP ScP 01 01 42.9 -5.2
AAK *e*S **S 01 04 15.4 -5.2**
AAK LR LR
comp=Z,3μm,22.0s
ASAR Alice Springs 53.78 188 P **P 00 56 49.5 -2.3**
comp=Z,55nm,0.8s,mb5.6,baz=6.2,slow=5.2,SNR=112
ASAR PcP PcP 00 57 56.8 -0.1
comp=Z,84nm,0.8s,baz=12,slow=3.9,SNR=11
ASAR ScP ScP 01 01 46.5 -1.7
comp=Z,14nm,0.9s,baz=7.9,slow=4.3,SNR=6.8
ASAR S **S 01 04 18.9 -1.9**
comp=Z,8.4nm,1.0s,baz=16,slow=17,SNR=9.6
ASAR PKP2bc 01 27 26.8
comp=Z,1.4nm,0.9s,baz=166,slow=2.7,SNR=4.3
ASAR P4KPbc 01 34 13.2
comp=Z,5.4nm,0.9s,baz=6.4,slow=4.6,SNR=38
ASAR Alice Springs 53.78 188 P **P 00 56 49.5 -2.2**
ASAR 00 57 56.8
ASAR S **S 01 04 18.9 -1.9**
ASAR pmax pmax
comp=Z,55nm,0.8s
ASAR smax
comp=N,8.0nm,1.0s
ASAR Alice Springs 53.78 188 P **P 00 56 49.5 -2.3**
ASAR PcP PcP 00 57 56.8 -0.1
ASAR ScP ScP 01 01 46.5 -1.7
ASAR S **S 01 04 18.9 -1.9**
ASAR ⇑*e* 01 27 26.8
UCH Uchtor 53.82 302 P **P 00 56 53.3 +1.3**
SNR=17
UCH Uchtor 53.82 302 *e*P **P 00 56 53.0 +1.0**
comp=N,60nm,1.1s,mb5.5
UCH *e*PcP PcP 00 57 58.5 +1.6
UCH *e*ScP ScP 01 01 46.7 -1.7
UCH LR LR
comp=Z,2μm,22.0s
KTH Kantishna Hill 53.88 31 *e*P **P 00 56 52.5 +0.4**
comp=Z,130nm,1.1s,mb5.9
BPAW Bear Paw Mtn. 53.89 30 *e*P **P 00 56 52.3 +0.1**
comp=Z,218nm,1.6s,mb5.9
BPAW *e* pP 00 57 08.9 -1.8
TRF Thorofare Moun 54.15 31 *e*P **P 00 56 54.2 +0.2**
comp=Z,123nm,1.1s,mb5.8
TRF *e*pP pP 00 57 11.5 -1.2
TRF *e*PcP PcP 00 57 56.0 -1.7
SMLA Simla 54.26 289 *i* P **P 00 56 53.8 -1.6**
SMLA *ex* x 00 56 59.3
comp=Z,228nm,0.4s
SMLA *i* x 01 04 24.7
EKS2 Erkin-Say 54.29 303 P **P 00 56 55.2 -0.2**
SNR=46
EKS2 Erkin-Say 54.29 303 *e*P **P 00 56 55.6 +0.3**
comp=Z,49nm,0.9s,mb5.5
EKS2 *e*PcP PcP 00 57 59.8 +1.1
EKS2 *e*ScP ScP 01 01 46.3 -4.2
EKS2 LR LR
comp=Z,2μm,19.0s
SEW Seward 54.40 35 *e*P **P 00 56 54.9 -1.0**
comp=Z,158nm,0.9s,mb6.0
SEW pP pP 00 57 13.7 -0.9
SEW *e*sP sP 00 57 23.5 +0.7
AML Almayashu 54.44 302 P **P 00 56 57.7 +1.2**
SNR=30
AML Almayashu 54.44 302 *e*P **P 00 56 57.4 +0.9**
comp=Z,179nm,0.8s,mb6.2
AML *e*pP pP 00 57 15.7 +0.5
AML *e*PcP PcP 00 58 00.2 +0.9
AML LR LR
comp=Z,3μm,22.0s
COLD Coldfoot 54.54 26 *e*P **P 00 56 57.2 +0.4**
comp=Z,151nm,1.4s,mb5.8
COLD *e*pP pP 00 57 13.3 -2.1
COLD *e*PcP PcP 00 57 56.7 -2.5
COLD *e*PP PP 00 58 58.9 -0.6
COLD *e*ScP ScP 01 01 50.7 -0.4
PMR Palmer 54.59 33 *e*P **P 00 56 56.1 -1.2**
PMR pmax pmax
comp=Z,96nm,1.1s,mb5.7
PMR Palmer 54.59 33 *e*P **P 00 56 56.1 -1.2**
comp=Z,96nm,1.1s,mb5.7
MCK McKinley 54.77 31 *e*P **P 00 56 58.3 -0.2**
MCK pmax pmax
comp=Z,220nm,1.0s,mb6.1
MCK McKinley 54.77 31 *e*P **P 00 56 58.3 -0.3**
comp=Z,216nm,1.0s,mb6.1
MCK *e*pP pP 00 57 15.1 -2.1
MCK *e*PP PP 00 59 03.4 +1.8
BHK Bhakra 54.79 289 *ex* x 00 57 14.6
MBWA Marble Bar 54.81 204 ⇓P **P 00 56 58.9 -0.3**
SNR=12
MBWA Marble Bar 54.81 204 *e*P **P 00 56 58.2 -1.1**
comp=Z,120nm,0.8s,mb6.0
MBWA *e*pP pP 00 57 17.2 -0.8
MBWA *e*sP sP 00 57 26.4 +0.2
MBWA LR LR
comp=Z,2μm,21.0s
DLH Dalhousie 54.85 291 *e*P **P 00 57 00.0 +0.4**
VOSK Vostochnaya 54.89 316 P **P 00 56 59.3 -0.2**
VOSK pmax pmax
comp=Z,245nm,0.9s,mb6.2
NDI New Delhi 54.94 286 *e*P **P 00 56 59.0 -1.3**
THN Thein Dam 55.08 290 *ex* x 00 56 58.1
BVA0 Borovoye Array 55.22 316 *i* P **P 00 57 01.9 0.0**
BVA0 pmax pmax
comp=Z,101nm,0.8s,mb5.9
BRVK Borovoye 55.28 316 P **P 00 57 02.8 +0.4**
comp=Z,4μm,0.8s
BRVK Borovoye 55.28 316 ⇓P **P 00 57 03.3 +0.9**
SNR=170
BRVK Borovoye 55.28 316 *e*P **P 00 57 02.3 -0.1**
BRVK *e*pP pP 00 57 21.4 +0.4
BRVK *e*ScP ScP 01 01 49.3 -5.3
BRVK *e*S **S 01 04 24.7 -16**
BRVK LR LR
comp=Z,2μm,20.0s
COLA College 55.30 29 *e*P **P 00 57 02.5 +0.2**
COLA *e**PP pP 00 57 21.2 +0.2
COLA *e* 00 59 04.9
COLA pmax pmax
comp=Z,73nm,0.8s,mb5.8
COLA MLR MLR
comp=Z,1μm,22.0s
COLA College 55.30 29 *e*P **P 00 57 02.5 +0.2**
comp=Z,73nm,0.8s,mb5.8
COLA *e*pP pP 00 57 21.2 +0.1
COLA *e*PP PP 00 59 04.8 -1.5
COLA LR LR
comp=Z,1μm,22.0s
EIDS Eidsvold 55.89 169 *e*P **P 00 57 05.5 -1.4**
NGP Nagpur 55.98 276 *e*P **P 00 57 06.0 -1.9**
NGP *ex* x 01 04 46.2
KK31 Karatay Array 56.56 304 P **P 00 57 11.3 -0.4**
KK31 pmax pmax
comp=Z,102nm,0.7s,mb6.0
MENT Mentasta 57.12 32 *e*P **P 00 57 15.7 +0.4**
NOUC Port Laguerre 57.23 152 *e*P **P 00 57 15.4 -1.2**
DZM Mont Dzumac 57.26 152 ⇑*iP* **P 00 57 16.6 -0.1**
DZM *e*pP pP 00 57 35.1 -0.5
AJM Ajmer 57.82 284 *e*P **P 00 57 19.4 -1.4**
POHA Pohakuloa 57.87 84 *e*P **P 00 57 19.7 -1.6**
POHA *e*pP pP 00 57 42.6 +2.5
POHA *e*PP PP 00 59 23.6 -6.5
HYB Hyderabad 57.90 273 *e*P **P 00 57 21.5 0.0**
HYB *e*S **S 01 05 14.0 -2.1**
HYB pmax pmax
comp=Z,45nm,1.0s,mb5.5
HYB Hyderabad 57.90 273 *i* P **P 00 57 21.5 0.0**
comp=Z,45nm,1.0s,mb5.5
HYB *e*pP pP 00 57 44.5 +4.2
HYB *e*S **S 01 05 14.0 -2.1**
HYB Hyderabad 57.90 273 *e*P **P 00 57 21.5 0.0**
comp=Z,45nm,1.0s,mb5.5
HYB *e*S **S 01 05 14.0 -2.1**
AKL Akola 57.91 277 *e*P **P 00 57 21.2 -0.4**
EGAK Eagle 58.16 30 *e*P **P 00 57 22.2 -0.4**
comp=Z,78nm,1.0s,mb5.7
EGAK *e*pP pP 00 57 40.5 -0.9
EGAK *e*PcP PcP 00 58 12.8 -0.5
MDRS Chennai 58.33 267 *ex* x 00 59 25.2
DAWY Dawson 58.98 30 *e*P **P 00 57 28.4 +0.1**
DAWY *e*pP pP 00 57 46.8 -0.4
DAWY *e*PcP PcP 00 58 15.6 -1.0
LATR Latur 59.22 275 *e*P **P 00 57 30.6 0.0**
PNL Peninsula 59.48 35 *e*P **P 00 57 31.9 +0.1**
comp=Z,96nm,1.0s,mb5.8
PNL *e*pP pP 00 57 49.3 -1.4
PNL *e*PcP PcP 00 58 17.3 -1.4
PNL *e*PP PP 00 59 43.5 -0.1
KBL Kabul 59.82 295 *e*P **P 00 57 34.2 -0.4**
KBL *e**PP pP 00 57 52.5 -1.0
KBL *e* 00 58 15.1
KBL *e*S **S 01 05 37.8 -2.8**
KBL pmax pmax
comp=Z,73nm,0.9s,mb5.7
KBL Kabul 59.82 295 *e*P **P 00 57 34.2 -0.4**
comp=Z,73nm,0.9s,mb5.7
KBL *e*pP pP 00 57 52.5 -1.0
KBL *e*PcP PcP 00 58 15.1 -5.4
KBL *e*ScP ScP 01 02 14.5 -0.5

KBL eS S 01 05 37.8 -2.8
SVE Sverdlovsk 60.30 321⇑ eP P 00 57 37.5 0.0
SVE e 00 59 47.3
SVE eS S 01 05 39.8 -6.3
SVE e 01 07 20.2
SVE eSSS 01 12 21.5
SVE pmax pmax
comp=Z,209nm,1.0s,mb6.1
SVE MLR MLR
comp=Z,2μm,18.0s
PALK Pallekele 60.71 261 eP P 00 57 40.6 -0.3
comp=Z,15nm,0.7s,mb5.1
PALK epP pP 00 57 60.0 +0.1
PALK ePcP PcP 00 58 24.7 +0.3
ARMA Armidale 60.92 169⇑ iP P 00 57 41.1 -0.8
ARMA i S S 01 05 51.7 -2.6
ARU Arti 61.51 321 P P 00 57 45.2 -0.5
comp=Z,1μm,1.0s,mb7.0,SNR=90
ARU Arti 61.51 321d iP P 00 57 45.6 -0.1
ARU e 00 58 25.5
ARU e 00 59 59.6
ARU eS S 01 06 02.9 +1.5
ARU 01 07 28.1
ARU SS SS 01 10 02.0 -0.9
ARU pmax pmax
comp=Z,361nm,1.2s,mb6.3
ARU Arti 61.51 321⇓ eP P 00 57 45.5 -0.2
ARU ePP PP 01 00 00.2 -1.3
ARU eS S 01 05 54.5 -6.9
ARU LR LR
comp=Z,2μm,20.0s
POO Poona 61.51 276 eP P 00 57 45.8 -0.5
POO AMb AMB 00 57 47.3
comp=Z,115nm,0.8s,mb6.0
STKA Stephens Creek 61.53 179 eP P 00 57 44.1 -1.9
comp=Z,108nm,0.8s,mb5.9
STKA eS S 01 05 54.7 -7.3
STKA Stephens Creek 61.53 179 P P 00 57 44.3 -1.7
comp=Z,132nm,0.8s,mb6.0,baz=351,slow=7.6,SNR=113
STKA S S 01 05 56.0 -6.0
comp=Z,7.4nm,0.9s,baz=336,slow=12,SNR=3.9
STKA LR LR 01 22 48.1
comp=Z,2μm,21.7s,baz=5.3,slow=34
STKA PKP2ab 01 27 25.4
comp=Z,6.1nm,1.1s,baz=162,slow=2.6,SNR=3.6
STKA Stephens Creek 61.53 179 eP P 00 57 43.6 -2.3
STKA eS S 01 05 54.7 -7.3
SKAG Skagway 61.56 35 eP P 00 57 46.9 +0.9
comp=Z,130nm,1.1s,mb5.9
SKAG epP pP 00 58 04.2 -0.7
SKAG ePP PP 01 00 01.8 -0.1
FORT Forrest 61.67 193⇑ iP P 00 57 45.0 -2.0
comp=Z,130nm,0.6s,mb6.1
KAD Karad 61.73 275 eP P 00 57 47.2 -0.6
KAD AMb AMB 00 57 49.8
comp=Z,149nm,1.0s,mb6.0
SOKR Solikamsk 61.79 325d iP P 00 57 47.4 -0.1
SOKR S S 01 06 03.3 -1.5
SOKR pmax pmax
comp=Z,140nm,1.2s,mb5.9
SOKR MLR MLR
comp=Z,2μm,19.0s
KOD Kodaikanal 62.05 266 eP P 00 57 50.0 -0.1
KOD AMb AMB 00 57 52.9
comp=Z,83nm,0.7s,mb5.8
SIT Sitka 62.06 38 eP P 00 57 49.4 0.0
SIT e*PP pP 00 58 05.9 -2.5
SIT pmax pmax
comp=Z,14nm,0.8s,mb5.0
SIT Sitka 62.06 38 eP P 00 57 49.4 0.0
comp=Z,14nm,0.8s,mb5.0
SIT epP pP 00 58 05.9 -2.4
AB31 Akbulak array 62.34 313 P P 00 57 51.6 +0.2
AB31 pmax pmax
comp=Z,152nm,0.5s,mb6.3
QUE Quetta 62.90 291 eP P 00 58 03.0 +7.5
QUE eS S 01 06 25.0 +5.2
MNGI Mangalore 63.09 270 ex x 00 58 07.5
BHJ Bhuj 63.21 283 i x P 00 57 57.5 -0.1
BHJ AMb AMB 00 58 33.0
comp=Z,198nm,1.0s,mb6.0
AKTO Aktyubinsk 63.24 315 P P 00 57 56.8 -0.5
AKTO pmax pmax
comp=Z,43nm,0.9s,mb5.4
TRD Trivandrum 63.32 264 eP P 00 57 58.5 +0.1
TRD AMb AMB 00 57 60.0
comp=Z,114nm,1.0s,mb5.8
DLBC Dease Lake 64.47 36 P P 00 58 06.4 +1.1
comp=Z,9.0nm,0.9s,mb4.6,baz=286,slow=7.5,SNR=18
DLBC pP pP 00 58 21.0 -3.4
comp=Z,43nm,1.1s,baz=294,slow=7.9,SNR=12
DLBC PKP2bc 01 26 55.6
comp=Z,2.8nm,0.9s,baz=111,slow=1.6,SNR=4.3
DLBC Dease Lake 64.47 36 eP P 00 58 06.3 +1.1
DLBC epP pP 00 58 23.5 -0.9
DLBC esP sP 00 58 32.6 0.0
XMAS Kiritimati 64.51 103 eP P 00 58 04.7 -1.6
comp=Z,195nm,1.1s,mb5.8
KLBR Kellerberrin 65.09 202 eP P 00 58 07.6 -2.0
comp=Z,74nm,0.9s,mb5.5
CAN Canberra 65.40 173⇑ iP P 00 58 10.8 -0.6
CAN e 01 00 36.9
CAN pmax pmax
comp=Z,317nm,0.9s,mb6.2
CAN Canberra 65.40 173⇑ iP P 00 58 10.8 -0.6
comp=Z,317nm,0.9s,mb6.2
CAN epP pP 00 58 31.4 +0.8
CAN ePP PP 01 00 36.9 +0.4
CNB Canberra Magne 65.43 172⇑ iP P 00 58 10.9 -0.8
MUN Mundaring 65.96 203 eP P 00 58 12.5 -2.6
NWAO Narrogin (SRO) 66.49 202 P P 00 58 18.9 +0.4
SNR=5.2
NWAO Narrogin (SRO) 66.49 202 P P 00 58 17.4 -1.1
comp=Z,182nm,0.8s,mb6.0,baz=28,slow=6.5,SNR=50
NWAO Narrogin (SRO) 66.49 202 eP P 00 58 17.5 -1.0
NWAO epP pP 00 58 38.8 +1.0
NWAO LR LR
comp=Z,985nm,22.0s
ABKT Ailbek 67.07 302 P P 00 58 23.6 +1.2
comp=Z,654nm,0.9s,mb6.5,SNR=39
ALE Alert 67.15 3 P P 00 58 22.0 -0.2
comp=Z,310nm,0.8s,mb6.2,SNR=16
TOO Toolangi 67.34 176⇑ iP P 00 58 23.1 -0.7
SPB4 Spitsbergen Ar 67.36 349 eP P 00 58 24.2 +0.6
SPB4 epP pP 00 58 44.1 +1.3
SPB4 ePP PP 01 00 47.8 -4.5
BBB Bella Bella 67.46 42 P P 00 58 23.5 -1.1
comp=Z,18nm,1.0s,mb4.8,baz=271,slow=3.3,SNR=4.4
KBS Kingsbay 67.53 351 eP P 00 58 25.5 +0.9
KBS eS S 01 07 17.7 +2.7
KBS AMS AMS 01 24 18.4
comp=Z,1μm,24.8s
KBS Kingsbay 67.53 351 eP P 00 58 25.4 +0.8
KBS epP pP 00 58 45.2 +1.3
HSP Hornsund 68.25 349 eP P 00 58 29.6 +0.5
LVZ Lovozero 68.41 337⇑ eP P 00 58 30.5 +0.3
APA Apatity 68.98 337⇑ iP P 00 58 33.6 -0.2
APA i 00 58 58.0
APA i S S 01 07 38.0 +5.5
APA i PS 01 08 02.0
APA i 01 08 28.0
APA pmax pmax
comp=Z,122nm,1.0s,mb5.7
RES Resolute Bay 69.51 14 P P 00 58 36.5 -0.5
comp=Z,31nm,0.8s,mb5.2,baz=317,slow=6.2,SNR=125
RES PKP2bc 01 26 37.5
comp=Z,4.4nm,1.0s,baz=106,slow=2.2,SNR=8.1
RES LR LR 01 29 01.2
comp=Z,734nm,21.8s,baz=315,slow=36
RES Resolute Bay 69.51 14 eP P 00 58 36.5 -0.5
RES e pP 00 58 56.1 -0.2
KLMR Klimovskoe 69.56 329⇓ iP P 00 58 37.0 -0.5
KLMR e pP 00 59 00.8 +4.0
KLMR pmax pmax
comp=Z,125nm,0.8s,mb5.8
KEV Kevo 69.91 340 ep P 00 58 38.4 -1.1
comp=Z,62nm,0.9s,mb5.4
KEV Kevo 69.91 340 eP P 00 58 38.4 -1.1
KEV pmax pmax
comp=Z,62nm,0.9s,mb5.4
YKA Yellowknife Ar 70.11 29 P P 00 58 39.9 -0.9
comp=Z,6.8nm,0.5s,mb4.8,baz=295,slow=6.3,SNR=112
YKA pP pP 00 58 58.3 -1.9
comp=Z,28nm,0.8s,baz=294,slow=6.3,SNR=10
YKA PKPPKP 01 26 35.5
comp=Z,0.9nm,0.9s,baz=101,slow=2.7,SNR=5.4
YKA LR LR 01 29 19.0
comp=Z,271nm,21.6s,baz=140,slow=36
YKA Yellowknife Ar 70.11 29 P P 00 58 39.9 -1.0
YKA *PP pP 00 58 58.3 -1.9
YKA pmax pmax
comp=Z,7.0nm,0.5s
YKA Yellowknife Ar 70.11 29 P P 00 58 39.9 -0.9
YKA pP pP 00 58 58.3 -1.9
YKA P'P' 01 26 35.5
YKA LR LR 01 29 19.0
ARCES ARCESS Array B 70.47 340 P P 00 58 43.3 +0.4
comp=Z,92nm,0.8s,mb5.7,baz=72,slow=6.2,SNR=110
ARCES sP sP 00 59 07.0 -3.4
comp=Z,62nm,0.8s,baz=57,slow=8.8,SNR=5.6
ARCES LR LR 01 32 56.6
comp=Z,2μm,19.6s,baz=56,slow=39
ARCES ARCESS Array B 70.47 340 P P 00 58 43.3 +0.4
ARCES *SP sP 00 59 07.0 -3.4
ARCES pmax pmax
comp=Z,92nm,0.8s
ARCES MLR MLR
comp=Z,2μm,19.6s
ARE0 ARCESS Array S 70.47 340 eP P 00 58 43.2 +0.2
ARE0 epP pP 00 59 03.3 +0.9
ARE0 esP sP 00 59 10.8 +0.3
OBC Olympics--Boni 71.43 45 P P 00 58 50.5 +1.4
KTK1 Kautokeino 71.44 340 eS S 01 08 05.2 +4.2
OOW Octopus West 71.48 45 P P 00 58 51.5 +2.0
PGC Sidney 71.56 44 eP P 00 58 50.7 +0.8
PGC ePcP PcP 00 59 08.6 -0.2
B04A Port Angeles 71.77 45⇑ P P 00 58 51.1 -0.1
baz=72
JOF Joensuu 72.03 333 ep P 00 58 51.2 -1.3
comp=Z,79nm,0.6s,mb5.7
JOF Joensuu 72.03 333 eP P 00 58 51.2 -1.3
JOF pmax pmax
comp=Z,79nm,0.6s,mb5.7
A05A Maple Falls 72.23 43 ⇓P P 00 58 53.7 -0.2
baz=72
C04A Brinnon 72.24 45 ⇓P P 00 58 54.4 +0.4
baz=72
TRO Tromso 72.27 342 eP P 00 58 53.8 +0.1
TRO eS S 01 08 16.8 +6.2
TRO Tromso 72.27 342 eP P 00 58 53.1 -0.6
MOO Moorlands 72.30 175 eP P 00 58 52.9 -1.2
E03A Lebam 72.37 46⇑ P P 00 58 55.2 +0.4
baz=72
WBK Wadi Bani Khal 72.45 286 ⇓P P 00 58 56.1 +0.4
SNR=6.5
B05A Bryant 72.54 44 ⇑P P 00 58 55.9 +0.2
baz=72,SNR=6.9
A06A Chilliwack 72.55 43 ⇓P P 00 58 55.7 -0.1
baz=72
MAK Makhachkala 72.60 310 eP P 00 58 57.1 +0.9
MAK i 01 08 44.9
MAK pmax pmax
comp=Z,1μm,1.6s,mb6.4
MAK MLR MLR
comp=Z,4μm,24.0s
MAK Makhachkala 72.60 310 eP P 00 58 57.1 +0.9
MAK pmax pmax
comp=Z,1μm,1.6s,mb6.4
VRHR Novokhopersk 72.72 319 eP P 00 58 56.4 -0.4
VRHR e*PP pP 00 59 15.3 -1.0
VRHR eS S 01 08 12.9 -3.5
VRHR pmax pmax
comp=Z,160nm,0.8s,mb5.9
VRHR pmax pmax
comp=N,50nm,0.9s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR smax
comp=E,2μm,3.2s
VRHR smax
comp=Z,1μm,3.6s
VRHR smax
comp=N,2μm,2.9s
MOS Moscow 72.74 325d iP P 00 58 57.1 +0.3
MOS e pP 00 59 14.5 -1.8
MOS i S S 01 08 13.6 -2.8
MOS i 01 08 50.5
MOS pmax pmax
comp=Z,247nm,1.0s,mb6.0
MOS pmax pmax
comp=Z,300nm,1.0s,mb6.1
MOS smax
comp=N,4μm,4.5s
MOS smax
comp=E,4μm,4.5s
MOS MLR MLR
comp=Z,2μm,19.0s
DAG Danmarks Havn 72.75 355⇑ iP P 00 58 56.2 -0.3
DAG pmax pmax
comp=Z,87nm,0.9s,mb5.6
DAG Danmarks Havn 72.75 355⇑ iP P 00 58 56.2 -0.3
comp=Z,86nm,0.9s,mb5.6
BIDO Bidbid 72.76 288 ⇓P P 00 58 57.9 +0.4
SNR=5.9
TAU Tasmania Unive 72.77 175 eP P 00 58 56.9 0.0
TAU pmax pmax
comp=Z,188nm,0.9s,mb5.9
TAU MLR MLR
comp=Z,1μm,20.0s
TAU Tasmania Unive 72.77 175 eP P 00 58 56.9 -0.1
comp=Z,188nm,0.9s,mb5.9
TAU esP sP 00 59 25.1 +0.7
TAU LR LR
comp=Z,1μm,20.0s
B06A Marblemount 72.80 44 ⇑P P 00 58 57.3 0.0
baz=73
DBC Dubki 73.02 310 iP P 00 58 55.5 -3.2
SMDO Samad 73.02 287 ⇓P P 00 58 59.7 +0.7
SNR=6.8
C05A Tolt Reservoir 73.03 44 ⇓P P 00 58 59.2 +0.5
baz=73
G03A Yamhill 73.07 47 ⇑P P 00 58 59.2 +0.2
baz=73
DLMR Dylym 73.13 310 iP P 00 58 57.0 -2.4
A07A Ashnola River, 73.22 43 ⇓P P 00 58 59.8 0.0
baz=73,SNR=13
BANOM Banah 73.22 291 ⇓P P 00 59 00.7 +0.5
SNR=13
JMDO Jabal Madar 73.28 286 P P 00 59 01.0 +0.4
SNR=7.4
TDL Tradedollar La 73.29 46 P P 00 59 01.1 +0.9
H03A Soap Creek Ran 73.34 48 ⇓P P 00 59 01.2 +0.6
baz=73
F04A Amboy 73.35 46 ⇓P P 00 59 01.0 +0.4
baz=73
LON Longmire 73.37 45 eP P 00 59 00.5 -0.2
LON e pP 00 59 15.8 -4.4
LON pmax pmax
comp=Z,14nm,1.2s,mb4.7
LON Longmire 73.37 45 eP P 00 59 00.5 -0.2
comp=Z,14nm,1.2s,mb4.7
LON ePcP PcP 00 59 15.8 -0.9
HOQ Hoqain 73.41 288 P P 00 59 01.6 +0.3
SNR=18
E05A Randle 73.48 46 ⇓P P 00 59 01.8 +0.4
baz=73
OBN Obninsk 73.56 325 P P 00 59 01.1 -0.6
comp=Z,1μm,1.0s,mb6.6,SNR=16
OBN Obninsk 73.56 325 ⇓iP P 00 59 01.7 0.0
OBN i pP 00 59 16.4 -4.8
OBN i 01 01 46.1
OBN i S S 01 08 22.9 -2.9
OBN i SS SS 01 13 10.5 +1.4
OBN pmax pmax
comp=Z,265nm,1.2s,mb5.8
OBN MLR MLR
comp=Z,1μm,15.0s
BTLR Botlikh 73.58 310 iP P 00 58 59.5 -2.5
G04A Mulino 73.63 47 ⇑P P 00 59 02.9 +0.6
baz=73
B07A Winthrop 73.64 43 ⇑P P 00 59 02.4 +0.2
baz=73,SNR=10
I03A Eugene 73.66 48 ⇑P P 00 59 02.8 +0.4
baz=74
VOR Voronezh 73.78 321 P P 00 59 03.0 0.0
VOR pmax pmax
comp=Z,350nm,1.2s,mb6.0
HATD Hatta, Dubai 73.83 290 P P 00 59 04.9 +1.1
SNR=15
BSY Bisya 73.86 287 P P 00 59 04.2 +0.2
SNR=16
A08A Turner Farm, O 73.91 43 ⇑P P 00 59 04.0 +0.2
baz=74,SNR=5.7
TBM Table Mountain 73.93 45 P P 00 59 04.4 +0.4
F05A White Salmon 73.97 46 ⇓P P 00 59 04.9 +0.6
baz=74
E06A Yakima 73.97 45 ⇓P P 00 59 04.4 +0.1
baz=74
C07A Waterville 74.02 44 ⇓P P 00 59 04.2 -0.2
baz=74,SNR=15
VSR Storozhevoye 74.04 320d iP P 00 59 04.7 +0.1
VSR i *PP pP 00 59 23.3 -0.8
VSR i S S 01 08 28.2 -3.1
VSR pmax pmax
comp=N,50nm,0.8s
VSR pmax pmax
comp=Z,60nm,0.8s,mb5.4
VSR pmax pmax
comp=E,130nm,0.9s
VSR smax
comp=E,710nm,1.6s
VSR smax
comp=Z,180nm,2.7s
VSR smax
comp=N,440nm,2.5s
H04A Detroit Lake 74.05 47 ⇑P P 00 59 04.8 +0.1
baz=74
EBG Ellensburg 74.06 45 P P 00 59 05.5 +0.8
WTV Waterville 74.08 44 P P 00 59 05.4 +0.6
VORD Divnogorie 74.09 320d iP P 00 59 04.7 -0.1
VORD e*PP pP 00 59 23.4 -1.0
VORD eS S 01 08 28.9 -2.9
VORD pmax pmax
comp=Z,130nm,1.0s,mb5.6
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,50nm,1.1s
VORD smax
comp=E,2μm,3.0s
VORD smax
comp=Z,910nm,3.6s
VORD smax
comp=N,910nm,2.1s
TRKR Terskaya 74.09 311 eP P 00 59 05.5 +0.5
TRKR eS pP 00 59 27.5 +3.0
PUL Pulkovo 74.10 331⇑ eP P 00 59 05.5 +0.8
HOOD Mount Hood Mea 74.10 47 eP P 00 59 04.8 -0.3
HOOD ePcP PcP 00 59 19.8 0.0
HOOD esP sP 00 59 33.5 +0.9
B08A Colville Reser 74.15 43 ⇓P P 00 59 05.4 +0.1
baz=74,SNR=9.1
ARQ Araqi 74.16 288 P P 00 59 06.2 +0.5
SNR=21
D07A Quincy 74.30 44 ⇑P P 00 59 06.1 0.0
baz=74
SNJR Sundja 74.33 311 ⇓iP P 00 59 06.3 -0.1
G05A Wamic 74.35 47 ⇓P P 00 59 06.8 +0.4
baz=74
MXC Moxie City 74.38 45 P P 00 59 07.2 +0.6
STEI Steigen 74.40 341 eP P 00 59 06.4 0.0
KAF Kangasniemi 74.42 334 ep P 00 59 05.4 -1.1
comp=N,43nm,0.6s,mb5.4,baz=52,slow=5.5
KAF Kangasniemi 74.42 334 eP P 00 59 05.4 -1.1
KAF pmax pmax
comp=Z,43nm,0.6s,mb5.4
VLKR Vladikavkaz 74.43 311 eP P 00 59 06.7 -0.3
F06A Goldendale 74.45 46 ⇓P P 00 59 07.1 +0.1
baz=74
EPH Ephrata 74.45 44 P P 00 59 06.9 -0.1
HUMO Hull Mountain 74.47 50 eP P 00 59 08.3 +1.1
comp=Z,40nm,1.0s,mb5.1
HUMO ePcP PcP 00 59 19.7 -1.7
HUMO epP pP 00 59 26.5 -0.3
C08A Higginbotham F 74.58 44 ⇑P P 00 59 07.3 -0.5
baz=74,SNR=10
ARNR Ardon 74.63 311 eP P 00 59 07.7 -0.4
E07A Sunnyside 74.66 45 ⇓P P 00 59 07.7 -0.5
baz=74
H05A Madras 74.67 47 ⇓P P 00 59 08.5 +0.1
baz=74
DGRG David-gareji 74.68 309 P P 00 59 09.6 +1.2
LACR Lac 74.78 311 ⇑iP P 00 59 09.1 +0.1
G06A Carlson Farm, 74.78 46 ⇑P P 00 59 09.1 +0.1
baz=75
KORR Kora 74.81 311 ⇓iP P 00 59 09.1 -0.1
B09A Rice 74.82 43 ⇓P P 00 59 09.6 +0.5
baz=75,SNR=8.1
I05A Bend 74.87 48 ⇓P P 00 59 09.2 -0.3
baz=75
LSNR Lesken 74.89 311 ⇓iP P 00 59 10.0 +0.4
LSNR eS sP 00 59 35.5 -1.8
A10A Northport 74.90 42 ⇑P P 00 59 09.7 +0.2
baz=75,SNR=7.7
F07A Phinny Hill Vi 74.92 46 ⇓P P 00 59 09.9 +0.1
baz=75
HAWA Hanford 74.93 45 eP P 00 59 09.3 -0.5
HAWA ePcP PcP 00 59 20.1 -3.2
HAWA esP sP 00 59 38.4 +0.9
MTA Mtatsminda 74.96 310 P P 00 59 10.8 +0.7
D08A Wollman Farm, 75.00 44 ⇑P P 00 59 10.3 +0.1
baz=75,SNR=11
YBH Yreka Blue Hor 75.03 50 LR LR 01 26 35.6
comp=Z,1μm,20.3s,baz=277,slow=31
YBH Yreka Blue Hor 75.03 50 eP P 00 59 11.0 +0.6
YBH e 00 59 21.3
YBH Yreka Blue Hor 75.03 50 eP P 00 59 11.0 +0.6
YBH ePcP PcP 00 59 21.3 -2.5
YBH epP pP 00 59 30.2 +0.2
YBH esP sP 00 59 38.8 +0.7
C09A Chrisman Ranch 75.04 43 ⇑P P 00 59 10.6 +0.3
baz=75,SNR=14
ZEI Tsey 75.07 311 ⇑iP P 00 59 11.3 +0.7
ZEI Tsey 75.07 311 ⇑iP P 00 59 11.3 +0.7
EDM Edmonton 75.14 37 eP P 00 59 10.5 -0.4
EDM ePcP PcP 00 59 24.7 +0.6
EDM epP pP 00 59 29.6 -0.9
EDM ePP PP 01 02 02.5 +3.1
E08A Dider Farm, El 75.18 45 ⇓P P 00 59 11.3 +0.1
baz=75
H06A Lindquist Farm 75.20 47 ⇑P P 00 59 11.7 +0.4
baz=75,SNR=6.2
DIGR Digorskoe uzhe 75.22 311 eP P 00 59 12.7 +1.2
KIV Kislovodsk 75.31 312 P P 00 59 13.5 +1.5
comp=Z,2μm,0.8s,mb6.9,SNR=36
KIV Kislovodsk 75.31 312 P P 00 59 13.3 +1.3
SNR=46
KIV Kislovodsk 75.31 312d iP P 00 59 12.6 +0.6
KIV i 00 59 20.0
KIV i pP 00 59 31.5 -0.1
KIV i S S 01 08 41.6 -4.1
KIV pmax pmax
comp=Z,457nm,1.3s,mb6.0
KIV Kislovodsk 75.31 312d iP P 00 59 12.6 +0.6
KIV pmax pmax
comp=Z,457nm,1.3s,mb6.0
D09A Jones Farm, Ri 75.36 44 ⇓P P 00 59 12.2 -0.1
baz=75
G07A Ruggs Ranch, H 75.37 46 ⇑P P 00 59 12.3 0.0
baz=75
ONI Oni 75.45 311 P P 00 59 14.2 +1.4
NEW Newport 75.50 42 eP P 00 59 13.4 +0.4
NEW ePcP PcP 00 59 23.9 -1.9
NEW epP pP 00 59 31.9 -0.7
NEW esP sP 00 59 41.7 +1.1
NEW LR LR
comp=Z,987nm,20.0s
A11A Hall Mountain, 75.60 42 ⇑P P 00 59 14.5 +0.9
baz=75,SNR=8.2
I06A Prineville 75.65 47 ⇑P P 00 59 14.7 +0.7
baz=75,SNR=12
WDC Whiskeytown Da 75.66 51 eP P 00 59 14.2 +0.1
WDC e 00 59 26.5
WDC pmax pmax
comp=Z,62nm,1.2s,mb5.2
WDC Whiskeytown Da 75.66 51 eP P 00 59 14.2 +0.1
comp=Z,62nm,1.2s,mb5.2
WDC ePcP PcP 00 59 26.5 -0.1
WDC e pP 00 59 33.4 -0.3
F08A Pendleton 75.68 45 ⇑P P 00 59 14.2 +0.1
baz=76,SNR=11
GNI Garni 75.69 308 P P 00 59 16.5 +2.2
SNR=42
GNI Garni 75.69 308 ⇑iP P 00 59 14.9 +0.6
E09A Wood Farm, Sta 75.72 44 ⇑P P 00 59 14.2 -0.1

baz=76,SNR=13
K05A **Summer Lake** 75.77 49 ⇑P P 00 59 15.1 +0.5
baz=76
G08A **Pilot Rock** 75.80 46 ⇑P P 00 59 15.3 +0.5
baz=76,SNR=10.0
URZ **Urewera** 75.82 151 P P 00 59 12.1 -2.6
comp=Z,37nm,0.8s,mb5.2,baz=344,slow=6.3,SNR=11
MOR8 **Moi Rana** 75.85 340 *e*P P 00 59 13.5 -1.2
B11A **Sandpoint** 75.85 42 ⇓P P 00 59 15.5 +0.5
baz=76,SNR=6.9
LNOR **Lincton Mounta** 75.94 45 *e*P P 00 59 16.7 +1.1
D10A **Wagner Farm, O** 75.99 44 ⇑P P 00 59 16.7 +0.9
baz=76,SNR=6.2
J06A **Christmas Vall** 76.01 48 ⇑P P 00 59 16.6 +0.6
baz=76,SNR=14
A12A **Yaak River Ran** 76.02 41 ⇓P P 00 59 16.6 +0.6
baz=76,SNR=12
I07A **Izee** 76.03 47 ⇓P P 00 59 16.7 +0.6
baz=76,SNR=7.3
STOK **Stokkvaagen** 76.14 341 *e*P P 00 59 16.6 +0.2
C11A **Tepee Creek (N** 76.21 43 ⇑P P 00 59 17.2 +0.1
baz=76,SNR=27
F09A **S2 Ranch, Elgi** 76.25 45 ⇓P P 00 59 18.0 +0.6
baz=76
B12A **Libby** 76.29 42 ⇓P P 00 59 17.8 +0.3
baz=76
LBCM **Butte Creek Ri** 76.35 51 P P 00 59 18.3 +0.3
H08A **Prairie City** 76.35 46 ⇑P P 00 59 18.0 +0.1
baz=76,SNR=21
VSU **Vasula** 76.36 330 ⇓*i*P P 00 59 18.1 +0.4
E10A **Myers Farm, Un** 76.36 44 ⇓P P 00 59 17.8 -0.1
baz=76
G09A **Cove** 76.54 45 ⇓P P 00 59 19.1 +0.1
baz=76,SNR=20
F10A **Beach Ranch, E** 76.54 45 ⇓P P 00 59 18.9 -0.1
baz=76
D11A **Klaveano Farm,** 76.55 43 ⇓P P 00 59 18.7 -0.4
baz=76,SNR=26
I08A **Drewsey** 76.71 47 ⇓P P 00 59 19.9 0.0
baz=76
A13A **Flathead Natio** 76.73 41 ⇑P P 00 59 19.5 -0.5
baz=76,SNR=9.2
C12B **Naegeli Ranch,** 76.73 42 ⇑P P 00 59 19.9 -0.1
baz=76,SNR=6.8
K07A **Rock Creek Ran** 76.86 48 ⇑P P 00 59 21.2 +0.3
baz=77
H09A **Durkee** 76.91 46 ⇑P P 00 59 20.9 -0.1
baz=77
G10A **Bishop Farm, J** 76.94 45 ⇓P P 00 59 20.9 -0.4
baz=77,SNR=33
WALA **Waterton Lakes** 76.95 41 *e*P P 00 59 21.4 +0.2
WALA *e*PcP PcP 00 59 33.0 +1.0
WALA *e*pP pP 00 59 40.5 -0.4
E11A **Bogner Ranch,** 76.97 44 ⇑P P 00 59 21.0 -0.4
baz=77,SNR=11
B13A **Whitefish** 76.98 41 ⇓P P 00 59 21.4 0.0
baz=77,SNR=16
J08A **Circle Bar Ran** 77.03 47 ⇑P P 00 59 21.4 -0.4
baz=77,SNR=18
BMO **Blue Mountains** 77.04 46 *e*P P 00 59 21.9 +0.1
BMO *e*PcP PcP 00 59 31.9 -0.6
ARTV **Artvin** 77.10 310 *i*P P 00 59 16.6 -5.6
L07A **Adell** 77.12 49 ⇓P P 00 59 23.3 +1.0
baz=77
I09A **Lost Marbles R** 77.20 47 ⇑P P 00 59 23.2 +0.5
baz=77,SNR=15
DBOC **Borcka** 77.20 310 *i*P P 00 59 15.6 -7.2
A14A **Double T Ranch** 77.27 41 ⇑P P 00 59 23.3 +0.3
baz=77,SNR=17
C13A **Hot Springs** 77.27 42 ⇓P P 00 59 23.7 +0.6
baz=77,SNR=35
E12A **Beaver Dam Sad** 77.32 44 ⇓P P 00 59 23.9 +0.5
baz=77,SNR=30
K08A **Mann Creek Ran** 77.33 48 ⇑P P 00 59 24.3 +0.8
baz=77
DDEM **Demirkent** 77.36 310 *i*P P 00 59 23.8 +0.1
TVAN **Van** 77.36 307 *i*P P 00 59 15.3 -8.5
WVOR **Wild Horse Val** 77.38 48 *e*P P 00 59 23.8 +0.1
WVOR *e* 00 59 35.1
WVOR *e**PP pP 00 59 42.4 -1.0
WVOR pmax pmax
comp=Z,87nm,1.2s,mb5.4
WVOR **Wild Horse Val** 77.38 48 *e*P P 00 59 23.8 0.0
comp=Z,87nm,1.2s,mb5.4
WVOR *e*PcP PcP 00 59 35.1 +1.1
WVOR *e*pP pP 00 59 42.4 -1.0
WVOR *es*P sP 00 59 51.8 +0.4
SOC **Sochi** 77.38 313 *d*iP P 00 59 23.7 0.0
SOC *e**PP pP 00 59 32.8 -11
SOC *e* 01 02 22.7
SOC *e*PPP 01 04 07.8
SOC *e*S S 01 09 05.6 -2.8
SOC *e**SS sS 01 09 28.5 -13
SOC *e* 01 09 32.6
SOC pmax pmax
comp=Z,196nm,0.7s,mb6.0
SOC pmax pmax
comp=Z,118nm,4.3s
SOC **Sochi** 77.38 313 *i*P pP 00 59 44.8 +1.4
N06A **Buffalo Meadow** 77.40 50 ⇓P P 00 59 24.0 +0.1
baz=77,SNR=11
G11A **Walters Elk Ra** 77.41 45 ⇑P P 00 59 23.7 -0.1
baz=77,SNR=60
BEKR **Beckwourth** 77.47 51 ⇑P P 00 59 25.0 +0.7
baz=77
J09A **Fry Pan Ranch,** 77.50 47 ⇑P P 00 59 25.0 +0.6
baz=77,SNR=21
M07A **Soldier Meadow** 77.53 49 ⇓P P 00 59 25.3 +0.7
baz=77,SNR=23
D13A **Huson** 77.64 43 ⇑P P 00 59 24.9 -0.3
baz=77
A15A **Johnson Ranch,** 77.66 40 ⇓P P 00 59 24.7 -0.5
baz=77,SNR=19
HOMI **Horasan** 77.66 309 *i*P P 00 59 22.6 -2.8
B14A **Marquette Ranc** 77.67 41 ⇑P P 00 59 25.4 +0.1
baz=77
L08A **Fields** 77.69 48 ⇓P P 00 59 26.3 +0.8
baz=78
O06A **Flanigan** 77.69 51 ⇓P P 00 59 25.8 +0.3
baz=78
C14A **Swan Lake** 77.71 42 ⇓P P 00 59 25.7 +0.3
baz=78,SNR=15
SUMG **Summit** 77.71 360 *e*P P 00 59 26.4 +1.3
comp=Z,84nm,0.9s,mb5.5
SUMG *e*PcP PcP 00 59 32.4 -2.5
SUMG *e*pP pP 00 59 44.8 0.0
I10A **Payette** 77.73 46 ⇑P P 00 59 25.3 -0.4
baz=78
LAVA **Lava Cap Winer** 77.74 52 ⇑P P 00 59 25.9 +0.1
baz=78,SNR=12
F12A **Elk City** 77.85 44 ⇑P P 00 59 26.3 0.0
baz=78,SNR=22
H11A **Donnelly** 77.92 45 ⇓P P 00 59 26.8 +0.1
baz=78,SNR=19
N07B **Gerlach** 77.96 50 ⇓P P 00 59 27.5 +0.4
baz=78,SNR=15
M08A **Happy Creek Ra** 78.03 49 ⇑P P 00 59 27.7 +0.3
baz=78
MSO **Missoula** 78.08 43 *e*P P 00 59 27.4 -0.1
MSO *e*PcP PcP 00 59 36.5 -0.4
MSO *e*pP pP 00 59 46.5 -0.7
MSO *e*PP PP 01 02 24.7 +0.4
B15A **Bradely Ranch,** 78.10 41 ⇑P P 00 59 27.8 +0.1
baz=78,SNR=20
G12A **Big Creek, Yel** 78.12 45 ⇓P P 00 59 27.8 0.0
baz=78
E13A **Victor** 78.13 43 ⇑P P 00 59 27.4 -0.5
baz=78,SNR=5.8
WCN **Washoe City** 78.15 51 ⇓P P 00 59 27.7 -0.4
baz=78
MNK **Minsk** 78.17 327 *e*P P 00 59 28.0 +0.1
MNK pmax pmax
comp=Z,560nm,1.0s,mb6.2
ANN **Anapa** 78.20 315 *d*iP P 00 59 28.4 +0.1
ANN *i**PP pP 00 59 38.8 -9.2
ANN *e* 00 59 42.4
ANN *e* 01 02 23.9
ANN *e*PPP 01 04 11.8
ANN *i*S S 01 09 14.5 -2.6
ANN pmax pmax
comp=N,126nm,1.6s
ANN pmax pmax
comp=E,111nm,1.6s
ANN pmax pmax
comp=Z,603nm,1.6s,mb6.1
SAO **San Andreas Ge** 78.20 54 *e*P P 00 59 28.3 -0.1
SAO *e* 00 59 37.6
SAO *e**PP pP 00 59 47.3 -0.8
D14A **Greenough** 78.20 42 ⇑P P 00 59 28.4 +0.1
baz=78,SNR=12
A16A **West Butte Ran** 78.31 40 ⇑P P 00 59 28.3 -0.5
baz=78,SNR=10
O07A **Toulon** 78.33 50 ⇓P P 00 59 29.2 +0.2
baz=78,SNR=24
CMB **Columbia Colle** 78.33 53 *e*P P 00 59 29.6 +0.4
CMB *e*PcP PcP 00 59 37.5 -0.7
CMB *e*pP pP 00 59 48.8 0.0
CMB *es*P sP 00 59 56.6 -0.3
CMB LR LR
comp=Z,1μm,20.0s
K10A **MacKenzie Ranc** 78.34 47 ⇓P P 00 59 29.4 +0.3
baz=78,SNR=24
I11A **Placerville** 78.35 46 ⇓P P 00 59 29.0 -0.2
baz=78
C15A **Salmond Ranch,** 78.36 41 ⇓P P 00 59 29.2 +0.1
baz=78,SNR=33
F13A **Darby** 78.39 44 ⇑P P 00 59 28.8 -0.5
baz=78,SNR=12
UMR **Umm Al-Rimmam** 78.41 297 *e*P P 00 59 29.1 -0.6
baz=297
UMR AMb AMb 00 59 30.5
comp=Z,156nm,0.6s,mb5.9,baz=297
N08A **GE Springer Mi** 78.51 50 ⇑P P 00 59 30.3 +0.2
baz=78,SNR=16
B16A **M & M Farms, S** 78.53 40 ⇓P P 00 59 30.2 +0.1
baz=78,SNR=9.0
E14A **Clinton** 78.56 43 ⇑P P 00 59 30.3 +0.1
baz=78,SNR=6.5
MIB **Mutribah** 78.58 298 *e*P P 00 59 30.0 -0.6
baz=298
MIB AMb AMb 00 59 31.8
comp=Z,283nm,0.8s,mb6.2,baz=298
MSL **Mosul** 78.58 305 *e*P P 00 59 33.0 +2.4
MSL *e*S S 01 09 18.0 -3.5
KBD **Kabd** 78.60 297 *e*P P 00 59 30.1 -0.6
baz=297
KBD AMb AMb 00 59 33.1
comp=Z,104nm,1.0s,mb5.6,baz=297
KOPT **Kop Dagi** 78.62 310 *i*P P 00 59 31.2 +0.5
QRN **Al-Qurain** 78.63 297 *e*P P 00 59 30.4 -0.6
baz=297
QRN AMb AMb 00 59 32.0
comp=Z,213nm,0.9s,mb6.0,baz=297
M09A **Marrel Ranch,** 78.64 49 ⇓P P 00 59 31.5 +0.7
baz=78
MFID **Camas Ranch** 78.68 46 ⇓P P 00 59 31.4 +0.5
baz=78,SNR=39
S05C **Merced** 78.70 53 ⇓P P 00 59 31.2 +0.1
baz=78,SNR=8.1
BNGL **BINGOL** 78.70 308 *i*P P 00 59 29.3 -1.9
H12A **Diamond D Ranc** 78.70 45 ⇑P P 00 59 31.0 0.0
baz=78,SNR=19
R06C **Coleville** 78.74 52 ⇑P P 00 59 31.8 +0.4
baz=78,SNR=12
O08A **Rochester Mine** 78.74 50 ⇑P P 00 59 31.9 +0.6
baz=78,SNR=18
D15A **Lincoln** 78.80 42 ⇑P P 00 59 30.9 -0.6
baz=79
G13A **Cobalt** 78.80 44 ⇓P P 00 59 31.4 -0.2
baz=79,SNR=26
A17A **Triple J Farms** 78.81 40 ⇓P P 00 59 31.9 +0.4
baz=79,SNR=8.7
C16A **Fuhringer Ranc** 78.84 41 ⇑P P 00 59 31.6 -0.1
baz=79,SNR=18
U04C **Hernandez Rese** 78.86 55 ⇑P P 00 59 31.6 -0.5
baz=79
N09A **Rock Creek Ran** 78.88 49 ⇓P P 00 59 33.0 +0.9
baz=79,SNR=6.2
NAY **Al-Naaiem** 78.91 297 *e*P P 00 59 31.6 -0.9
baz=297
NAY AMb AMb 00 59 33.7
comp=Z,177nm,0.9s,mb5.9,baz=297
WHFO **Wadi Hawf** 78.91 284 P P 00 59 32.4 -0.3
SNR=6.6
I12A **Atlanta** 78.92 46 ⇑P P 00 59 32.6 +0.3
baz=79,SNR=24
L10A **Juniper Basin** 78.95 48 ⇓P P 00 59 33.0 +0.6
baz=79,SNR=24
E15A **Deer Lodge** 79.06 43 ⇓P P 00 59 32.7 -0.3
baz=79,SNR=18
H13A **Challis** 79.06 45 ⇓P P 00 59 33.4 +0.3
baz=79,SNR=34
B17A **L&G Farms, Che** 79.11 40 ⇓P P 00 59 33.3 +0.1
baz=79,SNR=47
BEST **Besiri** 79.14 307 *i*P P 00 59 27.1 -6.5
J12A **Stokes Ranch,** 79.22 46 ⇓P P 00 59 34.4 +0.4
baz=79,SNR=11
BMN **Battle Mountai** 79.29 50 *e*P P 00 59 34.1 -0.2
BMN *e* 00 59 42.3
BMN **Battle Mountai** 79.29 50 *e*P P 00 59 34.1 -0.3
BMN *e*PcP PcP 00 59 42.3 -0.1
BMN *e*pP pP 00 59 54.0 0.0
A18A **Metzger Ranch,** 79.29 39 ⇑P P 00 59 34.2 0.0
baz=79,SNR=21
L11A **Cat Creek Ranc** 79.36 47 ⇑P P 00 59 35.2 +0.4
baz=79,SNR=30
D16A **Dana Ranch, Ca** 79.36 42 ⇓P P 00 59 35.0 +0.4
baz=79,SNR=11
O09A **Fish Creek Ran** 79.44 50 ⇑P P 00 59 35.0 -0.2
baz=79
F15A **Butte** 79.45 43 ⇑P P 00 59 35.3 +0.2
baz=79,SNR=41
C17A **Wharram Farm,** 79.49 41 ⇑P P 00 59 35.1 -0.1
baz=79,SNR=11
HLID **Hailey** 79.49 46 ⇑P P 00 59 36.2 +0.8
baz=79
HLID **Hailey** 79.49 46 *e*P P 00 59 36.1 +0.7
comp=Z,44nm,0.9s,mb5.3
HLID *e*PcP PcP 00 59 43.6 +0.4
HLID LR LR
comp=Z,813nm,22.0s
I13A **Wildhorse Cree** 79.49 45 ⇑P P 00 59 36.2 +0.8
baz=79,SNR=25
E16A **East Helena** 79.56 42 ⇓P P 00 59 35.8 +0.1
baz=79
NVAR **Mina Array Bea** 79.57 52 P P 00 59 36.2 +0.4
comp=Z,14nm,0.7s,mb4.9,baz=284,slow=5.6,SNR=67
NVAR PKKPbc PKKPbc 01 18 22.1 -0.8
comp=Z,1.2nm,0.8s,baz=144,slow=3.4,SNR=5.3
NVAR PKPPKP 01 26 31.7
comp=Z,1.3nm,0.9s,baz=124,slow=4.9,SNR=4.0
ABTO **Aybut** 79.58 284 P P 00 59 36.7 +0.4
SNR=8.5
H14A **Leadore** 79.58 44 ⇓P P 00 59 35.9 +0.1
baz=79,SNR=8.7
Q08A **Gabbs** 79.60 51 ⇓P P 00 59 36.1 0.0
baz=79,SNR=10
B18A **Beardsley Farm** 79.62 40 ⇓P P 00 59 36.3 +0.4
baz=79,SNR=32
DLMT **Dillon** 79.65 43 *e*P P 00 59 36.6 +0.5
DLMT *e*PcP PcP 00 59 44.1 +0.3
DLMT *e*pP pP 00 59 56.0 +0.1
DLMT *e*PP PP 01 02 37.4 +0.1
K12A **Draper Farm, C** 79.66 47 ⇓P P 00 59 36.6 +0.3
baz=79,SNR=6.6
AKASG **Malin Array Be** 79.67 323 P P 00 59 35.6 -0.6
comp=Z,67nm,0.7s,mb5.6,baz=49,slow=5.8,SNR=104
AKASG pP pP 00 59 55.1 -0.8
comp=Z,24nm,0.5s,baz=47,slow=5.9,SNR=5.2
AKASG S S 01 09 29.9 -2.7
comp=Z,0.7nm,0.5s,baz=50,slow=9.7,SNR=6.2
AKASG PKKPbc PKKPbc 01 18 19.9 -3.1
comp=Z,1.0nm,0.5s,baz=258,slow=3.1,SNR=8.1
AKASG LR LR 01 37 27.8
comp=Z,2μm,20.7s,baz=60,slow=38
AKASG **Malin Array Be** 79.67 323 P P 00 59 35.6 -0.6
AKASG S S 01 09 29.9 -2.7
AKASG pmax pmax
comp=Z,67nm,0.7s
AKASG smax
comp=N,1.0nm,0.5s
AKASG MLR MLR
comp=Z,2μm,20.7s
AKASG **Malin Array Be** 79.67 323 *i*P P 00 59 36.0 -0.2
AKASG pmax pmax
comp=Z,67nm,0.7s
AKBB **Malin Array Si** 79.67 323 *e*P P 00 59 35.7 -0.5
AKBB *e* 00 59 43.4
KIEV **Kiev** 79.68 323 *e*P P 00 59 35.8 -0.5
KIEV *e* 00 59 43.1
KIEV pmax pmax
comp=Z,71nm,0.6s,mb5.7
KIEV **Kiev** 79.68 323 *e*P P 00 59 35.8 -0.5
comp=Z,71nm,0.6s,mb5.7
KIEV *e*PcP PcP 00 59 43.1 -0.8
M11A **Holland Ranch,** 79.72 48 ⇑P P 00 59 37.2 +0.6
baz=80
J13A **Cove Ranch, Pi** 79.72 46 ⇑P P 00 59 37.3 +0.7
baz=80,SNR=14
R08A **Mina** 79.74 52 ⇓P P 00 59 36.9 0.0
baz=80
MARD **Mardin** 79.77 307 *i*P P 00 59 37.0 0.0
D17A **Six Diamond Ra** 79.79 41 ⇑P P 00 59 37.4 +0.5
baz=80,SNR=24
G15A **Dillon** 79.81 44 ⇑P P 00 59 37.7 +0.6
baz=80,SNR=22
EGMT **Eagleton** 79.84 40 ⇑P P 00 59 37.0 -0.1
baz=80
EGMT **Eagleton** 79.84 40 *e*P P 00 59 37.1 0.0
EGMT PcP PcP 00 59 44.6 +0.1
L12A **House Creek Ra** 79.84 47 ⇑P P 00 59 38.3 +0.9
baz=80,SNR=19
FFC **Flin Flon** 79.85 32 P P 00 59 36.6 -0.5
comp=Z,247nm,0.8s,mb6.1,SNR=17
FFC **Flin Flon** 79.85 32 *e*P P 00 59 36.4 -0.7
FFC *e* 00 59 44.1
FFC pmax pmax
comp=Z,73nm,0.8s,mb5.6
FFC MLR MLR
comp=Z,1μm,22.0s
FFC **Flin Flon** 79.85 32 *e*P P 00 59 36.4 -0.7
comp=Z,73nm,0.8s,mb5.6
FFC *e*PcP PcP 00 59 44.0 -0.4
FFC LR LR
comp=Z,1μm,22.0s
I14A **Mackay** 79.89 45 ⇑P P 00 59 38.6 +1.1
baz=80,SNR=47
DIYA **Diyarbakir** 79.92 308 *i*P P 00 59 33.8 -4.0
SMMC **Simmler** 79.93 55 ⇓P P 00 59 38.6 +0.7
baz=80
F16A **Kennard Place,** 79.99 43 ⇓P P 00 59 38.5 +0.5
baz=80,SNR=20
H15A **Lima** 80.02 44 ⇑P P 00 59 38.5 +0.3
baz=80
BOZ **Bozeman (W)** 80.07 43 ⇓P P 00 59 38.9 +0.5
baz=80
BOZ **Bozeman (W)** 80.07 43 *e*P P 00 59 39.0 +0.6
BOZ *e*pP pP 00 59 57.0 -1.2
N11A **Elko Archery C** 80.07 49 ⇑P P 00 59 39.1 +0.6
baz=80
E17A **Martinsdale** 80.07 42 ⇓P P 00 59 38.8 +0.3
baz=80,SNR=19
SIM **Simferopol'** 80.13 316 *c*P P 00 59 38.3 -0.5
SIM S S 01 09 33.0 -4.6
SIM pmax pmax
comp=Z,70nm,1.1s,mb5.4
SIM MLR MLR
comp=Z,1μm,20.0s
J14A **Carey** 80.17 46 ⇑P P 00 59 40.2 +1.2
baz=80,SNR=54
G16A **Moss Hill, Enn** 80.19 43 ⇑P P 00 59 39.4 +0.3
baz=80,SNR=18
P10A **Eureka** 80.20 50 ⇓P P 00 59 39.5 +0.2
baz=80
PKM **Peak Mountain** 80.26 55 ⇑P P 00 59 39.4 -0.3
baz=80
D18A **Linhart Farms,** 80.27 41 ⇓P P 00 59 39.7 +0.2
baz=80
M12A **Wells** 80.29 48 ⇑P P 00 59 40.3 +0.6
baz=80,SNR=29
TIN **Tinemaha** 80.31 53 ⇓P P 00 59 40.4 +0.5
baz=80
VES **Vestal, Richgr** 80.31 54 ⇓P P 00 59 39.1 -0.8
baz=80
KEMA **Kemaliye** 80.34 310 *i*P P 00 59 41.3 +1.2
ELZG **Elazig** 80.40 309 *i*P P 00 59 42.1 +1.7
ELK **Elko** 80.43 48 PKPPKP 01 26 24.2
comp=Z,1.7nm,0.8s,baz=77,slow=1.1,SNR=6.7
ELK **Elko** 80.43 48 *e*P P 00 59 41.0 +0.5
ELK pmax pmax
comp=Z,80nm,1.1s
ELK MLR MLR
comp=Z,2μm,21.0s
ELK **Elko** 80.43 48 *e*P P 00 59 41.0 +0.5
comp=Z,80nm,1.1s,mb5.5
ELK *e*pP pP 01 00 00.6 +0.3
ELK *es*P sP 01 00 09.5 +1.2
ELK *e*PP PP 01 02 14.5 -29
ELK *e*S S 01 09 27.6 -13
ELK LR LR
comp=Z,2μm,21.0s
O11A **Cowboy Ranch,** 80.47 49 ⇓P P 00 59 40.9 +0.2
baz=80,SNR=11
FCC **Fort Churchill** 80.47 26 *e*P P 00 59 39.3 -1.1
FCC *e*PcP PcP 00 59 45.7 -1.4
FCC *e*pP pP 00 59 58.0 -2.2
DOMB **Dombas** 80.48 339 *e*P P 00 59 40.3 0.0
TPH **Tonopah** 80.48 52 *e*P P 00 59 41.4 +0.6
TPH *e*PcP PcP 00 59 48.5 +0.9
TPH *e*pP pP 01 00 00.0 -0.6
TPH *es*P sP 01 00 09.8 +1.2
TPH *e*S S 01 09 39.2 -2.3
TPH LR LR
comp=Z,1μm,20.0s
F17A **Fitzpatrick Pl** 80.49 42 ⇑P P 00 59 41.3 +0.6
baz=80,SNR=15
R09A **Tonopah** 80.50 51 ⇓P P 00 59 41.0 0.0
baz=80,SNR=53
N12A **Clover Valley,** 80.50 48 ⇓P P 00 59 41.7 +0.8
baz=80,SNR=14
NB2 **NORSAR Subarra** 80.54 338 P P 00 59 40.3 -0.4
comp=Z,120nm,1.1s,mb5.6,baz=42,slow=5.6
NOA **NORSAR Array B** 80.54 338 P P 00 59 40.5 -0.2
comp=Z,44nm,0.9s,mb5.3,baz=42,slow=5.3,SNR=76
NOA PKKPbc PKKPbc 01 18 19.7 -1.8
comp=Z,1.2nm,0.8s,baz=228,slow=2.5,SNR=3.3
NOA LR LR 01 40 00.6
comp=Z,865nm,21.3s,baz=25,slow=39
NOA **NORSAR Array B** 80.54 338 P P 00 59 40.5 -0.2
NOA 01 18 19.7
NOA pmax pmax
comp=Z,44nm,0.9s
NOA MLR MLR
comp=Z,865nm,21.3s
NOA **NORSAR Array B** 80.54 338 P P 00 59 40.5 -0.2
NOA PKKPbc PKKPbc 01 18 19.7 -1.8
NOA LR LR 01 40 00.6
L13A **Double Diamond** 80.55 47 ⇑P P 00 59 41.8 +0.7
baz=80
E18A **Harlowton** 80.56 41 ⇑P P 00 59 41.7 +0.6
baz=80,SNR=22
SUW **Suwalki** 80.64 328 *e*P P 00 59 41.3 -0.1
SUW *e*PcP PcP 00 59 45.4 -2.6
SUW *e*pP pP 00 59 48.3 -13
SUW *e*S S 01 09 40.1 -2.5
SUW LMZ 01 37 52.9
comp=Z,2μm,19.3s
SUW **Suwalki** 80.64 328 *e*P P 00 59 41.3 -0.1
SUW *e*PcP PcP 00 59 45.4 -2.6
SUW *e*pP pP 00 59 48.3 -13
SUW *e*S S 01 09 40.1 -2.5
Q10A **Clear Creek Ra** 80.65 51 ⇑P P 00 59 42.0 +0.3
baz=80
S09A **Goldfield** 80.66 52 ⇑P P 00 59 42.1 +0.3
baz=80,SNR=38
P11A **Circle Ranch,** 80.71 50 ⇓P P 00 59 42.4 +0.4
baz=80
G17A **Pierce Place,** 80.77 43 ⇓P P 00 59 43.7 +1.4
baz=80,SNR=10
K14A **Jones Ranch, D** 80.80 46 ⇓P P 00 59 43.6 +1.2
baz=81,SNR=16
NAO01 **NORSAR Array S** 80.80 338 *e*P P 00 59 41.2 -0.8
comp=Z,22nm,0.7s,mb5.1
NAO01 *e*pP pP 01 00 01.4 -0.5
NAO01 *es*P sP 01 00 10.1 +0.2
NAO01 *e*PP PP 01 02 45.0 -1.3
J15A **Blackfoot** 80.80 45 ⇓P P 00 59 43.5 +1.1
baz=81,SNR=15
M13A **Montello** 80.80 47 ⇑P P 00 59 42.8 +0.3
baz=81
H16A **Russell Place,** 80.81 43 ⇑P P 00 59 43.2 +0.8
baz=81,SNR=24
ISA **Isabella** 80.83 54 ⇑P P 00 59 42.4 -0.3
baz=81
ISA **Isabella** 80.83 54 *e*P P 00 59 41.9 -0.9
ISA *es*P sP 01 00 10.8 +0.2
ISA *e*PP PP 01 02 42.8 -4.7
ARVC **Arvin** 80.85 55 ⇓P P 00 59 43.0 +0.1
baz=81

GRAC Grapevine Rang 80.92 53 ⇓P P 00 59 43.8 +0.6
baz=81
S10A Tonopah Range, 80.98 51 ⇑P P 00 59 44.0 +0.5
baz=81,SNR=30
R10A Warm Springs 80.99 51 ⇓P P 00 59 44.0 +0.4
baz=81
O12A Currie 81.00 49 ⇑P P 00 59 44.2 +0.7
baz=81
L14A Malta 81.03 47 ⇓P P 00 59 44.3 +0.7
baz=81,SNR=11
N13A Wendover, West 81.04 48 ⇑P P 00 59 44.0 +0.3
baz=81
F18A Big Timber 81.04 42 ⇑P P 00 59 44.0 +0.3
baz=81,SNR=21
I16A Newdale 81.12 44 ⇑P P 00 59 44.8 +0.7
baz=81,SNR=20
K15A Arbon 81.12 46 ⇓P P 00 59 45.3 +1.2
baz=81,SNR=5.5
OSI Osito Adit 81.18 55 eP P 00 59 44.3 -0.4
OSI ePP pP 01 00 04.8 +0.3
OSI esP sP 01 00 13.7 +1.2
AKCD Akcadag 81.22 309 i P P 00 59 46.0 +1.2
M14A Sheep Mountain 81.24 47 ⇓P P 00 59 45.5 +0.7
baz=81,SNR=28
SNCC San Nicolas Is 81.29 57 eP P 00 59 45.7 +0.5
comp=Z,161nm,1.0s,mb5.8
SNCC ePP pP 01 00 04.2 -0.8
MPMC Manual Prospec 81.32 53 ⇓P P 00 59 45.2 -0.1
baz=81
J16A Bone 81.37 45 ⇑P P 00 59 46.9 +1.4
baz=81,SNR=20
H17A Grant Village 81.38 43 ⇓P P 00 59 47.6 +2.2
baz=81,SNR=15
ATAB Bozova 81.39 308 i P P 00 59 47.1 +1.4
IMW Indian Meadow 81.44 44 eP P 00 59 46.7 +0.9
comp=Z,106nm,0.9s,mb5.7
IMW ePcP PcP 00 59 51.8 +0.1
IMW epP pP 01 00 05.6 0.0
R11A Troy Canyon, C 81.44 51 ⇓P P 00 59 46.5 +0.5
baz=81,SNR=36
DCID1 Drake Creek 81.45 44 eP P 00 59 46.3 +0.4
comp=Z,203nm,1.0s,mb5.9
DCID1 epP pP 01 00 05.8 +0.1
HVU Hansel Valley 81.46 47 eP P 00 59 47.0 +1.1
G18A Lazy EL Ranch, 81.46 42 ⇑P P 00 59 47.0 +1.1
baz=81
RRI2 Red Ridge 81.51 45 eP P 00 59 47.6 +1.4
RRI2 ePcP PcP 00 59 52.9 +0.9
RRI2 epP pP 01 00 06.4 +0.4
RRI2 esP sP 01 00 14.5 +0.5
OSL Oslo 81.53 337 eP P 00 59 45.9 0.0
FURC Furnace Creek, 81.55 53 ⇓P P 00 59 46.8 +0.3
baz=81
O13A Hicks Ranch, I 81.57 48 ⇑P P 00 59 47.1 +0.5
baz=81,SNR=9.5
EDW2 Edwards Air Fo 81.57 55 ⇑P P 00 59 46.9 +0.3
baz=81
L15A Malad City 81.58 46 ⇑P P 00 59 47.1 +0.5
baz=81,SNR=19
Q12A Willow Creek R 81.59 50 ⇑P P 00 59 47.0 +0.3
baz=81,SNR=11
K16A Soda Springs 81.62 45 ⇑P P 00 59 48.2 +1.4
baz=81,SNR=21
MOOW Moose Ponds 81.63 44 eP P 00 59 47.5 +0.7
MOOW ePcP PcP 00 59 53.1 +0.6
MOOW epP pP 01 00 06.5 -0.2
MOOW esP sP 01 00 15.0 +0.3
I17A Pilgram Creek 81.64 44 ⇓P P 00 59 47.3 +0.4
baz=81,SNR=15
TPAW Teton Pass 81.65 44 eP P 00 59 48.0 +1.1
TPAW ePcP PcP 00 59 53.6 +1.0
TPAW epP pP 01 00 06.8 +0.1
TPAW ePP PP 01 02 55.8 +1.8
N14A Grayback Hills 81.69 48 ⇑P P 00 59 47.6 +0.4
baz=82,SNR=14
TPNV Topopah Spring 81.72 52 ⇓P P 00 59 48.0 +0.5
baz=82
TPNV Topopah Spring 81.72 52 eP P 00 59 47.8 +0.4
TPNV e pP 01 00 06.6 -0.7
TPNV e 01 02 53.3
TPNV pmax pmax
comp=Z,227nm,0.9s,mb6.0
TPNV MLR MLR
comp=Z,2μm,20.0s
TPNV Topopah Spring 81.72 52 eP P 00 59 47.8 +0.3
comp=Z,227nm,0.9s,mb6.0
TPNV epP pP 01 00 06.6 -0.7
TPNV esP sP 01 00 15.2 0.0
TPNV ePP PP 01 02 53.3 -1.4
TPNV eS S 01 09 42.5 -12
TPNV LR LR
comp=Z,2μm,20.0s
RLMT Red Lodge 81.74 42 ⇑P P 00 59 48.3 +0.9
baz=82
RLMT Red Lodge 81.74 42 eP P 00 59 47.9 +0.5
RLMT ePcP PcP 00 59 52.1 -0.9
RLMT epP pP 01 00 07.3 +0.1
RLMT esP sP 01 00 17.0 +1.8
RLMT ePP PP 01 02 53.3 -1.3
PMOR Pomariorio Ree 81.76 112 eP P 00 59 47.8 -0.1
comp=Z,152nm,0.9s,mb5.8
REDW Red Top Meadow 81.78 44 eP P 00 59 50.6 +3.0
REDW epP pP 01 00 07.7 +0.2
SNOW Snow King Moun 81.79 44 eP P 00 59 48.7 +1.0
comp=Z,66nm,1.0s,mb5.4
SNOW ePcP PcP 00 59 52.8 -0.4
SNOW epP pP 01 00 07.7 +0.2
SNOW ePP PP 01 02 56.5 +1.4
PASC Pasadena Art C 81.79 55 eP P 00 59 46.5 -1.3
PASC ePcP PcP 00 59 52.5 -0.9
LOHW Long Hollow 81.80 44 eP P 00 59 48.9 +1.2
LOHW epP pP 01 00 07.3 -0.2
M15A Larsen Ranch, 81.83 47 ⇓P P 00 59 48.5 +0.5
baz=82,SNR=16
MWC Mount Wilson 81.85 55 eP P 00 59 48.2 0.0
MWC ePcP PcP 00 59 53.9 +0.2
MWC epP pP 01 00 06.9 -1.1
MWC esP sP 01 00 16.7 +0.7
J17A Brown Place, J 81.87 44 ⇑P P 00 59 48.9 +0.8
baz=82
PPT Papeete 81.87 116 eS S 01 10 12.3 +16
comp=Z,597nm,22.8s
PPT Papeete 81.87 116 LR LR 01 27 03.5
comp=Z,931nm,21.6s,baz=276,slow=29
P13A Bates Ranch, G 81.90 49 ⇑P P 00 59 49.0 +0.7
baz=82,SNR=13
U10A Ash Meadows, A 81.94 53 ⇓P P 00 59 49.4 +0.8
baz=82,SNR=12
AHID Auburn Hatcher 81.96 45 eP P 00 59 47.7 -0.8
comp=Z,77nm,1.1s,mb5.4
AHID epP pP 01 00 07.6 -0.8
PINB Pinarbasi 82.03 310 i P P 00 59 44.1 -5.0
KIS Kishinev 82.04 320 eP P 00 59 48.0 -0.9
KIS eS S 01 09 55.0 -2.3
KIS pmax pmax
comp=Z,185nm,1.8s,mb5.6
KIS smax
comp=N,380nm,2.0s
KIS smax
comp=E,620nm,3.0s
KIS smax
comp=N,3μm,10.0s
KIS smax
comp=E,2μm,9.0s
KIS MLR MLR
comp=E,1μm,18.0s
KIS MLR MLR
comp=Z,1μm,18.0s
KIS MLR MLR
comp=Z,1μm,18.0s
KIS Kishinev 82.04 320 eP P 00 59 48.0 -0.9
comp=Z,200nm,1.8s,mb5.7
KIS eS S 01 09 55.0 -2.3
comp=Z,600nm,3.0s
KIS Kishinev 82.04 320 ⇓i P P 00 59 53.7 +4.8
KIS Kishinev 82.04 320 ⇓P P 00 59 53.7 +4.8
TIAR Tiarei 82.05 115 eP P 00 59 49.5 +0.2
comp=Z,819nm,1.0s,mb6.5
CTKT Corum 82.05 312 i P P 00 59 46.5 -2.5
N15A Stansbury Isla 82.10 47 ⇓P P 00 59 49.7 +0.4
baz=82,SNR=22
VAH Vaihoa 82.11 113 eP P 00 59 49.2 -0.5
comp=Z,138nm,1.3s,mb5.6
R12A Pony Springs, 82.11 50 ⇑P P 00 59 50.0 +0.5
baz=82,SNR=15
KONO Kongsberg 82.12 337 eP P 00 59 48.8 -0.3
KONO ePcP PcP 00 59 53.2 -1.1
BFSC Mount Baldy St 82.13 55 ⇓P P 00 59 49.2 -0.5
baz=82
SCI San Clemente I 82.13 57 ⇓P P 00 59 49.4 -0.2
baz=82
Q13A Wheeler Ranch, 82.17 49 ⇓P P 00 59 50.5 +0.8
baz=82,SNR=7.7
L16A Fish Haven 82.17 46 ⇓P P 00 59 50.7 +1.0
baz=82,SNR=12
GSC Goldstone 82.19 54 ⇑P P 00 59 50.4 +0.5
baz=82
GSC Goldstone 82.19 54 eP P 00 59 50.5 +0.6
GSC epP pP 01 00 08.2 -1.5
GSC esP sP 01 00 18.1 +0.4
I18A Diamond G Ranc 82.22 44 ⇑P P 00 59 50.3 +0.4
baz=82
SHOC Shoshone 82.24 53 ⇓P P 00 59 50.2 0.0
baz=82
TVO Taravao 82.25 116 eP P 00 59 50.9 +0.5
comp=Z,966nm,1.0s,mb6.6
TVO Taravao 82.25 116 eP P 00 59 50.9 +0.5
pmax pmax
comp=Z,967nm,1.0s,mb6.6
T11A Corn Creek, Al 82.27 51 ⇓P P 00 59 50.6 +0.3
baz=82,SNR=26
DUG Dugway 82.29 48 ⇑P P 00 59 50.7 +0.4
baz=82
DUG Dugway 82.29 48 eP P 00 59 50.5 +0.2
DUG ePcP PcP 00 59 57.9 +2.5
DUG ePP PP 01 03 04.1 +4.8
DUG eS S 01 09 53.3 -6.9
DUG LR LR
comp=Z,1μm,20.0s
S12A Delamar Landin 82.33 51 ⇑P P 00 59 50.9 +0.3
baz=82
J18A Kendall Valley 82.37 44 ⇓P P 00 59 51.5 +0.8
baz=82,SNR=28
M16A Huntsville 82.43 46 ⇓P P 00 59 51.2 +0.2
baz=82
P14A Drum Mountains 82.45 49 ⇑P P 00 59 51.5 +0.3
baz=82,SNR=26
O15A The Old Anders 82.46 48 ⇓P P 00 59 51.8 +0.5
baz=82
L17A Cokeville 82.47 46 ⇑P P 00 59 51.9 +0.7
baz=82,SNR=11
U11A Corn Creek 82.59 52 ⇓P P 00 59 52.1 +0.1
baz=82
DGMT Dagmar 82.60 38 ⇑P P 00 59 51.4 -0.4
baz=82
DGMT Dagmar 82.60 38 eP P 00 59 51.7 -0.1
comp=Z,137nm,1.0s,mb5.7
DGMT epP pP 01 00 11.0 -0.7
DGMT esP sP 01 00 18.9 -0.7
DGMT ePP PP 01 03 02.1 +0.5
R13A O'Grain Ranch, 82.61 50 ⇓P P 00 59 52.6 +0.5
baz=82,SNR=8.0
IAS Iasi 82.61 321 ⇓i P P 00 59 52.9 +1.0
IAS Iasi 82.61 321 ⇓P P 00 59 52.9 +1.0
Q14A Sevier Lake (B 82.64 49 ⇓P P 00 59 52.5 +0.3
baz=82,SNR=26
ANDN Andirin 82.66 309 i P P 00 59 53.8 +1.5
K18A Toltan Ranch, 82.68 45 ⇓P P 00 59 52.4 0.0
baz=82
HEC Hector,Ludlow 82.77 54 ⇑P P 00 59 52.9 0.0
baz=83
WAR Warsaw 82.78 328 eP P 00 59 52.2 -0.4
WAR eS S 01 10 04.6 -0.1
WAR LMZ 01 39 09.1
comp=Z,2μm,22.0s
WAR Warsaw 82.78 328 eP P 00 59 52.2 -0.4
WAR eS S 01 10 04.6 -0.1
WAR LR LR
comp=Z,2μm,22.0s
MURC Murrieta 82.79 55 ⇓P P 00 59 52.7 -0.3
baz=83
N16A Rees Ranch, Co 82.79 47 ⇓P P 00 59 53.5 +0.5
baz=83
CDAG Cicekdag 82.86 312 i P P 00 59 45.3 -8.0
V11A Goodsprings 82.86 53 ⇑P P 00 59 53.4 0.0
baz=83,SNR=9.9
LVV L'vov 82.87 324 eP P 00 59 53.6 +0.5
LVV e 01 02 59.0
LVV eS S 01 10 05.0 -0.7
LVV MLR MLR
comp=Z,800nm,15.0s
LVV MLR MLR
comp=E,800nm,16.0s
LVV MLR MLR
comp=N,300nm,15.0s
BW06 Boulder Array 82.90 44 ⇑P P 00 59 54.1 +0.7
baz=83
BW06 Boulder Array 82.90 44 eP P 00 59 53.7 +0.2
comp=N,41nm,1.0s,mb5.2
BW06 epP pP 01 00 12.6 -0.7
BW06 ePP PP 01 03 22.9 +19
BW06 eS S 01 10 04.7 -1.6
BW06 LR LR
comp=Z,1μm,21.0s
PDAR Pinedale Array 82.90 44 P P 00 59 53.6 +0.1
comp=Z,11nm,0.9s,mb4.7,baz=20,slow=1.3,SNR=46
PDAR pP pP 01 00 12.4 -0.9
comp=Z,25nm,0.9s,baz=96,slow=0.8,SNR=12
PDAR PKKPbc PKKPbc 01 18 13.2 -2.3
comp=Z,1.0nm,0.7s,baz=101,slow=1.8,SNR=6.0
PDAR LR LR 01 35 19.6
comp=Z,600nm,19.4s,baz=321,slow=34
SFJD Kangerlussuaq 82.92 5 LR LR 01 36 31.1
comp=Z,657nm,18.9s,baz=327,slow=35
SFJD Kangerlussuaq 82.92 5 eP P 00 59 54.1 +1.0
SFJD Kangerlussuaq 82.92 5 i P P 00 59 54.1 +1.0
SFJD e pP 01 00 16.8 +3.8
SFJD i pP 01 00 17.6 +4.6
SFJD Kangerlussuaq 82.92 5 eP P 00 59 52.2 -0.9
comp=Z,245nm,1.0s,mb6.0
SFJD epP pP 01 00 13.2 +0.2
SFJD e pP 01 00 16.8 +3.8
SFJD i 01 00 17.6
SFJD esP sP 01 00 21.0 0.0
M17A Scullys Gap (B 82.95 46 ⇑P P 00 59 53.9 +0.2
baz=83,SNR=7.2
P15A Leamington 82.97 48 ⇑P P 00 59 54.4 +0.5
baz=83,SNR=10.0
ELDT Eldivan 82.99 313 i P P 00 59 53.7 -0.3
S13A Holt Ranch, En 83.01 51 ⇑P P 00 59 55.0 +0.9
baz=83,SNR=9.4
L18A Fontenelle, Gr 83.08 45 ⇑P P 00 59 55.1 +0.7
baz=83,SNR=14
TLCR 83.10 319 ⇓i P P 00 59 54.3 -0.2
O16A Springville 83.12 47 ⇓P P 00 59 55.2 +0.5
baz=83,SNR=13
N17A Moffit Pass 83.14 46 ⇑P P 00 59 54.9 +0.1
baz=83,SNR=12
U12A Valley of Fire 83.16 52 ⇑P P 00 59 55.0 0.0
baz=83
DAU Daniels Canyon 83.17 47 eP P 00 59 55.7 +0.8
Q15A Fillmore 83.22 49 ⇑P P 00 59 55.3 +0.1
baz=83
GMRC Granite Mounta 83.26 54 ⇑P P 00 59 55.5 0.0
baz=83
BR131 Keskin Array S 83.28 312 eP P 00 59 56.1 +0.7
BR131 pP pP 01 00 16.9 +1.5
BR131 esP sP 01 00 26.1 +2.7
BRTR Keskin Array B 83.28 312 P P 00 59 56.2 +0.7
comp=Z,153nm,0.9s,mb5.8,baz=90,slow=4.1,SNR=230
BRTR PKKPbc PKKPbc 01 18 14.9 +0.3
comp=Z,1.6nm,0.9s,baz=202,slow=3.9,SNR=4.2
BRTR LR LR 01 39 28.3
comp=Z,420nm,21.8s,baz=47,slow=37
T13A Saint George 83.28 51 ⇑P P 00 59 56.0 +0.5
baz=83,SNR=16
K19A Absolon Red Bu 83.30 44 ⇑P P 00 59 55.7 +0.2
baz=83,SNR=11
PFO Pinyon Flat Ob 83.31 55 ⇑P P 00 59 55.6 -0.1
baz=83
PFO Pinyon Flat Ob 83.31 55 eP P 00 59 55.3 -0.5
PFO pmax pmax
comp=Z,107nm,1.0s,mb5.6
PFO Pinyon Flat Ob 83.31 55 eP P 00 59 55.3 -0.5
comp=Z,107nm,1.0s,mb5.6
PFO epP pP 01 00 14.4 -1.3
PFO esP sP 01 00 22.8 -0.9
V12A Nelson 83.32 53 ⇑P P 00 59 55.9 +0.1
baz=83,SNR=10.0
M18A Lyman 83.34 46 ⇑P P 00 59 56.3 +0.5
baz=83,SNR=8.2
S14A Cedar City 83.37 50 ⇑P P 00 59 56.5 +0.5
baz=83
L19A Farson 83.40 45 ⇑P P 00 59 56.1 0.0
baz=83,SNR=19
BELC Belle Mtn. 83.43 55 ⇓P P 00 59 56.1 -0.2
baz=83
BSD Bornholm Skovb 83.48 332 i P P 00 59 56.1 -0.1
BSD pmax pmax
comp=Z,79nm,1.0s,mb5.5
BSD Bornholm Skovb 83.48 332 i P P 00 59 56.1 -0.1
comp=Z,79nm,1.0s,mb5.5
BSD i S S 01 10 01.0 -11
LDFC Landfair 83.49 53 eP P 00 59 55.7 -1.0
LDFC epP pP 01 00 14.2 -2.4
LDFC esP sP 01 00 23.6 -1.0
U13A Pakoon Wash 83.56 52 ⇓P P 00 59 57.1 +0.1
baz=83,SNR=34
O17A Robinson Place 83.61 47 ⇓P P 00 59 58.1 +0.9
baz=83,SNR=31
BUR08 Bucovina Ar. S 83.62 322 eP P 00 59 57.0 0.0
BUR08 epP pP 01 00 17.5 +0.6
MSU Marysvale 83.62 49 eP P 00 59 58.0 +0.7
BURAR Bucovina Array 83.62 322 P P 00 59 57.6 +0.5
BURAR Bucovina Array 83.62 322 ⇓i P P 00 59 57.4 +0.3
BURAR Bucovina Array 83.62 322 ⇓P P 00 59 57.4 +0.3
KWP Kalwaria 83.65 325 eP P 00 59 57.8 +0.6
KWP epP pP 01 00 06.7 -10
KWP eS S 01 10 12.2 -1.4
KWP LMZ 01 39 29.4
comp=Z,2μm,21.2s
KWP Kalwaria 83.65 325 ⇓i P P 00 59 57.8 +0.6
KWP Kalwaria 83.65 325 eP P 00 59 57.8 +0.6
KWP epP pP 01 00 06.7 -10
KWP eS S 01 10 12.3 -1.3
FRB Frobisher Bay 83.70 13 LR LR 01 37 15.4
comp=Z,632nm,21.3s,baz=284,slow=36
MONP Monument Peak 83.71 56 ⇓P P 00 59 57.7 -0.1
baz=84
R15A Junction 83.72 49 ⇓P P 00 59 58.0 +0.3
baz=84,SNR=9.7
ODB Odobesti 83.75 320 P P 00 59 59.6 +1.8
TIRR Tirgusor 83.76 318 ⇑i P P 00 59 58.6 +0.7
TIRR Tirgusor 83.76 318 ⇑P P 00 59 58.6 +0.7
GKP Gorka Klasztor 83.79 330 eP P 00 59 57.8 0.0
GKP ePcP PcP 00 59 59.1 -2.7
GKP epS 01 10 13.1
GKP LMZ 01 41 52.0
comp=Z,2μm,22.5s
GKP Gorka Klasztor 83.79 330 eP P 00 59 57.8 0.0
GKP ePcP PcP 00 59 59.1 -2.7
GKP ePS 01 10 13.1
GKP LR LR
comp=Z,2μm,22.5s
T14A Hurricane 83.81 51 ⇑P P 00 59 58.4 +0.1
baz=84,SNR=5.6
N18A Larsen Ranch, 83.85 46 ⇓P P 00 59 58.9 +0.5
baz=84,SNR=29
V13A Grand Canyon W 83.85 52 ⇑P P 00 59 58.4 -0.1
baz=84,SNR=5.2
VRI Vrincioaia 83.87 320 P P 01 00 00.0 +1.6
VRI Vrincioaia 83.87 320 ⇓i P P 00 59 59.5 +1.1
VRI Vrincioaia 83.87 320 ⇓P P 00 59 59.5 +1.1
HARR Harsova 83.90 319 ⇓i P P 00 59 59.7 +1.1
HARR Harsova 83.90 319 ⇓P P 00 59 59.7 +1.2
PLOR Plostina 83.93 320 ⇓i P P 00 59 59.1 +0.4
IRM Iron Mountain 83.95 54 ⇓P P 00 59 58.8 -0.2
baz=84
S15A Panguitch 83.95 50 ⇑P P 00 59 59.0 0.0
baz=84
BC3 Big Chuckw Mtn 84.00 55 ⇓P P 00 59 59.4 +0.1
baz=84
P17A Butcher Ranch, 84.02 48 ⇓P P 00 59 59.8 +0.5
baz=84,SNR=28
O18A Roosevelt 84.04 47 ⇑P P 00 59 59.9 +0.5
baz=84,SNR=10
Q16A Castle Valley 84.05 48 ⇑P P 00 59 59.9 +0.5
baz=84,SNR=9.9
COP Copenhagen 84.05 334 i P P 00 59 59.9 +0.8
comp=Z,91nm,0.9s,mb5.6
COP i S S 01 10 07.0 -10
DVTC Desert V Tower 84.06 56 ⇓P P 00 59 59.1 -0.5
baz=84
L20A Wamsutter 84.08 45 ⇑P P 00 59 59.7 +0.1
baz=84,SNR=8.4
U14A Mt Trumbull 84.09 51 ⇑P P 00 59 59.8 +0.1
baz=84,SNR=11
SWSC Sam W. Stewart 84.13 55 ⇑P P 00 59 59.6 -0.4
baz=84
R16A Teasdale 84.20 49 ⇑P P 01 00 01.3 +1.1
baz=84,SNR=43
N19A John Jarvie Ra 84.20 46 ⇑P P 01 00 00.3 +0.1
baz=84,SNR=21
P18A Preston Nutter 84.25 47 ⇓P P 01 00 01.1 +0.6
baz=84,SNR=31
T15A Red Dirt Ranch 84.30 50 ⇓P P 01 00 01.1 +0.4
baz=84,SNR=17
KOLS Kolonicke sedl 84.32 324 eP P 01 00 00.9 +0.3
KOLS pmax pmax
comp=Z,40nm,1.1s,mb5.2
KOLS Kolonicke sedl 84.32 324 eP P 01 00 00.9 +0.3
KOLS Kolonicke sedl 84.32 324 eP P 01 00 00.9 +0.3
comp=Z,40nm,1.1s,mb5.2
KOLS LR LR
comp=Z,1μm,19.1s
W13A Hualapai Mount 84.32 53 ⇓P P 01 00 01.2 +0.2
baz=84,SNR=9.4
SRU San Rafael 84.36 48 ⇑P P 01 00 01.1 +0.1
baz=84
SRU San Rafael 84.36 48 eP P 01 00 01.2 +0.2
S16A Weppner Ranch, 84.44 49 ⇓P P 01 00 01.4 0.0
baz=84,SNR=18
M20A Sweetwater, Wa 84.47 45 ⇓P P 01 00 02.1 +0.6
baz=84,SNR=16
UZH Uzhgorod 84.50 324 eP P 01 00 02.0 +0.5
UZH e pP 01 00 20.0 -1.5
UZH i S S 01 10 21.0 -1.2
UZH MLR MLR
comp=N,1μm,17.0s
UZH MLR MLR
comp=E,2μm,17.0s
UZH MLR MLR
comp=Z,1μm,17.0s
STHS Stebnicka Huta 84.52 325 eP P 01 00 02.2 +0.6
STHS eS S 01 10 19.5 -2.8
STHS pmax pmax
comp=Z,35nm,0.9s,mb5.3
STHS Stebnicka Huta 84.52 325 eP P 01 00 02.2 +0.6
STHS epP pP 01 00 22.5 +1.0
STHS eS S 01 10 19.5 -2.8
STHS Stebnicka Huta 84.52 325 eP P 01 00 02.2 +0.6
comp=Z,35nm,0.9s,mb5.3
STHS e pP 01 00 22.6 +1.1
STHS eS S 01 10 19.5 -2.8
RGN Rugen 84.53 332 eP P 01 00 02.4 +0.9
RGN epP pP 01 00 21.1 -0.3
MLR Muntele Rosu 84.54 320 P P 01 00 02.5 +0.7
MLR Muntele Rosu 84.54 320 ⇓i P P 01 00 02.4 +0.6
MLR Muntele Rosu 84.54 320 ⇓P P 01 00 02.4 +0.6
BORG Borgarnes 84.57 352 eP P 01 00 01.7 +0.2
comp=Z,364nm,1.4s,mb6.1
BORG epP pP 01 00 21.5 0.0
BORG ePP PP 01 03 17.6 +0.5
V14A Boquillas Ranc 84.57 52 ⇓P P 01 00 02.5 +0.4
baz=84,SNR=38
PDMCI Parker Dam,Lak 84.58 53 ⇓P P 01 00 02.1 -0.1
baz=84
Y12C Blythe 84.60 54 ⇑P P 01 00 02.2 -0.1
baz=84,SNR=10
Q18A Rafter H Ranch 84.61 48 ⇓P P 01 00 01.8 -0.5
baz=84,SNR=18
R17A Hanksville Air 84.63 49 ⇑P P 01 00 02.4 0.0
baz=84,SNR=49
X13A Yucca 84.64 53 ⇓P P 01 00 02.2 -0.3
baz=84,SNR=19
U15A North Rim 84.69 51 ⇓P P 01 00 03.2 +0.5
baz=84,SNR=33
L21A Rawlins 84.69 44 ⇓P P 01 00 02.9 +0.3
baz=84,SNR=29
OJC Ojcow 84.69 326 eP P 01 00 02.5 +0.1
OJC eS S 01 10 22.3 -1.7
OJC eSS SS 01 15 57.3 +1.5
OJC L 01 41 21.0
comp=Z,1.4nm,18.7s
MUD Monsted U'grnd 84.69 335 i P P 01 00 02.6 +0.3
MUD i S S 01 10 20.9 -2.9

MUD pmax pmax
comp=Z,69nm,0.9s,mb5.6
MUD Monsted U'grnd 84.69 335 *i* P **P 01 00 02.6 +0.3**
comp=Z,69nm,0.9s,mb5.6
MUD *i* pP 01 00 22.8 +0.5
MUD *i* S S 01 10 20.9 -2.9
HWQ Hawqa 84.70 307 *eP* **P 01 00 02.6 -0.2**
CRVS Cervenica-Dubn 84.75 325 *i* P **P 01 00 03.1 +0.3**
CRVS *e*pP pP 01 00 22.3 -0.4
CRVS *e*S S 01 10 21.0 -3.6
CRVS Cervenica-Dubn 84.75 325 *i* P **P 01 00 03.1 +0.3**
comp=Z,65nm,1.3s,mb5.4
CRVS *e* pP 01 00 22.3 -0.4
CRVS *e*S S 01 10 21.0 -3.6
CRVS LR LR
comp=Z,900nm,40.6s
GLA Glamis 84.76 55 ⇑P **P 01 00 03.5 +0.4**
baz=85
GLA Glamis 84.76 55 *eP* **P 01 00 03.5 +0.4**
GLA *e*pP pP 01 00 22.6 -0.5
GLA *e*sP sP 01 00 30.9 -0.2
N20A Spence Gulch, 84.80 45 ⇑P **P 01 00 03.7 +0.5**
baz=85,SNR=48
W14A Seligman 84.81 52 ⇑P **P 01 00 03.6 +0.2**
baz=85,SNR=25
TAOE Nuku Hiva Isla 84.87 103 *e*S S 01 10 43.5 +17
comp=Z,2μm,21.8s
TAOE Nuku Hiva Isla 84.87 103 *eP* **P 01 00 00.2 -3.7**
comp=Z,555nm,1.1s,mb6.4
TAOE *e*S S 01 10 43.5 +17
M21A Separation Pea 84.90 44 ⇑P **P 01 00 04.1 +0.4**
baz=85,SNR=20
T16A Glen Canyon Da 84.91 50 ⇓P **P 01 00 03.0 -0.8**
baz=85,SNR=5.2
KDHN Kadinhani 84.93 312 *i* P **P 01 00 00.2 -3.6**
RWWY Rawlins 84.95 44 *eP* **P 01 00 04.2 +0.3**
comp=Z,116nm,1.2s,mb5.7
RWWY *e*pP pP 01 00 23.7 -0.1
RWWY *e*sP sP 01 00 32.7 +0.9
NIE Niedzica 84.97 326 *eP* **P 01 00 04.6 +0.7**
NIE *e*PcP PcP 01 00 11.7 +4.6
S17A Black Ridge (B 85.01 49 ⇑P **P 01 00 04.0 -0.3**
baz=85,SNR=33
P19A Cripple Cowboy 85.05 47 ⇑P **P 01 00 05.1 +0.6**
baz=85,SNR=60
Y13A Salome 85.06 54 ⇓P **P 01 00 04.9 +0.2**
baz=85,SNR=21
VOIR 85.07 321 P **P 01 00 05.4 +1.0**
VOIR 85.07 321 ⇓*i*P **P 01 00 05.0 +0.6**
VOIR 85.07 321 ⇓P **P 01 00 05.0 +0.5**
V15A Kaibab Nationa 85.10 51 ⇑P **P 01 00 05.3 +0.5**
baz=85,SNR=26
BHL Bhannes 85.10 306 *eP* **P 01 00 05.1 +0.3**
NEF NEVSHA 85.14 318 P **P 01 00 05.6 +0.8**
ESKT Eskisehir 85.17 313 *i* P **P 00 59 57.4 -7.6**
R18A Canyonlands Na 85.17 48 ⇑P **P 01 00 05.0 -0.1**
baz=85,SNR=31
BORA Eskisehir 85.21 314 *i* P **P 01 00 00.1 -5.2**
L22A Ellis Ranch, M 85.21 44 ⇓P **P 01 00 05.9 +0.6**
baz=85
RCY Rachaya 85.21 306 *eP* **P 01 00 05.9 +0.5**
O20A White River Ci 85.22 46 ⇑P **P 01 00 05.6 +0.2**
baz=85,SNR=16
Q19A Hogan Spring (85.26 47 ⇑P **P 01 00 05.1 -0.4**
baz=85,SNR=12
N21A Black Mountain 85.30 45 ⇑P **P 01 00 06.0 +0.2**
baz=85,SNR=12
RSSD Black Hills 85.35 41 *eP* **P 01 00 05.2 -0.7**
RSSD pmax pmax
comp=Z,71nm,1.3s,mb5.4
RSSD MLR MLR
comp=Z,912nm,19.0s
RSSD Black Hills 85.35 41 *eP* **P 01 00 05.2 -0.7**
comp=Z,72nm,1.3s,mb5.4
RSSD *e*PcP PcP 01 00 08.3 -0.5
RSSD *e*pP pP 01 00 25.9 0.0
RSSD *e*sP sP 01 00 34.6 +0.8
RSSD *e*S S 01 10 14.7 -16
RSSD LR LR
comp=Z,912nm,19.0s
X14A Yava 85.35 53 ⇑P **P 01 00 06.7 +0.6**
baz=85,SNR=30
T17A Navajo Res., N 85.36 50 ⇑P **P 01 00 05.7 -0.4**
baz=85,SNR=7.4
W15A Williams 85.39 52 ⇓P **P 01 00 06.9 +0.6**
baz=85,SNR=9.0
DRGR 85.47 323 P **P 01 00 07.0 +0.6**
DRGR 85.47 323 ⇑*i*P **P 01 00 06.4 0.0**
DRGR 85.47 323 ⇑P **P 01 00 06.4 0.0**
M22A Cedar Creek Ra 85.49 44 ⇑P **P 01 00 06.7 +0.1**
baz=85,SNR=12
S18A Hurst Farm, Bl 85.50 49 ⇑P **P 01 00 06.8 0.0**
baz=85,SNR=27
Y14A Wickenburg 85.56 53 ⇑P **P 01 00 06.9 -0.3**
baz=85,SNR=7.5
BOLV Bolvadin 85.57 313 *i* P **P 01 00 07.7 +0.6**
ULM Lac du Bonnet 85.60 33 P **P 01 00 06.8 -0.2**
comp=Z,5.0nm,0.8s,mb4.5,baz=291,slow=6.1,SNR=4.1
ULM pP pP 01 00 28.3 +1.4
comp=Z,31nm,1.0s,baz=314,slow=4.7,SNR=6.2
ULM PKKPbc PKKPbc 01 18 08.3 -1.3
comp=Z,9.0nm,0.8s,baz=160,slow=3.4,SNR=9.9
ULM LR LR 01 35 35.6
comp=Z,1μm,22.0s,baz=302,slow=34
ULM Lac du Bonnet 85.60 33 P **P 01 00 06.8 -0.2**
ULM pP pP 01 00 28.3 +1.4
ULM PKKPbc PKKPbc 01 18 08.3 -1.3
ULM LR LR 01 35 35.6
U16A Tuba City 85.63 51 ⇓P **P 01 00 08.1 +0.7**
baz=85,SNR=16
R19A Curley Farm, L 85.64 48 ⇑P **P 01 00 07.4 0.0**
baz=85,SNR=33
O21A Pagoda 85.65 46 ⇑P **P 01 00 07.3 -0.1**
baz=85
113A Mohawk Valley, 85.67 55 ⇑P **P 01 00 07.3 -0.4**
baz=86,SNR=14
U17A Shonto 85.68 50 ⇓P **P 01 00 07.9 +0.2**
baz=86,SNR=23
PV10 Paradox Valley 85.73 48 *eP* **P 01 00 08.5 +0.6**
comp=Z,6μm,0.9s
PV10 *e*pP pP 01 00 28.8 +0.9
OKC Ostrava-Krasne 85.73 327 ⇑*i*P **P 01 00 07.6 -0.1**
OKC *e*pP pP 01 00 30.6 +3.0
OKC *e*S S 01 10 33.2 -1.1
X15A Humboldt 85.79 52 ⇓P **P 01 00 08.5 +0.2**
baz=86,SNR=28
WUAZ Wupatki 85.81 51 ⇑P **P 01 00 08.0 -0.4**
baz=86
WUAZ Wupatki 85.81 51 *eP* **P 01 00 08.0 -0.3**
comp=Z,235nm,1.2s,mb6.0
WUAZ *e*pP pP 01 00 28.3 0.0
WUAZ *e*sP sP 01 00 37.4 +1.1
RUE Ruedersdorf 85.84 331 *eP* **P 01 00 07.8 -0.3**
comp=Z,70nm,1.2s,mb5.5
RUE Ruedersdorf 85.84 331 *eP* **P 01 00 07.2 -0.9**
comp=Z,44nm,0.9s,mb5.4
RUE *e*PcP PcP 01 00 10.4 -0.4
RUE *e*pP pP 01 00 28.5 +0.4
Q20A Ridgley Place, 85.87 47 ⇑P **P 01 00 08.9 +0.4**
baz=86,SNR=50
ULDT Uludag 85.88 314 *i* P **P 01 00 03.9 -4.7**
KSP Ksiaz 85.90 328 *eP* **P 01 00 08.9 +0.4**
KSP *e*pP pP 01 00 15.8 -13
KSP *e*S S 01 10 35.4 -0.5
KSP LMZ 01 43 18.3
comp=Z,3μm,17.7s
KSP Ksiaz 85.90 328 *eP* **P 01 00 08.1 -0.4**
KSP *e**PP pP 01 00 26.4 -2.0
KSP *e*S S 01 10 31.0 -4.9
KSP Ksiaz 85.90 328 *eP* **P 01 00 08.1 -0.4**
KSP *e*pP pP 01 00 26.4 -2.0
KSP *e*S S 01 10 31.0 -4.9
KSP *e*SS SS 01 16 04.0 -9.4
T18A Mexican Hat 85.90 49 ⇓P **P 01 00 08.5 -0.3**
baz=86,SNR=29
SZH Strazhica 85.91 318 P **P 01 00 12.6 +3.9**
Z14A Wintersburg 85.92 54 ⇑P **P 01 00 08.8 -0.1**
baz=86,SNR=7.6
N22A Wattenberg Ran 85.93 45 ⇑P **P 01 00 09.2 +0.4**
baz=86,SNR=6.9
W16A Flagstaff 85.94 52 ⇓P **P 01 00 09.2 +0.2**
baz=86,SNR=7.3
ZIMR 86.00 319 ⇓*i*P **P 01 00 12.6 +3.5**
ZIMR 86.00 319 ⇓P **P 01 00 12.6 +3.5**
Y15A Casa Rosa Ranc 86.02 53 ⇑P **P 01 00 09.4 0.0**
baz=86,SNR=26
S19A Harvey Farm, M 86.03 48 ⇓P **P 01 00 09.0 -0.4**
baz=86,SNR=14
CSS Prodhromos 86.12 308 P **P 01 00 10.1 +0.2**
BSEG Bad Segeberg 86.17 333 *eP* **P 01 00 09.3 -0.4**
BSEG pmax pmax
comp=Z,58nm,1.0s,mb5.5
BSEG Bad Segeberg 86.17 333 *eP* **P 01 00 09.3 -0.4**
comp=Z,58nm,1.0s,mb5.5
PV01 Paradox Valley 86.17 48 *eP* **P 01 00 09.9 -0.2**
comp=Z,11μm,1.0s
PV01 *e*pP pP 01 00 29.9 -0.2
PSZ Piszkesteto 86.18 325⇑*e* **P 01 00 10.1 +0.2**
PSZ Piszkesteto 86.18 325⇓*iP* **P 01 00 11.0 +1.1**
PSZ Piszkesteto 86.18 325 *eP* **P 01 00 07.0 -2.9**
PSZ *e*PP PP 01 03 27.9 -2.7
PSZ *e*S S 01 10 26.3 -12
PSZ LR LR
comp=Z,2μm,19.0s
DPC Dobruska-Polom 86.23 328⇑*iP* **P 01 00 10.4 +0.3**
DPC *e*pP pP 01 00 28.1 -2.0
DPC *e*SKS 01 10 37.4
DPC AMS AMS 01 41 00.0
comp=Z,2μm,22.2s
PHWY Pilot Hill 86.23 44 *eP* **P 01 00 10.6 +0.3**
comp=Z,64nm,1.0s,mb5.5
PHWY *e*pP pP 01 00 30.2 -0.1
PHWY *e*sP sP 01 00 38.8 +0.5
UPC Upice 86.26 328⇑*eP* **P 01 00 10.3 +0.1**
UPC *e*pP pP 01 00 30.3 +0.1
GDZ Gediz 86.28 313 *i* P **P 01 00 01.2 -9.4**
U18A Rough Rock, Ch 86.31 50 ⇑P **P 01 00 11.0 +0.2**
baz=86,SNR=22
VYHS Vyhne 86.32 326 *i* P **P 01 00 10.8 +0.2**
VYHS *e*pP pP 01 00 33.8 +3.2
VYHS *e*PP PP 01 03 26.4 -5.3
VYHS *e*S S 01 10 31.2 -8.8
VYHS Vyhne 86.32 326 *i* P **P 01 00 10.8 +0.2**
comp=Z,34nm,1.2s,mb5.2
VYHS *e* pP 01 00 33.8 +3.2
VYHS *e*PP PP 01 03 26.4 -5.3
VYHS *e*S S 01 10 31.2 -8.8
VYHS LR LR
comp=Z,1μm,42.1s
GZR Gura Zlata 86.33 322⇑*iP* **P 01 00 12.4 +1.7**
GZR Gura Zlata 86.33 322 ⇑P **P 01 00 12.4 +1.7**
X16A Lo Mia Camp, P 86.38 52 ⇑P **P 01 00 11.3 +0.1**
baz=86,SNR=13
KOLL Kolacno 86.47 326 *i* P **P 01 00 11.5 +0.2**
KOLL *e*PP PP 01 03 32.6 -0.4
SMCO Snowmass 86.58 46 *eP* **P 01 00 09.5 -2.6**
comp=Z,114nm,1.1s,mb5.7
SMCO *e*pP pP 01 00 29.3 -2.8
T19A Beclabito 86.63 49 ⇑P **P 01 00 12.4 +0.1**
baz=86,SNR=14
Y16A Circle Bar Ran 86.65 53 ⇓P **P 01 00 12.4 -0.2**
baz=86,SNR=10
V18A Ganado 86.67 50 ⇓P **P 01 00 13.0 +0.5**
baz=86,SNR=9.5
R21A Cimarron 86.69 47 ⇑P **P 01 00 13.1 +0.5**
baz=86,SNR=21
MVCO Mesa Verde 86.75 48 ⇓P **P 01 00 12.8 -0.1**
baz=86
MVCO Mesa Verde 86.75 48 *eP* **P 01 00 12.6 -0.4**
comp=Z,106nm,1.2s,mb5.7
MVCO *e*pP pP 01 00 32.2 -0.8
MVCO *e*sP sP 01 00 41.6 +0.7
MVCO *e*PP PP 01 03 35.0 -0.6
214A Organ Pipe Nat 86.79 55 ⇓P **P 01 00 13.1 -0.1**
baz=87,SNR=8.5
115A Sonoran Desert 86.79 54 ⇑P **P 01 00 13.2 0.0**
baz=87,SNR=7.5
BZS Buzias 86.81 322⇑*iP* **P 01 00 12.5 -0.5**
BZS Buzias 86.81 322 ⇑P **P 01 00 12.5 -0.6**
VRAC Vranov 86.83 327 P **P 01 00 13.4 +0.3**
VRAC Vranov 86.83 327⇑*iP* **P 01 00 13.2 +0.1**
VRAC Vranov 86.83 327 ⇑P **P 01 00 13.2 +0.1**
PVCC Panska Ves 86.90 329⇑*eP* **P 01 00 13.3 -0.1**
PVCC *e*pP pP 01 00 32.9 -0.5
PVCC *e*SKS 01 10 40.3
BUD Budapest 86.91 325⇑*e* **P 01 00 14.7 +1.2**
BRG Berggiesshubel 86.93 330 *i* P **P 01 00 13.2 -0.3**
BRG S S 01 10 37.0 -8.9
BRG pmax pmax
comp=Z,16nm,1.3s,mb4.8
BRG MLR MLR
comp=N,727nm,18.1s
BRG MLR MLR
comp=E,879nm,18.2s
BRG MLR MLR
comp=Z,797nm,23.3s
BRG Berggiesshubel 86.93 330 *eP* **P 01 00 12.7 -0.8**
comp=Z,113nm,2.0s,mb5.5
BRG Berggiesshubel 86.93 330 *i* P **P 01 00 13.2 -0.3**
comp=Z,27nm,1.3s,mb5.0
BRG *i* pP pP 01 00 32.8 -0.7
comp=Z,37nm,1.1s
BRG *i* PP PP 01 03 29.9 -6.6
comp=Z,24nm,1.1s
BRG S S 01 10 37.0 -8.9
BRG PS 01 11 23.0
BRG SS SS 01 16 06.0 -22
comp=N,1μm,18.1s
BRG
comp=E,2μm,18.2s
BRG
comp=Z,1μm,23.3s
BRG Berggiesshubel 86.93 330 *i* P **P 01 00 13.2 -0.3**
comp=Z,16nm,1.3s,mb4.8
BRG *i* pP pP 01 00 32.8 -0.7
BRG *i* PP PP 01 03 29.9 -6.6
BRG S S 01 10 37.0 -8.9
BRG PS 01 11 23.0
BRG SS SS 01 16 06.0 -22
BRG LR LR
comp=Z,800nm,23.3s
AGMN Agassiz Refuge 86.94 34 *eP* **P 01 00 12.8 -0.8**
comp=Z,65nm,1.0s,mb5.5
SMOL Smolenice 86.99 326 *eP* **P 01 00 14.3 +0.5**
SMOL *e*pP pP 01 00 38.1 +4.3
SMOL *e*PP PP 01 03 38.7 +1.6
Z16A Peralta Trail, 86.99 53 ⇓P **P 01 00 13.4 -0.8**
baz=87
CLL Collm 87.02 330 *eP* **P 01 00 13.0 -0.9**
CLL *i* S S 01 10 43.6 -3.1
CLL pmax pmax
comp=Z,28nm,1.0s,mb5.2
CLL MLR MLR
comp=Z,1μm,19.8s
CLL Collm 87.02 330 *eP* **P 01 00 13.0 -0.9**
comp=Z,28nm,1.0s,mb5.2
CLL *i* x x 01 00 25.3
CLL *e*pP pP 01 00 36.0 +2.0
CLL *e*(sP) sP 01 00 43.0 +1.1
CLL *e*PP PP 01 03 37.0 -0.3
comp=Z,27nm,1.0s
CLL *e*pPP 01 04 01.0
CLL *i* S S 01 10 43.6 -3.1
CLL *e*Slp 01 10 46.0
comp=N,2μm,16.7s
CLL *e*Slp 01 10 46.0
comp=E,1μm,11.9s
CLL *e*Slp 01 10 46.0
comp=Z,800nm,10.6s
CLL *e*sS sS 01 11 19.0 -1.8
CLL *e*SS SS 01 16 36.0 +6.2
CLL LmV 01 40 00.0
comp=Z,500nm,20.3s
CLL LmV 01 43 00.0
comp=Z,1μm,19.8s
CLL Collm 87.02 330 *eP* **P 01 00 13.0 -0.9**
comp=Z,28nm,1.0s,mb5.2
CLL *i* S S 01 10 43.6 -3.1
CLL LR LR
comp=Z,1μm,19.8s
ISCO Idaho Springs 87.05 45 *eP* **P 01 00 14.7 +0.4**
ISCO *e*S S 01 10 42.0 -5.5
ISCO pmax pmax
comp=Z,57nm,1.1s,mb5.4
ISCO MLR MLR
comp=Z,930nm,21.0s
ISCO Idaho Springs 87.05 45 *eP* **P 01 00 14.7 +0.4**
comp=Z,57nm,1.1s,mb5.4
ISCO *e*pP pP 01 00 34.5 +0.2
ISCO *e*PP PP 01 03 50.4 +12
ISCO *e*S S 01 10 42.0 -5.4
ISCO LR LR
comp=Z,930nm,21.0s
FBE Freiberg 87.15 330 *eP* **P 01 00 13.9 -0.7**
comp=Z,168nm,2.0s,mb5.6
Y17A Roosevelt 87.19 52 ⇑P **P 01 00 15.1 0.0**
baz=87,SNR=12
116A Eloy 87.23 54 ⇓P **P 01 00 15.2 -0.2**
baz=87,SNR=7.2
V19A Window Rock 87.26 50 ⇓P **P 01 00 15.1 -0.3**
baz=87
PRU Pruhonice 87.30 329⇑*iP* **P 01 00 15.0 -0.3**
PRU *e* 01 10 33.8
PRU MLR MLR
comp=Z,2μm,15.3s
PRU Pruhonice 87.30 329⇑*iP* **P 01 00 15.0 -0.3**
PRU *e*pP pP 01 00 34.9 -0.4
PRU *e*SKS 01 10 33.8
PRU *ex* x 01 11 18.8
PRU AMS AMS 01 44 10.0
comp=Z,2μm,15.3s
TREC Trest 87.36 328⇑*iP* **P 01 00 15.4 -0.2**
TREC *e*pP pP 01 00 34.9 -0.7
TREC AMS AMS 01 41 40.0
comp=Z,2μm,22.9s
ZST Bratislava 87.36 326 *eP* **P 01 00 15.5 -0.2**
ZST *e* 01 03 39.3
ZST *e*S S 01 10 49.4 -0.8
ZST pmax pmax
comp=Z,50nm,1.2s,mb5.3
ZST MLR MLR
comp=Z,1μm,17.9s
ZST Bratislava 87.36 326 *eP* **P 01 00 15.5 -0.2**
ZST *e*pP pP 01 00 36.0 +0.3
ZST *e*PP PP 01 03 39.3 -0.9
ZST *e*S S 01 10 49.4 -0.8
ZST Bratislava 87.36 326 *eP* **P 01 00 15.5 -0.2**
comp=Z,50nm,1.2s,mb5.3
ZST *e* pP 01 00 36.0 +0.3
ZST *e*PP PP 01 03 39.3 -0.9
ZST *e*S S 01 10 49.4 -0.8
ZST LR LR
comp=Z,1μm,17.9s
MVH1 Achvaich 87.67 342 *eP* **P 01 00 16.2 -0.7**
Y18A Canyon Day Jun 87.70 52 ⇑P **P 01 00 17.7 +0.1**
baz=88,SNR=7.7
216A Three Points, 87.72 54 ⇓P **P 01 00 17.4 -0.3**
baz=88
CLZ Clausthal 87.73 332 *eP* **P 01 00 17.0 -0.3**
CLZ pmax pmax
comp=Z,38nm,1.2s,mb5.3
CLZ Clausthal 87.73 332 *eP* **P 01 00 17.0 -0.3**
comp=Z,38nm,1.2s,mb5.3
CLZ *e*pP pP 01 00 37.0 -0.4
X19A St. Johns 87.84 51 ⇑P **P 01 00 18.8 +0.6**
baz=88,SNR=12
VTS Vitosha 87.89 319 P **P 01 00 19.7 +1.4**
VTS Vitosha 87.89 319⇑*iP* **P 01 00 19.6 +1.3**
VTS Vitosha 87.89 319 P **P 01 00 18.6 +0.3**
VTS Vitosha 87.89 319 ⇑P **P 01 00 19.6 +1.3**
117A Oracle 87.90 53 ⇓P **P 01 00 18.6 +0.1**
baz=88
TANN Tannenbergstha 87.91 330 *eP* **P 01 00 17.8 -0.4**
comp=Z,40nm,1.7s,mb5.2
WERD Werda 87.95 330 *eP* **P 01 00 17.9 -0.5**
comp=Z,81nm,2.0s,mb5.4
PKSM Moragy 87.96 324 P **P 01 00 18.1 -0.5**
PKSM Moragy 87.96 324⇑*iP* **P 01 00 17.8 -0.8**
PKSM Moragy 87.96 324 ⇑P **P 01 00 17.8 -0.8**
SOP Sopron 87.98 326⇓*e* **P 01 00 19.2 +0.6**
TUC Tucson 88.02 54 *eP* **P 01 00 18.1 -1.0**
TUC pmax pmax
comp=Z,102nm,1.5s,mb5.6
TUC Tucson 88.02 54 *eP* **P 01 00 18.1 -1.0**
comp=Z,102nm,1.5s,mb5.6
TUC *e*pP pP 01 00 39.2 0.0
TUC *e*sP sP 01 00 47.6 +0.5
LBOS 88.03 285 *eP* **P 01 00 19.5 +0.1**
NKC Novy Kostel 88.05 330⇑*eP* **P 01 00 18.5 -0.4**
NKC *e*pP pP 01 00 37.8 -1.1
MOX Moxa 88.10 330 *eP* **P 01 00 18.3 -0.8**
comp=Z,32nm,1.6s,mb5.1
MOX *e* pP 01 00 38.2 -1.0
MOX *e* 01 03 46.7
MOX
comp=Z,700nm,17.0s
MOX Moxa 88.10 330 *eP* **P 01 00 18.3 -0.8**
MOX *e* 01 03 46.7
MOX pmax pmax
comp=Z,32nm,1.6s,mb5.1
MOX MLR MLR
comp=Z,700nm,17.0s
MOX Moxa 88.10 330 *eP* **P 01 00 18.4 -0.7**
comp=Z,26nm,1.3s,mb5.1
MDO Dochfour 88.14 342 *eP* **P 01 00 18.5 -0.7**
CONA Conrad Observa 88.15 327 *i* PcP PcP 01 00 19.7 -1.4
comp=Z,38nm,1.2s,SNR=12
CSNA Conrad Observa 88.15 327⇓*i*PcP PcP 01 00 19.5 -1.6
comp=Z,39nm,1.3s
MMB Musomiste 88.23 318 P **P 01 00 19.7 -0.2**
217A Green Valley 88.30 54 ⇓P **P 01 00 20.5 +0.1**
baz=88,SNR=7.2
KAC Achnashellach 88.34 343 *eP* **P 01 00 19.7 -0.4**
KHC Kasperske Hory 88.35 329 *eP* **P 01 00 19.9 -0.4**
KHC *e* 01 03 45.0
KHC *e* 01 10 40.7
KHC MLR MLR
comp=Z,2μm,25.3s
KHC Kasperske Hory 88.35 329⇑*eP* **P 01 00 19.9 -0.4**
KHC *e*pP pP 01 00 39.4 -1.0
KHC *ex* x 01 00 55.0
KHC *e*PP PP 01 03 45.0 -3.0
KHC *ex* x 01 04 14.5
KHC *e*SKS 01 10 40.7
KHC *ex* x 01 11 54.1
KHC AMS AMS 01 42 30.0
comp=Z,2μm,25.3s
SDCO Great Sand Dun 88.36 47 *eP* **P 01 00 20.8 +0.1**
comp=Z,118nm,0.5s,mb6.2
SDCO *e*pP pP 01 00 40.4 -0.3
SDCO *e*sP sP 01 00 49.2 +0.6
SDCO PP PP 01 03 51.7 +3.2
SDCO *e*S S 01 10 56.9 -3.2
SDCO LR LR
comp=Z,972nm,20.0s
118A Homack Ranch, 88.39 53 ⇑P **P 01 00 21.1 +0.2**
baz=88,SNR=5.8
IBBN Ibbenburen 88.41 333 *eP* **P 01 00 19.9 -0.7**
comp=Z,42nm,0.6s,mb5.7
IBBN *e*pP pP 01 00 40.0 -0.6
OGNE Ogallala 88.49 42 *eP* **P 01 00 20.9 -0.2**
comp=Z,89nm,0.9s,mb5.8
OGNE *e*pP pP 01 00 40.9 -0.4
OGNE *e*sP sP 01 00 48.8 -0.4
ROTZ Rotzenmuhle 88.50 330 *eP* **P 01 00 20.7 -0.3**
comp=Z,64nm,1.5s,mb5.4
GEC2 GERESS Array S 88.50 328 *eP* **P 01 00 20.5 -0.5**
GEC2 pmax pmax
comp=Z,16nm,1.0s,mb5.0
GEC2 GERESS Array S 88.50 328 *eP* **P 01 00 20.5 -0.5**
comp=Z,16nm,1.0s,mb5.0
GERES GERESS Array B 88.50 328 P **P 01 00 20.3 -0.8**
comp=Z,11nm,0.9s,mb4.9,baz=36,slow=6.1,SNR=29
GERES pP pP 01 00 39.6 -1.6
comp=Z,8.7nm,0.8s,baz=48,slow=7.1,SNR=2.4
GERES PP PP 01 03 49.1 -0.1
comp=Z,7.2nm,0.9s,baz=46,slow=9.5,SNR=4.4
GERES PKKPbc PKKPbc 01 18 01.1 -1.6
comp=Z,1.1nm,0.7s,baz=224,slow=2.7,SNR=5.2
GERES LR LR 01 44 15.5
comp=Z,1μm,18.5s,baz=291,slow=38
GERES GERESS Array B 88.50 328 P **P 01 00 20.3 -0.7**
GERES 01 03 49.1
GERES pmax pmax
comp=Z,11nm,0.9s
KPL Plockton 88.57 343 *eP* **P 01 00 20.9 -0.3**
KPL AMb AMB 01 00 25.8
comp=Z,122nm,1.9s,mb5.6
WET Wettzell 88.66 329 *eP* **P 01 00 21.5 -0.3**
WET pmax pmax
comp=Z,53nm,1.9s,mb5.2
WET Wettzell 88.66 329 *eP* **P 01 00 21.5 -0.3**
comp=Z,53nm,1.9s,mb5.2
218A Dragoon 88.72 54 ⇓P **P 01 00 22.8 +0.3**

baz=88,SNR=12
ARSA Arzberg 88.79 326 ⇑*i*PcP PcP 01 00 22.2 -1.7
comp=Z,24nm,1.2s,SNR=10
MOA Molln 88.96 327 ⇑*i*PcP PcP 01 00 23.1 -1.6
comp=Z,20nm,1.0s,SNR=9.0
ESY Stoneypath 88.97 340 *e*P **P 01 00 22.2 -1.0**
GRA1 Grafenberg Arr 88.98 330 *e*P **P 01 00 23.3 0.0**
comp=Z,57nm,1.3s,mb5.4
GRA1 *e*PP PP 01 03 51.7 -1.3
GRF Grafenberg Arr 88.98 330 *e*P **P 01 00 23.3 0.0**
GRF *e* 01 03 51.7
GRF pmax pmax
comp=Z,57nm,1.3s,mb5.4
GRF Grafenberg Arr 88.98 330 *e*P **P 01 00 23.3 0.0**
GRF *e* 01 03 51.7
GRF pmax pmax
comp=Z,57nm,1.3s,mb5.4
GRF Grafenberg Arr 88.98 330 *e*P **P 01 00 23.3 0.0**
comp=Z,57nm,1.3s,mb5.4
GRF *e*PP PP 01 03 51.7 -1.3
KOGS Kog 89.00 325 *i*P **P 01 00 22.7 -0.8**
KOGS *e* 01 02 11.8
STIP Stip 89.05 319 *i*Pn **P 01 00 22.2 -1.5**
318A Bisbee 89.06 54 ⇑P **P 01 00 24.5 +0.4**
baz=89,SNR=12
VAY Valandovo 89.07 319 *i*Pn **P 01 00 23.4 -0.6**
EBL Broad Law 89.22 341 *e*P **P 01 00 24.1 -0.2**
EAB Aberfoyle 89.23 341 *e*P **P 01 00 23.8 -0.5**
XSO Sourhope Farm 89.23 340 *e*P **P 01 00 24.1 -0.2**
219A White Tail Can 89.25 53 ⇓P **P 01 00 25.0 +0.1**
baz=89
EYMN Ely 89.27 32 *e*P **P 01 00 25.0 +0.3**
comp=Z,90nm,1.2s,mb5.7
EYMN *e*pP pP 01 00 45.0 +0.2
EYMN *e*sP sP 01 00 52.7 +0.1
EAU Auchinoon 89.28 341 *e*P **P 01 00 23.8 -0.8**
ANMO Albuquerque 89.42 49 PP PP 01 04 08.9 +12
comp=Z,5.7nm,1.1s,baz=326,slow=6.8,SNR=3.6
ANMO PKPPKP 01 26 09.2
comp=Z,1.1nm,0.7s,baz=107,slow=4.8,SNR=4.3
ANMO LR LR 01 35 25.3
comp=Z,2μm,21.8s,baz=116,slow=32
ANMO Albuquerque 89.42 49 *e*P **P 01 00 26.0 +0.3**
ANMO *e*S S 01 10 56.3 -14
ANMO pmax pmax
comp=Z,52nm,1.1s
ANMO MLR MLR
comp=Z,2μm,19.0s
ANMO Albuquerque 89.42 49 *e*P **P 01 00 26.0 +0.3**
comp=Z,52nm,1.1s,mb5.5
ANMO *e*pP pP 01 00 45.7 -0.1
ANMO *e*sP sP 01 00 54.0 +0.3
ANMO *e*PP PP 01 04 27.4 +30
ANMO *e*S S 01 10 56.3 -14
ANMO LR LR
comp=Z,2μm,19.0s
PERS Pernice 89.42 326 *e*P **P 01 00 25.0 -0.4**
PERS *e*SP SP 01 12 12.4 -1.5
PERS Pernice 89.42 326 *e*P **P 01 00 25.0 -0.4**
PERS *e* 01 02 12.4
SOKA Soboth 89.43 326 ⇓*i*PcP PcP 01 00 25.1 -1.7
comp=Z,49nm,1.1s
319A Douglas 89.60 54 ⇓P **P 01 00 27.0 +0.4**
baz=89,SNR=7.2
PGBU Glenifferbraes 89.60 341 *e*P **P 01 00 25.4 -0.6**
PGBU AMb AMB 01 00 31.2
comp=Z,154nm,1.7s,mb5.9
ESK Eskdalemuir 89.67 340 *e*P **P 01 00 25.7 -0.6**
ESK AMb AMB 01 00 32.6
comp=Z,96nm,1.7s,mb5.7
ECSD EROS,Sioux Fal 89.68 38 *e*P **P 01 00 26.0 -0.7**
comp=Z,49nm,1.0s,mb5.6
ECSD *e*pP pP 01 00 46.3 -0.5
ECSD *e*sP sP 01 00 54.1 -0.6
GCIS Gornji Cirnik 89.72 325 *i*P **P 01 00 26.1 -0.7**
RJOB Jochberg 89.72 328 *e*P **P 01 00 26.4 -0.4**
comp=Z,59nm,1.6s,mb5.5
ECK Cauldkaine Hil 89.76 340 *e*P **P 01 00 25.8 -1.0**
OBKA Obir 89.78 326 ⇑*i*PcP PcP 01 00 26.3 -2.1
comp=Z,11nm,0.9s
KRUS Krusevo 89.80 319 *e*Pn **P 01 00 27.7 +0.4**
KBA Koelnbreinsper 89.95 327 ⇑*i*P **P 01 00 26.5 -1.3**
comp=Z,24nm,1.0s,mb5.3,SNR=10.0
FUR Furstenfeldbru 90.09 329 *e*P **P 01 00 27.9 -0.6**
FUR pmax pmax
comp=Z,83nm,1.4s,mb5.7
FUR Furstenfeldbru 90.09 329 *e*P **P 01 00 27.9 -0.6**
comp=Z,83nm,1.4s,mb5.7
LJU Ljubljana 90.13 326 *i*P **P 01 00 28.0 -0.8**
LJU *e*SKSac SKSac 01 10 46.8 -6.5
LJU *e* 01 11 05.0
LJU *e* 01 11 26.7
LJU *e*SP SP 01 12 21.5 -0.3
LJU Ljubljana 90.13 326 *i*P **P 01 00 28.0 -0.8**
LJU *e* 01 02 21.5
LJU *e*SKSac SKSac 01 10 46.8 -6.5
LJU *e* 01 11 05.0
LJU *e* 01 11 26.7
MYKA Terra Mystica 90.13 327 ⇑*i*PcP PcP 01 00 27.6 -2.3
comp=Z,39nm,1.2s
BOJS Bojanci 90.16 325 *e*P **P 01 00 28.3 -0.6**
BOJS *i* pP 01 00 47.8 -1.1
BOJS *e*SP SP 01 12 21.6 -0.5
BOJS Bojanci 90.16 325 *e*P **P 01 00 28.3 -0.6**
BOJS *i* pP 01 00 47.8 -1.1
BOJS *e* 01 02 21.6
HGN Heimansgroeve 90.33 333 *e*P PP 01 04 14.1 +10
comp=Z,48nm,1.5s
CADS Cadrg 90.38 326 *i*P **P 01 00 28.2 -1.6**
CADS *i*PP PP 01 04 07.2 +3.0
CADS *e*SP SP 01 12 24.2 -0.3
CADS Cadrg 90.38 326 *i*P **P 01 00 28.2 -1.6**
CADS *e* 01 02 24.2
CADS *i*PP PP 01 04 07.2 +3.0
BEBN Eben Emael 90.41 333 P **P 01 00 29.4 -0.5**
MEM Membach 90.43 333 P **P 01 00 29.2 -0.8**
comp=Z,8.7nm,1.1s,mb4.8
PTCC Patocco-Chiusa 90.43 327 P **P 01 00 28.5 -1.6**
comp=Z,19nm,0.6s,mb5.4
VOY Vojsko 90.44 326 *e*P **P 01 00 28.8 -1.4**
VOY *e* 01 00 36.2
VOY *e* pP 01 00 48.6 -1.7
VOY *e* 01 01 19.0
VOY *e* 01 01 29.7
GAL1 Galloway 90.49 341 *e*P **P 01 00 29.0 -1.2**
GAL1 AMb AMB 01 00 32.5
comp=Z,90nm,1.4s,mb5.7
STU Stuttgart 90.55 330 *e*P **P 01 00 30.2 -0.5**
STU *e*pP pP 01 00 50.5 -0.2
STU *e*PP PP 01 03 58.4 -7.0
ABTA Abfaltersbach 90.58 327 ⇑*i*P **P 01 00 29.6 -1.2**
comp=Z,36nm,1.0s,mb5.5,SNR=24
GMNA Gemona 90.58 327 P **P 01 00 29.9 -0.9**
comp=Z,411nm,1.1s,mb6.5
WTTA Wattenberg 90.60 328 ⇑*i*PcP PcP 01 00 30.2 -1.8
comp=Z,24nm,1.0s
SEST Monte Rota 90.72 328 P **P 01 00 30.9 -0.6**
LHO Holmfirth 90.78 339 *e*P **P 01 00 31.3 -0.3**
RETA Reutte 90.83 329 ⇑*i*PcP PcP 01 00 31.7 -1.3
comp=Z,44nm,1.2s
BCLA Clavier 90.85 333 P **P 01 00 30.2 -1.8**
UCC Uccle 90.91 334 P **P 01 00 33.9 +1.7**
WLF Walferdange 91.11 333 P **P 01 00 33.8 +0.5**
comp=Z,24nm,1.6s,mb5.1
WLF Walferdange 91.11 333 *e*P **P 01 00 33.1 -0.1**
WLF *e* 01 04 09.8
WLF pmax pmax
comp=Z,136nm,1.4s,mb5.9
WLF Walferdange 91.11 333 *e*P **P 01 00 33.1 -0.1**
comp=Z,136nm,1.4s,mb5.9
WLF *e*pP pP 01 00 52.6 -0.8
WLF *e*PP PP 01 04 09.8 -0.1
FETA Feichten 91.20 329 *i*PcP PcP 01 00 33.3 -1.3
comp=Z,31nm,0.9s,SNR=19
CBKS Cedar Bluff 91.21 43 *e*P **P 01 00 33.3 -0.6**
CBKS pmax pmax
comp=Z,127nm,1.1s,mb6.0
CBKS Cedar Bluff 91.21 43 *e*P **P 01 00 33.3 -0.7**
comp=Z,127nm,1.1s,mb6.0
CBKS *e*pP pP 01 00 54.1 +0.1
CBKS *e*sP sP 01 01 01.4 -0.6
BFO Black Forest 91.26 331 P **P 01 00 33.3 -0.6**
comp=Z,153nm,1.1s,mb6.0,SNR=8.4
BFO Black Forest 91.26 331 *e*P **P 01 00 33.2 -0.7**
BFO pmax pmax
comp=Z,36nm,1.1s,mb5.4
BFO Black Forest 91.26 331 *e*P **P 01 00 33.2 -0.7**
comp=Z,36nm,1.1s,mb5.4
BFO Black Forest 91.26 331 *e*P **P 01 00 33.2 -0.7**
BFO *e*pP pP 01 00 54.2 +0.1
BFO *e*PP PP 01 04 11.4 +0.4
GIVF Givet 91.29 334 *e*P **P 01 00 33.1 -0.9**
CWF Charnwood Fore 91.29 338 *e*P **P 01 00 33.4 -0.6**
CWF AMb AMB 01 00 35.1
comp=Z,134nm,1.6s,mb5.8
DAVA Damuels 91.38 329 *i*PcP PcP 01 00 34.3 -1.1
comp=Z,51nm,0.9s,SNR=19
CTI Castel Tesino 91.50 327 P **P 01 00 33.8 -1.3**
CTI pmax pmax
comp=Z,99nm,1.3s,mb5.8
CTI Castel Tesino 91.50 327 P **P 01 00 33.8 -1.3**
comp=Z,99nm,1.3s,mb5.8
BAIF Baives 91.56 334 *e*P **P 01 00 34.4 -0.9**
comp=Z,61nm,1.3s,mb5.4
BAIF Baives 91.56 334 *e*P **P 01 00 34.4 -0.9**
BAIF pmax pmax
comp=Z,30nm,1.3s,mb5.4
BAIF Baives 91.56 334 *e*P **P 01 00 34.4 -0.9**
comp=Z,30nm,1.3s,mb5.4
CDF Champ du Feu 91.64 331 *e*P **P 01 00 35.0 -0.7**
comp=Z,225nm,1.4s,mb5.9
CDF Champ du Feu 91.64 331 *e*P **P 01 00 35.0 -0.7**
CDF pmax pmax
comp=Z,113nm,1.4s,mb5.9
CDF Champ du Feu 91.64 331 *e*P **P 01 00 35.0 -0.7**
comp=Z,112nm,1.4s,mb5.9
ECH Echery 91.84 331 *e*P **P 01 00 35.8 -0.8**
ECH Echery 91.84 331 *e*P **P 01 00 36.1 -0.5**
ECH 01 04 15.6
ECH pmax pmax
comp=Z,32nm,0.9s,mb5.5
ECH Echery 91.84 331 *e*P **P 01 00 36.1 -0.5**
comp=Z,32nm,0.9s,mb5.5
ECH *e*pP pP 01 00 56.7 -0.1
ECH *e*sP sP 01 01 05.5 +0.9
ECH PP PP 01 04 15.6 0.0
SSW Stow on the Wo 92.12 338 *e*P **P 01 00 37.6 -0.2**
MOF Molkenrain 92.13 331 *e*P **P 01 00 37.2 -0.8**
SCHQ Schefferville 92.20 16 P **P 01 00 37.5 -0.7**
comp=Z,8.2nm,0.9s,mb5.0,baz=13,slow=4.3,SNR=9.1
SCHQ PKKP PKKPbc 01 17 50.2 -3.4
comp=Z,8.4nm,0.9s,baz=206,slow=3.0,SNR=6.3
SCHQ LR LR 01 41 46.8
comp=Z,458nm,19.9s,baz=295,slow=35
SCHQ Schefferville 92.20 16 *e*P **P 01 00 38.2 +0.1**
comp=Z,59nm,1.0s,mb5.8
SCHQ *e*pP pP 01 00 58.0 -0.3
SCHQ *e*sP sP 01 01 06.3 +0.1
SCHQ PKKP PKKPbc 01 17 50.2 -3.4
SCHQ LR LR 01 41 46.8
TUE Stuetta 92.23 329 *e*P **P 01 00 38.5 0.0**
comp=Z,121nm,1.3s,mb6.0
TUE *e*pP pP 01 00 58.1 -0.5
TUE *e*PP PP 01 04 19.4 +0.6
HINF Hinteralfeld 92.28 331 *e*P **P 01 00 37.6 -1.1**
comp=Z,83nm,1.2s,mb5.5
HINF Hinteralfeld 92.28 331 *e*P **P 01 00 37.6 -1.1**
HINF pmax pmax
comp=Z,42nm,1.2s,mb5.5
HINF Hinteralfeld 92.28 331 *e*P **P 01 00 37.6 -1.1**
comp=Z,42nm,1.2s,mb5.5
HAU Haudompre 92.34 331 *e*P **P 01 00 37.9 -1.1**
comp=Z,76nm,0.9s,mb5.6
HAU *e*MLR MLR
comp=Z,2μm,20.0s
HAU Haudompre 92.34 331 *e*P **P 01 00 37.9 -1.1**
HAU pmax pmax
comp=Z,38nm,0.9s,mb5.6
HAU MLR MLR
comp=Z,2μm,20.0s
HAU Haudompre 92.34 331 *e*P **P 01 00 37.9 -1.1**
comp=Z,38nm,0.9s,mb5.6
HAU LR LR
comp=Z,2μm,20.0s
MCH1 Michaelchurch 92.47 339 *e*P **P 01 00 38.9 -0.5**
MCH1 AMb AMB 01 00 47.5
comp=Z,107nm,1.4s,mb5.9
MEZF Maizieres J'vi 92.48 332 *e*P **P 01 00 39.1 -0.5**
HTR Trewern Hill 92.48 339 *e*P **P 01 00 38.9 -0.6**
AMTX Amarillo 92.55 47 *e*P **P 01 00 40.1 -0.1**
comp=Z,193nm,1.0s,mb6.4
AMTX *e*pP pP 01 00 59.5 -0.8
AMTX *e*sP sP 01 01 08.4 +0.2
LOMF Lomont 92.65 331 *e*P **P 01 00 36.9 -3.5**
RSM Repubblica di 92.68 326 P **P 01 00 40.7 +0.1**
FSSB Fossombrone 92.69 325 P **P 01 00 40.9 +0.2**
SCIA State Center 92.75 37 *e*P **P 01 00 41.5 +0.5**
comp=Z,91nm,1.1s,mb6.0
KSU1 Kansas State U 92.84 41 *e*P **P 01 00 40.9 -0.6**
comp=Z,203nm,0.9s,mb6.5
KSU1 *e*pP pP 01 01 00.7 -0.9
KSU1 *e*sP sP 01 01 09.1 -0.3
SNTG Esanatoglia 92.93 325 P **P 01 00 41.6 -0.2**
comp=Z,15nm,0.5s,mb5.6
VAI Varese 92.95 329 P **P 01 00 40.7 -1.1**
LPIG La Paz 93.00 60 P **P 01 00 43.1 +0.6**
comp=Z,21nm,0.3s,mb6.0,baz=349,slow=5.2,SNR=3.0
LPIG LR LR 01 37 24.0
comp=Z,1μm,18.5s,baz=2.2,slow=32
VMG Vicchio 93.09 326 P **P 01 00 43.1 +0.6**
SEI Scarperia 93.12 326 P **P 01 00 42.8 +0.2**
NRCA Norcia 93.15 324 P **P 01 00 42.9 +0.1**
comp=Z,56nm,1.4s,mb5.7
ASS Assisi 93.21 325 P **P 01 00 42.3 -0.8**
ASS pmax pmax
comp=Z,21nm,0.7s,mb5.6
ASS Assisi 93.21 325 P **P 01 00 42.3 -0.8**
comp=Z,21nm,0.7s,mb5.6
GSCL Gusciola 93.26 327 P **P 01 00 43.8 +0.5**
comp=Z,33nm,0.9s,mb5.7
ERBM Eremo 93.30 327 P **P 01 00 44.2 +0.8**
comp=Z,529nm,2.9s,mb6.4
AQU L'Aquila 93.35 324 *e*P **P 01 00 44.2 +0.5**
AQU pmax pmax
comp=Z,29nm,0.9s,mb5.6
AQU L'Aquila 93.35 324 *e*P **P 01 00 44.2 +0.5**
comp=Z,29nm,0.9s,mb5.6
ORO Oropa 93.49 329 P **P 01 00 43.6 -0.7**
VLC Villacollemand 93.50 327 *e*P **P 01 00 45.2 +0.8**
JFWS Jewell Farm 93.54 35 *e*P **P 01 00 43.8 -0.8**
JFWS pmax pmax
comp=Z,25nm,0.8s,mb5.6
JFWS Jewell Farm 93.54 35 *e*P **P 01 00 43.8 -0.8**
comp=Z,26nm,0.8s,mb5.6
CABF La Chapelle 93.55 331 *e*P **P 01 00 43.7 -0.8**
comp=Z,72nm,1.1s,mb5.6
CABF La Chapelle 93.55 331 *e*P **P 01 00 43.7 -0.8**
CABF pmax pmax
comp=Z,36nm,1.1s,mb5.6
CABF La Chapelle 93.55 331 *e*P **P 01 00 43.7 -0.8**
comp=Z,36nm,1.1s,mb5.6
PTQR Pietraquaria 93.59 324 P **P 01 00 44.5 -0.3**
TIP Timpagrande 93.81 320 *e*P **P 01 00 46.0 +0.1**
LOR Lormes 93.95 332 *e*P **P 01 00 45.4 -1.0**
comp=Z,188nm,1.3s,mb6.0
LOR *e*MLR MLR
comp=Z,1μm,21.5s
LOR Lormes 93.95 332 *e*P **P 01 00 45.4 -1.0**
LOR pmax pmax
comp=Z,94nm,1.3s,mb6.0
LOR MLR MLR
comp=Z,1μm,21.5s
LOR Lormes 93.95 332 *e*P **P 01 00 45.4 -1.0**
comp=Z,94nm,1.3s,mb6.0
LOR LR LR
comp=Z,1μm,21.5s
RSL Roselend 94.04 330 *e*P **P 01 00 46.2 -0.6**
LPL La Plagne 94.13 330 *e*P **P 01 00 46.7 -0.5**
comp=Z,32nm,0.7s,mb5.5
LPL La Plagne 94.13 330 *e*P **P 01 00 46.7 -0.5**
LPL pmax pmax
comp=Z,16nm,0.7s,mb5.5
LPL La Plagne 94.13 330 *e*P **P 01 00 46.7 -0.5**
comp=Z,16nm,0.7s,mb5.5
LPG La Plagne 94.14 330 *e*P **P 01 00 46.7 -0.6**
comp=Z,44nm,0.8s,mb5.5
LPG La Plagne 94.14 330 *e*P **P 01 00 46.7 -0.6**
LPG pmax pmax
comp=Z,22nm,0.8s,mb5.5
LPG La Plagne 94.14 330 *e*P **P 01 00 46.7 -0.6**
comp=Z,22nm,0.8s,mb5.5
GRI Girifalco 94.24 320 P **P 01 00 48.3 +0.4**
SSF Saint Saulge 94.26 332 *e*P **P 01 00 47.0 -0.8**
comp=Z,74nm,0.9s,mb5.7
SSF Saint Saulge 94.26 332 *e*P **P 01 00 47.0 -0.8**
SSF pmax pmax
comp=Z,37nm,0.9s,mb5.7
SSF Saint Saulge 94.26 332 *e*P **P 01 00 47.0 -0.8**
comp=Z,37nm,0.9s,mb5.7
FLN La Foliniere 94.37 336 *e*P **P 01 00 47.3 -1.0**
FLN *e*MLR MLR
comp=Z,977nm,21.8s
FLN La Foliniere 94.37 336 *e*P **P 01 00 47.3 -1.0**
FLN LR LR
comp=Z,980nm,21.8s
LDF La Druitiere 94.38 335 *e*P **P 01 00 47.3 -1.0**
comp=Z,107nm,1.1s,mb5.8
LDF La Druitiere 94.38 335 *e*P **P 01 00 47.3 -1.0**
LDF pmax pmax
comp=Z,53nm,1.1s,mb5.8
LDF La Druitiere 94.38 335 *e*P **P 01 00 47.3 -1.0**
comp=Z,54nm,1.1s,mb5.8
SMF Signal de Mont 94.46 332 *e*P **P 01 00 47.7 -1.0**
comp=Z,82nm,0.9s,mb5.8
SMF Signal de Mont 94.46 332 *e*P **P 01 00 47.7 -1.0**
SMF pmax pmax
comp=Z,41nm,0.9s,mb5.8
SMF Signal de Mont 94.46 332 *e*P **P 01 00 47.7 -1.0**
comp=Z,41nm,0.9s,mb5.8
WMOK Wichita Mounta 94.46 46 *e*P **P 01 00 48.5 -0.5**
WMOK pmax pmax
comp=Z,93nm,1.0s,mb6.1
WMOK MLR MLR
comp=Z,1μm,21.0s
WMOK Wichita Mounta 94.46 46 *e*P **P 01 00 48.5 -0.5**
comp=Z,93nm,1.0s,mb6.1
WMOK LR LR
comp=Z,1μm,21.0s
BNI Bardonecchia 94.52 329 *e*P **P 01 00 48.7 -0.3**
BNI pmax pmax
comp=Z,37nm,0.9s,mb5.8
BNI Bardonecchia 94.52 329 *e*P **P 01 00 48.7 -0.4**
comp=Z,37nm,0.9s,mb5.8
BNI *e*pP pP 01 01 09.9 +0.7
AVF Avril sur Loir 94.54 332 *e*P **P 01 00 48.2 -0.9**
comp=Z,143nm,0.9s,mb6.1
AVF Avril sur Loir 94.54 332 *e*P **P 01 00 48.2 -0.9**
AVF pmax pmax
comp=Z,71nm,0.9s,mb6.1
AVF Avril sur Loir 94.54 332 *e*P **P 01 00 48.2 -0.9**
comp=Z,71nm,0.9s,mb6.1
TXAR Lajitas Array 94.70 52 P **P 01 00 50.0 -0.2**
comp=Z,15nm,0.8s,mb5.5,baz=303,slow=2.3,SNR=151
TXAR pP pP 01 01 09.5 -0.9
comp=Z,90nm,0.9s,baz=294,slow=2.0,SNR=19
TXAR PKKP PKKPbc 01 17 45.0 -1.6
comp=Z,0.9nm,0.8s,baz=133,slow=5.8,SNR=6.0
TXAR PKPPKP 01 25 50.2
comp=Z,0.4nm,0.8s,baz=62,slow=2.5,SNR=3.8
MBDF Montbardon 94.73 329 *e*P **P 01 00 48.5 -1.5**
comp=Z,27nm,0.8s,mb5.5
MBDF Montbardon 94.73 329 *e*P **P 01 00 48.5 -1.5**
MBDF pmax pmax
comp=Z,14nm,0.8s,mb5.4
MBDF Montbardon 94.73 329 *e*P **P 01 00 48.5 -1.5**
comp=Z,14nm,0.8s,mb5.4
GRR Gorron 94.82 336 *e*P **P 01 00 49.6 -0.7**
BGF Bois d'Agland 94.93 332 *e*P **P 01 00 50.0 -0.9**
comp=Z,217nm,1.5s,mb6.0
BGF Bois d'Agland 94.93 332 *e*P **P 01 00 50.0 -0.9**
BGF pmax pmax
comp=Z,109nm,1.5s,mb6.1
BGF Bois d'Agland 94.93 332 *e*P **P 01 00 50.0 -0.9**
comp=Z,109nm,1.5s,mb6.1
CEL Celeste 94.93 320 *e*P **P 01 00 50.7 -0.3**
comp=Z,90nm,0.9s,mb6.2
ORIF Oris-en-Rattie 94.97 330 *e*P **P 01 00 50.1 -1.0**
comp=Z,12nm,0.6s,mb5.2
ORIF *e*MLR MLR
comp=Z,1μm,18.0s
ORIF Oris-en-Rattie 94.97 330 *e*P **P 01 00 50.1 -1.0**
ORIF pmax pmax
comp=Z,6.0nm,0.6s,mb5.2
ORIF Oris-en-Rattie 94.97 330 *e*P **P 01 00 50.1 -1.0**
comp=Z,6.3nm,0.6s,mb5.2
SBF Sospel 95.10 328 *e*P **P 01 00 49.9 -1.8**
comp=Z,67nm,0.7s,mb5.8
SBF Sospel 95.10 328 *e*P **P 01 00 49.9 -1.8**
SBF pmax pmax
comp=Z,33nm,0.7s,mb5.9
SBF Sospel 95.10 328 *e*P **P 01 00 49.9 -1.8**
comp=Z,33nm,0.7s,mb5.9
SSB Saint Sauveur 95.26 331 *e*P **P 01 00 52.0 -0.4**
SSB pmax pmax
comp=Z,12nm,0.8s,mb5.4
SSB Saint Sauveur 95.26 331 *e*P **P 01 00 52.0 -0.4**
comp=Z,12nm,0.8s,mb5.4
SSB *e*pP pP 01 01 12.5 0.0
TCF Toulx Ste Croi 95.41 333 *e*P **P 01 00 51.1 -2.0**
comp=Z,36nm,0.7s,mb5.6
TCF Toulx Ste Croi 95.41 333 *e*P **P 01 00 51.1 -2.0**
TCF pmax pmax
comp=Z,18nm,0.7s,mb5.6
TCF Toulx Ste Croi 95.41 333 *e*P **P 01 00 51.1 -2.0**
comp=Z,18nm,0.7s,mb5.6
VIVF Saint-Julien-l 95.55 330 *e*P **P 01 00 52.8 -0.9**
comp=Z,103nm,1.3s,mb5.8
VIVF Saint-Julien-l 95.55 330 *e*P **P 01 00 52.8 -0.9**
VIVF pmax pmax
comp=Z,51nm,1.3s,mb5.8
VIVF Saint-Julien-l 95.55 330 *e*P **P 01 00 52.8 -0.9**
comp=Z,52nm,1.3s,mb5.8
FRF La Foret Royal 95.70 328 *e*P **P 01 00 52.7 -1.8**
comp=Z,40nm,1.1s,mb5.5
FRF La Foret Royal 95.70 328 *e*P **P 01 00 52.7 -1.8**
FRF pmax pmax
comp=Z,20nm,1.1s,mb5.5
FRF La Foret Royal 95.70 328 *e*P **P 01 00 52.7 -1.8**
comp=Z,20nm,1.1s,mb5.5
SMRF Simiane la Rot 95.85 329 *e*P **P 01 00 52.8 -2.3**
LMR La Mourre 95.94 328 *e*P **P 01 00 52.7 -2.8**
comp=Z,82nm,1.2s,mb5.7
LMR La Mourre 95.94 328 *e*P **P 01 00 52.7 -2.8**
LMR pmax pmax
comp=Z,41nm,1.3s,mb5.7
LMR La Mourre 95.94 328 *e*P **P 01 00 52.7 -2.8**
comp=Z,41nm,1.3s,mb5.7
MFF Saint Martin d 96.06 334 *e*P **P 01 00 54.1 -1.9**
comp=Z,265nm,1.5s,mb6.2
MFF Saint Martin d 96.06 334 *e*P **P 01 00 54.1 -1.9**
MFF pmax pmax
comp=Z,132nm,1.5s,mb6.1
MFF Saint Martin d 96.06 334 *e*P **P 01 00 54.1 -1.9**
comp=Z,132nm,1.5s,mb6.2
DRV Dumont d'Urvil 96.35 180 P **P 01 00 56.0 -0.6**
DRV Dumont d'Urvil 96.35 180 PP PP 01 04 48.0 -3.5
DRV S S 01 12 04.0 -5.9
DRV SS SS 01 18 42.0 -3.1
DRV L 01 28 00.0
DRV R 01 35 00.0
RKT Rikitea 96.39 113 *e*S S 01 12 26.7 +14
comp=Z,717nm,26.8s
RKT *e*SS SS 01 18 50.6 +3.2
comp=Z,781nm,27.8s
RJF Les Rejaudoux 96.49 333 *e*P **P 01 00 57.5 -0.5**
comp=Z,205nm,1.5s,mb6.0
RJF *e*MLR MLR
comp=Z,1μm,22.0s
RJF Les Rejaudoux 96.49 333 *e*P **P 01 00 57.5 -0.5**
RJF pmax pmax
comp=Z,102nm,1.5s,mb6.0
RJF MLR MLR
comp=Z,1μm,22.0s
RJF Les Rejaudoux 96.49 333 *e*P **P 01 00 57.5 -0.5**
comp=Z,102nm,1.5s,mb6.0
RJF LR LR
comp=Z,1μm,22.0s
CCM Cathedral Cave 96.56 39 *e*P **P 01 00 56.6 -1.9**
CCM pmax pmax
comp=Z,45nm,1.2s,mb5.8
CCM Cathedral Cave 96.56 39 *e*P **P 01 00 56.6 -1.9**
comp=Z,45nm,1.2s,mb5.8
CCM *e*pP pP 01 01 18.7 0.0
CAF Calviac 96.58 332 *e*P **P 01 00 58.3 -0.1**
JCT Junction City 96.58 49 *e*P **P 01 00 57.5 -1.2**
JCT pmax pmax
comp=Z,89nm,1.1s,mb6.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JCT	**Junction City**	**96.58**	**49**	*e*P	**P**	**01 00 57.5**	**-1.3**
	comp=Z,89nm,1.1s,mb6.1						
JCT				*e*pP	pP	01 01 17.7	-1.2
JCT				*e*sP	sP	01 01 27.1	+0.3
FVM	**French Village**	**97.06**	**38**	*e*P	**P**	**01 01 00.4**	**-0.3**
FVM				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.4						
FVM	**French Village**	**97.06**	**38**	*e*P	**P**	**01 01 00.4**	**-0.3**
	comp=Z,16nm,1.0s,mb5.4						
MIAR	**Mount Ida**	**97.74**	**43**	*e*P	**P**	**01 01 02.9**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,51nm,1.0s,mb6.0						
MIAR	**Mount Ida**	**97.74**	**43**	*e*P	**P**	**01 01 02.9**	**-1.0**
	comp=Z,51nm,1.0s,mb6.0						
MIAR				*e*pP	pP	01 01 23.4	-0.6
MIAR				*e*sP	sP	01 01 32.3	+0.3
SIUC	**Southern Illin**	**97.91**	**38**	P	**P**	**01 01 03.6**	**-1.0**
ACSO	**Alum Creek Sta**	**99.10**	**33**	*e*P	**P**	**01 01 08.3**	**-1.6**
KEST	**Kesra**	**100.36**	**322**	P	Pdif	01 01 15.4	+0.1
	comp=Z,1.6nm,0.9s,baz=22,slow=12,SNR=2.2						
KEST				PP	PP	01 05 23.3	+1.5
	comp=Z,8.2nm,1.0s,baz=216,slow=6.0,SNR=6.9						
ABPO	**Ambohimpanom**	**102.40**	**255**	*e*Pdif	Pdif	01 01 25.1	+0.7
	comp=Z,4.7nm,0.8s						
MVO	**Moncorvo**	**103.27**	**336**	*e*LQ		01 33 26.5	
MVO				A		01 53 38.7	
	comp=Z,544nm,20.0s						
ESDC	**Sonseca Array**	**103.41**	**333**	Pdiff	Pdif	01 01 30.3	+1.4
	comp=Z,0.1nm,0.4s,baz=19,slow=4.7,SNR=2.9						
ESDC				PP	PP	01 05 42.2	-2.2
	comp=Z,5.5nm,0.8s,baz=32,slow=7.1,SNR=7.0						
ESDC				PKKPbc	PKKPbc	01 17 21.1	-1.5
	comp=Z,1.0nm,0.8s,baz=217,slow=2.5,SNR=5.3						
CART	**Cartagena**	**103.94**	**330**	*e*Pdif	Pdif	01 01 30.8	-0.5
MTE	**Manteigas**	**104.13**	**336**	*e*LQ		01 33 50.6	
MTE				A		01 48 20.9	
	comp=Z,644nm,22.0s						
PCBR	**Castelo Branco**	**104.59**	**335**	*e*PP	PP	01 05 52.4	-0.8
PMRV	**Marv??o**	**104.93**	**335**	*e*LQ		01 33 40.1	
PMRV				A		01 51 27.3	
	comp=Z,702nm,18.0s						
PESTR	**Estremoz**	**105.50**	**335**	*e*LQ		01 34 14.1	
PESTR				A		01 51 34.0	
	comp=Z,549nm,20.0s						
PBAR	**Barrancos**	**105.90**	**334**	*e*PP	PP	01 06 05.2	+2.4
PBAR				*e*LR	LR	01 40 58.1	
	comp=Z,761nm,22.0s						
PVAQ	**Vaqueiros**	**106.83**	**334**	*e*LQ		01 34 31.2	
PVAQ				*e*LR	LR	01 41 38.2	
	comp=Z,849nm,20.0s						
PFVI	**Vila Bisbo**	**107.48**	**335**	*e*LQ		01 36 20.0	
PFVI				A		01 52 33.2	
	comp=Z,788nm,18.0s						
VNDA	**Vanda**	**108.00**	**175**	Pdiff	Pdif	01 01 56.0	+6.7
	comp=Z,2.0nm,0.8s,baz=337,slow=7.7,SNR=3.6						
VNDA				PKiKP	PKiKP	01 05 54.0	-0.9
	comp=Z,4.4nm,0.9s,baz=312,slow=3.2,SNR=7.3						
VNDA				PP	PP	01 06 16.8	-1.9
	comp=Z,3.8nm,1.0s,baz=341,slow=8.8,SNR=4.1						
VNDA				PKKP	PKKPab	01 17 31.1	+12
	comp=Z,3.0nm,1.2s,baz=116,slow=0.9,SNR=3.3						
VNDA	**Vanda**	**108.00**	**175**	Pdif	Pdif	01 01 56.0	+6.7
VNDA				PKPdf	PKiKP	01 05 54.0	-0.9
VNDA				PP	PP	01 06 16.8	-1.9
VNDA				PKKP	PKKPab	01 17 31.1	+12
CMIG	**Matias Romero**	**108.69**	**57**	PKiKP	PKiKP	01 05 57.4	-0.5
	comp=Z,2.3nm,0.7s,baz=0.0,slow=3.0,SNR=4.7						
CMIG				PKKPbc	PKKPbc	01 17 07.5	+1.5
	comp=Z,1.1nm,0.5s,baz=139,slow=6.8,SNR=3.5						
CMIG				PKKP	PKKPab	01 17 19.4	-2.2
	comp=Z,2.5nm,0.8s,baz=76,slow=1.2,SNR=6.4						
CMIG	**Matias Romero**	**108.69**	**57**	PKPdf	PKiKP	01 05 57.4	-0.5
CMIG				PKKPbc	PKKPbc	01 17 07.5	+1.5
CMIG				PKKP	PKKPab	01 17 19.4	-2.2
SBA	**Scott Base**	**108.69**	**174**	PFAKE		01 06 10.0	+14
SBA				LR	LR		
	comp=Z,456nm,21.0s						
MAW	**Mawson**	**113.00**	**204**	PKiKP	PKiKP	01 06 04.1	-0.4
	comp=Z,3.0nm,0.5s,baz=64,slow=1.2,SNR=3.6						
MAW	**Mawson**	**113.00**	**204**	*i* PKIKP	PKiKP	01 06 04.1	-0.4
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LSZ	**Lusaka**	**117.04**	**267**	PKKP	PKKPdf	01 17 11.7	+6.5
	comp=Z,2.9nm,0.9s,baz=192,slow=5.1,SNR=3.6						
LSZ	**Lusaka**	**117.04**	**267**	*e*PKIKP	PKPdf	01 06 13.8	0.0
QSPA	**South Pole Qui**	**119.75**	**180**	PKP	PKPdf	01 06 16.4	-0.8
	comp=Z,33nm,0.7s,baz=342,slow=1.0,SNR=54						
QSPA				PP	PP	01 07 38.8	-2.9
	comp=Z,15nm,1.0s,baz=339,slow=3.2,SNR=4.1						
QSPA				PKKP	PKKPdf	01 16 52.4	-9.2
	comp=Z,5.2nm,0.9s,baz=63,slow=0.2,SNR=4.7						
QSPA	**South Pole Qui**	**119.75**	**180**	PKP	PKPdf	01 06 16.4	-0.8
QSPA				PP	PP	01 07 38.8	-2.9
QSPA				PKKP	PKKPdf	01 16 52.4	-9.2
TOA0	**Torodi Ar. Sit**	**121.88**	**312**	*e*PKPdf	PKPdf	01 06 22.5	-0.7
TOA0				*e*pPKPdf	pPKPdf	01 06 47.0	+2.8
TORD	**Torodi Ar. Bea**	**121.88**	**312**	PKP	PKPdf	01 06 22.1	-1.2
	comp=Z,11nm,0.7s,baz=25,slow=0.9,SNR=77						
TORD				pPKP	pPKPdf	01 06 45.4	+1.2
	comp=Z,17nm,0.9s,baz=12,slow=2.3,SNR=8.6						
TORD				PP	PP	01 07 55.6	-1.3
	comp=Z,8.8nm,0.9s,baz=34,slow=5.0,SNR=4.1						
TORD				PKKPbc	PKKPbc	01 16 16.1	-4.4
	comp=Z,2.3nm,1.0s,baz=234,slow=2.8,SNR=5.1						
TORD				PKKP	PKKPdf	01 16 54.1	-1.2
	comp=Z,2.7nm,0.6s,baz=218,slow=3.6,SNR=4.4						
LBTB	**Lobatse**	**123.13**	**258**	*e*PKPdf	PKPdf	01 06 25.5	+0.2
LBTB				*e*pPKPdf	pPKPdf	01 06 47.2	+1.0
BOSA	**Boshof**	**124.61**	**254**	PKP	PKPdf	01 06 28.3	+0.3
	comp=Z,30nm,0.8s,baz=52,slow=0.4,SNR=44						
BOSA	**Boshof**	**124.61**	**254**	PKIKP	PKPdf	01 06 28.3	+0.3
BOSA				pmax	pmax		
	comp=Z,30nm,0.8s						
TSUM	**Tsumeb**	**127.87**	**268**	PKKP	PKKPdf	01 16 38.1	-6.5
	comp=Z,1.5nm,0.3s,baz=18,slow=3.2,SNR=3.1						
TSUM	**Tsumeb**	**127.87**	**268**	*e*PKPdf	PKPdf	01 06 35.0	+0.5
TSUM				*e*pPKPdf	pPKPdf	01 06 55.4	0.0
SUR	**Sutherland**	**129.34**	**251**	*e*PKPdf	PKPdf	01 06 38.7	+1.7
NVL	**N'lazarevskaya**	**130.59**	**200**	PKIKP	PKPdf	01 06 36.7	-1.5
NVL				pmax	pmax		
	comp=Z,30nm,1.2s						
BBTS	**Babate**	**130.60**	**331**	SKPbc	SKPbc	01 09 55.5	-1.7
	comp=Z,44nm,0.9s,baz=99,slow=4.9,SNR=4.2						
BBTS				SKP		01 10 04.8	
	comp=Z,81nm,0.8s,baz=148,slow=0.4,SNR=8.0						
MAIT	**Maitri**	**130.62**	**200**	*e*PKPdif	PKPdf	01 06 36.8	-1.4
SDV	**Santo Domingo**	**130.83**	**43**	PKP	PKPdf	01 06 40.0	-0.4
	comp=Z,37nm,0.9s,baz=347,slow=0.7,SNR=46						
SDV				pPKP	pPKPdf	01 07 01.6	+0.3
	comp=Z,16nm,1.0s,baz=16,slow=6.5,SNR=4.4						
SDV				SKPab		01 09 56.7	
	comp=Z,9.8nm,1.1s,baz=303,slow=2.7,SNR=4.7						
DBIC	**Dimbokro**	**130.97**	**312**	PKP	PKPdf	01 06 40.9	+0.2
	comp=Z,14nm,0.7s,baz=38,slow=2.2,SNR=26						
DBIC				pPKP	pPKPdf	01 07 01.1	-0.4
	comp=Z,3.7nm,0.5s,baz=59,slow=4.2,SNR=2.1						
DBIC				PP	PP	01 08 57.2	+0.1
	comp=Z,15nm,0.8s,baz=21,slow=9.8,SNR=4.5						
DBIC				SKPbc	SKPbc	01 09 56.4	-2.2
	comp=Z,72nm,1.1s,baz=24,slow=6.3,SNR=10						
DBIC	**Dimbokro**	**130.97**	**312**	PKP	PKPdf	01 06 40.9	+0.2
DBIC				pPKP	pPKPdf	01 07 01.1	-0.4
DBIC				PP	PP	01 08 57.2	+0.1
DBIC				SKPbc	SKPbc	01 09 56.4	-2.2
TIC	**Toumodi**	**131.10**	**313**	*e*PKIKP	PKPdf	01 06 40.6	-0.3
	comp=Z,36nm,0.3s						
KIC	**Kosan Boka**	**131.13**	**312**	*e*PKIKP	PKPdf	01 06 40.8	-0.2
	comp=Z,141nm,1.0s						
LIC	**Lamto**	**131.42**	**312**	*e*PKIKP	PKPdf	01 06 40.4	-1.1
	comp=Z,58nm,0.8s						
LIC				*e*MLR	MLR		
	comp=Z,2µm,22.0s						
LIC	**Lamto**	**131.42**	**312**	*e*PKIKP	PKPdf	01 06 41.2	-0.3
	comp=Z,88nm,0.8s						
LIC	**Lamto**	**131.42**	**312**	*e*PKPdf	PKPdf	01 06 40.4	-1.1
LIC				LR	LR		
	comp=Z,860nm,22.0s						
ROSC	**El Rosal**	**131.58**	**50**	PKP	PKPdf	01 06 42.3	+0.5
	comp=Z,3.7nm,0.4s,baz=284,slow=19,SNR=6.4						
OTAV	**Otavalo**	**131.92**	**59**	*e*PKPdf	PKPdf	01 06 43.5	+1.1
SNAA	**Sanae**	**133.89**	**195**	*e*PKPdf		01 06 28.0	
SNAA				*e*	PKPdf	01 06 44.8	+0.4
SNAA				*e*		01 06 46.7	
SNAA				*e*		01 07 10.1	
SNAA				*e*		01 09 20.6	
SNAA				*e*		01 10 05.8	
SNAA				*e*		01 10 10.5	
SNAA				*e*		01 10 12.9	
SNAA				*e*		01 10 38.5	
SNAA				*e*		01 10 42.7	
SNAA	**Sanae**	**133.89**	**195**	*e*PKPpre		01 06 28.0	
SNAA				*e*PKPdf	PKPdf	01 06 44.3	-0.1
SNAA				*e*PP	PP	01 09 15.5	+0.3
VNA2	**Neumayer--Watz**	**135.44**	**194**	*e*PKPdf		01 06 32.3	
	baz=177,slow=1.6						
VNA2				*e*	PKPdf	01 06 48.0	+0.7
VNA2				*e*		01 06 49.7	
VNA2				*e*		01 07 07.0	
VNA2				*e*		01 07 10.9	
VNA2				*e*		01 09 28.4	
VNA2				*e*		01 10 11.5	
VNA2				*e*		01 10 16.3	
VNA2				*e*		01 10 18.1	
VNA2				*e*		01 10 30.1	
VNA2				*e*		01 10 35.1	
VNA2				*e*		01 10 43.2	
VNA2				*e*		01 10 48.3	
VNA3	**Neumayer Olymp**	**135.66**	**193**	*e*PKPdf		01 06 31.8	
VNA3				*e*	PKPdf	01 06 48.4	+0.7
VNA3				*e*		01 06 50.0	
VNA3				*e*		01 07 12.0	
VNA3				*e*		01 09 26.8	
VNA3				*e*		01 10 11.8	
VNA3				*e*		01 10 16.2	
VNA3				*e*		01 10 18.0	
VNA3				*e*		01 10 43.0	
VNA3				*e*		01 10 48.6	
VNA1	**Neumayer--Stat**	**135.84**	**194**	*e*PKPdf		01 06 33.9	
VNA1				*e*	PKPdf	01 06 48.7	+0.7
VNA1				*e*		01 06 50.5	
VNA1				*e*		01 07 08.7	
VNA1				*e*		01 07 13.2	
VNA1				*e*		01 09 25.6	
VNA1				*e*		01 10 12.3	
VNA1				*e*		01 10 17.4	
VNA1				*e*		01 10 19.2	
VNA1				*e*		01 10 37.1	
VNA1				*e*		01 10 44.6	
VNA1				*e*		01 10 49.7	
ATAH	**Atahualpa**	**136.55**	**66**	PKP	PKPdf	01 06 52.5	+1.4
	comp=Z,10nm,0.9s,baz=61,slow=13,SNR=3.7						
NNA	**Nana**	**140.64**	**71**	PKhKP		01 06 49.0	
	comp=Z,15nm,0.6s,baz=275,slow=3.1,SNR=6.4						
NNA				PKP	PKPdf	01 06 58.8	+0.3
	comp=Z,11nm,0.6s,baz=346,slow=4.2,SNR=3.9						
NNA				pPKP	pPKPdf	01 07 17.7	-1.8
	comp=Z,14nm,0.5s,baz=273,slow=6.7,SNR=2.9						
NNA	**Nana**	**140.64**	**71**	PKP		01 06 49.0	
NNA				PKP	PKPdf	01 06 58.9	+0.3
NNA				pPKP	pPKPdf	01 07 17.7	-1.8
NNA				LR	LR		
	comp=Z,852nm,19.0s						
SHEL	**Horse Pasture**	**146.47**	**287**	*e*PKPdf	PKPdf	01 07 08.8	+0.2
ARE	**Arequipa**	**147.39**	**73**	*e*PKIKP	PKPdf	01 07 10.0	-0.2
USHA	**Ushuaia**	**147.44**	**148**	PKPbc	PKPbc	01 07 09.9	-1.8
	comp=Z,118nm,0.9s,baz=205,slow=3.7,SNR=28						
COYC	**Coyhaique**	**149.85**	**130**	*e*P	PKPdf	01 07 17.2	+3.9
LVC	**Limon Verde**	**152.27**	**82**	PKPbc	PKPbc	01 07 24.4	-0.1
	comp=Z,36nm,0.8s,baz=282,slow=3.8,SNR=22						
LVC				PKPab	PKPab	01 07 33.4	-1.4
	comp=Z,29nm,0.8s,baz=263,slow=7.0,SNR=8.4						
LVC				pPKPbc	pPKPbc	01 07 45.5	+0.1
	comp=Z,36nm,1.0s,baz=215,slow=4.2,SNR=3.6						
LVC				pPKPab	pPKPab	01 07 54.6	-0.5
	comp=Z,52nm,0.9s,baz=293,slow=7.0,SNR=5.4						
LVC	**Limon Verde**	**152.27**	**82**	*e*PKPdf	PKPdf	01 07 18.1	+0.4
LVC				PKPbc	PKPbc	01 07 24.4	-0.2
LVC				*e*PKPbc	PKPbc	01 07 24.9	+0.3
LVC				PKPab	PKPab	01 07 33.4	-1.4
LVC				pPKPbc	pPKPbc	01 07 45.5	+0.1
LVC				pPKPab	pPKPab	01 07 54.6	-0.5
LVC				LR	LR		
	comp=Z,722nm,22.0s						
PLCA	**Paso Flores**	**152.28**	**121**	PKP	PKPdf	01 07 18.2	+1.0
	comp=Z,7.8nm,0.9s,baz=227,slow=3.6,SNR=13						
PLCA				PKPbc	PKPbc	01 07 23.6	-0.5
	comp=Z,64nm,0.9s,baz=227,slow=4.9,SNR=58						
PLCA				PKPab	PKPab	01 07 33.6	-0.6
	comp=Z,32nm,0.8s,baz=237,slow=5.4,SNR=9.3						
PLCA	**Paso Flores**	**152.28**	**121**	PKIKP	PKPdf	01 07 18.2	+1.0
PLCA						01 07 23.6	
PLCA						01 07 33.6	
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LCO	**Las Campanas**	**152.45**	**96**	*e*PKPdf	PKPdf	01 07 19.5	+1.6
LCO				*e*PKPbc	PKPbc	01 07 24.3	-0.5
LCO	**Las Campanas**	**152.45**	**96**	⇑*i*P	PKPbc	01 07 24.1	-0.7
LCO				⇑*i*P		01 07 24.1	
FCH	**Farellones**	**153.23**	**105**	⇓*i*P	PKPdf	01 07 18.6	-0.3
EFI	**East Falkland**	**154.13**	**152**	*e*PKIKP	PKPdf	01 07 18.9	-0.6
EFI				*e*		01 07 27.5	
CFAA	**Coronel Fontan**	**154.88**	**101**	PKP	PKPdf	01 07 20.1	-1.1
	comp=Z,0.7nm,0.9s,baz=283,slow=0.9,SNR=7.9						
CFAA				PKPbc	PKPbc	01 07 29.1	-0.9
	comp=Z,0.7nm,0.7s,baz=304,slow=2.8,SNR=9.3						
CFAA				PKPab	PKPab	01 07 45.1	-0.5
	comp=Z,3.1nm,0.9s,baz=272,slow=4.1,SNR=14						
CFAA				pPKPab	pPKPab	01 08 06.5	+0.7
	comp=Z,6.0nm,0.9s,baz=303,slow=2.1,SNR=7.5						
SIV	**San Ignacio**	**155.44**	**60**	PKP	PKPdf	01 07 22.6	+0.2
	comp=Z,2.2nm,0.9s,baz=149,slow=2.7,SNR=6.8						
SIV				PKPbc	PKPdf	01 07 30.4	+7.9
	comp=Z,9.9nm,0.9s,baz=289,slow=1.5,SNR=26						
SIV				PKPab	PKPab	01 07 47.1	-1.2
	comp=Z,14nm,0.8s,baz=289,slow=5.2,SNR=13						
SIV				pPKPab	pPKPab	01 08 09.2	+0.7
	comp=Z,78nm,1.0s,baz=290,slow=3.2,SNR=7.9						
RCBR	**Riachuelo**	**155.79**	**352**	*e*PKPdf	PKPdf	01 07 21.2	-1.8
BDFB	**Brasilia**	**163.50**	**32**	PKP	PKPdf	01 07 32.8	+1.1
	comp=Z,3.7nm,1.0s,baz=3.8,slow=7.8,SNR=6.4						
BDFB	**Brasilia**	**163.50**	**32**	PKIKP	PKPdf	01 07 32.8	+1.1
BDFB				pmax	pmax		
	comp=Z,4.0nm,1.0s						

NEIC 07 00:54:03.1, 4446S×16704E, h5km, ML3.7(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.67**	**109**	P	Pg	00 54 16.3	+0.3
MSZ				S	Sg	00 54 24.4	-0.2
DCZ	**Deep Cove**	**1.02**	**175**	P	Pg	00 54 21.7	-1.0
MLZ	**Mavora Lakes**	**1.20**	**138**	P	Pg	00 54 25.5	-0.6
JCZ	**Jackson Bay**	**1.29**	**73**	P	Pn	00 54 27.1	-0.7
WKZ	**Wanaka**	**1.46**	**105**	P	Pn	00 54 30.8	+0.7
WHZ	**Wether Hill Ro**	**1.57**	**156**	P	Pn	00 54 31.2	-0.4
EAZ	**Earnscleugh**	**1.79**	**116**	P	Pn	00 54 35.7	+1.1
FOZ	**Fox Glacier**	**2.11**	**66**	P	Pn	00 54 39.0	0.0
LBZ	**Lake Benmore**	**2.25**	**89**	P	Pn	00 54 41.6	+0.6
TUZ	**Tuapeka**	**2.37**	**130**	P	Pn	00 54 44.3	+1.8
ODZ	**Otahua Downs**	**2.63**	**104**	P	Pn	00 54 46.4	+0.2
ODZ				S	Sn	00 55 15.6	-2.9
RPZ	**Rata Peaks**	**2.99**	**77**	P	Pn	00 54 50.6	-0.5
WVZ	**Waitaha Valley**	**3.01**	**64**	P	Pn	00 54 49.8	-1.6
LTZ	**Lake Taylor**	**4.15**	**68**	P	Pn	00 55 05.8	-1.3

MAN 07 01:04:28, 1244N×12519E, h14km, mb4.1, ML2.9, MS2.6, 1C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.52**	**278**	*e*P	Pg	01 04 39.5	+1.3
CNP				*e*S	Sg	01 04 51.3	+6.0
PLP	**Palo**	**1.28**	**189**	⇓*i*P	Pn	01 04 47.0	-4.5
PLP				*e*S	Sb	01 05 03.8	-4.4
PVCP	**Virac**	**1.53**	**319**	⇑*e*P	Pn	01 04 55.4	+0.5
PVCP				*e*S	Sn	01 05 24.3	+10
RCP	**Roxas**	**2.55**	**250**	⇓*e*P	Pn	01 05 10.2	+1.3

*ISCJB **07** 01:40:59.9±0.1, 1354S±003×7670W±004, h24km, mb5.2/148, MS5.1/165, Error ellipse: s-maj=5.8km s-min=3.2km az=141.8*

*IDC **07** 01:41:01.1±0.4, 1348S×7670W, h22km±2km, mb4.6/19, mb1 4.8/22, mb1mx4.8/26, mbtmp4.7/22, ML4.1/2, MS5.0/21, Ms1 5.0/21, ms1mx4.9/27, Error ellipse: s-maj=16.0km s-min=8.4km az=72.0*

*GCMT **07** 01:41:01.6±0.2, 1357S×7690W, h26km±1km, MW5.6/90, Moment Tensor Solution. s55,c72; s90,c166; Duration: 1s6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.04±.06; $M_{\theta\theta}$1.47±.04; $M_{\phi\phi}$-2.51±.06; $M_{r\theta}$-2.12±.16; $M_{\theta\phi}$-0.30±.04; $M_{\phi r}$-1.35±.14; Best double couple: $M_0$3.33600×10^{17} NP1:ϕ_s328.00000°,δ40.00000°,λ19.00000°. NP2: ϕ_s223.00000°,δ78.00000°,λ128.00000°. Principal axes: T 3.4680, Plg44.0000°, Azm170.0000°; N -0.2650, Plg37.0000°, Azm34.0000°; P -3.2030, Plg24.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **07** 01:41:01.9±1.1, 1339S×7669W, h33km, mb5.4/55, MS5.0/37 Error ellipse: s-maj=11.5km s-min=5.6km az=109.0*

*NEIC **07** 01:41:01.6±0.3, 1352S×7666W, h22km±1km, mb5.3/130, MS5.1/149, ML5.8(LIM), Error ellipse: s-maj=6.4km s-min=3.8km az=57.0*

NEIC Felt [IV] at Pisco and [III] at Lima. Also felt at Chincha Alta, Pachacamac and San Vicente de Canete.

*BJI **07** 01:41:01.6, 1350S×7670W, h22km, mB5.6, Ms5.5, Msz5.3*

ISC 07 01:41:02.4±0.1**, 1352S**±003**×7661W**±003**, h25km, h25km**±.8km**:pP-P, n794, σ0s73**/649**, mb5.2**/148**, MS5.1**/165**, 188C-144D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.54**	**351**	Pn	**Pn**	**01 41 27.4**	**-0.8**
	248µm,0.4s						
NNA	**Nana**	**1.54**	**351**	Pg	**Pn**	**01 41 27.6**	**-0.6**
	8µm,0.3s,baz=178,slow=12,SNR=1828						
NNA				Lg		01 41 47.4	
	17µm,0.3s,baz=220,slow=11,SNR=32						
NNA	**Nana**	**1.54**	**351**	*e*Pn	**Pn**	**01 41 26.3**	**-1.9**
NNA				*e*Sn	**Sn**	**01 41 47.3**	**-0.1**
ARE	**Arequipa**	**5.75**	**121**	*e*P	**Pn**	**01 42 28.0**	**+1.9**
ARE				*e*		01 42 36.0	
ARE				*e*S	**Sn**	**01 43 45.0**	**+14**
ATAH	**Atahualpa**	**6.71**	**345**	Pn	**Pn**	**01 42 38.7**	**-0.7**
	36nm,0.3s,baz=151,slow=4.8,SNR=56						
ATAH				Sn	**Sn**	**01 43 59.3**	**+4.3**
	36nm,0.3s,baz=270,slow=20,SNR=2.1						
ATAH				LR	LR	01 45 40.0	
	comp=Z,7µm,18.0s,baz=37,slow=43						
PB01	**Plate Boundary**	**10.11**	**139**	*e*P	**Pn**	**01 43 25.0**	**-1.0**
CEN1	**Los Morros**	**11.55**	**149**	*e*P	**Pn**	**01 43 44.5**	**-1.2**
LVC	**Limon Verde**	**11.63**	**142**	Pn	**Pn**	**01 43 46.7**	**-0.1**
	11nm,0.3s,baz=310,slow=9.8,SNR=72						
LVC				Sn	**Sn**	**01 45 54.0**	**-2.0**
	3.6nm,0.3s,baz=294,slow=20,SNR=5.3						
LVC				LR	LR	01 48 29.3	
	comp=Z,6µm,18.1s,baz=322,slow=38						
LVC	**Limon Verde**	**11.63**	**142**	*e*Pn	**Pn**	**01 43 46.1**	**-0.8**
	79nm,0.6s						
LVC				*e*Sn	**Sn**	**01 45 55.1**	**-0.9**
LVC	**Limon Verde**	**11.63**	**142**	⇑*i*P	**Pn**	**01 43 46.1**	**-0.7**
OTAV	**Otavalo**	**13.79**	**352**	*e*Pn	**Pn**	**01 44 18.6**	**+2.3**
OTAV				*e*Sn	**Sn**	**01 47 01.8**	**+13**
SIV	**San Ignacio**	**15.23**	**101**	Pn	**Pn**	**01 44 36.9**	**+1.1**
	0.4nm,0.3s,baz=280,slow=14,SNR=46						
LCO	**Las Campanas**	**16.37**	**161**	*e*Pn	**Pn**	**01 44 50.7**	**+0.2**
	212nm,1.0s						
LCO	**Las Campanas**	**16.37**	**161**	⇑*i*P	**Pn**	**01 44 49.6**	**-0.8**
TLL	**Tololo Astrono**	**17.42**	**163**	*e*P	**Pn**	**01 45 04.2**	**+0.5**
ROSC	**El Rosal**	**18.39**	**7**	P	**Pn**	**01 45 21.1**	**+5.3**
	1.2nm,0.3s,baz=135,slow=5.7,SNR=13						
ROSC				S	**Sn**	**01 48 54.7**	**+14**
	1.1nm,0.3s,baz=105,slow=19,SNR=2.2						
ROSC				LR	LR	01 53 33.9	
	comp=Z,10µm,19.9s,baz=192,slow=41						
PAYG	**Puerto Ayora**	**18.61**	**312**	*e*P	**Pn**	**01 45 16.4**	**-2.0**
	117nm,1.1s						
CFAA	**Coronel Fontan**	**19.58**	**158**	P	**Pn**	**01 45 29.1**	**-0.8**
	0.4nm,0.3s,baz=335,slow=12,SNR=30						
CFAA				LR	LR	01 51 51.8	
	comp=Z,620nm,20.2s,baz=346,slow=33						
FCH	**Farellones**	**20.55**	**165**	⇑*i*P	**P**	**01 45 39.8**	**+0.7**
LMEL	**Las Melosas**	**21.06**	**165**	*e*P	**P**	**01 45 45.2**	**+0.6**
BCIP	**Isla Barro Col**	**22.76**	**352**	*e*P	**P**	**01 46 02.8**	**-0.2**
	254nm,0.9s,mb5.7						
BCIP				LR	LR		
	comp=Z,5µm,20.0s,MS5.0						
SDV	**Santo Domingo**	**23.03**	**15**	P	**P**	**01 46 06.2**	**+0.3**
	comp=Z,12nm,0.5s,mb4.6,baz=230,slow=6.8,SNR=26						
SDV				S	**S**	**01 50 29.4**	**+14**
	comp=Z,16nm,1.1s,baz=232,slow=20,SNR=2.9						
SDV	**Santo Domingo**	**23.03**	**15**	*e*P	**P**	**01 46 06.1**	**+0.3**
	comp=Z,147nm,0.9s,mb5.4						
SDV				LR	LR		
	comp=Z,3µm,19.0s,MS4.7						
PCRV	**Puerto La Cruz**	**26.37**	**27**	P	**P**	**01 46 37.7**	**+0.9**
	comp=Z,8.1nm,0.6s,mb4.4,baz=225,slow=2.9,SNR=2.8						
PCRV				LR	LR	01 57 59.0	
	comp=Z,8µm,18.9s,MS5.3,baz=210,slow=39						
LPA	**La Plata**	**27.18**	**145**	*c e*P	**P**	**01 46 42.0**	**-1.9**
LPA	**La Plata**	**27.18**	**145**	*e*P	**P**	**01 46 46.0**	**+2.1**
LPA				*e*pP	pP	01 46 55.0	+3.7
LPA				*e*sS	sS	01 51 41.0	+7.5
PLCA	**Paso Flores**	**27.63**	**170**	P	**P**	**01 46 46.7**	**-1.2**
	comp=Z,29nm,0.9s,mb4.9,baz=348,slow=11,SNR=32						
PLCA				LR	LR	01 55 20.7	
	comp=Z,3µm,21.9s,MS4.8,baz=334,slow=31						
PLCA	**Paso Flores**	**27.63**	**170**	⇑*i*P	**P**	**01 46 47.4**	**-0.5**
PLCA				pmax	pmax		
	comp=Z,52nm,1.1s						
PLCA				MLR	MLR		
	comp=Z,2µm,20.0s						
PLCA	**Paso Flores**	**27.63**	**170**	⇑*i*P	**P**	**01 46 47.4**	**-0.5**
	comp=Z,52nm,1.1s,mb5.1						
PLCA				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
BDFB	**Brasilia**	**27.75**	**98**	P	**P**	**01 46 48.4**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=287,slow=16,SNR=7.2						
BDFB				LR	LR	01 58 24.0	
	comp=Z,3µm,20.2s,MS4.8,baz=266,slow=38						
TGUH	**Tegucigalpa,Un**	**29.36**	**339**	*e*P	**P**	**01 47 05.0**	**+1.5**
	comp=Z,61nm,0.9s,mb5.3						
TGUH				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
BBGH	**Gun Hill**	**31.42**	**33**	PFAKE		01 47 30.0	+8.3
BBGH				LR	LR		
	comp=Z,7µm,21.0s,MS5.3						
FDF	**Fort de France**	**31.97**	**29**	*e*P	**P**	**01 47 25.8**	**-0.8**
FDF				pmax	pmax		
	comp=Z,166nm,1.0s,mb5.8						
FDF	**Fort de France**	**31.97**	**29**	*e*P	**P**	**01 47 25.8**	**-0.8**
	comp=Z,166nm,1.0s,mb5.8						
CRPR	**Cabo Rojo, PR**	**32.69**	**17**	*e*P	**P**	**01 47 31.0**	**-1.9**
	comp=Z,21nm,0.8s,mb5.1						
SDDR	**Presa de Saban**	**32.72**	**9**	PFAKE		01 47 40.0	+6.9
SDDR				LR	LR		
	comp=Z,5µm,22.0s,MS5.2						
ICM	**Isla Caja Muer**	**32.76**	**18**	*e*P	**P**	**01 47 31.1**	**-2.3**
LSP	**Las Mesas**	**32.86**	**17**	*e*P	**P**	**01 47 35.3**	**+0.9**
LSP				*e*pP	pP	01 47 40.3	-1.6
OBIP	**Obispado Ponce**	**32.87**	**18**	*e*P	**P**	**01 47 32.9**	**-1.6**
OBIP				*e*pP	pP	01 47 39.6	-2.4
MPR	**Mayaguez**	**32.88**	**17**	*e*P	**P**	**01 47 35.2**	**+0.7**
CELP	**Cerrillos**	**32.91**	**18**	*e*P	**P**	**01 47 35.3**	**+0.5**
LRS	**Lares**	**33.04**	**17**	*e*P	**P**	**01 47 34.1**	**-1.8**
LRS				*e*pP	pP	01 47 41.9	-1.5
SJG	**San Juan**	**33.08**	**18**	*e*P	**P**	**01 47 36.1**	**-0.2**
SJG				*e**PP	pP	01 47 41.9	-1.8
SJG				pmax	pmax		
	comp=Z,71nm,0.7s						
SJG				MLR	MLR		
	comp=Z,4µm,21.0s						
SJG	**San Juan**	**33.08**	**18**	*e*P	**P**	**01 47 36.1**	**-0.2**
	comp=Z,71nm,0.7s,mb5.7						
SJG				*e*pP	pP	01 47 41.9	-1.8
SJG				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
CPD	**Cerro la Pandu**	**33.08**	**19**	*e*P	**P**	**01 47 33.6**	**-2.7**
CPD				*e**PP	pP	01 47 42.1	-1.6
CPD				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.4						
CPD	**Cerro la Pandu**	**33.08**	**19**	*e*P	**P**	**01 47 33.6**	**-2.7**
	comp=Z,43nm,0.8s,mb5.4						
CPD				*e*pP	pP	01 47 42.1	-1.6
AOPR	**Arecibo Observ**	**33.12**	**17**	*e*P	**P**	**01 47 42.6**	**+5.9**
	comp=Z,72nm,1.1s,mb5.5						
HUMP	**Col San Antoni**	**33.20**	**19**	*e*P	**P**	**01 47 41.6**	**+4.3**

comp=Z,37nm,0.8s,mb5.4
MTP Monte Pirata 33.25 19 *e*P P **01 47 36.1 -1.7**
comp=Z,5nm,0.8s,mb5.5
MTP *e*pP pP 01 47 42.6 -2.6
GTBY Guantanamo Bay 33.27 3 *e*P pP 01 47 48.4 +3.1
CBYP Canovanas 33.32 19 *e*P P **01 47 35.9 -2.5**
comp=Z,59nm,0.8s,mb5.6
CBYP *e*pP pP 01 47 43.5 -2.4
RPN Rapa Nui 33.42 241 PFAKE 01 47 50.0 +11
RPN LR LR
comp=Z,2µm,19.0s,MS4.8
CAM4 Nova Friburgo 33.50 110⇑ *i*P P **01 47 33.6 -6.4**
CAM4 *i* pP 01 47 39.2 -8.2
CAM4 *i* 01 47 45.2
CAM4 *i* 01 47 59.6
STVI Saint Thomas 33.69 20 *e*P P **01 47 37.6 -3.9**
ANWB Willy Bob 34.27 26 *e*P P **01 47 42.2 -4.4**
CAM3 Guarapari 35.17 107⇑ *i*P P **01 47 55.0 +0.5**
CAM3 *i* 01 47 59.1
CAM3 *i* 01 48 06.2
CAM3 *i* 01 48 14.4
CMIG Matias Romero 35.36 329 P P **01 47 55.9 -0.2**
comp=Z,8.9nm,0.8s,mb4.7,baz=142,slow=10,SNR=19
RCBR Riachuelo 40.80 83 *e*P P **01 48 41.8 -0.3**
comp=Z,23nm,1.1s,mb4.7
RCBR LR LR
comp=Z,2µm,19.0s,MS5.0
DWPF Disney 41.64 354 PFAKE 01 49 00.0 +11
DWPF LR LR
comp=Z,2µm,21.0s,MS5.0
USHA Ushuaia 41.72 173 P P **01 48 47.5 -1.5**
comp=Z,52nm,0.8s,mb5.2,baz=334,slow=5.8,SNR=18
BRAL Brewton 45.40 347 PFAKE 01 49 30.0 +11
BRAL LR LR
comp=Z,1µm,22.0s,MS4.8
KVTX Kingsville 45.74 333 *e*P P **01 49 22.4 +0.7**
comp=Z,148nm,0.6s,mb6.1
KVTX *e*pP pP 01 49 29.9 +0.5
KVTX LR LR
comp=Z,2µm,21.0s,MS5.0
NHSC New Hope 46.48 356 PFAKE 01 49 40.0 +12
NHSC LR LR
comp=Z,2µm,21.0s,MS5.0
HKT Hockley 47.02 337 *e*P P **01 49 31.0 -0.8**
HKT pmax pmax
comp=Z,32nm,1.3s,mb5.1
HKT MLR MLR
comp=Z,1µm,20.0s,MS4.9
HKT Hockley 47.02 337 *e*P P **01 49 31.0 -0.8**
comp=Z,32nm,1.3s,mb5.1
HKT LR LR
comp=Z,1µm,20.0s,MS4.9
BBSR BB Station 47.03 14 PFAKE 01 49 40.0 +8.2
BBSR LR LR
comp=Z,3µm,21.0s,MS5.2
GOGA Godfrey 47.12 352 PFAKE 01 49 40.0 +7.5
GOGA LR LR
comp=Z,2µm,21.0s,MS5.1
LRAL Lakeview Retre 47.34 348 *e*P P **01 49 33.0 -1.2**
comp=Z,19nm,0.9s,mb5.0
LRAL LR LR
comp=Z,1µm,21.0s,MS4.8
VBMS Vicksburg 47.38 344 PFAKE 01 49 50.0 +15
VBMS LR LR
comp=Z,1µm,20.0s,MS4.9
NATX Nacogdoches 48.23 339 PFAKE 01 49 50.0 +8.9
NATX LR LR
comp=Z,2µm,21.0s,MS5.0
CNNC Cliffs of the 48.50 359 PFAKE 01 49 50.0 +6.8
CNNC LR LR
comp=Z,2µm,20.0s,MS5.1
JCT Junction City 49.11 333 *e*P P **01 49 48.9 +1.0**
JCT *e**PP pP 01 49 54.7 -0.9
JCT pmax pmax
comp=Z,23nm,0.9s,mb5.2
JCT MLR MLR
comp=Z,931nm,20.0s,MS4.8
JCT Junction City 49.11 333 *e*P P **01 49 48.9 +0.9**
comp=Z,23nm,0.9s,mb5.2
JCT *e*pP pP 01 49 54.7 -0.9
JCT LR LR
comp=Z,931nm,20.0s,MS4.8
SWET Sewanee 49.26 350 *e*P P **01 49 48.0 -1.0**
CPCT Cooper Cave 49.27 351 *e*P P **01 49 47.4 -1.7**
TKL Tuckaleechee C 49.37 352 P P **01 49 48.0 -1.9**
comp=Z,7.7nm,1.0s,mb4.7,baz=190,slow=8.4,SNR=4.3
TKL Tuckaleechee C 49.37 352 *e*P P **01 49 48.6 -1.2**
TXAR Lajitas Array 49.97 329 P P **01 49 53.6 -1.0**
comp=Z,3.6nm,0.7s,mb4.5,baz=148,slow=8.7,SNR=46
TXAR LR LR 02 10 04.7
comp=Z,1µm,18.1s,MS4.9,baz=170,slow=35
UALR University of 50.30 343 *e*P P **01 49 56.7 -0.2**
comp=Z,50nm,1.3s,mb5.4
UALR *e*pP pP 01 50 02.9 -1.7
MIAR Mount Ida 50.44 342 *e*P P **01 49 57.3 -0.7**
MIAR pmax pmax
comp=Z,26nm,0.8s,mb5.3
MIAR MLR MLR
comp=Z,1µm,22.0s,MS4.9
MIAR Mount Ida 50.44 342 *e*P P **01 49 57.3 -0.7**
comp=Z,26nm,0.8s,mb5.3
MIAR LR LR
comp=Z,1µm,22.0s,MS4.9
WVT Waverly 50.50 348 *e*P P **01 49 55.6 -2.8**
WVT pmax pmax
comp=Z,46nm,1.7s,mb5.1
WVT MLR MLR
comp=Z,1µm,21.0s,MS4.9
WVT Waverly 50.50 348 *e*P P **01 49 55.6 -2.8**
comp=Z,46nm,1.7s,mb5.1
WVT LR LR
comp=Z,1µm,21.0s,MS4.9
BLA Blacksburg 50.58 356 *e*P P **01 49 57.7 -1.3**
BLA pmax pmax
comp=Z,30nm,1.1s,mb5.1
BLA MLR MLR
comp=Z,2µm,19.0s,MS5.1
BLA Blacksburg 50.58 356 *e*P P **01 49 57.7 -1.3**
comp=Z,30nm,1.1s,mb5.1
BLA LR LR
comp=Z,2µm,19.0s,MS5.1
VWCC Virginia Weste 50.59 357 *e*P P **01 49 58.8 -0.2**
JSRW J. Sargeant Re 50.95 359 *e*P P **01 50 01.9 +0.2**
PARMO Parma 51.42 346 *e*P P **01 50 04.4 -1.0**
PARMO *e*pP pP 01 50 14.6 +1.5
CBN Corbin 51.45 359 PFAKE 01 50 20.0 +14
CBN LR LR
comp=Z,1µm,19.0s,MS5.0
WCI Wyandotte Cave 52.27 350 *e*P P **01 50 10.2 -1.4**
WCI pmax pmax
comp=Z,22nm,0.8s,mb5.1
WCI MLR MLR
comp=Z,1µm,22.0s,MS4.9
WCI Wyandotte Cave 52.27 350 *e*P P **01 50 10.2 -1.4**
comp=Z,22nm,0.8s,mb5.2
WCI LR LR
comp=Z,1µm,22.0s,MS4.9
SIUC Southern Illin 52.32 347 *e*P P **01 50 10.7 -1.2**
comp=Z,42nm,1.0s,mb5.3
WMOK Wichita Mounta 52.41 337 *e*P P **01 50 12.2 -0.5**
WMOK pmax pmax
comp=Z,16nm,0.8s,mb5.0
WMOK MLR MLR
comp=Z,961nm,19.0s,MS4.9
WMOK Wichita Mounta 52.41 337 *e*P P **01 50 12.2 -0.5**
comp=Z,16nm,0.8s,mb5.0
WMOK LR LR
comp=Z,961nm,19.0s,MS4.9
SDMD Soldier's Deli 52.65 360 *e*P P **01 50 14.7 +0.3**
comp=Z,25nm,1.0s,mb5.1
GDL2 Guadalupe Moun 52.66 330 *e*P P **01 50 15.0 +0.4**
FVM French Village 52.84 346 *e*P P **01 50 14.1 -1.8**
FVM pmax pmax
comp=Z,20nm,0.8s,mb5.1
FVM French Village 52.84 346 *e*P P **01 50 14.1 -1.8**
comp=Z,20nm,0.8s,mb5.1
MCWV Mont Chateau 52.98 357 PFAKE 01 50 30.0 +13
MCWV LR LR
comp=Z,2µm,22.0s,MS5.0
OLIL Olney 53.08 349 *e*P P **01 50 15.4 -2.2**
comp=Z,36nm,0.7s,mb5.4
OLIL *e*pP pP 01 50 23.3 -2.1
CCM Cathedral Cave 53.10 346 *e*P P **01 50 17.1 -0.7**
CCM *e* 01 51 25.5
CCM pmax pmax
comp=Z,27nm,1.0s,mb5.1
CCM MLR MLR
comp=Z,1µm,21.0s,MS4.8
CCM Cathedral Cave 53.10 346 *e*P P **01 50 17.1 -0.7**
comp=Z,27nm,1.0s,mb5.1
CCM *e*PcP PcP 01 51 25.5 -0.4
CCM LR LR
comp=Z,1µm,21.0s,MS4.8
BLO Bloomington 53.22 350 *e*P P **01 50 16.5 -2.2**
BLO pmax pmax
comp=Z,36nm,0.7s,mb5.4
BLO Bloomington 53.22 350 *e*P P **01 50 16.5 -2.2**
comp=Z,36nm,0.7s,mb5.4
MVL Millersville 53.24 0 *e*P P **01 50 19.0 +0.2**
comp=Z,42nm,1.1s,mb5.3
AMTX Amarillo 53.70 334 *e*P P **01 50 22.0 -0.2**
comp=Z,25nm,0.9s,mb5.2
AMTX LR LR
comp=Z,938nm,22.0s,MS4.8
ACSO Alum Creek Sta 53.80 354 *e*P P **01 50 21.3 -1.5**
comp=Z,32nm,0.7s,mb5.4
ACSO LR LR
comp=Z,2µm,21.0s,MS5.1
SSPA Standing Stone 53.89 359 *e*P P **01 50 22.9 -0.6**
comp=Z,115nm,1.9s,mb5.5
SSPA LR LR
comp=Z,1µm,19.0s,MS5.1
PAL Palisades 54.30 3 *e*P P **01 50 27.0 +0.5**
PAL pmax pmax
comp=Z,20nm,0.9s,mb5.0
PAL Palisades 54.30 3 *e*P P **01 50 27.0 +0.5**
comp=Z,20nm,0.9s,mb5.0
319A Douglas 54.55 325⇑ P P **01 50 28.3 -0.2**
baz=55,SNR=11
YLE Yale 54.66 3 *e*P P **01 50 30.0 +0.9**
318A Bisbee 54.99 325⇓ P P **01 50 31.6 -0.1**
baz=55,SNR=10
219A White Tail Can 55.01 326⇓ P P **01 50 32.2 +0.3**
baz=55
HDIL Hopedale 55.07 348 *e*P P **01 50 29.5 -2.6**
comp=Z,28nm,0.6s,mb5.5
HDIL *e*pP pP 01 50 36.8 -3.1
HDIL LR LR
comp=Z,939nm,20.0s,MS4.9
218A Dragoon 55.43 325⇓ P P **01 50 34.6 -0.2**
baz=56,SNR=12
BINY Binghamton 55.44 1 *e*P P **01 50 34.7 -0.1**
comp=Z,163nm,1.8s,mb5.8
BINY LR LR
comp=Z,2µm,20.0s,MS5.2
ERPA Erie 55.44 357 PFAKE 01 50 50.0 +15
ERPA LR LR
comp=Z,2µm,21.0s,MS5.1
LPM Los Pinos Moun 55.47 330 *e*P P **01 50 37.3 +2.2**
LENM Lemitar 55.52 329 *e*pP pP 01 50 42.2 -1.1
KSU1 Kansas State U 55.58 341 *e*P P **01 50 31.6 -4.2**
comp=Z,17nm,0.8s,mb5.1
KSU1 LR LR
comp=Z,2µm,22.0s,MS5.0
119A Ashpeak Ranch, 55.63 327⇑ P P **01 50 36.7 +0.4**
baz=56
217A Green Valley 55.71 325⇑ P P **01 50 37.2 +0.4**
baz=56
118A Homack Ranch, 55.89 326⇑ P P **01 50 38.1 -0.1**
baz=56,SNR=8.5
ANMO Albuquerque 55.91 330 P P **01 50 37.7 -0.5**
comp=Z,4.0nm,0.7s,mb4.5,baz=156,slow=11,SNR=11
ANMO pP pP 01 50 44.0 -2.1
comp=Z,26nm,0.9s,baz=168,slow=8.6,SNR=25
ANMO Albuquerque 55.91 330 *e*P P **01 50 38.0 -0.2**
ANMO pmax pmax
comp=Z,33nm,1.0s
ANMO MLR MLR
comp=Z,1µm,20.0s
ANMO Albuquerque 55.91 330 *e*P P **01 50 38.0 -0.2**
comp=Z,34nm,1.0s,mb5.3
ANMO LR LR
comp=Z,1µm,20.0s,MS4.9
AAM Ann Arbor 55.92 354 *e*P P **01 50 36.7 -1.4**
AAM pmax pmax
comp=Z,19nm,0.6s,mb5.3
AAM MLR MLR
comp=Z,2µm,22.0s,MS5.2
AAM Ann Arbor 55.92 354 *e*P P **01 50 36.7 -1.5**
comp=Z,19nm,0.6s,mb5.3
AAM LR LR
comp=Z,2µm,22.0s,MS5.2
RKT Rikitea 55.92 251 *e*S S **01 58 25.5 +0.2**
comp=Z,764nm,29.0s
RKT *e*LQ 02 04 37.3
comp=Z,1µm,35.2s
RKT *e*LR LR 02 07 03.6
comp=Z,871nm,26.0s
TRY Troy 56.03 3 *e*P P **01 50 39.7 +0.7**
TUC Tucson 56.09 325 *e*P P **01 50 39.1 -0.5**
TUC pmax pmax
comp=Z,46nm,1.4s,mb5.3
TUC MLR MLR
comp=Z,2µm,20.0s,MS5.2
TUC Tucson 56.09 325 *e*P P **01 50 39.1 -0.5**
comp=Z,46nm,1.4s,mb5.3
TUC LR LR
comp=Z,2µm,20.0s,MS5.2
216A Three Points, 56.24 324⇓ P P **01 50 40.6 0.0**
baz=56
117A Oracle 56.26 325⇑ P P **01 50 40.6 -0.2**
baz=56,SNR=14
Z18A Geronimo 56.27 326⇑ P P **01 50 41.0 +0.2**
baz=56
CBKS Cedar Bluff 56.37 338 *e*P P **01 50 40.8 -0.7**
CBKS *e**PP pP 01 50 48.3 -1.0
CBKS pmax pmax
comp=Z,39nm,0.8s,mb5.5
CBKS MLR MLR
comp=Z,1µm,21.0s,MS5.0
CBKS Cedar Bluff 56.37 338 *e*P P **01 50 40.8 -0.7**
comp=Z,39nm,0.8s,mb5.5
CBKS *e*pP pP 01 50 48.3 -1.0
CBKS LR LR
comp=Z,1µm,21.0s,MS5.0
Y19A Nutrioso 56.52 327⇓ P P **01 50 43.2 +0.6**
baz=57
Z17A San Carlos Hig 56.66 326⇑ P P **01 50 43.7 0.0**
baz=57
ACCN Adirondack Com 56.68 3 *e*P P **01 50 44.1 +0.5**
comp=Z,156nm,1.7s,mb5.8
116A Eloy 56.79 325⇓ P P **01 50 45.0 +0.3**
baz=57
Y18A Canyon Day Jun 56.79 327⇓ P P **01 50 44.3 -0.3**
baz=57
X19A St. Johns 56.90 328⇑ P P **01 50 45.5 +0.1**
baz=57
214A Organ Pipe Nat 56.98 323⇓ P P **01 50 46.1 +0.1**
baz=57
HNH Hanover 57.08 4 *e*P P **01 50 48.2 +1.8**
Y17A Roosevelt 57.17 326⇓ P P **01 50 47.4 +0.2**
baz=57
115A Sonoran Desert 57.19 324⇑ P P **01 50 47.6 +0.2**
baz=57
Z16A Peralta Trail, 57.22 325⇑ P P **01 50 47.8 +0.1**
baz=58
SCIA State Center 57.23 345 *e*P P **01 50 46.7 -0.8**
comp=Z,27nm,0.9s,mb5.3
SCIA LR LR
comp=Z,1µm,22.0s,MS5.0
NCB Newcomb 57.25 2 *e*P P **01 50 47.5 -0.1**
comp=Z,59nm,1.6s,mb5.4
NCB LR LR
comp=Z,1µm,22.0s,MS4.9
MDV Middlebury 57.32 3 *e*P P **01 50 48.3 +0.2**
X18A Snowflake 57.33 327⇓ P P **01 50 48.8 +0.5**
baz=58
JFWS Jewell Farm 57.53 348 *e*P P **01 50 46.8 -2.8**
JFWS pmax pmax
comp=Z,58nm,1.6s,mb5.4
JFWS MLR MLR
comp=Z,1µm,20.0s,MS4.9
JFWS Jewell Farm 57.53 348 *e*P P **01 50 46.8 -2.8**
comp=Z,58nm,1.6s,mb5.4
JFWS LR LR
comp=Z,1µm,20.0s,MS4.9
Z15A Gila River Ind 57.59 325⇑ P P **01 50 50.2 0.0**
baz=58
LBNH Lisbon 57.63 4 *e*P P **01 50 50.1 -0.2**
LBNH pmax pmax
comp=Z,24nm,0.9s,mb5.2
LBNH MLR MLR
comp=Z,2µm,21.0s,MS5.2
LBNH Lisbon 57.63 4 *e*P P **01 50 50.1 -0.2**
comp=Z,24nm,0.9s,mb5.2
LBNH LR LR
comp=Z,2µm,21.0s,MS5.2
Y16A Circle Bar Ran 57.65 326⇓ P P **01 50 50.6 -0.1**
baz=58,SNR=6.0
W18A Petrified Fore 57.67 328⇑ P P **01 50 50.9 +0.1**
baz=58
SDCO Great Sand Dun 57.76 333 *e*P P **01 50 51.2 -0.1**
comp=Z,35nm,1.0s,mb5.3
SDCO LR LR
comp=Z,909nm,19.0s,MS4.9
X16A Lo Mia Camp, P 58.04 326⇓ P P **01 50 53.5 +0.1**
baz=58,SNR=8.7
SADO Sadowa 58.05 358 P P **01 50 50.9 -2.3**
comp=Z,19nm,0.8s,mb5.2,baz=186,slow=6.5,SNR=11
Z14A Wintersburg 58.09 324⇓ P P **01 50 53.8 +0.1**
baz=58
Y15A Casa Rosa Ranc 58.18 325⇑ P P **01 50 54.6 +0.2**
baz=58,SNR=13
GLMI Grayling 58.52 353 PFAKE 01 51 10.0 +14
GLMI LR LR
comp=Z,1µm,20.0s,MS5.1
X15A Humboldt 58.52 326⇓ P P **01 50 57.1 +0.4**
baz=59,SNR=12
Y14A Wickenburg 58.54 325⇑ P P **01 50 57.0 +0.1**
baz=59
W16A Flagstaff 58.60 327⇑ P P **01 50 57.4 +0.2**
baz=59
T19A Beclabito 58.65 330⇓ P P **01 50 57.9 +0.3**
baz=59
MVCO Mesa Verde 58.70 330⇑ P P **01 50 57.9 -0.1**
baz=59
MVCO Mesa Verde 58.70 330 *e*P P **01 50 58.1 +0.2**
comp=Z,27nm,0.9s,mb5.3
MVCO LR LR
comp=Z,1µm,19.0s,MS5.0
U18A Rough Rock, Ch 58.75 329⇓ P P **01 50 58.4 +0.1**
baz=59
WUAZ Wupatki 58.83 327⇑ P P **01 50 59.2 +0.3**
baz=59
WUAZ Wupatki 58.83 327 *e*P P **01 50 59.2 +0.4**
comp=Z,95nm,1.3s,mb5.7
WUAZ *e*pP pP 01 51 05.8 -1.0
WUAZ LR LR
comp=Z,2µm,19.0s,MS5.2
X14A Yava 58.87 325⇓ P P **01 50 59.5 +0.3**
baz=59,SNR=11
PKME Peaks-Kenny Pk 58.88 6 *e*P P **01 50 58.6 -0.3**
comp=Z,33nm,0.9s,mb5.4
PKME LR LR
comp=Z,2µm,20.0s,MS5.2
Y13A Salome 58.92 324⇓ P P **01 50 59.7 +0.2**
baz=59
GLA Glamis 58.95 323 *e*P P **01 51 00.4 +0.6**
GLA *e**PP pP 01 51 08.1 +0.5
GLA pmax pmax
comp=Z,15nm,0.9s,mb5.0
GLA Glamis 58.95 323 *e*P P **01 51 00.4 +0.6**
comp=Z,15nm,0.9s,mb5.0
GLA *e*pP pP 01 51 08.1 +0.5
W15A Williams 59.05 326⇑ P P **01 51 00.8 +0.4**
baz=59
OGNE Ogallala 59.08 338 PFAKE 01 51 10.0 +10
OGNE LR LR
comp=Z,993nm,21.0s,MS4.9
U16A Tuba City 59.18 328⇑ P P **01 51 01.6 +0.3**
baz=59
R21A Cimarron 59.19 332⇑ P P **01 51 02.0 +0.7**
baz=59
Y12C Blythe 59.27 323⇓ P P **01 51 02.2 +0.2**
baz=60,SNR=12
U17A Shonto 59.29 328⇑ P P **01 51 02.4 +0.3**
baz=60
T18A Mexican Hat 59.31 329⇓ P P **01 51 02.2 0.0**
baz=60,SNR=14
S19A Harvey Farm, M 59.43 330⇓ P P **01 51 03.3 +0.3**
baz=60,SNR=8.7
DVTC Desert V Tower 59.44 321⇓ P P **01 51 03.4 +0.3**
baz=60
PDMCI Parker Dam,Lak 59.45 324⇑ P P **01 51 03.1 -0.1**
baz=60
SWSC Sam W. Stewart 59.45 322⇑ P P **01 51 03.2 -0.1**
baz=60
V15A Kaibab Nationa 59.49 327⇓ P P **01 51 03.8 +0.4**
baz=60
X13A Yucca 59.49 325⇓ P P **01 51 03.6 +0.2**
baz=60
ISCO Idaho Springs 59.52 334 *e*P P **01 51 03.3 -0.2**
ISCO pmax pmax
comp=Z,65nm,1.9s,mb5.3
ISCO MLR MLR
comp=Z,2µm,21.0s,MS5.2
ISCO Idaho Springs 59.52 334 *e*P P **01 51 03.3 -0.3**
comp=Z,65nm,1.9s,mb5.3
ISCO LR LR
comp=Z,2µm,21.0s,MS5.2
W14A Seligman 59.53 326⇑ P P **01 51 03.8 +0.1**
baz=60
SMCO Snowmass 59.59 333 *e*P P **01 51 01.6 -2.4**
comp=Z,30nm,0.9s,mb5.3
T17A Navajo Res., N 59.67 329⇑ P P **01 51 04.8 +0.1**
baz=60,SNR=8.1
BC3 Big Chuckw Mtn 59.75 323⇓ P P **01 51 05.2 0.0**
baz=60
S18A Hurst Farm, Bl 59.81 330⇑ P P **01 51 06.1 +0.5**
baz=60,SNR=13
ECSD EROS,Sioux Fal 59.83 343 *e*P P **01 51 04.0 -1.6**
comp=Z,30nm,0.9s,mb5.3
ECSD LR LR
comp=Z,889nm,21.0s,MS4.9
PV04 Paradox Valley 59.84 331 *e*P P **01 51 08.7 +2.9**
V14A Boquillas Ranc 59.85 326⇓ P P **01 51 06.7 +0.7**
baz=60,SNR=14
W13A Hualapai Mount 59.89 325⇓ P P **01 51 06.8 +0.6**
baz=60,SNR=11
R19A Curley Farm, L 59.93 331⇑ P P **01 51 06.7 +0.3**
baz=60
IRM Iron Mountain 59.93 323⇓ P P **01 51 06.6 +0.1**
baz=60
U15A North Rim 60.01 327⇓ P P **01 51 07.4 +0.4**
baz=60
S17A Black Ridge (B 60.16 329⇓ P P **01 51 08.5 +0.5**
baz=60
R18A Canyonlands Na 60.30 330⇑ P P **01 51 08.8 -0.2**
baz=61,SNR=6.6
PFO Pinyon Flat Ob 60.31 322⇑ P P **01 51 09.6 +0.4**
baz=60
PFO Pinyon Flat Ob 60.31 322 *e*P P **01 51 08.6 -0.5**
PFO pmax pmax
comp=Z,36nm,1.2s,mb5.3
PFO MLR MLR
comp=Z,1µm,21.0s,MS5.0
PFO Pinyon Flat Ob 60.31 322 *e*P P **01 51 08.6 -0.5**
comp=Z,36nm,1.2s,mb5.3
PFO LR LR
comp=Z,1µm,21.0s,MS5.0
Q19A Hogan Spring (60.45 331⇑ P P **01 51 10.7 +0.7**
baz=61
U14A Mt Trumbull 60.47 326⇓ P P **01 51 10.6 +0.4**
baz=61
V13A Grand Canyon W 60.49 325⇑ P P **01 51 10.5 +0.2**
baz=61
T15A Red Dirt Ranch 60.50 327⇑ P P **01 51 11.3 +0.9**
baz=61
S16A Weppner Ranch, 60.63 329⇑ P P **01 51 11.6 +0.3**
baz=61
GMRC Granite Mounta 60.67 323⇓ P P **01 51 11.9 +0.4**
baz=61
N22A Wattenberg Ran 60.71 334⇑ P P **01 51 12.6 +0.9**
baz=61
PHWY Pilot Hill 60.71 335 *e*P P **01 51 13.1 +1.4**
comp=Z,59nm,1.8s,mb5.4
R17A Hanksville Air 60.73 330⇑ P P **01 51 12.0 +0.1**
baz=61,SNR=16
MURC Murrieta 60.75 322⇑ P P **01 51 12.4 +0.2**
baz=61
P19A Cripple Cowboy 60.87 332⇑ P P **01 51 13.5 +0.7**
baz=61
V12A Nelson 60.88 325⇑ P P **01 51 13.3 +0.3**
baz=61
U13A Pakoon Wash 60.90 326⇑ P P **01 51 13.3 +0.2**
baz=61
T14A Hurricane 60.90 327⇑ P P **01 51 13.4 +0.3**
baz=61
O20A White River Ci 60.93 333⇓ P P **01 51 13.6 +0.4**
baz=61
Q18A Rafter H Ranch 60.98 331⇓ P P **01 51 13.6 0.0**

baz=61,SNR=12
S15A Panguitch 60.99 328 ⇓P **P 01 51 14.1 +0.4**
baz=61
R16A Teasdale 61.01 329 ⇓P **P 01 51 14.2 +0.5**
baz=61,SNR=11
N21A Black Mountain 61.13 334 ⇓P **P 01 51 15.0 +0.5**
baz=61
SRU San Rafael 61.18 330 ⇑P **P 01 51 14.9 0.0**
baz=61
SRU San Rafael 61.18 330 *e*P **P 01 51 15.0 +0.1**
SRU pmax pmax
comp=Z,13nm,0.9s,mb5.1
SRU San Rafael 61.18 330 *e*P **P 01 51 15.0 +0.1**
comp=Z,13nm,0.9s,mb5.1
U12A Valley of Fire 61.22 326 ⇑P **P 01 51 15.1 -0.2**
baz=62,SNR=6.2
M22A Cedar Creek Ra 61.27 335 ⇓P **P 01 51 15.6 +0.2**
baz=62
V11A Goodsprings 61.29 324 ⇓P **P 01 51 15.5 -0.2**
baz=62
T13A Saint George 61.31 326 ⇓P **P 01 51 16.3 +0.5**
baz=62
Q16A Castle Valley 61.34 330 ⇑P **P 01 51 16.0 0.0**
baz=62
R15A Junction 61.35 328 ⇑P **P 01 51 16.4 +0.3**
baz=62
P18A Preston Nutter 61.45 331 ⇑P **P 01 51 16.9 +0.2**
baz=62
BFSC Mount Baldy St 61.47 322 ⇑P **P 01 51 16.9 -0.1**
baz=62
S14A Cedar City 61.47 327 ⇑P **P 01 51 17.2 +0.3**
baz=62
N20A Spence Gulch, 61.51 333 ⇑P **P 01 51 17.0 -0.1**
baz=62,SNR=5.6
TRIS Tristan da Cun 61.52 125 PFAKE 01 51 30.0 +13
TRIS LR LR
comp=Z,2μm,20.0s,MS5.2
MSU Marysvale 61.53 329 *e*P **P 01 51 17.7 +0.4**
MVU Marysvale 61.54 329 PFAKE 01 51 30.0 +13
MVU LR LR
comp=Z,2μm,19.0s,MS5.2
P17A Butcher Ranch, 61.57 330 ⇑P **P 01 51 17.7 +0.1**
baz=62
SHPR Sheep Range 61.62 325 *e*P **P 01 51 18.7 +0.8**
TMUT Trail Mountain 61.66 330 *e*P **P 01 51 19.3 +1.1**
GSC Goldstone 61.70 323 ⇑P **P 01 51 18.6 +0.1**
baz=62
GSC Goldstone 61.70 323 *e*pP pP 01 51 26.1 -0.3
MWC Mount Wilson 61.70 321 *e*P **P 01 51 18.9 +0.3**
MWC pmax pmax
comp=Z,92nm,1.4s,mb5.7
MWC Mount Wilson 61.70 321 *e*P **P 01 51 18.9 +0.3**
comp=Z,92nm,1.4s,mb5.7
S13A Holt Ranch, En 61.70 327 ⇓P **P 01 51 18.9 +0.4**
baz=62,SNR=19
L22A Ellis Ranch, M 61.72 335 ⇑P **P 01 51 18.7 +0.2**
baz=62
PASC Pasadena Art C 61.74 321 *e*pP pP 01 51 27.6 +0.8
M21A Separation Pea 61.76 334 ⇑P **P 01 51 18.4 -0.4**
baz=62,SNR=6.8
RWWY Rawlins 61.76 334 *e*P **P 01 51 18.3 -0.5**
comp=Z,74nm,1.4s,mb5.6
O18A Roosevelt 61.84 331 ⇓P **P 01 51 19.8 +0.4**
baz=62
N19A John Jarvie Ra 61.97 332 ⇓P **P 01 51 20.4 +0.2**
baz=62
Q15A Fillmore 62.01 329 ⇑P **P 01 51 20.5 0.0**
baz=62
M20A Sweetwater, Wa 62.01 334 ⇑P **P 01 51 21.1 +0.6**
baz=62
L21A Rawlins 62.05 334 ⇓P **P 01 51 20.8 0.0**
baz=62
EDW2 Edwards Air Fo 62.11 322 ⇓P **P 01 51 21.1 -0.2**
baz=62
P16A Fountain Green 62.12 330 ⇑P **P 01 51 21.6 +0.4**
baz=62
O17A Robinson Place 62.13 331 ⇑P **P 01 51 22.0 +0.6**
baz=62,SNR=10.0
T11A Corn Creek, Al 62.19 326 ⇑P **P 01 51 22.2 +0.4**
baz=62,SNR=12
R13A O'Grain Ranch, 62.20 327 ⇑P **P 01 51 22.1 +0.3**
baz=62,SNR=9.8
U10A Ash Meadows, A 62.21 324 ⇑P **P 01 51 22.3 +0.4**
baz=62
S12A Delamar Landin 62.25 326 ⇑P **P 01 51 22.8 +0.6**
baz=62
N18A Larsen Ranch, 62.26 332 ⇓P **P 01 51 22.7 +0.6**
baz=62
TAOE Nuku Hiva Isla 62.37 267 *e*S **S 01 59 52.2 +3.1**
comp=Z,3μm,27.4s
TAOE Nuku Hiva Isla 62.37 267 *e*LR LR 02 10 00.8
comp=Z,6μm,24.9s
P15A Leamington 62.39 329 ⇑P **P 01 51 23.3 +0.2**
baz=63
MPU Maple Canyon 62.42 330 *e*P **P 01 51 23.7 +0.4**
comp=Z,18nm,1.1s,mb5.1
MPU epP pP 01 51 29.9 -1.3
Q14A Sevier Lake (B 62.45 328 ⇑P **P 01 51 23.9 +0.4**
baz=63,SNR=11
L20A Wamsutter 62.50 334 ⇓P **P 01 51 23.9 +0.1**
baz=63
O16A Springville 62.51 330 ⇓P **P 01 51 24.0 +0.1**
baz=63,SNR=7.0
TPNV Topopah Spring 62.55 325 ⇓P **P 01 51 24.1 -0.1**
baz=63
TPNV Topopah Spring 62.55 325 *e*P **P 01 51 25.2 +1.0**
TPNV pmax pmax
comp=Z,18nm,0.9s,mb5.2
TPNV MLR MLR
comp=Z,768nm,20.0s,MS4.9
TPNV Topopah Spring 62.55 325 *e*P **P 01 51 25.2 +1.0**
comp=Z,18nm,0.9s,mb5.2
TPNV LR LR
comp=Z,768nm,20.0s,MS4.9
DAU Daniels Canyon 62.55 331 *e*P **P 01 51 24.8 +0.7**
FURC Furnace Creek, 62.55 324 ⇓P **P 01 51 24.4 +0.2**
baz=63
RSSD Black Hills 62.57 338 *e*P **P 01 51 23.5 -0.7**
RSSD pmax pmax
comp=Z,72nm,2.0s,mb5.5
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.1
RSSD Black Hills 62.57 338 *e*P **P 01 51 23.5 -0.7**
comp=Z,72nm,2.0s,mb5.5
RSSD LR LR
comp=Z,1μm,21.0s,MS5.1
NLU North Lily Min 62.59 330 *e*pP pP 01 51 31.1 -1.2
EYMN Ely 62.61 349 *e*pP pP 01 51 29.7 -2.5
EYMN LR LR
comp=Z,1μm,21.0s,MS5.0
MPMC Manual Prospec 62.63 323 ⇓P **P 01 51 24.9 +0.2**
baz=63
R12A Pony Springs, 62.65 327 ⇑P **P 01 51 25.1 +0.2**
baz=63,SNR=8.9
N17A Moffit Pass 62.76 331 ⇑P **P 01 51 25.9 +0.4**
baz=63,SNR=9.4
S11A Rachel 62.77 326 ⇓P **P 01 51 26.1 +0.4**
baz=63
ARVC Arvin 62.78 322 ⇑P **P 01 51 25.6 -0.1**
baz=63
JLU Jordanelle 62.79 331 *e*P **P 01 51 26.2 +0.5**
M18A Lyman 62.80 332 ⇓P **P 01 51 25.4 -0.3**
baz=63
P14A Drum Mountains 62.80 329 ⇑P **P 01 51 26.1 +0.3**
baz=63,SNR=10
Q13A Wheeler Ranch, 62.81 328 ⇑P **P 01 51 25.8 -0.1**
baz=63,SNR=13
DAC Darwin (Calif) 62.84 323 PFAKE 01 51 40.0 +14
DAC LR LR
comp=Z,1μm,19.0s,MS5.0
ISA Isabella 62.93 322 ⇑P **P 01 51 26.5 -0.2**
baz=63
ISA Isabella 62.93 322 *e*P **P 01 51 27.4 +0.6**
ISA pmax pmax
comp=Z,46nm,1.6s,mb5.4
ISA Isabella 62.93 322 *e*P **P 01 51 27.4 +0.6**
comp=Z,46nm,1.6s,mb5.4
N16A Rees Ranch, Co 63.00 331 ⇑P **P 01 51 27.5 +0.4**
baz=63
L19A Farson 63.02 333 ⇓P **P 01 51 27.4 +0.2**
baz=63
O15A The Old Anders 63.03 330 ⇑P **P 01 51 27.7 +0.3**
baz=63
K20A Yellowstone Ra 63.03 334 ⇑P **P 01 51 26.8 -0.5**
baz=63,SNR=5.9
M17A Scullys Gap (B 63.11 332 ⇑P **P 01 51 27.1 -0.7**
baz=63,SNR=6.9

DUG Dugway 63.13 330 ⇑P **P 01 51 27.7 -0.3**
baz=63
DUG Dugway 63.13 330 *e*P **P 01 51 28.1 +0.1**
DUG pmax pmax
comp=Z,53nm,1.2s,mb5.5
DUG MLR MLR
comp=Z,1μm,20.0s,MS5.1
DUG Dugway 63.13 330 *e*P **P 01 51 28.1 +0.1**
comp=Z,53nm,1.2s,mb5.5
DUG LR LR
comp=Z,1μm,20.0s,MS5.1
NOQ North Oquirrh 63.15 330 *e*pP pP 01 51 40.6 +4.6
L18A Fontenelle, Gr 63.18 333 ⇑P **P 01 51 28.3 +0.1**
baz=63
P13A Bates Ranch, G 63.18 328 ⇑P **P 01 51 28.7 +0.4**
baz=63,SNR=16
R11A Troy Canyon, C 63.19 326 ⇓P **P 01 51 28.4 -0.1**
baz=63,SNR=11
GRAC Grapevine Rang 63.21 324 ⇑P **P 01 51 28.3 -0.3**
baz=63
Q12A Willow Creek R 63.29 327 ⇑P **P 01 51 29.7 +0.6**
baz=64
K19A Absolon Red Bu 63.38 334 ⇑P **P 01 51 28.7 -0.9**
baz=64,SNR=7.7
VES Vestal, Richgr 63.41 322 ⇑P **P 01 51 30.4 +0.4**
baz=64
M16A Huntsville 63.43 331 ⇑P **P 01 51 30.2 +0.3**
baz=64
S10A Tonopah Range, 63.43 325 ⇓P **P 01 51 30.6 +0.5**
baz=64,SNR=11
N15A Stansbury Isla 63.52 330 ⇑P **P 01 51 30.8 +0.2**
baz=64
Q11A Duckwater 63.59 327 ⇓P **P 01 51 31.6 +0.6**
baz=64,SNR=20
S09A Goldfield 63.64 325 ⇑P **P 01 51 31.9 +0.5**
baz=64
BW06 Bcr Ber Array 63.64 333 ⇑P **P 01 51 31.2 -0.2**
baz=64
BW06 Boulder Array 63.64 333 *e*P **P 01 51 30.7 -0.6**
comp=Z,20nm,1.2s,mb5.0
BW06 LR LR
comp=Z,1μm,22.0s,MS5.0
PDAR Pinedale Array 63.64 333 P **P 01 51 29.8 -1.5**
comp=Z,2.3nm,0.6s,mb4.4,baz=125,slow=9.2,SNR=18
PDAR pP pP 01 51 36.9 -2.3
comp=Z,5.7nm,0.8s,baz=138,slow=4.5,SNR=14
PDAR PKP2bc 02 20 31.6
comp=Z,0.1nm,0.4s,baz=72,slow=2.9,SNR=3.8
PDAR LR LR 02 20 44.5
comp=Z,960nm,19.4s,MS5.0,baz=143,slow=38
PDAR Pinedale Array 63.64 333 P **P 01 51 29.8 -1.5**
PDAR pP pP 01 51 36.9 -2.3
PDAR ⇑*e* 02 20 31.6
PDAR LR LR 02 20 44.5
L17A Cokeville 63.70 332 ⇓P **P 01 51 30.9 -0.8**
baz=64,SNR=8.1
K18A Toltan Ranch, 63.75 333 ⇓P **P 01 51 32.1 +0.1**
baz=64,SNR=8.9
SPUT South Promonto 63.81 331 *e*P **P 01 51 32.9 +0.4**
N14A Grayback Hills 63.82 330 ⇑P **P 01 51 32.1 -0.4**
baz=64,SNR=9.3
AGMN Agassiz Refuge 63.88 346 *e*P **P 01 51 31.6 -1.1**
comp=Z,51nm,0.7s,mb5.7
AGMN LR LR
comp=Z,930nm,21.0s,MS4.9
L16A Fish Haven 63.88 332 ⇓P **P 01 51 32.6 -0.4**
baz=64
TPH Tonopah 63.89 325 *e*P **P 01 51 33.7 +0.6**
TPH pmax pmax
comp=Z,54nm,1.3s,mb5.4
TPH MLR MLR
comp=Z,761nm,19.0s,MS4.9
TPH Tonopah 63.89 325 *e*P **P 01 51 33.7 +0.7**
comp=Z,54nm,1.3s,mb5.4
TPH LR LR
comp=Z,761nm,19.0s,MS4.9
R09A Tonopah 63.92 325 ⇓P **P 01 51 33.3 0.0**
baz=64,SNR=8.5
M15A Larsen Ranch, 63.93 331 ⇓P **P 01 51 32.9 -0.4**
baz=64,SNR=8.9
MTUM Tungsten Hills 64.14 324 *e*P **P 01 51 35.5 +0.7**
P11A Circle Ranch, 64.16 327 ⇓P **P 01 51 34.9 +0.1**
baz=64
O12A Currie 64.16 328 ⇑P **P 01 51 34.9 +0.1**
baz=64,SNR=11
J18A Kendall Valley 64.20 333 ⇓P **P 01 51 34.2 -0.8**
baz=64,SNR=11
K17A Gardner Place, 64.23 333 ⇑P **P 01 51 34.6 -0.6**
baz=64
L15A Malad City 64.32 331 ⇓P **P 01 51 35.2 -0.6**
baz=65,SNR=7.3
AHID Auburn Hatcher 64.33 332 PFAKE 01 51 50.0 +14
AHID LR LR
comp=Z,1μm,20.0s,MS5.2
N13A Wendover, West 64.33 329 ⇓P **P 01 51 35.8 -0.1**
baz=65
HVU Hansel Valley 64.33 331 *e*P **P 01 51 35.7 -0.2**
HVU pmax pmax
comp=Z,26nm,1.0s,mb5.2
HVU Hansel Valley 64.33 331 *e*P **P 01 51 35.7 -0.2**
comp=Z,26nm,1.0s,mb5.2
M14A Sheep Mountain 64.39 330 ⇑P **P 01 51 35.8 -0.5**
baz=65,SNR=20
I18A Diamond G Ranc 64.51 334 ⇑P **P 01 51 36.3 -0.7**
baz=65,SNR=8.0
O11A Cowboy Ranch, 64.53 328 ⇑P **P 01 51 36.7 -0.5**
baz=65,SNR=7.8
P10A Eureka 64.58 327 ⇑P **P 01 51 38.4 +0.8**
baz=65
K16A Soda Springs 64.60 332 ⇓P **P 01 51 38.0 +0.4**
baz=65
J17A Brown Place, J 64.63 333 ⇓P **P 01 51 38.0 +0.2**
baz=65
M13A Montello 64.69 329 ⇓P **P 01 51 37.5 -0.7**
baz=65
REDW Red Top Meadow 64.69 333 *e*P **P 01 51 37.7 -0.4**
SNOW Snow King Moun 64.72 333 *e*P **P 01 51 38.5 +0.1**
comp=Z,18nm,1.0s,mb5.0
N12A Clover Valley, 64.74 329 ⇓P **P 01 51 38.5 -0.1**
baz=65
NVAR Mina Array Bea 64.74 325 P **P 01 51 38.9 +0.2**
comp=Z,2.9nm,0.7s,mb4.4,baz=137,slow=7.0,SNR=25
NVAR pP pP 01 51 44.9 -1.7
comp=Z,7.3nm,0.8s,baz=149,slow=5.4,SNR=13
NVAR PKP2ab 02 20 37.8
comp=Z,0.2nm,0.3s,baz=18,slow=3.2,SNR=3.5
L14A Malta 64.75 331 ⇑P **P 01 51 38.2 -0.4**
baz=65
ELK Elko 64.77 328 *e*P **P 01 51 38.8 +0.1**
ELK pmax pmax
comp=Z,33nm,1.4s
ELK MLR MLR
comp=Z,2μm,19.0s
ELK Elko 64.77 328 *e*P **P 01 51 38.8 +0.1**
comp=Z,33nm,1.4s,mb5.2
ELK LR LR
comp=Z,2μm,19.0s,MS5.3
LOHW Long Hollow 64.78 333 *e*P **P 01 51 38.4 -0.4**
comp=Z,109nm,2.4s,mb5.5
LOHW epP pP 01 51 46.0 -0.6
U04C Hernandez Rese 64.78 322 ⇓P **P 01 51 38.8 -0.2**
baz=65
TPAW Teton Pass 64.83 333 *e*P **P 01 51 39.2 +0.1**
comp=Z,40nm,1.5s,mb5.2
Q08A Gabbs 64.84 325 ⇑P **P 01 51 39.4 +0.1**
baz=65
RRI2 Red Ridge 64.88 333 *e*P **P 01 51 39.3 -0.2**
comp=Z,54nm,1.1s,mb5.5
P09A Austin 64.89 326 ⇓P **P 01 51 39.4 -0.2**
baz=65
K15A Arbon 64.92 331 ⇑P **P 01 51 39.9 +0.2**
baz=65
MOOW Moose Ponds 64.95 333 *e*P **P 01 51 39.3 -0.6**
comp=Z,23nm,1.4s,mb5.0
J16A Bone 64.96 332 ⇓P **P 01 51 39.7 -0.2**
baz=65,SNR=8.8
I17A Pilgram Creek 65.01 334 ⇑P **P 01 51 40.6 +0.3**
baz=65
DCID1 Drake Creek 65.02 333 *e*P **P 01 51 40.7 +0.4**
comp=Z,39nm,0.9s,mb5.4
O10A Cortez Mining, 65.09 327 ⇑P **P 01 51 41.3 +0.4**
baz=65
M12A Wells 65.10 329 ⇓P **P 01 51 40.6 -0.4**
baz=65,SNR=6.5
K14A Jones Ranch, D 65.11 331 ⇓P **P 01 51 40.2 -0.8**
baz=65,SNR=8.5
L13A Double Diamond 65.13 330 ⇑P **P 01 51 41.4 +0.3**
baz=65

S05C Merced 65.17 323 ⇑P **P 01 51 41.3 -0.1**
baz=65,SNR=9.4
O09A Fish Creek Ran 65.36 327 ⇓P **P 01 51 42.2 -0.5**
baz=66
I16A Newdale 65.38 333 ⇓P **P 01 51 42.7 0.0**
baz=66
J15A Blackfoot 65.43 332 ⇓P **P 01 51 42.5 -0.5**
baz=66,SNR=6.3
RLMT Red Lodge 65.43 335 ⇓P **P 01 51 43.1 +0.1**
baz=66
RLMT Red Lodge 65.43 335 *e*P **P 01 51 42.6 -0.4**
comp=Z,31nm,1.3s,mb5.2
RLMT LR LR
comp=Z,1μm,20.0s,MS5.1
WAKR Walker 65.44 324 *e*pP pP 01 51 48.5 -2.5
SAO San Andreas Ge 65.45 322 *e*pP pP 01 51 55.0 +3.8
SAO LR LR
comp=Z,869nm,19.0s,MS5.0
LKWY Lake 65.45 334 PFAKE 01 52 00.0 +17
LKWY LR LR
comp=Z,1μm,20.0s,MS5.1
R06C Coleville 65.46 324 ⇑P **P 01 51 43.3 0.0**
baz=66,SNR=8.4
P08A Dixie Valley 65.51 326 ⇓P **P 01 51 43.6 0.0**
baz=66
YFT Old Faithful 65.55 334 *e*pP pP 01 51 52.9 +1.2
M11A Holland Ranch, 65.55 329 ⇓P **P 01 51 43.5 -0.4**
baz=66,SNR=6.3
BMN Battle Mountai 65.57 327 *e*P **P 01 51 44.4 +0.4**
BMN pmax pmax
comp=Z,56nm,1.8s,mb5.3
BMN MLR MLR
comp=Z,1μm,22.0s,MS5.1
BMN Battle Mountai 65.57 327 *e*P **P 01 51 44.4 +0.4**
comp=Z,56nm,1.8s,mb5.3
BMN LR LR
comp=Z,1μm,22.0s,MS5.1
K13A Stover Farm, H 65.62 330 ⇑P **P 01 51 44.4 +0.2**
baz=66
CMB Columbia Colle 65.67 323 *e*P **P 01 51 44.2 -0.4**
CMB pmax pmax
comp=Z,27nm,1.1s,mb5.2
CMB MLR MLR
comp=Z,732nm,19.0s,MS4.9
CMB Columbia Colle 65.67 323 *e*P **P 01 51 44.2 -0.4**
comp=Z,27nm,1.1s,mb5.2
CMB LR LR
comp=Z,732nm,19.0s,MS4.9
YNR Norris Junctio 65.69 334 *e*pP pP 01 51 49.0 -3.6
L12A House Creek Ra 65.70 330 ⇑P **P 01 51 45.0 +0.3**
baz=66
ULM Lac du Bonnet 65.71 347 P **P 01 51 43.1 -1.5**
comp=Z,32nm,0.7s,mb5.5,baz=156,slow=6.0,SNR=35
ULM pP pP 01 51 50.0 -2.5
comp=Z,66nm,0.8s,baz=163,slow=6.5,SNR=21
ULM LR LR 02 24 48.5
comp=Z,1μm,18.7s,MS5.1,baz=333,slow=40
ULM Lac du Bonnet 65.71 347 *e*P **P 01 51 43.1 -1.5**
comp=Z,65nm,0.9s,mb5.7
ULM LR LR
comp=Z,1μm,19.0s,MS5.2
G18A Lazy EL Ranch, 65.71 335 ⇑P **P 01 51 44.4 -0.4**
baz=66,SNR=20
J14A Carey 65.87 331 ⇑P **P 01 51 46.3 +0.5**
baz=66,SNR=16
I15A Monteview 65.92 332 ⇓P **P 01 51 46.4 +0.2**
baz=66
H16A Russell Place, 65.93 334 ⇑P **P 01 51 46.4 +0.2**
baz=66
O08A Rochester Mine 65.97 326 ⇑P **P 01 51 46.7 +0.1**
baz=66,SNR=9.7
K12A Draper Farm, C 66.01 330 ⇑P **P 01 51 46.9 +0.2**
baz=66,SNR=22
L11A Cat Creek Ranc 66.08 329 ⇓P **P 01 51 47.7 +0.5**
baz=66,SNR=13
QLMT Earthquake Lak 66.11 334 *e*P **P 01 51 49.0 +1.7**
WCN Washoe City 66.16 325 ⇑P **P 01 51 47.9 +0.1**
baz=66
G17A Pierce Place, 66.21 334 ⇑P **P 01 51 48.8 +0.8**
baz=66
J13A Cove Ranch, Pi 66.23 331 ⇑P **P 01 51 47.9 -0.3**
baz=66,SNR=7.0
F18A Big Timber 66.25 335 ⇑P **P 01 51 48.0 -0.3**
baz=66,SNR=16
O07A Toulon 66.27 326 ⇓P **P 01 51 48.7 +0.2**
baz=66
I14A Mackay 66.30 332 ⇓P **P 01 51 48.8 +0.2**
baz=67,SNR=10
N08A GE Springer Mi 66.30 327 ⇓P **P 01 51 48.5 -0.2**
baz=66
L10A Juniper Basin 66.37 329 ⇑P **P 01 51 49.1 0.0**
baz=67,SNR=22
DGMT Dagmar 66.40 340 ⇑P **P 01 51 49.3 +0.2**
baz=67
DGMT Dagmar 66.40 340 *e*P **P 01 51 49.3 +0.2**
comp=Z,63nm,1.0s,mb5.6
DGMT LR LR
comp=Z,749nm,20.0s,MS4.9
M09A Marrel Ranch, 66.40 328 ⇓P **P 01 51 49.2 -0.1**
baz=67
H15A Lima 66.47 333 ⇓P **P 01 51 50.1 +0.4**
baz=67
HLID Hailey 66.47 331 ⇓P **P 01 51 49.9 +0.2**
baz=67
HLID Hailey 66.47 331 *e*P **P 01 51 50.0 +0.3**
comp=Z,12nm,0.9s,mb4.9
HLID LR LR
comp=Z,871nm,21.0s,MS4.9
J12A Stokes Ranch, 66.56 330 ⇓P **P 01 51 50.5 +0.2**
baz=67,SNR=8.4
G16A Moss Hill, Enn 66.59 334 ⇓P **P 01 51 50.3 -0.1**
baz=67,SNR=8.0
I13A Wildhorse Cree 66.60 331 ⇑P **P 01 51 50.6 +0.1**
baz=67,SNR=11
F17A Fitzpatrick Pl 66.64 335 ⇑P **P 01 51 50.7 -0.1**
baz=67,SNR=7.2
N07B Gerlach 66.75 326 ⇑P **P 01 51 51.4 -0.1**
baz=67,SNR=7.8
H14A Leadore 66.80 332 ⇓P **P 01 51 51.9 +0.1**
baz=67,SNR=8.1
O06A Flanigan 66.80 325 ⇑P **P 01 51 51.9 +0.1**
baz=67
G15A Dillon 66.83 333 ⇑P **P 01 51 51.9 -0.1**
baz=67,SNR=10
BOZ Bozeman (W) 66.84 334 ⇓P **P 01 51 51.7 -0.3**
baz=67
BOZ Bozeman (W) 66.84 334 *e*P **P 01 51 51.2 -0.8**
BOZ pmax pmax
comp=Z,85nm,2.0s,mb5.4
BOZ MLR MLR
comp=Z,816nm,19.0s,MS5.0
BOZ Bozeman (W) 66.84 334 *e*P **P 01 51 51.2 -0.8**
comp=Z,85nm,2.0s,mb5.4
BOZ LR LR
comp=Z,816nm,19.0s,MS5.0
E18A Harlowton 66.87 336 ⇓P **P 01 51 51.6 -0.5**
baz=67,SNR=5.8
BEKR Beckwourth 66.89 325 ⇓P **P 01 51 52.6 +0.2**
baz=67
M08A Happy Creek Ra 66.91 327 ⇓P **P 01 51 52.3 -0.2**
baz=67
F16A Kennard Place, 66.95 334 ⇑P **P 01 51 52.7 0.0**
baz=67
I12A Atlanta 66.99 331 ⇓P **P 01 51 52.9 -0.1**
baz=67,SNR=7.8
DLMT Dillon 67.03 333 *e*P **P 01 51 53.5 +0.2**
comp=Z,35nm,1.2s,mb5.3
MFID Camas Ranch 67.04 330 ⇓P **P 01 51 53.2 -0.1**
baz=67,SNR=18
K10A MacKenzie Ranc 67.09 329 ⇑P **P 01 51 53.4 -0.3**
baz=67,SNR=19
H13A Challis 67.16 332 ⇓P **P 01 51 54.1 +0.1**
baz=67,SNR=10
E17A Martinsdale 67.17 335 ⇑P **P 01 51 53.8 -0.3**
baz=67,SNR=7.0
OHCM Honcut 67.17 324 *e*pP pP 01 51 59.7 -2.6
N06A Buffalo Meadow 67.20 326 ⇓P **P 01 51 54.3 -0.2**
baz=67,SNR=15
M07A Soldier Meadow 67.29 327 ⇓P **P 01 51 54.7 -0.3**
baz=68
LRM Limekiln Ridge 67.33 334 *e*P **P 01 51 54.9 -0.2**
D18A Linhart Farms, 67.34 336 ⇓P **P 01 51 54.6 -0.5**
baz=68,SNR=6.6
F15A Butte 67.37 334 ⇑P **P 01 51 55.2 -0.1**
baz=68
L08A Fields 67.42 328 ⇑P **P 01 51 55.5 -0.2**
baz=68
H12A Diamond D Ranc 67.43 331 ⇑P **P 01 51 55.3 -0.5**

baz=68,SNR=6.5
I11A Placerville 67.47 330 ⇑P P **01 51 55.7 -0.4**
baz=68,SNR=14
J10A Berg Farm, Mel 67.51 329 ⇑P P **01 51 56.0 -0.3**
baz=68
G13A Cobalt 67.56 332 ⇑P P **01 51 56.3 -0.3**
baz=68,SNR=11
E16A East Helena 67.57 335 ⇑P P **01 51 56.6 0.0**
baz=68
D17A Six Diamond Ra 67.66 336 ⇑P P **01 51 57.1 -0.1**
baz=68,SNR=8.3
F14A Wisdom 67.73 333 ⇑P P **01 51 57.7 +0.1**
baz=68
WVOR Wild Horse Val 67.74 328 *e*P P **01 51 57.2 -0.6**
WVOR pmax pmax
comp=Z,44nm,1.5s,mb5.3
WVOR Wild Horse Val 67.74 328 *e*P P **01 51 57.2 -0.6**
comp=Z,44nm,1.5s,mb5.3
HRY Holter Researc 67.77 335 *e*pP pP 01 52 04.9 -0.9
L07A Adell 67.82 327 ⇑P P **01 51 59.0 +0.7**
baz=68
K08A Mann Creek Ran 67.88 328 ⇑P P **01 51 58.8 +0.2**
baz=68
HOPS Hopland 67.88 322 PFAKE 01 52 10.0 +11
HOPS LR LR
comp=Z,1μm,21.0s,MS5.1
E15A Deer Lodge 67.89 334 ⇑P P **01 51 58.8 +0.1**
baz=68
D16A Dana Ranch, Ca 67.91 335 ⇓P P **01 51 59.2 +0.4**
baz=68
J09A Fry Pan Ranch, 67.94 329 ⇑P P **01 51 59.1 +0.1**
baz=68
EGMT Eagleton 68.00 337 ⇓P P **01 51 58.9 -0.4**
baz=68
EGMT Eagleton 68.00 337 *e*P P **01 51 58.3 -1.0**
EGMT LR LR
comp=Z,43nm,1.2s,mb5.3
comp=Z,983nm,21.0s,MS5.0
C17A Wharram Farm, 68.08 336 ⇓P P **01 51 59.3 -0.5**
baz=68,SNR=10
H11A Donnelly 68.09 331 ⇑P P **01 51 59.6 -0.4**
baz=68
F13A Darby 68.14 333 ⇓P P **01 51 59.9 -0.3**
baz=68,SNR=10
K07A Rock Creek Ran 68.24 327 ⇑P P **01 52 00.7 -0.2**
baz=68
E14A Clinton 68.25 333 ⇓P P **01 52 00.7 -0.2**
baz=68,SNR=9.8
B18A Beardsley Farm 68.31 337 ⇑P P **01 52 00.6 -0.7**
baz=69,SNR=7.2
J08A Circle Bar Ran 68.32 328 ⇑P P **01 52 00.7 -0.7**
baz=69
D15A Lincoln 68.32 334 ⇑P P **01 52 00.9 -0.5**
baz=69
I09A Lost Marbles R 68.39 329 ⇓P P **01 52 02.2 +0.3**
baz=69
F12A Elk City 68.53 332 ⇓P P **01 52 02.4 -0.2**
baz=69,SNR=7.4
CHMT Chamberlain Mo 68.53 334 *e*P P **01 52 02.8 +0.2**
E13A Victor 68.57 333 ⇓P P **01 52 03.1 +0.2**
baz=69,SNR=9.5
SCHQ Schefferville 68.58 6 P P **01 52 01.7 -1.1**
comp=Z,13nm,0.8s,mb5.0,baz=186,slow=4.4,SNR=11
SCHQ LR LR 02 23 28.8
comp=Z,1μm,20.6s,MS5.1,baz=226,slow=37
SCHQ Schefferville 68.58 6 *e*P P **01 52 01.5 -1.3**
comp=Z,22nm,0.9s,mb5.1
SCHQ LR LR
comp=Z,2μm,21.0s,MS5.3
WDC Whiskeytown Da 68.61 324 *e*P P **01 52 01.7 -1.6**
WDC pmax pmax
comp=Z,41nm,1.8s,mb5.1
WDC MLR MLR
comp=Z,801nm,20.0s,MS5.0
WDC Whiskeytown Da 68.61 324 *e*P P **01 52 01.7 -1.5**
comp=Z,41nm,1.8s,mb5.1
WDC LR LR
comp=Z,801nm,20.0s,MS5.0
C16A Fuhringer Ranc 68.61 335 ⇓P P **01 52 03.0 -0.1**
baz=69,SNR=6.6
B17A L&G Farms, Che 68.63 336 ⇓P P **01 52 03.2 0.0**
baz=69
G11A Walters Elk Ra 68.73 331 ⇓P P **01 52 03.6 -0.4**
baz=69,SNR=12
I08A Drewsey 68.76 329 ⇑P P **01 52 04.3 +0.2**
baz=69
MSO Missoula 68.77 333 *e*P P **01 52 04.7 +0.5**
MSO LR LR
comp=Z,45nm,1.3s,mb5.2
comp=Z,588nm,19.0s,MS4.8
A18A Metzger Ranch, 68.77 337 ⇓P P **01 52 03.4 -0.7**
baz=69,SNR=7.0
D14A Greenough 68.77 334 ⇓P P **01 52 04.4 +0.2**
baz=69
BMO Blue Mountains 68.82 330 *e*P P **01 52 03.8 -0.7**
comp=Z,73nm,2.1s,mb5.2
BMO LR LR
comp=Z,1μm,20.0s,MS5.0
SLMT Seeley Lake 68.89 334 *e*P P **01 52 06.4 +1.5**
C15A Salmond Ranch, 68.94 335 ⇑P P **01 52 05.5 +0.4**
baz=69,SNR=13
G10A Bishop Farm, J 69.05 331 ⇓P P **01 52 06.0 +0.1**
baz=69,SNR=18
J06A Christmas Vall 69.11 327 ⇓P P **01 52 06.4 +0.1**
baz=69,SNR=19
A17A Triple J Farms 69.12 337 ⇓P P **01 52 06.0 -0.2**
baz=69,SNR=6.3
LHEM Herd Peak 69.12 325 P P **01 52 04.5 -1.9**
K05A Summer Lake 69.14 327 ⇓P P **01 52 07.8 +1.3**
baz=69,SNR=11
E12A Beaver Dam Sad 69.17 332 ⇑P P **01 52 06.5 -0.1**
baz=69,SNR=11
D13A Huson 69.19 333 ⇑P P **01 52 06.5 -0.3**
baz=69
H08A Prairie City 69.25 329 ⇑P P **01 52 07.7 +0.5**
baz=70,SNR=22
HOG Hogback Mounta 69.25 326 P P **01 52 08.0 +0.8**
SWMT Swartz Lake 69.32 334 *e*P P **01 52 09.3 +1.8**
B15A Bradely Ranch, 69.35 335 ⇓P P **01 52 07.3 -0.4**
baz=70,SNR=8.0
I07A Izee 69.36 328 ⇑P P **01 52 08.2 +0.4**
baz=70,SNR=9.8
G09A Cove 69.36 330 ⇑P P **01 52 07.9 +0.1**
baz=70,SNR=16
C14A Swan Lake 69.41 334 ⇑P P **01 52 08.3 +0.2**
baz=70
E11A Bogner Ranch, 69.42 332 ⇑P P **01 52 07.3 -0.9**
baz=70,SNR=12
YBH Yreka Blue Hor 69.46 325 *e*P P **01 52 07.6 -1.0**
YBH pmax pmax
comp=Z,19nm,1.1s
YBH MLR MLR
comp=Z,1μm,22.0s
YBH Yreka Blue Hor 69.46 325 *e*P P **01 52 07.6 -0.9**
comp=Z,19nm,1.1s,mb4.9
YBH LR LR
comp=Z,1μm,22.0s,MS5.1
A16A West Butte Ran 69.47 336 ⇑P P **01 52 08.4 0.0**
baz=70
KHMM Horse Mountain 69.48 324 *e*pP pP 01 52 11.8 -4.9
YBMT Yellow Bay 69.60 334 *e*P P **01 52 09.5 +0.3**
F10A Beach Ranch, E 69.61 331 ⇑P P **01 52 09.4 +0.1**
baz=70
JTMT Jette 69.62 334 *e*P P **01 52 10.0 +0.6**
I06A Prineville 69.62 328 ⇓P P **01 52 09.8 +0.3**
baz=70,SNR=9.7
B14A Marquette Ranc 69.68 335 ⇑P P **01 52 09.7 0.0**
baz=70,SNR=5.5
C13A Hot Springs 69.69 334 ⇑P P **01 52 09.8 -0.1**
baz=70,SNR=12
F09A S2 Ranch, Elgi 69.74 330 ⇑P P **01 52 10.2 +0.1**
baz=70
BSMT Bassoo Peak 69.92 334 P P **01 52 11.8 +0.5**
E10A Myers Farm, Un 69.93 331 ⇓P P **01 52 11.6 +0.2**
baz=70
VNA3 Neumayer Olymp 69.94 162 *e*P P **01 52 10.6 -0.5**
VNA3 Neumayer Olymp 69.94 162 *e*P P **01 52 10.6 -0.5**
VNA3 *e* 01 52 20.1
VNA3 *e* 01 52 26.5
A15A Johnson Ranch, 69.94 336 ⇑P P **01 52 11.1 -0.3**
baz=70
G08A Pilot Rock 69.94 330 ⇑P P **01 52 11.4 -0.1**
baz=70,SNR=11
D11A Klaveano Farm, 69.99 332 ⇑P P **01 52 10.8 -0.9**
baz=70,SNR=7.3
PPT Papeete 70.03 256 *e*S S 02 01 31.9 +10
comp=Z,445nm,22.8s
PPT Papeete 70.03 256 LR LR 02 17 21.6
comp=Z,474nm,18.0s,MS4.8,baz=79,slow=31
LNOR Lincton Mounta 70.03 330 *e*P P **01 52 15.1 +3.1**
LNOR Lincton Mounta 70.03 330 *e*pP pP 01 52 15.1 -4.9
C12B Naegeli Ranch, 70.11 333 ⇑P P **01 52 12.6 +0.2**
baz=70,SNR=9.8
HUMO Hull Mountain 70.18 325 *e*pP pP 01 52 24.6 +3.6
HUMO LR LR
comp=Z,787nm,20.0s,MS5.0
B13A Whitefish 70.19 334 ⇑P P **01 52 12.5 -0.3**
baz=70
VNA1 Neumayer--Stat 70.21 161 *e*P P **01 52 12.7 -0.1**
VNA1 Neumayer--Stat 70.21 161 *e*P P **01 52 12.7 -0.1**
VNA1 *e* pP 01 52 22.0 +1.3
VNA1 *e* 01 52 28.8
A14A Double T Ranch 70.22 335 ⇓P P **01 52 12.6 -0.4**
baz=70,SNR=6.5
F08A Pendleton 70.22 330 ⇑P P **01 52 12.7 -0.5**
baz=70
VIPM Ingram Point 70.23 328 P P **01 52 13.7 +0.5**
H06A Lindquist Farm 70.24 328 ⇓P P **01 52 13.5 +0.2**
baz=70,SNR=9.6
G07A Ruggs Ranch, H 70.28 329 ⇑P P **01 52 13.6 +0.1**
baz=70
D10A Wagner Farm, O 70.43 332 ⇑P P **01 52 13.8 -0.5**
baz=71,SNR=8.9
E09A Wood Farm, Sta 70.44 331 ⇑P P **01 52 14.0 -0.4**
baz=71,SNR=7.1
WALA Waterton Lakes 70.49 335 *e*P P **01 52 14.6 -0.1**
comp=Z,0.6nm,0.9s
C11A Tepee Creek (N 70.55 333 ⇓P P **01 52 14.6 -0.5**
baz=71,SNR=9.4
VNA2 Neumayer--Watz 70.56 161 *e*P P **01 52 14.4 -0.5**
baz=312,slow=11
VNA2 Neumayer--Watz 70.56 161 *e*P P **01 52 14.4 -0.5**
baz=293,slow=6.6
VNA2 *e* pP 01 52 23.4 +0.5
VNA2 *e* 01 52 30.2
A13A Flathead Natio 70.60 335 ⇓P P **01 52 15.3 -0.1**
baz=71
H05A Madras 70.64 328 ⇓P P **01 52 15.8 +0.1**
baz=71
B12A Libby 70.74 334 ⇓P P **01 52 16.8 +0.5**
baz=71
G06A Carlson Farm, 70.74 329 ⇑P P **01 52 16.6 +0.2**
baz=71
FRIS Frissel Point 70.80 327 P P **01 52 16.9 +0.3**
F07A Phinny Hill Vi 70.85 330 ⇓P P **01 52 18.0 +1.0**
baz=71
D09A Jones Farm, Ri 70.91 331 ⇑P P **01 52 17.6 +0.3**
baz=71
HAWA Hanford 71.01 330 *e*P P **01 52 18.0 0.0**
comp=Z,37nm,1.3s,mb5.2
HAWA LR LR
comp=Z,1μm,21.0s,MS5.2
RSW Rattlesnake Hi 71.04 330 *e*P P **01 52 18.8 +0.7**
B11A Sandpoint 71.05 333 ⇓P P **01 52 17.9 -0.2**
baz=71,SNR=9.0
G05A Wamic 71.09 328 ⇑P P **01 52 18.5 +0.1**
baz=71
A12A Yaak River Ran 71.12 334 ⇓P P **01 52 18.7 +0.1**
baz=71,SNR=17
H04A Detroit Lake 71.16 327 ⇓P P **01 52 19.0 +0.2**
baz=71
F06A Goldendale 71.19 329 ⇓P P **01 52 19.1 +0.1**
baz=71
D08A Wollman Farm, 71.20 331 ⇑P P **01 52 19.7 +0.7**
baz=71
NEW Newport 71.26 333 *e*P P **01 52 19.4 0.0**
NEW pmax pmax
comp=Z,37nm,1.3s
NEW MLR MLR
comp=Z,971nm,20.0s
NEW Newport 71.26 333 *e*P P **01 52 19.4 0.0**
comp=Z,37nm,1.3s,mb5.2
NEW LR LR
comp=Z,971nm,20.0s,MS5.1
I03A Eugene 71.26 326 ⇓P P **01 52 20.1 +0.6**
baz=72
E07A Sunnyside 71.29 330 ⇑P P **01 52 19.7 +0.1**
baz=72,SNR=6.5
FFC Flin Flon 71.30 345 *e*P P **01 52 18.4 -1.1**
FFC pmax pmax
comp=Z,19nm,0.9s,mb5.0
FFC MLR MLR
comp=Z,1μm,20.0s,MS5.1
FFC Flin Flon 71.30 345 *e*P P **01 52 18.4 -1.0**
comp=Z,19nm,0.9s,mb5.0
FFC LR LR
comp=Z,1μm,20.0s,MS5.1
HOOD Mount Hood Mea 71.32 328 *e*P P **01 52 18.9 -1.0**
comp=Z,78nm,1.1s,mb5.5
OD2 Odessa Site #2 71.34 331 P P **01 52 20.1 +0.2**
C09A Chrisman Ranch 71.44 332 ⇓P P **01 52 20.9 +0.4**
baz=72
A11A Hall Mountain, 71.44 334 ⇑P P **01 52 20.7 +0.2**
baz=72,SNR=8.0
G04A Mulino 71.67 328 ⇓P P **01 52 22.8 +0.9**
baz=72
COR Corvallis 71.68 327 *e*P P **01 52 21.8 -0.3**
COR pmax pmax
comp=Z,169nm,1.4s,mb5.8
COR MLR MLR
comp=Z,1μm,19.0s,MS5.1
COR Corvallis 71.68 327 *e*P P **01 52 21.8 -0.3**
comp=Z,169nm,1.4s,mb5.8
COR LR LR
comp=Z,1μm,19.0s,MS5.1
H03A Soap Creek Ran 71.74 327 ⇓P P **01 52 23.0 +0.6**
baz=72
C08A Higginbotham F 71.78 331 ⇑P P **01 52 23.0 +0.4**
baz=72
D07A Quincy 71.80 330 ⇑P P **01 52 23.0 +0.4**
baz=72
E06A Yakima 71.83 329 ⇓P P **01 52 23.0 +0.1**
baz=72
B09A Rice 71.83 332 ⇓P P **01 52 22.7 -0.2**
baz=72,SNR=7.2
A10A Northport 71.98 333 ⇑P P **01 52 23.8 +0.1**
baz=72
TBM Table Mountain 72.08 330 P P **01 52 25.2 +0.9**
F04A Amboy 72.13 328 ⇑P P **01 52 24.5 -0.2**
baz=72,SNR=5.3
WTV Waterville 72.15 331 P P **01 52 25.3 +0.5**
SNAA Sanae 72.16 161 *e*P P **01 52 23.6 -1.0**
SNAA *e* pP 01 52 32.3 -0.3
SNAA *e* 01 52 39.6
SNAA Sanae 72.16 161 *e*P P **01 52 23.8 -0.8**
SNAA *e**PP pP 01 52 32.8 +0.2
SNAA pmax pmax
comp=Z,48nm,1.0s
SNAA Sanae 72.16 161 *e*P P **01 52 23.8 -0.8**
comp=Z,48nm,1.0s,mb5.4
SNAA *e*pP pP 01 52 32.8 +0.2
C07A Waterville 72.19 331 ⇑P P **01 52 25.3 +0.3**
baz=72,SNR=6.7
E05A Randle 72.23 329 ⇓P P **01 52 25.6 +0.3**
baz=72
ETW Entiat 72.26 331 *e*P P **01 52 26.1 +0.7**
B08A Colville Reser 72.33 332 ⇑P P **01 52 25.7 -0.1**
baz=73
LON Longmire 72.38 329 *e*P P **01 52 25.4 -0.8**
LON pmax pmax
comp=Z,12nm,1.0s,mb4.8
LON Longmire 72.38 329 *e*P P **01 52 25.4 -0.8**
comp=Z,12nm,1.0s,mb4.8
A08A Turner Farm, O 72.73 332 ⇓P P **01 52 28.4 +0.2**
baz=73,SNR=8.1
B07A Winthrop 72.77 331 ⇑P P **01 52 28.2 -0.2**
baz=73,SNR=5.8
C05A Tolt Reservoir 72.98 330 ⇓P P **01 52 29.8 +0.1**
baz=73
A07A Ashnola River, 73.31 332 ⇑P P **01 52 31.9 +0.2**
baz=74,SNR=12
RPW Rockport 73.42 331 *e*P P **01 52 32.0 -0.3**
RPW *e*pP pP 01 52 36.8 -3.5
FCC Fort Churchill 73.42 351 *e*P P **01 52 31.1 -1.0**
comp=Z,1.2nm,0.9s
JCW Jim Creek 73.44 330 *e*P P **01 52 32.1 -0.3**
B06A Marblemount 73.45 331 ⇑P P **01 52 32.4 0.0**
baz=74
EDM Edmonton 73.55 338 *e*P P **01 52 31.9 -1.1**
B05A Bryant 73.57 330 ⇓P P **01 52 33.1 -0.1**
baz=74
C04A Brinnon 73.62 329 ⇑P P **01 52 33.5 0.0**
baz=74
CMW Cultus Mountai 73.69 330 P P **01 52 33.3 -0.6**
LIC Lamto 73.71 79 *e*P P **01 52 34.2 -0.6**
comp=Z,54nm,0.8s,mb5.2
LIC Lamto 73.71 79 *e*P P **01 52 34.1 -0.7**
comp=Z,83nm,0.8s,mb5.7
LIC Lamto 73.71 79 *e*P P **01 52 34.2 -0.6**
comp=Z,27nm,0.8s,mb5.2
TIC Toumodi 73.83 79 *e*P P **01 52 34.8 -0.7**
comp=Z,103nm,1.0s,mb5.7
DBIC Dimbokro 74.00 79 P P **01 52 36.0 -0.4**
comp=Z,11nm,0.7s,mb4.9,baz=233,slow=6.0,SNR=36
DBIC pP pP 01 52 43.8 -0.7
comp=Z,28nm,0.8s,baz=235,slow=6.2,SNR=25
DBIC LR LR 02 24 00.8
comp=Z,2μm,18.4s,MS5.4,baz=240,slow=35
DBIC Dimbokro 74.00 79 *e*P P **01 52 35.8 -0.7**
DBIC *e**PP pP 01 52 43.6 -0.9
DBIC pmax pmax
comp=Z,28nm,0.8s
DBIC MLR MLR
comp=Z,1μm,19.0s
DBIC Dimbokro 74.00 79 *e*P P **01 52 35.8 -0.7**
comp=Z,28nm,0.8s,mb5.2
DBIC *e*pP pP 01 52 43.5 -0.9
DBIC LR LR
comp=Z,1μm,19.0s,MS5.2
KIC Kosan Boka 74.02 79 *e*P P **01 52 36.2 -0.4**
comp=Z,234nm,0.8s,mb6.2
A05A Maple Falls 74.07 331 ⇓P P **01 52 36.4 +0.3**
baz=74
MAIT Maitri 76.80 160 *e*P P **01 52 49.3 -2.2**
NVL N'lazarevskaya 76.83 160 *e*P P **01 52 52.7 +1.0**
NVL pmax pmax
comp=Z,32nm,1.1s,mb5.2
FRB Frobisher Bay 77.27 4 LR LR 02 28 35.3
comp=Z,1μm,20.1s,MS5.3,baz=186,slow=37
MORF Marmelete 81.32 48 *e*P P **01 53 19.7 +2.9**
comp=Z,80nm,1.8s,mb5.3
RTC Rabat Centre 81.35 52 PFAKE 01 53 30.0 +13
RTC LR LR
comp=Z,666nm,20.0s,MS5.0
YKA Yellowknife Ar 81.36 343 P P **01 53 15.3 -1.1**
comp=Z,3.9nm,0.7s,mb4.4,baz=143,slow=6.1,SNR=73
YKA pP pP 01 53 22.5 -2.0
comp=Z,20nm,0.9s,baz=143,slow=6.0,SNR=40
YKA LR LR 02 33 26.3
comp=Z,378nm,20.3s,MS4.7,baz=95,slow=39
YKA Yellowknife Ar 81.36 343 P P **01 53 15.4 -1.0**
YKA *PP pP 01 53 22.5 -2.0
PTEO Sao Teotonio 81.37 48 *e*P P **01 53 19.1 +2.0**
TOA0 Torodi Ar. Sit 81.98 74 *e*P P **01 53 20.4 -0.4**
TOA0 *e*pP pP 01 53 28.8 -0.1
TORD Torodi Ar. Bea 81.98 74 P P **01 53 20.6 -0.2**
comp=Z,21nm,0.9s,mb5.0,baz=260,slow=4.8,SNR=82
TORD pP pP 01 53 27.2 -1.6
comp=Z,47nm,0.8s,baz=264,slow=3.3,SNR=45
TORD PKPPKP 02 20 01.6
comp=Z,0.5nm,1.0s,baz=149,slow=1.7,SNR=2.4
EGRO El Granado 82.26 49 P P **01 53 23.8 +2.0**
comp=Z,54nm,1.5s,mb5.2
SBA Scott Base 82.26 191 PFAKE 01 53 30.0 +8.8
SBA LR LR
comp=Z,831nm,20.0s,MS5.1
EVO Evora 82.28 47 ⇑*i*P P **01 53 22.5 +0.6**
comp=Z,56nm,0.9s,mb5.2
EVO Evora 82.28 47 *e*P P **01 53 22.8 +0.9**
comp=Z,33nm,1.2s,mb5.1
SFJD Kangerlussuaq 82.53 10 LR LR 02 30 20.3
comp=Z,1μm,20.6s,MS5.2,baz=203,slow=36
SFS San Fernando 82.79 50 PFAKE 01 53 40.0 +15
SFS LR LR
comp=Z,984nm,19.0s,MS5.2
PBAR Barrancos 82.84 48 *e*P P **01 53 26.2 +1.4**
EMIN Mina Concepcio 82.95 49 P P **01 53 27.1 +1.7**
comp=Z,38nm,2.7s,mb5.0
EBAD Badajoz 83.09 48 P P **01 53 27.6 +1.6**
comp=Z,49nm,1.9s,mb5.2
PCBR Castelo Branco 83.19 46 *e*P P **01 53 27.8 +1.2**
comp=Z,42nm,1.2s,mb5.3
ESPR Espera 83.20 50 P P **01 53 28.4 +1.7**
comp=Z,40nm,1.4s,mb5.3
PVIS Viseu 83.25 45 *e*P P **01 53 28.0 +1.1**
comp=Z,39nm,1.6s,mb5.2
EJIF Jimena Fronter 83.33 50 P P **01 53 29.7 +2.3**
EJIF pmax pmax
comp=Z,56nm,1.2s,mb5.5
EJIF Jimena Fronter 83.33 50 P P **01 53 29.7 +2.3**
comp=Z,56nm,1.2s,mb5.5
VNDA Vanda 83.34 191 P P **01 53 26.5 -0.3**
comp=Z,9.1nm,0.9s,mb4.8,baz=106,slow=4.1,SNR=19
VNDA pP pP 01 53 34.3 -0.6
comp=Z,6.8nm,0.8s,baz=126,slow=3.6,SNR=7.8
VNDA LR LR 02 23 03.2
comp=Z,955nm,20.4s,MS5.2,baz=122,slow=30
VNDA Vanda 83.34 191 P P **01 53 26.5 -0.2**
VNDA *PP pP 01 53 34.3 -0.6
MTE Manteigas 83.37 46 *e*P P **01 53 28.5 +1.0**
MTE Manteigas 83.37 46 *e*P P **01 53 28.0 +0.6**
comp=Z,28nm,1.1s,mb5.2
MTE LR LR
comp=Z,764nm,19.0s,MS5.1
WRAK Wrangell Islan 83.61 332 PFAKE 01 53 40.0 +12
WRAK LR LR
comp=Z,1μm,20.0s,MS5.2
DLBC Dease Lake 83.83 335 *e*P P **01 53 29.3 -0.1**
DLBC *e*pP pP 01 53 38.0 +0.5
EMIJ Mijas 83.89 50 P P **01 53 31.6 +1.4**
comp=Z,31nm,1.8s,mb5.1
MVO Moncorvo 84.03 45 *e*P P **01 53 32.9 +2.0**
ELOJ Sierra Loja 84.57 50 P P **01 53 35.6 +1.9**
ELOJ pmax pmax
comp=Z,23nm,1.2s,mb5.2
ELOJ Sierra Loja 84.57 50 P P **01 53 35.6 +1.9**
comp=Z,22nm,1.2s,mb5.2
ELUQ Luque 84.64 50 P P **01 53 35.8 +1.8**
ELUQ pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
ELUQ Luque 84.64 50 P P **01 53 35.8 +1.8**
comp=Z,8.8nm,0.7s,mb5.0
ERON Agron 84.78 50 P P **01 53 35.6 +0.8**
comp=Z,2.8nm,0.6s,mb4.6
EGUA Guajares 84.90 50 P P **01 53 35.6 +0.3**
EGUA pmax pmax
comp=Z,22nm,0.9s,mb5.3
EGUA Guajares 84.90 50 P P **01 53 35.6 +0.3**
comp=Z,22nm,0.9s,mb5.3
ECOG Cogollos-Vega 85.05 50 P P **01 53 35.9 -0.2**
PAB San Pablo 85.30 48 PFAKE 01 53 50.0 +13
PAB LR LR
comp=Z,987nm,22.0s,MS5.2
EBER Berja 85.43 51 P P **01 53 38.4 +0.4**
comp=Z,31nm,1.6s,mb5.2
EQES Quesada 85.61 50 P P **01 53 38.5 -0.4**
comp=Z,13nm,1.1s,mb5.1
ESDC Sonseca Array 85.63 48 P P **01 53 39.3 +0.3**
comp=Z,3.3nm,0.8s,mb4.6,baz=256,slow=5.2,SNR=19
ESDC pP pP 01 53 45.7 -1.3
comp=Z,3.3nm,0.7s,baz=258,slow=5.0,SNR=12
ESDC Sonseca Array 85.63 48 P P **01 53 39.0 +0.1**
comp=Z,6.2nm,1.0s,mb4.8
ESLA Sonseca Array 85.63 48 PFAKE 01 53 50.0 +11
ESLA LR LR
comp=Z,6μm,20.0s,MS6.0
ENIJ Nijar 85.96 51 P P **01 53 39.9 -0.8**
ENIJ pmax pmax
comp=Z,11nm,0.8s,mb5.1
ENIJ Nijar 85.96 51 P P **01 53 39.9 -0.7**
comp=Z,11nm,0.8s,mb5.1
EVIA Vianos 86.32 49 P P **01 53 43.6 +1.2**
EVIA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
EVIA Vianos 86.32 49 P P **01 53 43.6 +1.2**
comp=Z,10nm,0.9s,mb5.1
SKAG Skagway 86.66 334 *e*pP pP 01 53 52.1 +0.5
ETOB Tobarra 87.03 49 P P **01 53 46.1 +0.3**
comp=Z,12nm,0.9s,mb5.1
KIP Kipapa 87.07 293 *i* P P **01 53 43.7 -2.7**
ETOR Torete 87.40 47 P P **01 53 47.5 -0.1**
ETOR pmax pmax
comp=Z,12nm,1.0s,mb5.1
ETOR Torete 87.40 47 P P **01 53 47.5 -0.1**
comp=Z,12nm,1.0s,mb5.1
EBEN Beniarda 88.02 50 P P **01 53 50.2 -0.4**
comp=Z,24nm,1.2s,mb5.3
TAM Tamanrasset 88.08 66 *e*P P **01 53 51.8 +0.5**
TAM pmax pmax
comp=Z,14nm,1.0s,mb5.2

TAM Tamanrasset 88.08 66 eP P 01 53 51.8 +0.5
comp=Z,14nm,1.0s,mb5.2
HYT Haines Junctio 88.32 335 eP P 01 53 52.0 +0.6
PNL Peninsula 88.53 333 eP P 01 53 51.3 -1.2
comp=Z,87nm,1.6s,mb5.8
RES Resolute Bay 88.77 355 LR LR 02 34 31.4
comp=Z,926nm,21.3s,MS5.2,baz=76,slow=36
RES Resolute Bay 88.77 355 eP P 01 53 52.8 -0.5
RES pmax pmax
comp=Z,22nm,1.0s,mb5.4
RES Resolute Bay 88.77 355 eP P 01 53 52.8 -0.5
comp=Z,22nm,1.0s,mb5.4
SUR Sutherland 89.00 123 PFAKE 01 54 10.0 +15
SUR LR LR
comp=Z,2µm,20.0s,MS5.5
SUMG Summit 89.48 11 eP P 01 53 56.9 +0.1
comp=Z,34nm,1.1s,mb5.6
SUMG epP pP 01 54 04.3 -0.6
TSUM Tsumeb 89.50 110 eP P 01 53 57.0 -1.1
comp=Z,4.5nm,1.0s,mb4.8
TSUM LR LR
comp=Z,845nm,20.0s,MS5.2
DAWY Dawson 90.74 337 eP P 01 54 02.1 -0.7
EGAK Eagle 91.76 337 eP P 01 54 07.0 -0.5
comp=Z,37nm,1.2s,mb5.6
EGAK LR LR
comp=Z,845nm,21.0s,MS5.2
MENT Mentasta 91.92 335 eP P 01 54 08.1 -0.2
BOSA Boshof 93.74 120 LR LR 02 34 57.2
comp=Z,2µm,18.3s,MS5.5,baz=260,slow=34
BOSA Boshof 93.74 120 PFAKE 01 54 30.0 +12
BOSA LR LR
comp=Z,2µm,20.0s,MS5.5
MAW Mawson 93.95 166 LR LR 02 33 07.8
comp=Z,1µm,22.0s,MS5.2,baz=228,slow=33
MAW Mawson 93.95 166 PFAKE 01 54 30.0 +12
MAW LR LR
comp=Z,3µm,21.0s,MS5.8
ORIF Oris-en-Rattie 94.19 45 eP P 01 54 19.6 +0.4
comp=Z,49nm,1.5s,mb5.4
ORIF Oris-en-Rattie 94.19 45 eP P 01 54 19.6 +0.4
ORIF pmax pmax
comp=Z,24nm,1.5s,mb5.4
ORIF Oris-en-Rattie 94.19 45 eP P 01 54 19.6 +0.4
comp=Z,24nm,1.5s,mb5.4
COLA College 94.39 336 iP P 01 54 18.5 -1.1
COLA College 94.39 336 eP P 01 54 18.3 -1.3
comp=Z,13nm,1.0s,mb5.3
COLA LR LR
comp=Z,725nm,21.0s,MS5.1
KEST Kesra 94.54 55 LR LR 02 38 27.2
comp=Z,323nm,18.0s,MS4.8,baz=193,slow=36
SNZO South Karori 94.70 226 PFAKE 01 54 30.0 +8.3
SNZO LR LR
comp=Z,1µm,19.0s,MS5.4
BNI Bardonecchia 94.77 45 PFAKE 01 54 30.0 +8.2
BNI LR LR
comp=Z,976nm,21.0s,MS5.2
LPL La Plagne 94.92 45 eP P 01 54 22.8 +0.3
comp=Z,41nm,1.4s,mb5.4
LPL La Plagne 94.92 45 eP P 01 54 22.8 +0.3
LPL pmax pmax
comp=Z,20nm,1.4s,mb5.3
LPL La Plagne 94.92 45 eP P 01 54 22.8 +0.3
comp=Z,20nm,1.4s,mb5.4
LPG La Plagne 94.93 45 eP P 01 54 23.2 +0.6
comp=Z,31nm,1.4s,mb5.3
LPG La Plagne 94.93 45 eP P 01 54 23.2 +0.6
LPG pmax pmax
comp=Z,16nm,1.4s,mb5.3
LPG La Plagne 94.93 45 eP P 01 54 23.2 +0.6
comp=Z,16nm,1.4s,mb5.2
LBTB Lobatse 95.10 117 PFAKE 01 54 40.0 +16
LBTB LR LR
comp=Z,1µm,19.0s,MS5.5
WLF Walferdange 95.56 40 PFAKE 01 54 40.0 +15
WLF LR LR
comp=Z,577nm,20.0s,MS5.0
BFO Black Forest 96.64 42 PFAKE 01 54 40.0 +10
BFO LR LR
comp=Z,583nm,21.0s,MS5.0
TUE Stuetta 96.92 44 PFAKE 01 54 40.0 +8.4
TUE LR LR
comp=Z,848nm,21.0s,MS5.2
VLC Villacollemand 97.15 46 PFAKE 01 54 40.0 +7.3
VLC LR LR
comp=Z,768nm,22.0s,MS5.1
WTTA Wattenberg 98.61 44⇑iPdiff P 01 54 40.0 +0.8
comp=Z,14nm,1.2s,mb5.4
WDD Wield Dalam 98.69 55 PFAKE 01 54 50.0 +10
WDD LR LR
comp=Z,788nm,20.0s,MS5.2
AQU L'Aquila 98.98 49 PFAKE 01 54 50.0 +9.1
AQU LR LR
comp=Z,559nm,20.0s,MS5.1
ABTA Abfaltersbach 99.11 44⇑iPdiff P 01 54 42.8 +1.3
comp=Z,14nm,1.2s,mb5.4
KONO Kongsberg 99.64 31 iP Pdif 01 54 41.5 -2.2
CEL Celeste 100.17 53 PFAKE 01 55 00.0 +14
CEL LR LR
comp=Z,507nm,21.0s,MS5.0
KHC Kasperske Hory 100.21 42 iP Pdif 01 54 46.1 -0.1
GERES GERESS Array B 100.24 42 pP 01 54 52.1
comp=Z,0.8nm,0.8s,baz=242,slow=2.1,SNR=3.8
CASY Casey 100.26 183 PFAKE 01 55 00.0 +14
CASY LR LR
comp=Z,753nm,19.0s,MS5.2
LSZ Lusaka 100.31 108 PFAKE 01 55 00.0 +13
LSZ LR LR
comp=Z,2µm,21.0s,MS5.6
CUC Castrocucco 100.39 51 PFAKE 01 55 00.0 +13
CUC LR LR
comp=Z,471nm,20.0s,MS5.0
TIP Timpagrande 100.98 52 PFAKE 01 55 00.0 +10
TIP LR LR
comp=Z,606nm,21.0s,MS5.1
FUNA Funafuti 101.64 258 PFAKE 01 55 00.0 +7.4
FUNA LR LR
comp=Z,7µm,20.0s,MS6.1
KBS Kingsbay 102.89 11 PFAKE 01 55 10.0 +12
KBS LR LR
comp=Z,1µm,22.0s,MS5.3
TIR Tirane 103.62 50 PFAKE 01 55 10.0 +8.6
TIR LR LR
comp=Z,530nm,20.0s,MS5.1
PSZ Piszkesteto 104.24 44 PFAKE 01 55 20.0 +16
PSZ LR LR
comp=Z,532nm,21.0s,MS5.0
KIEV Kiev 110.36 41 PFAKE 01 59 40.0 +7.8
KIEV LR LR
comp=Z,842nm,19.0s,MS5.3
BILL Bilibino 112.45 339 iPKIKP PKiKP 01 59 32.9 -2.8
BILL e 02 00 21.0
BILL pmax pmax
comp=Z,3.0nm,1.3s
BILL Bilibino 112.45 339 PFAKE 01 59 50.0 +14
BILL LR LR
comp=Z,658nm,20.0s,MS5.2
CSS Prodhromos 113.89 58 PFAKE 01 59 50.0 +11
CSS LR LR
comp=Z,483nm,19.0s,MS5.1
OBN Obninsk 114.21 35 iPKIKP PKiKP 01 59 36.7 -2.7
OBN e 02 00 35.1
OBN pmax pmax
comp=Z,24nm,1.7s
OBN MLR MLR
comp=Z,600nm,19.0s,MS5.2
OBN Obninsk 114.21 35 PFAKE 01 59 50.0 +11
OBN LR LR
comp=Z,892nm,20.0s,MS5.4
ABPO Ambohimpanom 115.92 119 PFAKE 02 00 00.0 +16
ABPO LR LR
comp=Z,1µm,20.0s,MS5.5
HNR Honiara 119.41 251 PFAKE 02 00 00.0 +9.3
HNR LR LR
comp=Z,330nm,19.0s,MS5.0
TIXI Tiksi 119.89 351 iPKIKP PKPdf 01 59 50.7 +0.8
TIXI Tiksi 119.89 351 PFAKE 02 00 00.0 +10
TIXI LR LR
comp=Z,480nm,20.0s,MS5.1
KIV Kislovodsk 120.29 47 PFAKE 02 00 00.0 +8.5
KIV LR LR
comp=Z,331nm,21.0s,MS5.0
STKA Stephens Creek 121.89 218 PKP PKPdf 01 59 53.4 -1.7
comp=Z,1.9nm,0.8s,baz=202,slow=5.4,SNR=2.4
STKA pPKP pPKPdf 02 00 00.6 -2.8

comp=Z,7.8nm,0.9s,baz=8.1,slow=4.0,SNR=6.2
GNI Garni 122.48 51 PFAKE 02 00 10.0 +14
GNI LR LR
comp=Z,239nm,21.0s,MS4.8
ARU Arti 125.19 29 PFAKE 02 00 10.0 +9.5
ARU LR LR
comp=Z,814nm,20.0s,MS5.4
CTAO Charters Tower 126.21 232 ePKIKP PKPdf 02 00 02.5 -1.1
CTAO MLR MLR
comp=Z,365nm,19.0s,MS5.1
YAK Yakutsk 128.02 345 PFAKE 02 00 20.0 +14
YAK LR LR
comp=Z,349nm,21.0s,MS5.0
MSEY Mahe Island 129.12 108 PFAKE 02 00 20.0 +11
MSEY LR LR
comp=Z,768nm,19.0s,MS5.4
PMG Port Moresby 130.95 245 ePKIKP PKPdf 02 00 12.4 -0.4
PMG MLR MLR
comp=Z,352nm,20.0s
COEN Coen 132.07 237 ePKPdf PKPdf 02 00 14.6 -0.3
ASAR Alice Springs 132.50 219 PKP PKPdf 02 00 14.1 -1.4
comp=Z,2.7nm,0.8s,baz=142,slow=2.4,SNR=15
ASAR pPKP pPKPdf 02 00 21.9 -2.0
comp=Z,12nm,1.1s,baz=137,slow=2.5,SNR=20
BRVK Borovoye 132.60 27 PFAKE 02 00 30.0 +15
BRVK LR LR
comp=Z,933nm,22.0s,MS5.5
YSS Yuzh-Sakhalins 133.18 323 PFAKE 02 00 30.0 +14
YSS LR LR
comp=Z,160nm,19.0s,MS4.8
WB2 Warramunga Arr 134.91 223 ePKP PKPdf 02 00 18.1 -2.0
WRAB Tennant Creek 134.91 223 ePKIKP PKPdf 02 00 18.8 -1.3
WRAB MLR MLR
comp=Z,582nm,19.0s,MS5.3
BOD Bodaibo 135.06 352 ePKIKP PKiKP 02 00 23.0 +2.3
ERM Erimo 135.40 317 PFAKE 02 00 30.0 +10
ERM LR LR
comp=Z,683nm,22.0s,MS5.3
NVS Novosibirsk 135.86 17 ePKIKP PKiKP 02 00 25.1 +2.7
NVS e 02 03 02.3
ZAA0 Zalesovo Array 137.08 16 ePKPdf PKPdf 02 00 22.2 -0.8
ZALV Zalesovo Beam 137.08 16 PKP PKPdf 02 00 21.8 -1.3
comp=Z,2.0nm,0.7s,baz=336,slow=3.2,SNR=10
ZALV pPKP pPKPdf 02 00 30.0 -1.5
comp=Z,12nm,1.0s,baz=318,slow=2.0,SNR=8.7
KURK Kurchatov 137.79 23 ePKIKP PKPdf 02 00 24.2 -0.3
KURK MLR MLR
comp=Z,691nm,22.0s,MS5.3
KAKA Kakadu 141.16 229 ePKP x 02 00 12.1
comp=Z,8.9nm,0.8s
MJAR Matsushiro Arr 141.33 313 PKhKP 02 00 20.6
comp=Z,2.6nm,0.8s,baz=86,slow=1.0,SNR=5.9
MJAR PKP PKPdf 02 00 30.4 -1.0
comp=Z,4.9nm,0.9s,baz=90,slow=2.9,SNR=8.1
MAJO Matsushiro 141.33 313 PFAKE 02 00 40.0 +8.6
MAJO LR LR
comp=Z,670nm,20.0s,MS5.4
AML Almayashu 141.60 36 PFAKE 02 00 40.0 +8.3
AML LR LR
comp=Z,474nm,21.0s,MS5.2
AAK Ala-Archa 141.74 35 ePKIKP PKPdf 02 00 31.3 -0.6
AAK MLR MLR
comp=Z,601nm,22.0s,MS5.3
MDJ Mudanjiang 141.80 329 PKP PKPdf 02 00 30.3 -1.7
MDJ PP PP
comp=Z,272nm,6.0s
TLY Talaya 141.94 360 PFAKE 02 00 40.0 +8.0
TLY LR LR
comp=Z,333nm,20.0s,MS5.1
MBWA Marble Bar 141.99 205 PFAKE 02 00 40.0 +6.9
MBWA LR LR
comp=Z,564nm,20.0s,MS5.3
UCH Uchtor 142.01 36 PFAKE 02 00 40.0 +7.6
UCH LR LR
comp=Z,195nm,21.0s,MS4.8
TKM2 Tokmak 2 142.15 34 ePKIKP PKPdf 02 00 33.0 +0.3
TKM2 MLR MLR
comp=Z,621nm,22.0s,MS5.3
MK31 Makanchi Array 142.39 24 ePKIKP PKPdf 02 00 32.6 -0.4
MKAR Makanchi Array 142.39 24 PKhKP 02 00 28.0
comp=Z,1.4nm,0.8s,baz=347,slow=4.6,SNR=7.6
MKAR PKP PKPdf 02 00 32.4 -0.6
comp=Z,1.3nm,0.8s,baz=321,slow=2.0,SNR=7.7
ZAK Zakamensk 143.24 0 ePKIKP PKPdf 02 00 35.8 +1.5
ZAK e 02 03 39.5
ZAK pmax pmax
comp=Z,6.0nm,1.2s
ZAK pmax pmax
comp=Z,4.0nm,1.5s
CN2 Changchun 144.38 332 ePKP PKPdf 02 00 32.9 -3.7
CN2 ePP PP 02 03 53.4 +2.0
CN2 eSS SS 02 22 35.4 -0.3
CN2 PP PP
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,23.0s,MS5.1
CN2 LR LR
comp=E,300nm,23.0s,MS5.1
CN2 LR LR
comp=Z,300nm,24.0s,MS5.0
ULN Ulaanbaatar 145.62 356 ePKIKP PKPdf 02 00 38.6 0.0
ULN MLR MLR
comp=Z,608nm,20.0s,MS5.4
SONM Songino Array 145.69 356 PKPbc PKPbc 02 00 38.7 -0.3
comp=Z,15nm,1.0s,baz=338,slow=2.1,SNR=59
SONM pPKPbc pPKPbc 02 00 45.1 -2.2
comp=Z,49nm,1.1s,baz=329,slow=2.0,SNR=26
NIL Nilore 146.07 49 PFAKE 02 00 50.0 +10
NIL LR LR
comp=Z,278nm,21.0s,MS5.0
WMQ Urumqi 146.93 21 ePKP PKPdf 02 00 41.4 +0.5
WMQ LR LR
comp=N,368nm,25.5s,MS5.1
WMQ LR LR
comp=E,251nm,30.0s,MS5.1
WMQ LR LR
comp=Z,346nm,25.0s,MS5.0
KSRS Korea Array 147.65 322 PKPbc PKPdf 02 00 42.2 -0.1
comp=Z,1.5nm,0.7s,baz=47,slow=2.3,SNR=6.6
KSRS pPKPbc pPKPbc 02 00 50.2 -3.2
comp=Z,3.9nm,0.8s,baz=131,slow=40,SNR=4.2
DDI Dehra Dun 151.26 50 eP PKPdf 02 00 48.0 -0.3
BJI Beijing 151.29 339 PKP PKPbc 02 00 53.2 -0.8
BJI PP PP 02 04 34.9 +3.3
BJI PP PP
comp=Z,262nm,10.7s
BJI LR LR
comp=N,360nm,24.4s,MS5.2
BJI LR LR
comp=E,290nm,24.4s,MS5.2
BJI LR LR
comp=Z,456nm,23.9s,MS5.2
BJT Baijiatuau 151.31 339 ePKIKP PKPbc 02 00 53.0 -1.1
COCO West Island 153.65 165 PFAKE 02 01 00.0 +7.7
COCO LR LR
comp=Z,587nm,21.0s,MS5.4
GTA Gaotai 154.01 6 PKP PKPdf 02 00 53.1 +1.0
GTA PKP2 PKPab 02 01 18.8 +5.4
GTA PP PP 02 04 54.8 +8.0
GTA PP PP
comp=Z,174nm,7.5s
GTA LR LR
comp=N,351nm,19.8s,MS5.3
GTA LR LR
comp=E,272nm,18.3s,MS5.3
GTA LR LR
comp=Z,339nm,19.2s,MS5.2
KAPI Kappang 155.45 222 ePKPdf PKPdf 02 00 53.8 -1.0
KAPI LR LR
comp=Z,436nm,20.0s,MS5.3
DANN Dangsing 156.52 48 eP PKPdf 02 00 56.1 +0.3
comp=Z,34nm,0.9s
KOLN Koldanda 156.72 49 eP PKPdf 02 00 55.7 -0.4
NJ2 Nanjing 156.74 325 ePKP PKPdf 02 00 50.2 -5.8
DAV Davao City (W) 157.26 256 PFAKE 02 01 10.0 +13
DAV LR LR
comp=Z,293nm,22.0s,MS5.1
GKN Gorkha 157.35 48 eP PKPdf 02 00 56.7 -0.2
LZH Lanzhou 157.52 359 ePKP PKPdf 02 00 53.5 -3.4
LZH APKP 02 01 02.5
LZH XPKP 02 01 07.0
LZH PP PP 02 05 05.5 -0.8
LZH SKKS SKKSac 02 11 51.0 -4.3
LZH SS SS 02 25 00.1 -0.3
LZH PP PP

comp=Z,293nm,8.0s
LZH LR LR
comp=E,475nm,18.9s
LZH LR LR
comp=Z,579nm,20.0s,MS5.4
PKI Pulchoki 158.15 47 eP PKPdf 02 00 57.8 -0.1
GUN Gumba 158.28 46 eP PKPdf 02 00 58.1 +0.1
RAMN Ramite 159.37 47 eP PKPdf 02 00 58.9 -0.5
comp=Z,38nm,1.1s
YHNB Yeheng 159.73 306 PFAKE 02 01 10.0 +10
YHNB LR LR
comp=Z,508nm,21.0s,MS5.3
TAPN Taplejung 159.90 44 eP PKPdf 02 00 58.9 -1.1
comp=Z,25nm,1.1s
LSA Lhasa 160.31 33 PKP PKPdf 02 01 01.2 +0.9
CD2 Chengdu 162.69 359 PKP PKPdf 02 00 57.4 -5.4
CD2 APKP 02 01 03.7
CD2 PKP2 PKPab 02 01 50.6 -0.5
CD2 PKS 02 04 30.2
CD2 PP PP 02 05 38.2 +4.0
CD2 SKS SKSdf 02 07 58.4 -7.8
CD2 SKKS SKKSac 02 12 20.7 -1.6
CD2 SS SS 02 25 53.1 -1.6
CD2 LR LR
comp=N,480nm,19.2s
CD2 LR LR
comp=Z,500nm,20.1s
GYA Guiyang 166.76 347 PKP PKPdf 02 01 05.1 -1.4
GYA APKP 02 01 14.8
GYA PKS 02 04 38.3
GYA PP PP 02 05 59.7 +4.1
GYA SKKS SKKSac 02 12 43.0 0.0
GYA SS SS 02 26 39.6 +2.9
GYA PP PP
comp=Z,180nm,5.6s
GYA LR LR
comp=N,210nm,21.2s
GYA LR LR
comp=E,180nm,22.8s
GYA LR LR
comp=Z,280nm,22.7s
KMI Kunming 168.44 3 PKP PKPdf 02 01 06.9 -0.8
QIZ Qiongzhong 171.73 312 PKP PKPdf 02 01 03.9 -5.8
QIZ PP PP 02 06 23.0 +1.0
QIZ SS SS 02 27 26.5 -2.0
QIZ LR LR
comp=E,409nm,21.9s
QIZ LR LR
comp=Z,572nm,23.8s
CHTO Chiang Mai 173.22 38 PFAKE 02 01 20.0 +10
CHTO LR LR
comp=Z,467nm,21.0s
CM31 Chiang Mai Arr 173.49 40 PFAKE 02 01 20.0 +10
CM31 LR LR
comp=Z,573nm,19.0s
CMAR Chiang Mai Arr 173.49 40 PKP PKPdf 02 01 09.1 -1.4
comp=Z,2.2nm,0.6s,baz=303,slow=1.6,SNR=13
CMAR pPKP pPKPdf 02 01 17.0 -1.9
comp=Z,3.8nm,0.7s,baz=287,slow=1.8,SNR=3.8
CMAR PKPab PKPab 02 02 39.4 +0.1
comp=Z,1.0nm,0.4s,baz=310,slow=4.6,SNR=4.0
CMAR pPKPab pPKPab 02 02 46.8 -0.7
comp=Z,1.4nm,0.3s,baz=318,slow=5.6,SNR=3.1
CMAR Chiang Mai Arr 173.49 40 PKIKP PKPdf 02 01 09.1 -1.4
CMAR 02 01 17.0
CMAR 02 02 39.4

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*ISCJB **07** 01:42:11.5±0.3, 4685N±001×065W±002, h5km±2km, Error ellipse: s-maj=2.6km s-min=2.0km az=149.3*
*NEIC **07** 01:42:14.5, 4691N×062W, h5km, ML3.4(STR), ML3.8(LDG), After STR.*
*STR **07** 01:42:14.7±0.3, 4691N×062W, h5km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **07** 01:42:15.4±0.1, 4686N×067W, h12km, ML3.8/38, Error ellipse: s-maj=1.3km s-min=1.1km az=53.0*
*LDG **07** 01:42:15.4±0.1, 4689N×067W, h5km, Md3.8/3, Ml3.8/41, Error ellipse: s-maj=1.1km s-min=0.9km az=65.0*
ISC 07 01:42:14.0±0.3**, 4689N**±001×**062W**±002**, h13**km±2km**, n147,** σ1§**16**/334**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCHF	**La Chataignera**	**0.23**	**202**	Pg	**Pg**	**01 42 20.6**	**+1.7**
LCHF				Sg	**Sg**	**01 42 23.6**	**+1.3**
MFF	**Saint Martin d**	**0.43**	**131**	ePg	**Pg**	**01 42 24.1**	**+1.6**
MFF				eSg	**Sg**	**01 42 30.3**	**+2.0**
	1µm,0.2s						
MFF	**Saint Martin d**	**0.43**	**131**	ePg	**Pg**	**01 42 24.1**	**+1.6**
MFF				eSg	**Sg**	**01 42 30.3**	**+2.0**
	603nm,0.2s						
CHIF	**Chize**	**0.77**	**169**	Pg	**Pg**	**01 42 29.5**	**+0.7**
CHIF				Sg	**Sg**	**01 42 40.0**	**+1.2**
RENF	**Rennes**	**1.42**	**331**	Pg	**Pg**	**01 42 40.2**	**-1.0**
RENF				Sg	**Sg**	**01 42 59.2**	**-0.3**
GRR	**Gorron**	**1.51**	**354**	ePn	**Pn**	**01 42 40.8**	**0.0**
GRR	**Gorron**	**1.51**	**354**	ePg	**Pg**	**01 42 43.3**	**+0.2**
GRR				eSn	**Sn**	**01 43 00.3**	**-0.1**
GRR				eSg	**Sg**	**01 43 02.9**	**+0.2**
	528nm,0.2s						
GRR	**Gorron**	**1.51**	**354**	ePg	**Pg**	**01 42 43.3**	**+0.2**
GRR				eSn	**Sn**	**01 43 00.3**	**-0.1**
GRR				eSg	**Sg**	**01 43 02.9**	**+0.2**
	264nm,0.2s						
LDF	**La Druitiere**	**1.74**	**11**	ePn	**Pn**	**01 42 44.1**	**+0.2**
LDF	**La Druitiere**	**1.74**	**11**	eP	**Pn**	**01 42 46.6**	**+2.7**
LDF	**La Druitiere**	**1.74**	**11**	ePg	**Pg**	**01 42 47.8**	**+0.4**
LDF				eSn	**Sn**	**01 43 05.7**	**-0.3**
LDF				eSg	**Sg**	**01 43 10.3**	**+0.3**
	324nm,0.2s						
LDF	**La Druitiere**	**1.74**	**11**	eP	**Pn**	**01 42 46.6**	**+2.7**
LDF	**La Druitiere**	**1.74**	**11**	ePg	**Pg**	**01 42 47.8**	**+0.4**
LDF				eSn	**Sn**	**01 43 05.7**	**-0.3**
LDF				eSg	**Sg**	**01 43 10.3**	**+0.3**
	162nm,0.2s						
FLN	**La Foliniere**	**1.88**	**3**	ePn	**Pn**	**01 42 46.1**	**+0.3**
	baz=191						
FLN	**La Foliniere**	**1.88**	**3**	eP	**Pn**	**01 42 48.6**	**+2.8**
	baz=184						
FLN				eSn	**Sn**	**01 43 09.7**	**+0.3**
	523nm,0.4s,baz=190						
FLN	**La Foliniere**	**1.88**	**3**	eP	**Pn**	**01 42 48.6**	**+2.8**
FLN				eSn	**Sn**	**01 43 09.7**	**+0.3**
	261nm,0.4s						
SGMF	**Saint Gilles**	**1.90**	**317**	eP	**Pn**	**01 42 47.6**	**+1.5**
SGMF				eSn	**Sn**	**01 43 08.8**	**-1.0**
SGMF				eSg	**Sg**	**01 43 14.4**	**-0.6**
	79nm,0.2s						
SGMF	**Saint Gilles**	**1.90**	**317**	eP	**Pn**	**01 42 47.6**	**+1.5**
SGMF				eSn	**Sn**	**01 43 08.8**	**-1.0**
SGMF				eSg	**Sg**	**01 43 14.4**	**-0.6**
	40nm,0.2s						
SGMF	**Saint Gilles**	**1.90**	**317**	ePn	**Pn**	**01 42 45.0**	**-1.1**
SGMF				eP		01 42 47.6	
SGMF				eSn	**Sn**	**01 43 08.8**	**-1.0**
SGMF				eSg	**Sg**	**01 43 14.4**	**-0.6**
QUIF	**Quistinic**	**2.02**	**302**	eP	**Pn**	**01 42 49.9**	**+2.2**
QUIF				eSn	**Sn**	**01 43 11.6**	**-1.1**
	181nm,0.2s						
QUIF	**Quistinic**	**2.02**	**302**	eP	**Pn**	**01 42 49.9**	**+2.2**
QUIF				eSn	**Sn**	**01 43 11.6**	**-1.1**
	90nm,0.2s						
QUIF	**Quistinic**	**2.02**	**302**	ePn	**Pn**	**01 42 46.6**	**-1.1**
QUIF				eP		01 42 49.9	
QUIF				eSn	**Sn**	**01 43 11.6**	**-1.1**
TCF	**Toulx Ste Croi**	**2.04**	**106**	ePn	**Pn**	**01 42 49.5**	**+1.5**
TCF	**Toulx Ste Croi**	**2.04**	**106**	ePg	**Pg**	**01 42 54.2**	**+1.1**
TCF				eSn	**Sn**	**01 43 14.1**	**+0.8**
TCF				eSg	**Sg**	**01 43 20.4**	**+0.9**
	170nm,0.2s						
TCF	**Toulx Ste Croi**	**2.04**	**106**	ePg	**Pg**	**01 42 54.2**	**+1.1**
TCF				eSn	**Sn**	**01 43 14.1**	**+0.8**
TCF				eSg	**Sg**	**01 43 20.4**	**+0.9**
	85nm,0.2s						
LFF	**La Frestale**	**2.16**	**154**	ePg	**Pg**	**01 42 55.2**	**-0.3**
LFF				eSn	**Sn**	**01 43 16.5**	**+0.1**
LFF				eSg	**Sg**	**01 43 24.1**	**+0.6**
	182nm,0.3s						
LFF	**La Frestale**	**2.16**	**154**	ePg	**Pg**	**01 42 55.2**	**-0.3**
LFF				eSn	**Sn**	**01 43 16.5**	**+0.1**
LFF				eSg	**Sg**	**01 43 24.1**	**+0.6**
	91nm,0.3s						
LFF	**La Frestale**	**2.16**	**154**	ePn	**Pn**	**01 42 50.8**	**+1.1**

LFF ePg **Pg** **01 42 55.2 -0.3**
LFF eSn **Sn** **01 43 16.5 +0.1**
LFF eSg **Sg** **01 43 24.1 +0.6**
RJF Les Rejaudoux 2.17 136 ePg **Pg** **01 42 55.9 +0.3**
RJF eSn **Sn** **01 43 16.7 +0.2**
RJF eSg **Sg** **01 43 24.1 +0.4**
267nm,0.3s
RJF Les Rejaudoux 2.17 136 ePg **Pg** **01 42 55.9 +0.3**
RJF eSn **Sn** **01 43 16.7 +0.2**
RJF eSg **Sg** **01 43 24.1 +0.4**
133nm,0.3s
RJF Les Rejaudoux 2.17 136 ePn **Pn** **01 42 50.9 +1.1**
RJF ePg **Pg** **01 42 55.9 +0.3**
RJF eSn **Sn** **01 43 16.7 +0.2**
RJF eSg **Sg** **01 43 24.1 +0.4**
ROSF Rostrenen 2.31 310 eP **Pn** **01 42 55.2 +3.5**
ROSF eSn **Sn** **01 43 18.8 -1.2**
ROSF eSg **Sg** **01 43 26.9 -1.3**
104nm,0.3s
ROSF Rostrenen 2.31 310 eP **Pn** **01 42 55.2 +3.5**
ROSF eSn **Sn** **01 43 18.8 -1.2**
ROSF eSg **Sg** **01 43 26.9 -1.3**
52nm,0.3s
ROSF Rostrenen 2.31 310 ePn **Pn** **01 42 51.7 0.0**
ROSF eP 01 42 55.2
ROSF eSn **Sn** **01 43 18.8 -1.2**
ROSF eSg **Sg** **01 43 26.9 -1.3**
BGF Bois d'Agland 2.41 97 ePn **Pn** **01 42 54.9 +1.9**
BGF Bois d'Agland 2.41 97 ePg **Pg** **01 43 00.9 +0.8**
BGF eSn **Sn** **01 43 22.4 +0.1**
BGF eSg **Sg** **01 43 32.1 +0.9**
450nm,0.3s
BGF Bois d'Agland 2.41 97 ePg **Pg** **01 43 00.9 +0.8**
BGF eSn **Sn** **01 43 22.4 +0.1**
BGF eSg **Sg** **01 43 32.1 +0.9**
225nm,0.3s
VERF Verneugheol 2.43 117 Pn **Pn** **01 42 55.0 +1.6**
VERF Verneugheol 2.43 117 Pg **Pg** **01 43 01.2 +0.6**
VERF Sg **Sg** **01 43 34.1 +2.0**
VERF Verneugheol 2.43 117 Pg **Pg** **01 43 01.2 +0.6**
VERF Sg **Sg** **01 43 34.1 +2.0**
FRNF Fournols 2.67 123 Pn **Pn** **01 42 58.2 +1.5**
CAF Calviac 2.71 135 ePg **Pg** **01 43 05.4 -0.5**
CAF eSn **Sn** **01 43 29.7 -0.2**
CAF eSg **Sg** **01 43 41.3 +0.3**
105nm,0.2s
CAF Calviac 2.71 135 ePg **Pg** **01 43 05.4 -0.5**
CAF eSn **Sn** **01 43 29.7 -0.2**
CAF eSg **Sg** **01 43 41.3 +0.3**
52nm,0.2s
CAF Calviac 2.71 135 ePn **Pn** **01 42 58.6 +1.4**
CAF ePg **Pg** **01 43 05.4 -0.5**
CAF eSn **Sn** **01 43 29.7 -0.2**
CAF eSg **Sg** **01 43 41.3 +0.3**
AGO Saint Agoulin 2.72 106 Pg **Pg** **01 43 06.6 +0.5**
AGO Sg **Sg** **01 43 41.6 +0.2**
AGO Saint Agoulin 2.72 106 Pg **Pg** **01 43 06.6 +0.5**
AGO Sg **Sg** **01 43 41.6 +0.2**
AGO Saint Agoulin 2.72 106 Pn **Pn** **01 42 58.4 +1.0**
AGO Pg **Pg** **01 43 06.6 +0.5**
AGO Sg **Sg** **01 43 41.6 +0.2**
AVF Avril sur Loir 2.73 91 ePn **Pn** **01 42 58.8 +1.3**
AVF Avril sur Loir 2.73 91 ePg **Pg** **01 43 06.7 +0.5**
AVF eSn **Sn** **01 43 30.0 -0.3**
AVF eSg **Sg** **01 43 41.5 -0.1**
81nm,0.3s
AVF Avril sur Loir 2.73 91 ePg **Pg** **01 43 06.7 +0.5**
AVF eSn **Sn** **01 43 30.0 -0.3**
AVF eSg **Sg** **01 43 41.5 -0.1**
40nm,0.3s
PYM Petit Puy Mans 2.76 113 Pn **Pn** **01 42 59.4 +1.5**
PYM Pg **Pg** **01 43 07.3 +0.5**
CFF Clermont-Ferra 2.82 112 Pn **Pn** **01 42 57.4 -1.3**
CFF Pg **Pg** **01 43 07.9 -0.1**
CFF Sg **Sg** **01 43 49.0 +4.6**
SSF Saint Saulge 2.83 85 ePg **Pg** **01 43 08.7 +0.5**
SSF eSg **Sg** **01 43 45.3 +0.5**
151nm,0.4s
SSF Saint Saulge 2.83 85 ePn **Pn** **01 43 00.1 +1.2**
SSF Saint Saulge 2.83 85 ePg **Pg** **01 43 08.7 +0.5**
SSF eSg **Sg** **01 43 45.3 +0.5**
76nm,0.4s
PLDF La Plantade 3.07 106 Pg **Pg** **01 43 12.9 +0.1**
PLDF Sg **Sg** **01 43 55.0 +2.4**
PLDF La Plantade 3.07 106 Pg **Pg** **01 43 12.9 +0.1**
PLDF Sg **Sg** **01 43 55.0 +2.4**
PLDF La Plantade 3.07 106 Pn **Pn** **01 43 03.2 +1.0**
PLDF Pg **Pg** **01 43 12.9 +0.1**
PLDF Sg **Sg** **01 43 55.0 +2.4**
SMF Signal de Mont 3.07 93 ePn **Pn** **01 43 03.5 +1.3**
SMF Signal de Mont 3.07 93 ePg **Pg** **01 43 13.3 +0.4**
SMF eSg **Sg** **01 43 53.0 +0.3**
65nm,0.2s
SMF Signal de Mont 3.07 93 ePg **Pg** **01 43 13.3 +0.4**
SMF eSg **Sg** **01 43 53.0 +0.3**
32nm,0.2s
LOR Lormes 3.08 81 ePn **Pn** **01 43 03.6 +1.2**
baz=262
LOR Lormes 3.08 81 ePg **Pg** **01 43 13.3 +0.3**
baz=261
LOR eSn **Sn** **01 43 38.6 -0.5**
LOR eSg **Sg** **01 43 52.9 -0.1**
83nm,0.2s
LOR Lormes 3.08 81 ePg **Pg** **01 43 13.3 +0.3**
LOR eSn **Sn** **01 43 38.6 -0.5**
LOR eSg **Sg** **01 43 52.9 -0.1**
42nm,0.2s
LBL Lubilhac 3.16 120 Pg **Pg** **01 43 13.8 -0.7**
LBL Sg **Sg** **01 43 57.9 +2.5**
LBL Lubilhac 3.16 120 Pg **Pg** **01 43 13.8 -0.7**
LBL Sg **Sg** **01 43 57.9 +2.5**
LBL Lubilhac 3.16 120 Pn **Pn** **01 43 04.6 +1.2**
LBL Pg **Pg** **01 43 13.8 -0.7**
LBL Sg **Sg** **01 43 57.9 +2.5**
EALK Alkurruntz 3.72 190 Pn **Pn** **01 43 11.2 +0.1**
EALK Sn **Sn** **01 43 52.0 -2.8**
EALK Alkurruntz 3.72 190 Pn **Pn** **01 43 11.2 +0.1**
EALK Sn **Sn** **01 43 52.0 -2.8**
EALK Lg 01 44 11.6
ELIZ Elizondo 3.78 190 Pn **Pn** **01 43 11.5 -0.4**
ELIZ Sn **Sn** **01 43 53.8 -2.4**
ELIZ Elizondo 3.78 190 Pn **Pn** **01 43 11.5 -0.4**
ELIZ Sn **Sn** **01 43 53.8 -2.4**
ELIZ Lg 01 44 12.4
SJPF Ste Jean 3.80 187 ePn **Pn** **01 43 13.1 +0.9**
SJPF eSn **Sn** **01 43 53.8 -2.9**
SJPF eSg **Sg** **01 44 14.3 -1.5**
39nm,0.4s
SJPF Ste Jean 3.80 187 ePn **Pn** **01 43 13.1 +0.9**
SJPF eSn **Sn** **01 43 53.8 -2.9**
SJPF eSg **Sg** **01 44 14.3 -1.5**
19nm,0.4s
EPF Esparros 3.91 170 ePg **Pg** **01 43 27.8 -1.1**
EPF eSn **Sn** **01 43 58.2 -1.4**
EPF eSg **Sg** **01 44 18.4 -1.2**
41nm,0.3s
EPF Esparros 3.91 170 ePg **Pg** **01 43 27.8 -1.1**
EPF eSn **Sn** **01 43 58.2 -1.4**
EPF eSg **Sg** **01 44 18.4 -1.2**
21nm,0.3s
EPF Esparros 3.91 170 ePn **Pn** **01 43 14.5 +0.7**
EPF ePg **Pg** **01 43 27.8 -1.1**
EPF eSn **Sn** **01 43 58.2 -1.4**
EPF eSg **Sg** **01 44 18.4 -1.2**
SSB Saint Sauveur 3.93 112 Pn **Pn** **01 43 15.3 +1.3**
SSB Saint Sauveur 3.93 112 ePg **Pg** **01 43 29.2 -0.1**
SSB eSg **Sg** **01 44 21.5 +1.3**
SSB Saint Sauveur 3.93 112 ePg **Pg** **01 43 29.2 -0.1**
SSB eSg **Sg** **01 44 21.6 +1.3**
ETSF Etsaut 3.99 179 ePn **Pn** **01 43 13.9 -0.9**
ETSF eSn **Sn** **01 43 59.8 -1.6**
ETSF eSg **Sg** **01 44 20.6 -1.3**
37nm,0.5s
ETSF Etsaut 3.99 179 ePn **Pn** **01 43 13.9 -0.9**
ETSF eSn **Sn** **01 43 59.8 -1.6**
ETSF eSg **Sg** **01 44 20.6 -1.3**
18nm,0.5s
SFTF Sexfontaines 4.05 69 ePn **Pn** **01 43 16.4 +0.7**
baz=242
SFTF Sexfontaines 4.05 69 ePg **Pg** **01 43 31.1 -0.5**
baz=255
SFTF eSn **Sn** **01 44 02.0 -0.9**
baz=248
SFTF eSg **Sg** **01 44 23.8 -0.2**
27nm,0.3s
SFTF Sexfontaines 4.05 69 ePg **Pg** **01 43 31.1 -0.5**
SFTF eSn **Sn** **01 44 02.0 -0.9**
SFTF eSg **Sg** **01 44 23.8 -0.2**
14nm,0.3s
MTLF Montolieu 4.07 149 ePg **Pg** **01 43 31.3 -0.7**
MTLF eSg **Sg** **01 44 23.0 -1.7**
30nm,0.3s
MTLF Montolieu 4.07 149 ePg **Pg** **01 43 31.3 -0.7**
MTLF eSg **Sg** **01 44 23.0 -1.7**
15nm,0.3s
MTLF Montolieu 4.07 149 ePn **Pn** **01 43 16.2 +0.2**
MTLF ePg **Pg** **01 43 31.3 -0.7**
MTLF eSg **Sg** **01 44 23.0 -1.7**
MEZF Maizieres J'vi 4.16 65 ePn **Pn** **01 43 17.0 -0.1**
baz=250
MEZF Maizieres J'vi 4.16 65 ePg **Pg** **01 43 32.2 -1.4**
baz=254
MEZF eSn **Sn** **01 44 04.4 -1.1**
MEZF eSg **Sg** **01 44 26.6 -0.8**
46nm,0.5s
MEZF Maizieres J'vi 4.16 65 ePg **Pg** **01 43 32.2 -1.4**
MEZF eSn **Sn** **01 44 04.4 -1.1**
MEZF eSg **Sg** **01 44 26.6 -0.8**
23nm,0.5s
ELAN Lanestosa 4.16 210 Pn **Pn** **01 43 17.0 -0.2**
ELAN Lanestosa 4.16 210 Pn **Pn** **01 43 17.0 -0.2**
ELAN Sn **Sn** **01 44 01.3 -4.4**
VIVF Saint-Julien-l 4.21 117 ePg **Pg** **01 43 34.1 -0.6**
VIVF eSg **Sg** **01 44 28.4 -0.9**
85nm,0.5s
VIVF Saint-Julien-l 4.21 117 ePg **Pg** **01 43 34.1 -0.6**
VIVF eSg **Sg** **01 44 28.4 -0.9**
42nm,0.5s
VIVF Saint-Julien-l 4.21 117 ePn **Pn** **01 43 19.0 +1.1**
VIVF ePg **Pg** **01 43 34.1 -0.6**
VIVF eSg **Sg** **01 44 28.4 -0.9**
LASF Ste Croix 4.22 130 ePg **Pg** **01 43 34.9 +0.1**
LASF eSn **Sn** **01 44 05.5 -1.6**
LASF eSg **Sg** **01 44 28.2 -1.2**
72nm,0.4s
LASF Ste Croix 4.22 130 ePg **Pg** **01 43 34.9 +0.1**
LASF eSn **Sn** **01 44 05.5 -1.6**
LASF eSg **Sg** **01 44 28.2 -1.2**
36nm,0.4s
LASF Ste Croix 4.22 130 ePn **Pn** **01 43 19.8 +1.8**
LASF ePg **Pg** **01 43 34.9 +0.1**
LASF eSn **Sn** **01 44 05.5 -1.6**
LASF eSg **Sg** **01 44 28.2 -1.2**
EBIE Bielsa 4.23 172 Pn **Pn** **01 43 18.7 +0.5**
EBIE Sn **Sn** **01 44 06.6 -0.8**
EBIE Bielsa 4.23 172 Pn **Pn** **01 43 18.7 +0.5**
EBIE Sn **Sn** **01 44 06.6 -0.8**
EBIE Lg 01 44 30.7
RFYF Reffroy 4.46 65 ePn **Pn** **01 43 22.5 +1.2**
baz=249
RFYF eSg **Sg** **01 44 36.0 -1.2**
ECRI Cripan 4.48 198 Pn **Pn** **01 43 23.1 +1.5**
ECRI Sn **Sn** **01 44 12.7 -0.9**
ECRI Cripan 4.48 198 Pn **Pn** **01 43 23.1 +1.5**
ECRI Sn **Sn** **01 44 12.7 -0.9**
BAIF Baives 4.51 44 ePn **Pn** **01 43 22.9 +0.9**
BAIF eSn **Sn** **01 44 12.9 -1.5**
BAIF eSg **Sg** **01 44 38.2 -0.7**
8.9nm,0.3s
BAIF Baives 4.51 44 ePn **Pn** **01 43 22.9 +0.9**
BAIF eSn **Sn** **01 44 12.9 -1.5**
BAIF eSg **Sg** **01 44 38.2 -0.7**
4.4nm,0.3s
CABF La Chapelle 4.62 91 ePn **Pn** **01 43 24.8 +1.4**
CABF eSg **Sg** **01 44 41.1 -1.1**
48nm,0.7s
CABF La Chapelle 4.62 91 ePn **Pn** **01 43 24.8 +1.4**
CABF eSg **Sg** **01 44 41.1 -1.1**
24nm,0.7s
EARI Arriondas 4.84 224 Pn **Pn** **01 43 25.2 -1.3**
EARI Arriondas 4.84 224 Pn **Pn** **01 43 25.2 -1.3**
EARI Sn **Sn** **01 44 16.7 -5.7**
GIVF Givet 4.84 46 ePn **Pn** **01 43 27.5 +1.0**
GIVF eSn **Sn** **01 44 20.6 -1.8**
GIVF eSg **Sg** **01 44 48.6 -0.7**
33nm,0.5s
GIVF Givet 4.84 46 ePn **Pn** **01 43 27.5 +1.0**
GIVF eSn **Sn** **01 44 20.6 -1.8**
GIVF eSg **Sg** **01 44 48.6 -0.7**
16nm,0.5s
HAU Haudompre 4.86 74 ePn **Pn** **01 43 26.7 0.0**
HAU eSg **Sg** **01 44 48.8 -1.0**
37nm,0.3s
HAU Haudompre 4.86 74 ePn **Pn** **01 43 26.7 0.0**
HAU eSg **Sg** **01 44 48.8 -1.0**
18nm,0.3s
VALF Valcebollere 4.86 156 Pg **Pg** **01 43 46.7 -0.3**
FILF Fillols 4.88 151 Pg **Pg** **01 43 45.3 -2.1**
ORIF Oris-en-Rattie 4.94 111 ePn **Pn** **01 43 28.6 +0.7**
ORIF eSg **Sg** **01 44 50.3 -2.3**
29nm,0.7s
ORIF Oris-en-Rattie 4.94 111 ePn **Pn** **01 43 28.6 +0.7**
ORIF eSg **Sg** **01 44 50.3 -2.3**
15nm,0.7s
EJON La Jonquera 5.09 149 Pn **Pn** **01 43 30.9 +0.9**
EJON Sn **Sn** **01 44 29.0 +0.4**
EJON La Jonquera 5.09 149 Pn **Pn** **01 43 30.9 +0.9**
EJON Sn **Sn** **01 44 29.0 +0.4**
EJON Lg 01 44 57.9
HINF Hinteralfeld 5.16 77 ePn **Pn** **01 43 30.7 -0.2**
HINF eSn **Sn** **01 44 28.2 -2.1**
HINF eSg **Sg** **01 44 57.9 -1.7**
58nm,0.6s
HINF Hinteralfeld 5.16 77 ePn **Pn** **01 43 30.7 -0.2**
HINF eSn **Sn** **01 44 28.2 -2.1**
HINF eSg **Sg** **01 44 57.9 -1.7**
29nm,0.6s
SMRF Simiane la Rot 5.24 121 ePn **Pn** **01 43 33.5 +1.5**
SMRF eSg **Sg** **01 44 59.9 -2.2**
48nm,0.9s
SMRF Simiane la Rot 5.24 121 ePn **Pn** **01 43 33.5 +1.5**
SMRF eSg **Sg** **01 44 59.9 -2.2**
24nm,0.9s
LPL La Plagne 5.28 102 ePn **Pn** **01 43 35.1 +2.5**
LPL eSg **Sg** **01 45 02.0 -1.5**
21nm,0.6s
LPL La Plagne 5.28 102 ePn **Pn** **01 43 35.1 +2.5**
LPL eSg **Sg** **01 45 02.0 -1.5**
10nm,0.6s
LPG La Plagne 5.30 102 ePn **Pn** **01 43 35.2 +2.4**
LPG eSg **Sg** **01 45 02.8 -1.3**
21nm,0.6s
LPG La Plagne 5.30 102 ePn **Pn** **01 43 35.2 +2.4**
LPG eSg **Sg** **01 45 02.8 -1.3**
11nm,0.6s
ECH Echery 5.43 73 ePg **Pg** **01 43 57.7 -0.2**
4.1nm,0.4s
ECH eSg **Sg** **01 45 06.2 -2.0**
ECH Echery 5.43 73 ePg **Pg** **01 43 57.6 -0.3**
4.1nm,0.4s
ECH eSg **Sg** **01 45 06.2 -2.0**
CDF Champ du Feu 5.55 71 ePg **Pg** **01 43 58.9 -1.3**
CDF eSg **Sg** **01 45 10.6 -1.4**
29nm,0.6s
CDF Champ du Feu 5.55 71 ePg **Pg** **01 43 58.9 -1.3**
CDF eSg **Sg** **01 45 10.6 -1.4**
14nm,0.6s
CDF Champ du Feu 5.55 71 ePn **Pn** **01 43 37.1 +0.9**
CDF ePg **Pg** **01 43 58.9 -1.3**
CDF eSg **Sg** **01 45 10.6 -1.4**
MBDF Montbardon 5.60 110 ePn **Pn** **01 43 37.5 +0.6**
MBDF eSg **Sg** **01 45 12.2 -1.4**
19nm,0.7s
MBDF Montbardon 5.60 110 ePn **Pn** **01 43 37.5 +0.6**
MBDF eSg **Sg** **01 45 12.2 -1.4**
9.6nm,0.7s
EPON Pontenova 5.83 235 Pn **Pn** **01 43 39.5 -0.6**
EPON Pontenova 5.83 235 Pn **Pn** **01 43 39.5 -0.7**
EPON Sn **Sn** **01 44 41.3 -5.6**
FRF La Foret Royal 6.11 120 ePn **Pn** **01 43 44.1 +0.1**
FRF eSg **Sg** **01 45 27.1 -3.0**
9.2nm,0.5s
FRF La Foret Royal 6.11 120 ePn **Pn** **01 43 44.1 +0.1**
FRF eSg **Sg** **01 45 27.1 -3.0**
4.6nm,0.5s
LMR La Mourre 6.17 123 ePg **Pg** **01 44 10.8 -1.2**
LMR eSn **Sn** **01 44 51.3 -3.8**
LMR eSg **Sg** **01 45 29.4 -2.4**
4.0nm,0.4s
LMR La Mourre 6.17 123 ePn **Pn** **01 43 44.7 0.0**
LMR eSg **Sg** **01 45 29.4 -2.4**
2.0nm,0.4s
LMR La Mourre 6.17 123 ePn **Pn** **01 43 44.7 0.0**
LMR ePg **Pg** **01 44 10.8 -1.2**
LMR eSn **Sn** **01 44 51.3 -3.8**
LMR eSg **Sg** **01 45 29.4 -2.4**
SBF Sospel 6.43 115 ePn **Pn** **01 43 49.1 +0.8**
SBF eSg **Sg** **01 45 37.4 -2.7**
27nm,0.7s
SBF Sospel 6.43 115 ePn **Pn** **01 43 49.1 +0.8**
SBF eSg **Sg** **01 45 37.4 -2.7**
14nm,0.7s
ECAL Calabor 6.60 224 Pn **Pn** **01 43 50.1 -0.6**
ECAL Calabor 6.60 224 Pn **Pn** **01 43 50.1 -0.7**
ECAL Sn **Sn** **01 45 00.4 -5.5**
PGF Pioggiola 8.10 119 ePn **Pn** **01 44 11.6 +0.3**
PGF eSn **Sn** **01 45 38.8 -3.9**
3.4nm,0.6s
PGF Pioggiola 8.10 119 ePn **Pn** **01 44 11.6 +0.3**
PGF eSn **Sn** **01 45 38.8 -3.9**
1.7nm,0.6s

GUC 07 02:08:13.9±0.5, 2235S×7032W, h32km±2km, MD3.6, ML3.4, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.28**	**23**	↑*iP*	Pb	02 08 20.7	-0.6
TOCH				*iS*	Sb	02 08 26.0	-0.3
MACH	**Maria Elena**	**0.55**	**73**	↑*iP*	Pb	02 08 25.0	-0.2
MACH				*iS*	Sb	02 08 33.2	+0.4
PECH	**Pedro de Valdi**	**0.65**	**112**	↓*iP*	Pb	02 08 26.5	-0.3
PECH				*iS*	Sb	02 08 35.9	+0.3
PECH				AML	AML	02 08 36.3	
	comp=N,8μm,0.2s						
MECH	**Mejillones**	**0.76**	**189**	↑*iP*	Pn	02 08 27.5	-0.9
MECH				*iS*	Sb	02 08 38.1	-0.5
MECH				AML	AML	02 08 41.9	
	comp=N,2μm,0.5s						
CEN1	**Los Morros**	**1.04**	**174**	*eP*	Pn	02 08 34.3	+2.0
CEN1				*iS*	Sn	02 08 50.1	+4.5
ANCH	**Antofagasta**	**1.32**	**183**	↑*iP*	Pn	02 08 38.1	+1.9
ANCH				*iS*	Sn	02 08 55.3	+2.6
ANCH				AML	AML	02 08 59.4	
	comp=N,528nm,0.2s						
LVC	**Limon Verde**	**1.33**	**101**	↓*iP*	Pn	02 08 37.5	+1.3
LVC				*iS*	Sn	02 08 55.2	+2.3
LVC				AML	AML	02 08 58.3	
	comp=E,494nm,0.2s						
PB01	**Plate Boundary**	**1.52**	**31**	AML	AML	02 09 02.1	
	comp=E,1μm,0.2s						
CPN1	**Cerro Paranal**	**2.26**	**182**	AML	AML	02 09 26.3	
	comp=E,200nm,0.6s						

MAN 07 02:47:07, 1132N×12374E, h43km, mb4.7, ML3.6, MS3.5, 5C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.89**	**107**	*eP*	Pn	02 47 21.2	-1.9
OCLP				*eS*	Sn	02 47 36.1	+1.2
RCP	**Roxas**	**1.01**	**284**	↑*eP*	Pn	02 47 23.7	-1.0
RCP				*eS*	Sn	02 47 38.7	+1.0
LLP	**Lapu-Lapu**	**1.02**	**168**	↑*iP*	Pn	02 47 24.6	-0.3
LLP				*eS*	Sn	02 47 39.3	+1.3
MMPH	**Masbate**	**1.04**	**354**	↑*iP*	Pn	02 47 26.3	+1.2
MMPH				*iS*	Sn	02 47 39.6	+1.1
PLP	**Palo**	**1.22**	**97**	↓*eP*	Pn	02 47 27.0	-0.6
PLP				*eS*	Sn	02 47 43.2	+0.2
GUIM	**Jordan**	**1.33**	**239**	*eP*	Pn	02 47 28.4	-0.7
GUIM				*eS*	Sn	02 47 47.3	+1.7
KALP	**Kalibo**	**1.42**	**285**	*eP*	Pn	02 47 29.6	-0.8
CNP	**Catarman**	**1.49**	**37**	*eP*	Pn	02 47 30.6	-0.6
CNP				*eS*	Sn	02 47 51.1	+1.6
MSLP	**Maasin**	**1.61**	**137**	*eP*	Pn	02 47 33.3	+0.3
MSLP				*eS*	Sn	02 47 55.2	+2.7
TBP	**Tagbilaran**	**1.62**	**176**	*eP*	Pn	02 47 33.8	+0.6
TBP				*eS*	Sn	02 47 54.8	+1.9
OTRP	**Odiongan**	**1.98**	**302**	*eP*	Pn	02 47 39.2	+1.1
OTRP				*eS*	Sn	02 48 07.4	+5.8
PVCP	**Virac**	**2.30**	**10**	*eP*	Pn	02 47 44.3	+1.9
SCPH	**Surigao**	**2.30**	**132**	↑*eP*	Pn	02 47 43.3	+0.9
CUYO	**Cuyo Island**	**2.72**	**260**	*eP*	Pn	02 47 50.3	+2.1
SJMP	**San Jose**	**2.81**	**294**	*eP*	Pn	02 47 51.5	+2.0
GQP	**Guinayangan**	**2.87**	**334**	↑*eP*	Pn	02 47 53.3	+3.1
PAGZ	**Pagadian**	**3.47**	**186**	*eP*	Pn	02 48 00.5	+2.0
BUSP	**Coron**	**3.54**	**281**	*eP*	Pn	02 48 01.0	+1.5
ENPP	**El Nido**	**4.24**	**269**	*eP*	Pn	02 48 11.0	+2.0

*MOS **07** 03:14:12.9±1.2, 5020N×8843E, h10km, mb3.7/1, Error ellipse: s-maj=21.9km s-min=17.8km az=49.6*
*ISCJB **07** 03:14:13.7±0.8, 5027N±004×8834E±009, h10km, Error ellipse: s-maj=8.5km s-min=5.9km az=17.4*
*IDC **07** 03:14:16.3±3.2, 5020N×8856E, h22km±16km, mb3.4/1, mb1 3.5/6, mb1mx3.3/26, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=25.5km s-min=14.0km az=95.0*
*NEIC **07** 03:14:19.4±2.6, 5024N×8790E, h10km, Error ellipse: s-maj=37.4km s-min=12.0km az=102.0*

ISC 07 03:14:15.5±0.8, 5018N±004×8838E±008, h10km, n19, σ1s57/30, 2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HVS	**Khovu-Aksy**	**3.52**	**72**	↓*iP*N	**Pn**	**03 15 08.2**	**-2.0**
HVS				*i*		03 15 18.6	
HVS				*e*		03 15 48.6	
HVS				*e*		03 16 01.8	
BLRR	**Bol'shaya Rech**	**3.82**	**40**	↓*e*PN	**Pn**	**03 15 13.3**	**-1.0**
BLRR				*e*		03 15 22.0	
BLRR				*e*		03 15 56.0	
BLRR				*e*		03 16 12.1	
ZAA0	**Zalesovo Array**	**4.36**	**331**	*e*Pn	**Pn**	**03 15 24.6**	**+2.8**
ZAA0				*e*Sn	**Sn**	**03 16 10.1**	**-2.5**
ZAA0				*e*Sg	**Sg**	**03 16 35.9**	**+0.4**
ZALV	**Zalesovo Beam**	**4.36**	**331**	Pn	**Pn**	**03 15 22.1**	**+0.4**
	0.7nm,0.3s,baz=143,slow=13,SNR=6.3						
ZALV				Sn	**Sn**	**03 16 15.4**	**+2.7**
	2.4nm,0.3s,baz=147,slow=22,SNR=4.7						
ZALV				Lg		03 16 36.6	
	3.2nm,0.3s,baz=141,slow=27,SNR=10						
ZALV	**Zalesovo Beam**	**4.36**	**331**	PN	**Pn**	**03 15 22.1**	**+0.3**
ZALV						03 16 15.4	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,2.0nm,0.3s						
MK31	**Makanchi Array**	**5.28**	**232**	*e*PN	**Pn**	**03 15 35.7**	**+1.4**
MK31				*e*		03 16 34.3	
MK31	**Makanchi Array**	**5.28**	**232**	*e*Pn	**Pn**	**03 15 35.6**	**+1.3**
MK31				*e*Sn	**Sn**	**03 16 34.3**	**-0.9**
MK31				*e*Sg	**Sg**	**03 17 01.5**	**-3.3**
MKAR	**Makanchi Array**	**5.28**	**232**	Pn	**Pn**	**03 15 35.7**	**+1.4**
	comp=N,2.2nm,0.3s,baz=52,slow=15,SNR=93						
MKAR				Pg	**Pg**	**03 15 50.9**	**-5.6**
	comp=N,3.9nm,0.3s,baz=58,slow=18,SNR=14						
MKAR				Sn	**Sn**	**03 16 37.7**	**+2.6**
	comp=N,3.2nm,0.3s,baz=54,slow=24,SNR=7.7						
MKAR				Lg		03 17 01.9	
	comp=N,2.7nm,0.3s,baz=57,slow=38,SNR=10						
MKAR	**Makanchi Array**	**5.28**	**232**	PN	**Pn**	**03 15 35.7**	**+1.4**
MKAR						03 15 50.9	
MKAR						03 16 37.7	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR				smax			
	comp=N,3.0nm,0.3s						
MKAR	**Makanchi Array**	**5.28**	**232**	Pn	**Pn**	**03 15 35.7**	**+1.4**
MKAR				Pg	**Pg**	**03 15 50.9**	**-5.6**
MKAR				Sn	**Sn**	**03 16 37.7**	**+2.6**
MKAR				Lg		03 17 01.9	
KURK	**Kurchatov**	**6.25**	**279**	Pn	**Pn**	**03 15 48.4**	**+0.6**
	comp=N,0.3nm,0.3s,baz=90,slow=15,SNR=6.5						
KURK				Sn	**Sn**	**03 17 06.7**	**+7.4**
	comp=N,0.3nm,0.3s,baz=86,slow=30,SNR=5.5						
KURK				Lg		03 17 40.2	
	comp=N,0.5nm,0.3s,baz=101,slow=31,SNR=6.7						

KURK	Kurchatov	6.25	279	PN	Pn	03 15 48.4	+0.7
KURK						03 17 06.7	
KURK	Kurchatov	6.25	279	ePn	Pn	03 15 47.5	-0.3
KURK				eSg	Sg	03 17 33.6	-2.5
KURK				Lg		03 17 40.2	
BVAR	Borovoye Array	11.54	291	Pn	Pn	03 16 59.0	-1.1
	comp=N,0.3nm,0.3s,baz=100,slow=16,SNR=3.4						
BVAR				Sn	Sn	03 19 05.4	-3.6
	comp=N,0.2nm,0.3s,baz=116,slow=15,SNR=3.9						
SONM	Songino Array	12.06	94	Lg		03 20 23.1	
	comp=N,0.1nm,0.3s,baz=274,slow=34,SNR=5.5						
AKTK	Aktyubinsk	19.33	282	P	Pn	03 18 41.6	-0.2
AKTO	Aktyubinsk	19.33	282	P	Pn	03 18 41.6	-0.2
	comp=N,0.1nm,0.3s,baz=83,slow=15,SNR=3.5						
ESDC	Sonseca Array	62.17	299	P	P	03 24 37.7	+1.0
	comp=N,0.3nm,0.6s,baz=47,slow=6.4,SNR=4.5						
ESDC	Sonseca Array	62.17	299	P	P	03 24 37.7	+1.0

IDC 07 03:14:46.0±2.9, 17.02S×175.66W, h252km±25km, mb3.4/5, mb1 3.7/6, mb1mx3.4/18, mbtmp3.5/6, Error ellipse: s-maj=125.9km s-min=16.6km az=151.0
ISCJB 07 03:14:46.2±2.4, 16.8S±0.8×175.8W±0.4, h263km±20km, mb3.6/6, Error ellipse: s-maj=143.6km s-min=19.1km az=152.4
NEIC 07 03:14:47.3±1.9, 16.99S×175.69W, h264km±16km, mb3.8/3, Error ellipse: s-maj=93.7km s-min=12.7km az=154.0
ISC 07 03:14:46.8±2.4, 16.8S±0.8×175.8W±0.4, h256km±20km, n9, σ0.66/10, mb3.6/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.83	54	P	Pn	03 16 02.0	+1.3
	8.1nm,0.3s,baz=289,slow=18,SNR=4.2						
AFI				S	S	03 16 58.7	-0.9
	22nm,0.3s,baz=49,slow=22,SNR=6.7						
CTA	Charters Tower	36.11	259	P	P	03 21 25.4	+0.6
	3.0nm,0.7s,mb3.9,baz=88,slow=14,SNR=3.8						
CTAO	Charters Tower	36.11	259	eP	P	03 21 25.5	+0.7
	3.7nm,0.8s,mb4.0						
STKA	Stephens Creek	41.35	241	eP	P	03 22 07.8	-0.3
	3.9nm,1.1s,mb3.5						
STKA	Stephens Creek	41.35	241	P	P	03 22 07.2	-0.9
	3.4nm,0.8s,mb3.6,baz=61,slow=9.7,SNR=5.8						
WRAB	Tennant Creek	47.29	258	eP	P	03 22 54.8	-0.4
	5.1nm,1.0s,mb3.8						
ASAR	Alice Springs	47.50	253	P	P	03 22 56.5	-0.2
	7.1nm,0.6s,mb4.2,baz=88,slow=8.5,SNR=96						
NVAR	Mina Array Bea	76.91	43	P	P	03 26 11.2	+0.2
	0.1nm,0.4s,mb2.9,baz=235,slow=8.7,SNR=2.1						
TXAR	Lajitas Array	83.30	57	P	P	03 26 45.4	+0.1
	0.6nm,1.1s,mb3.3,baz=210,slow=7.0,SNR=3.1						

IDC 07 03:17:16.6±3.7, 0.14S×120.30E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.8/21, mbtmp3.9/7, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/33, Error ellipse: s-maj=180.5km s-min=25.6km az=88.0
ISCJB 07 03:17:19.2±1.3, 0.27S±0.07×121.05E±0.09, h55km±14km, mb4.1/10, Error ellipse: s-maj=16.4km s-min=9.4km az=148.7
DJA 07 03:17:19, 0.28S×121.09E, h30km, MLv4.2/5
NEIC 07 03:17:24.4±3.1, 1.03S×122.03E, h154km±65km, mb4.1/5, Error ellipse: s-maj=133.7km s-min=41.9km az=127.0
ISC 07 03:17:20.6±1.3, 0.26S±0.07×121.01E±0.08, h46km±15km, n26, σ0.84/27, mb4.1/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	1.34	241	P	Pn	03 17 42.0	-0.9
PCI				S	Sn	03 17 59.4	-0.1
KDI	Kendari	4.01	156	P	Pn	03 18 18.5	-1.1
KDI				S	Sn	03 19 05.3	0.0
KDI	Kendari	4.01	156	P	Pn	03 18 19.5	-0.1
MNI	Manado	4.18	66	P	Pn	03 18 11.6	-10
KAPI	Kappang	4.89	195	Pn	Pn	03 18 32.3	+0.7
	3.7nm,0.3s,baz=25,slow=6.6,SNR=20						
KAPI				Sn	Sn	03 19 27.3	+0.3
	1.1nm,0.3s,baz=202,slow=19,SNR=3.9						
KAPI	Kappang	4.89	195	P	Pn	03 18 32.2	+0.6
KAPI	Kappang	4.89	195	P	Pn	03 18 33.4	+1.8
	17nm,0.6s,0.1nm						
MYLDM	Lahad Datu	5.96	335	P	Pn	03 18 45.3	-1.0
	71nm,1.0s,0.3nm						
MYLDM	Lahad Datu	5.96	335	P	Pn	03 18 48.5	+2.2
	119nm,1.3s,944nm0.3nm						
BBKI	Banjar Baru	6.94	243	P	Pn	03 19 04.0	+4.2
BBKI	Banjar Baru	6.94	243	P	Pn	03 19 04.2	+4.4
	72nm,0.7s,2µm						
DAV	Davao City (W)	8.59	32	LR	LR	03 22 28.5	
	comp=Z,162nm,21.5s,baz=151,slow=35						
KAKA	Kakadu	16.78	138	eP	x	03 20 52.5	
	9.8nm,0.7s						
ULN	Ulaanbaatar	49.45	348	eP	P	03 26 06.2	+0.2
	1.5nm,0.5s,mb4.3						
SONM	Songino Array	49.56	347	P	P	03 26 07.2	+0.3
	1.6nm,0.6s,mb4.2,baz=170,slow=8.5,SNR=14						
MK31	Makanchi Array	57.80	329	eP	P	03 27 07.5	+0.2
MKAR	Makanchi Array	57.80	329	P	P	03 27 07.8	+0.6
	1.3nm,0.5s,mb4.2,baz=127,slow=8.6,SNR=22						
TKM2	Tokmak 2	59.16	322	eP	P	03 27 17.7	+0.9
	2.0nm,0.6s,mb4.3						
AAK	Ala-Archa	59.68	322	eP	P	03 27 21.5	+1.1
	2.4nm,0.7s,mb4.3						
EKS2	Erkin-Say	60.14	321	eP	P	03 27 24.3	+0.7
	2.6nm,0.9s,mb4.3						
ZALV	Zalesovo Beam	61.74	337	P	P	03 27 33.7	-0.5
	0.9nm,0.6s,mb4.0,baz=134,slow=4.2,SNR=3.8						
KURK	Kurchatov	62.22	331	P	P	03 27 36.6	-0.9
	0.5nm,0.3s,mb4.1,baz=136,slow=6.9,SNR=3.6						
KURK	Kurchatov	62.22	331	eP	P	03 27 37.9	+0.5
	1.9nm,0.8s,mb4.3						
BVAR	Borovoye Array	67.69	330	P	P	03 28 12.4	-0.6
	0.3nm,0.4s,mb3.7,baz=169,slow=8.2,SNR=3.6						
AKTK	Aktyubinsk	73.33	324	P	P	03 28 46.0	-1.4
AKTO	Aktyubinsk	73.33	324	P	P	03 28 46.0	-1.4
	0.9nm,0.8s,mb3.8,baz=140,slow=7.9,SNR=4.1						

IDC 07 03:23:37.5±1.2, 3.20S×101.00E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/23, mbtmp4.2/13, ML4.5/1, Error ellipse: s-maj=46.4km s-min=16.4km az=50.0
MOS 07 03:23:41.0±0.9, 3.06S×101.21E, h33km, mb4.7/3, Error ellipse: s-maj=46.7km s-min=20.6km az=122.3
NEIC 07 03:23:43.1±0.6, 3.22S×101.17E, h35km, mb4.9/9, Error ellipse: s-maj=25.1km s-min=6.7km az=47.0
ISCJB 07 03:23:45.5±1.7, 3.1S±0.1×101.2E±0.1, h74km±12km, mb4.5/20, Error ellipse: s-maj=30.3km s-min=9.7km az=44.5
DJA 07 03:23:48, 2.98S×101.09E, h50km, MLv4.2/4
ISC 07 03:23:48.2±1.5, 3.1S±0.1×101.3E±0.1, h78km±11km, n40, σ0.95/39, mb4.5/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.42	114	P	Pn	03 24 15.1	+2.7
PPI	Padang Panjang	2.75	341	P	Pn	03 24 28.6	-1.5
RGRI	Rengat	2.90	21	P	Pn	03 24 31.9	-0.2
KLI	Kotabumi	3.98	117	P	Sn	03 25 39.3	+7.1
GSI	Gunungsitoli	5.72	319	P	Pn	03 25 07.9	-2.7
KAPI	Kappang	18.51	97	P	Pn	03 27 57.8	-1.7
	1.6nm,0.3s,baz=270,slow=12,SNR=4.9						
CMAR	Chiang Mai Arr	21.52	354	P	P	03 28 31.3	+0.3
	1.9nm,0.4s,mb3.8,baz=184,slow=8.8,SNR=6.7						
ODAN	Odare	32.65	337	eP	P	03 30 13.6	+0.7
	12nm,0.6s,mb4.9						
TAPN	Taplejung	32.96	337	eP	P	03 30 16.6	+1.0
	26nm,0.8s,mb5.1						
RAMN	Ramite	33.05	335	eP	P	03 30 17.5	+1.1
JIRN	Jiri	33.84	335	eP	P	03 30 24.1	+0.8
GUN	Gumba	34.19	335	eP	P	03 30 27.0	+0.7
	39nm,0.5s,mb5.5						
DMN	Daman	34.26	334	eP	P	03 30 27.1	+0.2
KKN	Kakani	34.34	334	eP	P	03 30 28.2	+0.6
GKN	Gorkha	34.81	334	eP	P	03 30 32.2	+0.6
KOLN	Koldanda	35.08	332	eP	P	03 30 34.8	+0.8
	18nm,0.8s,mb5.0						
DANN	Dangsing	35.50	333	eP	P	03 30 38.2	+0.6
	26nm,0.5s,mb5.3						
WRAB	Tennant Creek	36.35	120	eP	P	03 30 44.1	-0.9
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
WRAB	Tennant Creek	36.35	120	eP	P	03 30 44.1	-0.9
	comp=Z,2.1nm,0.4s,mb4.4						
WB2	Warramunga Arr	36.35	120	eP	P	03 30 43.9	-1.1
ASAR	Alice Springs	37.58	126	P	P	03 30 55.5	+0.1
	comp=Z,1.5nm,0.7s,mb4.0,baz=300,slow=8.2,SNR=16						
STKA	Stephens Creek	47.48	132	P	P	03 32 16.4	+0.9
	comp=Z,0.9nm,0.6s,mb3.7,baz=330,slow=11,SNR=3.3						
SONM	Songino Array	50.89	4	P	P	03 32 42.0	+0.8
	comp=Z,1.2nm,0.5s,mb4.2,baz=183,slow=9.5,SNR=12						
SONM				PcP	PcP	03 33 56.7	0.0
	comp=Z,0.4nm,0.6s,baz=171,slow=4.5,SNR=2.8						
TKM2	Tokmak 2	51.33	336	eP	P	03 32 45.1	+0.5
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	Tokmak 2	51.33	336	eP	P	03 32 45.1	+0.5
	comp=Z,4.0nm,0.6s,mb4.6						
EKS2	Erkin-Say	51.88	334	eP	P	03 32 49.4	+0.6
	comp=Z,6.2nm,0.8s,mb4.7						
MK31	Makanchi Array	52.41	344	eP	P	03 32 52.5	0.0
MKAR	Makanchi Array	52.41	344	P	P	03 32 52.5	0.0
	comp=Z,6.2nm,0.7s,mb4.8,baz=147,slow=8.2,SNR=55						
KURK	Kurchatov	56.99	343	P	P	03 33 25.1	-0.6
	comp=Z,2.4nm,0.5s,mb4.5,baz=164,slow=7.1,SNR=11						
KURK	Kurchatov	56.99	343	eP	P	03 33 25.1	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KURK	Kurchatov	56.99	343	eP	P	03 33 25.1	-0.6
	comp=Z,3.6nm,0.7s,mb4.5						
ZAA0	Zalesovo Array	58.46	349	eP	P	03 33 35.1	-0.7
ZALV	Zalesovo Beam	58.46	349	P	P	03 33 35.4	-0.5
	comp=Z,7.6nm,0.4s,mb5.0,baz=163,slow=5.7,SNR=50						
BVAR	Borovoye Array	61.63	339	P	P	03 33 56.6	-0.9
	comp=Z,1.4nm,0.4s,mb4.3,baz=145,slow=9.3,SNR=11						
AKTK	Aktyubinsk	64.91	331	P	P	03 34 18.0	-1.3
AKTO	Aktyubinsk	64.91	331	P	P	03 34 18.0	-1.3
	comp=Z,1.1nm,0.6s,mb3.9,baz=157,slow=7.7,SNR=4.0						
PETK	Petropavlovsk-	73.10	32	P	P	03 35 10.2	+0.2
	comp=Z,3.7nm,0.8s,mb4.2,baz=224,slow=10.0,SNR=2.7						
BRTR	Keskin Array B	74.99	312	P	P	03 35 20.1	-1.2
	comp=Z,0.8nm,0.7s,mb3.6,baz=133,slow=7.3,SNR=3.8						
ARCES	ARCESS Array B	87.91	340	P	P	03 36 29.0	+0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=81,slow=7.5,SNR=3.6						
TXAR	Lajitas Array	144.73	40	PKPbc	PKPdf	03 43 16.6	-0.2
	comp=Z,1.1nm,0.7s,baz=293,slow=1.2,SNR=19						

DJA 07 03:37:19, 0.04N×99.54E, h22km, MLv3.5/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	Padang Panjang	0.99	120	P	Pb	03 37 36.7	-0.8
PPI				S	Sb	03 37 50.6	+0.5
PDSI	Padang	1.32	136	P	Pn	03 37 42.1	0.0
PDSI				S	Sn	03 37 59.2	+0.1
GSI	Gunungsitoli	2.33	303	P	Pn	03 37 56.5	+0.4

IDC 07 04:00:53.9±1.2, 4.84S×144.52E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.1/16, mbtmp4.2/8, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=49.1km s-min=22.6km az=88.0
ISCJB 07 04:01:03.5±3.3, 4.9S±0.1×144.4E±0.2, h86km±34km, mb4.0/9, Error ellipse: s-maj=32.8km s-min=21.1km az=31.0
NEIC 07 04:01:05.7±1.9, 4.96S×144.39E, h93km±21km, mb4.2/3, Error ellipse: s-maj=21.0km s-min=11.8km az=112.0
ISC 07 04:01:05.2±2.9, 5.0S±0.2×144.3E±0.2, h86km±32km, n18, σ0.56/15, mb4.0/9, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.24	148	ePn	Pn	04 02 21.2	+0.2
	46nm,0.9s						
KAKA	Kakadu	14.05	236	eP	x	04 04 01.4	
	10nm,0.6s						
WRAB	Tennant Creek	17.78	212	eP	Pn	04 05 06.9	-0.2
	7.0nm,1.2s						
WB2	Warramunga Arr	17.79	212	eP	Pn	04 05 06.5	-0.7
ASAR	Alice Springs	21.15	207	P	P	04 05 43.8	+0.4
	0.9nm,0.7s,baz=34,slow=10,SNR=12						
MJAR	Matsushiro Arr	41.67	353	LR	LR	04 24 25.3	
	comp=Z,34nm,18.4s,baz=165,slow=34						
CMAR	Chiang Mai Arr	50.42	299	P	P	04 09 56.0	+1.6
	0.8nm,0.3s,mb4.1,baz=127,slow=6.7,SNR=4.2						
PETK	Petropavlovsk-	58.94	9	P	P	04 10 55.2	-0.1
	1.1nm,0.5s,mb4.2,baz=185,slow=7.2,SNR=3.9						
VNDA	Vanda	73.12	176	P	P	04 12 26.1	+0.3
	1.0nm,0.8s,mb3.7,baz=308,slow=6.6,SNR=3.8						
MK31	Makanchi Array	75.02	321	eP	P	04 12 37.3	0.0
MKAR	Makanchi Array	75.02	321	P	P	04 12 37.5	+0.1
	1.4nm,0.6s,mb3.9,baz=95,slow=8.3,SNR=13						
MKAR	Makanchi Array	75.02	321	P	P	04 12 37.5	+0.1
ZALV	Zalesovo Beam	76.73	328	P	P	04 12 46.0	-0.9
	0.4nm,0.4s,mb3.5,baz=105,slow=5.7,SNR=4.2						
TKM2	Tokmak 2	78.04	316	eP	P	04 12 54.7	+0.1
	1.9nm,0.5s,mb4.1						
KURK	Kurchatov	78.80	324	P	P	04 12 58.0	-0.5
	0.8nm,0.6s,mb3.7,baz=107,slow=5.0,SNR=3.4						
BVAR	Borovoye Array	84.37	324	P	P	04 13 27.8	-0.1
	3.0nm,0.6s,mb4.3,baz=110,slow=7.4,SNR=16						
BRVK	Borovoye	84.44	324	eP	P	04 13 28.2	0.0
	2.6nm,0.7s,mb4.2						
DBIC	Dimbokro	149.31	275	PKPbc	PKPbc	04 20 44.7	-0.5
	1.1nm,0.6s,baz=135,slow=2.9,SNR=3.6						

SKO 07 04:05:10.3, 41.13N×23.20E, h33km, M0.8, ML1.4
SOF 07 04:05:11.8, 41.25N×23.21E, h12km, MD2.5
CSEM 07 04:05:11.3±0.1, 41.22N×23.23E, h2km, ML2.5/4, Error ellipse: s-maj=2.2km s-min=2.0km az=70.0
ISCJB 07 04:05:12.1±0.5, 41.22N±0.03×23.19E±0.04, h10km, Error ellipse: s-maj=4.7km s-min=3.5km az=148.9
THE 07 04:05:12.6, 41.22N×23.18E, h8km±4km, ML2.5/4, Error ellipse: s-maj=4.6km s-min=0.4km az=234.0
ISC 07 04:05:12.4±0.6, 41.24N±0.03×23.20E±0.04, h5km±15km, n16, σ0.51/28, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNT	Kendrikon	0.24	252	P	Pg	04 05 17.1	0.0
KNT				S	Sg	04 05 20.7	+0.4
SOH	Sokhos	0.43	165	P	Pg	04 05 20.4	-0.2
SOH				S	Sg	04 05 26.4	+0.2
VAY	Valandovo	0.48	280	P	Pg	04 05 21.2	-0.5
VAY				S	Sg	04 05 28.5	+0.5
VAY	Valandovo	0.48	280	ePg	Pg	04 05 21.2	-0.5
VAY				i Sg	Sg	04 05 27.5	-0.5
VAY	Valandovo	0.48	280	ePg	Pg	04 05 21.2	-0.5
VAY				i Sg	Sg	04 05 27.6	-0.5
VAY				eLg		04 05 27.8	
	comp=N,23nm,0.7s						
VAY				eLg		04 05 29.3	
	comp=E,11nm,0.3s						
MMB	Musomiste	0.53	48	i Pg	Pg	04 05 22.1	-0.5
MMB				i Pg	Pg	04 05 22.1	-0.5
THE	Thessaloniki	0.63	197	P	Pg	04 05 24.2	-0.3
THE				S	Sg	04 05 32.5	-0.1
KKB	Krupnik	0.64	352	i Pg	Pg	04 05 24.0	-0.6
HORT	Hortiatis	0.64	187	P	Pg	04 05 24.6	-0.1
HORT				S	Sg	04 05 33.3	+0.2
GRG	Griva	0.67	246	P	Pg	04 05 25.0	-0.2
GRG				S	Sg	04 05 34.3	+0.4
STIP	Stip	0.89	301	P	Pg	04 05 29.3	-0.2
STIP				S	Sg	04 05 42.0	+0.9
STIP	Stip	0.89	301	ePg	Pg	04 05 29.0	-0.5
STIP				i Sg	Sg	04 05 41.7	+0.6
STIP	Stip	0.89	301	ePg	Pg	04 05 29.1	-0.4
STIP				i Sg	Sg	04 05 41.7	+0.7
STIP				eLg		04 05 42.0	
	comp=E,9.5nm,0.4s						
STIP				eLg		04 05 42.1	
	comp=N,6.4nm,0.2s						
OUR	Ouranopolis	1.08	146	P	Pg	04 05 32.7	-0.3
RZN	Rozhen	1.22	68	P	Pg	04 05 37.4	+1.6
VTS	Vitosha	1.35	0	P	Pn	04 05 38.0	+0.1
VTS				P		04 05 38.0	

MAN 07 04:17:24, 12.46N×125.77E, h1km, mb4.4, ML3.2, MS3.1, 4C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	1.08	273	eP	Pg	04 17 45.3	+0.6
CNP				eS	Sg	04 17 59.0	+0.3
PLP	Palo	1.50	211⇓	eP	Pn	04 17 52.2	+0.2
PLP				eS	Sb	04 18 09.2	-2.9
PVCP	Virac	1.94	306⇑	iP	Pn	04 17 59.0	+0.9
PVCP				i S	Sn	04 18 30.8	+7.7
MMPH	Masbate	2.10	268⇑	iP	Pn	04 18 03.9	+3.6
MMPH				eS	Sn	04 18 30.1	+3.1
MSLP	Maasin	2.47	201	eP	Pn	04 18 08.4	+3.0
SCPH	Surigao	2.67	186⇑	eP	Pn	04 18 09.6	+1.4
RCP	Roxas	3.09	254⇑	eP	Pn	04 18 15.3	+1.4
RCP				eS	Sn	04 18 54.0	+2.5
TBP	Tagbilaran	3.32	214	eP	Pn	04 18 18.4	+1.3
GUIM	Jordan	3.61	240	eP	Pn	04 18 22.2	+1.1
OTRP	Odiongan	3.66	269	eP	Pn	04 18 23.4	+1.6

CASC 07 04:18:37.9±1.3, 12.10N×87.98W, h21km±5km, MD3.7, 5C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.08	57⇑	eP	Pn	04 18 57.4	-0.5
CRIN				eS	Sb	04 19 13.4	+1.7
CNCH	Conchagua	1.18	7	eP	x	04 18 58.9	
CNCH				eS	x	04 19 14.7	
MIRN	Miramar	1.28	75⇑	eP	Pn	04 18 59.8	-0.8
MIRN				eS	Sn	04 19 19.1	+2.0
CNGN	Cerro Negro	1.31	72⇓	eP	Pn	04 19 00.2	-0.8
VSM	San Miguel	1.35	348⇑	eP	x	04 19 02.2	
BLLM	Bellamira	1.36	349	eP	x	04 19 01.7	
BLLM				eS	x	04 19 20.1	
COPN	Copaltepe	1.36	87	eP	Pn	04 19 01.1	-0.6
COPN				eS	Sn	04 19 19.8	+0.8
MOMN	Momotombo	1.44	78⇑	eP	Pn	04 19 02.5	-0.2
MOMN				eS	Sn	04 19 22.0	+1.0
CSAN		1.52	87⇑	eP	Pn	04 19 03.6	-0.3
CSAN				eS	Sn	04 19 23.5	+0.4
CAHU	Cacacuatique	1.68	352	eP	x	04 19 07.0	
MGAN	Managua	1.69	88⇓	eP	Pn	04 19 06.0	-0.2
MGAN				eS	Sn	04 19 28.4	+1.1
HUEN		1.78	82	eP	Pn	04 19 07.2	-0.2
LFRS	El Faro	1.85	325	eP	x	04 19 08.6	
LFRS				eS	x	04 19 32.0	
LBRS	Las Brisas	1.93	328	eP	x	04 19 10.4	
SSN	San Juan del S	2.23	111	eP	Pn	04 19 14.1	+0.5

ISCJB 07 04:18:49.8±0.3, 7.22S±0.07×155.79E±0.06, h29km, mb4.6/31, MS3.8/4, Error ellipse: s-maj=10.2km s-min=6.9km az=33.1
IDC 07 04:18:50.6±0.6, 7.33S×155.90E, h26km±3km, mb4.3/14, mb1 4.4/14, mb1mx4.3/18, mbtmp4.3/14, MS3.7/6, Ms1 3.7/6, ms1mx3.4/16, Error ellipse: s-maj=21.6km s-min=15.0km az=87.0
NEIC 07 04:18:50.9±0.3, 7.23S×155.89E, mb4.8/20, Error ellipse: s-maj=9.8km s-min=8.4km az=51.0
MOS 07 04:18:50.6±0.9, 7.22S×155.75E, h33km, mb4.8/9, Error ellipse: s-maj=18.8km s-min=12.7km az=39.7
ISC 07 04:18:51.5±0.4, 7.25S±0.07×155.87E±0.07, h31km, h31km±.9km:pP-P, n70, σ0.92/57, mb4.6/31, MS3.8/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.58	119	Pn	Pn	04 20 01.1	+2.4
	29nm,0.3s,baz=224,slow=7.5,SNR=3.6						
HNR				Sn	Sn	04 20 55.5	+4.5
	39nm,0.3s,baz=287,slow=18,SNR=7.8						
HNR				LR	LR	04 21 41.5	
	comp=Z,816nm,18.0s,baz=322,slow=38						
HNR	Honiara	4.58	119	P	Pn	04 20 01.1	+2.4
HNR						04 20 55.5	
HNR	Honiara	4.58	119	Pn	Pn	04 20 01.1	+2.4
HNR				Sn	Sn	04 20 55.5	+4.5
HNR				LR	LR	04 21 41.5	
PMG	Port Moresby	8.88	255	eP	Pn	04 21 04.2	+6.4
PMG				pmax	pmax		
	comp=Z,21nm,0.8s						
PMG	Port Moresby	8.88	255	ePn	Pn	04 21 04.2	+6.3
	comp=Z,21nm,0.8s						
COEN	Coen	14.14	241	eP	Pn	04 22 12.2	+2.4
	comp=Z,5.9nm,0.8s						
CTA	Charters Tower	15.81	215	LR	LR	04 27 56.4	
	comp=Z,154nm,19.0s,baz=231,slow=35						
DZM	Mont Dzumac	17.92	146	eP	Pn	04 22 57.7	-0.9
	comp=Z,8.1nm,0.8s						
KAKA	Kakadu	23.70	255	eP	x	04 23 42.2	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	24.38	237	eP	P	04 24 07.1	-0.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
WRAB	Tennant Creek	24.38	237	eP	P	04 24 07.0	-0.1
	comp=Z,7.4nm,0.7s,mb4.2						
WB2	Warramunga Arr	24.39	237	eP	P	04 24 07.2	0.0
ASAR	Alice Springs	26.66	230	P	P	04 24 26.8	-1.1
	comp=Z,1.7nm,0.7s,mb3.7,baz=60,slow=8.8,SNR=17						
ASAR				pP	pP	04 24 34.0	-2.7
	comp=Z,3.0nm,0.8s,baz=60,slow=8.8,SNR=12						
ASAR				PcP	PcP	04 27 51.2	-0.1
	comp=Z,0.8nm,0.7s,baz=47,slow=2.6,SNR=4.6						
STKA	Stephens Creek	27.89	207	eP	P	04 24 40.2	+1.5
	comp=Z,2.6nm,0.6s,mb4.0						
STKA	Stephens Creek	27.89	207	P	P	04 24 39.8	+1.1
	comp=Z,1.5nm,0.6s,mb3.8,baz=32,slow=15,SNR=4.6						
STKA				LR	LR	04 36 02.1	
	comp=Z,128nm,18.3s,MS3.5,baz=26,slow=37						
KAPI	Kappang	35.97	271	eP	P	04 25 49.7	-0.2
	comp=Z,9.7nm,0.8s,mb4.8						
KAPI				epP	pP	04 25 58.3	-0.6
MBWA	Marble Bar	37.55	245	eP	P	04 26 02.4	-0.8
	comp=Z,4.2nm,0.5s,mb4.4						
RPZ	Rata Peaks	38.69	162	P	P	04 26 10.4	-2.1
	comp=Z,5.9nm,0.8s,mb4.4,baz=348,slow=4.9,SNR=4.1						
KSRS	Korea Array	51.57	332	P	P	04 27 54.8	-0.1
	comp=Z,1.8nm,0.6s,mb4.2,baz=146,slow=7.6,SNR=5.1						
PETK	Petropavlovsk-	60.14	1	P	P	04 28 57.3	+1.3
	comp=Z,4.6nm,0.8s,mb4.6,baz=156,slow=6.9,SNR=4.7						
PETK				LR	LR	04 50 08.3	
	comp=Z,65nm,21.7s,MS3.7,baz=320,slow=31						
CMAR	Chiang Mai Arr	61.67	295	P	P	04 29 07.8	+0.8
	comp=Z,4.1nm,0.7s,mb4.7,baz=113,slow=5.2,SNR=12						
CMAR				pP	pP	04 29 15.3	-1.2
	comp=Z,5.4nm,0.8s,baz=116,slow=4.8,SNR=5.6						
CHTO	Chiang Mai	61.79	296	eP	P	04 29 07.7	-0.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
CHTO	Chiang Mai	61.79	296	eP	P	04 29 07.7	-0.2
	comp=Z,4.0nm,0.7s,mb4.7						
ULN	Ulaanbaatar	69.68	327	eP	P	04 29 59.5	+1.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ULN	Ulaanbaatar	69.68	327	eP	P	04 29 59.5	+1.3
	comp=Z,4.7nm,0.6s,mb4.6						
SONM	Songino Array	70.02	327	P	P	04 30 01.6	+1.3
	comp=Z,8.6nm,0.8s,mb4.8,baz=141,slow=6.2,SNR=30						
SONM				LR	LR	04 58 51.6	
	comp=Z,53nm,18.6s,MS3.8,baz=339,slow=34						
VNDA	Vanda	70.31	179	P	P	04 30 01.8	+0.2
	comp=Z,1.4nm,0.8s,mb3.9,baz=10.0,slow=3.5,SNR=3.8						
VNDA	Vanda	70.31	179	P	P	04 30 01.8	+0.2
TAPN	Taplejung	74.27	301	eP	P	04 30 26.6	+0.4
	comp=Z,16nm,0.8s,mb5.0						
ODAN	Odare	74.41	300	eP	P	04 30 27.4	+0.4
	comp=Z,22nm,0.6s,mb5.3						
JIRN	Jiri	75.66	301	eP	P	04 30 34.5	+0.3
	comp=Z,15nm,0.8s,mb5.0						
GUN	Gumba	75.99	301	eP	P	04 30 36.4	+0.3
	comp=Z,23nm,0.8s,mb5.2						
PKI	Pulchoki	76.30	301	eP	P	04 30 37.8	0.0
	comp=Z,16nm,0.8s,mb5.0						
PKI	Pulchoki	76.30	301	eP	P	04 30 37.8	0.0
PKI				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
KKN	Kakani	76.47	301	eP	P	04 30 38.9	+0.1
DMN	Daman	76.57	301	eP	P	04 30 39.8	+0.5
	comp=Z,29nm,0.9s,mb5.2						
GKN	Gorkha	77.07	301	eP	P	04 30 42.4	+0.2
KOLN	Koldanda	77.90	300	eP	P	04 30 46.1	-0.7
	comp=Z,12nm,0.8s,mb4.9						
DANN	Dangsing	77.91	301	eP	P	04 30 46.7	-0.2
	comp=Z,16nm,0.8s,mb5.0						
MCK	McKinley	81.97	22	eP	P	04 31 08.4	+0.4

MCK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MCK	McKinley	81.97	22	eP	P	04 31 08.4	+0.4
	comp=Z,4.4nm,0.8s,mb4.4						
MK31	Makanchi Array	84.16	319	eP	P	04 31 20.1	+0.3
MK31				e*PP	pP	04 31 30.0	+0.5
MKAR	Makanchi Array	84.16	319	P	P	04 31 20.1	+0.3
	comp=Z,14nm,0.7s,mb5.2,baz=102,slow=5.9,SNR=154						
MKAR				pP	pP	04 31 29.4	-0.1
	comp=Z,8.0nm,0.7s,baz=104,slow=5.2,SNR=12						
ZAA0	Zalesovo Array	84.87	326	eP	P	04 31 22.2	-0.9
ZAA0				epP	pP	04 31 31.8	-1.1
ZALV	Zalesovo Beam	84.87	326	P	P	04 31 22.2	-1.0
	comp=Z,7.2nm,0.8s,mb4.9,baz=114,slow=5.5,SNR=20						
ZALV				pP	pP	04 31 32.0	-1.0
	comp=Z,4.9nm,0.5s,baz=107,slow=5.7,SNR=9.2						
KURK	Kurchatov	87.56	322	P	P	04 31 36.0	-0.5
	comp=Z,2.2nm,0.6s,mb4.6,baz=102,slow=4.6,SNR=12						
KURK				pP	pP	04 31 45.7	-0.6
	comp=Z,2.0nm,0.6s,baz=100,slow=4.9,SNR=0.5						
KURK	Kurchatov	87.56	322	eP	P	04 31 35.4	-1.1
KURK				*PP	pP	04 31 45.7	-0.6
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
KURK	Kurchatov	87.56	322	eP	P	04 31 35.4	-1.2
	comp=Z,3.4nm,0.7s,mb4.7						
KURK				pP	pP	04 31 45.7	-0.6
TKM2	Tokmak 2	87.81	314	eP	P	04 31 37.6	-0.3
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
TKM2	Tokmak 2	87.81	314	eP	P	04 31 37.6	-0.3
	comp=Z,2.8nm,0.8s,mb4.5						
AAK	Ala-Archa	88.55	313	eP	P	04 31 41.1	-0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
AAK	Ala-Archa	88.55	313	eP	P	04 31 41.1	-0.4
	comp=Z,2.8nm,0.9s,mb4.6						
BVAR	Borovoye Array	93.02	323	P	P	04 32 00.8	-1.1
	comp=Z,3.2nm,0.6s,mb5.0,baz=102,slow=6.2,SNR=18						
BVAR				pP	pP	04 32 10.3	-1.5
	comp=Z,4.0nm,0.8s,baz=108,slow=4.8,SNR=8.3						
BRVK	Borovoye	93.08	323	eP	P	04 32 00.5	-1.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.5						
BRVK	Borovoye	93.08	323	eP	P	04 32 00.5	-1.8
	comp=Z,1.4nm,0.5s,mb4.7						
YKA	Yellowknife Ar	96.15	28	P	P	04 32 14.8	-1.3
	comp=Z,0.4nm,0.8s,mb3.9,baz=266,slow=4.8,SNR=6.4						
YKA				pP	pP	04 32 24.5	-1.4
	comp=Z,0.5nm,0.7s,baz=266,slow=4.5,SNR=6.2						
PDAR	Pinedale Array	98.22	48	P	P	04 32 26.0	+0.1
	comp=Z,0.2nm,0.4s,mb4.0,baz=259,slow=0.9,SNR=2.4						
PDAR				pP	pP	04 32 34.6	-1.1
	comp=Z,0.5nm,1.0s,baz=228,slow=3.8,SNR=4.0						
PDAR				LR	LR	05 10 28.4	
	comp=Z,47nm,18.9s,MS4.0,baz=150,slow=32						
BRG	Berggiesshubel	126.28	331	eP	pPKPdf	04 38 00.6	-0.6
	comp=Z,15nm,1.5s						
GERES	GERESS Array B	127.71	329	PKP	PKPdf	04 37 54.5	+0.5
	comp=Z,0.6nm,0.5s,baz=98,slow=4.1,SNR=2.9						
GERES				pPKP	pPKPdf	04 38 04.1	0.0
	comp=Z,0.5nm,0.5s,baz=201,slow=1.1,SNR=3.9						
SDV	Santo Domingo	133.95	85	ePKPdf	PKPdf	04 38 05.9	-0.9
SDV				epPKPdf	pPKPdf	04 38 15.7	-1.2
ESDC	Sonseca Array	142.98	334	PKhKP		04 38 18.9	
	comp=Z,0.3nm,0.5s,baz=357,slow=3.1,SNR=5.0						
ESDC	Sonseca Array	142.98	334	PKP	PKPdf	04 38 18.9	-3.7
BDFB	Brasilia	147.19	134	PKPbc	PKPbc	04 38 31.7	-1.0
	comp=Z,4.0nm,0.8s,baz=206,slow=6.5,SNR=13						
BDFB				pPKPbc	pPKPbc	04 38 40.3	-2.5
	comp=Z,3.3nm,0.8s,baz=355,slow=26,SNR=5.6						
TOA0	Torodi Ar. Sit	153.93	285	ePKPbc	PKPbc	04 38 47.6	-1.4
TORD	Torodi Ar. Bea	153.93	285	PKP	PKPdf	04 38 39.8	-1.2
	comp=Z,0.5nm,0.9s,baz=26,slow=2.2,SNR=3.4						
TORD				PKPbc	PKPbc	04 38 48.2	-0.8
	comp=Z,0.9nm,0.7s,baz=37,slow=2.0,SNR=6.3						
TORD				pPKPbc	pPKPbc	04 38 57.9	-1.2
	comp=Z,1.1nm,0.7s,baz=84,slow=2.4,SNR=4.6						
KIC	Kosan Boka	160.72	269	eP	PKPab	04 39 31.1	-0.6
	comp=Z,36nm,1.1s						
DBIC	Dimbokro	160.86	269	PKPab	PKPab	04 39 31.5	-0.7
	comp=Z,1.9nm,0.6s,baz=138,slow=15,SNR=5.5						
DBIC	Dimbokro	160.86	269	ePKPab	PKPab	04 39 31.3	-0.9
LIC	Lamto	161.00	268	eP	PKPab	04 39 30.2	-2.7
	comp=Z,16nm,1.2s						
TIC	Toumodi	161.02	269	eP	PKPab	04 39 32.5	-0.4
	comp=Z,38nm,1.1s						

*ISK **07** 04:40:11.5, 4169N×2847E, h9km, MD3.3*
*NEIC **07** 04:40:11.0, 4168N×2848E, h8km, MD3.4(ISK), After ISK.*
*CSEM **07** 04:40:11.3±0.1, 4169N×2848E, h10km, MD3.3, Error ellipse: s-maj=1.3km s-min=1.0km az=78.0*
*ISCJB **07** 04:40:11.5±0.6, 4170N±002×2848E±004, h8km±4km, Error ellipse: s-maj=4.9km s-min=3.7km az=155.3*
*DDA **07** 04:40:12.2, 4171N×2842E, h10km±3km, Md3.4*
*SOF **07** 04:40:12.6, 4182N×2837E, h10km, MD3.1*
ISC 07 04:40:12.5±0.6**, 4167N**±002×**2848E**±004**, h9**km±4km**, n60, σ0ˢ71**/72**, 8C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTYL	Yal??k??y-??at	0.24	216	PG	Pg	04 40 16.9	-0.5
CTYL				eSG	Sg	04 40 20.6	-0.1
CTKS	Kestanelik-??a	0.44	177	PG	Pg	04 40 20.6	-0.4
CTKS				eSG	Sg	04 40 27.0	+0.2
SLVT	Silivri	0.49	205	PG	Pg	04 40 21.9	-0.1
SLVT				eSG	Sg	04 40 29.3	+0.9
CTT	Catalca	0.53	184	PG	Pg	04 40 22.3	-0.4
CTT				eSG	Sg	04 40 30.2	+0.6
ELBA	Catalca	0.53	184	i P	Pg	04 40 22.2	-0.6
ELBA				i S	Sg	04 40 29.5	-0.1
BGKT	Bogazkoy	0.54	156	PG	Pg	04 40 22.7	-0.2
BGKT				eSG	Sg	04 40 30.8	+0.8
ISK	Istanbul-Kandi	0.75	144	ePG	Pg	04 40 26.5	-0.4
CRLT	Corlu	0.78	226	ePG	Pg	04 40 27.8	+0.2
TKR	Tekirdag	0.99	227	ePG	Pg	04 40 31.3	-0.2
SILT	Sile	1.02	120	ePG	Pg	04 40 31.5	-0.6
HRT	Hereke	1.23	133	ePN	Pn	04 40 35.4	-0.5
MRMT	Marmara Adasi	1.26	212	ePN	Pn	04 40 35.4	-0.8
YLV	Yalova	1.29	148	ePN	Pn	04 40 36.4	-0.3
EDRB	Edirne	1.31	278	ePN	Pn	04 40 35.4	-1.5
GEMT	Gemlik	1.35	156	ePN	Pn	04 40 36.8	-0.6
BNT	Bandirma	1.38	198	ePN	Pn	04 40 37.5	-0.4
EDC	Edincik	1.41	200	ePN	Pn	04 40 37.7	-0.5
KCT	Karacabey	1.41	184	ePN	Pn	04 40 37.9	-0.4
ADVT	Abdulvahap	1.56	142	ePN	Pn	04 40 40.7	+0.3
JMB	Yambol	1.62	300	i P	Pn	04 40 42.4	+1.2
EYL	Eskiyayla	1.68	131	ePN	Pn	04 40 42.6	+0.6
PRD	Provadia	1.72	333	P	Pn	04 40 41.0	-1.6
CAVI	Cavuskoy	1.79	144	ePN	Pn	04 40 44.1	+0.5
LPK	Lapseki	1.84	226	ePN	Pn	04 40 43.9	-0.3
GPA	Golpazari	1.96	134	ePN	Pn	04 40 46.8	+1.0
GULT	Gulveren	1.98	128	ePN	Pn	04 40 46.6	+0.5
ENEZ	Enez	1.99	243	ePN	Pn	04 40 46.2	0.0
BALY	Balya	2.04	199	i P	Pn	04 40 45.9	-1.0
BALY				i S	Sn	04 41 16.7	+4.2
BALB	Balikesir	2.08	193	ePN	Pn	04 40 48.3	+0.8
DIM	Dimitrovgrad	2.23	281	P	Pn	04 40 48.1	-1.5
KDZE	Karadeniz Ereo	2.25	98	ePN	Pn	04 40 49.7	-0.2
KDZ	Kurdzhali	2.30	270	P	Pn	04 40 51.8	+1.3
BORA	Eskisehir	2.33	139	i P	Pn	04 40 51.0	0.0
BORA				i S	Sn	04 41 16.6	-3.2
MDU	Mudurnu	2.39	119	ePN	Pn	04 40 51.6	-0.3
GADA	Gvkgeada	2.45	234	ePN	Pn	04 40 52.9	+0.2
EZN	Ezine	2.47	222	ePN	Pn	04 40 53.5	+0.7
GDZ	Gediz	2.69	163	i P	Pn	04 40 56.1	+0.2
GDZ				i S	Sn	04 41 28.6	0.0
AYVA	Ayvalik	2.73	211	i P	Pn	04 41 02.3	+5.9
AYVA				i S	Sn	04 41 29.6	+0.1
TIRR	Tirgusor	2.78	359	⇑P	Pn	04 40 56.3	-0.9
TIRR				S	Sn	04 41 29.9	-1.0
TIRR	Tirgusor	2.78	359	⇑i P	Pn	04 40 56.3	-0.9
TIRR	Tirgusor	2.78	359	⇑P	Pn	04 40 56.3	-0.9
TIRR				S	Sn	04 41 29.9	-1.0
ESKT	Eskisehir	2.81	139	ePN	Pn	04 40 58.1	+0.6
AKS	Akhisar	2.84	191	ePN	Pn	04 40 58.1	+0.2
ALT	Altintas	2.90	154	ePN	Pn	04 40 58.6	-0.1
HARR	Harsova	3.04	353	⇑i P	Pn	04 41 01.0	+0.3
KULA	Kula-Manisa	3.16	177	ePN	Pn	04 41 02.8	+0.5
SAFT	Safranbolu	3.19	96	ePN	Pn	04 41 03.3	+0.5
VTS	Vitosha	4.03	285	i P	Pn	04 41 14.0	-0.3
VTS	Vitosha	4.03	285	⇑i P	Pn	04 41 13.9	-0.4
VTS	Vitosha	4.03	285	⇑P	Pn	04 41 13.9	-0.4
MLR	Muntele Rosu	4.24	335	⇓i P	Pn	04 41 18.0	+0.8
MLR	Muntele Rosu	4.24	335	⇓P	Pn	04 41 18.1	+0.9
VRI	Vrincioaia	4.38	344	⇓i P	Pn	04 41 19.5	+0.4
VRI	Vrincioaia	4.38	344	⇓P	Pn	04 41 19.5	+0.4
PLOR	Plostina	4.38	343	⇓i P	Pn	04 41 20.3	+1.2
VOIR		4.51	328	⇓i P	Pn	04 41 21.7	+0.7
GZR	Gura Zlata	5.57	314	⇑i P	Pn	04 41 36.0	+0.6
GZR	Gura Zlata	5.57	314	⇑P	Pn	04 41 36.0	+0.5
BURAR	Bucovina Array	6.38	340	⇓i P	Pn	04 41 47.5	+0.9
BURAR	Bucovina Array	6.38	340	⇓P	Pn	04 41 47.5	+0.9

*ISCJB **07** 04:52:49.0±0.5, 3974N±003×2782E±005, h10km±5km, Error ellipse: s-maj=6.7km s-min=4.3km az=174.9*
*CSEM **07** 04:52:48.9, 3975N×2785E, h9km, MD2.8, After ISK*
*DDA **07** 04:52:48.5, 3973N×2783E, h11km±1km, Md3.0*
*ISK **07** 04:52:48.9, 3975N×2785E, h9km, MD2.8*
ISC 07 04:52:49.2±0.5**, 3973N**±003×**2781E**±006**, h11**km±5km**, n12, σ0ˢ26**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.11	150	PG	Pg	04 52 52.0	-0.1
BALB				eSG	Sg	04 52 53.9	-0.2
BALY	Balya	0.15	273	i P	Pg	04 52 52.5	-0.2
BALY				i S	Sg	04 52 55.2	+0.1
DURS	Dursunbey	0.53	104	i P	Pg	04 52 59.3	-0.3
DURS				i S	Sg	04 53 06.9	+0.4
EDC	Edincik	0.61	4	ePG	Pg	04 53 01.1	0.0
EDC				eSG	Sg	04 53 09.6	+0.3
BNT	Bandirma	0.63	8	ePG	Pg	04 53 01.2	-0.2
BNT				eSG	Sg	04 53 09.8	+0.1
KCT	Karacabey	0.68	38	ePG	Pg	04 53 01.9	-0.5
AKHS	Akhisar	0.85	180	i P	Pg	04 53 05.3	-0.3
AKHS				i S	Sg	04 53 17.2	+0.5
AKS	Akhisar	0.85	180	ePG	Pg	04 53 05.9	+0.2
MRMT	Marmara Adasi	0.89	349	ePG	Pg	04 53 06.6	+0.3
GEMT	Gemlik	1.27	56	ePN	Pn	04 53 13.0	+0.2
MANT	Manisa	1.37	155	i P	Pn	04 53 14.0	-0.2
MANT				i S	Sb	04 53 32.4	+0.1
KULA	Kula-Manisa	1.39	151	ePN	Pn	04 53 14.2	-0.2

MAN 07 05:12:36, 1242N×12520E, h26km**, mb4.2, ML3.1, MS2.9, 1C-1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.53	280	eP	Pb	05 12 47.6	+0.8
CNP				eS	Sb	05 12 57.5	+3.5
PLP	Palo	1.26	190	⇓eP	Pn	05 12 53.5	-4.4
PLP				eS	Sn	05 13 11.7	-2.4
PVCP	Virac	1.55	319	eP	Pn	05 13 02.1	+0.2
PVCP				eS	Sn	05 13 21.7	+0.5
RCP	Roxas	2.54	251	⇑eP	Pn	05 13 19.8	+4.2
RCP				eS	Sn	05 13 53.6	+7.8
GUIM	Jordan	3.11	235	eP	Pn	05 13 24.5	+1.1

*IDC **07** 05:29:43.9±7.3, 3695N×7165E, h72km±62km, mb3.3/5, mb1 3.6/10, mb1mx3.4/25, mbtmp3.6/10, ML4.1/5, MS4.2/1, Ms1 4.2/1, ms1mx2.7/25, Error ellipse: s-maj=53.5km s-min=28.8km az=175.0*
*MOS **07** 05:29:48.9±1.4, 37.16N×71.79E, h138km, mb4.0/2, Error ellipse: s-maj=15.9km s-min=7.5km az=85.7*
*NEIC **07** 05:29:49.5±0.6, 37.11N×71.89E, h127km±8km, mb4.0/2, Error ellipse: s-maj=8.2km s-min=4.4km az=66.0*
*ISCJB **07** 05:29:49.0±0.4, 37.17N±003×7184E±005, h143km±7km, mb3.4/5, Error ellipse: s-maj=6.9km s-min=4.1km az=169.3*
*BJI **07** 05:29:49.5, 37.10N×71.90E, h127km, mb4.4*
*NNC **07** 05:29:57.5±4.7, 3782N×7187E, h127km±57km, mb3.4, mpv4.3, Error ellipse: s-maj=40.8km s-min=24.2km az=2.0*
ISC 07 05:29:49.9±0.4**, 3716N**±002×**7188E**±005**, h133**km±7km**, n75, σ1ˢ11**/87**, mb3.4**/5**, 4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.48	222	ePn	Pn	05 30 43.8	+0.9
KBL				eSn	Sn	05 31 24.3	+0.4
KSH	Kashi	3.99	53	P	Pn	05 30 52.6	+3.0
KSH				S	Sn	05 31 38.1	+2.2
AML	Almayashu	5.16	15	P	Pn	05 31 05.3	+0.2
	SNR=53						
AML	Almayashu	5.16	15	ePn	Pn	05 31 05.1	0.0
	150nm,0.3s						
AML				eSn	Sn	05 32 01.1	-2.6
UCH	Uchtor	5.46	21	P	Pn	05 31 09.5	+0.4
	SNR=7.5						
UCH	Uchtor	5.46	21	ePn	Pn	05 31 08.7	-0.4
	2µm,0.6s						
UCH				eSn	Sn	05 32 06.6	-4.2
KZA	Kyzart	5.56	27	P	Pn	05 31 10.7	+0.2
	SNR=19						
THN	Thein Dam	5.67	145	eP	Pn	05 31 13.8	+1.7
THN				eS	Sn	05 32 15.9	-0.2
EKS2	Erkin-Say	5.69	14	P	Pn	05 31 12.3	+0.1
	SNR=81						
EKS2	Erkin-Say	5.69	14	ePn	Pn	05 31 12.2	-0.1
	34nm,0.3s						
EKS2				eSn	Sn	05 32 12.7	-3.7
DLH	Dalhousie	5.70	143	eP	Pn	05 31 15.0	+2.5
DLH				ex	x	05 32 23.0	
AAK	Ala-Archa	5.83	19	ePN	Pn	05 31 14.4	+0.3
AAK				pmax	pmax		
	comp=Z,77nm,0.4s						
AAK	Ala-Archa	5.83	19	ePn	Pn	05 31 14.4	+0.3
	comp=Z,77nm,0.4s						
AAK				eSn	Sn	05 32 16.2	-3.5
KBK	Karagaybulak	5.98	22	P	Pn	05 31 16.8	+0.7
	SNR=17						
KK31	Karatay Array	6.03	350	⇓P	Pn	05 31 15.5	-1.3
	comp=Z,6.5nm,0.3s,baz=169,slow=13,SNR=301						
KK31				⇓S	Sn	05 32 17.8	-6.8
	comp=Z,21nm,0.3s,baz=168,slow=20,SNR=18						
KK31	Karatay Array	6.03	350	PN	Pn	05 31 15.4	-1.4
KK31				pmax	pmax		
	comp=Z,23nm,0.3s						
ULHL	Ulahol	6.09	32	P	Pn	05 31 17.8	+0.1
	SNR=33						
CHMS	Chumysh	6.24	20	P	Pn	05 31 19.8	+0.2
	SNR=23						
TKM2	Tokmak 2	6.42	25	⇑P	Pn	05 31 22.5	+0.4
	comp=Z,35nm,0.5s						
TKM2				⇑S	Sn	05 32 27.2	-6.9
	comp=Z,11nm,0.7s						
TKM2	Tokmak 2	6.42	25	ePN	Pn	05 31 22.5	+0.4
TKM2				pmax	pmax		
	comp=Z,50nm,0.5s						
TKM2	Tokmak 2	6.42	25	P	Pn	05 31 22.6	+0.6
	SNR=32						
TKM2	Tokmak 2	6.42	25	ePn	Pn	05 31 22.5	+0.5
	comp=Z,50nm,0.5s						
USP	Ospenovka	6.42	17	P	Pn	05 31 21.6	-0.4
	SNR=18						
SDNR	Sundarnagar	7.04	142	eP	Pn	05 31 31.0	+0.5
SDNR				eS	Sn	05 32 45.4	-3.7
SMLA	Simla	7.44	142	i P	Pn	05 31 37.0	+1.1
SMLA				i S	Sn	05 32 55.3	-3.5
SMLA				ex	x	05 33 02.1	
	comp=N,973nm,0.3s						
SMLA				ex	x	05 33 03.4	
	comp=E,861nm,0.3s						
DDI	Dehra Dun	8.54	141	ex	x	05 33 24.0	
JOSI	Joshimath	9.17	134	eS	Sn	05 33 35.0	-5.6
JOSI				AML	AML	05 33 52.4	
	comp=E,78nm,0.5s						
JOSI				AML	AML	05 33 54.1	
	comp=N,73nm,0.5s						
KHET	Khetri	9.64	159	eP	Pn	05 32 05.1	-0.3
KHET				eS	Sn	05 33 45.8	-6.3
KHET				AML	AML	05 33 49.3	
	comp=E,28nm,0.2s						
KHET				AML	AML	05 33 50.9	
	comp=N,24nm,0.1s						
AYAN	Aya Nagar	9.71	151	eP	Pn	05 32 06.0	-0.3
AYAN				eS	Sn	05 33 49.7	-4.0
SONA	Sohna	9.90	152	eS	Sn	05 33 52.9	-5.4
SONA				AML	AML	05 33 56.0	
	comp=E,39nm,0.2s						
SONA				AML	AML	05 33 57.2	
	comp=N,24nm,0.2s						
AJM	Ajmer	10.90	167	eP	Pn	05 32 21.5	-0.7
AJM				eS	Sn	05 34 15.2	-7.3
AJM				AML	AML	05 34 18.8	
	comp=N,23nm,0.1s						
AJM				AML	AML	05 34 19.2	
	comp=E,27nm,0.3s						
MK31	Makanchi Array	12.35	36	⇓P	Pn	05 32 40.7	-0.3
	comp=E,0.9nm,0.5s,baz=210,slow=7.8,SNR=11						
MK31	Makanchi Array	12.35	36	ePn	Pn	05 32 41.2	+0.2
MKAR	Makanchi Array	12.35	36	P	Pn	05 32 40.7	-0.3
	comp=E,0.4nm,0.3s,baz=218,slow=14,SNR=11						
DANN	Dangsing	13.30	128	eP	Pn	05 32 53.0	-0.5
KOLN	Koldanda	13.61	130	eP	Pn	05 32 56.8	-0.7
GKN	Gorkha	14.10	127	eP	Pn	05 33 03.4	-0.3
KURBB	Kurchatov Arra	14.28	17	⇑P	Pn	05 33 07.6	+1.8
	comp=E,1.1nm,0.5s						
KURK	Kurchatov	14.39	17	⇑P	Pn	05 33 08.8	+1.6
	comp=E,7.2nm,0.9s						
KURK	Kurchatov	14.39	17	P	Pn	05 33 04.4	-2.8
	comp=E,0.2nm,0.3s,baz=208,slow=11,SNR=5.2						
KURK	Kurchatov	14.39	17	eP	Pn	05 33 10.1	+2.9
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	14.39	17	ePn	Pn	05 33 10.1	+2.9
	comp=Z,7.6nm,0.9s						
KKN	Kakani	14.66	126	eP	Pn	05 33 10.3	-0.5
DMN	Daman	14.67	127	eP	Pn	05 33 10.3	-0.6
BHPL	Bhopal	14.67	159	eP	Pn	05 33 13.4	+2.4
BHPL				ex	x	05 35 43.6	
AB01	Akbulak array	14.87	328	⇓P	Pn	05 33 10.9	-2.4
	comp=Z,1.3nm,0.5s						
AB31	Akbulak array	14.87	328	P	Pn	05 33 10.6	-2.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PKI	Pulchoki	14.89	126	eP	Pn	05 33 13.4	-0.3
GUN	Gumba	14.97	124	eP	Pn	05 33 13.9	-0.8
JIRN	Jiri	15.34	124	eP	Pn	05 33 18.9	-0.4
BVAR	Borovoye Array	15.90	357	P	Pn	05 33 25.7	-0.4
	comp=Z,0.8nm,0.3s,baz=169,slow=10.0,SNR=8.2						
BVAR	Borovoye Array	15.90	357	P	Pn	05 33 25.7	-0.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	15.94	356	eP	Pn	05 33 27.3	+0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	Borovoye	15.94	356	eP	Pn	05 33 27.3	+0.8
	comp=Z,3.2nm,0.4s						
RAMN	Ramite	16.09	125	eP	Pn	05 33 28.4	-0.1
TAPN	Taplejung	16.56	122	eP	Pn	05 33 34.4	+0.1
AKTK	Aktyubinsk	16.58	328	P	Pn	05 33 34.0	-0.4
AKTO	Aktyubinsk	16.58	328	⇓P	Pn	05 33 35.4	+1.1
	comp=Z,0.6nm,0.9s						
AKTO	Aktyubinsk	16.58	328	P	Pn	05 33 34.0	-0.4
	comp=Z,0.5nm,0.3s,baz=144,slow=10,SNR=6.2						
AKTO	Aktyubinsk	16.58	328	P	Pn	05 33 34.0	-0.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ODAN	Odare	16.67	124	eP	Pn	05 33 35.8	+0.2
ZAA0	Zalesovo Array	19.03	24	eP	P	05 34 01.7	+0.4
ZALV	Zalesovo Beam	19.03	24	P	P	05 34 01.5	+0.2
	comp=Z,1.9nm,0.3s,baz=222,slow=11,SNR=24						
ZALV	Zalesovo Beam	19.03	24	P	P	05 34 01.5	+0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	Zalesovo Beam	19.03	24	P	P	05 34 01.5	+0.2
NVS	Novosibirsk	19.32	20	eP	P	05 34 03.6	-0.9
SONM	Songino Array	27.39	56	P	P	05 35 25.5	+2.9
	comp=Z,0.4nm,0.5s,mb3.3,baz=269,slow=10,SNR=4.3						
ARCES	ARCESS Array B	40.81	337	P	P	05 37 18.8	+1.1
	comp=Z,2.2nm,0.9s,mb3.8,baz=98,slow=8.7,SNR=6.7						
ARCES	ARCESS Array B	40.81	337	P	P	05 37 18.8	+1.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	NORSAR Array B	44.28	323	P	P	05 37 46.6	+0.7
	comp=Z,0.8nm,0.8s,mb3.4,baz=94,slow=7.5,SNR=2.7						
NOA	NORSAR Array B	44.28	323	P	P	05 37 46.6	+0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JHJ	Hachijo jima 2	54.60	73	LR	LR	06 04 34.2	
	comp=Z,231nm,20.0s,baz=11,slow=38						
ESDC	Sonseca Array	57.77	298	P	P	05 39 27.1	+0.1
	comp=Z,0.2nm,0.4s,mb3.3,baz=55,slow=7.3,SNR=4.2						
TORD	Torodi Ar. Bea	66.44	269	P	P	05 40 24.4	-0.7
	comp=Z,0.2nm,0.4s,mb3.3,baz=43,slow=6.1,SNR=6.7						
TORD	Torodi Ar. Bea	66.44	269	P	P	05 40 24.4	-0.7

*IDC **07** 05:33:04.2±3.0, 4665N×15235E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.7/23, mbtmp4.0/7, ML3.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/49, Error ellipse: s-maj=77.3km s-min=29.6km az=173.0*
*MOS **07** 05:33:04.4±1.4, 4640N×153.12E, h44km, mb4.2/4, Error ellipse: s-maj=48.5km s-min=20.5km az=85.2*
ISC 07 05:33:11.1±2.3**, 470N**±03×**1524E**±03**, h35**km**, n12, σ0ˢ93**/12**, mb3.9**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.03	27	Pn	Pn	05 34 52.8	+1.4
	0.2nm,0.3s,baz=173,slow=13,SNR=3.8						
PET	Petropavlovsk	7.28	31	ePN	Pn	05 34 52.6	-2.2
MKAR	Makanchi Array	46.40	297	P	P	05 41 33.6	-0.2
	0.4nm,0.5s,mb3.6,baz=58,slow=7.3,SNR=6.2						
KURK	Kurchatov	46.83	303	P	P	05 41 37.1	-0.1
	0.8nm,0.6s,mb3.8,baz=69,slow=8.6,SNR=5.5						
KURK				LR	LR	06 03 14.9	
	comp=Z,46nm,18.2s,baz=310,slow=38						
KURK	Kurchatov	46.83	303	P	P	05 41 37.1	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KURK				MLR	MLR		
	comp=Z,46nm,18.3s						
ARCES	ARCESS Array B	57.48	341	P	P	05 42 56.6	+0.6
	comp=Z,4.1nm,1.1s,mb4.4,baz=27,slow=6.2,SNR=4.5						
ARCES	ARCESS Array B	57.48	341	P	P	05 42 56.6	+0.6
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PDAR	Pinedale Array	65.02	54	P	P	05 43 47.7	+0.3
	comp=Z,0.6nm,0.9s,mb3.6,baz=293,slow=7.7,SNR=3.5						
NOA	NORSAR Array B	67.86	341	P	P	05 44 05.5	+0.3
	comp=Z,0.5nm,0.4s,mb3.9,baz=27,slow=6.4,SNR=3.7						
NOA	NORSAR Array B	67.86	341	P	P	05 44 05.5	+0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.09	326	P	P	05 44 24.8	-0.6
	comp=Z,0.8nm,0.4s,mb4.0,baz=33,slow=6.6,SNR=4.2						
AKASG	Malin Array Be	71.09	326	P	P	05 44 24.8	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						

*ISCJB **07** 05:36:45.6±0.3, 6037N±003×15089W±007, h70km±4km, mb3.8/16, Error ellipse: s-maj=5.4km s-min=4.9km az=0.8*
*IDC **07** 05:36:45.4±1.8, 6059N×15094W, h39km±18km, mb3.8/16, mb1 3.9/20, mb1mx3.9/28, mbtmp3.9/20, ML3.7/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/45, Error ellipse: s-maj=16.8km s-min=12.6km az=171.0*
*NEIC **07** 05:36:47.7, 6040N×15093W, h45km, mb3.9/1, ML3.9(AEIC), ML4.2(PMR), After AEIC.*
NEIC Felt [IV] at Seward; [III] at Kasilof, Kenai and Soldotna; [II] at Anchorage and Eagle River. Also felt at Anchor Point, Homer, Moose Pass and Sterling.
ISC 07 05:36:47.0±0.3**, 6036N**±003×**15089W**±006**, h63**km±4km**, n66, σ0ˢ77**/71**, mb3.9**/16**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLKM	Skilak Lake	0.36	66	P	Pn	05 36 56.9	-1.0
SEW	Seward	0.77	109	P	Pn	05 37 01.9	-0.2
SEW				S	Sn	05 37 13.5	+0.2
FIB	Fire Island	0.88	23	P	Pn	05 37 03.8	+0.2
FIB				S	Sn	05 37 16.6	+0.8
PMR	Palmer	1.50	34	eP	Pn	05 37 08.3	-3.4
KNK	Knik Glacier	1.59	47	P	Pn	05 37 13.1	+0.2
AUL	Augustine Lava	1.62	234	P	Pn	05 37 13.8	+0.6
SKT	Skwentna	1.65	349	P	Pn	05 37 13.9	+0.2
SKT				S	Sn	05 37 34.5	+0.6
GHO	Glory Hole Cre	1.71	33	P	Pn	05 37 14.4	0.0
GHO				S	Sn	05 37 35.5	+0.3
SML	Sawmill	1.91	39	P	Pn	05 37 17.2	0.0
SML				S	Sn	05 37 39.9	-0.3

SVW2	Sparrevohn	2.42	290	eP	Pn	05 37 23.1	-1.0
MID	Middleton Isla	2.48	110	P	Pn	05 37 24.4	-0.5
EYAK	Cordova Ski Ar	2.56	84	P	Pn	05 37 25.0	-1.0
PPLA	Purkeypile	2.62	347	P	Pn	05 37 27.0	+0.2
KDAK	Kodiak Island	2.73	199	Pn	Pn	05 37 27.8	-0.5
	10nm,0.3s,baz=25,slow=11,SNR=140						
KDAK				Sn	Sn	05 37 59.6	-0.5
	36nm,0.3s,baz=356,slow=14,SNR=4.5						
KDAK	Kodiak Island	2.73	199	P	Pn	05 37 29.3	+1.0
RAGM	Ragged Mountai	3.09	87	P	Pn	05 37 31.9	-1.2
TRF	Thorofare Moun	3.11	5	P	Pn	05 37 32.0	-1.5
OHAK	Old Harbor	3.39	203	P	Pn	05 37 37.9	+0.6
MCK	McKinley	3.51	14	P	Pn	05 37 39.2	+0.3
TT01	Tatalina	3.54	318	P	Pn	05 37 39.4	+0.1
CHUM	Lake Minchumin	3.60	350	ePn	Pn	05 37 39.7	-0.4
PAX	Paxson	3.68	42	P	Pn	05 37 42.4	+1.1
BPAW	Bear Paw Mtn.	3.75	359	P	Pn	05 37 43.0	+0.8
MENT	Mentasta	4.29	50	eP	Pn	05 37 50.1	+0.6
COLA	College	4.74	16	P	Pn	05 37 55.9	+0.1
IL1	Eielson Array	4.80	21	P	Pn	05 37 56.8	+0.3
BCA3	Beaver Creek A	5.11	54	P	Pn	05 38 01.2	+0.4
GCSA	Galena City Sc	5.20	330	P	Pn	05 38 01.9	-0.1
IM3	Indian Mountai	5.79	348	P	Pn	05 38 09.5	-0.6
PNL	Peninsula	5.81	92	P	Pn	05 38 10.1	-0.2
EGAK	Eagle	6.31	41	ePn	Pn	05 38 17.7	+0.5
DAWY	Dawson	6.53	50	P	Pn	05 38 20.0	-0.2
HYT	Haines Junctio	6.61	80	ePn	Pn	05 38 22.1	+0.8
COLD	Coldfoot	6.90	2	P	Pn	05 38 25.3	+0.1
BM3	Burnt Mountain	7.60	19	P	Pn	05 38 34.6	-0.2
SKAG	Skagway	7.88	90	eP	Pn	05 38 38.8	+0.2
WHY	Whitehorse	7.91	81	P	Pn	05 38 38.4	-0.7
TNA	Tin City	9.33	311	ePn	Pn	05 38 59.5	+1.1
DLBC	Dease Lake	10.80	91	Pn	Pn	05 39 18.4	-0.2
	0.5nm,0.3s,baz=285,slow=14,SNR=10						
DLBC				Sn	Sn	05 41 14.2	-3.4
	0.2nm,0.3s,baz=180,slow=19,SNR=1.9						
DLBC				LR	LR	05 43 31.5	
	comp=Z,109nm,20.0s,baz=275,slow=38						
BBB	Bella Bella	15.00	113	Pn	Pn	05 40 15.8	+0.7
	0.3nm,0.3s,baz=304,slow=15,SNR=7.6						
BBB				LR	LR	05 45 35.9	
	comp=Z,64nm,18.9s,baz=15,slow=35						
YKA	Yellowknife Ar	17.34	67	P	Pn	05 40 43.9	-0.4
	0.2nm,0.3s,baz=275,slow=13,SNR=16						
YKA				PcP	PcP	05 45 23.5	+0.8
	0.1nm,0.3s,baz=276,slow=1.2,SNR=7.7						
YKA				LR	LR	05 48 01.0	
	comp=Z,25nm,18.8s,baz=140,slow=39						
YKA				ScP	ScP	05 48 53.4	+1.7
	0.0nm,0.3s,baz=283,slow=2.0,SNR=4.1						
YKA	Yellowknife Ar	17.34	67	P	Pn	05 40 43.9	-0.4
YKA				PcP	PcP	05 45 23.5	+0.8
YKA				LR	LR	05 48 01.0	
YKA				ScP	ScP	05 48 53.4	+1.7
FX1	Attu Island--F	20.92	265	P	P	05 41 24.3	+0.4
	8.3nm,0.6s,baz=241,slow=11,SNR=5.7						
RES	Resolute Bay	24.44	32	P	P	05 41 59.5	+0.3
	2.3nm,0.5s,mb3.8,baz=253,slow=12,SNR=31						
RES	Resolute Bay	24.44	32	eP	P	05 41 59.6	+0.4
	2.5nm,0.6s,mb3.8						
PETK	Petropavlovsk-	28.45	278	LR	LR	05 52 54.3	
	comp=Z,35nm,20.3s,baz=208,slow=34						
NVAR	Mina Array Bea	30.00	122	P	P	05 42 50.9	+1.6
	0.2nm,0.4s,mb3.2,baz=318,slow=8.8,SNR=3.2						
PDAR	Pinedale Array	30.47	106	P	P	05 42 58.6	+5.2
	0.2nm,0.6s,mb3.0,baz=321,slow=5.1,SNR=2.4						
SCHQ	Schefferville	42.48	58	P	P	05 44 36.4	+1.0
	6.5nm,0.9s,mb4.2,baz=280,slow=12,SNR=3.2						
TXAR	Lajitas Array	44.14	113	P	P	05 44 52.2	+3.2
	0.3nm,0.7s,mb3.1,baz=338,slow=6.8,SNR=3.7						
ARCES	ARCESS Array B	50.37	2	P	P	05 45 35.9	-1.0
	0.8nm,0.5s,mb4.0,baz=5.3,slow=7.0,SNR=10.0						
ARCES				PcP	PcP	05 46 54.5	+0.1
	1.4nm,0.6s,baz=356,slow=3.8,SNR=7.8						
ARCES	ARCESS Array B	50.37	2	P	P	05 45 35.9	-1.0
ARCES				PcP	PcP	05 46 54.5	+0.1
SONM	Songino Array	55.42	307	P	P	05 46 15.3	+0.9
	1.1nm,0.6s,mb4.1,baz=59,slow=6.9,SNR=10						
SONM				sP	sP	05 46 32.1	-5.9
	3.5nm,0.7s,baz=40,slow=6.8,SNR=14						
SONM				PcP	PcP	05 47 15.3	+1.4
	1.2nm,0.9s,baz=58,slow=3.6,SNR=2.3						
ZALV	Zalesovo Beam	57.70	325	P	P	05 46 29.3	-1.1
	1.2nm,0.5s,mb4.2,baz=34,slow=6.8,SNR=5.3						
NB2	NORSAR Subarra	58.14	10	P	P	05 46 32.8	-0.6
	comp=Z,7.2nm,1.1s,mb4.6,baz=350,slow=7.4						
NOA	NORSAR Array B	58.14	10	P	P	05 46 32.5	-0.9
	comp=Z,1.6nm,0.8s,mb4.1,baz=350,slow=6.9,SNR=4.1						
NOA	NORSAR Array B	58.14	10	P	P	05 46 32.5	-0.9
BVAR	Borovoye Array	62.23	333	P	P	05 47 00.5	-0.9
	comp=Z,1.8nm,0.6s,mb4.3,baz=46,slow=7.2,SNR=8.5						
MKAR	Makanchi Array	64.80	323	P	P	05 47 17.2	-1.3
	comp=Z,0.4nm,0.6s,mb3.7,baz=50,slow=9.1,SNR=6.1						
AKTK	Aktyubinsk	67.12	340	P	P	05 47 32.6	-0.7
AKTO	Aktyubinsk	67.12	340	P	P	05 47 32.6	-0.7
	comp=Z,3.1nm,0.5s,mb4.6,baz=40,slow=7.4,SNR=11						
AKASG	Malin Array Be	69.29	360	P	P	05 47 46.4	-0.5
	comp=Z,2.7nm,0.4s,mb4.5,baz=360,slow=6.2,SNR=16						
ESDC	Sonseca Array	76.69	26	P	P	05 48 31.4	+0.6
	comp=Z,0.2nm,0.4s,mb3.4,baz=336,slow=7.1,SNR=5.0						
BRTR	Keskin Array B	80.20	356	P	P	05 48 50.6	+0.5
	comp=Z,1.6nm,0.7s,mb4.0,baz=54,slow=3.1,SNR=6.6						
KEST	Kesra	82.88	16	P	P	05 49 05.3	+1.0
	comp=Z,1.4nm,0.8s,mb4.0,baz=75,slow=5.0,SNR=3.7						
BOSA	Boshof	148.15	6	PKPbc	PKPbc	05 56 25.4	+0.4
	comp=Z,4.0nm,0.5s,baz=7.6,slow=4.4,SNR=9.7						

IDC 07 05:43:05.5±1.4**,223N×12684E,h0^{km},mb4.0**/7**,mb1 4.1**/7**, mb1mx3.9**/17**,mbtmp4.0**/7**,Error ellipse: s-maj=182.0km s-min=19.1km az=68.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	23.24	162	eP	P	05 48 14.9	+0.3
ASAR	Alice Springs	26.65	165	P	P	05 48 46.3	+0.2
	0.6nm,0.4s,baz=350,slow=7.5,SNR=16						
STKA	Stephens Creek	36.70	159	P	P	05 50 14.2	-0.2
	1.9nm,0.7s,baz=342,slow=9.6,SNR=2.8						
SONM	Songino Array	48.74	342	P	P	05 51 52.7	+0.8
	0.9nm,0.7s,baz=159,slow=8.0,SNR=4.9						
MKAR	Makanchi Array	58.84	326	P	P	05 53 05.5	-0.4
	0.6nm,0.4s,baz=120,slow=7.5,SNR=11						
ZALV	Zalesovo Beam	61.96	333	P	P	05 53 27.0	-0.2
	0.5nm,0.4s,baz=134,slow=10,SNR=3.1						
KURK	Kurchatov	63.05	328	P	P	05 53 34.9	+0.4
	2.2nm,0.8s,baz=126,slow=6.0,SNR=6.8						
BVAR	Borovoye Array	68.63	327	P	P	05 54 10.1	-0.2
	1.1nm,0.5s,baz=120,slow=7.7,SNR=5.9						

*ISCJB **07** 05:59:59.1±0.2,1668N±003×9827W±002,h14^{km}, mb4.8/78,MS4.2/14,Error ellipse: s-maj=4.5km s-min=2.6km az=25.5*
*NEIC **07** 06:00:02.4,1657N×9841W,h14^{km},mb4.9/75,After MEX.*
NEIC Felt at Mexico City.
*MEX **07** 06:00:02.2±1.0,1658N×9841W,h11^{km}±8^{km},MD4.5*
*IDC **07** 06:00:03.6±4.5,1682N×9821W,h33^{km}±33^{km},mb4.4/15, mb1 4.5/18,mb1mx4.3/28,mbtmp4.4/18,ML3.9/3,MS4.1/15, Ms1 4.1/15,ms1mx3.8/43,Error ellipse: s-maj=28.5km s-min=10.6km az=55.0*
*BJI **07** 06:00:05.4,1660N×9840W,h53^{km},mB5.2,Ms5.2,Msz4.8*
ISC 07 06:00:01.9±0.8**,1676N**±003×**9818W**±003**,h17**^{km}±5^{km}**, h29**^{km}±2.1^{km}**:pP-P,n466,**σ0^{s}.**74**/474**,mb4.8**/78**,MS4.2**/14**, 137C-155D,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.37	172	eP	Pg	06 00 08.4	-1.1
PNIG				eS	Sg	06 00 09.0	-5.6
PNIG				iS	Sg	06 00 13.9	-0.7
UTMO	Huajuapan	1.13	19	iP	Pn	06 00 23.0	+0.1
UTMO				iS	Sb	06 00 39.7	+2.3
VHO	Vista Hermosa	1.42	77	iP	Pn	06 00 29.0	+2.0
VHO				iS	Sn	06 00 48.9	+3.6
OXX	Oaxaca	1.43	77	eP	Pn	06 00 28.9	+1.8
OXX				iS	Sn	06 00 48.2	+2.6
ACX	Acapulco	1.67	274	eP	Pn	06 00 24.2	-6.1
ACX				iS	Sn	06 00 42.7	-8.7
MEIG	Mezcala	1.80	310	iP	Pn	06 00 30.2	-2.0
MEIG				iS	Sn	06 00 51.2	-3.4
CAIG	El Cayaco	2.02	279	iP	Pn	06 00 29.9	-5.2
CAIG				iS	Sn	06 00 53.1	-6.9
CAIG	El Cayaco	2.02	279	iS	Sn	06 00 53.1	-6.9
CAIG				eS	Sn	06 00 53.8	-6.2
PLIG	Platanillo	2.06	322	eP	Pn	06 00 34.5	-1.3
PLIG				iS	Sn	06 00 59.2	-1.8
PLIG	Platanillo	2.06	322	eP	Pn	06 00 34.5	-1.3
PLIG				iS	Sn	06 00 59.2	-1.8
PLIG				eS	Sn	06 01 00.0	-1.0
HUIG	Huatulco	2.22	116	eP	Pn	06 00 37.8	-0.2
HUIG				iS	Sn	06 01 04.3	-0.7
YAIG	Yautepec	2.26	338	iP	Pn	06 00 38.8	+0.4
YAIG				iS	Sn	06 01 06.1	+0.1
YAIG	Yautepec	2.26	338	iS	Sn	06 01 06.1	+0.1
YAIG				eS	Sn	06 01 07.5	+1.6
PPM	Popocatepetl	2.34	350	eP	Pn	06 00 40.6	+1.0
UNM	Universidad Na	2.73	340	eP	Pn	06 00 45.2	+0.2
UNM				iS	Sn	06 01 18.6	+1.1
CMIG	Matias Romero	3.17	84	Pn	Pn	06 00 52.1	+1.0
	29nm,0.3s,baz=256,slow=10,SNR=436						
CMIG				Pg	Pg	06 01 02.3	-0.5
	42nm,0.3s,baz=264,slow=15,SNR=26						
CMIG				Sn	Sn	06 01 31.4	+2.8
	38nm,0.3s,baz=70,slow=21,SNR=4.3						
CMIG				Lg		06 01 45.3	
	78nm,0.3s,baz=342,slow=21,SNR=16						
CMIG				LR	LR	06 02 29.3	
	comp=Z,901nm,19.8s,baz=260,slow=46						
CMIG	Matias Romero	3.17	84	eP	Pn	06 00 52.2	+1.1
CMIG				iS	Sn	06 01 31.7	+3.1
CMIG	Matias Romero	3.17	84	Pn	Pn	06 00 52.1	+1.0
CMIG				Pg	Pg	06 01 02.3	-0.5
CMIG				Sn	Sn	06 01 31.4	+2.8
CMIG				iS	Sn	06 01 31.7	+3.1
CMIG				Lg		06 01 45.3	
CMIG				LR	LR	06 02 29.3	
ZIIG	Zihuatanejo	3.25	286	iP	Pn	06 00 48.1	-4.0
ZIIG				eS	Sn	06 01 25.0	-5.5
MOIG	Morelia	4.08	316	iP	Pn	06 01 03.8	+0.3
MOIG				iS	Sn	06 01 49.0	-1.8
TGUH	Tegucigalpa,Un	10.86	103	ePn	Pn	06 02 39.5	+2.9
HKT	Hockley	13.31	9	ePn	Pn	06 03 11.6	+1.5
	16nm,1.1s						
TXAR	Lajitas Array	13.49	339	Pn	Pn	06 03 13.4	+0.8
	0.1nm,0.3s,baz=163,slow=15,SNR=24						
TXAR				LR	LR	06 08 60.0	
	comp=Z,2μm,18.7s,baz=170,slow=40						
LPIG	La Paz	13.51	305	Pn	Pn	06 03 15.2	+2.3
	2.2nm,0.3s,baz=154,slow=5.8,SNR=3.8						
JCT	Junction City	13.74	354	ePn	Pn	06 03 16.4	+0.4
NATX	Nacogdoches	15.28	11	eP	Pn	06 03 38.2	+1.4
	79nm,1.0s						
GDL2	Guadalupe Moun	16.36	341	ePn	Pn	06 03 52.1	+1.2
VBMS	Vicksburg	16.89	23	eP	Pn	06 03 56.8	-0.7
	65nm,1.1s						
319A	Douglas	17.71	327	⇓P	Pn	06 04 08.4	+0.6
	baz=18,SNR=11						
WMOK	Wichita Mounta	17.91	358	eP	Pn	06 04 08.2	-2.1
	21nm,0.9s						
318A	Bisbee	18.14	326	⇓P	Pn	06 04 14.0	+0.9
	baz=18,SNR=5.5						
MIAR	Mount Ida	18.19	12	eP	Pn	06 04 12.0	-1.7
	43nm,1.0s						
219A	White Tail Can	18.20	328	⇓P	Pn	06 04 14.6	+0.8
	baz=18,SNR=9.4						
AMTX	Amarillo	18.32	351	eP	Pn	06 04 14.0	-1.2
	43nm,0.8s						
218A	Dragoon	18.59	327	⇓P	Pn	06 04 19.4	+0.8
	baz=19						
UALR	University of	18.69	15	eP	Pn	06 04 19.1	-0.7
	26nm,1.0s						
119A	Ashpeak Ranch,	18.84	330	⇓P	Pn	06 04 22.1	+0.5
	baz=19						
217A	Green Valley	18.85	325	⇑P	Pn	06 04 22.2	+0.5
	baz=19						
LENM	Lemitar	19.05	337	ePn	Pn	06 04 24.0	-0.1
LPM	Los Pinos Moun	19.05	338	ePn	Pn	06 04 23.9	-0.3
118A	Homack Ranch,	19.07	328	⇓P	Pn	06 04 24.4	0.0
	baz=19						
LRAL	Lakeview Retre	19.10	30	eP	Pn	06 04 24.0	-0.7
	17nm,1.0s						
DWPF	Disney	19.14	51	eP	Pn	06 04 23.6	-1.7
	73nm,1.2s						
TUC	Tucson	19.24	326	eP	Pn	06 04 25.8	-0.6
	25nm,1.1s						
117A	Oracle	19.42	326	⇓P	Pn	06 04 28.0	-0.6
	baz=19,SNR=14						
ANMO	Albuquerque	19.57	339	P	Pn	06 04 28.8	-1.6
	0.5nm,0.3s,baz=150,slow=12,SNR=35						
ANMO				LR	LR	06 12 36.6	
	comp=Z,2μm,18.0s,baz=158,slow=39						
ANMO	Albuquerque	19.57	339	eP	Pn	06 04 28.7	-1.7
	44nm,1.3s						
Y19A	Nutrioso	19.81	332	⇑P	Pn	06 04 32.6	-0.6
	baz=20,SNR=10						
116A	Eloy	19.93	325	⇑P	Pn	06 04 33.8	-0.9
	baz=20						
Y18A	Canyon Day Jun	20.02	330	⇑P	P	06 04 34.9	+0.9
	baz=20,SNR=28						
214A	Organ Pipe Nat	20.13	321	⇑P	P	06 04 36.4	+1.3
	baz=20						
X19A	St. Johns	20.22	333	⇓P	P	06 04 36.6	+0.5
	baz=20,SNR=9.9						
115A	Sonoran Desert	20.33	324	⇓P	P	06 04 37.9	+0.6
	baz=20,SNR=5.6						
Y17A	Roosevelt	20.36	328	⇑P	P	06 04 38.2	+0.6
	baz=20,SNR=37						
Z16A	Peralta Trail,	20.38	327	⇓P	P	06 04 38.1	+0.3
	baz=20,SNR=6.5						
GNAR	Gosnell	20.46	19	ePn	P	06 04 41.0	+2.3
	588nm,0.8s						
X18A	Snowflake	20.60	331	⇑P	P	06 04 40.8	+0.5
	baz=21,SNR=16						
Z15A	Gila River Ind	20.73	325	⇓P	P	06 04 41.8	+0.2
	baz=21						
Y16A	Circle Bar Ran	20.82	327	⇑P	P	06 04 43.0	+0.4
	baz=21,SNR=15						
W18A	Petrified Fore	21.00	333	⇑P	P	06 04 44.9	+0.3
	baz=21						
PARMO	Parma	21.19	19	ePn	P	06 04 46.0	-0.6
V19A	Window Rock	21.22	335	⇓P	P	06 04 47.4	+0.5
	baz=21,SNR=5.8						
Z14A	Wintersburg	21.22	324	⇓P	P	06 04 47.4	+0.4
	baz=21,SNR=5.7						
X16A	Lo Mia Camp, P	21.23	328	⇓P	P	06 04 47.7	+0.7
	baz=21,SNR=31						
113A	Mohawk Valley,	21.27	321	⇓P	P	06 04 47.8	+0.3
	baz=21,SNR=6.7						
Y15A	Casa Rosa Ranc	21.33	326	⇑P	P	06 04 48.1	0.0
	baz=21,SNR=18						
WVT	Waverly	21.38	24	eP	P	06 04 46.8	-1.8
	17nm,0.9s,mb4.4						
SWET	Sewanee	21.39	28	eP	P	06 04 47.8	-1.0
W17A	Winslow	21.41	331	⇓P	P	06 04 48.8	-0.1
	baz=21						
V18A	Ganado	21.59	333	⇓P	P	06 04 50.9	+0.1
	baz=22,SNR=11						
112A	Yuma	21.61	320	⇑P	P	06 04 51.7	+0.5
	baz=22						
Y14A	Wickenburg	21.68	325	⇓P	P	06 04 51.9	0.0
	baz=22,SNR=11						
X15A	Humboldt	21.69	327	⇑P	P	06 04 52.3	+0.4
	baz=22,SNR=14						
W16A	Flagstaff	21.81	329	⇑P	P	06 04 53.3	0.0
	baz=22						
SDCO	Great Sand Dun	21.88	344	eP	P	06 04 53.5	-0.5
	22nm,0.9s,mb4.6						
CBKS	Cedar Bluff	22.02	357	eP	P	06 04 55.4	0.0
	74nm,0.9s,mb5.1						
X14A	Yava	22.02	326	⇓P	P	06 04 55.5	0.0
	baz=22,SNR=10						
Y13A	Salome	22.05	323	⇓P	P	06 04 56.0	+0.1
	baz=22,SNR=10						
CCM	Cathedral Cave	22.08	15	eP	P	06 04 53.9	-2.2
	42nm,0.9s,mb4.9						
WUAZ	Wupatki	22.08	330	⇑P	P	06 04 56.6	+0.5
	baz=22						
WUAZ	Wupatki	22.08	330	eP	P	06 04 57.3	+1.2
	78nm,0.9s,mb5.1						
GLA	Glamis	22.11	320	⇑P	P	06 04 57.0	+0.5
	baz=22						
GLA	Glamis	22.11	320	eP	P	06 04 56.9	+0.4
	56nm,1.1s,mb4.9						
U18A	Rough Rock, Ch	22.16	334	⇓P	P	06 04 57.2	+0.2
	baz=22						
T19A	Beclabito	22.18	336	⇑P	P	06 04 57.1	-0.1
	baz=22						
FVM	French Village	22.22	16	eP	P	06 04 55.3	-2.3
	19nm,0.7s,mb4.6						
W15A	Williams	22.24	328	⇓P	P	06 04 58.3	+0.4
	baz=22,SNR=6.4						
CPCT	Cooper Cave	22.25	31	eP	P	06 04 56.7	-1.2
MVCO	Mesa Verde	22.32	338	⇓P	P	06 04 58.4	-0.3
	baz=22						
SIUC	Southern Illin	22.32	19	eP	P	06 04 59.9	+1.2
	35nm,0.7s,mb4.9						
Y12C	Blythe	22.41	322	⇓P	P	06 05 00.1	+0.3
	baz=22						
U16A	Tuba City	22.48	332	⇓P	P	06 05 00.2	-0.1
	baz=22,SNR=14						
PDMCI	Parker Dam,Lak	22.59	324	⇓P	P	06 05 01.6	+0.1
	baz=23						
X13A	Yucca	22.63	325	⇓P	P	06 05 02.1	+0.1
	baz=23						
SWSC	Sam W. Stewart	22.64	319	⇓P	P	06 05 02.4	+0.3
	baz=23						
U17A	Shonto	22.65	333	⇑P	P	06 05 02.0	-0.2
	baz=23,SNR=12						
W14A	Seligman	22.69	327	⇓P	P	06 05 02.7	+0.1
	baz=23,SNR=11						
V15A	Kaibab Nationa	22.70	329	⇑P	P	06 05 03.1	+0.3
	baz=23,SNR=11						
T18A	Mexican Hat	22.78	335	⇓P	P	06 05 03.0	-0.6
	baz=23,SNR=28						
TKL	Tuckaleechee C	22.78	32	P	P	06 05 02.7	-1.0
	32nm,1.1s,mb4.7,baz=189,slow=8.7,SNR=17						
TKL	Tuckaleechee C	22.78	32	eP	P	06 05 02.2	-1.4
BC3	Big Chuckw Mtn	22.91	320	⇑P	P	06 05 05.4	+0.5
	baz=23						
NHSC	New Hope	23.00	42	eP	P	06 05 06.8	+0.9
	209nm,1.0s,mb5.5						
MONP	Monument Peak	23.01	318	⇓P	P	06 05 06.2	+0.2
	baz=23						
V14A	Boquillas Ranc	23.03	328	⇑P	P	06 05 06.3	+0.1
	baz=23,SNR=14						
S19A	Harvey Farm, M	23.03	337	⇓P	P	06 05 05.9	-0.3
	baz=23,SNR=26						
W13A	Hualapai Mount	23.03	325	⇑P	P	06 05 06.8	+0.5
	baz=23,SNR=6.7						
T17A	Navajo Res., N	23.05	333	⇓P	P	06 05 06.8	+0.4
	baz=23,SNR=20						
R21A	Cimarron	23.05	341	⇑P	P	06 05 07.0	+0.6
	baz=23,SNR=26						
USIN	University of	23.06	22	eP	P	06 05 06.8	+0.3
	36nm,0.8s,mb4.8						
IRM	Iron Mountain	23.07	322	⇓P	P	06 05 06.6	-0.1
	baz=23						
U15A	North Rim	23.25	330	⇑P	P	06 05 08.8	+0.3
	baz=23,SNR=14						
S18A	Hurst Farm, Bl	23.31	336	⇓P	P	06 05 09.3	+0.1
	baz=23,SNR=12						
T16A	Glen Canyon Da	23.34	332	⇓P	P	06 05 09.6	+0.1
	baz=23,SNR=13						
BELC	Belle Mtn.	23.47	320	⇑P	P	06 05 10.6	-0.3
	baz=24						
PFO	Pinyon Flat Ob	23.49	319	P	P	06 05 11.9	+0.7
	22nm,1.1s,mb4.5						
PV04	Paradox Valley	23.52	339	eP	P	06 05 11.8	+0.5
PV10	Paradox Valley	23.55	338	eP	P	06 05 10.0	-1.6
	399nm,1.0s,mb5.8						
R19A	Curley Farm, L	23.56	338	⇓P	P	06 05 11.2	-0.5
	baz=24,SNR=8.3						
S17A	Black Ridge (B	23.59	334	⇑P	P	06 05 11.8	-0.1
	baz=24,SNR=34						
TZTN	Tazewell	23.59	31	eP	P	06 05 10.9	-1.2
	89nm,1.6s,mb4.9						
SMCO	Snowmass	23.62	343	eP	P	06 05 08.4	-3.8
	31nm,1.1s,mb4.7						
LDFC	Landfair	23.70	324	eP	P	06 05 14.0	+1.0
	38nm,1.0s,mb4.8						
T15A	Red Dirt Ranch	23.77	331	⇑P	P	06 05 13.8	+0.2
	baz=24,SNR=18						
WCI	Wyandotte Cave	23.80	24	eP	P	06 05 12.3	-1.6
	27nm,0.9s,mb4.7						
GMRC	Granite Mounta	23.80	322	⇓P	P	06 05 14.0	0.0
	baz=24						
Q20A	Ridgley Place,	23.82	340	⇓P	P	06 05 13.8	-0.3
	baz=24,SNR=12						
ISCO	Idaho Springs	23.85	346	eP	P	06 05 14.3	-0.1
	43nm,0.8s,mb4.9						
R18A	Canyonlands Na	23.87	337	⇑P	P	06 05 14.0	-0.6
	baz=24,SNR=16						
S16A	Weppner Ranch,	24.00	333	⇑P	P	06 05 15.8	+0.1
	baz=24,SNR=29						
V12A	Nelson	24.02	325	⇓P	P	06 05 15.9	-0.1
	baz=24						
U13A	Pakoon Wash	24.07	327	⇓P	P	06 05 16.4	0.0
	baz=24						
T14A	Hurricane	24.14	330	⇓P	P	06 05 17.2	+0.2
	baz=24,SNR=6.3						
Q19A	Hogan Spring (	24.15	339	⇑P	P	06 05 16.6	-0.5
	baz=24,SNR=21						
R17A	Hanksville Air	24.22	335	⇓P	P	06 05 17.6	-0.2
	baz=24,SNR=13						
HEC	Hector,Ludlow	24.24	321	⇑P	P	06 05 18.4	+0.5
	baz=24						
S15A	Panguitch	24.30	332	⇓P	P	06 05 19.0	+0.5
	baz=24,SNR=5.7						
OGNE	Ogallala	24.33	353	eP	P	06 05 17.8	-0.9
	52nm,0.9s,mb5.0						
R16A	Teasdale	24.42	334	⇑P	P	06 05 19.7	+0.1
	baz=24,SNR=40						
V11A	Goodsprings	24.43	324	⇑P	P	06 05 19.7	0.0
	baz=24						
T13A	Saint George	24.51	328	⇓P	P	06 05 21.1	+0.7
	baz=24,SNR=10						
BLO	Bloomington	24.55	22	eP	P	06 05 20.3	-0.4
	15nm,0.6s,mb4.7						
Q18A	Rafter H Ranch	24.59	337	⇑P	P	06 05 21.3	+0.2
	baz=25,SNR=7.1						
P19A	Cripple Cowboy	24.66	340	⇓P	P	06 05 21.9	+0.1
	baz=25,SNR=8.4						
R15A	Junction	24.70	333	⇑P	P	06 05 22.2	+0.1
	baz=25,SNR=14						
O21A	Pagoda	24.73	343	⇑P	P	06 05 22.9	+0.6
	baz=25,SNR=43						
S14A	Cedar City	24.74	331	⇑P	P	06 05 23.2	+0.8
	baz=25,SNR=15						
SRU	San Rafael	24.75	337	⇑P	P	06 05 22.3	-0.2
	baz=25						
SRU	San Rafael	24.75	337	eP	P	06 05 22.4	-0.2
	16nm,0.9s,mb4.5						
SHPR	Sheep Range	24.77	326	eP	P	06 05 23.5	+0.7
Q16A	Castle Valley	24.83	335	⇑P	P	06 05 23.4	+0.1
	baz=25,SNR=18						
GSC	Goldstone	24.84	322	eP	P	06 05 23.8	+0.3
	1.1nm,1.3s						
O20A	White River Ci	24.88	341	⇑P	P	06 05 23.9	+0.2
	baz=25,SNR=19						
MSU	Marysvale	24.91	333	eP	P	06 05 25.0	+1.0
S13A	Holt Ranch, En	24.93	329	⇓P	P	06 05 24.6	+0.4
	baz=25,SNR=8.3						
HDIL	Hopedale	24.93	16	eP	P	06 05 22.9	-1.3
	50nm,1.1s,mb5.0						
N22A	Wattenberg Ran	25.01	345	⇓P	P	06 05 25.7	+0.8
	baz=25,SNR=5.4						
P18A	Preston Nutter	25.09	338	⇓P	P	06 05 26.0	+0.3
	baz=25,SNR=28						
R14A	James Farms, M	25.11	332	⇓P	P	06 05 26.3	+0.5
	baz=25,SNR=5.6						
P17A	Butcher Ranch,	25.14	337	⇓P	P	06 05 26.2	+0.1
	baz=25,SNR=14						
TMUT	Trail Mountain	25.17	336	eP	P	06 05 27.0	+0.6
N21A	Black Mountain	25.25	343	⇓P	P	06 05 27.6	+0.6
	baz=25,SNR=35						
PHWY	Pilot Hill	25.25	347	eP	P	06 05 26.6	-0.5
	15nm,0.8s,mb4.6						
EDW2	Edwards Air Fo	25.29	319	⇓P	P	06 05 27.6	+0.2
	baz=25						
T11A	Corn Creek, Al	25.35	327	⇑P	P	06 05 29.2	+1.1
	baz=25,SNR=9.2						
Q15A	Fillmore	25.40	334	⇓P	P	06 05 28.6	+0.1
	baz=25,SNR=9.0						
SCIA	State Center	25.43	9	eP	P	06 05 27.6	-1.0
	60nm,0.9s,mb5.1						
S12A	Delamar Landin	25.44	328	⇑P	P	06 05 30.2	+1.3
	baz=26,SNR=12						
OTAV	Otavalo	25.45	128	eP	P	06 05 31.1	+1.9
	10nm,1.0s,mb4.3						
R13A	O'Grain Ranch,	25.45	330	⇑P	P	06 05 30.4	+1.4
	baz=26,SNR=24						
N20A	Spence Gulch,	25.53	342	⇑P	P	06 05 29.7	+0.1
	baz=26,SNR=24						
O18A	Roosevelt	25.57	339	⇓P	P	06 05 30.7	+0.7
	baz=26,SNR=14						

M22A Cedar Creek Ra 25.61 345 ⇑P P 06 05 30.6 +0.3
baz=26,SNR=15
P16A Fountain Green 25.62 335 ⇑P P 06 05 30.9 +0.5
baz=26,SNR=8.1
FURC Furnace Creek, 25.69 323 ⇓P P 06 05 31.5 +0.4
baz=26
TPNV Topopah Spring 25.69 325 ⇑P P 06 05 31.6 +0.5
baz=26
TPNV Topopah Spring 25.69 325 eP P 06 05 33.7 +2.6
42nm,1.1s,mb4.9
BLA Blacksburg 25.71 34 eP P 06 05 30.6 -0.8
40nm,1.2s,mb4.8
MPMC Manual Prospec 25.77 322 ⇓P P 06 05 32.3 +0.4
baz=26
O17A Robinson Place 25.77 337 ⇓P P 06 05 32.0 +0.2
baz=26,SNR=27
Q14A Sevier Lake (B 25.78 332 ⇓P P 06 05 32.3 +0.4
baz=26,SNR=15
P15A Leamington 25.84 334 ⇓P P 06 05 32.3 -0.1
baz=26,SNR=6.4
N19A John Jarvie Ra 25.86 341 ⇑P P 06 05 32.5 -0.1
baz=26,SNR=18
R12A Pony Springs, 25.88 329 ⇓P P 06 05 33.3 +0.4
baz=26,SNR=9.9
S11A Rachel 25.93 327 ⇑P P 06 05 33.7 +0.4
baz=26
MPU Maple Canyon 25.96 336 eP P 06 05 33.8 +0.3
14nm,0.8s,mb4.5
ARVC Arvin 25.97 319 ⇑P P 06 05 34.5 +0.8
baz=26
M21A Separation Pea 26.00 344 ⇓P P 06 05 34.5 +0.7
baz=26,SNR=26
RWWY Rawlins 26.03 344 eP P 06 05 35.5 +1.3
37nm,1.0s,mb4.9
O16A Springville 26.07 336 ⇓P P 06 05 34.7 +0.2
baz=26,SNR=7.6
NLU North Lily Min 26.08 335 eP P 06 05 35.1 +0.5
ISA Isabella 26.09 320 ⇑P P 06 05 35.2 +0.4
baz=26
ISA Isabella 26.09 320 eP P 06 05 35.6 +0.7
30nm,1.1s,mb4.7
Q13A Wheeler Ranch, 26.09 331 ⇑P P 06 05 35.8 +1.0
baz=26,SNR=9.1
N18A Larsen Ranch, 26.10 340 ⇓P P 06 05 34.9 +0.1
baz=26,SNR=15
M20A Sweetwater, Wa 26.11 343 ⇑P P 06 05 35.0 +0.1
baz=26,SNR=13
DAU Daniels Canyon 26.16 337 eP P 06 05 35.7 +0.4
L22A Ellis Ranch, M 26.16 346 ⇑P P 06 05 35.7 +0.3
baz=26,SNR=25
P14A Drum Mountains 26.19 333 ⇑P P 06 05 35.2 -0.4
baz=26,SNR=8.7
ROSC El Rosal 26.20 114 P P 06 05 38.3 +2.3
4.3nm,0.9s,mb4.0,baz=84,slow=21,SNR=6.3
L21A Rawlins 26.33 344 ⇓P P 06 05 36.8 -0.1
baz=26,SNR=6.6
GRAC Grapevine Rang 26.35 324 ⇓P P 06 05 37.5 +0.4
baz=26
R11A Troy Canyon, C 26.38 328 ⇓P P 06 05 38.4 +1.1
baz=26,SNR=8.0
JLU Jordanelle 26.39 337 eP P 06 05 38.9 +1.4
M19A Rock Springs 26.41 341 ⇓P P 06 05 37.3 -0.3
baz=26,SNR=12
N17A Moffit Pass 26.46 338 ⇑P P 06 05 38.4 +0.3
baz=26
P13A Bates Ranch, G 26.50 332 ⇓P P 06 05 38.9 +0.5
baz=26,SNR=13
O15A The Old Anders 26.52 335 ⇓P P 06 05 39.0 +0.5
baz=26,SNR=6.4
Q12A Willow Creek R 26.54 330 ⇑P P 06 05 39.5 +0.7
baz=27
DUG Dugway 26.58 334 ⇑P P 06 05 39.4 +0.2
baz=27
S10A Tonopah Range, 26.59 326 ⇓P P 06 05 39.9 +0.6
baz=27
VES Vestal, Richgr 26.59 320 ⇓P P 06 05 39.6 +0.4
baz=27
M18A Lyman 26.63 340 ⇑P P 06 05 39.5 -0.1
baz=27,SNR=10
L20A Wamsutter 26.63 343 ⇓P P 06 05 39.4 -0.2
baz=27,SNR=8.3
N16A Rees Ranch, Co 26.64 337 ⇓P P 06 05 39.7 +0.1
baz=27
R10A Warm Springs 26.70 327 ⇑P P 06 05 40.6 +0.4
baz=27
S09A Goldfield 26.78 325 ⇓P P 06 05 41.2 +0.1
baz=27
Q11A Duckwater 26.80 329 ⇑P P 06 05 41.2 +0.1
baz=27
M17A Scullys Gap (B 26.88 339 ⇑P P 06 05 41.2 -0.6
baz=27,SNR=14
ECSD EROS,Sioux Fal 26.92 3 eP P 06 05 40.6 -1.5
16nm,1.0s,mb4.5
RCTC Rector, Farmer 26.99 320 ⇑P P 06 05 43.2 +0.3
baz=27
L19A Farson 27.02 341 ⇑P P 06 05 42.5 -0.5
baz=27,SNR=11
O13A Hicks Ranch, I 27.03 333 ⇑P P 06 05 43.1 -0.1
baz=27
TPH Tonopah 27.04 325 eP P 06 05 43.3 0.0
23nm,1.3s,mb4.5
N15A Stansbury Isla 27.05 336 ⇑P P 06 05 43.5 +0.1
baz=27
L18A Fontenelle, Gr 27.07 340 ⇑P P 06 05 43.0 -0.5
baz=27,SNR=14
R09A Tonopah 27.07 326 ⇓P P 06 05 43.6 0.0
baz=27
M16A Huntsville 27.08 337 ⇓P P 06 05 43.4 -0.2
baz=27
K20A Yellowstone Ra 27.24 343 ⇓P P 06 05 44.2 -0.8
baz=27,SNR=19
N14A Grayback Hills 27.29 335 ⇑P P 06 05 45.9 +0.3
baz=27,SNR=25
SPUT South Promonto 27.38 336 eP P 06 05 46.6 +0.2
O12A Currie 27.48 332 ⇓P P 06 05 47.3 0.0
baz=28
M15A Larsen Ranch, 27.52 336 ⇓P P 06 05 47.1 -0.4
baz=28,SNR=10
K19A Absolon Red Bu 27.53 343 ⇓P P 06 05 46.8 -0.9
baz=28,SNR=9.8
L16A Fish Haven 27.62 338 ⇑P P 06 05 47.7 -0.8
baz=28
PDAR Pinedale Array 27.68 342 P P 06 05 48.5 -0.5
8.3nm,0.7s,mb4.5,baz=138,slow=11,SNR=86
PDAR LR LR 06 17 46.3
comp=Z,530nm,20.2s,MS4.1,baz=168,slow=38
BW06 Boulder Array 27.68 342 ⇓P P 06 05 48.8 -0.3
baz=28
BW06 Boulder Array 27.68 342 eP P 06 05 48.5 -0.6
51nm,1.2s,mb5.0
K18A Toltan Ranch, 27.71 341 ⇑P P 06 05 49.4 +0.1
baz=28,SNR=26
N13A Wendover, West 27.72 333 ⇑P P 06 05 49.3 -0.1
baz=28
RSSD Black Hills 27.72 351 eP P 06 05 48.5 -0.8
5.3nm,0.8s,mb4.2
MCWV Mont Chateau 27.85 31 eP P 06 05 50.2 -0.3
32nm,1.3s,mb4.8
MCWV epP pP 06 05 58.4 +2.7
NVAR Mina Array Bea 27.88 325 P P 06 05 50.1 -0.7
2.9nm,0.6s,mb4.1,baz=152,slow=9.1,SNR=25
M14A Sheep Mountain 27.90 335 ⇑P P 06 05 51.2 +0.2
baz=28,SNR=28
HVU Hansel Valley 27.91 336 eP P 06 05 51.4 +0.3
31nm,1.0s,mb4.9
SDV Santo Domingo 27.95 103 P P 06 05 52.6 +0.9
22nm,0.9s,mb4.8,baz=340,slow=4.2,SNR=31
SDV LR LR 06 18 12.9
comp=Z,178nm,18.8s,MS3.7,baz=350,slow=39
SDV Santo Domingo 27.95 103 eP P 06 05 52.4 +0.6
24nm,0.9s,mb4.8
L15A Malad City 27.96 337 ⇓P P 06 05 51.3 -0.2
baz=28,SNR=13
Q08A Gabbs 27.99 326 ⇓P P 06 05 52.2 +0.4
baz=28
N12A Clover Valley, 28.09 332 ⇑P P 06 05 53.3 +0.6
baz=28,SNR=7.9
ELK Elko 28.09 332 P P 06 05 53.5 +0.8
3.6nm,0.8s,mb4.0,baz=150,slow=6.3,SNR=12
ELK LR LR 06 18 45.4
comp=Z,440nm,19.4s,MS4.1,baz=157,slow=40
K17A Gardner Place, 28.10 340 ⇓P P 06 05 52.4 -0.4
baz=28,SNR=15
M13A Montello 28.12 334 ⇑P P 06 05 53.1 +0.1
baz=28,SNR=12
J18A Kendall Valley 28.23 342 ⇓P P 06 05 53.9 0.0
baz=28,SNR=57
L14A Malta 28.31 336 ⇓P P 06 05 54.6 0.0
baz=28,SNR=19
K16A Soda Springs 28.40 339 ⇓P P 06 05 55.4 0.0
baz=28
M12A Wells 28.49 333 ⇓P P 06 05 56.1 -0.1
baz=28,SNR=14
WAKR Walker 28.57 324 eP P 06 05 57.5 +0.5
WAKR epP pP 06 06 08.1 +5.9
O09A Fish Creek Ran 28.57 329 ⇓P P 06 05 56.7 -0.3
baz=29
J17A Brown Place, J 28.58 341 ⇑P P 06 05 56.8 -0.2
baz=29,SNR=20
K15A Arbon 28.60 338 ⇑P P 06 05 56.9 -0.3
baz=29,SNR=8.3
I18A Diamond G Ranc 28.61 342 ⇓P P 06 05 57.1 -0.3
baz=29,SNR=10
REDW Red Top Meadow 28.62 340 eP P 06 05 57.2 -0.2
54nm,1.3s,mb5.1
SNOW Snow King Moun 28.68 341 eP P 06 05 57.9 -0.1
69nm,1.1s,mb5.3
K14A Jones Ranch, D 28.72 337 ⇓P P 06 05 58.3 -0.1
baz=29,SNR=10
RRI2 Red Ridge 28.76 340 eP P 06 05 58.9 +0.2
21nm,1.1s,mb4.8
TPAW Teton Pass 28.77 340 eP P 06 05 59.0 +0.3
67nm,1.3s,mb5.2
LOHW Long Hollow 28.77 341 eP P 06 05 58.5 -0.2
36nm,1.0s,mb5.1
BMN Battle Mountai 28.79 329 eP P 06 06 00.1 +1.2
16nm,1.3s,mb4.6
BMN epP pP 06 06 08.7 +4.6
J16A Bone 28.80 339 ⇓P P 06 05 58.7 -0.2
baz=29,SNR=12
M11A Holland Ranch, 28.89 332 ⇑P P 06 06 00.3 +0.5
baz=29,SNR=9.3
MOOW Moose Ponds 28.94 341 eP P 06 06 00.2 0.0
12nm,1.0s,mb4.6
DCID1 Drake Creek 28.94 340 eP P 06 06 00.6 +0.4
28nm,0.9s,mb5.0
I17A Pilgram Creek 29.04 341 ⇑P P 06 06 01.6 +0.5
baz=29,SNR=28
L12A House Creek Ra 29.13 334 ⇑P P 06 06 01.9 0.0
baz=29
IMW Indian Meadow 29.13 341 eP P 06 06 01.8 -0.2
14nm,1.0s,mb4.7
O08A Rochester Mine 29.15 328 ⇑P P 06 06 02.1 0.0
baz=29
K13A Stover Farm, H 29.16 335 ⇑P P 06 06 02.1 -0.2
baz=29,SNR=10
J15A Blackfoot 29.19 338 ⇑P P 06 06 02.6 +0.2
baz=29
I16A Newdale 29.29 340 ⇓P P 06 06 03.1 -0.2
baz=29
O07A Toulon 29.43 327 ⇑P P 06 06 04.5 -0.2
baz=30
L11A Cat Creek Ranc 29.46 333 ⇓P P 06 06 05.1 +0.3
baz=30,SNR=18
H17A Grant Village 29.47 342 ⇑P P 06 06 04.6 -0.4
baz=30
K12A Draper Farm, C 29.48 334 ⇑P P 06 06 05.2 +0.1
baz=30,SNR=12
LAVA Lava Cap Winer 29.49 322 ⇑P P 06 06 05.2 0.0
baz=30
N08A GE Springer Mi 29.50 328 ⇑P P 06 06 05.1 -0.2
baz=30
J14A Carey 29.52 337 ⇓P P 06 06 05.2 -0.2
baz=30,SNR=5.5
YFT Old Faithful 29.60 341 eP P 06 06 07.3 +1.2
M09A Marrel Ranch, 29.66 330 ⇓P P 06 06 06.9 +0.3
baz=30
I15A Monteview 29.73 339 ⇑P P 06 06 07.5 +0.3
baz=30
RLMT Red Lodge 29.77 344 ⇑P P 06 06 07.5 0.0
baz=30
RLMT Red Lodge 29.77 344 eP P 06 06 07.6 0.0
39nm,1.0s,mb5.1
YNR Norris Junctio 29.79 342 eP P 06 06 08.8 +1.0
J13A Cove Ranch, Pi 29.83 336 ⇓P P 06 06 08.1 0.0
baz=30
O06A Flanigan 29.94 326 ⇓P P 06 06 09.4 +0.2
baz=30
H16A Russell Place, 29.96 341 ⇓P P 06 06 09.5 +0.2
baz=30,SNR=7.0
I14A Mackay 30.02 338 ⇓P P 06 06 09.9 +0.2
baz=30,SNR=12
BEKR Beckwourth 30.03 325 ⇑P P 06 06 10.3 +0.4
baz=30
G18A Lazy EL Ranch, 30.03 344 ⇓P P 06 06 09.7 -0.2
baz=30,SNR=8.3
HLID Hailey 30.06 336 ⇑P P 06 06 10.3 +0.1
baz=30
HLID Hailey 30.06 336 eP P 06 06 10.3 +0.1
11nm,0.9s,mb4.6
J12A Drake Ranch, 30.07 335 ⇑P P 06 06 10.5 +0.2
baz=30
QLMT Earthquake Lak 30.13 341 eP P 06 06 11.9 +1.2
M08A Happy Creek Ra 30.13 329 ⇓P P 06 06 12.2 +1.4
baz=30
GLMI Grayling 30.22 19 eP P 06 06 10.6 -1.0
52nm,0.8s,mb5.3
I13A Wildhorse Cree 30.25 337 ⇓P P 06 06 12.0 +0.2
baz=30
H15A Lima 30.33 339 ⇑P P 06 06 13.2 +0.6
baz=30
N06A Buffalo Meadow 30.36 326 ⇑P P 06 06 13.0 +0.1
baz=30,SNR=6.9
G17A Pierce Place, 30.36 342 ⇓P P 06 06 13.3 +0.5
baz=30,SNR=13
K10A MacKenzie Ranc 30.45 332 ⇑P P 06 06 13.8 +0.3
baz=30
M07A Soldier Meadow 30.48 328 ⇓P P 06 06 14.6 +0.7
baz=30
MFID Camas Ranch 30.51 334 ⇓P P 06 06 14.7 +0.6
baz=30
I12A Atlanta 30.54 335 ⇓P P 06 06 14.7 +0.3
baz=31
H14A Leadore 30.58 338 ⇑P P 06 06 15.2 +0.4
baz=31,SNR=16
G16A Moss Hill, Enn 30.60 341 ⇑P P 06 06 15.8 +0.9
baz=31,SNR=27
F18A Big Timber 30.62 344 ⇓P P 06 06 14.9 -0.2
baz=31,SNR=16
ATAH Atahualpa 30.66 139 P P 06 06 18.5 +2.7
13nm,0.9s,mb4.7,baz=315,slow=7.7,SNR=8.7
ATAH LR LR 06 15 00.9
comp=Z,56nm,20.2s,MS3.2,baz=320,slow=29
L08A Fields 30.67 330 ⇓P P 06 06 15.9 +0.3
baz=31,SNR=8.5
G15A Dillon 30.77 340 ⇑P P 06 06 16.6 +0.3
baz=31,SNR=14
H13A Challis 30.86 337 ⇓P P 06 06 17.1 -0.1
baz=31,SNR=7.3
F17A Fitzpatrick Pl 30.87 343 ⇑P P 06 06 17.4 +0.1
baz=31,SNR=18
J10A Berg Farm, Mel 30.92 333 ⇓P P 06 06 18.2 +0.5
baz=31
BOZ Bozeman (W) 30.92 341 ⇓P P 06 06 17.7 0.0
baz=31
BOZ Bozeman (W) 30.92 341 eP P 06 06 17.7 0.0
16nm,1.1s,mb4.8
BOZ e 06 06 26.4
I11A Placerville 30.97 335 ⇑P P 06 06 18.8 +0.6
baz=31
DLMT Dillon 30.97 340 eP P 06 06 18.4 +0.2
64nm,1.0s,mb5.4
DLMT e 06 06 28.3
WVOR Wild Horse Val 31.00 330 eP P 06 06 18.4 -0.1
54nm,1.4s,mb5.2
L07A Adell 31.03 329 ⇓P P 06 06 19.3 +0.5
baz=31
F16A Kennard Place, 31.05 342 ⇓P P 06 06 19.2 +0.4
baz=31,SNR=17
H12A Diamond D Ranc 31.07 337 ⇑P P 06 06 19.0 -0.1
baz=31,SNR=14
LCCM Lewis and Clar 31.17 341 P P 06 06 20.5 +0.5
E18A Harlowton 31.28 344 ⇑P P 06 06 20.6 -0.3
baz=31,SNR=11
G13A Cobalt 31.30 338 ⇑P P 06 06 21.1 0.0
baz=31,SNR=13
LRM Limekiln Ridge 31.34 341 eP P 06 06 21.9 +0.5
F15A Butte 31.37 341 ⇓P P 06 06 21.6 0.0
baz=31,SNR=18
E17A Martinsdale 31.44 343 ⇑P P 06 06 22.2 0.0
baz=32,SNR=13
I10A Payette 31.47 334 ⇑P P 06 06 22.9 +0.3
baz=32
K07A Rock Creek Ran 31.49 330 ⇓P P 06 06 22.9 +0.1
baz=32,SNR=8.7
AGMN Agassiz Refuge 31.51 3 eP P 06 06 21.4 -1.5
16nm,0.8s,mb4.9
F14A Wisdom 31.63 340 ⇑P P 06 06 24.1 +0.1
baz=32
H11A Donnelly 31.65 335 ⇓P P 06 06 23.7 -0.4
baz=32,SNR=8.8
E16A East Helena 31.74 342 ⇑P P 06 06 24.6 -0.3
baz=32,SNR=18
I09A Lost Marbles R 31.78 333 ⇓P P 06 06 25.1 -0.3
baz=32
D18A Linhart Farms, 31.84 345 ⇑P P 06 06 25.6 -0.2
baz=32,SNR=17
E15A Deer Lodge 31.93 341 ⇑P P 06 06 26.1 -0.5
baz=32,SNR=8.8
F13A Darby 31.94 338 ⇑P P 06 06 26.3 -0.4
baz=32,SNR=12
HRY Holter Researc 31.94 342 eP P 06 06 26.9 +0.1
D17A Six Diamond Ra 32.03 344 ⇓P P 06 06 27.1 -0.3
baz=32,SNR=29
D16A Dana Ranch, Ca 32.15 343 ⇓P P 06 06 28.4 -0.2
baz=32,SNR=14
SADO Sadowa 32.20 26 P P 06 06 27.0 -2.0
15nm,0.8s,mb4.9,baz=257,slow=8.3,SNR=6.6
E14A Clinton 32.20 340 ⇓P P 06 06 28.7 -0.3
baz=32,SNR=9.9
BMO Blue Mountains 32.30 334 eP P 06 06 29.8 -0.1
15nm,1.3s,mb4.7
H09A Durkee 32.30 334 ⇑P P 06 06 29.2 -0.7
baz=32,SNR=10
G11A Walters Elk Ra 32.33 336 ⇑P P 06 06 29.8 -0.3
baz=32,SNR=14
K05A Summer Lake 32.33 328 ⇓P P 06 06 30.2 0.0
baz=32
D15A Lincoln 32.45 342 ⇑P P 06 06 31.1 0.0
baz=32
E13A Victor 32.45 339 ⇓P P 06 06 30.6 -0.6
baz=32,SNR=12
C17A Wharram Farm, 32.49 344 ⇑P P 06 06 31.0 -0.4
baz=32,SNR=28
CHMT Chamberlain Mo 32.56 341 P P 06 06 31.6 -0.5
G10A Bishop Farm, J 32.58 335 ⇑P P 06 06 31.5 -0.8
baz=33,SNR=11
EGMT Eagleton 32.60 346 ⇑P P 06 06 31.9 -0.6
baz=33
EGMT Eagleton 32.60 346 eP P 06 06 32.4 -0.1
29nm,1.0s,mb5.2
EGMT e 06 06 41.2
H08A Prairie City 32.62 332 ⇑P P 06 06 32.2 -0.5
baz=33,SNR=11
I07A Izee 32.66 331 ⇓P P 06 06 32.6 -0.5
baz=33
MSO Missoula 32.71 340 eP P 06 06 33.1 -0.3
10nm,0.9s,mb4.8
MSO e pP 06 06 39.7 +1.0
D14A Greenough 32.79 341 ⇓P P 06 06 33.5 -0.7
baz=33,SNR=12
G09A Cove 32.84 334 ⇓P P 06 06 34.3 -0.3
baz=33
I06A Prineville 32.89 330 ⇑P P 06 06 34.7 -0.4
baz=33
C16A Fuhringer Ranc 32.91 343 ⇑P P 06 06 34.9 -0.3
baz=33,SNR=9.7
E12A Beaver Dam Sad 32.92 338 ⇑P P 06 06 34.5 -0.7
baz=33,SNR=7.3
SLMT Seeley Lake 32.93 341 eP P 06 06 35.4 +0.1
B18A Beardsley Farm 32.95 346 ⇓P P 06 06 34.8 -0.7
baz=33,SNR=6.5
E11A Bogner Ranch, 33.10 337 ⇓P P 06 06 35.8 -1.1
baz=33,SNR=9.7
B17A L&G Farms, Che 33.11 345 ⇓P P 06 06 36.3 -0.6
baz=33,SNR=14
D13A Huson 33.11 339 ⇓P P 06 06 36.2 -0.8
baz=33,SNR=14
C15A Salmond Ranch, 33.13 342 ⇑P P 06 06 36.6 -0.6
baz=33,SNR=9.9
F10A Beach Ranch, E 33.18 335 ⇓P P 06 06 36.9 -0.7
baz=33,SNR=10
F09A S2 Ranch, Elgi 33.24 334 ⇓P P 06 06 37.4 -0.7
baz=33
SWMT Swartz Lake 33.33 340 eP P 06 06 38.3 -0.5
G08A Pilot Rock 33.35 333 ⇓P P 06 06 38.4 -0.7
baz=33,SNR=5.8
B16A M & M Farms, S 33.46 344 ⇓P P 06 06 39.5 -0.5
baz=34
A18A Metzger Ranch, 33.46 346 ⇑P P 06 06 39.0 -1.0
baz=34,SNR=9.3
ULM Lac du Bonnet 33.46 3 P P 06 06 37.5 -2.5
6.2nm,0.9s,mb4.5,baz=202,slow=8.7,SNR=4.4
ULM LR LR 06 20 16.7
comp=Z,124nm,21.9s,MS3.6,baz=248,slow=36
ULM Lac du Bonnet 33.46 3 P P 06 06 37.5 -2.5
ULM LR LR 06 20 16.7
VIPM Ingram Point 33.51 330 P P 06 06 39.9 -0.5
LNOR Lincton Mounta 33.53 334 eP P 06 06 43.9 +3.3
H06A Lindquist Farm 33.55 331 ⇑P P 06 06 40.6 -0.2
baz=34
E10A Myers Farm, Un 33.56 336 ⇓P P 06 06 40.9 0.0
baz=34
I05A Bend 33.57 329 ⇓P P 06 06 40.8 -0.2
baz=34
B15A Bradely Ranch, 33.60 343 ⇓P P 06 06 40.5 -0.7
baz=34
JTMT Jette 33.63 340 eP P 06 06 41.6 +0.2
YBMT Yellow Bay 33.64 341 eP P 06 06 41.6 +0.1
G07A Ruggs Ranch, H 33.65 332 ⇑P P 06 06 41.2 -0.4
baz=34
C13A Hot Springs 33.66 340 ⇑P P 06 06 41.6 -0.2
baz=34
A17A Triple J Farms 33.69 345 ⇓P P 06 06 41.3 -0.6
baz=34,SNR=14
D11A Klaveano Farm, 33.73 337 ⇑P P 06 06 42.0 -0.4
baz=34
B14A Marquette Ranc 33.86 342 ⇑P P 06 06 43.1 -0.3
baz=34
BSMT Bassoo Peak 33.88 340 eP P 06 06 43.9 +0.2
BSMT epP pP 06 06 53.1 +4.3
A16A West Butte Ran 33.92 344 ⇑P P 06 06 43.3 -0.6
baz=34,SNR=18
E09A Wood Farm, Sta 33.99 335 ⇑P P 06 06 44.3 -0.4
baz=34
C12B Naegeli Ranch, 33.99 339 ⇓P P 06 06 44.3 -0.3
baz=34
D10A Wagner Farm, O 34.09 336 ⇓P P 06 06 45.2 -0.3
baz=34
B13A Whitefish 34.24 341 ⇑P P 06 06 46.2 -0.6
baz=34,SNR=11
A15A Johnson Ranch, 34.25 343 ⇓P P 06 06 46.4 -0.5
baz=34
C11A Tepee Creek (N 34.38 338 ⇑P P 06 06 47.4 -0.5
baz=34
H04A Detroit Lake 34.40 329 ⇑P P 06 06 47.9 -0.3
baz=34
I03A Eugene 34.44 327 ⇑P P 06 06 48.3 -0.3
baz=34
A14A Double T Ranch 34.45 342 ⇓P P 06 06 47.7 -0.8
baz=34,SNR=6.4
F06A Goldendale 34.53 332 ⇑P P 06 06 49.1 -0.2
baz=34
WALA Waterton Lakes 34.67 342 eP P 06 06 50.4 -0.1
0.5nm,1.0s
WALA e pP 06 06 57.0 +1.3
B12A Libby 34.69 340 ⇑P P 06 06 50.2 -0.4
baz=35
A13A Flathead Natio 34.71 341 ⇓P P 06 06 50.9 0.0
baz=35
G04A Mulino 34.92 329 ⇑P P 06 06 52.5 -0.2
baz=35
F05A White Salmon 34.93 331 ⇓P P 06 06 53.1 +0.3
baz=35
C09A Chrisman Ranch 35.09 336 ⇓P P 06 06 54.3 +0.2
baz=35
A12A Yaak River Ran 35.11 340 ⇓P P 06 06 53.9 -0.3
baz=35,SNR=8.3
ASR Mount Adams--S 35.20 331 P P 06 06 55.9 +0.8
E06A Yakima 35.22 332 ⇓P P 06 06 55.5 +0.3
baz=35
A11A Hall Mountain, 35.37 339 ⇑P P 06 06 56.9 +0.4
baz=35
C08A Higginbotham F 35.38 335 ⇓P P 06 06 57.0 +0.3
baz=35
G03A Yamhill 35.39 329 ⇓P P 06 06 56.7 -0.1
baz=35
B09A Rice 35.56 337 ⇓P P 06 06 57.9 -0.2
baz=36,SNR=8.3
E05A Randle 35.58 332 ⇓P P 06 06 58.5 +0.1
baz=36
C07A Waterville 35.72 334 ⇓P P 06 06 59.6 +0.1
baz=36
LON Longmire 35.75 332 eP P 06 06 59.4 -0.4

12nm,1.1s,mb4.7
ETW Entiat 35.76 334 P P 06 06 59.8 -0.1
B08A Colville Reser 35.96 336 ⇓P P 06 07 01.5 0.0
baz=36
C05A Tolt Reservoir 36.41 333 ⇑P P 06 07 05.2 -0.3
baz=36
A07A Ashnola River, 36.93 336 ⇓P P 06 07 09.6 -0.2
baz=37
FFC Flin Flon 38.01 356 eP P 06 07 17.4 -1.5
18nm,0.8s,mb4.8
EDM Edmonton 38.28 345 eP P 06 07 20.1 -1.1
EDM e pP 06 07 26.7 +0.2
FCC Fort Churchill 42.05 3 eP P 06 07 50.8 -1.6
0.1nm,0.8s
SCHQ Schefferville 45.00 25 P P 06 08 15.3 -1.0
5.8nm,0.7s,mb4.5,baz=243,slow=10.0,SNR=5.1
SCHQ Schefferville 45.00 25 eP P 06 08 14.5 -1.7
7.8nm,0.7s,mb4.7
YKA Yellowknife Ar 47.12 350 P P 06 08 31.0 -1.8
6.5nm,0.8s,mb4.6,baz=157,slow=7.4,SNR=54
YKA LR LR 06 31 17.3
comp=Z,91nm,18.5s,MS3.8,baz=150,slow=40
DLBC Dease Lake 47.80 338 LR LR 06 30 47.3
comp=Z,470nm,19.7s,MS4.5,baz=32,slow=39
DLBC Dease Lake 47.80 338 eP P 06 08 39.0 +0.8
LVC Limon Verde 48.49 143 P P 06 08 43.0 -1.0
4.9nm,0.9s,mb4.5,baz=342,slow=4.7,SNR=2.9
TAOE Nuku Hiva Isla 48.69 242 eT 07 00 02.7
214nm,0.2s
SIV San Ignacio 48.97 130 P P 06 08 46.6 -1.2
4.8nm,0.9s,mb4.5,baz=311,slow=9.8,SNR=22
HYT Haines Junctio 52.20 337 eP P 06 09 13.1 +1.5
RKT Rikitea 53.52 223 eLR LR 06 24 46.9
240nm,23.8s
RKT Rikitea 53.52 223 eT 07 06 15.6
26nm,0.3s
DAWY Dawson 54.95 339 eP P 06 09 31.4 -0.2
EGAK Eagle 56.00 339 eP P 06 09 38.4 -0.8
6.4nm,0.7s,mb4.8
RES Resolute Bay 57.97 1 LR LR 06 35 03.3
comp=Z,123nm,18.0s,MS4.1,baz=179,slow=36
RES Resolute Bay 57.97 1 eP P 06 09 51.5 -1.6
80nm,2.9s,mb5.2
MCK McKinley 58.24 336 eP P 06 09 54.6 -0.5
12nm,0.8s,mb5.0
COLA College 58.41 338 eP P 06 09 55.2 -1.1
9.4nm,1.1s,mb4.7
TRF Thorofare Moun 58.64 335 eP P 06 09 57.3 -0.6
43nm,1.0s,mb5.4
BDFB Brasilia 59.04 120 P P 06 10 01.0 -0.3
4.5nm,0.8s,mb4.6,baz=277,slow=11,SNR=12
BDFB Brasilia 59.04 120 eP P 06 10 00.8 -0.5
7.0nm,0.8s,mb4.7
BPAW Bear Paw Mtn. 59.22 336 eP P 06 09 59.8 -2.1
8.3nm,0.9s,mb4.8
PLCA Paso Flores 62.69 157 P P 06 10 25.1 -0.7
7.6nm,0.8s,mb4.9,baz=340,slow=7.9,SNR=14
USHA Ushuaia 75.67 163 LR LR 06 37 13.9
comp=Z,963nm,19.7s,MS5.1,baz=217,slow=29
SPITS Spitsbergen Ar 78.56 11 LR LR 06 49 13.9
comp=Z,107nm,18.1s,MS4.2,baz=275,slow=38
MDT Midelt 84.01 58 LR LR 06 44 29.6
comp=Z,92nm,19.8s,MS4.2,baz=126,slow=32
TIXI Tiksi 86.27 347 eP P 06 12 41.2 -1.2
5.3nm,1.1s,mb4.7
VRAC Vranov 92.64 37 LR LR 06 52 17.6
comp=Z,82nm,21.3s,MS4.2,baz=65,slow=34
BJI Beijing 115.06 331 PKP PKiKP 06 18 40.4 -2.1
BJI LR LR
comp=N,162nm,26.8s
BJI LR LR
comp=E,272nm,15.1s
BJI LR LR
comp=Z,174nm,36.8s
HHC Hu-ho-hao-te 116.38 335 ePKP PKPdf 06 18 44.4 -0.6
HHC PP PP 06 19 53.4 +3.3
HHC PKS 06 22 19.1
HHC SKS SKSdf 06 25 51.4 -5.2
HHC SKKS SKKSac 06 26 43.0 -8.8
HHC SS SS 06 35 48.4 -4.7
HHC PP PP
comp=Z,92nm,7.5s
HHC LR LR
comp=N,180nm,17.8s,MS4.8
HHC LR LR
comp=E,124nm,19.0s,MS4.8
HHC LR LR
comp=Z,187nm,15.5s,MS4.8
WMQ Urumqi 119.48 355 ePKP PKPdf 06 18 50.7 -0.2
NJ2 Nanjing 119.88 324 ePKP PKPdf 06 18 54.4 +2.4
LZH Lanzhou 123.46 339 ePKP PKPdf 06 18 58.0 -0.7
LZH PP PP
comp=Z,68nm,4.3s
GYA Guiyang 130.72 330 ePKP PKPdf 06 19 11.4 -1.5
GYA XPKP 06 19 31.2
GYA PP PP 06 21 28.7 +1.7
GYA PKS 06 22 45.3
GYA SKKS SKKSac 06 28 13.2 -11
GYA SS SS 06 38 48.5 -6.6
GYA PP PP
comp=Z,110nm,8.6s
GYA LR LR
comp=N,110nm,21.2s,MS4.7
GYA LR LR
comp=E,130nm,20.8s,MS4.7
GYA LR LR
comp=Z,140nm,20.7s,MS4.6
KMI Kunming 133.65 333 PKP PKPdf 06 19 15.6 -2.8

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*NIED **07** 06:02:00, 31.80N×142.00E, h5km, Mw3.9 Best double couple: Mo8.14000×10^14 NP1:φs343.00000°, δ54.00000°, λ64.00000°. NP2:φs202.00000°, δ43.00000°, λ121.00000°.*
*ISCJB **07** 06:02:45.7±1.7, 31.80N±0.05×141.82E±0.10, h15km±11km, mb3.9/11, Error ellipse: s-maj=14.7km s-min=6.0km az=158.6*
*IDC **07** 06:02:45.1±0.8, 31.72N×141.76E, h0km, mb4.0/11, mb1 4.1/14, mb1mx4.1/24, mbtmp4.0/14, ML4.1/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/46, Error ellipse: s-maj=23.7km s-min=16.2km az=48.0*
*JMA **07** 06:02:45.6±0.3, 31.86N×141.96E, h15km, M4.1*
ISC 07 06:02:46.7±2.0**, 31.80N**±0.04×**141.83E**±0.10**, h11**km±13km**, n29,** σ1.08/41**, mb3.9**/11**, Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
JHJ Hachijo jima 2 2.17 308 Pn Pn 06 03 22.5 -0.3
112nm,0.3s,baz=228,slow=20,SNR=14
JHJ Sn Sn 06 03 48.8 -0.9
97nm,0.3s,baz=246,slow=22,SNR=7.4
BSO1 Boso 1 2.94 346 P Pn 06 03 32.4 -0.9
BSO1 eS Sn 06 04 08.1 -0.4
BSO3 Boso 3 3.19 340 eS Sn 06 04 15.9 +1.1
BSO4 Boso 4 3.42 339 P Pn 06 03 40.5 +0.6
JHU Hanno 4.56 333 P Pn 06 03 56.7 +1.1
JHU eS Sn 06 04 47.6 -1.1
CBIJ Chichi jima 4.70 176 Pn Pn 06 03 56.9 -0.6
23nm,0.3s,baz=98,slow=22,SNR=12
CBIJ Sn Sn 06 04 47.8 -4.2
23nm,0.3s,baz=318,slow=22,SNR=7.1
CBIJ LR LR 06 05 05.8
comp=Z,83nm,18.8s,baz=306,slow=30
CBIJ Chichi jima 4.70 176 P Pn 06 03 58.4 +0.9
CBIJ eS Sn 06 04 49.5 -2.4
JRY Ryogami san 4.86 331 P Pn 06 04 00.2 +0.5
JRY eS Sn 06 04 55.9 0.0
JHO Hitachi 4.91 348 P Pn 06 03 59.3 -1.1
JHO eS Sn 06 04 55.2 -2.1
JAG Ashikaga 5.02 338 P Pn 06 04 02.9 +1.0
JAG S Sn 06 04 58.5 -1.3
MJAR Matsushiro Arr 5.60 329 Pn Pn 06 04 10.2 +0.3
2.9nm,0.3s,baz=148,slow=11,SNR=15
MJAR Sn Sn 06 05 15.2 +0.9
0.6nm,0.3s,baz=188,slow=14,SNR=3.3
MAT Matsushiro 5.60 329 P Pn 06 04 10.5 +0.6
MAT S Sn 06 05 16.1 +1.8
JFK Kawauchi 5.61 352 P Pn 06 04 08.4 -1.6
JFK eS Sn 06 05 07.9 -6.6
JMK Ichinoseki 7.16 356 P Pn 06 04 30.9 -0.3
JMK eS Sn 06 05 46.3 -6.2
ASAJ Asahikawa 12.31 3 Pn Pn 06 05 38.8 -3.1
0.7nm,0.3s,baz=103,slow=29,SNR=2.6
ASAJ LR LR 06 11 34.3
comp=Z,69nm,19.2s,baz=183,slow=43

KSRS Korea Array 12.76 300 Pn Pn 06 05 53.8 +5.7
0.4nm,0.3s,baz=112,slow=13,SNR=3.3
KSRS LR LR 06 10 42.6
comp=Z,63nm,19.5s,baz=115,slow=37
SONM Songino Array 31.25 311 P P 06 09 07.5 +1.3
3.6nm,0.5s,mb4.5,baz=118,slow=11,SNR=26
ZALV Zalesovo Beam 45.81 316 P P 06 11 07.8 -0.5
1.1nm,0.4s,mb4.1,baz=90,slow=7.4,SNR=6.2
MKAR Makanchi Array 47.34 306 P P 06 11 20.8 +0.3
3.4nm,0.5s,mb4.5,baz=84,slow=9.8,SNR=46
WB2 Warramunga Arr 51.94 189 eP P 06 11 54.3 -1.3
BVAR Borovoye Array 54.44 315 P P 06 12 13.8 0.0
1.5nm,0.5s,mb4.2,baz=96,slow=7.7,SNR=8.7
ASAR Alice Springs 55.67 189 P P 06 12 22.0 -0.9
0.5nm,0.5s,mb3.8,baz=4.8,slow=7.5,SNR=16
YKA Yellowknife Ar 68.18 29 P P 06 13 47.4 +0.8
0.1nm,0.6s,mb3.0,baz=302,slow=6.6,SNR=3.0
NVAR Mina Array Bea 77.88 52 P P 06 14 45.1 +0.6
0.4nm,0.7s,mb3.5,baz=228,slow=36,SNR=2.9
NB2 NORSAR Subarra 79.15 338 P P 06 14 50.9 -0.2
comp=Z,3.5nm,1.0s,mb4.2,baz=42,slow=5.9
NOA NORSAR Array B 79.15 338 P P 06 14 50.7 -0.4
comp=Z,1.9nm,0.9s,mb4.0,baz=41,slow=5.7,SNR=3.6
PDAR Pinedale Array 81.11 45 P P 06 15 04.1 +2.1
comp=Z,0.4nm,0.7s,mb3.5,baz=280,slow=5.4,SNR=2.7
BRTR Keskin Array B 82.60 312 P P 06 15 11.4 +1.5
comp=Z,0.9nm,0.8s,mb3.8,baz=53,slow=5.6,SNR=3.3
TXAR Lajitas Array 93.03 53 P P 06 16 01.3 +0.7
comp=Z,0.7nm,0.7s,mb4.2,baz=308,slow=2.6,SNR=8.1

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*ISCJB **07** 06:19:33.6±0.4, 56.36S±0.07×139.3W±0.1, h10km, mb4.7/20, MS5.3/82, Error ellipse: s-maj=10.1km s-min=9.6km az=33.7*
*IDC **07** 06:19:33.5±0.6, 56.19S×139.46W, h0km, mb4.4/10, mb1 4.5/10, mb1mx4.4/13, mbtmp4.4/10, MS5.0/13, Ms1 5.0/13, ms1mx4.8/20, Error ellipse: s-maj=26.5km s-min=18.1km az=174.0*
*NEIC **07** 06:19:35.2±0.3, 56.21S×139.29W, h10km, mb5.0/13, MS5.3/71, Error ellipse: s-maj=17.1km s-min=10.3km az=176.0*
*GCMT **07** 06:19:35.2±0.1, 56.55S×139.04W, h12km, MW5.5/97, Moment Tensor Solution. s74,c123; s97,c167; Duration: 1.4 Moment tensor: Scale 10^17Nm; Mrr-1.02±.03; Mθθ2.45±.03; Mφφ-1.43±.03; Mrθ0.31±.07; Mθφ0.99±.03; Mφr0.11±.07; Best double couple: Mo2.19500×10^17 NP1:φs122.00000°, δ84.00000°, λ1.00000°. NP2:φs31.00000°, δ89.00000°, λ174.00000°. Principal axes: T 2.7190, Plg5.0000°, Azm346.0000°; N -1.0470, Plg84.0000°, Azm198.0000°; P -1.6720, Plg3.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **07** 06:19:35.1, 56.20S×139.30W, h10km, mB5.7, Ms5.8, Msz5.1*
ISC 07 06:19:35.5±0.4**, 56.33S**±0.07×**139.3W**±0.1**, h10**km**, (h11**km±3.0km**:pP-P), n142,** σ1.07/36**, mb4.7**/20**, MS5.3**/82**, 1C-1D, Pacific-Antarctic Ridge**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
VNDA Vanda 29.16 202 P P 06 25 37.2 +1.0
1.4nm,1.0s,mb3.6,baz=78,slow=16,SNR=2.7
VNDA LR LR 06 34 27.0
comp=Z,6μm,18.8s,MS5.2,baz=82,slow=30
VNDA Vanda 29.16 202 eP P 06 25 39.1 +2.9
9.4nm,1.3s,mb4.4
VNDA LR LR
comp=Z,6μm,20.0s,MS5.2
RKT Rikitea 33.32 7 eS S 06 31 32.5 -1.1
comp=Z,1μm,31.0s
RKT eLQ 06 33 05.2
comp=Z,2μm,29.0s
RKT eLR LR 06 34 45.6
comp=Z,14μm,28.8s,baz=183
QSPA South Pole Qui 33.83 180 P P 06 26 19.2 +1.9
comp=Z,5.0nm,0.9s,mb4.5,baz=66,slow=1.9,SNR=9.1
URZ Urewera 33.95 283 LR LR 06 35 24.7
comp=Z,814nm,20.8s,MS4.4,baz=139,slow=28
PMSA Palmer Station 35.78 135 LR LR 06 37 00.4
comp=Z,3μm,21.6s,MS5.1,baz=251,slow=29
RAR Rarotonga 38.23 328 LR LR 06 36 56.6
comp=Z,857nm,21.7s,MS4.5,baz=199,slow=27
USHA Ushuaia 38.45 118 P P 06 26 56.5 -0.4
comp=Z,7.3nm,0.9s,mb4.4,baz=288,slow=12,SNR=2.1
PPT Papeete 39.47 344 eS S 06 33 08.0 +0.3
comp=Z,1μm,26.5s
PPT eLQ 06 35 35.3
comp=Z,3μm,25.2s
PPT eLR LR 06 37 26.2
comp=Z,16μm,26.0s,baz=180
PPT Papeete 39.47 344 LR LR 06 38 59.2
comp=Z,4μm,19.4s,MS5.2,baz=154,slow=30
EFI East Falkland 45.34 120 PFAKE 06 28 10.0 +17
EFI LR LR
comp=Z,2μm,22.0s,MS4.9
PLCA Paso Flores 46.09 101 P P 06 28 00.1 +0.7
comp=Z,2.3nm,0.9s,mb4.1,baz=268,slow=6.0,SNR=4.1
PLCA LR LR 06 42 31.8
comp=Z,1μm,20.0s,MS4.9,baz=227,slow=30
PLCA Paso Flores 46.09 101 P P 06 28 00.1 +0.8
comp=Z,0.6nm,0.6s,mb3.7
CASY Casey 47.03 211 PFAKE 06 28 20.0 +14
CASY LR LR
comp=Z,4μm,19.0s,MS5.4
TAOE Nuku Hiva Isla 47.36 359 eS S 06 35 01.7 -1.5
comp=Z,3μm,25.4s
TAOE eLQ 06 38 56.1
comp=Z,4μm,27.0s
TAOE eLR LR 06 41 15.4
comp=Z,28μm,27.8s
VNA3 Neumayer Olymp 47.86 160 e P 06 28 11.1 -1.7
VNA3 e pP 06 28 13.1 -2.8
VNA3 e pP 06 28 15.6 -0.3
VNA3 e 06 28 26.1
VNA2 Neumayer--Watz 48.54 161 e P 06 28 16.5 -1.5
baz=218,slow=6.0
VNA2 e pP 06 28 18.8 -2.4
VNA2 e pP 06 28 21.2 0.0
VNA2 e 06 28 31.1
VNA1 Neumayer--Stat 48.61 160 e P 06 28 18.4 -0.2
VNA1 e pP 06 28 20.4 -1.3
VNA1 e pP 06 28 22.1 +0.4
VNA1 e 06 28 32.8
SNAA Sanae 48.69 163 e P 06 28 18.2 -1.0
SNAA e pP 06 28 19.9 -2.4
SNAA e pP 06 28 21.8 -0.5
SNAA e 06 28 31.5
SNAA Sanae 48.69 163 eP P 06 28 18.1 -1.1
comp=Z,22nm,1.2s,mb5.1
ARMA Armidale 53.84 268 eP P 06 29 00.2 +1.8
MAW Mawson 55.30 190 P P 06 29 08.1 -0.3
comp=Z,16nm,1.1s,mb5.0,baz=296,slow=22,SNR=2.7
MAW LR LR 06 50 20.3
comp=Z,2μm,20.0s,MS5.3,baz=157,slow=33
LPA La Plata 57.17 105 ceP P 06 29 21.0 -1.2
FUNA Funafuti 57.68 309 PFAKE 06 29 40.0 +14
FUNA LR LR
comp=Z,5μm,22.0s,MS5.5
EIDS Eidsvold 58.06 272 eP P 06 29 29.0 +0.4
comp=Z,25nm,1.4s,mb5.1
STKA Stephens Creek 58.28 259 eP P 06 29 29.6 -0.5
comp=Z,8.6nm,1.2s,mb4.7
STKA Stephens Creek 58.28 259 P P 06 29 29.5 -0.6
comp=Z,7.6nm,1.0s,mb4.7,baz=154,slow=7.1,SNR=5.7
STKA LR LR 06 50 36.1
comp=Z,2μm,19.1s,MS5.2,baz=146,slow=32
LVC Limon Verde 60.62 87 eP P 06 29 49.1 +2.8
comp=Z,19nm,0.9s,mb5.2
LVC LR LR
comp=Z,1μm,22.0s,MS5.0
NNA Nana 64.93 73 eP P 06 30 14.4 -0.7
comp=Z,25nm,1.1s,mb5.2
NNA LR LR
comp=Z,2μm,21.0s,MS5.3
CTA Charters Tower 64.94 271 eP P 06 30 15.9 +0.8
comp=Z,8.6nm,0.9s,mb4.8
CTAO Charters Tower 64.94 271 eP P 06 30 15.8 +0.7
comp=Z,62nm,1.6s,mb5.4
CTAO LR LR
comp=Z,525nm,20.0s,MS4.7
FORT Forrest 66.39 250 eP P 06 30 23.7 -0.7
comp=Z,19nm,0.8s,mb5.2
ASAR Alice Springs 68.92 259 P P 06 30 39.9 -0.5
comp=Z,7.2nm,0.8s,mb4.6,baz=140,slow=5.9,SNR=56
COEN Coen 71.61 272 eP P 06 30 57.3 +0.3
comp=Z,23nm,1.4s,mb4.9
WB2 Warramunga Arr 71.66 262 ⇓iP P 06 30 56.7 -0.6
WRAB Tennant Creek 71.67 262 P P 06 30 57.0 -0.3
comp=Z,78nm,1.0s,mb5.6,SNR=5.8
WRAB Tennant Creek 71.67 262 eP P 06 30 56.4 -0.9
comp=Z,56nm,1.6s,mb5.2
WRAB LR LR
comp=Z,1μm,19.0s,MS5.2
OTAV Otavalo 74.44 65 eP P 06 31 13.9 +0.2
comp=Z,15nm,1.4s,mb4.7
OTAV LR LR
comp=Z,332nm,21.0s,MS4.6
BDFB Brasilia 77.83 100 P P 06 31 34.9 +1.9
comp=Z,3.0nm,0.9s,mb4.2,baz=182,slow=24,SNR=5.5
BDFB LR LR 07 02 37.1
comp=Z,549nm,19.2s,MS4.9,baz=15,slow=33
MBWA Marble Bar 78.54 249 eP P 06 31 36.4 -0.5
comp=Z,9.3nm,0.7s,mb4.8
MBWA LR LR
comp=Z,908nm,20.0s,MS5.1
KAKA Kakadu 78.60 264 eP x 06 31 18.5
comp=Z,14nm,1.1s
ROSC El Rosal 80.48 66 P P 06 31 48.4 +0.9
comp=Z,12nm,0.8s,mb4.9,baz=69,slow=21,SNR=6.0
ROSC LR LR 07 01 28.5
comp=Z,563nm,18.3s,MS5.0,baz=204,slow=31
BCIP Isla Barro Col 81.47 59 PFAKE 06 32 00.0 +7.3
BCIP LR LR
comp=Z,885nm,20.0s,MS5.1
BATI Baumata 85.49 259 LR LR 07 07 47.6
comp=Z,2μm,20.1s,MS5.5,baz=141,slow=34
TXAR Lajitas Array 90.53 31 P P 06 32 37.5 +0.3
comp=Z,0.3nm,0.8s,mb3.7,baz=186,slow=8.8,SNR=3.4
TXAR LR LR 07 04 41.9
comp=Z,501nm,19.5s,MS5.0,baz=190,slow=30
TXAR Lajitas Array 90.53 31 P P 06 32 37.5 +0.3
TXAR LR LR 07 04 41.9
KAPI Kappang 91.93 258 PFAKE 06 33 00.0 +16
KAPI LR LR
comp=Z,1μm,20.0s,MS5.4
GRGR Grenville 93.24 73 PFAKE 06 33 00.0 +10
GRGR LR LR
comp=Z,840nm,20.0s,MS5.2
DAC Darwin (Calif) 94.07 17 PFAKE 06 33 00.0 +6.7
DAC LR LR
comp=Z,2μm,20.0s,MS5.6
BOSA Boshof 94.38 166 LR LR 07 14 01.0
comp=Z,2μm,18.4s,MS5.6,baz=190,slow=35
BOSA Boshof 94.38 166 PFAKE 06 33 10.0 +15
BOSA LR LR
comp=Z,2μm,20.0s,MS5.6
ANMO Albuquerque 95.11 27 PFAKE 06 33 10.0 +12
ANMO LR LR
comp=Z,1μm,20.0s,MS5.4
BBGH Gun Hill 95.20 74 PFAKE 06 33 10.0 +11
BBGH LR LR
comp=Z,2μm,22.0s,MS5.5
CMB Columbia Colle 95.36 15 PFAKE 06 33 10.0 +11
CMB LR LR
comp=Z,2μm,21.0s,MS5.5
HOPS Hopland 95.94 13 PFAKE 06 33 10.0 +8.2
HOPS LR LR
comp=Z,2μm,20.0s,MS5.6
AMTX Amarillo 96.31 30 PFAKE 06 33 10.0 +6.4
AMTX LR LR
comp=Z,2μm,19.0s,MS5.5
DWPF Disney 97.31 49 PFAKE 06 33 20.0 +12
DWPF LR LR
comp=Z,308nm,19.0s,MS4.8
COCO West Island 97.44 235 PFAKE 06 33 20.0 +11
COCO LR LR
comp=Z,588nm,22.0s,MS5.0
BMN Battle Mountai 98.18 17 PFAKE 06 33 20.0 +8.1
BMN LR LR
comp=Z,2μm,20.0s,MS5.6
DAV Davao City (W) 98.70 270 PFAKE 06 33 30.0 +15
DAV LR LR
comp=Z,522nm,19.0s,MS5.0
DUG Dugway 98.73 20 PFAKE 06 33 20.0 +5.6
DUG LR LR
comp=Z,1μm,19.0s,MS5.4
ELK Elko 98.82 18 PFAKE 06 33 30.0 +15
ELK LR LR
comp=Z,1μm,19.0s,MS5.5
HUMO Hull Mountain 99.52 12 PFAKE 06 33 30.0 +12
HUMO LR LR
comp=Z,2μm,22.0s,MS5.5
CBKS Cedar Bluff 100.53 30 PFAKE 06 33 30.0 +6.8
CBKS LR LR
comp=Z,2μm,20.0s,MS5.5
GOGA Godfrey 101.14 45 PFAKE 06 33 40.0 +14
GOGA LR LR
comp=Z,439nm,22.0s,MS4.9
COR Corvallis 101.44 12 PFAKE 06 33 40.0 +13
COR LR LR
comp=Z,2μm,19.0s,MS5.7
AHID Auburn Hatcher 101.55 21 PFAKE 06 33 40.0 +12
AHID LR LR
comp=Z,895nm,21.0s,MS5.3
BW06 Boulder Array 101.86 22 PFAKE 06 33 40.0 +11
BW06 LR LR
comp=Z,2μm,21.0s,MS5.5
CCM Cathedral Cave 102.45 37 PFAKE 06 33 40.0 +8.2
CCM LR LR
comp=Z,484nm,22.0s,MS5.0
BMO Blue Mountains 102.49 16 PFAKE 06 33 40.0 +8.1
BMO LR LR
comp=Z,1μm,19.0s,MS5.5
BOZ Bozeman (W) 104.22 20 PFAKE 06 33 50.0 +10
BOZ LR LR
comp=Z,595nm,19.0s,MS5.2
ABPO Ambohimpanom 104.75 186 PFAKE 06 33 50.0 +8.0
ABPO LR LR
comp=Z,2μm,21.0s,MS5.5
CNNC Cliffs of the 104.98 48 PFAKE 06 33 50.0 +7.0
CNNC LR LR
comp=Z,486nm,20.0s,MS5.0
BLA Blacksburg 105.66 45 PFAKE 06 38 10.0 +12
BLA LR LR
comp=Z,425nm,21.0s,MS5.0
ECSD EROS,Sioux Fal 105.97 31 PFAKE 06 38 10.0 +11
ECSD LR LR
comp=Z,2μm,21.0s,MS5.6
EGMT Eagleton 106.86 20 PFAKE 06 38 10.0 +10
EGMT LR LR
comp=Z,937nm,19.0s,MS5.4
ACSO Alum Creek Sta 107.31 42 PFAKE 06 38 10.0 +8.8
ACSO LR LR
comp=Z,409nm,19.0s,MS5.0
CBN Corbin 107.74 47 PFAKE 06 38 10.0 +7.9
CBN LR LR
comp=Z,528nm,19.0s,MS5.1
DGMT Dagmar 108.45 24 PFAKE 06 38 10.0 +7.0
DGMT LR LR
comp=Z,941nm,20.0s,MS5.3
AAM Ann Arbor 108.87 40 PFAKE 06 38 20.0 +16
AAM LR LR
comp=Z,551nm,20.0s,MS5.1
ERPA Erie 110.07 43 PFAKE 06 38 20.0 +14
ERPA LR LR
comp=Z,444nm,19.0s,MS5.1
AGMN Agassiz Refuge 110.36 29 PFAKE 06 38 20.0 +13
AGMN LR LR
comp=Z,1μm,20.0s,MS5.5
GLMI Grayling 110.74 38 PFAKE 06 38 20.0 +13
GLMI LR LR
comp=Z,579nm,20.0s,MS5.2
EYMN Ely 111.29 32 PFAKE 06 38 20.0 +12
EYMN LR LR
comp=Z,2μm,19.0s,MS5.6
BINY Binghamton 111.69 46 PFAKE 06 38 20.0 +11
BINY LR LR
comp=Z,610nm,19.0s,MS5.2
KDAK Kodiak Island 114.26 352 PFAKE 06 38 20.0 +6.3
KDAK LR LR
comp=Z,4μm,22.0s,MS5.9
FFC Flin Flon 114.80 23 PFAKE 06 38 30.0 +15
FFC LR LR
comp=Z,1μm,20.0s,MS5.5
LBNH Lisbon 115.03 47 PFAKE 06 38 30.0 +14
LBNH LR LR
comp=Z,344nm,21.0s,MS4.9
ERM Erimo 117.68 305 PFAKE 06 38 30.0 +9.2
ERM LR LR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,688nm,22.0s,MS5.2						
DBIC	Dimbokro	118.88	126	PFAKE		06 38 40.0	+16
DBIC				LR	LR		
	comp=Z,574nm,20.0s,MS5.2						
YKA	Yellowknife Ar	120.03	13	PKP	PKPdf	06 38 23.1	-1.6
	comp=Z,0.1nm,0.3s,baz=195,slow=2.3,SNR=2.4						
EGAK	Eagle	120.78	359	PFAKE		06 38 40.0	+14
EGAK				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
COLA	College	121.05	356	PFAKE		06 38 40.0	+13
COLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
NJ2	Nanjing	122.41	280	ePKP	PKPdf	06 38 27.4	-2.9
CM31	Chiang Mai Arr	122.68	253	PFAKE		06 38 40.0	+8.8
CM31				LR	LR		
	comp=Z,189nm,19.0s,MS4.8						
CMAR	Chiang Mai Arr	122.68	253	PKP	PKPdf	06 38 30.6	-0.6
	comp=Z,1.5nm,0.3s,baz=190,slow=1.6,SNR=5.8						
CHTO	Chiang Mai	122.97	254	PFAKE		06 38 40.0	+8.3
CHTO				LR	LR		
	comp=Z,316nm,22.0s,MS4.9						
KMI	Kunming	125.99	262	PKP	PKPdf	06 38 39.8	+2.4
TOA0	Torodi Ar. Sit	127.53	129	ePKPdf	PKPdf	06 38 39.0	-1.6
TORD	Torodi Ar. Bea	127.53	129	PKP	PKPdf	06 38 39.0	-1.6
	comp=Z,1.6nm,0.8s,baz=100,slow=1.4,SNR=10						
TORD	Torodi Ar. Bea	127.53	129	PKP	PKPdf	06 38 39.0	-1.6
BJT	Baijiatuau	129.76	285	PFAKE		06 39 00.0	+16
BJT				LR	LR		
	comp=Z,209nm,20.0s,MS4.8						
BILL	Bilibino	130.37	336	PFAKE		06 39 00.0	+16
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
TAM	Tamanrasset	137.72	128	ePKPdf	PKPdf	06 38 59.7	+0.1
GTA	Gaotai	138.32	272	ePKP	PKPdf	06 39 01.9	+1.8
GTA				XPKP		06 39 06.9	
SONM	Songino Array	140.21	286	PKP	PKPdf	06 39 03.0	-0.3
	comp=Z,0.6nm,0.7s,baz=144,slow=2.7,SNR=4.5						
TIXI	Tiksi	142.51	329	ePKP	PKPdf	06 39 03.2	-3.5
PCBR	Castelo Branco	144.66	97	ePKP	PKPdf	06 39 10.3	-1.2
MTE	Manteigas	145.01	96	ePKP	PKPdf	06 39 11.2	-0.9
MTE	Manteigas	145.01	96	ePKPdf	PKPdf	06 39 10.6	-1.4
MTE				LR	LR		
	comp=Z,727nm,19.0s,MS5.5						
SUMG	Summit	145.42	31	ePKPdf	PKPdf	06 39 11.4	-0.3
MVO	Moncorvo	145.82	96	ePKP	PKPdf	06 39 14.2	+0.8
ESLA	Sonseca Array	146.48	101	ePKPdf	PKPdf	06 39 13.5	-1.1
ESDC	Sonseca Array	146.48	101	PKPbc	PKPbc	06 39 15.8	-0.3
	comp=Z,1.4nm,0.6s,baz=231,slow=2.5,SNR=12						
WMQ	Urumqi	148.02	267	ePKP	PKPdf	06 39 19.5	+2.5
KEST	Kesra	150.43	121	PKPbc	PKPbc	06 39 26.0	-0.5
	comp=Z,2.7nm,1.0s,baz=162,slow=12,SNR=2.1						
KBL	Kabul	150.88	234	ePKPbc	PKPbc	06 39 28.0	+0.5
MK31	Makanchi Array	152.85	267	ePKPbc	PKPbc	06 39 30.7	-1.0
MKAR	Makanchi Array	152.85	267	PKPbc	PKPbc	06 39 30.9	-0.7
	comp=Z,5.4nm,1.0s,baz=107,slow=4.2,SNR=19						
MKAR				PP	PP	06 43 15.6	-0.9
	comp=Z,0.8nm,0.7s,baz=111,slow=7.9,SNR=4.8						
AAK	Ala-Archa	154.45	252	ePKPdf	PKPdf	06 39 26.1	-0.8
AAK				ePKPab	PKPab	06 39 50.0	+0.3
AAK				LR	LR		
	comp=Z,584nm,20.0s,MS5.4						
AML	Almayashu	154.52	250	PFAKE		06 39 40.0	+13
AML				LR	LR		
	comp=Z,452nm,20.0s,MS5.3						
EKS2	Erkin-Say	154.85	251	PFAKE		06 39 40.0	+13
EKS2				LR	LR		
	comp=Z,521nm,21.0s,MS5.3						
ZALV	Zalesovo Beam	155.01	283	PKPab	PKPab	06 39 50.6	-1.2
	comp=Z,0.9nm,0.5s,baz=121,slow=5.6,SNR=3.2						
CEL	Celeste	155.51	127	PFAKE		06 39 40.0	+12
CEL				LR	LR		
	comp=Z,483nm,20.0s,MS5.3						
BNI	Bardonecchia	155.91	103	PFAKE		06 39 40.0	+11
BNI				LR	LR		
	comp=Z,748nm,20.0s,MS5.5						
CUC	Castrocucco	156.89	124	PFAKE		06 39 40.0	+10
CUC				LR	LR		
	comp=Z,832nm,21.0s,MS5.5						
KURK	Kurchatov	157.01	272	PFAKE		06 39 40.0	+10
KURK				LR	LR		
	comp=Z,547nm,21.0s,MS5.4						
AQU	L'Aquila	157.56	117	PFAKE		06 39 40.0	+9.0
AQU				LR	LR		
	comp=Z,670nm,21.0s,MS5.5						
CSS	Prodhromos	158.04	164	PFAKE		06 39 40.0	+8.1
CSS				LR	LR		
	comp=Z,783nm,20.0s,MS5.5						
BFO	Black Forest	158.80	98	PFAKE		06 39 40.0	+7.7
BFO				LR	LR		
	comp=Z,547nm,19.0s,MS5.4						
SKDS	Skadanscina	160.13	112	i PKPdf	PKPdf	06 39 35.8	+1.8
CADS	Cadrg	160.44	110	ePKPdf	PKPdf	06 39 35.8	+1.6
PERS	Pernice	161.43	111	ePKPdf	PKPdf	06 39 35.2	-0.1
GERES	GERESS Array B	162.03	103	PKP	PKPdf	06 39 35.8	-0.1
	comp=Z,0.6nm,0.5s,baz=197,slow=3.1,SNR=2.5						
BVAR	Borovoye Array	162.61	272	PKPab	PKPab	06 40 23.4	-1.4
	comp=Z,3.3nm,0.9s,baz=104,slow=6.3,SNR=9.1						
BRVK	Borovoye	162.68	272	PFAKE		06 39 50.0	+14
BRVK				LR	LR		
	comp=Z,882nm,19.0s						
BR131	Keskin Array S	162.74	161	PFAKE		06 39 50.0	+13
BR131				LR	LR		
	comp=Z,520nm,20.0s						
GNI	Garni	163.60	191	PFAKE		06 39 50.0	+12
GNI				LR	LR		
	comp=Z,792nm,19.0s						
KWP	Kalwaria	167.26	114	PFAKE		06 39 50.0	+10
KWP				LR	LR		
	comp=Z,1µm,21.0s						
KIV	Kislovodsk	167.55	187	PFAKE		06 39 50.0	+9.2
KIV				LR	LR		
	comp=Z,683nm,20.0s						
AKTO	Aktyubinsk	168.13	247	PKPab	PKPab	06 40 48.2	-1.0
	comp=Z,9.4nm,1.0s,baz=133,slow=3.5,SNR=18						
ARU	Arti	170.11	278	PFAKE		06 39 50.0	+8.0
ARU				LR	LR		
	comp=Z,1µm,21.0s						

IDC 07 06:28:56.2±1.5**, 988N**×**5723E, h0**km**, mb3.8**/6**, mb1 3.8**/6**, mb1mx3.7**/21**, mbtmp3.8**/6**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx3.0**/34**, Error ellipse: s-maj=36.6km s-min=33.8km az=136.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASF	Jabal al Asfar	29.08	323	LR	LR	06 47 35.7	
	comp=Z,52nm,18.6s,baz=59,slow=38						
GNI	Garni	32.12	342	LR	LR	06 49 17.4	
	comp=Z,72nm,21.0s,baz=118,slow=38						
AKTO	Aktyubinsk	40.44	1	P	P	06 36 36.2	0.0
	3.3nm,0.8s,baz=197,slow=7.9,SNR=9.5						
MKAR	Makanchi Array	42.51	26	P	P	06 36 53.7	+0.4
	0.4nm,0.6s,baz=207,slow=8.7,SNR=3.6						
ZALV	Zalesovo Beam	49.18	21	P	P	06 37 44.0	-1.9
	1.2nm,0.7s,baz=205,slow=6.4,SNR=4.5						
TORD	Torodi Ar. Bea	54.43	279	P	P	06 38 25.9	+0.2
	0.6nm,0.9s,baz=108,slow=9.2,SNR=4.1						
SONM	Songino Array	55.94	38	P	P	06 38 37.7	+1.6
	0.9nm,0.9s,baz=234,slow=8.8,SNR=5.5						
ASAR	Alice Springs	81.94	116	P	P	06 41 18.2	-0.2
	0.8nm,0.9s,baz=296,slow=4.5,SNR=6.5						

*IDC **07** 06:30:10.1±1.5, 5190N×17182W, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.8/25, mbtmp3.8/8, ML3.0/1, Error ellipse: s-maj=51.3km s-min=14.9km az=6.0*
*ISCJB **07** 06:30:12.0±3.2, 517N±02×17179W±008, h28km±23km, mb3.8/8, Error ellipse: s-maj=25.7km s-min=7.7km az=175.6*
*NEIC **07** 06:30:14.0, 5163N×17172W, h24km, ML3.5(AEIC), After AEIC.*
ISC 07 06:30:11.2±3.3**, 517N**±02×**17182W**±008**, h7**km±22km**, n15, σ0.98**/17**, mb3.8**/8**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	1.54	289	P	Pn	06 30 40.3	+1.2
ATKA				S	Sn	06 30 59.4	0.0
NIKO	Nikolski	2.20	55	P	Pn	06 30 47.6	-0.5
OKCE	Okmok Cone E	2.80	51	P	Pn	06 30 56.1	-0.3
OKCD	Okmok Cone D	2.83	52	P	Pn	06 30 57.4	+0.7
UNV	Unalaska Valle	3.86	55	P	Pn	06 31 11.4	+0.6
UNV				S	Sn	06 31 57.2	+0.8
FX1	Attu Island--F	9.28	283	Pn	Pn	06 32 25.4	+0.2
	0.6nm,0.3s,baz=74,slow=23,SNR=2.5						
KDAK	Kodiak Island	12.63	54	Pn	Pn	06 33 09.1	-1.9
	0.2nm,0.3s,baz=98,slow=7.2,SNR=3.7						
DLBC	Dease Lake	24.51	58	P	P	06 35 33.0	+2.3
	1.9nm,0.5s,mb3.9,baz=260,slow=11,SNR=2.2						
YKA	Yellowknife Ar	31.79	48	P	P	06 36 35.6	-0.2
	0.3nm,0.3s,mb3.6,baz=271,slow=8.0,SNR=3.7						
NVAR	Mina Array Bea	39.18	88	P	P	06 37 39.0	-0.5
	0.9nm,0.8s,mb3.6,baz=302,slow=8.1,SNR=4.7						
PDAR	Pinedale Array	42.01	77	P	P	06 38 02.7	-0.2
	0.5nm,0.7s,mb3.2,baz=316,slow=4.1,SNR=4.8						
TXAR	Lajitas Array	54.28	87	P	P	06 39 38.4	+0.5
	0.4nm,0.5s,mb3.6,baz=292,slow=6.6,SNR=6.8						
ARCES	ARCESS Array B	58.38	353	P	P	06 40 04.1	-2.4
	1.7nm,0.8s,mb4.1,baz=7.0,slow=8.2,SNR=3.6						
BVAR	Borovoye Array	63.32	323	P	P	06 40 40.3	0.0
	1.4nm,0.5s,mb4.3,baz=45,slow=4.3,SNR=3.1						
AKTO	Aktyubinsk	69.78	329	P	P	06 41 21.0	-0.7
	1.3nm,0.5s,mb4.2,baz=67,slow=7.7,SNR=5.4						

*NEIC **07** 06:39:17.8, 3751N×30.13E, h5km, MD3.2(ISK), After ISK.*
*CSEM **07** 06:39:18.5±0.2, 3743N×30.17E, h0km±1km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.6km az=58.0*
*ISK **07** 06:39:18.5, 3743N×30.18E, h5km, MD2.9*
*DDA **07** 06:39:20.8, 3743N×3022E, h7km±4km, Md3.3*
*ISCJB **07** 06:39:20.7±0.3, 3740N±003×3021E±003, h10km, mb3.6/3, Error ellipse: s-maj=4.2km s-min=3.3km az=151.4*
*IDC **07** 06:39:21.3±1.4, 3721N×3043E, h0km, mb3.6/3, mb1 3.5/6, mb1mx3.4/24, mbtmp3.5/6, ML3.0/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/38, Error ellipse: s-maj=45.4km s-min=19.8km az=141.0*
ISC 07 06:39:20.8±0.5**, 3741N**±003×**3019E**±003**, h3**km±5km**, n43, σ1.33**/60**, mb3.6**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	Bucak	0.32	81	ePG	Pg	06 39 26.1	-0.9
BCK				eSG	Sg	06 39 31.7	+0.6
BCK	Bucak	0.32	81	Pg	Pg	06 39 26.1	-0.8
BCK				Sg	Sg	06 39 32.1	+1.0
GOLH	Golhisar	0.53	251	i P	Pg	06 39 29.8	-1.2
GOLH				i S	Sg	06 39 40.4	+2.5
ANTB	Antalya	0.63	144	ePG	Pg	06 39 32.5	-0.3
ANTB				eSG	Sg	06 39 42.1	+1.1
ELL	Elmali	0.70	199	ePG	Pg	06 39 32.8	-1.4
ELL				eSG	Sg	06 39 44.4	+1.2
ELL	Elmali	0.70	199	Pg	Pg	06 39 33.5	-0.7
ELL				eSg	Sg	06 39 44.4	+1.2
ELL	Elmali	0.70	199	Pg	Pg	06 39 33.5	-0.7
ELL				Sg	Sg	06 39 45.5	+2.2
DENT	Denizli	0.98	291	ePG	Pg	06 39 38.2	-1.4
DENT	Denizli	0.98	291	Pg	Pg	06 39 36.6	-3.0
KHL	Karahalli	1.05	330	ePG	Pg	06 39 39.1	-1.8
KHL	Karahalli	1.05	330	Pg	Pg	06 39 37.0	-4.0
KHAL	Karahalli	1.11	330	i P	Pg	06 39 40.9	-1.1
KHAL				i S	Sg	06 39 59.1	+2.8
SHUT	Suhut-Afyon	1.18	14	ePN	Pn	06 39 41.1	-3.0
AKAS	Kas	1.27	202	eP	Pg	06 39 45.2	+0.2
AKAS				i S	Sg	06 40 08.7	+7.2
TURN	Turunc	1.38	248	i P	Pn	06 39 51.7	+4.8
TURN				i S	Sb	06 40 15.2	+10
DALT	Dalyan (Mudla)	1.40	243	ePN	Pn	06 39 45.7	-1.5
DALT	Dalyan (Mudla)	1.40	243	Pn	Pn	06 39 45.2	-1.9
BOLV	Bolvadin	1.44	24	i P	Pn	06 39 47.8	+0.1
BOLV				i S	Sb	06 40 08.6	+1.7
YER	Yerkesik	1.55	260	ePN	Pn	06 39 48.8	-0.5
YER	Yerkesik	1.55	260	Pn	Pn	06 39 47.3	-1.9
YER	Yerkesik	1.55	260	Pn	Pn	06 39 47.3	-1.9
KULA	Kula-Manisa	1.64	313	ePN	Pn	06 39 49.6	-0.9
ALT	Altintas	1.64	358	ePN	Pn	06 39 49.2	-1.4
ALT	Altintas	1.64	358	Pn	Pn	06 39 46.7	-3.8
GDZ	Gediz	1.77	342	eP	Pn	06 39 53.2	+0.9
GDZ				i S	Sn	06 40 22.2	+7.0
KONT	Konya--Tatoy	1.80	72	ePN	Pn	06 39 52.3	-0.4
KONT	Konya--Tatoy	1.80	72	Pn	Pn	06 39 51.7	-1.0
AYDN	Tasoluk	1.85	278	i P	Pn	06 39 53.5	+0.1
AYDN				i S	Sn	06 40 17.7	+0.3
AYDN	Tasoluk	1.85	278	i P	Pn	06 39 53.5	+0.1
AYDN				i S	Sn	06 40 17.7	+0.3
LADK	Ladik-KONYA	1.89	65	ePN	Pn	06 39 53.2	-0.8
KIZT	Kizilcal	1.98	42	ePN	Pn	06 39 54.8	-0.4
KIZT	Kizilcal	1.98	42	Pn	Pn	06 39 52.3	-2.9
DAT	Datca	2.20	253	ePN	Pn	06 39 58.4	+0.2
BR131	Keskin Array S	3.56	48	ePn	Pn	06 40 16.9	+0.1
BR131				eSn	Sn	06 41 00.7	+1.4
BR131	Keskin Array S	3.56	48	ePn	Pn	06 40 16.9	0.0
BR131				eSn	Sn	06 41 00.7	+1.3
BRTR	Keskin Array B	3.56	48	Pn	Pn	06 40 17.8	+0.9
	0.5nm,0.3s,baz=225,slow=15,SNR=11						
BRTR				Sn	Sn	06 41 01.1	+1.7
	0.6nm,0.3s,baz=217,slow=26,SNR=6.6						
BRTR	Keskin Array B	3.56	48	Pn	Pn	06 40 17.8	+1.0
BRTR				Sn	Sn	06 41 01.0	+1.7
IDI	Anoyia	4.78	245	Pn	Pn	06 40 36.3	+2.7
	0.6nm,0.3s,baz=178,slow=21,SNR=3.5						
EIL	Elat	8.68	151	Pn	Pn	06 41 24.5	-2.8
	0.4nm,0.3s,baz=338,slow=9.3,SNR=4.3						
EIL				LR	LR	06 46 19.9	
	comp=Z,52nm,19.8s,baz=49,slow=50						
DAVOX	Davos/Dischmat	17.70	308	LR	LR	06 50 11.1	
	comp=Z,110nm,18.1s,baz=79,slow=36						
TORD	Torodi Ar. Bea	35.07	234	P	P	06 46 16.2	+1.0
	0.5nm,0.9s,mb3.4,baz=33,slow=9.8,SNR=2.5						
KURK	Kurchatov	36.60	53	P	P	06 46 28.2	+0.3
	1.6nm,0.7s,mb4.0,baz=274,slow=8.8,SNR=8.1						
MKAR	Makanchi Array	39.14	59	P	P	06 46 50.1	+0.6
	0.6nm,0.8s,mb3.4,baz=289,slow=5.3,SNR=5.5						

*ISCJB **07** 06:51:57.1±0.9, 24.1N±0.1×9391E±009, h123km±16km, mb3.4/3, Error ellipse: s-maj=22.7km s-min=6.3km az=31.6*
*NEIC **07** 06:51:57.2±0.6, 2427N×94.13E, h97km±12km, Error ellipse: s-maj=18.0km s-min=5.9km az=221.0*
*IDC **07** 06:51:58.2±4.3, 2447N×9457E, h93km±41km, mb3.3/3, mb1 3.3/4, mb1mx3.1/22, mbtmp3.2/4, Error ellipse: s-maj=72.3km s-min=21.5km az=70.0*
ISC 07 06:51:58.1±0.8**, 241N**±01×**9396E**±010**, h110**km±15km**, n19, σ0.91**/29**, mb3.4**/3**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.08	336	ePn	Pn	06 53 25.4	-0.1
TAPN	Taplejung	6.47	301	ePn	Pn	06 53 31.8	+0.9
TAPN				eSn	Sn	06 54 44.2	+0.9
	52nm,0.4s						
ODAN	Odare	6.52	296	ePn	Pn	06 53 32.3	+0.8
ODAN				eSn	Sn	06 54 44.2	-0.2
	160nm,0.3s						
CHTO	Chiang Mai	7.05	138	ePn	Pn	06 53 37.4	-1.2
	6.0nm,0.4s						
RAMN	Ramite	7.21	294	ePn	Pn	06 53 42.1	+1.3
RAMN				eSn	Sn	06 55 01.8	+0.7
	53nm,0.3s						
CMAR	Chiang Mai Arr	7.32	140	P	Pn	06 53 41.4	-1.0
	0.4nm,0.3s,baz=318,slow=12,SNR=8.7						
JIRN	Jiri	7.82	298	ePn	Pn	06 53 49.7	+0.6
JIRN				eSn	Sn	06 55 15.5	-0.5
	102nm,0.4s						
GUN	Gumba	8.18	299	ePn	Pn	06 53 54.2	+0.2
GUN				eSn	Sn	06 55 24.3	-0.3
	60nm,0.4s						
PKI	Pulchoki	8.42	296	ePn	Pn	06 53 58.2	+0.9
PKI	Pulchoki	8.42	296	ePn	Pn	06 53 58.3	+1.0
PKIN	Phulchoki	8.43	296	ePn	Pn	06 53 58.3	+0.8
KKN	Kakani	8.61	297	ePn	Pn	06 54 00.2	+0.3
KKN				eSn	Sn	06 55 34.2	-1.0
DMN	Daman	8.69	295	ePn	Pn	06 54 01.0	+0.1
DMN				eSn	Sn	06 55 36.8	-0.2
	16nm,0.3s						
GKN	Gorkha	9.22	297	ePn	Pn	06 54 08.5	+0.4
GKN				eSn	Sn	06 55 48.8	-1.2
	56nm,0.3s						
KOLN	Koldanda	9.99	293	ePn	Pn	06 54 19.1	+0.4
KOLN				eSn	Sn	06 56 07.5	-1.3
	26nm,0.4s						
DANN	Dangsing	10.06	297	ePn	Pn	06 54 19.4	-0.2
DANN				eSn	Sn	06 56 09.0	-1.5
	35nm,0.6s						
MKAR	Makanchi Array	24.46	340	P	P	06 57 07.4	+0.8
	0.3nm,0.5s,mb2.9,baz=145,slow=9.2,SNR=7.9						
SONM	Songino Array	25.63	20	P	P	06 57 14.6	-2.5
	1.4nm,0.8s,mb3.5,baz=193,slow=11,SNR=9.8						
ASAR	Alice Springs	61.33	138	P	P	07 02 03.5	+1.2
	0.6nm,0.7s,mb3.8,baz=322,slow=7.2,SNR=7.5						

*DJA **07** 06:56:25, 2394N×9473E, h32km, Mw5.6/13*
*BJI **07** 06:56:31.6, 2349N×9458E, h116km, mB4.9, mb5.0*
*ISCJB **07** 06:56:32.1±0.1, 2352N±002×9454E±002, h114km, mb4.8/129, Error ellipse: s-maj=3.4km s-min=2.2km az=27.1*
*MOS **07** 06:56:33.1±1.0, 2352N×9472E, h126km, mb4.7/52, Error ellipse: s-maj=9.1km s-min=4.1km az=123.3*
*NEIC **07** 06:56:33.6±0.2, 2350N×9457E, mb4.8/73, Error ellipse: s-maj=6.8km s-min=3.5km az=223.0*
NEIC Felt at Shillong, India.
*GCMT **07** 06:56:33.6±0.4, 2346N×9466E, h109km±4km, MW5.0/77, Moment Tensor Solution. s24,c24; s77,c112; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.50±.15; Mθθ-2.61±.17; Mφφ-0.89±.17; Mrθ-1.35±.14; Mθφ1.23±.17; Mφr-1.17±.14; Best double couple: M0 3.75300×10^16 NP1:φs135.00000°, δ42.00000°, λ120.00000°. NP2: φs277.00000°, δ54.00000°, λ65.00000°. Principal axes: T 4.1810, Plg69.0000°, Azm131.0000°; N -0.8620, Plg20.0000°, Azm292.0000°; P -3.3250, Plg6.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*LDG **07** 06:56:33.6±0.2, 2363N×94.14E, h107km, Mb4.7/31, Ms4.4/6 Error ellipse: s-maj=12.4km s-min=10.0km az=51.0*
*IDC **07** 06:56:34.1±0.4, 2353N×9473E, h118km±3km, mb4.5/23, mb1 4.6/24, mb1mx4.6/25, mbtmp4.5/24, MS3.3/2, Ms1 3.3/2, ms1mx3.1/27, Error ellipse: s-maj=12.2km s-min=6.3km az=61.0*
ISC 07 06:56:34.0±0.1**, 2355N**±002×**9460E**±002**, h116**km**, h116**km±1.4km**:pP-P, n389, σ1.14**/426**, mb4.8**/129**, 33C-24D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.38	334	eP	Pn	06 56 58.0	-1.7
IMP				eS	Sn	06 57 10.0	-9.3
AGT	Agartala	3.09	277	ex	Pn	06 57 15.0	-6.4
SHL	Shillong	3.19	310	⇑iP	Pn	06 57 19.0	-3.7
SHL				i x	Sn	06 57 55.0	-5.3
CAL	Calcutta	5.86	261	eP	Pn	06 57 58.0	-0.6
CAL				ex	Sn	06 58 58.8	-5.8
CHRT	Chiangrai	6.05	126	⇓P	Pn	06 58 00.0	-1.1
	3µm,0.5s						
CHG	Chiang Mai	6.21	138	PG	Pn	06 58 01.5	-1.8
CHG				SG	Sn	06 59 11.9	-1.1
CHTO	Chiang Mai	6.21	138	eP	Pn	06 58 01.5	-1.8
CM31	Chiang Mai Arr	6.49	141	ePn	Pn	06 58 06.1	-1.0
CMAR	Chiang Mai Arr	6.49	141	P	Pn	06 58 05.3	-1.7
	3.9nm,0.3s,baz=316,slow=14,SNR=68						
CMAR				S	Sn	06 59 18.1	-1.5
	baz=303,slow=20,SNR=2.7						
CMAR				ScP	ScP	07 08 12.0	-1.4
	0.9nm,0.3s,baz=294,slow=2.3,SNR=4.2						
CMAR	Chiang Mai Arr	6.49	141	P	Pn	06 58 05.4	-1.6
CMAR				S	Sn	06 59 18.1	-1.5
LSA	Lhasa	6.86	334	eP	Pn	06 58 12.5	+0.4
LSA				e		06 59 22.6	
LSA				pmax	pmax		
	comp=Z,228nm,0.7s						
LSA	Lhasa	6.86	334	ePn	Pn	06 58 12.5	+0.4
	comp=Z,228nm,0.7s						
LSA				eSn	Sn	06 59 22.6	-6.1
TAPN	Taplejung	7.29	303	ePn	Pn	06 58 15.8	-2.1
TAPN				eSn	Sn	06 59 34.7	-4.4
ODAN	Odare	7.32	298	ePn	Pn	06 58 16.3	-2.0
ODAN				eSn	Sn	06 59 34.2	-5.6
BDT	Bhumibol Dam	7.50	146	P	Pn	06 58 19.0	-1.9
	comp=Z,56nm,0.9s						
KMI	Kunming	7.58	76	P	Pn	06 58 24.7	+2.8
KMI				XP		06 58 53.4	
KMI				S	Sn	06 59 50.4	+4.1
KMI				AMB	AMB		
	comp=Z,82nm,0.8s						
KMI				LR	LR		
	comp=N,892nm,6.7s						
KMI				LR	LR		
	comp=E,686nm,6.2s						
KMI				LR	LR		
	comp=Z,711nm,11.7s						
BOK	Bokaro	8.00	274	eP	Pn	06 58 25.2	-2.2
BOK				ex	x	06 59 48.5	
BOK				AML	AML	06 59 55.4	
	comp=N,1µm,0.4s						
BOK				AML	AML	06 59 56.0	
	comp=E,917nm,0.5s						
RAMN	Ramite	8.00	297	ePn	Pn	06 58 25.4	-2.1
RAMN				eSn	Sn	06 59 50.3	-6.0
JIRN	Jiri	8.63	300	ePn	Pn	06 58 33.5	-2.5
BWNR	Bhubaneshwar	8.78	250	eP	Pn	06 58 37.9	-0.3
BWNR				ex	x	07 00 06.7	
GUN	Gumba	8.99	301	ePn	Pn	06 58 38.5	-2.4
GUN				eSn	Sn	07 00 13.8	-6.5
PKI	Pulchoki	9.22	298	ePn	Pn	06 58 40.9	-3.1
PKI				eSn	Sn	07 00 19.6	-6.3
	comp=E,525nm,0.3s						
PKI	Pulchoki	9.22	298	ePn	Pn	06 58 41.0	-3.0
PKI				eSn	Sn	07 00 19.6	-6.3
PKIN	Phulchoki	9.23	298	ePn	Pn	06 58 41.0	-3.2
PKIN				eSn	Sn	07 00 19.6	-6.6
	comp=E,1µm,0.4s						
NST	Nakhon Sawan	9.40	145	P	Pn	06 58 48.0	+1.3
KKN	Kakani	9.41	299	ePn	Pn	06 58 43.7	-3.0
KKN				eSn	Sn	07 00 24.1	-6.5
	comp=E,548nm,0.3s						
DMN	Daman	9.48	297	ePn	Pn	06 58 44.4	-3.2
DMN				eSn	Sn	07 00 25.8	-6.4
	comp=E,545nm,0.3s						
GKN	Gorkha	10.02	298	ePn	Pn	06 58 51.8	-3.1
GKN				eSn	Sn	07 00 37.6	-7.7
KOLN	Koldanda	10.78	295	ePn	Pn	06 59 01.6	-3.5
KOLN				eSn	Sn	07 00 54.8	-9.0
	comp=E,615nm,0.3s						
DANN	Dangsing	10.87	298	ePn	Pn	06 59 01.8	-4.4
DANN				eSn	Sn	07 00 58.3	-7.6
	comp=E,668nm,0.4s						
CD2	Chengdu	10.96	46	⇑P	Pn	06 59 07.1	-0.3
CD2				XP		06 59 39.2	
CD2				S	Sn	07 01 05.6	-2.4
CD2				AMB	AMB		
	comp=Z,50nm,0.5s						
CD2				AMB	AMB		
	comp=Z,130nm,5.5s						
CD2				LR	LR		
	comp=N,540nm,5.1s						
CD2				LR	LR		
	comp=E,900nm,8.8s						
CD2				LR	LR		
	comp=Z,650nm,14.9s						
GYA	Guiyang	11.32	73	⇑iP	Pn	06 59 11.5	-0.7
GYA				XP		06 59 43.0	
GYA				S	Sn	07 01 16.4	-0.4
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				AMB	AMB		
	comp=Z,160nm,5.1s						
ALBI	Allahabad	11.79	281	eP	Pn	06 59 13.5	-5.0
ALBI				ex	x	07 01 14.5	
VIS	Vishakhapatnam	12.04	243	ex	Pn	06 59 19.3	-2.6
VIS				eS	Sn	07 01 21.0	-13
VIS				ex	x	07 01 25.2	
	comp=E,110nm,0.9s						
VIS				ex	x	07 01 25.8	
	comp=N,126nm,0.7s						
JBP	Jabalpur	13.44	271	ex	Pn	06 59 39.3	-0.8
JBP				ex	x	07 01 59.5	
LGTI	Lohaghat	14.13	298	eP	Pn	06 59 46.5	-2.5
LGTI				ex	x	07 02 17.1	
PTH	Pithoragarh	14.19	298	eP	Pn	06 59 46.3	-3.5
PTH				ex	x	07 02 15.4	
NGP	Nagpur	14.59	264	eP	Pn	06 59 50.3	-4.6
NGP				eS	Sn	07 02 23.3	-13
LZH	Lanzhou	14.84	31	eP	Pn	06 59 56.0	-1.9

LZH XP sP 07 00 29.4 -6.8
LZH S **Sn** **07 02 48.0 +6.2**
LZH AMB AMB
comp=Z,17nm,1.0s
LZH AMB AMB
comp=Z,104nm,4.9s
LZH LR LR
comp=N,416nm,10.5s
LZH LR LR
comp=Z,546nm,11.2s
QIZ Qiongzhong 14.89 105 P **Pn** **07 00 02.0 +3.2**
QIZ S **Sn** **07 02 42.2 -1.3**
QIZ AMB AMB
comp=Z,135nm,1.1s
QIZ LR LR
comp=Z,457nm,11.5s
QIZ Qiongzhong 14.89 105 *e*P **Pn** **07 00 02.7 +3.9**
JOSI Joshimath 15.11 301 *e*P **Pn** **06 59 58.0 -3.4**
JOSI *ex* x 07 02 34.0
KALG Kalgarh 15.37 296 *e*P **Pn** **06 59 53.1 -12**
KALG *e*S S 07 02 35.1 -28
AGRA Agra 15.50 287 *e*P **Pn** **07 00 02.3 -4.0**
AGRA *e*S S 07 02 43.5 -22
AGRA AML AML 07 02 48.2
comp=N,835nm,0.4s
AGRA AML AML 07 02 50.1
comp=E,1µm,0.6s
DDI Dehra Dun 16.22 298 *e*P **Pn** **07 00 11.3 -3.9**
DDI *ex* x 07 03 01.0
HYB Hyderabad 16.22 251 *e*P **Pn** **07 00 15.0 -0.3**
HYB *e*S **S** **07 03 21.5 +1.1**
HYB pmax pmax
comp=Z,110nm,1.0s
HYB Hyderabad 16.22 251 *i* P **Pn** **07 00 15.0 -0.3**
comp=Z,110nm,1.0s
HYB *e* 07 03 02.5
HYB *e*S **S** **07 03 14.0 -6.4**
HYB Hyderabad 16.22 251 *e*P **Pn** **07 00 15.0 -0.3**
comp=Z,110nm,1.0s
HYB *e*S **S** **07 03 21.5 +1.1**
XAN Xi'an 16.32 47 P **Pn** **07 00 14.1 -2.3**
XAN XP sP 07 00 49.3 -3.4
XAN S **S** **07 03 15.0 -7.1**
XAN LG1 07 04 59.4
XAN LG2 07 05 26.3
XAN AMB AMB
comp=Z,6.0nm,0.6s
XAN AMB AMB
comp=Z,138nm,6.6s
XAN LR LR
comp=E,120nm,22.3s
XAN LR LR
comp=Z,348nm,27.7s
GTA Gaotai 16.42 14 P **Pn** **07 00 15.0 -2.6**
GTA XP sP 07 00 49.6 -4.2
GTA S **S** **07 03 18.3 -5.9**
GTA PCP PcP 07 05 03.8 +0.9
GTA SCP ScP 07 08 28.1 +1.2
GTA SCS ScS 07 12 05.1 -0.9
GTA AMB AMB
comp=Z,187nm,3.3s
GTA LR LR
comp=N,186nm,14.4s
GTA LR LR
comp=E,132nm,15.6s
GTA LR LR
comp=Z,133nm,15.3s
NDI New Delhi 16.43 292 *e*P **Pn** **07 00 15.0 -2.8**
NDI *ex* x 07 03 02.5
SONA Sohna 16.44 290 *e*P **Pn** **07 00 16.6 -1.4**
SONA *e*S **S** **07 03 05.8 -19**
AYAN Aya Nagar 16.46 291 *e*P **Pn** **07 00 14.9 -3.3**
AYAN *ex* x 07 03 05.2
SMLA Simla 17.22 300 *i* P **Pn** **07 00 23.2 -4.3**
SMLA *i* S **S** **07 03 27.2 -12**
SMLA *i* S **S** **07 03 28.7 -11**
KHET Khetri 17.51 289 *e*P **Pn** **07 00 29.5 -1.5**
KHET *e*S **S** **07 03 31.7 -14**
SDNR Sundarnagar 17.52 301 *e*P **Pn** **07 00 30.2 -0.8**
SDNR *ex* x 07 03 38.4
LATR Latur 17.60 257 *e*P **Pn** **07 00 32.0 -0.1**
AJM Ajmer 18.32 283 *e*P **P** **07 00 38.9 -0.5**
AJM *ex* x 07 03 49.3
DLH Dalhousie 18.71 303 *e*P **P** **07 00 45.0 +1.5**
DLH *ex* x 07 04 07.0
THN Thein Dam 18.86 302 *e*P **P** **07 00 44.4 -0.8**
THN *e*S **S** **07 04 05.9 -7.6**
WHN Wuhan 18.91 64 P **P** **07 00 46.5 +0.8**
WHN S **S** **07 04 13.4 -1.0**
WHN AMB AMB
comp=Z,128nm,0.7s
WHN LR LR
comp=Z,540nm,17.0s
KTGM Kuala Trenggan 19.89 154 P **P** **07 00 58.4 +2.0**
IPM Ipoh 19.94 161 ⇑P **P** **07 00 56.5 -0.6**
POO Poona 20.00 259 *e*P **P** **07 00 58.6 +1.0**
POO *ex* x 07 04 28.5
KAD Karad 20.11 256 *e*P **P** **07 01 00.8 +2.0**
KAD *ex* x 07 04 34.0
BOM Bombay 20.83 261 *i* P **P** **07 00 57.3 -9.2**
BOM *e*S S 07 04 29.2 -23
PALK Pallekele 20.98 222 *e*P **P** **07 01 09.1 +0.9**
PALK pmax pmax
comp=Z,20nm,0.6s
PALK Pallekele 20.98 222 *e*P **P** **07 01 09.1 +0.9**
comp=Z,20nm,0.6s
WMQ Urumqi 21.01 346 P **P** **07 01 09.5 +1.3**
WMQ PP 07 01 38.4
WMQ XP sP 07 01 47.2 +2.9
WMQ S **S** **07 04 55.7 +0.1**
WMQ PCP PcP 07 05 11.7 +1.0
WMQ XS sS 07 05 29.0 -2.6
WMQ SS 07 05 34.8
WMQ AMB AMB
comp=Z,124nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,162nm,3.6s
WMQ LR LR
comp=N,158nm,27.0s
WMQ LR LR
comp=E,354nm,26.0s
WMQ LR LR
comp=Z,248nm,30.0s
PSI Prapat 21.04 168 P **P** **07 01 09.3 +0.5**
comp=Z,43nm,0.8s,mb4.8,baz=326,slow=9.1,SNR=33
PSI S **S** **07 04 57.6 +0.9**
comp=Z,1.6nm,0.4s,baz=271,slow=23,SNR=3.9
FRIM Kepong 21.30 160 ⇑P **P** **07 01 12.6 +1.0**
QZH Quanzhou 21.91 81 ⇑*i*P **P** **07 01 17.8 -0.2**
QZH AMB AMB
comp=Z,240nm,1.4s,mb5.3
HHC Hu-ho-hao-te 22.37 36 *e*P **P** **07 01 20.8 -1.9**
HHC AP 07 01 46.6
HHC PP 07 01 54.4
HHC XP sP 07 02 00.9 +1.9
HHC S **S** **07 05 13.5 -6.6**
HHC PCP PcP 07 05 15.3 +1.8
HHC SS 07 06 03.5
HHC SCP ScP 07 08 39.7 -0.8
HHC PCS PcS 07 08 52.6 +0.4
HHC AMB AMB
comp=Z,20nm,0.7s,mb4.6
HHC AMB AMB
comp=Z,96nm,4.2s
HHC LR LR
comp=N,191nm,8.9s
HHC LR LR
comp=E,287nm,8.9s
HHC LR LR
comp=Z,257nm,9.9s
KSH Kashi 22.42 320 P **P** **07 01 25.2 +2.0**
KSH AP 07 01 49.0
KSH PP 07 01 58.1
KSH PCP PcP 07 05 16.2 +2.6
KSH S **S** **07 05 20.2 -0.7**
KSH XS sS 07 05 59.6 -0.1
KSH SS 07 06 11.1
KSH SCP ScP 07 08 42.0 +1.4
KSH PCS PcS 07 08 53.6 +1.3
KSH SCS ScS 07 12 25.8 0.0
KSH AMB AMB
comp=Z,291nm,1.0s,mb5.6
KSH AMB AMB
comp=Z,986nm,2.8s,mb5.7
KSH LR LR
comp=N,2µm,7.4s
KSH LR LR
comp=E,2µm,8.5s
KSH LR LR
comp=Z,1µm,7.6s
KGM Kluang 23.01 157 ⇓P **P** **07 01 29.2 +0.1**
NJ2 Nanjing 23.03 63 *e*P **P** **07 01 30.6 +1.4**
NJ2 AMB AMB
comp=Z,30nm,0.6s,mb4.8
TIA Tai'an 23.19 52 *e*P **P** **07 01 29.6 -1.0**
MYKOM Kota Tinggi 23.41 156 ⇓P **P** **07 01 33.9 +1.2**
ULHL Ulahol 24.11 325 P **P** **07 01 41.5 +2.6**
SNR=21
BJT Baijiatuau 24.51 43 *e*P **P** **07 01 42.7 +0.1**
BJT pmax pmax
comp=Z,16nm,0.6s
BJT Baijiatuau 24.51 43 *e*P **P** **07 01 42.7 +0.1**
comp=Z,16nm,0.6s,mb4.6
KZA Kyzart 24.52 324 P **P** **07 01 46.6 +3.9**
SNR=7.7
BJI Beijing 24.53 43 P **P** **07 01 42.8 0.0**
BJI XP sP 07 02 17.6 -3.6
BJI S **S** **07 05 44.7 -10**
BJI XS sS 07 06 38.6 +0.1
BJI AMB AMB
comp=Z,26nm,0.7s,mb4.8
BJI AMB AMB
comp=Z,81nm,4.6s
NACB Ninganchiao 24.68 83 *e*P **P** **07 01 45.7 +1.4**
comp=Z,117nm,1.1s,mb5.2
KBL Kabul 24.82 302 *e*P **P** **07 01 47.4 +1.9**
KBL pmax pmax
comp=Z,50nm,0.6s,mb5.1
KBL Kabul 24.82 302 *e*P **P** **07 01 47.4 +1.9**
comp=Z,50nm,0.6s,mb5.1
TKM2 Tokmak 2 24.92 325 *e*P **P** **07 01 48.0 +1.8**
TKM2 *e* 07 05 19.0
TKM2 pmax pmax
comp=Z,70nm,0.7s,mb5.2
TKM2 Tokmak 2 24.92 325 P **P** **07 01 48.3 +2.1**
SNR=64
TKM2 Tokmak 2 24.92 325 *e*P **P** **07 01 48.0 +1.7**
comp=Z,70nm,0.7s,mb5.2
TKM2 *e*PcP PcP 07 05 19.0 +0.1
TKM2 *e*ScP ScP 07 08 47.0 -0.3
UCH Uchtor 25.02 323 *e*P **P** **07 01 49.4 +2.2**
comp=Z,12nm,0.8s,mb4.4
KBK Karagaybulak 25.08 324 P **P** **07 01 50.3 +2.6**
SNR=28
MK31 Makanchi Array 25.22 340 *e*P **P** **07 01 50.4 +1.4**
MK31 *e* 07 05 19.4
MK31 Makanchi Array 25.22 340 *e*P **P** **07 01 50.4 +1.4**
MK31 *e*PcP PcP 07 05 19.4 0.0
MK31 *e*ScP ScP 07 08 49.1 +1.0
MKAR Makanchi Array 25.22 340 P **P** **07 01 50.2 +1.3**
comp=Z,42nm,0.5s,mb5.1,baz=150,slow=9.3,SNR=545
MKAR PcP PcP 07 05 20.0 +0.5
comp=Z,5.1nm,0.6s,baz=163,slow=3.8,SNR=7.7
MKAR S **S** **07 06 06.8 +1.0**
comp=Z,0.8nm,0.6s,baz=164,slow=16,SNR=1.9
MKAR ScP ScP 07 08 48.0 -0.1
comp=Z,3.7nm,0.9s,baz=167,slow=5.9,SNR=7.4
MKAR LR LR 07 14 57.4
comp=Z,40nm,19.1s,baz=301,slow=44
MKAR Makanchi Array 25.22 340 P **P** **07 01 50.2 +1.2**
MKAR 07 05 20.0
MKAR S **S** **07 06 06.8 +1.0**
MKAR Makanchi Array 25.22 340 P **P** **07 01 50.2 +1.3**
MKAR PcP PcP 07 05 20.0 +0.5
MKAR S **S** **07 06 06.8 +1.0**
MKAR ScP ScP 07 08 48.0 -0.1
MKAR LR LR 07 14 57.4
AAK Ala-Archa 25.31 324 *e*P **P** **07 01 52.3 +2.5**
AAK pmax pmax
comp=Z,21nm,0.7s,mb4.7
AAK Ala-Archa 25.31 324 *e*P **P** **07 01 52.3 +2.5**
comp=Z,21nm,0.7s,mb4.7
AAK *e*ScP ScP 07 08 48.7 +0.3
FRU Bishkek 25.38 324 *e*P **P** **07 01 52.0 +1.6**
FRU *e* pP 07 02 14.0 -1.3
FRU pmax pmax
comp=Z,60nm,1.2s,mb4.9
CHMS Chumysh 25.42 325 P **P** **07 01 54.6 +3.9**
SNR=9.1
AML Almayashu 25.42 322 P **P** **07 01 53.6 +2.8**
SNR=6.6
AML Almayashu 25.42 322 *e*P **P** **07 01 53.3 +2.5**
comp=Z,38nm,0.7s,mb4.9
EKS2 Erkin-Say 25.72 323 P **P** **07 01 55.8 +2.3**
SNR=16
EKS2 Erkin-Say 25.72 323 *e*P **P** **07 01 55.9 +2.4**
comp=Z,23nm,0.8s,mb4.7
USP Ospenovka 25.74 325 P **P** **07 01 55.1 +1.5**
SNR=13
SONM Songino Array 26.00 18 P **P** **07 01 55.7 -0.3**
comp=Z,2.4nm,0.5s,mb3.9,baz=196,slow=9.6,SNR=8.8
SONM pP pP 07 02 21.7 +0.7
comp=Z,12nm,0.9s,baz=204,slow=12,SNR=6.9
SONM ScP ScP 07 08 49.7 -0.6
comp=Z,5.5nm,0.8s,baz=192,slow=3.7,SNR=19
SONM LR LR 07 14 13.5
comp=Z,96nm,19.3s,baz=336,slow=41
SONM Songino Array 26.00 18 P **P** **07 01 55.7 -0.2**
SONM *PP pP 07 02 21.7 +0.8
ULN Ulaanbaatar 26.22 19 *e*P **P** **07 01 59.6 +1.7**
ULN pmax pmax
comp=Z,17nm,1.0s,mb4.4
ULN Ulaanbaatar 26.22 19 *e*P **P** **07 01 59.6 +1.7**
comp=Z,17nm,1.0s,mb4.4
ULN *e*ScP ScP 07 08 50.8 -0.1
KSM Kuching 26.71 143 *e*P **P** **07 02 03.3 +0.6**
comp=Z,10nm,0.6s,mb4.5
KSM Kuching 26.71 143 ⇑P **P** **07 02 03.5 +0.9**
KDM Kudat 27.01 124 ⇑P **P** **07 02 07.3 +1.9**
SBUM Sibu 27.03 138 ⇓P **P** **07 02 05.7 +0.1**
KKM Kota Kinabalu 27.12 127 ⇑P **P** **07 02 07.8 +1.4**
KK31 Karatay Array 27.86 320 P **P** **07 02 13.6 +0.9**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
SDKM Sandakan 28.11 126 ⇓P **P** **07 02 16.1 +0.9**
MOY Mondy 28.50 8 *e*P **P** **07 02 15.5 -2.8**
MYLDM Lahad Datu 29.39 125 ⇓P **P** **07 02 27.7 +1.2**
TSM Tawau 29.51 127 ⇓P **P** **07 02 28.1 +0.5**
KURK Kurchatov 29.83 339 P **P** **07 02 30.5 +0.5**
comp=Z,6.7nm,0.5s,mb4.5,baz=148,slow=9.8,SNR=38
KURK pP pP 07 02 56.4 +1.0
comp=Z,14nm,0.9s,baz=135,slow=12,SNR=6.5
KURK PcP PcP 07 05 31.0 +0.5
comp=Z,25nm,0.7s,baz=162,slow=2.2,SNR=25
KURK S **S** **07 07 17.6 -0.6**
comp=Z,2.9nm,0.9s,baz=121,slow=39,SNR=4.8
KURK ScP ScP 07 09 01.9 -0.2
comp=Z,6.5nm,0.5s,baz=270,slow=8.4,SNR=22
KURK Kurchatov 29.83 339 *e*P **P** **07 02 30.7 +0.6**
KURK *e**PP pP 07 02 57.5 +2.1
KURK *e* 07 05 29.5
KURK *e* 07 09 02.0
KURK pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
KURK Kurchatov 29.83 339 *e*P **P** **07 02 30.7 +0.7**
comp=Z,6.6nm,0.6s,mb4.4
KURK *e*pP pP 07 02 57.5 +2.1
KURK *e*PcP PcP 07 05 29.4 -1.1
KURK *e*ScP ScP 07 09 02.0 0.0
ZAA0 Zalesovo Array 31.24 349 *e*P **P** **07 02 42.9 +0.4**
ZAA0 *e*pP pP 07 03 08.4 +0.6
ZAA0 *e*PcP PcP 07 05 32.4 -1.8
ZAA0 *e*S **S** **07 07 40.5 +0.2**
ZAA0 *e*ScP ScP 07 09 04.9 -1.8
ZALV Zalesovo Beam 31.24 349 P **P** **07 02 43.3 +0.8**
comp=Z,4.0nm,0.4s,mb4.5,baz=169,slow=8.9,SNR=28
ZALV pP pP 07 03 09.2 +1.4
comp=Z,12nm,0.8s,baz=180,slow=8.3,SNR=5.6
ZALV PcP PcP 07 05 33.1 -1.1
comp=Z,2.6nm,0.5s,baz=132,slow=2.2,SNR=3.6
ZALV S **S** **07 07 41.0 +0.7**
comp=Z,1.8nm,0.6s,baz=163,slow=16,SNR=3.7
ZALV ScP ScP 07 09 05.5 -1.1
comp=Z,5.2nm,0.8s,baz=166,slow=3.2,SNR=9.0
ZALV Zalesovo Beam 31.24 349 P **P** **07 02 43.3 +0.9**
ZALV *PP pP 07 03 09.2 +1.4
ZALV 07 05 33.1
ZALV S **S** **07 07 41.0 +0.8**
ZALV Zalesovo Beam 31.24 349 P **P** **07 02 43.3 +0.8**
ZALV pP pP 07 03 09.2 +1.4
ZALV PcP PcP 07 05 33.1 -1.1
ZALV S **S** **07 07 41.0 +0.8**
KSRS Korea Array 31.70 56 P **P** **07 02 44.0 -2.6**
comp=Z,0.9nm,0.5s,mb3.8,baz=248,slow=8.2,SNR=4.4
KSRS pP pP 07 03 11.9 -0.1
comp=Z,1.0nm,0.5s,baz=261,slow=9.0,SNR=1.9
KSRS ScP ScP 07 09 07.2 -1.4
comp=Z,3.8nm,0.9s,baz=249,slow=3.5,SNR=5.5
CN2 Changchun 32.38 44 ⇑P **P** **07 02 51.0 -1.6**
CN2 *e*XP sP 07 03 31.2 -0.2
CN2 *e*S **S** **07 07 54.3 -4.0**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CN2 AMB AMB
comp=Z,200nm,5.0s
NVS Novosibirsk 32.39 348 *i* P **P** **07 02 51.8 -0.6**
NVS *e* 07 05 35.5
NVS *i* S **S** **07 07 56.6 -1.4**
NVS pmax pmax
comp=Z,21nm,0.9s,mb4.9
NVS pmax pmax
comp=N,18nm,1.1s
NVS pmax pmax
comp=E,15nm,1.3s
NVS smax
comp=N,73nm,1.8s
VOSK Vostochnaya 34.24 334 P **P** **07 03 09.6 +1.0**
VOSK pmax pmax
comp=Z,11nm,0.6s,mb4.9
BVA0 Borovoye Array 34.70 334 *i* P **P** **07 03 13.5 +1.0**
BVAR Borovoye Array 34.70 334 P **P** **07 03 13.5 +0.9**
comp=Z,5.6nm,0.6s,mb4.5,baz=141,slow=11,SNR=7.4
BVAR pP pP 07 03 39.7 +1.5
comp=Z,6.4nm,0.7s,baz=137,slow=11,SNR=4.1
BVAR PcP PcP 07 05 44.3 +0.4
comp=Z,15nm,0.7s,baz=150,slow=3.4,SNR=14
BVAR S **S** **07 08 34.6 +0.8**
comp=Z,3.4nm,0.9s,baz=130,slow=14,SNR=4.5
BVAR ScP ScP 07 09 18.9 +0.3
comp=Z,2.7nm,0.7s,baz=144,slow=5.3,SNR=6.0
BRVK Borovoye 34.77 334 *e*P **P** **07 03 14.1 +1.0**
BRVK *e* 07 04 36.6
BRVK *e* 07 05 44.5
BRVK pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
BRVK Borovoye 34.77 334 *e*P **P** **07 03 14.1 +1.0**
comp=Z,8.6nm,0.8s,mb4.6
BRVK *e*PP PP 07 04 36.6 +2.5
BRVK *e*PcP PcP 07 05 44.5 +0.5
MDJ Mudanjiang 35.41 45 P **P** **07 03 18.0 -0.8**
MDJ AP pP 07 03 42.6 -1.9
MDJ XP sP 07 03 55.5 -2.3
MDJ PP PP 07 04 39.8 -1.6
MDJ S **S** **07 08 44.5 -0.5**
MDJ SCP ScP 07 09 21.4 0.0
MDJ XS sS 07 09 27.9 -1.8
MDJ AMB AMB
comp=Z,8.0nm,1.6s,mb4.3
MDJ AMB AMB
comp=Z,70nm,4.9s
MDJ LR LR
comp=N,233nm,23.5s
MDJ LR LR
comp=E,288nm,24.1s
MDJ LR LR
comp=Z,461nm,22.9s
BOD Bodaibo 36.98 17 *e*P **P** **07 03 31.1 -0.9**
BOD pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
AB31 Akbulak array 37.38 322 P **P** **07 03 36.5 +1.1**
AB31 pmax pmax
comp=Z,11nm,0.5s,mb5.0
KAPI Kappang 37.52 136 P **P** **07 03 36.1 -0.9**
comp=Z,13nm,0.5s,mb5.0,baz=304,slow=10,SNR=8.5
KAPI Kappang 37.52 136 *e*P **P** **07 03 36.3 -0.7**
comp=Z,168nm,2.0s,mb5.5
AKTK Aktyubinsk 39.05 323 P **P** **07 03 50.4 +1.0**
AKTK PcP PcP 07 05 57.4 +0.3
AKTK ScP ScP 07 09 34.2 -0.8
AKTO Aktyubinsk 39.05 323 P **P** **07 03 50.4 +1.0**
comp=Z,5.8nm,0.5s,mb4.7,baz=119,slow=7.6,SNR=34
AKTO PcP PcP 07 05 57.4 +0.3
comp=Z,3.8nm,0.8s,baz=180,slow=6.3,SNR=4.3
AKTO ScP ScP 07 09 34.2 -0.8
comp=Z,3.0nm,0.6s,baz=87,slow=5.8,SNR=10
MAJO Matsushiro 39.59 61 *e*P **P** **07 03 52.9 -1.2**
MAJO pmax pmax
comp=Z,21nm,1.0s,mb4.9
MAJO Matsushiro 39.59 61 *e*P **P** **07 03 52.9 -1.2**
comp=Z,21nm,1.0s,mb4.9
MAT Matsushiro 39.59 61 P **P** **07 03 52.7 -1.4**
MJAR Matsushiro Arr 39.59 61 P **P** **07 03 53.0 -1.1**
comp=Z,8.5nm,0.8s,mb4.6,baz=273,slow=9.7,SNR=15
MJAR pP pP 07 04 21.3 +1.1
comp=Z,10.0nm,0.9s,baz=272,slow=9.8,SNR=6.1
MJAR ScP ScP 07 09 36.2 -1.1
comp=Z,1.8nm,0.5s,baz=267,slow=4.9,SNR=4.2
SVE Sverdlovsk 41.39 332 ⇓*e*P **P** **07 04 10.5 +1.9**
SVE *e*S **S** **07 10 21.4 +6.8**
SVE pmax pmax
comp=Z,33nm,0.9s,mb5.2
ARU Arti 42.05 331 *d i*P **P** **07 04 14.9 +0.9**
ARU *e* 07 05 54.1
ARU *e* 07 06 05.8
ARU *e*S **S** **07 10 27.1 +2.7**
ARU pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
ARU Arti 42.05 331 *e*P **P** **07 04 14.8 +0.8**
comp=Z,9.4nm,0.5s,mb4.8
ARU *e*PcP PcP 07 06 07.2 +0.5
UMR Umm Al-Rimmam 42.15 289 *e*P **P** **07 04 15.9 +0.7**
baz=289
UMR AMb AMB 07 04 21.9
comp=Z,51nm,1.1s,mb5.2,baz=289
KBD Kabd 42.19 288 *e*P **P** **07 04 16.6 +1.0**
baz=288
KBD AMb AMB 07 04 21.0
comp=Z,52nm,1.5s,mb5.0,baz=288
MIB Mutribah 42.46 289 *e*P **P** **07 04 18.8 +1.1**
baz=289
MIB AMb AMB 07 04 20.0
comp=Z,38nm,0.7s,mb5.2,baz=289
NAY Al-Naaiem 42.58 288 *e*P **P** **07 04 19.5 +0.8**
baz=288
NAY AMb AMB 07 04 25.9
comp=Z,29nm,1.1s,mb4.9,baz=288
BATI Baumata 43.97 136 P **P** **07 04 28.1 -1.9**
comp=Z,217nm,0.8s,mb6.0,baz=350,slow=0.8,SNR=36
BATI PcP PcP 07 06 13.4 -0.5
comp=Z,30nm,0.5s,baz=284,slow=4.3,SNR=3.7
KIV Kislovodsk 46.88 309 *i* P **P** **07 04 54.8 +2.2**
KIV *i* *PP pP 07 05 21.2 +1.8
KIV *e* 07 06 24.5
KIV pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
KIV Kislovodsk 46.88 309 *e*P **P** **07 04 55.0 +2.4**
comp=Z,23nm,0.9s,mb4.9
MBWA Marble Bar 50.73 149 *e*P **P** **07 05 21.8 -0.4**
comp=Z,78nm,0.8s,mb5.8
KAKA Kakadu 51.65 130 *e*P x 07 05 09.6
comp=Z,11nm,0.5s
TIXI Tiksi 51.90 13 ⇓*e*P **P** **07 05 28.3 -2.0**
TIXI pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
TIXI Tiksi 51.90 13 *e*P **P** **07 05 28.8 -1.5**
comp=Z,13nm,0.5s,mb5.2
OBN Obninsk 52.83 322 *e*P **P** **07 05 40.3 +2.9**
OBN *i* *PP pP 07 06 05.7 +1.0
OBN *i* 07 06 45.0
OBN *e* 07 07 40.6
OBN pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BR131 Keskin Array S 53.39 303 *e*P **P** **07 05 42.5 +0.7**
comp=Z,3.6nm,0.6s,mb4.6
BRTR Keskin Array B 53.39 303 P **P** **07 05 42.5 +0.7**
comp=Z,3.2nm,0.6s,mb4.5,baz=133,slow=11,SNR=20
BRTR ScP ScP 07 10 34.7 0.0
comp=Z,1.3nm,0.9s,baz=64,slow=3.4,SNR=3.3
PETK Petropavlovsk- 55.44 41 P **P** **07 05 54.6 -1.8**
comp=Z,5.1nm,0.9s,mb4.5,baz=303,slow=3.3,SNR=4.3
PET Petropavlovsk 56.00 41 ⇑*e*P **P** **07 05 59.4 -1.0**
PET pmax pmax
comp=Z,86nm,2.1s,mb5.4

AKASG Malin Array Be 56.65 316 P **P** **07 06 04.4 -0.6**
comp=Z,6.1nm,0.4s,mb5.0,baz=82,slow=6.8,SNR=42
AKASG pP pP 07 06 30.5 -2.3
comp=Z,2.7nm,0.5s,baz=83,slow=6.3,SNR=2.5
AKBB Malin Array Si 56.65 316 *eP* **P** **07 06 04.3 -0.8**
KIEV Kiev 56.66 316 *eP* **P** **07 06 04.2 -0.9**
KIEV pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
KIEV Kiev 56.66 316 *eP* **P** **07 06 04.2 -0.9**
comp=Z,7.4nm,0.4s,mb5.1
JOF Joensuu 57.18 331 *ep* **P** **07 06 08.8 +0.2**
comp=Z,3.6nm,0.3s,mb4.9
APA Apatity 57.55 337⇓ *iP* **P** **07 06 12.0 +0.9**
APA pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
WRAB Tennant Creek 58.05 135 *eP* **P** **07 06 15.0 -0.2**
comp=Z,62nm,0.7s,mb5.8
WB2 Warramunga Arr 58.05 135⇑ *iP* **P** **07 06 14.8 -0.5**
VRI Vrincioaia 58.29 310⇑ *iP* **P** **07 06 18.4 +1.8**
ISR Istrita 58.45 310⇑ *iP* **P** **07 06 19.8 +2.1**
ISR Istrita 58.45 310⇑ *iP* **P** **07 06 19.8 +2.1**
MLR Muntele Rosu 58.85 310⇑ *iP* **P** **07 06 21.7 +1.2**
MLR Muntele Rosu 58.85 310⇑ *iP* **P** **07 06 21.7 +1.2**
MUN Mundaring 58.95 159 *eP* **P** **07 06 20.4 -0.8**
KLBR Kellerberrin 59.13 157⇓ *iP* **P** **07 06 21.9 -0.6**
comp=Z,10nm,0.6s,mb5.0
BURAR Bucovina Array 59.26 313⇓ *iP* **P** **07 06 23.7 +0.4**
BURAR Bucovina Array 59.26 313 ⇓ *iP* **P** **07 06 23.7 +0.3**
BUR08 Bucovina Ar. S 59.27 313 *eP* **P** **07 06 23.2 -0.2**
KAF Kangasniemi 59.33 329 *ep* **P** **07 06 23.9 +0.4**
comp=Z,1.6nm,0.3s,mb4.5
KAF Kangasniemi 59.33 329 *eP* **P** **07 06 23.9 +0.4**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
VOIR 59.48 310⇑ *iP* **P** **07 06 25.1 +0.2**
NWAO Narrogin (SRO) 60.16 158 *eP* **P** **07 06 28.9 -0.7**
NWAO pmax pmax
comp=Z,17nm,0.8s
NWAO Narrogin (SRO) 60.16 158 *eP* **P** **07 06 28.9 -0.7**
comp=Z,17nm,0.8s,mb5.1
KEV Kevo 60.39 338 *ep* **P** **07 06 31.0 +0.3**
comp=Z,1.0nm,0.3s,mb4.3
KEV Kevo 60.39 338 *eP* **P** **07 06 31.0 +0.3**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
ASAR Alice Springs 60.49 138 P **P** **07 06 31.9 -0.1**
comp=Z,39nm,0.6s,mb5.6,baz=321,slow=6.9,SNR=596
ASAR PKPPKP 07 35 50.2
comp=Z,0.8nm,0.9s,baz=91,slow=1.5,SNR=6.5
KWP Kalwaria 60.84 315 *eP* **P** **07 06 34.4 +0.3**
KWP Kalwaria 60.84 315⇑ *iP* **P** **07 06 34.6 +0.5**
KWP Kalwaria 60.84 315 *eP* **P** **07 06 34.4 +0.3**
ARCES ARCESS Array B 60.86 338 P **P** **07 06 34.6 +0.7**
comp=Z,3.3nm,0.4s,mb4.7,baz=96,slow=7.8,SNR=64
ARCES pP 07 07 03.0 +1.1
comp=Z,10nm,0.8s,baz=101,slow=6.3,SNR=6.1
PMG Port Moresby 60.92 116 *eP* **P** **07 06 35.5 +0.4**
PMG pmax pmax
comp=Z,48nm,0.8s
PMG Port Moresby 60.92 116 *eP* **P** **07 06 35.5 +0.4**
comp=Z,48nm,0.8s,mb5.6
DRGR 61.02 312⇓ *iP* **P** **07 06 36.2 +0.9**
DRGR 61.02 312 ⇓ *iP* **P** **07 06 36.2 +0.9**
VTS Vitosha 61.05 307⇓ *iP* **P** **07 06 36.1 +0.5**
VTS Vitosha 61.05 307 ⇓ *iP* **P** **07 06 36.1 +0.5**
GZR Gura Zlata 61.08 310⇓ *iP* **P** **07 06 36.6 +0.8**
GZR Gura Zlata 61.08 310 ⇓ *iP* **P** **07 06 36.6 +0.8**
KOLS Kolonicke sedl 61.16 314 *eP* **P** **07 06 35.4 -0.9**
BILL Bilibino 61.53 24 *eP* **P** **07 06 36.3 -2.1**
BILL *e**PP pP 07 07 04.8 -1.7
BILL *i* 07 07 17.1
BILL pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
CRVS Cervenica-Dubn 61.70 314 *eP* **P** **07 06 40.6 +0.7**
CRVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CRVS Cervenica-Dubn 61.70 314 *eP* **P** **07 06 40.6 +0.7**
comp=Z,5.9nm,0.9s,mb4.6
STHS Stebnicka Huta 61.81 315 *eP* **P** **07 06 40.5 -0.1**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
STHS Stebnicka Huta 61.81 315 *eP* **P** **07 06 40.5 -0.1**
comp=Z,2.8nm,0.8s,mb4.3
NIE Niedzica 62.41 315 *eP* **P** **07 06 45.8 +1.2**
OJC Ojcow 62.68 316 *eP* **P** **07 06 46.7 +0.3**
OJC Ojcow 62.68 316 *eP* **P** **07 06 46.8 +0.4**
FORT Forrest 62.82 148⇑ *iP* **P** **07 06 47.5 0.0**
comp=Z,19nm,1.2s,mb4.9
VYHS Vyhne 63.47 314 *eP* **P** **07 06 51.0 -0.6**
VYHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
VYHS Vyhne 63.47 314 *eP* **P** **07 06 51.0 -0.6**
comp=Z,1.6nm,0.7s,mb4.1
PKSM Moragy 63.87 311⇑ *iP* **P** **07 06 54.0 -0.3**
ZST Bratislava 64.65 314 *eP* **P** **07 06 58.1 -1.3**
ZST pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
ZST Bratislava 64.65 314 *eP* **P** **07 06 58.1 -1.3**
comp=Z,9.8nm,0.5s,mb4.9
VRAC Vranov 64.84 315⇓ *iP* **P** **07 07 01.4 +0.8**
VRAC Vranov 64.84 315 ⇓ *iP* **P** **07 07 01.4 +0.8**
DPC Dobruska-Polom 64.89 316 *eP* **P** **07 07 01.5 +0.7**
UPC Upice 65.06 316 *eP* **P** **07 07 02.7 +0.7**
CONA Conrad Observa 65.52 314⇑ *iP* **P** **07 07 05.4 +0.4**
comp=Z,9.4nm,1.2s,mb4.5
CSNA Conrad Observa 65.52 314⇑ *iP* **P** **07 07 05.3 +0.3**
comp=Z,8.9nm,1.2s,mb4.5
ARSA Arzberg 65.84 313⇑ *iP* **P** **07 07 06.8 -0.3**
comp=Z,6.7nm,0.7s,mb4.6
PRU Pruhonice 66.07 316 *eP* **P** **07 07 09.1 +0.6**
PERS Pernice 66.22 312 *iP* **P** **07 07 09.6 +0.1**
SOKA Soboth 66.27 312⇑ *iP* **P** **07 07 09.9 +0.1**
comp=Z,4.5nm,0.5s,mb4.5
BRG Berggiesshubel 66.32 317 *iP* **P** **07 07 10.5 +0.5**
BRG *i* 07 07 50.1
BRG pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
BRG MLR MLR
comp=Z,400nm,19.9s
BRG Berggiesshubel 66.32 317 *iP* **P** **07 07 10.5 +0.5**
comp=Z,12nm,0.5s,mb4.9
BRG *i* 07 07 50.1
comp=Z,13nm,1.0s
BRG
comp=N,551nm,19.7s
BRG
comp=E,324nm,15.4s
BRG
comp=Z,663nm,19.9s
BRG Berggiesshubel 66.32 317 *iP* **P** **07 07 10.5 +0.5**
comp=Z,7.0nm,0.5s,mb4.8
BRG *i* 07 07 50.1
BRG LR LR
comp=Z,400nm,19.9s
PDKS Podkum 66.40 312 *iP* **P** **07 07 11.2 +0.5**
PDKS *e* pP 07 07 40.3 +1.2
CTA Charters Tower 66.45 126⇑ *iP* **P** **07 07 10.9 -0.4**
comp=Z,13nm,0.8s,mb4.8
CTA Charters Tower 66.45 126⇑ *iP* **P** **07 07 10.9 -0.4**
CTA pmax pmax
comp=Z,13nm,0.8s
CTAO Charters Tower 66.45 126 *eP* **P** **07 07 11.0 -0.3**
CTAO pmax pmax
comp=Z,27nm,1.0s,mb5.0
CTAO Charters Tower 66.45 126 *eP* **P** **07 07 11.0 -0.3**
comp=Z,27nm,1.0s,mb5.0
NB2 NORSAR Subarra 66.52 328 P **P** **07 07 10.8 -0.3**
comp=Z,17nm,1.0s,mb4.8,baz=84,slow=6.5
NOA NORSAR Array B 66.52 328 P **P** **07 07 10.9 -0.3**
comp=Z,7.2nm,0.7s,mb4.6,baz=85,slow=6.3,SNR=20
NOA pP pP 07 07 38.9 -0.8
comp=Z,6.4nm,0.9s,baz=84,slow=6.4,SNR=4.1
MOA Molln 66.59 314⇑ *iP* **P** **07 07 11.8 -0.1**
comp=Z,10.0nm,0.6s,mb4.9
NAO01 NORSAR Array S 66.70 328 *eP* **P** **07 07 12.1 -0.2**
comp=Z,3.1nm,0.4s,mb4.5
GEC2 GERESS Array S 66.79 315 *eP* **P** **07 07 13.3 +0.2**
comp=Z,1µm,0.6s
GERES GERESS Array B 66.79 315 P **P** **07 07 13.8 +0.7**
comp=Z,8.7nm,0.6s,mb4.8,baz=72,slow=6.2,SNR=34
GERES pP pP 07 07 41.3 -0.3
comp=Z,3.0nm,0.7s,baz=77,slow=5.9,SNR=3.2
KHC Kasperske Hory 66.83 315 *eP* **P** **07 07 13.8 +0.5**
CLL Collm 66.84 318 *eP* **P** **07 07 13.0 -0.3**
CLL LmV 07 55 00.0
comp=Z,500nm,20.0s
CLL LmH 08 00 00.0
comp=N,600nm,19.3s
CLL LmH 08 00 00.0
comp=E,500nm,20.3s
CLL LmH 08 00 00.0
comp=Z,500nm,18.6s
CEY Cerknica 66.85 311 *iP* **P** **07 07 13.7 +0.2**
CEY *e* pP 07 07 42.5 +0.5
CADS Cadrg 67.23 312 *iP* **P** **07 07 15.6 -0.3**
CADS *e* pP 07 07 42.6 -1.9
KBA Koelnbreinsper 67.34 313⇑ *iP* **P** **07 07 16.2 -0.4**
comp=Z,4.8nm,0.5s,mb4.6
ROBS Robic 67.38 312 *iP* **P** **07 07 16.1 -0.8**
WTTA Wattenberg 68.45 313⇑ *iP* **P** **07 07 23.0 -0.5**
comp=Z,10nm,0.8s,mb4.7
FETA Feichten 69.10 313⇑ *iP* **P** **07 07 27.2 -0.4**
comp=Z,7.3nm,0.7s,mb4.6
DAVA Damuels 69.61 314⇑ *iP* **P** **07 07 30.5 -0.2**
comp=Z,14nm,0.9s,mb4.8
TUE Stuetta 70.15 313 *eP* **P** **07 07 33.6 -0.4**
comp=Z,8.0nm,0.8s,mb4.6
CDF Champ du Feu 71.05 315 *eP* **P** **07 07 39.4 -0.1**
comp=Z,15nm,0.5s,mb4.8
CDF Champ du Feu 71.05 315 *eP* **P** **07 07 39.4 -0.1**
CDF pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
CDF Champ du Feu 71.05 315 *eP* **P** **07 07 39.4 -0.1**
comp=Z,7.7nm,0.5s,mb4.8
STKA Stephens Creek 71.11 139⇑ *iP* **P** **07 07 39.4 -0.5**
comp=Z,7.4nm,0.6s,mb4.7
STKA Stephens Creek 71.11 139 P **P** **07 07 39.2 -0.8**
comp=Z,14nm,0.9s,mb4.8,baz=312,slow=8.1,SNR=20
STKA pP pP 07 08 09.1 +0.3
comp=Z,7.9nm,0.9s,baz=0.6,slow=7.5,SNR=3.5
PGF Pioggiola 71.36 309 *eP* **P** **07 07 41.4 -0.1**
comp=Z,33nm,0.9s,mb4.8
PGF *ep*P pP 07 08 08.9 -1.4
PGF Pioggiola 71.36 309 *eP* **P** **07 07 41.4 -0.1**
PGF *e**PP pP 07 08 08.9 -1.4
PGF pmax pmax
comp=Z,16nm,0.9s,mb4.8
PGF Pioggiola 71.36 309 *eP* **P** **07 07 41.4 -0.1**
comp=Z,16nm,0.9s,mb4.9
PGF *ep*P pP 07 08 08.9 -1.4
WLF Walferdange 71.45 317 P **P** **07 07 43.0 +1.2**
comp=Z,23nm,1.5s,mb4.8
WLF AP pP 07 08 13.0 +2.3
HINF Hinteralfeld 71.47 315 *eP* **P** **07 07 41.7 -0.3**
comp=Z,4.0nm,0.5s,mb4.2
HINF Hinteralfeld 71.47 315 *eP* **P** **07 07 41.7 -0.3**
HINF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
HINF Hinteralfeld 71.47 315 *eP* **P** **07 07 41.7 -0.3**
comp=Z,2.0nm,0.5s,mb4.2
HAU Haudompre 71.75 315 *eP* **P** **07 07 43.6 -0.1**
comp=Z,15nm,0.7s,mb4.6
HAU *e*MLR MLR
comp=Z,721nm,21.5s
HAU Haudompre 71.75 315 *eP* **P** **07 07 43.6 -0.1**
HAU pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
HAU MLR MLR
comp=Z,720nm,21.5s
HAU Haudompre 71.75 315 *eP* **P** **07 07 43.6 -0.1**
comp=Z,7.6nm,0.7s,mb4.6
HAU LR LR
comp=Z,720nm,21.5s
SBF Sospel 72.12 311 *eP* **P** **07 07 45.8 -0.2**
comp=Z,43nm,0.9s,mb5.0
SBF Sospel 72.12 311 *eP* **P** **07 07 45.8 -0.2**
SBF pmax pmax
comp=Z,21nm,0.9s,mb5.0
SBF Sospel 72.12 311 *eP* **P** **07 07 45.8 -0.2**
comp=Z,21nm,0.9s,mb5.0
LPG La Plagne 72.15 312 *eP* **P** **07 07 46.7 +0.6**
comp=Z,16nm,0.6s,mb4.7
LPG La Plagne 72.15 312 *eP* **P** **07 07 46.7 +0.6**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
LPG La Plagne 72.15 312 *eP* **P** **07 07 46.7 +0.6**
comp=Z,7.8nm,0.6s,mb4.7
LPL La Plagne 72.16 312 *eP* **P** **07 07 46.7 +0.5**
comp=Z,26nm,0.5s,mb5.0
LPL *ep*P pP 07 08 13.9 -1.1
LPL La Plagne 72.16 312 *eP* **P** **07 07 46.7 +0.5**
LPL *e**PP pP 07 08 13.9 -1.1
LPL pmax pmax
comp=Z,13nm,0.5s,mb5.0
LPL La Plagne 72.16 312 *eP* **P** **07 07 46.7 +0.5**
comp=Z,13nm,0.5s,mb5.0
LPL *ep*P pP 07 08 13.9 -1.1
CABF La Chapelle 72.30 314 *eP* **P** **07 07 47.9 +0.9**
MBDF Montbardon 72.34 312 *eP* **P** **07 07 47.1 -0.2**
comp=Z,14nm,0.6s,mb4.6
MBDF Montbardon 72.34 312 *eP* **P** **07 07 47.1 -0.2**
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
MBDF Montbardon 72.34 312 *eP* **P** **07 07 47.1 -0.2**
comp=Z,6.8nm,0.6s,mb4.7
DAG Danmarks Havn 72.36 347⇓ *iP* **P** **07 07 46.4 -0.4**
DAG pmax pmax
comp=Z,13nm,0.8s,mb4.8
DAG Danmarks Havn 72.36 347⇓ *iP* **P** **07 07 46.4 -0.4**
comp=Z,13nm,0.8s,mb4.8
MEZF Maizieres J'vi 72.46 316 *eP* **P** **07 07 48.1 +0.2**
FRF La Foret Royal 72.75 310 *eP* **P** **07 07 49.5 -0.2**
ORIF Oris-en-Rattie 72.90 312 *eP* **P** **07 07 50.1 -0.5**
comp=Z,10nm,0.6s,mb4.5
ORIF *e*MLR MLR
comp=Z,990nm,23.0s
ORIF Oris-en-Rattie 72.90 312 *eP* **P** **07 07 50.1 -0.5**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
ORIF Oris-en-Rattie 72.90 312 *eP* **P** **07 07 50.1 -0.5**
comp=Z,5.1nm,0.6s,mb4.5
LMR La Mourre 72.91 310 *eP* **P** **07 07 49.9 -0.8**
comp=Z,12nm,0.7s,mb4.5
LMR La Mourre 72.91 310 *eP* **P** **07 07 49.9 -0.8**
LMR pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
LMR La Mourre 72.91 310 *eP* **P** **07 07 49.9 -0.8**
comp=Z,5.8nm,0.7s,mb4.5
KEST Kesra 72.98 302 P **P** **07 07 51.8 +0.5**
comp=Z,6.0nm,0.8s,mb4.5,baz=283,slow=3.0,SNR=9.7
KEST pP pP 07 08 21.3 +1.1
comp=Z,4.3nm,0.9s,baz=208,slow=2.8,SNR=3.3
EIDS Eidsvold 73.19 128 *eP* **P** **07 07 52.4 -0.1**
comp=Z,25nm,1.1s,mb5.0
SMRF Simiane la Rot 73.38 311 *eP* **P** **07 07 53.1 -0.3**
LOR Lormes 73.58 315 *eP* **P** **07 07 54.1 -0.4**
comp=Z,7.0nm,0.7s,mb4.2
LOR *e*MLR MLR
comp=Z,591nm,21.0s
LOR Lormes 73.58 315 *eP* **P** **07 07 54.1 -0.4**
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LOR MLR MLR
comp=Z,590nm,21.0s
LOR Lormes 73.58 315 *eP* **P** **07 07 54.1 -0.4**
comp=Z,3.5nm,0.6s,mb4.3
LOR LR LR
comp=Z,590nm,21.0s
VIVF Saint-Julien-l 73.74 312 *eP* **P** **07 07 55.4 -0.1**
comp=Z,17nm,0.7s,mb4.6
VIVF Saint-Julien-l 73.74 312 *eP* **P** **07 07 55.4 -0.1**
VIVF pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
VIVF Saint-Julien-l 73.74 312 *eP* **P** **07 07 55.4 -0.1**
comp=Z,8.7nm,0.7s,mb4.6
SMF Signal de Mont 73.77 314 *eP* **P** **07 07 55.4 -0.2**
comp=Z,19nm,0.5s,mb4.8
SMF *ep*P pP 07 08 22.9 -1.7
SMF Signal de Mont 73.77 314 *eP* **P** **07 07 55.4 -0.2**
SMF *e**PP pP 07 08 22.9 -1.7
SMF pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
SMF Signal de Mont 73.77 314 *eP* **P** **07 07 55.4 -0.2**
comp=Z,9.4nm,0.5s,mb4.8
SMF *ep*P pP 07 08 22.9 -1.7
SSF Saint Saulge 73.87 315 *eP* **P** **07 07 56.1 -0.1**
comp=Z,21nm,0.7s,mb4.7
SSF *ep*P pP 07 08 23.5 -1.7
SSF Saint Saulge 73.87 315 *eP* **P** **07 07 56.1 -0.1**
SSF *e**PP pP 07 08 23.5 -1.7
SSF pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
SSF Saint Saulge 73.87 315 *eP* **P** **07 07 56.1 -0.1**
comp=Z,10nm,0.7s,mb4.7
SSF *ep*P pP 07 08 23.5 -1.7
AVF Avril sur Loir 74.05 314 *eP* **P** **07 07 57.0 -0.3**
comp=Z,10nm,0.6s,mb4.5
AVF Avril sur Loir 74.05 314 *eP* **P** **07 07 57.0 -0.3**
AVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
AVF Avril sur Loir 74.05 314 *eP* **P** **07 07 57.0 -0.3**
comp=Z,5.2nm,0.6s,mb4.4
BGF Bois d'Agland 74.45 314 *eP* **P** **07 07 59.5 -0.1**
LASF Ste Croix 74.53 312 *eP* **P** **07 08 00.4 +0.3**
comp=Z,10nm,0.6s,mb4.4
TCF Toulx Ste Croi 74.95 314 *eP* **P** **07 08 02.8 +0.3**
comp=Z,18nm,0.6s,mb4.7
TCF Toulx Ste Croi 74.95 314 *eP* **P** **07 08 02.8 +0.3**
TCF pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
TCF Toulx Ste Croi 74.95 314 *eP* **P** **07 08 02.8 +0.3**
comp=Z,9.1nm,0.6s,mb4.7
CAF Calviac 75.48 313 *eP* **P** **07 08 05.9 +0.3**
comp=Z,17nm,0.9s,mb4.5
CAF Calviac 75.48 313 *eP* **P** **07 08 05.9 +0.3**
CAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
CAF Calviac 75.48 313 *eP* **P** **07 08 05.9 +0.3**
comp=Z,8.7nm,0.9s,mb4.5
LSZ Lusaka 75.50 246 *eP* **P** **07 08 06.6 +0.5**
LSZ pmax pmax
comp=Z,45nm,0.7s,mb5.3
LSZ Lusaka 75.50 246 *eP* **P** **07 08 06.6 +0.5**
comp=Z,45nm,0.7s,mb5.3
LDF La Druitiere 75.71 317 *eP* **P** **07 08 06.6 -0.2**
RJF Les Rejaudoux 75.73 313 *eP* **P** **07 08 07.0 0.0**
comp=Z,20nm,0.8s,mb4.6
RJF *e*MLR MLR
comp=Z,742nm,20.8s
RJF Les Rejaudoux 75.73 313 *eP* **P** **07 08 07.0 0.0**
RJF pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
RJF MLR MLR
comp=Z,740nm,20.8s
RJF Les Rejaudoux 75.73 313 *eP* **P** **07 08 07.0 0.0**
comp=Z,9.8nm,0.8s,mb4.6
RJF LR LR
comp=Z,740nm,20.8s
MTLF Montolieu 75.89 311 *eP* **P** **07 08 08.1 +0.2**
comp=Z,9.6nm,0.6s,mb4.4
MTLF Montolieu 75.89 311 *eP* **P** **07 08 08.1 +0.2**
MTLF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
MTLF Montolieu 75.89 311 *eP* **P** **07 08 08.1 +0.2**
comp=Z,4.8nm,0.6s,mb4.4
GRR Gorron 76.24 317 *eP* **P** **07 08 09.6 -0.2**
comp=Z,26nm,0.8s,mb4.7
GRR Gorron 76.24 317 *eP* **P** **07 08 09.6 -0.2**
GRR pmax pmax
comp=Z,13nm,0.8s,mb4.7
GRR Gorron 76.24 317 *eP* **P** **07 08 09.6 -0.2**
comp=Z,13nm,0.8s,mb4.7
LFF La Frestale 76.37 313 *eP* **P** **07 08 11.0 +0.4**
comp=Z,29nm,0.7s,mb4.8
LFF La Frestale 76.37 313 *eP* **P** **07 08 11.0 +0.4**
LFF pmax pmax
comp=Z,14nm,0.7s,mb4.8
LFF La Frestale 76.37 313 *eP* **P** **07 08 11.0 +0.4**
comp=Z,14nm,0.7s,mb4.8
ARMA Armidale 76.62 132 *eP* **P** **07 08 13.0 +0.9**
SGMF Saint Gilles 77.35 317 *eP* **P** **07 08 15.8 -0.2**
comp=Z,66nm,1.0s,mb5.0
SGMF Saint Gilles 77.35 317 *eP* **P** **07 08 15.8 -0.2**
SGMF pmax pmax
comp=Z,33nm,1.0s,mb5.0
SGMF Saint Gilles 77.35 317 *eP* **P** **07 08 15.8 -0.2**
comp=Z,33nm,1.0s,mb5.0
ROSF Rostrenen 77.76 317 *eP* **P** **07 08 18.6 +0.3**
ETSF Etsaut 77.95 312 *eP* **P** **07 08 20.0 +0.5**
comp=Z,28nm,0.9s,mb4.7
ETSF Etsaut 77.95 312 *eP* **P** **07 08 20.0 +0.5**
ETSF pmax pmax
comp=Z,14nm,0.9s,mb4.7
ETSF Etsaut 77.95 312 *eP* **P** **07 08 20.0 +0.5**
comp=Z,14nm,0.9s,mb4.7
CNB Canberra Magne 78.20 137 *eP* **P** **07 08 20.5 -0.3**
SJPF Ste Jean 78.33 312 *eP* **P** **07 08 22.2 +0.6**
comp=Z,13nm,0.7s,mb4.5
SJPF Ste Jean 78.33 312 *eP* **P** **07 08 22.2 +0.6**
SJPF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
SJPF Ste Jean 78.33 312 *eP* **P** **07 08 22.2 +0.6**
comp=Z,6.6nm,0.7s,mb4.5
BPAW Bear Paw Mtn. 79.03 24 *eP* **P** **07 08 23.5 -1.5**
comp=Z,6.1nm,0.8s,mb4.5
SUMG Summit 79.05 347 *eP* **P** **07 08 25.6 +0.7**
comp=Z,19nm,1.2s,mb4.8
SUMG *ep*P pP 07 08 53.4 -0.8
TAM Tamanrasset 80.41 291 *eP* **P** **07 08 33.9 +0.6**
TAM pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
TAM Tamanrasset 80.41 291 *eP* **P** **07 08 33.9 +0.6**
comp=Z,4.9nm,0.8s,mb4.4
ESDC Sonseca Array 81.54 310 P **P** **07 08 39.2 +0.3**
comp=Z,4.6nm,0.9s,mb4.3,baz=57,slow=5.3,SNR=13
ESLA Sonseca Array 81.54 310 *eP* **P** **07 08 38.9 -0.1**
comp=Z,7.3nm,1.4s,mb4.3
LBTB Lobatse 82.46 239 *eP* **P** **07 08 44.3 +0.4**
LBTB pmax pmax
comp=Z,39nm,0.7s,mb5.3
LBTB Lobatse 82.46 239 *eP* **P** **07 08 44.2 +0.4**
comp=Z,39nm,0.7s,mb5.3
MVO Moncorvo 83.06 312 *eP* **P** **07 08 47.6 +0.8**
PCBR Castelo Branco 83.94 311 *eP* **P** **07 08 52.2 +0.8**
PMRV Marv??o 84.06 310 *eP* **P** **07 08 52.5 +0.5**
comp=Z,30nm,2.0s,mb4.8
PBAR Barrancos 84.35 309 *eP* **P** **07 08 53.8 +0.4**
BOSA Boshof 84.53 236 P **P** **07 08 54.8 +0.4**
comp=Z,55nm,0.8s,mb5.5,baz=59,slow=4.2,SNR=62
BOSA pP pP 07 09 24.7 +0.6
comp=Z,32nm,0.8s,baz=71,slow=4.5,SNR=7.9
BOSA Boshof 84.53 236 *eP* **P** **07 08 54.4 0.0**
BOSA *e**PP pP 07 09 24.9 +0.8
BOSA pmax pmax
comp=Z,46nm,0.7s,mb5.5
BOSA Boshof 84.53 236 *eP* **P** **07 08 54.4 0.0**
comp=Z,46nm,0.7s,mb5.5
BOSA *ep*P pP 07 09 24.9 +0.8
EVO Evora 84.88 310 *eP* **P** **07 08 56.8 +0.7**
comp=Z,19nm,1.0s,mb4.7
EVO Evora 84.88 310 *eP* **P** **07 08 56.9 +0.8**
PBEJ Beja 85.00 309 *eP* **P** **07 08 57.9 +1.2**
PVAQ Vaqueiros 85.16 309 *eP* **P** **07 08 57.9 +0.3**
comp=Z,46nm,1.2s,mb5.3
PBDV Barranco-do-Ve 85.39 309 *eP* **P** **07 08 59.3 +0.6**
comp=Z,67nm,1.9s,mb5.2
PFVI Vila Bisbo 86.08 309 *eP* **P** **07 09 03.9 +1.8**
TSUM Tsumeb 86.28 247 *eP* **P** **07 09 03.6 +0.3**
comp=Z,6.5nm,0.8s,mb4.6
TOA0 Torodi Ar. Sit 87.45 283 *eP* **P** **07 09 09.8 +0.7**
TOA0 *ep*P pP 07 09 39.5 +0.4
TORD Torodi Ar. Bea 87.45 283 P **P** **07 09 09.8 +0.7**
comp=Z,20nm,0.7s,mb5.2,baz=62,slow=4.1,SNR=127
TORD pP pP 07 09 39.8 +0.8
comp=Z,7.9nm,0.9s,baz=59,slow=3.9,SNR=5.8
TORD Torodi Ar. Bea 87.45 283 P **P** **07 09 09.8 +0.7**
TORD pP pP 07 09 39.8 +0.8
YKA Yellowknife Ar 91.15 13 P **P** **07 09 24.2 -1.4**
comp=Z,1.1nm,0.8s,mb4.1,baz=331,slow=4.5,SNR=12
YKA PKKP PKKPbc 07 26 45.3 -4.1
comp=Z,1.1nm,0.8s,baz=154,slow=2.3,SNR=12
YKA Yellowknife Ar 91.15 13 P **P** **07 09 24.2 -1.4**
YKA PKKP PKKPbc 07 26 45.3 -4.1
DBIC Dimbokro 95.97 280 P **P** **07 09 48.8 +0.1**
comp=Z,7.3nm,0.7s,mb5.2,baz=44,slow=5.5,SNR=16
LIC Lamto 96.31 280 *eP* **P** **07 09 50.1 -0.1**
DLMT Dillon 107.08 20 *e*Pdif Pdif 07 10 37.5 0.0
comp=Z,2.8nm,0.4s
PDAR Pinedale Array 110.36 19 PKiKP PKiKP 07 14 51.6 -1.1
comp=Z,0.3nm,0.5s,baz=95,slow=1.9,SNR=6.1
PDAR PKKPbc PKKPbc 07 25 51.8 -2.3
comp=Z,0.5nm,0.8s,baz=165,slow=3.7,SNR=4.6
PDAR PKKPab PKKPab 07 26 02.4 -5.1
comp=Z,0.5nm,0.7s,baz=134,slow=6.4,SNR=4.4
NVAR Mina Array Bea 111.06 27 PKiKP PKiKP 07 14 54.5 +0.4
comp=Z,0.3nm,0.5s,baz=16,slow=4.2,SNR=2.7
NVAR PKKPbc PKKPbc 07 25 50.9 -0.8

comp=Z,0.5nm,0.6s,baz=146,slow=4.8,SNR=4.2
SNAA Sanae 114.48 200 *e*PKPdf PKiKP 07 14 57.8 -1.7
SNAA *e* 07 15 30.0
VNA2 Neumayer--Watz 115.97 201 *e*PKPdf PKPdf 07 15 02.5 +0.1
baz=40,slow=2.0
VNA2 *e* 07 15 33.3
VNA1 Neumayer--Stat 116.27 201 *e*PKPdf PKPdf 07 15 03.1 +0.1
VNA1 *e* 07 15 34.1
VNA3 Neumayer Olymp 116.68 201 *e*PKPdf PKPdf 07 15 03.2 -0.6
VNA3 *e* 07 15 34.1
MIAR Mount Ida 121.71 8 *e*PKIKP PKPdf 07 15 14.7 0.0
JCT Junction City 124.53 15 *e*PKIKP PKPdf 07 15 19.9 -0.3
JCT *e* 07 15 50.2
TXAR Lajitas Array 124.56 19 PKP PKPdf 07 15 19.9 -0.4
comp=Z,1.9nm,0.6s,baz=121,slow=0.9,SNR=29
TXAR pPKP pPKPdf 07 15 51.1 -0.5
comp=Z,1.9nm,0.9s,baz=180,slow=0.8,SNR=6.1
TGUH Tegucigalpa,Un 142.58 3 *e*PKPdf PKPdf 07 15 51.8 -2.4
TGUH *e*SKPbc SKPbc 07 19 22.3 +0.5
BDFB Brasilia 144.00 276 PKP PKPdf 07 15 55.5 -1.2
comp=Z,8.4nm,0.8s,baz=69,slow=5.8,SNR=25
SDV Santo Domingo 144.68 334 *e*PKPdf PKPdf 07 15 56.8 -1.2
SDV *e*pPKPdf pPKPdf 07 16 26.5 -2.9
SDV *e*SKPbc SKPbc 07 19 26.2 -0.6
BCIP Isla Barro Col 147.04 350 *e*PKPdf PKPdf 07 16 00.7 -1.3
ROSC El Rosal 149.78 338 PKP PKPdf 07 16 08.3 +1.8
comp=Z,96nm,1.0s,baz=96,slow=4.1,SNR=11
ROSC PKPbc PKPbc 07 16 12.8 +1.5
comp=Z,148nm,0.7s,baz=127,slow=1.8,SNR=96
OTAV Otavalo 155.41 343 *e*PKPdf PKPdf 07 16 14.0 -0.7
PLCA Paso Flores 158.80 213 PKP PKPdf 07 16 19.2 +1.0
comp=Z,4.2nm,1.1s,baz=166,slow=7.5,SNR=2.9
PLCA pPKP pPKPdf 07 16 50.0 +0.4
comp=Z,4.4nm,0.9s,baz=180,slow=7.3,SNR=4.5
LVC Limon Verde 164.80 270 *e*PKPab PKPab 07 17 22.1 +0.6

IDC 07 07:19:12.5±1.3**,751S×15568E,h30**km±6km**,mb3.8**/4**, mb1 3.8**/5**,mb1mx3.7**/16**,mbtmp3.9**/5**,ML4.3**/1**,MS2.8**/1**, Ms1 2.8**/1**,ms1mx2.5**/26**,Error ellipse: s-maj=39.7km s-min=33.3km az=58.0,Bougainville - Solomon Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 4.63 115 Pn Pn 07 20 21.1 +0.6
15nm,0.3s,baz=196,slow=15,SNR=3.1
HNR LR LR 07 21 16.2
comp=Z,104nm,21.2s,baz=338,slow=27
HNR Sn Sn 07 21 19.8 +6.5
19nm,0.3s,baz=128,slow=21,SNR=3.5
ASAR Alice Springs 26.36 230 P P 07 24 46.5 +0.2
0.2nm,0.5s,baz=70,slow=9.0,SNR=4.4
SONM Songino Array 70.14 327 P P 07 30 23.0 +0.9
1.0nm,0.4s,baz=140,slow=6.2,SNR=9.9
SONM pP pP 07 30 32.6 +1.1
1.2nm,0.7s,baz=139,slow=7.0,SNR=4.6
MKAR Makanchi Array 84.24 319 P P 07 31 41.5 +0.2
2.3nm,0.7s,baz=103,slow=5.6,SNR=26
MKAR pP pP 07 31 51.0 +0.1
1.3nm,0.7s,baz=107,slow=4.2,SNR=6.9
ZALV Zalesovo Beam 84.98 326 P P 07 31 43.4 -1.5
0.8nm,0.4s,baz=108,slow=4.7,SNR=4.4
ZALV pP pP 07 31 53.5 -1.0
0.6nm,0.4s,baz=123,slow=5.3,SNR=2.2

GUC 07 07:30:27.8±0.7**,2159S×6714W,h248**km±9km**,ML4.7, 4C-2D,Chile-Bolivia border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 1.93 238⇑*i*P Pn 07 31 11.3 +1.8
LVC *i* S S 07 31 45.1 +2.8
MACH Maria Elena 2.50 256⇑*i*P Pn 07 31 17.4 +2.5
MACH *i* S S 07 31 55.0 +2.8
TOCH Tocopilla 2.89 259⇑*i*P Pn 07 31 20.8 +1.8
TOCH *i* S S 07 32 01.3 +1.9
TOCH AML AML 07 32 02.1
comp=N,584nm,0.3s
CEN1 Los Morros 3.35 237⇑*i*P Pn 07 31 29.2 +5.2
CEN1 *i* S S 07 32 15.7 +7.1
CEN1 AML AML 07 32 19.1
comp=N,271nm,0.5s
ANCH Antofagasta 3.67 235⇓*i*P Pn 07 31 34.5 +6.9
ANCH *i* S S 07 32 21.7 +6.6
CPN1 Cerro Paranal 4.26 224⇓*i*P Pn 07 31 37.3 +2.7
CPN1 *i* S S 07 32 30.6 +2.9
CPN1 AML AML 07 32 33.5
comp=E,473nm,0.3s

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*ISCJB **07** 07:35:05.5±2.1,197S±0.1×692W±02,h104km±20km, mb4.2/8,Error ellipse: s-maj=29.6km s-min=16.0km az=33.2*
*IDC **07** 07:35:06.7±2.5,1972S×6921W,h100km±24km,mb3.6/6, mb1 3.8/8,mb1mx3.6/19,mbtmp3.7/8,Error ellipse: s-maj=25.5km s-min=18.7km az=124.0*
ISC 07 07:35:07.0±1.9**,197S**±01×**692W**±02**,h102**km±18km**,n13,** σ**0.s66**/13**,mb4.3**/7**,Northern Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 2.91 175 P **Pn 07 35 51.5 -0.1**
45nm,0.3s,baz=345,slow=8.9,SNR=96
LVC S **Sn 07 36 26.0 0.0**
54nm,0.3s,baz=27,slow=7.4,SNR=10
SIV San Ignacio 8.58 66 P **Pn 07 37 08.1 -0.3**
5.1nm,0.3s,baz=261,slow=12,SNR=60
CFAA Coronel Fontan 11.89 176 P **Pn 07 37 46.9 -6.2**
0.0nm,0.3s,baz=354,slow=13,SNR=4.0
BDFB Brasilia 20.59 82 P **P 07 39 39.3 +1.3**
1.6nm,0.4s,baz=252,slow=18,SNR=8.8
PLCA Paso Flores 21.00 183 P **P 07 39 42.4 +0.2**
4.0nm,0.8s,baz=2.9,slow=9.2,SNR=9.9
TXAR Lajitas Array 59.00 325 P **P 07 44 56.4 +0.3**
0.2nm,0.7s,mb3.3,baz=126,slow=9.1,SNR=2.5
LIC Lamto 68.17 75 *e*P **P 07 45 53.3 -3.5**
18nm,1.4s,mb4.7
TIC Toumodi 68.34 74 *e*P **P 07 45 51.4 -6.5**
6.9nm,0.2s,mb5.1
KIC Kosan Boka 68.48 75 *e*P **P 07 45 52.2 -6.6**
30nm,1.1s,mb5.0
DBIC Dimbokro 68.50 74 P **P 07 45 58.8 -0.1**
1.3nm,0.5s,mb4.0,baz=186,slow=2.8,SNR=5.0
TORD Torodi Ar. Bea 77.02 71 P **P 07 46 49.1 -0.2**
1.6nm,0.5s,mb4.0,baz=251,slow=5.4,SNR=30
YKA Yellowknife Ar 89.40 341 P **P 07 47 51.8 0.0**
0.9nm,0.8s,mb3.9,baz=134,slow=4.4,SNR=17
ASAR Alice Springs 131.36 209 PKP PKPdf 07 54 08.3 +0.3
0.2nm,0.4s,baz=137,slow=1.7,SNR=5.6

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*MOS **07** 08:09:19.1±0.9,558N×9471E,h33km,mb5.2/40,Error ellipse: s-maj=11.8km s-min=5.4km az=116.9*
*BJI **07** 08:09:21.0,521N×9458E,h75km,mB5.0,mb5.1,Ms4.5, Msz4.1*
*DJA **07** 08:09:22,529N×9442E,h47km,Mw5.2/4*
*ISCJB **07** 08:09:22.8±0.2,543N±004×9470E±003,h71km,mb4.9/94, Error ellipse: s-maj=6.1km s-min=3.2km az=34.9*
*IDC **07** 08:09:24.5±1.6,544N×9473E,h70km±12km,mb4.4/20, mb1 4.5/22,mb1mx4.4/27,mbtmp4.4/22,MS3.8/13, Ms1 3.8/13,ms1mx3.7/24,Error ellipse: s-maj=17.8km s-min=9.2km az=44.0*
*NEIC **07** 08:09:24.8±0.2,546N×9467E,mb5.0/38,Error ellipse: s-maj=6.7km s-min=4.2km az=224.0*
NEIC Felt [III] at Banda Aceh.
ISC 07 08:09:24.7±0.2**,545N**±004×**9470E**±003**,h73**km**, h73**km±1.8km**:pP-P,n274,**σ**0.s96**/266**,mb4.9**/93**,30C-15D, Northern Sumatera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BSI Banda Aceh 0.60 85 P **Pn 08 09 36.2 -2.6**
PSI Prapat 4.97 122 P **Pn 08 10 37.2 +0.3**
20nm,0.3s,baz=318,slow=13,SNR=45
PSI S **Sn 08 11 33.0 0.0**
28nm,0.3s,baz=170,slow=10,SNR=5.9
PSI LR LR 08 13 00.6
comp=Z,691nm,19.1s,baz=286,slow=43
PSI Prapat 4.97 122 P **Pn 08 10 37.2 +0.3**
PSI S **Sn 08 11 33.1 0.0**
PSI Prapat 4.97 122 P **Pn 08 10 37.2 +0.3**
PSI S **Sn 08 11 33.0 0.0**
PSI LR LR 08 13 00.6
GSI Gunungsitoli 5.02 145 P **Pn 08 10 33.8 -3.8**
84nm,0.6s,2μm0.8nm
TRSI Tarutung 5.45 128 P **Pn 08 10 50.8 +7.4**
SNG Songkhla 6.13 73 P **Pn 08 10 52.0 -0.8**
280nm,0.8s
IPM Ipoh 6.38 98 ⇓P **Pn 08 10 55.3 -0.8**
IPM Ipoh 6.38 98 P **Pn 08 10 55.0 -1.2**
90nm,0.4s,3μm0.7nm
FRIM Kepong 7.25 107 ⇓P **Pn 08 11 07.2 -0.9**
PPI Padang Panjang 8.17 136 P **Pn 08 11 18.6 -2.1**
37nm,0.6s
KTGM Kuala Trenggan 8.40 90 ⇓P **Pn 08 11 24.4 +0.5**
PDSI Padang 8.55 137 P **Pn 08 11 28.9 +3.1**
54nm,0.6s,2μm
KGM Kluang 9.26 111 ⇓P **Pn 08 11 34.0 -1.5**
MYKOM Kota Tinggi 9.83 111 ⇑P **Pn 08 11 42.6 -0.8**
MYKOM Kota Tinggi 9.83 111 P **Pn 08 11 43.6 +0.2**
CMAR Chiang Mai Arr 13.58 17 P **Pn 08 12 35.1 +0.9**
3.6nm,0.3s,baz=211,slow=14,SNR=32
CMAR LR LR 08 17 48.5
comp=Z,167nm,19.1s,baz=281,slow=37
CHG Chiang Mai 13.92 17 PG **Pn 08 12 41.0 +2.4**
CHG SG 08 12 45.0
CHTO Chiang Mai 13.92 17 *e*Pn **Pn 08 12 41.0 +2.4**
CHTO Chiang Mai 13.92 17 P **Pn 08 12 41.8 +3.2**
89nm,0.8s,723nm
TPI Tanjungpandan 15.29 122 P **Pn 08 12 57.0 +0.4**
KSM Kuching 16.07 104 *e*Pn **Pn 08 13 08.0 +1.6**
25nm,0.6s
KSM Kuching 16.07 104 ⇓P **Pn 08 13 05.3 -1.1**
KSM Kuching 16.07 104 P **Pn 08 13 09.0 +2.6**
40nm,1.0s
STKI Sintang 17.59 107 P **Pn 08 13 27.1 +1.9**
35nm,0.6s
SBUM Sibu 17.73 99 ⇓P **Pn 08 13 26.3 -0.7**
SBUM Sibu 17.73 99 P **Pn 08 13 28.0 +1.0**
12nm,1.2s
BTM Bintulu 18.47 96 ⇓P **Pn 08 13 33.7 -2.2**
HYB Hyderabad 19.77 308 *i* P **Pn 08 13 50.0 -1.3**
HYB *e*S **S 08 17 21.0 -7.1**
HYB Hyderabad 19.77 308 *e*P **Pn 08 13 50.0 -1.3**
HYB *e*S **S 08 17 32.0 +3.9**
QIZ Qiongzhong 20.01 46 P **P 08 13 53.4 +1.7**
QIZ AMB AMB
comp=Z,16nm,1.0s
QIZ LR LR
comp=N,412nm,14.6s
QIZ LR LR
comp=Z,493nm,18.2s
KMI Kunming 21.03 21 P **P 08 14 05.1 +2.4**
KMI AP 08 14 22.4
KMI XP sP 08 14 30.6 +3.7
KMI S **S 08 17 57.5 +4.6**
KMI AMB AMB
comp=Z,32nm,0.9s,mb4.7
KKM Kota Kinabalu 21.42 87 ⇑P **P 08 14 09.3 +2.3**
KDM Kudat 22.06 85 ⇓P **P 08 14 16.4 +2.6**
SDKM Sandakan 22.40 88 ⇑P **P 08 14 17.9 +0.6**
ODAN Odare 22.41 343 *e*P **P 08 14 15.2 -2.1**
comp=Z,48nm,0.5s,mb5.1
RAMN Ramite 22.73 341 *e*P **P 08 14 19.1 -1.7**
comp=Z,41nm,0.6s,mb5.0
TAPN Taplejung 22.78 344 *e*P **P 08 14 18.8 -2.4**
comp=Z,27nm,0.4s,mb5.0
KMMI Kalianget 22.89 123 P **P 08 14 26.6 +4.1**
comp=Z,71nm,0.8s,mb5.1
TSM Tawau 23.12 92 ⇑P **P 08 14 22.3 -2.6**
JIRN Jiri 23.53 341 *e*P **P 08 14 26.2 -2.2**
comp=Z,46nm,0.4s,mb5.2
MYLDM Lahad Datu 23.70 90 ⇑P **P 08 14 32.4 +2.2**
PKI Pulchoki 23.71 339 *e*P **P 08 14 29.4 -0.7**
comp=Z,27nm,0.5s,mb4.8
PKI Pulchoki 23.71 339 *e*P **P 08 14 29.5 -0.6**
PKIN Phulchoki 23.72 339 *e*P **P 08 14 29.5 -0.7**
GYA Guiyang 23.82 27⇓*i*P **P 08 14 32.8 +1.7**
GYA AP 08 14 48.6
GYA XP sP 08 14 55.7 -1.0
GYA PP 08 15 08.8
GYA PPP 08 15 19.9
GYA PCP PcP 08 18 13.3 +0.5
GYA S **S 08 18 41.0 -0.7**
GYA XS sS 08 19 09.8 -1.1
GYA SS 08 19 36.7
GYA SCP ScP 08 21 43.3 -1.6
GYA PCS PcS 08 21 51.6 -0.9
GYA AMB AMB
comp=Z,30nm,0.9s,mb4.6
GYA AMB AMB
comp=Z,210nm,6.9s
GYA LR LR
comp=N,780nm,10.2s
GYA LR LR
comp=E,550nm,10.0s
GYA LR LR
comp=Z,890nm,10.8s
DMN Daman 23.85 339 *e*P **P 08 14 30.6 -0.8**
comp=Z,40nm,0.7s,mb4.9
GUN Gumba 23.86 340 *e*P **P 08 14 29.6 -1.9**
comp=Z,78nm,0.6s,mb5.2
KKN Kakani 23.96 339 *e*P **P 08 14 31.2 -1.1**
comp=Z,54nm,0.8s,mb4.9
KKN Kakani 23.96 339 *e*P **P 08 14 31.2 -1.1**
KKN pmax pmax
comp=Z,54nm,0.8s,mb4.9
LSA Lhasa 24.36 353 P **P 08 14 37.2 +1.3**
LSA AMB AMB
comp=Z,50nm,0.6s,mb5.0
LSA Lhasa 24.36 353 *e*P **P 08 14 37.1 +1.2**
LSA *e**PP 08 14 54.5
LSA pmax pmax
comp=Z,34nm,0.5s,mb4.9
LSA Lhasa 24.36 353 *e*P **P 08 14 37.1 +1.2**
comp=Z,34nm,0.5s,mb4.9
LSA *e*pP 08 14 54.5
GKN Gorkha 24.38 338 *e*P **P 08 14 35.9 -0.3**
comp=Z,29nm,0.3s,mb5.1
KOLN Koldanda 24.58 336 *e*P **P 08 14 38.0 0.0**
comp=Z,64nm,0.5s,mb5.3
KHKI Kahang-Kahang 24.96 123 P **P 08 14 42.1 +0.4**
comp=Z,32nm,0.7s,mb4.9
DANN Dangsing 25.03 337 *e*P **P 08 14 42.0 -0.1**
comp=Z,121nm,0.5s,mb5.6
CD2 Chengdu 26.72 18 P **P 08 14 56.7 -0.7**
CD2 AP pP 08 15 14.1 -0.4
CD2 XP sP 08 15 23.3 +0.2
CD2 PP 08 15 45.4
CD2 PCP PcP 08 18 16.8 -2.5
CD2 S **S 08 19 26.8 -1.1**
CD2 XS sS 08 19 57.1 -0.3
CD2 SS 08 20 46.0
CD2 AMB AMB
comp=Z,40nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,140nm,6.5s
CD2 LR LR
comp=N,330nm,5.3s
CD2 LR LR
comp=Z,250nm,13.7s
KAPI Kappang 27.09 112 P **P 08 15 00.9 0.0**
comp=Z,243nm,0.8s,mb5.8,SNR=6.3
KAPI Kappang 27.09 112 P **P 08 15 00.1 -0.8**
comp=Z,20nm,0.6s,mb4.9,baz=283,slow=9.1,SNR=20
KAPI LR LR 08 25 08.6
comp=Z,107nm,19.6s,baz=189,slow=35
KAPI Kappang 27.09 112 *e*P **P 08 15 00.1 -0.8**
comp=Z,24nm,0.7s,mb4.8
KAPI Kappang 27.09 112 P **P 08 15 00.4 -0.5**
comp=Z,21nm,0.7s,mb4.8
XAN Xi'an 31.36 23 P **P 08 15 37.7 -0.9**
XAN AP pP 08 15 55.4 -0.5
XAN XP sP 08 16 04.6 +0.2
XAN PP PP 08 16 41.0 -10
XAN PPP 08 16 55.9
XAN S **S 08 20 32.4 -8.3**
XAN SS SS 08 22 35.0 -23
XAN AMB AMB
comp=Z,46nm,0.6s,mb5.4
XAN AMB AMB
comp=Z,185nm,8.6s
XAN LR LR
comp=Z,382nm,18.1s
LZH Lanzhou 31.63 14 *e*P **P 08 15 40.0 -0.9**
LZH AP pP 08 15 55.5 -2.7
LZH XP sP 08 16 05.5 -1.2
LZH PP PP 08 16 46.3 -7.3
LZH *e*S **S 08 20 43.4 -1.4**
LZH XS sS 08 21 16.4 +1.9
LZH SS SS 08 22 37.0 -26
LZH AMB AMB
comp=Z,38nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,154nm,4.0s
LZH LR LR
comp=N,879nm,14.9s
LZH LR LR
comp=Z,1μm,16.4s
GTA Gaotai 34.13 7 P **P 08 16 02.1 -0.5**
GTA AP pP 08 16 20.1 +0.1
GTA XP sP 08 16 29.3 +0.8
GTA S **S 08 21 22.8 -0.7**
GTA XS sS 08 21 53.6 +0.3
GTA SS SS 08 23 35.7 -18
GTA AMB AMB
comp=Z,29nm,0.9s,mb5.1
GTA AMB AMB
comp=Z,99nm,5.1s
GTA LR LR
comp=N,179nm,15.6s
GTA LR LR
comp=E,152nm,15.6s
GTA LR LR
comp=Z,132nm,15.6s
NJ2 Nanjing 34.80 38 *e*P **P 08 16 11.2 +2.6**
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.4
HHC Hu-ho-hao-te 38.36 21 *e*P **P 08 16 39.3 +0.6**
HHC AP pP 08 16 57.4 +1.1
HHC XP sP 08 17 07.0 +2.2
HHC PP PP 08 18 12.8 +5.0
HHC PCP PcP 08 18 47.1 -4.0
HHC S **S 08 22 29.5 +1.5**
HHC SS SS 08 25 14.8 -4.7
HHC SCS ScS 08 26 39.9 -2.8
HHC AMB AMB
comp=Z,18nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,129nm,4.2s
HHC LR LR
comp=N,277nm,17.8s
HHC LR LR
comp=E,118nm,15.5s
HHC LR LR
comp=Z,213nm,19.0s
FITZ Fitzroy Crossi 38.46 128⇑*i*P **P 08 16 38.8 -1.1**
comp=Z,17nm,0.5s,mb5.1
FITZ Fitzroy Crossi 38.46 128 P **P 08 16 38.9 -1.0**
comp=Z,32nm,0.7s,mb5.2
WMQ Urumqi 38.71 352 P **P 08 16 42.5 +0.9**
WMQ AP pP 08 16 59.7 +0.4
WMQ PCP PcP 08 18 51.0 -1.1
WMQ S **S 08 22 34.2 +0.9**
WMQ PCS PcS 08 22 39.1 -2.3
WMQ XS sS 08 23 03.5 0.0
WMQ SS SS 08 25 18.7 -7.9
WMQ AMB AMB
comp=Z,22nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,131nm,4.5s
BJT Baijiatuau 39.48 26 *e*P **P 08 16 49.1 +1.0**
BJT pmax pmax
comp=Z,20nm,0.4s
BJT Baijiatuau 39.48 26 *e*P **P 08 16 49.1 +1.0**
comp=Z,20nm,0.4s,mb5.3
BJI Beijing 39.50 26 P **P 08 16 49.1 +0.9**
BJI AMB AMB
comp=Z,47nm,0.9s,mb5.3
BJI AMB AMB
comp=Z,71nm,4.1s
ULHL Ulahol 40.15 339 P **P 08 16 54.4 +0.8**
SNR=5.5
KZA Kyzart 40.37 338 P **P 08 16 56.5 +1.0**
SNR=10
UCH Uchtor 40.79 337 P **P 08 17 00.0 +1.2**
SNR=6.5
TKM2 Tokmak 2 40.97 338 *e*P **P 08 17 00.8 +0.4**
TKM2 pmax pmax
comp=Z,20nm,0.6s,mb5.1
TKM2 Tokmak 2 40.97 338 P **P 08 17 01.0 +0.7**
SNR=28
TKM2 Tokmak 2 40.97 338 *e*P **P 08 17 00.8 +0.5**
comp=Z,20nm,0.6s,mb5.1
KBK Karagaybulak 40.98 338 P **P 08 17 01.8 +1.3**
SNR=63
AML Almayashu 41.03 336 P **P 08 17 02.1 +1.3**
SNR=15
AAK Ala-Archa 41.14 337 P **P 08 17 03.5 +1.8**
comp=Z,186nm,0.7s,mb6.0,SNR=13
AAK Ala-Archa 41.14 337 *e*P **P 08 17 02.9 +1.2**
AAK *e* 08 18 39.1
AAK pmax pmax
comp=Z,24nm,0.8s,mb5.1
AAK Ala-Archa 41.14 337 *e*P **P 08 17 02.9 +1.1**
comp=Z,24nm,0.8s,mb5.1
AAK *e*PP PP 08 18 39.1 +1.1
AAK Ala-Archa 41.14 337 P **P 08 17 03.2 +1.5**
comp=Z,22nm,0.9s,mb5.0
CHMS Chumysh 41.35 338 P **P 08 17 04.0 +0.5**
SNR=7.6
EKS2 Erkin-Say 41.44 337 P **P 08 17 05.4 +1.1**
SNR=21
EKS2 Erkin-Say 41.44 337 *e*P **P 08 17 04.9 +0.7**
comp=Z,22nm,0.6s,mb5.2
EKS2 *e*pP pP 08 17 22.9 +0.8
EKS2 *e*sP sP 08 17 31.7 +1.2
KAKA Kakadu 41.62 116 *e*P x 08 16 46.0
comp=Z,8.9nm,0.6s
KAKA Kakadu 41.62 116 P x 08 16 46.8
USP Ospenovka 41.68 338 P **P 08 17 06.6 +0.5**
SNR=45
MK31 Makanchi Array 42.56 347 *e*P **P 08 17 13.1 -0.2**
MKAR Makanchi Array 42.56 347 P **P 08 17 13.1 -0.2**
comp=Z,16nm,0.6s,mb4.9,baz=158,slow=8.2,SNR=149
MKAR PcP PcP 08 19 04.9 +0.3
comp=Z,2.3nm,0.6s,baz=189,slow=3.2,SNR=4.1
MKAR LR LR 08 37 10.3
comp=Z,114nm,20.8s,baz=19,slow=39
MKAR Makanchi Array 42.56 347 P **P 08 17 13.1 -0.2**
MKAR 08 19 04.9
MKAR Makanchi Array 42.56 347 P **P 08 17 13.1 -0.2**
MKAR PcP PcP 08 19 04.9 +0.4
MKAR LR LR 08 37 10.3
KK31 Karatay Array 43.17 334 *i* P **P 08 17 18.1 -0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
SONM Songino Array 43.41 11 P **P 08 17 19.7 -0.3**
comp=Z,14nm,0.7s,mb4.8,baz=190,slow=8.2,SNR=89
SONM PcP PcP 08 19 08.1 +0.8
comp=Z,3.9nm,0.5s,baz=197,slow=3.7,SNR=16
SONM LR LR 08 36 21.0
comp=Z,146nm,20.2s,baz=210,slow=37
SONM Songino Array 43.41 11 P **P 08 17 19.7 -0.4**
SONM 08 19 08.1
ULN Ulaanbaatar 43.57 12 *e*P **P 08 17 20.9 -0.5**
ULN *e* 08 19 07.8
ULN pmax pmax
comp=Z,11nm,0.6s,mb4.8
ULN Ulaanbaatar 43.57 12 *e*P **P 08 17 20.9 -0.5**
comp=Z,11nm,0.6s,mb4.8
ULN *e*PcP PcP 08 19 07.8 -0.1
ULN Ulaanbaatar 43.57 12 P **P 08 17 21.0 -0.4**
comp=Z,20nm,0.7s,mb5.0
KSRS Korea Array 43.96 39 P **P 08 17 24.4 -0.3**
comp=Z,5.4nm,0.6s,mb4.4,baz=215,slow=9.5,SNR=16
KSRS LR LR 08 34 56.7
comp=Z,131nm,21.5s,baz=297,slow=35
WRAB Tennant Creek 46.44 124 P **P 08 17 44.0 -0.6**
comp=Z,321nm,0.5s,SNR=58
WRAB Tennant Creek 46.44 124*c i*P **P 08 17 44.6 0.0**
WRAB Tennant Creek 46.44 124 *e*P **P 08 17 44.4 -0.1**
comp=Z,27nm,0.6s,mb5.2
WRAB *e*PcP PcP 08 19 18.6 +0.3
WRAB Tennant Creek 46.44 124 P **P 08 17 44.6 0.0**
WB2 Warramunga Arr 46.44 124⇑*i*P **P 08 17 44.4 -0.2**
TLY Talaya 46.68 8 *e*P **P 08 17 46.2 +0.2**
TLY pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
TLY Talaya 46.68 8 *e*P **P 08 17 46.2 +0.2**
comp=Z,6.3nm,0.8s,mb4.4

CN2 Changchun 46.80 31 ⇑P **P** **08 17 46.9 -0.2**
CN2 *e*AP pP 08 18 06.6 +1.4
CN2 *e*S **S** **08 24 31.9 -0.1**
CN2 AMB AMB
comp=Z,30nm,0.6s,mb5.2
CN2 AMB AMB
comp=Z,300nm,5.0s
KURK Kurchatov 47.08 346 P **P** **08 17 49.3 +0.2**
comp=Z,485nm,0.7s,SNR=41
KURK Kurchatov 47.08 346 P **P** **08 17 49.0 -0.1**
comp=Z,46nm,0.5s,mb5.4,baz=170,slow=6.8,SNR=42
KURK Kurchatov 47.08 346 *e*P **P** **08 17 49.5 +0.4**
KURK *e**PP pP 08 18 06.9 -0.4
KURK pmax pmax
comp=Z,46nm,0.7s,mb5.3
KURK Kurchatov 47.08 346 *e*P **P** **08 17 49.5 +0.3**
comp=Z,46nm,0.7s,mb5.3
KURK *e*pP pP 08 18 06.9 -0.4
ASAR Alice Springs 47.96 129 P **P** **08 17 56.4 0.0**
comp=Z,9.6nm,0.5s,mb4.9,baz=301,slow=7.6,SNR=203
ASAR S **S** **08 24 48.4 -0.7**
comp=Z,1.0nm,0.8s,baz=292,slow=14,SNR=8.9
HIA Hailar 48.54 22 *e*P **P** **08 18 00.6 +0.1**
HIA pmax pmax
comp=Z,8.0nm,0.4s
HIA Hailar 48.54 22 *e*P **P** **08 18 00.6 +0.1**
comp=Z,8.1nm,0.4s,mb5.0
ZAA0 Zalesovo Array 49.02 352 *e*P **P** **08 18 03.8 -0.2**
ZALV Zalesovo Beam 49.02 352 P **P** **08 18 03.9 -0.1**
comp=Z,24nm,0.5s,mb5.4,baz=186,slow=7.8,SNR=108
ZALV ScP ScP 08 23 15.1 -0.7
comp=Z,1.2nm,0.7s,baz=151,slow=3.4,SNR=3.9
ZALV LR LR 08 44 00.4
comp=Z,52nm,18.0s,baz=240,slow=42
ZALV Zalesovo Beam 49.02 352 P **P** **08 18 03.9 -0.1**
ZALV ScP ScP 08 23 15.1 -0.7
ZALV LR LR 08 44 00.4
MDJ Mudanjiang 49.52 32 P **P** **08 18 08.5 +0.5**
MDJ AP pP 08 18 25.9 -0.4
MDJ XP sP 08 18 34.2 -0.4
MDJ PP PP 08 20 03.4 +0.5
MDJ S **S** **08 25 11.0 +0.6**
MDJ XS sS 08 25 42.2 +0.7
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.9
MDJ AMB AMB
comp=Z,103nm,6.3s
MDJ LR LR
comp=N,61nm,21.1s
MDJ LR LR
comp=E,68nm,21.6s
MDJ LR LR
comp=Z,112nm,20.7s
MDJ Mudanjiang 49.52 32 *e*P **P** **08 18 08.5 +0.4**
comp=Z,18nm,0.9s,mb5.0
NVS Novosibirsk 50.11 351 ⇑*i*P **P** **08 18 10.6 -1.7**
NVS *e*S **S** **08 25 24.2 +6.0**
NVS pmax pmax
comp=Z,27nm,1.0s,mb5.1
NVS pmax pmax
comp=N,28nm,1.0s
NVS pmax pmax
comp=E,14nm,0.5s
NVS smax
comp=E,27nm,1.8s
MJAR Matsushiro Arr 50.41 46 P **P** **08 18 16.0 +1.0**
comp=E,2.0nm,0.5s,mb4.3,baz=223,slow=7.4,SNR=5.6
MJAR LR LR 08 39 52.9
comp=E,116nm,21.4s,baz=300,slow=36
KRAR Krasnoyarsk 50.44 359⇓*e*P **P** **08 18 15.2 +0.4**
KRAR pmax pmax
comp=Z,51nm,0.8s,mb5.5
NAY Al-Naaiem 50.64 304 *e*P **P** **08 18 17.0 +0.2**
NAY AMb AMB 08 18 21.2
comp=Z,25nm,1.4s,mb5.0
MIB Mutribah 50.74 304 *e*P **P** **08 18 17.6 0.0**
MIB AMb AMB 08 18 18.8
comp=Z,51nm,0.9s,mb5.5
VOSK Vostochnaya 51.01 342 P **P** **08 18 18.7 -0.4**
VOSK pmax pmax
comp=Z,15nm,0.7s,mb5.1
BRVK Borovoye 51.51 341 P **P** **08 18 22.8 -0.1**
comp=Z,238nm,0.6s,SNR=16
BRVK Borovoye 51.51 341 *e*P **P** **08 18 22.6 -0.3**
BRVK pmax pmax
comp=Z,24nm,0.5s,mb5.5
BRVK Borovoye 51.51 341 *e*P **P** **08 18 22.6 -0.3**
comp=Z,24nm,0.5s,mb5.5
OPO Ambohidratompo 52.55 242 P **P** **08 18 32.9 +1.7**
comp=Z,1.3nm,0.7s,mb4.1,baz=63,slow=4.5,SNR=3.9
AB31 Akbulak array 52.62 332 P **P** **08 18 30.9 -0.2**
AB31 pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
PMG Port Moresby 54.33 106⇓*e*P **P** **08 18 43.7 -0.6**
PMG pmax pmax
comp=Z,23nm,1.1s
BOD Bodaibo 54.38 13 *e*P **P** **08 18 42.5 -1.4**
BOD pmax pmax
comp=Z,15nm,1.0s,mb5.0
HABR Khabarovsk 54.88 32 P **P** **08 18 46.2 -1.5**
HABR *e**PP pP 08 18 56.2 -10
HABR *e* 08 19 46.4
HABR *e* 08 20 50.0
HABR *e*PPP 08 22 02.6
HABR *e*S **S** **08 26 28.1 +4.5**
HABR *e* 08 26 40.5
HABR *e* 08 28 32.5
HABR *e*SS SS 08 30 13.8 +5.8
ASAJ Asahikawa 56.90 40 P **P** **08 19 03.0 +0.8**
comp=Z,3.6nm,0.4s,mb4.8,baz=327,slow=31,SNR=3.7
SVE Sverdlovsk 57.85 339 *e*P **P** **08 19 08.6 0.0**
SVE pmax pmax
comp=Z,29nm,0.8s,mb5.4
STKA Stephens Creek 58.05 133 *e*P **P** **08 19 10.5 0.0**
comp=Z,2.9nm,0.4s,mb4.7
STKA Stephens Creek 58.05 133 P **P** **08 19 10.6 +0.1**
comp=Z,3.6nm,0.4s,mb4.7,baz=313,slow=7.5,SNR=12
STKA LR LR 08 47 33.6
comp=Z,90nm,18.4s,baz=12,slow=40
ARU Arti 58.33 337*c i*P **P** **08 19 11.4 -0.6**
ARU *e* 08 21 19.2
ARU S **S** **08 27 14.1 +5.3**
ARU SS SS 08 31 01.3 -0.6
ARU pmax pmax
comp=Z,22nm,1.7s,mb4.9
ARU Arti 58.33 337 *e*P **P** **08 19 11.2 -0.8**
comp=Z,17nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 58.37 37⇑*e*P **P** **08 19 12.5 0.0**
YSS pmax pmax
comp=Z,20nm,0.9s,mb5.2
KIV Kislovodsk 59.48 319 *i*P **P** **08 19 19.4 -0.9**
KIV *i* 08 20 04.4
KIV pmax pmax
comp=Z,13nm,0.7s,mb5.1
YAK Yakutsk 62.12 18⇑*e*P **P** **08 19 36.5 -1.3**
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.2
ANN Anapa 63.29 318 *e*P **P** **08 19 40.4 -5.5**
ANN *e*S **S** **08 28 12.1 -0.4**
ANN *e*SS SS 08 32 19.7 -0.4
ANN pmax pmax
comp=Z,63nm,1.4s,mb5.3
BR131 Keskin Array S 64.43 312 *e*P **P** **08 19 52.6 -0.9**
BRTR Keskin Array B 64.43 312 P **P** **08 19 52.6 -0.9**
comp=Z,5.3nm,0.8s,mb4.4,baz=125,slow=7.1,SNR=21
BRTR LR LR 08 49 05.1
comp=Z,42nm,19.0s,baz=197,slow=37
BRTR Keskin Array B 64.43 312 *i*P **P** **08 19 52.7 -0.8**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
OBN Obninsk 67.72 328 *e*P **P** **08 20 13.8 -0.5**
OBN *i* pP 08 20 32.8 -0.7
OBN pmax pmax
comp=Z,18nm,0.8s,mb5.0
TIXI Tiksi 69.49 11⇓*e*P **P** **08 20 23.2 -1.8**
TIXI pmax pmax
comp=Z,20nm,0.8s,mb5.0
TIXI MLR MLR
comp=Z,100nm,23.0s
AKASG Malin Array Be 70.39 322 P **P** **08 20 29.4 -1.5**
comp=Z,6.3nm,0.6s,mb4.7,baz=92,slow=5.6,SNR=15
AKASG Malin Array Be 70.39 322 P **P** **08 20 29.4 -1.5**
VRI Vrincioaia 70.83 317⇑*i*P **P** **08 20 34.1 +0.4**
VRI Vrincioaia 70.83 317 ⇑P **P** **08 20 34.1 +0.4**
PLOR Plostina 70.88 317⇓*i*P **P** **08 20 34.7 +0.7**

SEY Seymchan 70.90 24⇑*e*P **P** **08 20 32.9 -0.9**
MLR Muntele Rosu 71.29 316⇓*i*P **P** **08 20 36.9 +0.4**
VOIR 71.89 316⇑*i*P **P** **08 20 39.6 -0.6**
VOIR 71.89 316 ⇑P **P** **08 20 39.6 -0.5**
BURAR Bucovina Array 72.21 318⇑*i*P **P** **08 20 42.4 +0.4**
BUR08 Bucovina Ar. S 72.22 318 *e*P **P** **08 20 42.3 +0.2**
JOF Joensuu 73.26 335 *ep* **P** **08 20 47.2 -0.7**
comp=Z,2.9nm,0.4s,mb4.5
JOF Joensuu 73.26 335 *e*P **P** **08 20 47.2 -0.7**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
GZR Gura Zlata 73.46 316⇑*i*P **P** **08 20 50.8 +1.3**
GZR Gura Zlata 73.46 316 ⇑P **P** **08 20 50.8 +1.3**
DRGR 73.74 317⇑*i*P **P** **08 20 51.3 +0.3**
DRGR 73.74 317 ⇑P **P** **08 20 51.3 +0.3**
APA Apatity 74.30 340⇑*e*P **P** **08 20 53.6 -0.3**
APA pmax pmax
comp=Z,26nm,1.0s,mb4.9
KOLS Kolonicke sedl 74.39 319 *e*P **P** **08 20 55.0 +0.2**
KOLS *e*PCP PcP 08 21 11.0 +1.9
CRVS Cervenica-Dubn 74.91 319 *i*P **P** **08 20 58.0 +0.2**
CRVS *e* pP 08 21 15.2 -2.1
CRVS pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
CRVS Cervenica-Dubn 74.91 319 *i*P **P** **08 20 58.0 +0.2**
comp=Z,5.8nm,0.8s,mb4.4
CRVS *e* pP 08 21 15.2 -2.1
STHS Stebnicka Huta 75.13 320 *e*P **P** **08 20 59.8 +0.7**
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
STHS Stebnicka Huta 75.13 320 *e*P **P** **08 20 59.8 +0.7**
comp=Z,6.6nm,0.8s,mb4.4
KAF Kangasniemi 75.19 333 *ep* **P** **08 20 58.4 -0.7**
comp=Z,3.1nm,0.4s,mb4.4
KAF Kangasniemi 75.19 333 *e*P **P** **08 20 58.4 -0.7**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
PSZ Piszkesteto 75.80 318⇓*i*P **P** **08 21 03.4 +0.5**
PSZ Piszkesteto 75.80 318 ⇓P **P** **08 21 03.4 +0.5**
OJC Ojcow 76.18 320 *e*P **P** **08 21 04.9 -0.1**
PKSM Moragy 76.44 316⇑*i*P **P** **08 21 06.0 -0.6**
PKSM Moragy 76.44 316 ⇑P **P** **08 21 06.0 -0.6**
VYHS Vyhne 76.57 318 *e*P **P** **08 21 07.2 -0.1**
VYHS pmax pmax
comp=Z,8.0nm,1.6s,mb4.2
VYHS Vyhne 76.57 318 *e*P **P** **08 21 07.2 -0.1**
comp=Z,7.6nm,1.6s,mb4.2
KEV Kevo 77.29 341 *ep* **P** **08 21 10.1 -0.8**
comp=Z,1.8nm,0.4s,mb4.2
KEV Kevo 77.29 341 *e*P **P** **08 21 10.1 -0.8**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ZST Bratislava 77.69 318 *e*P **P** **08 21 14.0 +0.4**
ZST pmax pmax
comp=Z,13nm,0.6s,mb4.8
ZST Bratislava 77.69 318 *e*P **P** **08 21 14.0 +0.4**
comp=Z,13nm,0.6s,mb4.8
ARCES ARCESS Array B 77.72 340 P **P** **08 21 13.3 0.0**
comp=Z,6.8nm,0.5s,mb4.6,baz=94,slow=5.9,SNR=87
ARCES PP PP 08 24 08.0 -1.4
comp=Z,3.4nm,0.9s,baz=98,slow=10,SNR=3.7
ARCES ARCESS Array B 77.72 340 P **P** **08 21 13.3 0.0**
ARCES PP PP 08 24 08.0 -1.4
ARE0 ARCESS Array S 77.72 340 *e*P **P** **08 21 13.4 +0.1**
KOGS Kog 78.11 316 *i*P **P** **08 21 16.2 +0.3**
BILL Bilibino 78.13 21 *e*P **P** **08 21 14.6 -1.0**
BILL *e* 08 21 23.9
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
BILL MLR MLR
comp=Z,100nm,17.0s
DPC Dobruska-Polom 78.41 320 *e*P **P** **08 21 17.8 +0.3**
GCIS Gornji Cirnik 78.50 316 *i*P **P** **08 21 18.2 +0.1**
UPC Upice 78.62 320 *e*P **P** **08 21 14.9 -3.8**
BOJS Bojanci 78.74 315 *i*P **P** **08 21 19.5 0.0**
PERS Pernice 78.91 316 *i*P **P** **08 21 20.8 +0.5**
ZAVS Zavodnje 78.96 316 *i*P **P** **08 21 20.9 +0.3**
SOKA Soboth 78.97 316⇑*i*P **P** **08 21 21.1 +0.5**
comp=Z,8.5nm,0.8s,mb4.6
LJU Ljubljana 79.28 316 *i*P **P** **08 21 22.9 +0.5**
GEC2 GERESS Array S 80.00 319 *e*P **P** **08 21 26.4 +0.3**
comp=Z,1um,0.6s
GERES GERESS Array B 80.00 319 P **P** **08 21 26.4 +0.2**
comp=Z,7.4nm,0.7s,mb4.7,baz=86,slow=5.1,SNR=25
KHC Kasperske Hory 80.09 319 *e*P **P** **08 21 26.8 +0.1**
KHC *e*PCP PcP 08 21 37.5 +3.6
WTTA Wattenberg 81.32 317⇑*i*P **P** **08 21 32.9 -0.4**
comp=Z,6.3nm,0.5s,mb4.7
FETA Feichten 81.93 317⇑*i*P **P** **08 21 36.5 -0.1**
comp=Z,5.3nm,0.8s,mb4.4
NOA NORSAR Array B 82.10 331 P **P** **08 21 38.9 +1.7**
comp=Z,0.8nm,0.7s,baz=89,slow=5.7,SNR=2.8
NOA LR LR 09 03 41.2
comp=Z,70nm,18.9s,baz=345,slow=40
KEST Kesra 83.08 305 P **P** **08 21 44.0 +1.3**
comp=Z,1.2nm,0.8s,mb3.8,baz=261,slow=0.4,SNR=4.6
PGF Pioggiola 83.18 312 *e*P **P** **08 21 43.3 +0.2**
comp=Z,12nm,0.7s,mb4.5
PGF Pioggiola 83.18 312 *e*P **P** **08 21 43.3 +0.2**
PGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
PGF Pioggiola 83.18 312 *e*P **P** **08 21 43.3 +0.2**
comp=Z,6.1nm,0.7s,mb4.5
CDF Champ du Feu 84.25 318 *e*P **P** **08 21 49.3 +0.8**
SBF Sospel 84.29 313 *e*P **P** **08 21 48.7 -0.1**
comp=Z,26nm,0.7s,mb4.9
SBF Sospel 84.29 313 *e*P **P** **08 21 48.7 -0.1**
SBF pmax pmax
comp=Z,13nm,0.7s,mb4.9
SBF Sospel 84.29 313 *e*P **P** **08 21 48.7 -0.1**
comp=Z,13nm,0.7s,mb4.9
LPG La Plagne 84.71 315 *e*P **P** **08 21 51.2 +0.3**
comp=Z,11nm,0.6s,mb4.6
LPG La Plagne 84.71 315 *e*P **P** **08 21 51.2 +0.3**
LPG pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPG La Plagne 84.71 315 *e*P **P** **08 21 51.2 +0.3**
comp=Z,5.5nm,0.6s,mb4.7
LPL La Plagne 84.72 315 *e*P **P** **08 21 51.2 +0.3**
comp=Z,16nm,0.7s,mb4.8
LPL La Plagne 84.72 315 *e*P **P** **08 21 51.2 +0.3**
LPL pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPL La Plagne 84.72 315 *e*P **P** **08 21 51.2 +0.3**
comp=Z,8.0nm,0.7s,mb4.8
MBDF Montbardon 84.73 314 *e*P **P** **08 21 50.4 -0.6**
comp=Z,5.8nm,0.7s,mb4.3
MBDF Montbardon 84.73 314 *e*P **P** **08 21 50.4 -0.6**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MBDF Montbardon 84.73 314 *e*P **P** **08 21 50.4 -0.6**
comp=Z,2.9nm,0.7s,mb4.3
FRF La Foret Royal 84.87 313 *e*P **P** **08 21 51.5 -0.2**
comp=Z,11nm,0.6s,mb4.7
FRF La Foret Royal 84.87 313 *e*P **P** **08 21 51.5 -0.2**
FRF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
FRF La Foret Royal 84.87 313 *e*P **P** **08 21 51.5 -0.2**
comp=Z,5.4nm,0.6s,mb4.7
HAU Haudompre 84.89 318 *e*P **P** **08 21 51.2 -0.5**
CABF La Chapelle 85.12 316 *e*P **P** **08 21 52.9 0.0**
ORIF Oris-en-Rattie 85.36 315 *e*P **P** **08 21 54.3 +0.2**
comp=Z,7.6nm,0.7s,mb4.4
ORIF Oris-en-Rattie 85.36 315 *e*P **P** **08 21 54.3 +0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 85.36 315 *e*P **P** **08 21 54.3 +0.2**
comp=Z,3.8nm,0.7s,mb4.4
SMRF Simiane la Rot 85.62 314 *e*P **P** **08 21 55.0 -0.5**
VIVF Saint-Julien-l 86.22 315 *e*P **P** **08 21 58.3 -0.1**
LOR Lormes 86.61 317 *e*P **P** **08 21 59.9 -0.3**
comp=Z,18nm,0.9s,mb4.7
LOR Lormes 86.61 317 *e*P **P** **08 21 59.9 -0.3**
LOR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LOR Lormes 86.61 317 *e*P **P** **08 21 59.9 -0.3**
comp=Z,8.9nm,0.9s,mb4.7
SMF Signal de Mont 86.67 316 *e*P **P** **08 22 00.5 0.0**
LASF Ste Croix 86.86 314 *e*P **P** **08 22 02.0 +0.5**
comp=Z,16nm,0.9s,mb4.6
SSF Saint Saulge 86.86 317 *e*P **P** **08 22 01.3 -0.2**
BGF Bois d'Agland 87.36 316 *e*P **P** **08 22 03.9 0.0**
comp=Z,12nm,0.5s,mb4.8
BGF Bois d'Agland 87.36 316 *e*P **P** **08 22 03.9 0.0**
BGF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BGF Bois d'Agland 87.36 316 *e*P **P** **08 22 03.9 0.0**
comp=Z,6.2nm,0.5s,mb4.8
MTLF Montolieu 88.10 313 *e*P **P** **08 22 07.8 +0.3**
ALE Alert 91.54 357 P **P** **08 22 23.3 +0.4**
comp=Z,77nm,0.5s,SNR=13
TORD Torodi Ar. Bea 91.69 283 P **P** **08 22 25.3 +0.5**
comp=Z,0.5nm,0.5s,mb4.0,baz=87,slow=3.9,SNR=5.9
TORD PKKP PKKPbc 08 39 44.0 +0.4
comp=Z,0.3nm,0.5s,baz=303,slow=2.7,SNR=4.5
TORD LR LR 09 02 37.9
comp=Z,96nm,19.1s,baz=50,slow=35
ESDC Sonseca Array 93.19 310 P **P** **08 22 31.8 +0.5**
comp=Z,0.9nm,0.4s,mb4.4,baz=61,slow=3.9,SNR=5.7
ESDC Sonseca Array 93.19 310 P **P** **08 22 31.8 +0.5**
BPAW Bear Paw Mtn. 95.47 24 *e*P **P** **08 22 41.7 +0.5**
comp=Z,6.9nm,1.0s,mb5.0
DBIC Dimbokro 98.81 278 LR LR 09 05 57.7
comp=Z,64nm,18.0s,baz=58,slow=34
RES Resolute Bay 99.79 3 P Pdif **P** **08 23 01.3 +0.5**
comp=Z,2.7nm,0.5s,baz=282,slow=4.4,SNR=28
YKA Yellowknife Ar 108.64 14 PKiKP PKiKP 08 27 44.1 -0.9
comp=Z,0.2nm,0.6s,baz=327,slow=2.2,SNR=4.6
YKA PP PP 08 28 08.0 -2.9
comp=Z,0.3nm,0.7s,baz=336,slow=7.6,SNR=4.5
YKA Yellowknife Ar 108.64 14 PKPdf PKiKP 08 27 44.1 -0.9
YKA PP PP 08 28 08.0 -2.9
SCHQ Schefferville 118.00 348 PKP PKPdf 08 28 02.9 -0.2
comp=Z,3.5nm,0.7s,baz=305,slow=2.3,SNR=6.0
MSO Missoula 122.10 23 *e*PKPdf PKPdf 08 28 11.1 -0.2
EGMT Eagleton 122.58 19 *e*PKPdf PKPdf 08 28 12.6 +0.5
ULM Lac du Bonnet 123.78 8 PKP PKPdf 08 28 13.8 -0.6
comp=Z,5.3nm,0.5s,baz=338,slow=3.0,SNR=6.9
ULM Lac du Bonnet 123.78 8 PKP PKPdf 08 28 13.8 -0.6
DLMT Dillon 123.84 23 *e*PKPdf PKPdf 08 28 15.1 +0.5
BOZ Bozeman (W) 123.97 22 *e*PKIKP PKPdf 08 28 15.4 +0.6
HLID Hailey 124.58 25 *e*PKPdf PKPdf 08 28 16.8 +0.7
RLMT Red Lodge 125.28 21 *e*PKPdf PKPdf 08 28 18.6 +1.2
RRI2 Red Ridge 126.03 23 *e*PKPdf PKPdf 08 28 19.6 +0.7
TPAW Teton Pass 126.05 23 *e*PKPdf PKPdf 08 28 20.1 +1.1
NVAR Mina Array Bea 126.69 32 PKP PKPdf 08 28 21.9 +1.6
comp=Z,1.6nm,0.5s,baz=288,slow=2.5,SNR=14
NVAR Mina Array Bea 126.69 32 PKP PKPdf 08 28 21.9 +1.6
PDAR Pinedale Array 127.20 22 PKP PKPdf 08 28 21.6 +0.5
comp=Z,2.0nm,0.5s,baz=103,slow=2.8,SNR=24
RSSD Black Hills 127.85 17 *e*PKIKP PKPdf 08 28 22.8 +0.5
DUG Dugway 128.01 27 *e*PKIKP PKPdf 08 28 24.0 +1.3
TKL Tuckaleechee C 139.09 358 *e*PKIKP PKPdf 08 28 44.8 +1.1
TXAR Lajitas Array 141.18 26 PKhKP 08 28 41.4
comp=Z,0.4nm,0.4s,baz=325,slow=1.5,SNR=13
TXAR PKP PKPdf 08 28 48.4 +0.7
comp=Z,1.7nm,0.5s,baz=202,slow=1.0,SNR=23
TXAR SKPbc SKPbc 08 32 18.1 -0.3
comp=Z,0.4nm,0.7s,baz=19,slow=3.1,SNR=3.5
TXAR Lajitas Array 141.18 26 PKP PKPdf 08 28 48.4 +0.7
TXAR SKPbc SKPbc 08 32 18.1 -0.3
JCT Junction City 141.68 20 *e*PKIKP PKiKP 08 28 51.7 +0.3
CBYP Canovanas 149.61 321 *e*PKPbc PKPbc 08 29 06.9 0.0
CRPR Cabo Rojo, PR 150.58 323 *e*PKPbc PKPbc 08 29 10.2 +0.9

*ISCJB **07** 08:13:19.7±0.5,3007N±003×1415E±01,h85km±7km, mb3.8/10, Error ellipse: s-maj=15.4km s-min=4.1km az=167.5*
*JMA **07** 08:13:19.8, 3008N×14163E, h65km, M5.1*
*IDC **07** 08:13:20.2±1.1, 2989N×14100E, h63km±11km, mb3.6/10, mb1 3.9/13, mb1mx3.8/23, mbtmp3.8/13, Error ellipse: s-maj=26.0km s-min=7.7km az=72.0*

ISC 07 08:13:21.2±0.5, 3006N±003×1415E±01, h81km±6km, n40, σ1s03/55, mb3.8/10, 1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.00**	**169**	P	**Pn**	**08 14 05.9**	**-0.8**
	225nm,0.3s,baz=336,slow=7.2,SNR=91						
CBIJ				S	**Sn**	**08 14 39.1**	**-2.5**
	100nm,0.3s,baz=259,slow=22,SNR=4.3						
CBIJ	**Chichi jima**	**3.00**	**169**	⇓P	**Pn**	**08 14 06.0**	**-0.7**
CBIJ				*e*S	**Sn**	**08 14 41.2**	**-0.4**
JHJ2	**Mitsune**	**3.38**	**335**	P	**Pn**	**08 14 11.6**	**-0.1**
JHJ2				S	**Sn**	**08 14 49.5**	**-1.2**
JHJ	**Hachijo jima 2**	**3.40**	**334**	P	**Pn**	**08 14 11.3**	**-0.7**
	89nm,0.3s,baz=233,slow=22,SNR=43						
JHJ				S	**Sn**	**08 14 49.2**	**-2.0**
	116nm,0.3s,baz=244,slow=22,SNR=9.7						
JHHJ	**Haha-jima-NKT**	**3.46**	**170**	P	**Pn**	**08 14 13.3**	**+0.5**
JHHJ				*e*S	**Sn**	**08 14 52.6**	**-0.1**
JKO	**Kozu shima**	**4.59**	**334**	P	**Pn**	**08 14 29.8**	**+1.6**
BSO1	**Boso 1**	**4.61**	**354**	P	**Pn**	**08 14 28.4**	**0.0**
BSO1				S	**Sn**	**08 15 21.6**	**+1.0**
BSO2	**Boso 2**	**4.73**	**352**	*e*S	**Sn**	**08 15 24.6**	**+1.0**
NJJJ	**Nii jima 2**	**4.74**	**337**	P	**Pn**	**08 14 31.1**	**+1.0**
BSO3	**Boso 3**	**4.81**	**350**	P	**Pn**	**08 14 31.3**	**+0.1**
BSO3				*e*S	**Sn**	**08 15 25.0**	**-0.6**
BSO4	**Boso 4**	**5.02**	**349**	P	**Pn**	**08 14 34.2**	**+0.1**
BSO4				*e*S	**Sn**	**08 15 30.5**	**-0.3**
JOD2	**Odawara 2**	**5.59**	**339**	P	**Pn**	**08 14 42.5**	**+0.8**
HMMJ	**Hamamatsu 2**	**5.77**	**327**	P	**Pn**	**08 14 45.0**	**+0.8**
JIE	**Ise**	**5.95**	**318**	P	**Pn**	**08 14 47.7**	**+1.0**
JWZ	**Kozaga**	**6.05**	**306**	P	**Pn**	**08 14 48.0**	**0.0**
JHU	**Hanno**	**6.08**	**342**	P	**Pn**	**08 14 48.9**	**+0.4**
JHU				*e*S	**Sn**	**08 15 54.7**	**-1.9**
JKN2	**Miekihoku**	**6.11**	**314**	P	**Pn**	**08 14 49.9**	**+1.1**
JNY	**Yasuok**	**6.13**	**331**	P	**Pn**	**08 14 49.9**	**+0.8**
JYT	**Yasato**	**6.26**	**350**	P	**Pn**	**08 14 51.6**	**+0.7**
JYT				*e*S	**Sn**	**08 15 59.0**	**-1.9**
JRY	**Ryogami san**	**6.34**	**340**	P	**Pn**	**08 14 53.1**	**+1.1**
JRY				*e*S	**Sn**	**08 16 03.8**	**+0.8**
JAG	**Ashikaga**	**6.59**	**345**	P	**Pn**	**08 14 55.2**	**-0.2**
JAG				*e*S	**Sn**	**08 16 07.1**	**-1.9**
JHO	**Hitachi**	**6.59**	**353**	P	**Pn**	**08 14 55.3**	**-0.1**
JHO				*e*S	**Sn**	**08 16 05.5**	**-3.5**
MJAR	**Matsushiro Arr**	**7.04**	**338**	P	**Pn**	**08 15 01.6**	**+0.1**
	12nm,0.3s,baz=163,slow=12,SNR=60						
MJAR				S	**Sn**	**08 16 19.7**	**-0.4**
	1.2nm,0.3s,baz=85,slow=7.7,SNR=2.5						
MAT	**Matsushiro**	**7.04**	**338**	P	**Pn**	**08 15 02.4**	**+0.8**
MAT				*e*S	**Sn**	**08 16 20.3**	**+0.2**
MAT	**Matsushiro**	**7.04**	**338**	P	**Pn**	**08 15 02.8**	**+1.2**
JFK	**Kawauchi**	**7.31**	**356**	P	**Pn**	**08 15 04.3**	**-1.0**
JFK				S	**Sn**	**08 16 21.0**	**-5.7**
JMK	**Ichinoseki**	**8.88**	**358**	P	**Pn**	**08 15 26.4**	**-0.2**
KSRS	**Korea Array**	**13.51**	**307**	P	**Pn**	**08 16 31.6**	**+2.3**
	0.2nm,0.3s,baz=111,slow=13,SNR=5.1						
ASAJ	**Asahikawa**	**14.06**	**3**	P	**Pn**	**08 16 36.5**	**0.0**
	3.3nm,0.3s,baz=225,slow=11,SNR=20						
CMAR	**Chiang Mai Arr**	**40.30**	**263**	P	**P**	**08 20 48.0**	**-2.7**
	1.0nm,0.3s,mb4.1,baz=45,slow=9.0,SNR=4.1						
KURK	**Kurchatov**	**50.53**	**313**	P	**P**	**08 22 10.7**	**-0.4**
	0.9nm,0.5s,mb4.1,baz=92,slow=6.9,SNR=2.9						
ASAR	**Alice Springs**	**53.91**	**189**	P	**P**	**08 22 35.6**	**-0.8**
	0.7nm,0.4s,mb4.1,baz=0.1,slow=5.7,SNR=8.8						
ASAR				PcP	PcP	08 23 41.5	+0.7
	1.1nm,0.9s,baz=9.7,slow=3.5,SNR=5.7						
STKA	**Stephens Creek**	**61.59**	**180**	P	**P**	**08 23 29.6**	**-0.4**
	1.7nm,0.5s,mb4.3,baz=347,slow=18,SNR=3.5						
YKA	**Yellowknife Ar**	**69.82**	**29**	P	**P**	**08 24 24.2**	**+1.5**
	0.2nm,0.6s,mb3.1,baz=302,slow=6.2,SNR=4.2						
ARCES	**ARCESS Array B**	**70.57**	**340**	P	**P**	**08 24 28.6**	**+1.5**
	4.7nm,1.1s,mb4.2,baz=76,slow=7.5,SNR=3.5						
NVAR	**Mina Array Bea**	**79.14**	**52**	P	**P**	**08 25 23.0**	**+5.9**
	0.2nm,0.4s,mb3.3,baz=282,slow=9.1,SNR=3.1						
AKASG	**Malin Array Be**	**79.91**	**323**	P	**P**	**08 25 20.5**	**-0.6**
	0.7nm,0.4s,mb3.9,baz=44,slow=4.1,SNR=2.9						
BRTR	**Keskin Array B**	**83.59**	**312**	P	**P**	**08 25 39.9**	**-0.8**
	2.2nm,1.0s,mb4.0,baz=85,slow=4.3,SNR=4.9						
TXAR	**Lajitas Array**	**94.28**	**53**	P	**P**	**08 26 35.6**	**+3.8**
	0.1nm,0.5s,mb3.4,baz=306,slow=2.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**122.20**	**312**	PKP	PKPdf	08 32 07.1	-0.2
	0.4nm,0.6s,baz=358,slow=0.8,SNR=2.9						

CASC 07 08:43:36.9±1.4, 1256N×8882W, h11km±13km, MD3.7, ML2.5,5C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**1.02**	**32**	*e*P	x	08 43 56.2	
VSM				*e*P	x	08 43 56.2	
VSM				*e*S	x	08 44 10.4	
BLLM	**Bellamira**	**1.05**	**33**	*e*P	x	08 43 56.2	
BLLM				*e*S	x	08 44 10.3	
SNVI	**San Vicente**	**1.05**	**359**	*e*P	x	08 43 56.1	
SNVI				*e*P	x	08 43 56.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNVI				eS	x	08 44 10.1	
LFRS	El Faro	1.08	348	⇑eP	x	08 43 56.6	
LBRS	Las Brisas	1.19	350	⇑eP	x	08 43 58.5	
CNCH	Conchagua	1.20	53	eP	x	08 43 58.1	
CNCH				eP	x	08 43 58.2	
BOQS	Boqueron	1.25	339	eP	x	08 43 59.6	
BOQS				eP	x	08 43 59.6	
BOQS				eS	x	08 44 17.5	
CAHU	Cacacuatique	1.34	26	eP	x	08 44 01.3	
CAHU				eP	x	08 44 01.7	
SBLS	San Blas	1.49	329	eP	x	08 44 03.0	
SBLS				⇑eP	x	08 44 03.1	
SNJE	San Jose	1.51	330	⇑eP	x	08 44 03.4	
RTR	El Retiro	1.55	329	⇑eP	x	08 44 04.2	
RTR				eS	x	08 44 26.1	
RBDL	Robledal	1.76	332	eP	x	08 44 07.6	
MIRN	Miramar	2.06	93	eP	Pn	08 44 10.0	-1.6
COPN	Copaltepe	2.21	100	eP	Pn	08 44 13.0	-0.5
COPN				AML	AML	08 44 41.9	
	comp=Z,38nm,0.3s						
CHI2		16.85	117	eP	x	08 44 06.6	

ISCJB ***07*** *08:50:28.4±0.5, 2995N±005×13892E±010, h466^{km}±7^{km}, mb3.5/7, Error ellipse: s-maj=13.4km s-min=7.5km az=169.3*
JMA ***07*** *08:50:28.3±0.2, 2995N×13905E, h475^{km}, M3.7*
IDC ***07*** *08:50:29.0±0.7, 2991N×13885E, h450^{km}±11^{km}, mb3.1/7, mb1 3.2/13, mb1mx3.1/26, mbtmp3.2/13, Error ellipse: s-maj=25.3km s-min=10.1km az=69.0*
ISC 07 08:50:29.6±0.5**, 2997N**±005×**13895E**±010**, h460**^{km}±7^{km}**, n30, σ0^{s}99**/45**, mb3.5**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.22	13	P	P	08 51 39.6	+0.7
	35nm,0.3s,baz=79,slow=22,SNR=13						
JHJ				S	S	08 52 35.0	-0.3
	36nm,0.3s,baz=56,slow=22,SNR=8.1						
CBIJ	Chichi jima	4.04	134	P	P	08 51 45.5	-0.3
	4.4nm,0.3s,baz=295,slow=20,SNR=9.1						
CBIJ				S	S	08 52 45.1	-2.5
	24nm,0.3s,baz=288,slow=24,SNR=19						
CBIJ	Chichi jima	4.04	134	P	P	08 51 44.8	-1.0
CBIJ				eS	S	08 52 46.1	-1.6
JWZ	Kozaga	4.49	323	P	P	08 51 50.1	+0.5
JKN2	Miekihoku	4.82	333	P	P	08 51 53.4	+0.8
BSO1	Boso 1	4.97	20	P	P	08 51 54.7	+0.7
BSO1				eS	S	08 53 03.3	+0.3
HMMJ	Hamamatsu 2	4.98	348	P	P	08 51 55.6	+1.5
HMMJ				S	S	08 53 02.7	-0.4
BSO3	Boso 3	4.99	15	P	P	08 51 56.0	+1.8
BSO3				eS	S	08 53 02.6	-0.8
BSO4	Boso 4	5.14	13	P	P	08 51 56.1	+0.5
BSO4				eS	S	08 53 07.0	+1.1
JOD2	Odawara 2	5.28	1	P	P	08 51 57.0	+0.1
JOD2				S	S	08 53 08.6	+0.3
JNY	Yasuok	5.45	351	P	P	08 52 00.1	+1.5
JEG	Eigenji	5.58	338	P	P	08 52 01.9	+2.0
JHU	Hanno	5.87	3	P	P	08 52 02.4	-0.4
JHU				S	S	08 53 14.2	-4.8
JTO	Tosashimizu	5.99	300	P	P	08 52 04.0	0.0
JRY	Ryogami san	6.03	360	P	P	08 52 04.9	+0.5
JRY				eS	S	08 53 20.8	-1.2
JYT	Yasato	6.33	9	P	P	08 52 07.3	-0.1
JYT				S	S	08 53 23.7	-3.8
JAG	Ashikaga	6.45	4	P	P	08 52 08.2	-0.5
JAG				S	S	08 53 24.8	-5.0
MJAR	Matsushiro Arr	6.58	355	P	P	08 52 09.8	-0.2
	2.5nm,0.3s,baz=171,slow=11,SNR=25						
MJAR				S	S	08 53 28.9	-3.4
	0.6nm,0.3s,baz=242,slow=34,SNR=3.4						
MAT	Matsushiro	6.58	355	P	P	08 52 10.0	0.0
MAT				eS	S	08 53 30.6	-1.7
JHO	Hitachi	6.76	11	P	P	08 52 12.2	+0.3
JHO				S	S	08 53 33.2	-2.5
JOW	Kunigami	9.90	254	P	P	08 52 45.4	-0.3
	3.4nm,0.3s,baz=64,slow=9.9,SNR=5.6						
KSRS	Korea Array	11.82	312	P	P	08 53 05.5	-0.7
	0.5nm,0.3s,baz=121,slow=11,SNR=8.2						
ASAJ	Asahikawa	14.41	11	P	P	08 53 36.0	+2.0
	0.9nm,0.3s,baz=211,slow=5.9,SNR=6.2						
SONM	Songino Array	30.67	315	P	P	08 56 04.4	-0.5
	0.5nm,0.5s,mb3.2,baz=125,slow=5.2,SNR=4.0						
CMAR	Chiang Mai Arr	38.06	262	P	P	08 57 06.5	-1.2
	1.2nm,0.4s,mb3.7,baz=85,slow=4.0,SNR=4.8						
ZALV	Zalesovo Beam	45.45	318	P	P	08 58 05.7	-0.1
	0.7nm,0.4s,mb3.4,baz=62,slow=6.7,SNR=3.5						
MKAR	Makanchi Array	46.46	308	P	P	08 58 12.9	-0.7
	0.3nm,0.3s,mb3.2,baz=83,slow=11,SNR=8.7						
ASAR	Alice Springs	53.55	186	P	P	08 59 06.2	0.0
	0.9nm,0.5s,mb3.4,baz=2.9,slow=6.6,SNR=25						
STKA	Stephens Creek	61.56	177	P	P	09 00 01.2	+0.3
	1.1nm,0.5s,mb3.6,baz=356,slow=9.2,SNR=5.2						
ARCES	ARCESS Array B	69.89	340	P	P	09 00 53.0	+0.2
	4.8nm,1.1s,mb3.9,baz=72,slow=8.3,SNR=8.0						

IGQ 07 08:52:18.0, 096N×7759W, h5^{km}±3^{km}, Mb4.0, Ms3.8, 4C, Error ellipse: s-maj=3.3km s-min=2.1km az=156.7, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAYA	Cayambe	0.97	204	P	Pg	08 52 36.9	+0.2
CAYA	Cayambe	0.97	204	S	Sg	08 52 51.3	+2.1
COTA	Cotacachi	0.97	230	P	Pg	08 52 38.0	+1.3
CONE	Cono NE Rev Vo	1.03	183	⇑P	Pg	08 52 38.2	+0.5
CONE	Cono NE Rev Vo	1.03	183	⇑S	Sg	08 52 52.6	+1.5
LAV3	Lava3-Reventad	1.05	182	⇑P	Pg	08 52 38.5	+0.3
LAV3	Lava3-Reventad	1.05	182	⇑S	Sg	08 52 53.0	+1.1
YANA	Yana	1.45	222	P	Pn	08 52 45.2	+0.3
PINO	Pino	1.51	222	P	Pn	08 52 47.1	+1.4
GGP	Refugio Guagua	1.51	222	P	Pn	08 52 47.2	+1.5
ANTI	Antisana	1.51	202	P	Pn	08 52 46.6	+0.8
ANTI	Antisana	1.51	202	S	Sn	08 53 08.1	+2.2
TERV	Terraza Guagua	1.52	222	P	Pn	08 52 47.4	+1.6
VC1	Cotopaxi 1	1.79	207	P	Pn	08 52 52.8	+3.2
TAMB	Tambo	1.82	205	P	Pn	08 52 53.8	+3.9
CAMI	Rancho Maria	1.87	209	P	Pn	08 52 54.0	+3.4
PISA	Pisayambo	2.16	202	P	Pn	08 52 59.0	+4.4

DDA ***07*** *09:12:02.8, 3676N×4248E, h7^{km}±3^{km}, Md3.0*
ISCJB ***07*** *09:12:03.8±1.3, 3667N±005×4250E±006, h13^{km}±9^{km}, Error ellipse: s-maj=10.0km s-min=7.0km az=42.1*
CSEM ***07*** *09:12:03.0±0.3, 3679N×4252E, h2^{km}, MD3.0, Error ellipse: s-maj=8.2km s-min=3.8km az=91.0*
ISC 07 09:12:03.9±1.5**, 3672N**±005×**4250E**±007**, h9**^{km}±11^{km}**, n5, σ0^{s}79**/10**, Iraq**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSL	Mosul	0.59	123	ePg	Pg	09 12 15.0	-0.2
MSL				eSg	Sg	09 12 24.0	+1.1
HAKT	HAKKARI	1.28	49	i P	Pn	09 12 27.4	-0.4
HAKT				i S	Sb	09 12 44.7	+0.1
MARD	Mardin	1.50	294	eP	Pn	09 12 30.3	-0.6
MARD				eS	Sn	09 12 51.7	+1.1
BEST	Besiri	1.53	320	eP	Pn	09 12 30.3	-1.0
BEST				eS	Sn	09 12 52.0	+0.8
BHD	Baghdad	3.77	155	ePn	Pn	09 13 01.0	-1.2
BHD				eSn	Sn	09 13 47.0	+0.3

ISK ***07*** *09:34:10.9, 3690N×2933E, h9^{km}, MD2.7*
ISCJB ***07*** *09:34:11.9±0.5, 3694N±004×2935E±004, h10^{km}, Error ellipse: s-maj=5.6km s-min=4.1km az=4.1*
CSEM ***07*** *09:34:11.0±0.2, 3693N×2934E, h8^{km}, ML3.3, Error ellipse: s-maj=5.7km s-min=3.4km az=24.0*
DDA ***07*** *09:34:12.3, 3701N×2933E, h6^{km}±7^{km}, Md3.3, Ml3.3*
ISC 07 09:34:12.0±0.6**, 3697N**±004×**2932E**±004**, h4**^{km}±7^{km}**, n12, σ0^{s}87**/19**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.33	35	⇑iP	Pg	09 34 17.9	-0.5
GOLH				i S	Sg	09 34 23.9	+1.2
ELL	Elmali	0.52	115	ePG	Pg	09 34 20.8	-1.1
ELL				eSG	Sg	09 34 28.4	-0.2
DALT	Dalyan (Mudla)	0.58	251	ePG	Pg	09 34 22.1	-1.1
DALT				eSG	Sg	09 34 30.8	+0.1
TURN	Turunc	0.58	261	eP	Pg	09 34 27.3	+4.1
TURN				eS	Sg	09 34 40.4	+10
AKAS	Kas	0.76	163	eP	Pg	09 34 26.8	+0.1
AKAS				eS	Sg	09 34 39.2	+2.7
YER	Yerkesik	0.85	282	ePG	Pg	09 34 28.3	0.0
AYDN	Tasoluk	1.34	302	eP	Pn	09 34 37.4	-0.1
AYDN				eS	Sb	09 34 56.1	+0.8
KHL	Karahalli	1.36	7	ePN	Pn	09 34 37.9	+0.2
DAT	Datca	1.42	261	ePN	Pn	09 34 37.5	-1.0
BDRM	Kayabasi	1.51	274	eP	Pn	09 34 40.2	+0.5
BDRM				eS	Sn	09 35 00.6	+0.8
BODT	Bodrum	1.61	274	ePN	Pn	09 34 40.4	-0.8
KULA	Kula-Manisa	1.63	341	ePN	Pn	09 34 40.8	-0.6

DDA ***07*** *09:54:30.6, 3644N×2852E, h7^{km}±12^{km}, Md3.4*
NEIC ***07*** *09:54:31.6, 3656N×2868E, h24^{km}, MD3.0(ISK), MD3.4(ATH), After ATH.*
ATH ***07*** *09:54:31.5, 3657N×2867E, h24^{km}±1^{km}, MD3.4/6*
CSEM ***07*** *09:54:32.1±0.1, 3654N×2869E, h20^{km}, MD3.1, Error ellipse: s-maj=1.8km s-min=1.4km az=5.0*
ISCJB ***07*** *09:54:32.5±0.5, 3648N±003×2865E±003, h25^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=4.3km az=8.6*
ISK ***07*** *09:54:32.1, 3653N×2867E, h20^{km}, MD3.1*
ISC 07 09:54:32.7±0.5**, 3651N**±003×**2866E**±003**, h18**^{km}±3^{km}**, n32, σ0^{s}90**/46**, 4C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DALT	Dalyan (Mudla)	0.26	355	ePG	Pg	09 54 38.6	-0.1
DALT				eSG	Sg	09 54 43.0	+0.2
TURN	Turunc	0.37	352	⇑iP	Pg	09 54 41.2	+0.7
TURN				i S	Sg	09 54 47.6	+1.9
ARG	Arkhangelos	0.52	237	⇑iPN	Pg	09 54 42.6	-0.6
ARG				eSN	Sg	09 54 51.7	+1.5
ARG	Arkhangelos	0.52	237	⇑iPn	Pg	09 54 42.6	-0.6
ARG				eSn	Sg	09 54 52.0	+1.8
YER	Yerkesik	0.70	334	ePG	Pg	09 54 45.9	-0.6
YER				eSG	Sg	09 54 55.6	-0.2
AKAS	Kas	0.81	109	⇓iP	Pb	09 54 48.0	-0.2
AKAS				i S	Sb	09 55 00.8	+2.1
KSL	Kastellorizon	0.82	115	ePN	Pn	09 54 48.0	-1.4
DAT	Datca	0.90	285	ePG	Pg	09 54 49.9	-0.4
GOLH	Golhisar	1.02	44	⇑iP	Pb	09 54 51.3	-0.6
GOLH				i S	Sb	09 55 06.6	+1.6
ELL	Elmali	1.03	76	ePG	Pg	09 54 51.6	-1.1
MLSB	Milas	1.06	318	ePG	Pg	09 54 52.9	-0.4
BDRM	Kayabasi	1.13	300	eP	Pn	09 54 52.9	-0.6
BDRM				eS	Sb	09 55 08.4	+0.4
BODT	Bodrum	1.22	297	ePN	Pn	09 54 54.4	-0.4
NISR	Nisiros	1.24	275	ePN	Pn	09 54 55.0	-0.1
DENT	Denizli	1.28	13	ePN	Pn	09 54 55.4	-0.3
AYDN	Tasoluk	1.31	332	⇓iP	Pn	09 54 56.4	+0.3
AYDN				i S	Sn	09 55 13.7	+0.6
KARP	Karpathos	1.55	232	ePB	Pb	09 54 59.4	-1.4
KARP				eSN	Sn	09 55 21.4	+2.5
KARP	Karpathos	1.55	232	ePb	Pb	09 54 59.7	-1.1
KARP				eSn	Sn	09 55 21.6	+2.7
ANTB	Antalya	1.65	76	ePN	Pn	09 55 00.7	0.0
GCAM	G?zelcaml?	1.65	317	eP	Pn	09 55 00.7	-0.1
GCAM				eS	Sn	09 55 21.6	+0.1
BCK	Bucak	1.81	58	ePN	Pn	09 55 02.9	-0.1
SMG	Samos	1.89	310	ePB	Pb	09 55 03.7	-3.0
SMG				eSN	Sn	09 55 28.0	+0.6
SMG	Samos	1.89	310	ePb	Pb	09 55 03.7	-3.0
SMG				eSn	Sn	09 55 28.4	+1.0
KHL	Karahalli	1.94	20	ePN	Pn	09 55 04.5	-0.2
KULA	Kula-Manisa	2.01	360	ePN	Pn	09 55 04.8	-0.8
BLCB	Balcova	2.28	326	ePN	Pn	09 55 08.4	-1.0
AKS	Akhisar	2.46	344	ePN	Pn	09 55 11.6	-0.4
SHUT	Suhut-Afyon	2.54	36	ePN	Pn	09 55 12.7	-0.2
NPS	Neapolis	2.77	244	ePN	Pn	09 55 16.7	+0.5
NPS	Neapolis	2.77	244	ePn	Pn	09 55 16.4	+0.2
ALT	Altintas	2.79	24	ePN	Pn	09 55 16.5	+0.1
KONT	Konya--Tatoy	3.28	63	ePN	Pn	09 55 23.7	+0.5

ISK ***07*** *10:20:52.8, 3784N×2948E, h8^{km}, ML3.6*
CSEM ***07*** *10:20:52.7±0.1, 3785N×2949E, h8^{km}, MD3.6, Error ellipse: s-maj=1.2km s-min=1.1km az=18.0*
ISCJB ***07*** *10:20:53.4±0.5, 3785N±002×2949E±003, h7^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.3km az=155.0*
DDA ***07*** *10:20:53.3, 3787N×2947E, h24^{km}±1^{km}, Md3.6*
ISC 07 10:20:54.0±0.5**, 3784N**±002×**2948E**±003**, h9**^{km}±4^{km}**, n50, σ0^{s}87**/67**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.36	257	ePG	Pg	10 21 00.9	-0.2
KHL	Karahalli	0.49	4	ePG	Pg	10 21 02.5	-1.1
KHL				eSG	Sg	10 21 10.3	+0.4
KHAL	Karahalli	0.53	1	i P	Pg	10 21 03.2	-1.1
KHAL				i S	Sg	10 21 10.8	-0.6
KHAL	Karahalli	0.53	1	i P	Pg	10 21 03.2	-1.2
KHAL				i S	Sg	10 21 10.8	-0.6
GOLH	Golhisar	0.60	174	i P	Pg	10 21 05.4	-0.3
GOLH				i S	Sg	10 21 15.6	+2.1
KULA	Kula-Manisa	0.93	317	ePG	Pg	10 21 11.1	-0.9
KULA				eSG	Sg	10 21 24.9	+0.8
BCK	Bucak	0.96	113	ePG	Pg	10 21 11.4	-1.0
BCK				eSG	Sg	10 21 26.1	+1.2
SHUT	Suhut-Afyon	1.11	49	ePN	Pn	10 21 14.5	-1.2
ELL	Elmali	1.14	162	ePN	Pn	10 21 14.7	-1.5
ELL				eSN	Sn	10 21 31.2	-0.7
YER	Yerkesik	1.18	234	ePN	Pn	10 21 15.7	-1.0
TURN	Turunc	1.19	216	i P	Pb	10 21 20.7	+3.9
TURN				i S	Sb	10 21 41.4	+9.1
GDZ	Gediz	1.25	0	i P	Pn	10 21 16.6	-1.1
GDZ				i S	Sb	10 21 36.1	+2.1
DALT	Dalyan (Mudla)	1.26	212	ePN	Pn	10 21 17.4	-0.4
AYDN	Tasoluk	1.28	263	i P	Pn	10 21 17.8	-0.3
AYDN				i S	Sb	10 21 35.1	+0.3
ALT	Altintas	1.31	22	ePN	Pn	10 21 17.6	-0.9
ANTB	Antalya	1.32	135	ePN	Pn	10 21 18.2	-0.5
BOLV	Bolvadin	1.46	52	i P	Pn	10 21 20.5	0.0
BOLV				i S	Sn	10 21 42.6	+2.9
MLSB	Milas	1.46	249	ePN	Pn	10 21 20.4	-0.1
AKAS	Kas	1.60	176	i P	Pn	10 21 24.8	+2.3
AKAS				i S	Sn	10 21 49.1	+5.8
AKHS	Akhisar	1.67	309	i P	Pn	10 21 22.8	-0.7
AKHS				i S	Sn	10 21 50.1	+5.0
AKS	Akhisar	1.67	309	ePN	Pn	10 21 23.3	-0.3
GCAM	G?zelcaml?	1.78	266	i P	Pn	10 21 24.9	-0.1
GCAM				i S	Sn	10 21 51.2	+3.4
BDRM	Kayabasi	1.79	245	i P	Pn	10 21 24.9	-0.3
BDRM				i S	Sn	10 21 54.5	+6.5
DAT	Datca	1.88	234	ePN	Pn	10 21 26.3	0.0
DST	Dursunbey	1.89	340	ePN	Pn	10 21 26.1	-0.4
BODT	Bodrum	1.89	247	ePN	Pn	10 21 27.1	+0.6
ESKT	Eskisehir	1.99	32	ePN	Pn	10 21 27.6	-0.4
BLCB	Balcova	2.00	287	ePN	Pn	10 21 27.6	-0.4
KIZT	Kizilcal	2.16	60	ePN	Pn	10 21 30.3	+0.1
BORA	Eskisehir	2.18	20	i P	Pn	10 21 30.8	+0.3
KDHN	Kadinhani	2.19	71	i P	Pn	10 21 30.8	+0.2
BALB	Balikesir	2.19	326	ePN	Pn	10 21 31.3	+0.6
KONT	Konya--Tatoy	2.28	86	ePN	Pn	10 21 31.3	-0.6
LADK	Ladik-KONYA	2.31	80	ePN	Pn	10 21 32.2	-0.1
ULDT	Uludag	2.32	353	i P	Pn	10 21 36.7	+4.3
URLA	Izmir	2.33	284	i P	Pn	10 21 32.1	-0.5
URLA				i S	Sn	10 22 07.3	+5.9
CAVI	Cavuskoy	2.38	7	ePN	Pn	10 21 33.2	0.0
BALY	Balya	2.39	323	i P	Pn	10 21 33.5	0.0
BALY				i S	Sg	10 22 12.8	+1.9
GPA	Golpazari	2.53	15	ePN	Pn	10 21 35.3	-0.1
KCT	Karacabey	2.58	341	ePN	Pn	10 21 35.6	-0.3
ADVT	Abdulvahap	2.60	4	ePN	Pn	10 21 36.3	0.0
GEMT	Gemlik	2.60	355	ePN	Pn	10 21 36.3	0.0
GULT	Gulveren	2.71	17	ePN	Pn	10 21 38.2	+0.3
BNT	Bandirma	2.79	335	ePN	Pn	10 21 38.8	-0.2
EDC	Edincik	2.80	334	ePN	Pn	10 21 39.1	+0.1
MDU	Mudurnu	2.95	27	ePN	Pn	10 21 41.9	+0.8
EZN	Ezine	3.16	310	ePN	Pn	10 21 43.9	-0.1
GADA	Gvkgeada	3.65	311	ePN	Pn	10 21 51.1	+0.5
IKL	Isikli	3.73	114	ePN	Pn	10 21 52.5	+0.7
CORM	Corum	4.64	58	ePN	Pn	10 22 05.3	+0.9

IDC ***07*** *10:45:52.0±0.5, 991S×11357E, h0^{km}, mb5.1/18, mb1 5.0/19, mb1mx5.0/20, mbtmp5.0/19, ML5.3/2, MS4.3/22, Ms1 4.3/22, ms1mx4.3/30, Error ellipse: s-maj=17.0km s-min=10.5km az=57.0*
BJI ***07*** *10:45:51.7, 1000S×11350E, h10^{km}, mB5.5, mb5.5, Ms4.8, Msz4.5*
ISCJB ***07*** *10:45:52.1±0.2, 1007S±003×11353E±003, h14^{km}, mb5.4/114, MS4.7/113, Error ellipse: s-maj=5.3km s-min=4.1km az=42.6*
GCMT ***07*** *10:45:53.7±0.2, 10.19S×11361E, h29^{km}±1^{km}, MW5.3/77, Moment Tensor Solution. s46,c60; s77,c131; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.46±.03; M$_{\theta\theta}$0.70±.02; M$_{\phi\phi}$-1.15±.03; M$_{r\theta}$0.41±.04; M$_{\theta\phi}$-0.18±.02; M$_{\phi r}$-0.20±.04; Best double couple: M$_0$1.11000×10^{17} NP1:φ$_s$45.00000°,δ60.00000°,λ156.00000°. NP2: φ$_s$147.00000°,δ69.00000°,λ32.00000°. Principal axes: T 1.0370, Plg37.0000°, Azm9.0000°; N 0.1500, Plg52.0000°, Azm177.0000°; P -1.1830, Plg6.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***07*** *10:45:53.7±0.2, 998S×11347E, h10^{km}, mb5.5/34, MS4.8/77 Error ellipse: s-maj=7.3km s-min=5.0km az=50.0*
NEIC Felt at Denpasar and Kuta, Bali.
DJA ***07*** *10:45:54, 1037S×11344E, h10^{km}, Mw5.6/23*
MOS ***07*** *10:45:55.8±1.2, 977S×11361E, h33^{km}, mb5.5/41, MS4.5/25, Error ellipse: s-maj=12.0km s-min=6.1km az=113.6*
ISC 07 10:45:54.0±0.2**, 1008S**±003×**11355E**±003**, h14**^{km}**, h14**^{km}±1.5^{km}**:pP-P, n374, σ1^{s}22**/298**, mb5.4**/114**, MS4.7**/113**, 26C-20D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NBBI	Negara	2.00	32	P	Pn	10 46 30.9	+3.5
DNP	Denpasar	2.15	50	P	Pn	10 46 32.9	+3.4
KRKI	Karangkates	2.19	330	P	Pn	10 46 32.1	+2.1
KHKI	Kahang-Kahang	2.65	50	P	Pn	10 46 39.8	+3.4
SJI	Sawahan	2.92	323	P	Pn	10 46 41.7	+1.7
KMMI	Kalianget	3.04	8	P	Pn	10 46 45.7	+4.1
CLJI	Cilicap	5.05	297	P	Pn	10 47 11.3	+1.9
	4μm,1.1s,62nm						
JCJI	Jatiwangi	6.32	304	P	Pn	10 47 28.3	+1.5
	1μm,0.9s,8.7nm						
LEM	Lembang	6.70	298	P	Pn	10 47 34.2	+2.2
	1μm,1.1s,6.1nm						
BBKI	Banjar Baru	6.70	11	P	Pn	10 47 36.6	+4.6
	1μm,1.2s,3.2nm						
CBJI	Citeko	7.56	298	P	Pn	10 47 45.9	+2.1
	4μm,1.0s						
XMIS	Christmas Isla	7.78	266	⇓iP	Pn	10 47 44.7	-2.2
XMIS				eS	Sn	10 49 01.0	-14
XMIS	Christmas Isla	7.78	266	P	Pn	10 47 44.9	-2.0
	2μm,0.7s,6.4nm						
PLKI	Palangkaraya	7.81	3	P	Pn	10 47 51.9	+4.6
	678nm,1.0s,7μm2.1nm						
KAPI	Kappang	7.95	51	Pn	Pn	10 47 50.0	+0.8
	860nm,0.4s,SNR=57						
KAPI	Kappang	7.95	51	Pn	Pn	10 47 50.8	+1.6
	24nm,0.3s,baz=230,slow=8.7,SNR=59						
KAPI				Sn	Sn	10 49 14.9	-4.0
	30nm,0.3s,baz=146,slow=21,SNR=16						
KAPI				LR	LR	10 51 38.1	
	comp=Z,5μm,19.9s,baz=228,slow=44						
KAPI	Kappang	7.95	51	ePn	Pn	10 47 50.8	+1.7
KAPI				eSn	Sn	10 49 16.6	-2.3
KAPI	Kappang	7.95	51	P	Pn	10 47 53.1	+4.0
	72nm,0.9s,2μm0.6nm						
SBJI	Serang	8.33	298	P	Pn	10 47 59.0	+4.6
	1μm,0.9s,10μm3.4nm						
TPI	Tanjungpandan	9.34	321	P	Pn	10 48 11.8	+3.6
	120nm,1.2s,1μm						
BATI	Baumata	9.96	92	Pn	Pn	10 48 17.8	+1.0
	246nm,0.3s,baz=349,slow=0.5,SNR=113						
BATI				Sn	Sn	10 50 03.8	-4.7
	77nm,0.3s,baz=351,slow=20,SNR=6.4						
BATI	Baumata	9.96	92	P	Pn	10 48 17.6	+0.8
	354nm,0.5s,7μm						
SMKI	Samarinda	10.24	21	P	Pn	10 48 27.5	+6.9
	260nm,1.3s						
PPBI	Pangkal Pinang	10.77	316	P	Pn	10 48 32.0	+4.1
	110nm,1.2s						
KSM	Kuching	11.92	344	ePn	Pn	10 48 46.6	+2.9
	32nm,0.8s						
KSM	Kuching	11.92	344	⇓P	Pn	10 48 47.2	+3.5
KSM	Kuching	11.92	344	P	Pn	10 48 52.4	+8.8
	72nm,1.1s,794nm						
SBUM	Sibu	12.51	354	⇑P	Pn	10 48 55.8	+4.0
SBUM	Sibu	12.51	354	P	Pn	10 48 55.6	+3.8
	70nm,1.2s,971nm						
MBWA	Marble Bar	12.52	152	⇑P	Pn	10 48 47.3	-4.5
	SNR=5.9						
MBWA	Marble Bar	12.52	152	ePn	Pn	10 48 46.8	-5.0
MBWA				eSn	Sn	10 50 52.0	-19
MBWA	Marble Bar	12.52	152	P	Pn	10 48 47.1	-4.7
	161nm,0.7s						
KSI	Kapahiang	12.61	300	P	Pn	10 48 53.0	0.0
	3μm,0.7s						
BTM	Bintulu	13.20	358	⇓P	Pn	10 49 05.0	+3.9
FITZ	Fitzroy Crossi	14.18	126	eP	Pn	10 49 10.0	-4.5
	47nm,0.4s						
FITZ				eS	Sn	10 51 35.8	-16
FITZ	Fitzroy Crossi	14.18	126	P	Pn	10 49 11.5	-3.0
	211nm,1.5s,2μm						
RGRI	Rengat	14.76	310	P	Pn	10 49 30.9	+8.5
TSM	Tawau	14.91	17	⇓P	Pn	10 49 26.4	+1.9
KGM	Kluang	15.75	319	⇓P	Pn	10 49 36.8	+1.2
AAI	Ambon	15.86	67	P	Pn	10 49 42.6	+5.6
	224nm,0.6s,2μm						
PDSI	Padang	15.88	304	P	Pn	10 49 33.4	-3.9
	209nm,0.8s,3μm						
MYLDM	Lahad Datu	15.94	18	⇑P	Pn	10 49 39.9	+1.9
MYLDM	Lahad Datu	15.94	18	P	Pn	10 49 42.4	+4.4
	108nm,1.4s,2μm						
SDKM	Sandakan	16.03	13	⇓P	Pn	10 49 41.3	+2.1
PPI	Padang Panjang	16.20	305	P	Pn	10 49 38.8	-2.6
	101nm,1.0s,1μm						
KKM	Kota Kinabalu	16.23	10	ePn	Pn	10 49 42.1	+0.3
	35nm,0.6s						
KKM	Kota Kinabalu	16.23	10	⇓P	Pn	10 49 42.6	+0.8
KKM	Kota Kinabalu	16.23	10	P	Pn	10 49 43.7	+1.9
	77nm,1.3s,924nm						
COCO	West Island	16.53	261	P	Pn	10 49 46.5	+0.9
	3μm,1.3s,SNR=6.0						
COCO	West Island	16.53	261	ePn	Pn	10 49 44.7	-0.9
	654nm,1.2s						
COCO	West Island	16.53	261	P	Pn	10 49 46.9	+1.3
	308nm,1.2s,4μm						
LBMI	Labuha	16.75	57	P	Pn	10 49 54.6	+6.2
	167nm,0.9s,2μm						
KDM	Kudat	17.20	11	⇓P	Pn	10 49 55.9	+1.9
FRIM	Kepong	17.77	317	⇓P	Pn	10 50 03.3	+2.2
KAKA	Kakadu	18.70	100	⇓iP	x	10 49 53.5	
	84nm,0.7s						
KAKA				eS	x	10 53 14.5	
IPM	Ipoh	19.10	319	⇑P	Pn	10 50 19.1	+1.8
IPM	Ipoh	19.10	319	P	Pn	10 50 19.5	+2.2
	132nm,1.1s						
PSI	Prapat	19.38	311	P	Pn	10 50 16.6	-4.2
	1.0nm,0.3s,baz=142,slow=7.0,SNR=6.9						
PSI				S	Sn	10 53 47.5	-11
	0.4nm,0.3s,baz=46,slow=12,SNR=2.9						
PSI				LR	LR	10 58 43.0	
	comp=Z,4μm,21.9s,baz=125,slow=40						
PSI	Prapat	19.38	311	P	Pn	10 50 16.6	-4.2
PSI				S	Sn	10 53 47.5	-11
PSI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PSI				MLR	MLR		
	comp=Z,4μm,21.9s						
DAV	Davao City (W)	20.83	36	P	P	10 50 36.4	+1.0
	comp=Z,237nm,0.4s,baz=66,slow=17,SNR=2.6						
DAV				S	S	10 54 25.8	-1.8
	comp=Z,195nm,0.4s,baz=283,slow=6.7,SNR=2.0						
DAV				LR	LR	10 58 50.8	
	comp=Z,1μm,20.9s,MS4.2,baz=219,slow=38						
KLBR	Kellerberrin	21.76	170	eP	P	10 50 48.7	+3.4
	comp=Z,18nm,0.3s,mb5.0						
KLBR				eS	S	10 54 28.9	-17
MUN	Mundaring	21.93	174	eP	P	10 50 52.7	+5.6
MUN				e		10 51 04.6	
MUN				e		10 51 21.8	

MUN eS S 10 54 37.3 -12
MUN Mundaring 21.93 174 eP P 10 50 52.7 +5.6
MUN e 10 51 04.6
MUN e 10 51 21.8
WRAB Tennant Creek 22.33 118 P P 10 50 51.6 +0.1
comp=Z,881nm,0.7s,mb6.3,SNR=92
WRAB Tennant Creek 22.33 118 eP P 10 50 51.3 -0.2
WRAB pmax pmax
comp=Z,97nm,0.7s,mb5.3
WRAB MLR MLR
comp=Z,2µm,21.0s,MS4.5
WRAB Tennant Creek 22.33 118 eP P 10 50 51.3 -0.1
comp=Z,97nm,0.7s,mb5.3
WRAB LR LR
comp=Z,2µm,21.0s,MS4.5
WRAB Tennant Creek 22.33 118 P P 10 50 51.4 -0.1
comp=Z,172nm,1.1s,mb5.4
WB2 Warramunga Arr 22.34 118 eP P 10 50 51.1 -0.4
WB2 eS S 10 54 54.6 -2.4
NWAO Narrogin (SRO) 22.99 172 P P 10 50 59.4 +1.0
comp=Z,13nm,0.7s,mb4.5,baz=338,slow=12,SNR=5.6
NWAO S S 10 55 00.8 -7.6
comp=Z,66nm,0.8s,baz=315,slow=14,SNR=7.3
NWAO LR LR 11 00 25.5
NWAO Narrogin (SRO) 22.99 172 P P 10 50 59.4 +1.0
NWAO S S 10 55 00.9 -7.6
NWAO pmax pmax
comp=Z,13nm,0.7s
NWAO smax
comp=N,66nm,0.8s
NWAO MLR MLR
comp=Z,639nm,18.1s
NWAO Narrogin (SRO) 22.99 172 eP P 10 51 00.3 +1.9
comp=Z,61nm,1.0s,mb5.0
ASAR Alice Springs 23.66 127 P P 10 51 05.4 +0.1
comp=Z,30nm,0.5s,mb5.0,baz=301,slow=9.3,SNR=1122
ASAR S S 10 55 24.5 +4.9
comp=Z,15nm,0.9s,baz=296,slow=21,SNR=8.9
ASAR Alice Springs 23.66 127 P P 10 51 05.4 +0.1
ASAR S S 10 55 24.5 +4.9
ASAR pmax pmax
comp=Z,31nm,0.5s
ASAR smax
comp=N,15nm,0.9s
BSI Banda Aceh 23.87 310 P P 10 51 10.3 +3.0
comp=N,87nm,1.3s,mb5.0
FORT Forrest 24.63 149 eP P 10 51 14.4 +0.3
comp=N,74nm,0.6s,mb5.4
FORT e 10 51 25.0
FORT eS S 10 55 35.5 +0.4
NNT Nongplab 26.37 328 P P 10 51 31.1 +1.1
KKTK Khon Kaen 28.31 338 P P 10 51 48.0 +0.6
comp=N,617nm,0.7s,mb6.3
NST Nakhon Sawan 28.83 332 ⇓P P 10 51 53.1 +1.1
comp=N,177nm,0.9s,mb5.8
QIZ Qiongzhong 29.15 353 P P 10 51 54.3 -0.5
QIZ S S 10 56 48.9 +2.2
QIZ XS sS 10 56 54.7 +0.8
QIZ AMB AMB
comp=Z,42nm,1.8s,mb4.9
QIZ AMB AMB
comp=Z,314nm,3.6s
QIZ LR LR
comp=N,493nm,20.6s
QIZ LR LR
comp=Z,518nm,22.1s,MS4.1
QIZ Qiongzhong 29.15 353 eP P 10 51 54.6 -0.3
comp=Z,21nm,0.6s,mb5.0
QIZ LR LR
comp=Z,592nm,19.0s,MS4.2
COEN Coen 29.22 101 eP P 10 51 56.0 +0.3
comp=Z,32nm,0.9s,mb5.0
COEN Coen 29.22 101 P P 10 52 00.2 +4.6
BDT Bhumibol Dam 30.72 332 P P 10 52 08.0 -0.8
comp=Z,56nm,0.9s,mb5.4
CM31 Chiang Mai Arr 31.80 333 ⇑*i*P P 10 52 19.0 +0.7
comp=Z,49nm,0.5s,mb5.6
CM31 LR LR
comp=Z,815nm,20.0s,MS4.4
CMAR Chiang Mai Arr 31.80 333 P P 10 52 18.9 +0.5
comp=Z,131nm,1.0s,mb5.7,baz=167,slow=8.2,SNR=426
CMAR PcP PcP 10 55 10.3 +0.9
comp=Z,6.3nm,0.9s,baz=194,slow=2.8,SNR=4.2
CMAR S S 10 57 32.4 +4.1
comp=Z,0.5nm,0.3s,baz=164,slow=16,SNR=4.4
CMAR LR LR 11 06 39.1
comp=Z,803nm,19.0s,MS4.4,baz=334,slow=39
CMAR Chiang Mai Arr 31.80 333 P P 10 52 18.9 +0.6
CMAR 10 55 10.4
CMAR S S 10 57 32.4 +4.1
CMAR pmax pmax
comp=Z,131nm,1.0s
CMAR smax
comp=N,1.0nm,0.3s
CMAR MLR MLR
comp=Z,803nm,19.0s
CHG Chiang Mai 32.12 333 ⇑P P 10 52 21.9 +0.8
comp=Z,20nm,1.0s,mb4.9
CHTO Chiang Mai 32.12 333 ⇓P P 10 52 22.4 +1.3
SNR=34
CHTO Chiang Mai 32.12 333 eP P 10 52 22.0 +0.9
CHTO pmax pmax
comp=Z,195nm,1.3s,mb5.8
CHTO MLR MLR
comp=Z,762nm,19.0s,MS4.4
CHTO Chiang Mai 32.12 333 eP P 10 52 22.0 +0.9
comp=Z,195nm,1.3s,mb5.8
CHTO LR LR
comp=Z,762nm,19.0s,MS4.4
CHRT Chiangrai 32.70 336 ⇑P P 10 52 27.0 +0.8
comp=Z,290nm,1.0s,mb6.2
CTA Charters Tower 33.05 111 eP P 10 52 29.4 +0.1
comp=Z,5.8nm,0.6s,mb4.7
CTA eS S 10 58 00.0 +12
CTA Charters Tower 33.05 111 P P 10 52 29.5 +0.1
comp=Z,4.5nm,0.6s,mb4.6,baz=278,slow=11,SNR=6.5
CTA Charters Tower 33.05 111 P P 10 52 29.5 +0.2
CTA pmax pmax
comp=Z,5.0nm,0.6s
CTAO Charters Tower 33.05 111 eP P 10 52 30.6 +1.3
CTAO pmax pmax
comp=Z,45nm,1.4s,mb5.2
CTAO MLR MLR
comp=Z,1µm,21.0s,MS4.6
CTAO Charters Tower 33.05 111 eP P 10 52 30.6 +1.3
comp=Z,45nm,1.4s,mb5.2
CTAO LR LR
comp=Z,1µm,21.0s,MS4.6
CTAO Charters Tower 33.05 111 P P 10 52 36.3 +7.0
PMG Port Moresby 33.13 92 eP P 10 52 32.6 +2.5
PMG pmax pmax
comp=Z,13nm,0.8s
PMG MLR MLR
comp=Z,1µm,22.0s
PMG Port Moresby 33.13 92 eP P 10 52 32.6 +2.6
comp=Z,13nm,0.8s,mb4.9
PMG LR LR
comp=Z,1µm,22.0s,MS4.5
STKA Stephens Creek 33.82 134 ⇓*i*P P 10 52 36.5 +0.6
comp=Z,22nm,0.6s,mb5.3
STKA *e* 10 52 48.6
STKA Stephens Creek 33.82 134 P P 10 52 36.6 +0.7
comp=Z,26nm,0.6s,mb5.3,baz=309,slow=8.1,SNR=62
STKA LR LR 11 07 12.7
comp=Z,1µm,20.4s,MS4.7,baz=305,slow=38
SSLB Suanglung 34.43 12 eP P 10 52 41.3 +0.2
comp=Z,22nm,0.5s,mb5.3
NACB Ninganchiao 34.94 13 P P 10 52 44.3 -1.3
comp=Z,32nm,0.5s,mb5.5
YHNB Yeheng 35.37 12 PFAKE 10 53 00.0 +11
YHNB LR LR
comp=Z,462nm,21.0s,MS4.2
KMI Kunming 36.54 343 P P 10 53 02.0 +2.7
KMI AP pP 10 53 04.9 +1.2
KMI PPP 10 54 45.9
KMI S S 10 58 43.2 +1.8
KMI XS sS 10 58 48.3 -0.4
KMI PCS PcS 10 59 12.9 +2.1
KMI SSS 11 01 37.9
KMI AMB AMB
comp=Z,195nm,1.3s,mb5.8
KMI LR LR
comp=N,712nm,17.2s,MS4.7
KMI LR LR
comp=E,692nm,16.2s,MS4.7
KMI LR LR
comp=Z,867nm,17.2s,MS4.6
GYA Guiyang 36.93 350 ⇑*i*P P 10 53 03.9 +1.3
GYA PP PP 10 54 28.2 +1.3
GYA PPP 10 54 48.4
GYA PCP PcP 10 55 24.3 +0.3
GYA S S 10 58 45.5 -1.8
GYA SS SS 11 01 12.0 -17
GYA AMB AMB
comp=Z,80nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,450nm,6.0s
GYA LR LR
comp=N,1µm,13.5s,MS5.0
GYA LR LR
comp=E,1µm,14.1s,MS5.0
GYA LR LR
comp=Z,2µm,13.7s,MS5.0
PALK Pallekele 36.97 297 eP P 10 52 59.7 -3.6
comp=Z,12nm,0.6s,mb4.9
GUMO Guam 38.98 53 P P 10 53 18.8 -1.3
comp=Z,271nm,0.6s,mb6.2,baz=185,slow=10,SNR=23
GUMO LR LR 11 12 04.7
comp=Z,152nm,18.3s,MS3.9,baz=89,slow=40
JOW Kunigami 39.38 21 LR LR 11 09 32.4
comp=Z,178nm,20.5s,MS3.9,baz=301,slow=36
IMP Imphal 39.58 331 eP P 10 53 25.0 0.0
ENH Enshi 40.30 355 PFAKE 10 53 40.0 +9.1
ENH LR LR
comp=Z,3.0nm,21.0s
WHN Wuhan 40.39 1 ⇑*i*P P 10 53 32.4 +0.7
WHN AP pP 10 53 40.5 +4.4
WHN AMB AMB
comp=Z,280nm,1.2s,mb5.9
WHN LR LR
comp=Z,999nm,21.8s,MS4.6
VIS Vishakhapatnam 40.67 313 eP P 10 53 33.2 -0.9
VIS AMb AMB 10 53 37.1
comp=Z,230nm,1.2s,mb5.7
VIS *i* x x 10 59 38.8
ARMA Armidale 40.78 125 eP P 10 53 37.3 +2.3
ARMA *e* 10 53 49.2
ARMA eS S 10 59 58.9 +13
CAN Canberra 40.88 134 eP P 10 53 38.7 +2.9
CAN pmax pmax
comp=Z,62nm,1.5s,mb5.0
CAN Canberra 40.88 134 eP P 10 53 38.6 +2.9
comp=Z,62nm,1.5s,mb5.0
KOD Kodaikanal 41.17 298 eP P 10 53 38.3 -0.1
KOD AMb AMB 10 53 46.2
comp=Z,82nm,0.7s,mb5.5
SHL Shillong 41.23 330 ⇑*i*P P 10 53 39.5 +0.8
SHL *ex* x 10 59 43.0
SSSE Sheshan 41.59 10 P P 10 53 42.4 +0.9
SSE XP sP 10 53 46.8 -0.9
SSE S S 11 00 01.0 +3.7
SSE AMB AMB
comp=Z,135nm,1.2s,mb5.5
SSE AMB AMB
comp=Z,166nm,5.7s
SSE LR LR
comp=N,360nm,23.9s,MS4.2
SSE LR LR
comp=E,191nm,23.9s,MS4.2
SSE LR LR
comp=Z,490nm,22.5s,MS4.3
CD2 Chengdu 41.82 347 ⇑*i*P P 10 53 43.8 +0.4
CD2 AP pP 10 53 47.6 -0.3
CD2 XP sP 10 53 49.8 +0.1
CD2 PP PP 10 55 26.7 +6.3
CD2 PCP PcP 10 55 35.0 -4.4
CD2 SCP ScP 10 59 28.1 -1.4
CD2 PCS PcS 10 59 29.9 -1.1
CD2 S S 11 00 03.9 +3.2
CD2 XS sS 11 00 05.4 -2.7
CD2 SCS ScS 11 03 43.8 -2.6
CD2 AMB AMB
comp=Z,510nm,0.6s,mb6.3
CD2 AMB AMB
comp=Z,650nm,4.8s
CD2 LR LR
comp=N,560nm,12.7s,MS4.8
CD2 LR LR
comp=E,650nm,15.2s,MS4.8
CD2 LR LR
comp=Z,630nm,13.2s,MS4.7
BOK Bokaro 43.18 322 eP P 10 53 54.2 -0.4
BOK AMb AMB 10 53 56.7
comp=Z,107nm,1.0s,mb5.5
TAU Tasmania Unive 44.00 144 PFAKE 10 54 10.0 +9.0
TAU LR LR
comp=Z,1µm,19.0s,MS4.8
HYB Hyderabad 44.07 308 eP P 10 54 00.5 -1.4
HYB eS S 11 00 33.0 -1.2
HYB pmax pmax
comp=Z,75nm,1.0s,mb5.4
HYB Hyderabad 44.07 308 *i* P P 10 54 01.0 -0.9
comp=Z,75nm,1.0s,mb5.4
HYB eS S 11 00 33.0 -1.2
HYB Hyderabad 44.07 308 eP P 10 54 00.5 -1.4
comp=Z,75nm,1.0s,mb5.4
HYB eS S 11 00 33.0 -1.2
XAN Xi'an 44.09 354 P P 10 54 01.4 -0.4
XAN AP pP 10 54 03.1 -3.2
XAN PP PP 10 55 43.7 -1.0
XAN PPP 10 56 19.9
XAN S S 11 00 28.3 -5.7
XAN XS sS 11 00 38.3 -3.1
XAN SS SS 11 03 39.3 -12
XAN AMB AMB
comp=Z,83nm,0.7s,mb5.6
XAN AMB AMB
comp=Z,234nm,5.9s
XAN LR LR
comp=N,275nm,19.2s,MS4.4
XAN LR LR
comp=E,377nm,23.0s,MS4.4
XAN LR LR
comp=Z,623nm,25.6s,MS4.4
ODAN Odare 44.64 326 eP P 10 54 06.4 +0.1
TAPN Taplejung 44.85 327 eP P 10 54 08.6 +0.6
comp=Z,310nm,1.1s,mb6.1
LSA Lhasa 45.05 332 P P 10 54 10.6 +1.1
LSA AP pP 10 54 20.6 +6.6
LSA XP sP 10 54 23.8 +8.0
LSA PCP PcP 10 55 50.2 -0.1
LSA PP PP 10 55 55.5 +0.5
LSA S S 11 00 44.8 -3.3
LSA XS sS 11 01 03.5 +8.0
LSA SCS ScS 11 04 04.2 -2.5
LSA AMB AMB
comp=Z,70nm,1.0s,mb5.5
LSA AMB AMB
comp=Z,220nm,3.4s
LSA LR LR
comp=N,290nm,27.4s,MS4.5
LSA LR LR
comp=E,760nm,30.2s,MS4.5
LSA LR LR
comp=Z,600nm,31.6s,MS4.3
LSA Lhasa 45.05 332 ⇑*i*P P 10 54 10.6 +1.1
LSA pmax pmax
comp=Z,133nm,1.1s,mb5.7
LSA MLR MLR
comp=Z,631nm,20.0s,MS4.5
LSA Lhasa 45.05 332 ⇑*i*P P 10 54 10.6 +1.1
comp=Z,133nm,1.1s,mb5.7
LSA LR LR
comp=Z,631nm,20.0s,MS4.5
RAMN Ramite 45.15 325 eP P 10 54 10.6 +0.2
JIRN Jiri 45.93 325 eP P 10 54 16.9 +0.4
comp=Z,336nm,0.7s,mb6.4
NGP Nagpur 45.95 313 eP P 10 54 14.4 -2.5
NGP AMb AMB 10 54 17.6
comp=Z,81nm,1.3s,mb5.5
TIA Tai'an 46.16 4 P P 10 54 17.3 -0.9
TIA AMB AMB
comp=Z,42nm,1.0s,mb5.3
CBIJ Chichi jima 46.23 36 P P 10 54 16.4 -2.5
comp=Z,94nm,0.4s,mb6.1,baz=192,slow=23,SNR=22
CBIJ LR LR 11 14 21.9
comp=Z,119nm,19.1s,MS3.9,baz=283,slow=37
GUN Gumba 46.30 325 eP P 10 54 19.7 +0.3
comp=Z,326nm,0.4s,mb6.6
PKI Pulchoki 46.30 325 eP P 10 54 19.3 -0.2
comp=Z,98nm,0.5s,mb6.0
PKI Pulchoki 46.30 325 eP P 10 54 19.3 -0.2
PKI pmax pmax
comp=Z,98nm,0.5s,mb6.0
PKIN Phulchoki 46.31 325 eP P 10 54 19.1 -0.5
comp=Z,91nm,0.4s,mb6.0
DMN Daman 46.51 324 eP P 10 54 21.0 -0.1
comp=Z,225nm,0.7s,mb6.2
KKN Kakani 46.54 325 eP P 10 54 21.1 -0.3
LZH Lanzhou 46.82 349 ⇓P P 10 54 24.0 +0.7
LZH AP pP 10 54 26.8 -1.1
LZH PP PP 10 56 12.0 -1.6
LZH S S 11 01 14.2 +0.9
LZH XS sS 11 01 24.2 +3.5
LZH SS SS 11 04 35.2 -5.0
LZH AMB AMB
comp=Z,123nm,1.4s,mb5.6
LZH AMB AMB
comp=Z,310nm,4.0s
LZH LR LR
comp=N,1µm,15.4s
LZH LR LR
comp=Z,2µm,16.8s,MS5.1
ALBI Allahabad 46.83 319 eP P 10 54 21.5 -2.2
GKN Gorkha 47.07 324 eP P 10 54 25.2 -0.3
comp=Z,187nm,0.5s,mb6.3
AKL Akola 47.18 311 eP P 10 54 25.5 -1.0
AKL AMb AMB 10 54 29.0
comp=Z,43nm,1.8s,mb5.1
KAD Karad 47.47 305 eP P 10 54 27.8 -1.0
KOLN Koldanda 47.50 323 eP P 10 54 28.6 -0.3
comp=Z,150nm,0.4s,mb6.4
DANN Dangsing 47.84 324 eP P 10 54 31.3 -0.2
comp=Z,182nm,0.4s,mb6.4
POO Poona 48.39 306 eP P 10 54 35.4 -0.5
POO AMb AMB 10 54 42.1
comp=Z,72nm,0.9s,mb5.7
BHPL Bhopal 48.44 314 eP P 10 54 34.9 -1.2
INCN Inchon 48.87 14 PFAKE 10 54 50.0 +11
INCN LR LR
comp=Z,350nm,20.0s,MS4.3
KSRS Korea Array 49.16 15 P P 10 54 41.2 -0.3
comp=Z,50nm,1.0s,mb5.5,baz=194,slow=7.4,SNR=70
KSRS LR LR 11 16 59.6
comp=Z,162nm,21.9s,MS4.0,baz=203,slow=38
KSRS Korea Array 49.16 15 P P 10 54 41.2 -0.3
KSRS pmax pmax
comp=Z,50nm,1.0s,mb5.5
KSRS MLR MLR
comp=Z,162nm,21.9s,MS4.0
JHJ Hachijo jima 2 49.70 29 LR LR 11 13 16.1
comp=Z,297nm,21.3s,MS4.3,baz=239,slow=33
BJT Baijiatuau 49.90 3 eP P 10 54 46.1 -1.0
BJT pmax pmax
comp=Z,79nm,0.4s
BJT Baijiatuau 49.90 3 eP P 10 54 46.1 -1.0
comp=Z,78nm,0.4s,mb6.1
BJI Beijing 49.92 3 P P 10 54 46.2 -1.0
BJI S S 11 02 03.0 +5.9
BJI AMB AMB
comp=Z,98nm,0.5s,mb6.1
BJI AMB AMB
comp=Z,464nm,4.5s
BJI LR LR
comp=N,379nm,25.9s,MS4.3
BJI LR LR
comp=E,263nm,29.0s,MS4.3
BJI LR LR
comp=Z,318nm,28.6s,MS4.2
BTO Baotou 50.53 357 eP P 10 54 50.8 -1.0
HHC Hu-ho-hao-te 50.70 358 eP P 10 54 52.7 -0.4
HHC AP pP 10 54 56.7 -1.0
HHC PCP PcP 10 56 09.2 -1.1
HHC PP PP 10 56 49.9 +0.5
HHC SCP ScP 11 00 04.1 -2.1
HHC S S 11 02 07.2 -0.7
HHC XS sS 11 02 14.1 -1.3
HHC SS SS 11 05 38.8 -3.9
HHC AMB AMB
comp=Z,27nm,1.3s,mb5.0
HHC AMB AMB
comp=Z,214nm,5.1s
HHC LR LR
comp=N,197nm,16.6s,MS4.4
HHC LR LR
comp=E,239nm,16.7s,MS4.4
HHC LR LR
comp=Z,339nm,20.2s,MS4.4
PTH Pithoragarh 50.83 322 eP P 10 54 54.0 -0.3
PTH *ex* x 10 56 53.5
GTA Gaotai 50.86 346 ⇑P P 10 54 55.3 +0.9
GTA AP pP 10 54 59.8 +0.9
GTA XP sP 10 55 02.4 +1.7
GTA PCP PcP 10 56 11.7 +0.8
GTA S S 11 02 11.4 +1.2
GTA XS sS 11 02 19.5 +1.8
GTA SS SS 11 05 44.5 -0.8
GTA AMB AMB
comp=Z,37nm,1.5s,mb5.1
GTA AMB AMB
comp=Z,397nm,4.2s
GTA LR LR
comp=N,326nm,17.1s,MS4.6
GTA LR LR
comp=E,369nm,19.2s,MS4.6
GTA LR LR
comp=Z,263nm,19.8s,MS4.3
MAT Matsushiro 51.85 25 P P 10 54 59.4 -2.5
MAT eS S 11 02 24.0 0.0
MJAR Matsushiro Arr 51.85 25 P P 10 54 59.5 -2.3
comp=Z,25nm,1.0s,mb5.1,baz=203,slow=7.8,SNR=35
MJAR LR LR 11 18 18.0
comp=Z,166nm,19.9s,MS4.1,baz=180,slow=38
MJAR Matsushiro Arr 51.85 25 P P 10 54 59.6 -2.3
MJAR pmax pmax
comp=Z,25nm,1.0s
MJAR MLR MLR
comp=Z,167nm,19.9s
NDI New Delhi 52.12 319 *ex* x 10 54 58.0
AJM Ajmer 52.43 315 eP P 10 55 04.9 -1.4
SMLA Simla 53.81 321 *i* P P 10 55 15.1 -1.3
SMLA *i* x x 11 02 39.4
SMLA *i* x x 11 02 40.9
SDNR Sundarnagar 54.19 321 eP P 10 55 19.0 -0.2
CN2 Changchun 54.70 11 ⇑P P 10 55 21.2 -1.5
CN2 eS S 11 02 55.4 -7.1
CN2 AMB AMB
comp=Z,40nm,1.2s,mb5.3
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,300nm,14.0s,MS4.7
CN2 LR LR
comp=E,300nm,14.0s,MS4.7
CN2 LR LR
comp=Z,200nm,19.0s,MS4.2
THN Thein Dam 55.60 321 *ex* x 10 55 26.6
MDJ Mudanjiang 56.34 14 P P 10 55 33.2 -1.3
MDJ AP pP 10 55 36.4 -2.7
MDJ PP PP 10 57 38.3 -1.9
MDJ SCP ScP 11 00 30.3 -0.4
MDJ PCS PcS 11 00 31.5 -0.5
MDJ S S 11 03 23.0 -1.4
MDJ SCS ScS 11 05 20.9 -2.4
MDJ AMB AMB
comp=Z,72nm,1.7s,mb5.4
MDJ AMB AMB
comp=Z,100nm,2.6s,mb5.4
MDJ LR LR
comp=N,188nm,34.8s
MDJ LR LR
comp=E,232nm,29.6s
MDJ LR LR
comp=Z,241nm,35.9s,MS4.0
MDJ Mudanjiang 56.34 14 eP P 10 55 33.3 -1.2
comp=Z,220nm,1.5s,mb6.0
MDJ LR LR
comp=Z,253nm,22.0s,MS4.3
SONM Songino Array 58.00 354 P P 10 55 45.9 -0.2
comp=Z,26nm,0.5s,mb5.5,baz=173,slow=8.6,SNR=204
SONM PcP PcP 10 56 37.7 -0.3
comp=Z,4.3nm,0.5s,baz=180,slow=3.8,SNR=5.6
SONM LR LR 11 22 44.8
comp=Z,228nm,21.5s,MS4.2,baz=14,slow=38
SONM PKP2ab 11 25 55.3

comp=Z,0.2nm,0.4s,baz=26,slow=11,SNR=3.7
ERM Erimo 58.53 26 PFAKE 10 56 00.0 +10
ERM LR LR
comp=Z,358nm,21.0s,MS4.5
WMQ Urumqi 58.56 338 P **P** **10 55 50.1 -0.1**
WMQ PCP PcP 10 56 41.0 +0.6
WMQ PP PP 10 58 01.3 +1.3
WMQ S **S** **11 03 51.5 -2.1**
WMQ SS SS 11 07 41.7 -5.0
WMQ AMB AMB
comp=Z,38nm,1.0s,mb5.4
WMQ AMB AMB
comp=Z,406nm,5.0s
WMQ LR LR
comp=N,370nm,31.0s
WMQ LR LR
comp=E,525nm,38.0s
WMQ LR LR
comp=Z,209nm,31.0s,MS4.1
HIA Hailar 59.34 5 *e*P **P** **10 55 54.5 -0.9**
HIA pmax pmax
comp=Z,5.0nm,0.6s
HIA MLR MLR
comp=Z,334nm,21.0s
HIA Hailar 59.34 5 *e*P **P** **10 55 54.5 -1.0**
comp=Z,5.4nm,0.6s,mb4.8
HIA LR LR
comp=Z,334nm,21.0s,MS4.5
RPZ Rata Peaks 59.78 135 P **P** **10 56 02.6 +3.9**
comp=Z,9.0nm,0.9s,mb4.8,baz=354,slow=11,SNR=3.3
ASAJ Asahikawa 60.03 24 LR LR 11 23 07.9
comp=Z,189nm,21.3s,MS4.2,baz=183,slow=37
KSH Kashi 60.42 327 P **P** **10 56 03.7 +0.6**
KSH AP pP 10 56 08.2 +0.5
KSH XP sP 10 56 10.9 +1.4
KSH PCP PcP 10 56 48.5 +0.6
KSH PP PP 10 58 18.3 +1.8
KSH PPP 10 59 45.2
KSH SCP ScP 11 00 48.4 -0.6
KSH S **S** **11 04 15.1 -2.7**
KSH XS sS 11 04 22.5 -2.9
KSH SCS ScS 11 05 50.5 -3.1
KSH SS SS 11 08 13.7 -2.4
KSH AMB AMB
comp=Z,342nm,1.1s,mb6.3
KSH LR LR
comp=Z,1μm,8.0s
ZAK Zakamensk 60.87 352 *e*P **P** **10 56 05.1 -0.8**
ZAK pmax pmax
comp=Z,14nm,1.3s,mb4.9
KLR Kul'dur 61.19 14 *e*P **P** **10 56 03.0 -5.1**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,140nm,2.0s,mb5.8
HABR Khabarovsk 61.32 16 *e*P **P** **10 56 04.0 -5.0**
HABR *e**PP pP 10 56 09.8 -3.8
HABR *e* 10 56 48.3
HABR *e* 10 58 19.6
HABR *e*S **S** **11 04 23.1 -5.8**
HABR *e* 11 05 55.5
HABR *e*SS SS 11 08 24.5 -5.3
SNZO South Karori 61.82 132 PFAKE 10 56 30.0 +17
SNZO LR LR
comp=Z,594nm,20.0s,MS4.8
TLY Talaya 62.10 353 ⇓P **P** **10 56 14.5 +0.4**
SNR=5.7
TLY Talaya 62.10 353 *e*P **P** **10 56 14.3 +0.1**
TLY *e* 10 56 22.7
TLY pmax pmax
comp=Z,37nm,1.7s,mb5.2
TLY MLR MLR
comp=Z,226nm,16.0s,MS4.4
TLY Talaya 62.10 353 PFAKE 10 56 30.0 +16
TLY LR LR
comp=Z,260nm,19.0s,MS4.4
MOY Mondy 62.44 351 *e*P **P** **10 56 16.4 -0.1**
MOY pmax pmax
comp=Z,6.0nm,2.9s,mb4.2
YSS Yuzh-Sakhalins 62.47 22⇑ *i*P **P** **10 56 15.8 -1.0**
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.8
IRK Irkutsk 62.58 354 *e*P **P** **10 56 16.1 -1.3**
IRK *e* 10 56 34.0
IRK pmax pmax
comp=Z,59nm,1.7s,mb5.4
KZA Kyzart 62.66 329 P **P** **10 56 18.9 +0.7**
SNR=10.0
TKM2 Tokmak 2 63.10 330 *e*P **P** **10 56 20.6 -0.5**
TKM2 pmax pmax
comp=Z,5.0nm,0.3s,mb5.1
TKM2 MLR MLR
comp=Z,436nm,20.0s,MS4.6
TKM2 Tokmak 2 63.10 330 P **P** **10 56 21.1 0.0**
SNR=16
TKM2 Tokmak 2 63.10 330 *e*P **P** **10 56 20.6 -0.4**
comp=Z,5.2nm,0.3s,mb5.1
TKM2 LR LR
comp=Z,436nm,20.0s,MS4.6
MK31 Makanchi Array 63.12 336 *e*P **P** **10 56 20.5 -0.6**
MK31 pmax pmax
comp=Z,13nm,0.5s,mb5.3
MKAR Makanchi Array 63.12 336 P **P** **10 56 20.6 -0.5**
comp=Z,17nm,0.4s,mb5.5,baz=149,slow=7.4,SNR=121
MKAR PKPPKP 11 25 24.9
comp=Z,0.4nm,0.8s,baz=53,slow=6.5,SNR=3.5
MKAR LR LR 11 29 07.5
comp=Z,278nm,20.4s,MS4.4,baz=155,slow=41
KBK Karagaybulak 63.23 329 P **P** **10 56 22.5 +0.6**
SNR=28
AAK Ala-Archa 63.45 329 P **P** **10 56 23.8 +0.4**
comp=Z,188nm,1.2s,mb6.1,SNR=10
AAK Ala-Archa 63.45 329 ⇓P **P** **10 56 24.0 +0.6**
SNR=8.8
AAK Ala-Archa 63.45 329⇑ *e*P **P** **10 56 22.8 -0.6**
AAK pmax pmax
comp=Z,22nm,1.1s,mb5.2
AAK MLR MLR
comp=Z,200nm,16.0s,MS4.4
AAK Ala-Archa 63.45 329 P **P** **10 56 23.7 +0.4**
SNR=14
AAK Ala-Archa 63.45 329 PFAKE 10 56 40.0 +17
AAK LR LR
comp=Z,514nm,20.0s,MS4.7
AML Almayashu 63.50 328 P **P** **10 56 24.3 +0.6**
SNR=13
AML Almayashu 63.50 328 PFAKE 10 56 40.0 +16
AML LR LR
comp=Z,470nm,21.0s,MS4.6
EKS2 Erkin-Say 63.83 328 P **P** **10 56 26.3 +0.3**
SNR=23
EKS2 Erkin-Say 63.83 328 *e*P **P** **10 56 26.1 +0.2**
comp=Z,5.2nm,0.3s,mb5.0
EKS2 LR LR
comp=Z,652nm,21.0s,MS4.8
USP Ospenovka 63.90 329 P **P** **10 56 26.1 -0.3**
SNR=8.0
ABPO Ambohimpanom 64.50 254 PFAKE 10 56 40.0 +9.2
ABPO LR LR
comp=Z,269nm,19.0s,MS4.5
KK31 Karatay Array 65.87 327 *i* P **P** **10 56 38.2 -1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
MAW Mawson 66.44 199 P **P** **10 56 48.3 +5.8**
comp=Z,37nm,1.0s,mb5.4,baz=59,slow=5.8,SNR=9.8
MAW LR LR 11 21 39.1
comp=Z,302nm,18.3s,MS4.5,baz=220,slow=32
CLNS Chul'man 67.33 7 *e*P **P** **10 56 47.7 -0.5**
CLNS pmax pmax
comp=E,8.0nm,1.2s
CLNS pmax pmax
comp=Z,19nm,1.1s,mb5.0
CLNS pmax pmax
comp=N,13nm,1.2s
BOD Bodaibo 67.66 0 *e*P **P** **10 56 49.3 -1.0**
BOD pmax pmax
comp=Z,24nm,1.9s,mb4.9
KURK Kurchatov 67.72 337 P **P** **10 56 50.9 +0.1**
comp=Z,137nm,0.6s,mb6.2,SNR=19
KURK Kurchatov 67.72 337 P **P** **10 56 50.5 -0.4**
SNR=12
KURK Kurchatov 67.72 337⇑ *e*P **P** **10 56 49.1 -1.7**
KURK pmax pmax
comp=Z,44nm,1.5s,mb5.3
KURK MLR MLR
comp=Z,200nm,16.0s,MS4.4
KURK Kurchatov 67.72 337 PFAKE 10 57 00.0 +9.2
KURK LR LR
comp=Z,415nm,19.0s,MS4.7
ZALV Zalesovo Beam 68.27 342 P **P** **10 56 53.0 -1.2**
comp=Z,14nm,0.5s,mb5.3,baz=154,slow=5.9,SNR=60
ZALV PKPPKP 11 25 13.8
comp=Z,0.3nm,0.3s,baz=245,slow=6.0,SNR=3.9
NVS Novosibirsk 69.51 342 *i* P **P** **10 56 59.0 -2.9**
NVS pmax pmax
comp=Z,40nm,1.4s,mb5.2
NVS pmax pmax
comp=N,35nm,1.7s
NVS pmax pmax
comp=E,22nm,1.4s
ABKT Ailbek 70.40 316 P **P** **10 57 08.9 +1.1**
comp=E,333nm,1.3s,mb6.1,SNR=11
VNDA Vanda 71.81 170 P **P** **10 57 16.6 +0.8**
comp=E,3.2nm,1.0s,mb4.2,baz=320,slow=7.9,SNR=4.8
VNDA LR LR 11 28 21.5
comp=E,250nm,19.1s,MS4.5,baz=324,slow=35
BVA0 Borovoye Array 72.82 334 P **P** **10 57 21.3 -0.7**
BVA0 pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BRVK Borovoye 72.89 334 P **P** **10 57 22.6 +0.2**
comp=Z,171nm,1.5s,mb5.8,SNR=12
BRVK Borovoye 72.89 334 P **P** **10 57 22.3 -0.1**
SNR=14
BRVK Borovoye 72.89 334 PFAKE 10 57 30.0 +7.6
BRVK LR LR
comp=Z,640nm,20.0s,MS4.9
YAK Yakutsk 72.98 8*c i*P **P** **10 57 21.9 -0.9**
YAK pmax pmax
comp=Z,78nm,1.2s,mb5.5
YAK pmax pmax
comp=N,48nm,1.2s
YAK pmax pmax
comp=E,25nm,1.3s
YAK Yakutsk 72.98 8 PFAKE 10 57 30.0 +7.2
YAK LR LR
comp=Z,284nm,21.0s,MS4.5
PETK Petropavlovsk- 73.30 26 P **P** **10 57 24.6 -0.3**
comp=Z,28nm,0.8s,mb5.2,baz=196,slow=2.0,SNR=28
PETK LR LR 11 32 07.3
comp=Z,60nm,18.4s,MS3.9,baz=238,slow=38
PET Petropavlovsk 73.66 26 *e*P **P** **10 57 26.2 -0.8**
PET *e*S S 11 06 53.6 -3.4
PET *e*SSS 11 14 51.0
PET pmax pmax
comp=Z,33nm,0.7s,mb5.4
PET pmax pmax
comp=Z,100nm,13.0s
PET MLR MLR
comp=Z,100nm,20.0s,MS4.1
UMR Umm Al-Rimmam 74.57 304 *e*P **P** **10 57 32.0 -0.8**
baz=304
UMR AMb AMB 10 57 34.0
comp=Z,82nm,1.8s,mb5.4,baz=304
NAY Al-Naaiem 74.85 304 *e*P **P** **10 57 33.4 -1.1**
baz=304
NAY AMb AMB 10 57 34.7
comp=Z,31nm,1.5s,mb5.0,baz=304
SYO Syowa Base 74.92 201⇓ *e*P **P** **10 57 35.4 +1.3**
SYO Syowa Base 74.92 201⇓ *e*pP pP 10 57 39.4 +0.6
MIB Mutribah 74.97 305 *e*P **P** **10 57 34.1 -1.0**
baz=305
MIB AMb AMB 10 57 36.2
comp=Z,54nm,1.4s,mb5.3,baz=305
AB31 Akbulak array 75.43 327 P **P** **10 57 36.8 -0.6**
AB31 pmax pmax
comp=Z,56nm,0.6s,mb5.7
AKTK Aktyubinsk 77.13 327 P **P** **10 57 46.7 -0.2**
AKTO Aktyubinsk 77.13 327 P **P** **10 57 46.7 -0.2**
comp=Z,11nm,0.6s,mb5.0,baz=108,slow=5.1,SNR=24
AKTO Aktyubinsk 77.13 327 P **P** **10 57 46.7 -0.3**
AKTO pmax pmax
comp=Z,11nm,0.6s,mb5.0
SEY Seymchan 78.68 17⇑ *e*P **P** **10 57 54.1 -1.2**
SVE Sverdlovsk 79.56 334⇓ *e*P **P** **10 58 00.1 -0.1**
SVE pmax pmax
comp=Z,99nm,1.2s,mb5.6
QSPA South Pole Qui 79.93 180 P **P** **10 58 03.0 +1.0**
comp=Z,1.6nm,0.5s,mb4.2,baz=325,slow=3.8,SNR=4.8
QSPA South Pole Qui 79.93 180 P **P** **10 58 03.0 +1.0**
QSPA LR LR
comp=Z,451nm,21.0s,MS4.8
ARU Arti 80.25 333*c i*P **P** **10 58 03.5 -0.5**
ARU *e* 11 01 06.1
ARU *e*S S 11 08 10.3 +1.6
ARU SS SS 11 13 11.8 -8.3
ARU pmax pmax
comp=Z,111nm,1.7s,mb5.5
ARU Arti 80.25 333 PFAKE 10 58 20.0 +16
ARU LR LR
comp=Z,408nm,19.0s,MS4.8
DGRG David-gareji 80.76 315 P **P** **10 58 08.3 +1.2**
TBLG Delisi 81.31 315 *e*P **P** **10 58 08.9 -1.1**
TBLG Delisi 81.31 315 P **P** **10 58 08.9 -1.1**
TIXI Tiksi 82.19 5⇑ *e*P **P** **10 58 12.9 -1.1**
TIXI pmax pmax
comp=Z,91nm,1.0s,mb5.7
TIXI MLR MLR
comp=Z,294nm,22.0s,MS4.6
TIXI Tiksi 82.19 5⇑ *e*P **P** **10 58 12.9 -1.1**
comp=Z,91nm,1.0s,mb5.7
TIXI LR LR
comp=Z,294nm,22.0s,MS4.6
SOKR Solikamsk 82.81 335*d i*P **P** **10 58 17.1 -0.4**
SOKR pmax pmax
comp=Z,60nm,1.7s,mb5.3
SOKR MLR MLR
comp=Z,460nm,26.0s,MS4.7
LSZ Lusaka 82.97 256 PFAKE 10 58 30.0 +11
LSZ LR LR
comp=Z,302nm,19.0s,MS4.7
KIV Kislovodsk 83.51 317 *e*P **P** **10 58 22.6 +1.1**
KIV *i* S S 11 08 43.7 +0.8
KIV pmax pmax
comp=Z,32nm,1.7s,mb5.2
KIV Kislovodsk 83.51 317 PFAKE 10 58 30.0 +8.5
KIV LR LR
comp=Z,148nm,19.0s,MS4.4
BOSA Boshof 83.76 242 P **P** **10 58 24.0 +0.8**
comp=Z,5.9nm,0.9s,mb4.7,baz=111,slow=5.0,SNR=6.3
BOSA LR LR 11 27 46.1
comp=Z,370nm,21.7s,MS4.7,baz=100,slow=30
BOSA Boshof 83.76 242 P **P** **10 58 24.0 +0.8**
BOSA LR LR 11 27 46.1
SOC Sochi 85.42 316 *e*P **P** **10 58 29.7 -1.5**
SOC *e**SP sP 10 58 36.7 -1.0
SOC *e* 11 01 47.1
SOC *e*PPP 11 03 42.2
SOC *e*S S 11 08 53.9 -8.1
SOC *e*SS SS 11 14 37.5 0.0
SOC pmax pmax
comp=Z,46nm,0.9s,mb5.6
BILL Bilibino 86.37 17 *e*P **P** **10 58 34.2 -1.1**
BILL *e* 11 01 58.1
BILL pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
BILL Bilibino 86.37 17 PFAKE 10 58 50.0 +15
BILL LR LR
comp=Z,256nm,22.0s,MS4.6
VRHR Novokhopersk 86.69 323 *e*P **P** **10 58 36.8 -0.5**
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.9
VRHR pmax pmax
comp=N,40nm,1.4s
VRHR pmax pmax
comp=E,40nm,0.5s
SUR Sutherland 86.97 238 PFAKE 10 58 50.0 +11
SUR LR LR
comp=Z,429nm,19.0s,MS4.9
ANN Anapa 87.35 316 *e*P **P** **10 58 37.7 -3.0**
ANN *e* 10 58 45.8
ANN *e*S SKSac 11 09 03.4 -4.6
ANN *e*SS SS 11 15 00.3 -5.5
ANN pmax pmax
comp=Z,44nm,1.0s,mb5.6
ANN MLR MLR
comp=Z,528nm,22.0s,MS4.9
CSS Prodhromos 87.81 306 PFAKE 10 58 50.0 +6.9
CSS LR LR
comp=Z,523nm,21.0s,MS4.9
VSR Storozhevoye 88.19 323 *e*P **P** **10 58 43.9 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,40nm,1.1s
SNAA Sanae 88.48 196 *e*P **P** **10 58 46.4 +0.8**
SNAA *e* pP 10 58 51.5 +1.1
SNAA *e* 10 58 57.3
SNAA *e* 10 58 58.7
SNAA Sanae 88.48 196⇑ *e*P **P** **10 58 47.1 +1.5**
BRTR Keskin Array B 88.71 311 P **P** **10 58 47.0 -0.2**
comp=E,14nm,0.9s,mb5.3,baz=124,slow=6.1,SNR=37
BRTR LR LR 11 40 28.7
comp=E,289nm,21.3s,MS4.7,baz=326,slow=37
BRTR Keskin Array B 88.71 311 P **P** **10 58 47.1 -0.2**
BRTR pmax pmax
comp=Z,14nm,0.9s
BRTR MLR MLR
comp=Z,289nm,21.3s
VNA2 Neumayer--Watz 90.13 196 *e*P **P** **10 58 55.4 +2.0**
baz=112,slow=3.5
VNA2 *e* pP 10 58 59.8 +1.7
VNA2 *e* 10 59 05.5
VNA2 *e* 10 59 06.9
MOS Moscow 90.45 327 *e*P **P** **10 58 54.2 -0.8**
MOS *e* 11 02 28.5
MOS pmax pmax
comp=Z,60nm,0.6s,mb6.1
VNA1 Neumayer--Stat 90.52 196 *e*P pP 10 59 07.2 +7.2
VNA1 *e* 10 59 08.7
VNA3 Neumayer Olymp 90.58 196 *e*P **P** **10 58 56.9 +1.5**
VNA3 *e* pP 10 59 00.8 +0.6
VNA3 *e* 10 59 06.9
VNA3 *e* 10 59 08.7
ISP Isparta 90.67 308 PFAKE 10 59 10.0 +14
ISP LR LR
comp=Z,247nm,20.0s,MS4.6
OBN Obninsk 90.85 326 *e*P **P** **10 58 57.3 +0.4**
OBN *e* 11 02 31.3
OBN pmax pmax
comp=Z,53nm,1.2s,mb5.8
KLMR Klimovskoe 91.08 332 *e*P **P** **10 58 56.4 -1.4**
KLMR pmax pmax
comp=Z,80nm,1.5s,mb5.8
TSUM Tsumeb 92.28 250 *e*P **P** **10 59 06.7 +2.3**
PPT Papeete 93.46 108 LR LR 11 34 44.6
comp=Z,205nm,21.8s,MS4.5,baz=259,slow=31
AKASG Malin Array Be 94.14 321 P **P** **10 59 10.9 -1.3**
comp=Z,5.8nm,0.8s,mb5.0,baz=86,slow=4.6,SNR=18
AKASG Malin Array Be 94.14 321 *i* P **P** **10 59 10.8 -1.4**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
JOF Joensuu 95.37 333 *e*p **P** **10 59 18.4 +0.8**
comp=Z,1.3nm,0.4s,mb4.7
JOF Joensuu 95.37 333 *e*P **P** **10 59 18.4 +0.8**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.6
APA Apatity 95.50 338⇑ *e*P **P** **10 59 13.5 -4.5**
APA pmax pmax
comp=Z,34nm,1.3s,mb5.6
APA MLR MLR
comp=Z,1μm,18.0s,MS5.5
SDPT Sand Point 95.92 35 *e*P **P** **10 59 19.4 -0.9**
comp=Z,37nm,0.7s,mb5.9
KAF Kangasniemi 97.53 332 *e*p **P** **10 59 26.5 -0.9**
comp=Z,2.3nm,0.4s,mb5.1
KAF Kangasniemi 97.53 332 *e*P **P** **10 59 26.5 -0.9**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb5.0
ARCES ARCESS Array B 98.68 339 P **P** **10 59 30.9 -1.5**
comp=Z,1.4nm,0.6s,mb4.7,baz=86,slow=6.2,SNR=13
ARCES LR LR 11 48 15.6
comp=Z,398nm,18.9s,MS4.9,baz=104,slow=38
ARCES ARCESS Array B 98.68 339 P **P** **10 59 30.9 -1.5**
ARCES LR LR 11 48 15.6
TIR Tirane 99.32 310 PFAKE 10 59 50.0 +14
TIR LR LR
comp=Z,328nm,21.0s,MS4.8
CEL Celeste 102.15 307 PFAKE 11 00 00.0 +12
CEL LR LR
comp=Z,169nm,20.0s,MS4.6
CUC Castrocucco 102.30 309 PFAKE 11 00 00.0 +11
CUC LR LR
comp=Z,289nm,19.0s,MS4.8
TRI Trieste 103.96 315 PFAKE 11 00 10.0 +14
TRI LR LR
comp=Z,204nm,21.0s,MS4.6
GERES GERESS Array B 103.99 318 PP PP 11 04 13.2 -0.8
comp=Z,1.1nm,0.8s,baz=69,slow=4.9,SNR=3.9
AQU L'Aquila 104.20 311 PFAKE 11 00 10.0 +13
AQU LR LR
comp=Z,267nm,22.0s,MS4.7
TORD Torodi Ar. Bea 113.35 280 PKiKP PKiKP 11 04 31.8 -0.7
comp=Z,0.8nm,0.5s,baz=37,slow=2.2,SNR=11
TORD Torodi Ar. Bea 113.35 280 PKPdf PKiKP 11 04 31.8 -0.7
YKA Yellowknife Ar 117.32 23 PKP PKPdf 11 04 38.5 -0.1
comp=Z,2.1nm,0.4s,baz=324,slow=1.8,SNR=60
YKA PKKPab PKKPab 11 15 15.3 +10
comp=Z,0.3nm,0.7s,baz=105,slow=2.9,SNR=4.7
YKA SKKP 11 19 16.3
comp=Z,0.2nm,0.7s,baz=116,slow=3.2,SNR=3.7
YKA Yellowknife Ar 117.32 23 PKIKP PKPdf 11 04 38.5 -0.2
YKA pmax pmax
comp=Z,2.0nm,0.4s
YKA Yellowknife Ar 117.32 23 PKP PKPdf 11 04 38.5 -0.1
YKA PKKPab PKKPab 11 15 15.3 +10
YKA SKKP 11 19 16.3
KIC Kosan Boka 118.88 272 *e*PKIKP PKPdf 11 04 56.8 +14
comp=Z,24nm,0.8s
DBIC Dimbokro 119.04 272 PKP PKPdf 11 04 43.6 +0.1
comp=Z,0.9nm,0.4s,baz=60,slow=1.8,SNR=3.3
DBIC Dimbokro 119.04 272 PKIKP PKPdf 11 04 43.6 +0.2
DBIC pmax pmax
comp=Z,1.0nm,0.4s
LIC Lamto 119.14 272 *e*PKIKP PKPdf 11 04 57.1 +13
comp=Z,20nm,0.7s
TIC Toumodi 119.19 272 *e*PKIKP PKPdf 11 04 57.4 +14
comp=Z,10nm,0.3s
SFS San Fernando 119.79 306 PFAKE 11 05 00.0 +16
SFS LR LR
comp=Z,717nm,19.0s,MS5.3
RTC Rabat Centre 120.72 304 PFAKE 11 05 00.0 +14
RTC LR LR
comp=Z,215nm,20.0s,MS4.8
HUMO Hull Mountain 121.23 46 PFAKE 11 05 00.0 +13
HUMO LR LR
comp=Z,425nm,19.0s,MS5.1
EDM Edmonton 122.92 32 *e*PKIKP PKPdf 11 04 50.1 +0.4
NEW Newport 123.12 38 PFAKE 11 05 00.0 +10
NEW LR LR
comp=Z,120nm,19.0s,MS4.6
MSO Missoula 125.68 39 PFAKE 11 05 10.0 +15
MSO LR LR
comp=Z,117nm,21.0s,MS4.5
NVAR Mina Array Bea 125.83 50 PKP PKPdf 11 04 57.9 +2.1
comp=Z,1.6nm,0.6s,baz=270,slow=2.3,SNR=13
NVAR PP PP 11 06 44.4 -3.9
comp=Z,2.4nm,1.1s,baz=275,slow=6.1,SNR=4.6
BMN Battle Mountai 126.00 47 PFAKE 11 05 10.0 +14
BMN LR LR
comp=Z,260nm,20.0s,MS4.9
TPH Tonopah 126.75 50 PFAKE 11 05 10.0 +12
TPH LR LR
comp=Z,358nm,21.0s,MS5.0
HLID Hailey 126.78 42 *e*PKPdf PKPdf 11 04 59.4 +1.9
DAC Darwin (Calif) 126.99 52 PFAKE 11 05 10.0 +12
DAC LR LR
comp=Z,132nm,21.0s,MS4.6
DLMT Dillon 127.18 40 *e*PKPdf PKPdf 11 04 59.2 +1.1
FFC Flin Flon 127.34 25 PFAKE 11 05 10.0 +12
FFC LR LR
comp=Z,157nm,20.0s,MS4.7
EGMT Eagleton 127.59 36 *e*PKPdf PKPdf 11 04 59.4 +0.6
BOZ Bozeman (W) 127.65 39 PFAKE 11 05 10.0 +11
BOZ LR LR
comp=Z,205nm,19.0s,MS4.8
TPNV Topopah Spring 127.83 51 PFAKE 11 05 10.0 +10
TPNV LR LR
comp=Z,421nm,19.0s,MS5.1
RRI2 Red Ridge 128.91 41 *e*PKPdf PKPdf 11 05 03.5 +2.0
LKWY Lake 128.93 40 PFAKE 11 05 10.0 +8.5
LKWY LR LR
comp=Z,180nm,21.0s,MS4.7
REDW Red Top Meadow 129.21 41 *e*PKPdf PKPdf 11 05 03.2 +1.1
DUG Dugway 129.22 46 *e*PKIKP PKPdf 11 05 03.5 +1.3
DUG MLR MLR

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,137nm,20.0s,MS4.6						
PLCA	Paso Flores	129.31	176	PKP	PKiKP	11 05 05.5	+2.3
	comp=Z,0.8nm,0.7s,baz=135,slow=2.9,SNR=1.6						
PLCA	Paso Flores	129.31	176	PKIKP	PKiKP	11 05 05.5	+2.4
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	Paso Flores	129.31	176	PKP	PKiKP	11 05 05.5	+2.3
AHID	Auburn Hatcher	129.31	42	PFAKE		11 05 10.0	+7.7
AHID				LR	LR		
	comp=Z,226nm,21.0s,MS4.8						
PDAR	Pinedale Array	130.32	41	PKP	PKPdf	11 05 05.4	+1.2
	comp=Z,0.9nm,0.4s,baz=153,slow=1.0,SNR=18						
DGMT	Dagmar	130.39	32	PFAKE		11 05 20.0	+16
DGMT				LR	LR		
	comp=Z,197nm,19.0s,MS4.8						
ULM	Lac du Bonnet	133.15	26	PFAKE		11 05 20.0	+11
ULM				LR	LR		
	comp=Z,219nm,19.0s,MS4.9						
AGMN	Agassiz Refuge	134.61	27	PFAKE		11 05 20.0	+7.9
AGMN				LR	LR		
	comp=Z,228nm,20.0s,MS4.9						
SCHQ	Schefferville	135.36	0	PFAKE		11 05 30.0	+17
SCHQ				LR	LR		
	comp=Z,753nm,22.0s,MS5.4						
SDCO	Great Sand Dun	135.42	45	PFAKE		11 05 30.0	+16
SDCO				LR	LR		
	comp=Z,221nm,19.0s,MS4.9						
ANMO	Albuquerque	135.95	49	⇑*i*PKIKP	PKiKP	11 05 18.8	+2.1
ECSD	EROS,Sioux Fal	137.47	33	*e*PKPdf	PKPdf	11 05 18.3	+0.7
CBKS	Cedar Bluff	138.73	41	PFAKE		11 05 30.0	+10
CBKS				LR	LR		
	comp=Z,224nm,20.0s,MS4.9						
AMTX	Amarillo	139.49	47	PFAKE		11 05 30.0	+8.4
AMTX				LR	LR		
	comp=Z,200nm,19.0s,MS4.9						
TXAR	Lajitas Array	140.31	56	PKhKP		11 05 15.2	
	comp=Z,1.6nm,0.5s,baz=239,slow=2.8,SNR=56						
TXAR	Lajitas Array	140.31	56	*i* PKHKP		11 05 15.2	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSU1	Kansas State U	140.51	38	*e*PKPdf	PKPdf	11 05 23.9	+0.6
KSU1				LR	LR		
	comp=Z,234nm,19.0s,MS5.0						
JFWS	Jewell Farm	141.25	28	PFAKE		11 05 40.0	+15
JFWS				LR	LR		
	comp=Z,274nm,19.0s,MS5.0						
WMOK	Wichita Mounta	141.62	45	*e*PKIKP	PKPdf	11 05 20.4	-5.0
JCT	Junction City	142.93	52	*e*PKIKP	PKPdf	11 05 24.5	-3.4
JCT				MLR	MLR		
	comp=Z,240nm,19.0s,MS5.0						
CCM	Cathedral Cave	144.34	35	PFAKE		11 05 40.0	+10
CCM				LR	LR		
	comp=Z,222nm,20.0s,MS4.9						
SLM	Saint Louis	144.47	33	*e*PKIKP	PKPdf	11 05 28.4	-2.0
FVM	French Village	144.84	34	*e*PKIKP	PKPdf	11 05 29.7	-1.3
MIAR	Mount Ida	145.25	41	*e*PKIKP	PKPdf	11 05 31.8	0.0
MIAR				MLR	MLR		
	comp=Z,173nm,19.0s,MS4.8						
OLIL	Olney	145.51	31	*e*PKPdf	PKPdf	11 05 32.2	+0.1
SIUC	Southern Illin	145.69	33	*e*PKPdf	PKPdf	11 05 32.6	+0.2
UALR	University of	145.89	40	*e*PKPdf	PKPdf	11 05 33.5	+0.6
BLO	Bloomington	145.93	28	*e*PKP2	PKPab	11 05 33.4	-0.5
ERPA	Erie	145.94	18	PFAKE		11 05 40.0	+7.2
ERPA				LR	LR		
	comp=Z,228nm,21.0s,MS4.9						
NATX	Nacogdoches	146.13	46	PFAKE		11 05 50.0	+17
NATX				LR	LR		
	comp=Z,208nm,19.0s,MS4.9						
USIN	University of	146.32	31	*e*PKPdf	PKPdf	11 05 34.5	+1.0
ACSO	Alum Creek Sta	146.57	23	*e*PKPdf	PKPdf	11 05 34.4	+0.5
WCI	Wyandotte Cave	146.79	29	PFAKE		11 05 50.0	+16
WCI				LR	LR		
	comp=Z,171nm,20.0s,MS4.8						
BINY	Binghamton	146.93	13	PFAKE		11 05 50.0	+16
BINY				LR	LR		
	comp=Z,267nm,19.0s,MS5.0						
LVC	Limon Verde	147.42	176	*e*PKPbc	PKPbc	11 05 39.7	+1.4
WVT	Waverly	147.61	33	PFAKE		11 05 50.0	+14
WVT				LR	LR		
	comp=Z,148nm,19.0s,MS4.8						
BDFB	Brasilia	148.59	216	PKPbc	PKPbc	11 05 43.0	+1.4
	comp=Z,4.3nm,0.5s,baz=102,slow=4.5,SNR=11						
BDFB	Brasilia	148.59	216	PKPbc	PKPbc	11 05 43.0	+1.4
BDFB				LR	LR		
	comp=Z,239nm,20.0s,MS5.0						
TZTN	Tazewell	149.44	28	*e*PKPbc	PKPbc	11 05 43.4	+0.3
BLA	Blacksburg	150.19	23	*e*PKP2	PKiKP	11 05 45.0	-0.8
BLA				MLR	MLR		
	comp=Z,244nm,21.0s,MS5.0						
CBN	Corbin	150.32	18	PFAKE		11 05 50.0	+10
CBN				LR	LR		
	comp=Z,258nm,22.0s,MS5.0						
LRAL	Lakeview Retre	150.33	37	PFAKE		11 05 50.0	+10
LRAL				LR	LR		
	comp=Z,210nm,22.0s,MS4.9						
BRAL	Brewton	151.71	40	PFAKE		11 05 50.0	+7.6
BRAL				LR	LR		
	comp=Z,197nm,19.0s,MS4.9						
GOGA	Godfrey	152.00	31	*e*PKIKP	PKiKP	11 05 50.0	+0.3
CNNC	Cliffs of the	152.87	21	PFAKE		11 06 00.0	+16
CNNC				LR	LR		
	comp=Z,212nm,22.0s,MS4.9						
NHSC	New Hope	153.82	27	PFAKE		11 06 00.0	+15
NHSC				LR	LR		
	comp=Z,179nm,20.0s,MS4.9						
DWPF	Disney	157.19	36	PFAKE		11 06 00.0	+10
DWPF				LR	LR		
	comp=Z,183nm,21.0s,MS4.9						
TGUH	Tegucigalpa,Un	159.26	77	PFAKE		11 06 00.0	+7.0
TGUH				LR	LR		
	comp=Z,163nm,21.0s,MS4.8						
BCIP	Isla Barro Col	166.77	93	PFAKE		11 06 10.0	+10
BCIP				LR	LR		
	comp=Z,172nm,20.0s						
SDDR	Presa de Saban	169.99	27	PFAKE		11 06 10.0	+7.7
SDDR				LR	LR		
	comp=Z,243nm,20.0s						
SJG	San Juan	172.01	358	PFAKE		11 06 10.0	+6.7
SJG				LR	LR		
	comp=Z,545nm,20.0s						
SDV	Santo Domingo	175.71	106	PFAKE		11 06 20.0	+15
SDV				LR	LR		
	comp=Z,180nm,20.0s						

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*CSEM **07** 11:01:56.2±0.1, 3938N×2787E, h2km, MD3.1, Error ellipse: s-maj=1.6km s-min=1.2km az=88.0*
*ISK **07** 11:01:56.1, 3938N×2786E, h5km, MD3.1*
*ISCJB **07** 11:01:57.2±0.5, 3938N±002×2788E±003, h5km±4km, Error ellipse: s-maj=4.0km s-min=3.1km az=12.8*
*DDA **07** 11:01:57.4, 3938N×2791E, h4km, Md3.3*
ISC 07 11:01:57.7±0.4**, 3939N**±002×**2790E**±003**, h5**km±4km**, n47, σ0.79**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.25	357	*e*PG	Pg	11 02 03.1	+0.4
BALB				*e*SG	Sg	11 02 07.4	+1.4
BALY	Balya	0.41	329	*i* P	Pg	11 02 05.4	-0.3
BALY				*i* S	Sg	11 02 11.6	+0.5
AKS	Akhisar	0.51	187	*e*PG	Pg	11 02 07.2	-0.3
AKS				*e*SG	Sg	11 02 15.1	+0.9
AKHS	Akhisar	0.51	187	*i* P	Pg	11 02 07.2	-0.4
AKHS				*i* S	Sg	11 02 14.9	+0.7
DST	Dursunbey	0.61	69	*e*PG	Pg	11 02 08.9	-0.4
AYVA	Ayvalik	0.94	266	*i* P	Pg	11 02 16.1	+0.4
AYVA				*i* S	Sg	11 02 28.9	+1.1
KCT	Karacabey	0.95	22	*e*PG	Pg	11 02 15.4	-0.5
EDC	Edincik	0.96	359	*e*PG	Pg	11 02 15.6	-0.5
BNT	Bandirma	0.97	1	*e*PG	Pg	11 02 15.5	-0.8
KULA	Kula-Manisa	1.06	145	*e*PG	Pg	11 02 17.4	-0.5
KDAG	Bornova	1.10	207	*i* P	Pg	11 02 18.3	-0.5
KDAG				*i* S	Sg	11 02 33.2	+0.2
BLCB	Balcova	1.20	214	*e*PN	Pn	11 02 19.6	-1.5
ULDT	Uludag	1.22	51	*i* P	Pg	11 02 20.1	-0.9
ULDT				*i* S	Sg	11 02 35.9	-0.9
GDZ	Gediz	1.27	103	*i* P	Pg	11 02 21.9	-0.1
GDZ				*i* S	Sg	11 02 38.0	-0.4
EZN	Ezine	1.29	290	*e*PN	Pn	11 02 21.6	-0.6
LPK	Lapseki	1.32	319	*e*PN	Pn	11 02 21.9	-0.8
RKY	Sarkoy-Tekirda	1.41	337	*e*PN	Pn	11 02 22.8	-1.2
URLA	Izmir	1.44	225	*i* P	Pn	11 02 22.1	-2.3
URLA				*i* S	Sb	11 02 39.7	-3.9
GEMT	Gemlik	1.44	43	*e*PN	Pn	11 02 24.4	-0.1
KHAL	Karahalli	1.61	129	*i* P	Pn	11 02 25.3	-1.4
TKR	Tekirdag	1.62	350	*e*PN	Pn	11 02 26.4	-0.5
YLV	Yalova	1.64	43	*e*PN	Pn	11 02 26.9	-0.2
KHL	Karahalli	1.66	129	*e*PN	Pn	11 02 27.2	-0.2
CAVI	Cavuskoy	1.71	61	*e*PN	Pn	11 02 28.3	+0.2
AYDN	Tasoluk	1.72	180	*i* P	Pn	11 02 29.6	+1.3
AYDN				*i* S	Sn	11 02 45.5	-5.1
GADA	Gvkgeada	1.73	298	*e*PN	Pn	11 02 27.8	-0.6
CRLT	Corlu	1.74	356	*e*PN	Pn	11 02 28.8	+0.2
ALT	Altintas	1.75	100	*e*PN	Pn	11 02 29.1	+0.4
ADVT	Abdulvahap	1.76	53	*e*PN	Pn	11 02 29.4	+0.6
SLVT	Silivri	1.86	7	*e*PN	Pn	11 02 30.0	-0.1
ENEZ	Enez	1.90	316	*e*PN	Pn	11 02 30.7	0.0
ISK	Istanbul-Kandi	1.90	28	*e*PN	Pn	11 02 31.0	+0.3
CTKS	Kestanelik-??a	1.91	14	*e*PN	Pn	11 02 31.6	+0.9
BGKT	Bogazkoy	1.91	20	*e*PN	Pn	11 02 31.3	+0.4
HRT	Hereke	1.98	43	*e*PN	Pn	11 02 32.8	+1.1
BORA	Eskisehir	2.04	75	*i* P	Pn	11 02 31.7	-0.9
BORA				*i* S	Sn	11 03 03.1	+4.7
GPA	Golpazari	2.07	63	*e*PN	Pn	11 02 33.5	+0.6
EYL	Eskiyayla	2.10	55	*e*PN	Pn	11 02 34.2	+0.7
SHUT	Suhut-Afyon	2.23	111	*e*PN	Pn	11 02 36.7	+1.5
GULT	Gulveren	2.27	62	*e*PN	Pn	11 02 36.1	+0.3
YER	Yerkesik	2.27	172	*e*PN	Pn	11 02 36.1	+0.3
ESKT	Eskisehir	2.29	86	*i* P	Pn	11 02 40.3	+4.3
ESKT				*i* S	Sn	11 03 09.8	+5.1
ESKT	Eskisehir	2.29	86	*e*Pn	Pn	11 02 36.7	+0.6
SEYT	Eskypehyr	2.29	86	*i* P	Pn	11 02 40.3	+4.2
SEYT				*i* S	Sn	11 03 09.8	+5.2
BODT	Bodrum	2.37	191	*e*PN	Pn	11 02 37.4	+0.3
EDRB	Edirne	2.61	341	*e*PN	Pn	11 02 40.2	-0.2
MDU	Mudurnu	2.77	66	*e*PN	Pn	11 02 44.0	+1.4

MAN 07 11:03:30, 1466N×12129E, h2km, mb4.1, ML2.9, MS2.5, Luzon

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*CSEM **07** 11:08:06.2±0.1, 3699N×2928E, h5km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.4km az=174.0*
*ISK **07** 11:08:06.7, 3698N×2927E, h8km, MD2.9*
*ISCJB **07** 11:08:07.2±0.6, 3697N±004×2928E±003, h7km±6km, Error ellipse: s-maj=6.9km s-min=4.5km az=170.2*
*DDA **07** 11:08:07.7, 3703N×2923E, h7km±4km, Md3.0*
ISC 07 11:08:07.6±0.5**, 3698N**±004×**2927E**±004**, h9**km±5km**, n21, σ0.58**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.35	42	*i* P	Pg	11 08 13.9	-0.5
GOLH				*i* S	Sg	11 08 20.4	+1.3
GOLH	Golhisar	0.35	42	*i* P	Pg	11 08 13.9	-0.6
GOLH				*i* S	Sg	11 08 20.4	+1.3
TURN	Turunc	0.55	259	*i* P	Pg	11 08 22.9	+4.8
TURN				*i* S	Sg	11 08 34.6	+9.3
DALT	Dalyan (Mudla)	0.55	248	*e*PG	Pg	11 08 17.6	-0.6
DALT				*e*SG	Sg	11 08 25.8	+0.3
ELL	Elmali	0.56	114	*e*PG	Pg	11 08 17.9	-0.5
ELL				*e*SG	Sg	11 08 26.7	+0.9
AKAS	Kas	0.79	160	*i* P	Pg	11 08 22.4	-0.4
DENT	Denizli	0.80	346	*e*PG	Pg	11 08 22.3	-0.7
YER	Yerkesik	0.81	282	*e*PG	Pg	11 08 23.4	+0.2
BCK	Bucak	1.16	65	*e*PN	Pn	11 08 29.1	-0.9
MLSB	Milas	1.24	285	*e*PN	Pn	11 08 30.6	-0.5
AYDN	Tasoluk	1.30	302	*i* P	Pn	11 08 31.9	-0.1
AYDN				*i* S	Sb	11 08 49.4	+0.3
KHL	Karahalli	1.36	8	*e*PN	Pn	11 08 31.9	-0.9
DAT	Datca	1.38	260	*e*PN	Pn	11 08 33.0	-0.1
BDRM	Kayabasi	1.47	274	*i* P	Pn	11 08 34.8	+0.6
BDRM				*i* S	Sn	11 08 54.6	+1.0
BODT	Bodrum	1.57	274	*e*PN	Pn	11 08 35.7	0.0
KULA	Kula-Manisa	1.61	343	*e*PN	Pn	11 08 36.4	+0.1
SHUT	Suhut-Afyon	1.87	32	*e*PN	Pn	11 08 39.8	0.0
ALT	Altintas	2.18	17	*e*PN	Pn	11 08 44.0	-0.1
AKS	Akhisar	2.22	329	*e*PN	Pn	11 08 44.6	0.0
BLCB	Balcova	2.26	309	*e*PN	Pn	11 08 45.2	0.0
KONT	Konya--Tatoy	2.64	68	*e*PN	Pn	11 08 51.1	+0.7

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*NEIC **07** 11:13:41.6, 1472N×9435W, h16km, mb4.9/1, MD4.4(MEX), After MEX.*
MEX 07 11:13:41.5±1.0**, 1472N×9435W, h16**km±14km**, MD4.5, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.46	48	*i* P	Pn	11 14 03.3	-3.9
PCIG				*i* S	Sn	11 14 20.4	-5.7
HUIG	Huatulco	1.99	302	*i* P	Pn	11 14 11.5	-3.0
HUIG				*i* S	Sn	11 14 33.4	-5.8
HUIG	Huatulco	1.99	302	*i* P	Pn	11 14 11.5	-3.0
HUIG				*i* S	Sn	11 14 33.2	-6.0
THIG		2.02	85	*i* P	Pn	11 14 11.3	-3.6
THIG				*i* S	Sn	11 14 35.1	-4.7
TGIG		2.36	30	*e*P	Pn	11 14 17.9	-1.7
TGIG				*i* S	Sn	11 14 43.5	-4.7
CMIG	Matias Romero	2.41	348	*i* P	Pn	11 14 17.9	-2.4
CMIG				*i* S	Sn	11 14 45.6	-3.9
SCX	San Cristobal	2.59	39	*i* P	Pn	11 14 23.5	+0.7
SCX				*i* S	Sn	11 14 52.5	-1.5
CCIG	Comitan	2.63	54	*e*P	Pn	11 14 21.9	-1.4
CCIG				*i* S	Sn	11 14 51.7	-3.3
VHO	Vista Hermosa	3.27	316	*i* P	Pn	11 14 31.3	-0.9
VHO				*i* S	Sn	11 15 06.7	-4.2
PNIG	Pinotepa	4.00	295	*i* P	Pn	11 14 39.7	-2.5
PNIG				*i* S	Sn	11 15 26.2	-2.6
BRAL	Brewton	17.54	21	*e*Pn	Pn	11 17 43.6	-1.8
	44nm,0.4s						

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*ISCJB **07** 11:21:48.1±4.7, 3.1S±0.1×1425E±04, h11km±30km, mb3.8/5, Error ellipse: s-maj=68.1km s-min=19.7km az=4.4*
*IDC **07** 11:21:48.2±3.0, 308S×14255E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.9/4, Error ellipse: s-maj=135.0km s-min=25.3km az=85.0*
*NEIC **07** 11:21:53.7±1.4, 3.14S×14244E, h35km, mb3.8/2, Error ellipse: s-maj=44.9km s-min=15.0km az=92.0*
ISC 07 11:21:56.8±4.4**, 32S**±01×**1423E**±04**, h60**km±39km**, n7, σ0.86**/7**, mb3.8**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	13.59	226	*e*Pn	x	11 24 45.3	
KAKA				*e*Sn	x	11 27 10.3	
WRAB	Tennant Creek	18.34	205	*e*P	Pn	11 26 06.3	-0.7
	2.9nm,0.5s						
ASAR	Alice Springs	21.90	201	P	P	11 26 45.0	+0.1
	2.1nm,0.7s,mb3.7,baz=32,slow=9.4,SNR=19						
ASAR				S	S	11 30 43.1	-0.4
	0.5nm,0.9s,baz=16,slow=24,SNR=3.4						
FITZ	Fitzroy Crossi	22.05	227	*e*P	P	11 26 47.3	+0.7
	3.6nm,0.8s,mb3.9						
STKA	Stephens Creek	28.51	181	P	P	11 27 47.1	+0.5
	1.4nm,0.7s,mb3.8,baz=333,slow=12,SNR=4.0						
MKAR	Makanchi Array	72.42	321	P	P	11 33 17.2	+0.6
	0.5nm,0.7s,mb3.6,baz=119,slow=8.7,SNR=3.8						
ZALV	Zalesovo Beam	74.22	329	P	P	11 33 26.2	-0.9
	0.6nm,0.4s,mb3.8,baz=101,slow=7.7,SNR=4.6						

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*NIED **07** 11:30:00, 4650N×15260E, h20km, Mw4.2 Best double couple: Mo2.02000×10^15 NP1:φs222.00000°, δ68.00000°, λ-150.00000°. NP2:φs120.00000°, δ62.00000°, λ-25.00000°.*
*SKHL **07** 11:30:06.8±3.4, 4628N×15246E, h40km±14km, mb5.1/3*
*ISCJB **07** 11:30:07.6±0.7, 4641N±006×15238E±007, h52km±6km, mb4.3/25, MS3.7/7, Error ellipse: s-maj=11.6km s-min=4.5km az=143.9*
*JMA **07** 11:30:07.2±0.7, 4645N×15264E, h30km, M4.7*
*MOS **07** 11:30:09.5±1.0, 4655N×15234E, h68km, mb4.3/12, Error ellipse: s-maj=11.1km s-min=9.6km az=58.2*
*BJI **07** 11:30:09.3, 4660N×15254E, h90km, mB4.6, mb4.5*
*IDC **07** 11:30:10.6±0.6, 4661N×15224E, h56km±5km, mb3.6/14, mb1 3.9/16, mb1mx3.8/23, mbtmp3.7/16, MS3.6/7, Ms1 3.6/7, ms1mx3.2/45, Error ellipse: s-maj=20.6km s-min=13.6km az=152.0*
*NEIC **07** 11:30:12.1±0.8, 4664N×15230E, h70km±7km, mb5.3/10, Error ellipse: s-maj=13.3km s-min=5.6km az=150.0*
ISC 07 11:30:09.9±0.6**, 4641N**±006×**15240E**±007**, h55**km±5km**, h59**km±.8km**: pP-P, n109, σ1.34**/128**, mb4.3**/25**, MS3.7**/7**, 4C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.38	251	*e*PN	Pn	11 30 56.3	-3.8
KUR				*e*S	Sn	11 31 36.3	-2.6
KUR				pmax	pmax		
	comp=Z,290nm,0.5s						
KUR				pmax	pmax		
	comp=N,90nm,0.6s						
KUR				smax			
	comp=N,490nm,0.5s						
KUR				smax			
	comp=E,230nm,0.5s						
KUR	Kuril'sk	3.38	251	*e*P	Pn	11 30 56.3	-3.8
KUR				AMB	AMB	11 30 56.8	
	comp=E,90nm,0.5s						
KUR				AMB	AMB	11 30 56.8	
	comp=E,290nm,0.5s						
KUR				*e*S	Sn	11 31 36.3	-2.6
KUR				A		11 31 42.9	
	comp=E,490nm,0.5s						
KUR				A		11 31 42.9	
	comp=E,230nm,0.5s						
SKR	Severo-Kuril's	4.94	29	*e*PN	Pn	11 31 21.4	0.0
SKR				*e*S	Sn	11 32 14.0	-3.2
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,150nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
SKR	Severo-Kuril's	4.94	29	*e*P	Pn	11 31 21.4	0.0
SKR				AMB	AMB	11 31 24.0	
	comp=E,50nm,0.5s						
SKR				AMB	AMB	11 31 24.0	
	comp=E,80nm,0.5s						
SKR				*e*S	Sn	11 32 14.0	-3.2
SKR				A		11 32 41.0	
	comp=E,150nm,0.5s						
SKR				A		11 32 41.0	
	comp=E,80nm,0.6s						
YUK	Yuzh-Kuril'sk	5.19	245	*e*PN	Pn	11 31 25.9	+0.9
YUK				*e*S	Sn	11 32 24.4	+0.9
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				pmax	pmax		
	comp=N,170nm,0.5s						
YUK				pmax	pmax		
	comp=E,210nm,0.5s						
YUK				smax			
	comp=N,580nm,0.5s						
YUK				smax			
	comp=E,500nm,0.5s						
YUK	Yuzh-Kuril'sk	5.19	245	*e*P	Pn	11 31 25.9	+0.9
YUK				AMB	AMB	11 31 33.0	
	comp=E,200nm,0.5s						
YUK				AMB	AMB	11 31 33.0	
	comp=E,170nm,0.5s						
YUK				AMB	AMB	11 31 33.0	
	comp=E,210nm,0.5s						
YUK				*e*S	Sn	11 32 24.4	+0.9
YUK				A		11 32 49.1	
	comp=E,580nm,0.5s						
YUK				A		11 32 49.1	
	comp=E,500nm,0.5s						
NEM2	Nemuro 2	5.62	240	P	Pn	11 31 30.0	-0.9
NEM2				*e*S	Sn	11 32 31.5	-2.6
JRA	Rausu	5.71	247	P	Pn	11 31 34.6	+2.6
JNK	Nakash	6.13	245	P	Pn	11 31 39.3	+1.4
JNK				*e*S	Sn	11 32 47.9	+1.3
JAK	Akkeshi	6.46	241	P	Pn	11 31 41.7	-0.7
JAK				*e*S	Sn	11 32 50.7	-4.0
JTKR	Abashiri--Toko	6.48	251	P	Pn	11 31 44.8	+2.3
YSS	Yuzh-Sakhalins	6.66	278	⇑*i*PN	Pn	11 31 47.2	+2.2
YSS				*e*S	Sn	11 33 00.5	+1.1
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				smax			
	comp=E,30nm,0.5s						
YSS				smax			
	comp=N,40nm,0.6s						
YSS	Yuzh-Sakhalins	6.66	278	⇑*i*P	Pn	11 31 47.2	+2.2
YSS				AMB	AMB	11 31 47.9	
	comp=N,40nm,0.7s						
YSS				*e*S	Sn	11 33 00.5	+1.1
YSS				A		11 33 03.6	
	comp=N,30nm,0.5s						
YSS				A		11 33 03.6	
	comp=N,40nm,0.6s						
YSS	Yuzh-Sakhalins	6.66	278	*e*Pn	Pn	11 31 45.3	+0.3
	comp=N,30nm,0.6s						
JMP	Maruseppu	6.82	253	P	Pn	11 31 49.9	+2.6
JAR	Ashorobuto	6.88	246	P	Pn	11 31 49.6	+1.6
JAR				*e*S	Sn	11 33 05.6	+0.8
JOB	Onbets	7.04	243	P	Pn	11 31 50.6	+0.3
JOB				*e*S	Sn	11 33 07.2	-1.7
JKK2	Kamakawa 2	7.28	253	P	Pn	11 31 56.2	+2.7
ASAJ	Asahikawa	7.29	255	P	Pn	11 31 56.5	+2.8
	comp=N,3.5nm,0.3s,baz=77,slow=18,SNR=27						
ASAJ				S	Sn	11 33 29.2	+14
	baz=54,slow=20,SNR=2.0						
ASAJ				LR	LR	11 34 34.7	
	comp=N,191nm,20.3s,baz=167,slow=36						
ASAJ	Asahikawa	7.29	255	P	Pn	11 31 56.7	+3.1
ASAJ	Asahikawa	7.29	255	PN	Pn	11 31 56.5	+2.9
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,191nm,20.3s						
JWK2	Keihoku	7.41	265	P	Pn	11 32 00.2	+4.8
JCH	Churui	7.49	243	P	Pn	11 31 56.2	-0.2
JCH				*e*S	Sn	11 33 16.7	-3.2
PEA0B	Petropavlovsk-	7.53	25	*e*Pn	Pn	11 31 57.2	+0.3
PETK	Petropavlovsk-	7.53	25	P	Pn	11 31 57.8	+0.8
	comp=Z,1.2nm,0.3s,baz=180,slow=10,SNR=15						
PETK				S	Sn	11 33 34.7	+14
	comp=Z,0.2nm,0.3s,baz=220,slow=18,SNR=2.1						
JFR	Furan	7.69	249	P	Pn	11 32 00.7	+1.5
PET	Petropavlovsk	7.76	29	*e*PN	Pn	11 32 05.6	+5.5
PET				*e*S	Sn	11 33 34.3	+7.9
PET				pmax	pmax		
	comp=Z,12nm,0.7s						
PET	Petropavlovsk	7.76	29	*e*Pn	Pn	11 32 01.0	+1.0
	comp=Z,6.2nm,0.3s						
PET				*e*Sn	Sn	11 33 26.4	0.0
ERM	Erimo	7.96	240	*e*Pn	Pn	11 32 03.8	+0.9
	comp=Z,88nm,0.6s						
JEM	Erimo	7.96	240	P	Pn	11 32 03.8	+1.0
JBT2	Biratori 2	8.03	247	P	Pn	11 32 04.2	+0.4
JNBK	Urakawa-nobuka	8.05	243	P	Pn	11 32 03.4	-0.7
JNBK				*e*S	Sn	11 33 29.8	-3.8
JNB	Noboribetsu	9.03	248	P	Pn	11 32 18.5	+1.0
JKB	Kayabe	9.34	245	P	Pn	11 32 20.6	-1.1
JKB				*e*S	Sn	11 33 59.8	-5.3
JSH	Shimam	9.59	251	P	Pn	11 32 27.3	+2.1
JYM2	Yakumo 2	9.63	248	P	Pn	11 32 25.9	+0.1
JANG	Nango	9.95	237	P	Pn	11 32 27.0	-3.1
JANG				*e*S	Sn	11 34 11.2	-9.1
JTM	Tenmabayashi	9.95	240	P	Pn	11 32 28.4	-1.7
JTM				*e*S	Sn	11 34 12.5	-7.7
JTH	Tanohata	10.05	234	P	Pn	11 32 27.8	-3.6
JTH				*e*S	Sn	11 34 13.3	-9.3
JOSM	Okushiri--Mats	10.23	250	P	Pn	11 32 33.8	-0.1
OFUJ	Ofunato	10.76	231	P	Pn	11 32 38.0	-3.1
OFUJ				*e*S	Sn	11 34 30.3	-10
JRG	Rokugo	11.11	235	P	Pn	11 32 44.7	-1.2
JRG				*e*S	Sn	11 34 41.4	-7.1
JIO	Ouri	11.39	230	P	Pn	11 32 46.6	-3.1
JIO				*e*S	Sn	11 34 45.2	-10
HABR	Khabarovsk	11.93	286	*e*PN	Pn	11 32 53.3	-3.7
JYA	Atsumi	12.18	235	P	Pn	11 32 59.0	-1.6
KLR	Kul'dur	14.15	289	*e*P	Pn	11 33 26.8	-0.4
MJAR	Matsushiro Arr	14.48	232	P	Pn	11 33 36.8	+5.1
	comp=Z,1.1nm,0.3s,baz=38,slow=8.8,SNR=14						
MJAR	Matsushiro Arr	14.48	232	P	Pn	11 33 36.8	+5.1
MJAR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.0nm,0.3s						
MAT	**Matsushiro**	**14.48**	**232**	P	**Pn**	**11 33 38.6**	**+6.9**
FX1	**Attu Island--F**	**14.90**	**57**	P	**Pn**	**11 33 35.5**	**-1.5**
	comp=Z,6.9nm,0.3s,baz=282,slow=5.2,SNR=22						
FX1				S	**Sn**	**11 36 06.5**	**-14**
	comp=Z,0.7nm,0.3s,baz=25,slow=19,SNR=4.1						
CN2	**Changchun**	**19.17**	**272**	⇑P	**Pn**	**11 34 27.9**	**-2.2**
KSRS	**Korea Array**	**20.22**	**252**	P	**P**	**11 34 41.8**	**+1.5**
	comp=Z,6.1nm,0.8s,baz=55,slow=12,SNR=9.6						
KSRS	**Korea Array**	**20.22**	**252**	*e*P	**P**	**11 34 41.7**	**+1.4**
YAK	**Yakutsk**	**20.35**	**328**	*e*P	**P**	**11 34 40.2**	**-1.2**
YAK				pmax	pmax		
	comp=Z,17nm,1.0s						
HIA	**Hailar**	**22.01**	**289**	*i* P	**P**	**11 34 57.9**	**-1.4**
TIXI	**Tiksi**	**27.66**	**344**	*i* P	**P**	**11 35 52.7**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.4						
SONM	**Songino Array**	**30.98**	**290**	P	**P**	**11 36 21.0**	**-0.7**
	comp=Z,0.6nm,0.7s,mb3.5,baz=73,slow=9.4,SNR=3.8						
SONM				LR	LR	11 49 50.8	
	comp=Z,83nm,18.6s,MS3.4,baz=205,slow=38						
SONM	**Songino Array**	**30.98**	**290**	P	**P**	**11 36 21.0**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,83nm,18.6s						
SEW	**Seward**	**36.12**	**46**	*e*P	**P**	**11 37 04.1**	**-2.1**
	comp=Z,80nm,1.5s,mb5.4						
COLA	**College**	**36.71**	**38**	*e*P	**P**	**11 37 10.6**	**-0.6**
COLA				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.5						
COLA	**College**	**36.71**	**38**	*e*P	**P**	**11 37 10.6**	**-0.6**
	comp=Z,12nm,1.5s,mb4.5						
CD2	**Chengdu**	**40.36**	**265**	P	**P**	**11 37 43.0**	**+0.8**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
ZALV	**Zalesovo Beam**	**42.41**	**306**	P	**P**	**11 37 57.5**	**-1.2**
	comp=Z,0.5nm,0.3s,mb3.5,baz=95,slow=4.8,SNR=2.7						
ZALV				PcP	PcP	11 39 50.6	-0.3
	comp=Z,1.6nm,0.8s,baz=85,slow=3.3,SNR=5.0						
ZALV				LR	LR	11 56 01.2	
	comp=Z,65nm,19.1s,MS3.5,baz=61,slow=37						
ZALV	**Zalesovo Beam**	**42.41**	**306**	P	**P**	**11 37 57.5**	**-1.2**
ZALV						11 39 50.6	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,65nm,19.1s,MS3.5						
MK31	**Makanchi Array**	**46.66**	**297**	*e*P	**P**	**11 38 30.6**	**-2.1**
MKAR	**Makanchi Array**	**46.66**	**297**	P	**P**	**11 38 31.1**	**-1.6**
	comp=Z,2.1nm,0.7s,mb4.2,baz=68,slow=7.5,SNR=15						
MKAR				PcP	PcP	11 40 05.5	0.0
	comp=Z,0.8nm,0.5s,baz=67,slow=4.1,SNR=5.7						
MKAR				LR	LR	11 58 55.8	
	comp=Z,67nm,21.6s,MS3.6,baz=252,slow=37						
MKAR	**Makanchi Array**	**46.66**	**297**	P	**P**	**11 38 31.1**	**-1.6**
MKAR						11 40 05.6	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,67nm,21.6s						
KURK	**Kurchatov**	**47.14**	**304**	⇓*e*P	**P**	**11 38 35.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
YKA	**Yellowknife Ar**	**51.49**	**36**	P	**P**	**11 39 09.7**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=295,slow=6.8,SNR=5.5						
YKA	**Yellowknife Ar**	**51.49**	**36**	P	**P**	**11 39 09.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**51.81**	**256**	P	**P**	**11 39 13.7**	**+1.4**
	comp=Z,2.3nm,0.8s,mb4.2,baz=38,slow=7.4,SNR=12						
CMAR	**Chiang Mai Arr**	**51.81**	**256**	P	**P**	**11 39 13.7**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**53.54**	**296**	⇑*e*P	**P**	**11 39 26.0**	**+1.2**
TAPN	**Taplejung**	**53.62**	**273**	*e*P	**P**	**11 39 26.6**	**+1.0**
	comp=Z,16nm,1.0s,mb4.9						
JIRN	**Jiri**	**54.48**	**274**	*e*P	**P**	**11 39 32.7**	**+0.8**
	comp=Z,36nm,0.8s,mb5.3						
GUN	**Gumba**	**54.54**	**275**	*e*P	**P**	**11 39 32.8**	**+0.5**
	comp=Z,12nm,0.5s,mb5.2						
RAMN	**Ramite**	**54.64**	**273**	*e*P	**P**	**11 39 33.4**	**+0.3**
	comp=Z,27nm,0.6s,mb5.5						
KKN	**Kakani**	**55.03**	**275**	*e*P	**P**	**11 39 36.9**	**+1.1**
PKI	**Pulchoki**	**55.07**	**275**	*e*P	**P**	**11 39 36.7**	**+0.5**
DMN	**Daman**	**55.26**	**275**	*e*P	**P**	**11 39 38.3**	**+0.8**
GKN	**Gorkha**	**55.34**	**276**	*e*P	**P**	**11 39 38.6**	**+0.6**
	comp=Z,21nm,0.6s,mb5.4						
DANN	**Dangsing**	**55.72**	**277**	*e*P	**P**	**11 39 41.8**	**+1.0**
	comp=Z,36nm,0.6s						
KOLN	**Koldanda**	**56.20**	**276**	*e*P	**P**	**11 39 44.9**	**+0.7**
	comp=Z,18nm,0.6s,mb5.3						
ARCES	**ARCESS Array B**	**58.01**	**341**	P	**P**	**11 39 55.2**	**-1.2**
	comp=Z,1.9nm,0.9s,mb4.1,baz=34,slow=8.8,SNR=3.9						
ARCES	**ARCESS Array B**	**58.01**	**341**	P	**P**	**11 39 55.2**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTO	**Aktyubinsk**	**58.58**	**312**	LR	LR	12 06 40.0	
	comp=Z,76nm,20.7s,MS3.8,baz=241,slow=38						
WVOR	**Wild Horse Val**	**60.36**	**58**	P	**P**	**11 40 13.8**	**+0.8**
	comp=Z,3.7nm,1.1s,mb4.3						
NVAR	**Mina Array Bea**	**63.03**	**62**	P	**P**	**11 40 32.1**	**+1.0**
	comp=Z,0.1nm,0.3s,mb3.4,baz=320,slow=4.9,SNR=1.8						
NVAR				pP	pP	11 40 47.9	+1.8
	comp=Z,1.4nm,0.7s,baz=292,slow=7.1,SNR=6.8						
PDAR	**Pinedale Array**	**65.35**	**53**	P	**P**	**11 40 46.6**	**+0.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=291,slow=2.4,SNR=7.1						
PDAR				pP	pP	11 41 02.5	+1.2
	comp=Z,0.9nm,0.7s,baz=300,slow=0.9,SNR=6.3						
FRB	**Frobisher Bay**	**65.53**	**19**	LR	LR	12 12 41.1	
	comp=Z,166nm,18.4s,MS4.3,baz=16,slow=39						
NB2	**NORSAR Subarra**	**68.39**	**341**	P	**P**	**11 41 04.1**	**-1.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.39**	**341**	P	**P**	**11 41 04.5**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.3,baz=28,slow=6.3,SNR=6.7						
NOA	**NORSAR Array B**	**68.39**	**341**	P	**P**	**11 41 04.5**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**71.55**	**326**	P	**P**	**11 41 23.1**	**-1.7**
	comp=Z,0.8nm,0.3s,mb4.1,baz=33,slow=6.9,SNR=4.7						
AKASG	**Malin Array Be**	**71.55**	**326**	P	**P**	**11 41 23.1**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**71.73**	**198**	P	**P**	**11 41 27.2**	**+1.2**
	comp=Z,0.5nm,0.7s,mb3.6,baz=14,slow=5.5,SNR=12						
ASAR				pP	pP	11 41 42.9	+1.6
	comp=Z,0.6nm,0.8s,baz=10,slow=5.6,SNR=4.2						
ASAR	**Alice Springs**	**71.73**	**198**	P	**P**	**11 41 27.2**	**+1.2**
ASAR				*PP	pP	11 41 42.9	+1.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GNI	**Garni**	**72.37**	**310**	LR	LR	12 15 03.6	
	comp=Z,50nm,18.7s,MS3.8,baz=356,slow=37						
BUR08	**Bucovina Ar. S**	**75.58**	**326**	*e*P	**P**	**11 41 47.9**	**-0.6**
TXAR	**Lajitas Array**	**78.09**	**60**	P	**P**	**11 42 03.6**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=300,slow=4.6,SNR=12						
TXAR				pP	pP	11 42 19.3	+0.9
	comp=Z,0.8nm,0.6s,baz=298,slow=3.3,SNR=6.9						
TXAR	**Lajitas Array**	**78.09**	**60**	P	**P**	**11 42 03.7**	**+0.8**
TXAR				*PP	pP	11 42 19.3	+0.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**78.09**	**60**	P	**P**	**11 42 03.6**	**+0.7**
TXAR				pP	pP	11 42 19.3	+0.9
BRTR	**Keskin Array B**	**78.30**	**316**	P	**P**	**11 42 03.0**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.1,baz=76,slow=5.1,SNR=7.8						
BRTR	**Keskin Array B**	**78.30**	**316**	*e*P	**P**	**11 42 02.8**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**115.13**	**328**	PKP	PKiKP	11 48 44.6	-0.6
	comp=Z,0.5nm,1.0s,baz=318,slow=1.9,SNR=2.4						
PLCA	**Paso Flores**	**148.67**	**95**	PKPbc	PKPbc	11 49 51.3	+1.0
	comp=Z,1.4nm,0.6s,baz=46,slow=6.2,SNR=4.4						
PLCA				pPKPbc	pPKPbc	11 50 05.9	-0.6
	comp=Z,1.8nm,0.8s,baz=226,slow=2.1,SNR=2.5						
SNAA	**Sanae**	**152.09**	**196**	*e*PKPdf	PKPbc	11 49 57.4	-0.2
SNAA				*e*		11 50 13.8	
VNA2	**Neumayer--Watz**	**153.55**	**195**	*e*PKPdf	PKPbc	11 50 01.2	+0.4
	baz=332,slow=1.3						
VNA2				*e*		11 50 14.9	
VNA2				*e*		11 50 18.4	
VNA2				*e*		11 50 30.4	
VNA3	**Neumayer Olymp**	**153.65**	**193**	*e*PKPdf	PKPbc	11 50 01.0	0.0
VNA3				*e*		11 50 14.6	
VNA3				*e*		11 50 18.2	
VNA3				*e*		11 50 30.4	

*IDC **07** 11:49:20.8±1.2, 23.14N×128.49E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.7/18, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=55.8km s-min=24.8km az=77.0*
*JMA **07** 11:49:21.5±0.5, 23.10N×128.57E, h55^{km}, M4.5*
*ISCJB **07** 11:49:26.3±1.0, 23.40N±0.06×128.24E±0.05, h33^{km}, mb3.6/5, Error ellipse: s-maj=9.4km s-min=5.7km az=143.6*

ISC 07 11:49:26.8±0.8**, 23.33N**±0.05×**128.31E**±0.05**, h35**^{km}**, n21,** σ0^{s}**97**/32**, mb3.6**/5**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**2.84**	**350**	P	**Pn**	**11 50 09.8**	**+0.2**
JJT2				*e*S	**Sn**	**11 50 43.3**	**+0.7**
NAH1	**Naha**	**2.91**	**349**	P	**Pn**	**11 50 10.7**	**+0.1**
JOGS	**Gusukube**	**3.01**	**299**	P	**Pn**	**11 50 13.0**	**+1.1**
JMJ	**Miyako jima 2**	**3.12**	**299**	P	**Pn**	**11 50 14.8**	**+1.3**
JMJ				*e*S	**Sn**	**11 50 51.3**	**+1.7**
JKE	**Kume jima 2**	**3.29**	**335**	P	**Pn**	**11 50 16.1**	**+0.4**
JKE				*e*S	**Sn**	**11 50 53.1**	**-0.5**
JAGN	**Aguni-jima**	**3.38**	**344**	P	**Pn**	**11 50 17.6**	**+0.5**
JAGN				S	**Sn**	**11 50 55.5**	**-0.5**
JOW	**Kunigami**	**3.48**	**360**	Pn	**Pn**	**11 50 18.1**	**-0.3**
	9.8nm,0.3s,baz=154,slow=14,SNR=27						
JOW				Sn	**Sn**	**11 50 55.7**	**-2.8**
	22nm,0.3s,baz=109,slow=23,SNR=12						
JOW	**Kunigami**	**3.48**	**360**	P	**Pn**	**11 50 18.1**	**-0.4**
JOW				S	**Sn**	**11 50 56.1**	**-2.4**
JTJ	**Tarama**	**3.54**	**292**	P	**Pn**	**11 50 19.1**	**-0.2**
JTJ				S	**Sn**	**11 50 58.6**	**-1.4**
JMZ	**Minamidaito 2**	**3.63**	**46**	P	**Pn**	**11 50 16.0**	**-4.4**
JMZ				*e*S	**Sn**	**11 50 54.4**	**-7.7**
JIH	**Iheya**	**3.70**	**355**	P	**Pn**	**11 50 21.6**	**+0.2**
JIJ	**Ishigaki jima**	**3.95**	**286**	P	**Pn**	**11 50 25.0**	**+0.2**
JIJ				S	**Sn**	**11 51 08.8**	**-1.1**
JKRS	**Kuro-shima**	**4.04**	**284**	P	**Pn**	**11 50 26.6**	**+0.5**
JKRS				S	**Sn**	**11 51 11.1**	**-1.1**
HATJ	**Hateruma jima**	**4.19**	**281**	P	**Pn**	**11 50 27.9**	**-0.3**
IRIF	**Iriomote-Funau**	**4.31**	**284**	P	**Pn**	**11 50 30.0**	**+0.2**
IRIF				*e*S	**Sn**	**11 51 18.9**	**+0.1**
YOJ	**Yonaguni jima**	**4.98**	**284**	P	**Pn**	**11 50 38.9**	**-0.1**
SONM	**Songino Array**	**30.05**	**330**	P	**P**	**11 55 39.6**	**+7.2**
	0.6nm,0.6s,mb3.5,baz=132,slow=8.6,SNR=3.7						
MKAR	**Makanchi Array**	**43.55**	**314**	P	**P**	**11 57 29.4**	**+2.3**
	0.5nm,0.5s,mb3.5,baz=101,slow=8.9,SNR=6.5						
ASAR	**Alice Springs**	**47.03**	**173**	P	**P**	**11 57 52.5**	**-2.4**
	0.7nm,0.5s,mb3.9,baz=359,slow=13,SNR=27						
BRTR	**Keskin Array B**	**78.87**	**308**	P	**P**	**12 01 26.6**	**+0.1**
	1.3nm,0.9s,mb3.9,baz=82,slow=3.1,SNR=3.8						
YKA	**Yellowknife Ar**	**81.11**	**25**	P	**P**	**12 01 38.8**	**+0.6**
	0.3nm,0.8s,mb3.3,baz=307,slow=5.1,SNR=4.1						

MAN 07 11:54:36, 10.28N×124.85E, h41^{km}, mb4.0, ML2.8, MS2.7, Leyte

KRSC 07 11:56:22.2±0.2**, 57.21N×163.03E, h10**^{km}±10^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.01**	**187**	*i* P	Pg	11 56 41.2	-0.4
KBTR				*e*S	Sg	11 56 54.8	+0.1
SRKR	**Sorokina**	**1.16**	**242**	*e*P	Pb	11 56 43.2	-1.1
SRKR				*e*S	Sb	11 56 58.7	-0.7
KLY	**Klyuchi**	**1.59**	**237**	*i* P	Pn	11 56 48.6	-1.7
KLY				*i* S	Sn	11 57 08.2	-2.7
KRSR	**Krestovskiy**	**1.69**	**235**	*i* P	Pn	11 56 51.5	-0.1
KRSR				*e*S	Sn	11 57 12.8	-0.4
ZLN	**Zelenaya**	**1.72**	**227**	P	Pn	11 56 52.6	+0.5
ZLN				*e*S	Sn	11 57 14.4	+0.4
BZMR	**Bezymyannaya**	**1.90**	**229**	*e*P	Pn	11 56 55.0	+0.4
BZMR				*e*S	Sn	11 57 19.7	+1.2
KPT	**Kopyto**	**1.99**	**232**	*i* P	Pn	11 56 56.7	+0.8
KPT				*e*S	Sn	11 57 22.3	+1.5
SRDR	**Sredinnyy**	**2.03**	**245**	*e*P	Pn	11 56 56.9	+0.5
SRDR				*e*S	Sn	11 57 22.5	+0.7
KOZ	**Kozyrevsk**	**2.09**	**238**	*i* P	Pn	11 56 58.1	+0.9
KOZ				*e*S	Sn	11 57 24.1	+0.8
KMNR	**Kamenistaya**	**2.13**	**228**	*i* P	Pn	11 56 59.0	+1.3
KMNR				*e*S	Sn	11 57 25.7	+1.6
TUMR	**Tumrok**	**2.51**	**221**	*e*P	Pn	11 57 05.4	+2.4
TUMR				S	Sn	11 57 35.7	+2.0
MKZ	**Mys Kozlova**	**2.76**	**196**	P	Pn	11 57 06.8	+0.4
MKZ				*e*S	Sn	11 57 40.0	+0.3
SPN	**Mys Shipunski**	**4.47**	**204**	S	Sn	11 58 21.7	-0.1
GNL	**Ganaly**	**4.56**	**222**	P	Pn	11 57 31.3	+0.2
SDLR	**Sedlovina**	**4.60**	**213**	P	Pn	11 57 33.5	+1.8
AVH	**Avacha**	**4.65**	**214**	P	Pn	11 57 35.1	+2.7
RUS	**Russkaya**	**5.45**	**210**	P	Pn	11 57 45.0	+1.6

*HLW **07** 12:15:32.8, 29.39N×36.99E, h12^{km}, Mb3.5*
*CSEM **07** 12:15:34.0±1.3, 29.56N×36.66E, h2^{km}, ML3.5, Error ellipse: s-maj=28.7km s-min=17.2km az=93.0*
*ISCJB **07** 12:15:35.7±0.9, 29.88N±0.04×36.29E±0.06, h0^{km}, Error ellipse: s-maj=7.3km s-min=5.0km az=168.2*
*GII **07** 12:15:36.6±1.5, 29.88N×36.21E, h0^{km}, ML2.1/3, EXPLOSION*
*SGS **07** 12:15:36.5, 30.01N×36.22E, h3^{km}*

ISC 07 12:15:35.8±0.9**, 29.87N**±0.03×**36.33E**±0.06**, h0**^{km}**, n23,** σ0^{s}**90**/30**, 5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.12**	**263**	Pg	**Pg**	**12 15 56.5**	**-0.9**
HRFI	**Mount Harif**	**1.13**	**279**	Pg	**Pg**	**12 15 56.8**	**-0.8**
ZFRI	**Zfri**	**1.21**	**305**	Pg	**Pg**	**12 15 58.1**	**-0.8**
ZFRI				Sg	**Sg**	**12 16 13.4**	**-1.2**
EIL	**Elat**	**1.22**	**261**	Pg	**Pg**	**12 15 58.5**	**-0.6**
MBRI	**Mt Berech**	**1.23**	**267**	Pg	**Pg**	**12 15 58.7**	**-0.8**
MBRI				Sg	**Sg**	**12 16 16.9**	**+1.4**
HQLS		**1.24**	**243**	P	**Pg**	**12 15 58.7**	**-0.9**
HQLS		**1.24**	**243**	P	**Pg**	**12 15 58.7**	**-0.9**
HQLS				S	**Sg**	**12 16 15.6**	**-0.2**
PRNI	**Paran**	**1.24**	**293**	Pg	**Pg**	**12 15 58.7**	**-0.9**
PRNI				Sg	**Sg**	**12 16 17.4**	**+1.6**
JLOS		**1.35**	**213**	P	**Pg**	**12 16 01.4**	**-0.3**
JLOS		**1.35**	**213**	P	**Pg**	**12 16 01.4**	**-0.3**
JLOS				S	**Sg**	**12 16 20.0**	**+0.8**
HBST	**Basata**	**1.54**	**245**	⇓P	**Pn**	**12 16 05.4**	**+0.9**
MZDA	**Masada**	**1.66**	**330**	Pn	**Pn**	**12 16 06.6**	**+0.5**
TBKS	**Tabuk**	**1.66**	**174**	P	**Pn**	**12 16 06.7**	**+0.5**
BDAS	**Al Bad‘**	**1.79**	**217**	P	**Pn**	**12 16 07.7**	**-0.4**
YTIR	**Yattir**	**1.82**	**325**	Pn	**Pn**	**12 16 08.7**	**+0.4**
RTMI	**Retamim**	**1.84**	**310**	Pn	**Pn**	**12 16 08.7**	**0.0**
DSI	**Dead Sea**	**1.88**	**334**	Pn	**Pn**	**12 16 10.2**	**+1.0**
HNKL	**Nakhl**	**2.04**	**272**	P	**Pn**	**12 16 13.6**	**+2.2**
RSHS		**2.06**	**221**	P	**Pn**	**12 16 10.7**	**-1.0**
HKAT	**Jabal Katrina**	**2.45**	**237**	⇓P	**Pn**	**12 16 16.7**	**-0.3**
HKAT				S	**Sn**	**12 16 48.0**	**+0.4**
TR2		**2.72**	**238**	⇓P	**Pn**	**12 16 20.4**	**-0.4**
AMAG	**Maghara**	**2.81**	**287**	⇓P	**Pn**	**12 16 26.7**	**+4.8**
SUZ		**3.04**	**270**	⇓P	**Pn**	**12 16 29.1**	**+3.9**
SUZ				S	**Sn**	**12 17 09.7**	**+7.5**

JMA 07 12:26:31.8±0.1**, 30.07N×141.76E, h50**^{km}**, M3.7, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.99**	**173**	P	Pn	12 27 17.9	+1.2
CBIJ				*e*S	Sn	12 27 52.8	+1.6
JHJ2	**Mitsune**	**3.46**	**332**	*e*S	Sn	12 28 03.9	+1.1
BSO1	**Boso 1**	**4.62**	**352**	*e*S	Sn	12 28 34.7	+3.4
JHO	**Hitachi**	**6.60**	**352**	P	Pn	12 28 09.1	+2.9
JHO				*e*S	Sn	12 29 19.6	-0.4
JAG	**Ashikaga**	**6.62**	**344**	*e*S	Sn	12 29 20.4	-0.3

*DDA **07** 12:57:21.4, 36.39N×27.80E, h7^{km}±3^{km}, Md3.6*
*MOS **07** 12:57:25.3±1.4, 36.80N×27.93E, h33^{km}, mb4.1/7, Error ellipse: s-maj=14.1km s-min=6.4km az=131.7*
*CSEM **07** 12:57:25.1±0.0, 36.35N×27.96E, h80^{km}, mb4.5/5, Ms3.1, Mw3.8, Error ellipse: s-maj=1.6km s-min=1.0km az=66.0*
*ISCJB **07** 12:57:26.1±0.2, 36.29N±0.02×27.94E±0.02, h89^{km}±2^{km}, mb3.9/11, Error ellipse: s-maj=3.5km s-min=2.5km az=43.8*
*NEIC **07** 12:57:27.1, 36.40N×27.88E, h79^{km}, mb4.1/16, After ATH.*
*ISK **07** 12:57:27.9, 36.48N×27.87E, h83^{km}, ML3.6*
*IDC **07** 12:57:27.0±1.2, 36.43N×27.81E, h68^{km}±17^{km}, mb3.4/6, mb1 3.7/12, mb1mx3.5/27, mbtmp3.6/12, MS3.0/1, Ms1 3.0/1, ms1mx2.2/29, Error ellipse: s-maj=19.8km s-min=9.1km az=158.0*
*ATH **07** 12:57:27.0, 36.41N×27.88E, h80^{km}*
*HLW **07** 12:57:32.1, 35.89N×28.04E, h30^{km}, Mb4.6*
*GII **07** 12:57:33.0±0.0, 35.84N×28.21E, h20^{km}, mb4.1/3, ML3.8/5*
*NIC **07** 12:57:34.7±0.5, 36.30N×28.46E, h25^{km}, mb4.3, ML3.9, MW3.8*

ISC 07 12:57:27.4±0.2**, 36.31N**±0.02×**27.91E**±0.02**, h82**^{km}±3^{km}**, n177,** σ1^{s}**01**/208**, mb3.9**/11**, 8C-8D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.20**	**118**	⇑*i*P	**Pn**	**12 57 40.0**	**+0.7**
ARG				*e*S	**Sn**	**12 57 48.9**	**+0.7**
ARG	**Arkhangelos**	**0.20**	**118**	⇑*i*P	**Pn**	**12 57 40.4**	**+1.1**
ARG				*e*S	**Sn**	**12 57 48.9**	**+0.7**
DAT	**Datca**	**0.50**	**328**	PG	**Pn**	**12 57 41.1**	**-0.2**
NISR	**Nisiros**	**0.70**	**296**	*e*P	**Pn**	**12 57 43.0**	**-0.1**
NISR				*e*S	**Sn**	**12 57 54.0**	**-0.9**
DALT	**Dalyan (Mudla)**	**0.75**	**52**	*e*PG	**Pn**	**12 57 44.4**	**+0.8**
DALT				*e*SG	**Sn**	**12 57 55.8**	**0.0**
TURN	**Turunc**	**0.79**	**45**	*i* P	**Pn**	**12 57 34.8**	**-9.4**
TURN				*i* S	**Sn**	**12 57 48.7**	**-8.0**
BDRM	**Kayabasi**	**0.84**	**334**	*i* P	**Pn**	**12 57 42.4**	**-2.3**
YER	**Yerkesik**	**0.88**	**20**	*e*PG	**Pn**	**12 57 45.2**	**+0.1**
BODT	**Bodrum**	**0.89**	**328**	*e*PG	**Pn**	**12 57 44.9**	**-0.4**
BODT				*e*SG	**Sn**	**12 57 57.0**	**-1.7**
KARP	**Karpathos**	**0.97**	**219**	⇓*i*P	**Pn**	**12 57 47.5**	**+1.3**
KARP				*e*S	**Sn**	**12 58 01.7**	**+1.5**
MLSB	**Milas**	**0.99**	**354**	*e*PG	**Pn**	**12 57 46.2**	**-0.2**
AYDN	**Tasoluk**	**1.35**	**359**	*i* P	**Pn**	**12 57 50.0**	**-0.8**
AYDN				*i* S	**Sn**	**12 58 03.8**	**-4.7**
KSL	**Kastellorizon**	**1.36**	**96**	*e*P	**Pn**	**12 57 52.0**	**+1.0**
AKAS	**Kas**	**1.37**	**93**	*i* P	**Pn**	**12 57 49.4**	**-1.7**
AKAS				*i* S	**Sn**	**12 58 08.6**	**-0.4**
GCAM	**G?zelcaml?**	**1.49**	**339**	*i* P	**Pn**	**12 57 47.6**	**-5.0**
GCAM				*i* S	**Sn**	**12 58 09.1**	**-2.6**
GOLH	**Golhisar**	**1.62**	**55**	*i* P	**Pn**	**12 57 50.0**	**-4.3**
GOLH				*i* S	**Sn**	**12 58 06.3**	**-8.3**
SMG	**Samos**	**1.64**	**329**	⇑*i*P	**Pn**	**12 57 54.1**	**-0.5**
SMG				*e*S	**Sn**	**12 58 13.5**	**-1.6**
ELL	**Elmali**	**1.67**	**74**	*e*PN	**Pn**	**12 57 57.0**	**+2.0**
DENT	**Denizli**	**1.70**	**32**	*e*PN	**Pn**	**12 57 55.6**	**+0.2**
APE	**Apeiranthos**	**2.06**	**292**	⇓*i*P	**Pn**	**12 58 00.5**	**+0.5**
APE	**Apeiranthos**	**2.06**	**292**	⇓*i*P	**Pn**	**12 58 00.8**	**+0.8**
NPS	**Neapolis**	**2.14**	**241**	⇓*i*P	**Pn**	**12 58 02.3**	**+1.2**
BLCB	**Balcova**	**2.19**	**342**	*e*PN	**Pn**	**12 58 01.6**	**-0.2**
KULA	**Kula-Manisa**	**2.28**	**15**	*e*PN	**Pn**	**12 58 03.0**	**-0.1**
ANTB	**Antalya**	**2.29**	**74**	*e*PN	**Pn**	**12 58 05.1**	**+2.0**
URLA	**Izmir**	**2.30**	**333**	*i* P	**Pn**	**12 57 60.0**	**-3.3**
URLA				*i* S	**Sn**	**12 58 23.7**	**-7.1**
KHL	**Karahalli**	**2.39**	**32**	*e*PN	**Pn**	**12 58 04.8**	**+0.3**
BCK	**Bucak**	**2.44**	**61**	*e*PN	**Pn**	**12 58 06.2**	**+1.1**
AKHS	**Akhisar**	**2.57**	**358**	*i* P	**Pn**	**12 58 03.5**	**-3.3**
AKHS				*i* S	**Sn**	**12 58 26.2**	**-11**
AKS	**Akhisar**	**2.57**	**358**	*e*PN	**Pn**	**12 58 06.6**	**-0.3**
IDI	**Anoyia**	**2.66**	**248**	P	**Pn**	**12 58 09.0**	**+0.9**
	34nm,0.3s,baz=62,slow=13,SNR=169						
IDI				S	**Sn**	**12 58 38.1**	**-1.2**
	28nm,0.3s,baz=90,slow=20,SNR=6.8						
IDI	**Anoyia**	**2.66**	**248**	P	**Pn**	**12 58 08.9**	**+0.8**
IDI				S	**Sn**	**12 58 38.1**	**-1.3**
SHUT	**Suhut-Afyon**	**3.07**	**42**	*e*PN	**Pn**	**12 58 14.2**	**+0.5**
VAM	**Vamos**	**3.14**	**254**	*e*P	**Pn**	**12 58 16.2**	**+1.5**
VAM	**Vamos**	**3.14**	**254**	*e*P	**Pn**	**12 58 16.0**	**+1.3**
PRK	**Paraskevi**	**3.21**	**337**	*e*P	**Pn**	**12 58 15.5**	**0.0**
ALT	**Altintas**	**3.25**	**32**	*e*PN	**Pn**	**12 58 16.3**	**+0.2**
BALB	**Balikesir**	**3.33**	**360**	*e*PN	**Pn**	**12 58 17.0**	**-0.2**
DST	**Dursunbey**	**3.34**	**10**	*e*PN	**Pn**	**12 58 17.2**	**-0.1**
GVD	**Gavdhos**	**3.44**	**246**	*e*P	**Pn**	**12 58 20.5**	**+1.8**
EZN	**Ezine**	**3.73**	**341**	*e*PN	**Pn**	**12 58 22.5**	**0.0**
PPCY	**Paphos**	**3.88**	**110**	P	**Pn**	**12 58 26.2**	**+1.5**
KONT	**Konya--Tatoy**	**3.92**	**64**	*e*PN	**Pn**	**12 58 26.6**	**+1.5**
KYTH	**Kithira**	**3.94**	**271**	*e*P	**Pn**	**12 58 26.5**	**+1.1**
KYTH	**Kithira**	**3.94**	**271**	*e*P	**Pn**	**12 58 27.5**	**+2.1**
ESKT	**Eskisehir**	**3.96**	**35**	*e*PN	**Pn**	**12 58 26.3**	**+0.6**
ALFC	**Alevga**	**3.98**	**105**	P	**Pn**	**12 58 26.6**	**+0.5**
	66nm,0.1s						
ALFC				S	**Sn**	**12 59 07.9**	**-3.7**
VLI	**Veliai**	**4.03**	**277**	*e*P	**Pn**	**12 58 27.5**	**+0.9**
VLI	**Veliai**	**4.03**	**277**	*e*P	**Pn**	**12 58 28.5**	**+1.9**
LADK	**Ladik-KONYA**	**4.03**	**61**	*e*PN	**Pn**	**12 58 27.4**	**+0.7**
BNT	**Bandirma**	**4.04**	**0**	*e*PN	**Pn**	**12 58 26.5**	**-0.4**
KIZT	**Kizilcal**	**4.07**	**50**	*e*PN	**Pn**	**12 58 28.5**	**+1.3**
GADA	**Gvkgeada**	**4.19**	**338**	*e*PN	**Pn**	**12 58 28.6**	**-0.2**
LEF	**Lefka**	**4.22**	**105**	*e*PN	**Pn**	**12 58 32.0**	**+2.6**
SZAC	**Souni-Zanaja**	**4.34**	**109**	P	**Pn**	**12 58 32.1**	**+1.1**
	33nm,0.2s						
SZAC				S	**Sn**	**12 59 18.0**	**-2.3**
YLV	**Yalova**	**4.40**	**15**	*e*PN	**Pn**	**12 58 31.4**	**-0.4**
RKY	**Sarkoy-Tekirda**	**4.41**	**353**	*e*PN	**Pn**	**12 58 30.7**	**-1.1**
GULT	**Gulveren**	**4.60**	**26**	*e*PN	**Pn**	**12 58 34.8**	**+0.4**
CSS	**Prodhromos**	**4.62**	**105**	P	**Pn**	**12 58 35.9**	**+1.2**
	3.8nm,0.1s						
CSS				S	**Sn**	**12 59 24.2**	**-2.8**
IKL	**Isikli**	**4.67**	**89**	*e*PN	**Pn**	**12 58 36.8**	**+1.4**
LFK	**Lefkose**	**4.69**	**101**	*e*PN	**Pn**	**12 58 38.1**	**+2.5**
PHNC	**Paralimni**	**5.15**	**103**	P	**Pn**	**12 58 44.2**	**+2.2**
	4.9nm,0.5s						
LOD	**Lodumlu**	**5.24**	**46**	*e*PN	**Pn**	**12 58 43.5**	**+0.3**
HMAT	**Matruh**	**5.25**	**188**	⇓*e*P	**Pn**	**12 58 42.4**	**-0.9**
HMAT	**Matruh**	**5.25**	**188**	P	**Pn**	**12 58 42.3**	**-1.0**
SLUM		**5.30**	**206**	⇑P	**Pn**	**12 58 44.2**	**+0.1**
SLUM				S	**Sn**	**12 59 36.4**	**-7.4**
BR131	**Keskin Array S**	**5.67**	**51**	*e*Pn	**Pn**	**12 58 50.0**	**+1.0**
	11nm,0.5s						
BR131	**Keskin Array S**	**5.67**	**51**	*e*Pn	**Pn**	**12 58 50.0**	**+1.0**
	11nm,0.5s						
BRTR	**Keskin Array B**	**5.67**	**51**	P	**Pn**	**12 58 50.1**	**+1.1**
	3.2nm,0.3s,baz=172,slow=21,SNR=94						
BRTR				S	**Sn**	**12 59 52.9**	**+0.3**
	baz=343,slow=15,SNR=2.0						
BRTR	**Keskin Array B**	**5.67**	**51**	P	**Pn**	**12 58 50.1**	**+1.1**
BRTR				S	**Sn**	**12 59 52.9**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BHL	**Bhannes**	**6.79**	**108**	*e*Pn	**Pn**	**12 59 02.8**	**-1.5**
HWQ	**Hawqa**	**6.88**	**105**	*e*Pn	**Pn**	**12 59 05.5**	**0.0**
OFRI	**‘Ofer**	**6.91**	**120**	Pn	**Pn**	**12 59 05.8**	**-0.1**
SQR		**6.98**	**156**	⇑P	**Pn**	**12 59 06.0**	**-0.9**
MMC7	**Mount Meron ar**	**6.98**	**116**	Pn	**Pn**	**12 59 06.9**	**-0.1**
MMAI	**Mount Meron Ar**	**6.99**	**116**	P	**Pn**	**12 59 07.0**	**-0.1**
	comp=Z,26nm,0.3s,baz=305,slow=12,SNR=71						
MMAI				S	**Sn**	**13 00 20.1**	**-5.0**
	comp=Z,32nm,0.3s,baz=306,slow=28,SNR=10						
HRSH	**Kfar Ka’horesh**	**7.07**	**118**	P	**Pn**	**12 59 09.7**	**+1.6**
RCY	**Rachaya**	**7.08**	**111**	*e*Pn	**Pn**	**12 59 08.4**	**+0.1**
FYM	**Al Fayyum**	**7.10**	**157**	P	**Pn**	**12 59 06.9**	**-1.7**
AYT	**Al ‘Ayyat**	**7.13**	**157**	P	**Pn**	**12 59 09.2**	**+0.2**
KOT	**Kottamia**	**7.16**	**152**	P	**Pn**	**12 59 08.7**	**-0.8**
SLTI	**Sal’it**	**7.16**	**122**	Pn	**Pn**	**12 59 09.6**	**+0.2**
SLTI				Sn	**Sn**	**13 00 25.5**	**-3.8**
AMAG	**Maghara**	**7.18**	**140**	⇓P	**Pn**	**12 59 09.2**	**-0.4**
RSH		**7.21**	**136**	P	**Pn**	**12 59 09.7**	**-0.3**
HHAG	**Hagoal**	**7.25**	**150**	P	**Pn**	**12 59 10.1**	**-0.5**
MMLI	**Mount Malkishu**	**7.31**	**120**	Pn	**Pn**	**12 59 11.6**	**+0.1**
HSAF	**As Saff**	**7.34**	**154**	P	**Pn**	**12 59 11.0**	**-0.8**
SWA2		**7.34**	**197**	⇑P	**Pn**	**12 59 11.9**	**0.0**
SWA2				S	**Sn**	**13 00 25.2**	**-8.5**
GLL	**Jalalah**	**7.43**	**153**	⇑*e*P	**Pn**	**12 59 12.4**	**-0.7**
HMDT	**Nahal Hemdat**	**7.49**	**120**	Pn	**Pn**	**12 59 14.7**	**+0.8**
HMDT				Sn	**Sn**	**13 00 34.6**	**-2.6**
KZIT	**Kziot**	**7.63**	**133**	Pn	**Pn**	**12 59 15.4**	**-0.5**
SUZ		**7.66**	**146**	P	**Pn**	**12 59 16.3**	**+0.1**
RTMI	**Retamim**	**7.71**	**131**	Pn	**Pn**	**12 59 16.6**	**-0.3**
YTIR	**Yattir**	**7.76**	**127**	Pn	**Pn**	**12 59 17.5**	**-0.1**
DSI	**Dead Sea**	**7.80**	**125**	Pn	**Pn**	**12 59 18.4**	**+0.3**
DSI				Sn	**Sn**	**13 00 41.3**	**-3.6**
MZDA	**Masada**	**7.96**	**127**	Pn	**Pn**	**12 59 20.1**	**-0.2**
MZDA				Sn	**Sn**	**13 00 44.7**	**-4.0**
ZAF		**8.02**	**150**	⇓*e*P	**Pn**	**12 59 21.0**	**-0.2**
ZNM		**8.08**	**147**	P	**Pn**	**12 59 21.8**	**-0.2**
HNKL	**Nakhl**	**8.15**	**140**	P	**Pn**	**12 59 22.6**	**-0.3**
PRNI	**Paran**	**8.40**	**133**	Pn	**Pn**	**12 59 25.7**	**-0.6**

PRNI				Sn	Sn	13 00 54.3	-5.1
KRMI	Paran Flat	8.41	135	Pn	Pn	12 59 26.1	-0.3
ASF	Jabal al Asfar	8.51	116	P	Pn	12 59 31.2	+3.4
	comp=Z,1.4nm,0.3s,baz=188,slow=5.8,SNR=6.9						
ASF				S	Sn	13 00 59.0	-3.1
	comp=Z,1.0nm,0.3s,baz=151,slow=19,SNR=2.9						
HRFI	Mount Harif	8.65	134	Pn	Pn	12 59 28.6	-1.1
MBRI	Mt Berech	8.76	136	Pn	Pn	12 59 30.8	-0.5
MBRI				Sn	Sn	13 01 02.9	-5.4
EIL	Elat	8.88	136	P	Pn	12 59 32.8	0.0
	comp=Z,2.0nm,0.3s,baz=329,slow=5.2,SNR=31						
EIL				S	Sn	13 01 04.9	-6.2
	comp=Z,8.0nm,0.3s,baz=114,slow=20,SNR=9.6						
EIL	Elat	8.88	136	Pn	Pn	12 59 32.3	-0.5
HBST	Basata	9.11	139	P	Pn	12 59 35.9	-0.1
HFRF	Wahat Farafira	9.14	178	P	Pn	12 59 35.8	-0.6
MLR	Muntele Rosu	9.29	351	LR	LR	13 02 48.8	
	comp=Z,95nm,20.2s,baz=62,slow=35						
TR2		9.30	146	P	Pn	12 59 38.5	-0.2
HKAT	Jabal Katrina	9.31	145	P	Pn	12 59 38.5	-0.2
HHRG	Al Ghardaqah	10.26	150	P	Pn	12 59 51.6	-0.1
HDK1	Dakhla	10.81	173	⇓P	Pn	12 59 59.0	-0.1
AKRG	Al Kharijah	11.00	168	⇑P	Pn	13 00 01.0	-0.8
HDK2	Wahat Dakhilah	11.98	175	P	Pn	13 00 15.3	+0.1
GERES	GERESS Array B	16.29	325	P	Pn	13 01 10.5	-0.5
	comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=2.1						
MBDF	Montbardon	18.10	304	eP	Pn	13 01 34.0	+0.8
	comp=Z,6.6nm,0.5s						
MBDF	Montbardon	18.10	304	eP	Pn	13 01 34.0	+0.8
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MBDF	Montbardon	18.10	304	eP	Pn	13 01 34.0	+0.8
	comp=Z,3.3nm,0.5s						
LPG	La Plagne	18.40	306	eP	Pn	13 01 37.3	+0.6
	comp=Z,15nm,0.6s						
LPG	La Plagne	18.40	306	eP	Pn	13 01 37.3	+0.6
LPG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LPG	La Plagne	18.40	306	eP	Pn	13 01 37.3	+0.6
	comp=Z,7.6nm,0.6s						
CLL	Collm	18.40	329	eP	Pn	13 01 37.0	+0.3
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CLL	Collm	18.40	329	eP	Pn	13 01 37.0	+0.3
	comp=Z,7.0nm,0.7s						
LPL	La Plagne	18.41	306	eP	Pn	13 01 37.9	+0.9
	comp=Z,14nm,0.6s						
LPL	La Plagne	18.41	306	eP	Pn	13 01 37.9	+0.9
LPL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LPL	La Plagne	18.41	306	eP	Pn	13 01 37.9	+0.9
	comp=Z,7.1nm,0.6s						
ORIF	Oris-en-Rattie	18.76	304	eP	Pn	13 01 41.6	+0.5
	comp=Z,8.9nm,0.7s						
ORIF	Oris-en-Rattie	18.76	304	eP	Pn	13 01 41.6	+0.5
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ORIF	Oris-en-Rattie	18.76	304	eP	Pn	13 01 41.6	+0.5
	comp=Z,4.4nm,0.7s						
CABF	La Chapelle	19.26	309	eP	Pn	13 01 46.0	-1.0
	comp=Z,10nm,0.5s						
CABF	La Chapelle	19.26	309	eP	Pn	13 01 46.0	-1.0
CABF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CABF	La Chapelle	19.26	309	eP	Pn	13 01 46.0	-1.0
	comp=Z,5.2nm,0.5s						
CDF	Champ du Feu	19.39	315	eP	Pn	13 01 47.9	-0.6
	comp=Z,11nm,0.6s						
CDF	Champ du Feu	19.39	315	eP	Pn	13 01 47.9	-0.6
CDF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CDF	Champ du Feu	19.39	315	eP	Pn	13 01 47.9	-0.6
	comp=Z,5.6nm,0.6s						
VIVF	Saint-Julien-l	19.55	303	eP	Pn	13 01 49.1	-1.4
	comp=Z,16nm,0.6s						
VIVF	Saint-Julien-l	19.55	303	eP	Pn	13 01 49.1	-1.4
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VIVF	Saint-Julien-l	19.55	303	eP	Pn	13 01 49.1	-1.4
	comp=Z,8.1nm,0.6s						
HAU	Haudompre	19.73	313	eP	Pn	13 01 51.9	-0.6
	comp=Z,7.2nm,0.5s						
HAU				eMLR	MLR		
	comp=Z,120nm,20.0s						
HAU	Haudompre	19.73	313	eP	Pn	13 01 51.9	-0.6
HAU				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HAU	Haudompre	19.73	313	eP	Pn	13 01 51.9	-0.6
	comp=Z,3.6nm,0.5s						
SMF	Signal de Mont	20.70	307	eP	P	13 02 01.1	+0.3
	comp=Z,6.7nm,0.4s						
SMF	Signal de Mont	20.70	307	eP	P	13 02 01.1	+0.3
SMF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SMF	Signal de Mont	20.70	307	eP	P	13 02 01.1	+0.3
	comp=Z,3.3nm,0.4s						
MTLF	Montolieu	20.89	298	eP	P	13 02 02.8	-0.1
	comp=Z,11nm,0.7s						
MTLF	Montolieu	20.89	298	eP	P	13 02 02.8	-0.1
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MTLF	Montolieu	20.89	298	eP	P	13 02 02.8	-0.1
	comp=Z,5.4nm,0.7s						
LOR	Lormes	20.93	309	eP	P	13 02 04.8	+1.6
LOR				eMLR	MLR		
	comp=Z,127nm,17.0s						
LOR	Lormes	20.93	309	eP	P	13 02 04.8	+1.6
LOR				LR	LR		
	comp=Z,130nm,17.0s						
AVF	Avril sur Loir	21.07	307	eP	P	13 02 04.7	-0.1
SSF	Saint Saulge	21.07	308	eP	P	13 02 05.3	+0.5
	comp=Z,8.0nm,0.4s,mb4.2						
SSF	Saint Saulge	21.07	308	eP	P	13 02 05.3	+0.5
SSF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.1						
SSF	Saint Saulge	21.07	308	eP	P	13 02 05.3	+0.5
	comp=Z,4.0nm,0.4s,mb4.2						
BGF	Bois d'Agland	21.32	306	eP	P	13 02 07.0	-0.4
MFF	Saint Martin d	23.29	305	eP	P	13 02 28.1	+0.3
	comp=Z,13nm,0.6s,mb4.2						
MFF	Saint Martin d	23.29	305	eP	P	13 02 28.1	+0.3
MFF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
MFF	Saint Martin d	23.29	305	eP	P	13 02 28.1	+0.3
	comp=Z,6.7nm,0.6s,mb4.2						
LDF	La Druitiere	23.90	310	eP	P	13 02 32.8	-0.6
	comp=Z,20nm,0.5s,mb4.4						
LDF	La Druitiere	23.90	310	eP	P	13 02 32.8	-0.6
LDF				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.4						
LDF	La Druitiere	23.90	310	eP	P	13 02 32.8	-0.6
	comp=Z,10nm,0.5s,mb4.4						
FLN	La Foliniere	24.19	310	eP	P	13 02 35.3	-0.7
	comp=Z,10nm,0.2s,mb4.4						
FLN				eMLR	MLR		
	comp=Z,153nm,19.8s						
FLN	La Foliniere	24.19	310	eP	P	13 02 35.3	-0.7
FLN				pmax	pmax		
	comp=Z,5.0nm,0.2s,mb4.5						
FLN				MLR	MLR		
	comp=Z,150nm,19.8s						
FLN	La Foliniere	24.19	310	eP	P	13 02 35.3	-0.7
	comp=Z,5.3nm,0.2s,mb4.5						
FLN				LR	LR		
	comp=Z,150nm,19.8s						
GRR	Gorron	24.30	309	eP	P	13 02 36.4	-0.6
	comp=Z,51nm,0.6s,mb4.8						
GRR	Gorron	24.30	309	eP	P	13 02 36.4	-0.6
GRR				pmax	pmax		
	comp=Z,26nm,0.6s,mb4.7						
GRR	Gorron	24.30	309	eP	P	13 02 36.4	-0.6
	comp=Z,26nm,0.6s,mb4.8						
ESDC	Sonseca Array	25.27	287	P	P	13 02 46.9	+1.0
	comp=Z,0.4nm,0.3s,mb3.3,baz=82,slow=9.1,SNR=5.8						
ESDC	Sonseca Array	25.27	287	P	P	13 02 46.9	+1.0
HFS	Hagfors	25.54	343	P	P	13 02 47.3	-0.8
	comp=Z,3.5nm,0.9s,mb3.8,baz=141,slow=9.6,SNR=8.7						
HFS	Hagfors	25.54	343	P	P	13 02 47.3	-0.8
HFS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NOA	NORSAR Array B	26.93	342	P	P	13 02 59.5	-1.1
	comp=Z,1.4nm,0.8s,mb3.5,baz=144,slow=8.3,SNR=3.4						
NOA	NORSAR Array B	26.93	342	P	P	13 02 59.5	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TORD	Torodi Ar. Bea	32.95	232	P	P	13 03 55.6	+1.3
	comp=Z,0.3nm,0.3s,mb3.6,baz=36,slow=8.6,SNR=4.2						
ARCES	ARCESS Array B	33.31	358	P	P	13 03 56.0	-0.8
	comp=Z,1.6nm,0.9s,mb3.9,baz=172,slow=9.8,SNR=4.9						
ARCES	ARCESS Array B	33.31	358	P	P	13 03 56.0	-0.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	41.27	58	P	P	13 05 05.7	+1.2
	comp=Z,0.2nm,0.4s,mb3.3,baz=267,slow=9.0,SNR=4.0						

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*ISCJB **07** 12:57:33.3±1.6, 239S±07×1799E±03, h500km, mb3.8/6, Error ellipse: s-maj=104.4km s-min=18.3km az=160.6*
*IDC **07** 12:57:33.8±3.3, 24.11S×17990W, h499km±34km, mb3.4/5, mb1 3.6/5, mb1mx3.3/15, mbtmp3.4/5, Error ellipse: s-maj=49.8km s-min=22.7km az=162.0*
*NEIC **07** 12:57:39.6±6.3, 2408S×17988E, h568km±73km, mb4.6/3, Error ellipse: s-maj=77.1km s-min=32.5km az=160.0*
ISC 07 12:57:34.2±1.6**, 240S**±07×**1800W**±03**, h500km, n13, σ0.49**/10**, mb3.8**/6**, 3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.48	270	⇓iP	P	13 03 15.2	+0.8
	7.7nm,0.4s,mb4.5						
CTA	Charters Tower	31.48	270	P	P	13 03 15.3	+0.9
	8.9nm,0.4s,mb4.6,baz=95,slow=11,SNR=15						
CTAO	Charters Tower	31.48	270	⇓iP	P	13 03 15.2	+0.8
	10nm,0.5s,mb4.5						
STKA	Stephens Creek	34.69	248	P	P	13 03 41.9	+0.4
	1.9nm,0.8s,mb3.6,baz=101,slow=5.2,SNR=3.4						
ASAR	Alice Springs	42.02	261	P	P	13 04 41.1	-0.2
	1.3nm,0.3s,mb3.8,baz=97,slow=7.3,SNR=52						
ASAR				ScP	ScP	13 09 27.6	0.0
	1.0nm,0.8s,baz=106,slow=4.5,SNR=9.4						
WB2	Warramunga Arr	42.39	266	⇓iP	P	13 04 43.5	-0.8
KAKA	Kakadu	46.32	275	eP	x	13 04 55.3	
	3.6nm,0.3s						
FITZ	Fitzroy Crossi	50.82	266	eP	P	13 05 48.0	-0.3
	4.4nm,0.8s,mb3.8						
FITZ	Fitzroy Crossi	50.82	266	eP	P	13 05 47.9	-0.4
	4.3nm,0.9s,mb3.8						
TXAR	Lajitas Array	90.48	58	P	P	13 09 42.2	-0.1
	0.6nm,0.7s,mb3.5,baz=212,slow=6.4,SNR=9.6						
PDAR	Pinedale Array	92.75	44	P	P	13 09 52.7	+0.2
	0.3nm,0.7s,mb3.4,baz=224,slow=2.5,SNR=2.3						
ARCES	ARCESS Array B	131.98	348	PKP	PKPdf	13 15 48.7	-0.9
	1.4nm,0.8s,baz=35,slow=3.3,SNR=3.0						
TORD	Torodi Ar. Bea	169.09	189	PKPab	PKPab	13 17 58.2	-1.0
	0.4nm,1.0s,baz=165,slow=5.2,SNR=2.3						

DJA 07 13:14:28, 959S×11694E, h10km, MLv4.0/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.79	313	P	Pn	13 14 58.5	-0.5
KHKI				S	Sn	13 15 21.3	-0.6
IGBI	Denpasar	1.93	293	P	Pn	13 15 00.2	-0.7
IGBI				S	Sn	13 15 25.1	-0.2
DNP	Denpasar	1.93	298	P	Pn	13 14 59.4	-1.6
DNP				S	Sn	13 15 29.4	+4.1
KMMI	Kalianget	3.88	310	P	Pn	13 15 29.3	+1.6
BATI	Baumata	6.65	96	P	Pn	13 16 06.2	+0.3

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*IDC **07** 13:57:53.6±3.3, 1208N×8770W, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.9/20, mbtmp3.9/6, ML3.3/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/26, Error ellipse: s-maj=65.9km s-min=47.4km az=16.0*
*ISCJB **07** 13:57:55.7±1.1, 1181N±007×8807W±007, h40km±12km, mb4.1/11, MS3.1/2, Error ellipse: s-maj=14.1km s-min=9.1km az=135.7*
*CASC **07** 13:57:56.3±2.3, 1198N×8805W, h80km±88km, MD4.1, ML3.0, mb4.3(NEIC)*
*NEIC **07** 13:57:57.1±0.8, 1185N×8788W, h35km, mb4.3/7, Error ellipse: s-maj=18.5km s-min=11.0km az=224.0*
ISC 07 13:57:58.4±1.1**, 1190N**±008×**8791W**±009**, h47km**±12km**, n35, σ0.99**/36**, mb4.1**/11**, MS3.1**/2**, 8C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEL3	Telica 3	1.24	57	⇑eP	Pn	13 58 19.2	-0.1
TELN	Telica	1.27	56	eP	Pn	13 58 19.2	-0.5
MIRN	Miramar	1.29	65	⇑eP	Pn	13 58 20.1	+0.1
COPN	Copaltepe	1.32	78	⇓eP	Pn	13 58 20.5	+0.1
CNGN	Cerro Negro	1.33	63	⇑eP	Pn	13 58 20.1	-0.4
MOMN	Momotombo	1.44	69	⇑eP	Pn	13 58 22.0	+0.1
CSAN		1.49	79	⇑eP	Pn	13 58 22.8	+0.2
CSAN				eS	Sn	13 58 44.7	+3.8
XAVN	Gruta Xavier	1.57	81	⇓eP	Pn	13 58 24.0	+0.2
MGAN	Managua	1.65	81	eP	Pn	13 58 23.4	-1.5
MGAN				eS	Sn	13 58 48.2	+3.3
MGAN				AML	AML	13 58 49.5	
	comp=E,56nm,0.4s						
TICN	Ticuantepe	1.65	85	⇓eP	Pn	13 58 25.3	+0.4
HUEN		1.76	75	eP	Pn	13 58 26.4	+0.1
APON	Apoyo	1.81	89	eP	Pn	13 58 26.5	-0.5
APON				AML	AML	13 58 53.4	
	comp=Z,96nm,0.2s						
SSN	San Juan del S	2.10	106	eP	Pn	13 58 31.1	0.0
TGUH	Tegucigalpa,Un	2.23	16	ePn	Pn	13 58 33.0	+0.1
CONN	Concepcion	2.27	98	⇓eP	Pn	13 58 33.2	-0.1
LAJ	Bijagual	4.24	118	⇑eP	Pn	13 58 58.5	-2.0
LAJ				eS	Sn	13 59 44.1	-4.6
QCR	Quepos	4.43	123	⇑eP	Pn	13 59 04.3	+1.2
URSC	Urasca	4.55	116	⇓eP	Pn	13 59 08.0	+3.2
BUS	Buena Vista	4.70	119	⇑eP	Pn	13 59 09.0	+2.2
CMIG	Matias Romero	8.50	308	Pn	Pn	13 59 58.4	-0.6
	comp=Z,0.4nm,0.3s,baz=103,slow=11,SNR=4.9						
CMIG				Sn	Sn	14 01 43.1	+10
	comp=Z,0.2nm,0.3s,baz=326,slow=18,SNR=2.2						
CHI2		15.76	116	⇓eP	x	13 58 17.8	
CHI2				AML	x	13 58 45.5	
	comp=Z,1μm,0.7s						
SDV	Santo Domingo	17.26	98	ePn	Pn	14 01 54.7	-1.4
	comp=Z,12nm,1.3s						
ATAH	Atahualpa	21.03	153	LR	LR	14 09 39.6	
	comp=Z,91nm,18.9s,MS3.2,baz=163,slow=33						
JCT	Junction City	21.53	331	eP	P	14 02 43.4	-0.1
	comp=Z,6.3nm,0.8s,mb4.1						
GOGA	Godfrey	21.80	10	eP	P	14 02 46.8	+0.3
	comp=Z,17nm,1.3s,mb4.3						
TXAR	Lajitas Array	22.72	322	P	P	14 02 57.3	+1.0
	comp=Z,2.8nm,0.6s,mb3.9,baz=136,slow=9.8,SNR=44						
TKL	Tuckaleechee C	23.95	8	P	P	14 03 09.1	+0.9
	comp=Z,11nm,0.9s,mb4.3,baz=184,slow=12,SNR=8.1						
TKL				LR	LR	14 13 55.8	
	comp=Z,62nm,18.1s,MS3.1,baz=306,slow=40						
WMOK	Wichita Mounta	24.79	338	eP	P	14 03 15.9	0.0
	comp=Z,5.0nm,0.9s,mb4.0						
AMTX	Amarillo	26.08	334	eP	P	14 03 27.8	+0.2
	comp=Z,14nm,1.2s,mb4.4						
NNA	Nana	26.15	155	eP	P	14 03 28.0	-0.5
	comp=Z,15nm,0.9s,mb4.5						
PDAR	Pinedale Array	36.05	333	P	P	14 04 58.0	+2.7
	comp=Z,0.8nm,0.8s,mb3.7,baz=133,slow=10,SNR=5.4						
REDW	Red Top Meadow	37.10	332	eP	P	14 05 04.1	-0.2
	comp=Z,5.2nm,0.8s,mb4.4						
ULM	Lac du Bonnet	38.80	352	P	P	14 05 16.7	-1.7
	comp=Z,2.0nm,0.6s,mb4.1,baz=180,slow=7.4,SNR=3.2						
YKA	Yellowknife Ar	54.02	345	P	P	14 07 17.0	-0.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=140,slow=7.8,SNR=8.6						
CMAR	Chiang Mai Arr	149.09	347	PKPbc	PKPbc	14 17 44.2	+1.8
	comp=Z,1.3nm,0.7s,baz=345,slow=3.7,SNR=8.1						

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*BJI **07** 14:07:29.9, 4145N×79.17E, h4km, ML3.4*
*IDC **07** 14:07:30.8±2.0, 4161N×7893E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.3/24, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=52.9km s-min=20.0km az=131.0*
*ISCJB **07** 14:07:31.3±0.9, 4155N±006×7909E±006, h10km, Error ellipse: s-maj=9.6km s-min=6.5km az=159.2*
*NNC **07** 14:07:34.4±1.5, 4167N×7882E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=14.4km s-min=10.2km az=5.0*
*NEIC **07** 14:07:36.8±1.6, 4170N×79.10E, h35km, Error ellipse: s-maj=25.8km s-min=10.6km az=156.0*
*MOS **07** 14:07:40.8±1.5, 4221N×7885E, h33km, mb4.0/1, Error ellipse: s-maj=22.3km s-min=13.4km az=95.0*
ISC 07 14:07:33.0±0.9**, 4155N**±006×**7908E**±006**, h10km, n33, σ1.54**/38**, 5C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	2.23	289	P	Pn	14 08 07.5	-2.4
	SNR=170						
KNDC	Almaty	2.29	318	⇑Pn	Pn	14 08 10.3	-0.4
	135nm,0.6s						
KNDC				⇓Lg		14 08 41.2	
	376nm,0.6s						
AAA	Alma-Ata	2.34	318	ePN	Pn	14 08 10.9	-0.5
AAA				eS	Sn	14 08 42.1	+2.0
AAA				smax			
	comp=E,2.0nm,0.6s						
KZA	Kyzart	2.91	282	P	Pn	14 08 20.0	+0.7
	SNR=7.0						
TKM2	Tokmak 2	2.93	299	⇑Pn	Pn	14 08 19.6	+0.1
	comp=E,20nm,0.3s						
TKM2				⇓Lg		14 08 58.3	
	comp=E,95nm,0.6s						
TKM2	Tokmak 2	2.93	299	PN	Pn	14 08 19.6	+0.1
TKM2						14 08 58.4	
TKM2				pmax	pmax		
	comp=Z,20nm,0.4s						
TKM2				smax			
	comp=N,95nm,0.6s						
TKM2	Tokmak 2	2.93	299	P	Pn	14 08 19.9	+0.4
	SNR=12						
TKM2	Tokmak 2	2.93	299	ePn	Pn	14 08 18.9	-0.6
TKM2				eSn	Sn	14 08 53.6	-1.1
KSH	Kashi	3.11	230	eP	Pn	14 08 22.0	-0.1
KSH				S	Sn	14 08 52.9	-6.4
KSH				Smax			
	comp=N,17nm,0.7s						
KSH				Smax			
	comp=E,25nm,1.0s						
KBK	Karagaybulak	3.27	291	P	Pn	14 08 27.2	+3.1
	SNR=7.7						
UCH	Uchtor	3.47	283	P	Pn	14 08 30.1	+3.1
	SNR=8.8						
UCH	Uchtor	3.47	283	ePn	Pn	14 08 29.3	+2.3
UCH				eSn	Sg	14 09 16.6	-7.9
AAK	Ala-Archa	3.58	289	P	Pn	14 08 32.0	+3.5
	SNR=10						
AAK	Ala-Archa	3.58	289	ePn	Pn	14 08 29.1	+0.6
AML	Almayashu	4.06	280	P	Pn	14 08 40.2	+5.1
	SNR=15						
AML	Almayashu	4.06	280	ePn	Pn	14 08 37.9	+2.8
AML				eSn	Sn	14 09 21.2	-1.5
EKS2	Erkin-Say	4.10	288	ePn	Pn	14 08 37.8	+2.2
EKS2				eSn	Sn	14 09 22.1	-1.4
MK31	Makanchi Array	5.73	23	⇓Pn	Pn	14 08 59.5	+1.5
	comp=E,0.9nm,0.3s,baz=210,slow=14						
MK31				⇑Lg		14 10 34.5	
	comp=E,5.9nm,0.5s,baz=214,slow=27						
MK31	Makanchi Array	5.73	23	PN	Pn	14 08 59.1	+1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
MK31	Makanchi Array	5.73	23	ePn	Pn	14 08 58.3	+0.3
MKAR	Makanchi Array	5.73	23	Pn	Pn	14 08 59.4	+1.3
	comp=Z,0.9nm,0.3s,baz=204,slow=14,SNR=33						
MKAR				Lg		14 10 32.2	
	comp=Z,1.5nm,0.3s,baz=211,slow=25,SNR=3.2						
KK31	Karatay Array	6.54	287	Pg	Pb	14 09 29.0	+2.3
	comp=Z,2.4nm,0.6s,baz=104,slow=16,SNR=35						
KK31				⇑Lg		14 10 54.0	
	comp=Z,3.4nm,0.5s,baz=103,slow=27,SNR=4.5						
KK31	Karatay Array	6.54	287	PN	Pb	14 09 27.1	+0.4
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	9.09	358	⇓Lg		14 12 20.0	
	comp=Z,6.9nm,0.7s						
KURK	Kurchatov	9.18	358	⇑Lg		14 12 20.0	
	comp=Z,30nm,0.9s						
KURK	Kurchatov	9.18	358	Lg		14 12 16.9	
	comp=Z,0.2nm,0.3s,baz=180,slow=30,SNR=6.6						
KURK	Kurchatov	9.18	358	eP	Pn	14 09 43.9	-1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	9.18	358	ePn	Pn	14 09 43.9	-1.4
	comp=Z,1.0nm,0.5s						
KURK				eSn	Sn	14 11 31.5	+3.0
BVAR	Borovoye Array	12.90	336	Pn	Pn	14 10 35.2	-0.9
	comp=Z,0.2nm,0.3s,baz=128,slow=16,SNR=2.8						
BVAR				Lg		14 14 20.7	
	comp=Z,0.2nm,0.3s,baz=151,slow=27,SNR=5.9						
ZALV	Zalesovo Beam	12.99	15	Pn	Pn	14 10 34.7	-2.8
	comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=2.7						
ZALV				Sn	Sn	14 12 59.7	-2.2
	comp=Z,0.1nm,0.3s,baz=220,slow=26,SNR=2.9						
SONM	Songino Array	20.35	63	P	P	14 12 09.2	-0.1
	comp=Z,2.0nm,0.9s,baz=268,slow=12,SNR=12						
SONM	Songino Array	20.35	63	P	P	14 12 09.2	-0.1
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TORD	Torodi Ar. Bea	72.00	272	P	P	14 18 56.0	-1.1
	comp=Z,0.4nm,0.8s,baz=45,slow=5.4,SNR=2.8						

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*ISCJB **07** 14:54:01.7±0.5, 3969S±007×150W±0.1, h10km, mb4.4/15, MS4.1/11, Error ellipse: s-maj=16.6km s-min=10.6km az=2.5*
*IDC **07** 14:54:02.2±0.9, 3968S×15.15W, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/15, mbtmp4.0/9, MS4.1/11, Ms1 4.1/11, ms1mx4.0/18, Error ellipse: s-maj=27.6km s-min=19.9km az=156.0*
*NEIC **07** 14:54:03.3±0.5, 3969S×1502W, h10km, mb4.6/4, Error ellipse: s-maj=15.0km s-min=13.4km az=82.0*
*GCMT **07** 14:54:03.3±0.3, 3989S×1569W, h12km, MW5.0/67, Moment Tensor Solution. s19,c22; s67,c99; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.74±.12; Mθθ0.50±.12; Mφφ3.25±.10; Mrθ-1.54±.61; Mθφ-0.77±.10; Mφr-0.28±.42; Best double couple: Mo3.86400×10^16 NP1:φs3.00000°, δ47.00000°, λ-64.00000°. NP2: φs147.00000°, δ49.00000°, λ-115.00000°. Principal axes: T 3.4540, Plg1.0000°, Azm255.0000°; N 0.8260, Plg19.0000°, Azm164.0000°; P -4.2740, Plg71.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 07 14:54:03.7±0.5**, 3968S**±007×**151W**±01**, h10km, n26, σ0.62**/19**, mb4.4**/15**, MS4.1**/11**, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	31.57	175	e	P	15 00 26.2	+0.3
	baz=341,slow=9.8						
VNA2				e		15 00 31.6	
VNA2				e		15 00 36.9	
VNA2				e		15 00 39.1	
VNA3	Neumayer Olymp	31.76	177	e	P	15 00 27.3	-0.3
VNA3				e		15 00 32.9	
VNA3				e		15 00 38.0	
VNA3				e		15 00 40.4	
SNAA	Sanae	32.66	173	eP	P	15 00 35.2	-0.3
	6.1nm,1.2s,mb4.4						
TSUM	Tsumeb	34.71	64	eP	P	15 01 01.4	+7.5
	7.5nm,1.4s,mb4.4						
BOSA	Boshof	34.88	84	P	P	15 00 57.2	+1.9
	4.3nm,0.9s,mb4.4,baz=161,slow=5.9,SNR=4.1						
BOSA				LR	LR	15 12 06.6	
	comp=Z,379nm,19.2s,MS4.2,baz=267,slow=31						
BOSA	Boshof	34.88	84	eP	P	15 00 54.4	-0.9
	53nm,2.0s,mb5.1						
BOSA				LR	LR	15 12 06.5	
BDFB	Brasilia	37.41	300	P	P	15 01 17.3	+0.3
	0.8nm,0.5s,mb3.8,baz=198,slow=21,SNR=4.0						
CPUP	Villa Florida	37.52	278	P	P	15 01 17.6	-0.4
	0.4nm,0.4s,mb3.5,baz=147,slow=7.5,SNR=3.8						
CPUP				LR	LR	15 13 54.8	
	comp=Z,471nm,19.4s,MS4.3,baz=114,slow=32						
PLCA	Paso Flores	41.79	250	LR	LR	15 15 48.1	
	comp=Z,458nm,19.1s,MS4.4,baz=171,slow=31						
SIV	San Ignacio	46.40	287	P	P	15 02 31.0	+0.5
	1.2nm,0.9s,mb3.8,baz=138,slow=11,SNR=5.0						
LIC	Lamto	46.60	14	eP	P	15 02 31.3	-0.7
	43nm,1.4s,mb5.2						
KIC	Kosan Boka	46.79	14	eP	P	15 02 33.4	-0.1
	67nm,1.3s,mb5.4						
TIC	Toumodi	47.01	14	eP	P	15 02 35.1	-0.1
	7.3nm,0.2s,mb5.2						
DBIC	Dimbokro	47.07	14	P	P	15 02 35.2	-0.5
	2.0nm,0.8s,mb4.1,baz=199,slow=11,SNR=3.1						
DBIC				LR	LR	15 17 42.8	
	comp=Z,84nm,18.9s,MS3.7,baz=164,slow=30						

DBIC	Dimbokro	47.07	14	P	P	15 02 35.2	-0.5
DBIC				LR	LR	15 17 42.8	
MAW	Mawson	49.52	150	LR	LR	15 19 07.5	
	comp=Z,146nm,20.2s,MS4.0,baz=348,slow=30						
QSPA	South Pole Qui	50.58	180	eP	P	15 03 01.6	-0.3
	16nm,1.1s,mb4.9						
TORD	Torodi Ar. Bea	54.82	20	P	P	15 03 33.6	-0.3
	0.9nm,0.9s,mb3.8,baz=193,slow=5.9,SNR=4.6						
TORD				LR	LR	15 21 58.2	
	comp=Z,124nm,19.9s,MS4.0,baz=160,slow=31						
VNDA	Vanda	63.06	179	P	P	15 04 30.5	0.0
	2.9nm,0.9s,mb4.4,baz=178,slow=8.9,SNR=4.3						
VNDA				LR	LR	15 28 16.3	
	comp=Z,76nm,18.3s,MS3.9,baz=179,slow=33						
ROSC	El Rosal	70.15	294	LR	LR	15 34 30.1	
	comp=Z,282nm,18.5s,MS4.5,baz=20,slow=35						
KEST	Kesra	78.34	20	LR	LR	15 36 55.3	
	comp=Z,64nm,19.3s,MS4.0,baz=337,slow=33						
ESDC	Sonseca Array	79.62	9	P	P	15 06 10.8	+0.1
	1.4nm,0.8s,mb3.9,baz=212,slow=7.0,SNR=4.0						
BRTR	Keskin Array B	90.69	35	P	P	15 07 07.8	+1.5
	1.0nm,0.8s,mb4.2,baz=132,slow=1.8,SNR=3.9						
BRTR				LR	LR	15 43 56.2	
	comp=Z,48nm,18.5s,MS4.0,baz=44,slow=33						
GERES	GERESS Array B	91.75	19	LR	LR	15 45 11.9	
	comp=Z,122nm,19.6s,MS4.3,baz=263,slow=33						
KURK	Kurchatov	121.49	48	PKP	PKPdf	15 12 56.3	-0.4
	0.4nm,0.7s,baz=241,slow=2.3,SNR=3.1						
YKA	Yellowknife Ar	128.51	324	PKP	PKPdf	15 13 07.2	-2.6
	0.1nm,0.5s,baz=94,slow=2.7,SNR=2.4						

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*SGS **07** 15:27:51.5, 2845N×3286E, h4^{km}*
*GII **07** 15:27:51.9±0.0, 2834N×3302E, h15^{km}±1^{km}, mb4.3/5, ML4.2/5, Mw3.7/5*
*ISCJB **07** 15:27:53.1±0.7, 2856N±005×3309E±004, h10^{km}, mb3.6/6, MS3.5/4, Error ellipse: s-maj=7.4km s-min=4.7km az=5.8*
*IDC **07** 15:27:54.1±1.6, 2858N×3329E, h0^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.6/26, mbtmp3.6/10, ML3.1/4, MS3.5/4, Ms1 3.6/4, ms1mx2.9/42, Error ellipse: s-maj=30.5km s-min=11.4km az=148.0*
*CSEM **07** 15:27:54.0±0.9, 2851N×3325E, h13^{km}±6^{km}, ML4.1, Error ellipse: s-maj=8.9km s-min=4.9km az=15.0*
*NEIC **07** 15:27:59.1±1.0, 2870N×3326E, h35^{km}, mb3.9/2, Error ellipse: s-maj=19.0km s-min=11.1km az=155.0*

ISC 07 15:27:54.8±0.6**, 2856N**±005×**3318E**±004**, h10**^{km}**, n48,** σ**1**^{s}**18**/54**, mb3.6**/6**, MS3.5**/4**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		1.45	100	S	Sn	15 28 40.4	+0.3
RSHS		1.45	100	P	Pn	15 28 19.4	-1.7
BDAS	Al Bad‘	1.69	94	S	Sn	15 28 46.5	+0.3
BDAS	Al Bad‘	1.69	94	P	Pn	15 28 22.9	-1.5
HQLS		1.81	66	S	Sn	15 28 50.0	+1.0
HQLS		1.81	66	P	Pn	15 28 24.7	-1.3
HQLS		1.81	66	P	Pn	15 28 24.7	-1.3
HQLS				S	Sn	15 28 50.0	+1.0
EIL	Elat	1.90	54	Pg	Pn	15 28 26.5	-0.8
	40nm,0.3s,baz=234,slow=5.3,SNR=333						
EIL				Lg		15 28 52.5	
	198nm,0.3s,baz=39,slow=18,SNR=130						
EIL	Elat	1.90	54	Pg	Pn	15 28 26.5	-0.8
EIL				Lg		15 28 52.5	
EIL	Elat	1.90	54	Pn	Pn	15 28 26.3	-1.0
EIL				Sn	Sn	15 28 53.0	+1.6
MBRI	Mt Berech	1.95	51	Pn	Pn	15 28 27.3	-0.7
MBRI				Sn	Sn	15 28 54.8	+2.3
AQBJ	Aqaba	2.00	54	Pn	Pn	15 28 28.7	0.0
JLOS		2.04	85	S	Sn	15 28 57.1	+2.4
JLOS		2.04	85	P	Pn	15 28 28.2	-1.0
KRMI	Paran Flat	2.05	41	Pn	Pn	15 28 28.5	-0.9
KRMI				Sn	Sn	15 28 57.6	+2.5
HRFI	Mount Harif	2.19	47	Pn	Pn	15 28 30.4	-0.8
HRFI				Sn	Sn	15 29 00.8	+2.4
PRNI	Paran	2.39	41	Pn	Pn	15 28 33.6	-0.4
PRNI				Sn	Sn	15 29 06.3	+2.9
RMNI	Mount Ramon	2.45	34	Pn	Pn	15 28 34.7	-0.2
KZIT	Kziot	2.56	24	Pn	Pn	15 28 35.8	-0.7
ZFRI	Zfri	2.64	41	Pn	Pn	15 28 37.2	-0.3
RTMI	Retamim	2.81	27	Pn	Pn	15 28 38.9	-1.0
YTIR	Yattir	3.26	31	Pn	Pn	15 28 45.8	-0.1
MZDA	Masada	3.33	34	Pn	Pn	15 28 45.8	-1.1
DSI	Dead Sea	3.55	32	Pn	Pn	15 28 49.7	-0.3
SLTI	Sal’it	4.00	23	Pn	Pn	15 28 55.9	-0.3
HMDT	Nahal Hemdat	4.20	28	Pn	Pn	15 28 58.4	-0.5
BLGI	Bet Lehem HaGe	4.50	22	Pn	Pn	15 29 02.6	-0.5
ASF	Jabal al Asfar	4.82	41	Pn	Pn	15 29 06.5	-0.9
	0.9nm,0.3s,baz=69,slow=6.5,SNR=5.9						
ASF				Pg	Pg	15 29 21.8	-5.4
	0.8nm,0.3s,baz=92,slow=10,SNR=12						
ASF				Lg		15 30 22.7	
	1.8nm,0.3s,baz=39,slow=16,SNR=4.1						
MMAI	Mount Meron Ar	4.83	23	Pn	Pn	15 29 07.5	-0.1
	3.2nm,0.3s,baz=200,slow=9.7,SNR=11						
MMAI				Pg	Pg	15 29 23.2	-4.2
	15nm,0.3s,baz=206,slow=13,SNR=17						
MMAI				Sn	Sn	15 30 01.9	-1.7
	7.1nm,0.3s,baz=182,slow=14,SNR=2.4						
MMAI				Lg		15 30 25.0	
	18nm,0.3s,baz=171,slow=29,SNR=4.0						
IDI	Anoyia	9.72	316	Pn	Pn	15 30 15.1	+0.3
	0.2nm,0.3s,baz=146,slow=15,SNR=2.6						
IDI				Sn	Sn	15 31 58.4	-5.6
	0.2nm,0.3s,baz=344,slow=19,SNR=2.2						
BRTR	Keskin Array B	11.14	2	Pn	Pn	15 30 35.2	+1.1
	0.0nm,0.3s,baz=170,slow=19,SNR=2.4						
TIP	Timpagrande	17.24	312	ePn	Pn	15 31 50.9	-4.8
	6.5nm,0.9s						
CUC	Castrocucco	18.29	313	eP	Pn	15 32 08.2	-0.5
	11nm,0.7s						
CUC	Castrocucco	18.29	313	eP	Pn	15 32 08.2	-0.5
	11nm,0.7s						
KEST	Kesra	21.38	296	P	P	15 32 45.9	+3.3
	2.7nm,0.9s,mb3.6,baz=21,slow=7.8,SNR=4.4						
AKASG	Malin Array Be	22.31	353	P	P	15 32 52.2	-0.2
	3.3nm,0.7s,mb3.9,baz=170,slow=11,SNR=7.7						
AKASG	Malin Array Be	22.31	353	P	P	15 32 52.2	-0.2
VRAC	Vranov	24.30	333	LR	LR	15 44 39.2	
	comp=Z,66nm,19.1s,MS3.1,baz=237,slow=41						
GERES	GERESS Array B	25.19	329	P	P	15 33 22.0	+1.7
	1.0nm,0.5s,mb3.6,baz=150,slow=8.0,SNR=3.8						
TOA0	Torodi Ar. Sit	33.05	249	eP	P	15 34 33.9	+3.2
TOA0	Torodi Ar. Sit	33.05	249	eP	P	15 34 33.9	+3.2
TORD	Torodi Ar. Bea	33.05	249	P	P	15 34 31.6	+0.9
	0.5nm,0.8s,mb3.5,baz=73,slow=6.3,SNR=3.1						
KURK	Kurchatov	40.58	44	P	P	15 35 34.4	0.0
	0.8nm,0.8s,mb3.4,baz=264,slow=8.6,SNR=4.7						
ARCES	ARCESS Array B	41.25	356	LR	LR	15 53 42.6	
	comp=Z,154nm,18.1s,MS3.9,baz=121,slow=38						
LBTB	Lobatse	53.77	189	LR	LR	15 59 58.7	
	comp=Z,30nm,18.3s,MS3.4,slow=36						
KSRS	Korea Array	76.69	55	LR	LR	16 20 57.3	
	comp=Z,34nm,20.0s,MS3.7,baz=275,slow=42						
YKA	Yellowknife Ar	85.66	346	P	P	15 40 34.3	+0.8
	0.6nm,0.8s,mb3.9,baz=29,slow=5.6,SNR=6.6						
YKA	Yellowknife Ar	85.66	346	P	P	15 40 34.3	+0.8

DJA 07 15:31:24, 957S×11396E, h20^{km}**, MLv3.5**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	Negara	1.36	29	P	Pn	15 31 46.0	-1.8
IGBI	Denpasar	1.39	58	P	Pn	15 31 47.2	-1.1
DNP	Denpasar	1.52	54	P	Pn	15 31 50.5	+0.4
DNP				S	Sn	15 32 11.2	+1.9
KHKI	Kahang-Kahang	2.02	54	P	Pn	15 31 57.7	+0.7
KHKI				S	Sn	15 32 23.5	+1.8
KRKI	Karangkates	2.05	313	P	Pn	15 31 58.1	+0.8
KRKI				S	Sn	15 32 23.4	+1.1
KMMI	Kalianget	2.50	0	P	Pn	15 32 05.2	+1.6
SJI	Sawahan	2.83	310	P	Pn	15 32 10.0	+1.9

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*IDC **07** 15:57:54.3±1.0, 1228N×12554E, h0^{km}, mb4.1/10, mb1 4.2/10, mb1mx4.0/21, mbtmp4.1/10, Error ellipse: s-maj=50.6km s-min=15.5km az=69.0*
*ISCJB **07** 15:57:55.2±1.1, 1238N±003×12573E±005, h21^{km}±7^{km}, mb4.5/22, Error ellipse: s-maj=7.5km s-min=5.5km az=10.2*
*MAN **07** 15:57:55, 1241N×12578E, h26^{km}, mb5.1, ML4.0, MS4.1*
*NEIC **07** 15:57:58.3±0.4, 1221N×12565E, h35^{km}, mb4.8/12, Error ellipse: s-maj=10.3km s-min=7.3km az=47.0*

ISC 07 15:57:57.8±1.2**, 1232N**±004×**12575E**±005**, h29**^{km}±9^{km}**, n46,** σ**1**^{s}**10**/57**, mb4.5**/22**, 4C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.78	203	eP	Pb	15 58 12.1	-0.6
BESP				eS	Sb	15 58 25.4	+2.5
CNP	Catarman	1.07	280	eP	Pn	15 58 13.7	-3.1
CNP				eS	Sn	15 58 26.8	-4.0
PLP	Palo	1.37	213	⇑eP	Pn	15 58 20.1	-0.8
PLP				eS	Sn	15 58 37.7	-0.4
OCLP	Ormoc	1.68	222	eP	Pn	15 58 24.6	-0.6
OCLP				eS	Sn	15 58 44.2	-1.6
PVCP	Virac	2.00	309	⇑iP	Pn	15 58 27.0	-2.6
PVCP				i S	Sn	15 59 02.8	+9.1
MMPH	Masbate	2.07	271	⇑iP	Pn	15 58 32.0	+1.4
MMPH				i S	Sn	15 58 57.5	+2.1
MSLP	Maasin	2.34	202	eP	Pn	15 58 34.3	0.0
MSLP				eS	Sn	15 59 09.0	+6.9
SCPH	Surigao	2.54	186	⇓eP	Pn	15 58 36.5	-0.4
LLP	Lapu-Lapu	2.65	221	⇑eP	Pn	15 58 39.2	+0.7
LLP				eS	Sn	15 59 12.1	+2.5
RCP	Roxas	3.03	256	⇓eP	Pn	15 58 43.7	-0.1
RCP				eS	Sn	15 59 20.7	+1.6
TBP	Tagbilaran	3.20	215	eP	Pn	15 58 45.6	-0.5
TBP				eS	Sn	15 59 20.6	-2.8
GUIM	Jordan	3.52	242	eP	Pn	15 58 49.8	-0.8
GUIM				eS	Sn	15 59 31.4	+0.2
OTRP	Odiongan	3.64	271	eP	Pn	15 58 49.3	-2.9
POLP	Polilio Island	4.41	303	eP	Pn	15 59 07.2	+4.5
SJMP	San Jose	4.52	272	eP	Pn	15 59 04.9	+0.6
PAGZ	Pagadian	5.02	208	eP	Pn	15 59 12.7	+1.6
CAUP	Cauayan	5.96	321	eP	Pn	15 59 24.2	+0.2
BATI	Baumata	22.48	185	P	P	16 02 56.0	+1.2
	16nm,0.5s,mb4.7,baz=301,slow=0.7,SNR=9.8						
KS15	Wonju Array Si	25.09	4	eP	P	16 03 20.5	+0.6
CMAR	Chiang Mai Arr	26.53	287	P	P	16 03 31.8	-1.3
	2.8nm,0.8s,mb3.8,baz=94,slow=7.4,SNR=26						
MAJO	Matsushiro	26.60	23	eP	P	16 03 33.5	0.0
	52nm,2.0s,mb4.7						
PMG	Port Moresby	30.31	134	P	P	16 04 06.9	+0.1
	27nm,1.2s,mb4.9						
LSA	Lhasa	36.44	304	eP	P	16 05 00.8	+0.6
	4.1nm,1.1s,mb4.3						
ASAR	Alice Springs	36.65	167	P	P	16 05 01.4	-0.4
	0.6nm,0.4s,mb3.8,baz=341,slow=7.0,SNR=16						
ASAR				PcP	PcP	16 07 24.7	+0.1
	0.4nm,0.7s,baz=334,slow=3.1,SNR=4.1						
YSS	Yuzh-Sakhalins	37.38	19	eP	P	16 05 08.5	+0.7
	136nm,2.1s,mb5.4						
ODAN	Odare	38.75	298	eP	P	16 05 19.5	-0.2
	17nm,0.8s,mb4.8						
SONM	Songino Array	38.93	339	P	P	16 05 21.7	+0.8
	1.6nm,1.0s,mb3.7,baz=157,slow=7.6,SNR=6.8						
RAMN	Ramite	39.45	298	eP	P	16 05 25.6	-0.1
	12nm,0.7s,mb4.7						
JIRN	Jiri	39.98	298	eP	P	16 05 29.9	-0.1
	13nm,0.7s,mb4.8						
GUN	Gumba	40.31	299	eP	P	16 05 32.5	-0.3
	22nm,0.8s,mb4.9						
PKI	Pulchoki	40.63	298	eP	P	16 05 34.6	-0.8
	14nm,0.8s,mb4.6						
PKI	Pulchoki	40.63	298	eP	P	16 05 34.7	-0.7
PKIN	Phulchoki	40.65	298	eP	P	16 05 34.7	-0.8
KKN	Kakani	40.80	298	eP	P	16 05 36.2	-0.6
	7.3nm,0.7s,mb4.4						
DMN	Daman	40.90	298	eP	P	16 05 37.9	+0.2
GKN	Gorkha	41.40	298	eP	P	16 05 40.8	-0.9
DANN	Dangsing	42.23	299	eP	P	16 05 48.1	-0.4
	14nm,0.8s,mb4.7						
KOLN	Koldanda	42.24	298	eP	P	16 05 48.2	-0.4
	16nm,0.8s,mb4.7						
STKA	Stephens Creek	46.50	161	P	P	16 06 25.0	+2.5
	2.2nm,0.8s,mb4.2,baz=337,slow=13,SNR=2.9						
STKA	Stephens Creek	46.50	161	eP	P	16 06 20.8	-1.7
	15nm,2.3s,mb4.5						
MKAR	Makanchi Array	50.10	322	P	P	16 06 51.2	+1.1
	2.3nm,0.7s,mb4.3,baz=118,slow=9.0,SNR=13						
ZALV	Zalesovo Beam	52.59	331	P	P	16 07 08.8	+0.1
	0.3nm,0.4s,mb3.5,baz=100,slow=6.2,SNR=3.8						
ZALV	Zalesovo Beam	52.59	331	P	P	16 07 08.8	+0.1
KURK	Kurchatov	54.10	325	P	P	16 07 20.4	+0.5
	3.2nm,0.6s,mb4.4,baz=123,slow=7.2,SNR=14						
BVAR	Borovoye Array	59.70	325	P	P	16 07 59.7	+0.2
	1.9nm,0.8s,mb4.2,baz=108,slow=8.3,SNR=8.8						
ARCES	ARCESS Array B	82.11	340	P	P	16 10 16.6	+1.4
	2.8nm,0.9s,mb4.2,baz=78,slow=8.4,SNR=3.6						

KRSC 07 16:05:42.2±1.4**, 5067N×15778E, h10**^{km}±10^{km}**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel’ka	1.73	339	eP	Pn	16 06 12.4	+0.1
RUS	Russkaya	1.82	14	P	Pn	16 06 15.5	+1.9
RUS				eS	Sn	16 06 39.8	+3.1
PET	Petropavlovsk	2.42	13	S	Sn	16 06 53.3	+1.9
SDLR	Sedlovina	2.70	14	eP	Pn	16 06 27.8	+2.2
SPN	Mys Shipunski	2.80	29	S	Sn	16 07 02.5	+1.7
GNL	Ganaly	3.03	2	eP	Pn	16 06 31.8	+1.6
KBTR	Krutoberegovo	6.31	27	P	Pn	16 07 17.7	+2.5

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*ISCJB **07** 16:13:42.9±0.8, 2098S±007×687W±0.1, h106^{km}±9^{km}, mb3.4/2, Error ellipse: s-maj=16.5km s-min=10.2km az=18.8*
*IDC **07** 16:13:44.8±2.5, 21.10S×6845W, h104^{km}±26^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.3/17, mbtmp3.5/3, Error ellipse: s-maj=57.3km s-min=23.7km az=129.0*
*GUC **07** 16:13:44.6±0.6, 2107S×6884W, h104^{km}±4^{km}, MD3.6, ML4.0*
*NEIC **07** 16:13:44.6, 2107S×6884W, h104^{km}, MD3.6(GUC), After GUC.*

ISC 07 16:13:43.9±0.7**, 2097S**±006×**6873W**±010**, h101**^{km}±9^{km}**, n16,** σ**0**^{s}**79**/25**, mb3.4**/2**, 2C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.71	264	⇓iP	Pn	16 14 01.8	+0.3
PB01				i S	Sn	16 14 14.9	+0.2
PB01				AML	AML	16 14 17.2	
	comp=E,3µm,0.2s						
MACH	Maria Elena	1.54	218	i P	Pn	16 14 10.6	-0.1
MACH				i S	Sn	16 14 30.8	-0.4
LVC	Limon Verde	1.64	186	P	Pn	16 14 12.8	+0.9
	comp=E,43nm,0.3s,baz=7.9,slow=9.1,SNR=191						
LVC				S	Sn	16 14 33.3	+0.1
	comp=E,96nm,0.3s,baz=121,slow=17,SNR=33						
LVC	Limon Verde	1.64	186	⇑iP	Pn	16 14 12.8	+0.8
LVC				i S	Sn	16 14 34.1	+0.8
TOCH	Tocopilla	1.76	231	⇑iP	Pn	16 14 13.0	-0.4
TOCH				⇓iS	Sn	16 14 35.1	-0.9
TOCH				AML	AML	16 14 39.8	
	comp=N,4µm,0.3s						
PECH	Pedro de Valdi	1.84	208	i P	Pn	16 14 14.6	+0.2
PECH				i S	Sn	16 14 37.2	-0.5
PECH				AML	AML	16 14 42.1	
	comp=E,3µm,0.6s						
MECH	Mejillones	2.65	217	eP	Pn	16 14 25.6	+0.6
MECH				eS	Sn	16 14 56.1	-0.5
MECH				AML	AML	16 15 12.4	
	comp=N,938nm,0.6s						
CEN1	Los Morros	2.76	209	i P	Pn	16 14 29.1	+2.6
CEN1				i S	Sn	16 15 03.4	+4.2
CEN1				AML	AML	16 15 12.7	
	comp=N,566nm,0.2s						
ANCH	Antofagasta	3.11	210	eP	Pn	16 14 31.4	+0.3
ANCH				eS	Sn	16 15 06.8	-0.8
ANCH	Antofagasta	3.11	210	eP	Pn	16 14 31.4	+0.3
ANCH				eS	Sn	16 15 06.8	-0.8
ANCH				AML	AML	16 15 17.9	
	comp=E,558nm,0.3s						
LCO	Las Campanas	8.20	192	Pn	Pn	16 15 39.9	-0.1
SIV	San Ignacio	8.80	57	P	Pn	16 15 47.1	-1.1
	comp=E,2.3nm,0.3s,baz=244,slow=11,SNR=31						
TORD	Torodi Ar. Bea	77.02	70	P	P	16 25 25.2	-1.0
	comp=E,0.4nm,0.5s,mb3.4,baz=262,slow=5.1,SNR=6.6						
YKA	Yellowknife Ar	90.75	341	P	P	16 26 35.9	+1.0
	comp=E,0.2nm,0.6s,mb3.4,baz=126,slow=4.2,SNR=3.8						
YKA				pP	pP	16 27 04.6	+3.0
	comp=E,0.7nm,0.8s,baz=134,slow=4.8,SNR=8.0						
YKA	Yellowknife Ar	90.75	341	P	P	16 26 35.9	+1.0
YKA				pP	pP	16 27 04.6	+3.0
MKAR	Makanchi Array	145.11	36	PKPbc	PKPbc	16 33 10.1	+1.0
	comp=E,4.0nm,1.2s,baz=338,slow=3.0,SNR=8.4						

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*IDC **07** 16:24:29.3±1.4, 1222N×12557E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.7/21, mbtmp3.8/7, Error ellipse: s-maj=60.3km s-min=19.1km az=70.0*
*ISCJB **07** 16:24:31.6±2.5, 1236N±005×12582E±008, h32^{km}±20^{km}, mb3.9/8, Error ellipse: s-maj=12.9km s-min=8.4km az=168.9*
*MAN **07** 16:24:31, 1238N×12571E, h22^{km}, mb4.8, ML3.7, MS3.7*
*NEIC **07** 16:24:35.4±0.9, 1204N×12527E, h35^{km}, mb4.3/2, Error ellipse: s-maj=30.4km s-min=17.9km az=76.0*

ISC 07 16:24:32.5±1.8**, 1231N**±005×**12577E**±008**, h24**^{km}±13^{km}**, n23,** σ**0**^{s}**97**/26**, mb3.9**/8**, 2C-3D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.78	205	eP	Pb	16 24 47.6	+0.2
CNP	Catarman	1.10	281	eP	Pn	16 24 50.0	-2.5
PLP	Palo	1.38	214	⇓eP	Pn	16 24 55.4	-0.9
PLP				eS	Sn	16 25 13.4	-0.4
OCLP	Ormoc	1.69	222	eP	Pn	16 25 00.4	-0.3
PVCP	Virac	2.03	309	⇑iP	Pn	16 25 03.5	-1.8
PVCP				i S	Sn	16 25 39.2	+9.3
MMPH	Masbate	2.10	272	⇑iP	Pn	16 25 07.8	+1.6
MMPH				i S	Sn	16 25 32.4	+0.8
MSLP	Maasin	2.34	203	eP	Pn	16 25 11.3	+1.7
SCPH	Surigao	2.53	186	⇓eP	Pn	16 25 12.4	+0.3
RCP	Roxas	3.05	256	⇓eP	Pn	16 25 20.4	+1.0
GUIM	Jordan	3.54	242	eP	Pn	16 25 25.5	-0.5
OTRP	Odiongan	3.67	271	eP	Pn	16 25 27.7	-0.1
POLP	Polilio Island	4.43	303	eP	Pn	16 25 43.8	+5.4
CAUP	Cauayan	5.99	321	eP	Pn	16 26 00.1	+0.4
BATI	Baumata	22.47	185	P	P	16 29 29.2	-1.0
	6.1nm,0.4s,mb4.4,baz=226,slow=2.4,SNR=3.5						
KS15	Wonju Array Si	25.10	4	eP	P	16 30 00.2	+4.8
CMAR	Chiang Mai Arr	26.56	287	P	P	16 30 07.9	-1.0
	1.2nm,0.8s,mb3.5,baz=92,slow=7.3,SNR=9.9						
ASAR	Alice Springs	36.63	167	P	P	16 31 37.2	0.0
	0.3nm,0.3s,mb3.6,baz=339,slow=6.9,SNR=26						
SONM	Songino Array	38.95	339	P	P	16 31 57.4	+0.8
	0.4nm,0.9s,mb3.1,baz=153,slow=9.7,SNR=3.6						
MKAR	Makanchi Array	50.12	322	P	P	16 33 26.4	+0.5
	1.2nm,0.8s,mb4.0,baz=122,slow=9.1,SNR=5.6						
KURK	Kurchatov	54.12	325	P	P	16 33 55.0	-0.6
	1.2nm,0.5s,mb4.1,baz=122,slow=8.2,SNR=8.6						
KURK	Kurchatov	54.12	325	eP	P	16 33 56.0	+0.4
	3.2nm,0.9s,mb4.2						
TIXI	Tiksi	59.33	1	eP	P	16 34 36.5	+4.3
	4.1nm,1.6s,mb4.2						
BVAR	Borovoye Array	59.72	325	P	P	16 34 35.5	+0.3
	1.0nm,0.8s,mb3.9,baz=115,slow=10,SNR=5.5						

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*IDC **07** 16:49:43.2±1.7, 1210N×12558E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/24, Error ellipse: s-maj=65.3km s-min=23.9km az=63.0*
*ISCJB **07** 16:49:44.4±1.7, 1238N±005×12578E±007, h13^{km}±11^{km}, mb3.6/4, Error ellipse: s-maj=11.7km s-min=8.3km az=157.7*
*MAN **07** 16:49:45, 1227N×12564E, h1^{km}, mb4.8, ML3.7, MS3.7*

ISC 07 16:49:44.5±1.7**, 1231N**±005×**12577E**±007**, h5**^{km}±10^{km}**, n14,** σ**1**^{s}**08**/17**, mb3.6**/4**, 2C-3D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Catarman	1.10	281	eP	Pg	16 50 04.4	-1.2
PLP	Palo	1.37	214	⇓eP	Pn	16 50 09.6	-0.7
PLP				eS	Sb	16 50 27.4	-1.2
OCLP	Ormoc	1.69	222	eP	Pn	16 50 15.4	+0.7
PVCP	Virac	2.03	309	⇑eP	Pn	16 50 18.6	-0.7
PVCP				eS	Sg	16 50 49.9	+0.2
MMPH	Masbate	2.09	272	⇓iP	Pn	16 50 22.3	+2.1
MMPH				i S	Sn	16 50 46.6	-0.1
MSLP	Maasin	2.34	202	eP	Pn	16 50 25.7	+2.1
SCPH	Surigao	2.52	186	⇓eP	Pn	16 50 26.8	+0.6
RCP	Roxas	3.05	256	⇑eP	Pn	16 50 34.4	+1.0
RCP				eS	Sn	16 51 10.1	-0.2
GUIM	Jordan	3.53	242	eP	Pn	16 50 40.7	+0.6
JHJ	Hachijo jima 2	24.37	30	LR	LR	17 02 42.3	
	comp=Z,46nm,18.9s,baz=195,slow=32						
CMAR	Chiang Mai Arr	26.55	287	P	P	16 55 22.1	-1.4
	1.3nm,0.8s,mb3.5,baz=94,slow=7.6,SNR=13						
ASAR	Alice Springs	36.63	167	P	P	16 56 50.0	-1.9
	0.2nm,0.3s,mb3.4,baz=342,slow=7.2,SNR=22						
SONM	Songino Array	38.95	339	P	P	16 57 12.0	+0.6
	0.6nm,0.8s,mb3.4,baz=158,slow=9.3,SNR=4.0						
MKAR	Makanchi Array	50.12	322	P	P	16 58 40.5	-0.2
	1.3nm,0.8s,mb4.0,baz=115,slow=8.1,SNR=8.1						

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*NEIC **07** 17:14:33.8, 3131N×11559W, h8^{km}, ML3.1(ECX), After ECX.*

ECX 07 17:14:33.8±0.5**, 3131N×11559W, h8**^{km}**, MD3.0, ML3.1, 5C-6D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	0.48	70	⇑eP	Pg	17 14 42.4	-0.8
ECBX				eS	Sg	17 14 49.1	-0.5
RDX	Rancho Dowling	0.69	334	eP	Pg	17 14 46.1	-1.1
RDX				eS	Sg	17 14 56.0	-0.3
RDX				⇑e		17 14 56.7	
	comp=N,1µm,0.4s						
EMX	El Mayor	0.74	23	⇓eP	Pg	17 14 46.8	-1.3
EMX				eS	Sg	17 14 57.2	-0.4
EMX				⇓e		17 14 58.6	
	comp=N,368nm,0.3s						
EMX				⇑e		17 14 59.7	
	comp=E,440nm,0.6s						
ECNX	Esteban Cantu	0.93	292	eP	Pg	17 14 50.3	-1.4
ECNX				eS	Sg	17 15 03.0	-0.9
PBX	Punta Banda	1.06	294	⇓eP	Pg	17 14 52.3	-2.0
PBX				eS	Sg	17 15 06.8	-1.3
PBX				⇑e		17 15 09.2	
	comp=E,329nm,0.5s						
PBX				⇑e		17 15 09.6	
	comp=N,624nm,0.7s						
ENX	Ensenada	1.08	302	⇓eP	Pg	17 14 52.8	-1.8
ENX				eS	Sg	17 15 07.2	-1.5
ENX				⇓e		17 15 09.7	
	comp=N,743nm,0.5s						
CPBX	Cerro Prieto	1.13	12	eP	Pg	17 14 53.7	-1.9
CBX	Cerro Bola	1.36	318	⇓eP	Pn	17 14 57.2	-1.9
CBX				eS	Sb	17 15 15.3	-1.7
GLA	Glamis	1.85	20	ePn	Pn	17 15 06.4	+0.5
PFO	Pinyon Flat Ob	2.41	342	ePn	Pn	17 15 14.6	+1.1
PFO				eSn	Sn	17 15 45.5	+2.3
GSC	Goldstone	4.11	346	ePg	Pg	17 15 50.5	-2.1
GSC				eSg	Sg	17 16 40.9	-5.0
TUC	Tucson	4.21	75	eSg	Sg	17 16 52.5	+3.6
ISA	Isabella	4.97	332	eSg	Sg	17 17 03.8	-10

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*CSEM **07** 17:18:22.5±0.1, 4076N×3101E, h8^{km}, MD2.7, Error ellipse: s-maj=2.0km s-min=1.4km az=132.0*
*ISK **07** 17:18:22.1, 4077N×3100E, h3^{km}, MD2.9*
*ISCJB **07** 17:18:23.0±0.5, 4078N±003×3099E±004, h6^{km}±4^{km}, Error ellipse: s-maj=5.5km s-min=4.6km az=24.9*
*DDA **07** 17:18:24.3, 4082N×3091E, h8^{km}, Md2.7*

ISC 07 17:18:23.4±0.5**, 4078N**±003×**3099E**±004**, h8**^{km}±4^{km}**, n20,** σ**0**^{s}**70**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENT	Hendek	0.08	302	i P	Pg	17 18 25.4	-0.2
HENT				i S	Sg	17 18 27.4	+0.3
MDU	Mudurnu	0.36	151	PG	Pg	17 18 29.6	-0.8
MDU				eSG	Sg	17 18 34.9	-0.2
GULT	Gulveren	0.50	226	PG	Pg	17 18 33.1	0.0
GULT				eSG	Sg	17 18 40.8	+1.1
KDZE	Karadeniz Ereo	0.63	33	ePG	Pg	17 18 35.5	-0.1
KDZE				eSG	Sg	17 18 44.9	+0.9
GPA	Golpazari	0.71	227	ePG	Pg	17 18 36.5	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPA				eSG	Sg	17 18 47.1	+0.6
BORA	Eskisehir	0.99	205	iP	Pg	17 18 41.5	-0.9
BORA				iS	Sg	17 18 56.4	+1.2
HRT	Hereke	1.00	273	ePG	Pg	17 18 41.9	-0.8
ADVT	Abdulvahap	1.01	250	ePG	Pg	17 18 41.9	-1.0
CAVI	Cavuskoy	1.05	237	ePG	Pg	17 18 43.0	-0.5
SILT	Sile	1.09	291	ePN	Pn	17 18 43.5	-1.4
YLV	Yalova	1.25	261	ePN	Pn	17 18 47.1	0.0
ESKT	Eskisehir	1.26	185	iP	Pn	17 18 47.7	+0.4
ESKT				iS	Sb	17 19 03.7	0.0
ESKT	Eskisehir	1.26	185	ePn	Pn	17 18 47.0	-0.3
SEYT	Eskypehyr	1.26	185	iP	Pn	17 18 47.7	+0.4
SEYT				iS	Sb	17 19 03.7	0.0
SAFT	Safranbolu	1.36	70	ePN	Pn	17 18 48.5	-0.1
ISK	Istanbul-Kandi	1.49	282	ePN	Pn	17 18 51.0	+0.6
ULDT	Uludag	1.55	246	iP	Pn	17 18 51.2	0.0
ULDT				iS	Sn	17 19 10.8	-0.7
BGKT	Bogazkoy	1.73	284	ePN	Pn	17 18 54.4	+0.8
ALT	Altintas	1.85	202	ePN	Pn	17 18 56.3	+1.0
CTKS	Kestanelik-??a	1.93	284	ePN	Pn	17 18 57.2	+0.7

*ISCJB **07** 17:36:21.9±0.3, 4340N±003×8195E±004, h10km, mb4.1/16, Error ellipse: s-maj=4.9km s-min=4.0km az=148.5*

*BJI **07** 17:36:23.7, 4336N×8237E, h22km, mB4.4, mb4.2, ML4.0, Ms3.9, Msz3.5*

*IDC **07** 17:36:24.0±0.7, 4332N×82.11E, h16km±4km, mb3.9/8, mb1 4.0/13, mb1mx3.9/26, mbtmp4.0/13, ML3.9/5, MS2.9/3, Ms1 2.9/3, ms1mx2.7/37, Error ellipse: s-maj=17.8km s-min=10.9km az=82.0*

*MOS **07** 17:36:25.6±1.6, 4344N×82.19E, h33km, mb4.3/9, Error ellipse: s-maj=11.7km s-min=6.9km az=104.7*

*NEIC **07** 17:36:28.2±0.9, 4342N×82.17E, h42km±10km, mb3.8/4, Error ellipse: s-maj=10.4km s-min=9.3km az=118.0*

*NNC **07** 17:36:28.4±1.2, 4362N×8186E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=11.6km s-min=5.8km az=133.0*

ISC 07 17:36:24.3±0.3**, 4338N**±003×**8205E**±004**, h10**km**, (h18**km±.6km**:pP-P), n75,** σ1§**67**/99**, mb4.1**/16**, 10C-10D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	3.42	3	⇓Pn	Pn	17 37 20.0	+2.5
	3.9nm,0.2s,baz=186,slow=12						
MK31				⇑Lg		17 38 12.1	
	183nm,0.6s,baz=184,slow=28						
MK31	Makanchi Array	3.42	3	ePn	Pn	17 37 19.9	+2.3
MKAR	Makanchi Array	3.42	3	Pn	Pn	17 37 19.8	+2.2
	12nm,0.3s,baz=187,slow=13,SNR=182						
MKAR				Pg	Pg	17 37 28.1	-1.6
	23nm,0.3s,baz=171,slow=17,SNR=40						
MKAR				Lg		17 38 12.3	
	68nm,0.3s,baz=188,slow=29,SNR=6.5						
MKAR	Makanchi Array	3.42	3	Pn	Pn	17 37 19.8	+2.2
MKAR				Pg	Pg	17 37 28.1	-1.6
MKAR				Lg		17 38 12.3	
KNDC	Almaty	3.71	269	⇓Pg	Pg	17 37 33.4	-2.0
	58nm,0.5s						
KNDC				⇓Lg		17 38 20.2	
	195nm,0.5s						
AAA	Alma-Ata	3.72	270	ePN	Pg	17 37 32.6	-3.0
AAA				eS	Sg	17 38 20.9	-2.9
AAA				smax			
	comp=E,1.0nm,0.5s						
WMQ	Urumqi	4.12	82	ePG	Pn	17 37 30.1	+2.8
WMQ				S	Sn	17 38 16.8	+1.2
WMQ				SG	Sg	17 38 29.2	-7.5
WMQ				Smax			
	comp=N,213nm,0.5s						
WMQ				Smax			
	comp=E,161nm,1.0s						
TKM2	Tokmak 2	4.74	267	⇑Pn	Pn	17 37 40.6	+4.8
	comp=E,13nm,0.7s						
TKM2				⇑Pg	Pg	17 37 53.4	-1.7
	comp=E,45nm,0.7s						
TKM2				⇓Lg		17 38 54.2	
	comp=E,162nm,0.5s						
TKM2	Tokmak 2	4.74	267	PN	Pn	17 37 40.5	+4.7
TKM2						17 37 53.2	
TKM2						17 38 50.7	
TKM2				smax			
	comp=N,192nm,0.6s						
TKM2	Tokmak 2	4.74	267	ePn	Pn	17 37 39.7	+4.0
TKM2				eSg	Sg	17 38 51.8	-4.7
AAK	Ala-Archa	5.59	265	ePN	Pn	17 37 50.2	+2.8
AAK				e		17 38 10.3	
AAK				e		17 39 20.7	
AAK				pmax	pmax		
	comp=Z,107nm,1.8s						
AAK	Ala-Archa	5.59	265	ePn	Pn	17 37 50.1	+2.8
	comp=Z,107nm,1.8s						
AAK				ePg	Pg	17 38 10.3	-1.0
AAK				eSg	Sg	17 39 20.7	-3.0
UCH	Uchtor	5.66	261	ePn	Pn	17 37 52.4	+4.0
	comp=Z,5.8nm,0.9s						
UCH				eSg	Sg	17 39 22.9	-3.0
KSH	Kashi	5.98	232	ePG	Pg	17 38 12.3	-6.4
KSH				S	Sn	17 39 00.8	-0.4
KSH				Smax			
	comp=N,28nm,0.9s						
KSH				Smax			
	comp=E,37nm,0.9s						
EKS2	Erkin-Say	6.11	266	ePn	Pn	17 37 57.1	+2.6
	comp=E,42nm,0.6s						
EKS2				eSg	Sg	17 39 34.5	-5.7
AML	Almayashu	6.28	261	Pn	Pn	17 37 55.8	-1.0
	comp=E,29nm,0.6s						
AML				eSg	Sg	17 39 42.9	-2.7
KURBB	Kurchatov Arra	7.63	343	⇑Pn	Pn	17 38 16.7	+1.3
	comp=E,3.5nm,0.6s						
KURBB				⇑Sn	Sn	17 39 41.5	-0.4
	comp=E,5.3nm,0.7s						
KURBB				⇑Lg		17 40 21.1	
	comp=E,34nm,1.3s						
KURK	Kurchatov	7.70	344	⇓Pn	Pn	17 38 17.3	+0.9
	comp=E,13nm,0.6s						
KURK				⇑Sn	Sn	17 39 42.9	-0.7
	comp=E,82nm,0.9s						
KURK				⇓Lg		17 40 23.0	
	comp=E,123nm,0.6s						
KURK	Kurchatov	7.70	344	Pn	Pn	17 38 16.2	-0.2
	comp=E,0.6nm,0.3s,baz=165,slow=12,SNR=24						
KURK				Sn	Sn	17 39 37.6	-6.0
	comp=E,0.7nm,0.3s,baz=176,slow=17,SNR=3.6						
KURK				Lg		17 40 23.1	
	comp=E,2.0nm,0.3s,baz=92,slow=13,SNR=4.5						
KURK	Kurchatov	7.70	344	P	Pn	17 38 16.2	-0.2
KURK						17 39 37.6	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK				smax			
	comp=N,1.0nm,0.3s						
KURK	Kurchatov	7.70	344	Pn	Pn	17 38 16.2	-0.2
KURK				Sn	Sn	17 39 37.6	-6.0
KURK				eSn	Sn	17 39 44.3	+0.7
KURK				Lg		17 40 23.1	
KK31	Karatay Array	8.43	272	Pn	Pn	17 38 29.6	+3.2
	comp=N,1.6nm,0.7s,baz=82,slow=14,SNR=9.5						
KK31				⇓Pg	Pn	17 39 02.4	+36
	comp=N,4.2nm,0.6s,baz=86,slow=17,SNR=5.8						
KK31				⇓Lg		17 40 51.8	
	comp=N,35nm,0.6s,baz=82,slow=26,SNR=13						
KK31	Karatay Array	8.43	272	P	Pn	17 38 29.5	+3.1
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAA0	Zalesovo Array	10.73	9	ePn	Pn	17 38 57.5	-0.4
ZAA0				eSn	Sn	17 40 53.3	-4.7
ZALV	Zalesovo Beam	10.73	9	Pn	Pn	17 38 57.4	-0.5
	comp=Z,0.7nm,0.3s,baz=193,slow=13,SNR=16						
ZALV				Sn	Sn	17 40 54.6	-3.3
	comp=Z,2.1nm,0.3s,baz=192,slow=22,SNR=7.4						
ZALV				Lg		17 42 03.7	
	comp=Z,0.5nm,0.3s,baz=192,slow=27,SNR=3.6						
ZALV				LR	LR	17 43 45.4	
	comp=Z,34nm,20.5s,baz=98,slow=41						
NVS	Novosibirsk	11.50	3	eP	Pn	17 39 08.6	+0.3
NVS				e		17 41 11.7	
CHCP	Chirah Chowk	11.89	218	P	Pn	17 39 15.9	+2.1
VOSK	Vostochnaya	11.91	326	⇑Lg		17 42 38.6	
	comp=Z,46nm,1.2s						
BVA0	Borovoye Array	12.38	325	⇓Pn	Pn	17 39 23.1	+2.8
	comp=Z,0.4nm,0.8s,baz=127,slow=12,SNR=7.1						
BVA0				⇑Lg		17 42 53.2	
	comp=Z,9.6nm,1.2s,baz=134,slow=19,SNR=3.6						
BVAR	Borovoye Array	12.38	325	Pn	Pn	17 39 21.0	+0.7
	comp=Z,0.3nm,0.3s,baz=138,slow=11,SNR=5.5						
BVAR				Sn	Sn	17 41 31.4	-6.8
	comp=Z,0.3nm,0.3s,baz=117,slow=15,SNR=2.5						
BVAR				Lg		17 42 58.1	
	comp=Z,1.3nm,0.3s,baz=127,slow=32,SNR=5.9						
BVAR				LR	LR	17 44 17.2	
	comp=Z,140nm,21.1s,baz=47,slow=38						
BVAR	Borovoye Array	12.38	325	P	Pn	17 39 21.0	+0.7
BVAR						17 41 31.4	
CEP	Cherat	12.40	223	P	Pn	17 39 23.4	+2.7
CEP				S	Sn	17 41 39.0	+0.1
BRVK	Borovoye	12.45	325	eP	Pn	17 39 20.6	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	12.45	325	ePn	Pn	17 39 20.6	-0.7
	comp=Z,5.0nm,0.8s						
BRVK				eSn	Sn	17 41 31.0	-8.9
KBL	Kabul	13.41	233	eP	Pn	17 39 37.7	+3.1
GTA	Gaotai	13.91	101	⇓eP	Pn	17 39 38.8	-2.6
GTA				AP		17 39 48.4	
GTA				XP		17 39 52.5	
GTA				S	Sn	17 42 06.2	-10
GTA				LG1		17 43 17.1	
GTA				LG2		17 43 38.7	
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s						
GTA				AMB	AMB		
	comp=Z,44nm,5.4s						
GTA				LR	LR		
	comp=N,111nm,14.4s						
GTA				LR	LR		
	comp=E,177nm,15.0s						
GTA				LR	LR		
	comp=Z,179nm,15.3s						
LSA	Lhasa	15.47	149	eP	Pn	17 40 00.4	-2.1
LSA	Lhasa	15.47	149	eP	Pn	17 40 02.3	-0.2
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSA	Lhasa	15.47	149	ePn	Pn	17 40 02.3	-0.2
	comp=Z,5.0nm,0.9s						
ZAK	Zakamensk	16.09	57	eP	Pn	17 40 13.7	+3.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AB09	Akbulak array	16.35	299	⇑Pn	Pn	17 40 15.8	+2.0
	comp=Z,2.7nm,0.6s						
SONM	Songino Array	17.58	67	P	Pn	17 40 28.9	-0.3
	comp=Z,1.1nm,0.3s,baz=263,slow=12,SNR=55						
SONM				Lg		17 45 35.8	
	comp=Z,0.1nm,0.3s,baz=273,slow=27,SNR=3.2						
SONM				LR	LR	17 47 01.0	
	comp=Z,28nm,19.0s,baz=209,slow=36						
AKTK	Aktyubinsk	17.82	302	P	Pn	17 40 33.6	+1.4
AKTO	Aktyubinsk	17.82	302	P	Pn	17 40 33.6	+1.4
	comp=Z,0.3nm,0.3s,baz=100,slow=15,SNR=6.7						
SVE	Sverdlovsk	19.11	322	eP	Pn	17 40 48.8	+0.9
SVE				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU	Arti	19.85	319	eP	Pn	17 40 56.2	-0.5
ARU				eS	Sn	17 44 38.8	-0.8
ARU	Arti	19.85	319	eP	Pn	17 40 55.3	-1.4
	comp=Z,5.3nm,0.9s						
HHC	Hu-ho-hao-te	21.99	86	eP	P	17 41 13.7	-4.7
HHC				PP		17 41 38.1	
HHC				S	S	17 45 06.6	-14
HHC				SS		17 45 43.9	
HHC				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.5						
HHC				AMB	AMB		
	comp=Z,77nm,5.0s						
HHC				LR	LR		
	comp=N,139nm,10.3s						
HHC				LR	LR		
	comp=E,125nm,10.3s						
HHC				LR	LR		
	comp=Z,94nm,10.3s						
XAN	Xi'an	22.87	105	P	P	17 41 25.4	-2.3
XAN				AP		17 41 30.5	
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.0						
BOD	Bodaibo	24.60	43	eP	P	17 41 41.7	-2.6
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.9						
CHTO	Chiang Mai	28.33	145	eP	P	17 42 20.3	+2.1
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.8						
CHTO	Chiang Mai	28.33	145	eP	P	17 42 20.2	+2.0
	comp=Z,2.9nm,1.2s,mb3.8						
CMAR	Chiang Mai Arr	28.65	145	P	P	17 42 19.9	-1.2
	comp=Z,0.8nm,0.8s,mb3.5,baz=325,slow=8.5,SNR=10						
CMAR	Chiang Mai Arr	28.65	145	P	P	17 42 19.9	-1.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR131	Keskin Array S	36.01	281	P	P	17 43 30.2	+4.9
AKASG	Malin Array Be	36.06	301	P	P	17 43 25.6	-0.1
	comp=Z,1.4nm,0.6s,mb4.0,baz=71,slow=7.8,SNR=5.0						
AKASG				pP	pP	17 43 30.5	+1.7
	comp=Z,1.0nm,0.5s,baz=70,slow=7.6,SNR=4.2						
HABR	Khabarovsk	36.60	63	e	PP	17 44 50.7	-2.7
HABR				eSS	SS	17 51 41.0	-11
HABR				eSSS		17 51 59.5	
HABR				e		17 53 37.8	
ARCES	ARCESS Array B	38.55	332	P	P	17 43 45.6	-1.0
	comp=Z,4.9nm,1.0s,mb4.2,baz=85,slow=10.0,SNR=7.0						
ARCES	ARCESS Array B	38.55	332	P	P	17 43 45.6	-1.0
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NB2	NORSAR Subarra	44.41	319	P	P	17 44 34.7	0.0
	comp=Z,1.7nm,0.6s,mb4.0,baz=79,slow=8.6						
NOA	NORSAR Array B	44.41	319	P	P	17 44 35.0	+0.3
	comp=Z,2.0nm,0.6s,mb4.0,baz=80,slow=8.0,SNR=6.6						
NOA				pP	pP	17 44 40.3	+2.5
	comp=Z,1.8nm,0.9s,baz=83,slow=7.2,SNR=4.7						
NOA	NORSAR Array B	44.41	319	P	P	17 44 35.0	+0.3
NOA				*PP	pP	17 44 40.3	+2.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	44.41	319	P	P	17 44 35.0	+0.3
NOA				pP	pP	17 44 40.3	+2.5
CLL	Collm	45.86	305	e(P)	P	17 44 49.0	+2.7
LPG	La Plagne	51.93	300	eP	P	17 45 34.2	+1.2
	comp=Z,17nm,0.9s,mb4.7						
LPL	La Plagne	51.93	300	eP	P	17 45 34.2	+1.2
	comp=Z,11nm,0.8s,mb4.5						
SBF	Sospel	52.23	298	eP	P	17 45 35.6	+0.3
	comp=Z,28nm,0.7s,mb5.0						
YKA	Yellowknife Ar	73.63	8	P	P	17 47 55.6	-1.7
	comp=Z,0.1nm,0.3s,mb3.2,baz=341,slow=5.6,SNR=4.3						
YKA				pP	pP	17 48 00.8	+0.2
	comp=Z,0.3nm,0.7s,baz=341,slow=5.3,SNR=3.5						
TORD	Torodi Ar. Bea	74.12	273	P	P	17 47 59.9	-1.1
	comp=Z,2.1nm,0.6s,mb4.3,baz=40,slow=5.4,SNR=16						
TORD				pP	pP	17 48 04.5	+0.3
	comp=Z,2.9nm,0.8s,baz=43,slow=5.3,SNR=12						
ASAR	Alice Springs	81.97	133	P	P	17 48 42.6	-1.6
	comp=Z,1.3nm,0.8s,mb3.9,baz=326,slow=5.2,SNR=22						
ASAR				pP	pP	17 48 48.2	+0.7
	comp=Z,0.5nm,0.8s,baz=325,slow=5.4,SNR=3.8						
ASAR	Alice Springs	81.97	133	P	P	17 48 42.7	-1.5
ASAR				*PP	pP	17 48 48.2	+0.7
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FFC	Flin Flon	82.21	2	eP	P	17 48 47.2	+2.0
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
FFC	Flin Flon	82.21	2	eP	P	17 48 47.2	+2.0
	comp=Z,2.3nm,0.8s,mb4.2						
DBIC	Dimbokro	83.22	273	P	P	17 48 48.1	-2.9
	comp=Z,2.0nm,0.7s,mb4.3,baz=52,slow=8.7,SNR=4.5						
DBIC	Dimbokro	83.22	273	P	P	17 48 48.2	-2.9
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						

*ISCJB **07** 17:54:07.3±0.7, 2696N±007×1404E±02, h436km±7km, mb3.5/8, Error ellipse: s-maj=24.5km s-min=9.1km az=165.5*

*IDC **07** 17:54:08.3±1.4, 2695N×14032E, h435km±12km, mb3.1/8, mb1 3.3/10, mb1mx3.1/21, mbtmp3.1/10, Error ellipse: s-maj=31.9km s-min=20.1km az=172.0*

*JMA **07** 17:54:08.6±0.1, 27.17N×14104E, h450km, M3.8*

*NEIC **07** 17:54:11.9±3.5, 27.12N×140.18E, h468km±27km, MG3.8(JMA), Error ellipse: s-maj=47.2km s-min=21.3km az=159.0*

ISC 07 17:54:08.3±0.7**, 2697N**±007×**1404E**±02**, h431**km±7km**, n23,** σ1§**22**/31**, mb3.5**/8**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.63	85	P	P	17 55 05.2	+0.1
	62nm,0.3s,baz=113,slow=23,SNR=132						
CBIJ				S	S	17 55 47.9	-3.1
	61nm,0.3s,baz=262,slow=22,SNR=10						
CBIJ	Chichi jima	1.63	85	P	P	17 55 05.0	-0.1
CBIJ				S	S	17 55 50.0	-1.0
JHHJ	Haha-jima-NKT	1.66	101	P	P	17 55 05.9	+0.7
JHHJ				S	S	17 55 50.4	-0.9
JHJ2	Mitsune	6.14	356	P	P	17 55 46.4	+3.1
JHJ2				S	S	17 56 59.3	-1.6
JHJ	Hachijo jima 2	6.15	355	P	P	17 55 43.9	+0.5
	18nm,0.3s,baz=91,slow=17,SNR=31						
JHJ				S	S	17 56 56.8	-4.3
	4.6nm,0.3s,baz=242,slow=22,SNR=2.0						
JKN2	Miekihoku	8.06	335	P	P	17 56 06.8	+2.9
JOD2	Odawara 2	8.34	353	P	P	17 56 09.2	+2.2
JHU	Hanno	8.90	354	P	P	17 56 13.3	+0.1
JHU				S	S	17 57 54.9	-1.0
JRY	Ryogami san	9.11	352	P	P	17 56 15.8	+0.4
JRY				eS	S	17 57 59.0	-1.0
JAG	Ashikaga	9.46	356	P	P	17 56 19.2	-0.1
JAG				S	S	17 58 03.0	-4.2
JHO	Hitachi	9.61	1	P	P	17 56 21.6	+0.6
MJAR	Matsushiro Arr	9.72	350	P	P	17 56 23.8	+1.7
	0.4nm,0.3s,baz=169,slow=11,SNR=4.6						
JFK	Kawauchi	10.38	2	P	P	17 56 31.4	+2.0
CMAR	Chiang Mai Arr	38.99	266	P	P	18 00 55.7	-0.3
	0.5nm,0.5s,mb3.1,baz=73,slow=5.3,SNR=7.2						
ZALV	Zalesovo Beam	48.52	319	P	P	18 02 09.6	-0.5
	0.9nm,0.6s,mb3.3,baz=121,slow=7.1,SNR=4.5						
ZALV	Zalesovo Beam	48.52	319	P	P	18 02 09.6	-0.5
MKAR	Makanchi Array	49.30	310	P	P	18 02 15.9	-0.2
	0.4nm,0.4s,mb3.1,baz=89,slow=10,SNR=9.1						
YKA	Yellowknife Ar	73.02	28	P	P	18 04 52.0	-0.5
	0.6nm,0.4s,mb3.5,baz=296,slow=6.0,SNR=7.0						
ARCES	ARCESS Array B	73.12	341	P	P	18 04 52.9	-0.1
	2.1nm,0.9s,mb3.7,baz=75,slow=9.2,SNR=8.6						
AKASG	Malin Array Be	81.75	323	P	P	18 05 38.6	-1.9
	0.7nm,0.4s,mb3.7,baz=54,slow=3.9,SNR=5.3						
NVAR	Mina Array Bea	81.87	51	P	P	18 05 42.7	+1.3
	0.5nm,0.5s,mb3.5,baz=305,slow=6.5,SNR=2.9						
NB2	NORSAR Subarra	83.12	338	P	P	18 05 45.8	-1.5
	comp=Z,1.1nm,0.4s,mb3.9,baz=56,slow=5.1						
NOA	NORSAR Array B	83.12	338	P	P	18 05 45.8	-1.4
	comp=Z,1.7nm,0.6s,mb3.9,baz=45,slow=4.7,SNR=7.2						

*BJI **07** 18:24:39.0, 470S×14449E, h99km, mB5.2, mb4.9*

*MOS **07** 18:24:39.7±0.9, 442S×144.13E, h84km, mb4.8/11, Error ellipse: s-maj=12.4km s-min=7.1km az=101.6*

*ISCJB **07** 18:24:41.2±0.2, 447S±003×144.12E±005, h97km, mb4.8/64, Error ellipse: s-maj=7.1km s-min=4.2km az=169.9*

*GCMT **07** 18:24:42.7±0.3, 458S×14398E, h119km±3km, MW5.0/59, Moment Tensor Solution. s28,c34; s59,c95; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr0.07±.16; Mθθ-1.37±.15; Mφφ1.30±.17; Mrθ2.53±.09; Mθφ-0.94±.15; Mφr-1.75±.11; Best double couple: Mo3.47200×10[16] NP1:φs211.00000°, δ28.00000°, λ0.00000°. NP2: φs121.00000°, δ90.00000°, λ118.00000°. Principal axes: T 3.6380, Plg39.0000°, Azm56.0000°; N -0.3360, Plg28.0000°, Azm301.0000°; P -3.3050, Plg39.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 18:24:42.7±0.2, 447S×144.13E, mb4.9/38 Error ellipse: s-maj=6.8km s-min=4.2km az=83.0*

*IDC **07** 18:24:43.4±0.5, 446S×144.11E, h100km±4km, mb4.5/25, mb1 4.5/27, mb1mx4.5/28, mbtmp4.5/27, MS3.4/10, Ms1 3.4/10, ms1mx3.2/25, Error ellipse: s-maj=11.8km s-min=8.9km az=89.0*

*DJA **07** 18:24:46, 463S×144.11E, h111km, Mw5.4/14*

ISC 07 18:24:43.0±0.2**, 449S**±003×**14415E**±005**, h99**km**, h99**km±1.7km**:pP-P, n160,** σ1§**00**/146**, mb4.8**/64**, 2C-15D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.73	149	d iP	Pn	18 26 04.9	-0.8
PMG	Port Moresby	5.73	149	ePn	Pn	18 26 04.8	-0.9
	277nm,0.8s						
COEN	Coen	9.46	186	ePn	Pn	18 26 57.4	+0.9
	244nm,1.4s						
KAKA	Kakadu	14.16	234	eP	x	18 27 37.3	
	87nm,0.4s						
KAKA				eS	x	18 30 06.2	
CTA	Charters Tower	15.64	173	eP	Pn	18 28 18.2	+0.2
	13nm,1.0s						
CTA				epP	pP	18 28 38.7	+0.2
CTA				e		18 30 03.5	
CTA	Charters Tower	15.64	173	P	Pn	18 28 18.7	+0.7
	0.6nm,0.3s,baz=341,slow=12,SNR=17						
CTA				LR	LR	18 33 59.8	
	comp=Z,158nm,20.3s,baz=352,slow=36						
CTA	Charters Tower	15.64	173	eP	Pn	18 28 18.2	+0.2
CTA				pmax	pmax		
	comp=Z,13nm,1.0s						
CTAO	Charters Tower	15.64	173	eP	Pn	18 28 17.7	-0.3
CTAO				pmax	pmax		
	comp=Z,36nm,1.1s						
CTAO	Charters Tower	15.64	173	ePn	Pn	18 28 17.6	-0.3
	comp=Z,36nm,1.1s						
HNR	Honiara	16.43	108	P	Pn	18 28 27.9	0.0
	comp=Z,7.7nm,0.3s,baz=256,slow=5.0,SNR=6.5						
HNR	Honiara	16.43	108	eP	Pn	18 28 25.8	-2.0
HNR				pmax	pmax		
	comp=Z,87nm,0.8s						
HNR	Honiara	16.43	108	ePn	Pn	18 28 25.8	-2.1
	comp=Z,87nm,0.8s						
WRAB	Tennant Creek	18.08	211	⇓eP	Pn	18 28 45.5	-2.3
WRAB				pmax	pmax		
	comp=Z,67nm,0.8s						
WRAB	Tennant Creek	18.08	211	⇓ePn	Pn	18 28 45.5	-2.4
	comp=Z,67nm,0.8s						
WB2	Warramunga Arr	18.09	211	⇓iP	Pn	18 28 45.9	-2.0
WB2				eS	S	18 31 58.5	-11
BATI	Baumata	21.09	253	P	P	18 29 19.7	0.0
	comp=Z,105nm,0.4s,mb5.5,baz=148,slow=1.1,SNR=81						
BATI				S	S	18 33 11.1	+2.1
	comp=Z,54nm,1.2s,baz=186,slow=22,SNR=6.1						
ASAR	Alice Springs	21.48	206	P	P	18 29 22.4	-1.3
	comp=Z,9.6nm,0.4s,mb4.5,baz=36,slow=6.9,SNR=79						
ASAR				S	S	18 33 13.5	-2.9
	comp=Z,3.9nm,0.8s,baz=15,slow=14,SNR=3.1						
EIDS	Eidsvold	21.81	163	⇓eP	P	18 29 27.7	+0.5
	comp=Z,135nm,1.1s,mb5.2						
FITZ	Fitzroy Crossi	22.60	232	eP	P	18 29 32.8	-2.9
	comp=Z,21nm,0.6s,mb4.6						
FITZ				e		18 29 35.9	
FITZ				eS	S	18 33 34.9	-1.2
KAPI	Kappang	24.32	268	P	P	18 29 50.5	-1.2
	comp=Z,14nm,0.6s,mb4.5,baz=118,slow=7.2,SNR=14						
KAPI	Kappang	24.32	268	eP	P	18 29 49.7	-2.0
	comp=Z,28nm,0.8s,mb4.6						
ARMA	Armidale	26.74	166	⇓iP	P	18 30 14.5	+1.1
STKA	Stephens Creek	27.35	185	⇓iP	P	18 30 18.8	-0.1
	comp=Z,8.3nm,0.9s,mb4.3						
STKA	Stephens Creek	27.35	185	P	P	18 30 19.3	+0.4
	comp=Z,8.0nm,0.6s,mb4.5,baz=351,slow=7.6,SNR=24						
STKA				LR	LR	18 41 47.7	
	comp=Z,283nm,18.9s,baz=124,slow=37						
MBWA	Marble Bar	28.93	233	eP	P	18 30 32.4	-0.7
	comp=Z,82nm,1.0s,mb5.3						
FORT	Forrest	30.23	208	eP	P	18 30 44.4	0.0
	comp=Z,112nm,0.6s,mb5.7						
CAN	Canberra	31.01	172	eP	P	18 30 52.3	+1.1
CAN				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.4						
CAN	Canberra	31.01	172	eP	P	18 30 52.3	+1.1
	comp=Z,46nm,0.6s,mb5.4						
CNB	Canberra Magne	31.05	172	⇑iP	P	18 30 52.8	+1.2
CBIJ	Chichi jima	31.45	357	P	P	18 30 54.2	-1.0
	comp=Z,41nm,0.7s,mb5.3,baz=268,slow=18,SNR=4.1						
TOO	Toolangi	32.95	178	⇑iP	P	18 31 09.9	+1.7
JOW	Kunigami	34.71	335	P	P	18 31 24.6	+0.9
	comp=Z,18nm,0.8s,mb4.9,baz=270,slow=15,SNR=3.5						

JOW LR LR 18 45 37.9
comp=Z,63nm,18.3s,baz=294,slow=36
KLBR Kellerberrin 36.62 219 ǁ iP P 18 31 39.2 -0.7
comp=Z,58nm,0.5s,mb5.8
NWAO Narrogin (SRO) 37.84 218 P **P 18 31 50.0 -0.3**
comp=Z,46nm,0.7s,mb5.4,baz=56,slow=7.1,SNR=29
NWAO Narrogin (SRO) 37.84 218 eP **P 18 31 50.1 -0.1**
NWAO pmax pmax
comp=Z,53nm,0.9s
NWAO Narrogin (SRO) 37.84 218 eP **P 18 31 50.1 -0.2**
comp=Z,53nm,0.9s,mb5.4
MUN Mundaring 37.86 220 ǁ iP P 18 31 50.1 -0.3
MOO Moorlands 37.89 176 ǁ iP P 18 31 51.7 +1.2
TAU Tasmania Unive 38.37 176 eP **P 18 31 55.9 +1.4**
TAU pmax pmax
comp=Z,49nm,0.8s,mb5.4
TAU Tasmania Unive 38.37 176 eP **P 18 31 55.9 +1.4**
comp=Z,49nm,0.8s,mb5.4
QIZ Qiongzhong 41.07 306 P **P 18 32 17.0 -0.2**
QIZ S **S 18 38 23.4 +0.6**
QIZ LR LR
comp=Z,43nm,25.9s
MJAR Matsushiro Arr 41.19 353 P **P 18 32 16.6 -1.3**
comp=Z,1.7nm,0.5s,mb4.1,baz=174,slow=7.0,SNR=8.1
MJAR LR LR 18 48 15.4
comp=Z,15nm,20.4s,baz=190,slow=34
MAJO Matsushiro 41.19 353 P **P 18 32 17.0 -0.9**
MAT Matsushiro 41.19 353 P **P 18 32 17.7 -0.2**
NJ2 Nanjing 43.58 328 eP **P 18 32 37.4 0.0**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
KSRS Korea Array 44.38 341 P **P 18 32 43.1 -0.6**
comp=Z,7.9nm,0.9s,mb4.4,baz=157,slow=8.8,SNR=7.9
URZ Urewera 45.06 143 P **P 18 32 50.1 +1.0**
comp=Z,13nm,0.6s,mb4.9,baz=250,slow=3.8,SNR=15
RPZ Rata Peaks 45.72 153 P **P 18 32 55.4 +1.1**
comp=Z,90nm,0.9s,mb5.5,baz=348,slow=2.0,SNR=27
GYA Guiyang 47.56 312 P **P 18 33 12.3 +3.4**
GYA AP pP 18 33 35.5 +3.1
GYA XP sP 18 33 46.8 +3.3
GYA PCP PcP 18 34 36.8 -0.6
GYA SCP ScP 18 38 21.3 -1.5
GYA PCS PcS 18 38 31.6 -1.5
GYA S **S 18 39 55.8 -1.1**
GYA XS sS 18 40 46.0 +8.7
GYA SCS ScS 18 42 52.3 -0.9
GYA SS SS 18 43 22.3 -4.0
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
GYA AMB AMB
comp=Z,70nm,5.4s
GYA LR LR
comp=N,300nm,13.2s
GYA LR LR
comp=E,290nm,13.5s
GYA LR LR
comp=Z,400nm,12.8s
ASAJ Asahikawa 48.40 359 P **P 18 33 15.1 0.0**
comp=Z,4.1nm,0.6s,mb4.5,baz=103,slow=29,SNR=4.6
KMI Kunming 49.83 308 P **P 18 33 26.5 +0.2**
KMI AP pP 18 33 52.2 +2.2
KMI S **S 18 40 28.5 -0.3**
CM31 Chiang Mai Arr 50.03 298 eP **P 18 33 28.2 +0.3**
comp=Z,3.8nm,0.6s,mb4.5
CM31 epP pP 18 33 52.6 +1.0
CMAR Chiang Mai Arr 50.03 298 P **P 18 33 28.5 +0.6**
comp=Z,2.6nm,0.6s,mb4.3,baz=119,slow=6.2,SNR=21
CMAR pP pP 18 33 52.0 +0.4
comp=Z,7.2nm,0.7s,baz=118,slow=6.2,SNR=9.0
CMAR LR LR 18 55 19.1
comp=Z,18nm,18.1s,baz=125,slow=37
CMAR Chiang Mai Arr 50.03 298 P **P 18 33 28.5 +0.6**
CMAR *PP pP 18 33 52.1 +0.5
CHTO Chiang Mai 50.17 299 eP **P 18 33 28.7 -0.3**
CHTO e*PP pP 18 33 52.8 +0.1
CHTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CHTO Chiang Mai 50.17 299 eP **P 18 33 28.7 -0.3**
comp=Z,3.7nm,0.9s,mb4.3
CHTO epP pP 18 33 52.8 +0.1
MDJ Mudanjiang 50.59 347 P **P 18 33 32.6 +0.9**
MDJ AMB AMB
comp=Z,12nm,2.5s,mb4.5
MDJ AMB AMB
comp=Z,74nm,3.2s
CN2 Changchun 50.94 343 eP **P 18 33 35.2 +0.9**
CN2 eXP sP 18 34 09.0 -0.1
CN2 eS **S 18 40 45.1 +1.6**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,100nm,3.0s
CD2 Chengdu 52.20 315 P **P 18 33 45.8 +1.9**
CD2 AP pP 18 34 09.5 +1.7
CD2 XP sP 18 34 20.5 +1.7
CD2 PCP PcP 18 34 56.1 +1.8
CD2 PP PP 18 35 46.6 +3.2
CD2 S **S 18 41 01.9 +0.6**
CD2 XS sS 18 41 42.3 +0.1
CD2 SS SS 18 44 38.2 -2.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,540nm,6.3s
CD2 LR LR
comp=N,240nm,4.5s
CD2 LR LR
comp=Z,420nm,5.4s
HHC Hu-ho-hao-te 54.08 330 eP **P 18 34 00.7 +3.2**
HHC AP pP 18 34 23.9 +2.4
HHC XP sP 18 34 35.0 +2.4
HHC PP PP 18 36 06.6 +6.4
HHC S **S 18 41 30.8 +4.3**
HHC XS sS 18 42 11.3 +3.7
HHC SCS ScS 18 43 34.3 -3.1
HHC SS SS 18 45 14.4 +4.8
HHC AMB AMB
comp=Z,12nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,122nm,3.9s
HHC LR LR
comp=N,122nm,14.3s
HHC LR LR
comp=E,122nm,15.5s
HHC LR LR
comp=Z,74nm,15.5s
KLR Kul'dur 54.57 350 eP **P 18 33 57.9 -3.0**
KLR e pP 18 34 22.8 -2.2
BTO Baotou 54.69 328 eP **P 18 34 03.6 +1.6**
LZH Lanzhou 55.23 320 eP **P 18 34 06.0 +0.1**
LZH AP pP 18 34 30.0 0.0
LZH XP sP 18 34 42.5 +1.5
LZH PP PP 18 36 13.2 +2.7
LZH S **S 18 41 37.4 -4.6**
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,145nm,5.6s
LZH LR LR
comp=E,407nm,14.8s
LZH LR LR
comp=Z,715nm,15.4s
HIA Hailar 57.59 341 eP **P 18 34 22.4 0.0**
HIA e*PP pP 18 34 46.5 -0.2
HIA pmax pmax
comp=Z,5.0nm,0.8s
HIA Hailar 57.59 341 eP **P 18 34 22.4 -0.1**
comp=Z,4.5nm,0.8s,mb4.5
HIA epP pP 18 34 46.5 -0.2
PETK Petropavlovsk- 58.51 10 P **P 18 34 29.6 +0.9**
comp=Z,8.9nm,0.5s,mb5.0,baz=163,slow=6.6,SNR=37
PETK pP pP 18 34 54.5 +1.3
comp=Z,12nm,0.6s,baz=169,slow=7.0,SNR=9.2
LSA Lhasa 61.07 307 eP **P 18 34 47.0 +0.2**
LSA Lhasa 61.07 307 P **P 18 34 48.1 +1.3**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
LSA Lhasa 61.07 307 P **P 18 34 48.1 +1.3**
comp=Z,5.7nm,0.8s,mb4.7
SONM Songino Array 61.72 332 P **P 18 34 51.5 +0.6**
comp=Z,1.1nm,0.8s,mb4.0,baz=160,slow=6.7,SNR=7.1
SONM pP pP 18 35 16.9 +1.5
comp=Z,3.7nm,0.7s,baz=158,slow=7.0,SNR=11
SONM PKPPKP 19 04 10.7
comp=Z,1.2nm,0.9s,baz=331,slow=3.1,SNR=7.2
SONM Songino Array 61.72 332 P **P 18 34 51.5 +0.6**
SONM *PP pP 18 35 16.9 +1.5
TAPN Taplejung 62.95 304 eP **P 18 34 59.7 +0.2**
comp=Z,14nm,0.9s,mb4.9
ODAN Odare 63.04 303 eP **P 18 35 00.3 +0.2**
comp=Z,21nm,0.9s,mb5.1
RAMN Ramite 63.73 303 eP **P 18 35 05.2 +0.6**
JIRN Jiri 64.32 303 eP **P 18 35 09.1 +0.6**
GUN Gumba 64.67 304 eP **P 18 35 10.9 +0.2**
ZAK Zakamensk 64.97 332 eP **P 18 35 12.3 +0.1**
ZAK e pP 18 35 38.0 +1.0
ZAK pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
KKN Kakani 65.12 303 eP **P 18 35 13.7 0.0**
comp=Z,55nm,0.9s,mb5.4
KKN Kakani 65.12 303 eP **P 18 35 13.7 0.0**
KKN pmax pmax
comp=Z,55nm,0.9s,mb5.4
DMN Daman 65.21 303 eP **P 18 35 14.1 -0.1**
GKN Gorkha 65.73 303 eP **P 18 35 17.6 0.0**
comp=Z,8.7nm,0.5s,mb4.8
CASY Casey 65.99 194 eP **P 18 35 18.2 -0.3**
PPT Papeete 66.05 107 LR LR 18 59 45.5
comp=Z,3.6nm,18.6s,baz=249,slow=32
KOLN Koldanda 66.52 303 eP **P 18 35 23.0 +0.3**
DANN Dangsing 66.58 303 eP **P 18 35 23.0 0.0**
comp=Z,12nm,0.6s,mb4.9
BOD Bodaibo 66.69 343 eP **P 18 35 22.6 -0.5**
BOD e pP 18 35 48.2 +0.3
BOD pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
HYB Hyderabad 68.27 291 *i* P **P 18 35 35.0 +1.1**
HYB ePcP PcP 18 35 59.0 0.0
HYB Hyderabad 68.27 291 eP **P 18 35 35.0 +1.1**
HYB e pP 18 35 59.0 +0.2
WMQ Urumqi 69.81 320 eP **P 18 35 45.2 +2.3**
WMQ PCP PcP 18 36 09.3 +4.4
WMQ AMB AMB
comp=Z,21nm,1.0s,mb4.9
POO Poona 72.88 291 eP pP 18 36 26.0 -1.1
VNDA Vanda 73.59 176 P **P 18 36 05.8 +0.7**
comp=Z,111nm,0.8s,mb4.7,baz=327,slow=6.6,SNR=28
VNDA LR LR 19 08 26.4
comp=Z,46nm,20.6s,baz=345,slow=36
BILL Bilibino 74.01 8 P **P 18 36 08.1 +0.6**
BILL e*PP pP 18 36 33.2 +0.4
BILL Bilibino 74.01 8 P **P 18 36 08.1 +0.6**
BILL epP pP 18 36 33.2 +0.4
SBA Scott Base 74.28 175 P **P 18 36 08.5 -0.5**
SBA pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
SBA Scott Base 74.28 175 P **P 18 36 08.5 -0.5**
comp=Z,8.7nm,0.6s,mb4.7
MK31 Makanchi Array 74.53 321 eP **P 18 36 09.9 -1.1**
MK31 e*PP pP 18 36 37.1 +0.8
MKAR Makanchi Array 74.53 321 P **P 18 36 11.1 +0.1**
comp=Z,1.5nm,0.5s,mb4.0,baz=95,slow=8.0,SNR=25
MKAR pP pP 18 36 37.2 +0.9
comp=Z,6.0nm,0.7s,baz=102,slow=7.6,SNR=10
MKAR Makanchi Array 74.53 321 P **P 18 36 11.1 +0.1**
MKAR pP pP 18 36 37.2 +0.9
ZAA0 Zalesovo Array 76.23 328 eP **P 18 36 19.2 -1.4**
ZAA0 epP pP 18 36 45.4 -0.6
ZALV Zalesovo Beam 76.23 328 P **P 18 36 19.7 -0.8**
comp=Z,4.1nm,0.7s,mb4.3,baz=111,slow=6.2,SNR=14
ZALV pP pP 18 36 45.0 -0.9
comp=Z,10nm,0.7s,baz=111,slow=6.3,SNR=12
ZALV LR LR 19 12 01.9
comp=Z,18nm,19.4s,baz=67,slow=37
ZALV Zalesovo Beam 76.23 328 P **P 18 36 19.7 -0.8**
ZALV *PP pP 18 36 45.0 -1.0
TIXI Tiksi 76.65 355 P **P 18 36 21.9 -0.6**
TIXI e*PP pP 18 36 44.5 -3.5
NVS Novosibirsk 77.47 329 eP **P 18 36 25.5 -2.0**
NVS pmax pmax
comp=Z,20nm,1.5s,mb4.6
NVS pmax pmax
comp=N,18nm,1.8s
NVS pmax pmax
comp=E,10.0nm,1.5s
TKM2 Tokmak 2 77.58 316 eP **P 18 36 23.9 -4.5**
TKM2 e*PP pP 18 36 53.4 -0.4
TKM2 pmax pmax
comp=Z,11nm,1.0s,mb4.5
TKM2 Tokmak 2 77.58 316 eP **P 18 36 23.9 -4.4**
comp=Z,11nm,1.0s,mb4.5
TKM2 epP pP 18 36 53.4 -0.5
AAK Ala-Archa 78.26 315 P **P 18 36 35.3 +3.1**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
AAK Ala-Archa 78.26 315 P **P 18 36 35.3 +3.2**
comp=Z,5.4nm,1.0s,mb4.2
KURK Kurchatov 78.31 324 P **P 18 36 32.4 +0.2**
comp=Z,0.7nm,0.3s,mb3.9,baz=111,slow=4.2,SNR=4.7
KURK pP pP 18 36 57.9 +0.2
comp=Z,3.4nm,0.8s,baz=118,slow=4.7,SNR=4.9
KURK Kurchatov 78.31 324 eP **P 18 36 31.5 -0.7**
KURK e*PP pP 18 36 55.7 -2.1
KURK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KURK Kurchatov 78.31 324 eP **P 18 36 31.5 -0.7**
comp=Z,9.6nm,0.9s,mb4.5
KURK epP pP 18 36 55.7 -2.0
KDAK Kodiak Island 79.94 29 P **P 18 36 41.0 0.0**
comp=Z,14nm,0.9s,mb4.8,baz=160,slow=7.3,SNR=6.8
SVW2 Sparrevohn 80.08 25 eP **P 18 36 41.9 +0.3**
SVW2 epP pP 18 37 02.6 -4.6
PPLA Purkeypile 82.33 24 eP **P 18 36 52.7 -0.8**
MAW Mawson 82.55 202 ǁ iP P 18 36 54.8 +0.2
comp=Z,21nm,0.8s,mb5.0
MAW Mawson 82.55 202 P **P 18 36 55.1 +0.5**
comp=Z,22nm,0.7s,mb5.1,baz=88,slow=6.2,SNR=30
MAW LR LR 19 11 47.6
comp=Z,55nm,20.6s,baz=335,slow=34
MAW Mawson 82.55 202 ǁ iP P 18 36 54.8 +0.2
MAW pmax pmax
comp=Z,21nm,0.8s
RC01 Rabbit Creek A 82.63 27 eP **P 18 36 54.5 -0.6**
comp=Z,13nm,0.6s,mb5.0
RC01 epP pP 18 37 16.8 -4.1
PMR Palmer 83.10 26 eP **P 18 36 56.9 -0.6**
PMR e*PP pP 18 37 17.3 -6.0
PMR pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
PMR Palmer 83.10 26 eP **P 18 36 56.9 -0.6**
comp=Z,5.4nm,0.5s,mb4.6
PMR epP pP 18 37 17.3 -6.0
KTH Kantishna Hill 83.12 24 eP **P 18 36 56.2 -1.4**
comp=Z,16nm,1.0s,mb4.8
KTH epP pP 18 37 23.8 +0.4
BPAW Bear Paw Mtn. 83.33 24 eP **P 18 36 57.9 -0.7**
comp=Z,7.4nm,1.0s,mb4.5
BPAW epP pP 18 37 24.3 -0.1
TRF Thorofare Moun 83.34 24 eP **P 18 36 57.4 -1.3**
comp=Z,11nm,0.6s,mb4.8
BVAR Borovoye Array 83.88 324 P **P 18 37 01.8 +0.1**
comp=Z,5.2nm,0.6s,mb4.6,baz=110,slow=6.8,SNR=53
BVAR LR LR 19 13 03.2
comp=Z,52nm,18.4s,baz=41,slow=35
BRVK Borovoye 83.95 324 eP **P 18 37 01.6 -0.5**
BRVK e*PP pP 18 37 23.4 -4.5
BRVK pmax pmax
comp=Z,13nm,0.8s,mb4.8
BRVK Borovoye 83.95 324 eP **P 18 37 01.6 -0.5**
comp=Z,13nm,0.8s,mb4.8
BRVK epP pP 18 37 23.4 -4.5
MCK McKinley 84.01 24 eP **P 18 37 01.3 -0.8**
MCK e*PP pP 18 37 26.3 -1.7
MCK pmax pmax
comp=Z,17nm,0.6s,mb5.0
MCK McKinley 84.01 24 eP **P 18 37 01.3 -0.9**
comp=Z,17nm,0.6s,mb5.0
MCK epP pP 18 37 26.3 -1.6
COLA College 84.88 23 ǁ eP P 18 37 05.4 -1.1
COLA College 84.88 23 eP **P 18 37 05.1 -1.4**
comp=Z,12nm,0.8s,mb4.9
COLD Coldfoot 84.92 21 eP **P 18 37 07.2 +0.6**
comp=Z,12nm,1.0s,mb4.8
QSPA South Pole Qui 85.47 180 P **P 18 37 09.5 +0.2**
comp=Z,52nm,0.7s,mb5.6,baz=329,slow=1.1,SNR=273
QSPA South Pole Qui 85.47 180 ǁ iP P 18 37 09.3 0.0
comp=Z,50nm,0.7s,mb5.6
QSPA epP pP 18 37 34.1 -1.1
QSPA ePP PP 18 40 23.7 -4.9
MENT Mentasta 85.94 26 eP **P 18 37 11.7 -0.1**
MENT epP pP 18 37 35.5 -2.2
DAWY Dawson 88.12 25 eP **P 18 37 22.7 +0.4**
DAWY epP pP 18 37 47.0 -1.3
SYO Syowa Base 91.02 200 ǁ eP P 18 37 34.8 -1.1
ABPO Ambohimpanom 95.08 251 P **P 18 37 56.9 +1.3**
NVAR Mina Array Bea 98.68 52 P **P 18 38 12.7 +1.2**
comp=Z,1.2nm,0.7s,mb4.5,baz=273,slow=5.6,SNR=4.9
YKA Yellowknife Ar 99.15 27 P **P 18 38 12.6 -0.4**
comp=Z,0.8nm,0.8s,mb4.3,baz=276,slow=4.9,SNR=10.0
YKA PKKPbc PKKPbc 18 54 37.4 -3.2
comp=Z,0.6nm,0.7s,baz=99,slow=2.8,SNR=8.4
VNA2 Neumayer--Watz 102.40 189 *e* PKiKP 18 42 46.9 -1.5
VNA3 Neumayer Olymp 102.47 188 *e* PKiKP 18 42 47.1 -1.4
VNA1 Neumayer--Stat 102.78 189 *e* PKiKP 18 42 48.9 -0.2
ARCES ARCESS Array B 103.93 341 PKiKP PKiKP 18 42 50.1 -1.0
comp=Z,2.3nm,0.9s,baz=56,slow=0.4,SNR=5.9
PDAR Pinedale Array 104.98 47 Pdiff Pdif 18 38 40.0 +0.9
comp=Z,0.7nm,0.6s,baz=226,slow=2.0,SNR=7.2
TXAR Lajitas Array 111.51 60 PP PP 18 43 55.1 +6.3
comp=Z,1.0nm,1.1s,baz=259,slow=4.7,SNR=3.6
TXAR PKKPbc PKKPbc 18 54 11.5 +10
comp=Z,1.0nm,0.8s,baz=113,slow=6.4,SNR=11
CLL Collm 118.18 328 ePKPdf PKPdf 18 43 18.0 -0.6
CLL ePP PP 18 44 36.0 +1.2
GERES GERESS Array B 119.05 325 PKP PKPdf 18 43 20.0 -0.4
comp=Z,0.7nm,0.5s,baz=349,slow=1.4,SNR=4.0
MEM Membach 122.21 330 PKP PKPdf 18 43 26.6 +0.2
SCHQ Schefferville 123.91 21 PKP PKPdf 18 43 28.8 -0.7
comp=Z,2.9nm,0.8s,baz=240,slow=17,SNR=3.6
SCHQ Schefferville 123.91 21 PKP PKPdf 18 43 28.8 -0.7
PLCA Paso Flores 124.92 148 PKP PKPdf 18 43 33.1 +1.2
comp=Z,1.9nm,0.5s,baz=200,slow=2.1,SNR=7.6
NCB Newcomb 128.18 35 ePKPdf PKPdf 18 43 31.4 -6.6
TORD Torodi Ar. Bea 141.96 286 PKhKP 18 43 58.3
comp=Z,1.2nm,0.6s,baz=68,slow=3.9,SNR=13
TORD PKP PKPdf 18 44 04.8 +0.3
comp=Z,1.0nm,0.4s,baz=95,slow=3.0,SNR=11
TORD SKPbc SKPbc 18 47 33.2 0.0
comp=Z,1.6nm,0.7s,baz=80,slow=2.5,SNR=5.0
CPUP Villa Florida 142.97 147 PKhKP 18 44 02.4
comp=Z,1.4nm,0.5s,baz=212,slow=2.1,SNR=7.9
CPUP Villa Florida 142.97 147 PKP PKPdf 18 44 02.4 -3.6
SDV Santo Domingo 145.19 81 ePKPdf PKPdf 18 44 10.0 -0.2
SDV epPKPdf pPKPdf 18 44 36.1 -1.3
KIC Kosan Boka 148.97 275 ePKP1 PKPbc 18 44 20.7 0.0
comp=Z,40nm,0.6s
DBIC Dimbokro 149.08 275 PKPbc PKPbc 18 44 21.1 +0.2
comp=Z,13nm,0.6s,baz=101,slow=2.6,SNR=42
DBIC pPKPbc pPKPbc 18 44 47.8 -0.1
comp=Z,11nm,0.5s,baz=90,slow=2.9,SNR=7.2
DBIC Dimbokro 149.08 275 ePKPbc PKPbc 18 44 20.9 0.0
DBIC epPKPdf pPKPbc 18 44 46.8 -1.1
TIC Toumodi 149.24 275 ePKP1 PKPbc 18 44 21.4 +0.1
comp=Z,59nm,0.5s
LIC Lamto 149.26 275 ePKP1 PKPbc 18 44 21.4 0.0
comp=Z,68nm,0.7s

ISCJB ***07*** *18:47:30.8±0.9, 5146N±005×1607E±004, h0km, Error ellipse: s-maj=7.5km s-min=3.3km az=15.3*
PRU ***07*** *18:47:33.3, 5141N×1612E, h0km*
WAR ***07*** *18:47:33.3, 5147N×1610E, ML2.5, Mining Induced*
ISC 07 18:47:32.7±0.9, 5144N±005×1608E±004, h0km, n14, σ0877/28, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**167**		*e*Pg	**Pg**	**18 47 45.0**	**+0.5**
KSP					*e*Sg	**Sg**	**18 47 53.6**	**+1.1**
UPC	**Upice**	**0.94**	**182**		*e*PG	**Pg**	**18 47 51.1**	**+0.5**
DPC	**Dobruska-Polom**	**1.10**	**172**		*e*PG	**Pg**	**18 47 53.7**	**-0.1**
DPC					*e*SG	**Sg**	**18 48 08.3**	**+0.2**
comp=Z,18nm,0.3s								
PVCC	**Panska Ves**	**1.32**	**227**		*e*PG	**Pg**	**18 47 58.0**	**0.0**
PVCC					*e*SG	**Sg**	**18 48 15.2**	**+0.1**
comp=Z,103nm,0.2s								
BRG	**Berggiesshubel**	**1.46**	**248**		PG	**Pg**	**18 48 00.7**	**+0.1**
BRG					SG	**Sg**	**18 48 20.3**	**+0.8**
comp=Z,53nm,0.7s								
PRU	**Pruhonice**	**1.75**	**214**		*e*PN	**Pn**	**18 48 04.3**	**0.0**
PRU					*e*PG	**Pg**	**18 48 05.6**	**-0.6**
PRU					*e*SG	**Sg**	**18 48 28.7**	**-0.2**
comp=Z,22nm,0.4s								
CLL	**Collm**	**1.93**	**267**	*i*	Pg	**Pg**	**18 48 08.5**	**-1.1**
CLL				*ex*		x	18 48 11.0	
CLL				*e*	Sg	**Sg**	**18 48 35.0**	**+0.4**
comp=Z,17nm,0.5s								
OKC	**Ostrava-Krasne**	**2.08**	**140**		*e*PN	**Pn**	**18 48 07.9**	**-0.8**
OKC					*e*PG	**Pg**	**18 48 11.9**	**-0.6**
OKC					*e*SG	**Sg**	**18 48 39.6**	**+0.2**
comp=Z,13nm,0.4s								
TREC	**Trest**	**2.18**	**190**		*e*PG	**Pg**	**18 48 13.5**	**-1.0**
NKC	**Novy Kostel**	**2.60**	**244**		*e*PN	**Pn**	**18 48 16.4**	**+0.5**
NKC					*e*PG	**Pg**	**18 48 22.1**	**-0.3**
NKC					*e*SG	**Sg**	**18 48 56.5**	**+0.4**
comp=Z,8.9nm,0.1s								
KHC	**Kasperske Hory**	**2.81**	**216**		*e*PN	**Pn**	**18 48 19.3**	**+0.5**
KHC					*e*PG	**Pg**	**18 48 24.8**	**-1.8**
KHC					*e*SG	**Sg**	**18 49 01.5**	**-1.5**
MOX	**Moxa**	**2.93**	**256**		*e*PG	**Pg**	**18 48 29.1**	**+0.4**
MOX					*e*SG	**Sg**	**18 49 08.1**	**+1.5**
VYHS	**Vyhne**	**3.45**	**148**		*e*PN	**Pn**	**18 48 27.0**	**-0.6**
STHS	**Stebnicka Huta**	**3.88**	**120**		*e*SG	**Sg**	**18 49 38.4**	**+1.2**

WAR ***07*** *18:47:55.4, 5031N×1894E, ML2.3, Mining Induced*
ISC 07 18:47:56.4±2.0, 5028N±010×189E±01, h0km, n6, σ1919/11, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.59**	**96**		*e*Pg	**Pg**	**18 48 06.6**	**-1.2**
OJC					*e*Sg	**Sg**	**18 48 14.8**	**-0.7**
NIE	**Niedzica**	**1.27**	**132**		*e*Pg	**Pg**	**18 48 19.2**	**-1.5**
NIE					*e*Sg	**Sg**	**18 48 37.1**	**0.0**
KOLL	**Kolacno**	**1.73**	**190**		*e*PN	**Pn**	**18 48 28.2**	**+0.5**
KOLL					*e*SN	**Sn**	**18 48 50.5**	**+0.1**
STHS	**Stebnicka Huta**	**1.76**	**119**		*e*PN	**Pn**	**18 48 28.1**	**0.0**
STHS					*e*SN	**Sn**	**18 48 51.8**	**+0.7**
VYHS	**Vyhne**	**1.79**	**181**		*e*SN	**Sn**	**18 48 49.0**	**-2.9**
CRVS	**Cervenica-Dubn**	**2.18**	**128**		*e*PN	**Pn**	**18 48 35.6**	**+1.8**
CRVS					*e*SN	**Sn**	**18 49 03.2**	**+1.8**

NEIC ***07*** *18:57:10.1, 1978N×10549W, h16km, MD4.1(MEX), After MEX.*
MEX 07 18:57:10.1±0.9, 1978N×10549W, h16km±54km, MD4.1, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.50**	**124**	*i*	P	Pg	18 57 18.7	-1.4
CJM				*i*	S	Sg	18 57 24.9	-2.0
ANIG	**Ahuacatlan**	**1.56**	**35**	*i*	P	Pn	18 57 34.5	-2.7
ANIG				*i*	S	Sn	18 57 51.9	-5.1
SFJM	**Santa Fe**	**2.40**	**73**	*e*	P	Pn	18 57 46.5	-2.3
SFJM				*i*	S	Sn	18 58 15.2	-2.7
MMIG	**Aquila**	**2.51**	**126**	*e*	P	Pn	18 57 45.8	-4.5
MMIG				*i*	S	Sn	18 58 16.9	-3.7
MAIG	**Mazatlaan**	**3.50**	**346**	*e*	P	Pn	18 58 01.6	-2.3
ZAIG	**Zacatecas**	**4.03**	**42**	*e*	P	Pn	18 58 08.7	-2.5
ZAIG				*i*	S	Sn	18 58 54.8	-3.3
ZIIG	**Zihuatanejo**	**4.38**	**119**	*e*	P	Pn	18 58 13.9	-2.2
ZIIG				*i*	S	Sn	18 59 03.8	-3.0
PPM	**Popocatepetl**	**6.51**	**95**	*e*	P	Pn	18 58 44.6	-0.7
PPM				*i*	S	Sn	18 59 59.2	-0.2
HPIG		**7.12**	**359**	*e*	P	Pn	18 58 52.8	-0.9
HPIG				*i*	S	Sn	19 00 15.7	+1.4
UTMO	**Huajuapan**	**7.53**	**104**	*e*	P	Pn	18 58 55.5	-3.8
UTMO				*i*	S	Sn	19 00 30.4	+6.0
LNIG	**Linares**	**7.55**	**46**	*e*	P	Pn	18 58 58.5	-1.0
LNIG				*i*	S	Sn	19 00 22.1	-2.8
CGIG		**10.78**	**348**	*e*	P	Pn	19 00 01.9	+18
CGIG				*i*	S	Sn	19 01 47.2	+3.1

NIED ***07*** *19:08:00, 3550N×13560E, h360km, Mw3.8 Best double couple: M0 6.56000×10^14 NP1:φs233.00000°, δ50.00000°, λ-102.00000°. NP2:φs71.00000°, δ41.00000°, λ-76.00000°.*
MOS ***07*** *19:08:51.2±1.1, 3544N×13574E, h366km, mb4.1/4, Error ellipse: s-maj=21.0km s-min=16.2km az=104.3*

*ISCJB **07** 19:08:51.7±0.5, 3545N±007×13569E±007, h363km±4km, mb3.3/7, Error ellipse: s-maj=11.3km s-min=8.9km az=149.5*
*JMA **07** 19:08:52.8±0.1, 3548N×13564E, h356km±1km, M3.7*
*IDC **07** 19:08:52.2±1.1, 3540N×13579E, h357km±13km, mb3.0/6, mb1 3.1/10, mb1mx3.0/26, mbtmp3.1/10, Error ellipse: s-maj=23.5km s-min=14.5km az=51.0*
*NEIC **07** 19:08:52.3±1.0, 3543N×13566E, h356km±9km, mb4.2/2, Error ellipse: s-maj=20.3km s-min=14.7km az=217.0*
ISC 07 19:08:52.6±0.4**, 3543N**±007×**13568E**±007**, h356**km±4km**, n40, σ0^{s}64**/51**, mb3.3**/7**, 7D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFM	Mihama	0.26	68	⇓P	Pn	19 09 37.6	+0.5
JFM				eS	S	19 10 12.6	-0.3
JWT	Wachi	0.27	238	⇓P	Pn	19 09 37.5	+0.2
JWT				eS	S	19 10 12.1	-0.9
JGM	Miyama	0.89	72	⇓P	Pn	19 09 38.9	+0.3
JGM				eS	S	19 10 15.4	0.0
JKG	Kaga	1.00	32	⇓P	Pn	19 09 39.1	+0.2
JWY	Kouya	1.21	184	⇓P	Pn	19 09 40.5	+0.5
JWY				eS	S	19 10 17.7	-0.3
JIE	Ise	1.33	141	⇓P	Pn	19 09 41.2	+0.6
JIE				eS	S	19 10 18.9	-0.1
JWZ	Kozaga	1.90	179	P	Pn	19 09 44.1	+0.2
JWZ				eS	S	19 10 24.5	-0.5
JAI	Aioi	1.92	212	P	Pn	19 09 44.3	+0.2
JAI				eS	S	19 10 25.3	0.0
SAI	Saigo	2.06	293	P	Pn	19 09 45.0	+0.2
JHS	Saijyo	2.15	259	⇓P	Pn	19 09 45.7	+0.2
MAJO	Matsushiro	2.33	61	eP	Pn	19 09 46.6	-0.2
MAT	Matsushiro	2.33	61	P	Pn	19 09 47.1	+0.3
MJAR	Matsushiro Arr	2.33	61	P	Pn	19 09 46.8	0.0
	1.8nm,0.3s,baz=250,slow=7.9,SNR=19						
MJAR	Matsushiro Arr	2.33	61	P	Pn	19 09 46.8	0.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JYN	Shimob	2.34	88	P	Pn	19 09 47.2	+0.3
JSZ	Suzu	2.43	33	P	Pn	19 09 48.0	+0.5
JRY	Ryogami san	2.68	76	P	Pn	19 09 50.2	+0.5
JRY				eS	S	19 10 35.9	+0.3
JHJ	Hachijo jima 2	4.10	123	P	Pn	19 10 02.1	-1.0
	comp=Z,3.7nm,0.3s,baz=55,slow=16,SNR=2.8						
JHJ				S	S	19 11 05.2	+5.3
	comp=Z,12nm,0.3s,baz=116,slow=24,SNR=11						
KSRS	Korea Array	6.57	290	P	Pn	19 10 30.4	+0.2
	comp=Z,0.5nm,0.3s,baz=108,slow=12,SNR=16						
KSRS	Korea Array	6.57	290	P	Pn	19 10 30.4	+0.3
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CBIJ	Chichi jima	9.99	144	P	Pn	19 11 06.1	-4.5
	comp=Z,6.1nm,0.3s,baz=156,slow=22,SNR=15						
CBIJ				S	S	19 12 52.0	-12
	comp=Z,11nm,0.3s,baz=293,slow=22,SNR=11						
ASAJ	Asahikawa	10.17	29	P	Pn	19 11 10.7	-1.8
	comp=Z,2.5nm,0.3s,baz=188,slow=5.0,SNR=23						
ASAJ				S	S	19 12 59.1	-8.1
	comp=Z,0.6nm,0.3s,baz=8.7,slow=26,SNR=4.0						
ASAJ	Asahikawa	10.17	29	P	Pn	19 11 10.7	-1.7
ASAJ				S	S	19 12 59.2	-8.0
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
MDJ	Mudanjiang	10.29	335	P	Pn	19 11 13.5	-0.4
YSS	Yuzh-Sakhalins	12.68	23	eP	P	19 11 42.0	+0.8
YSS	Yuzh-Sakhalins	12.68	23	eP	P	19 11 40.9	-0.3
HIA	Hailar	18.11	325	eP	P	19 12 37.5	-2.7
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HIA	Hailar	18.11	325	eP	P	19 12 37.5	-2.7
	comp=Z,6.3nm,0.8s						
SONM	Songino Array	24.99	309	P	P	19 13 46.6	+1.4
	comp=Z,0.7nm,0.4s,mb3.2,baz=118,slow=9.6,SNR=12						
SONM	Songino Array	24.99	309	P	P	19 13 46.6	+1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	39.63	314	P	P	19 15 50.8	0.0
	comp=Z,0.7nm,0.4s,mb3.2,baz=103,slow=9.4,SNR=5.5						
ZALV				PcP	PcP	19 17 48.6	-1.0
	comp=Z,0.8nm,0.5s,baz=108,slow=3.9,SNR=4.9						
ZALV	Zalesovo Beam	39.63	314	P	P	19 15 50.8	0.0
ZALV						19 17 48.6	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.4						
MKAR	Makanchi Array	41.07	303	P	P	19 16 02.9	+0.3
	comp=Z,0.3nm,0.5s,mb2.8,baz=85,slow=11,SNR=5.5						
KURK	Kurchatov	43.30	309	P	P	19 16 20.0	-0.3
	comp=Z,0.7nm,0.5s,mb3.1,baz=81,slow=7.2,SNR=4.0						
KURK	Kurchatov	43.30	309	P	P	19 16 20.0	-0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.2						
PPLA	Purkeypile	51.11	34	eP	P	19 17 20.3	+0.6
	comp=Z,27nm,1.2s,mb4.4						
ASAR	Alice Springs	58.80	182	P	P	19 18 14.0	-0.6
	comp=Z,0.5nm,0.6s,mb3.1,baz=12,slow=14,SNR=16						
ASAR	Alice Springs	58.80	182	P	P	19 18 14.0	-0.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	82.03	42	P	P	19 20 33.8	+0.1
	comp=Z,0.2nm,0.6s,mb3.1,baz=248,slow=4.8,SNR=4.0						
TORD	Torodi Ar. Bea	114.97	309	PKP	PKPdf	19 26 51.3	-0.9
	comp=Z,0.6nm,1.1s,baz=66,slow=1.7,SNR=4.3						

*CSEM **07** 19:23:01.4±0.1, 37.16N×3109E, h110km±1km, MD3.5, Error ellipse: s-maj=2.1km s-min=1.7km az=164.0*
*IDC **07** 19:23:02.7±1.3, 37.10N×3104E, h101km±18km, mb3.3/2, mb1 3.1/6, mb1mx2.9/24, mbtmp3.1/6, Error ellipse: s-maj=21.0km s-min=11.3km az=138.0*
*ISCJB **07** 19:23:02.8±0.3, 3708N±003×31.11E±003, h115km±5km, mb3.6/2, Error ellipse: s-maj=4.9km s-min=4.3km az=169.0*
*ISK **07** 19:23:03.4, 37.10N×31.10E, h110km, MD3.5*
*DDA **07** 19:23:04.9, 37.18N×3108E, h57km±5km, Md3.5*
*NEIC **07** 19:23:04.0, 3708N×31.15E, h40km, MD3.4(ISK), After ISK.*
*HLW **07** 19:23:08.0, 3671N×3103E, h33km, Mb3.7*
ISC 07 19:23:03.8±0.3**, 3710N**±003×**3109E**±003**, h111**km±5km**, n58, σ0^{s}93**/82**, mb3.6**/2**, 3C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	Antalya	0.40	240	ePG	Pn	19 23 20.0	-0.1
ANTB				eSG	Sn	19 23 32.6	+0.3
BCK	Bucak	0.54	312	ePG	Pn	19 23 20.8	-0.2
BCK				eSG	Sn	19 23 33.5	-0.3
ISP	Isparta	0.88	328	ePG	Pn	19 23 23.8	0.0
ISP	Isparta	0.88	328	ePn	Pn	19 23 23.6	-0.2
ISP				eSn	Sn	19 23 33.3	-5.6
ELL	Elmali	1.01	250	ePG	Pn	19 23 25.4	+0.3
GOLH	Golhisar	1.23	277	i P	Pn	19 23 28.8	+1.4
GOLH				i S	Sn	19 23 47.4	+2.0
KONT	Konya--Tatoy	1.32	50	ePN	Pn	19 23 29.1	+0.6
KONT				eSN	Sn	19 23 46.7	-0.5
AKAS	Kas	1.47	235	i P	Pn	19 23 31.2	+0.9
AKAS				i S	Sn	19 23 50.2	-0.3
LADK	Ladik-KONYA	1.49	42	ePN	Pn	19 23 30.9	+0.3
SHUT	Suhut-Afyon	1.51	344	ePN	Pn	19 23 31.4	+0.6
BOLV	Bolvadin	1.62	356	i P	Pn	19 23 32.0	0.0
BOLV				i S	Sn	19 23 50.7	-2.9
BOLV	Bolvadin	1.62	356	i P	Pn	19 23 32.0	-0.1
BOLV				i S	Sn	19 23 50.7	-2.9
KDHN	Kadinhani	1.64	29	i P	Pn	19 23 32.1	-0.2
KDHN				i S	Sn	19 23 52.0	-2.0
KHL	Karahalli	1.74	315	ePN	Pn	19 23 33.5	-0.1
DENT	Denizli	1.76	292	ePN	Pn	19 23 34.8	+1.0
KHAL	Karahalli	1.79	316	i P	Pn	19 23 34.4	+0.2
KHAL				i S	Sn	19 23 56.2	-1.2
KIZT	Kizilcal	1.88	19	ePN	Pn	19 23 35.2	-0.1
DALT	Dalyan (Mudla)	1.99	261	ePN	Pn	19 23 37.3	+0.6
TURN	Turunc	2.00	264	i P	Pn	19 23 41.1	+4.2
TURN				i S	Sn	19 24 06.7	+4.6
YER	Yerkesik	2.24	272	ePN	Pn	19 23 40.8	+0.9
IKL	Isikli	2.26	112	ePN	Pn	19 23 41.0	+0.9
KULA	Kula-Manisa	2.39	307	ePN	Pn	19 23 42.0	+0.3
ESKT	Eskisehir	2.42	356	ePN	Pn	19 23 43.3	+1.1
MANT	Manisa	2.44	305	i P	Pn	19 23 42.7	+0.2
MANT				i S	Sn	19 24 09.2	-2.9
LEF	Lefka	2.46	143	ePN	Pn	19 23 42.2	-0.5
LFK	Lefkose	2.68	132	ePN	Pn	19 23 45.5	-0.2
MERS	Mersin	2.76	94	ePN	Pn	19 23 47.6	+1.0
CSS	Prodhromos	2.80	139	ePN	Pn	19 23 47.1	0.0
CSS	Prodhromos	2.80	139	ePn	Pn	19 23 47.2	0.0
CSS				eSn	Sn	19 24 16.8	-3.8
CSS	Prodhromos	2.80	139	ePn	Pn	19 23 45.9	-1.3
CSS				eSn	Sn	19 24 16.8	-3.8
DAT	Datca	2.84	264	ePN	Pn	19 23 47.9	+0.2
BDRM	Kayabasi	2.92	270	i P	Pn	19 23 49.4	+0.8
BDRM				i S	Sn	19 24 20.5	-2.8
BODT	Bodrum	3.02	270	ePN	Pn	19 23 50.2	+0.1
KAMT	Kaman	3.07	42	ePN	Pn	19 23 51.0	+0.4
KARA	Karaisali	3.17	86	ePN	Pn	19 23 53.2	+1.2
BR131	Keskin Array S	3.30	37	ePn	Pn	19 23 54.0	+0.3
BR131				eSn	Sn	19 24 28.6	-3.7
BR131	Keskin Array S	3.30	37	ePn	Pn	19 23 54.0	+0.2
BR131				eSn	Sn	19 24 28.6	-3.7
BRTR	Keskin Array B	3.30	37	P	Pn	19 23 54.1	+0.4
	1.4nm,0.3s,baz=216,slow=16,SNR=28						
BRTR				S	Sn	19 24 31.6	-0.7
	0.5nm,0.3s,baz=208,slow=24,SNR=6.2						
KRTS	Karatas	3.48	97	ePN	Pn	19 23 57.0	+0.9
KOZT	Kozan	3.80	83	ePN	Pn	19 24 01.0	+0.6
HTY	Hatay	4.18	102	ePN	Pn	19 24 05.8	+0.2
COBT	Iskenderun	4.19	96	i P	Pn	19 24 05.6	0.0
COBT				i S	Sn	19 24 49.5	-4.1
IDI	Anoyia	5.33	252	P	Pn	19 24 20.2	-0.9
	0.9nm,0.3s,baz=44,slow=17,SNR=12						
IDI				S	Sn	19 25 19.0	-2.3
	0.7nm,0.3s,baz=320,slow=12,SNR=3.2						
IDI	Anoyia	5.33	252	P	Pn	19 24 20.1	-1.0
IDI				S	Sn	19 25 19.0	-2.2
MMAI	Mount Meron Ar	5.39	138	P	Pn	19 24 21.9	-0.1
	1.7nm,0.3s,baz=314,slow=11,SNR=12						
MMAI				S	Sn	19 25 19.9	-2.9
	4.8nm,0.3s,baz=318,slow=30,SNR=7.7						
RSH		6.50	160	P	Pn	19 24 36.3	-0.7
AMAG	Maghara	6.68	164	⇓P	Pn	19 24 39.2	-0.1
HMAT	Matruh	6.84	210	⇑P	Pn	19 24 41.6	0.0
HMAT				S	Sn	19 25 49.7	-8.3
KOT	Kottamia	7.18	175	⇓P	Pn	19 24 46.4	+0.2
SUZ		7.38	168	⇑P	Pn	19 24 49.4	+0.5
GLL	Jalalah	7.52	176	⇓P	Pn	19 24 50.8	0.0
EIL	Elat	8.08	155	P	Pn	19 24 56.8	-1.6
	0.3nm,0.3s,baz=105,slow=12,SNR=2.9						
EIL				S	Sn	19 26 22.5	-5.6
	0.3nm,0.3s,baz=114,slow=21,SNR=3.8						
HKAT	Jabal Katrina	8.89	163	P	Pn	19 25 09.7	+0.2
SWA2		9.14	213	⇑P	Pn	19 25 12.9	0.0
AKASG	Malin Array Be	13.66	355	P	Pn	19 26 18.6	+5.8
	0.8nm,0.3s,baz=178,slow=9.9,SNR=6.2						
ARCES	ARCESS Array B	32.64	356	P	P	19 29 24.1	-0.6
	1.8nm,1.0s,mb3.9,baz=176,slow=8.5,SNR=5.5						
MKAR	Makanchi Array	38.68	59	P	P	19 30 16.9	+0.3
	0.3nm,0.6s,mb3.3,baz=268,slow=9.3,SNR=5.0						
MKAR	Makanchi Array	38.68	59	P	P	19 30 16.9	+0.3

IDC 07 19:44:29.2±4.4**, 1757S**×**16797E, h0**km**, mb4.1**/6**, mb1 4.2**/6**, mb1mx4.0**/17**, mbtmp4.1**/6**, MS3.6**/7**, Ms1 3.6**/7**, ms1mx3.3**/23**, Error ellipse: s-maj=108.1km s-min=40.2km az=124.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	11.23	315	LR	LR	19 51 06.1	
	comp=Z,145nm,18.7s,baz=126,slow=35						
CTA	Charters Tower	20.71	260	eP	P	19 49 16.8	+5.6
	8.0nm,1.0s						
CTA	Charters Tower	20.71	260	P	P	19 49 12.4	+1.3
	9.7nm,0.9s,baz=79,slow=17,SNR=2.7						
CTA				LR	LR	19 56 02.4	
	comp=Z,231nm,19.6s,baz=64,slow=34						
RPZ	Rata Peaks	26.20	175	LR	LR	19 58 37.5	
	comp=Z,104nm,19.7s,baz=255,slow=32						
STKA	Stephens Creek	27.78	234	eP	P	19 50 18.5	-1.4
	4.0nm,1.1s						
STKA	Stephens Creek	27.78	234	P	P	19 50 20.4	+0.6
	3.6nm,0.9s,baz=51,slow=7.8,SNR=4.9						
STKA				LR	LR	20 01 15.6	
	comp=Z,162nm,19.4s,baz=27,slow=36						
ASAR	Alice Springs	32.40	253	P	P	19 50 59.6	-1.3
	1.5nm,0.5s,baz=80,slow=8.5,SNR=41						
FITZ	Fitzroy Crossi	40.24	263	eP	P	19 52 07.0	-1.0
	13nm,0.9s						
BATI	Baumata	43.55	274	P	P	19 52 34.5	-0.6
	8.8nm,0.8s,baz=108,slow=3.8,SNR=4.5						
BATI				LR	LR	20 11 13.1	
	comp=Z,66nm,18.2s,baz=247,slow=37						
NWAO	Narrogin (SRO)	47.93	241	LR	LR	20 12 20.5	
	comp=Z,88nm,19.5s,baz=298,slow=35						
PETK	Petropavlovsk-	70.94	353	LR	LR	20 23 09.6	
	comp=Z,39nm,19.8s,baz=317,slow=33						
CMAR	Chiang Mai Arr	76.72	294	P	P	19 56 24.0	+1.2
	0.2nm,0.6s,baz=120,slow=5.5,SNR=2.4						
SONM	Songino Array	85.17	324	P	P	19 57 06.7	-0.5
	0.3nm,0.5s,baz=140,slow=7.5,SNR=4.6						

IDC 07 20:00:23.7±3.2**, 644S**×**11865E, h537**km±30km**, mb3.0**/4**, mb1 3.1**/5**, mb1mx2.7**/17**, mbtmp3.0**/5**, Error ellipse: s-maj=165.2km s-min=13.3km az=58.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	1.79	38	P	P	20 01 31.4	0.0
	2.3nm,0.3s,baz=202,slow=4.7,SNR=16						
BATI	Baumata	6.21	127	P	P	20 02 04.4	+0.7
	3.1nm,0.3s,baz=330,slow=3.4,SNR=11						
BATI				S	S	20 03 25.1	-0.3
	6.2nm,0.3s,baz=285,slow=16,SNR=9.6						
ASAR	Alice Springs	22.55	141	P	P	20 04 43.6	+0.2
	0.6nm,0.3s,baz=315,slow=8.6,SNR=23						
STKA	Stephens Creek	33.16	143	P	P	20 06 15.6	-0.2
	1.4nm,0.4s,baz=314,slow=11,SNR=10						
MKAR	Makanchi Array	62.04	333	P	P	20 09 52.0	+0.3
	0.5nm,0.5s,baz=156,slow=7.4,SNR=20						
ZALV	Zalesovo Beam	66.54	339	P	P	20 10 19.8	-0.4
	0.4nm,0.3s,baz=161,slow=9.2,SNR=2.9						

*CSEM **07** 20:18:31.2±0.1, 3698N×2922E, h5km, ML3.6, Error ellipse: s-maj=1.7km s-min=1.1km az=4.0*
*IDC **07** 20:18:32.0±1.3, 3685N×2924E, h0km, mb3.3/2, mb1 3.5/7, mb1mx3.4/25, mbtmp3.4/7, ML3.5/5, Error ellipse: s-maj=22.3km s-min=18.5km az=153.0*
*NEIC **07** 20:18:31.0, 3698N×2921E, h9km, MD3.4(ISK), After ISK.*
*ISK **07** 20:18:31.6, 3698N×2922E, h7km, MD3.4*
*DDA **07** 20:18:32.9, 3707N×2924E, h28km±1km, Md3.5, Ml3.6*
*ISCJB **07** 20:18:32.0±0.5, 3698N±002×2921E±002, h6km±4km, mb3.2/2, Error ellipse: s-maj=3.5km s-min=2.9km az=171.6*
ISC 07 20:18:32.7±0.5**, 3699N**±002×**2921E**±002**, h6**km±4km**, n61, σ0^{s}96**/84**, mb3.2**/2**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.37	49	i P	Pg	20 18 39.4	-0.5
GOLH				i S	Sg	20 18 46.1	+1.3
TURN	Turunc	0.50	256	i P	Pg	20 18 46.6	+4.3
TURN				i S	Sg	20 18 57.9	+9.1
DALT	Dalyan (Mudla)	0.51	244	ePG	Pg	20 18 41.6	-0.9
DALT				eSG	Sg	20 18 49.2	+0.1
ELL	Elmali	0.61	113	ePG	Pg	20 18 43.4	-1.0
ELL				eSG	Sg	20 18 52.8	+0.5
YER	Yerkesik	0.75	281	ePG	Pg	20 18 46.9	-0.2
YER				eSG	Sg	20 18 58.2	+1.2
DENT	Denizli	0.77	350	ePG	Pg	20 18 47.0	-0.6
AKAS	Kas	0.82	157	i P	Pg	20 18 47.1	-1.3
AKAS				i S	Sg	20 19 01.1	+2.1
KSL	Kastellorizon	0.89	160	eP	Pg	20 18 50.0	+0.2
ANTB	Antalya	1.16	94	ePN	Pn	20 18 54.1	-1.4
ARG	Arkhangelos	1.17	229	eP	Pg	20 18 53.2	-1.8
MLSB	Milas	1.18	285	ePN	Pn	20 18 54.9	-0.9
BCK	Bucak	1.20	67	ePN	Pn	20 18 54.9	-1.1
DAT	Datca	1.33	259	ePN	Pn	20 18 57.6	-0.2
ISP	Isparta	1.34	50	ePN	Pn	20 18 57.7	-0.2
ISP	Isparta	1.34	50	ePn	Pn	20 18 57.6	-0.3
ISP	Isparta	1.34	50	ePn	Pn	20 18 57.6	-0.3
KHL	Karahalli	1.35	11	ePN	Pn	20 18 58.5	+0.4
KHAL	Karahalli	1.39	9	i P	Pn	20 18 58.3	-0.4
KHAL				i S	Sb	20 19 15.7	-1.5
BDRM	Kayabasi	1.41	273	i P	Pn	20 18 59.0	+0.1
BDRM				i S	Sb	20 19 17.9	+0.2
BDRM	Kayabasi	1.41	273	i P	Pn	20 18 59.0	+0.1
BDRM				i S	Sb	20 19 18.0	+0.3
BODT	Bodrum	1.52	273	ePN	Pn	20 18 59.8	-0.6
KULA	Kula-Manisa	1.58	344	ePN	Pn	20 19 00.9	-0.3
MANT	Manisa	1.58	341	i P	Pn	20 19 01.1	-0.2
MANT				i S	Sn	20 19 20.1	-1.9
MANT	Manisa	1.58	341	i P	Pn	20 19 01.0	-0.3
MANT				i S	Sn	20 19 20.1	-2.0
GCAM	G?zelcaml?	1.73	295	i P	Pn	20 19 03.4	+0.1
GCAM				i S	Sn	20 19 27.0	+1.4
SHUT	Suhut-Afyon	1.89	34	ePN	Pn	20 19 04.5	-1.0
SMG	Samos	2.02	291	eP	Pn	20 19 06.6	-0.7
KDAG	Bornova	2.09	313	i P	Pn	20 19 08.2	0.0
KDAG				i S	Sn	20 19 34.2	-0.3
GDZ	Gediz	2.10	6	i P	Pn	20 19 09.0	+0.5
GDZ				i S	Sn	20 19 34.2	-0.7
ALT	Altintas	2.18	19	ePN	Pn	20 19 09.1	-0.4
AKHS	Akhisar	2.18	330	i P	Pn	20 19 08.3	-1.2
AKHS				i S	Sn	20 19 36.5	-0.3
AKS	Akhisar	2.18	330	ePN	Pn	20 19 09.1	-0.4
KARP	Karpathos	2.19	230	eP	Pn	20 19 10.6	+0.9
BOLV	Bolvadin	2.21	38	i P	Pn	20 19 10.1	+0.3
BOLV				i S	Sn	20 19 39.7	+2.2
BLCB	Balcova	2.21	310	ePN	Pn	20 19 09.6	-0.3
DURS	Dursunbey	2.67	348	i P	Pn	20 19 16.1	-0.1
DURS				i S	Sg	20 20 01.9	+3.6
KONT	Konya--Tatoy	2.68	68	ePN	Pn	20 19 16.4	0.0
KDHN	Kadinhani	2.76	56	i P	Pn	20 19 18.0	+0.5
KDHN				i S	Sn	20 19 55.2	+4.0
LADK	Ladik-KONYA	2.78	63	ePN	Pn	20 19 17.8	0.0
KIZT	Kizilcal	2.83	47	ePN	Pn	20 19 18.7	+0.2
ESKT	Eskisehir	2.83	27	ePN	Pn	20 19 18.9	+0.4
APE	Apeiranthos	2.94	273	eP	Pn	20 19 21.0	+1.0
NPS	Neapolis	3.38	240	eP	Pn	20 19 27.0	+1.0
YLV	Yalova	3.57	2	ePN	Pn	20 19 29.1	+0.4
IKL	Isikli	3.68	100	ePN	Pn	20 19 30.7	+0.6
IDI	Anoyia	3.89	245	Pn	Pn	20 19 33.9	+0.9
	2.9nm,0.3s,baz=59,slow=20,SNR=29						
IDI				Sn	Sn	20 20 19.6	+0.7
	6.5nm,0.3s,baz=22,slow=17,SNR=12						
LFK	Lefkose	3.90	115	ePN	Pn	20 19 33.9	+0.9
CSS	Prodhromos	3.91	120	ePn	Pn	20 19 33.3	0.0
CSS	Prodhromos	3.91	120	ePn	Pn	20 19 33.3	+0.1
LOD	Lodumlu	4.02	43	ePN	Pn	20 19 35.3	+0.6
MERS	Mersin	4.26	90	ePN	Pn	20 19 38.5	+0.5
BR131	Keskin Array S	4.42	51	ePn	Pn	20 19 41.3	+1.0
BR131	Keskin Array S	4.42	51	ePn	Pn	20 19 41.3	+0.9
BRTR	Keskin Array B	4.42	51	Pn	Pn	20 19 41.2	+0.9
	0.4nm,0.3s,baz=227,slow=14,SNR=12						
BRTR				Sn	Sn	20 20 36.1	+3.9
	0.6nm,0.3s,baz=229,slow=26,SNR=12						
MMAI	Mount Meron Ar	6.45	126	Pn	Pn	20 20 07.5	-0.7
	3.2nm,0.3s,baz=315,slow=12,SNR=18						
MMAI				Sn	Sn	20 21 18.6	-3.5
	0.9nm,0.3s,baz=276,slow=19,SNR=2.9						
EIL	Elat	8.74	145	Pn	Pn	20 20 37.5	-2.1
	0.8nm,0.3s,baz=328,slow=9.5,SNR=9.5						
EIL				Sn	Sn	20 22 12.9	-5.5
	0.2nm,0.3s,baz=252,slow=20,SNR=2.4						
EIL	Elat	8.74	145	Pn	Pn	20 20 37.5	-2.1
EIL				Sn	Sn	20 22 12.9	-5.6
MLR	Muntele Rosu	8.84	345	Pn	Pn	20 20 43.5	+2.6
	0.1nm,0.3s,baz=147,slow=17,SNR=3.1						
TIP	Timpagrande	10.05	286	Pn	Pn	20 20 58.3	+0.7
TORD	Torodi Ar. Bea	34.19	233	P	P	20 25 18.0	-1.1
	0.6nm,0.6s,mb3.7,baz=33,slow=8.6,SNR=6.9						
MKAR	Makanchi Array	40.03	59	P	P	20 26 09.8	+1.5
	0.1nm,0.6s,mb2.7,baz=263,slow=8.3,SNR=2.1						

GUC 07 20:50:17.6±0.9**, 2427S**×**6752W, h208**km±27km**, ML3.6, 1C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.09	322	⇓iP	Pn	20 50 59.6	+1.9
LVC				i S	Sn	20 51 31.3	+2.4
LVC				AML	AML	20 51 34.0	
	comp=E,101nm,0.4s						
CEN1	Los Morros	2.61	289	⇓iP	Pn	20 51 06.9	+3.7
CEN1				i S	Sn	20 51 43.3	+4.5
CEN1				AML	AML	20 51 46.2	
	comp=E,99nm,0.5s						
CPN1	Cerro Paranal	2.65	262	eP	Pn	20 51 06.4	+2.7
CPN1				i S	Sn	20 51 42.4	+2.8
CPN1				AML	AML	20 51 44.2	
	comp=E,131nm,0.5s						
ANCH	Antofagasta	2.71	282	⇑iP	Pn	20 51 07.5	+3.2
ANCH				i S	Sn	20 51 44.5	+3.7
PB01	Plate Boundary	3.69	330	eP	Pn	20 51 17.7	+1.7
PB01				i S	Sn	20 52 02.2	+0.4
PB01				AML	AML	20 52 06.4	
	comp=E,63nm,0.3s						

*NEIC **07** 20:51:24.2, 1925N×6662W, h25km, MD3.3(RSPR), After RSPR.*
RSPR 07 20:51:24.2, 1925N×**6662W, h25**km±19km**, MD3.3**/16**, MD3.3**/16**, 10C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	0.91	188	⇓eP	Pb	20 51 38.9	-2.4
AOPR				eS	Sb	20 51 50.4	-2.6
LRS	Lares	0.98	193	⇑eP	Pn	20 51 39.5	-2.9
MPR	Mayaguez	1.15	206	ePn	Pn	20 51 42.6	-2.1
MPR				eSb	Sb	20 51 55.7	-4.2
LSP	Las Mesas	1.16	203	⇑eP	Pn	20 51 42.5	-2.4
LSP				eS	Sn	20 51 57.0	-2.9
CELP	Cerrillos	1.17	178	⇑eP	Pn	20 51 42.7	-2.3
CELP				eS	Sn	20 51 58.1	-2.1
OBIP	Obispado Ponce	1.20	180	⇑eP	Pn	20 51 43.3	-2.2
OBIP				eS	Sn	20 51 58.3	-2.7
CBYP	Canovanas	1.21	143	⇓eP	Pn	20 51 43.2	-2.4
CBYP				eS	Sn	20 51 57.8	-3.4
SJG	San Juan	1.22	159	⇑eP	Pn	20 51 43.7	-1.9
SJG				eS	Sn	20 51 58.8	-2.5
SJG	San Juan	1.22	159	⇑eP	Pn	20 51 43.6	-2.1
SJG				eS	Sn	20 51 58.5	-2.8
GBPR	Guanica, Bosqu	1.29	191	⇑eP	Pn	20 51 44.8	-1.9
HUMP	Col San Antoni	1.32	146	⇑eP	Pn	20 51 44.8	-2.2
HUMP				eS	Sn	20 52 01.3	-2.6
CRPR	Cabo Rojo, PR	1.32	201	⇓eP	Pn	20 51 45.3	-1.8
ICM	Isla Caja Muer	1.35	176	⇑eP	Pn	20 51 45.7	-1.8
ICM				eS	Sn	20 52 02.0	-2.7
CPD	Cerro la Pandu	1.38	151	⇑eP	Pn	20 51 45.8	-2.1
CPD				eS	Sn	20 52 02.2	-3.1
MTP	Monte Pirata	1.53	138	⇓eP	Pn	20 51 47.6	-2.4
MTP				eS	Sn	20 52 06.0	-3.0
STVI	Saint Thomas	1.81	119	⇓eP	Pn	20 51 51.9	-2.0
STVI				eS	Sn	20 52 13.7	-2.3
TBVI	Tortola	2.07	113	⇓eP	Pn	20 51 55.5	-1.9
TBVI				eS	Sn	20 52 19.9	-2.5
SDDR	Presa de Saban	4.43	267	ePn	Pn	20 52 29.1	-0.8

*DDA **07** 20:54:41.0, 3945N×2597E, h7km±7km, Md3.0*
*ISCJB **07** 20:54:41.4±1.1, 3945N±003×2591E±007, h4km±6km, Error ellipse: s-maj=9.6km s-min=5.0km az=164.9*
*ISK **07** 20:54:41.3, 3949N×2593E, h2km, MD2.9*
*CSEM **07** 20:54:41.2±0.2, 3949N×2595E, h2km, MD2.9, Error ellipse: s-maj=5.0km s-min=2.4km az=72.0*
ISC 07 20:54:41.6±1.1**, 3944N**±003×**2591E**±007**, h3**km±6km**, n15, σ0^{s}77**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZN	Ezine	0.50	40	ePG	Pg	20 54 50.8	-0.4
EZN				eSG	Sg	20 54 58.2	+0.5
AYVA	Ayvalik	0.62	102	i P	Pg	20 54 53.5	0.0
AYVA				i S	Sg	20 55 02.4	+1.0
GADA	Gvkgeada	0.75	359	ePG	Pg	20 54 55.6	-0.4
GADA				eSG	Sg	20 55 06.2	+0.5
LPK	Lapseki	1.14	35	ePN	Pn	20 55 03.1	-1.3
LPK				eSN	Sn	20 55 18.8	-1.6
URLA	Izmir	1.20	153	i P	Pg	20 55 04.0	-0.7
URLA				i S	Sg	20 55 19.6	-0.6
ENEZ	Enez	1.31	8	ePN	Pn	20 55 06.1	-0.6
ENEZ				eSN	Sn	20 55 24.4	-0.3
BALY	Balya	1.35	77	i P	Pn	20 55 06.3	-1.0
BALY				i S	Sg	20 55 24.2	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**1.37**	**140**	*e*PN	**Pn**	**20 55 08.7**	**+1.1**
BALB	**Balikesir**	**1.54**	**82**	*e*PN	**Pn**	**20 55 10.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.58**	**38**	*e*PN	**Pn**	**20 55 10.6**	**+0.1**
RKY				*e*SN	**Sn**	**20 55 31.6**	**+0.2**
EDC	**Edincik**	**1.75**	**58**	*e*PN	**Pn**	**20 55 13.8**	**+0.9**
BNT	**Bandirma**	**1.80**	**59**	*e*PN	**Pn**	**20 55 14.2**	**+0.8**
EDRB	**Edirne**	**2.49**	**14**	*e*PN	**Pn**	**20 55 23.9**	**+1.0**
CTKS	**Kestanelik-??a**	**2.67**	**47**	*e*PN	**Pn**	**20 55 26.2**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.72**	**41**	*e*PN	**Pn**	**20 55 26.7**	**+0.5**

*ISCJB **07** 20:59:47.8±2.5, 72S±02×1250E±02, h309km±27km, mb4.0/7, Error ellipse: s-maj=40.1km s-min=8.7km az=143.9*
*IDC **07** 20:59:54.5±4.6, 689S×12598E, h379km±52km, mb3.2/3, mb1 3.0/4, mb1mx2.8/15, mbtmp3.0/4, Error ellipse: s-maj=157.5km s-min=13.1km az=65.0*
*NEIC **07** 20:59:56.8±3.0, 760S×12480E, h403km±38km, mb4.3/7, Error ellipse: s-maj=31.1km s-min=14.5km az=223.0*
ISC 07 20:59:54.2±2.4**, 74S**±02×**1249E**±02**, h367**km±27km**, n20,** σ**0s88**/21**, mb4.0**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.64**	**176**	*e*P	**Pn**	**21 02 17.0**	**-2.8**
	9.4nm,0.3s						
MBWA	**Marble Bar**	**14.56**	**200**	*e*P	**P**	**21 03 03.6**	**+0.3**
	6.4nm,0.7s						
WRAB	**Tennant Creek**	**15.43**	**145**	*e*P	**P**	**21 03 13.7**	**+0.9**
	3.5nm,0.8s						
WB2	**Warramunga Arr**	**15.44**	**145**	*e*P	**P**	**21 03 14.5**	**+1.6**
WB2				*e*S	**S**	**21 05 56.2**	**-1.4**
ASAR	**Alice Springs**	**18.31**	**153**	P	**P**	**21 03 43.4**	**-0.2**
	0.3nm,0.3s,baz=331,slow=12,SNR=13						
ASAR				S	**S**	**21 06 54.8**	**+1.2**
	baz=345,slow=23,SNR=5.2						
STKA	**Stephens Creek**	**28.87**	**150**	P	**P**	**21 05 19.3**	**-1.2**
	2.0nm,1.0s,mb3.3,baz=338,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**28.87**	**150**	P	**P**	**21 05 19.3**	**-1.2**
ODAN	**Odare**	**49.85**	**315**	*e*P	**P**	**21 08 12.1**	**+0.4**
TAPN	**Taplejung**	**49.93**	**315**	*e*P	**P**	**21 08 12.6**	**+0.3**
RAMN	**Ramite**	**50.46**	**314**	*e*P	**P**	**21 08 16.9**	**+0.6**
	11nm,0.6s,mb4.3						
JIRN	**Jiri**	**51.18**	**315**	*e*P	**P**	**21 08 21.8**	**+0.2**
GUN	**Gumba**	**51.55**	**315**	*e*P	**P**	**21 08 24.4**	**+0.1**
GKN	**Gorkha**	**52.49**	**314**	*e*P	**P**	**21 08 30.9**	**-0.2**
	7.1nm,0.3s,mb4.4						
KOLN	**Koldanda**	**53.10**	**313**	*e*P	**P**	**21 08 35.6**	**0.0**
	2.6nm,0.3s,mb4.1						
DANN	**Dangsing**	**53.32**	**314**	*e*P	**P**	**21 08 36.5**	**-0.6**
	9.8nm,0.7s,mb4.2						
MK31	**Makanchi Array**	**65.92**	**329**	*e*P	**P**	**21 10 01.8**	**0.0**
MKAR	**Makanchi Array**	**65.92**	**329**	P	**P**	**21 10 01.9**	**+0.1**
	1.2nm,0.6s,mb3.8,baz=125,slow=7.3,SNR=31						
MKAR	**Makanchi Array**	**65.92**	**329**	P	**P**	**21 10 01.9**	**+0.1**
ZALV	**Zalesovo Beam**	**69.83**	**336**	P	**P**	**21 10 24.8**	**-1.0**
	0.4nm,0.4s,mb3.5,baz=129,slow=5.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**123.96**	**281**	PKP	PKPdf	21 18 09.5	-0.7
	0.3nm,0.8s,baz=108,slow=1.8,SNR=3.5						

*ISCJB **07** 21:19:57.0±1.7, 363N±01×696E±02, h100km, Error ellipse: s-maj=31.2km s-min=7.7km az=154.4*
*NNC **07** 21:20:05.2±9.6, 3668N×6881E, h97km±146km, mb3.2, mpv3.5, Error ellipse: s-maj=76.5km s-min=51.6km az=22.0*
ISC 07 21:19:57.7±1.7**, 362N**±01×**695E**±02**, h100**km**, n12,** σ**1s35**/14**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.93**	**6**	⇑P	**Pn**	**21 21 38.7**	**+2.2**
	1.9nm,0.5s,baz=187,slow=12						
KK31				⇓S	**Sn**	**21 22 52.9**	**-0.9**
	3.3nm,0.4s,baz=193,slow=24						
MK31	**Makanchi Array**	**14.24**	**38**	P	**Pn**	**21 23 22.3**	**+7.7**
	1.0nm,0.6s,baz=219,slow=9.0,SNR=9.2						
DANN	**Dangsing**	**14.36**	**119**	*e*P	**Pn**	**21 23 15.8**	**-0.4**
KOLN	**Koldanda**	**14.60**	**121**	*e*P	**Pn**	**21 23 14.7**	**-4.6**
	3.9nm,0.4s						
AB09	**Akbulak array**	**14.81**	**335**	⇑P	**Pn**	**21 23 21.4**	**-0.5**
	0.7nm,0.9s						
AB09				⇑S	**Sn**	**21 25 55.9**	**-9.3**
	0.4nm,0.4s						
GKN	**Gorkha**	**15.19**	**118**	*e*P	**Pn**	**21 23 25.8**	**-1.0**
	7.6nm,0.4s						
KKN	**Kakani**	**15.77**	**118**	*e*P	**Pn**	**21 23 33.1**	**-1.0**
	5.8nm,0.4s						
GUN	**Gumba**	**16.13**	**116**	*e*P	**Pn**	**21 23 40.7**	**+2.1**
	4.1nm,0.3s						
JIRN	**Jiri**	**16.50**	**116**	*e*P	**Pn**	**21 23 44.5**	**+1.3**
	9.1nm,0.4s						
RAMN	**Ramite**	**17.21**	**118**	*e*P	**Pn**	**21 23 49.7**	**-2.2**
TAPN	**Taplejung**	**17.79**	**115**	*e*P	**Pn**	**21 24 00.3**	**+1.5**
	7.2nm,0.5s						
ODAN	**Odare**	**17.83**	**116**	*e*P	**Pn**	**21 23 58.8**	**-0.6**

MAN 07 21:51:12, 1362N×12049E, h32km, mb3.8, ML2.5, MS2.1, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.26**	**295**	*e*P	Pb	21 51 21.3	+2.2
LUBP				*e*S	Sb	21 51 26.4	+2.4
PGP	**Puerto Galera**	**0.47**	**105**	⇓*e*P	Pb	21 51 17.6	-4.4
PGP				*e*S	Sb	21 51 21.5	-7.4
TGY	**Tagaytay City**	**0.65**	**42**	⇑*e*P	Pb	21 51 26.1	+1.2
TGY				*e*S	Sb	21 51 35.2	+1.5
SJMP	**San Jose**	**1.31**	**152**	*e*P	Pn	21 51 34.5	+0.5
SJMP				*e*S	Sn	21 51 51.2	+0.8
OTRP	**Odiongan**	**1.95**	**130**	*e*P	Pn	21 51 43.8	+0.9

*DDA **07** 21:57:04.0, 3887N×2685E, h29km, Md3.1*
*ISK **07** 21:57:04.2, 3888N×2681E, h8km, MD3.3*
*CSEM **07** 21:57:04.6±0.1, 3886N×2686E, h15km, MD3.1, Error ellipse: s-maj=2.0km s-min=1.3km az=76.0*
*NEIC **07** 21:57:04.0, 3887N×2683E, h10km, MD3.3(ISK), MD3.4(ATH), After ISK.*
*ISCJB **07** 21:57:04.4±0.4, 3887N±002×2679E±003, h10km±3km, Error ellipse: s-maj=4.4km s-min=2.9km az=166.9*
*ATH **07** 21:57:05.8, 3871N×2638E, h19km±5km, MD3.4/4*
ISC 07 21:57:05.2±0.4**, 3886N**±002×**2682E**±003**, h12**km±3km**, n48,** σ**0s84**/67**, 2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.46**	**348**	*i* P	**Pg**	**21 57 13.9**	**-0.3**
AYVA				*i* S	**Sg**	**21 57 20.3**	**0.0**
BLCB	**Balcova**	**0.51**	**160**	PG	**Pg**	**21 57 15.1**	**0.0**
BLCB				*e*SG	**Sg**	**21 57 22.3**	**+0.4**
URLA	**Izmir**	**0.53**	**199**	*i* P	**Pg**	**21 57 15.2**	**-0.4**
URLA				*i* S	**Sg**	**21 57 23.6**	**+1.0**
PRK	**Paraskevi**	**0.57**	**312**	⇓*i*PN	**Pg**	**21 57 16.4**	**0.0**
PRK				*e*SN	**Sg**	**21 57 24.5**	**+0.6**
PRK	**Paraskevi**	**0.57**	**312**	⇓*i*Pn	**Pg**	**21 57 16.2**	**-0.2**
PRK				*e*Sn	**Sg**	**21 57 24.5**	**+0.6**
KDAG	**Bornova**	**0.58**	**142**	*i* P	**Pg**	**21 57 16.4**	**-0.1**
KDAG				*i* S	**Sg**	**21 57 24.0**	**-0.1**
AKHS	**Akhisar**	**0.78**	**88**	*i* P	**Pg**	**21 57 19.9**	**-0.4**
AKHS				*i* S	**Sg**	**21 57 30.6**	**+0.1**
AKS	**Akhisar**	**0.78**	**88**	*e*PG	**Pg**	**21 57 19.8**	**-0.5**
AKS				*e*SG	**Sg**	**21 57 30.8**	**+0.3**
EZN	**Ezine**	**1.03**	**339**	*e*PG	**Pg**	**21 57 24.4**	**-0.8**
EZN				*e*SG	**Sg**	**21 57 38.3**	**-0.3**
BALY	**Balya**	**1.08**	**35**	*i* P	**Pb**	**21 57 25.0**	**-0.7**
BALY				*i* S	**Sb**	**21 57 40.5**	**+0.7**
BALB	**Balikesir**	**1.13**	**46**	*e*PN	**Pn**	**21 57 26.0**	**-0.9**
BALB				*e*SN	**Sn**	**21 57 42.5**	**+0.1**
SMG	**Samos**	**1.15**	**179**	*e*PN	**Pn**	**21 57 26.2**	**-0.9**
SMG	**Samos**	**1.15**	**179**	*e*Pn	**Pn**	**21 57 26.1**	**-1.0**
GCAM	**G?zelcaml?**	**1.21**	**164**	*i* P	**Pn**	**21 57 27.0**	**-0.9**
GCAM				*i* S	**Sb**	**21 57 43.0**	**-0.5**
MANT	**Manisa**	**1.41**	**105**	*i* P	**Pn**	**21 57 29.9**	**-0.8**
MANT				*i* S	**Sn**	**21 57 47.4**	**-1.9**
MANT	**Manisa**	**1.41**	**105**	*i* P	**Pn**	**21 57 30.0**	**-0.7**
MANT				*i* S	**Sn**	**21 57 47.3**	**-2.0**
DURS	**Dursunbey**	**1.48**	**60**	*i* P	**Pn**	**21 57 30.6**	**-1.2**
DURS				*i* S	**Sn**	**21 57 50.1**	**-0.9**
DURS	**Dursunbey**	**1.48**	**60**	*i* P	**Pn**	**21 57 30.5**	**-1.2**
DURS				*i* S	**Sn**	**21 57 50.1**	**-1.0**
KULA	**Kula-Manisa**	**1.48**	**103**	*e*PN	**Pn**	**21 57 31.5**	**-0.2**
GADA	**Gvkgeada**	**1.50**	**332**	*e*PN	**Pn**	**21 57 31.6**	**-0.4**
LPK	**Lapseki**	**1.51**	**358**	*e*PN	**Pn**	**21 57 31.6**	**-0.4**
LIA	**Limnos Island**	**1.63**	**310**	*e*PN	**Pn**	**21 57 34.0**	**+0.2**
LIA	**Limnos Island**	**1.63**	**310**	*e*Pn	**Pn**	**21 57 34.5**	**+0.7**
EDC	**Edincik**	**1.69**	**28**	*e*PN	**Pn**	**21 57 33.8**	**-0.8**
BNT	**Bandirma**	**1.72**	**29**	*e*PN	**Pn**	**21 57 34.1**	**-0.9**
MLSB	**Milas**	**1.74**	**154**	*e*PN	**Pn**	**21 57 35.8**	**+0.6**
BODT	**Bodrum**	**1.84**	**168**	*e*PN	**Pn**	**21 57 37.5**	**+0.9**
KCT	**Karacabey**	**1.84**	**40**	*e*PN	**Pn**	**21 57 36.1**	**-0.5**
MRMT	**Marmara Adasi**	**1.84**	**19**	*e*PN	**Pn**	**21 57 35.9**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.84**	**9**	*e*PN	**Pn**	**21 57 36.4**	**-0.3**
BDRM	**Kayabasi**	**1.86**	**164**	*i* P	**Pn**	**21 57 36.1**	**-0.8**
BDRM				*i* S	**Sn**	**21 58 01.4**	**+1.0**
ENEZ	**Enez**	**1.94**	**345**	*e*PN	**Pn**	**21 57 38.4**	**+0.4**
APE	**Apeiranthos**	**2.06**	**210**	*e*PN	**Pn**	**21 57 37.6**	**-2.0**
GDZ	**Gediz**	**2.09**	**83**	*i* P	**Pn**	**21 57 43.6**	**+3.5**
GDZ				*i* S	**Sn**	**21 58 09.5**	**+3.5**
KHL	**Karahalli**	**2.19**	**103**	*e*PN	**Pn**	**21 57 42.1**	**+0.7**
DAT	**Datca**	**2.21**	**164**	*e*PN	**Pn**	**21 57 42.5**	**+0.8**
CRLT	**Corlu**	**2.37**	**17**	*e*PN	**Pn**	**21 57 44.1**	**+0.1**
SLVT	**Silivri**	**2.60**	**24**	*e*PN	**Pn**	**21 57 48.0**	**+1.0**
YLV	**Yalova**	**2.60**	**48**	*e*PN	**Pn**	**21 57 48.5**	**+1.3**
CTKS	**Kestanelik-??a**	**2.70**	**28**	*e*PN	**Pn**	**21 57 49.4**	**+0.9**
ADVT	**Abdulvahap**	**2.75**	**54**	*e*PN	**Pn**	**21 57 50.3**	**+1.2**
CTYL	**Yal??k??y-??at**	**2.84**	**23**	*e*PN	**Pn**	**21 57 51.1**	**+0.6**
EDRB	**Edirne**	**2.98**	**359**	*e*PN	**Pn**	**21 57 53.6**	**+1.2**
ESKT	**Eskisehir**	**3.20**	**77**	*i* P	**Pn**	**21 58 03.6**	**+8.2**
ESKT				*i* S	**Sn**	**21 58 46.4**	**+13**
ESKT	**Eskisehir**	**3.20**	**77**	*e*Pn	**Pn**	**21 57 56.3**	**+0.9**
GULT	**Gulveren**	**3.26**	**60**	*e*PN	**Pn**	**21 57 56.8**	**+0.7**
KIZT	**Kizilcal**	**3.95**	**88**	*e*PN	**Pn**	**21 58 07.3**	**+1.7**
KIZT	**Kizilcal**	**3.95**	**88**	*e*Pn	**Pn**	**21 58 07.3**	**+1.6**

*ISCJB **07** 22:06:08.5±0.5, 2389N±003×12253E±002, h17km±6km, Error ellipse: s-maj=5.5km s-min=3.1km az=172.1*
*TAP **07** 22:06:08.4, 2392N×12238E, h5km±1km, ML3.0, D*
*JMA **07** 22:06:09.0±0.3, 2410N×12244E, h31km, M2.2*
ISC 07 22:06:07.3±0.5**, 2389N**±003×**12252E**±002**, h6**km±4km**, n30,** σ**0s60**/44**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.72**	**38**	P	**Pg**	**22 06 21.4**	**+0.1**
YOJ				S	**Sg**	**22 06 30.3**	**-0.4**
TWD	**Chiawan**	**0.86**	**283**	*e*P	**Pg**	**22 06 23.6**	**-0.4**
	baz=282						
ENA	**Nanau**	**0.89**	**307**	*e*P	**Pg**	**22 06 24.6**	**+0.2**
	baz=310						
TWC	**Suao**	**0.94**	**320**	P	**Pg**	**22 06 25.1**	**-0.3**
	baz=324						
TWC				S	**Sg**	**22 06 38.2**	**+0.6**
	baz=324						
ESL	**Shilin**	**1.00**	**266**	*e*S	**Sg**	**22 06 39.4**	**-0.1**
	baz=263						
ILA	**Ilan**	**1.12**	**321**	*e*S	**Sg**	**22 06 44.6**	**+1.3**
	baz=325						
TWE	**Neicheng**	**1.13**	**317**	P	**Pg**	**22 06 29.1**	**0.0**
	baz=320						
TWE				S	**Sg**	**22 06 43.9**	**+0.1**
	baz=320						
ENTT	**Nioudou**	**1.15**	**311**	⇑*i*P	**Pg**	**22 06 29.1**	**-0.3**
	baz=313						
EHY	**Hungye**	**1.16**	**251**	P	**Pg**	**22 06 29.4**	**-0.3**
	baz=247						
EHY				S	**Sg**	**22 06 44.8**	**0.0**
	baz=247						
WHF	**Hehuan Shan**	**1.17**	**283**	P	**Pg**	**22 06 29.4**	**-0.5**
	baz=282						
WHF				*e*S	**Sg**	**22 06 44.8**	**-0.3**
	baz=282						
NNS	**Nan Shan**	**1.18**	**298**	⇑*i*P	**Pg**	**22 06 29.6**	**-0.4**
	baz=299						
NNS				S	**Sg**	**22 06 44.9**	**-0.4**
	baz=299						
HATJ	**Hateruma jima**	**1.19**	**82**	*e*S	**Sg**	**22 06 46.3**	**+0.7**
IRIF	**Iriomote-Funau**	**1.19**	**68**	P	**Pg**	**22 06 30.6**	**+0.4**
IRIF				*e*S	**Sg**	**22 06 45.5**	**-0.2**
TWF1	**Yuli**	**1.24**	**245**	P	**Pg**	**22 06 30.8**	**-0.4**
	baz=240						
TWF1				S	**Sg**	**22 06 46.9**	**-0.5**
	baz=240						
NSK	**Sanguang**	**1.32**	**307**	⇑*i*P	**Pn**	**22 06 31.6**	**-0.7**
	baz=308						
NSK				S	**Sb**	**22 06 49.1**	**-0.5**
	baz=308						
NWF	**Wu-fen Shan**	**1.35**	**330**	P	**Pn**	**22 06 33.1**	**+0.3**
	baz=334						
NWF				S	**Sb**	**22 06 50.8**	**+0.2**
	baz=334						
TWA	**Mucha**	**1.38**	**322**	*e*S	**Sb**	**22 06 51.5**	**+0.1**
	baz=325						
JKRS	**Kuro-shima**	**1.41**	**76**	P	**Pn**	**22 06 33.5**	**0.0**
JKRS				*e*S	**Sb**	**22 06 52.3**	**+0.2**
SMLT	**Sun Moon Lake**	**1.48**	**270**	*e*P	**Pn**	**22 06 34.2**	**-0.4**
	baz=268						
TYC	**Yuchr**	**1.52**	**271**	*e*P	**Pn**	**22 06 34.7**	**-0.4**
	baz=269						
ELDTW	**Lidau**	**1.55**	**243**	*e*P	**Pn**	**22 06 35.6**	**+0.1**
	baz=239						
JIJ	**Ishigaki jima**	**1.56**	**72**	P	**Pn**	**22 06 35.6**	**0.0**
JIJ				*e*S	**Sn**	**22 06 53.7**	**-2.3**
NSTT	**Nanjuang**	**1.57**	**298**	P	**Pn**	**22 06 36.2**	**+0.5**
	baz=299						
NSTT				S	**Sn**	**22 06 55.5**	**-0.8**
	baz=299						
ALS	**Alishan**	**1.62**	**257**	P	**Pn**	**22 06 36.5**	**+0.1**
	baz=254						
ALS				S	**Sn**	**22 06 56.7**	**-0.8**
	baz=254						
TWQ1	**Liyutan**	**1.66**	**286**	*e*S	**Sn**	**22 06 59.4**	**+0.8**
	baz=286						
CHN5	**Tsauling**	**1.71**	**260**	*e*P	**Pn**	**22 06 38.4**	**+0.6**
	baz=258						
WTP	**Ta-pu**	**1.86**	**250**	*e*P	**Pn**	**22 06 40.1**	**+0.3**
	baz=247						
ECL	**Taimali**	**1.93**	**228**	*e*P	**Pn**	**22 06 41.5**	**+0.8**
	baz=224						
CHN1	**Nanshi**	**1.96**	**249**	*e*P	**Pn**	**22 06 42.7**	**+1.6**
	baz=246						
TWK	**Hsinying**	**1.96**	**252**	*e*S	**Sn**	**22 07 06.9**	**+0.7**
	baz=249						

*CSEM **07** 22:08:06.4±0.1, 3701N×29.14E, h8km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.6km az=2.0*
*ISK **07** 22:08:06.8, 3702N×29.14E, h11km, MD2.8*
*ISCJB **07** 22:08:07.3±0.6, 3702N±004×29.13E±003, h4km±6km, Error ellipse: s-maj=6.2km s-min=4.3km az=167.3*
*DDA **07** 22:08:07.7, 3703N×29.11E, h7km±7km, Md3.0*
ISC 07 22:08:07.9±0.5**, 3702N**±004×**2913E**±003**, h11**km±6km**, n14,** σ**0s91**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.41**	**57**	*i* P	**Pg**	**22 08 15.1**	**-0.8**
GOLH				*i* S	**Sg**	**22 08 22.4**	**+1.1**
TURN	**Turunc**	**0.45**	**252**	*i* P	**Pg**	**22 08 20.8**	**+4.1**
TURN				*i* S	**Sg**	**22 08 31.5**	**+9.0**
DALT	**Dalyan (Mudla)**	**0.47**	**238**	*e*PG	**Pg**	**22 08 15.6**	**-1.4**
DALT				*e*SG	**Sg**	**22 08 23.4**	**+0.2**
ELL	**Elmali**	**0.68**	**113**	*e*PG	**Pg**	**22 08 20.4**	**-0.6**
ELL				*e*SG	**Sg**	**22 08 30.4**	**+0.5**
YER	**Yerkesik**	**0.69**	**280**	*e*PG	**Pg**	**22 08 20.9**	**-0.3**
YER				*e*SG	**Sg**	**22 08 31.7**	**+1.5**
DENT	**Denizli**	**0.74**	**354**	*e*PG	**Pg**	**22 08 21.1**	**-1.1**
AKAS	**Kas**	**0.87**	**154**	*i* P	**Pg**	**22 08 23.9**	**-0.7**
AKAS				*i* S	**Sg**	**22 08 39.1**	**+3.2**
MLSB	**Milas**	**1.12**	**285**	*e*PN	**Pn**	**22 08 29.0**	**-0.5**
DAT	**Datca**	**1.28**	**258**	*e*PN	**Pn**	**22 08 31.3**	**-0.4**
KHL	**Karahalli**	**1.34**	**13**	*e*PN	**Pn**	**22 08 32.1**	**-0.5**
BDRM	**Kayabasi**	**1.35**	**273**	*i* P	**Pn**	**22 08 33.4**	**+0.7**
BDRM				*i* S	**Sb**	**22 08 51.4**	**+0.9**
KHAL	**Karahalli**	**1.38**	**12**	*i* P	**Pn**	**22 08 33.6**	**+0.4**
KHAL				*i* S	**Sb**	**22 08 52.4**	**+1.0**
BODT	**Bodrum**	**1.46**	**272**	*e*PN	**Pn**	**22 08 33.5**	**-0.6**
KULA	**Kula-Manisa**	**1.54**	**346**	*e*PN	**Pn**	**22 08 34.8**	**-0.5**

*ISK **07** 22:28:18.5, 3740N×37.12E, h2km, MD2.9*
*ISCJB **07** 22:28:19.8±0.5, 3739N±003×3707E±004, h8km±6km, Error ellipse: s-maj=6.3km s-min=4.5km az=35.1*
*DDA **07** 22:28:19.1, 3741N×3709E, h13km±1km, Md2.9, Ml3.1*
*CSEM **07** 22:28:19.1±0.1, 3738N×37.11E, h8km, MD2.9, Error ellipse: s-maj=2.5km s-min=1.8km az=63.0*
ISC 07 22:28:20.1±0.5**, 3740N**±003×**3709E**±004**, h6**km±6km**, n15,** σ**0s73**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.18**	**305**	*e*PG	**Pg**	**22 28 24.0**	**+0.2**
KMRS				*e*SG	**Sg**	**22 28 27.1**	**+0.9**
GAZ	**Gaziantep**	**0.25**	**156**	*e*PG	**Pg**	**22 28 24.1**	**-0.9**
GAZ				*e*SG	**Sg**	**22 28 28.6**	**+0.4**
GZT	**Gaziantep**	**0.38**	**96**	*i* P	**Pg**	**22 28 26.8**	**-0.8**
GZT				*i* S	**Sg**	**22 28 35.0**	**+2.4**
ANDN	**Andirin**	**0.62**	**287**	*i* P	**Pg**	**22 28 31.7**	**-0.3**
ANDN				*i* S	**Sg**	**22 28 39.9**	**-0.1**
KUZU	**Kuzuini**	**0.62**	**181**	*i* P	**Pg**	**22 28 31.9**	**-0.2**
KUZU				*i* S	**Sg**	**22 28 40.3**	**+0.1**
KOZT	**Kozan**	**1.01**	**275**	*e*PG	**Pg**	**22 28 38.4**	**-1.0**
AKCD	**Akcadag**	**1.11**	**36**	*i* P	**Pg**	**22 28 41.1**	**-0.4**
AKCD				*i* S	**Sg**	**22 28 55.5**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.31**	**347**	*e*PN	**Pn**	**22 28 40.8**	**-4.1**
URFA	**Urfa**	**1.38**	**88**	*e*PN	**Pn**	**22 28 45.1**	**-0.8**
HTY	**Hatay**	**1.49**	**211**	*e*PN	**Pn**	**22 28 47.6**	**+0.3**
KARA	**Karaisali**	**1.63**	**266**	*e*PN	**Pn**	**22 28 49.9**	**+0.7**
DARE	**Darende-Malaty**	**1.65**	**20**	*e*PN	**Pn**	**22 28 42.4**	**-7.1**
BNN	**Bunyan**	**1.75**	**326**	*e*PN	**Pn**	**22 28 51.5**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.01**	**60**	*e*PN	**Pn**	**22 28 54.6**	**+0.1**
PTK	**Pertek**	**2.35**	**50**	*e*PN	**Pn**	**22 28 59.2**	**0.0**

*ISCJB **07** 22:29:24.8±1.1, 3561N±008×235E±01, h10km, Error ellipse: s-maj=16.3km s-min=4.4km az=44.2*
*NEIC **07** 22:29:24.8, 3562N×2346E, h11km, MD3.5(ATH), After ATH.*
*ATH **07** 22:29:24.8, 3562N×2347E, h12km±1km, MD3.5/8*
*CSEM **07** 22:29:24.8, 3562N×2346E, h11km, MD3.5/8, After ATH*
ISC 07 22:29:24.3±1.4**, 3562N**±009×**235E**±01**, h7**km±12km**, n13,** σ**0s65**/17**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	**Vamos**	**0.65**	**109**	*e*PG	**Pg**	**22 29 37.0**	**+0.2**
VAM				*e*SB	**Sb**	**22 29 46.5**	**-0.6**
KYTH	**Kithira**	**0.74**	**333**	*e*PB	**Pb**	**22 29 39.0**	**-0.6**
KYTH				*e*SB	**Sb**	**22 29 49.8**	**-0.1**
KYTH	**Kithira**	**0.74**	**333**	*e*Pb	**Pb**	**22 29 39.0**	**-0.6**
KYTH				*e*Sb	**Sb**	**22 29 50.0**	**+0.1**
GVD	**Gavdhos**	**0.94**	**146**	*e*PB	**Pb**	**22 29 42.5**	**-0.4**
VLI	**Veliai**	**1.17**	**339**	*e*PB	**Pb**	**22 29 47.0**	**+0.1**
VLI				*e*SB	**Sb**	**22 30 03.0**	**+0.7**
IDI	**Anoyia**	**1.22**	**105**	P	**Pg**	**22 29 47.9**	**+0.2**
LAST	**Lasithi**	**1.72**	**105**	P	**Pg**	**22 29 57.5**	**+0.2**
NPS	**Neapolis**	**1.80**	**101**	*e*PG	**Pb**	**22 29 57.9**	**+0.3**
ITM	**Ithomi**	**1.98**	**322**	*e*PN	**Pb**	**22 30 00.5**	**-0.3**
APE	**Apeiranthos**	**2.22**	**49**	*e*PN	**Pb**	**22 30 03.5**	**-1.2**
KARP	**Karpathos**	**3.02**	**90**	*e*PN	**Pn**	**22 30 14.6**	**+2.0**
KARP	**Karpathos**	**3.02**	**90**	*e*Pn	**Pn**	**22 30 13.6**	**+1.0**
VLS	**Valsamata**	**3.43**	**319**	P	**Pn**	**22 30 13.8**	**-4.4**

*BJI **07** 22:50:57.4, 28.11N×13906E, h503km, mB4.8, mb5.2*
*DJA **07** 22:50:58, 2832N×13905E, h508km, Mw5.1/5*
*JMA **07** 22:50:59.1±0.1, 2823N×13930E, h546km, M4.8*
*MOS **07** 22:51:00.8±1.0, 2825N×13889E, h534km, mb4.8/68, Error ellipse: s-maj=11.0km s-min=5.9km az=106.7*
*ISCJB **07** 22:51:00.5±0.3, 2828N±003×13879E±002, h519km±3km, mb4.7/161, Error ellipse: s-maj=4.3km s-min=2.9km az=163.9*
*IDC **07** 22:51:00.2±0.6, 2823N×13882E, h514km±5km, mb4.3/29, mb1 4.4/35, mb1mx4.4/36, mbtmp4.3/35, Error ellipse: s-maj=8.2km s-min=6.7km az=49.0*
*NEIC **07** 22:51:00.5±0.1, 2824N×13881E, mb4.8/112, Error ellipse: s-maj=4.1km s-min=3.0km az=155.0*
ISC 07 22:51:01.1±0.3**, 2827N**±003×**13883E**±002**, h516**km±3km**, h526**km±3.7km**:pP-P, n734,** σ**0s76**/766**, mb4.7**/161**, 168C-183D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.20**	**111**	P	**P**	**22 52 12.9**	**-1.8**
	279nm,0.3s,baz=303,slow=2.8,SNR=215						
CBIJ				S	**S**	**22 53 09.3**	**-5.2**
	184nm,0.3s,baz=270,slow=21,SNR=5.1						
CBIJ	**Chichi jima**	**3.20**	**111**	P	**P**	**22 52 12.7**	**-2.0**
JHHJ	**Haha-jima-NKT**	**3.40**	**118**	P	**P**	**22 52 14.7**	**-1.4**
JHHJ				S	**S**	**22 53 13.2**	**-3.8**
JHJ2	**Mitsune**	**4.90**	**10**	P	**P**	**22 52 29.1**	**+1.2**
JHJ2				*e*S	**S**	**22 53 38.4**	**-0.5**
JHJ	**Hachijo jima 2**	**4.90**	**9**	P	**P**	**22 52 28.9**	**+0.9**
	80nm,0.3s,baz=242,slow=24,SNR=35						
JHJ				S	**S**	**22 53 35.1**	**-3.9**
	138nm,0.3s,baz=132,slow=9.8,SNR=6.8						
JWZ	**Kozaga**	**5.88**	**334**	P	**P**	**22 52 39.7**	**+2.9**
JWZ				S	**S**	**22 53 59.2**	**+3.9**
JIE	**Ise**	**6.37**	**344**	P	**P**	**22 52 44.3**	**+2.9**
JIE				S	**S**	**22 54 07.6**	**+4.0**
BSO1	**Boso 1**	**6.62**	**16**	P	**P**	**22 52 43.8**	**-0.1**
BSO1				S	**S**	**22 54 05.3**	**-2.9**
JTO	**Tosashimizu**	**6.92**	**313**	P	**P**	**22 52 49.6**	**+2.7**
JOD2	**Odawara 2**	**6.98**	**2**	P	**P**	**22 52 47.4**	**0.0**
JOD2				S	**S**	**22 54 13.7**	**-0.8**
JRY	**Ryogami san**	**7.72**	**0**	P	**P**	**22 52 53.7**	**-1.2**
JRY				S	**S**	**22 54 26.6**	**-1.7**
JAM	**Amami Oshima**	**8.13**	**273**	P	**P**	**22 53 02.0**	**+2.9**
MJAR	**Matsushiro Arr**	**8.26**	**357**	P	**P**	**22 53 00.1**	**-0.2**
	16nm,0.3s,baz=172,slow=11,SNR=199						
MJAR				S	**S**	**22 54 36.4**	**-2.0**
	2.6nm,0.3s,baz=166,slow=18,SNR=5.3						
MJAR	**Matsushiro Arr**	**8.26**	**357**	P	**P**	**22 53 00.1**	**-0.3**
MJAR				S	**S**	**22 54 36.4**	**-2.0**
MJAR				pmax	pmax		
	comp=Z,16nm,0.3s						
MJAR				smax			
	comp=N,3.0nm,0.3s						
MAJO	**Matsushiro**	**8.27**	**357**	*e*P	**P**	**22 53 00.2**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,189nm,0.8s						
MAJO	**Matsushiro**	**8.27**	**357**	*e*Pn	**P**	**22 53 00.2**	**-0.2**
	comp=Z,189nm,0.8s						
MAT	**Matsushiro**	**8.27**	**357**	P	**P**	**22 53 00.1**	**-0.3**
MAT				S	**S**	**22 54 35.8**	**-2.6**
MAT	**Matsushiro**	**8.27**	**357**	P	**P**	**22 53 00.3**	**-0.1**
MAT				S	**S**	**22 54 36.5**	**-1.9**
JOW	**Kunigami**	**9.47**	**264**	P	**P**	**22 53 15.4**	**+2.3**
	comp=Z,66nm,0.3s,baz=100,slow=8.3,SNR=143						
KSRS	**Korea Array**	**12.95**	**318**	P	**P**	**22 53 49.5**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=130,slow=11,SNR=26						
KSRS				S	**S**	**22 56 10.2**	**+2.2**
	baz=121,slow=24,SNR=4.6						
KSRS				ScP	ScP	23 01 22.1	-1.8
	comp=Z,0.2nm,0.3s,baz=185,slow=1.6,SNR=9.3						
INCN	**Inchon**	**13.75**	**315**	*e*Pn	**P**	**22 54 03.4**	**+5.6**
	comp=Z,25nm,0.4s						
ERM	**Erimo**	**14.16**	**13**	*d i*P	**P**	**22 54 02.8**	**+0.8**
ERM	**Erimo**	**14.16**	**13**	*e*Pn	**P**	**22 54 02.1**	**+0.1**
ERM				*e*Sn	**S**	**22 56 42.8**	**+12**
GUMO	**Guam**	**15.65**	**158**	P	**P**	**22 54 17.5**	**-0.4**
	comp=Z,11nm,0.3s,baz=156,slow=5.1,SNR=5.6						
GUMO	**Guam**	**15.65**	**158**	P	**P**	**22 54 17.5**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,11nm,0.3s						
GUMO	**Guam**	**15.65**	**158**	*e*P	**P**	**22 54 18.3**	**+0.4**
	comp=Z,78nm,0.6s						
TATO	**Taipei**	**15.85**	**262**	*e*P	**P**	**22 54 19.6**	**-0.2**
	comp=Z,341nm,1.3s						
NACB	**Ninganchiao**	**15.99**	**259**	*e*P	**P**	**22 54 18.9**	**-2.5**
	comp=Z,86nm,0.6s						
YHNB	**Yeheng**	**16.03**	**261**	*e*P	**P**	**22 54 20.1**	**-1.7**
	comp=Z,100nm,0.6s						
YHNB				*e*S	**S**	**22 57 06.7**	**-0.5**
ASAJ	**Asahikawa**	**16.10**	**10**	P	**P**	**22 54 22.9**	**+0.7**
	comp=Z,9.2nm,0.3s,baz=228,slow=13,SNR=33						
ASAJ	**Asahikawa**	**16.10**	**10**	P	**P**	**22 54 22.9**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
YULB	**Yu-li**	**16.51**	**257**	*e*P	**P**	**22 54 25.4**	**-1.3**
	comp=Z,162nm,0.6s						
SSLB	**Suanglung**	**16.67**	**259**	*e*P	**P**	**22 54 28.3**	**0.0**
	comp=Z,377nm,0.8s						

SSLB eS S 22 57 18.5 +0.5
YUK Yuzh-Kuril'sk 16.71 18 eP P 22 54 29.0 +0.5
YUK pmax pmax
comp=N,240nm,0.5s
YUK pmax pmax
comp=Z,390nm,0.5s
TPUB Ta-pu 17.11 257 eP P 22 54 32.0 -0.6
comp=Z,162nm,0.6s
NJ2 Nanjing 17.68 287 eP P 22 54 38.6 +1.0
NJ2 AMB AMB
comp=Z,10.0nm,0.5s
DL2 Dalian 17.80 311 P P 22 54 38.3 -0.3
DL2 XP sP 22 56 45.2 -3.6
DL2 S S 22 57 36.0 0.0
DL2 AMB AMB
comp=Z,50nm,0.8s
MDJ Mudanjiang 17.90 338 P P 22 54 40.2 +0.7
MDJ S S 22 57 40.1 +2.5
MDJ SCP ScP 23 01 33.6 +0.5
MDJ PCS PcS 23 02 24.1 +0.7
MDJ SCS ScS 23 05 14.8 +0.9
MDJ AMB AMB
comp=Z,26nm,1.4s
MDJ AMB AMB
comp=Z,95nm,3.1s
MDJ Mudanjiang 17.90 338 eP P 22 54 41.2 +1.8
comp=Z,17nm,0.7s
QZH Quanzhou 18.39 264⇑ iP P 22 54 44.5 +0.2
QZH AMB AMB
comp=Z,350nm,0.9s
CN2 Changchun 18.86 329⇓ P P 22 54 49.9 +1.7
CN2 eXP sP 22 56 53.3 -7.3
CN2 eS S 22 57 54.0 +0.8
CN2 AMB AMB
comp=Z,30nm,0.9s
CN2 AMB AMB
comp=Z,100nm,4.0s
YSS Yuzh-Sakhalins 18.91 8⇑ iP P 22 54 49.0 +0.4
YSS pmax pmax
comp=Z,90nm,0.4s
YSS Yuzh-Sakhalins 18.91 8 eP P 22 54 48.7 +0.1
comp=Z,90nm,0.5s
TIA Tai'an 19.96 299 P P 22 54 59.0 +0.6
TIA AMB AMB
comp=Z,374nm,0.7s
HABR Khabarovsk 20.38 353 c iP P 22 55 01.9 -0.1
HABR e*SP sP 22 57 20.3 +2.9
HABR eS S 22 58 17.9 +0.4
HABR e 22 58 48.2
HABR e 23 05 17.5
HABR pmax pmax
comp=Z,62nm,0.8s
WHN Wuhan 21.43 282⇓ iP P 22 55 12.0 +0.2
WHN AMB AMB
comp=Z,288nm,0.9s,mb5.9
KLR Kul'dur 21.62 347⇓ iP P 22 55 10.6 -2.6
KLR pmax pmax
comp=N,20nm,0.8s
KLR pmax pmax
comp=E,40nm,0.8s
KLR pmax pmax
comp=Z,64nm,0.8s,mb5.3
BJT Baijiatuau 22.05 308 eP P 22 55 17.2 0.0
BJT pmax pmax
comp=Z,48nm,0.7s
BJT Baijiatuau 22.05 308 eP P 22 55 17.2 0.0
comp=Z,48nm,0.7s,mb5.2
BJI Beijing 22.05 308 P P 22 55 17.0 -0.2
BJI XP sP 22 57 33.8 -2.0
BJI S S 22 58 40.8 -3.4
BJI AMB AMB
comp=Z,40nm,0.6s,mb5.2
BJI AMB AMB
comp=Z,111nm,4.0s
HIA Hailar 25.57 330 eP P 22 55 48.6 +0.2
HIA pmax pmax
comp=Z,17nm,0.6s
HIA Hailar 25.57 330 eP P 22 55 48.6 +0.2
comp=Z,16nm,0.6s,mb4.8
HHC Hu-ho-hao-te 25.61 306 eP P 22 55 48.9 0.0
HHC XP sP 22 58 11.5 -2.6
HHC PCP PcP 22 59 03.2 +0.7
HHC S S 22 59 35.9 -4.3
HHC SCP ScP 23 01 55.5 +2.6
HHC PCS PcS 23 02 44.2 +0.6
HHC SCS ScS 23 05 44.6 +1.6
HHC AMB AMB
comp=Z,16nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,93nm,4.0s
XAN Xi'an 26.18 290 P P 22 55 54.1 +0.1
XAN PCP PcP 22 59 07.8 +3.8
XAN S S 22 59 50.1 +0.8
XAN SCP ScP 23 01 58.8 +4.0
XAN AMB AMB
comp=Z,55nm,2.8s,mb4.7
QIZ Qiongzhong 28.04 257 P P 22 56 10.2 -0.3
QIZ S S 23 00 17.6 -1.1
QIZ AMB AMB
comp=Z,24nm,1.1s,mb4.7
QIZ AMB AMB
comp=Z,163nm,4.0s
PEA0B Petropavlovsk- 28.47 24 eP P 22 56 15.2 +1.4
PETK Petropavlovsk- 28.47 24 P P 22 56 14.1 +0.3
comp=Z,18nm,0.7s,mb4.8,baz=196,slow=4.9,SNR=16
GYA Guiyang 28.58 274⇑ iP P 22 56 15.1 -0.1
GYA S S 23 00 25.0 -2.0
GYA SCP ScP 23 02 00.3 -2.0
GYA PCS PcS 23 02 51.7 -1.6
GYA SCS ScS 23 05 54.3 -2.6
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,150nm,5.0s
PET Petropavlovsk 28.75 25 eP P 22 56 16.5 +0.2
PET pmax pmax
comp=Z,62nm,0.6s,mb5.4
PET Petropavlovsk 28.75 25 eP P 22 56 15.2 -1.0
comp=Z,26nm,0.5s,mb5.1
KDM Kudat 29.73 229⇑ P P 22 56 26.0 +0.6
MYLDM Lahad Datu 30.00 224⇑ P P 22 56 30.2 +2.5
CLNS Chul'man 30.22 345 eP P 22 56 29.9 +1.0
CLNS pmax pmax
comp=Z,33nm,0.8s,mb4.9
CLNS pmax pmax
comp=N,19nm,0.8s
CLNS pmax pmax
comp=E,9.0nm,0.8s
SDKM Sandakan 30.46 226⇓ P P 22 56 32.3 +0.7
LZH Lanzhou 30.50 294⇑ P P 22 56 32.2 +0.5
LZH AP 22 58 01.1
LZH XP sP 22 58 57.0 -1.8
LZH S S 23 00 57.2 +0.8
LZH SS SS 23 03 34.1 -7.8
LZH AMB AMB
comp=Z,43nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,230nm,6.0s
CD2 Chengdu 30.54 284 P P 22 56 32.7 +0.6
CD2 AP 22 57 59.7
CD2 PP PP 22 58 01.6 +2.6
CD2 XP sP 22 58 58.2 -1.0
CD2 PCP PcP 22 59 16.1 +1.0
CD2 S S 23 00 58.0 +0.9
CD2 SS SS 23 03 38.9 -4.0
CD2 SCS ScS 23 06 06.5 +0.2
CD2 AMB AMB
comp=Z,440nm,0.6s
CD2 AMB AMB
comp=Z,180nm,5.4s
KKM Kota Kinabalu 30.79 228 eP P 22 56 35.1 +0.6
comp=Z,33nm,0.8s,mb4.9
KKM Kota Kinabalu 30.79 228⇑ P P 22 56 35.1 +0.6
TSM Tawau 31.08 224⇑ P P 22 56 39.3 +2.4
SONM Songino Array 31.81 317 P P 22 56 43.6 +0.8
comp=Z,3.7nm,0.5s,mb4.2,baz=128,slow=8.6,SNR=46
SONM PcP PcP 22 59 17.7 -0.6
comp=Z,1.5nm,0.8s,baz=145,slow=4.0,SNR=3.5
SONM S S 23 01 15.9 -0.3
comp=Z,0.7nm,0.8s,baz=125,slow=12,SNR=2.2
SONM ScP ScP 23 02 10.8 -1.8
comp=Z,3.4nm,0.7s,baz=141,slow=3.4,SNR=11
SONM Songino Array 31.81 317 P P 22 56 43.6 +0.8
SONM 22 59 17.7

SONM S S 23 01 15.9 -0.4
SONM pmax pmax
comp=Z,4.0nm,0.5s
SONM smax
comp=N,1.0nm,0.8s
KMI Kunming 32.32 273 P P 22 56 48.7 +1.3
KMI AP 22 58 20.4
KMI S S 23 01 24.8 +0.2
KMI AMB AMB
comp=Z,79nm,1.0s,mb5.2
KMI AMB AMB
comp=Z,125nm,3.1s
GTA Gaotai 34.02 299⇓ iP P 22 57 02.4 +0.8
GTA AP 22 58 33.8
GTA PCP PcP 22 59 25.9 +1.2
GTA XP sP 22 59 32.3 +2.4
GTA S S 23 01 53.7 +3.7
GTA SCP ScP 23 02 20.3 -0.2
GTA XS sS 23 04 33.8 -0.4
GTA SCS ScS 23 06 24.7 +0.6
GTA AMB AMB
comp=Z,39nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,132nm,5.1s
BOD Bodaibo 34.27 336⇑ iP P 22 57 03.7 +0.3
BOD e 22 59 23.9
BOD pmax pmax
comp=Z,11nm,0.9s,mb4.4
YAK Yakutsk 34.30 352 c iP P 22 57 03.2 -0.4
YAK e 22 58 41.8
YAK e 22 59 23.0
YAK eS S 23 01 52.5 -1.2
YAK e*SS sS 23 04 35.4 -2.6
YAK eSS SS 23 04 56.8 +2.4
YAK e 23 06 17.2
YAK pmax pmax
comp=Z,120nm,0.9s,mb5.4
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=N,39nm,1.1s
YAK pmax pmax
comp=Z,235nm,4.1s
YAK pmax pmax
comp=N,225nm,3.5s
YAK pmax pmax
comp=E,77nm,3.2s
YAK smax
comp=N,100nm,1.4s
YAK smax
comp=E,95nm,1.4s
YAK Yakutsk 34.30 352 eP P 22 57 03.3 -0.3
comp=E,160nm,0.9s,mb5.5
ZAK Zakamensk 34.77 319 eP P 22 57 08.3 +0.5
ZAK pmax pmax
comp=Z,6.0nm,1.5s,mb3.9
BTM Bintulu 34.97 229⇓ P P 22 57 04.6 -5.4
TLY Talaya 35.16 321 eP P 22 57 11.9 +0.9
TLY pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
TLY Talaya 35.16 321 eP P 22 57 11.8 +0.8
comp=Z,6.3nm,0.6s,mb4.3
KKTK Khon Kaen 35.23 258⇑ P P 22 57 13.0 +0.9
comp=Z,926nm,0.5s
FX1 Attu Island--F 35.30 36 P P 22 57 12.8 +0.8
comp=Z,67nm,0.6s,mb5.4,baz=193,slow=0.2,SNR=53
FX1 Attu Island--F 35.30 36 P P 22 57 12.9 +0.8
FX1 pmax pmax
comp=Z,67nm,0.6s
SEY Seymchan 35.78 11⇓ eP P 22 57 15.9 -0.1
SBUM Sibu 36.10 229⇑ P P 22 57 19.3 0.0
CHRT Chiangrai 36.49 266⇓ P P 22 57 23.0 +0.5
comp=Z,250nm,0.9s,mb5.7
CHG Chiang Mai 37.61 264⇓ P P 22 57 32.0 +0.3
comp=Z,60nm,0.9s,mb5.1
CHTO Chiang Mai 37.61 264 eP P 22 57 32.1 +0.4
CHTO pmax pmax
comp=Z,49nm,0.9s,mb5.0
CHTO Chiang Mai 37.61 264 eP P 22 57 32.1 +0.4
comp=Z,49nm,0.9s,mb5.0
CMAR Chiang Mai Arr 37.75 264 P P 22 57 33.3 +0.5
comp=Z,18nm,0.9s,mb4.6,baz=51,slow=9.5,SNR=100
CMAR ScP ScP 23 02 34.0 -0.7
comp=Z,2.0nm,0.7s,baz=60,slow=2.1,SNR=7.8
CMAR S S 23 02 48.8 +2.4
comp=Z,1.3nm,0.3s,baz=85,slow=20,SNR=3.1
CMAR Chiang Mai Arr 37.75 264 P P 22 57 33.3 +0.5
CMAR S S 23 02 48.8 +2.4
CMAR pmax pmax
comp=Z,18nm,0.9s
CMAR smax
comp=N,1.0nm,0.3s
KAPI Kappang 37.85 212 eP P 22 57 32.0 -1.7
comp=N,14nm,0.7s,mb4.6
KSM Kuching 38.11 231 eP P 22 57 35.6 -0.2
comp=N,35nm,0.6s,mb5.1
KSM Kuching 38.11 231⇓ P P 22 57 36.8 +1.0
PMG Port Moresby 38.31 167 eP P 22 57 35.6 -1.8
PMG pmax pmax
comp=Z,9.0nm,0.4s
PMG Port Moresby 38.31 167 eP P 22 57 35.6 -1.7
comp=Z,8.8nm,0.4s,mb4.6
KTGM Kuala Trenggan 40.82 243⇓ P P 22 57 58.6 +0.9
LSA Lhasa 41.50 284 P P 22 58 04.8 +1.9
LSA AMB AMB
comp=Z,20nm,0.8s,mb4.7
LSA Lhasa 41.50 284 eP P 22 58 04.9 +2.0
LSA e 22 59 52.4
LSA pmax pmax
comp=Z,14nm,0.7s,mb4.6
LSA Lhasa 41.50 284 eP P 22 58 04.9 +2.0
comp=Z,14nm,0.7s,mb4.6
LSA ePP PP 22 59 52.4 0.0
LSA eScP ScP 23 02 49.3 +0.1
COEN Coen 42.19 174 eP P 22 58 07.8 -0.6
comp=Z,21nm,0.8s,mb4.7
IPM Ipoh 43.00 244⇓ P P 22 58 14.7 -0.1
BILL Bilibino 43.03 15 c iP P 22 58 14.5 +0.2
BILL i *PP pP 22 59 51.3 +3.1
BILL i 23 00 06.6
BILL pmax pmax
comp=Z,140nm,0.8s,mb5.5
BILL Bilibino 43.03 15 eP P 22 58 14.5 +0.2
comp=Z,183nm,0.9s,mb5.6
FRIM Kepong 43.29 242⇓ P P 22 58 17.9 +0.7
WMQ Urumqi 43.47 305 P P 22 58 18.9 +0.8
WMQ AP pP 22 59 54.8 +2.5
WMQ PCP PcP 22 59 58.0 +3.2
WMQ PP PP 23 00 11.8 +1.7
WMQ S S 23 04 10.8 +2.0
WMQ SCS ScS 23 07 21.7 +1.8
WMQ AMB AMB
comp=Z,21nm,1.4s,mb4.5
WMQ AMB AMB
comp=Z,179nm,4.0s
TIXI Tiksi 43.77 355⇓ eP P 22 58 18.8 -1.2
TIXI pmax pmax
comp=Z,21nm,0.5s,mb4.9
TIXI Tiksi 43.77 355 eP P 22 58 19.5 -0.5
comp=Z,32nm,0.7s,mb5.0
TIXI ePP pP 22 59 55.0 +0.6
TAPN Taplejung 44.94 281 eP P 22 58 31.0 +1.2
comp=Z,41nm,0.4s,mb5.3
ODAN Odare 45.34 281 eP P 22 58 34.0 +1.2
comp=Z,79nm,0.4s,mb5.6
RAMN Ramite 46.00 281 eP P 22 58 38.9 +1.0
comp=Z,101nm,0.5s,mb5.6
JIRN Jiri 46.18 282 eP P 22 58 40.9 +1.6
GUN Gumba 46.39 283 eP P 22 58 42.5 +1.6
comp=Z,299nm,0.8s,mb5.9
ZAA0 Zalesovo Array 46.65 319 eP P 22 58 41.8 -0.5
ZAA0 ePcP PcP 23 00 04.3 -1.5
ZALV Zalesovo Beam 46.65 319 P P 22 58 42.0 -0.4
comp=Z,5.1nm,0.3s,mb4.5,baz=104,slow=7.4,SNR=48
ZALV PcP PcP 23 00 04.3 -1.5
comp=Z,5.1nm,0.5s,baz=126,slow=3.8,SNR=12
ZALV ScP ScP 23 03 07.1 -2.9
comp=Z,2.4nm,0.7s,baz=101,slow=4.7,SNR=5.2
ZALV S S 23 04 50.9 -2.4
comp=Z,1.3nm,0.8s,baz=129,slow=8.2,SNR=4.2
ZALV Zalesovo Beam 46.65 319 P P 22 58 42.0 -0.4
ZALV 23 00 04.3
ZALV S S 23 04 50.9 -2.4
ZALV pmax pmax
comp=Z,5.0nm,0.3s,mb4.5

ZALV smax
comp=N,1.0nm,0.8s
ZALV Zalesovo Beam 46.65 319 P P 22 58 42.0 -0.4
ZALV PcP PcP 23 00 04.3 -1.5
ZALV ScP ScP 23 03 07.1 -2.9
ZALV S S 23 04 50.9 -2.4
PKI Pulchoki 46.88 282 eP P 22 58 45.4 +0.9
comp=N,28nm,0.4s,mb5.2
PKI Pulchoki 46.88 282 eP P 22 58 45.4 +0.9
PKI pmax pmax
comp=Z,28nm,0.4s,mb5.2
PKIN Phulchoki 46.89 282 eP P 22 58 45.3 +0.7
comp=Z,40nm,0.5s,mb5.2
KKN Kakani 46.94 283 eP P 22 58 45.9 +0.9
DMN Daman 47.13 283 eP P 22 58 47.6 +1.2
comp=Z,73nm,0.4s,mb5.5
MK31 Makanchi Array 47.43 309 eP P 22 58 48.8 +0.4
MK31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.3
MK31 Makanchi Array 47.43 309 eP P 22 58 49.0 +0.6
MK31 eScP ScP 23 03 11.1 -2.3
MKAR Makanchi Array 47.43 309 P P 22 58 48.5 +0.1
comp=Z,3.9nm,0.3s,mb4.4,baz=86,slow=11,SNR=106
MKAR PcP PcP 23 00 08.4 -0.4
comp=Z,3.3nm,0.8s,baz=92,slow=6.1,SNR=5.2
MKAR ScP ScP 23 03 11.2 -2.2
comp=Z,6.1nm,0.9s,baz=85,slow=5.4,SNR=6.5
MKAR S S 23 05 04.2 -0.1
comp=Z,0.6nm,0.7s,baz=86,slow=19,SNR=4.2
MKAR Makanchi Array 47.43 309 P P 22 58 48.5 +0.1
MKAR 23 00 08.4
MKAR S S 23 05 04.2 -0.1
MKAR pmax pmax
comp=Z,4.0nm,0.3s
MKAR smax
comp=N,1.0nm,0.7s
GKN Gorkha 47.44 283 eP P 22 58 49.7 +0.9
NVS Novosibirsk 47.73 320 eP P 22 58 48.4 -2.1
NVS e 23 00 04.3
NVS eS S 23 05 04.5 -3.7
NVS pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.8s
NVS smax
comp=N,20nm,2.0s
NVS smax
comp=E,24nm,2.0s
FITZ Fitzroy Crossi 47.83 197 eP P 22 58 50.9 -0.8
comp=E,25nm,0.6s,mb4.9
DANN Dangsing 48.11 284 eP P 22 58 55.3 +1.5
WRAB Tennant Creek 48.11 186 eP P 22 58 52.6 -1.2
WRAB e*PP pP 23 00 29.5 -1.3
WRAB pmax pmax
comp=Z,26nm,0.4s,mb5.1
WRAB Tennant Creek 48.11 186 eP P 22 58 52.6 -1.2
comp=Z,26nm,0.4s,mb5.1
WRAB epP pP 23 00 29.5 -1.3
WB2 Warramunga Arr 48.12 186 eP P 22 58 52.5 -1.4
WB2 eSCP ScP 23 03 14.4 -2.2
WB2 eS S 23 05 08.9 -5.5
KOLN Koldanda 48.38 283 eP P 22 58 56.9 +1.0
CTA Charters Tower 48.61 171 eP P 22 58 56.9 -0.6
comp=Z,7.5nm,0.8s,mb4.3
CTA Charters Tower 48.61 171 eP P 22 58 56.9 -0.6
CTA pmax pmax
comp=Z,8.0nm,0.8s
CTAO Charters Tower 48.61 171 eP P 22 58 56.9 -0.6
CTAO pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
CTAO Charters Tower 48.61 171 eP P 22 58 56.9 -0.5
comp=Z,7.7nm,0.7s,mb4.3
KURK Kurchatov 50.04 314 P P 22 59 08.0 +0.3
comp=Z,30nm,0.3s,mb5.1,baz=92,slow=7.3,SNR=224
KURK PcP PcP 23 00 17.2 -1.1
comp=Z,3.2nm,0.6s,baz=96,slow=4.3,SNR=3.6
KURK S S 23 05 37.4 -2.5
comp=Z,2.2nm,0.7s,baz=95,slow=14,SNR=15
KURK Kurchatov 50.04 314 P P 22 59 08.0 +0.3
KURK 23 00 17.2
KURK S S 23 05 37.4 -2.5
KURK pmax pmax
comp=Z,30nm,0.4s,mb5.1
KURK smax
comp=N,2.0nm,0.7s
KURK Kurchatov 50.04 314 eP P 22 59 07.4 -0.3
comp=N,15nm,0.8s,mb4.5
KURK ePcP PcP 23 00 16.3 -1.9
KURK eS S 23 05 36.9 -3.0
ASAR Alice Springs 51.85 186 P P 22 59 20.0 -1.2
comp=N,6.7nm,0.4s,mb4.3,baz=15,slow=10,SNR=130
ASAR PcP PcP 23 00 25.6 +0.2
comp=N,3.7nm,0.8s,baz=8.0,slow=3.9,SNR=13
ASAR ScP ScP 23 03 29.1 -3.5
comp=N,1.1nm,0.7s,baz=8.0,slow=5.9,SNR=4.1
ASAR S S 23 06 01.1 -3.8
comp=N,1.3nm,0.8s,baz=16,slow=21,SNR=8.0
ASAR Alice Springs 51.85 186 P P 22 59 20.0 -1.2
ASAR 23 00 25.6
ASAR S S 23 06 01.1 -3.8
ASAR pmax pmax
comp=Z,7.0nm,0.4s
ASAR smax
comp=N,1.0nm,0.8s
TKM2 Tokmak 2 52.30 304 eP P 22 59 25.6 +1.3
TKM2 e 23 00 25.4
TKM2 pmax pmax
comp=Z,11nm,0.5s,mb4.4
TKM2 Tokmak 2 52.30 304 eP P 22 59 25.6 +1.3
comp=Z,11nm,0.5s,mb4.4
TKM2 ePcP PcP 23 00 25.4 -1.6
MBWA Marble Bar 52.49 203 eP P 22 59 25.0 -0.8
comp=Z,31nm,0.5s,mb4.9
AAK Ala-Archa 53.14 304⇑ eP P 22 59 31.0 +0.7
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
AAK Ala-Archa 53.14 304 eP P 22 59 30.5 +0.2
comp=Z,8.8nm,0.4s,mb4.4
EKS2 Erkin-Say 53.66 304 eP P 22 59 34.6 +0.6
comp=Z,5.4nm,0.8s,mb3.9
EKS2 ePcP PcP 23 00 32.0 -0.1
AML Almayashu 53.79 303 eP P 22 59 36.2 +1.4
comp=Z,15nm,0.6s,mb4.5
AML ePcP PcP 23 00 32.6 -0.1
SVW2 Sparrevohn 53.92 33 eP P 22 59 36.2 +0.7
EIDS Eidsvold 54.62 166 eP P 22 59 40.0 -0.9
comp=Z,4.3nm,0.5s,mb3.9
VOSK Vostochnaya 54.81 316 P P 22 59 41.6 -0.3
VOSK pmax pmax
comp=Z,7.0nm,0.6s,mb4.1
BVA0 Borovoye Array 55.16 317 i P P 22 59 44.6 +0.3
BVA0 pmax pmax
comp=Z,6.0nm,0.5s,mb4.1
BVAR Borovoye Array 55.16 317 P P 22 59 44.7 +0.3
comp=Z,48nm,0.4s,mb5.1,baz=91,slow=7.5,SNR=565
BVAR ScP ScP 23 03 43.8 -3.0
comp=Z,1.9nm,0.5s,baz=99,slow=4.6,SNR=3.8
BVAR S S 23 06 45.6 -2.3
comp=Z,10nm,0.8s,baz=92,slow=13,SNR=34
BVAR Borovoye Array 55.16 317 P P 22 59 44.7 +0.4
BVAR S S 23 06 45.6 -2.3
BVAR pmax pmax
comp=Z,48nm,0.4s
BVAR smax
comp=N,10.0nm,0.8s
BRVK Borovoye 55.22 317 eP P 22 59 45.3 +0.5
BRVK pmax pmax
comp=Z,37nm,0.8s,mb4.7
BRVK Borovoye 55.22 317 eP P 22 59 45.3 +0.5
comp=Z,37nm,0.8s,mb4.7
KDAK Kodiak Island 55.23 37 P P 22 59 44.2 -0.5
comp=Z,26nm,0.5s,mb4.8,baz=266,slow=3.0,SNR=49
KDAK Kodiak Island 55.23 37 eP P 22 59 43.9 -0.8
comp=Z,45nm,0.8s,mb4.8
PPLA Purkeypile 55.69 31 eP P 22 59 48.4 +0.6
comp=Z,86nm,1.5s,mb4.8
CHUM Lake Minchumin 55.72 30 eP P 22 59 48.6 +0.6
comp=Z,36nm,0.8s,mb4.7
CHUM ePcP PcP 23 00 39.8 +0.1
KK31 Karatay Array 55.98 305 P P 22 59 50.7 +0.5
KK31 pmax pmax
comp=Z,12nm,0.3s,mb4.6
HYB Hyderabad 56.10 273 i P P 22 59 51.5 +0.1
HYB Hyderabad 56.10 273 eP P 22 59 51.5 +0.1

KTH **Kantishna Hill** 56.31 30 *e*P P 22 59 51.8 -0.3
comp=Z,24nm,0.8s,mb4.5
BPAW **Bear Paw Mtn.** 56.32 30 *e*P P 22 59 52.0 -0.2
comp=Z,48nm,0.8s,mb4.8
TRF **Thorofare Moun** 56.59 31 *e*P P 22 59 53.9 -0.1
comp=Z,34nm,0.9s,mb4.6
RC01 **Rabbit Creek A** 56.75 33 *e*P P 22 59 54.8 -0.4
comp=Z,71nm,1.0s,mb4.8
SEW **Seward** 56.88 35 *e*P P 22 59 55.2 -1.0
comp=Z,77nm,1.0s,mb4.9
COLD **Coldfoot** 56.91 26 *e*P P 22 59 56.8 +0.6
comp=Z,28nm,0.9s,mb4.5
PMR **Palmer** 57.05 33 *e*P P 22 59 56.3 -1.0
PMR pmax pmax
comp=Z,99nm,1.3s,mb4.9
PMR **Palmer** 57.05 33 *e*P P 22 59 56.3 -1.0
comp=Z,99nm,1.3s,mb4.9
MCK **McKinley** 57.20 30 *e*P P 22 59 57.8 -0.5
MCK pmax pmax
comp=Z,89nm,0.8s,mb5.0
MCK **McKinley** 57.20 30 *e*P P 22 59 57.8 -0.5
comp=Z,89nm,0.8s,mb5.0
COLA **College** 57.72 29⇑ *e*P P 23 00 01.6 -0.1
COLA **College** 57.72 29 *e*P P 23 00 01.5 -0.2
comp=Z,18nm,0.6s,mb4.5
PALK **Pallekele** 58.58 261 *e*P P 23 00 08.5 +0.1
comp=Z,15nm,0.6s,mb4.4
PAX **Paxson** 58.76 31 *e*P P 23 00 08.0 -0.8
PAX *e* 23 00 52.2
PAX pmax pmax
comp=Z,42nm,1.1s,mb4.6
PAX **Paxson** 58.76 31 *e*P P 23 00 08.0 -0.8
comp=Z,42nm,1.1s,mb4.6
PAX *e*PcP PcP 23 00 52.2 +0.4
KBL **Kabul** 58.83 295 *e*P P 23 00 10.3 +0.4
KBL pmax pmax
comp=Z,16nm,0.8s,mb4.3
KBL **Kabul** 58.83 295 *e*P P 23 00 10.3 +0.4
comp=Z,16nm,0.8s,mb4.3
MENT **Mentasta** 59.56 31 *e*P P 23 00 14.1 -0.1
FORT **Forrest** 59.61 191 *e*P P 23 00 14.2 -0.7
comp=Z,47nm,0.6s,mb5.0
POO **Poona** 59.81 276 *e*P P 23 00 15.0 -1.7
STKA **Stephens Creek** 59.87 177 *e*P P 23 00 15.6 -1.1
comp=Z,4.1nm,0.4s,mb4.1
STKA **Stephens Creek** 59.87 177 P P 23 00 15.3 -1.3
comp=Z,5.0nm,0.4s,mb4.2,baz=350,slow=6.9,SNR=2.9
SVE **Sverdlovsk** 60.47 322⇓ *e*P P 23 00 20.6 +0.2
SVE *e* 23 03 04.4
SVE pmax pmax
comp=Z,34nm,0.9s,mb4.7
EGAK **Eagle** 60.58 29 *e*P P 23 00 20.5 -0.4
comp=Z,27nm,0.7s,mb4.7
DAWY **Dawson** 61.41 30 *e*P P 23 00 26.5 +0.1
ARU **Arti** 61.66 322 *c i*P P 23 00 28.0 -0.2
ARU *e* 23 01 04.2
ARU *e**PP pP 23 02 14.4 +2.4
ARU *e* 23 02 50.0
ARU *e*S S 23 08 04.9 -5.4
ARU pmax pmax
comp=Z,34nm,1.0s,mb4.7
ARU **Arti** 61.66 322 *e*P P 23 00 28.1 -0.1
comp=Z,24nm,0.6s,mb4.8
PNL **Peninsula** 61.97 35 *e*P P 23 00 30.2 0.0
comp=Z,41nm,0.8s,mb4.9
AB31 **Akbulak array** 62.14 313 P P 23 00 31.2 -0.2
AB31 pmax pmax
comp=Z,13nm,0.3s,mb4.8
HYT **Haines Junctio** 62.72 33 *e*P P 23 00 35.7 +0.7
INK **Inuvik** 63.20 25 *e*P P 23 00 37.2 -0.8
INK pmax pmax
comp=Z,17nm,0.3s
INK **Inuvik** 63.20 25 *e*P P 23 00 37.1 -0.8
comp=Z,17nm,0.3s,mb5.0
SKAG **Skagway** 64.04 35 *e*P P 23 00 43.8 +0.3
comp=Z,19nm,0.6s,mb4.7
CRAG **Craig** 66.15 38 *e*P P 23 00 57.2 +0.4
comp=Z,138nm,1.7s,mb5.2
DLBC **Dease Lake** 66.96 35 P P 23 01 02.5 +0.7
comp=Z,16nm,0.9s,mb4.5,baz=294,slow=7.8,SNR=25
DLBC **Dease Lake** 66.96 35 *e*P P 23 01 02.5 +0.7
KBS **Kingsbay** 68.91 350 *e*P P 23 01 14.2 +0.9
KLMR **Klimovskoe** 70.06 329 P P 23 01 18.8 -1.7
KEV **Kevo** 70.88 340 *e*p P 23 01 23.9 -1.3
comp=Z,4.7nm,0.6s,mb4.2
KEV **Kevo** 70.88 340 *e*P P 23 01 23.9 -1.3
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
ARCES **ARCESS Array B** 71.44 340 P P 23 01 28.6 +0.1
comp=Z,35nm,0.7s,mb5.0,baz=66,slow=7.9,SNR=141
ARCES **ARCESS Array B** 71.44 340 P P 23 01 28.6 +0.1
ARCES pmax pmax
comp=Z,35nm,0.7s
ARE0 **ARCESS Array S** 71.44 340 *e*P P 23 01 28.4 -0.2
RES **Resolute Bay** 71.61 13 P P 23 01 29.3 -0.2
comp=Z,31nm,0.7s,mb4.8,baz=321,slow=6.0,SNR=206
RES **Resolute Bay** 71.61 13 *e*P P 23 01 29.4 0.0
RES pmax pmax
comp=Z,31nm,0.7s,mb4.8
RES **Resolute Bay** 71.61 13 *e*P P 23 01 29.4 -0.1
comp=Z,31nm,0.7s,mb4.8
KTK1 **Kautokeino** 72.41 340 *e*P P 23 01 34.6 +0.4
YKA **Yellowknife Ar** 72.51 28 P P 23 01 34.1 -0.8
comp=Z,27nm,0.7s,mb4.8,baz=296,slow=5.8,SNR=299
YKA **Yellowknife Ar** 72.51 28 P P 23 01 34.1 -0.8
YKA pmax pmax
comp=Z,27nm,0.7s
JOF **Joensuu** 72.70 333 *e*p P 23 01 34.3 -1.6
comp=Z,7.7nm,0.3s,mb4.6
JOF **Joensuu** 72.70 333 *e*P P 23 01 34.3 -1.6
JOF pmax pmax
comp=Z,8.0nm,0.3s,mb4.6
VRHR **Novokhopersk** 72.79 319 *e*P P 23 01 36.3 -0.4
VRHR pmax pmax
comp=Z,30nm,0.8s,mb4.8
VRHR pmax pmax
comp=N,70nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
TRO **Tromso** 73.30 342 *e*P P 23 01 39.0 -0.3
TRO AMb AMB 23 01 45.2
comp=Z,100nm,1.8s,mb5.0
TRO **Tromso** 73.30 342 *e*P P 23 01 39.0 -0.3
comp=Z,100nm,1.8s,mb4.9
OBN **Obninsk** 73.86 324 *e*P P 23 01 42.4 -0.3
OBN *i* 23 01 52.3
OBN *e**PP pP 23 03 35.7 +4.1
OBN pmax pmax
comp=Z,31nm,0.9s,mb4.7
PGC **Sidney** 74.09 43 *e*P P 23 01 44.5 +0.3
VSR **Storozhevoye** 74.14 320 *e*P P 23 01 44.2 -0.2
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VORD **Divnogorie** 74.18 320 *e*P P 23 01 44.0 -0.6
VORD pmax pmax
comp=Z,20nm,1.0s,mb4.5
VORD pmax pmax
comp=N,50nm,1.8s
VORD pmax pmax
comp=E,50nm,0.9s
DAG **Danmarks Havn** 74.29 355⇓ *i*P P 23 01 44.0 -0.8
DAG pmax pmax
comp=Z,22nm,1.2s,mb4.5
DAG **Danmarks Havn** 74.29 355⇓ *i*P P 23 01 44.0 -0.8
comp=Z,22nm,1.2s,mb4.5
B04A **Port Angeles** 74.31 44 ⇓P P 23 01 45.6 +0.2
baz=74
A05A **Maple Falls** 74.77 42 ⇓P P 23 01 48.1 +0.1
baz=75
E03A **Lebam** 74.91 45 ⇓P P 23 01 49.2 +0.3
baz=75
KIV **Kislovodsk** 75.06 312 *e*P P 23 01 49.1 -0.7
KIV *e* 23 01 59.1
KIV *i**PP pP 23 03 43.6 +4.5
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.3
B05A **Bryant** 75.08 43 ⇓P P 23 01 50.0 +0.3
baz=75,SNR=6.6
KAF **Kangasniemi** 75.11 333 *e*p P 23 01 47.8 -1.8
comp=Z,6.3nm,0.4s,mb4.4,baz=54,slow=5.2
KAF **Kangasniemi** 75.11 333 *e*P P 23 01 47.8 -1.8
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb4.4
F03A **Seaside** 75.18 46 ⇑P P 23 01 50.3 -0.1
baz=75
JCW **Jim Creek** 75.21 43 P P 23 01 50.9 +0.4
B06A **Marblemount** 75.33 43 ⇓P P 23 01 51.0 -0.1
baz=75
RPW **Rockport** 75.34 43 *e*P P 23 01 51.1 -0.1
STEI **Steigen** 75.42 341 *e*P P 23 01 50.8 -0.5
C05A **Tolt Reservoir** 75.57 43 ⇑P P 23 01 52.7 +0.2
baz=75,SNR=10
A07A **Ashnola River,** 75.75 42 ⇓P P 23 01 53.6 +0.1
baz=76,SNR=19
H03A **Soap Creek Ran** 75.89 47 ⇓P P 23 01 54.7 +0.4
baz=76
F04A **Amboy** 75.89 45 ⇑P P 23 01 54.5 +0.2
baz=76,SNR=7.1
FMW **Mount Fremont** 75.92 44 P P 23 01 54.7 +0.3
C06A **Tall Timber Ra** 75.95 43 ⇓P P 23 01 54.6 0.0
baz=76
E05A **Randle** 76.03 45 ⇓P P 23 01 54.7 -0.4
baz=76
B07A **Winthrop** 76.17 42 ⇓P P 23 01 55.9 +0.1
baz=76,SNR=14
G04A **Mulino** 76.17 46 ⇓P P 23 01 56.3 +0.3
baz=76
I03A **Eugene** 76.20 47 ⇑P P 23 01 56.6 +0.6
baz=76
ETW **Entiat** 76.43 43 *e*P P 23 01 57.6 +0.3
A08A **Turner Farm, O** 76.44 42 ⇑P P 23 01 57.4 +0.1
baz=76,SNR=9.9
E06A **Yakima** 76.52 44 ⇓P P 23 01 58.1 +0.3
baz=76,SNR=9.9
C07A **Waterville** 76.56 43 ⇓P P 23 01 57.6 -0.4
baz=76,SNR=21
H04A **Detroit Lake** 76.59 46 ⇓P P 23 01 58.2 0.0
baz=76
EBG **Ellensburg** 76.60 44 P P 23 01 58.6 +0.4
WTV **Watervile** 76.62 43 P P 23 01 58.0 -0.3
HOOD **Mount Hood Mea** 76.65 46 *e*P P 23 01 59.7 +1.2
B08A **Colville Reser** 76.68 42 ⇑P P 23 01 58.5 -0.1
baz=76,SNR=21
MOR8 **Moi Rana** 76.81 340 *e*P P 23 01 57.3 -1.7
MOR8 AMb AMB 23 01 59.0
comp=Z,75nm,1.1s,mb5.0
MOR8 **Moi Rana** 76.81 340 *e*P P 23 01 57.3 -1.7
comp=Z,75nm,1.1s,mb5.0
A09A **Danville** 76.84 41 ⇑P P 23 01 59.6 +0.1
baz=77,SNR=13
D07A **Quincy** 76.84 43 ⇑P P 23 01 59.4 0.0
baz=77
G05A **Wamic** 76.89 46 ⇓P P 23 02 00.2 +0.3
baz=77
VSU **Vasula** 76.91 330⇓ *e*P P 23 01 58.5 -1.2
VSU pmax pmax
comp=Z,54nm,0.9s,mb5.0
F06A **Goldendale** 76.99 45 ⇑P P 23 02 00.7 +0.3
baz=77
C08A **Higginbotham F** 77.12 43 ⇓P P 23 02 00.8 -0.2
baz=77,SNR=8.4
STOK **Stokkvaagen** 77.13 340 *e*P P 23 02 00.1 -0.6
STOK AMb AMB 23 02 01.8
comp=Z,111nm,1.6s,mb5.0
STOK **Stokkvaagen** 77.13 340 *e*P P 23 02 00.1 -0.6
comp=Z,111nm,1.6s,mb5.0
E07A **Sunnyside** 77.20 44 ⇓P P 23 02 01.7 +0.3
baz=77
H05A **Madras** 77.22 46 ⇓P P 23 02 01.8 +0.1
baz=77,SNR=6.2
G06A **Carlson Farm,** 77.33 45 ⇑P P 23 02 02.2 0.0
baz=77,SNR=8.2
B09A **Rice** 77.35 42 ⇑P P 23 02 02.3 0.0
baz=77,SNR=9.0
I05A **Bend** 77.41 47 ⇓P P 23 02 03.1 +0.4
baz=77
A10A **Northport** 77.43 41 ⇑P P 23 02 02.7 0.0
baz=77,SNR=12
RSW **Rattlesnake Hi** 77.44 44 *e*P P 23 02 03.1 +0.3
F07A **Phinny Hill Vi** 77.46 45 ⇓P P 23 02 03.2 +0.2
baz=77,SNR=7.4
HAWA **Hanford** 77.47 44 *e*P P 23 02 03.0 0.0
OD2 **Odessa Site #2** 77.50 43 P P 23 02 02.8 -0.3
D08A **Wollman Farm,** 77.54 43 ⇑P P 23 02 03.2 -0.1
baz=77,SNR=15
YBH **Yreka Blue Hor** 77.57 49 P P 23 02 04.0 +0.4
comp=Z,14nm,0.7s,mb4.4,baz=332,slow=4.1,SNR=20
YBH **Yreka Blue Hor** 77.57 49 P P 23 02 04.0 +0.4
YBH pmax pmax
comp=Z,14nm,0.7s
YBH **Yreka Blue Hor** 77.57 49 *e*P P 23 02 04.0 +0.4
comp=Z,14nm,0.8s,mb4.3
C09A **Chrisman Ranch** 77.57 42 ⇑P P 23 02 03.4 -0.1
baz=77,SNR=9.9
EDM **Edmonton** 77.64 36 *e*P P 23 02 03.5 -0.2
VIPM **Ingram Point** 77.67 46 P P 23 02 04.4 +0.3
E08A **Dider Farm, El** 77.72 44 ⇓P P 23 02 04.2 -0.1
baz=78,SNR=6.9
H06A **Lindquist Farm** 77.75 46 ⇑P P 23 02 04.3 -0.2
baz=78,SNR=7.7
D09A **Jones Farm, Ri** 77.90 43 ⇑P P 23 02 05.1 -0.2
baz=78,SNR=10
G07A **Ruggs Ranch, H** 77.92 45 ⇑P P 23 02 05.5 +0.1
baz=78,SNR=8.3
B10A **Chitwood Farm,** 77.95 42 ⇓P P 23 02 05.5 -0.1
baz=78
NEW **Newport** 78.03 42 *e*P P 23 02 05.9 0.0
NEW pmax pmax
comp=Z,27nm,0.9s
NEW **Newport** 78.03 42 *e*P P 23 02 05.9 -0.1
comp=Z,27nm,0.9s,mb4.6
ANN **Anapa** 78.06 314 *e*P P 23 02 04.2 -2.0
ANN *e* 23 02 10.5
ANN *e**PP pP 23 03 58.8 +2.2
ANN *e* 23 05 13.6
ANN *e*PPP 23 07 03.5
ANN *e*S S 23 11 15.6 -2.3
ANN *e*SS SS 23 16 35.9 +3.0
ANN *e*SSS 23 20 00.3
ANN pmax pmax
comp=Z,51nm,1.1s,mb4.8
A11A **Hall Mountain,** 78.13 41 ⇓P P 23 02 07.2 +0.7
baz=78,SNR=13
I06A **Prineville** 78.19 46 ⇑P P 23 02 07.3 +0.4
baz=78,SNR=15
WDC **Whiskeytown Da** 78.20 50 *e*P P 23 02 07.4 +0.4
WDC pmax pmax
comp=Z,19nm,0.9s,mb4.4
WDC **Whiskeytown Da** 78.20 50 *e*P P 23 02 07.3 +0.3
comp=Z,19nm,0.9s,mb4.4
F08A **Pendleton** 78.22 44 ⇑P P 23 02 07.3 +0.3
baz=78,SNR=20
E09A **Wood Farm, Sta** 78.26 43 ⇓P P 23 02 07.3 +0.1
baz=78,SNR=14
G08A **Pilot Rock** 78.35 45 ⇑P P 23 02 07.9 +0.2
baz=78,SNR=11
B11A **Sandpoint** 78.38 41 ⇑P P 23 02 08.1 +0.2
baz=78
LNOR **Lincton Mounta** 78.49 44 *e*P P 23 02 09.6 +1.1
D10A **Wagner Farm, O** 78.53 43 ⇑P P 23 02 08.3 -0.4
baz=78
A12A **Yaak River Ran** 78.55 40 ⇑P P 23 02 09.2 +0.5
baz=78,SNR=14
J06A **Christmas Vall** 78.55 47 ⇓P P 23 02 09.0 +0.1
baz=78,SNR=9.5
I07A **Izee** 78.58 46 ⇓P P 23 02 09.2 +0.3
baz=78,SNR=9.6
NSS **Namsos** 78.69 339 *e*P P 23 02 07.3 -1.9
C11A **Tepee Creek (N** 78.74 42 ⇑P P 23 02 09.9 +0.1
baz=79,SNR=16
F09A **S2 Ranch, Elgi** 78.79 44 ⇓P P 23 02 10.2 +0.1
baz=79
B12A **Libby** 78.82 41 ⇓P P 23 02 10.3 +0.2
baz=79
LBCM **Butte Creek Ri** 78.89 50 P P 23 02 10.6 -0.1
H08A **Prairie City** 78.89 45 ⇑P P 23 02 10.9 +0.3
baz=79,SNR=11
E10A **Myers Farm, Un** 78.90 43 ⇓P P 23 02 10.6 -0.1
baz=79
J07A **Hines** 79.04 47 ⇓P P 23 02 11.9 +0.5
baz=79,SNR=5.2
F10A **Beach Ranch, E** 79.08 44 ⇑P P 23 02 11.4 -0.2
baz=79,SNR=6.3
G09A **Cove** 79.08 44 ⇑P P 23 02 11.7 0.0
baz=79,SNR=16
D11A **Klaveano Farm,** 79.09 42 ⇓P P 23 02 11.2 -0.4
baz=79,SNR=10
MOD **Modoc** 79.09 48 *e*P P 23 02 11.8 +0.1
comp=Z,21nm,0.9s,mb4.5
C12B **Naegeli Ranch,** 79.26 41 ⇑P P 23 02 12.2 -0.3
baz=79,SNR=5.2
K07A **Rock Creek Ran** 79.40 47 ⇓P P 23 02 13.8 +0.4
baz=79,SNR=19
SUMG **Summit** 79.41 359 *e*P P 23 02 13.2 +0.3
comp=Z,13nm,0.9s,mb4.3
H09A **Durkee** 79.45 45 ⇓P P 23 02 14.0 +0.4
baz=79,SNR=6.0
WALA **Waterton Lakes** 79.47 40 *e*P P 23 02 13.8 +0.1
comp=Z,0.7nm,0.8s
G10A **Bishop Farm, J** 79.48 44 ⇑P P 23 02 13.6 -0.1
baz=79,SNR=21
OHCM **Honcut** 79.50 51 *e*P P 23 02 13.7 -0.3
E11A **Bogner Ranch,** 79.51 43 ⇓P P 23 02 13.4 -0.4
baz=79,SNR=12
B13A **Whitefish** 79.51 41 ⇓P P 23 02 14.3 +0.5
baz=79,SNR=20
J08A **Circle Bar Ran** 79.58 46 ⇑P P 23 02 14.6 +0.3
baz=79,SNR=23
BMO **Blue Mountains** 79.58 45 *e*P P 23 02 14.4 +0.1
comp=Z,19nm,0.9s,mb4.4
BSMT **Bassoo Peak** 79.59 41 P P 23 02 14.7 +0.4
L07A **Adell** 79.66 48 ⇓P P 23 02 15.4 +0.6
baz=80,SNR=13
I09A **Lost Marbles R** 79.74 46 ⇓P P 23 02 15.5 +0.3
baz=80,SNR=10
A14A **Double T Ranch** 79.79 40 ⇓P P 23 02 15.6 +0.2
baz=80,SNR=16
C13A **Hot Springs** 79.80 41 ⇓P P 23 02 15.5 +0.1
baz=80,SNR=27
E12A **Beaver Dam Sad** 79.86 43 ⇓P P 23 02 15.9 +0.1
baz=80,SNR=41
K08A **Mann Creek Ran** 79.88 47 ⇓P P 23 02 16.0 +0.1
baz=80,SNR=16
AKASG **Malin Array Be** 79.90 323 P P 23 02 14.7 -1.1
comp=Z,7.5nm,0.4s,mb4.3,baz=52,slow=5.3,SNR=45
AKASG **Malin Array Be** 79.90 323 *i* P P 23 02 15.0 -0.8
AKASG pmax pmax
comp=Z,8.0nm,0.4s
AKBB **Malin Array Si** 79.90 323 *e*P P 23 02 14.9 -0.9
KIEV **Kiev** 79.91 323 *e*P P 23 02 14.6 -1.3
KIEV pmax pmax
comp=Z,19nm,0.8s,mb4.5
KIEV **Kiev** 79.91 323 *e*P P 23 02 14.6 -1.3
comp=Z,19nm,0.8s,mb4.5
WVOR **Wild Horse Val** 79.92 47 *e*P P 23 02 16.1 0.0
WVOR pmax pmax
comp=Z,13nm,0.9s,mb4.3
WVOR **Wild Horse Val** 79.92 47 *e*P P 23 02 16.1 0.0
comp=Z,13nm,0.9s,mb4.3
JTMT **Jette** 79.94 41 *e*P P 23 02 16.4 +0.3
N06A **Buffalo Meadow** 79.94 49 ⇓P P 23 02 16.1 -0.2
baz=80,SNR=12
G11A **Walters Elk Ra** 79.95 44 ⇓P P 23 02 15.7 -0.6
baz=80,SNR=40
BEKR **Beckwourth** 80.01 50 ⇑P P 23 02 16.4 -0.2
baz=80
YBMT **Yellow Bay** 80.03 41 *e*P P 23 02 17.1 +0.5
J09A **Fry Pan Ranch,** 80.04 46 ⇓P P 23 02 17.0 +0.3
baz=80,SNR=28
H10A **Noah's Angus R** 80.06 45 ⇓P P 23 02 16.3 -0.5
baz=80,SNR=13
M07A **Soldier Meadow** 80.08 48 ⇑P P 23 02 17.2 +0.2
baz=80,SNR=9.3
D13A **Huson** 80.17 42 ⇑P P 23 02 16.8 -0.5
baz=80,SNR=6.0
A15A **Johnson Ranch,** 80.18 39 ⇑P P 23 02 17.1 -0.2
baz=80,SNR=34
B14A **Marquette Ranc** 80.20 40 ⇑P P 23 02 17.9 +0.5
baz=80,SNR=21
SWMT **Swartz Lake** 80.22 41 *e*P P 23 02 17.5 -0.1
L08A **Fields** 80.23 47 ⇓P P 23 02 18.1 +0.3
baz=80,SNR=33
LAVA **Lava Cap Winer** 80.28 51 ⇑P P 23 02 17.5 -0.6
baz=80,SNR=8.7
F12A **Elk City** 80.38 43 ⇑P P 23 02 18.3 -0.2
baz=80,SNR=51
H11A **Donnelly** 80.46 44 ⇓P P 23 02 18.4 -0.5
baz=80,SNR=16
N07B **Gerlach** 80.50 49 ⇑P P 23 02 19.3 +0.1
baz=80,SNR=6.1
M08A **Happy Creek Ra** 80.57 48 ⇑P P 23 02 19.9 +0.4
baz=80,SNR=6.0
MSO **Missoula** 80.61 42 *e*P P 23 02 19.1 -0.6
comp=Z,5.2nm,0.8s,mb4.0
B15A **Bradely Ranch,** 80.63 40 ⇑P P 23 02 19.6 -0.1
baz=80,SNR=32
J10A **Berg Farm, Mel** 80.63 46 ⇓P P 23 02 19.7 -0.1
baz=80
SLMT **Seeley Lake** 80.66 41 *e*P P 23 02 19.5 -0.3
E13A **Victor** 80.67 42 ⇑P P 23 02 19.5 -0.5
baz=80
WCN **Washoe City** 80.69 50 ⇑P P 23 02 20.0 -0.2
baz=80
D14A **Greenough** 80.73 41 ⇑P P 23 02 19.6 -0.6
baz=81,SNR=22
PAHR **Pah Rah Range** 80.75 50 *e*P P 23 02 20.7 +0.2
L09A **Wilkinson Ranc** 80.75 47 ⇓P P 23 02 20.8 +0.3
baz=81,SNR=8.5
A16A **West Butte Ran** 80.83 39 ⇑P P 23 02 20.5 -0.2
baz=81,SNR=41
CMB **Columbia Colle** 80.87 52 *e*P P 23 02 20.9 -0.3
CMB pmax pmax
comp=Z,25nm,1.0s,mb4.6
CMB **Columbia Colle** 80.87 52 *e*P P 23 02 20.9 -0.3
comp=Z,25nm,1.0s,mb4.6
O07A **Toulon** 80.87 49 ⇑P P 23 02 21.3 +0.1
baz=81,SNR=7.3
C15A **Salmond Ranch,** 80.89 40 ⇑P P 23 02 21.3 +0.3
baz=81,SNR=59
K10A **MacKenzie Ranc** 80.89 46 ⇑P P 23 02 21.5 +0.3
baz=81,SNR=22
F13A **Darby** 80.92 43 ⇓P P 23 02 20.4 -0.9
baz=81,SNR=20
CHMT **Chamberlain Mo** 80.97 41 *e*P P 23 02 20.9 -0.6
B16A **M & M Farms, S** 81.05 39 ⇑P P 23 02 21.6 -0.3
baz=81,SNR=13
N08A **GE Springer Mi** 81.06 48 ⇓P P 23 02 22.3 +0.2
baz=81,SNR=16
SUW **Suwalki** 81.08 327 *e*P P 23 02 21.2 -0.8
SUW **Suwalki** 81.08 327 *e*P P 23 02 21.2 -0.7
E14A **Clinton** 81.09 42 ⇓P P 23 02 21.6 -0.6
baz=81,SNR=7.0
M09A **Marrel Ranch,** 81.19 48 ⇑P P 23 02 23.0 +0.2
baz=81
MFID **Camas Ranch** 81.22 45 ⇑P P 23 02 23.1 +0.2
baz=81,SNR=21
S05C **Merced** 81.24 52 ⇑P P 23 02 22.6 -0.5
baz=81
H12A **Diamond D Ranc** 81.25 44 ⇑P P 23 02 22.8 -0.2
baz=81,SNR=20
WAKR **Walker** 81.30 51 *e*P P 23 02 24.0 +0.6
A17A **Triple J Farms** 81.33 39 ⇓P P 23 02 23.2 -0.1
baz=81,SNR=15
D15A **Lincoln** 81.33 41 ⇓P P 23 02 22.8 -0.6
baz=81,SNR=10
G13A **Cobalt** 81.34 43 ⇓P P 23 02 22.8 -0.7
baz=81,SNR=21
C16A **Fuhringer Ranc** 81.36 40 ⇓P P 23 02 23.3 -0.2
baz=81,SNR=62
U04C **Hernandez Rese** 81.39 53 ⇓P P 23 02 22.9 -1.0
baz=81
NB2 **NORSAR Subarra** 81.40 337 P P 23 02 21.9 -1.5
comp=Z,29nm,0.7s,mb4.8,baz=47,slow=5.1
NOA **NORSAR Array B** 81.40 337 P P 23 02 22.1 -1.3
comp=Z,24nm,0.6s,mb4.8,baz=47,slow=4.9,SNR=68
NOA PP PP 23 05 37.7 -0.2
comp=Z,2.7nm,0.8s,baz=46,slow=8.4,SNR=6.9
NOA **NORSAR Array B** 81.40 337 P P 23 02 22.1 -1.3
NOA 23 05 37.7
NOA pmax pmax
comp=Z,24nm,0.6s
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA **NORSAR Array B** 81.40 337 P P 23 02 22.1 -1.3
NOA PP PP 23 05 37.7 -0.2
N09A **Rock Creek Ran** 81.42 48 ⇓P P 23 02 24.2 +0.3
baz=81,SNR=5.7
I12A **Atlanta** 81.46 45 ⇑P P 23 02 24.2 +0.1
baz=81,SNR=14
F14A **Wisdom** 81.48 42 ⇑P P 23 02 24.2 0.0
baz=81
L10A **Juniper Basin** 81.50 47 ⇑P P 23 02 24.5 +0.2
baz=81,SNR=14
E15A **Deer Lodge** 81.59 42 ⇑P P 23 02 24.6 -0.1
baz=81,SNR=30
H13A **Challis** 81.61 44 ⇑P P 23 02 24.9 +0.1

baz=81,SNR=57
B17A L&G Farms, Che 81.63 39 ⇓P P 23 02 24.8 0.0
baz=81,SNR=91
J12A Stokes Ranch, 81.77 45 ⇑P P 23 02 25.8 +0.2
baz=82,SNR=10.0
A18A Metzger Ranch, 81.81 38 ⇓P P 23 02 25.5 -0.2
baz=82,SNR=28
BMN Battle Mountai 81.83 48 eP P 23 02 26.7 +0.6
D16A Dana Ranch, Ca 81.89 41 ⇓P P 23 02 26.2 0.0
baz=82,SNR=36
HRY Holter Researc 81.90 41 eP P 23 02 26.5 +0.2
L11A Cat Creek Ranc 81.91 46 ⇑P P 23 02 26.9 +0.5
baz=82,SNR=33
F15A Butte 81.99 42 ⇓P P 23 02 26.9 +0.1
baz=82,SNR=54
O09A Fish Creek Ran 81.99 49 ⇑P P 23 02 27.1 +0.2
baz=82,SNR=13
C17A Wharram Farm, 82.01 40 ⇓P P 23 02 26.0 -0.8
baz=82,SNR=18
LRM Limekiln Ridge 82.02 42 eP P 23 02 27.1 +0.2
I13A Wildhorse Cree 82.03 44 ⇑P P 23 02 27.6 +0.6
baz=82,SNR=34
HLID Hailey 82.03 45 ⇑P P 23 02 27.3 +0.3
baz=82
HLID Hailey 82.03 45 eP P 23 02 27.4 +0.4
comp=Z,10nm,0.7s,mb4.4
E16A East Helena 82.09 41 ⇓P P 23 02 27.2 0.0
baz=82,SNR=13
NVAR Mina Array Bea 82.11 51 P P 23 02 27.7 +0.2
comp=Z,17nm,0.9s,mb4.5,baz=278,slow=5.4,SNR=38
H14A Leadore 82.12 43 ⇑P P 23 02 27.1 -0.3
baz=82,SNR=8.9
MLAC Mammoth Lakes 82.14 52 ⇓P P 23 02 27.6 0.0
baz=82
B18A Beardsley Farm 82.14 39 ⇓P P 23 02 27.3 -0.2
baz=82,SNR=34
Q08A Gabbs 82.14 50 ⇑P P 23 02 27.6 -0.1
baz=82
N10A Dunphy 82.16 48 ⇓P P 23 02 28.1 +0.4
baz=82
DLMT Dillon 82.18 42 eP P 23 02 27.3 -0.4
comp=Z,41nm,1.1s,mb4.8
K12A Draper Farm, C 82.21 46 ⇑P P 23 02 28.1 +0.2
baz=82,SNR=10
M11A Holland Ranch, 82.26 47 ⇓P P 23 02 28.9 +0.7
baz=82,SNR=12
J13A Cove Ranch, Pi 82.27 45 ⇑P P 23 02 28.9 +0.7
baz=82
R08A Mina 82.28 51 ⇓P P 23 02 28.6 +0.2
baz=82
FFC Flin Flon 82.29 31 eP P 23 02 26.9 -1.2
FFC pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
FFC Flin Flon 82.29 31 eP P 23 02 26.9 -1.2
comp=Z,4.8nm,0.6s,mb4.1
D17A Six Diamond Ra 82.32 40 ⇑P P 23 02 28.2 -0.2
baz=82,SNR=41
G15A Dillon 82.35 43 ⇑P P 23 02 28.6 -0.1
baz=82,SNR=18
EGMT Eagleton 82.36 39 ⇓P P 23 02 28.5 -0.1
baz=82
EGMT Eagleton 82.36 39 eP P 23 02 28.3 -0.2
comp=Z,34nm,0.8s,mb4.8
O10A Cortez Mining, 82.38 48 ⇓P P 23 02 29.3 +0.5
baz=82,SNR=8.0
L12A House Creek Ra 82.39 46 ⇑P P 23 02 29.4 +0.6
baz=82,SNR=10
I14A Mackay 82.43 44 ⇑P P 23 02 29.9 +0.8
baz=82,SNR=77
MTUM Tungsten Hills 82.46 52 eP P 23 02 29.5 +0.2
F16A Kennard Place, 82.53 42 ⇓P P 23 02 29.4 0.0
baz=82,SNR=18
H15A Lima 82.55 43 ⇓P P 23 02 29.6 0.0
baz=82,SNR=7.9
BOZ Bozeman (W) 82.60 42 ⇓P P 23 02 30.0 +0.1
baz=82
BOZ Bozeman (W) 82.60 42 eP P 23 02 30.1 +0.2
BOZ pmax pmax
comp=Z,16nm,0.8s,mb4.6
BOZ Bozeman (W) 82.60 42 eP P 23 02 30.1 +0.2
comp=Z,16nm,0.8s,mb4.6
E17A Martinsdale 82.60 41 ⇓P P 23 02 30.3 +0.5
baz=82,SNR=40
N11A Elko Archery C 82.61 48 ⇓P P 23 02 30.6 +0.6
baz=82
Q09A Carvers 82.67 50 ⇑P P 23 02 30.2 -0.1
baz=82
J14A Carey 82.71 45 ⇑P P 23 02 31.4 +1.0
baz=82,SNR=51
K13A Stover Farm, H 82.72 45 ⇑P P 23 02 31.1 +0.6
baz=82,SNR=15
G16A Moss Hill, Enn 82.72 42 ⇑P P 23 02 30.4 -0.1
baz=82,SNR=12
P10A Eureka 82.75 49 ⇑P P 23 02 30.9 +0.1
baz=83
PKM Peak Mountain 82.79 54 ⇓P P 23 02 31.1 +0.1
baz=83
D18A Linhart Farms, 82.80 40 ⇓P P 23 02 30.6 -0.2
baz=83,SNR=7.5
FCC Fort Churchill 82.83 25 eP P 23 02 29.6 -1.1
comp=Z,0.7nm,0.9s
M12A Wells 82.83 47 ⇓P P 23 02 31.8 +0.6
baz=83,SNR=42
VES Vestal, Richgr 82.84 53 ⇑P P 23 02 30.2 -1.1
baz=83
ELK Elko 82.97 47 P P 23 02 32.2 +0.4
comp=Z,16nm,0.9s,mb4.5,baz=304,slow=5.7,SNR=56
ELK Elko 82.97 47 P P 23 02 32.2 +0.4
ELK pmax pmax
comp=Z,16nm,0.9s
ELK Elko 82.97 47 P P 23 02 32.2 +0.4
I15A Monteview 82.98 44 ⇓P P 23 02 32.2 +0.4
baz=83
BR131 Keskin Array S 83.01 311 eP P 23 02 31.8 -0.3
comp=Z,3.5nm,0.6s,mb4.1
BRTR Keskin Array B 83.01 311 P P 23 02 31.4 -0.6
comp=Z,4.2nm,0.6s,mb4.1,baz=97,slow=3.5,SNR=20
BRTR Keskin Array B 83.01 311 P P 23 02 31.5 -0.5
BRTR pmax pmax
comp=Z,4.0nm,0.6s
O11A Cowboy Ranch, 83.02 48 ⇓P P 23 02 32.2 +0.1
baz=83,SNR=16
TPH Tonopah 83.02 51 eP P 23 02 32.6 +0.5
TPH pmax pmax
comp=Z,37nm,1.0s,mb4.9
TPH Tonopah 83.02 51 eP P 23 02 32.6 +0.4
comp=Z,37nm,1.0s,mb4.9
F17A Fitzpatrick Pl 83.03 41 ⇑P P 23 02 32.1 +0.1
baz=83,SNR=18
R09A Tonopah 83.04 50 ⇑P P 23 02 32.2 0.0
baz=83,SNR=32
N12A Clover Valley, 83.05 47 ⇑P P 23 02 32.5 +0.3
baz=83,SNR=22
E18A Harlowton 83.09 40 ⇓P P 23 02 32.7 +0.4
baz=83,SNR=38
L13A Double Diamond 83.10 46 ⇓P P 23 02 33.1 +0.7
baz=83,SNR=15
TLCR 83.13 318⇑iP P 23 02 31.9 -0.6
TLCR 83.13 318 ⇑P P 23 02 31.9 -0.6
QLMT Earthquake Lak 83.17 42 eP P 23 02 33.3 +0.6
Q10A Clear Creek Ra 83.20 50 ⇑P P 23 02 32.8 -0.1
baz=83,SNR=9.8
S09A Goldfield 83.20 51 ⇑P P 23 02 33.0 0.0
baz=83,SNR=26
P11A Circle Ranch, 83.25 49 ⇓P P 23 02 33.3 0.0
baz=83
G17A Pierce Place, 83.30 42 ⇑P P 23 02 33.9 +0.5
baz=83,SNR=9.9
J15A Blackfoot 83.34 44 ⇓P P 23 02 34.4 +0.8
baz=83
K14A Jones Ranch, D 83.34 45 ⇑P P 23 02 34.3 +0.7
baz=83,SNR=20
H16A Russell Place, 83.34 42 ⇑P P 23 02 34.3 +0.7
baz=83,SNR=22
M13A Montello 83.34 46 ⇑P P 23 02 34.0 +0.3
baz=83,SNR=26
ISA Isabella 83.36 53 ⇑P P 23 02 32.9 -1.0
baz=83
ISA Isabella 83.36 53 eP P 23 02 32.6 -1.3
ISA pmax pmax
comp=Z,29nm,1.4s,mb4.6
ISA Isabella 83.36 53 eP P 23 02 32.6 -1.3
comp=Z,29nm,1.4s,mb4.6
ARVC Arvin 83.38 54 ⇑P P 23 02 33.4 -0.6
baz=83
GRAC Grapevine Rang 83.46 51 ⇑P P 23 02 34.2 -0.2
baz=83
S10A Tonopah Range, 83.53 50 ⇑P P 23 02 34.5 -0.1
baz=83,SNR=26
R10A Warm Springs 83.54 50 ⇓P P 23 02 34.7 0.0
baz=83,SNR=8.5
O12A Currie 83.54 48 ⇓P P 23 02 34.9 +0.2
baz=83,SNR=34
F18A Big Timber 83.57 41 ⇓P P 23 02 34.9 +0.1
baz=83,SNR=21
L14A Malta 83.57 46 ⇓P P 23 02 35.3 +0.5
baz=83,SNR=18
I16A Newdale 83.66 43 ⇓P P 23 02 36.1 +1.0
baz=84,SNR=13
K15A Arbon 83.67 45 ⇓P P 23 02 36.0 +0.8
baz=84,SNR=6.8
YNR Norris Junctio 83.67 42 eP P 23 02 37.1 +1.8
OSI Osito Adit 83.71 54 ⇑P P 23 02 35.9 +0.3
baz=84
YFT Old Faithful 83.73 43 eP P 23 02 38.1 +2.6
M14A Sheep Mountain 83.79 46 ⇓P P 23 02 36.4 +0.5
baz=84,SNR=54
BUR08 Bucovina Ar. S 83.80 321 eP P 23 02 35.5 -0.3
BURAR Bucovina Array 83.80 321⇑iP P 23 02 35.6 -0.2
BURAR Bucovina Array 83.80 321 ⇑P P 23 02 35.6 -0.2
MPMC Manual Prospec 83.86 52 ⇓P P 23 02 36.1 -0.3
baz=84
H17A Grant Village 83.91 42 ⇓P P 23 02 38.6 +2.2
baz=84,SNR=6.8
LKWY Lake 83.92 42 eP P 23 02 38.3 +1.8
LKWY pmax pmax
comp=Z,51nm,1.1s,mb5.0
LKWY Lake 83.92 42 eP P 23 02 38.3 +1.8
comp=Z,51nm,1.1s,mb5.0
HARR Harsova 83.93 318⇓iP P 23 02 36.3 -0.2
HARR Harsova 83.93 318 ⇓P P 23 02 36.3 -0.2
VRI Vrincioaia 83.96 319⇓iP P 23 02 37.1 +0.4
VRI Vrincioaia 83.96 319 ⇓P P 23 02 37.1 +0.5
IMW Indian Meadow 83.97 43 eP P 23 02 37.3 +0.5
comp=Z,24nm,0.9s,mb4.7
R11A Troy Canyon, C 83.99 50 ⇓P P 23 02 36.9 -0.1
baz=84,SNR=17
DCID1 Drake Creek 83.99 43 eP P 23 02 38.3 +1.4
comp=Z,21nm,0.9s,mb4.7
HVU Hansel Valley 84.00 46 eP P 23 02 37.9 +1.0
LRMC Laurel Mountai 84.01 53 ⇓P P 23 02 36.9 -0.3
baz=84
PLOR Plostina 84.02 319⇓iP P 23 02 37.4 +0.5
RRI2 Red Ridge 84.05 44 eP P 23 02 37.9 +0.7
comp=Z,15nm,0.8s,mb4.6
FURC Furnace Creek, 84.08 52 ⇑P P 23 02 37.5 0.0
baz=84
EDW2 Edwards Air Fo 84.10 54 ⇑P P 23 02 37.5 0.0
baz=84
O13A Hicks Ranch, I 84.11 47 ⇑P P 23 02 37.8 +0.3
baz=84,SNR=5.3
L15A Malad City 84.12 45 ⇑P P 23 02 37.6 +0.1
baz=84,SNR=12
Q12A Willow Creek R 84.13 49 ⇓P P 23 02 37.6 0.0
baz=84
K16A Soda Springs 84.17 44 ⇑P P 23 02 38.7 +0.9
baz=84,SNR=20
MOOW Moose Ponds 84.17 43 eP P 23 02 38.3 +0.5
comp=Z,7.1nm,0.8s,mb4.2
I17A Pilgram Creek 84.18 43 ⇓P P 23 02 39.0 +1.3
baz=84,SNR=9.1
TPAW Teton Pass 84.19 43 eP P 23 02 38.6 +0.8
comp=Z,15nm,0.8s,mb4.6
N14A Grayback Hills 84.24 46 ⇑P P 23 02 38.3 +0.2
baz=84
S11A Rachel 84.24 50 ⇓P P 23 02 38.3 0.0
baz=84,SNR=5.0
TPNV Topopah Spring 84.26 51 ⇓P P 23 02 38.3 0.0
baz=84
TPNV Topopah Spring 84.26 51 eP P 23 02 37.8 -0.5
TPNV pmax pmax
comp=Z,29nm,1.1s,mb4.7
TPNV Topopah Spring 84.26 51 eP P 23 02 37.8 -0.5
comp=Z,29nm,1.1s,mb4.7
RLMT Red Lodge 84.28 41 ⇓P P 23 02 38.9 +0.7
baz=84
RLMT Red Lodge 84.28 41 eP P 23 02 38.9 +0.7
comp=Z,27nm,0.6s,mb5.0
GKP Gorka Klasztor 84.31 329 eP P 23 02 37.2 -1.0
GKP Gorka Klasztor 84.31 329 eP P 23 02 37.2 -1.0
REDW Red Top Meadow 84.32 43 eP P 23 02 38.8 +0.3
comp=Z,21nm,1.4s,mb4.5
SNOW Snow King Moun 84.33 43 eP P 23 02 39.5 +1.1
comp=Z,10nm,0.8s,mb4.4
LOHW Long Hollow 84.33 43 eP P 23 02 38.8 +0.3
comp=Z,11nm,0.9s,mb4.4
M15A Larsen Ranch, 84.38 46 ⇓P P 23 02 38.9 +0.1
baz=84,SNR=12
J17A Brown Place, J 84.41 43 ⇑P P 23 02 39.5 +0.6
baz=84
P13A Bates Ranch, G 84.45 48 ⇓P P 23 02 39.2 0.0
baz=84,SNR=22
SPUT South Promonto 84.46 46 eP P 23 02 39.6 +0.4
U10A Ash Meadows, A 84.48 52 ⇑P P 23 02 39.7 +0.3
baz=84
KOLS Kolonicke sedl 84.60 324 eP P 23 02 39.6 -0.1
MLR Muntele Rosu 84.63 319⇓iP P 23 02 38.9 -1.0
MLR Muntele Rosu 84.63 319 ⇓P P 23 02 38.9 -1.1
N15A Stansbury Isla 84.64 46 ⇑P P 23 02 40.2 +0.1
baz=84,SNR=7.1
R12A Pony Springs, 84.65 49 ⇓P P 23 02 40.2 0.0
baz=84,SNR=10
Q13A Wheeler Ranch, 84.71 48 ⇓P P 23 02 40.3 -0.2
baz=84,SNR=7.2
L16A Fish Haven 84.71 45 ⇑P P 23 02 40.9 +0.4
baz=84,SNR=20
GSC Goldstone 84.72 53 ⇓P P 23 02 40.3 -0.3
baz=85
GSC Goldstone 84.72 53 eP P 23 02 40.3 -0.3
comp=Z,1.3nm,1.1s,mb3.4
SFJD Kangerlussuaq 84.76 4 P P 23 02 39.5 -0.6
comp=Z,32nm,0.7s,mb4.9,baz=334,slow=3.9,SNR=13
T11A Corn Creek, Al 84.81 50 ⇑P P 23 02 40.8 -0.2
baz=85,SNR=6.7
STHS Stebnicka Huta 84.83 324 eP P 23 02 40.5 -0.3
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
STHS Stebnicka Huta 84.83 324 eP P 23 02 40.5 -0.3
comp=Z,3.6nm,0.9s,mb3.9
DUG Dugway 84.83 47 eP P 23 02 41.0 -0.1
DUG pmax pmax
comp=Z,28nm,1.2s,mb4.7
DUG Dugway 84.83 47 eP P 23 02 41.0 0.0
comp=Z,28nm,1.2s,mb4.7
J18A Kendall Valley 84.91 43 ⇓P P 23 02 41.7 +0.4
baz=85,SNR=8.5
L17A Cokeville 85.01 44 ⇑P P 23 02 42.0 +0.1
baz=85,SNR=5.7
CRVS Cervenica-Dubn 85.04 324 eP P 23 02 40.4 -1.5
CRVS pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
CRVS Cervenica-Dubn 85.04 324 eP P 23 02 40.4 -1.5
comp=Z,5.0nm,1.1s,mb4.0
U11A Corn Creek 85.13 51 ⇓P P 23 02 42.5 -0.1
baz=85
R13A O'Grain Ranch, 85.16 49 ⇓P P 23 02 42.9 +0.2
baz=85
VOIR 85.17 320⇓iP P 23 02 42.2 -0.4
VOIR 85.17 320 ⇓P P 23 02 42.2 -0.4
Q14A Sevier Lake (B 85.18 48 ⇑P P 23 02 42.8 0.0
baz=85,SNR=22
SHPR Sheep Range 85.24 51 eP P 23 02 43.6 +0.5
HEC Hector,Ludlow 85.30 53 ⇓P P 23 02 43.3 -0.1
baz=85
MURC Murrieta 85.31 54 ⇑P P 23 02 43.2 -0.3
baz=85
V11A Goodsprings 85.40 52 ⇓P P 23 02 43.6 -0.3
baz=85
BW06 Boulder Array 85.44 43 ⇓P P 23 02 43.7 -0.2
baz=85
PDAR Pinedale Array 85.44 43 P P 23 02 43.5 -0.5
comp=Z,5.9nm,0.8s,mb4.2,baz=267,slow=1.8,SNR=18
JLU Jordanelle 85.48 46 eP P 23 02 45.2 +1.0
M17A Scullys Gap (B 85.49 45 ⇓P P 23 02 43.9 -0.3
baz=85,SNR=12
P15A Leamington 85.52 47 ⇓P P 23 02 44.3 -0.1
baz=85,SNR=8.8
S13A Holt Ranch, En 85.55 50 ⇑P P 23 02 44.7 +0.1
baz=85,SNR=7.0
L18A Fontenelle, Gr 85.63 44 ⇓P P 23 02 45.0 +0.2
baz=85,SNR=5.7
DRGR 85.67 322⇑iP P 23 02 44.3 -0.7
DRGR 85.67 322 ⇑P P 23 02 44.3 -0.7
N17A Moffit Pass 85.68 45 ⇓P P 23 02 45.1 -0.1
baz=86
MPU Maple Canyon 85.69 47 eP P 23 02 46.1 +0.9
DAU Daniels Canyon 85.71 46 eP P 23 02 45.9 +0.6
109C Camp Elliot, M 85.74 55 ⇓P P 23 02 45.4 -0.2
baz=86
FRB Frobisher Bay 85.78 12 P P 23 02 44.2 -0.9
comp=Z,13nm,0.7s,mb4.7,baz=337,slow=5.8,SNR=20
FRB Frobisher Bay 85.78 12 P P 23 02 44.2 -0.9
FRB pmax pmax
comp=Z,13nm,0.7s
GMRC Granite Mounta 85.79 53 ⇑P P 23 02 45.7 -0.1
baz=86
T13A Saint George 85.82 50 ⇑P P 23 02 45.9 0.0
baz=86
K19A Absolon Red Bu 85.84 43 ⇓P P 23 02 45.1 -0.8
baz=86
PFO Pinyon Flat Ob 85.84 54 ⇑P P 23 02 45.6 -0.5
baz=86
PFO Pinyon Flat Ob 85.84 54 eP P 23 02 44.7 -1.4
PFO pmax pmax
comp=Z,14nm,0.9s,mb4.6
PFO Pinyon Flat Ob 85.84 54 eP P 23 02 44.7 -1.4
comp=Z,14nm,0.9s,mb4.6
V12A Nelson 85.86 52 ⇑P P 23 02 46.2 +0.1
baz=86
M18A Lyman 85.89 45 ⇓P P 23 02 46.3 +0.2
baz=86
U13A Pakoon Wash 86.10 51 ⇓P P 23 02 47.1 -0.2
baz=86
O17A Robinson Place 86.16 46 ⇑P P 23 02 47.5 +0.1
baz=86,SNR=6.0
MSU Marysvale 86.16 48 eP P 23 02 48.3 +0.8
MONP Monument Peak 86.24 55 ⇑P P 23 02 47.7 -0.2
baz=86
K20A Yellowstone Ra 86.24 43 ⇓P P 23 02 47.3 -0.5
baz=86
KSP Ksiaz 86.35 328 eP P 23 02 47.5 -0.7
KSP Ksiaz 86.35 328 eP P 23 02 47.2 -0.9
N18A Larsen Ranch, 86.39 45 ⇓P P 23 02 48.6 +0.1
baz=86
PSZ Piszkesteto 86.47 324⇑iP P 23 02 48.2 -0.5
PSZ Piszkesteto 86.47 324 eP P 23 02 48.1 -0.6
comp=Z,5.3nm,1.0s,mb4.1
BC3 Big Chuckw Mtn 86.53 54 ⇑P P 23 02 49.3 0.0
baz=86
P17A Butcher Ranch, 86.56 47 ⇑P P 23 02 49.4 0.0
baz=86
O18A Roosevelt 86.58 46 ⇑P P 23 02 50.0 +0.5
baz=86
Q16A Castle Valley 86.59 47 ⇓P P 23 02 49.7 +0.2
baz=86
VYHS Vyhne 86.65 325 iP P 23 02 48.8 -0.8
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
VYHS Vyhne 86.65 325 iP P 23 02 48.8 -0.8
comp=Z,5.9nm,1.1s,mb4.1
DPC Dobruska-Polom 86.67 327⇑iP P 23 02 48.8 -0.8
UPC Upice 86.71 327⇑iP P 23 02 48.8 -1.0
P18A Preston Nutter 86.79 46 ⇑P P 23 02 50.5 0.0
baz=87
KOLL Kolacno 86.81 325 iP P 23 02 49.5 -0.8
T15A Red Dirt Ranch 86.84 49 ⇑P P 23 02 50.5 -0.3
baz=87,SNR=6.3
SRU San Rafael 86.90 47 ⇓P P 23 02 50.6 -0.3
baz=87
SRU San Rafael 86.90 47 eP P 23 02 51.0 0.0
BZS Buzias 86.99 321⇓iP P 23 02 49.9 -1.3
BZS Buzias 86.99 321 ⇓P P 23 02 49.9 -1.3
M20A Sweetwater, Wa 87.01 44 ⇑P P 23 02 51.6 +0.1
baz=87
V14A Boquillas Ranc 87.11 51 ⇓P P 23 02 51.9 -0.1
baz=87
Q18A Rafter H Ranch 87.16 47 ⇓P P 23 02 51.5 -0.6
baz=87
R17A Hanksville Air 87.17 47 ⇓P P 23 02 51.9 -0.4
baz=87,SNR=5.3
L21A Rawlins 87.23 43 ⇑P P 23 02 52.4 -0.1
baz=87
VRAC Vranov 87.23 326⇑iP P 23 02 51.6 -0.7
VRAC Vranov 87.23 326 ⇑P P 23 02 51.6 -0.7
N20A Spence Gulch, 87.34 44 ⇓P P 23 02 53.1 +0.1
baz=87
W14A Seligman 87.35 51 ⇑P P 23 02 53.5 +0.4
baz=87
PVCC Panska Ves 87.38 328⇑eP P 23 02 51.9 -1.0
BRG Berggiesshubel 87.43 329 iP P 23 02 52.0 -1.2
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
BRG Berggiesshubel 87.43 329 iP P 23 02 52.0 -1.2
comp=Z,6.0nm,0.8s,mb4.3
M21A Separation Pea 87.44 43 ⇓P P 23 02 53.4 -0.1
baz=87
CLL Collm 87.55 329 iP P 23 02 52.2 -1.6
CLL epP pP 23 04 46.0 -1.5
S17A Black Ridge (B 87.55 48 ⇓P P 23 02 53.7 -0.4
baz=87
P19A Cripple Cowboy 87.59 46 ⇓P P 23 02 54.3 +0.1
baz=87,SNR=7.2
Y13A Salome 87.59 53 ⇑P P 23 02 54.2 -0.1
baz=87
V15A Kaibab Nationa 87.64 50 ⇓P P 23 02 54.6 +0.1
baz=88
R18A Canyonlands Na 87.72 47 ⇓P P 23 02 54.2 -0.6
baz=88
PRU Pruhonice 87.76 328⇑iP P 23 02 53.3 -1.4
Q19A Hogan Spring (87.80 46 ⇓P P 23 02 55.0 -0.2
baz=88
S18A Hurst Farm, Bl 88.05 48 ⇑P P 23 02 56.1 -0.3
baz=88
ULM Lac du Bonnet 88.05 32 P P 23 02 54.6 -1.5
comp=Z,4.8nm,0.4s,mb4.6,baz=316,slow=3.2,SNR=9.3
R19A Curley Farm, L 88.18 47 ⇑P P 23 02 56.8 -0.2
baz=88
113A Mohawk Valley, 88.20 54 ⇓P P 23 02 56.9 -0.3
baz=88
PKSM Moragy 88.22 323⇓iP P 23 02 55.6 -1.4
PKSM Moragy 88.22 323 ⇓P P 23 02 55.6 -1.4
U17A Shonto 88.22 49 ⇑P P 23 02 57.4 +0.2
baz=88
PV10 Paradox Valley 88.28 47 eP P 23 02 57.9 +0.5
comp=Z,409nm,0.8s
X15A Humboldt 88.33 51 ⇑P P 23 02 57.8 0.0
baz=88
PV04 Paradox Valley 88.35 47 eP P 23 02 58.3 +0.5
Q20A Ridgley Place, 88.42 46 ⇓P P 23 02 58.1 0.0
baz=88,SNR=12
T18A Mexican Hat 88.44 48 ⇑P P 23 02 57.6 -0.6
baz=88
W16A Flagstaff 88.48 51 ⇓P P 23 02 58.7 +0.3
baz=88
NKC Novy Kostel 88.56 329⇑eP P 23 02 57.5 -1.0
Y15A Casa Rosa Ranc 88.56 52 ⇓P P 23 02 58.8 -0.1
baz=88
S19A Harvey Farm, M 88.58 47 ⇓P P 23 02 58.7 -0.1
baz=88
PV01 Paradox Valley 88.72 47 eP P 23 02 59.2 -0.3
comp=Z,329nm,0.7s
PHWY Pilot Hill 88.77 43 eP P 23 03 00.2 +0.5
KHC Kasperske Hory 88.80 328⇑iP P 23 02 58.4 -1.2
U18A Rough Rock, Ch 88.85 49 ⇓P P 23 02 59.5 -0.6
baz=89
GERES GERESS Array B 88.94 327 P P 23 02 59.1 -1.2
comp=Z,3.1nm,0.8s,mb4.2,baz=52,slow=5.2,SNR=20
GERES GERESS Array B 88.94 327 P P 23 02 59.1 -1.2
GERES pmax pmax
comp=Z,3.0nm,0.8s
T19A Beclabito 89.17 48 ⇓P P 23 03 01.5 -0.2
baz=89,SNR=6.3
Y16A Circle Bar Ran 89.19 52 ⇑P P 23 03 02.5 +0.7
baz=89
R21A Cimarron 89.23 46 ⇑P P 23 03 02.4 +0.5
baz=89,SNR=10
MVCO Mesa Verde 89.30 47 ⇓P P 23 03 02.5 +0.3
baz=89
214A Organ Pipe Nat 89.31 54 ⇑P P 23 03 02.7 +0.3
baz=89
115A Sonoran Desert 89.32 53 ⇑P P 23 03 02.6 +0.2
baz=89
ISCO Idaho Springs 89.59 44 eP P 23 03 03.7 +0.2
ISCO pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
ISCO Idaho Springs 89.59 44 eP P 23 03 03.7 +0.2
comp=Z,10nm,1.2s,mb4.5
Y17A Roosevelt 89.73 51 ⇓P P 23 03 04.5 +0.2
baz=90
116A Eloy 89.77 53 ⇓P P 23 03 04.9 +0.5
baz=90
V19A Window Rock 89.80 49 ⇓P P 23 03 05.1 +0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=90,SNR=5.7						
X18A	Snowflake	89.87	50	⇑P	P	23 03 05.4	+0.5
	baz=90						
W19A	Sanders	89.92	50	⇓P	P	23 03 05.7	+0.5
	baz=90						
Y18A	Canyon Day Jun	90.24	51	⇓P	P	23 03 07.1	+0.5
	baz=90,SNR=7.8						
X19A	St. Johns	90.38	50	⇑P	P	23 03 07.8	+0.5
	baz=90						
117A	Oracle	90.44	52	⇑P	P	23 03 07.6	0.0
	baz=90,SNR=5.4						
TUC	Tucson	90.55	53	eP	P	23 03 08.6	+0.5
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TUC	Tucson	90.55	53	eP	P	23 03 08.6	+0.5
	comp=Z,8.4nm,1.0s,mb4.6						
Y19A	Nutrioso	90.67	50	⇓P	P	23 03 09.5	+0.9
	baz=90,SNR=5.5						
217A	Green Valley	90.83	53	⇑P	P	23 03 09.8	+0.4
	baz=91,SNR=6.1						
SDCO	Great Sand Dun	90.90	46	eP	P	23 03 10.0	+0.4
	comp=Z,17nm,1.1s,mb4.9						
118A	Homack Ranch,	90.93	52	⇑P	P	23 03 10.2	+0.3
	baz=91,SNR=8.0						
218A	Dragoon	91.26	52	⇓P	P	23 03 11.9	+0.5
	baz=91						
119A	Ashpeak Ranch,	91.32	51	⇓P	P	23 03 12.0	+0.3
	baz=91						
318A	Bisbee	91.60	53	⇑P	P	23 03 13.3	+0.4
	baz=91,SNR=11						
219A	White Tail Can	91.79	52	⇑P	P	23 03 14.1	+0.3
	baz=92,SNR=7.6						
ANMO	Albuquerque	91.96	48	P	P	23 03 15.2	+0.7
	comp=Z,12nm,0.8s,mb5.0,baz=292,slow=5.8,SNR=9.5						
ANMO	Albuquerque	91.96	48	P	P	23 03 15.3	+0.7
ANMO				pmax	pmax		
	comp=Z,12nm,0.8s						
319A	Douglas	92.13	53	⇓P	P	23 03 15.5	+0.1
	baz=92						
CDF	Champ du Feu	92.20	330	eP	P	23 03 14.1	-1.3
	comp=Z,27nm,1.0s,mb4.9						
CDF	Champ du Feu	92.20	330	eP	P	23 03 14.1	-1.3
CDF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CDF	Champ du Feu	92.20	330	eP	P	23 03 14.1	-1.3
	comp=Z,14nm,1.0s,mb4.9						
BAIF	Baives	92.24	333	eP	P	23 03 12.8	-2.7
HINF	Hinteralfeld	92.84	330	eP	P	23 03 16.6	-1.7
SCHQ	Schefferville	94.34	15	P	P	23 03 23.9	-1.1
	comp=Z,4.0nm,0.8s,mb4.6,baz=291,slow=8.6,SNR=3.0						
LOR	Lormes	94.56	331	eP	P	23 03 23.9	-2.3
LPL	La Plagne	94.63	328	eP	P	23 03 25.3	-1.2
	comp=Z,5.4nm,0.6s,mb4.5						
LPL	La Plagne	94.63	328	eP	P	23 03 25.3	-1.2
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
LPL	La Plagne	94.63	328	eP	P	23 03 25.3	-1.2
	comp=Z,2.7nm,0.6s,mb4.5						
LPG	La Plagne	94.63	328	eP	P	23 03 25.5	-1.0
	comp=Z,7.1nm,0.6s,mb4.6						
LPG	La Plagne	94.63	328	eP	P	23 03 25.5	-1.0
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
LPG	La Plagne	94.63	328	eP	P	23 03 25.5	-1.0
	comp=Z,3.5nm,0.6s,mb4.7						
SSF	Saint Saulge	94.87	331	eP	P	23 03 26.1	-1.5
	comp=Z,41nm,1.3s,mb5.1						
SSF	Saint Saulge	94.87	331	eP	P	23 03 26.1	-1.5
SSF				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.1						
SSF	Saint Saulge	94.87	331	eP	P	23 03 26.1	-1.5
	comp=Z,21nm,1.3s,mb5.1						
SMF	Signal de Mont	95.05	331	eP	P	23 03 26.9	-1.5
	comp=Z,13nm,0.9s,mb4.8						
SMF	Signal de Mont	95.05	331	eP	P	23 03 26.9	-1.5
SMF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
SMF	Signal de Mont	95.05	331	eP	P	23 03 26.9	-1.5
	comp=Z,6.4nm,0.9s,mb4.8						
AVF	Avril sur Loir	95.15	331	eP	P	23 03 27.5	-1.3
SBF	Sospel	95.54	327	eP	P	23 03 27.7	-3.0
BGF	Bois d'Agland	95.55	331	eP	P	23 03 29.3	-1.3
TCF	Toulx Ste Croi	96.03	331	eP	P	23 03 29.5	-3.3
	comp=Z,26nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	96.03	331	eP	P	23 03 29.5	-3.3
TCF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	96.03	331	eP	P	23 03 29.5	-3.3
	comp=Z,13nm,1.2s,mb5.0						
TXAR	Lajitas Array	97.24	51	P	P	23 03 38.6	0.0
	comp=Z,2.0nm,0.7s,mb4.5,baz=300,slow=2.7,SNR=4.6						
TXAR	Lajitas Array	97.24	51	P	P	23 03 38.6	0.0
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ESDC	Sonseca Array	104.04	331	PP	PP	23 08 28.8	-4.1
	comp=Z,0.7nm,0.6s,baz=26,slow=5.8,SNR=4.4						
TORD	Torodi Ar. Bea	121.55	309	PKP	PKPdf	23 08 55.0	-1.5
	comp=Z,2.4nm,0.6s,baz=357,slow=2.9,SNR=20						
TORD				PKKPbc	PKKPbc	23 18 58.2	+0.3
	comp=Z,1.0nm,0.7s,baz=215,slow=2.0,SNR=5.5						
TORD	Torodi Ar. Bea	121.55	309	PKP	PKPdf	23 08 55.0	-1.5
TORD				PKKPbc	PKKPbc	23 18 58.2	+0.3
BOSA	Boshof	122.31	252	PKP	PKPdf	23 08 56.7	-0.9
	comp=Z,2.7nm,0.7s,baz=231,slow=2.6,SNR=6.8						
BOSA	Boshof	122.31	252	PKIKP	PKPdf	23 08 56.7	-0.9
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	122.31	252	PKP	PKPdf	23 08 56.7	-0.9
DBIC	Dimbokro	130.66	309	PKP	PKPdf	23 09 12.7	-1.3
	comp=Z,4.3nm,0.9s,baz=199,slow=3.5,SNR=4.8						
DBIC				SKPbc	SKPbc	23 11 47.7	-2.0
	comp=Z,12nm,0.9s,baz=23,slow=3.8,SNR=18						
DBIC	Dimbokro	130.66	309	PKP	PKPdf	23 09 12.7	-1.3
DBIC				SKPbc	SKPbc	23 11 47.7	-2.0
VNA2	Neumayer--Watz	133.31	195	ePKPdf	PKPdf	23 09 16.9	-0.3
	baz=54,slow=0.6						
VNA2				e		23 09 18.9	
VNA2				e		23 11 55.2	
SDV	Santo Domingo	133.36	42	PKP	PKPdf	23 09 18.3	-0.8
	comp=Z,13nm,0.7s,baz=303,slow=2.6,SNR=22						
SDV				SKPbc	SKPbc	23 11 56.6	-2.4
	comp=Z,6.6nm,0.8s,baz=28,slow=1.9,SNR=8.7						
VNA3	Neumayer Olymp	133.56	193	ePKPdf	PKPdf	23 09 16.8	-0.9
VNA3				e		23 09 19.1	
VNA3				e		23 11 55.5	
VNA1	Neumayer--Stat	133.71	195	ePKPdf	PKPdf	23 09 18.0	0.0
VNA1				e		23 09 20.0	
VNA1				e		23 11 57.0	
PLCA	Paso Flores	152.92	125	PKPbc	PKPbc	23 09 59.2	-0.4
	comp=Z,6.7nm,0.6s,baz=263,slow=1.2,SNR=23						
PLCA				PKPab	PKPab	23 10 12.5	-0.9
	comp=Z,3.6nm,0.8s,baz=207,slow=6.0,SNR=4.2						
PLCA	Paso Flores	152.92	125	PKIKP	PKPbc	23 09 59.2	-0.4
PLCA						23 10 12.5	
PLCA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LVC	Limon Verde	154.36	84	ePKPdf	PKPdf	23 09 54.7	+0.3
CPUP	Villa Florida	165.51	86	PKP	PKPdf	23 10 05.4	-1.2
	comp=Z,0.5nm,0.4s,baz=226,slow=1.5,SNR=4.9						
CPUP				PKPab	PKPab	23 11 07.5	-1.3
	comp=Z,1.7nm,0.7s,baz=265,slow=3.2,SNR=5.2						
CPUP	Villa Florida	165.51	86	PKIKP	PKPdf	23 10 05.4	-1.2
CPUP						23 11 07.6	
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BDFB	Brasilia	165.93	28	PKP	PKPdf	23 10 06.9	-0.4
	comp=Z,1.9nm,0.9s,baz=37,slow=27,SNR=4.8						
BDFB				PKPab	PKPab	23 11 09.8	-0.8
	comp=Z,1.5nm,0.9s,baz=163,slow=19,SNR=2.9						
BDFB	Brasilia	165.93	28	PKIKP	PKPdf	23 10 06.9	-0.3
BDFB						23 11 09.8	
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.9s						

*ISCJB **07** 23:37:11.9±5.6, 242S±0.1×1800E±0.2, h459km±64km, mb3.7/4, Error ellipse: s-maj=34.7km s-min=19.6km az=153.7*

*IDC **07** 23:37:15.8±5.7, 2441S×17997E, h490km±64km, mb3.4/5, mb1 3.5/6, mb1mx3.3/17, mbtmp3.4/6, Error ellipse: s-maj=37.6km s-min=23.8km az=39.0*

ISC 07 23:37:14.7±4.3**, 244S**±02×**1799E**±02**, h476**km±50km**, n9, σ0s72**/8**, mb3.7**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.06	189	P	P	23 40 15.1	0.0
	0.8nm,0.3s,baz=357,slow=19,SNR=5.9						
URZ				S	S	23 42 43.8	-0.2
	0.5nm,0.3s,baz=329,slow=22,SNR=5.6						
CTA	Charters Tower	31.43	271	P	P	23 42 56.8	+0.8
	6.7nm,0.3s,baz=92,slow=12,SNR=28						
STKA	Stephens Creek	34.50	249	P	P	23 43 22.2	+0.3
	1.6nm,0.4s,mb3.8,baz=94,slow=10,SNR=9.0						
ASAR	Alice Springs	41.91	261	P	P	23 44 22.3	-0.3
	0.9nm,0.5s,mb3.4,baz=97,slow=7.4,SNR=16						
WB2	Warramunga Arr	42.32	267	eP	P	23 44 24.9	-0.9
QSPA	South Pole Qui	65.72	180	P	P	23 47 11.2	+0.5
	2.2nm,0.6s,mb3.9,baz=69,slow=2.5,SNR=6.1						
TXAR	Lajitas Array	90.72	58	P	P	23 49 25.9	-0.2
	0.6nm,0.7s,mb3.6,baz=206,slow=6.9,SNR=6.3						
BRTR	Keskin Array B	147.82	307	PKPbc	PKPbc	23 56 09.0	+3.6
	0.5nm,0.8s,baz=136,slow=3.9,SNR=2.6						
TORD	Torodi Ar. Bea	168.72	189	PKPab	PKPab	23 57 39.1	-1.1
	0.4nm,0.7s,baz=168,slow=3.5,SNR=3.3						

*CSEM **08** 00:14:22.8±0.5, 3735N×2469W, h5km, ML3.3, Error ellipse: s-maj=4.3km s-min=1.5km az=79.0, After PDA*

PDA 08 00:14:22.8±0.5**, 3735N×2469W, h5**km**, MD4.1, ML3.3, Error ellipse: s-maj=4.3km s-min=1.5km az=79.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.45	221	eP	Pg	00 14 30.7	-0.8
PSMN				eS	Sg	00 14 36.7	-0.7
PDA	Ponta Delgada	0.87	298	eP	Pg	00 14 36.5	-3.0
PDA				eS	Sg	00 14 46.9	-3.9
PSCM	Serra do Cume	2.34	306	eP	Pn	00 14 57.5	-4.5
PSCM				eS	Sn	00 15 23.1	-8.0
PSCM				A		00 15 26.9	
	57nm,0.3s						
PSCM	Serra do Cume	2.34	306	eP	Pn	00 14 57.5	-4.5
PSCM				eS	Sn	00 15 23.1	-8.0
ADH	Angra Heroismo	2.40	304	eS	Sn	00 15 24.2	-8.2
PMAN	Manadas	2.98	297	eP	Pn	00 15 06.1	-4.5
PMAN				eS	Sn	00 15 38.5	-8.2
PMAN				A		00 15 39.4	
	26nm,0.3s						
PMAN	Manadas	2.98	297	eP	Pn	00 15 06.1	-4.5
PMAN				eS	Sn	00 15 38.5	-8.2
ROSA	Rosais	3.12	297	eP	Pn	00 15 08.2	-4.4
ROSA				eS	Sn	00 15 42.3	-8.0
PICO	Pico	3.17	292	eP	Pn	00 15 08.8	-4.5
PICO				eS	Sn	00 15 43.3	-8.2
HOR	Horta	3.33	292	eS	Sn	00 15 47.0	-8.4
CALA	Caldeira	3.40	292	eP	Pn	00 15 11.8	-4.7
CALA				eS	Sn	00 15 49.3	-7.9

IDC 08 00:22:47.3±1.8**, 3910N×11072E, h0**km**, mb3.4**/4**, mb1 3.8**/5**, mb1mx3.5**/21**, mbtmp3.5**/5**, ML2.9**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.5**/33**, Error ellipse: s-maj=41.9km s-min=23.4km az=90.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.28	342	Pn	Pn	00 25 03.4	+1.1
	0.1nm,0.3s,baz=155,slow=13,SNR=24						
SONM				Lg		00 27 40.1	
	0.1nm,0.3s,baz=152,slow=24,SNR=4.2						
MKAR	Makanchi Array	22.10	300	P	P	00 27 44.4	+0.4
	1.3nm,1.0s,baz=95,slow=14,SNR=6.6						
CMAR	Chiang Mai Arr	22.97	210	P	P	00 27 53.1	-0.3
	2.9nm,0.8s,baz=13,slow=9.6,SNR=19						
ZALV	Zalesovo Beam	23.02	319	P	P	00 27 53.4	-0.3
	0.2nm,0.3s,baz=117,slow=8.3,SNR=2.5						
ARCES	ARCESS Array B	52.35	334	LR	LR	00 58 40.6	
	comp=Z,72nm,20.6s,baz=201,slow=41						
YKA	Yellowknife Ar	72.41	20	P	P	00 34 15.1	+0.2
	0.2nm,0.6s,baz=324,slow=5.6,SNR=4.7						

*BJI **08** 00:54:54.7, 1260S×16640E, h48km, mB5.1, mb4.7*

*ISCJB **08** 00:54:55.8±2.6, 1253S±0.08×1663E±0.1, h47km±22km, mb4.2/11, MS3.6/2, Error ellipse: s-maj=22.2km s-min=12.6km az=168.7*

*NEIC **08** 00:54:56.7±1.7, 1258S×16643E, h49km±15km, mb4.1/4, Error ellipse: s-maj=16.0km s-min=13.1km az=88.0*

*IDC **08** 00:54:58.0±5.6, 1258S×16632E, h56km±44km, mb3.9/11, mb1 4.1/12, mb1mx4.0/18, mbtmp4.0/12, ML5.1/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/29, Error ellipse: s-maj=40.8km s-min=23.7km az=118.0*

ISC 08 00:54:56.8±1.9**, 1262S**±010×**1664E**±01**, h46**km±17km**, n27, σ0s90**/25**, mb4.2**/11**, MS3.6**/2**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.08	296	P	Pn	00 56 38.3	+0.3
	31nm,0.3s,baz=226,slow=1.2,SNR=15						
HNR				LR	LR	00 59 00.6	
	comp=Z,128nm,20.1s,baz=316,slow=35						
HNR	Honiara	7.08	296	P	Pn	00 56 38.3	+0.3
HNR				LR	LR	00 59 00.6	
DZM	Mont Dzumac	9.40	180	eP	Pn	00 57 09.5	-0.3
DZM	Mont Dzumac	9.40	180	ePn	Pn	00 57 09.7	0.0
DZM				eSn	Sn	00 59 01.4	+7.2
EIDS	Eidsvold	19.23	227	eP	Pn	00 59 18.0	-0.5
	11nm,0.9s						
CTA	Charters Tower	20.70	246	P	P	00 59 33.5	+0.2
	3.5nm,0.8s,baz=73,slow=12,SNR=4.2						
CTA				LR	LR	01 06 55.6	
	comp=Z,202nm,18.2s,MS3.5,baz=50,slow=35						
CTA	Charters Tower	20.70	246	P	P	00 59 33.5	+0.2
CTA				LR	LR	01 06 55.6	
STKA	Stephens Creek	29.78	226	eP	P	01 00 59.8	+0.5
	1.9nm,0.9s,mb3.8						
STKA	Stephens Creek	29.78	226	P	P	01 00 59.8	+0.5
	2.8nm,1.0s,mb4.0,baz=16,slow=3.5,SNR=4.2						
STKA				LR	LR	01 12 13.8	
	comp=Z,131nm,18.7s,MS3.6,baz=295,slow=35						
WB2	Warramunga Arr	31.57	252	eP	P	01 01 15.2	-0.1
WRAB	Tennant Creek	31.57	252	eP	P	01 01 16.9	+1.6
	2.7nm,0.9s,mb4.1						
ASAR	Alice Springs	32.70	246	P	P	01 01 23.3	-1.8
	3.0nm,0.9s,mb4.2,baz=76,slow=9.2,SNR=24						
FITZ	Fitzroy Crossi	39.62	257	eP	P	01 02 29.1	+4.8
	5.8nm,0.8s						
MJAR	Matsushiro Arr	55.65	333	P	P	01 04 26.6	-1.7
	2.2nm,0.8s,mb4.2,baz=174,slow=9.6,SNR=4.7						
KSRS	Korea Array	61.53	326	P	P	01 05 09.2	0.0
	2.1nm,0.8s,baz=129,slow=7.6,SNR=7.0						
CN2	Changchun	67.41	329	eP	P	01 05 47.7	+0.2
CMAR	Chiang Mai Arr	73.33	294	P	P	01 06 24.9	+0.6
	2.1nm,0.8s,mb4.1,baz=128,slow=4.6,SNR=9.2						
SONM	Songino Array	80.30	324	P	P	01 07 02.6	-0.3
	2.0nm,0.7s,mb4.2,baz=135,slow=5.5,SNR=13						
GTA	Gaotai	80.60	314	eP	P	01 07 06.5	+1.8
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
NVAR	Mina Array Bea	86.55	50	P	P	01 07 36.3	+1.1
	comp=Z,0.3nm,0.5s,mb3.8,baz=207,slow=5.0,SNR=2.8						
MK31	Makanchi Array	95.10	317	eP	P	01 08 14.8	-0.2
MKAR	Makanchi Array	95.10	317	P	P	01 08 14.7	-0.3
	comp=Z,2.6nm,0.7s,mb4.8,baz=95,slow=6.0,SNR=25						
ZALV	Zalesovo Beam	95.20	324	P	P	01 08 14.0	-1.3
	comp=Z,1.3nm,0.6s,mb4.5,baz=114,slow=3.7,SNR=8.3						
YKA	Yellowknife Ar	96.07	27	P	P	01 08 18.9	-0.2
	comp=Z,0.2nm,0.5s,mb3.8,baz=260,slow=4.4,SNR=3.7						
ARCES	ARCESS Array B	118.01	345	PKP	PKPdf	01 13 36.4	-1.6
	comp=Z,3.4nm,1.0s,baz=47,slow=4.0,SNR=2.8						
KEST	Kesra	149.04	322	PKPbc	PKPbc	01 14 40.1	-0.3
	comp=Z,1.6nm,0.7s,baz=98,slow=2.7,SNR=7.9						
TORD	Torodi Ar. Bea	165.08	274	PKPab	PKPab	01 15 54.3	+0.3
	comp=Z,1.2nm,0.9s,baz=74,slow=4.5,SNR=7.9						

NEIC 08 01:14:06.4, 5349N×16465W, h26km**, ML2.9**(AEIC)**, After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	Akutan	0.93	315	ePg	Pn	01 14 23.1	-0.6
AKUT				eSg	Sb	01 14 35.6	-0.1
AKLV	Akutan Long Va	1.02	312	P	Pn	01 14 24.3	-0.7
AKGG	Akutan Green G	1.06	312	P	Pn	01 14 25.1	-0.5
AKGG				S	Sn	01 14 38.5	-1.0
UNV	Unalaska Valle	1.16	289	ePn	Pn	01 14 26.2	-0.6
UNV				eSn	Sn	01 14 40.5	-1.3
FALS	False Pass	1.55	27	ePn	Pn	01 14 32.1	-0.1
FALS				eSn	Sn	01 14 50.9	-0.7

*IDC **08** 01:19:57.5±1.3, 4695N×15596E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/24, mbtmp3.6/5, ML2.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/50, Error ellipse: s-maj=33.5km s-min=32.7km az=78.0*

*ISCJB **08** 01:20:00.8±1.2, 47.1N±0.2×156.0E±0.3, h33km, mb3.6/4, Error ellipse: s-maj=31.2km s-min=26.6km az=6.7*

*MOS **08** 01:20:04.3±3.0, 4728N×156.11E, h65km, mb4.0/2, Error ellipse: s-maj=81.3km s-min=35.4km az=90.0*

ISC 08 01:20:02.9±1.2**, 471N**±02×**1561E**±03**, h35**km**, n8, σ1s13**/7**, mb3.6**/4**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.10	9	Pn	Pn	01 21 29.2	-1.2
	0.2nm,0.3s,baz=177,slow=13,SNR=8.7						
DLBC	Dease Lake	43.88	47	LR	LR	01 42 53.9	
	comp=Z,54nm,21.9s,baz=241,slow=31						
KURK	Kurchatov	48.84	304	P	P	01 28 45.0	+0.4
	0.7nm,0.6s,mb3.9,baz=67,slow=8.5,SNR=7.0						
KURK	Kurchatov	48.84	304	P	P	01 28 45.0	+0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	Borovoye Array	52.18	310	P	P	01 29 10.4	+0.7
	comp=Z,0.3nm,0.4s,mb3.5,baz=41,slow=4.6,SNR=3.5						
ASAR	Alice Springs	73.23	201	P	P	01 31 28.6	-1.5
	comp=Z,0.4nm,0.8s,mb3.4,baz=25,slow=4.7,SNR=4.1						
TXAR	Lajitas Array	75.54	63	P	P	01 31 45.2	+1.4
	comp=Z,0.7nm,0.7s,mb3.7,baz=312,slow=4.6,SNR=7.6						
TXAR	Lajitas Array	75.54	63	P	P	01 31 45.2	+1.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **08** 01:49:10.2±0.6, 2403S±0.04×6708W±0.06, h174km±7km, mb3.9/9, Error ellipse: s-maj=9.7km s-min=7.0km az=176.5*

*NEIC **08** 01:49:11.1±0.7, 2402S×6702W, h172km±7km, MG4.7(GUC), Error ellipse: s-maj=11.0km s-min=10.0km az=108.0*

*IDC **08** 01:49:11.2±0.9, 2394S×6698W, h169km±8km, mb3.8/9, mb1 4.0/14, mb1mx3.9/20, mbtmp3.8/14, Error ellipse: s-maj=15.4km s-min=12.0km az=40.0*

*GUC **08** 01:49:13.7±0.7, 2383S×6751W, h204km±10km, ML4.7*

ISC 08 01:49:11.2±0.6**, 2402S**±004×**6706W**±006**, h167**km±6km**, n37, σ1s11**/46**, mb3.9**/9**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.20	309	P	Pn	01 49 51.8	+2.1
	43nm,0.3s,baz=127,slow=6.4,SNR=383						
LVC				S	Sn	01 50 20.5	+1.1
	143nm,0.3s,baz=268,slow=22,SNR=73						
LVC	Limon Verde	2.20	309	ePn	Pn	01 49 51.8	+2.1
LVC				eSn	Sn	01 50 21.8	+2.4
LVC	Limon Verde	2.20	309	⇑iP	Pn	01 49 51.8	+2.0
LVC				iS	Sn	01 50 20.9	+1.5
PECH	Pedro de Valdi	2.79	300	⇑iP	Pn	01 49 57.8	+1.1
PECH				iS	Sn	01 50 31.4	-0.4
PECH				AML	AML	01 50 32.8	
	comp=E,5µm,0.3s						
CEN1	Los Morros	2.94	282	⇓iP	Pn	01 50 00.4	+1.9
CEN1				iS	Sn	01 50 36.0	+0.8
CEN1				AML	AML	01 50 37.2	
	comp=E,979nm,0.5s						
MACH	Maria Elena	3.08	306	eP	Pn	01 50 01.1	+0.9
MACH				iS	Sn	01 50 37.6	-0.6
ANCH	Antofagasta	3.08	276	⇑iP	Pn	01 50 01.2	+0.9
ANCH				iS	Sn	01 50 37.1	-1.2
CPN1	Cerro Paranal	3.11	258	⇑iP	Pn	01 50 01.2	+0.6
CPN1				iS	Sn	01 50 38.2	-0.7
CPN1				AML	AML	01 50 40.3	
	comp=E,824nm,0.6s						
MECH	Mejillones	3.24	286	⇑iP	Pn	01 50 03.2	+1.0
MECH				AML	AML	01 50 51.2	
	comp=N,2µm,0.6s						
TOCH	Tocopilla	3.47	303	eP	Pn	01 50 05.5	+0.4
TOCH				iS	Sn	01 50 44.6	-2.4
TOCH				AML	AML	01 50 49.9	
	comp=N,892nm,0.1s						
PB01	Plate Boundary	3.72	322	⇑iP	Pn	01 50 08.5	+0.2
PB01				iS	Sn	01 50 50.9	-1.8
PB01				AML	AML	01 50 52.1	
	comp=N,407nm,0.2s						
LCO	Las Campanas	5.94	212	ePn	Pn	01 50 35.6	-1.6
	comp=N,73nm,0.3s						
LCO				eSn	Sn	01 51 42.3	-2.5
CFAA	Coronel Fontan	7.62	188	P	Pn	01 50 58.9	-0.6
	comp=N,0.1nm,0.3s,baz=351,slow=13,SNR=22						
CFAA				S	Sn	01 52 19.5	-5.4
	comp=N,0.4nm,0.3s,baz=127,slow=24,SNR=8.5						
CPUP	Villa Florida	9.11	107	P	Pn	01 51 18.9	-0.4
	comp=N,0.6nm,0.3s,baz=261,slow=10,SNR=11						
CPUP	Villa Florida	9.11	107	ePn	Pn	01 51 19.3	+0.1
SIV	San Ignacio	9.77	36	P	Pn	01 51 26.4	-1.6
	comp=N,6.5nm,0.3s,baz=222,slow=14,SNR=138						
SIV				S	Sn	01 53 03.7	-13
	baz=164,slow=19,SNR=4.9						
PLCA	Paso Flores	16.92	189	P	Pn	01 52 57.5	-0.6
	comp=N,0.4nm,0.3s,baz=18,slow=12,SNR=3.0						
PLCA	Paso Flores	16.92	189	eP	Pn	01 52 58.2	+0.1
BDFB	Brasilia	19.75	69	P	P	01 53 28.3	0.0
	comp=N,4.1nm,0.3s,baz=234,slow=17,SNR=133						
BDFB	Brasilia	19.75	69	eP	P	01 53 28.9	+0.6
VNA3	Neumayer Olymp	57.15	161	e	P	01 58 40.4	+0.4
VNA3				e		01 58 42.7	
VNA3				e		01 58 46.2	
VNA1	Neumayer--Stat	57.35	160	e	P	01 58 42.7	+1.3
VNA1				e		01 58 45.2	
VNA1				e		01 58 47.9	
VNA2	Neumayer--Watz	57.72	160	e	P	01 58 44.9	+0.9
	baz=287,slow=7.4						
VNA2				e		01 58 48.1	
VNA2				e		01 58 51.8	
TXAR	Lajitas Array	63.66	324	P	P	01 59 24.6	-0.1
	comp=N,0.7nm,0.8s,mb3.5,baz=153,slow=6.9,SNR=9.3						
DBIC	Dimbokro	67.86	72	P	P	01 59 50.6	-1.4
	comp=N,1.9nm,0.5s,mb4.1,baz=228,slow=7.1,SNR=7.9						
VNDA	Vanda	74.67	190	P	P	02 00 32.9	+1.1
	comp=N,4.4nm,1.3s,mb3.9,baz=113,slow=4.5,SNR=3.5						
TORD	Torodi Ar. Bea	76.63	69	P	P	02 00 43.0	-1.0
	comp=N,2.3nm,0.4s,mb4.2,baz=260,slow=5.5,SNR=47						
PDAR	Pinedale Array	77.14	329	P	P	02 00 45.6	-0.5
	comp=N,0.6nm,0.7s,mb3.3,baz=134,slow=7.1,SNR=6.4						
ULM	Lac du Bonnet	78.23	342	P	P	02 00 51.3	-0.7
	comp=N,2.8nm,0.5s,mb4.2,baz=170,slow=6.1,SNR=3.2						
NVAR	Mina Array Bea	78.52	321	P	P	02 00 54.6	+0.8
	comp=N,0.4nm,0.3s,mb3.5,baz=152,slow=8.6,SNR=3.9						
MAW	Mawson	81.43	163	P	P	02 01 09.9	+0.7
	comp=N,2.7nm,0.5s,mb4.2,baz=212,slow=8.3,SNR=8.1						
YKA	Yellowknife Ar	94.12	340	P	P	02 02 09.7	-0.5
	comp=N,0.9nm,0.6s,mb4.1,baz=133,slow=4.3,SNR=19						
YKA	Yellowknife Ar	94.12	340	P	P	02 02 09.7	-0.5
ASAR	Alice Springs	128.41	205	PKP	PKPdf	02 07 58.0	-0.7
	comp=N,2.1nm,0.7s,baz=135,slow=1.8,SNR=28						
ZALV	Zalesovo Beam	143.44	28	PKP	PKPdf	02 08 22.9	-2.5
	comp=N,1.5nm,0.6s,baz=319,slow=4.3,SNR=9.9						
ZALV	Zalesovo Beam	143.44	28	PKP	PKPdf	02 08 22.9	-2.5
MKAR	Makanchi Array	146.58	39	PKPbc	PKPbc	02 08 31.2	-1.6
	comp=N,2.5nm,0.7s,baz=330,slow=2.4,SNR=23						

*BJI **08** 02:01:32.5, 670N×7290W, h146km, mB5.2*

*ISCJB **08** 02:01:33.4±0.2, 674N±0.03×7293W±0.03, h170km±2km, mb4.5/58, Error ellipse: s-maj=5.0km s-min=3.4km az=43.1*

*IDC **08** 02:01:34.3±0.5, 682N×7292W, h163km±4km, mb4.1/18, mb1 4.3/23, mb1mx4.2/28, mbtmp4.1/23, Error ellipse: s-maj=9.1km s-min=8.5km az=140.0*

*NEIC **08** 02:01:34.6±0.3, 671N×7294W, h166km±3km, mb4.6/45, Error ellipse: s-maj=5.0km s-min=4.2km az=73.0*

*FUNV **08** 02:01:34.2, 672N×73.11W, h170km, MW4.4*

ISC 08 02:01:34.4±0.2**, 673N**±003×**7292W**±003**, h163**km±2km**, h164**km±2.3km**:pP-P, n158, σ0s79**/153**, mb4.5**/58**, 3C-14D, Northern Colombia**

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

BARC Barichara 0.27 253 *e*P Pn **02 01 56.4 -0.1**
BARC eS Sn **02 02 11.3 -1.8**
CAPV Capacho 1.28 28⇓*i*P Pn **02 02 03.7 +0.8**
CAPV *e*S Sn **02 02 25.2 +0.4**
CHIC Chingaza 2.23 201 *e*P Pn **02 02 13.7 +0.6**
CHIC *e*S Sn **02 02 43.9 +1.0**
ROSC El Rosal 2.33 217 P Pn **02 02 15.6 +1.4**
361nm,0.3s,baz=309,slow=2.3,SNR=503
ROSC S Sn **02 02 43.0 -1.9**
573nm,0.3s,baz=110,slow=16,SNR=19
SOCV Socops 2.56 53⇓*i*P Pn **02 02 18.3 +1.3**
SOCV *e*S Sn **02 02 50.6 +0.7**
VIGV El Vigia 2.60 36⇓*i*P Pn **02 02 18.1 +0.6**
VIGV *e*S Sn **02 02 50.8 0.0**
SDV Santo Domingo 3.12 46 P Pn **02 02 24.6 +0.8**
187nm,0.3s,baz=244,slow=7.4,SNR=970
SDV S Sn **02 03 01.7 -0.5**
193nm,0.3s,baz=272,slow=18,SNR=28
SDV Santo Domingo 3.12 46 *e*Pn Pn **02 02 25.0 +1.1**
SDV Sn Sn **02 03 03.4 +1.3**
TOLC Tolima 3.21 229 *e*P Pn **02 02 25.2 +0.2**
TOLC *e*S Sn **02 03 04.7 +0.5**
ELOV Elorza 3.42 85⇓*i*P Pn **02 02 29.6 +1.9**
PRAC Prado 3.60 213 *e*P Pn **02 02 29.6 -0.3**
PRAC *e*S Sn **02 03 12.8 -0.3**
VIRV Villa del Rosa 3.79 8⇓*i*P Pn **02 02 30.6 -1.8**
VIRV *e*S Sn **02 03 14.0 -3.4**
GUVC San Jose del G 4.16 176 *e*P Pn **02 02 37.5 +0.3**
QARV Quebrada Arrib 4.19 34⇓*i*P Pn **02 02 38.0 +0.4**
SANV Sanarito 4.34 50⇓*i*P Pn **02 02 39.8 +0.4**
SANV *e*S Sn **02 03 28.0 -2.1**
CURV Curarigua 4.38 42⇓*i*P Pn **02 02 40.2 +0.1**
DABV Dabajuro 4.74 28⇓*i*P Pn **02 02 44.5 -0.2**
TEPV Terepaima 4.89 49⇓*i*P Pn **02 02 47.1 +0.4**
SIQV Siquisique 4.96 38⇓*i*P Pn **02 02 47.3 -0.3**
BAUV El Baul 5.31 65⇓*i*P Pn **02 02 51.7 -0.5**
JACV Jacura 5.92 43 *e*P Pn **02 03 01.0 +0.7**
TURV Turiamo 6.24 53 *e*P Pn **02 03 04.8 +0.4**
CAOV Caicara del Or 6.57 84⇓*i*P Pn **02 03 08.6 -0.4**
MERV Las Mercedes 7.02 69 *e*P Pn **02 03 14.4 -0.4**
BCIP Isla Barro Col 7.27 290 *e*Pn Pn **02 03 13.5 -4.6**
BCIP Sn Sn **02 04 36.7 -3.0**
BIRV Birongo 7.56 60 *e*P Pn **02 03 21.1 -0.8**
CUPV Cœpira 7.79 64 *e*P Pn **02 03 24.5 -0.6**
PRGV PARIAGUAN 8.44 76 *e*P Pn **02 03 33.8 0.0**
OTAV Otavalo 8.48 221 *e*Pn Pn **02 03 33.2 -1.1**
14nm,0.6s
PCRV Puerto La Cruz 8.88 67 P Pn **02 03 40.7 +1.2**
3.7nm,0.3s,baz=220,slow=7.6,SNR=13
PCRV S Sn **02 05 17.0 -1.4**
2.3nm,0.3s,baz=255,slow=10.0,SNR=2.0
PCRV Puerto La Cruz 8.88 67 *e*P Pn **02 03 39.7 +0.2**
PCJ Portland Cotta 11.71 340 *i* P Pn **02 04 16.8 +0.2**
HOJ Hope 11.82 342⇓*e*P Pn **02 04 19.5 +1.5**
GWJ Greenwich 11.88 342⇓*e*P Pn **02 04 19.0 +0.2**
GWJ *e*S Sn 02 06 03.8 -27
STH Stony Hill 11.90 342⇑*e*P Pn **02 04 19.4 +0.2**
STH *e*S Sn **02 06 18.4 -13**
SDDR Presa de Saban 12.29 7 *e*Pn Pn **02 04 24.6 +0.5**
30nm,0.6s
SDDR Sn Sn **02 06 35.0 -5.2**
ATAH Atahualpa 14.69 202 P Pn **02 04 58.4 +3.8**
2.6nm,0.3s,baz=12,slow=7.5,SNR=8.8
ATAH S Sn **02 07 37.5 -0.5**
0.2nm,0.3s,baz=156,slow=20,SNR=3.2
TGUH Tegucigalpa,Un 15.88 298 *e*P Pn **02 05 08.7 -0.5**
14nm,0.9s
NNA Nana 19.00 192 P P **02 05 44.1 +0.4**
1.6nm,0.3s,baz=344,slow=7.4,SNR=4.1
SIV San Ignacio 25.43 153 P P **02 06 47.5 +0.2**
2.0nm,0.8s,mb3.7,baz=333,slow=12,SNR=11
CPCT Cooper Cave 30.51 341 *e*P P **02 07 33.2 +0.9**
WVT Waverly 32.30 337 *e*P P **02 07 48.1 +0.1**
14nm,1.0s,mb4.7
BDFB Brasilia 33.20 132 P P **02 07 57.4 +1.4**
3.7nm,0.7s,mb4.2,baz=290,slow=16,SNR=12
MIAR Mount Ida 33.61 328 *e*P P **02 07 58.9 -0.5**
3.0nm,0.7s,mb4.1
WCI Wyandotte Cave 33.62 341 *e*P P **02 08 00.2 +0.8**
11nm,0.7s,mb4.7
USIN University of 33.86 339 *e*P P **02 08 02.0 +0.5**
23nm,0.6s,mb5.1
SIUC Southern Illin 34.22 337 *e*P P **02 08 04.7 +0.2**
24nm,0.6s,mb5.1
BLO Bloomington 34.56 341 *e*P P **02 08 07.8 +0.4**
25nm,0.6s,mb5.0
ACSO Alum Creek Sta 34.56 346 *e*P P **02 08 08.8 +1.3**
11nm,0.9s,mb4.5
OLIL Olney 34.70 339 *e*P P **02 08 09.1 +0.4**
16nm,0.6s,mb4.8
FVM French Village 34.94 335 *e*P P **02 08 10.8 0.0**
17nm,0.6s,mb4.9
CCM Cathedral Cave 35.34 335 *e*P P **02 08 14.2 0.0**
30nm,0.7s,mb5.0
TXAR Lajitas Array 36.68 312 P P **02 08 25.2 -0.5**
2.8nm,0.6s,mb4.0,baz=127,slow=9.3,SNR=50
TXAR pP pP 02 08 58.2 -2.4
0.8nm,0.6s,baz=129,slow=8.8,SNR=2.9
TXAR PcP PcP 02 10 46.2 +1.2
2.6nm,0.6s,baz=133,slow=6.1,SNR=16
TXAR Lajitas Array 36.68 312 P P **02 08 25.2 -0.5**
TXAR pP pP 02 08 58.2 -2.4
TXAR PcP PcP 02 10 46.2 +1.2
WMOK Wichita Mounta 36.68 323 *e*P P **02 08 24.5 -1.1**
5.7nm,0.7s,mb4.3
AMTX Amarillo 38.55 321 *e*P P **02 08 41.5 +0.2**
13nm,0.9s,mb4.5
KSU1 Kansas State U 38.67 330 *e*P P **02 08 40.9 -1.4**
15nm,0.8s,mb4.7
JFWS Jewell Farm 39.15 340 *e*P P **02 08 45.6 -0.6**
26nm,0.6s,mb5.0
SCIA State Center 39.40 336 *e*P P **02 08 47.6 -0.6**
22nm,0.6s,mb5.0
ECSD EROS,Sioux Fal 42.32 334 *e*P P **02 09 11.0 -1.1**
7.2nm,0.9s,mb4.3
SDCO Great Sand Dun 42.75 321 *e*P P **02 09 16.9 +1.2**
EYMN Ely 44.02 342 *e*P P **02 09 25.2 -0.5**
ISCO Idaho Springs 44.10 323 *e*P P **02 09 27.2 +0.7**
8.2nm,1.0s,mb4.3
MVCO Mesa Verde 44.36 318 *e*P P **02 09 29.2 +0.6**
PV01 Paradox Valley 44.93 319 *e*P P **02 09 34.6 +1.5**
572nm,0.8s
AGMN Agassiz Refuge 45.79 339 *e*P P **02 09 39.2 -0.5**
9.6nm,0.6s,mb4.6
AGMN *e*PcP PcP 02 11 15.3 +0.8
RSSD Black Hills 46.12 329 *e*P P **02 09 42.3 -0.1**
3.2nm,0.8s,mb4.0
RWWY Rawlins 46.24 324 *e*P P **02 09 43.5 +0.2**
SRU San Rafael 46.74 319 *e*P P **02 09 47.8 +0.5**
PLCA Paso Flores 47.27 178 P P **02 09 51.8 +0.5**
1.8nm,0.7s,mb3.8,baz=307,slow=5.6,SNR=3.4
TMUT Trail Mountain 47.29 319 *e*P P **02 09 52.1 +0.6**
ULM Lac du Bonnet 47.44 340 P P **02 09 51.4 -1.1**
17nm,0.6s,mb4.9,baz=150,slow=7.3,SNR=15
ULM PcP PcP 02 11 19.1 -1.2
6.5nm,0.9s,baz=127,slow=4.8,SNR=3.3
ULM Lac du Bonnet 47.44 340 *e*P P **02 09 51.5 -1.0**
16nm,0.6s,mb4.8
MSU Marysvale 47.51 318 *e*P P **02 09 54.0 +0.8**
DAU Daniels Canyon 47.94 320 *e*P P **02 09 53.6 -2.9**
MPU Maple Canyon 47.96 320 *e*P P **02 09 57.2 +0.5**
JLU Jordanelle 48.16 320 *e*P P **02 09 58.8 +0.6**
NLU North Lily Min 48.21 319 *e*P P **02 09 59.3 +0.7**
SCHQ Schefferville 48.22 5 P P **02 09 58.4 0.0**
30nm,0.7s,mb5.0,baz=183,slow=6.5,SNR=51
SCHQ Schefferville 48.22 5 *e*P P **02 09 59.0 +0.6**
29nm,0.7s,mb5.0
PDAR Pinedale Array 48.27 324 P P **02 09 58.6 -0.4**
3.9nm,0.7s,mb4.2,baz=128,slow=8.8,SNR=34
PDAR pP pP 02 10 34.5 -1.0
1.2nm,0.7s,baz=115,slow=10.0,SNR=2.8
PDAR PcP PcP 02 11 23.4 0.0
1.0nm,0.4s,baz=134,slow=6.4,SNR=6.8
PDAR ScP ScP 02 15 02.7 -0.1
0.3nm,0.6s,baz=122,slow=4.6,SNR=2.7
DUG Dugway 48.82 319 *e*P P **02 10 03.7 +0.5**
5.4nm,0.7s,mb4.3
DUG *e*pP pP 02 10 41.6 +1.7
DGMT Dagmar 49.33 333 *e*P P **02 10 07.4 +0.5**
52nm,0.6s,mb5.3
REDW Red Top Meadow 49.39 324 *e*P P **02 10 07.6 +0.1**
14nm,0.8s,mb4.6
SNOW Snow King Moun 49.39 324 *e*P P **02 10 08.1 +0.6**
7.8nm,0.8s,mb4.4
LOHW Long Hollow 49.39 324 *e*P P **02 10 07.7 +0.2**
6.7nm,0.7s,mb4.4
TPAW Teton Pass 49.52 324 *e*P P **02 10 08.6 +0.1**
7.3nm,0.9s,mb4.3
MOOW Moose Ponds 49.56 324 *e*P P **02 10 08.7 -0.1**
5.8nm,0.8s,mb4.3
MOOW *e*PcP PcP 02 11 28.8 +0.8
RLMT Red Lodge 49.57 327 *e*P P **02 10 08.8 0.0**
3.2nm,0.5s,mb4.2
HVU Hansel Valley 49.65 321 *e*P P **02 10 10.2 +0.6**
RRI2 Red Ridge 49.66 324 *e*P P **02 10 09.7 +0.2**
15nm,0.7s,mb4.7
RRI2 *e*pP pP 02 10 47.4 +1.1
IMW Indian Meadow 49.76 324 *e*P P **02 10 10.4 +0.1**
3.9nm,0.7s,mb4.2
QLMT Earthquake Lak 50.60 325 *e*P P **02 10 18.0 +1.4**
HLID Hailey 51.63 322 *e*P P **02 10 24.4 0.0**
4.3nm,1.0s,mb4.0
NVAR Mina Array Bea 51.69 315 P P **02 10 24.7 -0.2**
2.9nm,0.7s,mb4.0,baz=124,slow=7.2,SNR=18
NVAR pP pP 02 11 01.9 0.0
0.9nm,0.7s,baz=123,slow=4.6,SNR=2.2
NVAR PcP PcP 02 11 36.9 +0.7
1.7nm,0.5s,baz=140,slow=4.4,SNR=6.7
NVAR Mina Array Bea 51.69 315 P P **02 10 24.7 -0.2**
NVAR pP pP 02 11 01.9 0.0
NVAR PcP PcP 02 11 36.9 +0.7
EGMT Eagleton 51.70 329 *e*P P **02 10 24.8 +0.1**
6.7nm,1.0s,mb4.2
LRM Limekiln Ridge 51.77 325 *e*P P **02 10 25.5 +0.2**
BMN Battle Mountai 51.85 317 *e*P P **02 10 26.1 +0.1**
HRY Holter Researc 51.96 327 *e*P P **02 10 26.9 +0.2**
SLMT Seeley Lake 53.19 326 *e*P P **02 10 35.8 +0.1**
FFC Flin Flon 53.25 339 *e*P P **02 10 35.2 -0.8**
14nm,1.3s,mb4.5
BSMT Bassoo Peak 54.26 326 *e*P P **02 10 44.1 +0.6**
FCC Fort Churchill 54.41 347 *e*P P **02 10 43.5 -0.9**
0.5nm,1.0s
LNOR Lincton Mounta 55.20 323 *e*P P **02 10 50.0 -0.3**
YBH Yreka Blue Hor 56.15 317 P P **02 10 55.2 -2.0**
4.3nm,0.6s,mb4.5,baz=71,slow=3.2,SNR=17
YBH PcP PcP 02 11 53.0 0.0
2.0nm,0.7s,baz=68,slow=9.2,SNR=2.5
EDM Edmonton 56.80 332 *e*P P **02 11 00.7 -0.9**
FRB Frobisher Bay 57.00 2 P P **02 11 01.9 -0.8**
9.5nm,0.4s,mb4.9,baz=190,slow=7.3,SNR=36
YKA Yellowknife Ar 63.42 340 P P **02 11 45.8 -0.6**
15nm,0.6s,mb5.0,baz=132,slow=6.7,SNR=289
YKA pP pP 02 12 23.7 -1.2
1.5nm,0.8s,baz=125,slow=4.6,SNR=2.3
YKA Yellowknife Ar 63.42 340 P P **02 11 45.8 -0.6**
YKA pP pP 02 12 23.7 -1.2
TIC Toumodi 67.38 86 *e*P P **02 12 12.1 -0.7**
43nm,0.7s,mb5.4
LIC Lamto 67.41 86 *e*P P **02 12 12.4 -0.6**
64nm,0.6s,mb5.6
DLBC Dease Lake 67.50 331 *e*P P **02 12 13.3 +0.7**
DBIC Dimbokro 67.54 86 P P **02 12 13.5 -0.3**
17nm,0.7s,mb4.9,baz=268,slow=6.3,SNR=38
DBIC pP pP 02 12 52.2 -0.5
3.2nm,0.8s,baz=261,slow=17,SNR=1.3
DBIC Dimbokro 67.54 86 *e*P P **02 12 13.6 -0.2**
17nm,0.7s,mb4.9
KIC Kosan Boka 67.68 86 *e*P P **02 12 14.3 -0.4**
99nm,0.6s
SUMG Summit 69.05 11 *e*P P **02 12 22.7 +0.7**
16nm,0.7s,mb4.9
RES Resolute Bay 69.09 354 P P **02 12 21.6 -0.7**
0.5nm,0.4s,mb3.6,baz=179,slow=11,SNR=8.6
RES Resolute Bay 69.09 354 *e*P P **02 12 22.4 +0.1**
2.6nm,0.9s,mb4.0
ESDC Sonseca Array 69.56 50 P P **02 12 24.8 -1.0**
0.2nm,0.4s,baz=261,slow=6.1,SNR=4.9
INK Inuvik 73.19 340 *e*P P **02 12 46.9 -0.2**
5.4nm,0.7s,mb4.4
INK *e*pP pP 02 13 27.2 +0.7
TOA0 Torodi Ar. Sit 73.56 78 *e*P P **02 12 49.8 -0.4**
TORD Torodi Ar. Bea 73.56 78 P P **02 12 49.0 -1.3**
1.3nm,0.4s,mb4.0,baz=284,slow=6.3,SNR=53
TORD Torodi Ar. Bea 73.56 78 P P **02 12 49.0 -1.3**
MCK McKinley 77.82 334 *e*P P **02 13 13.8 +0.3**
20nm,1.4s,mb4.5
TRF Thorofare Moun 78.37 333 *e*P P **02 13 16.9 +0.4**
5.2nm,0.7s,mb4.3
KTH Kantishna Hill 78.67 333 *e*P P **02 13 18.4 +0.2**
6.4nm,0.8s,mb4.3
CHUM Lake Minchumin 79.33 334 *e*P P **02 13 21.8 +0.1**
6.2nm,0.6s,mb4.4
NB2 NORSAR Subarra 81.31 29 P P **02 13 32.5 +0.1**
comp=Z,4.0nm,0.7s,mb4.2,baz=267,slow=5.3
NOA NORSAR Array B 81.31 29 P P **02 13 32.8 +0.4**
comp=Z,3.0nm,0.7s,mb4.0,baz=268,slow=5.3,SNR=7.8
HFS Hagfors 82.53 30 P P **02 13 37.4 -1.3**
comp=Z,2.4nm,0.8s,mb4.0,baz=198,slow=4.1,SNR=3.7
GERES GERESS Array B 82.76 42 P P **02 13 39.5 -0.7**
comp=Z,1.7nm,0.6s,mb3.9,baz=263,slow=3.5,SNR=16
ARCES ARCESS Array B 86.69 20 P P **02 13 59.2 -0.2**
comp=Z,4.2nm,0.7s,mb4.4,baz=288,slow=4.1,SNR=17
VNA3 Neumayer Olymp 88.02 163 *e*P P **02 14 05.3 -0.4**
VNA3 *e* 02 14 07.7
VNA3 *e* 02 14 13.3
VNA1 Neumayer--Stat 88.16 162 *e*P P **02 14 06.3 -0.1**
VNA1 *e* 02 14 08.6
VNA1 *e* 02 14 14.1
VNA2 Neumayer--Watz 88.54 163 *e*P P **02 14 07.9 -0.2**
baz=305,slow=6.2
VNA2 *e* 02 14 09.9
VNA2 *e* 02 14 15.2
ZALV Zalesovo Beam 116.71 15 PKP PKPdf 02 19 59.0 -0.3
comp=Z,4.6nm,0.6s,baz=264,slow=1.7,SNR=20
ZALV pPKP pPKPdf 02 20 42.6 +0.4
comp=Z,0.3nm,0.3s,baz=48,slow=2.1,SNR=1.3
MKAR Makanchi Array 122.34 20 PKP PKPdf 02 20 09.7 -0.6
comp=Z,2.2nm,0.4s,baz=296,slow=2.7,SNR=55
MKAR pPKP pPKPdf 02 20 53.3 +0.1
comp=Z,0.3nm,0.5s,baz=315,slow=1.7,SNR=1.5
MDJ Mudanjiang 125.02 340 PKP PKPdf 02 20 14.6 -0.9
MDJ PP PP
comp=Z,51nm,4.1s
SONM Songino Array 125.67 1 PKP PKPdf 02 20 17.1 +0.4
comp=Z,2.2nm,0.6s,baz=324,slow=1.3,SNR=17
WMQ Urumqi 126.72 17 *e*PKP PKPdf 02 20 17.3 -1.5
CN2 Changchun 127.03 343 *e*PKP PKPdf 02 20 18.0 -1.4
HHC Hu-ho-hao-te 132.48 355 *e*PKP PKPdf 02 20 25.5 -4.4
HHC XPKP 02 21 24.8
HHC PP PP 02 22 55.2 +1.5
HHC PKS 02 23 59.6
HHC SKS SKSdf 02 27 19.3 -6.8
HHC PP PP
comp=Z,71nm,5.9s
GTA Gaotai 133.61 8 PKP PKPdf 02 20 32.6 +0.6
LZH Lanzhou 137.31 4 *e*PKP PKPdf 02 20 39.5 +0.5
LZH XPKP 02 21 37.8
STKA Stephens Creek 139.24 228 *e*PKP PKPdf 02 20 42.9 +0.3
comp=Z,1.9nm,0.6s
STKA Stephens Creek 139.24 228 PKP PKPdf 02 20 42.3 -0.3
comp=Z,2.5nm,0.6s,baz=115,slow=4.9,SNR=3.3
CD2 Chengdu 142.44 5 PKP PKPdf 02 20 46.3 -2.2
CD2 APKP 02 21 28.1
CD2 XPKP 02 21 45.0
CD2 PP PP 02 23 58.6 +3.0
CD2 PKS 02 24 20.6
CD2 SKS SKSdf 02 27 38.3 -5.0
CD2 SKKS SKKSac 02 30 31.1 -3.2
CD2 SS SS 02 42 16.4 -0.6
CD2 PP PP
comp=Z,380nm,10.3s
CD2 LR LR
comp=N,290nm,5.3s
CD2 LR LR
comp=Z,250nm,5.9s
SHL Shillong 144.66 24⇑*i*P PKPdf 02 20 51.0 -1.5
GYA Guiyang 147.01 1 PKP PKPdf 02 20 56.2 -0.3
GYA PKP2 PKPab 02 21 00.2 -0.2
GYA APKP 02 21 35.4
GYA XPKP 02 21 52.2
GYA PP PP
comp=Z,90nm,6.7s
KMI Kunming 148.06 7 PKP PKPdf 02 20 56.0 -2.3
ASAR Alice Springs 149.22 234 PKP PKPdf 02 21 00.1 0.0
comp=Z,16nm,0.7s,baz=117,slow=3.5,SNR=114
ASAR PKPbc PKPbc 02 21 04.0 -0.6
comp=Z,16nm,0.7s,baz=116,slow=3.7,SNR=132
ASAR PKPab PKPab 02 21 08.8 -0.6
comp=Z,7.3nm,0.8s,baz=114,slow=3.7,SNR=16
ASAR pPKP pPKPdf 02 21 43.5 +0.3
comp=Z,2.9nm,0.7s,baz=115,slow=3.4,SNR=2.5
WB2 Warramunga Arr 150.46 241 *e*PKP PKPbc 02 21 06.9 -0.8
WB2 *ep*PKP pPKPdf 02 21 48.5 +3.3
WRAB Tennant Creek 150.46 241 *e*PKPbc PKPbc 02 21 07.1 -0.6
WRA Warramunga Arr 150.47 241 PKP PKPdf 02 21 02.0 -0.2
baz=106,slow=2.6
WRA PKPbc PKPbc 02 21 07.0 -0.7
CMAR Chiang Mai Arr 153.72 18 PKP PKPdf 02 21 07.3 +0.2
comp=Z,1.5nm,0.4s,baz=313,slow=1.9,SNR=8.9
CMAR PKPbc PKPbc 02 21 15.1 +0.1
comp=Z,7.7nm,0.6s,baz=322,slow=3.8,SNR=15
CMAR PKPab PKPab 02 21 25.9 -2.3
comp=Z,1.8nm,0.4s,baz=324,slow=4.5,SNR=2.9
KAKA Kakadu 154.32 255 *e*PKP x 02 20 57.3
comp=Z,3.3nm,0.6s
FITZ Fitzroy Crossi 158.67 236 *e*PKP PKPab 02 21 49.6 -0.1
comp=Z,6.2nm,0.8s

NEIC ***08*** *02:13:05.8, 1575N×9454W, h24km, MD4.1(MEX), After MEX.*

MEX 08 02:13:05.8±0.8, 1575N×9454W, h24km±21km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.28**	**92**	*i* P	Pn	02 13 25.5	-2.6
PCIG				*i* S	Sn	02 13 40.0	-4.4
CMIG	**Matias Romero**	**1.38**	**346**	*i* P	Pn	02 13 26.9	-2.6
CMIG				*i* S	Sn	02 13 43.4	-3.5
HUIG	**Huatulco**	**1.51**	**271**	*i* P	Pn	02 13 29.1	-2.2
HUIG				*i* S	Sn	02 13 45.9	-4.3
TGIG		**1.71**	**53**	*i* P	Pn	02 13 31.7	-2.4
TGIG				*i* S	Sn	02 13 50.9	-4.2
SCX	**San Cristobal**	**2.08**	**62**	*e*P	Pn	02 13 37.1	-2.0
SCX				*i* S	Sn	02 14 02.2	-2.1
THIG		**2.35**	**110**	*e*P	Pn	02 13 41.7	-1.2
THIG				*i* S	Sn	02 14 07.8	-3.2
CCIG	**Comitan**	**2.37**	**77**	*e*P	Pn	02 13 41.2	-2.0
CCIG				*i* S	Sn	02 14 08.1	-3.5
VHO	**Vista Hermosa**	**2.48**	**302**	*e*P	Pn	02 13 42.2	-2.5
VHO				*i* S	Sn	02 14 12.0	-2.2
PNIG	**Pinotepa**	**3.50**	**281**	*e*P	Pn	02 13 57.3	-1.5
PNIG				*i* S	Sn	02 14 34.9	-4.6
UTMO	**Huajuapan**	**3.75**	**304**	*e*P	Pn	02 14 06.2	+4.0
UTMO				*i* S	Sn	02 14 48.9	+3.4
PPM	**Popocatepetl**	**5.11**	**311**	*e*P	Pn	02 14 19.9	-1.0
PPM				*i* S	Sn	02 15 15.9	-3.2

ISCJB ***08*** *03:54:43.9±0.2, 6049S±004×523W±0.1, h10km, mb5.3/37, MS5.6/214, Error ellipse: s-maj=8.8km s-min=5.2km az=157.2*

IDC ***08*** *03:54:43.6±0.4, 6042S×5198W, h0km, mb4.9/18, mb1 4.9/20, mb1mx4.9/21, mbtmp4.9/20, ML5.2/2, MS5.5/18, Ms1 5.5/18, ms1mx5.5/20, Error ellipse: s-maj=18.3km s-min=10.3km az=77.0*

MOS ***08*** *03:54:45.4±1.7, 6059S×5271W, h10km, mb5.5/29, MS5.5/28, Error ellipse: s-maj=29.5km s-min=9.3km az=95.4*

GCMT ***08*** *03:54:46.0±0.1, 6068S×5200W, h12km, MW5.8/100, Moment Tensor Solution. s90,c182; s100,c288; Duration: 1§9 Moment tensor: Scale 10^17 Nm; Mrr=0.36±.06; Mθθ=-5.32±.05; Mϕϕ=4.96±.06; Mrθ=1.42±.13; Mθϕ=3.09±.05; Mϕr=0.40±.14; Best double couple: M=6.15600×10^17 NP1:ϕ=240.00000°, δ=81.00000°, λ=-9.00000°. NP2:ϕ=331.00000°, δ=81.00000°, λ=-171.00000°. Principal axes: T 5.8170, Plg0.0000°, Azm105.0000°; N 0.6780, Plg78.0000°, Azm15.0000°; P -6.4950, Plg12.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***08*** *03:54:46.0±0.2, 6051S×5238W, h10km, mb5.4/25, MS5.6/184, MW5.7 Error ellipse: s-maj=12.9km s-min=8.0km az=66.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^17 Nm; Mrr=0.66; Mθθ=2.67; Mϕϕ=3.32; Mrθ=2.00; Mθϕ=1.85; Mϕr=1.08; Best double couple: M=4.20000×10^17 NP1:ϕ=236.00000°, δ=64.00000°, λ=-17.00000°. NP2:ϕ=334.00000°, δ=75.00000°, λ=-152.00000°. Principal axes: T 3.9100, Plg7.0000°, Azm103.0000°; N 0.5700, Plg58.0000°, Azm1.0000°; P -4.4900, Plg30.0000°, Azm197.0000°;*

BJI ***08*** *03:54:46.0, 6050S×5240W, h10km, mB5.5, Ms5.8, Msz5.6*

ISC 08 03:54:45.9±0.2, 6047S±003×5215W±009, h10km, n430, σ1§30/106, mb5.3/37, MS5.6/214, 18C-13D, South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**6.98**	**227**	Pn	**Pn**	**03 56 29.6**	**+1.6**
PMSA	7.1nm,0.3s,baz=26,slow=14,SNR=11			Sn	**Sn**	**03 57 56.1**	**+8.8**
	baz=349,slow=19,SNR=1.7						
PMSA	**Palmer Station**	**6.98**	**227**	*e*Pn	**Pn**	**03 56 30.8**	**+2.8**
PMSA	442nm,1.0s			Sg	**Sg**	**03 58 30.2**	**+0.7**
EFI	**East Falkland**	**9.41**	**337**	Pn	**Pn**	**03 57 03.1**	**+1.7**
EFI	1μm,0.9s,SNR=9.4			*e*		03 58 46.1	
EFI	**East Falkland**	**9.41**	**337**	*e*P	**Pn**	**03 57 03.4**	**+2.0**
EFI				pmax	pmax		
	comp=Z,194nm,1.0s						
EFI	**East Falkland**	**9.41**	**337**	*e*Pn	**Pn**	**03 57 03.4**	**+2.1**
	comp=Z,194nm,1.0s						
EFI				*e*Sn	**Sn**	**03 58 46.1**	**-1.0**
USHA	**Ushuaia**	**10.38**	**296**	Pn	**Pn**	**03 57 15.4**	**+0.8**
	comp=Z,10nm,0.3s,baz=90,slow=14,SNR=32						
USHA				Sn	**Sn**	**03 59 24.6**	**+14**
	comp=Z,1.6nm,0.3s,baz=128,slow=15,SNR=2.8						
USHA				LR	LR	04 00 10.4	
	comp=Z,56μm,21.3s,baz=104,slow=31						
VNA3	**Neumayer Olymp**	**19.92**	**140**	*e*P	**Pn**	**03 59 16.6**	**-2.3**
VNA3				*e*		03 59 18.9	
VNA3				*e*		03 59 21.8	
VNA3				*e*		03 59 26.6	
VNA3				*e*		03 59 33.1	
VNA1	**Neumayer--Stat**	**20.28**	**138**	*e*P	**P**	**03 59 20.8**	**-0.4**
VNA1				*e*		03 59 23.7	
VNA1				*e*		03 59 27.2	
VNA1				*e*		03 59 30.8	
VNA1				*e*		03 59 37.9	
VNA2	**Neumayer--Watz**	**20.60**	**139**	*e*P	**P**	**03 59 23.4**	**-1.3**
	baz=283,slow=11						
VNA2				*e*		03 59 26.1	
VNA2				*e*		03 59 29.8	
VNA2				*e*		03 59 35.2	
VNA2				*e*		03 59 40.0	
SNAA	**Sanae**	**22.14**	**140**	*e*P	**P**	**03 59 41.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,409nm,1.3s						
SNAA	**Sanae**	**22.14**	**140**	*e*P	**P**	**03 59 41.1**	**-0.1**
	comp=Z,409nm,1.3s,mb5.7						
PLCA	**Paso Flores**	**22.80**	**322**	P	**P**	**03 59 47.1**	**-1.4**
	comp=Z,34nm,0.9s,mb4.8,baz=154,slow=8.0,SNR=22						
PLCA				S	**S**	**04 04 04.9**	**+7.3**
	comp=Z,9.2nm,1.1s,baz=93,slow=10,SNR=2.6						
PLCA				LR	LR	04 08 20.1	
	comp=Z,5μm,20.7s,MS4.9,baz=147,slow=36						
PLCA	**Paso Flores**	**22.80**	**322**	*e*P	**P**	**03 59 47.9**	**-0.6**
PLCA				pmax	pmax		
	comp=Z,278nm,1.4s						
PLCA				MLR	MLR		
	comp=Z,9μm,20.0s						
PLCA	**Paso Flores**	**22.80**	**322**	*e*P	**P**	**03 59 47.9**	**-0.6**
	comp=Z,278nm,1.4s,mb5.5						
PLCA				LR	LR		
	comp=Z,9μm,20.0s,MS5.2						
LPA	**La Plata**	**25.85**	**349**	*ce*P	**P**	**04 00 18.0**	**+0.7**
MAIT	**Maitri**	**26.89**	**139**	*e*P	**P**	**04 00 23.8**	**-2.6**
NVL	**N'lazarevskaya**	**26.93**	**139**	*e*P	**P**	**04 00 27.6**	**+0.9**
NVL				*e*S	**S**	**04 05 04.2**	**+1.1**
NVL				pmax	pmax		
	comp=Z,96nm,1.3s,mb5.2						
NVL				MLR	MLR		
	comp=N,4μm,17.0s,MS5.4						
NVL				MLR	MLR		
	comp=E,8μm,17.0s,MS5.4						
NVL				MLR	MLR		
	comp=Z,13μm,17.0s,MS5.6						
CLCH	**Cerro Calan**	**29.64**	**328**	*e*P	**P**	**04 00 50.1**	**-1.1**

FCH Farellones 29.64 328 ⇓ *i*P P 04 00 47.5 -3.7
QSPA South Pole Qui 29.77 180 P P 04 00 50.8 -1.1
comp=Z,55nm,1.0s,mb5.2,baz=169,slow=4.7,SNR=56
QSPA S S 04 05 51.4 +3.8
comp=Z,1.6nm,0.5s,baz=80,slow=1.3,SNR=2.4
QSPA LR LR 04 13 34.1
comp=Z,15μm,20.7s,MS5.6,baz=23,slow=38
QSPA South Pole Qui 29.77 180 P P 04 00 50.8 -1.1
QSPA S S 04 05 51.4 +3.8
QSPA LR LR 04 13 34.1
CFAA Coronel Fontan 30.78 332 P P 04 00 58.9 -2.4
comp=Z,0.7nm,0.8s,baz=185,slow=7.6,SNR=14
CFAA Coronel Fontan 30.78 332 P P 04 00 58.9 -2.4
TLL Tololo Astrono 32.77 329 *e*P P 04 01 18.3 -0.6
LCO Las Campanas 33.85 330 *e*P P 04 01 27.3 -1.0
comp=Z,126nm,1.2s,mb5.7
LCO *e*PP PP 04 02 42.6 -2.2
LCO LR LR
comp=Z,10μm,20.0s,MS5.5
LCO Las Campanas 33.85 330 *e*P P 04 01 26.5 -1.8
CPUP Villa Florida 34.31 352 P P 04 01 30.9 -1.4
comp=Z,7.7nm,0.8s,mb4.7,baz=156,slow=8.4,SNR=7.1
CPUP LR LR 04 14 48.7
comp=Z,6μm,22.0s,MS5.3,baz=155,slow=35
CPUP Villa Florida 34.31 352 *e*P P 04 01 31.1 -1.2
comp=Z,189nm,1.5s,mb5.8
CPUP LR LR
comp=Z,1μm,19.0s,MS4.6
TRIS Tristan da Cun 34.34 65 PFAKE 04 01 50.0 +18
TRIS LR LR
comp=Z,5μm,19.0s,MS5.2
CAM4 Nova Friburgo 38.67 14 ⇑ *i*P P 04 02 14.0 +4.5
CAM4 *i* pP 04 02 18.0 +5.4
CAM4 *i* 04 02 20.7
CAM4 *i* 04 02 24.9
CAM4 *i* 04 02 38.9
CAM4 *i* 04 02 44.6
LVC Limon Verde 39.61 335 P P 04 02 16.7 -0.6
comp=Z,21nm,1.0s,mb4.8,baz=164,slow=7.5,SNR=5.0
LVC Limon Verde 39.61 335 *e*P P 04 02 18.1 +0.8
comp=Z,56nm,1.2s,mb5.2
LVC LR LR
comp=Z,6μm,20.0s,MS5.4
SBA Scott Base 39.89 192 P P 04 02 20.5 +1.4
SBA pmax pmax
comp=Z,220nm,1.8s,mb5.6
SBA Scott Base 39.89 192 *e*P P 04 02 20.0 +0.8
comp=Z,222nm,1.9s,mb5.6
SBA LR LR
comp=Z,17μm,19.0s,MS5.9
CAM3 Guarapari 40.55 17 ⇑ *i*P P 04 02 27.6 +2.4
CAM3 *i* pP 04 02 32.2 +3.9
CAM3 *i* 04 02 35.2
CAM3 *i* 04 02 38.7
CAM3 *i* 04 02 42.9
CAM3 *i* 04 02 50.5
VNDA Vanda 40.67 191 P P 04 02 26.1 +0.5
comp=Z,5.1nm,0.9s,mb4.2,baz=159,slow=8.7,SNR=7.4
VNDA LR LR 04 20 53.4
comp=Z,17μm,18.2s,MS6.0,baz=140,slow=38
MAW Mawson 43.77 150 P P 04 02 49.6 -1.3
comp=Z,39nm,1.1s,mb5.0,baz=212,slow=12,SNR=9.5
MAW LR LR 04 20 01.7
comp=Z,13μm,18.2s,MS5.9,baz=227,slow=35
MAW Mawson 43.77 150 *e*P P 04 02 52.6 +1.7
MAW pmax pmax
comp=Z,75nm,1.2s
MAW Mawson 43.77 150 *e*P P 04 02 52.5 +1.6
comp=Z,15nm,1.3s,mb4.5
MAW LR LR
comp=Z,15μm,20.0s,MS5.9
BDFB Brasilia 44.86 6 P P 04 02 59.2 -0.9
comp=Z,7.5nm,0.8s,mb4.6,baz=184,slow=11,SNR=17
BDFB LR LR 04 20 15.0
comp=Z,6μm,20.9s,MS5.5,baz=342,slow=34
BDFB Brasilia 44.86 6 *e*P P 04 03 00.9 +0.7
BDFB pmax pmax
comp=Z,13nm,1.3s
BDFB MLR MLR
comp=Z,8μm,21.0s
BDFB Brasilia 44.86 6 *e*P P 04 03 00.9 +0.7
comp=Z,13nm,1.3s,mb4.6
BDFB LR LR
comp=Z,8μm,21.0s,MS5.6
SIV San Ignacio 44.88 348 P P 04 02 59.0 -1.4
comp=Z,7.4nm,0.8s,mb4.6,baz=175,slow=8.7,SNR=26
ARE Arequipa 46.12 334 *e*P P 04 03 12.0 +1.9
MIR Mirnyy 50.70 163 *e*P P 04 03 40.0 -4.9
MIR *i* S S 04 11 03.0 +3.5
MIR *i* 04 13 36.0
MIR pmax pmax
comp=Z,500nm,18.0s
MIR MLR MLR
comp=Z,12μm,18.0s,MS6.0
RPN Rapa Nui 50.71 285 PFAKE 04 04 00.0 +15
RPN LR LR
comp=Z,4μm,19.0s,MS5.4
NNA Nana 51.71 329 P P 04 03 54.0 +1.0
comp=Z,366nm,1.2s,mb6.2,SNR=5.1
NNA Nana 51.71 329 P P 04 03 54.2 +1.2
comp=Z,116nm,1.3s,mb5.7
NNA LR LR
comp=Z,3μm,19.0s,MS5.4
DRV Dumont d'Urvil 52.85 186 P P 04 04 02.0 +1.0
DRV S S 04 11 35.0 +5.9
DRV SS SS 04 15 14.0 +7.1
DRV R 04 21 00.0
CASY Casey 52.91 171 PFAKE 04 04 10.0 +8.6
CASY LR LR
comp=Z,8μm,20.0s,MS5.8
SUR Sutherland 54.14 93 P P 04 04 13.6 +2.7
comp=Z,214nm,1.1s,mb6.0,SNR=5.3
SUR Sutherland 54.14 93 *e*P P 04 04 13.2 +2.3
comp=Z,374nm,2.2s,mb5.9
SUR LR LR
comp=Z,7μm,19.0s,MS5.7
SHEL Horse Pasture 55.53 58 PFAKE 04 04 30.0 +9.0
SHEL LR LR
comp=Z,3μm,21.0s,MS5.4
RCBR Riachuelo 55.89 20 P P 04 04 23.2 -0.4
comp=Z,75nm,1.2s,mb5.6
RCBR LR LR
comp=Z,3μm,21.0s,MS5.3
ATAH Atahualpa 56.89 328 P P 04 04 30.4 -0.3
comp=Z,16nm,1.0s,mb5.0,baz=168,slow=4.5,SNR=10.0
BOSA Boshof 59.41 95 P P 04 04 47.4 -0.9
comp=Z,13nm,0.9s,mb4.9,baz=205,slow=6.5,SNR=11
BOSA LR LR 04 25 10.5
comp=Z,7μm,20.1s,MS5.8,baz=208,slow=31
BOSA Boshof 59.41 95 P P 04 04 49.7 +1.4
BOSA pmax pmax
comp=Z,12nm,0.9s,mb4.9
BOSA Boshof 59.41 95 *e*P P 04 04 49.6 +1.3
comp=Z,12nm,0.8s,mb5.0
BOSA LR LR
comp=Z,7μm,21.0s,MS5.8
LBTB Lobatse 62.57 93 *e*P P 04 05 09.1 -0.7
LBTB pmax pmax
comp=Z,32nm,0.8s,mb5.5
LBTB MLR MLR
comp=Z,5μm,19.0s,MS5.7
LBTB Lobatse 62.57 93 *e*P P 04 05 09.1 -0.7
comp=Z,32nm,0.8s,mb5.5
LBTB PP PP 04 07 24.3 -2.9
LBTB LR LR
comp=Z,5μm,19.0s,MS5.7
TSUM Tsumeb 63.50 82 *e*P P 04 05 17.3 +1.2
comp=Z,51nm,1.5s,mb5.3
TSUM LR LR
comp=Z,3μm,20.0s,MS5.5
OTAV Otavalo 63.86 330 *e*P P 04 05 18.9 +0.5
comp=Z,90nm,1.1s,mb5.7
OTAV LR LR
comp=Z,2μm,20.0s,MS5.3
PAYG Puerto Ayora 66.44 318 PFAKE 04 05 50.0 +15
PAYG LR LR
comp=Z,2μm,22.0s,MS5.4
RKT Rikitea 66.67 264 *e*S S 04 14 52.6 +25
comp=Z,967nm,25.8s
ROSC El Rosal 67.42 336 P P 04 05 41.4 +0.1
comp=Z,11nm,0.8s,mb4.9,baz=171,slow=5.5,SNR=9.9
ROSC LR LR 04 35 52.9
comp=Z,2μm,18.8s,MS5.4,baz=181,slow=37
ROSC El Rosal 67.42 336 *e*P P 04 05 42.5 +1.1
RPZ Rata Peaks 70.35 212 LR LR 04 36 59.3
comp=Z,3μm,18.3s,MS5.6,baz=43,slow=36

SDV Santo Domingo 70.67 341 P P 04 06 00.4 -1.1
comp=Z,11nm,0.8s,mb4.8,baz=177,slow=4.9,SNR=14
SDV Santo Domingo 70.67 341 *e*P P 04 06 02.0 +0.5
comp=Z,10nm,1.1s,mb4.7
SDV LR LR
comp=Z,2μm,19.0s,MS5.4
PCRV Puerto La Cruz 71.11 347 P P 04 06 03.6 -0.6
comp=Z,23nm,1.1s,mb5.0,baz=125,slow=12,SNR=2.3
SNZO South Karori 71.58 215 PFAKE 04 06 20.0 +13
SNZO LR LR
comp=Z,3μm,20.0s,MS5.6
LSZ Lusaka 72.08 89 *e*P P 04 06 11.4 +1.3
LSZ pmax pmax
comp=Z,37nm,1.4s,mb5.1
LSZ MLR MLR
comp=Z,4μm,22.0s,MS5.6
LSZ Lusaka 72.08 89 *e*P P 04 06 11.4 +1.3
comp=Z,37nm,1.4s,mb5.1
LSZ LR LR
comp=Z,4μm,22.0s,MS5.6
GRGR Grenville 72.76 350 PFAKE 04 06 30.0 +16
GRGR LR LR
comp=Z,2μm,20.0s,MS5.5
BCIP Isla Barro Col 72.80 331 PFAKE 04 06 30.0 +16
BCIP LR LR
comp=Z,1μm,20.0s,MS5.2
BBGH Gun Hill 73.60 352 PFAKE 04 06 30.0 +11
BBGH LR LR
comp=Z,5μm,22.0s,MS5.8
URZ Urewera 73.67 218 LR LR 04 35 10.6
comp=Z,3μm,19.6s,MS5.7,baz=152,slow=33
TAU Tasmania Unive 75.75 195 PFAKE 04 06 40.0 +8.7
TAU LR LR
comp=Z,5μm,21.0s,MS5.8
LIC Lamto 76.02 49 *e*PKIKP P 04 06 34.3 +1.2
comp=Z,410nm,1.3s,mb6.2
MOO Moorlands 76.23 195 *e*P P 04 06 33.0 -1.0
KIC Kosan Boka 76.25 49 *e*PKIKP P 04 06 35.6 +1.2
comp=Z,435nm,1.1s,mb6.3
TIC Toumodi 76.41 49 *e*PKIKP P 04 06 36.4 +1.1
comp=Z,837nm,1.6s
DBIC Dimbokro 76.49 49 P P 04 06 35.8 0.0
comp=Z,48nm,1.1s,mb5.3,baz=175,slow=7.7,SNR=21
DBIC LR LR 04 35 17.5
comp=Z,3μm,18.2s,MS5.6,baz=183,slow=32
DBIC Dimbokro 76.49 49 *e*P P 04 06 37.6 +1.8
DBIC pmax pmax
comp=Z,81nm,1.2s
DBIC MLR MLR
comp=Z,1μm,21.0s
DBIC Dimbokro 76.49 49 *e*P P 04 06 37.5 +1.7
comp=Z,81nm,1.2s,mb5.5
DBIC LR LR
comp=Z,1μm,21.0s,MS5.2
ABPO Ambohimpanom 78.17 107 PFAKE 04 07 00.0 +15
ABPO LR LR
comp=Z,4μm,21.0s,MS5.7
PPT Papeete 78.49 255 *e*S S 04 17 01.9 +19
comp=Z,483nm,26.0s
PPT Papeete 78.49 255 LR LR 04 32 01.2
comp=Z,3μm,21.6s,MS5.6,baz=154,slow=28
SJG San Juan 79.12 346 PFAKE 04 07 00.0 +10
SJG LR LR
comp=Z,3μm,19.0s,MS5.7
TGUH Tegucigalpa,Un 79.42 325 *e*P P 04 06 52.2 +0.2
comp=Z,27nm,1.4s,mb5.0
TGUH LR LR
comp=Z,2μm,20.0s,MS5.5
RAO Raoul Island 80.26 226 LR LR 04 40 22.9
comp=Z,1μm,18.1s,MS5.3,baz=134,slow=34
RAO Raoul Island 80.26 226 PFAKE 04 07 10.0 +13
RAO LR LR
comp=Z,2μm,20.0s,MS5.5
SDDR Presa de Saban 80.68 342 PFAKE 04 07 10.0 +11
SDDR LR LR
comp=Z,1μm,20.0s,MS5.3
TOO Toolangi 81.24 194 *e*S S 04 17 03.4 -8.3
TOO *e*SS SS 04 22 45.7 +20
TOO Toolangi 81.24 194 *e*P P 04 07 00.1 -1.6
TOO *e*S S 04 17 03.4 -8.3
TOO Toolangi 81.24 194 *e*P P 04 07 00.1 -1.6
TOO *e*S S 04 17 03.4 -8.3
TOO *e*SS SS 04 22 45.7 +20
TAOE Nuku Hiva Isla 81.38 267 *e*S 04 18 19.0
comp=Z,2μm,25.6s
CNB Canberra Magne 82.94 198 *e*P P 04 07 09.4 -1.2
TOA0 Torodi Ar. Sit 84.93 52 *e*P P 04 07 19.9 -1.0
TORD Torodi Ar. Bea 84.93 52 P P 04 07 18.8 -2.0
comp=Z,19nm,1.1s,mb5.2,baz=205,slow=5.1,SNR=44
TORD PP PP 04 10 36.7 -1.1
comp=Z,6.1nm,1.2s,baz=210,slow=8.0,SNR=4.9
TORD LR LR 04 38 57.4
comp=Z,3μm,18.6s,MS5.7,baz=190,slow=31
TORD Torodi Ar. Bea 84.93 52 P P 04 07 18.8 -2.0
TORD PP PP 04 10 36.7 -1.1
TORD LR LR 04 38 57.4
NWAO Narrogin (SRO) 86.54 171 *e*P P 04 07 29.8 +1.0
NWAO pmax pmax
comp=Z,26nm,1.0s
NWAO MLR MLR
comp=Z,4μm,22.0s
NWAO Narrogin (SRO) 86.54 171 *e*P P 04 07 29.8 +1.0
comp=Z,26nm,1.0s,mb5.4
NWAO LR LR
comp=Z,4μm,22.0s,MS5.7
SOR Soroa 86.68 332 *e* P 04 07 29.5 +0.1
STKA Stephens Creek 87.30 192 *e*P P 04 07 30.6 -2.0
comp=Z,11nm,1.6s,mb4.8
STKA *e*SKS 04 17 55.2
STKA *e*SS SS 04 23 50.8 -4.3
STKA Stephens Creek 87.30 192 P P 04 07 30.4 -2.1
comp=Z,5.0nm,0.6s,mb5.0,baz=118,slow=4.2,SNR=8.7
STKA LR LR 04 46 18.9
comp=Z,3μm,19.8s,MS5.8,baz=160,slow=35
ARMA Armidale 87.36 200 *e*P P 04 07 32.3 -0.6
ARMA *e*SKS 04 17 55.5
MUN Mundaring 87.39 170 *e*P P 04 07 30.9 -2.1
MUN *e*S S 04 18 17.8 +4.4
FORT Forrest 89.09 180 *e*P P 04 07 39.5 -1.6
comp=Z,38nm,0.8s,mb5.8
FORT Forrest 89.09 180 *e*P P 04 07 43.0 +1.9
comp=Z,67nm,0.9s,mb6.0
DWPF Disney 91.46 334 PFAKE 04 08 00.0 +8.2
DWPF LR LR
comp=Z,2μm,20.0s,MS5.6
EIDS Eidsvold 92.39 201 *e*P P 04 07 56.1 -0.4
comp=Z,18nm,1.1s,mb5.3
BBSR BB Station 93.08 349 PFAKE 04 08 10.0 +11
BBSR LR LR
comp=Z,2μm,21.0s,MS5.5
MSEY Mahe Island 94.54 108 PFAKE 04 08 20.0 +13
MSEY LR LR
comp=Z,3μm,20.0s,MS5.8
TAM Tamanrasset 95.17 52 *e*P P 04 08 12.3 +3.3
TAM pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
TAM Tamanrasset 95.17 52 *e*P P 04 08 12.3 +3.2
comp=Z,10nm,1.4s,mb5.1
KVTX Kingsville 95.31 320 PFAKE 04 08 20.0 +10
KVTX LR LR
comp=Z,1μm,19.0s,MS5.4
BRAL Brewton 95.54 330 PFAKE 04 08 20.0 +9.5
BRAL LR LR
comp=Z,1μm,22.0s,MS5.3
ASAR Alice Springs 96.03 186 P P 04 08 09.8 -3.4
comp=Z,4.0nm,0.8s,mb4.9,baz=170,slow=4.0,SNR=14
ASAR PP PP 04 12 02.6 -2.1
comp=Z,1.4nm,0.8s,baz=170,slow=6.8,SNR=5.6
ASAR PKKPbc PKKPbc 04 24 58.8 +0.9
comp=Z,0.7nm,0.7s,baz=357,slow=1.9,SNR=4.6
NHSC New Hope 96.04 337 PFAKE 04 08 20.0 +7.2
NHSC LR LR
comp=Z,2μm,20.0s,MS5.5
HKT Hockley 96.92 323 PFAKE 04 08 30.0 +13
HKT LR LR
comp=Z,711nm,21.0s,MS5.1
GOGA Godfrey 97.01 334 PFAKE 04 08 30.0 +13
GOGA LR LR
comp=Z,1μm,22.0s,MS5.4
LRAL Lakeview Retre 97.46 331 PFAKE 04 08 30.0 +11
LRAL LR LR
comp=Z,2μm,20.0s,MS5.6
VBMS Vicksburg 97.57 328 PFAKE 04 08 30.0 +10
VBMS LR LR
comp=Z,1μm,22.0s,MS5.3
CNNC Cliffs of the 97.68 339 PFAKE 04 08 30.0 +10
CNNC LR LR
comp=Z,2μm,21.0s,MS5.5
NATX Nacogdoches 98.28 324 PFAKE 04 08 30.0 +7.1
NATX LR LR
comp=Z,1μm,20.0s,MS5.3
CTA Charters Tower 98.35 197 *e*P P 04 08 24.8 +1.0
comp=Z,5.1nm,1.0s,mb5.0
CTA *e*SKS 04 18 57.4
CTA *e*PS PS 04 21 17.2 +1.1
CTA Charters Tower 98.35 197 P P 04 08 24.6 +0.8
comp=Z,4.5nm,0.9s,mb5.0,baz=185,slow=6.8
CTA LR LR 04 45 42.6
comp=Z,904nm,21.6s,MS5.2,baz=177,slow=31
CTA Charters Tower 98.35 197 *e*P P 04 08 24.8 +1.0
CTA *e* 04 18 57.4
CTA *e*PS PS 04 21 17.2 +1.1
CTA pmax pmax
comp=Z,5.0nm,1.0s
CTAO Charters Tower 98.35 197 PFAKE 04 08 30.0 +6.2
CTAO LR LR
comp=Z,3μm,20.0s,MS5.7
MBWA Marble Bar 98.40 172 PFAKE 04 08 40.0 +16
MBWA LR LR
comp=Z,5μm,20.0s,MS6.0
JCT Junction City 98.65 320 PFAKE 04 08 40.0 +15
JCT LR LR
comp=Z,1μm,19.0s,MS5.4
TXAR Lajitas Array 98.87 316 P P 04 08 26.5 +0.8
comp=Z,0.5nm,1.0s,baz=158,slow=10,SNR=3.5
TXAR PKKP PKKPbc 04 24 53.2 +2.2
comp=Z,0.6nm,1.1s,baz=335,slow=4.0,SNR=4.0
TXAR LR LR 04 46 27.5
comp=Z,3μm,20.5s,MS5.8,baz=250,slow=31
XMAS Kiritimati 99.29 258 PFAKE 04 08 40.0 +12
XMAS LR LR
comp=Z,2μm,19.0s,MS5.7
DGAR Diego Garcia 99.65 124 PFAKE 04 08 40.0 +10
DGAR LR LR
comp=Z,2μm,20.0s,MS5.6
WB2 Warramunga Arr 99.70 186 *e*PDIF Pdif 04 08 26.5 -3.5
WB2 *e*SKS 04 19 04.4
WB2 *e*SP SP 04 21 19.0 -11
WRAB Tennant Creek 99.71 186 P Pdif 04 08 26.5 -3.5
WRAB pmax pmax
comp=Z,11nm,0.9s,mb5.3
WRAB Tennant Creek 99.71 186 PFAKE 04 08 40.0 +10
WRAB LR LR
comp=Z,6μm,21.0s,MS6.1
BLA Blacksburg 100.06 337 PFAKE 04 08 40.0 +8.4
BLA LR LR
comp=Z,1μm,21.0s,MS5.5
FUNA Funafuti 100.26 232 PFAKE 04 08 40.0 +7.6
FUNA LR LR
comp=Z,8μm,19.0s,MS6.2
CBN Corbin 100.48 340 PFAKE 04 08 40.0 +6.6
CBN LR LR
comp=Z,2μm,20.0s,MS5.6
MIAR Mount Ida 100.59 326 PFAKE 04 08 40.0 +6.1
MIAR LR LR
comp=Z,740nm,19.0s,MS5.2
WVT Waverly 100.61 331 PFAKE 04 08 40.0 +6.0
WVT LR LR
comp=Z,1μm,19.0s,MS5.4
RTC Rabat Centre 101.17 37 PFAKE 04 08 50.0 +14
RTC LR LR
comp=Z,3μm,20.0s,MS5.8
WCI Wyandotte Cave 102.26 333 PFAKE 04 08 50.0 +8.7
WCI LR LR
comp=Z,1μm,19.0s,MS5.5
WMOK Wichita Mounta 102.27 322 PFAKE 04 08 50.0 +8.6
WMOK LR LR
comp=Z,764nm,20.0s,MS5.2
MCWV Mont Chateau 102.33 338 PFAKE 04 08 50.0 +8.4
MCWV LR LR
comp=Z,2μm,22.0s,MS5.5
SSPA Standing Stone 102.94 340 PFAKE 04 09 00.0 +16
SSPA LR LR
comp=Z,1μm,20.0s,MS5.4
CCM Cathedral Cave 103.28 329 PFAKE 04 09 00.0 +14
CCM LR LR
comp=Z,843nm,20.0s,MS5.3
AMTX Amarillo 103.31 320 PFAKE 04 09 00.0 +14
AMTX LR LR
comp=Z,2μm,20.0s,MS5.6
COCO West Island 103.47 149 PFAKE 04 09 00.0 +13
COCO LR LR
comp=Z,1μm,19.0s,MS5.5
ACSO Alum Creek Sta 103.48 336 PFAKE 04 09 00.0 +13
ACSO LR LR
comp=Z,2μm,21.0s,MS5.6
PFVI Vila Bisbo 103.54 34 *e*LQ 04 37 36.6
PFVI *e*LR LR 04 42 43.3
comp=Z,1μm,20.1s
SFS San Fernando 103.67 37 PFAKE 04 09 00.0 +12
SFS LR LR
comp=Z,4μm,22.0s,MS6.0
MORF Marmelete 103.75 34 *e*LR LR 04 42 51.2
comp=Z,2μm,20.4s
PBDV Barranco-do-Ve 103.89 35 *e*LR LR 04 42 57.8
comp=Z,960nm,19.0s
PVAQ Vaqueiros 104.10 35 *e*LQ 04 37 44.9
PVAQ *e*LR LR 04 43 02.3
comp=Z,1μm,20.4s
TUC Tucson 104.11 312 PFAKE 04 09 00.0 +10
TUC LR LR
comp=Z,1μm,20.0s,MS5.5
BINY Binghamton 104.16 342 PFAKE 04 09 00.0 +10
BINY LR LR
comp=Z,2μm,22.0s,MS5.7
ERPA Erie 104.74 339 PFAKE 04 09 00.0 +7.6
ERPA LR LR
comp=Z,1μm,22.0s,MS5.4
ANMO Albuquerque 104.95 316 PFAKE 04 09 00.0 +6.7
ANMO LR LR
comp=Z,2μm,20.0s,MS5.6
PBAR Barrancos 105.02 35 *e*LR LR 04 43 27.8
comp=Z,2μm,20.3s
PMAFR Mafra 105.12 33 *e*LR LR 04 43 29.2
comp=Z,2μm,20.0s
PESTR Estremoz 105.50 35 *e*SS SS 04 28 41.0 +26
PESTR *e*LQ 04 38 10.1
PESTR *e*LR LR 04 43 45.1
comp=Z,2μm,20.8s
LBNH Lisbon 105.60 345 PFAKE 04 13 20.0 +12
LBNH LR LR
comp=Z,2μm,20.0s,MS5.5
AAM Ann Arbor 105.61 336 PFAKE 04 13 20.0 +12
AAM LR LR
comp=Z,1μm,19.0s,MS5.5
NCB Newcomb 105.64 344 PFAKE 04 13 20.0 +12
NCB LR LR
comp=Z,2μm,19.0s,MS5.6
KSU1 Kansas State U 105.69 326 PFAKE 04 13 20.0 +11
KSU1 LR LR
comp=Z,875nm,21.0s,MS5.3
HNR Honiara 105.82 213 PFAKE 04 13 20.0 +10
HNR LR LR
comp=Z,2μm,19.0s,MS5.6
PMRV Marv??o 106.08 35 *e*LR LR 04 43 57.0
comp=Z,2μm,18.5s
PKME Peaks-Kenny Pk 106.30 347 PFAKE 04 13 20.0 +11
PKME LR LR
comp=Z,2μm,20.0s,MS5.7
CBKS Cedar Bluff 106.33 323 PFAKE 04 13 20.0 +10
CBKS LR LR
comp=Z,2μm,22.0s,MS5.5
MTE Manteigas 106.94 34 *e*LQ 04 39 04.2
MTE *e*LR LR 04 44 20.5
comp=Z,3μm,20.9s
MTE Manteigas 106.94 34 PFAKE 04 13 20.0 +9.2
MTE LR LR
comp=Z,3μm,20.0s,MS5.8
PAB San Pablo 107.07 37 PFAKE 04 13 20.0 +8.9
PAB LR LR
comp=Z,1μm,20.0s,MS5.5
SDCO Great Sand Dun 107.17 318 PFAKE 04 13 20.0 +8.7
SDCO LR LR
comp=Z,1μm,19.0s,MS5.5
WUAZ Wupatki 107.19 313 PFAKE 04 13 20.0 +8.6
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.6
ESLA Sonseca Array 107.30 37 PFAKE 04 13 20.0 +8.5
ESLA LR LR
comp=Z,8μm,20.0s,MS6.3
SCIA State Center 107.41 329 PFAKE 04 13 20.0 +8.4

SCIA LR LR
comp=Z,2µm,20.0s,MS5.6
PFO Pinyon Flat Ob 107.42 308 PFAKE 04 13 20.0 +8.1
PFO LR LR
comp=Z,1µm,20.0s,MS5.5
JFWS Jewell Farm 107.63 332 PFAKE 04 13 20.0 +8.0
JFWS LR LR
comp=Z,2µm,20.0s,MS5.6
MVCO Mesa Verde 107.69 316 PFAKE 04 13 20.0 +7.7
MVCO LR LR
comp=Z,2µm,19.0s,MS5.8
MVO Moncorvo 107.80 34 *e*LR LR 04 44 39.2
comp=Z,2µm,20.2s
GLMI Grayling 108.23 336 PFAKE 04 13 20.0 +7.0
GLMI LR LR
comp=Z,2µm,21.0s,MS5.6
PMG Port Moresby 108.68 200 PFAKE 04 13 30.0 +15
PMG LR LR
comp=Z,2µm,19.0s,MS5.8
ISCO Idaho Springs 109.06 319 PFAKE 04 13 30.0 +15
ISCO LR LR
comp=Z,1µm,19.0s,MS5.5
ECSD EROS,Sioux Fal 110.01 327 PFAKE 04 13 30.0 +14
ECSD LR LR
comp=Z,2µm,20.0s,MS5.6
MVU Marysvale 110.16 314 PFAKE 04 13 30.0 +13
MVU LR LR
comp=Z,2µm,21.0s,MS5.6
DAC Darwin (Calif) 110.20 308 PFAKE 04 13 30.0 +13
DAC LR LR
comp=Z,1µm,19.0s,MS5.5
TPNV Topopah Spring 110.28 310 PFAKE 04 13 30.0 +13
TPNV LR LR
comp=Z,2µm,21.0s,MS5.6
WDD Wield Dalam 110.32 53 PFAKE 04 13 30.0 +13
WDD LR LR
comp=Z,2µm,20.0s,MS5.7
TPH Tonopah 111.64 310 PFAKE 04 13 30.0 +10
TPH LR LR
comp=Z,1µm,20.0s,MS5.5
TARA Tarawa 111.73 230 PFAKE 04 13 30.0 +9.3
TARA LR LR
comp=Z,2µm,19.0s,MS5.6
DUG Dugway 111.87 314 PFAKE 04 13 30.0 +10
DUG LR LR
comp=Z,1µm,22.0s,MS5.4
SAO San Andreas Ge 112.15 306 PFAKE 04 13 30.0 +9.3
SAO LR LR
comp=Z,1µm,21.0s,MS5.5
RSSD Black Hills 112.48 322 PFAKE 04 13 30.0 +8.9
RSSD LR LR
comp=Z,1µm,20.0s,MS5.5
EYMN Ely 112.67 332 PFAKE 04 13 30.0 +8.7
EYMN LR LR
comp=Z,911nm,20.0s,MS5.4
CMB Columbia Colle 112.83 307 PFAKE 04 13 30.0 +8.0
CMB LR LR
comp=Z,1µm,19.0s,MS5.5
CEL Celeste 112.94 52 PFAKE 04 13 30.0 +7.8
CEL LR LR
comp=Z,2µm,21.0s,MS5.6
BW06 Boulder Array 113.03 318 PFAKE 04 13 30.0 +7.8
BW06 LR LR
comp=Z,1µm,19.0s,MS5.6
PDAR Pinedale Array 113.03 318 PKiKP PKiKP 04 13 23.3 +1.1
comp=Z,1.0nm,1.1s,baz=188,slow=3.0,SNR=4.5
ELK Elko 113.23 312 PFAKE 04 13 30.0 +7.4
ELK LR LR
comp=Z,1µm,22.0s,MS5.5
AHID Auburn Hatcher 113.55 317 PFAKE 04 13 40.0 +17
AHID LR LR
comp=Z,1µm,20.0s,MS5.6
POHA Pohakuloa 113.57 269 PFAKE 04 13 40.0 +16
POHA LR LR
comp=Z,5µm,19.0s,MS6.1
BMN Battle Mountai 113.69 311 PFAKE 04 13 40.0 +16
BMN LR LR
comp=Z,1µm,20.0s,MS5.5
MCCM Marconi Confer 113.92 305 PFAKE 04 13 40.0 +16
MCCM LR LR
comp=Z,2µm,20.0s,MS5.6
AGMN Agassiz Refuge 114.05 330 PFAKE 04 13 40.0 +16
AGMN LR LR
comp=Z,2µm,20.0s,MS5.7
TIP Timpagrande 114.08 53 PFAKE 04 13 40.0 +16
TIP LR LR
comp=Z,2µm,20.0s,MS5.6
KAPI Kappang 114.41 171 PFAKE 04 13 40.0 +14
KAPI LR LR
comp=Z,2µm,19.0s,MS5.8
CUC Castrocucco 114.41 51 PFAKE 04 13 40.0 +15
CUC LR LR
comp=Z,2µm,19.0s,MS5.7
HOPS Hopland 114.72 306 PFAKE 04 13 40.0 +14
HOPS LR LR
comp=Z,2µm,19.0s,MS5.6
LKWY Lake 114.91 318 PFAKE 04 13 40.0 +14
LKWY LR LR
comp=Z,1µm,19.0s,MS5.6
RLMT Red Lodge 115.03 319 PFAKE 04 13 40.0 +14
RLMT LR LR
comp=Z,2µm,19.0s,MS5.7
HLID Hailey 115.40 315 PFAKE 04 13 40.0 +13
HLID LR LR
comp=Z,966nm,20.0s,MS5.4
BNI Bardonecchia 115.53 42 PFAKE 04 13 40.0 +13
BNI LR LR
comp=Z,2µm,19.0s,MS5.7
AQU L'Aquila 115.53 48 PFAKE 04 13 40.0 +13
AQU LR LR
comp=Z,2µm,19.0s,MS5.8
SCHQ Schefferville 115.55 351 PFAKE 04 13 40.0 +13
SCHQ LR LR
comp=Z,3µm,22.0s,MS5.8
ULM Lac du Bonnet 115.86 330 PFAKE 04 13 40.0 +13
ULM LR LR
comp=Z,2µm,19.0s,MS5.7
WDC Whiskeytown Da 115.87 307 PFAKE 04 13 40.0 +12
WDC LR LR
comp=Z,1µm,22.0s,MS5.4
WVOR Wild Horse Val 115.95 311 PFAKE 04 13 40.0 +12
WVOR LR LR
comp=Z,1µm,19.0s,MS5.5
VLC Villacollemand 116.01 45 PFAKE 04 13 40.0 +12
VLC LR LR
comp=Z,1µm,20.0s,MS5.5
MOD Modoc 116.13 309 PFAKE 04 13 40.0 +12
MOD LR LR
comp=Z,844nm,20.0s,MS5.3
BOZ Bozeman (W) 116.27 318 PFAKE 04 13 40.0 +12
BOZ LR LR
comp=Z,1µm,20.0s,MS5.5
DGMT Dagmar 116.46 324 PFAKE 04 13 40.0 +11
DGMT LR LR
comp=Z,1µm,20.0s,MS5.6
YBH Yreka Blue Hor 116.92 308 PFAKE 04 13 40.0 +10
YBH LR LR
comp=Z,1µm,22.0s,MS5.4
TIR Tirane 117.16 54 PFAKE 04 13 40.0 +10
TIR LR LR
comp=Z,1µm,21.0s,MS5.5
BMO Blue Mountains 117.55 313 PFAKE 04 13 40.0 +9.2
BMO LR LR
comp=Z,772nm,20.0s,MS5.3
CSS Prodhromos 117.61 68 PFAKE 04 13 40.0 +8.8
CSS LR LR
comp=Z,1µm,19.0s,MS5.6
TUE Stuetta 117.67 43 PFAKE 04 13 40.0 +9.0
TUE LR LR
comp=Z,1µm,20.0s,MS5.6
EGMT Eagleton 117.75 320 PFAKE 04 13 40.0 +8.9
EGMT LR LR
comp=Z,1µm,20.0s,MS5.6
HUMO Hull Mountain 117.75 308 PFAKE 04 13 40.0 +8.7
HUMO LR LR
comp=Z,1µm,20.0s,MS5.5
MSO Missoula 118.08 317 *e*PKPdf PKPdf 04 13 31.8 0.0
MSO LR LR
comp=Z,757nm,19.0s,MS5.3
TRI Trieste 118.56 47 PFAKE 04 13 40.0 +7.3
TRI LR LR
comp=Z,872nm,19.0s,MS5.4
ISP Isparta 118.72 64 PFAKE 04 13 50.0 +17
ISP LR LR
comp=Z,736nm,22.0s,MS5.3

BFO Black Forest 118.95 42 PFAKE 04 13 50.0 +17
BFO LR LR
comp=Z,1µm,20.0s,MS5.6
WLF Walferdange 119.41 39 PFAKE 04 13 50.0 +16
WLF LR LR
comp=Z,3µm,20.0s,MS5.9
COR Corvallis 119.56 309 PFAKE 04 13 50.0 +15
COR LR LR
comp=Z,2µm,21.0s,MS5.7
HAWA Hanford 119.68 313 PFAKE 04 13 50.0 +15
HAWA LR LR
comp=Z,2µm,21.0s,MS5.6
NEW Newport 120.42 315 PFAKE 04 13 50.0 +14
NEW LR LR
comp=Z,1µm,20.0s,MS5.5
PKSM Moragy 120.79 50⇓ *i*P PKPdf 04 13 36.7 -0.3
PKSM Moragy 120.79 50 ⇓P PKPdf 04 13 36.7 -0.3
GRF Grafenberg Arr 121.09 43 *e*PKP PKPdf 04 13 44.1 +6.7
GRF *e*L 05 00 55.4
comp=Z,837nm,20.7s
GERES GERESS Array B 121.21 45 PKP PKPdf 04 13 37.7 0.0
comp=Z,2.5nm,1.0s,baz=186,slow=2.7,SNR=12
GERES GERESS Array B 121.21 45 PKIKP PKPdf 04 13 37.7 0.0
GERES pmax pmax
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 121.41 45 *e*PKPdf PKPdf 04 13 39.7 +1.6
KHC AMS AMS 04 59 30.0
comp=Z,1µm,19.5s
BZS Buzias 121.44 52⇑ *i*P PKPdf 04 13 40.2 +2.0
BZS Buzias 121.44 52 ⇑P PKPdf 04 13 40.2 +2.0
FFC Flin Flon 121.48 329 PFAKE 04 13 50.0 +12
FFC LR LR
comp=Z,1µm,20.0s,MS5.5
BR131 Keskin Array S 121.66 65 PFAKE 04 13 50.0 +11
BR131 LR LR
comp=Z,568nm,19.0s,MS5.2
BRTR Keskin Array B 121.66 65 PKP PKPdf 04 13 37.0 -1.9
comp=Z,2.1nm,0.8s,baz=174,slow=2.5,SNR=12
BRTR PP PP 04 15 10.6 -1.7
comp=Z,3.8nm,1.2s,baz=216,slow=5.3,SNR=4.3
ESK Eskdalemuir 121.78 30 PFAKE 04 13 50.0 +11
ESK LR LR
comp=Z,3µm,22.0s,MS5.9
EKA Eskdalemuir Ar 121.81 30 PKP PKPdf 04 13 38.0 -0.7
comp=Z,1.7nm,0.9s,baz=265,slow=2.6,SNR=2.9
EKA Eskdalemuir Ar 121.81 30 PKIKP PKPdf 04 13 38.0 -0.6
EKA pmax pmax
comp=Z,2.0nm,0.9s
NKC Novy Kostel 121.96 43 AMS AMS 04 57 10.0
comp=Z,1µm,21.6s
TREC Trest 122.22 46 *e*PKPdf PKPdf 04 13 39.5 -0.1
TREC AMS AMS 05 01 30.0
comp=Z,1µm,19.7s
PRU Pruhonice 122.47 45 *e*PKPdf PKPdf 04 13 42.9 +2.8
PRU AMS AMS 05 03 00.0
comp=Z,900nm,16.9s
VRAC Vranov 122.63 46 PKP PKPdf 04 13 40.1 -0.3
comp=Z,14nm,1.3s,baz=242,slow=2.6,SNR=6.7
VRAC Vranov 122.63 46 PKIKP PKPdf 04 13 40.1 -0.3
VRAC pmax pmax
comp=Z,14nm,1.3s
VRAC Vranov 122.63 46⇓ *i*P PKPdf 04 13 43.3 +2.9
VOIR 122.65 55⇑ *i*P PKPdf 04 13 43.9 +3.3
KOLL Kolacno 122.68 48 *e*PKIKP PKPdf 04 13 42.5 +2.0
KOLL Kolacno 122.68 48 *e*PKP PKPdf 04 13 42.5 +2.0
KOLL Kolacno 122.68 48 *e*PKP PKPdf 04 13 42.5 +2.0
PSZ Piszkesteto 122.68 49⇑ *i*P PKPdf 04 13 43.4 +2.8
PSZ Piszkesteto 122.68 49 ⇑P PKPdf 04 13 43.4 +2.9
PSZ LR LR
comp=Z,1µm,19.0s,MS5.6
VYHS Vyhne 122.77 48 *e*PKP PKPdf 04 13 42.8 +2.1
VYHS *e*PP PP 04 15 20.7 +1.0
VYHS Vyhne 122.77 48 *e*PKP PKPdf 04 13 42.8 +2.1
VYHS *e*PP PP 04 15 20.7 +1.0
VYHS LR LR
comp=Z,400nm,32.3s,MS4.9
DRGR 122.83 52⇓ *i*P PKPdf 04 13 42.0 +1.1
DRGR 122.83 52 ⇓P PKPdf 04 13 42.0 +1.1
PVCC Panska Ves 122.94 44 *e*PKPdf PKPdf 04 13 40.5 -0.5
PVCC AMS AMS 05 03 40.0
comp=Z,1µm,20.1s
BRG Berggiesshubel 123.01 44 *e*PKIKP PKPdf 04 13 42.0 +0.9
BRG SS SS 04 32 10.0 +4.8
BRG pmax pmax
comp=Z,12nm,1.6s
BRG MLR MLR
comp=N,671nm,21.2s,MS5.4
BRG MLR MLR
comp=E,466nm,18.8s,MS5.4
BRG MLR MLR
comp=Z,770nm,23.1s,MS5.3
BRG Berggiesshubel 123.01 44 *e*P PKPdf 04 13 42.0 +0.9
comp=Z,20nm,1.6s
BRG SS SS 04 32 10.0 +4.8
BRG
comp=N,1µm,21.2s
BRG
comp=E,778nm,18.8s
BRG
comp=Z,1µm,23.1s
MLR Muntele Rosu 123.06 55 PKP PKPdf 04 13 40.2 -1.2
comp=Z,17nm,1.2s,baz=303,slow=2.7,SNR=8.5
MLR Muntele Rosu 123.06 55 PKIKP PKPdf 04 13 40.2 -1.2
MLR pmax pmax
comp=Z,17nm,1.2s
CLL Collm 123.06 43 *e*PKIKP PKPdf 04 13 44.0 +2.8
CLL pmax pmax
comp=Z,22nm,1.3s
CLL MLR MLR
comp=Z,1µm,18.9s,MS5.6
CLL Collm 123.06 43 *e*PKPpre 04 13 39.0
CLL *e*PKPdf PKPdf 04 13 44.0 +2.8
comp=Z,22nm,1.3s
CLL *e*PP PP 04 15 21.0 -0.6
CLL *ex* x 04 16 51.0
CLL *e*PS PS 04 25 30.0 +13
CLL *e*SS SS 04 32 30.0 +24
CLL *e*SSS 04 37 00.0
CLL LmV 05 07 00.0
comp=Z,1µm,18.9s
HARR Harsova 123.22 57⇑ *i*P PKPdf 04 13 45.0 +3.3
HARR Harsova 123.22 57 ⇑P PKPdf 04 13 45.0 +3.3
DPC Dobruska-Polom 123.40 46 *e*PKPdf PKPdf 04 13 43.9 +2.0
DPC AMS AMS 05 04 10.0
comp=Z,800nm,18.3s
EDM Edmonton 123.41 321 *e*PKIKP PKPdf 04 13 41.3 -0.5
UPC Upice 123.42 45 *e*PKPdf PKPdf 04 13 42.4 +0.5
OKC Ostrava-Krasne 123.63 47 *e*PKPdf PKPdf 04 13 43.9 +1.6
OKC AMS AMS 04 57 20.0
comp=Z,700nm,24.9s
VRI Vrincioaia 123.68 55⇓ *i*P PKPdf 04 13 44.5 +1.9
VRI Vrincioaia 123.68 55 ⇓P PKPdf 04 13 44.5 +2.0
TRPA Tarpa 123.87 51⇓ *i*P PKPdf 04 13 46.1 +3.3
CRVS Cervenica-Dubn 124.09 50 *e*PKP PKPdf 04 13 43.9 +0.7
CRVS *e*PP PP 04 15 29.5 +0.9
CRVS Cervenica-Dubn 124.09 50 *e*PKP PKPdf 04 13 43.9 +0.7
CRVS *e*PP PP 04 15 29.5 +0.9
CRVS LR LR
comp=Z,700nm,26.8s,MS5.2
UZH Uzhgorod 124.18 51 *i* PKIKP PKPdf 04 13 41.7 -1.7
UZH *i* 04 13 45.0
UZH *i* 04 15 30.0
UZH *e* 04 20 48.0
UZH MLR MLR
comp=N,1µm,17.0s,MS5.7
UZH MLR MLR
comp=E,900nm,17.0s,MS5.7
UZH MLR MLR
comp=Z,600nm,17.0s,MS5.3
STHS Stebnicka Huta 124.43 49 *e*PKP PKPdf 04 13 47.2 +3.4
BURAR Bucovina Array 124.49 53⇑ *i*P PKPdf 04 13 43.8 -0.2
BURAR Bucovina Array 124.49 53 ⇑P PKPdf 04 13 43.8 -0.3
BUR08 Bucovina Ar. S 124.51 53 *e*PKPdf PKPdf 04 13 46.7 +2.6
HYB Hyderabad 124.53 119 *i* P PKPdf 04 13 47.5 +2.4
HYB Hyderabad 124.53 119 *e*P PKPdf 04 13 47.5 +2.4
OJC Ojcow 124.55 48 *e*P PKPdf 04 13 47.0 +2.9
KKM Kota Kinabalu 124.99 166 PFAKE 04 14 00.0 +14
KKM LR LR
comp=Z,1µm,19.0s,MS5.7
KWP Kalwaria 125.15 50 PFAKE 04 14 00.0 +15
KWP LR LR
comp=Z,1µm,21.0s,MS5.5
LVV L'vov 125.81 51 *e*PKIKP PKPdf 04 13 48.6 +2.1
DAV Davao City (W) 126.69 177 PFAKE 04 14 00.0 +11

DAV LR LR
comp=Z,1µm,19.0s,MS5.6
GNI Garni 127.12 73 PFAKE 04 14 00.0 +11
GNI LR LR
comp=Z,2µm,19.0s,MS5.7
SFJD Kangerlussuaq 127.17 1 PFAKE 04 14 00.0 +11
SFJD LR LR
comp=Z,3µm,22.0s,MS5.9
ANN Anapa 127.40 64 *i* PKIKP PKPdf 04 13 51.2 +1.5
ANN *e* 04 15 52.2
ANN *e* 04 20 57.0
ANN pmax pmax
comp=Z,54nm,1.5s
SOC Sochi 127.48 66 *i* PKIKP PKPdf 04 13 53.9 +4.0
SOC *e* 04 15 54.5
SOC *e*PPP 04 18 39.0
SOC *e*PS PS 04 25 53.1 -2.5
SOC *e*SSS 04 37 47.7
BER Bergen 128.44 32 AMS AMS 05 01 46.2
comp=Z,2µm,22.6s,MS5.8
KIEV Kiev 128.53 53 *e*PKIKP PKPdf 04 13 53.0 +1.3
KIEV MLR MLR
comp=Z,961nm,19.0s,MS5.5
AKASG Malin Array Be 128.54 54 PKP PKPdf 04 13 49.7 -2.0
comp=Z,2.6nm,0.6s,baz=242,slow=2.2,SNR=17
AKASG PP PP 04 15 55.0 -3.1
comp=Z,1.0nm,0.5s,baz=221,slow=6.8,SNR=6.2
AKASG Malin Array Be 128.54 54 PKP PKPdf 04 13 49.7 -2.0
AKASG PP PP 04 15 55.0 -3.1
AKBB Malin Array Si 128.54 54 *e*PKIKP PKPdf 04 13 53.0 +1.3
KONO Kongsberg 128.99 35 AMS AMS 05 04 12.9
comp=Z,1µm,18.8s,MS5.7
KONO Kongsberg 128.99 35 PFAKE 04 14 00.0 +7.8
KONO LR LR
comp=Z,2µm,20.0s,MS5.9
KIV Kislovodsk 129.12 68⇑ *i*PKIKP PKPdf 04 13 54.1 +1.1
KIV *e* 04 21 08.0
KIV *e*SS SS 04 33 29.2 +7.4
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,600nm,15.0s,MS5.4
KIV Kislovodsk 129.12 68⇑ *e*PKP PKPdf 04 13 54.2 +1.2
KIV LR LR
comp=Z,794nm,20.0s,MS5.4
HFS Hagfors 130.58 37 PKP PKPdf 04 13 54.5 -0.8
comp=Z,12nm,1.1s,baz=141,slow=4.8,SNR=3.1
HFS Hagfors 130.58 37 PKIKP PKPdf 04 13 54.5 -0.7
HFS pmax pmax
comp=Z,12nm,1.1s
NB2 NORSAR Subarra130.60 35 PKPdf PKPdf 04 13 55.3 +0.1
comp=Z,34nm,1.4s,baz=202,slow=1.9
NB2 NORSAR Subarra130.60 35 PKPdf PKPdf 04 13 55.3 +0.1
baz=202,slow=1.9
NB2 NORSAR Subarra130.60 35 PKPdf PKPdf 04 13 55.3 +0.1
baz=202,slow=1.9
NOA NORSAR Array B130.60 35 PKP PKPdf 04 13 54.8 -0.5
comp=Z,16nm,1.1s,baz=215,slow=2.0,SNR=7.2
NOA SKPbc SKPbc 04 17 19.6 +1.0
comp=Z,3.4nm,1.0s,baz=267,slow=2.1,SNR=3.3
MOL Molde 130.85 32 AMS AMS 05 02 14.5
comp=Z,2µm,18.8s,MS5.8
MIDW Midway 131.35 254 PFAKE 04 14 10.0 +12
MIDW LR LR
comp=Z,2µm,20.0s,MS5.8
YKA Yellowknife Ar 131.53 327 PKhKP 04 13 44.3
comp=Z,0.2nm,0.5s,baz=131,slow=2.8,SNR=3.8
YKA PKP PKPdf 04 13 55.5 -1.4
comp=Z,2.8nm,0.8s,baz=139,slow=2.3,SNR=14
YKA SKPbc SKPbc 04 17 22.8 +0.8
comp=Z,2.4nm,1.0s,baz=139,slow=4.0,SNR=6.2
YKA Yellowknife Ar 131.53 327 PKP PKPdf 04 13 55.5 -1.4
YKA SKPbc SKPbc 04 17 22.8 +0.8
GUMO Guam 131.56 202 PFAKE 04 14 10.0 +11
GUMO LR LR
comp=Z,895nm,19.0s,MS5.5
WRAK Wrangell Islan 132.48 312 PFAKE 04 14 10.0 +11
WRAK LR LR
comp=Z,1µm,19.0s,MS5.7
CM31 Chiang Mai Arr 133.23 141 PFAKE 04 14 10.0 +8.4
CM31 LR LR
comp=Z,1µm,19.0s,MS5.6
CMAR Chiang Mai Arr 133.23 141 PKP PKPdf 04 14 00.8 -0.8
comp=Z,2.1nm,0.4s,baz=226,slow=3.3,SNR=13
CMAR Chiang Mai Arr 133.23 141 PKIKP PKPdf 04 14 00.8 -0.8
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CHTO Chiang Mai 133.57 141 PFAKE 04 14 10.0 +7.8
CHTO LR LR
comp=Z,968nm,20.0s,MS5.5
NSS Namsos 133.61 32 AMS AMS 05 08 14.9
comp=Z,2µm,20.2s,MS5.8
KBL Kabul 134.59 97 PKIKP PKPdf 04 14 06.0 +2.3
OBN Obninsk 134.80 54⇓ *i*PKIKP PKPdf 04 14 02.8 -0.5
OBN *e*PS PS 04 26 54.4 -4.2
OBN pmax pmax
comp=Z,25nm,1.4s
OBN MLR MLR
comp=Z,800nm,22.0s,MS5.4
OBN Obninsk 134.80 54 *i* PKP PKPdf 04 14 03.1 -0.2
OBN LR LR
comp=Z,800nm,22.0s,MS5.4
NIL Nilore 135.93 102 PFAKE 04 14 20.0 +14
NIL LR LR
comp=Z,119nm,20.0s,MS4.6
QIZ Qiongzhong 136.65 155 PKP PKPdf 04 14 04.7 -3.3
QIZ PP PP 04 16 50.1 +0.5
QIZ PP PP
comp=Z,180nm,3.6s
QIZ LR LR
comp=N,829nm,21.6s
QIZ LR LR
comp=Z,2µm,21.6s,MS5.7
QIZ Qiongzhong 136.65 155 PFAKE 04 14 20.0 +12
QIZ LR LR
comp=Z,2µm,21.0s,MS5.8
SHL Shillong 137.30 129 *e*P PKPdf 04 14 00.1 -8.9
SHL *ex* x 04 17 36.0
RES Resolute Bay 137.79 344 *e*PKIKP PKPdf 04 14 08.7 +0.3
DAG Danmarks Havn 138.60 11⇑ *i*P PKPdf 04 14 10.6 +0.7
comp=Z,4.1nm,0.7s
DAG Danmarks Havn 138.60 11⇑ *e*P PKPdf 04 14 10.6 +0.7
TRO Tromso 139.24 30 AMS AMS 05 04 18.5
comp=Z,1µm,22.3s,MS5.5
KLMR Klimovskoe 139.86 49 *e*PKIKP PKPdf 04 14 09.1 -3.4
KMI Kunming 140.66 143 PKP PKPdf 04 14 20.1 +4.9
LSA Lhasa 140.69 125 PKP PKPdf 04 14 10.4 -4.7
LSA Lhasa 140.69 125 PFAKE 04 14 30.0 +15
LSA LR LR
comp=Z,1µm,22.0s,MS5.6
ARCES ARCESS Array B 140.89 33 PKhKP 04 14 05.2
comp=Z,2.6nm,0.6s,baz=215,slow=2.7,SNR=8.3
ARCES ARCESS Array B 140.89 33 *i* PKHKP 04 14 05.2
ARCES pmax pmax
comp=Z,3.0nm,0.6s
AKTO Aktyubinsk 140.99 72 PKhKP 04 14 07.5
comp=Z,4.7nm,1.0s,baz=180,slow=1.9,SNR=7.3
AKTO Aktyubinsk 140.99 72 *i* PKHKP 04 14 07.6
AKTO pmax pmax
comp=Z,5.0nm,1.0s
AB31 Akbulak array 141.10 75 PKHKP 04 14 08.2
AB31 pmax pmax
comp=Z,16nm,0.9s
EGAK Eagle 141.37 317 PFAKE 04 14 30.0 +15
EGAK LR LR
comp=Z,2µm,22.0s,MS5.7
KDAK Kodiak Island 141.41 302 PFAKE 04 14 30.0 +15
KDAK LR LR
comp=Z,2µm,19.0s,MS5.9
KEV Kevo 141.43 33 PFAKE 04 14 30.0 +15
KEV LR LR
comp=Z,3µm,22.0s,MS6.0
KK31 Karatay Array 141.93 91 *i* PKIKP PKPdf 04 14 13.4 -3.4
KK31 pmax pmax
comp=Z,14nm,1.0s
APA Apatity 141.94 38⇓ *i*PKIKP PKPdf 04 14 14.3 -1.8
APA pmax pmax
comp=Z,59nm,1.4s
LVZ Lovozero 142.52 38 PFAKE 04 14 30.0 +13
LVZ LR LR
comp=Z,3µm,22.0s,MS6.0
BJO Bjornoya 142.57 25 AMS AMS 05 05 01.0
comp=Z,1µm,26.9s,MS5.5
GYA Guiyang 143.04 147 PKP PKPdf 04 14 19.2 -0.2
GYA PKS 04 17 53.2

GYA PPP 04 20 43.6
GYA SKS SKSdf 04 21 26.0 -2.9
GYA SKKS SKKSac 04 24 23.2 +1.3
GYA SS SS 04 36 12.9 +5.7
GYA PP PP
comp=Z,260nm,7.5s
GYA LR LR
comp=N,450nm,20.8s,MS5.4
GYA LR LR
comp=E,530nm,22.8s,MS5.4
GYA LR LR
comp=Z,750nm,20.4s,MS5.4
EKS2 Erkin-Say 143.22 94 P PKPdf 04 14 17.9 -1.3
SNR=9.6
EKS2 Erkin-Say 143.22 94 *e*PKPdf PKPdf 04 14 18.5 -0.7
EKS2 LR LR
comp=Z,2μm,19.0s,MS5.8
KZA Kyzart 143.51 96 P PKPdf 04 14 18.9 -0.8
SNR=17
AAK Ala-Archa 143.55 95 *i* PKIKP PKPdf 04 14 18.2 -1.5
AAK MLR MLR
comp=Z,1μm,20.0s,MS5.7
COLA College 143.76 314 *i* PKIKP PKPdf 04 14 19.3 -0.1
COLA College 143.76 314 PFAKE 04 14 30.0 +11
COLA LR LR
comp=Z,1μm,21.0s,MS5.6
FRU Bishkek 143.76 95 *e*PKIKP PKPdf 04 14 17.5 -2.6
FRU pmax pmax
comp=Z,140nm,1.6s
FRU MLR MLR
comp=Z,1μm,19.0s,MS5.6
KBK Karagaybulak 143.79 95 P PKPdf 04 14 20.2 0.0
SNR=25
QZH Quanzhou 143.92 166 PKP PKPdf 04 14 18.9 -2.1
QZH PP PP 04 17 37.6 +3.5
QZH PP PP
comp=Z,1μm,4.7s
QZH LR LR
comp=Z,2μm,14.4s,MS6.0
YHNB Yeheng 143.94 170 PFAKE 04 14 30.0 +9.0
YHNB LR LR
comp=Z,1μm,20.0s,MS5.6
CHMS Chumysh 143.95 94 P PKPdf 04 14 19.7 -0.7
SNR=27
USP Ospenovka 144.02 94 P PKPdf 04 14 19.9 -0.7
SNR=32
ULHL Ulahol 144.12 97 P PKPdf 04 14 21.3 +0.6
SNR=11
KBS Kingsbay 144.14 17 *e*P PKPdf 04 14 20.2 +0.5
KBS AMb AMB 04 14 25.2
comp=Z,163nm,1.4s
KBS AMS AMS 05 05 37.4
comp=Z,663nm,19.5s,MS5.4
KBS Kingsbay 144.14 17 *i* PKP PKPdf 04 14 21.5 +1.7
KBS LR LR
comp=Z,1μm,21.0s,MS5.6
TATO Taipei 144.25 170 PFAKE 04 14 30.0 +8.4
TATO LR LR
comp=Z,776nm,19.0s,MS5.5
TKM2 Tokmak 2 144.31 95 P PKPdf 04 14 16.8 -4.3
SNR=25
TKM2 Tokmak 2 144.31 95 *e*PKPdf PKPdf 04 14 20.7 -0.4
TKM2 LR LR
comp=Z,1μm,19.0s,MS5.7
ARU Arti 145.04 65 *i* PKIKP PKPdf 04 14 21.9 0.0
ARU MLR MLR
comp=Z,2μm,21.0s,MS5.8
ARU Arti 145.04 65 *i* PKP PKPdf 04 14 21.7 -0.2
ARU LR LR
comp=Z,2μm,20.0s,MS5.8
SVE Sverdlovsk 146.21 66⇑ *i* PKIKP PKPdf 04 14 23.1 -0.8
SVE *e* 04 17 52.2
SVE *e*PPP 04 21 14.5
SVE pmax pmax
comp=Z,97nm,1.4s
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.8
CD2 Chengdu 146.38 141 PKP PKPbc 04 14 27.1 +0.8
CD2 PKP2 PKPab 04 14 29.3 +2.1
CD2 PP PP 04 17 55.7 +6.7
CD2 PKS 04 18 01.6
CD2 SKS SKSdf 04 21 34.4 +0.8
CD2 SKKS SKKSac 04 24 44.7 +3.9
CD2 SS SS 04 36 52.4 +6.8
CD2 PP PP
comp=Z,430nm,12.0s
CD2 LR LR
comp=N,540nm,16.8s,MS5.7
CD2 LR LR
comp=E,810nm,17.6s,MS5.7
CD2 LR LR
comp=Z,560nm,16.0s,MS5.4
BRVK Borovoye 148.53 77⇓ *e*PKIKP PKPdf 04 14 28.8 +1.0
BRVK MLR MLR
comp=Z,1μm,22.0s,MS5.7
BVA0 Borovoye Array 148.56 78 *i* PKIKP PKPdf 04 14 29.9 +2.0
BVA0 pmax pmax
comp=Z,11nm,1.1s
BVAR Borovoye Array 148.56 78 PKPbc PKPdf 04 14 28.6 +0.7
comp=Z,31nm,0.8s,baz=223,slow=2.2,SNR=28
BVAR Borovoye Array 148.56 78 PKIKP PKPdf 04 14 28.6 +0.7
BVAR pmax pmax
comp=Z,31nm,0.8s
VOSK Vostochnaya 148.67 78 PKIKP PKPbc 04 14 31.6 -0.3
VOSK pmax pmax
comp=Z,53nm,1.0s
WHN Wuhan 148.74 157 PKPR PKPdf 04 14 29.4 +0.4
WHN PP PP 04 18 08.4 +5.7
WHN SS SS 04 37 19.5 +7.6
WHN LR LR
comp=Z,2μm,20.2s,MS6.0
SSE Sheshan 150.29 168 PKP PKPdf 04 14 33.8 +2.4
SSE PP PP 04 18 18.0 +6.5
SSE SS SS 04 37 35.0 +6.0
SSE PP PP
comp=Z,83nm,11.0s
SSE LR LR
comp=N,503nm,21.4s,MS5.4
SSE LR LR
comp=E,388nm,21.4s,MS5.4
SSE LR LR
comp=Z,1μm,20.4s,MS5.6
MK31 Makanchi Array 150.40 97 *i* PKIKP PKPdf 04 14 33.9 +2.9
MK31 pmax pmax
comp=Z,50nm,1.1s
MKAR Makanchi Array 150.40 97 PKP PKPdf 04 14 29.4 -1.7
comp=Z,4.8nm,0.9s,baz=259,slow=1.2,SNR=20
MKAR PKPbc PKPbc 04 14 36.4 +0.1
comp=Z,30nm,1.0s,baz=233,slow=2.4,SNR=43
MKAR Makanchi Array 150.40 97 *i* PKIKP PKPdf 04 14 31.6 +0.6
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 150.40 97 PKP PKPdf 04 14 29.4 -1.7
MKAR PKPbc PKPbc 04 14 36.4 +0.1
XAN Xi'an 150.82 146 PKP PKPdf 04 14 32.5 +0.4
XAN PPP 04 21 31.6
XAN SKS SKSdf 04 21 39.2 -0.3
XAN PP PP
comp=Z,194nm,13.9s
XAN LR LR
comp=N,330nm,21.3s,MS5.4
XAN LR LR
comp=E,502nm,21.3s,MS5.4
XAN LR LR
comp=Z,1μm,21.5s,MS5.7
WMQ Urumqi 150.86 107 PKP PKPdf 04 14 34.0 +2.1
WMQ PKP2 PKPab 04 14 49.8 +4.9
WMQ PKS 04 18 07.4
WMQ PP PP 04 18 20.3 +4.9
WMQ SKS SKSdf 04 21 38.9 -0.1
WMQ PPP 04 21 44.9
WMQ SKKS SKKSac 04 25 07.7 +2.4
WMQ SS SS 04 37 37.5 +1.1
WMQ PP PP
comp=Z,220nm,7.0s
WMQ LR LR
comp=N,655nm,38.0s
WMQ LR LR
comp=E,490nm,32.0s
WMQ LR LR
comp=Z,745nm,36.0s,MS5.2
LZH Lanzhou 151.16 137 *e*PKP PKPdf 04 14 31.5 -1.1
LZH APKP 04 14 38.0
LZH XPKP 04 14 42.1
LZH PP PP 04 18 17.0 +0.2
LZH SKKS SKKSac 04 25 07.8 +0.6
LZH PP PP
comp=Z,250nm,7.8s
LZH LR LR
comp=N,1μm,19.4s
LZH LR LR
comp=Z,2μm,20.4s,MS5.8
KURK Kurchatov 151.19 87 PKP PKPdf 04 14 30.3 -1.8
comp=Z,5.8nm,0.8s,baz=233,slow=2.3,SNR=24
KURK Kurchatov 151.19 87 PKIKP PKPdf 04 14 32.9 +0.8
KURK pmax pmax
comp=Z,60nm,1.0s
KURK Kurchatov 151.19 87 PKP PKPdf 04 14 30.3 -1.8
KURK LR LR
comp=Z,1μm,19.0s,MS5.7
GTA Gaotai 152.62 128 PKP PKPdf 04 14 35.0 +0.3
GTA PKS 04 18 08.9
GTA PP PP 04 18 26.5 +1.2
GTA SKS SKSdf 04 21 39.7 -1.8
GTA SKKS SKKSac 04 25 11.1 -4.0
GTA SS SS 04 37 55.0 -0.6
GTA PP PP
comp=Z,213nm,8.3s
GTA LR LR
comp=N,679nm,23.5s,MS5.5
GTA LR LR
comp=E,523nm,21.4s,MS5.5
GTA LR LR
comp=Z,869nm,22.6s,MS5.5
MJAR Matsushiro Arr 155.15 200 PKPab PKPab 04 15 01.7 -1.4
comp=Z,14nm,1.0s,baz=180,slow=5.2,SNR=12
MJAR Matsushiro Arr 155.15 200 PKP2 PKPab 04 15 01.7 -1.4
MJAR pmax pmax
comp=Z,14nm,1.0s
MAJO Matsushiro 155.15 200 PFAKE 04 14 50.0 +12
MAJO LR LR
comp=Z,977nm,21.0s,MS5.6
MAT Matsushiro 155.15 200 PKP2 PKPab 04 15 03.0 -0.1
NVS Novosibirsk 155.86 83 *e*PKIKP PKPdf 04 14 35.6 -3.1
NVS pmax pmax
comp=Z,64nm,1.9s
NVS pmax pmax
comp=N,25nm,1.6s
NVS pmax pmax
comp=E,14nm,1.5s
ZALV Zalesovo Beam 156.16 87 PKP PKPdf 04 14 37.6 -1.5
comp=E,0.8nm,0.5s,baz=289,slow=4.5,SNR=8.0
ZALV PKPab PKPab 04 15 06.0 -1.0
comp=E,4.2nm,0.7s,baz=256,slow=4.1,SNR=9.2
ZALV Zalesovo Beam 156.16 87 PKIKP PKPdf 04 14 37.6 -1.5
ZALV 04 15 06.1
ZALV pmax pmax
comp=Z,1.0nm,0.5s
KSRS Korea Array 156.96 180 PKPab PKPab 04 15 09.7 -1.2
comp=Z,1.9nm,0.9s,baz=271,slow=36,SNR=3.4
KSRS Korea Array 156.96 180 PKP2 PKPab 04 15 09.7 -1.2
KSRS pmax pmax
comp=Z,2.0nm,0.9s
INCN Inchon 156.98 178 PFAKE 04 14 50.0 +9.3
INCN LR LR
comp=Z,1μm,20.0s,MS5.7
HHC Hu-ho-hao-te 157.93 146 *e*PKP PKPdf 04 14 44.4 +2.6
HHC PKS 04 18 17.3
HHC PP PP 04 18 58.9 +4.2
HHC SKS SKSdf 04 21 44.3 -2.9
HHC SKKS SKKSac 04 25 44.0 +0.7
HHC SS SS 04 38 53.8 +1.2
HHC PP PP
comp=Z,191nm,8.7s
HHC LR LR
comp=N,191nm,16.6s,MS5.3
HHC LR LR
comp=E,376nm,20.2s,MS5.3
HHC LR LR
comp=Z,380nm,25.0s,MS5.1
BJT Baijiatuau 158.27 155 PFAKE 04 14 50.0 +7.7
BJT LR LR
comp=Z,1μm,21.0s,MS5.7
BJI Beijing 158.29 155 PKP PKPdf 04 14 42.7 +0.4
BJI PP PP 04 18 55.9 -0.7
BJI PP PP
comp=Z,187nm,11.7s
BJI LR LR
comp=N,761nm,21.4s,MS5.5
BJI LR LR
comp=E,459nm,22.9s,MS5.5
BJI LR LR
comp=Z,615nm,25.9s,MS5.3
ERM Erimo 159.28 214 PFAKE 04 14 50.0 +6.6
ERM LR LR
comp=Z,1μm,21.0s,MS5.7
PET Petropavlovsk 161.68 260 *e* PP 04 19 19.7 +4.3
PET *e*SS SS 04 39 31.5 -1.4
PET *e*SSS 04 45 44.3
PET pmax pmax
comp=Z,100nm,11.7s
PET Petropavlovsk 161.68 260 PFAKE 04 15 00.0 +14
PET LR LR
comp=Z,2μm,21.0s
BILL Bilibino 161.97 311⇓ *e*PKIKP PKPdf 04 14 45.2 -0.3
BILL *e* 04 19 25.9
BILL pmax pmax
comp=Z,11nm,1.4s
BILL Bilibino 161.97 311 PFAKE 04 15 00.0 +15
BILL LR LR
comp=Z,2μm,22.0s
SONM Songino Array 162.28 126 PKP PKPdf 04 14 45.1 -1.3
comp=Z,3.4nm,1.0s,baz=127,slow=0.7,SNR=12
SONM PKPab PKPab 04 15 33.5 -0.2
comp=Z,5.4nm,0.9s,baz=207,slow=2.8,SNR=12
SONM Songino Array 162.28 126 PKIKP PKPdf 04 14 45.1 -1.3
SONM 04 15 33.5
SONM pmax pmax
comp=Z,3.0nm,1.0s
ZAK Zakamensk 162.89 115 *e*PKIKP PKPdf 04 14 40.5 -6.4
ZAK *e* 04 15 35.6
ZAK pmax pmax
comp=Z,6.0nm,1.6s
YSS Yuzh-Sakhalins 163.90 219 PFAKE 04 15 00.0 +12
YSS LR LR
comp=Z,521nm,19.0s
TLY Talaya 163.96 112 *i* PKIKP PKPdf 04 14 51.6 +3.7
TLY *e* 04 19 32.4
TLY pmax pmax
comp=Z,11nm,1.2s
TLY Talaya 163.96 112 PFAKE 04 15 00.0 +12
TLY LR LR
comp=Z,2μm,21.0s
MDJ Mudanjiang 164.09 185 PKP PKPdf 04 14 50.1 +1.8
MDJ APKP 04 14 53.4
MDJ XPKP 04 14 54.6
MDJ PKS 04 18 16.6
MDJ PP PP 04 19 30.1 +2.6
MDJ SKS SKSdf 04 21 46.3 -5.9
MDJ SS SS 04 40 02.1 +5.4
MDJ PP PP
comp=Z,352nm,14.7s
MDJ LR LR
comp=N,675nm,29.9s
MDJ LR LR
comp=E,646nm,25.1s
MDJ LR LR
comp=Z,952nm,25.1s
MDJ Mudanjiang 164.09 185 PFAKE 04 15 00.0 +12
MDJ LR LR
comp=Z,1μm,21.0s
HABR Khabarovsk 167.28 202 *e*PKP2 PKPab 04 15 48.1 -7.6
HABR *i* 04 21 53.5
HABR *e*SS SS 04 40 21.1 -8.3
HIA Hailar 167.85 154 PFAKE 04 15 00.0 +8.9
HIA LR LR
comp=Z,2μm,22.0s
KLR Kul'dur 168.52 193 *e*PKP2 PKPab 04 15 54.0 -7.2
TIXI Tiksi 168.76 358⇑ *e*PKIKP PKPdf 04 14 48.9 -2.2
TIXI Tiksi 168.76 358 PFAKE 04 15 00.0 +8.9
TIXI LR LR
comp=Z,2μm,22.0s
BOD Bodaibo 172.40 104 *e*PKP2 PKPab 04 16 17.3 -1.0
BOD pmax pmax
comp=Z,8.0nm,1.7s
YAK Yakutsk 178.20 331 PFAKE 04 15 10.0 +15
YAK LR LR
comp=Z,1μm,20.0s

IDC 08 04:01:26.5±2.9, 762S×11651E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.4/16, mbtmp3.3/3, Error ellipse: s-maj=196.0km s-min=27.9km az=56.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**23.09**	**136**	P	P	04 06 34.0	+0.1
	0.4nm,0.4s,baz=310,slow=9.3,SNR=7.8						
SONM	**Songino Array**	**55.93**	**352**	P	P	04 11 06.3	+0.1
	0.1nm,0.3s,baz=172,slow=7.4,SNR=4.5						
MKAR	**Makanchi Array**	**62.13**	**334**	P	P	04 11 49.4	+0.1
	0.1nm,0.5s,baz=146,slow=5.8,SNR=2.9						

*NEIC **08** 04:09:19.2±2.0, 7.19S×129.34E, h105km±19km, mb4.0/3, Error ellipse: s-maj=16.4km s-min=10.3km az=55.0*
*DJA **08** 04:09:20, 7.64S×129.86E, h67km, Mw5.5/5*
*ISCJB **08** 04:09:24.1±0.9, 7.40S±004×129.21E±006, h172km±9km, mb4.3/17, Error ellipse: s-maj=9.9km s-min=6.9km az=157.9*
*IDC **08** 04:09:24.6±2.7, 7.22S×129.29E, h152km±25km, mb3.9/13, mb1 4.0/16, mb1mx3.9/21, mbtmp3.9/16, Error ellipse: s-maj=23.7km s-min=11.5km az=57.0*

ISC 08 04:09:24.4±1.0, 7.38S±006×129.24E±007, h155km±10km, n46, σ1s13/46, mb4.3/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.81**	**344**	P	**Pn**	**04 10 23.1**	**+0.8**
KAKA	**Kakadu**	**6.17**	**150**	*e*P	x	04 10 34.4	
	189nm,0.5s						
KAKA				*e*S	x	04 11 39.6	
KAKA	**Kakadu**	**6.17**	**150**	P	x	04 10 34.8	
	420nm,0.7s,5μm9.6nm						
BATI	**Baumata**	**6.19**	**243**	P	**Pn**	**04 10 55.7**	**+2.0**
	26nm,0.3s,baz=87,slow=4.8,SNR=26						
BATI				S	**Sn**	**04 12 02.2**	**-1.4**
	44nm,0.3s,baz=10,slow=22,SNR=12						
BATI	**Baumata**	**6.19**	**243**	P	**Pn**	**04 10 55.4**	**+1.7**
	61nm,0.8s,2μm0.8nm						
KAPI	**Kappang**	**9.72**	**283**	P	**Pn**	**04 11 43.1**	**+2.4**
	baz=147,slow=15,SNR=4.0						
FITZ	**Fitzroy Crossi**	**11.22**	**198**	*e*P	**Pn**	**04 11 58.9**	**-1.5**
	24nm,0.2s						
FITZ				*e*S	**Sn**	**04 13 55.8**	**-8.8**
FITZ	**Fitzroy Crossi**	**11.22**	**198**	P	**Pn**	**04 11 59.8**	**-0.6**
	43nm,0.7s						
JAY	**Jayapura**	**12.40**	**68**	P	**Pn**	**04 12 07.7**	**-8.1**
	110nm,0.7s						
WRAB	**Tennant Creek**	**13.43**	**159**	*e*Pn	**Pn**	**04 12 26.5**	**-2.4**
	22nm,0.6s						
WRAB				*e*Sn	**Sn**	**04 14 48.6**	**-9.1**
WRAB	**Tennant Creek**	**13.43**	**159**	P	**Pn**	**04 12 26.1**	**-2.8**
	40nm,1.4s						
WRAB				S	**Sn**	**04 14 46.2**	**-12**
	40nm,1.4s						
WB2	**Warramunga Arr**	**13.44**	**159**	*e*P	**Pn**	**04 12 25.9**	**-3.1**
WB2				*e*S	**Sn**	**04 14 45.4**	**-13**
BBKI	**Banjar Baru**	**14.85**	**284**	P	**Pn**	**04 12 52.7**	**+5.8**
	168nm,1.3s,1μm						
COEN	**Coen**	**15.17**	**117**	*e*P	**Pn**	**04 12 52.7**	**+2.0**
	12nm,0.8s						
MBWA	**Marble Bar**	**16.50**	**213**	*e*P	**Pn**	**04 13 08.2**	**+1.2**
	6.4nm,0.7s						
MBWA				*e*S	**S**	**04 16 02.7**	**-7.9**
ASAR	**Alice Springs**	**16.80**	**165**	P	**Pn**	**04 13 10.8**	**+0.1**
	5.3nm,0.3s,baz=341,slow=10,SNR=172						
ASAR				S	**S**	**04 16 09.7**	**-7.8**
	2.8nm,0.3s,baz=345,slow=25,SNR=5.9						
SJI	**Sawahan**	**17.33**	**268**	P	**Pn**	**04 13 21.7**	**+4.6**
CTA	**Charters Tower**	**20.77**	**129**	P	**P**	**04 13 53.5**	**+0.1**
	3.0nm,0.7s,baz=291,slow=14,SNR=3.6						
FORT	**Forrest**	**23.31**	**183**	*e*P	**P**	**04 14 20.3**	**+1.8**
	29nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**26.96**	**156**	*e*P	**P**	**04 14 52.9**	**+1.4**
	2.4nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**26.96**	**156**	P	**P**	**04 14 52.3**	**+0.8**
	2.9nm,0.4s,mb4.2,baz=315,slow=11,SNR=6.2						
PSI	**Prapat**	**31.90**	**287**	P	**P**	**04 15 35.6**	**+0.2**
	5.8nm,0.7s,mb4.4,baz=138,slow=8.1,SNR=7.7						
CMAR	**Chiang Mai Arr**	**39.40**	**311**	P	**P**	**04 16 39.2**	**-0.1**
	1.2nm,0.3s,mb4.0,baz=154,slow=6.3,SNR=7.8						
MJAR	**Matsushiro Arr**	**44.49**	**10**	P	**P**	**04 17 18.2**	**-2.1**
	2.4nm,0.6s,mb4.0,baz=186,slow=8.5,SNR=4.5						
KSRS	**Korea Array**	**44.61**	**359**	P	**P**	**04 17 21.3**	**0.0**
	1.2nm,0.7s,mb3.6,baz=172,slow=9.3,SNR=3.3						
RPZ	**Rata Peaks**	**51.40**	**142**	P	**P**	**04 18 15.7**	**+2.3**
	10nm,0.9s,mb4.5,baz=314,slow=6.1,SNR=3.6						
ODAN	**Odare**	**52.94**	**312**	*e*P	**P**	**04 18 24.7**	**-0.3**
	14nm,0.5s,mb4.9						
TAPN	**Taplejung**	**52.98**	**312**	*e*P	**P**	**04 18 25.2**	**-0.1**
RAMN	**Ramite**	**53.58**	**311**	*e*P	**P**	**04 18 29.5**	**-0.1**
	24nm,0.6s						
JIRN	**Jiri**	**54.27**	**312**	*e*P	**P**	**04 18 34.4**	**-0.3**
	8.4nm,0.4s,mb4.8						
GUN	**Gumba**	**54.64**	**312**	*e*P	**P**	**04 18 37.2**	**-0.1**
	27nm,0.7s						
GKN	**Gorkha**	**55.61**	**311**	*e*P	**P**	**04 18 43.9**	**-0.4**
	19nm,0.3s						
KOLN	**Koldanda**	**56.27**	**310**	*e*P	**P**	**04 18 48.2**	**-0.8**
	13nm,0.6s,mb4.9						
DANN	**Dangsing**	**56.45**	**311**	*e*P	**P**	**04 18 50.1**	**-0.1**
	11nm,0.4s,mb5.0						
SONM	**Songino Array**	**58.56**	**342**	P	**P**	**04 19 04.8**	**+0.2**
	1.0nm,0.6s,mb3.8,baz=155,slow=5.9,SNR=6.1						
SONM				PcP	PcP	04 19 53.5	+0.2
	1.6nm,1.0s,baz=155,slow=3.9,SNR=2.7						
PETK	**Petropavlovsk-**	**64.92**	**18**	P	**P**	**04 19 47.2**	**+0.2**
	3.9nm,0.8s,mb4.3,baz=158,slow=4.7,SNR=4.3						
PETK	**Petropavlovsk-**	**64.92**	**18**	P	**P**	**04 19 47.2**	**+0.2**
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**04 20 07.4**	**-0.2**
	1.6nm,0.4s,mb4.1,baz=118,slow=7.4,SNR=22						
ZALV	**Zalesovo Beam**	**71.59**	**334**	P	**P**	**04 20 27.8**	**-0.7**
	3.9nm,0.s,mb4.6,baz=130,slow=4.7,SNR=5.5						
KURK	**Kurchatov**	**72.45**	**329**	P	**P**	**04 20 33.5**	**-0.2**
	2.0nm,0.5s,mb4.1,baz=123,slow=4.8,SNR=17						
QSPA	**South Pole Qui**	**82.60**	**180**	P	**P**	**04 21 30.8**	**+1.2**
	0.9nm,0.7s,mb3.6,baz=336,slow=5.7,SNR=2.8						
ARCES	**ARCESS Array B**	**101.67**	**340**	P	Pdif	04 22 57.4	-1.8
	1.1nm,0.7s,baz=104,slow=5.1,SNR=6.9						
TXAR	**Lajitas Array**	**125.77**	**59**	PKP	PKPdf	04 28 08.5	+0.2
	0.5nm,0.9s,baz=252,slow=1.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**128.14**	**281**	PKP	PKPdf	04 28 13.4	+0.2
	1.4nm,0.6s,baz=83,slow=1.8,SNR=21						
CPUP	**Villa Florida**	**145.89**	**169**	PKPbc	PKPbc	04 28 47.0	+0.6
	0.7nm,0.5s,baz=160,slow=4.4,SNR=6.0						
ATAH	**Atahualpa**	**148.96**	**117**	PKPbc	PKPbc	04 28 57.8	+2.7
	3.7nm,0.6s,baz=236,slow=3.6,SNR=3.9						

*SKO **08** 04:14:50.9, 39.31N×2029E, h0km, M1.8, ML2.5*
*NEIC **08** 04:14:52.3, 39.43N×2041E, h4km, MD3.4(ATH), After ATH.*
*ISCJB **08** 04:14:52.2±0.6, 39.39N±003×2037E±004, h10km, Error ellipse: s-maj=5.1km s-min=4.7km az=145.9*
*THE **08** 04:14:52.3, 39.43N×2043E, h0km±2km, ML3.0/5, Error ellipse: s-maj=2.9km s-min=1.0km az=246.0*
*CSEM **08** 04:14:52.1±0.1, 39.46N×2041E, h5km, ML3.0/5, Error ellipse: s-maj=2.9km s-min=2.2km az=108.0*
*ATH **08** 04:14:52.4, 39.42N×2041E, h4km, MD3.4/5*

ISC 08 04:14:52.3±0.6, 39.42N±003×2041E±004, h0km±5km, n26, σ0s84/37, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.13**	**331**	P	**Pg**	**04 14 54.5**	**-0.3**
IGT				S	**Sg**	**04 14 57.1**	**+0.5**
JAN	**Janina**	**0.41**	**55**	*e*PG	**Pg**	**04 15 00.0**	**-0.2**
JAN				*e*SG	**Sg**	**04 15 06.0**	**+0.4**
JAN	**Janina**	**0.41**	**55**	*e*Pg	**Pg**	**04 14 58.9**	**-1.3**
JAN				*e*Sg	**Sg**	**04 15 06.0**	**+0.4**
KEK	**Kerkira**	**0.56**	**302**	*e*PG	**Pg**	**04 15 03.0**	**-0.1**
EVR	**Evrytania**	**1.19**	**114**	*e*PN	**Pg**	**04 15 16.1**	**+0.9**
VLS	**Valsamata**	**1.25**	**174**	*e*PB	**Pg**	**04 15 16.0**	**-0.2**
VLS	**Valsamata**	**1.25**	**174**	*e*Pg	**Pg**	**04 15 15.9**	**-0.3**
VLS				S	**Sg**	**04 15 34.7**	**+2.4**
THL	**Klokotos Trika**	**1.25**	**83**	P	**Pg**	**04 15 14.2**	**-2.0**
THL				S	**Sg**	**04 15 33.3**	**+0.9**
THL	**Klokotos Trika**	**1.25**	**83**	*e*Pb	**Pb**	**04 15 16.3**	**-0.4**
THL				S	**Sg**	**04 15 33.3**	**+0.9**
KFL	**Anninata**	**1.34**	**167**	P	**Pg**	**04 15 16.9**	**-1.1**
AGG	**Agios Georgios**	**1.54**	**104**	P	**Pn**	**04 15 20.4**	**-0.6**
AGG				S	**Sn**	**04 15 42.0**	**+0.3**
FNA	**Florina**	**1.55**	**28**	P	**Pn**	**04 15 20.3**	**-0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FNA				S	Sn	04 15 41.9	-0.1
LIT	Litokhoron	1.74	66	P	Pn	04 15 23.6	-0.1
LIT				S	Sn	04 15 45.8	-0.8
BIA	Bitola	1.75	23	i Pn	Pn	04 15 23.9	+0.1
BIA	Bitola	1.75	23	i Pn	Pn	04 15 24.0	+0.2
KRUS	Krusevo	2.05	18	i Pn	Pn	04 15 29.0	+1.0
KRUS				i Sn	Sn	04 15 56.0	+1.7
KRUS	Krusevo	2.05	18	i Pn	Pn	04 15 29.1	+1.0
KRUS				i Sn	Sn	04 15 56.0	+1.7
GRG	Griva	2.16	44	P	Pn	04 15 29.4	-0.2
VAY	Valandovo	2.52	40	i Pn	Pn	04 15 34.8	+0.4
VAY				eLg		04 16 16.0	
	comp=E,16nm,1.1s						
VAY				eLg		04 16 16.2	
	comp=N,12nm,0.7s						
PLG	Polygyros	2.52	67	P	Pn	04 15 34.4	-0.1
KNT	Kendrikon	2.58	47	P	Pn	04 15 34.7	-0.6
STIP	Stip	2.65	30	i Pn	Pn	04 15 36.9	+0.7
STIP	Stip	2.65	30	i Pn	Pn	04 15 37.0	+0.8
SOH	Sokhos	2.65	57	P	Pn	04 15 35.9	-0.4
TIP	Timpagrande	2.85	266	ePn	Pn	04 15 38.2	-0.8
TIP	Timpagrande	2.85	266	ePn	Pn	04 15 38.2	-0.7

*CSEM **08** 04:37:13.8, 3694N×2924E, h9km, MD3.5, After ISK*
*ISK **08** 04:37:13.8, 3694N×2924E, h9km, MD3.5*
*NEIC **08** 04:37:13.0, 3692N×2925E, h9km, MD3.4(ISK), After ISK.*
*ISCJB **08** 04:37:14.0±0.8, 3697N±004×2924E±003, h3km±7km, mb3.5/2, Error ellipse: s-maj=6.4km s-min=4.5km az=170.8*
*IDC **08** 04:37:15.0±1.7, 3698N×2894E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/21, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=230.5km s-min=24.9km az=144.0*
ISC 08 04:37:14.9±0.7**, 3697N**±004×**2922E**±003**, h5**km±6km**, n39,** σ0s.**94**/42**, mb3.5**/2**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
DALT	Dalyan (Mudla)	0.51	247	ePG	Pg	04 37 24.0	-0.6
DALT				eSG	Sg	04 37 31.7	+0.5
ELL	Elmali	0.60	112	ePG	Pg	04 37 25.3	-1.2
YER	Yerkesik	0.76	283	ePG	Pg	04 37 29.6	0.0
YER				eSG	Sg	04 37 41.5	+2.0
DENT	Denizli	0.80	350	ePG	Pg	04 37 29.8	-0.4
KSL	Kastellorizon	0.87	160	eP	Pg	04 37 33.5	+1.9
ANTB	Antalya	1.16	93	ePN	Pn	04 37 36.0	-1.8
ARG	Arkhangelos	1.16	230	eP	Pg	04 37 36.1	-1.0
MLSB	Milas	1.19	286	ePN	Pn	04 37 37.4	-0.9
BCK	Bucak	1.20	66	ePN	Pn	04 37 37.1	-1.3
DAT	Datca	1.33	260	ePN	Pn	04 37 39.6	-0.7
ISP	Isparta	1.35	49	ePN	Pn	04 37 39.7	-0.8
ISP	Isparta	1.35	49	ePn	Pn	04 37 40.7	+0.2
KHL	Karahalli	1.37	10	ePN	Pn	04 37 40.6	-0.2
BODT	Bodrum	1.53	274	ePN	Pn	04 37 42.5	-0.4
KULA	Kula-Manisa	1.60	344	ePN	Pn	04 37 42.7	-1.3
SHUT	Suhut-Afyon	1.90	33	ePN	Pn	04 37 47.9	-0.2
SMG	Samos	2.03	292	eP	Pn	04 37 49.5	-0.3
KARP	Karpathos	2.19	230	eP	Pn	04 37 52.5	+0.6
ALT	Altintas	2.20	19	ePN	Pn	04 37 52.2	+0.1
AKS	Akhisar	2.20	330	ePN	Pn	04 37 51.2	-1.0
BLCB	Balcova	2.23	310	ePN	Pn	04 37 52.1	-0.4
KONT	Konya--Tatoy	2.69	68	ePN	Pn	04 37 58.8	0.0
LADK	Ladik-KONYA	2.79	63	ePN	Pn	04 37 59.8	-0.4
KIZT	Kizilcal	2.84	47	ePN	Pn	04 38 00.6	-0.4
ESKT	Eskisehir	2.85	26	ePN	Pn	04 38 00.7	-0.4
BALB	Balikesir	2.86	339	ePN	Pn	04 38 01.7	+0.4
NPS	Neapolis	3.38	241	eP	Pn	04 38 09.7	+1.4
YLV	Yalova	3.59	2	ePN	Pn	04 38 12.5	+1.2
GULT	Gulveren	3.60	16	ePN	Pn	04 38 12.3	+0.8
IKL	Isikli	3.67	100	ePN	Pn	04 38 12.7	+0.4
LFK	Lefkose	3.88	114	ePN	Pn	04 38 15.2	0.0
MERS	Mersin	4.25	90	ePN	Pn	04 38 20.1	-0.3
KAMT	Kaman	4.28	55	ePN	Pn	04 38 20.7	0.0
BRTR	Keskin Array B	4.43	50	Pn	Pn	04 38 24.1	+1.2
	0.5nm,0.3s,baz=229,slow=13,SNR=17						
BRTR				Sn	Sn	04 39 16.9	+2.1
	0.2nm,0.3s,baz=220,slow=22,SNR=4.2						
BR131	Keskin Array S	4.43	50	ePn	Pn	04 38 24.7	+1.8
KARA	Karaisali	4.68	85	ePN	Pn	04 38 26.6	+0.4
HTY	Hatay	5.64	97	ePN	Pn	04 38 40.2	+0.8
TORD	Torodi Ar. Bea	34.19	233	P	P	04 44 00.4	-1.0
	0.6nm,0.5s,mb3.8,baz=33,slow=8.5,SNR=16						
MKAR	Makanchi Array	40.03	59	P	P	04 44 54.0	+3.3
	0.3nm,0.6s,mb3.2,baz=278,slow=9.8,SNR=3.5						

JMA 08 04:52:50.9±0.2**, 2869N**×**13123E, h60**km**, M3.7, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
JAM	Amami Oshima	1.46	259	P	Pn	04 53 15.3	+0.3
JAM				eS	Sn	04 53 33.4	+0.3
JNN	Nakanoshima	1.65	314	P	Pn	04 53 18.4	+0.8
JNN				eS	Sn	04 53 38.0	+0.3
JTN	Tanegashima 3	1.97	354	P	Pn	04 53 22.4	+0.5
JTN				eS	Sn	04 53 45.9	+0.4
JKC	Kuchinoerabu	1.98	333	P	Pn	04 53 23.0	+0.9
JKC				eS	Sn	04 53 46.3	+0.4
JTK	Tokunoshima	2.20	246	P	Pn	04 53 26.0	+0.9
JTK				eS	Sn	04 53 51.0	-0.3
JTSR	Tashiro 2	2.48	354	P	Pn	04 53 30.2	+1.3
JTSR				eS	Sn	04 53 58.4	+0.3
JNAR	Kushima--Naru	2.83	1	P	Pn	04 53 35.0	+1.4
JNAR				eS	Sn	04 54 07.9	+1.4
JSU	Suzuyama	2.89	347	eS	Sn	04 54 07.4	-0.5
JOW	Kunigami	3.21	235	P	Pn	04 53 39.2	+0.4
JOW				eS	Sn	04 54 15.4	-0.4
JSJ	Shimokoshiki	3.25	337	P	Pn	04 53 39.7	+0.2
JSJ				eS	Sn	04 54 16.0	-1.0

*IDC **08** 05:16:02.7±2.7, 54.19N×87.47E, h0km, mb1 2.9/2, mb1mx2.9/24, mbtmp2.9/2, ML2.9/2, Error ellipse: s-maj=22.2km s-min=11.2km az=75.0*
*NNC **08** 05:16:03.1±4.3, 5422N×87.14E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=32.6km s-min=28.1km az=44.0*
ISC 08 05:16:06.8±2.7**, 543N**±01×**869E**±02**, h10**km**, n6,** σ1s.**02**/11**, 5C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ZALV	Zalesovo Beam	1.25	257	Pg	Pg	05 16 29.7	-1.1
	4.4nm,0.3s,baz=78,slow=17,SNR=27						
ZALV				Lg		05 16 53.6	
	1.2nm,0.3s,baz=81,slow=27,SNR=11						
ZALV				Rg		05 17 08.9	
	7.2nm,0.8s,baz=82,slow=33,SNR=5.4						
KURK	Kurchatov	6.17	238	⇑Pn	Pn	05 17 35.2	-2.6
	0.7nm,0.8s						
KURK				⇑Sn	Sn	05 18 49.2	+0.9
	1.9nm,1.1s						
KURK				⇑Lg		05 19 23.5	
	3.1nm,0.8s						
KURK	Kurchatov	6.17	238	Pn	Pn	05 17 40.3	+2.5
	0.1nm,0.3s,baz=56,slow=14,SNR=5.8						
KURK				Sn	Sn	05 18 54.9	+6.6
	0.0nm,0.3s,baz=19,slow=16,SNR=2.6						
KURK				Lg		05 19 31.9	
	0.1nm,0.3s,baz=340,slow=29,SNR=4.3						
KURBB	Kurchatov Arra	6.27	238	⇑Pn	Pn	05 17 39.4	+0.2
	0.2nm,0.4s,baz=56,slow=13						
KURBB				⇑Sn	Sn	05 18 51.5	+0.7
	0.5nm,0.7s						
KURBB				⇓Lg		05 19 26.4	
	1.5nm,1.1s,baz=56,slow=30						
MK31	Makanchi Array	8.02	203	⇓Pn	Pn	05 18 03.7	+0.4
	2.8nm,1.3s,baz=26,slow=14,SNR=7.6						
MK31				⇓Sn	Sn	05 19 40.4	+6.5
	1.7nm,1.1s,baz=217,slow=48,SNR=2.5						
MK31				Lg		05 20 16.5	
	2.2nm,0.9s,baz=141,slow=18,SNR=4.1						
MKAR	Makanchi Array	8.02	203	Pn	Pn	05 18 03.5	+0.3
	0.1nm,0.3s,baz=27,slow=14,SNR=5.4						
MKAR				Sn	Sn	05 19 33.1	-0.9
	0.0nm,0.3s,baz=22,slow=24,SNR=3.1						
MKAR				Lg		05 20 16.6	
	0.0nm,0.3s,baz=37,slow=18,SNR=3.5						

*ISCJB **08** 05:29:48.7±0.7, 605S±0.1×519W±03, h10km, mb3.7/5, Error ellipse: s-maj=27.3km s-min=11.8km az=140.3*
*IDC **08** 05:29:48.7±1.1, 6045S×5170W, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.8/16, mbtmp4.0/6, ML4.1/1, Error ellipse: s-maj=40.6km s-min=24.1km az=69.0*
ISC 08 05:29:51.1±8.3**, 604S**±01×**518W**±04**, h14**km±55km**, n9,** σ0s.**46**/8**, mb3.7**/5**, Scotia Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
USHA	Ushuaia	10.54	295	Pn	Pn	05 32 21.6	+0.1
	1.5nm,0.3s,baz=97,slow=12,SNR=7.7						
VNA3	Neumayer Olymp	19.83	140	e	Pn	05 34 22.0	-0.5
VNA3				e		05 34 30.1	
VNA3				e		05 34 34.3	
VNA2	Neumayer--Watz	20.51	139	e	P	05 34 28.9	+0.7
	baz=283,slow=12						
VNA2				e		05 34 37.0	
VNA2				e		05 34 41.6	
PLCA	Paso Flores	22.89	321	P	P	05 34 53.8	-0.1
	3.4nm,1.0s,mb3.8,baz=139,slow=5.0,SNR=4.2						
QSPA	South Pole Qui	29.81	180	P	P	05 35 56.6	-0.3
	1.7nm,0.7s,mb3.9,baz=160,slow=4.2,SNR=6.5						
SIV	San Ignacio	44.88	347	P	P	05 38 04.8	0.0
	1.1nm,1.0s,mb3.6,baz=182,slow=11,SNR=4.5						
TORD	Torodi Ar. Bea	84.74	52	P	P	05 42 24.4	-0.1
	0.4nm,0.5s,mb3.8,baz=200,slow=6.5,SNR=6.8						
ASAR	Alice Springs	96.09	185	P	P	05 43 18.2	+0.2
	0.1nm,0.5s,mb3.5,baz=159,slow=3.7,SNR=3.1						
MKAR	Makanchi Array	150.20	96	PKPbc	PKPbc	05 49 40.2	-0.1
	0.3nm,0.5s,baz=232,slow=4.3,SNR=4.5						

*DDA **08** 05:33:36.5, 3942N×4084E, h7km±6km, Md3.0*
*ISCJB **08** 05:33:37.9±0.9, 3938N±003×4084E±005, h2km±9km, Error ellipse: s-maj=6.7km s-min=5.3km az=12.8*
*CSEM **08** 05:33:37.9±0.2, 3938N×4079E, h5km, MD3.0, Error ellipse: s-maj=4.8km s-min=3.5km az=146.0*
*ISK **08** 05:33:37.9, 3940N×4081E, h6km, MD3.0*
ISC 08 05:33:38.5±0.9**, 3938N**±003×**4084E**±005**, h6**km±7km**, n13,** σ1s.**07**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
BNGL	BINGOL	0.49	150	i P	Pg	05 33 47.2	-0.7
BNGL				i S	Sg	05 33 55.7	+1.5
EZM	Erzurum	0.66	37	ePG	Pg	05 33 51.4	+0.1
EZM				eSG	Sg	05 34 00.2	+0.3
ERZM	Erzurum	0.67	38	i P	Pg	05 33 51.9	+0.6
ERZM				i S	Sg	05 33 58.0	-1.9
EZC	Erzincan	0.87	295	ePN	Pn	05 34 01.2	+3.9
PTK	Pertek	1.23	247	ePN	Pn	05 34 00.5	-1.6
PTK				eSN	Sn	05 34 18.4	-0.7
GUMT	Gumushane	1.50	316	ePN	Pn	05 34 06.5	+0.5
BEST	Besiri	1.52	167	i P	Pn	05 34 05.9	-0.4
BEST				i S	Sn	05 34 24.8	-1.6
TUTA	Tutak	1.53	89	i P	Pn	05 34 05.0	-1.3
TUTA				i S	Sn	05 34 27.7	+1.2
DIYA	Diyarbakir	1.56	201	i P	Pn	05 34 06.6	-0.1
DIYA				i S	Sn	05 34 27.8	+0.6
SVRC	Sivrice-ELAZID	1.56	231	ePN	Pn	05 34 06.8	+0.1
SVRC	Sivrice-ELAZID	1.56	231	ePn	Pn	05 34 06.8	+0.1
AGRB	Hanur-Agry	1.68	83	ePN	Pn	05 34 09.3	+1.0
KEMA	Kemaliye	1.82	267	i P	Pn	05 34 11.5	+1.1
KEMA				i S	Sn	05 34 37.3	+3.6

*NEIC **08** 05:34:35.5, 3239N×11636W, h5km, ML3.1(PAS), ML3.2(ECX), After ECX.*
ECX 08 05:34:35.5±0.6**, 3239N**×**11636W, h15**km±4km**, MD2.9, ML3.2, 7C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
CBX	Cerro Bola	0.27	254	⇑iP	Pg	05 34 41.1	-0.1
CBX				eS	Sg	05 34 45.3	+0.2
YUH	Yuha Desert	0.45	55	⇑eP	Pg	05 34 43.7	-0.7
YUH	Yuha Desert	0.45	55	eP	Pg	05 34 43.8	-0.7
ENX	Ensenada	0.57	207	⇑eP	Pg	05 34 45.6	-1.1
ENX				eS	Sg	05 34 53.6	-0.7
ENX				⇑e		05 34 55.3	
	comp=N,2μm,0.4s						
ENX	Ensenada	0.57	207	eP	Pg	05 34 45.6	-1.1
ENX				eS	Sg	05 34 53.6	-0.7
RDX	Rancho Dowling	0.57	143	⇑eP	Pg	05 34 45.7	-1.1
RDX				eS	Sg	05 34 53.4	-1.0
RDX				⇓e		05 34 53.6	
	comp=N,1μm,0.2s						
EML	El Monte Cty P	0.65	321	⇑eP	Pg	05 34 46.6	-1.6
PBX	Punta Banda	0.72	206	⇓eP	Pg	05 34 48.2	-1.3
PBX				eS	Sg	05 34 58.1	-0.8
PBX				⇓e		05 34 59.6	
	comp=N,736nm,0.5s						
PBX	Punta Banda	0.72	206	eP	Pg	05 34 48.2	-1.3
PBX				eS	Sg	05 34 58.1	-0.8
ECNX	Esteban Cantu	0.76	196	⇑eP	Pg	05 34 49.0	-1.2
ECNX				eS	Sg	05 34 59.4	-0.8
CPBX	Cerro Prieto	0.89	88	⇓eP	Pb	05 34 51.0	-1.7
EMX	El Mayor	1.03	113	⇓eP	Pb	05 34 53.7	-1.3
PFO	Pinyon Flat Ob	1.22	356	ePn	Pn	05 34 56.4	-1.7
PFO				eSn	Sn	05 35 12.7	-1.6
ECBX	El Chinero	1.44	129	eP	Pn	05 35 01.3	+0.2
ECBX				eS	Sn	05 35 20.1	+0.4
GLA	Glamis	1.45	62	ePn	Pn	05 35 00.9	-0.3
SPX	San Pedro Mart	1.54	150	eP	Pn	05 35 01.9	-0.5
SPX				eS	Sn	05 35 22.3	+0.1
MWC	Mount Wilson	2.32	323	ePn	Pn	05 35 14.8	+1.6
MWC				eSg	Sg	05 35 44.9	-5.2
PASC	Pasadena Art C	2.34	320	ePn	Pn	05 35 14.2	+0.6
PASC				eSn	Sn	05 35 43.6	+1.5
GSC	Goldstone	2.93	353	ePg	Pg	05 35 31.6	0.0
ISA	Isabella	3.71	332	Pn	Pn	05 35 34.4	+2.1
ISA				ePg	Pg	05 35 45.6	-0.9
ISA				eS	Sn	05 36 27.0	+11
TPNV	Topopah Spring	4.55	1	ePn	Pn	05 35 44.9	+1.1

IDC 08 05:35:45.6±2.4**, 5421N**×**8631E, h0**km**, mb1 3.2**/2**, mb1mx3.0**/24**, mbtmp3.2**/2**, ML3.2**/2**, Error ellipse: s-maj=19.3km s-min=6.8km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ZALV	Zalesovo Beam	0.92	254	Pg	Pg	05 36 01.8	-1.4
	2.4nm,0.3s,baz=72,slow=17,SNR=19						
ZALV				Lg		05 36 16.7	
	6.6nm,0.3s,baz=75,slow=29,SNR=19						
ZALV				Rg		05 36 22.0	
	8.2nm,0.4s,baz=77,slow=33,SNR=9.9						
KURK	Kurchatov	5.86	236	Pn	Pn	05 37 15.8	+2.2
	0.2nm,0.3s,baz=52,slow=13,SNR=5.0						
MKAR	Makanchi Array	7.86	201	Pn	Pn	05 37 42.2	+1.3
	0.3nm,0.3s,baz=22,slow=13,SNR=11						
MKAR				Lg		05 39 54.3	
	0.0nm,0.3s,baz=19,slow=32,SNR=4.6						

*NIED **08** 06:20:00, 3620N×13980E, h77km, Mw3.8 Best double couple: M0 4.91000×10^14 NP1:φs353.00000°, δ79.00000°, λ71.00000°. NP2:φs235.00000°, δ22.00000°, λ150.00000°.*
*ISCJB **08** 06:20:42.0±1.0, 3621N±004×13980E±006, h55km±9km, Error ellipse: s-maj=8.5km s-min=6.2km az=27.0*
*JMA **08** 06:20:41.8±0.1, 3622N×13980E, h57km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs229.00000°, δ15.00000°, λ172.00000°. NP2: φs327.00000°, δ88.00000°, λ75.00000°. Principal axes: T Plg45.0000°, Azm222.0000°; N Plg15.0000°, Azm328.0000°; P Plg41.0000°, Azm71.0000°;*
JMA Felt I J1.
ISC 08 06:20:42.4±1.0**, 3620N**±004×**13980E**±006**, h53**km±10km**, n11,** σ0s.**55**/20**, 2C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
JYT	Yasato	0.32	85	P	Pn	06 20 51.7	-0.2
JYT				S	Sn	06 20 59.1	+0.3
JAG	Ashikaga	0.36	308	⇓P	Pn	06 20 52.0	-0.3
JAG				eS	Sn	06 20 59.3	-0.1
JKT	Katashina	0.72	322	⇓P	Pn	06 20 55.8	-0.7
JKT				S	Sn	06 21 06.5	-0.2
JRY	Ryogami san	0.75	256	⇓P	Pn	06 20 56.6	-0.3
JRY				S	Sn	06 21 07.3	-0.2
JOD2	Odawara 2	1.10	212	P	Pn	06 21 01.8	+0.2
JOD2				S	Sn	06 21 16.1	+0.4
JFY	Yanaizu	1.20	356	⇑P	Pn	06 21 02.4	-0.5
JFY				eS	Sn	06 21 18.2	0.0
JHK	Hiroka	1.22	329	P	Pn	06 21 02.5	-0.6
JHK				S	Sn	06 21 20.3	+1.8
JYN	Shimob	1.24	236	⇓P	Pn	06 21 04.1	+0.7
MAT	Matsushiro	1.33	285	P	Pn	06 21 03.8	-0.8
MAT				S	Sn	06 21 21.3	+0.1
MAT	Matsushiro	1.33	285	P	Pn	06 21 04.6	0.0
JFT	Otama	1.38	18	⇑P	Pn	06 21 05.1	-0.2
JFT				eS	Sn	06 21 23.0	+0.5

*ISCJB **08** 06:33:37.1±1.0, 37.11N±005×3757E±008, h3km±12km, Error ellipse: s-maj=11.8km s-min=6.6km az=37.0*
*CSEM **08** 06:33:37.0±0.1, 37.16N×37.16E, h21km±1km, MD2.9, Error ellipse: s-maj=8.9km s-min=3.7km az=109.0*
*DDA **08** 06:33:37.4, 37.17N×3744E, h7km±3km, Md2.9*
ISC 08 06:33:37.6±0.9**, 3714N**±006×**3751E**±008**, h13**km±7km**, n6,** σ1s.**32**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
GZT	Gaziantep	0.22	11	i P	Pg	06 33 40.8	-1.4
GZT				i S	Sg	06 33 45.4	-0.1
GAZ	Gaziantep	0.24	277	ePG	Pg	06 33 41.0	-1.7
GAZ				eSG	Sg	06 33 48.5	+2.2
KUZU	Kuzuini	0.51	224	i P	Pg	06 33 46.7	-0.9
KUZU				i S	Sg	06 33 55.2	+0.9
URFA	Urfa	1.08	74	ePG	Pg	06 33 59.3	+0.8
AKCD	Akcadag	1.20	16	i P	Pn	06 34 00.5	+0.6
AKCD				i S	Sb	06 34 16.9	+1.5
SARI	SarD1z-Kayseri	1.66	337	ePN	Pn	06 34 04.5	-1.9

*ISCJB **08** 06:41:08.3±1.1, 3633N±006×2877E±005, h8km±6km, Error ellipse: s-maj=10.3km s-min=6.0km az=11.1*
*CSEM **08** 06:41:08.4±0.2, 3638N×2879E, h10km, MD3.1, Error ellipse: s-maj=6.2km s-min=2.5km az=19.0*
*ISK **08** 06:41:08.6, 3638N×2879E, h13km, MD2.9*
*DDA **08** 06:41:09.7, 3642N×2874E, h30km±2km, Md3.1*
ISC 08 06:41:08.9±1.1**, 3634N**±006×**2879E**±005**, h12**km±5km**, n10,** σ0s.**62**/18**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
TURN	Turunc	0.56	344	i P	Pg	06 41 19.8	0.0
TURN				i S	Sg	06 41 27.9	+0.7
AKAS	Kas	0.67	99	i P	Pg	06 41 22.7	+0.8
AKAS				i S	Sg	06 41 36.2	+5.5
YER	Yerkesik	0.89	333	ePG	Pg	06 41 25.9	-0.3
YER				eSG	Sg	06 41 37.8	-0.2
ELL	Elmali	0.99	65	ePG	Pg	06 41 27.3	-0.8
DAT	Datca	1.05	292	ePG	Pg	06 41 28.9	-0.3
DAT				eSG	Sg	06 41 42.9	0.0
GOLH	Golhisar	1.09	34	i P	Pb	06 41 28.6	-1.1
GOLH				i S	Sb	06 41 44.3	+0.4
MLSB	Milas	1.25	320	ePN	Pn	06 41 32.0	-0.2
MLSB				eSN	Sn	06 41 48.4	-0.6
BDRM	Kayabasi	1.30	304	i P	Pn	06 41 32.5	-0.4
BDRM				i S	Sb	06 41 49.6	-0.4
BODT	Bodrum	1.39	302	ePN	Pn	06 41 34.4	+0.3
GCAM	G?zelcaml?	1.84	318	i P	Pn	06 41 41.9	+1.6
GCAM				i S	Sn	06 42 04.1	+0.5

*IDC **08** 06:53:42.5±1.4, 1389S×11233W, h0km, mb3.9/8, mb1 4.2/8, mb1mx4.1/15, mbtmp3.9/8, MS4.3/18, Ms1 4.3/18, ms1mx4.2/21, Error ellipse: s-maj=45.4km s-min=20.9km az=53.0*
*ISCJB **08** 06:53:46.7±1.3, 136S±02×1116W±03, h10km, mb4.5/31, MS4.3/17, Error ellipse: s-maj=43.4km s-min=11.4km az=146.3*
*NEIC **08** 06:53:48.3±0.9, 1370S×11163W, h10km, mb4.7/25, Error ellipse: s-maj=36.1km s-min=13.0km az=59.0*
*GCMT **08** 06:53:48.3±0.2, 1340S×11197W, h17km±1km, MW5.1/83, Moment Tensor Solution. s38,c48; s83,c130; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.97±.19; Mθθ0.64±.16; Mφφ0.33±.18; Mrθ-0.54±.42; Mθφ5.61±.14; Mφr0.26±.47; Best double couple: M0 5.65300×10^16 NP1:φs181.00000°, δ83.00000°, λ-176.00000°. NP2: φs91.00000°, δ86.00000°, λ-7.00000°. Principal axes: T 6.1060, Plg2.0000°, Azm136.0000°; N -0.9070, Plg82.0000°, Azm239.0000°; P -5.1990, Plg8.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 08 06:53:48.6±1.3**, 137S**±02×**1116W**±03**, h10**km**, n60,** σ1s.**33**/40**, mb4.5**/31**, MS4.3**/17**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
RPN	Rapa Nui	13.53	171	LR	LR	07 00 52.3	
	comp=Z,2μm,18.7s,baz=355,slow=32						
PPT	Papeete	36.72	259	LR	LR	07 12 14.9	
	comp=Z,127nm,19.4s,MS3.7,baz=102,slow=31						
ROSC	El Rosal	41.34	66	LR	LR	07 14 59.8	
	comp=Z,113nm,21.3s,MS3.7,baz=26,slow=30						
TXAR	Lajitas Array	43.46	10	P	P	07 01 51.5	-0.5
	3.3nm,1.1s,mb4.0,baz=188,slow=8.5,SNR=14						
TXAR				LR	LR	07 16 29.2	
	comp=Z,143nm,21.2s,MS3.9,baz=60,slow=31						
TXAR	Lajitas Array	43.46	10	P	P	07 01 51.5	-0.5
TXAR				LR	LR	07 16 29.2	
CFAA	Coronel Fontan	43.49	122	P	P	07 01 52.4	0.0
	0.6nm,0.9s,mb3.3,baz=274,slow=6.7,SNR=13						
CFAA				LR	LR	07 15 58.9	
	comp=Z,112nm,19.2s,MS3.8,baz=282,slow=30						
CFAA	Coronel Fontan	43.49	122	P	P	07 01 52.4	0.0
CFAA				LR	LR	07 15 58.9	
PLCA	Paso Flores	44.78	135	P	P	07 02 03.9	+1.3
	4.5nm,0.9s,mb4.3,baz=292,slow=9.4,SNR=6.4						
PLCA				LR	LR	07 16 20.3	
	comp=Z,1μm,18.9s,MS4.8,baz=222,slow=30						
PLCA	Paso Flores	44.78	135	eP	P	07 02 03.9	+1.3
	6.4nm,0.9s,mb4.5						
PLCA				LR	LR	07 16 20.3	
JCT	Junction City	45.37	14	eP	P	07 02 03.5	-3.8
	30nm,1.4s,mb4.9						
RAR	Rarotonga	46.40	254	LR	LR	07 15 39.6	
	comp=Z,2μm,20.2s,MS5.0,baz=279,slow=29						
SDV	Santo Domingo	46.46	63	P	P	07 02 16.6	+0.5
	4.3nm,0.7s,mb4.5,baz=68,slow=1.1,SNR=5.6						
SDV	Santo Domingo	46.46	63	eP	P	07 02 16.1	-0.1
	6.5nm,0.9s,mb4.6						
SHPR	Sheep Range	50.04	356	eP	P	07 02 45.4	+2.0
MVCO	Mesa Verde	50.72	3	eP	P	07 02 51.5	+2.9
	1.7nm,0.4s,mb4.3						
SDCO	Great Sand Dun	51.49	6	eP	P	07 02 53.8	-0.6
	17nm,1.5s,mb4.8						
TPH	Tonopah	51.76	354	eP	P	07 02 54.3	-2.1
	18nm,1.3s,mb4.8						
CMB	Columbia Colle	52.11	351	eP	P	07 02 59.8	+0.8
	21nm,1.8s,mb4.8						
CPUP	Villa Florida	52.20	113	P	P	07 02 59.5	-0.5
	1.9nm,0.9s,mb4.0,baz=272,slow=9.4,SNR=5.1						
CPUP				LR	LR	07 21 07.1	
	comp=Z,398nm,21.1s,MS4.4,baz=260,slow=31						
CPUP	Villa Florida	52.20	113	eP	P	07 02 59.8	-0.2
	38nm,1.5s,mb5.1						
CPUP				LR	LR	07 21 07.1	
NVAR	Mina Array Bea	52.23	353	P	P	07 02 56.0	-3.8
	1.7nm,0.6s,mb4.1,baz=180,slow=11,SNR=10						
SRU	San Rafael	52.54	1	eP	P	07 03 02.8	+0.6
	12nm,1.4s,mb4.6						
NLU	North Lily Min	53.37	360	eP	P	07 03 06.3	-2.0
MPU	Maple Canyon	53.43	360	eP	P	07 03 07.5	-1.2
	12nm,1.3s,mb4.7						
ISCO	Idaho Springs	53.51	6	eP	P	07 03 08.4	-0.9
	24nm,2.1s,mb4.8						
JLU	Jordanelle	54.02	0	eP	P	07 03 11.6	-1.4
ELK	Elko	54.27	357	eP	P	07 03 16.8	+2.0
	9.6nm,1.3s,mb4.6						
MOD	Modoc	55.90	352	eP	P	07 03 28.0	+1.5
	3.9nm,0.8s,mb4.5						
PDAR	Pinedale Array	56.21	2	P	P	07 03 24.3	-4.5
	0.4nm,0.6s,mb3.7,baz=180,slow=7.3,SNR=5.4						
PDAR				LR	LR	07 23 24.4	
	comp=Z,219nm,18.7s,MS4.3,baz=200,slow=32						
RRI2	Red Ridge	56.76	0	eP	P	07 03 34.1	+1.4

5.0nm,1.2s,mb4.4
TPAW Teton Pass 56.91 1 *e*P **P 07 03 34.1 +0.3**
7.2nm,1.3s,mb4.5
DCID1 Drake Creek 57.01 0 *e*P **P 07 03 36.0 +1.5**
3.7nm,0.7s,mb4.5
HLID Hailey 57.03 358 *e*P **P 07 03 31.0 -3.6**
11nm,1.5s,mb4.7
MOOW Moose Ponds 57.17 1 *e*P **P 07 03 36.7 +1.1**
7.2nm,1.5s,mb4.5
IMW Indian Meadow 57.31 1 *e*P **P 07 03 37.8 +1.1**
8.7nm,1.1s,mb4.7
BMO Blue Mountains 58.50 355 *e*P **P 07 03 46.3 +1.4**
19nm,1.5s,mb4.9
DLMT Dillon 58.78 359 *e*P **P 07 03 47.4 +0.5**
11nm,1.4s,mb4.7
HAWA Hanford 60.23 354 *e*P **P 07 03 56.5 -0.4**
14nm,1.5s,mb4.8
BDFB Brasilia 61.36 100 P **P 07 04 04.5 -0.8**
0.7nm,0.6s,mb4.0,baz=264,slow=19,SNR=2.8
BDFB LR LR 07 26 49.1
comp=Z,87nm,18.7s,MS3.9,baz=88,slow=32
EGMT Eagleton 61.46 1 *e*P **P 07 04 04.5 -0.8**
24nm,1.5s,mb5.1
URZ Urewera 67.00 234 LR LR 07 28 14.1
comp=Z,273nm,18.3s,MS4.5,baz=112,slow=31
RPZ Rata Peaks 71.54 228 LR LR 07 29 39.9
comp=Z,448nm,18.9s,MS4.8,baz=21,slow=30
VNDA Vanda 75.97 193 LR LR 07 33 36.5
comp=Z,164nm,18.3s,MS4.4,baz=101,slow=32
YKA Yellowknife Ar 75.98 359 P **P 07 05 32.5 -3.0**
1.4nm,1.1s,mb3.8,baz=175,slow=5.6,SNR=14
YKA LR LR 07 35 24.2
comp=Z,126nm,18.7s,MS4.2,baz=120,slow=33
YKA Yellowknife Ar 75.98 359 P **P 07 05 32.5 -3.0**
YKA LR LR 07 35 24.2
SCHQ Schefferville 78.04 25 LR LR 07 38 05.2
comp=Z,251nm,19.8s,MS4.5,baz=266,slow=34
KTH Kantishna Hill 82.74 343 *e*P **P 07 06 10.4 -2.0**
36nm,1.1s,mb5.3
INK Inuvik 83.29 352 *e*P **P 07 06 14.1 -0.9**
4.1nm,1.1s,mb4.4
HNR Honiara 86.30 261 LR LR 07 37 17.3
comp=Z,78nm,19.8s,MS4.1,baz=80,slow=31
STKA Stephens Creek 96.61 235 LR LR 07 41 49.7
comp=Z,201nm,20.2s,MS4.6,baz=30,slow=30
MAW Mawson 98.83 178 LR LR 07 47 20.2
comp=Z,158nm,20.5s,MS4.5,baz=339,slow=33
SONM Songino Array 133.61 325 PKP PKPdf 07 13 06.6 +1.0
0.4nm,0.7s,baz=44,slow=3.5,SNR=4.9
BRTR Keskin Array B 139.97 43 PKP PKPdf 07 13 20.4 +2.9
1.1nm,1.0s,baz=329,slow=1.7,SNR=3.2
BVAR Borovoye Array 140.74 358 PKP PKPdf 07 13 14.0 -4.5
0.3nm,0.4s,baz=184,slow=2.2,SNR=2.9
KURK Kurchatov 142.15 349 PKhKP 07 13 13.3
0.8nm,0.9s,baz=14,slow=3.0,SNR=3.7
KURK PKP PKPdf 07 13 16.4 -4.7
1.1nm,0.9s,baz=6.9,slow=2.7,SNR=6.1
MK31 Makanchi Array 145.00 343 *e*PKPdf PKPdf 07 13 23.6 -2.6
MKAR Makanchi Array 145.00 343 PKP PKPdf 07 13 21.3 -5.0
0.3nm,0.6s,baz=346,slow=1.9,SNR=3.5
TKM2 Tokmak 2 150.22 349 *e*PKPdf PKPdf 07 13 35.6 +0.6
CMAR Chiang Mai Arr 150.28 283 PKPbc PKPdf 07 13 34.4 -1.5
1.1nm,0.4s,baz=93,slow=1.8,SNR=5.1
AML Almayashu 151.30 352 *e*PKPdf PKPdf 07 13 37.2 +0.4
AML *e*PKPbc PKPbc 07 13 45.2 +2.5
AML *e*PKPab PKPab 07 13 50.1 -0.5

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*UPP **08** 07:09:04.8, 3834N×1607E, h25km*
*NEIC **08** 07:09:21.2, 3969N×1595E, h279km, mb3.8/8, After ROM.*
*ROM **08** 07:09:21.2±0.3, 3969N×1595E, h279km±3km, Ml3.4/31, Error ellipse: s-maj=7.3km s-min=2.8km az=96.0*
*ISCJB **08** 07:09:22.1±0.3, 3974N±003×1583E±005, h276km±2km, mb3.4/10, Error ellipse: s-maj=6.6km s-min=4.6km az=1.3*
*CSEM **08** 07:09:22.3±0.1, 3970N×1586E, h268km, mb3.4/4, ML4.0/8, Error ellipse: s-maj=3.2km s-min=2.0km az=98.0*
*MOS **08** 07:09:22.3±1.1, 3979N×1582E, h279km, mb4.1/8, Error ellipse: s-maj=14.2km s-min=5.7km az=104.9*
*IDC **08** 07:09:24.3±1.1, 3987N×1551E, h291km±14km, mb3.2/9, mb1 3.3/17, mb1mx3.2/31, mbtmp3.2/17, Error ellipse: s-maj=14.9km s-min=10.8km az=99.0*
ISC 08 07:09:22.9±0.3**, 3973N**±003×**1583E**±005**, h271**km±2km**,**
n178, σ0^{s}99/207**, mb3.4**/10**, 16C-41D, Southern Italy**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
CUC Castrocucco 0.26 357⇓*i*Pg **Pn 07 09 57.7 0.0**
CUC Sg **S 07 10 24.4 -0.8**
212nm,0.9s
CUC Castrocucco 0.26 357⇓*i*Pg **Pn 07 09 57.7 0.0**
CUC Sg **S 07 10 24.4 -0.8**
212nm,0.9s
MGR Morigerati 0.46 332⇓*i*Pg **Pn 07 09 58.3 +0.2**
MGR Sg **S 07 10 26.4 +0.5**
193nm,0.9s
MGR Morigerati 0.46 332⇓*i*Pg **Pn 07 09 58.3 +0.2**
MGR Sg **S 07 10 26.4 +0.5**
193nm,0.9s
BULG Bulgheria - Ca 0.49 315⇓*i*Pg **Pn 07 09 58.7 +0.5**
BULG Bulgheria - Ca 0.49 315⇓*i*Pg **Pn 07 09 58.7 +0.5**
SCHR S. Chirico Rap 0.51 22⇓*i*Pg **Pn 07 09 58.7 +0.5**
SCHR Sg **S 07 10 26.8 +0.7**
75nm,0.5s
SCHR S. Chirico Rap 0.51 22⇓*i*Pg **Pn 07 09 58.7 +0.5**
SCHR Sg **S 07 10 26.8 +0.7**
75nm,0.5s
MTSN Montesano sull 0.54 354⇓*i*Pg **Pn 07 09 58.4 +0.1**
MTSN Montesano sull 0.54 354⇓*i*Pg **Pn 07 09 58.4 +0.1**
CARO Carolei 0.56 148 Pg **Pn 07 09 58.1 -0.4**
CARO Sg **S 07 10 24.5 -2.1**
2µm,0.4s
CARO Carolei 0.56 148 Pg **Pn 07 09 58.1 -0.4**
CARO Sg **S 07 10 24.5 -2.1**
2µm,0.4s
ORI Oriolo Calabro 0.58 55⇓*i*Pg **Pn 07 09 58.9 +0.5**
ORI Sg **S 07 10 26.9 +0.4**
342nm,0.3s
ORI Oriolo Calabro 0.58 55⇓*i*Pg **Pn 07 09 58.9 +0.5**
ORI Sg **S 07 10 26.9 +0.4**
342nm,0.3s
MCEL Monticello 0.59 358⇓*i*Pg **Pn 07 09 59.4 +0.9**
MCEL Sg **S 07 10 27.5 +0.9**
201nm,0.5s
MCEL Monticello 0.59 358⇓*i*Pg **Pn 07 09 59.4 +0.9**
MCEL Sg **S 07 10 27.5 +0.9**
201nm,0.5s
CMPR Campora 0.71 326⇓*i*Pg **Pn 07 09 59.2 +0.3**
51nm,0.4s
CMPR Campora 0.71 326⇓*i*Pg **Pn 07 09 59.2 +0.3**
51nm,0.4s
CRAC Craco 0.79 36⇓*i*Pg **Pn 07 09 59.4 +0.2**
170nm,0.4s
CRAC Craco 0.79 36⇓*i*Pg **Pn 07 09 59.4 +0.2**
170nm,0.4s
PTRP Pietrapertosa 0.81 13⇓*i*Pg **Pn 07 09 59.6 +0.3**
81nm,1.0s
PTRP Pietrapertosa 0.81 13⇓*i*Pg **Pn 07 09 59.6 +0.3**
81nm,1.0s
CDRU Civita di Ruta 0.86 332⇓*i*Pg **Pn 07 09 59.9 +0.4**
41nm,0.4s
CDRU Civita di Ruta 0.86 332⇓*i*Pg **Pn 07 09 59.9 +0.4**
41nm,0.4s
TIP Timpagrande 0.91 127⇓*i*Pg **Pn 07 10 00.3 +0.5**
136nm,0.3s
TIP Timpagrande 0.91 127⇓*i*Pg **Pn 07 10 00.3 +0.5**
136nm,0.3s
SGO Sicignano 0.92 334⇓*i*Pg **Pn 07 10 00.4 +0.6**
79nm,0.2s
SGO Sicignano 0.92 334⇓*i*Pg **Pn 07 10 00.4 +0.6**
79nm,0.2s
SERS Sersale 0.96 136 Pg **Pn 07 10 00.6 +0.5**
445nm,1.0s
SERS Sersale 0.96 136 Pg **Pn 07 10 00.6 +0.5**
445nm,1.0s
MIGL Miglionico 0.99 28 Pg **Pn 07 09 59.8 -0.3**
MIGL Sg **S 07 10 28.7 -0.8**
3µm,3.4s
MIGL Miglionico 0.99 28 Pg **Pn 07 09 59.8 -0.3**
MIGL Sg **S 07 10 28.7 -0.8**
3µm,3.4s
GRI Girifalco 1.02 153 Pg **Pn 07 10 00.9 +0.5**
GRI Sg **S 07 10 29.1 -0.8**
387nm,0.4s
GRI Girifalco 1.02 153 Pg **Pn 07 10 00.9 +0.5**
GRI Sg **S 07 10 29.1 -0.8**
387nm,0.4s
ACER Acerenza 1.06 5 Pg **Pn 07 10 00.4 0.0**
1.0nm,0.2s
ACER Acerenza 1.06 5 Pg **Pn 07 10 00.4 0.0**
1.0nm,0.2s
JOPP Joppolo 1.12 178⇑*i*Pg **Pn 07 10 00.6 -0.4**
JOPP Sg **S 07 10 28.6 -2.4**
603nm,0.2s
JOPP Joppolo 1.12 178⇑*i*Pg **Pn 07 10 00.6 -0.4**
JOPP Sg **S 07 10 28.6 -2.4**
603nm,0.2s
LTRZ Laterza 1.16 41⇓*i*Pg **Pn 07 10 00.7 -0.3**
LTRZ Sg **S 07 10 29.3 -1.8**
102nm,0.4s
LTRZ Laterza 1.16 41⇓*i*Pg **Pn 07 10 00.7 -0.3**
LTRZ Sg **S 07 10 29.3 -1.8**
102nm,0.4s
MCRV Calabrutti - M 1.17 334⇓*i*Pg **Pn 07 10 01.7 +0.6**
233nm,0.5s
MCRV Calabrutti - M 1.17 334⇓*i*Pg **Pn 07 10 01.7 +0.6**
233nm,0.5s
SG1 Sgolgore (BA) 1.28 30 *i* P **Pn 07 10 01.4 -0.4**
CSSN Cassano Irpino 1.29 332 Pg **Pn 07 10 02.3 +0.5**
17nm,0.3s
CSSN Cassano Irpino 1.29 332 Pg **Pn 07 10 02.3 +0.5**
17nm,0.3s
AMUR Altamura 1.32 26⇓*i*Pg **Pn 07 10 02.2 +0.2**
AMUR Sg **S 07 10 31.7 -1.2**
76nm,0.3s
AMUR Altamura 1.32 26⇓*i*Pg **Pn 07 10 02.2 +0.2**
AMUR Sg **S 07 10 31.7 -1.2**
76nm,0.3s
MRVN Minervino Murg 1.36 12⇓*i*Pg **Pn 07 10 02.2 0.0**
47nm,0.3s
MRVN Minervino Murg 1.36 12⇓*i*Pg **Pn 07 10 02.2 0.0**
47nm,0.3s
PLAC Placanica 1.36 160⇑*i*Pg **Pn 07 10 02.4 0.0**
PLAC Sg **S 07 10 31.9 -1.7**
175nm,0.3s
PLAC Placanica 1.36 160⇑*i*Pg **Pn 07 10 02.4 0.0**
PLAC Sg **S 07 10 31.9 -1.7**
175nm,0.3s
CAFE Carife 1.37 341⇓*i*Pg **Pn 07 10 03.3 +1.0**
620nm,2.1s
CAFE Carife 1.37 341⇓*i*Pg **Pn 07 10 03.3 +1.0**
620nm,2.1s
NOCI Noci 1.42 41⇓*i*Pg **Pn 07 10 02.7 +0.1**
NOCI Sg **S 07 10 32.5 -1.6**
118nm,0.1s
NOCI Noci 1.42 41⇓*i*Pg **Pn 07 10 02.7 +0.1**
NOCI Sg **S 07 10 32.5 -1.6**
118nm,0.1s
CEL Celeste 1.47 178 Pg **Pn 07 10 02.4 -0.7**
CEL Sg **S 07 10 32.2 -2.7**
180nm,0.6s
CEL Celeste 1.47 178 *e*Pn **Pn 07 10 02.1 -1.0**
CEL *e*Sn **S 07 10 31.1 -3.8**
CEL Celeste 1.47 178 Pg **Pn 07 10 02.4 -0.7**
CEL Sg **S 07 10 32.2 -2.7**
180nm,0.6s
BAI Bari 1.59 30 *i* P **Pn 07 10 03.8 0.0**
FG5 Orsara di Pugl 1.61 345 Pg **Pn 07 10 04.7 +0.7**
27nm,0.3s
FG5 Orsara di Pugl 1.61 345 Pg **Pn 07 10 04.7 +0.7**
27nm,0.3s
PE1 Pezze di Greco 1.62 48 *i* P **Pn 07 10 04.3 +0.2**
SOI Samo 1.67 174 Pg **Pn 07 10 04.1 -0.5**
87nm,0.6s
SOI Samo 1.67 174 Pg **Pn 07 10 04.1 -0.5**
87nm,0.6s
MTTG Motta San Giov 1.73 184 Pg **Pn 07 10 05.0 -0.1**
41nm,0.2s
MTTG Motta San Giov 1.73 184 Pg **Pn 07 10 05.0 -0.1**
41nm,0.2s
MPAZ Palizzi 1.78 176 Pg **Pn 07 10 05.2 -0.2**
208nm,0.7s
MPAZ Palizzi 1.78 176 Pg **Pn 07 10 05.2 -0.2**
208nm,0.7s
MMME Mongiuffi-Meli 1.85 194 Pg **Pn 07 10 06.6 +0.6**
83nm,0.3s
MMME Mongiuffi-Meli 1.85 194 Pg **Pn 07 10 06.6 +0.6**
83nm,0.3s
RGNG Rignano Grg 1.95 355 Pg **Pn 07 10 06.5 -0.2**
MS1 Monte Sant'Ang 1.98 2 *i* P **Pn 07 10 07.2 +0.3**
FGMS Monte Sant'Ang 1.98 3⇑*i*Pg **Pn 07 10 07.0 +0.1**
73nm,0.2s
FGMS Monte Sant'Ang 1.98 3⇑*i*Pg **Pn 07 10 07.0 +0.1**
73nm,0.2s
GIB Gibilmanna 2.24 220⇑*i*Pg **Pn 07 10 10.0 +0.7**
57nm,0.4s
GIB Gibilmanna 2.24 220⇑*i*Pg **Pn 07 10 10.0 +0.7**
57nm,0.4s
GALF Gagliano Caste 2.25 207 Pg **Pn 07 10 11.3 +1.9**
GALF Gagliano Caste 2.25 207 Pg **Pn 07 10 11.3 +1.9**
CSLB Castelbuono 2.26 218 Pg **Pn 07 10 10.1 +0.5**
63nm,0.5s
CSLB Castelbuono 2.26 218 Pg **Pn 07 10 10.1 +0.5**
63nm,0.5s
ECNV Catenanuova 2.30 203 Pg **Pn 07 10 11.2 +1.2**
ECNV Catenanuova 2.30 203 Pg **Pn 07 10 11.2 +1.2**
VAE Valguarnera 2.51 207 P **Pn 07 10 14.1 +2.2**
8.1nm,0.3s,baz=193,slow=3.3,SNR=16
AGST Augusta-Monte 2.52 191 Pg **Pn 07 10 10.7 -1.2**
10µm,11.0s
AGST Augusta-Monte 2.52 191 Pg **Pn 07 10 10.7 -1.2**
10µm,11.0s
SSY Sortino 2.64 193⇓*i*Pg **Pn 07 10 12.3 -0.9**
214nm,1.3s
SSY Sortino 2.64 193⇓*i*Pg **Pn 07 10 12.3 -0.9**
214nm,1.3s
HVZN Vizzini 2.69 199⇑*i*Pg **Pn 07 10 13.8 +0.1**
242nm,0.5s
HVZN Vizzini 2.69 199⇑*i*Pg **Pn 07 10 13.8 +0.1**
242nm,0.5s
HMDC Modica 2.89 197⇑*i*Pg **Pn 07 10 15.8 +0.1**
138nm,0.6s
HMDC Modica 2.89 197⇑*i*Pg **Pn 07 10 15.8 +0.1**
138nm,0.6s
BIA Bitola 4.39 71 *i* P **Pn 07 10 33.2 +1.1**
BIA Bitola 4.39 71 *i* P **Pn 07 10 33.3 +1.2**
KRUS Krusevo 4.44 67 *i* P **Pn 07 10 34.2 +1.5**
SKO Skopje 4.81 60 *i* P **Pn 07 10 38.6 +1.6**
SKO Skopje 4.81 60 *i* P **Pn 07 10 38.7 +1.7**
STIP Stip 5.21 66 *i* P **Pn 07 10 42.6 +0.7**
VAY Valandovo 5.38 71 *i* P **Pn 07 10 44.1 +0.3**
VAY Valandovo 5.38 71 *i* P **Pn 07 10 44.2 +0.3**
BOJS Bojanci 5.79 356 *i* P **Pn 07 10 49.3 +0.5**
VISS Visnje 6.11 353 *i* P **Pn 07 10 53.0 +0.3**
JAVS Javornik 6.29 349 *i* P **Pn 07 10 54.3 -0.6**
OBKA Obir 6.84 353⇑*i*Pn **Pn 07 11 02.1 +0.4**
4.7nm,0.6s
OBKA Obir 6.84 353 P **Pn 07 11 02.4 +0.7**
4.7nm,0.6s
PERS Pernice 6.92 356 *i* P **Pn 07 11 02.5 -0.2**
ABTA Abfaltersbach 7.42 342⇑*i*Pn **Pn 07 11 09.1 +0.2**
10.0nm,0.6s
ARSA Arzberg 7.52 358⇑*i*Pn **Pn 07 11 10.0 -0.1**
6.5nm,0.8s
FETA Feichten 8.18 335⇓*i*Pn **Pn 07 11 20.2 +1.9**
4.6nm,0.7s
FETA Feichten 8.18 335 P **Pn 07 11 21.0 +2.7**
4.6nm,0.7s
MOA Molln 8.20 353⇑*i*Pn **Pn 07 11 18.9 +0.4**
8.2nm,0.7s
MOA Molln 8.20 353 P **Pn 07 11 19.0 +0.5**
8.2nm,0.7s
DAVOX Davos/Dischmat 8.28 330 P **Pn 07 11 20.0 +0.5**
0.9nm,0.3s,baz=170,slow=12,SNR=10
RJOB Jochberg 8.30 346 *e*Pn **Pn 07 11 20.9 +1.1**
DAVOS Davos 8.36 330 P **Pn 07 11 20.0 -0.6**
MBDF Montbardon 8.37 310 *e*P **Pn 07 11 22.3 +1.5**
25nm,0.9s
MBDF Montbardon 8.37 310 *e*P **Pn 07 11 22.3 +1.5**
MBDF pmax pmax
comp=Z,13nm,0.9s
MBDF Montbardon 8.37 310 *e*P **Pn 07 11 22.3 +1.5**
comp=Z,13nm,0.9s
LPG La Plagne 8.83 314 *e*P **Pn 07 11 29.0 +2.5**
comp=Z,12nm,0.7s
LPG La Plagne 8.83 314 *e*P **Pn 07 11 29.0 +2.5**
LPG pmax pmax
comp=Z,6.0nm,0.7s
LPG La Plagne 8.83 314 *e*P **Pn 07 11 29.0 +2.5**
comp=Z,5.8nm,0.7s
LPL La Plagne 8.85 314 *e*P **Pn 07 11 29.3 +2.5**
GEC2 GERESS Array S 9.24 351 *e*Pn **Pn 07 11 31.6 0.0**
GERES GERESS Array B 9.24 351 P **Pn 07 11 31.5 0.0**
comp=Z,1.8nm,0.3s,baz=165,slow=13,SNR=56
GERES GERESS Array B 9.24 351 P **Pn 07 11 31.5 -0.1**
GERES pmax pmax
comp=Z,2.0nm,0.3s
MLR Muntele Rosu 9.42 49 P **Pn 07 11 37.8 +3.9**
comp=Z,0.4nm,0.3s,baz=260,slow=7.2,SNR=3.7
KHC Kasperske Hory 9.54 351 *e*P **Pn 07 11 34.0 -1.3**
WET Wettzell 9.64 348 *e*Pn **Pn 07 11 36.1 -0.5**
CABF La Chapelle 9.89 317 *e*P **Pn 07 11 38.3 -1.4**
comp=Z,4.9nm,0.3s
CABF La Chapelle 9.89 317 *e*P **Pn 07 11 38.3 -1.4**
CABF pmax pmax
comp=Z,2.0nm,0.3s
CABF La Chapelle 9.89 317 *e*P **Pn 07 11 38.3 -1.4**
comp=Z,2.5nm,0.3s
BFO Black Forest 10.15 330 *e*Pn **Pn 07 11 42.3 -0.6**
HINF Hinteralfeld 10.36 324 *e*P **Pn 07 11 43.8 -1.8**
comp=Z,6.5nm,0.3s
HINF Hinteralfeld 10.36 324 *e*P **Pn 07 11 43.8 -1.8**
HINF pmax pmax
comp=Z,3.0nm,0.3s
HINF Hinteralfeld 10.36 324 *e*P **Pn 07 11 43.8 -1.8**
comp=Z,3.3nm,0.3s
GRA1 Grafenberg Arr 10.48 343 *e*Pn **Pn 07 11 46.1 -1.0**
GRF Grafenberg Arr 10.48 343 *e*Pn **Pn 07 11 46.1 -1.0**
CDF Champ du Feu 10.63 328 *e*P **Pn 07 11 49.1 +0.2**
comp=Z,5.3nm,0.3s
CDF Champ du Feu 10.63 328 *e*P **Pn 07 11 49.1 +0.2**
CDF pmax pmax
comp=Z,3.0nm,0.3s
CDF Champ du Feu 10.63 328 *e*P **Pn 07 11 49.1 +0.2**
comp=Z,2.7nm,0.3s
HAU Haudompre 10.73 324 *e*P **Pn 07 11 48.1 -2.0**
comp=Z,8.9nm,0.5s
HAU Haudompre 10.73 324 *e*P **Pn 07 11 48.1 -2.0**
HAU pmax pmax
comp=Z,4.0nm,0.5s
HAU Haudompre 10.73 324 *e*P **Pn 07 11 48.1 -2.0**
comp=Z,4.4nm,0.5s
MOX Moxa 11.31 346 *e*PN **Pn 07 12 02.1 +4.8**
MOX Moxa 11.31 346 *e*Pn **Pn 07 12 01.7 +4.4**
SSF Saint Saulge 11.57 313 *e*P **Pn 07 12 01.6 +1.1**
CLL Collm 11.75 351 *e*Pn **Pn 07 12 03.5 +0.9**
CLL Collm 11.75 351 *e*(P) **Pn 07 12 04.0 +1.4**
AKASG Malin Array Be 14.45 36 P **Pn 07 12 35.6 +0.2**
comp=Z,1.4nm,0.3s,baz=226,slow=11,SNR=6.3
AKASG Malin Array Be 14.45 36 P **Pn 07 12 35.7 +0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ESDC Sonseca Array 15.24 276 P **Pn 07 12 44.1 -0.9**
comp=Z,0.2nm,0.3s,baz=79,slow=11,SNR=4.9
GOTU Gotland 18.06 5 P **P 07 13 14.1 -0.4**
EIL Elat 18.62 117 P **P 07 13 25.3 +4.5**
comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=2.6
ASF Jabal al Asfar 18.62 107 P **P 07 13 24.0 +3.1**
comp=Z,0.1nm,0.3s,baz=246,slow=0.9,SNR=3.4
EKA Eskdalemuir Ar 20.09 327 P **P 07 13 34.0 -2.3**
comp=Z,0.2nm,0.3s,baz=126,slow=8.0,SNR=4.3
HFS Hagfors 20.47 357 P **P 07 13 38.4 -1.7**
comp=Z,4.3nm,0.5s,baz=161,slow=9.4,SNR=22
HFS Hagfors 20.47 357 P **P 07 13 38.4 -1.7**
HFS pmax pmax
comp=Z,4.0nm,0.5s
NB2 NORSAR Subarra 21.53 354 P **P 07 13 48.8 -1.6**
comp=Z,0.4nm,0.4s,mb3.1,baz=170,slow=11
NOA NORSAR Array B 21.53 354 P **P 07 13 48.2 -2.2**
comp=Z,1.0nm,0.5s,mb3.4,baz=171,slow=7.5,SNR=5.4
NOA NORSAR Array B 21.53 354 P **P 07 13 48.3 -2.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
KAF Kangasniemi 23.30 12 *e*p **P 07 14 05.7 -0.9**
comp=Z,0.9nm,0.4s,mb3.5
KAF Kangasniemi 23.30 12 *e*P **P 07 14 05.7 -0.9**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.5
JOF Joensuu 25.02 17 *e*p **P 07 14 21.6 -0.5**
comp=Z,0.5nm,0.4s,mb3.3
JOF Joensuu 25.02 17 *e*P **P 07 14 21.6 -0.5**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb3.6
TORD Torodi Ar. Bea 29.27 209 P **P 07 15 00.3 0.0**
comp=Z,1.3nm,0.5s,mb3.6,baz=18,slow=9.3,SNR=17
ARCES ARCESS Array B 30.31 7 P **P 07 15 07.5 -1.3**
comp=Z,4.9nm,1.1s,mb4.0,baz=191,slow=8.6,SNR=20
ARCES ARCESS Array B 30.31 7 P **P 07 15 07.6 -1.3**
ARCES pmax pmax
comp=Z,5.0nm,1.1s
DBIC Dimbokro 37.81 215 P **P 07 16 13.5 -0.2**
comp=Z,1.3nm,0.3s,mb3.8,baz=173,slow=12,SNR=5.3
DBIC Dimbokro 37.81 215 P **P 07 16 13.5 -0.2**
DBIC pmax pmax
comp=Z,1.0nm,0.3s
KURK Kurchatov 44.31 54 P **P 07 17 06.1 +0.1**
comp=Z,0.4nm,0.3s,mb3.1,baz=302,slow=7.5,SNR=4.5
KURK Kurchatov 44.31 54 *e*P **P 07 17 05.9 -0.1**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb3.4
KURK Kurchatov 44.31 54 *e*P **P 07 17 05.9 -0.1**
comp=Z,0.9nm,0.4s,mb3.4
KURK Kurchatov 44.31 54 *e*P **P 07 17 05.9 -0.1**
comp=Z,0.9nm,0.4s,mb3.4
ZALV Zalesovo Beam 47.40 49 P **P 07 17 30.1 +0.1**
comp=Z,0.8nm,0.3s,mb3.5,baz=270,slow=6.8,SNR=2.8
ZALV Zalesovo Beam 47.40 49 P **P 07 17 30.1 +0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb3.6
MKAR Makanchi Array 47.61 59 P **P 07 17 32.2 +0.5**
comp=Z,0.6nm,0.4s,mb3.3,baz=281,slow=7.3,SNR=16
MKAR pP pP 07 18 28.8 -0.1
comp=Z,0.5nm,0.6s,baz=285,slow=5.8,SNR=4.6
MKAR Makanchi Array 47.61 59 P **P 07 17 32.2 +0.5**
MKAR *PP pP 07 18 28.8 0.0
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 47.61 59 P **P 07 17 32.2 +0.5**
MKAR pP pP 07 18 28.8 -0.1
YKA Yellowknife Ar 70.63 338 P **P 07 20 07.0 -1.6**
comp=Z,0.1nm,0.5s,mb2.7,baz=36,slow=5.3,SNR=3.9

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*IDC **08** 07:13:18.1±1.3, 1345S×11187W, h0km, mb3.5/7, mb1 3.9/7, mb1mx3.8/15, mbtmp3.5/7, MS3.9/10, Ms1 3.9/10, ms1mx3.8/13, Error ellipse: s-maj=57.4km s-min=22.1km az=61.0*
*ISCJB **08** 07:13:19.5±1.4, 13.1S±02×1113W±03, h10km, mb4.3/13, MS4.0/9, Error ellipse: s-maj=47.0km s-min=14.1km az=148.0*
*NEIC **08** 07:13:19.0±0.9, 1347S×11193W, h10km, mb4.9/7, Error ellipse: s-maj=41.1km s-min=15.6km az=63.0*
*GCMT **08** 07:13:28.0±0.4, 1357S×112.13W, h24km±2km, MW5.0/66, Moment Tensor Solution. s19,c20; s66,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.07±.24; $M_{\theta\theta}$0.78±.18; $M_{\phi\phi}$0.28±.20; $M_{r\theta}$0.38±.23; $M_{\theta\phi}$3.55±.14; $M_{\phi r}$-0.74±.26; Best double couple: $M_0$3.70700×10^{16} NP1:ϕ_s270.00000°, δ74.00000°, λ-12.00000°. NP2: ϕ_s4.00000°, δ78.00000°, λ-164.00000°. Principal axes: T 4.1030, Plg3.0000°, Azm137.0000°; N -0.7930, Plg70.0000°, Azm40.0000°; P -3.3110, Plg20.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 08 07:13:21.5±1.4**, 132S**±02×**1113W**±03**, h10**km**, n26,**
σ1^{s}21/14**, mb4.3**/13**, MS4.0**/9**, Central East Pacific Rise**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
RPN Rapa Nui 14.02 173 LR LR 07 19 51.9
comp=Z,238nm,19.9s,baz=328,slow=28
ATAH Atahualpa 32.94 83 LR LR 07 30 29.2
comp=Z,241nm,19.1s,MS3.9,baz=148,slow=31
LPIG La Paz 37.04 1 LR LR 07 31 20.7
comp=Z,142nm,19.7s,MS3.8,baz=187,slow=29
ROSC El Rosal 40.84 66 LR LR 07 33 34.4
comp=Z,49nm,19.1s,MS3.4,baz=21,slow=29
TXAR Lajitas Array 42.88 10 P **P 07 21 20.8 +0.6**
0.5nm,1.0s,mb3.2,baz=188,slow=6.0,SNR=3.8
TXAR LR LR 07 36 02.8
comp=Z,108nm,20.3s,MS3.7,baz=5.0,slow=32
CFAA Coronel Fontan 43.51 122 P **P 07 21 27.0 +1.6**
0.2nm,0.8s,baz=279,slow=7.0,SNR=2.8
JCT Junction City 44.77 14 P **P 07 21 34.8 -0.6**
31nm,1.3s,mb5.0
PLCA Paso Flores 44.94 135 P **P 07 21 35.1 -1.7**

3.1nm,1.0s,mb4.1,baz=278,slow=7.1,SNR=2.2
PLCA LR LR 07 35 52.9
comp=Z,485nm,20.1s,MS4.4,baz=224,slow=30
SDV Santo Domingo 45.94 64 *e*P **P 07 21 43.4 -1.6**
18nm,1.3s,mb4.8
NVAR Mina Array Bea 51.73 353 P **P 07 22 29.7 +0.7**
0.8nm,0.7s,mb3.8,baz=183,slow=11,SNR=4.6
CPUP Villa Florida 52.12 113 P **P 07 22 33.5 +1.2**
0.2nm,0.4s,mb3.4,baz=256,slow=8.3,SNR=2.3
CPUP LR LR 07 40 28.9
comp=Z,225nm,19.2s,MS4.2,baz=257,slow=31
DUG Dugway 53.09 359 P **P 07 22 36.3 -2.8**
10nm,1.2s,mb4.6
ELK Elko 53.75 356 *e*P **P 07 22 45.3 +1.3**
11nm,1.2s,mb4.7
PDAR Pinedale Array 55.67 2 P **P 07 22 58.4 +0.6**
0.8nm,0.7s,mb3.8,baz=119,slow=5.2,SNR=6.4
PDAR LR LR 07 42 50.2
comp=Z,144nm,18.7s,MS4.1,baz=34,slow=32
WVOR Wild Horse Val 55.72 353 *e*P **P 07 22 58.7 +0.4**
15nm,1.2s,mb4.9
BMO Blue Mountains 57.99 355 *e*P **P 07 23 14.9 +0.7**
10nm,1.3s,mb4.7
YKA Yellowknife Ar 75.45 358 P **P 07 25 04.9 -0.4**
0.8nm,1.0s,mb3.6,baz=177,slow=5.6,SNR=7.6
YKA LR LR 07 54 59.7
comp=Z,79nm,20.0s,MS4.0,baz=195,slow=33
VNDA Vanda 76.56 193 LR LR 07 51 16.6
comp=Z,110nm,19.7s,MS4.2,baz=15,slow=30
KTH Kantishna Hill 82.31 343 *e*P **P 07 25 41.4 -1.6**
41nm,1.1s,mb5.3
ZALV Zalesovo Beam 137.36 346 PKP PKPdf 07 32 48.3 +3.1
0.3nm,0.3s,baz=18,slow=5.2,SNR=2.8
MK31 Makanchi Array 144.57 344 *e*PKPdf PKPdf 07 32 54.9 -3.6
MKAR Makanchi Array 144.57 344 PKP PKPdf 07 32 54.5 -4.0
0.4nm,0.8s,baz=20,slow=4.6,SNR=3.4
MKAR Makanchi Array 144.57 344 PKP PKPdf 07 32 54.5 -4.0
EIL Elat 144.71 57 PKPbc PKPdf 07 32 59.3 0.0
6.8nm,1.0s,baz=315,slow=5.7,SNR=2.0
TKM2 Tokmak 2 149.75 350 *e*PKPbc PKPbc 07 33 09.8 -2.1
TKM2 *e*PKPab PKPab 07 33 16.1 -1.0
CMAR Chiang Mai Arr 150.46 284 PKPbc PKPbc 07 33 11.7 -2.6
1.8nm,0.3s,baz=90,slow=4.0,SNR=3.0

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*NEIC **08** 07:32:41.4, 1748N×9554W, h60km, MD3.9(MEX), After MEX.*
MEX 08 07:32:41.3±1.0**, 1748N×9554W, h61**km±18km**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.74**	**121**	*i* P	Pn	07 32 54.7	-1.4
CMIG				*i* S	Sn	07 33 05.1	-1.8
OXX	**Oaxaca**	**1.19**	**251**	*i* P	Pn	07 33 01.1	-0.8
OXX				*i* S	Sn	07 33 15.5	-1.8
VHO	**Vista Hermosa**	**1.21**	**251**	*i* P	Pn	07 33 00.4	-1.7
VHO				*i* S	Sn	07 33 15.1	-2.5
HUIG	**Huatulco**	**1.78**	**198**	*i* P	Pn	07 33 07.8	-2.0
HUIG				*i* S	Sn	07 33 30.8	-0.7
TPIG	**Tehuac#an**	**1.97**	**299**	*e*P	Pn	07 33 11.4	-1.0
TPIG				*i* S	Sn	07 33 34.3	-1.7
UTMO	**Huajuapan**	**2.18**	**280**	*i* P	Pn	07 33 14.8	-0.5
UTMO				*i* S	Sn	07 33 39.9	-1.4
TGIG		**2.42**	**106**	*i* P	Pn	07 33 18.4	0.0
TGIG				*i* S	Sn	07 33 45.4	-1.5
PNIG	**Pinotepa**	**2.70**	**247**	*i* P	Pn	07 33 19.1	-3.2
PNIG				*i* S	Sn	07 33 52.8	-1.1
PNIG	**Pinotepa**	**2.70**	**247**	*i* P	Pn	07 33 18.9	-3.4
PNIG				*i* S	Sn	07 33 53.5	-0.3
PCIG		**2.84**	**128**	*i* P	Pn	07 33 23.4	-0.8
PCIG				*i* S	Sn	07 33 55.8	-1.5
CCIG	**Comitan**	**3.47**	**109**	*e*P	Pn	07 33 34.8	+2.0
CCIG				*i* S	Sn	07 34 12.8	0.0

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*LDG **08** 07:40:23.2±0.1, 3823N×9068E, h10km, Mb5.0/19, Ms3.3/1, Error ellipse: s-maj=6.5km s-min=4.1km az=113.0*
*IDC **08** 07:40:23.6±0.7, 3834N×9094E, h0km, mb4.3/16, mb1 4.5/20, mb1mx4.4/27, mbtmp4.4/20, ML4.4/4, MS3.4/5, Ms1 3.4/5, ms1mx3.1/33, Error ellipse: s-maj=21.7km s-min=14.4km az=46.0*
*ISCJB **08** 07:40:26.4±0.3, 3874N±004×9073E±004, h10km, mb4.6/51, MS3.6/6, Error ellipse: s-maj=5.7km s-min=3.5km az=26.1*
*NEIC **08** 07:40:28.7±1.9, 3859N×9091E, h24km±12km, mb4.8/27, Error ellipse: s-maj=9.1km s-min=6.6km az=165.0*
*BJI **08** 07:40:28.0, 3862N×9079E, h26km, mB4.6, mb4.5, ML4.4, Ms4.0, Msz3.7*
*MOS **08** 07:40:28.0±0.9, 3853N×9083E, h33km, mb4.8/34, Error ellipse: s-maj=10.7km s-min=4.9km az=125.4*
ISC 08 07:40:28.1±0.3**, 3869N**±004×**9077E**±003**, h10**km**, (h30**km±1.8km**:pP-P), n181,** σ1s**16**/197**, mb4.6**/51**, MS3.6**/6**, 3C-1D, Southern Xinjiang**

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

WMQ Urumqi 5.62 337⇑*i*P **Pn 07 41 55.5 +3.8**
WMQ S **Sn 07 42 57.7 +1.4**
WMQ SG **Sg 07 43 24.1 -4.5**
WMQ Smax
comp=N,400nm,1.0s
WMQ Smax
comp=E,498nm,0.7s
WMQ LR LR
comp=N,293nm,13.0s
WMQ LR LR
comp=E,110nm,14.0s
WMQ LR LR
comp=Z,302nm,13.0s
GTA Gaotai 7.08 81 *e*P **Pn 07 42 10.0 -1.7**
GTA S **Sn 07 43 24.6 -7.6**
GTA LR LR
comp=N,482nm,11.0s
GTA LR LR
comp=E,428nm,11.9s
GTA LR LR
comp=Z,519nm,9.5s
LSA Lhasa 8.97 178 P **Pn 07 42 42.9 +5.1**
MK31 Makanchi Array 10.21 325 P **Pn 07 42 56.5 +1.9**
MK31 07 44 49.8
MK31 pmax pmax
comp=Z,21nm,0.4s
MK31 smax
comp=N,15nm,0.4s
MK31 Makanchi Array 10.21 325 *e*Pn **Pn 07 42 55.5 +0.8**
MK31 *e*Sn **Sn 07 44 50.9 +1.7**
MKAR Makanchi Array 10.21 325 Pn **Pn 07 42 55.9 +1.3**
comp=N,9.0nm,0.3s,baz=138,slow=13,SNR=234
MKAR Sn **Sn 07 44 51.3 +2.1**
comp=N,5.5nm,0.3s,baz=137,slow=25,SNR=8.8
MKAR LR LR 07 47 30.5
comp=N,166nm,20.0s,baz=90,slow=40
MKAR Makanchi Array 10.21 325 P **Pn 07 42 55.9 +1.3**
MKAR 07 44 51.3
MKAR pmax pmax
comp=Z,9.0nm,0.3s
MKAR smax
comp=N,6.0nm,0.3s
MKAR MLR MLR
comp=Z,166nm,20.0s
MKAR Makanchi Array 10.21 325 Pn **Pn 07 42 55.9 +1.3**
MKAR Sn **Sn 07 44 51.3 +2.1**
MKAR LR LR 07 47 30.5
ULHL Ulahol 11.62 292 P **Pn 07 43 16.2 +2.3**
SNR=8.0
TKM2 Tokmak 2 12.24 295 *e*P **Pn 07 43 23.0 +0.5**
TKM2 *e* 07 45 38.5
TKM2 pmax pmax
comp=Z,51nm,0.6s
TKM2 Tokmak 2 12.24 295 P **Pn 07 43 23.8 +1.3**
SNR=50
TKM2 Tokmak 2 12.24 295 *e*Pn **Pn 07 43 23.0 +0.6**
comp=Z,52nm,0.6s
TKM2 *e*Sn **Sn 07 45 38.5 -0.4**
KZA Kyzart 12.30 291 P **Pn 07 43 24.4 +1.1**
SNR=7.7
KBK Karagaybulak 12.64 293 P **Pn 07 43 29.1 +1.2**
SNR=23
UCH Uchtor 12.87 291 *e*Pn **Pn 07 43 32.2 +1.2**
comp=Z,8.6nm,0.7s
AAK Ala-Archa 12.96 293 *e*P **Pn 07 43 33.5 +1.2**
AAK pmax pmax
comp=Z,15nm,0.9s
AAK Ala-Archa 12.96 293 P **Pn 07 43 34.3 +2.0**
SNR=6.0
AAK Ala-Archa 12.96 293 *e*Pn **Pn 07 43 33.5 +1.2**
comp=Z,15nm,0.9s
USP Ospenovka 13.11 296 P **Pn 07 43 34.0 -0.3**
SNR=7.5
AML Almayashu 13.46 290 *e*Pn **Pn 07 43 40.9 +1.9**
comp=Z,14nm,0.7s
EKS2 Erkin-Say 13.49 292 *e*Pn **Pn 07 43 40.7 +1.3**
comp=Z,5.2nm,0.8s
SONM Songino Array 14.58 46 Pn **Pn 07 43 54.8 +0.6**
comp=Z,1.8nm,0.3s,baz=230,slow=15,SNR=30
SONM Sn **Sn 07 46 29.5 -6.3**
comp=Z,0.3nm,0.3s,baz=235,slow=23,SNR=5.1
SONM Lg 07 48 07.8
comp=Z,0.5nm,0.3s,baz=225,slow=23,SNR=4.2
SONM LR LR 07 49 56.5
comp=Z,145nm,19.4s,baz=17,slow=39
ZAK Zakamensk 14.68 33 *e*P **Pn 07 43 58.4 +2.7**
ZAK pmax pmax
comp=Z,12nm,1.2s
KURK Kurchatov 14.78 328 Pn **Pn 07 43 55.3 -1.7**
comp=Z,0.5nm,0.3s,baz=146,slow=12,SNR=32
KURK Kurchatov 14.78 328 *e*P **Pn 07 43 55.8 -1.2**
KURK pmax pmax
comp=Z,15nm,1.0s
KURK Kurchatov 14.78 328 *e*Pn **Pn 07 43 55.5 -1.4**
comp=Z,20nm,0.8s
MOY Mondy 14.82 26 *e*P **Pn 07 44 03.4 +5.8**
XAN Xi'an 15.34 102 P **Pn 07 44 06.8 +2.2**
XAN AP pP 07 44 11.9 -0.3
XAN S **Sn 07 46 55.3 +0.7**
XAN XS sS 07 47 04.1 -11
XAN SS 07 47 12.9
XAN LG1 07 49 05.3
XAN LG2 07 49 50.9
XAN AMB AMB
comp=Z,4.0nm,0.9s
XAN AMB AMB
comp=Z,67nm,5.1s
XAN LR LR
comp=N,81nm,10.0s
XAN LR LR
comp=E,359nm,11.5s
XAN LR LR
comp=Z,464nm,12.3s
ZAA0 Zalesovo Array 15.79 347 *e*Pn **Pn 07 44 10.3 -0.1**
ZAA0 *e*Sn **Sn 07 47 01.9 -3.5**
ZALV Zalesovo Beam 15.79 347 Pn **Pn 07 44 10.4 0.0**
comp=Z,0.4nm,0.3s,baz=165,slow=12,SNR=40
ZALV Sn **Sn 07 47 02.0 -3.3**
comp=Z,0.6nm,0.3s,baz=162,slow=26,SNR=5.7
ZALV LR LR 07 50 55.4
comp=Z,56nm,19.8s,baz=65,slow=39
ZALV Zalesovo Beam 15.79 347 P **Pn 07 44 10.4 0.0**
ZALV 07 47 02.0
ZALV smax
comp=N,1.0nm,0.3s
ZALV MLR MLR
comp=Z,56nm,19.8s
TLY Talaya 15.81 31 *e*P Px 07 44 23.0
TLY pmax pmax
comp=Z,10.0nm,0.9s
TLY MLR MLR
comp=Z,111nm,11.0s
KK31 Karatay Array 15.93 293 *i* P **Pn 07 44 11.6 -0.6**
KK31 pmax pmax
comp=Z,3.0nm,0.6s
HHC Hu-ho-hao-te 16.14 76 *e*P **Pn 07 44 19.7 +4.8**
HHC AP pP 07 44 26.4 +5.4
HHC XP sP 07 44 30.5 +8.2
HHC AMB AMB
comp=Z,19nm,1.0s
HHC AMB AMB
comp=Z,83nm,4.5s
HHC LR LR
comp=N,149nm,5.9s
HHC LR LR
comp=E,142nm,6.0s
HHC LR LR
comp=Z,102nm,9.5s
IRK Irkutsk 16.50 30 *e*P **Pn 07 44 27.7 +8.3**
IRK pmax pmax
comp=Z,37nm,1.1s
NVS Novosibirsk 16.94 345 *e*P **Pn 07 44 26.4 +1.4**
NVS *e*S **Sn 07 47 30.7 -2.5**
NVS pmax pmax
comp=Z,30nm,1.6s
NVS pmax pmax
comp=N,22nm,1.4s
NVS pmax pmax
comp=E,11nm,1.2s
NVS smax
comp=N,27nm,2.0s
NVS smax
comp=E,14nm,1.5s
KBL Kabul 17.91 263 *e*P **Pn 07 44 37.7 +0.4**
KBL pmax pmax
comp=Z,14nm,0.8s
KBL Kabul 17.91 263 *e*Pn **Pn 07 44 37.7 +0.4**
comp=Z,14nm,0.8s
GYA Guiyang 18.09 128⇓*i*P **Pn 07 44 42.2 +2.7**
GYA AP pP 07 44 50.2 +7.5
GYA S **Sn 07 48 02.4 +1.1**
GYA XS sS 07 48 12.4 +0.8
GYA AMB AMB
comp=Z,10.0nm,1.0s
GYA AMB AMB
comp=Z,50nm,6.0s
GYA LR LR
comp=N,370nm,9.6s
GYA LR LR
comp=E,320nm,10.5s
GYA LR LR
comp=Z,590nm,11.0s
VOSK Vostochnaya 19.60 322 P **Pn 07 44 57.5 -0.1**
VOSK pmax pmax
comp=Z,3.0nm,0.5s
BJI Beijing 19.68 78 P **Pn 07 44 58.3 -0.3**
BJI S **Sn 07 48 40.0 +0.4**
BJI AMB AMB
comp=Z,13nm,1.0s
BJI LR LR
comp=N,199nm,11.6s
BJI LR LR
comp=E,206nm,10.4s
BJI LR LR
comp=Z,153nm,35.8s
BVA0 Borovoye Array 20.07 322 *i* P **P 07 45 02.6 +1.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 20.07 322 P **P 07 45 03.2 +1.8**
comp=Z,9.7nm,0.6s,baz=131,slow=11,SNR=36
BVAR LR LR 07 53 23.5
comp=Z,132nm,21.6s,MS3.2,baz=175,slow=38
BVAR Borovoye Array 20.07 322 P **P 07 45 03.2 +1.8**
BVAR pmax pmax
comp=Z,10.0nm,0.6s
BVAR MLR MLR
comp=Z,132nm,21.6s
BRVK Borovoye 20.14 322 *e*P **P 07 45 04.0 +1.9**
BRVK pmax pmax
comp=Z,11nm,0.6s
BRVK Borovoye 20.14 322 *e*Pn **P 07 45 04.0 +1.8**
comp=Z,11nm,0.6s
WHN Wuhan 21.00 106 P **P 07 45 12.7 +1.0**
WHN XP sP 07 45 24.7 +8.9
CMAR Chiang Mai Arr 21.38 158 P **P 07 45 09.5 -6.3**
comp=Z,2.1nm,0.5s,mb3.8,baz=334,slow=10.0,SNR=6.4
CMAR Chiang Mai Arr 21.38 158 *i* P **P 07 45 13.8 -2.0**
CMAR pmax pmax
comp=Z,3.0nm,0.4s
HYB Hyderabad 23.73 210 *i* P **P 07 45 41.0 +0.5**
HYB Hyderabad 23.73 210 *e*P **P 07 45 41.0 +0.5**
BOD Bodaibo 24.39 31 *e*P **P 07 45 47.1 +0.8**
BOD pmax pmax
comp=Z,14nm,0.9s,mb4.4
AB31 Akbulak array 24.41 306 P **P 07 45 46.5 0.0**
AB31 pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
POO Poona 24.90 221 *e*P **P 07 45 56.0 +4.8**
AKTK Aktyubinsk 25.91 308 P **P 07 46 01.2 +1.2**
AKTO Aktyubinsk 25.91 308 P **P 07 46 01.2 +1.2**
comp=Z,5.1nm,0.8s,mb4.1,baz=109,slow=7.7,SNR=18
AKTO Aktyubinsk 25.91 308 P **P 07 46 00.9 +0.8**
SSE Sheshan 25.99 98 P **P 07 46 02.7 +1.6**
SSE AMB AMB
comp=Z,49nm,0.6s,mb5.2
SSE AMB AMB
comp=Z,102nm,4.7s
SSE LR LR
comp=N,165nm,25.7s,MS3.6
SSE LR LR
comp=E,158nm,25.7s,MS3.6
SSE LR LR
comp=Z,248nm,24.9s,MS3.6
CN2 Changchun 26.45 68 *e*P **P 07 46 06.4 +1.4**
CN2 *e*AP pP 07 46 15.4 +7.3
CN2 *e*S **S 07 50 38.3 -0.3**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,150nm,15.0s,MS4.1
CN2 LR LR
comp=E,340nm,15.0s,MS4.1
CN2 LR LR
comp=Z,260nm,16.0s,MS3.9
SVE Sverdlovsk 26.86 322 *e*P **P 07 46 10.0 +1.4**
SVE *e* 07 47 12.2
SVE *e* 07 49 23.0
SVE *e*S **S 07 50 49.7 +4.9**
SVE *e* 07 51 59.6
SVE pmax pmax
comp=Z,15nm,0.8s,mb4.6
ARU Arti 27.68 320*c* *i*P **P 07 46 16.6 +0.6**
ARU *e* 07 46 59.6
ARU *e*S **S 07 50 55.5 -2.4**
ARU pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
MDJ Mudanjiang 29.41 66 P **P 07 46 33.0 +1.5**
MDJ AP pP 07 46 39.2 +4.7
MDJ XP sP 07 46 41.8 +6.0
MDJ PCP PcP 07 49 38.2 +0.9
MDJ S **S 07 51 25.8 +0.6**
MDJ SCP ScP 07 53 19.9 +0.9
MDJ PCS PcS 07 53 22.2 +2.1
MDJ SCS ScS 07 57 14.3 +1.0
MDJ AMB AMB
comp=Z,8.0nm,1.2s,mb4.3
MDJ AMB AMB
comp=Z,65nm,5.6s
MDJ LR LR
comp=N,20nm,21.4s,MS3.1
MDJ LR LR
comp=E,47nm,21.4s,MS3.1
MDJ LR LR
comp=Z,78nm,22.0s,MS3.3
HABR Khabarovsk 33.12 58 *e*P **P 07 47 02.1 -2.1**
HABR *e**PP pP 07 47 11.2 +4.0
HABR *e* 07 49 44.8
HABR *e*S **S 07 52 19.6 -3.6**
HABR *e**SS sS 07 52 35.2 +6.9
HABR *e* 07 57 26.9
TIXI Tiksi 38.23 18 *e*P **P 07 47 45.5 -2.2**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
TIXI Tiksi 38.23 18 *e*P **P 07 47 46.0 -1.7**
comp=Z,2.6nm,0.4s,mb4.3
KLMR Klimovskoe 38.49 322 *e*P **P 07 47 49.9 -0.2**
KLMR pmax pmax
comp=Z,28nm,0.7s,mb5.1
OBN Obninsk 39.41 313⇑*e*P **P 07 47 58.0 +0.2**
OBN *e*S **S 07 53 56.0 -3.2**
OBN *e*SS SS 07 57 17.1 +24
OBN pmax pmax
comp=Z,20nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,21.0s,MS3.6
JOF Joensuu 42.65 324 *e*p **P 07 48 24.6 +0.3**
comp=Z,9.6nm,0.8s,mb4.6
JOF Joensuu 42.65 324 *e*P **P 07 48 24.6 +0.3**
JOF pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
BR131 Keskin Array S 43.62 290 *e*P **P 07 48 32.5 0.0**
comp=Z,4.7nm,0.7s,mb4.3
BR131 *e*pP pP 07 48 41.5 +5.8
BRTR Keskin Array B 43.62 290 P **P 07 48 32.4 -0.2**
comp=Z,5.3nm,0.7s,mb4.4,baz=99,slow=8.2,SNR=25
BRTR Keskin Array B 43.62 290 *i* P **P 07 48 32.7 +0.1**
BRTR pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 44.14 307 P **P 07 48 35.5 -1.0**
comp=Z,4.4nm,0.7s,mb4.3,baz=70,slow=7.5,SNR=12
AKASG Malin Array Be 44.14 307 *i* P **P 07 48 36.0 -0.6**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
CBIJ Chichi jima 44.18 89 LR LR 08 09 04.1
comp=Z,102nm,18.6s,MS3.8,baz=113,slow=39
KEV Kevo 45.25 334 *e*p **P 07 48 44.9 -0.2**
comp=Z,2.6nm,0.6s,mb4.2
KEV Kevo 45.25 334 *e*P **P 07 48 44.9 -0.2**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
ARCES ARCESS Array B 45.74 334 P **P 07 48 49.2 +0.2**
comp=Z,1.7nm,0.5s,mb4.2,baz=89,slow=7.5,SNR=20
ARCES ARCESS Array B 45.74 334 P **P 07 48 49.3 +0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.5s
SKR Severo-Kuril's 46.53 53 *e*P **P 07 48 52.0 -3.5**
PETK Petropavlovsk- 47.04 49 P **P 07 48 57.9 -1.5**
comp=Z,2.3nm,0.7s,mb4.2,baz=255,slow=5.5,SNR=4.4
BUR08 Bucovina Ar. S 47.35 303 *e*P **P 07 49 02.0 +0.1**
LVV L'vov 47.58 306 *e*P **P 07 49 04.2 +0.4**
KOLS Kolonicke sedl 48.91 306 *e*P **P 07 49 11.4 -2.6**
CRVS Cervenica-Dubn 49.44 306 *e*P **P 07 49 19.4 +1.3**
CRVS pmax pmax
comp=Z,27nm,2.2s,mb4.9
CRVS Cervenica-Dubn 49.44 306 *e*P **P 07 49 19.4 +1.3**
comp=Z,27nm,2.2s,mb4.9
STHS Stebnicka Huta 49.44 306 *e*P **P 07 49 18.0 -0.1**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 49.44 306 *e*P **P 07 49 18.0 -0.1**
comp=Z,4.0nm,0.9s,mb4.5
OJC Ojcow 50.13 308 *e*P **P 07 49 23.6 +0.3**
VYHS Vyhne 51.22 306 *e*P **P 07 49 31.9 +0.3**
VYHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
VYHS Vyhne 51.22 306 *e*P **P 07 49 31.9 +0.3**
comp=Z,7.2nm,1.4s,mb4.4
KOLL Kolacno 51.47 306 *e*P **P 07 49 34.0 +0.6**
NB2 NORSAR Subarra 52.20 323 P **P 07 49 38.2 -0.5**
comp=Z,4.0nm,0.6s,mb4.5,baz=76,slow=7.4
NOA NORSAR Array B 52.20 323 P **P 07 49 38.1 -0.5**
comp=Z,5.7nm,0.8s,mb4.5,baz=77,slow=7.5,SNR=12
DPC Dobruska-Polom 52.23 309 *e*P **P 07 49 39.6 +0.5**
UPC Upice 52.37 309 *e*P **P 07 49 40.9 +0.8**
PVCC Panska Ves 53.24 309 *e*P **P 07 49 47.3 +0.7**
PRU Pruhonice 53.43 309 *e*P **P 07 49 48.4 +0.4**
BRG Berggiesshubel 53.51 310 *e*P **P 07 49 45.5 -3.0**
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
BRG Berggiesshubel 53.51 310 *e*PKP **P 07 49 45.5 -3.0**
comp=Z,14nm,1.3s,mb4.7
CLL Collm 53.93 311 *i* P **P 07 49 51.2 -0.4**
CLL pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CLL Collm 53.93 311 *i* P **P 07 49 51.2 -0.4**
comp=Z,10.0nm,1.0s,mb4.7
KHC Kasperske Hory 54.31 308 *e*P **P 07 49 54.0 -0.4**
GERES GERESS Array B 54.33 308 P **P 07 49 54.7 +0.2**
comp=Z,3.2nm,0.8s,mb4.3,baz=65,slow=6.6,SNR=21
CDF Champ du Feu 58.44 309 *e*P **P 07 50 23.4 -0.5**
comp=Z,15nm,0.8s,mb4.8
CDF Champ du Feu 58.44 309 *e*P **P 07 50 23.4 -0.5**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CDF Champ du Feu 58.44 309 *e*P **P 07 50 23.4 -0.5**
comp=Z,7.7nm,0.8s,mb4.8
HINF Hinteralfeld 58.95 309 *e*P **P 07 50 26.7 -0.7**
comp=Z,7.2nm,0.6s,mb4.6
HINF Hinteralfeld 58.95 309 *e*P **P 07 50 26.7 -0.7**
HINF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
HINF Hinteralfeld 58.95 309 *e*P **P 07 50 26.7 -0.7**
comp=Z,3.6nm,0.6s,mb4.6
HAU Haudompre 59.17 309 *e*P **P 07 50 28.2 -0.8**
GIVF Givet 59.21 312 *e*P **P 07 50 28.9 -0.3**

BAIF	Baives	59.58	312	eP	P	07 50 31.5	-0.3
LPG	La Plagne	60.00	306	eP	P	07 50 35.1	+0.4
	comp=Z,37nm,0.8s,mb5.2						
LPG	La Plagne	60.00	306	eP	P	07 50 35.1	+0.4
LPG				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
LPG	La Plagne	60.00	306	eP	P	07 50 35.1	+0.4
	comp=Z,18nm,0.8s,mb5.2						
LPL	La Plagne	60.01	306	eP	P	07 50 35.0	+0.2
	comp=Z,34nm,0.8s,mb5.1						
LPL	La Plagne	60.01	306	eP	P	07 50 35.0	+0.2
LPL				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
LPL	La Plagne	60.01	306	eP	P	07 50 35.0	+0.2
	comp=Z,17nm,0.8s,mb5.1						
SBF	Sospel	60.29	304	eP	P	07 50 36.2	-0.5
	comp=Z,57nm,0.9s,mb5.3						
SBF	Sospel	60.29	304	eP	P	07 50 36.2	-0.5
SBF				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
SBF	Sospel	60.29	304	eP	P	07 50 36.2	-0.5
	comp=Z,29nm,0.9s,mb5.3						
MBDF	Montbardon	60.33	305	eP	P	07 50 35.8	-1.2
	comp=Z,15nm,0.7s,mb4.8						
MBDF	Montbardon	60.33	305	eP	P	07 50 35.8	-1.2
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
MBDF	Montbardon	60.33	305	eP	P	07 50 35.8	-1.2
	comp=Z,7.3nm,0.7s,mb4.8						
ORIF	Oris-en-Rattie	60.81	306	eP	P	07 50 39.6	-0.7
	comp=Z,17nm,0.6s,mb5.0						
ORIF	Oris-en-Rattie	60.81	306	eP	P	07 50 39.6	-0.7
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
ORIF	Oris-en-Rattie	60.81	306	eP	P	07 50 39.6	-0.7
	comp=Z,8.4nm,0.6s,mb5.0						
LOR	Lormes	61.01	309	eP	P	07 50 40.3	-1.3
	comp=Z,7.6nm,0.7s,mb4.7						
LOR	Lormes	61.01	309	eP	P	07 50 40.3	-1.3
LOR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
LOR	Lormes	61.01	309	eP	P	07 50 40.3	-1.3
	comp=Z,3.8nm,0.7s,mb4.6						
LMR	La Mourre	61.13	304	eP	P	07 50 41.5	-0.9
SMF	Signal de Mont	61.30	308	eP	P	07 50 42.7	-0.9
	comp=Z,37nm,0.9s,mb5.2						
SMF	Signal de Mont	61.30	308	eP	P	07 50 42.7	-0.9
SMF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						
SMF	Signal de Mont	61.30	308	eP	P	07 50 42.7	-0.9
	comp=Z,19nm,0.9s,mb5.2						
SSF	Saint Saulge	61.32	309	eP	P	07 50 42.6	-1.1
AVF	Avril sur Loir	61.54	309	eP	P	07 50 44.2	-1.0
VIVF	Saint-Julien-l	61.60	306	eP	P	07 50 44.9	-0.7
BGF	Bois d'Agland	61.95	309	eP	P	07 50 46.9	-1.1
TCF	Toulx Ste Croi	62.47	309	eP	P	07 50 50.9	-0.5
	comp=Z,44nm,0.9s,mb5.3						
TCF	Toulx Ste Croi	62.47	309	eP	P	07 50 50.9	-0.5
TCF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
TCF	Toulx Ste Croi	62.47	309	eP	P	07 50 50.9	-0.5
	comp=Z,22nm,0.9s,mb5.3						
LASF	Ste Croix	62.49	306	eP	P	07 50 51.1	-0.5
	comp=Z,81nm,1.3s,mb5.4						
LDF	La Druitiere	62.77	312	eP	P	07 50 52.3	-1.1
	comp=Z,17nm,0.8s,mb5.0						
LDF	La Druitiere	62.77	312	eP	P	07 50 52.3	-1.1
LDF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
LDF	La Druitiere	62.77	312	eP	P	07 50 52.3	-1.1
	comp=Z,8.7nm,0.8s,mb4.9						
CAF	Calviac	63.21	307	eP	P	07 50 56.0	-0.4
GRR	Gorron	63.30	312	eP	P	07 50 55.9	-1.0
	comp=Z,11nm,0.6s,mb4.9						
GRR	Gorron	63.30	312	eP	P	07 50 55.9	-1.0
GRR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
GRR	Gorron	63.30	312	eP	P	07 50 55.9	-1.0
	comp=Z,5.6nm,0.6s,mb4.9						
RJF	Les Rejaudoux	63.37	308	eP	P	07 50 57.1	-0.3
	comp=Z,12nm,0.8s,mb4.8						
RJF	Les Rejaudoux	63.37	308	eP	P	07 50 57.1	-0.3
RJF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
RJF	Les Rejaudoux	63.37	308	eP	P	07 50 57.1	-0.3
	comp=Z,6.1nm,0.8s,mb4.8						
MFF	Saint Martin d	63.75	310	eP	P	07 50 58.9	-1.0
LFF	La Frestale	64.02	308	eP	P	07 51 01.3	-0.4
SGMF	Saint Gilles	64.36	312	eP	P	07 51 03.0	-0.9
	comp=Z,67nm,1.2s,mb5.2						
SGMF	Saint Gilles	64.36	312	eP	P	07 51 03.0	-0.9
SGMF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
SGMF	Saint Gilles	64.36	312	eP	P	07 51 03.0	-0.9
	comp=Z,34nm,1.2s,mb5.2						
ROSF	Rostrenen	64.73	313	eP	P	07 51 05.6	-0.7
	comp=Z,50nm,1.1s,mb5.2						
ROSF	Rostrenen	64.73	313	eP	P	07 51 05.6	-0.7
ROSF				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
ROSF	Rostrenen	64.73	313	eP	P	07 51 05.6	-0.7
	comp=Z,25nm,1.1s,mb5.2						
COLD	Coldfoot	64.81	22	eP	P	07 51 06.7	+0.2
	comp=Z,6.0nm,0.8s,mb4.7						
COLD				epP	pP	07 51 14.9	+5.1
EPF	Esparros	65.23	306	eP	P	07 51 08.3	-1.3
	comp=Z,8.4nm,0.8s,mb4.5						
EPF	Esparros	65.23	306	eP	P	07 51 08.3	-1.3
EPF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
EPF	Esparros	65.23	306	eP	P	07 51 08.3	-1.3
	comp=Z,4.2nm,0.8s,mb4.5						
COLA	College	67.11	23	eP	P	07 51 21.2	-0.2
COLA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
COLA	College	67.11	23	eP	P	07 51 21.2	-0.2
	comp=Z,11nm,0.8s,mb4.9						
ESDC	Sonseca Array	69.75	305	P	P	07 51 37.1	-1.2
	comp=Z,3.2nm,0.7s,mb4.4,baz=49,slow=6.4,SNR=24						
WB2	Warramunga Arr	71.20	137	eP	P	07 51 42.9	-4.4
ASAR	Alice Springs	74.03	139	P	P	07 51 60.0	-4.1
	comp=Z,1.9nm,0.6s,mb4.2,baz=328,slow=6.2,SNR=30						
ASAR	Alice Springs	74.03	139	P	P	07 52 00.0	-4.1
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	Yellowknife Ar	77.11	12	P	P	07 52 20.1	-1.2
	comp=Z,2.7nm,0.8s,mb4.2,baz=336,slow=5.5,SNR=40						
YKA	Yellowknife Ar	77.11	12	P	P	07 52 20.1	-1.2
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	77.11	12	P	P	07 52 20.1	-1.2
TORD	Torodi Ar. Bea	81.19	280	P	P	07 52 42.1	-2.3
	comp=Z,3.6nm,0.9s,mb4.3,baz=42,slow=4.9,SNR=18						
STKA	Stephens Creek	84.64	139	P	P	07 52 57.4	-4.4
	comp=Z,1.2nm,0.7s,mb4.2,baz=308,slow=9.0,SNR=5.2						
SCHQ	Schefferville	84.89	347	P	P	07 53 01.4	-1.4
	comp=Z,2.4nm,0.7s,mb4.5,baz=27,slow=4.5,SNR=3.3						
DBIC	Dimbokro	90.25	279	P	P	07 53 26.8	-2.6
	comp=Z,3.7nm,0.8s,mb4.8,baz=34,slow=4.2,SNR=6.5						
DBIC	Dimbokro	90.25	279	P	P	07 53 26.8	-2.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CPUP	Villa Florida	150.56	285	PKPbc	PKPdf	08 00 16.4	+1.5
	comp=Z,4.1nm,0.8s,baz=52,slow=2.7,SNR=10						
CPUP	Villa Florida	150.56	285	PKIKP	PKPdf	08 00 16.4	+1.5
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.8s						

MEX 08 07:42:19.1±0.8, 1408N×9335W, h17km±32km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.33	52	eP	Pn	07 42 39.9	-3.0
THIG				i S	Sn	07 42 54.8	-5.4
PCIG		1.62	4	eP	Pn	07 42 43.2	-3.6
PCIG				i S	Sn	07 43 01.9	-5.4
CCIG	Comitan	2.48	28	eP	Pn	07 42 56.5	-2.2
CCIG				i S	Sn	07 43 25.8	-2.8
TGIG		2.69	5	i P	Pn	07 42 59.1	-2.5
TGIG				i S	Sn	07 43 31.0	-2.8
CMIG	Matias Romero	3.34	334	eP	Pn	07 43 07.9	-2.6
CMIG				i S	Sn	07 43 44.9	-4.8

*ISCJB **08** 08:16:55.2±0.6, 19.12S±0.04×68.94W±0.06, h106km±6km, mb4.5/34, Error ellipse: s-maj=10.6km s-min=5.8km az=154.4*
*IDC **08** 08:16:57.8±0.5, 19.18S×68.98W, h117km±4km, mb4.0/14, mb1 4.1/18, mb1mx4.1/24, mbtmp4.0/18, MS3.1/2, Ms1 3.1/2, ms1mx2.7/22, Error ellipse: s-maj=14.5km s-min=8.6km az=77.0*
*NEIC **08** 08:16:58.0±0.3, 19.09S×68.92W, mb4.5/23, Error ellipse: s-maj=9.3km s-min=6.0km az=57.0*
*BJI **08** 08:16:59.0, 19.10S×68.90W, h118km, mB5.0*
*GUC **08** 08:17:09.2±0.8, 20.11S×69.21W, h89km±21km, ML4.6*
ISC 08 08:16:56.5±0.6, 19.15S±0.04×68.96W±0.06, h102km±6km, h119km±1.5km: pP-P, n85, σ0.96/78, mb4.5/34, 5C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.95	195	⇑eP	Pn	08 17 28.8	+0.3
PB01				eS	Sn	08 17 52.5	-0.4
MACH	Maria Elena	3.12	194	eP	Pn	08 17 44.8	+0.9
MACH				i S	Sn	08 18 11.7	-8.8
TOCH	Tocopilla	3.15	201	eP	Pn	08 17 44.3	-0.1
TOCH				eS	Sn	08 18 11.4	-10
TOCH				AML	AML	08 18 29.2	
	comp=E,3μm,0.3s						
LVC	Limon Verde	3.45	179	P	Pn	08 17 50.5	+2.2
	comp=E,71nm,0.3s,baz=356,slow=7.6,SNR=340						
LVC				S	Sn	08 18 29.0	+0.7
	comp=E,154nm,0.3s,baz=73,slow=22,SNR=14						
LVC	Limon Verde	3.45	179	ePn	Pn	08 17 50.8	+2.5
LVC	Limon Verde	3.45	179	⇑iP	Pn	08 17 50.2	+1.9
LVC				i S	Sn	08 18 20.1	-8.2
ARE	Arequipa	3.60	318	⇑iP	Pn	08 17 50.0	-0.3
ARE				eS	Sn	08 18 33.0	+1.1
MECH	Mejillones	4.17	199	⇑eP	Pn	08 17 57.0	-1.0
MECH				eS	Sn	08 18 42.8	-3.0
MECH				AML	AML	08 19 05.1	
	comp=E,1μm,0.7s						
CEN1	Los Morros	4.38	195	⇑iP	Pn	08 18 01.9	+1.1
CEN1				AML	AML	08 19 11.6	
	comp=E,748nm,0.5s						
ANCH	Antofagasta	4.71	196	⇓iP	Pn	08 18 03.8	-1.5
ANCH				AML	AML	08 19 15.7	
	comp=E,654nm,0.8s						
SIV	San Ignacio	8.15	69	P	Pn	08 18 53.2	+1.1
	comp=E,14nm,0.3s,baz=261,slow=12,SNR=497						
SIV				LR	LR	08 22 30.4	
	comp=E,118nm,19.8s,baz=197,slow=41						
LCO	Las Campanas	9.95	189	Pn	Pn	08 19 17.2	+0.8
	comp=E,16nm,0.6s						
LCO				eSn	Sn	08 21 30.3	+24
NNA	Nana	10.41	312	P	Pn	08 19 22.3	-0.5
	comp=E,1.0nm,0.3s,baz=185,slow=7.4,SNR=3.1						
NNA	Nana	10.41	312	ePn	Pn	08 19 22.0	-0.8
CFAA	Coronel Fontan	12.42	177	P	Pn	08 19 47.2	-2.5
	comp=E,0.0nm,0.3s,baz=355,slow=12,SNR=3.3						
CFAA				S	Sn	08 21 54.2	-12
	comp=E,0.1nm,0.3s,baz=220,slow=16,SNR=2.5						
CFAA	Coronel Fontan	12.42	177	P	Pn	08 19 47.2	-2.5
CFAA				S	Sn	08 21 54.2	-12
CPUP	Villa Florida	12.89	126	P	Pn	08 19 55.1	-0.8
	comp=E,0.4nm,0.3s,baz=292,slow=12,SNR=8.3						
CPUP	Villa Florida	12.89	126	ePn	Pn	08 19 56.2	+0.3
	comp=E,10nm,0.6s						
BDFB	Brasilia	20.29	83	P	P	08 21 24.0	-0.3
	comp=E,4.3nm,0.6s,baz=227,slow=18,SNR=4.6						
BDFB	Brasilia	20.29	83	eP	P	08 21 23.3	-1.0
	comp=E,6.4nm,0.6s						
OTAV	Otavalo	21.40	333	eP	P	08 21 37.6	+1.4
	comp=E,42nm,1.9s,mb4.4						
PLCA	Paso Flores	21.56	183	P	P	08 21 37.5	-0.1
	comp=E,25nm,0.9s,mb4.5,baz=0.2,slow=11,SNR=27						
PLCA	Paso Flores	21.56	183	eP	P	08 21 39.8	+2.1
	comp=E,36nm,1.1s,mb4.6						
SDV	Santo Domingo	27.90	356	P	P	08 22 36.4	-0.7
	comp=E,4.9nm,0.4s,mb4.3,baz=207,slow=6.2,SNR=13						
SDV				LR	LR	08 34 09.2	
	comp=E,37nm,18.2s,baz=266,slow=37						
SDV	Santo Domingo	27.90	356	eP	P	08 22 35.8	-1.3
	comp=E,7.9nm,0.8s,mb4.3						
CBYP	Canovanas	37.31	5	eP	P	08 23 55.9	-3.0
	comp=E,4.3nm,0.6s,mb4.6						
CBYP				epP	pP	08 24 19.9	-2.3
CMIG	Matias Romero	44.12	323	P	P	08 24 55.3	+0.3
	comp=E,2.4nm,0.7s,mb4.0,baz=70,slow=6.2,SNR=7.0						
SWET	Sewanee	56.41	343	eP	P	08 26 26.6	-0.9
SWET				epP	pP	08 26 54.2	+2.0
WVT	Waverly	57.80	342	eP	P	08 26 35.0	-2.2
	comp=E,5.5nm,0.8s,mb4.6						
WVT				epP	pP	08 27 04.3	+2.2
TXAR	Lajitas Array	58.69	324	P	P	08 26 43.0	-0.5
	comp=E,1.0nm,0.8s,mb3.9,baz=145,slow=7.9,SNR=13						
TXAR				pP	pP	08 27 10.8	+2.3
	comp=E,0.4nm,0.8s,baz=154,slow=9.0,SNR=2.5						
TXAR	Lajitas Array	58.69	324	P	P	08 26 43.0	-0.5
TXAR				pP	pP	08 27 10.8	+2.3
SIUC	Southern Illin	59.69	341	eP	P	08 26 49.5	-0.7
	comp=E,17nm,0.7s,mb5.2						
SIUC				epP	pP	08 27 17.8	+2.6
FVM	French Village	60.30	341	eP	P	08 26 53.5	-0.9
	comp=E,11nm,0.8s,mb4.9						
FVM				epP	pP	08 27 21.8	+2.3
CCM	Cathedral Cave	60.63	340	eP	P	08 26 55.7	-0.9
	comp=E,89nm,2.7s,mb5.3						
CCM				epP	pP	08 27 24.2	+2.4
VNA1	Neumayer--Stat	62.51	161	eP	P	08 27 10.6	+1.7
VNA2	Neumayer--Watz	62.88	161	eP	P	08 27 12.8	+1.5
	baz=278,slow=7.1						
LPM	Los Pinos Moun	64.12	326	eP	P	08 27 20.5	+0.4
ANMO	Albuquerque	64.52	326	eP	P	08 27 22.1	-0.5
	comp=E,21nm,2.5s,mb4.5						
SDCO	Great Sand Dun	66.21	329	eP	P	08 27 33.2	-0.3
	comp=E,4.2nm,0.8s,mb4.3						
LIC	Lamto	67.80	75	eP	P	08 27 43.6	-0.5
	comp=E,37nm,1.1s,mb5.1						
ISCO	Idaho Springs	67.89	330	eP	P	08 27 44.2	+0.2
	comp=E,3.6nm,0.9s,mb4.2						
TIC	Toumodi	67.97	74	eP	P	08 27 45.0	-0.1
	comp=E,9.2nm,0.2s,mb5.3						
KIC	Kosan Boka	68.11	75	eP	P	08 27 45.8	-0.2
	comp=E,47nm,0.7s,mb5.4						
DBIC	Dimbokro	68.13	74	P	P	08 27 45.7	-0.4
	comp=E,9.7nm,0.7s,mb4.7,baz=238,slow=6.1,SNR=16						
SRU	San Rafael	69.79	327	eP	P	08 27 56.4	+0.6
	comp=E,22nm,2.2s,mb4.6						
MSU	Marysvale	70.23	325	eP	P	08 27 59.8	+1.3
MSU				epP	pP	08 28 28.9	+4.7
TPNV	Topopah Spring	71.42	322	eP	P	08 28 06.9	+1.1
	comp=E,18nm,1.7s,mb4.6						
TPNV				epP	pP	08 28 36.5	+4.9
PDAR	Pinedale Array	72.06	330	P	P	08 28 09.3	-0.1
	comp=E,1.2nm,0.9s,mb3.7,baz=127,slow=7.0,SNR=7.9						
ULM	Lac du Bonnet	73.07	342	P	P	08 28 14.5	-0.8
	comp=E,4.3nm,0.6s,mb4.5,baz=140,slow=4.1,SNR=5.3						
RRI2	Red Ridge	73.34	329	eP	P	08 28 17.7	+0.6
	comp=E,5.7nm,0.8s,mb4.5						
MOOW	Moose Ponds	73.37	330	eP	P	08 28 17.3	+0.1
	comp=E,34nm,2.8s,mb4.7						
NVAR	Mina Array Bea	73.62	322	P	P	08 28 18.2	-0.6
	comp=E,1.4nm,0.9s,mb3.7,baz=162,slow=6.6,SNR=6.6						
NVAR				pP	pP	08 28 48.9	+4.1
	comp=E,1.8nm,0.9s,baz=140,slow=5.8,SNR=6.2						
NVAR				sP	sP	08 29 00.7	+4.9
	comp=E,1.5nm,0.9s,baz=133,slow=5.8,SNR=4.1						
RLMT	Red Lodge	73.73	332	eP	P	08 28 19.7	+0.4
	comp=E,5.6nm,0.8s,mb4.3						
QLMT	Earthquake Lak	74.51	330	eP	P	08 28 24.3	+0.5
HLID	Hailey	75.04	328	P	P	08 28 26.7	-0.2
	comp=E,5.0nm,0.9s,mb4.2						
PAHR	Pah Rah Range	75.10	322	eP	P	08 28 28.1	+0.8
	comp=E,7.0nm,0.8s,mb4.4						
PAHR				epP	pP	08 28 58.1	+4.7
HRY	Holter Researc	76.10	331	eP	P	08 28 33.5	+0.6
EGMT	Eagleton	76.18	333	eP	P	08 28 33.5	+0.1
	comp=E,69nm,2.6s,mb4.9						
TOA0	Torodi Ar. Sit	76.62	71	eP	P	08 28 36.1	-0.5
TOA0				epP	pP	08 29 07.7	+5.0
TORD	Torodi Ar. Bea	76.62	71	P	P	08 28 35.5	-1.1
	comp=E,6.9nm,0.7s,mb4.5,baz=255,slow=6.0,SNR=31						
TORD				pP	pP	08 29 07.4	+4.7
	comp=E,2.7nm,0.9s,baz=252,slow=5.8,SNR=3.2						
TORD	Torodi Ar. Bea	76.62	71	P	P	08 28 35.5	-1.1
TORD				pP	pP	08 29 07.4	+4.7
BMO	Blue Mountains	77.42	327	eP	P	08 28 40.6	+0.2
	comp=E,3.8nm,0.8s,mb4.2						
BMO				epP	pP	08 29 10.4	+3.9
SYO	Syowa Base	78.71	160	⇓iP	P	08 28 46.8	-0.5
SYO	Syowa Base	78.71	160	⇓iPcP	PcP	08 28 55.1	-0.7
SYO	Syowa Base	78.71	160	⇓isZP	sP	08 29 28.8	+4.4
VNDA	Vanda	79.15	190	P	P	08 28 50.8	+1.2
	comp=E,2.4nm,1.0s,mb4.0,baz=140,slow=2.8,SNR=5.4						
OD2	Odessa Site #2	79.87	328	eP	P	08 28 54.3	+0.5
EDM	Edmonton	81.62	335	eP	P	08 29 02.2	-0.7
ESDC	Sonseca Array	84.20	45	P	P	08 29 18.1	+1.5
	comp=E,0.9nm,0.6s,mb3.8,baz=248,slow=5.6,SNR=8.1						
BOSA	Boshof	84.59	118	P	P	08 29 19.6	+0.6
	comp=E,0.8nm,0.4s,mb4.0,baz=259,slow=5.2,SNR=3.6						
YKA	Yellowknife Ar	88.96	341	P	P	08 29 39.0	-0.2
	comp=E,6.2nm,0.7s,mb4.7,baz=133,slow=4.6,SNR=124						
YKA				pP	pP	08 30 09.1	+3.2
	comp=E,2.8nm,0.6s,baz=134,slow=4.8,SNR=7.9						
YKA				sP	sP	08 30 21.5	+4.8
	comp=E,1.1nm,0.6s,baz=136,slow=4.7,SNR=2.8						
ASAR	Alice Springs	131.96	209	PKP	PKPdf	08 35 57.4	-1.4
	comp=E,0.8nm,0.5s,baz=138,slow=1.5,SNR=12						
ZALV	Zalesovo Beam	139.84	24	PKP	PKPdf	08 36 12.6	+0.2
	comp=E,2.1nm,0.6s,baz=252,slow=4.2,SNR=2.7						
MKAR	Makanchi Array	143.74	34	PKP	PKPdf	08 36 17.0	-2.6
	comp=E,0.5nm,0.7s,baz=335,slow=3.6,SNR=6.3						
WMQ	Urumqi	148.56	33	ePKP	PKPdf	08 36 27.5	-0.4
MDJ	Mudanjiang	150.26	333	PKP	PKPdf	08 36 30.0	-0.6
MDJ				PP	PP		
	comp=Z,40nm,5.0s						
MJAR	Matsushiro Arr	150.53	312	PKPbc	PKPbc	08 36 36.1	-0.6
	comp=Z,4.8nm,0.7s,baz=90,slow=1.8,SNR=16						
MAT	Matsushiro	150.53	312	PKP	PKPbc	08 36 36.4	-0.3
SONM	Songino Array	151.14	6	PKP	PKPdf	08 36 32.6	+0.8
	comp=Z,0.9nm,0.7s,baz=304,slow=2.9,SNR=7.2						
SONM				PKPbc	PKPbc	08 36 38.4	+0.7
	comp=Z,5.6nm,0.8s,baz=317,slow=1.3,SNR=35						
SONM				pPKPbc	pPKPbc	08 37 09.2	+3.6
	comp=Z,2.4nm,0.8s,baz=330,slow=1.7,SNR=5.5						
CN2	Changchun	152.60	337	ePKP	PKPdf	08 36 35.8	+1.7
HHC	Hu-ho-hao-te	158.37	359	ePKP	PKPdf	08 36 38.3	-3.7
HHC				PKS		08 40 10.6	
HHC				PP	PP	08 40 56.1	+0.1
HHC				SKKS	SKKSac	08 47 31.0	-5.5
HHC				PP	PP		
	comp=Z,85nm,6.8s						
HHC				LR	LR		
	comp=N,103nm,15.5s						
HHC				LR	LR		
	comp=E,91nm,17.8s						
HHC				LR	LR		
	comp=Z,76nm,14.3s						
LZH	Lanzhou	161.97	19	ePKP	PKPdf	08 36 44.8	-1.3
LZH				PP	PP		
	comp=Z,55nm,4.3s						
XAN	Xi'an	165.05	7	PKP	PKPdf	08 36 53.9	+4.8
XAN				APKP		08 37 20.9	
XAN				LR	LR		
	comp=E,21nm,19.8s						
XAN				LR	LR		
	comp=Z,41nm,19.2s						
CMAR	Chiang Mai Arr	168.52	91	PKP	PKPdf	08 36 49.0	-3.1
	comp=Z,1.7nm,0.3s,baz=44,slow=4.0,SNR=2.3						
GYA	Guiyang	171.68	28	ePKP	PKPdf	08 36 54.4	+0.7
GYA				XPKP		08 37 32.5	
GYA				PKS		08 40 20.6	
GYA				PP	PP		
	comp=Z,40nm,6.9s						

*ISCJB **08** 09:00:57.3±0.9, 8.7N±0.1×83.23W±0.08, h29km±7km, Error ellipse: s-maj=21.7km s-min=8.6km az=27.1*
*NEIC **08** 09:00:57.8±0.9, 8.83N×83.28W, h14km±9km, mb4.4/1, MD4.3(CASC), Error ellipse: s-maj=19.3km s-min=7.1km az=212.0*
*CASC **08** 09:00:57.4±1.9, 8.82N×83.34W, h0km±7km, MD4.3, ML3.3, mb4.4(NEIC)*
ISC 08 09:00:57.7±0.9, 8.83N±0.07×83.25W±0.07, h5km±7km, n32, σ1.16/31, 12C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.19	156	⇑iP	Pg	09 01 02.9	+1.4
BAR1		0.42	351	⇑eP	Pg	09 01 07.8	+2.1
BUS	Buena Vista	0.88	325	⇑iP	Pg	09 01 14.6	-0.1
QCR	Quepos	1.08	303	⇑iP	Pg	09 01 16.7	-1.9
URSC	Urasca	1.13	332	⇑iP	Pg	09 01 18.3	-1.1
LAJ	Bijagual	1.34	320	⇓eP	Pn	09 01 23.7	+0.6
SJS	Escuela Geolog	1.36	324	eP	Pn	09 01 21.6	-1.7
SJS				eS	Sb	09 01 41.2	-0.2
PRS1	Puriscal	1.56	318	⇑eP	Pn	09 01 23.7	-2.3
CGA2	Cerro Gallo 2	1.69	315	⇑eP	Pn	09 01 26.2	-1.6
JCR	Jicaral	2.10	299	eP	Pn	09 01 31.7	-1.8
FORC	Fortuna	2.15	319	⇑eP	Pn	09 01 33.6	-0.5
CUI	Cuipilapa	2.62	314	⇓eP	Pn	09 01 40.7	0.0
VCR	Vista de Mar	2.69	299	eP	Pn	09 01 40.1	-1.4
LIM1	Limonal	2.71	313	eP	Pn	09 01 41.6	-0.3
BCIP	Isla Barro Col	3.38	84	ePn	Pn	09 01 50.1	-1.1
SSN	San Juan del S	3.56	314	⇑eP	Pn	09 01 54.0	+0.4
CONN	Concepcion	3.59	319	⇑eP	Pn	09 01 54.6	+0.6
APON	Apoyo	4.14	318	eP	Pn	09 02 02.8	+1.2
TICN	Ticuantepe	4.33	318	⇑eP	Pn	09 02 04.8	+0.5
HUEN		4.52	321	eP	Pn	09 02 07.3	+0.5
CSAN		4.57	317	eP	Pn	09 02 08.6	+1.1
COPN	Copaltepe	4.68	316	⇓eP	Pn	09 02 09.5	+0.5
MIRN	Miramar	4.95	317	⇑eP	Pn	09 02 13.4	+0.7
CNGN	Cerro Negro	4.98	317	eP	Pn	09 02 14.2	+1.1
CNGN				AML	AML	09 02 23.4	
	comp=N,55nm,0.1s						
CNGN				eS	Sn	09 03 13.1	+1.9
TEL3	Telica 3	5.13	317	eP	Pn	09 02 15.8	+0.6
CRIN	San Cristobal	5.37	316	⇓eP	Pn	09 02 19.1	+0.7
CNCH	Conchagua	6.31	315	eP	x	09 02 31.7	
TGUH	Tegucigalpa,Un	6.53	323	ePn	Pn	09 02 35.7	+1.3
	comp=N,49nm,0.7s						
CHI2		10.31	113	⇓eP	x	09 02 17.5	
LAPE	La Pedrera	11.62	95	eP	x	09 01 44.4	
SDV	Santo Domingo	12.46	89	ePn	Pn	09 03 55.8	0.0
	comp=N,4.9nm,0.8s						
GOGA	Godfrey	24.47	360	eP	P	09 06 15.7	-1.9
	comp=N,9.8nm,0.9s						

*ISCJB **08** 09:23:11.5±0.4, 22.91N±0.02×121.53E±0.02, h29km±2km, Error ellipse: s-maj=3.4km s-min=2.8km az=142.0*
*NEIC **08** 09:23:11.9±2.6, 22.96N×121.46E, h26km±11km, MG3.2(JMA), Error ellipse: s-maj=34.7km s-min=11.9km az=128.0*
*TAP **08** 09:23:12.4, 22.96N×121.42E, h33km, ML3.6, C*
*JMA **08** 09:23:14.0±0.4, 23.02N×121.59E, h68km, M3.2*
ISC 08 09:23:11.9±0.4, 22.91N±0.02×121.51E±0.02, h27km±3km, n54, σ0.94/92, 6C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.23	326	i P	Pb	09 23 18.7	+0.5
	baz=340						
CHKT				S	Sb	09 23 23.2	+0.8
	baz=340						
TTN	Taitung	0.36	246	eP	Pb	09 23 21.0	+1.0
	baz=240						
TTN				eS	Sb	09 23 28.1	+2.5
	baz=240						
TWG	Pinlang	0.41	258	ePn	Pb	09 23 20.3	-0.4
TWG				eSn	Sb	09 23 26.3	-0.5
TWG	Pinlang	0.41	258	P	Pb	09 23 20.6	-0.1
	baz=246						
TWG				S	Sb	09 23 26.5	-0.2
	baz=246						
TWF1	Yuli	0.48	336	⇑iP	Pb	09 23 21.3	-0.7
	baz=333						
TWF1				S	Sb	09 23 29.6	+0.8
	baz=333						
YULB	Yu-li	0.52	338	ePn	Pn	09 23 21.5	-2.1
YULB				eSn	Sb	09 23 30.4	+0.6
ELDTW	Lidau	0.53	302	⇑iP	Pb	09 23 21.6	-1.1
	baz=298						
ECL	Taimali	0.60	239	P	Pb	09 23 22.8	-0.9
	baz=229						
ECL				eS	Sb	09 23 30.1	-1.7
	baz=229						
EHY	Hungye	0.62	344	eP	Pb	09 23 24.6	+0.3
	baz=341						
STYT	Tauyuan	0.74	290	⇑iP	Pb	09 23 25.2	-0.9
	baz=283						

STYT				eS	Sb	09 23 34.3	-1.5
	baz=283						
EAST	Anshuo	0.80	230	eP	Pb	09 23 25.9	-1.3
	baz=222						
SSD	Sandimen	0.82	259	P	Pb	09 23 26.5	-1.0
	baz=249						
SSD				S	Sb	09 23 35.6	-2.7
	baz=249						
LAY	Lan-yu	0.86	177	P	Pn	09 23 28.3	+0.1
	baz=165						
LAY				eS	Sb	09 23 39.7	+0.2
	baz=165						
ALS	Alishan	0.88	313	P	Pn	09 23 28.1	-0.5
	baz=319						
ALS				eS	Sb	09 23 39.4	-0.6
	baz=319						
WTP	Ta-pu	0.89	293	⇑iP	Pn	09 23 28.3	-0.3
	baz=291						
WTP				eS	Sb	09 23 40.2	0.0
	baz=291						
TPUB	Ta-pu	0.90	296	ePn	Pn	09 23 28.0	-0.7
TPUB				eSn	Sn	09 23 40.0	-0.9
ESL	Shilin	0.91	356	P	Pn	09 23 28.3	-0.5
	baz=1.0						
CHN1	Nanshi	0.94	287	⇑iP	Pn	09 23 29.6	+0.2
	baz=285						
CHN1				eS	Sb	09 23 42.1	+0.3
	baz=285						
CHN4	Tsaushan	0.95	298	P	Pn	09 23 29.4	-0.1
	baz=297						
CHN4				eS	Sb	09 23 42.4	+0.4
	baz=297						
SCZT	Fangliau	0.98	237	eP	Pn	09 23 29.2	-0.6
	baz=232						
SCZT				eS	Sb	09 23 42.8	+0.1
	baz=232						
TWM1	Shoushan	1.00	266	P	Pn	09 23 31.7	+1.5
	baz=260						
TWK	Hsinying	1.00	291	⇑iP	Pn	09 23 30.3	+0.1
	baz=289						
TWK				eS	Sn	09 23 44.1	+0.6
	baz=289						
SSLB	Suanglung	1.01	330	ePn	Pn	09 23 29.6	-0.8
SSLB				eSn	Sn	09 23 41.9	-1.9
CHN5	Tsauling	1.03	312	iP	Pn	09 23 30.8	+0.2
	baz=312						
CHN5				S	Sn	09 23 43.8	-0.2
	baz=312						
HWA	Hwalien	1.07	5	eP	Pn	09 23 32.0	+0.9
	baz=359						
SMLT	Sun Moon Lake	1.12	330	P	Pn	09 23 31.7	-0.1
	baz=342						
SMLT				eS	Sn	09 23 44.9	-1.5
	baz=342						
CHN2	Minshiung	1.14	303	eP	Pn	09 23 33.0	+1.0
	baz=303						
CHN2				eS	Sn	09 23 48.2	+1.5
	baz=303						
HEN	Hengchun	1.14	219	eP	Pn	09 23 33.3	+1.2
	baz=204						
HEN				S	Sn	09 23 47.1	+0.2
	baz=204						
TWK1	Hengchun	1.16	214	eP	Pn	09 23 32.1	-0.1
	baz=198						
TWK1				eS	Sn	09 23 46.5	-0.7
	baz=198						
CHY	Chiayi	1.16	301	P	Pn	09 23 33.1	+0.8
	baz=300						
CHY				eS	Sn	09 23 48.2	+1.0
	baz=300						
TYC	Yuchr	1.16	329	P	Pn	09 23 32.5	+0.2
	baz=340						
TYC				S	Sn	09 23 46.7	-0.6
	baz=340						
WGK	Gukeng	1.17	312	eP	Pn	09 23 33.8	+1.4
	baz=312						
WGK				eS	Sn	09 23 48.4	+0.9
	baz=312						
TWD	Chiawan	1.17	4	eP	Pn	09 23 31.8	-0.7
	baz=357						
TWD				eS	Sn	09 23 46.8	-0.8
	baz=357						
WNT	Mingjian	1.23	322	eP	Pn	09 23 33.7	+0.4
	baz=323						
WNT				eS	Sn	09 23 49.5	+0.5
	baz=323						
WHF	Hehuan Shan	1.25	350	P	Pn	09 23 32.6	-1.1
	baz=4.0						
NACB	Ninganchiao	1.27	4	ePn	Pn	09 23 32.9	-0.9
NACB				eSn	Sn	09 23 47.8	-2.1
TWT	Tachien	1.38	347	eP	Pn	09 23 37.0	+1.7
	baz=350						
TCU	Taichung	1.45	328	eP	Pn	09 23 37.7	+1.3
	baz=312						
ENA	Nanau	1.53	8	eP	Pn	09 23 37.1	-0.4
NNS	Nan Shan	1.53	355	eP	Pn	09 23 38.3	+0.8
	baz=9.0						
TWQ1	Liyutan	1.59	335	P	Pn	09 23 39.5	+1.3
	baz=337						
TWQ1				S	Sn	09 23 59.3	+1.5
	baz=337						
TWC	Suao	1.73	10	eP	Pn	09 23 40.9	+0.8
	baz=1.0						
TWC				S	Sn	09 24 01.4	+0.2
	baz=1.0						
ENTT	Nioudou	1.73	2	eP	Pn	09 23 39.5	-0.6
	baz=6.0						
YHNB	Yeheng	1.76	356	ePn	Pn	09 23 40.5	-0.1
YHNB				eSn	Sn	09 24 01.7	-0.5
NSK	Sanguang	1.77	356	eP	Pn	09 23 40.8	0.0
	baz=13						
NSTT	Nanjuang	1.78	345	eP	Pn	09 23 42.5	+1.7
	baz=348						
TWE	Neicheng	1.81	5	eP	Pn	09 23 42.8	+1.5
	baz=9.0						
TATO	Taipei	2.06	360	ePn	Pn	09 23 44.2	-0.5
YOJ	Yonaguni jima	2.07	41	P	Pn	09 23 45.4	+0.5
YOJ				S	Sn	09 24 08.2	-1.7
HATJ	Hateruma jima	2.40	61	P	Pn	09 23 49.9	+0.5
HATJ				S	Sn	09 24 17.1	-0.8
IRIF	Iriomote-Funau	2.49	55	P	Pn	09 23 51.7	+1.1
IRIF				S	Sn	09 24 20.0	0.0
JKRS	Kuro-shima	2.65	59	P	Pn	09 23 53.7	+0.9
JKRS				S	Sn	09 24 23.9	-0.2
JIJ	Ishigaki jima	2.82	58	P	Pn	09 23 55.6	+0.4
JIJ				S	Sn	09 24 27.1	-1.2
JTJ	Tarama	3.40	59	P	Pn	09 24 03.6	+0.5
JTJ				S	Sn	09 24 42.4	-0.2

*IDC **08** 09:36:57.3±0.7, 8.72S×157.60E, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.1/17, mbtmp4.0/11, ML3.5/2, MS3.2/4, Ms1 3.3/4, ms1mx3.0/28, Error ellipse: s-maj=20.7km s-min=13.2km az=9.0*
*NEIC **08** 09:37:01.9±0.8, 8.69S×157.71E, h35km, mb4.1/3, Error ellipse: s-maj=16.8km s-min=14.2km az=137.0*
*ISCJB **08** 09:37:02.9±3.3, 8.7S±0.2×157.5E±0.1, h49km±33km, mb4.0/10, MS3.7/3, Error ellipse: s-maj=31.4km s-min=15.3km az=143.9*
ISC 08 09:37:04.7±3.1, **8.7S**±0.2×**157.5E**±0.1, **h52**km±31km, **n21**, σ0.85/19, **mb4.0**/10, **MS3.7**/3, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.50	106	Pn	Pn	09 37 37.4	-5.5
	19nm,0.3s,baz=230,slow=7.6,SNR=5.2						
HNR				Pg	Pn	09 37 42.5	-0.4
	409nm,0.3s,baz=225,slow=8.8,SNR=46						
HNR				Lg		09 38 13.8	
	205nm,0.3s,baz=112,slow=21,SNR=10						
HNR				LR	LR	09 38 34.2	
	comp=Z,360nm,20.9s,baz=60,slow=40						
HNR	Honiara	2.50	106	Pn	Pn	09 37 37.4	-5.5
HNR				Lg		09 38 13.8	
HNR				LR	LR	09 38 34.2	
CTA	Charters Tower	15.69	223	Pn	Pn	09 40 42.1	-0.4
	0.1nm,0.3s,baz=322,slow=4.9,SNR=2.3						
CTA				LR	LR	09 45 39.4	
	comp=Z,95nm,21.0s,baz=231,slow=33						
CTAO	Charters Tower	15.69	223	Pn	Pn	09 40 44.6	+2.1
	31nm,2.1s						
EIDS	Eidsvold	17.65	200	ePn	Pn	09 41 07.4	+0.5
	8.9nm,1.1s						
KAKA	Kakadu	24.95	259	eP	x	09 42 04.3	
	4.1nm,0.6s						
WRAB	Tennant Creek	25.02	241	eP	P	09 42 23.8	-0.3
	8.3nm,0.6s,mb4.4						
WB2	Warramunga Arr	25.02	241	eP	P	09 42 23.5	-0.6
WRA	Warramunga Arr	25.04	241	P	P	09 42 24.0	-0.2
	baz=66,slow=9.4						
WRA				PcP	PcP	09 45 58.1	0.0
ASAR	Alice Springs	27.04	234	P	P	09 42 41.0	-1.3
	1.3nm,0.9s,mb3.4,baz=68,slow=8.2,SNR=8.7						
ASAR				PcP	PcP	09 46 03.3	+0.6
	0.6nm,0.5s,baz=74,slow=2.4,SNR=8.4						
STKA	Stephens Creek	27.38	211	P	P	09 42 45.4	+0.2
	2.0nm,0.3s,mb4.2,baz=76,slow=12,SNR=3.5						
STKA				LR	LR	09 52 57.1	
	comp=Z,72nm,20.2s,MS3.2,baz=23,slow=35						
STKA	Stephens Creek	27.38	211	P	P	09 42 45.4	+0.2
STKA				LR	LR	09 52 57.1	
RPZ	Rata Peaks	36.80	164	LR	LR	09 55 14.3	
	comp=Z,727nm,19.4s,MS4.5,baz=14,slow=30						
MJAR	Matsushiro Arr	48.55	339	P	P	09 45 41.4	-1.4
	0.5nm,0.5s,mb3.8,baz=161,slow=8.7,SNR=3.0						
CMAR	Chiang Mai Arr	63.78	295	P	P	09 47 33.2	+1.3
	0.7nm,0.3s,mb4.1,baz=110,slow=5.2,SNR=2.3						
CMAR				LR	LR	10 13 18.3	
	comp=Z,26nm,18.9s,MS3.4,baz=65,slow=34						
SONM	Songino Array	72.14	327	P	P	09 48 25.0	+1.2
	0.9nm,0.9s,mb3.7,baz=147,slow=2.9,SNR=3.9						
MKAR	Makanchi Array	86.35	318	P	P	09 49 41.6	+0.3
	0.8nm,0.6s,mb4.2,baz=97,slow=6.3,SNR=13						
NVAR	Mina Array Bea	90.83	51	P	P	09 50 03.4	+0.6
	1.0nm,0.7s,mb4.2,baz=256,slow=7.2,SNR=5.9						
YKA	Yellowknife Ar	96.69	28	P	P	09 50 28.9	-0.2
	0.2nm,0.6s,mb3.7,baz=262,slow=5.1,SNR=3.6						
PDAR	Pinedale Array	98.00	48	P	P	09 50 35.1	-0.4
	0.3nm,0.6s,mb4.0,baz=255,slow=5.5,SNR=2.9						
BDFB	Brasilia	144.99	134	PKP	PKPdf	09 56 36.4	-0.8
	2.1nm,0.7s,baz=198,slow=13,SNR=6.1						

*HLW **08** 10:07:26.6, 35.17N×32.49E, h33km, Mb3.1*
*NIC **08** 10:07:29.1±0.2, 34.79N×32.10E, h19km, ML3.3, MW3.2*
*NEIC **08** 10:07:29.1, 34.79N×32.10E, h19km, ML3.3(NIC), After NIC.*
*CSEM **08** 10:07:29.2±0.1, 34.71N×32.23E, h15km, Mw3.2, Error ellipse: s-maj=2.7km s-min=1.6km az=127.0*
*ISCJB **08** 10:07:29.4±0.8, 34.67N±0.03×32.23E±0.05, h13km±5km, Error ellipse: s-maj=6.7km s-min=4.8km az=19.5*
*ISK **08** 10:07:30.3, 34.75N×32.21E, h32km, MD3.2*
*GII **08** 10:07:34.3±1.2, 34.64N×32.15E, h32km±3km, ML2.8/4*
ISC 08 10:07:30.8±0.7, **34.73N**±0.03×**32.25E**±0.05, **h17**km±5km, **n37**, σ0.78/53, **6C-5D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	Paphos	0.17	27	⇓P	Pg	10 07 34.9	-0.3
ALFC	Alevga	0.51	34	⇑P	Pg	10 07 40.1	-1.0
	52nm,0.3s						
ALFC				S	Sg	10 07 48.5	+0.5
ALFC	Alevga	0.51	34	⇑iP	Pg	10 07 40.1	-1.0
	52nm,0.3s						
ALFC	Alevga	0.51	34	⇑iP	Pg	10 07 40.1	-1.0
ALFC				S	Sg	10 07 48.5	+0.5
SZAC	Souni-Zanaja	0.52	87	⇑P	Pg	10 07 41.5	+0.3
	37nm,0.2s						
SZAC				S	Sg	10 07 51.5	+3.2
LEF	Lefka	0.66	53	ePG	Pg	10 07 42.2	-1.5
LEF				eSG	Sg	10 07 52.4	0.0
MAMC	Mammari	0.91	61	P	Pb	10 07 47.9	-0.2
CSS	Prodhromos	0.92	75	ePG	Pg	10 07 47.2	-1.5
CSS				eSG	Sg	10 08 00.8	+0.1
CSS	Prodhromos	0.92	75	P	Pb	10 07 47.5	-0.8
	0.4nm,0.3s						
CSS				eSg	Sg	10 08 00.8	0.0
CSS				S	Sb	10 08 01.4	+1.2
LFK	Lefkose	1.19	62	ePN	Pn	10 07 51.8	-0.8
PHNC	Paralimni	1.49	79	P	Pn	10 07 57.9	+1.1
EREN	Erenkoy	1.77	63	ePN	Pn	10 08 00.4	-0.2
IKL	Isikli	1.91	38	ePN	Pn	10 08 01.8	-0.8
MERS	Mersin	2.82	40	ePN	Pn	10 08 14.6	-0.5
HNTI	Hanita	2.94	123	Sn	Sn	10 08 51.2	-0.3
OFRI	'Ofer	3.10	132	Pn	Pn	10 08 19.4	+0.5
OFRI				Sn	Sn	10 08 55.9	+0.2
MMA0	Mount Meron ar	3.13	122	Pn	Pn	10 08 20.3	+0.9
MMA0				Sn	Sn	10 08 56.3	0.0
HRSH	Kfar Ka'horesh	3.24	128	⇓P	Pn	10 08 30.2	+9.4
KARA	Karaisali	3.40	41	ePN	Pn	10 08 23.4	+0.3
SLTI	Sal'it	3.41	136	Sn	Sn	10 09 02.2	-1.0
KSHT	Keshet	3.44	119	Pn	Pn	10 08 25.3	+1.7
MMLI	Mount Malkishu	3.50	130	Pn	Pn	10 08 25.1	+0.7
MMLI				Sn	Sn	10 09 05.3	-0.1
TURN	Turunc	3.65	307	iP	Pn	10 08 26.8	+0.3
HMDT	Nahal Hemdat	3.69	131	Pn	Pn	10 08 27.9	+0.8
HMDT				Sn	Sn	10 09 10.2	+0.1
RSH		3.96	161	P	Pn	10 08 30.2	-0.5
DSI	Dead Sea	4.10	139	Pn	Pn	10 08 33.2	+0.5
AMAG	Maghara	4.16	168	⇑P	Pn	10 08 33.5	+0.1
RTMI	Retamim	4.20	150	Pn	Pn	10 08 34.5	+0.4
RTMI				Sn	Sn	10 09 22.5	-0.3
KZIT	Kziot	4.22	154	Pn	Pn	10 08 34.6	+0.3
KZIT				Sn	Sn	10 09 22.0	-1.2
MZDA	Masada	4.30	142	Pn	Pn	10 08 36.2	+0.8
MZDA				Sn	Sn	10 09 24.6	-0.5
HHAG	Hagoal	4.76	182	⇓P	Pn	10 08 42.3	+0.5
SUZ		4.90	174	⇓P	Pn	10 08 44.0	+0.3
PRNI	Paran	4.95	151	Pn	Pn	10 08 44.6	+0.3
PRNI				Sn	Sn	10 09 39.8	-1.4
HNKL	Nakhl	5.01	162	⇓P	Pn	10 08 43.6	-1.5
GLL	Jalalah	5.16	185	⇑P	Pn	10 08 47.9	+0.7
MBRI	Mt Berech	5.42	155	Pn	Pn	10 08 51.7	+1.0
MBRI				Sn	Sn	10 09 52.0	-0.7
EIL	Elat	5.54	155	Pn	Pn	10 08 52.8	+0.3

*ISCJB **08** 10:11:28.9±1.1, 7.64N±0.04×82.85W±0.03, h21km±8km, mb4.4/40, MS4.1/17, Error ellipse: s-maj=7.9km s-min=4.4km az=34.4*
*GCMT **08** 10:11:29.1±0.2, 7.68N×82.78W, h22km±1km, MW4.9/78, Moment Tensor Solution. s26,c30; s78,c115; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}-0.09±.14; $M_{\theta\theta}$-0.88±.10; $M_{\phi\phi}$0.97±.13; $M_{r\theta}$-0.28±.16; $M_{\theta\phi}$2.81±.09; $M_{\phi r}$-0.32±.19; Best double couple: $M_0$2.98800×10^16 NP1:ϕ_s171.00000°, δ84.00000°, λ175.00000°. NP2: ϕ_s261.00000°, δ85.00000°, λ6.00000°. Principal axes: T 3.0620, Plg8.0000°, Azm126.0000°; N -0.1470, Plg82.0000°, Azm301.0000°; P -2.9150, Plg1.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **08** 10:11:29.0, 7.60N×82.90W, h10km, mB5.3, Ms5.1, Msz4.6*
*NEIC **08** 10:11:29.1±0.3, 7.64N×82.90W, h10km, mb4.7/35, Error ellipse: s-maj=7.4km s-min=4.3km az=217.0*
*CASC **08** 10:11:30.6±2.1, 7.73N×82.76W, h25km±17km, MD4.5, ML3.8, mb4.7(NEIC)*
*IDC **08** 10:11:31.8±0.7, 7.67N×82.78W, h31km±4km, mb3.9/15, mb1 4.2/18, mb1mx4.1/25, mbtmp4.0/18, ML3.9/3, MS4.0/18, Ms1 3.9/18, ms1mx3.8/29, Error ellipse: s-maj=23.1km s-min=11.9km az=58.0*
ISC 08 10:11:30.4±1.6, **7.67N**±0.04×**82.84W**±0.04, **h17**km±10km, **n138**, σ1.06/108, **mb4.4**/40, **MS4.1**/17, **16C-9D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	1.03	342	⇑eP	Pb	10 11 47.2	-2.6
BAR1		1.63	343	⇓eP	Pn	10 11 57.2	-1.2
BUS	Buena Vista	2.08	334	⇑iP	Pn	10 12 04.1	-0.5
QCR	Quepos	2.18	323	⇑iP	Pn	10 12 04.2	-1.7
URSC	Urasca	2.34	337	⇑iP	Pn	10 12 07.7	-0.4
LAJ	Bijagual	2.52	330	⇓iP	Pn	10 12 10.6	-0.1
SJS	Escuela Geolog	2.56	332	⇑eP	Pn	10 12 11.0	-0.1
PRS1	Puriscal	2.72	328	⇑iP	Pn	10 12 11.5	-1.8
CGA2	Cerro Gallo 2	2.83	326	⇑eP	Pn	10 12 13.8	-1.1
CGA2				eS	Sn	10 12 48.5	-0.1
JCR	Jicaral	3.12	314	⇑eP	Pn	10 12 16.7	-2.2
FORC	Fortuna	3.32	327	⇓eP	Pn	10 12 21.4	-0.2
BCIP	Isla Barro Col	3.32	63	ePn	Pn	10 12 21.9	+0.3
VCR	Vista de Mar	3.69	312	⇑eP	Pn	10 12 25.4	-1.2
2RIO	Dos Rios de Up	3.70	320	iP	Pn	10 12 32.7	+5.9
CUI	Cuipilapa	3.75	322	iP	Pn	10 12 26.6	-0.9
LIM1	Limonal	3.84	322	iP	Pn	10 12 27.8	-0.9
SSN	San Juan del S	4.68	321	⇓eP	Pn	10 12 39.8	-0.4
CONN	Concepcion	4.75	325	eP	Pn	10 12 42.0	+0.8
MGAN	Managua	5.58	323	⇑eP	Pn	10 12 53.0	+0.4
TISN	Laguna Tiscapa	5.58	323	eP	Pn	10 12 53.2	+0.5
XAVN	Gruta Xavier	5.62	323	eP	Pn	10 12 54.6	+1.4
HUEN		5.68	325	eP	Pn	10 12 54.2	+0.1
CSAN		5.71	322	⇓eP	Pn	10 12 54.7	+0.2
COPN	Copaltepe	5.81	321	⇑eP	Pn	10 12 55.9	+0.1
MOMN	Momotombo	5.96	323	⇓eP	Pn	10 12 58.1	+0.3
MIRN	Miramar	6.08	321	⇑eP	Pn	10 13 00.8	+1.1
CNGN	Cerro Negro	6.12	322	⇓eP	Pn	10 13 00.4	+0.3
CNGN				eS	Sn	10 14 11.0	+1.2
CNGN				AML	AML	10 14 15.2	
	comp=N,118nm,0.9s						
TEL3	Telica 3	6.27	321	⇑eP	Pn	10 13 03.0	+0.8
CRIN	San Cristobal	6.49	321	eP	Pn	10 13 05.2	-0.1
CNCH	Conchagua	7.43	319	⇑eP	x	10 13 19.3	
TGUH	Tegucigalpa,Un	7.70	326	ePn	Pn	10 13 22.8	+1.0
	comp=N,109nm,0.7s						
BLLM	Bellamira	7.82	318	eP	x	10 13 25.2	
CAHU	Cacacuatique	8.04	319	⇓eP	x	10 13 28.7	
SNVI	San Vicente	8.35	316	eP	x	10 13 32.2	
SNVI				eS	x	10 15 06.6	
LBRS	Las Brisas	8.57	315	eP	x	10 13 36.4	
OTAV	Otavalo	8.58	149	eP	Pn	10 13 33.5	-0.5
OTAV	Otavalo	8.58	149	ePn	Pn	10 13 33.7	-0.2
BOQS	Boqueron	8.74	314	⇑eP	x	10 13 38.1	
ROSC	El Rosal	8.91	108	Pn	Pn	10 13 40.8	+2.4
	comp=N,5.1nm,0.3s,baz=104,slow=1.6,SNR=29						
ROSC				Sn	Sn	10 15 03.8	-15
	comp=N,3.5nm,0.3s,baz=286,slow=18,SNR=2.8						
ROSC				LR	LR	10 16 37.8	
	comp=N,627nm,21.6s,baz=4.1,slow=34						
ROSC	El Rosal	8.91	108	ePn	Pn	10 13 42.1	+3.7
SBLS	San Blas	9.06	313	⇓eP	x	10 13 43.0	
SNJE	San Jose	9.06	313	eP	x	10 13 42.9	
RTR	El Retiro	9.11	313	eP	x	10 13 43.8	
RBDL	Robledal	9.29	314	eP	x	10 13 45.9	
CHI2		9.53	108	⇑eP	x	10 13 05.2	
PAYG	Puerto Ayora	11.13	222	ePn	Pn	10 14 11.9	+3.1
	comp=N,112nm,1.1s						
LAPE	La Pedrera	11.16	90	iP	x	10 12 31.2	
SDV	Santo Domingo	12.14	83	Pn	Pn	10 14 22.7	0.0
	comp=N,0.3nm,0.3s,baz=276,slow=10,SNR=8.0						
SDV				Sn	Sn	10 16 30.3	-7.5
	comp=N,1.6nm,0.3s,baz=356,slow=16,SNR=4.1						
SDV				LR	LR	10 19 55.3	
	comp=N,583nm,18.0s,baz=298,slow=42						
SDV	Santo Domingo	12.14	83	ePn	Pn	10 14 22.9	+0.2
LMGC	Las Mercedes	13.56	24	eP	Pn	10 14 44.8	+2.8
CCCC	Cccc	14.32	19	eP	Pn	10 14 58.2	+5.8
CMIG	Matias Romero	15.03	310	Pn	Pn	10 15 03.8	+1.7
	comp=N,1.3nm,0.3s,baz=134,slow=10,SNR=25						
ATAH	Atahualpa	15.23	163	Pn	Pn	10 15 09.8	+5.0
	comp=N,0.3nm,0.3s,baz=355,slow=9.6,SNR=5.1						
ATAH				LR	LR	10 20 27.6	
	comp=N,667nm,18.7s,baz=148,slow=35						
SDDR	Presa de Saban	15.89	44	ePn	Pn	10 15 16.1	+2.8
	comp=N,54nm,1.0s						
PCRV	Puerto La Cruz	18.15	81	P	Pn	10 15 42.1	+0.2
	comp=N,0.4nm,0.3s,baz=338,slow=8.7,SNR=3.2						
MPR	Mayaguez	18.53	54	ePn	Pn	10 15 48.2	+1.9
LRS	Lares	18.80	54	ePn	Pn	10 15 50.1	+0.3
OBIP	Obispado Ponce	18.87	55	ePn	Pn	10 15 51.8	+1.2
AOPR	Arecibo Observ	18.91	54	ePn	Pn	10 15 52.2	+1.1
	comp=N,35nm,0.9s						
CELP	Cerrillos	18.91	55	ePn	Pn	10 15 51.8	+0.8
SJG	San Juan	19.28	56	ePn	Pn	10 15 55.6	+0.2
	comp=N,104nm,0.9s						
CPD	Cerro la Pandu	19.43	56	ePn	Pn	10 15 57.4	0.0
	comp=N,39nm,0.8s						
HUMP	Col San Antoni	19.54	56	eP	Pn	10 15 58.3	-0.3
	comp=N,74nm,1.0s						
CBYP	Canovanas	19.60	56	eP	Pn	10 15 57.9	-1.5
	comp=N,64nm,0.8s						
MTP	Monte Pirata	19.76	57	eP	Pn	10 16 00.6	-0.7
NNA	Nana	20.42	163	P	P	10 16 07.6	+0.7
	comp=N,18nm,0.9s,baz=345,slow=9.8,SNR=6.0						
NNA	Nana	20.42	163	eP	P	10 16 06.2	-0.7
	comp=N,32nm,1.1s						
NHSC	New Hope	25.43	5	eP	P	10 16 58.0	+0.7
	comp=N,35nm,0.8s,mb4.9						
LRAL	Lakeview Retre	25.53	352	eP	P	10 16 58.9	+0.7
	comp=N,22nm,1.3s,mb4.5						
GOGA	Godfrey	25.62	359	eP	P	10 16 58.7	-0.3
	comp=N,16nm,0.9s,mb4.6						
ARE	Arequipa	26.47	155	eP	P	10 17 08.0	+1.1
TKL	Tuckaleechee C	27.87	358	LR	LR	10 28 38.3	
	comp=N,286nm,20.7s,MS3.8,baz=357,slow=37						
WVT	Waverly	28.69	352	eP	P	10 17 25.2	-1.5
	comp=N,4.8nm,1.0s,mb4.2						
TXAR	Lajitas Array	29.13	320	P	P	10 17 31.4	+0.8
	comp=N,0.6nm,0.9s,mb3.3,baz=141,slow=7.5,SNR=4.7						
TXAR				pP	pP	10 17 39.1	+3.4
	comp=N,1.3nm,0.9s,baz=145,slow=10,SNR=8.8						
SIUC	Southern Illin	30.46	350	eP	P	10 17 42.5	+0.2
	comp=N,12nm,0.9s,mb4.6						
WCI	Wyandotte Cave	30.58	355	eP	P	10 17 42.5	-0.9
	comp=N,12nm,0.8s,mb4.8						
CCM	Cathedral Cave	31.19	347	eP	P	10 17 47.0	-1.7
	comp=N,11nm,0.9s,mb4.7						
OLIL	Olney	31.29	352	eP	P	10 17 49.0	-0.6
	comp=N,84nm,1.8s,mb5.3						
BLO	Bloomington	31.54	355	eP	P	10 17 50.7	-1.0
	comp=N,76nm,1.8s,mb5.2						
SIV	San Ignacio	31.89	138	P	P	10 17 53.6	-1.5
	comp=N,4.0nm,0.8s,mb4.3,baz=326,slow=11						
ACSO	Alum Creek Sta	32.42	360	eP	P	10 17 59.0	-0.5
	comp=N,22nm,1.1s,mb4.9						
LVC	Limon Verde	33.04	156	LR	LR	10 30 34.3	
	comp=N,102nm,20.9s,MS3.5,baz=324,slow=35						
SDCO	Great Sand Dun	36.31	329	eP	P	10 18 34.0	+0.8
	comp=N,5.9nm,1.4s,mb4.3						
MVCO	Mesa Verde	37.52	325	P	P	10 18 44.5	+0.9
	comp=N,28nm,1.7s,mb4.7						
WUAZ	Wupatki	38.09	321	eP	P	10 18 51.1	+2.7
	comp=N,45nm,1.8s,mb4.9						
SRU	San Rafael	39.99	326	eP	P	10 19 04.7	+0.5
	comp=N,3.6nm,0.8s,mb4.2						
MSU	Marysvale	40.53	324	eP	P	10 19 10.0	+1.3
CFAA	Coronel Fontan	41.47	161	P	P	10 19 16.2	-0.3
	comp=N,0.5nm,0.8s,mb3.2,baz=321,slow=6.3,SNR=6.9						
BDFB	Brasilia	41.55	124	LR	LR	10 37 49.9	
	comp=N,124nm,18.0s,MS3.8,baz=357,slow=38						
CPUP	Villa Florida	41.90	145	P	P	10 19 17.5	-2.6
	comp=N,1.5nm,0.7s,mb3.8,baz=294,slow=7.1,SNR=5.7						
CPUP				LR	LR	10 39 18.0	
	comp=N,215nm,18.9s,MS4.0,baz=106,slow=40						
CPUP	Villa Florida	41.90	145	eP	P	10 19 18.1	-2.1
	comp=N,7.9nm,0.7s,mb4.5						
BW06	Boulder Array	42.13	330	eP	P	10 19 21.8	0.0
	comp=N,62nm,3.0s						
PDAR	Pinedale Array	42.13	330	P	P	10 19 21.6	-0.2
	comp=N,1.2nm,1.0s,mb3.5,baz=141,slow=7.3,SNR=6.4						
PDAR				PcP	PcP	10 21 16.7	+0.5
	comp=N,0.7nm,1.0s,baz=109,slow=4.9,SNR=3.3						
PDAR				LR	LR	10 38 49.1	
	comp=N,111nm,19.8s,MS3.7,baz=138,slow=39						
REDW	Red Top Meadow	43.21	330	eP	P	10 19 30.9	+0.4
	comp=N,25nm,1.9s,mb4.6						
RRI2	Red Ridge	43.43	330	eP	P	10 19 33.2	+0.8
	comp=N,7.1nm,1.1s,mb4.3						
MOOW	Moose Ponds	43.44	330	eP	P	10 19 32.2	-0.2
	comp=N,34nm,2.5s,mb4.6						
RLMT	Red Lodge	43.78	333	eP	P	10 19 35.0	-0.2
	comp=N,5.0nm,0.9s,mb4.2						
ULM	Lac du Bonnet	43.82	348	P	P	10 19 34.2	-1.1
	comp=N,7.2nm,0.6s,mb4.6,baz=159,slow=7.1,SNR=7.0						
ULM				LR	LR	10 37 00.1	
	comp=N,118nm,21.5s,MS3.8,baz=341,slow=35						
ULM	Lac du Bonnet	43.82	348	eP	P	10 19 34.3	-1.1
	comp=N,10nm,0.9s,mb4.5						
NVAR	Mina Array Bea	44.27	319	P	P	10 19 40.6	+1.4
	comp=N,1.7nm,0.8s,mb3.8,baz=134,slow=6.3,SNR=7.0						
BMN	Battle Mountai	44.76	322	eP	P	10 19 44.7	+1.6
	comp=N,14nm,1.0s,mb4.7						
HLID	Hailey	45.18	328	eP	P	10 19 47.4	+1.0
	comp=N,3.4nm,0.9s,mb4.2						
BOZ	Bozeman (W)	45.27	332	eP	P	10 19 47.1	+0.1
	comp=N,4.7nm,1.1s,mb4.2						
HRY	Holter Researc	46.15	332	eP	P	10 19 54.4	+0.4
WVOR	Wild Horse Val	46.82	324	eP	P	10 20 00.2	+0.9
	comp=N,33nm,1.4s,mb5.1						
SCHQ	Schefferville	48.75	12	LR	LR	10 40 32.0	
	comp=N,172nm,20.6s,MS4.0,baz=201,slow=36						
FFC	Flin Flon	49.37	345	eP	P	10 20 19.9	+1.0

	comp=N,57nm,2.4s,mb5.2						
PLCA	Paso Flores	49.47	168	P	P	10 20 19.2	-0.5
	comp=N,5.0nm,0.8s,mb4.6,baz=333,slow=4.2,SNR=8.6						
FCC	Fort Churchill	51.70	353	eP	P	10 20 34.7	-1.6
	comp=N,1.1nm,1.9s,mb3.5						
YKA	Yellowknife Ar	59.42	344	P	P	10 21 30.3	-1.5
	comp=N,1.0nm,0.6s,mb4.0,baz=137,slow=7.0,SNR=23						
YKA				LR	LR	10 46 31.5	
	comp=N,36nm,21.1s,MS3.5,baz=300,slow=35						
YKA	Yellowknife Ar	59.42	344	P	P	10 21 30.3	-1.5
YKA				LR	LR	10 46 31.5	
RES	Resolute Bay	67.33	357	P	P	10 22 22.2	-1.8
	comp=N,1.7nm,0.9s,mb4.1,baz=185,slow=9.8,SNR=9.8						
INK	Inuvik	69.11	342	eP	P	10 22 35.6	+0.3
	comp=N,7.7nm,1.0s,mb4.6						
SUMG	Summit	70.13	13	eP	P	10 22 40.6	-0.9
	comp=N,48nm,2.1s,mb5.1						
ESDC	Sonseca Array	76.59	51	P	P	10 23 20.4	+0.1
	comp=N,0.8nm,0.5s,mb3.9,baz=276,slow=5.4,SNR=8.2						
ESDC				pP	pP	10 23 30.4	+4.7
	comp=N,2.2nm,0.6s,baz=276,slow=5.1,SNR=6.7						
ESDC				LR	LR	10 49 07.0	
	comp=N,130nm,20.3s,MS4.2,baz=330,slow=30						
ESDC	Sonseca Array	76.59	51	P	P	10 23 20.4	+0.1
ESDC				pP	pP	10 23 30.4	+4.7
ESDC				LR	LR	10 49 07.0	
DBIC	Dimbokro	77.27	85	P	P	10 23 23.9	-0.7
	comp=N,2.5nm,0.9s,mb4.2,baz=270,slow=6.1,SNR=3.1						
DBIC				LR	LR	10 55 19.0	
	comp=N,83nm,20.7s,MS4.0,baz=74,slow=34						
DBIC	Dimbokro	77.27	85	P	P	10 23 23.9	-0.7
DBIC				LR	LR	10 55 19.0	
TORD	Torodi Ar. Bea	83.00	78	P	P	10 23 54.6	-0.8
	comp=N,1.3nm,0.8s,mb4.0,baz=263,slow=4.8,SNR=6.8						
TORD				LR	LR	10 56 05.8	
	comp=N,105nm,21.1s,MS4.2,baz=265,slow=32						
NOA	NORSAR Array B	85.31	29	P	P	10 24 04.4	-1.9
	comp=N,1.8nm,1.0s,mb4.2,baz=225,slow=5.6,SNR=3.0						
DAVOX	Davos/Dischmat	86.33	43	LR	LR	10 54 10.9	
	comp=N,122nm,20.9s,MS4.3,baz=78,slow=30						
GERES	GERESS Array B	88.57	41	LR	LR	10 56 22.7	
	comp=N,130nm,21.4s,MS4.3,baz=274,slow=30						
ARCES	ARCESS Array B	89.18	20	LR	LR	11 01 08.6	
	comp=N,82nm,18.9s,MS4.2,baz=336,slow=33						
VRAC	Vranov	90.35	40	LR	LR	10 58 57.9	
	comp=N,112nm,19.1s,MS4.3,baz=351,slow=32						
MDJ	Mudanjiang	120.31	334	PKP	PKPdf	10 30 20.1	-0.9
MDJ				PP	PP		
	comp=Z,29nm,4.1s						
CN2	Changchun	122.72	336	ePKP	PKPdf	10 30 27.7	+2.0
SONM	Songino Array	124.14	352	PKP	PKPdf	10 30 28.5	+0.3
	comp=Z,0.2nm,0.4s,baz=6.3,slow=1.8,SNR=3.0						
SONM				pPKP	pPKPdf	10 30 37.2	+3.2
	comp=Z,1.0nm,0.8s,baz=1.9,slow=1.8,SNR=6.0						
KSRS	Korea Array	126.69	329	pPKP	pPKPdf	10 30 42.7	+3.5
	comp=Z,2.1nm,0.9s,baz=4.3,slow=2.6,SNR=5.5						
WMQ	Urumqi	128.04	9	ePKP	PKPdf	10 30 35.9	+0.1
HHC	Hu-ho-hao-te	129.94	346	ePKP	PKPdf	10 30 37.4	-2.1
HHC				PP	PP	10 32 52.6	+2.7
HHC				PKS	SKPdf	10 34 12.0	-2.4
HHC				SKS	SKSac	10 37 43.5	-4.7
HHC				SKKS	SKKSac	10 39 40.6	-7.0
HHC				SS	SS	10 50 12.5	-0.7
HHC				PP	PP		
	comp=Z,88nm,6.0s						
HHC				LR	LR		
	comp=N,122nm,14.3s,MS4.8						
HHC				LR	LR		
	comp=E,98nm,14.3s,MS4.8						
HHC				LR	LR		
	comp=Z,76nm,16.6s,MS4.5						
CD2	Chengdu	141.12	351	PKP	PKPdf	10 31 01.1	+0.4
CD2				PP	PP	10 34 05.8	+5.4
CD2				PKS		10 34 35.5	
CD2				SKS	SKSdf	10 38 09.6	-0.9
CD2				SKKS	SKKSac	10 40 55.8	+0.7
CD2				SS	SS	10 52 31.8	+4.6
CD2				PP	PP		
	comp=Z,150nm,9.2s						
CD2				LR	LR		
	comp=N,240nm,5.8s						
CD2				LR	LR		
	comp=Z,210nm,5.1s						
ASAR	Alice Springs	141.37	241	PKhKP		10 30 54.4	
	comp=Z,0.4nm,0.8s,baz=126,slow=3.7,SNR=5.6						
ASAR				PKP	PKPdf	10 30 59.5	-1.7
	comp=Z,0.5nm,0.7s,baz=107,slow=2.1,SNR=5.7						
ASAR				pPKP	pPKPdf	10 31 09.8	+2.9
	comp=Z,1.8nm,0.7s,baz=111,slow=2.0,SNR=10						
WB2	Warramunga Arr	141.98	247	eP	PKPdf	10 30 56.6	-5.8
GYA	Guiyang	144.84	345	ePKP	PKPdf	10 31 06.1	-1.2
GYA				PP	PP	10 34 26.6	+3.6
GYA				PKS		10 34 40.9	
GYA				SKS	SKSdf	10 38 12.3	-4.1
GYA				SKKS	SKKSac	10 41 13.2	-3.4
GYA				SS	SS	10 53 10.7	+0.3
GYA				PP	PP		
	comp=Z,110nm,8.5s						
GYA				LR	LR		
	comp=N,110nm,20.3s,MS4.8						
GYA				LR	LR		
	comp=E,130nm,22.6s,MS4.8						
GYA				LR	LR		
	comp=Z,110nm,20.7s,MS4.6						
KAKA	Kakadu	144.94	259	eP	x	10 30 47.7	
	comp=Z,13nm,0.7s						
KMI	Kunming	146.96	351	PKP	PKPdf	10 31 10.3	-0.7
FITZ	Fitzroy Crossi	150.41	247	eP	PKPbc	10 31 21.2	-0.8
	comp=Z,8.8nm,0.8s						
CMAR	Chiang Mai Arr	153.98	356	PKPbc	PKPbc	10 31 29.2	-0.8
	comp=Z,0.6nm,0.4s,baz=357,slow=2.0,SNR=4.7						
CMAR				pPKPbc	pPKPbc	10 31 39.4	+3.6
	comp=Z,2.0nm,0.7s,baz=314,slow=2.2,SNR=3.1						

IDC 08 10:12:35.3±3.0, 996S×11890E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=207.6km s-min=31.3km az=55.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	19.77	135	P	Pn	10 17 07.2	-1.4
	0.2nm,0.3s,baz=314,slow=9.6,SNR=14						
SONM	Songino Array	58.60	350	P	P	10 22 34.4	+0.4
	0.5nm,0.7s,baz=166,slow=8.8,SNR=4.1						
MKAR	Makanchi Array	65.26	333	P	P	10 23 18.7	-0.1
	0.4nm,0.5s,baz=144,slow=6.6,SNR=6.7						

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*NIED **08** 10:27:00, 4540N×15080E, h65km, Mw4.1 Best double couple: $M_0$1.45000×10^{15} NP1:ϕ_s182.00000°, δ72.00000°, λ95.00000°. NP2:ϕ_s345.00000°, δ19.00000°, λ74.00000°.*
*SKHL **08** 10:27:41.8±2.8, 4550N×15070E, h44km±13km, mb4.9/3*
*NEIC **08** 10:27:42.0±1.5, 4530N×15100E, h35km, Error ellipse: s-maj=36.1km s-min=13.5km az=139.0*
*MOS **08** 10:27:41.9±1.7, 4542N×15083E, h52km, mb4.1/8, Error ellipse: s-maj=12.0km s-min=9.5km az=140.6*
*ISCJB **08** 10:27:42.1±0.9, 4523N±007×15084E±008, h62km±10km, mb3.8/11, Error ellipse: s-maj=14.1km s-min=6.8km az=144.8*
*JMA **08** 10:27:43.8±0.7, 4540N×15075E, h30km, M4.8*
*IDC **08** 10:27:47.0±2.8, 4564N×15062E, h75km±24km, mb3.6/11, mb1 3.9/15, mb1mx3.7/26, mbtmp3.7/15, MS3.0/7, Ms1 3.0/7, ms1mx2.9/36, Error ellipse: s-maj=25.1km s-min=13.7km az=153.0*
ISC 08 10:27:43.6±0.7, 4520N±007×15091E±008, h57km±8km, n78, σ1s42/89, mb3.8/11, MS3.3/3, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.15	272	ePN	Pn	10 28 11.0	-6.0
KUR				S	Sn	10 28 35.0	-7.6
KUR				pmax	pmax		
	comp=N,420nm,0.5s						
KUR				pmax	pmax		
	comp=E,610nm,0.5s						
KUR				pmax	pmax		
	comp=Z,420nm,0.5s						
KUR				smax			
	comp=N,6µm,1.0s						
KUR				smax			
	comp=E,4µm,1.0s						
KUR				smax			
	comp=N,3µm,0.5s						
KUR				smax			
	comp=E,4µm,0.5s						
KUR	Kuril'sk	2.15	272	eP	Pn	10 28 11.0	-6.0
KUR				AMB	AMB	10 28 30.0	
	comp=E,610nm,0.5s						
KUR				AMB	AMB	10 28 30.0	
	comp=E,420nm,0.5s						
KUR				eS	Sn	10 28 35.0	-7.6
KUR				A		10 28 37.0	
	comp=E,6µm,1.0s						
KUR				A		10 28 37.0	
	comp=E,4µm,1.0s						
KUR				A		10 28 40.7	
	comp=E,3µm,0.5s						
KUR				A		10 28 40.7	
	comp=E,4µm,0.5s						
YUK	Yuzh-Kuril'sk	3.79	254⇓	iPN	Pn	10 28 40.5	+1.1
YUK				i S	Sn	10 29 22.5	-0.2
YUK				pmax	pmax		
	comp=Z,530nm,0.4s						
YUK				pmax	pmax		
	comp=N,180nm,0.3s						
YUK				pmax	pmax		
	comp=E,200nm,0.3s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,1µm,0.5s						
YUK				smax			
	comp=N,3µm,0.7s						
YUK				smax			
	comp=E,3µm,0.7s						
YUK	Yuzh-Kuril'sk	3.79	254⇓	iP	Pn	10 28 40.5	+1.1
YUK				AMB	AMB	10 28 42.5	
	comp=E,180nm,0.3s						
YUK				AMB	AMB	10 28 42.5	
	comp=E,200nm,0.3s						
YUK				AMB	AMB	10 28 42.5	
	comp=E,530nm,0.4s						
YUK				i S	Sn	10 29 22.5	-0.2
YUK				A		10 29 32.6	
	comp=E,2µm,0.5s						
YUK				A		10 29 32.6	
	comp=E,1µm,0.5s						
YUK				A		10 29 38.0	
	comp=E,3µm,0.7s						
YUK				A		10 29 38.0	
	comp=E,3µm,0.7s						
NEM2	Nemuro 2	4.14	246	P	Pn	10 28 43.5	-0.7
NEM2				eS	Sn	10 29 27.3	-4.0
JRA	Rausu	4.33	255	P	Pn	10 28 48.3	+1.5
JNK	Nakash	4.72	252	P	Pn	10 28 53.1	+0.9
JNK				eS	Sn	10 29 44.3	-1.3
JAK	Akkeshi	4.99	246	P	Pn	10 28 55.3	-0.6
JAK				eS	Sn	10 29 48.5	-3.7
JTKR	Abashiri--Toko	5.15	259	P	Pn	10 28 59.2	+1.1
JAR	Ashorobuto	5.47	252	P	Pn	10 29 03.8	+1.3
JAR				eS	Sn	10 30 04.7	+0.7
JMP	Maruseppu	5.52	260	P	Pn	10 29 04.7	+1.5
JOB	Onbets	5.59	248	P	Pn	10 29 04.9	+0.8
JOB				eS	Sn	10 30 05.6	-1.4
JSE	Soyaes	5.90	271	P	Pn	10 29 11.6	+3.2
YSS	Yuzh-Sakhalins	5.94	290	ePN	Pn	10 29 09.2	+0.3
YSS				eS	Sn	10 30 21.0	+5.5
YSS				pmax	pmax		
	comp=Z,20nm,0.3s						
YSS				smax			
	comp=E,20nm,1.0s						
YSS				smax			
	comp=E,20nm,0.8s						
YSS	Yuzh-Sakhalins	5.94	290	ePn	Pn	10 29 08.5	-0.4
	comp=E,14nm,0.3s						
JKK2	Kamakawa 2	5.99	260	P	Pn	10 29 10.9	+1.4
ASAJ	Asahikawa	6.03	263	P	Pn	10 29 12.1	+2.0
	comp=E,7.3nm,0.3s,baz=84,slow=20,SNR=19						
ASAJ				LR	LR	10 31 34.4	
	comp=E,120nm,19.4s,baz=170,slow=38						
ASAJ	Asahikawa	6.03	263	P	Pn	10 29 11.7	+1.6
JCH	Churui	6.04	247	P	Pn	10 29 10.1	-0.1
JCH				eS	Sn	10 30 15.2	-2.7
JFR	Furan	6.32	254	P	Pn	10 29 15.4	+1.3
JWK2	Keihoku	6.37	274	P	Pn	10 29 17.6	+2.9
JAB	Ashibetsu	6.46	258	P	Pn	10 29 18.6	+2.6
JEM	Erimo	6.47	243	P	Pn	10 29 17.5	+1.4
ERM	Erimo	6.47	243	ePN	Pn	10 29 18.3	+2.2
ERM				pmax	pmax		
	comp=Z,141nm,0.4s						
ERM	Erimo	6.47	243	ePn	Pn	10 29 18.3	+2.2
	comp=Z,141nm,0.4s						
ERM				eSn	Sn	10 30 28.9	+0.4
SKR	Severo-Kuril's	6.50	31	ePN	Pn	10 29 14.0	-2.6
SKR				e		10 30 26.0	
JNBK	Urakawa-nobuka	6.59	247	P	Pn	10 29 17.3	-0.5
JBT2	Biratori 2	6.62	252	P	Pn	10 29 18.4	+0.1
JEW	Eniwo	7.22	254	P	Pn	10 29 28.1	+1.7
JNB	Noboribetsu	7.64	253	P	Pn	10 29 32.0	-0.2
JKB	Kayabe	7.90	249	P	Pn	10 29 35.3	-0.5
JKB				eS	Sn	10 30 57.2	-6.5
JYM2	Yakumo 2	8.24	252	P	Pn	10 29 40.0	-0.4
JSH	Shimam	8.25	256	P	Pn	10 29 41.2	+0.7
JANG	Nango	8.43	238	P	Pn	10 29 40.8	-2.1
JANG				eS	Sn	10 31 08.3	-8.2
JTM	Tenmabayashi	8.45	242	P	Pn	10 29 42.4	-0.9
JTM				eS	Sn	10 31 09.5	-7.7
JSR	Shiriuchi	8.48	248	P	Pn	10 29 43.3	-0.3
JTH	Tanohata	8.49	235	P	Pn	10 29 41.4	-2.5
JOSM	Okushiri--Mats	8.86	253	P	Pn	10 29 48.3	-0.5
PETK	Petropavlovsk-	9.08	27	P	Pn	10 29 50.5	-1.2
	comp=Z,0.5nm,0.3s,baz=179,slow=12,SNR=16						
PETK				LR	LR	10 33 12.1	
	comp=Z,44nm,18.0s,baz=229,slow=37						
PETK	Petropavlovsk-	9.08	27	P	Pn	10 29 50.5	-1.2
PETK				LR	LR	10 33 12.1	
OFUJ	Ofunato	9.19	232	P	Pn	10 29 52.0	-1.4
JRG	Rokugo	9.57	236	P	Pn	10 29 56.4	-2.1
JIO	Ouri	9.81	230	P	Pn	10 30 00.5	-1.4
JYA	Atsumi	10.64	236	P	Pn	10 30 12.4	-0.7
HABR	Khabarovsk	11.35	292	ePN	Pn	10 30 25.3	+2.5
MJAR	Matsushiro Arr	12.92	232	P	Pn	10 30 43.3	-1.0
	comp=Z,0.2nm,0.3s,baz=23,slow=14,SNR=4.0						
MJAR				LR	LR	10 36 19.3	
	comp=Z,40nm,19.0s,baz=225,slow=39						
MAJO	Matsushiro	12.92	232	PN	Pn	10 30 51.3	+7.0
KLR	Kul'dur	13.63	294	ePN	Pn	10 30 51.2	-2.7
FX1	Attu Island--F	16.44	54	P	Pn	10 31 30.7	+0.4
	comp=Z,1.8nm,0.3s,baz=65,slow=15,SNR=11						
FX1	Attu Island--F	16.44	54	P	Pn	10 31 30.7	+0.4
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZEA	Zeya	17.53	308	eP	Pn	10 31 39.2	-4.5
ZEA				AMB	AMB	10 31 40.9	
	comp=Z,23nm,1.0s						
KSRS	Korea Array	18.88	254	P	Pn	10 32 00.5	+0.2
	comp=Z,0.3nm,0.3s,baz=62,slow=11,SNR=7.5						
KSRS				LR	LR	10 38 23.8	
	comp=Z,38nm,19.4s,baz=145,slow=34						
YAK	Yakutsk	20.88	331	eP	P	10 32 19.1	-1.5
YAK				pmax	pmax		
	comp=Z,27nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
HIA	Hailar	21.47	292	eP	P	10 32 28.7	+1.6
SONM	Songino Array	30.43	291	LR	LR	10 45 49.6	
	comp=N,41nm,20.5s,MS3.1,baz=93,slow=36						
ZALV	Zalesovo Beam	42.29	307	LR	LR	10 54 20.2	
	comp=N,35nm,18.4s,MS3.3,baz=73,slow=38						
MKAR	Makanchi Array	46.30	298	P	P	10 36 02.3	-1.0
	comp=N,0.5nm,0.6s,mb3.7,baz=65,slow=6.8,SNR=7.9						
MKAR				PcP	PcP	10 37 36.9	-0.9
	comp=N,0.4nm,0.6s,baz=66,slow=3.5,SNR=3.7						
MKAR				LR	LR	10 55 53.9	
	comp=N,47nm,20.1s,MS3.4,baz=171,slow=37						
MKAR	Makanchi Array	46.30	298	eP	P	10 36 02.7	-0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	46.95	304	P	P	10 36 07.7	-0.7
	comp=Z,0.8nm,0.6s,mb3.9,baz=72,slow=8.5,SNR=5.1						
KURK	Kurchatov	46.95	304	P	P	10 36 07.7	-0.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KURK	Kurchatov	46.95	304	P	P	10 36 07.7	-0.7
CMAR	Chiang Mai Arr	50.51	256	P	P	10 36 37.8	+1.8
	comp=Z,0.5nm,0.3s,mb3.9,baz=50,slow=6.0,SNR=4.7						
CMAR	Chiang Mai Arr	50.51	256	P	P	10 36 37.8	+1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RES	Resolute Bay	52.79	18	P	P	10 36 50.8	-1.5
	comp=Z,1.3nm,0.9s,mb3.9,baz=314,slow=7.7,SNR=4.5						
RES	Resolute Bay	52.79	18	P	P	10 36 50.8	-1.5
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
YKA	Yellowknife Ar	53.08	35	P	P	10 36 54.7	+0.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=298,slow=6.9,SNR=14						
YKA	Yellowknife Ar	53.08	35	eP	P	10 36 54.6	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	53.08	35	P	P	10 36 54.7	+0.1
NVAR	Mina Array Bea	64.52	60	P	P	10 38 16.9	+2.5
	comp=Z,1.4nm,0.7s,mb4.1,baz=298,slow=7.0,SNR=5.9						
PDAR	Pinedale Array	66.91	52	P	P	10 38 30.9	+1.3
	comp=Z,1.6nm,0.7s,mb4.2,baz=292,slow=1.3,SNR=16						
NOA	NORSAR Array B	69.19	340	P	P	10 38 41.2	-2.4
	comp=Z,0.9nm,1.0s,mb3.7,baz=32,slow=6.0,SNR=3.0						
NOA	NORSAR Array B	69.19	340	P	P	10 38 41.2	-2.4
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	70.27	197	P	P	10 38 54.0	+3.4
	comp=Z,0.3nm,0.6s,mb3.4,baz=4.5,slow=5.4,SNR=7.0						
AKASG	Malin Array Be	71.97	325	P	P	10 38 58.6	-2.1
	comp=Z,0.1nm,0.2s,mb3.3,baz=38,slow=6.6,SNR=4.4						
TXAR	Lajitas Array	79.60	59	P	P	10 39 46.0	+1.4
	comp=Z,1.7nm,0.6s,mb4.2,baz=300,slow=4.3,SNR=50						
TXAR	Lajitas Array	79.60	59	eP	P	10 39 46.0	+1.4
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PLCA	Paso Flores	149.58	96	PKPbc	PKPbc	10 47 27.2	+1.2
	comp=Z,1.7nm,0.7s,baz=14,slow=10,SNR=4.9						
CPUP	Villa Florida	150.57	60	PKPbc	PKPbc	10 47 28.8	-0.1
	comp=Z,0.6nm,0.5s,baz=341,slow=5.0,SNR=3.8						

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*NEIC **08** 10:41:20.8, 3244N×11521W, h0km, ML2.9(PAS), ML3.2(ECX), After ECX.*
ECX 08 10:41:20.8±0.5, 3244N×11521W, h10km±3km, MD3.0, ML3.2, 3C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.09	258⇑	eP	Pg	10 41 14.9	-8.2
CPBX				eS	Sg	10 41 16.7	-8.1
COA	Coachella	0.43	9⇓	eP	Pg	10 41 29.1	-0.2
ERPC	Ernies Place	0.49	309⇓	eP	Pg	10 41 29.7	-0.7
WESC	Westside Schoo	0.55	306	eP	Pg	10 41 30.5	-1.0
YMD	Yuma Desert	0.57	78⇓	eP	Pg	10 41 30.6	-1.2
BTCC	Brunts Corner	0.58	359⇓	eP	Pg	10 41 31.1	-0.9
COK	Cook Ranch	0.60	313	eP	Pg	10 41 31.4	-1.1
GLA	Glamis	0.69	27⇓	eP	Pg	10 41 32.8	-1.4
GLA	Glamis	0.69	27⇓	iPg	Pg	10 41 32.7	-1.5
GLA				eSg	Sg	10 41 42.0	-1.3
RDX	Rancho Dowling	0.80	232⇓	eP	Pg	10 41 34.5	-1.8
RDX				eS	Sg	10 41 45.8	-1.0
RDX			⇓	e		10 41 46.9	
	comp=N,617nm,0.5s						
RDX	Rancho Dowling	0.80	232⇓	eP	Pg	10 41 34.5	-1.8
RDX				eS	Sg	10 41 45.8	-1.0
ECBX	El Chinero	0.97	172⇑	eP	Pg	10 41 37.5	-2.0
ECBX				eS	Sg	10 41 50.9	-1.2
CBX	Cerro Bola	1.24	265⇓	eP	Pn	10 41 42.6	-1.6
CBX				eS	Sb	10 41 58.9	-1.4
SPX	San Pedro Mart	1.40	189	eP	Pn	10 41 45.5	-0.9
SPX				eS	Sn	10 42 04.5	-0.5
PBX	Punta Banda	1.46	242⇑	ePN	Pn	10 41 46.9	-0.3
PBX				eS	Sn	10 42 05.4	-1.1
PFO	Pinyon Flat Ob	1.57	318	ePn	Pn	10 41 45.2	-3.6
LDFC	Landfair	2.64	2	Pg	Pg	10 42 12.9	+1.5
TUC	Tucson	3.74	91	Pn	Pn	10 42 22.9	+4.3
WUAZ	Wupatki	4.42	45	ePn	Pn	10 42 26.7	-1.3
WUAZ				ePg	Pg	10 42 42.7	-2.9
TPNV	Topopah Spring	4.58	349	ePg	Pg	10 42 50.5	+1.9

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*IDC **08** 10:52:28.1±2.7, 2576N×6744E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.7/5, MS3.3/2, Ms1 3.3/2, ms1mx2.7/34, Error ellipse: s-maj=69.3km s-min=28.1km az=145.0*
*ISCJB **08** 10:52:30.7±1.5, 258N±02×6765E±009, h33km, mb3.6/5, MS3.3/2, Error ellipse: s-maj=23.1km s-min=11.9km az=5.4*
*NEIC **08** 10:52:31.9±2.9, 2604N×6774E, h10km, mb3.7/3, Error ellipse: s-maj=49.7km s-min=30.5km az=55.0*
ISC 08 10:52:33.5±1.4, 259N±02×6758E±009, h35km, n18, σ0s96/14, mb3.6/5, MS3.3/2, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	Ajmer	6.37	84	ex	x	10 54 37.0	
KHET	Khetri	7.64	72	eP	Pn	10 54 21.8	-0.6
KHET				eS	Sx	10 55 42.1	
KUDL	Kundal	8.25	73	eP	Pn	10 54 31.9	+1.2
KUDL				eS	Sx	10 55 56.2	
SONA	Sohna	8.78	73	eS	Sx	10 56 08.7	
SONA				AML	AML	10 57 34.4	
	comp=N,10nm,0.0s						
SONA				AML	AML	10 57 35.2	
	comp=E,13nm,0.4s						
NDI	New Delhi	9.00	70	eP	Pn	10 54 40.0	-1.0
NDI				eS	Sx	10 56 15.0	
SMLA	Simla	9.89	56	i P	Pn	10 54 53.5	+0.3
SMLA				eS	Sx	10 56 34.5	
SMLA				ex	x	10 56 43.4	
	comp=E,58nm,0.4s						
SMLA				ex	x	10 56 52.8	
	comp=N,70nm,0.4s						
DDI	Dehra Dun	10.23	62	eP	Pn	10 54 57.0	-0.8
AML	Almayashu	16.93	16	ePn	Pn	10 56 26.5	-1.0
	comp=N,7.1nm,0.8s						
AAK	Ala-Archa	17.60	17	ePn	Pn	10 56 35.3	-0.7
	comp=N,3.0nm,0.9s						
TKM2	Tokmak 2	18.18	19	ePn	Pn	10 56 43.0	0.0
	comp=N,8.2nm,1.1s						
GNI	Garni	23.73	312	LR	LR	11 08 47.5	
	comp=N,32nm,21.4s,MS2.8,baz=345,slow=41						
MKAR	Makanchi Array	23.88	26	P	P	10 57 44.2	+0.6
	comp=N,0.6nm,0.8s,mb3.1,baz=213,slow=10,SNR=6.5						
AKTK	Aktyubinsk	25.55	346	P	P	10 57 59.0	+0.1
AKTO	Aktyubinsk	25.55	346	P	P	10 57 59.0	+0.1
	comp=N,2.3nm,0.8s,mb3.8,baz=162,slow=6.4,SNR=6.6						
BVAR	Borovoye Array	27.14	4	P	P	10 58 16.4	+3.2
	comp=N,0.4nm,0.4s,mb3.3,baz=161,slow=9.2,SNR=3.7						
SONM	Songino Array	37.43	44	P	P	10 59 45.1	+1.9
	comp=N,0.6nm,0.7s,mb3.5,baz=233,slow=9.9,SNR=4.2						
ASAJ	Asahikawa	62.01	52	LR	LR	11 32 46.1	
	comp=N,56nm,18.3s,MS3.8,baz=165,slow=39						
TORD	Torodi Ar. Bea	62.83	272	P	P	11 02 55.3	-0.8
	comp=N,1.4nm,0.8s,mb4.2,baz=60,slow=5.9,SNR=11						

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*ISCJB **08** 10:57:57.8±1.8, 1874N±010×1455E±02, h226km±17km, mb3.5/11, Error ellipse: s-maj=24.9km s-min=15.8km az=176.5*
*IDC **08** 10:57:58.3±1.8, 1874N×14562E, h218km±17km, mb3.4/9, mb1 3.6/11, mb1mx3.4/24, mbtmp3.5/11, Error ellipse: s-maj=21.6km s-min=13.5km az=90.0*
*NEIC **08** 10:57:58.4±1.4, 1879N×14551E, h218km±13km, mb4.0/2, Error ellipse: s-maj=23.1km s-min=10.7km az=96.0*
ISC 08 10:57:58.4±1.7, 1872N±010×1456E±02, h217km±16km, n17, σ0s71/18, mb3.5/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.16	188	P	Pn	10 59 15.9	+0.7
	4.8nm,0.3s,baz=16,slow=20,SNR=6.3						
GUMO				S	S	11 00 15.2	-1.0
	11nm,0.3s,baz=343,slow=20,SNR=3.8						
JOW	Kunigami	17.90	300	P	P	11 01 53.6	+1.6
	4.7nm,0.3s,baz=143,slow=16,SNR=11						
WRAB	Tennant Creek	39.97	197	eP	P	11 05 12.2	+0.3
	4.8nm,0.5s,mb4.2						
WB2	Warramunga Arr	39.98	197	eP	P	11 05 12.1	0.0
WRA	Warramunga Arr	39.98	197	P	P	11 05 12.5	+0.4
	baz=22,slow=8.8						
FITZ	Fitzroy Crossi	41.53	209	eP	P	11 05 24.8	+0.1
	2.2nm,0.7s,mb3.7						
ASAR	Alice Springs	43.65	196	P	P	11 05 42.0	+0.3
	0.7nm,0.5s,mb3.2,baz=12,slow=8.0,SNR=22						
ASAR				ScP	ScP	11 10 54.5	-1.3
	0.3nm,0.9s,baz=8.8,slow=2.7,SNR=4.1						

MKAR	**Makanchi Array**	**58.39**	**314**	P	**P**	**11 07 30.6**	**-0.5**
	0.1nm,0.3s,mb2.9,baz=100,slow=8.1,SNR=4.1						
KURK	**Kurchatov**	**61.20**	**318**	P	**P**	**11 07 49.1**	**-1.0**
	0.4nm,0.4s,mb3.4,baz=93,slow=7.2,SNR=2.9						
BVAR	**Borovoye Array**	**66.41**	**320**	P	**P**	**11 08 23.1**	**-0.9**
	0.5nm,0.5s,mb3.4,baz=31,slow=0.8,SNR=3.5						
DLBC	**Dease Lake**	**71.31**	**34**	P	**P**	**11 08 54.5**	**+0.4**
	0.7nm,0.7s,mb3.4,baz=279,slow=4.6,SNR=5.2						
DLBC	**Dease Lake**	**71.31**	**34**	P	**P**	**11 08 54.5**	**+0.3**
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**11 09 32.0**	**-0.4**
	1.0nm,0.5s,mb3.7,baz=288,slow=5.5,SNR=18						
YKA	**Yellowknife Ar**	**78.00**	**28**	P	**P**	**11 09 32.0**	**-0.4**
ARCES	**ARCESS Array B**	**82.45**	**342**	P	**P**	**11 09 55.3**	**-0.7**
	2.4nm,0.9s,mb3.8,baz=78,slow=8.4,SNR=5.6						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	**P**	**11 10 01.4**	**+1.0**
	2.5nm,0.7s,mb4.0,baz=260,slow=5.8,SNR=14						
PDAR	**Pinedale Array**	**87.86**	**45**	P	**P**	**11 10 23.2**	**-0.2**
	0.2nm,0.6s,mb3.2,baz=357,slow=1.8,SNR=3.2						

*ISCJB **08** 11:10:39.9±0.9, 2983N±004×3626E±005, h0^{km}, Error ellipse: s-maj=6.7km s-min=5.4km az=171.0*
*GII **08** 11:10:40.6±0.6, 2987N×36.15E, h0^{km}, ML2.2/4, EXPLOSION*
*CSEM **08** 11:10:40.2, 3007N×3626E, h8^{km}, ML2.6, After SNSN*
*SGS **08** 11:10:40.2, 3007N×3626E, h3^{km}*
ISC 08 11:10:39.8±0.9**, 2983N**±004×**3631E**±005**, h0^{km}, n19, σ0^{s}56**/28**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.10**	**265**	Pg	**Pg**	**11 11 00.5**	**-0.4**
HRFI	**Mount Harif**	**1.13**	**281**	Pg	**Pg**	**11 11 00.8**	**-0.6**
HRFI				Sg	**Sg**	**11 11 15.8**	**-0.2**
EIL	**Elat**	**1.20**	**263**	Pg	**Pg**	**11 11 02.5**	**-0.2**
HQLS		**1.21**	**245**	P	**Pg**	**11 11 02.6**	**-0.4**
HQLS		**1.21**	**245**	P	**Pg**	**11 11 02.6**	**-0.3**
HQLS				S	**Sg**	**11 11 19.4**	**+0.8**
MBRI	**Mt Berech**	**1.22**	**269**	Pg	**Pg**	**11 11 02.7**	**-0.4**
MBRI				Sg	**Sg**	**11 11 20.0**	**+1.1**
ZFRI	**Zfri**	**1.22**	**307**	Pg	**Pg**	**11 11 02.4**	**-0.7**
ZFRI				Sg	**Sg**	**11 11 19.1**	**0.0**
PRNI	**Paran**	**1.25**	**295**	Pg	**Pg**	**11 11 02.9**	**-0.8**
PRNI				Sg	**Sg**	**11 11 20.1**	**+0.2**
JLOS		**1.30**	**214**	P	**Pg**	**11 11 05.2**	**+0.5**
JLOS		**1.30**	**214**	P	**Pg**	**11 11 05.2**	**+0.5**
KRMI	**Paran Flat**	**1.41**	**282**	Pg	**Pg**	**11 11 05.8**	**-1.0**
KRMI				Sg	**Sg**	**11 11 24.6**	**-0.5**
RMNI	**Mount Ramon**	**1.55**	**300**	Pn	**Pn**	**11 11 08.2**	**-0.3**
MZDA	**Masada**	**1.69**	**331**	Pn	**Pn**	**11 11 10.6**	**0.0**
MZDA				Sn	**Sn**	**11 11 33.8**	**+0.9**
BDAS	**Al Bad‘**	**1.75**	**218**	P	**Pn**	**11 11 11.9**	**+0.6**
YTIR	**Yattir**	**1.85**	**326**	Pn	**Pn**	**11 11 12.4**	**-0.3**
RTMI	**Retamim**	**1.86**	**312**	Pn	**Pn**	**11 11 13.2**	**+0.4**
RTMI				Sn	**Sn**	**11 11 37.6**	**+0.5**
DSI	**Dead Sea**	**1.91**	**335**	Pn	**Pn**	**11 11 14.6**	**+1.0**
KZIT	**Kziot**	**1.98**	**303**	Pn	**Pn**	**11 11 14.1**	**-0.3**
KZIT				Sn	**Sn**	**11 11 40.2**	**+0.3**
RSHS		**2.02**	**221**	P	**Pn**	**11 11 14.8**	**-0.3**

IDC 08 12:02:46.4±1.0**, 1535S**×**17350W, h0^{km}, mb4.0**/5**, mb1 4.3**/5**, mb1mx3.9**/16**, mbtmp4.0**/5**, Error ellipse: s-maj=66.7km s-min=26.6km az=153.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.98**	**240**	P	P	12 10 56.1	+0.5
	1.5nm,0.5s,baz=90,slow=11,SNR=3.2						
ASAR	**Alice Springs**	**50.04**	**252**	P	P	12 11 42.5	-0.6
	2.7nm,0.6s,baz=85,slow=8.0,SNR=45						
TXAR	**Lajitas Array**	**80.66**	**56**	P	P	12 15 01.4	-0.1
	0.8nm,1.0s,baz=212,slow=4.4,SNR=4.8						
PDAR	**Pinedale Array**	**82.29**	**42**	P	P	12 15 10.1	+0.2
	0.3nm,0.8s,baz=218,slow=5.6,SNR=3.6						
PLCA	**Paso Flores**	**89.61**	**132**	P	P	12 15 46.5	+0.3
	2.4nm,1.0s,baz=288,slow=6.4,SNR=2.9						
BRTR	**Keskin Array B**	**146.06**	**321**	PKPbc	PKPbc	12 22 28.7	+0.1
	0.7nm,0.7s,baz=70,slow=2.1,SNR=3.8						

*ISCJB **08** 12:04:50.5±0.8, 5145N±004×16.12E±004, h10^{km}, Error ellipse: s-maj=6.1km s-min=3.1km az=13.7*
*WAR **08** 12:04:52.7, 5145N×16.18E, Mw2.6*
*NEIC **08** 12:04:56.2±1.4, 5122N×1588E, h5^{km}, MG2.6(WAR), Error ellipse: s-maj=17.4km s-min=7.7km az=200.0*
ISC 08 12:04:52.6±0.8**, 5141N**±004×**1613E**±004**, h10^{km}, n18, σ1^{s}15**/39**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.58**	**170**	*e*Pg	**Pg**	**12 05 03.8**	**+0.1**
KSP				*e*Sg	**Sg**	**12 05 11.9**	**+0.6**
KSP	**Ksiaz**	**0.58**	**170**	*e*Pg	**Pg**	**12 05 03.8**	**+0.1**
KSP				*e*Sg	**Sg**	**12 05 11.8**	**+0.5**
UPC	**Upice**	**0.91**	**185**	*e*PG	**Pg**	**12 05 10.0**	**0.0**
UPC				*e*SG	**Sg**	**12 05 22.3**	**+0.5**
	comp=Z,28nm,0.4s						
DPC	**Dobruska-Polom**	**1.07**	**173**	*e*PG	**Pg**	**12 05 12.8**	**-0.2**
DPC				*e*SG	**Sg**	**12 05 26.6**	**-0.3**
	comp=Z,49nm,0.7s						
PVCC	**Panska Ves**	**1.32**	**229**	*e*PG	**Pg**	**12 05 18.3**	**+0.4**
PVCC				*e*SG	**Sg**	**12 05 36.1**	**+1.0**
	comp=Z,106nm,0.3s						
BRG	**Berggiesshubel**	**1.48**	**250**	PG	**Pg**	**12 05 20.7**	**-0.2**
BRG				SG	**Sg**	**12 05 41.1**	**+1.0**
	comp=Z,55nm,0.5s						
PRU	**Pruhonice**	**1.75**	**216**	*e*PG	**Pg**	**12 05 24.8**	**-1.2**
PRU				*e*SG	**Sg**	**12 05 48.5**	**-0.1**
	comp=Z,29nm,0.3s						
CLL	**Collm**	**1.96**	**268**	*i* Pn	**Pn**	**12 05 26.1**	**+0.3**
CLL				*i* Pg	**Pg**	**12 05 28.5**	**-1.7**
CLL				*e*x	x	12 05 30.0	
CLL				*e*Sn	**Sn**	**12 05 48.0**	**-2.5**
CLL				*e*Sg	**Sg**	**12 05 57.0**	**+1.4**
	comp=Z,25nm,0.3s						
CLL	**Collm**	**1.96**	**268**	*i* Pn	**Pn**	**12 05 26.1**	**+0.3**
CLL				*i* Pg	**Pg**	**12 05 28.5**	**-1.7**
CLL				*e*Sg	**Sg**	**12 05 57.0**	**+1.4**
VRAC	**Vranov**	**2.12**	**172**	P	**Pn**	**12 05 29.9**	**+1.8**
TREC	**Trest**	**2.16**	**191**	*e*PN	**Pn**	**12 05 30.4**	**+1.9**
TREC				*e*PG	**Pg**	**12 05 32.8**	**-1.1**
KRUC	**Moravsky**	**2.36**	**176**	P	**Pn**	**12 05 33.2**	**+2.0**
OJC	**Ojcow**	**2.61**	**116**	*e*Pg	**Pg**	**12 05 42.0**	**-0.6**
OJC				*e*Sg	**Sg**	**12 06 17.0**	**+0.5**
NKC	**Novy Kostel**	**2.62**	**245**	*e*PN	**Pn**	**12 05 35.8**	**+1.0**
NKC				*e*PG	**Pg**	**12 05 41.0**	**-1.6**
NKC				*e*SG	**Sg**	**12 06 15.8**	**-0.7**
	comp=Z,27nm,0.4s						
KHC	**Kasperske Hory**	**2.81**	**217**	*e*PN	**Pn**	**12 05 38.7**	**+1.3**
KHC				*e*PG	**Pg**	**12 05 44.3**	**-2.0**
KHC				*e*SN	**Sn**	**12 06 12.5**	**+1.2**
KHC				*e*SG	**Sg**	**12 06 21.0**	**-1.7**
	comp=Z,9.1nm,0.3s						
MOX	**Moxa**	**2.95**	**257**	*e*PG	**Pg**	**12 05 48.3**	**-0.8**
MOX				*e*SG	**Sg**	**12 06 28.4**	**+1.1**
KOLL	**Kolacno**	**3.19**	**152**	*e*SG	**Sg**	**12 06 33.4**	**-1.6**
STHS	**Stebnicka Huta**	**3.83**	**119**	*e*PG	**Pg**	**12 06 05.3**	**-0.6**
STHS				*e*SG	**Sg**	**12 07 00.0**	**+4.5**

*NIED **08** 12:26:00, 3880N×14350E, h11^{km}, Mw3.8 Best double couple: $M_0$4.97000×10^{14} NP1: ϕ_s35.00000°, δ74.00000°, λ120.00000°. NP2: ϕ_s151.00000°, δ34.00000°, λ30.00000°.*
*IDC **08** 12:26:15.0±3.1, 3862N×144.11E, h0^{km}, mb3.6/3, mb1 3.8/7, mb1mx3.5/25, mbtmp3.9/7, ML3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/34, Error ellipse: s-maj=57.5km s-min=25.0km az=100.0*
*ISCJB **08** 12:26:20.9±1.8, 3882N±005×14350E±008, h28^{km}±20^{km}, mb3.5/3, Error ellipse: s-maj=12.8km s-min=6.4km az=35.8*
*NEIC **08** 12:26:20.8±11.0, 3887N×14351E, h10^{km}, MG3.5(JMA), Error ellipse: s-maj=207.0km s-min=11.7km az=118.0*
*JMA **08** 12:26:21.0±0.2, 3878N×14349E, h33^{km}, M3.5*
ISC 08 12:26:21.7±2.0**, 3887N**±006×**1434E**±01**, h15^{km}**±18^{km}**, n22, σ0^{s}79**/34**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**1.37**	**280**	P	**Pn**	**12 26 45.9**	**-0.3**
OFUJ				*e*S	**Sn**	**12 27 03.7**	**-0.3**
MIYJ	**Miyakonagasawa**	**1.42**	**301**	P	**Pn**	**12 26 46.5**	**-0.4**
MIYJ				*e*S	**Sn**	**12 27 04.8**	**-0.5**
JIO	**Ouri**	**1.66**	**256**	P	**Pn**	**12 26 49.4**	**-0.8**
JIO				S	**Sn**	**12 27 10.1**	**-1.1**
JMK	**Ichinoseki**	**1.70**	**274**	P	**Pn**	**12 26 50.8**	**0.0**
JMK				S	**Sn**	**12 27 13.0**	**+0.6**
JOM	**Ohasama**	**1.75**	**291**	P	**Pn**	**12 26 51.7**	**+0.3**
JOM				*e*S	**Sn**	**12 27 14.5**	**+1.1**
JANG	**Nango**	**2.10**	**317**	P	**Pn**	**12 26 55.8**	**-0.4**
JOU	**Okura**	**2.20**	**258**	P	**Pn**	**12 26 57.4**	**-0.3**
JOU				*e*S	**Sn**	**12 27 23.9**	**-0.7**
JMM	**Marumori**	**2.28**	**245**	P	**Pn**	**12 26 57.4**	**-1.3**
JMM				*e*S	**Sn**	**12 27 25.0**	**-1.6**
JYK	**Kaneyama**	**2.38**	**272**	P	**Pn**	**12 27 00.4**	**+0.3**
JYK				*e*S	**Sn**	**12 27 30.8**	**+1.9**
ERM	**Erimo**	**3.15**	**357**	*e*Pn	**Pn**	**12 27 10.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**3.45**	**352**	P	**Pn**	**12 27 14.6**	**-0.2**
JNBK				*e*S	**Sn**	**12 27 54.8**	**-0.6**
MJAR	**Matsushiro Arr**	**4.72**	**242**	Pn	**Pn**	**12 27 33.2**	**+0.8**
	2.0nm,0.3s,baz=81,slow=18,SNR=24						
MJAR				Sn	**Sn**	**12 28 33.6**	**+6.7**
	baz=52,slow=14,SNR=3.0						
MJAR	**Matsushiro Arr**	**4.72**	**242**	Pn	**Pn**	**12 27 33.2**	**+0.8**
MJAR				Sn	**Sn**	**12 28 33.6**	**+6.7**
MAJO	**Matsushiro**	**4.73**	**242**	*e*Pn	**Pn**	**12 27 33.1**	**+0.8**
MAT	**Matsushiro**	**4.73**	**242**	P	**Pn**	**12 27 33.4**	**+1.0**
MAT				S	**Sn**	**12 28 27.4**	**+0.5**
ASAJ	**Asahikawa**	**5.28**	**354**	Pn	**Pn**	**12 27 40.0**	**+0.1**
	1.1nm,0.3s,baz=164,slow=33,SNR=11						
ASAJ				Sn	**Sn**	**12 28 36.4**	**-4.2**
	baz=45,slow=20,SNR=2.3						
JHJ	**Hachijo jima 2**	**6.44**	**208**	Pn	**Pn**	**12 27 51.8**	**-4.2**
	3.4nm,0.3s,baz=76,slow=19,SNR=3.9						
CBIJ	**Chichi jima**	**11.78**	**185**	Pn	**Pn**	**12 29 01.9**	**-7.3**
	1.1nm,0.3s,baz=3.9,slow=18,SNR=4.2						
FX1	**Attu Island--F**	**24.80**	**46**	LR	LR	12 41 36.6	
	comp=Z,31nm,18.8s,baz=105,slow=38						
SONM	**Songino Array**	**28.14**	**301**	P	**P**	**12 32 13.7**	**+0.7**
	0.2nm,0.5s,mb3.0,baz=108,slow=9.5,SNR=2.3						
MKAR	**Makanchi Array**	**44.50**	**301**	P	**P**	**12 34 33.1**	**+0.8**
	0.6nm,0.5s,mb3.7,baz=87,slow=8.4,SNR=15						
KURK	**Kurchatov**	**46.06**	**307**	P	**P**	**12 34 45.0**	**+0.4**
	0.6nm,0.4s,mb3.8,baz=80,slow=8.3,SNR=5.6						

*ISCJB **08** 12:29:21.0±2.1, 70S±02×15579E±008, h88^{km}±22^{km}, mb3.5/5, Error ellipse: s-maj=27.0km s-min=13.9km az=4.1*
*NEIC **08** 12:29:22.5±1.6, 699S×15584E, h89^{km}±15^{km}, mb3.5/1, Error ellipse: s-maj=24.6km s-min=14.1km az=181.0*
*IDC **08** 12:29:22.6±5.6, 695S×15580E, h91^{km}±60^{km}, mb3.5/4, mb1 3.5/5, mb1mx3.3/16, mbtmp3.5/5, ML3.6/1, MS3.1/4, Ms1 3.1/4, ms1mx2.9/17, Error ellipse: s-maj=44.0km s-min=25.0km az=135.0*
ISC 08 12:29:22.7±1.8**, 70S**±02×**15579E**±008**, h89^{km}**±18^{km}**, n13, σ0^{s}66**/12**, mb3.5**/5**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.79**	**121**	P	**Pn**	**12 30 31.4**	**-1.1**
	2.7nm,0.3s,baz=245,slow=17,SNR=2.1						
HNR				S	**Sn**	**12 31 27.6**	**+0.7**
	9.4nm,0.3s,baz=143,slow=19,SNR=4.0						
HNR				LR	LR	12 31 44.1	
	comp=Z,86nm,21.4s,baz=93,slow=30						
HNR	**Honiara**	**4.79**	**121**	P	**Pn**	**12 30 31.4**	**-1.2**
HNR				S	**Sn**	**12 31 27.6**	**+0.7**
HNR				LR	LR	12 31 44.1	
PMG	**Port Moresby**	**8.88**	**254**	*e*Pn	**Pn**	**12 31 28.9**	**+0.6**
CTA	**Charters Tower**	**16.00**	**214**	LR	LR	12 38 12.3	
	comp=Z,110nm,19.6s,baz=48,slow=33						
WRAB	**Tennant Creek**	**24.48**	**236**	*e*P	**P**	**12 34 33.4**	**-0.2**
	0.8nm,0.4s,mb3.4						
WB2	**Warramunga Arr**	**24.48**	**236**	*e*P	**P**	**12 34 33.4**	**-0.3**
WRA	**Warramunga Arr**	**24.49**	**236**	P	**P**	**12 34 33.5**	**-0.3**
	baz=62,slow=9.6						
ASAR	**Alice Springs**	**26.79**	**229**	P	**P**	**12 34 53.9**	**-0.8**
	0.4nm,0.4s,mb3.3,baz=59,slow=10,SNR=6.9						
STKA	**Stephens Creek**	**28.11**	**206**	P	**P**	**12 35 07.4**	**+1.1**
	0.7nm,0.5s,mb3.4,baz=54,slow=8.7,SNR=3.1						
STKA				LR	LR	12 46 38.4	
	comp=Z,52nm,21.1s,baz=24,slow=37						
KAPI	**Kappang**	**35.89**	**271**	LR	LR	12 48 52.6	
	comp=Z,37nm,21.8s,baz=48,slow=33						
SONM	**Songino Array**	**69.73**	**327**	P	**P**	**12 40 23.7**	**+0.6**
	0.5nm,0.4s,mb3.7,baz=139,slow=5.6,SNR=4.8						
MKAR	**Makanchi Array**	**83.90**	**319**	P	**P**	**12 41 42.7**	**-0.1**
	0.4nm,0.5s,mb3.5,baz=101,slow=5.0,SNR=8.6						
TORD	**Torodi Ar. Bea**	**153.78**	**286**	PKPbc	PKPbc	12 49 11.2	-1.4
	0.2nm,0.3s,baz=80,slow=2.7,SNR=3.6						

GUC 08 13:14:44.0±0.6**, 2394S**×**6724W, h210^{km}, ML3.9, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.02**	**310**⇑	*i*P	Pn	13 15 25.0	+1.5
LVC				*i* S	S	13 15 57.0	+2.7
CEN1	**Los Morros**	**2.77**	**281**⇑	*i*P	Pn	13 15 34.5	+3.0
CEN1				*i* S	S	13 16 12.3	+3.6
CEN1				AML	AML	13 16 15.2	
	comp=N,111nm,0.6s						
ANCH	**Antofagasta**	**2.92**	**274**⇑	*i*P	Pn	13 15 34.9	+1.7
ANCH				*i* S	S	13 16 13.7	+2.0
CPN1	**Cerro Paranal**	**2.97**	**256**⇓	*i*P	Pn	13 15 35.1	+1.3
CPN1				*i* S	S	13 16 14.7	+1.9
CPN1				AML	AML	13 16 17.5	
	comp=E,218nm,0.5s						
MECH	**Mejillones**	**3.06**	**285**	*e*P	Pn	13 15 36.8	+2.0
MECH				AML	AML	13 16 20.9	
	comp=N,172nm,0.3s						
PB01	**Plate Boundary**	**3.55**	**324**	AML	AML	13 16 28.1	
	comp=E,109nm,0.2s						

*IDC **08** 13:24:16.5±2.7, 482N×12650E, h105^{km}±24^{km}, mb4.0/11, mb1 4.1/13, mb1mx3.9/22, mbtmp4.1/13, Error ellipse: s-maj=26.7km s-min=11.8km az=75.0*
*ISCJB **08** 13:24:17.9±0.5, 470N±003×12639E±007, h136^{km}±4^{km}, mb4.3/21, Error ellipse: s-maj=11.0km s-min=4.7km az=171.1*
*MAN **08** 13:24:19, 482N×126.18E, h153^{km}, mb5.1, ML4.1, MS4.3*
*NEIC **08** 13:24:19.7±0.9, 473N×12633E, h136^{km}±8^{km}, mb4.6/11, Error ellipse: s-maj=11.8km s-min=5.2km az=71.0*
*DJA **08** 13:24:19, 460N×12647E, h71^{km}, MLv5.0/4*
ISC 08 13:24:18.8±0.5**, 471N**±003×**12641E**±006**, h127^{km}**±4^{km}**, n59, σ1^{s}00**/65**, mb4.3**/21**, 2C-3D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.00**	**313**⇓	*e*P	**Pn**	**13 24 51.3**	**-1.3**
GSPH				*e*S	**Sn**	**13 25 16.1**	**+0.3**
MATI	**Mati**	**2.23**	**356**	*e*P	**Pn**	**13 24 55.9**	**+0.5**
MATI				*e*S	**Sn**	**13 25 20.1**	**-1.3**
DAV	**Davao City (W)**	**2.48**	**341**	P	**Pn**	**13 24 59.6**	**+0.8**
	182nm,0.3s,baz=178,slow=1.7,SNR=21						
DAV				S	**Sn**	**13 25 31.8**	**+4.1**
	234nm,0.3s,baz=90,slow=22,SNR=6.7						
DAV	**Davao City (W)**	**2.48**	**341**	P	**Pn**	**13 24 59.2**	**+0.5**
KCP	**Kidapawan**	**2.63**	**330**⇑	*e*P	**Pn**	**13 25 03.3**	**+2.6**
KCP				*i* S	**Sn**	**13 25 38.6**	**+7.3**
BUKP	**Musuan**	**3.42**	**337**	*e*P	**Pn**	**13 25 11.7**	**+0.8**
BUKP				*e*S	**Sn**	**13 25 44.2**	**-6.1**
BIPH	**Bislig**	**3.45**	**359**⇑	*e*P	**Pn**	**13 25 11.3**	**0.0**
BIPH				*e*S	**Sn**	**13 25 45.0**	**-6.0**
MNI	**Manado**	**3.60**	**206**	P	**Pn**	**13 25 13.4**	**+0.1**
MNI				S	**Sn**	**13 25 54.2**	**-0.6**
TNTI	**Ternate**	**4.03**	**166**	S	**Sn**	**13 26 03.5**	**-1.5**
BUTP	**Butuan**	**4.30**	**350**	*e*P	**Pn**	**13 25 24.7**	**+2.1**
PAGZ	**Pagadian**	**4.33**	**316**	*e*P	**Pn**	**13 25 22.6**	**-0.4**
IPIL	**Ipil**	**4.89**	**309**	*e*P	**Pn**	**13 25 29.7**	**-0.7**
SCPH	**Surigao**	**5.12**	**350**⇓	*e*P	**Pn**	**13 25 34.3**	**+0.7**
LBMI	**Labuha**	**5.42**	**168**	P	**Pn**	**13 25 37.4**	**-0.2**
	165nm,0.9s,4μm1.4nm						
TBP	**Tagbilaran**	**5.56**	**333**	*e*P	**Pn**	**13 25 35.8**	**-3.6**
MSLP	**Maasin**	**5.60**	**344**	*e*P	**Pn**	**13 25 40.1**	**0.0**
MYLDM	**Lahad Datu**	**7.89**	**274**	P	**Pn**	**13 26 12.8**	**+1.8**
	71nm,1.0s,0.2nm						
AAI	**Ambon**	**8.53**	**168**	P	**Pn**	**13 26 18.7**	**-0.9**
	39nm,0.5s,1μm						
PCI	**Palu**	**8.62**	**230**	P	**Pn**	**13 26 22.4**	**+1.7**
	62nm,0.9s						
SJMP	**San Jose**	**9.31**	**326**	*e*P	**Pn**	**13 26 36.5**	**+6.5**
KAPI	**Kappang**	**11.73**	**215**	P	**Pn**	**13 27 01.4**	**-0.9**
	1.1nm,0.3s,baz=357,slow=4.1,SNR=11						
KAPI	**Kappang**	**11.73**	**215**	P	**Pn**	**13 27 00.9**	**-1.4**
BATI	**Baumata**	**15.07**	**190**	P	**Pn**	**13 27 46.5**	**+1.2**
	1.8nm,0.3s,baz=57,slow=3.0,SNR=3.3						
BATI				S	**S**	**13 30 42.3**	**+1.9**
	0.5nm,0.3s,baz=58,slow=17,SNR=4.4						
KSM	**Kuching**	**16.39**	**259**	*e*P	**Pn**	**13 28 03.1**	**+1.4**
	16nm,0.5s						
KAKA	**Kakadu**	**18.32**	**161**	*e*P	x	13 28 04.5	
	15nm,0.3s						
FITZ	**Fitzroy Crossi**	**22.68**	**182**	*e*P	**P**	**13 29 09.9**	**+0.1**
	12nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**25.70**	**163**	*e*P	**P**	**13 29 36.6**	**-0.7**
	12nm,0.4s,mb4.7						
WB2	**Warramunga Arr**	**25.71**	**163**	*e*P	**P**	**13 29 37.3**	**-0.1**
CBIJ	**Chichi jima**	**26.87**	**32**	P	**P**	**13 29 45.5**	**-2.2**
	18nm,0.6s,mb4.8,baz=272,slow=18,SNR=3.4						
ASAR	**Alice Springs**	**29.14**	**166**	P	**P**	**13 30 08.2**	**+0.3**
	5.7nm,0.6s,mb4.4,baz=350,slow=7.6,SNR=110						
ASAR				PcP	PcP	13 33 13.7	+0.9
	1.0nm,0.6s,baz=348,slow=2.7,SNR=4.9						
ASAR				ScP	ScP	13 36 44.4	+1.6
	0.8nm,0.8s,baz=333,slow=2.1,SNR=7.0						
CMAR	**Chiang Mai Arr**	**30.11**	**299**	P	**P**	**13 30 17.4**	**+0.7**
	0.6nm,0.6s,mb3.4,baz=124,slow=7.4,SNR=5.2						
FORT	**Forrest**	**35.32**	**178**	*e*P	**P**	**13 31 02.3**	**+0.4**
	9.4nm,0.5s,mb4.9						
KLBR	**Kellerberrin**	**37.03**	**192**	*e*P	**P**	**13 31 16.4**	**0.0**
MUN	**Mundaring**	**37.76**	**194**	*e*P	**P**	**13 31 22.8**	**+0.3**
NWAO	**Narrogin (SRO)**	**38.43**	**192**	P	**P**	**13 31 28.6**	**+0.5**
	2.5nm,0.5s,mb4.3,baz=45,slow=10.0,SNR=3.8						
STKA	**Stephens Creek**	**39.15**	**159**⇓	*i*P	**P**	**13 31 35.0**	**+0.8**
	8.7nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**39.15**	**159**	P	**P**	**13 31 35.1**	**+1.0**
	11nm,0.7s,mb4.8,baz=333,slow=8.0,SNR=21						
STKA				PcP	PcP	13 33 41.5	+0.3
	2.2nm,0.5s,baz=332,slow=7.2,SNR=3.1						
STKA	**Stephens Creek**	**39.15**	**159**	*e*P	**P**	**13 31 34.5**	**+0.3**
	2.0nm,0.7s,mb4.1						
ARMA	**Armidale**	**42.45**	**147**	*e*P	**P**	**13 32 03.2**	**+1.9**
TAPN	**Taplejung**	**43.19**	**306**	*e*P	**P**	**13 32 06.6**	**-0.7**
	8.5nm,0.6s,mb4.6						
RAMN	**Ramite**	**43.93**	**305**	*e*P	**P**	**13 32 12.5**	**-0.8**
	7.0nm,0.6s,mb4.5						
JIRN	**Jiri**	**44.55**	**305**	*e*P	**P**	**13 32 17.8**	**-0.4**
GUN	**Gumba**	**44.90**	**305**	*e*P	**P**	**13 32 20.5**	**-0.5**
	8.9nm,0.5s,mb4.7						
GKN	**Gorkha**	**45.95**	**305**	*e*P	**P**	**13 32 28.1**	**-1.1**
	4.1nm,0.6s,mb4.4						
SONM	**Songino Array**	**46.27**	**341**	P	**P**	**13 32 31.9**	**+0.4**
	0.2nm,0.4s,mb3.2,baz=138,slow=8.8,SNR=2.7						
SONM	**Songino Array**	**46.27**	**341**	P	**P**	**13 32 31.9**	**+0.4**
KOLN	**Koldanda**	**46.71**	**304**	*e*P	**P**	**13 32 34.5**	**-0.7**
	11nm,0.4s,mb4.9						
DANN	**Dangsing**	**46.79**	**305**	*e*P	**P**	**13 32 35.1**	**-0.7**
	20nm,0.4s,mb5.2						
MK31	**Makanchi Array**	**56.57**	**325**	*e*P	**P**	**13 33 47.5**	**-0.7**
MKAR	**Makanchi Array**	**56.57**	**325**	P	**P**	**13 33 48.0**	**-0.2**
	1.5nm,0.6s,mb4.2,baz=124,slow=8.3,SNR=23						
MKAR	**Makanchi Array**	**56.57**	**325**	P	**P**	**13 33 48.0**	**-0.2**
ZALV	**Zalesovo Beam**	**59.58**	**333**	P	**P**	**13 34 07.9**	**-1.0**
	0.6nm,0.4s,mb4.0,baz=126,slow=7.8,SNR=4.1						
KURK	**Kurchatov**	**60.75**	**327**	P	**P**	**13 34 16.7**	**-0.3**
	2.5nm,0.6s,mb4.4,baz=126,slow=6.3,SNR=24						
BVAR	**Borovoye Array**	**66.33**	**327**	P	**P**	**13 34 53.2**	**-0.4**
	1.2nm,0.6s,mb3.9,baz=124,slow=7.4,SNR=8.3						
BVAR				pP	pP	13 35 15.8	-8.9
	1.7nm,0.6s,baz=125,slow=7.8,SNR=7.4						
ARCES	**ARCESS Array B**	**89.42**	**340**	P	**P**	**13 37 00.2**	**-0.7**
	3.0nm,1.0s,mb4.3,baz=82,slow=5.7,SNR=6.6						
ARCES	**ARCESS Array B**	**89.42**	**340**	P	**P**	**13 37 00.2**	**-0.7**
YKA	**Yellowknife Ar**	**98.74**	**24**	P	**P**	**13 37 44.8**	**+1.1**
	0.2nm,0.7s,mb3.7,baz=300,slow=4.2,SNR=5.1						
YKA	**Yellowknife Ar**	**98.74**	**24**	P	**P**	**13 37 44.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**122.31**	**289**	PKP	PKPdf	13 43 00.4	+0.5
	0.3nm,0.6s,baz=88,slow=2.4,SNR=2.7						

*IDC **08** 13:24:27.8±0.6, 4578S×7265W, h0^{km}, mb4.4/10, mb1 4.4/11, mb1mx4.3/18, mbtmp4.4/11, ML3.0/1, MS3.6/8, Ms1 3.6/8, ms1mx3.4/25, Error ellipse: s-maj=28.6km s-min=16.2km az=104.0*
*ISCJB **08** 13:24:32.3±1.9, 4576S±007×727W±02, h44^{km}±15^{km}, mb4.6/23, MS3.8/5, Error ellipse: s-maj=25.2km s-min=9.7km az=165.0*
*NEIC **08** 13:24:32.8±0.4, 4579S×7279W, h35^{km}, mb4.8/16, Error ellipse: s-maj=18.6km s-min=9.3km az=94.0*
ISC 08 13:24:34.2±1.8**, 4573S**±007×**727W**±02**, h45^{km}**±14^{km}**, n51, σ1^{s}04**/36**, mb4.6**/23**, MS3.8**/5**, 1D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COYC	**Coyhaique**	**0.44**	**69**⇓	*e*P	**Pn**	**13 24 40.9**	**-3.5**
COYC				*i*		13 24 41.8	
	baz=237,slow=16						
COYC				*i* S	**Sn**	**13 24 51.4**	**-0.2**
COYC				AML	AML	13 24 54.2	
	comp=N,10μm,0.7s						
PLCA	**Paso Flores**	**5.23**	**18**	Pn	**Pn**	**13 25 53.1**	**+3.3**
	comp=N,1.6nm,0.3s,baz=205,slow=14,SNR=29						
PLCA				Lg		13 27 14.6	
	comp=N,6.1nm,0.3s,baz=90,slow=19,SNR=5.3						
PLCA				LR	LR	13 28 16.6	
	comp=N,467nm,18.6s,baz=207,slow=43						
USHA	**Ushuaia**	**9.51**	**165**	Lg		13 29 30.7	
	comp=N,0.8nm,0.3s,baz=266,slow=14,SNR=2.1						
USHA				LR	LR	13 30 46.8	
	comp=N,300nm,18.8s,baz=340,slow=40						
CFAA	**Coronel Fontan**	**14.52**	**15**	Pn	**Pn**	**13 27 57.0**	**+0.2**
	comp=N,0.1nm,0.3s,baz=203,slow=13,SNR=15						
CFAA				LR	LR	13 33 48.2	
	comp=N,28nm,18.7s,baz=202,slow=38						
CFAA	**Coronel Fontan**	**14.52**	**15**	Pn	**Pn**	**13 27 57.0**	**+0.2**
CFAA				LR	LR	13 33 48.2	
TLL	**Tololo Astrono**	**15.60**	**6**	*e*P	**Pn**	**13 28 11.7**	**+0.7**
LCO	**Las Campanas**	**16.76**	**6**	*e*Pn	**Pn**	**13 28 26.1**	**+0.5**
	comp=N,31nm,1.0s						
CPUP	**Villa Florida**	**22.91**	**38**	P	**P**	**13 29 35.0**	**+0.8**
	comp=N,2.9nm,0.5s,mb4.0,baz=206,slow=9.3,SNR=16						
CPUP				LR	LR	13 39 27.9	
	comp=N,386nm,20.6s,MS3.8,baz=183,slow=39						
CPUP	**Villa Florida**	**22.91**	**38**	*e*P	**P**	**13 29 34.4**	**+0.2**
	comp=N,21nm,0.6s,mb4.7						
CPUP				LR	LR	13 39 27.9	
LVC	**Limon Verde**	**23.26**	**9**	P	**P**	**13 29 38.5**	**+0.7**
	comp=N,9.7nm,0.7s,mb4.3,baz=187,slow=7.2,SNR=7.0						
LVC				LR	LR	13 38 02.1	
	comp=N,124nm,21.4s,MS3.3,baz=193,slow=35						
LVC	**Limon Verde**	**23.26**	**9**	*e*P	**P**	**13 29 35.5**	**-2.4**
	comp=N,43nm,1.4s,mb4.7						
LVC				LR	LR	13 38 02.1	
SIV	**San Ignacio**	**31.20**	**22**	P	**P**	**13 30 48.6**	**-0.6**
	comp=N,15nm,0.8s,mb4.8,baz=210,slow=9.1,SNR=25						
BDFB	**Brasilia**	**36.43**	**43**	P	**P**	**13 31 33.4**	**-1.1**
	comp=N,2.5nm,0.7s,mb4.2,baz=180,slow=19,SNR=3.1						
VNA3	**Neumayer Olymp**	**38.91**	**153**	*e*	**P**	**13 31 55.3**	**+0.4**
VNA3				*e*		13 31 59.3	
VNA3				*e*		13 32 18.3	
VNA1	**Neumayer--Stat**	**39.31**	**152**	*e*	**P**	**13 31 59.9**	**+1.6**
VNA1				*e*		13 32 03.1	
VNA2	**Neumayer--Watz**	**39.62**	**152**	*e*	**P**	**13 32 01.7**	**+0.9**
	baz=274,slow=7.0						
VNA2				*e*		13 32 05.4	
VNA2				*e*		13 32 21.6	
SNAA	**Sanae**	**41.11**	**153**	*e*P	**P**	**13 32 11.8**	**-1.4**
	comp=N,20nm,1.0s,mb4.7						
QSPA	**South Pole Qui**	**44.52**	**180**	P	**P**	**13 32 39.8**	**-0.9**
	comp=N,18nm,0.9s,mb4.9,baz=144,slow=5.3,SNR=28						
QSPA				PcP	PcP	13 34 23.6	+0.5
	comp=N,2.6nm,0.8s,baz=95,slow=2.4,SNR=3.2						
QSPA	**South Pole Qui**	**44.52**	**180**	P	**P**	**13 32 39.8**	**-0.9**
QSPA				PcP	PcP	13 34 23.6	+0.5
OTAV	**Otavalo**	**46.05**	**352**	*e*P	**P**	**13 32 51.4**	**-2.1**
	comp=N,19nm,1.4s,mb4.8						
SDV	**Santo Domingo**	**54.39**	**2**	*e*P	**P**	**13 33 58.6**	**+2.1**
	comp=N,4.7nm,0.7s,mb4.5						
MAW	**Mawson**	**62.12**	**162**	P	**P**	**13 34 50.3**	**+0.4**
	comp=N,5.9nm,1.1s,mb4.6,baz=201,slow=7.3,SNR=4.4						
MAW				LR	LR	13 59 52.5	
	comp=N,92nm,20.1s,MS3.9,baz=125,slow=34						
BOSA	**Boshof**	**75.22**	**116**	LR	LR	14 06 27.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,55nm,18.3s,MS3.9,baz=66,slow=34						
LPIG	La Paz	77.46	325	LR	LR	14 02 47.9	
	comp=N,94nm,18.4s,MS4.1,baz=54,slow=30						
GOGA	Godfrey	79.37	351	eP	P	13 36 35.5	+0.5
	comp=N,13nm,1.1s,mb4.8						
LRAL	Lakeview Retre	79.46	348	eP	P	13 36 36.7	+1.3
	comp=N,7.6nm,0.8s,mb4.7						
DBIC	Dimbokro	79.60	69	P	P	13 36 37.2	+0.5
	comp=N,1.7nm,0.7s,mb4.1,baz=233,slow=5.1,SNR=3.1						
JCT	Junction City	79.75	336	eP	P	13 36 36.5	-0.6
	comp=N,13nm,0.9s,mb4.9						
TXAR	Lajitas Array	79.84	333	P	P	13 36 38.1	+0.5
	comp=N,3.7nm,0.8s,mb4.4,baz=152,slow=7.3,SNR=42						
WMOK	Wichita Mounta	83.50	339	eP	P	13 36 55.0	-1.8
	comp=N,6.2nm,0.9s,mb4.7						
CCM	Cathedral Cave	85.06	345	eP	P	13 37 04.2	-0.5
	comp=N,8.0nm,0.8s,mb4.9						
ANMO	Albuquerque	85.92	333	eP	P	13 37 09.1	+0.2
	comp=N,7.2nm,0.9s,mb4.9						
LSZ	Lusaka	86.58	108	eP	P	13 37 13.4	+0.6
	comp=N,4.0nm,0.9s,mb4.7						
TORD	Torodi Ar. Bea	88.70	70	P	P	13 37 21.9	-1.0
	comp=N,1.8nm,1.1s,mb4.3,baz=284,slow=6.2,SNR=5.8						
SMCO	Snowmass	89.96	334	eP	P	13 37 22.2	-6.0
	comp=N,6.9nm,0.9s,mb5.0						
PHWY	Pilot Hill	91.47	336	eP	P	13 37 35.6	+0.5
	comp=N,4.8nm,0.8s,mb4.9						
ECSD	EROS,Sioux Fal	91.58	343	eP	P	13 37 35.0	-0.6
	comp=N,3.3nm,0.7s,mb4.8						
PDAR	Pinedale Array	94.03	334	P	P	13 37 46.9	-0.1
	comp=N,0.6nm,0.7s,mb4.1,baz=126,slow=4.8,SNR=7.2						
YKA	Yellowknife Ar	112.96	340	PKiKP	PKiKP	13 43 04.7	-0.2
	comp=N,0.3nm,0.8s,baz=142,slow=2.5,SNR=6.1						
YKA	Yellowknife Ar	112.96	340	PKPdf	PKiKP	13 43 04.7	-0.2
GERES	GERESS Array B	120.43	50	PKP	PKPdf	13 43 20.9	+1.1
	comp=N,0.6nm,0.7s,baz=342,slow=3.0,SNR=3.7						
BRTR	Keskin Array B	127.30	69	PKP	PKPdf	13 43 34.4	+1.1
	comp=N,0.7nm,0.7s,baz=241,slow=3.0,SNR=3.4						
PETK	Petropavlovsk-	147.01	301	PKPbc	PKPbc	13 44 10.9	-0.1
	comp=N,6.2nm,0.8s,baz=75,slow=6.6,SNR=6.9						
CMAR	Chiang Mai Arr	151.93	163	PKP	PKPdf	13 44 19.1	+1.2
	comp=N,0.8nm,0.8s,baz=242,slow=2.5,SNR=4.8						
CMAR				PKPbc	PKPbc	13 44 24.3	0.0
	comp=N,7.0nm,0.9s,baz=216,slow=4.0,SNR=25						
CHTO	Chiang Mai	152.27	163	ePKPbc	PKPbc	13 44 24.1	-1.0
MJAR	Matsushiro Arr	155.13	259	PKPab	PKPab	13 44 46.6	-0.2
	comp=N,1.1nm,1.0s,baz=136,slow=4.1,SNR=4.2						
KURK	Kurchatov	160.30	65	PKP	PKPdf	13 44 28.7	+0.9
	comp=N,1.2nm,0.9s,baz=277,slow=1.3,SNR=7.2						
KURK				PKPab	PKPab	13 45 07.8	-1.0
	comp=N,0.7nm,0.7s,baz=106,slow=6.4,SNR=3.8						
MKAR	Makanchi Array	162.66	77	PKP	PKPdf	13 44 31.2	+0.8
	comp=N,0.9nm,1.0s,baz=326,slow=0.4,SNR=6.1						
MKAR				PKPab	PKPab	13 45 18.7	-0.5
	comp=N,0.4nm,0.8s,baz=258,slow=4.6,SNR=3.5						
MKAR	Makanchi Array	162.66	77	PKP	PKPdf	13 44 31.2	+0.8
MKAR				PKPab	PKPab	13 45 18.7	-0.5
ZALV	Zalesovo Beam	163.36	52	PKP	PKPdf	13 44 30.8	0.0
	comp=N,0.6nm,0.6s,baz=298,slow=3.2,SNR=4.5						
SONM	Songino Array	177.80	17	PKPab	PKPab	13 46 28.5	+2.5
	comp=N,1.1nm,0.9s,baz=329,slow=2.8,SNR=5.0						

MAN 08 13:34:51,778N×12297E,h34km,mb3.9,ML2.6,MS2.2, 3C,Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IPIL	Ipil	0.39	271	⇑eP	Pb	13 35 03.5	+3.4
IPIL				eS	Sb	13 35 10.3	+4.1
PAGZ	Pagadian	0.42	81	eP	Pb	13 35 03.0	+2.6
PAGZ				eS	Sb	13 35 10.1	+3.2
ZMPH	Zamboanga City	1.22	227	⇑eP	Pn	13 35 19.4	+7.8
ZMPH				iS	Sn	13 35 31.8	+4.9
CTBH	Cotabato--PC H	1.39	114	⇑eP	Pn	13 35 20.6	+6.6
SNPH	Sibulan	1.57	10	eP	Pn	13 35 17.5	+1.0
GUIM	Jordan	2.85	353	eP	Pn	13 35 36.4	+2.3
GUIM				eS	Sn	13 36 03.1	-4.1

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*MOS **08** 13:39:03.6±1.0,686S×12721E,h397km,mb4.5/7,Error ellipse: s-maj=18.1km s-min=9.2km az=120.0*
*DJA **08** 13:39:04,7.12S×12760E,h399km,Mw4.8/6*
*ISCJB **08** 13:39:05.0±0.4,692S±003×12732E±005,h419km±4km, mb4.3/37,Error ellipse: s-maj=7.7km s-min=4.9km az=160.8*
*BJI **08** 13:39:04.1,690S×12730E,h400km,mB4.6,mb4.3*
*IDC **08** 13:39:05.6±1.1,691S×12727E,h403km±11km,mb3.8/16, mb1 3.8/18,mb1mx3.8/22,mbtmp3.8/18,Error ellipse: s-maj=15.4km s-min=7.6km az=67.0*
*NEIC **08** 13:39:05.2±0.6,687S×12728E,h401km±6km,mb4.7/23, Error ellipse: s-maj=6.9km s-min=3.3km az=54.0*
ISC 08 13:39:05.8±0.4,**690S**±003×**12731E**±005,**h407**km±4km, **n92**,σ0ˢ91/88,**mb4.3**/37,**3C-2D,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.31	16	P	Pn	13 40 12.3	0.0
AAI				S	S	13 41 07.0	+1.0
BATI	Baumata	4.88	227	P	Pn	13 40 27.5	+0.5
	440nm,0.3s,baz=107,slow=1.6,SNR=643						
BATI				S	S	13 41 31.7	-1.3
	214nm,0.3s,baz=301,slow=22,SNR=16						
BATI	Baumata	4.88	227	P	Pn	13 40 27.7	+0.7
BATI				S	S	13 41 32.2	-0.8
KDI	Kendari	5.50	302	P	Pn	13 40 34.1	+0.6
	144nm,1.1s,3µm0.4nm						
LBMI	Labuha	6.22	2	P	Pn	13 40 41.4	+0.2
	113nm,0.6s,1µm0.3nm						
LBMI				S	S	13 41 56.9	-2.0
	113nm,0.6s,1µm0.3nm						
WSI	Waingapu	7.46	248	P	P	13 40 54.2	-0.9
	611nm,0.5s,6.8nm						
KAKA	Kakadu	7.68	139	⇓iPn	x	13 40 37.9	
KAKA	Kakadu	7.68	139	P	x	13 40 38.2	
	160nm,0.6s,1µm7.0nm						
KAPI	Kappang	7.74	284	P	P	13 40 58.2	0.0
	6.8nm,0.3s,baz=131,slow=3.5,SNR=34						
KAPI	Kappang	7.74	284	P	P	13 40 58.2	0.0
	56nm,1.1s,348nm0.2nm						
PCI	Palu	9.54	308	P	P	13 41 20.6	+2.5
	70nm,0.9s,508nm						
FITZ	Fitzroy Crossi	11.26	188	eP	P	13 41 37.1	0.0
	8.6nm,0.6s						
FITZ	Fitzroy Crossi	11.26	188	P	P	13 41 37.3	+0.2
	18nm,1.0s						
KHKI	Kahang-Kahang	11.69	262	P	P	13 41 40.3	-1.7
	63nm,0.8s						
BBKI	Banjar Baru	12.87	285	P	P	13 41 58.0	+3.0
	120nm,1.2s						
KMMI	Kalianget	13.24	269	P	P	13 42 02.3	+3.2
	42nm,1.2s						
WRAB	Tennant Creek	14.65	153	eP	P	13 42 14.0	-0.3
WRAB				eS	S	13 44 46.4	-3.8
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.4s						
WRAB	Tennant Creek	14.65	153	eP	P	13 42 14.0	-0.3
	comp=Z,6.8nm,0.4s						
WRAB				eS	S	13 44 46.4	-3.9
WRAB	Tennant Creek	14.65	153	P	P	13 42 14.0	-0.3
	comp=Z,13nm,2.5s						
WB2	Warramunga Arr	14.66	153	eP	P	13 42 13.9	-0.5
WB2				eS	S	13 44 45.9	-4.5
MBWA	Marble Bar	15.96	207	eP	P	13 42 28.1	-0.3
	comp=Z,12nm,0.4s						
MBWA	Marble Bar	15.96	207	P	P	13 42 28.5	+0.1
	comp=Z,30nm,1.4s						
KKM	Kota Kinabalu	16.96	319	eP	P	13 42 37.9	-1.3
	comp=Z,58nm,1.4s						
COEN	Coen	17.10	115	⇓iP	P	13 42 39.8	-0.8
	comp=Z,33nm,0.7s						
COEN	Coen	17.10	115	P	P	13 42 40.0	-0.7
	comp=Z,28nm,1.0s						
SBUM	Sibu	17.69	301	P	P	13 42 49.3	+2.4
	comp=Z,18nm,0.8s						
ASAR	Alice Springs	17.84	160	P	P	13 42 48.1	-0.2
	comp=Z,4.9nm,0.3s,baz=348,slow=12,SNR=163						
ASAR				S	S	13 45 52.4	0.0
	comp=Z,1.0nm,0.3s,baz=342,slow=25,SNR=12						
ASAR				ScP	ScP	13 49 59.4	+0.1
	baz=325,slow=1.5,SNR=4.9						
ASAR	Alice Springs	17.84	160	P	P	13 42 48.1	-0.2
ASAR				S	S	13 45 52.4	0.0
KSM	Kuching	18.89	295	eP	P	13 42 58.4	-1.1
	comp=Z,12nm,0.8s						
KSM	Kuching	18.89	295	P	P	13 43 02.4	+2.9
	comp=Z,23nm,1.3s						
PMG	Port Moresby	19.81	99	eP	P	13 43 08.2	0.0
PMG				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PMG	Port Moresby	19.81	99	eP	P	13 43 08.2	0.0
	comp=Z,10nm,0.4s						
TPI	Tanjungpandan	20.01	281	P	P	13 43 11.4	+1.4
CTA	Charters Tower	22.58	127	P	P	13 43 34.4	+1.0
	comp=Z,4.9nm,0.8s,mb4.0,baz=318,slow=12,SNR=4.7						
FORT	Forrest	23.77	178	eP	P	13 43 43.8	-0.1
	comp=Z,43nm,0.6s,mb5.0						
KLBR	Kellerberrin	26.14	199	eP	P	13 44 04.7	-0.4
	comp=Z,15nm,0.5s,mb4.7						
MUN	Mundaring	27.02	201	eP	P	13 44 12.8	0.0
NWAO	Narrogin (SRO)	27.54	199	P	P	13 44 17.4	0.0
	comp=Z,11nm,0.5s,mb4.4,baz=19,slow=6.4,SNR=9.9						
STKA	Stephens Creek	28.21	154	eP	P	13 44 23.5	+0.2
	comp=Z,5.4nm,0.4s,mb4.2						
STKA				e		13 45 35.1	
STKA	Stephens Creek	28.21	154	P	P	13 44 23.6	+0.2
	comp=Z,7.8nm,0.5s,mb4.3,baz=325,slow=8.7,SNR=27						
STKA				pP		13 45 34.1	
	comp=Z,3.7nm,0.6s,baz=317,slow=11,SNR=5.0						
PSI	Prapat	29.92	288	P	P	13 44 37.4	-1.3
	comp=Z,13nm,0.9s,mb4.3,baz=162,slow=3.9,SNR=8.9						
TOO	Toolangi	34.72	154	eP	P	13 45 21.4	+1.9
CM31	Chiang Mai Arr	37.65	312	eP	P	13 45 43.8	-0.5
	comp=Z,3.4nm,0.6s,mb3.9						
CMAR	Chiang Mai Arr	37.65	312	P	P	13 45 44.2	0.0
	comp=Z,4.5nm,0.7s,mb3.9,baz=144,slow=7.0,SNR=19						
CMAR				PcP	PcP	13 47 52.5	+0.6
	comp=Z,1.3nm,0.6s,baz=170,slow=2.7,SNR=8.5						
CMAR				ScP	ScP	13 51 02.0	+2.1
	comp=Z,0.1nm,0.3s,baz=168,slow=4.2,SNR=4.7						
CHTO	Chiang Mai	37.88	313	eP	P	13 45 45.6	-0.5
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
CHTO	Chiang Mai	37.88	313	eP	P	13 45 45.6	-0.5
	comp=Z,5.1nm,0.8s,mb3.9						
KSRS	Korea Array	44.12	1	P	P	13 46 36.7	+0.7
	comp=Z,1.2nm,0.7s,mb3.3,baz=183,slow=9.0,SNR=3.5						
XAN	Xi'an	44.28	338	P	P	13 46 36.0	-1.3
XAN				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.2						
MJAR	Matsushiro Arr	44.40	13	P	P	13 46 37.2	-1.0
	comp=Z,1.6nm,0.5s,mb3.6,baz=189,slow=9.0,SNR=12						
LSA	Lhasa	50.31	318	P	P	13 47 24.4	+1.2
LSA	Lhasa	50.31	318	eP	P	13 47 24.1	+0.9
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.3						
LSA	Lhasa	50.31	318	eP	P	13 47 24.1	+0.9
	comp=Z,9.1nm,0.6s,mb4.3						
ODAN	Odare	51.19	313	eP	P	13 47 29.6	-0.2
	comp=Z,25nm,0.5s,mb4.7						
TAPN	Taplejung	51.24	313	eP	P	13 47 30.2	0.0
	comp=Z,17nm,0.4s,mb4.6						
RAMN	Ramite	51.83	312	eP	P	13 47 34.4	0.0
	comp=Z,43nm,0.5s,mb4.9						
JIRN	Jiri	52.53	313	eP	P	13 47 39.5	0.0
	comp=Z,18nm,0.5s,mb4.5						
GTA	Gaotai	52.63	333	eP	P	13 47 40.5	+0.5
GTA				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.1						
GUN	Gumba	52.90	313	eP	P	13 47 42.1	0.0
	comp=Z,32nm,0.4s,mb4.9						
RPZ	Rata Peaks	52.97	141	P	P	13 47 43.4	+0.9
	comp=Z,7.5nm,0.5s,mb4.2,baz=307,slow=3.2,SNR=7.8						
PKI	Pulchoki	53.05	312	eP	P	13 47 42.7	-0.6
	comp=Z,24nm,0.5s,mb4.7						
PKI	Pulchoki	53.05	312	eP	P	13 47 42.7	-0.6
PKI				pmax	pmax		
	comp=Z,24nm,0.5s,mb4.7						
KKN	Kakani	53.27	312	eP	P	13 47 44.5	-0.3
	comp=Z,22nm,0.5s,mb4.7						
KKN	Kakani	53.27	312	eP	P	13 47 44.5	-0.3
KKN				pmax	pmax		
	comp=Z,22nm,0.5s,mb4.6						
GKN	Gorkha	53.86	312	eP	P	13 47 48.8	-0.2
	comp=Z,56nm,0.4s,mb5.2						
KOLN	Koldanda	54.50	311	eP	P	13 47 53.6	0.0
	comp=Z,32nm,0.5s,mb4.8						
DANN	Dangsing	54.69	312	eP	P	13 47 54.7	-0.3
	comp=Z,28nm,0.5s,mb4.7						
SONM	Songino Array	57.54	343	P	P	13 48 15.4	+1.0
	comp=Z,0.8nm,0.4s,mb3.4,baz=174,slow=6.1,SNR=12						
SONM				PcP	PcP	13 49 03.1	+0.5
	comp=Z,1.3nm,0.9s,baz=154,slow=4.8,SNR=4.2						
PETK	Petropavlovsk-	65.09	20	P	P	13 49 04.6	+0.3
	comp=Z,1.7nm,0.7s,mb3.8,baz=197,slow=4.5,SNR=3.1						
MK31	Makanchi Array	66.70	328	⇑eP	P	13 49 14.6	0.0
MKAR	Makanchi Array	66.70	328	P	P	13 49 14.8	+0.3
	comp=Z,4.7nm,0.6s,mb4.3,baz=123,slow=7.8,SNR=132						
YAK	Yakutsk	68.74	1	c iP	P	13 49 27.0	+0.2
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
AAK	Ala-Archa	68.75	321	eP	P	13 49 28.3	+1.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
ZAA0	Zalesovo Array	70.33	335	⇑iP	P	13 49 36.0	-0.5
ZALV	Zalesovo Beam	70.33	335	P	P	13 49 36.0	-0.5
	comp=Z,6.6nm,0.5s,mb4.4,baz=136,slow=5.7,SNR=38						
KURK	Kurchatov	71.06	330	P	P	13 49 41.1	+0.2
	comp=Z,13nm,0.7s,mb4.6,baz=130,slow=5.5,SNR=54						
NVS	Novosibirsk	71.62	335	eP	P	13 49 41.7	-2.5
NVS				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.2						
NVS				pmax	pmax		
	comp=N,8.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.3s						
VNDA	Vanda	72.88	173	P	P	13 49 51.1	-0.2
	comp=E,2.2nm,1.0s,mb3.7,baz=340,slow=3.9,SNR=6.5						
OPO	Ambohidratompo	78.50	252	P	P	13 50 24.1	+0.2
	comp=E,1.5nm,0.7s,mb3.7,baz=18,slow=3.2,SNR=3.8						
QSPA	South Pole Qui	83.08	180	P	P	13 50 46.6	0.0
	comp=E,3.5nm,0.5s,mb4.3,baz=304,slow=1.2,SNR=19						
QSPA	South Pole Qui	83.08	180	P	P	13 50 46.6	0.0
ARU	Arti	84.22	329	eP	P	13 50 52.1	-0.5
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
YKA	Yellowknife Ar	108.82	26	PKiKP	PKiKP	13 56 46.6	-0.4
	comp=Z,0.3nm,0.6s,baz=298,slow=1.8,SNR=6.1						
YKA				PKKPbc	PKKPbc	14 07 55.4	-3.7
	comp=Z,0.3nm,0.4s,baz=115,slow=3.5,SNR=8.0						
YKA	Yellowknife Ar	108.82	26	PKPdf	PKiKP	13 56 46.6	-0.4
YKA				PKKPbc	PKKPbc	14 07 55.4	-3.7
GERES	GERESS Array B	110.62	320	PKiKP	PKiKP	13 56 50.8	-0.1
	comp=Z,0.4nm,0.8s,baz=45,slow=0.6,SNR=3.6						
PDAR	Pinedale Array	118.71	45	PKP	PKPdf	13 57 07.3	+0.7
	comp=Z,0.3nm,0.7s,baz=234,slow=3.1,SNR=2.6						
TORD	Torodi Ar. Bea	126.17	281	PKP	PKPdf	13 57 21.5	-0.2
	comp=Z,1.6nm,0.6s,baz=61,slow=2.0,SNR=14						
TXAR	Lajitas Array	127.16	58	PKP	PKPdf	13 57 23.9	+0.7
	comp=Z,0.2nm,0.5s,baz=204,slow=2.6,SNR=3.9						
TXAR				SKP		14 00 30.3	
	comp=Z,0.2nm,0.6s,baz=328,slow=3.2,SNR=3.6						
TXAR	Lajitas Array	127.16	58	PKP	PKPdf	13 57 23.9	+0.7
TXAR				SKP		14 00 30.3	
SCHQ	Schefferville	130.87	11	PKP	PKPdf	13 57 30.4	+0.9
	comp=Z,4.2nm,1.0s,baz=14,slow=8.3,SNR=4.9						
SCHQ				SKPbc	SKPbc	14 00 14.5	-0.4
	comp=Z,4.3nm,0.8s,baz=306,slow=5.7,SNR=4.0						
SCHQ	Schefferville	130.87	11	PKP	PKPdf	13 57 30.4	+0.9
SCHQ				SKPbc	SKPbc	14 00 14.5	-0.4
DBIC	Dimbokro	132.51	273	PKP	PKPdf	13 57 34.9	+1.0
	comp=Z,1.4nm,0.5s,baz=165,slow=1.8,SNR=3.7						
CPUP	Villa Florida	146.67	172	PKPbc	PKPbc	13 58 01.3	0.0
	comp=Z,1.9nm,0.4s,baz=179,slow=1.8,SNR=12						

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*ISCJB **08** 13:50:00.4±1.0,2038N±002×12082E±003,h6km±6km, mb4.8/72,MS4.1/30,Error ellipse: s-maj=5.0km s-min=3.3km az=0.3*
*BJI **08** 13:50:02.2,2053N×12075E,h11km,mB4.9,mb4.6,ML4.2, Ms4.6,Msz4.4*
*NEIC **08** 13:50:02.3±0.2,2037N×12081E,h10km,mb5.0/34,Error ellipse: s-maj=5.2km s-min=4.1km az=106.0*
NEIC Felt at Laoag, Luzon.
*IDC **08** 13:50:04.6±0.5,2040N×12072E,h20km±2km,mb4.4/22, mb1 4.5/24,mb1mx4.5/28,mbtmp4.4/24,ML3.5/2,MS3.8/17, Ms1 3.9/17,ms1mx3.7/29,Error ellipse: s-maj=14.8km s-min=9.2km az=66.0*
*MOS **08** 13:50:04.2±0.9,2040N×12082E,h33km,mb5.1/32, MS4.2/7,Error ellipse: s-maj=11.2km s-min=6.0km az=117.1*
*DJA **08** 13:50:05,2087N×121.15E,h44km,Mw5.2/9*
ISC 08 13:50:03.0±1.1,**2036N**±002×**12083E**±003,**h12**km±7km, **h21**km±1.4km**:pP-P,n205,**σ1ˢ**04**/223,**mb4.8**/72,**MS4.1**/31, **10C-7D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	2.40	151	eP	Pn	13 50 43.1	+1.0
SIPP	Brgy, Tapao	2.45	188	⇑eP	Pn	13 50 41.2	-1.7
SIPP				iS	Sn	13 51 11.7	-1.1
TWG	Pinlang	2.46	5	ePn	Pn	13 50 42.9	0.0
ABRA	Dolores	2.70	182	eP	Pn	13 50 44.6	-1.7
ABRA				eS	Sg	13 51 50.0	+20
TPUB	Ta-pu	2.93	356	ePn	Pn	13 50 47.5	-1.9
YULB	Yu-li	3.04	8	ePn	Pn	13 50 52.0	+1.0
SSLB	Suanglung	3.41	2	ePn	Pn	13 50 54.9	-1.1
CAUP	Cauayan	3.53	164	eP	Pn	13 51 00.2	+2.5
PALP	Palanan	3.61	155	⇑eP	Pn	13 51 00.9	+2.1
NACB	Ninganchiao	3.86	10	ePn	Pn	13 51 02.8	+0.6
NACB				eSn	Sn	13 51 48.4	+1.0
BOLP	Bolinao	4.06	193	eP	Pn	13 51 05.4	+0.4
BOLP				eS	Sg	13 52 32.7	+19
YHNB	Yeheng	4.31	7	ePn	Pn	13 51 07.7	-0.8
TATO	Taipei	4.63	7	ePn	Pn	13 51 11.1	-1.7
BALP	Baler	4.65	171	eP	Pn	13 51 13.6	+0.4
PCPH	Palayan	4.78	177	⇓eP	Pn	13 51 16.6	+1.7
QZH	Quanzhou	5.00	336	P	Pn	13 51 15.0	-3.0
QZH				S	Sn	13 52 05.3	-10
QZH				Smax			
	comp=N,170nm,0.9s						
QZH				Smax			
	comp=E,240nm,1.0s						
POLP	Polilio Island	5.70	169	eP	Pn	13 51 28.7	+1.1
PVCP	Virac	7.44	154	eP	Pn	13 51 59.6	+8.1
BUSP	Coron	8.34	184	eP	Pn	13 52 02.9	-0.9
JOW	Kunigami	9.38	45	Pn	Pn	13 52 18.6	+0.5
	comp=E,0.8nm,0.3s,baz=150,slow=20,SNR=2.3						
QIZ	Qiongzhong	10.44	265	P	Pn	13 52 31.9	-0.7
QIZ				S	Sn	13 54 30.5	+1.0
QIZ				AMB	AMB		
	comp=Z,25nm,1.4s						
QIZ				LR	LR		
	comp=N,1µm,10.2s						
QIZ				LR	LR		
	comp=E,2µm,11.0s						
QIZ				LR	LR		
	comp=Z,2µm,11.0s						
QIZ	Qiongzhong	10.44	265	ePn	Pn	13 52 30.7	-1.9
	comp=Z,162nm,2.1s						
SSE	Sheshan	10.69	2	P	Pn	13 52 35.8	-0.2
SSE				S	Sn	13 54 37.1	+1.5
SSE				AMB	AMB		
	comp=Z,30nm,0.8s						
SSE				AMB	AMB		
	comp=Z,92nm,6.1s						
SSE				LR	LR		
	comp=N,971nm,10.7s						
SSE				LR	LR		
	comp=E,1µm,10.7s						
SSE				LR	LR		
	comp=Z,1µm,13.2s						
WHN	Wuhan	11.70	331	⇑P	Pn	13 52 50.2	+0.4
WHN				S	Sn	13 55 02.3	+1.9
WHN				LR	LR		
	comp=N,4µm,8.2s						
WHN				LR	LR		
	comp=E,3µm,9.6s						
WHN				LR	LR		
	comp=Z,4µm,10.6s						
NJ2	Nanjing	11.77	352	eP	Pn	13 52 51.9	+1.1
NJ2				AP		13 52 56.2	
NJ2				XP		13 52 58.6	
NJ2				PP		13 53 01.7	
NJ2				S	Sn	13 55 04.8	+2.6
NJ2				XS		13 55 08.6	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,500nm,12.0s						
NJ2				LR	LR		
	comp=E,1µm,11.5s						
NJ2				LR	LR		
	comp=Z,1µm,11.5s						
DAV	Davao City (W)	13.99	160	LR	LR	13 59 27.8	
	comp=Z,1µm,20.0s,baz=323,slow=40						
GYA	Guiyang	14.35	298	⇑iP	Pn	13 53 25.6	-0.4
GYA				PP		13 53 37.1	
GYA				PPP		13 53 44.0	
GYA				S	Sn	13 56 06.2	+1.1
GYA				SS		13 56 22.6	
GYA				AMB	AMB		
	comp=Z,20nm,0.9s						
GYA				AMB	AMB		
	comp=Z,130nm,5.1s						
GYA				LR	LR		
	comp=N,1µm,12.0s						
GYA				LR	LR		
	comp=E,1µm,10.7s						
GYA				LR	LR		
	comp=Z,1µm,11.0s						
KKM	Kota Kinabalu	14.92	198	ePn	Pn	13 53 34.6	+0.6
	comp=Z,32nm,0.9s						
TIA	Tai'an	16.12	349	eP	Pn	13 53 51.0	+1.5
XAN	Xi'an	17.24	325	P	Pn	13 54 02.9	-0.7
XAN				AP	pP	13 54 06.9	-1.7
XAN				S	Sn	13 57 18.7	+3.4
XAN				LG1		13 58 10.2	
XAN				LR	LR		
	comp=N,474nm,10.0s						
XAN				LR	LR		
	comp=E,1µm,11.3s						
XAN				LR	LR		
	comp=Z,1µm,11.6s						
KMI	Kunming	17.34	289	P	Pn	13 54 07.5	+2.5
KMI				AP	pP	13 54 11.2	+1.3
KMI				PP		13 54 21.7	
KMI				PPP		13 54 29.8	
KMI				S	Sn	13 57 16.4	-1.6
KMI				XS	sS	13 57 21.7	-10
KMI				SS		13 57 37.6	
KMI				SSS		13 57 49.2	
KMI				AMB	AMB		
	comp=Z,12nm,1.3s						
KMI				LR	LR		
	comp=N,940nm,8.9s						
KMI				LR	LR		
	comp=E,920nm,10.4s						
KMI				LR	LR		
	comp=Z,770nm,9.6s						
INCN	Inchon	17.79	15	ePn	Pn	13 54 10.1	-0.3
	comp=Z,8.9nm,0.4s						
KS15	Wonju Array Si	18.09	18	eP	Pn	13 54 13.3	-0.8
KSRS	Korea Array	18.11	18	P	Pn	13 54 13.8	-0.6
	comp=Z,0.3nm,0.3s,baz=202,slow=12,SNR=26						
KSRS				LR	LR	14 02 30.9	
	comp=Z,371nm,18.4s,baz=345,slow=41						
CD2	Chengdu	18.61	308	⇑P	Pn	13 54 20.6	0.0
CD2				AP	pP	13 54 23.9	+0.1
CD2				XP	sP	13 54 26.6	+1.2
CD2				S	Sn	13 57 46.5	-2.1
CD2				XS	sS	13 57 50.8	-7.1
CD2				SS		13 58 09.2	
CD2				PCP	PcP	13 58 49.6	+0.4
CD2				AMB	AMB		
	comp=Z,70nm,1.0s						
CD2				AMB	AMB		
	comp=Z,270nm,5.3s						
CD2				LR	LR		
	comp=N,2µm,10.4s						
CD2				LR	LR		
	comp=E,2µm,13.5s						
CD2				LR	LR		
	comp=Z,1µm,10.4s						
TIY	Taiyuan	18.77	339	eP	Pn	13 54 20.9	-1.5
TIY				S	Sn	13 57 39.9	-12
TIY				LR	LR		
	comp=N,2µm,10.0s						
TIY				LR	LR		
	comp=E,1µm,11.8s						
TIY				LR	LR		
	comp=Z,2µm,10.6s						
CHRT	Chiangrai	19.77	272	P	Pn	13 54 34.0	-0.7
	comp=Z,105nm,1.2s						

BJT Baijiatuau 19.99 349 *e*P **Pn** **13 54 35.8 -1.3**
BJT pmax pmax
comp=Z,94nm,0.9s
BJT Baijiatuau 19.99 349 *e*P **Pn** **13 54 35.8 -1.3**
comp=Z,94nm,0.9s
BJI Beijing 20.01 350 P **P** **13 54 36.4 +0.8**
BJI AMB AMB
comp=Z,68nm,1.1s
BJI AMB AMB
comp=Z,243nm,4.0s
BJI LR LR
comp=N,594nm,16.5s,MS4.2
BJI LR LR
comp=E,457nm,14.0s,MS4.2
NST Nakhon Sawan 20.23 260 P **P** **13 54 36.8 -1.3**
CHG Chiang Mai 20.68 269 ⇑P **P** **13 54 43.2 +0.2**
comp=E,32nm,0.9s
CMAR Chiang Mai Arr 20.73 268 P **P** **13 54 43.6 +0.1**
comp=E,11nm,0.8s,baz=78,slow=9.1,SNR=84
CMAR PcP PcP 13 58 53.8 +0.6
comp=E,2.1nm,0.8s,baz=87,slow=0.4,SNR=13
CMAR pPcP 13 59 00.5
comp=E,2.0nm,0.7s,baz=20,slow=1.0,SNR=11
CMAR LR LR 14 02 21.2
comp=E,189nm,19.9s,MS3.5,baz=85,slow=36
CMAR Chiang Mai Arr 20.73 268 P **P** **13 54 43.7 +0.1**
CMAR 13 58 53.8
CMAR 13 59 00.5
SNY Shenyang 21.52 6 ⇓P **P** **13 54 51.7 -0.2**
SNY S **S** **13 58 40.9 -9.3**
SNY AMB AMB
comp=Z,16nm,1.9s,mb4.1
SNY LR LR
comp=N,320nm,15.0s,MS4.3
SNY LR LR
comp=E,717nm,12.0s,MS4.3
SNY LR LR
comp=Z,688nm,11.4s,MS4.3
LZH Lanzhou 21.61 320 ⇓P **P** **13 54 54.0 +1.1**
LZH AP 13 54 58.4
LZH XP sP 13 55 00.2 +2.1
LZH PP 13 55 18.0
LZH S **S** **13 58 50.3 -1.8**
LZH XS sS 13 58 54.0 -3.8
LZH SS 13 59 22.3
LZH AMB AMB
comp=Z,127nm,1.3s,mb5.2
LZH AMB AMB
comp=Z,311nm,4.0s
LZH LR LR
comp=E,1μm,12.9s
LZH LR LR
comp=Z,1μm,13.6s,MS4.5
HHC Hu-ho-hao-te 21.89 341 *e*P **P** **13 54 56.5 +0.6**
HHC AP 13 55 00.9
HHC XP sP 13 55 04.6 +3.6
HHC PP 13 55 21.0
HHC *e*S **S** **13 58 52.7 -4.8**
HHC XS sS 13 58 57.1 -6.1
HHC SS 13 59 29.2
HHC SCP ScP 14 02 30.4 -1.9
HHC AMB AMB
comp=Z,28nm,1.1s,mb4.6
HHC AMB AMB
comp=Z,236nm,4.4s
HHC LR LR
comp=N,1μm,8.9s
HHC LR LR
comp=E,517nm,10.9s
HHC LR LR
comp=Z,931nm,11.9s,MS4.4
MAT Matsushiro 22.15 40 P **P** **13 54 58.7 0.0**
MAT S **S** **13 59 07.0 +4.4**
MJAR Matsushiro Arr 22.15 40 P **P** **13 54 59.7 +1.0**
comp=Z,11nm,1.0s,mb4.2,baz=227,slow=9.2,SNR=21
MJAR pP 13 55 06.7
comp=Z,25nm,0.9s,baz=234,slow=10,SNR=20
MJAR Matsushiro Arr 22.15 40 P **P** **13 54 59.7 +1.0**
MJAR pP 13 55 06.7
BTO Baotou 22.19 338 *e*P **P** **13 54 54.7 -4.3**
CN2 Changchun 23.69 8 *e*P **P** **13 55 12.4 -2.2**
CN2 *e*XP sP 13 55 19.4 -0.5
CN2 *e*S **S** **13 59 28.0 -1.0**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.2
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,510nm,14.0s,MS4.4
CN2 LR LR
comp=E,710nm,14.0s,MS4.4
CN2 LR LR
comp=Z,790nm,16.0s,MS4.3
GUMO Guam 23.94 103 P **P** **13 55 18.6 +1.4**
comp=Z,105nm,1.0s,mb5.2,baz=169,slow=10,SNR=2.0
GUMO LR LR 14 04 35.1
comp=Z,106nm,18.8s,MS3.3,baz=267,slow=36
GUMO Guam 23.94 103 *e*P **P** **13 55 16.5 -0.7**
GUMO pmax pmax
comp=Z,91nm,0.7s,mb5.3
GUMO Guam 23.94 103 *e*P **P** **13 55 16.5 -0.7**
comp=Z,91nm,0.7s,mb5.3
GUMO LR LR 14 04 35.1
IMP Imphal 25.21 285 *e*P **P** **13 55 28.0 -0.7**
KAPI Kappang 25.24 183 P **P** **13 55 28.9 -0.1**
comp=Z,233nm,1.3s,mb5.5,SNR=7.2
KAPI Kappang 25.24 183 P **P** **13 55 28.7 -0.3**
comp=Z,15nm,0.9s,mb4.5,baz=346,slow=6.1,SNR=10.0
KAPI LR LR 14 05 26.1
comp=Z,126nm,21.2s,MS3.4,baz=20,slow=36
MDJ Mudanjiang 25.26 15 P **P** **13 55 28.2 -0.7**
MDJ AP pP 13 55 31.2 -1.5
MDJ XP sP 13 55 32.8 -1.4
MDJ PCP PcP 13 59 02.1 0.0
MDJ S **S** **13 59 56.6 +2.3**
MDJ SCP ScP 14 02 40.4 -0.8
MDJ PCS PcS 14 02 42.9 +0.6
MDJ SCS ScS 14 06 29.6 -0.1
MDJ AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
MDJ AMB AMB
comp=Z,78nm,5.4s
MDJ LR LR
comp=N,478nm,14.8s,MS4.2
MDJ LR LR
comp=E,333nm,13.0s,MS4.2
MDJ LR LR
comp=Z,431nm,15.5s,MS4.1
MDJ Mudanjiang 25.26 15 *e*P **P** **13 55 28.4 -0.5**
comp=Z,22nm,1.1s,mb4.6
GTA Gaotai 26.20 321 *e*P **P** **13 55 37.9 +0.3**
GTA AP pP 13 55 42.0 +0.7
GTA XP sP 13 55 45.4 +2.5
GTA S **S** **14 00 09.9 +0.5**
GTA XS sS 14 00 15.3 -0.3
GTA AMB AMB
comp=Z,10.0nm,1.2s,mb4.2
GTA AMB AMB
comp=Z,136nm,6.2s
GTA LR LR
comp=N,345nm,12.2s,MS4.5
GTA LR LR
comp=E,608nm,10.1s,MS4.5
GTA LR LR
comp=Z,808nm,10.4s,MS4.5
SHL Shillong 27.12 286 *e*P **P** **13 55 46.0 -0.1**
PSI Prapat 27.59 234 P **P** **13 55 49.9 -0.5**
comp=Z,5.7nm,0.6s,mb4.4,baz=44,slow=4.7,SNR=7.0
PSI LR LR 14 06 51.6
comp=Z,119nm,18.4s,MS3.5,baz=15,slow=36
LSA Lhasa 28.39 295 P **P** **13 55 58.6 +1.3**
LSA Lhasa 28.39 295 *e*P **P** **13 55 58.6 +1.3**
LSA pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
LSA Lhasa 28.39 295 *e*P **P** **13 55 58.5 +1.2**
comp=Z,8.1nm,0.7s,mb4.5
HIA Hailar 28.85 359 *e*P **P** **13 56 00.0 -1.2**
HIA pmax pmax
comp=Z,16nm,0.9s
HIA Hailar 28.85 359 *e*P **P** **13 56 00.0 -1.2**
comp=Z,16nm,0.9s,mb4.7
SONM Songino Array 29.79 340 P **P** **13 56 09.7 +0.1**
comp=Z,4.6nm,0.8s,mb4.2,baz=158,slow=9.7,SNR=24
SONM pP pP 13 56 15.6 +2.2
comp=Z,4.4nm,0.8s,baz=153,slow=9.4,SNR=14
SONM LR LR 14 09 11.6
comp=Z,500nm,18.6s,MS4.2,baz=125,slow=39
SONM Songino Array 29.79 340 P **P** **13 56 09.7 +0.1**
SONM *PP pP 13 56 15.6 +2.2
ASAJ Asahikawa 29.82 32 P **P** **13 56 12.1 +2.2**
comp=Z,9.4nm,0.9s,mb4.5,baz=293,slow=14,SNR=4.0
ASAJ LR LR 14 09 26.7
comp=Z,194nm,18.7s,MS3.8,baz=74,slow=39
KLR Kul'dur 30.10 14 *e*P **P** **13 56 10.9 -1.4**
KLR MLR MLR
comp=N,700nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS5.1
HABR Khabarovsk 30.29 19 *e*P **P** **13 56 13.9 -0.1**
HABR *e*PPP 13 57 16.0
HABR *e* 13 59 11.5
HABR *e*S **S** **14 01 11.4 -2.2**
HABR *e*SS SS 14 02 45.9 -37
BATI Baumata 30.50 175 P **P** **13 56 16.4 +0.2**
comp=Z,34nm,0.9s,mb5.2,baz=0.2,slow=2.3,SNR=5.2
BATI LR LR 14 10 41.4
comp=Z,162nm,18.0s,MS3.7,baz=303,slow=40
TAPN Taplejung 31.02 289 *e*P **P** **13 56 21.2 +0.5**
ODAN Odare 31.25 288 *e*P **P** **13 56 23.0 +0.2**
comp=Z,16nm,0.6s,mb5.0
RAMN Ramite 31.96 288 *e*P **P** **13 56 29.4 +0.4**
comp=Z,20nm,0.6s,mb5.1
YSS Yuzh-Sakhalins 31.98 29 ⇓*e*P **P** **13 56 29.0 +0.2**
YSS *e*S **S** **14 01 37.0 -3.0**
YSS pmax pmax
comp=Z,20nm,0.8s,mb5.0
JIRN Jiri 32.39 290 *e*P **P** **13 56 33.2 +0.5**
comp=Z,18nm,0.7s,mb5.0
GUN Gumba 32.69 290 *e*P **P** **13 56 35.7 +0.4**
comp=Z,24nm,0.7s,mb5.2
PKI Pulchoki 33.07 289 *e*P **P** **13 56 38.4 -0.3**
KKN Kakani 33.20 290 *e*P **P** **13 56 39.7 -0.2**
DMN Daman 33.34 289 *e*P **P** **13 56 40.8 -0.3**
GKN Gorkha 33.79 290 *e*P **P** **13 56 44.2 -0.8**
comp=Z,9.2nm,0.7s,mb4.8
TLY Talaya 34.03 341 *e*P **P** **13 56 47.2 +0.5**
TLY pmax pmax
comp=Z,13nm,0.8s,mb4.9
TLY MLR MLR
comp=Z,340nm,17.0s,MS4.1
DANN Dangsing 34.59 291 *e*P **P** **13 56 51.5 -0.4**
KOLN Koldanda 34.69 290 *e*P **P** **13 56 52.5 -0.3**
comp=Z,19nm,0.8s,mb5.0
KAKA Kakadu 34.79 160 *e*P x 13 56 33.4
comp=Z,13nm,0.8s
KAKA *e* 13 56 39.1
MOY Mondy 34.88 338 *e*P **P** **13 56 54.4 +0.3**
WMQ Urumqi 36.16 318 P **P** **13 57 06.0 +0.8**
WMQ XP sP 13 57 13.0 +2.4
WMQ PP PP 13 58 29.5 +2.1
WMQ PPP 13 58 48.0
WMQ S **S** **14 02 45.0 +0.2**
WMQ XS sS 14 02 50.6 -0.4
WMQ SS SS 14 05 09.0 -14
WMQ AMB AMB
comp=Z,5.0nm,1.1s,mb4.4
WMQ AMB AMB
comp=Z,218nm,3.6s
WMQ LR LR
comp=N,489nm,10.0s,MS4.6
WMQ LR LR
comp=E,278nm,10.0s,MS4.6
WMQ LR LR
comp=Z,207nm,17.0s
FITZ Fitzroy Crossi 38.52 173 *e*P **P** **13 57 24.1 -1.3**
comp=Z,12nm,0.9s,mb4.6
FITZ *e*sP sP 13 57 30.2 -0.5
PMG Port Moresby 39.32 136 *e*P **P** **13 57 31.8 -0.4**
PMG pmax pmax
comp=Z,45nm,1.2s
PMG Port Moresby 39.32 136 *e*P **P** **13 57 31.8 -0.5**
comp=Z,45nm,1.2s,mb5.1
HYB Hyderabad 40.03 273 *i* P **P** **13 57 38.5 +0.3**
HYB *e* 13 57 45.0
HYB Hyderabad 40.03 273 *e*P **P** **13 57 32.5 -5.7**
MKAR Makanchi Array 40.92 319 P **P** **13 57 45.6 +0.4**
comp=Z,9.0nm,0.9s,mb4.4,baz=112,slow=8.8,SNR=53
MKAR LR LR 14 18 02.1
comp=Z,98nm,20.6s,MS3.7,baz=295,slow=41
MKAR Makanchi Array 40.92 319 ⇑*e*P **P** **13 57 45.5 +0.3**
KRAR Krasnoyarsk 41.27 336 *e*P **P** **13 57 48.5 +0.6**
YAK Yakutsk 42.08 6 *e*P **P** **13 57 53.2 -1.3**
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.6
YAK pmax pmax
comp=N,13nm,1.4s
YAK MLR MLR
comp=Z,324nm,14.0s,MS4.4
YAK Yakutsk 42.08 6 *e*P **P** **13 57 52.0 -2.4**
comp=Z,23nm,0.8s,mb4.9
WRAB Tennant Creek 42.18 161 P **P** **13 57 55.2 -0.5**
comp=Z,291nm,1.2s,mb5.8,SNR=16
WRAB Tennant Creek 42.18 161 *e*P **P** **13 57 55.3 -0.4**
WB2 Warramunga Arr 42.19 161 *e*P **P** **13 57 54.9 -0.9**
WB2 *e*sP sP 13 58 01.8 +0.6
WB2 *e*S **S** **14 04 10.6 -5.2**
PETK Petropavlovsk- 43.23 32 P **P** **13 58 08.5 +4.5**
comp=Z,1.6nm,0.6s,mb3.9,baz=195,slow=2.8,SNR=4.3
PETK LR LR 14 18 39.8
comp=Z,106nm,19.1s,MS3.8,baz=114,slow=40
ZAA0 Zalesovo Array 43.31 330 *e*P **P** **13 58 04.0 -0.6**
ZALV Zalesovo Beam 43.31 330 P **P** **13 58 04.3 -0.2**
comp=Z,18nm,0.9s,mb4.8,baz=114,slow=7.2,SNR=58
ZALV pP pP 13 58 11.3 +2.9
comp=Z,12nm,0.8s,baz=120,slow=7.6,SNR=14
ZALV LR LR 14 17 03.7
comp=Z,98nm,18.3s,MS3.8,baz=250,slow=38
ZALV Zalesovo Beam 43.31 330 P **P** **13 58 04.4 -0.2**
ZALV *PP pP 13 58 11.4 +3.0
TKM2 Tokmak 2 43.94 311 P **P** **13 58 11.3 +1.5**
SNR=9.8
KZA Kyzart 43.96 310 P **P** **13 58 12.3 +2.3**
SNR=7.5
KBK Karagaybulak 44.33 311 P **P** **13 58 14.7 +1.8**
SNR=11
CHMS Chumysh 44.56 311 P **P** **13 58 15.8 +1.0**
SNR=7.9
NVS Novosibirsk 44.59 330 *e*P **P** **13 58 13.5 -1.3**
NVS pmax pmax
comp=N,12nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
NVS pmax pmax
comp=Z,20nm,1.2s,mb4.8
AAK Ala-Archa 44.64 311 *c i*P **P** **13 58 16.8 +1.3**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
AAK Ala-Archa 44.64 311 P **P** **13 58 17.0 +1.5**
SNR=5.6
USP Ospenovka 44.81 311 P **P** **13 58 17.5 +0.7**
SNR=5.1
KURK Kurchatov 44.86 323 P **P** **13 58 17.1 0.0**
comp=Z,86nm,1.1s,mb5.5,SNR=10
KURK Kurchatov 44.86 323 P **P** **13 58 17.1 +0.1**
comp=Z,11nm,0.8s,mb4.8,baz=117,slow=6.5,SNR=6.6
KURK pP pP 13 58 23.8 +2.8
comp=Z,14nm,0.7s,baz=122,slow=8.1,SNR=18
KURK LR LR 14 18 07.0
comp=Z,75nm,20.2s,MS3.6,baz=100,slow=38
KURK Kurchatov 44.86 323 P **P** **13 58 16.8 -0.3**
KURK pmax pmax
comp=Z,18nm,1.1s,mb4.8
AML Almayashu 45.09 310 P **P** **13 58 21.1 +2.0**
SNR=14
ASAR Alice Springs 45.58 163 P **P** **13 58 22.9 -0.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=343,slow=6.7,SNR=80
ASAR S **S** **14 05 10.4 +5.2**
comp=Z,1.2nm,1.0s,baz=352,slow=19,SNR=5.0
CTA Charters Tower 47.28 147 *e*P **P** **13 58 37.5 +1.0**
comp=Z,7.6nm,1.1s,mb4.5
CTA *es*P sP 13 58 43.7 +1.8
CTA Charters Tower 47.28 147 P **P** **13 58 37.5 +1.1**
comp=Z,13nm,1.1s,mb4.8,baz=333,slow=8.9,SNR=8.7
CTA pP pP 13 58 43.7 +3.4
comp=Z,14nm,0.6s,baz=325,slow=9.8,SNR=12
CTA Charters Tower 47.28 147 *e*P **P** **13 58 37.5 +1.0**
CTA *e*SP sP 13 58 43.7 +1.8
CTA pmax pmax
comp=Z,8.0nm,1.1s
KBL Kabul 47.60 299 *e*P **P** **13 58 39.5 +0.6**
KBL pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
KBL Kabul 47.60 299 *e*P **P** **13 58 39.5 +0.6**
comp=Z,4.8nm,0.5s,mb4.8
KK31 Karatay Array 47.60 310 *i* P **P** **13 58 38.9 +0.1**
KK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
BVAR Borovoye Array 50.46 323 P **P** **13 59 00.6 0.0**
comp=Z,3.3nm,0.9s,mb4.4,baz=120,slow=11,SNR=9.7
BVAR pP pP 13 59 07.4 +3.0
comp=Z,2.9nm,0.8s,baz=111,slow=12,SNR=5.9
BVAR PcP PcP 14 00 17.9 -0.7
comp=Z,1.8nm,0.7s,baz=125,slow=7.2,SNR=2.7
BVAR pPcP 14 00 24.6
comp=Z,2.4nm,0.8s,baz=97,slow=6.0,SNR=2.9
BVAR Borovoye Array 50.46 323 P **P** **13 59 00.6 +0.1**
BVAR *PP pP 13 59 07.4 +3.0
BVAR 14 00 17.9
TIXI Tiksi 51.51 3 *e*P **P** **13 59 06.6 -1.5**
TIXI pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TIXI MLR MLR
comp=Z,300nm,23.0s,MS4.3
BILL Bilibino 55.38 19 *e*P **P** **13 59 36.1 -0.5**
BILL *e* 14 01 39.7
BILL pmax pmax
comp=Z,15nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,100nm,15.0s,MS4.0
BILL Bilibino 55.38 19 *e*P **P** **13 59 36.4 -0.1**
comp=Z,12nm,0.8s,mb5.0
STKA Stephens Creek 55.62 159 *e*P **P** **13 59 38.6 -0.2**
comp=Z,8.4nm,0.8s,mb4.8
STKA Stephens Creek 55.62 159 P **P** **13 59 38.8 0.0**
comp=Z,7.2nm,0.9s,mb4.7,baz=333,slow=6.7,SNR=10
STKA LR LR 14 23 56.1
comp=Z,88nm,18.3s,MS3.9,baz=23,slow=36
AB31 Akbulak array 55.92 316 P **P** **13 59 40.5 -0.3**
AB31 pmax pmax
comp=Z,13nm,1.0s,mb4.9
SVE Sverdlovsk 56.95 325 *e*P **P** **13 59 47.8 -0.2**
SVE *e*S **S** **14 07 31.9 -10**
SVE *e* 14 09 27.4
SVE *e*SS SS 14 11 30.4 +0.5
SVE pmax pmax
comp=Z,14nm,0.9s,mb5.0
SVE MLR MLR
comp=Z,384nm,17.0s,MS4.6
AKTK Aktyubinsk 57.31 317 P **P** **13 59 50.9 +0.2**
AKTO Aktyubinsk 57.31 317 P **P** **13 59 50.9 +0.2**
comp=Z,5.2nm,0.8s,mb4.6,baz=103,slow=7.0,SNR=14
ARU Arti 57.98 325 *c i*P **P** **13 59 55.0 -0.3**
ARU *e* 14 01 59.8
ARU *e*S **S** **14 07 57.1 +1.8**
ARU *e*SS SS 14 11 50.9 +4.8
ARU pmax pmax
comp=Z,28nm,2.5s,mb4.8
CAN Canberra 61.49 154 *e*P **P** **14 00 20.7 +1.1**
CAN pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
CAN Canberra 61.49 154 *e*P **P** **14 00 20.7 +1.1**
comp=Z,5.5nm,0.6s,mb4.9
TOO Toolangi 62.13 158 *e*P **P** **14 00 25.1 +1.2**
KIV Kislovodsk 67.76 310 *e*P **P** **14 01 01.5 +0.8**
KIV *e* 14 03 27.3
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.9
KIV MLR MLR
comp=Z,100nm,20.0s,MS4.0
KLMR Klimovskoe 68.22 329 *e*P **P** **14 01 01.8 -1.4**
KLMR pmax pmax
comp=Z,34nm,1.6s,mb5.1
OBN Obninsk 70.31 323 *e*P **P** **14 01 15.7 -0.5**
OBN *e* 14 03 47.5
OBN pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.1
ANN Anapa 71.36 312 *e*P sP 14 01 33.2 +4.8
ANN pmax pmax
comp=Z,19nm,0.7s,mb5.1
JOF Joensuu 71.87 331 *ep* **P** **14 01 24.7 -0.9**
comp=Z,5.2nm,0.7s,mb4.6
JOF Joensuu 71.87 331 *e*P **P** **14 01 24.7 -0.9**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
COLA College 72.33 27 *e*P **P** **14 01 28.3 0.0**
COLA pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
COLA College 72.33 27 *e*P **P** **14 01 28.3 0.0**
comp=Z,5.2nm,0.7s,mb4.6
ARCES ARCESS Array B 72.95 339 P **P** **14 01 31.8 -0.1**
comp=Z,2.5nm,0.7s,mb4.3,baz=46,slow=10,SNR=4.9
ARCES LR LR 14 37 30.2
comp=Z,110nm,20.2s,MS4.1,baz=314,slow=39
KAF Kangasniemi 74.31 331 *ep* **P** **14 01 38.3 -1.7**
comp=Z,5.6nm,0.8s,mb4.5
KAF Kangasniemi 74.31 331 *e*P **P** **14 01 38.3 -1.7**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BR131 Keskin Array S 75.19 307 *e*P **P** **14 01 45.8 +0.2**
comp=Z,1.5nm,0.7s,mb4.0
BRTR Keskin Array B 75.19 307 P **P** **14 01 45.0 -0.6**
comp=Z,1.0nm,0.8s,mb3.8,baz=74,slow=6.2,SNR=5.8
BRTR LR LR 14 36 55.5
comp=Z,33nm,21.5s,MS3.6,baz=292,slow=37
AKASG Malin Array Be 75.51 319 P **P** **14 01 46.0 -1.2**
comp=Z,0.5nm,0.2s,mb4.1,baz=63,slow=6.2,SNR=4.4
CSS Prodhromos 76.65 303 *e*P **P** **14 01 53.5 -0.5**
comp=Z,12nm,0.8s,mb4.9
SUW Suwalki 78.14 323 *e*P **P** **14 02 01.8 -0.2**
SUW Suwalki 78.14 323 *e*P **P** **14 02 01.8 -0.2**
VRI Vrincioaia 78.43 315 ⇓*i*P **P** **14 02 06.3 +2.5**
MLR Muntele Rosu 79.07 314 ⇓*i*P **P** **14 02 08.1 +0.8**
KWP Kalwaria 79.83 319 *e*P **P** **14 02 11.0 -0.3**
KWP pmax pmax
comp=Z,22nm,1.0s,mb5.0
KWP Kalwaria 79.83 319 ⇑*i*P **P** **14 02 11.5 +0.2**
KWP Kalwaria 79.83 319 *e*P **P** **14 02 10.9 -0.4**
comp=Z,22nm,1.0s,mb5.0
OJC Ojcow 81.39 320 *e*P **P** **14 02 21.2 +1.5**
NB2 NORSAR Subarra 81.44 332 P **P** **14 02 19.0 -0.7**
comp=Z,4.0nm,0.8s,mb4.4,baz=64,slow=5.3
NOA NORSAR Array B 81.44 332 P **P** **14 02 19.2 -0.5**
comp=Z,1.7nm,0.6s,mb4.1,baz=63,slow=5.3,SNR=5.6
NOA pP pP 14 02 25.5 +1.7
comp=Z,2.3nm,0.6s,baz=62,slow=5.2,SNR=6.2
NOA LR LR 14 41 42.0
comp=Z,217nm,18.9s,MS4.5,baz=30,slow=38
NOA NORSAR Array B 81.44 332 P **P** **14 02 19.2 -0.5**
NOA *PP pP 14 02 25.5 +1.7
NOA NORSAR Array B 81.44 332 P **P** **14 02 19.2 -0.5**
NOA pP pP 14 02 25.5 +1.7
NOA LR LR 14 41 42.0
VTS Vitosha 81.88 312 ⇓*i*P **P** **14 02 23.3 +0.9**
RES Resolute Bay 82.47 9 *e*P **P** **14 02 24.8 -0.1**
RES pmax pmax
comp=Z,30nm,1.0s,mb5.2
RES Resolute Bay 82.47 9 *e*P **P** **14 02 24.8 -0.1**
comp=Z,30nm,1.0s,mb5.2
KSP Ksiaz 83.21 322 *e*P **P** **14 02 29.4 +0.2**
BRG Berggiesshubel 84.55 322 *e*P **P** **14 02 36.0 -0.1**
BRG *e* 14 02 42.8
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
BRG Berggiesshubel 84.55 322 *e*PKP **P** **14 02 36.0 -0.1**
comp=Z,8.7nm,0.8s,mb4.9
BRG *e* 14 02 42.8
comp=Z,12nm,1.1s
CLL Collm 84.90 323 *i* P **P** **14 02 37.6 -0.2**
comp=Z,12nm,1.0s,mb5.0
CLL *i* (sP) sP 14 02 44.3 +0.9
CLL LmV 14 46 00.0
comp=Z,100nm,20.8s
KHC Kasperske Hory 85.53 321 *e*P **P** **14 02 40.5 -0.5**
GERES GERESS Array B 85.58 321 P **P** **14 02 41.5 +0.2**
comp=Z,3.1nm,0.9s,mb4.6,baz=57,slow=4.9,SNR=16
GERES pP pP 14 02 48.0 +2.6
comp=Z,4.1nm,0.9s,baz=47,slow=5.9,SNR=9.3
SUMG Summit 86.25 354 *e*P **P** **14 02 43.9 -0.2**
comp=Z,4.9nm,0.8s,mb4.8
YKA Yellowknife Ar 86.60 23 P **P** **14 02 45.8 -0.2**
comp=Z,2.9nm,0.8s,mb4.6,baz=312,slow=4.7,SNR=62
YKA pP pP 14 02 52.5 +2.4
comp=Z,6.3nm,0.9s,baz=312,slow=4.6,SNR=27

YKA	Yellowknife Ar	86.60	23	P	P	14 02 45.9	-0.2
YKA				pP	pP	14 02 52.5	+2.3
CDF	Champ du Feu	89.53	322	eP	P	14 02 59.9	-0.4
	comp=Z,17nm,1.1s,mb5.0						
CDF	Champ du Feu	89.53	322	eP	P	14 02 59.9	-0.4
CDF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
CDF	Champ du Feu	89.53	322	eP	P	14 02 59.9	-0.4
	comp=Z,8.4nm,1.1s,mb5.0						
LPG	La Plagne	91.34	320	eP	P	14 03 08.8	0.0
	comp=Z,21nm,0.9s,mb5.2						
LPG	La Plagne	91.34	320	eP	P	14 03 08.8	0.0
LPG				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
LPG	La Plagne	91.34	320	eP	P	14 03 08.8	0.0
	comp=Z,11nm,0.9s,mb5.2						
LPL	La Plagne	91.34	320	eP	P	14 03 09.0	+0.2
	comp=Z,24nm,1.0s,mb5.2						
LPL	La Plagne	91.34	320	eP	P	14 03 09.0	+0.2
LPL				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.2						
LPL	La Plagne	91.34	320	eP	P	14 03 09.0	+0.2
	comp=Z,12nm,1.0s,mb5.2						
SBF	Sospel	91.76	318	eP	P	14 03 10.5	-0.3
	comp=Z,48nm,0.8s,mb5.6						
SBF	Sospel	91.76	318	eP	P	14 03 10.5	-0.3
SBF				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.6						
SBF	Sospel	91.76	318	eP	P	14 03 10.5	-0.3
	comp=Z,24nm,0.8s,mb5.6						
AVF	Avril sur Loir	92.64	322	eP	P	14 03 14.3	-0.5
	comp=Z,68nm,1.7s,mb5.5						
AVF	Avril sur Loir	92.64	322	eP	P	14 03 14.3	-0.5
AVF				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.5						
AVF	Avril sur Loir	92.64	322	eP	P	14 03 14.3	-0.5
	comp=Z,34nm,1.7s,mb5.5						
ETSF	Etsaut	97.15	321	eP	P	14 03 33.5	-2.0
LSZ	Lusaka	97.61	257	eP	P	14 03 36.2	-1.8
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.8						
LSZ	Lusaka	97.61	257	eP	P	14 03 36.2	-1.8
	comp=Z,3.2nm,0.9s,mb4.8						
TORD	Torodi Ar. Bea	111.52	294	PP	PP	14 09 14.9	-4.0
	comp=Z,1.0nm,0.9s,baz=67,slow=8.1,SNR=4.6						
TORD				PKKP	PKKPdf	14 19 48.8	-1.7
	comp=Z,1.3nm,0.7s,baz=255,slow=3.9,SNR=8.6						
TXAR	Lajitas Array	114.57	42	PKP	PKiKP	14 08 43.4	-0.3
	comp=Z,0.2nm,0.6s,baz=320,slow=2.0,SNR=3.9						
TXAR				pPKP		14 08 50.2	
	comp=Z,0.3nm,0.6s,baz=236,slow=1.2,SNR=3.9						
TXAR	Lajitas Array	114.57	42	PKP	PKiKP	14 08 43.4	-0.3
TXAR				pPKP		14 08 50.2	
SNAA	Sanae	119.52	198	ePKIKP	PKPdf	14 08 49.1	-2.7
SDV	Santo Domingo	148.82	22	ePKPdf	PKPdf	14 09 46.8	-0.8
ROSC	El Rosal	150.84	32	PKPbc	PKPbc	14 09 56.6	+0.1
	comp=Z,6.0nm,0.5s,baz=89,slow=18,SNR=6.1						
OTAV	Otavalo	152.15	45	ePKPdf	PKPdf	14 09 53.1	+0.3

*IDC **08** 13:55:41.9±3.2, 32.55N×116.30W, h0^{km}, mb1 3.3/4, mb1mx3.2/24, mbtmp2.9/4, ML3.2/4, Error ellipse: s-maj=43.3km s-min=16.2km az=46.0*
*ISCJB **08** 13:55:42.9±0.3, 32.67N±0.02×116.13W±0.03, h10^{km}, Error ellipse: s-maj=3.9km s-min=2.9km az=18.8*
*NEIC **08** 13:55:44.0, 32.65N×116.16W, h10^{km}, ML3.9(PAS), After PAS.*
NEIC Felt [IV] at Boulevard; [III] at Alpine, Campo, Descanso, El Cajon, Jamul, La Jolla, Pine Valley and San Diego; [II] at Escondido, Lakeside, Ramona and Santee. Also felt at El Centro, Fallbrook, Jacumba, Julian, Ocotillo, Poway, San Marcos and Spring Valley.
*ECX **08** 13:55:44.4±0.6, 32.66N×116.14W, h7^{km}, MD3.7, ML3.9*
ISC 08 13:55:43.6±0.3, 32.66N±0.02×116.17W±0.03, h10^{km}, n29, σ1^{s}09/38, 4C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUH	Yuha Desert	0.20	92	⇑eP	Pg	13 55 47.5	-0.4
CRR	Carrizo Plain	0.28	35	⇓eP	Pg	13 55 49.3	-0.1
COK	Cook Ranch	0.42	62	⇑eP	Pg	13 55 51.9	+0.1
CBX	Cerro Bola	0.54	231	⇑eP	Pg	13 55 54.4	+0.3
CBX				eS	Sg	13 56 02.1	+0.8
RDX	Rancho Dowling	0.74	166	⇓eP	Pg	13 55 57.3	-0.6
RDX				eS	Sg	13 56 07.4	-0.3
RDX				e		13 56 07.8	
	comp=E,5μm,0.4s						
ENX	Ensenada	0.88	209	eP	Pg	13 56 00.3	-0.3
ENX				eS	Sg	13 56 12.0	0.0
ENX				⇑e		13 56 12.9	
	comp=N,5μm,0.3s						
PFO	Pinyon Flat Ob	0.98	346	ePg	Pg	13 56 01.5	-1.0
PFO				eSg	Sg	13 56 14.6	-0.7
PBX	Punta Banda	1.03	208	eP	Pg	13 56 02.9	-0.4
PBX				eS	Sg	13 56 16.7	0.0
PBX				⇓e		13 56 22.4	
	comp=E,3μm,0.8s						
ECNX	Esteban Cantu	1.06	200	⇓eP	Pg	13 56 03.3	-0.7
ECNX				eS	Sg	13 56 17.9	+0.1
GLA	Glamis	1.19	70	ePb	Pb	13 56 03.7	-2.6
GLA				eSb	Sb	13 56 18.6	-3.2
MWC	Mount Wilson	2.23	315	ePb	Pb	13 56 23.4	-0.6
MWC				eSn	Sn	13 56 48.1	0.0
PASC	Pasadena Art C	2.27	312	ePn	Pn	13 56 23.7	+2.5
LDFC	Landfair	2.57	20	ePn	Pb	13 56 30.7	+0.9
GSC	Goldstone	2.69	349	ePb	Pb	13 56 30.9	-1.0
OSI	Osito Adit	2.89	313	eSb	Sb	13 57 10.2	-0.6
ISA	Isabella	3.56	328	ePb	Pb	13 56 45.4	-1.3
DAC	Darwin (Calif)	3.80	342	eSg	Sg	13 57 41.8	-3.9
SHPR	Sheep Range	3.93	12	ePn	Pn	13 56 43.7	-0.3
TPNV	Topopah Spring	4.28	359	ePn	Pn	13 56 49.0	+0.1
TUC	Tucson	4.56	93	ePn	Pn	13 56 50.8	-1.9
WUAZ	Wupatki	4.89	53	ePn	Pn	13 56 57.6	+0.4
TPH	Tonopah	5.48	351	ePn	Pn	13 57 06.5	+1.3
NVAR	Mina Array Bea	6.02	344	Pn	Pn	13 57 13.8	+1.0
	comp=E,0.2nm,0.3s,baz=166,slow=15,SNR=3.7						
NVAR				Pg	Pg	13 57 34.2	-4.7
	comp=E,1.4nm,0.3s,baz=161,slow=17,SNR=24						
NVAR				Lg		13 58 55.2	
	comp=E,0.1nm,0.3s,baz=165,slow=30,SNR=1.9						
MSU	Marysvale	6.69	28	ePb	Pn	13 57 22.8	+1.0
MVCO	Mesa Verde	7.76	52	ePn	Pn	13 57 38.5	+1.8
NLU	North Lily Min	8.00	23	ePn	Pn	13 57 43.1	+3.3
ANMO	Albuquerque	8.39	72	Pn	Pn	13 57 46.4	+1.0
	comp=E,0.1nm,0.3s,baz=292,slow=6.0,SNR=3.3						
ANMO				Lg		14 00 14.7	
	comp=E,0.1nm,0.3s,baz=28,slow=15,SNR=2.3						
TXAR	Lajitas Array	11.22	104	Pn	Pn	13 58 26.6	+2.4
	comp=E,0.1nm,0.3s,baz=286,slow=13,SNR=4.9						
PDAR	Pinedale Array	11.36	25	Pn	Pn	13 58 31.0	+5.0
	comp=E,0.0nm,0.3s,baz=204,slow=13,SNR=3.8						

*IDC **08** 14:28:20.6±7.4, 1.76N×96.20E, h0^{km}, mb3.6/3, mb1 3.6/5, mb1mx3.4/21, mbtmp3.5/5, ML3.6/2, Error ellipse: s-maj=139.1km s-min=42.2km az=12.0*
*ISCJB **08** 14:28:23.2±1.6, 1.8N±0.2×96.2E±0.2, h33^{km}, mb3.7/4, Error ellipse: s-maj=30.8km s-min=18.5km az=39.7*
*NEIC **08** 14:28:25.8±1.1, 1.82N×96.29E, h35^{km}, mb3.9/1, Error ellipse: s-maj=22.7km s-min=14.2km az=223.0*
ISC 08 14:28:25.7±1.6, 1.8N±0.2×96.3E±0.2, h35^{km}, n9, σ0^{s}53/8, mb3.7/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.80	69	Pn	Pn	14 29 07.9	-0.1
	2.6nm,0.3s,baz=307,slow=11,SNR=7.8						
CMAR	Chiang Mai Arr	16.74	9	Pn	Pn	14 32 17.5	-0.2
	0.2nm,0.3s,baz=197,slow=11,SNR=4.8						
WRAB	Tennant Creek	43.12	122	eP	P	14 36 23.0	0.0
	3.4nm,1.3s,mb3.9						
MK31	Makanchi Array	46.44	347	eP	P	14 36 48.0	-1.1
MKAR	Makanchi Array	46.44	347	P	P	14 36 49.5	+0.5
	0.7nm,0.7s,mb3.7,baz=166,slow=7.0,SNR=7.8						
MKAR	Makanchi Array	46.44	347	P	P	14 36 49.5	+0.4
SONM	Songino Array	46.67	9	P	P	14 36 51.6	+0.8
	0.2nm,0.4s,mb3.4,baz=195,slow=10,SNR=2.4						
ZALV	Zalesovo Beam	52.82	352	P	P	14 37 37.6	+0.1
	0.9nm,0.5s,mb4.0,baz=186,slow=11,SNR=6.9						
FCC	Fort Churchill	119.05	6	ePKPdf	PKPdf	14 47 11.2	+0.5

*IDC **08** 14:54:33.4±1.0, 32.28S×178.72W, h0^{km}, mb4.3/6, mb1 4.4/7, mb1mx4.1/17, mbtmp4.3/7, ML4.1/1, MS3.3/3, Ms1 3.2/3, ms1mx3.0/15, Error ellipse: s-maj=26.8km s-min=25.8km az=59.0*
*ISCJB **08** 14:54:36.8±6.2, 32.48S±0.09×179.0W±0.2, h23^{km}±42^{km}, mb4.4/7, Error ellipse: s-maj=21.7km s-min=14.5km az=0.5*
*NEIC **08** 14:54:38.7±0.8, 32.37S×178.79W, h35^{km}, mb4.6/5, Error ellipse: s-maj=20.2km s-min=18.9km az=109.0*
ISC 08 14:54:38.8±6.6, 32.42S±0.09×179.0W±0.2, h26^{km}±45^{km}, n28, σ0^{s}82/22, mb4.4/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.29	16	LR	LR	14 56 00.5	
	comp=Z,665nm,19.1s,baz=134,slow=28						
URZ	Urewera	6.64	208	Pn	Pn	14 56 14.5	-0.2
	3.5nm,0.3s,baz=320,slow=18,SNR=39						
URZ				Sn	Sn	14 57 29.3	-0.2
	5.1nm,0.3s,baz=199,slow=17,SNR=7.3						
URZ				LR	LR	14 58 43.4	
	comp=Z,77nm,21.2s,baz=286,slow=36						
URZ	Urewera	6.64	208	Pn	Pn	14 56 14.5	-0.2
URZ				Sn	Sn	14 57 29.3	-0.2
URZ				LR	LR	14 58 43.4	
RPZ	Rata Peaks	13.72	212	Pn	Pn	14 57 45.8	-5.9
	0.4nm,0.3s,baz=197,slow=0.8,SNR=3.4						
RPZ				Sn	Sn	15 00 11.1	-12
	0.7nm,0.3s,baz=282,slow=22,SNR=7.4						
STKA	Stephens Creek	33.25	260	P	P	15 01 14.3	+0.3
	2.2nm,1.1s,baz=96,slow=10,SNR=3.1						
STKA				LR	LR	15 12 55.3	
	comp=Z,81nm,18.4s,baz=205,slow=33						
CTA	Charters Tower	33.36	283	eP	P	15 01 17.4	+2.4
	4.1nm,0.6s,mb4.5						
CTA	Charters Tower	33.36	283	P	P	15 01 16.9	+1.9
	4.3nm,0.6s,mb4.6,baz=119,slow=9.8,SNR=18						
CTAO	Charters Tower	33.36	283	eP	P	15 01 15.8	+0.8
	4.4nm,0.6s,mb4.6						
ASAR	Alice Springs	42.20	270	P	P	15 02 29.7	0.0
	3.7nm,0.6s,mb4.2,baz=105,slow=7.6,SNR=58						
WB2	Warramunga Arr	43.37	275	eP	P	15 02 38.8	-0.4
WRAB	Tennant Creek	43.37	275	eP	P	15 02 38.7	-0.5
	3.4nm,0.6s,mb4.2						
KAKA	Kakadu	48.49	282	eP	x	15 02 59.9	
	6.8nm,1.1s						
MBWA	Marble Bar	55.20	266	eP	P	15 04 08.6	-1.0
	12nm,1.1s,mb4.8						
QSPA	South Pole Qui	57.70	180	P	P	15 04 27.6	+1.0
	3.5nm,0.6s,mb4.6,baz=7.4,slow=0.7,SNR=32						
QSPA	South Pole Qui	57.70	180	eP	P	15 04 27.3	+0.8
	6.3nm,0.6s,mb4.8						
MAW	Mawson	70.13	201	P	P	15 05 48.8	+0.4
	1.8nm,0.5s,mb4.3,baz=180,slow=3.0,SNR=2.8						
SNAA	Sanae	76.16	179	eP	P	15 06 27.3	+3.2
VNA3	Neumayer Olymp	76.35	176	e	P	15 06 24.1	-1.0
VNA3				e		15 06 29.4	
VNA3				e		15 06 35.8	
VNA2	Neumayer--Watz	76.77	177	e	P	15 06 27.4	-0.1
	baz=187,slow=4.1						
VNA2				e		15 06 32.0	
VNA2				e		15 06 38.4	
VNA1	Neumayer--Stat	77.01	177	e	P	15 06 29.0	+0.1
VNA1				e		15 06 33.6	
VNA1				e		15 06 39.2	
NVAR	Mina Array Bea	90.29	43	P	P	15 07 36.6	-0.6
	0.9nm,0.9s,mb4.1,baz=202,slow=6.8,SNR=3.3						
ARCES	ARCESS Array B	140.37	347	PKhKP		15 13 55.8	
	3.7nm,1.0s,baz=20,slow=2.9,SNR=3.4						
ARCES				PKP	PKPdf	15 14 03.5	-1.0
	4.0nm,1.0s,baz=64,slow=2.8,SNR=5.2						
ARCES	ARCESS Array B	140.37	347	PKP		15 13 55.8	
ARCES				PKP	PKPdf	15 14 03.5	-1.0
KAF	Kangasniemi	146.15	339	ep	PKPdf	15 14 12.1	-2.7
	0.5nm,0.3s						
NB2	NORSAR Subarra	150.60	350	PKP	PKPdf	15 14 24.8	+2.7
	comp=Z,0.6nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.60	350	PKPbc	PKPbc	15 14 25.1	-2.5
	comp=Z,1.5nm,0.5s,baz=16,slow=4.2,SNR=7.6						
BRTR	Keskin Array B	152.75	295	PKPbc	PKPbc	15 14 30.7	-2.5
	comp=Z,0.3nm,0.4s,baz=123,slow=2.8,SNR=3.1						
TORD	Torodi Ar. Bea	160.81	182	PKPab	PKPab	15 15 16.9	-2.2
	comp=Z,0.8nm,0.6s,baz=182,slow=3.2,SNR=6.1						

*NEIC **08** 15:05:10.0, 18.15N×100.67W, h60^{km}, MD3.7(MEX), After MEX.*
MEX 08 15:05:10.2±0.8, 18.17N×100.67W, h55^{km}±21^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.94	234	i P	Pn	15 05 25.5	-1.7
ZIIG				i S	Sn	15 05 38.1	-1.6
MEIG	Mezcala	1.03	103	i P	Pn	15 05 27.7	-0.8
MEIG				i S	Sn	15 05 40.9	-1.1
PLIG	Platanillo	1.14	78	i P	Pn	15 05 28.8	-1.1
PLIG				i S	Sn	15 05 41.7	-2.7
CAIG	El Cayaco	1.18	161	i P	Pn	15 05 28.2	-2.2
CAIG				i S	Sn	15 05 42.9	-2.6
ACX	Acapulco	1.48	151	i P	Pn	15 05 33.6	-1.0
ACX				i S	Sn	15 05 50.7	-2.2
MZVM		1.71	53	i P	Pn	15 05 34.3	-3.3
MZVM				i S	Sn	15 05 54.9	-3.4
IIO	Organos	2.33	52	eP	Pn	15 05 44.5	-1.6
IIO				i S	Sn	15 06 12.2	-1.3
UTMO	Huajuapan	2.75	97	eP	Pn	15 05 51.7	-0.2
UTMO				i S	Sn	15 06 22.9	-1.0
PNIG	Pinotepa	3.01	126	eP	Pn	15 05 54.6	-0.8
PNIG				i S	Sn	15 06 28.1	-2.1

*TIF **08** 15:09:14.4, 41.54N×43.70E, h20^{km}±2^{km}*
*ISCJB **08** 15:09:15.8±0.6, 41.53N±0.03×43.69E±0.04, h15^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=3.8km az=146.9*
*MOS **08** 15:09:15.0±0.2, 41.53N×43.67E, h15^{km}, mb3.8/1, Error ellipse: s-maj=37.7km s-min=11.6km az=79.5*
*CSEM **08** 15:09:17.4, 42.47N×42.00E, h9^{km}, MD2.8, After ERD*
*DDA **08** 15:09:17.4, 42.47N×42.00E, h9^{km}, Md2.8*
ISC 08 15:09:14.5±0.6, 41.54N±0.03×43.65E±0.03, h2^{km}±5^{km}, n15, σ0^{s}74/29, 2C, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOR	Gori	0.56	37	P	Pg	15 09 25.6	+0.3
GOR				S	Sg	15 09 34.0	+1.3
TBLG	Delisi	0.84	76	P	Pg	15 09 31.2	+0.6
TBLG				S	Sg	15 09 42.1	+0.7
MTA	Mtatsminda	0.87	79	P	Pg	15 09 31.1	-0.1
MTA				S	Sg	15 09 42.4	-0.1
ONI	Oni	1.05	352	P	Pg	15 09 34.4	-0.3
ONI				S	Sg	15 09 49.0	+0.6
ZEI	Tsey	1.25	8	⇑iPG	Pg	15 09 38.2	-0.2
ZEI				eS	Sg	15 09 55.7	+1.1
DGRG	David-gareji	1.30	93	P	Pg	15 09 39.2	-0.2
DGRG				S	Sg	15 09 55.3	-0.8
ARTV	Artvin	1.34	255	i P	Pn	15 09 40.3	0.0
ARTV				i S	Sg	15 09 57.2	-0.5
DIGR	Digorskoe uzhe	1.36	358	ePG	Pg	15 09 39.8	-0.8
DIGR				eS	Sg	15 09 58.5	+0.2
LACR	Lac	1.37	20	⇑iPG	Pg	15 09 39.9	-1.0
LACR				i S	Sg	15 09 58.6	-0.1
DAGI	Agillar	1.39	251	i P	Pn	15 09 41.7	+0.8
DAGI				i S	Sg	15 09 59.1	0.0
DBAD	Bademkaya	1.56	251	i P	Pn	15 09 44.1	+0.8
DBAD				i S	Sn	15 10 02.7	-1.4
DDEM	Demirkent	1.57	246	i P	Pn	15 09 44.5	+1.1
DDEM				i S	Sn	15 10 05.3	+1.0
KORR	Kora	1.58	11	ePG	Pg	15 09 43.1	-1.7
KORR				eS	Sn	15 10 04.3	-0.2
VLKR	Vladikavkaz	1.69	26	ePN	Pn	15 09 44.5	-0.5
VLKR				eS	Sn	15 10 06.8	-0.4
LSNR	Lesken	1.74	4	ePN	Pn	15 09 45.2	-0.5

*IDC **08** 15:10:00.3±5.1, 36.36N×71.13E, h183^{km}±46^{km}, mb3.5/7, mb1 3.6/12, mb1mx3.3/25, mbtmp3.4/12, Error ellipse: s-maj=27.5km s-min=17.9km az=1.0*
*BJI **08** 15:10:01.5, 36.55N×71.17E, h217^{km}, mb4.1*
*MOS **08** 15:10:01.8±0.8, 36.58N×71.16E, h204^{km}, mb4.0/6, Error ellipse: s-maj=15.4km s-min=8.4km az=87.3*
*ISCJB **08** 15:10:01.7±0.3, 36.61N±0.02×71.16E±0.05, h203^{km}±5^{km}, mb3.7/8, Error ellipse: s-maj=6.3km s-min=3.5km az=168.2*
*NEIC **08** 15:10:02.5±0.5, 36.57N×71.18E, h195^{km}±6^{km}, mb4.6/11, Error ellipse: s-maj=7.4km s-min=4.3km az=62.0*
*NNC **08** 15:10:08.2±3.0, 37.11N×70.83E, h188^{km}±28^{km}, mb2.8, mpv4.0, Error ellipse: s-maj=25.2km s-min=14.0km az=9.0*
ISC 08 15:10:02.7±0.3, 36.60N±0.02×71.18E±0.05, h195^{km}±5^{km}, n81, σ0^{s}99/99, mb3.7/8, 6C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.70	221	ePn	Pn	15 10 48.8	+0.3
KBL				eSn	Sn	15 11 22.1	-2.1
CEP	Cherat	2.84	168	⇓P	Pn	15 10 51.7	+1.6
CEP				S	Sn	15 11 28.0	+0.9
CHCP	Chirah Chowk	3.40	149	⇓P	Pn	15 10 58.8	+2.0
SBDP	Sheikh Budin	4.30	184	P	Pn	15 11 09.2	+1.1
KSH	Kashi	4.77	51	P	Pn	15 11 15.5	+1.6
KSH				S	Sn	15 12 08.3	-1.7
THN	Thein Dam	5.59	137	eP	Pn	15 11 25.0	+0.4
THN				eS	Sn	15 12 28.8	-0.4
DLH	Dalhousie	5.65	134	eP	Pn	15 11 27.0	+1.6
DLH				eS	Sn	15 12 29.0	-1.6
AML	Almayashu	5.85	19	P	Pn	15 11 28.6	+0.8
	SNR=125						
AML	Almayashu	5.85	19	⇓iPn	Pn	15 11 28.4	+0.6
AML				eSn	Sn	15 12 33.2	-1.9
UCH	Uchtor	6.18	24	P	Sn	15 12 41.8	-1.0
	SNR=9.9						
UCH	Uchtor	6.18	24	ePn	Pn	15 11 32.6	+0.6
	6.0nm,0.6s						
EKS2	Erkin-Say	6.37	17	P	Pn	15 11 34.9	+0.3
	SNR=5.8						
EKS2	Erkin-Say	6.37	17	ePn	Pn	15 11 34.7	+0.2
	3.7nm,0.4s						
EKS2				eSn	Sn	15 12 43.5	-3.8
KK31	Karatay Array	6.51	356	P	Pn	15 11 36.1	-0.3
	2.9nm,0.2s,baz=179,slow=12,SNR=79						
KK31				S	Sn	15 12 44.4	-6.3
	11nm,0.3s,baz=189,slow=18,SNR=19						
AAK	Ala-Archa	6.54	22	ePN	Pn	15 11 37.1	+0.4
AAK				e		15 12 51.6	
AAK				pmax	pmax		
	comp=Z,12nm,0.5s						
AAK	Ala-Archa	6.54	22	P	Pn	15 11 37.8	+1.1
	SNR=7.1						
AAK	Ala-Archa	6.54	22	ePn	Pn	15 11 37.1	+0.4
	comp=Z,12nm,0.5s						
AAK				eSn	Sn	15 12 51.6	+0.3
KBK	Karagaybulak	6.71	24	P	Pn	15 11 40.2	+1.3
	SNR=13						
CHMS	Chumysh	6.95	22	P	Pn	15 11 42.7	+0.6
	SNR=6.0						
TKM2	Tokmak 2	7.17	27	⇑P	Pn	15 11 45.2	+0.3
	comp=Z,13nm,0.7s						
TKM2				⇑S	Sn	15 13 04.9	-1.1
	comp=Z,8.6nm,1.1s						
TKM2	Tokmak 2	7.17	27	⇓ePN	Pn	15 11 45.4	+0.5
TKM2				pmax	pmax		
	comp=Z,12nm,0.6s						
TKM2	Tokmak 2	7.17	27	P	Pn	15 11 45.5	+0.6
	SNR=21						
TKM2	Tokmak 2	7.17	27	⇓ePn	Pn	15 11 45.4	+0.5
	comp=Z,12nm,0.6s						
SMLA	Simla	7.39	136	⇓iP	Pn	15 11 48.4	+0.5
SMLA				i S	Sn	15 13 07.5	-3.9
SMLA				i S	Sn	15 13 08.1	-3.3
SMLA				ex	x	15 13 11.1	
	comp=E,1μm,0.4s						
SMLA				ex	x	15 13 12.7	
	comp=N,1μm,0.4s						
KLP	Kalpa	7.74	129	eP	Pn	15 11 52.9	+0.4
KLP				eS	Sn	15 13 18.1	-1.7
KLP				AML	AML	15 13 21.5	
	comp=N,256nm,0.6s						
KLP				AML	AML	15 13 22.0	
	comp=E,203nm,0.6s						
DDI	Dehra Dun	8.49	136	ex	x	15 13 14.0	
DDI				ex	x	15 13 37.0	
JOSI	Joshimath	9.23	128	eP	Pn	15 12 13.0	+1.1
JOSI				eS	Sn	15 13 49.8	-5.4
JOSI				AML	AML	15 13 52.8	
	comp=E,159nm,1.0s						
JOSI				AML	AML	15 13 54.4	
	comp=N,186nm,0.6s						
KHET	Khetri	9.36	154	eS	Sn	15 13 50.1	-8.3
NDI	New Delhi	9.39	146	ex	x	15 13 50.0	
KUDL	Kundal	9.55	151	eP	Pn	15 12 14.8	-1.4
KUDL				eS	Sn	15 13 54.7	-8.2
SONA	Sohna	9.70	147	eP	Pn	15 12 17.8	-0.3
SONA				eS	Sn	15 13 58.5	-8.0
MK31	Makanchi Array	13.12	36	⇓P	Pn	15 13 05.3	+3.7
	comp=N,1.2nm,0.8s,baz=200,slow=9.4,SNR=5.5						
MK31				⇓S	Sn	15 15 29.4	+1.6
	comp=N,1.5nm,0.9s,baz=207,slow=15,SNR=3.8						
MK31	Makanchi Array	13.12	36	ePn	Pn	15 13 00.3	-1.3
MKAR	Makanchi Array	13.12	36	P	Pn	15 13 01.8	+0.2
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=7.9						
MKAR				S	Sn	15 15 34.6	+6.8
	comp=N,0.1nm,0.3s,baz=201,slow=18,SNR=4.4						
MKAR	Makanchi Array	13.12	36	P	Pn	15 13 01.8	+0.2
MKAR				S	Sn	15 15 34.6	+6.8
DANN	Dangsing	13.42	124	eP	Pn	15 13 04.9	-0.7
	comp=N,14nm,0.3s						
KOLN	Koldanda	13.70	126	eP	Pn	15 13 07.8	-1.3
GKN	Gorkha	14.23	123	eP	Pn	15 13 15.6	-0.1
DMN	Daman	14.80	123	eP	Pn	15 13 22.8	+0.1
	comp=N,40nm,0.7s						
KKN	Kakani	14.81	122	eP	Pn	15 13 22.0	-0.7
	comp=N,26nm,0.6s						
KKN	Kakani	14.81	122	eP	Pn	15 13 22.0	-0.7
KKN				pmax	pmax		
	comp=Z,26nm,0.6s						
KURBB	Kurchatov Arra	14.98	18	⇑P	Pn	15 13 26.0	+1.4
	comp=Z,0.7nm,1.4s						
PKI	Pulchoki	15.03	123	eP	Pn	15 13 25.7	+0.2
AB07	Akbulak array	15.05	331	⇑P	Pn	15 13 23.7	-1.7
	comp=Z,3.2nm,0.7s						
AB07				⇑S	S	15 16 03.5	-8.9
	comp=Z,3.3nm,0.8s						
KURK	Kurchatov	15.09	18	P	Pn	15 13 25.1	-0.8
	comp=Z,0.1nm,0.3s,baz=206,slow=11,SNR=4.2						
KURK	Kurchatov	15.09	18	eP	Pn	15 13 26.5	+0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	15.09	18	eP	Pn	15 13 26.5	+0.6
	comp=Z,0.7nm,0.4s						
GUN	Gumba	15.14	121	eP	Pn	15 13 26.5	-0.3
JIRN	Jiri	15.51	121	eP	Pn	15 13 31.6	+0.3
	comp=Z,25nm,0.3s						
VOSK	Vostochnaya	16.12	360	⇑P	Pn	15 13 37.2	-1.1
	comp=Z,2.9nm,0.8s						
RAMN	Ramite	16.24	122	eP	Pn	15 13 40.0	-0.1
	comp=Z,11nm,0.4s						
BVA0	Borovoye Array	16.43	358	P	Pn	15 13 42.2	+0.2
	comp=Z,0.6nm,0.9s,baz=158,slow=9.4,SNR=12						
BVAR	Borovoye Array	16.43	358	P	Pn	15 13 42.2	+0.1
	comp=Z,0.6nm,0.3s,baz=153,slow=9.1,SNR=9.6						
BVAR	Borovoye Array	16.43	358	P	Pn	15 13 42.2	+0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	16.47	358	eP	Pn	15 13 42.1	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	16.47	358	eP	Pn	15 13 42.1	-0.4
	comp=Z,2.7nm,0.7s						
TAPN	Taplejung	16.77	119	eP	Pn	15 13 47.0	+0.6
	comp=Z,12nm,0.3s						
AKTK	Aktyubinsk	16.77	330	P	Pn	15 13 45.6	-0.5
AKTO	Aktyubinsk	16.77	330	⇓P	Pn	15 13 45.4	-0.7
	comp=Z,1.6nm,1.0s						
AKTO	Aktyubinsk	16.77	330	P	Pn	15 13 45.6	-0.5
	comp=Z,1.3nm,0.3s,baz=142,slow=9.9,SNR=24						
AKTO	Aktyubinsk	16.77	330	P	Pn	15 13 45.7	-0.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ODAN	Odare	16.84	121	eP	Pn	15 13 48.0	+0.7
ZAA0	Zalesovo Array	19.76	24	eP	P	15 14 17.6	+0.2
ZALV	Zalesovo Beam	19.76	24	P	P	15 14 17.9	+0.4
	comp=Z,0.6nm,0.3s,baz=223,slow=11,SNR=11						
ZALV	Zalesovo Beam	19.76	24	P	P	15 14 17.9	+0.4

ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	**Keskin Array B**	**29.54**	**288**	P	**P**	**15 15 49.4**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.2,baz=88,slow=12,SNR=2.6						
AKASG	**Malin Array Be**	**33.00**	**309**	P	**P**	**15 16 19.2**	**+0.2**
	comp=Z,1.1nm,0.4s,mb3.7,baz=80,slow=7.2,SNR=6.1						
AKASG	**Malin Array Be**	**33.00**	**309**	P	**P**	**15 16 19.2**	**+0.2**
JOF	**Joensuu**	**35.85**	**330**	*e*p	**P**	**15 16 43.8**	**+0.5**
	comp=Z,2.4nm,0.3s,mb4.2						
JOF	**Joensuu**	**35.85**	**330**	*e*P	**P**	**15 16 43.8**	**+0.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
ARCES	**ARCESS Array B**	**41.11**	**337**	P	**P**	**15 17 27.5**	**+0.6**
	comp=Z,2.7nm,0.6s,mb3.9,baz=116,slow=8.0,SNR=21						
ARCES	**ARCESS Array B**	**41.11**	**337**	P	**P**	**15 17 27.5**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**15 17 53.3**	**-0.1**
	comp=Z,3.5nm,0.5s,mb4.0,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**15 17 53.3**	**-0.1**
	comp=Z,3.2nm,0.5s,mb3.9,baz=96,slow=7.7,SNR=14						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**15 17 53.3**	**-0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.87**	**269**	P	**P**	**15 20 25.4**	**-2.2**
	comp=Z,1.0nm,0.4s,mb3.8,baz=52,slow=6.1,SNR=22						
TORD	**Torodi Ar. Bea**	**65.87**	**269**	P	**P**	**15 20 25.4**	**-2.2**
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**15 21 56.2**	**+0.4**
	comp=Z,1.0nm,0.4s,mb3.8,baz=350,slow=5.4,SNR=23						
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**15 21 56.2**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**15 21 56.2**	**+0.4**
ASAR	**Alice Springs**	**84.19**	**125**	P	**P**	**15 22 11.2**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.4,baz=313,slow=5.5,SNR=11						

CASC 08 15:10:20.5±2.1, 1270N×8754W, h105km±15km, MD3.6, ML3.0, 2C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.65**	**333**	⇓*e*P	x	15 10 38.4	
CNCH				*e*S	x	15 10 50.9	
TEL3	**Telica 3**	**0.69**	**100**	*e*P	Pn	15 10 37.6	-0.6
CNGN	**Cerro Negro**	**0.84**	**103**	*e*P	Pn	15 10 38.3	-1.3
CNGN				AML	AML	15 10 58.3	
	comp=E,263nm,0.2s						
MIRN	**Miramar**	**0.84**	**107**	⇓*e*P	Pn	15 10 39.0	-0.7
BLLM	**Bellamira**	**1.01**	**317**	⇑*e*P	x	15 10 41.8	
BLLM				*e*S	x	15 10 58.5	
MOMN	**Momotombo**	**1.01**	**106**	⇓*e*P	Pn	15 10 41.7	+0.2
VSM	**San Miguel**	**1.02**	**315**	⇓*e*P	x	15 10 42.4	
CSAN		**1.20**	**115**	*e*P	Pn	15 10 43.6	+0.1
CAHU	**Cacacuatique**	**1.25**	**328**	*e*P	x	15 10 46.3	
XAVN	**Gruta Xavier**	**1.30**	**115**	*e*P	Pn	15 10 44.9	+0.2
TICN	**Ticuantepe**	**1.43**	**117**	⇓*e*P	Pn	15 10 46.6	+0.4
SNVI	**San Vicente**	**1.56**	**306**	*e*P	x	15 10 48.6	
LFRS	**El Faro**	**1.75**	**302**	⇑*e*P	x	15 10 50.5	
LFRS				*e*S	x	15 11 12.9	
CHI2		**15.80**	**119**	*e*P	x	15 10 36.6	
CHI2				*e*S	x	15 10 49.7	

*CSEM **08** 15:21:46.6±0.1, 3694N×2933E, h20km, MD3.2, Error ellipse: s-maj=2.9km s-min=2.5km az=32.0*
*DDA **08** 15:21:46.1, 3700N×2919E, h7km±7km, Md3.2*
*ISK **08** 15:21:46.3, 3702N×2926E, h9km, MD3.0*
*ISCJB **08** 15:21:47.7±0.5, 3700N±004×2928E±004, h20km±8km, Error ellipse: s-maj=6.1km s-min=5.9km az=7.9*
ISC 08 15:21:47.4±0.5, 3699N±004×2927E±004, h16km±5km, n13, σ0.86/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.34**	**44**	*i* P	**Pg**	**15 21 53.8**	**-0.7**
GOLH				*i* S	**Sg**	**15 21 59.7**	**+0.5**
TURN	**Turunc**	**0.54**	**258**	*i* P	**Pg**	**15 22 01.3**	**+3.2**
TURN				*i* S	**Sg**	**15 22 11.7**	**+6.3**
ELL	**Elmali**	**0.57**	**115**	*e*PG	**Pg**	**15 21 57.3**	**-1.3**
ELL				*e*SG	**Sg**	**15 22 07.3**	**+1.1**
YER	**Yerkesik**	**0.80**	**281**	*e*PG	**Pg**	**15 22 02.1**	**-0.9**
YER				*e*SG	**Sg**	**15 22 13.4**	**0.0**
AKAS	**Kas**	**0.80**	**160**	*i* P	**Pg**	**15 22 01.6**	**-1.3**
AKAS				*i* S	**Sg**	**15 22 14.4**	**+0.9**
AKAS	**Kas**	**0.80**	**160**	*i* P	**Pg**	**15 22 01.6**	**-1.4**
AKAS				*i* S	**Sg**	**15 22 14.4**	**+0.8**
BCK	**Bucak**	**1.16**	**66**	*e*PN	**Pn**	**15 22 08.2**	**-0.7**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**15 22 11.7**	**+0.2**
DAT	**Datca**	**1.38**	**260**	*e*PN	**Pn**	**15 22 12.4**	**+0.4**
KHAL	**Karahalli**	**1.39**	**7**	*i* P	**Pn**	**15 22 13.1**	**+0.9**
KHAL				*i* S	**Sn**	**15 22 29.9**	**-0.3**
BDRM	**Kayabasi**	**1.46**	**273**	*i* P	**Pn**	**15 22 12.3**	**-0.8**
BDRM				*i* S	**Sn**	**15 22 31.9**	**0.0**
BODT	**Bodrum**	**1.57**	**273**	*e*PN	**Pn**	**15 22 14.8**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**343**	*e*PN	**Pn**	**15 22 15.6**	**+0.6**

*IDC **08** 15:35:39.3±8.9, 3637N×7092E, h199km±76km, mb3.1/5, mb1 3.1/9, mb1mx2.9/25, mbtmp3.0/9, MS3.3/2, Ms1 3.3/2, ms1mx2.6/20, Error ellipse: s-maj=61.3km s-min=25.8km az=33.0*
*ISCJB **08** 15:35:40.1±0.6, 3657N±005×7100E±009, h212km±8km, mb3.2/4, Error ellipse: s-maj=11.7km s-min=8.3km az=11.1*
*MOS **08** 15:35:40.8±1.4, 3659N×7082E, h220km, mb4.0/2, Error ellipse: s-maj=29.7km s-min=10.8km az=78.7*
*NEIC **08** 15:35:41.2±0.8, 3655N×7101E, h209km±8km, mb4.0/4, Error ellipse: s-maj=18.3km s-min=9.8km az=120.0*
ISC 08 15:35:41.1±0.6, 3652N±006×7104E±009, h208km±8km, n26, σ0.67/30, mb3.2/4, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.56**	**220**	*e*Pn	**Pn**	**15 36 27.1**	**+0.9**
KBL				*e*Sn	**Sn**	**15 37 01.1**	**-0.4**
DLH	**Dalhousie**	**5.68**	**133**	*e*P	**Sn**	**15 38 10.0**	**-0.3**
AML	**Almayashu**	**5.96**	**19**	⇑*i*Pn	**Pn**	**15 37 07.8**	**0.0**
	28nm,0.4s						
AML				*e*Sn	**Sn**	**15 38 12.3**	**-4.4**
EKS2	**Erkin-Say**	**6.48**	**18**	*e*Pn	**Pn**	**15 37 13.9**	**-0.6**
	2.4nm,0.5s						
KK31	**Karatay Array**	**6.58**	**357**	⇓Pn	**Pn**	**15 37 16.2**	**+0.4**
	1.0nm,0.4s,baz=179,slow=13,SNR=6.4						
KK31				⇓Sn	**Sn**	**15 38 23.5**	**-7.7**
	6.7nm,0.6s,baz=185,slow=19,SNR=12						
AAK	**Ala-Archa**	**6.66**	**23**	*e*PN	**Pn**	**15 37 16.8**	**0.0**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AAK	**Ala-Archa**	**6.66**	**23**	*e*Pn	**Pn**	**15 37 16.8**	**0.0**
	comp=Z,7.7nm,0.4s						
AAK				*e*Sn	**Sn**	**15 38 25.4**	**-7.5**
TKM2	**Tokmak 2**	**7.29**	**27**	⇓Pn	**Pn**	**15 37 24.8**	**-0.1**
	comp=Z,7.5nm,0.7s						
TKM2				⇑Sn	**Sn**	**15 38 40.0**	**-7.7**
	comp=Z,3.9nm,0.8s						
TKM2				⇑Lg		15 39 11.6	
	comp=Z,4.6nm,1.2s						
TKM2	**Tokmak 2**	**7.29**	**27**	*e*PN	**Pn**	**15 37 25.0**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TKM2	**Tokmak 2**	**7.29**	**27**	*e*Pn	**Pn**	**15 37 25.0**	**+0.1**
	comp=Z,4.8nm,0.8s						
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**15 38 43.5**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=4.6						
KURK	**Kurchatov**	**15.20**	**19**	P	**Pn**	**15 39 04.6**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=209,slow=11,SNR=2.3						
KURK				LR	LR	15 46 33.5	
	comp=Z,37nm,20.4s,baz=160,slow=43						
BVAR	**Borovoye Array**	**16.51**	**359**	P	**P**	**15 39 20.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=158,slow=10,SNR=7.1						
AKTK	**Aktyubinsk**	**16.78**	**330**	P	**P**	**15 39 22.2**	**-0.5**
AKTO	**Aktyubinsk**	**16.78**	**330**	P	**P**	**15 39 22.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=5.7						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**15 39 56.5**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=222,slow=12,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	**P**	**15 39 56.5**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
IDI	**Anoyia**	**37.13**	**282**	LR	LR	15 59 16.9	
	comp=Z,112nm,19.6s,slow=38						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**15 43 04.8**	**+0.5**
	comp=Z,2.6nm,0.8s,mb3.7,baz=99,slow=7.5,SNR=5.8						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**15 43 04.8**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**15 43 04.8**	**+0.5**
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**15 43 30.0**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.1,baz=98,slow=10,SNR=3.1						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**15 43 30.0**	**-0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**81.22**	**3**	P	**P**	**15 47 33.3**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.0,baz=350,slow=5.5,SNR=4.3						
YKA	**Yellowknife Ar**	**81.22**	**3**	P	**P**	**15 47 33.3**	**+0.1**
ASAR	**Alice Springs**	**84.24**	**125**	P	**P**	**15 47 48.7**	**-0.6**
	comp=Z,0.3nm,0.7s,mb3.1,baz=317,slow=5.7,SNR=5.1						

KRSC 08 15:37:49.6±0.3, 5133N×15786E, h113km±112km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.17**	**325**	*i* P	Pn	15 38 13.4	+0.7
MIPR				*e*S	Sn	15 38 30.7	+0.4
RUS	**Russkaya**	**1.18**	**20**	*i* P	Pn	15 38 15.7	+2.9
RUS				*i* S	Sn	15 38 35.3	+4.8
PET	**Petropavlovsk**	**1.77**	**16**	*i* P	Pn	15 38 22.3	+2.6
PET				*i* S	Sn	15 38 46.6	+3.9
AVH	**Avacha**	**2.01**	**15**	*i* P	Pn	15 38 26.2	+3.4
AVH				*i* S	Sn	15 38 52.0	+3.8
NLC	**Nalytchevo**	**2.06**	**26**	*e*P	Pn	15 38 25.2	+1.8
NLC				*i* S	Sn	15 38 51.8	+2.6
SPN	**Mys Shipunski**	**2.21**	**36**	*e*P	Pn	15 38 28.3	+2.9
SPN				*i* S	Sn	15 38 56.2	+3.4
GNL	**Ganaly**	**2.37**	**1**	*i* P	Pn	15 38 29.0	+1.7
GNL				*e*S	Sn	15 38 58.3	+2.0
KII	**Karymskiy**	**2.88**	**19**	P	Pn	15 38 37.1	+3.1
KII				*i* S	Sn	15 39 13.0	+4.8
MKZ	**Mys Kozlova**	**3.99**	**34**	*e*P	Pn	15 38 50.3	+1.6
MKZ				*i* S	Sn	15 39 34.4	-0.2
TUMR	**Tumrok**	**4.19**	**18**	P	Pn	15 38 54.1	+2.7
KMNR	**Kamenistaya**	**4.66**	**17**	P	Pn	15 39 00.5	+2.8
SRDR	**Sredinnyy**	**5.12**	**12**	P	Pn	15 39 06.0	+2.1
KBTR	**Krutoberegovo**	**5.70**	**29**	P	Pn	15 39 13.0	+1.2

*ISCJB **08** 15:58:15.6±1.2, 2465S±0.1×4465E±0.1, h10km, mb3.5/2, Error ellipse: s-maj=22.2km s-min=8.8km az=40.8*
*IDC **08** 15:58:15.7±1.3, 2454S×4462E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.5/24, mbtmp3.7/5, ML3.7/2, MS2.8/2, Ms1 2.8/2, ms1mx2.6/23, Error ellipse: s-maj=29.0km s-min=23.3km az=131.0*
*NEIC **08** 15:58:17.4±1.1, 2464S×4459E, h10km, mb3.6/1, Error ellipse: s-maj=22.1km s-min=16.4km az=149.0*
ISC 08 15:58:17.3±1.2, 2465S±01×4465E±01, h10km, n9, σ0.96/9, mb3.5/2, Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**6.07**	**24**	*e*Pn	**Pn**	**15 59 47.8**	**+0.6**
	34nm,0.3s						
ABPO				*e*Sn	**Sn**	**16 00 57.5**	**+0.8**
OPO	**Ambohidratompo**	**6.47**	**22**	Pn	**Pn**	**15 59 53.4**	**+0.8**
OPO				Sn	**Sn**	**16 01 04.4**	**-2.1**
	7.8nm,0.3s,baz=200,slow=18,SNR=3.0						
OPO				Lg		16 01 38.1	
	21nm,0.3s,baz=283,slow=23,SNR=8.5						
LBTB	**Lobatse**	**17.25**	**265**	P	**Pn**	**16 02 23.8**	**+5.3**
	4.8nm,1.0s						
BOSA	**Boshof**	**17.74**	**253**	P	**Pn**	**16 02 24.0**	**-0.5**
	0.1nm,0.3s,baz=88,slow=15,SNR=2.8						
LSZ	**Lusaka**	**17.98**	**298**	P	**Pn**	**16 02 28.4**	**+0.9**
	0.4nm,0.3s,baz=129,slow=12,SNR=4.1						
LSZ				LR	LR	16 08 45.8	
	comp=Z,22nm,21.6s,baz=121,slow=35						
TSUM	**Tsumeb**	**25.61**	**277**	LR	LR	16 13 29.0	
	comp=Z,31nm,19.5s,baz=270,slow=36						
TORD	**Torodi Ar. Bea**	**56.22**	**307**	P	**P**	**16 07 57.0**	**-0.9**
	0.6nm,1.1s,mb3.6,baz=136,slow=6.0,SNR=2.6						
ASAR	**Alice Springs**	**79.91**	**111**	P	**P**	**16 10 26.8**	**-0.1**
	0.5nm,0.8s,mb3.5,baz=234,slow=6.9,SNR=4.6						
TXAR	**Lajitas Array**	**151.37**	**287**	PKPbc	PKPbc	16 18 13.0	+1.3
	0.2nm,0.7s,baz=116,slow=5.2,SNR=3.8						

*ISCJB **08** 16:12:03.4±0.6, 3478N±005×7401E±006, h10km, Error ellipse: s-maj=9.2km s-min=4.4km az=140.4*
*NEIC **08** 16:12:05.7±0.7, 3445N×7377E, h10km, Error ellipse: s-maj=16.6km s-min=7.4km az=215.0*
ISC 08 16:12:07.3±0.6, 3473N±005×7400E±007, h10km, n19, σ1.50/25, 1C-2D, Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.14**	**159**	*e*x	**Sn**	**16 13 12.0**	**+2.4**
THN	**Thein Dam**	**2.70**	**147**	*e*x	**Pn**	**16 12 53.2**	**+2.5**
THN				*e*S	**Sg**	**16 13 32.6**	**-1.3**
DLH	**Dalhousie**	**2.73**	**142**	*e*P	**Pg**	**16 13 00.0**	**+0.5**
DLH				*e*S	**Sg**	**16 13 34.0**	**-0.8**
KBL	**Kabul**	**4.09**	**269**	*e*Pn	**Pn**	**16 13 05.9**	**-4.0**
KBL				*e*Sn	**Sn**	**16 13 56.3**	**-1.5**
SMLA	**Simla**	**4.47**	**143**	⇑*i*P	**Pn**	**16 13 17.2**	**+2.2**
SMLA				*e*S	**Sn**	**16 14 08.7**	**+1.6**
SMLA				*e*x	x	16 14 28.6	
	comp=E,549nm,0.4s						
SMLA				*e*x	x	16 14 29.3	
	comp=N,700nm,0.3s						
KLP	**Kalpa**	**4.78**	**131**	*e*x	**Pn**	**16 13 22.2**	**+2.9**
KLP				*e*S	**Sn**	**16 14 20.6**	**+5.9**
KLP				AML	AML	16 14 56.7	
	comp=E,96nm,0.4s						
KLP				AML	AML	16 14 58.0	
	comp=N,76nm,0.7s						
DDI	**Dehra Dun**	**5.57**	**141**	*e*S	**Sn**	**16 14 40.5**	**+6.3**
KHET	**Khetri**	**6.81**	**166**	*e*P	Px	16 13 54.4	
KHET				*e*S	Sx	16 15 11.2	
KHET				AML	AML	16 15 49.9	
	comp=E,12nm,0.3s						
KHET				AML	AML	16 15 50.2	
	comp=N,9.9nm,0.4s						
SONA	**Sohna**	**6.97**	**157**	*e*S	**Sn**	**16 15 16.0**	**+7.2**
SONA				AML	AML	16 15 57.1	
	comp=E,17nm,0.2s						
SONA				AML	AML	16 15 57.7	
	comp=N,10nm,0.1s						
AML	**Almayashu**	**7.40**	**358**	*e*Pn	**Pn**	**16 13 57.9**	**+2.7**
	comp=N,5.5nm,0.5s						
AML				*e*Sn	**Sn**	**16 15 15.0**	**-4.2**
KK31	**Karatay Array**	**8.80**	**343**	⇓Pn	**Pn**	**16 14 15.8**	**+1.4**
	comp=N,1.2nm,0.5s,baz=172,slow=14						
KK31				⇓Sn	**Sn**	**16 15 53.6**	**+0.1**
	comp=N,2.5nm,0.6s,baz=174,slow=24						
DANN	**Dangsing**	**10.47**	**125**	*e*P	**Pn**	**16 14 36.8**	**-0.6**
KOLN	**Koldanda**	**10.74**	**128**	*e*P	**Pn**	**16 14 40.7**	**-0.5**
	comp=N,3.4nm,0.3s						
GKN	**Gorkha**	**11.29**	**124**	*e*P	**Pn**	**16 14 47.3**	**-1.3**
	comp=N,9.9nm,0.3s						
DMN	**Daman**	**11.86**	**124**	*e*P	**Pn**	**16 14 55.4**	**-1.0**
GUN	**Gumba**	**12.21**	**121**	*e*P	**Pn**	**16 15 00.6**	**-0.7**
	comp=N,10nm,0.4s						
JIRN	**Jiri**	**12.58**	**121**	*e*P	**Pn**	**16 15 05.9**	**-0.4**
	comp=N,9.9nm,0.3s						
RAMN	**Ramite**	**13.30**	**122**	*e*P	**Pn**	**16 15 14.3**	**-1.9**
TAPN	**Taplejung**	**13.85**	**118**	*e*P	**Pn**	**16 15 22.2**	**-1.5**
	comp=N,6.3nm,0.3s						

*NEIC **08** 16:14:53.9, 1900N×6829W, h136km, MD3.9(RSPR), After RSPR.*
RSPR 08 16:14:53.9, 1900N×6829W, h136km±6km, MD3.9/5, MD3.9/5, 6C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPR	**Mayaguez**	**1.34**	**126**	*e*P	Sn	16 15 41.0	-0.2
LSP	**Las Mesas**	**1.40**	**126**	⇑*e*P	Pn	16 15 20.8	-0.6
LSP				*e*S	Sn	16 15 42.3	0.0
CRPR	**Cabo Rojo, PR**	**1.49**	**131**	⇑*e*P	Pn	16 15 19.3	-3.1
CRPR				*e*S	Sn	16 15 42.4	-1.6
LRS	**Lares**	**1.54**	**117**	*e*S	Sn	16 15 45.5	+0.5
LRS	**Lares**	**1.54**	**117**	*e*Pn	Sn	16 15 46.1	+1.2
AOPR	**Arecibo Observ**	**1.59**	**114**	⇑*e*P	Pn	16 15 23.2	-0.3
AOPR				*e*S	Sn	16 15 46.1	+0.1
AOPR				*e*Pn	Sn	16 15 46.5	+0.5
SJG	**San Juan**	**2.21**	**113**	*e*S	Sn	16 15 60.0	+0.9
CBYP	**Canovanas**	**2.41**	**107**	⇑*e*P	Pn	16 15 33.8	+0.4
CBYP				*e*S	Sn	16 16 03.7	+0.1
HUMP	**Col San Antoni**	**2.46**	**110**	⇑*e*P	Pn	16 15 33.9	0.0
HUMP				*e*S	Sn	16 16 04.7	0.0
MTP	**Monte Pirata**	**2.74**	**109**	⇑*e*P	Pn	16 15 37.7	+0.2
TBVI	**Tortola**	**3.52**	**99**	*e*S	Sn	16 16 30.3	+1.1

CASC 08 16:15:59.4±1.9, 1026N×8647W, h0km±9km, MD4.0, ML2.2, 8C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.84**	**99**	*e*P	Pg	16 16 16.9	+1.5
SSN	**San Juan del S**	**1.20**	**30**	⇑*e*P	Pg	16 16 21.8	-0.7
2RIO	**Dos Rios de Up**	**1.25**	**77**	*i* P	Pg	16 16 22.6	-0.8
2RIO				*e*P		16 16 22.6	
LIM1	**Limonal**	**1.27**	**70**	⇑*i*P	Pg	16 16 22.9	-0.9
JCR	**Jicaral**	**1.40**	**107**	*e*P	Pn	16 16 25.7	-0.5
CONN	**Concepcion**	**1.54**	**33**	⇑*e*P	Pn	16 16 27.0	-1.1
APON	**Apoyo**	**1.69**	**13**	*e*P	Pn	16 16 30.2	0.0
TICN	**Ticuantepe**	**1.78**	**8**	⇑*e*P	Pn	16 16 31.4	0.0
FORC	**Fortuna**	**1.79**	**83**	*e*P	Pn	16 16 31.2	-0.3
TISN	**Laguna Tiscapa**	**1.88**	**6**	*e*P	Pn	16 16 32.9	+0.1
XAVN	**Gruta Xavier**	**1.88**	**4**	*e*P	Pn	16 16 31.9	-0.9
MGAN	**Managua**	**1.89**	**7**	*e*S	Sn	16 17 00.8	+3.3
MGAN				AML	AML	16 17 07.5	
	comp=E,18nm,0.6s						
COPN	**Copaltepe**	**1.91**	**356**	⇓*e*P	Pn	16 16 33.2	0.0
CSAN		**1.91**	**1**	*e*P	Pn	16 16 33.1	-0.1
CGA2	**Cerro Gallo 2**	**1.99**	**97**	*e*P	Pn	16 16 34.1	-0.2
HUEN		**2.09**	**8**	⇑*e*P	Pn	16 16 35.4	-0.3
MOMN	**Momotombo**	**2.14**	**358**	⇑*e*P	Pn	16 16 36.4	0.0
PRS1	**Puriscal**	**2.14**	**97**	*e*P	Pn	16 16 36.3	-0.2
LAJ	**Bijagual**	**2.35**	**99**	*e*P	Pn	16 16 35.0	-4.3
TELN	**Telica**	**2.36**	**351**	*e*P	Pn	16 16 39.5	+0.1
URSC	**Urasca**	**2.68**	**99**	*e*P	Pn	16 16 45.2	+1.3
LAPE	**La Pedrera**	**14.96**	**99**	⇑*i*P	x	16 16 20.6	
LAPE				⇑*e*		16 16 20.6	
LAPE				*i* S	x	16 16 39.0	

*NEIC **08** 16:51:58.3±0.5, 2396N×12187E, h10km, mb4.5/3, ML4.4(TAP), Error ellipse: s-maj=7.4km s-min=5.6km az=128.0*
NEIC Recorded [4 TAP] in Hua-lien County.
*BJI **08** 16:51:58.2, 2400N×12190E, h10km, mb4.7, ML3.6*
*TAP **08** 16:52:01.0, 2402N×12169E, h21km, ML4.3, B*
*ISCJB **08** 16:52:00.8±0.3, 2400N±001×12178E±002, h22km±2km, mb3.7/10, Error ellipse: s-maj=3.0km s-min=1.9km az=40.2*
*JMA **08** 16:52:01.0±0.2, 2400N×12168E, h61km, M3.4*
*IDC **08** 16:52:02.8±4.5, 2405N×12189E, h39km±43km, mb3.5/8, mb1 3.6/9, mb1mx3.5/21, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=22.4km s-min=21.6km az=42.0*
ISC 08 16:52:00.8±0.3, 2400N±001×12177E±002, h17km±2km, n92, σ0.99/145, mb3.7/10, 13C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.15**	**261**	⇓*i*P	**Pg**	**16 52 05.7**	**+0.8**
	baz=243						
TWD	**Chiawan**	**0.18**	**296**	⇓*i*P	**Pg**	**16 52 05.5**	**+0.2**
	baz=304						
TWD				*i* S	**Sg**	**16 52 08.3**	**+0.1**
	baz=304						
NACB	**Ninganchiao**	**0.23**	**317**	*e*P	**Pg**	**16 52 05.1**	**-1.1**
NACB				*e*S	**Sg**	**16 52 09.3**	**-0.5**
ESF	**Shoufeng Towns**	**0.27**	**242**	*e*P	**Pg**	**16 52 06.8**	**0.0**
	baz=235						
EHP	**Heping Village**	**0.31**	**355**	*i* P	**Pg**	**16 52 07.8**	**+0.4**
	baz=4.0						
EHP				S	**Sg**	**16 52 12.8**	**+1.0**
	baz=4.0						
TEGC	**Jichi Village**	**0.36**	**216**	P	**Pg**	**16 52 08.9**	**+0.6**
	baz=191						
TEGC				*e*S	**Sg**	**16 52 15.5**	**+2.2**
	baz=191						
ESL	**Shilin**	**0.36**	**239**	⇓*i*P	**Pg**	**16 52 08.1**	**-0.2**
	baz=234						
ESL				*e*S	**Sg**	**16 52 13.3**	**-0.1**
	baz=234						
ENA	**Nanau**	**0.42**	**357**	⇑*i*P	**Pg**	**16 52 09.8**	**+0.3**
	baz=6.0						
ENA				S	**Sg**	**16 52 15.9**	**+0.7**
	baz=6.0						
WHF	**Hehuan Shan**	**0.48**	**287**	⇑*i*P	**Pg**	**16 52 10.2**	**-0.3**
	baz=282						
NNS	**Nan Shan**	**0.57**	**320**	⇑*i*P	**Pg**	**16 52 11.9**	**-0.1**
	baz=325						
NNS				S	**Sg**	**16 52 19.1**	**-0.5**
	baz=325						
TWT	**Tachien**	**0.60**	**295**	⇑*i*P	**Pg**	**16 52 12.6**	**-0.1**
	baz=295						
TWT				S	**Sg**	**16 52 20.6**	**0.0**
	baz=295						
TWC	**Suao**	**0.61**	**7**	⇑*i*P	**Pg**	**16 52 13.1**	**+0.3**
	baz=6.0						
TWC				S	**Sg**	**16 52 22.1**	**+1.1**
	baz=6.0						
EHY	**Hungye**	**0.64**	**220**	⇓*i*P	**Pg**	**16 52 12.4**	**-1.0**
	baz=214						
ENTT	**Nioudou**	**0.66**	**344**	⇑*i*P	**Pg**	**16 52 13.7**	**-0.1**
	baz=342						
ENTT				S	**Sg**	**16 52 22.9**	**+0.3**
	baz=342						
TWE	**Neicheng**	**0.72**	**353**	⇑*i*P	**Pg**	**16 52 14.9**	**-0.1**
	baz=358						
TWE				S	**Sg**	**16 52 24.8**	**+0.2**
	baz=358						
YULB	**Yu-li**	**0.74**	**216**	*e*P	**Pb**	**16 52 13.3**	**-2.1**
YULB				*e*S	**Sb**	**16 52 25.3**	**0.0**
YHNB	**Yeheng**	**0.76**	**332**	⇓*i*P	**Pb**	**16 52 14.9**	**-0.6**
YHNB				*e*S	**Sb**	**16 52 24.5**	**-1.1**
ILA	**Ilan**	**0.76**	**359**	P	**Pb**	**16 52 15.7**	**+0.1**
	baz=356						
ILA				*e*S	**Sb**	**16 52 26.9**	**+1.1**
	baz=356						
NSK	**Sanguang**	**0.77**	**331**	⇑*i*P	**Pb**	**16 52 15.3**	**-0.5**
	baz=324						
NSK				*i* S	**Sb**	**16 52 24.8**	**-1.1**
	baz=324						
SSLB	**Suanglung**	**0.78**	**254**	⇑*i*P	**Pb**	**16 52 14.6**	**-1.3**
SSLB				*e*S	**Sb**	**16 52 24.4**	**-1.8**
TWF1	**Yuli**	**0.78**	**214**	⇓*i*P	**Pb**	**16 52 14.5**	**-1.4**
	baz=222						
SMLT	**Sun Moon Lake**	**0.80**	**262**	⇓*i*P	**Pb**	**16 52 15.6**	**-0.7**
	baz=260						
SMLT				S	**Sb**	**16 52 25.7**	**-1.3**
	baz=260						
TYC	**Yuchr**	**0.84**	**264**	⇓*i*P	**Pb**	**16 52 16.1**	**-0.9**
	baz=262						
TYC				S	**Sb**	**16 52 26.2**	**-1.8**
	baz=262						
NSTT	**Nanjuang**	**0.94**	**312**	⇑*i*P	**Pb**	**16 52 18.4**	**-0.3**
	baz=314						
NSTT				S	**Sb**	**16 52 30.4**	**-0.5**
	baz=314						
CHKT	**Chengkung**	**0.97**	**202**	*e*P	**Pb**	**16 52 18.2**	**-1.0**
	baz=180						
CHKT				*e*S	**Sb**	**16 52 33.2**	**+1.4**
	baz=180						
TWQ1	**Liyutan**	**0.97**	**291**	⇑*i*P	**Pb**	**16 52 19.3**	**+0.1**
	baz=291						
TWQ1				*e*S	**Sb**	**16 52 31.9**	**+0.1**
	baz=291						
TWA	**Mucha**	**0.99**	**350**	⇓*i*P	**Pb**	**16 52 19.6**	**+0.1**
	baz=353						
WNT	**Mingjian**	**1.00**	**263**	P	**Pb**	**16 52 19.8**	**0.0**
	baz=260						
WNT				S	**Sb**	**16 52 33.0**	**+0.4**
	baz=260						
TATO	**Taipei**	**1.00**	**345**	*e*P	**Pb**	**16 52 19.0**	**-0.7**
TATO				S	**Sb**	**16 52 30.7**	**-2.0**
ALS	**Alishan**	**1.01**	**241**	⇓*i*P	**Pb**	**16 52 19.5**	**-0.4**
	baz=239						
TCU	**Taichung**	**1.01**	**278**	⇓P	**Pb**	**16 52 20.4**	**+0.5**
	baz=278						
TCU				*e*S	**Sb**	**16 52 33.1**	**+0.2**
	baz=278						
TAP1	**Taipei**	**1.06**	**348**	*e*P	**Pb**	**16 52 20.6**	**-0.1**
	baz=353						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAP1				eS	Sb	16 52 33.1	-1.1
	baz=353						
ELDTW	Lidau	1.06	221	⇓iP	Pb	16 52 18.9	-1.9
	baz=207						
NWF	Wu-fen Shan	1.06	1	P	Pb	16 52 21.1	+0.3
	baz=351						
NWF				eS	Sb	16 52 35.0	+0.5
	baz=351						
CHN5	Tsauling	1.08	248	⇓iP	Pb	16 52 20.8	-0.2
	baz=245						
CHN5				eS	Sb	16 52 35.4	+0.6
	baz=245						
HSN	Hsinchu	1.08	318	⇑iP	Pb	16 52 21.6	+0.5
	baz=322						
HSN				S	Sb	16 52 36.5	+1.6
	baz=322						
NCU	National Centr	1.10	331	⇓P	Pb	16 52 21.7	+0.3
	baz=349						
NCU				S	Sb	16 52 37.2	+1.7
	baz=349						
TWS1	Kuangyinshan	1.14	344	eP	Pn	16 52 21.5	-0.6
	baz=348						
TWS1				eS	Sb	16 52 37.7	+1.1
	baz=348						
WGK	Gukeng	1.15	254	P	Pn	16 52 22.0	-0.2
	baz=251						
WGK				eS	Sb	16 52 37.9	+1.0
	baz=251						
YOJ	Yonaguni jima	1.22	68	P	Pn	16 52 23.4	+0.2
YOJ				S	Sb	16 52 39.8	+0.8
YOJ	Yonaguni jima	1.22	68	eP	Pn	16 52 22.7	-0.5
	baz=68						
STYT	Tauyuan	1.25	228	⇓iP	Pn	16 52 23.0	-0.5
	baz=215						
STYT				eS	Sb	16 52 39.1	-0.6
	baz=215						
TPUB	Ta-pu	1.26	236	ePn	Pn	16 52 22.9	-0.7
TPUB				eSn	Sn	16 52 40.4	+0.2
CHN4	Tsaushan	1.26	239	⇓P	Pn	16 52 23.8	+0.1
	baz=225						
CHN4				eS	Sb	16 52 41.0	+0.9
	baz=225						
CHN2	Minshiung	1.27	249	eP	Pn	16 52 24.1	+0.2
	baz=245						
CHN2				eS	Sb	16 52 42.9	+2.4
	baz=245						
TWY	Chenhua	1.28	353	eP	Pn	16 52 24.2	+0.2
	baz=357						
WTP	Ta-pu	1.30	235	⇓iP	Pn	16 52 24.2	0.0
	baz=231						
WTP				eS	Sn	16 52 41.9	+0.7
	baz=231						
CHY	Chiayi	1.33	248	eP	Pn	16 52 24.8	+0.1
	baz=244						
CHY				eS	Sn	16 52 42.8	+0.8
	baz=244						
TWG	Pinlang	1.34	209	eP	Pn	16 52 21.9	-2.9
TWG	Pinlang	1.34	209	eP	Pn	16 52 22.4	-2.4
	baz=205						
WTCT	Ta-ch'eng	1.37	265	P	Pn	16 52 25.2	+0.1
	baz=277						
WTCT				eS	Sn	16 52 43.4	+0.5
	baz=277						
TWK	Hsinying	1.38	238	eP	Pn	16 52 25.6	+0.2
	baz=233						
TWK				eS	Sn	16 52 43.7	+0.4
	baz=233						
CHN1	Nanshi	1.40	235	eP	Pn	16 52 25.6	0.0
	baz=230						
CHN1				eS	Sn	16 52 45.5	+1.8
	baz=230						
WSF	Szhu	1.46	256	eP	Pn	16 52 26.6	+0.1
	baz=253						
WSF				eS	Sn	16 52 47.0	+1.7
	baz=253						
CHN8	Yiju	1.57	246	eP	Pn	16 52 28.0	0.0
	baz=242						
CHN8				eS	Sn	16 52 48.9	+0.9
	baz=242						
ECL	Taimali	1.59	208	eP	Pn	16 52 25.6	-2.5
	baz=192						
SSD	Sandimen	1.63	220	eP	Pn	16 52 28.1	-0.6
	baz=214						
SSD				eS	Sn	16 52 50.9	+1.6
	baz=214						
PCYT	Pengchaiyu	1.64	10	eP	Pn	16 52 28.6	-0.3
	baz=14						
SCLT	Jiali	1.66	241	eP	Pn	16 52 29.2	0.0
	baz=236						
TWM1	Shoushan	1.71	227	eP	Pn	16 52 31.6	+1.8
	baz=221						
TAI1	Yung-k'ang	1.71	236	eP	Pn	16 52 30.9	+1.0
	baz=230						
SGLT	Jiouru	1.73	223	eP	Pn	16 52 31.9	+1.8
	baz=203						
IRIF	Iriomote-Funau	1.82	79	P	Pn	16 52 31.6	+0.2
IRIF				S	Sn	16 52 54.5	+0.4
TAW	Tawu	1.82	206	eP	Pn	16 52 32.5	+1.1
	baz=192						
HATJ	Hateruma jima	1.86	88	P	Pn	16 52 32.3	+0.3
HATJ				S	Sn	16 52 55.7	+0.6
SCZT	Fangliau	1.94	213	eP	Pn	16 52 33.0	0.0
	baz=192						
LAY	Lan-yu	1.96	186	eP	Pn	16 52 31.3	-2.1
	baz=175						
JKRS	Kuro-shima	2.06	83	P	Pn	16 52 35.3	+0.6
JKRS				S	Sn	16 53 01.6	+1.6
PNG	Penghu	2.07	258	⇓P	Pn	16 52 34.3	-0.6
	baz=257						
JIJ	Ishigaki jima	2.20	80	P	Pn	16 52 36.6	0.0
JIJ				S	Sn	16 53 03.0	-0.4
HEN	Hengchun	2.20	206	eP	Pn	16 52 37.4	+0.7
	baz=192						
TWK1	Hengchun	2.23	204	eP	Pn	16 52 36.9	-0.2
	baz=187						
JTJ	Tarama	2.75	76	P	Pn	16 52 44.7	+0.5
JTJ				S	Sn	16 53 18.4	+1.4
QZH	Quanzhou	3.04	289	⇑iP	Pn	16 52 47.1	-1.1
QZH				S	Sn	16 53 19.8	-4.5
QZH				Smax			
	comp=N,290nm,0.4s						
QZH				Smax			
	comp=E,210nm,0.6s						
KNM	Kinmen	3.07	278	eP	Pn	16 52 49.1	+0.5
	baz=278						
JOGS	Gusukube	3.40	76	P	Pn	16 52 54.5	+1.4
JOGS				S	Sn	16 53 33.6	+0.5
JKE	Kume jima 2	5.10	62	P	Pn	16 53 16.9	+0.4
JOW	Kunigami	6.52	63	Pn	Pn	16 53 35.0	-1.0
	comp=E,3.8nm,0.3s,baz=108,slow=22,SNR=22						
JOW				Sn	Sn	16 54 47.4	-2.7
	baz=136,slow=27,SNR=1.4						
NJ2	Nanjing	8.42	343	eP	Pn	16 54 04.2	+2.1
NJ2				AP		16 54 08.9	
NJ2				XP		16 54 13.3	
NJ2				S	Sn	16 55 38.6	+1.8
NJ2				XS		16 55 43.8	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
KSRS	Korea Array	14.41	20	Pn	Pn	16 55 30.1	+6.0
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=13						
MAJO	Matsushiro	18.88	45	P	Pn	16 56 17.7	-3.3
	comp=Z,74nm,2.1s						
CMAR	Chiang Mai Arr	21.97	260	P	P	16 56 54.8	+0.8
	comp=Z,0.6nm,0.7s,mb3.2,baz=69,slow=8.4,SNR=8.5						
ERM	Erimo	25.27	40	P	P	16 57 23.5	-2.7
	comp=Z,5.4nm,1.0s,mb4.0						
ASAJ	Asahikawa	26.33	35	P	P	16 57 33.2	-2.5
	comp=Z,7.5nm,1.2s,mb4.1,baz=263,slow=19,SNR=3.0						
SONM	Songino Array	26.74	337	P	P	16 57 39.4	0.0
	comp=Z,0.6nm,0.7s,mb3.2,baz=154,slow=11,SNR=4.8						
MKAR	Makanchi Array	38.84	316	P	P	16 59 24.4	-0.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=99,slow=8.9,SNR=9.1						
PET	Petropavlovsk	40.16	34	P	P	16 59 33.2	-2.7
	comp=Z,24nm,1.1s,mb4.8						
ZALV	Zalesovo Beam	40.69	327	P	P	16 59 38.8	-1.4
	comp=Z,1.0nm,0.5s,mb3.7,baz=111,slow=8.1,SNR=6.0						
ASAR	Alice Springs	48.83	165	P	P	17 00 44.4	-1.0
	comp=Z,0.2nm,0.3s,mb3.6,baz=343,slow=7.3,SNR=18						
BRTR	Keskin Array B	73.71	307	P	P	17 03 33.1	-0.8
	comp=Z,0.2nm,0.4s,mb3.4,baz=76,slow=6.1,SNR=3.5						
YKA	Yellowknife Ar	82.93	23	P	P	17 04 23.4	-1.1
	comp=Z,0.5nm,0.6s,mb3.7,baz=315,slow=5.0,SNR=13						
YKA	Yellowknife Ar	82.93	23	P	P	17 04 23.4	-1.1

*BJI **08** 17:14:58.7,1702S×16830E,h157km,mB4.9,mb4.6*
*NEIC **08** 17:15:00.4±1.4,1740S×16859E,h180km±12km,mb4.5/15, Error ellipse: s-maj=9.5km s-min=8.2km az=81.0*
*ISCJB **08** 17:15:02.1±1.1,1752S±006×16851E±007,h209km±10km, mb4.3/32,Error ellipse: s-maj=11.4km s-min=10.3km az=8.6*
*IDC **08** 17:15:05.8±2.4,1756S×16853E,h229km±22km,mb3.9/16, mb1 4.0/17,mb1mx4.0/20,mbtmp3.9/17,Error ellipse: s-maj=13.9km s-min=11.9km az=107.0*
ISC 08 17:15:02.9±1.1,**1753S**±006×**16855E**±007,**h203**km±9km, **n69**,σ**0^{s}88**/53,**mb4.3**/31,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.94	203	ePn	Pn	17 16 15.7	-0.8
	105nm,0.7s						
DZM				eSn	Sn	17 17 13.2	-1.5
NOUC	Port Laguerre	5.02	205	eP	Pn	17 16 17.1	-0.5
NOUC				eS	Sn	17 17 31.1	+15
LASL	Noumea	5.05	202	eP	Pn	17 16 19.4	+1.5
HNR	Honiara	11.61	313	P	Pn	17 17 43.3	+0.5
	2.6nm,0.3s,baz=251,slow=18,SNR=6.2						
HNR	Honiara	11.61	313	ePn	Pn	17 17 38.1	-4.7
EIDS	Eidsvold	18.03	241	eP	P	17 19 00.4	+1.5
	7.8nm,0.9s						
ARMA	Armidale	20.06	227	eP	P	17 19 22.4	+1.7
ARMA				e		17 20 07.1	
CTA	Charters Tower	21.26	260	P	P	17 19 35.1	+1.6
	1.9nm,0.4s,mb4.0,baz=54,slow=9.4,SNR=2.9						
CTAO	Charters Tower	21.26	260	eP	P	17 19 32.9	-0.7
URZ	Urewera	21.97	162	P	P	17 19 41.2	+0.7
	16nm,0.7s,mb4.7,baz=346,slow=8.1,SNR=9.2						
PMG	Port Moresby	22.30	288	P	P	17 19 42.8	-0.9
	11nm,0.9s,mb4.4						
SNZO	South Karori	24.28	169	eP	P	17 20 02.3	+0.8
	41nm,1.1s,mb5.0						
CNB	Canberra Magne	24.60	220	eP	P	17 20 05.3	+0.8
CNB				e		17 20 50.9	
STKA	Stephens Creek	28.25	235	eP	P	17 20 38.0	+0.8
	10nm,0.8s,mb4.5						
STKA				e	pP	17 21 22.5	+4.2
STKA	Stephens Creek	28.25	235	P	P	17 20 38.0	+0.8
	11nm,0.7s,mb4.6,baz=53,slow=7.9,SNR=25						
STKA	Stephens Creek	28.25	235	eP	P	17 20 37.7	+0.5
STKA				epP	pP	17 21 16.1	-2.2
TOO	Toolangi	28.44	221	eP	P	17 20 39.4	+0.6
WB2	Warramunga Arr	32.45	260	eP	P	17 21 12.8	-1.4
WRAB	Tennant Creek	32.45	260	eP	P	17 21 12.5	-1.7
	4.5nm,1.1s,mb3.9						
ASAR	Alice Springs	32.95	253	P	P	17 21 18.3	-0.2
	7.4nm,0.3s,mb4.6,baz=83,slow=8.8,SNR=339						
ASAR				S	S	17 26 19.8	-1.8
	1.8nm,1.0s,baz=86,slow=16,SNR=10						
FITZ	Fitzroy Crossi	40.79	262	eP	P	17 22 24.8	+0.1
	5.0nm,0.7s,mb4.0						
FITZ				e	pP	17 23 10.9	+3.2
MBWA	Marble Bar	46.07	257	eP	P	17 23 06.7	-0.1
NWAO	Narrogin (SRO)	48.44	241	P	P	17 23 24.7	-0.2
	8.2nm,1.0s,mb4.0,baz=4.2,slow=15,SNR=3.5						
JOW	Kunigami	58.93	318	P	P	17 24 42.0	+0.9
	26nm,0.7s,mb5.0,baz=172,slow=5.1,SNR=6.2						
VNDA	Vanda	60.11	182	P	P	17 24 48.2	-0.1
	1.0nm,0.6s,mb3.6,baz=104,slow=3.9,SNR=3.6						
MJAR	Matsushiro Arr	60.94	332	P	P	17 24 53.8	-0.6
	1.5nm,0.8s,mb3.7,baz=172,slow=5.4,SNR=4.8						
MAJO	Matsushiro	60.94	332	P	P	17 24 52.9	-1.6
	15nm,1.3s,mb4.5						
KSRS	Korea Array	66.73	326	P	P	17 25 32.5	+0.2
	1.1nm,0.8s,mb3.6,baz=141,slow=6.3,SNR=6.1						
PETK	Petropavlovsk-	70.97	353	P	P	17 25 58.1	+0.1
	7.3nm,0.8s,mb4.4,baz=156,slow=6.5,SNR=14						
MDJ	Mudanjiang	71.32	332	eP	P	17 26 01.2	+0.9
	11nm,0.9s,mb4.5						
QSPA	South Pole Qui	72.52	180	P	P	17 26 07.2	+0.3
	4.3nm,0.8s,mb4.1,baz=76,slow=4.1,SNR=7.5						
CN2	Changchun	72.67	329	eP	P	17 26 08.8	+0.5
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
XAN	Xi'an	76.48	313	P	P	17 26 30.8	+0.3
XAN				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.3						
XAN				AMB	AMB		
	comp=Z,95nm,5.1s						
CMAR	Chiang Mai Arr	77.21	294	P	P	17 26 36.1	+1.2
	comp=Z,3.3nm,0.8s,mb4.0,baz=132,slow=4.6,SNR=26						
CHTO	Chiang Mai	77.35	295	eP	P	17 26 35.5	-0.2
	comp=Z,4.8nm,0.9s,mb4.1						
YAK	Yakutsk	85.05	343	eP	P	17 27 14.9	-0.3
	comp=Z,18nm,0.7s,mb4.9						
BILL	Bilibino	85.34	359	eP	P	17 27 15.8	-0.8
	comp=Z,3.8nm,0.8s,mb4.2						
SONM	Songino Array	85.47	323	P	P	17 27 18.2	+0.6
	comp=Z,3.9nm,0.7s,mb4.2,baz=153,slow=6.7,SNR=27						
GTA	Gaotai	85.48	314	eP	P	17 27 18.5	+0.6
GTA				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
CMB	Columbia Colle	86.51	48	eP	P	17 27 22.6	-0.4
	comp=Z,4.2nm,0.8s,mb4.2						
ISA	Isabella	86.92	51	P	P	17 27 25.5	+0.5
	comp=Z,9.2nm,1.0s,mb4.5						
LSA	Lhasa	88.08	302	P	P	17 27 31.0	+0.3
NVAR	Mina Array Bea	88.16	49	P	P	17 27 31.8	+0.9
	comp=Z,2.3nm,0.7s,mb4.1,baz=226,slow=8.4,SNR=16						
NVAR	Mina Array Bea	88.16	49	P	P	17 27 31.8	+0.9
TPH	Tonopah	88.80	49	P	P	17 27 32.6	-1.3
	comp=Z,7.7nm,1.1s,mb4.5						
SNAA	Sanae	90.83	183	eP	P	17 27 41.9	-0.9
	comp=Z,8.5nm,1.3s,mb4.5						
VNA3	Neumayer Olymp	91.45	181	e	P	17 27 44.8	-0.8
VNA3				e		17 27 47.7	
VNA3				e		17 27 52.5	
VNA2	Neumayer--Watz	91.73	181	e	P	17 27 46.6	-0.3
	baz=180,slow=4.9						
VNA2				e		17 27 49.3	
VNA2				e		17 27 54.1	
ANMO	Albuquerque	95.87	55	P	P	17 28 06.7	+0.1
TXAR	Lajitas Array	96.52	61	P	P	17 28 08.3	-1.3
	comp=Z,0.3nm,0.9s,mb3.5,baz=216,slow=4.5,SNR=3.5						
YKA	Yellowknife Ar	99.45	27	P	Pdif	17 28 21.7	-0.7
	comp=Z,0.2nm,0.6s,baz=254,slow=5.1,SNR=5.2						
YKA	Yellowknife Ar	99.45	27	P	Pdif	17 28 21.7	-0.7
EFI	East Falkland	100.01	153	ePdif	Pdif	17 28 21.4	-3.5
	comp=Z,81nm,1.0s						
MKAR	Makanchi Array	100.06	316	P	Pdif	17 28 25.5	+0.4
	comp=Z,0.3nm,0.5s,baz=97,slow=7.7,SNR=6.8						
ZALV	Zalesovo Beam	100.36	323	P	Pdif	17 28 26.0	-0.4
	comp=Z,0.3nm,0.5s,baz=104,slow=3.0,SNR=2.7						
ARCES	ARCESS Array B	123.26	345	PKP	PKPdf	17 33 33.9	-0.9
	comp=Z,4.8nm,1.1s,baz=96,slow=2.4,SNR=5.9						
GERES	GERESS Array B	142.68	332	PKhKP		17 34 08.6	
	comp=Z,0.5nm,0.8s,baz=46,slow=3.3,SNR=3.5						
GIVF	Givet	144.97	342	ePKP1	PKPdf	17 34 15.2	-0.5
BAIF	Baives	145.19	342	ePKP1	PKPbc	17 34 16.0	-0.1
	comp=Z,46nm,1.1s						
BFO	Black Forest	145.30	337	ePKPdf	PKPdf	17 34 16.2	-0.1
CDF	Champ du Feu	145.62	338	ePKP1	PKPbc	17 34 16.7	-0.8
	comp=Z,19nm,0.9s						
MEZF	Maizieres J'vi	146.31	340	ePKP1	PKPbc	17 34 19.7	+0.2
	comp=Z,59nm,1.2s						
FLN	La Foliniere	147.59	346	ePKP1	PKPbc	17 34 24.0	+0.9
LOR	Lormes	147.77	340	ePKP1	PKPbc	17 34 23.5	-0.2
	comp=Z,24nm,1.0s						
SSF	Saint Saulge	148.07	341	ePKP1	PKPbc	17 34 24.4	0.0
	comp=Z,19nm,0.8s						
LPG	La Plagne	148.25	335	ePKP1	PKPbc	17 34 24.6	-0.3
	comp=Z,7.2nm,0.7s						
AVF	Avril sur Loir	148.36	340	ePKP1	PKPbc	17 34 24.7	-0.5
BGF	Bois d'Agland	148.72	341	ePKP1	PKPbc	17 34 25.8	-0.3
ESDC	Sonseca Array	157.00	345	PKPab	PKPab	17 35 05.6	+0.2
	comp=Z,0.4nm,0.6s,baz=11,slow=4.5,SNR=5.4						

DJA 08 17:54:13,846S×**11834E,h100**km**,MLv4.5**/5**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	2.28	122	P	Pn	17 54 49.2	0.0
WSI				S	Sn	17 55 25.1	+8.2
KHKI	Kahang-Kahang	2.71	272	P	Pn	17 54 55.2	+0.4
KHKI				S	Sn	17 55 29.6	+2.6
DNP	Denpasar	3.10	266	P	Pn	17 55 00.8	+0.7
DNP				S	Sn	17 55 39.1	+2.6
IGBI	Denpasar	3.18	263	P	Pn	17 55 01.0	-0.1
IGBI				S	Sn	17 55 39.3	+1.0
NBBI	Negara	3.68	271	S	Sn	17 55 50.4	0.0
KAPI	Kappang	3.70	22	P	Pn	17 55 08.1	-0.1
BATI	Baumata	5.53	109	P	Pn	17 55 30.6	-2.4

*IDC **08** 18:04:02.6±3.1,6087S×52.18W,h0km,mb3.7/3,mb1 3.8/3, mb1mx3.7/14,mbtmp3.8/3,MS3.8/9,Ms1 3.7/9, ms1mx3.7/15,Error ellipse: s-maj=112.1km s-min=36.6km az=40.0*
*ISCJB **08** 18:04:05.0±0.9,604S±02×514W±05,h10km,mb4.1/6, MS3.6/9,Error ellipse: s-maj=42.8km s-min=12.1km az=144.6*
*NEIC **08** 18:04:04.8±1.1,6059S×5185W,h10km,mb4.5/3,Error ellipse: s-maj=50.7km s-min=17.1km az=51.0*
ISC 08 18:04:06.7±1.0,**604S**±02×**514W**±05,**h10**km,**n21**,σ**1^{s}00**/9, **mb4.1**/6,**MS3.6**/9,**Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	10.68	294	LR	LR	18 09 39.1	
	comp=Z,950nm,19.8s,baz=53,slow=32						
VNA3	Neumayer Olymp	19.74	140	e	Pn	18 08 37.0	-0.6
VNA3				e		18 08 39.8	
VNA3				e		18 08 45.8	
VNA2	Neumayer--Watz	20.41	139	e	P	18 08 44.3	+0.9
	baz=277,slow=7.2						
VNA2				e		18 08 46.7	
VNA2				e		18 08 53.5	
SNAA	Sanae	21.96	141	eP	P	18 08 59.7	-0.4
	17nm,1.3s,mb4.3						
PLCA	Paso Flores	22.98	320	P	P	18 09 09.9	-1.3
	1.6nm,0.9s,mb3.5,baz=168,slow=9.3,SNR=2.4						
PLCA				LR	LR	18 18 20.1	
	comp=Z,154nm,19.8s,MS3.5,baz=289,slow=37						
CFAA	Coronel Fontan	30.90	331	LR	LR	18 22 01.1	
	comp=Z,11nm,18.6s,MS2.5,baz=138,slow=35						
CPUP	Villa Florida	34.31	351	LR	LR	18 24 39.3	
	comp=Z,62nm,18.9s,MS3.4,baz=325,slow=36						
VNDA	Vanda	40.79	191	LR	LR	18 27 44.4	
	comp=Z,132nm,19.8s,MS3.8,baz=148,slow=35						
MAW	Mawson	43.64	150	LR	LR	18 28 53.8	
	comp=Z,199nm,18.2s,MS4.1,baz=22,slow=34						
BDFB	Brasilia	44.78	5	LR	LR	18 29 43.2	
	comp=Z,65nm,20.6s,MS3.5,baz=187,slow=34						
SIV	San Ignacio	44.91	347	P	P	18 12 21.7	+0.3
	0.6nm,0.6s,mb3.6,baz=222,slow=8.6,SNR=3.8						
BOSA	Boshof	59.06	94	LR	LR	18 34 37.9	
	comp=Z,69nm,18.2s,MS3.8,baz=179,slow=31						
LBTB	Lobatse	62.21	92	P	P	18 14 28.7	+0.4
	1.4nm,0.6s,mb4.3						
OTAV	Otavalo	63.99	330	P	P	18 14 42.0	+1.8
	13nm,1.4s,mb4.8						
DBIC	Dimbokro	76.19	48	LR	LR	18 43 35.6	
	comp=Z,40nm,19.8s,MS3.7,baz=100,slow=31						
TOA0	Torodi Ar. Sit	84.61	52	P	P	18 16 38.5	-1.6
TORD	Torodi Ar. Bea	84.61	52	P	P	18 16 40.6	+0.5
	1.1nm,0.8s,mb4.0,baz=200,slow=5.8,SNR=14						
TORD				LR	LR	18 48 25.8	
	comp=Z,67nm,18.1s,MS4.1,baz=215,slow=31						
TKM2	Tokmak 2	143.96	95	PKPdf	PKPdf	18 23 38.3	-3.0
MK31	Makanchi Array	150.05	96	ePKPbc	PKPbc	18 23 54.3	-2.0
MK31				ePKPab	PKPab	18 24 00.0	-2.2
MKAR	Makanchi Array	150.05	96	PKPbc	PKPbc	18 23 54.4	-1.9
	0.4nm,0.7s,baz=245,slow=2.2,SNR=4.4						
MKAR	Makanchi Array	150.05	96	PKPbc	PKPbc	18 23 54.4	-1.9

*IDC **08** 18:12:24.0±2.0,493S×12968E,h0km,mb3.4/2,mb1 3.8/5, mb1mx3.6/16,mbtmp3.7/5,ML3.8/1,MS2.8/1,Ms1 2.8/1, ms1mx2.5/19,Error ellipse: s-maj=48.1km s-min=28.7km az=77.0*
*NEIC **08** 18:12:25.1±1.3,5.13S×12962E,h10km,Error ellipse: s-maj=30.0km s-min=12.7km az=57.0*
*ISCJB **08** 18:12:26.6±3.4,527S±007×1292E±02,h32km±31km, mb3.4/2,Error ellipse: s-maj=30.7km s-min=7.9km az=161.2*
*DJA **08** 18:12:37,492S×12777E,h30km,MLv3.8/5*
ISC 08 18:12:28.9±1.3,**525S**±008×**1295E**±02,**h37**km±18km,**n14**, σ**1^{s}03**/15,**mb3.4**/2,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.97	343	P	Sn	18 13 12.8	-11
AAI	Ambon	2.03	320	P	Pn	18 12 56.2	-4.4
AAI				S	Sn	18 13 18.3	-6.4
LBMI	Labuha	5.00	336	P	Pn	18 13 40.9	-0.6
LBMI				S	Sn	18 14 33.3	-4.7
TNTI	Ternate	6.35	340	P	Pn	18 14 00.6	+0.6
BATI	Baumata	7.61	229	Pn	Pn	18 14 21.5	+4.2
	2.2nm,0.3s,baz=63,slow=2.8,SNR=9.1						
BATI	Baumata	7.61	229	P	Pn	18 14 14.5	-2.8
KAKA	Kakadu	7.96	159	eP	x	18 14 06.1	
	6.7nm,0.4s						
KAKA				eS	x	18 15 33.9	
KAPI	Kappang	9.72	271	Pn	Pn	18 14 47.5	+1.2
	0.5nm,0.3s,baz=64,slow=11,SNR=2.6						
KAPI				LR	LR	18 17 44.4	
	comp=Z,52nm,20.2s,baz=197,slow=32						
FITZ	Fitzroy Crossi	13.33	196	eP	Pn	18 15 35.2	-0.4
	2.6nm,0.3s						
WRAB	Tennant Creek	15.34	163	ePn	Pn	18 16 01.7	-1.1
WB2	Warramunga Arr	15.35	163	eP	Pn	18 16 03.1	+0.2
ASAR	Alice Springs	18.80	167	P	Pn	18 16 48.0	+1.9
	0.3nm,0.3s,baz=343,slow=10,SNR=32						
CMAR	Chiang Mai Arr	38.25	309	P	P	18 19 45.1	-0.6
	0.4nm,0.9s,mb3.1,baz=138,slow=7.6,SNR=4.0						
MKAR	Makanchi Array	66.50	327	P	P	18 23 14.8	0.0
	0.4nm,0.6s,mb3.6,baz=116,slow=8.2,SNR=11						

GUC 08 18:30:34.3±0.7,**2338S**×**6884W,h99**km±5km**,ML3.5, 2C-3D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.76	52	eP	Pn	18 30 53.1	+0.9
SPCH				iS	Sn	18 31 07.0	+1.5
SPCH				AML	AML	18 31 07.6	
	comp=E,6µm,0.3s						
LVC	Limon Verde	0.77	355	⇓iP	Pn	18 30 53.2	+1.0
LVC				iS	Sn	18 31 07.4	+1.7
PECH	Pedro de Valdi	1.09	315	⇓iP	Pn	18 30 56.5	+0.9
PECH				iS	Sn	18 31 13.3	+1.6
PECH				AML	AML	18 31 14.6	
	comp=E,5µm,0.3s						
CEN1	Los Morros	1.25	269	⇓iP	Pn	18 30 59.5	+2.1
CEN1				iS	Sn	18 31 18.8	+3.9
CEN1				AML	AML	18 31 21.8	
	comp=E,389nm,0.5s						
MACH	Maria Elena	1.45	324	iS	Sn	18 31 21.0	+1.8
ANCH	Antofagasta	1.47	258	⇑iP	Pn	18 31 00.5	+0.4
ANCH				iS	Sn	18 31 20.8	+1.1
ANCH				AML	AML	18 31 25.2	
	comp=N,607nm,0.1s						
TOCH	Tocopilla	1.79	315	eP	Pn	18 31 04.9	+0.7
TOCH				iS	Sn	18 31 28.1	+1.2
TOCH				AML	AML	18 31 31.4	
	comp=N,567nm,0.1s						
CPN1	Cerro Paranal	1.89	229	AML	AML	18 31 33.9	
	comp=E,285nm,0.4s						
PB01	Plate Boundary	2.40	345	⇑iP	Pn	18 31 13.1	+1.0
PB01				AML	AML	18 31 57.2	
	comp=E,215nm,0.1s						

*NEIC **08** 18:31:37.4,1733N×10055W,h17km,MD3.4(MEX),After MEX.*
MEX 08 18:31:37.5±1.2,**1733N**×**10055W,h16**km±13km**,MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.39	136	iP	Pg	18 31 43.5	-1.9
CAIG				iS	Sg	18 31 49.7	-1.1
ACX	Acapulco	0.76	127	iP	Pg	18 31 50.3	-2.1
ACX				iS	Sg	18 31 58.5	-3.9
ZIIG	Zihuatanejo	0.92	288	iP	Pb	18 31 52.2	-2.8
ZIIG				iS	Sb	18 32 02.0	-4.9
MEIG	Mezcala	1.07	56	iP	Pb	18 31 54.6	-3.0
MEIG				iS	Sb	18 32 06.0	-5.4
PNIG	Pinotepa	2.50	111	eP	Pn	18 32 15.0	-2.5
PNIG				iS	Sn	18 32 42.9	-4.9
UTMO	Huajuapan	2.67	79	eP	Pn	18 32 20.9	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UTMO				*i* S	Sn	18 32 47.8	-4.1

PGC ***08*** *18:51:23.6±18.0, 6305N×14390W, h1km, ML2.9/3, 248km northeast of Valdez, Ak Central Alaska*
NEIC 08 18:51:20.0, 6313N×14432W, h3km, ML2.5(AEIC)**, 3D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MENT	**Mentasta**	**0.33**	**125**	*e*Pg	Pg	18 51 26.5	+0.2
MENT				*e*Sg	Sg	18 51 31.6	+0.9
PAX	**Paxson**	**0.55**	**254**	*e*Pg	Pg	18 51 30.4	0.0
PAX				*e*Sg	Sg	18 51 37.1	-0.5
MCK	**McKinley**	**2.16**	**288**	*e*Pn	Pn	18 51 59.2	+2.4
MCK				*e*Sn	Sn	18 52 26.9	+2.9
EGAK	**Eagle**	**2.17**	**39**	*e*Pn	Pn	18 51 59.8	+3.0
EGAK				*e*Sn	Sn	18 52 27.4	+3.3
COLA	**College**	**2.34**	**320**	*e*Pg	Pg	18 52 05.4	+0.6
COLA				*e*Sn	Sn	18 52 24.5	-4.1
COLA				*e*Sg	Sg	18 52 33.4	-1.8
DAWY	**Dawson**	**2.40**	**65**	⇑Pn	Pn	18 51 59.9	-0.1
DAWY				⇑Pg	Pg	18 52 03.7	-2.2
DAWY				⇑Sg	Sg	18 52 34.8	-2.0
DAWY	**Dawson**	**2.40**	**65**	*e*Pn	Pn	18 51 59.9	-0.1
DAWY				*e*Pg	Pg	18 52 03.9	-1.9
DAWY				*e*Sg	Sg	18 52 34.7	-2.1
TRF	**Thorofare Moun**	**2.72**	**280**	*e*Pn	Pn	18 52 04.3	-0.1
TRF				*e*S	Sn	18 52 41.1	+3.5
KTH	**Kantishna Hill**	**3.01**	**281**	*e*Pn	Pn	18 52 10.2	+1.8
KTH				*e*Sg	Sg	18 52 53.6	-2.9
BPAW	**Bear Paw Mtn.**	**3.13**	**291**	*e*Pn	Pn	18 52 11.3	+1.2
BPAW				*e*Pg	Pg	18 52 18.0	-2.0
BPAW				*e*Sn	Sn	18 52 49.5	+1.6
RC01	**Rabbit Creek A**	**3.27**	**234**	*e*Pn	Pn	18 52 14.6	+2.6
RC01				*e*Sn	Sn	18 52 53.3	+2.1
PPLA	**Purkeypile**	**3.59**	**270**	*e*Pn	Pn	18 52 19.0	+2.6
HYT	**Haines Junctio**	**3.96**	**123**	⇓Pn	Pn	18 52 21.8	+0.4
HYT				⇓Pg	Pg	18 52 30.8	-4.9
WHY	**Whitehorse**	**5.10**	**115**	⇓Pn	Pn	18 52 37.6	+0.4

ISK ***08*** *19:33:16.1, 3474N×3246E, h6km, MD3.1*
CSEM ***08*** *19:33:18.5±0.1, 3481N×3255E, h15km, Mw3.1, Error ellipse: s-maj=3.6km s-min=2.1km az=106.0*
ISCJB ***08*** *19:33:19.3±0.7, 3479N±004×3255E±006, h23km±5km, Error ellipse: s-maj=8.4km s-min=5.9km az=6.7*
HLW ***08*** *19:33:20.8, 3496N×3286E, h30km, Mb3.6*
NEIC ***08*** *19:33:20.3, 3488N×3264E, h22km, MD3.0(ISK), ML3.1(NIC), After NIC.*
NIC ***08*** *19:33:20.3±0.2, 3488N×3264E, h22km, ML3.1, MW3.1*
ISC 08 19:33:20.2±0.6**, 3483N**±003×**3258E**±005**, h17**km±4km**, n24, σ0^{s}94**/34**, 8C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.20**	**287**	⇑*i*P	**Pg**	**19 33 26.4**	**+1.3**
SZAC	**Souni-Zanaja**	**0.26**	**105**	⇑P	**Pg**	**19 33 26.2**	**+0.1**
SZAC				S	**Sg**	**19 33 30.8**	**+0.8**
ALFC	**Alevga**	**0.33**	**3**	⇑P	**Pg**	**19 33 26.8**	**-0.5**
	49nm,0.2s						
ALFC				S	**Sg**	**19 33 32.2**	**+0.2**
ALFC	**Alevga**	**0.33**	**3**	⇑*e*P	**Pg**	**19 33 26.8**	**-0.5**
	49nm,0.2s						
ALFC	**Alevga**	**0.33**	**3**	⇑*e*P	**Pg**	**19 33 26.8**	**-0.5**
ALFC				S	**Sg**	**19 33 32.2**	**+0.2**
LEF	**Lefka**	**0.39**	**41**	*e*PG	**Pg**	**19 33 26.1**	**-2.2**
LEF				*e*SG	**Sg**	**19 33 33.2**	**-0.5**
MAMC	**Mammari**	**0.63**	**57**	P	**Pg**	**19 33 31.8**	**-0.9**
CSS	**Prodhromos**	**0.64**	**77**	⇑P	**Pg**	**19 33 31.7**	**-1.1**
CSS				S	**Sg**	**19 33 40.2**	**-1.0**
CSS	**Prodhromos**	**0.64**	**77**	*e*PG	**Pg**	**19 33 31.2**	**-1.5**
CSS				*e*SG	**Sg**	**19 33 41.5**	**+0.3**
CSS	**Prodhromos**	**0.64**	**77**	⇑P	**Pg**	**19 33 31.7**	**-1.1**
CSS				*e*Sg	**Sg**	**19 33 41.5**	**+0.3**
LFK	**Lefkose**	**0.91**	**60**	*e*PG	**Pg**	**19 33 36.5**	**-1.3**
LFK				*e*SG	**Sg**	**19 33 51.9**	**+2.1**
PHNC	**Paralimni**	**1.21**	**81**	⇑P	**Pn**	**19 33 43.0**	**+0.7**
	8.1nm,0.5s						
PHNC				S	**Sb**	**19 34 01.5**	**+3.5**
EREN	**Erenkoy**	**1.48**	**61**	*e*PN	**Pn**	**19 33 46.0**	**-0.1**
IKL	**Isikli**	**1.68**	**32**	*e*PN	**Pn**	**19 33 47.8**	**-0.9**
MERS	**Mersin**	**2.58**	**37**	*e*PN	**Pn**	**19 34 01.8**	**+0.7**
HRSH	**Kfar Ka'horesh**	**3.09**	**133**	P	**Pg**	**19 34 20.4**	**+0.9**
KONT	**Konya--Tatoy**	**3.12**	**357**	*e*PN	**Pn**	**19 34 09.2**	**+0.6**
KARA	**Karaisali**	**3.15**	**39**	*e*PN	**Pn**	**19 34 09.8**	**+0.7**
KOZT	**Kozan**	**3.73**	**44**	*e*PN	**Pn**	**19 34 17.1**	**+0.1**
RSH		**3.97**	**166**	P	**Pn**	**19 34 20.5**	**+0.2**
AMAG	**Maghara**	**4.21**	**173**	P	**Pn**	**19 34 23.6**	**+0.1**
AMAG				S	**Sn**	**19 35 10.7**	**-1.5**
SUZ		**4.97**	**177**	P	**Pn**	**19 34 34.6**	**+0.5**
HNKL	**Nakhl**	**5.02**	**166**	P	**Pn**	**19 34 34.5**	**-0.3**
TR2		**6.50**	**171**	P	**Pn**	**19 34 54.8**	**-0.2**

IDC ***08*** *19:49:41.9±25.0, 3660N×7114E, h204km±159km, mb3.2/2, mb1 3.3/4, mb1mx2.9/22, mbtmp3.1/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/16, Error ellipse: s-maj=215.1km s-min=69.3km az=6.0*
ISCJB ***08*** *19:49:43.1±0.7, 3672N±004×7132E±010, h214km±9km, Error ellipse: s-maj=13.1km s-min=5.1km az=166.7*
NEIC ***08*** *19:49:43.5±0.8, 3669N×7121E, h212km±10km, mb4.3/5, Error ellipse: s-maj=13.6km s-min=6.9km az=76.0*
MOS ***08*** *19:49:43.2±1.0, 3670N×7121E, h222km, mb4.3/1, Error ellipse: s-maj=31.2km s-min=12.9km az=70.3*
ISC 08 19:49:44.0±0.7**, 3673N**±004×**7133E**±010**, h203**km±8km**, n33, σ1^{s}18**/41**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.87**	**221**	*e*Pn	**Pn**	**19 50 31.7**	**-0.5**
KBL				*e*Sn	**Sn**	**19 50 55.8**	**-14**
THN	**Thein Dam**	**5.61**	**139**	*e*P	**Pn**	**19 51 06.9**	**+0.7**
THN				*e*x	**Sn**	**19 52 09.8**	**-1.4**
DLH	**Dalhousie**	**5.66**	**136**	*e*P	**Pn**	**19 51 08.0**	**+1.1**
AML	**Almayashu**	**5.70**	**18**	*e*Pn	**Pn**	**19 51 08.8**	**+1.6**
	17nm,0.5s						
AML				*e*Sn	**Sn**	**19 52 12.7**	**-0.5**
EKS2	**Erkin-Say**	**6.22**	**17**	*e*Pn	**Pn**	**19 51 14.1**	**+0.1**
EKS2				*e*Sn	**Sn**	**19 52 22.0**	**-3.3**
AAK	**Ala-Archa**	**6.38**	**21**	*e*PN	**Pn**	**19 51 17.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK	**Ala-Archa**	**6.38**	**21**	*e*Pn	**Pn**	**19 51 17.1**	**+1.1**
	comp=Z,2.4nm,0.3s						
AAK				*e*Sn	**Sn**	**19 52 26.2**	**-2.9**
KK31	**Karatay Array**	**6.40**	**355**	⇑Pn	**Pn**	**19 51 16.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=178,slow=13						
KK31				⇓Sn	**Sn**	**19 52 24.5**	**-5.1**
	comp=Z,5.0nm,0.7s,baz=184,slow=27						
TKM2	**Tokmak 2**	**7.00**	**27**	⇑Pn	**Pn**	**19 51 25.6**	**+1.5**
	comp=Z,2.2nm,0.4s						
TKM2				⇑Sn	**Sn**	**19 52 44.2**	**+0.5**
	comp=Z,2.8nm,0.8s						
TKM2	**Tokmak 2**	**7.00**	**27**	*e*Pn	**Pn**	**19 51 25.1**	**+1.0**
SMLA	**Simla**	**7.39**	**137**	*i* P	**Pn**	**19 51 30.4**	**+1.1**
SMLA				*i* S	**Sn**	**19 52 49.0**	**-4.2**
SMLA				*e*x	x	19 52 53.3	
	comp=N,145nm,0.4s						
SMLA				*e*x	x	19 52 55.2	
	comp=E,132nm,0.4s						
KLP	**Kalpa**	**7.73**	**130**	*e*P	**Pn**	**19 51 34.5**	**+0.8**
KLP				*e*S	**Sn**	**19 52 58.2**	**-2.8**
KHET	**Khetri**	**9.42**	**155**	*e*S	**Sn**	**19 53 26.4**	**-15**
KUDL	**Kundal**	**9.60**	**152**	*e*S	**Sn**	**19 53 34.0**	**-12**
SONA	**Sohna**	**9.75**	**149**	*e*S	**Sn**	**19 53 35.6**	**-13**
MK31	**Makanchi Array**	**12.95**	**36**	*e*P	**Pn**	**19 52 40.4**	**-0.1**
MKAR	**Makanchi Array**	**12.95**	**36**	P	**Pn**	**19 52 41.0**	**+0.5**
	comp=E,0.2nm,0.3s,baz=217,slow=14,SNR=9.9						
DANN	**Dangsing**	**13.39**	**125**	*e*P	**Pn**	**19 52 45.9**	**-0.4**
	comp=E,3.7nm,0.2s						
KOLN	**Koldanda**	**13.68**	**127**	*e*P	**Pn**	**19 52 47.4**	**-2.5**
GKN	**Gorkha**	**14.21**	**124**	*e*P	**Pn**	**19 52 56.6**	**+0.3**
KKN	**Kakani**	**14.77**	**123**	*e*P	**Pn**	**19 53 03.0**	**-0.3**
DMN	**Daman**	**14.78**	**124**	*e*P	**Pn**	**19 53 03.1**	**-0.2**
GUN	**Gumba**	**15.10**	**121**	*e*P	**Pn**	**19 53 08.5**	**+1.2**
	comp=E,5.4nm,0.4s						
JIRN	**Jiri**	**15.47**	**122**	*e*P	**Pn**	**19 53 12.3**	**+0.5**
RAMN	**Ramite**	**16.21**	**123**	*e*P	**P**	**19 53 20.4**	**+0.4**
	comp=E,3.1nm,0.4s						
TAPN	**Taplejung**	**16.72**	**119**	*e*P	**P**	**19 53 28.2**	**+2.6**
ZALV	**Zalesovo Beam**	**19.60**	**24**	P	**P**	**19 53 56.4**	**-0.2**
	comp=E,0.5nm,0.3s,baz=216,slow=12,SNR=8.7						
ZALV	**Zalesovo Beam**	**19.60**	**24**	P	**P**	**19 53 56.4**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**27.99**	**56**	LR	LR	20 08 34.6	
	comp=Z,30nm,19.2s,baz=113,slow=40						
ARCES	**ARCESS Array B**	**41.04**	**337**	P	**P**	**19 57 05.2**	**-1.8**
	comp=Z,2.0nm,0.9s,baz=121,slow=8.7,SNR=4.2						
ARCES	**ARCESS Array B**	**41.04**	**337**	P	**P**	**19 57 05.2**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	**81.01**	**3**	P	**P**	**20 01 34.2**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=349,slow=5.6,SNR=5.3						
YKA	**Yellowknife Ar**	**81.01**	**3**	P	**P**	**20 01 34.2**	**-1.3**

BJI ***08*** *19:55:18.0, 728S×3747E, h6km, mB6.0, mb5.3, Ms5.2, Msz4.8*
ISCJB ***08*** *19:55:18.2±0.1, 752S±002×3760E±003, h10km, mb5.3/188, MS5.1/109, Error ellipse: s-maj=4.0km s-min=3.5km az=6.9*
IDC ***08*** *19:55:18.8±0.4, 751S×3755E, h0km, mb4.9/29, mb1 5.0/31, mb1mx5.0/32, mbtmp4.9/31, MS5.0/22, Ms1 5.0/22, ms1mx5.0/24, Error ellipse: s-maj=11.1km s-min=9.3km az=134.0*
SZGRF ***08*** *19:55:19.3, 735S×3892E, h33km, mb5.8, MS5.0, Tanzania*
NEIC ***08*** *19:55:19.4±0.2, 756S×3765E, h6km, mb5.4/105, ME5.2, MS5.2/56, Error ellipse: s-maj=5.1km s-min=4.3km az=49.0 Broadband fault plane solution: P waves. NP1: φs210.00000°, δ30.00000°, λ-90.00000°. NP2:φs30.00000°, δ60.00000°, λ-90.00000°. Principal axes: T Plg15.0000°, Azm120.0000°; N Plg0.0000°, Azm0.0000°; P Plg75.0000°, Azm300.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
MOS ***08*** *19:55:19.0±0.8, 730S×3768E, h10km, mb5.5/74, MS5.0/31 Error ellipse: s-maj=8.8km s-min=4.0km az=100.9*
STR ***08*** *19:55:20.3±0.0, 625S×3980E, Mb5.4, Ms5.2, Error ellipse: s-maj=0.0km s-min=0.0km az=139.0*
GCMT ***08*** *19:55:20.0±0.1, 744S×3749E, h12km, MW5.6/106, Moment Tensor Solution. s75,c136; s106,c273; Duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.87±.03; $M_{\theta\theta}$1.29±.03; $M_{\phi\phi}$1.58±.03; $M_{r\theta}$-1.68±.09; $M_{\theta\phi}$1.30±.02; $M_{\phi r}$-1.07±.09; Best double couple: $M_0$3.43900×10^{17} NP1:φs214.00000°, δ28.00000°, λ-104.00000°. NP2:φs50.00000°, δ63.00000°, λ-82.00000°. Principal axes: T 3.3440, Plg17.0000°, Azm135.0000°; N 0.1910, Plg7.0000°, Azm227.0000°; P -3.5350, Plg71.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
DJA ***08*** *19:55:23, 774S×3746E, h10km, Mw5.8/16*
ISC 08 19:55:20.2±0.1**, 757S**±002×**3763E**±003**, h10**km**, (h15**km±1.1km**:pP-P), n573, σ1^{s}05**/515**, mb5.3**/188**, MS5.1**/109**, 23C-61D, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**12.01**	**230**	⇑P	**Pn**	**19 58 09.1**	**-2.4**
	SNR=28						
LSZ	**Lusaka**	**12.01**	**230**	Pn	**Pn**	**19 58 09.5**	**-2.0**
	8.5nm,0.3s,baz=48,slow=11,SNR=51						
LSZ				Sn	**Sn**	**20 00 20.3**	**-5.3**
	7.6nm,0.3s,baz=56,slow=4.4,SNR=3.8						
LSZ				Lg		20 01 27.4	
	11nm,0.3s,baz=26,slow=17,SNR=5.2						
LSZ				LR	LR	20 03 18.9	
	comp=Z,3µm,20.2s,baz=48,slow=40						
LSZ	**Lusaka**	**12.01**	**230**	*e*Pn	**Pn**	**19 58 08.4**	**-3.1**
LSZ				*e*Sn	Sn	20 00 04.0	-22
LSZ				*e*Lg		20 01 25.1	
LSZ	**Lusaka**	**12.01**	**230**	*e*P	**Pn**	**19 58 08.8**	**-2.7**
OPO	**Ambohidratompo**	**14.35**	**141**	Pn	**Pn**	**19 58 43.2**	**-0.3**
	9.0nm,0.3s,baz=307,slow=12,SNR=62						
OPO				Sn	**Sn**	**20 01 16.9**	**-6.0**
	3.0nm,0.3s,baz=210,slow=20,SNR=3.4						
ABPO	**Ambohimpanom**	**14.71**	**142**	Pn	**Pn**	**19 58 48.8**	**+0.4**
	506nm,1.2s,SNR=14						
ABPO	**Ambohimpanom**	**14.71**	**142**	*e*Pn	**Pn**	**19 58 47.9**	**-0.5**
	158nm,1.1s						
ABPO				*e*Sn	**Sn**	**20 01 21.9**	**-10**
MSNA	**Messina**	**16.42**	**206**	*e*P	**Pn**	**19 59 08.6**	**-2.2**
MSNA				AMb	AMB	19 59 16.8	
	comp=Z,449nm,1.7s						
MSEY	**Mahe Island**	**17.97**	**82**	P	**Pn**	**19 59 32.5**	**+2.1**
	comp=Z,902nm,1.2s,SNR=6.5						
MSEY	**Mahe Island**	**17.97**	**82**	⇓P	**Pn**	**19 59 33.4**	**+3.0**
	SNR=10						
MSEY	**Mahe Island**	**17.97**	**82**	⇑*e*Pn	**Pn**	**19 59 31.0**	**+0.6**
	comp=Z,297nm,1.2s						
MSEY				*e*Sn	**Sn**	**20 02 32.7**	**-18**
SLR	**Silverton**	**20.14**	**205**	*e*P	**P**	**19 59 53.9**	**-0.7**
SLR				AMb	AMB	20 00 19.1	
	comp=Z,151nm,1.2s						
POGA	**Pongola**	**20.50**	**195**	*e*P	**P**	**19 59 57.6**	**-0.9**
POGA				AMb	AMB	20 00 37.3	
	comp=Z,209nm,1.4s						
ERPM	**east rand prop**	**20.70**	**204**	*e*P	**P**	**19 59 58.7**	**-1.9**
ERPM				AMb	AMB	20 00 08.0	
	comp=Z,227nm,1.2s						
LBTB	**Lobatse**	**20.81**	**212**	P	**P**	**20 00 00.6**	**-1.3**
	comp=Z,86nm,0.8s,baz=43,slow=11,SNR=63						
LBTB				S	**S**	**20 03 48.7**	**-5.5**
	comp=Z,43nm,0.8s,baz=114,slow=1.3,SNR=4.0						
LBTB				Lg		20 06 07.0	
	comp=Z,264nm,1.0s,baz=343,slow=15,SNR=3.6						
LBTB				LR	LR	20 08 19.2	
	comp=Z,4µm,19.3s,MS4.8,baz=54,slow=38						
LBTB	**Lobatse**	**20.81**	**212**	*e*P	**P**	**20 00 00.2**	**-1.7**
LBTB				*e*S	**S**	**20 03 46.9**	**-7.3**
LBTB				pmax	pmax		
	comp=Z,120nm,1.1s						
LBTB	**Lobatse**	**20.81**	**212**	*e*P	**P**	**19 59 60.0**	**-1.9**
	comp=Z,117nm,1.1s						
LBTB				*e*S	**S**	**20 03 51.4**	**-2.8**
LBTB				*e*Lg		20 05 47.3	
LBTB	**Lobatse**	**20.81**	**212**	*e*P	**P**	**20 00 00.4**	**-1.5**
LBTB				AMb	AMB	20 00 11.1	
	comp=Z,297nm,1.4s						
KSR	**Koster**	**20.86**	**208**	*e*P	**P**	**20 00 01.8**	**-0.5**
KSR				AMb	AMB	20 00 13.2	
	comp=Z,196nm,1.6s						
PRYS	**Parys**	**21.58**	**206**	*e*P	**P**	**20 00 09.7**	**-0.4**
PRYS				AMb	AMB	20 00 21.0	
	comp=Z,185nm,1.6s,mb5.3						
RER	**Riviere de l'E**	**22.11**	**130**	*e*P	**P**	**20 00 18.8**	**+2.9**
	comp=Z,424nm,1.5s,mb5.7						
LBOS		**22.60**	**20**	*e*P	**P**	**20 00 21.0**	**-0.1**
TSUM	**Tsumeb**	**22.64**	**237**	P	**P**	**20 00 20.1**	**-1.4**
	comp=Z,36nm,1.0s,mb4.8,baz=60,slow=8.6,SNR=27						
TSUM				S	**S**	**20 04 31.2**	**+1.1**
	comp=Z,21nm,0.9s,baz=46,slow=8.5,SNR=2.7						
TSUM				Lg		20 07 09.6	
	comp=Z,77nm,0.9s,baz=159,slow=8.6,SNR=2.5						
TSUM	**Tsumeb**	**22.64**	**237**	⇓*e*P	**P**	**20 00 20.5**	**-1.1**
	comp=Z,108nm,1.2s,mb5.2						
TSUM				*e*S	**S**	**20 04 16.8**	**-13**
TSUM				*e*Lg		20 06 48.6	
TSUM				LR	LR		
	comp=Z,2µm,20.0s,MS4.5						
TSUM	**Tsumeb**	**22.64**	**237**	*e*P	**P**	**20 00 20.4**	**-1.1**
TSUM				AMb	AMB	20 00 25.8	
	comp=Z,1µm,1.6s,mb6.1						
SEK	**Senekal**	**22.70**	**203**	*e*P	**P**	**20 00 20.4**	**-1.7**
SWZ	**Schweizer**	**22.73**	**209**	*e*P	**P**	**20 00 21.1**	**-1.2**
SWZ				AMb	AMB	20 00 25.9	
	comp=Z,686nm,1.8s,mb5.8						
MRKH	**Merkhyat**	**23.70**	**347**	*i* P	**P**	**20 00 32.7**	**+0.2**
MRKH				AMb	AMB	20 00 38.6	
	comp=Z,157nm,1.7s,mb5.2						
MRKH				*e*		20 01 33.0	
	baz=167						
MRKH				*i* S	**S**	**20 04 48.2**	**+0.7**
BOSA	**Boshof**	**23.97**	**208**	P	**P**	**20 00 34.0**	**-0.8**
	comp=Z,52nm,0.6s,mb5.2,baz=37,slow=9.2,SNR=86						
BOSA				S	**S**	**20 04 55.1**	**+3.5**
	comp=Z,9.9nm,0.7s,baz=87,slow=16,SNR=1.9						
BOSA				Lg		20 07 43.0	
	comp=Z,115nm,1.0s,baz=132,slow=14,SNR=3.6						
BOSA				LR	LR	20 10 18.4	
	comp=Z,2µm,19.6s,MS4.5,baz=221,slow=38						
BOSA	**Boshof**	**23.97**	**208**	⇓*i*P	**P**	**20 00 33.7**	**-1.2**
BOSA				*e*S	**S**	**20 04 59.6**	**+7.9**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
BOSA	**Boshof**	**23.97**	**208**	⇓*i*P	**P**	**20 00 33.7**	**-1.2**
	comp=Z,1.3nm,0.3s,mb3.8						
BOSA				*e*S	**S**	**20 04 57.3**	**+5.6**
BOSA				*e*Lg		20 07 38.9	
BOSA				LR	LR		
	comp=Z,3µm,19.0s,MS4.8						
BOSA	**Boshof**	**23.97**	**208**	*e*P	**P**	**20 00 33.6**	**-1.3**
BOSA				AMb	AMB	20 00 38.4	
	comp=Z,310nm,1.8s,mb5.4						
KSD	**Kokstad**	**24.11**	**198**	*e*P	**P**	**20 00 36.7**	**+0.5**
KSD				AMb	AMB	20 00 47.6	
	comp=Z,753nm,1.5s,mb5.9						
UPI	**Upington**	**25.83**	**215**	*e*P	**P**	**20 00 51.0**	**-0.8**
UPI				AMb	AMB	20 00 57.5	
	comp=Z,158nm,1.6s,mb5.3						
PKA	**Prieska**	**26.05**	**211**	*e*P	**P**	**20 00 54.6**	**+0.7**
PKA				AMb	AMB	20 00 58.7	
	comp=Z,64nm,1.5s,mb4.9						
SOE	**Somerset East**	**27.41**	**203**	*e*P	**P**	**20 01 06.1**	**+0.1**
CVNA	**Calvinia**	**29.05**	**213**	*e*P	**P**	**20 01 21.1**	**+0.4**
CVNA				AMb	AMB	20 02 02.4	
	comp=Z,119nm,1.6s,mb5.4						
CER	**Ceres**	**30.77**	**211**	*e*P	**P**	**20 01 35.1**	**-0.8**
CER				AMb	AMB	20 02 31.4	
	comp=Z,39nm,1.9s,mb4.9						
BSY	**Bisya**	**35.70**	**32**	⇓P	**P**	**20 02 18.7**	**-0.3**
	SNR=13						
SMDO	**Samad**	**36.41**	**33**	⇑P	**P**	**20 02 24.6**	**-0.5**
	SNR=15						
HOQ	**Hoqain**	**36.45**	**31**	⇑P	**P**	**20 02 25.2**	**-0.2**
	SNR=13						
WBK	**Wadi Bani Khal**	**36.55**	**34**	⇓P	**P**	**20 02 27.5**	**+1.2**
	SNR=11						
BIDO	**Bidbid**	**36.83**	**32**	⇑P	**P**	**20 02 31.4**	**+2.8**
	SNR=5.1						
HATD	**Hatta, Dubai**	**36.90**	**29**	P	**P**	**20 02 29.7**	**+0.5**
	SNR=6.9						
NAY	**Al-Naaiem**	**37.76**	**14**	*e*P	**P**	**20 02 36.5**	**+0.1**
	baz=14						
NAY				AMb	AMB	20 02 40.9	
	comp=Z,41nm,1.1s,mb5.1,baz=14						
KBD	**Kabd**	**37.80**	**14**	*e*P	**P**	**20 02 36.7**	**0.0**
	baz=14						
KBD				AMb	AMB	20 02 45.2	
	comp=Z,71nm,1.7s,mb5.1,baz=14						
MIB	**Mutribah**	**38.31**	**14**	*e*P	**P**	**20 02 41.1**	**0.0**
	baz=13						
MIB				AMb	AMB	20 02 45.8	
	comp=Z,69nm,0.9s,mb5.4,baz=13						
TOA0	**Torodi Ar. Sit**	**41.21**	**300**	*e*P	**P**	**20 03 04.4**	**-1.0**
TOA0				*e*PP	PP	20 04 39.6	-1.1
TOA0				*e*S	**S**	**20 09 19.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**41.21**	**300**	P	**P**	**20 03 04.4**	**-1.1**
	comp=Z,5.5nm,0.9s,mb4.2,baz=110,slow=6.8,SNR=16						
TORD				PP	PP	20 04 41.8	+1.1
	comp=Z,5.3nm,0.9s,baz=112,slow=8.7,SNR=3.6						
TORD				PcP	PcP	20 05 05.0	+0.4
	comp=Z,8.4nm,0.7s,baz=109,slow=1.7,SNR=8.9						
TORD				S	**S**	**20 09 23.9**	**+4.5**
	comp=Z,3.4nm,0.9s,baz=115,slow=9.3,SNR=3.0						
TORD				LR	LR	20 20 11.8	
	comp=Z,6µm,19.1s,MS5.5,baz=105,slow=36						
TRD	**Trivandrum**	**42.32**	**69**	*e*P	**P**	**20 03 15.8**	**+1.1**
TRD				AMb	AMB	20 03 20.5	
	comp=Z,59nm,1.5s,mb5.0						
SHEL	**Horse Pasture**	**43.20**	**255**	PFAKE		20 03 30.0	+8.2
SHEL				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
TAM	**Tamanrasset**	**43.57**	**315**	⇓*e*P	**P**	**20 03 24.6**	**0.0**
	comp=Z,84nm,1.7s,mb5.2						
TAM				*e*PP	PP	20 05 05.3	-0.8
TAM				*e*PcP	PcP	20 05 14.1	+1.7
KAD	**Karad**	**43.77**	**55**	*e*P	**P**	**20 03 25.7**	**-0.6**
BHJ	**Bhuj**	**43.80**	**45**	*e*P	**P**	**20 03 27.0**	**+0.5**
BHJ				AMb	AMB	20 03 36.5	
	comp=Z,39nm,1.1s,mb5.1						
POO	**Poona**	**44.15**	**54**	*e*P	**P**	**20 03 28.7**	**-0.6**
KIC	**Kosan Boka**	**44.48**	**287**	*e*P	**P**	**20 03 30.6**	**-1.5**
	comp=Z,85nm,1.1s,mb5.4						
DBIC	**Dimbokro**	**44.68**	**287**	P	**P**	**20 03 32.9**	**-0.8**
	comp=Z,9.5nm,0.5s,mb4.8,baz=95,slow=11,SNR=24						
DBIC				PP	PP	20 05 16.7	-1.4
	comp=Z,10.0nm,0.7s,baz=90,slow=8.0,SNR=6.4						
DBIC				S	**S**	**20 10 06.7**	**-3.8**
	comp=Z,3.8nm,0.9s,baz=42,slow=20,SNR=2.1						
DBIC				LR	LR	20 21 53.8	
	comp=Z,5µm,20.3s,MS5.4,baz=91,slow=36						
DBIC	**Dimbokro**	**44.68**	**287**	*e*P	**P**	**20 03 32.3**	**-1.4**
	comp=Z,12nm,0.6s,mb4.9						
DBIC				*e*PcP	PcP	20 05 16.7	+0.3
DBIC				LR	LR		
	comp=Z,6µm,21.0s,MS5.5						
DBIC	**Dimbokro**	**44.68**	**287**	*e*P	**P**	**20 03 26.5**	**-7.2**
LIC	**Lamto**	**44.71**	**287**	*e*P	**P**	**20 03 32.2**	**-1.7**
	comp=Z,22nm,0.7s,mb4.8						
LIC				*e*MLR	MLR		
	comp=Z,6µm,22.0s,MS5.2						
LIC	**Lamto**	**44.71**	**287**	*e*P	**P**	**20 03 31.5**	**-2.4**
	comp=Z,201nm,2.1s,mb5.6						
LIC	**Lamto**	**44.71**	**287**	*e*P	**P**	**20 03 32.2**	**-1.7**
	comp=Z,11nm,0.7s,mb4.8						
LIC				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
TIC	**Toumodi**	**44.83**	**287**	*e*P	**P**	**20 03 33.6**	**-1.3**
	comp=Z,138nm,0.6s,mb6.0						
BRTR	**Keskin Array B**	**47.20**	**356**	P	**P**	**20 03 53.6**	**+0.5**
	comp=Z,15nm,1.0s,mb4.9,baz=176,slow=9.8,SNR=40						
BRTR				LR	LR	20 25 37.0	
	comp=Z,1µm,19.0s,MS4.8,baz=321,slow=39						
BR131	**Keskin Array S**	**47.20**	**356**	*e*P	**P**	**20 03 53.9**	**+0.8**
HYB	**Hyderabad**	**47.45**	**58**	*i* P	**P**	**20 03 55.0**	**-0.4**
HYB				*e*PP	PP	20 05 40.0	-6.9
HYB				*e*S	**S**	**20 10 50.0**	**-0.2**
HYB	**Hyderabad**	**47.45**	**58**	*e*P	**P**	**20 03 54.0**	**-1.4**
HYB				*e*S	**S**	**20 10 50.0**	**-0.2**
GNI	**Garni**	**47.93**	**7**	*d i*P	**P**	**20 03 57.5**	**-1.3**
GNI				pmax	pmax		
	comp=Z,76nm,1.7s						
GNI				MLR	MLR		
	comp=Z,3µm,19.0s						
GNI	**Garni**	**47.93**	**7**	⇓*e*P	**P**	**20 03 59.7**	**+0.9**
	comp=Z,36nm,0.8s,mb5.5						
GNI				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
ABKT	**Ailbek**	**49.14**	**21**	P	**P**	**20 04 10.1**	**+2.0**
	comp=Z,45nm,1.2s,mb5.4,SNR=6.9						
AJM	**Ajmer**	**49.34**	**45**	*e*P	**P**	**20 04 09.5**	**-0.4**
RZN	**Rozhen**	**50.43**	**347**	P	**P**	**20 04 15.6**	**-2.3**
MMB	**Musomiste**	**50.55**	**346**	P	**P**	**20 04 16.3**	**-2.5**
KEST	**Kesra**	**50.64**	**330**	P	**P**	**20 04 20.6**	**+1.0**
	comp=Z,6.8nm,0.9s,mb4.6,baz=340,slow=7.2,SNR=6.2						
KEST				PcP	PcP	20 05 39.0	+1.9
	comp=Z,7.2nm,0.9s,baz=193,slow=9.2,SNR=6.7						
KEST				LR	LR	20 27 27.5	
	comp=Z,2µm,18.5s,MS5.2,baz=278,slow=38						
PLD	**Plovdiv**	**50.83**	**348**	P	**P**	**20 04 21.2**	**+0.3**
SOC	**Sochi**	**50.95**	**2**	*d i*P	**P**	**20 04 20.5**	**-1.3**
SOC				*e**PP	pP	20 04 28.5	+3.6
SOC				*e*PPP		20 07 12.0	
SOC				*e*S	**S**	**20 11 32.8**	**-5.7**
SOC				*e**SS	sS	20 11 50.0	+6.3
SOC				*e*SS	SS	20 15 11.3	-2.4
SOC				*e*SSS		20 16 42.5	
SOC				MLR	MLR		
	comp=Z,33µm,13.0s						
KKB	**Krupnik**	**50.97**	**346**	P	**P**	**20 04 19.1**	**-2.9**
MAK	**Makhachkala**	**51.09**	**9**	*e*P	**P**	**20 04 21.2**	**-1.6**
MAK				*e*		20 05 40.6	
MAK				*i*		20 06 17.7	
MAK				*e*S	**S**	**20 11 32.2**	**-8.3**
MAK				*e*SS	SS	20 15 07.1	-8.9
MAK				pmax	pmax		
	comp=Z,212nm,0.7s,mb6.2						
MAK				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.5						
KBL	**Kabul**	**51.35**	**33**	⇓*i*P	**P**	**20 04 25.0**	**0.0**

KBL pmax pmax
comp=Z,23nm,1.3s,mb5.0
KBL Kabul 51.35 33 ⇓*iP* **P 20 04 25.0 0.0**
comp=Z,23nm,1.3s,mb5.0
PRD Provadia 51.38 350 P **P 20 04 24.6 -0.4**
JBP Jabalpur 51.46 52 *eP* **P 20 04 24.4 -1.5**
JBP *eS* **S 20 11 47.8 +1.6**
KIV Kislovodsk 51.49 5 P **P 20 04 26.4 +0.6**
comp=Z,295nm,0.9s,mb6.2,SNR=9.4
KIV Kislovodsk 51.49 5 ⇓P **P 20 04 25.8 0.0**
SNR=11
KIV Kislovodsk 51.49 5⇓*eP* **P 20 04 25.7 -0.1**
KIV *e* 20 06 15.4
KIV *i* S **S 20 11 48.2 +2.2**
KIV pmax pmax
comp=Z,73nm,1.6s,mb5.4
KIV Kislovodsk 51.49 5 ⇓*iP* **P 20 04 25.4 -0.4**
comp=Z,56nm,1.0s,mb5.5
KIV *e*ScP ScP 20 09 29.2 -7.7
VTS Vitosha 51.63 346 P **P 20 04 24.5 -2.4**
VIS Vishakhapatnam 51.65 60 *eP* **P 20 04 27.7 +0.1**
ANN Anapa 52.13 360 *diP* **P 20 04 29.0 -1.6**
ANN *e* 20 06 22.5
ANN *e*PPP 20 07 28.3
ANN *e*S **S 20 11 50.8 -4.0**
ANN pmax pmax
comp=Z,722nm,6.0s
ANN pmax pmax
comp=Z,37nm,1.5s,mb5.1
ANN MLR MLR
comp=Z,2µm,21.0s,MS5.1
SIM Simferopol' **52.37 357** *iP* **P 20 04 29.3 -3.1**
SIM *e*S **S 20 11 59.3 +1.2**
SIM pmax pmax
comp=Z,200nm,8.0s
SIM MLR MLR
comp=Z,1µm,17.0s,MS5.0
TIRR Tirgusor 52.45 352 ⇓*iP* **P 20 04 33.5 +0.5**
NDI New Delhi 52.49 45 *eP* **P 20 04 32.0 -1.6**
NDI *e* 20 04 32.0
THN Thein Dam 53.84 40 *eP* **P 20 04 42.2 -1.3**
VOIR 53.96 349 ⇓*iP* **P 20 04 45.5 +1.4**
DDI Dehra Dun 54.07 44 *eP* **P 20 04 43.0 -2.2**
PLOR Plostina 54.08 351 ⇓*iP* **P 20 04 45.2 +0.2**
VRI Vrincioaia 54.09 351 ⇓*iP* **P 20 04 45.8 +0.8**
GZR Gura Zlata 54.38 347 ⇓*iP* **P 20 04 48.0 +0.8**
BZS Buzias 54.86 346 ⇓*iP* **P 20 04 50.3 -0.3**
KIS Kishinev 54.89 353 ⇑*iP* **P 20 04 50.0 -0.8**
KIS *e*S **S 20 12 28.0 -4.2**
KIS pmax pmax
comp=Z,1µm,4.0s
KIS pmax pmax
comp=N,800µm,3.5s
KIS pmax pmax
comp=N,1µm,4.0s
KIS pmax pmax
comp=Z,2µm,4.0s
KIS pmax pmax
comp=Z,2µm,4.0s
KIS MLR MLR
comp=Z,500nm,14.0s,MS4.7
KIS MLR MLR
comp=Z,1µm,12.0s
KIS Kishinev 54.89 353 ⇑*iP* **P 20 04 50.0 -0.8**
comp=Z,800nm,3.5s
KIS *e*S **S 20 12 28.0 -4.2**
KIS *e*SS SS 20 16 32.0 +16
KIS LRM 20 31 20.0
comp=Z,500nm,14.0s
DRGR 55.73 348 ⇑*iP* **P 20 04 57.8 +0.9**
BURAR Bucovina Array 56.03 350 ⇓*iP* **P 20 05 00.3 +1.3**
BUR08 Bucovina Ar. S 56.06 350 ⇓*iP* **P 20 04 59.9 +0.6**
PKSM Moragy 56.17 344 ⇑*iP* **P 20 05 00.1 +0.1**
BOK Bokaro 56.48 55 *eP* **P 20 05 02.3 -0.5**
KOLN Koldanda 56.64 50 *eP* **P 20 05 02.9 -0.9**
comp=Z,62nm,1.1s,mb5.6
VISS Visnje 56.92 341 *iP* **P 20 05 06.2 +0.9**
TRPA Tarpa 57.04 348 ⇑*iP* **P 20 05 07.0 +0.8**
DANN Dangsing 57.06 49 *eP* **P 20 05 06.0 -0.7**
comp=Z,58nm,0.9s,mb5.6
BUD Budapest 57.24 345 *eP* **P 20 05 08.6 +1.0**
JAVS Javornik 57.25 341 *iP* **P 20 05 07.8 +0.1**
PSZ Piszkesteto 57.43 346 *eP* **P 20 05 08.2 -0.8**
PSZ pmax pmax
comp=Z,420nm,2.8s,mb6.0
PSZ Piszkesteto 57.43 346 *eP* **P 20 05 09.3 +0.3**
PSZ Piszkesteto 57.43 346 ⇓*iP* **P 20 05 09.2 +0.2**
GKN Gorkha 57.54 50 *eP* **P 20 05 09.2 -1.0**
comp=Z,95nm,1.2s,mb5.7
UZH Uzhgorod 57.57 348 ⇑*iP* **P 20 05 10.0 +0.1**
UZH *i* pP 20 05 13.0 -0.1
UZH *e* 20 06 02.3
UZH *e* 20 07 25.0
UZH *e*PPP 20 08 37.0
UZH *e*S **S 20 13 03.0 -4.7**
UZH *e*PS 20 13 12.5
UZH *e* 20 14 55.0
UZH *e*SS SS 20 16 51.0 -7.0
UZH *e*SSS 20 19 16.0
UZH MLR MLR
comp=N,1µm,16.0s,MS5.2
UZH MLR MLR
comp=E,1µm,16.0s,MS5.2
UZH MLR MLR
comp=Z,800nm,16.0s,MS4.9
PERS Pernice 57.57 342 *iP* **P 20 05 10.2 +0.2**
SOKA Soboth 57.64 342 ⇓*iP* **P 20 05 11.0 +0.6**
comp=Z,22nm,1.0s,mb5.2
DMN Daman 57.70 51 *eP* **P 20 05 10.7 -0.6**
comp=Z,41nm,0.9s,mb5.5
KOLS Kolonicke sedl 57.86 348 *eP* **P 20 05 13.1 +1.1**
KOLS pmax pmax
comp=Z,211nm,2.7s,mb5.7
KOLS MLR MLR
comp=Z,800nm,21.9s,MS4.8
KOLS Kolonicke sedl 57.86 348 *eP* **P 20 05 13.1 +1.1**
KOLS *e* 20 05 34.0
KOLS Kolonicke sedl 57.86 348 *eP* **P 20 05 13.1 +1.1**
comp=Z,211nm,2.7s,mb5.7
KOLS *e* 20 05 34.0
KOLS LR LR
comp=Z,800nm,21.9s,MS4.8
PKI Pulchoki 57.91 51 *eP* **P 20 05 12.0 -0.8**
comp=Z,82nm,1.3s,mb5.6
PKI Pulchoki 57.91 51 *eP* **P 20 05 12.0 -0.8**
PKI pmax pmax
comp=Z,82nm,1.3s,mb5.6
EMUR La Murta 57.92 324 P **P 20 05 14.6 +2.0**
comp=Z,326nm,2.5s,mb5.9
KKN Kakani 57.92 51 *eP* **P 20 05 12.1 -0.8**
comp=Z,41nm,0.9s,mb5.5
KKN Kakani 57.92 51 *eP* **P 20 05 12.1 -0.8**
KKN pmax pmax
comp=Z,41nm,0.9s,mb5.5
CAL Calcutta 57.95 58 *eP* **P 20 05 12.0 -1.1**
CAL *ex* x 20 20 35.1
CRVS Cervenica-Dubn 58.00 347 *eP* **P 20 05 13.2 +0.3**
CRVS *e* 20 05 34.4
CRVS Cervenica-Dubn 58.00 347 *eP* **P 20 05 13.2 +0.3**
comp=Z,61nm,1.4s,mb5.4
CRVS *e* 20 05 34.4
CRVS LR LR
comp=Z,500nm,30.1s,MS4.5
ARSA Arzberg 58.00 342 ⇑*iP* **P 20 05 13.6 +0.6**
comp=Z,13nm,1.1s,mb4.9
LMR La Mourre 58.01 334 *eP* **P 20 05 13.4 +0.2**
comp=Z,85nm,1.3s,mb5.3
LMR La Mourre 58.01 334 *eP* **P 20 05 13.4 +0.2**
LMR pmax pmax
comp=Z,43nm,1.3s,mb5.3
LMR La Mourre 58.01 334 *eP* **P 20 05 13.4 +0.2**
comp=Z,43nm,1.3s,mb5.3
SOP Sopron 58.09 343⇓*eP* **P 20 05 13.5 -0.1**
FRF La Foret Royal 58.13 334 *eP* **P 20 05 13.6 -0.4**
comp=Z,51nm,1.0s,mb5.2
FRF La Foret Royal 58.13 334 *eP* **P 20 05 13.6 -0.4**
FRF pmax pmax
comp=Z,26nm,1.0s,mb5.2
FRF La Foret Royal 58.13 334 *eP* **P 20 05 13.6 -0.4**
comp=Z,26nm,1.0s,mb5.2
VYHS Vyhne 58.23 345 *eP* **P 20 05 13.0 -1.5**
comp=Z,249nm,3.2s
VYHS LR LR
comp=Z,700nm,38.3s,MS4.5
EBER Berja 58.27 322 P **P 20 05 16.5 +1.4**
comp=Z,865nm,3.9s
VORD Divnogorie 58.31 1 *eP* **P 20 05 14.2 -0.9**
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.3
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,30nm,0.6s
LVV L'vov 58.37 350 *eP* **P 20 05 12.8 -2.7**
LVV *eS* **S 20 13 11.2 -7.0**
LVV MLR MLR
comp=Z,600nm,18.0s,MS4.8
ZST Bratislava 58.41 344 *eP* **P 20 05 15.4 -0.4**
comp=Z,833nm,3.7s
ZST LR LR
comp=Z,500nm,20.2s,MS4.6
COCO West Island 58.41 100 PFAKE 20 05 30.0 +13
COCO LR LR
comp=Z,3µm,21.0s,MS5.3
KOLL Kolacno 58.41 345 *eP* **P 20 05 16.1 +0.2**
KWP Kalwaria 58.44 349 *eP* **P 20 05 16.5 +0.5**
KWP LMZ 20 34 54.7
comp=Z,800nm,22.0s
KWP Kalwaria 58.44 349 P **P 20 05 16.3 +0.3**
KWP pmax pmax
comp=Z,230nm,1.8s,mb5.9
KWP Kalwaria 58.44 349 *eP* **P 20 05 16.5 +0.5**
GUN Gumba 58.44 51 *eP* **P 20 05 16.0 -0.5**
comp=Z,217nm,1.5s,mb6.0
KIEV Kiev 58.48 354 P **P 20 05 15.1 -1.2**
KIEV pmax pmax
comp=Z,14nm,0.9s,mb5.0
KIEV Kiev 58.48 354⇓*eP* **P 20 05 15.0 -1.3**
comp=Z,14nm,0.8s,mb5.0
AKASG Malin Array Be 58.49 354 P **P 20 05 15.0 -1.3**
comp=Z,11nm,0.8s,mb5.0,baz=175,slow=6.2,SNR=40
AKASG LR LR 20 35 45.6
comp=Z,994nm,18.8s,MS5.0,baz=130,slow=42
AKASG Malin Array Be 58.49 354 P **P 20 05 15.0 -1.3**
AKASG LR LR 20 35 45.6
AKBB Malin Array Si 58.49 354 P **P 20 05 15.6 -0.7**
AKBB Malin Array Si 58.49 354 *eP* **P 20 05 15.1 -1.3**
CONA Conrad Observa 58.51 343 ⇓*iP* **P 20 05 16.7 +0.1**
comp=Z,22nm,1.1s,mb5.1,SNR=15
CSNA Conrad Observa 58.51 343 ⇓*iP* **P 20 05 16.6 +0.1**
comp=Z,21nm,1.1s,mb5.1
VRHR Novokhopersk 58.53 3 *eP* **P 20 05 15.7 -0.9**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRHR pmax pmax
comp=E,6.0nm,0.4s
KBA Koelnbreinsper 58.53 341 *iP* **P 20 05 16.7 0.0**
comp=E,17nm,0.8s,mb5.1,SNR=5.8
STHS Stebnicka Huta 58.53 348 *iP* **P 20 05 17.3 +0.6**
STHS pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
STHS Stebnicka Huta 58.53 348 *iP* **P 20 05 17.3 +0.6**
comp=Z,7.6nm,0.7s,mb4.8
STHS *e*PP PP 20 07 38.9 +13
RAMN Ramite 58.53 52 *eP* **P 20 05 16.7 -0.5**
comp=Z,128nm,1.6s,mb5.7
JIRN Jiri 58.56 51 *eP* **P 20 05 16.6 -0.7**
comp=Z,51nm,1.1s,mb5.5
VSR Storozhevoye 58.56 1 *eP* **P 20 05 15.7 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,5.0nm,0.8s
NIE Niedzica 58.74 347 *eP* **P 20 05 19.0 +0.9**
KSH Kashi 58.76 34 P **P 20 05 18.8 +0.3**
KSH AP pP 20 05 23.6 +1.9
KSH XP sP 20 05 25.6 +2.7
KSH PCP PcP 20 06 09.2 +1.0
KSH PP PP 20 07 29.5 +0.9
KSH PPP 20 08 53.7
KSH SCP ScP 20 10 07.8 -1.2
KSH PCS PcS 20 10 09.6 -0.2
KSH S **S 20 13 20.0 -3.7**
KSH XS sS 20 13 27.4 -1.6
KSH SCS ScS 20 15 04.1 -4.6
KSH SS SS 20 17 13.2 -4.1
KSH AMB AMB
comp=Z,65nm,0.8s,mb5.7
KSH AMB AMB
comp=Z,3µm,4.6s
KSH LR LR
comp=N,6µm,13.7s,MS5.9
KSH LR LR
comp=E,2µm,10.2s,MS5.9
KSH LR LR
comp=Z,3µm,12.2s,MS5.6
ERON Agron 58.91 322 P **P 20 05 22.7 +3.1**
comp=Z,103nm,1.4s,mb5.7
MOA Molln 58.92 342 ⇓*iP* **P 20 05 19.4 0.0**
comp=Z,28nm,1.0s,mb5.3,SNR=20
ECOG Cogollos-Vega 58.93 322 P **P 20 05 22.8 +3.1**
ECOG pmax pmax
comp=Z,50nm,1.3s,mb5.4
ECOG Cogollos-Vega 58.93 322 P **P 20 05 22.8 +3.1**
comp=Z,50nm,1.3s,mb5.4
SMRF Simiane la Rot 58.93 333 *eP* **P 20 05 19.8 +0.2**
comp=Z,68nm,1.2s,mb5.2
SMRF Simiane la Rot 58.93 333 *eP* **P 20 05 19.8 +0.2**
comp=Z,68nm,1.2s,mb5.5
MBDF Montbardon 59.01 335 *eP* **P 20 05 20.6 +0.5**
comp=Z,49nm,1.0s,mb5.2
MBDF Montbardon 59.01 335 *eP* **P 20 05 20.6 +0.5**
MBDF pmax pmax
comp=Z,25nm,1.0s,mb5.2
MBDF Montbardon 59.01 335 *eP* **P 20 05 20.6 +0.5**
comp=Z,25nm,1.0s,mb5.2
VOR Voronezh 59.08 1 *eP* **P 20 05 19.0 -1.4**
VOR pmax pmax
comp=Z,200nm,2.2s,mb5.8
EPOB Poblet 59.11 328 P **P 20 05 22.6 +1.8**
comp=Z,155nm,2.3s,mb5.6
ODAN Odare 59.11 53 *eP* **P 20 05 20.8 -0.4**
comp=Z,32nm,0.9s,mb5.3
EVIA Vianos 59.19 324 P **P 20 05 22.8 +1.3**
EVIA pmax pmax
comp=Z,18nm,0.8s,mb5.2
EVIA Vianos 59.19 324 P **P 20 05 22.8 +1.3**
comp=Z,18nm,0.8s,mb5.2
ELOJ Sierra Loja 59.20 322 P **P 20 05 22.1 +0.5**
ELOJ pmax pmax
comp=Z,77nm,1.2s,mb5.6
ELOJ Sierra Loja 59.20 322 P **P 20 05 22.1 +0.5**
comp=Z,77nm,1.2s,mb5.6
BNI Bardonecchia 59.31 335⇓*eP* **P 20 05 22.2 0.0**
BNI pmax pmax
comp=Z,353nm,2.5s,mb6.0
BNI Bardonecchia 59.31 335⇓*eP* **P 20 05 22.2 0.0**
comp=Z,353nm,2.5s,mb6.0
FETA Feichten 59.38 339 *iP* **P 20 05 23.1 +0.5**
comp=Z,19nm,0.8s,mb5.2,SNR=19
TUE Stuetta 59.42 338 *eP* **P 20 05 22.4 -0.5**
comp=Z,100nm,1.9s,mb5.5
AML Almayashu 59.42 31 ⇓*iP* **P 20 05 23.3 +0.3**
comp=Z,12nm,0.8s,mb5.0
ELUQ Luque 59.54 322 P **P 20 05 23.3 -0.6**
ORIF Oris-en-Rattie 59.55 334 *eP* **P 20 05 23.8 0.0**
comp=Z,19nm,0.9s,mb4.8
ORIF *e*MLR MLR
comp=Z,4µm,22.0s,MS5.2
ORIF Oris-en-Rattie 59.55 334 *eP* **P 20 05 23.8 0.0**
ORIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 59.55 334 *eP* **P 20 05 23.8 0.0**
comp=Z,9.6nm,0.9s,mb4.8
VRAC Vranov 59.56 344 ⇓*iP* **P 20 05 23.3 -0.5**
TAPN Taplejung 59.59 52 *eP* **P 20 05 24.2 -0.3**
comp=Z,92nm,1.3s,mb5.7
OJC Ojcow 59.61 347 *eP* **P 20 05 23.8 -0.3**
EBAN Banos Encina 59.64 323 P **P 20 05 24.6 0.0**
EBAN pmax pmax
comp=Z,12nm,0.9s,mb4.9
EBAN Banos Encina 59.64 323 P **P 20 05 24.6 0.0**
comp=Z,12nm,0.9s,mb4.9
OKC Ostrava-Krasne 59.64 346 *eP* **P 20 05 23.9 -0.5**
OKC *e*pP pP 20 05 27.8 +0.2
LPG La Plagne 59.64 335 *eP* **P 20 05 23.8 -0.7**
comp=Z,89nm,1.4s,mb5.3
LPG La Plagne 59.64 335 *eP* **P 20 05 23.8 -0.7**
LPG pmax pmax
comp=Z,44nm,1.4s,mb5.3
LPG La Plagne 59.64 335 *eP* **P 20 05 23.8 -0.7**
comp=Z,44nm,1.4s,mb5.3
LPL La Plagne 59.67 335 *eP* **P 20 05 23.9 -0.7**
comp=Z,72nm,1.4s,mb5.2
LPL La Plagne 59.67 335 *eP* **P 20 05 23.9 -0.7**
LPL pmax pmax
comp=Z,36nm,1.4s,mb5.2
LPL La Plagne 59.67 335 *eP* **P 20 05 23.9 -0.7**
comp=Z,36nm,1.4s,mb5.2
RETA Reutte 59.76 339 ⇑*iP* **P 20 05 24.4 -0.9**
comp=Z,23nm,0.9s,mb5.2,SNR=17
LASF Ste Croix 59.79 332 *eP* **P 20 05 25.7 +0.2**
comp=Z,91nm,1.2s,mb5.4
TREC Trest 59.85 343 *eP* **P 20 05 25.2 -0.6**
TREC AMS AMS 20 33 30.0
comp=Z,2µm,20.2s
EKS2 Erkin-Say 59.86 30 *eP* **P 20 05 24.3 -1.7**
comp=Z,20nm,1.3s,mb5.0
EKS2 LR LR
comp=Z,864nm,21.0s,MS4.9
AB31 Akbulak array 59.86 17 P **P 20 05 24.6 -1.3**
AB31 pmax pmax
comp=Z,16nm,0.8s,mb5.1
DAVA Damuels 59.91 339 ⇓*iP* **P 20 05 25.6 -0.7**
comp=Z,35nm,0.9s,mb5.4
UCH Uchtor 59.91 31 P **P 20 05 28.3 +1.9**
comp=Z,2.7nm,0.7s,mb4.4
UCH LR LR
comp=Z,590nm,22.0s,MS4.7
GEC2 GERESS Array S 59.98 342 P **P 20 05 26.1 -0.6**
GEC2 GERESS Array S 59.98 342 *eP* **P 20 05 25.5 -1.2**
comp=Z,6µm,1.1s
GERES GERESS Array B 59.98 342 P **P 20 05 26.5 -0.1**
comp=Z,10nm,0.9s,mb4.8,baz=141,slow=4.5,SNR=37
GERES LR LR 20 34 10.5
comp=Z,1µm,19.1s,MS5.0,baz=42,slow=39
MTLF Montolieu 60.00 331 *eP* **P 20 05 26.7 -0.3**
VIVF Saint-Julien-l 60.02 333 *eP* **P 20 05 27.7 +0.6**
comp=Z,52nm,0.9s,mb5.3
VIVF Saint-Julien-l 60.02 333 *eP* **P 20 05 27.7 +0.6**
VIVF pmax pmax
comp=Z,26nm,0.9s,mb5.3
VIVF Saint-Julien-l 60.02 333 *eP* **P 20 05 27.7 +0.6**
comp=Z,26nm,0.9s,mb5.3
SFS San Fernando 60.07 320⇓*eP* **P 20 05 28.5 +0.9**
SFS pmax pmax
comp=Z,269nm,1.1s,mb6.2
SFS MLR MLR
comp=Z,7µm,19.0s,MS5.8
SFS San Fernando 60.07 320⇓*eP* **P 20 05 28.5 +0.9**
comp=Z,269nm,1.1s,mb6.2
SFS LR LR
comp=Z,7µm,19.0s,MS5.8
EADA Adamuz 60.12 322 P **P 20 05 29.9 +2.1**
comp=Z,197nm,3.5s
AAK Ala-Archa 60.20 31 P **P 20 05 28.9 +0.6**
comp=Z,65nm,1.5s,mb5.4,SNR=8.7
AAK Ala-Archa 60.20 31 ⇓P **P 20 05 28.4 +0.1**
SNR=10
AAK Ala-Archa 60.20 31*diP* **P 20 05 27.9 -0.4**
AAK MLR MLR
comp=Z,500nm,16.0s,MS4.8
AAK Ala-Archa 60.20 31 *eP* **P 20 05 28.3 0.0**
comp=Z,265nm,3.0s
KHC Kasperske Hory 60.27 342 *eP* **P 20 05 27.3 -1.4**
KHC Kasperske Hory 60.27 342 *eP* **P 20 05 27.2 -1.5**
KHC *e*pP pP 20 05 29.5 -2.4
KHC *e*sP sP 20 05 32.5 -0.6
KHC *ex* x 20 05 45.0
KHC AMS AMS 20 32 00.0
comp=Z,2µm,19.5s
MELF Melles 60.38 330 *eP* **P 20 05 30.7 +1.1**
FRU Bishkek 60.40 31 *eP* **P 20 05 28.0 -1.7**
FRU *e* 20 07 44.0
FRU pmax pmax
comp=Z,550nm,3.8s
SSB Saint Sauveur 60.41 334 *eP* **P 20 05 29.9 +0.1**
comp=Z,22nm,0.8s,mb5.2
AKTK Aktyubinsk 60.42 15 P **P 20 05 28.8 -0.8**
AKTO Aktyubinsk 60.42 15 P **P 20 05 28.8 -0.8**
comp=Z,17nm,0.7s,mb5.2,baz=205,slow=7.2
RESF Ens 60.54 329 *eP* **P 20 05 31.8 +1.1**
EBIE Bielsa 60.55 329 P **P 20 05 34.0 +3.2**
comp=Z,159nm,2.2s,mb5.8
DPC Dobruska-Polom 60.58 344 *eP* **P 20 05 29.2 -1.6**
DPC *e*pP pP 20 05 33.3 -0.7
OG05 Jujurieux 60.62 335 *eP* **P 20 05 31.0 -0.1**
EPF Esparros 60.70 329 *eP* **P 20 05 31.6 -0.2**
ESDC Sonseca Array 60.73 324 P **P 20 05 32.8 +0.7**
comp=Z,20nm,0.8s,mb5.3,baz=133,slow=6.7,SNR=105
ESDC LR LR 20 33 53.7
comp=Z,3µm,20.6s,MS5.4,baz=135,slow=38
ESDC Sonseca Array 60.73 324 P **P 20 05 32.8 +0.7**
ESDC LR LR 20 33 53.7
ESLA Sonseca Array 60.73 324 *eP* **P 20 05 32.7 +0.7**
comp=Z,12nm,1.0s,mb5.0
ESLA LR LR
comp=Z,23µm,19.0s,MS6.3
PRU Pruhonice 60.75 343 *eP* **P 20 05 28.7 -3.2**
PRU *e*pP pP 20 05 34.4 -0.8
PRU AMS AMS 20 33 40.0
comp=Z,1µm,20.3s
UPC Upice 60.81 344 *eP* **P 20 05 31.2 -1.1**
UPC *e*pP pP 20 05 36.6 +1.0
CABF La Chapelle 60.81 336 *eP* **P 20 05 32.2 -0.3**
comp=Z,34nm,1.0s,mb5.1
CABF La Chapelle 60.81 336 *eP* **P 20 05 32.2 -0.3**
CABF pmax pmax
comp=Z,17nm,1.0s,mb5.1
CABF La Chapelle 60.81 336 *eP* **P 20 05 32.2 -0.3**
comp=Z,17nm,1.0s,mb5.1
LABF Labassere 60.85 329 *eP* **P 20 05 33.8 +1.0**
PAB San Pablo 60.87 324 *eP* **P 20 05 33.8 +0.8**
PAB *e* 20 07 51.4
PAB pmax pmax
comp=Z,55nm,1.4s,mb5.5
PAB San Pablo 60.87 324 *eP* **P 20 05 33.8 +0.8**
comp=Z,55nm,1.4s,mb5.5
PAB *e*PP PP 20 07 51.4 +4.1
LBL Lubilhac 60.95 333 *eP* **P 20 05 34.3 +0.8**
TKM2 Tokmak 2 60.96 31⇓*eP* **P 20 05 33.3 -0.3**
TKM2 pmax pmax
comp=Z,11nm,0.8s,mb5.0
TKM2 MLR MLR
comp=Z,936nm,22.0s,MS4.9
TKM2 Tokmak 2 60.96 31⇓*eP* **P 20 05 33.3 -0.3**
comp=Z,12nm,0.8s,mb5.1
TKM2 LR LR
comp=Z,936nm,22.0s,MS4.9
KSP Ksiaz 61.04 345 *eP* **P 20 05 33.5 -0.4**
KSP *e*S **S 20 13 57.0 +4.5**
ETSF Etsaut 61.07 329 *eP* **P 20 05 34.7 +0.4**
comp=Z,49nm,0.8s,mb5.4
ETSF Etsaut 61.07 329 *eP* **P 20 05 34.7 +0.4**
ETSF pmax pmax
comp=Z,24nm,0.8s,mb5.4
ETSF Etsaut 61.07 329 *eP* **P 20 05 34.7 +0.4**
comp=Z,24nm,0.8s,mb5.4
REYF Montagne du Re 61.10 329 *eP* **P 20 05 36.0 +1.5**
LOMF Lomont 61.12 337 *eP* **P 20 05 34.5 0.0**
EMIN Mina Concepcio 61.16 321 P **P 20 05 36.2 +1.2**
comp=Z,248nm,3.1s
PVCC Panska Ves 61.22 343 AMS AMS 20 34 40.0
comp=Z,1µm,19.3s
CAF Calviac 61.27 332 *eP* **P 20 05 36.3 +0.7**
comp=Z,91nm,1.2s,mb5.5
CAF Calviac 61.27 332 *eP* **P 20 05 36.3 +0.7**
CAF pmax pmax
comp=Z,46nm,1.2s,mb5.5
CAF Calviac 61.27 332 *eP* **P 20 05 36.3 +0.7**
comp=Z,46nm,1.2s,mb5.5
BFO Black Forest 61.35 338 *eP* **P 20 05 35.7 -0.4**
BFO pmax pmax
comp=Z,13nm,0.8s,mb5.1
BFO Black Forest 61.35 338 *eP* **P 20 05 35.6 -0.4**
comp=Z,13nm,0.8s,mb5.1
PLDF La Plantade 61.36 334 *eP* **P 20 05 35.3 -0.9**
MOF Molkenrain 61.41 337 *eP* **P 20 05 36.0 -0.5**
PYM Petit Puy Mans 61.46 333 *eP* **P 20 05 37.2 +0.3**
GUD Guadarrama 61.47 325 P **P 20 05 36.6 -0.5**
GUD pmax pmax
comp=Z,18nm,0.8s,mb5.2
GUD Guadarrama 61.47 325 P **P 20 05 36.6 -0.5**

comp=Z,18nm,0.8s,mb5.3
HINF Hinteralfeld 61.49 337 *e*P P **20 05 36.5 -0.5**
comp=Z,29nm,0.8s,mb5.1
HINF Hinteralfeld 61.49 337 *e*P P **20 05 36.5 -0.5**
HINF pmax pmax
comp=Z,14nm,0.8s,mb5.1
HINF Hinteralfeld 61.49 337 *e*P P **20 05 36.5 -0.5**
comp=Z,14nm,0.8s,mb5.2
GRA1 Grafenberg Arr 61.50 341 *e*P P **20 05 36.1 -1.0**
comp=Z,118nm,2.0s,mb5.7
GRA1 LR LR
comp=Z,1µm,20.8s,MS5.0
GRF Grafenberg Arr 61.50 341 *e*P P **20 05 36.1 -1.0**
GRF pmax pmax
comp=Z,118nm,2.0s,mb5.7
GRF MLR MLR
comp=Z,1µm,20.8s,MS5.0
GRF Grafenberg Arr 61.50 341 *e*P P **20 05 36.1 -1.0**
GRF pmax pmax
comp=Z,118nm,2.0s,mb5.7
GRF MLR MLR
comp=Z,1µm,20.8s,MS5.0
GRF Grafenberg Arr 61.50 341 *e*P P **20 05 36.1 -1.0**
comp=Z,118nm,2.0s,mb5.7
GRF *e*L 20 33 55.0
comp=Z,1µm,20.8s
SJPF Ste Jean 61.56 329 *e*P P **20 05 38.1 +0.5**
comp=Z,42nm,1.1s,mb5.2
SJPF Ste Jean 61.56 329 *e*P P **20 05 38.1 +0.5**
SJPF pmax pmax
comp=Z,21nm,1.0s,mb5.2
SJPF Ste Jean 61.56 329 *e*P P **20 05 38.1 +0.5**
comp=Z,21nm,1.0s,mb5.2
PVAQ Vaqueiros 61.60 320 *e*S S **20 14 09.0 +8.8**
PVAQ *e*LR LR 20 25 30.1
comp=Z,2µm,20.0s
PBAR Barrancos 61.63 321 *e*LR LR 20 27 40.8
comp=Z,3µm,18.0s
PBDV Barranco-do-Ve 61.64 320 *e*LR LR 20 28 19.4
comp=Z,2µm,18.0s
ECH Echery 61.70 337 *e*P P **20 05 38.1 -0.3**
ECH Echery 61.70 337 *e*P P **20 05 38.2 -0.2**
ECH pmax pmax
comp=Z,12nm,0.8s,mb5.1
ECH Echery 61.70 337 *e*P P **20 05 38.2 -0.2**
comp=Z,12nm,0.8s,mb5.1
BRG Berggiesshubel 61.71 343 *e*P P **20 05 37.9 -0.5**
BRG S S **20 14 08.0 +6.9**
BRG pmax pmax
comp=Z,13nm,1.7s,mb4.8
BRG MLR MLR
comp=N,503nm,17.0s,MS4.9
BRG MLR MLR
comp=E,509nm,14.8s,MS4.9
BRG MLR MLR
comp=Z,821nm,18.8s,MS4.9
BRG Berggiesshubel 61.71 343 *e*P P **20 05 37.9 -0.5**
comp=Z,22nm,1.6s,mb5.0
BRG S S **20 14 08.0 +6.9**
BRG SS SS 20 18 08.0 +5.0
BRG
comp=N,840nm,17.0s
BRG
comp=E,850nm,14.8s
BRG
comp=Z,1µm,18.8s
SMF Signal de Mont 61.79 334 *e*P P **20 05 38.9 -0.1**
comp=Z,45nm,0.9s,mb5.3
SMF Signal de Mont 61.79 334 *e*P P **20 05 38.9 -0.1**
SMF pmax pmax
comp=Z,22nm,0.9s,mb5.3
SMF Signal de Mont 61.79 334 *e*P P **20 05 38.9 -0.1**
comp=Z,22nm,0.9s,mb5.3
RJF Les Rejaudoux 61.81 332 *e*P P **20 05 39.8 +0.6**
comp=Z,81nm,1.2s,mb5.4
RJF *e*MLR MLR
comp=Z,4µm,22.5s,MS5.2
RJF Les Rejaudoux 61.81 332 *e*P P **20 05 39.8 +0.6**
RJF pmax pmax
comp=Z,40nm,1.3s,mb5.4
RJF MLR MLR
comp=Z,4µm,22.5s,MS5.5
RJF Les Rejaudoux 61.81 332 *e*P P **20 05 39.8 +0.6**
comp=Z,40nm,1.3s,mb5.4
RJF LR LR
comp=Z,4µm,22.5s,MS5.5
CDF Champ du Feu 61.81 338 *e*P P **20 05 38.6 -0.6**
comp=Z,44nm,0.8s,mb5.3
CDF Champ du Feu 61.81 338 *e*P P **20 05 38.6 -0.6**
CDF pmax pmax
comp=Z,22nm,0.8s,mb5.3
CDF Champ du Feu 61.81 338 *e*P P **20 05 38.6 -0.6**
comp=Z,22nm,0.8s,mb5.3
HAU Haudompre 61.84 337 *e*P P **20 05 38.9 -0.5**
comp=Z,48nm,0.8s,mb5.4
HAU *e*MLR MLR
comp=Z,2µm,20.8s,MS4.9
HAU Haudompre 61.84 337 *e*P P **20 05 38.9 -0.5**
HAU pmax pmax
comp=Z,24nm,0.8s,mb5.4
HAU MLR MLR
comp=Z,2µm,20.8s,MS5.2
HAU Haudompre 61.84 337 *e*P P **20 05 38.9 -0.5**
comp=Z,24nm,0.8s,mb5.4
HAU LR LR
comp=Z,2µm,20.8s,MS5.2
LFF La Frestale 61.90 331 *e*P P **20 05 40.3 +0.4**
comp=Z,62nm,1.0s,mb5.4
LFF La Frestale 61.90 331 *e*P P **20 05 40.3 +0.4**
LFF pmax pmax
comp=Z,31nm,1.0s,mb5.4
LFF La Frestale 61.90 331 *e*P P **20 05 40.3 +0.4**
comp=Z,31nm,1.0s,mb5.4
EBAD Badajoz 61.97 322 P P **20 05 43.0 +2.5**
comp=Z,1µm,4.6s
PSI Prapat 62.01 83 P P **20 05 40.9 -0.4**
comp=Z,8.9nm,0.7s,mb5.0,baz=309,slow=4.4,SNR=8.7
PBEJ Beja 62.06 320 *e*P P **20 05 42.0 +0.9**
comp=Z,38nm,1.8s,mb5.2
LANF Langenberg 62.09 338 *e*P P **20 05 41.0 0.0**
AVF Avril sur Loir 62.11 334 *e*P P **20 05 41.1 -0.1**
comp=Z,31nm,0.8s,mb5.2
AVF Avril sur Loir 62.11 334 *e*P P **20 05 41.1 -0.1**
AVF pmax pmax
comp=Z,15nm,0.8s,mb5.2
AVF Avril sur Loir 62.11 334 *e*P P **20 05 41.1 -0.1**
comp=Z,15nm,0.8s,mb5.2
MORF Marmelete 62.14 319 *e*P P **20 05 44.2 +2.6**
comp=Z,56nm,1.8s,mb5.4
MORF *e*S S **20 14 17.5 +10**
MORF *e*LR LR 20 29 55.5
comp=Z,2µm,18.0s
BGF Bois d'Agland 62.15 334 *e*P P **20 05 41.6 +0.1**
comp=Z,43nm,0.9s,mb5.3
BGF Bois d'Agland 62.15 334 *e*P P **20 05 41.6 +0.1**
BGF pmax pmax
comp=Z,21nm,0.9s,mb5.3
BGF Bois d'Agland 62.15 334 *e*P P **20 05 41.6 +0.1**
comp=Z,21nm,0.9s,mb5.3
PFVI Vila Bisbo 62.15 319 *e*P P **20 05 43.3 +1.6**
PFVI *e*S S **20 14 16.9 +10**
PFVI *e*LR LR 20 25 52.8
comp=Z,1µm,16.0s
SHL Shillong 62.16 56⇓*i x* P **20 05 44.3 +2.3**
MOX Moxa 62.20 342 *e*P P **20 05 46.0 +4.2**
MOX
comp=Z,1µm,23.0s
TCF Toulx Ste Croi 62.23 333 *e*P P **20 05 42.8 +0.8**
comp=Z,87nm,0.8s,mb5.6
TCF Toulx Ste Croi 62.23 333 *e*P P **20 05 42.8 +0.8**
TCF pmax pmax
comp=Z,43nm,0.8s,mb5.6
TCF Toulx Ste Croi 62.23 333 *e*P P **20 05 42.8 +0.8**
comp=Z,43nm,0.8s,mb5.6
TOD Tromm 62.25 339 *e*P P **20 05 42.0 -0.1**
SSF Saint Saulge 62.25 334 *e*P P **20 05 41.7 -0.5**
LOR Lormes 62.27 335 *e*P P **20 05 42.1 -0.2**
comp=Z,41nm,1.0s,mb5.2,baz=149
LOR *e*MLR MLR
comp=Z,3µm,22.2s,MS5.0
LOR Lormes 62.27 335 *e*P P **20 05 42.1 -0.2**
LOR pmax pmax
comp=Z,20nm,1.0s,mb5.2
LOR MLR MLR
comp=Z,3µm,22.3s,MS5.3
LOR Lormes 62.27 335 *e*P P **20 05 42.1 -0.2**
comp=Z,20nm,1.0s,mb5.2
LOR LR LR
comp=Z,3µm,22.3s,MS5.3
MAW Mawson 62.32 169 *e*P P **20 05 44.3 +2.0**
comp=Z,10nm,0.7s,mb5.1
MAW Mawson 62.32 169 P P **20 05 44.6 +2.3**
comp=Z,11nm,0.7s,mb5.1,baz=307,slow=9.9,SNR=13
MAW LR LR 20 29 17.6
comp=Z,1µm,20.0s,MS5.1,baz=336,slow=33
MAW Mawson 62.32 169 *e*P P **20 05 44.3 +2.0**
MAW pmax pmax
comp=Z,11nm,0.7s
CLL Collm 62.37 343 *i* P P **20 05 46.4 +3.5**
CLL pmax pmax
comp=Z,69nm,2.0s,mb5.4
CLL Collm 62.37 343 *e*P P **20 05 42.0 -0.9**
CLL *e*pP pP 20 05 46.0 -0.1
comp=Z,69nm,2.0s
CLL *e*x x 20 06 06.0
CLL *e*PPP 20 09 42.0
CLL *e*S **S** **20 14 10.0 +0.6**
CLL *e*PS 20 14 24.0
CLL *e*SS SS 20 18 36.0 +23
CLL *e*SSS 20 21 18.0
CLL L 20 34 00.0
comp=Z,800nm,21.3s
CLL Collm 62.37 343 *i* P P **20 05 46.4 +3.5**
comp=Z,69nm,2.0s,mb5.4
CLL *e*S **S** **20 14 10.0 +0.6**
MNK Minsk 62.38 354 *e*P P **20 05 40.0 -2.9**
PESTR Estremoz 62.40 321 *e*P P **20 05 44.1 +0.8**
comp=Z,46nm,2.2s,mb5.2
PESTR *e*S **S** **20 14 20.1 +10**
PESTR *e*LR LR 20 26 46.5
comp=Z,2µm,18.0s
EVO Evora 62.46 321 *e*P P **20 05 44.4 +0.6**
comp=Z,98nm,1.5s,mb5.4
EVO *e*MLR MLR
comp=Z,4µm,19.0s,MS5.3
EVO Evora 62.46 321 *e*P P **20 05 44.9 +1.1**
comp=Z,34nm,2.3s,mb5.1
OBN Obninsk 62.46 359⇑*e*P P **20 05 42.8 -0.6**
OBN *e* 20 07 58.5
OBN *i* S **S** **20 14 04.4 -6.0**
OBN pmax pmax
comp=Z,73nm,1.5s,mb5.6
OBN MLR MLR
comp=Z,600nm,17.0s,MS4.8
OBN Obninsk 62.46 359 *e*P P **20 05 43.8 +0.4**
OBN LR LR
comp=Z,600nm,17.0s,MS4.8
SUW Suwalki 62.55 350 *e*P P **20 05 43.5 -0.5**
SUW LMZ 20 38 49.7
comp=Z,1µm,18.1s
PMRV Marv??o 62.62 322 *e*P P **20 05 45.0 +0.2**
comp=Z,40nm,1.8s,mb5.2
PMRV *e*S **S** **20 14 22.0 +9.0**
PMRV *e*LR LR 20 25 56.2
comp=Z,2µm,18.0s
MEZF Maizieres J'vi 62.75 336 *e*P P **20 05 44.8 -0.7**
comp=Z,70nm,0.9s,mb5.5
MEZF Maizieres J'vi 62.75 336 *e*P P **20 05 44.8 -0.7**
comp=Z,70nm,0.9s,mb5.8
PCBR Castelo Branco 62.92 322 *e*P P **20 05 47.4 +0.6**
GKP Gorka Klasztor 63.03 346 *e*P P **20 05 47.5 +0.3**
GKP LMZ 20 34 10.7
comp=Z,1µm,22.8s
MOS Moscow 63.08 360 *e*P P **20 05 51.2 +3.7**
MOS *e* 20 08 11.8
MOS pmax pmax
comp=Z,89nm,1.4s,mb5.7
MTE Manteigas 63.31 323 *e*P P **20 05 50.2 +0.8**
MTE *e*LR LR 20 27 23.1
comp=Z,4µm,22.0s
LSA Lhasa 63.36 52 P P **20 05 50.8 +0.9**
LSA AP pP 20 05 59.4 +6.2
LSA XP sP 20 06 02.8 +8.4
LSA PP PP 20 08 15.0 +5.5
LSA S **S** **20 14 23.0 +0.3**
LSA SCS ScS 20 15 42.8 -0.8
LSA AMB AMB
comp=Z,20nm,2.0s,mb4.9
LSA AMB AMB
comp=Z,800nm,5.0s
LSA LR LR
comp=N,520nm,25.7s,MS4.8
LSA LR LR
comp=E,660nm,26.0s,MS4.8
LSA LR LR
comp=Z,1µm,28.7s,MS4.9
LSA Lhasa 63.36 52⇓*e*P P **20 05 50.6 +0.7**
LSA pmax pmax
comp=Z,67nm,1.5s,mb5.5
LSA MLR MLR
comp=Z,788nm,20.0s,MS4.9
LSA Lhasa 63.36 52⇓*e*P P **20 05 50.6 +0.7**
comp=Z,67nm,1.5s,mb5.5
LSA LR LR
comp=Z,788nm,20.0s,MS4.9
MVO Moncorvo 63.48 324 *e*P P **20 05 51.6 +1.1**
comp=Z,43nm,2.4s,mb5.2
MVO *e*LR LR 20 27 31.6
comp=Z,3µm,18.0s
PMAFR Mafra 63.51 320 *e*P P **20 05 52.5 +1.8**
PMAFR *e*S **S** **20 14 29.7 +5.5**
PMAFR *e*LR LR 20 28 31.4
comp=Z,3µm,18.0s
MFF Saint Martin d 63.55 332 *e*P P **20 05 51.7 +0.9**
comp=Z,111nm,1.2s,mb5.5
MFF Saint Martin d 63.55 332 *e*P P **20 05 51.7 +0.9**
MFF pmax pmax
comp=Z,55nm,1.2s,mb5.5
MFF Saint Martin d 63.55 332 *e*P P **20 05 51.7 +0.9**
comp=Z,55nm,1.2s,mb5.5
PVIS Viseu 63.71 323 *e*P P **20 05 53.4 +1.4**
GIVF Givet 64.12 337 *e*P P **20 05 55.3 +0.8**
BAIF Baives 64.33 337 *e*P P **20 05 57.2 +1.3**
comp=Z,92nm,1.5s,mb5.3
BAIF Baives 64.33 337 *e*P P **20 05 57.2 +1.3**
BAIF pmax pmax
comp=Z,46nm,1.5s,mb5.3
BAIF Baives 64.33 337 *e*P P **20 05 57.2 +1.3**
comp=Z,46nm,1.5s,mb5.3
PCAB Cabril 64.40 324 *e*P P **20 05 57.8 +1.2**
LDF La Druitiere 65.01 333 *e*P P **20 06 00.3 0.0**
comp=Z,54nm,1.1s,mb5.2
LDF La Druitiere 65.01 333 *e*P P **20 06 00.3 0.0**
LDF pmax pmax
comp=Z,27nm,1.1s,mb5.2
LDF La Druitiere 65.01 333 *e*P P **20 06 00.3 0.0**
comp=Z,27nm,1.1s,mb5.2
FLN La Foliniere 65.29 333 *e*P P **20 06 02.5 +0.3**
comp=Z,70nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,3µm,22.5s,MS5.2
FLN La Foliniere 65.29 333 *e*P P **20 06 02.5 +0.3**
FLN pmax pmax
comp=Z,35nm,1.1s,mb5.3
FLN MLR MLR
comp=Z,3µm,22.5s,MS5.5
FLN La Foliniere 65.29 333 *e*P P **20 06 02.5 +0.3**
comp=Z,35nm,1.1s,mb5.3
FLN LR LR
comp=Z,3µm,22.5s,MS5.5
CMAR Chiang Mai Arr 65.76 66 P P **20 06 06.3 +0.5**
comp=Z,22nm,0.9s,mb5.2,baz=257,slow=7.6,SNR=69
CMAR PP PP 20 08 31.3 +0.6
comp=Z,1.3nm,0.8s,baz=256,slow=7.8,SNR=2.6
CMAR LR LR 20 33 50.9
comp=Z,396nm,18.2s,MS4.7,baz=139,slow=35
CMAR Chiang Mai Arr 65.76 66 P P **20 06 06.4 +0.6**
CMAR 20 08 31.3
CHG Chiang Mai 65.87 66 ⇓P P **20 06 06.9 +0.4**
comp=Z,36nm,0.8s,mb5.5
CHTO Chiang Mai 65.87 66 ⇑P P **20 06 06.6 0.0**
SNR=8.2
CHTO Chiang Mai 65.87 66 *e*P P **20 06 07.0 +0.5**
CHTO pmax pmax
comp=Z,28nm,0.9s,mb5.3
CHTO Chiang Mai 65.87 66⇓*e*P P **20 06 06.7 +0.2**
comp=Z,28nm,0.9s,mb5.3
CHTO LR LR
comp=Z,544nm,20.0s,MS4.8
NST Nakhon Sawan 66.06 69 P P **20 06 02.0 -5.8**
ARU Arti 66.07 13 P P **20 06 06.7 -0.4**
comp=Z,197nm,2.0s,mb5.8,SNR=17
ARU Arti 66.07 13*d i* P P **20 06 06.1 -1.0**
ARU *e* 20 08 29.8
ARU *e*PPP 20 10 02.9
ARU *e*S S 20 14 50.1 -5.0
ARU *e*SS SS 20 19 06.0 -4.9
ARU pmax pmax
comp=Z,67nm,1.7s,mb5.4
ARU MLR MLR
comp=Z,1µm,17.0s,MS5.2
ARU Arti 66.07 13⇓*i* P P **20 06 05.9 -1.1**
comp=Z,48nm,1.1s,mb5.4
ROSF Rostrenen 66.27 331 *e*P P **20 06 08.9 +0.4**
comp=Z,221nm,1.4s,mb5.7
ROSF Rostrenen 66.27 331 *e*P P **20 06 08.9 +0.4**
ROSF pmax pmax
comp=Z,110nm,1.4s,mb5.7
ROSF Rostrenen 66.27 331 *e*P P **20 06 08.9 +0.4**
comp=Z,110nm,1.4s,mb5.7
VOSK Vostochnaya 66.43 21 P P **20 06 08.6 -0.8**
VOSK pmax pmax
comp=Z,32nm,1.5s,mb5.1
BRVK Borovoye 66.45 21 P P **20 06 09.6 0.0**
comp=Z,58nm,1.2s,mb5.5,SNR=9.5
BRVK Borovoye 66.45 21 ⇑P P **20 06 08.9 -0.7**
SNR=12
BRVK Borovoye 66.45 21 *e*P P **20 06 08.9 -0.7**
BRVK pmax pmax
comp=Z,58nm,1.4s,mb5.4
BRVK Borovoye 66.45 21⇓*i*P P **20 06 08.8 -0.7**
comp=Z,38nm,1.4s,mb5.2
BRVK *e*PP PP 20 08 35.5 -0.6
BRVK LR LR
comp=Z,761nm,20.0s,MS4.9
BVA0 Borovoye Array 66.46 21 *i* P P **20 06 08.5 -1.1**
BVAR Borovoye Array 66.46 21 P P **20 06 09.1 -0.6**
comp=Z,4.9nm,0.8s,mb4.6,baz=214,slow=5.7,SNR=32
BVAR PcP PcP 20 06 39.8 +0.6
comp=Z,3.4nm,0.7s,baz=204,slow=3.3,SNR=5.0
BVAR PP PP 20 08 37.0 +0.8
comp=Z,2.4nm,1.0s,baz=145,slow=5.4,SNR=3.3
SVE Sverdlovsk 66.90 14⇑*e*P P **20 06 11.5 -0.8**
SVE *e*S S 20 14 54.1 -11
SVE pmax pmax
comp=Z,42nm,1.5s,mb5.2
SVE MLR MLR
comp=Z,1µm,17.0s,MS5.3
MK31 Makanchi Array 67.08 32 *e*P P **20 06 13.7 0.0**
MK31 Makanchi Array 67.08 32⇓*i*P P **20 06 13.4 -0.4**
MK31 *e*PP PP 20 08 41.8 +0.1
MKAR Makanchi Array 67.08 32 P P **20 06 13.5 -0.2**
comp=Z,41nm,0.7s,mb5.5,baz=226,slow=6.1,SNR=238
MKAR LR LR 20 39 08.7
comp=Z,962nm,18.2s,MS5.0,baz=251,slow=39
MKAR Makanchi Array 67.08 32 P P **20 06 13.5 -0.2**
MKAR LR LR 20 39 08.7
KURK Kurchatov 67.99 27 P P **20 06 19.7 +0.3**
comp=Z,118nm,1.6s,mb5.7,SNR=20
KURK Kurchatov 67.99 27 ⇑P P **20 06 19.4 0.0**
SNR=19
KURK Kurchatov 67.99 27 P P **20 06 18.4 -1.0**
comp=Z,12nm,1.1s,mb4.8,baz=226,slow=7.1,SNR=23
KURK PP PP 20 08 51.4 +1.8
comp=Z,4.0nm,1.1s,baz=227,slow=5.6,SNR=3.7
KURK Kurchatov 67.99 27 *e*P P **20 06 19.1 -0.3**
KURK pmax pmax
comp=Z,280nm,2.5s,mb5.8
KURK Kurchatov 67.99 27⇓*e*P P **20 06 18.8 -0.6**
comp=Z,284nm,2.5s,mb5.8
KURK *e*PP PP 20 08 49.4 -0.1
KURK LR LR
comp=Z,766nm,21.0s,MS4.9
KLMR Klimovskoe 68.23 1 *e*P P **20 06 19.0 -1.7**
KLMR pmax pmax
comp=Z,63nm,1.5s,mb5.4
WMQ Urumqi 68.26 37⇓*i*P P **20 06 21.5 +0.2**
WMQ PCP PcP 20 06 46.9 0.0
WMQ PP PP 20 08 53.9 +1.8
WMQ PPP 20 10 30.2
WMQ S S 20 15 20.3 -1.7
WMQ PS 20 15 45.9
WMQ SCS ScS 20 16 15.1 -5.7
WMQ SS SS 20 19 44.8 -0.6
WMQ AMB AMB
comp=Z,29nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,918nm,5.2s
WMQ LR LR
comp=N,711nm,22.0s
WMQ LR LR
comp=E,307nm,13.0s
WMQ LR LR
comp=Z,444nm,25.0s,MS4.6
SOKR Solikamsk 68.65 10*d i*P P **20 06 24.2 +0.9**
SOKR pmax pmax
comp=Z,60nm,1.6s,mb5.3
SOKR MLR MLR
comp=Z,1µm,19.0s,MS5.2
SNAA Sanae 68.73 193 *e*P P **20 06 25.8 +2.1**
SNAA pmax pmax
comp=Z,9.0nm,0.9s
SNAA Sanae 68.73 193 *e*P P **20 06 25.8 +2.0**
comp=Z,8.6nm,0.9s,mb4.7
VNA2 Neumayer--Watz 69.27 194 *e*P P **20 06 29.5 +2.4**
baz=26,slow=6.1
VNA2 *e* pP 20 06 33.4 +3.0
VNA1 Neumayer--Stat 69.31 195 *e*P P **20 06 30.0 +2.7**
VNA1 *e* pP 20 06 33.5 +2.9
KAF Kangasniemi 70.03 354 *e*p P **20 06 30.4 -1.4**
comp=Z,20nm,0.8s,mb5.1,baz=166,slow=6.0
KAF Kangasniemi 70.03 354 *e*P P **20 06 30.4 -1.4**
KAF pmax pmax
comp=Z,20nm,0.8s,mb5.1
VNA3 Neumayer Olymp 70.04 195 *e*P P **20 06 33.9 +2.0**
VNA3 *e* pP 20 06 37.3 +2.2
JOF Joensuu 70.45 357 *e*p P **20 06 32.7 -1.7**
comp=Z,9.0nm,0.7s,mb4.8
JOF Joensuu 70.45 357 *e*P P **20 06 32.7 -1.7**
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KONO Kongsberg 70.63 345 *e*P P **20 06 33.9 -1.7**
KONO Kongsberg 70.63 345 *e*P P **20 06 33.0 -2.6**
KMI Kunming 71.15 60 P P **20 06 39.7 +0.2**
KMI AP pP 20 06 43.3 +0.5
KMI XP sP 20 06 44.5 +0.5
KMI PP PP 20 09 21.9 +4.5
KMI S S 20 16 00.5 +3.7
KMI XS sS 20 16 06.2 +4.0
KMI PS 20 16 32.1
KMI SKS 20 16 39.3
KMI SSS 20 23 48.4
KMI AMB AMB
comp=Z,21nm,1.9s,mb4.7
KMI AMB AMB
comp=Z,923nm,5.5s
KMI LR LR
comp=N,654nm,19.8s,MS5.0
KMI LR LR
comp=E,422nm,20.2s,MS5.0
KMI LR LR
comp=Z,554nm,28.8s
KMI Kunming 71.15 60 P P **20 06 39.7 +0.2**
comp=Z,21nm,1.9s,mb4.7
KMI pP pP 20 06 43.3 +0.5
KMI sP sP 20 06 44.5 +0.5
KMI PP PP 20 09 21.9 +4.5
KMI S S 20 16 00.5 +3.7
KMI sS sS 20 16 06.2 +4.0
KMI PS 20 16 32.1
KMI SKS 20 16 39.3
KMI SS SS 20 20 39.7 +9.0
KMI SSS 20 23 48.4
KMI LR LR
comp=Z,550nm,28.8s,MS4.7
NAO01 NORSAR Array S 71.37 347 *e*P P **20 06 39.3 -0.8**
comp=Z,17nm,0.8s,mb5.0
NOA NORSAR Array B 71.47 347 P P **20 06 40.3 -0.3**
comp=Z,9.5nm,0.8s,mb4.8,baz=151,slow=5.7,SNR=28
NOA LR LR 20 41 22.7
comp=Z,348nm,19.5s,MS4.6,baz=195,slow=39
NVS Novosibirsk 72.87 26⇓*i*P P **20 06 47.9 -1.3**
NVS *e* 20 09 29.2
NVS *e* 20 17 01.4
NVS pmax pmax
comp=N,55nm,1.7s
NVS pmax pmax
comp=Z,72nm,1.7s,mb5.3

NVS pmax pmax
comp=E,35nm,2.0s
RCBR Riachuelo 72.98 266⇓ *e*P **P 20 06 51.4 +0.7**
comp=E,11nm,0.8s,mb4.8
RCBR LR LR
comp=Z,2μm,19.0s,MS5.3
ZALV Zalesovo Beam 72.98 27 P **P 20 06 48.9 -1.0**
comp=Z,7.8nm,0.8s,mb4.7,baz=238,slow=5.1,SNR=29
ZALV PP PP 20 09 30.1 -2.4
comp=Z,0.4nm,0.4s,baz=63,slow=29,SNR=2.6
ZALV LR LR 20 41 19.4
comp=Z,456nm,18.9s,MS4.8,baz=97,slow=38
ZALV Zalesovo Beam 72.98 27 P **P 20 06 48.9 -0.9**
ZALV 20 09 30.1
ZALV Zalesovo Beam 72.98 27 P **P 20 06 48.9 -1.0**
ZALV PP PP 20 09 30.1 -2.4
ZALV LR LR 20 41 19.4
CD2 Chengdu 73.86 55 P **P 20 06 56.5 +1.0**
CD2 AP pP 20 07 01.5 +2.7
CD2 XP sP 20 07 03.8 +3.8
CD2 PCP PcP 20 07 12.4 +1.4
CD2 PP PP 20 09 43.7 +3.2
CD2 S S 20 16 27.5 0.0
CD2 XS sS 20 16 35.3 +2.4
CD2 SKS 20 16 58.8
CD2 SS SS 20 21 14.3 +2.4
CD2 AMB AMB
comp=Z,40nm,0.5s,mb5.6
CD2 AMB AMB
comp=Z,730nm,5.6s
CD2 LR LR
comp=N,500nm,20.4s
CD2 LR LR
comp=Z,390nm,25.2s,MS4.6
GTA Gaotai 74.00 45 P **P 20 06 56.8 +0.7**
GTA AP pP 20 07 01.1 +1.7
GTA XP sP 20 07 04.3 +3.7
GTA S S 20 16 28.7 0.0
GTA XS sS 20 16 35.2 +1.0
GTA SS SS 20 21 14.4 +0.7
GTA AMB AMB
comp=Z,18nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,669nm,6.3s
GTA LR LR
comp=N,375nm,17.2s,MS4.9
GTA LR LR
comp=E,362nm,18.1s,MS4.9
GTA LR LR
comp=Z,450nm,18.4s,MS4.8
GYA Guiyang 74.93 60⇓ *i*P **P 20 07 02.7 +0.9**
GYA PCP PcP 20 07 17.9 +2.2
GYA PP PP 20 09 53.0 +3.3
GYA PPP 20 11 39.2
GYA S S 20 16 40.4 +0.7
GYA SKS 20 17 07.5
GYA SSS 20 24 44.3
GYA AMB AMB
comp=Z,50nm,0.7s,mb5.5
GYA AMB AMB
comp=Z,800nm,6.1s
GYA LR LR
comp=N,2μm,20.0s,MS5.4
GYA LR LR
comp=E,1μm,21.0s,MS5.4
GYA LR LR
comp=Z,2μm,19.8s,MS5.4
APA Apatity 75.02 358 *e*P **P 20 07 02.0 +0.6**
APA *e*SS SS 20 21 26.0 -2.0
APA pmax pmax
comp=Z,29nm,1.0s,mb5.2
APA MLR MLR
comp=Z,1μm,17.0s,MS5.3
LVZ Lovozero 75.31 359 *e*P **P 20 07 02.9 -0.3**
LZH Lanzhou 75.69 50 ⇑P **P 20 07 06.5 +0.5**
LZH AP pP 20 07 10.6 +1.3
LZH XP sP 20 07 12.4 +1.9
LZH PP PP 20 09 56.0 +0.1
LZH S S 20 16 45.0 -2.8
LZH XS sS 20 16 55.0 +1.8
LZH *e*SS SS 20 21 40.0 +0.4
LZH AMB AMB
comp=Z,34nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,108nm,4.2s
LZH LR LR
comp=N,818nm,16.7s
LZH LR LR
comp=Z,972nm,18.2s,MS5.2
LZH Lanzhou 75.69 50 ⇑P **P 20 07 06.5 +0.5**
comp=Z,34nm,1.2s,mb5.2
LZH pP pP 20 07 10.6 +1.3
LZH sP sP 20 07 12.4 +1.9
LZH PP PP 20 09 56.0 +0.1
LZH S S 20 16 45.0 -2.8
LZH sS sS 20 16 55.0 +1.8
LZH *e*SS SS 20 21 40.0 +0.4
LZH LR LR
comp=Z,970nm,18.2s,MS5.2
HVS Khovu-Aksy 75.70 33*c* *i*P **P 20 07 06.4 +0.7**
HVS pmax pmax
comp=Z,101nm,0.7s,mb5.9
QIZ Qiongzhong 75.87 68 P **P 20 07 06.7 -0.7**
QIZ PP PP 20 09 57.9 +0.1
QIZ S S 20 16 50.2 -0.1
QIZ XS sS 20 16 56.6 +0.8
QIZ SS SS 20 21 44.0 +1.1
QIZ AMB AMB
comp=Z,21nm,1.0s,mb5.0
QIZ AMB AMB
comp=Z,442nm,7.5s
QIZ LR LR
comp=E,966nm,21.5s
QIZ LR LR
comp=Z,1μm,22.7s,MS5.1
CASY Casey 76.25 157 PFAKE 20 07 20.0 +11
CASY LR LR
comp=Z,2μm,19.0s,MS5.4
MUN Mundaring 76.36 121 *e*P **P 20 07 11.3 +1.3**
NWAO Narrogin (SRO) 77.21 122 P **P 20 07 16.8 +2.0**
comp=Z,40nm,1.0s,mb5.3,baz=284,slow=5.1,SNR=8.4
NWAO Narrogin (SRO) 77.21 122 *e*P **P 20 07 15.4 +0.6**
NWAO pmax pmax
comp=Z,630nm,2.7s
NWAO MLR MLR
comp=Z,2μm,22.0s
NWAO Narrogin (SRO) 77.21 122 *e*P **P 20 07 15.3 +0.5**
comp=Z,630nm,2.7s,mb6.1
NWAO LR LR
comp=Z,2μm,22.0s,MS5.4
ARCES ARCESS Array B 77.39 356 P **P 20 07 14.3 -0.6**
comp=Z,10nm,0.7s,mb4.8,baz=170,slow=5.6,SNR=30
ARCES LR LR 20 42 55.2
comp=Z,794nm,18.4s,MS5.1,baz=169,slow=37
ARCES ARCESS Array B 77.39 356 P **P 20 07 14.3 -0.6**
ARCES LR LR 20 42 55.2
KLBR Kellerberrin 77.68 121 *e*P **P 20 07 18.9 +1.5**
comp=Z,61nm,1.5s,mb5.3
KRAR Krasnoyarsk 77.93 28*d* *i*P **P 20 07 19.3 +1.1**
KRAR pmax pmax
comp=Z,90nm,1.7s,mb5.4
XAN Xi'an 78.98 53 P **P 20 07 24.8 +0.3**
XAN AP pP 20 07 29.5 +1.7
XAN PP PP 20 10 26.1 +2.5
XAN PPP 20 12 15.9
XAN S S 20 17 23.2 -0.4
XAN XS sS 20 17 30.8 +1.8
XAN SKS 20 17 35.2
XAN SS SS 20 22 32.1 +2.8
XAN AMB AMB
comp=Z,24nm,1.5s,mb4.9
XAN AMB AMB
comp=Z,529nm,5.1s
XAN LR LR
comp=N,140nm,19.3s,MS4.6
XAN LR LR
comp=E,222nm,21.9s,MS4.6
XAN LR LR
comp=Z,367nm,22.7s,MS4.7
KKM Kota Kinabalu 79.54 82 PFAKE 20 07 40.0 +12
KKM LR LR
comp=Z,1μm,21.0s,MS5.2
MOY Mondy 79.95 34 *e*P **P 20 07 29.8 +0.4**
MBWA Marble Bar 79.97 110 *e*P **P 20 07 29.9 -0.4**
comp=Z,16nm,0.9s,mb5.0
MBWA LR LR
comp=Z,1μm,20.0s,MS5.2
ZAK Zakamensk 80.72 36 *e*P **P 20 07 34.2 +0.6**
ZAK pmax pmax
comp=Z,15nm,1.3s,mb4.8
TLY Talaya 81.46 35 P **P 20 07 39.0 +1.5**
comp=Z,77nm,1.7s,mb5.4,SNR=7.1
TLY Talaya 81.46 35 *e*P **P 20 07 39.5 +2.0**
TLY *e*S S 20 17 49.0 +0.1
TLY *e* 20 18 41.5
TLY pmax pmax
comp=Z,35nm,1.6s,mb5.0
TLY MLR MLR
comp=Z,538nm,15.0s,MS5.0
TLY Talaya 81.46 35 *e*P **P 20 07 36.3 -1.1**
comp=Z,74nm,1.8s,mb5.3
KAPI Kappang 81.56 94 P **P 20 07 38.8 -0.1**
comp=Z,12nm,0.9s,mb4.8,baz=233,slow=7.7,SNR=5.6
KAPI Kappang 81.56 94⇓ *e*P **P 20 07 37.1 -1.8**
comp=Z,23nm,1.1s,mb5.0
SONM Songino Array 81.65 39 P **P 20 07 40.0 +1.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=238,slow=3.9,SNR=27
BTO Baotou 81.75 47 *e*P **P 20 07 39.2 -0.1**
IRK Irkutsk 82.04 35 *e*P **P 20 07 40.1 -0.4**
IRK pmax pmax
comp=Z,104nm,3.3s
QSPA South Pole Qui 82.50 180⇓ *e*P **P 20 07 43.8 +1.3**
comp=Z,391nm,2.7s,mb6.0
WHN Wuhan 82.51 58 P **P 20 07 44.4 +0.9**
WHN XP sP 20 07 57.4 +9.4
WHN S S 20 18 05.1 +4.4
WHN AMB AMB
comp=Z,97nm,1.5s,mb5.6
WHN AMB AMB
comp=Z,2μm,5.0s
WHN LR LR
comp=Z,853nm,16.4s,MS5.2
HHC Hu-ho-hao-te 82.94 47 *e*P **P 20 07 47.3 +1.8**
HHC AP pP 20 07 52.3 +3.5
HHC XP sP 20 07 55.6 +5.6
HHC PP PP 20 11 01.7 +5.5
HHC SKS 20 18 03.0
HHC S S 20 18 07.5 +2.9
HHC SS SS 20 23 30.4 +2.2
HHC AMB AMB
comp=Z,52nm,1.2s,mb5.4
HHC AMB AMB
comp=Z,2μm,4.5s
HHC LR LR
comp=N,143nm,14.3s,MS5.0
HHC LR LR
comp=E,444nm,14.3s,MS5.0
HHC LR LR
comp=Z,381nm,21.4s
BDFB Brasilia 83.83 255 P **P 20 07 52.1 +1.5**
comp=Z,3.2nm,0.7s,mb4.5,baz=91,slow=15,SNR=9.4
BDFB LR LR 20 42 57.3
comp=Z,460nm,18.1s,MS4.9,baz=43,slow=34
BATI Baumata 84.80 100 P **P 20 07 58.0 +2.3**
comp=Z,18nm,0.6s,mb5.3,baz=257,slow=7.0,SNR=8.0
QZH Quanzhou 85.03 64 *i*P **P 20 07 58.0 +1.4**
QZH S S 20 18 25.3 -1.0
QZH AMB AMB
comp=Z,3μm,4.5s
QZH LR LR
comp=Z,840nm,23.7s,MS5.0
FTZ Fitzroy Crossi 85.80 108 *e*P **P 20 08 01.1 +0.6**
comp=Z,16nm,0.8s,mb5.3
BJI Beijing 86.14 49 P **P 20 08 02.9 +1.2**
BJI PP PP 20 11 21.2 -1.1
BJI S S 20 18 38.9 +2.3
BJI SS SS 20 24 18.1 +2.7
BJI AMB AMB
comp=Z,20nm,2.8s,mb4.8
BJI AMB AMB
comp=Z,860nm,4.7s
BJI LR LR
comp=N,385nm,23.9s,MS4.8
BJI LR LR
comp=E,328nm,24.7s,MS4.8
BJI LR LR
comp=Z,273nm,27.9s,MS4.5
BJI Beijing 86.14 49 P **P 20 08 02.9 +1.2**
comp=Z,20nm,2.8s,mb4.8
BJI PP PP 20 11 21.2 -1.1
BJI S S 20 18 38.9 +2.3
BJI SS SS 20 24 18.1 +2.7
BJI LR LR
comp=Z,270nm,27.9s,MS4.5
NJ2 Nanjing 86.60 57 *e*P **P 20 08 04.1 -0.1**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.5
CIT Chita 87.36 37 *e*P **P 20 08 08.0 +0.6**
DRV Dumont d'Urvil 87.97 157 PP PP 20 11 37.0 +0.9
DRV S S 20 18 52.0 -1.3
DRV SS SS 20 24 45.0 +4.6
DRV L 20 32 00.0
DRV R 20 38 00.0
SSE Sheshan 88.38 59 P **P 20 08 12.5 -0.3**
SSE XP sP 20 08 17.2 -0.1
SSE PP PP 20 11 40.2 -0.4
SSE S S 20 18 58.6 0.0
SSE XS sS 20 19 04.5 +0.4
SSE AMB AMB
comp=Z,66nm,0.6s,mb6.0
SSE AMB AMB
comp=Z,433nm,5.7s
SSE LR LR
comp=N,242nm,21.4s,MS4.8
SSE LR LR
comp=E,258nm,21.4s,MS4.8
SSE LR LR
comp=Z,329nm,18.5s,MS4.8
SSE Sheshan 88.38 59 P **P 20 08 12.5 -0.3**
comp=Z,66nm,0.6s,mb6.0
SSE sP sP 20 08 17.2 -0.1
SSE PP PP 20 11 40.2 -0.4
SSE S S 20 18 58.6 0.0
SSE sS sS 20 19 04.5 +0.4
SSE LR LR
comp=Z,330nm,18.5s,MS4.8
DAV Davao City (W) 88.89 83 PFAKE 20 08 30.0 +14
DAV LR LR
comp=Z,508nm,20.0s,MS4.9
BOD Bodaibo 89.17 31 *e*P **P 20 08 14.4 -1.5**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
VNDA Vanda 89.63 170 P **P 20 08 18.8 +1.0**
comp=Z,2.1nm,0.7s,mb4.6,baz=243,slow=3.9,SNR=6.8
VNDA LR LR 20 44 39.8
comp=Z,1μm,21.9s,MS5.3,baz=236,slow=33
VNDA Vanda 89.63 170 *e*P **P 20 08 18.5 +0.7**
comp=Z,15nm,1.4s,mb5.1
DL2 Dalian 90.05 51 P **P 20 08 19.0 -1.5**
DL2 S S 20 19 12.1 -1.8
DL2 AMB AMB
comp=Z,140nm,5.8s
DL2 LR LR
comp=N,180nm,17.3s
DL2 LR LR
comp=Z,190nm,14.2s,MS4.7
SBA Scott Base 90.26 171 PFAKE 20 08 30.0 +9.3
SBA LR LR
comp=Z,1μm,20.0s,MS5.3
HIA Hailar 90.56 40 *e*P **P 20 08 22.1 -0.4**
HIA pmax pmax
comp=Z,25nm,1.3s
HIA Hailar 90.56 40 *e*P **P 20 08 22.1 -0.4**
comp=Z,25nm,1.3s,mb5.4
CPUP Villa Florida 91.10 243 P **P 20 08 26.0 +0.3**
comp=Z,4.1nm,0.8s,mb4.8,baz=71,slow=5.2,SNR=7.7
CPUP LR LR 20 46 20.9
comp=Z,1μm,19.2s,MS5.4,baz=86,slow=34
CPUP Villa Florida 91.10 243 *e*P **P 20 08 25.8 +0.1**
CPUP pmax pmax
comp=Z,33nm,1.1s
CPUP MLR MLR
comp=Z,234nm,20.0s
CPUP Villa Florida 91.10 243 *e*P **P 20 08 25.8 +0.1**
comp=Z,33nm,1.1s,mb5.6
CPUP LR LR
comp=Z,234nm,20.0s,MS4.6
SNY Shenyang 91.98 48 P **P 20 08 26.2 -3.1**
SNY PP PP 20 12 09.0 0.0
SNY AMB AMB
comp=Z,489nm,6.0s
SNY LR LR
comp=N,342nm,16.8s,MS5.0
SNY LR LR
comp=E,271nm,13.5s,MS5.0
SNY LR LR
comp=Z,339nm,16.8s,MS4.9
ASAR Alice Springs 92.70 114 P **P 20 08 33.3 +0.2**
comp=Z,6.5nm,0.9s,mb5.0,baz=261,slow=4.5,SNR=21
ASAR PKKP PKKPbc 20 25 47.6 +2.5
comp=Z,0.4nm,0.8s,baz=117,slow=1.7,SNR=4.1
CN2 Changchun 93.61 46 *e*P **P 20 08 38.0 +1.2**
CN2 *e*XP sP 20 08 45.0 +3.7
CN2 *e*S S 20 19 44.1 -1.7
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.4
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,360nm,20.0s,MS4.9
CN2 LR LR
comp=E,250nm,20.0s,MS4.9
CN2 LR LR
comp=Z,340nm,22.0s,MS4.8
WRAB Tennant Creek 93.71 111 PFAKE 20 08 50.0 +12
WRAB LR LR
comp=Z,2μm,22.0s,MS5.6
KSRS Korea Array 94.78 53 P **P 20 08 42.6 +0.3**
comp=Z,1.8nm,0.8s,mb4.6,baz=275,slow=5.7,SNR=5.4
KSRS LR LR 20 54 26.0
comp=Z,323nm,19.1s,MS4.8,baz=59,slow=37
SFJD Kangerlussuaq 96.23 337 PFAKE 20 09 00.0 +12
SFJD LR LR
comp=Z,2μm,21.0s,MS5.5
MDJ Mudanjiang 96.65 46 P **P 20 08 50.3 -0.4**
MDJ AP pP 20 08 53.8 -0.3
MDJ XP sP 20 08 56.0 +0.8
MDJ PP PP 20 12 46.4 +1.1
MDJ S S 20 20 13.0 +0.8
MDJ AMB AMB
comp=Z,7.0nm,2.1s,mb4.7
MDJ AMB AMB
comp=Z,140nm,3.9s
MDJ LR LR
comp=N,293nm,22.5s,MS4.9
MDJ LR LR
comp=E,265nm,18.9s,MS4.9
MDJ LR LR
comp=Z,219nm,27.2s
TIXI Tiksi 97.52 19⇓ *i*P **P 20 08 53.3 -0.7**
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
TIXI Tiksi 97.52 19⇑ *i*P **P 20 08 53.5 -0.6**
comp=Z,18nm,0.5s,mb5.8
YAK Yakutsk 97.59 28 *e*P **P 20 08 54.1 -0.4**
STKA Stephens Creek 97.74 124 P **P 20 08 58.7 +2.7**
comp=Z,4.8nm,1.1s,mb5.0,baz=321,slow=10,SNR=3.9
STKA LR LR 20 46 31.9
comp=Z,1μm,20.5s,MS5.3,baz=242,slow=31
STKA Stephens Creek 97.74 124 *e*P **P 20 08 58.3 +2.3**
comp=Z,1.9nm,1.4s,mb4.4
KLR Kul'dur 98.37 41 *e*P **P 20 08 54.5 -3.8**
KLR *e* 20 08 54.7
KLR *e* 20 12 52.5
KLR MLR MLR
comp=N,1μm,16.0s,MS5.6
KLR MLR MLR
comp=E,700nm,16.0s,MS5.6
KLR MLR MLR
comp=Z,800nm,14.0s,MS5.4
PLCA Paso Flores 98.63 227 LR LR 20 52 46.3
comp=Z,977nm,18.7s,MS5.3,baz=107,slow=35
PLCA Paso Flores 98.63 227 PFAKE 20 09 10.0 +10
PLCA LR LR
comp=Z,1μm,20.0s,MS5.3
HABR Khabarovsk 100.54 42*c* *e*P Pdif 20 09 04.7 -3.2
HABR *e* PP 20 13 11.1 -3.8
HABR *e*PPP 20 15 18.6
HABR *e*S SKSac 20 19 40.6 -6.6
HABR *e*S Sdif 20 20 37.6 -7.1
HABR *e*PS PS 20 22 12.6 -3.1
HABR *e*SS SS 20 27 34.6 -6.4
HABR *e*SSS 20 31 25.7
LVC Limon Verde 102.17 245 PFAKE 20 09 30.0 +15
LVC LR LR
comp=Z,999nm,21.0s,MS5.3
MAJO Matsushiro 102.95 54 PFAKE 20 09 30.0 +11
MAJO LR LR
comp=Z,364nm,19.0s,MS4.9
CTAO Charters Tower 104.64 113 PFAKE 20 09 40.0 +14
CTAO LR LR
comp=Z,1μm,21.0s,MS5.4
SJG San Juan 105.37 287 PFAKE 20 13 50.0 +5.8
SJG LR LR
comp=Z,2μm,21.0s,MS5.6
SDV Santo Domingo 109.10 277 PFAKE 20 14 00.0 +8.7
SDV LR LR
comp=Z,313nm,21.0s,MS4.9
NNA Nana 112.02 254 PFAKE 20 14 10.0 +13
NNA LR LR
comp=Z,825nm,21.0s,MS5.3
OTAV Otavalo 115.88 267 *e*PKPdf PKPdf 20 14 05.3 +1.1
OTAV LR LR
comp=Z,648nm,20.0s,MS5.2
YKA Yellowknife Ar 121.55 345 PKP PKPdf 20 14 12.9 -0.8
comp=Z,1.6nm,0.8s,baz=30,slow=1.8,SNR=7.4
YKA PP PP 20 15 45.8 +0.7
comp=Z,1.1nm,0.8s,baz=23,slow=6.5,SNR=7.2
YKA PKKPbc PKKPbc 20 24 17.9 +2.1
comp=Z,0.2nm,0.4s,baz=212,slow=3.2,SNR=5.7
YKA Yellowknife Ar 121.55 345 PKIKP PKPdf 20 14 12.9 -0.8
YKA 20 15 45.9
YKA Yellowknife Ar 121.55 345 PKP PKPdf 20 14 12.9 -0.8
YKA PP PP 20 15 45.9 +0.7
YKA PKKPbc PKKPbc 20 24 17.9 +2.1
OLIL Olney 122.30 311 *e*PKPdf PKPdf 20 14 15.5 -0.4
JFWS Jewell Farm 122.41 317 *e*PKIKP PKPdf 20 14 14.9 -1.1
ULM Lac du Bonnet 122.58 326 PKP PKPdf 20 14 15.9 -0.2
comp=Z,3.7nm,0.8s,baz=116,slow=5.1,SNR=3.4
COLA College 122.66 3 *i* PKIKP PKPdf 20 14 15.6 -0.2
COLA College 122.66 3 PFAKE 20 14 30.0 +14
COLA LR LR
comp=Z,501nm,20.0s,MS5.2
EGAK Eagle 122.89 359 *e*PKPdf PKPdf 20 14 16.1 -0.1
DAWY Dawson 123.57 358 *e*PKPdf PKPdf 20 14 18.1 +0.5
AGMN Agassiz Refuge 123.58 324 *e*PKPdf PKPdf 20 14 17.7 -0.4
KTH Kantishna Hill 123.78 5 *e*PKPdf PKPdf 20 14 17.8 -0.1
FVM French Village 124.28 311 *e*PKIKP PKPdf 20 14 19.8 +0.1
CCM Cathedral Cave 124.86 312 *e*PKIKP PKPdf 20 14 20.8 0.0
TGUH Tegucigalpa,Un 125.60 282 *e*PKPdf PKPdf 20 14 25.0 +2.2
ECSD EROS,Sioux Fal 126.27 320 PKPdf PKPdf 20 14 22.8 -0.6
HYT Haines Junctio 126.74 357 *e*PKPdf PKPdf 20 14 25.4 +1.7
MIAR Mount Ida 127.81 308 *e*PKIKP PKPdf 20 14 29.2 +2.6
DGMT Dagmar 128.05 329 *e*PKPdf PKPdf 20 14 27.4 +0.8
DGMT *e* 20 14 35.4
KSU1 Kansas State U 128.35 315 *e*PKPdf PKPdf 20 14 28.6 +1.2
EDM Edmonton 128.75 338 PKHKP 20 14 07.1
RSSD Black Hills 130.61 324 *e*PKPdf PKPdf 20 14 30.8 -0.8
RSSD *e*SKP 20 18 01.1
EGMT Eagleton 131.12 331 *e*PKPdf PKPdf 20 14 33.6 +1.2
WMOK Wichita Mounta 131.73 310 *e*PKPdf PKPdf 20 14 34.9 +0.9
WMOK *e*SKP 20 18 01.3
RLMT Red Lodge 132.88 328 *e*PKPdf PKPdf 20 14 37.9 +2.1
HRY Holter Researc 133.04 331 *e*PP PP 20 17 11.2 +10
SLMT Seeley Lake 133.42 333 *e*PKPdf PKPdf 20 14 37.8 +1.0
SWMT Swartz Lake 133.44 334 *e*PKPdf PKPdf 20 14 38.6 +1.8
BSMT Bassoo Peak 133.52 335 *e*PP PP 20 17 10.0 +5.7
CHMT Chamberlain Mo 133.56 333 *e*PKPdf PKPdf 20 14 38.3 +1.2
BOZ Bozeman (W) 133.71 330 *e*PKIKP PKPdf 20 14 39.2 +1.8
MSO Missoula 133.93 333 *e*PKPdf PKPdf 20 14 39.7 +1.9
MSO LR LR
comp=Z,651nm,19.0s,MS5.4
LRM Limekiln Ridge 133.99 331 *e*PKPdf PKPdf 20 14 42.9 +5.0
ISCO Idaho Springs 134.06 320 *e*PKIKP PKPdf 20 14 36.8 -1.5
JCT Junction City 134.14 306 *e*PKIKP PKPdf 20 14 37.5 -1.2
NEW Newport 134.15 337 PFAKE 20 14 50.0 +12
NEW LR LR
comp=Z,812nm,19.0s,MS5.5
QLMT Earthquake Lak 134.19 329 *e*PKPdf PKPdf 20 14 41.5 +3.2
DLMT Dillon 134.39 331 *e*PKPdf PKPdf 20 14 41.4 +2.7
IMW Indian Meadow 134.59 328 *e*PKPdf PKPdf 20 14 39.4 +0.3
BW06 Boulder Array 134.60 326 *e*PKPdf PKPdf 20 14 40.8 +1.6
PDAR Pinedale Array 134.60 326 PKhKP 20 14 30.6
comp=Z,0.4nm,0.6s,baz=132,slow=2.2,SNR=4.3
PDAR PKP PKPdf 20 14 39.6 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.2nm,0.9s,baz=69,slow=4.9,SNR=6.7						
TPAW	**Teton Pass**	**134.87**	**328**	*e*PKPdf	PKPdf	20 14 42.1	+2.5
REDW	**Red Top Meadow**	**134.91**	**327**	*e*PKPdf	PKPdf	20 14 40.9	+1.2
SDCO	**Great Sand Dun**	**135.12**	**318**	PFAKE		20 14 50.0	+10
SDCO				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
RRI2	**Red Ridge**	**135.17**	**328**	*e*PKPdf	PKPdf	20 14 39.7	-0.5
SMCO	**Snowmass**	**135.28**	**320**	*e*PKPpre		20 14 34.2	
AHID	**Auburn Hatcher**	**135.45**	**327**	PFAKE		20 14 50.0	+9.2
AHID				LR	LR		
	comp=Z,983nm,20.0s,MS5.5						
HLID	**Hailey**	**136.59**	**330**	PFAKE		20 14 50.0	+7.1
HLID				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
BMO	**Blue Mountains**	**136.95**	**334**	*e*PKHKP		20 14 40.2	
BMO	**Blue Mountains**	**136.95**	**334**	*e*PKPpre		20 14 32.9	
BMO				LR	LR		
	comp=Z,842nm,19.0s,MS5.5						
PV04	**Paradox Valley**	**136.96**	**321**	*e*PKPdf	PKPdf	20 14 45.3	+1.6
ANMO	**Albuquerque**	**137.25**	**315**	*i* PKIKP	PKPdf	20 14 46.4	+2.0
ANMO	**Albuquerque**	**137.25**	**315**	*e*PKPdf	PKPdf	20 14 46.9	+2.5
MVCO	**Mesa Verde**	**137.39**	**319**	PFAKE		20 14 50.0	+5.4
MVCO				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
SRU	**San Rafael**	**137.52**	**323**	*e*PKIKP	PKPdf	20 14 48.6	+3.9
TXAR	**Lajitas Array**	**137.68**	**306**	PKhKP		20 14 35.4	
	comp=Z,1.7nm,0.8s,baz=98,slow=3.8,SNR=15						
TXAR				PKP	PKPdf	20 14 46.8	+1.5
	comp=Z,2.3nm,0.8s,baz=120,slow=3.7,SNR=9.4						
MSU	**Marysvale**	**138.89**	**323**	*e*PKIKP	PKPdf	20 14 41.7	-5.6
WVOR	**Wild Horse Val**	**139.46**	**333**	PFAKE		20 15 00.0	+12
WVOR				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
COR	**Corvallis**	**139.56**	**339**	PFAKE		20 15 00.0	+12
COR				LR	LR		
	comp=Z,350nm,21.0s,MS5.1						
WUAZ	**Wupatki**	**140.26**	**319**	*e*PKPdf	PKPdf	20 14 55.9	+6.1
WUAZ				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
BMN	**Battle Mountai**	**140.32**	**329**	PFAKE		20 15 00.0	+10
BMN				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
MOD	**Modoc**	**140.62**	**334**	PFAKE		20 15 00.0	+10
MOD				LR	LR		
	comp=Z,971nm,20.0s,MS5.5						
HUMO	**Hull Mountain**	**141.13**	**337**	*e*PKPdf	PKPdf	20 14 50.1	-1.1
TUC	**Tucson**	**141.70**	**314**	*e*PKIKP	PKPdf	20 14 54.7	+2.1
TUC	**Tucson**	**141.70**	**314**	*e*PKPdf	PKPdf	20 14 54.4	+1.8
PAHR	**Pah Rah Range**	**141.94**	**331**	*e*PKPdf	PKPdf	20 14 51.1	-1.6
SHPR	**Sheep Range**	**141.99**	**323**	*e*PKPdf	PKPdf	20 14 55.5	+2.6
TPH	**Tonopah**	**142.06**	**327**	*e*PKIKP	PKPdf	20 14 49.6	-3.4
TPH	**Tonopah**	**142.06**	**327**	*e*PKPpre		20 14 49.0	
WAKR	**Walker**	**142.90**	**330**	*e*PKPdf	PKPdf	20 14 53.0	-1.5
DAC	**Darwin (Calif)**	**143.56**	**325**	*e*PKHKP		20 14 47.5	
CMB	**Columbia Colle**	**143.73**	**330**	*e*PKIKP	PKPdf	20 14 54.0	-2.0
GLA	**Glamis**	**144.03**	**319**	*e*PKIKP	PKPdf	20 14 55.0	-1.7
HOPS	**Hopland**	**144.22**	**334**	PFAKE		20 15 10.0	+13
HOPS				LR	LR		
	comp=Z,605nm,19.0s,MS5.4						
MWC	**Mount Wilson**	**145.28**	**323**	*e*PKIKP	PKPdf	20 14 59.3	+0.5
PASC	**Pasadena Art C**	**145.39**	**323**	*e*PKPdf	PKPdf	20 15 00.2	+1.3
OSI	**Osito Adit**	**145.39**	**324**	*e*PKPdf	PKPdf	20 15 00.3	+1.4

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*ISCJB **08** 21:04:41.5±1.1, 7.7S±0.1×37.5E±0.1, h10km, mb3.8/3, Error ellipse: s-maj=24.8km s-min=15.7km az=140.3*
*IDC **08** 21:04:42.1±1.3, 7.62S×37.44E, h0km, mb3.8/4, mb1 3.9/6, mb1mx3.6/25, mbtmp3.8/6, ML3.8/2, MS4.0/1, Ms1 4.0/1, ms1mx3.1/27, Error ellipse: s-maj=55.0km s-min=19.5km az=131.0*
*NEIC **08** 21:04:43.8±1.0, 7.69S×37.50E, h10km, mb4.0/1, Error ellipse: s-maj=22.9km s-min=14.5km az=141.0*
ISC 08 21:04:43.9±1.1**, 7.7S**±0.1×**37.5E**±0.1**, h10km, n10, σ0.81**/9, **mb3.8**/3**, Tanzania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.84**	**230**	Pn	**Pn**	**21 07 33.4**	**+0.4**
	0.5nm,0.3s,baz=47,slow=18,SNR=5.2						
LSZ				Lg		21 10 56.0	
	0.7nm,0.3s,baz=323,slow=22,SNR=6.5						
LSZ	**Lusaka**	**11.84**	**230**	*e*Pn	**Pn**	**21 07 33.2**	**+0.2**
OPO	**Ambohidratompo**	**14.35**	**140**	Pn	**Pn**	**21 08 07.1**	**-0.1**
	0.6nm,0.3s,baz=308,slow=12,SNR=7.9						
OPO	**Ambohidratompo**	**14.35**	**140**	Pn	**Pn**	**21 08 07.1**	**-0.1**
LBTB	**Lobatse**	**20.65**	**212**	P	**P**	**21 09 22.4**	**-1.5**
	2.4nm,0.6s,baz=41,slow=9.9,SNR=7.4						
BOSA	**Boshof**	**23.81**	**208**	P	**P**	**21 09 58.4**	**+1.2**
	2.6nm,0.5s,mb3.9,baz=25,slow=10,SNR=12						
BOSA	**Boshof**	**23.81**	**208**	*e*P	**P**	**21 09 58.5**	**+1.3**
	2.1nm,0.5s,mb3.8						
TORD	**Torodi Ar. Bea**	**41.15**	**300**	LR	LR	21 28 37.2	
	comp=Z,176nm,18.1s,baz=155,slow=35						
CMAR	**Chiang Mai Arr**	**65.92**	**66**	P	**P**	**21 15 30.9**	**+0.3**
	0.6nm,0.9s,mb3.6,baz=265,slow=7.7,SNR=4.1						
MKAR	**Makanchi Array**	**67.24**	**32**	P	**P**	**21 15 38.1**	**-0.4**
	0.9nm,0.8s,mb3.9,baz=230,slow=7.3,SNR=5.6						

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*ISCJB **08** 21:06:04.5±0.7, 7.64S±0.10×37.3E±0.1, h10km, mb3.8/6, Error ellipse: s-maj=17.5km s-min=12.1km az=33.5*
*IDC **08** 21:06:05.3±1.0, 7.58S×37.31E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.7/26, mbtmp3.9/9, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx3.0/26, Error ellipse: s-maj=32.1km s-min=17.5km az=125.0*
*NEIC **08** 21:06:06.7±0.8, 7.53S×37.56E, h10km, mb4.0/2, Error ellipse: s-maj=22.8km s-min=15.0km az=81.0*
ISC 08 21:06:06.9±0.7**, 7.6S**±0.1×**37.4E**±0.1**, h10km, n13, σ1.37**/14, **mb3.8**/6**, Tanzania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.78**	**229**	Pn	**Pn**	**21 08 54.1**	**-0.9**
	0.8nm,0.3s,baz=86,slow=19,SNR=3.1						
LSZ				Lg		21 12 16.7	
	0.9nm,0.3s,baz=97,slow=6.4,SNR=3.6						
LSZ	**Lusaka**	**11.78**	**229**	*e*Pn	**Pn**	**21 08 55.1**	**+0.1**
OPO	**Ambohidratompo**	**14.51**	**140**	Pn	**Pn**	**21 09 31.4**	**-0.9**
	0.5nm,0.3s,baz=305,slow=12,SNR=4.2						
LBTB	**Lobatse**	**20.64**	**212**	P	**P**	**21 10 47.9**	**+1.2**
	6.8nm,0.7s,baz=66,slow=9.9,SNR=8.0						
LBTB				S	**S**	**21 14 29.6**	**-7.8**
	3.3nm,0.8s,baz=133,slow=19,SNR=2.8						
LBTB				Lg		21 16 54.2	
	10nm,1.0s,baz=300,slow=20,SNR=2.7						
LBTB	**Lobatse**	**20.64**	**212**	*e*P	**P**	**21 10 47.7**	**+1.1**
	5.1nm,0.7s						
LBTB				S	**S**	**21 14 29.6**	**-7.8**
TSUM	**Tsumeb**	**22.39**	**237**	P	**P**	**21 11 03.5**	**-2.1**
	3.2nm,1.0s,mb3.7,baz=61,slow=19,SNR=3.8						
BOSA	**Boshof**	**23.81**	**207**	P	**P**	**21 11 21.2**	**+1.0**
	3.0nm,0.6s,mb3.9,baz=51,slow=11,SNR=7.7						
BOSA	**Boshof**	**23.81**	**207**	*e*P	**P**	**21 11 22.2**	**+2.0**
	2.7nm,0.6s,mb3.9						
DBIC	**Dimbokro**	**44.42**	**288**	LR	LR	21 30 42.6	
	comp=Z,83nm,21.2s,baz=268,slow=33						
GERES	**GERESS Array B**	**59.92**	**342**	P	**P**	**21 16 11.9**	**-1.1**
	0.8nm,1.0s,mb3.7,baz=156,slow=3.1,SNR=3.0						
ESDC	**Sonseca Array**	**60.59**	**324**	P	**P**	**21 16 19.6**	**+1.8**
	1.1nm,0.8s,mb4.0,baz=131,slow=6.7,SNR=5.0						
CMAR	**Chiang Mai Arr**	**66.03**	**66**	P	**P**	**21 16 55.7**	**+1.4**
	0.4nm,0.7s,mb3.5,baz=248,slow=8.7,SNR=4.3						
MKAR	**Makanchi Array**	**67.26**	**32**	P	**P**	**21 17 00.3**	**-1.3**
	1.3nm,0.8s,mb4.0,baz=221,slow=6.7,SNR=7.3						

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*ISCJB **08** 21:12:56.5±1.9, 25.26S±0.09×179.8E±0.1, h513km±22km, mb3.8/11, Error ellipse: s-maj=17.0km s-min=13.6km az=147.7*
*IDC **08** 21:12:57.3±2.5, 25.33S×179.89E, h518km±28km, mb3.3/8, mb1 3.6/10, mb1mx3.4/17, mbtmp3.4/10, Error ellipse: s-maj=23.4km s-min=14.6km az=163.0*
*NEIC **08** 21:12:57.5±1.3, 25.41S×179.94E, h525km±14km, mb3.8/4, Error ellipse: s-maj=14.6km s-min=10.7km az=208.0*
ISC 08 21:12:57.1±1.6**, 25.36S**±0.10×**179.9E**±0.1**, h510km**±18km**, n28, σ0.84**/21, **mb3.8**/11**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.73**	**282**	*e*Pn	**P**	**21 15 44.5**	**+1.2**
URZ	**Urewera**	**13.07**	**190**	P	**P**	**21 15 46.3**	**-0.5**
	3.8nm,0.3s,baz=360,slow=2.3,SNR=22						
URZ				S	**S**	**21 18 06.0**	**-0.6**
	0.4nm,0.3s,baz=315,slow=16,SNR=2.7						
SNZO	**South Karori**	**16.48**	**194**	*e*P	**P**	**21 16 22.1**	**-0.1**
	51nm,1.5s						
RPZ	**Rata Peaks**	**19.68**	**199**	P	**P**	**21 16 51.3**	**-0.7**
	1.5nm,0.3s,baz=120,slow=3.4,SNR=6.7						
CTA	**Charters Tower**	**31.40**	**273**	P	**P**	**21 18 36.0**	**0.0**
	2.8nm,0.5s,mb4.1,baz=93,slow=12,SNR=10						
CTAO	**Charters Tower**	**31.40**	**273**	*e*P	**P**	**21 18 36.6**	**+0.6**
	4.5nm,1.3s,mb3.8						
STKA	**Stephens Creek**	**34.10**	**250**	P	**P**	**21 18 59.3**	**+0.5**
	1.1nm,0.5s,mb3.7,baz=150,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**41.70**	**262**	P	**P**	**21 20 01.1**	**+0.1**
	0.8nm,0.3s,mb3.7,baz=91,slow=7.1,SNR=39						
ASAR				PcP	PcP	21 21 45.6	-0.2
	0.3nm,0.7s,baz=101,slow=4.8,SNR=4.2						
ASAR				S	**S**	**21 25 39.9**	**-0.9**
	0.5nm,0.6s,baz=98,slow=14,SNR=6.2						
WB2	**Warramunga Arr**	**42.20**	**268**	⇑*i*P	**P**	**21 20 04.3**	**-0.7**
WRAB	**Tennant Creek**	**42.21**	**268**	*e*P	**P**	**21 20 04.4**	**-0.6**
	2.2nm,0.8s,mb3.7						
MBWA	**Marble Bar**	**55.02**	**261**	*e*P	**P**	**21 21 40.1**	**-0.2**
	4.4nm,1.0s,mb3.6						
QSPA	**South Pole Qui**	**64.73**	**180**	*e*P	**P**	**21 22 47.1**	**+3.1**
	3.0nm,0.8s,mb3.8						
PETK	**Petropavlovsk-**	**80.48**	**347**	P	**P**	**21 24 13.6**	**-1.5**
	3.3nm,0.7s,mb3.8,baz=139,slow=9.8,SNR=5.5						
VNA3	**Neumayer Olymp**	**83.43**	**177**	*e*	**P**	**21 24 31.0**	**+0.9**
VNA3				*e*		21 24 33.8	
VNA2	**Neumayer--Watz**	**83.85**	**178**	*e*	**P**	**21 24 33.4**	**+1.3**
VNA2				*e*		21 24 36.1	
NVAR	**Mina Array Bea**	**85.88**	**44**	P	**P**	**21 24 42.3**	**-0.2**
	1.3nm,0.7s,mb3.7,baz=221,slow=8.0,SNR=7.9						
CMAR	**Chiang Mai Arr**	**89.92**	**290**	P	**P**	**21 25 02.6**	**+0.8**
	0.8nm,0.8s,mb3.6,baz=133,slow=3.8,SNR=7.2						
TXAR	**Lajitas Array**	**91.30**	**58**	P	**P**	**21 25 07.8**	**-0.2**
	1.5nm,0.8s,mb4.0,baz=211,slow=6.4,SNR=13						
PDAR	**Pinedale Array**	**93.81**	**44**	P	**P**	**21 25 18.8**	**-0.4**
	0.4nm,0.6s,mb3.7,baz=177,slow=3.0,SNR=3.9						
MKAR	**Makanchi Array**	**113.05**	**312**	PKiKP	PKiKP	21 30 34.1	-1.7
	0.5nm,0.8s,baz=251,slow=1.7,SNR=4.5						
ARCES	**ARCESS Array B**	**133.28**	**348**	PKP	PKPdf	21 31 12.7	-1.1
	1.5nm,0.6s,baz=77,slow=3.1,SNR=16						
NB2	**NORSAR Subarra**	**143.50**	**351**	PKP	PKPdf	21 31 29.8	-2.9
	comp=Z,1.1nm,0.6s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**143.50**	**351**	PKP	PKPdf	21 31 29.8	-2.9
	comp=Z,3.0nm,0.8s,baz=15,slow=4.9,SNR=8.9						
AKASG	**Malin Array Be**	**146.12**	**326**	PKPbc	PKPbc	21 31 38.0	-1.5
	comp=Z,2.3nm,0.5s,baz=44,slow=4.2,SNR=9.3						
AKASG	**Malin Array Be**	**146.12**	**326**	PKPbc	PKPbc	21 31 38.0	-1.5
BRTR	**Keskin Array B**	**148.34**	**305**	PKPbc	PKPbc	21 31 45.1	-0.6
	comp=Z,1.1nm,0.6s,baz=127,slow=3.3,SNR=8.3						
CLL	**Collm**	**152.21**	**342**	⇓*i*PKPbc	PKPbc	21 31 53.9	-0.4
TORD	**Torodi Ar. Bea**	**167.73**	**188**	PKP	PKPdf	21 32 04.5	-0.8
	comp=Z,0.5nm,1.0s,baz=344,slow=0.2,SNR=2.7						
TORD				PKPab	PKPab	21 33 15.9	+0.9
	comp=Z,0.9nm,0.6s,baz=187,slow=3.6,SNR=6.7						

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*ISCJB **08** 21:17:55.5±3.3, 5.02N±0.07×127.8E±0.1, h233km±35km, mb4.0/17, Error ellipse: s-maj=21.8km s-min=11.1km az=166.4*
*IDC **08** 21:17:55.4±2.7, 5.05N×127.79E, h212km±27km, mb3.7/12, mb1 3.7/13, mb1mx3.6/20, mbtmp3.7/13, MS3.6/1, Ms1 3.6/1, ms1mx2.8/37, Error ellipse: s-maj=22.8km s-min=10.1km az=84.0*
*NEIC **08** 21:17:56.4±3.7, 5.03N×127.83E, h226km±39km, mb4.3/6, Error ellipse: s-maj=14.8km s-min=7.4km az=72.0*
ISC 08 21:17:56.3±3.6**, 5.03N**±0.08×**127.8E**±0.1**, h223km**±39km**, n23, σ0.58**/21**, mb4.0**/17**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**15.69**	**195**	P	**Pn**	**21 21 25.8**	**-0.1**
	4.7nm,0.3s,baz=256,slow=0.5,SNR=8.1						
KSM	**Kuching**	**17.84**	**259**	*e*P	**P**	**21 21 49.3**	**+0.3**
KAKA	**Kakadu**	**18.21**	**165**	*e*P	x	21 21 33.9	
	5.6nm,0.5s						
JOW	**Kunigami**	**21.69**	**1**	P	**P**	**21 22 29.6**	**0.0**
	12nm,0.7s,mb4.5,baz=158,slow=9.7,SNR=6.1						
FITZ	**Fitzroy Crossi**	**23.09**	**185**	*e*P	**P**	**21 22 42.3**	**-0.2**
	3.4nm,0.3s,mb4.3						
WRAB	**Tennant Creek**	**25.62**	**166**	*e*P	**P**	**21 23 05.3**	**-0.1**
	4.2nm,0.4s,mb4.4						
WB2	**Warramunga Arr**	**25.63**	**166**	*e*P	**P**	**21 23 04.7**	**-0.8**
ASAR	**Alice Springs**	**29.13**	**169**	P	**P**	**21 23 36.6**	**0.0**
	0.8nm,0.3s,mb3.9,baz=352,slow=7.6,SNR=29						
CMAR	**Chiang Mai Arr**	**31.20**	**298**	P	**P**	**21 23 55.0**	**+0.1**
	0.9nm,0.6s,mb3.6,baz=104,slow=7.2,SNR=13						
CMAR				ScP	ScP	21 30 07.7	+1.8
	0.5nm,0.8s,baz=197,slow=4.2,SNR=4.5						
CHTO	**Chiang Mai**	**31.34**	**298**	*e*P	**P**	**21 23 55.7**	**-0.4**
	3.5nm,1.6s,mb3.7						
KSRS	**Korea Array**	**32.27**	**0**	P	**P**	**21 24 04.2**	**+0.2**
	2.3nm,0.6s,mb3.9,baz=178,slow=9.7,SNR=10						
MJAR	**Matsushiro Arr**	**32.78**	**16**	P	**P**	**21 24 07.2**	**-1.2**
	0.7nm,0.6s,mb3.4,baz=190,slow=8.2,SNR=4.5						
HNR	**Honiara**	**35.08**	**114**	LR	LR	21 38 21.1	
	comp=Z,98nm,20.5s,baz=135,slow=35						
STKA	**Stephens Creek**	**38.97**	**161**	P	**P**	**21 25 01.5**	**+0.5**
	2.9nm,0.5s,mb4.0,baz=346,slow=7.0,SNR=8.6						
STKA	**Stephens Creek**	**38.97**	**161**	*e*P	**P**	**21 25 01.6**	**+0.6**
	1.4nm,1.2s,mb3.4						
NWAO	**Narrogin (SRO)**	**39.06**	**194**	P	**P**	**21 25 02.3**	**+0.6**
	3.8nm,0.4s,mb4.3,baz=30,slow=11,SNR=8.1						
SONM	**Songino Array**	**46.44**	**340**	P	**P**	**21 26 00.9**	**+0.2**
	0.7nm,0.4s,mb3.4,baz=155,slow=9.0,SNR=11						
PETK	**Petropavlovsk-**	**53.82**	**22**	P	**P**	**21 26 57.3**	**+1.4**
	4.0nm,0.6s,mb4.1,baz=165,slow=3.2,SNR=8.8						
YAK	**Yakutsk**	**56.89**	**1**	*e*P	**P**	**21 27 18.1**	**+0.5**
	6.7nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**57.13**	**324**	P	**P**	**21 27 20.0**	**+0.4**
	3.0nm,0.7s,mb4.0,baz=114,slow=7.8,SNR=35						
ZALV	**Zalesovo Beam**	**59.95**	**332**	P	**P**	**21 27 38.2**	**-0.6**
	0.6nm,0.4s,mb3.5,baz=109,slow=8.0,SNR=4.4						
KURK	**Kurchatov**	**61.25**	**327**	*e*P	**P**	**21 27 47.8**	**+0.1**
	3.3nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**89.61**	**340**	P	**P**	**21 30 27.2**	**-1.0**
	1.8nm,0.9s,mb3.9,baz=93,slow=6.4,SNR=3.1						

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*ISCJB **08** 21:50:15.1±0.7, 7.65S±0.10×37.6E±0.1, h10km, mb3.7/6, Error ellipse: s-maj=16.8km s-min=12.2km az=39.1*
*IDC **08** 21:50:15.6±0.9, 7.63S×37.67E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=28.0km s-min=17.5km az=130.0*
*NEIC **08** 21:50:17.2±0.6, 7.61S×37.65E, h10km, mb4.0/1, Error ellipse: s-maj=15.2km s-min=12.3km az=119.0*
ISC 08 21:50:17.2±0.7**, 7.71S**±0.08×**37.71E**±0.08**, h10km, n12, σ1.17**/15**, mb3.7**/6**, Tanzania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.98**	**230**	Pn	**Pn**	**21 53 07.6**	**-0.5**
	0.9nm,0.3s,baz=53,slow=10,SNR=18						
LSZ				Sn	**Sn**	**21 55 20.6**	**-1.2**
	0.2nm,0.3s,baz=85,slow=16,SNR=2.2						
LSZ				Lg		21 56 34.7	
	0.7nm,0.3s,baz=127,slow=23,SNR=7.0						
LSZ	**Lusaka**	**11.98**	**230**	*e*Pn	**Pn**	**21 53 07.7**	**-0.4**
LSZ				*e*Sn	**Sn**	**21 55 31.7**	**+10**
OPO	**Ambohidratompo**	**14.20**	**140**	Pn	**Pn**	**21 53 40.1**	**+1.6**
	0.3nm,0.3s,baz=299,slow=16,SNR=4.2						
OPO				Sn	**Sn**	**21 56 14.3**	**-1.9**
	0.2nm,0.3s,baz=241,slow=18,SNR=2.5						
LBTB	**Lobatse**	**20.74**	**213**	P	**P**	**21 54 58.5**	**+0.5**
	4.0nm,0.7s,baz=37,slow=10,SNR=8.2						
BOSA	**Boshof**	**23.89**	**208**	P	**P**	**21 55 31.6**	**+0.5**
	4.8nm,0.6s,mb4.1,baz=36,slow=8.3,SNR=17						
BOSA	**Boshof**	**23.89**	**208**	*e*P	**P**	**21 55 33.0**	**+1.9**
	2.4nm,0.5s,mb3.9						
TORD	**Torodi Ar. Bea**	**41.34**	**300**	P	**P**	**21 58 04.5**	**+1.0**
	0.3nm,0.9s,mb2.9,baz=106,slow=9.2,SNR=2.5						
ESDC	**Sonseca Array**	**60.88**	**324**	P	**P**	**22 00 29.0**	**-1.0**
	1.0nm,0.8s,mb4.0,baz=125,slow=7.8,SNR=4.0						
ESDC	**Sonseca Array**	**60.88**	**324**	P	**P**	**22 00 29.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**65.75**	**66**	P	**P**	**22 01 04.0**	**+1.2**
	0.6nm,0.8s,mb3.7,baz=263,slow=7.0,SNR=7.8						
MKAR	**Makanchi Array**	**67.16**	**32**	P	**P**	**22 01 10.6**	**-0.6**
	2.3nm,0.8s,mb4.2,baz=223,slow=5.9,SNR=12						
ZALV	**Zalesovo Beam**	**73.07**	**27**	P	**P**	**22 01 46.0**	**-1.3**
	0.2nm,0.4s,mb3.4,baz=243,slow=6.2,SNR=3.7						

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*ISCJB **08** 21:54:53.2±0.7, 6.95N±0.09×73.1W±0.1, h167km±8km, mb3.4/2, Error ellipse: s-maj=20.6km s-min=7.3km az=40.7*
*IDC **08** 21:54:54.1±0.9, 7.05N×73.28W, h142km±56km, mb3.2/2, mb1 3.5/4, mb1mx3.2/21, mbtmp3.3/4, Error ellipse: s-maj=114.4km s-min=7.8km az=133.0*
*FUNV **08** 21:54:54.7, 6.91N×73.13W, h170km, MW3.6*
ISC 08 21:54:54.3±0.7**, 6.97N**±0.08×**73.13W**±0.09**, h160km**±8km**, n15, σ0.91**/21**, mb3.4**/2**, 4C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**42**	⇑*i*P	**Pn**	**21 55 22.8**	**+1.1**
CAPV				*e*S	**Sn**	**21 55 44.0**	**+1.2**
ROSC	**El Rosal**	**2.42**	**210**	P	**Pn**	**21 55 34.9**	**-0.1**
	22nm,0.3s,baz=271,slow=22,SNR=67						
ROSC				S	**Sn**	**21 56 05.7**	**-0.7**
	49nm,0.3s,baz=85,slow=18,SNR=18						
VIGV	**El Vigia**	**2.55**	**43**	⇑*i*P	**Pn**	**21 55 37.1**	**+0.6**
VIGV				*e*S	**Sn**	**21 56 08.2**	**-0.9**
SOCV	**Socops**	**2.60**	**60**	*e*P	**Pn**	**21 55 37.4**	**+0.3**
SOCV				*e*S	**Sn**	**21 56 09.5**	**-0.8**
SDV	**Santo Domingo**	**3.12**	**52**	P	**Pn**	**21 55 44.6**	**+1.1**
	5.2nm,0.3s,baz=227,slow=2.0,SNR=54						
SDV				S	**Sn**	**21 56 22.6**	**+0.9**
	6.8nm,0.3s,baz=78,slow=18,SNR=23						
VIRV	**Villa del Rosa**	**3.58**	**11**	*e*P	**Pn**	**21 55 49.5**	**+0.1**
VIRV				*e*S	**Sn**	**21 56 29.8**	**-2.5**
QARV	**Quebrada Arrib**	**4.12**	**38**	⇑*i*P	**Pn**	**21 55 57.2**	**+0.9**
CURV	**Curarigua**	**4.35**	**46**	*e*P	**Pn**	**21 55 59.7**	**+0.3**
SANV	**Sanarito**	**4.35**	**54**	*e*P	**Pn**	**21 55 58.6**	**-0.9**
DABV	**Dabajuro**	**4.63**	**32**	*e*P	**Pn**	**21 56 03.5**	**+0.4**
TEPV	**Terepaima**	**4.90**	**52**	*e*P	**Pn**	**21 56 06.2**	**-0.4**
SIQV	**Siquisique**	**4.91**	**42**	*e*P	**Pn**	**21 56 06.0**	**-0.7**
BAUV	**El Baul**	**5.40**	**68**	⇑*e*P	**Pn**	**21 56 11.6**	**-1.6**
TXAR	**Lajitas Array**	**36.36**	**312**	P	**P**	**22 01 43.2**	**0.0**
	0.9nm,1.1s,mb3.3,baz=128,slow=9.7,SNR=4.1						
YKA	**Yellowknife Ar**	**63.12**	**340**	P	**P**	**22 05 05.4**	**+0.8**
	0.4nm,0.5s,mb3.5,baz=132,slow=6.8,SNR=11						

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*IDC **08** 22:04:24.0±3.1, 7.15S×148.19E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/14, mbtmp3.5/3, Error ellipse: s-maj=116.1km s-min=31.4km az=92.0*
*NEIC **08** 22:04:29.4±1.6, 7.06S×148.04E, h35km, mb3.8/2, Error ellipse: s-maj=44.2km s-min=16.2km az=100.0*
*ISCJB **08** 22:04:30.9±4.0, 7.2S±0.2×148.0E±0.3, h63km±30km, mb3.5/4, Error ellipse: s-maj=58.4km s-min=32.0km az=8.8*
ISC 08 22:04:32.3±3.9**, 7.2S**±0.2×**148.0E**±0.4**, h60km**±29km**, n8, σ0.68**/8**, mb3.5**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.36**	**200**	*e*Pn	**Pn**	**22 05 08.3**	**-0.4**
PMG				*e*Sn	**Sn**	**22 05 37.3**	**+0.7**
COEN	**Coen**	**8.23**	**215**	*e*Pn	**Pn**	**22 06 28.8**	**-0.2**
WRAB	**Tennant Creek**	**18.32**	**225**	*e*P	**Pn**	**22 08 42.6**	**+0.3**
	4.8nm,1.3s						
ASAR	**Alice Springs**	**21.25**	**218**	P	**P**	**22 09 13.1**	**-0.5**
	0.6nm,0.6s,mb3.1,baz=54,slow=9.1,SNR=12						
FITZ	**Fitzroy Crossi**	**24.32**	**241**	*e*P	**P**	**22 09 44.1**	**-0.4**
	3.2nm,1.4s,mb3.6						
STKA	**Stephens Creek**	**25.29**	**193**	P	**P**	**22 09 53.1**	**-0.1**
	2.1nm,0.8s,mb3.7,baz=17,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**79.01**	**320**	P	**P**	**22 16 30.6**	**+0.8**
	0.5nm,0.9s,mb3.4,baz=107,slow=7.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**146.30**	**283**	PKPbc	PKPbc	22 24 07.7	+0.3
	0.3nm,0.6s,baz=68,slow=2.3,SNR=6.8						

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*CSEM **08** 22:09:40.9±0.2, 34.39N×23.76E, h25km, ML3.4, Error ellipse: s-maj=5.3km s-min=2.9km az=90.0*
*NEIC **08** 22:09:41.5, 34.53N×23.75E, h31km, MD3.4(ATH), After ATH.*
*ATH **08** 22:09:41.7, 34.55N×23.73E, h31km±3km, MD3.4/4*
*HLW **08** 22:09:41.5, 34.59N×23.88E, h33km, Mb3.4*
*ISCJB **08** 22:09:42.4±1.0, 34.40N±0.04×24.1E±0.1, h33km, Error ellipse: s-maj=13.0km s-min=5.5km az=171.0*
ISC 08 22:09:42.6±1.4**, 34.44N**±0.04×**23.9E**±0.2**, h35km, n14, σ1.18**/16**, 2C, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.44**	**23**	*e*PB	**Pn**	**22 09 51.0**	**-1.4**
GVD				*e*SB	**Sn**	**22 09 58.0**	**-1.1**
VAM	**Vamos**	**1.00**	**15**	*e*PN	**Pn**	**22 10 00.0**	**-0.2**
IDI	**Anoyia**	**1.19**	**44**	*e*Pn	**Pn**	**22 10 03.9**	**+1.2**
IDI	**Anoyia**	**1.19**	**44**	*e*Pn	**Pn**	**22 10 03.9**	**+1.2**
NPS	**Neapolis**	**1.65**	**59**	*e*PB	**Pn**	**22 10 11.1**	**+2.1**
KARP	**Karpathos**	**2.91**	**67**	⇑*i*PN	**Pn**	**22 10 28.9**	**+2.5**
KARP	**Karpathos**	**2.91**	**67**	⇑*i*Pn	**Pn**	**22 10 28.3**	**+1.9**
SLUM		**3.14**	**159**	P	**Pn**	**22 10 30.2**	**+0.6**
SLUM				S	**Sn**	**22 11 06.4**	**+0.6**
HMAT	**Matruh**	**4.29**	**140**	P	**Pn**	**22 10 45.7**	**+0.2**
HMAT				S	**Sn**	**22 11 33.1**	**-1.2**
AKAS	**Kas**	**5.01**	**67**	*e*P	**Sn**	**22 11 52.0**	**0.0**
AKAS				*i* S	**Sn**	**22 12 02.1**	**+10**
GOLH	**Golhisar**	**5.39**	**57**	*i* P	Px	22 11 29.2	
AMAG	**Maghara**	**8.73**	**113**	P	**Pn**	**22 11 45.4**	**-1.0**
SUZ		**8.86**	**119**	P	**Pn**	**22 11 46.9**	**-1.3**
HRSH	**Kfar Ka'horesh**	**9.67**	**97**	P	Px	22 11 48.0	

IGQ 08 22:39:07.2, 1.31S×80.57W, h23km±8km, Mb4.0, Ms3.8, 2C-6D, Error ellipse: s-maj=5.8km s-min=4.3km az=13.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.30**	**328**	⇓P	Pb	22 39 13.6	-0.5
CHIS				⇓S	Sb	22 39 18.1	-0.7
JAMA	**Jama**	**1.10**	**19**	P	Pn	22 39 27.1	-0.1
JAMA	**Jama**	**1.10**	**19**	S	Sb	22 39 41.6	+0.2
QIL2	**Quilotoa**	**1.71**	**75**	⇓P	Pn	22 39 39.2	+3.8
IGUA	**Igualata**	**1.94**	**95**	P	Pn	22 39 40.1	+1.4
ARRY	**Arrayan**	**2.12**	**95**	P	Pn	22 39 43.0	+1.9
ARRY	**Arrayan**	**2.12**	**95**	S	Sn	22 40 08.9	+2.1
PATA	**Patacocha**	**2.14**	**95**	⇑P	Pn	22 39 44.0	+2.5
PATA	**Patacocha**	**2.14**	**95**	⇑S	Sn	22 40 10.7	+3.4
RUN5	**Runtun**	**2.15**	**93**	P	Pn	22 39 45.1	+3.6
CAMI	**Rancho Maria**	**2.15**	**73**	P	Pn	22 39 44.8	+3.1
ULBA	**Ulba**	**2.16**	**94**	P	Pn	22 39 44.5	+2.7
PISA	**Pisayambo**	**2.19**	**84**	P	Pn	22 39 44.2	+2.0
NAS2	**Nasa**	**2.20**	**73**	P	Pn	22 39 45.0	+2.7
MOV1	**Cotopaxi Vol s**	**2.21**	**75**	P	Pn	22 39 46.3	+4.0
PITA	**Cotopaxi Volc**	**2.26**	**71**	⇓P	Pn	22 39 45.0	+1.9
PITA	**Cotopaxi Volc**	**2.26**	**71**	⇓S	Sn	22 40 13.2	+3.0
TERV	**Terraza Guagua**	**2.26**	**60**	P	Pn	22 39 46.8	+3.7
VC1	**Cotopaxi 1**	**2.26**	**73**	P	Pn	22 39 45.8	+2.7
PINO	**Pino**	**2.27**	**60**	P	Pn	22 39 43.3	+0.1
GGP	**Refugio Guagua**	**2.27**	**60**	⇓P	Pn	22 39 44.6	+1.3
COV1	**Cotopaxi Volc**	**2.31**	**74**	P	Pn	22 39 44.0	+0.1
YANA	**Yana**	**2.32**	**59**	P	Pn	22 39 46.7	+2.8
YANA	**Yana**	**2.32**	**59**	S	Sn	22 40 16.8	+5.1
ANTI	**Antisana**	**2.55**	**71**	P	Pn	22 39 49.6	+2.5
COTA	**Cotacachi**	**2.76**	**54**	P	Pn	22 39 54.4	+4.4

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*BJI **08** 22:39:42.7, 6.30S×154.40E, h20km, mb4.6*
*MOS **08** 22:39:46.3±1.2, 6.04S×154.40E, h45km, mb4.4/4, Error ellipse: s-maj=15.3km s-min=12.5km az=139.1*
*ISCJB **08** 22:39:48.2±2.0, 6.2S±0.1×154.37E±0.05, h61km±20km, mb4.5/22, Error ellipse: s-maj=18.7km s-min=8.5km az=175.4*
*IDC **08** 22:39:49.8±3.6, 6.26S×154.29E, h68km±34km, mb3.8/10, mb1 4.0/11, mb1mx3.9/16, mbtmp3.8/11, ML4.5/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/26, Error ellipse: s-maj=22.4km s-min=19.7km az=113.0*
*NEIC **08** 22:39:50.7±1.5, 6.27S×154.45E, h75km±15km, mb4.3/5, Error ellipse: s-maj=15.3km s-min=11.1km az=153.0*
ISC 08 22:39:51.0±1.5**, 6.3S**±0.1×**154.45E**±0.07**, h77km**±15km**, n46, σ0.99**/43**, mb4.4**/22**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.26**	**120**	P	**Pn**	**22 41 20.8**	**0.0**
	9.6nm,0.3s,baz=265,slow=3.5,SNR=7.1						
HNR				S	**Sn**	**22 42 35.7**	**+4.8**
	baz=6.0,slow=19,SNR=3.5						

PMG	**Port Moresby**	**7.85**	**247**	eP	**Pn**	**22 41 40.7**	**-1.8**
PMG				e		22 43 11.0	
PMG				pmax	pmax		
	comp=Z,73nm,0.7s						
PMG	**Port Moresby**	**7.85**	**247**	ePn	**Pn**	**22 41 40.7**	**-1.8**
	comp=Z,73nm,0.7s						
PMG				eSn	**Sn**	**22 43 11.0**	**+1.1**
CTA	**Charters Tower**	**15.83**	**209**	eP	**Pn**	**22 43 31.1**	**+1.7**
	comp=Z,12nm,0.7s						
CTA				e		22 43 45.7	
CTA	**Charters Tower**	**15.83**	**209**	P	**Pn**	**22 43 31.0**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=33,slow=12,SNR=25						
CTA				LR	LR	22 48 24.0	
	comp=Z,155nm,19.6s,baz=47,slow=32						
CTA	**Charters Tower**	**15.83**	**209**	eP	**Pn**	**22 43 31.1**	**+1.7**
CTA				pmax	pmax		
	comp=Z,12nm,0.7s						
CTAO	**Charters Tower**	**15.83**	**209**	eP	**Pn**	**22 43 32.6**	**+3.2**
CTAO				pmax	pmax		
	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**15.83**	**209**	eP	**Pn**	**22 43 32.6**	**+3.2**
	comp=Z,16nm,0.8s						
GUMO	**Guam**	**21.95**	**334**	LR	LR	22 51 22.8	
	comp=Z,86nm,20.7s,baz=161,slow=32						
KAKA	**Kakadu**	**22.61**	**252**	eP	x	22 44 25.9	
	comp=Z,8.5nm,0.6s						
WRAB	**Tennant Creek**	**23.75**	**233**	eP	**P**	**22 44 56.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**23.75**	**233**	eP	**P**	**22 44 56.1**	**-0.4**
	comp=Z,8.0nm,0.8s,mb4.1						
WB2	**Warramunga Arr**	**23.76**	**233**	eP	**P**	**22 44 55.8**	**-0.8**
ASAR	**Alice Springs**	**26.22**	**227**	P	**P**	**22 45 18.1**	**-0.9**
	comp=Z,1.7nm,0.7s,mb3.6,baz=57,slow=9.3,SNR=27						
ASAR				PcP	PcP	22 48 43.8	-0.3
	comp=Z,0.7nm,0.5s,baz=40,slow=2.3,SNR=4.7						
STKA	**Stephens Creek**	**28.12**	**204**	P	**P**	**22 45 34.8**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.5,baz=9.5,slow=6.1,SNR=2.7						
STKA				PcP	PcP	22 48 47.9	-0.5
	comp=Z,3.0nm,0.8s,baz=20,slow=6.9,SNR=3.6						
STKA				LR	LR	22 56 57.1	
	comp=Z,158nm,21.2s,baz=26,slow=36						
STKA	**Stephens Creek**	**28.12**	**204**	P	**P**	**22 45 34.8**	**-1.0**
STKA				PcP	PcP	22 48 47.9	-0.5
STKA				LR	LR	22 56 57.1	
FITZ	**Fitzroy Crossi**	**30.44**	**245**	eP	**P**	**22 45 55.5**	**-1.1**
	comp=Z,4.6nm,0.6s,mb4.3						
KSRS	**Korea Array**	**50.10**	**332**	P	**P**	**22 48 37.5**	**-0.9**
	comp=Z,1.5nm,0.8s,mb4.0,baz=161,slow=7.7,SNR=4.4						
PETK	**Petropavlovsk-**	**59.27**	**2**	P	**P**	**22 49 43.9**	**-0.6**
	comp=Z,2.0nm,0.9s,mb4.1,baz=134,slow=8.3,SNR=3.6						
PETK				LR	LR	23 11 19.6	
	comp=Z,31nm,19.1s,baz=321,slow=32						
CMAR	**Chiang Mai Arr**	**60.01**	**295**	P	**P**	**22 49 48.5**	**-1.8**
	comp=Z,1.4nm,0.4s,mb4.4,baz=118,slow=5.0,SNR=9.2						
LZH	**Lanzhou**	**63.46**	**316**	eP	**P**	**22 50 13.0**	**-0.1**
LZH				AP	pP	22 50 20.5	-12
LZH				XP	sP	22 50 22.4	-19
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.8						
GTA	**Gaotai**	**67.89**	**317**	eP	**P**	**22 50 43.0**	**+1.5**
GTA				AP	pP	22 50 46.7	-15
GTA				XP	sP	22 50 49.8	-20
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.0						
SONM	**Songino Array**	**68.48**	**327**	P	**P**	**22 50 44.6**	**-0.4**
	comp=Z,0.8nm,0.5s,mb3.8,baz=144,slow=6.2,SNR=6.3						
LSA	**Lhasa**	**70.45**	**304**	P	**P**	**22 50 59.0**	**+1.4**
LSA	**Lhasa**	**70.45**	**304**	eP	**P**	**22 50 59.2**	**+1.6**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
LSA	**Lhasa**	**70.45**	**304**	eP	**P**	**22 50 59.2**	**+1.5**
	comp=Z,15nm,0.8s,mb4.9						
TAPN	**Taplejung**	**72.60**	**301**	eP	**P**	**22 51 11.4**	**+0.8**
	comp=Z,31nm,0.8s,mb5.2						
ODAN	**Odare**	**72.73**	**301**	eP	**P**	**22 51 12.1**	**+0.7**
	comp=Z,56nm,0.8s						
RAMN	**Ramite**	**73.43**	**300**	eP	**P**	**22 51 16.0**	**+0.5**
	comp=Z,12nm,0.5s,mb5.0						
JIRN	**Jiri**	**73.98**	**301**	eP	**P**	**22 51 19.5**	**+0.8**
	comp=Z,29nm,0.7s,mb5.1						
GUN	**Gumba**	**74.31**	**301**	eP	**P**	**22 51 21.5**	**+0.9**
	comp=Z,52nm,0.7s,mb5.4						
PKI	**Pulchoki**	**74.62**	**301**	eP	**P**	**22 51 23.0**	**+0.6**
	comp=Z,38nm,1.0s,mb5.1						
PKI	**Pulchoki**	**74.62**	**301**	eP	**P**	**22 51 23.0**	**+0.6**
PKI				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.1						
KKN	**Kakani**	**74.79**	**301**	eP	**P**	**22 51 24.0**	**+0.6**
	comp=Z,26nm,0.6s,mb5.1						
KKN	**Kakani**	**74.79**	**301**	eP	**P**	**22 51 24.0**	**+0.6**
KKN				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.1						
DMN	**Daman**	**74.89**	**301**	eP	**P**	**22 51 24.8**	**+0.8**
	comp=Z,59nm,0.7s						
GKN	**Gorkha**	**75.40**	**301**	eP	**P**	**22 51 27.3**	**+0.4**
	comp=Z,56nm,0.7s						
KOLN	**Koldanda**	**76.22**	**300**	eP	**P**	**22 51 31.9**	**+0.3**
	comp=Z,53nm,0.7s						
DANN	**Dangsing**	**76.23**	**301**	eP	**P**	**22 51 31.9**	**+0.2**
	comp=Z,44nm,0.6s,mb5.3						
MKAR	**Makanchi Array**	**82.55**	**319**	P	**P**	**22 52 04.5**	**-1.0**
	comp=Z,0.6nm,0.6s,mb3.6,baz=95,slow=8.2,SNR=9.9						
ZALV	**Zalesovo Beam**	**83.33**	**326**	P	**P**	**22 52 07.7**	**-1.8**
	comp=Z,0.9nm,0.6s,mb3.8,baz=109,slow=5.3,SNR=5.7						
NVAR	**Mina Array Bea**	**91.73**	**52**	P	**P**	**22 52 51.1**	**+0.7**
	comp=Z,1.6nm,0.8s,mb4.3,baz=261,slow=6.2,SNR=9.7						
YKA	**Yellowknife Ar**	**96.00**	**28**	P	**P**	**22 53 08.1**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.9,baz=258,slow=4.8,SNR=5.0						
BOSA	**Boshof**	**120.01**	**232**	PKP	PKPdf	22 58 33.8	+0.2
	comp=Z,2.1nm,0.6s,baz=116,slow=8.1,SNR=6.1						
GERES	**GERESS Array B**	**126.20**	**329**	PKP	PKPdf	22 58 43.2	-1.6
	comp=Z,0.3nm,0.6s,baz=38,slow=4.7,SNR=2.4						
TORD	**Torodi Ar. Bea**	**152.33**	**286**	PKPbc	PKPbc	22 59 38.4	-0.8
	comp=Z,2.2nm,0.3s,baz=79,slow=1.8,SNR=66						
TORD				PKPab	PKPab	22 59 48.5	-0.9
	comp=Z,3.7nm,0.7s,baz=72,slow=4.1,SNR=15						

*ISCJB **08** 23:04:52.6±0.5, 685N±006×7289W±005, h171km±5km, mb3.7/8, Error ellipse: s-maj=11.2km s-min=6.5km az=139.9*
*IDC **08** 23:04:53.0±0.7, 678N×7290W, h165km±7km, mb3.4/7, mb1 3.7/10, mb1mx3.4/22, mbtmp3.5/10, Error ellipse: s-maj=18.2km s-min=7.6km az=135.0*
*NEIC **08** 23:04:53.6±0.8, 709N×73.14W, h138km±16km, mb4.1/1, Error ellipse: s-maj=23.2km s-min=11.4km az=148.0*
*FUNV **08** 23:04:54.7, 693N×7298W, h168km, MW3.8*
ISC 08 23:04:53.6±0.5**, 685N**±006×**7288W**±005**, h165**km±5km**, n33, σ0.93**/37**, mb3.7**/8**, 8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.15**	**29**	⇓iP	**Pn**	**23 05 21.6**	**+0.5**
CAPV				eS	**Sn**	**23 05 42.4**	**+0.2**
ROSC	**El Rosal**	**2.45**	**216**	P	**Pn**	**23 05 34.0**	**-0.9**
	52nm,0.3s,baz=94,slow=23,SNR=73						
ROSC				S	**Sn**	**23 06 06.0**	**-0.8**
	184nm,0.3s,baz=109,slow=17,SNR=15						
SOCV	**Socops**	**2.46**	**54**	⇓iP	**Pn**	**23 05 36.3**	**+1.3**
SOCV				eS	**Sn**	**23 06 06.0**	**-1.0**
VIGV	**El Vigia**	**2.48**	**37**	eP	**Pn**	**23 05 35.5**	**+0.3**
VIGV				eS	**Sn**	**23 06 05.4**	**-2.1**
SDV	**Santo Domingo**	**3.01**	**48**	P	**Pn**	**23 05 42.9**	**+1.3**
	50nm,0.3s,baz=263,slow=5.5,SNR=248						
SDV				S	**Sn**	**23 06 20.1**	**+1.1**
	59nm,0.3s,baz=344,slow=10.0,SNR=23						
ELOV	**Elorza**	**3.38**	**87**	⇓iP	**Pn**	**23 05 47.8**	**+1.5**
ELOV				eS	**Sn**	**23 06 26.7**	**-0.5**
VIRV	**Villa del Rosa**	**3.66**	**7**	i P	**Pn**	**23 05 48.3**	**-1.7**
VIRV				eS	**Sn**	**23 06 29.0**	**-4.8**
QARV	**Quebrada Arrib**	**4.07**	**35**	⇓iP	**Pn**	**23 05 55.8**	**+0.6**
SANV	**Sanarito**	**4.23**	**51**	eP	**Pn**	**23 05 57.8**	**+0.5**
CURV	**Curarigua**	**4.27**	**42**	⇓eP	**Pn**	**23 05 58.1**	**+0.3**
DABV	**Dabajuro**	**4.61**	**29**	eP	**Pn**	**23 06 02.1**	**-0.1**
TEPV	**Terepaima**	**4.78**	**49**	⇓iP	**Pn**	**23 06 05.1**	**+0.6**
SIQV	**Siquisique**	**4.84**	**39**	eP	**Pn**	**23 06 04.9**	**-0.4**
BAUV	**El Baul**	**5.22**	**66**	⇓eP	**Pn**	**23 06 09.6**	**-0.6**
TURV	**Turiamo**	**6.13**	**54**	eP	**Pn**	**23 06 22.8**	**+0.6**
CAOV	**Caicara del Or**	**6.53**	**85**	⇓eP	**Pn**	**23 06 26.8**	**-0.7**
MERV	**Las Mercedes**	**6.94**	**69**	eP	**Pn**	**23 06 32.5**	**-0.5**
BCIP	**Isla Barro Col**	**7.26**	**289**	ePn	**Pn**	**23 06 32.2**	**-5.0**
BIRV	**Birongo**	**7.46**	**61**	eP	**Pn**	**23 06 39.2**	**-0.7**
CUPV	**Cœpira**	**7.70**	**65**	eP	**Pn**	**23 06 42.7**	**-0.4**
OTAV	**Otavalo**	**8.60**	**220**	Pn	**Pn**	**23 06 57.0**	**+2.0**
PCRV	**Puerto La Cruz**	**8.80**	**67**	P	**Pn**	**23 06 58.3**	**+0.8**
	0.7nm,0.3s,baz=292,slow=5.4,SNR=3.4						
TXAR	**Lajitas Array**	**36.62**	**311**	P	**P**	**23 11 43.5**	**-0.7**
	0.6nm,0.6s,mb3.4,baz=126,slow=9.0,SNR=10						
PHWY	**Pilot Hill**	**44.90**	**325**	eP	**P**	**23 12 53.6**	**+1.8**
	2.5nm,0.5s,mb4.1						
SCHQ	**Schefferville**	**48.09**	**5**	P	**P**	**23 13 17.2**	**+0.8**
	4.4nm,0.6s,mb4.3,baz=265,slow=12,SNR=9.7						
PDAR	**Pinedale Array**	**48.20**	**324**	P	**P**	**23 13 17.3**	**-0.1**
	0.2nm,0.5s,mb3.0,baz=126,slow=10,SNR=3.4						
YKA	**Yellowknife Ar**	**63.32**	**340**	P	**P**	**23 15 04.1**	**-0.6**
	0.6nm,0.5s,mb3.7,baz=132,slow=6.6,SNR=7.9						
DBIC	**Dimbokro**	**67.49**	**86**	P	**P**	**23 15 32.3**	**-0.2**
	1.2nm,0.6s,mb3.9,baz=225,slow=17,SNR=3.0						
TORD	**Torodi Ar. Bea**	**73.50**	**78**	P	**P**	**23 16 07.8**	**-1.0**
	0.1nm,0.3s,mb3.0,baz=286,slow=6.5,SNR=7.6						
ARCES	**ARCESS Array B**	**86.56**	**20**	P	**P**	**23 17 16.9**	**-0.9**
	3.0nm,0.9s,mb4.1,baz=276,slow=5.1,SNR=3.5						
MKAR	**Makanchi Array**	**122.21**	**20**	PKP	PKPdf	23 23 28.1	-1.0
	0.2nm,0.4s,baz=307,slow=2.6,SNR=8.4						
SONM	**Songino Array**	**125.55**	**1**	PKP	PKPdf	23 23 35.9	+0.4
	0.3nm,0.5s,baz=347,slow=1.7,SNR=3.1						
ASAR	**Alice Springs**	**149.32**	**234**	PKPbc	PKPbc	23 24 22.4	-1.4
	0.4nm,0.7s,baz=122,slow=3.3,SNR=7.1						

*IDC **08** 23:06:57.5±5.5, 2263S×17977W, h629km±66km, mb3.5/8, mb1 3.7/8, mb1mx3.4/17, mbtmp3.5/8, Error ellipse: s-maj=41.0km s-min=26.5km az=130.0*
*ISCJB **08** 23:06:59.8±3.1, 227S±02×1800W±02, h679km±40km, mb4.2/13, Error ellipse: s-maj=40.5km s-min=23.4km az=137.1*
*NEIC **08** 23:06:59.4±3.4, 2263S×17986W, h655km±42km, mb4.6/7, Error ellipse: s-maj=26.0km s-min=18.6km az=129.0*
ISC 08 23:06:59.8±3.3**, 226S**±02×**1799W**±02**, h658**km±44km**, n29, σ0.50**/22**, mb4.2**/13**, 6D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.66**	**270**	eP	**P**	**23 09 43.9**	**-0.4**
ARMA	**Armidale**	**26.59**	**247**	⇓iP	**P**	**23 11 49.9**	**+0.7**
EIDS	**Eidsvold**	**26.64**	**258**	eP	**P**	**23 11 49.2**	**-0.6**
	7.7nm,0.6s,mb4.4						
CNB	**Canberra Magne**	**29.59**	**238**	eP	**P**	**23 12 15.6**	**+0.5**
CTA	**Charters Tower**	**31.59**	**268**	⇓iP	**P**	**23 12 32.5**	**+0.2**
	12nm,0.4s,mb4.8						
CTA	**Charters Tower**	**31.59**	**268**	P	**P**	**23 12 32.4**	**+0.1**
	17nm,0.5s,mb4.9,baz=96,slow=11,SNR=48						
TOO	**Toolangi**	**33.23**	**235**	⇓iP	**P**	**23 12 45.8**	**0.0**
PMG	**Port Moresby**	**34.19**	**287**	eP	**P**	**23 12 54.2**	**+0.1**
	27nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**35.30**	**246**	⇓iP	**P**	**23 13 03.3**	**+0.3**
	5.0nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**35.30**	**246**	P	**P**	**23 13 03.4**	**+0.4**
	6.5nm,0.4s,mb4.5,baz=92,slow=10,SNR=22						
ASAR	**Alice Springs**	**42.35**	**259**	P	**P**	**23 13 59.5**	**+0.2**
	11nm,0.8s,mb4.4,baz=93,slow=8.1,SNR=81						
WB2	**Warramunga Arr**	**42.59**	**265**	⇓iP	**P**	**23 14 00.9**	**-0.4**
WRAB	**Tennant Creek**	**42.60**	**265**	eP	**P**	**23 14 00.5**	**-0.8**
	14nm,0.8s,mb4.5						
KAKA	**Kakadu**	**46.31**	**274**	⇓iP	x	23 14 10.7	
	9.5nm,0.4s						
FORT	**Forrest**	**46.86**	**248**	eP	**P**	**23 14 33.0**	**-0.5**
	18nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**51.04**	**265**	eP	**P**	**23 15 04.8**	**+0.5**
	7.6nm,0.8s,mb4.0						
NWAO	**Narrogin (SRO)**	**55.86**	**245**	P	**P**	**23 15 37.5**	**-0.4**
	7.8nm,0.9s,mb3.9,baz=71,slow=3.9,SNR=3.2						
PETK	**Petropavlovsk-**	**77.89**	**346**	P	**P**	**23 17 52.4**	**+0.8**
	3.5nm,0.8s,mb3.9,baz=177,slow=8.7,SNR=3.4						
NVAR	**Mina Array Bea**	**83.77**	**44**	P	**P**	**23 18 21.9**	**-0.1**
	1.0nm,0.8s,mb3.4,baz=219,slow=8.8,SNR=5.7						
NVAR	**Mina Array Bea**	**83.77**	**44**	P	**P**	**23 18 21.9**	**-0.1**
TXAR	**Lajitas Array**	**89.67**	**58**	P	**P**	**23 18 50.4**	**+0.3**
	1.0nm,0.8s,mb3.7,baz=205,slow=5.5,SNR=10						
TXAR	**Lajitas Array**	**89.67**	**58**	P	**P**	**23 18 50.4**	**+0.3**
PDAR	**Pinedale Array**	**91.71**	**44**	P	**P**	**23 18 58.3**	**-0.8**
	0.7nm,0.8s,mb3.6,baz=187,slow=3.7,SNR=4.6						
HFS	**Hagfors**	**141.32**	**349**	PKhKP		23 25 12.8	
	1.9nm,0.7s,baz=354,slow=4.3,SNR=5.1						
AKASG	**Malin Array Be**	**143.95**	**328**	PKhKP		23 25 18.3	
	0.5nm,0.3s,baz=41,slow=4.1,SNR=4.3						
AKASG				PKP	PKPdf	23 25 21.4	-0.5
	0.6nm,0.4s,baz=46,slow=4.6,SNR=4.1						
BRTR	**Keskin Array B**	**146.88**	**309**	PKPbc	PKPbc	23 25 31.0	+0.6
	0.4nm,0.7s,baz=74,slow=5.1,SNR=3.0						
EKA	**Eskdalemuir Ar**	**147.25**	**3**	PKPbc	PKPbc	23 25 31.1	+0.3
	2.0nm,0.7s,baz=341,slow=3.7,SNR=4.9						
CLL	**Collm**	**149.67**	**344**	i PKPbc	PKPbc	23 25 38.1	+1.2
TORD	**Torodi Ar. Bea**	**170.45**	**189**	PKPab	PKPab	23 27 16.7	+0.2
	0.5nm,0.7s,baz=184,slow=4.3,SNR=3.4						

*ISCJB **08** 23:08:23.8±0.5, 2774N±006×1401E±02, h499km±7km, mb3.5/9, Error ellipse: s-maj=23.9km s-min=7.3km az=167.2*
*IDC **08** 23:08:23.6±0.6, 2771N×14000E, h481km±9km, mb3.1/9, mb1 3.2/12, mb1mx3.1/23, mbtmp3.1/12, Error ellipse: s-maj=27.3km s-min=12.0km az=73.0*
*NEIC **08** 23:08:24.6±2.2, 2778N×14021E, h502km±71km, mb4.4/1, Error ellipse: s-maj=169.4km s-min=17.7km az=66.0*
*JMA **08** 23:08:25.5±0.3, 2792N×14056E, h498km±4km, M4.1*
ISC 08 23:08:25.1±0.5**, 2781N**±006×**1403E**±02**, h498**km±7km**, n29, σ1.20**/37**, mb3.5**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.81**	**113**	P	**P**	**23 09 29.0**	**-0.1**
	24nm,0.3s,baz=332,slow=8.7,SNR=11						
CBIJ				S	**S**	**23 10 18.6**	**-2.4**
	141nm,0.3s,baz=322,slow=23,SNR=22						
CBIJ	**Chichi jima**	**1.81**	**113**	P	**P**	**23 09 29.4**	**+0.3**
CBIJ				eS	**S**	**23 10 19.3**	**-1.7**
JHHJ	**Haha-jima-NKT**	**2.03**	**125**	P	**P**	**23 09 30.9**	**+0.7**
JHHJ				eS	**S**	**23 10 22.5**	**-0.5**
BSO1	**Boso 1**	**6.85**	**5**	P	**P**	**23 10 10.9**	**+1.4**
BSO3	**Boso 3**	**6.98**	**1**	eS	**S**	**23 11 36.2**	**-1.3**
JIE	**Ise**	**7.25**	**336**	P	**P**	**23 10 15.9**	**+2.3**
JKN2	**Miekihoku**	**7.29**	**333**	P	**P**	**23 10 15.5**	**+1.6**
JOD2	**Odawara 2**	**7.51**	**352**	P	**P**	**23 10 17.1**	**+0.9**
JHU	**Hanno**	**8.07**	**354**	P	**P**	**23 10 22.8**	**+0.9**
JHU				eS	**S**	**23 11 56.5**	**-1.4**
JRY	**Ryogami san**	**8.27**	**352**	P	**P**	**23 10 24.6**	**+0.5**
JRY				eS	**S**	**23 12 01.5**	**-0.3**
JYT	**Yasato**	**8.40**	**359**	P	**P**	**23 10 26.3**	**+0.9**
JAG	**Ashikaga**	**8.62**	**355**	P	**P**	**23 10 27.4**	**-0.3**
JAG				eS	**S**	**23 12 04.0**	**-4.5**
JHO	**Hitachi**	**8.78**	**1**	P	**P**	**23 10 30.6**	**+1.2**
JHO				eS	**S**	**23 12 09.7**	**-1.9**
MJAR	**Matsushiro Arr**	**8.89**	**349**	P	**P**	**23 10 29.6**	**-0.9**
	2.0nm,0.3s,baz=164,slow=10,SNR=16						
MJAR				S	**S**	**23 12 11.7**	**-2.0**
	0.4nm,0.3s,baz=197,slow=26,SNR=3.7						
MAJO	**Matsushiro**	**8.89**	**349**	eP	**P**	**23 10 31.0**	**+0.5**
	9.8nm,0.5s						
MAT	**Matsushiro**	**8.89**	**349**	P	**P**	**23 10 31.3**	**+0.8**
JHS	**Saijyo**	**9.44**	**321**	P	**P**	**23 10 37.3**	**+0.9**
JMK	**Ichinoseki**	**11.14**	**4**	P	**P**	**23 10 56.5**	**+2.2**
KSRS	**Korea Array**	**14.18**	**316**	P	**P**	**23 11 22.6**	**-3.9**
	0.3nm,0.3s,baz=121,slow=10,SNR=3.7						
SONM	**Songino Array**	**33.05**	**316**	P	**P**	**23 14 17.8**	**-0.6**
	0.5nm,0.5s,mb3.2,baz=122,slow=8.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**47.86**	**319**	P	**P**	**23 16 15.5**	**-1.3**
	1.1nm,0.3s,mb3.6,baz=113,slow=7.1,SNR=7.5						
MKAR	**Makanchi Array**	**48.74**	**309**	P	**P**	**23 16 22.7**	**-0.8**
	0.5nm,0.3s,mb3.3,baz=88,slow=10,SNR=21						
MKAR				ScP	ScP	23 20 45.9	-0.4
	0.4nm,0.5s,baz=86,slow=4.4,SNR=6.1						
MKAR	**Makanchi Array**	**48.74**	**309**	P	**P**	**23 16 22.7**	**-0.8**
MKAR				ScP	ScP	23 20 45.9	-0.4
ASAR	**Alice Springs**	**51.54**	**188**	P	**P**	**23 16 43.1**	**-1.2**
	1.9nm,0.4s,mb3.8,baz=1.3,slow=4.9,SNR=29						
STKA	**Stephens Creek**	**59.36**	**179**	P	**P**	**23 17 38.1**	**-0.5**
	1.4nm,0.4s,mb3.7,baz=0.0,slow=7.1,SNR=4.9						
YKA	**Yellowknife Ar**	**72.31**	**28**	P	**P**	**23 19 01.3**	**+2.1**
	0.2nm,0.4s,mb3.0,baz=295,slow=5.8,SNR=6.3						
ARCES	**ARCESS Array B**	**72.32**	**340**	P	**P**	**23 18 59.8**	**+0.6**
	2.2nm,0.9s,mb3.7,baz=81,slow=7.7,SNR=5.3						
HFS	**Hagfors**	**82.11**	**336**	P	**P**	**23 19 51.6**	**-1.1**
	2.7nm,1.0s,mb3.7,baz=86,slow=8.8,SNR=4.3						
NOA	**NORSAR Array B**	**82.33**	**338**	P	**P**	**23 19 53.2**	**-0.6**
	1.1nm,1.0s,mb3.4,baz=36,slow=5.2,SNR=2.7						

*ISK **08** 23:18:54.5, 3765N×3575E, h14km, ML2.1*
*CSEM **08** 23:18:55.9±0.5, 3756N×3571E, h15km, MD2.6, Error ellipse: s-maj=12.6km s-min=6.9km az=168.0*
*ISCJB **08** 23:18:56.8±1.3, 3759N±008×3566E±006, h10km±9km, Error ellipse: s-maj=14.6km s-min=7.1km az=160.2*
*DDA **08** 23:18:58.5, 3752N×3568E, h7km±1km, Md2.6*
ISC 08 23:18:57.1±1.3**, 3759N**±009×**3567E**±007**, h12**km±9km**, n6, σ1.27**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.17**	**131**	ePG	**Pg**	**23 18 59.4**	**-1.4**
KOZT				eSG	**Sg**	**23 19 01.8**	**-1.7**
ANDN	**Andirin**	**0.54**	**91**	i P	**Pg**	**23 19 08.2**	**+0.6**
ANDN				i S	**Sg**	**23 19 17.0**	**+2.3**
ANDN	**Andirin**	**0.54**	**91**	i P	**Pg**	**23 19 08.1**	**+0.5**
ANDN				i S	**Sg**	**23 19 17.0**	**+2.3**
CEYT	**Ceyhan**	**0.58**	**174**	ePG	**Pg**	**23 19 07.5**	**-0.9**
CEYT				eSG	**Sg**	**23 19 17.5**	**+1.4**
KARA	**Karaisali**	**0.59**	**236**	ePG	**Pg**	**23 19 08.4**	**-0.1**
KARA				eSG	**Sg**	**23 19 17.8**	**+1.5**
MERS	**Mersin**	**1.16**	**232**	ePN	**Pn**	**23 19 17.9**	**-1.3**
MERS				eSN	**Sn**	**23 19 35.0**	**-0.1**

IDC 08 23:22:35.0±2.6**, 1408S**×**16788E, h0**km**, mb4.1**/5**, mb1 4.1**/5**, mb1mx3.9**/16**, mbtmp4.1**/5**, Error ellipse: s-maj=99.7km s-min=32.9km az=125.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.86**	**229**	P	P	23 28 44.8	+0.6
	1.5nm,0.5s,baz=41,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**33.46**	**248**	P	P	23 29 15.6	-0.4
	0.8nm,0.4s,baz=77,slow=9.2,SNR=18						
SONM	**Songino Array**	**82.33**	**323**	P	P	23 34 59.6	+1.0
	0.3nm,0.3s,baz=117,slow=5.0,SNR=5.8						
MKAR	**Makanchi Array**	**97.15**	**316**	P	P	23 36 08.9	-0.4
	0.7nm,0.6s,baz=93,slow=5.8,SNR=5.3						
ZALV	**Zalesovo Beam**	**97.23**	**324**	P	P	23 36 08.8	-0.7
	0.5nm,0.6s,baz=90,slow=1.4,SNR=3.5						
ARCES	**ARCESS Array B**	**119.78**	**346**	PKP	PKPdf	23 41 26.1	-0.5
	1.3nm,0.8s,baz=57,slow=3.3,SNR=6.8						
KEST	**Kesra**	**151.08**	**322**	PKPbc	PKPbc	23 42 30.5	+0.1
	5.0nm,1.1s,baz=96,slow=9.2,SNR=3.2						

*IDC **08** 23:37:17.7±1.6, 1216N×12545E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/19, mbtmp3.6/6, Error ellipse: s-maj=63.3km s-min=25.6km az=69.0*
*ISCJB **08** 23:37:20.7±0.8, 1236N±005×12571E±007, h33km, mb3.6/7, Error ellipse: s-maj=10.5km s-min=6.9km az=168.5*
ISC 08 23:37:22.9±0.8**, 1231N**±005×**12563E**±008**, h35**km**, n16, σ1.29**/20**, mb3.6**/7**, 1C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.96**	**282**	eP	**Pn**	**23 37 38.0**	**-1.9**
CNP				eS	**Sn**	**23 37 51.7**	**-0.7**
PLP	**Palo**	**1.30**	**209**	⇓eP	**Pn**	**23 37 43.0**	**-1.6**
PLP				eS	**Sn**	**23 38 01.4**	**+0.5**
OCLP	**Ormoc**	**1.60**	**219**	eP	**Pn**	**23 37 51.9**	**+3.2**
PVCP	**Virac**	**1.92**	**312**	eP	**Pn**	**23 37 51.5**	**-1.6**
PVCP				eS	**Sn**	**23 38 18.6**	**+2.4**
MSLP	**Maasin**	**2.29**	**199**	eP	**Pn**	**23 37 58.2**	**0.0**
MSLP				eS	**Sn**	**23 38 30.2**	**+5.0**
SCPH	**Surigao**	**2.52**	**183**	⇓eP	**Pn**	**23 38 00.0**	**-1.3**
RCP	**Roxas**	**2.92**	**256**	⇑eP	**Pn**	**23 38 07.6**	**+0.8**
GUIM	**Jordan**	**3.42**	**241**	eP	**Pn**	**23 38 14.8**	**+1.1**
MATI	**Mati**	**5.37**	**173**	eP	**Pn**	**23 38 43.0**	**+2.5**
CMAR	**Chiang Mai Arr**	**26.43**	**287**	P	**P**	**23 42 55.0**	**-1.5**
	0.6nm,0.4s,mb3.5,baz=100,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**36.66**	**167**	P	**P**	**23 44 25.3**	**-1.0**
	0.2nm,0.5s,mb3.2,baz=346,slow=7.2,SNR=4.1						
SONM	**Songino Array**	**38.90**	**339**	P	**P**	**23 44 45.3**	**+0.3**
	0.3nm,0.6s,mb3.2,baz=152,slow=9.8,SNR=3.9						
MKAR	**Makanchi Array**	**50.04**	**322**	P	**P**	**23 46 14.7**	**+0.7**
	0.4nm,0.4s,mb3.8,baz=111,slow=8.9,SNR=10						
ZALV	**Zalesovo Beam**	**52.55**	**331**	P	**P**	**23 46 32.5**	**-0.2**
	0.3nm,0.4s,mb3.6,baz=130,slow=4.3,SNR=2.8						
KURK	**Kurchatov**	**54.04**	**325**	P	**P**	**23 46 44.1**	**+0.3**
	1.4nm,0.4s,mb4.2,baz=125,slow=7.6,SNR=6.7						
BVAR	**Borovoye Array**	**59.64**	**325**	P	**P**	**23 47 24.4**	**+1.0**
	0.5nm,0.6s,mb3.8,baz=133,slow=6.3,SNR=3.6						

*ISCJB **08** 23:46:17.2±0.6, 762S±008×3756E±0.10, h10km, mb3.9/8, Error ellipse: s-maj=14.0km s-min=11.3km az=5.2*
*IDC **08** 23:46:17.6±0.9, 761S×3759E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.8/26, mbtmp3.9/11, ML3.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/32, Error ellipse: s-maj=30.1km s-min=16.9km az=119.0*
*NEIC **08** 23:46:18.4±0.9, 756S×3755E, h10km, mb3.8/1, Error ellipse: s-maj=14.8km s-min=11.9km az=197.0*
ISC 08 23:46:19.2±0.6**, 763S**±008×**3756E**±009**, h10**km**, n15, σ0.70**/14**, mb3.9**/8**, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.92**	**230**	Pn	**Pn**	**23 49 08.8**	**-0.6**
	0.3nm,0.3s,baz=57,slow=11,SNR=10						
LSZ				Lg		23 52 27.3	
	0.6nm,0.3s,baz=142,slow=19,SNR=3.1						
LSZ	**Lusaka**	**11.92**	**230**	ePn	**Pn**	**23 49 08.4**	**-1.0**
LSZ				eLg		23 52 34.2	
OPO	**Ambohidratompo**	**14.35**	**140**	Pn	**Pn**	**23 49 42.4**	**-0.1**
	0.9nm,0.3s,baz=301,slow=12,SNR=12						
ABPO	**Ambohimpanom**	**14.71**	**141**	ePn	**Pn**	**23 49 47.5**	**0.0**
	1.6nm,0.4s						
LBTB	**Lobatse**	**20.73**	**212**	P	**P**	**23 51 00.5**	**+0.5**
	4.0nm,0.8s,baz=30,slow=12,SNR=6.5						
LBTB	**Lobatse**	**20.73**	**212**	eP	**P**	**23 50 60.0**	**-0.1**
	3.6nm,0.8s						
TSUM	**Tsumeb**	**22.55**	**237**	P	**P**	**23 51 19.7**	**0.0**
	2.0nm,1.1s,mb3.5,baz=86,slow=15,SNR=2.7						
BOSA	**Boshof**	**23.89**	**208**	P	**P**	**23 51 33.6**	**+0.4**
	2.3nm,0.5s,mb3.8,baz=238,slow=17,SNR=11						
TORD	**Torodi Ar. Bea**	**41.18**	**300**	LR	LR	00 13 03.9	
	comp=Z,52nm,20.0s,baz=330,slow=39						
BRTR	**Keskin Array B**	**47.25**	**356**	P	**P**	**23 54 51.3**	**-1.3**
	1.6nm,1.1s,mb3.9,baz=188,slow=3.7,SNR=5.0						
GERES	**GERESS Array B**	**60.01**	**342**	P	**P**	**23 56 26.7**	**+0.7**
	0.7nm,0.8s,mb3.7,baz=151,slow=3.0,SNR=5.0						
ESDC	**Sonseca Array**	**60.73**	**324**	P	**P**	**23 56 32.6**	**+1.4**
	1.3nm,1.0s,mb4.0,baz=136,slow=6.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**65.84**	**66**	P	**P**	**23 57 06.0**	**+0.5**
	0.7nm,0.5s,mb3.9,baz=262,slow=7.8,SNR=4.8						
MKAR	**Makanchi Array**	**67.17**	**32**	P	**P**	**23 57 12.9**	**-0.5**
	2.5nm,0.8s,mb4.3,baz=226,slow=6.1,SNR=16						
ARCES	**ARCESS Array B**	**77.44**	**356**	P	**P**	**23 58 13.7**	**-0.6**
	5.0nm,1.0s,mb4.4,baz=165,slow=7.5,SNR=3.8						

*ISCJB **08** 23:48:09.1±0.7, 760S±007×3760E±009, h10km, mb3.8/4, Error ellipse: s-maj=13.2km s-min=9.8km az=30.2*
*IDC **08** 23:48:09.6±1.2, 766S×3754E, h0km, mb3.9/5, mb1 3.9/7, mb1mx3.6/25, mbtmp3.9/7, ML3.8/2, Error ellipse: s-maj=36.2km s-min=20.7km az=114.0*
*NEIC **08** 23:48:11.4±0.8, 770S×3750E, h10km, mb3.9/1, Error ellipse: s-maj=15.2km s-min=11.7km az=220.0*
ISC 08 23:48:11.1±0.6**, 765S**±008×**375E**±01**, h10**km**, n13, σ0.76**/15**, mb3.8**/4**, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.88**	**230**	Pn	**Pn**	**23 51 00.3**	**-0.3**
	0.3nm,0.3s,baz=48,slow=16,SNR=3.0						
LSZ	**Lusaka**	**11.88**	**230**	Pn	**Pn**	**23 51 00.3**	**-0.3**
LSZ				Sn	**Sn**	**23 53 19.4**	**+6.0**
OPO	**Ambohidratompo**	**14.36**	**140**	Pn	**Pn**	**23 51 34.0**	**-0.6**
	0.7nm,0.3s,baz=301,slow=15,SNR=5.0						
OPO				Sn	**Sn**	**23 54 07.0**	**-7.1**
	0.2nm,0.3s,baz=261,slow=13,SNR=2.1						
ABPO	**Ambohimpanom**	**14.72**	**141**	ePn	**Pn**	**23 51 39.9**	**+0.4**
	1.2nm,0.4s						
LBTB	**Lobatse**	**20.69**	**212**	P	**P**	**23 52 51.7**	**+0.2**
	6.3nm,1.1s,baz=32,slow=12,SNR=3.9						
LBTB	**Lobatse**	**20.69**	**212**	eP	**P**	**23 52 51.4**	**-0.1**
	6.5nm,1.0s						
BOSA	**Boshof**	**23.86**	**208**	P	**P**	**23 53 25.4**	**+0.7**
	2.0nm,0.5s,mb3.8,baz=33,slow=14,SNR=6.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DBIC	**Dimbokro**	**44.59**	**288**	P	**P**	**23 56 23.5**	**-0.4**
	1.5nm,0.9s,mb3.8,baz=84,slow=10,SNR=2.8						
BRTR	**Keskin Array B**	**47.27**	**356**	P	**P**	**23 56 45.9**	**+1.4**
	0.9nm,1.0s,mb3.6,baz=170,slow=8.8,SNR=3.5						
DBAD	**Bademkaya**	**48.57**	**4**	*i* P	**P**	**23 56 58.6**	**+3.9**
DAGI	**Agillar**	**48.65**	**4**	*i* P	**P**	**23 56 55.4**	**+0.2**
ARTV	**Artvin**	**48.76**	**4**	*i* P	**P**	**23 56 54.8**	**-1.3**
MKAR	**Makanchi Array**	**67.20**	**32**	P	**P**	**23 59 05.1**	**-0.3**
	1.5nm,0.8s,mb4.1,baz=232,slow=5.5,SNR=7.6						

CASC 08 23:55:25.5±1.6**,1340N**×**8856W,h141**km±7km**,MD3.9, ML3.7,7C-8D,El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.28**	**84**	⇑*e*P	x	23 55 45.4	
BLLM	**Bellamira**	**0.31**	**82**	*e*P	x	23 55 44.7	
BLLM				⇓*e*P	x	23 55 46.1	
SNVI	**San Vicente**	**0.35**	**308**	⇓*e*P	x	23 55 45.6	
SNVI				*e*S	x	23 56 01.4	
CAHU	**Cacacuatique**	**0.50**	**42**	⇓*i*P	x	23 55 46.1	
CAHU				*e*S	x	23 56 02.2	
LFRS	**El Faro**	**0.54**	**295**	⇑*i*P	x	23 55 46.1	
LFRS				*e*S	x	23 56 02.4	
LBRS	**Las Brisas**	**0.58**	**306**	⇑*e*P	x	23 55 46.6	
CNCH	**Conchagua**	**0.71**	**100**	⇓*i*P	x	23 55 47.1	
CNCH				*e*S	x	23 56 04.1	
BOQS	**Boqueron**	**0.78**	**296**	⇓*e*P	x	23 55 48.4	
BOQS				*e*S	x	23 56 06.0	
SNJE	**San Jose**	**1.12**	**295**	⇑*e*P	x	23 55 50.7	
SNJE				*e*S	x	23 56 11.9	
SBLS	**San Blas**	**1.13**	**293**	⇓*e*P	x	23 55 51.1	
RTR	**El Retiro**	**1.17**	**295**	⇓*e*P	x	23 55 50.6	
RBDL	**Robledal**	**1.31**	**303**	⇑*e*P	x	23 55 52.8	
CRIN	**San Cristobal**	**1.62**	**115**	⇓*e*P	Pn	23 55 56.0	+0.2
CRIN				AML	AML	23 56 25.9	
	comp=N,1μm,0.2s						
CNGN	**Cerro Negro**	**2.02**	**116**	⇑*e*P	Pn	23 56 00.1	-0.1
CNGN				AML	AML	23 56 35.2	
	comp=N,369nm,0.2s						
COPN	**Copaltepe**	**2.27**	**122**	⇑*e*P	Pn	23 56 03.6	+0.3
XAVN	**Gruta Xavier**	**2.50**	**119**	*e*S	Sn	23 56 40.1	+2.5
VCR	**Vista de Mar**	**4.33**	**138**	*e*P	Pn	23 56 30.9	+1.0
JCR	**Jicaral**	**4.88**	**136**	*e*P	Pn	23 56 38.6	+1.4
JCR				*e*S	Sn	23 57 33.7	+0.6
CGA2	**Cerro Gallo 2**	**5.23**	**130**	*e*P	Pn	23 56 44.5	+2.6
CGA2				*e*S	Sn	23 57 43.0	+1.7
PRS1	**Puriscal**	**5.37**	**129**	*e*P	Pn	23 56 46.0	+2.3
URSC	**Urasca**	**5.87**	**127**	*e*P	Pn	23 56 53.8	+3.4
URSC				*e*S	Sn	23 58 00.4	+3.7

MEX 09 00:12:51.7±0.8**,1707N**×**10026W,h7**km±16km**,MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.03**	**203**	*i* P	Pg	00 12 51.9	-1.1
CAIG				*i* S	Sg	00 12 53.0	-1.0
ACX	**Acapulco**	**0.38**	**122**	*i* P	Pg	00 12 58.9	-0.2
ACX				*i* S	Sg	00 13 04.7	+0.4
ZIIG	**Zihuatanejo**	**1.27**	**295**	*i* P	Pn	00 13 12.9	-3.0
ZIIG				*i* S	Sb	00 13 27.6	-4.9
UTMO	**Huajuapan**	**2.46**	**72**	*e*P	Pn	00 13 29.4	-2.9
UTMO				*i* S	Sn	00 13 57.5	-5.1

KRSC 09 00:23:34.1±1.9**,5356N**×**16615E,h41**km±41km**,ML3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**2.79**	**293**	P	Pn	00 24 18.8	+2.6
KBTR	**Krutoberegovo**	**3.28**	**325**	P	Pn	00 24 23.6	+0.7
SPN	**Mys Shipunski**	**3.70**	**265**	P	Pn	00 24 31.6	+2.9
SPN				*i* S	Sn	00 25 13.9	+2.9
KMNR	**Kamenistaya**	**4.08**	**305**	P	Pn	00 24 38.0	+4.2
NLC	**Nalytchevo**	**4.09**	**267**	P	Pn	00 24 37.3	+3.2
NLC				*i* S	Sn	00 25 23.1	+2.4
AVH	**Avacha**	**4.45**	**269**	P	Pn	00 24 42.6	+3.7
RUS	**Russkaya**	**4.75**	**259**	P	Pn	00 24 46.4	+3.3
RUS				*i* S	Sn	00 25 38.4	+1.6
GNL	**Ganaly**	**4.89**	**275**	P	Pn	00 24 49.6	+4.6

KRSC 09 00:33:05.4±1.8**,5545N**×**16616E,h31**km±31km**,ML4.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**2.03**	**293**	P	Pn	00 33 37.4	0.0
MKZ	**Mys Kozlova**	**2.70**	**252**	*e*P	Pn	00 33 49.1	+2.4
MKZ				*i* S	Sn	00 34 21.0	+2.7
ZLN	**Zelenaya**	**3.08**	**283**	P	Pn	00 33 54.8	+3.0
CIRR	**Tsirk**	**3.13**	**285**	P	Pn	00 33 55.6	+3.1
KMNR	**Kamenistaya**	**3.37**	**278**	P	Pn	00 33 59.4	+3.5
KPT	**Kopyto**	**3.40**	**281**	P	Pn	00 33 59.4	+3.2
TUMR	**Tumrok**	**3.44**	**270**	P	Pn	00 34 00.4	+3.7
SPN	**Mys Shipunski**	**4.30**	**239**	P	Pn	00 34 11.2	+2.6
SPN				*i* S	Sn	00 34 59.9	+2.3
NLC	**Nalytchevo**	**4.60**	**243**	P	Pn	00 34 15.1	+2.4
NLC				*i* S	Sn	00 35 06.4	+1.5
AVH	**Avacha**	**4.86**	**246**	P	Pn	00 34 20.3	+4.0
GNL	**Ganaly**	**5.09**	**253**	P	Pn	00 34 23.8	+4.3

*NEIC **09** 00:35:39.7±4.4, 5622S×2696W, h60km±41km, mb4.3/1, Error ellipse: s-maj=16.7km s-min=12.6km az=89.0*
*ISCJB **09** 00:35:40.1±4.0, 562S±01×270W±03, h79km±38km, mb4.2/9, Error ellipse: s-maj=26.4km s-min=19.7km az=178.0*
*IDC **09** 00:35:44.8±0.9, 5626S×2698W, h107km±7km, mb4.0/9, mb1 4.0/9, mb1mx3.9/16, mbtmp4.0/9, Error ellipse: s-maj=21.7km s-min=15.6km az=95.0*
ISC 09 00:35:41.3±3.6**,562S**±01×**270W**±03**,h73**km±34km**,n18, σ0s74**/17**,mb4.2**/9**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.59**	**158**	*e*P	**Pn**	**00 39 29.9**	**+1.2**
VNA1				*e*		00 39 32.0	
VNA1				*e*		00 39 35.0	
VNA3	**Neumayer Olymp**	**16.79**	**161**	*e*P	**Pn**	**00 39 31.7**	**+0.5**
VNA3				*e*		00 39 33.6	
VNA3				*e*		00 39 36.4	
VNA3				*e*S	**S**	**00 42 23.8**	**-20**
VNA2	**Neumayer--Watz**	**16.98**	**158**	*e*P	**Pn**	**00 39 33.4**	**-0.2**
	baz=314,slow=13						
VNA2				*e*		00 39 35.1	
VNA2				*e*		00 39 37.6	
VNA2				*e*S	**S**	**00 42 30.3**	**-17**
SNAA	**Sanae**	**18.53**	**156**	*e*P	**Pn**	**00 39 50.5**	**-1.9**
	17nm,0.8s						
QSPA	**South Pole Qui**	**34.03**	**180**	P	**P**	**00 42 17.7**	**+0.2**
	4.6nm,0.4s,mb4.7,baz=194,slow=3.7,SNR=94						
QSPA				PcP	PcP	00 44 52.7	-0.7
	1.2nm,0.6s,baz=283,slow=1.7,SNR=3.6						
QSPA				ScP	ScP	00 48 27.1	-4.3
	0.9nm,0.7s,baz=181,slow=0.8,SNR=7.4						
CPUP	**Villa Florida**	**37.02**	**311**	P	**P**	**00 42 43.5**	**-0.1**
	0.5nm,0.3s,mb3.9,baz=128,slow=6.5,SNR=4.0						
CPUP				pP	pP	00 43 07.9	+6.6
	0.2nm,0.4s,baz=135,slow=4.3,SNR=1.6						
MAW	**Mawson**	**39.94**	**143**	P	**P**	**00 43 07.5**	**-0.1**
	1.1nm,0.3s,mb4.1,baz=282,slow=9.3,SNR=4.0						
BOSA	**Boshof**	**45.89**	**75**	P	**P**	**00 43 56.2**	**0.0**
	2.0nm,0.8s,mb3.9,baz=209,slow=13,SNR=3.7						
BOSA	**Boshof**	**45.89**	**75**	P	**P**	**00 43 56.2**	**0.0**
VNDA	**Vanda**	**46.41**	**183**	P	**P**	**00 43 59.8**	**+0.2**
	7.2nm,0.7s,mb4.5,baz=191,slow=5.0,SNR=49						
LBTB	**Lobatse**	**48.93**	**73**	P	**P**	**00 44 20.0**	**+0.2**
	4.3nm,0.7s,mb4.5,baz=211,slow=6.8,SNR=8.4						
DBIC	**Dimbokro**	**65.27**	**24**	P	**P**	**00 46 14.0**	**-1.0**
	1.8nm,0.9s,mb3.9,baz=173,slow=7.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**73.14**	**29**	P	**P**	**00 47 04.7**	**+1.1**
	1.8nm,0.6s,mb4.1,baz=197,slow=6.4,SNR=22						
TORD				pP	pP	00 47 31.4	+8.3
	1.8nm,0.5s,baz=201,slow=6.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**73.14**	**29**	P	**P**	**00 47 04.7**	**+1.1**
TORD				pP	pP	00 47 31.4	+8.3
ASAR	**Alice Springs**	**98.79**	**162**	P	**P**	**00 49 12.6**	**-0.2**
	0.4nm,0.5s,mb4.2,baz=183,slow=4.4,SNR=7.1						
YKA	**Yellowknife Ar**	**136.38**	**318**	PKP	PKPdf	00 54 52.6	-0.2
	0.2nm,0.6s,baz=125,slow=2.4,SNR=6.5						
YKA				pPKP	pPKPdf	00 55 20.2	+6.5
	0.2nm,0.6s,baz=127,slow=2.4,SNR=2.2						
YKA				SKPbc	SKPbc	00 58 13.9	-4.4
	0.6nm,0.8s,baz=127,slow=2.6,SNR=8.5						
ZALV	**Zalesovo Beam**	**142.33**	**64**	PKP	PKPdf	00 55 05.0	+1.0
	0.8nm,0.5s,baz=258,slow=4.2,SNR=4.6						
SONM	**Songino Array**	**150.61**	**87**	PKPbc	PKPbc	00 55 23.2	-0.3
	0.7nm,0.8s,baz=206,slow=2.6,SNR=4.6						
SONM				PKPab	PKPab	00 55 29.2	-1.5
	0.3nm,0.4s,baz=219,slow=3.0,SNR=3.9						

NEIC 09 00:46:17.4,3778S×**17681E,h4**km**,ML3.8**(WEL)**,After WEL.,North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.23**	**207**	P	Pg	00 46 22.3	+0.4
EDRZ	**Edgecumbe**	**0.33**	**190**	P	Pg	00 46 24.1	+0.3
EDRZ				S	Sg	00 46 28.6	+0.5
WIZ	**White Island**	**0.39**	**50**	P	Pg	00 46 25.5	+0.6
LIRZ	**Lichensteins R**	**0.40**	**236**	P	Pg	00 46 25.9	+0.8
TGRZ	**Tauranga**	**0.44**	**276**	P	Pg	00 46 26.3	+0.5
MKRZ	**Makatiti**	**0.45**	**217**	P	Pg	00 46 26.9	+0.9
KARZ	**Kaharoa**	**0.51**	**242**	P	Pg	00 46 27.7	+0.6
TAZ	**Tarawera**	**0.51**	**208**	P	Pg	00 46 28.2	+1.0
URZ	**Urewera**	**0.54**	**154**	P	Pg	00 46 27.2	-0.4
MWZ	**Matawai**	**0.79**	**134**	P	Pg	00 46 32.1	-0.5
TOZ	**Tahuroa Road**	**1.04**	**272**	P	Pg	00 46 35.8	-1.4
MXZ	**Matakaoa Point**	**1.21**	**80**	P	Pg	00 46 40.5	0.0
KUZ	**Kuaotunu**	**1.35**	**320**	P	Pn	00 46 39.6	-3.3
KNZ	**Kokohu**	**1.41**	**151**	P	Pn	00 46 45.2	+1.4
MKAZ	**Moumakai**	**1.47**	**297**	P	Pn	00 46 41.8	-2.7
OTAZ	**Otara**	**1.71**	**298**	P	Pn	00 46 51.6	+3.7
SNZO	**South Karori**	**3.88**	**204**	Pn	Pn	00 47 17.1	-0.6

*ISCJB **09** 01:21:26.2±0.3, 5148N±002×1603E±002, h0km, mb3.2/2, Error ellipse: s-maj=3.0km s-min=2.0km az=13.3*
*NEIC **09** 01:21:27.6±0.4, 5160N×1598E, h5km, ML3.0(BRA), ML3.4(FUR), ML3.9(SZGRF), Error ellipse: s-maj=5.7km s-min=5.2km az=203.0*
*BGR **09** 01:21:27.3±0.6, 5159N×1608E, h1km, ML3.4, Error ellipse: s-maj=6.7km s-min=3.3km az=20.0*
*WAR **09** 01:21:28.4, 5154N×1603E, ML3.1, Mining Induced*
*IDC **09** 01:21:28.2±0.7, 5152N×1604E, h0km, mb3.3/2, mb1 3.4/9, mb1mx3.3/27, mbtmp3.3/9, ML3.0/6, Error ellipse: s-maj=11.2km s-min=7.1km az=117.0*
*IPEC **09** 01:21:28.4±0.2, 5152N×1604E, h8km±1km, ML2.8/2, Error ellipse: s-maj=1.3km s-min=0.7km az=42.0*
*CSEM **09** 01:21:29.2±0.2, 5148N×1601E, h2km, ML3.7/9, Ms3.9, Error ellipse: s-maj=3.3km s-min=2.0km az=18.0*
*PRU **09** 01:21:29.1, 5148N×1600E, h0km*
*VIE **09** 01:21:31.4±0.5, 5127N×1589E, h0km, mb2.6/3, ML3.2/6, Ms3.9/1, Error ellipse: s-maj=3.8km s-min=3.3km az=102.0 77 km NE of Liberec Suspected Mining induced.*
ISC 09 01:21:27.4±0.3**,5153N**±002×**1603E**±002**,h0**km**,n79, σ1s08**/151**,mb3.2**/2**,11C-5D,Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**166**	*e*Pg	**Pg**	**01 21 41.6**	**+0.7**
KSP				*e*		01 21 44.4	
KSP				*e*Sg	**Sg**	**01 21 51.1**	**+1.1**
KSP				*e*		01 21 55.2	
KSP	**Ksiaz**	**0.70**	**166**	*e*Pg	**Pg**	**01 21 41.6**	**+0.7**
KSP				*e*Sg	**Sg**	**01 21 51.1**	**+1.1**
KSP	**Ksiaz**	**0.70**	**166**	*e*Pg	**Pg**	**01 21 41.5**	**+0.6**
KSP				Sg	**Sg**	**01 21 50.9**	**+0.9**
KSP	**Ksiaz**	**0.70**	**166**	*e*Pg	**Pg**	**01 21 41.5**	**+0.6**
KSP				*i* Sg	**Sg**	**01 21 51.1**	**+1.1**
KSP				*e*		01 21 55.1	
UPC	**Upice**	**1.02**	**181**	*e*PG	**Pg**	**01 21 47.4**	**+0.4**
UPC				*e*SG	**Sg**	**01 22 01.1**	**+0.9**
	comp=Z,218nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**171**	*e*Pg	**Pg**	**01 21 50.2**	**0.0**
DPC				*e*Sg	**Sg**	**01 22 06.6**	**+0.9**
DPC	**Dobruska-Polom**	**1.19**	**171**	*e*PG	**Pg**	**01 21 50.4**	**+0.1**
DPC				*e*SG	**Sg**	**01 22 05.6**	**-0.1**
	comp=Z,196nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**223**	*e*Pn	**Pn**	**01 21 53.8**	**+0.2**
PVCC				*e*Sg	**Sg**	**01 22 12.0**	**+0.9**
PVCC	**Panska Ves**	**1.36**	**223**	*e*PG	**Pg**	**01 21 53.5**	**0.0**
PVCC				*e*SG	**Sg**	**01 22 12.1**	**+1.0**
	comp=Z,394nm,0.4s						
BRG	**Berggiesshubel**	**1.47**	**244**	*e*Pn	**Pn**	**01 21 55.5**	**+0.4**
BRG				*e*Sg	**Sg**	**01 22 15.6**	**+1.1**
BRG	**Berggiesshubel**	**1.47**	**244**	*e*Pn	**Pn**	**01 21 55.4**	**+0.3**
BRG	**Berggiesshubel**	**1.47**	**244**	PN	**Pn**	**01 21 54.5**	**-0.6**
BRG				PG	**Pg**	**01 21 55.7**	**+0.2**
BRG				SG	**Sg**	**01 22 15.7**	**+1.2**
	comp=Z,254nm,0.3s						
RUE	**Ruedersdorf**	**1.69**	**305**	*e*Pn	**Pn**	**01 21 56.8**	**-1.3**
RUE				*e*Sg	**Sg**	**01 22 21.9**	**+0.3**
RUE	**Ruedersdorf**	**1.69**	**305**	*e*Pn	**Pn**	**01 21 56.8**	**-1.4**
RUE				*e*Sg	**Sg**	**01 22 21.9**	**+0.3**
FBE	**Freiberg**	**1.79**	**251**	*e*Pn	**Pn**	**01 22 00.7**	**+1.1**
FBE				*e*Sg	**Sg**	**01 22 25.0**	**+0.2**
PRU	**Pruhonice**	**1.81**	**212**	*e*Pn	**Pn**	**01 21 59.4**	**-0.4**
PRU	**Pruhonice**	**1.81**	**212**	*e*PN	**Pn**	**01 21 59.5**	**-0.3**
PRU				*e*PG	**Pg**	**01 22 01.4**	**-0.6**
PRU				*e*SG	**Sg**	**01 22 25.2**	**-0.2**
	comp=Z,118nm,0.3s						
CLL	**Collm**	**1.91**	**265**	*e*Pn	**Pn**	**01 22 00.4**	**-0.8**
CLL				*e*Pg	**Pg**	**01 22 03.0**	**-1.0**
CLL				*e*Sg	**Sg**	**01 22 29.0**	**+0.3**
CLL	**Collm**	**1.91**	**265**	*i* Pn	**Pn**	**01 22 00.4**	**-0.8**
	comp=Z,14nm,0.4s						
CLL				*e*Pg	**Pg**	**01 22 03.0**	**-1.0**
CLL				*i* x	x	01 22 07.8	
CLL				*e*Sg	**Sg**	**01 22 29.0**	**+0.3**
	comp=Z,93nm,0.6s						
CLL	**Collm**	**1.91**	**265**	*i* Pn	**Pn**	**01 22 00.4**	**-0.8**
CLL				*e*Pg	**Pg**	**01 22 03.0**	**-1.0**
CLL				*e*Sg	**Sg**	**01 22 29.0**	**+0.3**
RAC	**Raciborz**	**1.99**	**136**	*e*Pg	**Pg**	**01 22 06.1**	**+0.5**
RAC				*e*Sg	**Sg**	**01 22 31.9**	**+0.5**
OKC	**Ostrava-Krasne**	**2.16**	**141**	*e*Pn	**Pn**	**01 22 04.3**	**-0.3**
OKC	**Ostrava-Krasne**	**2.16**	**141**	Pn	**Pn**	**01 22 04.3**	**-0.3**
VRAC	**Vranov**	**2.25**	**171**	Pn	**Pn**	**01 22 06.4**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=333,slow=15,SNR=18						
VRAC				Lg		01 22 40.0	
	comp=Z,19nm,0.3s,baz=102,slow=20,SNR=20						
VRAC	**Vranov**	**2.25**	**171**	Pn	**Pn**	**01 22 06.4**	**+0.5**
VRAC				*e*Sg	**Sg**	**01 22 37.4**	**-2.3**
	comp=Z,51nm,0.3s						
TREC	**Trest**	**2.26**	**189**	*e*Pn	**Pn**	**01 22 06.8**	**+0.8**
TREC	**Trest**	**2.26**	**189**	*e*PN	**Pn**	**01 22 07.3**	**+1.3**
KRUC	**Moravsky**	**2.48**	**174**	*e*Pn	**Pn**	**01 22 09.7**	**+0.7**
KRUC	**Moravsky**	**2.48**	**174**	*e*Pg	**Pg**	**01 22 13.5**	**-1.4**
KRUC				*e*Sg	**Sg**	**01 22 46.5**	**-0.5**
	comp=Z,39nm,0.4s						
TANN	**Tannenbergstha**	**2.52**	**245**	*e*Pn	**Pn**	**01 22 09.7**	**+0.2**
TANN				*e*Sg	**Sg**	**01 22 48.1**	**-0.1**
WERD	**Werda**	**2.59**	**247**	*e*Pn	**Pn**	**01 22 10.6**	**+0.1**
NKC	**Novy Kostel**	**2.61**	**242**	*e*PN	**Pn**	**01 22 11.0**	**+0.2**
NKC				*e*PG	**Pg**	**01 22 16.8**	**-0.7**
NKC				*e*SG	**Sg**	**01 22 51.0**	**-0.3**
	comp=Z,129nm,0.3s						
OJC	**Ojcow**	**2.72**	**117**	Pn	**Pn**	**01 22 10.2**	**-2.2**
OJC				*e*Pg	**Pg**	**01 22 20.2**	**+0.6**
OJC				Sn	**Sn**	**01 22 42.0**	**-3.9**
OJC				*e*Sg	**Sg**	**01 22 55.8**	**+1.0**
OJC	**Ojcow**	**2.72**	**117**	*e*Pn	**Pn**	**01 22 10.2**	**-2.2**
OJC				*e*Pg	**Pg**	**01 22 20.2**	**+0.6**
OJC				*e*Sn	**Sn**	**01 22 42.0**	**-3.9**
OJC				*e*Sg	**Sg**	**01 22 55.8**	**+1.0**
KHC	**Kasperske Hory**	**2.87**	**214**	*e*PN	**Pn**	**01 22 14.2**	**-0.1**
KHC				*e*PG	**Pg**	**01 22 20.4**	**-1.9**
KHC				*e*SN	**Sn**	**01 22 48.3**	**-1.2**
KHC				*e*SG	**Sg**	**01 22 58.5**	**-1.0**
	comp=Z,46nm,0.5s						
MGBB	**Grossbuechelbe**	**2.88**	**239**	⇑*i*Pn	**Pn**	**01 22 14.9**	**+0.4**
MOX	**Moxa**	**2.92**	**254**	*e*Pg	**Pg**	**01 22 23.1**	**-0.3**
MOX				*e*Sg	**Sg**	**01 23 02.3**	**+1.1**
MOX	**Moxa**	**2.92**	**254**	*e*PG	**Pg**	**01 22 23.1**	**-0.3**
MOX				*e*SG	**Sg**	**01 23 02.6**	**+1.4**
MOX	**Moxa**	**2.92**	**254**	Pg	**Pg**	**01 22 23.1**	**-0.3**
MOX				*e*Sg	**Sg**	**01 22 59.6**	**-1.6**
ROTZ	**Rotzenmuhle**	**3.00**	**236**	*e*Pn	**Pn**	**01 22 16.7**	**+0.4**
GEC2	**GERESS Array S**	**3.07**	**210**	*e*Pn	**Pn**	**01 22 18.3**	**+1.1**
GEC2	**GERESS Array S**	**3.07**	**210**	*e*Pn	**Pn**	**01 22 18.3**	**+1.1**
GERES	**GERESS Array B**	**3.07**	**210**	Pn	**Pn**	**01 22 17.0**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=26,slow=13,SNR=53						
GERES				Pg	**Pg**	**01 22 24.6**	**-1.7**
	comp=Z,9.2nm,0.3s,baz=32,slow=19,SNR=35						
GERES				Sn	**Sn**	**01 22 55.7**	**+1.1**
	comp=Z,4.5nm,0.3s,baz=29,slow=23,SNR=6.5						
GERES				Lg		01 23 05.7	
	comp=Z,17nm,0.3s,baz=32,slow=26,SNR=19						
GERES	**GERESS Array B**	**3.07**	**210**	Pg	**Pg**	**01 22 24.6**	**-1.7**
WET	**Wettzell**	**3.12**	**221**	*e*Pn	**Pn**	**01 22 18.3**	**+0.4**
WET	**Wettzell**	**3.12**	**221**	*e*Pn	**Pn**	**01 22 17.9**	**0.0**
WET				*e*Sg	**Sg**	**01 23 04.5**	**-3.3**
SMOL	**Smolenice**	**3.15**	**163**	*e*PN	**Pn**	**01 22 20.9**	**+2.7**
SMOL				*e*PG	**Pg**	**01 22 28.6**	**+0.9**
SMOL				*e*SG	**Sg**	**01 23 07.7**	**-0.8**
KOLL	**Kolacno**	**3.32**	**152**	*e*PN	**Pn**	**01 22 23.0**	**+2.4**
KOLL				*e*SG	**Sg**	**01 23 13.9**	**-0.2**
ZST	**Bratislava**	**3.41**	**168**	*e*PG	**Pg**	**01 22 31.2**	**-1.5**
ZST				*e*SG	**Sg**	**01 23 15.3**	**-1.5**
NIE	**Niedzica**	**3.46**	**126**	*e*P	**Pg**	**01 22 32.8**	**-0.8**
NIE				*e*S	**Sg**	**01 23 16.7**	**-1.7**
VYHS	**Vyhne**	**3.53**	**148**	*e*PN	**Pn**	**01 22 24.2**	**+0.7**
VYHS				*e*PG	**Pg**	**01 22 36.1**	**+1.0**
VYHS				*e*SG	**Sg**	**01 23 19.1**	**-1.8**
GRA1	**Grafenberg Arr**	**3.57**	**241**	Pn	**Pn**	**01 22 24.6**	**+0.6**
GRA1				Sg	**Sg**	**01 23 23.1**	**+1.0**
GRA1	**Grafenberg Arr**	**3.57**	**241**	*e*Pn	**Pn**	**01 22 24.6**	**+0.6**
GRA1				*e*Sg	**Sg**	**01 23 23.1**	**+1.0**
GRF	**Grafenberg Arr**	**3.57**	**241**	*e*Pn	**Pn**	**01 22 24.6**	**+0.5**
GRF				*e*Sg	**Sg**	**01 23 23.1**	**+1.0**
CONA	**Conrad Observa**	**3.60**	**182**	⇑*i*Pn	**Pn**	**01 22 25.2**	**+0.7**
CONA				⇑*i*Sg	**Sg**	**01 23 21.3**	**-1.8**
	comp=Z,101nm,0.7s						
CONA	**Conrad Observa**	**3.60**	**182**	Pn	**Pn**	**01 22 25.2**	**+0.7**
CONA				Sg	**Sg**	**01 23 21.3**	**-1.8**
	comp=Z,101nm,0.7s						
CSNA	**Conrad Observa**	**3.60**	**182**	⇓*i*Pn	**Pn**	**01 22 25.3**	**+0.9**
CSNA				⇑*i*Sg	**Sg**	**01 23 22.5**	**-0.6**
	comp=Z,31nm,0.4s						
BSD	**Bornholm Skovb**	**3.66**	**350**	*i* P	**Pn**	**01 22 23.3**	**-1.9**
BSD				*i* S	**Sn**	**01 23 04.0**	**-4.9**
HROE	**Hohe Rhon--Fla**	**3.84**	**257**	⇑*i*Pn	**Pn**	**01 22 27.7**	**0.0**
MOA	**Molln**	**3.85**	**198**	⇑*i*Pn	**Pn**	**01 22 28.4**	**+0.5**
MOA				⇓*i*Sg	**Sg**	**01 23 31.2**	**0.0**
	comp=Z,37nm,0.6s						
MOA	**Molln**	**3.85**	**198**	Pn	**Pn**	**01 22 28.4**	**+0.5**
MOA				Sg	**Sg**	**01 23 31.2**	**0.0**
	comp=Z,37nm,0.6s						
STHS	**Stebnicka Huta**	**3.94**	**120**	*e*PN	**Pn**	**01 22 30.2**	**+1.1**
STHS				*e*PG	**Pg**	**01 22 42.7**	**-0.3**
STHS				*e*SG	**Sg**	**01 23 36.9**	**+2.9**
ARSA	**Arzberg**	**4.29**	**185**	⇑*i*Pn	**Pn**	**01 22 34.0**	**+0.1**
ARSA				⇓*i*Sg	**Sg**	**01 23 43.8**	**-1.5**
	comp=Z,30nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.37**	**125**	*e*PN	**Pn**	**01 22 37.5**	**+2.6**
CRVS				*e*PG	**Pg**	**01 22 51.4**	**+0.3**
CRVS				*e*SG	**Sg**	**01 23 50.2**	**+2.6**
KWP	**Kalwaria**	**4.66**	**111**	*e*Pn	**Pn**	**01 22 38.2**	**-0.8**
KWP	**Kalwaria**	**4.66**	**111**	*e*Pn	**Pn**	**01 22 38.2**	**-0.7**
KWP				*e*Pg	**Pg**	**01 22 52.8**	**-3.9**
KBA	**Koelnbreinsper**	**4.79**	**203**	⇓*i*Pn	**Pn**	**01 22 41.7**	**+1.0**
KBA				⇑*i*Sg	**Sg**	**01 24 00.8**	**-0.3**
	comp=Z,27nm,0.6s						
WATA	**Walderalm**	**5.10**	**216**	⇑*i*Pn	**Pn**	**01 22 46.0**	**+0.9**
WATA				⇑*i*Sg	**Sg**	**01 24 11.5**	**+0.3**
	comp=Z,18nm,0.7s						
DAVA	**Damuels**	**5.84**	**226**	⇑*i*Pn	**Pn**	**01 22 55.4**	**+0.3**
DAVA				⇓*i*Sg	**Sg**	**01 24 36.9**	**+2.0**
	comp=Z,7.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**6.23**	**223**	Pn	**Pn**	**01 23 01.4**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=350,slow=19,SNR=3.7						
DAVOX				Sn	**Sn**	**01 24 09.0**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=338,slow=19,SNR=2.3						
DAVOX				Lg		01 24 48.4	
	comp=Z,0.9nm,0.3s,baz=143,slow=20,SNR=3.5						
DAVOX	**Davos/Dischmat**	**6.23**	**223**	Pn	**Pn**	**01 23 01.4**	**+0.9**
DAVOX				Sn	**Sn**	**01 24 09.0**	**-3.4**
AKASG	**Malin Array Be**	**8.35**	**91**	Pn	**Pn**	**01 23 28.3**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=280,slow=12,SNR=3.4						
AKASG				Sn	**Sn**	**01 24 56.2**	**-8.2**
	comp=Z,1.6nm,0.3s,baz=39,slow=24,SNR=3.8						
HFS	**Hagfors**	**8.73**	**352**	Pn	**Pn**	**01 23 33.2**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=153,slow=22,SNR=3.8						
NOA	**NORSAR Array B**	**9.90**	**346**	Pn	**Pn**	**01 23 49.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=159,slow=13,SNR=3.3						
EKA	**Eskdalemuir Ar**	**12.05**	**296**	Pn	**Pn**	**01 24 16.4**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=103,slow=14,SNR=2.8						
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn	**Pn**	**01 25 41.7**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=189,slow=14,SNR=9.5						
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn	**Pn**	**01 25 41.7**	**-4.5**
BVAR	**Borovoye Array**	**32.63**	**66**	P	**P**	**01 28 01.6**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.3,baz=282,slow=7.2,SNR=2.6						
KURK	**Kurchatov**	**38.23**	**66**	P	**P**	**01 28 48.6**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=298,slow=9.4,SNR=3.1						

CASC 09 01:36:14.3±1.2**,1309N**×**8901W,h52**km±14km**,MD3.6, ML3.2,12C-5D,El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.53**	**354**	⇑*e*P	x	01 36 26.2	
LFRS				*e*S	x	01 36 35.2	
SNVI	**San Vicente**	**0.54**	**17**	⇑*e*P	x	01 36 26.6	
SNVI				*e*S	x	01 36 36.0	
LBRS	**Las Brisas**	**0.64**	**357**	⇓*e*P	x	01 36 27.9	
LBRS				*e*S	x	01 36 36.6	
BOQS	**Boqueron**	**0.69**	**337**	⇓*e*P	x	01 36 28.5	
BOQS				*e*S	x	01 36 39.5	
BOQS				AML	x	01 36 42.1	
	comp=Z,632nm,0.2s						
VSM	**San Miguel**	**0.79**	**65**	⇓*e*P	x	01 36 30.0	
VSM				*e*S	x	01 36 42.2	
BLLM	**Bellamira**	**0.82**	**65**	⇓*e*P	x	01 36 30.1	
BLLM				*e*S	x	01 36 41.6	
SBLS	**San Blas**	**0.95**	**321**	⇑*e*P	x	01 36 31.9	
SBLS				*e*S	x	01 36 45.2	
SNJE	**San Jose**	**0.97**	**323**	⇑*e*P	x	01 36 32.0	
SNJE				*e*S	x	01 36 45.1	
RTR	**El Retiro**	**1.01**	**322**	⇓*e*P	x	01 36 33.1	
RTR				*e*S	x	01 36 47.1	
CAHU	**Cacacuatique**	**1.02**	**49**	⇑*e*P	x	01 36 32.9	
CAHU				*e*S	x	01 36 46.8	
CNCH	**Conchagua**	**1.16**	**81**	⇑*e*P	x	01 36 34.5	
CNCH				*e*S	x	01 36 50.0	
RBDL	**Robledal**	**1.21**	**327**	⇑*e*P	x	01 36 35.3	
RBDL				*e*S	x	01 36 51.3	
CRIN	**San Cristobal**	**1.95**	**101**	⇑*e*P	Pn	01 36 45.5	+0.5
TEL3	**Telica 3**	**2.17**	**104**	⇑*e*P	Pn	01 36 47.9	0.0
CNGN	**Cerro Negro**	**2.33**	**104**	*e*P	Pn	01 36 49.9	-0.3
MIRN	**Miramar**	**2.33**	**106**	⇑*e*P	Pn	01 36 49.8	-0.4
COPN	**Copaltepe**	**2.52**	**111**	⇑*e*P	Pn	01 36 52.4	-0.4
CSAN		**2.68**	**109**	⇑*e*P	Pn	01 36 55.0	0.0

*ISCJB **09** 02:02:23.1±1.1, 1637N±004×12220E±008, h64km±16km, Error ellipse: s-maj=13.6km s-min=6.0km az=7.2*
*MAN **09** 02:02:23, 1635N×12222E, h28km, mb4.1, ML2.9, MS2.6*
ISC 09 02:02:23.7±1.1**,1637N**±004×**12220E**±008**,h62**km±17km**, n9,σ0s43**/15**,1C-1D,Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.67**	**327**	*e*P	**Pn**	**02 02 37.1**	**-0.7**
CAUP				*e*S	**Sn**	**02 02 48.6**	**+0.6**
PALP	**Palanan**	**0.72**	**17**	*e*P	**Pn**	**02 02 37.8**	**-0.5**
PALP				*e*S	**Sn**	**02 02 49.0**	**0.0**
BALP	**Baler**	**0.87**	**224**	*e*P	**Pn**	**02 02 39.4**	**-0.7**
BALP				*e*S	**Sn**	**02 02 51.9**	**-0.4**
PCPH	**Palayan**	**1.33**	**233**	⇑*e*P	**Pn**	**02 02 46.3**	**+0.1**
PCPH				*i* S	**Sn**	**02 03 03.2**	**+0.1**
CVP	**Callao Caves**	**1.37**	**345**	*e*P	**Pn**	**02 02 46.5**	**-0.2**
CVP				*i* S	**Sn**	**02 03 04.6**	**+0.6**
POLP	**Polilio Island**	**1.66**	**189**	*e*P	**Pn**	**02 02 50.5**	**0.0**
POLP				*e*S	**Sn**	**02 03 11.4**	**+0.6**
APYP	**Conner**	**1.74**	**328**	*e*P	**Pn**	**02 02 51.8**	**+0.1**
ABRA	**Dolores**	**1.91**	**312**	*e*P	**Pn**	**02 02 54.0**	**0.0**
GQP	**Guinayangan**	**2.47**	**174**	⇓*i*P	**Sn**	**02 03 31.0**	**+0.4**

*ISCJB **09** 02:03:27.8±0.2, 15.15S±0.05×44.24W±0.05, h10km, mb4.7/55, MS4.2/18, Error ellipse: s-maj=7.4km s-min=5.5km az=41.3*

*IDC **09** 02:03:28.0±0.5, 15.06S×44.32W, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.6/28, mbtmp4.5/24, ML4.5/1, MS4.1/15, Ms1 4.0/15, ms1mx3.9/28, Error ellipse: s-maj=16.1km s-min=11.3km az=165.0*

*NEIC **09** 02:03:29.4±0.2, 15.05S×44.23W, h10km, mb4.9/32, Error ellipse: s-maj=7.5km s-min=6.5km az=200.0*

NEIC One person killed, six injured, 380 displaced and 76 buildings damaged in the Itacarambi-Januaria-Manga area. Felt at Varzelandia.

*BJI **09** 02:03:29.4, 15.00S×44.20W, h10km, mB5.5, Ms5.3, Msz4.7*

ISC 09 02:03:29.7±0.2**, 15.12S**±0.05×**44.28W**±0.05**, h10km, (h10km±.6km:pP-P), n136,** σ**0.94**/115**, mb4.7**/55**, MS4.2**/18**, 5C-3D, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**3.64**	**261**	Pn	**Pn**	**02 04 25.4**	**-0.7**
	23nm,0.3s,baz=66,slow=19,SNR=219						
BDFB				Pg	**Pg**	**02 04 34.9**	**-4.6**
	37nm,0.3s,baz=61,slow=19,SNR=35						
BDFB				Lg		02 05 20.7	
	46nm,0.3s,baz=50,slow=19,SNR=6.6						
BDFB				LR	LR	02 06 02.9	
	comp=Z,878nm,22.0s,baz=72,slow=43						
BDFB	**Brasilia**	**3.64**	**261**	*e*Pn	**Pn**	**02 04 25.5**	**-0.6**
BDFB				*e*Sn	**Sn**	**02 05 13.3**	**+4.1**
CAM3	**Guarapari**	**6.63**	**148**	⇓*e*P	**Pn**	**02 05 05.6**	**-1.7**
CAM3				*i* S	**Sn**	**02 06 22.0**	**-0.9**
RCBR	**Riachuelo**	**12.37**	**43**	*e*Pn	**Pn**	**02 06 21.8**	**-4.2**
RCBR				*e*Sn	**Sn**	**02 08 35.6**	**-8.4**
SIV	**San Ignacio**	**16.20**	**265**	Pn	**Pn**	**02 07 14.0**	**-3.6**
	1.8nm,0.3s,baz=101,slow=14,SNR=69						
SIV				Lg		02 11 59.3	
	1.9nm,0.3s,baz=216,slow=23,SNR=6.9						
CPUP	**Villa Florida**	**16.52**	**225**	Pn	**Pn**	**02 07 15.7**	**-6.0**
	15nm,0.3s,baz=34,slow=12,SNR=114						
CPUP				Sn	**Sn**	**02 10 11.9**	**-13**
	3.8nm,0.3s,baz=3.4,slow=17,SNR=6.0						
CPUP				Lg		02 12 12.8	
	5.5nm,0.3s,baz=122,slow=19,SNR=3.1						
CPUP				LR	LR	02 14 14.6	
	comp=Z,383nm,20.4s,baz=33,slow=39						
CPUP	**Villa Florida**	**16.52**	**225**	⇑*i*Pn	**Pn**	**02 07 15.7**	**-6.0**
	30nm,0.7s						
CPUP				*e*Sn	**Sn**	**02 10 12.4**	**-13**
LVC	**Limon Verde**	**24.45**	**249**	P	**P**	**02 08 48.0**	**-0.8**
	14nm,1.1s,mb4.3,baz=79,slow=11,SNR=8.7						
LVC				LR	LR	02 19 45.3	
	comp=Z,126nm,21.8s,MS3.4,baz=264,slow=40						
LVC	**Limon Verde**	**24.45**	**249**	P	**P**	**02 08 48.0**	**-0.8**
LVC				LR	LR	02 19 45.3	
CFAA	**Coronel Fontan**	**27.34**	**229**	P	**P**	**02 09 13.8**	**-1.2**
	0.9nm,0.9s,mb3.3,baz=58,slow=8.7,SNR=13						
CFAA				LR	LR	02 21 08.8	
	comp=Z,30nm,20.1s,MS2.9,baz=85,slow=39						
PCRV	**Puerto La Cruz**	**32.22**	**320**	P	**P**	**02 09 55.5**	**-2.9**
	30nm,0.8s,mb5.2,baz=130,slow=4.5,SNR=6.9						
PLCA	**Paso Flores**	**34.25**	**217**	LR	LR	02 25 12.3	
	comp=Z,323nm,19.6s,MS4.1,baz=43,slow=38						
SDV	**Santo Domingo**	**35.37**	**311**	P	**P**	**02 10 25.9**	**+0.1**
	11nm,1.0s,mb4.8,baz=164,slow=8.9,SNR=11						
SDV	**Santo Domingo**	**35.37**	**311**	*e*P	**P**	**02 10 25.7**	**-0.1**
	8.8nm,1.0s,mb4.6						
ROSC	**El Rosal**	**35.78**	**301**	P	**P**	**02 10 30.2**	**+0.9**
	20nm,0.9s,mb5.1,baz=178,slow=4.3,SNR=15						
ROSC				LR	LR	02 25 53.2	
	comp=Z,588nm,19.6s,MS4.4,baz=208,slow=38						
ROSC	**El Rosal**	**35.78**	**301**	*e*P	**P**	**02 10 30.4**	**+1.0**
OTAV	**Otavalo**	**37.06**	**291**	*e*P	**P**	**02 10 40.0**	**-0.4**
	8.0nm,0.8s,mb4.6						
USHA	**Ushuaia**	**43.84**	**200**	P	**P**	**02 11 36.4**	**+0.5**
	9.7nm,0.7s,mb4.6,baz=9.9,slow=7.0,SNR=9.1						
LIC	**Lamto**	**44.30**	**64**	*e*P	**P**	**02 11 38.4**	**-1.8**
	15nm,0.4s,mb5.0						
TIC	**Toumodi**	**44.52**	**64**	*e*P	**P**	**02 11 40.7**	**-1.2**
	14nm,0.5s,mb5.1						
KIC	**Kosan Boka**	**44.62**	**64**	*e*P	**P**	**02 11 41.5**	**-1.2**
	77nm,1.6s,mb5.3						
DBIC	**Dimbokro**	**44.67**	**64**	P	**P**	**02 11 42.2**	**-0.9**
	6.4nm,0.5s,mb4.7,baz=219,slow=8.6,SNR=40						
DBIC				PcP	PcP	02 13 25.9	+0.1
	2.8nm,0.6s,baz=221,slow=3.1,SNR=4.4						
DBIC				LR	LR	02 26 54.2	
	comp=Z,96nm,18.6s,MS3.8,baz=282,slow=32						
DBIC	**Dimbokro**	**44.67**	**64**	*e*P	**P**	**02 11 42.0**	**-1.1**
	5.2nm,0.4s,mb4.7						
PMSA	**Palmer Station**	**51.41**	**191**	P	**P**	**02 12 35.5**	**+0.9**
	43nm,1.1s,mb5.3,baz=113,slow=7.7,SNR=3.3						
PMSA	**Palmer Station**	**51.41**	**191**	P	**P**	**02 12 35.5**	**+0.9**
TOA0	**Torodi Ar. Sit**	**53.47**	**61**	*e*P	**P**	**02 12 49.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**53.47**	**61**	P	**P**	**02 12 49.6**	**-1.0**
	6.3nm,0.4s,mb4.9,baz=242,slow=7.9,SNR=193						
TSUM	**Tsumeb**	**58.99**	**104**	*e*P	**P**	**02 13 30.2**	**+0.1**
	1.4nm,0.5s,mb4.2						
VNA1	**Neumayer--Stat**	**59.69**	**167**	*e*P	**P**	**02 13 33.7**	**-0.3**
VNA1				*e*	pP	02 13 36.2	-1.0
VNA1				*e*		02 13 41.4	
VNA3	**Neumayer Olymp**	**59.84**	**168**	*e*P	**P**	**02 13 35.5**	**+0.5**
VNA3				*e*	pP	02 13 38.7	+0.4
VNA3				*e*		02 13 44.0	
VNA2	**Neumayer--Watz**	**60.08**	**167**	*e*P	**P**	**02 13 37.3**	**+0.6**
VNA2				*e*	pP	02 13 40.1	+0.2
VNA2				*e*		02 13 46.2	
GOGA	**Godfrey**	**61.04**	**323**	*e*P	**P**	**02 13 43.5**	**-0.2**
	11nm,1.0s,mb5.0						
SNAA	**Sanae**	**61.65**	**166**	*e*P	**P**	**02 13 47.5**	**+0.1**
	4.0nm,0.6s,mb4.7						
PBDV	**Barranco-do-Ve**	**62.31**	**32**	*e*P	**P**	**02 13 53.1**	**+0.8**
PVAQ	**Vaqueiros**	**62.55**	**32**	*e*P	**P**	**02 13 54.5**	**+0.7**
LRAL	**Lakeview Retre**	**62.91**	**320**	*e*P	**P**	**02 13 55.7**	**-0.6**
	29nm,1.2s,mb5.3						
PBEJ	**Beja**	**62.95**	**32**	*e*P	**P**	**02 13 57.2**	**+0.7**
CPCT	**Cooper Cave**	**63.11**	**324**	*e*P	**P**	**02 13 57.1**	**-0.5**
EVO	**Evora**	**63.26**	**31**	*e*P	**P**	**02 13 58.9**	**+0.3**
TZTN	**Tazewell**	**63.35**	**325**	*e*P	**P**	**02 13 59.0**	**-0.2**
	14nm,1.3s,mb4.9						
SWET	**Sewanee**	**63.76**	**323**	*e*P	**P**	**02 14 01.9**	**-0.1**
BOSA	**Boshof**	**65.14**	**115**	P	**P**	**02 14 10.8**	**-0.5**
	2.8nm,0.4s,mb4.6,baz=260,slow=6.1,SNR=29						
BOSA				LR	LR	02 40 08.3	
	comp=Z,166nm,18.4s,MS4.3,baz=318,slow=34						
BOSA	**Boshof**	**65.14**	**115**	*e*P	**P**	**02 14 10.7**	**-0.5**
	3.2nm,0.5s,mb4.6						
WVT	**Waverly**	**65.51**	**322**	*e*P	**P**	**02 14 11.5**	**-1.8**
	26nm,0.8s,mb5.3						
ACSO	**Alum Creek Sta**	**65.78**	**328**	*e*P	**P**	**02 14 14.7**	**-0.3**
	24nm,0.8s,mb5.3						
ESDC	**Sonseca Array**	**66.20**	**33**	P	**P**	**02 14 17.9**	**+0.1**
	3.1nm,0.9s,mb4.3,baz=229,slow=5.6,SNR=12						
SIUC	**Southern Illin**	**67.40**	**323**	*e*P	**P**	**02 14 23.7**	**-1.8**
	19nm,0.9s,mb5.1						
FVM	**French Village**	**68.29**	**322**	*e*P	**P**	**02 14 29.4**	**-1.6**
	42nm,1.3s,mb5.3						
CCM	**Cathedral Cave**	**68.82**	**322**	*e*P	**P**	**02 14 33.2**	**-1.2**
	6.2nm,0.8s,mb4.6						
JCT	**Junction City**	**70.05**	**311**	*e*P	**P**	**02 14 42.0**	**-0.1**
	16nm,0.8s,mb5.0						
JFWS	**Jewell Farm**	**71.50**	**326**	*e*P	**P**	**02 14 49.4**	**-1.2**
	17nm,0.8s,mb5.0						
KEST	**Kesra**	**71.62**	**44**	P	**P**	**02 14 52.3**	**+0.7**
	4.0nm,1.1s,mb4.3,baz=253,slow=20,SNR=6.0						
WMOK	**Wichita Mounta**	**71.64**	**315**	*e*P	**P**	**02 14 51.0**	**-0.7**
	38nm,2.0s,mb5.0						
SCHQ	**Schefferville**	**72.26**	**347**	P	**P**	**02 14 54.6**	**-0.4**
	4.9nm,1.0s,mb4.4,baz=271,slow=12,SNR=6.1						
SCHQ				LR	LR	02 46 02.3	
	comp=Z,252nm,18.7s,MS4.5,baz=41,slow=35						
TXAR	**Lajitas Array**	**72.35**	**308**	P	**P**	**02 14 55.7**	**-0.4**
	3.5nm,0.7s,mb4.4,baz=111,slow=7.4,SNR=50						
TXAR				LR	LR	02 45 26.7	
	comp=Z,100nm,19.6s,MS4.1,baz=0.0,slow=35						
SCIA	**State Center**	**72.47**	**324**	*e*P	**P**	**02 14 56.5**	**0.0**
	29nm,1.0s,mb5.2						
GDL2	**Guadalupe Moun**	**74.28**	**310**	*e*P	**P**	**02 15 07.7**	**+0.3**
CBKS	**Cedar Bluff**	**74.57**	**318**	*e*P	**P**	**02 15 08.7**	**-0.3**
	21nm,0.8s,mb5.1						
ECSD	**EROS,Sioux Fal**	**75.56**	**324**	*e*P	**P**	**02 15 13.8**	**-0.8**
LENM	**Lemitar**	**77.14**	**311**	*e*P	**P**	**02 15 24.8**	**+1.0**
ANMO	**Albuquerque**	**77.14**	**312**	*e*P	**P**	**02 15 24.4**	**+0.6**
	5.2nm,0.8s,mb4.5						
SDCO	**Great Sand Dun**	**77.84**	**315**	*e*P	**P**	**02 15 28.5**	**+0.9**
AGMN	**Agassiz Refuge**	**78.00**	**328**	*e*P	**P**	**02 15 26.9**	**-1.4**
	29nm,1.2s,mb5.1						
TUC	**Tucson**	**79.15**	**308**	*e*P	**P**	**02 15 35.7**	**+0.7**
	6.2nm,1.0s,mb4.5						
ULM	**Lac du Bonnet**	**79.25**	**329**	P	**P**	**02 15 33.8**	**-1.3**
	13nm,0.9s,mb4.9,baz=119,slow=5.4,SNR=11						
ULM				LR	LR	02 49 38.1	
	comp=Z,174nm,18.9s,MS4.4,baz=110,slow=35						
ULM	**Lac du Bonnet**	**79.25**	**329**	*e*P	**P**	**02 15 33.5**	**-1.6**
	15nm,1.1s,mb4.8						
MVCO	**Mesa Verde**	**79.67**	**313**	*e*P	**P**	**02 15 37.6**	**-0.1**
	3.9nm,0.5s,mb4.6						
RSSD	**Black Hills**	**80.18**	**321**	*e*P	**P**	**02 15 40.5**	**+0.3**
	2.1nm,0.7s,mb4.2						
PV04	**Paradox Valley**	**80.50**	**314**	*e*P	**P**	**02 15 43.7**	**+1.6**
GERES	**GERESS Array B**	**81.74**	**34**	P	**P**	**02 15 48.9**	**+0.5**
	0.5nm,0.6s,mb3.6,baz=187,slow=6.9,SNR=4.0						
SRU	**San Rafael**	**81.96**	**314**	*e*P	**P**	**02 15 50.8**	**+0.9**
MAW	**Mawson**	**82.52**	**158**	P	**P**	**02 15 55.1**	**+2.8**
	3.5nm,0.9s,mb4.4,baz=320,slow=7.9,SNR=2.3						
MAW				LR	LR	02 45 48.1	
	comp=Z,103nm,18.3s,MS4.2,baz=135,slow=31						
TMUT	**Trail Mountain**	**82.52**	**314**	*e*P	**P**	**02 15 54.0**	**+1.2**
DGMT	**Dagmar**	**82.60**	**325**	*e*P	**P**	**02 15 53.3**	**+0.3**
	16nm,0.8s,mb5.1						
MSU	**Marysvale**	**82.85**	**313**	*e*P	**P**	**02 15 56.2**	**+1.6**
BW06	**Boulder Array**	**82.98**	**318**	*e*P	**P**	**02 15 55.2**	**0.0**
PDAR	**Pinedale Array**	**82.98**	**318**	P	**P**	**02 15 55.0**	**-0.1**
	8.1nm,0.7s,mb4.8,baz=118,slow=7.0,SNR=70						
PDAR				LR	LR	02 54 54.3	
	comp=Z,109nm,19.2s,MS4.2,baz=73,slow=37						
DAU	**Daniels Canyon**	**83.05**	**315**	*e*P	**P**	**02 15 56.7**	**+1.2**
PKSM	**Moragy**	**83.18**	**39**	⇓*i*P	**P**	**02 15 56.9**	**+0.8**
JLU	**Jordanelle**	**83.26**	**315**	*e*P	**P**	**02 15 57.9**	**+1.3**
RLMT	**Red Lodge**	**83.91**	**320**	*e*P	**P**	**02 15 59.5**	**-0.4**
FCC	**Fort Churchill**	**84.05**	**336**	*e*P	**P**	**02 15 59.1**	**-1.1**
	0.3nm,0.9s,mb3.4						
LOHW	**Long Hollow**	**84.05**	**318**	*e*P	**P**	**02 16 00.5**	**-0.2**
	7.1nm,0.9s,mb4.8						
SNOW	**Snow King Moun**	**84.08**	**318**	*e*P	**P**	**02 16 01.8**	**+1.0**
MOOW	**Moose Ponds**	**84.21**	**318**	*e*P	**P**	**02 16 01.5**	**+0.1**
TPAW	**Teton Pass**	**84.22**	**318**	*e*P	**P**	**02 16 01.9**	**+0.4**
IMW	**Indian Meadow**	**84.40**	**318**	*e*P	**P**	**02 16 02.8**	**+0.5**
BZS	**Buzias**	**84.71**	**40**	⇑*i*P	**P**	**02 16 04.7**	**+0.8**
FFC	**Flin Flon**	**84.93**	**331**	*e*P	**P**	**02 16 03.9**	**-0.9**
	19nm,1.6s,mb5.0						
EGMT	**Eagleton**	**85.58**	**322**	*e*P	**P**	**02 16 08.5**	**+0.3**
BOZ	**Bozeman (W)**	**85.63**	**320**	*e*P	**P**	**02 16 08.4**	**-0.1**
	1.9nm,1.0s,mb4.3						
ELK	**Elko**	**85.93**	**314**	*e*P	**P**	**02 16 10.6**	**+0.5**
	3.2nm,0.9s,mb4.5						
DLMT	**Dillon**	**86.11**	**319**	*e*P	**P**	**02 16 11.7**	**+0.8**
HRY	**Holter Researc**	**86.23**	**320**	*e*P	**P**	**02 16 12.3**	**+0.9**
VNDA	**Vanda**	**86.31**	**186**	P	**P**	**02 16 13.6**	**+2.1**
	1.4nm,0.9s,mb4.2,baz=162,slow=7.4,SNR=3.0						
VOIR		**86.79**	**41**	⇑*i*P	**P**	**02 16 15.7**	**+1.4**
NVAR	**Mina Array Bea**	**87.23**	**311**	P	**P**	**02 16 17.3**	**+0.8**
	5.4nm,0.8s,mb4.8,baz=127,slow=5.2,SNR=28						
MLR	**Muntele Rosu**	**87.39**	**42**	⇑*i*P	**P**	**02 16 17.9**	**+0.8**
NOA	**NORSAR Array B**	**87.71**	**24**	LR	LR	02 53 54.6	
	comp=Z,109nm,18.5s,MS4.3,baz=250,slow=34						
BURAR	**Bucovina Array**	**87.82**	**39**	⇓*i*P	**P**	**02 16 20.6**	**+1.4**
SWMT	**Swartz Lake**	**87.91**	**320**	*e*P	**P**	**02 16 19.8**	**+0.2**
VRI	**Vrincioaia**	**88.04**	**41**	⇑*i*P	**P**	**02 16 21.2**	**+0.9**
WALA	**Waterton Lakes**	**88.51**	**322**	*e*P	**P**	**02 16 22.7**	**+0.2**
WVOR	**Wild Horse Val**	**88.94**	**315**	*e*P	**P**	**02 16 25.2**	**+0.6**
	3.7nm,1.0s,mb4.7						
JMIC	**Jan Mayen**	**89.31**	**11**	LR	LR	02 51 06.8	
	comp=Z,215nm,19.4s,MS4.6,baz=73,slow=32						
EDM	**Edmonton**	**89.98**	**326**	*e*P	**P**	**02 16 28.1**	**-1.1**
BRTR	**Keskin Array B**	**90.52**	**49**	P	**P**	**02 16 33.6**	**+1.6**
	0.6nm,0.8s,mb4.0,baz=204,slow=8.1,SNR=4.6						
AKASG	**Malin Array Be**	**91.47**	**38**	P	**P**	**02 16 36.6**	**+0.4**
	0.4nm,0.3s,mb4.2,baz=263,slow=3.6,SNR=4.3						
RPW	**Rockport**	**92.94**	**319**	*e*P	**P**	**02 16 42.4**	**-0.7**
JCW	**Jim Creek**	**93.12**	**319**	*e*P	**P**	**02 16 42.7**	**-1.2**
YKA	**Yellowknife Ar**	**94.50**	**334**	P	**P**	**02 16 48.3**	**-1.6**
	0.6nm,0.6s,mb4.2,baz=110,slow=5.4,SNR=16						
YKA				LR	LR	03 00 56.9	
	comp=Z,62nm,20.4s,MS4.1,baz=100,slow=36						
RES	**Resolute Bay**	**94.99**	**348**	P	**P**	**02 16 52.2**	**+0.3**
	1.0nm,0.8s,mb4.3,baz=173,slow=11,SNR=5.3						
BRVK	**Borovoye**	**116.68**	**38**	*e*PKP	PKPdf	02 22 13.8	-0.3
KURK	**Kurchatov**	**122.25**	**39**	*e*PKPdf	PKPdf	02 22 24.8	-0.1
ZALV	**Zalesovo Beam**	**124.69**	**34**	PKP	PKPdf	02 22 29.1	-0.3
	1.4nm,0.4s,baz=275,slow=2.9,SNR=6.8						
MK31	**Makanchi Array**	**125.71**	**43**	*e*PKPdf	PKPdf	02 22 31.1	-0.5
MKAR	**Makanchi Array**	**125.71**	**43**	PKP	PKPdf	02 22 31.6	0.0
	0.9nm,0.7s,baz=247,slow=2.6,SNR=9.0						
WMQ	**Urumqi**	**130.27**	**45**	*e*PKP	PKPdf	02 22 40.1	-0.3
SONM	**Songino Array**	**139.37**	**30**	PKP	PKPdf	02 22 56.5	-0.8
	0.3nm,0.3s,baz=280,slow=2.0,SNR=4.2						
ASAR	**Alice Springs**	**141.41**	**177**	PKhKP		02 22 54.5	
	0.6nm,0.5s,baz=181,slow=3.0,SNR=7.8						
ASAR				PKP	PKPdf	02 23 00.9	-0.9
	0.7nm,0.6s,baz=171,slow=2.3,SNR=7.6						
CMAR	**Chiang Mai Arr**	**144.67**	**79**	PKP	PKPdf	02 23 05.3	-2.3
	3.6nm,0.6s,baz=268,slow=5.2,SNR=13						
CHTO	**Chiang Mai**	**144.68**	**79**	*e*PKPdf	PKPdf	02 23 06.0	-1.6
LZH	**Lanzhou**	**144.72**	**48**	*e*PKP	PKPdf	02 23 06.5	-0.7
LZH				APKP	pPKPdf	02 23 10.0	-0.7
LZH				XPKP		02 23 12.6	
LZH				PP	PP		
	comp=Z,127nm,4.3s						
WB2	**Warramunga Arr**	**145.13**	**178**	*e*P	PKPbc	02 23 06.5	-1.3
WRAB	**Tennant Creek**	**145.14**	**178**	*e*PKPbc	PKPbc	02 23 07.2	-0.6
FITZ	**Fitzroy Crossi**	**145.53**	**163**	*e*P	PKPdf	02 23 09.4	+0.2
	comp=Z,9.2nm,0.5s						
CD2	**Chengdu**	**146.80**	**56**	*e*PKP	PKPdf	02 23 11.0	+0.1
CD2				PKP2	PKPab	02 23 15.8	+1.9
CD2				PP	PP	02 26 40.8	+4.2
CD2				PKS	SKPdf	02 26 44.9	-0.4
CD2				PP	PP		
	comp=Z,150nm,4.8s						
CD2				LR	LR		
	comp=N,310nm,5.0s						
CD2				LR	LR		
	comp=Z,210nm,5.9s						
HHC	**Hu-ho-hao-te**	**146.87**	**35**	*e*PKP	PKPdf	02 23 05.6	-5.1
HHC				APKP		02 23 16.1	
HHC				PP	PP	02 26 35.0	-1.1
HHC				PKS		02 26 38.6	
HHC				PP	PP		
	comp=Z,153nm,6.3s						
HHC				LR	LR		
	comp=N,151nm,16.6s,MS5.0						
HHC				LR	LR		
	comp=E,183nm,17.8s,MS5.0						
HHC				LR	LR		
	comp=Z,122nm,21.4s,MS4.7						
KMI	**Kunming**	**147.55**	**67**	PKP	PKPdf	02 23 10.1	-2.2
KMI				PP	PP		
	comp=Z,112nm,4.3s						
KMI				LR	LR		
	comp=Z,107nm,20.5s,MS4.6						
XAN	**Xi'an**	**149.35**	**47**	PKP	PKPdf	02 23 15.2	+0.2
XAN				PP	PP	02 26 54.3	+3.1
XAN				LR	LR		
	comp=E,67nm,25.3s						
XAN				LR	LR		
	comp=Z,74nm,26.6s,MS4.3						
BJI	**Beijing**	**149.87**	**31**	PKP	PKPdf	02 23 13.6	-2.1
CN2	**Changchun**	**150.10**	**15**	*e*PKP	PKPdf	02 23 16.1	+0.2
COEN	**Coen**	**150.19**	**195**	*e*PKPbc	PKPbc	02 23 21.9	-0.1
GYA	**Guiyang**	**150.66**	**63**	PKP	PKPdf	02 23 14.9	-2.4
GYA				PKP2	PKPab	02 23 30.4	+0.8
GYA				PKS		02 26 47.6	
GYA				PP	PP		
	comp=Z,70nm,5.1s						
GYA				LR	LR		
	comp=N,120nm,20.3s,MS4.8						
GYA				LR	LR		
	comp=E,130nm,21.0s,MS4.8						
GYA				LR	LR		
	comp=Z,110nm,19.8s,MS4.7						
PMG	**Port Moresby**	**153.13**	**206**	*e*PKPdf	PKPdf	02 23 21.2	-0.2
NJ2	**Nanjing**	**157.18**	**39**	*e*PKP	PKPdf	02 23 21.1	-5.3

*MOS **09** 02:22:55.3±1.0, 2.40N×126.85E, h33km, mb5.1/28, Error ellipse: s-maj=14.3km s-min=6.8km az=117.1*

*BJI **09** 02:22:56.5, 1.96N×126.97E, h75km, mB5.1, mb4.7, Ms4.4, Msz4.1*

*IDC **09** 02:22:57.9±3.6, 2.37N×126.86E, h40km±32km, mb4.3/23, mb1 4.4/24, mb1mx4.4/25, mbtmp4.3/24, ML4.0/1, MS3.7/5, Ms1 3.8/5, ms1mx3.4/26, Error ellipse: s-maj=19.9km s-min=10.0km az=73.0*

*ISCJB **09** 02:22:58.5±0.7, 2.33N±0.04×126.86E±0.04, h65km±7km, mb4.7/75, Error ellipse: s-maj=7.6km s-min=5.1km az=143.3*

*DJA **09** 02:23:00, 2.24N×126.96E, h63km, Mw5.0/5*

*NEIC **09** 02:23:01.1±0.9, 2.29N×126.81E, h75km±8km, mb4.9/34, Error ellipse: s-maj=8.0km s-min=4.1km az=64.0*

ISC 09 02:23:00.3±0.6**, 2.32N**±0.03×**126.87E**±0.04**, h65km**±6km**, h71km**±5.1km**:pP-P, n165,** σ**1.05**/163**, mb4.7**/75**, 2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.61**	**162**	P	**Pn**	**02 23 24.8**	**-1.9**
TNTI				S	**Sn**	**02 23 45.1**	**-1.5**
MNI	**Manado**	**2.21**	**247**	P	**Pn**	**02 23 33.2**	**-1.4**
MNI				S	**Sn**	**02 23 59.2**	**-1.7**
LBMI	**Labuha**	**3.00**	**168**	P	**Pn**	**02 23 47.3**	**+1.8**
DAV	**Davao City (W)**	**4.89**	**345**	Pn	**Pn**	**02 24 14.1**	**+2.8**
	40nm,0.3s,baz=58,slow=18,SNR=2.2						
DAV				Sn	**Sn**	**02 25 15.6**	**+8.9**
	44nm,0.3s,baz=79,slow=22,SNR=5.9						
SWI	**Sorong**	**5.41**	**126**	P	**Pn**	**02 24 18.2**	**-0.2**
	72nm,1.0s,797nm0.2nm						
AAI	**Ambon**	**6.11**	**167**	P	**Pn**	**02 24 31.1**	**+3.1**
	89nm,0.7s,1μm0.3nm						
KDI	**Kendari**	**7.54**	**214**	P	**Pn**	**02 24 46.9**	**-0.7**
	56nm,0.8s,4μm0.2nm						
KDI	**Kendari**	**7.54**	**214**	P	**Pn**	**02 24 46.9**	**-0.7**
	47nm,0.8s,4μm0.2nm						
PCI	**Palu**	**7.72**	**246**	P	**Pn**	**02 24 51.1**	**+0.9**
	101nm,0.8s,1μm						
PCI	**Palu**	**7.72**	**246**	P	**Pn**	**02 24 51.1**	**+0.9**
	85nm,0.9s,1μm0.3nm						
MYLDM	**Lahad Datu**	**8.82**	**289**	P	**Pn**	**02 25 09.0**	**+3.9**
	134nm,1.0s						
MYLDM	**Lahad Datu**	**8.82**	**289**	P	**Pn**	**02 25 07.1**	**+2.0**
	112nm,0.9s,0.4nm						
KAPI	**Kappang**	**10.18**	**224**	Pn	**Pn**	**02 25 23.3**	**-0.4**
	1.1nm,0.3s,baz=102,slow=3.4,SNR=9.9						
KAPI	**Kappang**	**10.18**	**224**	*e*Pn	**Pn**	**02 25 23.4**	**-0.3**
KAPI	**Kappang**	**10.18**	**224**	P	**Pn**	**02 25 22.4**	**-1.3**
KAPI	**Kappang**	**10.18**	**224**	P	**Pn**	**02 25 22.4**	**-1.3**
	9.7nm,0.8s						
KKM	**Kota Kinabalu**	**11.25**	**290**	*e*Pn	**Pn**	**02 25 39.4**	**+1.0**
BATI	**Baumata**	**12.84**	**194**	Pn	**Pn**	**02 26 06.8**	**+6.7**
	1.7nm,0.3s,baz=76,slow=4.2,SNR=3.1						
BATI	**Baumata**	**12.84**	**194**	P	**Pn**	**02 26 01.0**	**+0.9**
BBKI	**Banjar Baru**	**13.32**	**245**	P	**Pn**	**02 26 10.5**	**+3.9**
	31nm,1.3s						
SBUM	**Sibu**	**14.64**	**271**	P	**Pn**	**02 26 31.3**	**+7.4**
KHKI	**Kahang-Kahang**	**15.45**	**226**	P	**Pn**	**02 26 37.0**	**+2.6**
	53nm,1.4s						
KMMI	**Kalianget**	**15.89**	**234**	P	**Pn**	**02 26 41.7**	**+1.7**
	94nm,1.1s						
KAKA	**Kakadu**	**15.92**	**160**	*e*P	x	02 26 24.0	
	27nm,0.5s						
KAKA	**Kakadu**	**15.92**	**160**	P	x	02 26 23.6	
	83nm,0.8s,576nm						
DNP	**Denpasar**	**15.95**	**227**	P	**Pn**	**02 26 43.8**	**+3.0**
FITZ	**Fitzroy Crossi**	**20.33**	**183**	*e*P	**P**	**02 27 30.9**	**-0.3**
	12nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.33**	**183**	P	**P**	**02 27 31.2**	**0.0**
	29nm,0.9s						
GUMO	**Guam**	**21.03**	**57**	LR	LR	02 34 24.8	
	comp=Z,216nm,21.1s,baz=264,slow=33						
PPBI	**Pangkal Pinang**	**21.20**	**258**	P	**P**	**02 27 34.7**	**-6.0**
COEN	**Coen**	**22.86**	**135**	*e*P	**P**	**02 27 57.5**	**-0.9**
	3.7nm,0.6s,mb3.9						
WRAB	**Tennant Creek**	**23.30**	**162**	*e*P	**P**	**02 28 01.5**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,37nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**23.30**	**162**	*e*P	**P**	**02 28 01.5**	**-1.1**
	comp=Z,37nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**23.30**	**162**	P	**P**	**02 28 01.5**	**-1.1**
	comp=Z,50nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**23.31**	**162**	*e*P	**P**	**02 28 01.0**	**-1.7**
WB2				*e*S	**S**	**02 32 12.1**	**+1.8**
QIZ	**Qiongzhong**	**23.53**	**316**	P	**P**	**02 28 03.9**	**-0.9**
QIZ				S	**S**	**02 32 14.2**	**+0.2**
QIZ				LR	LR		
	comp=Z,221nm,31.1s						
MBWA	**Marble Bar**	**24.36**	**196**	*e*P	**P**	**02 28 10.8**	**-1.5**
	comp=Z,11nm,0.8s,mb4.2						
JOW	**Kunigami**	**24.41**	**3**	P	**P**	**02 28 14.2**	**+1.4**
	comp=Z,20nm,0.9s,mb4.5,baz=285,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**26.72**	**166**	P	**P**	**02 28 33.0**	**-0.6**
	comp=Z,2.2nm,0.4s,mb4.0,baz=347,slow=8.0,SNR=39						
ASAR				PcP	PcP	02 31 57.0	+1.1
	comp=Z,1.9nm,0.6s,baz=347,slow=2.3,SNR=6.3						
PSI	**Prapat**	**27.92**	**272**	P	**P**	**02 28 45.9**	**+1.2**
	comp=Z,4.0nm,0.9s,mb4.0,baz=108,slow=6.4,SNR=3.0						
CTA	**Charters Tower**	**29.29**	**140**	P	**P**	**02 28 56.9**	**+0.3**
	comp=Z,2.4nm,0.6s,mb4.0,baz=317,slow=12,SNR=4.9						
CTAO	**Charters Tower**	**29.29**	**140**	*e*P	**P**	**02 28 56.5**	**-0.1**
NJ2	**Nanjing**	**30.52**	**347**	*e*P	**P**	**02 29 09.1**	**+1.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
GYA	**Guiyang**	**30.86**	**323**	*e*P	**P**	**02 29 11.2**	**+0.7**
GYA				AP	pP	02 29 29.3	+2.9
GYA				XP	sP	02 29 39.4	+5.3
GYA				S	**S**	**02 34 10.8**	**+0.9**
GYA				XS	sS	02 34 41.7	+4.7
GYA				SCP	ScP	02 35 42.1	-1.4
GYA				PCS	PcS	02 35 52.4	+2.1
GYA				SCS	ScS	02 39 38.7	-1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,420nm,17.3s						
GYA				LR	LR		
	comp=E,330nm,17.0s						
GYA				LR	LR		
	comp=Z,410nm,18.8s						
CMAR	**Chiang Mai Arr**	**31.72**	**302**	P	**P**	**02 29 17.5**	**-0.7**
	comp=Z,7.9nm,0.9s,mb4.5,baz=124,slow=7.5,SNR=21						
CMAR				LR	LR	02 40 50.8	
	comp=Z,86nm,19.5s,baz=94,slow=34						
CHTO	**Chiang Mai**	**31.88**	**303**	*e*P	**P**	**02 29 18.6**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**31.88**	**303**	*e*P	**P**	**02 29 18.6**	**-0.9**
	comp=Z,10nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**31.88**	**303**	P	**P**	**02 29 18.6**	**-1.0**
KMI	**Kunming**	**32.48**	**316**	P	**P**	**02 29 29.1**	**+4.3**
KMI				S	**S**	**02 34 36.7**	**+1.5**
KMI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.8						
KMI				LR	LR		
	comp=N,124nm,15.2s						
KMI				LR	LR		
	comp=E,132nm,15.9s						
KMI				LR	LR		
	comp=Z,127nm,17.3s						
FORT	**Forrest**	**32.93**	**178**	*e*P	**P**	**02 29 28.8**	**+0.2**
	comp=Z,40nm,0.8s,mb5.3						
KLBR	**Kellerberrin**	**34.82**	**194**	*e*P	**P**	**02 29 45.3**	**+0.4**
	comp=Z,39nm,1.4s,mb5.0						
KSRS	**Korea Array**	**34.98**	**1**	P	**P**	**02 29 46.6**	**+0.3**
	comp=Z,7.0nm,0.8s,mb4.5,baz=177,slow=9.6,SNR=20						
MJAR	**Matsushiro Arr**	**35.63**	**16**	P	**P**	**02 29 50.9**	**-1.0**
	comp=Z,3.2nm,0.7s,mb4.4,baz=200,slow=8.3,SNR=12						
MJAR				LR	LR	02 42 06.1	
	comp=Z,100nm,21.7s,baz=210,slow=32						
MJAR	**Matsushiro Arr**	**35.63**	**16**	P	**P**	**02 29 50.9**	**-1.0**
MJAR				LR	LR	02 42 06.1	
MAJO	**Matsushiro**	**35.63**	**16**	*e*P	**P**	**02 29 50.9**	**-1.0**
	comp=Z,12nm,1.0s,mb4.8						
MAT	**Matsushiro**	**35.63**	**16**	P	**P**	**02 29 51.3**	**-0.6**
XAN	**Xi'an**	**35.73**	**334**	P	**P**	**02 29 51.0**	**-1.8**
XAN				AP	pP	02 30 08.0	-0.9
XAN				PP	PP	02 31 13.8	-1.4
XAN				PPP		02 31 38.0	
XAN				S	**S**	**02 35 24.6**	**-0.6**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
XAN				AMB	AMB		
	comp=Z,84nm,5.5s						
XAN				LR	LR		
	comp=N,39nm,30.0s						
XAN				LR	LR		

	comp=E,57nm,31.4s						
XAN				LR	LR		
	comp=Z,174nm,32.7s						
CD2	**Chengdu**	**35.86**	**325**	eP	**P**	**02 29 53.3**	**-0.7**
CD2				AP	pP	02 30 11.5	+1.4
CD2				XP	sP	02 30 20.4	+2.7
CD2				PP	PP	02 31 17.2	+0.6
CD2				S	**S**	**02 35 25.9**	**-1.4**
CD2				XS	sS	02 35 57.0	+2.3
CD2				SS	SS	02 37 52.4	-14
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2				AMB	AMB		
	comp=Z,40nm,4.8s						
CD2				LR	LR		
	comp=N,190nm,10.8s						
CD2				LR	LR		
	comp=E,240nm,8.4s						
CD2				LR	LR		
	comp=Z,160nm,10.8s						
EIDS	**Eidsvold**	**36.17**	**141**	eP	**P**	**02 29 56.4**	**-0.2**
	comp=Z,19nm,0.9s,mb5.0						
NWAO	**Narrogin (SRO)**	**36.22**	**194**	P	**P**	**02 29 58.1**	**+1.2**
	comp=Z,6.6nm,0.6s,mb4.8,baz=16,slow=9.2,SNR=5.5						
STKA	**Stephens Creek**	**36.77**	**159**	eP	**P**	**02 30 01.2**	**-0.5**
	comp=Z,24nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**36.77**	**159**	P	**P**	**02 30 01.6**	**0.0**
	comp=Z,26nm,0.7s,mb5.3,baz=339,slow=7.9,SNR=45						
STKA				PcP	PcP	02 32 23.7	+0.8
	comp=Z,4.9nm,0.8s,baz=335,slow=8.4,SNR=3.3						
BJT	**Baijiatuau**	**38.76**	**347**	eP	**P**	**02 30 18.0**	**-0.4**
BJT				pmax	pmax		
	comp=Z,27nm,1.0s						
BJT	**Baijiatuau**	**38.76**	**347**	eP	**P**	**02 30 18.0**	**-0.3**
	comp=Z,27nm,1.0s,mb5.0						
BJI	**Beijing**	**38.78**	**347**	P	**P**	**02 30 18.8**	**+0.2**
BJI				S	**S**	**02 36 10.5**	**-0.8**
BJI				AMB	AMB		
	comp=Z,24nm,0.5s,mb5.3						
BJI				AMB	AMB		
	comp=Z,110nm,4.2s						
BJI				LR	LR		
	comp=N,132nm,19.3s						
BJI				LR	LR		
	comp=E,193nm,19.1s						
BJI				LR	LR		
	comp=Z,56nm,20.6s						
LZH	**Lanzhou**	**39.79**	**330**	eP	**P**	**02 30 25.5**	**-1.5**
LZH				AP	pP	02 30 48.4	+5.1
LZH				XP	sP	02 30 54.5	+3.6
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,140nm,5.8s						
LZH				LR	LR		
	comp=E,283nm,14.3s						
LZH				LR	LR		
	comp=Z,410nm,15.5s						
ARMA	**Armidale**	**40.22**	**146**	eP	**P**	**02 30 31.2**	**+0.5**
HHC	**Hu-ho-hao-te**	**40.77**	**342**	eP	**P**	**02 30 36.7**	**+1.6**
HHC				AP	pP	02 30 55.0	+3.6
HHC				XP	sP	02 31 04.1	+5.1
HHC				PP	PP	02 32 14.5	+4.3
HHC				PCP	PcP	02 32 37.1	+1.9
HHC				eS	**S**	**02 36 41.4**	**+0.3**
HHC				XS	sS	02 37 12.2	+3.3
HHC				SS	SS	02 39 40.9	-3.5
HHC				SCS	ScS	02 40 31.9	-2.2
HHC				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,182nm,6.1s						
HHC				LR	LR		
	comp=N,152nm,17.8s						
HHC				LR	LR		
	comp=E,168nm,13.1s						
HHC				LR	LR		
	comp=Z,145nm,17.8s						
CN2	**Changchun**	**41.33**	**358**	eP	**P**	**02 30 42.2**	**+2.7**
MDJ	**Mudanjiang**	**42.19**	**3**	P	**P**	**02 30 46.7**	**+0.1**
MDJ				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,62nm,3.4s						
CAN	**Canberra**	**42.80**	**153**	eP	**P**	**02 30 52.4**	**+0.8**
CAN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
CAN	**Canberra**	**42.80**	**153**	eP	**P**	**02 30 52.4**	**+0.8**
	comp=Z,7.8nm,0.8s,mb4.5						
LSA	**Lhasa**	**43.48**	**312**	P	**P**	**02 30 59.0**	**+1.7**
LSA	**Lhasa**	**43.48**	**312**	eP	**P**	**02 30 58.1**	**+0.8**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**43.48**	**312**	eP	**P**	**02 30 58.1**	**+0.8**
	comp=Z,8.2nm,0.8s,mb4.5						
GTA	**Gaotai**	**44.38**	**330**	eP	**P**	**02 31 04.1**	**-0.2**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb3.9						
TAPN	**Taplejung**	**44.97**	**307**	eP	**P**	**02 31 07.9**	**-1.3**
	comp=Z,23nm,0.9s,mb4.9						
ODAN	**Odare**	**45.01**	**307**	eP	**P**	**02 31 08.5**	**-1.1**
RAMN	**Ramite**	**45.68**	**306**	eP	**P**	**02 31 14.2**	**-0.7**
	comp=Z,36nm,0.9s,mb5.1						
JIRN	**Jiri**	**46.32**	**307**	eP	**P**	**02 31 19.0**	**-0.9**
	comp=Z,30nm,0.8s,mb5.1						
HABR	**Khabarovsk**	**46.52**	**8**	eP	**P**	**02 31 17.9**	**-3.2**
HABR				e*PP	pP	02 31 32.1	-5.6
HABR				e		02 32 51.6	
HABR				eS	**S**	**02 38 03.3**	**-1.3**
HABR				e*SS	sS	02 38 26.7	-6.1
HABR				eSSS		02 42 30.6	
GUN	**Gumba**	**46.67**	**307**	eP	**P**	**02 31 21.6**	**-1.1**
	comp=Z,32nm,0.7s,mb5.2						
PKI	**Pulchoki**	**46.90**	**306**	eP	**P**	**02 31 24.3**	**-0.2**
KLR	**Kul'dur**	**46.92**	**4**	eP	**P**	**02 31 20.1**	**-4.1**
DMN	**Daman**	**47.16**	**306**	eP	**P**	**02 31 25.8**	**-0.7**
GKN	**Gorkha**	**47.70**	**307**	eP	**P**	**02 31 29.6**	**-1.1**
KOLN	**Koldanda**	**48.45**	**306**	eP	**P**	**02 31 35.5**	**-0.9**
	comp=Z,53nm,0.7s,mb5.5						
DANN	**Dangsing**	**48.55**	**307**	eP	**P**	**02 31 36.3**	**-0.9**
	comp=Z,47nm,0.7s,mb5.5						
SONM	**Songino Array**	**48.67**	**342**	P	**P**	**02 31 37.9**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.4,baz=160,slow=7.5,SNR=19						
SONM				LR	LR	02 52 39.3	
	comp=Z,142nm,21.5s,baz=156,slow=37						
HYB	**Hyderabad**	**49.73**	**291**	i P	**P**	**02 31 46.0**	**-0.4**
HYB	**Hyderabad**	**49.73**	**291**	eP	**P**	**02 31 46.0**	**-0.4**
TLY	**Talaya**	**52.91**	**342**	eP	**P**	**02 32 14.1**	**+4.5**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,101nm,24.0s						
MOY	**Mondy**	**53.75**	**340**	eP	**P**	**02 32 16.8**	**+1.1**
WMQ	**Urumqi**	**53.96**	**326**	eP	**P**	**02 32 18.5**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,253nm,7.0s						
HVS	**Khovu-Aksy**	**56.07**	**335**	eP	**P**	**02 32 32.8**	**+0.3**
HVS				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
BOD	**Bodaibo**	**56.27**	**352**	eP	**P**	**02 32 33.7**	**-0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.4						
PETK	**Petropavlovsk-**	**56.68**	**22**	P	**P**	**02 32 37.7**	**+0.9**
	comp=Z,2.3nm,0.7s,mb4.3,baz=217,slow=4.5,SNR=3.6						
PETK	**Petropavlovsk-**	**56.68**	**22**	P	**P**	**02 32 37.7**	**+0.8**
PET	**Petropavlovsk**	**56.97**	**22**	eP	**P**	**02 32 38.8**	**-0.1**
PET				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
MK31	**Makanchi Array**	**58.79**	**326**	eP	**P**	**02 32 50.9**	**-0.9**
MKAR	**Makanchi Array**	**58.79**	**326**	P	**P**	**02 32 51.3**	**-0.5**
	comp=Z,3.4nm,0.6s,mb4.5,baz=118,slow=7.5,SNR=32						
MKAR				LR	LR	02 59 45.2	
	comp=Z,95nm,19.1s,baz=354,slow=38						
YAK	**Yakutsk**	**59.61**	**2**	eP	**P**	**02 32 56.4**	**-0.7**
YAK				e*PP	pP	02 33 09.5	-4.8
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,15nm,1.6s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.6s						
YAK	**Yakutsk**	**59.61**	**2**	eP	**P**	**02 32 57.7**	**+0.6**
	comp=E,35nm,0.6s,mb5.6						
RPZ	**Rata Peaks**	**60.54**	**145**	P	**P**	**02 33 03.9**	**+0.1**
	comp=E,8.2nm,0.6s,mb4.9,baz=354,slow=7.2,SNR=5.5						
TKM2	**Tokmak 2**	**60.89**	**319**	eP	**P**	**02 33 06.0**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**60.89**	**319**	eP	**P**	**02 33 06.0**	**-0.3**
	comp=Z,5.1nm,0.8s,mb4.6						
UCH	**Uchtor**	**61.30**	**318**	eP	**P**	**02 33 08.9**	**-0.2**
	comp=Z,2.4nm,0.5s,mb4.5						
AAK	**Ala-Archa**	**61.49**	**318**	eP	**P**	**02 33 10.8**	**+0.5**
AAK				pmax	pmax		
	comp=Z,25nm,2.2s,mb4.9						
AAK	**Ala-Archa**	**61.49**	**318**	eP	**P**	**02 33 10.8**	**+0.5**
	comp=Z,25nm,2.2s,mb4.9						
AML	**Almayashu**	**61.81**	**318**	eP	**P**	**02 33 12.9**	**+0.4**
	comp=Z,9.3nm,0.8s,mb4.9						
ZAA0	**Zalesovo Array**	**61.90**	**333**	eP	**P**	**02 33 11.6**	**-1.2**
ZALV	**Zalesovo Beam**	**61.90**	**333**	P	**P**	**02 33 11.8**	**-1.0**
	comp=Z,2.1nm,0.6s,mb4.3,baz=76,slow=6.1,SNR=10.0						
EKS2	**Erkin-Say**	**61.98**	**318**	eP	**P**	**02 33 13.7**	**0.0**
	comp=Z,5.9nm,0.8s,mb4.7						
KBL	**Kabul**	**62.49**	**308**	eP	**P**	**02 33 16.8**	**-0.4**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KBL	**Kabul**	**62.49**	**308**	eP	**P**	**02 33 16.8**	**-0.4**
	comp=Z,4.8nm,0.7s,mb4.6						
KURK	**Kurchatov**	**63.00**	**328**	P	**P**	**02 33 19.7**	**-0.6**
	comp=Z,8.0nm,0.6s,mb4.8,baz=128,slow=6.3,SNR=26						
KURK	**Kurchatov**	**63.00**	**328**	eP	**P**	**02 33 19.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KURK	**Kurchatov**	**63.00**	**328**	eP	**P**	**02 33 19.3**	**-1.0**
	comp=Z,14nm,0.7s,mb5.0						
NVS	**Novosibirsk**	**63.19**	**333**	eP	**P**	**02 33 19.3**	**-2.1**
NVS				pmax	pmax		
	comp=N,3.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
SEY	**Seymchan**	**63.37**	**13**	eP	**P**	**02 33 24.2**	**+1.7**
BVAR	**Borovoye Array**	**68.57**	**327**	P	**P**	**02 33 55.8**	**-0.2**
	comp=Z,4.8nm,0.8s,mb4.4,baz=130,slow=8.0,SNR=17						
BRVK	**Borovoye**	**68.64**	**327**	eP	**P**	**02 33 56.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**68.64**	**327**	eP	**P**	**02 33 56.5**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.5						
TIXI	**Tiksi**	**69.24**	**1**	eP	**P**	**02 33 59.7**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
AKTK	**Aktyubinsk**	**74.85**	**322**	P	**P**	**02 34 33.9**	**+0.1**
AKTO	**Aktyubinsk**	**74.85**	**322**	P	**P**	**02 34 33.9**	**+0.1**
	comp=Z,4.1nm,0.7s,mb4.3,baz=103,slow=7.1,SNR=17						
SVE	**Sverdlovsk**	**75.23**	**329⇑**	eP	**P**	**02 34 36.1**	**+0.2**
SVE				ePPP		02 39 09.6	
SVE				eS	S	02 44 02.8	-6.9
SVE				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
ARU	**Arti**	**76.20**	**328c**	iP	**P**	**02 34 40.8**	**-0.6**
ARU				e		02 37 31.8	
ARU				eS	S	02 44 23.0	+2.6
ARU				SS	SS	02 49 16.7	+1.6
ARU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
ARU	**Arti**	**76.20**	**328**	eP	**P**	**02 34 40.5**	**-0.8**
	comp=Z,13nm,0.8s,mb4.7						
VNDA	**Vanda**	**82.02**	**173**	P	**P**	**02 35 13.6**	**+0.8**
	comp=Z,4.7nm,0.8s,mb4.3,baz=310,slow=7.1,SNR=16						
VNDA	**Vanda**	**82.02**	**173**	eP	**P**	**02 35 13.2**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VNDA	**Vanda**	**82.02**	**173**	eP	**P**	**02 35 13.2**	**+0.5**
	comp=Z,4.4nm,0.8s,mb4.3						
MAW	**Mawson**	**82.49**	**200**	P	**P**	**02 35 16.6**	**+1.2**
	comp=Z,4.5nm,0.6s,mb4.5,baz=78,slow=10,SNR=7.8						
KIV	**Kislovodsk**	**84.21**	**314**	eP	**P**	**02 35 24.9**	**+0.1**
KIV				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
KIV	**Kislovodsk**	**84.21**	**314**	eP	**P**	**02 35 25.0**	**+0.3**
	comp=Z,26nm,1.4s,mb4.9						
VRHR	**Novokhopersk**	**85.22**	**321**	eP	**P**	**02 35 31.4**	**+1.7**
VRHR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
VRHR				pmax	pmax		
	comp=N,40nm,0.6s						
VRHR				pmax	pmax		
	comp=E,40nm,1.1s						
MCK	**McKinley**	**85.36**	**26**	eP	**P**	**02 35 30.5**	**+0.4**
MCK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
MCK	**McKinley**	**85.36**	**26**	eP	**P**	**02 35 30.5**	**+0.4**
	comp=Z,13nm,1.3s,mb4.7						
VORD	**Divnogorie**	**86.68**	**321**	eP	**P**	**02 35 37.3**	**+0.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
VORD				pmax	pmax		
	comp=N,6.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.8s						
KLMR	**Klimovskoe**	**86.70**	**331**	eP	**P**	**02 35 38.3**	**+1.5**
KLMR				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
VSR	**Storozhevoye**	**86.77**	**321**	eP	**P**	**02 35 37.3**	**0.0**
VSR				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
VSR				pmax	pmax		
	comp=N,2.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,8.0nm,0.9s						
OBN	**Obninsk**	**88.29**	**325⇓**	eP	**P**	**02 35 44.9**	**+0.4**
OBN				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
BR131	**Keskin Array S**	**91.02**	**310**	eP	**P**	**02 35 57.2**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**91.02**	**310**	P	**P**	**02 35 57.6**	**0.0**
	comp=Z,1.2nm,0.7s,mb4.1,baz=120,slow=4.2,SNR=8.5						
BRTR	**Keskin Array B**	**91.02**	**310**	i P	**P**	**02 35 58.0**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**91.42**	**22**	eP	**P**	**02 35 59.3**	**+0.4**
ARCES	**ARCESS Array B**	**91.81**	**340**	P	**P**	**02 36 00.2**	**-0.5**
	comp=Z,2.6nm,0.8s,mb4.5,baz=76,slow=6.5,SNR=6.2						
ARCES	**ARCESS Array B**	**91.81**	**340**	P	**P**	**02 36 00.2**	**-0.5**
AKASG	**Malin Array Be**	**93.07**	**321**	P	**P**	**02 36 08.4**	**+1.5**
	comp=Z,1.0nm,0.6s,mb4.3,baz=69,slow=4.4,SNR=4.1						
AKASG	**Malin Array Be**	**93.07**	**321**	P	**P**	**02 36 08.4**	**+1.5**
MLR	**Muntele Rosu**	**96.01**	**316**	P	**P**	**02 36 20.9**	**+0.4**
	comp=Z,3.2nm,1.0s,mb4.7,baz=260,slow=6.1,SNR=3.3						
BUR08	**Bucovina Ar. S**	**96.15**	**318**	eP	**P**	**02 36 22.4**	**+1.3**
RES	**Resolute Bay**	**99.17**	**10**	eP	**P**	**02 36 34.4**	**+0.3**
RES				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.8						
RES	**Resolute Bay**	**99.17**	**10**	eP	**P**	**02 36 34.4**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.6						
NOA	**NORSAR Array B**	**100.11**	**334**	P	Pdif	02 36 38.8	+0.2
	comp=Z,1.2nm,0.9s,baz=76,slow=7.7,SNR=3.3						
YKA	**Yellowknife Ar**	**100.72**	**25**	P	Pdif	02 36 41.8	+0.4
	comp=Z,0.1nm,0.3s,baz=291,slow=3.9,SNR=4.2						
TXAR	**Lajitas Array**	**122.34**	**53**	PKP	PKPdf	02 41 50.0	+1.4
	comp=Z,0.4nm,0.8s,baz=193,slow=1.2,SNR=5.0						
TOA0	**Torodi Ar. Sit**	**123.48**	**287**	ePKPdf	PKPdf	02 41 50.5	-0.7
TORD	**Torodi Ar. Bea**	**123.48**	**287**	PKP	PKPdf	02 41 51.5	+0.3
	comp=Z,0.7nm,0.8s,baz=65,slow=1.6,SNR=9.4						
JCT	**Junction City**	**124.86**	**50**	ePKIKP	PKPdf	02 41 53.3	-0.2
DBIC	**Dimbokro**	**130.99**	**281**	PKP	PKPdf	02 42 07.3	+1.7
	comp=Z,1.3nm,0.7s,baz=166,slow=4.2,SNR=3.3						
PLCA	**Paso Flores**	**138.64**	**160**	PKP	PKPdf	02 42 19.5	+0.3
	comp=Z,2.2nm,0.9s,baz=211,slow=7.6,SNR=3.8						
CPUP	**Villa Florida**	**155.79**	**171**	PKP	PKPdf	02 42 52.1	+4.4
	comp=Z,0.2nm,0.4s,baz=117,slow=4.5,SNR=2.7						
CPUP				PKPbc	pPKPdf	02 43 00.3	-6.4
	comp=Z,0.5nm,0.4s,baz=264,slow=1.0,SNR=4.6						
CPUP				PKPab	PKPab	02 43 15.8	+1.6
	comp=Z,1.9nm,0.8s,baz=203,slow=3.6,SNR=5.3						
CPUP	**Villa Florida**	**155.79**	**171**	PKIKP	PKPdf	02 42 52.1	+4.4
CPUP						02 43 00.4	
CPUP	**Villa Florida**	**155.79**	**171**	PKP	PKPdf	02 42 52.1	+4.4
CPUP				PKPbc	pPKPdf	02 43 00.3	-6.4
CPUP				PKPab	PKPab	02 43 15.8	+1.6

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*ISCJB **09** 03:03:41.6±0.5, 1071N±003×6231W±003, h93km±6km, Error ellipse: s-maj=5.9km s-min=3.7km az=156.0*
*FUNV **09** 03:03:43.1, 1074N×6223W, h83km, MW3.6*
*TRN **09** 03:03:44.7, 1074N×6216W, h84km, MD3.4*
ISC 09 03:03:42.6±0.5**, 1071N**±003×**6231W**±003**, h86**km±6km**, n26, σ1s00**/45**, 6C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.10**	**124⇑**	iP	**Pn**	**03 03 54.9**	**0.0**
GUIV				eS	**Sn**	**03 04 02.7**	**-1.2**
TCE	**Chacachacare**	**0.55**	**91⇑**	iP	**Pn**	**03 03 58.2**	**+0.9**
TCE				eS	**Sn**	**03 04 07.7**	**-0.6**
GUNV	**Guanoco**	**0.82**	**229⇑**	iP	**Pn**	**03 04 01.6**	**+1.6**
GUNV				eS	**Sn**	**03 04 14.7**	**+1.6**
TRN	**Trinidad (W)**	**0.90**	**94⇓**	iP	**Pn**	**03 04 01.6**	**+0.7**
TRN				eS	**Sn**	**03 04 13.1**	**-1.4**
CRUV	**Carupano**	**0.91**	**268⇑**	iP	**Pn**	**03 04 01.8**	**+0.8**
CRUV				eS	**Sn**	**03 04 15.3**	**+0.6**
TPP	**Pointe-a-Pierr**	**0.93**	**114**	eP	**Pn**	**03 04 01.7**	**+0.5**
TPP				eS	**Sn**	**03 04 15.4**	**+0.2**
ITEV	**Isla Los Testi**	**1.03**	**309⇓**	iP	**Pn**	**03 04 03.2**	**+0.8**
TBH	**Brigand Hill**	**1.24**	**100⇑**	eP	**Pn**	**03 04 06.2**	**+1.2**
TBH				eS	**Sn**	**03 04 21.3**	**-0.5**
GRW	**Mount Saint Ca**	**1.58**	**24**	eP	**Pn**	**03 04 10.3**	**+1.0**
GRW				eS	**Sn**	**03 04 30.0**	**+0.6**
TPR	**Prospect**	**1.58**	**72**	eP	**Pn**	**03 04 10.1**	**+0.8**
TPR				eS	**Sn**	**03 04 28.3**	**-1.1**
TOSP	**Speyside**	**1.84**	**71**	eP	**Pn**	**03 04 12.0**	**-0.6**
TOSP				eS	**Sn**	**03 04 32.6**	**-2.8**
ORIV	**Oritupano**	**1.95**	**214**	eP	**Pn**	**03 04 15.0**	**+0.9**
ORIV				eS	**Sn**	**03 04 38.2**	**+0.2**
PCRV	**Puerto La Cruz**	**2.35**	**257**	eP	**Pn**	**03 04 19.6**	**+0.3**
PCRV				eS	**Sn**	**03 04 46.4**	**-1.0**
IBAV	**Isla La Blanqu**	**2.48**	**297⇑**	iP	**Pn**	**03 04 22.6**	**+1.5**
IBAV				eS	**Sn**	**03 04 49.5**	**-1.2**
RIOV	**Rio Grande**	**2.67**	**169**	eP	**Pn**	**03 04 24.0**	**+0.4**
SVB	**Belmont**	**2.75**	**22**	eP	**Pn**	**03 04 25.6**	**+0.9**
SVB				eS	**Sn**	**03 04 57.6**	**+0.5**
PRGV	**PARIAGUAN**	**3.00**	**230**	eP	**Pn**	**03 04 28.9**	**+0.8**
GURV	**El Guri**	**3.02**	**195**	eP	**Pn**	**03 04 28.6**	**+0.1**
MCLT	**Moule a Chique**	**3.27**	**24**	eP	**Pn**	**03 04 31.8**	**+0.1**
MCLT				eS	**Sn**	**03 05 08.0**	**-1.7**
CUPV	**Cœpira**	**3.48**	**260**	eP	**Pn**	**03 04 35.3**	**+0.7**
CUPV				eS	**Sn**	**03 05 14.1**	**-0.7**
BIRV	**Birongo**	**3.90**	**267**	eP	**Pn**	**03 04 40.4**	**+0.2**
BIRV				eS	**Sn**	**03 05 23.1**	**-1.8**
MERV	**Las Mercedes**	**4.18**	**250**	eP	**Pn**	**03 04 43.9**	**-0.3**
MERV				eS	**Sn**	**03 05 30.2**	**-1.7**
LUEV	**Luepa**	**4.90**	**170**	eP	**Pn**	**03 04 52.8**	**-1.1**
CAOV	**Caicara del Or**	**5.19**	**230**	eP	**Pn**	**03 04 58.0**	**+0.1**
CAOV				eS	**Sn**	**03 05 53.7**	**-2.8**
TURV	**Turiamo**	**5.44**	**268**	eP	**Pn**	**03 05 01.5**	**+0.2**
BAUV	**El Baul**	**5.91**	**253**	eP	**Pn**	**03 05 07.3**	**-0.4**

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*ISK **09** 03:20:09.8, 4036N×2742E, h15km, ML3.6*
*ISCJB **09** 03:20:09.6±0.3, 4035N±002×2742E±002, h9km±3km, Error ellipse: s-maj=2.6km s-min=2.3km az=33.7*
*CSEM **09** 03:20:09.6±0.0, 4036N×2742E, h12km, MD3.5, Error ellipse: s-maj=1.0km s-min=0.8km az=17.0*
*DDA **09** 03:20:09.6, 4034N×2743E, h24km±1km, Md3.5*
*NEIC **09** 03:20:09.0, 4038N×2741E, h16km, MD3.7(ATH), ML3.6(ISK), After ISK.*
*ATH **09** 03:20:10.0, 4037N×2762E, h48km±5km, MD3.7/4*
*THE **09** 03:20:10.8, 4030N×2735E, h1km±1km, ML3.7/3, Error ellipse: s-maj=2.2km s-min=0.9km az=75.0*
*BEO **09** 03:20:11.0±0.9, 4043N×2741E, ML3.4/3*
ISC 09 03:20:10.2±0.3**, 4034N**±001×**2742E**±002**, h7**km±2km**, n109, σ0s85**/141**, 9C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.29**	**27**	PG	**Pg**	**03 20 16.5**	**+0.6**
MRMT				SG	**Sg**	**03 20 20.2**	**+0.4**
EDC	**Edincik**	**0.34**	**89**	PG	**Pg**	**03 20 17.3**	**+0.5**
BNT	**Bandirma**	**0.38**	**88**	PG	**Pg**	**03 20 17.7**	**+0.1**
BNT				eSG	**Sg**	**03 20 22.9**	**+0.3**
RKY	**Sarkoy-Tekirda**	**0.39**	**332**	PG	**Pg**	**03 20 17.9**	**+0.1**
RKY				eSG	**Sg**	**03 20 23.2**	**+0.3**
LPK	**Lapseki**	**0.51**	**274**	ePG	**Pg**	**03 20 20.5**	**+0.6**
BALY	**Balya**	**0.62**	**166**	i P	**Pg**	**03 20 22.6**	**+0.5**
BALY				i S	**Sg**	**03 20 31.3**	**+1.1**
TKR	**Tekirdag**	**0.65**	**8**	ePG	**Pg**	**03 20 23.1**	**+0.3**
TKR				eSG	**Sg**	**03 20 32.2**	**+0.9**
BALB	**Balikesir**	**0.79**	**153**	ePG	**Pg**	**03 20 25.6**	**+0.4**
CRLT	**Corlu**	**0.82**	**17**	ePG	**Pg**	**03 20 25.8**	**-0.1**
EZN	**Ezine**	**0.99**	**239**	ePG	**Pg**	**03 20 28.9**	**-0.2**
ENEZ	**Enez**	**1.04**	**292**	ePG	**Pg**	**03 20 29.8**	**-0.4**
SLVT	**Silivri**	**1.07**	**34**	ePG	**Pg**	**03 20 30.5**	**-0.2**
CTT	**Catalca**	**1.11**	**43**	ePN	**Pn**	**03 20 30.7**	**-1.4**
ELBA	**Catalca**	**1.11**	**43**	i P	**Pg**	**03 20 30.9**	**-0.6**
ELBA				i S	**Sg**	**03 20 45.6**	**-0.2**
GADA	**Gvkgeada**	**1.18**	**263**	ePN	**Pn**	**03 20 32.2**	**-0.8**
AYVA	**Ayvalik**	**1.18**	**209**	i P	**Pg**	**03 20 32.9**	**+0.1**
AYVA				i S	**Sg**	**03 20 48.9**	**+0.8**
DST	**Dursunbey**	**1.18**	**128**	ePN	**Pn**	**03 20 32.2**	**-0.9**
ALN	**Alexandroupoli**	**1.19**	**298**	P	**Pg**	**03 20 32.4**	**-0.5**
ALN				S	**Sg**	**03 20 48.7**	**+0.4**
CTKS	**Kestanelik-??a**	**1.21**	**42**	ePN	**Pn**	**03 20 32.5**	**-1.1**
CTYL	**Yal??k??y-??at**	**1.31**	**30**	ePN	**Pn**	**03 20 33.7**	**-1.2**
BGKT	**Bogazkoy**	**1.32**	**50**	ePN	**Pn**	**03 20 34.0**	**-1.1**
ULDT	**Uludag**	**1.33**	**98**	i P	**Pn**	**03 20 34.9**	**-0.2**
ULDT				i S	**Sb**	**03 20 53.7**	**+1.1**
GEMT	**Gemlik**	**1.35**	**86**	ePN	**Pn**	**03 20 34.9**	**-0.6**
PRK	**Paraskevi**	**1.41**	**219**	P	**Pn**	**03 20 36.1**	**-0.2**
PRK				S	**Sb**	**03 20 55.0**	**0.0**
PRK	**Paraskevi**	**1.41**	**219⇑**	iP	**Pn**	**03 20 36.0**	**-0.3**
PRK				eS	**Sb**	**03 20 55.1**	**+0.1**
PRK	**Paraskevi**	**1.41**	**219⇑**	iP	**Pn**	**03 20 36.0**	**-0.3**
PRK				S	**Sb**	**03 20 55.0**	**0.0**
ISK	**Istanbul-Kandi**	**1.44**	**59**	ePN	**Pn**	**03 20 35.2**	**-1.5**
AKS	**Akhisar**	**1.49**	**168**	ePN	**Pn**	**03 20 37.4**	**-0.1**
AKHS	**Akhisar**	**1.49**	**168**	i P	**Pn**	**03 20 37.1**	**-0.3**
AKHS				i S	**Sn**	**03 20 56.9**	**-0.2**
YLV	**Yalova**	**1.50**	**81**	ePN	**Pn**	**03 20 37.5**	**-0.1**
KLYT	**Kilyos**	**1.53**	**53**	ePN	**Pn**	**03 20 36.6**	**-1.3**
EDRB	**Edirne**	**1.59**	**341**	ePN	**Pn**	**03 20 37.6**	**-1.1**
RDO	**Rodhopi**	**1.64**	**300⇓**	iP	**Pn**	**03 20 39.3**	**-0.1**
ADVT	**Abdulvahap**	**1.77**	**86**	ePN	**Pn**	**03 20 41.2**	**0.0**
LIA	**Limnos Island**	**1.77**	**256**	P	**Pn**	**03 20 41.5**	**+0.2**
LIA				S	**Sn**	**03 21 04.7**	**+0.6**
LIA	**Limnos Island**	**1.77**	**256**	eP	**Pn**	**03 20 41.8**	**+0.5**
HRT	**Hereke**	**1.78**	**74**	ePN	**Pn**	**03 20 41.4**	**+0.1**
CAVI	**Cavuskoy**	**1.86**	**94**	ePN	**Pn**	**03 20 42.3**	**-0.1**
SILT	**Sile**	**1.87**	**64**	ePN	**Pn**	**03 20 41.8**	**-0.8**
KDAG	**Bornova**	**1.94**	**184**	i P	**Pn**	**03 20 40.6**	**-3.0**
KDAG				i S	**Sn**	**03 21 07.1**	**-1.1**
BLCB	**Balcova**	**1.98**	**189**	ePN	**Pn**	**03 20 44.6**	**+0.5**
BLCB	**Balcova**	**1.98**	**189**	P	**Pn**	**03 20 43.9**	**-0.2**
BLCB				S	**Sn**	**03 21 08.5**	**-0.6**
BLCB	**Balcova**	**1.98**	**189**	ePn	**Pn**	**03 20 44.6**	**+0.5**
BLCB				S	**Sn**	**03 21 08.5**	**-0.6**
GDZ	**Gediz**	**2.02**	**128**	i P	**Pn**	**03 20 45.2**	**+0.5**
GDZ				i S	**Sn**	**03 21 14.3**	**+4.1**
KULA	**Kula-Manisa**	**2.06**	**152**	ePN	**Pn**	**03 20 44.7**	**-0.5**
EYL	**Eskiyayla**	**2.10**	**83**	ePN	**Pn**	**03 20 45.0**	**-0.7**
GPA	**Golpazari**	**2.21**	**90**	ePN	**Pn**	**03 20 47.5**	**+0.3**
JMB	**Yambol**	**2.21**	**344**	P	**Pn**	**03 20 48.2**	**+0.9**
JMB				S	**Sn**	**03 21 17.3**	**+2.4**
CHOS	**Chios island**	**2.22**	**209**	P	**Pn**	**03 20 47.1**	**-0.3**
CHOS				S	**Sn**	**03 21 15.3**	**+0.2**
GULT	**Gulveren**	**2.36**	**87**	ePN	**Pn**	**03 20 49.2**	**-0.2**
BORA	**Eskisehir**	**2.37**	**100**	i P	**Pn**	**03 20 49.0**	**-0.4**
BORA				i S	**Sg**	**03 21 25.2**	**-1.1**
BORA	**Eskisehir**	**2.37**	**100**	i P	**Pn**	**03 20 49.0**	**-0.5**
ALT	**Altintas**	**2.44**	**121**	ePN	**Pn**	**03 20 50.4**	**0.0**
KHAL	**Karahalli**	**2.54**	**140**	i P	**Pn**	**03 20 51.8**	**0.0**
KHAL				i S	**Sg**	**03 21 31.8**	**0.0**
KHL	**Karahalli**	**2.59**	**140**	ePN	**Pn**	**03 20 52.9**	**+0.3**
OUR	**Ouranopolis**	**2.63**	**271**	P	**Pn**	**03 20 52.3**	**-0.7**
SMG	**Samos**	**2.67**	**190**	eP	**Pn**	**03 20 53.0**	**-0.6**
HENT	**Hendek**	**2.69**	**79**	i P	**Pn**	**03 20 57.8**	**+3.9**
HENT				i S	**Sn**	**03 21 33.6**	**+6.9**
PLD	**Plovdiv**	**2.70**	**312**	P	**Pn**	**03 20 54.8**	**+0.8**
ESKT	**Eskisehir**	**2.76**	**106**	i P	**Pn**	**03 20 54.8**	**0.0**
ESKT				i S	**Sg**	**03 21 38.7**	**-0.1**
ESKT	**Eskisehir**	**2.76**	**106**	ePn	**Pn**	**03 20 55.2**	**+0.4**
SEYT	**Eskypehyr**	**2.76**	**106**	i P	**Pn**	**03 20 54.8**	**0.0**
NVR	**Nevrokopi**	**2.88**	**292**	P	**Pn**	**03 20 56.7**	**+0.2**
MDU	**Mudurnu**	**2.90**	**86**	ePN	**Pn**	**03 20 57.0**	**+0.3**
PAIG	**Paliouri**	**2.90**	**263**	P	**Pn**	**03 20 56.5**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**3.01**	**125**	ePN	**Pn**	**03 20 58.8**	**+0.6**
PLG	**Polygyros**	**3.04**	**272**	P	**Pn**	**03 20 58.1**	**-0.6**
PLG	**Polygyros**	**3.04**	**272**	P	**Pn**	**03 20 59.1**	**+0.4**
MLSB	**Milas**	**3.06**	**175**	ePN	**Pn**	**03 20 58.7**	**-0.2**
SOH	**Sokhos**	**3.13**	**280**	P	**Pn**	**03 20 59.7**	**-0.3**
SOH				S	**Sn**	**03 21 37.9**	**+0.3**
BOLV	**Bolvadin**	**3.17**	**120**	iP	**Pn**	**03 21 01.4**	**+0.8**
BOLV				iS	**Sg**	**03 21 51.7**	**-0.4**
KDZE	**Karadeniz Ereo**	**3.20**	**71**	ePN	**Pn**	**03 21 01.3**	**+0.4**
APE	**Apeiranthos**	**3.59**	**205**	P	**Pn**	**03 21 05.4**	**-0.8**
APE	**Apeiranthos**	**3.59**	**205**⇑	iP	**Pn**	**03 21 05.7**	**-0.5**
KIZT	**Kizilcal**	**3.74**	**112**	ePN	**Pn**	**03 21 08.6**	**+0.3**
LIT	**Litokhoron**	**3.78**	**268**	P	**Pn**	**03 21 08.9**	**0.0**
BCK	**Bucak**	**3.79**	**138**	ePN	**Pn**	**03 21 09.9**	**+0.8**
VAY	**Valandovo**	**3.81**	**286**	ePn	**Pn**	**03 21 08.8**	**-0.4**
VAY	**Valandovo**	**3.81**	**286**	ePn	**Pn**	**03 21 08.9**	**-0.4**
LKR	**Lokris**	**3.82**	**245**	P	**Pn**	**03 21 12.0**	**+2.6**
GRG	**Griva**	**3.87**	**281**	P	**Pn**	**03 21 10.2**	**+0.1**
VTS	**Vitosha**	**3.88**	**307**	ePn	**Pn**	**03 21 11.0**	**+0.8**
VTS				eSg	**Sg**	**03 22 12.0**	**-2.8**
VTS	**Vitosha**	**3.88**	**307**⇓	iP	**Pn**	**03 21 10.8**	**+0.6**
ELL	**Elmali**	**4.08**	**151**	ePN	**Pn**	**03 21 14.0**	**+1.0**
SAFT	**Safranbolu**	**4.10**	**76**	ePN	**Pn**	**03 21 14.5**	**+1.3**
TIRR	**Tirgusor**	**4.18**	**10**⇓	iP	**Pn**	**03 21 13.8**	**-0.5**
STIP	**Stip**	**4.18**	**291**	ePn	**Pn**	**03 21 14.5**	**+0.1**
STIP	**Stip**	**4.18**	**291**	ePn	**Pn**	**03 21 14.6**	**+0.2**
STIP				iSn	**Sg**	**03 22 28.6**	**+4.0**
THL	**Klokotos Trika**	**4.23**	**261**	P	**Pn**	**03 21 14.4**	**-0.6**
HARR	**Harsova**	**4.36**	**5**⇑	iP	**Pn**	**03 21 17.0**	**+0.2**
LADK	**Ladik-KONYA**	**4.39**	**118**	ePN	**Pn**	**03 21 18.1**	**+0.9**
KONT	**Konya--Tatoy**	**4.53**	**120**	ePN	**Pn**	**03 21 19.9**	**+0.8**
KRUS	**Krusevo**	**4.79**	**284**	ePn	**Pn**	**03 21 23.9**	**+1.1**
BR131	**Keskin Array S**	**4.81**	**95**	ePn	**Pn**	**03 21 22.5**	**-0.5**
BR131	**Keskin Array S**	**4.81**	**95**	ePg	**Pg**	**03 21 39.8**	**-2.6**
BR131	**Keskin Array S**	**4.81**	**95**	ePn	**Pn**	**03 21 22.5**	**-0.5**
BR131				ePg	**Pg**	**03 21 39.8**	**-2.6**
BR131				eSg	**Sg**	**03 22 45.6**	**+0.9**
BARS	**Barje**	**4.88**	**302**	ePn	**Pn**	**03 21 24.6**	**+0.7**
BARS				eSg	**Sg**	**03 22 43.3**	**-3.5**
MLR	**Muntele Rosu**	**5.26**	**349**⇓	iP	**Pn**	**03 21 31.0**	**+1.9**
BOLS	**Boljevac**	**5.36**	**312**	ePn	**Pn**	**03 21 30.2**	**-0.3**
BOLS				eSg	**Sg**	**03 22 59.6**	**-2.5**
VOIR		**5.38**	**342**⇓	iP	**Pn**	**03 21 31.6**	**+0.8**
PLOR	**Plostina**	**5.53**	**354**⇑	iP	**Pn**	**03 21 34.5**	**+1.6**
VRI	**Vrincioaia**	**5.54**	**355**⇓	iP	**Pn**	**03 21 34.3**	**+1.2**
GZR	**Gura Zlata**	**6.09**	**327**⇓	iP	**Pn**	**03 21 40.3**	**-0.3**
BZS	**Buzias**	**6.77**	**323**	ePn	**Pn**	**03 21 48.7**	**-1.2**
BZS	**Buzias**	**6.77**	**323**⇑	iP	**Pn**	**03 21 48.8**	**-1.1**
BURAR	**Bucovina Array**	**7.44**	**348**⇑	iP	**Pn**	**03 22 01.0**	**+1.9**
PKSM	**Moragy**	**8.68**	**315**	ePn	**Pn**	**03 22 15.4**	**-0.7**
PKSM	**Moragy**	**8.68**	**315**⇑	iP	**Pn**	**03 22 15.6**	**-0.5**
PKSM	**Moragy**	**8.68**	**315**⇑	iP	**Pn**	**03 22 15.6**	**-0.5**

*ISCJB **09** 03:57:44.7±0.5, 1795N±003×12020E±005, h48km±5km, mb4.2/14, Error ellipse: s-maj=8.5km s-min=4.9km az=179.1*

*MAN **09** 03:57:44, 1791N×12022E, h29km, mb5.2, ML4.2, MS4.4*

MAN INTENSITY III - STO DOMINGO, ILOCOS SUR; INTENSITY II - ABRA, SINAIT I. SUR.

*NEIC **09** 03:57:45.9±1.1, 1784N×12056E, h53km±10km, mb4.5/7, Error ellipse: s-maj=13.5km s-min=9.1km az=74.0*

NEIC Felt [III PIVS] at Santo Domingo and [II PIVS] at Sinait.

*IDC **09** 03:57:45.3±1.0, 1777N×12059E, h48km±9km, mb3.8/10, mb1 4.0/11, mb1mx3.8/22, mbtmp3.9/11, ML3.4/1, MS2.9/1, Ms1 3.1/1, ms1mx2.7/33, Error ellipse: s-maj=24.8km s-min=16.4km az=75.0*

ISC 09 03:57:45.9±0.5**, 1791N**±003×**12023E**±005**, h44**km±5km**, n50, σ0ˢ93**/54**, mb4.2**/14**, 1C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.22**	**86**⇓	iP	**Pn**	**03 57 53.0**	**-0.7**
SIPP				iS	**Sn**	**03 57 59.1**	**0.0**
ABRA	**Dolores**	**0.53**	**119**	eP	**Pn**	**03 57 56.4**	**-0.7**
ABRA				eS	**Sn**	**03 58 05.5**	**+0.3**
PIP	**Pasuquin**	**0.56**	**42**⇓	eP	**Pn**	**03 57 57.2**	**-0.3**
PIP				eS	**Sn**	**03 58 06.1**	**+0.3**
APYP	**Conner**	**0.97**	**92**	eP	**Pn**	**03 58 02.1**	**-0.9**
APYP				eS	**Sn**	**03 58 15.3**	**-0.4**
CVP	**Callao Caves**	**1.54**	**97**⇑	iP	**Pn**	**03 58 10.8**	**0.0**
CVP				iS	**Sn**	**03 58 30.3**	**+0.8**
BOLP	**Bolinao**	**1.55**	**191**	eP	**Pn**	**03 58 10.5**	**-0.5**
BCPH	**Baguio City Da**	**1.56**	**167**⇓	iP	**Pn**	**03 58 10.6**	**-0.5**
BCPH				iS	**Sn**	**03 58 29.9**	**-0.1**
SGCP	**Mt. Cagua**	**1.76**	**79**	eP	**Pn**	**03 58 13.7**	**-0.3**
CAUP	**Cauayan**	**1.80**	**122**	eP	**Pn**	**03 58 15.9**	**+1.5**
SCZP	**Santa Cruz**	**2.14**	**188**	eP	**Pn**	**03 58 19.0**	**-0.1**
PALP	**Palanan**	**2.26**	**111**⇓	iP	**Pn**	**03 58 21.6**	**+0.9**
PALP				iS	**Sn**	**03 58 50.8**	**+3.4**
PCPH	**Palayan**	**2.48**	**160**⇓	eP	**Pn**	**03 58 23.9**	**+0.2**
PCPH				iS	**Sn**	**03 58 55.9**	**+3.1**
BALP	**Baler**	**2.51**	**149**	eP	**Pn**	**03 58 25.4**	**+1.2**
POLP	**Polilio Island**	**3.56**	**152**	eP	**Pn**	**03 58 39.5**	**+0.8**
LUBP	**Lubang**	**4.15**	**180**	eP	**Pn**	**03 58 50.2**	**+3.5**
GQP	**Guinayangan**	**4.52**	**151**	eP	**Pn**	**03 58 46.9**	**-4.9**
TWG	**Pinlang**	**4.95**	**9**	ePn	**Pn**	**03 58 56.7**	**-1.0**
TPUB	**Ta-pu**	**5.38**	**4**	ePn	**Pn**	**03 59 04.2**	**+0.6**
	73nm,0.8s						
YULB	**Yu-li**	**5.55**	**10**	ePn	**Pn**	**03 59 05.4**	**-0.5**
	44nm,0.3s						
PVCP	**Virac**	**5.72**	**138**	eP	**Pn**	**03 59 04.1**	**-4.2**
BUSP	**Coron**	**5.87**	**180**	eP	**Pn**	**03 59 08.9**	**-1.4**
SSLB	**Suanglung**	**5.89**	**7**	ePn	**Pn**	**03 59 11.1**	**+0.5**
	34nm,0.4s						
ENPP	**El Nido**	**6.71**	**187**	eP	**Pn**	**03 59 20.4**	**-1.4**
YHNB	**Yeheng**	**6.81**	**9**	ePn	**Pn**	**03 59 24.1**	**+0.8**
	54nm,0.4s						
JOW	**Kunigami**	**11.59**	**39**	P	**Pn**	**04 00 28.1**	**-0.6**
	0.6nm,0.3s,baz=132,slow=17,SNR=2.7						
CMAR	**Chiang Mai Arr**	**20.23**	**275**	P	**P**	**04 02 21.6**	**+4.2**
	2.5nm,0.3s,baz=83,slow=7.0,SNR=2.9						
CMAR				LR	LR	04 10 35.6	
	comp=Z,32nm,18.4s,baz=95,slow=37						
KSRS	**Korea Array**	**20.61**	**18**	P	**P**	**04 02 21.3**	**-0.1**
	2.9nm,1.0s,baz=197,slow=11,SNR=5.9						
KAPI	**Kappang**	**22.78**	**181**	P	**P**	**04 02 44.6**	**-0.2**
	2.8nm,0.6s,mb3.9,baz=45,slow=18,SNR=2.9						
KAPI	**Kappang**	**22.78**	**181**	P	**P**	**04 02 44.6**	**-0.2**
SONM	**Songino Array**	**31.92**	**342**	P	**P**	**04 04 08.2**	**+1.1**
	0.9nm,0.7s,mb3.7,baz=152,slow=8.3,SNR=7.6						
COEN	**Coen**	**38.92**	**143**	eP	**P**	**04 05 07.0**	**-0.7**
	9.4nm,1.2s,mb4.4						
WRAB	**Tennant Creek**	**40.08**	**159**	eP	**P**	**04 05 12.4**	**-4.7**
	0.9nm,0.5s,mb3.8						
MK31	**Makanchi Array**	**42.44**	**321**	eP	**P**	**04 05 38.0**	**+1.7**
MKAR	**Makanchi Array**	**42.44**	**321**	P	**P**	**04 05 37.8**	**+1.4**
	4.5nm,0.8s,mb4.1,baz=117,slow=8.7,SNR=20						
MKAR				pP	pP	04 05 51.6	+3.3
	1.3nm,0.8s,baz=113,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**43.42**	**162**	P	**P**	**04 05 40.6**	**-3.9**
	1.5nm,0.4s,mb4.1,baz=337,slow=7.1,SNR=48						
ZALV	**Zalesovo Beam**	**45.15**	**331**	P	**P**	**04 05 58.4**	**+0.4**
	0.9nm,0.5s,mb3.9,baz=123,slow=5.3,SNR=6.9						
PETK	**Petropavlovsk-**	**45.62**	**31**	P	**P**	**04 06 00.3**	**-1.4**
	1.2nm,0.7s,mb3.9,baz=226,slow=3.5,SNR=3.5						
KURK	**Kurchatov**	**46.49**	**324**	P	**P**	**04 06 09.7**	**+1.1**
	2.8nm,0.6s,mb4.4,baz=122,slow=8.3,SNR=14						
KURK	**Kurchatov**	**46.49**	**324**	eP	**P**	**04 06 09.2**	**+0.7**
	5.7nm,0.9s,mb4.5						
BRVK	**Borovoye**	**52.16**	**324**	eP	**P**	**04 06 52.3**	**+0.5**
	4.2nm,1.2s,mb4.2						
KIV	**Kislovodsk**	**68.92**	**311**	eP	**P**	**04 08 46.6**	**+0.2**
	4.9nm,0.8s,mb4.5						
MCK	**McKinley**	**74.49**	**28**	eP	**P**	**04 09 18.5**	**-0.9**
	6.6nm,0.7s,mb4.7						
INK	**Inuvik**	**79.36**	**21**	eP	**P**	**04 09 45.7**	**-1.1**
RES	**Resolute Bay**	**84.97**	**9**	eP	**P**	**04 10 15.1**	**-1.0**
	2.1nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**89.08**	**22**	P	**P**	**04 10 35.5**	**-0.7**
	1.1nm,0.7s,mb4.3,baz=310,slow=4.4,SNR=24						
YKA				pP	pP	04 10 48.9	-0.4
	0.2nm,0.4s,baz=256,slow=35,SNR=2.8						
YKA	**Yellowknife Ar**	**89.08**	**22**	P	**P**	**04 10 35.5**	**-0.7**
YKA				pP	pP	04 10 48.9	-0.4
TXAR	**Lajitas Array**	**116.76**	**43**	PKP	PKPdf	04 16 25.0	-1.1
	0.4nm,0.5s,baz=188,slow=1.0,SNR=9.4						
TXAR				pPKP	pPKPdf	04 16 38.2	-1.5
	0.1nm,0.5s,baz=286,slow=4.3,SNR=2.0						
JCT	**Junction City**	**118.37**	**39**	ePKPdf	PKPdf	04 16 27.4	-1.7
WVT	**Waverly**	**120.06**	**26**	ePKPdf	PKPdf	04 16 30.5	-1.7
HKT	**Hockley**	**121.08**	**37**	ePKPdf	PKPdf	04 16 32.8	-1.6

*NIED **09** 04:09:00, 4050N×14360E, h17km, Mw4.5 Best double couple: M₀5.58000×10¹⁵ NP1:φs37.00000°, δ75.00000°, λ124.00000°. NP2:φs148.00000°, δ37.00000°, λ25.00000°.*

*JMA **09** 04:09:53.7±0.3, 4053N×14360E, h16km±4km, M4.0*

*NEIC **09** 04:09:54.8±3.6, 4069N×14330E, h4km±22km, mb4.6/6, MW4.4(NIED), Error ellipse: s-maj=10.7km s-min=7.5km az=123.0*

*ISCJB **09** 04:09:54.6±1.3, 4053N±003×14366E±005, h29km±10km, mb4.1/20, MS3.9/7, Error ellipse: s-maj=6.9km s-min=3.3km az=27.2*

*IDC **09** 04:09:54.0±0.9, 4067N×14335E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/24, mbtmp3.8/13, ML3.2/2, MS3.8/8, Ms1 3.8/8, ms1mx3.5/33, Error ellipse: s-maj=22.3km s-min=18.8km az=119.0*

*MOS **09** 04:09:56.7±1.1, 4063N×14332E, h33km, mb4.3/14, MS4.0/5, Error ellipse: s-maj=14.5km s-min=8.1km az=92.7*

*BJI **09** 04:09:56.1, 4067N×143.12E, h14km, mB4.6, mb4.4, Ms4.2, Msz4.1*

ISC 09 04:09:54.3±1.5**, 4058N**±003×**14354E**±006**, h8**km±10km**, n74, σ0ˢ99**/87**, mb4.1**/20**, MS3.9**/7**, 1C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.43**	**244**	P	**Pn**	**04 10 19.5**	**-1.0**
JTH				eS	**Sn**	**04 10 38.2**	**-1.3**
ERM	**Erimo**	**1.46**	**349**	ePn	**Pn**	**04 10 20.4**	**-0.5**
ERM				eSn	**Sn**	**04 10 39.7**	**-0.5**
JEM	**Erimo**	**1.47**	**349**	P	**Pn**	**04 10 20.8**	**-0.2**
JEM				eS	**Sn**	**04 10 40.0**	**-0.3**
JANG	**Nango**	**1.56**	**263**	P	**Pn**	**04 10 21.9**	**-0.3**
JANG				S	**Sn**	**04 10 42.6**	**0.0**
MIYJ	**Miyakonagasawa**	**1.66**	**233**	P	**Pn**	**04 10 23.0**	**-0.6**
MIYJ				eS	**Sn**	**04 10 44.1**	**-0.9**
JNBK	**Urakawa-nobuka**	**1.80**	**341**	P	**Pn**	**04 10 26.1**	**+0.5**
JNBK				S	**Sn**	**04 10 49.6**	**+1.0**
JCH	**Churui**	**2.04**	**356**	P	**Pn**	**04 10 28.3**	**-0.5**
JCH				S	**Sn**	**04 10 54.2**	**-0.2**
JOM	**Ohasama**	**2.05**	**238**	P	**Pn**	**04 10 29.3**	**+0.3**
JOM				eS	**Sn**	**04 10 54.5**	**-0.2**
JOT	**Ohata**	**2.05**	**294**	P	**Pn**	**04 10 29.8**	**+0.8**
JOT				S	**Sn**	**04 10 56.0**	**+1.3**
JKB	**Kayabe**	**2.30**	**305**	P	**Pn**	**04 10 33.2**	**+0.8**
JKB				eS	**Sn**	**04 11 01.7**	**+0.8**
JMK	**Ichinoseki**	**2.42**	**228**	P	**Pn**	**04 10 34.2**	**+0.2**
JMK				eS	**Sn**	**04 11 03.3**	**-0.4**
JAK	**Akkeshi**	**2.57**	**19**	P	**Pn**	**04 10 34.9**	**-1.2**
JAK				S	**Sn**	**04 11 03.9**	**-3.6**
JFR	**Furan**	**2.68**	**345**	P	**Pn**	**04 10 38.7**	**+1.1**
JFR				eS	**Sn**	**04 11 11.2**	**+1.0**
JAR	**Ashorobuto**	**2.72**	**4**	P	**Pn**	**04 10 36.8**	**-1.4**
JAR				S	**Sn**	**04 11 08.3**	**-3.0**
JEW	**Eniwo**	**2.75**	**326**	eS	**Sn**	**04 11 12.3**	**+0.3**
NEM2	**Nemuro 2**	**3.23**	**30**	P	**Pn**	**04 10 43.4**	**-1.9**
NEM2				S	**Sn**	**04 11 18.2**	**-5.7**
ASAJ	**Asahikawa**	**3.60**	**349**	Pn	**Pn**	**04 10 51.4**	**+1.0**
	1.8nm,0.3s,baz=260,slow=25,SNR=20						
ASAJ				Sn	**Sn**	**04 11 33.3**	**+0.3**
	4.2nm,0.3s,baz=24,slow=33,SNR=3.6						
ASAJ	**Asahikawa**	**3.60**	**349**	P	**Pn**	**04 10 51.4**	**+1.0**
ASAJ						04 11 33.3	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.86**	**26**	eP	**Pn**	**04 10 53.9**	**0.0**
YUK				iS	**Sn**	**04 11 34.4**	**-4.9**
YUK				smax			
	comp=N,770nm,0.4s						
YUK				smax			
	comp=E,350nm,0.4s						
YUK				smax			
	comp=N,4μm,1.0s						
YUK				smax			
	comp=E,2μm,1.0s						
KUR	**Kuril'sk**	**5.63**	**33**	eP	**Pn**	**04 11 13.0**	**-5.2**
KUR				pmax	pmax		
	comp=Z,530nm,1.0s						
MAJO	**Matsushiro**	**5.80**	**228**	eP	**Pn**	**04 11 20.8**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,16nm,0.6s						
MAJO	**Matsushiro**	**5.80**	**228**	ePn	**Pn**	**04 11 20.8**	**+0.2**
	comp=Z,16nm,0.6s						
MAT	**Matsushiro**	**5.80**	**228**	P	**Pn**	**04 11 22.2**	**+1.6**
MAT				S	**Sn**	**04 12 27.0**	**-0.3**
MJAR	**Matsushiro Arr**	**5.80**	**228**	Pn	**Pn**	**04 11 20.6**	**0.0**
	comp=Z,0.7nm,0.3s,baz=39,slow=12,SNR=10						
MJAR				Sn	**Sn**	**04 12 26.8**	**-0.5**
	baz=32,slow=12,SNR=2.6						
MJAR	**Matsushiro Arr**	**5.80**	**228**	P	**Pn**	**04 11 20.6**	**0.0**
MJAR						04 12 26.8	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR	**Kul'dur**	**12.02**	**320**	eP	**Pn**	**04 12 42.0**	**-3.7**
KLR				MLR	MLR		
	comp=N,1μm,13.0s						
KLR				MLR	MLR		
	comp=E,600nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2μm,13.0s						
KSRS	**Korea Array**	**12.54**	**261**	LR	LR	04 17 34.5	
	comp=Z,525nm,18.4s,baz=269,slow=37						
PETK	**Petropavlovsk-**	**15.80**	**33**	LR	LR	04 19 18.8	
	comp=Z,89nm,19.0s,baz=228,slow=36						
CLNS	**Chul'man**	**20.29**	**330**	eP	**P**	**04 14 30.0**	**-0.1**
CLNS				pmax	pmax		
	comp=Z,13nm,1.1s						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK	**Yakutsk**	**23.06**	**343**	eP	**P**	**04 15 01.0**	**+1.2**
YAK				e*PP		04 15 09.2	
YAK				e		04 15 25.2	
YAK				eS	**S**	**04 19 02.8**	**-7.8**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
YAK				pmax	pmax		
	comp=E,1.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				smax			
	comp=N,89nm,2.5s						
YAK				smax			
	comp=E,42nm,2.8s						
YAK				MLR	MLR		
	comp=Z,422nm,18.0s,MS3.9						
YAK				MLR	MLR		
	comp=N,283nm,18.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,275nm,18.0s,MS3.9						
BOD	**Bodaibo**	**25.58**	**322**⇓	iP	**P**	**04 15 22.8**	**-0.6**
BOD				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
SONM	**Songino Array**	**27.39**	**298**	P	**P**	**04 15 40.1**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.5,baz=85,slow=8.3,SNR=8.9						
SONM				LR	LR	04 27 16.5	
	comp=Z,259nm,19.5s,MS3.8,baz=107,slow=38						
SONM	**Songino Array**	**27.39**	**298**	P	**P**	**04 15 40.1**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,259nm,19.5s						
BILL	**Bilibino**	**30.16**	**17**⇑	eP	**P**	**04 16 03.1**	**-1.2**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
BILL	**Bilibino**	**30.16**	**17**	eP	**P**	**04 16 03.8**	**-0.5**
	comp=Z,5.5nm,1.0s,mb4.2						
GTA	**Gaotai**	**33.27**	**283**	eP	**P**	**04 16 32.6**	**+0.7**
GTA				AP	pP	04 16 37.8	+3.3
GTA				XP	sP	04 16 41.0	+5.4
GTA				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.3						
ZAA0	**Zalesovo Array**	**40.85**	**309**	eP	**P**	**04 17 36.0**	**-0.2**
ZALV	**Zalesovo Beam**	**40.85**	**309**	P	**P**	**04 17 35.9**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.8,baz=80,slow=8.1,SNR=6.7						
ZALV	**Zalesovo Beam**	**40.85**	**309**	P	**P**	**04 17 35.9**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NVS	**Novosibirsk**	**41.69**	**311**	eP	**P**	**04 17 41.0**	**-2.0**
NVS				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.3						
NVS				pmax	pmax		
	comp=N,13nm,1.8s						
NVS				pmax	pmax		
	comp=E,15nm,1.4s						
MK31	**Makanchi Array**	**43.74**	**299**	eP	**P**	**04 17 59.3**	**-0.5**
MKAR	**Makanchi Array**	**43.74**	**299**	P	**P**	**04 18 00.0**	**+0.2**
	comp=E,3.7nm,1.0s,mb4.1,baz=77,slow=8.4,SNR=9.9						
MKAR				LR	LR	04 37 42.7	
	comp=E,111nm,18.8s,MS3.8,baz=174,slow=38						
MKAR	**Makanchi Array**	**43.74**	**299**	P	**P**	**04 18 00.0**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,111nm,18.8s						
CMAR	**Chiang Mai Arr**	**44.05**	**253**	LR	LR	04 37 20.0	
	comp=Z,56nm,18.5s,MS3.5,baz=310,slow=38						
KURK	**Kurchatov**	**45.14**	**306**	P	**P**	**04 18 11.4**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.3,baz=78,slow=8.5,SNR=18						
KURK	**Kurchatov**	**45.14**	**306**	eP	**P**	**04 18 10.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
KURK	**Kurchatov**	**45.14**	**306**	eP	**P**	**04 18 10.3**	**-0.6**
	comp=Z,17nm,1.3s,mb4.7						
TKM2	**Tokmak 2**	**49.48**	**296**	eP	**P**	**04 18 45.2**	**+0.4**
	comp=Z,9.1nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**49.48**	**310**	LR	LR	04 40 34.0	
	comp=Z,66nm,21.5s,MS3.6,baz=156,slow=37						
BRVK	**Borovoye**	**49.53**	**311**	eP	**P**	**04 18 45.0**	**-0.1**
BRVK				e*PP	pP	04 18 53.7	+5.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
BRVK	**Borovoye**	**49.53**	**311**	eP	**P**	**04 18 45.0**	**-0.2**
	comp=Z,3.6nm,0.7s,mb4.5						
BRVK				epP	pP	04 18 53.7	+5.9
INK	**Inuvik**	**50.48**	**29**	eP	**P**	**04 18 53.7**	**+1.6**
ARU	**Arti**	**54.84**	**317**	P	**P**	**04 19 24.3**	**-0.3**
ARU	**Arti**	**54.84**	**317**	eP	**P**	**04 19 23.3**	**-1.3**
	comp=Z,36nm,1.8s,mb5.1						
RES	**Resolute Bay**	**58.76**	**15**	P	**P**	**04 19 51.6**	**-0.4**
	comp=Z,1.3nm,1.0s,mb3.9,baz=54,slow=8.7,SNR=4.1						
RES	**Resolute Bay**	**58.76**	**15**	P	**P**	**04 19 51.7**	**-0.4**
RES				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
RES	**Resolute Bay**	**58.76**	**15**	eP	**P**	**04 19 52.8**	**+0.7**
	comp=Z,5.0nm,1.1s,mb4.5						
YKA	**Yellowknife Ar**	**59.92**	**32**	P	**P**	**04 20 01.6**	**+1.4**
	comp=Z,0.8nm,1.1s,mb3.7,baz=300,slow=7.1,SNR=6.3						
YKA	**Yellowknife Ar**	**59.92**	**32**	P	**P**	**04 20 01.6**	**+1.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YKA	**Yellowknife Ar**	**59.92**	**32**	P	**P**	**04 20 01.6**	**+1.4**
ARCES	**ARCESS Array B**	**61.27**	**339**	LR	LR	04 51 36.0	
	comp=Z,163nm,18.6s,MS4.2,baz=144,slow=41						
ASAR	**Alice Springs**	**64.54**	**190**	P	**P**	**04 20 33.5**	**+1.9**
	comp=Z,0.4nm,0.8s,mb3.5,baz=7.5,slow=7.9,SNR=3.9						
ASAR	**Alice Springs**	**64.54**	**190**	P	**P**	**04 20 33.5**	**+1.9**
BOZ	**Bozeman (W)**	**71.03**	**46**	eP	**P**	**04 21 14.8**	**+2.3**
BOZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
BOZ	**Bozeman (W)**	**71.03**	**46**	eP	**P**	**04 21 14.8**	**+2.3**
	comp=Z,1.8nm,1.0s,mb4.0						
NOA	**NORSAR Array B**	**71.55**	**338**	P	**P**	**04 21 15.4**	**0.0**
	comp=Z,1.5nm,0.9s,mb3.9,baz=39,slow=5.9,SNR=3.6						
NOA				LR	LR	04 56 43.1	
	comp=Z,121nm,19.2s,MS4.2,baz=235,slow=39						
NOA	**NORSAR Array B**	**71.55**	**338**	P	**P**	**04 21 15.4**	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,121nm,19.2s						
AKASG	**Malin Array Be**	**72.51**	**323**	P	**P**	**04 21 19.9**	**-1.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=42,slow=7.1,SNR=5.2						
AKASG	**Malin Array Be**	**72.51**	**323**	P	**P**	**04 21 19.9**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**74.02**	**47**	P	**P**	**04 21 32.0**	**+1.7**
	comp=Z,0.6nm,0.9s,mb3.5,baz=299,slow=3.1,SNR=4.0						
TXAR	**Lajitas Array**	**86.67**	**54**	P	**P**	**04 22 41.0**	**+2.4**
	comp=Z,0.2nm,0.7s,mb3.5,baz=268,slow=4.1,SNR=2.7						
TXAR	**Lajitas Array**	**86.67**	**54**	P	**P**	**04 22 41.0**	**+2.4**
VNA2	**Neumayer--Watz**	**146.18**	**197**	e	PKPdf	04 29 34.8	+2.0
VNA2				e		04 29 38.2	
VNA3	**Neumayer Olymp**	**146.41**	**195**	e	PKPab	04 29 36.2	+0.8
VNA3				e		04 29 39.6	

*ISCJB **09** 04:21:57.4±0.2, 4833N±001×661E±002, h10km, Error ellipse: s-maj=1.9km s-min=1.6km az=154.2*

*STR **09** 04:21:59.3±0.2, 4836N×667E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NEIC **09** 04:21:59.3, 4836N×667E, h10km, ML2.5(STR), ML2.8(LDG), After STR.*

*CSEM **09** 04:21:59.9±0.0, 4834N×666E, h15km, ML2.8/25, Error ellipse: s-maj=0.7km s-min=0.6km az=154.0*

*BGR **09** 04:22:00.2±0.3, 4835N×667E, h10km, ML2.7/7, Error ellipse: s-maj=3.3km s-min=2.2km az=147.0*

*LDG **09** 04:22:00.2±0.0, 4834N×664E, h10km, Md3.0/3, Ml2.8/26, Error ellipse: s-maj=0.8km s-min=0.6km az=160.0*

ISC 09 04:21:58.8±0.2**, 4834N**±001×**663E**±002**, h17**km±2km**, n104, σ0ˢ89**/217**, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECH	**Echery**	**0.37**	**109**	Pg	**Pg**	**04 22 07.1**	**+0.5**
ECH				Sg	**Sg**	**04 22 11.7**	**0.0**
ECH	**Echery**	**0.37**	**109**	ePg	**Pg**	**04 22 07.2**	**+0.6**
	SNR=37						
ECH				eSg	**Sg**	**04 22 11.9**	**+0.1**
	SNR=3.4						
ECH	**Echery**	**0.37**	**109**	Pg	**Pg**	**04 22 07.1**	**+0.5**
ECH				Sg	**Sg**	**04 22 11.9**	**+0.2**
	SNR=3.4						
HAU	**Haudompre**	**0.38**	**210**	ePg	**Pg**	**04 22 07.8**	**+1.1**
	SNR=1.0						
HAU				eSg	**Sg**	**04 22 12.8**	**+0.8**
	144nm,0.3s						
HAU	**Haudompre**	**0.38**	**210**	ePg	**Pg**	**04 22 07.8**	**+1.1**
	SNR=1.0						
HAU				eSg	**Sg**	**04 22 12.8**	**+0.8**
	72nm,0.3s						
CDF	**Champ du Feu**	**0.44**	**80**	ePg	**Pg**	**04 22 08.2**	**+0.5**
	SNR=1.0						
CDF				eSg	**Sg**	**04 22 13.7**	**0.0**
	56nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**0.44**	**80**	ePg	**Pg**	**04 22 08.2**	**+0.5**
	SNR=1.0						
CDF				eSg	**Sg**	**04 22 13.7**	**0.0**
	28nm,0.3s,SNR=1.0						
THEF	**They Montfort**	**0.44**	**256**	Pg	**Pg**	**04 22 08.8**	**+1.0**
THEF				Sg	**Sg**	**04 22 14.4**	**+0.5**
THEF	**They Montfort**	**0.44**	**256**	ePg	**Pg**	**04 22 08.9**	**+1.1**
	SNR=29						
THEF				eSg	**Sg**	**04 22 14.8**	**+0.9**
	SNR=2.7						
HINF	**Hinteralfeld**	**0.54**	**164**	ePg	**Pg**	**04 22 10.3**	**+0.7**
	SNR=1.0						
HINF				eSg	**Sg**	**04 22 17.3**	**+0.4**
	92nm,0.2s						
HINF				eSn	**Sg**	**04 22 20.3**	**+3.4**
	SNR=1.0						
HINF	**Hinteralfeld**	**0.54**	**164**	ePg	**Pg**	**04 22 10.3**	**+0.7**
	SNR=1.0						
HINF				eSg	**Sg**	**04 22 17.3**	**+0.4**
	46nm,0.2s						
HINF				eSn	**Sg**	**04 22 20.3**	**+3.4**
	SNR=1.0						
MOF	**Molkenrain**	**0.59**	**145**	ePg	**Pg**	**04 22 11.2**	**+0.7**
	SNR=6.3						
RFYF	**Reffroy**	**0.82**	**291**	ePg	**Pg**	**04 22 16.0**	**+1.1**
	baz=110						
RFYF				eSg	**Sg**	**04 22 26.9**	**+1.2**
	94nm,0.2s,baz=107						
RFYF	**Reffroy**	**0.82**	**291**	eSg	**Sg**	**04 22 26.9**	**+1.2**
	47nm,0.2s						
LOMF	**Lomont**	**1.00**	**172**	Pg	**Pg**	**04 22 19.0**	**+0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LOMF				Sg	Sg	04 22 31.7	+0.5
LOMF	Lomont	1.00	172	ePg	Pg	04 22 19.3	+1.1
	SNR=12						
LOMF				eSg	Sg	04 22 32.0	+0.8
	SNR=1.6						
LOMF	Lomont	1.00	172	Pg	Pg	04 22 19.0	+0.9
LOMF				Sg	Sg	04 22 32.0	+0.8
	SNR=1.6						
LANF	Langenberg	1.01	50	Pg	Pg	04 22 18.4	0.0
LANF				Sg	Sg	04 22 30.8	-0.9
LANF	Langenberg	1.01	50	ePg	Pg	04 22 18.6	+0.2
	SNR=7.9						
LANF				eSg	Sg	04 22 31.2	-0.5
	SNR=2.5						
FELD	Feldberg im Sc	1.03	116	ePg	Pg	04 22 19.4	+0.6
	SNR=9.4						
FELD				eSg	Sg	04 22 32.1	-0.2
	SNR=2.7						
FELD	Feldberg im Sc	1.03	116	Pg	Pg	04 22 19.3	+0.5
FELD				Sg	Sg	04 22 32.2	-0.1
BBS	Basel-Blauen	1.05	146	ePg	Pg	04 22 20.2	+0.9
	SNR=4.2						
BBS	Basel-Blauen	1.05	146	Pg	Pg	04 22 20.1	+0.8
BBS				Sg	Sg	04 22 33.4	+0.3
MEZF	Maizieres J'vi	1.06	279	ePg	Pg	04 22 20.3	+0.9
	baz=97,SNR=1.0						
MEZF				eSg	Sg	04 22 34.2	+0.8
	17nm,0.2s,SNR=1.0						
SFTF	Sexfontaines	1.07	263	ePg	Pg	04 22 20.3	+0.7
	baz=93						
SFTF				eSg	Sg	04 22 34.6	+1.0
	31nm,0.2s						
BFO	Black Forest	1.13	90	ePg	Pg	04 22 21.2	+0.5
	SNR=7.8						
BFO				eSg	Sg	04 22 34.0	-1.6
	SNR=9.2						
BFO	Black Forest	1.13	90	ePg	Pg	04 22 21.2	+0.5
BFO				eSg	Sg	04 22 34.0	-1.6
WLF	Walferdange	1.36	347	ePg	Pg	04 22 26.2	+1.0
	SNR=4.0						
WLF				eSg	Sg	04 22 43.7	+0.8
	SNR=4.2						
WLF	Walferdange	1.36	347	P	Pn	04 22 26.3	+3.2
KTD	Kalmit	1.38	44	ePg	Pg	04 22 25.9	+0.6
	SNR=3.2						
KTD	Kalmit	1.38	44	Pg	Pg	04 22 25.9	+0.6
	SNR=3.2						
KTD				Sg	Sg	04 22 43.9	+0.7
KTD	Kalmit	1.38	44	Pg	Pg	04 22 24.4	-0.9
KTD				Sg	Sg	04 22 43.9	+0.7
SPAK	Spaichingen-Ko	1.46	98	ePg	Pg	04 22 27.7	+0.8
	SNR=8.9						
SPAK	Spaichingen-Ko	1.46	98	Pg	Pg	04 22 27.6	+0.7
SPAK				Sg	Sg	04 22 46.1	+0.1
ABH	Alteburg	1.66	21	ePg	Pg	04 22 30.8	+0.1
	SNR=3.9						
ABH	Alteburg	1.66	21	Pg	Pg	04 22 30.8	+0.1
	SNR=3.9						
ABH				Sg	Sg	04 22 51.6	-0.7
ABH	Alteburg	1.66	21	Pg	Pg	04 22 30.4	-0.3
ABH				Sg	Sg	04 22 51.6	-0.7
STU	Stuttgart	1.76	75	ePn	Pn	04 22 30.0	+1.5
	SNR=0.8						
STU				eSg	Sg	04 22 55.0	-0.5
	SNR=4.4						
CABF	La Chapelle	1.77	192	ePg	Pg	04 22 33.3	+0.5
CABF				eSg	Sg	04 22 56.3	+0.6
	28nm,0.4s,SNR=1.0						
CABF	La Chapelle	1.77	192	ePg	Pg	04 22 33.3	+0.5
CABF				eSg	Sg	04 22 56.3	+0.6
	14nm,0.4s,SNR=1.0						
CABF	La Chapelle	1.77	192	ePn	Pn	04 22 29.6	+1.0
CABF				ePg	Pg	04 22 33.3	+0.5
CABF				eSg	Sg	04 22 56.3	+0.6
TOD	Tromm	1.91	48	ePn	Pn	04 22 29.9	-0.7
	SNR=1.4						
TOD				ePg	Pg	04 22 36.0	+0.4
	SNR=1.8						
TOD				eSg	Sg	04 22 59.8	-0.6
	SNR=4.6						
TOD	Tromm	1.91	48	Pg	Pg	04 22 35.9	+0.3
TOD				Sg	Sg	04 22 59.8	-0.6
	SNR=4.6						
TOD	Tromm	1.91	48	Pg	Pg	04 22 35.9	+0.3
TOD				Sg	Sg	04 22 59.6	-0.8
GIVF	Givet	2.13	327	ePg	Pg	04 22 39.7	+0.1
GIVF				eSg	Sg	04 23 06.3	-0.9
	10nm,0.2s,SNR=1.0						
GIVF	Givet	2.13	327	ePg	Pg	04 22 39.7	+0.1
GIVF				eSg	Sg	04 23 06.3	-0.9
	5.1nm,0.2s,SNR=1.0						
GIVF	Givet	2.13	327	ePn	Pn	04 22 34.4	+0.9
GIVF				ePg	Pg	04 22 39.7	+0.1
GIVF				eSg	Sg	04 23 06.3	-0.9
LOR	Lormes	2.15	241	ePn	Pn	04 22 34.5	+0.6
	baz=68,SNR=1.0						
LOR	Lormes	2.15	241	ePg	Pg	04 22 40.6	+0.5
	baz=64,SNR=1.0						
LOR				eSg	Sg	04 23 08.3	+0.2
	25nm,0.2s,baz=66						
LOR	Lormes	2.15	241	ePg	Pg	04 22 40.6	+0.5
	SNR=1.0						
LOR				eSg	Sg	04 23 08.3	+0.2
	12nm,0.2s						
LOR	Lormes	2.15	241	ePn	Pn	04 22 34.5	+0.6
LOR				ePg	Pg	04 22 40.6	+0.5
LOR				eSg	Sg	04 23 08.3	+0.2
DOU	Dourbes	2.21	324	P	Pg	04 22 41.9	+0.7
BCLA	Clavier	2.26	338	P	Pg	04 22 42.7	+0.6
MEM	Membach	2.31	350	P	Pg	04 22 42.8	-0.3
BAIF	Baives	2.34	318	ePg	Pg	04 22 43.7	-0.1
	SNR=1.0						
BAIF				eSn	Sn	04 23 03.9	-1.0
	SNR=1.0						
BAIF				eSg	Sg	04 23 13.8	-0.4
	4.3nm,0.2s,SNR=1.0						
BAIF	Baives	2.34	318	ePg	Pg	04 22 43.7	-0.1
	SNR=1.0						
BAIF				eSn	Sn	04 23 03.9	-1.0
	SNR=1.0						
BAIF				eSg	Sg	04 23 13.8	-0.4
	2.2nm,0.2s,SNR=1.0						
BAIF	Baives	2.34	318	ePn	Pn	04 22 37.0	+0.5
BAIF				ePg	Pg	04 22 43.7	-0.1
BAIF				eSn	Sn	04 23 03.9	-1.0
BAIF				eSg	Sg	04 23 13.8	-0.4
SSF	Saint Saulge	2.47	240	ePg	Pg	04 22 46.1	0.0
	SNR=1.0						
SSF				eSg	Sg	04 23 18.0	-0.1
	11nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.47	240	ePg	Pg	04 22 46.1	0.0
	SNR=1.0						
SSF				eSg	Sg	04 23 18.0	-0.1
	5.7nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.47	240	ePn	Pn	04 22 38.7	+0.5
SSF				ePg	Pg	04 22 46.1	0.0
SSF				eSg	Sg	04 23 18.0	-0.1
SMF	Signal de Mont	2.54	229	ePg	Pg	04 22 47.5	0.0
	SNR=1.0						
SMF				eSg	Sg	04 23 20.0	-0.4
	19nm,0.2s,SNR=1.0						
SMF	Signal de Mont	2.54	229	ePg	Pg	04 22 47.5	0.0
	SNR=1.0						
SMF				eSg	Sg	04 23 20.0	-0.4
	9.4nm,0.2s,SNR=1.0						
SMF	Signal de Mont	2.54	229	ePn	Pn	04 22 39.5	+0.3
SMF				ePg	Pg	04 22 47.5	0.0
SMF				eSg	Sg	04 23 20.0	-0.4
AVF	Avril sur Loir	2.71	236	ePg	Pg	04 22 50.5	-0.2
	SNR=1.0						
AVF				eSg	Sg	04 23 25.7	0.0
	6.4nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.71	236	ePg	Pg	04 22 50.5	-0.2
	SNR=1.0						
AVF				eSg	Sg	04 23 25.7	0.0
	3.2nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.71	236	ePn	Pn	04 22 42.1	+0.6
AVF				ePg	Pg	04 22 50.5	-0.2
AVF				eSg	Sg	04 23 25.7	0.0
LPL	La Plagne	2.82	179	ePg	Pg	04 22 53.0	+0.1
LPL				eSn	Sn	04 23 16.4	-0.3
LPL				eSg	Sg	04 23 29.6	+0.1
	7.2nm,0.6s						
LPL	La Plagne	2.82	179	ePn	Pn	04 22 43.8	+0.7
LPL				eSn	Sn	04 23 16.4	-0.3
LPL				eSg	Sg	04 23 29.6	+0.1
	3.6nm,0.6s						
LPL	La Plagne	2.82	179	ePn	Pn	04 22 43.8	+0.7
LPL				ePg	Pg	04 22 53.0	+0.1
LPL				eSn	Sn	04 23 16.4	-0.3
LPL				eSg	Sg	04 23 29.6	+0.1
LPG	La Plagne	2.84	178	ePg	Pg	04 22 53.2	-0.1
LPG				eSn	Sn	04 23 16.6	-0.6
LPG				eSg	Sg	04 23 30.3	+0.2
	3.2nm,0.3s						
LPG	La Plagne	2.84	178	ePn	Pn	04 22 44.4	+1.0
LPG				eSn	Sn	04 23 16.6	-0.6
LPG				eSg	Sg	04 23 30.3	+0.2
	1.6nm,0.3s						
LPG	La Plagne	2.84	178	ePn	Pn	04 22 44.4	+1.0
LPG				ePg	Pg	04 22 53.2	-0.1
LPG				eSn	Sn	04 23 16.6	-0.6
LPG				eSg	Sg	04 23 30.3	+0.2
HYF	Humbligny	2.90	250	ePn	Pn	04 22 44.7	+0.6
HYF				ePg	Pg	04 22 54.0	-0.3
HYF				eSg	Sg	04 23 31.1	-0.7
FUR	Furstenfeldbru	3.11	91	eSg	Sg	04 23 38.5	-0.1
	SNR=3.3						
BGF	Bois d'Agland	3.12	237	ePg	Pg	04 22 58.6	-0.1
BGF				eSn	Sn	04 23 23.2	-0.9
BGF				eSg	Sg	04 23 38.6	-0.6
	20nm,0.3s,SNR=1.0						
BGF	Bois d'Agland	3.12	237	ePg	Pg	04 22 58.6	-0.1
BGF				eSn	Sn	04 23 23.2	-0.9
BGF				eSg	Sg	04 23 38.6	-0.6
	10nm,0.3s,SNR=1.0						
BGF	Bois d'Agland	3.12	237	ePn	Pn	04 22 47.7	+0.5
BGF				ePg	Pg	04 22 58.6	-0.1
BGF				eSn	Sn	04 23 23.2	-0.9
BGF				eSg	Sg	04 23 38.6	-0.6
GRF	Grafenberg Arr	3.31	64	eSg	Sg	04 23 44.4	-0.8
ORIF	Oris-en-Rattie	3.46	189	ePn	Pn	04 22 52.5	+0.7
ORIF				eSg	Sg	04 23 48.5	-1.4
	3.7nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	3.46	189	ePn	Pn	04 22 52.5	+0.7
ORIF				eSg	Sg	04 23 48.5	-1.4
	1.9nm,0.3s,SNR=1.0						
MBDF	Montbardon	3.61	178	ePn	Pn	04 22 54.4	+0.4
MBDF				eSg	Sg	04 23 54.2	-0.6
	1.0nm,0.4s						
MBDF	Montbardon	3.61	178	ePn	Pn	04 22 54.4	+0.4
MBDF				eSg	Sg	04 23 54.2	-0.6
	0.5nm,0.4s						
TCF	Toulx Ste Croi	3.64	237	ePn	Pn	04 22 53.7	-0.6
TCF				eSg	Sg	04 23 53.1	-2.6
	5.5nm,0.3s,SNR=1.0						
VIVF	Saint-Julien-l	3.73	202	ePn	Pn	04 22 55.8	+0.2
VIVF				eSg	Sg	04 23 57.7	-1.0
	5.5nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	3.73	202	ePn	Pn	04 22 55.8	+0.2
VIVF				eSg	Sg	04 23 57.7	-1.0
	2.8nm,0.4s,SNR=1.0						
MOX	Moxa	3.99	53	eSg	Sg	04 24 06.4	-0.3
	SNR=3.0						
MOX	Moxa	3.99	53	eSG	Sg	04 24 06.8	+0.1
WET	Wettzell	4.21	77	eSn	Sn	04 23 49.6	-1.3
	SNR=3.8						
WET				eSg	Sg	04 24 11.4	-2.6
	SNR=3.1						
TANN	Tannenbergstha	4.34	59	eSg	Sg	04 24 16.7	-1.4
	SNR=2.5						
LDF	La Druitiere	4.50	276	ePn	Pn	04 23 06.5	+0.4
LDF				eSg	Sg	04 24 21.5	-1.7
	4.5nm,0.4s						
LDF	La Druitiere	4.50	276	ePn	Pn	04 23 06.5	+0.4
LDF				eSg	Sg	04 24 21.5	-1.7
	2.2nm,0.4s						
RJF	Les Rejaudoux	4.64	231	ePn	Pn	04 23 08.6	+0.5
RJF				eSg	Sg	04 24 26.0	-1.7
	1.7nm,0.2s						
CAF	Calviac	4.64	224	ePn	Pn	04 23 08.3	+0.2
CAF				eSg	Sg	04 24 25.8	-1.9
	2.2nm,0.3s,SNR=1.0						
LASF	Ste Croix	4.68	205	ePn	Pn	04 23 08.8	+0.2
LASF				eSg	Sg	04 24 27.3	-1.6
	1.7nm,0.3s						
LASF	Ste Croix	4.68	205	ePn	Pn	04 23 08.8	+0.2
LASF				eSg	Sg	04 24 27.3	-1.6
	0.9nm,0.3s						
GEC2	GERESS Array S	4.72	81	eSn	Sn	04 24 03.2	-0.2
	SNR=4.0						
GEC2				eSg	Sg	04 24 28.7	-1.5
	SNR=1.9						
GEC2	GERESS Array S	4.72	81	Sn	Sn	04 24 03.2	-0.2
	SNR=4.0						
GEC2				Sg	Sg	04 24 28.7	-1.6
	SNR=1.9						
FLN	La Foliniere	4.74	278	ePn	Pn	04 23 10.0	+0.5
FLN				eSg	Sg	04 24 29.0	-2.0
	2.2nm,0.2s						
FLN	La Foliniere	4.74	278	ePn	Pn	04 23 10.0	+0.5
FLN				eSg	Sg	04 24 29.0	-2.0
	1.1nm,0.2s						
MFF	Saint Martin d	4.91	252	ePn	Pn	04 23 12.3	+0.5
MFF				eSg	Sg	04 24 34.2	-2.2
	1.6nm,0.3s						
GRR	Gorron	4.99	273	ePn	Pn	04 23 13.6	+0.7
GRR				eSg	Sg	04 24 36.8	-2.2
	3.1nm,0.3s						
GRR	Gorron	4.99	273	ePn	Pn	04 23 13.6	+0.7
GRR				eSg	Sg	04 24 36.8	-2.2
	1.5nm,0.3s						
CLL	Collm	5.08	52	eSg	Sg	04 24 41.0	-0.9
LFF	La Frestale	5.29	232	ePn	Pn	04 23 17.2	+0.2
LFF				eSg	Sg	04 24 46.4	-2.2
	3.6nm,0.3s						

*NEIC **09** 04:23:11.0±1.1, 242N×9581E, mb4.0/1, Error ellipse: s-maj=24.2km s-min=11.9km az=223.0*
*ISCJB **09** 04:23:11.8±4.4, 25N±02×959E±02, h46km±35km, mb3.8/5, Error ellipse: s-maj=41.2km s-min=19.2km az=136.1*
*IDC **09** 04:23:11.4±1.9, 247N×9588E, h25km±5km, mb3.6/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.6/7, ML4.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/29, Error ellipse: s-maj=45.4km s-min=21.5km az=42.0*
ISC 09 04:23:12.8±4.6**, 25N**±02×**959E**±02**, h37**km±38km**,**
h25km±2.1km**:pP-P, n12,** $\sigma 0^{s}$**24**/13**, mb3.8**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PSI	Prapat	3.07	83	Pn	Pn	04 23 58.7	-0.1
	1.8nm,0.3s,baz=290,slow=5.7,SNR=13						
PSI				Sn	Sn	04 24 34.3	0.0
	3.1nm,0.3s,baz=260,slow=19,SNR=3.5						
PSI	Prapat	3.07	83	Pn	Pn	04 23 58.7	-0.1
PSI				Sn	Sn	04 24 34.3	0.0
CMAR	Chiang Mai Arr	16.19	11	Pn	Pn	04 26 57.7	+0.1
	0.5nm,0.3s,baz=196,slow=9.4,SNR=5.6						
ASAR	Alice Springs	45.20	127	P	P	04 31 26.6	+0.1
	0.2nm,0.4s,mb3.3,baz=304,slow=7.9,SNR=6.1						
KSRS	Korea Array	45.60	36	LR	LR	04 53 48.9	
	comp=Z,19nm,19.4s,baz=180,slow=40						
MK31	Makanchi Array	45.72	347	eP	P	04 31 30.1	-0.1
MKAR	Makanchi Array	45.72	347	P	P	04 31 30.2	0.0
	0.5nm,0.4s,mb3.8,baz=164,slow=7.9,SNR=13						
MKAR				pP	pP	04 31 38.1	-2.9
	1.4nm,0.6s,baz=160,slow=8.2,SNR=7.3						
SONM	Songino Array	46.11	10	P	P	04 31 33.3	0.0
	1.1nm,0.6s,mb4.0,baz=189,slow=9.5,SNR=12						
SONM				pP	pP	04 31 41.1	-3.0
	0.5nm,0.6s,baz=190,slow=8.4,SNR=3.4						
KURK	Kurchatov	50.25	346	P	P	04 32 05.5	+0.3
	0.9nm,0.7s,mb3.9,baz=167,slow=7.3,SNR=6.7						
KURK				pP	pP	04 32 12.9	-3.3
	0.7nm,0.6s,baz=163,slow=7.0,SNR=5.6						
KURK	Kurchatov	50.25	346	eP	P	04 32 05.7	+0.5
	1.2nm,0.7s,mb4.0						
KURK				pP	pP	04 32 12.9	-3.2
ZALV	Zalesovo Beam	52.13	352	P	P	04 32 18.6	-0.5
	0.9nm,0.5s,mb3.9,baz=183,slow=7.4,SNR=5.4						
ZALV				pP	pP	04 32 26.8	-3.4
	1.8nm,0.6s,baz=182,slow=7.6,SNR=5.4						
ZALV	Zalesovo Beam	52.13	352	P	P	04 32 18.6	-0.5
ZALV				pP	pP	04 32 26.8	-3.4

*NEIC **09** 05:04:38.7, 1669N×9399W, h142km, MD3.8(MEX), After MEX.*
MEX 09 05:04:38.7±0.9**, 1669N**×**9399W, h141**km±9km**, MD3.8, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TGIG		0.84	84	i P	Pn	05 05 00.2	-1.1
TGIG				i S	Sn	05 05 16.1	-2.3
CMIG	Matias Romero	0.94	295	i P	Pn	05 05 01.2	-0.9
CMIG				i S	Sn	05 05 18.3	-1.7
PCIG		1.23	143	i P	Pn	05 05 03.8	-1.1
PCIG				i S	Sn	05 05 23.1	-1.7
SCX	San Cristobal	1.30	88	eP	Pn	05 05 04.0	-1.5
SCX				i S	Sn	05 05 24.8	-1.2
CCIG	Comitan	1.82	103	i P	Pn	05 05 10.5	-0.7
CCIG				i S	Sn	05 05 33.1	-3.1
HUIG	Huatulco	2.23	246	i P	Pn	05 05 13.2	-2.9
HUIG				i S	Sn	05 05 42.5	-2.3
THIG		2.43	137	eP	Pn	05 05 20.3	+1.7
THIG				i S	Sn	05 05 48.8	-0.4
VHO	Vista Hermosa	2.65	279	i P	Pn	05 05 20.2	-1.1
VHO				i S	Sn	05 05 49.9	-4.3
UTMO	Huajuapan	3.81	288	i P	Pn	05 05 35.8	-0.5
UTMO				i S	Sn	05 06 19.7	-1.3
PNIG	Pinotepa	3.98	266	eP	Pn	05 05 37.8	-0.6
PNIG				i S	Sn	05 06 22.9	-2.0
PPM	Popocatepetl	5.01	299	eP	Pn	05 05 58.7	+6.6
PPM				i S	Sn	05 06 47.8	-1.4

*IDC **09** 05:11:59.8±0.7, 8098N×12150E, h0km, mb3.8/16, mb1 4.0/16, mb1mx3.9/25, mbtmp3.8/16, MS3.4/2, Ms1 3.4/2, ms1mx2.9/43, Error ellipse: s-maj=17.9km s-min=13.9km az=156.0*
*ISCJB **09** 05:12:00.3±0.4, 8094N±007×1216E±04, h10km, mb3.9/26, MS3.3/2, Error ellipse: s-maj=10.9km s-min=8.0km az=144.4*
*MOS **09** 05:12:00.7±1.7, 8099N×12080E, h10km, mb4.2/13, Error ellipse: s-maj=67.3km s-min=12.2km az=88.5*
*NEIC **09** 05:12:01.9±0.4, 8096N×12130E, h10km, mb4.2/9, Error ellipse: s-maj=12.3km s-min=7.7km az=147.0*
ISC 09 05:12:02.1±0.4**, 8094N**±007×**1216E**±04**, h10**km**, n58,** $\sigma 0^{s}$**99**/61**, mb3.9**/26**, MS3.3**/2**, 8C-2D, East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BILL	Bilibino	16.82	114	eP	Pn	05 16 03.0	+5.9
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL	Bilibino	16.82	114	Pn	Pn	05 16 04.6	+7.5
	comp=Z,4.5nm,0.8s						
DAG	Danmarks Havn	21.13	336⇑	eP	P	05 16 46.1	-0.3
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
DAG	Danmarks Havn	21.13	336⇑	iP	P	05 16 46.1	-0.3
	comp=Z,4.7nm,0.6s,mb4.0						
DAG	Danmarks Havn	21.13	336⇑	eP	P	05 16 46.1	-0.3
	comp=Z,4.7nm,0.6s,mb4.0						
ARCES	ARCESS Array B	23.31	298	P	P	05 17 07.6	-2.1
	comp=Z,2.2nm,0.6s,mb3.8,baz=40,slow=9.6,SNR=10.0						
ARCES				S	S	05 21 21.5	+0.1
	comp=Z,3.9nm,0.9s,baz=29,slow=22,SNR=3.4						
ARCES	ARCESS Array B	23.31	298	P	P	05 17 07.6	-2.0
ARCES				S	S	05 21 21.5	+0.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES				smax			
	comp=N,4.0nm,0.9s						
ARCES	ARCESS Array B	23.31	298	P	P	05 17 07.6	-2.1
ARCES				S	S	05 21 21.5	+0.1
BOD	Bodaibo	23.35	190	eP	P	05 17 08.3	-1.8
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
RES	Resolute Bay	23.36	23	P	P	05 17 08.4	-1.7
	comp=Z,2.1nm,1.0s,mb3.5,baz=25,slow=11,SNR=4.7						
RES	Resolute Bay	23.36	23	P	P	05 17 08.4	-1.7
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
COLD	Coldfoot	24.30	71	eP	P	05 17 19.4	+0.4
	comp=Z,2.8nm,0.6s,mb3.9						
INK	Inuvik	25.65	56	P	P	05 17 33.5	+2.3
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	Inuvik	25.65	56	P	P	05 17 33.5	+2.2
	comp=Z,4.8nm,0.5s,mb4.3						
ZALV	Zalesovo Beam	29.38	226	P	P	05 18 03.4	-1.3
	comp=Z,0.3nm,0.4s,mb3.4,baz=316,slow=8.2,SNR=3.3						
ZALV				LR	LR	05 30 46.6	
	comp=Z,121nm,19.8s,MS3.5,baz=95,slow=38						
BRVK	Borovoye	32.11	242	eP	P	05 18 29.0	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BRVK	Borovoye	32.11	242	eP	P	05 18 29.0	+0.2
	comp=Z,1.9nm,0.6s,mb4.1						
KURK	Kurchatov	33.30	232	P	P	05 18 39.5	+0.3
	comp=Z,0.8nm,0.7s,mb3.8,baz=19,slow=7.6,SNR=3.1						
KURK	Kurchatov	33.30	232⇓	iP	P	05 18 39.9	+0.7
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
NB2	NORSAR Subarra	33.31	304	P	P	05 18 38.1	-1.2
	comp=Z,3.0nm,0.9s,mb4.2,baz=13,slow=9.3						
NOA	NORSAR Array B	33.31	304	P	P	05 18 38.4	-0.8
	comp=Z,1.3nm,0.6s,mb4.0,baz=13,slow=8.7,SNR=4.7						
NOA	NORSAR Array B	33.31	304	P	P	05 18 38.4	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	33.31	304	P	P	05 18 38.4	-0.8
YKA	Yellowknife Ar	33.53	44	P	P	05 18 39.6	-1.5
	comp=Z,0.6nm,0.8s,mb3.6,baz=348,slow=8.3,SNR=9.9						
YKA				PcP	PcP	05 21 20.1	-1.2
	comp=Z,0.3nm,0.7s,baz=353,slow=1.9,SNR=5.1						
YKA				LR	LR	05 32 17.7	
	comp=Z,40nm,20.9s,MS3.1,baz=80,slow=36						
YKA	Yellowknife Ar	33.53	44	P	P	05 18 39.7	-1.5
YKA						05 21 20.1	
YKA	Yellowknife Ar	33.53	44	P	P	05 18 39.6	-1.5
YKA				PcP	PcP	05 21 20.1	-1.2
YKA				LR	LR	05 32 17.7	
SONM	Songino Array	33.63	199	P	P	05 18 41.2	-0.9
	comp=Z,0.8nm,0.8s,mb3.7,baz=326,slow=9.2,SNR=4.9						
SONM	Songino Array	33.63	199	eP	P	05 18 42.5	+0.4
OBN	Obninsk	35.31	278	eP	P	05 18 57.2	+0.6
OBN				e		05 20 09.3	
OBN				e		05 21 26.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MKAR	Makanchi Array	36.71	227	P	P	05 19 07.7	-1.0
	comp=Z,1.7nm,1.0s,mb3.8,baz=328,slow=4.3,SNR=4.3						
MKAR	Makanchi Array	36.71	227	eP	P	05 19 10.9	+2.2
AKASG	Malin Array Be	40.73	283	P	P	05 19 41.6	-0.6
	comp=Z,0.3nm,0.3s,mb3.4,baz=14,slow=8.7,SNR=5.2						
AKASG	Malin Array Be	40.73	283	eP	P	05 19 44.1	+1.8
AAK	Ala-Archa	41.76	234⇑	iP	P	05 19 52.0	+1.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.6						
KWP	Kalwaria	42.76	289	eP	P	05 19 59.1	+0.2
KWP				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
KWP	Kalwaria	42.76	289⇑	iP	P	05 19 59.6	+0.7
KWP	Kalwaria	42.76	289	eP	P	05 19 59.1	+0.2
	comp=Z,12nm,0.8s,mb4.7						
TRPA	Tarpa	44.25	289⇑	iP	P	05 20 11.1	+0.2
GERES	GERESS Array B	44.84	297	P	P	05 20 15.9	+0.3
	comp=Z,1.0nm,0.6s,mb3.8,baz=11,slow=9.5,SNR=8.6						
GERES	GERESS Array B	44.84	297	P	P	05 20 15.9	+0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DRGR		45.53	288⇓	iP	P	05 20 21.7	+0.6
PKSM	Moragy	46.70	292⇑	iP	P	05 20 31.2	+0.8
BZS	Buzias	46.84	289⇑	iP	P	05 20 32.0	+0.5
BMO	Blue Mountains	50.52	52	eP	P	05 21 00.7	+0.9
	comp=Z,5.7nm,1.0s,mb4.5						
BR131	Keskin Array S	50.74	275	eP	P	05 21 01.7	+0.2
	comp=Z,1.9nm,0.7s,mb4.1						
BRTR	Keskin Array B	50.74	275	P	P	05 21 02.5	+1.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=14,slow=5.5,SNR=5.3						
BRTR	Keskin Array B	50.74	275	P	P	05 21 02.6	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RLMT	Red Lodge	51.21	45	eP	P	05 21 05.8	+0.8
	comp=Z,2.4nm,0.6s,mb4.3						
PDAR	Pinedale Array	53.50	46	P	P	05 21 22.0	0.0
	comp=Z,0.9nm,0.8s,mb3.7,baz=359,slow=3.8,SNR=7.5						

ESDC	**Sonseca Array**	**56.17**	**311**	P	**P**	**05 21 41.5**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=340,slow=7.0,SNR=3.1						
ESDC	**Sonseca Array**	**56.17**	**311**	P	**P**	**05 21 41.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**63.29**	**204**	P	**P**	**05 22 30.3**	**-0.3**
	comp=Z,0.6nm,0.4s,mb4.1,baz=353,slow=6.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**63.29**	**204**	P	**P**	**05 22 30.3**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**67.43**	**42**	P	**P**	**05 22 56.7**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.2,baz=8.0,slow=4.5,SNR=21						
TXAR	**Lajitas Array**	**67.43**	**42**	P	**P**	**05 22 56.7**	**-0.6**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**67.43**	**42**	P	**P**	**05 22 56.7**	**-0.6**
AUQP	**San Andres**	**67.65**	**179**	*e*P	**P**	**05 22 58.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**81.59**	**301**	P	**P**	**05 24 18.6**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=4.9,slow=5.4,SNR=14						

MOS ***09*** *05:22:08.8±1.1, 12.27N×125.36E, h33km, mb5.4/41, MS5.1/27, Error ellipse: s-maj=9.9km s-min=5.0km az=117.7*

MAN ***09*** *05:22:08, 12.47N×125.61E, h23km, mb5.8, ML4.9, MS5.4*

MAN INTENSITY IV - ORAS, CAN-AVID, EASTERN SAMAR; INTENSITY III - CATARMAN, NORTHERN SAMAR, BORONGAN, EASTERN SAMAR; INTENSITY II - TACLOBAN, LEYTE, IROSIN, SORSOGON.

IDC ***09*** *05:22:10.6±2.7, 12.33N×125.35E, h33km±19km, mb4.8/23, mb1 4.8/26, mb1mx4.8/28, mbtmp4.8/26, ML4.6/3, MS5.0/24, Ms1 5.0/24, ms1mx4.9/32, Error ellipse: s-maj=15.5km s-min=8.4km az=88.0*

ISCJB ***09*** *05:22:10.0±0.2, 12.39N±0.02×125.52E±0.02, h43km, mb5.2/114, MS5.2/178, Error ellipse: s-maj=3.5km s-min=2.4km az=174.8*

NEIC ***09*** *05:22:11.1±0.2, 12.28N×125.42E, mb5.3/66, MS5.2/138, Error ellipse: s-maj=6.6km s-min=4.3km az=75.0*

NEIC Felt [IV PIVS] at Can-Avid and Oras; [III PIVS] at Borongan and Catarman; [II PIVS] at Irosin, Luzon and at Tacloban, Leyte.

GCMT ***09*** *05:22:11.1±0.1, 12.45N×125.62E, h19km, MW5.6/103, Moment Tensor Solution. s94,c167; s103,c191; Duration: 1.5s Moment tensor: Scale 10^{17}Nm; M_{rr}1.66±.03; $M_{\theta\theta}$0.04±.02; $M_{\phi\phi}$-1.70±.03; $M_{r\theta}$-0.16±.05; $M_{\theta\phi}$0.47±.02; $M_{\phi r}$2.54±.10; Best double couple: $M_0$3.08400×10^{17} NP1:ϕ_s156.00000°,δ18.00000°, λ72.00000°. NP2:ϕ_s355.00000°,δ73.00000°,λ96.00000°. Principal axes: T 3.0280, Plg62.0000°, Azm273.0000°; N 0.1130, Plg6.0000°, Azm173.0000°; P -3.1410, Plg28.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***09*** *05:22:14.5, 12.49N×125.36E, h76km, mB5.3, mb5.0, Ms5.2, Msz5.0*

DJA ***09*** *05:22:22, 12.30N×125.45E, h133km, Mw5.4/23*

ISC 09 05:22:11.8±0.2**, 12.35N**±0.02×**125.47E**±0.03**, h44**km**, h44**km±3.5km**: pP-P, n478,** σ**1.27**/391**, mb5.2**/114**, MS5.2**/178**, 32C-28D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.75**	**183**	*e*P	**Pn**	**05 22 24.6**	**-1.4**
BESP				*e*S	**Sn**	**05 22 39.3**	**+3.1**
CNP	**Catarman**	**0.81**	**281**	*e*P	**Pn**	**05 22 24.6**	**-2.2**
CNP				*e*S	**Sn**	**05 22 38.2**	**+0.6**
PLP	**Palo**	**1.27**	**202**	⇓*i*P	**Pn**	**05 22 32.4**	**-0.8**
PLP				*e*S	**Sn**	**05 22 50.3**	**+1.2**
OCLP	**Ormoc**	**1.54**	**213**	*e*P	**Pn**	**05 22 37.2**	**+0.4**
OCLP				*e*S	**Sn**	**05 22 59.6**	**+3.9**
PVCP	**Virac**	**1.78**	**314**	⇑*i*P	**Pn**	**05 22 37.7**	**-2.5**
PVCP				*i* S	**Sn**	**05 23 10.3**	**+8.7**
MMPH	**Masbate**	**1.81**	**270**	⇓*e*P	**Pn**	**05 22 42.7**	**+2.2**
MMPH				*i* S	**Sn**	**05 23 11.8**	**+10**
MSLP	**Maasin**	**2.28**	**195**	*e*P	**Pn**	**05 22 47.7**	**+0.6**
MSLP				*e*S	**Sn**	**05 23 17.4**	**+3.5**
LLP	**Lapu-Lapu**	**2.50**	**216**	⇑*e*P	**Pn**	**05 22 50.2**	**+0.1**
LLP				*e*S	**Sn**	**05 23 28.2**	**+8.9**
SCPH	**Surigao**	**2.55**	**180**	*e*P	**Pn**	**05 22 49.2**	**-1.5**
SCPH				*e*S	**Sn**	**05 23 29.6**	**+9.0**
RCP	**Roxas**	**2.78**	**254**	⇑*e*P	**Pn**	**05 22 54.7**	**+0.8**
RCP				*e*S	**Sn**	**05 23 34.2**	**+7.9**
TBP	**Tagbilaran**	**3.08**	**211**	⇑*e*P	**Pn**	**05 22 58.5**	**+0.5**
TBP				*e*S	**Sn**	**05 23 29.9**	**-3.6**
KALP	**Kalibo**	**3.14**	**258**	⇓*e*P	**Pn**	**05 23 02.2**	**+3.4**
GUIM	**Jordan**	**3.30**	**239**	*e*P	**Pn**	**05 23 01.6**	**+0.5**
GQP	**Guinayangan**	**3.33**	**298**	⇑*e*P	**Pn**	**05 22 59.5**	**-1.9**
GQP				*e*S	**Sn**	**05 23 49.3**	**+10**
OTRP	**Odiongan**	**3.37**	**271**	*e*P	**Pn**	**05 23 02.4**	**+0.5**
OTRP				*e*S	**Sn**	**05 23 44.3**	**+3.5**
POLP	**Polilio Island**	**4.17**	**305**	*e*P	**Pn**	**05 23 17.5**	**+4.6**
BIPH	**Bislig**	**4.23**	**168**	⇑*e*P	**Pn**	**05 23 11.0**	**-2.8**
SJMP	**San Jose**	**4.25**	**272**	*e*P	**Pn**	**05 23 15.9**	**+1.8**
DCPH	**Dipolog City**	**4.29**	**209**	⇑*e*P	**Pn**	**05 23 14.8**	**+0.2**
BUKP	**Musuan**	**4.46**	**185**	*e*P	**Pn**	**05 23 18.1**	**+1.1**
PGP	**Puerto Galera**	**4.55**	**285**	⇑*i*P	**Pn**	**05 23 21.1**	**+2.9**
CUYO	**Cuyo Island**	**4.61**	**252**	*e*P	**Pn**	**05 23 21.1**	**+2.0**
PAGZ	**Pagadian**	**4.92**	**205**	*e*P	**Pn**	**05 23 24.1**	**+0.7**
BALP	**Baler**	**5.06**	**312**	*e*P	**Pn**	**05 23 25.1**	**-0.2**
BUSP	**Coron**	**5.17**	**267**	*e*P	**Pn**	**05 23 27.8**	**+1.1**
CTBH	**Cotabato--PC H**	**5.24**	**193**	⇑*i*P	**Pn**	**05 23 24.6**	**-3.1**
DAV	**Davao City (W)**	**5.25**	**179**	Pn	**Pn**	**05 23 34.0**	**+6.2**
	63nm,0.3s,baz=13,slow=8.5,SNR=3.7						
DAV				Sn	**Sn**	**05 24 37.3**	**+10**
	66nm,0.3s,baz=163,slow=23,SNR=4.4						
DAV				LR	LR	05 25 57.9	
	comp=Z,44µm,18.2s,baz=244,slow=44						
DAV	**Davao City (W)**	**5.25**	**179**	*e*Pn	**Pn**	**05 23 29.4**	**+1.6**
DAV				Sn	**Sn**	**05 24 37.3**	**+10**
DAV				LR	LR	05 25 57.9	
LUBP	**Lubang**	**5.27**	**286**	*e*P	**Pn**	**05 23 30.5**	**+2.4**
PCPH	**Palayan**	**5.31**	**307**	⇑*e*P	**Pn**	**05 23 25.7**	**-2.9**
PCPH				*i* S	**Sn**	**05 24 24.6**	**-4.1**
IPIL	**Ipil**	**5.36**	**212**	*e*P	**Pn**	**05 23 31.3**	**+2.0**
MATI	**Mati**	**5.43**	**172**	*e*P	**Pn**	**05 23 33.6**	**+3.3**
PALP	**Palanan**	**5.53**	**328**	⇑*i*P	**Pn**	**05 23 30.7**	**-1.0**
CAUP	**Cauayan**	**5.77**	**323**	*e*P	**Pn**	**05 23 33.7**	**-1.2**
ENPP	**El Nido**	**6.03**	**260**	*e*P	**Pn**	**05 23 40.1**	**+1.6**
BCPH	**Baguio City Da**	**6.21**	**311**	⇓*i*P	**Pn**	**05 23 41.3**	**+0.4**
CVP	**Callao Caves**	**6.38**	**327**	⇑*e*P	**Pn**	**05 23 42.4**	**-1.0**
BOLP	**Bolinao**	**6.71**	**307**	*e*P	**Pn**	**05 23 49.4**	**+1.5**
APYP	**Conner**	**6.83**	**324**	*e*P	**Pn**	**05 23 48.4**	**-1.2**
ABRA	**Dolores**	**6.99**	**319**	*e*P	**Pn**	**05 23 52.5**	**+0.7**
PPR	**Puerto Princes**	**7.09**	**250**	*e*P	**Pn**	**05 23 52.5**	**-0.6**
PIP	**Pasuquin**	**7.56**	**322**	⇓*e*P	**Sn**	**05 25 32.0**	**+8.0**
KKM	**Kota Kinabalu**	**11.08**	**236**	*e*Pn	**Pn**	**05 24 50.4**	**+2.6**
	68nm,1.4s						
KKM				*e*Sn	**Sn**	**05 27 01.5**	**+11**
YULB	**Yu-li**	**11.68**	**341**	*e*Pn	**Pn**	**05 24 55.2**	**-0.6**
	66nm,1.0s						
TPUB	**Ta-pu**	**11.82**	**338**	*e*Pn	**Pn**	**05 25 00.8**	**+2.9**
	150nm,1.0s						
SSLB	**Suanglung**	**12.16**	**340**	*e*Pn	**Pn**	**05 25 04.8**	**+2.3**
	74nm,0.9s						
SSLB				*e*Sn	**Sn**	**05 27 12.8**	**-3.9**
NACB	**Ninganchiao**	**12.32**	**343**	*e*Pn	**Pn**	**05 25 08.3**	**+3.7**
YHNB	**Yeheng**	**12.85**	**343**	*e*Pn	**Pn**	**05 25 13.8**	**+1.9**
	72nm,0.9s						
YHNB				*e*Sn	**Sn**	**05 27 27.3**	**-6.4**
QZH	**Quanzhou**	**14.11**	**334**	⇑*i*P	**Pn**	**05 25 27.5**	**-1.7**
QZH				S	**Sn**	**05 28 04.0**	**-0.4**
QZH				AMB	AMB		
	comp=Z,2µm,10.0s						
QZH				LR	LR		
	comp=N,3µm,14.3s						
QZH				LR	LR		
	comp=E,16µm,17.5s						
QZH				LR	LR		
	comp=Z,7µm,19.2s						
HKC	**Hong Kong Obse**	**14.63**	**314**	P	**Pn**	**05 25 42.0**	**+5.9**
JOW	**Kunigami**	**14.64**	**10**	Pn	**Pn**	**05 25 37.1**	**+0.8**
	comp=Z,2.7nm,0.3s,baz=177,slow=14,SNR=14						
JOW				Sn	**Sn**	**05 28 09.4**	**-8.0**
	comp=Z,0.3nm,0.3s,baz=324,slow=19,SNR=1.8						
JOW				LR	LR	05 29 49.2	
	comp=Z,4µm,19.5s,baz=12,slow=31						
GZH	**Guangzhou**	**15.72**	**314**	P	**Pn**	**05 25 51.3**	**+1.0**
GZH				S	**S**	**05 28 49.0**	**-7.7**
GZH				LR	LR		
	comp=N,15µm,18.4s						
GZH				LR	LR		
	comp=E,11µm,17.6s						
GZH				LR	LR		
	comp=Z,10µm,14.9s						
QIZ	**Qiongzhong**	**16.44**	**296**	P	**Pn**	**05 25 58.8**	**-0.7**
QIZ				S	**S**	**05 29 01.8**	**-10**
QIZ				XS	sS	05 29 22.2	-6.0
QIZ				AMB	AMB		
	comp=Z,2µm,12.5s						
QIZ				LR	LR		
	comp=E,10µm,17.9s						
QIZ				LR	LR		
	comp=Z,14µm,18.5s						
KAPI	**Kappang**	**18.16**	**199**	Pn	**Pn**	**05 26 22.8**	**+1.9**
	comp=Z,580nm,0.9s,SNR=11						
KAPI	**Kappang**	**18.16**	**199**	⇓P	**Pn**	**05 26 22.6**	**+1.7**
	SNR=31						
KAPI	**Kappang**	**18.16**	**199**	P	**Pn**	**05 26 21.1**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=3.8,slow=9.0,SNR=15						
KAPI				S	**S**	**05 29 41.4**	**-5.3**
	comp=Z,0.4nm,0.3s,baz=170,slow=18,SNR=2.5						
KAPI	**Kappang**	**18.16**	**199**	*e*Pn	**Pn**	**05 26 21.4**	**+0.5**
	comp=Z,109nm,0.9s						
KAPI				*e*Sn	**Sn**	**05 29 41.4**	**-1.5**
KSM	**Kuching**	**18.51**	**235**	*e*Pn	**Pn**	**05 26 24.6**	**-0.6**
	comp=Z,98nm,1.1s						
KSM				*e*S	**S**	**05 29 52.5**	**-1.2**
GUMO	**Guam**	**18.94**	**84**	P	**Pn**	**05 26 30.6**	**+0.3**
	comp=Z,10nm,0.3s,baz=330,slow=9.3,SNR=4.1						
GUMO				LR	LR	05 32 20.4	
	comp=Z,4µm,18.6s,baz=276,slow=32						
SSE	**Sheshan**	**19.07**	**349**	P	**Pn**	**05 26 31.5**	**-0.2**
SSE				S	**S**	**05 30 03.0**	**-1.7**
SSE				AMB	AMB		
	comp=Z,49nm,1.0s						
SSE				AMB	AMB		
	comp=Z,1µm,9.2s						
SSE				LR	LR		
	comp=N,5µm,16.4s						
SSE				LR	LR		
	comp=E,1µm,16.5s						
SSE				LR	LR		
	comp=Z,3µm,17.6s						
NJ2	**Nanjing**	**20.53**	**344**	*e*P	**P**	**05 26 51.7**	**+5.2**
NJ2				AP		05 27 07.6	
NJ2				PP		05 27 16.3	
NJ2				XP	sP	05 27 17.4	+15
NJ2				S	**S**	**05 30 30.0**	**-3.9**
NJ2				XS	sS	05 30 54.0	+3.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,820nm,5.5s						
NJ2				LR	LR		
	comp=N,1µm,13.7s,MS4.8						
NJ2				LR	LR		
	comp=E,3µm,16.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,3µm,19.9s,MS4.6						
WHN	**Wuhan**	**20.83**	**332**	⇓P	**P**	**05 26 50.7**	**+1.0**
WHN				AMB	AMB		
	comp=Z,2µm,6.8s						
WHN				LR	LR		
	comp=N,5µm,12.2s,MS5.2						
WHN				LR	LR		
	comp=E,5µm,15.0s,MS5.2						
WHN				LR	LR		
	comp=Z,10µm,22.8s						
CBIJ	**Chichi jima**	**21.47**	**44**	LR	LR	05 34 59.1	
	comp=Z,3µm,18.4s,MS4.7,baz=230,slow=36						
BATI	**Baumata**	**22.48**	**185**	P	**P**	**05 27 07.3**	**-0.3**
	comp=Z,136nm,0.5s,mb5.7,baz=274,slow=4.9,SNR=23						
BATI				LR	LR	05 36 18.0	
	comp=Z,3µm,21.2s,MS4.6,baz=197,slow=38						
GYA	**Guiyang**	**22.57**	**311**	⇓*i*P	**P**	**05 27 08.5**	**0.0**
GYA				AP		05 27 25.5	
GYA				XP	sP	05 27 35.1	+10
GYA				PP		05 27 40.5	
GYA				PPP		05 27 51.2	
GYA				PCP	PcP	05 31 00.5	-0.4
GYA				S	**S**	**05 31 06.6**	**-6.9**
GYA				XS	sS	05 31 35.0	+3.6
GYA				SS		05 31 54.5	
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,200nm,7.0s						
GYA				LR	LR		
	comp=N,10µm,20.0s,MS5.3						
GYA				LR	LR		
	comp=E,7µm,22.1s,MS5.3						
GYA				LR	LR		
	comp=Z,8µm,17.7s,MS5.2						
JHJ	**Hachijo jima 2**	**24.47**	**30**	LR	LR	05 35 22.3	
	comp=Z,3µm,18.4s,MS4.8,baz=296,slow=32						
NST	**Nakhon Sawan**	**24.80**	**281**	P	**P**	**05 27 28.5**	**-1.5**
KMI	**Kunming**	**24.95**	**304**	P	**P**	**05 27 32.0**	**+0.8**
KMI				AP		05 27 51.0	
KMI				XP	sP	05 28 01.6	+14
KMI				PP		05 28 12.6	
KMI				PPP		05 28 24.6	
KMI				PCP	PcP	05 31 04.7	-1.3
KMI				S	**S**	**05 31 44.4**	**-7.5**
KMI				XS	sS	05 32 15.1	+3.7
KMI				SS		05 32 46.7	
KMI				SSS		05 33 06.1	
KMI				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.5						
KMI				AMB	AMB		
	comp=Z,954nm,12.8s						
KMI				LR	LR		
	comp=N,6µm,16.4s,MS5.4						
KMI				LR	LR		
	comp=E,7µm,16.4s,MS5.4						
KMI				LR	LR		
	comp=Z,9µm,15.7s,MS5.4						
INCN	**Inchon**	**25.05**	**2**	P	**P**	**05 27 29.2**	**-2.8**
INCN				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
KSRS	**Korea Array**	**25.09**	**5**	P	**P**	**05 27 31.8**	**-0.6**
	comp=Z,19nm,0.9s,mb4.6,baz=184,slow=10,SNR=21						
KSRS				PcP	PcP	05 31 08.9	+2.9
	comp=Z,1.8nm,0.9s,baz=108,slow=2.7,SNR=4.2						
KSRS				LR	LR	05 37 15.7	
	comp=Z,2µm,19.8s,MS4.6,baz=88,slow=36						
KAKA	**Kakadu**	**25.84**	**164**	*e*P	x	05 27 18.1	
	comp=Z,47nm,0.6s						
KAKA				*e*PCP	x	05 30 50.7	
KAKA				*e*S	x	05 31 56.6	
CM31	**Chiang Mai Arr**	**26.27**	**287**	PFAKE		05 27 50.0	+6.7
CM31				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
CMAR	**Chiang Mai Arr**	**26.27**	**287**	P	**P**	**05 27 42.2**	**-1.0**
	comp=Z,26nm,0.8s,mb4.8,baz=96,slow=7.8,SNR=84						
CMAR				PcP	PcP	05 31 09.4	+0.4
	comp=Z,7.4nm,0.9s,baz=63,slow=1.3,SNR=11						
CMAR				LR	LR	05 39 14.9	
	comp=Z,6µm,18.1s,MS5.2,baz=88,slow=39						
CMAR	**Chiang Mai Arr**	**26.27**	**287**	P	**P**	**05 27 42.3**	**-1.0**
CMAR						05 31 09.5	
CHG	**Chiang Mai**	**26.33**	**287**	⇑P	**P**	**05 27 42.4**	**-1.4**
	comp=Z,18nm,0.8s,mb4.7						
CHTO	**Chiang Mai**	**26.33**	**287**	*e*P	**P**	**05 27 42.8**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.5						
CHTO				MLR	MLR		
	comp=Z,4µm,19.0s,MS4.9						
CHTO	**Chiang Mai**	**26.33**	**287**	*e*P	**P**	**05 27 42.8**	**-1.0**
	comp=Z,13nm,0.8s,mb4.5						
CHTO				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
XAN	**Xi'an**	**26.33**	**328**	P	**P**	**05 27 42.7**	**-1.0**
XAN				AP	pP	05 28 01.2	+5.9
XAN				PP		05 28 31.7	
XAN				PPP		05 28 43.6	
XAN				S	**S**	**05 32 11.3**	**-2.4**
XAN				AMB	AMB		
	comp=Z,107nm,1.0s,mb5.3						
XAN				LR	LR		
	comp=N,710nm,23.9s,MS4.7						
XAN				LR	LR		
	comp=E,2µm,19.2s,MS4.7						
XAN				LR	LR		
	comp=Z,3µm,19.2s,MS4.8						
DL2	**Dalian**	**26.67**	**353**	*i* P	**P**	**05 27 49.3**	**+2.7**
DL2				S	**S**	**05 32 20.6**	**+1.8**
DL2				AMB	AMB		
	comp=Z,40nm,1.1s,mb4.9						
DL2				AMB	AMB		
	comp=Z,380nm,7.9s						
DL2				LR	LR		
	comp=N,1µm,14.6s						
DL2				LR	LR		
	comp=Z,1µm,12.7s,MS4.7						
MAJO	**Matsushiro**	**26.68**	**23**	*e*P	**P**	**05 27 49.6**	**+2.9**
MAJO				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
MAJO				MLR	MLR		
	comp=Z,4µm,21.0s,MS4.9						
MAJO	**Matsushiro**	**26.68**	**23**	*e*P	**P**	**05 27 49.6**	**+2.9**
	comp=Z,17nm,1.2s,mb4.5						
MAJO				LR	LR		
	comp=Z,4µm,21.0s,MS4.9						
MAT	**Matsushiro**	**26.68**	**23**	P	**P**	**05 27 49.6**	**+2.9**
MAT				S	**S**	**05 32 21.0**	**+1.9**
MJAR	**Matsushiro Arr**	**26.68**	**23**	P	**P**	**05 27 47.0**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=191,slow=9.8,SNR=5.9						
MJAR				LR	LR	05 36 36.5	
	comp=Z,3µm,21.0s,MS4.9,baz=220,slow=32						
CD2	**Chengdu**	**27.27**	**316**	⇑*i*P	**P**	**05 27 51.5**	**-0.6**
CD2				AP	pP	05 28 09.9	+6.1
CD2				XP	sP	05 28 18.7	+10
CD2				PP		05 28 41.0	
CD2				PCP	PcP	05 31 08.9	-2.3
CD2				S	**S**	**05 32 23.8**	**-4.7**
CD2				XS	sS	05 32 54.8	+6.7
CD2				SS		05 33 46.7	
CD2				PCS	PcS	05 34 51.3	-1.6
CD2				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.2						
CD2				AMB	AMB		
	comp=Z,2µm,9.3s						
CD2				LR	LR		
	comp=N,13µm,17.8s,MS5.7						
CD2				LR	LR		
	comp=E,13µm,19.1s,MS5.7						
CD2				LR	LR		
	comp=Z,5µm,15.5s,MS5.2						
PSI	**Prapat**	**27.94**	**252**	P	**P**	**05 27 57.8**	**-0.6**
	comp=Z,12nm,0.8s,mb4.5,baz=52,slow=3.0,SNR=12						
PSI				LR	LR	05 39 55.8	
	comp=Z,7µm,18.9s,MS5.3,baz=138,slow=38						
BJT	**Baijiatuau**	**28.76**	**345**	*e*P	**P**	**05 28 04.6**	**-0.7**
BJT				pmax	pmax		
	comp=Z,19nm,0.6s						
BJT	**Baijiatuau**	**28.76**	**345**	*e*P	**P**	**05 28 04.6**	**-0.7**
	comp=Z,19nm,0.6s,mb5.0						
BJI	**Beijing**	**28.77**	**345**	P	**P**	**05 28 05.6**	**+0.1**
BJI				S	**S**	**05 32 49.7**	**-2.3**
BJI				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.1						
BJI				AMB	AMB		
	comp=Z,514nm,7.1s						
BJI				LR	LR		
	comp=N,2µm,19.8s,MS4.9						
BJI				LR	LR		
	comp=E,2µm,17.2s,MS4.9						
BJI				LR	LR		
	comp=Z,1µm,19.8s,MS4.6						
SNY	**Shenyang**	**29.41**	**357**	⇓P	**P**	**05 28 11.2**	**+0.1**
SNY				S	**S**	**05 32 53.4**	**-8.6**
SNY				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
SNY				AMB	AMB		
	comp=Z,376nm,4.9s						
SNY				LR	LR		
	comp=N,2µm,11.6s,MS5.2						
SNY				LR	LR		
	comp=E,3µm,15.1s,MS5.2						
SNY				LR	LR		
	comp=Z,2µm,13.9s,MS4.9						
FITZ	**Fitzroy Crossi**	**30.26**	**180**	*e*P	**P**	**05 28 17.0**	**-1.8**
	comp=Z,72nm,0.5s,mb5.7						
FITZ				*e*S	**S**	**05 33 16.8**	**+1.1**
PMG	**Port Moresby**	**30.52**	**134**	PFAKE		05 28 30.0	+8.8
PMG				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
LZH	**Lanzhou**	**30.64**	**324**	*e*P	**P**	**05 28 23.1**	**+1.1**
LZH				AP	pP	05 28 38.8	+5.0
LZH				XP	sP	05 28 47.0	+8.0
LZH				PP	PP	05 29 26.0	-5.8
LZH				*e*S	**S**	**05 33 19.0**	**-2.4**
LZH				XS	sS	05 33 51.0	+10
LZH				SCP	ScP	05 34 52.0	-6.8
LZH				SS	PcS	05 35 04.0	+0.6
LZH				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=E,560nm,14.7s						
LZH				LR	LR		
	comp=Z,910nm,15.8s,MS4.5						
HHC	**Hu-ho-hao-te**	**30.91**	**339**	*e*P	**P**	**05 28 24.6**	**+0.3**
HHC				AP	pP	05 28 41.9	+5.8
HHC				XP	sP	05 28 51.4	+10
HHC				PP	PP	05 29 28.4	-6.3
HHC				PCP	PcP	05 31 19.0	-1.2
HHC				S	**S**	**05 33 22.7**	**-2.8**
HHC				XS	sS	05 33 52.5	+7.4
HHC				PCS	PcS	05 35 02.4	-1.7
HHC				SS	PcS	05 35 11.4	+7.3
HHC				SCS	ScS	05 38 49.2	-7.1
HHC				AMB	AMB		
	comp=Z,21nm,0.7s,mb5.1						
HHC				AMB	AMB		
	comp=Z,645nm,5.7s						
HHC				LR	LR		
	comp=N,2µm,11.9s						
HHC				LR	LR		
	comp=E,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,14.3s,MS5.0						
BTO	**Baotou**	**31.25**	**337**	*e*P	**P**	**05 28 23.4**	**-4.0**
CN2	**Changchun**	**31.34**	**360**	*e*P	**P**	**05 28 31.6**	**+3.5**
CN2				*e*S	**S**	**05 33 34.2**	**+2.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
CN2				AMB	AMB		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=N,900nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,1µm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
COEN	**Coen**	**31.48**	**146**	*e*P	**P**	**05 28 28.3**	**-1.3**
	comp=Z,43nm,1.1s,mb5.2						
MDJ	**Mudanjiang**	**32.35**	**6**	P	**P**	**05 28 37.6**	**+0.7**
MDJ				AP	pP	05 28 56.0	+7.3
MDJ				XP	sP	05 29 05.7	+12
MDJ				PP	PP	05 29 51.8	+1.2
MDJ				S	**S**	**05 33 41.8**	**-6.1**
MDJ				XS	sS	05 34 15.8	+8.2
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,202nm,8.3s						
MDJ				LR	LR		
	comp=N,1µm,15.8s,MS5.0						
MDJ				LR	LR		
	comp=E,2µm,15.2s,MS5.0						
MDJ				LR	LR		
	comp=Z,1µm,19.8s,MS4.7						
WRAB	**Tennant Creek**	**33.25**	**165**	P	**P**	**05 28 44.0**	**-1.1**
	comp=Z,156nm,1.3s,mb5.8,SNR=7.7						
WRAB	**Tennant Creek**	**33.25**	**165**	*e*P	**P**	**05 28 42.4**	**-2.7**
WRAB				*e*S	**S**	**05 34 00.6**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
WRAB				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.7						
WRAB	**Tennant Creek**	**33.25**	**165**	*e*P	**P**	**05 28 42.4**	**-2.6**
	comp=Z,18nm,0.8s,mb5.1						
WRAB				*e*S	**S**	**05 34 00.6**	**-1.7**
WRAB				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
WB2	**Warramunga Arr**	**33.26**	**165**	*e*P	**P**	**05 28 42.6**	**-2.5**
WB2				*e*PCP	PcP	05 31 28.4	+1.5
WB2				*e*S	**S**	**05 33 58.9**	**-3.6**
ERM	**Erimo**	**33.33**	**24**	PFAKE		05 29 00.0	+14
ERM				LR	LR		

comp=Z,2µm,19.0s,MS4.8
MBWA Marble Bar 33.77 190 *e*P P **05 28 48.1 -1.5**
comp=Z,11nm,0.9s,mb4.8
MBWA LR LR
comp=Z,1µm,20.0s,MS4.6
SHL Shillong 34.27 297 *e*P P **05 28 55.0 +1.1**
SHL *ex* x 05 31 35.0
ASAJ Asahikawa 34.91 22 P P **05 29 02.0 +2.8**
comp=Z,5.0nm,0.7s,mb4.5,baz=284,slow=12,SNR=3.2
ASAJ LR LR 05 41 35.4
comp=Z,2µm,20.5s,MS4.8,baz=200,slow=33
GTA Gaotai 35.24 324 P P **05 29 02.7 +0.6**
GTA AP pP 05 29 21.1 +7.1
GTA XP sP 05 29 30.6 +11
GTA PCP PcP 05 31 33.3 +1.0
GTA S S **05 34 32.0 -0.8**
GTA XS sS 05 35 02.9 +10
GTA AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
GTA AMB AMB
comp=Z,398nm,8.0s
GTA LR LR
comp=N,3µm,18.7s,MS5.1
GTA LR LR
comp=E,2µm,22.3s,MS5.1
GTA LR LR
comp=Z,4µm,16.0s
LSA Lhasa 36.20 304 P P **05 29 11.0 +0.4**
LSA PP PP 05 30 36.5 +3.0
LSA XS sS 05 35 14.2 +6.5
LSA SCS ScS 05 39 21.3 -3.1
LSA AMB AMB
comp=Z,30nm,1.1s,mb5.1
LSA AMB AMB
comp=Z,630nm,10.4s
LSA LR LR
comp=N,2µm,17.4s,MS5.2
LSA LR LR
comp=E,3µm,16.9s,MS5.2
LSA LR LR
comp=Z,6µm,16.9s,MS5.4
LSA Lhasa 36.20 304 *e*P P **05 29 11.3 +0.7**
LSA pmax pmax
comp=Z,54nm,1.1s,mb5.4
LSA Lhasa 36.20 304 *e*P P **05 29 11.3 +0.8**
comp=Z,54nm,1.1s,mb5.4
ASAR Alice Springs 36.73 167 P P **05 29 13.3 -1.7**
comp=Z,5.3nm,0.5s,mb4.7,baz=357,slow=7.7,SNR=71
ASAR S S **05 34 56.6 +0.8**
comp=Z,1.3nm,0.6s,baz=355,slow=18,SNR=7.0
ASAR ScP ScP 05 35 21.8 +1.4
comp=Z,4.4nm,0.8s,baz=343,slow=4.3,SNR=4.4
ASAR Alice Springs 36.73 167 P P **05 29 13.3 -1.7**
ASAR S S **05 34 56.7 +0.8**
CAL Calcutta 36.76 291 *e*P P **05 29 15.7 +0.2**
CAL *ex* x 05 35 01.5
HABR Khabarovsk 36.88 11 *e*P P **05 29 18.1 +2.0**
HABR *e**PP pP 05 29 28.0 0.0
HABR *e**SP sP 05 29 34.6 +1.4
HABR *e* 05 31 36.0
HABR *e*S S **05 35 00.7 +3.0**
HABR *e*SSS 05 37 53.4
HABR *e* 05 39 24.8
HIA Hailar 37.11 354 *e*P P **05 29 18.1 +0.1**
HIA pmax pmax
comp=Z,13nm,0.6s
HIA Hailar 37.11 354 *e*P P **05 29 18.1 +0.1**
comp=Z,13nm,0.6s,mb4.9
KLR Kul'dur 37.13 7 *e*P P **05 29 15.0 -3.2**
YSS Yuzh-Sakhalins 37.44 20 *e*P P **05 29 22.0 +1.2**
YSS *e* 05 29 29.8
YSS *e*S S **05 35 05.0 -1.2**
YSS *e*SS SS 05 37 45.0 -6.6
YSS MLR MLR
comp=Z,1µm,16.0s,MS4.7
YSS MLR MLR
comp=E,1µm,17.0s
YSS Yuzh-Sakhalins 37.44 20 *e*P P **05 29 22.7 +1.9**
COCO West Island 37.44 230 PFAKE 05 29 30.0 +8.8
COCO LR LR
comp=Z,2µm,19.0s,MS4.9
CTA Charters Tower 38.18 147 *e*P P **05 29 26.8 -0.5**
comp=Z,10nm,0.8s,mb4.6
CTA *e*PP PP 05 31 04.5 +9.2
CTA *e*PCP PcP 05 31 43.1 +1.6
CTA *e*S S **05 35 15.0 -2.9**
CTA *e*SS SS 05 38 10.2 +3.1
CTA Charters Tower 38.18 147 *e*P P **05 29 26.8 -0.5**
CTA *e* 05 31 04.5
CTA *e* 05 31 43.1
CTA *e*S S **05 35 15.0 -2.9**
CTA pmax pmax
comp=Z,10.0nm,0.8s
CTAO Charters Tower 38.18 147 *e*P P **05 29 27.3 0.0**
CTAO pmax pmax
comp=Z,13nm,0.8s,mb4.7
CTAO MLR MLR
comp=Z,2µm,21.0s,MS4.9
CTAO Charters Tower 38.18 147 *e*P P **05 29 27.3 0.0**
comp=Z,13nm,0.8s,mb4.7
CTAO LR LR
comp=Z,2µm,21.0s,MS4.9
TAPN Taplejung 38.35 299 *e*P P **05 29 28.9 +0.1**
comp=Z,155nm,1.2s,mb5.6
ODAN Odare 38.50 298 *e*P P **05 29 29.9 -0.2**
comp=Z,108nm,0.7s,mb5.7
SONM Songino Array 38.81 339 P P **05 29 31.6 -0.7**
comp=Z,41nm,1.1s,mb5.1,baz=156,slow=10,SNR=53
SONM PcP PcP 05 31 42.8 -0.2
comp=Z,3.0nm,0.9s,baz=167,slow=4.0,SNR=2.6
SONM LR LR 05 46 46.5
comp=Z,2µm,18.4s,MS5.0,baz=154,slow=38
SONM Songino Array 38.81 339 P P **05 29 31.6 -0.7**
SONM 05 31 42.8
BOK Bokaro 39.19 293 *e*P P **05 29 35.8 0.0**
BOK AMb AMB 05 29 39.2
comp=Z,43nm,0.7s,mb5.3
RAMN Ramite 39.20 298 *e*P P **05 29 36.1 +0.1**
comp=Z,148nm,0.9s,mb5.7
JIRN Jiri 39.73 299 *e*P P **05 29 40.6 +0.2**
comp=Z,77nm,0.7s,mb5.6
GUN Gumba 40.06 299 *e*P P **05 29 43.1 0.0**
comp=Z,169nm,0.9s,mb5.8
PKI Pulchoki 40.38 298 *e*P P **05 29 45.0 -0.8**
comp=Z,50nm,0.6s,mb5.4
PKI Pulchoki 40.38 298 *e*P P **05 29 45.1 -0.7**
PKI pmax pmax
comp=Z,40nm,0.5s,mb5.4
PKI Pulchoki 40.38 298 *e*P P **05 29 45.1 -0.7**
comp=Z,40nm,0.5s,mb5.4
PKIN Phulchoki 40.40 298 *e*P P **05 29 45.1 -0.8**
comp=Z,40nm,0.5s,mb5.4
HNR Honiara 40.52 121 LR LR 05 43 56.3
comp=Z,3µm,21.6s,MS5.2,baz=301,slow=32
HNR Honiara 40.52 121 PFAKE 05 30 00.0 +13
HNR LR LR
comp=Z,4µm,22.0s,MS5.2
KKN Kakani 40.55 298 *e*P P **05 29 46.4 -0.7**
comp=Z,132nm,1.0s,mb5.5
DMN Daman 40.65 298 *e*P P **05 29 47.5 -0.5**
comp=Z,99nm,0.9s,mb5.5
VIS Vishakhapatnam 40.98 283 *e*P P **05 29 49.4 -1.4**
GKN Gorkha 41.15 299 *e*P P **05 29 51.2 -0.9**
comp=Z,93nm,0.9s,mb5.4
DANN Dangsing 41.98 299 *e*P P **05 29 58.7 -0.2**
comp=Z,261nm,0.8s,mb5.9
KOLN Koldanda 41.99 298 *e*P P **05 29 58.5 -0.5**
comp=Z,216nm,0.8s,mb5.8
ZAK Zakamensk 42.05 339 *e*P P **05 29 58.2 -0.9**
ZAK *e* 05 31 38.9
FORT Forrest 42.95 177 *e*P P **05 30 05.9 -0.7**
comp=Z,93nm,0.6s,mb5.7
TLY Talaya 43.02 340 *e*P P **05 30 06.8 -0.2**
TLY *e* 05 31 50.1
TLY *e*S S **05 36 33.1 +3.7**
TLY *e* 05 40 05.2
TLY pmax pmax
comp=Z,23nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,903nm,16.0s,MS4.8
TLY Talaya 43.02 340 *e*P P **05 30 07.0 0.0**
comp=Z,28nm,1.2s,mb4.9
TLY LR LR
comp=Z,936nm,19.0s,MS4.7
MOY Mondy 43.93 338 *e*P P **05 30 15.8 +1.5**

KLBR Kellerberrin 44.31 189 *e*P P **05 30 16.6 -0.9**
comp=Z,12nm,0.5s,mb4.9
CLNS Chul'man 44.39 360 *e*P P **05 30 18.3 +0.4**
CLNS *e* 05 32 03.6
CLNS *e*S S **05 36 43.2 -6.1**
CLNS *e*SS SS 05 40 07.5 -1.7
CLNS pmax pmax
comp=N,18nm,1.0s
CLNS pmax pmax
comp=Z,26nm,1.0s,mb4.9
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS smax
comp=E,275nm,12.1s
CLNS smax
comp=N,235nm,14.4s
JBP Jabalpur 44.47 290 *e*P P **05 30 19.2 +0.2**
JBP *ex* x 05 36 53.9
MUN Mundaring 44.96 191 *e*P P **05 30 21.7 -1.0**
MUN Mundaring 44.96 191 *e*P P **05 30 21.7 -1.0**
EIDS Eidsvold 45.04 146 *e*P P **05 30 22.6 -0.8**
comp=N,18nm,0.9s,mb4.9
WMQ Urumqi 45.12 321 P P **05 30 25.0 +1.1**
WMQ AP pP 05 30 45.4 +9.4
WMQ PCP PcP 05 32 05.0 +1.1
WMQ S S **05 36 57.4 -2.8**
WMQ XS sS 05 37 31.0 +11
WMQ SCS ScS 05 40 12.0 -5.2
WMQ AMB AMB
comp=Z,31nm,1.3s,mb5.0
WMQ AMB AMB
comp=Z,564nm,4.0s
WMQ LR LR
comp=N,6µm,16.0s,MS5.8
WMQ LR LR
comp=E,6µm,15.0s,MS5.8
WMQ LR LR
comp=Z,4µm,16.0s,MS5.4
NGP Nagpur 45.17 288 *e*P P **05 30 22.4 -2.3**
NGP *ex* x 05 36 55.2
HYB Hyderabad 45.54 282 *i* P P **05 30 27.0 -0.6**
HYB *e*PcP PcP 05 32 08.0 +2.1
HYB *e*S S **05 37 08.0 +1.0**
HYB Hyderabad 45.54 282 *e*P P **05 30 27.0 -0.6**
NWAO Narrogin (SRO) 45.70 190 *e*P P **05 30 28.8 +0.2**
comp=Z,42nm,1.1s,mb5.3
NWAO LR LR
comp=Z,1µm,19.0s,MS4.8
BOD Bodaibo 46.21 352 *e*P P **05 30 31.6 -0.7**
BOD pmax pmax
comp=Z,18nm,1.0s,mb5.0
STKA Stephens Creek 46.61 161 *e*P P **05 30 35.3 -0.4**
comp=Z,23nm,0.8s,mb5.2
STKA *e*PCP PcP 05 32 11.6 +2.4
STKA *e*S S **05 37 15.0 -6.8**
STKA *e*SS SS 05 40 48.7 0.0
STKA Stephens Creek 46.61 161 P P **05 30 35.4 -0.3**
comp=Z,14nm,0.7s,mb5.0,baz=340,slow=8.3,SNR=14
STKA PcP PcP 05 32 10.3 +1.1
comp=Z,18nm,0.8s,baz=352,slow=7.1,SNR=2.5
STKA Stephens Creek 46.61 161 *e*PKPdf P **05 30 35.4 -0.4**
STKA Stephens Creek 46.61 161 *e*P P **05 30 35.3 -0.4**
comp=Z,23nm,0.8s,mb5.2
STKA *e*PcP PcP 05 32 11.6 +2.4
STKA *e*S S **05 37 15.0 -6.8**
STKA *e*SS SS 05 40 48.7 0.0
AKL Akola 47.05 287 *e*P P **05 30 40.0 +0.5**
KOD Kodaikanal 47.08 273 *e*P P **05 30 39.8 0.0**
KOD AMb AMB 05 30 59.6
comp=Z,28nm,0.4s,mb5.5
DDI Dehra Dun 47.27 300 *ex* P **05 30 38.0 -3.1**
NDI New Delhi 47.69 298 *ex* P **05 30 41.5 -2.8**
TRD Trivandrum 47.81 270⇑ *ex* x 05 30 50.0
TRD *ex* x 05 38 00.0
PEA0B Petropavlovsk- 48.09 26 *e*P P **05 30 48.5 +1.5**
PETK Petropavlovsk- 48.09 26 P P **05 30 48.6 +1.6**
comp=Z,21nm,1.0s,mb5.1,baz=236,slow=2.7,SNR=9.7
SMLA Simla 48.19 301 *i* P P **05 30 48.0 -0.1**
comp=Z,222nm,0.6s,mb6.4
SMLA *i* x x 05 36 49.3
TARA Tarawa 48.27 99 PFAKE 05 31 00.0 +11
TARA LR LR
comp=Z,3µm,19.0s,MS5.3
SDNR Sundarnagar 48.43 301 *e*P P **05 30 51.0 +1.0**
PET Petropavlovsk 48.44 26 *e*P P **05 30 52.3 +2.6**
PET *e* 05 32 46.1
PET *e*S S **05 37 49.8 +2.4**
PET *e*SS SS 05 41 15.8 -1.7
PET pmax pmax
comp=Z,43nm,1.2s,mb5.3
PET pmax pmax
comp=Z,200nm,15.9s
PET MLR MLR
comp=Z,900nm,17.0s,MS4.8
PET MLR MLR
comp=Z,900nm,18.0s
PET Petropavlovsk 48.44 26 *e*P P **05 30 51.1 +1.3**
comp=Z,65nm,1.3s,mb5.5
PET LR LR
comp=Z,1µm,21.0s,MS4.9
ARMA Armidale 49.41 150 *e*P P **05 30 57.7 +0.2**
ARMA *e*S S **05 38 02.9 +1.3**
AJM Ajmer 49.65 294 *e*P P **05 30 59.1 -0.3**
AJM AMb AMB 05 31 03.1
comp=Z,55nm,1.2s,mb5.5
THN Thein Dam 49.66 302 *e*P P **05 30 57.6 -1.8**
YAK Yakutsk 49.69 3 *e*P P **05 30 56.3 -2.9**
YAK *e**PP pP 05 31 05.1 -6.3
YAK *e*S S **05 37 58.0 -6.7**
YAK *e**SS sS 05 38 24.9 -0.2
YAK *e* 05 40 42.2
YAK pmax pmax
comp=Z,30nm,1.1s,mb5.2
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,16nm,1.3s
YAK smax
comp=N,176nm,4.9s
YAK smax
comp=E,325nm,6.2s
YAK MLR MLR
comp=Z,1µm,22.0s,MS4.8
YAK MLR MLR
comp=E,1µm,15.0s
YAK MLR MLR
comp=N,679nm,19.0s
YAK Yakutsk 49.69 3 *e*P P **05 30 59.3 +0.1**
comp=N,81nm,1.1s,mb5.7
KAD Karad 49.71 282 *e*P P **05 30 58.1 -1.9**
KAD *i* P 05 30 59.2
KAD AMb AMB 05 31 03.2
comp=Z,31nm,0.8s,mb5.4
MK31 Makanchi Array 49.91 322 *e*P P **05 31 01.7 +0.6**
MKAR Makanchi Array 49.91 322 P P **05 31 01.6 +0.5**
comp=Z,36nm,0.8s,mb5.5,baz=118,slow=7.9,SNR=81
MKAR PcP PcP 05 32 21.8 +0.9
comp=Z,7.1nm,0.8s,baz=101,slow=3.9,SNR=5.2
MKAR LR LR 05 55 05.3
comp=Z,2µm,18.2s,MS5.1,baz=245,slow=40
MKAR Makanchi Array 49.91 322 P P **05 31 01.6 +0.5**
MKAR 05 32 21.8
POO Poona 50.00 284 *e*P P **05 31 01.0 -1.2**
POO *e*P 05 31 01.7
POO AMb AMB 05 31 04.6
comp=Z,26nm,0.6s,mb5.4
ULHL Ulahol 51.96 314 P P **05 31 19.9 +3.3**
SNR=5.5
CAN Canberra 52.39 156 *e*P P **05 31 19.6 -0.1**
CAN pmax pmax
comp=Z,22nm,0.9s,mb5.1
CAN Canberra 52.39 156 *e*P P **05 31 19.6 -0.1**
comp=Z,22nm,0.9s,mb5.1
ZAA0 Zalesovo Array 52.44 331 *e*P P **05 31 19.1 -0.7**
ZALV Zalesovo Beam 52.44 331 P P **05 31 19.0 -0.9**
comp=Z,17nm,0.8s,mb5.1,baz=115,slow=6.7,SNR=48
ZALV LR LR 05 54 37.8
comp=Z,1µm,19.4s,MS5.0,baz=134,slow=37
ZALV Zalesovo Beam 52.44 331 P P **05 31 19.0 -0.9**
ZALV LR LR 05 54 37.8
CNB Canberra Magne 52.53 155 *e*P P **05 31 21.3 +0.5**
CNB *e*S S **05 38 46.3 +1.8**
KZA Kyzart 52.60 314 P P **05 31 23.9 +2.5**
SNR=10
TKM2 Tokmak 2 52.64 315 *e*P P **05 31 22.3 +0.7**
TKM2 *e**PP pP 05 31 32.9 -1.1
TKM2 *e* 05 32 33.2
TKM2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
TKM2 MLR MLR
comp=Z,4µm,21.0s,MS5.4
TKM2 Tokmak 2 52.64 315 P P **05 31 22.5 +0.9**
SNR=5.8
TKM2 Tokmak 2 52.64 315 *e*P P **05 31 22.3 +0.7**
comp=Z,10nm,0.7s,mb4.9
TKM2 *e*pP pP 05 31 32.9 -1.1
TKM2 *e*PcP PcP 05 32 33.2 +2.0
TKM2 LR LR
comp=Z,4µm,21.0s,MS5.4
DZM Mont Dzumac 52.77 130 *e*P P **05 31 21.3 -1.6**
comp=Z,9.9nm,0.9s,mb4.7
KBK Karagaybulak 53.00 315 P P **05 31 20.4 -3.9**
SNR=5.6
TOO Toolangi 53.10 160 *e*P P **05 31 24.9 0.0**
TOO *e*S S **05 38 56.8 +4.6**
UCH Uchtor 53.17 314 *e*P P **05 31 25.9 +0.4**
comp=Z,19nm,0.8s,mb5.1
UCH *e*pP pP 05 31 38.1 +0.2
UCH LR LR
comp=Z,970nm,21.0s,MS4.8
CHMS Chumysh 53.25 315 P P **05 31 26.8 +0.7**
SNR=6.3
AAK Ala-Archa 53.31 314 *e*P P **05 31 24.9 -1.7**
AAK MLR MLR
comp=Z,4µm,19.0s,MS5.5
USP Ospenovka 53.52 315 P P **05 31 28.8 +0.7**
SNR=7.5
NVS Novosibirsk 53.71 331⇑ *i*P P **05 31 27.6 -1.7**
NVS *e*S S **05 39 00.2 0.0**
NVS *e* 05 41 15.9
NVS pmax pmax
comp=N,13nm,1.2s
NVS pmax pmax
comp=E,23nm,1.2s
NVS pmax pmax
comp=Z,42nm,1.2s,mb5.2
NVS smax
comp=N,34nm,2.3s
NVS smax
comp=E,11nm,2.0s
AML Almayashu 53.72 314 PFAKE 05 31 40.0 +10
AML LR LR
comp=Z,2µm,20.0s,MS5.2
EKS2 Erkin-Say 53.82 314 PFAKE 05 31 40.0 +10
EKS2 LR LR
comp=Z,4µm,19.0s,MS5.5
KURK Kurchatov 53.92 325 P P **05 31 31.8 +0.9**
comp=Z,671nm,1.0s,mb6.5,SNR=78
KURK Kurchatov 53.92 325⇑P P **05 31 31.2 +0.3**
SNR=40
KURK Kurchatov 53.92 325 P P **05 31 31.1 +0.2**
comp=Z,54nm,0.8s,mb5.5,baz=125,slow=7.3,SNR=87
KURK Kurchatov 53.92 325 *e*P P **05 31 31.1 +0.2**
KURK pmax pmax
comp=Z,126nm,1.0s,mb5.8
KURK MLR MLR
comp=Z,1µm,19.0s,MS5.0
KURK Kurchatov 53.92 325 *e*P P **05 31 31.1 +0.3**
comp=Z,126nm,1.0s,mb5.8
KURK LR LR
comp=Z,1µm,19.0s,MS5.0
SEY Seymchan 54.01 15 *e*P P **05 31 31.8 +0.5**
MIDW Midway 55.42 64 PFAKE 05 31 50.0 +7.9
MIDW LR LR
comp=Z,2µm,19.0s,MS5.3
KBL Kabul 55.53 303 *e*P P **05 31 42.6 -0.2**
KBL *e**PP pP 05 31 54.0 -1.3
KBL pmax pmax
comp=Z,29nm,0.8s,mb5.4
KBL Kabul 55.53 303 *e*P P **05 31 42.6 -0.2**
comp=Z,28nm,0.8s,mb5.3
KBL *e*pP pP 05 31 54.0 -1.3
FUNA Funafuti 57.28 109 PFAKE 05 32 10.0 +14
FUNA LR LR
comp=Z,8µm,20.0s,MS5.8
TAU Tasmania Unive 58.52 161 PFAKE 05 32 20.0 +16
TAU LR LR
comp=Z,1µm,19.0s,MS5.0
TIXI Tiksi 59.30 1⇑ *i*P P **05 32 07.8 -0.9**
TIXI pmax pmax
comp=Z,24nm,0.9s,mb5.2
TIXI Tiksi 59.30 1 *e*P P **05 32 08.1 -0.7**
comp=Z,42nm,1.0s,mb5.4
BVA0 Borovoye Array 59.52 325 *i* P P **05 32 10.4 -0.2**
BVA0 pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
BVAR Borovoye Array 59.52 325 P P **05 32 10.2 -0.3**
comp=Z,30nm,0.8s,mb5.4,baz=116,slow=10,SNR=59
BRVK Borovoye 59.59 325 P P **05 32 11.5 +0.4**
comp=Z,454nm,0.7s,SNR=28
BRVK Borovoye 59.59 325⇑ *i*P P **05 32 11.1 0.0**
BRVK LR LR
comp=Z,2µm,19.0s,MS5.2
BILL Bilibino 61.63 16 *e*P P **05 32 25.1 +0.4**
BILL *e**PP pP 05 32 41.0 +3.7
BILL *e* 05 33 06.0
BILL pmax pmax
comp=Z,53nm,1.4s,mb5.5
BILL MLR MLR
comp=Z,615nm,20.0s,MS4.8
BILL Bilibino 61.63 16 *e*P P **05 32 25.1 +0.4**
comp=Z,53nm,1.4s,mb5.5
BILL *e*pP pP 05 32 41.0 +3.7
BILL *e*PcP PcP 05 33 06.0 +0.2
BILL LR LR
comp=Z,615nm,20.0s,MS4.8
ABKT Ailbek 64.68 306 P P **05 32 46.6 +1.1**
comp=Z,299nm,1.1s,mb6.2,SNR=13
AB31 Akbulak array 64.80 319 P P **05 32 45.3 -0.7**
AB31 pmax pmax
comp=Z,29nm,1.0s,mb5.3
SVE Sverdlovsk 66.05 327⇓ *e*P P **05 32 53.5 -0.5**
SVE *e*S S 05 41 44.7 +6.0
SVE *e* 05 42 46.5
SVE *e*SS SS 05 45 59.6 +5.1
SVE pmax pmax
comp=Z,59nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,2µm,16.0s,MS5.5
AKTK Aktyubinsk 66.24 320 P P **05 32 54.9 -0.4**
AKTO Aktyubinsk 66.24 320 P P **05 32 54.9 -0.4**
comp=Z,9.4nm,0.9s,mb4.8,baz=67,slow=8.1,SNR=18
ARU Arti 67.07 326 P P **05 32 59.1 -1.4**
comp=Z,244nm,0.5s,mb6.5,SNR=13
ARU Arti 67.07 326 *d i*P P **05 32 59.9 -0.6**
ARU 05 33 27.1
ARU *e* 05 35 25.1
ARU *e*PPP 05 37 04.3
ARU *e*S S 05 41 51.5 +0.4
ARU SS SS 05 46 04.7 -5.7
ARU pmax pmax
comp=Z,45nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,2µm,17.0s,MS5.3
ARU Arti 67.07 326 *e*P P **05 32 59.6 -0.8**
comp=Z,63nm,1.3s,mb5.5
ARU LR LR
comp=Z,1µm,21.0s,MS5.2
WHFO Wadi Hawf 69.08 285⇑P P **05 33 12.7 -1.1**
SNR=5.6
SNZO South Karori 70.07 143 PFAKE 05 33 30.0 +11
SNZO LR LR
comp=Z,1µm,20.0s,MS5.1
MSEY Mahe Island 71.58 261 PFAKE 05 33 40.0 +11
MSEY LR LR
comp=Z,994nm,20.0s,MS5.1
MAK Makhachkala 72.91 311 P P **05 33 31.2 -5.4**
MAK *e* 05 33 56.2
MAK *e*S S 05 42 55.0 -5.0
MAK *e* 05 43 39.2
MAK pmax pmax
comp=Z,236nm,1.2s,mb6.0
SVW2 Sparrevohn 73.93 30 *e*P P **05 33 43.7 +1.5**
GNI Garni 75.10 308 P P **05 33 51.9 +2.4**

comp=Z,13nm,0.8s,mb4.9,baz=181,slow=16,SNR=5.8
GNI Garni 75.10 308 *e*P **P 05 33 51.1 +1.6**
GNI pmax pmax
comp=Z,114nm,1.4s
GNI MLR MLR
comp=Z,806nm,20.0s
GNI Garni 75.10 308 *e*P **P 05 33 51.1 +1.6**
comp=Z,114nm,1.4s,mb5.6
GNI LR LR
comp=Z,806nm,20.0s,MS5.0
KDAK Kodiak Island 75.36 33 P **P 05 33 50.8 +0.2**
comp=Z,5.5nm,0.6s,mb4.7,baz=339,slow=15,SNR=6.5
KDAK Kodiak Island 75.36 33 P **P 05 33 50.8 +0.2**
KDAK LR LR
comp=Z,1µm,20.0s,MS5.2
ONI Oni 75.91 311 P **P 05 33 54.9 +0.9**
BPAW Bear Paw Mtn. 76.16 27 *e*P **P 05 33 55.5 +0.4**
comp=Z,31nm,1.0s,mb5.2
KIV Kislovodsk 76.37 313 P **P 05 33 57.7 +1.1**
comp=Z,319nm,0.8s,mb6.3,SNR=5.0
KIV Kislovodsk 76.37 313 ⇑P **P 05 33 58.1 +1.4**
SNR=13
KIV Kislovodsk 76.37 313 *e*P **P 05 33 56.0 -0.6**
KIV *e* 05 36 52.1
KIV *e*S S 05 43 39.1 +0.4
KIV pmax pmax
comp=Z,52nm,1.1s,mb5.4
KIV MLR MLR
comp=Z,2µm,17.0s,MS5.5
KIV Kislovodsk 76.37 313 *e*P **P 05 33 56.7 0.0**
comp=Z,50nm,0.9s,mb5.4
KIV LR LR
comp=Z,1µm,19.0s,MS5.2
COLD Coldfoot 76.50 23 *e*P **P 05 33 57.1 +0.2**
comp=Z,23nm,1.1s,mb5.0
VRHR Novokhopersk 76.64 320 *e*P **P 05 33 57.4 -0.6**
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.5
VRHR pmax pmax
comp=N,50nm,1.1s
VRHR pmax pmax
comp=E,30nm,0.9s
MCK McKinley 77.07 27 *e*P **P 05 34 01.4 +1.2**
MCK pmax pmax
comp=Z,32nm,1.1s,mb5.2
MCK McKinley 77.07 27 *e*P **P 05 34 01.4 +1.2**
comp=Z,32nm,1.1s,mb5.2
KLMR Klimovskoe 77.34 330 *e*P **P 05 34 00.9 -0.9**
KLMR 05 36 54.3
KLMR pmax pmax
comp=Z,69nm,1.4s,mb5.4
COLA College 77.50 26 *e*P **P 05 34 03.9 +1.3**
COLA College 77.50 26 PFAKE 05 34 10.0 +7.4
COLA LR LR
comp=Z,625nm,20.0s,MS4.9
VSR Storozhevoye 78.18 320 *e*P **P 05 34 06.3 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,0.5s
SOC Sochi 78.55 312 *e*P **P 05 34 05.6 -3.2**
SOC *e* pP 05 34 15.1 -6.7
SOC *e**PP pP 05 34 20.6 -1.2
SOC *e*S S 05 44 00.1 -2.1
SOC *e**SS sS 05 44 21.6 -2.3
MOS Moscow 78.69 325 *e*P **P 05 34 10.7 +1.3**
MOS pmax pmax
comp=Z,79nm,0.8s,mb5.7
LVZ Lovozero 78.96 337 PFAKE 05 34 20.0 +9.4
LVZ LR LR
comp=Z,1µm,19.0s,MS5.2
CASY Casey 79.19 186 PFAKE 05 34 20.0 +8.3
CASY LR LR
comp=Z,1µm,21.0s,MS5.2
OBN Obninsk 79.36 324 ⇑*i*P **P 05 34 12.3 -0.7**
OBN *e* 05 34 19.9
OBN *i* pP 05 34 25.2 -0.8
OBN *e*S S 05 44 13.3 +2.9
OBN pmax pmax
comp=Z,43nm,0.9s,mb5.4
OBN MLR MLR
comp=Z,2µm,17.0s,MS5.5
OBN Obninsk 79.36 324 *e*P **P 05 34 12.2 -0.8**
comp=Z,41nm,0.9s,mb5.4
OBN LR LR
comp=Z,2µm,19.0s,MS5.5
APA Apatity 79.47 337 ⇑*i*P **P 05 34 14.8 +1.4**
APA *e* 05 44 24.0
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
APA MLR MLR
comp=Z,1µm,17.0s,MS5.4
DRV Dumont d'Urvil 79.52 174 SS SS 05 49 23.0 +2.7
DRV L 05 56 00.0
DRV R 06 02 00.0
ANN Anapa 80.03 314 *e*P PcP 05 34 25.0 +0.8
ANN *e**PP sP 05 34 40.5 +5.6
ANN *e*S 05 44 32.8
ANN pmax pmax
comp=Z,84nm,1.2s,mb5.5
EGAK Eagle 80.36 26 *e*P **P 05 34 19.9 +1.7**
comp=Z,251nm,3.0s
EGAK LR LR
comp=Z,572nm,19.0s,MS4.9
RAR Rarotonga 80.60 114 LR LR 06 02 32.9
comp=Z,1µm,20.8s,MS5.2,baz=57,slow=30
JOF Joensuu 81.00 332 *e*p **P 05 34 21.3 -0.4**
comp=Z,4.0nm,0.4s,mb4.7
JOF Joensuu 81.00 332 *e*P **P 05 34 21.3 -0.4**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
DAWY Dawson 81.23 26 *e*P **P 05 34 24.4 +1.4**
KEV Kevo 81.42 340 PFAKE 05 34 40.0 +16
KEV LR LR
comp=Z,832nm,19.0s,MS5.1
ARCES ARCESS Array B 81.98 340 P **P 05 34 26.8 0.0**
comp=Z,28nm,1.0s,mb5.2,baz=80,slow=6.6,SNR=40
ARCES LR LR 06 15 10.6
comp=Z,729nm,19.1s,MS5.1,baz=294,slow=39
ARE0 ARCESS Array S 81.98 340 *e*P **P 05 34 25.4 -1.3**
KBS Kingsbay 82.35 350 PFAKE 05 34 40.0 +11
KBS LR LR
comp=Z,1µm,19.0s,MS5.3
INK Inuvik 82.65 22 *e*P **P 05 34 30.3 0.0**
INK pmax pmax
comp=Z,18nm,1.0s
INK Inuvik 82.65 22 *e*P **P 05 34 30.3 0.0**
comp=Z,18nm,1.0s,mb5.0
ABPO Ambohimpanom 83.14 249 *e*P **P 05 34 31.9 -1.8**
comp=Z,10nm,0.9s,mb4.9
ABPO LR LR
comp=Z,699nm,19.0s,MS5.0
KAF Kangasniemi 83.43 332 *e*p **P 05 34 33.9 -0.5**
comp=Z,1.7nm,0.4s,mb4.4,baz=73,slow=4.8
KAF Kangasniemi 83.43 332 *e*P **P 05 34 33.9 -0.5**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
BR131 Keskin Array S 83.62 309 *e*P **P 05 34 36.0 +0.1**
BR131 LR LR
comp=Z,501nm,19.0s,MS4.9
BRTR Keskin Array B 83.62 309 P **P 05 34 35.0 -0.9**
comp=Z,3.7nm,0.8s,mb4.5,baz=118,slow=4.9,SNR=14
BRTR LR LR 06 12 44.9
comp=Z,394nm,20.9s,MS4.8,baz=332,slow=36
BRTR Keskin Array B 83.62 309 *i*P **P 05 34 35.5 -0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
SKAG Skagway 84.09 30 *e*P **P 05 34 34.9 -3.0**
comp=Z,40nm,1.5s,mb5.3
VSU Vasula 84.10 329 *e*P **P 05 34 37.4 -0.5**
MNK Minsk 84.44 324 *e*P **P 05 34 38.0 -1.7**
AKASG Malin Array Be 84.47 321 P **P 05 34 38.8 -1.2**
comp=Z,30nm,0.8s,mb5.5,baz=67,slow=4.7,SNR=35
AKASG LR LR 06 16 24.0
comp=Z,1µm,21.1s,MS5.3,baz=110,slow=38
AKBB Malin Array Si 84.47 321 *e*P **P 05 34 39.3 -0.7**
KIEV Kiev 84.48 321 *e*P **P 05 34 39.2 -0.8**
KIEV pmax pmax
comp=Z,33nm,1.0s,mb5.4
KIEV MLR MLR
comp=Z,1µm,19.0s,MS5.4
KIEV Kiev 84.48 321 *e*P **P 05 34 39.2 -0.8**
comp=Z,33nm,1.0s,mb5.4
KIEV LR LR
comp=Z,1µm,19.0s,MS5.4
CSS Prodhromos 84.76 304 PFAKE 05 34 50.0 +8.2
CSS LR LR
comp=Z,1µm,20.0s,MS5.2
KIS Kishinev 85.56 317 *e*P **P 05 34 47.0 +1.5**
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.0
KIS MLR MLR
comp=Z,800nm,20.0s
TLCR 85.98 315 ⇑*i*P **P 05 34 50.6 +3.0**
TLCR 85.98 315 ⇑P **P 05 34 50.6 +3.0**
TIRR Tirgusor 86.42 315 ⇓*i*P **P 05 34 52.7 +2.8**
TIRR Tirgusor 86.42 315 ⇓P **P 05 34 52.6 +2.8**
HARR Harsova 86.70 315 ⇑*i*P **P 05 34 50.7 -0.5**
HARR Harsova 86.70 315 ⇑P **P 05 34 50.7 -0.5**
DLBC Dease Lake 87.02 31 *e*P **P 05 34 59.5 +7.1**
VRI Vrincioaia 87.23 316 ⇓*i*P **P 05 34 58.2 +4.4**
VRI Vrincioaia 87.23 316 ⇓P **P 05 34 58.2 +4.4**
PLOR Plostina 87.29 316 ⇓*i*P **P 05 34 57.2 +3.1**
BURAR Bucovina Array 87.78 318 ⇓*i*P **P 05 34 57.2 +0.9**
BURAR Bucovina Array 87.78 318 ⇓P **P 05 34 57.2 +0.9**
BUR08 Bucovina Ar. S 87.78 318 *e*P **P 05 34 56.2 -0.1**
BUR08 *e*pP pP 05 35 08.2 -1.4
MLR Muntele Rosu 87.86 316 ⇓*i*P **P 05 34 54.8 -2.0**
MLR Muntele Rosu 87.86 316 ⇓P **P 05 34 54.8 -2.0**
LVV L'vov 87.92 321 *e*P **P 05 34 55.4 -1.6**
DAG Danmarks Havn 88.60 352 ⇓*i*P **P 05 35 01.9 +2.2**
DAG pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
DAG Danmarks Havn 88.60 352 ⇓*i*P **P 05 35 01.9 +2.2**
comp=Z,6.7nm,0.9s,mb5.0
KWP Kalwaria 88.79 321 *e*P **P 05 35 00.9 -0.2**
KWP Kalwaria 88.79 321 ⇓*i*P **P 05 35 01.3 +0.2**
KWP Kalwaria 88.79 321 *e*P **P 05 35 00.9 -0.2**
KWP LR LR
comp=Z,2µm,19.0s,MS5.5
PPT Papeete 88.95 108 *e*S S 05 46 01.1 +13
comp=Z,873nm,24.8s
PPT Papeete 88.95 108 LR LR 06 07 16.3
comp=Z,1µm,20.2s,MS5.3,baz=262,slow=30
KOLS Kolonicke sedl 89.28 320 *e*P **P 05 35 05.7 +2.3**
comp=Z,32nm,2.0s,mb5.3
KOLS LR LR
comp=Z,600nm,20.8s,MS5.0
UZH Uzhgorod 89.36 320 *e*P **P 05 35 03.5 -0.3**
UZH *i* pP 05 35 15.0 -2.0
RES Resolute Bay 89.60 10 P **P 05 35 04.0 -0.4**
comp=Z,7.8nm,0.9s,mb5.0,baz=311,slow=5.3,SNR=18
RES Resolute Bay 89.60 10 *e*P **P 05 35 04.1 -0.3**
RES pmax pmax
comp=Z,23nm,1.3s,mb5.3
RES Resolute Bay 89.60 10 *e*P **P 05 35 04.1 -0.3**
comp=Z,23nm,1.3s,mb5.3
DRGR 89.65 318 ⇓*i*P **P 05 35 05.0 -0.2**
DRGR 89.65 318 ⇓P **P 05 35 05.0 -0.2**
STHS Stebnicka Huta 89.77 321 *e*P **P 05 35 06.5 +0.8**
STHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
STHS Stebnicka Huta 89.77 321 *e*P **P 05 35 06.5 +0.8**
comp=Z,6.7nm,1.1s,mb4.9
CRVS Cervenica-Dubn 89.79 320 *e*P **P 05 35 06.0 +0.2**
comp=Z,28nm,1.2s,mb5.5
CRVS LR LR
comp=Z,600nm,18.9s,MS5.0
NIE Niedzica 90.34 321 *e*P **P 05 35 08.7 +0.4**
OJC Ojcow 90.38 322 *e*P **P 05 35 10.5 +2.0**
NOA NORSAR Array B 90.56 334 P **P 05 35 07.7 -1.4**
comp=Z,8.2nm,0.9s,mb5.1,baz=65,slow=4.6,SNR=19
NOA LR LR 06 17 51.8
comp=Z,1µm,19.6s,MS5.4,baz=50,slow=37
BZS Buzias 90.74 317 ⇑*i*P **P 05 35 09.8 -0.5**
BZS Buzias 90.74 317 ⇑P **P 05 35 09.8 -0.5**
PSZ Piszkesteto 91.10 320 *e*P **P 05 35 10.2 -1.7**
PSZ MLR MLR
comp=Z,1µm,21.0s,MS5.3
VYHS Vyhne 91.57 320 *e*P **P 05 35 13.5 -0.6**
comp=Z,11nm,1.6s,mb4.9
VYHS LR LR
comp=Z,500nm,19.0s,MS5.0
KOLL Kolacno 91.81 321 *e*P **P 05 35 15.9 +0.7**
KOLL Kolacno 91.81 321 *e*P **P 05 35 16.0 +0.8**
VNDA Vanda 92.08 173 P **P 05 35 14.8 -1.0**
comp=Z,1.6nm,0.5s,mb4.6,baz=326,slow=3.2,SNR=10
VNDA Vanda 92.08 173 P **P 05 35 14.8 -1.0**
YKA Yellowknife Ar 92.18 24 P **P 05 35 16.6 0.0**
comp=Z,1.5nm,0.9s,mb4.3,baz=298,slow=4.8,SNR=14
YKA PKKP PKKPbc 05 52 30.9 -3.2
comp=Z,0.1nm,0.6s,baz=132,slow=3.3,SNR=3.8
YKA LR LR 06 15 39.6
comp=Z,148nm,21.6s,MS4.4,baz=200,slow=35
YKA Yellowknife Ar 92.18 24 P **P 05 35 16.6 0.0**
YKA 05 52 30.9
YKA Yellowknife Ar 92.18 24 P **P 05 35 16.6 0.0**
YKA PKKP PKKPbc 05 52 30.9 -3.2
YKA LR LR 06 15 39.6
DPC Dobruska-Polom 92.42 323 *e*P **P 05 35 20.2 +2.2**
PKSM Moragy 92.50 318 ⇓*i*P **P 05 35 18.9 +0.5**
PKSM Moragy 92.50 318 ⇓P **P 05 35 18.9 +0.4**
VRAC Vranov 92.65 322 ⇓*i*P **P 05 35 18.3 -0.8**
TIR Tirane 93.33 313 PFAKE 05 35 30.0 +7.6
TIR LR LR
comp=Z,886nm,19.0s,MS5.2
BRG Berggiesshubel 93.60 324 *e*P **P 05 35 22.8 -0.6**
BRG *e* 05 47 44.0
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.8
BRG MLR MLR
comp=Z,1µm,11.4s,MS5.5
BRG Berggiesshubel 93.60 324 *e*P **P 05 35 22.8 -0.6**
comp=Z,5.8nm,1.1s,mb4.9
BRG *e* 05 47 44.0
comp=Z,11nm,1.4s
BRG comp=N,2µm,23.8s
BRG comp=E,955nm,16.8s
BRG comp=Z,2µm,11.4s
BRG Berggiesshubel 93.60 324 *e*P **P 05 35 22.8 -0.6**
comp=Z,3.5nm,1.1s,mb4.7
BRG *e* 05 47 44.0
BRG LR LR
comp=Z,1µm,11.4s,MS5.5
PRU Pruhonice 93.61 323 *e*P **P 05 35 25.7 +2.2**
CONA Conrad Observa 93.63 321 ⇑*i*PcP PcP 05 35 24.3 +0.2
comp=Z,9.3nm,1.5s
CSNA Conrad Observa 93.63 321 ⇑*i*PcP PcP 05 35 24.3 +0.2
comp=Z,7.9nm,1.3s
CLL Collm 93.95 324 *e*P **P 05 35 26.0 +1.0**
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
CLL MLR MLR
comp=Z,1µm,19.0s,MS5.4
CLL Collm 93.95 324 *e*P **P 05 35 26.0 +1.0**
comp=Z,8.0nm,1.0s,mb5.1
CLL LmV 05 23 00.0
comp=Z,1µm,19.0s
CLL *e*pP pP 05 35 40.0 +1.8
CLL *e*S S 05 46 36.0 +4.1
CLL *e*SS SS 05 52 48.0 -3.3
CLL Collm 93.95 324 *e*P **P 05 35 26.0 +1.0**
comp=Z,8.0nm,1.0s,mb5.1
CLL LR LR
comp=Z,1µm,19.0s,MS5.4
KHC Kasperske Hory 94.54 322 *e*P **P 05 35 29.3 +1.6**
GERES GERESS Array B 94.58 322 P **P 05 35 28.0 0.0**
comp=Z,2.1nm,0.9s,mb4.6,baz=66,slow=4.5,SNR=7.5
GERES LR LR 06 21 18.0
comp=Z,882nm,20.1s,MS5.2,baz=168,slow=38
SUMG Summit 94.60 355 *e*P **P 05 35 25.4 -2.2**
comp=Z,7.6nm,1.0s,mb5.1
MOA Molln 94.64 321 ⇑*i*PcP PcP 05 35 28.5 -0.2
comp=Z,17nm,1.1s
COR Corvallis 95.98 42 PFAKE 05 35 50.0 +16
COR LR LR
comp=Z,1µm,19.0s,MS5.4
TIP Timpagrande 96.31 312 PFAKE 05 35 50.0 +14
TIP LR LR
comp=Z,849nm,20.0s,MS5.2
HUMO Hull Mountain 97.00 44 PFAKE 05 35 50.0 +11
HUMO LR LR
comp=Z,922nm,20.0s,MS5.3
AQU L'Aquila 97.44 316 PFAKE 05 35 50.0 +8.9
AQU LR LR
comp=Z,946nm,19.0s,MS5.3
YBH Yreka Blue Hor 97.52 44 LR LR 06 15 09.1
comp=Z,828nm,20.8s,MS5.2,baz=304,slow=33
YBH Yreka Blue Hor 97.52 44 PFAKE 05 35 50.0 +8.5
YBH LR LR
comp=Z,973nm,21.0s,MS5.3
HAWA Hanford 97.61 39 PFAKE 05 35 50.0 +8.2
HAWA LR LR
comp=Z,627nm,20.0s,MS5.1
WDC Whiskeytown Da 98.10 46 PFAKE 05 36 00.0 +16
WDC LR LR
comp=Z,1µm,21.0s,MS5.4
NEW Newport 98.19 37 PFAKE 05 36 00.0 +16
NEW LR LR
comp=Z,770nm,21.0s,MS5.2
TUE Stuetta 98.27 321 PFAKE 05 36 00.0 +15
TUE LR LR
comp=Z,2µm,20.0s,MS5.6
HOPS Hopland 98.36 47 PFAKE 05 36 00.0 +15
HOPS LR LR
comp=Z,1µm,22.0s,MS5.3
CDF Champ du Feu 98.58 324 *e*P **P 05 35 46.3 +0.2**
comp=Z,74nm,1.6s,mb5.7
CDF Champ du Feu 98.58 324 *e*P **P 05 35 46.3 +0.2**
CDF pmax pmax
comp=Z,37nm,1.5s,mb5.7
CDF Champ du Feu 98.58 324 *e*P **P 05 35 46.3 +0.2**
comp=Z,37nm,1.5s,mb5.7
VLC Villacollemand 98.66 319 PFAKE 05 36 00.0 +13
VLC LR LR
comp=Z,1µm,19.0s,MS5.4
MCCM Marconi Confer 98.83 48 PFAKE 05 36 00.0 +13
MCCM LR LR
comp=Z,1µm,20.0s,MS5.3
MOD Modoc 99.09 44 PFAKE 05 36 00.0 +11
MOD LR LR
comp=Z,849nm,21.0s,MS5.2
BMO Blue Mountains 99.70 40 PFAKE 05 36 00.0 +9.1
BMO LR LR
comp=Z,849nm,21.0s,MS5.2
LSZ Lusaka 100.09 256 PFAKE 05 36 00.0 +7.3
LSZ LR LR
comp=Z,976nm,20.0s,MS5.3
LPG La Plagne 100.32 321 *e*P Pdif 05 35 54.5 +0.8
comp=Z,40nm,1.4s
LPG La Plagne 100.32 321 *e*P Pdif 05 35 54.5 +0.8
LPG pmax pmax
comp=Z,20nm,1.4s
LPG La Plagne 100.32 321 *e*P Pdif 05 35 54.5 +0.8
comp=Z,20nm,1.4s
SAO San Andreas Ge 100.43 49 PFAKE 05 36 10.0 +16
SAO LR LR
comp=Z,1µm,19.0s,MS5.5
CMB Columbia Colle 100.67 47 PFAKE 05 36 10.0 +15
CMB LR LR
comp=Z,985nm,20.0s,MS5.3
SBF Sospel 100.69 319 *e*P Pdif 05 35 54.6 -0.7
MSO Missoula 100.77 37 PFAKE 05 36 10.0 +14
MSO LR LR
comp=Z,335nm,20.0s,MS4.8
SSF Saint Saulge 101.45 324 *e*P Pdif 05 35 58.5 -0.2
comp=Z,21nm,1.2s
SSF Saint Saulge 101.45 324 *e*P Pdif 05 35 58.5 -0.2
SSF pmax pmax
comp=Z,11nm,1.2s
SSF Saint Saulge 101.45 324 *e*P Pdif 05 35 58.5 -0.2
comp=Z,11nm,1.2s
LMR La Mourre 101.53 319 *e*P Pdif 05 35 58.6 -0.5
comp=Z,88nm,1.7s
LMR La Mourre 101.53 319 *e*P Pdif 05 35 58.6 -0.5
LMR pmax pmax
comp=Z,44nm,1.7s
LMR La Mourre 101.53 319 *e*P Pdif 05 35 58.6 -0.5
comp=Z,44nm,1.7s
SMRF Simiane la Rot 101.81 320 *e*P Pdif 05 36 00.2 -0.1
comp=Z,74nm,1.4s
SMRF Simiane la Rot 101.81 320 *e*P Pdif 05 36 00.2 -0.1
comp=Z,74nm,1.4s
BMN Battle Mountai 101.82 44 PFAKE 05 36 10.0 +10
BMN LR LR
comp=Z,789nm,20.0s,MS5.2
FFC Flin Flon 102.14 26 PFAKE 05 36 10.0 +8.2
FFC LR LR
comp=Z,399nm,19.0s,MS5.0
HLID Hailey 102.15 40 PFAKE 05 36 10.0 +8.2
HLID LR LR
comp=Z,789nm,20.0s,MS5.2
EGMT Eagleton 102.51 34 PFAKE 05 36 20.0 +17
EGMT LR LR
comp=Z,516nm,20.0s,MS5.0
BOZ Bozeman (W) 102.76 37 PFAKE 05 36 20.0 +15
BOZ LR LR
comp=Z,365nm,20.0s,MS4.9
TPH Tonopah 102.90 46 PFAKE 05 36 20.0 +15
TPH LR LR
comp=Z,776nm,21.0s,MS5.2
ELK Elko 103.01 43 PFAKE 05 36 20.0 +14
ELK LR LR
comp=Z,1µm,19.0s,MS5.4
DAC Darwin (Calif) 103.44 48 PFAKE 05 36 20.0 +12
DAC LR LR
comp=Z,1µm,20.0s,MS5.4
LBTB Lobatse 103.97 247 PFAKE 05 36 20.0 +10
LBTB LR LR
comp=Z,1µm,21.0s,MS5.3
LKWY Lake 104.08 38 PFAKE 05 36 20.0 +10
LKWY LR LR
comp=Z,557nm,20.0s,MS5.1
TPNV Topopah Spring 104.10 47 PFAKE 05 36 20.0 +9.5
TPNV LR LR
comp=Z,1µm,22.0s,MS5.3
RLMT Red Lodge 104.44 37 PFAKE 05 36 20.0 +8.0
RLMT LR LR
comp=Z,490nm,19.0s,MS5.1
AHID Auburn Hatcher 104.63 39 PFAKE 05 36 30.0 +17
AHID LR LR
comp=Z,655nm,20.0s,MS5.2
BOSA Boshof 104.69 243 PFAKE 05 36 20.0 +6.9
BOSA LR LR
comp=Z,872nm,20.0s,MS5.3
DGMT Dagmar 105.20 32 PFAKE 05 40 40.0 +10
DGMT LR LR
comp=Z,601nm,22.0s,MS5.1
PFO Pinyon Flat Ob 105.47 50 PFAKE 05 40 40.0 +9.4
PFO LR LR
comp=Z,772nm,19.0s,MS5.3
BW06 Boulder Array 105.58 39 PFAKE 05 40 40.0 +9.4
BW06 LR LR
comp=Z,894nm,21.0s,MS5.3
MVU Marysvale 106.15 44 PFAKE 05 40 40.0 +8.3
MVU LR LR
comp=Z,637nm,20.0s,MS5.2
MVCO Mesa Verde 109.33 43 PFAKE 05 40 50.0 +12
MVCO LR LR
comp=Z,951nm,21.0s,MS5.3
ISCO Idaho Springs 109.72 40 PFAKE 05 40 50.0 +12
ISCO LR LR
comp=Z,783nm,19.0s,MS5.3
SDCO Great Sand Dun 110.99 41 PFAKE 05 40 50.0 +9.2
SDCO LR LR
comp=Z,676nm,22.0s,MS5.2
EYMN Ely 111.57 26 PFAKE 05 40 50.0 +8.4
EYMN LR LR
comp=Z,617nm,20.0s,MS5.2
ANMO Albuquerque 111.95 44 PFAKE 05 40 50.0 +7.3
ANMO LR LR
comp=Z,654nm,20.0s,MS5.2
SCHQ Schefferville 112.27 8 PFAKE 05 40 50.0 +7.3
SCHQ LR LR
comp=Z,1µm,20.0s,MS5.4
ECSD EROS,Sioux Fal 112.29 32 PFAKE 05 40 50.0 +6.9
ECSD LR LR
comp=Z,462nm,20.0s,MS5.1
SFS San Fernando 113.45 319 PFAKE 05 41 00.0 +14
SFS LR LR
comp=Z,2µm,19.0s,MS5.7
CBKS Cedar Bluff 113.90 37 PFAKE 05 41 00.0 +14
CBKS LR LR
comp=Z,498nm,21.0s,MS5.1
AMTX Amarillo 115.17 42 PFAKE 05 41 00.0 +11
AMTX LR LR
comp=Z,984nm,19.0s,MS5.4
SCIA State Center 115.34 31 PFAKE 05 41 00.0 +11
SCIA LR LR
comp=Z,553nm,19.0s,MS5.2
RTC Rabat Centre 115.37 317 PFAKE 05 41 00.0 +11
RTC LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,360nm,19.0s,MS5.0						
KSU1	**Kansas State U**	**115.52**	**35**	PFAKE		05 41 00.0	+11
KSU1				LR	LR		
	comp=Z,463nm,21.0s,MS5.1						
JFWS	**Jewell Farm**	**116.02**	**29**	PFAKE		05 41 00.0	+10
JFWS				LR	LR		
	comp=Z,648nm,21.0s,MS5.2						
GLMI	**Grayling**	**116.90**	**24**	PFAKE		05 41 00.0	+8.1
GLMI				LR	LR		
	comp=Z,559nm,20.0s,MS5.2						
TXAR	**Lajitas Array**	**117.04**	**48**	PKP	PKPdf	05 40 53.1	+0.5
	comp=Z,1.0nm,0.8s,baz=243,slow=0.3,SNR=7.6						
TXAR	**Lajitas Array**	**117.04**	**48**	PKP	PKPdf	05 40 53.1	+0.5
TORD	**Torodi Ar. Bea**	**118.76**	**293**	PKP	PKPdf	05 40 56.6	+0.3
	comp=Z,1.7nm,0.8s,baz=37,slow=0.9,SNR=4.0						
JCT	**Junction City**	**119.10**	**45**	PFAKE		05 41 10.0	+13
JCT				LR	LR		
	comp=Z,486nm,20.0s,MS5.1						
CCM	**Cathedral Cave**	**119.20**	**33**	PFAKE		05 41 10.0	+13
CCM				LR	LR		
	comp=Z,428nm,19.0s,MS5.1						
AAM	**Ann Arbor**	**119.39**	**24**	PFAKE		05 41 10.0	+13
AAM				LR	LR		
	comp=Z,718nm,20.0s,MS5.3						
MIAR	**Mount Ida**	**120.43**	**37**	PFAKE		05 41 10.0	+11
MIAR				LR	LR		
	comp=Z,548nm,19.0s,MS5.2						
ERPA	**Erie**	**120.96**	**22**	PFAKE		05 41 10.0	+10
ERPA				LR	LR		
	comp=Z,475nm,20.0s,MS5.1						
PKME	**Peaks-Kenny Pk**	**121.12**	**12**	PFAKE		05 41 10.0	+10
PKME				LR	LR		
	comp=Z,399nm,19.0s,MS5.1						
NCB	**Newcomb**	**121.15**	**17**	PFAKE		05 41 10.0	+10
NCB				LR	LR		
	comp=Z,636nm,19.0s,MS5.3						
ACSO	**Alum Creek Sta**	**121.40**	**25**	PFAKE		05 41 10.0	+9.3
ACSO				LR	LR		
	comp=Z,490nm,19.0s,MS5.2						
LBNH	**Lisbon**	**121.50**	**15**	PFAKE		05 41 10.0	+9.2
LBNH				LR	LR		
	comp=Z,666nm,19.0s,MS5.3						
NATX	**Nacogdoches**	**121.67**	**40**	PFAKE		05 41 10.0	+8.5
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
HKT	**Hockley**	**122.11**	**43**	PFAKE		05 41 10.0	+7.6
HKT				LR	LR		
	comp=Z,568nm,19.0s,MS5.2						
KVTX	**Kingsville**	**122.21**	**46**	PFAKE		05 41 10.0	+7.4
KVTX				LR	LR		
	comp=Z,362nm,22.0s,MS5.0						
BINY	**Binghamton**	**122.25**	**19**	PFAKE		05 41 10.0	+7.7
BINY				LR	LR		
	comp=Z,561nm,21.0s,MS5.2						
WVT	**Waverly**	**122.44**	**32**	*e*PKIKP	PKPdf	05 41 02.3	-0.5
SSPA	**Standing Stone**	**123.01**	**21**	PFAKE		05 41 20.0	+16
SSPA				LR	LR		
	comp=Z,418nm,20.0s,MS5.1						
MCWV	**Mont Chateau**	**123.15**	**23**	PFAKE		05 41 20.0	+16
MCWV				LR	LR		
	comp=Z,691nm,20.0s,MS5.3						
VBMS	**Vicksburg**	**123.88**	**37**	PFAKE		05 41 20.0	+14
VBMS				LR	LR		
	comp=Z,799nm,20.0s,MS5.4						
BLA	**Blacksburg**	**125.02**	**25**	PFAKE		05 41 20.0	+12
BLA				LR	LR		
	comp=Z,623nm,22.0s,MS5.2						
LRAL	**Lakeview Retre**	**125.25**	**34**	PFAKE		05 41 20.0	+12
LRAL				LR	LR		
	comp=Z,597nm,21.0s,MS5.2						
CBN	**Corbin**	**125.35**	**22**	PFAKE		05 41 20.0	+12
CBN				LR	LR		
	comp=Z,586nm,20.0s,MS5.2						
BRAL	**Brewton**	**126.76**	**35**	PFAKE		05 41 20.0	+8.7
BRAL				LR	LR		
	comp=Z,764nm,19.0s,MS5.4						
GOGA	**Godfrey**	**126.78**	**30**	PFAKE		05 41 20.0	+8.7
GOGA				LR	LR		
	comp=Z,530nm,21.0s,MS5.2						
DBIC	**Dimbokro**	**127.13**	**288**	PKP	PKPdf	05 41 11.5	-0.9
	comp=Z,4.6nm,0.9s,baz=0.0,slow=1.0,SNR=2.4						
DBIC	**Dimbokro**	**127.13**	**288**	PKP	PKPdf	05 41 11.5	-0.9
DBIC				LR	LR		
	comp=Z,554nm,21.0s,MS5.2						
LIC	**Lamto**	**127.45**	**288**	*e*PKIKP	PKPdf	05 41 10.3	-2.7
	comp=Z,25nm,1.0s						
CNNC	**Cliffs of the**	**127.75**	**24**	PFAKE		05 41 20.0	+7.0
CNNC				LR	LR		
	comp=Z,505nm,21.0s,MS5.2						
NHSC	**New Hope**	**128.59**	**28**	PFAKE		05 41 30.0	+15
NHSC				LR	LR		
	comp=Z,592nm,21.0s,MS5.2						
DWPF	**Disney**	**132.08**	**33**	PFAKE		05 41 30.0	+8.5
DWPF				LR	LR		
	comp=Z,636nm,22.0s,MS5.3						
SHEL	**Horse Pasture**	**132.64**	**260**	PFAKE		05 41 30.0	+7.3
SHEL				LR	LR		
	comp=Z,593nm,20.0s,MS5.3						
BBSR	**BB Station**	**134.48**	**12**	PFAKE		05 41 40.0	+14
BBSR				LR	LR		
	comp=Z,215nm,21.0s,MS4.8						
TGUH	**Tegucigalpa,Un**	**138.27**	**52**	PFAKE		05 41 50.0	+17
TGUH				LR	LR		
	comp=Z,454nm,20.0s,MS5.2						
SDDR	**Presa de Saban**	**144.75**	**28**	PFAKE		05 42 00.0	+15
SDDR				LR	LR		
	comp=Z,598nm,20.0s,MS5.4						
BCIP	**Isla Barro Col**	**146.99**	**51**	PFAKE		05 42 00.0	+11
BCIP				LR	LR		
	comp=Z,465nm,22.0s,MS5.2						
SJG	**San Juan**	**147.63**	**21**	PFAKE		05 42 00.0	+10
SJG				LR	LR		
	comp=Z,588nm,20.0s,MS5.4						
PLCA	**Paso Flores**	**148.41**	**156**	PKPbc	PKPbc	05 41 54.2	+0.3
	comp=Z,22nm,0.8s,baz=181,slow=4.8,SNR=34						
PLCA	**Paso Flores**	**148.41**	**156**	*e*PKPbc	PKPbc	05 41 53.2	-0.7
PLCA				LR	LR		
	comp=Z,508nm,20.0s,MS5.3						
OTAV	**Otavalo**	**153.17**	**64**	*e*PKPbc	PKPbc	05 42 06.8	+0.8
OTAV				LR	LR		
	comp=Z,424nm,19.0s,MS5.3						
SDV	**Santo Domingo**	**153.52**	**38**	PKP	PKPdf	05 41 58.6	-0.4
	comp=Z,13nm,1.0s,baz=155,slow=3.5,SNR=6.6						
SDV				PKPbc	PKPbc	05 42 06.6	0.0
	comp=Z,22nm,0.9s,baz=112,slow=1.1,SNR=12						
SDV	**Santo Domingo**	**153.52**	**38**	*e*PKPdf	PKPdf	05 41 56.1	-2.8
SDV				LR	LR		
	comp=Z,220nm,20.0s,MS5.0						
GRGR	**Grenville**	**154.67**	**16**	PFAKE		05 42 10.0	+9.4
GRGR				LR	LR		
	comp=Z,407nm,19.0s,MS5.3						
CFAA	**Coronel Fontan**	**157.05**	**149**	PKP	PKPdf	05 42 02.9	-0.4
	comp=Z,1.0nm,1.0s,baz=231,slow=2.8,SNR=12						
CFAA				PKPab	PKPab	05 42 34.8	+1.2
	comp=Z,0.5nm,0.8s,baz=215,slow=6.2,SNR=5.5						
LCO	**Las Campanas**	**157.60**	**140**	PFAKE		05 42 20.0	+16
LCO				LR	LR		
	comp=Z,625nm,20.0s,MS5.4						
NNA	**Nana**	**158.19**	**91**	PFAKE		05 42 20.0	+15
NNA				LR	LR		
	comp=Z,485nm,20.0s,MS5.3						
RCBR	**Riachuelo**	**160.51**	**288**	PFAKE		05 42 20.0	+12
RCBR				LR	LR		
	comp=Z,661nm,20.0s						
LVC	**Limon Verde**	**162.92**	**129**	PFAKE		05 42 20.0	+10
LVC				LR	LR		
	comp=Z,558nm,19.0s						
CPUP	**Villa Florida**	**165.84**	**170**	PKP	PKPdf	05 42 12.8	+0.2
	comp=Z,6.9nm,0.8s,baz=101,slow=1.6,SNR=14						
CPUP				PKPab	PKPab	05 43 13.8	+1.8
	comp=Z,1.3nm,0.6s,baz=124,slow=3.6,SNR=2.6						
CPUP	**Villa Florida**	**165.84**	**170**	*e*PKPdf	PKPdf	05 42 12.7	+0.1
CPUP				*e*PKPab	PKPab	05 43 13.3	+1.3
SIV	**San Ignacio**	**172.69**	**120**	PKP	PKPdf	05 42 19.3	+2.2
	comp=Z,3.3nm,0.9s,baz=212,slow=1.6,SNR=6.4						
BDFB	**Brasilia**	**172.88**	**242**	PKP	PKPdf	05 42 16.8	-0.4
	comp=Z,2.6nm,1.0s,baz=312,slow=10,SNR=4.3						
BDFB	**Brasilia**	**172.88**	**242**	PKP	PKPdf	05 42 16.8	-0.4
BDFB				LR	LR		
	comp=Z,654nm,20.0s						

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*MOS **09** 05:27:18.4±1.1, 1922S×6909W, h104km, mb4.8/18, Error ellipse: s-maj=18.8km s-min=7.9km az=118.8*
*ISCJB **09** 05:27:18.8±0.2, 1930S±003×69.12W±005, h108km, mb4.7/77, Error ellipse: s-maj=6.9km s-min=4.0km az=165.7*
*GUC **09** 05:27:19.4±0.3, 1949S×69.11W, h118km±7km, ML5.0*
*NEIC **09** 05:27:19.7±0.6, 1922S×6902W, h99km±6km, mb4.8/59, Error ellipse: s-maj=8.3km s-min=5.2km az=55.0*
NEIC Felt [II] at Arica, Iquique and Pisagua.
*BJI **09** 05:27:19.7, 1920S×6900W, h90km, mB5.3, Ms5.5, Msz5.2*
*IDC **09** 05:27:20.1±0.4, 1934S×69.10W, h108km±3km, mb4.4/16, mb1 4.6/20, mb1mx4.6/23, mbtmp4.5/20, MS3.6/2, Ms1 3.5/2, ms1mx2.9/33, Error ellipse: s-maj=14.0km s-min=8.2km az=79.0*
ISC 09 05:27:20.6±0.2**, 1936S**±003×**6910W**±005**, h110**km±1.2km**:pP-P, n205,** σ1**s**05/174**, mb4.7**/77**, 2D,**
Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.72**	**192**⇓	*e*P	**Pn**	**05 27 48.5**	**-1.6**
PB01				*e*S	**Sn**	**05 28 10.7**	**-1.9**
PB01				AML	AML	05 28 11.8	
	comp=E,24µm,0.3s						
MACH	**Maria Elena**	**2.89**	**192**	*e*P	**Pn**	**05 28 04.2**	**-1.0**
TOCH	**Tocopilla**	**2.91**	**200**	*e*P	**Pn**	**05 28 04.0**	**-1.5**
LVC	**Limon Verde**	**3.25**	**177**	P	**Pn**	**05 28 09.8**	**-0.1**
	comp=E,156nm,0.3s,baz=355,slow=8.1,SNR=472						
LVC				S	**Sn**	**05 28 47.7**	**-0.3**
	comp=E,462nm,0.3s,baz=341,slow=11,SNR=8.5						
LVC	**Limon Verde**	**3.25**	**177**	*e*Pn	**Pn**	**05 28 10.4**	**+0.5**
LVC				Sn	**Sn**	**05 28 37.4**	**-11**
LVC	**Limon Verde**	**3.25**	**177**	*e*P	**Pn**	**05 28 09.1**	**-0.8**
LVC				*e*S	**Sn**	**05 28 46.9**	**-1.1**
LVC				AML	AML	05 29 15.8	
	comp=E,2µm,0.7s						
SPCH	**San Pedro de A**	**3.63**	**167**	*e*P	**Pn**	**05 28 16.7**	**+1.6**
ARE	**Arequipa**	**3.67**	**321**⇓	*i*P	**Pn**	**05 28 13.0**	**-2.6**
ARE				*i* S	**Sn**	**05 28 51.1**	**-7.0**
MECH	**Mejillones**	**3.94**	**198**	*e*P	**Pn**	**05 28 16.9**	**-2.2**
MECH				*e*S	**Sn**	**05 29 01.2**	**-3.3**
SIV	**San Ignacio**	**8.35**	**68**	P	**Pn**	**05 29 17.6**	**-1.4**
	comp=E,85nm,0.3s,baz=265,slow=10,SNR=2446						
LCO	**Las Campanas**	**9.72**	**188**	*e*Pn	**Pn**	**05 29 40.9**	**+3.4**
	comp=E,32nm,0.6s						
LCO				Sn	**Sn**	**05 31 41.9**	**+17**
NNA	**Nana**	**10.45**	**313**	P	**Pn**	**05 29 43.1**	**-4.3**
	comp=E,3.0nm,0.3s,baz=137,slow=12,SNR=11						
NNA				S	**Sn**	**05 31 31.1**	**-11**
	comp=E,8.7nm,0.3s,baz=220,slow=9.3,SNR=4.1						
NNA	**Nana**	**10.45**	**313**	*e*Pn	**Pn**	**05 29 43.5**	**-4.0**
	comp=E,35nm,0.8s						
CFAA	**Coronel Fontan**	**12.22**	**177**	P	**Pn**	**05 30 05.0**	**-5.9**
	comp=E,0.1nm,0.3s,baz=354,slow=13,SNR=18						
CFAA				S	**Sn**	**05 32 12.7**	**-13**
	comp=E,0.1nm,0.3s,baz=15,slow=19,SNR=2.5						
CPUP	**Villa Florida**	**12.88**	**125**	P	**Pn**	**05 30 18.8**	**-0.9**
	comp=E,5.6nm,0.3s,baz=288,slow=11,SNR=104						
CPUP				LR	LR	05 35 11.8	
	comp=E,123nm,20.1s,baz=291,slow=37						
CPUP	**Villa Florida**	**12.88**	**125**	*e*P	**Pn**	**05 30 19.1**	**-0.5**
CPUP				pmax	pmax		
	comp=Z,133nm,0.6s						
CPUP	**Villa Florida**	**12.88**	**125**	*e*Pn	**Pn**	**05 30 19.1**	**-0.5**
	comp=Z,133nm,0.6s						
ATAH	**Atahualpa**	**15.24**	**322**	P	**Pn**	**05 30 46.6**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=144,slow=17,SNR=2.4						
BDFB	**Brasilia**	**20.45**	**83**	P	**P**	**05 31 49.3**	**-0.2**
	comp=Z,58nm,0.5s,baz=248,slow=16,SNR=37						
PLCA	**Paso Flores**	**21.34**	**183**	P	**P**	**05 31 58.5**	**-0.3**
	comp=Z,28nm,0.9s,mb4.6,baz=358,slow=11,SNR=28						
PLCA	**Paso Flores**	**21.34**	**183**	*e*P	**P**	**05 31 59.4**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,42nm,1.0s						
PLCA	**Paso Flores**	**21.34**	**183**	*e*P	**P**	**05 31 59.4**	**+0.6**
	comp=Z,42nm,1.0s,mb4.7						
OTAV	**Otavalo**	**21.52**	**334**	*e*P	**P**	**05 32 03.2**	**+2.2**
	comp=Z,23nm,0.8s,mb4.5						
ROSC	**El Rosal**	**24.60**	**347**	P	**P**	**05 32 29.9**	**-0.8**
	comp=Z,6.2nm,0.6s,mb4.2,baz=53,slow=20,SNR=8.1						
ROSC	**El Rosal**	**24.60**	**347**	*e*P	**P**	**05 32 30.9**	**+0.2**
SDV	**Santo Domingo**	**28.10**	**357**	P	**P**	**05 33 01.2**	**-1.0**
	comp=Z,7.6nm,0.4s,mb4.6,baz=172,slow=7.1,SNR=11						
SDV	**Santo Domingo**	**28.10**	**357**	*e*P	**P**	**05 33 00.9**	**-1.3**
	comp=Z,9.3nm,1.0s,mb4.3						
PCRV	**Puerto La Cruz**	**29.67**	**9**	P	**P**	**05 33 14.4**	**-1.8**
	comp=Z,7.8nm,0.7s,mb4.5,baz=63,slow=2.8,SNR=7.1						
PCRV				LR	LR	05 46 30.0	
	comp=Z,196nm,19.2s,baz=307,slow=39						
RCBR	**Riachuelo**	**34.99**	**72**	*e*P	**P**	**05 34 04.2**	**+1.5**
	comp=Z,50nm,0.6s,mb5.5						
BBSR	**BB Station**	**51.60**	**5**	*e*P	**P**	**05 36 14.2**	**-1.5**
	comp=Z,21nm,0.7s,mb5.3						
NHSC	**New Hope**	**53.23**	**348**	*e*P	**P**	**05 36 27.7**	**0.0**
	comp=Z,42nm,0.8s,mb5.5						
NHSC				*e*pP	pP	05 36 54.3	+0.3
GOGA	**Godfrey**	**54.23**	**345**	*e*P	**P**	**05 36 33.9**	**-1.1**
GOGA				*e**PP	pP	05 37 00.8	-0.7
GOGA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
GOGA	**Godfrey**	**54.23**	**345**	*e*P	**P**	**05 36 33.9**	**-1.1**
	comp=Z,7.8nm,0.8s,mb4.8						
GOGA				*e*pP	pP	05 37 00.8	-0.7
LRAL	**Lakeview Retre**	**54.83**	**342**	*e*P	**P**	**05 36 37.8**	**-1.5**
	comp=Z,10nm,1.1s,mb4.8						
NATX	**Nacogdoches**	**56.42**	**334**	*e*P	**P**	**05 36 51.2**	**+0.4**
	comp=Z,26nm,0.8s,mb5.3						
CPCT	**Cooper Cave**	**56.43**	**345**	*e*P	**P**	**05 36 49.4**	**-1.4**
TKL	**Tuckaleechee C**	**56.45**	**346**	*e*P	**P**	**05 36 49.5**	**-1.4**
TKL				*e**PP	pP	05 37 15.9	-1.6
SWET	**Sewanee**	**56.57**	**343**	*e*P	**P**	**05 36 50.3**	**-1.5**
JCT	**Junction City**	**57.68**	**329**	*e*P	**P**	**05 36 58.8**	**-0.9**
JCT				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
JCT	**Junction City**	**57.68**	**329**	*e*P	**P**	**05 36 58.8**	**-0.9**
	comp=Z,12nm,0.9s,mb4.9						
WVT	**Waverly**	**57.96**	**342**	*e*P	**P**	**05 36 59.6**	**-1.9**
WVT				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
WVT	**Waverly**	**57.96**	**342**	*e*P	**P**	**05 36 59.6**	**-2.0**
	comp=Z,12nm,0.6s,mb5.1						
MIAR	**Mount Ida**	**58.44**	**336**	*e*P	**P**	**05 37 03.8**	**-1.1**
MIAR				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
MIAR	**Mount Ida**	**58.44**	**336**	*e*P	**P**	**05 37 03.8**	**-1.1**
	comp=Z,18nm,1.1s,mb5.0						
TXAR	**Lajitas Array**	**58.78**	**325**	P	**P**	**05 37 06.5**	**-0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=151,slow=8.5,SNR=34						
TXAR				pP	pP	05 37 32.2	-1.9
	comp=Z,0.7nm,0.6s,baz=147,slow=8.2,SNR=3.2						
TXAR				pP	pP	05 37 32.2	-1.9
TXAR	**Lajitas Array**	**58.78**	**325**	P	**P**	**05 37 06.5**	**-0.9**
PARMO	**Parma**	**59.03**	**341**	*e*P	**P**	**05 37 06.7**	**-2.3**
WCI	**Wyandotte Cave**	**59.51**	**344**	*e*P	**P**	**05 37 10.2**	**-2.0**
WCI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
WCI	**Wyandotte Cave**	**59.51**	**344**	*e*P	**P**	**05 37 10.2**	**-2.0**
	comp=Z,8.2nm,0.7s,mb4.9						
MCWV	**Mont Chateau**	**59.56**	**350**	*e*P	**P**	**05 37 11.9**	**-0.6**
	comp=Z,20nm,0.8s,mb5.2						
MCWV				*e*pP	pP	05 37 39.2	-0.2
SIUC	**Southern Illin**	**59.84**	**342**	*e*P	**P**	**05 37 13.9**	**-0.5**
	comp=Z,40nm,1.0s,mb5.4						
SIUC				*e*pP	pP	05 37 40.1	-1.2
FVM	**French Village**	**60.45**	**341**	*e*P	**P**	**05 37 17.6**	**-1.1**
	comp=Z,33nm,0.5s,mb5.6						
FVM				*e*pP	pP	05 37 44.2	-1.4
BLO	**Bloomington**	**60.46**	**344**	*e*P	**P**	**05 37 16.8**	**-1.9**
BLO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
BLO	**Bloomington**	**60.46**	**344**	*e*P	**P**	**05 37 16.8**	**-1.9**
	comp=Z,12nm,0.9s,mb4.9						
ACSO	**Alum Creek Sta**	**60.67**	**348**	*e*P	**P**	**05 37 18.9**	**-1.2**
	comp=Z,23nm,1.0s,mb5.2						
CCM	**Cathedral Cave**	**60.78**	**340**	*e*P	**P**	**05 37 19.4**	**-1.4**
	comp=Z,10nm,1.0s,mb4.8						
GDL2	**Guadalupe Moun**	**61.39**	**326**	*e*P	**P**	**05 37 25.2**	**+0.1**
GDL2				*e*pP	pP	05 37 50.9	-1.2
ALLY	**Alegheny Colle**	**61.55**	**351**	*e*P	**P**	**05 37 25.7**	**-0.3**
	comp=Z,34nm,0.9s,mb5.4						
ALLY				*e*pP	pP	05 37 53.0	-0.1
VNA3	**Neumayer Olymp**	**62.16**	**162**	*e*Pdiff	**P**	**05 37 31.6**	**+1.8**
VNA3				*e*		05 37 41.1	
VNA3				*e*		05 37 48.1	
VNA3				*e*		05 37 51.4	
VNA3				*e*	pP	05 37 57.8	+1.0
VNA3				*e*		05 38 09.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNA1	**Neumayer--Stat**	**62.36**	**161**	*e*Pdiff	**P**	**05 37 32.7**	**+1.6**
VNA1				*e*		05 37 42.8	
VNA1				*e*		05 37 49.5	
VNA1				*e*		05 37 52.8	
VNA1				*e*	pP	05 37 58.1	-0.1
VNA1				*e*		05 38 10.9	
VNA2	**Neumayer--Watz**	**62.73**	**161**	*e*Pdiff	**P**	**05 37 34.7**	**+1.2**
	baz=304,slow=6.0						
VNA2				*e*		05 37 44.6	
VNA2				*e*		05 37 51.5	
VNA2				*e*		05 37 55.5	
VNA2				*e*	pP	05 38 01.6	+1.0
VNA2				*e*		05 38 12.8	
KSU1	**Kansas State U**	**63.60**	**336**	*e*P	**P**	**05 37 38.7**	**-1.0**
	comp=Z,24nm,1.0s,mb5.0						
LPM	**Los Pinos Moun**	**64.22**	**326**	*e*P	**P**	**05 37 44.2**	**+0.4**
CBKS	**Cedar Bluff**	**64.59**	**334**	*e*P	**P**	**05 37 45.8**	**-0.4**
CBKS				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
CBKS	**Cedar Bluff**	**64.59**	**334**	*e*P	**P**	**05 37 45.8**	**-0.4**
	comp=Z,20nm,0.7s,mb5.1						
ANMO	**Albuquerque**	**64.62**	**327**	*e*P	**P**	**05 37 46.2**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	**Albuquerque**	**64.62**	**327**	*e*P	**P**	**05 37 46.2**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.2						
SCIA	**State Center**	**64.91**	**340**	*e*P	**P**	**05 37 47.2**	**-0.9**
	comp=Z,22nm,0.8s,mb5.0						
JFWS	**Jewell Farm**	**64.95**	**343**	*e*P	**P**	**05 37 47.1**	**-1.3**
JFWS				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
JFWS	**Jewell Farm**	**64.95**	**343**	*e*P	**P**	**05 37 47.1**	**-1.3**
	comp=Z,14nm,0.6s,mb5.0						
SDCO	**Great Sand Dun**	**66.32**	**329**	*e*P	**P**	**05 37 57.6**	**+0.3**
	comp=Z,16nm,1.1s,mb4.8						
MVCO	**Mesa Verde**	**67.41**	**327**	*e*P	**P**	**05 38 04.4**	**+0.1**
	comp=Z,5.8nm,0.7s,mb4.5						
ECSD	**EROS,Sioux Fal**	**67.66**	**339**	*e*P	**P**	**05 38 05.2**	**-0.5**
	comp=Z,30nm,1.4s,mb4.9						
WUAZ	**Wupatki**	**67.70**	**324**	*e*P	**P**	**05 38 07.1**	**+0.9**
	comp=Z,9.8nm,0.9s,mb4.6						
LIC	**Lamto**	**67.98**	**75**	*e*P	**P**	**05 38 07.6**	**-0.8**
	comp=Z,54nm,0.6s,mb5.6						
ISCO	**Idaho Springs**	**68.00**	**330**	*e*P	**P**	**05 38 08.2**	**+0.3**
ISCO				*e**PP	pP	05 38 37.6	+2.2
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ISCO	**Idaho Springs**	**68.00**	**330**	*e*P	**P**	**05 38 08.2**	**+0.3**
	comp=Z,7.4nm,1.0s,mb4.5						
ISCO				*e*pP	pP	05 38 37.6	+2.2
TIC	**Toumodi**	**68.16**	**74**	*e*P	**P**	**05 38 08.8**	**-0.7**
	comp=Z,241nm,1.2s						
KIC	**Kosan Boka**	**68.30**	**75**	*e*P	**P**	**05 38 09.8**	**-0.6**
	comp=Z,265nm,0.8s						
DBIC	**Dimbokro**	**68.31**	**74**	P	**P**	**05 38 10.0**	**-0.5**
	comp=Z,60nm,0.8s,mb5.5,baz=224,slow=6.2,SNR=95						
DBIC				PP	PP	05 40 37.8	-4.9
	comp=Z,5.9nm,0.8s,baz=235,slow=7.3,SNR=3.9						
DBIC	**Dimbokro**	**68.31**	**74**	*e*P	**P**	**05 38 09.8**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,59nm,0.8s						
DBIC	**Dimbokro**	**68.31**	**74**	*e*P	**P**	**05 38 09.8**	**-0.7**
	comp=Z,59nm,0.8s,mb5.5						
PHWY	**Pilot Hill**	**69.13**	**331**	*e*P	**P**	**05 38 15.1**	**+0.2**
	comp=Z,30nm,1.7s,mb4.8						
LDFC	**Landfair**	**69.55**	**321**	*e*P	**P**	**05 38 19.0**	**+1.4**
SRU	**San Rafael**	**69.89**	**327**	*e*P	**P**	**05 38 19.8**	**+0.2**
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
SRU	**San Rafael**	**69.89**	**327**	*e*P	**P**	**05 38 19.8**	**+0.2**
	comp=Z,6.2nm,0.8s,mb4.5						
MSU	**Marysvale**	**70.32**	**325**	*e*P	**P**	**05 38 23.2**	**+0.9**
SHPR	**Sheep Range**	**70.56**	**322**	*e*P	**P**	**05 38 24.7**	**+0.9**
RSSD	**Black Hills**	**70.80**	**334**	*e*P	**P**	**05 38 25.2**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
RSSD	**Black Hills**	**70.80**	**334**	*e*P	**P**	**05 38 25.2**	**+0.2**
	comp=Z,9.9nm,0.8s,mb4.7						
MPU	**Maple Canyon**	**71.13**	**327**	*e*P	**P**	**05 38 28.0**	**+0.8**
	comp=Z,7.5nm,0.8s,mb4.6						
DAU	**Daniels Canyon**	**71.23**	**327**	*e*P	**P**	**05 38 28.6**	**+0.8**
NLU	**North Lily Min**	**71.32**	**326**	*e*P	**P**	**05 38 29.4**	**+1.1**
JLU	**Jordanelle**	**71.47**	**327**	*e*P	**P**	**05 38 29.9**	**+0.7**
TPNV	**Topopah Spring**	**71.50**	**322**	*e*P	**P**	**05 38 30.6**	**+1.1**
TPNV				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7						
TPNV	**Topopah Spring**	**71.50**	**322**	*e*P	**P**	**05 38 30.6**	**+1.2**
	comp=Z,13nm,1.1s,mb4.7						
ISA	**Isabella**	**71.97**	**319**	*e*P	**P**	**05 38 33.3**	**+1.0**
ISA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
ISA	**Isabella**	**71.97**	**319**	*e*P	**P**	**05 38 33.3**	**+0.9**
	comp=Z,9.7nm,0.8s,mb4.7						
BW06	**Boulder Array**	**72.17**	**330**	*e*P	**P**	**05 38 33.2**	**-0.1**
	comp=Z,9.5nm,1.5s,mb4.4						
PDAR	**Pinedale Array**	**72.17**	**330**	P	**P**	**05 38 32.9**	**-0.4**
	comp=Z,1.8nm,0.5s,mb4.1,baz=121,slow=8.0,SNR=21						
ULM	**Lac du Bonnet**	**73.23**	**342**	P	**P**	**05 38 38.3**	**-1.1**
	comp=Z,6.9nm,0.6s,mb4.7,baz=147,slow=7.2,SNR=7.9						
ULM				pP	pP	05 39 05.4	-1.8
	comp=Z,8.1nm,0.6s,baz=151,slow=7.6,SNR=5.9						
REDW	**Red Top Meadow**	**73.24**	**330**	*e*P	**P**	**05 38 40.0**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.5						
SNOW	**Snow King Moun**	**73.27**	**330**	*e*P	**P**	**05 38 40.2**	**+0.4**
	comp=Z,7.1nm,0.9s,mb4.5						
LOHW	**Long Hollow**	**73.31**	**330**	*e*P	**P**	**05 38 40.2**	**+0.2**
	comp=Z,4.8nm,0.8s,mb4.4						
TPAW	**Teton Pass**	**73.38**	**330**	*e*P	**P**	**05 38 40.8**	**+0.4**
	comp=Z,6.8nm,0.8s,mb4.5						
RRI2	**Red Ridge**	**73.45**	**329**	*e*P	**P**	**05 38 41.4**	**+0.5**
	comp=Z,18nm,0.8s,mb5.0						
MOOW	**Moose Ponds**	**73.48**	**330**	*e*P	**P**	**05 38 41.3**	**+0.2**
	comp=Z,3.1nm,0.6s,mb4.3						
DCID1	**Drake Creek**	**73.57**	**329**	*e*P	**P**	**05 38 42.6**	**+1.0**
	comp=Z,11nm,0.8s,mb4.7						
IMW	**Indian Meadow**	**73.68**	**330**	*e*P	**P**	**05 38 42.8**	**+0.6**
	comp=Z,19nm,1.4s,mb4.6						
NVAR	**Mina Array Bea**	**73.70**	**322**	P	**P**	**05 38 43.5**	**+1.0**
	comp=Z,4.6nm,0.8s,mb4.2,baz=159,slow=7.2,SNR=18						
NVAR				pP	pP	05 39 09.9	-0.4
	comp=Z,1.4nm,0.7s,baz=150,slow=6.2,SNR=2.4						
NVAR	**Mina Array Bea**	**73.70**	**322**	P	**P**	**05 38 43.5**	**+1.0**
NVAR				pP	pP	05 39 09.9	-0.4
RLMT	**Red Lodge**	**73.85**	**332**	*e*P	**P**	**05 38 43.6**	**+0.4**
	comp=Z,12nm,0.7s,mb4.7						
SCHQ	**Schefferville**	**73.91**	**1**	P	**P**	**05 38 42.1**	**-1.2**
	comp=Z,4.7nm,1.0s,mb4.2,baz=180,slow=9.1,SNR=2.7						
SCHQ				pP	pP	05 39 10.3	-0.9
	comp=Z,6.7nm,0.9s,baz=189,slow=5.5,SNR=3.3						
SCHQ	**Schefferville**	**73.91**	**1**	P	**P**	**05 38 42.1**	**-1.2**
SCHQ				pP	pP	05 39 10.3	-0.9
YFT	**Old Faithful**	**74.06**	**330**	*e*P	**P**	**05 38 46.9**	**+2.5**
YNR	**Norris Junctio**	**74.18**	**331**	*e*P	**P**	**05 38 46.7**	**+1.6**
DGMT	**Dagmar**	**74.44**	**337**	*e*P	**P**	**05 38 47.0**	**+0.4**
	comp=Z,25nm,0.9s,mb4.9						
QLMT	**Earthquake Lak**	**74.62**	**330**	*e*P	**P**	**05 38 49.1**	**+1.4**
HLID	**Hailey**	**75.14**	**328**	*e*P	**P**	**05 38 51.5**	**+0.9**
	comp=Z,9.5nm,0.8s,mb4.6						
PAHR	**Pah Rah Range**	**75.18**	**322**	*e*P	**P**	**05 38 52.1**	**+1.1**
	comp=Z,23nm,0.8s,mb5.0						
PAHR				*e*pP	pP	05 39 20.3	+1.4
BOZ	**Bozeman (W)**	**75.33**	**331**	*e*P	**P**	**05 38 51.6**	**-0.1**
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
BOZ	**Bozeman (W)**	**75.33**	**331**	*e*P	**P**	**05 38 51.6**	**-0.1**
	comp=Z,6.5nm,1.1s,mb4.3						
LRM	**Limekiln Ridge**	**75.84**	**330**	*e*P	**P**	**05 38 55.4**	**+0.8**
EGMT	**Eagleton**	**76.31**	**333**	*e*P	**P**	**05 38 57.4**	**+0.1**
	comp=Z,12nm,0.8s,mb4.7						
TOA0	**Torodi Ar. Sit**	**76.82**	**71**	*e*P	**P**	**05 38 59.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.82**	**71**	P	**P**	**05 38 59.9**	**-0.9**
	comp=Z,34nm,0.8s,mb5.1,baz=254,slow=5.5,SNR=163						
TORD				pP	pP	05 39 28.9	+0.1
	comp=Z,21nm,0.9s,baz=251,slow=5.2,SNR=5.2						
TORD	**Torodi Ar. Bea**	**76.82**	**71**	P	**P**	**05 38 59.9**	**-0.9**
TORD				pP	pP	05 39 28.9	+0.1
CHMT	**Chamberlain Mo**	**77.02**	**331**	*e*P	**P**	**05 39 02.0**	**+0.8**
MOD	**Modoc**	**77.15**	**323**	*e*P	**P**	**05 39 02.7**	**+0.6**
	comp=Z,133nm,2.9s,mb5.2						
MSO	**Missoula**	**77.28**	**330**	*e*P	**P**	**05 39 03.7**	**+1.0**
	comp=Z,12nm,1.8s,mb4.3						
SLMT	**Seeley Lake**	**77.37**	**331**	*e*P	**P**	**05 39 04.0**	**+0.8**
BMO	**Blue Mountains**	**77.52**	**327**	*e*P	**P**	**05 39 04.8**	**+0.7**
	comp=Z,10nm,0.8s,mb4.6						
SWMT	**Swartz Lake**	**77.80**	**331**	*e*P	**P**	**05 39 06.4**	**+0.8**
BSMT	**Bassoo Peak**	**78.42**	**331**	*e*P	**P**	**05 39 10.0**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WALA	**Waterton Lakes**	**78.90**	**332**	*e*P	**P**	**05 39 11.8**	**+0.2**
	comp=Z,0.3nm,0.9s						
VNDA	**Vanda**	**78.92**	**190**	P	**P**	**05 39 09.7**	**-1.7**
	comp=Z,1.3nm,0.7s,mb3.9,baz=66,slow=3.1,SNR=3.8						
HAWA	**Hanford**	**79.72**	**327**	*e*P	**P**	**05 39 17.0**	**+0.9**
	comp=Z,6.1nm,0.8s,mb4.5						
GBL	**Gable Mountain**	**79.82**	**327**	P	**P**	**05 39 17.6**	**+1.0**
OD2	**Odessa Site #2**	**79.98**	**328**	P	**P**	**05 39 18.1**	**+0.6**
MORF	**Marmelete**	**80.07**	**45**	*e*P	**P**	**05 39 19.7**	**+1.5**
FCC	**Fort Churchill**	**80.51**	**347**	*e*P	**P**	**05 39 19.9**	**-0.1**
	comp=Z,1.1nm,1.8s						
FCC				*e*pP	pP	05 39 47.9	-0.5
EBG	**Ellensburg**	**80.59**	**327**	P	**P**	**05 39 21.8**	**+1.0**
TBM	**Table Mountain**	**80.78**	**327**	P	**P**	**05 39 22.7**	**+0.9**
TSUM	**Tsumeb**	**80.83**	**107**	*e*P	**P**	**05 39 23.6**	**+0.8**
	comp=Z,16nm,0.9s,mb4.8						
ETW	**Entiat**	**80.93**	**328**	*e*P	**P**	**05 39 23.1**	**+0.5**
PBEJ	**Beja**	**80.98**	**45**	*e*P	**P**	**05 39 24.1**	**+1.0**
	comp=Z,24nm,2.3s,mb4.6						
EVO	**Evora**	**81.16**	**44**	*e*P	**P**	**05 39 24.6**	**+0.6**
	comp=Z,32nm,2.0s,mb4.8						
PBAR	**Barrancos**	**81.61**	**45**	*e*P	**P**	**05 39 27.1**	**+0.7**
	comp=Z,26nm,1.8s,mb4.8						
PESTR	**Estremoz**	**81.62**	**44**	*e*P	**P**	**05 39 26.9**	**+0.4**
EDM	**Edmonton**	**81.75**	**335**	*e*P	**P**	**05 39 25.9**	**-0.9**
RPW	**Rockport**	**82.09**	**328**	*e*P	**P**	**05 39 28.2**	**-0.5**
JCW	**Jim Creek**	**82.13**	**327**	P	**P**	**05 39 28.5**	**-0.4**
CMW	**Cultus Mountai**	**82.38**	**328**	P	**P**	**05 39 30.0**	**-0.2**
VDB	**Vedder Mountai**	**82.76**	**328**	P	**P**	**05 39 31.7**	**-0.4**
PGC	**Sidney**	**83.20**	**327**	*e*P	**P**	**05 39 34.7**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.6						
MVO	**Moncorvo**	**83.23**	**42**	*e*P	**P**	**05 39 35.7**	**+0.9**
TAM	**Tamanrasset**	**84.02**	**63**	*e*P	**P**	**05 39 39.8**	**+0.6**
TAM				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
TAM	**Tamanrasset**	**84.02**	**63**	*e*P	**P**	**05 39 39.8**	**+0.6**
	comp=Z,8.5nm,1.0s,mb4.5						
ESDC	**Sonseca Array**	**84.44**	**45**	P	**P**	**05 39 40.8**	**-0.2**
	comp=Z,4.8nm,1.0s,mb4.3,baz=242,slow=5.6,SNR=12						
BOSA	**Boshof**	**84.61**	**118**	P	**P**	**05 39 42.2**	**0.0**
	comp=Z,7.4nm,0.9s,mb4.6,baz=203,slow=0.7,SNR=11						
LBTB	**Lobatse**	**86.08**	**115**	*e*P	**P**	**05 39 50.4**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
LBTB	**Lobatse**	**86.08**	**115**	*e*P	**P**	**05 39 50.4**	**+0.8**
	comp=Z,7.4nm,1.1s,mb4.5						
MAW	**Mawson**	**86.43**	**163**	P	**P**	**05 39 53.0**	**+2.6**
	comp=Z,4.0nm,0.9s,mb4.3,baz=260,slow=6.1,SNR=3.4						
YKA	**Yellowknife Ar**	**89.11**	**341**	P	**P**	**05 40 02.7**	**-0.3**
	comp=Z,20nm,0.7s,mb5.3,baz=134,slow=4.6,SNR=337						
YKA				pP	pP	05 40 31.0	-0.8
	comp=Z,4.6nm,0.5s,baz=132,slow=4.8,SNR=5.8						
YKA	**Yellowknife Ar**	**89.11**	**341**	P	**P**	**05 40 02.7**	**-0.3**
YKA				pP	pP	05 40 31.0	-0.8
ARCES	**ARCESS Array B**	**109.58**	**22**	PKKPbc	PKKPbc	05 56 41.8	-3.2
	comp=Z,2.9nm,0.9s,baz=76,slow=3.8,SNR=4.8						
KIV	**Kislovodsk**	**118.75**	**50**	*e*PKIKP	PKPdf	05 45 55.5	-0.4
KIV	**Kislovodsk**	**118.75**	**50**	*e*PKPdf	PKPdf	05 45 55.5	-0.4
STKA	**Stephens Creek**	**121.17**	**211**	*e*PKPdf	PKPdf	05 46 02.9	+1.8
ASAR	**Alice Springs**	**131.71**	**209**	PKP	PKPdf	05 46 20.9	-0.5
	comp=Z,1.2nm,0.5s,baz=137,slow=1.7,SNR=11						
ASAR				pPKP	pPKPdf	05 46 50.4	-1.1
	comp=Z,1.8nm,0.8s,baz=144,slow=1.8,SNR=5.5						
ASAR				SKPbc	SKPbc	05 49 37.0	-0.2
	comp=Z,2.5nm,1.1s,baz=155,slow=6.2,SNR=7.5						
ASAR	**Alice Springs**	**131.71**	**209**	PKIKP	PKPdf	05 46 20.9	-0.5
ASAR						05 46 50.4	
KURK	**Kurchatov**	**139.62**	**32**	PKP	PKPdf	05 46 32.8	-2.4
	comp=Z,0.4nm,0.6s,baz=286,slow=1.7,SNR=2.0						
KURK				pPKP	pPKPdf	05 47 05.6	+0.4
	comp=Z,0.4nm,0.6s,baz=306,slow=2.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**140.09**	**24**	PKP	PKPdf	05 46 33.4	-2.5
	comp=Z,1.4nm,0.7s,baz=358,slow=4.3,SNR=5.3						
ZALV				pPKP	pPKPdf	05 47 06.5	+0.5
	comp=Z,5.4nm,0.6s,baz=290,slow=2.4,SNR=7.2						
ZALV				SKPbc	SKPbc	05 50 03.5	+1.5
	comp=Z,2.2nm,0.7s,baz=321,slow=2.1,SNR=6.5						
ZALV	**Zalesovo Beam**	**140.09**	**24**	PKIKP	PKPdf	05 46 33.4	-2.5
ZALV						05 47 06.5	
ZALV	**Zalesovo Beam**	**140.09**	**24**	PKP	PKPdf	05 46 33.4	-2.5
ZALV				pPKP	pPKPdf	05 47 06.5	+0.5
ZALV				SKPbc	SKPbc	05 50 03.5	+1.5
MKAR	**Makanchi Array**	**143.99**	**34**	PKP	PKPdf	05 46 41.2	-1.9
	comp=Z,1.0nm,0.6s,baz=11,slow=3.0,SNR=6.0						
MKAR				pPKP	pPKPdf	05 47 12.8	-0.4
	comp=Z,1.6nm,0.6s,baz=321,slow=2.3,SNR=5.0						
MKAR				SKPbc	SKPbc	05 50 12.9	+1.0
	comp=Z,0.6nm,0.8s,baz=329,slow=1.7,SNR=4.0						
MKAR	**Makanchi Array**	**143.99**	**34**	PKIKP	PKPdf	05 46 41.2	-1.9
MKAR						05 47 12.8	
MKAR	**Makanchi Array**	**143.99**	**34**	PKP	PKPdf	05 46 41.2	-1.9
MKAR				pPKP	pPKPdf	05 47 12.8	-0.4
MKAR				SKPbc	SKPbc	05 50 12.9	+1.0
KLR	**Kul'dur**	**145.81**	**335**	*e*PKHKP		05 46 42.0	
MOY	**Mondy**	**146.83**	**11**	*e*PKP2	PKPab	05 46 51.2	0.0
ZAK	**Zakamensk**	**148.45**	**9**	*e*PKP2	PKPbc	05 46 53.4	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WMQ	**Urumqi**	**148.81**	**33**	*e*PKP	PKPdf	05 46 51.7	+0.4
MJAR	**Matsushiro Arr**	**150.56**	**311**	PKPbc	PKPbc	05 47 00.0	+0.2
	comp=Z,7.4nm,0.7s,baz=94,slow=1.6,SNR=23						
MJAR				PKPab	PKPab	05 47 06.0	-0.9
	comp=Z,3.3nm,0.5s,baz=65,slow=4.0,SNR=11						
MJAR				pPKPbc	pPKPbc	05 47 28.9	-0.8
	comp=Z,5.4nm,0.7s,baz=104,slow=1.3,SNR=6.0						
MAJO	**Matsushiro**	**150.57**	**311**	*e*PKIKP	PKPbc	05 47 00.0	+0.1
MAT	**Matsushiro**	**150.57**	**311**	PKP	PKPbc	05 46 59.5	-0.4
SONM	**Songino Array**	**151.36**	**6**	PKP	PKPdf	05 46 56.3	+1.1
	comp=Z,1.3nm,0.8s,baz=312,slow=2.1,SNR=7.8						
SONM				PKPbc	PKPbc	05 47 01.9	+0.6
	comp=Z,6.4nm,0.6s,baz=305,slow=1.3,SNR=20						
SONM				pPKPbc	pPKPbc	05 47 31.2	-0.1
	comp=Z,6.6nm,0.7s,baz=356,slow=1.5,SNR=6.2						
KAPI	**Kappang**	**154.26**	**201**	PKPbc	PKPbc	05 47 09.1	+0.3
	comp=Z,2.2nm,0.5s,baz=228,slow=3.1,SNR=2.7						
KAPI				PKPab	PKPab	05 47 22.9	0.0
	comp=Z,15nm,0.9s,baz=142,slow=2.8,SNR=12						
KAPI	**Kappang**	**154.26**	**201**	*e*PKPab	PKPab	05 47 22.8	-0.1
GKN	**Gorkha**	**154.50**	**65**	*e*P	PKPab	05 47 23.6	-0.2
	comp=Z,12nm,0.5s						
DMN	**Daman**	**155.00**	**66**	*e*P	PKPab	05 47 25.8	-0.1
	comp=Z,12nm,0.7s						
KKN	**Kakani**	**155.10**	**65**	*e*P	PKPab	05 47 26.2	-0.2
	comp=Z,25nm,0.6s						
PKI	**Pulchoki**	**155.26**	**66**	*e*P	PKPab	05 47 26.6	-0.5
GUN	**Gumba**	**155.59**	**65**	*e*P	PKPab	05 47 27.6	-0.8
	comp=Z,16nm,0.5s						
JIRN	**Jiri**	**155.91**	**65**	*e*P	PKPab	05 47 28.1	-1.7
	comp=Z,4.9nm,0.4s						
RAMN	**Ramite**	**156.44**	**67**	*e*P	PKPab	05 47 29.0	-3.1
	comp=Z,15nm,0.6s						
KSRS	**Korea Array**	**156.63**	**324**	PKPab	PKPab	05 47 32.3	-0.2
	comp=Z,2.1nm,1.0s,baz=73,slow=4.2,SNR=4.3						
ODAN	**Odare**	**157.15**	**67**	*e*P	PKPab	05 47 30.8	-4.4
	comp=Z,12nm,0.6s						
TAPN	**Taplejung**	**157.30**	**65**	*e*P	PKPab	05 47 30.8	-5.0
	comp=Z,8.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**158.57**	**359**	*e*PKP	PKPdf	05 47 01.2	-4.1
HHC				APKP		05 47 28.0	
HHC				XPKP		05 47 38.4	
HHC				PKS		05 50 33.6	
HHC				SKS	SKSdf	05 53 55.4	-5.5
HHC				PP	PP		
	comp=Z,684nm,11.6s						
HHC				LR	LR		
	comp=N,350nm,16.7s						
HHC				LR	LR		
	comp=E,197nm,15.5s						
HHC				LR	LR		
	comp=Z,281nm,15.5s						
BJI	**Beijing**	**158.89**	**349**	PKP	PKPdf	05 47 05.5	-0.2
LZH	**Lanzhou**	**162.21**	**19**	*e*PKP	PKPdf	05 47 08.0	-1.4
LZH				APKP		05 47 38.0	
LZH				XPKP		05 47 48.0	
LZH				PP	PP	05 51 41.0	+0.9
LZH				SKKS	SKKSac	05 58 19.0	+0.1
LZH				PP	PP		
	comp=Z,190nm,4.7s						
CD2	**Chengdu**	**166.81**	**28**	PKP	PKPdf	05 47 11.5	-2.2
CD2				APKP		05 47 38.5	
CD2				XPKP		05 47 49.0	
CD2				PKP2	PKPab	05 48 16.5	-0.6
CD2				PKS		05 50 42.5	
CD2				PP	PP	05 52 04.9	+0.5
CD2				SKS	SKSdf	05 54 03.9	-3.8
CD2				SKKS	SKKSac	05 58 40.8	-1.6
CD2				SS	SS	06 12 36.9	-1.6
CD2				PP	PP		
	comp=Z,160nm,6.2s						
CD2				LR	LR		
	comp=N,1μm,12.6s						
CD2				LR	LR		
	comp=Z,1μm,10.2s						
CMAR	**Chiang Mai Arr**	**168.65**	**93**	PKPab	PKPab	05 48 25.7	-0.2
	comp=Z,2.8nm,0.9s,baz=259,slow=5.8,SNR=9.3						
KMI	**Kunming**	**170.51**	**51**	PKP	PKPdf	05 47 16.7	+0.5
GYA	**Guiyang**	**171.93**	**28**	PKP	PKPdf	05 47 15.4	-1.5
GYA				XPKP		05 47 49.2	
GYA				PKP2	PKPab	05 48 39.1	-0.8
GYA				PKS		05 50 45.8	
GYA				PP	PP	05 52 31.6	+1.4
GYA				SKS	SKSdf	05 54 07.5	-2.9
GYA				SKKS	SKKSac	05 59 07.4	-0.1
GYA				SS	SS	06 13 27.6	-1.7
GYA				PP	PP		
	comp=Z,120nm,8.4s						
GYA				LR	LR		
	comp=N,140nm,20.0s						
GYA				LR	LR		
	comp=E,120nm,22.0s						
GYA				LR	LR		
	comp=Z,140nm,21.5s						

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*IDC **09** 05:31:09.1±1.1, 12.11N×125.46E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/20, mbtmp3.9/9, Error ellipse: s-maj=56.7km s-min=21.1km az=65.0*
*MAN **09** 05:31:09, 12.46N×125.69E, h0km, mb4.3, ML3.1, MS2.9*
*ISCJB **09** 05:31:10.9±1.6, 12.44N±0.04×125.70E±0.08, h18km±10km, mb3.9/9, Error ellipse: s-maj=13.5km s-min=6.5km az=176.9*
ISC 09 05:31:10.5±1.5**, 12.41N**±0.04×**125.68E**±0.07**, h4**km±8km**, n20,** σ1.02/27**, mb3.9**/9**, 1C-1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.84**	**197**	*e*P	**Pg**	**05 31 26.9**	**+0.4**
BESP				*e*S	**Sg**	**05 31 42.4**	**+5.1**
CNP	**Catarman**	**1.00**	**276**	*e*P	**Pg**	**05 31 29.4**	**-0.3**
CNP				*e*S	**Sg**	**05 31 42.3**	**-0.4**
PLP	**Palo**	**1.41**	**209**⇓	*e*P	**Pn**	**05 31 37.3**	**+0.3**
PLP				*e*S	**Sb**	**05 31 54.5**	**-1.4**
OCLP	**Ormoc**	**1.71**	**218**	*e*P	**Pn**	**05 31 42.9**	**+1.8**
OCLP				*e*S	**Sn**	**05 32 06.2**	**+2.8**
PVCP	**Virac**	**1.90**	**309**	*e*P	**Pn**	**05 31 43.1**	**-0.6**
PVCP				*e*S	**Sn**	**05 32 11.6**	**+3.5**
PVCP	**Virac**	**1.90**	**309**⇑	*e*P	**Sn**	**05 32 17.0**	**+8.8**
SCPH	**Surigao**	**2.62**	**184**	*e*P	**Pn**	**05 31 54.3**	**+0.7**
SCPH				*e*S	**Sn**	**05 32 24.1**	**-1.7**
LLP	**Lapu-Lapu**	**2.67**	**219**	*e*P	**Pn**	**05 31 53.4**	**-0.9**
LLP				*e*S	**Sn**	**05 32 27.6**	**+0.4**
TBP	**Tagbilaran**	**3.24**	**214**	*e*P	**Pn**	**05 32 03.3**	**+1.2**
TBP				*e*S	**Sn**	**05 32 41.0**	**-0.2**
OTRP	**Odiongan**	**3.58**	**270**	*e*P	**Pn**	**05 32 06.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**26.45**	**286**	P	**P**	**05 36 47.6**	**-1.2**
	2.2nm,0.8s,mb3.8,baz=99,slow=7.1,SNR=7.2						
ASAR	**Alice Springs**	**36.74**	**167**	P	**P**	**05 38 15.2**	**-3.9**
	0.4nm,0.4s,mb3.6,baz=348,slow=6.8,SNR=6.8						
SONM	**Songino Array**	**38.83**	**339**	P	**P**	**05 38 37.3**	**+0.7**
	1.0nm,0.9s,mb3.6,baz=111,slow=15,SNR=4.8						
MKAR	**Makanchi Array**	**49.99**	**322**	P	**P**	**05 40 06.2**	**+0.4**
	1.7nm,0.7s,mb4.2,baz=119,slow=7.9,SNR=9.4						
ZALV	**Zalesovo Beam**	**52.49**	**331**	P	**P**	**05 40 24.5**	**0.0**
	0.3nm,0.4s,mb3.6,baz=106,slow=11,SNR=3.4						
KURK	**Kurchatov**	**53.99**	**325**	P	**P**	**05 40 35.9**	**+0.2**
	3.0nm,0.6s,mb4.4,baz=126,slow=7.4,SNR=18						
BVAR	**Borovoye Array**	**59.59**	**325**	P	**P**	**05 41 15.8**	**+0.4**
	1.3nm,0.6s,mb4.2,baz=131,slow=8.1,SNR=6.8						
ARCES	**ARCESS Array B**	**82.00**	**340**	P	**P**	**05 43 31.4**	**0.0**
	1.8nm,0.8s,mb4.0,baz=81,slow=5.8,SNR=2.9						
BRTR	**Keskin Array B**	**83.74**	**309**	P	**P**	**05 43 39.1**	**-2.0**
	0.4nm,0.7s,mb3.6,baz=90,slow=3.3,SNR=2.7						
PLCA	**Paso Flores**	**148.38**	**156**	PKPbc	PKPbc	05 50 59.0	+0.4
	1.0nm,0.5s,baz=214,slow=3.7,SNR=3.5						

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*BJI **09** 05:34:24.7, 12.00N×125.80E, h30km, mB5.2, mb4.7, Ms4.9, Msz4.7*
*MAN **09** 05:34:28, 12.53N×125.65E, h29km, mb5.4, ML4.3, MS4.6*
*ISCJB **09** 05:34:29.8±0.6, 12.43N±0.03×125.63E±0.04, h42km±5km, mb4.7/75, MS4.5/7, Error ellipse: s-maj=7.6km s-min=3.9km az=157.4*
*MOS **09** 05:34:29.3±0.9, 12.44N×125.49E, h33km, mb5.1/21, Error ellipse: s-maj=14.3km s-min=6.6km az=121.9*
*NEIC **09** 05:34:30.1±0.2, 12.37N×125.51E, mb5.0/32, Error ellipse: s-maj=8.3km s-min=4.1km az=63.0*
*IDC **09** 05:34:30.8±3.0, 12.36N×125.54E, h34km±21km, mb4.4/18, mb1 4.4/19, mb1mx4.4/21, mbtmp4.3/19, MS4.3/2, Ms1 4.3/2, ms1mx3.8/33, Error ellipse: s-maj=21.9km s-min=10.8km az=78.0*
*DJA **09** 05:35:03, 11.72N×124.85E, h340km, mb4.4/8*
ISC 09 05:34:31.8±0.6**, 12.40N**±0.03×**125.58E**±0.05**, h42**km±5km**, h31**km±1.3km**: pP-P, n164,** σ1.00/171**, mb4.7**/75**, MS4.5**/7**, 17C-4D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.81**	**190**	*e*P	**Pn**	**05 34 45.7**	**-0.9**
BESP				*e*S	**Sn**	**05 34 59.0**	**+1.5**
CNP	**Catarman**	**0.90**	**277**	*e*P	**Pn**	**05 34 45.3**	**-2.7**
CNP				*e*S	**Sn**	**05 34 59.2**	**-0.6**
PLP	**Palo**	**1.36**	**206**⇓	*e*P	**Pn**	**05 34 53.1**	**-1.2**
PLP				*e*S	**Sn**	**05 35 09.7**	**-1.4**
OCLP	**Ormoc**	**1.64**	**215**	*e*P	**Pn**	**05 34 59.0**	**+0.9**
PVCP	**Virac**	**1.83**	**311**	*e*P	**Pn**	**05 34 58.5**	**-2.2**
PVCP				*e*S	**Sn**	**05 35 21.8**	**-0.8**
PVCP	**Virac**	**1.83**	**311**⇑	*e*P	**Pn**	**05 35 10.6**	**+10**
MMPH	**Masbate**	**1.91**	**269**⇑	*i*P	**Pn**	**05 35 03.4**	**+1.6**
MMPH				*i* S	**Sn**	**05 35 28.7**	**+4.1**
MSLP	**Maasin**	**2.36**	**197**	*e*P	**Pn**	**05 35 08.6**	**+0.6**
MSLP				*e*S	**Sn**	**05 35 39.1**	**+3.3**
SCPH	**Surigao**	**2.60**	**182**	*e*P	**Pn**	**05 35 10.2**	**-1.1**
SCPH				*e*S	**Sn**	**05 35 41.3**	**-0.4**
LLP	**Lapu-Lapu**	**2.60**	**218**⇓	*e*P	**Pn**	**05 35 11.5**	**+0.1**
RCP	**Roxas**	**2.89**	**254**⇑	*e*P	**Pn**	**05 35 15.4**	**0.0**
RCP				*e*S	**Sn**	**05 35 53.4**	**+4.4**
AUQP	**San Andres**	**2.98**	**288**	*e*P	**Pn**	**05 35 19.0**	**+2.5**
TBP	**Tagbilaran**	**3.17**	**212**	*e*P	**Pn**	**05 35 19.2**	**-0.1**
TBP				*e*S	**Sn**	**05 35 51.0**	**-4.9**
GUIM	**Jordan**	**3.42**	**239**	*e*P	**Pn**	**05 35 23.1**	**+0.5**
GUIM				*e*S	**Sn**	**05 36 03.4**	**+1.6**
OTRP	**Odiongan**	**3.47**	**270**	*e*P	**Pn**	**05 35 23.0**	**-0.3**
POLP	**Polilio Island**	**4.23**	**304**	*e*P	**Pn**	**05 35 38.4**	**+4.8**
DCPH	**Dipolog City**	**4.38**	**210**⇑	*e*P	**Pn**	**05 35 35.0**	**-0.8**
BUKP	**Musuan**	**4.52**	**186**	*e*P	**Pn**	**05 35 39.5**	**+1.7**
CUYO	**Cuyo Island**	**4.72**	**251**	*e*P	**Pn**	**05 35 40.3**	**-0.3**
PAGZ	**Pagadian**	**5.01**	**206**	*e*P	**Pn**	**05 35 45.4**	**+0.9**
DAV	**Davao City (W)**	**5.29**	**180**	LR	LR	05 38 07.8	
	comp=Z,3μm,20.7s,baz=314,slow=41						
LUBP	**Lubang**	**5.36**	**285**	*e*P	**Pn**	**05 35 51.1**	**+1.8**
PCPH	**Palayan**	**5.37**	**306**⇑	*e*P	**Pn**	**05 35 47.8**	**-1.5**
MATI	**Mati**	**5.46**	**173**	*e*P	**Pn**	**05 35 51.4**	**+0.7**
PALP	**Palanan**	**5.55**	**327**	*e*P	**Pn**	**05 35 50.4**	**-1.4**
NACB	**Ninganchiao**	**12.30**	**343**	*e*Pn	**Pn**	**05 37 22.7**	**-1.7**
YHNB	**Yeheng**	**12.84**	**343**	Pn	**Pn**	**05 37 32.1**	**+0.4**
KAPI	**Kappang**	**18.24**	**199**	P	**Pn**	**05 38 41.3**	**-0.5**
	baz=28,slow=10,SNR=6.6						
KAPI	**Kappang**	**18.24**	**199**	*e*Pn	**Pn**	**05 38 41.9**	**+0.1**
	28nm,1.0s						
GUMO	**Guam**	**18.84**	**84**	LR	LR	05 45 49.8	
	comp=Z,836nm,19.2s,baz=250,slow=36						
NJ2	**Nanjing**	**20.51**	**344**	*e*P	**P**	**05 39 08.7**	**+2.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
WHN	**Wuhan**	**20.83**	**332**	⇓P	**P**	**05 39 11.1**	**+1.2**
BATI	**Baumata**	**22.54**	**185**	P	**P**	**05 39 27.6**	**-0.5**
	comp=Z,62nm,0.7s,mb5.2,baz=312,slow=0.9,SNR=9.1						
GYA	**Guiyang**	**22.62**	**311**	P	**P**	**05 39 28.8**	**-0.2**
GYA				AP		05 39 37.6	
GYA				XP	sP	05 39 41.8	-3.0
GYA				PCP	PcP	05 43 21.5	+0.4
GYA				S	**S**	**05 43 28.7**	**-5.7**
GYA				XS	sS	05 43 45.3	-6.7
GYA				SS		05 44 12.8	
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,6.0s						
GYA				LR	LR		
	comp=N,2μm,18.0s,MS4.7						
GYA				LR	LR		
	comp=E,1μm,19.0s,MS4.7						
GYA				LR	LR		
	comp=Z,3μm,18.5s,MS4.7						
KMI	**Kunming**	**25.00**	**304**	P	**P**	**05 39 52.8**	**+1.0**
KMI				AP	pP	05 40 01.3	-1.8
KMI				XP	sP	05 40 05.5	-2.7
KMI				PP		05 40 31.2	
KMI				S	**S**	**05 44 12.5**	**-0.6**
KMI				XS	sS	05 44 27.8	-4.2
KMI				SS		05 45 12.3	
KMI				SSS		05 45 29.0	
KMI				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,3μm,9.3s						
KMI				LR	LR		
	comp=N,1μm,11.6s,MS4.8						
KMI				LR	LR		
	comp=E,1μm,12.3s,MS4.8						
KMI				LR	LR		
	comp=Z,928nm,12.3s,MS4.5						
KSRS	**Korea Array**	**25.04**	**4**	P	**P**	**05 39 51.9**	**0.0**
	comp=Z,7.8nm,0.9s,mb4.2,baz=181,slow=10,SNR=24						
KAKA	**Kakadu**	**25.86**	**164**	*e*P	x	05 39 39.3	
	comp=Z,11nm,0.6s						
XAN	**Xi'an**	**26.35**	**328**	P	**P**	**05 40 04.3**	**+0.4**
XAN				AP	pP	05 40 11.9	-3.3
XAN				PPP		05 41 07.3	
XAN				S	**S**	**05 44 36.5**	**+2.4**
XAN				AMB	AMB		
	comp=Z,29nm,1.1s,mb4.7						
XAN				AMB	AMB		
	comp=Z,1μm,14.8s						
XAN				LR	LR		
	comp=E,257nm,19.1s						
XAN				LR	LR		
	comp=Z,754nm,21.5s,MS4.2						
CMAR	**Chiang Mai Arr**	**26.35**	**287**	P	**P**	**05 40 02.9**	**-1.2**
	comp=Z,10nm,0.8s,mb4.4,baz=95,slow=7.4,SNR=48						
CMAR				PcP	PcP	05 43 29.4	0.0
	comp=Z,1.7nm,0.5s,baz=44,slow=1.1,SNR=6.8						
CHTO	**Chiang Mai**	**26.41**	**287**	*e*P	**P**	**05 40 03.1**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
CHTO	**Chiang Mai**	**26.41**	**287**	*e*P	**P**	**05 40 03.0**	**-1.6**
	comp=Z,13nm,1.2s,mb4.3						
MJAR	**Matsushiro Arr**	**26.59**	**23**	P	**P**	**05 40 05.9**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.5,baz=208,slow=6.4,SNR=3.7						
MJAR	**Matsushiro Arr**	**26.59**	**23**	P	**P**	**05 40 05.9**	**-0.1**
DL2	**Dalian**	**26.63**	**353**	P	**P**	**05 40 10.6**	**+4.2**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
CD2	**Chengdu**	**27.30**	**316**⇑	*i*P	**P**	**05 40 12.1**	**-0.4**
CD2				AP	pP	05 40 21.8	-2.1
CD2				XP	sP	05 40 25.6	-3.4
CD2				PP		05 40 59.2	
CD2				S	**S**	**05 44 48.3**	**-1.0**
CD2				XS	sS	05 45 04.3	-4.1
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
CD2				AMB	AMB		
	comp=Z,90nm,7.5s						
CD2				LR	LR		
	comp=N,1μm,15.1s,MS5.0						
CD2				LR	LR		
	comp=E,3μm,10.8s,MS5.0						
CD2				LR	LR		
	comp=Z,2μm,13.3s,MS4.9						
PSI	**Prapat**	**28.06**	**252**	P	**P**	**05 40 20.2**	**+0.8**
	comp=Z,1.9nm,0.4s,mb4.1,baz=60,slow=8.8,SNR=4.0						
BJI	**Beijing**	**28.76**	**345**	P	**P**	**05 40 25.9**	**+0.6**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**30.31**	**180**	*e*P	**P**	**05 40 38.1**	**-1.2**
	comp=Z,43nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**30.31**	**180**	*e*P	**P**	**05 40 38.2**	**-1.0**
	comp=Z,24nm,0.8s,mb5.0						
LZH	**Lanzhou**	**30.66**	**324**	*e*P	**P**	**05 40 43.4**	**+1.1**
LZH				AP	pP	05 40 52.0	-1.7
LZH				XP	sP	05 40 56.0	-2.8
LZH				AMB	AMB		
	comp=Z,44nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,198nm,4.5s						
HHC	**Hu-ho-hao-te**	**30.90**	**339**	*e*P	**P**	**05 40 44.4**	**+0.1**
HHC				XP	sP	05 40 58.0	-2.8
HHC				PP	PP	05 41 46.7	-7.9
HHC				*e*S	**S**	**05 45 46.0**	**+0.5**
HHC				XS	sS	05 46 01.7	-3.0
HHC				AMB	AMB		
	comp=Z,23nm,0.5s,mb5.3						
HHC				AMB	AMB		
	comp=Z,764nm,5.7s						
HHC				LR	LR		
	comp=N,736nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,438nm,16.7s,MS4.5						
HHC				LR	LR		
	comp=Z,366nm,16.7s,MS4.1						
CN2	**Changchun**	**31.29**	**360**	*e*P	**P**	**05 40 51.0**	**+3.3**
COEN	**Coen**	**31.46**	**146**	*e*P	**P**	**05 40 48.8**	**-0.7**
	comp=Z,4.5nm,0.8s,mb4.3						
MDJ	**Mudanjiang**	**32.29**	**5**	P	**P**	**05 40 57.3**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.4						
WRAB	**Tennant Creek**	**33.27**	**165**	*e*P	**P**	**05 41 03.6**	**-1.7**
WRAB				*e*		05 43 47.0	
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**33.27**	**165**	*e*P	**P**	**05 41 03.6**	**-1.7**
	comp=Z,1.8nm,0.8s,mb4.0						
WRAB				*e*PcP	PcP	05 43 47.0	0.0
WB2	**Warramunga Arr**	**33.28**	**165**	*e*P	**P**	**05 41 03.6**	**-1.8**
WB2				*e*PCP	PcP	05 43 47.4	+0.3
SHL	**Shillong**	**34.34**	**297**	*e*P	**P**	**05 41 16.0**	**+1.4**
GTA	**Gaotai**	**35.26**	**324**	*e*P	**P**	**05 41 23.0**	**+0.6**
GTA				AP	pP	05 41 32.2	-1.8
GTA				XP	sP	05 41 36.3	-2.7
GTA				PCP	PcP	05 43 53.8	+1.3
GTA				S	**S**	**05 46 54.1**	**+0.8**
GTA				XS	sS	05 47 11.7	-0.9
GTA				SS	SS	05 49 17.4	-10
GTA				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7						
GTA				AMB	AMB		
	comp=Z,372nm,6.9s						
GTA				LR	LR		
	comp=N,650nm,15.3s,MS4.7						
GTA				LR	LR		
	comp=E,579nm,13.8s,MS4.7						
GTA				LR	LR		
	comp=Z,893nm,16.5s,MS4.6						
LSA	**Lhasa**	**36.26**	**304**	P	**P**	**05 41 32.6**	**+1.5**
LSA	**Lhasa**	**36.26**	**304**	*e*P	**P**	**05 41 31.1**	**0.0**
LSA				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
LSA	**Lhasa**	**36.26**	**304**	*e*P	**P**	**05 41 31.1**	**0.0**
	comp=Z,24nm,1.2s,mb5.0						
ASAR	**Alice Springs**	**36.76**	**167**	P	**P**	**05 41 34.4**	**-1.0**
	comp=Z,2.0nm,0.5s,mb4.2,baz=347,slow=6.5,SNR=18						
ASAR				PcP	PcP	05 43 57.0	-0.1
	comp=Z,2.9nm,0.8s,baz=348,slow=3.1,SNR=7.4						
ASAR				S	**S**	**05 47 15.3**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=344,slow=19,SNR=4.9						
ASAR				ScP	ScP	05 47 43.0	+2.4
	comp=Z,2.7nm,1.2s,baz=340,slow=2.8,SNR=5.2						
ASAR	**Alice Springs**	**36.76**	**167**	P	**P**	**05 41 34.4**	**-0.9**
ASAR						05 43 57.1	
ASAR				S	**S**	**05 47 15.3**	**-1.1**
HIA	**Hailar**	**37.07**	**354**⇑	*i*P	**P**	**05 41 37.0**	**-0.7**
KLR	**Kul'dur**	**37.08**	**7**	*e*P	**P**	**05 41 32.2**	**-5.5**
TAPN	**Taplejung**	**38.42**	**299**	*e*P	**P**	**05 41 49.1**	**-0.3**
ODAN	**Odare**	**38.57**	**298**	*e*P	**P**	**05 41 50.4**	**-0.3**
	comp=Z,43nm,0.8s,mb5.2						
ULN	**Ulaanbaatar**	**38.60**	**340**	*e*P	**P**	**05 41 51.2**	**+0.5**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ULN	Ulaanbaatar	38.60	340	eP	P	05 41 51.2	+0.6
	comp=Z,10nm,1.0s,mb4.5						
SONM	Songino Array	38.80	339	P	P	05 41 52.8	+0.5
	comp=Z,14nm,1.1s,mb4.6,baz=157,slow=8.8,SNR=37						
RAMN	Ramite	39.27	298	eP	P	05 41 56.6	0.0
	comp=Z,91nm,1.2s,mb5.4						
JIRN	Jiri	39.80	298	eP	P	05 42 00.9	-0.1
	comp=Z,71nm,1.1s,mb5.3						
GUN	Gumba	40.13	299	eP	P	05 42 03.6	-0.1
	comp=Z,91nm,1.1s,mb5.4						
PKI	Pulchoki	40.45	298	eP	P	05 42 05.5	-0.9
PKI	Pulchoki	40.45	298	eP	P	05 42 06.3	-0.1
PKI				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
PKI	Pulchoki	40.45	298	eP	P	05 42 06.3	-0.1
	comp=Z,30nm,0.7s,mb5.1						
PKIN	Phulchoki	40.46	298	eP	P	05 42 06.3	-0.2
	comp=Z,30nm,0.7s,mb5.2						
KKN	Kakani	40.62	298	eP	P	05 42 07.1	-0.7
	comp=Z,88nm,1.2s,mb5.3						
KKN	Kakani	40.62	298	eP	P	05 42 07.1	-0.7
KKN				pmax	pmax		
	comp=Z,88nm,1.2s,mb5.3						
DMN	Daman	40.72	298	eP	P	05 42 08.1	-0.5
	comp=Z,74nm,1.1s,mb5.2						
GKN	Gorkha	41.22	298	eP	P	05 42 11.6	-1.1
	comp=Z,43nm,0.9s,mb5.1						
ZAK	Zakamensk	42.05	339	eP	P	05 42 18.5	-0.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
DANN	Dangsing	42.05	299	eP	P	05 42 18.8	-0.7
	comp=Z,83nm,0.9s,mb5.4						
KOLN	Koldanda	42.06	298	eP	P	05 42 19.0	-0.6
	comp=Z,84nm,0.9s,mb5.4						
FORT	Forrest	42.99	177	eP	P	05 42 27.2	+0.2
	comp=Z,27nm,0.6s,mb5.2						
TLY	Talaya	43.01	340⇑	iP	P	05 42 28.5	+1.5
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
MOY	Mondy	43.93	338	eP	P	05 42 35.1	+0.8
EIDS	Eidsvold	45.02	147	eP	P	05 42 43.1	-0.3
	comp=Z,28nm,1.2s,mb5.0						
WMQ	Urumqi	45.14	321	P	P	05 42 44.8	+0.6
WMQ				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,864nm,13.0s						
WMQ				LR	LR		
	comp=N,315nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=E,365nm,15.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,380nm,15.0s,MS4.5						
HYB	Hyderabad	45.63	282	i P	P	05 42 48.0	-0.4
HYB	Hyderabad	45.63	282	eP	P	05 42 48.0	-0.4
BOD	Bodaibo	46.18	351	eP	P	05 42 49.7	-2.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
STKA	Stephens Creek	46.62	161	eP	P	05 42 56.5	+0.6
	comp=Z,5.9nm,0.6s,mb4.7						
STKA				ePCP	PcP	05 44 30.2	+0.8
STKA	Stephens Creek	46.62	161	P	P	05 42 56.2	+0.3
	comp=Z,5.8nm,0.7s,mb4.6,baz=339,slow=11,SNR=9.0						
STKA				PcP	PcP	05 44 30.1	+0.8
	comp=Z,5.2nm,0.7s,baz=326,slow=3.6,SNR=2.7						
ARMA	Armidale	49.40	150	eP	P	05 43 18.9	+1.4
YAK	Yakutsk	49.64	3⇑	iP	P	05 43 18.4	-0.4
YAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
YAK	Yakutsk	49.64	3⇑	iP	P	05 43 18.4	-0.4
YAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
MK31	Makanchi Array	49.94	322	i P	P	05 43 21.8	+0.5
MK31				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
MK31	Makanchi Array	49.94	322	eP	P	05 43 21.8	+0.5
MKAR	Makanchi Array	49.94	322	P	P	05 43 22.0	+0.7
	comp=Z,12nm,0.8s,mb5.0,baz=118,slow=8.5,SNR=50						
MKAR				PcP	PcP	05 44 41.4	+0.2
	comp=Z,2.7nm,0.7s,baz=97,slow=9.2,SNR=5.5						
MKAR	Makanchi Array	49.94	322	P	P	05 43 22.0	+0.7
MKAR				PcP	PcP	05 44 41.4	+0.2
POO	Poona	50.09	284	ex	P	05 43 20.0	-3.0
ZALV	Zalesovo Beam	52.45	331	P	P	05 43 39.3	-0.7
	comp=Z,6.9nm,0.8s,mb4.6,baz=116,slow=6.9,SNR=26						
CNB	Canberra Magne	52.53	155	eP	P	05 43 42.2	+1.3
CNB				ePCP	PcP	05 44 43.2	-7.7
TOO	Toolangi	53.11	160	eP	P	05 43 46.2	+1.1
AAK	Ala-Archa	53.35	314	eP	P	05 43 47.5	+0.6
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
AAK	Ala-Archa	53.35	314	eP	P	05 43 47.5	+0.6
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
AAK	Ala-Archa	53.35	314	eP	P	05 43 47.5	+0.6
	comp=Z,8.9nm,1.2s,mb4.6						
NVS	Novosibirsk	53.72	331	eP	P	05 43 48.1	-1.3
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
NVS	Novosibirsk	53.72	331	eP	P	05 43 48.1	-1.3
NVS				e		05 44 53.2	
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
AML	Almayashu	53.76	313	eP	P	05 43 51.3	+1.3
	comp=Z,8.3nm,0.9s,mb4.7						
AML				epP	pP	05 44 01.4	-0.6
KURK	Kurchatov	53.94	325	P	P	05 43 51.2	+0.1
	comp=Z,17nm,0.7s,mb5.1,baz=126,slow=7.3,SNR=44						
KURK	Kurchatov	53.94	325c	iP	P	05 43 51.6	+0.5
KURK	Kurchatov	53.94	325	eP	P	05 43 51.2	+0.1
	comp=Z,38nm,0.9s,mb5.3						
KBL	Kabul	55.59	303	eP	P	05 44 03.7	+0.4
	comp=Z,8.3nm,0.9s,mb4.8						
KBL				epP	pP	05 44 13.0	-2.4
KK31	Karatay Array	56.29	314	P	P	05 44 08.1	-0.1
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
VOSK	Vostochnaya	59.10	325	P	P	05 44 27.5	-0.2
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TIXI	Tiksi	59.25	1	i P	P	05 44 28.3	-0.2
TIXI	Tiksi	59.25	1	eP	P	05 44 28.1	-0.4
	comp=Z,11nm,0.9s,mb4.9						
BVA0	Borovoye Array	59.54	325	i P	P	05 44 30.5	-0.3
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BVAR	Borovoye Array	59.54	325	P	P	05 44 31.3	+0.5
	comp=Z,11nm,0.8s,mb4.9,baz=119,slow=8.6,SNR=49						
BRVK	Borovoye	59.61	325	eP	P	05 44 31.4	+0.1
BRVK				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
BRVK	Borovoye	59.61	325	eP	P	05 44 31.4	+0.1
	comp=Z,28nm,0.9s,mb5.3						
BILL	Bilibino	61.56	16⇑	iP	P	05 44 45.0	+0.7
BILL				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.9						
AB31	Akbulak array	64.83	319	P	P	05 45 05.7	-0.6
AB31				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1						
SVE	Sverdlovsk	66.06	327⇑	eP	P	05 45 14.5	+0.4
SVE				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
ARU	Arti	67.09	326c	iP	P	05 45 20.1	-0.6
ARU	Arti	67.09	326	eP	P	05 45 20.3	-0.4
	comp=Z,11nm,0.7s,mb5.0						
ONI	Oni	75.96	311	P	P	05 46 11.7	-2.7
KIV	Kislovodsk	76.42	312⇑	eP	P	05 46 17.6	+0.6
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
KIV	Kislovodsk	76.42	312	eP	P	05 46 17.4	+0.4
	comp=Z,18nm,0.9s,mb5.0						
MOS	Moscow	78.72	325	eP	P	05 46 28.4	-1.2
MOS				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.5						
OBN	Obninsk	79.38	324d	iP	P	05 46 32.7	-0.5
OBN				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
JOF	Joensuu	81.00	332	ep	P	05 46 41.7	-0.1
	comp=Z,0.8nm,0.4s,mb4.0						
JOF	Joensuu	81.00	332	eP	P	05 46 41.7	-0.1
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ARCES	ARCESS Array B	81.97	340	P	P	05 46 47.6	+0.7
	comp=Z,8.1nm,0.9s,mb4.7,baz=70,slow=4.8,SNR=11						
INK	Inuvik	82.57	22	eP	P	05 46 50.5	+0.5
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
INK	Inuvik	82.57	22	eP	P	05 46 50.5	+0.5
	comp=Z,8.3nm,1.0s,mb4.7						
KAF	Kangasniemi	83.44	332	ep	P	05 46 54.2	-0.4
	comp=Z,0.6nm,0.3s,mb4.1						
KAF	Kangasniemi	83.44	332	eP	P	05 46 54.2	-0.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
BRTR	Keskin Array B	83.67	309	P	P	05 46 56.0	-0.2
	comp=Z,1.4nm,0.8s,mb4.2,baz=104,slow=5.7,SNR=6.7						
BRTR	Keskin Array B	83.67	309⇑	eP	P	05 46 58.4	+2.2
AKASG	Malin Array Be	84.50	321	P	P	05 46 59.5	-0.7
	comp=Z,13nm,0.9s,mb5.0,baz=64,slow=5.0,SNR=25						
BUR08	Bucovina Ar. S	87.81	318	eP	P	05 47 17.1	+0.5
BUR08				epP	pP	05 47 24.8	-4.6
KOLS	Kolonicke sedl	89.31	320	eP	P	05 47 24.5	+0.9
KOLS				epP	pP	05 47 34.0	-2.5
UZH	Uzhgorod	89.39	320⇑	iP	P	05 47 24.3	+0.3
UZH				e	pP	05 47 34.5	-2.3
STHS	Stebnicka Huta	89.79	321	i P	P	05 47 27.4	+1.5
STHS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6						
STHS	Stebnicka Huta	89.79	321	i P	P	05 47 27.4	+1.5
	comp=Z,3.2nm,1.0s,mb4.6						
CRVS	Cervenica-Dubn	89.82	320	eP	P	05 47 26.6	+0.5
CRVS				e	pP	05 47 36.7	-2.2
CRVS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
CRVS	Cervenica-Dubn	89.82	320	eP	P	05 47 26.6	+0.5
	comp=Z,10nm,1.1s,mb5.1						
CRVS				e	pP	05 47 36.7	-2.2
NOA	NORSAR Array B	90.56	334	P	P	05 47 26.6	-2.6
	comp=Z,1.3nm,0.9s,mb4.3,baz=61,slow=4.7,SNR=3.6						
VYHS	Vyhne	91.60	320	eP	P	05 47 34.3	0.0
YKA	Yellowknife Ar	92.10	24	P	P	05 47 36.6	+0.3
	comp=Z,0.8nm,0.9s,mb4.0,baz=297,slow=4.3,SNR=7.5						
VNDA	Vanda	92.11	173	P	P	05 47 35.7	-0.3
	comp=Z,1.4nm,0.7s,mb4.4,baz=348,slow=9.4,SNR=6.3						
GERES	GERESS Array B	94.61	322	P	P	05 47 47.8	-0.4
	comp=Z,0.4nm,0.7s,mb4.0,baz=123,slow=4.9,SNR=4.3						
RW3	Ridgway	109.18	42	ePdif	Pdif	05 48 45.1	-8.1
TXAR	Lajitas Array	116.93	48	PKP	PKPdf	05 53 13.6	+1.0
	comp=Z,0.2nm,0.6s,baz=264,slow=1.3,SNR=3.7						
TXAR	Lajitas Array	116.93	48	PKP	PKPdf	05 53 13.6	+1.0
TORD	Torodi Ar. Bea	118.84	293	PKP	PKPdf	05 53 15.9	-0.7
	comp=Z,0.5nm,0.7s,baz=59,slow=1.8,SNR=3.6						
TORD				PP	PP	05 54 26.5	-8.8
	comp=Z,0.6nm,0.9s,baz=71,slow=6.4,SNR=2.8						
PLCA	Paso Flores	148.42	156	PKPbc	PKPbc	05 54 15.0	+1.0
	comp=Z,7.4nm,0.9s,baz=222,slow=3.1,SNR=12						
SDV	Santo Domingo	153.42	38	PKP	PKPdf	05 54 20.0	+1.1
	comp=Z,4.4nm,0.9s,baz=340,slow=4.9,SNR=4.1						
SDV				PKPbc	PKPbc	05 54 27.2	+0.7
	comp=Z,7.4nm,0.9s,baz=296,slow=6.2,SNR=6.3						
SDV				PKPab	PKPab	05 54 37.0	-1.6
	comp=Z,4.7nm,0.8s,baz=315,slow=2.9,SNR=3.5						
SDV	Santo Domingo	153.42	38	ePKPdf	PKPdf	05 54 19.6	+0.7
SDV				ePKPbc	PKPbc	05 54 27.3	+0.7
CPUP	Villa Florida	165.87	169	PKP	PKPdf	05 54 32.8	+0.1
	comp=Z,2.1nm,0.9s,baz=129,slow=4.2,SNR=4.4						

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*KISR **09** 05:41:50.5, 3103N×5122E, h33km, ML2.9*
*CSEM **09** 05:41:54.0±0.3, 3094N×5132E, h2km, ML3.0, Error ellipse: s-maj=11.9km s-min=7.8km az=116.0*
*ISCJB **09** 05:41:55.4±0.6, 3095N±004×5138E±005, h10km, Error ellipse: s-maj=6.0km s-min=5.1km az=177.6*
*THR **09** 05:41:55.3±1.2, 3092N×5144E, h14km±33km, ML3.0*
ISC 09 05:41:56.6±0.7**, 3092N**±005×**5142E**±006**, h10**km**, n13, σ1^{s}31**/20**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NASN	Na'in	2.21	32	ePg	Pn	05 42 35.0	+1.6
NASN				eSg	Sg	05 43 05.3	-2.4
NASN				AML	AML	05 43 11.6	
	comp=E,93nm,0.6s						
NASN	Na'in	2.21	32	ePn	Pn	05 42 35.0	+1.7
	SNR=52						
NASN				eSg	Sg	05 43 06.7	-1.0
	SNR=92						
SHGR	Shooshtar-Gavs	2.53	299	ePn	Pg	05 42 43.9	-1.3
	SNR=52						
SHGR				eSg	Sg	05 43 20.5	+2.5
	SNR=91						
GHIR	Ghir-Karzin	2.96	152	ePn	Pn	05 42 44.1	+0.5
GHIR				AML	AML	05 43 43.0	
	comp=E,40nm,0.6s						
GHIR				AML	AML	05 43 44.4	
	comp=N,34nm,0.5s						
GHIR	Ghir-Karzin	2.96	152	ePn	Pn	05 42 44.1	+0.5
	SNR=52						
GHIR				eSg	Sg	05 43 36.3	+4.7
	SNR=91						
GHVR	GHOM	3.55	358	ePn	Pg	05 43 04.2	-0.4
KBD	Kabd	3.67	243	eP	Pn	05 42 51.2	-2.2
KBD				eS	Sn	05 43 36.9	+0.1
	comp=N,17nm,0.5s						
KBD	Kabd	3.67	243	eP	Pn	05 42 51.2	-2.2
	baz=240						
KBD				eS	Sn	05 43 36.9	+0.1
	baz=240						
KBD				AML	AML	05 43 42.8	
	comp=Z,17nm,0.5s,baz=240						
QRN	Al-Qurain	3.74	235	eP	Pn	05 42 52.6	-1.7
	baz=232						
QRN				eS	Sn	05 43 39.1	+0.7
	baz=232						
QRN				AML	AML	05 43 41.3	
	comp=Z,29nm,0.4s,baz=232						
ASAO	Ashtian	3.81	342	ePn	Pn	05 42 55.6	+0.4
ASAO				AML	AML	05 44 13.2	
	comp=E,22nm,0.9s						
DAMV	Damavand	4.72	5	ePn	Pn	05 43 08.7	+0.9
	SNR=52						
SNGE	Sanandaj	5.39	322	ePn	Pn	05 43 18.1	+1.1
SNGE				AML	AML	05 44 27.7	
	comp=N,8.3nm,0.5s						
SNGE	Sanandaj	5.39	322	ePn	Pn	05 43 21.9	+4.9

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*NEIC **09** 05:54:36.4±0.5, 678S×130.10E, h35km, mb4.2/4, Error ellipse: s-maj=13.6km s-min=7.7km az=71.0*
*DJA **09** 05:54:40, 727S×13030E, h30km, MLv4.4/7*
*ISCJB **09** 05:54:41.4±0.6, 703S±005×13027E±005, h111km±8km, mb4.0/10, Error ellipse: s-maj=8.8km s-min=7.4km az=44.9*
*IDC **09** 05:54:42.5±4.2, 685S×13020E, h95km±39km, mb3.9/9, mb1 4.0/11, mb1mx4.0/17, mbtmp4.0/11, MS3.6/1, Ms1 3.6/1, ms1mx3.0/24, Error ellipse: s-maj=31.3km s-min=16.3km az=70.0*
ISC 09 05:54:42.6±0.6**, 702S**±005×**13027E**±005**, h103**km±7km**, n35, σ1^{s}38**/41**, mb4.0**/10**, 1D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	Tual	2.81	61	P	Pn	05 55 26.7	+0.7
TLE				S	Sn	05 55 58.8	-0.5
MSAI	Masohi	3.89	340	P	Pn	05 55 41.6	+1.2
AAI	Ambon	3.91	328	P	Pn	05 55 39.5	-1.1
KAKA	Kakadu	6.04	159⇓	iP	x	05 55 51.3	
	147nm,0.6s						
KAKA				eS	x	05 56 56.0	
KAKA	Kakadu	6.04	159	P	x	05 55 51.4	
	256nm,0.6s,4.5nm						
KAKA				S	x	05 56 59.2	
	256nm,0.6s,4.5nm						
BATI	Baumata	7.26	244	P	Pn	05 56 27.4	+1.4
	20nm,0.3s,baz=115,slow=8.4,SNR=8.7						
BATI				S	Sn	05 57 46.6	-0.3
	12nm,0.3s,baz=145,slow=15,SNR=5.9						
BATI				LR	LR	05 59 43.4	
	comp=Z,395nm,19.4s,baz=119,slow=41						
BATI	Baumata	7.26	244	P	Pn	05 56 27.6	+1.5
	40nm,0.9s,0.2nm						
BATI				S	Sn	05 57 45.5	-1.5
	40nm,0.9s,0.2nm						
KDI	Kendari	8.20	291	P	Pn	05 56 41.0	+2.1
	20nm,1.3s,2µm0.1nm						
KAPI	Kappang	10.65	280	P	Pn	05 57 15.4	+3.2
	1.3nm,0.3s,baz=193,slow=11,SNR=5.1						
KAPI	Kappang	10.65	280	P	Pn	05 57 11.6	-0.6
	6.1nm,1.4s						
FITZ	Fitzroy Crossi	11.90	202	eP	Pn	05 57 25.9	-3.0
	39nm,0.3s						
FITZ				eS	Sn	05 59 29.9	-10
FITZ	Fitzroy Crossi	11.90	202	P	Pn	05 57 27.0	-1.9
	53nm,0.6s						
WRAB	Tennant Creek	13.43	163	ePn	Pn	05 57 47.4	-1.7
	12nm,0.5s						
WRAB				eSn	Sn	06 00 09.5	-7.4
WRAB	Tennant Creek	13.43	163	P	Pn	05 57 47.4	-1.7
	23nm,0.7s						
WB2	Warramunga Arr	13.44	163	eP	Pn	05 57 46.9	-2.3
WB2				eS	Sn	06 00 08.0	-9.2
COEN	Coen	14.43	120	ePn	Pn	05 58 02.2	+0.1
	16nm,0.5s						
COEN				eSn	Sn	06 00 29.9	-11
COEN	Coen	14.43	120	P	Pn	05 58 03.9	+1.8
	16nm,0.7s						
ASAR	Alice Springs	16.91	168	P	Pn	05 58 34.2	+1.2
	3.5nm,0.3s,baz=336,slow=8.9,SNR=133						
MBWA	Marble Bar	17.36	215	eP	Pn	05 58 38.4	-0.1
	5.3nm,0.6s						
CTA	Charters Tower	20.22	132	eP	P	05 59 13.9	+4.3
	9.0nm,0.8s						
CTA				eS	S	06 02 52.7	+1.7
CTA	Charters Tower	20.22	132	P	P	05 59 13.9	+4.4
	12nm,0.7s,baz=308,slow=12,SNR=21						
CTAO	Charters Tower	20.22	132	ePn	P	05 59 13.8	+4.3
	10.0nm,0.8s						
CTAO	Charters Tower	20.22	132	P	P	05 59 13.9	+4.3
FORT	Forrest	23.72	185	P	P	05 59 48.2	+2.9
	17nm,0.7s,mb4.5						
STKA	Stephens Creek	26.89	158	eP	P	06 00 16.9	+2.9
	4.2nm,0.4s,mb4.3						
STKA	Stephens Creek	26.89	158	P	P	06 00 16.9	+2.9
	5.0nm,0.3s,mb4.5,baz=340,slow=9.1,SNR=21						
MJAR	Matsushiro Arr	43.97	9	P	P	06 02 37.8	-1.8
	0.6nm,0.4s,mb3.7,baz=188,slow=10.0,SNR=5.0						
KSRS	Korea Array	44.30	357	P	P	06 02 41.6	-0.6
	1.0nm,0.6s,mb3.8,baz=168,slow=8.9,SNR=3.8						
SONM	Songino Array	58.55	341	P	P	06 04 28.2	-0.1
	0.5nm,0.5s,mb3.8,baz=151,slow=9.9,SNR=3.8						
MKAR	Makanchi Array	68.39	327	P	P	06 05 33.4	+0.2
	5.1nm,0.5s,mb4.6,baz=115,slow=8.7,SNR=40						
ZALV	Zalesovo Beam	71.72	334	P	P	06 05 52.4	-1.0
	0.9nm,0.5s,mb3.8,baz=147,slow=3.0,SNR=4.2						
KURK	Kurchatov	72.68	329	P	P	06 05 58.7	-0.4
	1.4nm,0.5s,mb4.1,baz=125,slow=5.1,SNR=9.5						
KURK	Kurchatov	72.68	329	P	P	06 05 58.7	-0.4
BVAR	Borovoye Array	78.23	328	P	P	06 06 30.7	-0.1
	0.5nm,0.5s,mb3.5,baz=133,slow=6.1,SNR=2.8						
QSPA	South Pole Qui	82.95	180	P	P	06 06 57.5	+1.8
	4.5nm,1.1s,mb4.2,baz=30,slow=1.1,SNR=2.7						

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*IDC **09** 05:54:49.5±3.6, 18.14N×12069E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.8/21, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=72.8km s-min=30.3km az=159.0*
*ISCJB **09** 05:54:52.5±0.7, 1823N±004×12057E±004, h29km±4km, mb3.8/6, Error ellipse: s-maj=6.8km s-min=5.9km az=0.1*
*MAN **09** 05:54:53, 1805N×12056E, h20km, mb4.9, ML3.8, MS3.8*
MAN INTENSITY III - PASUQUIN I NORTE; INTENSITY II - SINAIT I. SUR.
ISC 09 05:54:54.1±0.6**, 1817N**±003×**12061E**±004**, h28**km±4km**, n26, σ0^{s}92**/34**, mb3.8**/6**, 5C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.16	2⇑	iP	Pb	05 55 01.0	+1.5
SIPP	Brgy, Tapao	0.28	211⇑	iP	Pb	05 55 00.4	-0.7
SIPP				i S	Sb	05 55 06.4	+0.6
ABRA	Dolores	0.52	170	eP	Pb	05 55 03.6	-1.2
ABRA				eS	Sb	05 55 11.7	-0.4
APYP	Conner	0.67	117	eP	Pb	05 55 06.5	-0.7
APYP				eS	Sb	05 55 16.8	+0.6
CVP	Callao Caves	1.24	112⇑	iP	Pn	05 55 15.2	-0.4
CVP				eS	Sn	05 55 32.0	+0.6
SGCP	Mt. Cagua	1.36	87	eP	Pn	05 55 17.8	+0.5
CAUP	Cauayan	1.68	136	eP	Pn	05 55 22.4	+0.8
BCPH	Baguio City Da	1.78	181⇓	iP	Pn	05 55 21.4	-1.6
BOLP	Bolinao	1.90	201	eP	Pn	05 55 22.5	-2.1
BOLP				eS	Sn	05 55 48.5	+0.8
PALP	Palanan	2.05	122⇑	iP	Pn	05 55 27.6	+0.9
PALP				i S	Sn	05 55 56.3	+4.9
SCZP	Santa Cruz	2.47	196	eP	Pn	05 55 31.7	-0.8
SCZP				eS	Sn	05 56 03.5	+1.7
BALP	Baler	2.58	159	eP	Pn	05 55 34.1	0.0
PCPH	Palayan	2.63	170⇑	eP	Pn	05 55 34.4	-0.4
POLP	Polilio Island	3.65	159	eP	Pn	05 55 48.7	0.0
LUBP	Lubang	4.42	185	eP	Pn	05 56 01.4	+2.0
GQP	Guinayangan	4.59	157	i P	Pn	05 56 00.7	-1.0
GQP				i S	Sn	05 56 58.5	+4.3
PVCP	Virac	5.68	143	eP	Pn	05 56 16.4	-0.3
JOW	Kunigami	11.15	38	Pn	Pn	05 57 31.5	-0.3
	1.5nm,0.3s,baz=261,slow=19,SNR=4.5						
KSRS	Korea Array	20.26	17	P	P	05 59 27.0	-0.3
	2.4nm,0.8s,baz=197,slow=10,SNR=9.2						
CMAR	Chiang Mai Arr	20.58	274	P	P	05 59 32.5	+1.5
	0.8nm,0.4s,baz=83,slow=9.2,SNR=4.1						
SONM	Songino Array	31.79	342	P	P	06 01 16.3	+0.2
	0.3nm,0.5s,mb3.4,baz=163,slow=10,SNR=3.1						
MKAR	Makanchi Array	42.47	321	P	P	06 02 47.1	+0.4
	2.0nm,0.7s,mb3.9,baz=121,slow=9.7,SNR=9.6						
ZALV	Zalesovo Beam	45.10	331	P	P	06 03 07.0	-0.8
	0.8nm,0.5s,mb3.8,baz=104,slow=8.3,SNR=4.9						
KURK	Kurchatov	46.49	324	P	P	06 03 18.7	-0.1
	2.2nm,0.6s,mb4.3,baz=123,slow=8.3,SNR=21						
BVAR	Borovoye Array	52.09	324	P	P	06 04 01.0	-0.6
	0.3nm,0.4s,mb3.6,baz=101,slow=7.5,SNR=3.4						
YKA	Yellowknife Ar	88.70	22	P	P	06 07 44.2	-0.6
	0.5nm,0.8s,mb3.9,baz=315,slow=5.0,SNR=7.8						

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*ISCJB **09** 05:56:21.3±0.3, 41.15S±006×807E±0.1, h10km, mb4.7/35, MS4.6/8, Error ellipse: s-maj=14.6km s-min=8.7km az=16.3*
*IDC **09** 05:56:21.6±0.6, 41.16S×8071E, h0km, mb4.4/15, mb1 4.4/15, mb1mx4.4/19, mbtmp4.3/15, MS4.5/8, Ms1 4.5/8, ms1mx4.3/16, Error ellipse: s-maj=20.6km s-min=16.7km az=101.0*
*BJI **09** 05:56:21.8, 4120S×8070E, h10km, mB5.4, mb4.9*
*NEIC **09** 05:56:22.9±0.3, 41.17S×8067E, h10km, mb5.3/19, Error ellipse: s-maj=11.0km s-min=7.1km az=112.0*
*GCMT **09** 05:56:22.9±0.4, 4122S×8088E, h16km±1km, MW5.1/60, Moment Tensor Solution. s26,c30; s60,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.18±.22; $M_{\theta\theta}$5.41±.21; $M_{\phi\phi}$-4.23±.20; $M_{r\theta}$-0.71±.55; $M_{\theta\phi}$-0.53±.17; $M_{\phi r}$2.29±.65; Best double couple: $M_0$5.50500×10^{16} NP1:ϕ_s231.00000°, δ65.00000°, λ-165.00000°. NP2: ϕ_s135.00000°, δ76.00000°, λ-26.00000°. Principal axes: T 5.5510, Plg8.0000°, Azm185.0000°; N -0.0930, Plg61.0000°, Azm289.0000°; P -5.4580, Plg28.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 09 05:56:23.2±0.3**, 4117S**±006×**807E**±01**, h10**km**, (h12**km±3.1km**:pP-P), n48, σ0^{s}78**/44**, mb4.7**/35**, MS4.6**/8**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	11.01	219	ePn	Pn	05 58 58.3	-2.3
MAW	Mawson	28.22	194	eP	P	06 02 15.5	-0.2
	11nm,0.7s,mb4.6						
MAW	Mawson	28.22	194	P	P	06 02 15.4	-0.3
	19nm,0.9s,mb4.7,baz=4.2,slow=10,SNR=15						
MAW				LR	LR	06 10 55.8	
	comp=Z,773nm,21.7s,MS4.3,baz=21,slow=31						
MAW	Mawson	28.22	194	eP	P	06 02 15.4	-0.3
	6.1nm,1.0s,mb4.2						
BOSA	Boshof	46.45	267	P	P	06 04 50.4	+0.2
	4.5nm,0.9s,mb4.4,baz=115,slow=7.5,SNR=4.2						
PSI	Prapat	46.82	25	P	P	06 04 53.9	+0.8
	1.7nm,0.3s,mb4.4,baz=198,slow=6.4,SNR=4.0						
PSI	Prapat	46.82	25	P	P	06 04 53.9	+0.8
ASAR	Alice Springs	47.45	85	P	P	06 04 58.8	+0.8
	2.2nm,0.8s,mb4.1,baz=220,slow=8.4,SNR=3.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBTB	Lobatse	48.11	272	P	P	06 05 04.1	+0.9
	3.8nm,0.9s,mb4.4,baz=135,slow=10,SNR=4.7						
VNDA	Vanda	48.29	163	P	P	06 05 03.9	-0.1
	1.4nm,0.6s,mb4.1,baz=255,slow=7.6,SNR=12						
VNDA				LR	LR	06 23 30.2	
	comp=Z,1μm,19.9s,MS4.8,baz=278,slow=34						
STKA	Stephens Creek	48.93	100	P	P	06 05 09.1	-0.3
	4.5nm,0.8s,mb4.6,baz=271,slow=4.7,SNR=3.4						
STKA				LR	LR	06 21 00.4	
	comp=Z,629nm,21.3s,MS4.6,baz=201,slow=30						
QSPA	South Pole Qui	48.99	180	P	P	06 05 09.4	+0.2
	8.3nm,0.8s,mb4.8,baz=292,slow=2.9,SNR=23						
VNA2	Neumayer--Watz	51.12	205	e	P	06 05 25.8	+0.3
	baz=98,slow=7.2						
VNA2				e	pP	06 05 27.9	-0.8
VNA2				e		06 05 32.8	
VNA2				e		06 05 37.4	
VNA1	Neumayer--Stat	51.47	205	e	P	06 05 29.0	+0.9
VNA1				e	pP	06 05 31.4	+0.1
VNA1				e		06 05 35.6	
VNA1				e		06 05 40.3	
VNA3	Neumayer Olymp	51.76	204	e	P	06 05 30.6	+0.3
VNA3				e	pP	06 05 33.0	-0.4
VNA3				e		06 05 37.5	
VNA3				e		06 05 41.6	
LSZ	Lusaka	52.03	284	eP	P	06 05 33.2	+0.2
	6.5nm,0.9s,mb4.6						
CMAR	Chiang Mai Arr	61.70	20	P	P	06 06 41.0	-0.4
	8.0nm,0.8s,mb4.9,baz=210,slow=6.7,SNR=27						
CMAR				LR	LR	06 29 13.8	
	comp=Z,343nm,19.6s,MS4.5,baz=203,slow=32						
CHTO	Chiang Mai	62.04	20	eP	P	06 06 43.2	-0.5
	4.3nm,0.8s,mb4.6						
SHL	Shillong	67.21	11	eP	P	06 07 20.0	+2.7
ODAN	Odare	67.97	6	eP	P	06 07 21.9	-0.2
	30nm,0.9s,mb5.3						
RAMN	Ramite	68.00	6	eP	P	06 07 22.4	+0.1
	34nm,1.1s,mb5.3						
TAPN	Taplejung	68.48	7	eP	P	06 07 25.0	-0.4
	31nm,0.8s,mb5.4						
PKI	Pulchoki	68.53	5	eP	P	06 07 25.6	-0.1
	38nm,1.1s,mb5.2						
DMN	Daman	68.55	4	eP	P	06 07 25.7	-0.1
	29nm,0.8s,mb5.3						
KOLN	Koldanda	68.64	3	eP	P	06 07 25.9	-0.5
	24nm,0.9s,mb5.1						
JIRN	Jiri	68.67	5	eP	P	06 07 26.5	0.0
	24nm,1.1s,mb5.0						
KKN	Kakani	68.74	4	eP	P	06 07 26.7	-0.3
	30nm,0.7s,mb5.3						
GUN	Gumba	68.90	5	eP	P	06 07 28.0	+0.1
	73nm,1.2s,mb5.5						
GKN	Gorkha	68.92	4	eP	P	06 07 27.1	-1.0
	52nm,1.1s,mb5.4						
DANN	Dangsing	69.23	3	eP	P	06 07 29.3	-0.7
	30nm,0.8s,mb5.3						
LSA	Lhasa	71.18	10	eP	P	06 07 41.7	-0.2
	5.2nm,0.8s,mb4.5						
KBL	Kabul	76.10	350	eP	P	06 08 11.1	+0.4
	17nm,1.1s,mb4.9						
LZH	Lanzhou	79.77	19	eP	P	06 08 31.5	+0.4
LZH				AP	pP	06 08 39.0	+4.6
LZH				XP	sP	06 08 43.5	+7.9
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,87nm,4.3s						
GTA	Gaotai	82.07	15	eP	P	06 08 44.8	+1.5
GTA				AP	pP	06 08 49.5	+2.9
GTA				XP	sP	06 08 52.4	+4.6
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.5						
AML	Almayashu	83.16	355	eP	P	06 08 49.1	+0.2
	comp=Z,7.9nm,1.0s,mb4.7						
AAK	Ala-Archa	83.61	355	eP	P	06 08 51.4	+0.2
	comp=Z,10.0nm,1.4s,mb4.8						
EKS2	Erkin-Say	83.68	355	eP	P	06 08 51.7	+0.1
	comp=Z,9.1nm,1.1s,mb4.8						
MKAR	Makanchi Array	87.59	1	P	P	06 09 11.3	+0.4
	comp=Z,2.0nm,0.9s,mb4.3,baz=164,slow=5.6,SNR=4.7						
MKAR				LR	LR	06 46 29.5	
	comp=Z,239nm,19.1s,MS4.6,baz=179,slow=34						
TORD	Torodi Ar. Bea	90.45	287	P	P	06 09 26.7	+1.6
	comp=Z,1.5nm,1.0s,mb4.3,baz=146,slow=5.0,SNR=7.0						
TORD				LR	LR	06 46 31.3	
	comp=Z,389nm,18.2s,MS4.9,baz=65,slow=33						
BRTR	Keskin Array B	91.19	326	P	P	06 09 27.4	-0.6
	comp=Z,0.4nm,0.7s,mb3.9,baz=145,slow=5.3,SNR=2.7						
SONM	Songino Array	91.51	17	P	P	06 09 27.9	-1.4
	comp=Z,0.5nm,0.6s,mb4.0,baz=219,slow=1.9,SNR=4.6						
SONM				LR	LR	06 46 15.8	
	comp=Z,196nm,20.0s,MS4.5,baz=238,slow=33						
KURK	Kurchatov	91.53	359	P	P	06 09 28.0	-1.2
	comp=Z,1.5nm,0.8s,mb4.4,baz=191,slow=4.4,SNR=5.6						
KURK	Kurchatov	91.53	359	P	P	06 09 28.0	-1.2
ZALV	Zalesovo Beam	94.81	2	P	P	06 09 43.1	-1.2
	comp=Z,0.3nm,0.3s,mb4.1,baz=108,slow=1.8,SNR=2.8						
ZALV				LR	LR	06 48 03.2	
	comp=Z,142nm,20.7s,MS4.4,baz=69,slow=33						
RES	Resolute Bay	146.33	358	ePKPbc	PKPbc	06 16 04.3	+1.6
INK	Inuvik	147.24	23	ePKPbc	PKPbc	06 16 06.2	+0.7
YKA	Yellowknife Ar	156.77	18	PKPab	PKPab	06 16 47.1	0.0
	comp=Z,0.2nm,0.4s,baz=336,slow=3.6,SNR=3.9						
TXAR	Lajitas Array	167.67	162	PKP	PKPdf	06 16 29.7	+0.1
	comp=Z,0.2nm,0.8s,baz=187,slow=6.9,SNR=2.6						

*IDC **09** 06:06:56.3±0.8, 3.68S×76.45W, h107km±8km, mb3.2/5, mb1 3.6/9, mb1mx3.4/24, mbtmp3.4/9, Error ellipse: s-maj=26.5km s-min=11.0km az=109.0*
*NEIC **09** 06:06:56.9±0.7, 3.71S×76.48W, Error ellipse: s-maj=20.5km s-min=11.2km az=90.0*
*ISCJB **09** 06:06:57.3±0.9, 3.70S±0.05×76.4W±0.1, h135km±12km, mb3.2/5, Error ellipse: s-maj=22.2km s-min=8.7km az=6.8*
ISC 09 06:06:58.2±0.9**, 3.69S**±0.06×**76.4W**±0.1**, h125**km±12km**, n11, σ0s68**/14**, mb3.4**/5**, Northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.84	211	P	Pn	06 07 56.3	+0.5
	17nm,0.3s,baz=24,slow=11,SNR=87						
ATAH				S	Sn	06 08 41.0	+0.7
	8.6nm,0.3s,baz=122,slow=17,SNR=6.4						
OTAV	Otavalo	4.41	332	ePn	Pn	06 08 02.6	-0.7
OTAV				eSn	Sn	06 08 33.2	-21
NNA	Nana	8.25	183	P	Pn	06 08 54.5	-0.7
	8.9nm,0.3s,baz=352,slow=12,SNR=24						
NNA				S	Sn	06 10 26.2	-0.5
	6.1nm,0.3s,baz=222,slow=20,SNR=6.5						
ROSC	El Rosal	8.74	14	P	Pn	06 09 01.5	-0.2
	0.4nm,0.3s,baz=83,slow=22,SNR=4.4						
SDV	Santo Domingo	13.76	25	P	Pn	06 10 09.0	+1.0
	1.1nm,0.3s,baz=330,slow=5.4,SNR=11						
TXAR	Lajitas Array	41.98	323	P	P	06 14 36.9	-0.1
	0.1nm,0.4s,mb2.9,baz=137,slow=14,SNR=3.0						
ANMO	Albuquerque	47.70	326	P	P	06 15 23.3	+1.1
	0.4nm,0.4s,mb3.6,baz=142,slow=8.1,SNR=8.0						
ANMO	Albuquerque	47.70	326	P	P	06 15 23.3	+1.1
PDAR	Pinedale Array	55.11	331	P	P	06 16 16.9	-0.4
	0.4nm,0.7s,mb3.6,baz=131,slow=9.7,SNR=3.5						
YKA	Yellowknife Ar	72.09	342	P	P	06 18 07.4	-1.0
	0.5nm,0.7s,mb3.5,baz=140,slow=6.0,SNR=9.0						
YKA				pP	pP	06 18 35.9	-3.7
	0.2nm,0.7s,baz=144,slow=5.8,SNR=2.9						
TORD	Torodi Ar. Bea	79.28	76	P	P	06 18 50.9	+0.5
	0.6nm,1.1s,mb3.4,baz=280,slow=5.8,SNR=2.5						
TORD				pP	pP	06 19 19.0	-3.1
	0.2nm,0.4s,baz=280,slow=5.8,SNR=2.4						
TORD				sP	sP	06 19 28.3	-7.1
	0.2nm,0.4s,baz=278,slow=5.7,SNR=2.6						

MAN 09 06:20:40, 9.39N×126.17E, h22km, mb4.8, ML3.7, MS3.7, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.68	232	eP	Pb	06 20 54.2	+1.0
BUTP				eS	Sb	06 21 05.4	+3.1
SCPH	Surigao	0.77	300	eP	Pb	06 20 54.9	+0.1
SCPH				eS	Sb	06 21 07.7	+2.8
MSLP	Maasin	1.49	300	eP	Pn	06 21 05.9	+0.5
BUKP	Musuan	1.86	216	eP	Pn	06 21 10.9	+0.4
BUKP				eS	Sn	06 21 37.2	+3.8

*CSEM **09** 06:27:40.2, 36.26N×6.27E, h0km, ML3.5, After ALG*
CRAAG 09 06:27:40.2, 36.26N×6.27E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CASM	Ain Smara	0.18	91	P	Pg	06 27 45.5	+1.9
CTEI	Djebel Teioual	0.23	151	P	Pg	06 27 46.5	+2.0
CKFL	Kef-Lekhel	0.39	69	P	Pg	06 27 51.0	+3.4
DFRA	Djebel Bou Aff	0.43	312	P	Pg	06 27 51.5	+3.1
SET	Setif	0.71	265	P	Sg	06 28 04.0	+1.1
CMAH	Djebel Manchou	0.99	68	P	Pg	06 28 00.0	+0.7

BJI 09 06:35:05.0, 39.51N×77.72E, h6km, ML3.0, 3C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.35	271	PG	Pg	06 35 29.1	-1.8
KSH				SG	Sg	06 35 48.9	+0.5
KSH				Smax			
	comp=N,96nm,0.3s						
KSH				Smax			
	comp=E,55nm,0.2s						
TKM2	Tokmak 2	3.77	336	⇑Pn	Pn	06 36 06.6	+3.1
	comp=E,3.4nm,0.5s						
TKM2				Pg	Pg	06 36 13.0	-4.1
TKM2				⇑Lg		06 37 05.3	
	comp=E,10nm,0.6s						
KK31	Karatay Array	6.51	306	⇑Pg	Pg	06 36 59.6	-10
	comp=E,0.8nm,0.8s,baz=122,slow=15						
KK31				⇓Lg		06 38 25.9	
	comp=E,1.3nm,0.6s,baz=127,slow=30						

*ISCJB **09** 06:47:59.0±1.4, 45.2S±0.2×95.7E±0.4, h10km, mb4.0/6, MS3.8/4, Error ellipse: s-maj=41.4km s-min=18.3km az=20.6*
*IDC **09** 06:47:59.4±1.6, 45.18S×95.80E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.9/14, mbtmp3.9/4, MS3.9/4, Ms1 3.9/4, ms1mx3.6/16, Error ellipse: s-maj=55.1km s-min=25.5km az=97.0*
*NEIC **09** 06:48:01.0±1.1, 45.20S×95.84E, h10km, mb4.2/2, Error ellipse: s-maj=33.6km s-min=14.9km az=111.0*
ISC 09 06:48:01.1±1.4**, 45.2S**±0.2×**95.9E**±0.4**, h10**km**, n11, σ0s43**/8**, mb4.0**/6**, MS3.8**/4**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	20.56	61	LR	LR	06 57 41.6	
	comp=Z,100nm,18.6s,MS3.2,baz=263,slow=28						
MAW	Mawson	28.31	206	LR	LR	07 02 20.4	
	comp=Z,312nm,20.4s,MS3.9,baz=75,slow=30						
FITZ	Fitzroy Crossi	36.67	52	eP	P	06 55 08.7	+0.7
	5.4nm,1.2s,mb4.2						
ASAR	Alice Springs	37.55	68	P	P	06 55 15.3	-0.1
	1.4nm,1.0s,mb3.7,baz=226,slow=7.3,SNR=8.5						
STKA	Stephens Creek	37.68	85	LR	LR	07 07 35.7	
	comp=Z,222nm,18.8s,MS4.0,baz=206,slow=31						
WB2	Warramunga Arr	40.50	64	eP	P	06 55 39.4	-0.8
WRAB	Tennant Creek	40.51	64	eP	P	06 55 40.5	+0.3
	7.6nm,1.2s,mb4.2						
VNDA	Vanda	41.17	162	P	P	06 55 45.4	+0.3
	1.1nm,0.9s,mb3.5,baz=283,slow=10,SNR=2.5						
VNDA				LR	LR	07 11 38.1	
	comp=Z,204nm,18.7s,MS4.0,baz=30,slow=34						
QSPA	South Pole Qui	44.95	180	P	P	06 56 15.5	-0.2
	1.3nm,1.0s,mb3.7,baz=300,slow=1.0,SNR=3.8						
QSPA	South Pole Qui	44.95	180	P	P	06 56 15.5	-0.2
CMAR	Chiang Mai Arr	63.40	3	P	P	06 58 30.6	-0.1
	1.2nm,0.3s,mb4.5,baz=198,slow=5.7,SNR=7.1						

NNC 09 06:58:06.3±2.2**, 35.07N×68.52E, h0km, mb3.8, mpv3.5, 4C-1D, Error ellipse: s-maj=34.6km s-min=17.1km az=103.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	8.17	10	⇑Pn	Pn	07 00 08.5	+2.5
	1.0nm,0.5s,baz=190,slow=14,SNR=22						
KK31				⇓Sn	Sn	07 01 45.5	+6.5
	0.7nm,0.5s,baz=198,slow=19,SNR=3.9						
TKM2	Tokmak 2	9.57	33	⇑Pn	Pn	07 00 25.4	+0.1
	1.7nm,0.5s						
TKM2				⇑Sn	Sn	07 02 16.1	+2.6
	1.7nm,0.8s						
AB09	Akbulak array	15.53	339	⇑Pn	Pn	07 01 48.3	+1.9
	0.7nm,0.7s						

*IDC **09** 07:14:44.3±1.0, 9.32S×122.75E, h0km, mb4.0/4, mb1 4.3/5, mb1mx4.0/14, mbtmp4.1/5, ML4.6/1, Error ellipse: s-maj=100.4km s-min=22.3km az=65.0*
*ISCJB **09** 07:14:49.6±1.6, 9.6S±0.1×123.0E±0.2, h71km±21km, mb3.8/4, Error ellipse: s-maj=31.5km s-min=9.9km az=148.2*
*NEIC **09** 07:14:50.1±1.3, 9.43S×123.12E, h44km±15km, mb4.2/2, Error ellipse: s-maj=26.8km s-min=10.3km az=58.0*
*DJA **09** 07:14:53, 9.61S×122.89E, h119km, mb4.2/3*
ISC 09 07:14:50.1±1.3**, 9.4S**±0.1×**123.1E**±0.2**, h41**km±17km**, n16, σ1s13**/17**, mb3.9**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	5.52	322	ePn	Pn	07 16 11.0	+1.2
	13nm,0.6s						
FITZ	Fitzroy Crossi	8.96	164	eP	Pn	07 16 57.3	+0.3
	18nm,0.3s						
FITZ				eS	Sn	07 18 30.3	-6.3
KAKA	Kakadu	9.70	110	eP	x	07 16 55.4	
	13nm,0.4s						
KAKA				eS	x	07 18 35.2	
MBWA	Marble Bar	12.11	195	ePn	Pn	07 17 39.0	-1.1
MBWA				eSn	Sx	07 19 36.8	
WRAB	Tennant Creek	15.05	135	ePn	Pn	07 18 19.5	-0.5
	8.6nm,0.6s						
WRAB				eSn	Sn	07 20 58.8	-6.8
WB2	Warramunga Arr	15.06	135	eP	Pn	07 18 19.2	-0.9
WB2				eS	Sx	07 20 58.1	
ASAR	Alice Springs	17.51	145	Pn	Pn	07 18 52.0	+0.8
	1.8nm,0.3s,baz=323,slow=12,SNR=163						
ASAR				Sn	Sn	07 21 58.8	-6.4
	0.8nm,0.3s,baz=313,slow=21,SNR=8.6						
ASAR	Alice Springs	17.51	145	Pn	Pn	07 18 52.0	+0.8
ASAR				Sn	Sn	07 21 58.8	-6.4
STKA	Stephens Creek	28.14	145	eP	P	07 20 39.3	+0.8
	4.7nm,0.8s,mb4.2						
STKA	Stephens Creek	28.14	145	P	P	07 20 41.4	+2.9
	5.2nm,0.7s,mb4.3,baz=323,slow=11,SNR=4.8						
SONM	Songino Array	58.91	347	P	P	07 24 44.3	-0.5
	0.4nm,0.4s,mb3.8,baz=162,slow=6.8,SNR=3.9						
MKAR	Makanchi Array	66.76	331	P	P	07 25 35.4	-1.7
	0.7nm,0.6s,mb3.9,baz=130,slow=6.9,SNR=7.1						
MKAR	Makanchi Array	66.76	331	P	P	07 25 35.4	-1.7
VNDA	Vanda	70.95	172	P	P	07 26 04.4	+1.6
	1.0nm,0.8s,mb3.8,baz=330,slow=8.1,SNR=4.9						
TORD	Torodi Ar. Bea	122.55	280	PKP	PKPdf	07 33 41.7	-0.5
	0.3nm,0.6s,baz=90,slow=2.9,SNR=3.1						
LCO	Las Campanas	139.52	161	ePKPdf	PKPdf	07 34 19.4	+5.5

*NEIC **09** 07:20:08.4, 19.69N×69.09W, h164km, MD4.2(RSPR), After RSPR.*
RSPR 09 07:20:08.4, 19.69N×69.09W, h163km±12km**, MD4.2**/12**, MD4.2**/12**, 12C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSP	Las Mesas	2.42	128	⇑eP	Pn	07 20 49.1	-0.1
LSP				eS	Sn	07 21 21.6	+0.8
CRPR	Cabo Rojo, PR	2.51	131	⇑eP	Pn	07 20 49.9	-0.4
CRPR				eS	Sn	07 21 23.6	+0.8
LRS	Lares	2.54	123	⇑eP	Pn	07 20 51.0	+0.4
LRS				eS	Sn	07 21 24.9	+1.6
AOPR	Arecibo Observ	2.58	121	⇑eP	Pn	07 20 51.5	+0.3
AOPR				eS	Sn	07 21 24.6	+0.4
OBIP	Obispado Ponce	2.86	124	⇑eP	Pn	07 20 55.2	+0.6
OBIP				eS	Sn	07 21 31.4	+1.0
CELP	Cerrillos	2.87	124	⇑eP	Pn	07 20 55.7	+1.1
CELP				eS	Sn	07 21 31.3	+0.9
ICM	Isla Caja Muer	3.02	126	⇑eP	Pn	07 20 56.3	-0.2
ICM				eS	Sn	07 21 35.1	+1.3
SJG	San Juan	3.19	119	eS	Sn	07 21 39.3	+1.5
SJG	San Juan	3.19	119	⇑eP	Pn	07 20 59.1	+0.4
SJG				eS	Sn	07 21 38.3	+0.6
CBYP	Canovanas	3.37	114	⇑eP	Pn	07 21 01.3	+0.4
CBYP	Canovanas	3.37	114	eS	Sn	07 21 42.2	+0.5
CBYP	Canovanas	3.37	114	ePn	Pn	07 21 00.9	0.0
CBYP				eSn	Sn	07 21 41.2	-0.4
CBYP				eS	Sn	07 21 42.2	+0.5
CPD	Cerro la Pandu	3.42	118	⇑eP	Pn	07 21 02.5	+0.9
CPD				eS	Sn	07 21 44.8	+1.8
HUMP	Col San Antoni	3.43	116	⇑eP	Pn	07 21 02.6	+0.9
HUMP				eS	Sn	07 21 43.6	+0.5
MTP	Monte Pirata	3.70	115	⇑eP	Pn	07 21 06.2	+1.0
MTP				eSn	Sn	07 21 49.8	+0.5
MTP				eS	Sn	07 21 50.5	+1.1
STVI	Saint Thomas	4.13	108	eS	Sn	07 22 00.8	+1.6
TBVI	Tortola	4.41	106	eS	Sn	07 22 08.3	+2.5

*DJA **09** 07:28:08, 26.14S×175.32W, h130km, Mw7.8/18*
*IDC **09** 07:28:14.4±1.3, 25.88S×177.65W, h90km±11km, mb6.2/22, mb1 6.2/23, mb1mx6.2/23, mbtmp6.2/23, MS6.9/22, Ms1 6.9/22, ms1mx6.5/38, Error ellipse: s-maj=10.4km s-min=8.9km az=9.0*
*ISCJB **09** 07:28:19.3±0.1, 26.06S±0.02×177.40W±0.03, h148km, mb6.8/137, Error ellipse: s-maj=3.7km s-min=2.7km az=30.9*
*BGS **09** 07:28:20.8±3.7, 26.00S×177.51W, h150km, mb7.0(NEIC)*
*NEIC **09** 07:28:20.8±0.7, 26.00S×177.51W, h152km±6km, mb7.0/127, ME7.3, MW7.7, Error ellipse: s-maj=5.4km s-min=4.2km az=144.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{20}Nm; M_{rr}1.78; $M_{\theta\theta}$-2.48; $M_{\phi\phi}$0.70; $M_{r\theta}$-3.49; $M_{\theta\phi}$-0.66; $M_{\phi r}$-0.73; Best double couple: $M_0$4.20000×10^{20} NP1:ϕ_s258.00000°, δ74.00000°, λ90.00000°. NP2: ϕ_s80.00000°, δ16.00000°, λ92.00000°. Principal axes: T 3.7700, Plg60.0000°, Azm167.0000°; N 0.8300, Plg0.0000°, Azm258.0000°; P -4.6000, Plg29.0000°, Azm348.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s90.00000°, δ20.00000°, λ90.00000°. NP2: ϕ_s270.00000°, δ70.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm180.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm360.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by at least one larger event about 6 seconds later. Focal mechanism and depth based on first large event. Energy computed from BB mechanism.*
NEIC Felt [IV] at Nuku'alofa, Tonga. Felt at Mu'a, Neiafu, Pangai and Vaini, Tonga. Felt at Alofi, Niue. Also felt at Lower Hutt, Napier, Wellington and Whakatane, New Zealand.
*MOS **09** 07:28:20.1±0.9, 25.94S×177.59W, h158km, mb6.7/28, MS7.0/20 Error ellipse: s-maj=9.7km s-min=6.6km az=55.1*
*BJI **09** 07:28:20.8, 26.00S×177.50W, h152km, mB7.5, mb6.6*
*GCMT **09** 07:28:20.8±0.1, 25.75S×177.22W, h150km, MW7.8/122, Moment Tensor Solution. s122,c332; s118,c577; Duration: 20s2 Moment tensor: Scale 10^{20}Nm; M_{rr}2.52±.03; $M_{\theta\theta}$-4.34±.02; $M_{\phi\phi}$1.83±.02; $M_{r\theta}$-5.69±.03; $M_{\theta\phi}$-2.71±.02; $M_{\phi r}$-0.53±.02; Best double couple: $M_0$7.09200×10^{20} NP1:ϕ_s34.00000°, δ25.00000°, λ38.00000°. NP2:ϕ_s269.00000°, δ75.00000°, λ110.00000°. Principal axes: T 5.9430, Plg55.0000°, Azm204.0000°; N 2.3070, Plg19.0000°, Azm84.0000°; P -8.2400, Plg28.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s.*
*SZGRF **09** 07:28:21.3, 26.97S×178.11W, h159km, South of Fiji Islands*
ISC 09 07:28:20.8±0.1**, 26.10S**±0.02×**177.36W**±0.03**, h150**km**, h150**km±2.9km**:pP-P, n1521, σ1s36**/495**, mb6.8**/134**, 97C-67D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.18	189	P	Pn	07 29 11.2	+0.8
	3μm,0.3s,baz=334,slow=2.8,SNR=68						
RAO				S	Sn	07 29 41.3	-7.6
	27μm,0.3s,baz=120,slow=18,SNR=6.4						
RAO				LR	LR	07 29 47.9	
	comp=Z,399μm,19.5s,baz=51,slow=28						
RAO	Raoul Island	3.18	189	ePn	Px	07 29 12.3	
MXZ	Matakaoa Point	12.01	197	P	Pn	07 30 57.3	-10
WCZ	Waipu Caves	12.11	214	P	Pn	07 31 15.1	+6.7
KUZ	Kuaotunu	12.14	207	P	Pn	07 31 11.3	+2.4
WIZ	White Island	12.30	201	P	Pn	07 31 09.3	-1.6
PUZ	Puketiti	12.50	196	P	Pn	07 31 05.3	-8.2
OTAZ	Otara	12.66	209	eP	Pn	07 31 20.7	+5.2
WTAZ	Waiatarua	12.80	210	eP	Pn	07 31 25.0	+7.7
MARZ	Manawahe	12.88	202	P	Pn	07 31 19.5	+1.1
MWZ	Matawai	12.94	198	P	Pn	07 31 12.4	-6.8
EDRZ	Edgecumbe	12.97	201	P	Pn	07 31 22.9	+3.4
URZ	Urewera	13.00	200	P	Pn	07 31 15.5	-4.3
	7.3nm,0.3s,baz=5.2,slow=3.0,SNR=25						
URZ				S	Sn	07 33 40.3	-3.2
	1μm,0.3s,baz=356,slow=12,SNR=9.3						
URZ				ScS	ScS	07 43 47.9	+11
	baz=160,slow=21,SNR=5.7						
URZ				P3KP		08 07 47.9	
	0.9nm,0.3s,baz=76,slow=9.6,SNR=4.4						
URZ	Urewera	13.00	200	P	Pn	07 31 21.5	+1.7
KARZ	Kaharoa	13.06	203	P	Pn	07 31 23.6	+2.9
TAZ	Tarawera	13.16	202	P	Pn	07 31 24.7	+2.7
KNZ	Kokohu	13.55	197	P	Pn	07 31 21.7	-5.2
WATZ	Wairara	13.86	203	P	Pn	07 31 31.6	+0.8
HATZ	Hinemaiaia	13.90	202	P	Pn	07 31 33.4	+2.1
RATZ	Rangitukua	13.98	203	P	Pn	07 31 35.1	+2.7
HIZ	Hauiti	14.01	206	P	Pn	07 31 36.4	+3.6
BKZ	Black Stump Fm	14.02	200	P	Pn	07 31 33.1	+0.3
RITZ	Rihia Road	14.05	202	P	Pn	07 31 34.3	+1.0
KATZ	Kakaramea	14.11	203	P	Pn	07 31 34.6	+0.7
TWVZ	Taurewa	14.28	203	P	Pn	07 31 37.7	+1.5
NGZ	Ngauruhoe	14.32	203	P	Pn	07 31 41.9	+5.3
WPVZ	Whakapapa	14.36	203	P	Pn	07 31 39.4	+2.2
TUVZ	Tukino	14.38	202	P	Pn	07 31 38.5	+1.1
FWVZ	Far West T-bar	14.41	203	P	Pn	07 31 38.1	+0.4
WNVZ	Wahianoa	14.46	202	P	Pn	07 31 35.6	-2.7
MOVZ	Moawhango	14.47	202	P	Pn	07 31 32.9	-5.7
VRZ	Vera Road	14.58	205	P	Pn	07 31 39.0	-0.9
RAEZ	Rainy Point	14.86	206	P	Pn	07 31 46.9	+3.5
PKE	Pukeiti	14.94	207	P	Pn	07 31 52.6	+8.2
NEZ	North Egmont	14.97	207	P	Pn	07 31 49.1	+4.4
TSZ	Takapari Road	15.00	200	P	Pn	07 31 39.6	-5.5
WAZ	Wanganui	15.05	203	P	Pn	07 31 44.3	-1.4
PLUM	Mont Dore	15.09	281	eP	Pn	07 31 51.5	+5.2
NORM	Noumea	15.24	281	eP	Pn	07 31 52.1	+3.9
DZM	Mont Dzumac	15.32	282	eP	Pn	07 31 54.4	+5.2
DZM	Mont Dzumac	15.32	282	ePn	Pn	07 31 51.2	+1.9
	6μm,0.8s						
NOUC	Port Laguerre	15.43	281	eP	Pn	07 31 53.2	+2.6
BFZ	Birch Farm	15.49	198	P	Pn	07 31 50.2	-0.9
MRZ	Mangatainoka R	15.67	200	P	Pn	07 31 44.4	-8.9
KIW	Kapiti Island	16.06	202	P	Pn	07 31 51.6	-6.6
MTW	Mount Morrison	16.15	200	P	Pn	07 31 53.5	-5.7
CAW	Cannon Point	16.23	201	P	Pn	07 31 52.2	-8.1
PAWZ	Paruwai Farm	16.37	200	P	Pn	07 31 56.1	-5.8
MSWZ	Moikau Station	16.46	200	P	Pn	07 31 55.8	-7.2
MRW	Makara Radio	16.46	202	P	Pn	07 31 56.8	-6.3
WEL	Wellington	16.49	201	P	Pn	07 31 58.6	-4.8
SNZO	South Karori	16.53	201	ePn	Pn	07 32 00.3	-3.6
	2μm,0.6s						
SNZO				eS	S	07 34 56.2	-12
BHW	Baring Head	16.57	201	P	Pn	07 31 58.4	-5.9
TCW	Tory Channel	16.59	203	P	Pn	07 31 57.7	-6.9
RAR	Rarotonga	16.83	77	P	Pn	07 32 08.2	+0.6
	6.2nm,0.3s,baz=246,slow=7.0,SNR=26						
RAR				S	S	07 35 17.3	+2.4
	134nm,0.3s,baz=103,slow=21,SNR=4.1						
RAR	Rarotonga	16.83	77	ePn	Pn	07 32 10.1	+2.4
	36μm,1.7s						
NNZ	Nelson	16.92	205	P	Pn	07 32 02.6	-6.0
QRZ	Quartz Range	16.92	207	P	Pn	07 32 06.5	-2.1
CMWZ	Cape Campbell	17.09	202	P	Pn	07 32 08.5	-2.1
BSWZ	Blackbirch Sta	17.18	203	P	Pn	07 32 07.6	-4.0
THZ	Tophouse	17.57	205	P	Pn	07 32 08.6	-7.8
FUNA	Funafuti	17.78	349	eP	Pn	07 32 14.6	-4.5
	15nm,0.2s						

FUNA eS S 07 35 29.2 -5.3
KHZ Kahutara 17.91 202 P Pn 07 32 13.3 -7.1
DSZ Denniston Nort 17.99 207 P Pn 07 32 14.4 -6.9
LTZ Lake Taylor 18.69 204 P P 07 32 22.2 -5.2
CRLZ Canterbury Las 19.25 203 P P 07 32 31.8 -1.7
MQZ McQueen's Vall 19.36 202 P P 07 32 30.9 -3.8
WVZ Waitaha Valley 19.53 207 P P 07 32 32.6 -4.0
RPZ Rata Peaks 19.95 205 P P 07 32 37.3 -3.7
103nm,0.6s,baz=294,slow=2.2,SNR=50
RPZ S S 07 36 11.9 -5.2
2µm,0.6s,baz=349,slow=23,SNR=13
RPZ Rata Peaks 19.95 205 P P 07 32 36.6 -4.4
FOZ Fox Glacier 20.37 208 P P 07 32 40.8 -4.7
LBZ Lake Benmore 20.85 206 P P 07 32 46.4 -4.3
JCZ Jackson Bay 21.18 209 P P 07 32 50.7 -3.5
ODZ Otahua Downs 21.23 204 P P 07 32 50.9 -3.8
WKZ Wanaka 21.68 207 P P 07 32 56.2 -3.3
EAZ Earnscleugh 21.90 206 P P 07 33 01.1 -0.6
MSZ Milford Sound 22.01 209 P P 07 33 00.2 -2.8
TUZ Tuapeka 22.38 204 P P 07 33 04.2 -2.5
MLZ Mavora Lakes 22.45 207 P P 07 33 04.5 -2.8
DCZ Deep Cove 22.99 209 P P 07 33 09.6 -2.6
WHZ Wether Hill Ro 22.99 207 P P 07 33 09.2 -3.0
PAE Paea 27.07 78 *eP* P 07 33 55.3 +5.8
6µm,1.0s,mb7.2
PPT Papeete 27.11 77 *eP* P 07 33 55.7 +5.9
1µm,1.1s,mb6.4
PPT eLR LR 07 40 33.4
1338µm,30.8s
PPT Papeete 27.11 77 P P 07 33 53.6 +3.8
724nm,1.1s,mb6.2,baz=213,slow=5.2,SNR=29
PPT LR LR 07 42 09.5
comp=Z,250µm,21.1s,baz=254,slow=31
HNR Honiara 27.15 303 P P 07 33 49.2 -1.1
1µm,0.7s,mb6.6,baz=167,slow=3.1,SNR=34
HNR S S 07 38 13.6 -4.2
276nm,0.7s,baz=247,slow=21,SNR=1.9
HNR LR LR 07 41 30.3
comp=Z,324µm,18.1s,baz=131,slow=30
HNR Honiara 27.15 303 *eP* P 07 33 48.1 -2.1
21µm,1.3s,mb7.6
HNR eS S 07 38 12.9 -5.0
TVO Taravao 27.31 78 *eP* P 07 33 57.4 +5.8
5µm,0.7s,mb7.2
TVO Taravao 27.31 78 *eP* P 07 33 57.4 +5.8
TVO pmax pmax
comp=Z,5µm,0.7s,mb7.2
TIAR Tiarei 27.32 78 *eP* P 07 33 57.5 +5.8
ARMA Armidale 27.60 254 *eP* P 07 33 55.2 +1.1
ARMA eSCP ScP 07 40 40.7 +6.1
ARMA eS ScS 07 44 32.7 +5.9
MEH Mehetia 28.32 79 *eP* P 07 34 06.0 +5.4
comp=Z,9µm,1.2s,mb7.4
EIDS Eidsvold 28.40 264 *eP* P 07 34 01.0 -0.2
comp=Z,2µm,0.8s,mb7.0
TARA Tarawa 28.86 340 *eP* P 07 34 00.9 -4.4
comp=Z,26µm,1.0s,mb7.9
TARA eS S 07 38 40.4 -4.2
PMOR Pomariorio Ree 29.65 74 *eP* P 07 34 17.9 +5.5
comp=Z,1µm,1.1s,mb6.6
CNB Canberra Magne 29.93 244 *eP* P 07 34 15.1 +0.4
CNB eS S 07 39 03.9 +2.7
CNB eSCP ScP 07 40 48.0 +6.1
CAN Canberra 30.23 244 *eP* P 07 34 17.7 +0.4
CAN pmax pmax
comp=Z,1µm,1.1s,mb6.5
CAN Canberra 30.23 244 *eP* P 07 34 17.7 +0.4
comp=Z,1µm,1.1s,mb6.5
MOO Moorlands 33.24 232 *eP* P 07 34 43.6 0.0
MOO eS S 07 39 56.4 +4.0
MOO eSCP ScP 07 40 58.6 +5.7
MOO eSCS ScS 07 44 56.7 +3.0
TAU Tasmania Unive 33.29 231 *eP* P 07 34 44.6 +0.6
TAU Tasmania Unive 33.29 231 *eP* P 07 34 43.8 -0.3
comp=Z,13µm,2.6s,mb7.2
MCQ Macquarie Isla 33.31 205 *eP* P 07 34 44.5 +0.5
MCQ Macquarie Isla 33.31 205 *eP* P 07 34 45.4 +1.4
TOO Toolangi 33.37 241 *eP* P 07 34 44.6 -0.2
TOO eS S 07 39 58.2 +3.6
TOO eSCP ScP 07 40 58.2 +4.8
CTA Charters Tower 33.92 272 *eP* P 07 34 48.2 -1.5
comp=Z,3µm,0.9s,mb7.0
CTA eS S 07 40 03.7 +0.2
CTA *e* 07 41 03.1
CTA eSCS ScS 07 45 02.7 +4.7
CTA Charters Tower 33.92 272 P P 07 34 48.0 -1.7
comp=Z,306nm,0.7s,mb6.2,baz=100,slow=11,SNR=97
CTA S S 07 40 03.8 +0.3
comp=Z,67nm,0.6s,baz=226,slow=17,SNR=5.6
CTA ScP ScP 07 41 02.7 +7.0
comp=Z,367nm,1.0s,baz=108,slow=1.1,SNR=3.8
CTA ScS ScS 07 45 05.0 +7.0
comp=Z,48nm,1.1s,baz=14,slow=23,SNR=5.6
CTA P3KPbc 08 05 58.4
comp=Z,11nm,0.9s,baz=275,slow=5.0,SNR=6.1
CTA Charters Tower 33.92 272 *eP* P 07 34 48.2 -1.5
CTA eS S 07 40 03.7 +0.2
CTA *e* 07 41 03.1
CTA pmax pmax
comp=Z,3µm,0.9s
CTAO Charters Tower 33.92 272 *eP* P 07 34 50.6 +0.9
CTAO Charters Tower 33.92 272 *eP* P 07 34 48.9 -0.8
comp=Z,25µm,2.1s,mb7.6
XMAS Kiritimati 33.96 38 *eP* P 07 34 49.0 -1.2
comp=Z,189nm,0.6s,mb6.0
STKA Stephens Creek 36.20 251 *eP* P 07 35 08.4 -0.8
comp=Z,1µm,1.4s,mb6.4
STKA eS S 07 40 33.4 -4.8
STKA Stephens Creek 36.20 251 P P 07 35 07.8 -1.4
comp=Z,77nm,0.6s,baz=88,slow=8.3,SNR=42
STKA S S 07 40 37.9 -0.3
comp=Z,60nm,0.6s,baz=357,slow=15,SNR=1.5
STKA P3KPbc 08 05 48.3
comp=Z,7.9nm,0.9s,baz=321,slow=4.2,SNR=5.7
STKA PKPPKP 08 08 01.1
comp=Z,17nm,0.9s,baz=291,slow=5.2,SNR=3.9
PMG Port Moresby 37.48 290 *eP* P 07 35 21.6 +1.5
comp=Z,15µm,1.4s,mb7.4
KWAJ Kwajalein Atol 37.64 335 *eP* P 07 35 19.0 -2.4
comp=Z,5µm,1.1s,mb7.0
KWAJ eS S 07 40 54.9 -5.3
RKT Rikitea 38.53 95 *eP* P 07 35 35.4 +6.5
comp=Z,1µm,1.0s,mb6.6
COEN Coen 38.84 280 *eP* P 07 35 30.4 -1.1
comp=Z,4µm,1.1s,mb6.9
TAOE Nuku Hiva Isla 39.23 71 *eP* P 07 35 38.1 +3.3
comp=Z,17µm,1.1s,mb7.6
TAOE Nuku Hiva Isla 39.23 71 *eP* P 07 35 33.6 -1.2
ASAR Alice Springs 44.08 262 P P 07 36 11.3 -2.8
comp=Z,308nm,0.7s,mb6.1,baz=94,slow=7.6,SNR=242
ASAR ScP ScP 07 41 43.5 +8.9
comp=Z,360nm,1.0s,baz=117,slow=4.3,SNR=7.1
ASAR S S 07 42 36.5 +1.0
comp=Z,145nm,0.9s,baz=110,slow=15,SNR=9.3
ASAR P3KPbc 08 05 16.0
comp=Z,5.4nm,1.0s,baz=304,slow=2.4,SNR=7.4
ASAR P3KP 08 06 53.2
comp=Z,4.6nm,0.7s,baz=204,slow=0.9,SNR=7.8
ASAR PKPPKP 08 08 02.5
comp=Z,13nm,1.0s,baz=254,slow=0.9,SNR=5.2
ASAR Alice Springs 44.08 262 P P 07 36 11.3 -2.8
ASAR S S 07 42 36.5 +1.0
ASAR pmax pmax
comp=Z,308nm,0.7s
ASAR smax
comp=N,145nm,0.9s
ASAR Alice Springs 44.08 262 P P 07 36 11.3 -2.8
ASAR ScP ScP 07 41 43.5 +8.9
ASAR S S 07 42 36.5 +1.0
ASAR *e* 08 05 16.0
ASAR PKKKP 08 06 53.2
ASAR P'P' 08 08 02.5
WB2 Warramunga Arr 44.66 267 *eP* P 07 36 16.5 -2.3
WB2 *e* 07 38 13.8
WB2 eS S 07 42 37.5 -6.5
WB2 eSCS ScS 07 46 00.7 -0.4
WRAB Tennant Creek 44.67 267 P P 07 36 16.0 -2.8
comp=N,18µm,1.3s,mb7.5
WRAB Tennant Creek 44.67 267 *c iP* P 07 36 17.2 -1.6
WRAB Tennant Creek 44.67 267 *eP* P 07 36 16.0 -2.8
FORT Forrest 47.83 251 *eP* P 07 36 40.5 -2.9
comp=N,3µm,0.5s,mb7.2
FORT eS S 07 43 22.4 -6.6
DRV Dumont d'Urvil 48.33 201 P P 07 36 48.0 +1.3
DRV S S 07 43 33.0 -2.0
DRV L 07 48 00.0
DRV R 07 51 00.0
KAKA Kakadu 48.90 276 *eP* x 07 36 29.2
comp=N,1µm,0.6s
KAKA eS x 07 43 26.3
KHU Kahuku 49.78 27 *eP* P 07 37 01.8 +3.5
KHU eS S 07 43 51.3 -4.9
STCH Steam Cracks 50.11 28 *eP* P 07 36 59.8 -0.9
STCH eS S 07 44 04.1 +3.3
POHA Pohakuloa 50.27 27 *eP* P 07 37 02.5 +0.6
comp=N,8µm,1.4s,mb7.1
HON Honolulu 50.74 24 *eP* P 07 37 05.8 +0.3
HON Honolulu 50.74 24 *eP* P 07 37 04.4 -1.0
KIP Kipapa 50.83 23 *eP* P 07 37 05.2 -1.0
comp=N,11µm,1.5s,mb7.3
SBA Scott Base 52.35 184 *eP* P 07 37 20.2 +3.4
SBA pmax pmax
comp=Z,5µm,1.2s,mb7.0
SBA Scott Base 52.35 184 *eP* P 07 37 20.2 +3.4
comp=Z,5µm,1.2s,mb7.0
VNDA Vanda 52.42 186 P P 07 37 19.6 +2.3
comp=Z,1µm,1.1s,mb6.5,baz=354,slow=7.7,SNR=109
VNDA S S 07 44 39.3 +8.0
comp=Z,22nm,0.9s,baz=160,slow=12,SNR=1.7
VNDA PKPPKP 08 07 50.9
comp=Z,9.6nm,1.0s,baz=282,slow=5.0,SNR=5.1
FITZ Fitzroy Crossi 53.06 266 *eP* P 07 37 20.8 -2.1
comp=Z,2µm,0.6s,mb7.0
FITZ *e*sP sP 07 38 11.8 -2.1
FITZ eS S 07 44 38.2 -3.4
FITZ eSCS ScS 07 47 02.0 +4.3
GUMO Guam 53.91 313 P P 07 37 27.4 -1.6
comp=Z,545nm,0.8s,mb6.3,baz=191,slow=4.0,SNR=12
GUMO S S 07 44 51.9 -1.0
comp=Z,95nm,0.9s,baz=72,slow=24,SNR=4.9
GUMO Guam 53.91 313 *eP* P 07 37 28.0 -0.9
comp=Z,27µm,1.9s,mb7.7
MIDW Midway 54.00 360 *eP* P 07 37 27.4 -1.9
comp=Z,23µm,1.8s,mb7.6
MIDW eS S 07 44 52.6 -1.1
KLBR Kellerberrin 56.37 248 *eP* P 07 37 43.5 -3.0
comp=Z,2µm,0.8s,mb7.0
KLBR eS S 07 45 25.5 0.0
NWAO Narrogin (SRO) 56.53 246 P P 07 37 45.8 -1.9
comp=Z,643nm,1.1s,mb6.3,baz=105,slow=7.3,SNR=36
NWAO S S 07 45 27.3 -0.3
comp=Z,41nm,1.0s,baz=128,slow=16,SNR=1.9
NWAO Narrogin (SRO) 56.53 246 P P 07 37 45.8 -1.9
NWAO S S 07 45 27.3 -0.3
NWAO pmax pmax
comp=Z,643nm,1.2s
NWAO smax
comp=N,41nm,1.0s
NWAO Narrogin (SRO) 56.53 246 *eP* P 07 37 45.2 -2.5
comp=N,3µm,1.8s,mb6.8
MBWA Marble Bar 57.37 261 *eP* P 07 37 50.8 -2.9
comp=N,2µm,1.2s,mb6.8
MUN Mundaring 57.58 247 *eP* P 07 37 52.7 -2.3
MUN eS S 07 45 38.2 -3.1
BATI Baumata 57.77 274 P P 07 37 55.9 -0.7
comp=N,81nm,0.5s,mb5.8,baz=235,slow=1.9,SNR=19
BATI S S 07 45 44.0 -0.3
comp=N,30nm,0.7s,baz=253,slow=21,SNR=2.0
BATI PKP2bc 08 07 52.5
comp=N,165nm,1.2s,baz=110,slow=2.8,SNR=6.5
CASY Casey 59.21 207 *eP* P 07 38 05.1 -0.6
CASY eS S 07 46 01.3 -0.1
RPN Rapa Nui 60.12 108 P P 07 38 19.6 +7.0
comp=N,10µm,1.5s,mb7.4,SNR=18
RPN Rapa Nui 60.12 108 P P 07 38 16.4 +3.8
comp=N,2µm,1.2s,mb6.7,baz=294,slow=3.8,SNR=27
RPN S S 07 46 25.1 +11
comp=N,19nm,0.4s,baz=189,slow=3.8,SNR=1.9
RPN LR LR 07 56 42.3
comp=N,66µm,20.2s,baz=252,slow=28
RPN Rapa Nui 60.12 108 *eP* P 07 38 13.9 +1.3
comp=N,11µm,1.9s,mb7.4
RPN eS S 07 46 23.7 +9.4
KAPI Kappang 63.49 278 P P 07 38 32.1 -3.3
comp=N,8µm,1.2s,mb7.4
KAPI Kappang 63.49 278 PKPPKP 08 07 32.7
comp=N,73nm,1.3s,baz=263,slow=2.3,SNR=5.6
KAPI Kappang 63.49 278 *eP* P 07 38 32.6 -2.8
MATI Mati 63.79 293 *eP* P 07 38 36.4 -0.9
QSPA South Pole Qui 64.00 180 P P 07 38 40.0 +2.4
comp=N,7µm,1.0s,mb7.4,baz=40,slow=3.3,SNR=181
QSPA S S 07 47 15.1 +14
comp=N,50nm,0.9s,baz=96,slow=20,SNR=5.9
GSPH General Santos 64.41 291⇑ *eP* P 07 38 45.1 +3.8
DAV Davao City (W) 64.42 293 P P 07 38 41.2 -0.2
comp=N,2µm,0.7s,mb7.0,baz=66,slow=5.3,SNR=12
DAV S S 07 47 09.9 +1.5
comp=N,90nm,0.4s,baz=277,slow=21,SNR=4.7
DAV Davao City (W) 64.42 293⇑ *eP* P 07 38 41.0 -0.4
DMPH Davao City--Mi 64.48 293⇑ *eP* P 07 38 43.7 +1.9
KCP Kidapawan 64.79 292⇓ *eP* P 07 38 50.3 +6.5
BUKP Musuan 65.28 293 *eP* P 07 38 45.3 -1.7
PCI Palu 65.30 282 P 07 47 47.2
BUTP Butuan 65.42 294 *eP* P 07 38 48.3 +0.4
CTBH Cotabato--PC H 65.61 292⇑ *eP* P 07 38 50.0 +0.9
CBIJ Chichi jima 65.68 321 LR LR 08 02 37.0
comp=N,73µm,20.4s,baz=15,slow=32
CBIJ PKPPKP 08 07 29.4
comp=N,77nm,0.8s,baz=134,slow=21,SNR=3.4
SCPH Surigao 65.98 295 *eP* P 07 38 54.2 +2.8
DNP Denpasar 65.99 272 P S 07 47 34.4 +6.7
MIR Mirnyy 66.22 206*α iP* P 07 38 52.5 +0.4
MIR *i* 07 39 22.0
MIR *i* S S 07 47 30.0 +1.3
MIR *i* 07 48 32.0
MIR pmax pmax
comp=Z,1µm,1.0s,mb6.6
MIR pmax pmax
comp=Z,17µm,6.0s
NBBI Negara 66.65 272 P S 07 47 49.8 +14
MSLP Maasin 66.69 295 *eP* P 07 38 56.1 +0.2
BESP Borongan 67.05 297 *eP* P 07 39 01.3 +3.1
DCPH Dipolog City 67.08 293⇓ *eP* P 07 39 01.3 +2.9
PLP Palo 67.17 296⇓ *eP* P 07 38 59.3 +0.3
TBP Tagbilaran 67.27 294 *eP* P 07 39 01.9 +2.3
TBP Tagbilaran 67.27 294 *eP* S 07 47 38.6 -4.3
IPIL Ipil 67.31 291 *eP* P 07 38 58.1 -1.7
IPIL Ipil 67.31 291⇑ *eP* P 07 39 03.0 +3.1
OCLP Ormoc 67.41 296 *eP* P 07 39 00.7 +0.2
LLP Lapu-Lapu 67.53 295⇑ *eP* P 07 39 03.9 +2.7
LLP eS S 07 47 44.2 -1.7
CNP Catarman 68.19 297 *eP* P 07 39 08.0 +2.6
KRKI Karangkates 68.69 271 P S 07 48 12.2 +12
comp=Z,2µm,1.7s,comp=Z,9.1nm
GUIM Jordan 68.83 294 *eP* P 07 39 08.2 -1.2
RCP Roxas 69.21 295⇓ *eP* P 07 39 11.3 -0.4
RCP Roxas 69.21 295⇓ *eP* S 07 48 00.9 -5.0
PVCP Virac 69.21 298 *eP* P 07 39 13.8 +2.1
PVCP Virac 69.21 298⇓ *eP* P 07 39 14.7 +3.0
MYLDM Lahad Datu 69.42 287 ⇑ *P* P 07 39 17.3 +4.3
TSM Tawau 69.53 286 ⇑ *P* P 07 39 16.6 +3.0
KALP Kalibo 69.61 295⇑ *eP* P 07 39 18.8 +4.7
CUYO Cuyo Island 70.24 293 *eP* P 07 39 20.0 +2.0
OTRP Odiongan 70.24 295 *eP* P 07 39 18.1 +0.1
AUQP San Andres 70.25 296 *eP* P 07 39 21.2 +3.2
GQP Guinayangan 70.75 297⇓ *eP* P 07 39 21.3 +0.3
GQP Guinayangan 70.75 297 *eP* S 07 48 17.4 -6.5
SDKM Sandakan 70.78 287 ⇑ *P* P 07 39 23.7 +2.4
SJMP San Jose 71.03 295 *eP* P 07 39 23.8 +1.1
BUSP Coron 71.54 294 *eP* P 07 39 26.6 +0.8
PPR Puerto Princes 71.58 291⇓ *eP* P 07 39 28.4 +2.3
POLP Polilio Island 71.62 297 *eP* P 07 39 29.0 +2.7
KDM Kudat 71.72 288 ⇑ *P* P 07 39 31.4 +4.4
PGP Puerto Galera 71.73 296⇑ *eP* P 07 39 28.6 +1.6
ENPP El Nido 71.75 293 *eP* P 07 39 28.7 +1.6
KKM Kota Kinabalu 71.82 286 *eP* P 07 39 25.6 -2.0
comp=Z,2µm,1.0s,mb6.8
KKM Kota Kinabalu 71.82 286 ⇓ *P* P 07 39 29.9 +2.3
BATP Bataraza 71.85 290 *eP* P 07 39 29.4 +1.7
CLJI Cilicap 71.96 270 P S 07 48 49.1 +11
comp=Z,2µm,1.3s,comp=Z,7.8nm
LUBP Lubang 72.44 295 *eP* P 07 39 30.5 -0.7
BALP Baler 72.48 298 *eP* P 07 39 32.1 +0.7
PALP Palanan 72.56 300⇓ *iP* P 07 39 35.8 +4.0
PCPH Palayan 72.76 297⇑ *eP* P 07 39 35.9 +2.9
CAUP Cauayan 72.96 299 *eP* P 07 39 39.9 +5.7
BTM Bintulu 73.18 282 ⇑ *P* P 07 39 38.8 +3.2
CVP Callao Caves 73.39 300⇑ *eP* P 07 39 38.2 +1.5
SGCP Mt. Cagua 73.53 300 *eP* P 07 39 38.0 +0.5
SBUM Sibu 73.59 281⇓ *P* P 07 39 39.4 +1.4
BCPH Baguio City Da 73.63 298⇓ *eP* P 07 39 42.8 +4.7
SCZP Santa Cruz 73.83 297 *eP* P 07 39 40.6 +1.3
XMIS Christmas Isla 73.84 266 *eP* P 07 39 37.1 -2.4
XMIS eS S 07 48 56.8 -2.5
APYP Conner 73.94 300 *eP* P 07 39 41.4 +1.5
BOLP Bolinao 74.16 298 *eP* P 07 39 44.0 +2.8
JOW Kunigami 74.23 311 P P 07 39 41.3 -0.1
comp=Z,432nm,0.8s,mb6.2,baz=144,slow=6.3,SNR=40
ABRA Dolores 74.23 299 *eP* P 07 39 41.2 -0.4
SIPP Brgy, Tapao 74.59 299 *eP* P 07 39 47.8 +4.1
PIP Pasuquin 74.69 300⇓ *eP* P 07 39 49.5 +5.3
KSM Kuching 74.83 279 *eP* P 07 39 42.9 -2.4
comp=Z,2µm,0.9s,mb6.8
KSM eS S 07 48 55.1 -15
KSM Kuching 74.83 279 ⇓ *P* P 07 39 47.7 +2.4
MJAR Matsushiro Arr 75.06 324 P P 07 39 43.5 -2.5
comp=Z,365nm,1.1s,mb5.9,baz=164,slow=5.9,SNR=64
MJAR S S 07 49 26.0 +14
comp=Z,15nm,1.2s,baz=296,slow=41,SNR=3.9
MJAR PKKPbc PKKPbc 07 59 19.2 +9.3
comp=Z,6.7nm,1.1s,baz=315,slow=6.8,SNR=4.2
MJAR PKP2bc 08 06 51.3
comp=Z,3.0nm,0.8s,baz=248,slow=3.0,SNR=4.2
MJAR PKPPKP 08 07 10.2
comp=Z,10nm,1.0s,baz=317,slow=2.4,SNR=4.7
MJAR LR LR 08 07 44.0
comp=Z,83µm,22.0s,baz=150,slow=32
MJAR Matsushiro Arr 75.06 324 P P 07 39 43.5 -2.5
MJAR S S 07 49 26.0 +14
MJAR pmax pmax
comp=Z,365nm,1.1s
MJAR Matsushiro Arr 75.06 324 P P 07 39 43.5 -2.5
MJAR S S 07 49 26.0 +14
MJAR PKKPbc PKKPbc 07 59 19.2 +9.3
MJAR ⇑ *e* 08 06 51.3
MJAR P'P' 08 07 10.2
MJAR LR LR 08 07 44.0
MAJO Matsushiro 75.06 324 *eP* P 07 39 43.6 -2.4
SBJI Serang 75.23 270 P S 07 49 20.8 +6.1
comp=Z,2µm,2.2s
PMSA Palmer Station 75.95 156 P P 07 39 53.4 +2.7
comp=Z,1µm,0.9s,mb6.6,baz=216,slow=6.5,SNR=6.8
PMSA S S 07 49 29.8 +8.9
comp=Z,28nm,1.0s,baz=350,slow=16,SNR=3.0
PMSA Palmer Station 75.95 156 *eP* P 07 39 50.3 -0.4
comp=Z,3µm,1.1s,mb6.8
PMSA S S 07 49 29.9 +8.9
MAW Mawson 76.53 200 *eP* P 07 39 54.0 +0.1
comp=Z,2µm,0.6s,mb6.9
MAW eS S 07 49 36.2 +9.1
MAW Mawson 76.53 200 P P 07 39 54.1 +0.2
comp=Z,1µm,0.5s,mb6.8,baz=132,slow=6.7,SNR=81
MAW S S 07 49 31.9 +4.8
comp=Z,9.6nm,0.9s,baz=305,slow=18,SNR=1.7
MAW LR LR 08 11 36.6
comp=Z,52µm,18.6s,baz=123,slow=34
TWG Pinlang 76.92 304 *eP* P 07 39 58.2 +1.4
comp=Z,710nm,0.7s,mb6.4
ERM Erimo 76.97 331 P P 07 40 00.4 +3.8
comp=Z,8µm,1.0s,mb7.3,SNR=37
ERM Erimo 76.97 331⇑ *iP* P 07 39 56.1 -0.5
YULB Yu-li 77.08 304 *eP* P 07 39 57.9 +0.2
comp=Z,905nm,1.0s,mb6.4
AMKA Amchitka 77.19 358 *eP* P 07 39 56.8 -0.8
NACB Ninganchiao 77.32 305 *eP* P 07 39 58.3 -0.7
comp=Z,7µm,1.2s,mb7.2
YUK Yuzh-Kuril'sk 77.50 334 P P 07 40 00.5 +0.9
YUK eS S 07 49 40.5 +2.4
YUK pmax pmax
comp=N,2µm,1.0s
YUK pmax pmax
comp=E,550nm,0.5s
YUK smax
comp=N,189µm,11.0s
YUK smax
comp=E,132µm,11.0s
TPUB Ta-pu 77.53 304 *eP* P 07 39 58.7 -1.5
comp=E,3µm,1.0s,mb6.9
TPUB eS S 07 49 29.4 -10
SSLB Suanglung 77.57 304 *eP* P 07 40 00.1 -0.3
comp=E,3µm,1.0s,mb6.8
ADK Adak 77.64 0 *eP* P 07 39 57.6 -2.5
YHNB Yeheng 77.77 305 *eP* P 07 40 02.4 +0.9
comp=E,7µm,1.4s,mb7.1
TATO Taipei 77.87 306 *eP* P 07 40 04.9 +2.8
SMY Shemya 78.84 355 *eP* P 07 40 07.6 +0.9
comp=E,15µm,1.9s,mb7.3
ASAJ Asahikawa 78.91 332 LR LR 08 08 06.2
comp=E,118µm,21.8s,baz=214,slow=30
ASAJ Asahikawa 78.91 332 P P 07 40 07.3 0.0
NIKO Nikolski 79.08 5 *eP* P 07 40 06.6 -1.4
comp=E,15µm,1.2s,mb7.5
USHA Ushuaia 79.16 146 P P 07 40 10.0 +1.3
comp=E,628nm,0.9s,mb6.2,baz=220,slow=7.0,SNR=14
USHA S S 07 50 04.8 +9.0
comp=E,20nm,1.2s,baz=134,slow=8.1,SNR=3.1
SKR Severo-Kuril's 79.96 343 *eP* P 07 40 12.0 -0.8
SKR *e* 07 40 55.0
SKR *e* 07 43 20.0
SKR *e*PPP 07 45 10.0
SKR *e* 07 50 45.0
SKR pmax pmax
comp=N,1µm,1.0s
SKR pmax pmax
comp=Z,2µm,1.0s,mb6.8
SKR pmax pmax
comp=E,3µm,2.5s
SKR pmax pmax
comp=Z,97µm,18.0s
SKR pmax pmax
comp=N,31µm,12.0s
SKR pmax pmax
comp=E,44µm,12.0s
SKR pmax pmax
comp=N,16µm,18.0s
SKR pmax pmax
comp=E,17µm,18.0s
SKR pmax pmax
comp=Z,32µm,18.0s
SKR MLR MLR
comp=N,26µm,18.0s
SKR MLR MLR
comp=E,32µm,18.0s
SKR MLR MLR
comp=Z,62µm,18.0s
QZH Quanzhou 79.99 304 *i* P P 07 40 15.4 +1.8
QZH S S 07 50 03.7 -1.7
QZH AMB AMB
comp=Z,4µm,1.1s,mb7.0
QZH AMB AMB
comp=Z,97µm,8.9s
UNV Unalaska Valle 80.16 7 *eP* P 07 40 13.9 0.0
comp=Z,4µm,1.2s,mb7.0
AKUT Akutan 80.52 7 *eP* P 07 40 13.4 -2.3
comp=Z,7µm,1.1s,mb7.2
SNCC San Nicolas Is 80.66 46 *eP* P 07 40 16.2 -0.8
comp=Z,1µm,1.2s,mb6.4
YSS Yuzh-Sakhalins 81.14 334⇓ *iP* P 07 40 18.0 -1.2
YSS *e* 07 43 28.0
YSS *i* S S 07 50 14.0 -2.4
YSS pmax pmax
comp=N,2µm,1.2s
YSS pmax pmax
comp=E,3µm,1.2s
YSS pmax pmax
comp=Z,5µm,1.2s,mb7.0
YSS pmax pmax
comp=N,22µm,12.0s
YSS pmax pmax
comp=Z,69µm,12.0s
YSS pmax pmax
comp=Z,27µm,20.0s
YSS pmax pmax
comp=N,9µm,18.0s
YSS smax
comp=N,117µm,12.0s
YSS smax
comp=E,106µm,12.0s
YSS MLR MLR
comp=Z,49µm,19.0s
YSS MLR MLR
comp=N,49µm,18.0s
YSS MLR MLR
comp=E,57µm,20.0s
KGM Kluang 81.30 277⇓ *P* P 07 40 25.7 +4.8

SYO **Syowa Base** 81.42 193 ⇓ *i* P P 07 40 18.6 -2.0
KSRS **Korea Array** 81.46 319 P P 07 40 19.3 -1.8
comp=E,243nm,1.0s,mb5.8,baz=134,slow=5.5,SNR=105
KSRS S S 07 50 25.9 +5.7
comp=E,7.9nm,1.1s,baz=40,slow=4.2,SNR=3.2
KSRS PKKP PKKPbc 07 58 42.1 -13
comp=E,5.4nm,1.0s,baz=311,slow=6.2,SNR=4.8
KSRS PKP2bc 08 06 39.9
comp=E,0.8nm,0.6s,baz=340,slow=2.4,SNR=4.9
KSRS PKPPKP 08 07 01.6
comp=E,21nm,1.1s,baz=303,slow=3.8,SNR=6.3
KSRS LR LR 08 08 30.8
comp=E,87µm,21.9s,baz=126,slow=30
KSRS Korea Array 81.46 319 P P 07 40 19.3 -1.9
KSRS S S 07 50 25.9 +5.8
KSRS pmax pmax
comp=Z,243nm,1.0s,mb5.8
FALS False Pass 81.51 8 *eP* P 07 40 22.0 +1.1
comp=Z,3µm,0.8s,mb7.0
PET Petropavlovsk 81.51 346 *d iP* P 07 40 19.4 -1.6
PET *e* 07 43 30.2
PET *eS* S 07 50 09.2 -11
PET *e* 07 51 09.1
PET *e**SS sS 07 51 30.0 +5.5
PET pmax pmax
comp=Z,72µm,12.2s
PET pmax pmax
comp=Z,89µm,14.8s
PET pmax pmax
comp=Z,1µm,0.6s,mb6.7
PET pmax pmax
comp=Z,46µm,20.2s
PET pmax pmax
comp=Z,27µm,15.7s
PET smax
comp=E,58µm,15.7s
PET smax
comp=E,53nm,1.0s
PET MLR MLR
comp=Z,34µm,20.0s
PET MLR MLR
comp=Z,25µm,19.0s
COYC Coyhaique 81.67 137 *eP* P 07 40 23.4 +1.0
SAC San Andreas 81.69 41 *eP* P 07 40 28.4 +6.1
SAO San Andreas Ge 81.72 42 *eP* P 07 40 23.8 +1.2
SSE Sheshan 81.73 310 P P 07 40 23.8 +1.1
SSE XP sP 07 41 16.4 +0.5
SSE S S 07 50 11.5 -12
SSE AMB AMB
comp=Z,213nm,1.4s,mb5.6
SSE AMB AMB
comp=Z,54µm,10.9s
SSE LR LR
comp=N,321µm,40.5s
SSE LR LR
comp=E,404µm,40.5s
SSE LR LR
comp=Z,335µm,39.0s
LPIG La Paz 81.80 58 *i* P P 07 40 23.4 +0.2
PETK Petropavlovsk- 81.80 345 S S 07 50 30.2 +7.3
comp=Z,13nm,1.0s,baz=134,slow=12,SNR=5.4
PETK PKKPbc PKKPbc 07 58 54.5 -1.1
comp=Z,20nm,1.1s,baz=83,slow=4.6,SNR=4.7
PETK PKPPKP 08 07 03.0
comp=Z,13nm,1.0s,baz=122,slow=1.9,SNR=6.3
PETK LR LR 08 11 07.3
comp=Z,62µm,21.6s,baz=152,slow=32
HKC Hong Kong Obse 81.91 300 ⇑ *i* P P 07 40 22.0 -1.9
MWC Mount Wilson 82.22 46 *eP* P 07 40 25.1 -0.1
VNA3 Neumayer Olymp 82.55 176 *eP* P 07 40 25.5 -0.9
VNA3 *e* 07 40 30.4
VNA3 *e* 07 40 32.8
VNA3 *e* 07 40 40.4
VNA3 *e* 07 40 43.7
VNA3 *e* 07 40 48.2
VNA3 *e* pP 07 41 01.0 -2.8
VNA3 *e* 07 50 32.6
VNA3 *e* 07 58 59.3
VNA3 *e* 07 59 02.7
VNA3 *e* 08 06 52.7
VNA3 *e* 08 06 59.2
VNA3 *e* 08 07 08.1
ISA Isabella 82.85 45 *eP* P 07 40 27.8 -0.7
PFO Pinyon Flat Ob 82.89 47 *eP* P 07 40 29.4 +0.7
KTGM Kuala Trenggan 82.95 279 ⇑ P P 07 40 34.6 +5.1
GZH Guangzhou 82.98 300 P P 07 40 31.4 +2.0
GZH S S 07 50 27.8 -8.4
GZH LR LR
comp=N,136µm,42.2s
GZH LR LR
comp=E,68µm,51.5s
VNA2 Neumayer--Watz 82.99 177 *eP* P 07 40 28.2 -0.5
baz=169,slow=3.2
VNA2 *e* 07 40 33.4
VNA2 *e* 07 40 35.2
VNA2 *e* 07 40 43.2
VNA2 *e* 07 40 46.7
VNA2 *e* 07 40 51.8
VNA2 *e* pP 07 41 03.9 -2.2
VNA2 *e* 07 50 39.4
VNA2 *e* 07 58 58.8
VNA2 *e* 07 59 02.4
VNA2 *e* 08 06 52.5
VNA2 *e* 08 07 00.0
VNA2 *e* 08 07 09.0
MAIT Maitri 83.19 183 *eP* P 07 40 32.1 +2.4
MAIT *ep*P pP 07 40 39.9 -27
MAIT *e*PP PP 07 43 40.4 -1.9
MAIT *eS* S 07 50 35.0 -1.9
CMB Columbia Colle 83.19 42 *eP* P 07 40 29.5 -0.6
VNA1 Neumayer--Stat 83.22 176 *eP* P 07 40 29.7 -0.2
VNA1 *e* 07 40 34.9
VNA1 *e* 07 40 36.9
VNA1 *e* 07 40 43.5
VNA1 *e* 07 40 47.3
VNA1 *e* 07 40 52.0
VNA1 *e* pP 07 41 04.0 -3.3
VNA1 *e* 07 50 48.1
VNA1 *e* 07 58 56.0
VNA1 *e* 07 58 59.8
VNA1 *e* 08 06 53.4
VNA1 *e* 08 07 00.8
FRIM Kepong 83.35 277 ⇓ P P 07 40 35.5 +3.9
CJM Chamela 83.54 65 *i* P P 07 40 31.7 -0.6
WDC Whiskeytown Da 83.62 39 *eP* P 07 40 31.8 -0.5
GLA Glamis 83.64 49 *eP* P 07 40 32.7 +0.2
comp=E,2µm,1.3s,mb6.7
GLA *e* 07 40 37.4
GLA *e* 07 41 16.9
QIZ Qiongzhong 83.69 295 P P 07 40 33.4 +0.3
QIZ AP pP 07 41 08.8 -1.8
QIZ XP sP 07 41 24.0 -2.4
QIZ PP PP 07 43 48.0 -0.4
QIZ S S 07 50 43.2 -0.3
QIZ XS sS 07 51 43.7 -4.7
QIZ AMB AMB
comp=Z,607nm,1.4s,mb6.1
QIZ AMB AMB
comp=Z,48µm,12.3s
QIZ LR LR
comp=N,82µm,28.2s
QIZ LR LR
comp=Z,113µm,48.4s
QIZ Qiongzhong 83.69 295 *eP* P 07 40 32.2 -0.9
comp=Z,569nm,1.0s,mb6.2
QIZ *eS* S 07 50 56.7 +13
GSC Goldstone 83.69 46 *eP* P 07 40 32.3 -0.5
PAF Port-aux-Franc 83.88 217 *eP* P 07 40 34.2 +0.6
comp=Z,10µm,1.3s,mb7.4
NJ2 Nanjing 83.90 310 *eP* P 07 40 34.9 +1.0
NJ2 AP pP 07 41 10.4 -1.0
NJ2 XP sP 07 41 25.5 -1.7
NJ2 PP PP 07 43 51.0 +1.2
NJ2 S S 07 50 40.0 -5.1
NJ2 AMB AMB
comp=Z,170nm,0.8s,mb5.8
NJ2 AMB AMB
comp=Z,50µm,11.2s
NJ2 LR LR
comp=N,72µm,30.0s
NJ2 LR LR
comp=E,151µm,30.7s
NJ2 LR LR
comp=Z,150µm,30.7s

YBH Yreka Blue Hor 84.30 38 P P 07 40 36.1 +0.4
comp=Z,419nm,1.1s,mb6.1,baz=180,slow=3.2,SNR=84
YBH PKPPKP 08 06 59.1
comp=Z,12nm,1.0s,baz=140,slow=2.2,SNR=6.8
YBH LR LR 08 11 00.8
comp=Z,80µm,20.8s,baz=237,slow=30
YBH Yreka Blue Hor 84.30 38 *eP* P 07 40 35.0 -0.7
comp=Z,12µm,3.2s
YBH *e* 07 41 20.6
MAIG Mazatlaan 84.32 61 *i* P P 07 40 36.4 +0.1
IPM Ipoh 84.44 278 P P 07 40 39.0 +1.9
IPM Ipoh 84.44 278 ⇑ P P 07 40 38.9 +1.8
NVAR Mina Array Bea 84.70 43 P P 07 40 37.1 -0.6
comp=Z,353nm,0.7s,mb6.2,baz=220,slow=7.7,SNR=186
NVAR S S 07 50 57.5 +4.7
comp=Z,5.5nm,0.9s,baz=208,slow=4.1,SNR=2.6
NVAR PKKP PKKPbc 07 58 44.8 -3.0
comp=Z,15nm,1.0s,baz=60,slow=3.1,SNR=4.1
NVAR PKPPKP 08 06 56.9
comp=Z,13nm,0.8s,baz=102,slow=2.3,SNR=9.0
BUOR Burton Butte 84.93 38 P P 07 40 38.3 -0.5
PLCA Paso Flores 85.03 133 P P 07 40 40.4 +0.8
comp=Z,802nm,1.0s,mb6.4,baz=235,slow=5.4,SNR=109
PLCA S S 07 51 03.0 +6.8
comp=Z,9.6nm,1.0s,baz=88,slow=19,SNR=2.5
PLCA PKKPbc PKKPbc 07 58 50.9 +5.1
comp=Z,19nm,1.0s,baz=23,slow=1.1,SNR=6.6
PLCA PKP2bc 08 06 30.4
comp=Z,4.7nm,1.0s,baz=20,slow=4.1,SNR=2.8
PLCA PKPPKP 08 06 56.7
comp=Z,26nm,0.9s,baz=40,slow=3.8,SNR=6.1
PLCA LR LR 08 13 40.9
comp=Z,90µm,18.5s,baz=131,slow=32
PLCA Paso Flores 85.03 133 P P 07 40 40.4 +0.8
PLCA S S 07 51 03.0 +6.7
PLCA pmax pmax
comp=Z,802nm,1.0s
PLCA smax
comp=N,10.0nm,1.0s
PLCA Paso Flores 85.03 133 *eP* P 07 40 40.4 +0.8
comp=N,1µm,0.7s,mb6.8
TPNV Topopah Spring 85.06 45 *eP* P 07 40 38.9 -0.7
KULM Kulim 85.14 278 ⇓ P P 07 40 41.4 +0.8
TPH Tonopah 85.14 43 *eP* P 07 40 39.6 -0.4
TRSI Tarutung 85.20 275 P ScS 07 51 10.5 +2.0
HSO Harness Mounta 85.31 36 P P 07 40 41.6 +0.9
MDJ Mudanjiang 85.42 325 P P 07 40 40.7 -0.5
MDJ AP pP 07 41 15.9 -2.9
MDJ PP PP 07 43 59.4 -2.5
MDJ S S 07 50 50.9 -8.7
MDJ AMB AMB
comp=Z,1µm,1.4s,mb6.5
MDJ AMB AMB
comp=Z,66µm,12.6s
MDJ LR LR
comp=N,118µm,56.7s
MDJ LR LR
comp=Z,206µm,54.0s
MDJ Mudanjiang 85.42 325 *eP* P 07 40 40.0 -1.2
comp=Z,2µm,1.0s,mb6.9
MDJ *eS* S 07 50 51.7 -7.8
ZIIG Zihuatanejo 85.56 68 *i* P P 07 40 43.9 +1.4
PSI Prapat 85.58 275 P P 07 40 40.6 -2.2
comp=Z,181nm,0.8s,mb5.9,baz=164,slow=3.0,SNR=67
PSI S S 07 51 03.1 +0.6
comp=Z,64nm,1.1s,baz=259,slow=21,SNR=7.3
PSI PKKPbc PKKPbc 07 58 51.0 +6.9
comp=Z,23nm,1.0s,baz=266,slow=4.9,SNR=4.8
PSI PKPPKP 08 06 53.0
comp=Z,26nm,1.2s,baz=219,slow=11,SNR=7.1
PSI LR LR 08 18 27.3
comp=Z,85µm,20.0s,baz=120,slow=35
PSI Prapat 85.58 275 P P 07 40 40.6 -2.2
PSI S S 07 51 03.1 +0.6
PSI PKKPbc PKKPbc 07 58 51.0 +6.9
PSI P'P' 08 06 53.0
PSI LR LR 08 18 27.3
HABR Khabarovsk 85.58 330 *d iP* P 07 40 46.1 +4.2
HABR *e**PP pP 07 41 29.6 +10
HABR *i* 07 44 02.5
HABR *eS* S 07 50 53.2 -7.7
HABR *e* 07 51 57.8
HABR *e**SS sS 07 52 17.6 +11
HABR *eSS* SS 07 56 38.3 -2.8
HABR *eSSS* 08 00 13.3
HABR pmax pmax
comp=Z,9µm,1.8s,mb7.2
SFJM Santa Fe 85.67 65 *i* P P 07 40 45.0 +2.0
COCH Cobquecura 85.78 128 *eP* P 07 40 44.1 +0.7
UBT Ubonrachathani 85.88 289 ⇑ PN P 07 40 45.5 +1.3
COR Corvallis 85.92 35 *eP* P 07 40 44.2 +0.5
COR *eS* S 07 50 59.5 -5.0
COR pmax pmax
comp=Z,659nm,0.9s,mb6.4
COR Corvallis 85.92 35 *eP* P 07 40 44.2 +0.5
comp=Z,659nm,0.9s,mb6.4
COR *eS* S 07 50 59.5 -5.0
TUC Tucson 85.99 51 *eP* P 07 40 44.2 -0.1
TUC *eS* S 07 51 08.6 +2.9
TUC pmax pmax
comp=Z,2µm,1.4s,mb6.7
TUC Tucson 85.99 51 *eP* P 07 40 44.2 -0.2
comp=Z,2µm,1.4s,mb6.7
TUC *eS* S 07 51 08.6 +2.9
SNG Songkhla 86.01 280 P Px 07 40 59.0
comp=Z,860nm,1.0s
EFI East Falkland 86.08 147 P P 07 40 49.8 +5.2
comp=Z,18µm,1.4s,mb7.6,SNR=14
EFI East Falkland 86.08 147 ⇓ *i* P P 07 40 45.1 +0.5
EFI East Falkland 86.08 147 *eP* P 07 40 44.6 0.0
comp=Z,9µm,1.5s,mb7.3
EFI *eS* S 07 50 53.2 -13
KDAK Kodiak Island 86.10 13 PKKPbc PKKPbc 07 58 53.7 +8.1
comp=Z,46nm,1.0s,baz=149,slow=5.6,SNR=7.3
KDAK PKPPKP 08 06 54.4
comp=Z,24nm,1.0s,baz=26,slow=7.2,SNR=4.3
KDAK LR LR 08 14 33.7
comp=Z,62µm,21.5s,baz=214,slow=32
DL2 Dalian 86.19 317 ⇑ *i* P P 07 40 46.0 +0.8
DL2 AP pP 07 41 25.8 +3.0
DL2 SKS 07 50 55.6
DL2 S S 07 51 08.3 +0.9
DL2 XS sS 07 52 15.5 +2.9
DL2 AMB AMB
comp=Z,2µm,1.5s,mb6.5
DL2 AMB AMB
comp=Z,37µm,9.4s
WHN Wuhan 86.23 307 P P 07 40 44.6 -0.9
WHN PP PP 07 44 14.0 +5.2
WHN SKS 07 50 49.5
WHN S S 07 50 58.1 -10
WHN PS 07 52 34.2
WHN SS SS 07 56 46.3 -5.0
WHN AMB AMB
comp=Z,33µm,4.4s
WHN LR LR
comp=N,100µm,21.2s
WHN LR LR
comp=E,63µm,18.8s
WHN LR LR
comp=Z,403µm,30.3s
CAIG El Cayaco 86.30 69 *i* P P 07 40 45.0 -1.1
SSOR Sweet Springs 86.55 36 P P 07 40 46.7 0.0
BMN Battle Mountai 86.61 42 *eP* P 07 40 46.0 -1.2
MOIG Morelia 86.79 66 *i* P P 07 40 48.5 0.0
SNY Shenyang 86.85 320 P P 07 40 50.4 +2.1
SNY AMB AMB
comp=Z,902nm,1.3s,mb6.4
SNY LR LR
comp=N,102µm,22.2s
SNY LR LR
comp=E,72µm,23.0s
SNY LR LR
comp=Z,216µm,42.2s
WVOR Wild Horse Val 87.05 39 *eP* P 07 40 48.6 -0.7
comp=Z,1µm,0.3s,mb7.2
CN2 Changchun 87.07 322 *eP* P 07 40 46.7 -2.6
CN2 *eS* S 07 51 09.0 -6.6
CN2 SS SS 07 57 02.0 -1.1
CN2 LR LR
comp=N,42µm,22.0s
CN2 LR LR
comp=E,39µm,22.0s
CN2 LR LR
comp=Z,60µm,23.0s

PAYG Puerto Ayora 87.08 89 *eP* P 07 40 51.1 +1.0
comp=Z,4µm,1.4s,mb7.1
ZAIG Zacatecas 87.17 63 *i* P P 07 40 49.9 -0.4
TDH Tom, Dick, Har 87.19 36 P P 07 40 50.0 +0.1
ON2 Olympics--Nort 87.26 34 P P 07 40 51.0 +0.9
NICH Los Niches 87.44 128 *eP* P 07 40 51.2 -0.3
TIA Tai'an 87.47 313 *eP* P 07 40 50.5 -0.9
TIA AP pP 07 41 27.4 -1.8
TIA LR LR
comp=E,262µm,30.0s
PLIG Platanillo 87.57 68 *i* P P 07 40 52.1 -0.2
KLR Kul'dur 87.62 329 *eP* P 07 40 46.2 -5.6
PNIG Pinotepa 87.79 71 *i* P P 07 40 54.6 +1.2
ELK Elko 87.99 42 *eP* P 07 40 53.1 -0.7
ELK pmax pmax
comp=Z,480nm,1.0s
ELK Elko 87.99 42 *eP* P 07 40 53.1 -0.7
comp=Z,480nm,1.0s,mb6.3
DIB Dawson Inlet, 88.06 25 P P 07 40 58.1 +4.3
VIB Van Inlet 88.08 25 P P 07 40 56.6 +2.8
IHA Instituto Hidr 88.13 126 *eP* P 07 40 54.3 -0.6
YAIG Yautepec 88.16 68 *i* P P 07 40 55.6 +0.5
LON Longmire 88.16 35 *eP* P 07 40 53.4 -1.0
LON pmax pmax
comp=Z,445nm,0.9s,mb6.3
LON Longmire 88.16 35 *eP* P 07 40 53.4 -1.0
comp=Z,445nm,0.9s,mb6.3
KKTK Khon Kaen 88.26 289 P P 07 41 02.0 +6.4
UNM Universidad Na 88.28 68 *i* P P 07 40 55.8 +0.1
PBVM Pinon 88.42 68 *eP* P 07 40 56.3 0.0
PTVM Pico Tres Padr 88.46 67 *eP* P 07 40 56.7 +0.2
MSU Marysvale 88.58 45 *eP* P 07 40 56.8 +0.2
ANTU Antumapu 88.59 127 *eP* P 07 40 57.1 +0.1
PPM Popocatepetl 88.62 68 *i* P P 07 40 57.6 +0.4
CLCH Cerro Calan 88.75 127 *eP* P 07 40 58.0 +0.2
CLCH *eS* S 07 51 23.9 -8.4
LMEL Las Melosas 88.75 127 *eP* P 07 40 58.1 +0.3
LMEL *eS* S 07 51 24.1 -8.2
PEL Peldehue 88.77 126 *eP* P 07 40 57.6 -0.2
IIO Organos 88.79 68 *eP* P 07 40 58.4 +0.3
SEW Seward 88.89 14 *eP* P 07 40 56.9 -0.6
comp=Z,37nm,0.6s
YECH El Yeso 88.93 127 *eP* P 07 40 59.9 +1.3
FCH Farellones 88.96 127 *eP* P 07 40 59.4 +0.7
FCH *eS* S 07 51 26.0 -8.3
MID Middleton Isla 88.97 15 *eP* P 07 41 02.8 +4.9
NNT Nongplab 89.21 284 P P 07 41 02.0 +1.9
HUIG Huatulco 89.23 72 *i* P P 07 41 00.5 +0.3
VHO Vista Hermosa 89.29 71 *i* P P 07 41 01.5 +1.1
WRW Wenatchee Ridg 89.37 34 P P 07 40 58.9 -1.1
LNOR Lincton Mounta 89.44 37 *eP* P 07 40 59.7 -0.7
CRAG Craig 89.59 23 *eP* P 07 41 02.6 +1.7
comp=Z,2µm,1.1s,mb7.0
CRAG *e*PP PP 07 44 42.4 +7.2
TXAR Lajitas Array 89.59 57 P P 07 41 01.4 -0.1
comp=Z,16nm,0.9s,baz=209,slow=6.1,SNR=86
TXAR S S 07 51 20.9 -19
comp=Z,26nm,1.3s,baz=303,slow=7.0,SNR=2.9
TXAR PKKPbc PKKPbc 07 58 35.9 +0.5
comp=Z,5.0nm,0.7s,baz=68,slow=4.9,SNR=4.8
TXAR PKPPKP 08 06 50.9
comp=Z,10nm,1.0s,baz=96,slow=3.8,SNR=5.9
TXAR LR LR 08 11 17.7
comp=Z,62µm,20.7s,baz=325,slow=29
TXAR Lajitas Array 89.59 57 P P 07 41 01.5 -0.1
TXAR S S 07 51 20.9 -19
TXAR Lajitas Array 89.59 57 P P 07 41 01.4 -0.1
TXAR S S 07 51 20.9 -19
TXAR PKKPbc PKKPbc 07 58 35.9 +0.5
TXAR P'P' 08 06 50.9
TXAR LR LR 08 11 17.7
FIB Fire Island 89.71 13 P P 07 41 01.4 +0.1
comp=Z,2µm,0.8s,mb7.2
RC01 Rabbit Creek A 89.72 13 *eP* P 07 41 00.9 -0.4
comp=Z,279nm,1.7s,mb5.9
RC01 *e*PP PP 07 44 35.1 -1.0
WTV Waterville 89.74 35 P P 07 41 00.3 -1.5
GYA Guiyang 89.91 300 ⇓ *i* P P 07 41 01.7 -1.4
GYA AP pP 07 41 41.0 -0.1
GYA XP sP 07 41 56.4 -0.4
GYA PP PP 07 44 39.7 +1.4
GYA PPP 07 46 40.2
GYA SKS 07 51 15.9
GYA S S 07 51 38.1 -5.0
GYA XS sS 07 52 46.0 -2.9
GYA PS PS 07 53 07.5 -1.4
GYA AMB AMB
comp=Z,2µm,1.0s,mb7.1
GYA AMB AMB
comp=Z,23µm,5.1s
GYA LR LR
comp=N,29µm,20.6s
GYA LR LR
comp=E,74µm,21.5s
GYA LR LR
comp=Z,67µm,23.6s
SRU San Rafael 89.98 46 *eP* P 07 41 02.2 -0.9
SIT Sitka 90.08 21 *eP* P 07 41 07.4 +4.2
HVU Hansel Valley 90.10 42 *eP* P 07 41 02.6 -1.0
TLL Tololo Astrono 90.18 124 *eP* P 07 41 05.3 +0.9
DAU Daniels Canyon 90.25 44 *eP* P 07 41 04.1 -0.3
NST Nakhon Sawan 90.25 287 P P 07 41 03.0 -1.9
comp=Z,950nm,1.0s,mb6.7
BJT Baijiatuau 90.26 315 *eP* P 07 41 05.7 +1.3
comp=Z,7µm,1.6s,mb7.4
MVCO Mesa Verde 90.26 48 *eP* P 07 41 04.3 -0.2
comp=Z,1µm,0.3s,mb7.3
MVCO *ep*P pP 07 41 47.8 +5.3
BJI Beijing 90.27 315 P P 07 41 05.2 +0.8
BJI SS SS 07 57 48.2 -1.4
BJI AMB AMB
comp=Z,208nm,1.7s,mb5.8
BJI AMB AMB
comp=Z,28µm,5.4s
BJI LR LR
comp=N,143µm,33.1s
BJI LR LR
comp=E,120µm,35.6s
BJI LR LR
comp=Z,199µm,47.0s
PMR Palmer 90.31 13 *eP* P 07 41 02.3 -1.8
ANMO Albuquerque 90.45 51 *eP* P 07 41 05.2 -0.2
ANMO pmax pmax
comp=Z,88nm,0.3s
ANMO Albuquerque 90.45 51 *eP* P 07 41 05.2 -0.2
comp=Z,88nm,0.3s,mb6.2
WRAK Wrangell Islan 90.60 23 *eP* P 07 41 05.4 -0.2
comp=Z,2µm,1.0s,mb7.0
LVIG Laguna Verde 90.77 68 *i* P P 07 41 05.5 -1.7
LCO Las Campanas 90.85 123 *eP* P 07 41 07.5 0.0
comp=Z,4µm,1.8s,mb7.2
LCO *eS* S 07 51 40.0 -12
LCO Las Campanas 90.85 123 *eP* P 07 41 08.8 +1.2
CMIG Matias Romero 90.87 71 LR LR 08 13 36.6
comp=Z,54µm,21.0s,baz=247,slow=30
CMIG Matias Romero 90.87 71 *i* P P 07 41 07.4 -0.4
PPLA Purkeypile 90.92 11 *eP* P 07 41 07.8 +0.8
comp=Z,29nm,0.4s,mb5.7
PPLA *e*PP PP 07 44 49.5 +3.9
PNL Peninsula 90.98 18 P P 07 41 03.1 -4.1
comp=Z,2µm,1.1s,mb7.0
CFAA Coronel Fontan 91.33 126 S S 07 51 39.8 -16
comp=Z,1.4nm,1.0s,baz=72,slow=22,SNR=7.3
CFAA PKKPbc PKKPbc 07 58 35.8 +5.4
comp=Z,0.8nm,0.5s,baz=86,slow=2.5,SNR=9.1
CFAA PKPPKP 08 06 44.7
comp=Z,1.3nm,0.7s,baz=44,slow=1.6,SNR=8.4
NEW Newport 91.56 35 *eP* P 07 41 09.9 -0.3
NEW *e* 07 44 57.2
TNA Tin City 91.65 4 *eP* P 07 41 09.4 -0.9
comp=Z,2µm,1.7s,mb6.8
TUIG Tuzandepetl 91.69 71 *i* P P 07 41 11.8 +0.2
KTH Kantishna Hill 91.76 12 *eP* P 07 41 10.1 -0.7
comp=Z,46nm,0.8s
TRF Thorofare Moun 91.78 12 *eP* P 07 41 10.0 -0.9
comp=Z,120nm,1.1s,mb5.8
CHUM Lake Minchumin 91.82 11 *eP* P 07 41 09.8 -1.3
comp=Z,58nm,0.4s,mb6.0
BDT Bhumibol Dam 91.93 288 P P 07 41 12.0 -0.7
comp=Z,238nm,1.1s,mb6.1
SEY Seymchan 91.93 347 ⇑ *eP* P 07 41 11.0 -0.6
XAN Xi'an 91.97 307 P P 07 41 11.1 -1.4
XAN AP pP 07 41 47.6 -2.9
XAN XP sP 07 42 03.0 -3.2

XAN XS sS 07 53 03.9 -3.6
XAN PS PS 07 53 30.2 -1.3
XAN SS SS 07 58 14.1 -0.3
XAN LR LR
comp=N,30µm,34.6s
XAN LR LR
comp=E,79µm,32.1s
XAN LR LR
comp=Z,283µm,41.2s
BPAW Bear Paw Mtn. 92.25 11 *e*P **P 07 41 12.6 -0.4**
comp=Z,176nm,0.8s,mb6.1
BPAW *e*PP PP 07 44 58.8 +2.9
MCK McKinley 92.29 12 *e*P **P 07 41 12.4 -0.8**
MCK *e* 07 44 55.2
MCK pmax pmax
comp=Z,182nm,0.5s,mb6.4
MCK McKinley 92.29 12 *e*P **P 07 41 12.4 -0.8**
comp=Z,182nm,0.5s,mb6.4
MCK *e*PP PP 07 44 55.2 -1.0
PAX Paxson 92.31 14 *e*P **P 07 41 12.6 -0.7**
PAX *e* 07 44 57.2
PAX pmax pmax
comp=Z,159nm,1.0s,mb6.0
PAX Paxson 92.31 14 *e*P **P 07 41 12.6 -0.8**
comp=Z,160nm,1.0s,mb6.0
PAX *e*PP PP 07 44 57.2 +0.7
SMCO Snowmass 92.33 47 *e*P **P 07 41 05.8 -8.2**
comp=Z,324nm,0.7s,mb6.5
SMCO *e*pP pP 07 41 50.1 -1.9
KMI Kunming 92.39 297 P **P 07 41 14.7 0.0**
KMI AP pP 07 41 58.1 +5.5
KMI XP sP 07 42 12.8 +4.5
KMI PP PP 07 44 59.4 +1.5
KMI PPP 07 47 03.1
KMI SKS 07 51 32.8
KMI S S 07 52 01.7 -3.9
KMI XS sS 07 53 06.6 -5.1
KMI PS PS 07 53 34.6 -1.8
KMI SS SS 07 58 20.3 -0.4
KMI SSS 08 02 00.0
KMI AMB AMB
comp=Z,697nm,1.4s,mb6.5
KMI AMB AMB
comp=Z,30µm,8.9s
KMI LR LR
comp=N,82µm,35.9s
KMI LR LR
comp=E,74µm,23.3s
KMI LR LR
comp=Z,138µm,30.5s
MSO Missoula 92.40 38 *e*P **P 07 41 13.0 -1.2**
comp=Z,5µm,1.1s,mb7.4
MSO *e*PP PP 07 44 57.6 +0.1
CHRT Chiangrai 92.44 291 ⇑P **P 07 41 14.0 -1.0**
comp=Z,3µm,0.6s,mb7.5
CMAR Chiang Mai Arr 92.52 289 P **P 07 41 15.1 -0.3**
comp=Z,259nm,0.9s,mb6.3,baz=139,slow=3.6,SNR=67
CMAR S SKSac 07 51 41.6 +6.5
comp=Z,1.6nm,0.3s,baz=100,slow=3.6,SNR=2.4
CMAR PKKPbc PKKPbc 07 58 34.0 +6.5
comp=Z,18nm,0.6s,baz=284,slow=4.3,SNR=11
CMAR PKPPKP 08 06 43.1
comp=Z,13nm,1.0s,baz=284,slow=3.5,SNR=13
PDAR Pinedale Array 92.63 43 P **P 07 41 14.4 -0.9**
comp=Z,161nm,1.0s,mb6.1,baz=204,slow=3.3,SNR=123
PDAR S SKSac 07 51 39.7 +5.0
comp=Z,16nm,1.2s,baz=158,slow=1.6,SNR=3.5
PDAR PKKP PKKPbc 07 58 22.3 -6.0
comp=Z,5.5nm,0.7s,baz=145,slow=3.7,SNR=4.2
PDAR PKKPbc PKKPbc 07 58 32.1 +3.8
comp=Z,17nm,0.6s,baz=83,slow=3.6,SNR=11
PDAR PKPPKP 08 06 37.8
comp=Z,4.4nm,1.1s,baz=102,slow=3.6,SNR=4.2
PDAR LR LR 08 14 32.7
comp=Z,35µm,20.9s,baz=244,slow=30
PDAR Pinedale Array 92.63 43 P **P 07 41 14.4 -0.9**
PDAR S SKSac 07 51 39.7 +5.0
PDAR PKKP PKKPbc 07 58 22.3 -6.0
PDAR PKKPbc PKKPbc 07 58 32.1 +3.8
PDAR P'P' 08 06 37.8
PDAR LR LR 08 14 32.7
MENT Mentasta 92.67 15 *e*P **P 07 41 13.3 -1.7**
MENT *e*PP PP 07 45 00.6 +1.3
CHG Chiang Mai 92.67 290 ⇓P **P 07 41 15.3 -0.8**
comp=Z,2µm,0.9s,mb7.3
CHTO Chiang Mai 92.67 290 *e*P **P 07 41 15.7 -0.4**
CHTO *e* 07 44 57.0
CHTO *e*S SKSac 07 51 37.8 +1.8
CHTO pmax pmax
comp=Z,224nm,1.0s,mb6.2
CHTO Chiang Mai 92.67 290 *e*P **P 07 41 15.7 -0.4**
comp=Z,2µm,1.0s,mb7.2
CHTO *e*PP PP 07 44 57.0 -3.2
CHTO *e*S SKSac 07 51 37.8 +1.8
CCIG Comitan 92.87 73 *i* P **P 07 41 18.4 +1.4**
DLBC Dease Lake 92.95 23 LR LR 08 20 04.1
comp=Z,56µm,19.4s,baz=250,slow=34
BOZ Bozeman (W) 93.01 40 *e*P **P 07 41 16.3 -0.7**
BOZ *e* 07 45 00.6
BOZ pmax pmax
comp=Z,177nm,0.6s,mb6.4
BOZ Bozeman (W) 93.01 40 *e*P **P 07 41 16.3 -0.7**
comp=Z,177nm,0.6s,mb6.4
BOZ *e*PP PP 07 45 00.6 -1.8
JCT Junction City 93.07 58 *e*P **P 07 41 16.7 -1.0**
LKWY Lake 93.12 41 *e*P **P 07 41 18.4 +0.9**
LKWY pmax pmax
comp=Z,437nm,1.0s,mb6.5
LKWY Lake 93.12 41 *e*P **P 07 41 18.4 +0.8**
comp=Z,437nm,1.0s,mb6.5
KVTX Kingsville 93.17 61 *e*P **P 07 41 18.3 +0.1**
comp=Z,2µm,1.5s,mb7.0
RWWY Rawlins 93.51 45 *e*P **P 07 41 17.9 -1.5**
comp=Z,2µm,0.9s,mb7.3
COLA College 93.53 12 P **P 07 41 18.7 -0.2**
COLA *e* 07 45 03.8
COLA *e*S SKSac 07 51 37.8 -0.8
COLA pmax pmax
comp=Z,447nm,0.8s,mb6.7
COLA College 93.53 12 P **P 07 41 18.7 -0.2**
comp=Z,447nm,0.8s,mb6.7
COLA *e*PP PP 07 45 03.8 -2.2
COLA *e*S SKSac 07 51 37.8 -0.8
ISCO Idaho Springs 93.55 47 *e*P **P 07 41 19.6 -0.1**
ISCO pmax pmax
comp=Z,1µm,0.7s,mb7.2
ISCO Idaho Springs 93.55 47 *e*P **P 07 41 19.6 -0.1**
comp=Z,1µm,0.7s,mb7.2
HIA Hailar 93.56 324 *e*P **P 07 41 20.9 +1.4**
HIA *e* 07 45 03.3
HIA pmax pmax
comp=Z,1µm,1.4s
HIA Hailar 93.56 324 *e*P **P 07 41 20.9 +1.4**
comp=Z,1µm,1.4s,mb6.8
HIA *e*PP PP 07 45 03.3 -3.3
HHC Hu-ho-hao-te 93.66 314 *e*P **P 07 41 21.3 +1.2**
HHC AP pP 07 41 59.7 +1.6
HHC XP sP 07 42 18.7 +4.9
HHC PP PP 07 45 10.0 +2.5
HHC SKS 07 51 38.9
HHC S S 07 52 11.0 -5.0
HHC XS sS 07 53 23.7 +1.4
HHC SS SS 07 58 35.5 -2.8
HHC AMB AMB
comp=Z,73nm,1.2s,mb5.7
HHC AMB AMB
comp=Z,43µm,5.2s
HHC LR LR
comp=N,134µm,28.6s
HHC LR LR
comp=E,107µm,32.1s
HHC LR LR
comp=Z,162µm,36.9s
AMTX Amarillo 93.80 53 *e*P **P 07 41 19.8 -1.1**
comp=Z,601nm,1.3s,mb6.6
MECH Mejillones 94.03 118 *e*P **P 07 41 29.5 +7.1**
NNA Nana 94.04 105 P **P 07 41 28.5 +6.0**
comp=Z,2µm,1.2s,mb7.2,SNR=12
NNA Nana 94.04 105 PP PP 07 45 21.0 +10
comp=Z,71nm,1.2s,baz=242,slow=9.6,SNR=3.8
NNA S SKSac 07 51 51.2 +7.4
comp=Z,9.1nm,0.6s,baz=92,slow=14,SNR=3.3
NNA PKPPKP 08 06 39.2
comp=Z,3.5nm,0.6s,baz=228,slow=3.1,SNR=3.8
NNA Nana 94.04 105 *e*P **P 07 41 21.8 -0.7**
comp=Z,634nm,1.2s,mb6.6
NNA *e*PP PP 07 45 14.7 +4.1
NNA *e*S SKSac 07 51 52.1 +8.3
RLMT Red Lodge 94.10 41 *e*P **P 07 41 22.6 +0.5**
comp=Z,10µm,2.8s,mb7.5
CD2 Chengdu 94.27 302 P **P 07 41 22.9 -0.3**
CD2 AP pP 07 42 07.4 +6.2
CD2 PP PP 07 45 18.2 +5.7
CD2 SKS 07 51 36.6
CD2 S S 07 52 15.2 -6.7
CD2 PS PS 07 53 59.8 +2.8
CD2 SS SS 07 58 44.6 -2.9
CD2 AMB AMB
comp=Z,860nm,1.4s,mb6.7
CD2 AMB AMB
comp=Z,46µm,10.8s
CD2 LR LR
comp=N,116µm,25.2s
CD2 LR LR
comp=E,74µm,24.0s
CD2 LR LR
comp=Z,224µm,27.3s
BTO Baotou 94.53 313 *e*P **P 07 41 25.0 +0.9**
BTO LR LR
comp=N,24µm,12.7s
BTO LR LR
comp=E,24µm,7.8s
BILL Bilibino 94.64 354 *e*P **P 07 41 24.3 +0.4**
BILL *e* 07 45 20.3
BILL *e*S SKSac 07 51 46.5 +2.0
BILL pmax pmax
comp=Z,2µm,1.1s,mb7.2
BILL Bilibino 94.64 354 *e*P **P 07 41 24.3 +0.4**
comp=Z,2µm,1.1s,mb7.2
BILL *e*PP PP 07 45 20.3 +5.8
BILL *e*S SKSac 07 51 46.5 +2.1
EGAK Eagle 94.84 15 *e*P **P 07 41 25.0 +0.1**
comp=Z,15µm,0.7s
EGAK *e*PP PP 07 45 16.2 +0.1
ATAH Atahualpa 94.94 100 LR LR 08 17 31.7
comp=Z,47µm,18.3s,baz=77,slow=31
COLD Coldfoot 95.25 10 *e*P **P 07 41 29.6 +2.8**
comp=Z,1µm,1.7s,mb6.8
COLD *e*PP PP 07 45 22.2 +2.9
EGMT Eagleton 95.41 39 *e*P **P 07 41 28.1 +0.2**
comp=Z,1µm,0.3s,mb7.6
LVC Limon Verde 95.50 118 P **P 07 41 33.8 +4.7**
LVC PP PP 07 45 28.5 +6.9
comp=Z,110nm,1.3s,baz=227,slow=12,SNR=3.6
LVC S SKSac 07 52 01.8 +10
comp=Z,14nm,1.1s,baz=303,slow=15,SNR=3.6
LVC PKKPbc PKKPbc 07 58 23.1 +3.7
comp=Z,18nm,0.6s,baz=346,slow=4.8,SNR=8.2
LVC PKPPKP 08 06 34.4
comp=Z,4.4nm,0.9s,baz=28,slow=4.9,SNR=3.8
LVC LR LR 08 16 52.3
comp=Z,39µm,19.8s,baz=228,slow=30
LVC Limon Verde 95.50 118 P **P 07 41 33.8 +4.7**
LVC PP PP 07 45 28.5 +6.9
LVC S SKSac 07 52 01.8 +10
LVC PKKPbc PKKPbc 07 58 23.1 +3.7
LVC P'P' 08 06 34.4
LVC LR LR 08 16 52.3
LVC Limon Verde 95.50 118 *e*P **P 07 41 31.6 +2.5**
NRGR Nerungri 95.79 332 *i* P **P 07 41 34.1 +4.6**
WMOK Wichita Mounta 95.83 54 *e*P **P 07 41 29.0 -1.2**
WMOK *e**PP pP 07 42 12.3 +4.1
PB01 Plate Boundary 95.84 117 *e*P **P 07 41 33.6 +2.9**
CLNS Chul'man 95.84 332 *e*P **P 07 41 32.7 +3.0**
CLNS *e*S SKSac 07 51 51.3 0.0
CLNS pmax pmax
comp=Z,321nm,1.4s,mb6.5
CLNS pmax pmax
comp=N,193nm,1.5s
CLNS pmax pmax
comp=E,78nm,1.5s
HKT Hockley 95.88 60 *e*P **P 07 41 30.3 -0.2**
HKT pmax pmax
comp=Z,211nm,1.4s,mb6.3
HKT Hockley 95.88 60 *e*P **P 07 41 30.2 -0.3**
comp=Z,211nm,1.4s,mb6.3
TGUH Tegucigalpa,Un 96.14 77 *e*P **P 07 41 31.3 -0.8**
comp=Z,245nm,1.1s,mb6.5
TGUH *e*PP PP 07 45 35.8 +8.6
EDM Edmonton 96.47 33 *e*P **P 07 41 31.3 -1.3**
EDM *e* 07 45 29.2
ARE Arequipa 96.47 112 *e*P **P 07 41 36.0 +2.4**
LPA La Plata 96.54 134 *c**eP **P 07 41 34.0 +0.4**
LPA *i* PCP PcP 07 41 36.0 +2.3
LPA *e*pP pP 07 42 14.0 +2.3
LPA *e*SKS SKSac 07 51 54.0 -2.5
LZH Lanzhou 96.60 307 ⇑P **P 07 41 35.7 +2.0**
LZH PP PP 07 45 34.8 +4.3
LZH SKS SKSac 07 51 56.0 -0.3
LZH S S 07 52 38.0 -3.8
LZH SS SS 07 59 19.8 -0.5
LZH AMB AMB
comp=Z,4µm,1.8s,mb7.5
LZH AMB AMB
comp=Z,22µm,7.4s
RSSD Black Hills 96.76 44 *e*P **P 07 41 33.4 -0.8**
RSSD pmax pmax
comp=Z,418nm,0.8s,mb6.8
RSSD Black Hills 96.76 44 *e*P **P 07 41 33.4 -0.8**
comp=Z,418nm,0.8s,mb6.8
CBKS Cedar Bluff 97.04 50 *e*P **P 07 41 35.1 -0.5**
CBKS pmax pmax
comp=Z,194nm,1.3s,mb6.3
CBKS Cedar Bluff 97.04 50 *e*P **P 07 41 35.1 -0.5**
comp=Z,194nm,1.3s,mb6.3
YAK Yakutsk 97.49 338 *c i*P **P 07 41 40.6 +3.6**
YAK *e**PP pP 07 42 21.3 +6.2
YAK *e* PP 07 45 37.7 +1.1
YAK *e*S SKSac 07 51 58.3 -1.3
YAK *e**SS S 07 52 48.9 +0.7
YAK *e*PS SP 07 54 09.6 -2.2
YAK *e*SS SS 07 59 24.2 -7.4
YAK pmax pmax
comp=Z,871nm,1.5s,mb6.9
YAK pmax pmax
comp=E,255nm,1.4s
YAK pmax pmax
comp=N,166nm,1.5s
YAK pmax pmax
comp=N,2µm,2.5s
YAK pmax pmax
comp=Z,7µm,3.7s
YAK pmax pmax
comp=E,5µm,3.7s
YAK Yakutsk 97.49 338 *e*P **P 07 41 36.6 -0.5**
comp=E,2µm,1.0s,mb7.5
NATX Nacogdoches 97.58 58 *e*P **P 07 41 37.6 -0.6**
comp=E,150nm,1.2s,mb6.3
TEIG Tepich 97.87 71 LR LR 08 16 25.7
comp=E,29µm,20.6s,baz=243,slow=30
OTAV Otavalo 98.11 94 *e*P **P 07 41 42.4 +1.3**
comp=E,89nm,1.1s,mb6.1
OTAV *e*PP PP 07 45 41.6 -0.6
CIT Chita 98.37 324 *e*P **P 07 41 45.7 +4.5**
CIT *e* 07 45 44.5
CIT *e* 07 52 01.3
DGMT Dagmar 98.81 40 *e*P **P 07 41 42.7 -0.6**
comp=E,565nm,1.0s,mb7.0
KSU1 Kansas State U 99.34 51 *e*Pdif Pdif 07 41 45.7 -0.2
comp=E,348nm,0.7s
IMP Imphal 99.43 293 *ex* x 07 41 50.0
IMP *ex* x 07 51 50.0
INK Inuvik 99.50 15 *e*P Pdif 07 41 44.4 -2.2
INK *e* 07 45 49.2
INK pmax pmax
comp=Z,160nm,2.3s
INK Inuvik 99.50 15 *e*Pdif Pdif 07 41 44.4 -2.1
comp=Z,160nm,2.3s
INK *e*PP PP 07 45 49.2 -2.6
MIAR Mount Ida 99.59 56 *e*Pdif Pdif 07 41 47.2 +0.2
comp=Z,1µm,0.3s
SONM Songino Array 100.32 318 P Pdif 07 41 48.9 -1.3
comp=Z,68nm,1.2s,baz=130,slow=2.7,SNR=64
SONM PP PP 07 46 00.8 +2.2
comp=Z,143nm,1.2s,baz=132,slow=6.0,SNR=4.8
SONM S SKSac 07 52 18.4 +4.0
comp=Z,7.6nm,0.9s,baz=329,slow=0.9,SNR=3.6
SONM PKKPbc PKKPbc 07 58 09.2 +1.8
comp=Z,28nm,0.7s,baz=275,slow=3.5,SNR=29
SONM PKPPKP 08 06 25.1
comp=Z,24nm,1.3s,baz=267,slow=2.0,SNR=6.9
SONM LR LR 08 26 04.2
comp=Z,60µm,20.3s,baz=14,slow=35
UALR University of 100.61 57 *e*Pdif Pdif 07 41 54.5 +3.0
comp=Z,73nm,1.0s
UALR *e*PKKPbc PKKPbc 07 57 56.6 -9.5
GTA Gaotai 100.93 308 P Pdif 07 41 52.2 -0.7
GTA AP 07 42 36.8
GTA XP 07 42 54.5
GTA PP PP 07 46 07.8 +4.5
GTA SKS SKSac 07 52 16.6 -1.2
GTA S Sdif 07 53 20.1 +2.0
GTA XS 07 54 25.7
GTA AMB AMB
comp=Z,18µm,11.1s
GTA LR LR
comp=N,46µm,20.7s
GTA LR LR
comp=E,45µm,43.1s
GTA LR LR
comp=Z,303µm,47.9s
VBMS Vicksburg 100.96 60 *e*Pdif Pdif 07 41 54.3 +1.2
comp=Z,182nm,1.3s
BOD Bodaibo 101.20 329 *e*P Pdif 07 41 53.5 -0.6
BOD pmax pmax
comp=Z,150nm,1.7s
AGT Agartala 101.31 291 *i* P Pdif 07 41 55.0 +0.4
AGT *i* x x 07 44 22.0
YKA Yellowknife Ar 101.32 25 P Pdif 07 41 54.0 -0.7
comp=Z,9.3nm,0.9s,baz=238,slow=4.3,SNR=50
YKA PP PP 07 46 06.5 +0.8
comp=Z,25nm,0.9s,baz=239,slow=6.9,SNR=4.0
YKA PKKPbc PKKPbc 07 58 08.0 +2.9
comp=Z,23nm,0.8s,baz=39,slow=2.8,SNR=14
YKA PKPPKP 08 06 24.6
comp=Z,2.7nm,0.8s,baz=71,slow=2.2,SNR=6.0
YKA Yellowknife Ar 101.32 25 P Pdif 07 41 54.0 -0.7
YKA PP PP 07 46 06.5 +0.8
YKA PKKPbc PKKPbc 07 58 08.0 +2.9
YKA P'P' 08 06 24.6
ECSD EROS,Sioux Fal 101.34 47 *e*Pdif Pdif 07 41 55.0 +0.3
comp=Z,14µm,1.3s
SHL Shillong 101.45 293 ⇑*i*P Pdif 07 41 53.8 -1.4
SHL *ex* x 07 46 15.0
CPUP Villa Florida 102.18 127 P Pdif 07 42 00.2 +1.7
comp=Z,8.5nm,0.8s,baz=213,slow=6.1,SNR=6.7
CPUP PP PP 07 46 19.5 +7.3
comp=Z,34nm,1.1s,baz=238,slow=8.0,SNR=2.8
CPUP S SKSac 07 52 33.2 +8.5
comp=Z,5.0nm,0.9s,baz=2.2,slow=16,SNR=1.2
CPUP PKPPKP 08 06 23.9
comp=Z,7.7nm,0.9s,baz=25,slow=4.0,SNR=4.2
CPUP Villa Florida 102.18 127 P Pdif 07 42 00.2 +1.7
CPUP 07 46 19.5
CPUP pmax pmax
comp=Z,9.0nm,0.8s
CPUP Villa Florida 102.18 127 *e*Pdif Pdif 07 42 00.1 +1.6
comp=Z,1µm,1.0s
TURI Tura 102.73 292 *ex* x 07 42 54.0
TURI *ex* x 07 44 02.0
CCM Cathedral Cave 102.74 54 *e*P Pdif 07 42 04.8 +3.8
CCM pmax pmax
comp=Z,45nm,1.1s
CCM Cathedral Cave 102.74 54 *e*Pdif Pdif 07 42 04.8 +3.9
comp=Z,45nm,1.1s
SCIA State Center 102.87 50 *e*Pdif Pdif 07 42 06.5 +5.0
comp=Z,2µm,0.8s
FFC Flin Flon 102.99 35 *e*P Pdif 07 42 01.4 -0.7
FFC pmax pmax
comp=Z,1µm,1.1s
FFC Flin Flon 102.99 35 *e*Pdif Pdif 07 42 01.4 -0.7
comp=Z,1µm,1.1s
PVMO Portageville 103.24 56 *e*Pdif Pdif 07 42 02.0 -1.1
comp=Z,171nm,1.0s
CAL Calcutta 103.25 289 *ex* x 07 42 12.1
CAL AMP 07 42 15.5
comp=Z,788nm,0.3s
CAL *ex* x 07 46 29.4
ZAK Zakamensk 103.28 320 *e*P Pdif 07 42 07.8 +4.4
ZAK *e* 07 52 27.8
ZAK pmax pmax
comp=Z,131nm,1.6s
FVM French Village 103.31 54 P Pdif 07 42 06.5 +3.0
FVM pmax pmax
comp=Z,83nm,1.2s
FVM French Village 103.31 54 Pdif Pdif 07 42 06.5 +3.0
comp=Z,83nm,1.2s
SOR Soroa 103.39 71 *e*P Pdif 07 41 57.5 -6.4
IRK Irkutsk 103.50 322 *e*P Pdif 07 42 06.1 +1.7
IRK *e* 07 52 28.2
IRK pmax pmax
comp=Z,209nm,1.7s
TLY Talaya 103.62 321 *e*P Pdif 07 42 08.2 +3.3
TLY *e* PP 07 46 25.7 +2.6
TLY *e* SKSac 07 52 32.8 +2.9
TLY *e*PS SP 07 55 21.0 +3.4
TLY *e*SS SS 08 00 48.5 -8.6
TLY pmax pmax
comp=Z,229nm,1.2s
TLY Talaya 103.62 321 *e*Pdif Pdif 07 42 05.0 +0.2
comp=Z,164nm,1.1s
LSA Lhasa 103.65 296 P Pdif 07 42 07.0 +2.0
LSA pmax pmax
comp=Z,282nm,1.3s
LSA Lhasa 103.65 296 Pdif Pdif 07 42 07.0 +1.9
comp=Z,282nm,1.3s
ROSC El Rosal 103.82 91 Pdiff Pdif 07 42 11.2 +5.4
comp=Z,2.3nm,0.3s,baz=280,slow=4.1,SNR=20
ROSC PP PP 07 46 33.5 +8.2
comp=Z,25nm,0.9s,baz=123,slow=2.1,SNR=4.4
ROSC S SKSac 07 52 38.0 +5.4
comp=Z,4.0nm,0.4s,baz=275,slow=23,SNR=2.5
ROSC PKKPbc PKKPbc 07 57 55.9 +0.1
comp=Z,18nm,0.8s,baz=250,slow=11,SNR=4.8
ROSC El Rosal 103.82 91 *e*Pdif Pdif 07 42 07.9 +2.1
ROSC PP PP 07 46 33.5 +8.2
ROSC S SKSac 07 52 38.0 +5.4
ROSC PKPbc PKKPbc 07 57 55.9 +0.1
UTMT University of 103.83 56 *e*Pdif Pdif 07 42 09.9 +4.0
comp=Z,116nm,1.0s
PALK Pallekele 103.86 271 Pdif Pdif 07 42 10.0 +4.1
comp=Z,255nm,1.5s
LRAL Lakeview Retre 104.02 60 *e*Pdif Pdif 07 42 10.5 +3.9
comp=Z,415nm,2.0s
SIUC Southern Illin 104.09 55 Pdif Pdif 07 42 11.8 +4.8
comp=Z,41nm,0.9s
TIXI Tiksi 104.28 345 ⇑*i*P Pdif 07 42 08.5 +0.7
TIXI *i* 07 46 21.8
TIXI pmax pmax
comp=Z,230nm,2.7s
TIXI Tiksi 104.28 345 *e*Pdif Pdif 07 42 07.6 -0.2
comp=Z,296nm,1.4s
ULM Lac du Bonnet 104.48 41 Pdiff Pdif 07 42 11.9 +3.2
comp=Z,45nm,1.2s,baz=245,slow=5.0,SNR=15
ULM S SKSac 07 52 33.9 +0.1
comp=Z,2.7nm,0.5s,baz=90,slow=14,SNR=1.8
ULM PKKPab PKKPab 07 57 59.2 -12
comp=Z,16nm,0.7s,baz=148,slow=2.2,SNR=4.1
ULM Lac du Bonnet 104.48 41 *e*Pdif Pdif 07 42 12.4 +3.8
comp=Z,84nm,0.3s
WVT Waverly 104.53 57 *e*P Pdif 07 42 07.8 -1.1
WVT pmax pmax
comp=Z,24nm,1.0s
WVT Waverly 104.53 57 *e*Pdif Pdif 07 42 07.8 -1.2
comp=Z,24nm,1.0s
BWNR Bhubaneshwar 104.55 286 *e*P Pdif 07 42 15.7 +6.7
BWNR *e*S SKSac 07 52 39.1 +3.5
MOY Mondy 105.12 320 *e*P Pdif 07 42 13.4 +1.8
MOY *e* 07 52 37.2
MOY pmax pmax
comp=Z,41nm,2.5s
SIV San Ignacio 105.27 117 Pdiff Pdif 07 42 17.6 +5.4
comp=Z,7.4nm,1.0s,baz=224,slow=5.7,SNR=16
SIV PP PP 07 46 35.3 -0.2
comp=Z,23nm,0.9s,baz=256,slow=6.6,SNR=5.9
SIV S SKSac 07 52 48.9 +10
comp=Z,8.0nm,0.8s,baz=54,slow=9.1,SNR=2.4
JFWS Jewell Farm 105.28 50 *e*P Pdif 07 42 16.8 +4.5
JFWS pmax pmax
comp=Z,5µm,1.4s
JFWS Jewell Farm 105.28 50 *e*Pdif Pdif 07 42 16.8 +4.5
comp=Z,5µm,1.4s
OLIL Olney 105.28 54 *e*Pdif Pdif 07 42 16.7 +4.5
comp=Z,33nm,0.9s
USIN University of 105.32 55 *e*Pdif Pdif 07 42 17.4 +4.9
comp=Z,88nm,1.1s

TAPN Taplejung 105.58 293 eP Pdif 07 42 17.9 +4.3
ODAN Odare 105.67 292 eP Pdif 07 42 19.3 +5.3
MGV Manicaragua 105.72 73 eP Pdif 07 42 18.8 +4.6
VIS Vishakhapatnam 105.72 282 i P Pdif 07 42 13.2 -1.0
VIS eS SKSac 07 52 37.5 -3.4
BOK Bokaro 105.80 289 eP Pdif 07 42 14.0 -0.6
BOK eS SKSac 07 52 40.3 -0.8
EYMN Ely 106.28 44 ePdif Pdif 07 42 18.6 +1.9
comp=Z,35nm,1.2s
RAMN Ramite 106.36 292 eP Pdif 07 42 22.5 +5.4
WCI Wyandotte Cave 106.43 55 eP Pdif 07 42 21.2 +3.8
WCI pmax pmax
comp=Z,308nm,2.6s
WCI Wyandotte Cave 106.43 55 ePdif Pdif 07 42 21.2 +3.8
comp=Z,308nm,2.6s
BLO Bloomington 106.59 54 eP Pdif 07 42 17.1 -1.0
BLO pmax pmax
comp=Z,170nm,2.0s
BLO Bloomington 106.59 54 ePdif Pdif 07 42 17.1 -1.0
comp=Z,170nm,2.0s
MDRS Chennai 106.64 277 eP Pdif 07 42 17.7 -0.6
MDRS ex x 07 47 33.9
MDRS AMS AMS 08 32 20.4
comp=Z,105µm,19.5s
GOGA Godfrey 106.91 61 eP Pdif 07 42 23.4 +3.9
JIRN Jiri 106.95 293 eP Pdif 07 42 25.3 +5.6
comp=Z,178nm,0.8s
GUN Gumba 107.30 293 eP Pdif 07 42 26.4 +5.2
comp=Z,252nm,0.9s
TKL Tuckaleechee C 107.44 58 eP Pdif 07 42 24.6 +2.7
LMGC Las Mercedes 107.53 76 eP Pdif 07 42 28.8 +6.5
LMGC eS SKSac 07 52 53.5 +4.7
comp=N,19µm,25.6s
LMGC e
comp=E,19µm,21.3s
PKI Pulchoki 107.57 293 eP Pdif 07 42 27.7 +5.3
comp=E,230nm,0.8s
PKI Pulchoki 107.57 293 eP Pdif 07 42 27.9 +5.5
PKIN Phulchoki 107.58 293 eP Pdif 07 42 27.9 +5.4
TRD Trivandrum 107.74 271 eP Pdif 07 42 20.9 -2.3
TRD ex x 07 52 56.2
KKN Kakani 107.75 293 eP Pdif 07 42 28.7 +5.4
comp=E,279nm,0.8s
KKN Kakani 107.75 293 eP Pdif 07 42 28.7 +5.4
KKN pmax pmax
comp=Z,279nm,0.8s
DMN Daman 107.83 292 eP Pdif 07 42 29.0 +5.4
comp=Z,284nm,0.8s
TZTN Tazewell 107.91 58 ePdif Pdif 07 42 28.2 +4.3
comp=Z,132nm,0.6s
KOD Kodaikanal 107.99 273 eP Pdif 07 42 24.7 +0.4
GKN Gorkha 108.36 293 eP Pdif 07 42 31.0 +5.0
comp=Z,459nm,1.1s
FCC Fort Churchill 108.57 33 eP Pdif 07 42 29.6 +2.7
FCC pmax pmax
comp=Z,1.0nm,0.9s
FCC Fort Churchill 108.57 33 ePdif Pdif 07 42 29.6 +2.6
comp=Z,0.9nm,0.9s
SDV Santo Domingo 108.84 89 ePdif Pdif 07 42 31.3 +3.2
comp=Z,36nm,1.0s
KOLN Koldanda 109.14 292 eP Pdif 07 42 34.2 +4.8
comp=Z,157nm,0.8s
DANN Dangsing 109.20 293 eP Pdif 07 42 33.7 +4.0
comp=Z,472nm,1.2s
NHSC New Hope 109.40 62 Pdif Pdif 07 42 33.5 +2.9
ACSO Alum Creek Sta 109.52 54 ePKPdf PKiKP 07 46 36.5 +3.0
MOAC Moa 109.53 76 eP Pdif 07 42 24.0 -7.2
ALBI Allahabad 109.81 289 ex x 07 42 37.5
HYB Hyderabad 109.82 280 i Pdif Pdif 07 42 30.0 -2.4
HYB epPdif 07 43 12.0
HYB esPdif 07 43 21.0
HYB e 07 43 43.5
HYB e 07 46 04.0
HYB ePP PP 07 47 08.0 -1.3
HYB e 07 47 36.0
HYB e 07 47 54.0
HYB e 07 50 16.0
HYB e 07 52 30.0
HYB eSKS SKSac 07 53 00.0 +1.4
HYB eSKKS SKKSac 07 53 56.0 -1.4
HYB e 07 55 22.0
HYB e 07 56 42.0
HYB e 07 56 52.0
HYB eSPP 07 57 18.0
HYB ⇑ePKKPB 07 57 44.0
HYB ePPS 07 57 46.0
HYB ePKKPAB 07 57 50.0
HYB e 07 57 56.0
HYB e 08 01 49.0
HYB Hyderabad 109.82 280 eP Pdif 07 42 30.0 -2.4
HYB eSKS SKSac 07 52 55.0 -3.6
RER Riviere de l'E 110.30 233 Pdif Pdif 07 42 42.4 +7.8
BLA Blacksburg 110.50 58 ePKIKP PKiKP 07 46 34.8 -0.6
JBP Jabalpur 110.64 286 ex x 07 42 40.6
JBP ex x 07 53 04.2
NGP Nagpur 110.74 284 eP PKiKP 07 46 34.5 -1.8
WMQ Urumqi 110.97 309 PKP PKiKP 07 46 37.1 +1.0
WMQ PP PP 07 47 22.7 +5.6
WMQ PPP 07 49 45.5
WMQ PKS 07 50 12.6
WMQ SKS SKSdf 07 53 29.5 -4.6
WMQ SKKS SKKSac 07 53 56.2 -8.0
WMQ PS PS 07 56 52.1 +2.3
WMQ SS SS 08 02 30.0 -7.0
WMQ LR LR
comp=N,258µm,50.0s
WMQ LR LR
comp=E,91µm,53.0s
WMQ LR LR
comp=Z,366µm,50.0s
KRAR Krasnoyarsk 111.09 323 i PKIKP PKiKP 07 46 35.0 -0.9
MNGI Mangalore 111.44 274 eP PKiKP 07 46 36.4 -1.5
MNGI ex x 07 59 16.9
comp=Z,8µm,20.7s
CNNC Cliffs of the 111.87 60 ePKPdf PKiKP 07 46 42.0 +3.9
SDDR Presa de Saban 112.15 79 ePKPdf PKiKP 07 46 43.2 +4.1
ERPA Erie 112.22 53 ePKPdf PKiKP 07 46 39.7 +1.1
AKL Akola 112.36 283 eP PKiKP 07 46 38.8 -0.6
LGTI Lohaghat 112.47 293 eP PKiKP 07 46 41.5 +2.1
PTH Pithoragarh 112.53 293 ex x 07 42 57.0
RES Resolute Bay 112.98 17 S SKSac 07 53 10.1 +1.1
comp=Z,14nm,1.0s,baz=225,slow=7.2,SNR=3.4
RES PKKPab PKKPab 07 57 30.6 -1.9
comp=Z,27nm,1.0s,baz=47,slow=7.4,SNR=11
RES Resolute Bay 112.98 17 P Pdif 07 42 47.9 +1.4
CBN Corbin 113.10 58 ePKPdf PKiKP 07 46 38.4 -1.9
GOA Goa 113.31 276 eP PKiKP 07 46 40.7 -0.7
GOA ex x 07 50 49.0
SSPA Standing Stone 113.36 55 ePKPdf PKiKP 07 46 44.1 +3.4
KAD Karad 113.66 278 eP PKiKP 07 46 41.5 -0.5
POO Poona 114.39 280 eP PKiKP 07 46 42.2 -1.2
POO AMS AMS 08 37 55.8
comp=Z,52µm,12.6s
DDI Dehra Dun 114.55 293 ex x 07 46 30.0
NDI New Delhi 114.77 291 ex x 07 42 56.0
BINY Binghamton 115.12 54 ePKPdf PKPdf 07 46 47.9 +3.8
ZALV Zalesovo Beam 115.16 320 Pdiff Pdif 07 43 00.7 +4.5
comp=Z,4.8nm,0.8s,baz=111,slow=3.3,SNR=21
ZALV PKiKP PKiKP 07 46 43.7 -0.1
comp=Z,160nm,0.9s,baz=156,slow=1.7,SNR=7.3
ZALV PKKPab PKKPab 07 57 26.9 +3.2
comp=Z,32nm,0.9s,baz=268,slow=2.4,SNR=5.9
ZALV Zalesovo Beam 115.16 320 P Pdif 07 43 00.7 +4.5
ZALV i 07 46 43.7
ZALV 07 57 26.9
ZALV pmax pmax
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 115.16 320 PKPdf PKPdf 07 46 43.7 -0.1
ZALV PKKPab PKKPab 07 57 26.9 +3.2
MK31 Makanchi Array 115.39 312 ePdif Pdif 07 43 02.8 +5.6
MK31 ePKPdf PKPdf 07 46 44.4 0.0
MK31 i PKP PKPdf 07 46 44.6 +0.1
MKAR Makanchi Array 115.39 312 Pdiff Pdif 07 43 00.7 +3.5
comp=Z,5.9nm,0.9s,baz=105,slow=5.3,SNR=18
MKAR PKP PKPdf 07 46 44.5 0.0
comp=Z,93nm,0.8s,baz=72,slow=4.0,SNR=15
MKAR PP PP 07 47 50.2 +1.8
comp=Z,20nm,0.9s,baz=333,slow=35,SNR=1.4
MKAR S SKSac 07 53 19.7 +0.2
comp=Z,8.7nm,0.9s,baz=333,slow=4.5,SNR=2.4
MKAR PKKPbc PKKPbc 07 57 21.1 +1.3
comp=Z,31nm,0.6s,baz=317,slow=1.4,SNR=8.2
MKAR Makanchi Array 115.39 312 Pdif Pdif 07 43 00.7 +3.5
MKAR PKP PKPdf 07 46 44.5 0.0
MKAR PP PP 07 47 50.2 +1.8
MKAR S SKSac 07 53 19.7 +0.2
MKAR PKKPbc PKKPbc 07 57 21.1 +1.3
BOM Bombay 115.44 279 ex x 07 42 56.1
BOM ex x 07 47 43.2
CRPR Cabo Rojo, PR 115.51 82 ePKPdf PKPdf 07 46 47.6 +2.1
SMLA Simla 115.51 294 eP PKPdf 07 46 45.3 +0.1
BDFB Brasilia 115.60 124 Pdiff Pdif 07 43 14.3 +16
comp=Z,2.1nm,0.9s,baz=244,slow=12,SNR=4.1
BDFB PKP PKPdf 07 46 48.1 +2.3
comp=Z,19nm,0.7s,baz=261,slow=1.8,SNR=23
BDFB PP PP 07 47 55.3 +5.6
comp=Z,16nm,0.8s,baz=177,slow=20,SNR=1.5
BDFB PKKPab PKKPab 07 57 20.3 -5.7
comp=Z,15nm,0.9s,baz=84,slow=26,SNR=3.5
BDFB Brasilia 115.60 124 P Pdif 07 43 14.3 +16
BDFB 07 47 55.3
BDFB 07 57 20.3
BDFB pmax pmax
comp=Z,2.0nm,0.9s
BDFB Brasilia 115.60 124 PKP PKPdf 07 46 48.1 +2.3
BDFB PP PP 07 47 55.3 +5.6
BDFB PKKPab PKKPab 07 57 20.3 -5.7
SDNR Sundarnagar 115.78 294 ex x 07 46 50.4
ICM Isla Caja Muer 115.99 82 ePKPdf PKPdf 07 46 45.8 -0.7
BHK Bhakra 116.21 294 eP PKPdf 07 46 48.2 +1.7
BHK ex x 07 48 59.4
NVS Novosibirsk 116.22 320 eP Pdif 07 43 02.5 +1.6
NVS ePPP 07 47 52.1
NVS eS SKSac 07 53 19.8 -2.4
NVS pmax pmax
comp=N,45nm,1.7s
NVS pmax pmax
comp=E,107nm,1.7s
NVS pmax pmax
comp=Z,124nm,1.7s
AJM Ajmer 116.29 288 eP PKPdf 07 46 45.5 -1.3
SJG San Juan 116.40 82 ePKIKP PKPdf 07 46 46.3 -1.0
NCB Newcomb 116.76 52 ePKPdf PKPdf 07 46 46.6 -0.6
DLH Dalhousie 116.88 295 eP PKPdf 07 46 50.0 +2.2
MTP Monte Pirata 116.93 82 ePKPdf PKPdf 07 46 48.8 +0.5
THN Thein Dam 117.05 295 eP PKPdf 07 46 46.7 -1.4
ABPO Ambohimpanom 117.66 229 Pdif Pdif 07 43 09.5 +2.2
ABPO ePKPdf PKPdf 07 46 48.7 -1.0
OPO Ambohidratompo 117.99 229 PKP PKPdf 07 46 51.6 +1.1
comp=Z,64nm,0.7s,baz=134,slow=1.2,SNR=17
OPO PKKPab PKKPab 07 57 16.5 +0.8
comp=Z,14nm,1.0s,baz=302,slow=2.8,SNR=3.6
GRGR Grenville 118.22 90 ePKPdf PKPdf 07 46 52.6 +1.8
KURK Kurchatov 118.44 315 ePdif Pdif 07 43 14.6 +3.8
KURK ⇑ePKP PKPdf 07 46 48.6 -1.6
KURK ePKPdf PKPdf 07 46 49.0 -1.2
LBNH Lisbon 118.44 52 ePKIKP PKPdf 07 46 49.9 -0.5
ULHL Ulahol 118.78 306 P PKPdf 07 46 56.1 +5.0
SNR=13
TKM2 Tokmak 2 119.37 306 P PKPdf 07 46 57.1 +4.8
SNR=7.8
TKM2 Tokmak 2 119.37 306 ePKPdf PKPdf 07 46 51.7 -0.5
KZA Kyzart 119.48 305 P PKPdf 07 46 57.8 +5.3
SNR=13
BHJ Bhuj 119.65 283 eP PKPdf 07 46 50.8 -2.6
BIM Bigot 119.65 88 eP PKPdf 07 46 57.9 +4.3
FDF Fort de France 119.66 87 eP PKPdf 07 46 57.9 +4.3
FDF Fort de France 119.66 87 ePKPdf PKPdf 07 46 57.2 +3.6
KBK Karagaybulak 119.80 306 P PKPdf 07 46 57.6 +4.6
SNR=12
MVM Montagne Vaucl 119.82 88 eP PKPdf 07 46 57.7 +3.8
CHMS Chumysh 119.99 306 P PKPdf 07 46 50.9 -2.6
SNR=17
UCH Uchtor 120.05 305 P PKPdf 07 46 59.1 +5.5
SNR=13
UCH Uchtor 120.05 305 ePKPdf PKPdf 07 46 53.9 +0.3
FRU Bishkek 120.06 306 eP Pdif 07 43 24.0 +6.0
FRU i 07 46 50.0
FRU i 07 47 28.0
FRU e 07 59 12.0
FRU pmax pmax
comp=Z,3µm,14.0s
AAK Ala-Archa 120.12 306 P PKPdf 07 46 58.3 +4.6
SNR=10.0
AAK Ala-Archa 120.12 306 ePKPdf PKPdf 07 46 53.8 +0.1
ANWB Willy Bob 120.14 84 ePKPdf PKPdf 07 46 57.9 +3.4
USP Ospenovka 120.22 307 P PKPdf 07 46 58.2 +4.3
SNR=12
MSEY Mahe Island 120.39 247 ePKPdf PKPdf 07 46 53.9 -1.3
PKME Peaks-Kenny Pk 120.45 51 ePKPdf PKPdf 07 46 53.5 -0.8
BBGH Gun Hill 120.49 90 ePKPdf PKPdf 07 47 01.6 +6.3
AML Almayashu 120.63 305 P PKPdf 07 46 60.0 +5.2
SNR=11
AML Almayashu 120.63 305 ePdif Pdif 07 43 30.4 +10
AML ePKPdf PKPdf 07 46 53.4 -1.3
EKS2 Erkin-Say 120.65 306 P PKPdf 07 46 59.5 +4.8
SNR=10
EKS2 Erkin-Say 120.65 306 ePdif Pdif 07 43 24.5 +3.9
EKS2 ePKPdf PKPdf 07 46 55.0 +0.3
BOSA Boshof 121.42 203 PKP PKPdf 07 46 57.3 +0.5
comp=Z,79nm,0.6s,baz=156,slow=2.2,SNR=12
BOSA PP PP 07 48 31.4 +2.7
comp=Z,169nm,1.0s,baz=176,slow=7.7,SNR=1.5
BOSA PKKPab PKKPab 07 57 01.9 +0.6
comp=Z,26nm,0.9s,baz=318,slow=4.9,SNR=7.0
BOSA Boshof 121.42 203 ePKPdf PKPdf 07 46 56.6 -0.2
BBSR BB Station 121.76 67 ePKPdf PKPdf 07 46 58.9 +1.7
SCHQ Schefferville 122.64 40 PKP PKPdf 07 46 58.6 +0.5
comp=Z,109nm,1.0s,baz=352,slow=1.5,SNR=17
SCHQ PKKPab PKKPab 07 56 58.0 +6.9
comp=Z,16nm,0.6s,baz=117,slow=1.5,SNR=7.5
SCHQ Schefferville 122.64 40 ePKPdf PKPdf 07 46 57.1 -1.1
KBL Kabul 122.96 296 ePKIKP PKPdf 07 46 57.9 -1.5
KK31 Karatay Array 123.09 306 i PKIKP PKPdf 07 47 02.5 +3.1
KK31 pmax pmax
comp=Z,281nm,0.7s
VOSK Vostochnaya 123.31 317 PKIKP PKPdf 07 46 56.9 -2.6
VOSK pmax pmax
comp=Z,761nm,1.7s
BVA0 Borovoye Array 123.66 318 PKIKP PKPdf 07 46 58.7 -1.5
BVA0 pmax pmax
comp=Z,195nm,1.6s
BRVK Borovoye 123.73 318 ePKIKP PKPdf 07 46 58.4 -1.9
LBTB Lobatse 124.56 205 PKP PKPdf 07 47 03.6 +0.7
comp=Z,73nm,0.7s,baz=169,slow=3.3,SNR=5.0
LBTB PP PP 07 48 53.6 +3.7
comp=Z,124nm,0.9s,baz=138,slow=9.8,SNR=3.6
LBTB PKKPab PKKPab 07 56 52.6 +4.8
comp=Z,38nm,0.9s,baz=324,slow=5.3,SNR=4.4
LBTB Lobatse 124.56 205 ePKPdf PKPdf 07 47 02.0 -0.9
LBTB ePP PP 07 48 54.7 +4.8
KBS Kingsbay 126.93 358 eP PKPdf 07 47 05.0 -0.8
KBS AMb AMB 07 47 28.5
comp=Z,1µm,0.9s
KBS ePP PP 07 49 04.9 -0.8
KBS eSS SS 08 05 59.6 -0.7
KBS Kingsbay 126.93 358 ⇑iPKIKP PKPdf 07 47 05.1 -0.7
KBS Kingsbay 126.93 358 ePKPdf PKPdf 07 47 05.1 -0.7
SFJD Kangerlussuaq 127.86 24 SKKPbc 08 00 20.9
comp=Z,48nm,1.0s,baz=78,slow=6.8,SNR=4.0
SFJD Kangerlussuaq 127.86 24 ⇓iPKIKP PKPdf 07 47 08.0 +0.2
SFJD i 07 49 09.0
SFJD MLR MLR
comp=Z,43µm,20.0s
SFJD Kangerlussuaq 127.86 24 ⇓iP PKPdf 07 47 08.0 +0.2
comp=Z,108nm,0.8s
SFJD i 07 49 09.0
SFJD i 08 05 31.1
SFJD i 08 05 52.3
SFJD
comp=Z,43µm,20.0s
DAG Danmarks Havn 128.22 6 ⇓iP PKPdf 07 47 03.5 -4.8
comp=Z,253nm,1.1s
SUMG Summit 128.41 15 ePKPdf PKPdf 07 47 08.6 -0.2
SUMG ePP PP 07 49 14.0 -1.6
HSP Hornsund 128.64 356 eP PKPdf 07 47 13.3 +4.2
SVE Sverdlovsk 128.86 323 ⇑eP Pdif 07 44 11.7 +15
SVE i 07 47 10.6
SVE e 07 49 16.6
SVE e 07 54 08.6
SVE e 08 01 07.9
ARU Arti 130.06 323 P Pdif 07 44 11.2 +8.8
ARU i 07 47 10.1
ARU 07 53 58.9
ARU PS PS 07 59 19.0 -21
ARU Arti 130.06 323 ePKPdf PKPdf 07 47 09.5 -2.8
SOKR Solikamsk 130.14 327c iPKIKP PKPdf 07 47 12.1 -0.2
SOKR i 07 49 26.2
SOKR i 08 01 19.1
SOKR pmax pmax
comp=Z,2µm,1.2s
AB31 Akbulak array 130.45 314 PKIKP PKPdf 07 47 09.3 -3.9
AB31 pmax pmax
comp=Z,864nm,1.7s
BJO Bjornoya 130.78 354 eP PKPdf 07 47 15.2 +2.0
BJO AMb AMB 07 47 20.1
comp=Z,848nm,1.7s
BJO ePP PP 07 49 31.7 +0.9
BJO e 08 06 57.6
BJO1 Bjornoya 130.80 354 eP PKPdf 07 47 16.4 +3.2
RCBR Riachuelo 130.97 125 ePKPdf PKPdf 07 47 11.3 -4.1
LSZ Lusaka 131.95 214 PKhKP 07 47 13.2
comp=Z,16nm,0.5s,baz=175,slow=3.7,SNR=7.1
LSZ PKP PKPdf 07 47 17.8 +0.7
comp=Z,68nm,0.5s,baz=172,slow=2.2,SNR=37
LSZ SKPbc SKPbc 07 50 35.6 +6.2
comp=Z,112nm,0.9s,baz=170,slow=4.0,SNR=5.5
LSZ SKKPbc 07 59 54.7
comp=Z,37nm,1.2s,baz=337,slow=3.1,SNR=3.9
LSZ Lusaka 131.95 214 PKIKP PKPdf 07 47 13.2 -4.0
LSZ S 07 59 54.7
LSZ pmax pmax
comp=Z,16nm,0.5s
LSZ Lusaka 131.95 214 ePKPdf PKPdf 07 47 12.2 -5.0
LSZ PKP PKPdf 07 47 17.8 +0.7
LSZ SKPbc SKPbc 07 50 35.6 +6.2
LSZ SKKPbc 07 59 54.7
TSUM Tsumeb 132.69 199 PKhKP 07 47 12.2
comp=Z,18nm,0.7s,baz=110,slow=2.1,SNR=11
TSUM PKP PKPdf 07 47 19.2 +0.7
comp=Z,46nm,0.7s,baz=274,slow=1.4,SNR=18
TSUM PP PP 07 49 48.1 +5.1
comp=Z,362nm,1.1s,baz=154,slow=5.8,SNR=11
TSUM SKPbc SKPbc 07 50 37.8 +5.8
comp=Z,161nm,0.9s,baz=135,slow=6.6,SNR=3.5
TSUM SKKPbc 07 59 52.9
comp=Z,20nm,1.0s,baz=341,slow=5.0,SNR=3.0
TSUM Tsumeb 132.69 199 ePKPdf 07 47 09.7
TSUM PKP PKPdf 07 47 19.2 +0.7
TSUM PP PP 07 49 48.1 +5.1
TSUM SKPbc SKPbc 07 50 37.8 +5.8
TSUM SKKPbc 07 59 52.9
LVZ Lovozero 133.91 344 i PKIKP PKPdf 07 47 18.9 -0.3
KEV Kevo 134.05 348 ePKIKP PKPdf 07 47 18.2 -1.2
APA Apatity 134.47 344 ⇓iPKIKP PKPdf 07 47 18.0 -2.3
APA i 07 50 00.0
APA pmax pmax
comp=Z,4.0nm,2.6s
APA pmax pmax
comp=Z,15µm,9.0s
ARCES ARCESS Array B 134.50 349 PKhKP 07 47 13.5
comp=Z,21nm,0.7s,baz=50,slow=3.4,SNR=11
ARCES PKP PKPdf 07 47 20.0 -0.3
comp=Z,154nm,0.6s,baz=48,slow=1.8,SNR=30
ARCES PP PP 07 49 57.5 +2.9
comp=Z,209nm,1.0s,baz=28,slow=5.5,SNR=5.2
ARCES SKPbc SKPbc 07 50 42.8 +6.5
comp=Z,965nm,1.2s,baz=11,slow=2.5,SNR=9.0
ARCES PKKP 07 57 10.4
comp=Z,17nm,0.8s,baz=187,slow=2.1,SNR=3.6
ARCES SKKPbc 07 59 48.3
comp=Z,42nm,0.9s,baz=188,slow=3.7,SNR=4.0
ARCES ARCESS Array B 134.50 349 PKIKP PKPdf 07 47 20.0 -0.3
ARCES 07 49 57.5
ARCES 07 59 48.3
ARCES ARCESS Array B 134.50 349 PKP PKPdf 07 47 20.0 -0.3
ARCES PP PP 07 49 57.5 +2.9
ARCES SKPbc SKPbc 07 50 42.8 +6.5
ARCES PKKP 07 57 10.4
ARCES SKKPbc 07 59 48.3
ARE0 ARCESS Array S 134.50 349 ePKPdf PKPdf 07 47 19.9 -0.4
JNW Jan Mayen West 134.59 5 e PKPdf 07 47 26.0 +5.6
JMIC Jan Mayen 134.62 5 ePP PP 07 50 01.4 +6.1
JMIC eSS SS 08 07 35.2 +1.0
JMIC Jan Mayen 134.62 5 eP PKPdf 07 47 23.8 +3.3
MUKL Al Mukalla 135.18 264 ⇑eP PKPdf 07 47 18.4 -4.7
KTK1 Kautokeino 135.35 350 ePP PP 07 49 59.2 -0.7
KTK1 eSS SS 08 07 34.5 -8.5
TRO Tromso 135.40 352 eP PKPdf 07 47 16.7 -5.3
TRO AMb AMB 07 47 36.4
comp=Z,777nm,0.7s
TRO ePP PP 07 50 00.9 +0.7
TRO eSS SS 08 07 45.2 +1.8
KLMR Klimovskoe 137.19 334 i PKIKP PKPdf 07 47 22.7 -2.8
KLMR e 07 50 08.9
KLMR e 07 54 17.3
KLMR eSP SP 08 00 13.9 -7.8
KLMR pmax pmax
comp=Z,1.0nm,1.4s
SHEL Horse Pasture 137.41 168 ePKPdf PKPdf 07 47 27.9 +0.6
LOF Lofoten 137.43 354 eP PKPdf 07 47 25.3 -0.5
STEI Steigen 137.45 353 eP PKPdf 07 47 22.5 -3.3
BDHA Al Bayda' 138.09 262 ⇑eP PKPdf 07 47 24.2 -4.4
LBOS 138.33 261 ⇑eP PKPdf 07 47 24.6 -4.4
BORG Borgarnes 138.39 15 SKKPbc 07 59 37.4
comp=Z,42nm,0.8s,baz=52,slow=1.5,SNR=5.0
BORG Borgarnes 138.39 15 ePKPdf PKPdf 07 47 29.6 +2.0
JOF Joensuu 138.60 341 epkp PKPdf 07 47 24.8 -3.3
comp=Z,358nm,0.7s
JOF Joensuu 138.60 341 ePKIKP PKPdf 07 47 24.8 -3.3
JOF pmax pmax
comp=Z,358nm,0.7s
KONS Konsvik 139.06 354 eP PKPdf 07 47 25.4 -3.4
KONS AMb AMB 07 47 50.6
comp=Z,1µm,1.3s
STOK Stokkvaagen 139.23 354 eP PKPdf 07 47 26.0 -3.1
STOK AMb AMB 07 47 37.7
comp=Z,1µm,2.0s
STOK ePP PP 07 50 26.4 +2.5
MOR8 Moi Rana 139.23 353 eP PKPdf 07 47 24.7 -4.4
MOR8 ePP PP 07 50 25.5 +1.5
DHBB Dhamar BB 139.37 262 ⇓eP PKPdf 07 47 26.5 -4.4
UDYN Al 'Udayn 139.50 261 eP PKPdf 07 47 26.5 -4.6
QRN Al-Qurain 139.90 284 eP PKPdf 07 47 29.5 -2.0
baz=284
QRN AMb AMB 07 47 40.7
comp=Z,3µm,1.9s,baz=284
MAK Makhachkala 139.90 306d iPKIKP PKPdf 07 47 27.2 -3.9
MAK i 07 50 37.3
MAK ePS 08 00 37.9
MAK pmax pmax
comp=Z,3µm,1.6s
MAK MLR MLR
comp=N,48µm,22.0s
MAK MLR MLR
comp=E,94µm,22.0s
MAK MLR MLR
comp=Z,65µm,20.0s
KBD Kabd 140.15 285 eP PKPdf 07 47 29.9 -2.1
baz=285
UMR Umm Al-Rimmam 140.17 286 eP PKPdf 07 47 30.1 -1.9
baz=286
HAJJ Hajjah 140.50 263 ⇑eP PKPdf 07 47 28.4 -4.5
MIB Mutribah 140.52 286 eP PKPdf 07 47 30.4 -2.3
baz=286
MIB AMb AMB 07 47 41.3
comp=Z,1µm,1.1s,baz=286
NAY Al-Naaiem 140.55 285 eP PKPdf 07 47 30.2 -2.4
baz=285
NAY AMb AMB 07 47 50.5
comp=Z,597nm,1.4s,baz=285
ZUQR Zugar Island 140.59 260 eP PKPdf 07 47 28.3 -4.8
KAF Kangasniemi 140.66 343 epkp PKPdf 07 47 30.5 -1.3
comp=Z,352nm,0.7s,baz=34,slow=3.4
KAF Kangasniemi 140.66 343 ePKIKP PKPdf 07 47 30.5 -1.3
KAF pmax pmax
comp=Z,353nm,0.7s
MOS Moscow 141.03 329 ePKHKP 07 47 26.5
MOS e 07 54 23.3
MOS i 08 02 53.2
MOS eSSS 08 13 57.2
MOS pmax pmax
comp=Z,1µm,1.4s
NSS Namsos 141.09 354 eP PKPdf 07 47 27.6 -5.0
NSS AMb AMB 07 47 50.3
comp=Z,1µm,1.3s
NSS ePP PP 07 50 35.6 +0.2
NSS eSS SS 08 08 53.1 +2.6
VRHR Novokhopersk 141.29 321 i PKIKP PKPdf 07 47 28.6 -4.7
VRHR e 07 50 39.9

VRHR pmax pmax
comp=Z,1µm,2.3s
VRHR pmax pmax
comp=N,260nm,3.2s
VRHR pmax pmax
comp=E,550nm,2.9s
VRHR pmax pmax
comp=Z,17µm,12.6s
VRHR pmax pmax
comp=N,5µm,15.9s
VRHR pmax pmax
comp=E,9µm,14.0s
DGRG David-gareji 141.72 305 P PKPdf 07 47 32.6 -1.8
OBN Obninsk 141.88 329⇑ *e*P Pdif 07 45 06.6 +12
OBN *i* 07 47 28.8
OBN *i* 07 50 46.0
OBN *i* PPP 07 53 58.3
OBN *i* PPS 08 03 07.8
OBN *i* SS SS 08 09 02.7 +2.1
OBN pmax pmax
comp=Z,600nm,16.5s
OBN pmax pmax
comp=Z,2µm,1.6s
OBN MLR MLR
comp=Z,34µm,20.0s
OBN Obninsk 141.88 329 *e*PKPdf PKPdf 07 47 29.8 -4.4
MTA Mtatsminda 142.11 305 P PKPdf 07 47 32.9 -2.2
TBLG Delisi 142.14 305 P PKPdf 07 47 35.1 0.0
VOR Voronezh 142.35 323 *e*PKIKP PKPdf 07 47 32.0 -3.2
VOR pmax pmax
comp=Z,4µm,2.0s
GNI Garni 142.41 303 *e*P PKPdf 07 47 31.7 -4.0
GNI Garni 142.41 303 SKPbc SKPbc 07 51 07.9 +8.3
comp=Z,202nm,1.0s,baz=334,slow=23,SNR=2.0
GNI Garni 142.41 303 *e*PKPdf PKPdf 07 47 34.6 -1.0
GOR Gori 142.55 306 P PKPdf 07 47 35.3 -0.6
VSR Storozhevoye 142.62 322 *i* PKIKP PKPdf 07 47 30.9 -4.8
VSR *e* 07 50 46.5
VSR *e*SS SS 08 08 59.0 -11
VSR pmax pmax
comp=Z,2µm,3.5s
VSR pmax pmax
comp=N,470nm,4.7s
VSR pmax pmax
comp=E,1µm,4.5s
VSR pmax pmax
comp=Z,7µm,11.9s
VSR pmax pmax
comp=N,4µm,14.8s
VSR pmax pmax
comp=E,6µm,14.6s
VORD Divnogorie 142.66 322 *i* PKHKP 07 47 28.8
VORD *e* 07 50 44.1
VORD pmax pmax
comp=Z,5µm,3.7s
VORD pmax pmax
comp=N,400nm,2.4s
VORD pmax pmax
comp=E,2µm,4.4s
VORD pmax pmax
comp=Z,33µm,18.1s
VORD pmax pmax
comp=N,3µm,8.2s
VORD pmax pmax
comp=E,14µm,19.0s
ONI Oni 142.90 307 P PKPdf 07 47 34.1 -2.4
KIV Kislovodsk 143.10 309 *e*PKHKP 07 47 29.0
KIV *i* 07 47 33.8
KIV *e* 07 50 51.3
KIV *e* 07 54 24.2
KIV *e* 08 03 21.3
KIV *e*SS SS 08 09 04.7 -11
KIV pmax pmax
comp=Z,289nm,1.2s
KIV MLR MLR
comp=Z,54µm,20.0s
KIV Kislovodsk 143.10 309 *e*PKPdf PKPdf 07 47 32.7 -4.0
DYDN Diyadin 143.30 302 *i* P PKPdf 07 47 37.5 +0.2
MOL Molde 143.38 356 *e*P PKPdf 07 47 32.9 -3.8
MOL *e*PP PP 07 50 48.4 -0.7
MOL *e*SS SS 08 09 20.4 +3.4
DIGO Kars 143.39 303 *i* P PKPdf 07 47 32.0 -5.4
VSU Vasula 143.48 339⇑ *i*PKIKP PKPdf 07 47 34.5 -2.5
HKR Hakkari 143.51 299 *e*P PKPdf 07 47 35.9 -1.8
HAKT HAKKARI 143.54 299 *i* P PKPdf 07 47 39.7 +1.9
KARS Kars 143.57 304 *e*P PKPdf 07 47 36.6 -1.1
CUKT Cukurca 143.65 298 *e*P PKPdf 07 47 34.4 -3.6
TVAN Van 143.66 300 *i* P PKPdf 07 47 38.6 +0.6
VANT Van 143.69 300 *e*P PKPdf 07 47 41.2 +3.2
DOMB Dombas 143.80 355 *e*P PKPdf 07 47 33.8 -3.7
DOMB AMb AMB 07 47 42.3
comp=Z,3µm,1.4s
DOMB *e*PP PP 07 50 51.0 -0.7
AGRB Hanur-Agry 143.82 302 *e*P PKPdf 07 47 36.7 -1.5
TUTA Tutak 143.99 302 *i* P PKPdf 07 47 36.4 -2.1
ARTV Artvin 144.32 305 *i* P PKPdf 07 47 35.3 -3.7
DAGI Agillar 144.35 305 *i* P PKPdf 07 47 36.4 -2.7
DBOC Borcka 144.47 305 *i* P PKPdf 07 47 35.3 -4.0
BCA Borcka 144.49 305 *e*P PKPdf 07 47 37.0 -2.3
DDEM Demirkent 144.51 305 *i* P PKPdf 07 47 38.6 -0.8
DBAD Bademkaya 144.53 305 *i* P PKPdf 07 47 36.4 -3.0
HOMI Horasan 144.57 303 *i* P PKPdf 07 47 37.5 -2.0
NB2 NORSAR Subarra144.58 353 PKP PKPdf 07 47 35.8 -3.0
comp=Z,8µm,1.7s,baz=16,slow=3.2
NB2 NORSAR Subarra144.58 353 PKP PKPdf 07 47 35.8 -3.0
baz=16,slow=3.2
NOA NORSAR Array B144.58 353 PKP PKPdf 07 47 37.3 -1.5
comp=Z,139nm,0.7s,baz=13,slow=2.3,SNR=101
NOA SKKPbc 07 59 11.3
comp=Z,16nm,0.9s,baz=174,slow=4.0,SNR=4.5
NAO01 NORSAR Array S144.81 353 *e*PKPdf PKPdf 07 47 36.7 -2.5
ERZM Erzurum 145.00 303 *i* P PKPbc 07 47 38.6 -1.3
EZM Erzurum 145.00 303 *e*P PKPbc 07 47 39.5 -0.4
SUE Sulen 145.02 358 *e*P PKPbc 07 47 37.0 -2.2
PZAR Pazar-Rize 145.08 305 *e*P PKPbc 07 47 40.8 +0.7
HFS Hagfors 145.13 350 PKP PKPdf 07 47 38.1 -1.7
comp=Z,312nm,0.7s,baz=46,slow=5.6,SNR=52
HFS Hagfors 145.13 350 PKIKP PKPdf 07 47 38.1 -1.7
HFS pmax pmax
comp=Z,312nm,0.7s
SOC Sochi 145.27 310*c* *i*PKIKP PKPdf 07 47 38.2 -2.4
SOC *e**PP 07 48 32.1
SOC *e* 07 50 59.9
SOC *e* 07 54 27.3
SOC *e* 08 03 35.4
SOC *e*SS SS 08 09 32.3 -8.4
SOC *e*SSS 08 15 07.6
SOC pmax pmax
comp=Z,5µm,0.8s
BNGL BINGOL 145.34 301 *i* P PKPdf 07 47 41.0 +0.1
BEST Besiri 145.42 300 *i* P PKPdf 07 47 41.0 0.0
ASK Askoy 145.58 358 *e*P PKPdf 07 47 38.8 -1.7
KOPT Kop Dagi 145.63 303 *i* P PKPdf 07 47 42.9 +1.6
RUND Rundenannen 145.65 358 *e*P PKPdf 07 47 42.3 +1.6
BER Bergen 145.68 358 *e*P PKPdf 07 47 40.1 -0.6
BER *e*P 07 47 41.2
BER AMb AMB 07 47 49.5
comp=Z,8µm,1.6s
BER AMb AMB 07 47 50.8
comp=Z,7µm,2.1s
BER *e*SS SS
BER Bergen 145.68 358 *e*P PKPdf 07 47 41.2 +0.5
OSL Oslo 145.71 353 *e*P PKPdf 07 47 39.5 -1.2
EGD Espegrend 145.79 358 *e*P PKPdf 07 47 41.1 +0.1
LRW Lerwick 145.87 3 *e*P PKPdf 07 47 42.1 +1.1
LRW AMb AMB 07 47 49.1
comp=Z,4µm,1.6s
LRW *e* 07 50 59.8
MARD Mardin 145.89 299 *i* P PKPdf 07 47 41.9 0.0
KTUT Trabzon 145.95 305 *e*P PKPdf 07 47 44.0 +2.2
MACK Trabzon 145.96 305 *i* P PKPdf 07 47 44.0 +2.2
ODD1 Odda 146.09 356 *e*P PKPdf 07 47 39.5 -2.0
ODD1 Odda 146.09 356 *e*P PKPdf 07 47 40.5 -0.9
MNK Minsk 146.09 334⇓ *e*PKIKP PKPdf 07 47 39.0 -2.6
MNK *e* 07 48 36.0
MNK *e* 07 51 06.0
MNK *e*PPS 08 03 40.0
MNK *e*SS SS 08 10 20.0 +31
MNK pmax pmax
comp=E,1µm,2.0s
MNK pmax pmax
comp=Z,7µm,1.4s
MNK pmax pmax
comp=Z,148µm,8.0s
MNK pmax pmax
comp=N,2µm,2.0s
KONO Kongsberg 146.12 354 *e*P PKPdf 07 47 42.2 +0.7
KONO AMb AMB 07 48 05.7
comp=Z,8µm,2.0s
KONO *e*PP PP 07 51 05.2 -0.3
KONO *e*SS SS 08 09 48.5 +0.3
KONO Kongsberg 146.12 354 *e*PKPdf PKPdf 07 47 40.3 -1.2
EZC Erzincan 146.20 303 *e*P PKPdf 07 47 43.8 +1.6
GUMT Gumushane 146.29 304 *e*P PKPdf 07 47 43.5 +1.1
DIYA Diyarbakir 146.31 300 *i* P PKPdf 07 47 44.0 +1.5
ANN Anapa 146.40 313 *i* PKP2 PKPdf 07 47 41.7 -0.7
ANN *e* 07 51 13.2
ANN *e* 08 03 44.1
ANN *e*SS SS 08 09 48.0 -5.3
ANN pmax pmax
comp=Z,45µm,6.9s
ANN pmax pmax
comp=Z,13µm,2.5s
ANN MLR MLR
comp=N,41µm,22.0s
ANN MLR MLR
comp=E,23µm,22.0s
ANN MLR MLR
comp=Z,40µm,22.0s
BLS5 Blasjo 146.58 356 *e*P PKPdf 07 47 43.4 +1.2
BLS5 Blasjo 146.58 356 *e*P PKPbc 07 47 44.6 +0.5
PTK Pertek 146.70 302 *e*P PKPdf 07 47 43.6 +0.5
ESPY Espiye-Giresun 146.73 306 *e*P PKPdf 07 47 43.2 +0.1
KMY Karmoy 146.85 358 *e*P PKPdf 07 47 42.9 +0.1
SVRC Sivrice-ELAZID 146.86 301 *e*P PKPab 07 47 46.5 -0.8
GRSN GIRESUNGRSN 147.07 306 *i* P PKPdf 07 47 42.9 -0.8
ELZG Elazig 147.09 301 *i* P PKPbc 07 47 46.2 +0.1
STAV Stavanger 147.11 357 *e*P PKPdf 07 47 44.6 +1.5
STAV AMb AMB 07 48 09.1
comp=Z,4µm,1.8s
STAV *e*PP PP 07 51 10.6 -0.6
RSC Scourie 147.30 8 *e*P PKPbc 07 47 45.5 -0.6
KEMA Kemaliye 147.30 303 *i* P PKPdf 07 47 45.1 +1.0
URFA Urfa 147.41 299 *e*P PKPdf 07 47 46.0 +1.6
RRH Rhenigidale 147.51 9 *e*P PKPdf 07 47 44.5 +0.6
MLA1 Latheron 147.53 6 *e*P PKPdf 07 47 44.3 +0.4
SNART Snartemo 147.62 355 *e*P PKPdf 07 47 45.9 +1.9
SNART AMb AMB 07 48 10.4
comp=Z,5µm,1.6s
RRR Rubha Reidh 147.70 8 *e*P PKPdf 07 47 45.8 +1.6
ATAB Bozova 147.81 299 *i* P PKPbc 07 47 47.3 -0.9
MVH1 Achvaich 147.83 7 *e*P PKPdf 07 47 45.6 +1.2
DARE Darende-Malaty 147.90 302 *e*P PKPdf 07 47 49.5 +4.3
AKCD Akcadag 147.95 301 *i* P PKPdf 07 47 46.2 +1.0
AKASG Malin Array Be 148.10 327 PKP PKPdf 07 47 43.2 -1.8
comp=Z,27nm,0.9s,baz=44,slow=3.8,SNR=26
AKASG PKPbc PKPbc 07 47 47.9 -0.5
comp=Z,33nm,0.5s,baz=42,slow=2.3,SNR=43
AKASG Malin Array Be 148.10 327 PKIKP PKPdf 07 47 43.2 -1.9
AKASG 07 47 47.9
AKASG pmax pmax
comp=Z,27nm,0.9s
AKASG Malin Array Be 148.10 327 PKP PKPdf 07 47 43.2 -1.9
AKASG PKPbc PKPbc 07 47 47.9 -0.6
AKBB Malin Array Si 148.10 327 *e*PKIKP PKPdf 07 47 43.3 -1.8
KAC Achnashellach 148.11 8 *e*P PKPdf 07 47 46.2 +1.3
KIEV Kiev 148.12 327 *e*PKIKP PKPdf 07 47 44.5 -0.6
KPL Plockton 148.22 9 *e*P PKPbc 07 47 48.3 -0.3
KPL AMb AMB 07 47 55.9
comp=Z,4µm,1.7s
KPL *e* 07 51 04.0
SUW Suwalki 148.23 337 *e*PKP PKPbc 07 47 48.2 -0.4
SUW *e*pPKP pPKPdf 07 48 37.3 +12
SUW *e*PP PP 07 51 11.3 -6.8
SUW *e* 07 57 54.6
SUW *e* 08 01 20.1
SUW *e*SS SS 08 10 46.1 +34
SUW Suwalki 148.23 337 *e*PKP PKPbc 07 47 48.2 -0.5
SUW *e*pPKP pPKPdf 07 48 37.3 +12
SUW *e*PP PP 07 51 11.3 -6.8
SUW *e* 07 57 54.6
SUW *e* 08 01 20.1
SUW *e*SS SS 08 10 46.1 +34
MCD Coleburn Disti 148.26 6 *e*P PKPdf 07 47 44.7 -0.4
SVSK Karacayir 148.27 304 *e*P PKPbc 07 47 48.7 -0.6
MDO Dochfour 148.28 7 *e*P PKPdf 07 47 46.5 +1.4
GZT Gaziantep 148.41 299 *i* P PKPbc 07 47 48.4 -1.3
TOKT Tokat 148.49 305 *e*P PKPbc 07 47 48.7 -1.1
MME1 Meikle Cairn 148.55 6 *e*P PKPdf 07 47 45.6 0.0
KAR1 Arisaig 148.61 9 *e*P PKPdf 07 47 47.6 +1.9
KVT Kavak 148.63 307 *e*P PKPdf 07 47 48.0 +1.7
GAZ Gaziantep 148.72 299 *e*P PKPdf 07 47 48.0 +1.4
SARI SarD1z-Kayseri 148.80 302 *e*P PKPbc 07 47 48.7 -2.0
KUZU Kuzuini 148.90 298 *i* P PKPdf 07 47 46.2 -0.6
KMRS Kahramanmaras 148.90 300 *e*P PKPdf 07 47 48.0 +1.1
DIKM Dikmen 149.01 308 *e*P PKPdf 07 47 45.7 -1.2
PINB Pinarbasi 149.03 302 *i* P PKPdf 07 47 45.1 -1.9
MUD Monsted U'grnd 149.30 353⇑ *i*P PKPbc 07 47 50.5 -0.8
comp=Z,2µm,0.9s
MUD *i* S SKKSac 07 58 02.1 +1.4
MUD 07 58 02.9
comp=Z,23µm,22.0s
MUD Monsted U'grnd 149.30 353⇑ *i*P PKPbc 07 47 50.5 -0.8
MUD *i* S SKKSac 07 58 02.1 +1.4
ANDN Andirin 149.31 300 *i* P PKPdf 07 47 48.4 +0.9
BNN Bunyan 149.40 303 *e*P PKPbc 07 47 50.0 -2.2
EAB Aberfoyle 149.51 8 *e*P PKPbc 07 47 49.2 -2.6
EBH Black Hill 149.55 7 *e*P PKPdf 07 47 48.5 +1.3
COP Copenhagen 149.59 349 *i* P PKPdf 07 47 45.8 -1.5
comp=Z,1µm,0.9s
COP *i* S 07 58 02.9
COP
comp=Z,24µm,23.0s
COP Copenhagen 149.59 349 *e*P PKPdf 07 47 45.8 -1.5
COP *i* S 07 58 02.9
COP LR LR
comp=Z,24µm,23.0s
BSD Bornholm Skovb 149.64 346 *i* P PKPdf 07 47 49.1 +1.7
comp=Z,2µm,1.0s
BSD *i* S 07 58 01.3
BSD
comp=Z,40µm,22.0s
BSD Bornholm Skovb 149.64 346 *i* P PKPdf 07 47 49.1 +1.7
BSD *i* S 07 58 01.3
CTKT Corum 149.68 307 *i* P PKPdf 07 47 48.4 +0.4
KOZT Kozan 149.74 300 *e*P PKPdf 07 47 49.5 +1.3
HTY Hatay 149.75 297 *e*P PKPbc 07 47 53.2 +0.1
BZK Bozkurt 149.78 310 *e*P PKPbc 07 47 50.2 -2.8
PGBU Glenifferbraes 149.86 8 *e*P PKPbc 07 47 51.2 -1.5
PGBU AMb AMB 07 47 59.8
comp=Z,4µm,1.5s
PGBU *e* 08 00 51.5
CEYT Ceyhan 149.90 299 *e*P PKPbc 07 47 54.0 +0.6
EDI Edinburgh 149.90 7 *e*P PKPbc 07 47 51.1 -1.7
EDI AMb AMB 07 48 01.0
comp=Z,4µm,1.6s
EDI *e* 08 01 09.1
CORM Corum 149.94 306 *e*P PKPdf 07 47 47.3 -1.1
EAU Auchinoon 149.95 7 *e*P PKPdf 07 47 49.9 +2.0
ESY Stoneypath 149.96 6 *e*P PKPdf 07 47 49.6 +1.7
TOS Tosya 150.09 308 *e*P PKPbc 07 47 53.2 -0.5
SLAT Slait 150.22 256 *e* PKPdf 07 47 43.9 -5.6
baz=114,slow=6.2
SLAT *i* P 07 47 46.9
SLAT AMb AMB 07 48 08.0
comp=Z,6µm,1.3s
KRTS Karatas 150.28 299 *e*P PKPbc 07 47 53.2 -1.1
CDAG Cicekdag 150.29 305 *i* P PKPbc 07 47 51.7 -2.6
ILGA Ilgaz 150.30 308 *i* P PKPdf 07 47 50.6 +1.7
BALT Daday 150.36 309 *i* P PKPdf 07 47 51.7 +2.7
RCY Rachaya 150.37 292 *e*P PKPdf 07 47 48.5 -0.7
KARA Karaisali 150.39 300 *e*P PKPbc 07 47 51.8 -2.8
XSO Sourhope Farm 150.41 6 *e*P PKPbc 07 47 52.0 -2.1
WAR Warsaw 150.43 337 *e*PKP PKPbc 07 47 52.8 -1.4
WAR *e* 08 01 36.4
WAR *e*SS SS 08 11 19.7 +43
WAR Warsaw 150.43 337 *e*PKP PKPbc 07 47 52.8 -1.4
WAR *e* 08 01 36.4
WAR *e*SS SS 08 11 19.7 +43
MRKH Merkhyat 150.43 255 *i* P PKPdf 07 47 48.5 -1.3
MRKH AMS AMS 07 51 52.0
comp=E,16µm,10.2s
MRKH *i* S 07 54 41.4
BHL Bhannes 150.46 293 *e*P PKPdf 07 47 46.7 -2.7
ESK Eskdalemuir 150.50 7 *e*P PKPdf 07 47 51.2 +2.5
ESK AMb AMB 07 48 01.2
comp=Z,3µm,1.6s
ESK *e* 08 00 50.5
ESK Eskdalemuir 150.50 7 *e*PKPdf PKPdf 07 47 50.1 +1.4
RGN Rugen 150.50 347 *e*PKPdf PKPdf 07 47 50.0 +1.2
RGN *e*PP PP 07 51 34.0 +3.0
RGN *e*SS SS 08 10 47.2 +10
RGN Rugen 150.50 347 *e*PKPbc PKPbc 07 47 52.3 -2.0
CANT Cankiri 150.53 307 *e*P PKPbc 07 47 51.7 -3.1
NIG Nigde 150.53 302 *e*P PKPbc 07 47 54.0 -0.9
KIS Kishinev 150.61 322 *i* PKIKP PKPdf 07 47 47.0 -2.2
KIS *i* 07 47 50.0
KIS *i* PPP 07 55 06.0
KIS *i* PS 08 04 26.0
KIS pmax pmax
comp=Z,15µm,3.0s
KIS pmax pmax
comp=Z,34µm,6.0s
KIS Kishinev 150.61 322 *e*PKIKP PKPdf 07 47 47.0 -2.2
KIS M 07 48 00.0
comp=Z,15µm,3.0s
KIS *i* pPKP pPKPdf 07 48 24.0 -5.0
KIS Kishinev 150.61 322 *i* PP PP 07 51 45.0 +13
comp=Z,37µm,14.0s
KIS Kishinev 150.61 322⇓ *i*P PKPab 07 47 59.4 -2.7
ELDT Eldivan 150.70 307 *i* P PKPdf 07 47 49.5 -0.1
GKP Gorka Klasztor 150.74 342 *e*PKP PKPdf 07 47 51.6 +2.4
GKP *e*PKiKP PKPab 07 47 60.0 -2.4
GKP *e* 07 58 09.3
GKP *e* 08 01 44.0
GKP *e*SS SS 08 11 40.4 +60
GKP Gorka Klasztor 150.74 342 *e*PKIKP PKPdf 07 47 51.6 +2.4
GKP *i* 07 48 00.0
GKP *e*SS SS 08 11 40.4 +60
GAL1 Galloway 150.75 9 *e*P PKPdf 07 47 51.6 +2.5
GAL1 AMb AMB 07 48 01.8
comp=Z,5µm,1.6s
BR131 Keskin Array S 150.80 305 *e*PKPdf PKPdf 07 47 47.5 -2.2
BRTR Keskin Array B 150.80 305 PKP PKPdf 07 47 48.4 -1.4
comp=Z,5.1nm,0.9s,baz=116,slow=2.9,SNR=12
BRTR PKPbc PKPbc 07 47 54.3 -1.2
comp=Z,94nm,0.9s,baz=132,slow=1.8,SNR=13
BRTR PKPab PKPab 07 48 00.6 -2.5
comp=Z,296nm,0.7s,baz=138,slow=4.6,SNR=74
BRTR Keskin Array B 150.80 305 PKIKP PKPdf 07 47 48.4 -1.3
BRTR 07 47 54.3
BRTR 07 48 00.6
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR pmax pmax
comp=Z,94nm,0.9s
GCD Castle Douglas 150.86 8 *e*P PKPdf 07 47 50.3 +0.9
CALA Caldeira 150.89 57 *e*PKP PKPbc 07 47 55.1 -0.6
MERS Mersin 150.89 299 *e*P PKPdf 07 47 51.0 +1.0
HOR Horta 150.96 57 *e*PKP PKPbc 07 47 55.8 -0.1
SAFT Safranbolu 150.96 309 *e*P PKPdf 07 47 49.5 -0.4
PICO Pico 151.12 57 *e*PKP PKPbc 07 47 55.2 -1.1
LVV L'vov 151.12 331 *i* PKIKP PKPbc 07 47 53.7 -2.2
LVV *e* 07 48 40.2
LVV *e* 07 51 38.8
LVV *i* 08 04 27.4
IAS Iasi 151.18 323⇑ *i*P PKPdf 07 47 52.7 +2.6
IAS Iasi 151.18 323⇑ P PKPdf 07 47 52.7 +2.7
GMM Mts of Mourne 151.18 10 *e*P PKPdf 07 47 51.5 +1.7
ROSA Rosais 151.19 56 *e*PKP PKPbc 07 47 55.9 -0.5
SRBC Serra Branca 151.25 56 *e*PKP PKPbc 07 47 59.0 +2.4
PMAN Manadas 151.33 57 *e*PKP PKPbc 07 47 56.6 -0.2
LOD Lodumlu 151.38 306 *e*P PKPdf 07 47 51.7 +1.1
EREN Erenkoy 151.43 297 *e*P PKPdf 07 47 50.3 -0.5
WIM Isle of Man 151.46 9 *e* PP 07 51 37.6 +1.2
WIM Isle of Man 151.46 9 PP 07 51 37.6 +1.2
BSEG Bad Segeberg 151.61 350 *e*PKPdf PKPdf 07 47 51.3 +0.8
BSEG *e*PP PP 07 51 42.8 +5.5
PHNC Paralimni 151.63 296 P PKPbc 07 47 54.3 -3.3
TLCR 151.64 319⇑ *i*P PKPbc 07 47 55.4 -1.8
HLG Helgoland 151.67 353 *e*PKPdf PKPdf 07 47 51.6 +1.0
HLG *e*PP PP 07 51 42.5 +4.9
HLG *e*SS SS 08 10 56.4 +6.2
IKL Isikli 151.68 298 *e*P PKPdf 07 47 52.5 +1.3
KDZE Karadeniz Ereo 151.80 310 *e*P PKPdf 07 47 51.0 -0.2
KWP Kalwaria 151.83 332 *e*PKP PKPdf 07 47 55.2 +4.2
KWP *e* 07 58 18.8
KWP *e* 08 01 47.1
KWP *e*SS SS 08 11 22.5 +30
KWP Kalwaria 151.83 332 *e*PKIKP PKPdf 07 47 50.8 -0.2
KWP *e* 07 47 55.2
KWP Kalwaria 151.83 332⇑ *i*P PKPbc 07 47 54.3 -3.2
KWP Kalwaria 151.83 332 *e*PKPdf PKPdf 07 47 50.8 -0.2
KWP *e*PKP PKPbc 07 47 55.2 -2.3
KWP *e* 07 58 18.7
KWP *e* 08 01 47.1
KWP *e*SS SS 08 11 22.5 +30
DLF Lyons Farm 151.98 12 *e*P PKPdf 07 47 54.0 +2.9
HPK Haverah Park 151.99 5 *e*P PKPdf 07 47 53.9 +2.8
HPK AMb AMB 07 48 04.9
comp=Z,3µm,1.6s
LFK Lefkose 151.99 297 *e*P PKPdf 07 47 54.8 +3.1
PSCM Serra do Cume 152.04 56 *e*PKP PKPdf 07 47 53.7 +2.0
DSB Dublin 152.06 12 *e*PKPdf PKPdf 07 47 50.5 -0.7
BURAR Bucovina Array 152.12 326⇑ *i*P PKPdf 07 47 52.4 +0.9
BURAR Bucovina Array 152.12 326⇑ P PKPdf 07 47 52.4 +0.9
CSS Prodhromos 152.21 296 P PKPdf 07 47 51.9 -0.1
LADK Ladik-KONYA 152.21 303 *e*P PKPdf 07 47 50.2 -1.7
MAMC Mammari 152.26 296 P PKPdf 07 47 52.9 +0.8
TIRR Tirgusor 152.28 318⇑ *i*P PKPdf 07 47 52.2 +0.4
TIRR Tirgusor 152.28 318⇑ P PKPdf 07 47 52.2 +0.3
KONT Konya--Tatoy 152.28 303 *e*P PKPdf 07 47 54.0 +1.9
MDU Mudurnu 152.29 308 *e*P PKPdf 07 47 54.3 +2.4
KDHN Kadinhani 152.30 304 *i* P PKPdf 07 47 48.4 -3.6
ODB Odobesti 152.32 321⇓ *i*P PKPab 07 48 04.4 -4.9
RUE Ruedersdorf 152.34 345 *e*PKPdf PKPdf 07 47 52.2 +0.6
RUE *e*PP PP 07 51 45.3 +3.8
RUE *e*SS SS 08 11 06.6 +8.9
RUE Ruedersdorf 152.34 345 *e*PKPdf PKPdf 07 47 51.2 -0.4
YRE Rhoscolyn 152.35 9 *e*P PKPdf 07 47 53.2 +1.6
KIZT Kizilcal 152.36 305 *e*P PKPdf 07 47 51.0 -1.2
HENT Hendek 152.37 309 *i* P PKPdf 07 47 49.5 -2.6
LHO Holmfirth 152.38 6 *e*P PKPdf 07 47 51.8 +0.2
WPM1 Penmaenmawr 152.43 9 *e*P PKPdf 07 47 53.2 +1.5
HARR Harsova 152.44 319 PKIKP PKPbc 07 47 55.9 -3.2
HARR Harsova 152.44 319⇑ *i*P PKPbc 07 47 56.6 -2.5
VRI Vrincioaia 152.44 322⇑ *i*P PKPdf 07 47 53.3 +1.3
PLOR Plostina 152.50 322 PKIKP PKPbc 07 47 56.2 -2.9
PLOR Plostina 152.50 322⇓ *i*P PKPbc 07 47 59.9 +0.8
YLL Llanberis 152.51 9 *e*P PKPdf 07 47 53.0 +1.1
OJC Ojcow 152.53 336 *e*PKPdf PKPdf 07 47 51.4 -0.6
OJC *e*PKPbc PKPbc 07 47 57.2 -1.9
OJC *e*PKPab PKPab 07 48 09.1 -0.9
OJC *e*PP PP 07 51 50.8 +8.0
OJC *e*SKKSac SKKSac 07 58 31.2 +12
OJC *e*SS SS 08 11 26.0 +26
OJC L 08 58 27.8
comp=Z,55nm,24.2s
OJC Ojcow 152.53 336 *e*PKIKP PKPdf 07 47 51.4 -0.6
OJC *e* 07 47 57.2
OJC *e* 07 48 09.1
LEF Lefka 152.54 296 *e*P PKPdf 07 47 53.1 +0.5
KOLS Kolonicke sedl 152.55 331⇑ *e*PKIKP PKPdf 07 47 51.5 -0.6
KOLS *e* 07 47 57.4
KOLS *e* 07 51 42.9
KOLS *e*SS SS 08 10 57.2 -3.4
KOLS Kolonicke sedl 152.55 331 *e*PKP PKPdf 07 47 51.5 -0.6
KOLS *e* 07 47 57.4
KOLS *e*PP PP 07 51 42.9 -0.1
KOLS Kolonicke sedl 152.55 331 *e*PKP PKPdf 07 47 51.5 -0.6
KOLS *e* 07 47 57.4
KOLS *e*PP PP 07 51 42.9 -0.1
KOLS *e*SKKSac SKKSac 07 58 15.2 -3.7
KOLS *e* 08 01 46.6
KOLS *e* 08 04 32.6
KOLS *e*SS SS 08 10 57.2 -3.4
CVD Cernavoda 152.59 318 PKIKP PKPbc 07 47 57.2 -2.2
CVD Cernavoda 152.59 318⇓ *i*P PKPbc 07 47 57.5 -1.9
STHS Stebnicka Huta 152.61 333 *e*PKIKP PKPdf 07 47 52.5 +0.4
STHS *e* 07 47 57.4
STHS *e* 07 51 45.6
STHS Stebnicka Huta 152.61 333 *e*PKP PKPdf 07 47 52.5 +0.4
STHS *e* 07 47 57.4
STHS *e* 07 48 14.1
STHS *e*PP PP 07 51 45.6 +2.3
SZAC Souni-Zanaja 152.61 296 P PKPbc 07 47 55.9 -3.9

YRE	**Yr Eifl**	**152.63**	**9**	eP	PKPdf	07 47 55.7	+3.7
YRE				e		07 51 44.5	
KBI1	**Birley Grange**	**152.70**	**5**	eP	PKPdf	07 47 55.3	+3.2
ALFC	**Alevga**	**152.76**	**297**	P	PKPdf	07 47 51.8	-1.0
UZH	**Uzhgorod**	**152.77**	**331**	i PKIKP	PKPdf	07 47 53.5	+1.1
UZH				e		07 47 56.7	
UZH				e		07 48 04.5	
UZH				i		07 48 31.0	
UZH				i		07 51 50.0	
UZH				i PPS		08 04 42.0	
UZH				eSS	SS	08 11 50.0	+47
GULT	**Gulveren**	**152.79**	**309**	eP	PKPdf	07 47 53.0	+0.3
STNC	**Stoke**	**152.79**	**6**	P	PKPdf	07 47 55.3	+3.0
STNC				AMb	AMB	07 48 06.9	
	comp=Z,4µm,1.6s						
STNC	**Stoke**	**152.79**	**6**	eP	PKPdf	07 47 55.3	+3.0
STNC				AMb	AMB	07 48 06.9	
	comp=Z,4µm,1.6s						
PSN	**Preselentsi**	**152.84**	**317**	P	PKPdf	07 47 56.4	+3.7
SBD1	**Bryn Du**	**152.86**	**8**	eP	PKPdf	07 47 54.2	+1.8
SBD1				e		07 51 44.8	
ESKT	**Eskisehir**	**152.90**	**307**	eP	PKPdf	07 47 52.5	-0.4
ESKT	**Eskisehir**	**152.90**	**307**	i P	PKPdf	07 47 52.8	-0.1
KWE	**Weaver Farm**	**152.90**	**6**	eP	PKPdf	07 47 54.3	+1.8
CRVS	**Cervenica-Dubn**	**152.92**	**332**	⇑ePKIKP	PKPdf	07 47 52.1	-0.5
CRVS				e		07 47 57.6	
CRVS				e		07 48 31.6	
CRVS				e		07 51 44.3	
CRVS				e		08 04 33.1	
CRVS				eSS	SS	08 11 01.2	-3.4
CRVS	**Cervenica-Dubn**	**152.92**	**332**	ePKP	PKPdf	07 47 52.1	-0.5
CRVS				e		07 47 57.6	
CRVS				e		07 48 24.0	
CRVS				e		07 48 31.6	
CRVS				ePP	PP	07 51 44.2	-0.9
CRVS	**Cervenica-Dubn**	**152.92**	**332**	ePKP	PKPdf	07 47 52.1	-0.5
CRVS				e		07 47 57.6	
CRVS				e		07 48 24.0	
CRVS				e		07 48 31.6	
CRVS				ePP	PP	07 51 44.3	-0.8
CRVS				eSKKSac	SKKSac	07 58 17.2	-3.7
CRVS				e		08 01 38.0	
CRVS				e		08 04 33.1	
CRVS				eSS	SS	08 11 01.2	-3.4
ORH	**Orhaniye**	**152.93**	**310**	eP	PKPbc	07 48 01.3	+1.0
NIE	**Niedzica**	**152.98**	**334**	ePKPdf	PKPdf	07 47 52.0	-0.7
NIE				i PKPbc	PKPbc	07 47 58.4	-1.7
NIE				i PKPab	PKPab	07 48 07.4	-4.5
GPA	**Golpazari**	**152.99**	**309**	eP	PKPdf	07 47 57.0	+4.0
PPCY	**Paphos**	**153.02**	**296**	P	PKPdf	07 47 53.9	+0.7
TRPA	**Tarpa**	**153.03**	**330**	⇑iP	PKPdf	07 47 53.3	+0.5
NRDL	**Niedersach Rie**	**153.04**	**350**	ePKPdf	PKPdf	07 47 53.5	+0.8
NRDL				ePP	PP	07 51 50.0	+4.6
BORA	**Eskisehir**	**153.05**	**308**	i P	PKPdf	07 47 53.9	+0.8
SILT	**Sile**	**153.10**	**311**	eP	PKPdf	07 47 53.2	+0.1
BOLV	**Bolvadin**	**153.10**	**305**	i P	PKPdf	07 47 50.6	-2.6
MLR	**Muntele Rosu**	**153.11**	**322**	⇓iP	PKPdf	07 47 57.0	+4.0
MLR	**Muntele Rosu**	**153.11**	**322**	⇓P	PKPdf	07 47 57.0	+4.0
WIT	**Witteveen**	**153.15**	**355**	⇑iPKP	PKPdf	07 47 57.6	+4.8
	comp=Z,3µm,2.1s						
WIT	**Witteveen**	**153.15**	**355**	ePP	PP	07 51 57.7	+12
KSP	**Ksiaz**	**153.17**	**341**	ePKP	PKPdf	07 47 54.1	+1.2
KSP				e		07 58 27.4	
KSP				e		08 01 58.0	
KSP				eSS	SS	08 12 02.1	+55
KSP	**Ksiaz**	**153.17**	**341**	ePKIKP	PKPdf	07 47 51.2	-1.7
KSP				e		07 47 57.6	
KSP				e		07 48 05.6	
KSP				e		07 51 48.0	
KSP				eSSS		08 16 54.0	
KSP	**Ksiaz**	**153.17**	**341**	ePKPdf	PKPdf	07 47 51.2	-1.7
KSP				ePKPbc	PKPbc	07 47 57.6	-2.8
KSP				e		07 48 05.6	
KSP				ePP	PP	07 51 48.0	+1.7
KSP				eSKKS	SKKSac	07 58 21.0	-1.1
KSP				e		08 01 40.0	
KSP				eSS	SS	08 11 26.0	+19
KSP				eSSS		08 16 54.0	
RAC	**Raciborz**	**153.21**	**337**	ePKIKP	PKPdf	07 47 53.1	+0.1
RAC				e		07 51 44.1	
RAC	**Raciborz**	**153.21**	**337**	ePKPdf	PKPdf	07 47 53.1	+0.1
RAC				epPKPdf	pPKPdf	07 48 41.9	+9.1
RAC				ePP	PP	07 51 44.1	-2.5
RAC				LR	LR		
	comp=Z,103µm,30.0s						
HRT	**Hereke**	**153.22**	**310**	eP	PKPdf	07 47 56.0	+2.7
CWF	**Charnwood Fore**	**153.23**	**5**	eP	PKPdf	07 47 55.9	+3.0
CWF				AMb	AMB	07 48 07.4	
	comp=Z,2µm,1.6s						
AWI1	**Witton**	**153.28**	**2**	eP	PKPbc	07 47 57.3	-3.3
ADVT	**Abdulvahap**	**153.34**	**309**	eP	PKPdf	07 47 53.8	+0.2
CAVI	**Cavuskoy**	**153.36**	**309**	eP	PKPdf	07 47 53.2	-0.3
PDA	**Ponta Delgada**	**153.42**	**57**	ePKP	PKPbc	07 48 01.9	+0.5
PDA				eLR	LR	08 40 16.0	
OKC	**Ostrava-Krasne**	**153.44**	**337**	ePKIKP	PKPdf	07 47 52.2	-1.1
OKC				e		07 47 58.2	
OKC				e		07 51 55.1	
OKC				e		07 55 21.7	
OKC				e		08 04 47.9	
OKC				MLR	MLR		
	comp=Z,42µm,23.5s						
OKC	**Ostrava-Krasne**	**153.44**	**337**	ePKPDF	PKPdf	07 47 52.2	-1.1
OKC				ex	x	07 47 58.2	
OKC				ex	x	07 49 03.4	
OKC				ePP	PP	07 51 55.1	+7.2
OKC				ex	x	07 55 21.7	
OKC				eSKKS	SKKSac	07 58 30.7	+7.1
OKC				ex	x	08 02 04.0	
OKC				ex	x	08 04 47.9	
OKC				AMS	AMS	08 55 00.0	
	comp=Z,42µm,23.5s						
OKC	**Ostrava-Krasne**	**153.44**	**337**	ePKP	PKPdf	07 47 52.2	-1.1
OKC				e		07 47 58.2	
OKC				e		07 49 03.4	
OKC				ePP	PP	07 51 55.1	+7.2
OKC				e		07 55 21.7	
OKC				e		07 58 30.7	
OKC				e		08 02 04.0	
OKC				e		08 04 47.9	
SHUT	**Suhut-Afyon**	**153.45**	**305**	eP	PKPdf	07 47 53.9	+0.2
KLYT	**Kilyos**	**153.46**	**311**	eP	PKPdf	07 47 52.5	-1.2
AEU	**East Anglia Un**	**153.49**	**2**	eP	PKPdf	07 47 54.9	+1.6
MDB	**Medias**	**153.53**	**325**	⇑iP	PKPbc	07 48 06.9	+5.5
YLV	**Yalova**	**153.53**	**310**	eP	PKPdf	07 47 53.4	-0.4
ISK	**Istanbul-Kandi**	**153.53**	**311**	eP	PKPdf	07 47 53.2	-0.5
IBBN	**Ibbenburen**	**153.54**	**353**	ePKPdf	PKPdf	07 47 54.4	+1.0
IBBN				ePKPab	PKPab	07 48 18.5	+4.3
IBBN				ePP	PP	07 51 52.3	+4.1
UPC	**Upice**	**153.55**	**341**	ePKPDF	PKPdf	07 47 52.1	-1.4
UPC				ex	PKPbc	07 47 58.0	-3.3
PRD	**Provadia**	**153.57**	**317**	P	PKPdf	07 47 57.9	+4.2
DPC	**Dobruska-Polom**	**153.59**	**340**	ePKIKP	PKPdf	07 47 52.4	-1.1
DPC				e	PKPbc	07 47 58.7	-2.7
DPC				e		07 51 56.7	
DPC				e		07 55 18.4	
DPC				e		08 12 01.6	
DPC				MLR	MLR		
	comp=Z,55µm,21.7s						
DPC	**Dobruska-Polom**	**153.59**	**340**	ePKPDF	PKPdf	07 47 52.4	-1.1
DPC				ex	PKPbc	07 47 58.7	-2.7
DPC				ex	x	07 49 01.0	
DPC				ePP	PP	07 51 56.7	+8.0
DPC				ex	x	07 55 18.4	
DPC				eSKKS	SKKSac	07 58 26.6	+2.2
DPC				ex	x	08 01 54.2	
DPC				ex	x	08 04 44.7	
DPC				eSKSSKS		08 12 01.6	
DPC				AMS	AMS	08 57 10.0	
	comp=Z,55µm,21.7s						
ALT	**Altintas**	**153.60**	**306**	eP	PKPdf	07 47 54.3	+0.4
CLL	**Collm**	**153.61**	**345**	ePKIKP	PKPdf	07 47 52.0	-1.5
CLL				e		07 51 54.0	
CLL				pmax	pmax		
	comp=Z,509nm,2.1s						
CLL	**Collm**	**153.61**	**345**	ePKPdf	PKPdf	07 47 54.1	+0.6
CLL				ePP	PP	07 51 53.1	+4.4
CLL				eSS	SS	08 11 20.3	+8.7
CLL	**Collm**	**153.61**	**345**	ePKPdf	PKPdf	07 47 52.0	-1.5
	comp=Z,509nm,2.1s						
CLL				i x	x	07 47 58.0	
	comp=Z,2µm,1.9s						
CLL				ePKPbc	PKPbc	07 48 03.0	+1.6
	comp=Z,2µm,2.0s						
CLL				ex	x	07 48 06.0	
	comp=Z,2µm,1.4s						
CLL				ePKPab	PKPab	07 48 15.0	+0.5
	comp=Z,2µm,1.4s						
CLL				i x	x	07 48 20.3	
CLL				i pPKPbc	pPKPbc	07 48 42.5	+1.5
CLL				esPKPdf		07 48 47.0	
CLL				ePP	PP	07 51 54.0	+5.3
CLL				ePPlp		07 51 58.0	
	comp=Z,31µm,12.3s						
CLL				esPP		07 52 41.0	
CLL				ePPP		07 55 20.0	
CLL				esPPP		07 56 12.0	
CLL				eSKKSac	SKKSac	07 58 26.0	+1.5
CLL				eSKSP		08 01 54.0	
CLL				ePPS		08 04 49.0	
CLL				ex	x	08 06 36.0	
CLL				eSS	SS	08 11 13.0	+1.4
CLL				eSSP		08 12 03.0	
CLL				eSSS		08 17 18.0	
CLL				eSSSS		08 21 16.0	
CLL	**Collm**	**153.61**	**345**	ePKP	PKPdf	07 47 52.0	-1.5
CLL				ePP	PP	07 51 54.0	+5.3
CLL				eSKKS	SKKSac	07 58 26.0	+1.5
NEF	**NEVSHA**	**153.62**	**317**	P	PKPbc	07 48 00.9	-0.8
CLZ	**Clausthal**	**153.63**	**349**	ePKPdf	PKPdf	07 47 54.7	+1.2
CLZ				ePP	PP	07 51 55.0	+6.3
VOIR		**153.63**	**323**	⇓iP	PKPdf	07 47 52.5	-1.3
HTR	**Trewern Hill**	**153.67**	**8**	eP	PKPdf	07 47 55.5	+1.9
HTR				e		07 51 44.3	
BGKT	**Bogazkoy**	**153.68**	**311**	eP	PKPdf	07 47 57.0	+3.1
GEMT	**Gemlik**	**153.72**	**310**	eP	PKPdf	07 47 52.5	-1.6
BUC1	**Bucharest**	**153.75**	**320**	⇑iP	PKPdf	07 47 56.6	+2.6
BUC1	**Bucharest**	**153.75**	**320**	⇑P	PKPdf	07 47 56.6	+2.6
BCK	**Bucak**	**153.77**	**302**	eP	PKPdf	07 47 53.2	-1.0
MCH1	**Michaelchurch**	**153.78**	**8**	eP	PKPdf	07 47 55.8	+2.0
MCH1				AMb	AMB	07 48 08.3	
	comp=Z,1µm,1.6s						
MCH1				e		07 51 51.3	
BRG	**Berggiesshubel**	**153.79**	**344**	i PKIKP	PKPdf	07 47 52.4	-1.4
BRG				i		07 48 34.9	
BRG						07 51 56.0	
BRG				SS	SS	08 11 08.0	-5.5
BRG	**Berggiesshubel**	**153.79**	**344**	ePKPdf	PKPdf	07 47 54.4	+0.6
BRG				ePP	PP	07 51 53.4	+3.7
BRG				eSS	SS	08 11 21.8	+8.3
BRG	**Berggiesshubel**	**153.79**	**344**	i PKP	PKPdf	07 47 52.4	-1.4
	comp=Z,102nm,1.5s						
BRG				i		07 47 46.5	
	comp=Z,1µm,1.7s						
BRG				i		07 48 06.7	
	comp=Z,3µm,1.8s						
BRG				i		07 48 34.9	
	comp=Z,3µm,1.2s						
BRG				PP	PP	07 51 56.0	+6.3
BRG				i		07 58 30.0	
BRG				i		08 01 55.0	
BRG				SS	SS	08 11 08.0	-5.5
CTKS	**Kestanelik-??a**	**153.83**	**312**	eP	PKPdf	07 47 56.3	+2.1
CTYL	**Yal??k??y-??at**	**153.87**	**312**	eP	PKPdf	07 47 55.5	+1.3
ULDT	**Uludag**	**153.88**	**309**	i P	PKPdf	07 47 58.2	+4.0
ANTB	**Antalya**	**153.88**	**301**	eP	PKPdf	07 47 54.8	+0.4
DRGR		**153.92**	**328**	⇓iP	PKPdf	07 47 54.0	-0.1
DRGR		**153.92**	**328**	⇓P	PKPdf	07 47 54.0	-0.1
ELBA	**Catalca**	**153.92**	**312**	i P	PKPdf	07 47 55.0	+0.7
CTT	**Catalca**	**153.92**	**312**	eP	PKPdf	07 47 56.3	+1.9
PVCC	**Panska Ves**	**153.94**	**343**	ePKIKP	PKPdf	07 47 52.8	-1.2
PVCC				e		07 47 58.7	
PVCC				e		07 51 58.2	
PVCC				e		08 04 50.8	
PVCC	**Panska Ves**	**153.94**	**343**	ePKPDF	PKPdf	07 47 52.8	-1.2
PVCC				ex	x	07 47 58.7	
PVCC				ePP	PP	07 51 58.2	+7.6
PVCC				eSKKS	SKKSac	07 58 29.0	+2.7
PVCC				ex	x	08 01 53.4	
PVCC				ex	x	08 04 50.8	
PVCC				eSKSSKS		08 11 46.8	
WTSB	**Winterswijk**	**153.97**	**354**	⇑iPKP	PKPdf	07 47 58.3	+4.3
	comp=Z,1µm,2.7s						
WTSB	**Winterswijk**	**153.97**	**354**	ex	PKPab	07 48 20.0	+4.0
WTSB	**Winterswijk**	**153.97**	**354**	ex	x	07 49 01.2	
WTSB	**Winterswijk**	**153.97**	**354**	ePP	PP	07 52 01.0	+10
SLVT	**Silivri**	**154.03**	**312**	eP	PKPdf	07 47 53.2	-1.2
GDZ	**Gediz**	**154.04**	**307**	i P	PKPdf	07 47 53.9	-0.7
PSMN	**Pico do Norte,**	**154.10**	**58**	ePKP	PKPbc	07 48 00.2	-2.7
HGH	**Gray Hill**	**154.16**	**8**	eP	PKPdf	07 47 55.8	+1.5
HGH				e		07 51 49.9	
KHL	**Karahalli**	**154.29**	**305**	eP	PKPdf	07 47 57.8	+2.9
KHAL	**Karahalli**	**154.29**	**305**	i P	PKPdf	07 47 52.8	-2.1
VYHS	**Vyhne**	**154.30**	**335**	⇑ePKIKP	PKPdf	07 47 52.5	-2.1
VYHS				e		07 47 59.0	
VYHS				e		07 51 55.0	
VYHS				e		08 04 39.2	
VYHS				eSS	SS	08 11 16.2	-3.3
VYHS	**Vyhne**	**154.30**	**335**	ePKP	PKPdf	07 47 52.5	-2.1
VYHS				e		07 47 59.0	
VYHS				e		07 48 24.0	
VYHS				ePP	PP	07 51 55.0	+2.2
VYHS	**Vyhne**	**154.30**	**335**	ePKP	PKPdf	07 47 52.5	-2.1
VYHS				e		07 47 59.0	
VYHS				e		07 48 24.0	
VYHS				ePP	PP	07 51 55.0	+2.2
VYHS				eSKKSac	SKKSac	07 58 29.8	+1.4
VYHS				e		08 01 47.6	
VYHS				e		08 04 39.2	
VYHS				e		08 04 46.2	
VYHS				eSS	SS	08 11 16.2	-3.3
PSZ	**Piszkesteto**	**154.34**	**333**	⇑ePKP	PKPdf	07 47 58.1	+3.4
PSZ	**Piszkesteto**	**154.34**	**333**	⇓iP	PKPdf	07 47 55.7	+1.0
PSZ	**Piszkesteto**	**154.34**	**333**	ePKPdf	PKPdf	07 47 53.2	-1.4
KOLL	**Kolacno**	**154.40**	**335**	⇑ePKIKP	PKPdf	07 47 54.4	-0.3
KOLL				e		07 47 59.5	
KOLL	**Kolacno**	**154.40**	**335**	ePKP	PKPdf	07 47 54.4	-0.3
KOLL				e		07 47 59.5	
KOLL				e		07 48 22.7	
KOLL				e		07 48 31.6	
KOLL	**Kolacno**	**154.40**	**335**	ePKP	PKPdf	07 47 54.4	-0.3
KOLL				e		07 47 59.5	
KOLL				e		07 48 22.7	
KOLL				e		07 48 31.7	
KOLL				eSKKSac	SKKSac	07 58 29.3	+0.4
SWN1	**Swindon**	**154.40**	**6**	eP	PKPdf	07 47 57.5	+2.9
SWN1				AMb	AMB	07 48 10.1	
	comp=Z,3µm,1.7s						
SWN1				e		08 01 55.5	
CRLT	**Corlu**	**154.40**	**312**	eP	PKPdf	07 47 57.0	+2.0
VRAC	**Vranov**	**154.41**	**339**	⇓iP	PKPdf	07 47 54.9	+0.2
VRAC	**Vranov**	**154.41**	**339**	P	PKPdf	07 47 54.3	-0.5
SZH	**Strazhica**	**154.43**	**318**	P	PKPdf	07 47 55.7	+0.7
PRU	**Pruhonice**	**154.43**	**342**	ePKIKP	PKPdf	07 47 53.0	-1.7
PRU				e		07 47 58.8	
PRU				e		07 52 01.3	
PRU				e		07 55 26.8	
PRU				e		08 04 54.4	
PRU				e		08 12 05.2	
PRU				MLR	MLR		
	comp=Z,61µm,21.8s						
PRU	**Pruhonice**	**154.43**	**342**	ePKPDF	PKPdf	07 47 53.0	-1.7
PRU				ex	x	07 47 58.8	
PRU				ex	x	07 49 02.3	
PRU				ePP	PP	07 52 01.3	+7.9
PRU				ex	x	07 55 26.8	
PRU				eSKKS	SKKSac	07 58 35.5	+6.5
PRU				ex	x	08 01 52.5	
PRU				ex	x	08 04 54.4	
PRU				eSKSSKS		08 12 05.2	
PRU				AMS	AMS	08 57 50.0	
	comp=Z,61µm,21.8s						
BUG	**Bochum--Univer**	**154.45**	**353**	ePKPdf	PKPdf	07 47 55.3	+0.6
BUG				ePKPab	PKPab	07 48 22.4	+4.4
BUG				epPKPab	pPKPab	07 49 02.0	+5.6
BUG				ePP	PP	07 52 00.3	+7.0
DST	**Dursunbey**	**154.45**	**308**	eP	PKPdf	07 47 57.0	+1.9
DEV	**Deva**	**154.46**	**326**	⇓iP	PKPbc	07 47 59.5	-3.9
DEV	**Deva**	**154.46**	**326**	⇓P	PKPbc	07 47 59.5	-3.9
JMB	**Yambol**	**154.47**	**316**	P	PKPdf	07 47 57.6	+2.6
ELL	**Elmali**	**154.50**	**301**	eP	PKPdf	07 47 55.5	+0.2
MOX	**Moxa**	**154.54**	**347**	ePKP	PKPdf	07 47 54.5	-0.3
	comp=Z,2µm,2.0s						
MOX				e		07 48 24.1	
	comp=Z,5µm,1.8s						
MOX	**Moxa**	**154.54**	**347**	ePKPdf	PKPdf	07 47 56.0	+1.2
MOX				epPKPab	pPKPab	07 49 02.5	+5.7
MOX				ePP	PP	07 51 58.4	+4.6
MOX				eSS	SS	08 11 30.7	+9.1
TANN	**Tannenbergstha**	**154.57**	**345**	ePKPdf	PKPdf	07 47 55.3	+0.4
TANN				ePKPab	PKPab	07 48 22.7	+4.1
TANN				epPKPab	pPKPab	07 49 02.8	+5.9
TANN				ePP	PP	07 51 57.5	+3.5
HEX	**Exmoor**	**154.58**	**9**	eP	PKPdf	07 47 54.6	-0.3
HEX				e		07 51 55.0	
TKR	**Tekirdag**	**154.60**	**312**	eP	PKPdf	07 47 56.3	+1.0
GOLH	**Golhisar**	**154.62**	**303**	i P	PKPdf	07 47 58.2	+2.8
BNT	**Bandirma**	**154.62**	**310**	eP	PKPdf	07 47 58.5	+3.2
WOL	**Wolverton**	**154.65**	**6**	eP	PKPdf	07 47 57.9	+2.9
UBBA	**Unterbreizbach**	**154.68**	**349**	ePKPdf	PKPdf	07 47 55.6	+0.6
UBBA				ePKPab	PKPab	07 48 22.7	+3.6
UBBA				epPKPab	pPKPab	07 49 03.1	+5.7
UBBA				ePP	PP	07 51 58.7	+4.1
UBBA				eSS	SS	08 11 32.9	+10
EDRB	**Edirne**	**154.69**	**314**	eP	PKPdf	07 47 55.4	0.0
MRMT	**Marmara Adasi**	**154.74**	**311**	eP	PKPdf	07 47 54.5	-1.0
NKC	**Novy Kostel**	**154.74**	**345**	ePKIKP	PKPdf	07 47 53.5	-1.6
NKC				e		07 47 57.3	
NKC				e		07 52 02.4	
NKC	**Novy Kostel**	**154.74**	**345**	ePKPDF	PKPdf	07 47 53.5	-1.6
NKC				ex	x	07 47 57.3	
NKC				ePP	PP	07 52 02.4	+7.4
NKC				eSKKS	SKKSac	07 58 35.1	+4.5
NKC				ex	x	08 02 04.1	
NKC				ex	x	08 04 53.7	
NKC				eSKSSKS		08 11 56.7	
NKC				AMS	AMS	08 54 20.0	
	comp=Z,101µm,27.8s						
NKC	**Novy Kostel**	**154.74**	**345**	ePKP	PKPdf	07 47 53.5	-1.6
NKC				e		07 47 57.3	
NKC				ePP	PP	07 52 02.4	+7.4
NKC				e		07 58 35.1	
NKC				e		08 02 04.1	
NKC				e		08 04 53.7	
NKC				eS'S'		08 11 56.7	
TREC	**Trest**	**154.78**	**340**	ePKIKP	PKPdf	07 47 54.0	-1.2
TREC				e		07 47 59.5	
TREC				e		07 51 58.8	
TREC				e		08 12 06.5	
TREC	**Trest**	**154.78**	**340**	ePKPDF	PKPdf	07 47 54.0	-1.2
TREC				ex	x	07 47 59.5	
TREC				ex	x	07 49 03.1	
TREC				ePP	PP	07 51 58.8	+3.5
TREC				eSKKS	SKKSac	07 58 33.4	+2.5
TREC				ex	x	08 02 01.7	
TREC				eSKSSKS		08 12 06.5	
SMOL	**Smolenice**	**154.81**	**336**	ePKP	PKPdf	07 47 59.2	+3.9
SMOL				e		07 48 23.3	
SMOL				e		07 48 32.0	
SMOL	**Smolenice**	**154.81**	**336**	ePKP	PKPdf	07 47 59.2	+3.9
SMOL				e		07 48 23.3	
SMOL				e		07 48 32.0	
SMOL				eSKKSac	SKKSac	07 58 32.6	+1.5
PVL	**Pavlikeni**	**154.82**	**318**	P	PKPdf	07 47 57.1	+1.6
DENT	**Denizli**	**154.85**	**304**	eP	PKPdf	07 47 56.3	+0.6
KULA	**Kula-Manisa**	**154.85**	**306**	eP	PKPdf	07 47 54.8	-0.9
GZR	**Gura Zlata**	**154.87**	**325**	⇑iP	PKPdf	07 47 55.3	-0.2
GZR	**Gura Zlata**	**154.87**	**325**	P	PKPdf	07 47 54.0	-1.5
AKAS	**Kas**	**154.88**	**300**	i P	PKPdf	07 47 50.6	-5.2
KSL	**Kastellorizon**	**154.92**	**300**	eP	PKPdf	07 47 56.0	+0.1
BALB	**Balikesir**	**154.96**	**309**	eP	PKPdf	07 47 57.0	+1.2
RKY	**Sarkoy-Tekirda**	**154.98**	**312**	eP	PKPdf	07 47 54.8	-1.0
TFO1	**Folkestone**	**154.99**	**2**	P	PKPdf	07 47 59.5	+4.0
TFO1				AMb	AMB	07 48 11.8	
	comp=Z,2µm,1.4s						
TFO1	**Folkestone**	**154.99**	**2**	eP	PKPdf	07 47 58.5	+3.0
TFO1				eP		07 47 59.5	
TFO1				AMb	AMB	07 48 11.8	
	comp=Z,2µm,1.4s						
CRAR	**CRAIOVA**	**155.03**	**322**	⇓iP	PKPdf	07 47 57.3	+1.6
BUD	**Budapest**	**155.04**	**333**	⇑ePKP	PKPdf	07 47 56.8	+1.2
BALY	**Balya**	**155.10**	**309**	i P	PKPdf	07 47 55.0	-1.0
DYA	**Yadsworthy**	**155.18**	**10**	eP	PKPdf	07 47 59.8	+4.1
DYA				AMb	AMB	07 48 11.5	
	comp=Z,871nm,1.7s						
DYA				e		08 04 19.8	
ZST	**Bratislava**	**155.19**	**337**	⇑ePKIKP	PKPdf	07 47 54.9	-0.9
ZST				e		07 48 01.1	
ZST				e		07 48 34.7	
ZST	**Bratislava**	**155.19**	**337**	ePKP	PKPdf	07 47 54.9	-0.9
ZST				e		07 48 01.1	
ZST				e		07 48 26.7	
ZST				e		07 48 34.7	
ZST				e		07 48 42.4	
ZST	**Bratislava**	**155.19**	**337**	ePKP	PKPdf	07 47 54.9	-0.9
ZST				e		07 48 01.1	
ZST				e		07 48 26.7	
ZST				e		07 48 34.7	
ZST				e		07 48 42.4	
ZST				eSKKSac	SKKSac	07 58 34.0	+0.9
BEBN	**Eben Emael**	**155.23**	**355**	PKP	PKPdf	07 47 55.2	-0.6
ROTZ	**Rotzenmuhle**	**155.23**	**345**	ePKPdf	PKPdf	07 47 56.3	+0.5
ROTZ				ePKPab	PKPab	07 48 26.0	+4.5
ROTZ				epPKPab	pPKPab	07 49 06.5	+6.7
ROTZ				ePP	PP	07 52 01.6	+3.8
HGN	**Heimansgroeve**	**155.24**	**355**	ePKP	PKPdf	07 47 53.5	-2.3
	comp=Z,52nm,3.0s						
HGN	**Heimansgroeve**	**155.24**	**355**	⇑iPKP	PKPdf	07 48 00.1	+4.3
	comp=Z,816nm,3.5s						
HGN	**Heimansgroeve**	**155.24**	**355**	ex	PKPab	07 48 26.7	+5.3
HGN	**Heimansgroeve**	**155.24**	**355**	ex	x	07 49 08.5	
HGN	**Heimansgroeve**	**155.24**	**355**	ePP	PP	07 52 02.6	+4.9
BZS	**Buzias**	**155.29**	**327**	⇓iP	PKPdf	07 47 55.0	-1.1
BZS	**Buzias**	**155.29**	**327**	P	PKPdf	07 47 53.6	-2.4
UCC	**Uccle**	**155.30**	**357**	PKP	PKPdf	07 47 56.7	+0.8
AKHS	**Akhisar**	**155.32**	**307**	i P	PKPdf	07 47 58.2	+1.9
AKS	**Akhisar**	**155.32**	**307**	eP	PKPdf	07 47 57.0	+0.7
MEM	**Membach**	**155.39**	**355**	PKP	PKPdf	07 47 54.6	-1.4
TIM	**Timisoara**	**155.40**	**328**	⇓iP	PKPdf	07 47 58.2	+2.0
TIM	**Timisoara**	**155.40**	**328**	⇓P	PKPdf	07 47 58.1	+2.0
LPK	**Lapseki**	**155.41**	**311**	eP	PKPdf	07 47 59.7	+3.3
KHC	**Kasperske Hory**	**155.48**	**343**	ePKIKP	PKPdf	07 47 54.3	-1.9
KHC				e		07 47 58.5	
KHC				e		07 51 55.0	
KHC				e		08 04 47.9	
KHC				e		08 12 20.0	
KHC				MLR	MLR		
	comp=Z,100µm,24.1s						
KHC	**Kasperske Hory**	**155.48**	**343**	ePKPDF	PKPdf	07 47 54.3	-1.9
KHC				ex	x	07 47 58.5	
KHC				ex	x	07 48 08.5	
KHC				ex	x	07 49 11.2	
KHC				ePP	PP	07 51 55.0	-4.2
KHC				ex	x	07 52 07.3	
KHC				eSKKS	SKKSac	07 58 35.9	+1.3
KHC				ex	x	08 02 02.2	
KHC				ex	x	08 04 47.9	
KHC				eSKSSKS		08 12 20.0	
KHC				AMS	AMS	08 57 10.0	
	comp=Z,100µm,24.1s						
GRA1	**Grafenberg Arr**	**155.52**	**346**	ePKPdf	PKPdf	07 47 57.2	+1.0
GRA1				ePKPab	PKPab	07 48 26.6	+3.9
GRA1				ePP	PP	07 52 03.1	+3.8
GRA1				eSKKSac	SKKSac	07 58 37.0	+2.2
GRA1				eSS	SS	08 11 39.8	+7.6
GRF	**Grafenberg Arr**	**155.52**	**346**	ePKIKP	PKPdf	07 47 57.2	+1.0
GRF				e		07 52 03.1	
GRF	**Grafenberg Arr**	**155.52**	**346**	ePKPdf	PKPdf	07 47 57.2	+1.0
GRF				ePKPab	PKPab	07 48 26.6	+3.9
GRF				ePP	PP	07 52 03.1	+3.8
GRF				eSKKSac	SKKSac	07 58 37.0	+2.2
GRF				eSS	SS	08 11 39.8	+7.6
MENF	**Mencas**	**155.57**	**1**	PKP	PKPdf	07 47 57.1	+0.8
SNF	**Seneffe**	**155.59**	**357**	PKP	PKPdf	07 47 54.8	-1.5
YER	**Yerkesik**	**155.62**	**303**	eP	PKPdf	07 47 59.3	+2.5
BCLA	**Clavier**	**155.63**	**356**	PKP	PKPdf	07 47 55.6	-0.8
ALN	**Alexandroupoli**	**155.63**	**313**	P	PKPdf	07 47 56.5	-0.2
ENEZ	**Enez**	**155.64**	**313**	eP	PKPdf	07 47 57.0	+0.3
KDZ	**Kurdzhali**	**155.64**	**315**	P	PKPdf	07 47 58.5	+1.8
WET	**Wettzell**	**155.65**	**344**	ePKIKP	PKPdf	07 47 57.2	+0.8
WET				e		07 52 04.7	
WET	**Wettzell**	**155.65**	**344**	ePKPdf	PKPdf	07 47 57.2	+0.8

WET ePKPab PKPab 07 48 27.5 +4.2
WET epPKPab pPKPab 07 49 07.9 +6.3
WET ePP PP 07 52 04.7 +4.6
WET eSS SS 08 11 41.7 +8.0
GEC2 GERESS Array S 155.70 342 ePKIKP PKPdf 07 47 57.5 +1.0
GEC2 e 07 52 04.3
GEC2 GERESS Array S 155.70 342 ePKPdf PKPdf 07 47 57.5 +1.0
GEC2 ePKPab PKPab 07 48 27.8 +4.3
GEC2 ePP PP 07 52 04.3 +3.9
GEC2 eSS SS 08 11 41.8 +7.5
GERES GERESS Array B 155.70 342 PKP PKPdf 07 47 55.1 -1.4
comp=Z,6.4nm,0.9s,baz=118,slow=2.0,SNR=15
GERES PKPab PKPab 07 48 24.6 +1.0
comp=Z,138nm,0.8s,baz=30,slow=2.6,SNR=10
GERES GERESS Array B 155.70 342 PKIKP PKPdf 07 47 55.1 -1.4
GERES 07 48 24.6
GERES pmax pmax
comp=Z,6.0nm,0.9s
GERES pmax pmax
comp=Z,139nm,0.8s
SOP Sopron 155.82 337⇑ ePKP PKPdf 07 48 00.0 +3.3
RDO Rodhopi 155.83 314 eP PKPdf 07 48 01.0 +4.1
PLD Plovdiv 155.84 317 P PKPdf 07 47 58.9 +2.0
CONA Conrad Observa 155.85 336⇓ iPKPdf PKPdf 07 47 56.1 -0.6
comp=Z,10μm,2.4s,SNR=45
CSNA Conrad Observa 155.85 338⇓ iPKPdf PKPdf 07 47 57.2 +0.5
comp=Z,9μm,2.4s
KDAG Bornova 155.91 307 i P PKPdf 07 48 02.6 +5.5
PGB Panagyurishte 155.91 318 P PKPdf 07 47 59.9 +2.9
MLSB Milas 155.94 304 eP PKPdf 07 47 57.0 -0.2
ABH Alteburg 155.95 352 PKP PKPdf 07 47 57.5 +0.7
EZN Ezine 155.96 311 eP PKPdf 07 47 56.3 -0.9
GIVF Givet 155.97 357⇓ iPKIKP PKPdf 07 47 56.1 -0.7
comp=Z,3μm,1.9s
DOU Dourbes 155.99 357 PKP PKPdf 07 47 56.5 -0.3
ARG Arkhangelos 156.03 301 eP PKPdf 07 47 58.0 +0.6
BAIF Baives 156.04 356⇓ iPKIKP PKPdf 07 47 56.1 -0.8
comp=Z,2μm,1.9s
TOD Tromm 156.05 350 PKP PKPdf 07 47 59.3 +2.4
RZN Rozhen 156.06 316 P PKPdf 07 47 58.9 +1.7
GADA Gvkgeada 156.07 312 eP PKPdf 07 47 59.3 +2.0
BLCB Balcova 156.07 307 eP PKPdf 07 47 58.5 +1.2
GCAM G?zelcaml? 156.20 305 i P PKPdf 07 47 57.2 -0.4
PKSM Moragy 156.21 332⇓ iP PKPdf 07 47 57.0 -0.3
PKSM Moragy 156.21 332⇓ P PKPdf 07 47 57.0 -0.3
PRK Paraskevi 156.25 309 P PKPdf 07 47 57.6 +0.1
PRK Paraskevi 156.25 309 eP PKPdf 07 48 01.1 +3.6
BDRM Kayabasi 156.27 303 i P PKPdf 07 48 01.5 +3.9
WLF Walferdange 156.31 354 PKP PKPdf 07 47 56.6 -0.7
WLF Walferdange 156.31 354 ePKPdf PKPdf 07 47 58.1 +0.8
WLF ePKPab PKPab 07 48 30.5 +4.4
WLF ePP PP 07 52 08.7 +5.1
WLF Walferdange 156.31 354 ePKPdf PKPdf 07 47 56.6 -0.7
BOLS Boljevac 156.36 323 eP PKPdf 07 48 00.9 +3.4
BODT Bodrum 156.37 304 eP PKPdf 07 47 57.8 0.0
KTD Kalmit 156.43 351 PKP PKPdf 07 48 00.5 +3.1
BEO Beograd 156.43 327 eP PKPdf 07 48 02.5 +4.9
MOA Molln 156.44 340⇑ iPKPdf PKPdf 07 47 56.0 -1.5
comp=Z,12μm,2.5s,SNR=11
SVIS Svilajnac 156.45 325 eP PKPab 07 48 19.5 -7.4
VTS Vitosha 156.45 320⇑ iP PKPdf 07 47 57.9 +0.2
VTS Vitosha 156.45 320 P PKPdf 07 47 58.1 +0.4
VTS Vitosha 156.45 320⇑ P PKPdf 07 47 57.9 +0.2
ARSA Arzberg 156.55 338⇑ iPKPdf PKPdf 07 47 55.9 -1.8
comp=Z,12μm,3.4s,SNR=64
ARSA Arzberg 156.55 338 P PKPdf 07 47 56.9 -0.8
JSA Saint Aubin 156.65 8 eP PKPdf 07 48 00.9 +3.2
JSA AMb AMB 07 48 14.2
comp=Z,770nm,1.5s
NISR Nisiros 156.66 303 eP PKPdf 07 48 01.5 +3.3
LIA Limnos Island 156.69 312 P PKPdf 07 47 58.6 +0.5
MMB Musomiste 156.73 317 P PKPdf 07 47 58.7 +0.6
CHOS Chios island 156.78 308 P PKPdf 07 48 00.8 +2.5
STU Stuttgart 156.79 349 ePKPdf PKPdf 07 47 58.5 +0.6
STU ePP PP 07 52 09.9 +3.6
STU eSS SS 08 11 51.2 +5.4
STU Stuttgart 156.79 349 ePKPdf PKPdf 07 47 57.0 -1.0
LANF Langenberg 156.80 351 PKP PKPdf 07 48 00.8 +2.9
FUR Furstenfeldbru 156.95 345 ePKIKP PKPdf 07 47 58.1 0.0
FUR e 07 52 11.9
FUR Furstenfeldbru 156.95 345 ePKPdf PKPdf 07 47 58.1 0.0
FUR ePKPab PKPab 07 48 32.6 +3.7
FUR ePP PP 07 52 11.9 +4.7
FUR eSS SS 08 11 56.0 +8.4
KKB Krupnik 156.96 318 P PKPdf 07 47 59.7 +1.3
RJOB Jochberg 156.96 342 ePKPdf PKPdf 07 47 58.5 +0.3
RJOB ePKPab PKPab 07 48 33.5 +4.5
RJOB epPKPab pPKPab 07 49 14.3 +7.1
RJOB ePP PP 07 52 11.3 +3.9
GRUS Gruza 156.97 325 eP PKPdf 07 48 02.0 +3.7
KOGS Kog 156.98 335 ePKPdf PKPdf 07 47 55.9 -2.3
KOGS ePKPab PKPab 07 48 32.1 +3.1
KOGS e 07 49 13.3
KOGS ePP PP 07 52 13.0 +5.4
KOGS e 08 05 19.9
KOGS e 08 12 56.0
KOGS e 08 22 18.5
KOGS e 08 33 04.1
KOGS e 08 41 49.0
KOGS Kog 156.98 335 ePKPdf PKPdf 07 47 55.9 -2.3
KOGS ePKPab PKPab 07 48 32.1 +3.1
KOGS e 07 49 13.3
KOGS ePP PP 07 52 13.0 +5.4
KOGS e 08 05 19.9
KOGS e 08 12 56.0
KARP Karpathos 156.98 300 eP PKPdf 07 47 59.0 +0.4
BARS Barje 157.10 322 eP PKPdf 07 48 02.7 +4.2
STR Strasbourg 157.19 351 PKP PKPdf 07 48 01.0 +2.6
SOKA Soboth 157.22 338⇑ iPKPdf PKPdf 07 47 56.7 -1.8
comp=Z,11μm,4.2s
PERS Pernice 157.22 337 ePKPdf PKPdf 07 47 58.8 +0.2
PERS ePKPab PKPab 07 48 34.4 +4.2
PERS ePP PP 07 52 14.5 +5.5
PERS e 07 59 43.2
PERS e 08 02 13.2
FLN La Foliniere 157.24 5 ePKIKP PKPdf 07 47 57.4 -1.1
comp=Z,3μm,1.9s
FLN eMLR MLR
comp=Z,63μm,22.9s
FLN La Foliniere 157.24 5 ePKPdf PKPdf 07 47 57.4 -1.1
FLN LR LR
comp=Z,63μm,22.9s
OUR Ouranopolis 157.26 314 P PKPab 07 48 37.7 +7.1
ROSF Rostrenen 157.32 10 ePKIKP PKPdf 07 47 57.3 -1.3
BFO Black Forest 157.36 350 ePKIKP PKPdf 07 47 59.1 +0.4
BFO e 07 52 13.7
BFO Black Forest 157.36 350 ePKPdf PKPdf 07 47 59.1 +0.4
BFO epPKPab pPKPab 07 49 14.7 +5.8
BFO ePP PP 07 52 13.7 +4.3
BFO eSS SS 08 11 57.5 +5.7
SOH Sokhos 157.40 316 P PKPdf 07 47 58.5 -0.5
KBA Koelnbreinsper 157.40 341⇑ iPKPdf PKPdf 07 47 56.7 -2.1
comp=Z,13μm,2.8s,SNR=31
CDF Champ du Feu 157.43 352⇓ iPKIKP PKPdf 07 47 57.6 -1.1
comp=Z,2μm,1.9s
LDF La Druitiere 157.44 5 ePKIKP PKPdf 07 47 57.6 -1.1
comp=Z,824nm,1.3s
KNT Kendrikon 157.49 317 P PKPdf 07 47 59.9 +0.8
SPAK Spaichingen-Ko 157.51 349 PKP PKPdf 07 48 00.1 +1.3
SGMF Saint Gilles 157.51 9⇓ iPKIKP PKPdf 07 47 57.4 -1.4
comp=Z,2μm,1.9s
OBKA Obir 157.53 338⇑ iPKPdf PKPdf 07 47 58.2 -0.8
comp=Z,12μm,4.1s,SNR=29
MEZF Maizieres J'vi 157.55 356 ePKIKP PKPdf 07 47 58.3 -0.6
comp=Z,4μm,1.9s
GRR Gorron 157.58 6 ePKIKP PKPdf 07 47 58.7 -0.2
comp=Z,719nm,1.4s
PLG Polygyros 157.59 315 P PKPdf 07 47 58.9 -0.3
PLG Polygyros 157.59 315 eP PKPdf 07 47 59.0 -0.2
VAY Valandovo 157.59 318 i PKP PKPdf 07 47 58.7 -0.5
VAY i PKP PKPab 07 48 37.7 +5.7
VAY i PP PP 07 52 14.0 +2.4
VAY i SKK 08 02 29.0
VAY i SS SS 08 12 19.6 +24
STIP Stip 157.60 319 i PKP PKPdf 07 47 57.1 -2.1
STIP i PKP PKPab 07 48 33.6 +1.6
ECH Echery 157.64 352 PKP PKPdf 07 48 01.5 +2.5
ECH Echery 157.64 352 ePKPdf PKPdf 07 47 59.4 +0.4
LIBD Limburg 157.64 351 PKIKP PKPdf 07 48 01.5 +2.5
BBLS Lazići 157.65 327 eP PKPdf 07 47 58.8 -0.4
WATA Walderalm 157.65 344⇓ iPKPdf PKPdf 07 47 57.7 -1.3
comp=Z,1μm,2.0s,SNR=9.9

PAIG Paliouri 157.68 313 P PKPdf 07 47 59.2 -0.1
HORT Hortiatis 157.68 315 P PKPdf 07 47 58.3 -1.0
APE Apeiranthos 157.69 305 P PKPdf 07 48 01.7 +2.2
APE Apeiranthos 157.69 305 eP PKPdf 07 48 00.0 +0.6
APE Apeiranthos 157.69 305⇓ iP PKPdf 07 48 02.9 +3.5
RETA Reutte 157.71 345⇓ iPKPdf PKPdf 07 47 57.8 -1.3
comp=Z,10μm,3.7s,SNR=34
WTTA Wattenberg 157.71 344⇑ iPKPdf PKPdf 07 47 57.6 -1.5
comp=Z,13μm,3.2s,SNR=60
WTTA Wattenberg 157.71 344 P PKPdf 07 47 57.9 -1.2
MYKA Terra Mystica 157.72 340⇑ iPKPdf PKPdf 07 47 59.0 -0.2
comp=Z,10μm,4.2s
SISC Sisak 157.75 334 P PKPdf 07 48 00.2 +1.0
SISC Sisak 157.75 334 i P PKPdf 07 48 00.2 +1.0
QUIF Quistinic 157.75 10 ePKIKP PKPdf 07 47 58.2 -0.9
comp=Z,2μm,1.9s
THE Thessaloniki 157.75 316 P PKPdf 07 47 58.2 -1.2
THEF They Montfort 157.75 354 PKP PKPdf 07 48 00.5 +1.4
SJES Sjenica 157.79 325 eP PKPab 07 48 36.1 +3.4
CRES Cresnjev 157.80 336 ePKPdf PKPdf 07 47 59.2 -0.1
CRES ePKPab PKPab 07 48 36.6 +3.9
CRES ePP PP 07 52 17.6 +5.5
ZKR Zakros 157.84 300 P PKPdf 07 47 59.9 +0.2
FELD Feldberg im Sc 157.85 350 PKP PKPdf 07 48 00.1 +0.8
SKO Skopje 157.86 320 i PKP PKPdf 07 47 58.2 -1.3
SKO i PP PP 07 52 19.2 +6.2
SKO i SKK 08 02 26.2
SKO i SS SS 08 12 01.4 +2.9
GRG Griva 157.91 317 P PKPdf 07 48 01.9 +2.3
AOS Alonnisos 157.93 311 P PKPdf 07 48 03.4 +3.7
HAU Haudompre 157.94 353⇓ iPKIKP PKPdf 07 47 58.4 -1.0
comp=Z,2μm,1.8s
HAU eMLR MLR
comp=Z,64μm,22.1s
HAU Haudompre 157.94 353⇓ iPKPdf PKPdf 07 47 58.4 -1.0
HAU LR LR
comp=Z,64μm,22.1s
LJU Ljubljana 157.94 338 ePKIKP PKPdf 07 47 57.7 -1.8
LJU e 07 48 37.0
LJU e 07 52 17.9
LJU e 08 05 25.5
LJU e 08 13 05.3
LJU Ljubljana 157.94 338 ePKPdf PKPdf 07 47 57.7 -1.8
LJU ePKPab PKPab 07 48 37.0 +3.8
LJU ePP PP 07 52 17.9 +5.0
LJU i 07 55 46.9
LJU e 07 59 32.3
LJU e 08 05 25.5
LJU e 08 13 05.3
ABTA Abfaltersbach 157.95 342⇑ iPKPdf PKPdf 07 47 56.9 -2.6
comp=Z,7μm,2.6s,SNR=37
MOF Molkenrain 158.00 352 PKP PKPdf 07 48 01.9 +2.4
PTCC Patocco-Chiusa 158.01 340 PKP PKPdf 07 47 57.6 -1.9
PLE Pljevlja 158.04 326⇑ iPKP PKPdf 07 47 59.7 0.0
CADS Cadrg 158.04 339 ePKPdf PKPdf 07 47 57.5 -2.1
CADS e 07 53 21.3
HINF Hinteralfeld 158.07 352⇓ iPKIKP PKPdf 07 47 58.4 -1.1
comp=Z,2μm,1.8s
DAVA Damuels 158.09 347⇑ iPKPdf PKPdf 07 47 58.0 -1.6
SNR=15
IVA Berane 158.10 324⇑ iPKP PKPdf 07 47 59.5 -0.3
FETA Feichten 158.15 345⇑ iPKPdf PKPdf 07 47 58.1 -1.5
SNR=36
GMNA Gemona 158.16 340 PKP PKPdf 07 47 57.7 -2.0
VOY Vojsko 158.17 339 ePKPdf PKPdf 07 47 57.3 -2.4
VOY e 07 48 04.3
PVY Plav 158.26 324⇑ iPKP PKPdf 07 47 59.0 -1.0
NPS Neapolis 158.27 300 eP PKPdf 07 47 56.0 -4.2
XOR Xorichti 158.29 313 P PKPdf 07 48 01.3 +1.2
NEO Neokhori 158.30 312 eP PKPdf 07 48 02.1 +2.0
BBS Basel-Blauen 158.33 351 PKP PKPdf 07 48 01.0 +1.1
LIT Litokhoron 158.35 315 P PKPdf 07 47 59.9 -0.2
KRUS Krusevo 158.35 319 i PKP PKPdf 07 47 58.5 -1.6
KRUS i PKP PKPab 07 48 39.5 +4.3
KRUS i PP PP 07 52 26.0 +10
UPM Unac-Piva 158.38 326⇑ iPKP PKPdf 07 47 58.5 -1.6
LAST Lasithi 158.41 300 P PKPdf 07 48 00.9 +0.5
PTL Penteli 158.48 309 eP PKPdf 07 48 00.5 +0.1
BIA Bitola 158.52 319 i PKP PKPdf 07 48 01.1 +0.7
BIA i PKP PKPab 07 48 38.0 +2.0
LOMF Lomont 158.53 352 PKP PKPdf 07 48 01.7 +1.6
APPI Appiano 158.54 344 PKP PKPdf 07 48 00.7 +0.5
ATH Athens Observa 158.62 309 eP PKPdf 07 48 01.5 +1.0
FNA Florina 158.64 318 P PKPdf 07 48 02.9 +2.4
KZN Kozani 158.68 316 eP PKPdf 07 48 02.5 +2.0
TTG Podgorica 158.75 324⇑ iPKP PKPdf 07 47 59.6 -0.9
BRY Bratogost 158.78 326⇑ iPKP PKPdf 07 47 58.3 -2.3
LKR Lokris 158.78 311 P PKPdf 07 48 00.2 -0.5
CTI Castel Tesino 158.83 342 PKIKP PKPdf 07 48 00.1 -0.4
LOR Lormes 158.85 358⇓ iPKIKP PKPdf 07 47 59.7 -0.8
comp=Z,3μm,1.8s
LOR eMLR MLR
comp=Z,45μm,22.1s
LOR Lormes 158.85 358⇓ iPKPdf PKPdf 07 47 59.7 -0.8
LOR LR LR
comp=Z,45μm,22.1s
HYF Humbligny 158.87 360⇓ iPKIKP PKPdf 07 48 00.1 -0.4
NAIG Nisos Aigina 158.88 308 eP PKPdf 07 48 04.0 +3.1
LIC Lamto 158.93 158⇑ iPKIKP PKPdf 07 48 00.2 -1.5
comp=Z,1μm,1.1s
LIC eMLR MLR
comp=Z,75μm,22.9s
LIC Lamto 158.93 158 ePKIKP PKPdf 07 47 59.7 -2.0
comp=Z,4μm,0.8s
LIC Lamto 158.93 158⇑ iPKPdf PKPdf 07 48 00.2 -1.5
LIC LR LR
comp=Z,38μm,22.9s
THL Klokotos Trika 158.95 314 P PKPdf 07 48 00.4 -0.5
SIVA Sivas 158.97 300 P PKPdf 07 48 01.9 +0.8
TUE Stuetta 158.97 347 ePKPdf PKPdf 07 47 59.8 -0.9
BUM Brajici-Budva 159.03 325⇑ iPKP PKPdf 07 47 59.9 -1.0
AGG Agios Georgios 159.04 313 P PKPdf 07 48 01.3 +0.3
SSF Saint Saulge 159.06 358⇓ iPKIKP PKPdf 07 47 59.9 -0.9
comp=Z,3μm,1.9s
ULC Ulcinj 159.08 323⇑ iPKP PKPdf 07 48 00.2 -0.8
NVLJ Novalja 159.09 335 P PKPdf 07 48 00.8 -0.1
NVLJ Novalja 159.09 335 i P PKPdf 07 48 00.8 -0.1
MABI Malga Bissina 159.11 344 PKP PKPdf 07 47 58.9 -1.9
LTK Loutraki 159.12 310 P PKPdf 07 48 00.2 -0.9
HCY Herceg Novi 159.13 325 ePKP PKPdf 07 47 59.7 -1.3
KIC Kosan Boka 159.15 159 ePKIKP PKPdf 07 48 00.1 -1.8
comp=Z,2μm,0.9s
TIR Tirane 159.16 321 ePKIKP PKPdf 07 48 00.8 -0.3
DID Didima 159.17 308 P PKPdf 07 48 02.9 +1.7
STON Ston 159.22 327 P PKPdf 07 48 00.6 -0.5
STON Ston 159.22 327 i P PKPdf 07 48 00.6 -0.5
VAM Vamos 159.31 302 eP PKPdf 07 48 04.0 +2.6
TIC Toumodi 159.32 158 ePKIKP PKPdf 07 48 00.2 -1.9
comp=Z,2μm,0.8s
AVF Avril sur Loir 159.34 359⇓ iPKIKP PKPdf 07 48 00.0 -1.1
comp=Z,2μm,1.9s
CABF La Chapelle 159.34 353⇓ iPKIKP PKPdf 07 48 00.8 -0.3
comp=Z,5μm,1.9s
DBIC Dimbokro 159.40 158 PKP PKPdf 07 48 04.1 +1.9
comp=Z,32nm,1.0s,baz=169,slow=1.6,SNR=20
DBIC PKPab PKPab 07 48 44.1 +3.8
comp=Z,700nm,0.8s,baz=184,slow=5.5,SNR=16
DBIC PP PP 07 52 27.8 +7.1
comp=Z,76nm,0.9s,baz=184,slow=2.7,SNR=2.3
DBIC Dimbokro 159.40 158 ePKPdf PKPdf 07 48 00.7 -1.5
DBIC PKP PKPdf 07 48 04.1 +1.9
DBIC PKPab PKPab 07 48 44.1 +3.8
DBIC PP PP 07 52 27.8 +7.1
MFF Saint Martin d 159.41 5 ePKIKP PKPdf 07 48 00.2 +1.0
EVR Evrytania 159.44 313 eP PKPdf 07 48 00.1 -1.4
SMF Signal de Mont 159.47 358⇓ iPKIKP PKPdf 07 48 00.2 -1.0
comp=Z,2μm,1.8s
KARN Karanos 159.53 302 P PKPdf 07 48 02.1 +0.4
BGF Bois d'Agland 159.58 360⇓ iPKIKP PKPdf 07 48 00.6 -0.8
comp=Z,3μm,1.8s
GVD Gavdhos 159.59 300 eP PKPdf 07 48 03.2 +1.4
JAN Janina 159.63 316 eP PKPdf 07 48 02.5 +0.8
KYTH Kithira 159.85 305 eP PKPdf 07 48 00.5 -1.5
TCF Toulx Ste Croi 159.85 1⇓ iPKIKP PKPdf 07 48 00.8 -0.9
comp=Z,3μm,1.9s
IGT Igoumenitsa 160.03 317 P PKPdf 07 48 01.7 -0.4
PLDF La Plantade 160.15 358 PKP PKPdf 07 48 06.0 +4.0
ITM Ithomi 160.24 309 eP PKPdf 07 48 01.5 -0.9
KEK Kerkira 160.25 318 eP PKPdf 07 48 01.5 -0.9
LPL La Plagne 160.34 351 ePKIKP PKPdf 07 48 02.0 -0.3
comp=Z,2μm,1.9s
LPG La Plagne 160.36 351 ePKIKP PKPdf 07 48 02.1 -0.2
comp=Z,2μm,1.9s

PYM Petit Puy Mans 160.38 359 PKP PKPdf 07 48 02.3 0.0
PYL PYLOS 160.51 308 P PKPdf 07 48 02.5 -0.2
KFL Anninata 160.55 312 P PKPdf 07 48 06.8 +4.1
BOB Bobbio (Coli) 160.57 345 PKIKP PKPdf 07 48 03.1 +0.6
VLS Valsamata 160.64 313 P PKPdf 07 48 02.6 -0.2
VLS Valsamata 160.64 313 eP PKPdf 07 48 03.5 +0.7
EMAZ Mazaricos 160.69 27 PKP PKPdf 07 48 02.7 0.0
FNVD Fontana Vidola 160.70 341 PKP PKPdf 07 48 05.4 +2.7
CING Cingoli 160.73 336 PKP PKPdf 07 48 03.2 +0.4
SSB Saint Sauveur 160.80 356 ePKIKP PKPdf 07 48 02.8 0.0
BNI Bardonecchia 160.81 351 ePKIKP PKPdf 07 48 01.9 -0.9
RJF Les Rejaudoux 160.81 2 ePKIKP PKPdf 07 48 02.0 -0.8
comp=Z,3μm,1.9s
RJF eMLR MLR
comp=Z,72μm,22.9s
RJF Les Rejaudoux 160.81 2 ePKPdf PKPdf 07 48 02.0 -0.8
RJF LR LR
comp=Z,72μm,22.9s
LBL Lubilhac 160.90 359 PKP PKPdf 07 48 03.9 +1.0
STS Santiago 160.91 26 PKIKP PKPdf 07 48 03.7 +0.7
VLC Villacollemand 160.91 343 ePKPdf PKPdf 07 48 03.2 +0.3
VLC ePP PP 07 52 30.6 +1.8
FGMS Monte Sant'Ang 160.94 328 PKP PKPdf 07 48 03.8 +0.8
ORIF Oris-en-Rattie 161.04 353 ePKIKP PKPdf 07 48 02.4 -0.6
comp=Z,2μm,1.9s
ORIF eMLR MLR
comp=Z,67μm,21.3s
EPON Pontenova 161.05 22 PKP PKPdf 07 48 03.2 +0.1
MURB Monte Urbino 161.07 337 PKP PKPdf 07 48 04.1 +1.0
MBDF Montbardon 161.11 351 ePKIKP PKPdf 07 48 02.5 -0.6
comp=Z,2μm,1.9s
LFF La Frestale 161.13 4 ePKIKP PKPdf 07 48 02.6 -0.5
comp=Z,2μm,1.8s
CAF Calviac 161.21 1 ePKIKP PKPdf 07 48 02.7 -0.5
comp=Z,2μm,1.9s
VIVF Saint-Julien-l 161.21 356 ePKIKP PKPdf 07 48 02.7 -0.5
comp=Z,3μm,1.9s
QLNO Quiliano 161.23 347 PKP PKPdf 07 48 02.6 -0.7
DOI San Damiano 161.26 350 PKIKP PKPdf 07 48 06.0 +2.7
CSNT Castellina Chi 161.28 340 PKP PKPdf 07 48 00.9 -2.4
EZAM Zamans 161.47 27 PKIKP PKPdf 07 48 04.0 +0.4
AQU L'Aquila 161.53 334 ePKIKP PKPdf 07 48 04.0 +0.4
AQU e 07 52 36.6
CHIE El Hierro 161.56 80 PKP PKPdf 07 48 05.9 +1.8
EHIG Higuera 161.67 78 PKP PKPdf 07 48 05.8 +1.6
EARI Arriondas 161.68 18 PKP PKPdf 07 48 02.9 -0.9
SAOF Saorge 161.71 349 PKP PKPdf 07 48 04.2 +0.4
AUTN L'Aution 161.72 349 PKP PKPdf 07 48 08.1 +4.3
TOUF Mont Tournerai 161.74 349 PKP PKPdf 07 48 06.8 +3.0
PMAR Madeira 161.74 64 ePKPdf PKPdf 07 48 04.2 0.0
MIDA Miranda 161.77 331 PKP PKPdf 07 48 03.0 -0.9
FUL Funchal 161.78 64 ePKPdf PKPdf 07 48 07.2 +3.0
FUL Funchal 161.78 64 ePKPab PKPab 07 48 47.9 -2.7
LUCF Luceram 161.84 349 PKP PKPdf 07 48 06.5 +2.6
SBF Sospel 161.85 349 ePKIKP PKPdf 07 48 02.6 -1.3
comp=Z,3μm,1.9s
MVIF Mont Vial 161.87 349 PKP PKPdf 07 48 06.6 +2.7
ERUA La Rua 161.87 24 PKIKP PKPdf 07 48 03.4 -0.6
ELOB Lobios 161.97 27 PKP PKPdf 07 48 04.4 +0.3
REVF Revere 161.98 349 PKP PKPdf 07 48 06.6 +2.5
SMRF Simiane la Rot 162.00 353 ePKIKP PKPdf 07 48 03.8 -0.3
comp=Z,3μm,1.8s
LASF Ste Croix 162.03 357 ePKIKP PKPdf 07 48 03.7 -0.4
comp=Z,3μm,1.9s
CERT Cerreto 162.04 334 PKP PKPdf 07 48 02.4 -1.8
CALN Calern 162.05 350 PKP PKPdf 07 48 07.3 +3.2
PCAB Cabril 162.11 27 ePKPdf PKPdf 07 48 06.2 +1.9
PCAB Cabril 162.11 27 ePKPab PKPab 07 48 55.5 +3.9
PCAB Cabril 162.11 27 ePP PP 07 52 38.8 +3.4
ELAN Lanestosa 162.20 15 PKP PKPdf 07 48 05.6 +1.3
EGOM La Gomera 162.21 79 PKP PKPdf 07 48 05.5 +0.7
FRF La Foret Royal 162.27 350 ePKIKP PKPdf 07 48 03.3 -1.1
comp=Z,3μm,1.9s
MAON Monte Argentar 162.28 339 PKP PKPdf 07 48 03.4 -1.0
TOLF Tolfa 162.30 337 PKP PKPdf 07 48 02.1 -2.3
CUC Castrocucco 162.31 325 ePKPdf PKPdf 07 48 04.3 -0.2
TIP Timpagrande 162.38 321 ePKPdf PKPdf 07 48 03.3 -1.3
ECAL Calabor 162.41 24 PKP PKPdf 07 48 05.7 +1.1
LMR La Mourre 162.51 351 ePKIKP PKPdf 07 48 03.5 -1.1
comp=Z,3μm,1.9s
PBRG Braganca 162.53 24 ePKPdf PKPdf 07 48 05.1 +0.4
PBRG Braganca 162.53 24 ePP PP 07 52 40.5 +2.9
EALK Alkurruntz 162.59 10 PKP PKPdf 07 48 04.9 +0.3
OSSF Osses 162.59 10 PKP PKPdf 07 48 06.0 +1.3
ELIZ Elizondo 162.64 10 PKIKP PKPdf 07 48 05.3 +0.6
ORDF Ordiarp 162.68 9 PKP PKPdf 07 48 06.9 +2.1
SJPF Ste Jean 162.73 10 ePKIKP PKPdf 07 48 04.7 -0.1
comp=Z,2μm,1.9s
CCAN Las Canadas 162.74 79 PKP PKPdf 07 48 05.3 0.0
PGF Pioggiola 162.78 344 ePKIKP PKPdf 07 48 03.6 -1.3
comp=Z,3μm,1.9s
MTLF Montlieu 162.79 1 ePKIKP PKPdf 07 48 04.2 -0.7
comp=Z,2μm,1.9s
VENT Ventotene 162.82 331 PKP PKPdf 07 48 03.6 -1.4
ATE Arette 162.83 8 PKP PKPdf 07 48 08.0 +3.1
LARF Larrau 162.84 9 PKP PKPdf 07 48 08.2 +3.3
REYF Montagne du Re 162.89 8 PKP PKPdf 07 48 05.0 0.0
EBAJ Bajamar 162.96 78 PKP PKPdf 07 48 06.5 +1.0
LABF Labassere 162.96 6 PKP PKPdf 07 48 09.5 +4.5
MVO Moncorvo 162.97 26 ePKPdf PKPdf 07 48 05.7 +0.6
MVO Moncorvo 162.97 26 ePKPab PKPab 07 48 52.4 -2.9
MVO Moncorvo 162.97 26 ePP PP 07 52 43.2 +3.2
ECRI Cripan 163.00 13 PKIKP PKPdf 07 48 07.2 +2.1
PVIS Viseu 163.00 28 ePKPdf PKPdf 07 48 05.4 +0.2
PVIS Viseu 163.00 28 ePKPab PKPab 07 48 56.7 +1.2
PVIS Viseu 163.00 28 ePP PP 07 52 43.0 +2.8
EPF Esparros 163.00 6 ePKIKP PKPdf 07 48 04.7 -0.4
comp=Z,3μm,1.9s
ETSF Etsaut 163.03 8 ePKIKP PKPdf 07 48 05.1 0.0
VIEF Viey 163.12 7 PKP PKPdf 07 48 05.5 +0.3
MLS Moulis 163.13 4 PKP PKPdf 07 48 06.9 +1.7
LRDF Laroque-de-Fa 163.20 0 PKP PKPdf 07 48 08.0 +2.7
RESF Ens 163.22 6 PKP PKPdf 07 48 05.7 +0.4
EBIE Bielsa 163.32 6 PKP PKPdf 07 48 06.3 +0.9
SALF Salau 163.33 4 PKP PKPdf 07 48 07.0 +1.6
MTE Manteigas 163.41 28 ePKPdf PKPdf 07 48 05.8 +0.2
MTE Manteigas 163.41 28 ePKPab PKPab 07 48 53.3 -4.0
MTE Manteigas 163.41 28 ePKPdf PKPdf 07 48 05.4 -0.2
CEL Celeste 163.50 321 ePKPdf PKPdf 07 48 04.2 -1.5
CEL PKP PKPdf 07 48 08.1 +2.4
FILF Fillols 163.58 0 PKP PKPdf 07 48 08.4 +2.8
SJAF Saint Jean de 163.65 359 PKP PKPdf 07 48 05.9 +0.2
EOSO Osorio 163.68 79 PKP PKPdf 07 48 06.0 +0.3
EJON La Jonquera 163.69 359 PKP PKPdf 07 48 06.0 +0.3
VALF Valcebollere 163.73 2 PKP PKPdf 07 48 06.4 +0.6
PMAFR Mafra 163.73 35 ePKPdf PKPdf 07 48 06.4 +0.5
PMAFR Mafra 163.73 35 ePKPab PKPab 07 48 55.4 -3.4
PMAFR Mafra 163.73 35 ePP PP 07 52 46.5 +2.3
PCBR Castelo Branco 163.90 29 ePKPdf PKPdf 07 48 05.8 -0.2
PCBR Castelo Branco 163.90 29 ePKPab PKPab 07 48 57.1 -2.4
ALMR Almeirim 163.93 33 eP PKPdf 07 48 06.1 0.0
EMIR Miracle 164.19 3 PKP PKPdf 07 48 05.9 -0.3
ESAC San Caprasio 164.20 9 PKP PKPdf 07 48 06.6 +0.4
PMRV Marv??o 164.27 30 ePKPdf PKPdf 07 48 06.5 +0.1
PMRV Marv??o 164.27 30 ePKPab PKPab 07 48 55.3 -5.8
PMRV Marv??o 164.27 30 ePP PP 07 52 49.9 +3.0
GUD Guadarrama 164.43 20 PKIKP PKPdf 07 48 07.1 +0.6
USI Ustica 164.61 327 PKP PKPdf 07 48 06.5 -0.2
PESTR Estremoz 164.63 32 ePKPdf PKPdf 07 48 07.1 +0.4
PESTR Estremoz 164.63 32 ePKPab PKPab 07 48 53.8 -7.0
PESTR Estremoz 164.63 32 ePP PP 07 52 53.0 +4.1
EVO Evora 164.69 33 ePKIKP PKPdf 07 48 05.5 -1.3
comp=Z,5μm,1.9s
EVO eMLR MLR
comp=Z,59μm,21.4s
EVO Evora 164.69 33 ePKPdf PKPdf 07 48 07.2 +0.4
EVO Evora 164.69 33 ePKPab PKPab 07 48 57.3 -5.7
EVO Evora 164.69 33 ePP PP 07 52 50.4 +1.2
EPOB Poblet 164.73 4 PKP PKPdf 07 48 07.0 +0.3
ETOR Torete 164.81 14 PKIKP PKPdf 07 48 07.7 +0.9
CFTV Fuerteventura 164.95 77 PKP PKPdf 07 48 06.2 -1.2
EBAD Badajoz 164.99 30 PKP PKPdf 07 48 06.2 -0.8
HMDC Modica 165.03 319 PKP PKPdf 07 48 09.2 +2.8
ERTA Horta de San J 165.06 7 PKP PKPdf 07 48 05.7 -1.3
PTEO Sao Teotonio 165.06 37 ePKPdf PKPdf 07 48 07.8 +0.7
PTEO Sao Teotonio 165.06 37 ePP PP 07 52 57.7 +6.4
PBEJ Beja 165.16 34 ePKPdf PKPdf 07 48 07.5 +0.3
PBEJ Beja 165.16 34 ePP PP 07 52 51.6 -0.1
MORF Marmelete 165.28 38 ePKPdf PKPdf 07 48 07.0 -0.3
MORF Marmelete 165.28 38 ePKPab PKPab 07 48 57.8 -7.9
MORF Marmelete 165.28 38 ePP PP 07 52 59.4 +7.0

PFVI	Vila Bisbo	165.30	39	ePKPdf	PKPdf	07 48 07.0	-0.4
PFVI	Vila Bisbo	165.30	39	ePKPab	PKPab	07 48 57.5	-8.3
PFVI	Vila Bisbo	165.30	39	ePP	PP	07 52 57.7	+5.1
EFAM	Famara	165.35	74	PKP	PKPdf	07 48 08.0	+0.3
PAB	San Pablo	165.37	22	ePKIKP	PKPdf	07 48 07.4	+0.1
ESDC	Sonseca Array	165.38	21	PKP	PKPdf	07 48 07.7	+0.4
	comp=Z,16nm,1.1s,baz=356,slow=3.2,SNR=26						
ESDC				PKPab	PKPab	07 49 07.8	+1.9
	comp=Z,88nm,0.9s,baz=335,slow=4.4,SNR=7.8						
ESDC				PP	PP	07 52 59.0	+6.6
	comp=Z,33nm,1.0s,baz=319,slow=4.0,SNR=4.4						
ESDC	Sonseca Array	165.38	21	PKP	PKPdf	07 48 06.6	-0.8
ESLA	Sonseca Array	165.38	21	ePKPdf	PKPdf	07 48 07.5	+0.2
PBAR	Barrancos	165.44	32	ePKPdf	PKPdf	07 48 07.9	+0.5
PBAR	Barrancos	165.44	32	ePKPab	PKPab	07 48 57.7	-8.6
PBAR	Barrancos	165.44	32	ePP	PP	07 52 53.1	0.0
EMOS	Mosqueruela	165.54	10	PKP	PKPdf	07 48 07.2	-0.3
PVAQ	Vaqueiros	165.71	35	ePKPdf	PKPdf	07 48 08.6	+0.9
PVAQ	Vaqueiros	165.71	35	ePKPab	PKPab	07 48 56.5	-11
PVAQ	Vaqueiros	165.71	35	ePP	PP	07 52 58.1	+3.5
PBDV	Barranco-do-Ve	165.71	36	ePKPdf	PKPdf	07 48 08.5	+0.8
PBDV	Barranco-do-Ve	165.71	36	ePKPab	PKPab	07 48 58.9	-8.7
PBDV	Barranco-do-Ve	165.71	36	ePP	PP	07 52 52.5	-2.1
EGRO	El Granado	165.73	35	PKP	PKPdf	07 48 07.4	-0.3
EMIN	Mina Concepcio	165.94	32	PKP	PKPdf	07 48 07.0	-0.8
ECHE	Chera	166.21	12	PKIKP	PKPdf	07 48 09.2	+1.2
ETOS	Mallorca	166.37	359	PKP	PKPdf	07 48 11.2	+3.0
EADA	Adamuz	166.51	25	PKP	PKPdf	07 48 07.0	-1.3
EVIA	Vianos	166.76	18	PKIKP	PKPdf	07 48 08.8	+0.3
EBAN	Banos Encina	166.80	23	PKIKP	PKPdf	07 48 08.2	-0.3
ETOB	Tobarra	167.00	15	PKP	PKPdf	07 48 07.5	-1.1
ESPR	Espera	167.05	32	PKP	PKPdf	07 48 07.7	-1.1
EIBI	Ibiza	167.06	5	PKP	PKPdf	07 48 11.7	+3.0
TOA0	Torodi Ar. Sit	167.09	176	ePKPdf	PKPdf	07 48 07.7	-1.7
TORD	Torodi Ar. Bea	167.09	176	PKP	PKPdf	07 48 11.0	+1.6
	comp=Z,26nm,0.9s,baz=308,slow=0.6,SNR=47						
TORD				PKPab	PKPab	07 49 16.4	+2.4
	comp=Z,858nm,1.0s,baz=180,slow=3.1,SNR=15						
TORD				PP	PP	07 53 08.4	+7.5
	comp=Z,226nm,1.1s,baz=145,slow=2.8,SNR=4.4						
TORD				PKKP		07 56 11.6	
	comp=Z,63nm,1.1s,baz=47,slow=1.4,SNR=4.4						
TORD				SS	SS	08 13 33.5	+1.0
	comp=Z,0.2nm,0.2s,baz=237,slow=26,SNR=7.7						
TORD	Torodi Ar. Bea	167.09	176	PKP	PKPdf	07 48 11.0	+1.6
TORD				PKPab	PKPab	07 49 16.4	+2.4
TORD				PP	PP	07 53 08.4	+7.5
TORD				PKKP		07 56 11.6	
TORD				SS	SS	08 13 33.5	+1.0
ELUQ	Luque	167.16	25	PKIKP	PKPdf	07 48 08.4	-0.4
EBEN	Beniarda	167.20	10	PKP	PKPdf	07 48 09.2	+0.4
SFS	San Fernando	167.20	34	ePKIKP	PKPdf	07 48 07.8	-1.1
EQES	Quesada	167.37	21	PKP	PKPdf	07 48 08.0	-0.9
ELOJ	Sierra Loja	167.56	26	PKIKP	PKPdf	07 48 07.6	-1.5
EJIF	Jimena Fronter	167.57	32	PKIKP	PKPdf	07 48 09.7	+0.6
ECOG	Cogollos-Vega	167.67	24	PKIKP	PKPdf	07 48 07.6	-1.6
EMIJ	Mijas	167.80	29	PKP	PKPdf	07 48 08.7	-0.6
ERON	Agron	167.81	25	PKP	PKPdf	07 48 09.5	+0.3
EMUR	La Murta	167.84	15	PKP	PKPdf	07 48 08.2	-1.1
EGUA	Guajares	168.06	25	PKIKP	PKPdf	07 48 08.6	-0.9
CART	Cartagena	168.13	14	ePKPdf	PKPdf	07 48 10.3	+0.8
EBER	Berja	168.25	22	PKP	PKPdf	07 48 08.3	-1.2
ENIJ	Nijar	168.40	20	PKIKP	PKPdf	07 48 08.7	-1.0
RTC	Rabat Centre	168.63	44	ePKPdf	PKPdf	07 48 11.1	+1.1
CMAH	Djebel Manchou	168.74	340	P	PKPdf	07 48 14.8	+4.9
KEST	Kesra	168.80	331	PKP	PKPdf	07 48 12.1	+2.1
	comp=Z,24nm,1.0s,baz=354,slow=2.2,SNR=20						
KEST				PKPab	PKPab	07 49 21.9	+0.7
	comp=Z,75nm,1.0s,baz=336,slow=7.3,SNR=3.3						
KEST				PP	PP	07 53 17.8	+7.6
	comp=Z,67nm,1.2s,baz=253,slow=5.3,SNR=3.8						
ABSA	Djebel Ababsia	169.04	339	P	PKPdf	07 48 15.5	+5.4
EALB	Alboran	169.05	25	PKP	PKPdf	07 48 10.6	+0.5
DFRA	Djebel Bou Aff	169.22	346	P	PKPdf	07 48 15.2	+5.0
ABA	Alger-Bouzarea	169.32	358	P	PKPdf	07 48 13.0	+2.7
CASM	Ain Smara	169.35	343	P	PKPdf	07 48 14.0	+3.7
AKF	Akfadou	169.37	352	P	PKPdf	07 48 16.0	+5.7
CTEI	Djebel Teioual	169.55	343	P	PKPdf	07 48 15.0	+4.6
SET	Setif	169.65	347	P	PKPdf	07 48 11.0	+0.5
EBNR	Beni Rached	169.79	5	P	PKPdf	07 48 12.9	+2.3
ECHA	Ech Chlef	169.92	6	P	PKPdf	07 48 12.2	+1.6
EMHD	Djebel Mahouad	169.92	359	P	PKPdf	07 48 11.4	+0.7
OKGL	Djebel Kef Gue	169.94	9	P	PKPdf	07 48 14.5	+3.8
ADJB	Djebel Djouab	169.95	356	P	PKPdf	07 48 10.0	-0.7
USTO	Oran	170.01	15	P	PKPdf	07 48 21.0	+10
AKET	Djebel Ketaf	170.02	354	P	PKPdf	07 48 11.9	+1.2
EANR	'Ain N'Sour	170.09	7	P	PKPdf	07 48 10.0	-0.8
ODZI	Dziouia	170.25	19	P	PKPdf	07 48 19.0	+8.1
OJBR	Djebel Berber	170.34	11	P	PKPdf	07 48 14.0	+3.1
OJGS	Djebel Guires	170.48	9	P	PKPdf	07 48 13.0	+2.0
ODJA	Bouhanifia	170.49	14	P	PKPdf	07 48 18.0	+7.0
ETRT	Tiaret	170.66	7	P	PKPdf	07 48 11.2	+0.1
MDT	Midelt	170.79	42	PP	PP	07 53 28.1	+7.5
	comp=Z,91nm,1.2s,baz=343,slow=4.9,SNR=4.3						
TAM	Tamanrasset	175.79	219	ePKPdf	PKPdf	07 48 13.2	-0.3
TAM				ePKPab	PKPab	07 49 59.3	+6.8

KRSC 09 07:39:16.8±1.3,51.57N×158.39E,h81km±81km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.87	5	eP	Pn	07 39 36.2	+1.9
RUS				eS	Sn	07 39 51.2	+3.8
MIPR	Malaya Ipel'ka	1.23	306	P	Pn	07 39 39.1	+0.4
PET	Petropavlovsk	1.47	6	S	Sn	07 40 04.2	+3.8
NLC	Nalytchevo	1.71	20	eS	Sn	07 40 08.2	+2.2
AVH	Avacha	1.71	7	eP	Pn	07 39 48.0	+3.2
SPN	Mys Shipunski	1.83	33	P	Pn	07 39 48.8	+2.4
SPN				S	Sn	07 40 12.2	+3.3
GNL	Ganaly	2.15	353	P	Pn	07 39 52.9	+2.3
MKZ	Mys Kozlova	3.61	33	P	Pn	07 40 11.9	+1.6

IDC 09 07:46:22.4±6.8,22.51S×178.25W,h0km,mb4.2/1, mb1 4.4/1,mb1mx4.0/15,mbtmp4.2/1,Error ellipse: s-maj=459.4km s-min=51.1km az=154.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.86	259	P	P	07 54 30.6	-0.1
	1.8nm,0.5s,baz=91,slow=7.2,SNR=16						
ARCES	ARCESS Array B	130.85	349	PKP	PKPdf	08 05 35.1	+0.1
	2.0nm,0.8s,baz=48,slow=1.8,SNR=4.7						
NOA	NORSAR Array B	140.94	353	PKP	PKPdf	08 05 51.5	-2.5
	2.2nm,0.8s,baz=12,slow=2.3,SNR=3.6						
AKASG	Malin Array Be	144.64	330	PKP	PKPdf	08 05 58.9	-2.0
	1.4nm,0.8s,baz=45,slow=4.2,SNR=3.0						
BRTR	Keskin Array B	147.98	310	PKPbc	PKPbc	08 06 10.3	+0.4
	1.3nm,0.9s,baz=83,slow=4.2,SNR=2.4						

PRE 09 08:02:14.1±1.1,21.31S×33.20E,h5km,ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.75	217	eP	Pn	08 02 59.7	+0.7
MOPA				eS	Sn	08 03 31.7	-0.9
MOPA				AML	AML	08 03 55.4	
	comp=Z,578nm,0.4s						
MSNA	Messina	3.12	250	eP	Pn	08 03 04.9	+0.9
MSNA				eS	Sn	08 03 43.0	+1.3
MSNA				AML	AML	08 03 57.9	
	comp=Z,136nm,0.3s						
POGA	Pongola	6.20	193	eP	Pn	08 03 46.8	+0.5
POGA				eS	Sn	08 04 54.2	-3.4
POGA				AML	AML	08 05 49.1	
	comp=Z,18nm,0.5s						
KSR	Koster	7.33	231	eP	Pn	08 04 03.4	+1.5
KSR				eS	Sn	08 05 22.8	-2.7
KSR				AML	AML	08 06 20.2	
	comp=Z,26nm,0.5s						
PRYS	Parys	7.72	223	eP	Pn	08 04 08.2	+0.9
PRYS				eS	Sn	08 05 32.3	-2.8
PRYS				AML	AML	08 06 35.9	
	comp=Z,15nm,0.4s						
LBTB	Lobatse	7.90	241	eP	Pn	08 04 10.1	+0.3
LBTB				eS	Sn	08 05 35.5	-4.1
LBTB				AML	AML	08 06 31.7	
	comp=Z,17nm,0.7s						
BOSA	Boshof	10.23	223	eP	Pn	08 04 43.0	+1.4
BOSA				eS	Sn	08 06 31.5	-5.2
BOSA				AML	AML	08 07 42.1	
	comp=Z,5.2nm,0.7s						

IDC 09 08:02:38.8±0.8,25.92S×177.06W,h0km,mb4.4/11, mb1 4.5/11,mb1mx4.5/16,mbtmp4.4/11,Error ellipse: s-maj=29.7km s-min=21.9km az=126.0
NEIC 09 08:03:02.6±3.6,26.51S×177.18W,h205km±32km,mb4.7/5, Error ellipse: s-maj=18.8km s-min=16.2km az=183.0
ISCJB 09 08:03:04.1±3.3,26.46S±0.09×177.3W±0.2,h231km±28km, mb4.2/13,Error ellipse: s-maj=25.3km s-min=14.7km az=174.0
ISC 09 08:03:02.1±3.2,26.6S±0.1×177.2W±0.2,h203km±29km,n26, σ0.80/20,mb4.2/13,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.62	201	Pn	Pn	08 05 40.5	-14
	1.2nm,0.3s,baz=17,slow=19,SNR=4.9						
URZ				Sn	Sn	08 08 14.6	-0.7
	2.1nm,0.3s,baz=151,slow=19,SNR=3.9						
DZM	Mont Dzumac	15.61	283	eP	Pn	08 06 32.4	+0.7
	106nm,1.8s						
NOUC	Port Laguerre	15.72	283	eP	Pn	08 06 33.1	+0.1
RPZ	Rata Peaks	19.60	206	P	P	08 07 15.7	+0.9
	14nm,0.9s,baz=68,slow=11,SNR=3.6						
EIDS	Eidsvold	28.55	265	eP	P	08 08 38.8	-0.3
	26nm,1.1s,mb4.8						
CTA	Charters Tower	34.14	273	P	P	08 09 28.0	0.0
	8.6nm,0.6s,mb4.5,baz=108,slow=12,SNR=7.3						
CTAO	Charters Tower	34.14	273	eP	P	08 09 27.5	-0.5
	9.9nm,0.7s,mb4.5						
STKA	Stephens Creek	36.23	252	P	P	08 09 45.3	-0.5
	10nm,1.0s,mb4.3,baz=123,slow=11,SNR=4.6						
ASAR	Alice Springs	44.20	263	P	P	08 10 51.4	+0.1
	6.4nm,0.7s,mb4.1,baz=88,slow=6.6,SNR=19						
WB2	Warramunga Arr	44.84	268	eP	P	08 10 57.0	+0.7
WRAB	Tennant Creek	44.84	268	eP	P	08 10 56.2	-0.2
	7.6nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	53.23	267	eP	P	08 12 00.7	+0.7
	18nm,0.8s,mb4.6						
MAW	Mawson	76.15	200	P	P	08 14 32.1	+4.9
	3.5nm,0.5s,mb4.2,baz=152,slow=3.7,SNR=8.1						
ASAJ	Asahikawa	79.42	332	P	P	08 14 43.7	-1.8
	11nm,0.8s,mb4.5,baz=117,slow=6.8,SNR=4.4						
KSRS	Korea Array	81.95	319	P	P	08 14 58.4	-0.7
	0.8nm,0.4s,mb3.7,baz=124,slow=5.9,SNR=3.9						
PETK	Petropavlovsk-	82.31	345	P	P	08 14 59.1	-1.4
	1.6nm,0.6s,mb3.8,baz=101,slow=7.7,SNR=6.2						
NVAR	Mina Array Bea	84.92	42	P	P	08 15 14.8	+0.6
	1.3nm,0.8s,mb3.7,baz=218,slow=5.7,SNR=4.2						
PDAR	Pinedale Array	92.84	43	P	P	08 15 52.3	+0.8
	0.3nm,0.6s,mb3.5,baz=187,slow=2.3,SNR=2.3						
CMAR	Chiang Mai Arr	92.86	289	P	P	08 15 53.2	+1.0
	1.3nm,0.5s,mb4.2,baz=136,slow=2.7,SNR=4.8						
ARCES	ARCESS Array B	135.01	349	PKP	PKPdf	08 21 56.0	-0.1
	1.6nm,0.7s,baz=40,slow=2.1,SNR=4.4						
NB2	NORSAR Subarra	145.08	353	PKP	PKPdf	08 22 14.0	-0.5
	comp=Z,1.9nm,0.6s,baz=11,slow=3.5						
NOA	NORSAR Array B	145.08	353	PKP	PKPdf	08 22 14.3	-0.2
	comp=Z,3.8nm,0.8s,baz=14,slow=2.3,SNR=11						
AKASG	Malin Array Be	148.61	327	PKPbc	PKPbc	08 22 24.6	-0.1
	comp=Z,1.9nm,0.6s,baz=44,slow=4.1,SNR=11						
BR131	Keskin Array S	151.23	305	ePKPbc	PKPbc	08 22 32.3	+0.9
BRTR	Keskin Array B	151.23	305	PKPbc	PKPbc	08 22 32.1	+0.7
	comp=Z,1.2nm,0.7s,baz=115,slow=2.6,SNR=6.7						
BRTR				PKPab	PKPab	08 22 40.2	0.0
	comp=Z,3.6nm,0.8s,baz=86,slow=4.2,SNR=11						
TORD	Torodi Ar. Bea	166.60	175	PKPab	PKPab	08 23 51.4	+4.3
	comp=Z,0.6nm,0.7s,baz=172,slow=3.0,SNR=2.7						

ISCJB 09 08:19:27.9±1.8,25.98S±0.10×177.4W±0.2,h160km±15km, mb4.0/6,Error ellipse: s-maj=23.9km s-min=15.6km az=167.1
IDC 09 08:19:28.9±3.4,26.03S×177.30W,h154km±29km,mb3.8/4, mb1 4.1/6,mb1mx3.8/16,mbtmp3.9/6,Error ellipse: s-maj=32.1km s-min=25.6km az=25.0
NEIC 09 08:19:28.4±1.9,25.91S×177.31W,h154km±16km,mb4.1/4, Error ellipse: s-maj=21.2km s-min=12.9km az=207.0
ISC 09 08:19:30.0±1.9,26.1S±0.1×177.4W±0.2,h162km±16km,n18, σ0.84/13,mb4.0/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.19	188	P	Pn	08 20 20.5	+0.3
	74nm,0.3s,baz=90,slow=20,SNR=3.1						
RAO				S	Sn	08 20 59.1	-0.2
	217nm,0.3s,baz=96,slow=22,SNR=6.2						
URZ	Urewera	12.99	199	P	Pn	08 22 29.7	+1.2
	1.0nm,0.3s,baz=357,slow=19,SNR=5.3						
URZ				S	Sn	08 24 51.5	-1.0
	11nm,0.3s,baz=18,slow=23,SNR=31						
DZM	Mont Dzumac	15.25	282	Pn	Pn	08 22 56.7	-0.3
	13nm,1.2s						
EIDS	Eidsvold	28.33	264	P	P	08 25 09.4	+0.6
	2.8nm,0.7s,mb4.1						
CTA	Charters Tower	33.85	272	P	P	08 25 58.9	+1.7
	7.5nm,0.7s,mb4.5,baz=106,slow=10,SNR=13						
CTAO	Charters Tower	33.85	272	eP	P	08 25 58.6	+1.4
	7.5nm,0.8s,mb4.5						
ASAR	Alice Springs	44.01	262	P	P	08 27 21.2	-0.4
	3.4nm,0.8s,mb4.0,baz=99,slow=8.0,SNR=27						
WB2	Warramunga Arr	44.59	267	eP	P	08 27 25.2	-1.1
WRAB	Tennant Creek	44.60	267	eP	P	08 27 25.8	-0.5
	3.9nm,0.9s,mb4.0						
VNDA	Vanda	52.43	186	P	P	08 28 26.2	+0.9
	1.5nm,0.9s,mb3.6,baz=29,slow=7.0,SNR=3.1						
PDAR	Pinedale Array	92.66	43	P	P	08 32 22.2	-1.0
	0.5nm,0.8s,mb3.7,baz=205,slow=3.1,SNR=3.9						
MKAR	Makanchi Array	115.33	312	PKP	PKPdf	08 37 50.3	-1.7
	0.7nm,0.8s,baz=104,slow=1.7,SNR=3.9						
KURK	Kurchatov	118.37	315	PKP	PKPdf	08 37 56.8	-1.0
	0.5nm,0.5s,baz=104,slow=1.8,SNR=2.9						
BVAR	Borovoye Array	123.60	318	PKP	PKPdf	08 38 07.7	-0.1
	0.4nm,0.4s,baz=56,slow=2.7,SNR=4.1						
NB2	NORSAR Subarra	144.55	353	PKP	PKPdf	08 38 45.5	-1.0
	comp=Z,2.0nm,0.7s,baz=12,slow=3.4						
NOA	NORSAR Array B	144.55	353	PKP	PKPdf	08 38 45.9	-0.6
	comp=Z,4.6nm,0.8s,baz=14,slow=2.4,SNR=10						
AKASG	Malin Array Be	148.05	327	PKPbc	PKPbc	08 38 55.2	-0.9
	comp=Z,2.0nm,0.6s,baz=42,slow=4.1,SNR=9.3						
BRTR	Keskin Array B	150.73	305	PKPbc	PKPbc	08 39 03.1	+0.1
	comp=Z,2.0nm,0.9s,baz=112,slow=1.6,SNR=7.2						
BRTR				PKPab	PKPab	08 39 11.7	+1.0
	comp=Z,1.7nm,0.7s,baz=92,slow=3.5,SNR=8.2						

ISCJB 09 08:47:08.9±2.7,25.5S±0.1×177.6W±0.1,h146km±23km, mb3.9/11,Error ellipse: s-maj=22.5km s-min=19.9km az=33.0
IDC 09 08:47:10.6±6.4,25.42S×177.49W,h151km±56km,mb3.7/11, mb1 4.0/12,mb1mx3.9/17,mbtmp3.8/12,Error ellipse: s-maj=23.4km s-min=17.6km az=73.0
NEIC 09 08:47:10.1±4.3,25.41S×177.50W,h150km±38km,mb3.7/1, Error ellipse: s-maj=22.8km s-min=19.7km az=192.0
ISC 09 08:47:09.7±2.6,25.5S±0.1×177.5W±0.1,h140km±22km,n26, σ0.63/20,mb3.9/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.79	185	S	Sn	08 48 51.4	0.0
	385nm,0.3s,baz=77,slow=22,SNR=7.5						
URZ	Urewera	13.55	198	P	Pn	08 50 15.8	-0.3
	4.1nm,0.3s,baz=274,slow=5.4,SNR=12						
URZ				S	Sn	08 52 32.6	-13
	4.6nm,0.3s,baz=322,slow=23,SNR=15						
CTA	Charters Tower	33.76	272	eP	P	08 53 39.8	+1.7
	1.4nm,0.9s,mb3.7						
CTA	Charters Tower	33.76	272	P	P	08 53 39.2	+1.0
	2.8nm,0.6s,mb4.2,baz=100,slow=13,SNR=8.1						
STKA	Stephens Creek	36.28	250	P	P	08 53 59.7	+0.1
	1.1nm,0.5s,mb3.8,baz=157,slow=14,SNR=3.4						
ASAR	Alice Springs	44.03	262	P	P	08 55 03.0	-0.6
	1.3nm,0.5s,mb3.9,baz=91,slow=6.9,SNR=22						
WB2	Warramunga Arr	44.56	267	eP	P	08 55 06.4	-1.4
VNDA	Vanda	53.03	186	P	P	08 56 12.6	+0.9
	0.8nm,0.5s,mb3.7,baz=323,slow=7.3,SNR=8.4						
VNDA	Vanda	53.03	186	P	P	08 56 12.6	+0.9
QSPA	South Pole Qui	64.63	180	P	P	08 57 32.0	+0.4
	6.0nm,0.9s,mb4.4,baz=20,slow=2.3,SNR=12						
QSPA	South Pole Qui	64.63	180	P	P	08 57 32.0	+0.4
MAW	Mawson	77.07	200	P	P	08 58 46.9	0.0
	5.1nm,0.4s,mb4.5,baz=123,slow=3.4,SNR=16						
KSRS	Korea Array	80.90	319	P	P	08 59 09.0	+0.8
	0.6nm,0.6s,mb3.4,baz=120,slow=4.4,SNR=3.7						
PETK	Petropavlovsk-	81.16	345	P	P	08 59 09.0	-0.1
	1.6nm,0.5s,mb3.9,baz=240,slow=7.7,SNR=11						
VNA2	Neumayer--Watz	83.63	177	e	P	08 59 21.4	-0.5
	baz=172,slow=1.3						
VNA2				e		08 59 23.7	
VNA1	Neumayer--Stat	83.85	176	e	P	08 59 22.7	-0.4
VNA1				e		08 59 24.8	
NVAR	Mina Array Bea	84.33	43	P	P	08 59 25.8	-0.1
	1.5nm,0.6s,mb3.9,baz=225,slow=8.5,SNR=10						
TXAR	Lajitas Array	89.36	57	P	P	08 59 50.5	0.0
	0.2nm,0.7s,mb3.2,baz=229,slow=4.9,SNR=3.1						
PDAR	Pinedale Array	92.26	43	P	P	09 00 03.4	-0.2
	0.7nm,0.7s,mb3.8,baz=193,slow=2.9,SNR=7.3						
ARCES	ARCESS Array B	133.86	349	PKP	PKPdf	09 06 08.1	-1.1
	4.0nm,0.8s,baz=5.7,slow=1.8,SNR=11						
ARCES	ARCESS Array B	133.86	349	PKP	PKPdf	09 06 08.1	-1.1
NB2	NORSAR Subarra	143.94	353	PKP	PKPdf	09 06 24.8	-2.9
	comp=Z,1.5nm,0.6s,baz=11,slow=3.4						
NOA	NORSAR Array B	143.94	353	PKP	PKPdf	09 06 24.9	-2.9
	comp=Z,2.5nm,0.7s,baz=1.7,slow=2.2,SNR=9.4						
AKASG	Malin Array Be	147.50	328	PKPbc	PKPbc	09 06 34.3	-2.6
	comp=Z,2.0nm,0.4s,baz=42,slow=3.6,SNR=10.0						
BRTR	Keskin Array B	150.32	306	PKPbc	PKPbc	09 06 43.9	-0.5
	comp=Z,1.1nm,0.5s,baz=139,slow=4.3,SNR=8.2						
TORD	Torodi Ar. Bea	167.73	176	PKPab	PKPab	09 08 06.1	-0.7
	comp=Z,0.8nm,0.8s,baz=187,slow=3.8,SNR=4.2						

KRSC 09 08:55:49.7±1.2,52.93N×156.98E,h305km±54km,ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	0.67	192	P	Pn	08 56 30.3	+0.9
GNL	Ganaly	0.96	37	P	Pn	08 56 31.3	+1.0
PET	Petropavlovsk	1.02	84	P	Pn	08 56 32.3	+1.7
RUS	Russkaya	1.06	117	eP	Pn	08 56 32.1	+1.3
RUS				eS	S	08 57 03.4	-0.2
AVH	Avacha	1.11	72	P	Pn	08 56 32.9	+1.9
NLC	Nalytchevo	1.45	79	S	S	08 57 08.3	+0.9
SPN	Mys Shipunski	1.85	84	P	Pn	08 56 37.0	+1.4
SPN				S	S	08 57 10.9	-1.4
MKZ	Mys Kozlova	3.26	58	P	Pn	08 56 50.1	+1.9
MKZ				S	S	08 57 33.2	-1.8
KBTR	Krutoberegovo	4.72	44	P	Pn	08 57 06.2	+2.1

BEO 09 09:06:16.0±0.6,44.04N×20.82E,ML1.7/2,1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRUS	Gruza	0.17	207	ePg	Pg	09 06 17.9	-1.3
GRUS				eSg	Sg	09 06 21.4	0.0
GRUS	Gruza	0.17	207	ePg	Pg	09 06 18.1	-1.1
GRUS				eSg	Sg	09 06 20.8	-0.6
BOLS	Boljevac	0.84	104	ePg	Pg	09 06 30.9	-1.3
BOLS				eSg	Sg	09 06 43.6	+0.5
BOLS				eSg	Sg	09 06 43.6	+0.5
BOLS	Boljevac	0.84	104	⇑iPg	Pg	09 06 30.8	-1.4
BOLS				eSg	Sg	09 06 43.3	+0.2
BBLS	Lazići	1.04	261	ePg	Pg	09 06 34.5	-1.4
BBLS				eSg	Sg	09 06 49.6	+0.3
BBLS	Lazići	1.04	261	ePg	Pg	09 06 34.4	-1.5
BBLS				eSg	Sg	09 06 49.5	+0.2
BARS	Barje	1.42	149	ePg	Pg	09 06 39.5	-3.7
BARS	Barje	1.42	149	ePg	Pg	09 06 42.2	-1.0
BARS				eSg	Sg	09 07 01.9	+0.3

ISCJB 09 09:06:27.8±1.4,12.36N±0.05×125.73E±0.10,h38km±12km, mb4.0/11,Error ellipse: s-maj=16.5km s-min=7.3km az=158.3
MAN 09 09:06:27,12.37N×125.74E,h44km,mb5.1,ML4.1,MS4.2
MAN INTENSITY II - CAN-AVID, SAMAR.
NEIC 09 09:06:30.8±1.0,12.10N×125.09E,mb4.6/1,Error ellipse: s-maj=26.1km s-min=20.7km az=72.0
NEIC Felt [II PIVS] at Can-Avid.
IDC 09 09:06:31.2±0.8,12.13N×125.12E,h35km±5km,mb3.8/9, mb1 3.9/9,mb1mx3.7/20,mbtmp3.9/9,Error ellipse: s-maj=28.1km s-min=14.0km az=73.0
ISC 09 09:06:29.5±1.6,12.35N±0.04×125.67E±0.07,h35km±12km, h34km±1.1km:pP-P,n27,σ0.88/34,mb4.0/11,1C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.78	197	eP	Pn	09 06 43.0	-1.0
BESP				eS	Sn	09 06 56.2	+1.7
CNP	Catarman	1.00	279	eP	Pn	09 06 45.6	-1.4
CNP				eS	Sn	09 07 00.6	+0.7
PLP	Palo	1.36	210	⇓eP	Pn	09 06 51.0	-1.0
PLP				eS	Sn	09 07 08.2	-0.6
OCLP	Ormoc	1.66	219	eP	Pn	09 06 55.3	-0.9
PVCP	Virac	1.93	310	eP	Pn	09 06 58.9	-1.0
PVCP				eS	Sn	09 07 30.4	+7.5
MSLP	Maasin	2.34	200	eP	Pn	09 07 06.2	+0.7
MSLP				eS	Sn	09 07 42.7	+10
SCPH	Surigao	2.56	184	eP	Pn	09 07 07.4	-1.1
SCPH				eS	Sn	09 07 36.7	-1.7
LLP	Lapu-Lapu	2.62	220	eP	Pn	09 07 09.5	+0.1
LLP				eS	Sn	09 07 40.6	+0.6
RCP	Roxas	2.97	255	⇓eP	Pn	09 07 14.8	+0.6
TBP	Tagbilaran	3.18	214	eP	Pn	09 07 16.0	-1.2
BUTP	Butuan	3.36	181	eP	Pb	09 07 29.6	+1.2
GUIM	Jordan	3.47	241	eP	Pn	09 07 21.7	+0.6
BUKP	Musuan	4.48	188	eP	Pn	09 07 35.9	+0.9
PAGZ	Pagadian	5.01	207	eP	Pn	09 07 43.5	+1.3
BATI	Baumata	22.50	185	P	P	09 11 26.3	+0.2
	15nm,0.5s,mb4.7,baz=98,slow=1.7,SNR=4.7						
CMAR	Chiang Mai Arr	26.46	287	P	P	09 12 02.9	-0.6
	1.2nm,0.4s,mb3.8,baz=91,slow=7.2,SNR=9.3						
MJAR	Matsushiro Arr	26.60	23	P	P	09 12 11.8	+7.2
	1.8nm,0.9s,mb3.6,baz=188,slow=14,SNR=4.0						
ASAR	Alice Springs	36.69	167	P	P	09 13 33.5	+0.2
	0.6nm,0.5s,mb3.7,baz=343,slow=7.2,SNR=14						
ASAR				pP	pP	09 13 43.2	-0.1
	0.8nm,0.7s,baz=348,slow=7.5,SNR=5.1						
ASAR				sP	sP	09 13 50.2	+2.7
	0.7nm,0.6s,baz=349,slow=8.2,SNR=4.1						
ASAR				PcP	PcP	09 15 55.6	0.0
	0.5nm,1.0s,baz=337,slow=2.7,SNR=4.1						
ASAR				pPcP		09 16 06.6	
	0.6nm,0.9s,baz=338,slow=2.2,SNR=3.9						
SONM	Songino Array	38.88	339	P	P	09 13 51.5	0.0
	0.9nm,1.0s,mb3.5,baz=156,slow=12,SNR=5.4						
PETK	Petropavlovsk-	48.01	25	P	P	09 15 10.7	+5.7
	4.0nm,1.0s,mb4.4,baz=135,slow=19,SNR=15						
MK31	Makanchi Array	50.03	322	⇑Pn	P	09 15 20.6	0.0
	0.3nm,0.2s,mb3.9,baz=126,slow=14,SNR=44						
MK31				Sn	PcP	09 16 20.8	-19
	0.5nm,0.3s,baz=118,slow=25,SNR=6.0						
MK31	Makanchi Array	50.03	322	eP	P	09 15 21.0	+0.4
MK31				e	PcP	09 16 20.5	-20
MKAR	Makanchi Array	50.03	322	P	P	09 15 21.1	+0.5
	1.5nm,0.3s,mb4.5,baz=126,slow=12,SNR=37						
MKAR				pP	pP	09 15 31.4	+0.4
	1.2nm,0.8s,baz=111,slow=6.6,SNR=2.9						
ZALV	Zalesovo Beam	52.53	331	P	P	09 15 39.1	-0.1
	0.3nm,0.3s,mb3.7,baz=132,slow=6.0,SNR=3.1						
KURK	Kurchatov	54.04	325	P	P	09 15 51.4	+1.0
	2.3nm,0.7s,mb4.2,baz=124,slow=7.4,SNR=16						
KURK				pP	pP	09 16 00.8	-0.1
	1.7nm,0.9s,baz=127,slow=7.1,SNR=5.6						
KURK	Kurchatov	54.04	325	P	P	09 15 51.4	+1.0
KURK				pP	pP	09 16 00.8	-0.1
BRVK	Borovoye	59.71	325	eP	P	09 16 30.7	+0.2
	4.4nm,0.9s,mb4.5						

IDC 09 09:13:33.2±0.7,18.03S×176.44W,h0km,mb4.5/15, mb1 4.7/15,mb1mx4.7/19,mbtmp4.5/15,Error ellipse: s-maj=25.2km s-min=17.1km az=148.0
NEIC 09 09:13:35.0±0.3,18.05S×176.50W,h10km,mb5.0/30,Error ellipse: s-maj=14.6km s-min=6.0km az=150.0
ISCJB 09 09:13:34.4±5.9,18.20S±0.09×176.47W±0.06,h15km±41km, mb4.8/44,Error ellipse: s-maj=15.0km s-min=9.2km az=163.3

*BJI **09** 09:13:36.9, 1800S×17650W, h20km, mB5.5, mb4.9*
*MOS **09** 09:13:37.5±1.6, 1832S×17648W, h33km, mb5.2/15, Error ellipse: s-maj=14.1km s-min=10.8km az=162.3*
*DJA **09** 09:13:39, 1980S×17644W, h10km, mb5.3/10*
ISC 09 09:13:37.1±6.0**, 1820S**±009×**17643W**±006**, h22**km±42km**, h29**km±1.1km**: pP-P, n143,** σ1s**11**/90**, mb4.8**/44**, 16C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.53	254	eP	pP	09 17 31.5	-4.8
DZM	Mont Dzumac	16.53	254	ePn	Pn	09 17 28.6	+1.0
	131nm,1.6s						
NOUC	Port Laguerre	16.67	254	eP	pP	09 17 35.9	-1.8
SNZO	South Karori	24.25	196	eP	P	09 18 52.5	0.0
	64nm,1.3s,mb4.9						
PAE	Paea	25.55	93	eP	P	09 19 04.5	0.0
	501nm,1.1s						
PPT	Papeete	25.56	93	eP	P	09 19 05.0	+0.4
EIDS	Eidsvold	30.94	251	eP	P	09 19 52.3	-0.3
	9.2nm,0.9s,mb4.6						
ARMA	Armidale	31.43	241	eP	P	09 19 59.3	+2.4
CNB	Canberra Magne	34.75	234	eP	P	09 20 26.7	+0.9
CAN	Canberra	35.03	234	eP	P	09 20 28.4	+0.1
CAN				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
CAN	Canberra	35.03	234	eP	P	09 20 28.4	+0.1
	comp=Z,31nm,0.9s,mb5.2						
CTA	Charters Tower	35.25	261	eP	P	09 20 29.2	-1.1
	comp=Z,40nm,0.9s,mb5.3						
CTA	Charters Tower	35.25	261	P	P	09 20 29.3	-1.0
	comp=Z,77nm,1.0s,mb5.6,baz=95,slow=11,SNR=27						
CTA	Charters Tower	35.25	261	eP	P	09 20 29.2	-1.1
CTA				pmax	pmax		
	comp=Z,40nm,0.9s						
CTAO	Charters Tower	35.25	261	eP	P	09 20 29.7	-0.6
CTAO				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.5						
CTAO	Charters Tower	35.25	261	eP	P	09 20 29.7	-0.7
	comp=Z,64nm,0.9s,mb5.5						
PMG	Port Moresby	36.36	279	⇑iP	P	09 20 39.6	-0.3
TOO	Toolangi	38.46	232	eP	P	09 20 57.8	+0.4
COEN	Coen	38.98	270	eP	P	09 21 00.8	-1.3
	comp=Z,25nm,1.2s,mb4.8						
STKA	Stephens Creek	40.14	242	eP	P	09 21 11.6	0.0
	comp=Z,9.0nm,1.1s,mb4.4						
STKA	Stephens Creek	40.14	242	P	P	09 21 11.5	0.0
	comp=Z,13nm,0.9s,mb4.7,baz=74,slow=8.8,SNR=7.8						
WB2	Warramunga Arr	46.41	260	eP	P	09 22 00.0	-2.4
WRAB	Tennant Creek	46.42	260	P	P	09 22 00.0	-2.4
	comp=Z,99nm,0.7s,mb5.8,SNR=8.0						
WRAB	Tennant Creek	46.42	260	eP	P	09 22 00.0	-2.4
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
WRAB	Tennant Creek	46.42	260	eP	P	09 22 00.0	-2.4
	comp=Z,11nm,0.8s,mb4.8						
ASAR	Alice Springs	46.52	254	P	P	09 22 01.4	-1.8
	comp=Z,9.2nm,0.7s,mb4.8,baz=88,slow=8.1,SNR=125						
KAKA	Kakadu	49.46	269	eP	x	09 22 04.6	
	comp=Z,14nm,1.0s						
FITZ	Fitzroy Crossi	54.83	260	eP	P	09 23 05.6	-0.4
	comp=Z,10nm,0.9s,mb4.9						
BATI	Baumata	58.41	269	P	P	09 23 31.3	-0.2
	comp=Z,9.1nm,0.4s,mb5.2,baz=312,slow=11,SNR=2.6						
VNDA	Vanda	60.32	185	P	P	09 23 44.8	+1.1
	comp=Z,4.5nm,0.9s,mb4.5,baz=15,slow=8.2,SNR=7.5						
KLBR	Kellerberrin	60.38	244	eP	P	09 23 44.9	0.0
	comp=Z,26nm,1.0s,mb5.2						
MUN	Mundaring	61.67	243	eP	P	09 23 53.7	+0.1
KAPI	Kappang	63.59	273	P	P	09 24 06.9	+0.2
	comp=Z,16nm,1.1s,mb5.0,baz=163,slow=10,SNR=3.5						
MJAR	Matsushiro Arr	69.27	322	P	P	09 24 41.2	-1.4
	comp=Z,6.5nm,0.9s,mb4.5,baz=163,slow=5.0,SNR=5.5						
MJAR	Matsushiro Arr	69.27	322	P	P	09 24 41.2	-1.4
PETK	Petropavlovsk-	74.45	344	P	P	09 25 11.9	-1.3
	comp=Z,7.4nm,1.0s,mb4.6,baz=119,slow=8.8,SNR=5.6						
YSS	Yuzh-Sakhalins	74.53	332	⇑iP	P	09 25 16.0	+2.1
YSS				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
KSRS	Korea Array	76.18	317	P	P	09 25 23.4	-0.2
	comp=Z,1.6nm,0.7s,mb4.1,baz=134,slow=6.5,SNR=9.5						
NVAR	Mina Array Bea	78.34	43	P	P	09 25 34.9	-0.8
	comp=Z,3.9nm,1.0s,mb4.3,baz=230,slow=8.8,SNR=8.5						
MOD	Modoc	79.11	39	eP	P	09 25 44.3	+4.4
	comp=Z,12nm,1.3s,mb4.7						
HABR	Khabarovsk	79.20	330	eP	P	09 25 40.4	+0.2
HABR				e	pP	09 25 48.5	+1.1
HABR				e*PP	pP	09 25 56.9	+9.5
HABR				e		09 28 38.5	
HABR				ePPP		09 30 27.2	
HABR				eS	S	09 35 34.4	-4.4
HABR				e		09 35 57.2	
HABR				eSS	SS	09 40 41.8	-4.2
HABR				eSSS		09 44 06.2	
TUC	Tucson	80.40	51	eP	P	09 25 46.9	-0.2
TUC				pmax	pmax		
	comp=Z,56nm,2.6s,mb5.0						
TUC	Tucson	80.40	51	eP	P	09 25 46.9	-0.2
	comp=Z,56nm,2.6s,mb5.0						
JCW	Jim Creek	82.03	33	eP	P	09 25 56.6	+1.2
RSW	Rattlesnake Hi	82.20	36	eP	P	09 25 55.2	-1.1
	comp=Z,25nm,1.3s,mb5.0						
ETW	Entiat	82.52	35	eP	P	09 25 57.6	-0.4
BMO	Blue Mountains	82.60	38	eP	P	09 26 00.6	+2.1
	comp=Z,17nm,1.5s,mb4.8						
HLID	Hailey	83.63	40	eP	P	09 26 03.3	-0.5
	comp=Z,12nm,1.4s,mb4.8						
SRU	San Rafael	83.87	46	eP	P	09 26 05.3	+0.2
SRU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
SRU	San Rafael	83.87	46	eP	P	09 26 05.3	+0.2
	comp=Z,7.0nm,1.0s,mb4.8						
JLU	Jordanelle	83.98	44	eP	P	09 26 05.5	-0.2
LPM	Los Pinos Moun	84.41	51	eP	P	09 26 08.1	+0.1
SEY	Seymchan	84.49	346	⇑eP	P	09 26 10.3	+2.6
TXAR	Lajitas Array	84.57	57	P	P	09 26 08.8	-0.1
	comp=Z,1.3nm,0.8s,mb4.1,baz=217,slow=6.0,SNR=13						
ANMO	Albuquerque	84.81	51	eP	P	09 26 09.7	-0.3
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	84.81	51	eP	P	09 26 09.7	-0.4
	comp=Z,6.1nm,1.1s,mb4.6						
GDL2	Guadalupe Moun	85.21	54	eP	P	09 26 12.3	+0.2
RRI2	Red Ridge	85.44	42	eP	P	09 26 12.9	0.0
	comp=Z,12nm,1.1s,mb5.0						
MSO	Missoula	85.66	38	eP	P	09 26 13.6	-0.4
	comp=Z,62nm,3.0s						
COLA	College	85.66	12	eP	P	09 26 12.6	-0.9
COLA				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
COLA	College	85.66	12	eP	P	09 26 12.6	-0.9
	comp=Z,15nm,1.0s,mb5.2						
DLMT	Dillon	85.68	39	eP	P	09 26 13.7	-0.4
	comp=Z,10nm,1.1s,mb5.0						
BSMT	Bassoo Peak	85.72	36	eP	P	09 26 17.0	+2.8
REDW	Red Top Meadow	85.74	42	eP	P	09 26 18.0	+3.5
	comp=Z,12nm,1.3s,mb5.0						
SNOW	Snow King Moun	85.86	42	eP	P	09 26 15.8	+0.8
	comp=Z,13nm,1.1s,mb5.1						
IMW	Indian Meadow	85.95	41	eP	P	09 26 15.6	+0.1
	comp=Z,11nm,1.1s,mb5.0						
MOOW	Moose Ponds	86.00	41	eP	P	09 26 13.4	-2.3
	comp=Z,62nm,3.0s						
LRM	Limekiln Ridge	86.00	39	eP	P	09 26 19.3	+3.6
CHMT	Chamberlain Mo	86.10	38	eP	P	09 26 17.8	+1.6
QLMT	Earthquake Lak	86.12	40	eP	P	09 26 16.6	+0.3
PDAR	Pinedale Array	86.28	43	P	P	09 26 15.7	-1.4
	comp=Z,1.4nm,0.9s,mb4.2,baz=215,slow=1.8,SNR=7.8						
SMCO	Snowmass	86.33	47	eP	P	09 26 12.1	-5.4
	comp=Z,0.3nm,1.1s						
BOZ	Bozeman (W)	86.41	39	eP	P	09 26 16.8	-0.9
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
BOZ	Bozeman (W)	86.41	39	eP	P	09 26 16.8	-1.0
	comp=Z,9.8nm,1.4s,mb4.8						
HRY	Holter Researc	86.83	39	eP	P	09 26 19.0	-0.8
BILL	Bilibino	86.92	354	⇑iP	P	09 26 21.6	+1.9
BILL				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.1						
HIA	Hailar	87.70	324	⇑iP	P	09 26 23.3	-0.6
JCT	Junction City	88.11	57	eP	P	09 26 25.4	-0.9
JCT				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.8						
JCT	Junction City	88.11	57	eP	P	09 26 25.4	-0.9
	comp=Z,7.3nm,1.1s,mb4.8						
EDM	Edmonton	89.39	32	eP	P	09 26 31.5	-0.2
VNA3	Neumayer Olymp	90.32	176	eP	P	09 26 35.7	-0.3
VNA3				e		09 26 37.8	
VNA3				e		09 26 44.4	
YAK	Yakutsk	90.55	338	⇑iP	P	09 26 38.8	+1.8
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
CMAR	Chiang Mai Arr	90.75	289	P	P	09 26 40.2	+1.2
	comp=Z,0.8nm,0.3s,mb4.6,baz=131,slow=3.3,SNR=6.0						
VNA2	Neumayer--Watz	90.78	176	eP	P	09 26 37.2	-0.9
	baz=169,slow=3.0						
VNA2				e		09 26 38.9	
VNA2				e	pP	09 26 45.8	+0.3
VNA1	Neumayer--Stat	91.00	176	eP	P	09 26 39.9	+0.7
VNA1				e		09 26 41.9	
VNA1				e		09 26 48.7	
DGMT	Dagmar	92.22	39	eP	P	09 26 45.1	+0.1
	comp=Z,33nm,1.1s,mb5.6						
LZH	Lanzhou	92.56	307	eP	P	09 26 48.0	+1.0
LZH				AP	pP	09 26 57.0	+2.7
LZH				XP	sP	09 27 01.5	+4.6
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.6						
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
YKA	Yellowknife Ar	93.82	24	P	P	09 26 50.6	-1.5
	comp=Z,1.3nm,1.0s,mb4.3,baz=232,slow=4.2,SNR=7.4						
YKA				PP	PP	09 30 39.3	+1.4
	comp=Z,1.2nm,1.2s,baz=244,slow=6.6,SNR=5.4						
ULN	Ulaanbaatar	94.60	319	⇑iP	P	09 26 57.4	+1.4
BOD	Bodaibo	94.85	330	eP	P	09 26 52.1	-4.8
SONM	Songino Array	95.00	319	P	P	09 26 58.0	+0.1
	comp=Z,0.9nm,0.9s,mb4.2,baz=122,slow=2.3,SNR=5.6						
ECSD	EROS,Sioux Fal	95.28	46	eP	P	09 26 57.8	-1.5
	comp=Z,8.9nm,1.3s,mb5.0						
TIXI	Tiksi	96.92	345	⇓iP	P	09 27 08.5	+2.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.8						
ARU	Arti	124.13	327	i PKIKP	PKPdf	09 32 35.3	+1.8
ARU						09 34 25.2	
ARU						09 39 30.9	
ARU				SS	SS	09 51 11.3	+3.8
OBN	Obninsk	135.41	334	i PKIKP	PKPdf	09 32 57.3	+2.3
OBN				pmax	pmax		
	comp=Z,13nm,1.1s						
AKASG	Malin Array Be	141.67	334	PKP	PKPdf	09 33 05.1	-1.5
	comp=Z,0.2nm,0.3s,baz=48,slow=1.5,SNR=5.4						
LVV	L'vov	144.43	337	ePKHKP		09 33 08.0	
OJC	Ojcow	145.51	342	ePKP	PKPdf	09 33 12.7	-0.7
BUR08	Bucovina Ar. S	145.71	334	ePKPbc	PKPbc	09 33 13.9	-0.2
BURAR	Bucovina Array	145.73	334	⇑iP	PKPdf	09 33 13.7	-0.1
STHS	Stebnicka Huta	145.75	339	ePKP	PKPdf	09 33 12.7	-1.1
KOLS	Kolonicke sedl	145.81	338	ePKP	PKPdf	09 33 14.0	+0.1
IBBN	Ibbenburen	145.81	355	ePKPab	PKPab	09 33 13.1	-1.6
TLCR		145.84	328	⇑iP	PKPdf	09 33 11.4	-2.7
KSP	Ksiaz	145.89	346	ePKIKP	PKPdf	09 33 11.9	-2.1
CLZ	Clausthal	146.00	352	ePKPab	PKPab	09 33 12.8	-2.6
UZH	Uzhgorod	146.05	338	ePKP2	PKPab	09 33 14.3	-1.4
NIE	Niedzica	146.05	340	ePKP	PKPdf	09 33 13.7	-0.6
CRVS	Cervenica-Dubn	146.12	339	ePKP	PKPdf	09 33 15.2	+0.8
CLL	Collm	146.13	349	ePKIKP	PKPdf	09 33 13.0	-1.4
CLL				pmax	pmax		
	comp=Z,42nm,1.2s						
CLL	Collm	146.13	349	ePKPab	PKPdf	09 33 13.8	-0.6
CLL	Collm	146.13	349	i PKPbc	PKPbc	09 33 13.9	-1.4
	comp=Z,42nm,1.2s						
UPC	Upice	146.27	346	ePKP	PKPdf	09 33 16.1	+1.5
UPC				epPKP	pPKPdf	09 33 20.0	-2.2
BR131	Keskin Array S	146.31	316	ePKPbc	PKPbc	09 33 15.2	-1.0
BRTR	Keskin Array B	146.31	316	PKPbc	PKPbc	09 33 14.7	-1.6
	comp=Z,11nm,1.2s,baz=163,slow=3.0,SNR=12						
OKC	Ostrava-Krasne	146.33	343	ePKP	PKPab	09 33 17.7	+0.9
OKC				epPKP	pPKPdf	09 33 19.9	-2.4
DPC	Dobruska-Polom	146.34	345	ePKP	PKPdf	09 33 15.8	+1.0
DPC				epPKP	pPKPdf	09 33 20.4	-1.9
BRG	Berggiesshubel	146.37	348	ePKPab	PKPab	09 33 15.0	-1.9
BRG	Berggiesshubel	146.37	348	ePKP	PKPdf	09 33 14.8	0.0
	comp=Z,40nm,1.4s						
BRG				e		09 33 28.6	
	comp=Z,12nm,1.1s						
VRI	Vrincioaia	146.38	330	⇑iP	PKPdf	09 33 15.3	+0.3
PLOR	Plostina	146.43	330	⇑iP	PKPbc	09 33 15.6	-0.8
PVCC	Panska Ves	146.57	347	ePKP	PKPbc	09 33 16.8	+0.2
HARR	Harsova	146.64	328	⇑iP	PKPbc	09 33 16.8	-0.3
PRU	Pruhonice	147.09	347	ePKP	PKPab	09 33 21.2	+1.5
PRU				epPKP	pPKPdf	09 33 24.7	+1.1
VRAC	Vranov	147.23	344	⇑iP	PKPbc	09 33 19.5	+0.9
VYHS	Vyhne	147.33	341	ePKP	PKPbc	09 33 18.6	-0.3
DRGR		147.41	335	⇑iP	PKPbc	09 33 18.1	-1.1
VOIR		147.49	331	⇑iP	PKPbc	09 33 20.0	+0.6
PSZ	Piszkesteto	147.50	339	ePKP2	PKPbc	09 33 18.1	-1.3
TREC	Trest	147.52	345	ePKP	PKPbc	09 33 20.9	+1.5
GRA1	Grafenberg Arr	147.99	351	ePKPab	PKPab	09 33 22.2	-1.0
GRF	Grafenberg Arr	147.99	351	ePKPab	PKPab	09 33 22.2	-1.0
KHC	Kasperske Hory	148.10	348	ePKP	PKPbc	09 33 21.1	+0.2
KHC				epPKP	pPKPdf	09 33 24.6	-0.7
KHC				ex	x	09 33 30.0	
ZST	Bratislava	148.11	343	ePKP	PKPab	09 33 23.2	-0.6
GERES	GERESS Array B	148.35	347	PKPbc	PKPbc	09 33 20.2	-1.4
	comp=Z,2.5nm,0.8s,baz=14,slow=0.6,SNR=12						
BZS	Buzias	148.81	335	⇓iP	PKPbc	09 33 21.6	-1.3
STU	Stuttgart	149.16	353	ePKPab	PKPab	09 33 26.3	-1.7
PKSM	Moragy	149.40	339	⇑iP	PKPbc	09 33 22.8	-1.6
CDF	Champ du Feu	149.72	355	ePKP1	PKPbc	09 33 27.6	+2.5
	comp=Z,92nm,1.5s						
LOR	Lormes	151.01	360	ePKP1	PKPbc	09 33 30.7	+2.5
	comp=Z,86nm,1.6s						
SSF	Saint Saulge	151.22	0	ePKP1	PKPbc	09 33 31.3	+2.6
	comp=Z,105nm,1.6s						
CABF	La Chapelle	151.59	356	ePKP1	PKPbc	09 33 31.2	+1.6
	comp=Z,209nm,1.8s						
TORD	Torodi Ar. Bea	174.66	160	PKP	PKPdf	09 33 44.8	-1.3
	comp=Z,1.8nm,1.1s,baz=225,slow=1.0,SNR=6.5						
TORD				PKPab	PKPab	09 35 20.3	+0.8
	comp=Z,2.2nm,0.9s,baz=179,slow=3.1,SNR=6.6						

JMA 09 09:52:14.6±0.1**, 3016N**×**14198E, h36**km**, M3.9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.06	177	P	Pn	09 53 02.1	+1.7
JOD2	Odawara 2	5.64	335	P	Pn	09 53 40.2	+4.3
JHU	Hanno	6.11	339	P	Pn	09 53 45.6	+3.2
JRY	Ryogami san	6.39	337	P	Pn	09 53 49.5	+3.4
JHO	Hitachi	6.54	350	P	Pn	09 53 51.9	+3.6
JHO				eS	Sn	09 55 01.5	-0.1
JAG	Ashikaga	6.60	342	P	Pn	09 53 51.4	+2.4

*HLW **09** 09:53:29.5, 3574N×2228E, h30km, Mb3.7*
*ISCJB **09** 09:53:36.6±0.9, 35.12N±0.02×22.77E±0.03, h15km±6km, mb4.1/19, Error ellipse: s-maj=5.2km s-min=3.1km az=145.2*
*IDC **09** 09:53:36.4±0.7, 3534N×2279E, h0km, mb4.0/14, mb1 4.1/21, mb1mx4.0/33, mbtmp4.0/21, ML3.8/7, Error ellipse: s-maj=14.6km s-min=13.0km az=175.0*
*NEIC **09** 09:53:38.9, 3531N×2295E, h10km, ML3.8(ATH), After ATH.*
*MOS **09** 09:53:39.7±1.1, 3524N×2280E, h33km, mb4.2/11, Error ellipse: s-maj=9.6km s-min=4.6km az=90.3*
*ATH **09** 09:53:39.2, 3532N×2298E, h12km±1km, MD4.0/19, ML3.8*
*THE **09** 09:53:40.9, 3539N×2291E, h2km±2km, ML4.5/2, Error ellipse: s-maj=3.6km s-min=1.1km az=209.0*
*CSEM **09** 09:53:41.9±0.2, 3536N×2289E, h25km, ML4.5/2, Error ellipse: s-maj=4.6km s-min=1.9km az=36.0*
ISC 09 09:53:36.7±0.8**, 3515N**±002×**2276E**±003**, h0**km±5km**, n143,** σ1s**37**/159**, mb4.1**/19**, 15C-5D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	Karanos	0.98	75	P	Pg	09 53 53.8	-1.6
KARN				S	Sg	09 54 07.7	-0.4
GVD	Gavdhos	1.13	105	ePB	Pb	09 53 58.9	-0.2
KYTH	Kithira	1.15	11	ePN	Pn	09 53 58.0	-2.0
VAM	Vamos	1.20	77	ePG	Pg	09 53 58.0	-1.8
VLI	Veliai	1.57	5	ePG	Pg	09 54 05.1	-1.7
SIVA	Sivas	1.68	94	P	Pn	09 54 09.2	+1.9
SIVA				S	Sn	09 54 31.6	+2.0
IDI	Anoyia	1.75	85	Pn	Pn	09 54 09.1	+0.9
	48nm,0.3s,baz=272,slow=15,SNR=153						
IDI				Sn	Sn	09 54 32.5	+1.4
	95nm,0.3s,baz=43,slow=19,SNR=5.5						
PYL	PYLOS	1.93	335	P	Pn	09 54 11.6	+0.9
PYL				S	Sn	09 54 35.6	0.0
ITM	Ithomi	2.14	342	ePN	Pn	09 54 15.2	+1.7
ITM	Ithomi	2.14	342	ePn	Pn	09 54 15.1	+1.6
LAST	Lasithi	2.23	89	P	Pn	09 54 17.2	+2.4
LAST				S	Sn	09 54 44.4	+1.5
LAST	Lasithi	2.23	89	P	Pn	09 54 17.2	+2.4
LAST				S	Sn	09 54 45.2	+2.3
NPS	Neapolis	2.34	86	ePN	Pn	09 54 17.0	+0.7
NPS	Neapolis	2.34	86	ePn	Pn	09 54 18.0	+1.7
DID	Didima	2.38	9	P	Pn	09 54 17.3	+0.4
DID				S	Sn	09 54 43.9	-2.9
NAIG	Nisos Aigina	2.67	12	ePN	Pn	09 54 21.7	+0.8
ZKR	Zakros	2.83	90	P	Pn	09 54 25.6	+2.5
LTK	Loutraki	2.87	3	P	Pn	09 54 23.9	+0.2
LTK				S	Sn	09 54 57.3	-1.6
ATH	Athens Observa	2.92	15	ePB	Pb	09 54 25.0	-4.6
APE	Apeiranthos	2.95	49	ePb	Pb	09 54 25.0	-5.1
APE				S	Sn	09 54 58.5	-2.3
PTL	Penteli	3.03	17	ePB	Pn	09 54 26.9	+1.1
PTL	Penteli	3.03	17	ePb	Pn	09 54 27.0	+1.2
RLS	Riolos of Patr	3.08	341	P	Pn	09 54 30.0	+3.4
VLS	Valsamata	3.49	331	P	Pn	09 54 32.9	+0.7
VLS				S	Sn	09 55 14.5	+0.4
VLS	Valsamata	3.49	331	ePN	Pn	09 54 35.1	+2.9
VLS	Valsamata	3.49	331	ePn	Pn	09 54 34.0	+1.8
VLS				S	Sn	09 55 14.5	+0.4
LKR	Lokris	3.50	3	P	Pn	09 54 33.3	+1.0
LKR	Lokris	3.50	3	ePN	Pn	09 54 33.8	+1.5
LKR	Lokris	3.50	3	P	Pn	09 54 33.3	+1.0
KARP	Karpathos	3.62	82	ePN	Pn	09 54 34.7	+0.8
KARP	Karpathos	3.62	82	ePn	Pn	09 54 34.1	+0.2
EVR	Evrytania	3.84	349	ePN	Pn	09 54 39.3	+2.4
EVR	Evrytania	3.84	349	ePn	Pn	09 54 39.5	+2.6
AGG	Agios Georgios	3.88	355	P	Pn	09 54 39.1	+1.6
AGG	Agios Georgios	3.88	355	P	Pn	09 54 38.8	+1.3
AOS	Alonnisos	4.11	12	P	Pn	09 54 41.5	+0.8
NEO	Neokhori	4.17	5	ePN	Pn	09 54 42.7	+1.3
CHOS	Chios island	4.17	38	P	Pn	09 54 42.5	+0.9
SLUM		4.18	150	⇑eP	Pn	09 54 40.2	-1.5
SLUM				S	Sn	09 55 31.7	+0.4
XOR	Xorichti	4.22	5	P	Pn	09 54 43.2	+1.0
THL	Klokotos Trika	4.45	353	P	Pn	09 54 46.0	+0.7
ARG	Arkhangelos	4.49	75	P	Pn	09 54 47.7	+1.7
JAN	Janina	4.75	342	ePN	Pn	09 54 51.7	+2.2
JAN	Janina	4.75	342	ePn	Pn	09 54 51.5	+2.0
IGT	Igoumenitsa	4.79	337	P	Pn	09 54 50.0	+0.1
IGT				S	Sn	09 55 45.4	-0.6
PAIG	Paliouri	4.83	8	P	Pn	09 54 51.2	+0.7
LIT	Litokhoron	4.95	358	P	Pn	09 54 52.7	+0.5
KEK	Kerkira	5.13	334	ePN	Pn	09 54 57.6	+2.9
KEK	Kerkira	5.13	334	ePn	Pn	09 54 57.1	+2.4
KZN	Kozani	5.21	352	ePN	Pn	09 54 58.1	+2.3
PLG	Polygyros	5.24	6	ePN	Pn	09 54 57.2	+0.9
PLG	Polygyros	5.24	6	ePn	Pn	09 54 57.0	+0.7
HMAT	Matruh	5.44	137	⇓eP	Pn	09 54 57.5	-1.4
HORT	Hortiatis	5.45	3	P	Pn	09 54 59.0	0.0
FNA	Florina	5.73	349	P	Pn	09 55 03.5	+0.6
FNA				S	Sn	09 56 09.1	-0.3
GRG	Griva	5.80	357	P	Pn	09 55 04.6	+0.6
BIA	Bitola	5.97	349	ePn	Pn	09 55 06.5	+0.3
KNT	Kendrikon	6.00	1	P	Pn	09 55 07.2	+0.5
VAY	Valandovo	6.16	359	ePn	Pn	09 55 08.4	-0.5
TIP	Timpagrande	6.26	312	ePn	Pn	09 55 10.6	+0.4
	13nm,0.6s						
TIP	Timpagrande	6.26	312	ePn	Pn	09 55 10.6	+0.5
	13nm,0.6s						
TIP				eSn	Sn	09 56 15.6	-6.8
SWA2		6.32	158	⇑eP	Pn	09 55 09.1	-1.9
SWA2				S	Sn	09 56 23.5	-0.3
KRUS	Krusevo	6.32	350	ePn	Pn	09 55 11.6	+0.5
KRUS	Krusevo	6.32	350	ePn	Pn	09 55 11.7	+0.6
CEL	Celeste	6.33	301	ePn	Pn	09 55 12.1	+0.9
CEL	Celeste	6.33	301	ePn	Pn	09 55 12.1	+0.9
CUC	Castrocucco	7.33	313	ePn	Pn	09 55 26.6	+1.6
	34nm,0.6s						
CUC				eSn	Sn	09 56 47.7	-1.1
BARS	Barje	7.69	355	ePn	Pn	09 55 29.4	-0.5
SGO	Sicignano	8.00	315	P	Pn	09 55 35.4	+1.4
SGO				pmax	pmax		
	comp=Z,11nm,0.3s						
SGO	Sicignano	8.00	315	Pn	Pn	09 55 35.4	+1.4
	comp=Z,11nm,0.3s						
FG5	Orsara di Pugl	8.50	318	P	Pn	09 55 41.6	+0.7
FG5				pmax	pmax		
	comp=Z,47nm,0.5s						
FG5	Orsara di Pugl	8.50	318	Pn	Pn	09 55 41.6	+0.7
	comp=Z,47nm,0.5s						
RGNG	Rignano Grg	8.61	321	Pn	Pn	09 55 41.1	-1.3
RGNG				Sn	Sn	09 57 16.0	-4.2
CSS	Prodhromos	8.67	88	ePn	Pn	09 55 45.3	+2.0
CSS	Prodhromos	8.67	88	ePn	Pn	09 55 45.3	+2.0
GRUS	Gruza	8.87	350	ePn	Pn	09 55 43.4	-2.6
BBLS	Lazići	9.08	344	ePn	Pn	09 55 47.7	-1.2
HFRF	Wahat Farafira	9.28	148	⇑eP	Pn	09 55 51.0	-0.7
GLL	Jalalah	9.38	124	⇑eP	Pn	09 55 52.1	-1.0
BR131	Keskin Array S	9.78	59	ePn	Pn	09 55 59.7	+1.2
	comp=Z,8.4nm,0.9s						
BRTR	Keskin Array B	9.78	59	Pn	Pn	09 55 58.8	+0.3
	comp=Z,0.2nm,0.3s,baz=233,slow=13,SNR=29						
AMAG	Maghara	9.86	114	⇓P	Pn	09 55 57.9	-1.7
GZR	Gura Zlata	10.23	0	⇑iP	Pn	09 56 02.4	-2.3
GZR	Gura Zlata	10.23	0	⇑P	Pn	09 56 02.4	-2.3
VOIR		10.42	9	⇑iP	Pn	09 56 08.4	+1.1
VOIR		10.42	9	⇑P	Pn	09 56 08.4	+1.1
BZS	Buzias	10.49	356	⇑iP	Pn	09 56 05.6	-2.6
MLR	Muntele Rosu	10.61	12	Pn	Pn	09 56 09.7	-0.1
	comp=Z,0.1nm,0.3s,baz=126,slow=19,SNR=1.9						
MLR	Muntele Rosu	10.61	12	P	Pn	09 56 09.7	-0.2
MLR	Muntele Rosu	10.61	12	⇓P	Pn	09 56 11.5	+1.6
MLR	Muntele Rosu	10.61	12	⇓iP	Pn	09 56 11.5	+1.6
MLR	Muntele Rosu	10.61	12	⇓P	Pn	09 56 11.5	+1.6
MMAI	Mount Meron Ar	10.70	98	Pn	Pn	09 56 10.8	-0.3
	comp=Z,1.7nm,0.3s,baz=297,slow=13,SNR=3.5						
PLOR	Plostina	11.09	14	⇑iP	Pn	09 56 20.5	+4.1
HDK1	Dakhla	11.16	147	P	Pn	09 56 17.2	-0.1
PKSM	Moragy	11.48	345	⇑iP	Pn	09 56 18.4	-3.4
DRGR		11.63	360	⇑iP	Pn	09 56 22.5	-1.3
DRGR		11.63	360	⇑P	Pn	09 56 22.6	-1.3
EIL	Elat	11.65	115	Pn	Pn	09 56 25.1	+0.9
	comp=Z,0.8nm,0.3s,baz=326,slow=11,SNR=3.8						
VRAC	Vranov	14.86	344	Pn	Pn	09 57 06.3	-1.6
	comp=Z,0.3nm,0.3s,baz=148,slow=9.5,SNR=3.4						
VRAC	Vranov	14.86	344	⇑iP	Pn	09 57 06.8	-1.1
GERES	GERESS Array B	15.24	337	Pn	Pn	09 57 11.3	-1.6
	comp=Z,0.2nm,0.3s,baz=158,slow=14,SNR=5.0						
KHC	Kasperske Hory	15.53	337	eP	Pn	09 57 22.5	+5.8
KHC				ex	x	09 57 32.0	
AKASG	Malin Array Be	16.24	15	Pn	Pn	09 57 21.6	-4.4
	comp=Z,0.8nm,0.3s,baz=205,slow=12,SNR=3.9						
AKASG	Malin Array Be	16.24	15	P	Pn	09 57 21.6	-4.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	16.24	15	Pn	Pn	09 57 21.5	-4.5
CLL	Collm	17.62	339	esP	sP	09 57 48.0	+3.3
KIV	Kislovodsk	17.67	54	eP	Pn	09 57 49.7	+5.6
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MIB	Mutribah	21.39	98	eP	P	09 58 24.7	-1.1
	comp=Z,36nm,0.6s,mb4.9						
MIB	Mutribah	21.39	98	eP	P	09 58 24.7	-1.1
	baz=98						
MIB				AMb	AMB	09 58 28.5	
	comp=Z,37nm,0.6s,mb4.9,baz=98						
NAY	Al-Naaiem	21.51	99	eP	P	09 58 26.1	-1.0
	comp=Z,12nm,0.8s,mb4.4						
NAY	Al-Naaiem	21.51	99	eP	P	09 58 26.1	-1.0
	baz=99						
NAY				AMb	AMB	09 58 29.0	
	comp=Z,12nm,0.8s,mb4.4,baz=99						
ESDC	Sonseca Array	21.67	290	P	P	09 58 29.3	+0.5
	comp=Z,1.9nm,0.7s,mb3.6,baz=88,slow=12,SNR=9.1						
UMR	Umm Al-Rimmam	21.78	98	eP	P	09 58 29.1	-1.0
	comp=Z,73nm,0.7s,mb5.2						
UMR	Umm Al-Rimmam	21.78	98	eP	P	09 58 29.1	-1.0
	baz=98						
UMR				AMb	AMB	09 58 32.9	
	comp=Z,73nm,0.7s,mb5.2,baz=98						
OBN	Obninsk	22.14	21	⇑eP	P	09 58 33.7	+0.1
OBN				pmax	pmax		

	comp=Z,26nm,1.7s,mb4.4						
MDT	Midelt	22.80	272	P	P	09 58 40.3	-0.6
	comp=Z,1.7nm,0.8s,mb3.6,baz=72,slow=14,SNR=2.9						
HFS	Hagfors	25.68	350	P	P	09 59 05.9	-2.2
	comp=Z,2.2nm,0.5s,mb4.1,baz=157,slow=12,SNR=17						
HFS	Hagfors	25.68	350	P	P	09 59 05.9	-2.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
EKA	Eskdalemuir Ar	26.94	327	P	P	09 59 17.4	-2.1
	comp=Z,2.5nm,0.7s,mb4.0,baz=129,slow=8.3,SNR=6.5						
EKA	Eskdalemuir Ar	26.94	327	P	P	09 59 17.4	-2.0
EKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB2	NORSAR Subarra	26.95	348	P	P	09 59 17.4	-2.0
	comp=Z,1.3nm,0.6s,mb3.8,baz=149,slow=10						
NOA	NORSAR Array B	26.95	348	P	P	09 59 17.7	-1.7
	comp=Z,1.1nm,0.7s,mb3.7,baz=157,slow=8.9,SNR=7.6						
NOA	NORSAR Array B	26.95	348	P	P	09 59 17.7	-1.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	Torodi Ar. Bea	29.02	226	P	P	09 59 39.3	+0.9
	comp=Z,1.7nm,0.6s,mb4.1,baz=32,slow=8.8,SNR=10						
ARCES	ARCESS Array B	34.47	2	P	P	10 00 23.4	-2.4
	comp=Z,3.1nm,0.9s,mb4.2,baz=181,slow=8.2,SNR=10						
ARCES	ARCESS Array B	34.47	2	P	P	10 00 23.4	-2.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DBIC	Dimbokro	38.06	228	P	P	10 00 58.9	+1.9
	comp=Z,1.9nm,0.7s,mb4.0,baz=32,slow=4.0,SNR=4.3						
DBIC	Dimbokro	38.06	228	P	P	10 00 58.9	+1.9
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	45.42	56	P	P	10 01 55.0	-1.9
	comp=Z,1.6nm,0.5s,mb4.2,baz=279,slow=7.3,SNR=9.1						
MKAR	Makanchi Array	45.42	56	P	P	10 01 55.1	-1.8
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NVS	Novosibirsk	45.48	45	eP	P	10 01 55.5	-1.8
ZALV	Zalesovo Beam	46.43	46	P	P	10 02 01.9	-2.9
	comp=Z,1.2nm,0.3s,mb4.4,baz=267,slow=9.8,SNR=7.1						
ZALV	Zalesovo Beam	46.43	46	P	P	10 02 02.0	-2.8
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
LSZ	Lusaka	50.41	173	P	P	10 02 36.8	+0.9
	comp=Z,1.3nm,0.5s,mb4.1,baz=358,slow=6.5,SNR=3.8						
LSZ	Lusaka	50.41	173	P	P	10 02 36.8	+1.0
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
SONM	Songino Array	61.01	50	P	P	10 03 50.3	-1.4
	comp=Z,0.4nm,0.6s,mb3.7,baz=296,slow=10,SNR=4.9						
BOD	Bodaibo	61.66	37	eP	P	10 03 51.0	-5.0
BOD				pmax	pmax		
	comp=Z,3.0nm,1.9s,mb4.2						
YKA	Yellowknife Ar	76.84	341	P	P	10 05 29.7	-0.3
	comp=Z,0.7nm,0.5s,mb4.0,baz=33,slow=5.2,SNR=18						
YKA	Yellowknife Ar	76.84	341	P	P	10 05 29.7	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	79.83	51	P	P	10 05 45.0	-1.9
	comp=Z,1.4nm,0.7s,mb4.0,baz=308,slow=4.8,SNR=4.7						
KSRS	Korea Array	79.83	51	P	P	10 05 45.1	-1.9
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ASAR	Alice Springs	119.98	99	PKP	PKPdf	10 12 29.0	-0.4
	comp=Z,0.2nm,0.7s,baz=306,slow=2.2,SNR=3.4						

KRSC 09 10:27:15.7±0.9, 5541N×16463E, h41^{km}±41^{km}, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.30	309	eP	Pn	10 27 36.7	-0.6
KBTR				iS	Sn	10 27 52.6	-0.8
MKZ	Mys Kozlova	1.88	244	eP	Pn	10 27 47.1	+1.9
MKZ				iS	Sn	10 28 09.7	+2.0
ZLN	Zelenaya	2.25	287	P	Pn	10 27 53.8	+3.5
BZGR	Bezymyannyi-Gr	2.29	285	eP	Pn	10 27 55.2	+4.3
CIRR	Tsirk	2.31	289	eP	Pn	10 27 54.1	+3.0
BZMR	Bezymyannaya	2.40	284	eP	Pn	10 27 55.9	+3.5
BZWR	Bezymyannyi-We	2.41	285	eP	Pn	10 27 54.9	+2.4
KLY	Klyuchi	2.42	294	P	Pn	10 27 53.4	+0.7
KLY				iS	Sn	10 28 21.0	0.0
KRSR	Krestovskiy	2.43	291	eP	Pn	10 27 55.2	+2.4
KIRR	Kirishev	2.49	284	P	Pn	10 27 56.2	+2.6
KMNR	Kamenistaya	2.52	280	eP	Pn	10 27 57.5	+3.5
KMNR				iS	Sn	10 28 28.6	+5.2
KPT	Kopyto	2.56	284	P	Pn	10 27 57.3	+2.7
TUMR	Tumrok	2.56	269	P	Pn	10 27 57.7	+3.0
SRDR	Sredinnyy	2.91	290	P	Pn	10 28 02.6	+3.1
KII	Karymskiy	3.31	248	eP	Pn	10 28 08.4	+3.6
SPN	Mys Shipunski	3.56	231	P	Pn	10 28 09.9	+1.6
SPN				iS	Sn	10 28 49.3	+0.2
NLC	Nalytchevo	3.82	236	P	Pn	10 28 14.7	+2.7
NLC				iS	Sn	10 28 56.9	+1.3
AVH	Avacha	4.06	240	eP	Pn	10 28 19.1	+3.9
PET	Petropavlovsk	4.25	238	P	Pn	10 28 21.2	+3.5
PET				iS	Sn	10 29 08.3	+2.3
GNL	Ganaly	4.26	249	eP	Pn	10 28 22.1	+4.2
RUS	Russkaya	4.69	233	P	Pn	10 28 26.5	+2.7

*ISCJB **09** 10:31:53.9±0.8, 686N±008×7296W±008, h171^{km}±8^{km}, Error ellipse: s-maj=17.3km s-min=8.7km az=44.4*
*IDC **09** 10:31:53.8±0.9, 670N×7293W, h162^{km}±14^{km}, mb2.9/1, mb1 3.3/3, mb1mx2.9/21, mbtmp3.2/3, Error ellipse: s-maj=63.9km s-min=7.9km az=132.0*
*FUNV **09** 10:31:54.6, 686N×7314W, h171^{km}, MW3.2*
ISC 09 10:31:54.6±0.7, 681N±008×7296W±008, h163^{km}±8^{km}, n16, σ1^{s}00/23, 5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	32	⇑iP	Pn	10 32 23.4	+0.9
CAPV				eS	Sn	10 32 44.5	+0.5
ROSC	El Rosal	2.38	215	P	Pn	10 32 35.5	+0.6
	11nm,0.3s,baz=94,slow=19,SNR=49						
ROSC				S	Sn	10 33 04.2	-1.8
	14nm,0.3s,baz=104,slow=16,SNR=7.6						
SOCV	Socops	2.55	55	⇑eP	Pn	10 32 38.2	+1.2
SOCV				eS	Sn	10 33 09.9	+0.2
VIGV	El Vigia	2.56	38	⇑eP	Pn	10 32 37.9	+0.8
VIGV				eS	Sn	10 33 09.1	-0.9
SDV	Santo Domingo	3.09	48	P	Pn	10 32 45.0	+1.4
	9.3nm,0.3s,baz=238,slow=2.6,SNR=73						
SDV				S	Sn	10 33 22.2	+0.5
	5.4nm,0.3s,baz=57,slow=22,SNR=16						
ELOV	Elorza	3.46	87	⇑iP	Pn	10 32 49.5	+1.3
VIRV	Villa del Rosa	3.71	8	eP	Pn	10 32 50.5	-1.0
VIRV				eS	Sn	10 33 30.7	-5.1
QARV	Quebrada Arrib	4.14	35	eP	Pn	10 32 57.2	+0.1
SANV	Sanarito	4.32	52	eP	Pn	10 32 59.3	-0.1
CURV	Curarigua	4.35	43	eP	Pn	10 33 00.1	+0.4
CURV				eS	Sn	10 33 48.4	-2.2
TEPV	Terepaima	4.87	50	⇑eP	Pn	10 33 06.9	+0.4
SIQV	Siquisique	4.92	39	eP	Pn	10 33 06.8	-0.5
BAUV	El Baul	5.31	66	eP	Pn	10 33 11.7	-0.7
BAUV				eS	Sn	10 34 10.5	-2.8
CAOV	Caicara del Or	6.61	85	eP	Pn	10 33 29.3	-0.3
YKA	Yellowknife Ar	63.33	340	P	P	10 42 06.0	+0.1
	0.2nm,0.6s,baz=134,slow=6.4,SNR=7.9						
ASAR	Alice Springs	149.24	234	PKPbc	PKPbc	10 51 23.4	-1.4
	0.2nm,0.7s,baz=105,slow=3.6,SNR=2.9						

*IDC **09** 11:04:48.3±1.9, 2607S×17754W, h159^{km}±16^{km}, mb4.2/12, mb1 4.3/12, mb1mx4.2/16, mbtmp4.2/12, Error ellipse: s-maj=18.6km s-min=15.0km az=50.0*
*ISCJB **09** 11:04:49.1±1.6, 262S±0.1×1777W±0.1, h175^{km}±13^{km}, mb4.3/17, Error ellipse: s-maj=20.3km s-min=15.4km az=37.6*
*NEIC **09** 11:04:50.3±1.9, 2629S×17754W, h180^{km}±16^{km}, mb4.6/8, Error ellipse: s-maj=20.4km s-min=16.0km az=206.0*
ISC 09 11:04:50.3±1.5, 262S±01×1776W±01, h174^{km}±12^{km}, n47, σ1^{s}10/32, mb4.3/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.03	185	P	Pn	11 05 38.1	-0.9
	670nm,0.3s,baz=58,slow=19,SNR=15						
RAO				S	Sn	11 06 17.5	+0.5
	745nm,0.3s,baz=278,slow=22,SNR=10						
URZ	Urewera	12.80	199	P	Pn	11 07 36.8	-9.1
	0.9nm,0.3s,baz=180,slow=18,SNR=11						
URZ				S	Sn	11 09 56.7	-11
	5.1nm,0.3s,baz=156,slow=23,SNR=12						
DZM	Mont Dzumac	15.11	283	ePn	Pn	11 08 18.0	+3.0
	19nm,0.8s						
RPZ	Rata Peaks	19.73	205	P	P	11 09 03.5	-2.9
	0.6nm,0.3s,baz=13,slow=6.4,SNR=4.3						
RPZ				S	S	11 12 27.9	-11
	0.9nm,0.3s,baz=85,slow=15,SNR=9.1						
HNR	Honiara	27.02	304	P	P	11 10 14.5	-1.9
	23nm,0.3s,mb5.2,baz=156,slow=23,SNR=12						
EIDS	Eidsvold	28.15	265	eP	P	11 10 28.0	+1.7
	6.1nm,0.6s,mb4.5						
CTA	Charters Tower	33.69	273	eP	P	11 11 16.3	+1.4
	18nm,0.9s,mb4.8						
CTA	Charters Tower	33.69	273	P	P	11 11 16.3	+1.4
	9.3nm,0.3s,mb4.9,baz=103,slow=11,SNR=27						
CTAO	Charters Tower	33.69	273	eP	P	11 11 16.4	+1.4
	22nm,0.8s,mb5.0						
STKA	Stephens Creek	35.93	251	eP	P	11 11 33.8	-0.3
	3.5nm,1.1s,mb3.9						
STKA	Stephens Creek	35.93	251	P	P	11 11 35.8	+1.7
	1.9nm,0.4s,mb4.1,baz=78,slow=13,SNR=6.1						
ASAR	Alice Springs	43.82	262	P	P	11 12 38.9	-0.3
	11nm,0.8s,mb4.5,baz=108,slow=7.9,SNR=94						
ASAR				PcP	PcP	11 14 21.7	-0.9
	1.3nm,0.7s,baz=100,slow=4.8,SNR=4.2						
WB2	Warramunga Arr	44.42	268	eP	P	11 12 43.2	-0.8
WRAB	Tennant Creek	44.42	268	eP	P	11 12 43.4	-0.6
	12nm,0.7s,mb4.7						
FORT	Forrest	47.56	251	eP	P	11 13 07.2	-1.2
	16nm,0.8s,mb4.7						
KAKA	Kakadu	48.67	276	eP	x	11 12 57.2	
	8.0nm,0.5s						
VNDA	Vanda	52.27	186	P	P	11 13 44.6	+1.4
	2.2nm,0.7s,mb3.9,baz=3.5,slow=9.8,SNR=10						
FITZ	Fitzroy Crossi	52.81	267	eP	P	11 13 47.3	-0.8
	15nm,0.6s,mb4.9						
BATI	Baumata	57.54	275	P	P	11 14 22.2	+0.2
	6.5nm,0.4s,mb4.9,baz=149,slow=6.6,SNR=2.8						
KAPI	Kappang	63.27	278	P	P	11 14 59.9	-1.0
	5.8nm,0.9s,mb4.4,baz=116,slow=18,SNR=4.2						
MAW	Mawson	76.32	200	P	P	11 16 20.3	+0.7
	7.5nm,0.5s,mb4.6,baz=136,slow=8.8,SNR=20						
KSRS	Korea Array	81.40	319	P	P	11 16 46.9	-0.7
	1.9nm,0.7s,mb3.8,baz=134,slow=5.4,SNR=9.5						
PETK	Petropavlovsk-	81.86	345	P	P	11 16 49.2	-0.4
	1.6nm,0.6s,mb3.8,baz=107,slow=9.6,SNR=12						
PETK	Petropavlovsk-	81.86	345	P	P	11 16 49.2	-0.5
VNA3	Neumayer Olymp	82.44	176	e	P	11 16 51.9	-0.7
VNA3				e		11 16 55.9	
VNA2	Neumayer--Watz	82.88	177	e	P	11 16 55.0	+0.1
	baz=192,slow=2.6						
VNA2				e		11 16 58.7	
VNA1	Neumayer--Stat	83.10	176	e	P	11 16 56.5	+0.5
VNA1				e		11 17 00.0	
NVAR	Mina Array Bea	84.96	43	P	P	11 17 06.5	+0.7
	0.2nm,0.5s,mb3.1,baz=209,slow=7.2,SNR=2.4						
CMAR	Chiang Mai Arr	92.33	289	P	P	11 17 42.6	+1.4
	2.0nm,0.7s,mb4.3,baz=143,slow=3.2,SNR=14						
PDAR	Pinedale Array	92.88	43	P	P	11 17 43.2	+0.1
	0.2nm,0.7s,mb3.3,baz=228,slow=3.6,SNR=3.7						
ZALV	Zalesovo Beam	115.10	320	PKP	PKPdf	11 23 08.1	-2.1
	0.6nm,0.3s,baz=38,slow=5.4,SNR=3.9						
MKAR	Makanchi Array	115.30	312	PKP	PKPdf	11 23 09.3	-1.5
	0.9nm,0.7s,baz=133,slow=1.2,SNR=4.9						
MKAR	Makanchi Array	115.30	312	PKP	PKPdf	11 23 09.3	-1.5
KURK	Kurchatov	118.36	315	PKP	PKPdf	11 23 15.1	-1.5
	1.1nm,0.6s,baz=95,slow=1.8,SNR=7.8						
BOSA	Boshof	121.21	204	PKP	PKPdf	11 23 22.5	-0.4
	1.3nm,0.8s,baz=109,slow=9.0,SNR=4.5						
BOSA	Boshof	121.21	204	PKP	PKPdf	11 23 22.5	-0.4
BVAR	Borovoye Array	123.59	318	PKP	PKPdf	11 23 25.6	-1.0
	2.6nm,0.7s,baz=150,slow=1.2,SNR=9.0						
AKTO	Aktyubinsk	131.45	315	PKP	PKPdf	11 23 40.4	-1.3
	1.6nm,0.6s,baz=58,slow=3.5,SNR=1.8						
ARCES	ARCESS Array B	134.58	349	PKP	PKPdf	11 23 45.8	-1.2
	1.2nm,0.5s,baz=14,slow=1.7,SNR=12						
NB2	NORSAR Subarra	144.68	353	PKP	PKPdf	11 24 03.5	-2.0
	comp=Z,19nm,0.9s,baz=15,slow=3.8						
NOA	NORSAR Array B	144.68	353	PKP	PKPdf	11 24 03.6	-1.9
	comp=Z,9.8nm,0.8s,baz=20,slow=2.5,SNR=24						
AKASG	Malin Array Be	148.08	327	PKP	PKPdf	11 24 10.8	-0.8
	comp=Z,3.5nm,0.5s,baz=44,slow=4.0,SNR=22						
AKASG				PKPbc	PKPbc	11 24 13.8	-1.2
	comp=Z,3.5nm,0.5s,baz=44,slow=4.0,SNR=21						
BRTR	Keskin Array B	150.68	305	PKPbc	PKPbc	11 24 21.1	-0.6
	comp=Z,3.7nm,0.8s,baz=136,slow=4.1,SNR=15						
BRTR				PKPab	PKPab	11 24 30.0	+0.7
	comp=Z,4.0nm,0.7s,baz=101,slow=3.9,SNR=15						
CLL	Collm	153.67	345	ePKPbc	PKPbc	11 24 28.0	-0.1
KHC	Kasperske Hory	155.52	342	ePKPab	PKPab	11 24 49.5	+0.1
GERES	GERESS Array B	155.75	342	PKPab	PKPab	11 24 49.5	-0.9
	comp=Z,0.6nm,0.6s,baz=37,slow=6.9,SNR=4.8						
TORD	Torodi Ar. Bea	166.98	177	PKP	PKPdf	11 24 34.5	-1.3
	comp=Z,1.0nm,0.9s,baz=311,slow=0.8,SNR=5.4						
TORD				PKPab	PKPab	11 25 39.9	-0.3
	comp=Z,1.1nm,0.8s,baz=165,slow=3.8,SNR=5.4						

*ISCJB **09** 11:10:34.2±2.3, 254S±0.1×1776W±02, h126^{km}±19^{km}, mb4.0/9, Error ellipse: s-maj=23.7km s-min=20.0km az=161.8*
*IDC **09** 11:10:35.2±3.0, 2538S×17752W, h122^{km}±26^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.9/18, mbtmp3.9/11, Error ellipse: s-maj=24.1km s-min=21.0km az=95.0*
*NEIC **09** 11:10:38.4±3.6, 2570S×17786W, h123^{km}±18^{km}, mb3.8/2, Error ellipse: s-maj=50.8km s-min=16.7km az=51.0*
ISC 09 11:10:34.9±2.3, 255S±01×1775W±02, h119^{km}±19^{km}, n24, σ0^{s}76/23, mb4.0/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.79	186	P	Pn	11 11 31.7	+0.1
	124nm,0.3s,baz=61,slow=22,SNR=3.2						
RAO				S	Sn	11 12 19.3	+3.8
	402nm,0.3s,baz=87,slow=22,SNR=5.0						
RAO	Raoul Island	3.79	186	P	Pn	11 11 31.7	+0.1
RAO				S	Sn	11 12 19.3	+3.8
URZ	Urewera	13.55	198	P	Pn	11 13 41.5	-0.7
	0.2nm,0.3s,baz=167,slow=15,SNR=1.8						
URZ				S	Sn	11 15 59.0	-13
	2.5nm,0.3s,baz=158,slow=23,SNR=11						
RPZ	Rata Peaks	20.47	204	P	P	11 15 02.2	-0.9
	4.6nm,0.5s,baz=160,slow=15,SNR=2.5						
RPZ				S	S	11 18 31.5	-14
	4.1nm,0.6s,baz=56,slow=16,SNR=5.3						
RPZ	Rata Peaks	20.47	204	P	P	11 15 02.1	-0.9
RPZ				S	S	11 18 31.5	-14
CTA	Charters Tower	33.79	272	P	P	11 17 05.8	+0.1
	1.0nm,0.3s,mb4.1,baz=249,slow=9.6,SNR=3.8						
CTAO	Charters Tower	33.79	272	P	P	11 17 05.8	+0.2
	1.2nm,0.4s,mb4.1						
ASAR	Alice Springs	44.05	262	P	P	11 18 31.3	+0.2
	0.9nm,0.4s,mb3.9,baz=92,slow=7.6,SNR=28						
WRAB	Tennant Creek	44.59	267	eP	P	11 18 36.0	+0.6
	0.4nm,0.4s,mb3.5						
WRAB				epP	pP	11 19 04.0	+1.3
VNDA	Vanda	53.03	186	P	P	11 19 40.6	+1.5
	0.9nm,0.7s,mb3.9,baz=5.5,slow=10.0,SNR=4.1						
MAW	Mawson	77.08	200	P	P	11 22 15.2	+0.6
	4.9nm,0.5s,mb4.5,baz=147,slow=7.4,SNR=13						
KSRS	Korea Array	80.92	319	P	P	11 22 35.2	-0.7
	1.5nm,0.6s,mb4.0,baz=120,slow=39,SNR=5.1						
PETK	Petropavlovsk-	81.17	345	P	P	11 22 36.8	0.0
	4.0nm,0.6s,mb4.4,baz=128,slow=5.8,SNR=7.5						
VNA3	Neumayer Olymp	83.18	176	e	P	11 22 46.5	-0.8
VNA3				e		11 22 49.6	
VNA2	Neumayer--Watz	83.62	177	e	P	11 22 49.4	-0.2
	baz=191,slow=2.9						
VNA2				e		11 22 52.3	
VNA1	Neumayer--Stat	83.85	176	e	P	11 22 50.5	-0.2
VNA1				e		11 22 52.7	
NVAR	Mina Array Bea	84.31	43	P	P	11 22 54.6	+1.1
	1.5nm,0.6s,mb4.0,baz=226,slow=8.8,SNR=11						
PDAR	Pinedale Array	92.24	43	P	P	11 23 30.4	-0.8
	0.5nm,0.6s,mb3.9,baz=222,slow=2.0,SNR=6.0						
ARCES	ARCESS Array B	133.86	349	PKP	PKPdf	11 29 37.3	+0.3
	1.2nm,0.8s,baz=48,slow=1.5,SNR=3.9						
NB2	NORSAR Subarra	143.94	353	PKP	PKPdf	11 29 53.0	-2.6
	comp=Z,0.8nm,0.5s,baz=7.6,slow=3.4						
NOA	NORSAR Array B	143.94	353	PKP	PKPdf	11 29 53.1	-2.5
	comp=Z,1.6nm,0.8s,baz=1.5,slow=2.2,SNR=6.3						
AKASG	Malin Array Be	147.51	328	PKP	PKPdf	11 29 59.1	-3.0
	comp=Z,1.0nm,0.4s,baz=45,slow=4.1,SNR=2.2						
AKASG				PKPbc	PKPbc	11 30 03.6	-1.1
	comp=Z,1.1nm,0.4s,baz=42,slow=3.6,SNR=7.2						
BRTR	Keskin Array B	150.34	306	PKPbc	PKPbc	11 30 12.1	-0.2
	comp=Z,0.3nm,0.5s,baz=115,slow=5.1,SNR=2.6						
TORD	Torodi Ar. Bea	167.72	176	PKP	PKPdf	11 30 26.7	-1.1
	comp=Z,0.4nm,0.9s,baz=225,slow=1.1,SNR=2.4						
TORD				PKPab	PKPab	11 31 33.8	-0.8
	comp=Z,0.7nm,0.8s,baz=177,slow=4.1,SNR=3.9						

*ISCJB **09** 11:15:35.0±0.8, 1408N±006×9208W±005, h58^{km}±18^{km}, Error ellipse: s-maj=11.9km s-min=6.6km az=30.0*
*CASC **09** 11:15:36.9±1.4, 1420N×9190W, h66^{km}±17^{km}, MD3.8*
*NEIC **09** 11:15:36.4, 1401N×92.10W, h38^{km}, MD4.1(MEX), After MEX.*
*MEX **09** 11:15:36.4±0.4, 1401N×92.10W, h38^{km}±21^{km}, MD4.1*
ISC 09 11:15:36.5±0.8, 1411N±007×9203W±005, h42^{km}±32^{km}, n22, σ1^{s}09/27, 4C-4D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.43	62	⇑eP	Pn	11 15 47.7	+1.2
THIG		0.82	344	iP	Pn	11 15 50.9	-0.9
THIG				iS	Sn	11 16 02.5	-0.2
FUG	Fuego 3	1.20	74	⇓iP	Pn	11 15 56.1	-0.7
PCG	Pacaya	1.41	78	⇓eP	Pn	11 15 59.5	-0.2
PCG				eS	Sn	11 16 16.2	-0.9
NBG	Las Nubes	1.70	74	eP	Pn	11 16 04.9	+1.2
PCIG		1.96	324	iP	Pn	11 16 06.6	-0.7
PCIG				iS	Sn	11 16 29.0	-1.6
CCIG	Comitan	2.16	357	iP	Pn	11 16 10.3	+0.2
CCIG				iS	Sn	11 16 35.9	+0.3
RBDL	Robledal	2.27	90	⇓eP	x	11 16 11.2	
RBDL				eS	x	11 16 37.6	
RTR	El Retiro	2.32	95	⇑eP	x	11 16 11.2	
RTR				eS	x	11 16 40.0	
SBLS	San Blas	2.35	96	⇓eP	x	11 16 11.9	
SBLS				eS	x	11 16 39.9	
SNJE	San Jose	2.37	96	⇑eP	x	11 16 12.4	
SNJE				eS	x	11 16 40.7	
SCX	San Cristobal	2.67	347	eP	Pn	11 16 16.7	-0.4
SCX				iS	Sn	11 16 49.7	+1.4
BOQS	Boqueron	2.70	98	⇑eP	x	11 16 16.9	
BOQS				eS	x	11 16 48.5	
TGIG		2.85	338	iP	Pn	11 16 19.3	-0.2
TGIG				iS	Sn	11 16 53.2	+0.5
SNVI	San Vicente	3.14	99	eP	x	11 16 23.2	
SNVI				eS	x	11 16 59.2	
CMIG	Matias Romero	4.04	318	iP	Pn	11 16 35.3	-0.6
CMIG				iS	Sn	11 17 21.3	-0.7
CNCH	Conchagua	4.16	101	eP	x	11 16 37.0	
CNCH				eS	x	11 17 24.1	
HUIG	Huatulco	4.27	293	eP	Pn	11 16 38.7	-0.4
HUIG				iS	Sn	11 17 24.5	-3.2
VHO	Vista Hermosa	5.40	304	eP	Pn	11 16 57.4	+2.8
VHO				iS	Sn	11 17 57.7	+2.1
PNIG	Pinotepa	6.31	292	eP	Pn	11 17 06.4	-0.6
PNIG				iS	Sn	11 18 20.8	+2.9
UTMO	Huajuapan	6.67	304	eP	Pn	11 17 11.7	-0.4
UTMO				iS	Sn	11 18 26.4	-0.4
PPM	Popocatepetl	8.02	309	eP	Pn	11 17 31.9	+1.4
PPM				iS	Sn	11 18 59.3	-0.6

*ISCJB **09** 11:31:39.5±3.3, 3044S±005×1772W±0.1, h10^{km}±20^{km}, mb4.0/5, Error ellipse: s-maj=20.7km s-min=8.5km az=5.2*
*IDC **09** 11:31:39.5±1.4, 3021S×177.14W, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx4.0/15, mbtmp4.0/5, ML3.5/1, Error ellipse: s-maj=27.2km s-min=24.6km az=65.0*
*NEIC **09** 11:31:40.7±0.8, 3049S×17699W, h10^{km}, Error ellipse: s-maj=18.4km s-min=12.0km az=106.0*
ISC 09 11:31:41.5±4.4, 3038S±006×1771W±01, h13^{km}±28^{km}, n10, σ1^{s}26/14, mb4.0/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.31	329	Pn	Pn	11 32 02.3	-3.3
	298nm,0.3s,baz=95,slow=22,SNR=5.9						
RAO				Sn	Sn	11 32 21.4	-1.6
	598nm,0.3s,baz=118,slow=22,SNR=8.6						
RAO	Raoul Island	1.31	329	ePn	Pn	11 32 06.4	+0.8
RAO				Sn	Sn	11 32 21.4	-1.6
URZ	Urewera	9.18	210	Pn	Pn	11 33 53.2	-0.5
	0.4nm,0.3s,baz=349,slow=5.4,SNR=3.4						
URZ				Sn	Sn	11 35 38.3	+1.5
	0.9nm,0.3s,baz=88,slow=19,SNR=6.6						
RPZ	Rata Peaks	16.28	212	Pn	Pn	11 35 28.1	-1.8
	0.5nm,0.3s,baz=25,slow=23,SNR=3.5						
RPZ				Sn	Sn	11 38 28.6	-1.7
	1.0nm,0.3s,baz=38,slow=14,SNR=8.6						
CTA	Charters Tower	34.53	279	P	P	11 38 32.2	+2.5
	1.9nm,0.5s,mb4.2,baz=128,slow=8.8,SNR=4.3						
STKA	Stephens Creek	35.20	257	P	P	11 38 36.4	+0.8
	0.6nm,0.3s,mb4.0,baz=93,slow=12,SNR=2.5						
ASAR	Alice Springs	43.85	267	P	P	11 39 48.1	+0.5
	1.1nm,0.7s,mb3.7,baz=103,slow=7.5,SNR=18						
WB2	Warramunga Arr	44.83	272	eP	P	11 39 56.3	+0.8
WB2				e		11 40 07.5	
NVAR	Mina Array Bea	87.73	42	P	P	11 44 29.9	0.0
	1.5nm,1.0s,mb4.2,baz=216,slow=8.4,SNR=6.7						
TXAR	Lajitas Array	91.76	57	P	P	11 44 48.8	-0.3
	0.6nm,1.1s,mb3.9,baz=204,slow=13,SNR=3.0						

*BJI **09** 11:32:08.0, 190N×9674E, h36^{km}, mB5.1, mb5.0, Ms4.7, Msz4.5*
*IDC **09** 11:32:10.0±3.4, 224N×9676E, h16^{km}±20^{km}, mb4.5/22, mb1 4.6/24, mb1mx4.5/28, mbtmp4.5/24, ML4.4/2, MS3.6/1, Ms1 3.6/1, ms1mx3.5/8, Error ellipse: s-maj=17.2km s-min=12.3km az=41.0*
*MOS **09** 11:32:10.3±1.2, 224N×9673E, h33^{km}, mb5.2/29, Error ellipse: s-maj=10.9km s-min=6.0km az=102.5*
*DJA **09** 11:32:11, 226N×9661E, h30^{km}, MLv4.9/6*
*ISCJB **09** 11:32:11.7±0.6, 221N±004×9671E±004, h43^{km}±5^{km}, mb4.9/77, MS4.6/6, Error ellipse: s-maj=7.5km s-min=4.8km az=44.2*
*NEIC **09** 11:32:12.8±0.2, 222N×9676E, h35^{km}, mb5.0/32, Error ellipse: s-maj=6.2km s-min=4.1km az=43.0*
ISC 09 11:32:13.9±0.6, 223N±004×9674E±004, h46^{km}±5^{km}, h34^{km}±1.1^{km}:pP-P, n178, σ1^{s}07/178, mb4.9/77, MS4.6/6, 16C-11D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.25	138	P	Pn	11 32 32.8	-2.1
TRSI	Tarutung	2.23	95	P	Pn	11 32 48.1	-0.3
PSI	Prapat	2.26	75	Pn	Pn	11 32 47.9	-0.9
	20nm,0.3s,baz=275,slow=8.0,SNR=68						
PSI				LR	LR	11 33 37.5	
	comp=Z,1µm,19.1s,baz=275,slow=40						
PSI	Prapat	2.26	75	Pn	Pn	11 32 47.9	-0.9
PSI				LR	LR	11 33 37.5	
BSI	Banda Aceh	3.55	336	P	Pn	11 33 03.9	-2.6
BSI				S	Sn	11 33 46.0	-1.3
PPI	Padang Panjang	4.53	126	P	Pn	11 33 20.0	0.0
IPM	Ipoh	4.83	62	⇓P	Pn	11 33 25.1	+1.0
IPM	Ipoh	4.83	62	P	Pn	11 33 23.8	-0.3
PDSI	Padang	4.86	130	P	Pn	11 33 26.3	+1.8
KULM	Kulim	4.95	52	⇑P	Pn	11 33 26.6	+0.8
FRIM	Kepong	4.99	78	⇓P	Pn	11 33 32.7	+6.4
KGM	Kluang	6.58	92	⇑P	Pn	11 33 49.1	+0.9
KTGM	Kuala Trenggan	7.09	64	⇓P	Pn	11 33 56.4	+1.3
KSI	Kapahiang	8.27	135	P	Pn	11 34 11.5	+0.1
KSM	Kuching	13.59	93	ePn	Pn	11 35 24.5	+0.3
	68nm,1.5s						
KSM	Kuching	13.59	93	⇓P	Pn	11 35 25.6	+1.4
SBUM	Sibu	15.47	89	⇓P	Pn	11 35 50.0	+0.7
CM31	Chiang Mai Arr	16.27	7	ePn	Pn	11 35 58.3	-1.1
CMAR	Chiang Mai Arr	16.27	7	Pn	Pn	11 35 57.9	-1.5
	1.6nm,0.3s,baz=198,slow=11,SNR=146						
CMAR				ScP	ScP	11 44 25.8	+3.1
	baz=210,slow=3.2,SNR=4.6						
BTM	Bintulu	16.36	86	⇓P	Pn	11 36 03.5	+2.9
CHG	Chiang Mai	16.62	7	⇓P	Pn	11 36 02.7	-1.1
	20nm,1.1s						
CHTO	Chiang Mai	16.62	7	eP	Pn	11 36 02.8	-1.0
CHTO				pmax	pmax		
	comp=Z,26nm,1.2s						
CHTO	Chiang Mai	16.62	7	ePn	Pn	11 36 02.8	-1.1
	comp=Z,26nm,1.2s						
PALK	Pallekele	16.74	288	ePn	Pn	11 36 04.4	-0.9

PALK Sn **Sn** **11 38 51.7 -19**
comp=Z,4.0nm,0.5s
CHRT Chiangrai 17.78 9 ⇓P **Pn** **11 36 18.0 -0.2**
comp=Z,242nm,0.8s
KKM Kota Kinabalu 19.79 78 ⇑P **Pn** **11 36 41.5 -1.0**
VIS Vishakhapatnam 20.25 320 *i* P **P** **11 36 49.5 +3.9**
VIS *i* S **S** **11 40 19.6 -11**
KDM Kudat 20.56 76 ⇓P **P** **11 36 49.6 +0.6**
SDKM Sandakan 20.69 80 ⇑P **P** **11 36 51.1 +0.7**
QIZ Qiongzhong 21.06 37 *eP* **P** **11 36 53.7 -0.6**
comp=Z,2.6nm,0.6s
TSM Tawau 21.20 84 ⇑P **P** **11 36 56.8 +0.9**
MYLDM Lahad Datu 21.91 82 ⇓P **P** **11 37 05.0 +1.4**
HYB Hyderabad 23.38 311 *i* P **P** **11 37 21.0 +2.1**
HYB Hyderabad 23.38 311 *eP* **P** **11 37 21.0 +2.1**
HYB *eS* **S** **11 41 20.0 -8.6**
KMI Kunming 23.49 14 P **P** **11 37 20.3 +0.5**
KMI AP 11 37 31.2
KMI XP sP 11 37 35.6 -1.3
KMI PP 11 37 55.1
KMI PPP 11 38 03.3
KMI S **S** **11 41 28.0 -2.1**
KMI XS sS 11 41 44.1 -6.0
KMI SS 11 42 20.3
KMI SSS 11 42 36.7
KMI AMB AMB
comp=Z,28nm,0.7s,mb4.8
KMI AMB AMB
comp=Z,250nm,7.1s
KMI LR LR
comp=N,640nm,15.2s,MS4.3
KMI LR LR
comp=E,617nm,17.0s,MS4.3
KMI LR LR
comp=Z,2μm,45.2s
SHL Shillong 23.67 349 *eP* **P** **11 37 22.0 +0.6**
SHL *eS* **S** **11 41 32.0 -1.0**
KAPI Kappang 24.09 107 P **P** **11 37 24.3 -1.2**
comp=Z,9.5nm,0.6s,mb4.4,baz=302,slow=8.2,SNR=5.3
GYA Guiyang 25.91 21 ⇑*iP* **P** **11 37 42.9 +1.1**
GYA AP pP 11 37 53.2 -0.6
GYA XP sP 11 37 57.4 -1.9
GYA PP 11 38 25.7
GYA PPP 11 38 36.5
GYA PCP PcP 11 41 12.3 +2.3
GYA S **S** **11 42 10.9 +2.0**
GYA XS sS 11 42 26.9 -2.3
GYA SS 11 43 16.5
GYA SCP ScP 11 44 46.2 +0.2
GYA AMB AMB
comp=Z,20nm,0.7s,mb4.8
GYA AMB AMB
comp=Z,420nm,7.3s
GYA LR LR
comp=N,430nm,10.2s,MS4.4
GYA LR LR
comp=E,340nm,10.6s,MS4.4
GYA LR LR
comp=Z,460nm,12.5s,MS4.2
ODAN Odare 26.08 341 *eP* **P** **11 37 44.0 +0.6**
comp=Z,52nm,0.5s,mb5.3
RAMN Ramite 26.43 339 *eP* **P** **11 37 47.6 +1.1**
comp=Z,86nm,0.8s,mb5.3
TAPN Taplejung 26.43 342 *eP* **P** **11 37 46.8 +0.3**
comp=Z,87nm,0.9s,mb5.3
JIRN Jiri 27.23 339 *eP* **P** **11 37 54.2 +0.5**
comp=Z,104nm,0.8s,mb5.4
PKI Pulchoki 27.43 338 *eP* **P** **11 37 56.4 +0.9**
comp=Z,21nm,0.6s,mb4.8
PKIN Phulchoki 27.44 338 *eP* **P** **11 37 56.4 +0.8**
GUN Gumba 27.57 339 *eP* **P** **11 37 57.4 +0.7**
comp=Z,76nm,0.6s,mb5.5
DMN Daman 27.58 337 *eP* **P** **11 37 57.6 +0.7**
comp=Z,28nm,0.6s,mb5.1
KKN Kakani 27.68 338 *eP* **P** **11 37 58.3 +0.6**
comp=Z,63nm,0.9s,mb5.2
KKN Kakani 27.68 338 *eP* **P** **11 37 58.3 +0.6**
KKN pmax pmax
comp=Z,63nm,0.9s,mb5.2
LSA Lhasa 27.83 350 P **P** **11 38 00.2 +1.1**
LSA AMB AMB
comp=Z,30nm,0.9s,mb4.9
LSA Lhasa 27.83 350 *eP* **P** **11 37 59.9 +0.8**
LSA pmax pmax
comp=Z,21nm,0.8s,mb4.8
LSA Lhasa 27.83 350 *eP* **P** **11 37 59.9 +0.8**
comp=Z,21nm,0.8s,mb4.8
GKN Gorkha 28.12 337 *eP* **P** **11 38 01.7 +0.1**
KOLN Koldanda 28.33 335 *eP* **P** **11 38 04.6 +1.0**
comp=Z,64nm,0.7s,mb5.4
DANN Dangsing 28.78 336 *eP* **P** **11 38 08.2 +0.7**
comp=Z,43nm,0.6s,mb5.4
CD2 Chengdu 29.29 12 *eP* **P** **11 38 10.8 -1.2**
CD2 AP pP 11 38 20.3 -3.8
CD2 XP sP 11 38 24.3 -5.3
CD2 PP PP 11 39 07.5 -11
CD2 PCP PcP 11 41 15.3 -2.8
CD2 S **S** **11 43 01.8 -0.3**
CD2 XS sS 11 43 17.8 -4.6
CD2 SS SS 11 44 36.3 -32
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
CD2 AMB AMB
comp=Z,130nm,6.6s
CD2 LR LR
comp=N,1μm,14.2s,MS4.7
CD2 LR LR
comp=E,940nm,16.2s,MS4.7
CD2 LR LR
comp=Z,1μm,16.6s,MS4.6
BATI Baumata 29.52 115 P **P** **11 38 12.0 -2.3**
comp=Z,8.2nm,0.3s,mb4.9,baz=256,slow=7.9,SNR=4.1
MBWA Marble Bar 32.36 137 *eP* **P** **11 38 39.9 +0.7**
comp=Z,4.0nm,0.6s,mb4.4
XAN Xi'an 33.63 18 P **P** **11 38 48.2 -2.0**
XAN AP pP 11 38 58.0 -4.4
XAN PP PP 11 40 08.0 +1.0
XAN S **S** **11 44 12.8 +2.9**
XAN AMB AMB
comp=Z,19nm,0.6s,mb5.2
XAN LR LR
comp=E,846nm,48.4s
XAN LR LR
comp=Z,903nm,42.6s
LZH Lanzhou 34.33 10 *eP* **P** **11 38 56.0 -0.2**
LZH AP pP 11 39 05.5 -2.9
LZH XP sP 11 39 10.0 -3.8
LZH PP PP 11 40 12.5 -2.2
LZH *eS* **S** **11 44 21.9 +1.4**
LZH XS sS 11 44 36.3 -4.7
LZH SS SS 11 46 33.3 -17
LZH AMB AMB
comp=Z,34nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,140nm,4.5s
LZH LR LR
comp=E,875nm,14.3s
LZH LR LR
comp=Z,1μm,15.5s,MS4.8
FITZ Fitzroy Crossi 34.91 127 *eP* **P** **11 38 59.9 -1.6**
comp=Z,10nm,0.7s,mb4.9
NJ2 Nanjing 36.24 33 *eP* **P** **11 39 15.4 +2.6**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
GTA Gaotai 37.11 4 P **P** **11 39 19.3 -0.7**
GTA AP pP 11 39 28.7 -3.6
GTA XP sP 11 39 32.9 -4.8
GTA AMB AMB
comp=Z,69nm,0.8s,mb5.5
KAKA Kakadu 38.43 114 *eP* x 11 39 10.6
comp=Z,18nm,0.7s
HHC Hu-ho-hao-te 40.71 17 *eP* **P** **11 39 50.1 -0.1**
HHC AP pP 11 39 59.8 -2.8
HHC XP sP 11 40 03.9 -4.0
HHC PCS PcS 11 45 40.0 -1.7
HHC *eS* **S** **11 45 57.9 +0.6**
HHC XS sS 11 46 14.3 -3.8
HHC SS SS 11 48 55.1 -4.3
HHC SCS ScS 11 49 50.3 -1.4
HHC AMB AMB
comp=Z,19nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,333nm,6.7s
HHC LR LR
comp=N,684nm,20.2s,MS4.6
HHC LR LR
comp=E,582nm,19.0s,MS4.6
HHC LR LR
comp=Z,2μm,28.5s
BJT Baijiatuau 41.55 23 *eP* **P** **11 39 57.7 +0.7**
BJT pmax pmax
comp=Z,20nm,0.4s
BJT Baijiatuau 41.55 23 *eP* **P** **11 39 57.7 +0.7**
comp=Z,20nm,0.4s,mb5.1
BJI Beijing 41.57 23 P **P** **11 39 58.4 +1.2**
BJI AMB AMB
comp=Z,37nm,0.7s,mb5.1
WMQ Urumqi 42.19 350 P **P** **11 40 02.8 +0.6**
WMQ AMB AMB
comp=Z,10.0nm,1.3s,mb4.3
WMQ AMB AMB
comp=Z,114nm,11.0s
WRAB Tennant Creek 42.98 123 ⇑*iP* **P** **11 40 07.8 -1.2**
WRAB Tennant Creek 42.98 123 *eP* **P** **11 40 07.3 -1.7**
comp=Z,16nm,0.9s,mb4.8
DL2 Dalian 43.00 29 P **P** **11 40 09.0 +0.1**
DL2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
ULHL Ulahol 43.87 338 P **P** **11 40 17.1 +1.2**
SNR=20
KZA Kyzart 44.11 337 P **P** **11 40 19.1 +1.3**
SNR=7.4
ASAR Alice Springs 44.38 128 P **P** **11 40 19.6 -0.6**
comp=Z,6.1nm,0.8s,mb4.4,baz=301,slow=8.0,SNR=39
ASAR ScP ScP 11 45 55.0 +2.8
comp=Z,0.8nm,0.9s,baz=319,slow=5.1,SNR=4.3
TKM2 Tokmak 2 44.70 338 *eP* **P** **11 40 23.7 +1.3**
TKM2 pmax pmax
comp=Z,32nm,1.1s,mb5.1
TKM2 Tokmak 2 44.70 338 P **P** **11 40 22.9 +0.5**
SNR=22
TKM2 Tokmak 2 44.70 338 *eP* **P** **11 40 23.7 +1.2**
comp=Z,32nm,1.1s,mb5.1
KBK Kagaybulak 44.72 337 P **P** **11 40 24.7 +2.1**
SNR=23
AML Almayashu 44.78 336 P **P** **11 40 24.5 +1.4**
SNR=16
AAK Ala-Archa 44.88 337 *eP* **P** **11 40 25.3 +1.4**
AAK pmax pmax
comp=Z,53nm,1.6s,mb5.1
AAK Ala-Archa 44.88 337 P **P** **11 40 25.6 +1.7**
SNR=8.9
AAK Ala-Archa 44.88 337 *eP* **P** **11 40 25.3 +1.5**
comp=Z,53nm,1.6s,mb5.1
FRU Bishkek 45.00 337 *eP* **P** **11 40 26.0 +1.2**
FRU *e* pP 11 40 36.0 -1.4
CHMS Chumysh 45.08 337 P **P** **11 40 26.1 +0.6**
SNR=7.5
EKS2 Erkin-Say 45.19 336 P **P** **11 40 27.8 +1.5**
SNR=17
EKS2 Erkin-Say 45.19 336 *eP* **P** **11 40 27.6 +1.3**
comp=Z,16nm,0.8s,mb4.9
KSRS Korea Array 45.28 35 P **P** **11 40 26.4 -0.8**
comp=Z,9.7nm,0.8s,mb4.7,baz=228,slow=9.0,SNR=39
USP Ospenovka 45.41 337 P **P** **11 40 28.5 +0.4**
SNR=27
MK31 Makanchi Array 46.14 346 *i* P **P** **11 40 33.8 0.0**
MK31 pmax pmax
comp=Z,18nm,0.5s,mb5.3
MKAR Makanchi Array 46.14 346 P **P** **11 40 33.6 -0.2**
comp=Z,32nm,0.7s,mb5.4,baz=162,slow=7.5,SNR=172
SONM Songino Array 46.19 9 P **P** **11 40 34.1 -0.1**
comp=Z,26nm,1.0s,mb5.1,baz=189,slow=7.7,SNR=99
SONM PcP PcP 11 42 10.4 +1.0
comp=Z,2.7nm,0.6s,baz=193,slow=3.8,SNR=8.0
ULN Ulaanbaatar 46.33 10 *eP* **P** **11 40 35.7 +0.5**
ULN pmax pmax
comp=Z,15nm,1.0s,mb4.9
ULN Ulaanbaatar 46.33 10 *eP* **P** **11 40 35.7 +0.4**
comp=Z,15nm,1.0s,mb4.9
KK31 Karatay Array 46.93 334 *eP* **P** **11 40 40.3 +0.2**
KK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
ZAK Zakamensk 48.30 6 *eP* **P** **11 40 48.1 -2.4**
ZAK *e* 11 42 35.9
ZAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CN2 Changchun 48.61 28 *eP* **P** **11 40 51.9 -1.1**
CN2 *eS* **S** **11 47 51.6 -0.1**
CN2 AMB AMB
comp=Z,10.0nm,1.3s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
MOY Mondy 49.39 3 *eP* **P** **11 40 59.7 +0.8**
TLY Talaya 49.62 6*c iP* **P** **11 41 01.2 +0.6**
TLY pmax pmax
comp=Z,13nm,0.9s,mb5.0
KURK Kurchatov 50.68 345 P **P** **11 41 08.2 -0.5**
comp=Z,25nm,0.6s,mb5.3,baz=165,slow=7.0,SNR=87
KURK Kurchatov 50.68 345 ⇑*eP* **P** **11 41 08.8 +0.1**
KURK pmax pmax
comp=Z,36nm,1.2s,mb5.2
KURK Kurchatov 50.68 345 *eP* **P** **11 41 08.5 -0.2**
comp=Z,25nm,0.9s,mb5.1
HIA Hailar 50.82 19 *eP* **P** **11 41 10.1 +0.3**
HIA pmax pmax
comp=Z,12nm,0.9s
HIA Hailar 50.82 19 *eP* **P** **11 41 10.1 +0.3**
comp=Z,12nm,0.9s,mb4.8
MDJ Mudanjiang 51.20 30 P **P** **11 41 13.4 +0.6**
MDJ AP pP 11 41 21.7 -3.8
MDJ XP sP 11 41 25.8 -5.0
MDJ PP PP 11 43 09.4 -0.6
MDJ PCS PcS 11 46 25.8 +0.6
MDJ S **S** **11 48 28.3 +0.4**
MDJ SS SS 11 52 07.0 +3.1
MDJ AMB AMB
comp=Z,12nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,140nm,5.0s
MAJO Matsushiro 51.25 43 *eP* **P** **11 41 13.0 -0.3**
MAJO pmax pmax
comp=Z,241nm,2.5s,mb5.7
MAJO Matsushiro 51.25 43 *eP* **P** **11 41 13.0 -0.3**
comp=Z,241nm,2.5s,mb5.7
MAT Matsushiro 51.25 43 P **P** **11 41 11.7 -1.6**
MJAR Matsushiro Arr 51.26 43 P **P** **11 41 12.9 -0.4**
comp=Z,5.3nm,1.0s,mb4.4,baz=225,slow=6.6,SNR=52
PMG Port Moresby 51.55 104 *eP* **P** **11 41 15.6 -0.2**
PMG pmax pmax
comp=Z,20nm,0.8s
PMG Port Moresby 51.55 104 *eP* **P** **11 41 15.6 -0.3**
comp=Z,20nm,0.8s,mb5.1
ZAA0 Zalesovo Array 52.48 351 *eP* **P** **11 41 21.9 -0.1**
ZALV Zalesovo Beam 52.48 351 P **P** **11 41 21.9 -0.2**
comp=Z,50nm,0.7s,mb5.5,baz=180,slow=7.2,SNR=89
OPO Ambohidratompo 52.93 245 P **P** **11 41 27.0 +0.9**
comp=Z,18nm,0.9s,mb4.0,baz=63,slow=9.0,SNR=4.7
CTA Charters Tower 53.38 117 *eP* **P** **11 41 29.4 +0.1**
comp=Z,6.1nm,0.8s,mb4.6
CTA Charters Tower 53.38 117 P **P** **11 41 29.3 0.0**
comp=Z,7.1nm,0.8s,mb4.7,baz=296,slow=7.1,SNR=9.3
CTA Charters Tower 53.38 117 *eP* **P** **11 41 29.4 +0.1**
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTAO Charters Tower 53.38 117 *eP* **P** **11 41 29.5 +0.2**
CTAO *e**PP pP 11 41 39.0 -3.1
CTAO *e**SP sP 11 41 44.1 -3.3
CTAO pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CTAO Charters Tower 53.38 117 *eP* **P** **11 41 29.5 +0.2**
comp=Z,9.5nm,1.0s,mb4.7
CTAO *ep*P pP 11 41 39.0 -3.1
CTAO *es*P sP 11 41 44.1 -3.3
NVS Novosibirsk 53.59 350 *i* P **P** **11 41 28.6 -1.6**
NVS *eS* **S** **11 48 56.4 -3.8**
NVS pmax pmax
comp=N,17nm,0.8s
NVS pmax pmax
comp=Z,22nm,0.8s,mb5.1
NVS pmax pmax
comp=E,11nm,0.7s
NVS smax
comp=N,13nm,1.7s
KRAR Krasnoyarsk 53.71 357 ⇑*iP* **P** **11 41 28.5 -2.6**
KRAR pmax pmax
comp=Z,17nm,0.4s,mb5.3
STKA Stephens Creek 54.39 132 *eP* **P** **11 41 36.9 +0.4**
comp=Z,4.9nm,0.8s,mb4.5
STKA Stephens Creek 54.39 132 P **P** **11 41 36.2 -0.3**
comp=Z,4.2nm,0.9s,mb4.4,baz=280,slow=10,SNR=3.0
VOSK Vostochnaya 54.68 341 P **P** **11 41 37.8 -0.4**
VOSK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
BVAR Borovoye Array 55.13 341 P **P** **11 41 41.2 -0.3**
comp=Z,9.8nm,0.6s,mb5.0,baz=145,slow=9.2,SNR=46
BRVK Borovoye 55.19 341 *eP* **P** **11 41 41.6 -0.3**
BRVK pmax pmax
comp=Z,13nm,0.8s,mb5.0
BRVK Borovoye 55.19 341 *eP* **P** **11 41 41.6 -0.3**
comp=Z,13nm,0.8s,mb5.0
KLR Kul'dur 55.55 27 *eP* **P** **11 41 40.1 -4.5**
KLR pmax pmax
comp=Z,56nm,1.8s,mb5.3
KLR MLR MLR
comp=N,900nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s,MS5.1
AB31 Akbulak array 56.39 332 P **P** **11 41 49.9 -0.7**
AB31 pmax pmax
comp=Z,19nm,0.8s,mb5.2
HABR Khabarovsk 56.59 30 *eP* **P** **11 41 49.5 -2.5**
HABR *e* 11 42 44.8
HABR *e* 11 43 55.9
HABR *e*PPP 11 45 12.5
HABR *eS* **S** **11 49 35.8 -4.9**
HABR *e* 11 51 30.7
HABR *e*SS SS 11 53 25.3 -3.5
BOD Bodaibo 57.09 11 *eP* **P** **11 41 54.3 -1.1**
BOD pmax pmax
comp=Z,10.0nm,1.7s,mb4.6
AKTK Aktyubinsk 58.11 332 P **P** **11 42 02.3 -0.4**
AKTO Aktyubinsk 58.11 332 P **P** **11 42 02.3 -0.4**
comp=Z,7.9nm,0.6s,mb4.9,baz=143,slow=8.3,SNR=15
SVE Sverdlovsk 61.57 338 ⇑*eP* **P** **11 42 26.7 +0.4**
SVE pmax pmax
comp=Z,27nm,1.0s,mb5.3
ARU Arti 62.06 337*c iP* **P** **11 42 29.2 -0.4**
ARU *e* 11 44 47.3
ARU *e*PPP 11 46 12.4
ARU *eS* **S** **11 50 50.0 -1.0**
ARU *e*SS SS 11 54 52.6 -1.8
ARU pmax pmax
comp=Z,15nm,1.0s,mb5.1
ARU Arti 62.06 337 *eP* **P** **11 42 29.5 -0.1**
comp=Z,9.1nm,0.8s,mb5.0
YAK Yakutsk 64.57 16 ⇑*eP* **P** **11 42 45.4 -0.7**
YAK pmax pmax
comp=Z,55nm,1.0s,mb5.5
YAK Yakutsk 64.57 16 *eP* **P** **11 42 45.3 -0.8**
comp=Z,39nm,0.7s,mb5.5
SOC Sochi 65.05 318 *eP* **P** **11 42 47.3 -2.3**
SOC *e**SP sP 11 43 14.4 +6.4
SOC *e* 11 45 15.6
SOC *eS* S 11 51 22.6 -6.1
SOC *e* 11 52 33.3
SOC *eSS* SS 11 55 39.1 -2.5
SOC *eSSS* 11 58 40.2
SOC pmax pmax
comp=Z,545nm,0.8s
ANN Anapa 67.03 318 *eP* **P** **11 42 58.1 -4.2**
ANN pmax pmax
comp=Z,18nm,1.0s,mb5.1
BR131 Keskin Array S 68.08 312 *eP* **P** **11 43 08.9 -0.1**
comp=Z,3.7nm,0.7s,mb4.5
BRTR Keskin Array B 68.08 312 P **P** **11 43 08.8 -0.2**
comp=Z,1.8nm,0.8s,mb4.2,baz=133,slow=6.5,SNR=8.2
PETK Petropavlovsk- 71.14 34 P **P** **11 43 27.8 +0.1**
comp=Z,2.6nm,0.8s,mb4.2,baz=197,slow=4.5,SNR=4.2
MOS Moscow 71.22 329 *eP* **P** **11 43 26.5 -1.6**
OBN Obninsk 71.50 328⇓*eP* **P** **11 43 29.7 -0.1**
OBN *e* 11 43 37.2
OBN *i* *PP pP 11 43 51.2 +8.1
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
TIXI Tiksi 72.26 10 ⇑*eP* **P** **11 43 33.4 -0.6**
TIXI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TIXI Tiksi 72.26 10 *eP* **P** **11 43 33.1 -0.9**
comp=Z,9.1nm,0.8s,mb4.8
KLMR Klimovskoe 72.63 334 P **P** **11 43 34.1 -2.3**
KLMR pmax pmax
comp=Z,15nm,1.3s,mb4.8
AKASG Malin Array Be 74.16 322 P **P** **11 43 44.8 -0.9**
comp=Z,3.6nm,0.6s,mb4.5,baz=94,slow=5.1,SNR=12
KIEV Kiev 74.17 322 *eP* **P** **11 43 44.6 -1.1**
KIEV pmax pmax
comp=Z,13nm,1.3s,mb4.7
KIEV Kiev 74.17 322 *eP* **P** **11 43 44.6 -1.1**
comp=Z,13nm,1.3s,mb4.7
BOSA Boshof 74.89 240 P **P** **11 43 50.6 +0.2**
comp=Z,1.6nm,0.8s,mb4.0,baz=31,slow=7.1,SNR=3.6
BUR08 Bucovina Ar. S 75.97 319 *eP* **P** **11 43 57.3 +1.1**
BILL Bilibino 80.37 21 ⇑*iP* **P** **11 44 18.4 -1.7**
BILL pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
ARCES ARCESS Array B 81.42 340 P **P** **11 44 25.4 -0.2**
comp=Z,2.2nm,0.6s,mb4.3,baz=95,slow=6.2,SNR=18
ARCES ARCESS Array B 81.42 340 P **P** **11 44 25.4 -0.2**
DPC Dobruska-Polom 82.17 320 *eP* **P** **11 44 31.0 +1.0**
GERES GERESS Array B 83.74 319 P **P** **11 44 38.5 +0.4**
comp=Z,1.9nm,0.6s,mb4.4,baz=98,slow=5.5,SNR=15
KHC Kasperske Hory 83.84 319 *eP* **P** **11 44 39.4 +0.7**
KHC *ex* x 11 44 47.3
NKC Novy Kostel 84.64 320 *eP* **P** **11 44 41.6 -1.1**
NB2 NORSAR Subarra 85.89 331 P **P** **11 44 48.4 -0.3**
comp=Z,3.7nm,0.8s,mb4.7,baz=96,slow=5.1
NOA NORSAR Array B 85.89 331 P **P** **11 44 48.4 -0.3**
comp=Z,1.0nm,0.6s,mb4.2,baz=255,slow=3.2,SNR=4.9
NOA NORSAR Array B 85.89 331 P **P** **11 44 48.4 -0.3**
FALS False Pass 93.86 35 *eP* PP 11 49 20.7 +8.5
TORD Torodi Ar. Bea 94.40 283 P **P** **11 45 30.9 +1.2**
comp=Z,0.6nm,0.9s,mb4.0,baz=98,slow=4.8,SNR=2.4
HRY Holter Researc 125.16 24 *ePKPdf* PKPdf 11 51 09.7 0.0
HRY *ePP* PP 11 53 04.6 +6.2
NVAR Mina Array Bea 128.22 35 PKP PKPdf 11 51 16.9 +1.2
comp=Z,0.8nm,0.6s,baz=308,slow=2.4,SNR=7.2
NVAR Mina Array Bea 128.22 35 PKP PKPdf 11 51 16.9 +1.2
SNOW Snow King Moun 128.24 25 *ePKPdf* PKPdf 11 51 17.1 +1.4
PDAR Pinedale Array 129.31 25 PKP PKPdf 11 51 17.9 +0.2
comp=Z,0.7nm,0.6s,baz=200,slow=1.6,SNR=7.7
ANMO Albuquerque 137.09 28 *iPKIKP* PKPdf 11 51 34.1 +1.5
ANMO Albuquerque 137.09 28 *ePKPdf* PKPdf 11 51 33.8 +1.3
WMOK Wichita Mounta 140.45 20 *ePP* PP 11 54 28.7 -7.5
TXAR Lajitas Array 143.03 30 PKHKP 11 51 39.3
comp=Z,0.7nm,0.6s,baz=281,slow=1.1,SNR=12
TXAR PKP PKPdf 11 51 41.3 -2.2
comp=Z,0.7nm,0.7s,baz=285,slow=1.8,SNR=12
JCT Junction City 143.85 25 *ePKIKP* PKPdf 11 51 43.6 -1.3
NATX Nacogdoches 144.51 17 *ePKPdf* PKPdf 11 51 42.5 -3.6
VBMS Vicksburg 145.06 11 *ePKPdf* PKPdf 11 51 47.3 +0.3
CPUP Villa Florida 145.44 224 PKPbc PKPbc 11 51 47.8 0.0
comp=Z,0.7nm,0.5s,baz=20,slow=1.0,SNR=5.9
CPUP Villa Florida 145.44 224 *ePKPbc* PKPbc 11 51 47.9 +0.2

*IDC **09** 11:32:59.9±4.3,2594S×17742W,h154km±28km,mb3.9/7, mb1 4.1/9,mb1mx3.8/18,mbtmp4.0/9, Error ellipse: s-maj=45.9km s-min=20.3km az=49.0*
*NEIC **09** 11:32:59.2±3.7,2590S×17735W,h151km±19km,mb4.5/4, Error ellipse: s-maj=48.8km s-min=14.6km az=47.0*
ISC 09 11:32:58.2±4.3,258S±02×1773W±03,h148km±25km,n19, σ0s57/20,mb4.2/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.45**	**189**	P	**Pn**	**11 33 51.1**	**-0.1**
	248nm,0.3s,baz=93,slow=21,SNR=2.6						
RAO				S	**Sn**	**11 34 32.2**	**-0.1**
	153nm,0.3s,baz=68,slow=23,SNR=3.6						
RAO	**Raoul Island**	**3.45**	**189**	P	**Pn**	**11 33 51.1**	**-0.1**
RAO				S	**Sn**	**11 34 32.2**	**-0.1**
URZ	**Urewera**	**13.27**	**200**	P	**Pn**	**11 36 00.9**	**+0.2**
	4.1nm,0.3s,baz=24,slow=20,SNR=15						
URZ				S	Sx	11 38 11.6	
	3.8nm,0.3s,baz=115,slow=21,SNR=8.1						
RPZ	**Rata Peaks**	**20.21**	**205**	P	**P**	**11 37 21.3**	**-0.1**
	3.4nm,0.6s,baz=180,slow=16,SNR=3.1						
RPZ				S	Sx	11 40 41.5	
	3.4nm,0.6s,baz=145,slow=19,SNR=7.3						
EIDS	**Eidsvold**	**28.50**	**264**	*eP*	**P**	**11 38 40.6**	**+0.8**
	2.6nm,0.6s,mb4.1						
CTA	**Charters Tower**	**33.99**	**272**	*eP*	**P**	**11 39 28.8**	**+0.9**
	6.9nm,0.7s,mb4.5						
CTA	**Charters Tower**	**33.99**	**272**	P	**P**	**11 39 28.8**	**+0.9**

	8.1nm,0.7s,mb4.5,baz=96,slow=10,SNR=12						
CTAO	**Charters Tower**	**33.99**	**272**	*e*P	**P**	**11 39 29.0**	**+1.1**
	7.7nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**36.36**	**251**	P	**P**	**11 39 47.5**	**-0.6**
	1.9nm,0.5s,mb4.0,baz=87,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**44.19**	**262**	P	**P**	**11 40 51.5**	**-1.1**
	3.5nm,0.8s,mb4.0,baz=96,slow=7.4,SNR=9.0						
WB2	**Warramunga Arr**	**44.75**	**267**	*e*P	**P**	**11 40 57.2**	**+0.1**
VNDA	**Vanda**	**52.68**	**186**	P	**P**	**11 41 57.9**	**+1.0**
	2.1nm,0.9s,mb3.9,baz=9.0,slow=4.2,SNR=6.2						
FITZ	**Fitzroy Crossi**	**53.16**	**266**	*e*P	**P**	**11 42 00.7**	**-0.5**
	6.0nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	**64.26**	**180**	P	**P**	**11 43 17.4**	**+0.5**
	3.3nm,0.7s,mb4.3,baz=30,slow=1.9,SNR=8.4						
MAW	**Mawson**	**76.79**	**200**	P	**P**	**11 44 32.9**	**-0.1**
	4.9nm,0.6s,mb4.3,baz=139,slow=11,SNR=13						
VNA3	**Neumayer Olymp**	**82.80**	**176**	*e*P	**P**	**11 45 04.6**	**-0.7**
VNA3				*e*		11 45 07.6	
VNA2	**Neumayer--Watz**	**83.24**	**177**	*e*P	**P**	**11 45 07.4**	**-0.2**
	baz=189,slow=2.4						
VNA1	**Neumayer--Stat**	**83.47**	**176**	*e*P	**P**	**11 45 08.7**	**-0.1**
VNA1				*e*		11 45 11.6	
BRTR	**Keskin Array B**	**150.71**	**306**	PKPbc	PKPbc	11 52 33.1	+0.2
	0.8nm,0.6s,baz=140,slow=4.0,SNR=4.2						
BRTR				PKPab	PKPab	11 52 41.6	+1.2
	0.8nm,0.7s,baz=90,slow=4.9,SNR=4.3						

*ISCJB **09** 11:38:43.6±2.9, 20.3S±0.2×177.8W±0.2, h551km±31km, mb4.0/9, Error ellipse: s-maj=36.2km s-min=32.5km az=11.9*
*IDC **09** 11:38:44.8±3.2, 20.35S×177.76W, h547km±41km, mb3.5/5, mb1 3.6/5, mb1mx3.2/17, mbtmp3.5/5, Error ellipse: s-maj=31.8km s-min=28.0km az=152.0*
*NEIC **09** 11:38:44.5±3.6, 20.30S×177.84W, h544km±34km, mb4.2/6, Error ellipse: s-maj=36.0km s-min=22.2km az=69.0*
ISC 09 11:38:44.0±2.8**, 20.3S**±0.2×**177.8W**±0.2**, h536**km±27km**, n17,** σ0s31/17**, mb4.0**/9**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.80**	**260**	*e*P	**P**	**11 41 51.7**	**+0.1**
	7.9nm,0.8s						
EIDS	**Eidsvold**	**29.08**	**254**	*e*P	**P**	**11 44 01.2**	**-0.1**
	3.2nm,0.6s,mb4.1						
ARMA	**Armidale**	**29.33**	**244**	*e*P	**P**	**11 44 03.9**	**+0.5**
CTA	**Charters Tower**	**33.69**	**264**	*e*P	**P**	**11 44 41.2**	**+0.4**
	11nm,0.4s,mb4.7						
CTA	**Charters Tower**	**33.69**	**264**	P	**P**	**11 44 41.3**	**+0.5**
	14nm,0.5s,mb4.8,baz=97,slow=10,SNR=31						
CTAO	**Charters Tower**	**33.69**	**264**	*e*P	**P**	**11 44 40.6**	**-0.2**
	10.0nm,0.6s,mb4.5						
COEN	**Coen**	**37.74**	**273**	*e*P	**P**	**11 45 14.2**	**-0.3**
	0.9nm,0.5s,mb3.6						
STKA	**Stephens Creek**	**38.05**	**244**	*e*P	**P**	**11 45 16.7**	**0.0**
	7.0nm,1.6s,mb3.9						
STKA	**Stephens Creek**	**38.05**	**244**	P	**P**	**11 45 16.7**	**0.0**
	1.1nm,0.4s,mb3.7,baz=78,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**44.74**	**256**	P	**P**	**11 46 09.9**	**+0.1**
	8.4nm,0.6s,mb4.5,baz=94,slow=7.7,SNR=120						
ASAR				S	**S**	**11 52 08.1**	**+0.3**
	0.8nm,0.8s,baz=94,slow=17,SNR=5.7						
WB2	**Warramunga Arr**	**44.80**	**262**	⇓*i*P	**P**	**11 46 09.8**	**-0.5**
WRAB	**Tennant Creek**	**44.80**	**262**	*e*P	**P**	**11 46 09.8**	**-0.5**
	3.3nm,0.3s,mb4.3						
KAKA	**Kakadu**	**48.15**	**271**	*e*P	x	11 46 16.6	
	8.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**53.23**	**262**	*e*P	**P**	**11 47 12.8**	**+0.1**
	3.7nm,0.4s,mb4.1						
QSPA	**South Pole Qui**	**69.80**	**180**	P	**P**	**11 48 59.9**	**0.0**
	0.8nm,0.6s,mb3.4,baz=83,slow=9.1,SNR=3.0						
QSPA	**South Pole Qui**	**69.80**	**180**	P	**P**	**11 48 59.9**	**0.0**
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**11 49 02.8**	**+0.3**
	1.2nm,0.5s,mb3.7,baz=153,slow=5.6,SNR=5.8						

*NEIC **09** 11:50:14.8, 16.32N×98.44W, h10km, MD4.2(MEX), After MEX.*
MEX 09 11:50:14.7±0.7**, 16.32N**×**98.44W, h9**km±4km**, MD4.2, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.31**	**77**	*i* P	Pg	11 50 20.3	-0.5
PNIG				*i* S	Sg	11 50 24.6	-0.4
ACX	**Acapulco**	**1.52**	**291**	*i* P	Pn	11 50 38.1	-4.0
ACX				*i* S	Sn	11 50 57.2	-4.8
UTMO	**Huajuapan**	**1.62**	**22**	*e*P	Pn	11 50 40.6	-2.8
UTMO				*i* S	Sn	11 50 60.0	-4.5
VHO	**Vista Hermosa**	**1.80**	**65**	*i* P	Pn	11 50 43.2	-2.7
VHO				*i* S	Sn	11 51 03.9	-5.0
OXX	**Oaxaca**	**1.81**	**65**	*i* P	Pn	11 50 43.2	-2.9
OXX				*i* S	Sn	11 51 04.5	-4.7
CAIG	**El Cayaco**	**1.89**	**293**	*i* P	Pn	11 50 43.9	-3.3
CAIG				*i* S	Sn	11 51 06.9	-4.3
MEIG	**Mezcala**	**1.95**	**325**	*e*P	Pn	11 50 44.7	-3.4
MEIG				*i* S	Sn	11 51 07.7	-5.0
PLIG	**Platanillo**	**2.29**	**334**	*e*P	Pn	11 50 51.7	-1.0
PLIG				*i* S	Sn	11 51 16.7	-4.4
HUIG	**Huatulco**	**2.31**	**103**	*i* P	Pn	11 50 50.0	-2.9
HUIG				*i* S	Sn	11 51 16.7	-4.8
TPIG	**Tehuac#an**	**2.33**	**26**	*e*P	Pn	11 50 51.0	-2.2
TPIG				*i* S	Sn	11 51 17.7	-4.2
YAIG	**Yautepec**	**2.60**	**347**	*e*P	Pn	11 50 53.9	-3.0
YAIG				*i* S	Sn	11 51 23.7	-4.9
PPM	**Popocatepetl**	**2.73**	**356**	*e*P	Pn	11 50 55.9	-2.9
PPM				*e*P		11 50 56.9	
PPM				*i* S	Sn	11 51 29.8	-2.2
PPM				*i* S	Sn	11 51 29.9	-2.1
PPM	**Popocatepetl**	**2.73**	**356**	*e*P	Pn	11 50 56.9	-1.9
PPM				*i* S	Sn	11 51 29.8	-2.2
MZVM		**2.95**	**345**	*i* P	Pn	11 51 05.5	+3.8
MZVM				*i* S	Sn	11 51 42.7	+5.4
UNM	**Universidad Na**	**3.07**	**347**	*e*P	Pn	11 51 09.3	+5.8
UNM				*i* S	Sn	11 51 42.6	+2.3
PBVM	**Pinon**	**3.16**	**349**	*e*P	Pn	11 51 02.2	-2.5
PBVM				*i* S	Sn	11 51 39.0	-3.6
PBVM	**Pinon**	**3.16**	**349**	*e*P	Pn	11 51 06.2	+1.5
PBVM				*i* S	Sn	11 51 44.0	+1.4
ZIIG	**Zihuatanejo**	**3.16**	**294**	*e*P	Pn	11 51 02.1	-2.6
ZIIG				*i* S	Sn	11 51 36.3	-6.4
IIO	**Organos**	**3.26**	**355**	*e*P	Pn	11 51 07.8	+1.7
IIO				*i* S	Sn	11 51 47.3	+2.2
IIO	**Organos**	**3.26**	**355**	*e*P	Pn	11 51 05.3	-0.7
IIO				*i* S	Sn	11 51 48.1	+3.0
PTVM	**Pico Tres Padr**	**3.32**	**349**	*e*P	Pn	11 51 04.5	-2.3
PTVM				*i* S	Sn	11 51 41.8	-4.6
PTVM	**Pico Tres Padr**	**3.32**	**349**	*e*P	Pn	11 51 09.4	+2.7
PTVM				*i* S	Sn	11 51 48.9	+2.5
CMIG	**Matias Romero**	**3.49**	**77**	*i* P	Pn	11 51 06.0	-3.3
CMIG				*i* S	Sn	11 51 46.8	-4.0
MOIG	**Morelia**	**4.24**	**322**	*e*P	Pn	11 51 29.8	+10
MOIG				*i* S	Sn	11 52 08.4	-0.8
PCIG		**5.06**	**96**	*e*P	Pn	11 51 29.9	-0.8
PCIG				*i* S	Sn	11 52 23.7	-5.7
TGIG		**5.12**	**84**	*e*P	Pn	11 51 33.5	+1.8
TGIG				*i* S	Sn	11 52 33.8	+2.9
CCIG	**Comitan**	**6.05**	**89**	*e*P	Pn	11 51 41.7	-2.7
CCIG				*i* S	Sn	11 52 54.6	+0.7

*ISCJB **09** 11:50:28.7±0.4, 41.02S±0.04×174.55E±0.07, h85km±7km, Error ellipse: s-maj=9.5km s-min=3.9km az=32.8*
*IDC **09** 11:50:29.5±2.0, 40.79S×174.41E, h48km±20km, mb3.4/1, mb1 3.7/3, mb1mx3.5/14, mbtmp3.7/3, ML3.6/2, Error ellipse: s-maj=36.9km s-min=16.4km az=135.0*
*NEIC **09** 11:50:31.1, 40.89S×174.48E, h46km, ML4.4(WEL), After WEL.*
NEIC Felt at Wellington.
ISC 09 11:50:30.2±0.4**, 40.99S**±0.03×**174.52E**±0.06**, h65**km±7km**, n66,** σ0s88/62**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRW	**Makara Radio**	**0.28**	**151**	P	**Pn**	**11 50 40.5**	**-0.1**
TCW	**Tory Channel**	**0.29**	**220**	P	**Pn**	**11 50 40.0**	**-0.7**
KIW	**Kapiti Island**	**0.32**	**67**	P	**Pn**	**11 50 40.0**	**-0.9**
KIW				S	**Sn**	**11 50 46.7**	**-1.9**
SNZO	**South Karori**	**0.35**	**157**	P	**Pn**	**11 50 41.4**	**+0.3**
WEL	**Wellington**	**0.35**	**148**	P	**Pn**	**11 50 41.4**	**+0.3**
CAW	**Cannon Point**	**0.43**	**106**	P	**Pn**	**11 50 42.1**	**+0.3**
BHW	**Baring Head**	**0.49**	**148**	P	**Pn**	**11 50 43.1**	**+0.7**
MSWZ	**Moikau Station**	**0.69**	**128**	P	**Pn**	**11 50 45.4**	**+0.8**
MTW	**Mount Morrison**	**0.76**	**103**	P	**Pn**	**11 50 46.1**	**+0.7**
PAWZ	**Paruwai Farm**	**0.79**	**120**	P	**Pn**	**11 50 46.4**	**+0.7**
CMWZ	**Cape Campbell**	**0.79**	**197**	P	**Pn**	**11 50 47.7**	**+1.9**
MRZ	**Mangatainoka R**	**0.86**	**68**	P	**Pn**	**11 50 46.9**	**+0.2**
BSWZ	**Blackbirch Sta**	**0.87**	**214**	P	**Pn**	**11 50 47.9**	**+1.1**
NNZ	**Nelson**	**0.90**	**255**	P	**Pn**	**11 50 46.9**	**-0.1**
WAZ	**Wanganui**	**1.28**	**16**	P	**Pn**	**11 50 52.2**	**+0.2**
BFZ	**Birch Farm**	**1.34**	**77**	P	**Pn**	**11 50 52.8**	**0.0**
TSZ	**Takapari Road**	**1.44**	**50**	P	**Pn**	**11 50 53.9**	**-0.2**
THZ	**Tophouse**	**1.44**	**237**	P	**Pn**	**11 50 54.9**	**+0.7**
QRZ	**Quartz Range**	**1.52**	**275**	P	**Pn**	**11 50 55.1**	**-0.1**
KHZ	**Kahutara**	**1.61**	**207**	P	**Pn**	**11 50 57.5**	**+1.1**
RAEZ	**Rainy Point**	**1.70**	**357**	P	**Pn**	**11 50 58.0**	**+0.3**
NEZ	**North Egmont**	**1.75**	**349**	P	**Pn**	**11 50 58.5**	**+0.2**
NWEZ	**Newall Road**	**1.79**	**343**	P	**Pn**	**11 50 58.9**	**+0.1**
MOVZ	**Moawhango**	**1.84**	**31**	P	**Pn**	**11 50 59.2**	**-0.3**
PKE	**Pukeiti**	**1.84**	**347**	P	**Pn**	**11 50 59.6**	**+0.1**
WNVZ	**Wahianoa**	**1.85**	**27**	P	**Pn**	**11 51 00.2**	**+0.5**
VRZ	**Vera Road**	**1.87**	**6**	P	**Pn**	**11 50 59.8**	**-0.1**
TUVZ	**Tukino**	**1.92**	**27**	P	**Pn**	**11 51 01.2**	**+0.6**
NGZ	**Ngauruhoe**	**1.99**	**25**	P	**Pn**	**11 51 02.2**	**+0.7**
TWVZ	**Taurewa**	**2.04**	**20**	P	**Pn**	**11 51 02.4**	**+0.2**
WTVZ	**West Tongariro**	**2.04**	**24**	P	**Pn**	**11 51 02.7**	**+0.5**
DSZ	**Denniston Nort**	**2.18**	**249**	P	**Pn**	**11 51 04.6**	**+0.5**
KATZ	**Kakaramea**	**2.20**	**24**	P	**Pn**	**11 51 05.2**	**+0.8**
RITZ	**Rihia Road**	**2.25**	**27**	P	**Pn**	**11 51 06.5**	**+1.4**
RATZ	**Rangitukua**	**2.33**	**25**	P	**Pn**	**11 51 07.1**	**+1.0**
BKZ	**Black Stump Fm**	**2.36**	**40**	P	**Pn**	**11 51 05.7**	**-0.9**
HATZ	**Hinemaiaia**	**2.42**	**30**	P	**Pn**	**11 51 06.9**	**-0.4**
LTZ	**Lake Taylor**	**2.46**	**222**	P	**Pn**	**11 51 08.3**	**+0.4**
HIZ	**Hauiti**	**2.48**	**6**	P	**Pn**	**11 51 08.4**	**+0.1**
WHTZ	**Whakaora**	**2.57**	**26**	P	**Pn**	**11 51 09.7**	**+0.3**
CRLZ	**Canterbury Las**	**2.95**	**208**	P	**Pn**	**11 51 14.1**	**-0.4**
MQZ	**McQueen's Vall**	**3.05**	**206**	P	**Pn**	**11 51 14.9**	**-1.0**
KNZ	**Kokohu**	**3.12**	**52**	P	**Pn**	**11 51 16.1**	**-0.8**
URZ	**Urewera**	**3.38**	**37**	P	**Pn**	**11 51 18.0**	**-2.5**
	6.6nm,0.3s,baz=236,slow=6.1,SNR=35						
URZ				S	**Sn**	**11 51 56.7**	**-2.6**
	20nm,0.3s,baz=90,slow=16,SNR=7.4						
URZ	**Urewera**	**3.38**	**37**	P	**Pn**	**11 51 18.0**	**-2.4**
WVZ	**Waitaha Valley**	**3.51**	**232**	P	**Pn**	**11 51 22.3**	**+0.1**
MWZ	**Matawai**	**3.52**	**42**	P	**Pn**	**11 51 19.7**	**-2.7**
RPZ	**Rata Peaks**	**3.75**	**222**	P	**Pn**	**11 51 25.6**	**+0.2**
	4.4nm,0.3s,baz=275,slow=3.5,SNR=12						
RPZ				S	**Sn**	**11 52 05.2**	**-3.1**
	16nm,0.3s,baz=45,slow=2.6,SNR=9.3						
RPZ	**Rata Peaks**	**3.75**	**222**	P	**Pn**	**11 51 26.1**	**+0.7**
OTAZ	**Otara**	**4.04**	**5**	P	**Pn**	**11 51 30.0**	**+0.4**
WTAZ	**Waiatarua**	**4.05**	**1**	P	**Pn**	**11 51 30.1**	**+0.5**
KUZ	**Kuaotunu**	**4.34**	**13**	P	**Pn**	**11 51 33.8**	**+0.2**
FOZ	**Fox Glacier**	**4.42**	**233**	P	**Pn**	**11 51 32.4**	**-2.2**
LBZ	**Lake Benmore**	**4.67**	**222**	P	**Pn**	**11 51 37.6**	**-0.4**
ODZ	**Otahua Downs**	**4.95**	**214**	P	**Pn**	**11 51 41.0**	**-0.9**
WCZ	**Waipu Caves**	**5.04**	**358**	P	**Pn**	**11 51 43.0**	**-0.2**
JCZ	**Jackson Bay**	**5.26**	**232**	P	**Pn**	**11 51 45.3**	**-0.8**
TUZ	**Tuapeka**	**6.11**	**214**	P	**Pn**	**11 51 57.1**	**-0.6**
ASAR	**Alice Springs**	**38.03**	**284**	P	**P**	**11 57 42.5**	**+0.2**
	0.5nm,0.5s,baz=124,slow=7.3,SNR=22						
LIC	**Lamto**	**145.38**	**181**	*e*P	PKPbc	12 10 02.9	+1.8
	13nm,0.7s						
KIC	**Kosan Boka**	**145.51**	**181**	*e*P	PKPdf	12 10 03.5	+2.2
	18nm,0.8s						
TIC	**Toumodi**	**145.80**	**181**	*e*P	PKPdf	12 10 05.2	+3.4
	6.0nm,0.2s						
DBIC	**Dimbokro**	**145.82**	**181**	PKPbc	PKPbc	12 10 04.5	+2.0
	1.2nm,0.5s,baz=176,slow=4.1,SNR=3.1						
ARCES	**ARCESS Array B**	**147.13**	**341**	PKPbc	PKPbc	12 10 04.6	0.0
	1.1nm,0.6s,baz=38,slow=2.5,SNR=8.4						
BRTR	**Keskin Array B**	**150.33**	**281**	PKPbc	PKPbc	12 10 13.0	-0.7
	0.7nm,0.8s,baz=132,slow=4.3,SNR=3.2						
BRTR				PKPab	PKPab	12 10 20.9	+0.6
	0.6nm,0.8s,baz=167,slow=7.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**151.56**	**195**	PKPbc	PKPbc	12 10 18.6	+1.3
	0.7nm,0.7s,baz=142,slow=3.2,SNR=5.8						
TORD				PKPab	PKPab	12 10 27.9	+2.1
	1.7nm,0.9s,baz=174,slow=3.5,SNR=6.9						

*IDC **09** 11:54:44.1±1.6, 28.52N×52.46E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/23, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=45.5km s-min=27.7km az=159.0*
*THR **09** 11:54:44.9±0.3, 28.72N×52.00E, h17km±5km, ML3.5*
*NEIC **09** 11:54:45.2, 28.75N×52.04E, h15km, ML3.5(THR), After THR.*
*CSEM **09** 11:54:47.0±0.2, 28.79N×52.16E, h25km, ML3.5, Error ellipse: s-maj=6.3km s-min=5.8km az=97.0*
*ISCJB **09** 11:54:48.1±0.9, 28.77N±0.06×52.15E±0.08, h38km±12km, mb3.6/6, Error ellipse: s-maj=13.4km s-min=6.9km az=34.1*
ISC 09 11:54:48.8±1.6**, 28.77N**±0.05×**52.21E**±0.08**, h25**km±13km**, n25,** σ1s**15**/27**, mb3.6**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.83**	**125**	*e*Pg	**Pb**	**11 55 03.3**	**-1.4**
GHIR				AML	AML	11 55 21.5	
	comp=N,1µm,0.5s						
GHIR				AML	AML	11 55 21.6	
	comp=E,2µm,0.4s						
GHIR	**Ghir-Karzin**	**0.83**	**125**	Pg	**Pb**	**11 55 03.0**	**-1.7**
BNDS	**Bandar-Abbas**	**3.76**	**110**	*e*P	**Pn**	**11 55 46.6**	**+1.5**
NASN	**Na'in**	**4.05**	**7**	*e*Pn	**Pn**	**11 55 49.6**	**+0.4**
NASN	**Na'in**	**4.05**	**7**	P	**Pn**	**11 55 49.0**	**-0.2**
NASN	**Na'in**	**4.05**	**7**	*e*Pn	**Pn**	**11 55 49.6**	**+0.4**
	SNR=52						
KRBR	**Kerman**	**4.15**	**72**	*e*Pn	**Pn**	**11 55 52.6**	**+2.0**
KRBR				AML	AML	11 57 08.8	
	comp=E,40nm,0.7s						
KRBR	**Kerman**	**4.15**	**72**	P	**Pn**	**11 55 52.0**	**+1.4**
KRBR	**Kerman**	**4.15**	**72**	*e*Pn	**Pn**	**11 55 52.6**	**+2.0**
	SNR=52						
SLWS		**4.19**	**200**	P	**Pn**	**11 55 47.0**	**-4.1**
SLWS		**4.19**	**200**	P	**Pn**	**11 55 47.0**	**-4.1**
SLWS				S	**Sn**	**11 56 41.4**	**+2.1**
BTHS		**4.86**	**195**	P	**Pn**	**11 56 01.2**	**+0.9**
BTHS		**4.86**	**195**	P	**Pn**	**11 56 01.2**	**+0.9**
BTHS				S	**Sn**	**11 56 55.8**	**+0.1**
HRDDS		**6.32**	**204**	S	**Sn**	**11 57 31.0**	**-0.7**
HRDDS		**6.32**	**204**	P	**Pn**	**11 56 21.5**	**+1.2**
ASYS		**7.06**	**262**	P	**Pn**	**11 56 30.4**	**-0.2**
LYLS		**8.06**	**215**	S	**Sn**	**11 58 11.2**	**-3.5**
LYLS		**8.06**	**215**	P	**Pn**	**11 56 44.2**	**-0.1**
BRTR	**Keskin Array B**	**18.81**	**310**	P	**Pn**	**11 59 10.3**	**+3.3**
	comp=E,0.1nm,0.3s,baz=123,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**29.56**	**44**	P	**P**	**12 00 50.5**	**-0.9**
	comp=E,0.5nm,0.8s,mb3.3,baz=240,slow=9.1,SNR=3.5						
KURK	**Kurchatov**	**29.61**	**35**	P	**P**	**12 00 50.9**	**-0.9**
	comp=E,0.2nm,0.5s,mb3.1,baz=233,slow=8.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**34.58**	**34**	P	**P**	**12 01 35.0**	**-0.4**
	comp=E,0.8nm,0.5s,mb3.9,baz=232,slow=7.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**49.30**	**263**	P	**P**	**12 03 36.1**	**+0.1**
	comp=E,0.4nm,0.7s,mb3.6,baz=56,slow=6.9,SNR=3.1						
YKA	**Yellowknife Ar**	**88.45**	**354**	P	**P**	**12 07 38.6**	**+0.1**
	comp=E,0.6nm,0.9s,mb3.8,baz=10,slow=5.2,SNR=8.4						
ASAR	**Alice Springs**	**94.29**	**115**	P	**P**	**12 08 05.0**	**-1.3**
	comp=E,0.2nm,0.8s,mb3.6,baz=311,slow=4.7,SNR=4.5						

*TEH **09** 11:56:52.8, 28.63N×52.19E, h4km, ML3.6*
*IDC **09** 11:58:27.1±1.1, 28.66N×52.26E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/25, mbtmp3.9/14, ML3.4/1, Error ellipse: s-maj=30.3km s-min=19.1km az=157.0*
*NEIC **09** 11:58:28.2, 28.82N×52.11E, h6km, ML3.7(THR), After THR.*
*ISCJB **09** 11:58:28.6±0.3, 28.72N±0.03×52.18E±0.04, h10km, mb3.8/13, Error ellipse: s-maj=5.6km s-min=3.2km az=36.9*
*THR **09** 11:58:28.1±0.3, 28.82N×52.10E, h6km±5km, ML3.7*
*CSEM **09** 11:58:29.8±0.1, 28.76N×52.24E, h12km, ML3.7, Error ellipse: s-maj=1.9km s-min=1.4km az=153.0*
ISC 09 11:58:31.1±0.6**, 28.74N**±0.03×**52.24E**±0.04**, h18**km±4km**, n59,** σ1s**08**/66**, mb3.8**/13**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mouk**	**0.52**	**54**	*e*Pg	**Pg**	**11 58 40.1**	**-1.4**
IMOK				*e*Sg	**Sg**	**11 58 48.9**	**+0.4**
IMOK	**Mouk**	**0.52**	**54**	*e*Pg	**Pg**	**11 58 40.1**	**-1.4**
IMOK				*e*Sg	**Sg**	**11 58 48.9**	**+0.4**
IMOK				*e*		11 58 53.2	
GHIR	**Ghir-Karzin**	**0.80**	**124**	*e*Pg	**Pg**	**11 58 46.4**	**-0.3**
GHIR				AML	AML	11 59 04.5	
	comp=N,2µm,0.5s						
GHIR				AML	AML	11 59 04.6	
	comp=E,3µm,0.4s						
GHIR	**Ghir-Karzin**	**0.80**	**124**	Pg	**Pg**	**11 58 46.0**	**-0.7**
SHI	**Shiraz**	**0.93**	**15**	*e*Pg	**Pg**	**11 58 48.6**	**-0.6**
SHI				*e*Sg	**Sg**	**11 59 01.9**	**+0.4**
SHI	**Shiraz**	**0.93**	**15**	*e*Pg	**Pg**	**11 58 48.6**	**-0.6**
SHI				*e*Sg	**Sg**	**11 59 01.9**	**+0.4**
SHI				*e*		11 59 07.1	
ISRV	**Sarvestan**	**1.00**	**50**	*e*Pg	**Pg**	**11 58 49.0**	**-1.5**
ISRV	**Sarvestan**	**1.00**	**50**	*e*Pg	**Pg**	**11 58 49.0**	**-1.5**
ISRV				*e*		11 58 55.5	
IMEH	**Mehriz**	**3.35**	**37**	*e*Pn	**Pn**	**11 59 23.8**	**+1.2**
IMEH				*e*Sn	**Sn**	**12 00 03.0**	**+1.1**
IMEH	**Mehriz**	**3.35**	**37**	*e*Pn	**Pn**	**11 59 23.8**	**+1.2**
IMEH				*e*		11 59 26.6	
IMEH				*e*Sn	**Sn**	**12 00 03.0**	**+1.1**
ISAD	**Sadrabad**	**3.40**	**21**	*e*Pn	**Pn**	**11 59 25.0**	**+1.7**
ISAD	**Sadrabad**	**3.40**	**21**	*e*Pn	**Pn**	**11 59 25.0**	**+1.7**
ISAD				*e*		12 00 23.4	
BNDS	**Bandar-Abbas**	**3.72**	**110**	*e*P	**Pn**	**11 59 30.3**	**+2.6**
BNDS	**Bandar-Abbas**	**3.72**	**110**	P	**Pn**	**11 59 30.0**	**+2.3**
KFJS		**3.82**	**263**	P	**Pg**	**11 59 43.7**	**-0.7**
BOQSS		**3.83**	**222**	P	**Pn**	**11 59 30.9**	**+1.7**
ICHK	**Chekchek**	**3.96**	**28**	*e*Pn	**Pn**	**11 59 32.2**	**+1.2**
ICHK	**Chekchek**	**3.96**	**28**	*e*Pn	**Pn**	**11 59 32.2**	**+1.2**
ICHK				*e*		11 59 33.4	
KBD	**Kabd**	**4.01**	**277**	*e*P	**Pn**	**11 59 32.7**	**+1.1**
UMR	**Umm Al-Rimmam**	**4.04**	**283**	*e*P	**Pn**	**11 59 32.9**	**+0.9**
	baz=284						
UMR				AML	AML	12 00 22.6	
	comp=Z,68nm,0.4s,baz=284						
IBAF	**Bafgh**	**4.05**	**45**	*e*Pn	**Pn**	**11 59 32.7**	**+0.5**
IBAF	**Bafgh**	**4.05**	**45**	*e*Pn	**Pn**	**11 59 32.7**	**+0.5**
IBAF				*e*		11 59 50.7	
NASN	**Na'in**	**4.08**	**7**	*e*Pn	**Pn**	**11 59 32.5**	**0.0**
NASN	**Na'in**	**4.08**	**7**	Pn	**Pn**	**11 59 32.0**	**-0.6**
IPIR	**Pirpir**	**4.10**	**344**	*e*Pn	**Pn**	**11 59 33.4**	**+0.5**
IPIR	**Pirpir**	**4.10**	**344**	*e*Pn	**Pn**	**11 59 33.4**	**+0.5**
IPIR				*e*		11 59 56.7	
KRBR	**Kerman**	**4.14**	**71**	*e*Pn	**Pn**	**11 59 35.5**	**+2.0**
KRBR				AML	AML	12 00 51.8	
	comp=E,63nm,0.8s						
KRBR	**Kerman**	**4.14**	**71**	Pn	**Pn**	**11 59 35.0**	**+1.6**
IZEF	**Zefreh**	**4.14**	**1**	*e*Pn	**Pn**	**11 59 34.1**	**+0.6**
IZEF	**Zefreh**	**4.14**	**1**	*e*Pn	**Pn**	**11 59 34.1**	**+0.6**
SLWS		**4.17**	**200**	P	**Pn**	**11 59 35.3**	**+1.4**
SLWS		**4.17**	**200**	P	**Pn**	**11 59 35.3**	**+1.3**
SLWS				S	**Sn**	**12 00 22.4**	**+0.1**
NAY	**Al-Naaiem**	**4.41**	**278**	*e*P	**Pn**	**11 59 38.4**	**+1.3**
	baz=279						
NAY				AML	AML	12 00 35.5	
	comp=Z,18nm,0.5s,baz=279						
MIB	**Mutribah**	**4.41**	**285**	*e*P	**Pn**	**11 59 38.3**	**+1.1**
	baz=287						
MIB				AML	AML	12 00 31.0	
	comp=Z,36nm,0.5s,baz=287						
IKLH	**Kolahrood**	**4.60**	**353**	*e*Pn	**Pn**	**11 59 39.5**	**-0.3**
IKLH	**Kolahrood**	**4.60**	**353**	*e*Pn	**Pn**	**11 59 39.5**	**-0.3**
IKLH				*e*		12 00 22.9	
BTHS		**4.84**	**195**	P	**Pn**	**11 59 44.1**	**+1.1**
HRDDS		**6.30**	**204**	S	**Sn**	**12 01 14.2**	**-0.6**
HRDDS		**6.30**	**204**	P	**Pn**	**12 00 04.4**	**+1.1**
LYLS		**8.05**	**215**	S	**Sn**	**12 01 55.4**	**-2.6**
LYLS		**8.05**	**215**	P	**Pn**	**12 00 27.1**	**-0.2**
BRTR	**Keskin Array B**	**18.85**	**310**	P	**Pn**	**12 02 50.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=139,slow=14,SNR=5.9						
AKTK	**Aktyubinsk**	**22.11**	**10**	P	**P**	**12 03 24.8**	**-0.5**
AKTK	**Aktyubinsk**	**22.11**	**10**	P	**P**	**12 03 24.8**	**-0.6**
AKTO	**Aktyubinsk**	**22.11**	**10**	P	**P**	**12 03 24.8**	**-0.6**
	comp=Z,1.7nm,0.7s,mb3.6,baz=214,slow=10,SNR=4.7						
BVAR	**Borovoye Array**	**27.71**	**24**	P	**P**	**12 04 18.1**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.3,baz=211,slow=7.3,SNR=4.1						
MKAR	**Makanchi Array**	**29.56**	**44**	P	**P**	**12 04 34.5**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.6,baz=233,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**29.56**	**44**	P	**P**	**12 04 34.5**	**-0.3**
KURK	**Kurchatov**	**29.61**	**35**	P	**P**	**12 04 34.1**	**-1.0**
	comp=Z,1.0nm,0.7s,mb3.7,baz=236,slow=9.0,SNR=9.0						
ZALV	**Zalesovo Beam**	**34.59**	**34**	P	**P**	**12 05 18.1**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=244,slow=9.6,SNR=9.6						
NOA	**NORSAR Array B**	**42.24**	**332**	P	**P**	**12 06 21.5**	**-1.5**
	comp=Z,0.8nm,0.7s,mb3.5,baz=106,slow=10,SNR=2.6						
ARCES	**ARCESS Array B**	**43.65**	**347**	P	**P**	**12 06 32.3**	**-1.9**
	comp=Z,1.3nm,0.7s,mb3.7,baz=140,slow=9.7,SNR=3.8						
ARCES	**ARCESS Array B**	**43.65**	**347**	P	**P**	**12 06 32.3**	**-1.9**
TORD	**Torodi Ar. Bea**	**49.33**	**263**	P	**P**	**12 07 18.9**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.9,baz=61,slow=8.6,SNR=6.1						
DBIC	**Dimbokro**	**58.06**	**259**	P	**P**	**12 08 22.8**	**-0.8**
	comp=Z,1.2nm,0.6s,mb4.1,baz=14,slow=6.9,SNR=2.9						
KSRS	**Korea Array**	**62.45**	**60**	P	**P**	**12 08 51.8**	**-1.6**
	comp=Z,0.8nm,0.5s,mb4.1,baz=281,slow=6.5,SNR=6.0						
SCHQ	**Schefferville**	**81.76**	**329**	P	**P**	**12 10 47.8**	**-0.9**
	comp=Z,2.0nm,0.6s,mb4.2,baz=78,slow=9.3,SNR=3.3						
YKA	**Yellowknife Ar**	**88.48**	**354**	P	**P**	**12 11 21.6**	**-0.5**
	comp=Z,0.6nm,0.6s,mb4.0,baz=9.2,slow=5.3,SNR=15						
ASAR	**Alice Springs**	**94.26**	**115**	P	**P**	**12 11 47.9**	**-1.7**
	comp=Z,0.2nm,0.5s,mb3.8,baz=309,slow=4.9,SNR=6.6						

IDC 09 12:05:53.0±7.9**, 26.48S**×**177.31W, h265**km±78km**, mb3.3**/4**, mb1 3.6**/5**, mb1mx3.3**/15**, mbtmp3.3**/5**, Error ellipse: s-maj=57.6km s-min=27.9km az=179.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.66**	**200**	P	Pn	12 08 44.5	+0.4
	0.2nm,0.3s,baz=78,slow=19,SNR=2.3						
URZ				S	S	12 11 04.4	-0.3
	1.1nm,0.3s,baz=309,slow=23,SNR=8.2						
CTA	**Charters Tower**	**33.98**	**273**	P	P	12 12 12.2	+0.1
	1.4nm,0.5s,baz=95,slow=14,SNR=2.5						
ASAR	**Alice Springs**	**44.07**	**263**	P	P	12 13 35.1	-0.1
	0.6nm,0.5s,baz=98,slow=7.3,SNR=27						
NVAR	**Mina Array Bea**	**84.95**	**43**	P	P	12 17 58.7	+0.4
	0.8nm,0.6s,baz=225,slow=8.7,SNR=6.8						
PDAR	**Pinedale Array**	**92.87**	**43**	P	P	12 18 35.7	+0.1
	0.2nm,0.6s,baz=205,slow=4.0,SNR=2.9						
ARCES	**ARCESS Array B**	**134.88**	**349**	PKP	PKPdf	12 24 40.5	+1.1
	2.6nm,0.8s,baz=54,slow=2.3,SNR=3.7						
NOA	**NORSAR Array B**	**144.96**	**353**	PKP	PKPdf	12 24 57.1	-0.8
	1.1nm,1.0s,baz=19,slow=2.7,SNR=4.4						
AKASG	**Malin Array Be**	**148.45**	**327**	PKPbc	PKPbc	12 25 06.6	-1.3
	0.7nm,0.3s,baz=40,slow=3.3,SNR=6.5						
BRTR	**Keskin Array B**	**151.06**	**305**	PKPbc	PKPbc	12 25 15.5	+0.9
	0.6nm,0.6s,baz=106,slow=3.1,SNR=3.7						

*ISCJB **09** 12:08:19.5±1.1, 42.6N±0.1×89.8E±0.2, h10km, Error ellipse: s-maj=26.3km s-min=8.7km az=38.1*
*BJI **09** 12:08:20.9, 42.08N×89.52E, h14km, mb3.8, ML3.6*
*NNC **09** 12:08:23.8±1.8, 42.51N×89.17E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=19.2km s-min=12.8km az=52.0*
ISC 09 12:08:24.4±1.1**, 42.3N**±0.1×**89.5E**±0.1**, h35**km**, n6,** σ1s**45**/11**, 2C-9D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.04**	**319**	⇓*i*P	**Pn**	**12 08 59.1**	**+2.9**
WMQ				SG	**Sn**	**12 09 29.5**	**+9.1**
WMQ				Smax			
	comp=N,436nm,0.5s						
WMQ				Smax			
	comp=E,751nm,0.6s						
MK31	**Makanchi Array**	**6.86**	**313**	Pn	**Pn**	**12 10 03.2**	**+0.8**
	comp=E,0.6nm,0.3s,baz=128,slow=14,SNR=44						
MK31				⇑Sn	**Sn**	**12 11 22.4**	**+3.3**
	comp=E,2.8nm,0.5s,baz=131,slow=27,SNR=6.9						
MK31				⇓Lg		12 11 49.3	
	comp=E,7.5nm,0.6s,baz=131,slow=28,SNR=3.9						
GTA	**Gaotai**	**8.31**	**107**	*e*P	**Pn**	**12 10 22.0**	**-0.3**
GTA				AP		12 10 26.0	
GTA				XP		12 10 29.2	
GTA				LG2		12 12 28.7	
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s						
TKM2	**Tokmak 2**	**10.30**	**278**	⇑Pn	**Pn**	**12 10 51.4**	**+1.9**
	comp=Z,1.1nm,0.5s						
TKM2				⇓Sn	**Sn**	**12 12 42.0**	**-1.6**
	comp=Z,3.3nm,0.6s						
TKM2				⇓Lg		12 13 41.2	
	comp=Z,10nm,1.6s						

KURBB	**Kurchatov Arra**	**11.26**	**321**	⇓Pn	**Pn**	**12 11 01.3**	**-1.4**
	comp=Z,0.4nm,0.9s						
KURBB				⇓Sn	**Sn**	**12 13 06.8**	**-0.3**
	comp=Z,1.0nm,0.6s						
KURBB				⇓Lg		12 14 10.3	
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**11.28**	**322**	⇓Pn	**Pn**	**12 11 01.4**	**-1.6**
	comp=Z,9.0nm,2.0s						
KURK				⇓Sn	**Sn**	**12 13 07.1**	**-0.5**
	comp=Z,4.9nm,0.7s						

CASC 09 12:27:52.7±1.6**,1149N×8696W,h22**^{km}±12^{km}**,MD3.6, ML2.4,5C-4D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.78**	**27**⇓	*e*P	Pb	12 28 07.5	-0.1
COPN				*e*S	Sb	12 28 16.6	-1.0
CSAN		**0.87**	**37**⇓	*e*P	Pb	12 28 08.6	-0.5
TICN	**Ticuantepe**	**0.89**	**52**	*e*P	Pb	12 28 08.8	-0.7
XAVN	**Gruta Xavier**	**0.90**	**43**⇓	*e*P	Pb	12 28 09.6	-0.1
MGAN	**Managua**	**0.95**	**47**	*e*P	Pb	12 28 09.8	-0.8
MGAN				*e*S	Sb	12 28 24.4	+1.6
MGAN				AML	AML	12 28 27.0	
	comp=N,26nm,0.4s						
APON	**Apoyo**	**0.97**	**64**⇓	*e*P	Pb	12 28 10.7	-0.2
MOMN	**Momotombo**	**1.00**	**24**	*e*P	Pb	12 28 11.2	-0.2
CNGN	**Cerro Negro**	**1.04**	**14**⇑	*e*P	Pn	12 28 11.2	-0.8
CNGN				AML	AML	12 28 36.4	
	comp=N,178nm,0.4s						
TEL3	**Telica 3**	**1.08**	**6**⇑	*e*P	Pn	12 28 12.3	-0.3
SSN	**San Juan del S**	**1.10**	**100**	*e*P	Pn	12 28 12.1	-0.7
SSN				*e*S	Sb	12 28 26.9	+0.1
HUEN		**1.14**	**42**⇑	*e*P	Pn	12 28 12.9	-0.6
CRIN	**San Cristobal**	**1.21**	**356**⇑	*e*P	Pn	12 28 13.3	-1.1
CNCH	**Conchagua**	**1.98**	**334**⇑	*e*P	x	12 28 25.0	
CNCH				*e*S	x	12 28 50.0	

*IDC **09** 12:34:48.7±1.2,453S×7751W,h0^{km},mb3.4/4,mb1 3.8/6, mb1mx3.6/21,mbtmp3.4/6,ML2.8/1,Error ellipse: s-maj=71.1km s-min=23.5km az=59.0*
*ISCJB **09** 12:34:53.9±1.5,485S±007×777W±02,h64^{km}±19^{km}, mb3.5/3,Error ellipse: s-maj=29.8km s-min=10.3km az=172.2*
*NEIC **09** 12:34:55.8±1.1,479S×7771W,h64^{km}±16^{km},mb3.5/1, Error ellipse: s-maj=22.5km s-min=10.1km az=77.0*
ISC 09 12:34:56.0±1.3**,482S**±007×**776W**±02**,h66**^{km}±17^{km}**,n10,** σ**0**^{s}**45**/10**,mb3.4**/3**,Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**5.10**	**350**	*e*Pn	**Pn**	**12 36 09.6**	**-0.3**
	66nm,1.1s						
NNA	**Nana**	**7.16**	**174**	Pn	**Pn**	**12 36 38.4**	**+0.3**
	2.1nm,0.3s,baz=360,slow=14,SNR=5.3						
NNA				Sn	**Sn**	**12 37 57.9**	**-0.1**
	0.8nm,0.3s,baz=304,slow=12,SNR=2.0						
SDV	**Santo Domingo**	**15.27**	**27**	*e*Pn	**Pn**	**12 38 28.3**	**+0.5**
	1.7nm,0.4s						
SIV	**San Ignacio**	**19.64**	**126**	P	**Pn**	**12 39 21.1**	**-0.3**
	0.0nm,0.3s,baz=290,slow=16,SNR=2.7						
TXAR	**Lajitas Array**	**42.20**	**325**	P	**P**	**12 42 42.2**	**-0.4**
	0.3nm,0.9s,baz=146,slow=8.3,SNR=3.5						
TXAR	**Lajitas Array**	**42.20**	**325**	P	**P**	**12 42 42.2**	**-0.4**
PDAR	**Pinedale Array**	**55.53**	**332**	P	**P**	**12 44 23.9**	**-0.5**
	0.4nm,1.0s,mb3.4,baz=133,slow=6.3,SNR=2.4						
NVAR	**Mina Array Bea**	**57.22**	**322**	P	**P**	**12 44 37.4**	**+0.9**
	0.3nm,0.6s,mb3.5,baz=142,slow=4.6,SNR=2.9						
YKA	**Yellowknife Ar**	**72.81**	**343**	P	**P**	**12 46 17.1**	**-0.1**
	0.3nm,0.5s,mb3.4,baz=142,slow=5.8,SNR=8.3						
ASAR	**Alice Springs**	**138.24**	**226**	PKP	PKPdf	12 54 16.2	+1.7
	0.5nm,1.1s,baz=121,slow=3.1,SNR=2.8						

*ISK **09** 12:35:12.8,3704N×2933E,h11^{km},MD2.8*
*ISCJB **09** 12:35:13.4±0.7,3697N±005×2932E±004,h9^{km}±6^{km}, Error ellipse: s-maj=7.7km s-min=5.1km az=12.2*
*CSEM **09** 12:35:13.0±0.1,3706N×2938E,h12^{km},MD2.9,Error ellipse: s-maj=4.5km s-min=2.4km az=36.0*
*DDA **09** 12:35:13.0,3697N×2927E,h6^{km}±6^{km},Md2.9*
ISC 09 12:35:13.8±0.6**,3696N**±004×**2932E**±004**,h9**^{km}±5^{km}**,n12,** σ**1**^{s}**12**/19**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.34**	**35**	*i* P	**Pg**	**12 35 20.1**	**-0.3**
GOLH				*i* S	**Sg**	**12 35 26.6**	**+1.7**
ELL	**Elmali**	**0.52**	**114**	*e*PG	**Pg**	**12 35 23.7**	**-0.1**
ELL				*e*SG	**Sg**	**12 35 32.1**	**+1.5**
AKAS	**Kas**	**0.76**	**163**	*i* P	**Pg**	**12 35 28.4**	**0.0**
AKAS				*i* S	**Sg**	**12 35 43.7**	**+5.4**
DENT	**Denizli**	**0.82**	**344**	*e*PG	**Pg**	**12 35 28.1**	**-1.6**
YER	**Yerkesik**	**0.85**	**282**	*e*PG	**Pg**	**12 35 29.8**	**-0.4**
YER				*e*SG	**Sg**	**12 35 41.4**	**+0.2**
ANTB	**Antalya**	**1.07**	**93**	*e*PN	**Pn**	**12 35 34.1**	**-0.7**
BCK	**Bucak**	**1.13**	**63**	*e*PN	**Pn**	**12 35 33.7**	**-2.0**
MLSB	**Milas**	**1.28**	**286**	*e*PN	**Pn**	**12 35 37.2**	**-0.6**
KHL	**Karahalli**	**1.37**	**7**	*e*PN	**Pn**	**12 35 37.3**	**-1.8**
KHAL	**Karahalli**	**1.41**	**5**	*i* P	**Pn**	**12 35 39.7**	**+0.1**
KHAL				*i* S	**Sn**	**12 36 00.4**	**+2.1**
BDRM	**Kayabasi**	**1.51**	**275**	*i* P	**Pn**	**12 35 41.2**	**+0.3**
BDRM				*i* S	**Sn**	**12 36 02.6**	**+2.0**
GCAM	**G?zelcaml?**	**1.82**	**295**	*i* P	**Pn**	**12 35 45.4**	**+0.2**
GCAM				*i* S	**Sn**	**12 36 08.4**	**0.0**

*SGS **09** 12:40:12.4,3031N×3647E,h3^{km}*
*ISCJB **09** 12:40:16.9±0.6,2985N±002×3623E±004,h0^{km},Error ellipse: s-maj=5.3km s-min=3.5km az=170.0*
*GII **09** 12:40:17.1±0.5,2987N×36.13E,h0^{km},ML2.4/5, EXPLOSION*
*CSEM **09** 12:40:17.1±1.1,2976N×3622E,h0^{km}±18^{km},ML3.1,Error ellipse: s-maj=24.3km s-min=4.9km az=77.0*
*HLW **09** 12:40:17.9,2975N×3632E,h4^{km},Mb3.1*
ISC 09 12:40:17.1±0.7**,2984N**±003×**3626E**±004**,h0**^{km}**,n27,** σ**0**^{s}**89**/38**,4C-2D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.06**	**264**	Pg	**Pg**	**12 40 36.9**	**-0.4**
HRFI	**Mount Harif**	**1.08**	**281**	Pg	**Pg**	**12 40 37.2**	**-0.6**
HRFI				Sg	**Sg**	**12 40 52.0**	**+0.2**
EIL	**Elat**	**1.15**	**262**	Pg	**Pg**	**12 40 38.6**	**-0.5**
EIL				Sg	**Sg**	**12 40 54.2**	**+0.1**
MBRI	**Mt Berech**	**1.17**	**268**	Pg	**Pg**	**12 40 39.0**	**-0.5**
MBRI				Sg	**Sg**	**12 40 55.6**	**+0.9**
HQLS		**1.17**	**243**	P	**Pg**	**12 40 38.8**	**-0.7**
ZFRI	**Zfri**	**1.18**	**308**	Pg	**Pg**	**12 40 38.5**	**-1.2**
ZFRI				Sg	**Sg**	**12 40 55.2**	**+0.3**
PRNI	**Paran**	**1.20**	**296**	Pg	**Pg**	**12 40 39.1**	**-1.1**
PRNI				Sg	**Sg**	**12 40 56.4**	**+0.6**
JLOS		**1.29**	**212**	P	**Pg**	**12 40 41.7**	**-0.1**
JLOS		**1.29**	**212**	P	**Pg**	**12 40 41.7**	**0.0**
JLOS				S	**Sg**	**12 41 00.3**	**+1.9**
HBST	**Basata**	**1.47**	**245**⇑	*e*P	**Pn**	**12 40 44.4**	**-0.3**
HBST				S	**Sg**	**12 41 03.8**	**-0.5**
RMNI	**Mount Ramon**	**1.50**	**301**	Pn	**Pn**	**12 40 44.3**	**-0.9**
TBKS	**Tabuk**	**1.63**	**171**	S	**Sn**	**12 41 10.8**	**+2.1**
TBKS	**Tabuk**	**1.63**	**171**	P	**Pn**	**12 40 45.8**	**-1.2**
MZDA	**Masada**	**1.66**	**332**	Pn	**Pn**	**12 40 47.0**	**-0.5**
MZDA				Sn	**Sn**	**12 41 10.0**	**+0.5**
BDAS	**Al Bad‘**	**1.73**	**216**	S	**Sn**	**12 41 14.2**	**+3.1**
BDAS	**Al Bad‘**	**1.73**	**216**	P	**Pn**	**12 40 48.0**	**-0.5**
YTIR	**Yattir**	**1.81**	**327**	Pn	**Pn**	**12 40 49.1**	**-0.4**
RTMI	**Retamim**	**1.82**	**312**	Pn	**Pn**	**12 40 49.0**	**-0.6**
RTMI				Sn	**Sn**	**12 41 13.1**	**-0.3**
DSI	**Dead Sea**	**1.89**	**337**	Pn	**Pn**	**12 40 50.8**	**+0.3**
DSI				Sn	**Sn**	**12 41 16.3**	**+1.2**
HNKL	**Nakhl**	**1.98**	**273**⇓	*e*P	**Pn**	**12 40 52.0**	**+0.1**
HNKL				S	**Sn**	**12 41 17.4**	**0.0**
RSHS		**2.00**	**220**	P	**Pn**	**12 40 51.0**	**-1.1**
HKAT	**Jabal Katrina**	**2.38**	**237**⇑	*e*P	**Pn**	**12 40 57.0**	**-0.3**
RSH		**2.46**	**298**	P	**Pn**	**12 40 59.1**	**+0.6**
HMDT	**Nahal Hemdat**	**2.49**	**346**	Sn	**Sn**	**12 41 31.9**	**+2.0**
TR2		**2.65**	**238**⇑	*e*P	**Pn**	**12 41 00.7**	**-0.3**
AMAG	**Maghara**	**2.76**	**288**⇑	*e*P	**Pn**	**12 41 03.7**	**+1.1**
HRSH	**Kfar Ka'horesh**	**2.98**	**344**⇓	*e*P	**Pn**	**12 40 59.1**	**-6.5**

*SGS **09** 13:04:25.9,3023N×3626E,h3^{km}*
*ISCJB **09** 13:04:28.1±0.8,2983N±003×3623E±005,h0^{km},Error ellipse: s-maj=6.0km s-min=4.5km az=160.7*
*GII **09** 13:04:28.7±0.8,2988N×36.13E,h0^{km},ML2.0/3, EXPLOSION*
*CSEM **09** 13:04:29.5±0.2,2969N×3620E,h2^{km},ML2.8,Error ellipse: s-maj=5.6km s-min=2.8km az=73.0*
*HLW **09** 13:04:29.1,2961N×3630E,h2^{km},Mb2.8*
ISC 09 13:04:28.1±0.8**,2981N**±003×**3627E**±005**,h0**^{km}**,n21,** σ**0**^{s}**79**/30**,2C-3D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.06**	**266**	Pg	**Pg**	**13 04 48.0**	**-0.5**
HRFI	**Mount Harif**	**1.09**	**282**	Pg	**Pg**	**13 04 48.4**	**-0.7**
HRFI				Sg	**Sg**	**13 05 03.4**	**+0.2**
EIL	**Elat**	**1.15**	**263**	Pg	**Pg**	**13 04 50.1**	**-0.1**
EIL				Sg	**Sg**	**13 05 06.5**	**+1.2**
HQLS		**1.17**	**244**	P	**Pg**	**13 04 49.8**	**-0.7**
MBRI	**Mt Berech**	**1.18**	**270**	Pg	**Pg**	**13 04 50.2**	**-0.5**
MBRI				Sg	**Sg**	**13 05 06.8**	**+0.9**
ZFRI	**Zfri**	**1.20**	**308**	Pg	**Pg**	**13 04 50.0**	**-1.1**
ZFRI				Sg	**Sg**	**13 05 06.2**	**-0.5**
PRNI	**Paran**	**1.22**	**297**	Pg	**Pg**	**13 04 50.4**	**-1.1**
PRNI				Sg	**Sg**	**13 05 07.6**	**+0.2**
JLOS		**1.27**	**213**	P	**Pg**	**13 04 52.6**	**+0.2**
HBST	**Basata**	**1.46**	**247**	⇓P	**Pn**	**13 04 55.5**	**-0.3**
HBST				S	**Sg**	**13 05 14.3**	**-0.8**
TBKS	**Tabuk**	**1.60**	**171**	S	**Sn**	**13 05 23.0**	**+3.9**
TBKS	**Tabuk**	**1.60**	**171**	P	**Pn**	**13 04 58.5**	**+0.8**
MZDA	**Masada**	**1.69**	**333**	Pn	**Pn**	**13 04 59.1**	**+0.2**
MZDA				Sn	**Sn**	**13 05 20.8**	**-0.4**
BDAS	**Al Bad‘**	**1.71**	**217**	P	**Pn**	**13 04 59.2**	**-0.1**
DSI	**Dead Sea**	**1.91**	**337**	Pn	**Pn**	**13 05 01.9**	**-0.1**
DSI				Sn	**Sn**	**13 05 27.1**	**+0.3**
RSHS		**1.98**	**221**	P	**Pn**	**13 05 02.5**	**-0.4**
HNKL	**Nakhl**	**1.99**	**274**⇓	*e*P	**Pn**	**13 05 03.6**	**+0.6**
HNKL				S	**Sn**	**13 05 29.5**	**+0.8**
HKAT	**Jabal Katrina**	**2.37**	**238**	⇓P	**Pn**	**13 05 07.4**	**-0.9**
RSH		**2.48**	**298**	P	**Pn**	**13 05 11.6**	**+1.8**
TR2		**2.64**	**238**	⇑P	**Pn**	**13 05 11.4**	**-0.6**
AMAG	**Maghara**	**2.77**	**288**⇑	*e*P	**Pn**	**13 05 15.7**	**+1.8**
HRSH	**Kfar Ka'horesh**	**3.00**	**344**	P	**Pn**	**13 05 11.6**	**-5.4**

*ISCJB **09** 13:36:00.1±1.3,163S±0.1×716W±0.1,h78^{km}±19^{km}, mb3.3/2,Error ellipse: s-maj=25.4km s-min=8.8km az=139.1*
*IDC **09** 13:36:01.7±2.0,1630S×7155W,h72^{km}±23^{km},mb3.3/2, mb1 3.4/5,mb1mx3.2/21,mbtmp3.3/5,Error ellipse: s-maj=39.0km s-min=14.3km az=48.0*
*NEIC **09** 13:36:01.5±1.1,1646S×7163W,h79^{km}±13^{km},Error ellipse: s-maj=24.7km s-min=12.8km az=217.0*
ISC 09 13:36:02.4±1.0**,163S**±01×**716W**±01**,h84**^{km}±15^{km}**,n8,** σ**0**^{s}**87**/10**,mb3.3**/2**,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**6.67**	**309**	P	**Pn**	**13 37 37.7**	**-0.1**
	1.0nm,0.3s,baz=254,slow=14,SNR=4.1						
NNA				S	**Sn**	**13 38 52.8**	**+0.4**
	0.6nm,0.3s,baz=235,slow=21,SNR=3.7						
LVC	**Limon Verde**	**6.76**	**159**	P	**Pn**	**13 37 36.8**	**-2.2**
	0.3nm,0.3s,baz=318,slow=6.4,SNR=5.5						
LVC				S	**Sn**	**13 38 55.8**	**+1.2**
	0.2nm,0.3s,baz=328,slow=20,SNR=3.6						
LVC	**Limon Verde**	**6.76**	**159**	*e*Pn	**Pn**	**13 37 36.5**	**-2.5**
LVC				S	**Sn**	**13 38 55.8**	**+1.2**
SIV	**San Ignacio**	**10.10**	**90**	P	**Pn**	**13 38 24.8**	**+0.3**
	0.1nm,0.3s,baz=275,slow=20,SNR=2.9						
TOA0	**Torodi Ar. Sit**	**78.09**	**72**	*e*P	**P**	**13 47 52.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**78.09**	**72**	P	**P**	**13 47 52.6**	**-0.1**
	1.0nm,0.7s,mb3.6,baz=253,slow=5.3,SNR=5.8						
YKA	**Yellowknife Ar**	**85.47**	**341**	P	**P**	**13 48 30.3**	**-0.1**
	0.1nm,0.5s,mb3.0,baz=136,slow=4.5,SNR=3.8						
SONM	**Songino Array**	**148.51**	**3**	PKPbc	PKPbc	13 55 41.4	+2.0
	0.7nm,0.7s,baz=349,slow=4.4,SNR=3.8						

MAN 09 13:46:51,905N×12177E,h212^{km}**,mb4.2,ML3.0,MS2.8, Sulu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.48**	**147**	*e*P	Pn	13 47 26.6	+0.9
IPIL				*e*S	S	13 47 54.3	+1.6
PAGZ	**Pagadian**	**1.99**	**127**	*e*P	Pn	13 47 31.2	+0.9
PAGZ				*e*S	S	13 48 01.8	+0.7
BUKP	**Musuan**	**3.46**	**109**	*e*P	Pn	13 47 48.2	+1.5

*NEIC **09** 14:39:35.3,1696N×9997W,h28^{km},MD4.2(MEX),After MEX.*
MEX 09 14:39:35.2±0.8**,1695N×9997W,h29**^{km}±6^{km}**,MD4.2,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.10**	**147**	*i* P	Pb	14 39 39.1	-1.3
ACX				*i* S	Sb	14 39 42.9	-1.1
CAIG	**El Cayaco**	**0.30**	**289**	*e*P	Pb	14 39 40.4	-2.2
CAIG				*i* S	Sb	14 39 46.0	-1.5
MEIG	**Mezcala**	**1.03**	**19**	*i* P	Pn	14 39 50.9	-2.7
MEIG				*i* S	Sn	14 40 03.3	-3.7
PLIG	**Platanillo**	**1.50**	**17**	*e*P	Pn	14 39 58.6	-1.6
PLIG				*i* S	Sn	14 40 16.6	-2.2
ZIIG	**Zihuatanejo**	**1.57**	**295**	*e*P	Pn	14 39 59.2	-1.9
ZIIG				*i* S	Sn	14 40 19.0	-1.5
PNIG	**Pinotepa**	**1.85**	**107**	*i* P	Pn	14 40 02.0	-3.0
PNIG				*i* S	Sn	14 40 26.4	-1.0
MZVM		**2.34**	**17**	*e*P	Pn	14 40 10.6	-1.1
MZVM				*i* S	Sn	14 40 37.1	-2.3
PPM	**Popocatepetl**	**2.46**	**31**	*e*P	Pn	14 40 11.2	-2.2
PPM				*i* S	Sn	14 40 42.1	-0.4
PPM	**Popocatepetl**	**2.46**	**31**	*e*P	Pn	14 40 11.2	-2.2
PPM				*i* S	Sn	14 40 42.2	-0.4
PBVM	**Pinon**	**2.62**	**19**	*e*P	Pn	14 40 14.1	-1.4
PBVM				*i* S	Sn	14 40 45.8	-0.5
PTVM	**Pico Tres Padr**	**2.75**	**17**	*e*P	Pn	14 40 16.3	-1.1
PTVM				*i* S	Sn	14 40 48.7	-0.9
IIO	**Organos**	**2.88**	**24**	*e*P	Pn	14 40 20.9	+1.8
IIO				*i* S	Sn	14 40 54.9	+2.0
TPIG	**Tehuac#an**	**2.89**	**59**	*i* P	Pn	14 40 17.9	-1.3
TPIG				*e*S	Sn	14 40 51.0	-1.9
MOIG	**Morelia**	**2.95**	**337**	*i* P	Pn	14 40 24.7	+4.6
MOIG				*i* S	Sn	14 40 55.0	+0.5
VHO	**Vista Hermosa**	**3.10**	**87**	*i* P	Pn	14 40 18.0	-4.2
VHO				*i* S	Sn	14 40 56.6	-1.7
MMIG	**Aquila**	**3.48**	**293**	*i* P	Pn	14 40 30.0	+2.5
MMIG				*i* S	Sn	14 41 06.1	-1.6
HUIG	**Huatulco**	**3.89**	**107**	*i* P	Pn	14 40 30.9	-2.1
HUIG				*i* S	Sn	14 41 15.9	-1.9
HUIG	**Huatulco**	**3.89**	**107**	*i* P	Pn	14 40 30.9	-2.1
HUIG				*i* S	Sn	14 41 18.0	+0.2
CMIG	**Matias Romero**	**4.87**	**88**	*i* P	Pn	14 40 45.4	-1.1
CMIG				*i* S	Sn	14 41 42.6	+0.7

*IDC **09** 14:41:56.5±1.2,3632N×6785E,h0^{km},mb3.6/7, mb1 3.8/11,mb1mx3.7/25,mbtmp3.7/11,ML3.5/4,Error ellipse: s-maj=26.3km s-min=18.8km az=150.0*
*ISCJB **09** 14:42:00.6±1.2,3667N±005×6785E±008,h39^{km}±13^{km}, mb3.5/4,Error ellipse: s-maj=11.1km s-min=7.5km az=162.1*
*NEIC **09** 14:42:00.1±4.2,3658N×6781E,h20^{km}±32^{km},mb3.7/2, Error ellipse: s-maj=15.9km s-min=8.9km az=66.0*
*NNC **09** 14:42:02.9±4.6,37.15N×6795E,h0^{km},mb3.9,mpv3.9, Error ellipse: s-maj=51.2km s-min=36.9km az=96.0*
ISC 09 14:42:00.4±2.3**,3660N**±005×**6775E**±007**,h22**^{km}±19^{km}**, n46,** σ**1**^{s}**23**/48**,mb3.6**/5**,3C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.31**	**153**	*e*Pn	**Pn**	**14 42 38.8**	**+1.7**
KK31	**Karatay Array**	**6.83**	**17**	Pn	**Pn**	**14 43 40.1**	**+0.9**
	2.2nm,0.5s,baz=207,slow=15,SNR=49						
KK31				Sn	**Sn**	**14 44 54.4**	**-1.8**
	7.6nm,0.7s,baz=207,slow=29,SNR=4.9						
AML	**Almayashu**	**7.19**	**38**	P	**Pn**	**14 43 44.8**	**+0.8**
	SNR=24						
AML	**Almayashu**	**7.19**	**38**	*e*P	**Pn**	**14 43 44.7**	**+0.6**
	14nm,0.6s						
EKS2	**Erkin-Say**	**7.63**	**36**	P	**Pn**	**14 43 51.1**	**+0.9**
	SNR=7.2						
EKS2	**Erkin-Say**	**7.63**	**36**	*e*P	**Pn**	**14 43 50.8**	**+0.7**
	4.4nm,0.6s						
UCH	**Uchtor**	**7.67**	**41**	P	**Pn**	**14 43 52.4**	**+1.6**
	8.3nm,0.8s						
AAK	**Ala-Archa**	**7.96**	**39**	P	**Pn**	**14 43 55.5**	**+0.9**
	SNR=24						
AAK	**Ala-Archa**	**7.96**	**39**	*e*P	**Pn**	**14 43 55.2**	**+0.6**
	15nm,0.6s						
KZA	**Kyzart**	**7.97**	**44**	P	**Pn**	**14 43 55.6**	**+0.8**
	SNR=24						
KBK	**Karagaybulak**	**8.21**	**40**	P	**Pn**	**14 43 58.6**	**+0.6**
	SNR=22						
CHMS	**Chumysh**	**8.35**	**38**	P	**Pn**	**14 44 00.7**	**+0.7**
	SNR=7.0						
USP	**Ospenovka**	**8.43**	**36**	P	**Pn**	**14 44 01.0**	**-0.1**
	SNR=7.6						
TKM2	**Tokmak 2**	**8.73**	**41**	⇓Pn	**Pn**	**14 44 06.1**	**+0.9**
	5.7nm,0.5s						
TKM2				⇓Sn	**Sn**	**14 45 43.6**	**+0.6**
	5.2nm,1.0s						
TKM2	**Tokmak 2**	**8.73**	**41**	P	**Pn**	**14 44 05.2**	**0.0**
	SNR=14						
TKM2	**Tokmak 2**	**8.73**	**41**	*e*P	**Pn**	**14 44 05.1**	**-0.2**
	8.3nm,0.6s						
AB31	**Akbulak array**	**13.87**	**338**	Pn	**Pn**	**14 45 13.8**	**-1.7**
	1.0nm,0.5s,baz=154,slow=13,SNR=22						
MK31	**Makanchi Array**	**14.86**	**42**	⇑Pn	**Pn**	**14 45 27.6**	**-1.5**
	1.5nm,0.7s,baz=229,slow=13,SNR=10.0						
MK31	**Makanchi Array**	**14.86**	**42**	*e*P	**Pn**	**14 45 27.2**	**-1.9**
MKAR	**Makanchi Array**	**14.86**	**42**	Pn	**Pn**	**14 45 27.3**	**-1.7**
	0.2nm,0.3s,baz=230,slow=12,SNR=12						
AKTK	**Aktyubinsk**	**15.51**	**336**	Pn	**Pn**	**14 45 36.9**	**-0.6**
AKTO	**Aktyubinsk**	**15.51**	**336**	Pn	**Pn**	**14 45 37.1**	**-0.4**
AKTO	**Aktyubinsk**	**15.51**	**336**	Pn	**Pn**	**14 45 36.9**	**-0.6**
	0.1nm,0.3s,baz=152,slow=13,SNR=7.4						
KURBB	**Kurchatov Arra**	**16.02**	**26**	⇓Pn	**Pn**	**14 45 47.1**	**+3.1**
	1.4nm,1.4s						
KURK	**Kurchatov**	**16.12**	**26**	⇑Pn	**Pn**	**14 45 47.8**	**+2.3**
	4.6nm,1.1s						
KURK	**Kurchatov**	**16.12**	**26**	Pn	**Pn**	**14 45 41.2**	**-4.2**
	0.1nm,0.3s,baz=214,slow=11,SNR=2.9						
KURK	**Kurchatov**	**16.12**	**26**	*e*P	**Pn**	**14 45 47.6**	**+2.1**
	5.8nm,1.2s						
VOSK	**Vostochnaya**	**16.28**	**7**	⇑Pn	**Pn**	**14 45 47.8**	**+0.3**
	3.0nm,0.7s						
BVA0	**Borovoye Array**	**16.53**	**6**	Pn	**Pn**	**14 45 49.9**	**-0.7**
	0.7nm,0.9s,baz=165,slow=10,SNR=7.0						
BVAR	**Borovoye Array**	**16.53**	**6**	Pn	**Pn**	**14 45 48.9**	**-1.7**
	0.4nm,0.3s,baz=166,slow=11,SNR=8.3						
BRVK	**Borovoye**	**16.55**	**5**	*e*P	**Pn**	**14 45 50.3**	**-0.6**
	5.4nm,0.8s						
GKN	**Gorkha**	**16.63**	**116**	*e*P	**Pn**	**14 45 50.9**	**-1.2**
DMN	**Daman**	**17.20**	**116**	*e*P	**Pn**	**14 45 57.0**	**-2.2**
GUN	**Gumba**	**17.59**	**114**	*e*P	**Pn**	**14 46 04.3**	**+0.2**
RAMN	**Ramite**	**18.66**	**116**	*e*P	**Pn**	**14 46 14.2**	**-3.0**
TAPN	**Taplejung**	**19.25**	**113**	*e*P	**Pn**	**14 46 24.2**	**-0.1**
ZAA0	**Zalesovo Array**	**21.00**	**29**	*e*P	**P**	**14 46 41.5**	**-0.5**
ZALV	**Zalesovo Beam**	**21.00**	**29**	P	**P**	**14 46 41.8**	**-0.3**
	2.5nm,0.5s,mb3.8,baz=224,slow=10,SNR=14						
BRTR	**Keskin Array B**	**26.91**	**287**	P	**P**	**14 47 40.7**	**+0.9**
	0.7nm,0.8s,baz=97,slow=8.3,SNR=4.5						
SONM	**Songino Array**	**30.44**	**56**	P	**P**	**14 48 13.5**	**+2.4**
	0.4nm,0.7s,baz=260,slow=9.9,SNR=3.2						
NB2	**NORSAR Subarra**	**42.73**	**323**	P	**P**	**14 49 56.3**	**+0.8**
	comp=Z,0.2nm,0.7s,mb3.0,baz=100,slow=8.6						
NOA	**NORSAR Array B**	**42.73**	**323**	P	**P**	**14 49 56.3**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.6,baz=98,slow=7.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**63.11**	**267**	P	**P**	**14 52 27.1**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.5,baz=52,slow=5.5,SNR=3.0						
YKA	**Yellowknife Ar**	**81.23**	**1**	P	**P**	**14 54 15.5**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.7,baz=351,slow=5.6,SNR=16						
YKA	**Yellowknife Ar**	**81.23**	**1**	P	**P**	**14 54 15.5**	**+1.4**
ASAR	**Alice Springs**	**86.48**	**123**	P	**P**	**14 54 39.4**	**-2.1**
	comp=Z,0.3nm,0.8s,mb3.6,baz=310,slow=4.6,SNR=5.6						

*IDC **09** 14:44:54.9±1.4,3481N×2374E,h0^{km},mb3.6/5,mb1 3.6/6, mb1mx3.4/24,mbtmp3.5/6,ML3.6/1,Error ellipse: s-maj=36.1km s-min=24.3km az=140.0*
*ISCJB **09** 14:45:00.2±1.1,348N±0.1×237E±02,h58^{km}±8^{km},mb3.4/5, Error ellipse: s-maj=23.8km s-min=21.8km az=43.9*
*NEIC **09** 14:45:01.9±0.9,3483N×2370E,h57^{km}±7^{km},MD3.4(ATH), Error ellipse: s-maj=15.9km s-min=14.4km az=133.0*
*ATH **09** 14:45:06.7,3501N×2384E,h4^{km},MD3.4/3*
*CSEM **09** 14:45:07.2±1.6,3503N×2383E,h2^{km},MD3.4,Error ellipse: s-maj=48.9km s-min=8.3km az=79.0*
ISC 09 14:45:01.5±1.1**,348N**±01×**238E**±02**,h51**^{km}±8^{km}**,n13,** σ**0**^{s}**79**/15**,mb3.4**/5**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.28**	**82**	*e*PG	**Pn**	**14 45 12.1**	**+1.6**
GVD				*e*SG	**Sn**	**14 45 15.5**	**-1.5**
GVD	**Gavdhos**	**0.28**	**82**	*e*Pg	**Pn**	**14 45 12.0**	**+1.5**
GVD				*e*Sg	**Sn**	**14 45 15.5**	**-1.5**
VAM	**Vamos**	**0.71**	**31**	*e*PG	**Pn**	**14 45 16.0**	**+0.6**
NPS	**Neapolis**	**1.59**	**73**	*e*PN	**Pn**	**14 45 34.6**	**+7.3**
NPS	**Neapolis**	**1.59**	**73**	*e*Pn	**Pn**	**14 45 35.0**	**+7.7**
TIP	**Timpagrande**	**7.10**	**310**	*e*P	**Pn**	**14 46 33.9**	**-8.8**
GERES	**GERESS Array B**	**15.89**	**335**	Pn	**Pn**	**14 48 41.3**	**-0.2**
	0.1nm,0.3s,baz=148,slow=11,SNR=3.6						
NOA	**NORSAR Array B**	**27.47**	**347**	P	**P**	**14 50 42.2**	**-0.3**
	0.7nm,0.7s,mb3.3,baz=153,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	**29.38**	**228**	P	**P**	**14 50 59.8**	**-0.1**
	0.5nm,0.9s,mb3.2,baz=36,slow=8.2,SNR=2.6						
KURK	**Kurchatov**	**42.30**	**51**	P	**P**	**14 52 49.5**	**-0.4**
	0.5nm,0.5s,mb3.4,baz=274,slow=8.7,SNR=3.4						
KURK	**Kurchatov**	**42.30**	**51**	P	**P**	**14 52 49.5**	**-0.5**
MKAR	**Makanchi Array**	**44.93**	**56**	P	**P**	**14 53 11.9**	**+0.7**
	0.5nm,0.6s,mb3.6,baz=264,slow=7.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**46.08**	**46**	P	**P**	**14 53 19.8**	**-0.4**
	0.4nm,0.4s,mb3.8,baz=272,slow=6.9,SNR=3.5						

*JMA **09** 14:51:32.8±0.2,2476N×12225E,h69^{km},M2.6*
*ISCJB **09** 14:51:33.3±0.5,2462N±003×12223E±002,h64^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=2.9km az=168.3*
*TAP **09** 14:51:33.4,2465N×12221E,h64^{km},ML3.5,D*
ISC 09 14:51:33.9±0.5**,2463N**±003×**12223E**±002**,h61**^{km}±6^{km}**, n46,** σ**0**^{s}**74**/90**,2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.35**	**267**⇓	*i*P	**Pn**	**14 51 44.2**	**-0.3**
	baz=263						
TWC				*i* S	**Sn**	**14 51 52.0**	**-0.2**
	baz=263						
ILA	**Ilan**	**0.46**	**287**	*i* P	**Pn**	**14 51 45.7**	**+0.1**
	baz=285						
ILA				*i* S	**Sn**	**14 51 54.8**	**+0.8**
	baz=285						
ENA	**Nanau**	**0.49**	**246**	*i* P	**Pn**	**14 51 45.7**	**-0.1**
	baz=242						
ENA				*i* S	**Sn**	**14 51 55.3**	**+0.7**
	baz=242						
TWE	**Neicheng**	**0.52**	**280**	*i* P	**Pn**	**14 51 46.2**	**0.0**
	baz=278						
TWE				*i* S	**Sn**	**14 51 55.3**	**+0.2**
	baz=278						
NWF	**Wu-fen Shan**	**0.60**	**317**	*i* P	**Pn**	**14 51 47.1**	**0.0**
	baz=317						
NWF				*i* S	**Sn**	**14 51 56.9**	**+0.2**
	baz=317						
ENTT	**Nioudou**	**0.61**	**271**	*i* P	**Pn**	**14 51 47.3**	**+0.2**
	baz=269						
ENTT				S	**Sn**	**14 51 57.1**	**+0.3**
	baz=269						
TWA	**Mucha**	**0.69**	**301**	P	**Pn**	**14 51 47.9**	**-0.1**
	baz=300						
TWA				S	**Sn**	**14 51 58.0**	**-0.4**
	baz=300						
YOJ	**Yonaguni jima**	**0.73**	**103**	P	**Pn**	**14 51 48.3**	**-0.3**
YOJ				S	**Sn**	**14 51 59.9**	**+0.6**
TAP1	**Taipei**	**0.76**	**302**	P	**Pn**	**14 51 48.6**	**-0.4**
	baz=302						
TAP1				S	**Sn**	**14 51 59.5**	**-0.5**
	baz=302						
NSK	**Sanguang**	**0.80**	**273**	P	**Pn**	**14 51 49.5**	**+0.1**
	baz=272						
NSK				S	**Sn**	**14 52 01.1**	**+0.2**
	baz=272						

TWD	Chiawan	0.80	227	P	Pn	14 51 48.8	-0.6
	baz=224						
TWD				eS	Sn	14 52 00.6	-0.2
	baz=224						
NNS	Nan Shan	0.81	257	eP	Pn	14 51 49.4	-0.1
	baz=254						
NNS				eS	Sn	14 52 01.1	+0.2
	baz=254						
TWY	Chenhua	0.86	318	eP	Pn	14 51 48.0	-2.2
	baz=318						
TWY				S	Sn	14 52 02.5	+0.3
	baz=318						
HWA	Hwalien	0.87	221	eP	Pn	14 51 50.5	+0.2
	baz=219						
HWA				eS	Sn	14 52 03.2	+0.8
	baz=219						
TWS1	Kuangyinshan	0.88	303	P	Pn	14 51 50.1	-0.3
	baz=302						
TWS1				S	Sn	14 52 02.4	-0.2
	baz=302						
WHF	Hehuan Shan	1.01	242	eP	Pn	14 51 51.8	-0.2
	baz=239						
WHF				eS	Sn	14 52 05.6	+0.1
	baz=239						
NCU	National Centr	1.01	290	eP	Pn	14 51 52.0	-0.1
	baz=289						
NCU				eS	Sn	14 52 05.8	+0.2
	baz=289						
TWT	Tachien	1.03	249	eP	Pn	14 51 52.6	+0.2
	baz=247						
TWT				eS	Sn	14 52 06.1	-0.1
	baz=247						
ESL	Shilin	1.09	222	eP	Pn	14 51 51.7	-1.5
	baz=220						
ESL				eS	Sn	14 52 05.4	-2.1
	baz=220						
NSTT	Nanjuang	1.12	270	eP	Pn	14 51 53.4	-0.2
	baz=269						
NSTT				eS	Sn	14 52 08.2	+0.1
	baz=269						
HSN	Hsinchu	1.16	279	eP	Pn	14 51 53.8	-0.3
	baz=279						
HSN				eS	Sn	14 52 08.8	-0.4
	baz=279						
TWQ1	Liyutan	1.36	258	eP	Pn	14 51 56.7	-0.1
	baz=257						
TWQ1				eS	Sn	14 52 13.8	0.0
	baz=257						
EHY	Hungye	1.39	217	eP	Pn	14 51 57.5	+0.3
	baz=215						
EHY				eS	Sn	14 52 11.6	-3.1
	baz=215						
IRIF	Iriomote-Funau	1.40	102	P	Pn	14 51 56.6	-0.6
IRIF				S	Sn	14 52 14.3	-0.4
SMLT	Sun Moon Lake	1.43	239	eP	Pn	14 51 58.5	+0.9
	baz=237						
SMLT				eS	Sn	14 52 16.3	+0.9
	baz=237						
TYC	Yuchr	1.45	240	eP	Pn	14 51 58.5	+0.6
	baz=238						
TYC				eS	Sn	14 52 16.3	+0.3
	baz=238						
TCU	Taichung	1.50	252	eP	Pn	14 51 57.9	-0.7
	baz=250						
TCU				S	Sn	14 52 17.0	-0.1
	baz=250						
TWF1	Yuli	1.53	214	eP	Pn	14 51 57.9	-1.1
	baz=212						
TWF1				eS	Sn	14 52 15.4	-2.7
	baz=212						
HATJ	Hateruma jima	1.54	111	P	Pn	14 51 59.4	+0.2
HATJ				eS	Sn	14 52 18.9	+0.6
JKRS	Kuro-shima	1.67	103	P	Pn	14 52 00.7	-0.1
JKRS				S	Sn	14 52 21.5	+0.3
CHKT	Chengkung	1.72	208	eP	Pn	14 52 00.3	-1.3
	baz=206						
CHN5	Tsauling	1.75	234	eP	Pn	14 52 02.5	+0.5
	baz=233						
CHN5				eS	Sn	14 52 24.1	+0.7
	baz=233						
JIJ	Ishigaki jima	1.76	98	P	Pn	14 52 01.5	-0.6
JIJ				S	Sn	14 52 22.7	-0.8
WGK	Gukeng	1.79	239⇓	eP	Pn	14 52 03.0	+0.5
	baz=237						
WGK				eS	Sn	14 52 24.4	+0.1
	baz=237						
ELDTW	Lidau	1.81	218	eP	Pn	14 52 02.6	-0.3
	baz=216						
ELDTW				eS	Sn	14 52 21.9	-2.9
	baz=216						
CHN2	Minshiung	1.94	236	eP	Pn	14 52 05.0	+0.4
	baz=234						
CHN2				eS	Sn	14 52 28.2	+0.3
	baz=234						
CHN4	Tsaushan	1.97	230	eP	Pn	14 52 05.9	+1.0
	baz=228						
CHN4				eS	Sn	14 52 28.8	+0.3
	baz=228						
STYT	Tauyuan	1.99	223	eP	Pn	14 52 05.8	+0.6
	baz=221						
STYT				eS	Sn	14 52 29.8	+0.7
	baz=221						
WTP	Ta-pu	2.02	227	eP	Pn	14 52 06.6	+0.9
	baz=226						
WTP				eS	Sn	14 52 30.2	+0.3
	baz=226						
TWG	Pinlang	2.09	211	eP	Pn	14 52 07.0	+0.3
	baz=209						
TWG				eS	Sn	14 52 32.2	+0.7
	baz=209						
TWK	Hsinying	2.10	230	eP	Pn	14 52 07.3	+0.7
	baz=228						
TWK				eS	Sn	14 52 31.9	+0.3
	baz=228						
CHN1	Nanshi	2.12	228	eP	Pn	14 52 07.7	+0.7
	baz=226						
CHN1				eS	Sn	14 52 32.7	+0.4
	baz=226						
JTJ	Tarama	2.25	89	P	Pn	14 52 09.1	+0.4
JTJ				eS	Sn	14 52 37.0	+1.6
ECL	Taimali	2.34	210	eP	Pn	14 52 11.2	+1.2
	baz=209						
ECL				eS	Sn	14 52 34.6	-3.0
	baz=209						
SSD	Sandimen	2.38	218	eP	Pn	14 52 11.2	+0.6
	baz=217						
SSD				eS	Sn	14 52 38.4	-0.2
	baz=217						
LAY	Lan-yu	2.65	194	eP	Pn	14 52 13.3	-1.0
	baz=193						

*BJI **09** 15:00:01.5, 5179N×17743W, h27km, mB4.9, mb4.7, Ms4.6, Msz4.0*

*ISCJB **09** 15:00:04.2±0.5, 5177N±007×17651W±005, h62km±4km, mb4.5/55, Error ellipse: s-maj=11.9km s-min=4.9km az=169.1*

*NEIC **09** 15:00:05.2±0.6, 5170N×17649W, h58km±5km, mb4.5/40, ML4.5(AEIC), Error ellipse: s-maj=9.0km s-min=4.1km az=167.0*

*IDC **09** 15:00:07.1±0.8, 5188N×17648W, h71km±6km, mb3.9/20, mb1 4.0/21, mb1mx4.0/27, mbtmp3.9/21, Error ellipse: s-maj=20.3km s-min=9.8km az=174.0*

ISC 09 15:00:05.3±0.6, **5177N**±007×**17651W**±005, **h56**km±4km, **h68**km±2.7km**:pP-P, n100,** σ**1.01**/97, **mb4.5**/55, **MS4.2**/2, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	0.16	318	P	Pn	15 00 13.0	-1.2
ADK				S	Sn	15 00 20.6	+0.1
ATKA	Atka Island	1.50	72	P	Pn	15 00 28.6	-1.3
ATKA				S	Sn	15 00 48.6	+0.3
AMKA	Amchitka	2.64	263	eP	Pn	15 00 45.9	+0.5
UNV	Unalaska Valle	6.42	67	P	Pn	15 01 37.6	+0.5
FX1	Attu Island--F	6.43	284	P	Pn	15 01 37.6	+0.3
	5.1nm,0.3s,baz=151,slow=20,SNR=24						
FX1				S	Sn	15 02 54.1	+5.0
	3.0nm,0.3s,baz=66,slow=20,SNR=3.1						
FX1	Attu Island--F	6.43	284	P	Pn	15 01 39.2	+2.0
SPIA	Saint Paul Isl	6.54	31	P	Pn	15 01 41.5	+2.8
AKUT	Akutan	6.91	66	ePn	Pn	15 01 49.1	+5.2
OHAK	Old Harbor	14.52	59	eP	Pn	15 03 24.3	-3.0
	42nm,1.3s						
SVW2	Sparrevohn	14.81	43	eP	Pn	15 03 35.6	+4.5
KDAK	Kodiak Island	15.02	57	S	S	15 06 22.5	-11
	0.3nm,0.3s,baz=144,slow=19,SNR=5.4						
KDAK	Kodiak Island	15.02	57	ePn	Pn	15 03 31.5	-2.3
	36nm,0.4s						
KDAK				eP		15 03 36.4	
PETK	Petropavlovsk-	15.76	285	P	Pn	15 03 48.0	+4.7
	0.1nm,0.3s,baz=90,slow=14,SNR=5.6						
PPLA	Purkeypile	17.10	40	eP	Pn	15 04 04.1	+4.0
	14nm,0.5s						
SEW	Seward	17.20	50	eP	Pn	15 03 59.7	-1.6
	22nm,0.3s						
CHUM	Lake Minchumin	17.56	37	eP	Pn	15 04 07.9	+2.2
	20nm,0.9s						
PMR	Palmer	17.83	46	eP	Pn	15 04 09.2	+0.1
	2.8nm,0.3s						
KTH	Kantishna Hill	17.92	39	eP	Pn	15 04 11.8	+1.6
	62nm,1.1s						
TRF	Thorofare Moun	18.12	40	eP	Pn	15 04 13.7	+1.1
	7.7nm,0.6s						
BPAW	Bear Paw Mtn.	18.17	37	eP	Pn	15 04 14.7	+1.6
	18nm,0.6s						
BILL	Bilibino	18.34	339	P	Pn	15 04 14.7	-0.5
	17nm,1.1s						
MCK	McKinley	18.79	40	eP	Pn	15 04 19.9	-0.7
	16nm,0.6s						
COLA	College	19.73	37	eP	Pn	15 04 30.3	-1.5
	13nm,0.6s						
PAX	Paxson	19.92	44	eP	Pn	15 04 32.8	-1.2
	16nm,0.9s						
COLD	Coldfoot	20.20	30	eP	P	15 04 37.0	+2.0
	13nm,1.0s						
MENT	Mentasta	20.67	45	eP	P	15 04 40.2	+0.1
EGAK	Eagle	22.32	41	eP	P	15 04 57.2	-0.5
	15nm,0.8s,mb4.5						
DAWY	Dawson	22.85	43	eP	P	15 05 03.3	+0.1
INK	Inuvik	26.33	35	eP	P	15 05 34.9	-0.5
	2.5nm,0.4s,mb4.1						
YKA	Yellowknife Ar	33.93	47	P	P	15 06 41.4	-1.1
	0.8nm,0.5s,mb3.9,baz=277,slow=7.9,SNR=19						
YKA				pP	pP	15 06 59.1	+2.4
	1.4nm,0.8s,baz=281,slow=7.9,SNR=6.4						
YKA				PcP	PcP	15 09 20.0	+0.5
	3.6nm,0.7s,baz=287,slow=3.0,SNR=48						
YKA				ScP	ScP	15 12 57.9	-1.3
	0.3nm,0.7s,baz=281,slow=3.5,SNR=4.7						
YKA	Yellowknife Ar	33.93	47	P	P	15 06 41.4	-1.1
YKA				pP	pP	15 06 59.1	+2.4
YKA				PcP	PcP	15 09 20.1	+0.6
YKA				ScP	ScP	15 12 57.9	-1.3
MJAR	Matsushiro Arr	35.25	262	P	P	15 06 54.7	+0.5
	0.7nm,0.6s,mb3.8,baz=46,slow=8.2,SNR=3.8						
HAWA	Hanford	36.88	75	eP	P	15 07 08.8	+0.8
	5.8nm,0.6s,mb4.6						
EDM	Edmonton	37.37	62	eP	P	15 07 11.9	-0.2
NEW	Newport	37.41	71	eP	P	15 07 12.6	+0.1
	12nm,0.9s,mb4.7						
MOD	Modoc	38.80	82	eP	P	15 07 25.5	+1.2
	3.7nm,0.8s,mb4.2						
CN2	Changchun	38.87	282	eP	P	15 07 20.2	-4.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
BMO	Blue Mountains	39.02	76	eP	P	15 07 26.4	+0.3
	comp=Z,1.8nm,0.6s,mb4.0						
WVOR	Wild Horse Val	39.53	80	eP	P	15 07 31.1	+0.8
	comp=Z,5.5nm,0.7s,mb4.4						
MSO	Missoula	39.99	71	eP	P	15 07 34.0	-0.1
	comp=Z,2.1nm,0.6s,mb4.0						
KSRS	Korea Array	41.06	272	P	P	15 07 44.1	+1.1
	comp=Z,3.8nm,0.8s,mb4.1,baz=55,slow=8.1,SNR=15						
KSRS				pP	pP	15 08 01.4	+3.9
	comp=Z,1.7nm,0.7s,baz=59,slow=7.5,SNR=4.2						
HLID	Hailey	41.46	76	eP	P	15 07 46.6	+0.4
	comp=Z,3.7nm,0.8s,mb4.1						
EGMT	Eagleton	41.81	68	eP	P	15 07 48.5	-0.6
	comp=Z,9.0nm,0.6s,mb4.6						
BOZ	Bozeman (W)	41.98	72	eP	P	15 07 50.5	0.0
	comp=Z,4.4nm,0.6s,mb4.3						
NVAR	Mina Array Bea	42.09	85	P	P	15 07 52.4	+1.0
	comp=Z,2.4nm,0.8s,mb3.9,baz=293,slow=8.4,SNR=12						
NVAR				pP	pP	15 08 10.4	+4.4
	comp=Z,1.4nm,0.8s,baz=288,slow=7.6,SNR=4.4						
NVAR				PcP	PcP	15 09 45.5	+0.3
	comp=Z,1.3nm,0.8s,baz=285,slow=4.1,SNR=5.5						
NVAR	Mina Array Bea	42.09	85	P	P	15 07 52.4	+1.0
NVAR				pP	pP	15 08 10.4	+4.4
NVAR				PcP	PcP	15 09 45.5	+0.3
ELK	Elko	42.58	80	eP	P	15 07 56.1	+0.7
	comp=Z,3.7nm,0.7s,mb4.2						
RRI2	Red Ridge	43.44	74	eP	P	15 08 03.8	+1.4
	comp=Z,3.3nm,0.8s,mb4.1						
RLMT	Red Lodge	43.66	71	eP	P	15 08 04.5	+0.5
	comp=Z,16nm,0.9s,mb4.8						
TPNV	Topopah Spring	44.29	85	eP	P	15 08 09.4	+0.2
	comp=Z,7.6nm,0.9s,mb4.4						
PDAR	Pinedale Array	44.83	74	P	P	15 08 13.8	+0.3
	comp=Z,7.6nm,0.7s,mb4.6,baz=312,slow=3.7,SNR=67						
BJI	Beijing	46.68	283	P	P	15 08 22.1	-6.0
BJI				AMB	AMB		
	comp=Z,11nm,0.5s,mb5.0						
RSSD	Black Hills	47.29	69	eP	P	15 08 32.5	-0.3
	comp=Z,3.2nm,0.6s,mb4.4						
SONM	Songino Array	47.74	297	P	P	15 08 36.4	+0.2
	comp=Z,0.5nm,0.6s,mb3.7,baz=69,slow=7.9,SNR=4.5						
SONM				PcP	PcP	15 10 05.0	+0.5
	comp=Z,1.3nm,0.5s,baz=82,slow=2.6,SNR=9.2						
SONM				ScP	ScP	15 13 53.1	-0.6
	comp=Z,0.5nm,0.8s,baz=44,slow=4.6,SNR=3.6						
WUAZ	Wupatki	48.22	83	eP	P	15 08 40.6	+0.6
	comp=Z,7.6nm,0.8s,mb4.8						
ULM	Lac du Bonnet	48.27	58	P	P	15 08 39.0	-1.3
	comp=Z,2.6nm,0.6s,mb4.5,baz=305,slow=6.7,SNR=3.0						
HHC	Hu-ho-hao-te	48.95	287	eP	P	15 08 39.7	-5.9
HHC				AP	pP	15 08 55.5	-4.9
HHC				PCP	PcP	15 10 06.2	-2.8
HHC				PP	PP	15 10 32.0	-7.1
HHC				PCS	PcS	15 14 00.5	-4.8
HHC				eS	S	15 15 34.9	-10
HHC				XS	sS	15 16 00.6	-10
HHC				SS	SS	15 19 00.2	-16
HHC				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
HHC				AMB	AMB		
	comp=Z,352nm,4.6s						
HHC				LR	LR		
	comp=N,263nm,14.3s,MS4.4						
HHC				LR	LR		
	comp=E,158nm,15.5s,MS4.4						
HHC				LR	LR		
	comp=Z,162nm,22.2s						
SDCO	Great Sand Dun	50.37	77	eP	P	15 08 57.0	+0.5
	comp=Z,1.6nm,0.5s,mb4.3						
ANMO	Albuquerque	51.62	80	P	P	15 09 05.6	-0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=329,slow=5.9,SNR=4.4						
ANMO	Albuquerque	51.62	80	P	P	15 09 05.6	-0.3
ECSD	EROS,Sioux Fal	51.78	65	eP	P	15 09 05.3	-1.6
	comp=Z,5.2nm,0.9s,mb4.5						
ZALV	Zalesovo Beam	54.79	314	PcP	PcP	15 10 30.7	+0.1
	comp=Z,0.8nm,0.5s,baz=54,slow=2.6,SNR=5.2						
XAN	Xi'an	54.98	282	P	P	15 09 24.7	-5.8
XAN				AP	pP	15 09 40.6	-5.0
XAN				PP	PP	15 11 27.6	-6.2
XAN				S	S	15 17 00.2	-8.0
XAN				SS	SS	15 20 44.9	-7.1
XAN				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.5						
XAN				LR	LR		
	comp=Z,342nm,50.1s,MS4.0						
LZH	Lanzhou	56.64	287	eP	P	15 09 40.5	-1.9
LZH				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,68nm,5.1s						
TXAR	Lajitas Array	57.19	83	P	P	15 09 46.4	0.0
	comp=Z,4.2nm,0.8s,mb4.5,baz=298,slow=4.7,SNR=53						
ARCES	ARCESS Array B	57.94	351	P	P	15 09 50.7	-0.4
	comp=Z,1.7nm,0.8s,mb4.1,baz=23,slow=6.6,SNR=4.7						
SCHQ	Schefferville	58.81	40	P	P	15 09 56.1	-1.1
	comp=Z,3.2nm,0.7s,mb4.5,baz=315,slow=11,SNR=2.9						
MIAR	Mount Ida	59.65	72	eP	P	15 10 02.6	-0.8
	comp=Z,11nm,1.1s,mb4.8						
KURK	Kurchatov	59.78	315	P	P	15 10 04.5	+0.5
	comp=Z,2.7nm,0.6s,mb4.5,baz=44,slow=6.7,SNR=22						
CD2	Chengdu	60.28	283	eP	P	15 10 05.7	-2.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CD2				AMB	AMB		
	comp=Z,30nm,9.0s						
WMQ	Urumqi	60.32	304	eP	P	15 10 06.5	-1.4
MKAR	Makanchi Array	60.90	310	P	P	15 10 10.9	-0.8
	comp=Z,0.8nm,0.7s,mb4.0,baz=47,slow=5.9,SNR=7.0						
GYA	Guiyang	61.70	278	P	P	15 10 14.4	-3.0
GYA				PCP	PcP	15 10 58.9	+0.5
GYA				PCS	PcS	15 15 00.4	-1.1
GYA				S	S	15 18 25.3	-10
GYA				SCS	ScS	15 20 01.1	-3.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,100nm,6.0s						
KMI	Kunming	65.08	279	P	P	15 10 41.0	+1.2
KMI				AMB	AMB		
	comp=Z,13nm,0.9s,mb5.0						
GOGA	Godfrey	66.31	66	eP	P	15 10 46.5	-1.2
	comp=Z,13nm,1.1s,mb4.9						
AKTK	Aktyubinsk	68.18	326	P	P	15 10 59.9	+0.7
AKTO	Aktyubinsk	68.18	326	P	P	15 10 59.9	+0.7
	comp=Z,2.0nm,0.8s,mb4.2,baz=23,slow=5.3,SNR=7.3						
NHSC	New Hope	68.39	64	eP	P	15 11 01.3	+0.6
	comp=Z,50nm,1.0s,mb5.5						
CMAR	Chiang Mai Arr	72.39	278	P	P	15 11 26.1	+0.8
	comp=Z,7.5nm,1.2s,mb4.5,baz=26,slow=7.6,SNR=15						
CMAR				pP	pP	15 11 43.8	+2.8
	comp=Z,1.6nm,0.8s,baz=33,slow=6.9,SNR=3.7						
TAPN	Taplejung	72.40	292	eP	P	15 11 25.8	+0.5
GUN	Gumba	73.02	293	eP	P	15 11 29.7	+0.7
	comp=Z,19nm,0.4s,mb5.4						
JIRN	Jiri	73.04	293	eP	P	15 11 30.0	+0.9
	comp=Z,7.7nm,0.4s,mb4.9						
RAMN	Ramite	73.34	292	eP	P	15 11 29.6	-1.3
	comp=Z,8.8nm,0.4s,mb5.0						
GKN	Gorkha	73.66	294	eP	P	15 11 32.9	+0.1
	comp=Z,4.3nm,0.5s,mb4.7						
DANN	Dangsing	73.89	295	eP	P	15 11 34.5	+0.4
AKASG	Malin Array Be	75.60	343	P	P	15 11 43.3	-0.3
	comp=Z,0.4nm,0.3s,mb3.8,baz=18,slow=5.6,SNR=3.3						
KAKA	Kakadu	77.88	231	eP	x	15 11 37.8	
	comp=Z,6.4nm,0.9s						
BCLA	Clavier	78.18	359	XP	sP	15 12 19.1	-1.1
WB2	Warramunga Arr	83.29	226	eP	P	15 12 24.9	-0.8
PSI	Prapat	84.44	267	P	P	15 12 32.1	+0.2
	comp=Z,5.4nm,0.7s,mb4.8,baz=351,slow=8.2,SNR=5.3						
BRTR	Keskin Array B	85.17	337	P	P	15 12 35.0	-0.1
	comp=Z,0.9nm,0.7s,mb4.0,baz=41,slow=4.2,SNR=5.3						
FITZ	Fitzroy Crossi	85.84	234	eP	P	15 12 38.1	-0.5
	comp=Z,6.3nm,0.6s,mb5.0						
ASAR	Alice Springs	86.75	224	P	P	15 12 43.0	0.0
	comp=Z,2.4nm,0.7s,mb4.5,baz=25,slow=4.6,SNR=23						
STKA	Stephens Creek	91.04	215	P	P	15 13 03.3	+0.3
	comp=Z,2.3nm,0.6s,mb4.7,baz=298,slow=24,SNR=6.4						
TORD	Torodi Ar. Bea	115.34	2	PKP	PKPdf	15 18 39.8	-0.8
	comp=Z,0.7nm,0.4s,baz=348,slow=2.6,SNR=18						
DBIC	Dimbokro	121.36	10	PKP	PKPdf	15 18 51.7	-0.6
	comp=Z,1.5nm,0.4s,baz=340,slow=3.5,SNR=14						
DBIC	Dimbokro	121.36	10	PKP	PKPdf	15 18 51.7	-0.6
CPUP	Villa Florida	128.14	85	PKP	PKPdf	15 19 04.4	-0.4
	comp=Z,0.4nm,0.5s,baz=16,slow=7.4,SNR=2.7						
MAW	Mawson	147.66	218	PKPbc	PKPbc	15 19 41.0	-0.9
	comp=Z,3.0nm,0.8s,baz=0.0,slow=2.0,SNR=4.6						
BOSA	Boshof	151.72	317	PKPbc	PKPbc	15 19 53.1	0.0
	comp=Z,9.2nm,0.5s,baz=11,slow=2.2,SNR=33						

*IDC **09** 15:04:10.8±9.0, 2546S×17731W, h165km±82km, mb3.8/4, mb1 3.8/5, mb1mx3.5/16, mbtmp3.8/5, Error ellipse: s-maj=55.0km s-min=38.2km az=164.0*

*NEIC **09** 15:04:15.7±3.7, 2572S×17721W, h218km±33km, mb4.2/2, Error ellipse: s-maj=27.5km s-min=18.7km az=210.0*

*ISCJB **09** 15:04:24.1±3.9, 262S±0.1×1780W±03, h256km±29km, mb3.9/5, Error ellipse: s-maj=40.6km s-min=15.6km az=155.4*

ISC 09 15:04:13.4±5.1, **255S**±02×**1773W**±02, **h186**km±41km, **n19,** σ**0.90**/15, **mb4.1**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.54	199	P	Pn	15 07 17.3	-0.8
	0.8nm,0.3s,baz=18,slow=16,SNR=5.7						
URZ				S	Sn	15 09 34.0	-15
	0.4nm,0.3s,baz=59,slow=16,SNR=3.7						
DZM	Mont Dzumac	15.24	280	eP	Pn	15 07 42.6	+3.2
DZM				e		15 07 51.1	
EIDS	Eidsvold	28.49	263	eP	P	15 09 52.2	+0.7
CTA	Charters Tower	33.93	272	eP	P	15 10 39.5	+0.4
	1.1nm,0.3s,mb4.1						
CTA	Charters Tower	33.93	272	P	P	15 10 39.1	0.0
	1.2nm,0.3s,mb4.1,baz=90,slow=13,SNR=6.9						
STKA	Stephens Creek	36.42	250	eP	P	15 11 01.0	+0.7
	1.8nm,0.6s,mb3.9						
STKA	Stephens Creek	36.42	250	P	P	15 10 59.8	-0.4
	2.0nm,0.5s,mb4.0,baz=94,slow=7.6,SNR=8.2						
STKA	Stephens Creek	36.42	250	eP	P	15 11 00.4	+0.2
ASAR	Alice Springs	44.19	262	P	P	15 12 03.0	-1.1
	1.0nm,0.4s,mb3.8,baz=95,slow=6.9,SNR=53						
WRAB	Tennant Creek	44.73	267	eP	P	15 12 07.5	-0.9
FORT	Forrest	48.05	251	eP	P	15 12 34.1	0.0
	15nm,0.8s,mb4.7						
PETK	Petropavlovsk-	81.26	345	P	P	15 16 07.6	-0.7
	2.9nm,0.7s,mb4.0,baz=133,slow=5.1,SNR=13						
VNA3	Neumayer Olymp	83.11	176	e	P	15 16 18.4	+0.5
VNA3				e		15 16 21.0	
VNA2	Neumayer--Watz	83.55	177	e	P	15 16 21.2	+1.0
	baz=199,slow=4.8						
VNA2				e		15 16 23.6	
ARCES	ARCESS Array B	133.95	349	PKP	PKPdf	15 23 06.3	-1.3
	2.3nm,0.9s,baz=350,slow=2.8,SNR=5.8						
NOA	NORSAR Array B	144.02	353	PKP	PKPdf	15 23 25.7	-0.5
	1.1nm,0.8s,baz=16,slow=5.1,SNR=3.6						
NOA	NORSAR Array B	144.02	353	PKP	PKPdf	15 23 25.7	-0.5
AKASG	Malin Array Be	147.64	328	PKPbc	PKPbc	15 23 34.8	-0.9
	2.0nm,0.5s,baz=43,slow=3.7,SNR=9.7						
BRTR	Keskin Array B	150.49	306	PKPbc	PKPbc	15 23 43.0	-0.1
	0.9nm,0.5s,baz=132,slow=3.9,SNR=4.7						
BRTR				PKPab	PKPab	15 23 50.5	+0.2
	0.9nm,0.6s,baz=125,slow=3.9,SNR=4.9						

*NEIC **09** 15:12:23.3, 3273S×7171W, h47km, MD3.5(GUC), After GUC.*

GUC 09 15:12:23.3±0.7, **3273S**×**7171W, h47**km±3km, **MD3.5, ML2.8, 7C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.30	169⇓	iP	Pn	15 12 32.1	0.0
IHA				i S	Sn	15 12 38.8	+0.5
CHNG	Los Chungos	0.86	12⇑	iP	Pn	15 12 39.6	+0.5
CHNG				i S	Sn	15 12 51.6	+1.0
JACH	Jahuel	0.94	87	eP	Pn	15 12 41.0	+0.9
JACH				i S	Sn	15 12 54.2	+1.8
PEL	Peldehue	0.95	116⇑	iP	Pn	15 12 41.1	+0.9
PEL				i S	Sn	15 12 54.6	+1.9
PEL				AML	AML	15 12 56.1	
	comp=E,1μm,0.3s						
TACH	Talagante	1.12	145⇑	iP	Pn	15 12 43.2	+0.6
CLCH	Cerro Calan	1.18	124⇑	iP	Pn	15 12 44.5	+1.0
CLCH				i S	Sn	15 13 00.4	+2.0
CLCH				AML	AML	15 13 02.0	
	comp=E,192nm,0.7s						
ANTU	Antumapu	1.23	133	eP	Pn	15 12 44.8	+0.7
ANTU				i S	Sn	15 13 00.9	+1.5
ANTU	Antumapu	1.23	133	eP	Pn	15 12 44.8	+0.7
ANTU				i S	Sn	15 13 00.9	+1.5
ANTU				AML	AML	15 13 02.0	
	comp=N,396nm,0.5s						
FCH	Farellones	1.33	117⇑	iP	Pn	15 12 46.5	+1.1
FCH				i S	Sn	15 13 03.9	+2.0
FCH				AML	AML	15 13 04.8	
	comp=N,172nm,0.2s						
PCH	Pirque	1.34	132	eP	Pn	15 12 46.5	+0.9
PCH				i S	Sn	15 13 03.6	+1.5
CACH	El Canelo	1.66	146	eP	Pn	15 12 51.3	+1.3
CACH				i S	Sn	15 13 12.4	+2.3
LMEL	Las Melosas	1.68	132⇑	iP	Pn	15 12 51.5	+1.2
LMEL				i S	Sn	15 13 12.3	+1.7
LMEL	Las Melosas	1.68	132⇑	iP	Pn	15 12 51.5	+1.2
LMEL				i S	Sn	15 13 12.3	+1.7
LMEL				AML	AML	15 13 15.6	
	comp=N,317nm,0.1s						

*MOS **09** 15:19:22.2±1.2, 3027S×71.17W, h33km, mb5.0/8, Error*

ellipse: s-maj=18.3km s-min=11.4km az=98.0
*NEIC **09** 15:19:25.8,3032S×7137W,h56km,mb4.7/13,After GUC.*
NEIC Felt [III] at Coquimbo, La Serena and Ovalle; [II] at Illapel.
*ISCJB **09** 15:19:25.7±0.4,3034S±002×7130W±007,h68km±3km, mb4.6/26,Error ellipse: s-maj=9.6km s-min=3.6km az=1.8*
*GUC **09** 15:19:25.8±0.8,3032S×7137W,h56km±4km,ML5.3*
*IDC **09** 15:19:26.5±0.5,3035S×7129W,h61km±3km,mb4.4/14, mb1 4.5/18,mb1mx4.4/23,mbtmp4.4/18,MS3.8/2, Ms1 3.7/2,ms1mx3.1/14,Error ellipse: s-maj=16.1km s-min=9.0km az=40.0*
*BJI **09** 15:19:26.9,2985S×7195W,h75km,mB5.0,Ms4.8,Msz4.6*
ISC 09 15:19:26.8±0.4,**3033S**±002×**7129W**±007,**h62**km±3km, **h61**km±2.3km**:pP-P,n122,**σ**0.98**/95,**mb4.7**/26,**11C-2D,**
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.28**	**164**⇓	*i*P	**Pn**	**15 19 35.8**	**-1.2**
OVCH				*i* S	**Sn**	**15 19 43.3**	**-1.2**
TLL	**Tololo Astrono**	**0.45**	**69**⇑	*i*P	**Pn**	**15 19 38.7**	**+0.3**
TLL				*i* S	**Sn**	**15 19 47.8**	**+0.9**
TLL	**Tololo Astrono**	**0.45**	**69**⇑	*i*P	**Pn**	**15 19 38.7**	**+0.3**
TLL				*i* S	**Sn**	**15 19 47.8**	**+0.8**
TLL				AML	AML	15 19 48.5	
	comp=N,117µm,0.3s						
LCO	**Las Campanas**	**1.41**	**21**	*e*P	**Pn**	**15 19 50.8**	**+0.5**
LCO				*e*S	**Sn**	**15 20 10.0**	**+1.9**
CHNG	**Los Chungos**	**1.56**	**187**⇑	*i*P	**Pn**	**15 19 51.2**	**-1.1**
CHNG				*i* S	**Sn**	**15 20 11.4**	**0.0**
CHNG				AML	AML	15 20 14.7	
	comp=N,22µm,0.6s						
JACH	**Jahuel**	**2.42**	**166**	*e*P	**Pn**	**15 20 04.0**	**+0.1**
ROCH	**El Roble**	**2.64**	**175**	*e*P	**Pn**	**15 20 07.5**	**+0.5**
IHA	**Instituto Hidr**	**2.70**	**186**	*e*P	**Pn**	**15 20 05.6**	**-2.2**
IHA				*i* S	**Sn**	**15 20 44.6**	**+5.3**
PEL	**Peldehue**	**2.85**	**170**⇑	*i*P	**Pn**	**15 20 09.7**	**-0.1**
PEL				*i* S	**Sn**	**15 20 43.0**	**+0.1**
PEL				AML	AML	15 20 53.8	
	comp=E,16µm,0.4s						
CFAA	**Coronel Fontan**	**2.91**	**117**	P	**Pn**	**15 20 12.1**	**+1.4**
	baz=302,slow=12						
CFAA				S	**Sn**	**15 20 46.6**	**+2.1**
	comp=E,34nm,0.3s,baz=76,slow=12,SNR=7.7						
CFAA	**Coronel Fontan**	**2.91**	**117**	P	**Pn**	**15 20 12.1**	**+1.4**
CFAA				S	**Sn**	**15 20 46.6**	**+2.1**
CPCH	**Copiapo**	**3.08**	**16**⇑	*i*P	**Pn**	**15 20 12.3**	**-0.7**
CPCH				*e*S	**Sn**	**15 20 48.6**	**+0.1**
FCH	**Farellones**	**3.10**	**164**⇑	*i*P	**Pn**	**15 20 14.0**	**+0.7**
FCH				*i* S	**Sn**	**15 20 50.8**	**+1.6**
FCH				AML	AML	15 21 00.9	
	comp=E,7µm,0.7s						
CLCH	**Cerro Calan**	**3.12**	**168**⇑	*i*P	**Pn**	**15 20 13.7**	**+0.2**
CLCH				*i* S	**Sn**	**15 20 49.9**	**+0.3**
CLCH				AML	AML	15 21 08.9	
	comp=N,15µm,0.6s						
SAN	**Santiago**	**3.16**	**170**	*e*P	**Pn**	**15 20 13.9**	**-0.2**
SAN				AML	AML	15 21 04.9	
	comp=E,7µm,0.4s						
FSR	**Penalolen**	**3.20**	**169**	*e*P	**Pn**	**15 20 14.9**	**+0.2**
FSR				*i* S	**Sn**	**15 20 51.6**	**0.0**
FSR	**Penalolen**	**3.20**	**169**	*e*P	**Pn**	**15 20 14.9**	**+0.2**
FSR				*i* S	**Sn**	**15 20 51.6**	**0.0**
FSR				AML	AML	15 20 59.7	
	comp=E,2µm,0.7s						
ANTU	**Antumapu**	**3.27**	**170**	*e*P	**Pn**	**15 20 15.8**	**+0.2**
ANTU				*i* S	**Sn**	**15 20 53.0**	**-0.4**
ANTU	**Antumapu**	**3.27**	**170**	*e*P	**Pn**	**15 20 15.8**	**+0.2**
ANTU				*i* S	**Sn**	**15 20 53.0**	**-0.4**
ANTU				AML	AML	15 21 00.8	
	comp=E,10µm,0.5s						
TACH	**Talagante**	**3.32**	**175**⇑	*i*P	**Pn**	**15 20 15.8**	**-0.5**
PCH	**Pirque**	**3.34**	**169**⇓	*i*P	**Pn**	**15 20 16.8**	**+0.2**
YECH	**El Yeso**	**3.48**	**163**	*e*P	**Pn**	**15 20 19.3**	**+0.9**
LMEL	**Las Melosas**	**3.62**	**166**	*e*P	**Pn**	**15 20 21.2**	**+0.8**
LMEL				*i* S	**Sn**	**15 21 02.6**	**+0.7**
CACH	**El Canelo**	**3.82**	**171**	*e*P	**Pn**	**15 20 23.4**	**+0.4**
LVC	**Limon Verde**	**7.98**	**16**	P	**Pn**	**15 21 17.6**	**-2.5**
	comp=E,1.8nm,0.3s,baz=198,slow=9.0,SNR=9.1						
LVC				S	**Sn**	**15 22 47.8**	**-1.1**
	comp=E,15nm,0.3s,baz=190,slow=14,SNR=3.7						
LVC	**Limon Verde**	**7.98**	**16**	*e*P	**Pn**	**15 21 17.4**	**-2.7**
	comp=E,86nm,0.8s						
PLCA	**Paso Flores**	**10.39**	**177**	P	**Pn**	**15 21 51.4**	**-1.6**
	comp=E,0.6nm,0.3s,baz=335,slow=15,SNR=9.0						
PLCA	**Paso Flores**	**10.39**	**177**	*e*P	**Pn**	**15 21 51.7**	**-1.3**
PLCA				pmax	pmax		
	comp=Z,18nm,0.9s						
PLCA	**Paso Flores**	**10.39**	**177**	*e*P	**Pn**	**15 21 51.6**	**-1.3**
	comp=Z,18nm,0.9s						
CPUP	**Villa Florida**	**12.93**	**75**	P	**Pn**	**15 22 24.9**	**-2.8**
	comp=Z,1.5nm,0.3s,baz=239,slow=11,SNR=11						
CPUP				LR	LR	15 27 51.1	
	comp=Z,291nm,21.6s,baz=270,slow=39						
CPUP	**Villa Florida**	**12.93**	**75**	*e*P	**Pn**	**15 22 23.8**	**-3.8**
CPUP				pmax	pmax		
	comp=Z,89nm,0.5s						
CPUP	**Villa Florida**	**12.93**	**75**	*e*P	**Pn**	**15 22 23.8**	**-3.8**
	comp=Z,89nm,0.5s						
SIV	**San Ignacio**	**17.07**	**36**	P	**Pn**	**15 23 19.5**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=225,slow=11,SNR=74						
NNA	**Nana**	**18.97**	**343**	P	**Pn**	**15 23 44.1**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=171,slow=9.8,SNR=7.2						
NNA	**Nana**	**18.97**	**343**	*e*P	**Pn**	**15 23 45.9**	**+1.5**
	comp=Z,15nm,0.8s						
EFI	**East Falkland**	**23.47**	**159**⇑	*i*P	**P**	**15 24 28.9**	**-1.7**
USHA	**Ushuaia**	**24.57**	**176**	P	**P**	**15 24 40.0**	**-0.6**
	comp=Z,25nm,1.0s,mb4.7,baz=347,slow=7.1,SNR=6.1						
BDFB	**Brasilia**	**25.87**	**61**	P	**P**	**15 24 51.9**	**-0.9**
	comp=Z,25nm,0.8s,mb4.8,baz=225,slow=14,SNR=62						
BDFB	**Brasilia**	**25.87**	**61**	*e*P	**P**	**15 24 51.9**	**-0.9**
BDFB				pmax	pmax		
	comp=Z,30nm,0.7s						
BDFB	**Brasilia**	**25.87**	**61**	*e*P	**P**	**15 24 51.9**	**-0.9**
	comp=Z,30nm,0.7s,mb4.9						
OTAV	**Otavalo**	**31.16**	**346**	P	**P**	**15 25 41.9**	**+2.1**
	comp=Z,11nm,1.4s,mb4.5						
SDV	**Santo Domingo**	**39.00**	**1**	*e*P	**P**	**15 26 46.8**	**-0.5**
	comp=Z,12nm,0.9s,mb4.6						
VNA3	**Neumayer Olymp**	**52.52**	**159**	*e*P	**P**	**15 28 33.1**	**-0.1**
VNA3				*e*		15 28 34.4	
VNA3				*e*	pP	15 28 48.0	-1.4
VNA3				*e*	pP	15 28 53.8	+4.4
VNA3				*e*		15 29 01.2	
VNA1	**Neumayer--Stat**	**52.81**	**158**	*e*P	**P**	**15 28 34.7**	**-0.6**
VNA1				*e*		15 28 36.4	
VNA1				*e*	pP	15 28 50.4	-1.2
VNA1				*e*		15 28 56.4	
VNA1				*e*		15 29 03.6	
VNA2	**Neumayer--Watz**	**53.16**	**158**	*e*P	**P**	**15 28 37.7**	**-0.2**
	baz=286,slow=9.1						
VNA2				*e*		15 28 39.1	
VNA2				*e*	pP	15 28 52.9	-1.2
VNA2				*e*		15 28 58.7	
VNA2				*e*		15 29 06.0	
QSPA	**South Pole Qui**	**59.89**	**180**	P	**P**	**15 29 26.0**	**+0.4**
	comp=Z,12nm,0.7s,mb5.0,baz=146,slow=2.9,SNR=37						
QSPA				LR	LR	15 53 09.2	
	comp=Z,111nm,21.9s,baz=204,slow=34						
JCT	**Junction City**	**66.28**	**333**	*e*P	**P**	**15 30 08.6**	**+0.1**
JCT				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
JCT	**Junction City**	**66.28**	**333**	*e*P	**P**	**15 30 08.6**	**+0.2**
	comp=Z,2.7nm,0.3s,mb4.8						
TXAR	**Lajitas Array**	**66.88**	**329**	P	**P**	**15 30 13.3**	**+1.0**
	comp=Z,2.4nm,0.8s,mb4.3,baz=153,slow=8.2,SNR=22						
TXAR				pP	pP	15 30 29.5	+0.4
	comp=Z,3.2nm,1.0s,baz=147,slow=8.4,SNR=9.0						
WVT	**Waverly**	**67.91**	**346**	*e*P	**P**	**15 30 18.3**	**-0.4**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
WVT	**Waverly**	**67.91**	**346**	*e*P	**P**	**15 30 18.3**	**-0.4**
	comp=Z,7.1nm,0.8s,mb4.8						
ANMO	**Albuquerque**	**72.90**	**330**⇑	*i*P	**P**	**15 30 51.2**	**+2.0**
LIC	**Lamto**	**73.03**	**72**	*e*P	**P**	**15 30 49.4**	**-1.0**
	comp=Z,45nm,1.2s,mb5.3						
TIC	**Toumodi**	**73.27**	**72**	*e*P	**P**	**15 30 50.7**	**-1.1**
	comp=Z,44nm,0.9s,mb5.4						
KIC	**Kosan Boka**	**73.34**	**72**	*e*P	**P**	**15 30 51.5**	**-0.8**
	comp=Z,100nm,1.0s,mb5.7						
DBIC	**Dimbokro**	**73.42**	**72**	P	**P**	**15 30 52.2**	**-0.5**
	comp=Z,12nm,0.7s,mb4.9,baz=203,slow=5.8,SNR=26						
DBIC				pP	pP	15 31 08.0	-1.8
	comp=Z,6.6nm,0.8s,baz=201,slow=8.8,SNR=5.9						
DBIC	**Dimbokro**	**73.42**	**72**	*e*P	**P**	**15 30 52.0**	**-0.7**
DBIC				*e*	pP	15 31 07.4	-2.4
DBIC				pmax	pmax		
	comp=Z,22nm,1.1s						
DBIC	**Dimbokro**	**73.42**	**72**	*e*P	**P**	**15 30 52.0**	**-0.7**
	comp=Z,22nm,1.1s,mb5.0						
DBIC				*e*	pP	15 31 07.4	-2.4
WUAZ	**Wupatki**	**75.58**	**327**	P	**P**	**15 31 05.8**	**+1.1**
	comp=Z,6.3nm,1.1s,mb4.5						
MVCO	**Mesa Verde**	**75.69**	**330**	*e*P	**P**	**15 31 07.1**	**+1.8**
	comp=Z,3.5nm,1.0s,mb4.2						
MAW	**Mawson**	**76.51**	**164**	P	**P**	**15 31 08.9**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.4,baz=225,slow=8.3,SNR=4.2						
ISCO	**Idaho Springs**	**76.72**	**333**	*e*P	**P**	**15 31 12.1**	**+1.0**
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ISCO	**Idaho Springs**	**76.72**	**333**	*e*P	**P**	**15 31 12.1**	**+1.0**
	comp=Z,4.5nm,1.0s,mb4.3						
ECSD	**EROS,Sioux Fal**	**77.27**	**341**	*e*P	**P**	**15 31 14.1**	**0.0**
	comp=Z,9.7nm,0.9s,mb4.7						
TSUM	**Tsumeb**	**79.61**	**106**	*e*P	**P**	**15 31 27.9**	**+0.1**
	comp=Z,25nm,0.9s,mb5.2						
PDAR	**Pinedale Array**	**80.80**	**332**	P	**P**	**15 31 34.0**	**+0.6**
	comp=Z,1.0nm,0.6s,mb3.9,baz=137,slow=7.6,SNR=10.0						
BOSA	**Boshof**	**81.22**	**118**	P	**P**	**15 31 35.6**	**-0.6**
	comp=Z,18nm,0.8s,mb5.1,baz=244,slow=3.6,SNR=24						
BOSA	**Boshof**	**81.22**	**118**	*e*P	**P**	**15 31 35.4**	**-0.8**
BOSA				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
BOSA	**Boshof**	**81.22**	**118**	*e*P	**P**	**15 31 35.4**	**-0.8**
	comp=Z,17nm,0.8s,mb5.0						
NVAR	**Mina Array Bea**	**81.26**	**324**	P	**P**	**15 31 37.5**	**+1.6**
	comp=Z,1.6nm,0.7s,mb4.0,baz=154,slow=7.1,SNR=13						
NVAR				pP	pP	15 31 54.1	+0.8
	comp=Z,1.7nm,0.7s,baz=152,slow=6.2,SNR=6.8						
TOA0	**Torodi Ar. Sit**	**82.36**	**70**	*e*P	**P**	**15 31 41.6**	**-0.7**
TORD	**Torodi Ar. Bea**	**82.36**	**70**	P	**P**	**15 31 41.7**	**-0.6**
	comp=Z,8.9nm,0.7s,mb4.8,baz=276,slow=5.7,SNR=92						
TORD				pP	pP	15 31 58.1	-1.5
	comp=Z,3.9nm,0.7s,baz=262,slow=5.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**82.36**	**70**	P	**P**	**15 31 41.7**	**-0.6**
TORD				pP	pP	15 31 58.1	-1.5
ULM	**Lac du Bonnet**	**83.14**	**344**	P	**P**	**15 31 45.1**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.3,baz=140,slow=3.3,SNR=3.5						
LBTB	**Lobatse**	**83.27**	**115**	P	**P**	**15 31 46.9**	**-0.1**
	comp=Z,29nm,0.9s,mb5.3,baz=256,slow=4.8,SNR=34						
LSZ	**Lusaka**	**90.33**	**108**	P	**P**	**15 32 22.6**	**+1.1**
	comp=Z,1.7nm,0.5s,mb4.6,baz=216,slow=8.7,SNR=3.4						
YKA	**Yellowknife Ar**	**98.80**	**341**	P	**P**	**15 32 58.6**	**-0.4**
	comp=Z,0.3nm,0.5s,mb4.1,baz=142,slow=4.5,SNR=9.8						
YKA				pP	pP	15 33 17.1	+0.5
	comp=Z,0.3nm,0.6s,baz=142,slow=4.5,SNR=2.8						
MMAI	**Mount Meron Ar**	**118.76**	**67**	PKP	PKPdf	15 38 07.3	-0.7
	comp=Z,0.5nm,0.4s,baz=146,slow=0.5,SNR=3.0						
AKASG	**Malin Array Be**	**119.22**	**46**	PKP	PKPdf	15 38 07.0	-1.4
	comp=Z,1.0nm,0.6s,baz=247,slow=3.6,SNR=5.8						
VSU	**Vasula**	**119.40**	**37**	*i* PKIKP	PKPdf	15 38 07.7	-0.7
ASAR	**Alice Springs**	**121.11**	**207**	PKP	PKPdf	15 38 11.0	-2.0
	comp=Z,0.3nm,0.8s,baz=136,slow=1.7,SNR=6.0						
ASAR				pPKP	pPKPdf	15 38 29.2	-2.0
	comp=Z,0.2nm,0.5s,baz=128,slow=1.3,SNR=2.4						
LVZ	**Lovozero**	**123.71**	**26**	*i* PKIKP	PKPdf	15 38 16.2	-0.2
WRAB	**Tennant Creek**	**124.27**	**210**⇑	*i*PKIKP	PKPdf	15 38 16.5	-2.6
AB31	**Akbulak array**	**138.85**	**48**	PKIKP	PKPdf	15 38 47.1	+1.5
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVA0	**Borovoye Array**	**144.12**	**40**	*i* PKIKP	PKPdf	15 38 53.4	-1.5
VOSK	**Vostochnaya**	**144.56**	**40**	PKIKP	PKPdf	15 38 54.7	-1.0
VOSK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
YAK	**Yakutsk**	**145.46**	**343**	*e*PKIKP	PKPdf	15 38 56.2	-0.7
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK	**Yakutsk**	**145.46**	**343**	*e*PKP	PKPdf	15 38 56.8	-0.2
KK31	**Karatay Array**	**147.12**	**57**	*i* PKP2	PKPdf	15 39 01.8	+1.5
KK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NVS	**Novosibirsk**	**149.47**	**29**	*i* PKP2	PKPbc	15 39 07.2	-1.1
NVS				pmax	pmax		
	comp=Z,16nm,1.2s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
EKS2	**Erkin-Say**	**149.56**	**56**	P	PKPbc	15 39 09.7	+0.8
	SNR=11						
EKS2	**Erkin-Say**	**149.56**	**56**	*e*PKPbc	PKPbc	15 39 09.3	+0.3
AML	**Almayashu**	**149.60**	**58**	P	PKPbc	15 39 10.3	+1.2
	SNR=5.7						
HYB	**Hyderabad**	**149.68**	**108**	*i* PKP	PKPbc	15 39 09.5	-0.5
HYB				*e*		15 39 26.0	
KURK	**Kurchatov**	**149.71**	**39**	PKP	PKPdf	15 39 03.9	-0.5
	comp=N,3.1nm,1.1s,baz=306,slow=3.1,SNR=6.7						
KURK				PKPbc	PKPbc	15 39 08.7	-0.4
	comp=N,6.9nm,0.8s,baz=301,slow=3.1,SNR=9.1						
KURK				pPKPbc	pPKPbc	15 39 26.8	-0.4
	comp=N,3.3nm,0.6s,baz=304,slow=3.1,SNR=7.3						
KURK	**Kurchatov**	**149.71**	**39**	PKP	PKPdf	15 39 03.9	-0.5
KURK				PKPbc	PKPbc	15 39 08.7	-0.4
KURK				*e*PKPbc	PKPbc	15 39 09.1	+0.1
KURK				pPKPbc	pPKPbc	15 39 26.8	-0.4
USP	**Ospenovka**	**149.94**	**55**	P	PKPbc	15 39 10.3	+0.5
	SNR=10.0						
AAK	**Ala-Archa**	**150.08**	**56**	P	PKPbc	15 39 11.2	+1.0
	SNR=13						
AAK	**Ala-Archa**	**150.08**	**56**	*e*PKPbc	PKPbc	15 39 11.0	+0.8
CHMS	**Chumysh**	**150.18**	**55**	P	PKPbc	15 39 10.9	+0.5
	SNR=8.2						
KBK	**Karagaybulak**	**150.40**	**56**	P	PKPbc	15 39 11.6	+0.6
	SNR=5.2						
ZAA0	**Zalesovo Array**	**150.76**	**29**	*e*PKPbc	PKPbc	15 39 11.3	-0.2
ZALV	**Zalesovo Beam**	**150.76**	**29**	PKP	PKPdf	15 39 05.5	-0.3
	comp=N,0.9nm,0.6s,baz=270,slow=1.5,SNR=5.6						
ZALV				PKPbc	PKPbc	15 39 11.4	0.0
	comp=N,20nm,0.6s,baz=298,slow=3.1,SNR=90						
ZALV				PKPab	PKPab	15 39 19.4	+0.7
	comp=N,7.9nm,0.7s,baz=309,slow=3.7,SNR=7.3						
ZALV				pPKPbc	pPKPbc	15 39 28.5	-1.1
	comp=N,25nm,0.8s,baz=297,slow=3.0,SNR=10						
ZALV	**Zalesovo Beam**	**150.76**	**29**	PKIKP	PKPdf	15 39 05.5	-0.4
ZALV						15 39 11.5	
ZALV						15 39 19.4	
TKM2	**Tokmak 2**	**150.80**	**55**	P	PKPbc	15 39 12.2	+0.3
	SNR=8.5						
TKM2	**Tokmak 2**	**150.80**	**55**	*e*PKPbc	PKPbc	15 39 11.9	-0.1
TKM2				*e*PKPab	PKPab	15 39 18.8	-0.5
BOD	**Bodaibo**	**152.28**	**354**	*e*PKIKP	PKPbc	15 39 13.0	-1.8
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MKAR	**Makanchi Array**	**153.78**	**44**	PKPbc	PKPbc	15 39 17.2	-1.3
	comp=Z,2.1nm,0.8s,baz=318,slow=3.3,SNR=10						
MKAR				PKPab	PKPab	15 39 31.9	+0.3
	comp=Z,2.7nm,0.8s,baz=190,slow=0.7,SNR=8.3						
MKAR				pPKPab	pPKPab	15 39 47.9	-1.5
	comp=Z,1.7nm,0.7s,baz=273,slow=1.5,SNR=3.1						
MKAR	**Makanchi Array**	**153.78**	**44**	*i* PKIKP	PKPbc	15 39 18.1	-0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**153.78**	**44**	PKPbc	PKPbc	15 39 17.2	-1.3
MKAR				PKPab	PKPab	15 39 31.9	+0.3
MKAR				pPKPab	pPKPab	15 39 47.9	-1.5
MJAR	**Matsushiro Arr**	**154.68**	**292**	PKPbc	PKPbc	15 39 21.1	+0.3
	comp=Z,0.4nm,0.6s,baz=50,slow=5.0,SNR=3.3						
MJAR				PKPab	PKPab	15 39 36.5	+0.7
	comp=Z,1.0nm,0.6s,baz=85,slow=3.3,SNR=4.7						
MJAR				pPKPab	pPKPab	15 39 53.8	+0.3
	comp=Z,1.0nm,0.6s,baz=87,slow=4.5,SNR=2.2						
MJAR	**Matsushiro Arr**	**154.68**	**292**	PKIKP	PKPbc	15 39 21.1	+0.3
MJAR						15 39 36.5	
WMQ	**Urumqi**	**158.57**	**45**	*e*PKP	PKPdf	15 39 17.3	+0.3
CN2	**Changchun**	**161.10**	**320**	*e*PKP	PKPdf	15 39 14.5	-5.3
SONM	**Songino Array**	**162.43**	**5**	PKPab	PKPab	15 40 08.7	-0.2
	comp=Z,1.0nm,0.9s,baz=320,slow=1.9,SNR=5.3						
BJI	**Beijing**	**168.56**	**330**	PKP	PKPdf	15 39 26.7	+0.3
HHC	**Hu-ho-hao-te**	**169.25**	**348**	*e*PKP	PKPdf	15 39 25.1	-1.7
HHC				PKS		15 42 56.4	
HHC				PP	PP	15 44 28.5	+0.4
HHC				SKKS	SKKSac	15 50 59.5	-11
HHC				PP	PP		
	comp=Z,278nm,5.4s						
HHC				LR	LR		
	comp=N,104nm,14.3s						
HHC				LR	LR		
	comp=E,163nm,15.5s						
HHC				LR	LR		
	comp=Z,226nm,20.2s						
KMI	**Kunming**	**172.59**	**133**	PKP	PKPdf	15 39 28.2	-0.8
LZH	**Lanzhou**	**172.96**	**34**	*e*PKP	PKPdf	15 39 32.0	+3.1
LZH				APKP		15 39 47.2	
LZH				XPKP		15 39 53.5	
LZH				PP	PP		
	comp=Z,73nm,4.5s						
CD2	**Chengdu**	**175.69**	**81**	*e*PKP	PKPdf	15 39 32.3	+2.4
GYA	**Guiyang**	**175.74**	**154**	*e*PKP	PKPdf	15 39 27.8	-2.3
GYA				APKP		15 39 44.5	
GYA				PKP2	PKPab	15 41 07.5	-0.8
GYA				PKS		15 43 02.3	
GYA				PP	PP	15 45 00.6	+0.4
GYA				PP	PP		
	comp=Z,90nm,7.9s						
XAN	**Xi'an**	**176.30**	**357**	PKP	PKPdf	15 39 32.2	+2.2
XAN				LR	LR		
	comp=N,69nm,29.0s						
XAN				LR	LR		
	comp=E,42nm,28.6s						
XAN				LR	LR		
	comp=Z,73nm,28.9s						

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*ISCJB **09** 15:23:43.8±0.5,091S±0.10×6748E±0.10,h10km,mb4.2/15, MS4.3/14,Error ellipse: s-maj=15.8km s-min=11.5km az=135.9*
*IDC **09** 15:23:43.4±0.9,1.19S×6764E,h0km,mb3.9/10, mb1 4.0/10,mb1mx3.8/24,mbtmp3.9/10,MS4.3/14, Ms1 4.3/14,ms1mx4.2/24,Error ellipse: s-maj=26.2km s-min=21.4km az=156.0*
*NEIC **09** 15:23:45.4±0.6,1.11S×6755E,h10km,mb4.6/7,Error ellipse: s-maj=18.1km s-min=13.0km az=148.0*
ISC 09 15:23:45.5±0.5,**102S**±009×**6751E**±009,**h10**km**,n41,** σ**1.41**/26,**mb4.2**/15,**MS4.3**/14,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**12.55**	**253**	*e*Pn	**Pn**	**15 26 42.5**	**-1.7**
	77nm,0.8s						
PALK	**Pallekele**	**15.53**	**58**	*e*Pn	**Pn**	**15 27 22.8**	**-1.9**
HYB	**Hyderabad**	**21.31**	**30**	*i* P	**P**	**15 28 39.0**	**+6.4**
PSI	**Prapat**	**31.64**	**83**	LR	LR	15 40 27.5	
	comp=Z,904nm,21.2s,MS4.4,baz=290,slow=32						
CMAR	**Chiang Mai Arr**	**36.47**	**56**	P	**P**	**15 30 51.2**	**+0.2**
	1.2nm,1.0s,mb3.8,baz=239,slow=10,SNR=8.3						
CMAR				LR	LR	15 46 21.5	
	comp=Z,392nm,18.2s,MS4.2,baz=242,slow=37						
LSA	**Lhasa**	**37.98**	**35**	*e*P	**P**	**15 31 05.8**	**+2.1**
	23nm,1.4s,mb4.7						
LSZ	**Lusaka**	**41.31**	**248**	P	**P**	**15 31 30.9**	**-0.8**
	4.0nm,0.7s,mb4.2,baz=51,slow=7.9,SNR=12						
LSZ	**Lusaka**	**41.31**	**248**	*e*P	**P**	**15 31 29.9**	**-1.8**
	5.0nm,0.7s,mb4.2						
EKS2	**Erkin-Say**	**43.84**	**7**	P	**P**	**15 31 54.7**	**+2.8**
	8.7nm,1.1s,mb4.4						
MKAR	**Makanchi Array**	**49.35**	**13**	P	**P**	**15 32 33.6**	**-1.4**
	0.6nm,0.8s,mb3.7,baz=189,slow=6.9,SNR=3.6						
BR131	**Keskin Array S**	**51.02**	**326**	*e*P	**P**	**15 32 49.4**	**+1.6**
	1.7nm,0.4s,mb4.3						
BRTR	**Keskin Array B**	**51.02**	**326**	P	**P**	**15 32 50.4**	**+2.6**
	1.6nm,0.9s,mb4.0,baz=152,slow=11,SNR=8.4						
AKTK	**Aktyubinsk**	**51.89**	**352**	P	**P**	**15 32 53.7**	**-0.4**
AKTO	**Aktyubinsk**	**51.89**	**352**	P	**P**	**15 32 53.7**	**-0.4**
	1.5nm,0.6s,mb4.1,baz=169,slow=5.1,SNR=6.6						
KAPI	**Kappang**	**52.31**	**96**	LR	LR	15 52 11.3	
	comp=Z,317nm,21.5s,MS4.3,baz=338,slow=33						
KURK	**Kurchatov**	**52.40**	**9**	P	**P**	**15 32 57.2**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=204,slow=7.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**56.63**	**12**	P	**P**	**15 33 28.0**	**-0.5**
	0.6nm,0.5s,mb3.9,baz=226,slow=7.8,SNR=2.6						
ZALV				LR	LR	15 57 08.8	
	comp=Z,87nm,19.2s,MS3.9,baz=197,slow=35						
ZALV	**Zalesovo Beam**	**56.63**	**12**	P	**P**	**15 33 28.0**	**-0.5**
ZALV				LR	LR	15 57 08.8	
SONM	**Songino Array**	**59.25**	**29**	P	**P**	**15 33 47.6**	**+0.6**
	0.9nm,0.8s,mb3.9,baz=222,slow=4.7,SNR=6.2						
SONM				LR	LR	15 59 33.2	
	comp=Z,688nm,18.6s,MS4.8,baz=281,slow=36						
FITZ	**Fitzroy Crossi**	**59.50**	**110**	*e*P	**P**	**15 33 54.1**	**+4.7**
	4.5nm,0.9s,mb4.5						
MAW	**Mawson**	**66.54**	**182**	LR	LR	15 58 22.1	
	comp=Z,250nm,20.8s,MS4.4,baz=215,slow=31						
TORD	**Torodi Ar. Bea**	**66.73**	**285**	LR	LR	16 04 15.6	
	comp=Z,425nm,18.1s,MS4.7,baz=110,slow=36						
KSRS	**Korea Array**	**67.53**	**48**	LR	LR	16 07 39.5	
	comp=Z,204nm,18.5s,MS4.4,baz=32,slow=39						
WRAB	**Tennant Creek**	**67.92**	**111**	P	**P**	**15 34 43.6**	**-1.4**
	5.0nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**67.92**	**111**	*e*P	**P**	**15 34 45.7**	**+0.7**
ASAR	**Alice Springs**	**68.03**	**115**	P	**P**	**15 34 43.5**	**-2.2**
	2.0nm,1.0s,mb4.1,baz=288,slow=5.8,SNR=13						
DBIC	**Dimbokro**	**72.61**	**277**	P	**P**	**15 35 13.9**	**+0.1**
	3.4nm,1.0s,mb4.2,baz=120,slow=9.4,SNR=3.5						
DBIC				LR	LR	16 05 13.2	
	comp=Z,216nm,21.7s,MS4.4,baz=68,slow=34						
MJAR	**Matsushiro Arr**	**75.19**	**52**	LR	LR	16 09 13.7	
	comp=Z,128nm,19.8s,MS4.2,baz=265,slow=36						
NOA	**NORSAR Array B**	**75.25**	**335**	LR	LR	16 05 12.2	
	comp=Z,109nm,21.4s,MS4.1,baz=90,slow=33						
ARCES	**ARCESS Array B**	**75.83**	**346**	LR	LR	16 09 14.4	
	comp=Z,250nm,19.1s,MS4.5,baz=129,slow=36						
STKA	**Stephens Creek**	**75.97**	**123**	LR	LR	16 07 51.5	
	comp=Z,138nm,19.0s,MS4.3,baz=232,slow=35						
SNAA	**Sanae**	**82.93**	**197**	*e*P	**P**	**15 36 10.4**	**+0.2**
VNA2	**Neumayer--Watz**	**84.13**	**199**	*e*	**P**	**15 36 19.9**	**+3.5**
	baz=61,slow=4.8						
VNA2				*e*		15 36 25.6	
VNA2				*e*		15 36 28.1	
VNA3	**Neumayer Olymp**	**84.92**	**198**	*e*	**P**	**15 36 23.5**	**+3.1**
VNA3				*e*		15 36 29.4	
VNA3				*e*		15 36 32.4	
QSPA	**South Pole Qui**	**88.97**	**180**	*e*P	**P**	**15 36 41.5**	**+1.5**
	9.3nm,1.4s,mb4.9						
PETK	**Petropavlovsk-**	**90.92**	**37**	LR	LR	16 17 14.2	
	comp=Z,48nm,18.4s,MS4.0,baz=165,slow=35						
YKA	**Yellowknife Ar**	**118.65**	**1**	PKP	PKPdf	15 42 34.7	+1.2
	0.1nm,0.7s,baz=350,slow=2.5,SNR=2.8						
YKA	**Yellowknife Ar**	**118.65**	**1**	PKP	PKPdf	15 42 34.7	+1.1
PDAR	**Pinedale Array**	**138.35**	**357**	PKP	PKPdf	15 43 14.4	+2.9
	1.8nm,1.4s,baz=46,slow=3.9,SNR=2.5						
OTAV	**Otavalo**	**145.95**	**269**	*e*PKP	PKPdf	15 43 27.3	+1.4
TXAR	**Lajitas Array**	**150.61**	**344**	PKPbc	PKPbc	15 43 40.5	+2.0
	5.9nm,1.1s,baz=64,slow=2.9,SNR=9.6						
TXAR				PKPab	PKPab	15 43 45.7	+0.7
	3.0nm,0.9s,baz=79,slow=1.9,SNR=13						

CASC 09 15:36:21.3±2.0,**1329N**×**8987W,h33**km±4km**,MD3.7, ML2.9,11C-4D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.59**	**24**⇑	*i*P	x	15 36 33.5	
SBLS				*e*S	x	15 36 43.0	
SNJE	**San Jose**	**0.63**	**24**⇑	*e*P	x	15 36 33.9	
SNJE				*e*S	x	15 36 43.8	
RTR	**El Retiro**	**0.64**	**20**⇑	*i*P	x	15 36 34.2	
RTR				*e*S	x	15 36 44.5	
BOQS	**Boqueron**	**0.72**	**52**⇑	*e*P	x	15 36 35.2	
BOQS				*e*S	x	15 36 46.4	
SNET	**Serv Nac Est T**	**0.73**	**58**⇓	*e*P	x	15 36 35.2	
SNET				*e*S	x	15 36 46.6	
RBDL	**Robledal**	**0.83**	**12**⇑	*e*P	x	15 36 36.9	
LFRS	**El Faro**	**0.85**	**67**⇑	*e*P	x	15 36 36.5	
LBRS	**Las Brisas**	**0.92**	**61**⇑	*e*P	x	15 36 37.8	
SNVI	**San Vicente**	**1.05**	**72**⇑	*e*P	x	15 36 39.6	
SNVI				*e*S	x	15 36 54.8	
SNVI				AML	x	15 36 55.5	
	comp=Z,274nm,0.2s						
MTO2	**Montecristo 2**	**1.21**	**24**⇑	*e*P	x	15 36 41.7	
MTO2				*e*S	x	15 36 58.5	
PCG	**Pacaya**	**1.31**	**327**	*e*P	Pn	15 36 44.5	+1.2
PCG				*e*S	Sn	15 37 00.2	+0.6
NBG	**Las Nubes**	**1.37**	**340**	*e*P	Pn	15 36 45.4	+1.4
NBG				*e*S	Sn	15 37 01.7	+0.6
FUG	**Fuego 3**	**1.49**	**321**	*e*P	Pn	15 36 45.9	+0.2
FUG				*e*S	Sn	15 37 04.8	+0.8
VSM	**San Miguel**	**1.56**	**85**⇓	*e*P	x	15 36 47.1	
VSM				*e*S	x	15 37 07.1	
BLLM	**Bellamira**	**1.59**	**84**⇑	*e*P	x	15 36 47.2	
CAHU	**Cacacuatique**	**1.68**	**73**⇑	*e*P	x	15 36 48.1	
MRL	**Marmol**	**1.77**	**6**	*e*P	Pn	15 36 50.9	+1.3
CNCH	**Conchagua**	**1.98**	**90**⇓	*e*P	x	15 36 52.5	
CNCH				*e*S	x	15 37 19.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JAT	Jato	2.00	301	eP	Pn	15 36 53.5	+0.8
COPN	Copaltepe	3.38	109⇓	eP	Pn	15 37 13.8	+2.0
COPN				eS	Sn	15 37 48.5	-2.3

*CSEM **09** 15:40:58.9±0.1, 6583N×1226E, h5km, ML2.8, Error ellipse: s-maj=3.7km s-min=1.5km az=108.0*
*NAO **09** 15:41:00.4±1.7, 6591N×1237E, ML2.8*
*BER **09** 15:41:02.5±3.3, 6588N×1255E, h10km, MD3.2, ML2.6, ML2.8(NAO)*
*UPP **09** 15:41:02.9, 6591N×1254E, h7km, ML1.9*
*NEIC **09** 15:41:02.6, 6592N×1244E, h10km, ML2.6(BER), ML2.8(NAO), After BER.*
*IDC **09** 15:41:02.3±1.8, 6581N×1301E, h0km, mb1 3.4/5, mb1mx3.2/26, mbtmp3.3/5, ML3.4/5, Error ellipse: s-maj=36.0km s-min=7.5km az=114.0*
HEL 09 15:41:01.1±0.2**, 6590N×1240E, h7**km±1km**, ML3.0, ML1.9**(UPP)**, ML2.6**(BER)**, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STOK	Stokkvaagen	0.50	30	i P	Pg	15 41 10.1	-0.6
STOK				i S	Sg	15 41 16.7	-0.5
STOK				AML	AML	15 41 20.6	
	comp=Z,314nm,0.5s						
STOK	Stokkvaagen	0.50	30	eP	Pg	15 41 10.1	-0.6
STOK				eS	Sg	15 41 16.7	-0.5
STOK				AML	AML	15 41 20.6	
	comp=Z,314nm,0.5s						
STOK	Stokkvaagen	0.50	30	eP	Pg	15 41 10.1	-0.6
STOK				eS	Sg	15 41 16.9	-0.3
FLOS	Flostrand	0.59	42	i P	Pg	15 41 11.6	-0.8
FLOS				i S	Sg	15 41 19.5	-0.5
FLOS				AML	AML	15 41 21.1	
	comp=Z,778nm,0.3s						
FLOS	Flostrand	0.59	42	eP	Pg	15 41 11.6	-0.8
FLOS				eS	Sg	15 41 19.5	-0.5
FLOS				AML	AML	15 41 21.1	
	comp=Z,778nm,0.3s						
KONS	Konsvik	0.67	26	i P	Pg	15 41 13.1	-0.8
KONS				i S	Sg	15 41 22.9	+0.4
KONS				AML	AML	15 41 24.2	
	comp=Z,325nm,0.3s						
KONS	Konsvik	0.67	26	eP	Pg	15 41 13.1	-0.8
KONS				eS	Sg	15 41 22.9	+0.4
KONS				AML	AML	15 41 24.2	
	comp=Z,325nm,0.3s						
MOR8	Moi Rana	0.88	71	eP	Pg	15 41 19.0	+1.1
MOR8				eS	Sg	15 41 33.7	+4.4
MOR8				AML	AML	15 41 34.4	
	comp=Z,581nm,0.1s						
MOR8	Moi Rana	0.88	71	eP	Pg	15 41 19.0	+1.1
	SNR=70						
MOR8				eS	Sg	15 41 33.7	+4.4
	comp=Z,581nm,0.1s,SNR=70						
MOR8	Moi Rana	0.88	71	eP	Pg	15 41 19.0	+1.1
MOR8				eS	Sg	15 41 33.7	+4.4
NSS	Namsos	1.39	188	eP	Pn	15 41 24.1	-2.7
NSS				eS	Sb	15 41 41.7	-3.6
NSS				AML	AML	15 41 43.4	
	comp=Z,160nm,0.1s						
NSS	Namsos	1.39	188	eP	Pn	15 41 24.1	-2.8
	SNR=50						
NSS				eS	Sb	15 41 41.8	-3.5
NSS	Namsos	1.39	188	eP	Pn	15 41 24.1	-2.7
NSS				eS	Sb	15 41 41.8	-3.5
LOF	Lofoten	2.28	11	eP	Pn	15 41 39.0	-0.1
LOF				AML	AML	15 42 17.3	
	comp=Z,36nm,0.3s						
STEI	Steigen	2.32	28	eP	Pn	15 41 41.5	+1.8
STEI				eSG	Sg	15 42 13.4	-2.3
STEI				AML	AML	15 42 14.9	
	comp=Z,48nm,0.3s						
STEI	Steigen	2.32	28	eP	Pn	15 41 41.5	+1.8
	SNR=50						
STEI				eSg	Sg	15 42 13.4	-2.2
	SNR=92						
MOL	Molde	3.96	215	eP	Pn	15 42 00.5	-1.7
MOL				eS	Sn	15 42 44.6	-4.2
MOL	Molde	3.96	215	eP	Pn	15 42 00.4	-1.7
	SNR=49						
MOL				eS	Sn	15 42 44.6	-4.1
	SNR=49						
DOMB	Dombas	4.14	202	eP	Pn	15 42 04.5	-0.2
DOMB				eS	Sn	15 42 52.2	-1.1
DOMB				AML	AML	15 43 10.4	
	comp=Z,33nm,0.3s						
DOMB	Dombas	4.14	202	eP	Pn	15 42 04.5	-0.2
	SNR=49						
DOMB				eS	Sn	15 42 52.2	-1.1
	comp=Z,33nm,0.3s,SNR=49						
DOMB	Dombas	4.14	202	eP	Pn	15 42 04.5	-0.2
DOMB				eS	Sn	15 42 52.2	-1.1
HASU	Hassela	4.20	152	eS	Sn	15 42 54.8	+0.2
KIF	Kilpisjarvi	4.49	42	eP	Pn	15 42 10.1	+0.7
KIF				eSG	Sg	15 43 18.1	-6.9
KIF				MSG		15 43 28.2	
	comp=Z,24nm,0.3s						
TRO	Tromso	4.49	31	eP	Pn	15 42 09.9	+0.5
TRO				eS	Sn	15 43 02.3	+0.5
TRO				eSG	Sg	15 43 20.7	-4.4
TRO	Tromso	4.49	31	eP	Pn	15 42 10.4	+1.0
TRO				eSg	Sg	15 43 20.9	-4.2
TRO	Tromso	4.49	31	eP	Pn	15 42 10.4	+1.0
TRO				eSg	Sg	15 43 20.9	-4.2
HUDU	Hudiksvall	4.68	151	eS	Sn	15 43 06.0	-0.4
ROTU	Roteberg	4.75	160	eS	Sn	15 43 09.1	+0.9
ARNU	Arnoeviken	4.77	150	eS	Sn	15 43 07.8	-0.9
NB2	NORSAR Subarra	4.91	187	eP	Pn	15 42 15.5	+0.3
NB2				ePG	Pg	15 42 30.3	-4.8
NB2				eS	Sn	15 43 13.1	+0.9
NB2				eSG	Sg	15 43 31.4	-7.2
NB2	NORSAR Subarra	4.91	187	Pn	Pn	15 42 15.5	+0.3
NB2				Pg	Pg	15 42 30.3	-4.8
NB2				Sn	Sn	15 43 13.1	+0.9
NB2				Lg		15 43 31.4	
	baz=22,slow=28						
NB2	NORSAR Subarra	4.91	187	Pg	Pg	15 42 30.3	-4.8
	SNR=91						
NB2				Sn	Sn	15 43 13.1	+0.9
	SNR=50						
NOA	NORSAR Array B	4.91	187	Pn	Pn	15 42 15.6	+0.4
	comp=Z,0.8nm,0.3s,baz=0.1,slow=14,SNR=13						
NOA				Sn	Sn	15 43 11.5	-0.7
	comp=Z,1.8nm,0.3s,baz=315,slow=20,SNR=3.8						
NOA				Lg		15 43 29.4	
	comp=Z,4.0nm,0.3s,baz=192,slow=16,SNR=5.8						
HEF	Hetta	5.06	55	eP	Pn	15 42 17.1	-0.1
HEF				eS	Sn	15 43 13.2	-2.5
HEF				eSG	Sg	15 43 35.2	-8.0
HEF				MSG		15 43 45.2	
	comp=Z,17nm,0.4s						
KTK1	Kautokeino	5.21	48	eP	Pn	15 42 19.7	+0.4
KTK1				eS	Sn	15 43 18.2	-1.2
KTK1				eSG	Sg	15 43 43.8	-4.2
KTK1	Kautokeino	5.21	48	eP	Pn	15 42 19.7	+0.5
	SNR=49						
KTK1				eSg	Sg	15 43 43.7	-4.3
KTK1	Kautokeino	5.21	48	eP	Pn	15 42 19.7	+0.4
KTK1				eSg	Sg	15 43 43.7	-4.3
VAF	Ylistaro	5.29	118	eP	Pn	15 42 20.2	-0.2
VAF				eS	Sn	15 43 19.6	-1.8
VAF				eSG	Sg	15 43 43.6	-7.1
VAF				MSG		15 43 51.9	
	comp=Z,32nm,0.3s						
HYA	Hoyanger	5.50	213	eP	Pn	15 42 23.4	+0.1
IGGU	Iggoen	5.51	154	eS	Sn	15 43 25.5	-1.5
FALU	Falun	5.65	162	eP	Pn	15 42 25.3	0.0
OUL	Oulu	5.68	92	eP	Pn	15 42 23.9	-1.8
OUL				eS	Sn	15 43 26.3	-4.8
SGF	Sodankyl	5.82	68	eP	Pn	15 42 26.2	-1.5
HFS	Hagfors	5.82	174	Pn	Pn	15 42 27.4	-0.4
	comp=Z,0.9nm,0.3s,baz=9.4,slow=11,SNR=41						
HFS				Sn	Sn	15 43 32.2	-2.4
	comp=Z,1.5nm,0.3s,baz=353,slow=24,SNR=8.6						
HFS				Lg		15 44 01.4	
	comp=Z,4.5nm,0.3s,baz=357,slow=30,SNR=9.2						
HFS	Hagfors	5.82	174	eP	Pn	15 42 27.1	-0.6
HFS				eS	Sn	15 43 32.5	-2.2
HFS				eSG	Sg	15 43 59.5	-8.3
HFS	Hagfors	5.82	174	Pn	Pn	15 42 27.1	-0.6
	baz=2.2,slow=14						
HFS				Sn	Sn	15 43 32.5	-2.2
	baz=353,slow=28						
HFS				Lg		15 43 59.5	
	baz=356,slow=28						
UDD	Uddeholm	5.86	174	eP	Pn	15 42 28.2	0.0
OSTU	Oestervaala	6.09	157	eP	Pn	15 42 30.5	-0.9
OSTU				eS	Sn	15 43 38.4	-2.7
ARA0	ARCESS Array S	6.17	48	eP	Pn	15 42 31.7	-0.7
ARA0				eS	Sn	15 43 39.5	-3.5
ARA0	ARCESS Array S	6.17	48	Pn	Pn	15 42 31.6	-0.8
	baz=235,slow=14						
ARA0				Sn	Sn	15 43 39.4	-3.7
	baz=233,slow=22						
ARA0				Lg		15 44 10.8	
	baz=234,slow=28						
ARA0	ARCESS Array S	6.17	48	Pn	Pn	15 42 31.6	-0.8
ARA0				Sn	Sn	15 43 39.4	-3.7
ARCES	ARCESS Array B	6.17	48	Pn	Pn	15 42 31.6	-0.8
	comp=Z,1.3nm,0.3s,baz=234,slow=13,SNR=39						
ARCES				Sn	Sn	15 43 41.5	-1.6
	comp=Z,2.3nm,0.3s,baz=233,slow=21,SNR=7.4						
ARCES				Lg		15 44 10.3	
	comp=Z,2.6nm,0.3s,baz=234,slow=27,SNR=6.6						
ARCES	ARCESS Array B	6.17	48	Pn	Pn	15 42 31.6	-0.8
ARCES				Sn	Sn	15 43 41.5	-1.6
FLYU	Flymyra	6.31	154	eP	Pn	15 42 34.2	-0.2
BACU	Backbrunna	6.44	158	eP	Pn	15 42 36.4	+0.2
RAF	Rauma	6.45	135	eP	Pn	15 42 36.4	+0.1
RAF				eS	Sn	15 43 48.3	-1.6
RAF				MSG		15 44 24.0	
	comp=Z,28nm,0.4s						
NRAU	Nora	6.47	168	eP	Pn	15 42 36.3	-0.4
KEF	Keuruu	6.63	119	eP	Pn	15 42 38.6	-0.2
KEF				eS	Sn	15 43 51.9	-2.6
KEF				eSG	Sg	15 44 24.2	-10
KEF				MSG		15 44 29.1	
	comp=Z,16nm,0.3s						
AAL	Aland	6.70	146	eP	Pn	15 42 39.9	+0.1
AAL				eS	Sn	15 43 52.9	-3.3
AAL				eSG	Sg	15 44 28.1	-7.9
KEV	Kevo	6.74	48	eP	Pn	15 42 39.1	-1.1
KEV				eS	Sn	15 43 52.6	-4.4
KEV				MSG		15 44 43.1	
	comp=Z,9.2nm,0.3s						
KJN	Kajaani	6.74	99	eP	Pn	15 42 39.6	-0.7
KJN				eS	Sn	15 43 52.8	-4.5
KJN				eSG	Sg	15 44 27.3	-10
KJN				MSG		15 44 36.2	
	comp=Z,16nm,0.3s						
SUF	Sumiainen	6.78	112	eP	Pn	15 42 39.9	-0.9
MSF	Maaselka	6.81	82	eP	Pn	15 42 39.2	-2.1
MSF				eS	Sn	15 43 53.6	-5.3
NRTU	Norrtaelje	6.87	153	eP	Pn	15 42 41.5	-0.6
STRU	Stroemstad	6.92	185	eP	Pn	15 42 42.2	-0.6
ESKU	Eskilstuna	6.95	163	eP	Pn	15 42 41.8	-1.3
NASU	Vaermlandsnaes	7.01	177	eP	Pn	15 42 44.1	+0.1
VRF	Varrio	7.03	67	eP	Pn	15 42 42.4	-1.9
VRF				eS	Sn	15 43 57.7	-6.7
KU6	Riekki	7.14	81	eP	Pn	15 42 44.1	-1.7
KU6				MSG		15 44 45.7	
	comp=Z,9.8nm,0.3s						
KAF	Kangasniemi	7.19	115	eP	Pn	15 42 45.7	-0.7
KAF				eS	Sn	15 44 05.4	-2.9
KAF				eSG	Sg	15 44 40.5	-11
KAF				MSG		15 44 51.1	
	comp=Z,21nm,0.4s						
NYNU	Nynaeshamn	7.39	157	eP	Pn	15 42 48.6	-0.7
FIA0	FINESS Array S	7.54	120	Pn	Pn	15 42 50.4	-0.9
	baz=317,slow=14						
FIA0				Sn	Sn	15 44 14.2	-2.7
	baz=320,slow=22						
FIA0	FINESS Array S	7.54	120	eP	Pn	15 42 51.1	-0.1
FIA0				eS	Sn	15 44 13.5	-3.4
FIA0				MSG		15 45 03.4	
	comp=Z,12nm,0.3s						
VIKU	Vikbolandet	7.70	163	eP	Pn	15 42 52.7	-0.7
LNKU	Linkoeping	7.84	168	eP	Pn	15 42 55.1	-0.3
PVF	Pernaja	8.10	125	eP	Pn	15 42 59.3	+0.3
PVF				eS	Sn	15 44 27.2	-3.4
PVF				MSG		15 45 21.5	
	comp=Z,11nm,0.3s						
VSTU	Vaestervik	8.50	165	eP	Pn	15 43 04.5	0.0
VJF	Virojoki	8.69	121	eP	Pn	15 43 05.5	-1.5
VJF				MSG		15 45 33.9	
	comp=Z,18nm,0.5s						
JOF	Joensuu	8.70	101	eP	Pn	15 43 05.3	-1.9
JOF				eS	Sn	15 44 39.2	-6.2
JOF				eSG	Sn	15 45 28.3	+43
JOF				MSG		15 45 40.1	
	comp=Z,9.3nm,0.3s						
MTSE	Matsula	8.95	138	eP	Pn	15 43 09.8	-0.7
GERES	GERESS Array B	17.12	177	P	Pn	15 45 01.5	+1.0
	comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=2.5						
AKASG	Malin Array Be	17.52	142	P	Pn	15 45 05.4	-0.1
	comp=Z,0.5nm,0.3s,baz=334,slow=12,SNR=2.8						

*BJI **09** 15:41:34.2, 599S×14681E, h99km, mB5.2, mb4.7*
*ISCJB **09** 15:41:36.6±1.2, 564S±004×14636E±006, h85km±11km, mb4.4/38, Error ellipse: s-maj=9.5km s-min=7.0km az=11.9*
*MOS **09** 15:41:39.3±1.6, 554S×14629E, h110km, mb4.4/9, Error ellipse: s-maj=14.1km s-min=8.5km az=97.0*
*NEIC **09** 15:41:41.0±0.3, 569S×14629E, mb4.7/15, Error ellipse: s-maj=9.0km s-min=6.7km az=82.0*
*IDC **09** 15:41:41.3±0.7, 565S×14630E, h111km±6km, mb4.1/19, mb1 4.2/20, mb1mx4.2/21, mbtmp4.1/20, Error ellipse: s-maj=14.8km s-min=10.0km az=84.0*
*DJA **09** 15:41:42, 574S×14658E, h109km, mb4.8/11*
ISC 09 15:41:39.4±1.0**, 570S**±004×**14631E**±006**, h95**km±10km**, h107**km±3.0km**: pP-P, n84,** σ**1.11**/82**, mb4.4**/38**, 8C-3D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.77	167c	iP	Pn	15 42 35.8	+0.3
PMG	Port Moresby	3.77	167⇑	iPn	Pn	15 42 35.9	+0.4
PMG				eSn	Sn	15 43 17.4	-1.4
COEN	Coen	8.77	200	ePn	Pn	15 43 45.1	+1.8
	77nm,0.8s						
COEN				eSn	Sn	15 45 19.5	-1.0
HNR	Honiara	14.01	106	P	Pn	15 44 53.7	-0.1
	5.4nm,0.3s,baz=201,slow=14,SNR=3.5						
HNR	Honiara	14.01	106	P	Pn	15 44 53.7	-0.1
HNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CTA	Charters Tower	14.30	180	eP	Pn	15 45 02.1	+4.7
	comp=Z,53nm,0.4s						
CTA				eS	Sn	15 47 31.2	-3.8
CTA	Charters Tower	14.30	180	P	Pn	15 45 02.4	+5.0
	comp=Z,16nm,0.3s,baz=360,slow=14,SNR=280						
CTA				S	Sn	15 47 31.3	-3.7
	comp=Z,0.6nm,0.3s,baz=90,slow=20,SNR=5.8						
CTA	Charters Tower	14.30	180	eP	Pn	15 45 02.1	+4.7
CTA				eS	Sn	15 47 31.2	-3.8
CTA				pmax	pmax		
	comp=Z,53nm,0.4s						
CTAO	Charters Tower	14.30	180	eP	Pn	15 45 02.2	+4.8
CTAO				pmax	pmax		
	comp=Z,66nm,0.6s						
CTAO	Charters Tower	14.30	180	eP	Pn	15 45 02.2	+4.8
	comp=Z,66nm,0.6s						
KAKA	Kakadu	15.36	242	eP	x	15 44 51.8	
	comp=Z,90nm,0.6s						
WRAB	Tennant Creek	18.31	218⇑	iP	Pn	15 45 47.0	-0.2
WRAB	Tennant Creek	18.31	218	eP	Pn	15 45 45.8	-1.4
	comp=Z,36nm,0.9s						
WB2	Warramunga Arr	18.32	218	eP	Pn	15 45 45.7	-1.6
WB2				eS	S	15 49 07.9	-2.9
EIDS	Eidsvold	20.08	167	eP	P	15 46 06.2	+0.9
	comp=Z,8.5nm,0.6s						
ASAR	Alice Springs	21.49	213	P	P	15 46 21.0	+0.5
	comp=Z,7.2nm,0.6s,mb4.2,baz=46,slow=8.0,SNR=81						
ASAR				S	S	15 50 15.8	+2.3
	comp=Z,2.5nm,0.9s,baz=25,slow=22,SNR=5.3						
BATI	Baumata	22.87	257	P	P	15 46 36.6	+1.5
	comp=Z,30nm,0.6s,mb4.8,baz=232,slow=1.0,SNR=13						
FITZ	Fitzroy Crossi	23.65	237	eP	P	15 46 42.1	-0.1
	comp=Z,33nm,0.5s,mb4.9						
FITZ				eS	S	15 50 49.4	-0.7
ARMA	Armidale	25.09	169⇓	iP	P	15 46 56.1	+0.9
DZM	Mont Dzumac	25.37	132	eP	P	15 46 57.2	-0.6
STKA	Stephens Creek	26.41	189	eP	P	15 47 07.2	+0.1
	comp=Z,5.6nm,0.8s,mb4.0						
STKA	Stephens Creek	26.41	189	P	P	15 47 07.1	0.0
	comp=Z,6.0nm,0.7s,mb4.1,baz=358,slow=7.3,SNR=11						
KAPI	Kappang	26.45	270	P	P	15 47 06.9	-0.8
	comp=Z,2.6nm,0.7s,mb3.8,baz=180,slow=4.0,SNR=4.1						
KAPI	Kappang	26.45	270	eP	P	15 47 06.8	-0.9
	comp=Z,14nm,0.8s,mb4.4						
CNB	Canberra Magne	29.60	175	eP	P	15 47 36.5	+1.0
TOO	Toolangi	31.73	181	eP	P	15 47 54.2	0.0
KLBR	Kellerberrin	37.12	223	eP	P	15 48 41.0	+0.1
	comp=Z,14nm,0.3s,mb5.4						
MUN	Mundaring	38.41	223	eP	P	15 48 52.5	+0.8
MJAR	Matsushiro Arr	42.70	350	P	P	15 49 26.7	-0.2
	comp=Z,0.6nm,0.6s,mb3.5,baz=188,slow=11,SNR=3.5						
URZ	Urewera	42.80	144	P	P	15 49 28.7	+1.0
	comp=Z,3.6nm,0.4s,mb4.5,baz=192,slow=18,SNR=6.7						
SNZO	South Karori	43.58	149	eP	P	15 49 34.2	+0.3
RPZ	Rata Peaks	43.67	154	P	P	15 49 35.7	+1.0
	comp=Z,20nm,0.6s,mb5.0,baz=231,slow=3.2,SNR=17						
KSRS	Korea Array	46.23	340	P	P	15 49 55.3	+0.3
	comp=Z,4.6nm,0.8s,mb4.2,baz=158,slow=8.6,SNR=20						
KSRS				pP	pP	15 50 20.6	+2.9
	comp=Z,3.9nm,1.0s,baz=155,slow=9.5,SNR=5.0						
PSI	Prapat	48.08	279	P	P	15 50 09.7	-0.2
	comp=Z,4.1nm,0.5s,mb4.5,baz=74,slow=7.4,SNR=3.4						
GYA	Guiyang	49.97	312	eP	P	15 50 24.2	+0.2
GYA				AP	pP	15 50 48.8	+1.8
GYA				XP	sP	15 51 00.2	+2.5
GYA				PCP	PcP	15 51 42.5	-0.4
GYA				SCP	ScP	15 55 27.6	-2.5
GYA				PCS	PcS	15 55 37.9	-2.2
GYA				S	S	15 57 27.1	-0.6
GYA				XS	sS	15 58 08.4	+1.3
GYA				SCS	ScS	16 00 02.3	-4.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI	Kunming	52.27	308	P	P	15 50 43.9	+2.6
KMI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.5						
CMAR	Chiang Mai Arr	52.51	298	P	P	15 50 44.0	+0.9
	comp=Z,2.6nm,0.7s,mb4.4,baz=124,slow=5.9,SNR=21						
YSS	Yuzh-Sakhalins	52.52	357⇑	iP	P	15 50 39.4	-3.3
YSS				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.3						
CN2	Changchun	52.76	341	eP	P	15 50 46.5	+2.0
XAN	Xi'an	53.02	321	P	P	15 50 46.1	-0.5
XAN				AP	pP	15 51 08.4	-1.4
XAN				PP	PP	15 52 47.2	-0.2
XAN				S	S	15 58 10.5	+1.2
XAN				SS	SS	16 01 52.2	+2.2
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
CD2	Chengdu	54.58	314	eP	P	15 50 59.8	+1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
HHC	Hu-ho-hao-te	56.22	329	eP	P	15 51 11.2	+1.5
HHC				AP	pP	15 51 34.9	+1.8
HHC				XP	sP	15 51 46.5	+2.8
HHC				PCP	PcP	15 52 09.1	+2.9
HHC				PP	PP	15 53 18.1	+2.1
HHC				eS	S	15 58 51.5	-0.6
HHC				XS	sS	15 59 32.5	+0.3
HHC				SS	SS	16 02 39.4	-0.9
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.1						
HHC				AMB	AMB		
	comp=Z,155nm,3.8s						
HHC				LR	LR		
	comp=N,97nm,13.1s						
HHC				LR	LR		
	comp=E,208nm,14.3s						
HHC				LR	LR		
	comp=Z,260nm,16.7s						
LZH	Lanzhou	57.54	320	eP	P	15 51 21.9	+2.8
LZH				AP	pP	15 51 47.7	+5.1
LZH				XP	sP	15 51 57.0	+3.8
LZH				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,83nm,5.5s						
PETK	Petropavlovsk-	59.38	8	P	P	15 51 32.1	+0.7
	comp=Z,3.8nm,0.9s,mb4.5,baz=125,slow=4.4,SNR=5.7						
PETK				pP	pP	15 51 58.8	+3.7
	comp=Z,6.8nm,0.9s,baz=184,slow=8.9,SNR=5.6						
HIA	Hailar	59.44	340⇑	iP	P	15 51 31.8	-0.2
ULN	Ulaanbaatar	63.52	332	eP	P	15 52 00.1	+0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
ULN	Ulaanbaatar	63.52	332	eP	P	15 52 00.1	+0.6
	comp=Z,5.2nm,1.4s,mb4.2						
SONM	Songino Array	63.81	331	P	P	15 52 01.5	+0.1
	comp=Z,1.7nm,0.9s,mb3.9,baz=151,slow=6.6,SNR=8.8						
ZAK	Zakamensk	67.05	332	eP	P	15 52 21.5	-0.8
ZAK				e	pP	15 52 47.3	+0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
BOD	Bodaibo	68.48	342	eP	P	15 52 29.6	-1.5
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
YAK	Yakutsk	68.75	352⇓	iP	P	15 52 31.8	-0.8
YAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
HYB	Hyderabad	70.72	291	eP	P	15 52 43.0	-2.7
WMQ	Urumqi	72.12	320	eP	P	15 52 54.1	+0.5
VNDA	Vanda	72.25	176	P	P	15 52 54.5	+0.7
	comp=Z,5.9nm,0.6s,mb4.6,baz=325,slow=6.6,SNR=55						
VNDA	Vanda	72.25	176	eP	P	15 52 54.3	+0.5
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VNDA	Vanda	72.25	176	eP	P	15 52 54.3	+0.5
	comp=Z,6.2nm,0.9s,mb4.4						
BILL	Bilibino	74.91	8⇑	iP	P	15 53 09.3	-0.1
BILL				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
MKAR	Makanchi Array	76.83	321	P	P	15 53 20.2	-0.6
	comp=Z,0.8nm,0.4s,mb3.8,baz=95,slow=8.6,SNR=5.5						
MKAR				pP	pP	15 53 49.0	+3.6
	comp=Z,1.3nm,0.7s,baz=108,slow=6.5,SNR=3.1						
TIXI	Tiksi	78.05	354⇑	iP	P	15 53 25.0	-2.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ZALV	Zalesovo Beam	78.40	328	P	P	15 53 27.7	-1.7
	comp=Z,2.0nm,0.6s,mb4.0,baz=116,slow=5.0,SNR=9.7						
ZALV				pP	pP	15 53 57.5	+3.5
	comp=Z,2.1nm,0.7s,baz=107,slow=5.3,SNR=5.6						
ZALV	Zalesovo Beam	78.40	328	P	P	15 53 27.7	-1.7
ZALV				pP	pP	15 53 57.5	+3.5
KURK	Kurchatov	80.56	323⇑	iP	P	15 53 39.6	-1.6
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
AAK	Ala-Archa	80.64	315⇓	iP	P	15 53 41.8	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.7						
MAW	Mawson	82.26	203	P	P	15 53 50.1	+0.2
	comp=Z,7.4nm,0.7s,mb4.6,baz=105,slow=7.1,SNR=11						
CHUM	Lake Minchumin	82.96	23	eP	P	15 53 53.6	+0.1
	comp=Z,11nm,1.0s,mb4.7						
QSPA	South Pole Qui	84.26	180	P	P	15 54 00.3	+0.3
	comp=Z,5.3nm,0.6s,mb4.6,baz=324,slow=1.4,SNR=24						
QSPA	South Pole Qui	84.26	180	eP	P	15 54 00.1	+0.2
	comp=Z,6.8nm,1.0s,mb4.4						
COLA	College	85.14	23	eP	P	15 54 03.1	-1.4
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
COLA	College	85.14	23	eP	P	15 54 03.1	-1.5
	comp=Z,6.4nm,0.8s,mb4.6						
NVAR	Mina Array Bea	97.73	52	P	P	15 55 03.7	-0.3
	comp=Z,0.7nm,0.8s,mb4.3,baz=245,slow=7.2,SNR=4.6						
NVAR	Mina Array Bea	97.73	52	P	P	15 55 03.7	-0.3
YKA	Yellowknife Ar	99.23	28	P	P	15 55 09.0	-1.0
	comp=Z,0.1nm,0.3s,mb3.8,baz=274,slow=4.9,SNR=3.1						
GERES	GERESS Array B	121.28	325	PKP	PKPdf	16 00 22.4	+1.0
	comp=Z,0.5nm,0.8s,baz=29,slow=3.0,SNR=4.2						
PLCA	Paso Flores	122.74	147	PKP	PKPdf	16 00 25.6	+1.1
	comp=Z,5.5nm,1.0s,baz=271,slow=6.7,SNR=5.2						
CPUP	Villa Florida	140.76	145	PKhKP		16 00 49.8	
	comp=Z,0.7nm,0.7s,baz=180,slow=3.0,SNR=3.2						
CPUP				PKP	PKPdf	16 00 59.2	+0.4
	comp=Z,1.4nm,0.6s,baz=306,slow=1.6,SNR=6.3						
CPUP	Villa Florida	140.76	145	PKP		16 00 49.8	
CPUP				PKP	PKPdf	16 00 59.2	+0.4
TOA0	Torodi Ar. Sit	144.35	285	ePKP	PKPdf	16 01 02.9	-2.5
TORD	Torodi Ar. Bea	144.35	285	PKP	PKPdf	16 01 03.3	-2.2
	comp=Z,8.7nm,0.8s,baz=74,slow=3.5,SNR=52						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIC	Kosan Boka	151.21	273	ePKIKP	PKPbc	16 01 23.2	+0.4
	comp=Z,23nm,0.7s						
DBIC	Dimbokro	151.32	273	PKPbc	PKPbc	16 01 22.6	-0.4
	comp=Z,6.0nm,0.6s,baz=71,slow=2.4,SNR=23						
DBIC	Dimbokro	151.32	273	ePKPdf	PKPdf	16 01 14.7	-2.3
DBIC				ePKPbc	PKPbc	16 01 22.2	-0.8
DBIC				PKPbc	PKPbc	16 01 22.6	-0.4
TIC	Toumodi	151.49	273	ePKIKP	PKPbc	16 01 23.8	+0.4
	comp=Z,10.0nm,0.2s						
LIC	Lamto	151.49	273	ePKIKP	PKPbc	16 01 23.6	+0.2
	comp=Z,22nm,0.5s						
BDFB	Brasilia	154.49	146	PKP	PKPdf	16 01 23.4	+1.9
	comp=Z,1.0nm,0.8s,baz=53,slow=23,SNR=3.2						
BDFB				PKPbc	PKPbc	16 01 30.1	+0.1
	comp=Z,3.5nm,0.8s,baz=175,slow=9.2,SNR=10						

*NEIC **09** 16:16:37.0±0.9, 17.73S×178.70W, h600km, mb3.4/1, Error ellipse: s-maj=75.3km s-min=11.4km az=153.0*

IDC 09 16:16:35.3±8.9**, 17.94S×178.56W, h581**km±114km**, mb2.9**/6**, mb1 3.2**/6**, mb1mx3.0**/17**, mbtmp2.9**/6**, Error ellipse: s-maj=110.9km s-min=36.4km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIDS	Eidsvold	29.12	250	eP	P	16 21 50.8	+0.3
CTA	Charters Tower	33.30	261	P	P	16 22 26.3	+0.2
	0.6nm,0.4s,baz=74,slow=15,SNR=4.3						
STKA	Stephens Creek	38.49	241	P	P	16 23 08.4	-0.3
	1.5nm,0.5s,baz=80,slow=12,SNR=4.8						
STKA	Stephens Creek	38.49	241	eP	P	16 23 09.2	+0.4
WRAB	Tennant Creek	44.47	260	eP	P	16 23 55.8	-0.3
	0.6nm,0.5s						
ASAR	Alice Springs	44.64	254	P	P	16 23 57.2	-0.1
	3.7nm,0.6s,baz=88,slow=8.8,SNR=102						
NVAR	Mina Array Bea	79.55	44	P	P	16 27 42.8	+0.1
	0.3nm,0.6s,baz=210,slow=5.2,SNR=2.9						
NVAR	Mina Array Bea	79.55	44	P	P	16 27 42.8	+0.1
TXAR	Lajitas Array	86.14	58	P	P	16 28 16.4	+0.6
	0.5nm,0.7s,baz=223,slow=5.5,SNR=8.7						
PDAR	Pinedale Array	87.47	43	P	P	16 28 21.6	-0.2
	0.3nm,0.6s,baz=262,slow=6.2,SNR=3.3						
GERES	GERESS Array B	147.60	345	PKPbc	PKPbc	16 35 14.5	-0.4
	0.2nm,0.5s,baz=354,slow=2.0,SNR=3.1						

*ISCJB **09** 16:29:57.5±2.2, 7.1S±0.2×155.1E±0.1, h97km±25km, mb3.6/8, Error ellipse: s-maj=34.9km s-min=17.2km az=166.7*
*NEIC **09** 16:29:59.3±1.6, 7.18S×155.15E, h100km±19km, mb3.4/1, Error ellipse: s-maj=26.9km s-min=14.0km az=168.0*
*IDC **09** 16:30:08.2±15.0, 7.53S×155.44E, h200km±154km, mb3.3/7, mb1 3.4/7, mb1mx3.3/15, mbtmp3.3/7, Error ellipse: s-maj=52.3km s-min=38.0km az=138.0*

ISC 09 16:29:59.3±1.8**, 7.2S**±0.2×**155.2E**±0.1**, h100**km±21km**, n10, σ0^{s}93**/10**, mb3.6**/8**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.25	116	ePn	Pn	16 31 15.6	+0.3
	60nm,0.8s						
PMG	Port Moresby	8.21	254	eP	Pn	16 31 55.3	-0.5
WRAB	Tennant Creek	23.83	236	eP	P	16 35 03.9	+0.6
	1.3nm,0.7s,mb3.4						
ASAR	Alice Springs	26.17	229	P	P	16 35 24.0	-0.5
	0.4nm,0.6s,mb3.0,baz=58,slow=10,SNR=13						
PETK	Petropavlovsk-	60.09	2	P	P	16 39 56.0	+0.2
	1.5nm,0.7s,mb4.2,baz=140,slow=7.0,SNR=4.7						
CMAR	Chiang Mai Arr	61.00	296	P	P	16 40 04.5	+1.9
	1.4nm,0.7s,mb4.1,baz=120,slow=5.4,SNR=17						
SONM	Songino Array	69.57	327	P	P	16 40 58.2	+0.7
	0.4nm,0.5s,mb3.5,baz=136,slow=5.3,SNR=5.0						
MKAR	Makanchi Array	83.64	319	P	P	16 42 16.5	-0.2
	0.4nm,0.7s,mb3.3,baz=115,slow=7.2,SNR=2.5						
ZALV	Zalesovo Beam	84.42	326	P	P	16 42 18.5	-2.0
	0.3nm,0.4s,mb3.5,baz=90,slow=4.5,SNR=2.7						
YKA	Yellowknife Ar	96.42	28	P	P	16 43 16.3	-0.6
	0.1nm,0.3s,mb3.7,baz=267,slow=4.4,SNR=6.6						

*NEIC **09** 16:31:47.0, 17.07N×100.28W, h8km, MD3.5(MEX), After MEX.*

MEX 09 16:31:47.0±1.1**, 17.07N**×**100.27W, h8**km±6km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.02	169	i P	Pg	16 31 47.2	-1.2
CAIG				i S	Sg	16 31 48.2	-1.2
ACX	Acapulco	0.40	121	i P	Pg	16 31 54.2	-0.5
ACX				i S	Sg	16 32 00.0	+0.1
ACX	Acapulco	0.40	121	i P	Pg	16 31 56.1	+1.4
ACX				i S	Sg	16 32 00.0	+0.1
MEIG	Mezcala	1.05	36	eP	Pg	16 32 05.0	-2.2
MEIG				i S	Sg	16 32 16.9	-4.1
ZIIG	Zihuatanejo	1.26	295	i P	Pn	16 32 08.1	-2.9
ZIIG				i S	Sb	16 32 21.4	-6.0
PNIG	Pinotepa	2.16	108	eP	Pn	16 32 20.6	-2.8
PNIG				i S	Sn	16 32 44.9	-5.5
UTMO	Huajuapan	2.48	72	eP	Pn	16 32 25.1	-2.6
UTMO				i S	Sn	16 32 54.5	-3.7

MAN 09 17:20:07, 17.62N×120.03E, h29km, mb3.8, ML2.5, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.51	53	⇓iP	Pb	17 20 18.4	+0.9
SIPP				i S	Sb	17 20 27.0	+2.4
ABRA	Dolores	0.65	87	eP	Pb	17 20 19.9	+0.1
ABRA				eS	Sb	17 20 31.1	+2.6
BOLP	Bolinao	1.23	185	eP	Pn	17 20 28.9	+0.6
BOLP				eS	Sn	17 20 44.2	+0.2
CAUP	Cauayan	1.83	111	eP	Pn	17 20 39.7	+3.1

MAN 09 17:29:08, 8.01N×122.17E, h29km, mb4.1, ML2.9, MS2.6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IPIL	Ipil	0.45	119	⇓iP	Pb	17 29 18.1	+0.5
IPIL				i S	Sb	17 29 24.6	+0.4
ZMPH	Zamboanga City	1.05	186	⇑iP	Pn	17 29 28.4	+1.6
ZMPH				i S	Sn	17 29 40.5	-0.1
PAGZ	Pagadian	1.21	98	eP	Pn	17 29 29.8	+0.8
PAGZ				eS	Sn	17 29 45.2	+0.8
DCPH	Dipolog City	1.30	64	⇑eP	Pn	17 29 30.4	+0.2
DCPH				eS	Sn	17 29 47.9	+1.2
GUIM	Jordan	2.63	9	eP	Pn	17 29 50.4	+1.8
GUIM				eS	Sn	17 30 20.4	+0.8
BUKP	Musuan	2.87	92	eP	Pn	17 30 00.2	+8.4

*ISCJB **09** 17:29:59.9±0.9, 35.30N±0.05×137.40E±0.06, h49km±9km, Error ellipse: s-maj=9.5km s-min=8.2km az=147.2*
*JMA **09** 17:29:59.6, 35.31N×137.43E, h50km±1km, M3.3*
JMA Felt I J1.

ISC 09 17:30:00.2±0.8**, 35.29N**±0.06×**137.39E**±0.06**, h47**km±9km**, n9, σ0^{s}80**/14**, 3C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAO	Obara	0.11	258	⇓P	Pn	17 30 07.7	-0.1
JAO				S	Sn	17 30 13.7	+0.6
JGF	Kuroka	0.31	355	P	Pn	17 30 08.5	-0.7
JGF				S	Sn	17 30 15.0	-0.6
JGM	Miyama	0.69	307	⇑P	Pn	17 30 13.3	-0.4
JGM				eS	Sn	17 30 23.6	+0.2
SHZ3	Shizuoka 3	0.71	108	⇑P	Pn	17 30 12.6	-1.3
JYN	Shimob	0.96	77	P	Pn	17 30 16.7	-0.7
JYN				eS	Sn	17 30 31.6	+1.6
TSUJ	Tsu 2	0.98	234	P	Pn	17 30 19.1	+1.4
TK04	Tokai 4	0.99	156	⇑P	Pn	17 30 17.6	-0.1
JIE	Ise	1.06	212	⇓P	Pn	17 30 18.4	-0.3
MAT	Matsushiro	1.42	28	P	Pn	17 30 23.2	-0.3
MAT				S	Sn	17 30 41.8	+0.8

*IDC **09** 17:38:18.4±0.7, 0.11N×98.16E, h0km, mb4.4/15, mb1 4.4/17, mb1mx4.3/24, mbtmp4.4/17, ML4.7/2, MS3.5/3, Ms1 3.6/3, ms1mx3.3/17, Error ellipse: s-maj=21.5km s-min=16.5km az=83.0*
*MOS **09** 17:38:21.6±0.9, 0.15N×98.30E, h33km, mb4.8/11, Error ellipse: s-maj=15.4km s-min=6.9km az=108.1*
*BJI **09** 17:38:23.9, 0.55N×98.13E, h18km, mB5.0, mb4.7, Ms5.3, Msz4.7*
*NEIC **09** 17:38:23.1±0.3, 0.06N×98.34E, h35km, mb4.8/23, Error ellipse: s-maj=10.1km s-min=7.1km az=72.0*
*DJA **09** 17:38:24, 0.00N×97.92E, h25km, MLv4.8/8*
*ISCJB **09** 17:38:24.3±1.1, 0.13N±0.05×98.27E±0.07, h57km±10km, mb4.7/45, Error ellipse: s-maj=12.9km s-min=6.6km az=153.2*

ISC 09 17:38:25.8±1.0**, 0.09N**±0.05×**98.30E**±0.07**, h55**km±9km**, n122, σ0^{s}96**/114**, mb4.7**/45**, 7C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	2.03	19	P	Pn	17 38 57.1	-0.5
TRSI				S	Sn	17 39 31.0	+9.1
PPI	Padang Panjang	2.17	105	P	Pn	17 38 58.3	-1.2
PPI				S	Sn	17 39 26.4	+1.1
PDSI	Padang	2.38	115	P	Pn	17 39 00.8	-1.7
PSI	Prapat	2.76	13	Pn	Pn	17 39 04.2	-3.4
	38nm,0.3s,baz=341,slow=6.9,SNR=57						
PSI				Sn	Sn	17 39 39.9	+0.1
	26nm,0.3s,baz=167,slow=21,SNR=5.5						
PSI				LR	LR	17 40 19.6	
	comp=Z,254nm,18.6s,baz=160,slow=45						
PSI	Prapat	2.76	13	P	Pn	17 39 04.2	-3.4
PSI						17 39 39.9	
PSI	Prapat	2.76	13	Pn	Pn	17 39 04.2	-3.4
PSI				Sn	Sn	17 39 39.9	+0.1
PSI				LR	LR	17 40 19.6	
RGRI	Rengat	4.06	96	P	Px	17 39 39.4	
IPM	Ipoh	5.14	32	P	Pn	17 39 41.4	+1.2
	98nm,1.1s,1μm0.5nm						
KULM	Kulim	5.67	24	P	Pn	17 39 48.1	+0.6
	84nm,1.0s,0.3nm						
KSI	Kapahiang	5.68	131	P	Pn	17 39 49.4	+1.7
	199nm,0.8s,3μm1.0nm						
BSI	Banda Aceh	6.15	331	P	Pn	17 39 48.9	-5.1
	104nm,0.8s,3μm0.5nm						
CBJI	Citeko	10.71	127	P	Pn	17 41 00.9	+4.3
LEM	Lembang	11.56	127	P	Px	17 41 25.8	
SBUM	Sibu	14.12	80	P	Px	17 41 56.8	
	22nm,0.9s						
PLKI	Palangkaraya	15.81	98	P	pP	17 42 15.4	-4.7
CMAR	Chiang Mai Arr	18.26	2	P	Pn	17 42 33.2	-2.1
	2.0nm,0.3s,baz=192,slow=11,SNR=30						
CMAR				LR	LR	17 50 06.3	
	comp=Z,189nm,18.8s,baz=190,slow=39						
CMAR	Chiang Mai Arr	18.26	2	P	Pn	17 42 33.2	-2.1
CMAR				LR	LR	17 50 06.3	
CHTO	Chiang Mai	18.61	2	eP	Pn	17 42 37.1	-2.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	Chiang Mai	18.61	2	eP	Pn	17 42 37.1	-2.5
	comp=Z,3.2nm,0.7s						
PALK	Pallekele	18.94	293	eP	Pn	17 42 42.5	-1.1
PALK				pmax	pmax		
	comp=Z,25nm,1.1s						
PALK	Pallekele	18.94	293	eP	Pn	17 42 42.5	-1.1
	comp=Z,25nm,1.1s						
HYB	Hyderabad	25.96	313	i P	P	17 43 56.5	+3.1
SHL	Shillong	26.07	347	eP	P	17 43 57.0	+2.8
ODAN	Odare	28.61	339	eP	P	17 44 17.6	+0.6
	comp=Z,15nm,0.7s,mb4.8						
TAPN	Taplejung	28.95	340	eP	P	17 44 20.9	+0.9
	comp=Z,31nm,0.9s,mb5.0						
RAMN	Ramite	28.98	338	eP	P	17 44 21.2	+1.0
	comp=Z,16nm,0.6s,mb4.9						
JIRN	Jiri	29.77	338	eP	P	17 44 27.8	+0.5
PKI	Pulchoki	29.99	337	eP	P	17 44 29.2	0.0
PKIN	Phulchoki	30.00	337	eP	P	17 44 29.1	-0.2
GUN	Gumba	30.11	338	eP	P	17 44 30.8	+0.5
	comp=Z,55nm,0.5s,mb5.5						
DMN	Daman	30.15	336	eP	P	17 44 31.4	+0.8
LSA	Lhasa	30.22	348	P	P	17 44 32.4	+1.2
LSA	Lhasa	30.22	348	eP	P	17 44 32.0	+0.8
LSA				e		17 47 32.6	
LSA				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
LSA	Lhasa	30.22	348	eP	P	17 44 32.0	+0.8
	comp=Z,14nm,0.8s,mb4.7						
LSA				ePcP	PcP	17 47 32.6	+1.5
KKN	Kakani	30.24	337	eP	P	17 44 31.6	+0.2
	comp=Z,41nm,1.1s,mb5.1						
KKN	Kakani	30.24	337	eP	P	17 44 31.6	+0.2
KKN				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.1						
GKN	Gorkha	30.69	336	eP	P	17 44 35.5	+0.1
KOLN	Koldanda	30.92	334	eP	P	17 44 37.9	+0.5
	comp=Z,28nm,0.7s,mb5.2						
DANN	Dangsing	31.36	335	eP	P	17 44 41.5	+0.2
	comp=Z,16nm,0.6s,mb5.1						
NWAO	Narrogin (SRO)	37.38	153	LR	LR	17 59 04.9	
	comp=Z,162nm,21.0s,baz=225,slow=33						
GTA	Gaotai	39.15	2	eP	P	17 45 48.0	-0.1
GTA				AP	pP	17 45 53.0	-9.4
GTA				XP	sP	17 45 56.3	-13
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.1						
WRAB	Tennant Creek	40.53	122	eP	P	17 45 59.1	-0.8
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WRAB	Tennant Creek	40.53	122	eP	P	17 45 59.0	-0.8
	comp=Z,4.2nm,0.8s,mb4.1						
ASAR	Alice Springs	41.86	127	P	P	17 46 10.8	+0.1
	comp=Z,1.3nm,0.6s,mb3.7,baz=303,slow=8.0,SNR=7.3						
BJI	Beijing	42.97	20	P	P	17 46 20.2	+0.7
BJI				AMB	AMB		
	comp=Z,19nm,0.7s,mb4.9						
WMQ	Urumqi	44.55	349	P	P	17 46 33.0	+0.9
WMQ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
KSRS	Korea Array	46.15	33	P	P	17 46 44.8	-0.1
	comp=Z,3.3nm,0.7s,mb4.4,baz=222,slow=8.6,SNR=9.1						
TKM2	Tokmak 2	47.25	337	eP	P	17 46 54.2	+0.8
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TKM2	Tokmak 2	47.25	337	P	P	17 46 54.1	+0.7
	SNR=8.9						
TKM2	Tokmak 2	47.25	337	eP	P	17 46 54.2	+0.8
	comp=Z,7.9nm,0.8s,mb4.7						
KBK	Karagaybulak	47.28	337	P	P	17 46 55.0	+1.4
	SNR=8.9						
AML	Almayashu	47.36	335	P	P	17 46 55.5	+1.2
	SNR=6.2						
AML	Almayashu	47.36	335	eP	P	17 46 54.7	+0.5
	comp=Z,4.4nm,0.5s,mb4.6						
AAK	Ala-Archa	47.44	336	eP	P	17 46 55.9	+1.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
AAK	Ala-Archa	47.44	336	eP	P	17 46 55.9	+1.0
	comp=Z,2.5nm,0.7s,mb4.2						
EKS2	Erkin-Say	47.76	336	P	P	17 46 58.7	+1.3
	SNR=6.4						
EKS2	Erkin-Say	47.76	336	eP	P	17 46 58.1	+0.8
	comp=Z,5.0nm,0.8s,mb4.6						
USP	Ospenovka	47.97	337	P	P	17 46 59.5	+0.5
	SNR=14						
SONM	Songino Array	48.07	7	P	P	17 47 00.6	+0.9
	comp=Z,1.6nm,0.5s,mb4.3,baz=189,slow=9.8,SNR=17						
SONM				PcP	PcP	17 48 28.1	+1.4
	comp=Z,1.1nm,0.6s,baz=201,slow=3.4,SNR=3.8						
ULN	Ulaanbaatar	48.19	8	eP	P	17 47 00.6	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
ULN	Ulaanbaatar	48.19	8	eP	P	17 47 00.6	0.0
	comp=Z,4.0nm,0.7s,mb4.6						
MK31	Makanchi Array	48.58	345	eP	P	17 47 03.5	-0.1
MKAR	Makanchi Array	48.58	345	P	P	17 47 03.9	+0.3
	comp=Z,9.9nm,0.6s,mb5.0,baz=156,slow=8.9,SNR=141						
MKAR				PcP	PcP	17 48 28.0	-0.6
	comp=Z,1.1nm,0.5s,baz=152,slow=6.5,SNR=1.9						
ZAK	Zakamensk	50.28	4	eP	P	17 47 14.5	-2.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
STKA	Stephens Creek	51.81	132	eP	P	17 47 29.6	+1.3
	comp=Z,4.2nm,1.4s,mb4.2						
STKA	Stephens Creek	51.81	132	P	P	17 47 29.4	+1.1
	comp=Z,2.6nm,0.5s,mb4.4,baz=311,slow=9.6,SNR=8.1						
STKA	Stephens Creek	51.81	132	eP	P	17 47 27.4	-0.9
	comp=Z,0.6nm,0.6s,mb3.7						
KURK	Kurchatov	53.14	344	P	P	17 47 37.3	-0.6
	comp=Z,5.3nm,0.7s,mb4.6,baz=163,slow=6.8,SNR=4.2						
OPO	Ambohidratompo	53.48	247	P	P	17 47 41.5	+0.5
	comp=Z,2.0nm,0.8s,mb4.1,baz=51,slow=3.9,SNR=4.2						
ZAA0	Zalesovo Array	54.82	350	eP	P	17 47 49.4	-0.7
ZALV	Zalesovo Beam	54.82	350	P	P	17 47 50.0	0.0
	comp=Z,12nm,0.6s,mb5.1,baz=178,slow=7.1,SNR=44						
QRN	Al-Qurain	55.89	305	eP	P	17 47 57.7	-0.5
	baz=305						
QRN				AMb	AMB	17 48 02.4	
	comp=Z,78nm,1.2s,mb5.6,baz=305						
NVS	Novosibirsk	55.95	350	eP	P	17 47 57.2	-0.9
UMR	Umm Al-Rimmam	56.35	306	eP	P	17 48 01.1	-0.5
	baz=306						
UMR				AMb	AMB	17 48 05.8	
	comp=Z,45nm,1.6s,mb5.2,baz=306						
NAY	Al-Naaiem	56.62	306	eP	P	17 48 02.9	-0.6
	baz=306						
NAY				AMb	AMB	17 48 03.6	
	comp=Z,31nm,0.7s,mb5.5,baz=306						
MIB	Mutribah	56.75	306	eP	P	17 48 04.0	-0.3
	baz=306						
MIB				AMb	AMB	17 48 05.1	
	comp=Z,51nm,0.9s,mb5.5,baz=306						
BVAR	Borovoye Array	57.65	340	P	P	17 48 09.6	-0.6
	comp=Z,3.7nm,0.7s,mb4.6,baz=145,slow=8.9,SNR=23						
BOD	Bodaibo	58.90	10	eP	P	17 48 18.1	-0.7
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
ARU	Arti	64.62	337	P	P	17 48 56.1	-1.3
BR131	Keskin Array S	70.66	312	eP	P	17 49 34.2	-1.6
	comp=Z,1.8nm,0.6s,mb4.2						
BRTR	Keskin Array B	70.66	312	P	P	17 49 34.9	-1.0
	comp=Z,2.7nm,0.7s,mb4.3,baz=131,slow=6.9,SNR=20						
TIXI	Tiksi	74.08	10	eP	P	17 49 52.7	-2.9
TIXI				pmax	pmax		
	comp=Z,17nm,0.4s,mb5.3						
TIXI	Tiksi	74.08	10	eP	P	17 49 52.7	-2.9
	comp=Z,16nm,0.4s,mb5.3						
BOSA	Boshof	75.19	240	P	P	17 50 03.6	+0.7
	comp=Z,3.8nm,0.6s,mb4.5,baz=110,slow=8.9,SNR=12						
AKASG	Malin Array Be	76.80	322	P	P	17 50 10.4	-1.1
	comp=Z,2.9nm,0.6s,mb4.4,baz=88,slow=5.3,SNR=12						
VRI	Vrincioaia	77.17	317	⇓iP	P	17 50 14.3	+0.6
VRI	Vrincioaia	77.17	317	⇓P	P	17 50 14.3	+0.6
MLR	Muntele Rosu	77.62	317	⇑iP	P	17 50 16.6	+0.3
MLR	Muntele Rosu	77.62	317	⇑P	P	17 50 16.6	+0.4
BURAR	Bucovina Array	78.57	319	⇑iP	P	17 50 22.2	+0.7
BURAR	Bucovina Array	78.57	319	⇑P	P	17 50 22.2	+0.7
BUR08	Bucovina Ar. S	78.59	319	eP	P	17 50 21.9	+0.3
JOF	Joensuu	79.61	335	ep	P	17 50 26.3	-0.5
	comp=Z,0.7nm,0.4s,mb3.9						
DRGR		80.08	318	⇑iP	P	17 50 30.0	+0.3
DRGR		80.08	318	⇑P	P	17 50 30.0	+0.3
TRPA	Tarpa	80.44	319	⇓iP	P	17 50 31.9	+0.2
KAF	Kangasniemi	81.56	333	ep	P	17 50 36.9	-0.4
	comp=Z,1.8nm,0.4s,mb4.3						
KAF	Kangasniemi	81.56	333	eP	P	17 50 36.9	-0.4
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
PKSM	Moragy	82.77	316	⇑iP	P	17 50 43.6	-0.4
ARCES	ARCESS Array B	83.94	340	P	P	17 50 49.6	+0.1
	comp=Z,2.9nm,0.9s,mb4.4,baz=69,slow=6.6,SNR=5.7						
BRG	Berggiesshubel	86.35	321	eP	P	17 51 02.3	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
BRG	Berggiesshubel	86.35	321	eP	P	17 51 02.2	+0.3
	comp=Z,6.7nm,0.9s,mb4.9						
GERES	GERESS Array B	86.36	319	P	P	17 51 02.3	+0.2
	comp=Z,2.7nm,1.0s,mb4.4,baz=111,slow=3.3,SNR=14						
CDF	Champ du Feu	90.61	318	eP	P	17 51 20.0	-2.2
LPG	La Plagne	91.02	315	eP	P	17 51 24.6	+0.4
	comp=Z,7.2nm,0.8s,mb4.8						
LPG	La Plagne	91.02	315	eP	P	17 51 24.6	+0.4
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
LPG	La Plagne	91.02	315	eP	P	17 51 24.6	+0.4
	comp=Z,3.6nm,0.8s,mb4.8						
MBDF	Montbardon	91.02	315	eP	P	17 51 22.1	-2.1
	comp=Z,14nm,0.9s,mb5.0						
MBDF	Montbardon	91.02	315	eP	P	17 51 22.1	-2.1
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
MBDF	Montbardon	91.02	315	eP	P	17 51 22.1	-2.1
	comp=Z,6.8nm,0.9s,mb5.0						
LPL	La Plagne	91.03	315	eP	P	17 51 24.6	+0.3
	comp=Z,9.7nm,0.8s,mb4.9						
LPL	La Plagne	91.03	315	eP	P	17 51 24.6	+0.3
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
LPL	La Plagne	91.03	315	eP	P	17 51 24.6	+0.3
	comp=Z,4.8nm,0.8s,mb4.9						
LOR	Lormes	92.95	317	eP	P	17 51 33.1	0.0
TORD	Torodi Ar. Bea	96.41	283	P	P	17 51 49.3	-0.3
	comp=Z,0.3nm,0.6s,mb3.9,baz=97,slow=5.2,SNR=3.5						
LIC	Lamto	103.23	276	eP	Pdif	17 52 13.6	-5.6
	comp=Z,44nm,1.5s						
LIC	Lamto	103.23	276	eP	Pdif	17 52 13.6	-5.6
	comp=Z,22nm,1.5s						
TZTN	Tazewell	143.51	2	ePKPdf	PKPdf	17 57 51.4	-3.4
TXAR	Lajitas Array	144.00	34	PKP	PKPdf	17 57 55.1	-0.7
	comp=Z,0.6nm,0.6s,baz=202,slow=0.2,SNR=10						
CPUP	Villa Florida	144.90	220	PKP	PKPdf	17 57 57.5	0.0
	comp=Z,5.3nm,0.7s,baz=113,slow=4.2,SNR=18						
CPUP	Villa Florida	144.90	220	ePKPdf	PKPdf	17 57 57.4	-0.1
CPUP				PKP	PKPdf	17 57 57.5	0.0
JCT	Junction City	145.06	28	ePKIKP	PKPdf	17 57 57.6	-0.1

*IDC **09** 17:40:15.1±1.8, 10.67S×123.54E, h0km, mb4.0/2, mb1 3.8/3, mb1mx3.5/14, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=51.1km s-min=11.9km az=109.0*
*ISCJB **09** 17:40:18.8±0.7, 10.55S±0.08×124.0E±0.1, h33km, mb4.0/2, Error ellipse: s-maj=21.1km s-min=5.3km az=151.0*
*NEIC **09** 17:40:20.8±0.7, 10.36S×124.26E, h35km, Error ellipse: s-maj=40.6km s-min=9.4km az=58.0*

ISC 09 17:40:21.8±1.1**, 10.5S**±0.1×**124.3E**±0.1**, h53**km±18km**, n9, σ0^{s}70**/15**, mb4.0**/2**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	0.64	294	Pg	Pn	17 40 24.7	-10
	1μm,0.3s,baz=158,slow=4.7,SNR=1557						
BATI				Lg		17 40 30.2	
	2μm,0.3s,baz=209,slow=19,SNR=84						
KNA	Kununurra	6.85	141	eP	Pn	17 42 04.4	+4.8
	9.5nm,0.8s						
KNA				eS	Sn	17 43 21.6	+5.4
KAPI	Kappang	7.02	320	Pn	Pn	17 42 00.8	-1.1
	0.7nm,0.3s,baz=183,slow=6.7,SNR=4.9						
KAPI				Sn	Sn	17 43 20.8	+0.4
	0.7nm,0.3s,baz=260,slow=10.0,SNR=4.8						
FITZ	Fitzroy Crossi	7.71	170	eP	Pn	17 42 12.0	+0.6
	11nm,0.6s						
FITZ				eS	Sn	17 43 37.8	+0.4
FITZ	Fitzroy Crossi	7.71	170	ePn	Pn	17 42 11.9	+0.5
	4.8nm,0.6s						
FITZ				eSn	Sn	17 43 36.5	-0.9
WB2	Warramunga Arr	13.55	135	eP	Pn	17 43 32.3	+1.1
WB2				eS	Sn	17 45 59.7	-0.6
ASAR	Alice Springs	16.03	146	Pn	Pn	17 44 04.5	+0.7
	0.1nm,0.3s,baz=317,slow=11,SNR=12						
ASAR				Sn	Sn	17 47 00.0	-0.7
	0.1nm,0.3s,baz=330,slow=25,SNR=4.2						
MKAR	Makanchi Array	68.20	330	P	P	17 51 17.0	+0.4
	0.9nm,0.7s,mb3.9,baz=132,slow=8.1,SNR=6.7						
ZALV	Zalesovo Beam	72.33	337	P	P	17 51 41.3	-0.4
	1.0nm,0.5s,mb4.0,baz=128,slow=4.9,SNR=4.7						

GUC 09 18:06:42.4±0.9**, 22.28S**×**70.10W, h45**km±1km**, ML3.5, 5C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOCH	Tocopilla	0.21	333	⇑iP	Pn	18 06 50.2	0.0
TOCH				i S	Sn	18 06 55.6	-0.1
TOCH				AML	AML	18 06 56.4	
	comp=E,5μm,0.1s						
MACH	Maria Elena	0.33	75	⇑iP	Pn	18 06 52.0	+0.7
MACH				i S	Sn	18 06 58.5	+0.9
PECH	Pedro de Valdi	0.50	129	⇑iP	Pn	18 06 53.9	+0.5
PECH				i S	Sn	18 07 02.2	+1.0
PECH				AML	AML	18 07 02.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,11µm,0.2s						
MECH	Mejillones	0.88	201	⇑iP	Pn	18 06 59.0	+0.6
MECH				iS	Sn	18 07 11.6	+1.5
MECH				AML	AML	18 07 13.8	
	comp=E,1µm,0.4s						
CEN1	Los Morros	1.11	185	⇓iP	Pn	18 07 05.1	+3.7
CEN1				iS	Sn	18 07 22.0	+6.4
LVC	Limon Verde	1.15	107	eP	Pn	18 07 03.6	+1.6
LVC				iS	Sn	18 07 18.1	+1.5
PB01	Plate Boundary	1.36	25	eP	Pn	18 07 06.0	+1.1
PB01				iS	Sn	18 07 23.7	+2.0
PB01				AML	AML	18 07 26.1	
	comp=E,860nm,0.2s						
ANCH	Antofagasta	1.42	192	⇑iP	Pn	18 07 06.7	+0.9
ANCH				iS	Sn	18 07 25.0	+1.6

IDC ***09*** *18:08:48.3±2.0, 0.02S×98.12E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=71.5km s-min=24.6km az=66.0*
ISCJB ***09*** *18:08:49.2±2.9, 0.03N±0.07×97.98E±0.07, h19km±22km, mb3.8/6, Error ellipse: s-maj=15.4km s-min=7.7km az=44.0*
NEIC ***09*** *18:08:53.4±1.0, 0.04N×98.19E, h35km, mb3.9/1, Error ellipse: s-maj=33.6km s-min=14.4km az=72.0*
DJA ***09*** *18:08:53, 0.14N×98.17E, h16km, MLv4.3/6*
ISC 09 18:08:49.0±3.3**, 0.06N**±0.08×**98.07E**±0.08**, h2**km±22km**, n19, σ0.83**/20**, mb3.8**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRSI	Tarutung	2.15	25	P	Pn	18 09 26.0	+0.1
TRSI				S	Sn	18 09 52.4	-0.8
PPI	Padang Panjang	2.38	102	P	Pn	18 09 29.0	-0.2
PPI				S	Sn	18 09 58.8	-0.2
PDSI	Padang	2.58	112	P	Pn	18 09 30.9	-1.0
PDSI				S	Sn	18 10 05.3	+1.4
PSI	Prapat	2.85	17	Pn	Pn	18 09 34.9	-0.8
	7.6nm,0.3s,baz=96,slow=13,SNR=26						
IPM	Ipoh	5.29	34	P	Pn	18 10 12.0	+2.8
	29nm,0.9s,0.1nm						
KSI	Kapahiang	5.83	129	P	Pn	18 10 21.5	+4.9
	76nm,1.0s,1µm0.3nm						
BSI	Banda Aceh	6.07	333	P	Pn	18 10 20.6	+0.7
CMAR	Chiang Mai Arr	18.30	3	P	Pn	18 13 04.2	-0.1
	0.3nm,0.3s,baz=192,slow=11,SNR=13						
BATI	Baumata	27.43	113	P	Px	18 14 54.5	
LSA	Lhasa	30.20	348	eP	P	18 15 00.9	-0.1
	0.9nm,0.4s,mb3.9						
ASAR	Alice Springs	42.02	127	P	P	18 16 41.2	-1.0
	0.5nm,1.0s,mb3.1,baz=298,slow=8.0,SNR=4.1						
ASAR	Alice Springs	42.02	127	P	P	18 16 41.2	-1.0
KSRS	Korea Array	46.30	33	P	P	18 17 11.8	-4.6
	0.7nm,0.8s,mb3.6,baz=220,slow=9.3,SNR=3.3						
SONM	Songino Array	48.13	8	P	P	18 17 30.7	+0.2
	0.2nm,0.3s,mb3.6,baz=192,slow=7.7,SNR=3.5						
MKAR	Makanchi Array	48.55	346	P	P	18 17 34.2	+0.6
	1.7nm,0.6s,mb4.2,baz=154,slow=9.1,SNR=24						
ZAA0	Zalesovo Array	54.82	350	eP	P	18 18 20.0	-0.4
ZALV	Zalesovo Beam	54.82	350	P	P	18 18 20.5	+0.1
	2.0nm,0.6s,mb4.3,baz=177,slow=8.0,SNR=8.5						
ZALV	Zalesovo Beam	54.82	350	P	P	18 18 20.5	+0.1
TXAR	Lajitas Array	144.16	34	PKP	PKPdf	18 28 25.4	-1.9
	0.3nm,0.8s,baz=247,slow=1.6,SNR=3.6						

IDC ***09*** *18:14:04.6±0.9, 12.45N×126.28E, h0km, mb4.1/13, mb1 4.1/14, mb1mx4.0/23, mbtmp4.1/14, ML3.5/1, Error ellipse: s-maj=39.1km s-min=13.4km az=77.0*
MOS ***09*** *18:14:06.2±1.3, 12.54N×126.60E, h33km, mb4.4/5, Error ellipse: s-maj=26.2km s-min=13.6km az=110.9*
ISCJB ***09*** *18:14:07.3±0.5, 12.40N±0.05×126.31E±0.08, h33km, mb4.2/21, Error ellipse: s-maj=10.8km s-min=6.7km az=15.1*
NEIC ***09*** *18:14:08.9±0.5, 12.55N×126.57E, h35km, mb4.3/10, Error ellipse: s-maj=22.7km s-min=9.7km az=80.0*
ISC 09 18:14:09.5±0.5**, 12.39N**±0.05×**126.26E**±0.08**, h35**km**, n36, σ0.91**/37**, mb4.2**/21**, 2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLP	Palo	1.75	226	⇓eP	Pn	18 14 36.9	-0.4
PLP				eS	Sn	18 14 56.9	-1.5
RCP	Roxas	3.54	257	⇓eP	Pn	18 15 02.9	+1.0
TBP	Tagbilaran	3.57	222	eP	Pn	18 15 01.4	-0.9
KAPI	Kappang	18.46	201	P	Pn	18 18 23.8	+1.1
	0.2nm,0.3s,baz=29,slow=18,SNR=17						
BATI	Baumata	22.60	187	P	P	18 19 08.6	+1.5
	21nm,0.6s,mb4.7,baz=313,slow=2.4,SNR=7.5						
KS15	Wonju Array Si	24.99	3	eP	P	18 19 30.0	+0.1
KSRS	Korea Array	25.00	3	P	P	18 19 30.6	+0.5
	2.2nm,0.7s,mb3.8,baz=186,slow=9.9,SNR=14						
MAJO	Matsushiro	26.34	22	eP	P	18 19 40.7	-1.5
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
MAJO	Matsushiro	26.34	22	eP	P	18 19 40.7	-1.5
	comp=Z,4.1nm,0.6s,mb4.1						
CMAR	Chiang Mai Arr	27.00	286	P	P	18 19 48.8	+0.5
	comp=Z,0.4nm,0.4s,mb3.3,baz=109,slow=8.1,SNR=3.9						
FITZ	Fitzroy Crossi	30.30	181	eP	P	18 20 21.6	+4.0
	comp=Z,5.0nm,0.8s,mb4.3						
WRAB	Tennant Creek	33.09	166	eP	P	18 20 40.9	-1.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WRAB	Tennant Creek	33.09	166	eP	P	18 20 40.9	-1.2
	comp=Z,3.2nm,1.0s,mb4.2						
WB2	Warramunga Arr	33.10	166	eP	P	18 20 42.3	+0.1
MBWA	Marble Bar	33.95	191	P	P	18 20 49.4	-0.2
	comp=Z,9.4nm,1.0s,mb4.7						
ASAR	Alice Springs	36.61	168	P	P	18 21 13.1	+0.6
	comp=Z,1.4nm,0.7s,mb3.9,baz=352,slow=7.9,SNR=12						
YSS	Yuzh-Sakhalins	37.15	19	P	P	18 21 11.2	-5.6
YSS				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.1						
YSS	Yuzh-Sakhalins	37.15	19	P	P	18 21 11.2	-5.7
	comp=Z,50nm,1.5s,mb5.1						
CTA	Charters Tower	37.80	148	eP	P	18 21 21.4	-1.2
	comp=Z,1.1nm,0.3s,mb4.1						
CTA	Charters Tower	37.80	148	eP	P	18 21 21.4	-1.2
CTA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CTAO	Charters Tower	37.80	148	eP	P	18 21 21.1	-1.5
CTAO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
CTAO	Charters Tower	37.80	148	eP	P	18 21 21.1	-1.5
	comp=Z,1.3nm,0.3s,mb4.1						
SONM	Songino Array	39.05	339	P	P	18 21 32.8	0.0
	comp=Z,0.6nm,0.5s,mb3.6,baz=158,slow=9.3,SNR=5.4						
FORT	Forrest	42.95	178	eP	P	18 22 08.8	+3.7
	comp=Z,22nm,0.7s,mb5.0						
NWAO	Narrogin (SRO)	45.88	191	P	P	18 22 29.1	+0.6
	comp=Z,7.8nm,0.9s,mb4.6,baz=30,slow=8.1,SNR=3.5						
STKA	Stephens Creek	46.40	162	eP	P	18 22 34.4	+1.8
	comp=Z,2.1nm,0.6s,mb4.2						
STKA	Stephens Creek	46.40	162	P	P	18 22 32.7	+0.1
	comp=Z,2.9nm,0.7s,mb4.3,baz=327,slow=7.2,SNR=7.3						
STKA	Stephens Creek	46.40	162	eP	P	18 22 33.1	+0.5
	comp=Z,0.8nm,0.8s,mb3.7						
MKAR	Makanchi Array	50.35	322	P	P	18 23 02.8	-0.2
	comp=Z,1.5nm,0.8s,mb4.1,baz=116,slow=8.5,SNR=10						
ZALV	Zalesovo Beam	52.78	331	P	P	18 23 20.8	-0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=122,slow=7.0,SNR=4.2						
KURK	Kurchatov	54.33	325	P	P	18 23 32.6	+0.2
	comp=Z,1.9nm,0.7s,mb4.1,baz=124,slow=7.0,SNR=16						
BVAR	Borovoye Array	59.93	325	P	P	18 24 12.6	+0.6
	comp=Z,1.1nm,0.8s,mb3.9,baz=111,slow=8.3,SNR=7.3						
BILL	Bilibino	61.38	16	eP	P	18 24 18.0	-3.6
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
BILL	Bilibino	61.38	16	eP	P	18 24 18.0	-3.6
	comp=Z,1.0nm,0.3s,mb4.4						
BRTR	Keskin Array B	84.19	309	P	P	18 26 37.2	-0.2
	comp=Z,0.5nm,0.7s,mb3.7,baz=105,slow=4.3,SNR=3.6						
AKASG	Malin Array Be	84.93	321	P	P	18 26 41.0	+0.1
	comp=Z,0.3nm,0.3s,mb4.0,baz=74,slow=3.3,SNR=5.5						

NEIC ***09*** *18:48:49.1, 17.24N×94.71W, h143km, MD4.0(MEX), After MEX.*
MEX 09 18:48:49.0±0.9**, 17.24N**×**94.71W, h144**km±8km**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.23	227	iP	Pn	18 49 07.2	-1.4
CMIG				iS	Sn	18 49 21.3	-2.1
TGIG		1.59	107	iP	Pn	18 49 18.1	-1.0
TGIG				iS	Sn	18 49 39.9	-2.2
OXX	Oaxaca	1.93	266	eP	Pn	18 49 21.1	-1.8
OXX				iS	Sn	18 49 48.1	-0.8
VHO	Vista Hermosa	1.94	265	iP	Pn	18 49 22.7	-0.3
VHO				iS	Sn	18 49 48.7	-0.5
HUIG	Huatulco	1.99	223	iP	Pn	18 49 21.1	-2.5
HUIG				iS	Sn	18 49 48.6	-1.5
PCIG		2.10	137	iP	Pn	18 49 24.4	-0.5
PCIG				iS	Sn	18 49 50.7	-1.8
CCIG	Comitan	2.65	111	iP	Pn	18 49 31.9	+0.2
CCIG				iS	Sn	18 50 02.1	-2.4
TPIG	Tehuac#an	2.78	295	eP	Pn	18 49 31.5	-1.9
TPIG				iS	Sn	18 50 06.0	-1.6
UTMO	Huajuapan	3.01	282	iP	Pn	18 49 35.5	-0.8
UTMO				iS	Sn	18 50 10.5	-2.2
THIG		3.31	134	eP	Pn	18 49 42.9	+2.8
THIG				iS	Sn	18 50 17.9	-1.6
PNIG	Pinotepa	3.38	256	eP	Pn	18 49 38.2	-2.8
PNIG				iS	Sn	18 50 16.4	-4.9
PPM	Popocatepetl	4.14	297	eP	Pn	18 49 50.9	-0.1
PPM				iS	Sn	18 50 37.9	-1.2
CAIG	El Cayaco	5.32	269	eP	Pn	18 50 09.0	+2.5
CAIG				iS	Sn	18 51 04.9	-2.1

IDC ***09*** *19:25:06.9±0.6, 12.41N×126.16E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.3/21, mbtmp4.3/17, ML4.2/2, MS3.5/11, Ms1 3.5/11, ms1mx3.4/37, Error ellipse: s-maj=26.0km s-min=12.6km az=81.0*
ISCJB ***09*** *19:25:09.6±1.6, 12.43N±0.03×126.26E±0.04, h32km±12km, mb4.5/31, MS3.5/9, Error ellipse: s-maj=7.0km s-min=5.0km az=6.7*
MOS ***09*** *19:25:09.5±1.1, 12.43N×126.30E, h33km, mb4.8/8, Error ellipse: s-maj=16.4km s-min=10.2km az=105.7*
NEIC ***09*** *19:25:11.8±0.2, 12.44N×126.28E, h35km, mb4.7/18, Error ellipse: s-maj=8.3km s-min=5.2km az=77.0*
MAN ***09*** *19:25:12, 12.45N×126.01E, h31km, mb5.3, ML4.3, MS4.6*
ISC 09 19:25:10.5±1.7**, 12.42N**±0.03×**126.23E**±0.04**, h24**km±12km**, n91, σ1.06**/86**, mb4.5**/31**, MS3.5**/9**, 2C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	Borongan	1.12	223	eP	Pn	19 25 30.1	-0.6
CNP	Catarman	1.53	273	eP	Pn	19 25 35.0	-1.3
PLP	Palo	1.75	224	⇓eP	Pn	19 25 37.8	-1.5
PLP				eS	Sn	19 25 59.9	-0.9
OCLP	Ormoc	2.09	229	eP	Pn	19 25 44.1	+0.1
PVCP	Virac	2.33	300	⇓eP	Pn	19 25 45.1	-2.2
MMPH	Masbate	2.54	269	⇑eP	Pn	19 25 52.1	+1.9
MMPH				iS	Sn	19 26 20.3	-0.1
MSLP	Maasin	2.64	211	eP	Pn	19 25 52.5	+0.9
SCPH	Surigao	2.72	195	eP	Pn	19 25 52.2	-0.5
SCPH				eS	Sn	19 26 22.6	-2.3
LLP	Lapu-Lapu	3.05	227	eP	Pn	19 25 57.3	+0.1
LLP				eS	Sn	19 26 32.6	-0.3
BUTP	Butuan	3.48	190	eP	Pn	19 26 06.1	+2.9
RCP	Roxas	3.51	256	⇑eP	Pn	19 26 04.4	+0.9
TBP	Tagbilaran	3.57	221	eP	Pn	19 26 05.1	+0.7
KALP	Kalibo	3.87	259	⇓eP	Pn	19 26 13.9	+5.3
GUIM	Jordan	3.99	244	eP	Pn	19 26 10.8	+0.7
OTRP	Odiongan	4.11	270	eP	Pn	19 26 12.2	+0.5
BUKP	Musuan	4.66	194	eP	Pn	19 26 23.6	+4.2
POLP	Polilio Island	4.75	299	eP	Pn	19 26 21.3	+0.6
SJMP	San Jose	4.99	271	eP	Pn	19 26 21.9	-2.0
PAGZ	Pagadian	5.34	212	eP	Pn	19 26 29.2	+0.5
PALP	Palanan	5.90	322	eP	Pn	19 26 33.2	-3.1
CAUP	Cauayan	6.19	317	eP	Pn	19 26 39.0	-1.5
ABRA	Dolores	7.44	315	eP	Pn	19 27 00.9	+3.4
JOW	Kunigami	14.46	7	Pn	Pn	19 28 35.2	+1.5
	1.7nm,0.3s,baz=338,slow=25,SNR=6.9						
JOW				LR	LR	19 32 56.4	
	comp=Z,160nm,20.6s,baz=192,slow=32						
GUMO	Guam	18.20	84	LR	LR	19 34 42.5	
	comp=Z,99nm,21.2s,baz=312,slow=32						
GUMO	Guam	18.20	84	eP	Pn	19 29 19.3	-2.4
GUMO				pmax	pmax		
	comp=Z,295nm,1.4s						
GUMO	Guam	18.20	84	eP	Pn	19 29 19.3	-2.4
	comp=Z,295nm,1.4s						
KAPI	Kappang	18.48	201	P	Pn	19 29 25.3	+0.2
	comp=Z,1.0nm,0.3s,baz=40,slow=5.6,SNR=22						
CBIJ	Chichi jima	20.91	43	LR	LR	19 36 48.2	
	comp=Z,112nm,21.3s,MS3.2,baz=101,slow=34						
BATI	Baumata	22.63	187	P	P	19 30 10.2	+0.5
	comp=Z,63nm,0.7s,mb5.1,baz=282,slow=0.6,SNR=22						
JHJ	Hachijo jima 2	24.05	29	LR	LR	19 37 51.3	
	comp=Z,159nm,18.5s,MS3.5,baz=97,slow=32						
KS15	Wonju Array Si	24.96	3	eP	P	19 30 32.3	+0.3
KSRS	Korea Array	24.97	3	P	P	19 30 32.5	+0.3
	comp=Z,4.4nm,0.7s,mb4.1,baz=184,slow=10,SNR=23						
KSRS				LR	LR	19 39 59.7	
	comp=Z,61nm,18.3s,MS3.1,baz=152,slow=36						
KAKA	Kakadu	25.72	166	eP	x	19 30 20.6	
	comp=Z,17nm,0.6s						
MJAR	Matsushiro Arr	26.32	22	P	P	19 30 45.3	+0.8
	comp=Z,1.0nm,0.8s,mb3.4,baz=168,slow=10,SNR=4.2						
MJAR				LR	LR	19 39 06.1	
	comp=Z,128nm,21.9s,MS3.4,baz=210,slow=32						
MAJO	Matsushiro	26.32	22	eP	P	19 30 38.6	-5.8
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
MAJO	Matsushiro	26.32	22	eP	P	19 30 38.5	-5.9
	comp=Z,3.4nm,0.6s,mb4.0						
CMAR	Chiang Mai Arr	26.95	286	P	P	19 30 50.6	+0.3
	comp=Z,1.7nm,0.7s,mb3.7,baz=95,slow=7.7,SNR=17						
CMAR				LR	LR	19 41 47.6	
	comp=Z,67nm,20.3s,MS3.2,baz=139,slow=37						
PSI	Prapat	28.67	253	LR	LR	19 42 19.8	
	comp=Z,164nm,18.7s,MS3.7,baz=257,slow=36						
FITZ	Fitzroy Crossi	30.34	181	eP	P	19 31 20.9	+0.5
	comp=Z,7.5nm,0.9s,mb4.4						
MDJ	Mudanjiang	32.21	5	P	P	19 31 35.0	-1.6
	comp=Z,4.8nm,0.4s,mb4.7						
WRAB	Tennant Creek	33.13	166	eP	P	19 31 43.2	-1.8
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
WRAB	Tennant Creek	33.13	166	eP	P	19 31 43.2	-1.8
	comp=Z,5.1nm,1.0s,mb4.4						
WB2	Warramunga Arr	33.14	166	eP	P	19 31 45.1	+0.1
MBWA	Marble Bar	33.98	191	eP	P	19 31 52.7	+0.4
	comp=Z,31nm,1.5s,mb5.0						
ASAJ	Asahikawa	34.58	21	LR	LR	19 45 30.3	
	comp=Z,91nm,18.2s,MS3.5,baz=349,slow=35						
ASAR	Alice Springs	36.65	168	P	P	19 32 14.8	-0.5
	comp=Z,1.9nm,0.4s,mb4.3,baz=353,slow=7.8,SNR=45						
ASAR				PcP	PcP	19 34 38.0	0.0
	comp=Z,0.3nm,0.5s,baz=346,slow=3.4,SNR=4.4						
YSS	Yuzh-Sakhalins	37.13	19	eP	P	19 32 17.1	-2.0
YSS				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.7						
YSS	Yuzh-Sakhalins	37.13	19	eP	P	19 32 17.1	-2.1
	comp=Z,3.7nm,0.3s,mb4.7						
CTAO	Charters Tower	37.85	148	eP	P	19 32 26.3	+0.8
CTAO				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5						
CTAO	Charters Tower	37.85	148	eP	P	19 32 26.3	+0.8
	comp=Z,13nm,1.4s,mb4.5						
SONM	Songino Array	39.00	339	P	P	19 32 35.2	+0.3
	comp=Z,1.8nm,0.7s,mb3.9,baz=153,slow=9.3,SNR=18						
ODAN	Odare	39.12	297	eP	P	19 32 37.0	+0.8
RAMN	Ramite	39.83	297	eP	P	19 32 43.1	+1.0
HNR	Honiara	39.93	121	LR	LR	19 47 41.9	
	comp=Z,95nm,19.4s,MS3.6,baz=140,slow=34						
GUN	Gumba	40.67	298	eP	P	19 32 49.9	+0.8
	comp=Z,17nm,0.8s,mb4.7						
DMN	Daman	41.27	298	eP	P	19 32 54.6	+0.5
GKN	Gorkha	41.76	298	eP	P	19 32 57.8	-0.3
DANN	Dangsing	42.60	298	eP	P	19 33 04.9	0.0
FORT	Forrest	42.99	178	eP	P	19 33 12.2	+4.3
	comp=Z,26nm,0.6s,mb5.1						
KLBR	Kellerberrin	44.51	190	eP	P	19 33 20.0	-0.1
	comp=Z,13nm,0.8s,mb4.8						
NWAO	Narrogin (SRO)	45.91	191	eP	P	19 33 30.9	-0.3
NWAO				pmax	pmax		
	comp=Z,60nm,1.6s						
NWAO	Narrogin (SRO)	45.91	191	eP	P	19 33 30.9	-0.3
	comp=Z,60nm,1.6s,mb5.3						
HYB	Hyderabad	46.24	282	iP	P	19 33 36.0	+1.8
BOD	Bodaibo	46.25	351	eP	P	19 33 31.5	-2.1
STKA	Stephens Creek	46.45	162	eP	P	19 33 35.9	+0.4
	comp=Z,4.0nm,0.6s,mb4.5						
STKA	Stephens Creek	46.45	162	P	P	19 33 35.8	+0.3
	comp=Z,6.6nm,0.8s,mb4.6,baz=340,slow=7.2,SNR=10						
STKA				PcP	PcP	19 35 10.8	+0.8
	comp=Z,1.5nm,0.7s,baz=296,slow=3.1,SNR=2.9						
STKA	Stephens Creek	46.45	162	eP	P	19 33 35.4	-0.1
	comp=Z,1.0nm,0.6s,mb3.9						
PETK	Petropavlovsk-	47.71	25	P	P	19 33 46.0	+0.9
	comp=Z,3.3nm,0.8s,mb4.4,baz=242,slow=4.0,SNR=5.5						
ARMA	Armidale	49.11	151	eP	P	19 33 58.0	+1.8
YAK	Yakutsk	49.59	2	eP	P	19 33 58.8	-0.6
YAK				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9						
YAK	Yakutsk	49.59	2	eP	P	19 33 58.8	-0.6
	comp=Z,20nm,1.6s,mb4.9						
MKAR	Makanchi Array	50.31	322	P	P	19 34 06.1	+1.0
	comp=Z,4.0nm,0.9s,mb4.5,baz=113,slow=8.4,SNR=20						
ZALV	Zalesovo Beam	52.73	331	P	P	19 34 23.2	+0.1
	comp=Z,2.0nm,0.7s,mb4.2,baz=109,slow=6.8,SNR=9.6						
ZALV				PcP	PcP	19 35 31.3	-1.3
	comp=Z,0.6nm,0.6s,baz=104,slow=6.1,SNR=1.9						
KURK	Kurchatov	54.29	325	eP	P	19 34 34.4	-0.2
KURK				e*PP	pP	19 34 41.4	-0.8
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KURK	Kurchatov	54.29	325	eP	P	19 34 34.4	-0.2
	comp=Z,7.6nm,0.9s,mb4.6						
KURK				epP	pP	19 34 41.4	-0.8
KBL	Kabul	56.10	303	eP	P	19 34 48.1	+0.1
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
KBL	Kabul	56.10	303	eP	P	19 34 48.1	+0.1
	comp=Z,3.6nm,0.9s,mb4.4						
TAU	Tasmania Unive	58.36	162	P	P	19 35 03.4	-0.3
	comp=Z,320nm,2.3s						
BILL	Bilibino	61.36	16	eP	P	19 35 23.0	-1.0
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
BILL	Bilibino	61.36	16	eP	P	19 35 23.0	-1.0
	comp=Z,2.9nm,0.6s,mb4.6						
KIV	Kislovodsk	76.86	313	eP	P	19 37 01.0	+0.3
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KIV	Kislovodsk	76.86	313	eP	P	19 37 01.2	+0.5
	comp=Z,5.3nm,0.7s,mb4.6						
ARCES	ARCESS Array B	82.17	340	P	P	19 37 29.6	+0.6
	comp=Z,3.9nm,0.9s,mb4.3,baz=90,slow=6.6,SNR=5.7						
BRTR	Keskin Array B	84.14	309	P	P	19 37 39.2	-0.6
	comp=Z,1.2nm,0.7s,mb4.1,baz=112,slow=4.1,SNR=6.7						
AKASG	Malin Array Be	84.88	321	P	P	19 37 42.5	-0.7
	comp=Z,4.8nm,0.9s,mb4.6,baz=68,slow=4.2,SNR=11						
YKA	Yellowknife Ar	91.82	24	P	P	19 38 16.3	+0.1
	comp=Z,0.4nm,1.0s,mb3.7,baz=295,slow=4.0,SNR=4.6						
YKA				LR	LR	20 21 04.5	
	comp=Z,25nm,19.1s,MS3.7,baz=110,slow=37						
YKA	Yellowknife Ar	91.82	24	P	P	19 38 16.3	+0.1
YKA				LR	LR	20 21 04.5	
VNDA	Vanda	92.06	173	P	P	19 38 17.7	+0.8
	comp=Z,1.4nm,0.8s,mb4.3,baz=332,slow=3.3,SNR=6.0						
VNDA	Vanda	92.06	173	P	P	19 38 17.7	+0.8
TORD	Torodi Ar. Bea	119.41	293	PKP	PKPdf	19 43 58.2	-0.8
	comp=Z,0.6nm,1.0s,baz=51,slow=2.1,SNR=2.9						
PLCA	Paso Flores	148.18	155	PKPbc	PKPbc	19 44 55.4	+0.8
	comp=Z,2.6nm,0.9s,baz=191,slow=14,SNR=3.1						

INET ***09*** *19:53:48.2, 12.14N×89.81W, h15km, MD3.8, ML3.4*
IDC ***09*** *19:53:49.3±4.1, 12.94N×88.79W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.5/20, mbtmp3.4/4, ML3.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/19, Error ellipse: s-maj=131.0km s-min=43.4km az=28.0*
ISCJB ***09*** *19:53:51.7±2.0, 12.3N±0.2×89.5W±0.1, h42km±18km, mb3.3/3, Error ellipse: s-maj=33.3km s-min=10.2km az=35.1*
SSS ***09*** *19:53:51.4, 12.36N×89.61W, h17km, MD3.8*
GCG ***09*** *19:53:51.1, 13.40N×89.17W, h192km, MD4.0*
CASC ***09*** *19:53:51.4±1.5, 12.23N×89.64W, h36km±999km, MD4.0, ML3.2*
NEIC ***09*** *19:53:52.4±2.6, 12.18N×89.51W, h35km, Error ellipse: s-maj=51.2km s-min=18.7km az=182.0*
ISC 09 19:53:53.5±2.0**, 12.4N**±0.2×**89.5W**±0.1**, h37**km±17km**, n23, σ0.92**/13**, mb3.4**/3**, 9C-7D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS	El Faro	1.30	18	⇑eP	x	19 54 15.7	
BOQS	Boqueron	1.36	8	⇓eP	x	19 54 16.6	
BOQS				eS	x	19 54 36.5	
SNVI	San Vicente	1.38	27	⇓eP	x	19 54 17.0	
SNVI				⇓eP	x	19 54 17.9	
SBLS	San Blas	1.46	354	⇓eP	x	19 54 17.8	
SBLS				eS	x	19 54 39.2	
SNJE	San Jose	1.49	355	⇑eP	x	19 54 17.9	
SNJE				eS	x	19 54 38.2	
RTR	El Retiro	1.52	354	⇓eP	x	19 54 18.7	
RTR				eS	x	19 54 39.6	
VSM	San Miguel	1.57	48	iP	x	19 54 20.2	
VSM				⇑eP	x	19 54 20.4	
BLLM	Bellamira	1.60	48	⇑eP	x	19 54 20.5	
RBDL	Robledal	1.74	353	⇑eP	x	19 54 21.8	
RBDL				eS	x	19 54 44.1	
CNCH	Conchagua	1.83	61	⇑eP	x	19 54 23.3	
CNCH				eS	x	19 54 50.1	
CNCH				AML	x	19 54 56.5	
	comp=Z,240nm,0.3s						
CAHU	Cacacuatique	1.85	41	⇓eP	x	19 54 24.6	
IXG	Ixpaco	2.03	332	⇑eP	Pn	19 54 24.6	-0.6
IXG				eS	Sn	19 54 49.4	0.0
FUG	Fuego 3	2.45	327	⇓eP	Pn	19 54 30.6	-0.5
FUG				eS	Sn	19 54 59.5	-0.4
TGUH	Tegucigalpa,Un	2.72	52	⇑iPn	Pn	19 54 36.1	+1.4
COPN	Copaltepe	2.82	94	⇑eP	Pn	19 54 35.3	-0.8
CMIG	Matias Romero	7.03	313	Pn	Pn	19 55 34.8	+0.9
	comp=Z,0.3nm,0.3s,baz=156,slow=16,SNR=2.9						
CMIG				Sn	Sn	19 56 59.6	+7.0
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=4.6						
TXAR	Lajitas Array	21.43	324	P	P	19 58 38.9	+0.5
	comp=Z,0.6nm,0.7s,mb3.0,baz=144,slow=9.2,SNR=7.2						
TXAR	Lajitas Array	21.43	324	P	P	19 58 38.9	+0.5
TKL	Tuckaleechee C	23.75	12	LR	LR	20 09 27.8	
	comp=Z,68nm,19.0s,baz=303,slow=41						
NVAR	Mina Array Bea	36.48	320	P	P	20 00 56.4	+1.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=128,slow=8.2,SNR=5.2						
YKA	Yellowknife Ar	53.18	346	P	P	20 03 06.0	-1.6
	comp=Z,0.5nm,0.9s,mb3.5,baz=138,slow=7.6,SNR=6.4						
YKA	Yellowknife Ar	53.18	346	P	P	20 03 06.0	-1.6
CMAR	Chiang Mai Arr	148.26	345	PKPbc	PKPbc	20 13 36.6	-0.1
	comp=Z,0.3nm,0.5s,baz=12,slow=5.0,SNR=3.8						

ISCJB ***09*** *20:24:53.9±2.0, 18.00S±0.09×178.0E±0.1, h578km±23km, mb4.2/25, Error ellipse: s-maj=16.2km s-min=14.0km az=26.6*
NEIC ***09*** *20:24:54.4±2.0, 17.99S×178.02E, h571km±21km, mb4.4/17, Error ellipse: s-maj=16.6km s-min=13.2km az=97.0*
IDC ***09*** *20:24:55.9±2.7, 17.96S×178.04E, h584km±31km, mb3.5/12, mb1 3.8/12, mb1mx3.7/15, mbtmp3.5/12, Error ellipse: s-maj=15.6km s-min=12.2km az=125.0*
DJA ***09*** *20:25:09, 19.34S×176.84E, h650km, mb4.7/10*
ISC 09 20:24:54.2±1.9**, 17.99S**±0.09×**178.0E**±0.1**, h567**km±21km**, n81, σ0.72**/40**, mb4.2**/25**, 6C-14D, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.61	248	eP	P	20 27 28.2	-0.6
	8.1nm,0.6s						
EIDS	Eidsvold	26.06	249	eP	P	20 29 43.5	0.0
	15nm,0.8s,mb4.7						
ARMA	Armidale	26.99	238	⇓iP	P	20 29 53.0	+1.4
CTA	Charters Tower	30.08	261	⇓iP	P	20 30 19.2	+0.7
	28nm,0.8s,mb4.8						
CTAO	Charters Tower	30.08	261	⇓iP	P	20 30 19.1	+0.6
	38nm,0.8s,mb5.0						
CNB	Canberra Magne	30.73	230	eP	P	20 30 25.1	+1.2
PMG	Port Moresby	31.13	282	eP	P	20 30 27.3	-0.4
TOO	Toolangi	34.52	229	eP	P	20 30 56.9	+1.0
STKA	Stephens Creek	35.63	240	⇓iP	P	20 31 06.2	+1.0
	12nm,0.5s,mb4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	Stephens Creek	35.63	240	P	P	20 31 06.3	+1.1
	18nm,0.6s,mb4.8,baz=92,slow=9.4,SNR=56						
STKA				ScP	ScP	20 36 15.5	+4.9
	4.4nm,0.8s,baz=92,slow=3.3,SNR=6.2						
STKA	Stephens Creek	35.63	240	eP	P	20 31 06.1	+0.9
	5.8nm,0.8s,mb4.2						
WB2	Warramunga Arr	41.26	260	eP	P	20 31 49.9	-1.0
WRAB	Tennant Creek	41.26	260	eP	P	20 31 49.9	-1.1
	9.8nm,0.8s,mb4.4						
ASAR	Alice Springs	41.50	254	P	P	20 31 52.9	+0.1
	91nm,0.5s,mb5.6,baz=87,slow=8.6,SNR=1834						
ASAR				PcP	PcP	20 33 37.4	+0.6
	1.8nm,0.7s,baz=82,slow=3.8,SNR=4.4						
ASAR				ScP	ScP	20 36 37.0	+3.7
	1.2nm,1.0s,baz=90,slow=3.0,SNR=4.3						
ASAR				S	S	20 37 28.4	+0.2
	2.0nm,0.9s,baz=86,slow=16,SNR=12						
KAKA	Kakadu	44.18	270	⇓iP	x	20 31 54.5	
	10nm,0.4s						
FORT	Forrest	46.91	244	eP	P	20 32 34.0	-0.3
	28nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	49.66	261	⇓iP	P	20 32 54.9	-0.1
	7.6nm,1.2s,mb4.0						
MBWA	Marble Bar	54.76	256	eP	P	20 33 30.5	-0.9
	15nm,1.0s,mb4.2						
KLBR	Kellerberrin	55.75	244	eP	P	20 33 37.2	-0.9
	27nm,0.8s,mb4.5						
NWAO	Narrogin (SRO)	56.17	242	eP	P	20 33 40.5	-0.5
	7.5nm,0.5s,mb4.2						
MUN	Mundaring	57.06	243	eP	P	20 33 46.9	-0.2
VNDA	Vanda	60.10	184	P	P	20 34 07.3	+0.6
	1.6nm,0.6s,mb3.5,baz=8.3,slow=5.3,SNR=16						
VNDA	Vanda	60.10	184	eP	P	20 34 07.1	+0.3
	6.7nm,1.3s,mb3.8						
SBA	Scott Base	60.15	183	eP	P	20 34 06.3	-0.8
	16nm,1.1s,mb4.3						
CASY	Casey	64.65	204	eP	P	20 34 36.0	-0.3
	18nm,1.1s,mb4.4						
MJAR	Matsushiro Arr	66.00	326	P	P	20 34 44.8	-0.4
	2.1nm,0.6s,mb3.9,baz=63,slow=1.4,SNR=11						
QSPA	South Pole Qui	72.07	180	P	P	20 35 21.3	+0.4
	7.0nm,0.6s,mb4.3,baz=25,slow=3.3						
KSRS	Korea Array	72.54	320	P	P	20 35 24.8	+0.5
	0.9nm,0.6s,mb3.4,baz=133,slow=6.1,SNR=5.2						
PETK	Petropavlovsk-	72.95	347	P	P	20 35 26.4	+0.2
	2.2nm,0.8s,mb3.6,baz=120,slow=10,SNR=3.0						
NVAR	Mina Array Bea	81.86	45	P	P	20 36 14.8	0.0
	3.1nm,0.7s,mb3.8,baz=225,slow=8.7,SNR=21						
MAW	Mawson	82.62	200	P	P	20 36 18.6	+0.5
	2.3nm,0.6s,mb3.9,baz=159,slow=7.0,SNR=14						
MAW	Mawson	82.62	200	eP	P	20 36 17.9	-0.2
	2.8nm,0.9s,mb3.8						
CMAR	Chiang Mai Arr	85.72	291	P	P	20 36 36.1	+1.8
	1.4nm,0.6s,mb3.8,baz=113,slow=3.2,SNR=16						
TXAR	Lajitas Array	88.92	59	P	P	20 36 49.9	+0.8
	2.0nm,0.7s,mb4.0,baz=217,slow=5.7,SNR=28						
SNAA	Sanae	90.57	180	eP	P	20 36 54.8	-1.1
	1.6nm,0.4s,mb4.3						
VNA3	Neumayer Olymp	90.84	178	e	P	20 36 56.8	-0.4
VNA3				e		20 36 59.7	
VNA2	Neumayer--Watz	91.24	178	e	P	20 36 59.1	+0.1
	baz=192,slow=3.5						
VNA2				e		20 37 01.8	
ISCO	Idaho Springs	91.31	48	eP	P	20 37 00.1	+0.2
	5.8nm,0.8s,mb4.6						
SONM	Songino Array	91.41	320	P	P	20 37 00.1	-0.1
	0.4nm,0.3s,mb3.8,baz=138,slow=5.0,SNR=5.8						
YKA	Yellowknife Ar	95.84	26	P	P	20 37 19.3	-0.7
	0.2nm,0.6s,mb3.5,baz=243,slow=4.6,SNR=4.3						
BVAR	Borovoye Array	114.75	321	PKP	PKPdf	20 42 29.8	-0.7
	0.7nm,0.4s,baz=159,slow=2.4,SNR=7.0						
AKTK	Aktyubinsk	122.70	319	PKP	PKPdf	20 42 44.7	-1.2
AKTO	Aktyubinsk	122.70	319	PKP	PKPdf	20 42 44.7	-1.2
	1.6nm,0.7s,baz=156,slow=3.8,SNR=6.6						
ARCES	ARCESS Array B	125.75	348	PKP	PKPdf	20 42 50.2	-0.9
	3.5nm,0.9s,baz=94,slow=3.9,SNR=6.2						
ARCES	ARCESS Array B	125.75	348	PKP	PKPdf	20 42 50.2	-0.9
NOA	NORSAR Array B	135.98	351	PKhKP		20 43 07.2	
	0.9nm,0.9s,baz=67,slow=2.9,SNR=3.6						
ASF	Jabal al Asfar	142.28	300	PKP	PKPdf	20 43 20.3	-2.8
	2.7nm,0.7s,baz=308,slow=3.5,SNR=4.9						
BR131	Keskin Array S	142.38	313	eP	PKPdf	20 43 19.6	-3.4
BRTR	Keskin Array B	142.38	313	PKP	PKPdf	20 43 20.4	-2.6
	1.1nm,0.6s,baz=10,slow=1.5,SNR=7.8						
BURAR	Bucovina Array	143.01	329	⇓iP	PKPdf	20 43 22.9	-0.9
BURAR	Bucovina Array	143.01	329	⇓P	PKPdf	20 43 22.9	-0.9
ODB	Odobesti	143.28	325	⇑iP	PKPdf	20 43 24.8	+0.4
ODB	Odobesti	143.28	325	⇑P	PKPdf	20 43 24.8	+0.4
MMAI	Mount Meron Ar	143.31	301	PKP	PKPdf	20 43 24.3	-0.6
	12nm,0.5s,baz=64,slow=5.8,SNR=39						
KOLS	Kolonicke sedl	143.41	333	ePKP	PKPdf	20 43 20.7	-3.8
KOLS	Kolonicke sedl	143.41	333	eP	PKPdf	20 43 20.7	-3.8
PLOR	Plostina	143.45	326	⇓iP	PKPdf	20 43 24.1	-0.6
STHS	Stebnicka Huta	143.48	334	ePKP	PKPdf	20 43 24.1	-0.5
STHS	Stebnicka Huta	143.48	334	eP	PKPdf	20 43 24.1	-0.5
CRVS	Cervenica-Dubn	143.78	334	ePKP	PKPdf	20 43 25.0	-0.2
CRVS	Cervenica-Dubn	143.78	334	eP	PKPdf	20 43 25.0	-0.2
TRPA	Tarpa	143.90	332	⇓iP	PKPdf	20 43 25.2	-0.2
MLR	Muntele Rosu	144.06	326	PKP	PKPdf	20 43 26.3	+0.5
	2.5nm,0.5s,baz=336,slow=7.8,SNR=7.7						
MLR	Muntele Rosu	144.06	326	PKP	PKPdf	20 43 26.3	+0.5
VOIR		144.57	326	⇓iP	PKPdf	20 43 28.3	+1.7
VOIR		144.57	326	⇓P	PKPdf	20 43 28.3	+1.7
CLL	Collm	144.69	344	i PKPbc	PKPdf	20 43 27.1	+0.5
	comp=Z,9.0nm,0.6s						
DRGR		144.80	330	⇑iP	PKPdf	20 43 28.3	+1.3
DRGR		144.80	330	⇑P	PKPdf	20 43 28.3	+1.3
VYHS	Vyhne	145.18	336	ePKP	PKPdf	20 43 29.0	+1.4
VYHS	Vyhne	145.18	336	eP	PKPdf	20 43 29.0	+1.4
KOLL	Kolacno	145.28	336	ePKP	PKPdf	20 43 28.8	+1.1
KOLL	Kolacno	145.28	336	eP	PKPdf	20 43 28.8	+1.1
BZS	Buzias	146.18	330	⇑iP	PKPdf	20 43 28.5	-0.9
BZS	Buzias	146.18	330	⇑P	PKPdf	20 43 28.6	-0.8
KHC	Kasperske Hory	146.48	341	ePKP	PKPdf	20 43 30.0	+0.3
GERES	GERESS Array B	146.69	341	PKPbc	PKPbc	20 43 33.0	+0.2
	comp=Z,2.5nm,0.5s,baz=26,slow=3.3,SNR=30						
PKSM	Moragy	147.08	333	⇓iP	PKPbc	20 43 33.3	-0.6
PKSM	Moragy	147.08	333	⇓P	PKPbc	20 43 33.3	-0.7
DAVOX	Davos/Dischmat	149.66	344	PKPbc	PKPbc	20 43 40.8	+0.5
	comp=Z,6.1nm,0.6s,baz=240,slow=2.2,SNR=19						
TORD	Torodi Ar. Bea	174.03	217	PKPab	PKPab	20 45 35.1	0.0
	comp=Z,0.7nm,0.7s,baz=109,slow=4.0,SNR=5.7						

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*DDA **09** 20:29:45.9, 3697N×2920E, h7km±6km, Md3.9*
*ISCJB **09** 20:29:45.4±0.1, 3691N±001×2931E±002, h10km, mb4.3/33, Error ellipse: s-maj=2.2km s-min=1.6km az=40.3*
*NEIC **09** 20:29:46.0, 3704N×2923E, h4km, mb4.1/22, ML4.2(ISK), ML4.3(ATH), After ISK.*
*ISK **09** 20:29:46.5, 3705N×2923E, h6km, ML4.2*
*MOS **09** 20:29:46.1±1.0, 3699N×2937E, h15km, mb4.2/16, Error ellipse: s-maj=6.9km s-min=4.2km az=107.3*
*CSEM **09** 20:29:47.1±0.0, 3707N×2925E, h10km, mb4.7/9, Mw3.8, Error ellipse: s-maj=1.3km s-min=0.8km az=20.0*
*NIC **09** 20:29:48.6±0.3, 3661N×2871E, h55km, mb4.3, ML4.0, MW3.8*
*THE **09** 20:29:50.8, 3704N×2926E, h14km±3km, ML4.5/2, Error ellipse: s-maj=4.2km s-min=1.2km az=95.0*
*GII **09** 20:29:51.2±0.8, 3639N×2928E, h7km±48km, mb4.2/3, ML4.1/3, Mw3.5/5*
*IDC **09** 20:29:51.4±1.0, 3688N×2930E, h50km±12km, mb3.9/18, mb1 4.0/26, mb1mx4.0/33, mbtmp3.9/26, ML4.1/8, MS3.3/2, Ms1 3.3/2, ms1mx2.6/38, Error ellipse: s-maj=11.8km s-min=7.8km az=160.0*
*HLW **09** 20:30:03.6, 3603N×2992E, h30km, Mb3.8*
*BEO **09** 20:30:22.4±1.1, 39.19N×2770E, ML3.0/1*
ISC 09 20:29:48.2±0.4**, 3694N**±001×**2929E**±002**, h16**km±3km**, n319, σ1§20**/359**, mb4.3**/33**, 18C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.37	35	i P	Pg	20 29 53.4	-2.4
GOLH				i S	Sg	20 29 60.0	-0.9
ELL	Elmali	0.53	111	PG	Pg	20 29 58.1	-0.5
ELL				eSG	Sg	20 30 08.0	+2.2
AKAS	Kas	0.74	160	i P	Pg	20 30 01.9	-0.8
AKAS				i S	Sg	20 30 17.4	+4.9
YER	Yerkesik	0.83	284	PG	Pg	20 30 01.7	-2.7
YER				eSG	Sg	20 30 13.0	-2.4
DENT	Denizli	0.84	346	PG	Pg	20 30 00.6	-4.0
ANTB	Antalya	1.09	92	ePN	Pg	20 30 09.1	-0.2
BCK	Bucak	1.16	63	ePN	Pg	20 30 08.8	-1.8
ARG	Arkhangelos	1.18	233	eP	Pg	20 30 08.6	-2.4
ARG	Arkhangelos	1.18	233	P	Pg	20 30 08.9	-2.1
MLSB	Milas	1.26	287	ePN	Pn	20 30 09.7	-1.5
DAT	Datca	1.39	262	ePN	Pn	20 30 12.2	-0.8
KHL	Karahalli	1.40	7	ePN	Pn	20 30 11.8	-1.2
KULA	Kula-Manisa	1.65	343	ePN	Pn	20 30 15.2	-1.4
SHUT	Suhut-Afyon	1.90	31	ePN	Pn	20 30 19.2	-0.7
SMG	Samos	2.10	292	eP	Pn	20 30 22.0	-0.7
SMG	Samos	2.10	292	P	Pn	20 30 22.1	-0.6
ALT	Altintas	2.21	17	ePN	Pn	20 30 23.6	-0.6
KARP	Karpathos	2.21	232	eP	Pn	20 30 25.6	+1.4
KARP	Karpathos	2.21	232	P	Pn	20 30 26.5	+2.3
AKS	Akhisar	2.27	329	ePN	Pn	20 30 24.0	-0.9
BLCB	Balcova	2.30	310	P	Pn	20 30 24.7	-0.7
BLCB				S	Sn	20 30 52.4	-1.0
BLCB	Balcova	2.30	310	ePn	Pn	20 30 24.5	-0.9
BLCB	Balcova	2.30	310	P	Pn	20 30 24.7	-0.7
BLCB				S	Sn	20 30 52.4	-1.0
KONT	Konya--Tatoy	2.64	67	ePN	Pn	20 30 30.8	+0.6
LADK	Ladik-KONYA	2.75	62	ePN	Pn	20 30 32.5	+0.9
KIZT	Kizilcal	2.82	46	ePN	Pn	20 30 33.0	+0.4
ESKT	Eskisehir	2.85	25	ePN	Pn	20 30 32.8	-0.3
BALB	Balikesir	2.92	338	ePN	Pn	20 30 33.0	-1.0
CHOS	Chios island	2.95	300	P	Pn	20 30 34.4	0.0
CHOS				S	Sn	20 31 09.2	-0.2
APE	Apeiranthos	3.02	274	P	Pn	20 30 35.6	+0.3
APE				S	Sn	20 31 11.3	+0.2
APE	Apeiranthos	3.02	274	eP	Pn	20 30 35.0	-0.3
ZKR	Zakros	3.09	235	P	Pg	20 30 38.6	-8.7
ZKR				S	Sn	20 31 14.2	+1.4
ALFC	Alevga	3.21	123	P	Pn	20 30 40.3	+2.3
	5.3nm,0.6s						
ALFC				S	Sn	20 31 21.7	+5.7
PPCY	Paphos	3.21	129	⇑P	Pn	20 30 40.2	+2.2
CAVI	Cavuskoy	3.29	7	ePN	Pn	20 30 38.3	-0.8
PRK	Paraskevi	3.32	315	P	Pn	20 30 39.1	-0.3
PRK				S	Sn	20 31 18.1	-0.4
PRK	Paraskevi	3.32	315	eP	Pn	20 30 39.0	-0.4
PRK	Paraskevi	3.32	315	P	Pn	20 30 39.6	+0.2
KCT	Karacabey	3.40	348	ePN	Pn	20 30 39.3	-1.3
NPS	Neapolis	3.42	242	eP	Pn	20 30 41.9	+1.1
NPS	Neapolis	3.42	242	P	Pn	20 30 42.2	+1.4
LEF	Lefka	3.43	121	ePN	Pn	20 30 43.1	+2.1
GPA	Golpazari	3.44	13	ePN	Pn	20 30 41.3	+0.2
GEMT	Gemlik	3.49	359	ePN	Pn	20 30 41.4	-0.4
ADVT	Abdulvahap	3.51	6	ePN	Pn	20 30 42.1	+0.1
LAST	Lasithi	3.56	241	P	Pn	20 30 44.2	+1.4
LAST				S	Sn	20 31 26.2	+1.6
LAST	Lasithi	3.56	241	P	Pn	20 30 44.4	+1.6
LAST				S	Sn	20 31 26.2	+1.6
BNT	Bandirma	3.58	343	ePN	Pn	20 30 41.7	-1.3
EDC	Edincik	3.58	342	ePN	Pn	20 30 42.6	-0.4
IKL	Isikli	3.60	100	ePN	Pn	20 30 45.9	+2.6
GULT	Gulveren	3.62	15	ePN	Pn	20 30 43.2	-0.4
YLV	Yalova	3.62	1	ePN	Pn	20 30 43.8	+0.1
MAMC	Mammari	3.63	118	P	Pn	20 30 47.7	+3.9
SZAC	Souni-Zanaja	3.64	126	P	Pn	20 30 46.4	+2.6
	5.8nm,0.7s						
SZAC				S	Sn	20 31 32.0	+5.6
EZN	Ezine	3.71	322	ePN	Pn	20 30 44.4	-0.4
LFK	Lefkose	3.81	114	ePN	Pn	20 30 49.3	+3.1
CSS	Prodhromos	3.82	120	P	Pn	20 30 50.0	+3.6
	4.8nm,1.0s						
CSS				S	Sn	20 31 37.3	+6.3
CSS	Prodhromos	3.82	120	P	Pn	20 30 49.0	+2.6
CSS				S	Sn	20 31 37.3	+6.3
MDU	Mudurnu	3.83	23	ePN	Pn	20 30 47.1	+0.6
HRT	Hereke	3.89	4	ePN	Pn	20 30 47.3	+0.1
MRMT	Marmara Adasi	3.89	341	ePN	Pn	20 30 46.3	-1.0
IDI	Anoyia	3.93	247	P	Pn	20 30 49.0	+1.2
	27nm,0.3s,baz=62,slow=14,SNR=135						
IDI				S	Sn	20 31 34.8	+1.3
	24nm,0.3s,baz=137,slow=9.5,SNR=8.5						
LPK	Lapseki	3.96	331	ePN	Pn	20 30 47.7	-0.6
LOD	Lodumlu	4.01	42	ePN	Pn	20 30 49.7	+0.7
RKY	Sarkoy-Tekirda	4.09	337	ePN	Pn	20 30 49.5	-0.6
SIVA	Sivas	4.11	244	P	Pn	20 30 52.9	+2.6
ISK	Istanbul-Kandi	4.13	358	ePN	Pn	20 30 51.2	+0.7
EREN	Erenkoy	4.18	108	ePN	Pn	20 30 54.1	+2.7
MERS	Mersin	4.19	89	ePN	Pn	20 30 54.1	+2.6
GADA	Gvkgeada	4.20	322	ePN	Pn	20 30 50.6	-1.0
SILT	Sile	4.22	4	ePN	Pn	20 30 52.2	+0.4
BGKT	Bogazkoy	4.26	355	ePN	Pn	20 30 51.7	-0.6
PHNC	Paralimni	4.30	115	P	Pn	20 30 58.5	+5.6
PHNC				S	Sn	20 31 52.8	+10
KLYT	Kilyos	4.31	357	ePN	Pn	20 30 52.9	-0.2
CTKS	Kestanelik-??a	4.34	352	ePN	Pn	20 30 53.1	-0.3
CRLT	Corlu	4.36	344	ePN	Pn	20 30 53.1	-0.6
SLVT	Silivri	4.37	349	ePN	Pn	20 30 53.8	-0.1
LIA	Limnos Island	4.38	314	eP	Pn	20 30 53.6	-0.4
LIA	Limnos Island	4.38	314	P	Pn	20 30 54.0	0.0
LIA	Limnos Island	4.38	314	P	Pn	20 30 54.3	+0.3
NIG	Nigde	4.38	73	ePN	Pn	20 30 56.0	+1.9
VAM	Vamos	4.39	251	eP	Pg	20 31 06.7	-5.7
BR131	Keskin Array S	4.41	50	ePn	Pn	20 30 55.1	+0.7
BR131				eSn	Sn	20 31 46.3	+0.9
BR131	Keskin Array S	4.41	50	ePn	Pn	20 30 55.1	+0.7
BR131				eSn	Sn	20 31 46.3	+0.9
BRTR	Keskin Array B	4.41	50	P	Pn	20 30 55.4	+1.0
	4.6nm,0.3s,baz=231,slow=14,SNR=122						
BRTR				S	Sn	20 31 48.5	+3.1
	4.1nm,0.3s,baz=225,slow=25,SNR=10						
BRTR				LR	LR	20 33 15.7	
	comp=Z,294nm,19.2s,baz=207,slow=46						
BRTR	Keskin Array B	4.41	50	P	Pn	20 30 55.4	+1.0
BRTR				S	Sn	20 31 48.5	+3.1
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BRTR				smax			
	comp=N,4.0nm,0.3s						
BRTR	Keskin Array B	4.41	50	P	Pn	20 30 55.3	+0.9
BRTR				S	Sn	20 31 48.5	+3.1
PTL	Penteli	4.46	286	eP	Pn	20 30 55.7	+0.6
PTL	Penteli	4.46	286	P	Pn	20 30 56.2	+1.1
ENEZ	Enez	4.52	328	ePN	Pn	20 30 55.7	-0.2
ATH	Athens Observa	4.56	285	P	Pn	20 30 58.0	+1.6
CTYL	Yal??k??y-??at	4.60	351	ePN	Pn	20 30 56.6	-0.4
KARN	Karanos	4.61	252	P	Pn	20 30 59.3	+2.1
KARN				S	Sn	20 31 52.5	+2.1
KARA	Karaisali	4.62	84	ePN	Pn	20 30 59.7	+2.4
KDZE	Karadeniz Ereo	4.68	20	ePN	Pn	20 30 57.8	-0.3
ALN	Alexandroupoli	4.70	328	P	Pn	20 30 58.0	-0.4
ALN				S	Sn	20 31 51.4	-1.1
KRTS	Karatas	4.90	92	ePN	Pn	20 31 04.6	+3.5
CANT	Cankiri	4.98	41	ePN	Pn	20 31 03.5	+1.2
SAFT	Safranbolu	5.04	31	ePN	Pn	20 31 03.5	+0.4
RDO	Rodhopi	5.12	326	P	Pn	20 31 05.7	+1.5
CEYT	Ceyhan	5.17	87	ePN	Pn	20 31 07.2	+2.3
KOZT	Kozan	5.24	82	ePN	Pn	20 31 08.9	+3.1
KOZT	Kozan	5.24	82	ePn	Pn	20 31 08.9	+3.0
EDRB	Edirne	5.29	339	ePN	Pn	20 31 06.0	-0.4
PAIG	Paliouri	5.32	306	P	Pn	20 31 07.3	+0.3
NEO	Neokhori	5.34	298	P	Pn	20 31 08.4	+1.2
TOS	Tosya	5.51	41	ePN	Pn	20 31 10.6	+1.1
BNN	Bunyan	5.52	68	ePN	Pn	20 31 12.1	+2.4
HTY	Hatay	5.57	96	ePN	Pn	20 31 14.0	+3.6
KDZ	Kurdzhali	5.58	329	P	Pn	20 31 10.5	-0.1
PLG	Polygyros	5.72	309	P	Pn	20 31 13.1	+0.7
PLG	Polygyros	5.72	309	P	Pn	20 31 13.7	+1.3
AGG	Agios Georgios	5.88	293	P	Pn	20 31 16.2	+1.5
ITM	Ithomi	5.90	275	P	Pn	20 31 19.1	+4.2
HORT	Hortiatis	6.06	309	P	Pn	20 31 18.1	+0.9
KMRS	Kahramanmaras	6.10	82	ePN	Pn	20 31 20.6	+3.0
NVR	Nevrokopi	6.10	318	P	Pn	20 31 18.7	+1.0
SARI	SarD1z-Kayseri	6.11	71	ePN	Pn	20 31 17.0	-0.9
EVR	Evrytania	6.24	291	P	Pn	20 31 23.5	+3.9
PLD	Plovdiv	6.26	327	P	Pn	20 31 20.2	+0.3
PLD	Plovdiv	6.26	327	eP	Pn	20 31 22.6	+2.7
GAZ	Gaziantep	6.34	86	ePN	Pn	20 31 24.3	+3.4
MMB	Musomiste	6.34	319	P	Pn	20 31 21.0	0.0
MMA0B	Mount Meron ar	6.36	126	Pn	Pn	20 31 21.6	+0.4
MMA0B				Sn	Sn	20 32 33.4	-0.2
MMAI	Mount Meron Ar	6.36	126	P	Pn	20 31 21.8	+0.6
	comp=N,12nm,0.3s,baz=315,slow=12,SNR=70						
MMAI				S	Sn	20 32 33.7	+0.1
	comp=N,9.1nm,0.3s,baz=309,slow=28,SNR=5.8						
OFRI	‘Ofer	6.36	131	Pn	Pn	20 31 22.1	+0.8
BLGI	Bet Lehem HaGe	6.41	129	Pn	Pn	20 31 22.2	+0.3
HRSH	Kfar Ka’horesh	6.49	129	⇓eP	Pn	20 31 29.3	+6.3
NEF	NEVSHA	6.51	347	P	Pn	20 31 23.0	-0.2
KNT	Kendrikon	6.52	312	P	Pn	20 31 24.8	+1.3
SLTI	Sal’it	6.66	133	Pn	Pn	20 31 25.0	-0.4
SLTI				Sn	Sn	20 32 39.5	-1.5
GRG	Griva	6.70	309	P	Pn	20 31 27.4	+1.5
SVSK	Karacayir	6.74	61	ePN	Pn	20 31 29.1	+2.6
MMLI	Mount Malkishu	6.75	130	Pn	Pn	20 31 27.1	+0.4
MMLI				Sn	Sn	20 32 42.3	-0.9
KKB	Krupnik	6.88	318	eP	Pn	20 31 28.7	+0.3
HMDT	Nahal Hemdat	6.95	130	Pn	Pn	20 31 30.3	+1.1
HMDT				Sn	Sn	20 32 47.1	-0.8
RSH		7.00	147	P	Pn	20 31 29.3	-0.8
AMAG	Maghara	7.07	151	eP	Pn	20 31 30.5	-0.5
AMAG				S	Sn	20 32 33.9	-17
KOT	Kottamia	7.30	162	P	Pn	20 31 34.0	-0.3
VTS	Vitosha	7.34	322	ePn	Pn	20 31 35.6	+1.0
VTS				eSg	Sn	20 32 55.2	-2.3
VTS	Vitosha	7.34	322	⇑iP	Pn	20 31 35.6	+1.0
VTS	Vitosha	7.34	322	eP	Pn	20 31 38.0	+3.4
VTS	Vitosha	7.34	322	⇑P	Pn	20 31 35.6	+1.0
HHAG	Hagoal	7.35	161	⇑P	Pn	20 31 34.5	-0.3
DSI	Dead Sea	7.35	135	Pn	Pn	20 31 35.0	+0.1
DSI				Sn	Sn	20 32 56.3	-1.7
KZIT	Kziot	7.36	143	Pn	Pn	20 31 35.0	0.0
KZIT				Sn	Sn	20 32 54.9	-3.3
RTMI	Retamim	7.38	141	Pn	Pn	20 31 35.3	0.0
RTMI				Sn	Sn	20 32 56.4	-2.4
MZDA	Masada	7.54	136	Pn	Pn	20 31 37.7	+0.3
MZDA				Sn	Sn	20 33 00.7	-1.8
TIRR	Tirgusor	7.54	355	⇑iP	Pn	20 31 37.5	+0.1
TIRR	Tirgusor	7.54	355	⇑P	Pn	20 31 37.5	0.0
GLL	Jalalah	7.61	164	P	Pn	20 31 38.4	-0.1
SUZ		7.67	156	⇑P	Pn	20 31 38.9	-0.3
HARR	Harsova	7.81	353	⇑iP	Pn	20 31 42.5	+1.3
HARR	Harsova	7.81	353	⇑P	Pn	20 31 42.5	+1.4
ASF	Jabal al Asfar	7.87	125	P	Pn	20 31 43.7	+1.8
	comp=N,0.6nm,0.3s,baz=168,slow=10,SNR=4.6						
ASF	Jabal al Asfar	7.87	125	P	Pn	20 31 43.7	+1.7
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SKO	Skopje	7.88	312	ePn	Pn	20 31 44.9	+2.8
HNKL	Nakhl	8.01	149	⇓eP	Pn	20 31 43.5	-0.4
ZAF		8.11	159	⇑eP	Pn	20 31 44.8	-0.5
PRNI	Paran	8.11	142	Pn	Pn	20 31 45.1	-0.2
PRNI				Sn	Sn	20 33 14.2	-2.4
KRMI	Paran Flat	8.17	145	Pn	Pn	20 31 45.5	-0.6
KRMI				Sn	Sn	20 33 15.5	-2.7
BARS	Barje	8.21	318	ePn	Pn	20 31 48.1	+1.4
PTK	Pertek	8.22	73	ePN	Pn	20 31 49.7	+3.0
TLCR		8.25	358	⇓iP	Pn	20 31 47.4	+0.3
TLCR		8.25	358	⇓P	Pn	20 31 47.4	+0.3
SEV	Sevastopol’	8.29	22	eP	Pn	20 31 47.1	-0.6
HRFI	Mount Harif	8.39	143	Pn	Pn	20 31 48.7	-0.4
HRFI				Sn	Sn	20 33 20.2	-3.2
YAL	Yalta	8.39	25	eP	Pn	20 31 49.8	+0.7
MBRI	Mt Berech	8.53	145	Pn	Pn	20 31 50.6	-0.5
MBRI				Sn	Sn	20 33 24.5	-2.5
ALU	Alushta	8.65	25	eP	Pn	20 31 51.8	-0.8
AQBJ	Aqaba	8.65	145	Pn	Pn	20 31 53.0	+0.3
EIL	Elat	8.65	145	P	Pn	20 31 52.5	-0.2
	comp=Z,4.2nm,0.3s,baz=334,slow=9.5,SNR=32						
EIL				S	Sn	20 33 27.6	-2.4
	comp=Z,0.7nm,0.3s,baz=323,slow=22,SNR=2.9						
EIL	Elat	8.65	145	Pn	Pn	20 31 52.5	-0.2
EIL				Sn	Sn	20 33 26.9	-3.2
SIM	Simferopol’	8.79	23	eP	Pn	20 31 52.5	-2.1
SIM				eS	Sn	20 33 27.8	-5.5
MLR	Muntele Rosu	8.91	345	P	Pn	20 31 57.0	+0.8
	comp=Z,1.4nm,0.3s,baz=198,slow=7.7,SNR=15						
MLR	Muntele Rosu	8.91	345	P	Pn	20 31 57.0	+0.8
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR	Muntele Rosu	8.91	345	P	Pn	20 31 57.0	+0.8
HBST	Basata	8.95	148	⇑P	Pn	20 31 56.5	-0.3
ODB	Odobesti	8.99	350	⇓iP	Pn	20 31 58.2	+0.9
SUDU	Sudak	9.04	27	eP	Pn	20 32 01.9	+3.9
VOIR		9.07	341	⇓iP	Pn	20 31 59.1	+0.7
VOIR		9.07	341	⇓P	Pn	20 31 59.1	+0.7
PLOR	Plostina	9.12	348	⇓iP	Pn	20 32 00.3	+1.2
VRI	Vrincioaia	9.13	349	⇑iP	Pn	20 32 00.1	+0.9
VRI	Vrincioaia	9.13	349	⇑P	Pn	20 32 00.1	+1.0
HKAT	Jabal Katrina	9.28	153	⇑P	Pn	20 32 00.9	-0.3
HKAT	Jabal Katrina	9.28	153	P	Pn	20 32 00.9	-0.4
TR2		9.31	155	⇑eP	Pn	20 32 01.1	-0.6
MDB	Medias	9.90	340	⇓iP	Pn	20 32 11.1	+1.3
MDB	Medias	9.90	340	⇓P	Pn	20 32 11.1	+1.3
TIP	Timpagrande	10.14	287	ePn	Pn	20 32 13.3	+0.3
	comp=Z,15nm,0.8s						
TIP	Timpagrande	10.14	287	ePn	Pn	20 32 13.3	+0.3
	comp=Z,15nm,0.8s						
BZS	Buzias	10.41	329	ePn	Pn	20 32 16.3	-0.5
BZS	Buzias	10.41	329	⇑iP	Pn	20 32 16.1	-0.7
HSFG		11.06	158	P	Pn	20 32 25.8	+0.1
BURAR	Bucovina Array	11.09	346	⇑iP	Pn	20 32 25.4	-0.6
BURAR	Bucovina Array	11.09	346	⇑P	Pn	20 32 25.4	-0.6
BUR08	Bucovina Ar. S	11.12	346	ePn	Pn	20 32 25.2	-1.2
BUR08	Bucovina Ar. S	11.12	346	ePn	Pn	20 32 25.2	-1.2
PKSM	Moragy	12.21	323	⇓iP	Pn	20 32 42.0	+0.6
PKSM	Moragy	12.21	323	P	Pn	20 32 42.0	+0.5
GNI	Garni	12.51	70	LR	LR	20 38 46.3	
	comp=Z,200nm,21.2s,baz=167,slow=43						
GNI	Garni	12.51	70	eP	Pn	20 32 44.3	-1.2
GNI				pmax	pmax		
	comp=Z,41nm,1.5s						
GNI	Garni	12.51	70	ePn	Pn	20 32 44.3	-1.3
	comp=Z,41nm,1.5s						
PSZ	Piszkesteto	12.97	331	eP	Pn	20 32 52.1	+0.3
PSZ				pmax	pmax		
	comp=Z,18nm,1.7s						
PSZ	Piszkesteto	12.97	331	ePn	Pn	20 32 52.1	+0.3
	comp=Z,18nm,1.7s						
PSZ	Piszkesteto	12.97	331	ePn	Pn	20 32 52.1	+0.3
	comp=Z,18nm,1.7s						
KWP	Kalwaria	13.56	341	eP	Pn	20 32 57.7	-2.0
KWP				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KWP	Kalwaria	13.56	341	ePn	Pn	20 32 57.7	-2.0
	comp=Z,5.1nm,0.7s						
KWP	Kalwaria	13.56	341	ePn	Pn	20 32 57.7	-2.0
	comp=Z,5.1nm,0.7s						
OKC	Ostrava-Krasne	15.21	331	eP	Pn	20 33 28.6	+6.5
KEST	Kesra	16.12	272	P	Pn	20 33 35.4	+1.3
	comp=Z,0.1nm,0.3s,baz=173,slow=8.5,SNR=5.2						
DPC	Dobruska-Polom	16.33	329	eP	pP	20 33 46.8	+2.8
GEC2	GERESS Array S	16.46	321	eP	Pn	20 33 42.8	+4.5
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GEC2	GERESS Array S	16.46	321	eP	Pn	20 33 42.8	+4.5
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	16.46	321	P	Pn	20 33 39.8	+1.5
	comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=16						
KHC	Kasperske Hory	16.71	322	eP	Pn	20 33 45.1	+3.6
WET	Wettzell	17.07	321	eP	Pn	20 33 48.9	+2.9
WET				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WET	Wettzell	17.07	321	eP	Pn	20 33 48.9	+2.9
	comp=Z,3.0nm,0.6s						
DAVOX	Davos/Dischmat	17.45	310	P	Pn	20 33 55.7	+4.9
	comp=Z,0.2nm,0.3s,baz=97,slow=10,SNR=3.6						
DAVOS	Davos	17.53	310	P	Pn	20 33 55.7	+4.0
SBF	Sospel	18.00	299	eP	Pn	20 33 56.6	-1.0
	comp=Z,62nm,0.9s						
SBF	Sospel	18.00	299	eP	Pn	20 33 56.6	-1.0
SBF				pmax	pmax		
	comp=Z,31nm,0.9s						
SBF	Sospel	18.00	299	eP	Pn	20 33 56.6	-1.0
	comp=Z,31nm,0.9s						
GRA1	Grafenberg Arr	18.25	320	eP	Pn	20 34 02.7	+2.0
	comp=Z,4.0nm,0.9s						
GRF	Grafenberg Arr	18.25	320	eP	Pn	20 34 02.7	+2.0
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GRF	Grafenberg Arr	18.25	320	eP	Pn	20 34 02.7	+2.0
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GRF	Grafenberg Arr	18.25	320	eP	Pn	20 34 02.7	+2.0
	comp=Z,4.0nm,0.9s						
MOX	Moxa	18.66	323	eP	Pn	20 34 07.5	+1.9
	comp=Z,3.0nm,0.8s						
MBDF	Montbardon	18.70	302	eP	Pn	20 34 05.8	-0.3
	comp=Z,14nm,0.7s						
MBDF	Montbardon	18.70	302	eP	Pn	20 34 05.8	-0.3
MBDF				pmax	pmax		

	comp=Z,7.0nm,0.7s						
MBDF	Montbardon	18.70	302	eP	Pn	20 34 05.8	-0.3
	comp=Z,6.9nm,0.7s						
STU	Stuttgart	18.83	315	eP	Pn	20 34 07.9	+0.2
STU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STU	Stuttgart	18.83	315	eP	Pn	20 34 08.6	+0.9
	comp=Z,8.0nm,0.9s						
STU	Stuttgart	18.83	315	eP	Pn	20 34 07.9	+0.2
	comp=Z,6.3nm,0.5s						
STU	Stuttgart	18.83	315	eP	Pn	20 34 07.9	+0.2
	comp=Z,6.3nm,0.5s						
LPG	La Plagne	18.95	304	eP	Pn	20 34 09.7	+0.6
	comp=Z,28nm,1.0s						
LPG	La Plagne	18.95	304	eP	Pn	20 34 09.7	+0.6
LPG				pmax	pmax		
	comp=Z,14nm,1.0s						
LPG	La Plagne	18.95	304	eP	Pn	20 34 09.7	+0.6
	comp=Z,14nm,1.0s						
LPL	La Plagne	18.96	304	eP	Pn	20 34 09.8	+0.5
	comp=Z,16nm,0.8s						
LPL	La Plagne	18.96	304	eP	Pn	20 34 09.8	+0.5
LPL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPL	La Plagne	18.96	304	eP	Pn	20 34 09.8	+0.5
	comp=Z,7.9nm,0.8s						
ORIF	Oris-en-Rattie	19.36	302	eP	Pn	20 34 13.5	-0.6
	comp=Z,21nm,0.9s						
ORIF	Oris-en-Rattie	19.36	302	eP	Pn	20 34 13.5	-0.6
ORIF				pmax	pmax		
	comp=Z,11nm,0.9s						
ORIF	Oris-en-Rattie	19.36	302	eP	Pn	20 34 13.5	-0.6
	comp=Z,11nm,0.9s						
HINF	Hinteralfeld	19.75	310	eP	Pn	20 34 17.5	-1.3
CABF	La Chapelle	19.76	307	eP	Pn	20 34 16.9	-2.0
	comp=Z,36nm,1.0s						
CABF	La Chapelle	19.76	307	eP	Pn	20 34 16.9	-2.0
CABF				pmax	pmax		
	comp=Z,18nm,1.0s						
CABF	La Chapelle	19.76	307	eP	Pn	20 34 16.9	-2.0
	comp=Z,18nm,1.0s						
CDF	Champ du Feu	19.76	312	eP	Pn	20 34 17.6	-1.3
VIVF	Saint-Julien-l	20.17	301	eP	P	20 34 20.9	-0.9
	comp=Z,33nm,0.9s						
VIVF	Saint-Julien-l	20.17	301	eP	P	20 34 20.9	-0.9
VIVF				pmax	pmax		
	comp=Z,17nm,0.9s						
VIVF	Saint-Julien-l	20.17	301	eP	P	20 34 20.9	-0.9
	comp=Z,17nm,0.9s						
NRDL	Niedersach Rie	20.58	325	eP	P	20 34 28.7	+2.5
	comp=Z,6.0nm,1.0s						
SMF	Signal de Mont	21.23	305	eP	P	20 34 33.1	-0.2
SSF	Saint Saulge	21.58	306	eP	P	20 34 37.1	+0.1
	comp=Z,7.0nm,0.6s,mb3.9						
SSF	Saint Saulge	21.58	306	eP	P	20 34 37.1	+0.1
SSF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
SSF	Saint Saulge	21.58	306	eP	P	20 34 37.1	+0.1
	comp=Z,3.5nm,0.6s,mb4.0						
AKTK	Aktyubinsk	24.58	48	P	P	20 35 06.7	-0.6
AKTK	Aktyubinsk	24.58	48	P	P	20 35 06.7	-0.6
AKTO	Aktyubinsk	24.58	48	P	P	20 35 06.7	-0.6
	comp=Z,2.8nm,0.8s,mb3.8,baz=252,slow=9.1,SNR=4.1						
AKTO	Aktyubinsk	24.58	48	P	P	20 35 06.7	-0.6
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
TAM	Tamanrasset	24.89	242	eP	P	20 35 10.4	+0.1
TAM				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
TAM	Tamanrasset	24.89	242	eP	P	20 35 10.4	+0.1
	comp=Z,3.0nm,0.6s,mb4.0						
TAM	Tamanrasset	24.89	242	eP	P	20 35 10.4	+0.1
	comp=Z,3.0nm,0.6s,mb4.0						
HFS	Hagfors	25.28	342	P	P	20 35 13.5	+0.1
	comp=Z,7.2nm,0.8s,mb4.2,baz=134,slow=13,SNR=10						
HFS	Hagfors	25.28	342	P	P	20 35 13.5	0.0
HFS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KONO	Kongsberg	26.03	337	eP	P	20 35 18.0	-2.3
KONO	Kongsberg	26.03	337	eP	P	20 35 18.0	-2.3
ESDC	Sonseca Array	26.16	286	P	P	20 35 20.4	-1.2
	comp=Z,3.1nm,0.7s,mb4.0,baz=79,slow=9.3,SNR=12						
ESLA	Sonseca Array	26.16	286	eP	P	20 35 20.6	-1.1
	comp=Z,2.2nm,1.0s,mb3.6						
ESLA	Sonseca Array	26.16	286	eP	P	20 35 20.6	-1.1
	comp=Z,2.2nm,1.0s,mb3.6						
NB2	NORSAR Subarra	26.70	340	P	P	20 35 25.1	-1.2
	comp=Z,1.5nm,0.7s,mb3.6,baz=143,slow=10						
NOA	NORSAR Array B	26.70	340	P	P	20 35 24.7	-1.6
	comp=Z,2.2nm,0.8s,mb3.7,baz=145,slow=9.1,SNR=6.4						
NOA	NORSAR Array B	26.70	340	P	P	20 35 24.7	-1.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	27.65	36	eP	P	20 35 33.9	-1.0
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
ARU	Arti	27.65	36	eP	P	20 35 33.8	-1.1
	comp=Z,4.6nm,0.9s,mb4.1						
ARU	Arti	27.65	36	eP	P	20 35 33.9	-1.1
	comp=Z,4.6nm,0.9s,mb4.1						
MDT	Midelt	28.03	272	P	P	20 35 37.8	-0.8
	comp=Z,1.7nm,0.7s,mb3.8,baz=99,slow=9.8,SNR=3.9						
ARCES	ARCESS Array B	32.72	358	P	P	20 36 19.6	0.0
	comp=Z,3.5nm,0.8s,mb4.3,baz=181,slow=9.0,SNR=5.4						
ARCES	ARCESS Array B	32.72	358	P	P	20 36 19.6	0.0
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TOA0	Torodi Ar. Sit	34.22	233	eP	P	20 36 32.2	-1.0
TOA0	Torodi Ar. Sit	34.22	233	eP	P	20 36 32.2	-1.0
TORD	Torodi Ar. Bea	34.22	233	P	P	20 36 32.4	-0.8
	comp=Z,9.6nm,0.7s,mb4.8,baz=34,slow=8.9,SNR=74						
AAK	Ala-Archa	34.87	66	eP	P	20 36 36.9	-1.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
AAK	Ala-Archa	34.87	66	eP	P	20 36 36.9	-1.8
	comp=Z,3.0nm,1.0s,mb4.2						
AAK	Ala-Archa	34.87	66	eP	P	20 36 36.9	-1.8
	comp=Z,3.0nm,1.0s,mb4.2						
KURK	Kurchatov	37.45	52	P	P	20 36 59.8	-0.8
	comp=Z,2.3nm,0.7s,mb4.1,baz=276,slow=8.8,SNR=8.0						
KURK	Kurchatov	37.45	52	P	P	20 36 59.8	-0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MKAR	Makanchi Array	40.00	59	P	P	20 37 21.6	-0.4
	comp=Z,2.5nm,1.0s,mb3.9,baz=274,slow=8.2,SNR=10						
MKAR	Makanchi Array	40.00	59	P	P	20 37 21.6	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZALV	Zalesovo Beam	41.35	48	P	P	20 37 32.2	-0.8
	comp=Z,0.6nm,0.5s,mb3.5,baz=260,slow=8.5,SNR=3.0						
ZALV	Zalesovo Beam	41.35	48	P	P	20 37 32.2	-0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
DBIC	Dimbokro	43.31	234	P	P	20 37 49.0	-0.4
	comp=Z,2.9nm,0.9s,mb4.0,baz=15,slow=9.4,SNR=10						
DBIC	Dimbokro	43.31	234	P	P	20 37 49.0	-0.5
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIC	Toumodi	43.43	235	eP	P	20 37 49.6	-0.9
	comp=Z,31nm,0.9s,mb5.1						
KIC	Kosan Boka	43.47	234	eP	P	20 37 46.9	-3.8
	comp=Z,53nm,1.4s,mb5.1						
LIC	Lamto	43.75	234	eP	P	20 37 47.8	-5.3
	comp=Z,30nm,1.6s,mb4.8						
DANN	Dangsing	46.13	84	eP	P	20 38 11.8	0.0
	comp=Z,37nm,0.7s,mb5.4						
KOLN	Koldanda	46.25	85	eP	P	20 38 12.3	-0.5
	comp=Z,20nm,0.8s,mb5.1						
GKN	Gorkha	46.97	84	eP	P	20 38 17.3	-1.2
	comp=Z,12nm,0.8s,mb4.9						
DMN	Daman	47.52	84	eP	P	20 38 22.4	-0.4
	comp=Z,22nm,0.8s,mb5.3						
KKN	Kakani	47.58	84	eP	P	20 38 22.8	-0.4
	comp=Z,12nm,0.8s,mb5.0						
KKN	Kakani	47.58	84	eP	P	20 38 22.8	-0.4
KKN				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
GUN	Gumba	48.00	84	eP	P	20 38 26.1	-0.4
	comp=Z,20nm,1.1s,mb5.1						
JIRN	Jiri	48.36	84	eP	P	20 38 29.0	-0.3
RAMN	Ramite	49.00	84	eP	P	20 38 33.3	-0.9
	comp=Z,15nm,0.7s,mb5.1						
SONM	Songino Array	55.76	53	P	P	20 39 23.6	-0.5
	comp=Z,0.3nm,0.5s,mb3.6,baz=272,slow=6.6,SNR=3.8						
RES	Resolute Bay	62.80	346	P	P	20 40 12.5	+0.2
	comp=Z,1.4nm,0.9s,mb4.1,baz=52,slow=14,SNR=3.7						
RES	Resolute Bay	62.80	346	P	P	20 40 12.5	+0.2
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb4.0						
CMAR	Chiang Mai Arr	63.08	86	P	P	20 40 13.4	-1.6
	comp=Z,0.8nm,0.6s,mb4.0,baz=297,slow=8.2,SNR=6.1						
CMAR	Chiang Mai Arr	63.08	86	P	P	20 40 13.4	-1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	63.99	320	P	P	20 40 18.8	-1.7
	comp=Z,5.0nm,0.7s,mb4.7,baz=276,slow=2.8,SNR=6.9						
SCHQ	Schefferville	63.99	320	P	P	20 40 18.8	-1.7
YKA	Yellowknife Ar	76.74	344	P	P	20 41 37.8	-0.5
	comp=Z,1.2nm,0.7s,mb3.9,baz=30,slow=5.6,SNR=21						
YKA	Yellowknife Ar	76.74	344	P	P	20 41 37.8	-0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	76.74	344	P	P	20 41 37.8	-0.5
ULM	Lac du Bonnet	80.65	328	P	P	20 41 59.0	-1.1
	comp=Z,3.7nm,0.8s,mb4.4,baz=18,slow=2.2,SNR=3.9						
PDAR	Pinedale Array	92.26	331	P	P	20 42 56.1	-1.3
	comp=Z,0.6nm,0.7s,mb4.1,baz=55,slow=5.6,SNR=6.4						

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*CSEM **09** 20:33:55.4±0.9, 3765N×2479W, h15km, ML2.7, Error ellipse: s-maj=8.3km s-min=2.7km az=67.0, After PDA*

PDA 09 20:33:55.4±0.9, 3765N×2479W, h15km, MD3.9, ML2.7, Error ellipse: s-maj=8.3km s-min=2.7km az=67.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.69	199	eP	Pg	20 34 06.4	-2.4
PSMN				eS	Sg	20 34 14.0	-3.8
PDA	Ponta Delgada	0.70	278	eP	Pg	20 34 06.4	-2.6
PDA				eS	Sg	20 34 15.0	-3.3
PSCM	Serra do Cume	2.11	300	eP	Pn	20 34 25.6	-4.5
PSCM				eS	Sn	20 34 48.7	-7.4
PSCM				A		20 34 50.1	
	8.2nm,0.1s						
PSCM				A		20 34 53.8	
	10nm,0.3s						
PSCM	Serra do Cume	2.11	300	eP	Pn	20 34 25.6	-4.5
PSCM				eS	Sn	20 34 48.7	-7.4
PMAN	Manadas	2.78	292	eP	Pn	20 34 35.6	-3.7
PMAN				eS	Sn	20 35 04.9	-7.7
PMAN				A		20 35 06.3	
	18nm,0.2s						
PMAN	Manadas	2.78	292	eP	Pn	20 34 35.6	-3.7
PMAN				eS	Sn	20 35 04.9	-7.7
ROSA	Rosais	2.92	292	eP	Pn	20 34 37.3	-4.0
ROSA				eS	Sn	20 35 08.6	-7.5
PICO	Pico	2.99	288	eP	Pn	20 34 38.5	-3.7
PICO				eS	Sn	20 35 10.5	-7.3
CALA	Caldeira	3.22	288	eP	Pn	20 34 41.4	-4.0
CALA				eS	Sn	20 35 15.9	-7.6

GUC 09 20:37:04.3±0.6, 3119S×7149W, h7km±4km, MD3.9, ML3.1, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.63	23	eP	Pg	20 37 17.1	+0.7
OVCH				i S	Sg	20 37 26.7	+2.1
OVCH				AML	AML	20 37 28.6	
	comp=N,1μm,0.5s						
CHNG	Los Chungos	0.69	181	⇑iP	Pg	20 37 17.8	+0.2
CHNG				i S	Sg	20 37 28.1	+1.4
CHNG				AML	AML	20 37 30.6	
	comp=E,915nm,0.7s						
TLL	Tololo Astrono	1.18	30	⇓iP	Pg	20 37 26.2	-0.6
TLL				i S	Sg	20 37 42.7	+0.6
TLL				AML	AML	20 37 44.7	
	comp=N,582nm,0.7s						
PEL	Peldehue	2.07	161	⇑iP	Pn	20 37 39.9	+0.5
PEL				i S	Sn	20 38 07.0	+1.6
PEL				AML	AML	20 38 15.0	
	comp=E,491nm,0.8s						
CLCH	Cerro Calan	2.34	160	i S	Sn	20 38 15.3	+3.1
CLCH				AML	AML	20 38 23.5	
	comp=E,308nm,0.7s						
FCH	Farellones	2.36	155	eP	Pn	20 37 45.2	+1.8
FCH				i S	Sn	20 38 16.0	+3.3
FCH				AML	AML	20 38 25.3	
	comp=E,174nm,0.3s						
TACH	Talagante	2.50	169	eP	Pn	20 37 46.5	+1.1
TACH				eS	Sn	20 38 18.5	+2.4

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*NEIC **09** 20:37:36.9, 1680N×9482W, h112km, MD3.7(MEX), After MEX.*

MEX 09 20:37:36.9±0.8, 1679N×9481W, h111km±7km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.31	347	i P	Pn	20 37 51.5	-1.3
CMIG				i S	Sn	20 38 02.9	-1.9
HUIG	Huatulco	1.61	231	i P	Pn	20 38 03.1	-2.0
HUIG				i S	Sn	20 38 25.5	-1.0
TGIG		1.62	90	i P	Pn	20 38 04.3	-0.9
TGIG				i S	Sn	20 38 24.7	-2.1
OXX	Oaxaca	1.85	279	eP	Pn	20 38 07.4	-0.6
OXX				i S	Sn	20 38 30.4	-1.4
VHO	Vista Hermosa	1.86	279	i P	Pn	20 38 07.8	-0.4
VHO				i S	Sn	20 38 30.0	-2.0
PCIG		1.88	125	i P	Pn	20 38 07.8	-0.6
PCIG				i S	Sn	20 38 32.0	-0.4
CCIG	Comitan	2.62	101	i P	Pn	20 38 18.1	+0.2
CCIG				i S	Sn	20 38 48.1	-1.3
UTMO	Huajuapan	3.04	290	i P	Pn	20 38 23.0	-0.4
UTMO				i S	Sn	20 38 58.1	-1.3
PNIG	Pinotepa	3.20	263	i P	Pn	20 38 23.0	-2.6
PNIG				i S	Sn	20 39 00.7	-2.5
PPM	Popocatepetl	4.28	303	eP	Pn	20 38 38.5	-1.5
PPM				i S	Sn	20 39 32.1	+3.1

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*NEIC **09** 20:54:09.5, 1630N×98.17W, h12km, MD3.9(MEX), After MEX.*

MEX 09 20:54:09.5±0.6, 1630N×9817W, h12km±2km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.10	24	i P	Pg	20 54 11.5	-0.9
PNIG				i S	Sg	20 54 14.1	-0.4
UTMO	Huajuapan	1.56	13	eP	Pn	20 54 33.9	-3.1
UTMO				i S	Sn	20 54 52.4	-4.7
VHO	Vista Hermosa	1.57	61	i P	Pn	20 54 34.1	-3.1
VHO				i S	Sn	20 54 53.0	-4.6
ACX	Acapulco	1.77	289	i P	Pn	20 54 36.4	-3.5
ACX				i S	Sn	20 54 58.8	-3.5
HUIG	Huatulco	2.05	105	eP	Pn	20 54 39.3	-4.5
HUIG				i S	Sn	20 55 05.0	-4.3
MEIG	Mezcala	2.13	320	eP	Pn	20 54 41.8	-3.0
MEIG				i S	Sn	20 55 05.6	-5.6
CAIG	El Cayaco	2.14	291	eP	Pn	20 54 42.5	-2.6
CAIG				i S	Sn	20 55 07.0	-4.5
PLIG	Platanillo	2.44	329	eP	Pn	20 54 46.1	-3.0
PLIG				i S	Sn	20 55 13.2	-5.6
ZIIG	Zihuatanejo	3.41	293	eP	Pn	20 55 02.8	+0.3
ZIIG				i S	Sn	20 55 39.0	-3.8

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*ISCJB **09** 21:10:44.2±0.4, 4385N±003×10535W±003, h0km, Error ellipse: s-maj=4.0km s-min=3.1km az=12.1*

*IDC **09** 21:10:46.6±1.7, 4373N×10537W, h0km, mb1 3.5/5, mb1mx3.3/26, mbtmp3.2/5, ML2.9/4, Error ellipse: s-maj=45.4km s-min=8.4km az=149.0*

*NEIC **09** 21:10:47.5±0.4, 4381N×10525W, h0km, ML3.0, Error ellipse: s-maj=6.6km s-min=4.7km az=160.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

ISC 09 21:10:46.9±0.3, 4381N±002×10533W±002, h0km, n29, σ1s40/77, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	71	eP	Pg	21 11 06.3	+0.5
RSSD				eS	Sg	21 11 21.6	+3.1
PHWY	Pilot Hill	2.50	182	ePn	Pn	21 11 28.7	-0.1
PHWY				ePg	Pg	21 11 31.2	-3.6
PHWY				eS	Sn	21 12 03.0	+3.0
RWWY	Rawlins	2.53	214	eP	Pn	21 11 30.9	+1.8
RWWY				eS	Sn	21 12 03.5	+2.9
RLMT	Red Lodge	3.11	296	ePn	Pn	21 11 39.0	+1.8
RLMT				ePg	Pg	21 11 45.8	-0.7
RLMT				eSn	Sn	21 12 16.5	+1.5
RLMT				eSg	Sg	21 12 26.8	0.0
PDAR	Pinedale Array	3.26	253	Pn	Pn	21 11 40.5	+1.3
	3.9nm,0.3s,baz=74,slow=17,SNR=57						
PDAR				Pg	Pg	21 11 48.5	-0.8
	8.3nm,0.3s,baz=73,slow=18,SNR=31						
PDAR				Lg		21 12 26.4	
	8.4nm,0.3s,baz=78,slow=22,SNR=12						
PDAR	Pinedale Array	3.26	253	Pn	Pn	21 11 40.5	+1.3
PDAR				Pg	Pg	21 11 48.5	-0.8
PDAR				Lg		21 12 26.4	
LKWY	Lake	3.73	284	Pn	Pn	21 11 45.4	-0.2
LOHW	Long Hollow	3.83	269	ePn	Pn	21 11 49.5	+2.5
LOHW				ePg	Pg	21 11 59.6	-0.6
LOHW				eS	Sg	21 12 49.1	-0.7
MOOW	Moose Ponds	3.92	271	ePn	Pn	21 11 50.8	+2.5
MOOW				ePg	Pg	21 12 01.3	-0.7
MOOW				eSn	Sn	21 12 34.9	-0.1
ISCO	Idaho Springs	4.01	183	ePn	Pn	21 11 50.5	+1.0
ISCO				ePg	Pg	21 12 01.9	-1.8
ISCO				eSn	Sn	21 12 37.5	+0.4
ISCO				eSg	Sg	21 12 53.0	-2.6
REDW	Red Top Meadow	4.04	266	ePn	Pn	21 11 52.3	+2.5
REDW				ePg	Pg	21 12 02.5	-1.7
REDW				eS	Sg	21 12 58.8	+2.3
IMW	Indian Meadow	4.06	273	ePn	Pn	21 11 51.5	+1.4
IMW				ePg	Pg	21 12 03.8	-0.8
IMW				eSn	Sn	21 12 37.1	-1.2
TPAW	Teton Pass	4.09	268	ePn	Pn	21 11 52.5	+1.9
TPAW				ePg	Pg	21 12 04.6	-0.6
TPAW				eS	Sn	21 12 43.6	+4.5
DCID1	Drake Creek	4.25	269	ePn	Pn	21 11 55.8	+3.0
DCID1				ePg	Pg	21 12 06.6	-1.7
DCID1				eS	Sg	21 13 02.4	-0.9
AHID	Auburn Hatcher	4.34	258	ePn	Pn	21 11 54.2	+0.2
AHID				ePg	Pg	21 12 07.8	-2.2
AHID				eS	Sn	21 12 55.4	+10
RRI2	Red Ridge	4.38	266	ePn	Pn	21 11 56.3	+1.8
RRI2				ePg	Pg	21 12 08.8	-1.9
RRI2				eS	Sg	21 13 06.0	-1.5
DGMT	Dagmar	4.73	9	ePn	Pn	21 12 01.7	+2.3
DGMT				ePg	Pg	21 12 16.8	-0.7
DGMT				eSn	Sn	21 12 59.7	+4.8
DGMT				eSg	Sg	21 13 17.3	-1.6
BOZ	Bozeman (W)	4.85	294	ePn	Pn	21 12 01.8	+0.7
BOZ				ePg	Pg	21 12 16.0	-3.8
BOZ				eSn	Sn	21 12 57.7	-0.2
BOZ				eSg	Sg	21 13 21.2	-1.4
EGMT	Eagleton	5.23	325	ePn	Pn	21 12 07.4	+1.2
	15nm,0.5s						
EGMT				ePg	Pg	21 12 26.1	-0.8
EGMT				eSn	Sn	21 13 07.7	+0.5
EGMT				eSg	Sg	21 13 36.0	+1.3
DLMT	Dillon	5.42	289	ePn	Pn	21 12 08.4	-0.5
	2.6nm,0.4s						
DLMT				ePg	Pg	21 12 28.1	-2.5
DLMT				Sn	Sn	21 13 11.2	-0.7
DLMT				eSg	Sg	21 13 40.0	-0.8
ECSD	EROS,Sioux Fal	6.31	88	ePn	Pn	21 12 21.6	+0.4
	4.4nm,0.3s						
ECSD				ePg	Pg	21 12 44.4	-3.4
ECSD				eSn	Sn	21 13 33.6	-0.3
CBKS	Cedar Bluff	6.53	138	ePn	Pn	21 12 23.9	-0.2
CBKS				ePg	Pg	21 12 50.5	-1.3
CBKS				eSn	Sn	21 13 37.6	-1.5
CBKS				eSg	Sg	21 14 15.9	-0.4
DUG	Dugway	6.64	240	ePn	Pn	21 12 26.8	+1.2
	1.7nm,0.3s						
DUG				Pg	Pg	21 12 53.5	-0.6
DUG				Sn	Sn	21 13 37.7	-4.3
ELK	Elko	7.96	251	Pn	Pn	21 12 45.9	+2.1
	0.4nm,0.3s,baz=70,slow=13,SNR=7.8						
AGMN	Agassiz Refuge	7.97	52	ePn	Pn	21 12 43.0	-0.8
	5.5nm,0.4s						
AGMN				ePg	Pg	21 13 13.0	-6.5
ULM	Lac du Bonnet	9.12	42	Pn	Pn	21 12 58.5	-1.1
	0.9nm,0.3s,baz=229,slow=14,SNR=7.3						
ULM				Lg		21 15 27.1	
	0.4nm,0.3s,baz=223,slow=19,SNR=1.8						
FFC	Flin Flon	11.14	10	ePn	Pn	21 13 26.2	-1.1
	2.5nm,0.6s						
NVAR	Mina Array Bea	11.16	246	Pn	Pn	21 13 29.8	+2.2
	0.1nm,0.3s,baz=59,slow=9.6,SNR=3.4						
YKA	Yellowknife Ar	19.49	347	P	Pn	21 15 16.8	+0.5
	0.1nm,0.3s,baz=151,slow=14,SNR=3.9						

IDC 09 21:49:25.1±8.1, 2252S×17890W, h0km, mb3.4/1, mb1 3.6/1, mb1mx3.4/15, mbtmp3.4/1, Error ellipse: s-maj=499.2km s-min=63.0km az=153.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.28	259	P	P	21 57 28.6	-0.1
	0.2nm,0.3s,baz=98,slow=8.4,SNR=6.0						
NOA	NORSAR Array B	140.87	352	PKP	PKPdf	22 08 54.1	-2.4
	1.3nm,0.9s,baz=24,slow=3.9,SNR=3.6						
AKASG	Malin Array Be	144.34	329	PKP	PKPdf	22 09 02.9	-0.1
	0.4nm,0.3s,baz=45,slow=3.2,SNR=4.4						
BRTR	Keskin Array B	147.52	309	PKPbc	PKPbc	22 09 11.1	-0.3
	0.2nm,0.5s,baz=116,slow=3.4,SNR=2.9						

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*BJI **09** 21:50:08.8, 1290N×8870W, h89km, mB5.3*

*IDC **09** 21:50:12.9±0.6, 1295N×8858W, h53km±5km, mb3.9/14, mb1 4.2/15, mb1mx4.0/24, mbtmp3.9/15, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=23.3km s-min=10.4km az=52.0*

*ISCJB **09** 21:50:13.9±0.4, 1285N±004×8884W±003, h76km±4km, mb4.5/49, Error ellipse: s-maj=7.9km s-min=3.5km az=37.6*

*CASC **09** 21:50:14.2±2.0, 1292N×8887W, h45km±43km, MD4.4, ML4.5, mb4.7(NEIC)*

*NEIC **09** 21:50:16.8±0.5, 1291N×8873W, h90km±5km, mb4.7/42, MD4.4(SNET), MD5.0(CASC), Error ellipse: s-maj=10.4km s-min=4.6km az=48.0*

NEIC Felt [II] at San Salvador.

ISC 09 21:50:15.5±0.4, 1287N±004×8879W±004, h74km±4km, h57km±2.1km:pP-P, n153, σ1s25/134, mb4.5/49, 8C-15D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	San Vicente	0.74	356	⇓eP	x	21 50 27.7	
SNVI				eS	x	21 50 39.7	
VSM	San Miguel	0.75	42	⇓iP	x	21 50 29.2	
VSM				i P	x	21 50 29.2	
BLLM	Bellamira	0.78	44	⇓iP	x	21 50 29.4	
LFRS	El Faro	0.79	341	⇓iP	x	21 50 27.8	
LBRS	Las Brisas	0.90	344	⇓eP	x	21 50 29.7	
SNET	Serv Nac Est T	0.92	332	i P	x	21 50 29.4	
SNET				eS	x	21 50 40.7	
SNET				AML	x	21 50 42.7	
	comp=Z,14μm,0.2s						
BOQS	Boqueron	0.98	331	⇑iP	x	21 50 30.6	
CNCH	Conchagua	1.02	67	⇓eP	x	21 50 32.7	
CAHU	Cacacuatique	1.06	32	⇓eP	x	21 50 33.4	
CAHU				eS	x	21 50 48.2	
CAHU				AML	x	21 50 51.6	
	comp=Z,10μm,0.7s						
SBLS	San Blas	1.26	320	⇓eP	x	21 50 34.3	
SNJE	San Jose	1.27	321	⇓iP	x	21 50 34.4	
RTR	El Retiro	1.31	321	⇓eP	x	21 50 35.2	
RBDL	Robledal	1.51	325	⇓iP	x	21 50 38.0	
MTO2	Montecristo 2	1.62	340	⇓iP	x	21 50 39.8	
TGUH	Tegucigalpa,Un	1.89	51	ePn	Pn	21 50 45.1	-0.6
TGUH				eSn	Sn	21 51 11.0	+2.3
TEL3	Telica 3	1.92	99	eP	Pn	21 50 44.9	-1.3
IXG	Ixpaco	2.07	309	⇑eP	Pn	21 50 45.9	-2.3
MIRN	Miramar	2.08	102	i P	Pn	21 50 47.0	-1.2
CNGN	Cerro Negro	2.08	100	eP	Pn	21 50 46.8	-1.4
CNGN				eS	Sn	21 51 14.1	+0.9
MOMN	Momotombo	2.25	102	eP	Pn	21 50 49.5	-1.0
COPN	Copaltepe	2.26	108	eP	Pn	21 50 48.9	-1.8
MRL	Marmol	2.35	338	⇓eP	Pn	21 50 51.4	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CSAN		2.41	106	eP	Pn	21 50 51.9	-0.9
XAVN	Gruta Xavier	2.51	106	eP	Pn	21 50 53.0	-1.2
FUG	Fuego 3	2.54	308	eP	Pn	21 50 53.3	-1.2
TISN	Laguna Tiscapa	2.57	106	eP	Pn	21 50 54.0	-0.9
MGAN	Managua	2.59	106	eP	Pn	21 50 53.8	-1.3
MGAN				AML	AML	21 51 27.4	
	comp=Z,2µm,0.4s						
HUEN		2.61	101	i P	Pn	21 50 54.3	-1.2
JAT	Jato	3.12	298	eP	Pn	21 51 00.4	-1.9
SSN	San Juan del S	3.27	118	eP	Pn	21 51 04.2	-0.3
VCR	Vista de Mar	4.13	131⇑	eP	Pn	21 51 17.8	+1.7
CCIG	Comitan	4.69	317	i P	Pn	21 51 23.3	-0.4
CCIG				i S	Sn	21 52 28.0	+11
FORC	Fortuna	4.69	120⇓	eP	Pn	21 51 25.7	+1.9
FORC	Fortuna	4.69	120	eP	Pn	21 51 25.7	+1.9
JCR	Jicaral	4.70	129⇑	eP	Pn	21 51 25.0	+1.1
JCR	Jicaral	4.70	129	eP	Pn	21 51 25.0	+1.2
CGA2	Cerro Gallo 2	5.10	123	eP	Pn	21 51 32.4	+2.9
CGA2				eS	Sn	21 52 28.9	+1.9
CGA2	Cerro Gallo 2	5.10	123	eP	Pn	21 51 32.4	+2.9
CGA2				eS	Sn	21 52 27.1	0.0
PRS1	Puriscal	5.25	123	eP	Pn	21 51 34.4	+3.0
SCX	San Cristobal	5.34	316	i P	Pn	21 51 30.7	-2.1
LAJ	Bijagual	5.47	123⇑	eP	Pn	21 51 32.8	-1.6
LAJ	Bijagual	5.47	123	eP	Pn	21 51 32.7	-1.8
QCR	Quepos	5.69	127⇑	eP	Pn	21 51 39.3	+1.9
URSC	Urasca	5.77	121⇑	eP	Pn	21 51 40.9	+2.4
URSC	Urasca	5.77	121	eP	Pn	21 51 40.9	+2.4
BUS	Buena Vista	5.94	123⇑	eP	Pn	21 51 43.8	+3.0
BAR1		6.48	123⇓	eP	Pn	21 51 50.6	+2.4
BAR1				eS	Sn	21 53 04.3	+3.5
ACR	Cerro Adams	6.94	127	eP	Pn	21 51 57.0	+2.5
ACR				eS	Sn	21 53 14.0	+2.0
ACR	Cerro Adams	6.94	127	eP	Pn	21 51 57.0	+2.5
ACR				eS	Sn	21 53 08.2	-3.8
CMIG	Matias Romero	7.23	306	P	Pn	21 51 57.7	-0.8
	comp=Z,0.5nm,0.3s,baz=120,slow=11,SNR=12						
CMIG				S	Sn	21 53 20.7	+1.6
	comp=Z,1.0nm,0.3s,baz=119,slow=18,SNR=2.8						
TEIG	Tepich	7.33	4	P	Pn	21 51 59.2	-0.7
	comp=Z,2.7nm,0.3s,baz=195,slow=9.5,SNR=13						
TEIG				LR	LR	21 55 12.8	
	comp=Z,826nm,21.3s,baz=111,slow=41						
HUIG	Huatulco	7.65	293	i P	Pn	21 52 09.2	+4.9
HUIG				i S	Sn	21 53 29.5	-0.1
VHO	Vista Hermosa	8.74	300	i P	Pn	21 52 13.2	-5.9
VHO				i S	Sn	21 54 06.6	+11
BCIP	Isla Barro Col	9.53	112	ePn	Pn	21 52 28.9	-1.1
PNIG	Pinotepa	9.69	292	eP	Pn	21 52 25.1	-7.0
PNIG				i S	Sn	21 54 30.9	+12
PPM	Popocatepetl	11.28	304	eP	Pn	21 52 55.8	+1.9
PPM				i S	Sn	21 55 22.6	+24
SOR	Soroa	11.29	28	eP	Pn	21 52 56.3	+2.3
PAYG	Puerto Ayora	13.54	186	Pn	Pn	21 53 21.1	-3.3
ROSC	El Rosal	16.35	118	P	Pn	21 54 00.6	0.0
	comp=Z,0.9nm,0.3s,baz=280,slow=18,SNR=2.2						
DWPF	Disney	16.64	23	eP	Pn	21 54 07.7	+3.6
CHI2		16.96	117	eP	x	21 50 42.1	
SDV	Santo Domingo	18.26	101	P	Pn	21 54 23.2	-0.8
	comp=Z,1.2nm,0.3s,baz=301,slow=4.8,SNR=29						
SDV				PcP	PcP	21 58 54.1	+1.1
	comp=Z,0.1nm,0.3s,baz=316,slow=4.9,SNR=3.7						
SDV	Santo Domingo	18.26	101	Pn	Pn	21 54 15.9	-8.2
	comp=Z,18nm,0.7s						
VBMS	Vicksburg	19.32	356	P	Pn	21 54 38.7	+2.2
	comp=Z,63nm,0.3s						
NATX	Nacogdoches	19.56	345	ePn	Pn	21 54 41.0	+1.7
	comp=Z,89nm,1.3s						
LRAL	Lakeview Retre	20.14	4	eP	P	21 54 45.2	+1.6
	comp=Z,9.9nm,0.8s						
JCT	Junction City	20.27	332	eP	P	21 54 45.1	0.0
	comp=Z,11nm,0.8s						
GOGA	Godfrey	21.02	13	eP	P	21 54 54.2	+1.1
	comp=Z,27nm,0.8s,mb4.6						
TXAR	Lajitas Array	21.43	322	P	P	21 54 58.0	+0.5
	comp=Z,2.9nm,0.6s,mb3.8,baz=145,slow=11,SNR=34						
TXAR				pP		21 55 08.7	
	comp=Z,4.7nm,0.8s,baz=143,slow=9.4,SNR=11						
TXAR				PcP	PcP	21 58 59.6	+1.1
	comp=Z,0.9nm,0.7s,baz=160,slow=5.1,SNR=5.8						
TXAR				pPcP		21 59 15.6	
	comp=Z,1.5nm,0.9s,baz=132,slow=1.9,SNR=6.5						
TXAR				LR	LR	22 03 14.9	
	comp=Z,85nm,21.1s,baz=225,slow=36						
OXF	Oxford	21.55	359	eP	P	21 54 58.6	-0.2
	comp=Z,16nm,0.9s,mb4.3						
NHSC	New Hope	21.63	20	eP	P	21 54 58.4	-1.2
	comp=Z,82nm,1.1s,mb5.0						
UALR	University of	22.04	352	eP	P	21 55 06.0	+1.9
	comp=Z,20nm,1.0s,mb4.4						
ATAH	Atahualpa	22.28	152	P	P	21 55 06.5	-0.3
	comp=Z,1.6nm,0.6s,mb3.6,baz=334,slow=17,SNR=2.4						
SWET	Sewanee	22.40	6	eP	P	21 55 08.5	+0.8
SJG	San Juan	22.42	74	P	P	21 55 00.8	-7.5
CPCT	Cooper Cave	22.81	9	eP	P	21 55 11.8	-0.3
TKL	Tuckaleechee C	23.14	10	P	P	21 55 15.2	-0.2
	comp=Z,9.4nm,0.8s,mb4.2,baz=183,slow=11,SNR=19						
TKL				pP		21 55 25.7	
	comp=Z,5.4nm,0.9s,baz=196,slow=12,SNR=3.3						
TKL				LR	LR	22 04 15.1	
	comp=Z,232nm,20.6s,baz=104,slow=37						
TKL	Tuckaleechee C	23.14	10	eP	P	21 55 14.9	-0.5
WVT	Waverly	23.17	2	eP	P	21 55 15.2	-0.5
	comp=Z,3.5nm,0.9s,mb3.7						
LPIG	La Paz	23.23	302	LR	LR	22 05 13.3	
	comp=Z,144nm,19.7s,baz=226,slow=38						
WMOK	Wichita Mounta	23.58	339	eP	P	21 55 19.2	-0.3
PCRV	Puerto La Cruz	23.82	94	P	P	21 55 21.7	-0.2
	comp=Z,12nm,0.7s,mb4.4,baz=333,slow=14,SNR=5.3						
PCRV				LR	LR	22 04 38.7	
	comp=Z,109nm,21.9s,baz=173,slow=37						
TZTN	Tazewell	24.04	10	eP	P	21 55 24.0	+0.4
	comp=Z,55nm,1.5s,mb4.7						
SIUC	Southern Illin	24.74	359	eP	P	21 55 29.1	-0.9
	comp=Z,13nm,0.6s,mb4.5						
AMTX	Amarillo	24.83	334	eP	P	21 55 31.4	+0.6
	comp=Z,17nm,0.8s,mb4.5						
CCM	Cathedral Cave	25.18	355	eP	P	21 55 33.1	-0.9
	comp=Z,18nm,0.7s,mb4.6						
WCI	Wyandotte Cave	25.35	5	eP	P	21 55 34.0	-1.6
	comp=Z,13nm,0.8s,mb4.4						
WCI				epP	pP	21 55 49.3	-3.5
BLA	Blacksburg	25.37	16	eP	P	21 55 33.8	-2.0
	comp=Z,40nm,1.4s,mb4.7						
KSU1	Kansas State U	27.03	347	eP	P	21 55 50.9	+0.3
ANMO	Albuquerque	27.19	327	P	P	21 55 53.4	+1.2
	comp=Z,0.4nm,0.5s,baz=146,slow=16,SNR=2.6						
ANMO				PcP	PcP	21 59 12.0	+1.1
	comp=Z,1.3nm,0.7s,baz=133,slow=3.9,SNR=5.2						
ANMO				pPcP		21 59 27.1	
	comp=Z,2.0nm,0.8s,baz=121,slow=5.2,SNR=4.4						
ANMO				LR	LR	22 07 18.0	
	comp=Z,82nm,21.8s,baz=344,slow=38						
ANMO	Albuquerque	27.19	327	eP	P	21 55 52.9	+0.7
ANMO				PcP	PcP	21 59 12.0	+1.1
ANMO				pPcP		21 59 27.1	
ANMO				LR	LR	22 07 17.9	
NNA	Nana	27.40	154	LR	LR	22 05 13.2	
	comp=Z,92nm,18.4s,baz=53,slow=33						
ACSO	Alum Creek Sta	27.73	10	eP	P	21 55 55.5	-1.4
SDMD	Soldier's Deli	28.47	20	eP	P	21 56 04.0	+0.5
	comp=Z,13nm,0.7s,mb4.6						
SDCO	Great Sand Dun	28.91	332	eP	P	21 56 08.4	+0.9
BBSR	BB Station	29.39	45	P	P	21 56 06.2	-5.6
MVCO	Mesa Verde	29.97	327	eP	P	21 56 19.4	+2.5
	comp=Z,73nm,2.5s,mb4.9						
ISCO	Idaho Springs	30.65	334	eP	P	21 56 23.5	+0.6
	comp=Z,4.7nm,0.8s,mb4.3						
SMCO	Snowmass	30.75	332	P	P	21 56 17.2	-6.5
	comp=Z,5.3nm,0.8s,mb4.3						
PV04	Paradox Valley	31.08	328	eP	P	21 56 28.0	+1.4
PHWY	Pilot Hill	31.85	336	eP	P	21 56 33.5	+0.1
	comp=Z,7.1nm,1.0s,mb4.3						
PHWY				ePcP	PcP	21 59 21.9	-0.8
SRU	San Rafael	32.45	328	eP	P	21 56 40.7	+2.0
	comp=Z,28nm,2.2s,mb4.6						
RSSD	Black Hills	33.78	340	eP	P	21 56 51.1	+0.9
	comp=Z,6.2nm,0.5s,mb4.7						
PDAR	Pinedale Array	34.79	333	P	P	21 56 58.8	-0.2
	comp=Z,2.1nm,0.8s,mb4.0,baz=138,slow=7.4,SNR=18						
PDAR				PcP	PcP	21 59 31.0	+0.1
	comp=Z,1.4nm,0.6s,baz=136,slow=4.2,SNR=7.0						
PDAR				pPcP		21 59 46.1	
	comp=Z,1.2nm,0.6s,baz=134,slow=5.2,SNR=5.3						
BW06	Boulder Array	34.79	333	eP	P	21 56 59.0	0.0
	comp=Z,73nm,3.0s						
AHID	Auburn Hatcher	35.50	331	eP	P	21 57 05.3	+0.3
	comp=Z,6.0nm,0.7s,mb4.5						
AGMN	Agassiz Refuge	35.80	352	eP	P	21 57 06.4	-1.1
	comp=Z,58nm,2.0s,mb5.2						
REDW	Red Top Meadow	35.84	332	eP	P	21 57 08.3	+0.3
	comp=Z,12nm,0.8s,mb4.9						
SNOW	Snow King Moun	35.88	332	eP	P	21 57 09.1	+0.8
	comp=Z,18nm,0.9s,mb5.0						
SNOW				epP	pP	21 57 22.9	-3.1
LOHW	Long Hollow	35.93	333	eP	P	21 57 09.3	+0.6
	comp=Z,5.9nm,0.8s,mb4.6						
TPAW	Teton Pass	35.99	332	eP	P	21 57 09.9	+0.6
	comp=Z,13nm,1.1s,mb4.8						
RRI2	Red Ridge	36.05	332	eP	P	21 57 10.4	+0.7
	comp=Z,15nm,1.4s,mb4.7						
MOOW	Moose Ponds	36.10	333	eP	P	21 57 10.6	+0.5
	comp=Z,29nm,2.2s,mb4.8						
ELK	Elko	36.16	325	eP	P	21 57 09.5	-1.2
	comp=Z,2.3nm,0.9s,mb4.1						
IMW	Indian Meadow	36.30	333	eP	P	21 57 12.7	+0.8
	comp=Z,2.8nm,0.8s,mb4.2						
NVAR	Mina Array Bea	36.53	319	P	P	21 57 15.1	+1.1
	comp=Z,1.8nm,0.8s,mb4.1,baz=128,slow=7.3,SNR=16						
NVAR				pP	pP	21 57 27.8	-3.9
	comp=Z,1.4nm,0.6s,baz=139,slow=8.7,SNR=6.4						
NVAR				PcP	PcP	21 59 37.6	+1.5
	comp=Z,3.6nm,0.7s,baz=136,slow=4.2,SNR=18						
NVAR				pPcP		21 59 53.3	
	comp=Z,4.3nm,0.7s,baz=132,slow=4.1,SNR=14						
RLMT	Red Lodge	36.57	335	eP	P	21 57 13.9	-0.3
	comp=Z,127nm,2.6s,mb5.4						
HLID	Hailey	37.70	329	eP	P	21 57 24.0	+0.3
HLID				ePcP	PcP	21 59 41.5	+1.9
ULM	Lac du Bonnet	37.72	353	P	P	21 57 21.9	-1.9
	comp=Z,3.2nm,0.8s,mb4.2,baz=176,slow=8.4,SNR=3.7						
ULM				LR	LR	22 14 13.6	
	comp=Z,207nm,18.6s,baz=195,slow=38						
DGMT	Dagmar	37.73	343	eP	P	21 57 23.7	-0.2
	comp=Z,27nm,0.7s,mb5.2						
DGMT				epP	pP	21 57 38.4	-3.4
BOZ	Bozeman (W)	37.98	334	eP	P	21 57 26.5	+0.4
	comp=Z,6.8nm,0.8s,mb4.5						
DLMT	Dillon	38.19	333	eP	P	21 57 28.4	+0.6
	comp=Z,54nm,2.5s,mb4.9						
LRM	Limekiln Ridge	38.48	333	eP	P	21 57 30.8	+0.6
EGMT	Eagleton	39.16	338	eP	P	21 57 36.5	+0.6
	comp=Z,22nm,0.7s,mb5.1						
WALA	Waterton Lakes	41.62	335	eP	P	21 57 56.0	-0.3
FFC	Flin Flon	43.02	349	eP	P	21 58 06.8	-0.7
	comp=Z,39nm,1.8s,mb4.8						
EDM	Edmonton	44.75	339	eP	P	21 58 20.5	-0.9
SCHQ	Schefferville	45.27	18	P	P	21 58 23.6	-1.9
	comp=Z,7.9nm,0.7s,mb4.5,baz=240,slow=11,SNR=6.6						
FCC	Fort Churchill	45.98	356	eP	P	21 58 29.4	-1.6
	comp=Z,2.0nm,2.1s,mb3.5						
BDFB	Brasilia	49.30	124	P	P	21 58 56.0	-1.3
	comp=Z,3.7nm,0.6s,mb4.5,baz=283,slow=16,SNR=12						
CPUP	Villa Florida	49.54	142	P	P	21 58 58.6	-0.5
	comp=Z,1.3nm,0.6s,mb4.1,baz=331,slow=7.1,SNR=6.9						
CPUP				pP	pP	21 59 13.1	-4.5
	comp=Z,2.2nm,0.6s,baz=326,slow=9.4,SNR=4.5						
YKA	Yellowknife Ar	52.87	345	P	P	21 59 22.2	-1.2
	comp=Z,11nm,0.8s,mb5.0,baz=140,slow=7.8,SNR=180						
YKA				pP	pP	21 59 36.7	-5.4
	comp=Z,6.4nm,0.8s,baz=139,slow=7.9,SNR=11						
YKA				PcP	PcP	22 00 30.7	-0.9
	comp=Z,0.9nm,0.7s,baz=148,slow=4.0,SNR=4.5						
YKA	Yellowknife Ar	52.87	345	P	P	21 59 22.2	-1.2
YKA				pP	pP	21 59 36.7	-5.4
YKA				PcP	PcP	22 00 30.8	-0.9
DLBC	Dease Lake	54.97	335	eP	P	21 59 39.4	+0.6
PLCA	Paso Flores	55.95	163	P	P	21 59 45.2	-0.8
	comp=Z,2.0nm,0.8s,mb4.2,baz=297,slow=9.0,SNR=2.6						
PLCA				LR	LR	22 20 36.4	
	comp=Z,44nm,19.4s,baz=7.1,slow=33						
RKT	Rikitea	57.64	232	eT		23 01 49.1	
	comp=Z,4.8nm,0.3s						
RES	Resolute Bay	61.90	358	eP	P	22 00 24.9	-1.8
	comp=Z,4.7nm,0.8s,mb4.6						
INK	Inuvik	62.41	343	eP	P	22 00 29.7	-0.6
	comp=Z,9.3nm,0.8s,mb4.9						
PPT	Papeete	67.19	245	eLR	LR	22 21 16.1	
	comp=Z,205nm,25.8s						
PPT	Papeete	67.19	245	LR	LR	22 23 55.9	
	comp=Z,14nm,19.0s,baz=84,slow=30						
CHGN	Chignik	68.10	326	eP	P	22 01 07.0	-0.2
NOA	NORSAR Array B	83.63	29	LR	LR	22 36 19.4	
	comp=Z,90nm,21.1s,baz=270,slow=33						
TORD	Torodi Ar. Bea	87.59	77	P	P	22 02 53.4	-2.9
	comp=Z,0.1nm,0.5s,baz=291,slow=4.4,SNR=5.8						
TORD				LR	LR	22 35 00.7	
	comp=Z,73nm,20.2s,baz=335,slow=31						
KEST	Kesra	89.06	54	LR	LR	22 37 12.9	
	comp=Z,87nm,18.4s,baz=294,slow=32						
ZALV	Zalesovo Beam	113.22	4	PKiKP	PKiKP	22 08 43.0	-1.5
	comp=Z,0.5nm,0.6s,baz=8.5,slow=2.9,SNR=2.9						
SONM	Songino Array	118.07	348	PKP	PKPdf	22 08 53.3	-0.7
	comp=Z,0.8nm,0.7s,baz=2.5,slow=3.3,SNR=6.9						
SONM				pPKP	pPKPdf	22 09 09.8	-5.3
	comp=Z,0.7nm,0.6s,baz=59,slow=0.9,SNR=4.5						
KSRS	Korea Array	119.22	327	PKP	PKPdf	22 08 57.0	+0.5
	comp=Z,0.6nm,0.3s,baz=47,slow=2.5,SNR=5.7						
KSRS				pPKP	pPKPdf	22 09 12.3	-5.3
	comp=Z,2.0nm,0.7s,baz=28,slow=1.6,SNR=4.2						
MKAR	Makanchi Array	120.07	7	PKP	PKPdf	22 08 56.0	-1.9
	comp=Z,0.4nm,0.6s,baz=339,slow=2.0,SNR=4.2						
LZH	Lanzhou	129.87	347	ePKP	PKPdf	22 09 11.5	-5.5
LZH				PP	PP		
	comp=Z,75nm,5.0s						
ASAR	Alice Springs	138.20	249	PKhKP		22 09 25.7	
	comp=Z,0.4nm,0.7s,baz=114,slow=4.0,SNR=3.4						
ASAR				PKP	PKPdf	22 09 34.2	+1.3
	comp=Z,0.7nm,0.7s,baz=85,slow=1.8,SNR=6.7						
ASAR				pPKP	pPKPdf	22 09 48.9	-5.1
	comp=Z,1.5nm,1.0s,baz=101,slow=3.5,SNR=4.3						
HYB	Hyderabad	147.41	23	i PKP	PKPdf	22 09 50.5	+1.2
HYB	Hyderabad	147.41	23	eP	PKPdf	22 09 45.0	-4.3
CMAR	Chiang Mai Arr	147.95	346	PKPbc	PKPdf	22 09 50.9	+0.7
	comp=Z,2.8nm,0.7s,baz=343,slow=3.6,SNR=15						

IDC 09 22:34:23.7±2.8**, 217S**×**9890E, h0**km**, mb3.6**/6**, mb1 3.7**/6**, mb1mx3.5**/20**, mbtmp3.6**/6**, Error ellipse: s-maj=117.7km s-min=24.5km az=58.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	20.49	0	P	P	22 39 03.5	+0.2
	0.7nm,0.4s,baz=189,slow=11,SNR=3.4						
ASAR	Alice Springs	40.05	125	P	P	22 42 00.5	-0.5
	0.2nm,0.6s,baz=302,slow=7.1,SNR=3.6						
SONM	Songino Array	50.22	7	P	P	22 43 21.0	-0.4
	0.3nm,0.6s,baz=188,slow=6.8,SNR=5.3						
MKAR	Makanchi Array	50.90	345	P	P	22 43 25.8	-0.7
	0.7nm,0.7s,baz=156,slow=8.4,SNR=6.3						
KURK	Kurchatov	55.46	344	P	P	22 43 59.1	-0.9
	0.4nm,0.7s,baz=164,slow=7.2,SNR=2.6						
ZALV	Zalesovo Beam	57.13	350	P	P	22 44 12.7	+0.8
	1.5nm,0.6s,baz=170,slow=5.7,SNR=9.5						
TXAR	Lajitas Array	145.49	36	PKPbc	PKPbc	22 54 05.0	+0.4
	0.6nm,0.5s,baz=329,slow=1.1,SNR=14						

*IDC **09** 23:26:21.2±0.7, 823S×11670E, h0km, mb4.1/8, mb1 4.2/10, mb1mx4.1/18, mbtmp4.2/10, ML4.3/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=27.3km s-min=16.9km az=65.0*
*NEIC **09** 23:26:25.9±0.5, 824S×11680E, h35km, mb4.4/4, Error ellipse: s-maj=15.1km s-min=7.8km az=70.0*
*ISCJB **09** 23:26:26.2±0.6, 8.17S±0.05×116.89E±0.04, h53km±7km, mb4.2/11, MS3.3/2, Error ellipse: s-maj=7.8km s-min=6.0km az=171.5*
*DJA **09** 23:26:28, 8.15S×116.88E, h30km, MLv4.6/10*
ISC 09 23:26:27.2±0.6**, 823S**±005×**11689E**±004**, h42**km±7km**, n40,** σ**1**§**17**/43**, mb4.2**/11**, MS3.3**/2**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.27	264	P	Pn	23 26 47.0	-1.5
KHKI				S	Sn	23 27 04.6	+0.2
DNP	Denpasar	1.72	255	P	Pn	23 26 56.4	+1.8
DNP				S	Sn	23 27 23.1	+7.8
BMNI	Bima	1.81	100	P	Pn	23 26 55.9	0.0
BMNI				S	Sn	23 27 22.7	+5.0
IGBI	Denpasar	1.82	251	P	Pn	23 26 55.9	-0.1
IGBI				S	Sn	23 27 16.9	-0.9
NBBI	Negara	2.25	266	P	Pn	23 27 05.8	+3.9
NBBI				S	Sn	23 27 34.6	+6.2
KMMI	Kalianget	3.12	292	P	Pn	23 27 14.8	+0.9
WSI	Waingapu	3.66	113	P	Pn	23 27 25.5	+4.2
KAPI	Kappang	4.28	42	Pn	Pn	23 27 29.1	-0.8
	7.1nm,0.3s,baz=200,slow=8.6,SNR=23						
KAPI				Sn	Sn	23 28 18.4	-0.1
	34nm,0.3s,baz=225,slow=19,SNR=20						
KAPI	Kappang	4.28	42	P	Pn	23 27 29.2	-0.6
KRKI	Karangkates	4.39	271	P	Pn	23 27 35.3	+4.0
BBKI	Banjar Baru	5.15	337	P	Pn	23 27 43.2	+1.4
	149nm,0.9s,2µm0.7nm						
BATI	Baumata	6.97	107	Pn	Pn	23 28 08.2	+1.3
	13nm,0.3s,baz=278,slow=15,SNR=9.5						
BATI				Sn	Sn	23 29 30.6	+5.7
	0.8nm,0.3s,baz=270,slow=20,SNR=1.9						
BATI				LR	LR	23 31 10.1	
	comp=Z,201nm,19.1s,baz=288,slow=40						
BATI	Baumata	6.97	107	P	Pn	23 28 08.3	+1.5
FITZ	Fitzroy Crossi	12.99	140	eP	Pn	23 29 28.3	-1.0
	6.1nm,0.6s						
FITZ				eS	Sn	23 31 48.1	-4.4
MBWA	Marble Bar	13.15	168	ePn	Pn	23 29 28.1	-3.2
	11nm,0.6s						
KKM	Kota Kinabalu	14.19	357	Pn	Pn	23 29 43.4	-2.3
KAKA	Kakadu	15.93	108	eP	x	23 29 46.6	
	9.2nm,0.6s						
DAV	Davao City (W)	17.50	30	LR	LR	23 36 19.0	
	comp=Z,47nm,20.1s,baz=354,slow=34						
WRAB	Tennant Creek	20.52	126	eP	P	23 31 01.5	-0.5
	9.6nm,0.6s						
WRAB				eS	S	23 34 46.1	-3.4
WB2	Warramunga Arr	20.53	126	eP	P	23 31 01.6	-0.5
PSI	Prapat	21.00	301	LR	LR	23 40 05.0	
	comp=Z,106nm,18.3s,MS3.3,baz=164,slow=40						
NWAO	Narrogin (SRO)	24.58	179	P	P	23 31 43.0	-0.2
	5.2nm,0.7s,mb4.2,baz=18,slow=8.2,SNR=2.9						
NWAO				LR	LR	23 41 59.4	
	comp=Z,104nm,18.4s,MS3.4,baz=336,slow=38						
FORT	Forrest	24.75	157	eP	P	23 31 45.5	+0.7
	14nm,0.7s,mb4.6						
CTAO	Charters Tower	30.76	116	eP	P	23 32 40.1	+1.4
	5.3nm,1.0s,mb4.3						
CMAR	Chiang Mai Arr	31.88	326	P	P	23 32 46.1	-2.6
	0.6nm,0.3s,mb3.9,baz=168,slow=8.8,SNR=2.7						
STKA	Stephens Creek	32.89	139	eP	P	23 32 57.4	+0.1
	3.8nm,0.5s,mb4.6						
STKA	Stephens Creek	32.89	139	P	P	23 32 57.2	-0.1
	4.5nm,0.5s,mb4.6,baz=312,slow=9.9,SNR=15						
GUMO	Guam	35.24	52	P	P	23 33 18.7	+0.8
LSA	Lhasa	45.11	328	eP	P	23 34 38.2	-1.3
	11nm,1.1s,mb4.6						
BJT	Baijiatuau	48.01	359	P	P	23 35 03.6	+1.7
SONM	Songino Array	56.59	352	P	P	23 36 06.8	+1.3
	1.1nm,0.7s,mb4.0,baz=169,slow=8.9,SNR=10						
TLY	Talaya	60.75	351	P	P	23 36 32.8	-1.6
MKAR	Makanchi Array	62.84	334	P	P	23 36 48.2	-0.3
	0.5nm,0.8s,mb3.7,baz=160,slow=7.6,SNR=7.8						
ZALV	Zalesovo Beam	67.59	340	P	P	23 37 19.1	-0.1
	0.7nm,0.6s,mb3.9,baz=162,slow=5.6,SNR=5.0						
VNDA	Vanda	73.08	171	P	P	23 37 53.0	+0.5
	1.1nm,0.7s,mb3.9,baz=301,slow=3.2,SNR=3.8						
VNDA	Vanda	73.08	171	P	P	23 37 53.0	+0.5
BOSA	Boshof	87.54	242	P	P	23 39 11.8	+0.6
	3.2nm,1.1s,mb4.5,baz=117,slow=9.2,SNR=2.6						
TORD	Torodi Ar. Bea	116.27	281	PKP	PKPdf	23 45 05.7	-1.4
	0.5nm,0.6s,baz=74,slow=1.4,SNR=7.9						
CPUP	Villa Florida	145.19	189	PKPbc	PKPbc	23 46 01.4	+0.9
	7.8nm,0.9s,baz=194,slow=4.2,SNR=16						
CPUP	Villa Florida	145.19	189	PKPbc	PKPbc	23 46 01.4	+0.8

*SKHL **09** 23:36:35.2±3.3, 4661N×15324E, h50km±19km, mb5.6/1, mbh5.5/1, msh5.5/1*
*JMA **09** 23:36:36.9±0.7, 4689N×15327E, h30km, M5.0*
*ISCJB **09** 23:36:37.2±0.6, 4669N±005×153.10E±005, h37km±4km, mb4.6/61, MS3.8/9, Error ellipse: s-maj=9.6km s-min=4.0km az=146.1*
*MOS **09** 23:36:38.2±1.1, 4675N×153.18E, h47km, mb4.6/30, Error ellipse: s-maj=8.5km s-min=6.7km az=87.5*
*BJI **09** 23:36:39.2, 4669N×15321E, h59km, mB4.9, mb4.6, Ms4.2, Msz4.0*
*NEIC **09** 23:36:40.8±0.7, 4678N×15307E, h51km±6km, mb4.8/34, Error ellipse: s-maj=8.9km s-min=4.2km az=149.0*
*IDC **09** 23:36:42.4±2.9, 4690N×15304E, h66km±25km, mb3.9/17, mb1 4.2/19, mb1mx4.1/25, mbtmp4.0/19, MS3.5/10, Ms1 3.5/10, ms1mx3.3/44, Error ellipse: s-maj=23.1km s-min=12.5km az=162.0*
ISC 09 23:36:40.0±0.5**, 4676N**±005×**15305E**±006**, h42**km±4km**, h68**km±2.9km**: pP-P, n211,** σ**1**§**22**/233**, mb4.6**/61**, MS3.8**/9**, 17C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.92	249	eP	Pn	23 37 33.7	-3.9
KUR				AMB	AMB	23 37 34.5	
	170nm,0.5s						
KUR				eS	Sn	23 38 20.0	-2.4
KUR				A		23 38 26.6	
	4µm,2.0s						
KUR				A		23 38 26.6	
	2µm,2.0s						
KUR				A		23 38 43.0	
	1µm,0.6s						
KUR				A		23 38 43.0	
	460nm,0.6s						
SKR	Severo-Kuril's	4.42	26	eP	Pn	23 37 42.5	-1.9
SKR				AMB	AMB	23 37 45.0	
	50nm,0.5s						
SKR				AMB	AMB	23 37 45.0	
	80nm,0.5s						
SKR				eS	Sn	23 38 30.5	-4.1
SKR				A		23 38 55.4	
	510nm,0.9s						
SKR				A		23 38 55.4	
	680nm,0.9s						
SKR				A		23 38 55.4	
	310nm,0.9s						
YUK	Yuzh-Kuril'sk	5.75	244	PN	Pn	23 38 03.6	+0.9
YUK				S	Sn	23 39 19.4	+12
YUK				pmax	pmax		
	comp=N,230nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,390nm,0.5s						
YUK				smax			
	comp=N,2µm,0.7s						
YUK				smax			
	comp=E,1µm,0.6s						
YUK				smax			
	comp=N,4µm,1.0s						
YUK				smax			
	comp=E,4µm,1.0s						
YUK	Yuzh-Kuril'sk	5.75	244	eP	Pn	23 38 03.6	+0.9
YUK				AMB	AMB	23 38 13.0	
	comp=E,230nm,0.5s						
YUK				AMB	AMB	23 38 13.0	
	comp=E,190nm,0.5s						
YUK				AMB	AMB	23 38 13.0	
	comp=E,390nm,0.5s						
YUK				A		23 39 35.6	
	comp=E,1µm,0.6s						
YUK				A		23 39 35.6	
	comp=E,4µm,1.0s						
YUK				A		23 39 35.6	
	comp=E,4µm,1.0s						
YUK				A		23 39 35.6	
	comp=E,2µm,0.7s						
NEM2	Nemuro 2	6.19	239	P	Pn	23 38 07.8	-0.9
NEM2				eS	Sn	23 39 14.7	-3.5
JRA	Rausu	6.26	246	P	Pn	23 38 11.7	+2.0
JNK	Nakash	6.69	245	P	Pn	23 38 16.7	+1.1
JNK				eS	Sn	23 39 32.0	+1.5
JTKR	Abashiri--Toko	7.02	250	P	Pn	23 38 22.3	+2.2
JAK	Akkeshi	7.03	241	P	Pn	23 38 19.3	-0.9
JAK				eS	Sn	23 39 35.5	-3.2
PEA0B	Petropavlovsk-	7.03	24	ePn	Pn	23 38 21.9	+1.7
PEA0B				eSn	Sn	23 40 03.9	+25
PETK	Petropavlovsk-	7.03	24	P	Pn	23 38 20.0	-0.2
	comp=E,0.9nm,0.3s,baz=176,slow=10,SNR=13						
PETK				S	Sn	23 39 35.5	-3.1

baz=217,slow=20,SNR=1.6
PETK Petropavlovsk- 7.03 24 P **Pn** **23 38 20.0 -0.2**
PETK S **Sn** **23 39 35.5 -3.1**
YSS Yuzh-Sakhalins 7.06 275 *e*P **Pn** **23 38 19.0 -1.7**
YSS *e*LQ 23 40 08.0
YSS AMS AMS 23 40 58.0
comp=E,500nm,15.0s
YSS AMS AMS 23 40 58.0
comp=E,400nm,17.0s
YSS AMS AMS 23 40 58.0
comp=E,300nm,14.0s
YSS Yuzh-Sakhalins 7.06 275 *e*Pn **Pn** **23 38 20.4 -0.3**
PET Petropavlovsk 7.24 28 *e*PN **Pn** **23 38 28.1 +5.0**
PET pmax pmax
comp=Z,44nm,1.4s
PET MLR MLR
comp=Z,100nm,15.0s
PET Petropavlovsk 7.24 28 *e*Pn **Pn** **23 38 24.0 +0.9**
PET *e*Sn **Sn** **23 39 42.0 -1.8**
JMP Maruseppu 7.36 252 P **Pn** **23 38 28.4 +3.6**
JAR Ashorobuto 7.43 246 P **Pn** **23 38 27.0 +1.2**
JAR *e*S **Sn** **23 39 49.0 +0.3**
JOB Onbets 7.60 243 P **Pn** **23 38 28.3 +0.2**
JOB *e*S **Sn** **23 39 50.8 -2.1**
UGL Uglegorsk 7.74 291 *e*PN **Pn** **23 38 33.0 +3.1**
UGL pmax pmax
comp=Z,90nm,1.0s
UGL MLR MLR
comp=N,500nm,18.0s
UGL MLR MLR
comp=E,500nm,18.0s
UGL MLR MLR
comp=Z,2μm,18.0s
ASAJ Asahikawa 7.81 254 P **Pn** **23 38 35.0 +4.0**
comp=Z,2.4nm,0.3s,baz=92,slow=15,SNR=13
ASAJ S **Sn** **23 40 14.8 +17**
comp=Z,1.3nm,0.3s,baz=131,slow=20,SNR=3.9
ASAJ LR LR 23 41 22.4
comp=Z,310nm,20.0s,baz=147,slow=36
ASAJ Asahikawa 7.81 254 P **Pn** **23 38 34.8 +3.8**
JKK2 Kamakawa 2 7.81 252 P **Pn** **23 38 33.6 +2.6**
TYV Tymovskoe 7.99 305 *e*P **Pn** **23 38 36.0 +2.6**
TYV AMB AMB 23 38 39.0
comp=Z,400nm,2.0s
TYV AMB AMB 23 38 39.0
comp=Z,500nm,3.0s
TYV AMB AMB 23 38 47.5
comp=Z,132nm,1.0s
TYV AMB AMB 23 38 47.5
comp=Z,22nm,0.8s
JCH Churui 8.05 243 P **Pn** **23 38 34.4 +0.1**
JCH *e*S **Sn** **23 40 00.7 -3.2**
JFR Furan 8.24 248 P **Pn** **23 38 38.9 +2.0**
JAB Ashibetsu 8.32 251 P **Pn** **23 38 40.7 +2.8**
JEM Erimo 8.52 240 P **Pn** **23 38 39.6 -1.1**
JEM *e*S **Sn** **23 40 10.9 -4.6**
ERM Erimo 8.52 240 *d i*PN **Pn** **23 38 41.1 +0.3**
ERM Erimo 8.52 240 *e*Pn **Pn** **23 38 40.9 +0.2**
JBT2 Biratori 2 8.58 246 P **Pn** **23 38 41.7 +0.2**
JNBK Urakawa-nobuka 8.61 242 P **Pn** **23 38 41.0 -1.0**
JNBK *e*S **Sn** **23 40 12.2 -5.5**
JNB Noboribetsu 9.58 248 P **Pn** **23 38 55.9 +0.7**
JNB *e*S **Sn** **23 40 39.1 -2.3**
JKB Kayabe 9.89 245 P **Pn** **23 38 58.4 -1.1**
JKB *e*S **Sn** **23 40 42.8 -6.3**
JYM2 Yakumo 2 10.18 247 P **Pn** **23 39 02.8 -0.7**
NKL Nikolayevsk 10.21 313 *e*P **Pn** **23 39 04.0 +0.2**
NKL AMB AMB 23 39 05.0
comp=Z,20nm,1.3s
NKL AMB AMB 23 39 05.0
comp=Z,40nm,1.3s
JTM Tenmabayashi 10.52 240 P **Pn** **23 39 05.6 -2.5**
JTM *e*S **Sn** **23 40 55.9 -8.5**
JANG Nango 10.52 237 P **Pn** **23 39 04.4 -3.7**
JANG *e*S **Sn** **23 40 54.4 -10**
JTH Tanohata 10.62 234 *e*S **Sn** **23 40 58.5 -8.4**
JOSM Okushiri--Mats 10.77 249 P **Pn** **23 39 12.7 +1.1**
OFUJ Ofunato 11.33 231 *e*S **Sn** **23 41 15.2 -9.1**
JRG Rokugo 11.68 235 P **Pn** **23 39 22.1 -1.8**
JRG *e*S **Sn** **23 41 25.2 -7.7**
JIO Ouri 11.96 230 P **Pn** **23 39 24.0 -3.7**
FX1 Attu Island--F 14.33 57 P **Pn** **23 39 57.0 -3.1**
comp=Z,2.6nm,0.3s,baz=250,slow=15,SNR=5.9
FX1 S **Sn** **23 42 23.6 -14**
comp=Z,3.0nm,0.3s,baz=288,slow=20,SNR=7.0
FX1 LR LR 23 45 10.4
comp=Z,81nm,18.8s,baz=292,slow=36
FX1 Attu Island--F 14.33 57 P **Pn** **23 39 57.0 -3.1**
FX1 S **Sn** **23 42 23.6 -14**
FX1 LR LR 23 45 10.4
KLR Kul'dur 14.47 288 *e*P **Pn** **23 39 58.2 -3.7**
KLR MLR MLR
comp=E,500nm,15.0s
KLR MLR MLR
comp=Z,900nm,15.0s
MAJO Matsushiro 15.05 233 *e*P **Pn** **23 40 11.5 +1.8**
MAJO pmax pmax
comp=Z,19nm,0.7s
MAJO Matsushiro 15.05 233 *e*Pn **Pn** **23 40 11.5 +1.8**
comp=Z,19nm,0.7s
MAT Matsushiro 15.05 233 P **Pn** **23 40 15.2 +5.5**
MJAR Matsushiro Arr 15.05 233 P **Pn** **23 40 08.8 -0.9**
comp=Z,0.3nm,0.3s,baz=27,slow=14,SNR=5.6
MJAR LR LR 23 46 08.4
comp=Z,117nm,21.0s,baz=10.0,slow=37
MDJ Mudanjiang 16.52 271 P **Pn** **23 40 29.0 +0.5**
MDJ AP pP 23 40 43.5 +2.8
MDJ XP sP 23 40 51.5 +5.5
MDJ S **S** **23 43 30.4 -11**
MDJ PCS PcS 23 48 55.6 +2.3
MDJ SCS ScS 23 52 26.1 -1.6
MDJ AMB AMB
comp=Z,21nm,0.8s
MDJ AMB AMB
comp=Z,156nm,7.0s
MDJ Mudanjiang 16.52 271 *e*P **Pn** **23 40 31.1 +2.6**
comp=Z,16nm,0.7s
JHJ Hachijo jima 2 16.97 221 LR LR 23 46 32.3
comp=Z,50nm,21.9s,baz=315,slow=35
ZEA Zeya 17.85 302 *e*P **Pn** **23 40 45.6 +0.7**
ZEA AMB AMB 23 40 47.8
comp=Z,22nm,0.9s
CN2 Changchun 19.61 271 *e*P **Pn** **23 41 03.5 -2.7**
YAK Yakutsk 20.29 327 *e*P **P** **23 41 14.9 +3.1**
YAK pmax pmax
comp=Z,29nm,1.3s
YAK pmax pmax
comp=E,16nm,1.2s
YAK pmax pmax
comp=N,11nm,1.5s
KSRS Korea Array 20.76 252 P **P** **23 41 18.6 +1.5**
comp=N,6.8nm,0.8s,baz=56,slow=10,SNR=13
KSRS LR LR 23 48 21.9
comp=N,72nm,19.0s,MS3.1,baz=70,slow=34
KSRS Korea Array 20.76 252 P **P** **23 41 18.6 +1.5**
KSRS pmax pmax
comp=Z,7.0nm,0.8s
KSRS MLR MLR
comp=Z,72nm,19.0s,MS3.1
HIA Hailar 22.32 289 ⇓*i*P **P** **23 41 33.7 0.0**
BILL Bilibino 22.39 13 ⇓*i*P **P** **23 41 35.7 +1.4**
BILL pmax pmax
comp=Z,9.0nm,1.3s,mb4.0
BILL Bilibino 22.39 13 *e*P **P** **23 41 33.0 -1.3**
comp=Z,3.1nm,0.6s,mb3.9
BOD Bodaibo 25.95 310 *e*P **P** **23 42 07.6 -0.5**
BOD pmax pmax
comp=Z,4.0nm,1.8s,mb3.6
BJI Beijing 27.43 269 P **P** **23 42 25.9 +4.3**
BJI S **S** **23 46 57.5 -1.6**
BJI AMB AMB
comp=Z,19nm,0.9s,mb4.6
BJI AMB AMB
comp=Z,124nm,3.6s
BJI LR LR
comp=N,161nm,10.0s,MS4.1
BJI LR LR
comp=E,275nm,13.1s,MS4.1
TIXI Tiksi 27.45 344 ⇓*i*P **P** **23 42 24.8 +3.4**
TIXI pmax pmax
comp=Z,1.0nm,0.5s,mb3.6
HHC Hu-ho-hao-te 30.25 274 *e*P **P** **23 42 48.5 +1.8**
HHC AP pP 23 43 03.3 +5.3
HHC XP sP 23 43 10.2 +7.2
HHC PP PP 23 43 47.8 -7.5
HHC PCP PcP 23 45 49.5 +3.1
HHC *e*S **S** **23 47 40.1 -3.2**
HHC XS sS 23 48 05.1 +2.8
HHC SS SS 23 49 20.1 -33
HHC PCS PcS 23 49 31.9 +2.0
HHC SCS ScS 23 53 18.0 -2.9
HHC AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,125nm,3.6s
HHC LR LR
comp=N,128nm,15.5s,MS3.9
HHC LR LR
comp=E,164nm,14.3s,MS3.9
HHC LR LR
comp=Z,263nm,16.6s,MS4.0
ULN Ulaanbaatar 30.85 289 *e*P **P** **23 42 53.3 +1.4**
ULN pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ULN Ulaanbaatar 30.85 289 *e*P **P** **23 42 53.3 +1.4**
comp=Z,7.2nm,0.9s,mb4.5
SONM Songino Array 31.29 289 P **P** **23 42 55.3 -0.5**
comp=Z,1.0nm,0.8s,mb3.7,baz=76,slow=7.6,SNR=6.4
SONM LR LR 23 56 33.6
comp=Z,197nm,18.2s,MS3.8,baz=45,slow=38
SONM Songino Array 31.29 289 *e*P **P** **23 42 58.2 +2.5**
ZAK Zakamensk 32.63 295 *e*P **P** **23 43 06.5 -1.0**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
COLD Coldfoot 35.35 34 *e*P **P** **23 43 30.4 -0.4**
comp=Z,4.1nm,0.8s,mb4.4
XAN Xi'an 35.47 265 P **P** **23 43 32.2 -0.1**
XAN AP pP 23 43 47.2 +3.4
XAN PP PP 23 44 53.3 +0.1
XAN PPP 23 45 21.0
XAN S **S** **23 49 02.7 -1.8**
XAN AMB AMB
comp=Z,11nm,1.0s,mb4.7
XAN AMB AMB
comp=Z,23nm,10.7s
XAN LR LR
comp=N,72nm,28.0s
XAN LR LR
comp=E,67nm,20.7s
MCK McKinley 35.67 40 P **P** **23 43 34.1 +0.4**
COLA College 36.16 38 *e*P **P** **23 43 37.3 -0.5**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA College 36.16 38 *e*P **P** **23 43 37.3 -0.5**
comp=Z,9.5nm,0.8s,mb4.8
LZH Lanzhou 37.84 272 *e*P **P** **23 43 54.0 +1.5**
LZH AP pP 23 44 13.5 +9.5
LZH AMB AMB
comp=Z,26nm,1.2s,mb4.8
LZH AMB AMB
comp=Z,120nm,4.8s
GTA Gaotai 38.92 279 *e*P **P** **23 44 05.1 +3.6**
GTA AP pP 23 44 21.1 +8.0
GTA XP sP 23 44 28.2 +10
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.2
CD2 Chengdu 40.84 265 *e*P **P** **23 44 17.9 +0.4**
CD2 AP pP 23 44 33.5 +4.4
CD2 PP PP 23 45 56.2 +4.2
CD2 PCP PcP 23 46 20.0 +2.3
CD2 S **S** **23 50 23.4 -2.3**
CD2 XS sS 23 50 49.2 +4.2
CD2 SS SS 23 53 20.2 -7.5
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,250nm,6.6s
CD2 LR LR
comp=E,1μm,9.8s
GYA Guiyang 41.67 257 *e*P **P** **23 44 23.6 -0.8**
GYA AP pP 23 44 41.2 +5.2
GYA XP sP 23 44 48.5 +7.5
GYA PCP PcP 23 46 20.4 -0.1
GYA SCP ScP 23 50 03.7 -3.4
GYA PCS PcS 23 50 11.0 -1.1
GYA S **S** **23 50 35.1 -3.1**
GYA XS sS 23 51 03.8 +6.3
GYA SCS ScS 23 54 18.6 -5.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
GYA AMB AMB
comp=Z,80nm,4.9s
ZALV Zalesovo Beam 42.57 306 P **P** **23 44 29.6 -1.8**
comp=Z,0.9nm,0.6s,mb3.7,baz=70,slow=6.5,SNR=4.6
ZALV PcP PcP 23 46 22.8 -0.2
comp=Z,1.1nm,0.6s,baz=93,slow=3.2,SNR=5.1
ZALV LR LR 00 03 58.3
comp=Z,54nm,18.9s,MS3.5,baz=244,slow=38
ZALV Zalesovo Beam 42.57 306 P **P** **23 44 29.6 -1.8**
ZALV 23 46 22.8
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
ZALV MLR MLR
comp=Z,54nm,18.9s,MS3.5
WMQ Urumqi 44.88 291 *e*P **P** **23 44 52.0 +1.9**
WMQ LR LR
comp=N,211nm,30.0s,MS3.9
WMQ LR LR
comp=E,66nm,28.0s,MS3.9
WMQ LR LR
comp=Z,155nm,25.0s,MS3.8
KMI Kunming 45.20 259 P **P** **23 44 54.0 +1.2**
KMI AP pP 23 45 11.9 +7.3
KMI S **S** **23 51 27.3 -2.5**
KMI SS SS 23 54 41.8 -11
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb4.4
KMI AMB AMB
comp=Z,67nm,3.2s
MK31 Makanchi Array 46.90 297 *e*P **P** **23 45 05.4 -0.5**
MKAR Makanchi Array 46.90 297 P **P** **23 45 04.8 -1.1**
comp=Z,1.8nm,0.6s,mb4.2,baz=64,slow=7.3,SNR=15
MKAR PcP PcP 23 46 37.7 -0.3
comp=Z,1.5nm,0.8s,baz=57,slow=1.9,SNR=6.2
MKAR Makanchi Array 46.90 297 P **P** **23 45 04.9 -1.0**
MKAR 23 46 37.7
MKAR pmax pmax
comp=Z,2.0nm,0.6s
KURK Kurchatov 47.32 304 P **P** **23 45 08.1 -1.0**
comp=Z,2.7nm,0.8s,mb4.2,baz=70,slow=8.6,SNR=16
KURK Kurchatov 47.32 304 P **P** **23 45 08.1 -1.1**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KURK Kurchatov 47.32 304 *e*P **P** **23 45 08.0 -1.2**
comp=Z,36nm,2.4s,mb4.9
LSA Lhasa 50.23 273 P **P** **23 45 34.0 +2.2**
LSA Lhasa 50.23 273 *e*P **P** **23 45 32.9 +1.1**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
LSA Lhasa 50.23 273 *e*P **P** **23 45 32.9 +1.2**
comp=Z,9.4nm,0.6s,mb5.0
RES Resolute Bay 50.84 19 P **P** **23 45 35.2 -0.5**
comp=Z,1.4nm,0.8s,mb3.9,baz=301,slow=9.4,SNR=6.2
RES Resolute Bay 50.84 19 P **P** **23 45 35.3 -0.5**
RES pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
RES Resolute Bay 50.84 19 *e*P **P** **23 45 35.8 0.0**
BRVK Borovoye 50.86 309 *e*P **P** **23 45 36.0 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
BRVK Borovoye 50.86 309 *e*P **P** **23 45 36.0 -0.2**
comp=Z,1.7nm,0.5s,mb4.2
YKA Yellowknife Ar 50.94 37 P **P** **23 45 36.0 -0.6**
comp=Z,1.0nm,0.5s,mb4.0,baz=298,slow=7.4,SNR=14
YKA Yellowknife Ar 50.94 37 P **P** **23 45 36.0 -0.7**
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 50.94 37 P **P** **23 45 36.0 -0.6**
CHTO Chiang Mai 52.08 257 *e*P **P** **23 45 46.8 +1.1**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CHTO Chiang Mai 52.08 257 *e*P **P** **23 45 46.8 +1.1**
comp=Z,8.6nm,0.9s,mb4.7
SHL Shillong 52.33 268 *e*P **P** **23 45 51.5 +4.0**
CMAR Chiang Mai Arr 52.33 256 P **P** **23 45 48.8 +1.1**
comp=Z,3.3nm,0.8s,mb4.3,baz=35,slow=7.7,SNR=23
CMAR Chiang Mai Arr 52.33 256 P **P** **23 45 48.8 +1.2**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 53.79 296 *e*P **P** **23 45 58.0 -0.1**
TAPN Taplejung 54.05 273 *e*P **P** **23 46 01.0 +0.8**
comp=Z,17nm,0.8s,mb5.0
EKS2 Erkin-Say 54.22 297 P **P** **23 46 00.9 -0.3**
ODAN Odare 54.59 273 *e*P **P** **23 46 05.4 +1.3**
comp=Z,11nm,0.6s,mb5.0
JIRN Jiri 54.90 275 *e*P **P** **23 46 07.5 +1.1**
comp=Z,26nm,0.6s,mb5.4
GUN Gumba 54.96 275 *e*P **P** **23 46 07.5 +0.7**
comp=Z,14nm,0.5s,mb5.2
ARU Arti 54.98 317 *c i*P **P** **23 46 06.2 -0.3**
ARU *e* 23 48 07.3
ARU *e*S **S** **23 53 45.4 +0.3**
ARU SS SS 23 57 33.5 +5.2
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
ARU Arti 54.98 317 *e*P **P** **23 46 04.7 -1.7**
comp=Z,2.9nm,0.5s,mb4.6
RAMN Ramite 55.07 274 *e*P **P** **23 46 08.4 +0.8**
comp=Z,28nm,0.6s,mb5.5
KKN Kakani 55.44 275 *e*P **P** **23 46 10.9 +0.6**
comp=Z,24nm,0.6s,mb5.4
PKI Pulchoki 55.49 275 *e*P **P** **23 46 11.4 +0.8**
comp=Z,15nm,0.6s,mb5.2
PKI Pulchoki 55.49 275 *e*P **P** **23 46 11.4 +0.8**
PKI pmax pmax
comp=Z,15nm,0.6s,mb5.2
DMN Daman 55.68 275 *e*P **P** **23 46 13.1 +1.2**
comp=Z,21nm,0.7s,mb5.3
GKN Gorkha 55.75 276 *e*P **P** **23 46 13.2 +0.7**
comp=Z,47nm,1.0s,mb5.5
DANN Dangsing 56.13 277 *e*P **P** **23 46 16.4 +1.2**
comp=Z,31nm,0.6s,mb5.5
EDM Edmonton 56.34 46 *e*P **P** **23 46 15.3 -1.0**
KOLN Koldanda 56.60 276 *e*P **P** **23 46 19.3 +0.7**
comp=Z,33nm,0.9s,mb5.3
ARCES ARCESS Array B 57.83 341 P **P** **23 46 25.9 -0.7**
comp=Z,3.7nm,0.9s,mb4.4,baz=32,slow=8.6,SNR=4.2
ARCES ARCESS Array B 57.83 341 P **P** **23 46 25.9 -0.7**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
SUMG Summit 60.69 4 *e*P **P** **23 46 46.4 +0.1**
comp=Z,114nm,3.0s
FCC Fort Churchill 61.28 33 *e*P **P** **23 46 49.9 -0.6**
comp=Z,0.2nm,1.0s
JOF Joensuu 61.31 334 *e*p **P** **23 46 49.4 -1.2**
comp=Z,0.7nm,0.5s,mb4.0
JOF Joensuu 61.31 334 *e*P **P** **23 46 49.4 -1.2**
JOF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
KBL Kabul 62.02 292 *e*P **P** **23 46 55.0 -0.9**
KBL pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
KBL Kabul 62.02 292 *e*P **P** **23 46 55.0 -0.9**
comp=Z,6.5nm,0.9s,mb4.8
NVAR Mina Array Bea 62.47 62 P **P** **23 46 58.9 0.0**
comp=Z,1.2nm,0.8s,mb4.0,baz=290,slow=7.0,SNR=7.6
KAF Kangasniemi 63.41 335 *e*p **P** **23 47 03.6 -1.1**
comp=Z,0.5nm,0.4s,mb4.0
KAF Kangasniemi 63.41 335 *e*P **P** **23 47 03.6 -1.1**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
RRI2 Red Ridge 63.42 54 *e*P **P** **23 47 06.3 +1.3**
comp=Z,4.3nm,0.8s,mb4.6
TPAW Teton Pass 63.53 54 *e*P **P** **23 47 07.3 +1.5**
comp=Z,38nm,2.3s,mb5.0
TPAW *e*pP pP 23 47 14.2 -3.8
PSI Prapat 64.05 244 P **P** **23 47 09.1 -0.5**
comp=Z,4.2nm,0.8s,mb4.5,baz=60,slow=9.1,SNR=4.2
PSI Prapat 64.05 244 P **P** **23 47 09.1 -0.4**
PSI pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
PSI Prapat 64.05 244 P **P** **23 47 09.1 -0.5**
DUG Dugway 64.61 58 *e*P **P** **23 47 13.0 +0.1**
DUG pmax pmax
comp=Z,16nm,2.0s,mb4.7
DUG Dugway 64.61 58 *e*P **P** **23 47 13.0 0.0**
comp=Z,16nm,2.0s,mb4.7
PDAR Pinedale Array 64.78 54 P **P** **23 47 13.5 -0.5**
comp=Z,1.7nm,0.9s,mb4.1,baz=293,slow=1.7,SNR=12
FRB Frobisher Bay 65.06 19 LR LR 00 19 44.3
comp=Z,86nm,18.2s,MS4.0,baz=98,slow=40
SFJD Kangerlussuaq 65.15 10 LR LR 00 15 52.8
comp=Z,116nm,21.6s,MS4.0,baz=280,slow=36
SRU San Rafael 66.65 57 *e*P **P** **23 47 26.4 +0.3**
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
SRU San Rafael 66.65 57 *e*P **P** **23 47 26.4 +0.3**
comp=Z,3.0nm,0.7s,mb4.4
SRU *e*pP pP 23 47 33.5 -4.9
HYB Hyderabad 66.95 271 *i*P **P** **23 47 27.0 -1.3**
HYB Hyderabad 66.95 271 *e*P **P** **23 47 27.0 -1.3**
NB2 NORSAR Subarra 68.20 341 P **P** **23 47 34.7 -0.8**
comp=Z,11nm,0.7s,mb5.0,baz=27,slow=6.5
NOA NORSAR Array B 68.20 341 P **P** **23 47 34.5 -1.0**
comp=Z,8.3nm,0.7s,mb4.9,baz=27,slow=6.3,SNR=30
NOA LR LR 00 23 13.6
comp=Z,46nm,21.2s,MS3.7,baz=265,slow=41
NOA NORSAR Array B 68.20 341 *e*P **P** **23 47 34.8 -0.7**
WRAB Tennant Creek 68.50 199 *e*P **P** **23 47 37.7 -0.1**
KIV Kislovodsk 70.76 314 P **P** **23 47 52.0 +0.4**
AKASG Malin Array Be 71.51 326 P **P** **23 47 54.6 -1.5**
comp=Z,4.2nm,0.5s,mb4.6,baz=33,slow=6.1,SNR=20
AKASG Malin Array Be 71.51 326 P **P** **23 47 54.6 -1.5**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
KWP Kalwaria 74.79 329 ⇓*i*P **P** **23 48 16.1 +0.7**
OJC Ojcow 75.29 331 *e*P **P** **23 48 18.2 -0.1**
STHS Stebnicka Huta 75.48 330 *e*P **P** **23 48 20.1 +0.7**
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
STHS Stebnicka Huta 75.48 330 *e*P **P** **23 48 20.1 +0.7**
comp=Z,7.5nm,1.0s,mb4.6
STHS *e* 23 48 22.6
KOLS Kolonicke sedl 75.53 329 *e*P **P** **23 48 19.2 -0.5**
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 75.53 329 *e*P **P** **23 48 19.2 -0.5**
comp=Z,6.2nm,1.1s,mb4.5
BUR08 Bucovina Ar. S 75.54 327 *e*P **P** **23 48 19.7 0.0**
BURAR Bucovina Array 75.56 327 ⇓*i*P **P** **23 48 19.8 -0.1**
BURAR Bucovina Array 75.56 327 ⇓P **P** **23 48 19.8 -0.1**
CRVS Cervenica-Dubn 75.85 329 *e*P **P** **23 48 21.1 -0.4**
CRVS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CRVS Cervenica-Dubn 75.85 329 *e*P **P** **23 48 21.1 -0.4**
comp=Z,4.4nm,1.0s,mb4.3
TRPA Tarpa 76.12 328 ⇑*i*P **P** **23 48 23.2 +0.2**
TLCR 76.12 323 ⇑*i*P **P** **23 48 23.1 0.0**
TLCR 76.12 323 ⇑P **P** **23 48 23.1 0.0**
DPC Dobruska-Polom 76.30 333 *e*P **P** **23 48 24.2 +0.2**
ODB Odobesti 76.36 324 ⇓*i*P **P** **23 48 26.0 +1.6**
ODB Odobesti 76.36 324 ⇓P **P** **23 48 25.9 +1.5**
CLL Collm 76.44 336 *e*P **P** **23 48 24.0 -0.8**
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 76.44 336 ⇓*i*P **P** **23 48 24.1 -0.7**
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 76.44 336 *e*P **P** **23 48 24.0 -0.8**
comp=Z,8.0nm,0.8s,mb4.7
PLOR Plostina 76.45 325 ⇑*i*P **P** **23 48 31.9 +6.9**
MLR Muntele Rosu 77.03 325 ⇑*i*P **P** **23 48 29.0 +0.7**
MLR Muntele Rosu 77.03 325 ⇑P **P** **23 48 29.1 +0.8**
VYHS Vyhne 77.10 331 *e*P **P** **23 48 28.3 -0.3**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 77.10 331 *e*P **P** **23 48 28.3 -0.3**
comp=Z,2.8nm,0.9s,mb4.2
VRAC Vranov 77.12 332 ⇑*i*P **P** **23 48 26.3 -2.4**
VRAC Vranov 77.12 332 ⇑P **P** **23 48 26.3 -2.4**
PRU Pruhonice 77.16 334 *e*P **P** **23 48 28.9 0.0**
KOLL Kolacno 77.17 331 *e*P **P** **23 48 29.3 +0.3**
DRGR 77.18 328 ⇓*i*P **P** **23 48 29.3 +0.2**
DRGR 77.18 328 ⇓P **P** **23 48 29.3 +0.2**
VOIR 77.43 325 ⇑*i*P **P** **23 48 30.9 +0.4**
VOIR 77.43 325 ⇑P **P** **23 48 30.9 +0.4**
TREC Trest 77.48 333 *e*P **P** **23 48 26.9 -3.8**
TXAR Lajitas Array 77.53 61 P **P** **23 48 30.6 -0.8**
comp=Z,2.0nm,0.6s,mb4.2,baz=301,slow=4.8,SNR=30
TXAR Lajitas Array 77.53 61 P **P** **23 48 30.6 -0.7**
TXAR pmax pmax
comp=Z,2.0nm,0.6s
SMOL Smolenice 77.55 332 *e*P **P** **23 48 31.4 +0.3**
KHC Kasperske Hory 78.21 334 *e*P **P** **23 48 34.9 +0.1**
GZR Gura Zlata 78.34 327 ⇑*i*P **P** **23 48 35.6 +0.1**

GZR Gura Zlata 78.34 327 ⇑P P 23 48 35.6 0.0
BRTR Keskin Array B 78.35 317 P P 23 48 35.8 +0.1
comp=Z,4.7nm,0.8s,mb4.5,baz=64,slow=3.4,SNR=24
BRTR Keskin Array B 78.35 317 P P 23 48 35.8 +0.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
GERES GERESS Array B 78.43 334 P P 23 48 35.7 -0.2
comp=Z,1.3nm,0.7s,mb4.0,baz=32,slow=5.2,SNR=12
GERES GERESS Array B 78.43 334 P P 23 48 35.7 -0.3
GERES pmax pmax
comp=Z,1.0nm,0.7s
BZS Buzias 78.58 328 ⇑iP P 23 48 36.3 -0.6
BZS Buzias 78.58 328 ⇑P P 23 48 36.3 -0.6
MIB Mutribah 78.62 301 eP P 23 48 37.3 -0.1
baz=301
MIB AMb AMB 23 48 38.5
comp=Z,46nm,0.7s,mb5.5,baz=301
KBD Kabd 78.87 301 eP P 23 48 38.8 0.0
baz=301
KBD AMb AMB 23 48 44.9
comp=Z,44nm,1.6s,mb5.1,baz=301
NAY Al-Naaiem 79.09 301 eP P 23 48 39.7 -0.3
baz=301
NAY AMb AMB 23 48 41.4
comp=Z,21nm,1.0s,mb5.0,baz=301
PKSM Moragy 79.14 330 ⇑iP P 23 48 39.2 -0.7
PKSM Moragy 79.14 330 ⇑P P 23 48 39.2 -0.7
MIV Mineville/With 80.63 32 eP P 23 48 49.2 +1.2
CFAA Coronel Fontan 145.03 79 PKPbc PKPbc 23 56 10.1 -1.8
comp=Z,0.3nm,0.8s,baz=332,slow=1.6,SNR=4.2
PLCA Paso Flores 148.25 95 PKPbc PKPbc 23 56 19.2 -1.7
comp=Z,1.4nm,0.6s,baz=325,slow=3.4,SNR=5.6
PLCA Paso Flores 148.25 95 PKP2 PKPbc 23 56 19.2 -1.7
PLCA pmax pmax
comp=Z,1.0nm,0.6s
CPUP Villa Florida 148.50 60 PKPbc PKPbc 23 56 20.6 -1.3
comp=Z,1.1nm,0.6s,baz=312,slow=1.7,SNR=4.2
CPUP Villa Florida 148.50 60 PKP2 PKPbc 23 56 20.7 -1.3
CPUP pmax pmax
comp=Z,1.0nm,0.6s

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*ISCJB **09** 23:44:43.8±0.8, 1620S±005×6959W±005, h207km±9km, mb3.9/13, Error ellipse: s-maj=9.5km s-min=7.1km az=43.2*
*IDC **09** 23:44:44.4±1.3, 16.17S×6945W, h194km±11km, mb3.6/10, mb1 3.7/14, mb1mx3.6/24, mbtmp3.5/14, Error ellipse: s-maj=18.0km s-min=13.0km az=41.0*
*NEIC **09** 23:44:44.9±0.8, 16.18S×6949W, h200km±8km, mb3.9/5, Error ellipse: s-maj=10.4km s-min=6.8km az=56.0*
ISC 09 23:44:45.3±0.9, **1620S**±007×**6950W**±006, **h204**km±10km, **n37**, σ0s**77**/38, **mb3.8**/13, **Peru-Bolivia border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 6.41 175 P Pn 23 46 17.0 -0.8
3.7nm,0.3s,baz=338,slow=8.9,SNR=35
LVC S Sn 23 47 24.7 -6.5
12nm,0.3s,baz=119,slow=6.4,SNR=18
SIV San Ignacio 8.11 90 P Pn 23 46 39.9 0.0
1.0nm,0.3s,baz=275,slow=11,SNR=19
SIV S Sn 23 48 11.5 +0.2
0.4nm,0.3s,baz=250,slow=13,SNR=3.9
NNA Nana 8.26 300 P Pn 23 46 42.1 +0.2
1.0nm,0.3s,baz=121,slow=18,SNR=3.9
NNA S Sn 23 48 09.9 -5.2
2.7nm,0.3s,baz=213,slow=15,SNR=5.7
LCO Las Campanas 12.80 185 ePn Pn 23 47 40.2 +0.1
LCO eSn Sn 23 49 56.5 -6.5
CPUP Villa Florida 15.17 134 ePn Pn 23 48 09.4 0.0
CFAA Coronel Fontan 15.38 176 P Pn 23 48 12.8 +0.9
0.2nm,0.3s,baz=351,slow=11,SNR=9.5
CFAA Coronel Fontan 15.38 176 P Pn 23 48 12.8 +0.9
BDFB Brasilia 20.67 91 P P 23 49 09.5 -0.1
3.2nm,0.6s,baz=242,slow=18,SNR=12
BDFB Brasilia 20.67 91 eP P 23 49 13.5 +3.8
PLCA Paso Flores 24.46 182 P P 23 49 45.2 -0.2
2.3nm,0.8s,mb3.9,baz=6.8,slow=6.2,SNR=4.7
PLCA Paso Flores 24.46 182 eP P 23 49 45.6 +0.1
2.1nm,0.9s,mb3.8
SDV Santo Domingo 24.95 357 P P 23 49 50.1 +0.1
1.2nm,0.4s,mb3.9,baz=135,slow=1.4,SNR=3.8
OXF Oxford 53.87 340 P P 23 53 47.4 0.0
WVT Waverly 54.86 342 eP P 23 53 52.6 -1.9
MIAR Mount Ida 55.41 336 eP P 23 53 58.0 -0.6
TXAR Lajitas Array 56.01 324 P P 23 54 03.6 +0.7
0.2nm,0.4s,mb3.0,baz=144,slow=6.5,SNR=6.2
WMOK Wichita Mounta 57.80 332 eP P 23 54 15.0 -0.3
ANMO Albuquerque 61.80 326 eP P 23 54 41.9 -0.7
3.6nm,1.7s,mb3.7
SDCO Great Sand Dun 63.44 329 eP P 23 54 54.4 +1.1
4.8nm,1.4s,mb3.9
PV01 Paradox Valley 65.31 327 eP P 23 55 07.3 +1.8
RSSD Black Hills 67.81 334 P P 23 55 21.5 +0.3
DBIC Dimbokro 67.87 76 P P 23 55 21.8 -0.5
5.1nm,0.4s,mb4.5,baz=223,slow=6.6,SNR=30
PDAR Pinedale Array 69.27 330 P P 23 55 30.9 +0.7
0.3nm,0.5s,mb3.2,baz=110,slow=11,SNR=4.5
ULM Lac du Bonnet 70.12 342 P P 23 55 33.8 -1.5
2.8nm,0.3s,mb4.3,baz=195,slow=6.8,SNR=7.0
SCHQ Schefferville 70.78 2 P P 23 55 38.6 -0.5
TOA0 Torodi Ar. Sit 76.17 72 eP P 23 56 10.7 -0.8
TORD Torodi Ar. Bea 76.17 72 P P 23 56 10.7 -0.8
4.6nm,0.6s,mb4.3,baz=250,slow=4.4,SNR=84
SBA Scott Base 80.92 190 P P 23 56 35.1 -1.2
41nm,0.9s
TSUM Tsumeb 82.14 108 eP P 23 56 44.8 +1.0
1.1nm,0.6s,mb3.7
ESDC Sonseca Array 82.48 45 P P 23 56 45.6 +0.6
0.5nm,0.5s,mb3.5,baz=258,slow=5.6,SNR=5.3
ESLA Sonseca Array 82.48 45 eP P 23 56 45.9 +0.9
YKA Yellowknife Ar 86.02 341 P P 23 57 02.3 0.0
0.7nm,0.5s,mb3.6,baz=134,slow=4.8,SNR=22
LSZ Lusaka 92.95 107 eP P 23 57 36.2 +0.3
3.8nm,0.8s,mb4.5
INK Inuvik 95.79 340 eP P 23 57 48.1 +0.4
ZALV Zalesovo Beam 137.35 22 PKP PKPdf 00 03 45.4 +1.2
1.3nm,0.6s,baz=291,slow=3.2,SNR=7.0
ZALV SKP 00 07 00.4
0.8nm,0.6s,baz=318,slow=1.9,SNR=4.4
MKAR Makanchi Array 141.55 31 PKP PKPdf 00 03 53.4 +1.3
0.5nm,0.7s,baz=283,slow=2.9,SNR=4.7
MKAR SKPbc SKPbc 00 07 11.3 +1.3
0.7nm,0.7s,baz=316,slow=3.4,SNR=5.0
SONM Songino Array 148.27 5 PKPbc PKPbc 00 04 08.7 +1.4
4.5nm,0.4s,baz=325,slow=1.9,SNR=84

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*MOS **09** 23:47:05.5±1.5, 4577N×14220E, h240km, mb3.9/1, Error ellipse: s-maj=67.6km s-min=44.7km az=100.5*
*ISCJB **09** 23:47:06.2±0.5, 4500N±006×1424E±0.1, h279km±5km, mb2.9/5, Error ellipse: s-maj=12.4km s-min=10.0km az=159.9*
*JMA **09** 23:47:06.8±0.3, 4508N×14233E, h275km±3km, M3.1*
*IDC **09** 23:47:07.0±1.6, 4558N×14228E, h247km±47km, mb2.9/5, mb1 3.1/5, mb1mx2.9/20, mbtmp2.9/5, Error ellipse: s-maj=97.6km s-min=21.9km az=172.0*
ISC 09 23:47:07.1±0.5, **4497N**±006×**1424E**±0.1, **h274**km±5km, **n27**, σ1s**03**/34, **mb2.9**/5, **1D, Hokkaido region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JSE Soyaes 0.10 97 P Pn 23 47 42.0 0.0
JWK2 Keihoku 0.51 312 P Pn 23 47 42.4 -0.2
JWK2 eS S 23 48 09.9 -0.9
JSS Shosan 0.71 216 P Pn 23 47 43.7 +0.3
ASAJ Asahikawa 0.86 172 P Pn 23 47 44.9 +0.9
33nm,0.3s,baz=352,slow=4.0,SNR=62
ASAJ S S 23 48 13.1 -0.2
baz=38,slow=19,SNR=1.5
ASAJ Asahikawa 0.86 172 P Pn 23 47 44.8 +0.8
ASAJ Asahikawa 0.86 172 PN Pn 23 47 44.9 +0.9
ASAJ S S 23 48 13.1 -0.1
ASAJ pmax pmax
comp=Z,33nm,0.3s
JKK2 Kamakawa 2 1.12 168 P Pn 23 47 46.2 +0.9
JMP Maruseppu 1.17 145 P Pn 23 47 46.3 +0.7
JHR Hokuryu 1.33 203 P Pn 23 47 47.1 +0.5
JTKR Abashiri--Toko 1.45 133 P Pn 23 47 48.4 +1.1
JAB Ashibetsu 1.48 186 P Pn 23 47 48.3 +0.8
JFR Furan 1.81 176 P Pn 23 47 50.8 +0.8
JAR Ashorobuto 1.93 150 P Pn 23 47 52.2 +1.2
YSS Yuzh-Sakhalins 1.99 6 ⇓iPN Pn 23 47 50.0 -1.4
JRA Rausu 2.18 117 P Pn 23 47 54.8 +1.7
JEW Eniwo 2.25 199 P Pn 23 47 54.9 +1.1
JCH Churui 2.45 164 P Pn 23 47 55.0 -0.6
JCH eS S 23 48 31.7 -2.4
JAK Akkeshi 2.56 140 P Pn 23 47 57.4 +0.7
JAK eS S 23 48 34.7 -1.3
JNBK Urakawa-nobuka 2.70 175 P Pn 23 47 58.6 +0.5
JNBK eS S 23 48 38.7 +0.2
NEM2 Nemuro 2 2.87 123 eS S 23 48 40.0 -1.5
JKB Kayabe 3.25 199 P Pn 23 48 03.5 -0.2
JKB eS S 23 48 46.8 -1.9
SONM Songino Array 24.88 290 P P 23 52 05.2 +0.2
comp=Z,0.2nm,0.4s,mb2.9,baz=82,slow=9.4,SNR=3.6
SONM Songino Array 24.88 290 P P 23 52 05.2 +0.2
SONM pmax pmax
comp=Z,1.0nm,0.1s
MKAR Makanchi Array 41.01 295 P P 23 54 22.6 -1.1
comp=Z,0.4nm,0.5s,mb2.9,baz=74,slow=6.8,SNR=6.4
RES Resolute Bay 54.74 16 P P 23 56 06.0 -1.9
comp=Z,0.3nm,0.4s,mb3.0,baz=311,slow=5.7,SNR=3.9
YKA Yellowknife Ar 56.64 33 P P 23 56 21.2 -0.3
comp=Z,0.1nm,0.3s,mb2.8,baz=304,slow=6.8,SNR=3.9
PDAR Pinedale Array 71.64 48 P P 23 57 59.9 +1.0
comp=Z,0.4nm,0.7s,mb3.1,baz=337,slow=2.1,SNR=3.6

TRN 09 23:52:41.1, 1506N×6133W, h148km, MD3.8, M2.7(FDF), **2C-2D, Leeward Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FDF Fort de France 0.37 152 ⇑eP Pn 23 53 02.7 +1.1
FDF ⇑eS Sn 23 53 18.0 +0.8
BIM Bigot 0.59 155 eP Pn 23 53 03.5 +0.8
BIM eS Sn 23 53 21.0 +1.8
MVM Montagne Vaucl 0.66 140 ⇓eP Pn 23 53 03.4 +0.3
MVM ⇓eS Sn 23 53 19.0 -0.8
SCG Saint Claude 1.02 341 eP Pn 23 53 07.1 +1.2
LZG Guadaloupe-1 1.16 338 eP Pn 23 53 08.2 +1.2
SLPE Piton Saint Es 1.25 165 eP Pn 23 53 10.0 +2.0
SLPE eS Sn 23 53 30.1 +1.5
SLB Belfond 1.26 167 eP Pn 23 53 09.9 +1.8
SLB eS Sn 23 53 29.9 +1.3
MCLT Moule a Chique 1.40 164 eP Pn 23 53 10.4 +0.9
MCLT eS Sn 23 53 31.7 +0.6
SVB Belmont 1.78 178 eP Pn 23 53 14.1 +0.5
SVB eS Sn 23 53 39.1 +0.6
SKI Saint Kitts 2.63 329 eS Sn 23 54 04.0 +7.2
TOSP Speyside 3.82 168 eP Pn 23 53 37.4 -1.5
TOSP eS Sn 23 54 15.7 -8.3

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*IDC **10** 00:00:59.8±0.8, 166N×12791E, h0km, mb4.3/12, mb1 4.5/14, mb1mx4.4/17, mbtmp4.4/14, ML4.4/2, MS3.9/15, Ms1 3.9/15, ms1mx3.7/38, Error ellipse: s-maj=26.9km s-min=16.8km az=85.0*
*BJI **10** 00:01:00.6, 093N×12802E, h38km, mB5.1, mb4.6, Ms4.5, Msz4.2*
*ISCJB **10** 00:01:01.5±1.6, 159N±005×12808E±006, h19km±11km, mb4.6/40, MS4.0/20, Error ellipse: s-maj=10.7km s-min=7.6km az=160.2*
*MOS **10** 00:01:04.0±1.5, 177N×12802E, h33km, mb5.0/12, Error ellipse: s-maj=21.5km s-min=9.5km az=117.6*
*NEIC **10** 00:01:05.4±0.4, 146N×12778E, h35km, mb4.8/14, Error ellipse: s-maj=13.7km s-min=7.8km az=72.0*
NEIC Felt [III] at Tobelo.
*DJA **10** 00:01:18, 1.10N×12702E, h11km, MLv4.6/6*
ISC 10 00:01:05.5±1.6, **153N**±005×**12801E**±006, **h33**km±11km, **h42**km±2.2km**:pP-P, n98,** σ1s**44**/92, **mb4.6**/40, **MS4.0**/20, **2C-1D, Halmahera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNTI Ternate 1.00 220 P Pn 00 01 26.2 +3.0
LBMI Labuha 2.22 193 P Pn 00 01 39.3 -0.8
LBMI S Sn 00 02 11.2 +4.8
MNI Manado 3.17 268 P Pn 00 01 51.4 -1.8
MSAI Masohi 4.93 169 P Px 00 02 30.5
AAI Ambon 5.19 178 P Px 00 02 37.4
DAV Davao City (W) 6.01 336 Pn Pn 00 02 31.9 -0.3
44nm,0.3s,baz=158,slow=8.0,SNR=3.6
DAV LR LR 00 04 27.3
comp=Z,157nm,20.5s,baz=91,slow=35
DAV Davao City (W) 6.01 336 ePn Pn 00 02 33.3 +1.0
KDI Kendari 7.67 225 P Pn 00 02 51.9 -3.1
65nm,1.3s,0.2nm
PCI Palu 8.53 254 P Pn 00 03 07.6 +0.8
45nm,1.4s,0.2nm
MYLDM Lahad Datu 10.16 291 P Pn 00 03 33.8 +4.5
92nm,1.1s
KAPI Kappang 10.51 232 Pn Pn 00 03 30.8 -3.2
3.5nm,0.3s,baz=257,slow=1.4,SNR=15
KAPI Kappang 10.51 232 ePn Pn 00 03 31.8 -2.2
KAPI Kappang 10.51 232 P Pn 00 03 33.2 -0.8
22nm,1.0s,338nm
BATI Baumata 12.44 200 Pn Pn 00 04 00.9 +0.5
2.0nm,0.3s,baz=93,slow=3.1,SNR=3.5
BATI LR LR 00 09 08.7
comp=Z,600nm,19.0s,baz=116,slow=39
BATI Baumata 12.44 200 P Pn 00 04 09.3 +8.9
27nm,1.2s
BBKI Banjar Baru 14.07 249 P Pn 00 04 23.2 +0.5
40nm,1.2s
KAKA Kakadu 14.82 163 eP x 00 04 08.5
15nm,0.7s
KAKA Kakadu 14.82 163 ePn x 00 04 12.2
KMMI Kalianget 16.41 239 P Pn 00 04 54.9 +1.4
75nm,1.2s
KSM Kuching 17.70 270 ePn Pn 00 05 04.3 -5.4
KSM Kuching 17.70 270 P Pn 00 05 15.7 +6.0
26nm,1.7s
SJI Sawahan 18.64 240 P Pn 00 05 22.2 +1.0
FITZ Fitzroy Crossi 19.65 187 eP Pn 00 05 28.7 -4.6
12nm,0.8s
GUMO Guam 20.53 53 LR LR 00 11 30.8
comp=Z,383nm,21.0s,MS3.7,baz=268,slow=31
COEN Coen 21.51 136 eP P 00 05 52.9 +1.0
9.3nm,1.4s,mb4.0
WRAB Tennant Creek 22.22 164 i P P 00 06 00.8 +1.3
WB2 Warramunga Arr 22.23 164 eP P 00 05 58.6 -1.0
TPUB Ta-pu 22.79 342 eP P 00 06 06.6 +1.1
179nm,1.4s,mb5.3
MBWA Marble Bar 23.96 199 eP P 00 06 16.2 -0.9
72nm,1.8s,mb4.8
QIZ Qiongzhong 24.89 315 P P 00 06 24.5 -1.0
QIZ S S 00 10 46.7 -0.1
QIZ XS sS 00 11 08.2 +5.9
QIZ SS 00 11 51.1
QIZ AMB AMB
comp=Z,253nm,4.9s
QIZ LR LR
comp=N,448nm,19.1s,MS4.1
QIZ LR LR
comp=E,398nm,18.3s,MS4.1
QZH Quanzhou 24.99 339 ⇑P P 00 06 30.7 +4.3
QZH S S 00 10 51.1 +2.8
QZH LR LR
comp=Z,840nm,28.6s,MS4.1
JOW Kunigami 25.15 1 LR LR 00 15 50.2
comp=Z,233nm,20.1s,MS3.7,baz=41,slow=36
PSI Prapat 29.09 273 P P 00 07 00.8 -2.7
comp=Z,4.4nm,0.8s,mb4.3,baz=63,slow=5.5,SNR=4.0
NJ2 Nanjing 31.56 345 eP P 00 07 27.4 +2.4
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
GYA Guiyang 32.17 322 eP P 00 07 31.2 +0.7
GYA AP pP 00 07 43.7 +3.7
GYA XP sP 00 07 51.3 +7.3
GYA PP PP 00 08 39.4 -4.2
GYA PCP PcP 00 10 19.8 +0.7
GYA S S 00 12 40.5 -0.9
GYA SCP ScP 00 13 57.6 -2.9
GYA SCS ScS 00 17 55.9 -3.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,450nm,17.2s,MS4.4
GYA LR LR
comp=E,440nm,16.6s,MS4.4
GYA LR LR
comp=Z,480nm,17.5s,MS4.2
CMAR Chiang Mai Arr 33.10 302 P P 00 07 37.8 -1.0
comp=Z,1.5nm,0.5s,mb4.2,baz=118,slow=7.0,SNR=17
CMAR Chiang Mai Arr 33.10 302 ⇑eP P 00 07 40.5 +1.7
HNR Honiara 33.62 110 LR LR 00 20 26.9
comp=Z,311nm,21.2s,MS4.0,baz=295,slow=35
KMI Kunming 33.83 316 P P 00 07 46.3 +1.3
KMI AP pP 00 07 58.7 +4.2
KMI PP PP 00 09 01.3 -0.7
KMI S S 00 13 06.4 -0.8
KMI SS SS 00 15 14.4 -20
KMI AMB AMB
comp=Z,5.0nm,0.6s,mb4.6
KMI LR LR
comp=N,225nm,18.7s,MS4.0
KMI LR LR
comp=E,179nm,20.4s,MS4.0
KMI LR LR
comp=Z,218nm,17.1s,MS3.9
STKA Stephens Creek 35.64 160 P P 00 07 59.4 -1.1
comp=Z,12nm,0.8s,mb4.9,baz=334,slow=9.2,SNR=9.5
STKA LR LR 00 24 01.4
comp=Z,362nm,19.1s,MS4.2,baz=229,slow=39
STKA Stephens Creek 35.64 160 eP P 00 08 00.2 -0.3
comp=Z,3.5nm,1.2s,mb4.2
KSRS Korea Array 35.74 360 P P 00 07 59.9 -1.5
comp=Z,1.3nm,0.5s,mb4.1,baz=177,slow=9.8,SNR=4.5
KSRS LR LR 00 20 54.9
comp=Z,173nm,20.1s,MS3.8,baz=298,slow=34
MJAR Matsushiro Arr 36.09 14 P P 00 08 01.6 -2.8
comp=Z,0.9nm,0.3s,mb4.2,baz=174,slow=8.5,SNR=3.6
MJAR LR LR 00 22 14.4
comp=Z,217nm,19.6s,MS3.9,baz=195,slow=35
XAN Xi'an 36.94 333 P P 00 08 11.1 -0.5
XAN AP pP 00 08 23.5 +2.3
XAN PP PP 00 09 38.3 +2.1
XAN PPP 00 10 59.3
XAN S S 00 13 57.0 +2.3
XAN AMB AMB
comp=Z,9.0nm,0.9s,mb4.6
CD2 Chengdu 37.16 324 eP P 00 08 16.0 +2.4
CD2 AP pP 00 08 27.9 +4.8
CD2 XP sP 00 08 33.2 +6.1
CD2 PP PP 00 09 43.7 +5.0
CD2 S S 00 13 58.6 +0.4
CD2 XS sS 00 14 19.3 +5.4
CD2 SS SS 00 16 31.2 -11
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,180nm,8.4s
CD2 LR LR
comp=N,270nm,5.4s
CD2 LR LR
comp=E,420nm,15.6s
CD2 LR LR
comp=Z,270nm,19.1s,MS4.1
ARMA Armidale 38.94 147 eP P 00 08 28.9 +0.3
BJI Beijing 39.81 346 P P 00 08 34.7 -1.0
BJI AMB AMB
comp=Z,11nm,1.1s,mb4.5
BJI AMB AMB
comp=Z,97nm,6.9s
LZH Lanzhou 41.03 330 eP P 00 08 49.0 +3.1
LZH AP pP 00 08 57.9 +2.4
LZH XP sP 00 09 03.6 +4.2
LZH AMB AMB
comp=Z,43nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,160nm,4.6s
CN2 Changchun 42.15 357 eP P 00 08 57.9 +3.0
SHL Shillong 42.21 308 eP P 00 08 57.0 +1.3
MDJ Mudanjiang 42.92 2 P P 00 09 04.2 +3.0
MDJ XP sP 00 09 19.6 +4.8
MDJ PCP PcP 00 10 52.4 +0.9
MDJ PCS PcS 00 14 45.4 +1.8
MDJ S S 00 15 25.8 +1.9
MDJ AMB AMB
comp=Z,6.0nm,1.1s,mb4.2
MDJ AMB AMB
comp=Z,102nm,7.8s
MDJ LR LR
comp=N,73nm,27.7s,MS3.5
MDJ LR LR
comp=E,58nm,27.0s,MS3.5
MDJ LR LR
comp=Z,109nm,24.9s,MS3.6
GTA Gaotai 45.63 329 eP P 00 09 22.6 -0.3
GTA AP pP 00 09 35.0 +2.4
GTA XP sP 00 09 39.7 +3.2
GTA S S 00 16 02.1 -1.4
GTA XS sS 00 16 22.7 +3.2
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.2
GTA AMB AMB
comp=Z,90nm,6.6s
GTA LR LR
comp=N,143nm,17.4s,MS4.1
GTA LR LR
comp=E,138nm,17.4s,MS4.1
GTA LR LR
comp=Z,201nm,17.1s,MS4.1
ULN Ulaanbaatar 49.59 342 eP P 00 09 53.9 +0.4
ULN e 00 11 50.1
ULN pmax pmax
comp=Z,12nm,0.8s,mb5.0
ULN Ulaanbaatar 49.59 342 eP P 00 09 53.9 +0.4
comp=Z,12nm,0.8s,mb5.0
ULN ePcP PcP 00 11 04.4 -10
ULN ePP PP 00 11 50.1 +1.9
SONM Songino Array 49.77 341 P P 00 09 52.8 -2.1
comp=Z,4.1nm,0.7s,mb4.6,baz=155,slow=7.4,SNR=30
HYB Hyderabad 51.08 291 i P P 00 10 07.0 +1.7
HYB Hyderabad 51.08 291 eP P 00 10 07.0 +1.7
ZAK Zakamensk 53.01 340 eP P 00 10 16.9 -2.2
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
MOY Mondy 54.87 340 eP P 00 10 32.9 +0.2
WMQ Urumqi 55.25 325 P P 00 10 37.6 +2.0
WMQ AMB AMB
comp=Z,14nm,1.0s,mb5.0
PETK Petropavlovsk- 56.99 21 P P 00 10 47.7 -0.2
comp=Z,1.6nm,0.7s,mb4.2,baz=201,slow=5.1,SNR=3.5
BOD Bodaibo 57.21 351 eP P 00 10 48.7 -0.6
BOD pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
RPZ Rata Peaks 59.24 145 LR LR 00 38 24.0
comp=Z,204nm,20.1s,MS4.2,baz=65,slow=38
MK31 Makanchi Array 60.08 325 eP P 00 11 09.1 -0.4
MKAR Makanchi Array 60.08 325 P P 00 11 07.4 -2.1
comp=Z,6.5nm,0.5s,mb4.9,baz=117,slow=7.5,SNR=44
YAK Yakutsk 60.36 1 eP P 00 11 11.4 +0.3
YAK pmax pmax
comp=Z,15nm,0.7s,mb5.1
YAK Yakutsk 60.36 1 eP P 00 11 11.7 +0.6
comp=Z,22nm,0.6s,mb5.4
TKM2 Tokmak 2 62.23 319 eP P 00 11 24.1 -0.1
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
TKM2 Tokmak 2 62.23 319 eP P 00 11 24.1 -0.1
comp=Z,3.3nm,0.6s,mb4.6
AAK Ala-Archa 62.84 318 eP P 00 11 30.7 +2.5
AAK pmax pmax
comp=Z,9.0nm,1.5s,mb4.7
AAK Ala-Archa 62.84 318 eP P 00 11 30.7 +2.5
comp=Z,9.1nm,1.5s,mb4.7
ZALV Zalesovo Beam 63.11 333 P P 00 11 27.3 -2.5
comp=Z,2.5nm,0.9s,mb4.3,baz=116,slow=6.8,SNR=8.6
ZALV LR LR 00 39 51.8
comp=Z,42nm,20.0s,MS3.6,baz=78,slow=37
ZALV Zalesovo Beam 63.11 333 P P 00 11 27.3 -2.5
ZALV LR LR 00 39 51.8
AML Almayashu 63.16 317 eP P 00 11 28.8 -1.6
comp=Z,18nm,1.2s,mb5.1
EKS2 Erkin-Say 63.33 318 eP P 00 11 31.6 +0.2
comp=Z,6.3nm,1.0s,mb4.7
KBL Kabul 63.87 308 eP P 00 11 35.9 +0.6
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
KBL Kabul 63.87 308 eP P 00 11 35.9 +0.7
comp=Z,8.4nm,0.8s,mb4.8
KURK Kurchatov 64.27 328 eP P 00 11 36.6 -0.9
KURK pmax pmax
comp=Z,14nm,0.8s,mb5.0
KURK Kurchatov 64.27 328 eP P 00 11 36.6 -0.9
comp=Z,14nm,0.8s,mb5.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVS	Novosibirsk	64.40	333	eP	P	00 11 36.3	-2.0
BRVK	Borovoye	69.92	327	eP	P	00 12 12.3	-1.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
BRVK	Borovoye	69.92	327	eP	P	00 12 12.3	-1.0
	comp=Z,8.9nm,1.0s,mb4.7						
BILL	Bilibino	71.34	14	P	P	00 12 29.0	+7.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
SVE	Sverdlovsk	76.49	329	eP	P	00 12 51.3	-0.8
SVE				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ARU	Arti	77.47	328	d iP	P	00 12 56.4	-1.2
ARU				e		00 15 53.5	
ARU				SS	SS	00 27 42.2	-3.2
ARU				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
VNDA	Vanda	81.10	173	P	P	00 13 18.8	+1.7
	comp=Z,1.6nm,0.8s,mb4.0,baz=286,slow=4.7,SNR=6.1						
VNDA				LR	LR	00 45 09.8	
	comp=Z,85nm,18.8s,MS4.1,baz=332,slow=33						
VNDA	Vanda	81.10	173	P	P	00 13 18.8	+1.7
VNDA				LR	LR	00 45 09.8	
MAW	Mawson	82.16	201	LR	LR	00 45 43.2	
	comp=Z,117nm,19.9s,MS4.2,baz=222,slow=33						
KDAK	Kodiak Island	83.05	32	LR	LR	00 48 14.8	
	comp=Z,94nm,19.8s,MS4.2,baz=268,slow=34						
PPT	Papeete	83.22	108	LR	LR	00 46 37.1	
	comp=Z,36nm,18.8s,MS3.8,baz=254,slow=33						
OBN	Obninsk	89.58	325	P	P	00 14 03.0	+3.2
OBN				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.2						
MMAI	Mount Meron Ar	91.36	303	LR	LR	01 01 15.6	
	comp=Z,50nm,19.4s,MS4.0,baz=80,slow=40						
BRTR	Keskin Array B	92.40	310	P	P	00 14 13.0	-0.2
	comp=Z,0.1nm,0.3s,mb3.7,baz=210,slow=8.3,SNR=2.7						
ARCES	ARCESS Array B	92.94	340	P	P	00 14 13.0	-2.0
	comp=Z,6.5nm,1.0s,mb5.0,baz=86,slow=3.9,SNR=6.1						
ARCES	ARCESS Array B	92.94	340	P	P	00 14 13.0	-2.0
TOA0	Torodi Ar. Sit	124.80	287	ePKPdf	PKPdf	00 20 02.5	-0.6
TORD	Torodi Ar. Bea	124.80	287	PKP	PKPdf	00 20 01.4	-1.7
	comp=Z,0.6nm,0.7s,baz=81,slow=0.6,SNR=4.3						
PLCA	Paso Flores	137.51	159	PKP	PKPdf	00 20 26.6	+0.2
	comp=Z,2.9nm,1.1s,baz=207,slow=2.3,SNR=1.7						

*NEIC **10** 00:05:34.4, 1786N×10140W, h40km, MD3.8(MEX), After MEX.*
MEX 10 00:05:33.9±0.7**, 1784N×10142W, h45**km±10km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.24	191	i P	Pn	00 05 40.3	-1.8
ZIIG				i S	Sn	00 05 46.2	-1.5
CAIG	El Cayaco	1.35	126	i P	Pn	00 05 54.2	-2.2
CAIG				i S	Sn	00 06 10.8	-2.3
MEIG	Mezcala	1.71	87	i P	Pn	00 05 59.8	-1.5
MEIG				i S	Sn	00 06 19.6	-2.4
ACX	Acapulco	1.73	124	i P	Pn	00 06 00.9	-0.7
ACX				i S	Sn	00 06 20.4	-2.0
ACX	Acapulco	1.73	124	i P	Pn	00 06 01.6	+0.1
ACX				i S	Sn	00 06 20.0	-2.4
PLIG	Platanillo	1.90	73	eP	Pn	00 06 02.2	-1.7
PLIG				i S	Sn	00 06 24.2	-2.5
PLIG	Platanillo	1.90	73	eP	Pn	00 06 02.2	-1.7
PLIG				i S	Sn	00 06 23.2	-3.5
MZVM		2.47	57	eP	Pn	00 06 10.8	-0.9
MZVM				i S	Sn	00 06 39.3	-1.3
PPM	Popocatepetl	2.92	65	i P	Pn	00 06 17.3	-0.5
PPM				i S	Sn	00 06 50.8	-0.8
IIO	Organos	3.09	55	eP	Pn	00 06 19.4	-0.8
IIO				i S	Sn	00 06 54.6	-1.3
UTMO	Huajuapan	3.44	90	eP	Pn	00 06 23.6	-1.4
UTMO				i S	Sn	00 07 03.1	-1.5
PNIG	Pinotepa	3.46	114	eP	Pn	00 06 28.6	+3.3
PNIG				i S	Sn	00 07 08.6	+3.6

*IDC **10** 00:16:32.8±3.3, 2531S×17745W, h168km±28km, mb3.9/8, mb1 4.1/10, mb1mx3.9/17, mbtmp4.0/10, Error ellipse: s-maj=24.4km s-min=20.9km az=78.0*
*ISCJB **10** 00:16:33.4±2.0, 255S±0.1×1776W±02, h182km±16km, mb4.0/9, Error ellipse: s-maj=22.5km s-min=20.1km az=161.3*
*NEIC **10** 00:16:33.3±2.0, 2535S×17746W, h175km±16km, mb3.7/2, Error ellipse: s-maj=18.9km s-min=16.7km az=218.0*
ISC 10 00:16:32.7±2.3**, 254S**±01×**1775W**±02**, h164**km±18km**, n20,** σ**0s95**/20**, mb4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.84	186	P	Pn	00 17 33.2	+2.0
	195nm,0.3s,baz=88,slow=22,SNR=2.4						
RAO				S	Sn	00 18 14.4	-2.4
	283nm,0.3s,baz=26,slow=23,SNR=5.6						
URZ	Urewera	13.60	198	P	Pn	00 19 39.0	+0.1
	4.7nm,0.3s,baz=283,slow=2.4,SNR=14						
URZ				S	Sn	00 21 57.4	-12
	3.4nm,0.3s,baz=109,slow=22,SNR=12						
RPZ	Rata Peaks	20.51	204	P	P	00 20 58.2	+0.3
	10nm,0.9s,baz=160,slow=5.2,SNR=3.6						
RPZ				S	S	00 24 27.1	-11
	8.6nm,0.8s,baz=129,slow=21,SNR=4.6						
CTA	Charters Tower	33.79	272	P	P	00 22 59.5	+0.3
	1.5nm,0.4s,mb4.1,baz=103,slow=14,SNR=4.1						
CTA	Charters Tower	33.79	272	P	P	00 22 59.5	+0.3
STKA	Stephens Creek	36.32	250	eP	P	00 23 21.1	+0.3
	3.6nm,0.4s,mb4.3						
STKA	Stephens Creek	36.32	250	P	P	00 23 20.9	0.0
	4.2nm,0.4s,mb4.4,baz=94,slow=9.1,SNR=16						
WB2	Warramunga Arr	44.59	267	eP	P	00 24 27.8	-1.0
WRAB	Tennant Creek	44.59	267	eP	P	00 24 29.0	+0.2
	0.7nm,0.4s,mb3.6						
VNDA	Vanda	53.08	186	P	P	00 25 33.9	+1.3
	1.3nm,0.6s,mb3.8,baz=22,slow=6.9,SNR=9.3						
VNDA	Vanda	53.08	186	eP	P	00 25 34.5	+1.9
	1.3nm,0.6s,mb3.8						
CASY	Casey	59.76	206	eP	P	00 26 19.2	-0.8
MAW	Mawson	77.12	200	P	P	00 28 08.3	+0.7
	5.0nm,0.5s,mb4.4,baz=155,slow=3.1,SNR=14						
PETK	Petropavlovsk-	81.12	345	P	P	00 28 29.1	-0.3
	4.4nm,0.6s,mb4.2,baz=140,slow=6.1,SNR=8.6						
SNAA	Sanae	83.10	178	eP	P	00 28 39.1	-0.5
	6.6nm,1.0s,mb4.3						
NVAR	Mina Array Bea	84.28	43	P	P	00 28 45.5	-0.6
	0.2nm,0.5s,mb3.1,baz=221,slow=6.5,SNR=4.6						
NVAR				pP	pP	00 29 23.8	-2.9
	1.1nm,0.9s,baz=223,slow=6.9,SNR=3.5						
PLCA	Paso Flores	85.57	133	P	P	00 28 52.5	-0.2
	2.2nm,0.9s,mb3.9,baz=337,slow=8.7,SNR=3.1						
BRTR	Keskin Array B	150.32	306	PKPbc	PKPbc	00 36 03.2	-1.4
	0.3nm,0.4s,baz=128,slow=4.2,SNR=2.7						
TORD	Torodi Ar. Bea	167.77	176	PKP	PKPdf	00 36 17.7	-2.4
	0.5nm,0.7s,baz=21,slow=0.8,SNR=4.1						
TORD				PKPab	PKPab	00 37 26.6	-0.7
	0.9nm,0.6s,baz=166,slow=2.9,SNR=8.0						
TORD	Torodi Ar. Bea	167.77	176	PKP	PKPdf	00 36 17.7	-2.5
TORD				PKPab	PKPab	00 37 26.6	-0.7

*ISCJB **10** 00:23:33.9±0.6, 38.11N±0.05×3793E±0.05, h10km, Error ellipse: s-maj=6.8km s-min=5.4km az=21.0*
*ISK **10** 00:23:33.8, 3808N×3794E, h15km, MD2.9*
*CSEM **10** 00:23:33.0±0.2, 38.11N×3795E, h8km, MD2.9, Error ellipse: s-maj=4.4km s-min=3.8km az=177.0*
*DDA **10** 00:23:33.5, 38.15N×3793E, h7km±7km, Md2.8*
ISC 10 00:23:33.6±0.6**, 3818N**±004×**3794E**±005**, h10**km**, n11,** σ**1s33**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAB	Bozova	0.76	158	i P	Pg	00 23 46.7	-1.6
ATAB				i S	Sg	00 23 59.8	+1.5
DARE	Darende-Malaty	0.78	353	ePG	Pg	00 23 46.2	-2.4
DARE				eSG	Sg	00 23 55.3	-3.5
URFA	Urfa	1.02	136	ePG	Pg	00 23 52.1	-1.0
URFA				eSG	Sg	00 24 06.6	+0.3
KMRS	Kahramanmaras	1.06	231	ePG	Pg	00 23 53.5	-0.5
KMRS				eSG	Sg	00 24 07.5	-0.3
SARI	SarD1z-Kayseri	1.09	298	ePN	Pn	00 23 57.4	+2.5
SVRC	Sivrice-ELAZID	1.10	79	ePN	Pn	00 23 54.9	-0.1
GAZ	Gaziantep	1.16	210	ePN	Pn	00 23 55.0	-0.8
PTK	Pertek	1.35	58	ePN	Pn	00 23 59.8	+1.3
BNN	Bunyan	1.77	293	ePN	Pn	00 24 06.1	+1.8
KOZT	Kozan	1.81	248	ePN	Pn	00 24 04.2	-0.5
SVSK	Karacayir	1.88	337	ePN	Pn	00 24 07.0	+1.1

*IDC **10** 00:30:00.4±1.3, 158N×12808E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.0/17, mbtmp4.0/9, MS3.6/5, Ms1 3.6/5, ms1mx3.2/29, Error ellipse: s-maj=39.2km s-min=25.2km az=80.0*
*ISCJB **10** 00:30:04.2±0.5, 167N±005×12807E±006, h33km, mb4.1/10, MS3.6/4, Error ellipse: s-maj=8.4km s-min=7.1km az=175.5*
*DJA **10** 00:30:06, 140N×12785E, h10km, MLv4.6/4*
*NEIC **10** 00:30:06.1±0.5, 157N×12804E, h35km, mb4.2/3, Error ellipse: s-maj=15.7km s-min=7.4km az=80.0*
ISC 10 00:30:06.2±0.5**, 160N**±005×**12803E**±006**, h35**km**, n32,** σ**1s26**/30**, mb4.1**/10**, MS3.6**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.05	219	P	Pn	00 30 19.1	-5.4
TNTI				S	Sn	00 30 32.5	-5.4
LBMI	Labuha	2.28	193	P	Pn	00 30 40.9	-0.5
LBMI				S	Sn	00 31 10.4	+2.1
MNI	Manado	3.19	267	P	Pn	00 30 52.9	-1.0
MNI				S	Sn	00 31 31.4	+0.7
KDI	Kendari	7.72	224	P	Pn	00 31 53.6	-2.6
	42nm,1.2s,4μm0.1nm						
MYLDM	Lahad Datu	10.15	291	P	Pn	00 32 33.9	+4.3
	32nm,1.3s						
KAPI	Kappang	10.56	231	Pn	Pn	00 32 31.6	-3.6
	1.1nm,0.3s,baz=67,slow=15,SNR=4.3						
KAPI	Kappang	10.56	231	ePn	Pn	00 32 34.2	-1.0
	15nm,0.9s						
BATI	Baumata	12.50	200	LR	LR	00 37 43.4	
	comp=Z,199nm,18.2s,baz=34,slow=37						
JAY	Jayapura	13.32	108	P	Pn	00 33 15.8	+2.9
	88nm,0.7s,8μm						
KAKA	Kakadu	14.87	163	ePn	x	00 33 25.7	
KHKI	Kahang-Kahang	15.85	231	P	Pn	00 33 50.5	+3.7
KMMI	Kalianget	16.45	238	P	Pn	00 33 57.7	+3.2
SJI	Sawahan	18.68	240	P	Pn	00 34 23.2	+1.1
	36nm,1.5s						
FITZ	Fitzroy Crossi	19.71	187	eP	Pn	00 34 32.0	-2.5
	1.3nm,0.9s						
WRAB	Tennant Creek	22.28	164	eP	P	00 35 00.8	+0.3
	11nm,0.9s,mb4.3						
WRAB	Tennant Creek	22.28	164	P	P	00 35 01.5	+1.0
WB2	Warramunga Arr	22.29	164	eP	P	00 35 00.0	-0.6
CBIJ	Chichi jima	28.77	27	LR	LR	00 46 45.2	
	comp=Z,104nm,20.7s,MS3.4,baz=156,slow=35						
CMAR	Chiang Mai Arr	33.08	302	P	P	00 36 40.1	+1.1
	1.2nm,0.5s,mb4.1,baz=123,slow=8.1,SNR=8.5						
HNR	Honiara	33.63	110	LR	LR	00 50 04.3	
	comp=Z,105nm,21.5s,MS3.5,baz=259,slow=36						
STKA	Stephens Creek	35.69	160	P	P	00 37 00.8	-0.6
	4.1nm,0.7s,mb4.5,baz=333,slow=6.8,SNR=3.6						
STKA				LR	LR	00 50 59.0	
	comp=Z,87nm,21.2s,MS3.5,baz=21,slow=35						
STKA	Stephens Creek	35.69	160	eP	P	00 37 01.4	0.0
MJAR	Matsushiro Arr	36.03	14	P	P	00 37 03.3	-0.9
	1.0nm,0.4s,mb4.1,baz=200,slow=4.4,SNR=3.6						
ULN	Ulaanbaatar	49.54	342	eP	P	00 38 54.3	+0.8
	5.9nm,0.9s,mb4.6						
SONM	Songino Array	49.72	341	P	P	00 38 54.4	-0.5
	0.6nm,0.5s,mb3.9,baz=157,slow=8.0,SNR=5.8						
MK31	Makanchi Array	60.03	325	eP	P	00 40 10.0	+0.4
MKAR	Makanchi Array	60.03	325	P	P	00 40 09.0	-0.6
	1.2nm,0.6s,mb4.1,baz=113,slow=8.2,SNR=11						
ZALV	Zalesovo Beam	63.06	333	P	P	00 40 29.8	0.0
	0.3nm,0.4s,mb3.8,baz=27,slow=26,SNR=2.9						
KURK	Kurchatov	64.22	328	P	P	00 40 36.8	-0.8
	1.4nm,0.5s,mb4.2,baz=126,slow=6.5,SNR=5.5						
KURK	Kurchatov	64.22	328	eP	P	00 40 38.4	+0.8
BVAR	Borovoye Array	69.80	327	P	P	00 41 13.3	+0.3
	0.7nm,0.6s,mb3.8,baz=275,slow=35,SNR=3.6						
MAW	Mawson	82.22	201	LR	LR	01 14 42.1	
	comp=Z,65nm,18.3s,MS4.0,baz=199,slow=33						

*ISCJB **10** 00:37:39.0±0.6, 26.15N±0.07×12701E±0.05, h62km±5km, mb3.5/5, Error ellipse: s-maj=12.4km s-min=6.6km az=158.1*
*IDC **10** 00:37:38.9±1.9, 2734N×127.17E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, Error ellipse: s-maj=88.4km s-min=15.6km az=32.0*
*NEIC **10** 00:37:39.2, 26.14N×12699E, h61km, MG3.5(JMA), After JMA.*
*JMA **10** 00:37:39.1±0.1, 26.14N×12699E, h61km±2km, M3.5*
ISC 10 00:37:39.8±0.6**, 2613N**±007×**12703E**±005**, h57**km±5km**, n18,** σ**0s58**/27**, mb3.5**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.29	312	P	Pn	00 37 49.1	-0.4
JKE				S	Sn	00 37 56.4	-0.1
JAGN	Aguni-jima	0.49	23	P	Pn	00 37 51.3	-0.2
JAGN				S	Sn	00 38 00.2	+0.3
NAH1	Naha	0.60	83	P	Pn	00 37 52.5	-0.1
NAH1				S	Sn	00 38 01.9	-0.1
JJT2	Tamagusuku 2	0.65	89	P	Pn	00 37 53.4	+0.2
JJT2				S	Sn	00 38 04.2	+1.2
JIH	Iheya	1.23	43	P	Pn	00 38 00.8	0.0
JIH				S	Sn	00 38 16.7	+0.2
JOW	Kunigami	1.32	58	Pn	Pn	00 38 02.1	+0.2
	89nm,0.3s,baz=214,slow=12,SNR=120						
JOW				Sn	Sn	00 38 18.6	+0.1
	135nm,0.3s,baz=126,slow=28,SNR=28						
JOW	Kunigami	1.32	58	P	Pn	00 38 02.0	+0.1
JOW				S	Sn	00 38 18.6	+0.1
JTK	Tokunoshima	2.38	46	P	Pn	00 38 16.6	+0.2
JTK				S	Sn	00 38 43.2	-1.2
JTJ	Tarama	2.57	235	P	Pn	00 38 19.1	+0.1
JIJ	Ishigaki jima	3.15	237	P	Pn	00 38 26.8	-0.1
JAM	Amami Oshima	3.23	45	P	Pn	00 38 28.3	+0.3
JMZ	Minamidaito 2	3.79	94	P	Pn	00 38 32.7	-3.0
JMZ				S	Sn	00 39 11.1	-7.9
MKAR	Makanchi Array	40.80	312	P	P	00 45 15.7	+0.1
	0.6nm,0.5s,mb3.5,baz=97,slow=9.3,SNR=5.6						
ZALV	Zalesovo Beam	41.67	323	P	P	00 45 22.6	0.0
	0.6nm,0.4s,mb3.5,baz=121,slow=8.2,SNR=5.1						
KURK	Kurchatov	44.15	317	P	P	00 45 42.7	+0.1
	0.2nm,0.3s,mb3.3,baz=109,slow=3.1,SNR=3.9						
BVAR	Borovoye Array	49.63	319	P	P	00 46 25.5	+0.1
	0.4nm,0.3s,mb3.9,baz=107,slow=10.0,SNR=6.3						
YKA	Yellowknife Ar	79.07	25	P	P	00 49 38.2	+0.6
	0.4nm,0.6s,mb3.5,baz=301,slow=5.3,SNR=7.3						
YKA	Yellowknife Ar	79.07	25	P	P	00 49 38.2	+0.6

*ISCJB **10** 00:38:34.8±1.2, 476N±0.1×1533E±0.1, h80km±11km, mb3.9/11, Error ellipse: s-maj=24.2km s-min=8.5km az=143.8*
*IDC **10** 00:38:34.1±7.0, 4737N×153.13E, h66km±50km, mb3.7/11, mb1 3.9/12, mb1mx3.6/26, mbtmp3.7/12, ML3.7/1, Error ellipse: s-maj=61.7km s-min=17.7km az=5.0*
*MOS **10** 00:38:35.9±2.1, 4755N×15336E, h91km, mb4.2/1, Error ellipse: s-maj=21.4km s-min=11.3km az=68.2*
*NEIC **10** 00:38:38.0±1.1, 4764N×153.18E, h92km±9km, mb4.2/1, Error ellipse: s-maj=18.5km s-min=9.6km az=145.0*
ISC 10 00:38:37.9±1.2**, 476N**±01×**1532E**±02**, h89**km±10km**, n22,** σ**0s86**/24**, mb3.9**/11**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.61	31	ePN	Pn	00 39 27.4	-4.2
SKR				eS	Sn	00 40 07.5	-5.6
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,110nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
PEA0B	Petropavlovsk-	6.20	26	ePn	Pn	00 40 06.5	-0.2
PETK	Petropavlovsk-	6.20	26	P	Pn	00 40 06.0	-0.6
	comp=E,1.6nm,0.3s,baz=203,slow=11,SNR=25						
PETK				S	Sn	00 41 29.0	+13
	baz=118,slow=19,SNR=1.7						
PET	Petropavlovsk	6.43	31	ePN	Pn	00 40 14.9	+5.0
PET				pmax	pmax		
	comp=Z,34nm,0.8s						
YSS	Yuzh-Sakhalins	7.14	268	ePN	Pn	00 40 21.8	+2.3
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
ERM	Erimo	9.07	236	ePn	Pn	00 40 46.5	+0.6
ERM				eSn	Sn	00 42 25.1	-1.2
FX1	Attu Island--F	13.80	60	P	Pn	00 41 45.3	-4.1
	comp=Z,1.9nm,0.3s,baz=238,slow=9.5,SNR=5.4						
ZALV	Zalesovo Beam	42.15	305	P	P	00 46 20.2	-1.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=55,slow=7.9,SNR=6.5						
KURK	Kurchatov	46.94	303	P	P	00 46 59.9	+0.7
	comp=Z,2.5nm,0.6s,mb4.1,baz=69,slow=8.5,SNR=14						
KURK	Kurchatov	46.94	303	P	P	00 46 59.9	+0.6
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
KURK	Kurchatov	46.94	303	eP	P	00 46 58.6	-0.7
	comp=Z,2.2nm,0.6s,mb4.1						
RES	Resolute Bay	49.99	19	P	P	00 47 23.7	+1.3
	comp=Z,0.6nm,0.7s,mb3.7,baz=315,slow=4.3,SNR=4.1						
YKA	Yellowknife Ar	50.19	37	P	P	00 47 24.2	+0.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=296,slow=7.2,SNR=9.7						
BVAR	Borovoye Array	50.35	309	P	P	00 47 24.7	-0.7
	comp=Z,0.8nm,0.6s,mb3.8,baz=64,slow=11,SNR=4.5						
ARCES	ARCESS Array B	57.05	341	P	P	00 48 13.7	-0.3
	comp=Z,2.5nm,0.9s,mb4.3,baz=38,slow=10,SNR=2.9						
NVAR	Mina Array Bea	61.98	63	P	P	00 48 48.9	+0.5
	comp=Z,1.0nm,0.6s,mb4.0,baz=306,slow=7.7						
PDAR	Pinedale Array	64.19	54	P	P	00 49 02.6	-0.3
	comp=Z,0.8nm,0.7s,mb3.6,baz=306,slow=2.2,SNR=7.7						
HFS	Hagfors	67.66	339	P	P	00 49 24.7	-0.2
	comp=Z,3.1nm,0.9s,mb4.1,baz=49,slow=4.7,SNR=9.0						
EKA	Eskdalemuir Ar	75.50	346	P	P	00 50 12.3	+0.3
	comp=Z,1.0nm,0.7s,mb3.7,baz=17,slow=5.2,SNR=3.5						
TXAR	Lajitas Array	77.01	61	P	P	00 50 21.0	0.0
	comp=Z,1.8nm,0.6s,mb4.0,baz=304,slow=4.6,SNR=20						
TXAR	Lajitas Array	77.01	61	P	P	00 50 21.0	0.0
CFAA	Coronel Fontan	144.76	78	PKP	PKPdf	00 58 02.2	-1.8
	comp=Z,0.2nm,0.4s,baz=284,slow=2.9,SNR=7.9						

*PGC **10** 00:40:57.1±0.1, 6523N×14041W, h5km, ML3.0/4, 138km northwest of Dawson, Yt Northern Yukon Territory, Canada*
NEIC 10 00:41:05.5, 6470N×14101W, h4km**, ML2.6**(AEIC)**, 5D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EGAK	Eagle	0.10	320	ePg	Pg	00 41 04.9	-2.6
EGAK				eSg	Sg	00 41 09.1	+0.2
DAWY	Dawson	0.95	132	⇑P	Pg	00 41 18.9	-4.7
DAWY				⇓S	Sg	00 41 36.7	+0.8
DAWY	Dawson	0.95	132	P	Pg	00 41 23.3	-0.3
DAWY				S	Sg	00 41 37.3	+1.4
BCA3	Beaver Creek A	1.68	192	P	Pn	00 41 34.6	-1.0
DOT	Dot Lake	1.71	233	P	Pn	00 41 35.0	-0.9
MENT	Mentasta	2.14	215	ePn	Pn	00 41 42.6	+0.6
MENT				eSn	Sn	00 42 08.8	-0.1
IL1	Eielson Array	2.52	274	P	Pn	00 41 47.8	+0.6
PAX	Paxson	2.63	231	P	Pn	00 41 48.9	+0.2
COLA	College	2.94	276	ePn	Pn	00 41 53.4	+0.5
COLA				eSn	Sn	00 42 31.7	+3.2
BM3	Burnt Mountain	3.10	333	P	Pg	00 41 55.8	-9.0
MCK	McKinley	3.60	258	P	Pn	00 42 03.5	+1.5
HYT	Haines Junctio	4.21	156	⇓Pn	Pn	00 42 08.4	-2.0
HYT				⇓Pg	Pg	00 42 22.4	-3.6
HYT				⇑Sg	Sg	00 43 17.9	-2.6
INK	Inuvik	4.70	36	⇓Sg	Sn	00 43 06.3	-5.6
WHY	Whitehorse	4.94	142	⇓Sg	Sg	00 43 38.8	-5.1

*ISCJB **10** 00:48:35.8±0.6, 4547N±0.03×1090E±0.03, h1km±7km, Error ellipse: s-maj=5.3km s-min=3.1km az=5.5*
*ROM **10** 00:48:36.8±0.2, 4546N×1089E, h10km, Md2.4/7, Ml2.1/5, Error ellipse: s-maj=3.0km s-min=2.2km az=158.0*
*CSEM **10** 00:48:36.0±0.1, 4547N×1086E, h20km, ML3.0/6, Error ellipse: s-maj=2.4km s-min=1.8km az=176.0*
*VIE **10** 00:48:37.0±0.4, 4552N×1089E, h11km±2km, mb1.9/4, ML2.8/9, Error ellipse: s-maj=2.4km s-min=1.5km az=2.0*
ISC 10 00:48:36.5±0.6**, 4545N**±003×**1088E**±003**, h12**km±7km**, n26,** σ**0s77**/48**, 6C-5D, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALO	Salr	0.30	305	Pg	Pg	00 48 43.2	+0.6
	106nm,0.2s						
SALO	Salr	0.30	305	Pg	Pg	00 48 43.2	+0.6
	106nm,0.2s						
MAGA	Magasa	0.37	332	Pg	Pg	00 48 44.0	+0.1
MAGA				Sg	Sg	00 48 49.8	+0.9
	142nm,0.5s						
MAGA	Magasa	0.37	332	Pg	Pg	00 48 44.0	+0.1
MAGA				Sg	Sg	00 48 49.8	+0.9
	142nm,0.5s						
SBPO	S.Benedetto Po	0.40	175	Pg	Pg	00 48 45.5	+1.1
	6μm,3.9s						
SBPO	S.Benedetto Po	0.40	175	Pg	Pg	00 48 45.5	+1.1
	6μm,3.9s						
TEOL	Teolo	0.57	99	⇓iPg	Pg	00 48 48.0	+0.4
TEOL				i Sg	Sg	00 48 55.6	+0.6
CTI	Castel Tesino	0.81	42	Pg	Pg	00 48 51.8	-0.4
CTI				Sg	Sg	00 49 03.0	+0.2
	48nm,0.1s						
CTI	Castel Tesino	0.81	42	Pg	Pg	00 48 51.8	-0.4
CTI				Sg	Sg	00 49 03.0	+0.2
	48nm,0.1s						
MDI	Monti di Nese	0.88	292	Pg	Pg	00 48 53.2	-0.3
MDI				Sg	Sg	00 49 06.2	+1.2
MDI	Monti di Nese	0.88	292	Pg	Pg	00 48 53.2	-0.3
MDI				Sg	Sg	00 49 06.2	+1.2
MTLO	Montello	0.93	66	⇑iPg	Pg	00 48 55.0	+0.5
MTLO				i Sg	Sg	00 49 07.5	+0.9
VARN	Col Varnada, M	1.02	57	⇑iPg	Pg	00 48 55.7	-0.5
VARN				i Sg	Sg	00 49 10.3	+0.8
APPI	Appiano	1.06	13	Pg	Pg	00 48 57.1	+0.2
APPI				Sg	Sg	00 49 11.1	+0.3
	68nm,0.2s						
APPI	Appiano	1.06	13	Pg	Pg	00 48 57.1	+0.2
APPI				Sg	Sg	00 49 11.1	+0.3
	68nm,0.2s						
CAE	Caneva	1.23	62	ePg	Pg	00 49 00.1	0.0
CAE				eSg	Sg	00 49 17.3	+1.2
VAI	Varese	1.54	287	Pg	Pg	00 49 05.0	-1.0
VAI				Sg	Sg	00 49 25.4	-0.6
	14nm,0.2s						
VAI	Varese	1.54	287	Pg	Pg	00 49 05.0	-1.0
VAI				Sg	Sg	00 49 25.4	-0.6
	14nm,0.2s						
FETA	Feichten	1.58	356	⇓iPg	Pg	00 49 06.2	-0.6
FETA				⇑iSn	Sn	00 49 24.9	+0.2
FETA				⇓iSg	Sg	00 49 27.3	0.0
	0.7nm,0.1s						
ABTA	Abfaltersbach	1.73	41	⇑ePg	Pg	00 49 09.2	-0.5
	SNR=14						
ABTA				⇓iSg	Sg	00 49 32.7	+0.6
	2.5nm,0.2s						
WTTA	Wattenberg	1.89	16	⇓iPg	Pg	00 49 12.4	-0.4
WTTA				⇑iSg	Sg	00 49 36.5	-0.8
	4.6nm,0.2s						
ROBS	Robic	2.01	66	i Pn	Pg	00 49 13.6	-1.4
ROBS				i		00 49 14.6	
ROBS				i Sn	Sg	00 49 41.2	+0.3
CADS	Cadrg	2.15	68	i Pn	Pg	00 49 16.7	-1.0
CADS				i Sn	Sg	00 49 45.2	-0.3
VOY	Vojsko	2.19	73	e	Sn	00 49 42.8	+2.9
VOY				eSn	Sg	00 49 46.3	-0.7
JAVS	Javornik	2.28	78	i Pn	Pg	00 49 18.9	-1.4
JAVS				i		00 49 19.9	
JAVS				i Sn	Sg	00 49 49.0	-0.8
OBKA	Obir	2.77	66	⇑iPg	Pg	00 49 29.1	-0.6

*IDC **10** 01:12:30.9±5.9, 076N×9720E, h0km, mb4.2/6, mb1 4.2/8, mb1mx3.9/22, mbtmp4.2/8, ML3.6/2, Error ellipse: s-maj=115.6km s-min=39.7km az=171.0*
*DJA **10** 01:12:33, 097N×9688E, h15km, MLv4.7/4*
*BJI **10** 01:12:33.6, 080N×9730E, h25km, mB5.0, mb4.5*
*NEIC **10** 01:12:36.7±0.9, 083N×9729E, h35km, mb4.0/2, Error ellipse: s-maj=16.1km s-min=14.0km az=18.0*
*ISCJB **10** 01:12:37.8±1.7, 10N±0.1×973E±02, h54km±10km,*

mb4.2/12, Error ellipse: s-maj=28.2km s-min=15.2km az=148.8

ISC 10 01:12:38.9±2.3**, 10N**±01×**973E**±02**, h46**^{km}±14^{km}**, n25,** σ**0**^{s}**83**/26**, mb4.2**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.39	44	P	Pn	01 12 47.5	-1.1
GSI				S	Sn	01 12 56.0	+0.6
TRSI	Tarutung	1.93	59	P	Pn	01 13 09.7	+0.4
TRSI				S	Sn	01 13 42.8	+10
PSI	Prapat	2.39	42	Pn	Pn	01 13 14.8	-0.8
	4.4nm,0.3s,baz=207,slow=3.8,SNR=18						
PSI	Prapat	2.39	42	Pn	Pn	01 13 14.8	-0.8
PPI	Padang Panjang	3.42	115	P	Pn	01 13 30.9	+1.1
PDSI	Padang	3.69	121	P	Px	01 13 51.1	
BSI	Banda Aceh	4.88	336	P	Sn	01 14 32.3	-13
IPM	Ipoh	5.06	47	P	Pn	01 13 53.1	+0.9
KULM	Kulim	5.39	38	ePn	Pn	01 13 56.5	-0.4
	51nm,0.8s						
CMAR	Chiang Mai Arr	17.40	5	Pn	Pn	01 16 36.8	-1.7
	0.2nm,0.3s,baz=198,slow=11,SNR=8.5						
KMI	Kunming	24.53	12	P	P	01 17 54.8	+0.5
KMI				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.5						
XAN	Xi'an	34.60	17	P	P	01 19 22.9	-0.7
XAN				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6						
LZH	Lanzhou	35.41	9	eP	P	01 19 36.5	+6.0
LZH				AP	pP	01 19 41.3	-1.5
LZH				XP	sP	01 19 44.0	-4.2
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,105nm,5.0s						
GTA	Gaotai	38.27	3	eP	P	01 19 55.1	+0.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.0						
WRAB	Tennant Creek	41.86	122	eP	P	01 20 23.0	-1.9
	comp=Z,2.7nm,1.2s,mb3.8						
KSRS	Korea Array	45.93	34	P	P	01 20 56.8	-0.5
	comp=Z,2.8nm,0.8s,mb4.2,baz=221,slow=9.6,SNR=9.9						
SONM	Songino Array	47.29	8	P	P	01 21 08.6	+0.8
	comp=Z,2.1nm,0.6s,mb4.3,baz=189,slow=8.8,SNR=17						
ULN	Ulaanbaatar	47.42	9	eP	P	01 21 09.3	+0.6
	comp=Z,1.1nm,0.6s,mb4.0						
MK31	Makanchi Array	47.44	346	eP	P	01 21 09.6	+0.7
MKAR	Makanchi Array	47.44	346	P	P	01 21 09.6	+0.6
	comp=Z,3.2nm,0.9s,mb4.3,baz=159,slow=7.7,SNR=17						
KURK	Kurchatov	51.99	345	P	P	01 21 43.1	-0.3
	comp=Z,1.3nm,0.7s,mb4.0,baz=166,slow=7.1,SNR=6.3						
KURK	Kurchatov	51.99	345	eP	P	01 21 43.9	+0.4
ZAA0	Zalesovo Array	53.75	351	eP	P	01 21 56.8	+0.5
ZALV	Zalesovo Beam	53.75	351	P	P	01 21 56.6	+0.3
	comp=Z,3.8nm,0.6s,mb4.5,baz=181,slow=7.4,SNR=23						
BVAR	Borovoye Array	56.45	341	P	P	01 22 15.2	-0.7
	comp=Z,1.2nm,0.7s,mb4.0,baz=134,slow=8.5,SNR=8.0						

*IDC **10** 01:13:07.6±1.4, 080N×9723E, h0^{km}, mb4.3/9, mb1 4.4/11, mb1mx4.1/22, mbtmp4.3/11, ML4.0/2, MS4.0/1, Ms1 3.9/1, ms1mx3.1/23, Error ellipse: s-maj=35.3km s-min=27.9km az=56.0*
*BJI **10** 01:13:08.8, 034N×9749E, h45^{km}, mB5.0, mb4.7, Ms4.1, Msz4.0*
*ISCJB **10** 01:13:11.5±0.8, 095N±009×973E±01, h33^{km}, mb4.4/13, MS4.0/2, Error ellipse: s-maj=17.4km s-min=12.6km az=155.9*
*NEIC **10** 01:13:14.2±0.6, 100N×9725E, h35^{km}, mb4.2/2, Error ellipse: s-maj=13.4km s-min=10.6km az=56.0*

ISC 10 01:13:13.9±0.8**, 096N**±010×**973E**±01**, h35**^{km}**, n20,** σ**0**^{s}**88**/20**, mb4.4**/13**, MS4.0**/2**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.44	42	Pn	Pn	01 13 51.2	0.0
	10.0nm,0.3s,baz=349,slow=17,SNR=13						
KULM	Kulim	5.45	38	ePn	Pn	01 14 33.1	+0.5
CMAR	Chiang Mai Arr	17.46	5	P	Pn	01 17 13.1	-1.7
	0.5nm,0.3s,baz=195,slow=12,SNR=7.0						
KMI	Kunming	24.59	12	P	P	01 18 32.5	+1.7
KMI				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
KMI				LR	LR		
	comp=N,227nm,14.3s,MS4.0						
KMI				LR	LR		
	comp=E,180nm,10.4s,MS4.0						
KMI				LR	LR		
	comp=Z,293nm,13.7s,MS3.9						
FITZ	Fitzroy Crossi	33.71	126	eP	P	01 19 52.3	+0.2
	comp=Z,1.6nm,0.8s,mb4.0						
XAN	Xi'an	34.66	17	P	P	01 19 58.5	-1.6
XAN				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.8						
WRAB	Tennant Creek	41.83	122	eP	P	01 21 01.9	+1.2
KSRS	Korea Array	45.98	34	P	P	01 21 33.5	-0.3
	comp=Z,5.2nm,0.9s,mb4.5,baz=224,slow=9.1,SNR=11						
SONM	Songino Array	47.35	8	P	P	01 21 44.6	+0.3
	comp=Z,3.8nm,0.5s,mb4.6,baz=189,slow=9.8,SNR=19						
SONM				PcP	PcP	01 23 15.2	+0.5
	comp=Z,1.3nm,0.5s,baz=178,slow=3.5,SNR=6.0						
ULN	Ulaanbaatar	47.48	9	eP	P	01 21 45.9	+0.6
	comp=Z,1.6nm,0.5s,mb4.2						
MK31	Makanchi Array	47.49	346	eP	P	01 21 46.2	+0.8
MKAR	Makanchi Array	47.49	346	P	P	01 21 45.9	+0.5
	comp=Z,3.7nm,0.7s,mb4.5,baz=157,slow=8.8,SNR=12						
KURK	Kurchatov	52.04	345	P	P	01 22 19.5	-0.4
	comp=Z,3.3nm,0.8s,mb4.3,baz=166,slow=6.9,SNR=9.4						
KURK	Kurchatov	52.04	345	eP	P	01 22 20.2	+0.3
STKA	Stephens Creek	53.12	132	P	P	01 22 26.4	-1.9
	comp=Z,3.4nm,0.8s,mb4.3,baz=324,slow=8.3,SNR=3.2						
STKA				LR	LR	01 44 25.2	
	comp=Z,137nm,21.0s,MS4.0,baz=276,slow=35						
ZAA0	Zalesovo Array	53.80	351	eP	P	01 22 33.0	+0.1
ZALV	Zalesovo Beam	53.80	351	P	P	01 22 32.8	-0.1
	comp=Z,5.4nm,0.4s,mb4.8,baz=174,slow=6.6,SNR=15						
BVAR	Borovoye Array	56.50	341	P	P	01 22 51.9	-0.5
	comp=Z,2.0nm,0.7s,mb4.2,baz=137,slow=10.0,SNR=7.8						
ARCES	ARCESS Array B	82.79	340	P	P	01 25 33.8	-0.3
	comp=Z,2.7nm,0.8s,mb4.3,baz=93,slow=5.1,SNR=6.9						
GERES	GERESS Array B	85.06	319	P	P	01 25 46.4	+0.4
	comp=Z,0.3nm,0.5s,mb3.7,baz=98,slow=5.5,SNR=4.7						

*NEIC **10** 02:05:55.8, 2313S×7052W, h37^{km}, MG4.0(GUC), After GUC.*

GUC 10 02:05:55.8±0.8**, 2313S**×**7052W, h37**^{km}±3^{km}**, ML4.0, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.07	69	eP	Pn	02 06 01.4	-0.6
MECH				i S	Sn	02 06 05.9	-0.2
MECH				AML	AML	02 06 06.9	
	comp=E,40μm,0.6s						
CEN1	Los Morros	0.39	132	eP	Pn	02 06 06.2	+1.2
CEN1				i S	Sn	02 06 13.2	+1.8
PECH	Pedro de Valdi	0.94	56	⇓iP	Pn	02 06 13.4	+0.9
PECH				i S	Sn	02 06 26.3	+1.6
PECH				AML	AML	02 06 27.6	
	comp=E,12μm,0.2s						
TOCH	Tocopilla	1.07	16	eP	Pn	02 06 14.9	+0.6
TOCH				i S	Sn	02 06 29.3	+1.4
TOCH				AML	AML	02 06 30.8	
	comp=E,7μm,0.1s						
MACH	Maria Elena	1.16	37	⇓iP	Pn	02 06 16.8	+1.2
MACH				i S	Sn	02 06 32.2	+2.0
LVC	Limon Verde	1.57	71	ePn	Pn	02 06 24.2	+3.0
LVC				eSn	Sn	02 06 44.5	+4.3
LVC	Limon Verde	1.57	71	eP	Pn	02 06 23.5	+2.4
LVC				i S	Sn	02 06 44.3	+4.1
LVC				AML	AML	02 06 45.2	
	comp=N,3μm,0.4s						
PB01	Plate Boundary	2.28	25	⇑iP	Pn	02 06 32.5	+1.5
PB01				AML	AML	02 07 07.3	
	comp=E,1μm,0.5s						
LCO	Las Campanas	5.86	182	ePn	Pn	02 07 21.3	+1.1
ARE	Arequipa	6.69	352	eP	Pn	02 07 32.0	+0.3

*CSEM **10** 02:09:40.9±0.8, 3827N×4466E, h5^{km}, MD3.1, Error ellipse: s-maj=19.5km s-min=13.2km az=91.0*
*DDA **10** 02:09:45.2, 3868N×4448E, h24^{km}, Md3.2*

ISK 10 02:09:40.1, 3828N×**4474E, h5**^{km}**, MD3.1, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANT	Van	1.07	279	ePN	Pn	02 10 03.1	+1.4
VANT				eSN	Sn	02 10 21.3	+4.3
TVAN	Van	1.07	284	i P	Pg	02 10 01.2	+0.5
TVAN				i S	Sg	02 10 18.8	+4.2
HAKT	HAKKARI	1.08	229	i P	Pg	02 10 08.1	+7.2
HAKT				i S	Sg	02 10 26.5	+12
VANB	Van	1.10	287	ePN	Pn	02 10 02.2	0.0
VANB				eSN	Sn	02 10 18.4	+0.6
CUKT	Cukurca	1.36	221	ePN	Pn	02 10 07.3	+1.5
AGRB	Hanur-Agry	1.88	314	ePN	Pn	02 10 14.8	+1.9
KARS	Kars	2.66	332	ePN	Pn	02 10 25.9	+2.4
BEST	Besiri	2.76	263	i P	Pn	02 10 29.0	+4.0
BEST				i S	Sn	02 11 10.4	+12

*NEIC **10** 02:38:19.9, 1629N×9809W, h14^{km}, MD3.9(MEX), After MEX.*

MEX 10 02:38:19.8±0.9**, 1628N**×**9809W, h14**^{km}±3^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.11	342	i P	Pg	02 38 22.1	-0.9
PNIG				i S	Sg	02 38 25.0	-0.4
VHO	Vista Hermosa	1.52	59	i P	Pn	02 38 42.9	-3.7
VHO				i S	Sn	02 39 02.0	-4.1
OXX	Oaxaca	1.53	59	i P	Pn	02 38 43.4	-3.4
OXX				i S	Sn	02 39 01.7	-4.8
UTMO	Huajuapan	1.56	10	i P	Pn	02 38 44.5	-2.7
UTMO				i S	Sn	02 39 01.3	-6.0
ACX	Acapulco	1.84	289	eP	Pn	02 38 47.2	-3.9
ACX				i S	Sn	02 39 08.0	-6.3
HUIG	Huatulco	1.97	105	i P	Pn	02 38 50.0	-2.8
HUIG				i S	Sn	02 39 12.0	-5.4
HUIG	Huatulco	1.97	105	i P	Pn	02 38 50.0	-2.8
HUIG				i S	Sn	02 39 10.8	-6.6
MEIG	Mezcala	2.19	318	eP	Pn	02 38 53.8	-2.0
MEIG				i S	Sn	02 39 17.8	-5.0
CAIG	El Cayaco	2.22	290	eP	Pn	02 38 54.3	-1.9
CAIG				i S	Sn	02 39 18.7	-4.8
TPIG	Tehuac#an	2.23	18	eP	Pn	02 38 54.2	-2.2
TPIG				i S	Sn	02 39 19.7	-4.1
PLIG	Platanillo	2.49	327	eP	Pn	02 38 58.4	-1.6
PLIG				i S	Sn	02 39 26.4	-3.8
PLIG	Platanillo	2.49	327	eP	Pn	02 38 58.4	-1.6
PLIG				i S	Sn	02 39 30.4	+0.2
PPM	Popocatepetl	2.81	350	eP	Pn	02 39 06.3	+1.9
PPM				i S	Sn	02 39 41.3	+3.1
MZVM		3.09	340	eP	Pn	02 39 06.3	-1.8
MZVM				i S	Sn	02 39 47.7	+2.8
CMIG	Matias Romero	3.18	75	eP	Pn	02 39 05.1	-4.3
CMIG				i S	Sn	02 39 43.0	-4.1
CMIG	Matias Romero	3.18	75	eP	Pn	02 39 04.0	-5.3
CMIG				i S	Sn	02 39 38.0	-9.1
IIO	Organos	3.34	350	eP	Pn	02 39 09.7	-2.0
IIO				i S	Sn	02 39 55.1	+3.8
ZIIG	Zihuatanejo	3.49	293	eP	Pn	02 39 14.1	+0.4
ZIIG				i S	Sn	02 39 57.7	+2.9

*ISCJB **10** 02:46:54.9±0.6, 3722N±004×3694E±005, h7^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=5.8km az=152.2*
*CSEM **10** 02:46:54.3±0.1, 3720N×3697E, h6^{km}±1^{km}, MD2.9, Error ellipse: s-maj=2.2km s-min=1.7km az=6.0*
*ISK **10** 02:46:54.4, 3720N×3696E, h5^{km}, MD2.9*
*DDA **10** 02:46:55.2, 3723N×3696E, h12^{km}, Md3.3*

ISC 10 02:46:55.3±0.6**, 3722N**±004×**3694E**±005**, h7**^{km}±6^{km}**, n13,** σ**0**^{s}**79**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.22	101	PG	Pg	02 46 58.8	-0.9
GAZ				eSG	Sg	02 47 02.3	-0.4
KMRS	Kahramanmaras	0.29	354	PG	Pg	02 47 01.3	+0.3
KMRS				eSG	Sg	02 47 05.4	+0.5
KUZU	Kuzuini	0.46	166	i P	Pg	02 47 04.0	0.0
KUZU				i S	Sg	02 47 11.0	+1.0
KOZT	Kozan	0.93	287	ePG	Pg	02 47 12.9	-0.2
CEYT	Ceyhan	0.97	258	ePG	Pg	02 47 13.8	-0.2
HTY	Hatay	1.27	211	ePN	Pn	02 47 18.9	-0.5
SARI	SarD1z-Kayseri	1.47	353	ePN	Pn	02 47 19.6	-2.6
KARA	Karaisali	1.51	272	ePN	Pn	02 47 22.9	+0.2
URFA	Urfa	1.52	81	ePN	Pn	02 47 22.9	+0.1
BNN	Bunyan	1.85	332	ePN	Pn	02 47 27.8	+0.4
DARE	Darende-Malaty	1.86	21	ePN	Pn	02 47 21.9	-5.7
SVRC	Sivrice-ELAZID	2.20	58	ePN	Pn	02 47 32.3	+0.1
PTK	Pertek	2.56	48	ePN	Pn	02 47 38.5	+1.4

*NEIC **10** 02:56:16.5, 2975S×7160W, h48^{km}, MG3.5(GUC), After GUC.*

GUC 10 02:56:16.5±0.7**, 2975S**×**7160W, h48**^{km}**, ML3.5, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	0.80	121	eP	Pn	02 56 32.9	+1.4
TLL				i S	Sn	02 56 44.5	+2.1
TLL	Tololo Astrono	0.80	121	eP	Pn	02 56 32.9	+1.4
TLL				i S	Sn	02 56 44.5	+2.1
TLL				AML	AML	02 56 47.0	
	comp=N,810nm,0.6s						
OVCH	Ovalle	0.92	158	⇓iP	Pn	02 56 33.8	+0.7
OVCH				i S	Sn	02 56 46.0	+0.8
LCO	Las Campanas	1.07	47	ePn	Pn	02 56 36.4	+1.2
LCO				eSn	Sn	02 56 50.9	+1.9
LCO	Las Campanas	1.07	47	⇑iP	Pn	02 56 36.4	+1.2
LCO				i S	Sn	02 56 51.1	+2.1
LCO				AML	AML	02 56 51.7	
	comp=E,1μm,0.4s						
CHNG	Los Chungos	2.12	178	⇓iP	Pn	02 56 49.3	-0.2
CHNG				i S	Sn	02 57 13.2	-1.5
PEL	Peldehue	3.47	167	eP	Pn	02 57 08.4	+0.5
PEL				i S	Sn	02 57 48.3	+0.5
PEL				AML	AML	02 58 05.7	
	comp=E,131nm,0.6s						
FCH	Farellones	3.73	163	eP	Pn	02 57 12.9	+1.3
FCH				i S	Sn	02 57 55.9	+1.6
FCH				AML	AML	02 58 04.2	
	comp=E,57nm,0.3s						
CLCH	Cerro Calan	3.74	166	⇑iP	Pn	02 57 12.6	+0.8
CLCH				i S	Sn	02 57 54.9	+0.4
CLCH				AML	AML	02 58 16.0	
	comp=E,88nm,0.4s						
LMEL	Las Melosas	4.25	164	eP	Pn	02 57 19.8	+1.2
LVC	Limon Verde	7.51	19	Pn	Pn	02 58 04.5	+1.1

*NEIC **10** 03:08:30.7, 1620N×9736W, h19^{km}, MD3.7(MEX), After MEX.*

MEX 10 03:08:30.7±1.0**, 1623N**×**9737W, h15**^{km}±13^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.75	283	i P	Pg	03 08 43.4	-1.9
PNIG				i S	Sg	03 08 51.5	-3.8
VHO	Vista Hermosa	1.04	36	i P	Pb	03 08 46.5	-3.8
VHO				i S	Sb	03 08 59.7	-4.1
OXX	Oaxaca	1.05	36	i P	Pb	03 08 47.7	-2.9
OXX				i S	Sb	03 09 00.6	-3.5
OXX	Oaxaca	1.05	36	i P	Pb	03 08 47.7	-2.9
OXX				i S	Sb	03 09 01.0	-3.2
HUIG	Huatulco	1.29	110	i P	Pn	03 08 51.0	-3.2
HUIG				i S	Sb	03 09 05.4	-5.7
UTMO	Huajuapan	1.65	345	i P	Pn	03 08 55.7	-3.4
UTMO				i S	Sn	03 09 16.3	-3.8
TPIG	Tehuac#an	2.18	0	i S	Sn	03 09 29.8	-3.4
CMIG	Matias Romero	2.53	70	eP	Pn	03 09 08.6	-2.7
CMIG				i S	Sn	03 09 37.5	-4.3
PPM	Popocatepetl	3.07	337	eP	Pn	03 09 16.3	-2.4
PPM				i S	Sn	03 09 54.0	-1.2
MZVM		3.44	329	eP	Pn	03 09 25.3	+1.6
MZVM				i S	Sn	03 10 04.8	+0.5
IIO	Organos	3.59	339	eP	Pn	03 09 22.5	-3.3
IIO				i S	Sn	03 10 06.8	-1.1

*NIED **10** 03:45:00, 3710N×14130E, h50^{km}, Mw3.6 Best double couple: $M_0$2.59000×10^{14} NP1:ϕ_s131.00000°, δ86.00000°, λ102.00000°. NP2:ϕ_s241.00000°, δ12.00000°, λ20.00000°.*
*ISCJB **10** 03:45:59.1±1.3, 3709N±005×14139E±009, h40^{km}±22^{km}, Error ellipse: s-maj=13.3km s-min=6.9km az=24.4*
*JMA **10** 03:45:59.6±0.1, 3709N×14130E, h50^{km}±1^{km}, M3.7*
JMA Felt I J1.

ISC 10 03:45:59.1±1.5**, 3709N**±005×**14140E**±009**, h32**^{km}±6^{km}**, n10,** σ**0**^{s}**76**/20**, 7C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.48	272	⇑P	Pb	03 46 09.9	+0.6
ONAJ				S	Sb	03 46 17.1	+0.7
JFK	Kawauchi	0.51	304	⇑P	Pb	03 46 10.1	+0.4
JFK				S	Sb	03 46 17.4	+0.4
JHO	Hitachi	0.82	235	⇑P	Pn	03 46 13.8	-0.6
JHO				S	Sb	03 46 24.1	-1.5
JMM	Marumori	0.92	328	⇑P	Pn	03 46 15.5	-0.2
JMM				S	Sb	03 46 27.2	-1.2
JFT	Otama	0.95	297	⇑P	Pn	03 46 16.3	+0.1
JFT				S	Sn	03 46 28.1	-0.6
JIO	Ouri	1.37	358	⇑P	Pn	03 46 22.1	+0.2
JIO				eS	Sn	03 46 39.2	+0.3
JFY	Yanaizu	1.39	284	⇑P	Pn	03 46 21.9	-0.4
JFY				eS	Sn	03 46 38.4	-1.2
JOU	Okura	1.41	336	P	Pn	03 46 22.4	-0.1
JOU				eS	Sn	03 46 40.1	+0.2
JYS	Shirataka	1.55	317	P	Pn	03 46 24.7	+0.2
JYS				S	Sn	03 46 43.5	0.0
MAT	Matsushiro	2.62	259	P	Pn	03 46 39.6	+0.4
MAT				S	Sn	03 47 12.1	+2.2

*IDC **10** 04:02:45.1±0.8, 1060N×6936W, h0^{km}, mb3.5/7, mb1 3.9/8, mb1mx3.7/22, mbtmp3.6/8, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/25, Error ellipse: s-maj=18.7km s-min=14.2km az=125.0*
*ISCJB **10** 04:02:46.2±0.5, 1075N±003×6941W±002, h22^{km}±5^{km}, mb3.5/8, Error ellipse: s-maj=4.5km s-min=3.4km az=153.1*
*FUNV **10** 04:02:46.1, 1070N×6942W, h2^{km}, MW4.0*
*NEIC **10** 04:02:46.0, 1077N×6940W, h5^{km}, mb4.2/1, MD3.8(CAR), After CAR.*

ISC 10 04:02:46.2±0.6**, 1071N**±002×**6942W**±002**, h10**^{km}±4^{km}**, n36,** σ**1**^{s}**03**/54**, mb3.5**/8**, 7C-7D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIQV	Siquisique	0.39	262	⇑iP	Pg	04 02 53.2	-0.7
SIQV				eS	Sg	04 02 59.8	+0.7
JACV	Jacura	0.69	56	⇑eP	Pg	04 02 60.0	+0.4
JACV				eS	Sg	04 03 09.6	+1.0
TEPV	Terepaima	0.77	163	⇓iP	Pg	04 03 00.2	-0.9
TEPV				eS	Sg	04 03 11.7	+0.6
CURV	Curarigua	0.87	218	⇑eP	Pg	04 03 01.4	-1.7
CURV				eS	Sg	04 03 15.0	+0.6
QARV	Quebrada Arrib	1.20	246	⇑eP	Pb	04 03 08.0	-1.0
QARV				eS	Sb	04 03 24.5	-0.1
SANV	Sanarito	1.20	186	⇓iP	Pb	04 03 08.0	-1.2
SANV				eS	Sb	04 03 25.1	+0.3
DABV	Dabajuro	1.22	280	⇓eP	Pn	04 03 09.2	-0.1
DABV				eS	Sb	04 03 25.6	+0.4
TURV	Turiamo	1.57	99	⇓eP	Pn	04 03 13.1	-1.1
TURV				eS	Sn	04 03 35.9	+1.2
SDV	Santo Domingo	2.17	214	Pg	Pg	04 03 23.8	-4.0
	26nm,0.3s,baz=36,slow=14,SNR=115						
SDV				Lg		04 03 52.3	
	47nm,0.3s,baz=6.2,slow=21,SNR=5.0						
SDV	Santo Domingo	2.17	214	ePn	Pn	04 03 24.9	+2.4
SDV				eSn	Sn	04 03 53.7	+4.3
BAUV	El Baul	2.21	142	eP	Pn	04 03 23.4	+0.3
BAUV				eS	Sn	04 03 50.4	-0.1
VIGV	El Vigia	2.67	226	⇑eP	Pn	04 03 30.6	+1.3
VIGV				eS	Sn	04 04 00.8	-1.0
SOCV	Socops	2.79	211	⇑eP	Pn	04 03 32.0	+1.0
SOCV				eS	Sn	04 04 03.8	-1.1
VIRV	Villa del Rosa	2.95	266	⇑eP	Pn	04 03 32.5	-0.6
VIRV				eS	Sn	04 04 07.7	-0.9
BIRV	Birongo	3.10	94	eP	Pn	04 03 34.6	-0.7
MERV	Las Mercedes	3.40	115	⇓eP	Pn	04 03 39.5	+0.1
CUPV	Cœpira	3.63	100	eP	Pn	04 03 42.3	-0.2
ELOV	Elorza	3.68	181	⇓eP	Pn	04 03 44.3	+1.0
CAPV	Capacho	4.02	226	eP	Pn	04 03 48.6	+0.7
CAOV	Caicara del Or	4.54	137	⇓eP	Pn	04 03 54.4	-0.6
PCRV	Puerto La Cruz	4.73	96	Pn	Pn	04 03 57.2	-0.5
	1.9nm,0.3s,baz=5.5,slow=17,SNR=15						
PCRV				Sn	Sn	04 04 53.7	+1.0
	1.3nm,0.3s,baz=158,slow=19,SNR=2.7						
PCRV				LR	LR	04 06 01.3	
	comp=Z,112nm,21.4s,baz=267,slow=42						
ROSC	El Rosal	7.58	220	Pn	Pn	04 04 40.6	+3.7
	3.0nm,0.3s,baz=273,slow=19,SNR=9.4						
ROSC				Sn	Sn	04 06 06.3	+3.3
	0.9nm,0.3s,baz=73,slow=19,SNR=2.6						
ROSC	El Rosal	7.58	220	ePn	Pn	04 04 40.7	+3.8
ROSC				eSn	Sn	04 06 03.1	+0.2
CRPR	Cabo Rojo, PR	7.59	17	ePn	Pn	04 04 36.9	-0.2
CRPR				eSn	Sn	04 06 01.8	-1.4
AOPR	Arecibo Observ	8.02	18	ePn	Pn	04 04 43.2	+0.3
	15nm,0.5s						
HUMP	Col San Antoni	8.16	25	ePn	Pn	04 04 44.9	+0.1
	19nm,0.9s						
MTP	Monte Pirata	8.25	27	ePn	Pn	04 04 46.6	+0.6
FDF	Fort de France	9.00	63	ePn	Pn	04 04 54.0	-2.4
FDF				eSn	Sn	04 06 36.4	-1.5
SIV	San Ignacio	27.78	163	P	P	04 08 34.2	-1.4
	0.5nm,0.6s,mb3.4,baz=328,slow=7.5,SNR=3.9						
TXAR	Lajitas Array	36.94	305	P	P	04 09 58.4	+2.8
	0.4nm,0.7s,mb3.4,baz=119,slow=9.4,SNR=3.3						
PDAR	Pinedale Array	47.30	320	P	P	04 11 20.4	+0.3
	0.5nm,0.6s,mb3.6,baz=123,slow=11,SNR=5.3						
PDAR				PcP	PcP	04 12 53.1	+2.0
	0.3nm,0.7s,baz=150,slow=2.0,SNR=2.4						
RRI2	Red Ridge	48.71	320	eP	P	04 11 32.5	+1.5
	1.3nm,0.6s,mb4.1						
NVAR	Mina Array Bea	51.55	311	P	P	04 11 52.5	-0.1
	0.2nm,0.7s,mb3.2,baz=119,slow=7.3,SNR=2.9						
NVAR				PcP	PcP	04 13 10.6	+3.9
	0.2nm,0.6s,baz=116,slow=6.1,SNR=2.4						
YKA	Yellowknife Ar	60.98	338	P	P	04 12 59.1	-0.4
	0.9nm,0.6s,mb4.1,baz=118,slow=6.9,SNR=15						
TORD	Torodi Ar. Bea	69.41	80	P	P	04 13 55.1	0.0
	0.1nm,0.4s,mb3.1,baz=291,slow=7.4,SNR=6.4						
GERES	GERESS Array B	77.50	42	P	P	04 14 44.3	+2.1
	0.2nm,0.5s,mb3.3,baz=284,slow=8.0,SNR=3.0						

*ISCJB **10** 04:07:16.7±1.4, 8.14N±0.09×936E±0.1, h97^{km}±13^{km}, mb4.0/16, Error ellipse: s-maj=21.1km s-min=9.0km az=143.7*
*IDC **10** 04:07:17.6±2.3, 8.19N×9365E, h89^{km}±19^{km}, mb3.7/11, mb1 3.8/13, mb1mx3.7/23, mbtmp3.7/13, Error ellipse: s-maj=32.7km s-min=19.1km az=76.0*
*NEIC **10** 04:07:18.3±1.1, 809N×9357E, h101^{km}±10^{km}, mb4.1/3, Error ellipse: s-maj=16.1km s-min=5.1km az=60.0*

ISC 10 04:07:18.0±1.2**, 817N**±008×**936E**±01**, h91**^{km}±11^{km}**, n51,** σ**0**^{s}**89**/44**, mb4.0**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	3.56	347	ex	x	04 08 41.0	
PBA				eS	x	04 08 54.6	
PSI	Prapat	7.54	135	P	Pn	04 09 05.1	-0.1
	2.6nm,0.3s,baz=335,slow=15,SNR=21						
KULM	Kulim	7.59	112	ePn	Pn	04 09 07.0	+1.1
CMAR	Chiang Mai Arr	11.48	27	P	Pn	04 09 58.0	-0.9
	0.6nm,0.3s,baz=215,slow=14,SNR=9.5						
CHTO	Chiang Mai	11.79	26	ePn	Pn	04 10 04.7	+1.5
VIS	Vishakhapatnam	13.77	315	eP	Pn	04 10 27.8	-1.5
VIS				ex	x	04 12 46.6	
BWNR	Bhubaneshwar	14.20	329	eP	Pn	04 10 36.1	+1.2
BWNR				ex	x	04 12 58.9	
BOK	Bokaro	17.19	336	eP	Pn	04 11 11.6	-0.9
BOK				AMb	AMB	04 11 14.3	
	comp=Z,22nm,1.4s						
BOK				ex	x	04 14 13.0	
SHL	Shillong	17.37	355	eP	Pn	04 11 11.5	-3.1
NGP	Nagpur	19.05	314	ex	x	04 14 58.8	
NGP				AML	AML	04 15 35.3	

comp=E,16nm,0.4s
ODAN Odare 19.49 343 *e*P Pn 04 11 38.3 -1.6
RAMN Ramite 19.81 341 *e*P Pn 04 11 43.0 -0.7
TAPN Taplejung 19.87 344 *e*P Pn 04 11 42.6 -1.7
JIRN Jiri 20.60 341 *e*P P 04 11 50.4 +0.6
PKI Pulchoki 20.78 339 *e*P P 04 11 52.3 +0.5
DMN Daman 20.93 339 *e*P P 04 11 54.1 +0.8
GUN Gumba 20.94 341 *e*P P 04 11 53.6 +0.2
KAD Karad 20.96 298 *e*P P 04 11 48.2 -5.6
KAD AMb AMB 04 11 58.4
comp=Z,14nm,0.8s
KAD *e*S **S** 04 15 42.4 0.0
KKN Kakani 21.03 339 *e*P P 04 11 55.4 +1.0
GKN Gorkha 21.46 338 *e*P P 04 11 59.3 +0.3
LSA Lhasa 21.54 354 *e*P P 04 11 59.6 -0.2
comp=Z,15nm,0.4s,mb4.7
KOLN Koldanda 21.66 335 *e*P P 04 12 01.9 +0.8
DANN Dangsing 22.10 336 *e*P P 04 12 06.4 +0.5
AML Almayashu 38.10 336 *e*P P 04 14 29.6 +1.6
comp=Z,11nm,0.5s,mb5.0
MKAR Makanchi Array 39.68 348 P P 04 14 40.2 -0.8
comp=Z,1.2nm,0.5s,mb4.0,baz=168,slow=8.1,SNR=23
MKAR PP PP 04 16 13.1 -0.7
comp=Z,1.3nm,0.7s,baz=158,slow=10,SNR=4.2
SONM Songino Array 41.00 13 P P 04 14 50.8 -1.1
comp=Z,0.4nm,0.4s,mb3.6,baz=200,slow=9.7,SNR=5.8
SONM PcP PcP 04 16 51.2 +0.9
comp=Z,0.2nm,0.4s,baz=194,slow=4.2,SNR=3.5
SONM ScP ScP 04 20 31.4 -0.6
comp=Z,0.4nm,0.9s,baz=188,slow=5.8,SNR=2.7
KURK Kurchatov 44.19 346 P P 04 15 17.4 -0.3
comp=Z,2.6nm,0.7s,mb4.1,baz=160,slow=7.5,SNR=9.5
KURK ScP ScP 04 20 43.9 -0.9
comp=Z,0.5nm,0.6s,baz=156,slow=3.9,SNR=4.4
KURK Kurchatov 44.19 346 *e*P P 04 15 18.1 +0.4
comp=Z,1.3nm,0.6s,mb3.8
KURK ScP ScP 04 20 43.9 -0.9
ZAA0 Zalesovo Array 46.19 353 *e*P P 04 15 33.7 +0.3
ZALV Zalesovo Beam 46.19 353 P P 04 15 33.5 +0.1
comp=Z,6.9nm,0.4s,mb4.8,baz=179,slow=8.2,SNR=20
BVAR Borovoye Array 48.53 341 P P 04 15 51.3 -0.3
comp=Z,0.9nm,0.6s,mb3.9,baz=139,slow=9.2,SNR=6.4
WRAB Tennant Creek 48.89 125 *e*P P 04 15 54.2 -0.8
comp=Z,4.2nm,1.4s,mb4.2
WB2 Warramunga Arr 48.90 125 *e*P P 04 15 53.9 -1.1
MJAR Matsushiro Arr 49.38 48 PcP PcP 04 17 18.8 -0.8
comp=Z,1.3nm,0.6s,baz=246,slow=3.6,SNR=4.6
AKTK Aktyubinsk 51.42 332 P P 04 16 13.4 -0.1
AKTO Aktyubinsk 51.42 332 P P 04 16 13.4 -0.1
comp=Z,0.8nm,0.4s,mb4.1,baz=108,slow=10,SNR=5.1
BRTR Keskin Array B 61.81 311 P P 04 17 27.7 +0.3
comp=Z,0.8nm,0.7s,mb3.9,baz=125,slow=7.5,SNR=5.7
JOF Joensuu 70.34 335 *e*p P 04 18 22.1 +0.5
comp=Z,0.8nm,0.4s,mb3.9
KAF Kangasniemi 72.27 333 *e*p P 04 18 33.5 +0.3
comp=Z,1.2nm,0.4s,mb4.1
ARCES ARCESS Array B 74.80 340 P P 04 18 48.7 +0.8
comp=Z,2.3nm,0.8s,mb4.0,baz=93,slow=5.9,SNR=4.1
ARCES ARCESS Array B 74.80 340 P P 04 18 48.7 +0.8
GERES GERESS Array B 77.23 318 P P 04 19 03.1 +0.9
comp=Z,0.5nm,0.5s,mb3.5,baz=86,slow=4.4,SNR=7.1
GERES pP pP 04 19 31.2 +5.3
comp=Z,0.4nm,0.5s,baz=70,slow=4.4,SNR=4.4
NB2 NORSAR Subarra 79.20 331 P P 04 19 13.0 +0.3
comp=Z,1.1nm,0.6s,mb3.9,baz=95,slow=5.3
NOA NORSAR Array B 79.20 331 P P 04 19 12.8 +0.1
comp=Z,1.4nm,0.7s,mb3.9,baz=92,slow=5.7,SNR=5.5
NOA NORSAR Array B 79.20 331 P P 04 19 12.8 +0.1
TORD Torodi Ar. Bea 89.98 283 P P 04 20 07.1 -0.9
comp=Z,0.4nm,1.0s,mb3.5,baz=83,slow=4.6,SNR=2.1
NVAR Mina Array Bea 124.95 30 PKP PKPdf 04 26 07.5 -0.4
comp=Z,0.3nm,0.6s,baz=321,slow=1.3,SNR=2.7
PDAR Pinedale Array 125.09 21 PKP PKPdf 04 26 07.8 -0.3
comp=Z,0.2nm,0.7s,baz=342,slow=4.7,SNR=2.4
PLCA Paso Flores 144.63 201 PKP PKPdf 04 26 42.9 -1.4
comp=Z,2.1nm,0.8s,baz=224,slow=2.9,SNR=4.2
CPUP Villa Florida 146.99 233 PKPbc PKPbc 04 26 48.9 -2.0
comp=Z,0.2nm,0.4s,baz=135,slow=1.4,SNR=2.3
CFAA Coronel Fontan 151.18 214 PKPbc PKPbc 04 27 02.5 +1.2
comp=Z,0.3nm,0.4s,baz=105,slow=3.7,SNR=6.0

MAN 10 04:23:52,963N×12447E,h3km,mb4.0,ML2.7,MS2.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.60**	**276**	*e*P	Pg	04 24 03.9	+0.3
TBP				*e*S	Sg	04 24 12.7	+1.2
MSLP	**Maasin**	**0.63**	**37**	*e*P	Pg	04 24 04.3	+0.2
MSLP				*e*S	Sg	04 24 13.8	+1.6
BUKP	**Musuan**	**1.84**	**161**	*e*P	Pn	04 24 24.4	-0.1
PAGZ	**Pagadian**	**2.07**	**211**	*e*P	Pn	04 24 29.0	+1.2
GUIM	**Jordan**	**2.10**	**298**	*e*P	Pn	04 24 27.9	-0.2
GUIM				*e*S	Sn	04 24 56.3	+1.5

*JMA **10** 05:27:44.1±0.2,2487N×12263E,h10km,M2.3*
TAP 10 05:27:44.7,2472N×12244E,h5km±1km,ML3.0,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.50**	**305**	*i* P	Pg	05 27 54.4	0.0
TWB1	baz=305			*i* S	Sg	05 28 01.5	+0.6
TWC	**Suao**	**0.55**	**259**	P	Pg	05 27 54.2	-1.1
TWC	baz=258			*e*S	Sg	05 28 03.9	+1.4
YOJ	**Yonaguni jima**	**0.58**	**116**	P	Pg	05 27 54.4	-1.5
YOJ				S	Sg	05 28 01.6	-1.9
NWF	**Wu-fen Shan**	**0.69**	**301**	*e*P	Pg	05 27 58.4	+0.3
NWF	baz=300			*e*S	Sg	05 28 07.5	+0.5
ENA	**Nanau**	**0.70**	**246**	*e*P	Pg	05 27 57.4	-0.8
ENA	baz=245			*e*S	Sg	05 28 07.2	-0.1
TWE	**Neicheng**	**0.70**	**270**	P	Pg	05 27 58.2	0.0
TWE	baz=270			S	Sg	05 28 08.2	+0.8
ENTT	**Nioudou**	**0.80**	**265**	*e*P	Pg	05 27 59.9	-0.2
ENTT	baz=264			S	Sg	05 28 11.1	+0.7
TWY	**Chenhua**	**0.94**	**306**	*e*P	Pg	05 28 02.6	-0.2
TWY	baz=306			*e*S	Sg	05 28 15.2	+0.1
NSK	**Sanguang**	**0.98**	**268**	P	Pg	05 28 03.0	-0.6
NSK	baz=267			*e*S	Sg	05 28 15.3	-1.1
NNS	**Nan Shan**	**1.01**	**254**	*e*P	Pg	05 28 03.6	-0.5
NNS	baz=254			*e*S	Sg	05 28 17.2	0.0
WHF	**Hehuan Shan**	**1.21**	**242**	*e*P	Pg	05 28 06.9	-1.1
WHF	baz=241			*e*S	Sg	05 28 22.6	-1.2
IRIF	**Iriomote-Funau**	**1.24**	**108**	P	Pg	05 28 05.4	-3.1
IRIF				*e*S	Sg	05 28 19.8	-4.7
TWT	**Tachien**	**1.24**	**248**	*e*P	Pg	05 28 09.6	+1.0
NSTT	baz=248 **Nanjuang**	**1.31**	**266**	*e*P	Pn	05 28 10.1	+0.4
NSTT	baz=266			*e*S	Sg	05 28 26.4	-0.6
HATJ	**Hateruma jima**	**1.41**	**118**	P	Pn	05 28 08.9	-2.1
JKRS	**Kuro-shima**	**1.51**	**108**	P	Pn	05 28 09.1	-3.3
JKRS				*e*S	Sn	05 28 28.3	-4.1
JIJ	**Ishigaki jima**	**1.59**	**102**	P	Pn	05 28 10.2	-3.3
JIJ				*e*S	Sn	05 28 30.1	-4.3
SMLT	**Sun Moon Lake**	**1.63**	**240**	*e*P	Pn	05 28 15.0	+0.9
TYC	baz=239 **Yuchr**	**1.66**	**241**	*e*P	Pn	05 28 14.8	+0.4
TYC	baz=240			*e*S	Sn	05 28 36.8	+0.8
TWF1	**Yuli**	**1.71**	**218**	*e*P	Pn	05 28 12.9	-2.4
ALS	baz=217 **Alishan**	**1.92**	**231**	*e*P	Pn	05 28 19.3	+1.3
CHN5	baz=231 **Tsauling**	**1.96**	**236**	*e*P	Pn	05 28 19.2	+0.7
CHN5	baz=235			*e*S	Sn	05 28 45.3	+1.8
WTP	baz=235 **Ta-pu**	**2.22**	**229**	*e*P	Pn	05 28 24.0	+1.8
CHN1	baz=228 **Nanshi**	**2.32**	**229**	*e*P	Pn	05 28 26.5	+2.9
	baz=228						

*ISCJB **10** 05:46:13.8±0.2,3751N×001×11233W±001,h10km,Error ellipse: s-maj=1.9km s-min=1.7km az=171.1*
*IDC **10** 05:46:13.0±1.7,3742N×11239W,h0km,mb2.9/1, mb1 3.0/5,mb1mx3.0/25,mbtmp2.7/5,ML2.8/4,Error ellipse: s-maj=16.9km s-min=11.8km az=175.0*
*NEIC **10** 05:46:13.0,3753N×11232W,h2km,ML3.0(SLC),After SLC.*
ISC 10 05:46:14.2±0.2,3752N±001×11233W±001,h10km,n90, σ1§12/150,41C-40D,Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S15A	**Panguitch**	**0.16**	**351**	⇓P	Pg	05 46 16.8	-1.0
S15A	baz=0.1			⇓S	Sg	05 46 20.2	0.0
T15A	**Red Dirt Ranch**	**0.50**	**185**	P	Pg	05 46 23.0	-0.9
T15A	baz=0.5,SNR=200			⇑S	Sg	05 46 29.5	-0.9
S16A	baz=0.5 **Weppner Ranch,**	**0.62**	**70**	⇓P	Pg	05 46 24.8	-1.3
S16A	baz=0.6,SNR=128			⇓S	Sg	05 46 32.9	-1.4
R15A	baz=0.6 **Junction**	**0.69**	**3**	⇑P	Pg	05 46 26.6	-1.0
R15A	baz=0.7,SNR=183			⇑S	Sg	05 46 35.7	-1.1
S14A	baz=0.7 **Cedar City**	**0.71**	**290**	⇑P	Pg	05 46 27.2	-0.7
S14A	baz=0.7,SNR=346			⇓S	Sg	05 46 36.6	-0.6
T14A	baz=0.7 **Hurricane**	**0.75**	**233**	⇑P	Pg	05 46 27.8	-0.9
T14A	baz=0.8,SNR=126			⇓S	Sg	05 46 37.4	-1.2
CCUT	baz=0.8 **Cedar City**	**0.82**	**273**	*e*Pg	Pg	05 46 29.0	-1.0
CCUT				*e*Sg	Sg	05 46 39.4	-1.4
T16A	**Glen Canyon Da**	**0.84**	**129**	⇑P	Pg	05 46 29.0	-1.5
T16A	baz=0.8,SNR=106			⇓S	Sg	05 46 39.8	-1.6
ARUT	baz=0.8 **Antelope Range**	**0.92**	**287**	*e*Pg	Pg	05 46 31.1	-0.9
ARUT				*e*Sg	Sg	05 46 43.2	-0.7
R14A	**James Farms, M**	**0.95**	**325**	⇑P	Pg	05 46 31.6	-0.9
R14A	baz=0.9,SNR=167			⇓S	Sg	05 46 44.6	-0.4
MSU	baz=0.9 **Marysvale**	**1.00**	**7**	*e*P	Pg	05 46 32.1	-1.3
R16A	**Teasdale**	**1.02**	**41**	⇑P	Pg	05 46 31.7	-2.1
R16A	baz=1.0,SNR=153			⇑S	Sg	05 46 45.4	-1.7
U15A	baz=1.0 **North Rim**	**1.09**	**178**	P	Pb	05 46 33.5	-1.5
U15A	baz=1.1,SNR=334			⇓S	Sg	05 46 48.0	-1.1
S13A	baz=1.1 **Holt Ranch, En**	**1.22**	**274**	⇑P	Pn	05 46 36.6	-0.7
S13A	baz=1.2,SNR=319			⇓S	Sb	05 46 52.3	-0.8
S17A	baz=1.2 **Black Ridge (B**	**1.22**	**84**	⇓P	Pn	05 46 35.6	-1.7
S17A	baz=1.2,SNR=653			⇑S	Sb	05 46 51.2	-1.9
U14A	baz=1.2 **Mt Trumbull**	**1.29**	**212**	P	Pn	05 46 37.0	-1.2
T17A	baz=1.3,SNR=135 **Navajo Res., N**	**1.32**	**113**	P	Pn	05 46 37.7	-1.0
T17A	baz=1.3,SNR=594			⇑S	Sb	05 46 54.6	-1.5
T13A	baz=1.3 **Saint George**	**1.35**	**249**	P	Pn	05 46 38.8	-0.3
T13A	baz=1.4,SNR=845			⇑S	Sb	05 46 55.8	-1.1
R13A	baz=1.4 **O'Grain Ranch,**	**1.46**	**298**	P	Pn	05 46 41.0	+0.5
R13A	baz=1.5,SNR=864			⇓S	Sn	05 46 59.8	+0.2
Q15A	baz=1.5 **Fillmore**	**1.48**	**359**	⇑P	Pn	05 46 40.8	-0.1
Q15A	baz=1.5,SNR=24			⇑S	Sn	05 47 00.1	-0.2
R17A	baz=1.5 **Hanksville Air**	**1.56**	**54**	P	Pn	05 46 41.7	-0.3
R17A	baz=1.5,SNR=945			⇓S	Sn	05 47 01.4	-0.9
U17A	baz=1.5 **Shonto**	**1.62**	**124**	⇓P	Pn	05 46 42.9	+0.2
U17A	baz=1.6,SNR=414			⇓S	Sn	05 47 03.3	-0.3
Q14A	baz=1.6 **Sevier Lake (B**	**1.65**	**333**	⇑P	Pn	05 46 43.1	-0.1
Q14A	baz=1.6,SNR=301			⇑S	Sn	05 47 05.1	+0.7
Q16A	baz=1.6 **Castle Valley**	**1.67**	**33**	⇑P	Pn	05 46 43.3	-0.2
Q16A	baz=1.7,SNR=56			⇑S	Sn	05 47 05.4	+0.4
U16A	baz=1.7 **Tuba City**	**1.68**	**145**	⇑P	Pn	05 46 44.0	+0.5
U16A	baz=1.7,SNR=443			⇑S	Sn	05 47 05.4	+0.4
V15A	baz=1.7 **Kaibab Nationa**	**1.70**	**176**	⇓P	Pn	05 46 44.2	+0.4
V15A	baz=1.7,SNR=220			⇑S	Sn	05 47 06.5	+0.9
U13A	baz=1.7 **Pakoon Wash**	**1.71**	**231**	⇓P	Pn	05 46 44.5	+0.5
U13A	baz=1.7,SNR=144			⇑S	Sn	05 47 06.3	+0.4
S18A	baz=1.7 **Hurst Farm, Bl**	**1.86**	**84**	⇑P	Pn	05 46 46.7	+0.6
S18A	baz=1.9,SNR=961			⇓S	Sn	05 47 10.2	+0.6
Q13A	baz=1.9 **Wheeler Ranch,**	**1.96**	**318**	⇓P	Pn	05 46 47.7	+0.2
Q13A	baz=2.0,SNR=30			⇓S	Sn	05 47 13.6	+1.5
R12A	baz=2.0 **Pony Springs,**	**1.98**	**295**	⇑P	Pn	05 46 47.9	+0.3
R12A	baz=2.0			⇓Sb	Sb	05 47 16.4	+1.5
V14A	baz=2.0 **Boquillas Ranc**	**1.98**	**199**	⇓P	Pn	05 46 48.6	+0.9
V14A	baz=2.0,SNR=243			⇑S	Sn	05 47 13.7	+1.2
TMUT	baz=2.0 **Trail Mountain**	**1.98**	**26**	*e*Pn	Pn	05 46 48.6	+0.8
TMUT				*e*S	Sn	05 47 15.1	+2.4
T18A	**Mexican Hat**	**1.99**	**100**	⇓P	Pn	05 46 48.1	+0.2
T18A	baz=2.0,SNR=416			⇓S	Sn	05 47 13.7	+0.8
S12A	baz=2.0 **Delamar Landin**	**2.00**	**273**	⇓P	Pn	05 46 48.5	+0.5
S12A	baz=2.0,SNR=18			⇓Sb	Sb	05 47 17.5	+1.9
P15A	baz=2.0 **Leamington**	**2.05**	**1**	⇓Sb	Sb	05 47 18.7	+1.6
T12A	baz=2.0 **Moapa**	**2.06**	**248**	⇑Pb	Pb	05 46 51.0	-0.7
T12A	baz=2.1			⇓S	Sn	05 47 16.4	+1.8
U12A	baz=2.1 **Valley of Fire**	**2.07**	**239**	⇓P	Pn	05 46 50.0	+1.0
R18A	baz=2.1,SNR=74 **Canyonlands Na**	**2.11**	**65**	⇓P	Pn	05 46 50.2	+0.6
R18A	baz=2.1,SNR=334			⇑S	Sn	05 47 17.0	+1.1
V13A	baz=2.1 **Grand Canyon W**	**2.13**	**219**	⇑P	Pn	05 46 50.9	+1.1
SRU	baz=2.1,SNR=108 **San Rafael**	**2.13**	**41**	*e*Pn	Pn	05 46 51.7	+1.9
SRU				*e*Sn	Sn	05 47 17.3	+0.9
WUAZ	**Wupatki**	**2.14**	**159**	*e*Pn	Pn	05 46 50.6	+0.7
WUAZ				*e*S	Sn	05 47 18.8	+2.3
P14A	**Drum Mountains**	**2.15**	**345**	⇓P	Pn	05 46 49.8	-0.3
U18A	baz=2.1 **Rough Rock, Ch**	**2.25**	**118**	⇑P	Pn	05 46 52.6	+1.1
T11A	baz=2.3 **Corn Creek, Al**	**2.32**	**264**	⇑P	Pn	05 46 52.9	+0.5
W15A	baz=2.3,SNR=10 **Williams**	**2.33**	**179**	⇑Pb	Pb	05 46 55.5	-0.8
P13A	baz=2.4 **Bates Ranch, G**	**2.34**	**326**	⇓P	Pn	05 46 52.9	+0.2
Q18A	baz=2.3,SNR=11 **Rafter H Ranch**	**2.34**	**47**	⇓Pb	Pb	05 46 55.3	-1.3
W14A	baz=2.3 **Seligman**	**2.38**	**195**	⇓P	Pn	05 46 53.9	+0.7
NLU	baz=2.4,SNR=92 **North Lily Min**	**2.44**	**5**	*e*Pn	Pn	05 46 56.6	+2.5
NLU				*e*Sg	Sg	05 47 32.2	-0.5
SHPR	**Sheep Range**	**2.48**	**247**	*e*Pn	Pn	05 46 55.4	+0.8
Q12A	**Willow Creek R**	**2.49**	**308**	⇑P	Pn	05 46 55.3	+0.6
W16A	baz=2.5,SNR=14 **Flagstaff**	**2.50**	**165**	⇓P	Pn	05 46 55.6	+0.8
S19A	baz=2.5,SNR=15 **Harvey Farm, M**	**2.55**	**84**	⇑P	Pn	05 46 56.0	+0.5
R19A	baz=2.5,SNR=71 **Curley Farm, L**	**2.55**	**71**	⇑P	Pn	05 46 56.1	+0.5
MPU	baz=2.5,SNR=50 **Maple Canyon**	**2.56**	**12**	*e*P	Pn	05 46 59.9	+4.2
V18A	**Ganado**	**2.64**	**132**	⇓P	Pn	05 46 57.7	+0.9
R11A	baz=2.6,SNR=75 **Troy Canyon, C**	**2.71**	**289**	⇑P	Pn	05 46 57.7	0.0
T19A	baz=2.7,SNR=18 **Beclabito**	**2.73**	**104**	⇓P	Pn	05 46 58.7	+0.7
PV10	baz=2.7,SNR=43 **Paradox Valley**	**2.74**	**71**	*e*Pn	Pn	05 46 58.6	+0.4
PV10				*e*Sn	Sn	05 47 34.7	+3.4
PV04	**Paradox Valley**	**2.85**	**71**	*e*Pn	Pn	05 47 00.9	+1.3
PV04				*e*Sg	Sg	05 47 40.0	-5.6
V11A	**Goodsprings**	**3.00**	**237**	⇓P	Pn	05 47 02.2	+0.5
DAU	baz=3.0 **Daniels Canyon**	**3.01**	**16**	*e*Pn	Pn	05 47 02.2	+0.3
DAU				*e*Pg	Pg	05 47 09.3	-2.5
PV01	**Paradox Valley**	**3.04**	**77**	*e*Pn	Pn	05 47 03.1	+0.8
PV01				*e*Sg	Sg	05 47 46.0	-5.9
MVCO	**Mesa Verde**	**3.07**	**95**	*e*Pn	Pn	05 47 03.6	+0.9
MVCO				*e*S	Sn	05 47 44.0	+4.5
X14A	**Yava**	**3.07**	**189**	⇓P	Pn	05 47 03.6	+0.8
JLU	baz=3.1,SNR=10 **Jordanelle**	**3.16**	**12**	*e*Pg	Pg	05 47 11.7	-3.0
JLU				*e*Sg	Sg	05 47 51.9	-3.7
TPNV	**Topopah Spring**	**3.18**	**261**	⇑P	Pn	05 47 04.6	+0.4
TPNV	baz=3.2 **Topopah Spring**	**3.18**	**261**	*e*Pn	Pn	05 47 04.7	+0.5
TPNV				*e*Sg	Sg	05 47 53.5	-2.8
LDFC	**Landfair**	**3.31**	**224**	*e*Pg	Pg	05 47 13.3	-4.3
LDFC				*e*Sg	Sg	05 47 58.1	-2.4
U10A	**Ash Meadows, A**	**3.38**	**252**	⇑P	Pn	05 47 07.7	+0.6
X18A	baz=3.4,SNR=7.9 **Snowflake**	**3.55**	**146**	⇑P	Pn	05 47 10.3	+1.0
GMRC	baz=3.6,SNR=12 **Granite Mounta**	**3.84**	**226**	⇑P	Pn	05 47 13.6	+0.3
Y13A	baz=3.8 **Salome**	**3.89**	**199**	⇑P	Pn	05 47 14.2	+0.2
TPH	baz=3.9,SNR=6.1 **Tonopah**	**3.92**	**280**	*e*Pg	Pg	05 47 26.1	-3.0
TPH				*e*Sg	Sg	05 48 15.8	-4.1
ELK	**Elko**	**3.94**	**326**	Pn	Pn	05 47 15.8	+1.1
ELK	0.2nm,0.3s,baz=151,slow=10,SNR=3.5			Pg	Pg	05 47 25.4	-4.2
ELK	0.2nm,0.3s,baz=313,slow=22,SNR=5.5			Lg		05 48 15.5	
ELK	1.4nm,0.3s,baz=236,slow=23,SNR=8.8 **Elko**	**3.94**	**326**	*e*Pg	Pg	05 47 24.9	-4.7
ELK				*e*Sg	Sg	05 48 15.6	-5.0
GSC	**Goldstone**	**4.23**	**240**	Pn	Pn	05 47 20.1	+1.4
GSC				*e*Pg	Pg	05 47 31.4	-3.8
GSC				*e*Sg	Sg	05 48 23.8	-6.3
MPMC	**Manual Prospec**	**4.39**	**252**	⇓P	Pn	05 47 21.3	+0.4
SMCO	baz=4.4 **Snowmass**	**4.53**	**67**	*e*Pn	Pn	05 47 16.5	-6.3
SMCO				*e*S	Sn	05 48 15.4	0.0
NVAR	**Mina Array Bea**	**4.81**	**283**	Pn	Pn	05 47 26.6	0.0
NVAR	0.3nm,0.3s,baz=112,slow=14,SNR=5.2			Pg	Pg	05 47 42.0	-4.3
NVAR	0.8nm,0.3s,baz=102,slow=18,SNR=4.1			Lg		05 48 44.6	
NVAR	3.2nm,0.3s,baz=102,slow=34,SNR=8.8 **Mina Array Bea**	**4.81**	**283**	Pn	Pn	05 47 26.6	0.0
NVAR				Pg	Pg	05 47 42.0	-4.3
NVAR				Lg		05 48 44.6	
TUC	**Tucson**	**5.35**	**166**	*e*Pg	Pg	05 47 49.4	-7.2
TUC	3.0nm,0.8s			*e*S	Sg	05 48 54.9	-11
ANMO	**Albuquerque**	**5.39**	**117**	Pn	Pn	05 47 34.6	0.0
ANMO	0.5nm,0.3s,baz=303,slow=13,SNR=14 **Albuquerque**	**5.39**	**117**	*e*Pn	Pn	05 47 35.0	+0.4
ANMO	8.4nm,0.8s			*e*Pg	Pg	05 47 54.9	-2.5
ANMO				*e*Sg	Sg	05 49 03.7	-3.5
SDCO	**Great Sand Dun**	**5.42**	**86**	*e*Pn	Pn	05 47 36.4	+1.3
SDCO	1.4nm,0.6s			*e*Pg	Pg	05 47 53.2	-4.9
LENM	**Lemitar**	**5.49**	**126**	*e*Pg	Pg	05 47 53.7	-5.6
LENM	3.5nm,0.4s			*e*Sg	Sg	05 49 01.5	-8.8
PDAR	**Pinedale Array**	**5.66**	**21**	Pn	Pn	05 47 41.8	+3.5
PDAR	0.1nm,0.3s,baz=159,slow=13,SNR=3.3			Pg	Pg	05 47 54.2	-8.3
PDAR	0.1nm,0.3s,baz=184,slow=12,SNR=5.0			Lg		05 49 16.2	
PDAR	0.2nm,0.3s,baz=199,slow=30,SNR=4.5 **Pinedale Array**	**5.66**	**21**	Pn	Pn	05 47 41.8	+3.5
PDAR				Pg	Pg	05 47 54.2	-8.3
PDAR				Lg		05 49 16.2	
ISCO	**Idaho Springs**	**5.73**	**64**	*e*Pg	Pg	05 47 56.8	-7.1
YKA	3.2nm,0.9s **Yellowknife Ar**	**25.05**	**358**	P	P	05 51 40.2	+2.0
	0.1nm,0.5s,baz=174,slow=10.0,SNR=5.3						

GUC 10 06:12:11.4±0.5,2290S×6710W,h237km±7km,ML3.8,1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.69**	**279**	*e*P	Pn	06 12 51.8	+1.8
LVC				*i* S	S	06 13 22.8	+2.4
PB01	**Plate Boundary**	**2.88**	**309**	*e*P	Pn	06 13 03.5	+1.7
PB01				*i* S	S	06 13 43.5	+2.0
PB01	comp=E,53nm,0.4s			AML	AML	06 13 45.5	
CEN1	**Los Morros**	**2.89**	**260**	⇑*i*P	Pn	06 13 05.9	+4.1
CEN1				*i* S	S	06 13 46.8	+5.2
CEN1	comp=N,61nm,0.5s			AML	AML	06 13 50.8	
TOCH	**Tocopilla**	**2.97**	**285**	*i* S	S	06 13 45.3	+2.0
TOCH				AML	AML	06 13 47.1	
	comp=E,149nm,0.4s						

*NERS **10** 06:15:48.7,5668N×14696E,h8km*
*IDC **10** 06:15:49.2±1.1,5719N×14329E,h0km,mb3.8/9, mb1 3.8/10,mb1mx3.7/25,mbtmp3.7/10,ML3.2/1,MS3.3/1, Ms1 3.3/1,ms1mx2.5/47,Error ellipse: s-maj=35.1km s-min=19.0km az=166.0*
*ISCJB **10** 06:15:50.1±0.7,5750N±008×1434E±02,h10km,mb3.8/9, Error ellipse: s-maj=14.8km s-min=6.3km az=42.7*
ISC 10 06:15:51.6±0.7,5737N±007×1433E±01,h10km,n17, σ1§01/19,mb3.8/9,1D,Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGD	**Magadan 1**	**4.71**	**52**	⇓*e*	Pn	06 17 01.6	-1.0
MGD				Pgmax		06 17 01.9	
MGD	20nm,0.2s			*e*		06 17 56.8	
MGD				*e*max		06 17 59.5	
MGD	30nm,0.3s			*e*max		06 17 59.5	
MGD	20nm,0.3s			*e*		06 18 04.0	
OCHR	**Omchak**	**4.89**	**26**	*e*P	Pn	06 17 06.2	+1.1
OCHR				*e*Pg	Pg	06 17 22.3	-2.9
OCHR				Pgmax		06 17 27.8	
OCHR	20nm,0.3s			*e*		06 18 05.5	
OCHR				*e*Sg	Sg	06 18 28.1	-0.4

OCHR				Sgmax		06 18 30.4	
	20nm,0.3s						
SNGR	**Sinegor'e**	**5.92**	**34**	*e*	**Sn**	**06 18 33.0**	**+6.1**
SNGR				*e*	**Sg**	**06 19 01.5**	**+0.1**
TLAR	**Talaya**	**6.00**	**47**	*e*	**Pn**	**06 17 27.0**	**+6.8**
TLAR				*e*Sg	**Sn**	**06 18 21.8**	**-7.0**
SEY	**Seymchan**	**7.18**	**35**	*e*	**Pn**	**06 17 37.8**	**+1.3**
SEY				*e*		06 18 56.0	
SEY				*e*		06 18 56.0	
PETK	**Petropavlovsk-**	**9.26**	**111**	Pn	**Pn**	**06 18 04.3**	**-0.7**
	0.2nm,0.3s,baz=345,slow=6.1,SNR=3.2						
SONM	**Songino Array**	**24.08**	**263**	P	**P**	**06 21 07.0**	**+0.3**
	0.6nm,0.5s,mb3.3,baz=46,slow=12,SNR=2.6						
ZALV	**Zalesovo Beam**	**32.29**	**289**	P	**P**	**06 22 19.6**	**-0.4**
	0.5nm,0.6s,mb3.5,baz=51,slow=9.6,SNR=2.5						
ZALV				LR	LR	06 37 08.2	
	comp=Z,48nm,19.0s,baz=273,slow=40						
MKAR	**Makanchi Array**	**37.71**	**281**	P	**P**	**06 23 06.0**	**-0.9**
	0.8nm,0.8s,mb3.5,baz=63,slow=7.4,SNR=3.5						
RES	**Resolute Bay**	**42.74**	**19**	P	**P**	**06 23 49.2**	**+1.0**
	0.9nm,0.6s,mb3.6,baz=338,slow=5.4,SNR=6.3						
YKA	**Yellowknife Ar**	**46.23**	**39**	P	**P**	**06 24 16.5**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=306,slow=7.2,SNR=8.1						
AKTO	**Aktyubinsk**	**47.57**	**300**	P	**P**	**06 24 26.9**	**0.0**
	0.9nm,0.5s,mb4.0,baz=42,slow=12,SNR=3.6						
FRB	**Frobisher Bay**	**56.76**	**16**	P	**P**	**06 25 33.9**	**-1.1**
	2.8nm,1.0s,mb4.2,baz=337,slow=8.4,SNR=5.0						
ULM	**Lac du Bonnet**	**62.21**	**39**	P	**P**	**06 26 14.9**	**+2.1**
	2.9nm,0.6s,mb4.6,baz=333,slow=2.3,SNR=3.4						
PDAR	**Pinedale Array**	**63.19**	**52**	P	**P**	**06 26 19.4**	**0.0**
	0.4nm,0.5s,mb3.8,baz=18,slow=3.9,SNR=6.8						
CPUP	**Villa Florida**	**145.67**	**34**	PKPbc	PKPbc	06 35 27.9	-2.1
	0.3nm,0.4s,baz=326,slow=3.6,SNR=3.2						
QSPA	**South Pole Qui**	**147.12**	**180**	PKPbc	PKPbc	06 35 30.5	-2.2
	1.4nm,0.7s,baz=303,slow=2.4,SNR=6.5						

*TAP **10** 06:17:46.3, 21.09N×121.67E, h124^{km}, ML3.8, D*

ISC 10 06:17:48.3±1.1**, 21.24N**±0.07×**121.79E**±0.10**, h121**^{km}±10^{km}**, n23,** σ0^{s}**82**/44**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.83**	**344**	P	**Pn**	**06 18 08.2**	**-0.7**
	baz=354						
LAY				*e*S	**Sn**	**06 18 25.3**	**+0.9**
	baz=354						
TSEB	**Hengchuen, Pin**	**1.06**	**309**	*e*S	**Sn**	**06 18 30.1**	**+1.9**
	baz=312						
TWK1	**Hengchun**	**1.16**	**308**	*e*P	**Pn**	**06 18 10.0**	**-2.0**
	baz=314						
TWK1				*e*S	**Sn**	**06 18 28.7**	**-1.3**
	baz=314						
TAW	**Tawu**	**1.39**	**324**	*e*P	**Pn**	**06 18 14.7**	**+0.1**
	baz=331						
TAW				*e*S	**Sn**	**06 18 34.3**	**-0.3**
	baz=331						
EAST	**Anshuo**	**1.44**	**323**	*e*P	**Pn**	**06 18 14.8**	**-0.4**
	baz=336						
EAST				*e*S	**Sn**	**06 18 35.0**	**-0.5**
	baz=336						
ECL	**Taimali**	**1.56**	**330**	*e*P	**Pn**	**06 18 15.8**	**-0.8**
	baz=336						
ECL				*e*S	**Sn**	**06 18 36.7**	**-1.3**
	baz=336						
SCZT	**Fangliau**	**1.57**	**316**	*e*P	**Pn**	**06 18 16.8**	**+0.1**
	baz=323						
SCZT				*e*S	**Sn**	**06 18 38.5**	**+0.3**
	baz=323						
TWG	**Pinlang**	**1.71**	**337**	P	**Pn**	**06 18 17.9**	**-0.5**
	baz=337						
TWG				*e*S	**Sn**	**06 18 40.2**	**-1.0**
	baz=337						
TWP	**Hsiaoliuchiu**	**1.73**	**310**	*e*P	**Pn**	**06 18 18.6**	**+0.1**
	baz=316						
TWP				*e*S	**Sn**	**06 18 43.8**	**+2.3**
	baz=316						
SSD	**Sandimen**	**1.85**	**325**	*e*P	**Pn**	**06 18 20.1**	**+0.1**
	baz=335						
SSD				*e*S	**Sn**	**06 18 43.4**	**-0.8**
	baz=335						
TWM1	**Shoushan**	**2.03**	**321**	*e*P	**Pn**	**06 18 23.5**	**+1.3**
	baz=317						
TWM1				*e*S	**Sn**	**06 18 50.9**	**+2.9**
	baz=317						
STYT	**Tauyuan**	**2.14**	**334**	*e*P	**Pn**	**06 18 24.1**	**+0.4**
	baz=338						
STYT				*e*S	**Sn**	**06 18 51.1**	**+0.5**
	baz=338						
TWF1	**Yuli**	**2.15**	**348**	*e*P	**Pn**	**06 18 24.1**	**+0.3**
	baz=345						
TWF1				*e*S	**Sn**	**06 18 51.4**	**+0.5**
	baz=345						
CHN1	**Nanshi**	**2.27**	**329**	*i* P	**Pn**	**06 18 25.4**	**+0.2**
	baz=333						
CHN1				*e*S	**Sn**	**06 18 52.9**	**-0.5**
	baz=333						
WTP	**Ta-pu**	**2.28**	**332**	*i* P	**Pn**	**06 18 25.5**	**+0.2**
	baz=336						
WTP				*e*S	**Sn**	**06 18 53.9**	**+0.2**
	baz=336						
EHY	**Hungye**	**2.30**	**349**	*e*P	**Pn**	**06 18 25.2**	**-0.4**
	baz=344						
EHY				*e*S	**Sn**	**06 18 53.9**	**-0.4**
	baz=344						
TWK	**Hsinying**	**2.35**	**329**	*e*P	**Pn**	**06 18 26.3**	**0.0**
	baz=342						
TWK				*e*S	**Sn**	**06 18 55.7**	**+0.2**
	baz=342						
CHN4	**Tsaushan**	**2.38**	**332**	*e*P	**Pn**	**06 18 26.8**	**+0.2**
	baz=345						
CHN4				*e*S	**Sn**	**06 18 56.0**	**0.0**
	baz=345						
ALS	**Alishan**	**2.44**	**338**	P	**Pn**	**06 18 28.1**	**+0.7**
	baz=342						
CHN5	**Tsauling**	**2.57**	**337**	*e*P	**Pn**	**06 18 29.3**	**+0.3**
	baz=340						
CHN5				*e*S	**Sn**	**06 18 59.8**	**-0.5**
	baz=340						
TYC	**Yuchr**	**2.79**	**342**	P	**Pn**	**06 18 32.1**	**+0.1**
	baz=338						
TYC				*e*S	**Sn**	**06 19 05.5**	**0.0**
	baz=338						
WHF	**Hehuan Shan**	**2.94**	**351**	*e*P	**Pn**	**06 18 34.8**	**+1.0**
	baz=353						
WHF				*e*S	**Sn**	**06 19 09.1**	**+0.2**
	baz=353						
PNG	**Penghu**	**3.11**	**319**	*e*P	**Pn**	**06 18 34.9**	**-1.2**
	baz=327						
PNG				*e*S	**Sn**	**06 19 12.0**	**-0.9**
	baz=327						

*ISCJB **10** 06:27:11.0±0.8, 28.15N±0.04×34.53E±0.06, h10^{km}, Error ellipse: s-maj=8.1km s-min=5.4km az=157.2*
*GII **10** 06:27:10.5±0.0, 28.15N×34.77E, h0^{km}±1^{km}, mb4.2/7, ML4.1/7, Mw3.2/3*
*CSEM **10** 06:27:13.0±0.4, 28.24N×34.69E, h20^{km}, ML4.0, Error ellipse: s-maj=10.9km s-min=4.9km az=71.0*
*SGS **10** 06:27:13.9, 28.27N×34.61E, h14^{km}*

ISC 10 06:27:11.9±0.8**, 28.16N**±0.04×**34.56E**±0.06**, h10**^{km}**, n25,** σ0^{s}**87**/31**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSHS		**0.25**	**57**	P	**Pg**	**06 27 17.9**	**+0.9**
BDAS	**Al Bad'**	**0.55**	**61**	S	**Sg**	**06 27 30.1**	**+0.4**
BDAS	**Al Bad'**	**0.55**	**61**	P	**Pg**	**06 27 23.0**	**+0.5**
JLOS		**1.00**	**55**	P	**Pg**	**06 27 30.6**	**-0.5**
JLOS		**1.00**	**55**	P	**Pg**	**06 27 30.6**	**-0.6**
JLOS				S	**Sg**	**06 27 42.4**	**-1.8**
HQLS		**1.22**	**21**	P	**Pn**	**06 27 33.0**	**-2.0**
GLFJ		**1.40**	**16**	*e*P	**Pn**	**06 27 35.8**	**-1.7**
	SNR=52						
EIL	**Elat**	**1.54**	**13**	Pn	**Pn**	**06 27 38.1**	**-1.3**
EIL				Sn	**Sn**	**06 28 00.5**	**+0.9**
AQBJ	**Aqaba**	**1.62**	**15**	Pn	**Pn**	**06 27 39.6**	**-0.9**
MBRI	**Mt Berech**	**1.66**	**11**	Pn	**Pn**	**06 27 40.4**	**-0.6**
MBRI				Sn	**Sn**	**06 28 03.2**	**+0.8**
TBKS	**Tabuk**	**1.75**	**88**	P	**Pn**	**06 27 42.7**	**+0.4**
HRFI	**Mount Harif**	**1.92**	**13**	Pn	**Pn**	**06 27 43.7**	**-0.8**
HRFI				Sn	**Sn**	**06 28 09.2**	**+0.5**
KRMI	**Paran Flat**	**1.96**	**4**	Pn	**Pn**	**06 27 44.8**	**-0.3**
KRMI				Sn	**Sn**	**06 28 11.5**	**+1.8**
WJHS		**2.17**	**131**	P	**Pn**	**06 27 48.2**	**+0.2**
PRNI	**Paran**	**2.22**	**10**	Pn	**Pn**	**06 27 48.5**	**-0.2**
PRNI				Sn	**Sn**	**06 28 17.4**	**+1.2**
RMNI	**Mount Ramon**	**2.43**	**4**	Pn	**Pn**	**06 27 51.8**	**+0.1**
ZFRI	**Zfri**	**2.45**	**13**	Pn	**Pn**	**06 27 51.8**	**0.0**
BIDS	**Bi'r al Bayda'**	**2.49**	**121**	P	**Pn**	**06 27 53.4**	**+0.9**
KZIT	**Kziot**	**2.74**	**357**	Pn	**Pn**	**06 27 55.6**	**-0.3**
RTMI	**Retamim**	**2.89**	**2**	Pn	**Pn**	**06 27 58.0**	**+0.1**
MZDA	**Masada**	**3.22**	**12**	Pn	**Pn**	**06 28 02.2**	**-0.2**
YTIR	**Yattir**	**3.23**	**9**	Pn	**Pn**	**06 28 03.0**	**+0.4**
DSI	**Dead Sea**	**3.47**	**12**	Pn	**Pn**	**06 28 06.0**	**0.0**
UMJS	**Umm Lajj**	**3.82**	**139**	P	**Pn**	**06 28 11.4**	**+0.7**
MMLI	**Mount Malkishu**	**4.33**	**10**	Pn	**Pn**	**06 28 18.2**	**+0.4**

*ISCJB **10** 06:29:05.7±0.7, 30.46S±0.09×179.5W±0.2, h337^{km}±7^{km}, mb3.6/4, Error ellipse: s-maj=26.7km s-min=11.6km az=21.8*
*IDC **10** 06:29:06.3±0.8, 30.45S×179.39W, h335^{km}±8^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.3/15, mbtmp3.5/5, Error ellipse: s-maj=26.9km s-min=15.0km az=107.0*

ISC 10 06:29:06.3±0.7**, 30.51S**±0.09×**179.5W**±0.2**, h330**^{km}±7^{km}**, n15,** σ0^{s}**99**/11**, mb3.6**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.87**	**48**	P	**Pn**	**06 29 55.4**	**+0.5**
	163nm,0.3s,baz=90,slow=20,SNR=2.6						
RAO				S	**S**	**06 30 33.2**	**-0.4**
	153nm,0.3s,baz=252,slow=20,SNR=2.5						
URZ	**Urewera**	**8.22**	**199**	P	**Pn**	**06 31 04.1**	**+1.5**
	6.4nm,0.3s,baz=306,slow=4.8,SNR=27						
URZ				S	**S**	**06 32 36.0**	**-1.5**
	9.7nm,0.3s,baz=78,slow=18,SNR=13						
CTA	**Charters Tower**	**32.53**	**280**	P	**P**	**06 35 09.0**	**+1.5**
	1.9nm,0.5s,mb3.5,baz=107,slow=11,SNR=7.0						
WB2	**Warramunga Arr**	**42.79**	**273**	*e*P	**P**	**06 36 31.4**	**-1.3**
QSPA	**South Pole Qui**	**59.60**	**180**	P	**P**	**06 38 36.7**	**+1.1**
	1.3nm,0.7s,mb3.5,baz=62,slow=2.9,SNR=11						
VNA3	**Neumayer Olymp**	**78.28**	**177**	*e*	**P**	**06 40 29.8**	**0.0**
VNA2	**Neumayer--Watz**	**78.70**	**177**	*e*	**P**	**06 40 31.8**	**-0.2**
	baz=168,slow=3.6						
PETK	**Petropavlovsk-**	**85.60**	**346**	P	**P**	**06 41 06.7**	**-0.9**
	2.0nm,0.7s,mb4.1,baz=104,slow=9.9,SNR=3.8						
NVAR	**Mina Array Bea**	**89.21**	**44**	P	**P**	**06 41 24.6**	**-0.4**
	0.3nm,0.7s,mb3.2,baz=248,slow=4.8,SNR=3.1						
KAF	**Kangasniemi**	**144.20**	**340**	*e*p	PKPdf	06 47 58.6	-3.7
	2.2nm,0.4s						
NB2	**NORSAR Subarra**	**148.65**	**350**	PKP	PKPdf	06 48 11.6	+1.8
	comp=Z,1.3nm,0.6s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**148.65**	**350**	PKPbc	PKPbc	06 48 12.3	-1.7
	comp=Z,1.5nm,0.6s,baz=15,slow=4.2,SNR=6.8						
AKASG	**Malin Array Be**	**150.58**	**322**	PKPbc	PKPbc	06 48 17.1	-1.9
	comp=Z,1.0nm,0.4s,baz=52,slow=2.5,SNR=6.6						
BRTR	**Keskin Array B**	**151.50**	**298**	PKPbc	PKPbc	06 48 20.2	-1.3
	comp=Z,0.9nm,0.6s,baz=142,slow=3.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**162.69**	**184**	PKPab	PKPab	06 49 19.5	-0.5
	comp=Z,0.5nm,0.5s,baz=172,slow=5.0,SNR=7.3						

*ISCJB **10** 06:43:21.2±0.7, 37.0S±0.1×17.1W±0.2, h10^{km}, mb4.4/12, MS3.8/10, Error ellipse: s-maj=21.5km s-min=14.4km az=26.9*
*IDC **10** 06:43:21.4±0.8, 37.03S×17.17W, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx4.0/18, mbtmp4.1/9, MS3.8/10, Ms1 3.8/10, ms1mx3.7/17, Error ellipse: s-maj=29.7km s-min=19.3km az=120.0*
*NEIC **10** 06:43:22.8±0.6, 37.06S×17.14W, h10^{km}, mb4.4/1, Error ellipse: s-maj=22.4km s-min=15.4km az=126.0*

ISC 10 06:43:23.2±0.7**, 37.1S**±0.1×**17.1W**±0.2**, h10**^{km}**, n24,** σ0^{s}**89**/17**, mb4.4**/12**, MS3.8**/10**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**34.69**	**300**	LR	LR	07 01 39.4	
	comp=Z,162nm,20.8s,MS3.8,baz=303,slow=32						
TSUM	**Tsumeb**	**35.15**	**69**	P	**P**	**06 50 16.9**	**-0.2**
	1.3nm,0.8s,mb3.9,baz=233,slow=4.8,SNR=4.2						
TSUM				LR	LR	07 02 36.5	
	comp=Z,98nm,18.3s,MS3.6,baz=314,slow=33						
CPUP	**Villa Florida**	**35.61**	**276**	LR	LR	07 02 43.4	
	comp=Z,186nm,18.1s,MS3.9,baz=111,slow=33						
BOSA	**Boshof**	**36.35**	**89**	P	**P**	**06 50 26.6**	**-0.8**
	2.0nm,0.8s,mb4.1,baz=234,slow=10.0,SNR=3.2						
BOSA				LR	LR	07 02 10.0	
	comp=Z,213nm,19.1s,MS3.9,baz=317,slow=31						
PLCA	**Paso Flores**	**41.22**	**248**	P	**P**	**06 51 07.0**	**-1.1**
	2.5nm,1.0s,mb3.8,baz=93,slow=7.8,SNR=3.2						
PLCA				LR	LR	07 07 30.0	
	comp=Z,112nm,18.9s,MS3.8,baz=281,slow=35						
LIC	**Lamto**	**44.51**	**17**	*e*P	**P**	**06 51 39.7**	**+4.7**
	43nm,1.4s,mb5.1						
KIC	**Kosan Boka**	**44.71**	**18**	*e*P	**P**	**06 51 35.6**	**-0.9**
	41nm,1.0s,mb5.2						
TIC	**Toumodi**	**44.92**	**17**	*e*P	**P**	**06 51 38.3**	**+0.1**
	27nm,0.5s,mb5.3						
DBIC	**Dimbokro**	**44.98**	**17**	LR	LR	07 04 40.3	
	comp=Z,32nm,19.6s,MS3.3,baz=211,slow=28						
LSZ	**Lusaka**	**45.57**	**74**	P	**P**	**06 51 43.8**	**+0.4**
	1.5nm,0.5s,mb4.1,baz=248,slow=11,SNR=4.9						
LSZ				LR	LR	07 08 33.7	
	comp=Z,276nm,18.1s,MS4.2,baz=184,slow=33						
LSZ	**Lusaka**	**45.57**	**74**	*e*P	**P**	**06 51 43.2**	**-0.3**
	5.1nm,1.1s,mb4.4						
MAW	**Mawson**	**52.60**	**152**	LR	LR	07 09 40.2	
	comp=Z,94nm,19.8s,MS3.8,baz=77,slow=30						
TOA0	**Torodi Ar. Sit**	**52.98**	**23**	*e*P	**P**	**06 52 39.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**52.98**	**23**	P	**P**	**06 52 39.3**	**-0.7**
	4.0nm,0.9s,mb4.3,baz=196,slow=7.1,SNR=18						
TORD				LR	LR	07 11 42.8	
	comp=Z,76nm,18.2s,MS3.8,baz=340,slow=32						
QSPA	**South Pole Qui**	**53.20**	**180**	P	**P**	**06 52 40.4**	**-0.5**
	6.0nm,0.8s,mb4.6,baz=214,slow=3.5,SNR=21						
QSPA	**South Pole Qui**	**53.20**	**180**	P	**P**	**06 52 40.4**	**-0.5**
TAM	**Tamanrasset**	**63.24**	**23**	*e*P	**P**	**06 53 53.0**	**+1.3**
VNDA	**Vanda**	**65.69**	**180**	P	**P**	**06 54 08.9**	**+1.7**
	1.7nm,0.9s,mb4.1,baz=178,slow=5.0,SNR=6.9						
ROSC	**El Rosal**	**67.58**	**295**	LR	LR	07 20 45.3	
	comp=Z,145nm,19.2s,MS4.2,baz=173,slow=33						
MDT	**Midelt**	**70.48**	**11**	P	**P**	**06 54 39.2**	**+1.5**
	2.6nm,0.9s,mb4.1,baz=198,slow=9.6,SNR=3.6						
ESDC	**Sonseca Array**	**77.31**	**10**	P	**P**	**06 55 17.8**	**+0.3**
	0.2nm,0.3s,mb3.6,baz=190,slow=4.9,SNR=4.4						
ESDC	**Sonseca Array**	**77.31**	**10**	P	**P**	**06 55 17.8**	**+0.3**
YKA	**Yellowknife Ar**	**125.43**	**326**	PKP	PKPdf	07 02 21.7	-1.7
	0.4nm,0.9s,baz=109,slow=2.5,SNR=4.7						
YKA	**Yellowknife Ar**	**125.43**	**326**	PKP	PKPdf	07 02 21.7	-1.7

IDC 10 06:44:45.8±8.2**, 18.04S**×**178.64W, h600**^{km}±97^{km}**, mb3.1**/8**, mb1 3.4**/8**, mb1mx3.3**/16**, mbtmp3.1**/8**, Error ellipse: s-maj=34.2km s-min=22.1km az=91.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**60.30**	**185**	P	P	06 53 57.3	+0.2
	0.4nm,0.7s,baz=14,slow=8.3,SNR=3.2						
MJAR	**Matsushiro Arr**	**67.88**	**324**	P	P	06 54 45.5	-0.2
	1.2nm,0.5s,baz=152,slow=6.0,SNR=3.0						
QSPA	**South Pole Qui**	**72.02**	**180**	P	P	06 55 09.7	+0.2
	1.0nm,0.7s,baz=96,slow=6.9,SNR=4.0						
PETK	**Petropavlovsk-**	**73.75**	**345**	P	P	06 55 19.9	+0.3
	2.4nm,0.6s,baz=112,slow=7.9,SNR=7.8						
NVAR	**Mina Array Bea**	**79.67**	**44**	P	P	06 55 52.3	+0.1
	0.9nm,0.6s,baz=224,slow=8.4,SNR=9.7						
TXAR	**Lajitas Array**	**86.25**	**58**	P	P	06 56 26.2	+1.0
	1.2nm,0.7s,baz=214,slow=6.8,SNR=13						
PDAR	**Pinedale Array**	**87.59**	**44**	P	P	06 56 31.1	0.0
	0.8nm,0.6s,baz=209,slow=3.1,SNR=10						
YKA	**Yellowknife Ar**	**94.54**	**25**	P	P	06 57 01.8	-0.8
	0.2nm,0.4s,baz=240,slow=4.5,SNR=6.3						
ARCES	**ARCESS Array B**	**126.41**	**350**	PKP	PKPdf	07 02 40.0	-0.7
	2.3nm,0.8s,baz=83,slow=2.8,SNR=3.6						
GERES	**GERESS Array B**	**147.68**	**345**	PKPbc	PKPbc	07 03 23.9	+0.1
	1.3nm,0.6s,baz=35,slow=3.3,SNR=10.0						

*NEIC **10** 06:49:13.0, 34.01N×23.70E, h22^{km}, MD3.8(ATH), After ATH.*
*ATH **10** 06:49:13.0, 34.01N×23.70E, h22^{km}, MD3.8/3*
*CSEM **10** 06:49:14.7±0.2, 34.02N×23.88E, h5^{km}, MD3.8, Error ellipse: s-maj=6.0km s-min=3.7km az=21.0*
*ISCJB **10** 06:49:17.4±1.0, 34.18N±0.09×23.8E±0.1, h10^{km}, mb3.5/4, Error ellipse: s-maj=15.5km s-min=11.3km az=34.9*
*IDC **10** 06:49:18.5±1.4, 34.37N×23.60E, h0^{km}, mb3.6/4, mb1 3.6/7, mb1mx3.5/26, mbtmp3.5/7, ML3.6/3, Error ellipse: s-maj=34.7km s-min=20.9km az=140.0*

ISC 10 06:49:19.9±1.0**, 34.28N**±0.09×**23.8E**±0.1**, h10**^{km}**, n12,** σ1^{s}**33**/14**, mb3.5**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.62**	**26**	*e*PN	**Pg**	**06 49 30.2**	**-1.8**
VAM	**Vamos**	**1.18**	**18**	*e*PN	**Pn**	**06 49 40.0**	**-2.5**
VAM				*e*SN	**Sn**	**06 50 00.0**	**+1.4**
IDI	**Anoyia**	**1.37**	**43**	Pn	**Pn**	**06 49 44.4**	**-0.7**
	12nm,0.3s,baz=237,slow=17,SNR=43						
IDI				Sn	**Sn**	**06 50 10.3**	**+7.0**
	14nm,0.3s,baz=153,slow=21,SNR=7.5						
NPS	**Neapolis**	**1.82**	**57**	*e*PN	**Pn**	**06 49 47.5**	**-3.7**
BRTR	**Keskin Array B**	**9.59**	**53**	Pn	**Pn**	**06 51 39.6**	**+1.6**
	0.1nm,0.3s,baz=223,slow=12,SNR=4.0						
GERES	**GERESS Array B**	**16.36**	**336**	Pn	**Pn**	**06 53 10.7**	**+1.2**
	0.1nm,0.3s,baz=146,slow=11,SNR=3.6						
KHC	**Kasperske Hory**	**16.65**	**336**	*e*P	**Pn**	**06 53 14.0**	**+0.8**
AKASG	**Malin Array Be**	**16.89**	**12**	Pn	**Pn**	**06 53 15.3**	**-0.9**
	0.9nm,0.3s,baz=207,slow=10,SNR=4.6						
HFS	**Hagfors**	**26.69**	**349**	P	**P**	**06 54 57.3**	**-1.6**
	2.8nm,1.0s,mb3.8,baz=152,slow=13,SNR=7.2						
TORD	**Torodi Ar. Bea**	**29.04**	**229**	P	**P**	**06 55 20.0**	**-0.3**
	0.3nm,0.6s,mb3.2,baz=34,slow=8.1,SNR=3.6						
MKAR	**Makanchi Array**	**45.23**	**56**	P	**P**	**06 57 37.5**	**+0.4**
	1.1nm,0.8s,mb3.7,baz=273,slow=6.7,SNR=5.9						
SONM	**Songino Array**	**60.94**	**50**	P	**P**	**06 59 34.2**	**+1.3**
	0.2nm,0.5s,mb3.5,baz=275,slow=6.5,SNR=2.7						

*NEIC **10** 06:54:22.1±0.7, 3.05S×100.98E, h35^{km}, mb4.6/13, Error ellipse: s-maj=27.8km s-min=6.8km az=47.0*
*IDC **10** 06:54:23.5±1.3, 2.94S×100.90E, h47^{km}±7^{km}, mb4.1/10, mb1 4.1/12, mb1mx3.9/22, mbtmp4.1/12, ML3.6/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=35.9km s-min=19.4km az=42.0*
*ISCJB **10** 06:54:24.3±1.3, 2.9S±0.1×101.1E±0.1, h69^{km}±8^{km}, mb4.5/23, Error ellipse: s-maj=28.2km s-min=7.6km az=135.0*
*DJA **10** 06:54:26, 2.80S×101.09E, h34^{km}, MLv4.4/5*

ISC 10 06:54:25.3±1.2**, 2.9S**±0.1×**101.1E**±0.1**, h59**^{km}±8^{km}**, h49**^{km}±.6^{km}**: pP-P, n45,** σ0^{s}**86**/41**, mb4.6**/23**, MS3.5**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.86**	**24**	P	**Pn**	**06 54 41.1**	**-0.4**
KSI	**Kapahiang**	**1.66**	**117**	P	**Pn**	**06 54 53.8**	**+1.6**
PDSI	**Padang**	**2.06**	**341**	P	**Pn**	**06 54 56.7**	**-1.0**
PPI	**Padang Panjang**	**2.51**	**343**	P	**Pn**	**06 55 04.0**	**+0.2**
GSI	**Gunungsitoli**	**5.46**	**320**	P	**Pn**	**06 55 44.0**	**-0.2**
PSI	**Prapat**	**6.06**	**339**	P	**Pn**	**06 55 50.6**	**-1.8**
	0.4nm,0.3s,baz=155,slow=11,SNR=2.5						
PSI				LR	LR	06 58 36.5	
	comp=Z,270nm,21.8s,baz=174,slow=43						
KAPI	**Kappang**	**18.71**	**97**	P	**Pn**	**06 58 41.8**	**+1.6**
	0.7nm,0.3s,baz=278,slow=11,SNR=14						
KAPI				LR	LR	07 07 52.6	
	comp=Z,50nm,18.6s,baz=75,slow=43						
CMAR	**Chiang Mai Arr**	**21.31**	**354**	LR	LR	07 08 12.2	
	comp=Z,57nm,19.0s,MS3.0,baz=136,slow=39						
FITZ	**Fitzroy Crossi**	**28.40**	**124**	*e*P	**P**	**07 00 13.8**	**-0.7**
	4.1nm,1.0s,mb4.0						
ODAN	**Odare**	**32.40**	**337**	*e*P	**P**	**07 00 50.7**	**+1.0**
TAPN	**Taplejung**	**32.72**	**338**	*e*P	**P**	**07 00 53.3**	**+0.9**
	43nm,0.9s,mb5.4						
RAMN	**Ramite**	**32.80**	**336**	*e*P	**P**	**07 00 54.0**	**+0.8**
JIRN	**Jiri**	**33.60**	**336**	*e*P	**P**	**07 01 01.1**	**+1.0**
	55nm,1.0s,mb5.4						
PKI	**Pulchoki**	**33.85**	**334**	*e*P	**P**	**07 01 03.2**	**+0.9**
GUN	**Gumba**	**33.95**	**335**	*e*P	**P**	**07 01 04.0**	**+0.9**
	20nm,0.5s,mb5.3						
DMN	**Daman**	**34.01**	**334**	*e*P	**P**	**07 01 04.7**	**+1.0**
KKN	**Kakani**	**34.10**	**334**	*e*P	**P**	**07 01 04.9**	**+0.5**
GKN	**Gorkha**	**34.56**	**334**	*e*P	**P**	**07 01 09.3**	**+0.8**
KOLN	**Koldanda**	**34.83**	**332**	*e*P	**P**	**07 01 11.8**	**+1.0**
	20nm,0.8s,mb5.1						
DANN	**Dangsing**	**35.25**	**333**	*e*P	**P**	**07 01 15.3**	**+0.9**
	15nm,0.4s,mb5.2						
WRAB	**Tennant Creek**	**36.59**	**120**	*e*P	**P**	**07 01 25.1**	**-0.9**
	4.4nm,0.8s,mb4.3						
WB2	**Warramunga Arr**	**36.60**	**120**	*e*P	**P**	**07 01 25.1**	**-1.0**
COEN	**Coen**	**42.95**	**107**	*e*P	**P**	**07 02 18.4**	**-0.5**
	4.7nm,0.9s,mb4.2						
KSRS	**Korea Array**	**47.22**	**29**	P	**P**	**07 02 53.2**	**+0.8**
	0.6nm,0.3s,mb4.0,baz=212,slow=7.9,SNR=3.3						
KSRS				pP	pP	07 03 05.7	-2.2
	2.6nm,1.0s,baz=214,slow=8.6,SNR=3.5						
STKA	**Stephens Creek**	**47.73**	**132**	*e*P	**P**	**07 02 56.9**	**+0.3**
	3.6nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**47.73**	**132**	P	**P**	**07 02 56.8**	**+0.2**
	2.4nm,0.6s,mb4.4,baz=316,slow=8.3,SNR=4.8						
SONM	**Songino Array**	**50.72**	**5**	P	**P**	**07 03 19.0**	**0.0**
	6.8nm,0.8s,mb4.6,baz=182,slow=8.2,SNR=42						
SONM				LR	LR	07 27 25.3	
	comp=Z,78nm,20.8s,MS3.7,baz=43,slow=39						
TKM2	**Tokmak 2**	**51.08**	**336**	*e*P	**P**	**07 03 22.6**	**+0.7**
	6.2nm,0.8s,mb4.6						
TKM2				*e*pP	pP	07 03 35.5	-1.9
EKS2	**Erkin-Say**	**51.63**	**334**	*e*P	**P**	**07 03 26.5**	**+0.6**
	9.2nm,0.9s,mb4.7						
EKS2				*e*pP	pP	07 03 38.8	-2.7
MK31	**Makanchi Array**	**52.18**	**344**	*e*P	**P**	**07 03 29.6**	**-0.3**
MKAR	**Makanchi Array**	**52.18**	**344**	P	**P**	**07 03 29.2**	**-0.7**
	5.8nm,0.8s,mb4.5,baz=150,slow=7.7,SNR=15						
MJAR	**Matsushiro Arr**	**52.27**	**38**	P	**P**	**07 03 30.2**	**-0.6**
	1.9nm,1.0s,mb4.0,baz=204,slow=9.4,SNR=3.1						
EIDS	**Eidsvold**	**52.95**	**120**	*e*P	**P**	**07 03 35.9**	**-0.2**
	2.5nm,0.6s,mb4.3						
KURK	**Kurchatov**	**56.77**	**343**	*e*P	**P**	**07 04 02.8**	**-0.4**
	1.8nm,0.8s,mb4.2						
KURK				*e*pP	pP	07 04 15.9	-3.1
ZAA0	**Zalesovo Array**	**58.24**	**349**	*e*P	**P**	**07 04 12.7**	**-0.7**
ZALV	**Zalesovo Beam**	**58.24**	**349**	P	**P**	**07 04 13.1**	**-0.4**
	16nm,0.8s,mb5.1,baz=164,slow=5.9,SNR=67						
BVAR	**Borovoye Array**	**61.39**	**339**	P	**P**	**07 04 34.2**	**-1.0**
	2.1nm,0.8s,mb4.3,baz=131,slow=6.7,SNR=11						
BVAR				pP	pP	07 04 47.8	-3.3
	2.0nm,0.6s,baz=144,slow=10,SNR=6.7						
AKTK	**Aktyubinsk**	**64.66**	**331**	P	**P**	**07 04 56.0**	**-0.9**
AKTK				pP	pP	07 05 09.5	-3.4
AKTO	**Aktyubinsk**	**64.66**	**331**	P	**P**	**07 04 56.0**	**-0.9**
	1.2nm,0.7s,mb4.0,baz=214,slow=2.2,SNR=4.3						
AKTO				pP	pP	07 05 09.5	-3.4
	0.8nm,0.5s,baz=46,slow=12,SNR=2.2						
MAW	**Mawson**	**69.71**	**195**	LR	LR	07 28 47.9	
	comp=Z,59nm,19.8s,MS3.8,baz=133,slow=30						
BRTR	**Keskin Array B**	**74.74**	**312**	P	**P**	**07 05 58.6**	**-0.6**
	1.2nm,1.0s,mb3.8,baz=145,slow=5.3,SNR=4.7						
TIXI	**Tiksi**	**76.55**	**9**	*e*P	**P**	**07 06 07.1**	**-1.7**
	1.9nm,0.3s,mb4.5						
ARCES	**ARCESS Array B**	**87.68**	**340**	P	**P**	**07 07 06.7**	**-0.4**
	6.4nm,0.9s,mb4.8,baz=108,slow=10,SNR=4.6						
TXAR	**Lajitas Array**	**144.70**	**39**	PKP	PKPdf	07 13 55.5	-0.7
	1.5nm,0.7s,baz=282,slow=1.2,SNR=15						
TXAR				pPKP	pPKPdf	07 14 09.5	-4.1
	1.8nm,0.5s,baz=298,slow=1.9,SNR=11						
TXAR	**Lajitas Array**	**144.70**	**39**	PKP	PKPdf	07 13 55.5	-0.7
TXAR				pPKP	pPKPdf	07 14 09.5	-4.1

*ATH **10** 07:10:11.8, 37.00N×29.49E, h42^{km}, MD3.5/4*
*CSEM **10** 07:10:11.4±0.1, 37.03N×29.33E, h2^{km}, MD3.3, Error ellipse: s-maj=2.2km s-min=1.5km az=13.0*
*ISCJB **10** 07:10:12.5±0.6, 37.04N±0.03×29.32E±0.04, h6^{km}±6^{km}, Error ellipse: s-maj=5.7km s-min=4.4km az=34.1*
*ISK **10** 07:10:12.1, 37.04N×29.32E, h7^{km}, MD3.2*
*DDA **10** 07:10:12.3, 36.99N×29.24E, h7^{km}±4^{km}, Md3.3*
*NEIC **10** 07:10:12.2, 37.04N×29.33E, h8^{km}, MD3.2(ISK), MD3.5(ATH), After ISK.*

ISC 10 07:10:13.0±0.6**, 37.03N**±0.03×**29.32E**±0.04**, h7**^{km}±6^{km}**, n32,** σ0^{s}**99**/43**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.28**	**42**	⇑*i*P	**Pg**	**07 10 19.3**	**+0.7**
GOLH				*i* S	**Sg**	**07 10 25.7**	**+3.3**
ELL	**Elmali**	**0.55**	**120**	*e*PG	**Pg**	**07 10 22.8**	**-0.7**
ELL				*e*SG	**Sg**	**07 10 31.9**	**+1.3**
ELL	**Elmali**	**0.55**	**120**	*e*Pg	**Pg**	**07 10 22.8**	**-0.7**

ELL				Sg	**Sg**	**07 10 31.8**	**+1.2**
ELL	**Elmali**	**0.55**	**120**	Pg	**Pg**	**07 10 22.8**	**-0.7**
ELL				Sg	**Sg**	**07 10 31.8**	**+1.2**
DENT	**Denizli**	**0.76**	**343**	*e*PG	**Pg**	**07 10 27.0**	**-0.6**
DENT	**Denizli**	**0.76**	**343**	*e*Pg	**Pg**	**07 10 27.0**	**-0.6**
DENT				Sg	**Sg**	**07 10 37.0**	**-0.6**
DENT	**Denizli**	**0.76**	**343**	Pg	**Pg**	**07 10 27.0**	**-0.6**
DENT				Sg	**Sg**	**07 10 37.0**	**-0.5**
AKAS	**Kas**	**0.82**	**164**	*e*P	**Pg**	**07 10 27.9**	**-0.9**
AKAS				*e*S	**Sg**	**07 10 42.3**	**+2.9**
YER	**Yerkesik**	**0.84**	**278**	*e*PG	**Pg**	**07 10 28.8**	**-0.2**
YER				*e*SG	**Sg**	**07 10 40.2**	**+0.3**
YER	**Yerkesik**	**0.84**	**278**	*e*Pg	**Pg**	**07 10 28.8**	**-0.3**
YER				Sg	**Sg**	**07 10 41.8**	**+1.9**
YER	**Yerkesik**	**0.84**	**278**	Pg	**Pg**	**07 10 28.8**	**-0.2**
YER				Sg	**Sg**	**07 10 41.8**	**+1.9**
KSL	**Kastellorizon**	**0.90**	**166**	*e*P	**Pg**	**07 10 28.5**	**-1.7**
BCK	**Bucak**	**1.10**	**66**	*e*PN	**Pn**	**07 10 33.5**	**-1.2**
ARG	**Arkhangelos**	**1.26**	**230**	*e*P	**Pb**	**07 10 35.4**	**-1.5**
ARG	**Arkhangelos**	**1.26**	**230**	*e*P	**Pb**	**07 10 35.2**	**-1.7**
MLSB	**Milas**	**1.26**	**283**	*e*PN	**Pn**	**07 10 36.3**	**-0.6**
KHL	**Karahalli**	**1.30**	**7**	*e*PN	**Pn**	**07 10 37.7**	**+0.2**
KHL	**Karahalli**	**1.30**	**7**	Pn	**Pn**	**07 10 37.8**	**+0.2**
DAT	**Datca**	**1.43**	**259**	*e*PN	**Pn**	**07 10 39.4**	**+0.1**
BDRM	**Kayabasi**	**1.50**	**272**	*e*P	**Pn**	**07 10 40.2**	**0.0**
BDRM				*e*S	**Sn**	**07 11 01.5**	**+1.5**
KULA	**Kula-Manisa**	**1.58**	**341**	*e*PN	**Pn**	**07 10 40.6**	**-0.7**
SHUT	**Suhut-Afyon**	**1.81**	**32**	*e*PN	**Pn**	**07 10 44.6**	**+0.2**
SMG	**Samos**	**2.09**	**290**	*e*P	**Pn**	**07 10 48.0**	**-0.4**
AKS	**Akhisar**	**2.20**	**328**	*e*PN	**Pn**	**07 10 49.5**	**-0.4**
AKS	**Akhisar**	**2.20**	**328**	Pn	**Pn**	**07 10 50.1**	**+0.2**
AKS	**Akhisar**	**2.20**	**328**	Pn	**Pn**	**07 10 50.1**	**+0.2**
BLCB	**Balcova**	**2.26**	**308**	*e*PN	**Pn**	**07 10 50.7**	**0.0**
KARP	**Karpathos**	**2.29**	**230**	*e*P	**Pn**	**07 10 50.3**	**-0.7**
KARP	**Karpathos**	**2.29**	**230**	*e*P	**Pn**	**07 10 51.6**	**+0.6**
KIZT	**Kizilcal**	**2.74**	**47**	*e*PN	**Pn**	**07 10 57.9**	**+0.5**
APE	**Apeiranthos**	**3.03**	**272**	P	**Pn**	**07 11 01.8**	**+0.5**
ZKR	**Zakros**	**3.16**	**234**	P	**Pn**	**07 11 04.1**	**+1.1**

*ISCJB **10** 07:18:16.1±0.3, 3559N±002×3163E±003, h10km, Error ellipse: s-maj=3.8km s-min=2.7km az=144.8*
*NIC **10** 07:18:17.0±0.4, 3604N×3199E, h10km, ML3.2, MW3.5*
*NEIC **10** 07:18:16.5, 3563N×3166E, h14km, ML3.2(NIC), ML3.5(ISK), After ISK.*
*HLW **10** 07:18:17.1, 3587N×3158E, h33km, Mb4.1*
*ISK **10** 07:18:17.2, 3557N×3166E, h79km, ML3.6*
*CSEM **10** 07:18:18.4±0.1, 3565N×3166E, h40km, Mw3.5, Error ellipse: s-maj=1.7km s-min=1.2km az=82.0*
*GII **10** 07:18:22.5±1.3, 3547N×3217E, h2km±52km, ML3.3/9*
ISC 10 07:18:18.6±0.8, **3566N**±002×**3169E**±003, **h18**km±5km, **n77**, σ**1s17**/93, **2C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	**Alevga**	**0.89**	**124**	P	**Pb**	**07 18 35.5**	**0.0**
	62nm,0.1s						
ALFC				S	**Sb**	**07 18 49.9**	**+2.8**
PPCY	**Paphos**	**0.94**	**145**	P	**Pb**	**07 18 39.3**	**+3.0**
	17nm,0.2s						
LEF	**Lefka**	**1.12**	**118**	*e*PG	**Pg**	**07 18 37.7**	**-2.6**
LEF				*e*SG	**Sg**	**07 18 53.2**	**-1.7**
LEF	**Lefka**	**1.12**	**118**	Pn	**Pn**	**07 18 37.9**	**-1.3**
LEF				Sg	**Sg**	**07 18 53.9**	**-0.9**
SZAC	**Souni-Zanaja**	**1.33**	**132**	P	**Pn**	**07 18 43.5**	**+1.3**
SZAC				S	**Sn**	**07 19 03.8**	**+4.5**
MAMC	**Mammari**	**1.34**	**111**	P	**Pn**	**07 18 41.7**	**-0.6**
ANTB	**Antalya**	**1.50**	**326**	*e*PN	**Pg**	**07 18 44.6**	**-2.8**
CSS	**Prodhromos**	**1.51**	**117**	P	**Pn**	**07 18 43.6**	**-1.1**
	4.4nm,0.6s						
CSS				S	**Sn**	**07 19 04.8**	**+1.0**
LFK	**Lefkose**	**1.55**	**104**	*e*PN	**Pn**	**07 18 43.8**	**-1.4**
LFK	**Lefkose**	**1.55**	**104**	Pn	**Pn**	**07 18 44.8**	**-0.5**
IKL	**Isikli**	**1.72**	**70**	*e*PN	**Pn**	**07 18 47.1**	**-0.5**
IKL	**Isikli**	**1.72**	**70**	Pn	**Pn**	**07 18 47.2**	**-0.4**
IKL	**Isikli**	**1.72**	**70**	Pn	**Pn**	**07 18 47.2**	**-0.3**
ELL	**Elmali**	**1.81**	**308**	*e*PN	**Pn**	**07 18 48.2**	**-0.5**
ELL	**Elmali**	**1.81**	**308**	Pn	**Pn**	**07 18 48.2**	**-0.6**
BCK	**Bucak**	**2.01**	**334**	*e*PN	**Pn**	**07 18 50.6**	**-0.9**
BCK	**Bucak**	**2.01**	**334**	Pn	**Pn**	**07 18 51.1**	**-0.4**
PHNC	**Paralimni**	**2.02**	**108**	⇑P	**Pg**	**07 18 54.6**	**-2.8**
PHNC				S	**Sg**	**07 19 26.5**	**+2.8**
EREN	**Erenkoy**	**2.02**	**93**	*e*PN	**Pn**	**07 18 51.3**	**-0.4**
EREN	**Erenkoy**	**2.02**	**93**	Pn	**Pn**	**07 18 51.7**	**-0.1**
KONT	**Konya--Tatoy**	**2.34**	**13**	*e*PN	**Pn**	**07 18 56.6**	**+0.4**
KONT	**Konya--Tatoy**	**2.34**	**13**	Pn	**Pn**	**07 18 56.5**	**+0.3**
MERS	**Mersin**	**2.59**	**61**	*e*PN	**Pn**	**07 18 59.8**	**+0.3**
LADK	**Ladik-KONYA**	**2.59**	**12**	*e*PN	**Pn**	**07 18 60.0**	**+0.4**
LADK	**Ladik-KONYA**	**2.59**	**12**	Pn	**Pn**	**07 18 59.8**	**+0.2**
LADK	**Ladik-KONYA**	**2.59**	**12**	Pn	**Pn**	**07 18 59.8**	**+0.2**
DENT	**Denizli**	**2.99**	**315**	*e*PN	**Pn**	**07 19 05.2**	**+0.2**
SHUT	**Suhut-Afyon**	**3.03**	**343**	*e*PN	**Pn**	**07 19 06.0**	**+0.4**
YER	**Yerkesik**	**3.12**	**299**	*e*PN	**Pn**	**07 19 06.7**	**-0.1**
KARA	**Karaisali**	**3.15**	**58**	*e*PN	**Pn**	**07 19 08.0**	**+0.8**
KHL	**Karahalli**	**3.18**	**328**	*e*PN	**Pn**	**07 19 08.1**	**+0.5**
KIZT	**Kizilcal**	**3.22**	**3**	*e*PN	**Pn**	**07 19 08.3**	**+0.1**
DAT	**Datca**	**3.50**	**289**	*e*PN	**Pn**	**07 19 11.3**	**-0.7**
CEYT	**Ceyhan**	**3.54**	**66**	*e*PN	**Pn**	**07 19 12.6**	**-0.1**
CEYT	**Ceyhan**	**3.54**	**66**	Pn	**Pn**	**07 19 14.8**	**+2.2**
CEYT	**Ceyhan**	**3.54**	**66**	Pn	**Pn**	**07 19 14.8**	**+2.2**
MLSB	**Milas**	**3.55**	**299**	*e*PN	**Pn**	**07 19 12.1**	**-0.7**
MLSB	**Milas**	**3.55**	**299**	Pn	**Pn**	**07 19 12.8**	**+0.1**
HTY	**Hatay**	**3.64**	**81**	*e*PN	**Pn**	**07 19 13.8**	**-0.1**
HTY	**Hatay**	**3.64**	**81**	Pn	**Pn**	**07 19 14.8**	**+0.8**
KULA	**Kula-Manisa**	**3.74**	**321**	*e*PN	**Pn**	**07 19 14.7**	**-0.7**
HWQ	**Hawqa**	**3.75**	**110**	*e*Pn	**Pn**	**07 19 17.0**	**+1.4**
KOZT	**Kozan**	**3.79**	**60**	*e*PN	**Pn**	**07 19 15.1**	**-1.0**
HNTI	**Hanita**	**3.86**	**131**	Sn	**Sn**	**07 19 59.9**	**-1.9**
ESKT	**Eskisehir**	**3.91**	**350**	*e*PN	**Pn**	**07 19 17.0**	**-0.7**
ESKT	**Eskisehir**	**3.91**	**350**	Pn	**Pn**	**07 19 17.2**	**-0.5**
MMA0	**Mount Meron ar**	**4.05**	**130**	Pn	**Pn**	**07 19 19.4**	**-0.2**
MMA0				Sn	**Sn**	**07 20 04.0**	**-2.5**
HRSH	**Kfar Ka'horesh**	**4.19**	**134**	P	**Pg**	**07 19 33.0**	**-5.9**
KSHT	**Keshet**	**4.33**	**127**	Pn	**Pn**	**07 19 23.6**	**+0.2**
MMLI	**Mount Malkishu**	**4.46**	**135**	Pn	**Pn**	**07 19 26.7**	**+1.4**
MMLI				Sn	**Sn**	**07 20 15.4**	**-1.3**
HMDT	**Nahal Hemdat**	**4.66**	**136**	Pn	**Pn**	**07 19 28.2**	**+0.3**
HMDT				Sn	**Sn**	**07 20 19.6**	**-1.9**
MANS	**Anshas**	**4.69**	**182**	P	**Pn**	**07 19 38.3**	**+10**
GAZ	**Gaziantep**	**4.70**	**70**	*e*PN	**Pn**	**07 19 28.3**	**-0.3**
GAZ	**Gaziantep**	**4.70**	**70**	Pn	**Pn**	**07 19 29.9**	**+1.3**
RSH		**4.98**	**159**	P	**Pn**	**07 19 33.0**	**+0.5**
DSI	**Dead Sea**	**5.11**	**142**	Pn	**Pn**	**07 19 35.6**	**+1.4**
DSI				Sn	**Sn**	**07 20 31.2**	**-1.4**
AMAG	**Maghara**	**5.16**	**165**	P	**Pn**	**07 19 35.4**	**+0.5**
AMAG				S	**Sn**	**07 20 32.6**	**-1.3**
MZDA	**Masada**	**5.31**	**144**	Pn	**Pn**	**07 19 38.8**	**+1.8**
MZDA				Sn	**Sn**	**07 20 36.4**	**-1.3**
AANS		**5.36**	**183**	P	**Pn**	**07 19 38.3**	**+0.7**
HHAG	**Hagoal**	**5.70**	**176**	P	**Pn**	**07 19 42.7**	**+0.4**
HHAG				S	**Sn**	**07 20 45.6**	**-1.6**
KOT	**Kottamia**	**5.71**	**179**	P	**Pn**	**07 19 43.0**	**+0.5**
SUZ		**5.88**	**170**	P	**Pn**	**07 19 45.4**	**+0.6**
AYT	**Al 'Ayyat**	**5.95**	**185**	P	**Pn**	**07 19 46.5**	**+0.7**
HMAT	**Matruh**	**5.96**	**221**	P	**Pn**	**07 19 44.7**	**-1.2**
FYM	**Al Fayyum**	**5.97**	**185**	P	**Pn**	**07 19 46.4**	**+0.3**
FYM				S	**Sn**	**07 20 51.6**	**-2.4**
PRNI	**Paran**	**5.98**	**151**	Pn	**Pn**	**07 19 47.6**	**+1.5**
HSAF	**As Saff**	**6.02**	**181**	P	**Pn**	**07 19 47.2**	**+0.5**
HSAF	**As Saff**	**6.02**	**181**	P	**Pn**	**07 19 47.2**	**+0.4**
GLL	**Jalalah**	**6.06**	**180**	P	**Pn**	**07 19 48.0**	**+0.7**
HRFI	**Mount Harif**	**6.27**	**152**	Pn	**Pn**	**07 19 52.0**	**+1.8**
HRFI				Sn	**Sn**	**07 21 00.8**	**-0.6**
MBRI	**Mt Berech**	**6.45**	**154**	Pn	**Pn**	**07 19 55.2**	**+2.6**
MBRI				Sn	**Sn**	**07 21 06.1**	**+0.4**
EIL	**Elat**	**6.57**	**154**	Pn	**Pn**	**07 19 55.8**	**+1.5**
HKAT	**Jabal Katrina**	**7.38**	**164**	P	**Pn**	**07 20 06.3**	**+1.0**
TR2		**7.45**	**166**	⇑P	**Pn**	**07 20 07.0**	**+0.6**
SWA2		**8.29**	**221**	P	**Pn**	**07 20 17.0**	**-0.8**
HFRF	**Wahat Farafira**	**8.96**	**200**	⇓P	**Pn**	**07 20 27.3**	**+0.2**
HDK1	**Dakhla**	**10.27**	**192**	⇓P	**Pn**	**07 20 45.9**	**+0.8**

*NIED **10** 07:23:00, 4250N×14420E, h77km, Mw4.3 Best double couple: M0 3.02000×10^15 NP1:φs280.00000°, δ84.00000°, λ-97.00000°. NP2:φs149.00000°, δ9.00000°, λ-41.00000°.*
*BJI **10** 07:23:33.1, 4261N×14481E, h63km, mB4.8, mb4.5, Ms4.2, Msz3.8*
*MOS **10** 07:23:34.7±1.1, 4270N×14410E, h40km, mb4.7/16, Error ellipse: s-maj=10.9km s-min=6.9km az=77.5*
*ISCJB **10** 07:23:37.6±0.3, 4250N±003×14428E±003, h72km±2km, mb4.3/51, Error ellipse: s-maj=5.6km s-min=3.3km az=144.8*
*IDC **10** 07:23:38.7±0.7, 4246N×144.15E, h66km±4km, mb4.0/12, mb1 4.2/16, mb1mx4.1/24, mbtmp4.1/16, MS3.0/6, Ms1 3.1/6, ms1mx2.9/27, Error ellipse: s-maj=15.4km s-min=8.8km az=37.0*
*NEIC **10** 07:23:38.9±0.3, 4261N×144.16E, mb4.5/25, MW4.3(NIED), Error ellipse: s-maj=8.0km s-min=5.4km az=143.0*
NEIC Recorded [2 JMA] in south-central Hokkaido and [1 JMA] in eastern Hokkaido.
*JMA **10** 07:23:38.4±0.1, 4255N×14425E, h74km±1km, M4.2*
JMA Felt II J1.
ISC 10 07:23:38.7±0.3, **4253N**±003×**14428E**±003, **h64**km±2km, **h65**km±.7km**:pP-P, n139,** σ**0s98**/151, **mb4.4**/51, **4C-13D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOB	**Onbets**	**0.50**	**319**	⇓P	**Pn**	**07 23 51.7**	**+0.7**
JOB				*e*S	**Sn**	**07 24 00.9**	**+0.9**
JAK	**Akkeshi**	**0.56**	**33**	⇓P	**Pn**	**07 23 52.1**	**+0.4**
JAK				*e*S	**Sn**	**07 24 02.1**	**+1.0**
JCH	**Churui**	**0.68**	**278**	⇑P	**Pn**	**07 23 53.4**	**+0.4**
JCH				*e*S	**Sn**	**07 24 03.5**	**0.0**
JAR	**Ashorobuto**	**0.86**	**334**	⇓P	**Pn**	**07 23 55.2**	**+0.1**
JAR				*e*S	**Sn**	**07 24 07.6**	**+0.4**
JEM	**Erimo**	**0.98**	**239**	P	**Pn**	**07 23 56.9**	**+0.3**
JEM				*e*S	**Sn**	**07 24 10.5**	**+0.6**
ERM	**Erimo**	**0.98**	**239**	*e*PN	**Pn**	**07 23 57.5**	**+0.9**
ERM	**Erimo**	**0.98**	**239**	*e*Pn	**Pn**	**07 23 57.8**	**+1.2**
JNK	**Nakash**	**1.11**	**17**	P	**Pn**	**07 23 58.3**	**0.0**
JNK				*e*S	**Sn**	**07 24 12.8**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.16**	**258**	⇑P	**Pn**	**07 23 58.6**	**-0.3**
JNBK				*e*S	**Sn**	**07 24 13.2**	**-0.8**
NEM2	**Nemuro 2**	**1.36**	**51**	⇓P	**Pn**	**07 24 01.3**	**-0.4**
NEM2				*e*S	**Sn**	**07 24 17.8**	**-1.1**
JFR	**Furan**	**1.40**	**298**	⇓P	**Pn**	**07 24 01.9**	**-0.2**
JFR				*e*S	**Sn**	**07 24 19.1**	**-0.5**
JBT2	**Biratori 2**	**1.44**	**281**	⇑P	**Pn**	**07 24 02.0**	**-0.6**
JTKR	**Abashiri--Toko**	**1.47**	**349**	⇓P	**Pn**	**07 24 03.7**	**+0.6**
JTKR				*e*S	**Sn**	**07 24 22.2**	**+0.8**
JRA	**Rausu**	**1.54**	**23**	P	**Pn**	**07 24 04.4**	**+0.4**
JRA				*e*S	**Sn**	**07 24 23.0**	**-0.1**
JMP	**Maruseppu**	**1.63**	**336**	⇓P	**Pn**	**07 24 05.3**	**+0.1**
JMP				*e*S	**Sn**	**07 24 25.4**	**+0.2**
JKK2	**Kamakawa 2**	**1.75**	**321**	⇓P	**Pn**	**07 24 07.2**	**+0.3**
JKK2				*e*S	**Sn**	**07 24 29.0**	**+0.8**
JAB	**Ashibetsu**	**1.80**	**304**	⇓P	**Pn**	**07 24 08.5**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**1.90**	**37**	*e*PN	**Pn**	**07 24 09.1**	**+0.2**
YUK				*i* S	**Sn**	**07 24 31.9**	**+0.1**
YUK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YUK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YUK				pmax	pmax		
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,21μm,1.0s						
YUK				smax			
	comp=E,11μm,0.8s						
YUK				smax			
	comp=N,10μm,0.5s						
YUK				smax			
	comp=E,8μm,0.6s						
ASAJ	**Asahikawa**	**2.01**	**323**	P	**Pn**	**07 24 11.1**	**+0.8**
	comp=E,79nm,0.3s,baz=181,slow=5.1,SNR=134						
ASAJ				S	**Sn**	**07 24 35.4**	**+0.9**
	comp=E,106nm,0.3s,baz=206,slow=14,SNR=7.3						
KUR	**Kuril'sk**	**3.75**	**43**	*e*PN	**Pn**	**07 24 31.0**	**-3.0**
KUR				*e*S	**Sn**	**07 25 14.0**	**-2.9**
KUR				pmax	pmax		
	comp=N,120nm,0.4s						
KUR				pmax	pmax		
	comp=E,80nm,0.4s						
KUR				pmax	pmax		
	comp=Z,160nm,0.4s						
KUR				smax			
	comp=N,5μm,2.0s						
KUR				smax			
	comp=N,650nm,0.8s						
KUR				smax			
	comp=E,460nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.56**	**347**	*e*PN	**Pn**	**07 24 45.2**	**+0.1**
YSS				*e*S	**Sn**	**07 25 34.0**	**-2.7**
YSS				smax			
	comp=N,160nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.56**	**347**	*e*Pn	**Pn**	**07 24 46.2**	**+1.1**
MAJO	**Matsushiro**	**7.59**	**220**	*e*PN	**Pn**	**07 25 26.3**	**-0.4**
MAT	**Matsushiro**	**7.59**	**220**	P	**Pn**	**07 25 26.4**	**-0.3**
MAT				S	**Sn**	**07 26 50.6**	**-0.7**
MJAR	**Matsushiro Arr**	**7.59**	**220**	P	**Pn**	**07 25 26.2**	**-0.5**
	comp=N,3.4nm,0.3s,baz=31,slow=12,SNR=36						
MJAR	**Matsushiro Arr**	**7.59**	**220**	P	**Pn**	**07 25 26.2**	**-0.5**
HABR	**Khabarovsk**	**8.79**	**316**	*e*PN	**Pn**	**07 25 34.1**	**-8.9**
JHJ	**Hachijo jima 2**	**10.04**	**202**	P	**Pn**	**07 25 57.5**	**-2.5**
	comp=N,22nm,0.3s,baz=37,slow=20,SNR=3.6						
JHJ				S	**Sn**	**07 27 40.6**	**-10**
	comp=N,38nm,0.3s,baz=261,slow=24,SNR=7.3						
JHJ				LR	LR	07 30 33.5	
	comp=N,140nm,18.6s,baz=39,slow=42						
MDJ	**Mudanjiang**	**10.86**	**286**	P	**Pn**	**07 26 10.4**	**-0.9**
MDJ				S	**Sn**	**07 28 13.8**	**+2.7**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.8s						
MDJ				AMB	AMB		
	comp=Z,43nm,5.2s						
SKR	**Severo-Kuril's**	**11.52**	**41**	*e*PN	**Pn**	**07 26 18.5**	**-1.6**
KSRS	**Korea Array**	**13.52**	**253**	P	**Pn**	**07 26 46.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=65,slow=13,SNR=5.7						
KSRS				LR	LR	07 31 19.3	
	comp=Z,57nm,21.6s,baz=154,slow=34						
CN2	**Changchun**	**13.81**	**282**	*e*P	**Pn**	**07 26 51.3**	**0.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
PETK	**Petropavlovsk-**	**13.88**	**36**	P	**Pn**	**07 26 49.6**	**-2.5**
	comp=Z,1.3nm,0.3s,baz=196,slow=10,SNR=15						
PETK				LR	LR	07 32 06.4	
	comp=Z,31nm,21.0s,baz=54,slow=36						
PETK	**Petropavlovsk-**	**13.88**	**36**	P	**Pn**	**07 26 49.6**	**-2.5**
PETK				LR	LR	07 32 06.4	
PET	**Petropavlovsk**	**14.24**	**38**	*e*P	**Pn**	**07 26 56.2**	**-0.7**
PET				*e*S	**Sn**	**07 29 30.5**	**-2.8**
PET				pmax	pmax		
	comp=Z,12nm,1.1s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	**Petropavlovsk**	**14.24**	**38**	*e*Pn	**Pn**	**07 26 55.4**	**-1.5**
CBIJ	**Chichi jima**	**15.49**	**187**	LR	LR	07 32 53.6	
	comp=Z,81nm,20.8s,baz=96,slow=36						
JOW	**Kunigami**	**20.40**	**225**	LR	LR	07 37 26.7	
	comp=Z,58nm,18.1s,baz=96,slow=41						
SEY	**Seymchan**	**20.99**	**10**	⇑*e*P	**P**	**07 28 14.0**	**-2.4**
BJI	**Beijing**	**21.23**	**273**	P	**P**	**07 28 15.3**	**-3.9**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.0						
YAK	**Yakutsk**	**21.38**	**341**	⇓*e*P	**P**	**07 28 16.7**	**-3.9**
YAK				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.5						
YAK	**Yakutsk**	**21.38**	**341**	*e*P	**P**	**07 28 16.8**	**-3.8**
	comp=Z,33nm,0.6s,mb4.8						
FX1	**Attu Island--F**	**21.88**	**52**	P	**P**	**07 28 27.6**	**+1.6**
	comp=Z,38nm,0.7s,mb5.0,baz=332,slow=1.9,SNR=11						
NJ2	**Nanjing**	**22.69**	**251**	*e*P	**P**	**07 28 35.4**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
HHC	**Hu-ho-hao-te**	**24.41**	**277**	*e*P	**P**	**07 28 50.5**	**-0.5**
HHC				AP		07 29 04.7	
HHC				XP	sP	07 29 12.2	-1.8
HHC				PP		07 29 27.2	
HHC				*e*S	**S**	**07 33 00.9**	**-5.3**
HHC				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.3						
HHC				AMB	AMB		
	comp=Z,106nm,4.9s						
HHC				LR	LR		
	comp=N,146nm,13.1s						
HHC				LR	LR		
	comp=E,284nm,12.0s						
HHC				LR	LR		
	comp=Z,91nm,11.3s						
BOD	**Bodaibo**	**24.42**	**319**	*e*P	**P**	**07 28 47.1**	**-3.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**26.59**	**294**	*i* P	**P**	**07 29 09.1**	**-1.6**
SONM	**Songino Array**	**27.03**	**294**	P	**P**	**07 29 14.0**	**-0.7**
	comp=Z,4.3nm,0.6s,mb4.2,baz=85,slow=7.1,SNR=28						
TLY	**Talaya**	**28.81**	**303**	*e*P	**P**	**07 29 31.4**	**+1.0**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
TLY	**Talaya**	**28.81**	**303**	*e*P	**P**	**07 29 31.3**	**+0.9**
	comp=Z,5.0nm,0.8s,mb4.3						
XAN	**Xi'an**	**28.85**	**265**	P	**P**	**07 29 29.6**	**-1.4**
XAN				AP	pP	07 29 45.5	-1.1
XAN				PPP		07 30 37.8	
XAN				S	**S**	**07 34 16.7**	**+0.2**
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb3.8						
XAN				LR	LR		
	comp=Z,48nm,19.5s						
TIXI	**Tiksi**	**30.18**	**350**	⇓*e*P	**P**	**07 29 39.0**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
LZH	**Lanzhou**	**31.71**	**272**	*e*P	**P**	**07 29 57.0**	**+0.7**
LZH				AP	pP	07 30 13.0	+1.1
LZH				XP	sP	07 30 21.0	+1.5
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,76nm,5.2s						
GTA	**Gaotai**	**33.43**	**280**	*e*P	**P**	**07 30 11.1**	**-0.1**
GTA				AP	pP	07 30 26.4	-0.6
GTA				XP	sP	07 30 33.8	-0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.1						
CD2	**Chengdu**	**34.19**	**264**	P	**P**	**07 30 19.3**	**+1.4**
CD2				AP	pP	07 30 34.0	+0.4
CD2				XP	sP	07 30 41.3	+0.2
CD2				PP	PP	07 31 35.2	-1.0
CD2				PCP	PcP	07 32 55.0	+1.6
CD2				S	**S**	**07 35 40.1**	**+0.4**
CD2				XS	sS	07 36 06.0	-0.6
CD2				SS	SS	07 37 52.3	-17
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				LR	LR		
	comp=N,220nm,4.1s						
CD2				LR	LR		
	comp=Z,200nm,5.1s						
GYA	**Guiyang**	**34.58**	**255**	P	**P**	**07 30 22.6**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KMI	**Kunming**	**38.19**	**256**	P	**P**	**07 30 52.5**	**+0.4**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
ZAA0	**Zalesovo Array**	**40.07**	**308**	*e*P	**P**	**07 31 06.9**	**-0.6**
ZALV	**Zalesovo Beam**	**40.07**	**308**	P	**P**	**07 31 06.6**	**-0.9**
	comp=Z,3.1nm,0.4s,mb4.3,baz=89,slow=7.6,SNR=14						
ZALV				PcP	PcP	07 33 11.2	+0.2
	comp=Z,1.7nm,0.5s,baz=82,slow=3.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**40.07**	**308**	P	**P**	**07 31 06.6**	**-0.9**
ZALV				PcP	PcP	07 33 11.2	+0.2
WMQ	**Urumqi**	**40.59**	**292**	*e*P	**P**	**07 31 12.6**	**+0.7**
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.1						
WMQ				AMB	AMB		
	comp=Z,210nm,5.0s						
MCK	**McKinley**	**42.88**	**37**	*e*P	**P**	**07 31 34.1**	**+3.8**
MCK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MCK	**McKinley**	**42.88**	**37**	*e*P	**P**	**07 31 34.1**	**+3.8**
	comp=Z,1.1nm,0.5s,mb3.8						
COLA	**College**	**43.29**	**35**	⇓*i*P	**P**	**07 31 34.4**	**+0.8**
COLA	**College**	**43.29**	**35**	*e*P	**P**	**07 31 34.0**	**+0.4**
	comp=Z,12nm,0.8s,mb4.7						
COLA				*e*pP	pP	07 31 49.4	-0.4
MK31	**Makanchi Array**	**43.29**	**298**	*e*P	**P**	**07 31 33.7**	**-0.1**
MKAR	**Makanchi Array**	**43.29**	**298**	P	**P**	**07 31 33.5**	**-0.3**
	comp=Z,1.8nm,0.5s,mb4.1,baz=82,slow=10,SNR=45						
MKAR				PcP	PcP	07 33 21.9	+0.2
	comp=Z,0.5nm,0.5s,baz=48,slow=4.3,SNR=3.2						
KURK	**Kurchatov**	**44.48**	**304**	*e*P	**P**	**07 31 42.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
KURK	**Kurchatov**	**44.48**	**304**	*e*P	**P**	**07 31 42.3**	**-1.0**
	comp=Z,12nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**45.16**	**252**	LR	LR	07 50 53.3	
	comp=Z,16nm,19.4s,baz=205,slow=36						
EGAK	**Eagle**	**46.15**	**35**	*e*P	**P**	**07 31 56.8**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.6						
EGAK				*e*pP	pP	07 32 11.9	-0.7
INK	**Inuvik**	**48.51**	**29**	*e*P	**P**	**07 32 14.8**	**+0.2**
	comp=Z,85nm,3.0s						
HYT	**Haines Junctio**	**48.62**	**40**	*e*P	**P**	**07 32 17.2**	**+1.7**
HYT				*e*pP	pP	07 32 33.7	+1.7
BRVK	**Borovoye**	**48.70**	**309**	*e*P	**P**	**07 32 15.9**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
BRVK	**Borovoye**	**48.70**	**309**	*e*P	**P**	**07 32 15.9**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.7						
SVE	**Sverdlovsk**	**52.59**	**317**	*e*P	**P**	**07 32 45.7**	**+0.2**
SVE				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
ARU	**Arti**	**53.80**	**317**	*d i*P	**P**	**07 32 53.8**	**-0.5**
ARU				*e*		07 34 51.5	
ARU				*e*S	**S**	**07 40 23.9**	**0.0**
ARU				*e*SS	SS	07 44 04.0	-0.9
ARU				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
ARU	**Arti**	**53.80**	**317**	*e*P	**P**	**07 32 53.7**	**-0.7**
	comp=Z,11nm,0.7s,mb4.9						
COEN	**Coen**	**56.21**	**181**	*e*P	**P**	**07 33 12.9**	**+0.8**
	comp=Z,4.0nm,0.8s,mb4.5						
COEN				*e*pP	pP	07 33 28.6	-0.3
RES	**Resolute Bay**	**56.73**	**16**	*e*P	**P**	**07 33 14.5**	**-0.7**
RES				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
RES	**Resolute Bay**	**56.73**	**16**	*e*P	**P**	**07 33 14.5**	**-0.7**
	comp=Z,10nm,0.8s,mb4.9						
KBL	**Kabul**	**57.62**	**289**	*e*P	**P**	**07 33 21.3**	**-0.7**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KBL	**Kabul**	**57.62**	**289**	*e*P	**P**	**07 33 21.3**	**-0.7**
	comp=Z,3.0nm,0.4s,mb4.7						
YKA	**Yellowknife Ar**	**57.98**	**33**	P	**P**	**07 33 24.1**	**0.0**
	comp=Z,1.1nm,0.8s,mb4.0,baz=300,slow=6.6,SNR=21						
YKA				pP	pP	07 33 40.5	-0.5
	comp=Z,1.3nm,0.9s,baz=303,slow=6.7,SNR=6.7						
YKA	**Yellowknife Ar**	**57.98**	**33**	P	**P**	**07 33 24.1**	**0.0**
YKA				pP	pP	07 33 40.5	-0.5
ARCES	**ARCESS Array B**	**59.65**	**339**	P	**P**	**07 33 36.1**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.4,baz=46,slow=8.7,SNR=9.2						
JOF	**Joensuu**	**62.18**	**332**	*e*p	**P**	**07 33 51.3**	**-1.5**
	comp=Z,5.4nm,0.7s,mb4.8						
WRAB	**Tennant Creek**	**62.82**	**191**	*e*P	**P**	**07 33 57.8**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**62.82**	**191**	*e*P	**P**	**07 33 57.8**	**+0.3**
	comp=Z,3.8nm,0.9s,mb4.5						
WB2	**Warramunga Arr**	**62.83**	**191**	*e*P	**P**	**07 33 56.8**	**-0.8**
EDM	**Edmonton**	**63.71**	**41**	*e*P	**P**	**07 34 03.6**	**+0.4**
KAF	**Kangasniemi**	**64.45**	**333**	*e*p	**P**	**07 34 06.5**	**-1.4**
	comp=Z,4.2nm,0.7s,mb4.6,baz=44,slow=6.2						
KAF	**Kangasniemi**	**64.45**	**333**	*e*P	**P**	**07 34 06.5**	**-1.4**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
NEW	**Newport**	**64.71**	**47**	*e*P	**P**	**07 34 10.3**	**+0.5**
NEW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NEW	**Newport**	**64.71**	**47**	*e*P	**P**	**07 34 10.3**	**+0.5**
	comp=Z,2.5nm,1.0s,mb4.2						
FINES	**FINESS Array B**	**64.99**	**332**	*e*P	**P**	**07 34 10.0**	**-1.4**
SUMG	**Summit**	**65.19**	**1**	*e*P	**P**	**07 34 12.3**	**-0.2**
	comp=Z,12nm,1.2s,mb4.8						
SUMG				*e*pP	pP	07 34 31.6	+1.9
WALA	**Waterton Lakes**	**65.94**	**45**	*e*P	**P**	**07 34 18.0**	**+0.3**
	comp=Z,0.1nm,0.6s						
WALA				*e*pP	pP	07 34 35.5	+0.6
SWMT	**Swartz Lake**	**66.84**	**46**	*e*P	**P**	**07 34 23.9**	**+0.3**
SWMT				*e*pP	pP	07 34 41.6	+0.9
SLMT	**Seeley Lake**	**67.28**	**46**	*e*P	**P**	**07 34 27.1**	**+0.8**
SLMT				*e*pP	pP	07 34 44.3	+0.8
FFC	**Flin Flon**	**67.92**	**35**	*e*P	**P**	**07 34 30.0**	**-0.2**
FFC				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
FFC	**Flin Flon**	**67.92**	**35**	*e*P	**P**	**07 34 30.0**	**-0.2**

	comp=Z,9.0nm,1.1s,mb4.7								
FCC	**Fort Churchill**	**68.12**	**29**	*e*P		**P**	**07 34 31.0**	**-0.3**
	comp=Z,0.1nm,0.9s								
HRY	**Holter Researc**	**68.50**	**46**	*e*P		**P**	**07 34 35.0**	**+1.0**
HRY				*e*pP	pP		07 34 52.1	+0.8
LRM	**Limekiln Ridge**	**68.73**	**47**	*e*P		**P**	**07 34 36.2**	**+0.8**
LRM				*e*pP	pP		07 34 53.5	+0.8
EGMT	**Eagleton**	**68.74**	**44**	*e*P		**P**	**07 34 35.6**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.2								
DLMT	**Dillon**	**68.94**	**47**	*e*P		**P**	**07 34 37.8**	**+1.0**
	comp=Z,2.9nm,0.6s,mb4.4								
KIV	**Kislovodsk**	**68.99**	**311**	*e*P		**P**	**07 34 36.5**	**-0.6**
KIV				pmax	pmax				
	comp=Z,8.0nm,0.7s,mb4.8								
NB2	**NORSAR Subarra**	**69.96**	**338**	P		**P**	**07 34 41.8**	**-1.0**
	comp=Z,2.9nm,0.7s,mb4.3,baz=36,slow=6.2								
NOA	**NORSAR Array B**	**69.96**	**338**	P		**P**	**07 34 41.5**	**-1.3**
	comp=Z,4.3nm,0.8s,mb4.5,baz=36,slow=6.1,SNR=16								
NVAR	**Mina Array Bea**	**70.01**	**56**	P		**P**	**07 34 45.0**	**+1.5**
	comp=Z,2.0nm,0.7s,mb4.2,baz=293,slow=6.4,SNR=16								
NVAR				pP	pP		07 35 02.5	+1.8	
	comp=Z,1.7nm,0.8s,baz=281,slow=6.8,SNR=6.4								
IMW	**Indian Meadow**	**70.80**	**48**	*e*P		**P**	**07 34 50.0**	**+1.9**
	comp=Z,6.8nm,1.4s,mb4.4								
IMW				*e*pP	pP		07 35 06.1	+0.6	
RRI2	**Red Ridge**	**70.94**	**48**	*e*P		**P**	**07 34 50.4**	**+1.3**
	comp=Z,5.8nm,1.1s,mb4.4								
RRI2				*e*pP	pP		07 35 07.9	+1.5	
TPAW	**Teton Pass**	**71.05**	**48**	*e*P		**P**	**07 34 50.3**	**+0.6**
	comp=Z,6.3nm,1.3s,mb4.4								
REDW	**Red Top Meadow**	**71.19**	**48**	*e*P		**P**	**07 34 51.9**	**+1.4**
	comp=Z,7.5nm,1.4s,mb4.4								
AKASG	**Malin Array Be**	**71.30**	**323**	P		**P**	**07 34 50.0**	**-1.0**
	comp=Z,2.4nm,0.6s,mb4.3,baz=42,slow=6.2,SNR=11								
TPNV	**Topopah Spring**	**72.20**	**56**	*e*P		**P**	**07 34 57.4**	**+0.7**
TPNV				*e**PP	pP		07 35 15.3	+1.1	
TPNV				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.3								
TPNV	**Topopah Spring**	**72.20**	**56**	*e*P		**P**	**07 34 57.4**	**+0.6**
	comp=Z,4.1nm,1.0s,mb4.3								
TPNV				*e*pP	pP		07 35 15.3	+1.1	
BW06	**Boulder Array**	**72.30**	**48**	*e*P		**P**	**07 34 57.4**	**+0.2**
	comp=Z,1.0nm,0.4s,mb4.1								
BW06				*e*pP	pP		07 35 14.2	-0.4	
PDAR	**Pinedale Array**	**72.30**	**48**	P		**P**	**07 34 57.4**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.1,baz=14,slow=0.3,SNR=28								
PDAR				pP	pP		07 35 15.0	+0.4	
	comp=Z,0.9nm,0.6s,baz=238,slow=1.2,SNR=4.9								
PDAR				sP	sP		07 35 23.2	+1.5	
	comp=Z,0.7nm,0.6s,baz=280,slow=2.6,SNR=3.5								
PV10	**Paradox Valley**	**75.55**	**51**	*e*P		**P**	**07 35 17.1**	**+0.8**
CLL	**Collm**	**77.40**	**331**	*e*P		**P**	**07 35 28.0**	**+1.5**
CLL				*e*pP	pP		07 35 45.0	+0.9	
KHC	**Kasperske Hory**	**78.98**	**330**	*e*P		**P**	**07 35 35.4**	**+0.1**
GERES	**GERESS Array B**	**79.17**	**329**	P		**P**	**07 35 34.7**	**-1.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=42,slow=6.2,SNR=4.6								
MEM	**Membach**	**80.36**	**335**	P		**P**	**07 35 42.6**	**-0.1**
	comp=Z,31nm,3.3s								
DOU	**Dourbes**	**81.25**	**335**	P		**P**	**07 35 47.4**	**-0.1**
TXAR	**Lajitas Array**	**85.07**	**54**	P		**P**	**07 36 08.3**	**+0.8**
	comp=Z,1.6nm,0.7s,mb4.2,baz=286,slow=3.1,SNR=18								
TXAR				pP	pP		07 36 26.5	+1.1	
	comp=Z,0.6nm,0.7s,baz=316,slow=3.5,SNR=4.1								
TXAR				sP	sP		07 36 35.3	+2.9	
	comp=Z,0.5nm,0.5s,baz=275,slow=3.6,SNR=3.0								
TXAR	**Lajitas Array**	**85.07**	**54**	P		**P**	**07 36 08.4**	**+0.8**
TXAR				*PP	pP		07 36 26.5	+1.1	
TXAR	**Lajitas Array**	**85.07**	**54**	P		**P**	**07 36 08.3**	**+0.8**
TXAR				pP	pP		07 36 26.5	+1.1	
TXAR				sP	sP		07 36 35.3	+2.9	
SIV	**San Ignacio**	**145.78**	**47**	PKPbc	PKPbc		07 43 11.0	+0.2	
	comp=Z,2.5nm,0.4s,baz=283,slow=3.1,SNR=20								
LVC	**Limon Verde**	**146.01**	**65**	PKPbc	PKPbc		07 43 12.8	+1.5	
	comp=Z,2.7nm,0.6s,baz=68,slow=3.3,SNR=4.2								
LVC	**Limon Verde**	**146.01**	**65**	*e*PKPdf	PKPbc		07 43 13.0	+1.7	
SNAA	**Sanae**	**146.64**	**198**	*e*PKPdf	PKPdf		07 43 11.6	+1.6	
SNAA				*e*			07 43 15.3		
SNAA				*e*			07 43 19.6		
SNAA				*e*			07 43 35.1		
SNAA				*e*			07 43 39.5		
SNAA				*e*			07 43 42.6		
VNA2	**Neumayer--Watz**	**148.21**	**197**	*e*PKPdf	PKPdf		07 43 13.0	+0.4	
VNA2				*e*			07 43 17.0		
VNA2				*e*			07 43 20.7		
VNA2				*e*			07 43 35.3		
VNA2				*e*			07 43 40.3		
VNA2				*e*			07 43 43.3		
VNA3	**Neumayer Olymp**	**148.44**	**196**	*e*PKPdf	PKPbc		07 43 13.6	-0.1	
VNA3				*e*			07 43 20.5		
VNA3				*e*			07 43 24.5		
VNA3				*e*			07 43 36.8		
VNA3				*e*			07 43 41.3		
VNA3				*e*			07 43 44.6		
VNA1	**Neumayer--Stat**	**148.60**	**197**	*e*PKPdf	PKPdf		07 43 14.8	+1.5	
VNA1				*e*			07 43 18.1		
VNA1				*e*			07 43 21.9		
BDFB	**Brasilia**	**151.20**	**25**	PKPbc	PKPbc		07 43 25.1	+0.1	
	comp=Z,1.2nm,0.5s,baz=142,slow=26,SNR=4.9								
BDFB	**Brasilia**	**151.20**	**25**	PKIKP	PKPbc		07 43 25.1	+0.1	
BDFB				pmax	pmax				
	comp=Z,1.0nm,0.5s								
CFAA	**Coronel Fontan**	**152.01**	**78**	PKPbc	PKPbc		07 43 26.1	-0.3	
	comp=Z,0.2nm,0.5s,baz=224,slow=3.1,SNR=6.8								

*ISCJB **10** 07:54:27.4±0.7, 3826N±003×22.17E±004, h73km±9km, Error ellipse: s-maj=6.1km s-min=4.6km az=41.0*
*NEIC **10** 07:54:27.8, 3827N×22.18E, h66km, MG2.7(ATH), After ATH.*
*THE **10** 07:54:27.6, 3826N×22.16E, h68km±3km, ML2.8/3, Error ellipse: s-maj=3.2km s-min=0.8km az=125.0*
*CSEM **10** 07:54:27.2±0.1, 3827N×22.14E, h55km±2km, ML2.7, Error ellipse: s-maj=2.2km s-min=1.5km az=142.0*
*ATH **10** 07:54:27.7, 3829N×22.17E, h67km±2km, ML2.7*
ISC 10 07:54:28.0±0.8, 3826N±003×2217E±004, h71km±10km, n26, σ0§47/44, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.59**	**250**	*e*P	**Pn**	**07 54 41.7**	**0.0**
RLS				*e*S	**Sn**	**07 54 52.2**	**+0.4**
RLS	**Riolos of Patr**	**0.59**	**250**	*e*P	**Pn**	**07 54 41.4**	**-0.3**
RLS				*e*S	**Sn**	**07 54 52.2**	**+0.4**
LTK	**Loutraki**	**0.67**	**110**	P	**Pn**	**07 54 41.9**	**-0.7**
LTK				S	**Sn**	**07 54 52.7**	**-0.7**
EVR	**Evrytania**	**0.71**	**337**	*e*P	**Pn**	**07 54 43.3**	**+0.2**
EVR	**Evrytania**	**0.71**	**337**	*e*P	**Pn**	**07 54 44.0**	**+0.9**
LKR	**Lokris**	**0.76**	**59**	P	**Pn**	**07 54 43.2**	**-0.4**
LKR				S	**Sn**	**07 54 55.1**	**-0.1**
LKR	**Lokris**	**0.76**	**59**	*e*P	**Pn**	**07 54 43.4**	**-0.2**
LKR				*e*S	**Sn**	**07 54 55.4**	**+0.2**
LKR	**Lokris**	**0.76**	**59**	*e*P	**Pn**	**07 54 43.4**	**-0.2**
LKR				*e*S	**Sn**	**07 54 55.5**	**+0.3**
AGG	**Agios Georgios**	**0.77**	**9**	P	**Pn**	**07 54 43.7**	**-0.1**
AGG				S	**Sn**	**07 54 55.3**	**-0.1**
ITM	**Ithomi**	**1.09**	**190**	*e*P	**Pn**	**07 54 48.7**	**+1.0**
KFL	**Anninata**	**1.10**	**263**	P	**Pn**	**07 54 46.7**	**-1.0**
VLS	**Valsamata**	**1.25**	**267**	P	**Pn**	**07 54 48.3**	**-1.3**
VLS				S	**Sn**	**07 55 05.5**	**-0.3**
VLS	**Valsamata**	**1.25**	**267**	*e*P	**Pn**	**07 54 50.3**	**+0.7**
VLS	**Valsamata**	**1.25**	**267**	*e*P	**Pn**	**07 54 48.6**	**-1.0**
VLS				S	**Sn**	**07 55 05.5**	**-0.3**
ATH	**Athens Observa**	**1.25**	**103**	*e*P	**Pn**	**07 54 50.0**	**+0.3**
ATH				*e*S	**Sn**	**07 55 06.5**	**+0.5**
ATH	**Athens Observa**	**1.25**	**103**	*e*P	**Pn**	**07 54 49.9**	**+0.2**
ATH				*e*S	**Sn**	**07 55 05.9**	**-0.1**
THL	**Klokotos Trika**	**1.31**	**355**	P	**Pn**	**07 54 50.2**	**-0.2**
THL				S	**Sn**	**07 55 07.9**	**+0.6**
NEO	**Neokhori**	**1.33**	**38**	*e*P	**Pn**	**07 54 50.9**	**+0.2**
PTL	**Penteli**	**1.35**	**98**	*e*P	**Pn**	**07 54 51.3**	**+0.3**
XOR	**Xorichti**	**1.36**	**36**	P	**Pn**	**07 54 51.3**	**+0.1**
XOR				S	**Sn**	**07 55 09.1**	**+0.5**
PYL	**PYLOS**	**1.40**	**194**	P	**Pn**	**07 54 51.5**	**-0.2**
PYL				S	**Sn**	**07 55 10.1**	**+0.6**
AOS	**Alonnisos**	**1.62**	**55**	P	**Pn**	**07 54 54.5**	**0.0**
AOS				S	**Sn**	**07 55 14.4**	**-0.2**
LIT	**Litokhoron**	**1.86**	**8**	P	**Pn**	**07 54 57.4**	**-0.3**
LIT				S	**Sn**	**07 55 20.6**	**+0.4**
PAIG	**Paliouri**	**2.04**	**35**	P	**Pn**	**07 54 59.9**	**-0.2**
PAIG				S	**Sn**	**07 55 24.2**	**-0.4**
HORT	**Hortiatis**	**2.44**	**17**	P	**Pn**	**07 55 05.9**	**+0.3**
HORT				S	**Sn**	**07 55 34.4**	**0.0**
OUR	**Ouranopolis**	**2.51**	**34**	P	**Pn**	**07 55 06.3**	**-0.1**

*DDA **10** 09:08:23.4, 37.03N×2831E, h7km±3km, Md2.7*
CSEM 10 09:08:23.4±0.5, 3706N×2831E, h2km, MD2.7, Error ellipse: s-maj=11.5km s-min=9.3km az=72.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.08**	**342**	*e*PG	Pg	09 08 25.4	+0.5
YER				*e*SG	Sg	09 08 27.3	+1.3
TURN	**Turunc**	**0.30**	**129**	*i* P	Pg	09 08 29.2	+0.1
TURN				*i* S	Sg	09 08 33.8	+0.8
TURN	**Turunc**	**0.30**	**129**	*i* P	Pg	09 08 29.2	+0.1
MLSB	**Milas**	**0.49**	**299**	*e*PG	Pg	09 08 33.6	+0.8
DAT	**Datca**	**0.68**	**241**	*e*PG	Pg	09 08 38.4	+2.0
BDRM	**Kayabasi**	**0.69**	**271**	*e*P	Pg	09 08 36.4	-0.3
BDRM				*i* S	Sg	09 08 47.2	+1.5
GCAM	**G?zelcaml?**	**1.07**	**307**	*e*P	Pg	09 08 46.7	+2.8
GCAM				*i* S	Sg	09 08 59.7	+1.8
KHAL	**Karahalli**	**1.61**	**35**	*e*P	Pn	09 08 55.8	+3.0
KHAL				*i* S	Sn	09 09 17.2	+3.1
KHAL	**Karahalli**	**1.61**	**35**	*e*P	Pn	09 08 55.8	+3.0
KHAL				*i* S	Sn	09 09 17.2	+3.1

*IDC **10** 09:31:26.4±1.4, 3527N×14140E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.6/23, mbtmp3.5/8, ML3.5/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/21, Error ellipse: s-maj=32.3km s-min=25.4km az=158.0*
*ISCJB **10** 09:31:27.6±1.1, 3522N±004×14145E±008, h23km±7km, mb3.5/4, Error ellipse: s-maj=10.9km s-min=6.1km az=7.4*
*NEIC **10** 09:31:29.1, 3523N×14132E, h27km, MG3.0(JMA), After JMA.*
*JMA **10** 09:31:29.1±0.3, 3523N×14132E, h27km±4km, M3.0*
ISC 10 09:31:27.9±1.1, 3521N±003×14140E±007, h13km±6km, n19, σ0§98/26, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.66**	**212**	P	**Pg**	**09 31 41.4**	**+0.7**
BSO1				*e*S	**Sg**	**09 31 50.1**	**+0.8**
CHOJ	**Chosi**	**0.66**	**318**	P	**Pg**	**09 31 40.8**	**+0.1**
CHOJ				*e*S	**Sg**	**09 31 49.9**	**+0.5**
BSO3	**Boso 3**	**0.83**	**241**	P	**Pg**	**09 31 43.8**	**-0.3**
BSO3				*e*S	**Sg**	**09 31 53.1**	**-1.9**
BSO4	**Boso 4**	**0.90**	**256**	P	**Pg**	**09 31 44.9**	**-0.3**
JCN	**Nagara**	**1.00**	**282**	P	**Pb**	**09 31 47.7**	**+0.7**
JYT	**Yasato**	**1.41**	**316**	P	**Pn**	**09 31 53.3**	**+0.1**
JIM2	**Oshima 3**	**1.69**	**254**	P	**Pn**	**09 31 55.5**	**-1.5**
JHJ	**Hachijo jima 2**	**2.48**	**213**	P	**Pn**	**09 32 07.6**	**-0.3**
	16nm,0.3s,baz=84,slow=19,SNR=5.7						
JHJ				Sn	**Sn**	**09 32 37.4**	**-0.7**
	32nm,0.3s,baz=83,slow=22,SNR=6.3						
MJAR	**Matsushiro Arr**	**2.91**	**298**	Pn	**Pn**	**09 32 14.2**	**+0.4**
	3.3nm,0.3s,baz=106,slow=8.0,SNR=22						
MJAR				LR	LR	09 33 29.0	
	comp=Z,184nm,19.6s,baz=175,slow=43						
MAJO	**Matsushiro**	**2.91**	**298**	*e*Pn	**Pn**	**09 32 14.6**	**+0.8**
MAT	**Matsushiro**	**2.91**	**298**	P	**Pn**	**09 32 14.7**	**+0.9**
MAT				*e*S	**Sn**	**09 32 48.9**	**+0.3**
ERM	**Erimo**	**6.93**	**11**	*e*Pn	**Pn**	**09 33 07.8**	**-1.2**
ERM				*e*Sn	**Sn**	**09 34 26.9**	**-0.8**
ASAJ	**Asahikawa**	**8.94**	**6**	Pn	**Pn**	**09 33 34.2**	**-2.4**
	0.8nm,0.3s,baz=317,slow=28,SNR=6.8						
ASAJ				Sn	**Sn**	**09 35 13.1**	**-4.0**
	0.3nm,0.3s,baz=233,slow=20,SNR=2.2						
ASAJ				LR	LR	09 37 37.3	
	comp=Z,94nm,18.9s,baz=178,slow=42						
KSRS	**Korea Array**	**11.10**	**286**	Pn	**Pn**	**09 34 09.9**	**+3.7**
	0.1nm,0.3s,baz=101,slow=13,SNR=3.3						
KSRS				LR	LR	09 38 40.2	
	comp=Z,68nm,18.2s,baz=150,slow=39						
SONM	**Songino Array**	**28.82**	**307**	P	**P**	**09 37 26.5**	**+0.9**
	0.3nm,0.5s,mb3.3,baz=127,slow=9.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.15**	**314**	P	**P**	**09 39 27.4**	**-0.4**
	0.9nm,0.6s,mb3.7,baz=83,slow=6.0,SNR=2.6						
YKA	**Yellowknife Ar**	**65.39**	**30**	P	**P**	**09 42 09.6**	**0.0**
	0.0nm,0.4s,baz=303,slow=7.0,SNR=3.0						
NVAR	**Mina Array Bea**	**76.09**	**53**	P	**P**	**09 43 17.1**	**+1.8**
	0.3nm,0.6s,mb3.4,baz=294,slow=4.6,SNR=3.5						
PDAR	**Pinedale Array**	**78.95**	**45**	P	**P**	**09 43 32.0**	**+0.9**
	0.4nm,0.8s,mb3.4,baz=262,slow=2.6,SNR=3.2						

Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.84**	**177**↓	*e*P	Pg	07 49 59.3	-0.2
NBG	**Las Nubes**	**0.87**	**143**↓	*e*P	Pg	07 49 59.9	-0.3
NBG				*e*S	Sg	07 50 13.4	+1.9
PCG	**Pacaya**	**0.93**	**163**	*e*P	Pg	07 50 01.9	+0.6
IXG	**Ixpaco**	**1.19**	**159**	*e*P	Pg	07 50 05.8	-0.3
IXG				*e*S	Sg	07 50 23.9	+2.3
JAT	**Jato**	**1.21**	**217**↓	*e*P	Pg	07 50 07.1	+0.5
RBDL	**Robledal**	**1.65**	**135**↓	*e*P	x	07 50 13.1	
RBDL				*e*S	x	07 50 36.8	
MTO2	**Montecristo 2**	**1.72**	**121**↑	*e*P	x	07 50 13.8	
MTO2				*e*S	x	07 50 38.3	
RTR	**El Retiro**	**1.84**	**139**↓	*e*P	x	07 50 16.3	
RTR				*e*S	x	07 50 42.4	
SNJE	**San Jose**	**1.88**	**138**↓	*e*P	x	07 50 17.0	
SBLS	**San Blas**	**1.89**	**139**↓	*e*P	x	07 50 17.2	
BQQS	**Boqueron**	**2.20**	**135**↓	*e*P	x	07 50 23.0	
LBRS	**Las Brisas**	**2.36**	**131**	*e*P	x	07 50 23.6	
LBRS				*e*S	x	07 50 53.9	
CAHU	**Cacacuatique**	**3.00**	**120**	*e*P	x	07 50 33.5	

IDC 10 07:27:15.2±1.6, 967N×5795E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/20, mbtmp3.9/6, MS3.6/4, Ms1 3.6/4, ms1mx3.2/28, Error ellipse: s-maj=47.6km s-min=25.3km az=164.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**36.94**	**328**	P	P	07 34 26.7	+0.6
	0.9nm,0.8s,baz=162,slow=9.0,SNR=3.7						
CMAR	**Chiang Mai Arr**	**40.63**	**73**	P	P	07 34 57.8	+0.4
	0.6nm,0.3s,baz=256,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**42.40**	**25**	LR	LR	07 53 02.5	
	comp=Z,78nm,18.5s,baz=299,slow=36						
KURK	**Kurchatov**	**44.33**	**19**	P	P	07 35 25.9	-1.1
	0.4nm,0.3s,baz=219,slow=8.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**49.12**	**21**	P	P	07 36 03.9	-0.6
	1.0nm,0.6s,baz=226,slow=8.0,SNR=4.3						
BOSA	**Boshof**	**49.45**	**219**	LR	LR	07 54 41.8	
	comp=Z,30nm,19.1s,baz=259,slow=33						
TORD	**Torodi Ar. Bea**	**55.16**	**279**	P	P	07 36 49.9	-0.2
	1.0nm,0.8s,baz=87,slow=6.6,SNR=6.4						
DBIC	**Dimbokro**	**62.17**	**272**	P	P	07 37 39.2	+0.2
	2.2nm,0.9s,baz=66,slow=8.0,SNR=3.3						
JOW	**Kunigami**	**68.19**	**65**	LR	LR	08 06 20.9	
	comp=Z,84nm,18.6s,baz=167,slow=34						
PETK	**Petropavlovsk-**	**88.14**	**36**	LR	LR	08 17 58.4	
	comp=Z,35nm,19.8s,baz=239,slow=34						
PDAR	**Pinedale Array**	**126.58**	**349**	PKP	PKPdf	07 46 19.9	-0.9
	0.2nm,0.7s,baz=67,slow=2.3,SNR=5.1						
NVAR	**Mina Array Bea**	**132.02**	**356**	PKP	PKPdf	07 46 32.2	+0.9
	0.5nm,0.7s,baz=110,slow=1.1,SNR=4.3						

*MOS **10** 07:44:50.2±0.9, 5472N×16666E, h33km, mb4.2/1, Error ellipse: s-maj=52.5km s-min=32.7km az=162.4*
KRSC 10 07:44:55.3±1.6, 5457N×16590E, h31km±30km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**2.41**	**314**	P	Pn	07 45 31.4	-1.0
MKZ	**Mys Kozlova**	**2.43**	**271**	P	Pn	07 45 34.6	+1.8
MKZ				S	Sn	07 46 03.2	+1.8
ZLN	**Zelenaya**	**3.25**	**299**	P	Pn	07 45 47.9	+3.8
BZGR	**Bezymyannyi-Gr**	**3.28**	**297**	P	Pn	07 45 46.4	+1.9
CIRR	**Tsirk**	**3.33**	**300**	P	Pn	07 45 47.0	+1.9
TUMR	**Tumrok**	**3.40**	**284**	P	Pn	07 45 48.4	+2.3
KMNR	**Kamenistaya**	**3.46**	**292**	*e*P	Pn	07 45 49.2	+2.3
KIRR	**Kirishev**	**3.47**	**296**	S	Sn	07 46 33.6	+6.6
SPN	**Mys Shipunski**	**3.78**	**249**	P	Pn	07 45 54.1	+2.7
SPN				S	Sn	07 46 36.6	+1.9
SRDR	**Sredinnyy**	**3.93**	**299**	S	Sn	07 46 44.2	+5.8
NLC	**Nalytchevo**	**4.12**	**253**	P	Pn	07 45 58.9	+2.8
NLC				S	Sn	07 46 45.0	+1.8
GNL	**Ganaly**	**4.76**	**263**	P	Pn	07 46 08.9	+4.1
RUS	**Russkaya**	**4.90**	**247**	P	Pn	07 46 10.0	+3.3

CASC 10 07:49:43.4±2.1, 1529N×9089W, h1km±9km, MD3.8, 3C-6D,

*NEIC **10** 08:54:32.5±0.8, 344S×10068E, h35km, mb4.8/10, Error ellipse: s-maj=25.7km s-min=7.8km az=47.0*
*ISCJB **10** 08:54:35.4±5.1, 3.1S±03×101.0E±03, h67km±38km, mb4.6/12, Error ellipse: s-maj=69.8km s-min=12.6km az=44.6*
*IDC **10** 08:54:38.4±5.1, 2.84S×100.96E, h64km±40km, mb3.9/4, mb1 4.0/6, mb1mx3.6/20, mbtmp4.0/6, ML4.1/2, MS3.4/2, Ms1 3.4/2, ms1mx2.9/27, Error ellipse: s-maj=83.9km s-min=20.9km az=53.0*
ISC 10 08:54:38.5±4.8, 31S±03×1011E±03, h78km±35km, n25, σ0§54/23, mb4.6/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.24**	**340**	P	**Pn**	**08 56 02.8**	**-5.1**
	3.1nm,0.3s,baz=181,slow=3.1,SNR=9.2						
PSI				LR	LR	08 58 53.3	
	comp=Z,194nm,18.9s,baz=258,slow=44						
KULM	**Kulim**	**8.33**	**357**	*e*Pn	**Pn**	**08 56 36.2**	**-0.4**
	15nm,0.7s						
KAPI	**Kappang**	**18.72**	**96**	P	**Pn**	**08 58 52.9**	**+0.6**
	0.8nm,0.3s,baz=274,slow=10,SNR=5.2						
KAPI	**Kappang**	**18.72**	**96**	*e*P	**Pn**	**08 58 53.0**	**+0.7**
	19nm,1.0s						
BATI	**Baumata**	**23.50**	**109**	LR	LR	09 10 27.7	
	comp=Z,128nm,18.9s,baz=313,slow=40						

KRSC 10 09:36:58.8±1.1, 5283N×16021E, h31km±20km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.29**	**337**	*e*P	Pb	09 37 06.4	+0.2
SPN				*i* S	Sb	09 37 12.0	+0.8
NLC	**Nalytchevo**	**0.62**	**304**	*e*P	Pb	09 37 10.9	-0.4
NLC				*i* S	Sb	09 37 20.1	+0.3
PET	**Petropavlovsk**	**0.96**	**282**	*e*P	Pn	09 37 15.9	-0.2
PET				*i* S	Sn	09 37 28.7	0.0
AVH	**Avacha**	**0.99**	**297**	*e*P	Pn	09 37 16.8	+0.3
RUS	**Russkaya**	**1.11**	**250**	*e*P	Pn	09 37 17.7	-0.4
RUS				*i* S	Sn	09 37 31.9	-0.4
KII	**Karymskiy**	**1.29**	**340**	P	Pn	09 37 21.1	+0.4
GNL	**Ganaly**	**1.61**	**303**	*e*P	Pn	09 37 26.7	+1.6
MKZ	**Mys Kozlova**	**1.95**	**27**	*e*P	Pn	09 37 29.3	-0.4
MIPR	**Malaya Ipel'ka**	**2.18**	**257**	P	Pn	09 37 34.6	+1.8
TUMR	**Tumrok**	**2.46**	**359**	P	Pn	09 37 38.2	+1.5
KMNR	**Kamenistaya**	**2.93**	**0**	P	Pn	09 37 45.4	+2.2
ZLN	**Zelenaya**	**3.21**	**6**	P	Pn	09 37 49.9	+2.9
KBTR	**Krutoberegovo**	**3.71**	**23**	P	Pn	09 37 53.7	-0.2

*CSEM **10** 09:45:32.7, 3005N×3618E, h2km, ML2.8, After SNSN*
SGS 10 09:45:32.7, 3005N×3618E, h1km, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		**1.22**	**233**	P	Pg	09 45 55.0	-1.2
HQLS		**1.22**	**233**	P	Pg	09 45 55.0	-1.2
HQLS				S	Sg	09 46 11.8	-0.3
JLOS		**1.44**	**205**	P	Pn	09 45 57.9	-2.0
BDAS	**Al Bad'**	**1.87**	**210**	P	Pn	09 46 04.2	-1.6

*CSEM **10** 09:51:42.8±0.3, 4046N×2924E, h3km±1km, MD2.5, Error ellipse: s-maj=7.7km s-min=2.0km az=108.0*
*ISK **10** 09:51:42.9, 4043N×2924E, h6km, MD2.5*
*DDA **10** 09:51:44.0, 4045N×2921E, h7km±2km, Md2.4*
ISC 10 09:51:43.0±1.9, 4053N±009×292E±01, h10km, n6, σ1§06/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.09**	**173**	*e*PG	**Pg**	**09 51 44.4**	**-1.1**
GEMT				*e*SG	**Sg**	**09 51 45.5**	**-1.7**
YLV	**Yalova**	**0.16**	**75**	*e*PG	**Pg**	**09 51 46.8**	**+0.3**
YLV				*e*SG	**Sg**	**09 51 49.6**	**+0.8**
ADVT	**Abdulvahap**	**0.44**	**102**	*e*PG	**Pg**	**09 51 50.9**	**-0.7**
ADVT				*e*SG	**Sg**	**09 51 56.8**	**-0.7**
GULT	**Gulveren**	**1.03**	**95**	*e*PG	**Pg**	**09 52 02.2**	**-0.6**
BORA	**Eskisehir**	**1.17**	**123**	*i* P	**Pb**	**09 52 05.8**	**+0.5**
BORA				*i* S	**Sb**	**09 52 21.2**	**+0.6**
GDZ	**Gediz**	**1.46**	**171**	*e*P	**Pn**	**09 52 10.5**	**+1.1**
GDZ				*i* S	**Sn**	**09 52 31.3**	**+2.8**

*ISK **10** 10:22:23.8, 3701N×2929E, h9km, MD3.1*
*ATH **10** 10:22:23.5, 3693N×2963E, h37km, MD3.3/3*
*CSEM **10** 10:22:23.5±0.1, 3703N×2931E, h5km, MD3.2, Error ellipse: s-maj=3.4km s-min=1.8km az=6.0*
*NEIC **10** 10:22:23.0, 3701N×2929E, h8km, MD3.0(ISK), After ISK.*
*DDA **10** 10:22:24.3, 3702N×2926E, h7km±7km, Md3.2*
*ISCJB **10** 10:22:24.3±0.6, 3703N±003×2930E±003, h6km±6km, Error ellipse: s-maj=5.0km s-min=4.3km az=175.7*
ISC 10 10:22:24.9±0.5**, 3702N**±003×**2930E**±003**, h8**km±5km**, n27, σ1s01**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.30**	**44**	*i* P	**Pg**	**10 22 30.5**	**-0.3**
GOLH				*i* S	**Sg**	**10 22 37.2**	**+2.4**
ELL	**Elmali**	**0.56**	**119**	*e*PG	**Pg**	**10 22 34.4**	**-1.3**
ELL				*e*SG	**Sg**	**10 22 43.4**	**+0.4**
TURN	**Turunc**	**0.58**	**255**	*i* P	**Pg**	**10 22 39.0**	**+3.0**
TURN				*i* S	**Sg**	**10 22 53.8**	**+10**
TURN	**Turunc**	**0.58**	**255**	*i* P	**Pg**	**10 22 39.0**	**+2.9**
TURN				*i* S	**Sg**	**10 22 53.8**	**+10**
DENT	**Denizli**	**0.76**	**344**	*e*PG	**Pg**	**10 22 38.8**	**-0.7**
YER	**Yerkesik**	**0.82**	**278**	*e*PG	**Pg**	**10 22 40.1**	**-0.6**
YER				*e*SG	**Sg**	**10 22 51.7**	**+0.3**
YER	**Yerkesik**	**0.82**	**278**	Pg	**Pg**	**10 22 40.0**	**-0.7**
AKAS	**Kas**	**0.82**	**163**	*i* P	**Pg**	**10 22 39.1**	**-1.7**
AKAS				*i* S	**Sg**	**10 22 52.8**	**+1.3**
KSL	**Kastellorizon**	**0.90**	**165**	*e*PN	**Pn**	**10 22 39.0**	**-4.9**
ANTB	**Antalya**	**1.09**	**96**	*e*PN	**Pn**	**10 22 45.9**	**-0.6**
BCK	**Bucak**	**1.12**	**67**	*e*PN	**Pn**	**10 22 45.9**	**-1.0**
ARG	**Arkhangelos**	**1.24**	**230**	*e*PN	**Pn**	**10 22 48.6**	**0.0**
ARG				*e*SN	**Sn**	**10 23 06.8**	**+1.3**
MLSB	**Milas**	**1.25**	**283**	*e*PN	**Pn**	**10 22 48.3**	**-0.4**
KHL	**Karahalli**	**1.31**	**8**	*e*PN	**Pn**	**10 22 49.3**	**-0.3**
KHAL	**Karahalli**	**1.35**	**6**	*i* P	**Pn**	**10 22 50.3**	**+0.2**
KHAL				*i* S	**Sb**	**10 23 10.1**	**+2.1**
DAT	**Datca**	**1.41**	**259**	*e*PN	**Pn**	**10 22 50.0**	**-0.9**
BDRM	**Kayabasi**	**1.48**	**272**	*i* P	**Pn**	**10 22 52.2**	**+0.2**
BDRM				*i* S	**Sn**	**10 23 12.8**	**+1.3**
KULA	**Kula-Manisa**	**1.57**	**341**	*e*PN	**Pn**	**10 22 52.4**	**-0.7**
SHUT	**Suhut-Afyon**	**1.82**	**33**	*e*PN	**Pn**	**10 22 56.7**	**+0.1**
ALT	**Altintas**	**2.13**	**17**	*e*PN	**Pn**	**10 23 00.4**	**-0.4**
AKHS	**Akhisar**	**2.19**	**328**	*i* P	**Pn**	**10 23 00.1**	**-1.6**
AKS	**Akhisar**	**2.19**	**328**	*e*PN	**Pn**	**10 23 01.0**	**-0.7**
BLCB	**Balcova**	**2.25**	**308**	*e*PN	**Pn**	**10 23 01.6**	**-0.8**
KARP	**Karpathos**	**2.27**	**230**	*e*PN	**Pn**	**10 23 02.7**	**0.0**
KONT	**Konya--Tatoy**	**2.60**	**68**	*e*PN	**Pn**	**10 23 08.2**	**+0.9**
LADK	**Ladik-KONYA**	**2.70**	**63**	*e*PN	**Pn**	**10 23 09.1**	**+0.4**
KIZT	**Kizilcal**	**2.76**	**47**	*e*PN	**Pn**	**10 23 09.9**	**+0.5**

*CSEM **10** 10:47:46.0, 3970N×3989E, h12km, MD2.6, After ISK*
ISK 10 10:47:46.0, 3970N×3989E, h12km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.07**	**312**	*e*PG	Pg	10 47 54.4	+5.9
EZC				*e*SG	Sg	10 48 01.4	+11
KOPT	**Kop Dagi**	**0.57**	**56**	*i* P	Pg	10 47 58.9	+1.8
GUMT	**Gumushane**	**0.82**	**338**	*e*PG	Pg	10 48 02.4	+0.5
GUMT				*e*SG	Sg	10 48 14.0	+1.4
PTK	**Pertek**	**0.89**	**206**	*e*PG	Pg	10 48 04.0	+0.8
PTK				*e*SG	Sg	10 48 16.1	+1.2
EZM	**Erzurum**	**1.16**	**79**	*e*PN	Pn	10 48 09.3	+1.3
KEMA	**Kemaliye**	**1.16**	**249**	*i* P	Pb	10 48 08.4	+0.4
SVRC	**Sivrice-ELAZID**	**1.40**	**199**	*e*PN	Pn	10 48 11.6	+0.4

*CSEM **10** 11:30:50.2, 2802N×3397E, h10km, ML2.5, After SNSN*
*GII **10** 11:30:50.0±0.6, 2794N×3476E, h0km, ML2.3/2*
*SGS **10** 11:30:50.2, 2802N×3397E, h10km*
ISC 10 11:30:48.1±1.9**, 2797N**±009×**3393E**±009**, h10**km**, n12, σ1s02**/18**, Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSHS		**0.83**	**66**	P	**Pg**	**11 31 04.6**	**+0.5**
RSHS		**0.83**	**66**	P	**Pg**	**11 31 04.6**	**+0.4**
RSHS				S	**Sg**	**11 31 16.7**	**+1.7**
BDAS	**Al Bad'**	**1.13**	**66**	P	**Pb**	**11 31 10.1**	**+0.4**
JLOS		**1.57**	**61**	P	**Pn**	**11 31 15.5**	**-0.6**
JLOS		**1.57**	**61**	P	**Pn**	**11 31 15.5**	**-0.5**
JLOS				S	**Sn**	**11 31 34.6**	**-1.9**
HQLS		**1.66**	**37**	P	**Pn**	**11 31 16.7**	**-0.5**
HQLS		**1.66**	**37**	P	**Pn**	**11 31 16.7**	**-0.5**
HQLS				S	**Sn**	**11 31 36.4**	**-2.2**
EIL	**Elat**	**1.92**	**28**	Pn	**Pn**	**11 31 21.3**	**+0.5**
EIL				Sn	**Sn**	**11 31 44.6**	**-0.4**
AQBJ	**Aqaba**	**2.01**	**29**	Pn	**Pn**	**11 31 21.1**	**-1.0**
MBRI	**Mt Berech**	**2.02**	**25**	Pn	**Pn**	**11 31 22.2**	**+0.1**
MBRI				Sn	**Sn**	**11 31 47.1**	**-0.2**
HRFI	**Mount Harif**	**2.28**	**25**	Sn	**Sn**	**11 31 54.3**	**+0.5**
PRNI	**Paran**	**2.56**	**21**	Pn	**Pn**	**11 31 30.9**	**+1.4**
PRNI				Sn	**Sn**	**11 32 01.9**	**+1.2**

*ISK **10** 11:39:05.9, 4081N×3102E, h5km, ML3.7*
*DDA **10** 11:39:06.2, 4082N×3100E, h7km±5km, Md3.5*
*NEIC **10** 11:39:06.0, 4081N×3103E, h5km, ML3.6(ISK), After ISK.*
*CSEM **10** 11:39:07.4±0.1, 4078N×3105E, h10km, MD3.5, Error ellipse: s-maj=1.8km s-min=1.3km az=23.0*
*ISCJB **10** 11:39:07.6±0.3, 4080N±002×3105E±003, h10km, mb3.4/3, Error ellipse: s-maj=2.9km s-min=2.8km az=15.4*
*IDC **10** 11:39:08.2±1.1, 4081N×3105E, h0km, mb3.4/3, mb1 3.5/7, mb1mx3.4/25, mbtmp3.5/7, ML3.4/4, Error ellipse: s-maj=22.2km s-min=9.8km az=43.0*
ISC 10 11:39:08.5±0.3**, 4078N**±002×**3104E**±003**, h10**km**, n68, σ1s21**/83**, mb3.4**/3**, 9C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDU	**Mudurnu**	**0.34**	**157**	PG	**Pg**	**11 39 14.3**	**-0.9**
MDU				*e*SG	**Sg**	**11 39 19.9**	**+0.2**
GULT	**Gulveren**	**0.53**	**229**	PG	**Pg**	**11 39 17.0**	**-1.7**
GULT				*e*SG	**Sg**	**11 39 25.9**	**+0.3**
KDZE	**Karadeniz Ereo**	**0.62**	**30**	*e*PG	**Pg**	**11 39 19.0**	**-1.4**
KDZE				*e*SG	**Sg**	**11 39 27.1**	**-1.3**
EYL	**Eskiyayla**	**0.70**	**253**	*e*PG	**Pg**	**11 39 20.8**	**-1.2**
GPA	**Golpazari**	**0.74**	**229**	*e*PG	**Pg**	**11 39 21.1**	**-1.6**
BORA	**Eskisehir**	**1.00**	**207**	*i* P	**Pg**	**11 39 26.2**	**-1.5**
BORA				*i* S	**Sg**	**11 39 41.6**	**+0.9**
HRT	**Hereke**	**1.04**	**273**	*e*PG	**Pg**	**11 39 26.1**	**-2.4**
ADVT	**Abdulvahap**	**1.05**	**251**	*e*PG	**Pg**	**11 39 26.6**	**-2.1**
CAVI	**Cavuskoy**	**1.08**	**238**	*e*PN	**Pn**	**11 39 26.9**	**-2.7**
SILT	**Sile**	**1.12**	**290**	*e*PN	**Pn**	**11 39 28.3**	**-1.9**
ESKT	**Eskisehir**	**1.27**	**187**	*i* P	**Pn**	**11 39 31.5**	**-0.6**
ESKT				*i* S	**Sb**	**11 39 48.2**	**-0.5**
ESKT	**Eskisehir**	**1.27**	**187**	*e*Pn	**Pn**	**11 39 32.0**	**-0.2**
SEYT	**Eskypehyr**	**1.27**	**187**	*i* P	**Pn**	**11 39 31.5**	**-0.7**
SEYT				*i* S	**Sb**	**11 39 48.2**	**-0.5**
YLV	**Yalova**	**1.28**	**261**	*e*PN	**Pn**	**11 39 31.3**	**-1.1**
SAFT	**Safranbolu**	**1.33**	**69**	*e*PN	**Pn**	**11 39 31.9**	**-1.1**
GEMT	**Gemlik**	**1.45**	**257**	*e*PN	**Pn**	**11 39 33.3**	**-1.4**
ISK	**Istanbul-Kandi**	**1.53**	**281**	*e*PN	**Pn**	**11 39 34.2**	**-1.6**
KLYT	**Kilyos**	**1.58**	**288**	*e*PN	**Pn**	**11 39 36.1**	**-0.4**
ULDT	**Uludag**	**1.58**	**247**	*i* P	**Pn**	**11 39 35.5**	**-1.0**
ULDT				*i* S	**Sn**	**11 39 58.5**	**+1.4**
LOD	**Lodumlu**	**1.59**	**123**	*e*PN	**Pn**	**11 39 37.2**	**+0.6**
BGKT	**Bogazkoy**	**1.76**	**284**	*e*PN	**Pn**	**11 39 38.6**	**-0.4**
ALT	**Altintas**	**1.86**	**203**	*e*PN	**Pn**	**11 39 40.8**	**+0.4**
BALT	**Daday**	**1.93**	**66**	*i* P	**Pn**	**11 39 42.1**	**+0.8**
CANT	**Cankiri**	**1.97**	**94**	*e*PN	**Pn**	**11 39 42.1**	**+0.3**
CTKS	**Kestanelik-??a**	**1.97**	**284**	*e*PN	**Pn**	**11 39 41.8**	**-0.1**
KIZT	**Kizilcal**	**2.00**	**161**	*e*PN	**Pn**	**11 39 43.4**	**+1.1**
CTT	**Catalca**	**2.01**	**281**	*e*PN	**Pn**	**11 39 42.3**	**-0.1**
BOLV	**Bolvadin**	**2.06**	**182**	*i* P	**Pn**	**11 39 46.9**	**+3.9**
GDZ	**Gediz**	**2.07**	**216**	*i* P	**Pn**	**11 39 43.1**	**-0.1**
GDZ				*i* S	**Sn**	**11 40 11.2**	**+2.1**
DST	**Dursunbey**	**2.19**	**238**	*e*PN	**Pn**	**11 39 45.1**	**+0.3**
SLVT	**Silivri**	**2.19**	**283**	*e*PN	**Pn**	**11 39 44.8**	**0.0**
CTYL	**Yal??k??y-??at**	**2.19**	**289**	*e*PN	**Pn**	**11 39 45.2**	**+0.4**
BR131	**Keskin Array S**	**2.25**	**117**	*e*Pn	**Pn**	**11 39 46.0**	**+0.3**
BR131				*e*Sg	**Sg**	**11 40 20.5**	**-0.2**
BR131	**Keskin Array S**	**2.25**	**117**	*e*Pn	**Pn**	**11 39 46.0**	**+0.3**
BR131				*e*Sg	**Sg**	**11 40 20.5**	**-0.3**
BRTR	**Keskin Array B**	**2.25**	**117**	Pn	**Pn**	**11 39 46.1**	**+0.4**
	2.5nm,0.3s,baz=294,slow=12,SNR=68						
BRTR				Pg	**Pg**	**11 39 50.4**	**-1.2**
	12nm,0.3s,baz=298,slow=15,SNR=90						
BRTR				Lg		11 40 22.1	
	21nm,0.3s,baz=303,slow=23,SNR=9.2						
BRTR	**Keskin Array B**	**2.25**	**117**	Pg	**Pg**	**11 39 50.3**	**-1.3**
SHUT	**Suhut-Afyon**	**2.25**	**190**	*e*PN	**Pn**	**11 39 46.5**	**+0.8**
TOS	**Tosya**	**2.28**	**83**	*e*PN	**Pn**	**11 39 45.1**	**-0.9**
KDHN	**Kadinhani**	**2.40**	**159**	*i* P	**Pn**	**11 39 47.5**	**-0.3**
BNT	**Bandirma**	**2.41**	**261**	*e*PN	**Pn**	**11 39 48.8**	**+0.9**
KAMT	**Kaman**	**2.49**	**124**	*e*PN	**Pn**	**11 39 49.5**	**+0.5**
BZK	**Bozkurt**	**2.52**	**61**	*e*PN	**Pn**	**11 39 49.4**	**0.0**
BALB	**Balikesir**	**2.67**	**246**	*e*PN	**Pn**	**11 39 51.9**	**+0.4**
KHAL	**Karahalli**	**2.69**	**207**	*i* P	**Pn**	**11 39 54.5**	**+2.8**
LADK	**Ladik-KONYA**	**2.77**	**158**	*e*PN	**Pn**	**11 39 52.8**	**0.0**
BYBT	**Boyabat**	**2.90**	**75**	*e*PN	**Pn**	**11 39 55.7**	**+1.0**
KULA	**Kula-Manisa**	**2.91**	**220**	*e*PN	**Pn**	**11 39 56.1**	**+1.3**
MANT	**Manisa**	**2.98**	**221**	*i* P	**Pn**	**11 40 01.7**	**+6.0**
AKS	**Akhisar**	**3.12**	**234**	*e*PN	**Pn**	**11 39 59.0**	**+1.3**
TIRR	**Tirgusor**	**4.16**	**333**	⇓P	**Pn**	**11 40 12.2**	**+0.3**
TIRR				S	**Sn**	**11 40 59.5**	**-1.0**
TIRR	**Tirgusor**	**4.16**	**333**	⇓*i*P	**Pn**	**11 40 12.2**	**+0.3**
VRI	**Vrincioaia**	**5.98**	**330**	⇑*i*P	**Pn**	**11 40 38.2**	**+1.3**
VRI	**Vrincioaia**	**5.98**	**330**	⇑P	**Pn**	**11 40 38.1**	**+1.2**
PLOR	**Plostina**	**6.00**	**329**	⇑*i*P	**Pn**	**11 40 39.4**	**+2.2**
MLR	**Muntele Rosu**	**6.00**	**323**	Pn	**Pn**	**11 40 39.7**	**+2.4**
	0.5nm,0.3s,baz=170,slow=11,SNR=3.3						
MLR				Pg	**Pb**	**11 40 48.4**	**-4.7**
	0.8nm,0.3s,baz=38,slow=12,SNR=5.6						
MLR				Sn	**Sn**	**11 41 48.0**	**+1.9**
	0.4nm,0.3s,baz=233,slow=23,SNR=2.7						
MLR	**Muntele Rosu**	**6.00**	**323**	Pg	**Pb**	**11 40 48.4**	**-4.7**
VOIR		**6.39**	**319**	⇑*i*P	**Pn**	**11 40 44.6**	**+2.0**
VOIR		**6.39**	**319**	⇑P	**Pn**	**11 40 44.6**	**+2.0**
GZR	**Gura Zlata**	**7.60**	**310**	⇑*i*P	**Pn**	**11 41 03.0**	**+3.8**
GZR	**Gura Zlata**	**7.60**	**310**	⇑P	**Pn**	**11 41 03.0**	**+3.7**
BURAR	**Bucovina Array**	**8.01**	**330**	⇑*i*P	**Pn**	**11 41 07.5**	**+2.7**
BURAR	**Bucovina Array**	**8.01**	**330**	⇑P	**Pn**	**11 41 07.5**	**+2.7**
ASF	**Jabal al Asfar**	**9.79**	**149**	Pn	**Pn**	**11 41 28.9**	**-0.4**
	0.6nm,0.3s,baz=62,slow=2.8,SNR=2.8						
AKASG	**Malin Array Be**	**10.01**	**353**	Pn	**Pn**	**11 41 30.5**	**-1.6**
	1.4nm,0.3s,baz=165,slow=15,SNR=4.4						
AKASG				Sn	**Sn**	**11 43 30.4**	**+6.1**
	1.1nm,0.3s,baz=184,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**36.94**	**63**	P	**P**	**11 46 18.2**	**+0.8**
	0.5nm,0.6s,mb3.5,baz=269,slow=8.2,SNR=6.7						
TORD	**Torodi Ar. Bea**	**37.64**	**231**	P	**P**	**11 46 24.8**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=40,slow=8.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**37.64**	**231**	P	**P**	**11 46 24.8**	**+1.1**
SONM	**Songino Array**	**52.40**	**55**	P	**P**	**11 48 21.3**	**+0.6**
	0.2nm,0.3s,mb3.5,baz=289,slow=4.4,SNR=2.4						

*GRAL **10** 11:53:54.9±0.3, 3357N×3696E, h26km±8km, MD3.3*
*GII **10** 11:53:55.0±1.5, 3379N×3675E, h0km, ML2.9/6, EXPLOSION*
ISC 10 11:53:54.6±1.5**, 3372N**±005×**3691E**±009**, h0**km**, n11, σ0s92**/20**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.94**	**256**	*e*P	**Pg**	**11 54 11.5**	**-1.1**
RCY				*e*S	**Sg**	**11 54 23.8**	**-1.1**
HWQ	**Hawqa**	**0.97**	**305**	*e*P	**Pg**	**11 54 13.8**	**+0.5**
HWQ				*e*S	**Sg**	**11 54 27.9**	**+1.9**
BHL	**Bhannes**	**1.06**	**280**	*e*P	**Pg**	**11 54 14.4**	**-0.6**
KSHT	**Keshet**	**1.18**	**232**	Pg	**Pg**	**11 54 16.1**	**-1.1**
MMA0B	**Mount Meron ar**	**1.44**	**241**	Pn	**Pn**	**11 54 20.4**	**-1.5**
MMA0B				Sn	**Sn**	**11 54 40.9**	**-0.7**
HNTI	**Hanita**	**1.58**	**247**	Pn	**Pn**	**11 54 23.2**	**-0.8**
HNTI				Sn	**Sn**	**11 54 45.0**	**-0.2**
MMLI	**Mount Malkishu**	**1.79**	**225**	Pn	**Pn**	**11 54 27.0**	**+0.3**
MMLI				Sn	**Sn**	**11 54 51.1**	**+1.0**
HMDT	**Nahal Hemdat**	**1.87**	**219**	Pn	**Pn**	**11 54 27.5**	**-0.4**
HMDT				Sn	**Sn**	**11 54 52.6**	**+0.5**
OFRI	**'Ofer**	**1.95**	**236**	Pn	**Pn**	**11 54 29.1**	**+0.1**
OFRI				Sn	**Sn**	**11 54 54.5**	**+0.3**
SLTI	**Sal'it**	**2.15**	**227**	Pn	**Pn**	**11 54 32.2**	**+0.4**
SLTI				Sn	**Sn**	**11 55 00.8**	**+1.6**
DSI	**Dead Sea**	**2.50**	**211**	Pn	**Pn**	**11 54 36.5**	**0.0**
DSI				Sn	**Sn**	**11 55 09.0**	**+1.2**

*ISCJB **10** 11:54:44.8±0.5, 5981N±004×15339W±009, h137km±5km, mb3.7/7, Error ellipse: s-maj=7.1km s-min=6.5km az=6.3*
*IDC **10** 11:54:46.0±5.0, 5971N×15341W, h134km±82km, mb3.5/7, mb1 3.5/8, mb1mx3.3/24, mbtmp3.4/8, Error ellipse: s-maj=87.9km s-min=24.0km az=157.0*
*NEIC **10** 11:54:47.3, 5980N×15335W, h131km, MG3.5(AEIC), After AEIC.*
ISC 10 11:54:46.0±0.5**, 5981N**±004×**15338W**±009**, h129**km±5km**, n46, σ0s80**/51**, mb3.7**/7**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.43**	**184**	P	**Pn**	**11 55 05.6**	**+1.1**
SVW2	**Sparrevohn**	**1.69**	**321**	*e*P	**Pn**	**11 55 16.1**	**-0.1**
SLKM	**Skilak Lake**	**1.73**	**65**	P	**Pn**	**11 55 17.1**	**+0.6**
SEW	**Seward**	**2.00**	**80**	P	**Pn**	**11 55 20.4**	**+0.6**
SEW				S	**Sn**	**11 55 45.3**	**-0.4**
KDAK	**Kodiak Island**	**2.07**	**168**	P	**Pn**	**11 55 20.5**	**-0.3**
	8.9nm,0.3s,baz=32,slow=6.5,SNR=110						
KDAK				S	**Sn**	**11 55 46.1**	**-1.2**
	94nm,0.3s,baz=246,slow=20,SNR=44						
KDAK	**Kodiak Island**	**2.07**	**168**	P	**Pn**	**11 55 20.4**	**-0.4**
KDAK				S	**Sn**	**11 55 46.9**	**-0.5**
FIB	**Fire Island**	**2.09**	**48**	P	**Pn**	**11 55 22.4**	**+1.5**
RC01	**Rabbit Creek A**	**2.22**	**53**	P	**Pn**	**11 55 22.8**	**+0.3**
RC01				S	**Sn**	**11 55 50.0**	**-0.6**
SKT	**Skwentna**	**2.36**	**22**	P	**Pn**	**11 55 24.8**	**+0.4**
OHAK	**Old Harbor**	**2.59**	**179**	*e*P	**Pn**	**11 55 26.3**	**-1.0**
PMR	**Palmer**	**2.75**	**48**	*e*P	**Pn**	**11 55 28.5**	**-0.8**
PPLA	**Purkeypile**	**3.15**	**10**	P	**Pn**	**11 55 35.4**	**+0.9**
SML	**Sawmill**	**3.18**	**49**	P	**Pn**	**11 55 33.1**	**-1.8**
TT01	**Tatalina**	**3.36**	**339**	P	**Pn**	**11 55 36.7**	**-0.5**
MID	**Middleton Isla**	**3.59**	**93**	*e*P	**Pn**	**11 55 41.4**	**+1.1**
EYAK	**Cordova Ski Ar**	**3.88**	**76**	P	**Pn**	**11 55 44.4**	**+0.3**
KTH	**Kantishna Hill**	**3.94**	**16**	P	**Pn**	**11 55 44.7**	**-0.1**
TRF	**Thorofare Moun**	**3.94**	**21**	P	**Pn**	**11 55 44.8**	**-0.1**
CHUM	**Lake Minchumin**	**4.12**	**7**	*e*Pn	**Pn**	**11 55 47.5**	**+0.3**
RAGM	**Ragged Mountai**	**4.39**	**79**	P	**Pn**	**11 55 51.6**	**+0.7**
BPAW	**Bear Paw Mtn.**	**4.46**	**14**	P	**Pn**	**11 55 51.4**	**-0.3**
MCK	**McKinley**	**4.47**	**26**	P	**Pn**	**11 55 51.9**	**0.0**
PAX	**Paxson**	**4.95**	**47**	P	**Pn**	**11 55 58.3**	**0.0**
MENT	**Mentasta**	**5.60**	**52**	*e*P	**Pn**	**11 56 08.1**	**+1.1**
COLA	**College**	**5.70**	**24**	P	**Pn**	**11 56 07.6**	**-0.7**
IL1	**Eielson Array**	**5.83**	**28**	P	**Pn**	**11 56 09.3**	**-0.7**
DOT	**Dot Lake**	**5.87**	**45**	P	**Pn**	**11 56 11.7**	**+1.1**
IM3	**Indian Mountai**	**6.20**	**359**	P	**Pn**	**11 56 15.3**	**+0.3**
BCA3	**Beaver Creek A**	**6.45**	**55**	P	**Pn**	**11 56 18.5**	**+0.1**
PNL	**Peninsula**	**7.07**	**85**	P	**Pn**	**11 56 27.6**	**+0.9**
EGAK	**Eagle**	**7.56**	**44**	*e*Pn	**Pn**	**11 56 32.4**	**-1.0**
COLD	**Coldfoot**	**7.58**	**9**	P	**Pn**	**11 56 33.4**	**-0.3**
DAWY	**Dawson**	**7.85**	**51**	P	**Pn**	**11 56 36.9**	**-0.4**
BM3	**Burnt Mountain**	**8.57**	**23**	P	**Pn**	**11 56 45.7**	**-1.2**
SKAG	**Skagway**	**9.15**	**84**	P	**Pn**	**11 56 53.1**	**-1.6**
SIT	**Sitka**	**9.85**	**98**	*e*P	**Pn**	**11 57 05.9**	**+1.7**
	45nm,1.0s						
DLBC	**Dease Lake**	**12.06**	**86**	P	**Pn**	**11 57 37.3**	**+3.9**
	0.6nm,0.3s,baz=223,slow=12,SNR=36						
DLBC				S	**Sn**	**11 59 44.6**	**-1.4**
	0.2nm,0.3s,baz=282,slow=23,SNR=4.0						
YKA	**Yellowknife Ar**	**18.70**	**65**	P	**P**	**11 58 55.1**	**+1.1**
	0.2nm,0.3s,baz=278,slow=9.8,SNR=20						
KSRS	**Korea Array**	**53.04**	**282**	P	**P**	**12 03 49.4**	**+0.1**
	1.2nm,0.7s,mb3.7,baz=18,slow=9.2,SNR=4.0						
SONM	**Songino Array**	**54.75**	**306**	P	**P**	**12 04 01.9**	**+0.3**
	0.6nm,0.6s,mb3.5,baz=47,slow=8.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**57.42**	**323**	P	**P**	**12 04 20.5**	**0.0**
	2.1nm,0.4s,mb4.3,baz=32,slow=6.7,SNR=12						
ZALV	**Zalesovo Beam**	**57.42**	**323**	P	**P**	**12 04 20.5**	**0.0**
NOA	**NORSAR Array B**	**58.90**	**9**	P	**P**	**12 04 30.5**	**-0.1**
	0.4nm,0.6s,mb3.4,baz=83,slow=7.2,SNR=2.9						
KURK	**Kurchatov**	**62.08**	**325**	P	**P**	**12 04 52.7**	**+0.3**
	0.9nm,0.6s,mb3.8,baz=27,slow=6.7,SNR=4.1						
BVAR	**Borovoye Array**	**62.15**	**332**	P	**P**	**12 04 52.7**	**-0.1**
	1.2nm,0.5s,mb4.0,baz=21,slow=5.9,SNR=7.5						
MKAR	**Makanchi Array**	**64.47**	**321**	P	**P**	**12 05 07.7**	**-0.5**
	0.5nm,0.7s,mb3.5,baz=48,slow=5.7,SNR=4.2						

*ISCJB **10** 12:00:15.2±0.8, 789S±005×7879W±008, h94km±6km, mb4.6/45, Error ellipse: s-maj=13.8km s-min=5.7km az=156.4*
*IDC **10** 12:00:15.4±0.7, 797S×7892W, h84km±5km, mb4.1/13, mb1 4.3/18, mb1mx4.1/27, mbtmp4.1/18, Error ellipse: s-maj=11.3km s-min=7.5km az=69.0*
*NEIC **10** 12:00:18.7±0.9, 789S×7870W, h112km±9km, mb4.7/33, Error ellipse: s-maj=11.3km s-min=5.4km az=66.0*
NEIC Felt [III] at Trujillo.
ISC 10 12:00:16.8±0.7**, 787S**±005×**7870W**±008**, h90**km±6km**, h83**km±.9km**:pP-P, n84, σ0s80**/85**, mb4.6**/45**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**0.91**	**19**	P	**Pn**	**12 00 35.4**	**-0.1**
	685nm,0.3s,baz=208,slow=3.8,SNR=4874						
ATAH				S	**Sn**	**12 00 49.8**	**+0.3**
NNA	**Nana**	**4.48**	**156**	P	**Pn**	**12 01 22.3**	**-0.2**
	34nm,0.3s,baz=314,slow=11,SNR=50						
NNA				S	**Sn**	**12 02 12.7**	**-0.8**
	113nm,0.3s,baz=253,slow=19,SNR=6.9						
OTAV	**Otavalo**	**8.05**	**2**	*e*Pn	**Pn**	**12 02 15.2**	**+4.0**
	25nm,0.6s						
ROSC	**El Rosal**	**13.37**	**19**	P	**Pn**	**12 03 26.0**	**+3.0**
	1.3nm,0.3s,baz=261,slow=23,SNR=3.2						
ROSC				S	**Sn**	**12 05 59.8**	**+10**
	0.5nm,0.3s,baz=93,slow=20,SNR=1.8						
LVC	**Limon Verde**	**17.42**	**148**	P	**Pn**	**12 04 15.5**	**+1.3**
	0.7nm,0.3s,baz=309,slow=11,SNR=5.6						
LVC	**Limon Verde**	**17.42**	**148**	P	**Pn**	**12 04 15.5**	**+1.3**
SDV	**Santo Domingo**	**18.48**	**26**	P	**Pn**	**12 04 26.5**	**-0.5**
	0.9nm,0.3s,baz=249,slow=12,SNR=9.4						
SDV				S	**S**	**12 07 59.5**	**+7.4**
	0.4nm,0.3s,baz=349,slow=15,SNR=2.2						
SIV	**San Ignacio**	**19.03**	**117**	P	**Pn**	**12 04 32.3**	**-1.2**
	0.3nm,0.3s,baz=298,slow=12,SNR=10						
SIV				S	**S**	**12 08 08.2**	**+5.1**
	0.5nm,0.3s,baz=54,slow=22,SNR=3.4						
PCRV	**Puerto La Cruz**	**22.74**	**38**	P	**P**	**12 05 12.7**	**+1.1**
	12nm,0.6s,mb4.4,baz=200,slow=5.9,SNR=8.9						
CFAA	**Coronel Fontan**	**25.55**	**159**	P	**P**	**12 05 38.0**	**+0.8**
	0.3nm,0.5s,baz=345,slow=9.0,SNR=5.5						
BDFB	**Brasilia**	**30.98**	**107**	P	**P**	**12 06 25.8**	**0.0**
	1.0nm,0.8s,mb3.6,baz=270,slow=20,SNR=3.8						
BDFB				S	**S**	**12 11 26.7**	**+2.4**
	1.5nm,0.5s,baz=312,slow=26,SNR=3.6						
PLCA	**Paso Flores**	**33.52**	**169**	P	**P**	**12 06 47.4**	**-0.4**
	7.2nm,1.0s,mb4.5,baz=338,slow=8.8,SNR=6.0						
PLCA	**Paso Flores**	**33.52**	**169**	P	**P**	**12 06 47.4**	**-0.4**
BRAL	**Brewton**	**39.48**	**349**	*e*P	**P**	**12 07 40.4**	**+1.9**
	61nm,0.6s,mb5.6						
GOGA	**Godfrey**	**41.30**	**354**	*e*P	**P**	**12 07 51.4**	**-2.1**
	11nm,1.3s,mb4.5						
LRAL	**Lakeview Retre**	**41.43**	**349**	*e*P	**P**	**12 07 53.6**	**-1.0**
	17nm,1.2s,mb4.8						
JCT	**Junction City**	**43.17**	**333**	*e*P	**P**	**12 08 09.2**	**+0.5**
	7.8nm,1.1s,mb4.3						
SWET	**Sewanee**	**43.39**	**351**	*e*P	**P**	**12 08 09.4**	**-1.0**
TKL	**Tuckaleechee C**	**43.55**	**354**	*e*P	**P**	**12 08 10.4**	**-1.3**
TXAR	**Lajitas Array**	**44.11**	**328**	P	**P**	**12 08 16.2**	**-0.2**
	1.7nm,0.7s,mb3.9,baz=146,slow=9.3,SNR=20						
TXAR				PcP	PcP	12 09 59.9	-0.1
	0.7nm,0.8s,baz=161,slow=8.9,SNR=3.6						
TXAR	**Lajitas Array**	**44.11**	**328**	P	**P**	**12 08 16.2**	**-0.2**
TXAR				PcP	PcP	12 09 59.9	-0.2
MIAR	**Mount Ida**	**44.47**	**342**	*e*P	**P**	**12 08 19.3**	**+0.2**
	11nm,1.0s,mb4.6						
WVT	**Waverly**	**44.59**	**349**	*e*P	**P**	**12 08 18.1**	**-2.0**
	4.9nm,0.8s,mb4.3						
GDL2	**Guadalupe Moun**	**46.77**	**330**	*e*P	**P**	**12 08 38.1**	**+0.9**
CCM	**Cathedral Cave**	**47.16**	**346**	*e*P	**P**	**12 08 39.1**	**-1.1**
	5.6nm,0.7s,mb4.4						
ANMO	**Albuquerque**	**50.01**	**330**	*e*P	**P**	**12 09 02.5**	**+0.4**
	7.2nm,0.9s,mb4.6						
TUC	**Tucson**	**50.32**	**324**	*e*P	**P**	**12 09 04.9**	**+0.3**
	5.7nm,1.0s,mb4.5						
SCIA	**State Center**	**51.28**	**346**	*e*P	**P**	**12 09 10.8**	**-0.8**
	22nm,0.9s,mb5.2						
SDCO	**Great Sand Dun**	**51.82**	**333**	*e*P	**P**	**12 09 15.9**	**+0.2**
	13nm,1.3s,mb4.8						
WUAZ	**Wupatki**	**53.01**	**327**	*e*P	**P**	**12 09 25.3**	**+0.8**
	13nm,0.9s,mb5.0						
ISCO	**Idaho Springs**	**53.57**	**334**	*e*P	**P**	**12 09 28.9**	**+0.4**
	58nm,3.0s						
ECSD	**EROS,Sioux Fal**	**53.87**	**344**	*e*P	**P**	**12 09 28.9**	**-1.7**
	14nm,1.1s,mb4.9						
SRU	**San Rafael**	**55.29**	**330**	*e*P	**P**	**12 09 41.3**	**+0.4**
	9.2nm,1.4s,mb4.6						
MSU	**Marysvale**	**55.67**	**328**	*e*P	**P**	**12 09 44.6**	**+0.9**
SHPR	**Sheep Range**	**55.84**	**325**	*e*P	**P**	**12 09 45.7**	**+0.6**
RSSD	**Black Hills**	**56.59**	**338**	*e*P	**P**	**12 09 50.0**	**-0.2**
	6.2nm,0.8s,mb4.7						
DAU	**Daniels Canyon**	**56.65**	**331**	*e*P	**P**	**12 09 51.2**	**+0.5**
TPNV	**Topopah Spring**	**56.78**	**324**	*e*P	**P**	**12 09 52.5**	**+0.8**
	6.2nm,1.0s,mb4.6						
JLU	**Jordanelle**	**56.89**	**331**	*e*P	**P**	**12 09 53.0**	**+0.6**
ISA	**Isabella**	**57.24**	**322**	*e*P	**P**	**12 09 55.7**	**+0.7**
	3.8nm,0.8s,mb4.5						
BW06	**Boulder Array**	**57.70**	**333**	*e*P	**P**	**12 09 57.6**	**-0.5**
	45nm,2.8s,mb5.0						
PDAR	**Pinedale Array**	**57.70**	**333**	P	**P**	**12 09 57.5**	**-0.6**
	1.5nm,0.6s,mb4.2,baz=130,slow=8.5,SNR=18						
PDAR				PcP	PcP	12 10 48.8	-1.3
	0.9nm,0.5s,baz=125,slow=6.9,SNR=8.1						
REDW	**Red Top Meadow**	**58.75**	**333**	*e*P	**P**	**12 10 05.3**	**0.0**
	4.4nm,1.0s,mb4.4						
LOHW	**Long Hollow**	**58.84**	**333**	*e*P	**P**	**12 10 05.8**	**-0.1**
	26nm,2.2s,mb4.9						
ELK	**Elko**	**58.91**	**328**	P	**P**	**12 10 06.8**	**+0.3**
	6.9nm,0.9s,mb4.7,baz=138,slow=5.9,SNR=25						
ELK	**Elko**	**58.91**	**328**	*e*P	**P**	**12 10 07.0**	**+0.5**
	9.8nm,1.0s,mb4.8						
RRI2	**Red Ridge**	**58.95**	**333**	*e*P	**P**	**12 10 06.6**	**-0.2**
	8.3nm,0.8s,mb4.8						
NVAR	**Mina Array Bea**	**58.98**	**324**	P	**P**	**12 10 07.5**	**+0.4**
	5.8nm,0.7s,mb4.7,baz=134,slow=7.3,SNR=52						
NVAR	**Mina Array Bea**	**58.98**	**324**	P	**P**	**12 10 07.5**	**+0.4**
IMW	**Indian Meadow**	**59.21**	**333**	*e*P	**P**	**12 10 08.7**	**+0.1**
	5.2nm,1.2s,mb4.4						
WAKR	**Walker**	**59.69**	**324**	*e*P	**P**	**12 10 12.9**	**+1.0**
ULM	**Lac du Bonnet**	**59.77**	**347**	P	**P**	**12 10 10.9**	**-1.3**
	8.3nm,0.6s,mb4.9,baz=165,slow=6.7,SNR=7.8						
ULM				PcP	PcP	12 10 57.3	-0.7
	1.7nm,0.7s,baz=220,slow=2.9,SNR=3.1						
ULM	**Lac du Bonnet**	**59.77**	**347**	*e*P	**P**	**12 10 10.5**	**-1.8**
	13nm,1.1s,mb4.9						
CMB	**Columbia Colle**	**59.95**	**323**	*e*P	**P**	**12 10 13.8**	**+0.1**
	59nm,2.9s,mb5.1						
HLID	**Hailey**	**60.57**	**331**	*e*P	**P**	**12 10 18.0**	**+0.2**
	4.3nm,0.9s,mb4.5						
BOZ	**Bozeman (W)**	**60.90**	**334**	*e*P	**P**	**12 10 19.9**	**-0.1**
	5.2nm,0.8s,mb4.6						
EGMT	**Eagleton**	**62.03**	**337**	*e*P	**P**	**12 10 27.4**	**-0.2**
	14nm,1.3s,mb4.8						
MOD	**Modoc**	**62.45**	**326**	*e*P	**P**	**12 10 30.7**	**+0.2**
	20nm,1.3s,mb5.0						
MSO	**Missoula**	**62.82**	**334**	*e*P	**P**	**12 10 33.0**	**+0.1**
	7.2nm,1.0s,mb4.6						
YBH	**Yreka Blue Hor**	**63.70**	**325**	P	**P**	**12 10 37.3**	**-1.4**
	3.8nm,0.6s,mb4.4,baz=108,slow=6.4,SNR=7.5						
BSMT	**Bassoo Peak**	**63.98**	**334**	*e*P	**P**	**12 10 40.9**	**+0.4**
NEW	**Newport**	**65.33**	**333**	*e*P	**P**	**12 10 48.9**	**-0.3**
	5.9nm,0.9s,mb4.4						
OD2	**Odessa Site #2**	**65.43**	**331**	*e*P	**P**	**12 10 50.3**	**+0.4**
ETW	**Entiat**	**66.36**	**331**	*e*P	**P**	**12 10 56.6**	**+0.7**
LIC	**Lamto**	**74.79**	**81**	*e*P	**P**	**12 11 47.9**	**0.0**
	17nm,0.9s,mb4.8						
TIC	**Toumodi**	**74.87**	**81**	*e*P	**P**	**12 11 48.4**	**0.0**
	55nm,1.0s,mb5.2						
DBIC	**Dimbokro**	**75.03**	**81**	P	**P**	**12 11 49.6**	**+0.3**
	3.8nm,0.6s,mb4.3,baz=199,slow=5.3,SNR=9.9						
KIC	**Kosan Boka**	**75.09**	**81**	*e*P	**P**	**12 11 49.9**	**+0.2**
	57nm,1.0s,mb5.3						
YKA	**Yellowknife Ar**	**75.39**	**344**	P	**P**	**12 11 49.2**	**-1.1**

	2.7nm,0.5s,mb4.2,baz=141,slow=6.0,SNR=111						
YKA	**Yellowknife Ar**	**75.39**	**344**	P	**P**	**12 11 49.2**	**-1.1**
VNA3	**Neumayer Olymp**	**75.92**	**162**	*e*	**P**	**12 11 53.5**	**+0.3**
VNA3				*e*	pP	12 12 14.9	-1.8
VNA3				*e*		12 12 24.2	
VNA1	**Neumayer--Stat**	**76.19**	**161**	*e*	**P**	**12 11 55.1**	**+0.3**
VNA1				*e*	pP	12 12 16.4	-1.9
VNA2	**Neumayer--Watz**	**76.54**	**161**	*e*	**P**	**12 11 57.2**	**+0.4**
	baz=285,slow=4.8						
VNA2				*e*	pP	12 12 18.4	-1.9
VNA2				*e*		12 12 27.5	
SNAA	**Sanae**	**78.14**	**162**	*e*	**P**	**12 12 05.3**	**-0.4**
SNAA				*e*	pP	12 12 26.7	-2.6
SNAA				*e*		12 12 36.5	
TORD	**Torodi Ar. Bea**	**82.51**	**76**	P	**P**	**12 12 29.7**	**-0.5**
	4.9nm,0.8s,mb4.4,baz=282,slow=4.0,SNR=23						
TORD				pP	pP	12 12 52.4	-1.7
	2.4nm,0.9s,baz=281,slow=5.3,SNR=3.3						
DAWY	**Dawson**	**84.77**	**337**	*e*P	**P**	**12 12 40.4**	**-0.3**
INK	**Inuvik**	**85.07**	**342**	*e*P	**P**	**12 12 41.9**	**-0.3**
EGAK	**Eagle**	**85.79**	**338**	*e*P	**P**	**12 12 45.6**	**-0.2**
VNDA	**Vanda**	**88.47**	**191**	P	**P**	**12 12 58.3**	**-0.3**
	1.5nm,0.9s,mb4.0,baz=102,slow=6.3,SNR=4.7						
BVAR	**Borovoye Array**	**128.44**	**23**	PKP	PKPdf	12 19 11.6	-1.4
	1.6nm,0.6s,baz=204,slow=3.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**132.16**	**13**	PKP	PKPdf	12 19 18.4	-1.6
	3.3nm,0.4s,baz=349,slow=2.9,SNR=22						
ZALV				pPKP	pPKPdf	12 19 42.3	-2.9
	1.4nm,0.5s,baz=318,slow=2.0,SNR=3.4						
KURK	**Kurchatov**	**133.32**	**20**	PKP	PKPdf	12 19 21.9	-0.4
	2.2nm,0.6s,baz=321,slow=2.2,SNR=8.7						
KURK				pPKP	pPKPdf	12 19 44.9	-2.6
	1.1nm,0.7s,baz=319,slow=2.8,SNR=3.8						
MKAR	**Makanchi Array**	**137.93**	**20**	PKP	PKPdf	12 19 30.4	-0.7
	2.9nm,0.8s,baz=321,slow=1.7,SNR=8.9						
SONM	**Songino Array**	**139.94**	**355**	PKP	PKPdf	12 19 32.3	-2.4
	2.3nm,0.9s,baz=339,slow=0.7,SNR=9.8						
SONM				pPKP	pPKPdf	12 19 57.4	-2.4
	1.4nm,0.8s,baz=340,slow=2.2,SNR=4.9						

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*BJI **10** 12:10:05.9, 3.59S×144.96E, h28km, mB5.9, mb5.2, Ms5.5, Msz5.3*

*IDC **10** 12:10:05.5±0.5, 3.55S×144.43E, h0km, mb5.0/25, mb1 4.9/27, mb1mx4.9/28, mbtmp5.0/27, ML4.4/2, MS5.3/18, Ms1 5.3/18, ms1mx5.1/30, Error ellipse: s-maj=18.2km s-min=11.6km az=81.0*

*ISCJB **10** 12:10:06.7±1.5, 3.57S±0.03×144.48E±0.04, h15km±9km, mb5.4/115, MS5.3/46, Error ellipse: s-maj=6.7km s-min=4.6km az=161.2*

*GCMT **10** 12:10:07.2±0.1, 3.42S×144.46E, h12km, MW5.7/109, Moment Tensor Solution. s80,c144; s109,c248; Duration: 1.7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25±.04; $M_{\theta\theta}$-3.07±.04; $M_{\phi\phi}$3.32±.05; $M_{r\theta}$-1.07±.12; $M_{\theta\phi}$2.14±.04; $M_{\phi r}$0.37±.12; Best double couple: $M_0$4.01400×10^{17} NP1:ϕ_s61.00000°,δ78.00000°, λ-11.00000°. NP2:ϕ_s153.00000°,δ79.00000°, λ-168.00000°. Principal axes: T 3.9710, Plg1.0000°, Azm287.0000°; N 0.0830, Plg73.0000°, Azm195.0000°; P -4.0580, Plg17.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **10** 12:10:07.2±0.2, 3.57S×144.44E, h10km, mb5.7/57, MS5.7/2, MW5.5 Error ellipse: s-maj=5.9km s-min=3.8km az=78.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}0.62; $M_{\theta\theta}$-2.03; $M_{\phi\phi}$1.41; $M_{r\theta}$-0.45; $M_{\theta\phi}$0.91; $M_{\phi r}$1.07; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s62.00000°,δ57.00000°,λ14.00000°. NP2: ϕ_s324.00000°,δ78.00000°,λ146.00000°. Principal axes: T 2.2200, Plg31.0000°, Azm278.0000°; N 0.2100, Plg54.0000°, Azm127.0000°; P -2.4200, Plg13.0000°, Azm17.0000°;*

*MOS **10** 12:10:10.7±1.0, 3.16S×144.46E, h33km, mb5.6/28, MS5.4/9 Error ellipse: s-maj=16.4km s-min=7.4km az=113.8*

*DJA **10** 12:10:10, 3.57S×144.41E, h10km, Mw5.6/16*

ISC 10 12:10:09.7±1.6**, 3.56S**±0.03×**144.48E**±0.04**, h26**km±11km**, h35**km±.7km**:pP-P, n325, σ1.14**/274**, mb5.4**/115**, MS5.3**/46**, 23C-14D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.39**	**155**	*e*Pn	**Pn**	**12 11 42.3**	**+0.1**
PMG				*e*Sn	**Sn**	**12 12 55.0**	**+0.7**
COEN	**Coen**	**10.41**	**187**	*e*Pn	**Pn**	**12 12 38.3**	**+0.9**
	535nm,1.4s						
KAKA	**Kakadu**	**14.98**	**232**	*e*P	x	12 13 17.4	
	76nm,0.6s						
KAKA				*e*S	x	12 16 00.4	
HNR	**Honiara**	**16.43**	**112**	Pn	**Pn**	**12 13 57.2**	**-1.6**
	5.2nm,0.3s,baz=173,slow=8.4,SNR=7.6						
HNR	**Honiara**	**16.43**	**112**	*e*P	**Pn**	**12 13 58.8**	**0.0**
HNR				pmax	pmax		
	comp=Z,792nm,1.1s						
HNR	**Honiara**	**16.43**	**112**	*e*Pn	**Pn**	**12 13 58.8**	**+0.1**
	comp=Z,792nm,1.1s						
CTA	**Charters Tower**	**16.52**	**174**	*e*P	**Pn**	**12 14 03.4**	**+3.7**
	comp=Z,62nm,2.0s						
CTA				*e*pP	pP	12 14 12.7	+3.6
CTA				*e*		12 14 21.8	
CTA	**Charters Tower**	**16.52**	**174**	Pn	**Pn**	**12 13 59.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=335,slow=12,SNR=5.5						
CTA	**Charters Tower**	**16.52**	**174**	Pn	**Pn**	**12 13 59.8**	**+0.1**
CTA				*e*pP	pP	12 14 12.7	+3.6
CTA				*e*		12 14 21.8	
CTAO	**Charters Tower**	**16.52**	**174**	*e*P	**Pn**	**12 13 59.3**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,90nm,1.1s						
CTAO	**Charters Tower**	**16.52**	**174**	*e*Pn	**Pn**	**12 13 59.3**	**-0.4**
	comp=Z,90nm,1.1s						
GUMO	**Guam**	**17.05**	**1**	LR	LR	12 20 28.2	
	comp=Z,9μm,18.3s,baz=185,slow=37						
WRAB	**Tennant Creek**	**19.03**	**210**	*e*P	**Pn**	**12 14 28.4**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,342nm,1.5s						
WRAB	**Tennant Creek**	**19.03**	**210**	*e*P	**Pn**	**12 14 28.4**	**-2.4**
	comp=Z,342nm,1.5s						
WB2	**Warramunga Arr**	**19.04**	**210**	*e*P	**Pn**	**12 14 28.6**	**-2.3**
BIPH	**Bislig**	**21.51**	**303**	⇑*e*P	**P**	**12 14 54.1**	**-2.8**
DAV	**Davao City (W)**	**21.62**	**299**	P	**P**	**12 15 00.4**	**+2.3**
	SNR=9.5						
DAV	**Davao City (W)**	**21.62**	**299**	P	**P**	**12 14 58.1**	**0.0**
	comp=Z,193nm,0.4s,mb5.9,baz=272,slow=9.9,SNR=4.3						
DAV				LR	LR	12 23 05.5	
	comp=Z,7μm,19.9s,MS5.1,baz=249,slow=36						
DAV	**Davao City (W)**	**21.62**	**299**	⇓*e*P	**P**	**12 14 57.4**	**-0.7**
BATI	**Baumata**	**21.68**	**251**	P	**P**	**12 14 58.5**	**-0.3**
	comp=Z,216nm,0.7s,mb5.7,baz=78,slow=2.1,SNR=23						
BUKP	**Musuan**	**22.46**	**300**	*e*P	**P**	**12 15 04.9**	**-2.2**
EIDS	**Eidsvold**	**22.59**	**164**	*e*P	**P**	**12 15 08.3**	**-0.1**
	comp=Z,182nm,1.2s,mb5.4						
FITZ	**Fitzroy Crossi**	**23.43**	**231**	*e*P	**P**	**12 15 14.5**	**-2.8**
	comp=Z,163nm,1.1s,mb5.4						
MSLP	**Maasin**	**23.81**	**305**	*e*P	**P**	**12 15 19.0**	**-1.9**
PAGZ	**Pagadian**	**23.90**	**298**	*e*P	**P**	**12 15 20.1**	**-1.7**
BESP	**Borongan**	**24.20**	**309**	*e*P	**P**	**12 15 27.4**	**+3.1**
TBP	**Tagbilaran**	**24.40**	**303**	*e*P	**P**	**12 15 25.2**	**-1.0**
OCLP	**Ormoc**	**24.53**	**307**	*e*P	**P**	**12 15 25.4**	**-2.0**
IPIL	**Ipil**	**24.59**	**297**	*e*P	**P**	**12 15 27.3**	**-0.7**
KAPI	**Kappang**	**24.70**	**266**	P	**P**	**12 15 27.6**	**-1.4**
	SNR=9.8						
KAPI	**Kappang**	**24.70**	**266**	P	**P**	**12 15 27.0**	**-2.0**
	comp=Z,15nm,0.6s,mb4.7,baz=81,slow=4.4,SNR=12						
KAPI	**Kappang**	**24.70**	**266**	*e*P	**P**	**12 15 27.6**	**-1.4**
	comp=Z,926nm,2.9s,mb5.8						
GUIM	**Jordan**	**25.95**	**303**	*e*P	**P**	**12 15 40.8**	**+0.4**
PVCP	**Virac**	**26.41**	**311**	*e*P	**P**	**12 15 46.2**	**+1.7**
OTRP	**Odiongan**	**27.36**	**306**	*e*P	**P**	**12 15 56.2**	**+3.2**
MYLDM	**Lahad Datu**	**27.36**	**288**	⇑P	**P**	**12 15 55.5**	**+2.4**
AUQP	**San Andres**	**27.38**	**308**	*e*P	**P**	**12 15 52.1**	**-1.2**
CUYO	**Cuyo Island**	**27.39**	**302**	*e*P	**P**	**12 15 53.0**	**-0.4**
ARMA	**Armidale**	**27.55**	**167**	*e*P	**P**	**12 15 54.4**	**-0.2**
TSM	**Tawau**	**27.70**	**286**	⇓P	**P**	**12 15 56.3**	**+0.1**
SJMP	**San Jose**	**28.14**	**305**	*e*P	**P**	**12 15 59.4**	**-0.7**
DZM	**Mont Dzumac**	**28.16**	**133**	*e*P	**P**	**12 16 00.9**	**+0.8**
	comp=Z,94nm,1.4s,mb5.2						
STKA	**Stephens Creek**	**28.29**	**185**	*e*P	**P**	**12 16 00.5**	**-0.7**
	comp=Z,13nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**28.29**	**185**	P	**P**	**12 16 00.6**	**-0.6**
	comp=Z,14nm,0.9s,mb4.6,baz=352,slow=9.2,SNR=7.4						
STKA				LR	LR	12 27 39.2	
	comp=Z,11μm,18.5s,MS5.5,baz=118,slow=37						
BUSP	**Coron**	**28.66**	**303**	*e*P	**P**	**12 16 02.2**	**-2.5**
SDKM	**Sandakan**	**28.74**	**288**	⇑P	**P**	**12 16 07.8**	**+2.4**
ENPP	**El Nido**	**28.92**	**301**	*e*P	**P**	**12 16 06.8**	**-0.3**
BATP	**Bataraza**	**29.29**	**295**	*e*P	**P**	**12 16 13.3**	**+3.0**
KDM	**Kudat**	**29.49**	**291**	⇓P	**P**	**12 16 13.7**	**+1.6**
BALP	**Baler**	**29.69**	**311**	*e*P	**P**	**12 16 19.2**	**+5.5**
MBWA	**Marble Bar**	**29.75**	**232**	*e*P	**P**	**12 16 14.2**	**-0.1**
KKM	**Kota Kinabalu**	**29.79**	**289**	⇓P	**P**	**12 16 16.6**	**+1.9**
CBIJ	**Chichi jima**	**30.56**	**356**	P	**P**	**12 16 22.3**	**+1.0**
	comp=Z,122nm,0.9s,mb5.7,baz=273,slow=3.9,SNR=5.8						
FORT	**Forrest**	**31.19**	**208**	*e*P	**P**	**12 16 26.5**	**-0.4**
	comp=Z,51nm,0.7s,mb5.5						
CNB	**Canberra Magne**	**31.92**	**172**	*e*P	**P**	**12 16 33.9**	**+0.7**
BTM	**Bintulu**	**32.09**	**282**	⇑P	**P**	**12 16 38.1**	**+3.1**
SBUM	**Sibu**	**32.79**	**280**	⇓P	**P**	**12 16 41.8**	**+0.6**
TOO	**Toolangi**	**33.86**	**179**	*e*P	**P**	**12 16 50.4**	**+0.2**
JOW	**Kunigami**	**34.03**	**334**	P	**P**	**12 16 51.8**	**0.0**
	comp=Z,37nm,0.9s,mb5.3,baz=154,slow=13,SNR=5.6						
JOW				LR	LR	12 28 15.5	
	comp=Z,6μm,18.9s,MS5.4,baz=154,slow=32						
KSM	**Kuching**	**34.52**	**278**	*e*P	**P**	**12 16 55.7**	**-0.6**
	comp=Z,61nm,1.2s,mb5.4						
KSM	**Kuching**	**34.52**	**278**	⇓P	**P**	**12 16 55.4**	**-0.9**
YULB	**Yu-li**	**35.05**	**321**	*e*P	**P**	**12 17 00.3**	**-0.4**
	comp=Z,28nm,0.8s,mb5.2						
TPUB	**Ta-pu**	**35.41**	**320**	*e*P	**P**	**12 17 02.4**	**-1.4**
	comp=Z,171nm,1.5s,mb5.8						
NACB	**Ninganchiao**	**35.44**	**322**	*e*P	**P**	**12 17 04.0**	**-0.1**
	comp=Z,176nm,1.2s,mb5.9						
SSLB	**Suanglung**	**35.55**	**321**	*e*P	**P**	**12 17 05.4**	**+0.4**
	comp=Z,55nm,1.0s,mb5.4						
YHNB	**Yeheng**	**35.94**	**323**	*e*P	**P**	**12 17 09.0**	**+0.6**
	comp=Z,220nm,1.3s,mb5.9						
TATO	**Taipei**	**36.10**	**323**	P	**P**	**12 17 14.0**	**+4.4**
	SNR=5.3						
TATO	**Taipei**	**36.10**	**323**	*e*P	**P**	**12 17 09.9**	**+0.2**
	comp=Z,2μm,2.1s,mb6.6						
JHJ	**Hachijo jima 2**	**36.75**	**353**	LR	LR	12 29 29.7	
	comp=Z,3μm,21.6s,MS5.0,baz=2.8,slow=32						
KLBR	**Kellerberrin**	**37.54**	**219**	*e*P	**P**	**12 17 21.6**	**-0.3**
	comp=Z,80nm,1.4s,mb5.3						
JWZ	**Kozaga**	**37.81**	**348**	P	**P**	**12 17 22.3**	**-1.8**
QZH	**Quanzhou**	**37.88**	**320**	⇑*i*P	**P**	**12 17 25.0**	**+0.2**
QZH				AMB	AMB		
	comp=Z,150nm,0.9s,mb5.7						
QZH				AMB	AMB		
	comp=Z,2μm,4.1s						
QZH				LR	LR		
	comp=N,4μm,12.3s,MS5.6						
QZH				LR	LR		
	comp=E,5μm,12.4s,MS5.6						
QZH				LR	LR		
	comp=Z,9μm,29.9s						
JMN	**Monobe**	**38.42**	**346**	P	**P**	**12 17 31.2**	**+2.0**
JIE	**Ise**	**38.45**	**350**	P	**P**	**12 17 29.2**	**-0.3**
JNU	**Nakatsue**	**38.69**	**342**	P	**P**	**12 17 27.7**	**-3.8**
NWAO	**Narrogin (SRO)**	**38.77**	**218**	P	**P**	**12 17 32.2**	**0.0**
	comp=Z,11nm,0.8s,mb4.6,baz=23,slow=8.3,SNR=4.2						
NWAO				LR	LR	12 32 34.5	
	comp=Z,5μm,18.4s,MS5.4,baz=43,slow=35						
NWAO	**Narrogin (SRO)**	**38.77**	**218**	P	**P**	**12 17 32.2**	**0.0**
NWAO				LR	LR	12 32 34.5	
MUN	**Mundaring**	**38.77**	**220**	*e*P	**P**	**12 17 32.1**	**-0.2**
JOD2	**Odawara 2**	**38.95**	**353**	P	**P**	**12 17 30.2**	**-3.5**
JAD	**Aida**	**39.51**	**347**	P	**P**	**12 17 41.9**	**+3.6**
JWT	**Wachi**	**39.57**	**348**	P	**P**	**12 17 40.3**	**+1.5**
JRY	**Ryogami san**	**39.72**	**353**	P	**P**	**12 17 38.7**	**-1.4**
JHS	**Saijyo**	**39.82**	**345**	P	**P**	**12 17 38.3**	**-2.6**
GZH	**Guangzhou**	**40.30**	**313**	P	**P**	**12 17 45.8**	**+0.7**
GZH				S	**S**	**12 23 56.7**	**+5.3**
GZH				LR	LR		
	comp=N,3μm,15.0s						
GZH				LR	LR		
	comp=E,3μm,23.6s						
GZH				LR	LR		
	comp=Z,6μm,24.5s						
MJAR	**Matsushiro Arr**	**40.32**	**352**	P	**P**	**12 17 43.0**	**-2.1**
	comp=Z,5.7nm,1.0s,mb4.3,baz=176,slow=8.2,SNR=12						
MJAR				LR	LR	12 33 48.1	
	comp=Z,3μm,18.2s,MS5.1,baz=170,slow=35						
MAJO	**Matsushiro**	**40.33**	**352**	*e*P	**P**	**12 17 44.8**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,270nm,2.1s,mb5.6						
MAJO	**Matsushiro**	**40.33**	**352**	*e*P	**P**	**12 17 46.1**	**+1.0**
	comp=Z,266nm,2.1s,mb5.6						
MAT	**Matsushiro**	**40.33**	**352**	P	**P**	**12 17 44.1**	**-1.0**
MAT				S	**S**	**12 23 50.0**	**-1.4**
MAT	**Matsushiro**	**40.33**	**352**	P	**P**	**12 17 44.7**	**-0.4**
QIZ	**Qiongzhong**	**40.81**	**305**	P	**P**	**12 17 49.6**	**+0.2**
QIZ				AP	pP	12 17 58.8	+1.6
QIZ				PP	PP	12 19 25.0	+1.2
QIZ				AMB	AMB		
	comp=Z,35nm,1.6s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,555nm,6.1s						
QIZ				LR	LR		
	comp=E,2μm,21.6s						
QIZ				LR	LR		
	comp=Z,5μm,22.7s,MS5.3						
SSE	**Sheshan**	**41.00**	**329**	P	**P**	**12 17 51.1**	**+0.3**
SSE				AMB	AMB		
	comp=Z,37nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,364nm,4.7s						
SSE				LR	LR		
	comp=N,2μm,10.6s,MS5.5						
SSE				LR	LR		
	comp=E,2μm,10.6s,MS5.5						
SSE				LR	LR		
	comp=Z,4μm,19.7s						
JMM	**Marumori**	**41.36**	**356**	P	**P**	**12 17 51.7**	**-1.9**
KGM	**Kluang**	**41.51**	**277**	⇓P	**P**	**12 17 56.2**	**+1.0**
JSD	**Sado**	**41.79**	**353**	P	**P**	**12 17 57.0**	**-0.1**
JYA	**Atsumi**	**42.17**	**354**	P	**P**	**12 18 01.4**	**+1.1**
KTGM	**Kuala Trenggan**	**42.23**	**282**	⇓P	**P**	**12 17 59.7**	**-1.4**
JOM	**Ohasama**	**42.92**	**356**	P	**P**	**12 18 05.2**	**-1.1**
NJ2	**Nanjing**	**42.98**	**327**	*e*P	**P**	**12 18 08.0**	**+1.1**
NJ2				AP	pP	12 18 17.5	+2.7
NJ2				XP	sP	12 18 21.7	+3.8
NJ2				PP	PP	12 19 50.4	+3.3
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,770nm,4.9s						
NJ2				LR	LR		
	comp=N,1μm,27.5s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,25.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,2μm,25.4s,MS5.0						
FRIM	**Kepong**	**43.35**	**278**	⇑P	**P**	**12 18 10.1**	**-0.2**
KSRS	**Korea Array**	**43.62**	**341**	P	**P**	**12 18 11.5**	**-0.5**
	comp=Z,15nm,0.8s,mb4.8,baz=159,slow=9.9,SNR=40						
IPM	**Ipoh**	**44.14**	**280**	⇓P	**P**	**12 18 16.6**	**-0.1**
JTM	**Tenmabayashi**	**44.24**	**356**	P	**P**	**12 18 19.4**	**+2.4**
AFI	**Afiamalu**	**44.37**	**106**	LR	LR	12 34 31.8	
	comp=Z,3μm,20.1s,MS5.3,baz=272,slow=33						
WHN	**Wuhan**	**44.48**	**322**	⇑*i*P	**P**	**12 18 20.2**	**+1.2**
WHN				AMB	AMB		
	comp=Z,2μm,4.3s						
WHN				LR	LR		
	comp=N,4μm,9.5s						
WHN				LR	LR		
	comp=E,3μm,8.4s						
WHN				LR	LR		
	comp=Z,6μm,15.4s,MS5.7						
KULM	**Kulim**	**44.65**	**281**	⇑P	**P**	**12 18 21.3**	**+0.6**
JSH	**Shimam**	**46.16**	**355**	P	**P**	**12 18 31.5**	**-0.7**
JEW	**Eniwo**	**46.27**	**357**	P	**P**	**12 18 33.0**	**0.0**
RPZ	**Rata Peaks**	**46.39**	**153**	P	**P**	**12 18 35.7**	**+1.8**
	comp=Z,38nm,1.0s,mb5.3,baz=358,slow=10,SNR=3.8						
TIA	**Tai'an**	**47.11**	**330**	⇑P	**P**	**12 18 39.0**	**-0.7**
TIA				S	**S**	**12 25 34.5**	**+4.0**
TIA				LR	LR		
	comp=E,1μm,11.0s						
GYA	**Guiyang**	**47.20**	**311**	⇓*i*P	**P**	**12 18 41.7**	**+1.1**
GYA				AP	pP	12 18 51.6	+3.1
GYA				XP	sP	12 18 55.5	+3.9
GYA				PCP	PcP	12 20 14.6	+2.7
GYA				PP	PP	12 20 31.8	+0.1
GYA				PPP		12 21 19.9	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,600nm,5.0s						
GYA				LR	LR		
	comp=N,3μm,17.2s,MS5.4						
GYA				LR	LR		
	comp=E,2μm,17.1s,MS5.4						
GYA				LR	LR		
	comp=Z,2μm,17.3s,MS5.1						
DL2	**Dalian**	**47.23**	**336**	P	**P**	**12 18 41.7**	**+1.1**
DL2				PP	PP	12 20 28.7	-3.2
DL2				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
DL2				AMB	AMB		
	comp=Z,250nm,4.9s						
DL2				LR	LR		
	comp=N,1μm,15.9s						
DL2				LR	LR		
	comp=Z,1μm,20.6s,MS4.9						
JMP	**Maruseppu**	**47.36**	**359**	P	**P**	**12 18 40.8**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**47.40**	**1**	P	**P**	**12 18 39.2**	**-2.6**
YUK				pmax	pmax		
	comp=Z,2μm,2.0s,mb6.8						
ASAJ	**Asahikawa**	**47.49**	**358**	P	**P**	**12 18 42.9**	**+0.4**
	comp=Z,25nm,1.0s,mb5.1,baz=229,slow=19,SNR=6.4						
ASAJ	**Asahikawa**	**47.49**	**358**	P	**P**	**12 18 43.2**	**+0.7**
NST	**Nakhon Sawan**	**47.85**	**295**	P	**P**	**12 18 47.5**	**+1.7**
SNY	**Shenyang**	**49.01**	**339**	⇑P	**P**	**12 18 53.9**	**-0.4**
SNY				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.2						
SNY				AMB	AMB		
	comp=Z,568nm,5.0s						
SNY				LR	LR		
	comp=N,3μm,17.4s,MS5.4						
SNY				LR	LR		
	comp=E,2μm,13.8s,MS5.4						
SNY				LR	LR		
	comp=Z,4μm,16.5s,MS5.5						
KMI	**Kunming**	**49.53**	**308**	P	**P**	**12 19 00.6**	**+2.0**
KMI				AP	pP	12 19 10.9	+4.4
KMI				XP	sP	12 19 15.1	+5.5
KMI				PCP	PcP	12 20 22.3	+2.0
KMI				PP	PP	12 20 55.5	+2.4
KMI				PPP		12 21 51.2	
KMI				AMB	AMB		
	comp=Z,33nm,1.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,988nm,5.3s						
KMI				LR	LR		
	comp=N,2μm,18.0s,MS5.2						
KMI				LR	LR		
	comp=E,2μm,22.7s,MS5.2						
KMI				LR	LR		
	comp=Z,3μm,22.7s,MS5.3						
MDJ	**Mudanjiang**	**49.78**	**346**	P	**P**	**12 19 02.1**	**+2.0**
MDJ				XP	sP	12 19 14.5	+3.3
MDJ				PP	PP	12 20 57.4	+2.3
MDJ				AMB	AMB		
	comp=Z,20nm,2.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,385nm,6.6s						
MDJ				LR	LR		
	comp=N,2μm,25.7s,MS5.2						
MDJ				LR	LR		
	comp=E,3μm,28.0s,MS5.2						
MDJ				LR	LR		
	comp=Z,2μm,27.4s,MS5.0						
MDJ	**Mudanjiang**	**49.78**	**346**	*e*P	**P**	**12 19 00.7**	**+0.5**
	comp=Z,33nm,1.4s,mb5.2						
CMAR	**Chiang Mai Arr**	**49.89**	**298**	P	**P**	**12 19 01.8**	**+0.3**
	comp=Z,44nm,0.9s,mb5.5,baz=118,slow=6.0,SNR=240						
CMAR				LR	LR	12 37 54.0	
	comp=Z,2μm,20.3s,MS5.1,baz=288,slow=34						
CMAR	**Chiang Mai Arr**	**49.89**	**298**	*i* P	**P**	**12 19 02.5**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,44nm,0.9s						
CHG	**Chiang Mai**	**50.02**	**298**	⇑P	**P**	**12 19 03.2**	**+0.8**
	comp=Z,57nm,1.5s,mb5.4						
CHTO	**Chiang Mai**	**50.02**	**298**	P	**P**	**12 19 03.5**	**+1.0**
	SNR=41						
CHTO	**Chiang Mai**	**50.02**	**298**	*e*P	**P**	**12 19 03.3**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,532nm,2.4s,mb6.2						
CHTO	**Chiang Mai**	**50.02**	**298**	*e*P	**P**	**12 19 03.2**	**+0.8**
	comp=Z,532nm,2.4s,mb6.2						
CN2	**Changchun**	**50.16**	**342**	⇑P	**P**	**12 19 03.4**	**+0.3**
CN2				*e*AP	pP	12 19 13.3	+2.3
CN2				*e*XP	sP	12 19 17.1	+3.0
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
CN2				AMB	AMB		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=N,3μm,15.0s,MS5.5						
CN2				LR	LR		
	comp=E,3μm,15.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
XAN	**Xi'an**	**50.22**	**321**	P	**P**	**12 19 03.6**	**-0.1**
XAN				AP	pP	12 19 14.0	+2.4
XAN				PP	PP	12 21 00.7	+1.5
XAN				PPP		12 21 57.1	
XAN				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.4						
XAN				LR	LR		
	comp=N,593nm,23.4s,MS5.0						
XAN				LR	LR		
	comp=E,1μm,23.4s,MS5.0						
XAN				LR	LR		
	comp=Z,4μm,29.3s						
YSS	**Yuzh-Sakhalins**	**50.32**	**358**	*e*P	**P**	**12 19 04.0**	**-0.2**
YSS				*e*		12 19 16.0	
YSS				*e*S	**S**	**12 26 14.0**	**-1.4**
YSS				*e*PS		12 26 30.0	
YSS				*e*SSS		12 31 05.0	
YSS				pmax	pmax		
	comp=Z,160nm,1.5s,mb5.8						
YSS				pmax	pmax		
	comp=Z,700nm,5.0s						
YSS				smax			
	comp=E,2μm,6.0s						
YSS				MLR	MLR		
	comp=N,1μm,17.0s,MS5.0						
YSS				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.1						
YSS				MLR	MLR		
	comp=E,700nm,18.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**50.32**	**358**	*e*P	**P**	**12 19 03.7**	**-0.5**
	comp=E,104nm,1.4s,mb5.7						
BJT	**Baijiatuau**	**50.56**	**332**	*e*P	**P**	**12 19 05.6**	**-0.5**
BJT				pmax	pmax		
	comp=Z,86nm,1.3s						
BJT	**Baijiatuau**	**50.56**	**332**	*e*P	**P**	**12 19 05.6**	**-0.5**
	comp=Z,86nm,1.3s,mb5.5						
BJI	**Beijing**	**50.57**	**332**	P	**P**	**12 19 05.6**	**-0.6**
BJI				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.1						
BJI				AMB	AMB		
	comp=Z,686nm,4.4s						
BJI				LR	LR		
	comp=N,4μm,19.7s,MS5.5						
BJI				LR	LR		
	comp=E,2μm,18.6s,MS5.5						
BJI				LR	LR		
	comp=Z,3μm,23.0s,MS5.2						
CD2	**Chengdu**	**51.78**	**314**	⇑*i*P	**P**	**12 19 16.1**	**+0.6**
CD2				AP	pP	12 19 26.0	+2.5
CD2				XP	sP	12 19 30.0	+3.4
CD2				PCP	PcP	12 20 28.3	-0.2
CD2				PP	PP	12 21 14.9	+1.4
CD2				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.7						
CD2				AMB	AMB		
	comp=Z,1μm,4.9s						
CD2				LR	LR		
	comp=N,4μm,19.2s,MS5.6						
CD2				LR	LR		
	comp=E,4μm,18.0s,MS5.6						
CD2				LR	LR		
	comp=Z,4μm,19.0s,MS5.5						
HABR	**Khabarovsk**	**52.47**	**352**	*e*P	**P**	**12 19 18.2**	**-2.1**
HABR				*e**PP	pP	12 19 27.7	-0.6
HABR				*e**SP	sP	12 19 31.7	+0.3
HABR				*e*		12 20 27.2	
HABR				*e*		12 21 17.0	
HABR				*e*PPP		12 22 20.7	
HABR				*e*S	**S**	**12 26 42.6**	**-2.4**

HABR e*SS sS 12 26 59.3 +1.1
HABR e 12 29 05.1
HABR eSS SS 12 30 21.4 -2.1
HHC Hu-ho-hao-te 53.46 329 eP **P** **12 19 27.6 -0.1**
HHC AP pP 12 19 37.5 +1.8
HHC XP sP 12 19 41.6 +2.8
HHC PP PP 12 21 29.3 +0.8
HHC AMB AMB
comp=Z,40nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,736nm,4.3s
HHC LR LR
comp=N,2μm,16.7s,MS5.3
HHC LR LR
comp=E,1μm,19.0s,MS5.3
HHC LR LR
comp=Z,3μm,19.0s,MS5.4
KLR Kul'dur 53.73 350 eP **P** **12 19 24.2 -5.3**
KLR eS **S** **12 26 52.5 -10**
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.5
KLR smax
comp=N,1μm,9.0s
KLR smax
comp=E,900nm,9.0s
KLR MLR MLR
comp=N,2μm,14.0s
KLR MLR MLR
comp=Z,4μm,14.0s,MS5.6
BTO Baotou 54.09 328 eP **P** **12 19 32.0 -0.3**
LZH Lanzhou 54.74 320 ⇑P **P** **12 19 38.3 +1.2**
LZH AP pP 12 19 47.1 +1.9
LZH XP sP 12 19 51.5 +3.2
LZH PCP PcP 12 20 39.9 +0.3
LZH PP PP 12 21 43.5 +3.4
LZH AMB AMB
comp=Z,361nm,1.5s,mb6.2
LZH AMB AMB
comp=Z,1μm,4.0s
LZH LR LR
comp=N,4μm,16.8s
LZH LR LR
comp=Z,4μm,17.4s,MS5.5
SKR Severo-Kuril's 54.95 9 eP **P** **12 19 34.0 -4.4**
SKR e 12 20 48.0
SKR e 12 21 40.0
SKR eS **S** **12 27 23.0 +4.4**
SKR pmax pmax
comp=N,320nm,1.4s
SKR pmax pmax
comp=Z,640nm,1.4s,mb6.5
SKR pmax pmax
comp=N,2μm,5.0s
SKR pmax pmax
comp=E,2μm,5.0s
SKR pmax pmax
comp=Z,2μm,5.0s
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,3μm,10.0s
SKR MLR MLR
comp=N,3μm,16.0s,MS5.6
SKR MLR MLR
comp=E,3μm,16.0s,MS5.6
SKR MLR MLR
comp=Z,3μm,16.0s,MS5.4
IMP Imphal 56.58 303 ex x 12 24 07.0
HIA Hailar 56.83 341 eP **P** **12 19 51.5 -0.4**
HIA pmax pmax
comp=Z,74nm,1.4s
HIA Hailar 56.83 341 eP **P** **12 19 51.5 -0.3**
comp=Z,74nm,1.4s,mb5.5
RAR Rarotonga 56.88 113 LR LR 12 41 47.8
comp=Z,1μm,19.6s,MS5.1,baz=261,slow=33
PEA0B Petropavlovsk- 57.55 9 eP **P** **12 19 57.1 +0.1**
PETK Petropavlovsk- 57.55 9 P **P** **12 19 56.9 0.0**
comp=Z,3.4nm,0.7s,mb4.5,baz=109,slow=23,SNR=4.0
PETK LR LR 12 40 22.0
comp=Z,2μm,21.0s,MS5.1,baz=186,slow=32
PET Petropavlovsk 57.63 10deP **P** **12 19 59.1 +1.6**
PET eS **S** **12 27 55.8 +1.7**
PET pmax pmax
comp=Z,400nm,6.3s
PET pmax pmax
comp=Z,63nm,1.1s,mb5.6
PET pmax pmax
comp=Z,600nm,5.4s
PET Petropavlovsk 57.63 10 eP **P** **12 19 59.6 +2.1**
comp=Z,66nm,1.1s,mb5.6
GTA Gaotai 59.27 321 P **P** **12 20 10.3 +1.1**
GTA AP pP 12 20 20.6 +3.3
GTA XP sP 12 20 24.9 +4.5
GTA PP PP 12 22 24.1 +3.7
GTA AMB AMB
comp=Z,28nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,1μm,5.4s
GTA LR LR
comp=N,1μm,18.0s,MS5.2
GTA LR LR
comp=E,973nm,17.1s,MS5.2
GTA LR LR
comp=Z,2μm,18.6s,MS5.2
CAL Calcutta 60.62 298 eP **P** **12 20 20.5 +1.7**
CAL ex x 12 28 53.1
LSA Lhasa 60.77 307 P **P** **12 20 21.0 +1.3**
LSA AP pP 12 20 32.7 +4.9
LSA XP sP 12 20 37.1 +6.2
LSA PPP 12 23 29.8
LSA S **S** **12 28 31.0 -4.7**
LSA SCS ScS 12 30 08.4 -1.1
LSA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
LSA LR LR
comp=N,1μm,23.8s,MS5.2
LSA LR LR
comp=E,2μm,22.3s,MS5.2
LSA LR LR
comp=Z,3μm,26.1s,MS5.3
LSA Lhasa 60.77 307 eP **P** **12 20 20.4 +0.7**
LSA pmax pmax
comp=Z,87nm,1.6s,mb5.6
LSA Lhasa 60.77 307 eP **P** **12 20 20.4 +0.7**
comp=Z,87nm,1.6s,mb5.6
ULN Ulaanbaatar 60.78 332 P **P** **12 20 21.0 +1.6**
SNR=31
ULN Ulaanbaatar 60.78 332⇑eP **P** **12 20 19.6 +0.2**
ULN Ulaanbaatar 60.78 332 eP **P** **12 20 20.3 +0.9**
comp=Z,92nm,1.3s,mb5.8
SONM Songino Array 61.07 332 P **P** **12 20 21.8 +0.4**
comp=Z,11nm,1.1s,mb4.9,baz=149,slow=8.1,SNR=25
SONM LR LR 12 45 45.1
comp=Z,4μm,18.8s,MS5.6,baz=136,slow=35
SONM PKPPKP 12 49 47.8
comp=Z,5.3nm,1.0s,baz=249,slow=1.3,SNR=14
SONM Songino Array 61.07 332 P **P** **12 20 21.8 +0.4**
SONM LR LR 12 45 45.1
SONM P'P' 12 49 47.8
FX1 Attu Island--F 61.22 19 P **P** **12 20 22.1 -0.1**
comp=Z,85nm,1.0s,mb5.8,baz=193,slow=7.3,SNR=8.8
CIT Chita 61.28 339 eP **P** **12 20 23.5 +0.8**
CIT e 12 20 33.4
CIT e 12 21 07.5
CIT e 12 24 10.2
CIT pmax pmax
comp=Z,230nm,1.8s,mb6.0
KIP Kipapa 61.50 63 eP **P** **12 20 25.5 +0.7**
KIP pmax pmax
comp=Z,322nm,1.4s,mb6.3
KIP Kipapa 61.50 63 eP **P** **12 20 25.5 +0.7**
comp=Z,322nm,1.4s,mb6.3
NRGR Nerungri 62.14 348 eP **P** **12 20 32.3 +3.9**
NRGR S **S** **12 28 55.8 +3.8**
NRGR smax
comp=E,51nm,0.4s
CLNS Chul'man 62.27 348 eP **P** **12 20 30.1 +0.8**
CLNS e*PP pP 12 20 40.4 +3.0
CLNS e 12 21 11.3
CLNS e 12 22 47.4
CLNS eS **S** **12 28 52.8 -0.8**
CLNS pmax pmax
comp=E,11nm,1.2s
CLNS pmax pmax
comp=N,36nm,1.3s
CLNS pmax pmax
comp=Z,57nm,1.4s,mb5.5
CLNS pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,10.0nm,1.6s
CLNS pmax pmax
comp=E,8.0nm,1.3s
CLNS smax
comp=E,360nm,13.5s
CLNS smax
comp=N,181nm,11.1s
CLNS MLR MLR
comp=Z,502nm,15.0s,MS4.8
CLNS MLR MLR
comp=N,609nm,13.0s,MS5.0
CLNS MLR MLR
comp=E,425nm,16.0s,MS5.0
TAPN Taplejung 62.72 303 eP **P** **12 20 33.8 +0.9**
comp=E,189nm,1.4s,mb6.0
ODAN Odare 62.82 303 eP **P** **12 20 34.5 +0.9**
comp=E,138nm,1.0s,mb6.0
DRV Dumont d'Urvil 63.06 182 P **P** **12 20 40.0 +5.6**
DRV S **S** **12 29 18.0 +15**
DRV SS SS 12 33 10.0 +0.7
DRV L 12 36 00.0
BOK Bokaro 63.15 299 eP **P** **12 20 36.0 +0.2**
BOK AMb AMB 12 20 42.9
comp=Z,58nm,0.0s
BOK ex x 12 29 10.5
RAMN Ramite 63.52 302 eP **P** **12 20 39.1 +0.9**
comp=Z,264nm,1.4s,mb6.1
VIS Vishakhapatnam 63.87 292 *i* P **P** **12 20 40.7 0.0**
VIS ex x 12 20 48.7
comp=Z,123nm,1.4s
VIS *i* x x 12 24 02.7
JIRN Jiri 64.09 303 eP **P** **12 20 42.9 +0.9**
comp=Z,278nm,1.7s,mb6.0
ZAK Zakamensk 64.32 332 eP **P** **12 20 43.0 0.0**
ZAK pmax pmax
comp=Z,74nm,1.2s,mb5.6
GUN Gumba 64.44 303 eP **P** **12 20 45.3 +1.1**
comp=Z,436nm,1.4s,mb6.3
PALK Pallekele 64.55 280 eP **P** **12 20 45.3 +0.1**
comp=Z,157nm,1.8s,mb5.7
PKI Pulchoki 64.72 303 eP **P** **12 20 46.6 +0.5**
comp=Z,282nm,1.5s,mb6.1
PKI Pulchoki 64.72 303 eP **P** **12 20 46.6 +0.5**
PKI pmax pmax
comp=Z,282nm,1.5s,mb6.1
KKN Kakani 64.90 303 eP **P** **12 20 47.9 +0.6**
comp=Z,275nm,1.3s,mb6.1
KKN Kakani 64.90 303 eP **P** **12 20 47.9 +0.6**
KKN pmax pmax
comp=Z,275nm,1.3s,mb6.1
DMN Daman 64.99 303 eP **P** **12 20 48.8 +1.0**
comp=Z,257nm,1.3s,mb6.1
TLY Talaya 65.05 333 P **P** **12 20 48.6 +0.9**
SNR=17
TLY Talaya 65.05 333 eP **P** **12 20 48.0 +0.3**
TLY *e* 12 21 27.3
TLY eS S 12 29 31.7 +3.4
TLY ePS 12 29 40.6
TLY pmax pmax
comp=Z,73nm,1.4s,mb5.5
TLY MLR MLR
comp=Z,2μm,18.0s,MS5.4
TLY Talaya 65.05 333 eP **P** **12 20 48.6 +0.9**
comp=Z,85nm,1.4s,mb5.6
IRK Irkutsk 65.16 334 eP **P** **12 20 51.7 +3.3**
IRK pmax pmax
comp=Z,91nm,2.2s,mb5.4
GKN Gorkha 65.51 303 eP **P** **12 20 51.7 +0.5**
comp=Z,497nm,1.5s,mb6.3
BOD Bodaibo 65.91 343 eP **P** **12 20 52.3 -0.8**
BOD pmax pmax
comp=Z,29nm,1.5s,mb5.1
PPT Papeete 66.01 108 eS S 12 29 40.2 -1.2
comp=Z,910nm,24.0s
PPT Papeete 66.01 108 eLR LR 12 40 49.2
comp=Z,2μm,23.2s
MOY Mondy 66.25 332 eP **P** **12 20 56.3 +0.8**
MOY pmax pmax
comp=Z,20nm,1.6s,mb4.9
KOLN Koldanda 66.31 302 eP **P** **12 20 57.0 +0.6**
comp=Z,136nm,0.9s,mb6.0
DANN Dangsing 66.35 303 eP **P** **12 20 57.1 +0.5**
comp=Z,88nm,0.8s,mb5.8
YAK Yakutsk 66.39 352 eP **P** **12 20 55.7 -0.5**
YAK e*PP pP 12 21 06.6 +2.3
YAK *e* 12 21 22.9
YAK *e* 12 23 16.3
YAK ePPP 12 24 58.6
YAK eS S 12 29 44.3 -0.1
YAK e*SS sS 12 30 00.8 +3.0
YAK *e* 12 30 39.9
YAK pmax pmax
comp=Z,118nm,1.2s,mb5.8
YAK pmax pmax
comp=N,58nm,1.2s
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=Z,230nm,3.5s
YAK pmax pmax
comp=N,203nm,3.3s
YAK smax
comp=E,479nm,4.4s
YAK smax
comp=N,548nm,7.2s
YAK Yakutsk 66.39 352 eP **P** **12 20 56.0 -0.1**
comp=N,175nm,1.2s,mb6.0
SEY Seymchan 66.59 4⇑eP **P** **12 20 57.5 +0.1**
KOD Kodaikanal 68.11 282 eP **P** **12 21 09.1 +1.1**
KOD AMb AMB 12 21 16.0
comp=Z,124nm,0.3s,mb6.4
HYB Hyderabad 68.26 290 *i* P **P** **12 21 08.0 -0.9**
HYB Hyderabad 68.26 290 eP **P** **12 21 06.0 -2.9**
HYB *e* 12 28 27.0
HYB eS S 12 29 56.0 -12
NGP Nagpur 68.57 294 eP **P** **12 21 09.3 -1.5**
NGP ex x 12 21 21.6
comp=Z,94nm,1.8s
NGP eS S 12 30 13.0 +0.9
WMQ Urumqi 69.32 320 P **P** **12 21 15.3 +0.3**
WMQ AP pP 12 21 26.8 +3.6
WMQ PP PP 12 23 49.2 +0.7
WMQ AMB AMB
comp=Z,50nm,1.5s,mb5.2
WMQ AMB AMB
comp=Z,889nm,4.5s
WMQ LR LR
comp=N,1μm,18.0s,MS5.3
WMQ LR LR
comp=E,479nm,17.0s,MS5.3
WMQ LR LR
comp=Z,1μm,28.0s
LGTI Lohaghat 69.62 303 eP **P** **12 21 17.0 -0.2**
LGTI ex x 12 24 39.0
AKL Akola 70.34 293 eP **P** **12 21 19.7 -2.1**
AKL AMb AMB 12 21 28.0
comp=Z,108nm,0.5s,mb6.1
BHPL Bhopal 70.50 296 eP **P** **12 21 21.9 -0.8**
BHPL AMb AMB 12 21 33.5
comp=Z,70nm,0.8s,mb5.6
BHPL ex x 12 30 33.6
DDI Dehra Dun 71.69 303 ex x 12 21 26.0
DDI ex x 12 24 47.8
NDI New Delhi 71.97 302 ex x 12 24 50.0
KAD Karad 72.35 289 eP **P** **12 21 33.3 -0.7**
KAD AMb AMB 12 21 47.1
comp=Z,98nm,3.1s
GOA Goa 72.40 287 ex x 12 21 12.3
GOA AMb AMB 12 21 41.4
comp=Z,100nm,1.3s,mb5.6
SMLA Simla 72.64 304 *i* P **P** **12 21 35.3 -0.2**
SMLA AMb AMB 12 21 46.6
comp=Z,117nm,1.4s,mb5.6
SMLA *i* x x 12 25 01.7
BILL Bilibino 73.06 8deP **P** **12 21 37.8 +0.7**
BILL e*PP pP 12 21 46.5 +1.1
BILL *SP sP 12 21 52.0 +3.6
BILL *e* 12 21 55.1
BILL eS S 12 31 05.1 +2.5
BILL *e* 12 31 47.5
BILL pmax pmax
comp=Z,39nm,1.1s,mb5.2
BILL MLR MLR
comp=Z,900nm,20.0s,MS5.0
BILL Bilibino 73.06 8 eP **P** **12 21 37.4 +0.2**
comp=Z,58nm,1.4s,mb5.3
AJM Ajmer 73.68 299 eP **P** **12 21 41.4 -0.3**
AJM AMb AMB 12 21 48.0
comp=Z,69nm,1.1s,mb5.5
MK31 Makanchi Array 74.03 321 P **P** **12 21 44.0 +0.7**
MK31 Makanchi Array 74.03 321 eP **P** **12 21 43.7 +0.4**
MKAR Makanchi Array 74.03 321 P **P** **12 21 42.8 -0.5**
comp=Z,5.4nm,0.9s,mb4.5,baz=101,slow=6.3,SNR=22
MKAR LR LR 12 59 01.0
comp=Z,899nm,18.0s,MS5.1,baz=259,slow=40
THN Thein Dam 74.17 305 eP **P** **12 21 42.3 -2.1**
THN *ex* x 12 25 04.7
VNDA Vanda 74.49 176 P **P** **12 21 44.8 -0.6**
comp=Z,3.2nm,0.7s,mb4.4,baz=323,slow=6.8,SNR=28
VNDA LR LR 12 52 36.6
comp=Z,3μm,20.6s,MS5.5,baz=353,slow=34
VNDA Vanda 74.49 176 eP **P** **12 21 44.7 -0.8**
comp=Z,32nm,1.4s,mb5.1
SBA Scott Base 75.17 175 eP **P** **12 21 50.5 +1.1**
ZAA0 Zalesovo Array 75.63 328 eP **P** **12 21 51.4 -0.9**
ZALV Zalesovo Beam 75.63 328 P **P** **12 21 51.4 -0.9**
comp=Z,18nm,0.8s,mb5.0,baz=106,slow=5.3,SNR=43
ZALV PKPPKP 12 49 16.1
comp=Z,0.3nm,0.4s,baz=286,slow=2.8,SNR=4.1
ZALV LR LR 12 54 48.1
comp=Z,2μm,20.7s,MS5.4,baz=122,slow=36
ZALV Zalesovo Beam 75.63 328 P **P** **12 21 51.4 -0.9**
ZALV P'P' 12 49 16.1
ZALV LR LR 12 54 48.1
TIXI Tiksi 75.76 355⇓*i*P **P** **12 21 51.5 -1.3**
TIXI pmax pmax
comp=Z,33nm,1.5s,mb5.0
TIXI Tiksi 75.76 355 eP **P** **12 21 51.0 -1.8**
KSH Kashi 75.89 312 P **P** **12 21 59.0 +4.8**
KSH AP pP 12 22 09.0 +6.5
KSH PCP PcP 12 22 10.7 +4.1
KSH XP sP 12 22 13.3 +7.8
KSH AMB AMB
comp=Z,3.0nm,0.4s,mb4.6
KSH AMB AMB
comp=Z,146nm,4.6s
KSH LR LR
comp=N,121nm,10.9s,MS4.8
KSH LR LR
comp=E,262nm,15.1s,MS4.8
KSH LR LR
comp=Z,235nm,21.1s
NVS Novosibirsk 76.86 329⇑*i*P **P** **12 21 57.5 -1.8**
NVS eS S 12 31 38.9 -6.4
NVS pmax pmax
comp=Z,123nm,1.4s,mb5.6
NVS pmax pmax
comp=N,62nm,1.5s
NVS pmax pmax
comp=E,84nm,1.5s
NVS smax
comp=N,39nm,2.7s
NVS smax
comp=E,47nm,2.7s
TKM2 Tokmak 2 77.16 315 P **P** **12 22 03.8 +2.5**
TKM2 pmax pmax
comp=Z,100nm,1.7s,mb5.5
TKM2 Tokmak 2 77.16 315 eP **P** **12 22 03.1 +1.8**
comp=Z,103nm,1.8s,mb5.5
BHJ Bhuj 77.52 295 eP **P** **12 22 03.8 0.0**
BHJ AMb AMB 12 22 10.6
comp=Z,129nm,0.0s
UCH Uchtor 77.72 314 eP **P** **12 22 05.6 +1.1**
comp=Z,100nm,2.1s,mb5.4
KURK Kurchatov 77.77 324 P **P** **12 22 05.2 +0.7**
SNR=45
KURK Kurchatov 77.77 324 P **P** **12 22 02.6 -1.9**
comp=Z,3.8nm,0.8s,mb4.4,baz=114,slow=4.5,SNR=7.0
KURK Kurchatov 77.77 324 eP **P** **12 22 04.5 0.0**
KURK pmax pmax
comp=Z,109nm,1.3s,mb5.6
KURK Kurchatov 77.77 324 eP **P** **12 22 04.5 0.0**
comp=Z,109nm,1.3s,mb5.6
FRU Bishkek 77.82 315 eP **P** **12 22 08.5 +3.5**
FRU *e* 12 32 01.0
FRU pmax pmax
comp=Z,140nm,2.2s,mb5.5
AAK Ala-Archa 77.85 315⇑*i*P **P** **12 22 05.1 -0.1**
AAK pmax pmax
comp=Z,30nm,1.9s,mb4.9
AAK Ala-Archa 77.85 315 eP **P** **12 22 06.0 +0.8**
AML Almayashu 78.28 314 eP **P** **12 22 08.8 +1.2**
comp=Z,69nm,1.4s,mb5.4
EKS2 Erkin-Say 78.36 315 eP **P** **12 22 08.9 +0.8**
comp=Z,42nm,1.3s,mb5.2
KDAK Kodiak Island 78.98 29 LR LR 12 52 33.8
comp=Z,2μm,20.7s,MS5.5,baz=280,slow=32
SVW2 Sparrevohn 79.11 25 eP **P** **12 22 16.8 +5.0**
RKT Rikitea 79.92 113 eS S 12 32 13.5 -6.1
comp=Z,443nm,39.5s
RKT Rikitea 79.92 113 eLR LR 12 47 54.6
comp=Z,3μm,37.2s
KBL Kabul 80.07 306 eP **P** **12 22 17.3 -0.3**
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.8
KBL Kabul 80.07 306 eP **P** **12 22 17.3 -0.3**
comp=Z,11nm,0.9s,mb4.8
KK31 Karatay Array 80.80 315 *i* P **P** **12 22 21.0 -0.3**
KK31 pmax pmax
comp=Z,52nm,1.4s,mb5.3
PPLA Purkeypile 81.36 24 eP **P** **12 22 25.7 +1.9**
comp=Z,85nm,1.7s,mb5.4
CHUM Lake Minchumin 81.73 24 eP **P** **12 22 25.7 -0.1**
comp=Z,94nm,1.2s,mb5.6
PMR Palmer 82.13 26 eP **P** **12 22 31.9 +4.0**
VOSK Vostochnaya 82.91 324 P **P** **12 22 31.2 -1.0**
VOSK pmax pmax
comp=Z,34nm,1.4s,mb5.2
MCK McKinley 83.04 24 eP **P** **12 22 31.8 -0.8**
BVA0 Borovoye Array 83.33 324 *i* P **P** **12 22 34.1 -0.2**
BVA0 pmax pmax
comp=Z,30nm,2.0s,mb5.0
BVAR Borovoye Array 83.33 324 P **P** **12 22 34.4 +0.1**
comp=Z,28nm,0.8s,mb5.3,baz=104,slow=6.3,SNR=66
BRVK Borovoye 83.40 324 P **P** **12 22 35.2 +0.5**
SNR=43
BRVK Borovoye 83.40 324 P **P** **12 22 34.9 +0.2**
BRVK pmax pmax
comp=Z,250nm,1.3s,mb6.1
BRVK Borovoye 83.40 324 eP **P** **12 22 34.8 +0.1**
comp=Z,160nm,1.4s,mb5.9
MAW Mawson 83.52 202 P **P** **12 22 34.7 -0.4**
comp=Z,6.1nm,0.7s,mb4.9,baz=90,slow=8.0,SNR=14
MAW LR LR 12 56 35.1
comp=Z,2μm,20.2s,MS5.6,baz=73,slow=33
MAW Mawson 83.52 202 P **P** **12 22 35.0 -0.1**
MAW pmax pmax
comp=Z,10.0nm,0.7s
MAW Mawson 83.52 202 eP **P** **12 22 34.2 -0.9**
comp=Z,1.9nm,0.7s,mb4.3
COLA College 83.91 23 eP **P** **12 22 36.2 -0.9**
COLA pmax pmax
comp=Z,38nm,1.2s,mb5.4
COLA College 83.91 23 eP **P** **12 22 36.2 -0.8**
comp=Z,38nm,1.2s,mb5.4
COLD Coldfoot 83.95 21 eP **P** **12 22 37.4 +0.2**
comp=Z,42nm,1.3s,mb5.4
MENT Mentasta 84.97 26 eP **P** **12 22 42.4 -0.1**
QSPA South Pole Qui 86.39 180 P **P** **12 22 48.3 -0.9**
comp=Z,5.6nm,0.6s,mb4.9,baz=245,slow=1.0,SNR=2.8
QSPA South Pole Qui 86.39 180 P **P** **12 22 48.3 -0.9**
EGAK Eagle 86.59 24 eP **P** **12 22 49.7 -0.8**
comp=Z,51nm,1.4s,mb5.6
HYT Haines Junctio 87.27 29 eP **P** **12 22 54.3 +0.5**
SKAG Skagway 88.07 30 eP **P** **12 23 00.2 +2.5**
comp=Z,56nm,1.3s,mb5.6
SVE Sverdlovsk 89.58 327 eP **P** **12 23 03.1 -1.8**
SVE pmax pmax
comp=Z,21nm,1.6s,mb5.2
INK Inuvik 90.33 22 eP **P** **12 23 07.3 -0.8**
AKTK Aktyubinsk 90.46 320 P **P** **12 23 07.9 -1.3**
AKTO Aktyubinsk 90.46 320 P **P** **12 23 07.9 -1.3**
comp=Z,6.7nm,0.9s,mb5.0,baz=149,slow=2.7,SNR=7.4
ARU Arti 90.68 326*d i*P **P** **12 23 10.9 +0.9**

ARU 12 26 45.6
ARU S SKSac 12 33 39.2 -0.7
ARU SP SP 12 35 13.7 +2.5
ARU SS SS 12 39 59.8 -6.5
ARU pmax pmax
comp=Z,22nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,1µm,17.0s,MS5.4
ARU Arti 90.68 326 eP **P** **12 23 10.5 +0.4**
comp=Z,25nm,1.4s,mb5.4
MAK Makhachkala 97.52 313 eP **P** **12 23 40.0 -1.7**
MAK e 12 27 36.5
MAK eS SKSac 12 34 13.8 -3.9
MAK e 12 35 00.1
MAK pmax pmax
comp=Z,277nm,1.7s,mb6.5
NVAR Mina Array Bea 97.86 52 P **P** **12 23 43.0 -0.3**
comp=Z,0.2nm,0.5s,baz=324,slow=50,SNR=3.6
YKA Yellowknife Ar 98.19 27 P **P** **12 23 43.0 -1.3**
comp=Z,0.6nm,0.8s,mb4.2,baz=277,slow=4.6,SNR=10
YKA PKKPbc PKKPbc 12 40 15.9 -3.0
comp=Z,0.4nm,0.7s,baz=93,slow=2.8,SNR=12
YKA LR LR 13 05 39.7
comp=Z,991nm,20.9s,MS5.3,baz=330,slow=34
YKA Yellowknife Ar 98.19 27 P **P** **12 23 43.0 -1.3**
YKA PKKPbc PKKPbc 12 40 15.9 -3.0
YKA LR LR 13 05 39.7
KIV Kislovodsk 100.95 314 eP Pdif 12 23 58.2 +1.4
KIV e 12 28 03.9
KIV e 12 34 36.8
KIV eSS SS 12 42 34.2 +1.6
KIV pmax pmax
comp=Z,8.0nm,1.1s
APA Apatity 101.23 339⇓eP Pdif 12 23 53.0 -5.0
APA pmax pmax
comp=Z,18nm,1.1s
APA MLR MLR
comp=Z,2µm,22.0s,MS5.5
PDAR Pinedale Array 104.12 47 Pdiff Pdif 12 24 11.2 +0.3
comp=Z,0.4nm,0.9s,baz=270,slow=3.0,SNR=4.1
PDAR PP PP 12 28 29.7 +0.6
comp=Z,1.6nm,1.1s,baz=202,slow=7.5,SNR=5.2
AKASG Malin Array Be 108.57 323 PP PP 12 29 03.7 +2.2
comp=Z,0.5nm,0.4s,baz=60,slow=7.4,SNR=5.7
TXAR Lajitas Array 110.77 60 PKiKP PKiKP 12 28 43.1 +2.0
comp=Z,0.5nm,0.8s,baz=321,slow=3.2,SNR=4.1
UZH Uzhgorod 113.51 322 ePKIKP PKiKP 12 28 53.8 +8.1
CRVS Cervenica-Dubn 113.91 323 PDIF Pdif 12 24 52.6 -1.8
CRVS Cervenica-Dubn 113.91 323 ePdif Pdif 12 24 52.6 -1.8
OKC Ostrava-Krasne 115.46 325 AMS AMS 13 22 30.0
comp=Z,1µm,22.5s
VYHS Vyhne 115.66 323 ePP PP 12 29 52.4 +0.2
DPC Dobruska-Polom 116.26 326 AMS AMS 13 21 30.0
comp=Z,1µm,20.9s
PVCC Panska Ves 117.14 327 AMS AMS 13 22 50.0
comp=Z,2µm,23.5s
TREC Trest 117.25 325 AMS AMS 13 22 20.0
comp=Z,2µm,21.7s
BRG Berggiesshubel 117.31 327 eP PKPdf 12 28 54.6 +1.7
comp=Z,5.0nm,1.2s
BRG e 12 29 07.8
comp=Z,21nm,1.4s
PRU Pruhonice 117.43 326 AMS AMS 13 25 00.0
comp=Z,1µm,23.7s
CLL Collm 117.58 328 ePKPdf PKPdf 12 28 53.0 -0.4
CLL LmV 12 20 00.0
comp=Z,2µm,21.1s
CLL eSS SS 12 46 18.0 +2.8
CLL Collm 117.58 328 ePKP PKPdf 12 28 53.0 -0.4
CLL LR LR
comp=Z,2µm,21.1s,MS5.8
KHC Kasperske Hory 118.41 326 ePKPDF PKPdf 12 28 54.5 -0.6
KHC AMS AMS 13 23 00.0
comp=Z,2µm,19.6s
GERES GERESS Array B 118.49 325 PKP PKPdf 12 28 54.9 -0.4
comp=Z,1.5nm,0.6s,baz=79,slow=2.9,SNR=8.4
GRF Grafenberg Arr 119.41 327 eSKPdf SKPdf 12 32 20.5 -11
GRF eL 13 25 22.7
comp=Z,2µm,18.1s
WTTA Wattenberg 120.49 325⇑ipPKiKP 12 29 04.1
comp=Z,19nm,1.3s
FETA Feichten 121.15 325⇑ipPKiKP 12 29 05.3
comp=Z,12nm,1.4s
DAVA Damuels 121.49 325⇑iPKiKP PKiKP 12 29 01.1 -0.1
comp=Z,16nm,1.3s
GIVF Givet 122.48 330 ePKP1 PKPdf 12 29 02.6 -0.3
BAIF Baives 122.82 331 ePKP1 PKPdf 12 29 02.9 -0.6
SCHQ Schefferville 122.94 21 PKP PKPdf 12 29 04.3 +0.7
comp=Z,4.8nm,0.8s,baz=49,slow=10,SNR=3.8
HAU Haudompre 123.01 328 ePKP1 PKPdf 12 29 03.0 -1.0
comp=Z,47nm,1.2s
TSUM Tsumeb 123.10 244 ePKPdf PKPdf 12 29 06.0 +1.0
LOR Lormes 124.79 328 ePKP1 PKPdf 12 29 06.8 -0.6
comp=Z,68nm,1.5s
SSF Saint Saulge 125.11 328 ePKP1 PKPdf 12 29 08.3 +0.3
comp=Z,26nm,1.0s
TKL Tuckaleechee C 125.25 48 ePKPdf PKPdf 12 29 07.8 -0.8
PLCA Paso Flores 125.52 148 PKP PKPdf 12 29 09.7 +0.6
comp=Z,3.9nm,0.7s,baz=298,slow=3.2,SNR=9.1
PLCA Paso Flores 125.52 148 PKP PKPdf 12 29 09.7 +0.6
TCF Toulx Ste Croi 126.29 328 ePKP1 PKPdf 12 29 09.7 -0.6
comp=Z,68nm,1.3s
TCF Toulx Ste Croi 126.29 328 ePKP PKPdf 12 29 09.7 -0.6
BLA Blacksburg 126.99 45 ePKPdf PKPdf 12 29 11.1 -0.8
TOA0 Torodi Ar. Sit 142.02 287 ePKPdf PKPdf 12 29 39.5 -1.1
TORD Torodi Ar. Bea 142.02 287 PKhKP 12 29 33.6
comp=Z,2.4nm,0.8s,baz=72,slow=3.5,SNR=11
CPUP Villa Florida 143.55 146 PKP PKPdf 12 29 40.5 -2.6
comp=Z,5.3nm,0.8s,baz=262,slow=1.6,SNR=6.8
CPUP Villa Florida 143.55 146 ePKPdf PKPdf 12 29 41.3 -1.8
SDV Santo Domingo 144.72 80 ePKPdf PKPdf 12 29 44.5 -0.9
MTP Monte Pirata 147.24 62 ePKPbc PKPbc 12 29 52.7 +0.9
SIV San Ignacio 148.12 128 PKPbc PKPbc 12 29 53.9 -0.3
comp=Z,19nm,0.9s,baz=251,slow=4.0,SNR=57
KIC Kosan Boka 149.21 276 ePKP1 PKPbc 12 29 56.8 -0.4
comp=Z,512nm,1.4s
DBIC Dimbokro 149.30 277 PKPbc PKPbc 12 29 56.9 -0.5
comp=Z,9.8nm,0.6s,baz=84,slow=3.0,SNR=29
DBIC Dimbokro 149.30 277 ePKPbc PKPbc 12 29 57.1 -0.3
TIC Toumodi 149.47 277 ePKP1 PKPbc 12 29 56.3 -1.5
comp=Z,374nm,1.3s
LIC Lamto 149.50 276 ePKIKP PKPdf 12 29 57.5 +4.1
comp=Z,299nm,1.4s
LIC Lamto 149.50 276 ePKP1 PKPbc 12 29 57.2 -0.7
comp=Z,278nm,1.4s
BDFB Brasilia 157.26 147 PKP PKPdf 12 30 06.0 +1.6
comp=Z,0.7nm,0.5s,baz=209,slow=15,SNR=4.1
BDFB PKPbc PKPdf 12 30 17.0 +13
comp=Z,3.0nm,0.8s,baz=171,slow=7.5,SNR=6.4

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*ISCJB **10** 12:13:26.4±1.1, 3.57S±0.03×144.35E±0.04, h0km±6km, mb5.6/104, MS5.2/24, Error ellipse: s-maj=7.1km s-min=5.4km az=169.8*
*IDC **10** 12:13:28.3±0.4, 3.48S×144.16E, h0km, mb5.2/27, mb1 5.1/28, mb1mx5.1/29, mbtmp5.2/28, ML5.1/1, MS5.2/3, Ms1 5.2/3, ms1mx4.6/32, Error ellipse: s-maj=17.0km s-min=11.0km az=81.0*
*BJI **10** 12:13:28.9, 3.70S×144.91E, h36km, mB5.8, mb5.4, Ms5.4, Msz5.2*
*NEIC **10** 12:13:30.0±3.8, 3.61S×144.28E, h12km±23km, mb5.7/52, Error ellipse: s-maj=7.9km s-min=5.8km az=70.0*
NEIC Felt at Wewak.
*GCMT **10** 12:13:30.0±0.2, 3.35S×144.43E, h18km±1km, MW5.4/78, Moment Tensor Solution. s34,c44; s78,c132; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.85±.08; $M_{\theta\theta}$-1.81±.06; $M_{\phi\phi}$0.96±.05; $M_{r\theta}$-0.74±.12; $M_{\theta\phi}$-0.06±.05; $M_{\phi r}$-0.12±.15; Best double couple: $M_0$1.55900×10^{17} NP1:ϕ_s125.00000°,δ42.00000°,λ145.00000°. NP2: ϕ_s242.00000°,δ67.00000°,λ53.00000°. Principal axes: T 1.1140, Plg53.0000°, Azm108.0000°; N 0.8930, Plg34.0000°, Azm258.0000°; P -2.0030, Plg15.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MOS **10** 12:13:32.4±1.4, 3.45S×144.21E, h33km, mb5.8/22, MS5.1/5 Error ellipse: s-maj=11.2km s-min=6.5km az=105.3*
*DJA **10** 12:13:37, 3.74S×143.78E, h15km, Mw5.8/6*
ISC 10 12:13:29.8±1.2**, 3.59S**±0.03×**144.35E**±0.04**, h10**km±7km**, h35**km±1.0km**:pP-P, n307,** σ1s30/242**, mb5.5**/104**, MS5.2**/24**, 16C-7D, Near north coast of New Guinea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 6.42 154 i P **Pn** **12 15 04.4 -0.1**
KAKA Kakadu 14.86 232 eP x 12 16 40.5
104nm,0.6s
CTA Charters Tower 16.51 174 eP **Pn** **12 17 27.2 +5.6**
20nm,1.0s
CTA Charters Tower 16.51 174 Pn **Pn** **12 17 26.3 +4.7**
0.4nm,0.3s,baz=348,slow=13,SNR=3.6
CTA Charters Tower 16.51 174 eP **Pn** **12 17 27.2 +5.6**
CTA pmax pmax
comp=Z,20nm,1.0s
CTAO Charters Tower 16.51 174 eP **Pn** **12 17 20.1 -1.5**
HNR Honiara 16.55 111 Pn **Pn** **12 17 23.6 +1.5**
comp=Z,6.6nm,0.3s,baz=252,slow=7.9,SNR=4.2
HNR Honiara 16.55 111 P **Pn** **12 17 23.6 +1.5**
HNR pmax pmax
comp=Z,7.0nm,0.3s
HNR Honiara 16.55 111 ePn **Pn** **12 17 22.6 +0.5**
comp=Z,361nm,1.1s
WRAB Tennant Creek 18.95 210 i P **Pn** **12 17 52.9 +1.1**
WB2 Warramunga Arr 18.96 210 eP **Pn** **12 17 50.8 -1.1**
DAV Davao City (W) 21.52 299 P **P** **12 18 23.5 +4.3**
comp=Z,99nm,0.3s,mb5.7,baz=75,slow=5.4,SNR=4.5
BATI Baumata 21.55 251 P **P** **12 18 19.9 +0.4**
comp=Z,236nm,0.7s,mb5.7,baz=32,slow=0.7,SNR=14
BATI LR LR 12 26 38.7
comp=Z,9µm,18.6s,MS5.2,baz=77,slow=37
BUKP Musuan 22.36 301 eP **P** **12 18 25.2 -3.0**
BUKP Musuan 22.36 301 eS **P** **12 18 26.2 -2.0**
BUTP Butuan 22.45 304 eP **P** **12 18 34.4 +5.2**
EIDS Eidsvold 22.61 164 eP **P** **12 18 30.6 -0.1**
comp=Z,116nm,1.1s,mb5.2
FITZ Fitzroy Crossi 23.32 230 eP **P** **12 18 36.2 -2.1**
comp=Z,157nm,0.8s,mb5.5
MSLP Maasin 23.72 305 eP **P** **12 18 43.4 +1.1**
PAGZ Pagadian 23.80 299 eP **P** **12 18 42.1 -1.0**
PAGZ Pagadian 23.80 299 eS **P** **12 18 42.4 -0.7**
OCLP Ormoc 24.44 307 eP **P** **12 18 48.6 -0.3**
IPIL Ipil 24.49 298 eP **P** **12 18 49.5 +0.2**
IPIL Ipil 24.49 298 eS **P** **12 18 49.8 +0.5**
KAPI Kappang 24.57 266 P **P** **12 18 48.7 -1.4**
comp=Z,366nm,0.7s,mb6.0,SNR=5.4
KAPI Kappang 24.57 266 P **P** **12 18 48.4 -1.7**
comp=Z,26nm,0.7s,mb4.9,baz=91,slow=6.1,SNR=14
KAPI Kappang 24.57 266 eP **P** **12 18 48.9 -1.2**
comp=Z,47nm,0.8s,mb5.1
GUIM Jordan 25.86 303 eP **P** **12 19 02.0 +0.2**
CUYO Cuyo Island 27.29 302 eP **P** **12 19 15.3 +0.5**
ARMA Armidale 27.56 166 eP **P** **12 19 14.6 -2.4**
STKA Stephens Creek 28.26 185 eP **P** **12 19 21.5 -1.7**
comp=Z,16nm,0.8s,mb4.7
STKA Stephens Creek 28.26 185 P **P** **12 19 24.4 +1.2**
comp=Z,16nm,0.7s,mb4.8,baz=356,slow=7.0,SNR=9.2
ENPP El Nido 28.82 301 eP **P** **12 19 28.6 +0.1**
CBIJ Chichi jima 30.57 356 P **P** **12 19 41.1 -2.6**
comp=Z,150nm,1.0s,mb5.8,baz=158,slow=7.2,SNR=7.2
FORT Forrest 31.11 208 eP **P** **12 19 49.1 +0.5**
comp=Z,33nm,0.5s,mb5.4
CNB Canberra Magne 31.91 172 eP **P** **12 19 55.7 +0.2**
TOO Toolangi 33.84 178 eP **P** **12 20 12.5 +0.1**
JOW Kunigami 34.00 334 P **P** **12 20 11.9 -1.9**
comp=Z,22nm,1.0s,mb5.0,baz=136,slow=3.4,SNR=3.4
KSM Kuching 34.39 278 eP **P** **12 20 16.7 -0.8**
comp=Z,90nm,1.4s,mb5.5
YULB Yu-li 34.99 321 eP **P** **12 20 21.9 -0.6**
comp=Z,68nm,1.0s,mb5.5
TPUB Ta-pu 35.34 320 eP **P** **12 20 25.1 -0.4**
comp=Z,185nm,1.5s,mb5.8
NACB Ninganchiao 35.38 322 eP **P** **12 20 26.9 +1.0**
comp=Z,244nm,1.2s,mb6.0
SSLB Suanglung 35.49 321 eP **P** **12 20 29.7 +2.9**
comp=Z,72nm,1.0s,mb5.6
YHNB Yeheng 35.88 323 eP **P** **12 20 31.5 +1.3**
comp=Z,261nm,1.2s,mb6.0
TATO Taipei 36.04 323 eP **P** **12 20 32.9 +1.3**
comp=Z,430nm,1.1s,mb6.3
KLBR Kellerberrin 37.44 219 eP **P** **12 20 43.7 +0.3**
comp=Z,30nm,0.8s,mb5.2
JWZ Kozaga 37.81 348 S **P** **12 20 42.9 -3.5**
QZH Quanzhou 37.81 320⇓iP **P** **12 20 47.7 +1.1**
QZH eS **S** **12 26 38.4 +0.6**
QZH AMB AMB
comp=Z,310nm,0.9s,mb6.0
QZH AMB AMB
comp=Z,1µm,4.1s
QZH LR LR
comp=N,2µm,8.6s
QZH LR LR
comp=E,3µm,10.9s
QZH LR LR
comp=Z,4µm,14.3s,MS5.4
JMN Monobe 38.41 346 S **P** **12 20 51.3 -0.2**
JIE Ise 38.45 350 S **P** **12 20 52.8 +0.9**
NWAO Narrogin (SRO) 38.67 218 P **P** **12 20 54.3 +0.5**
comp=Z,20nm,0.8s,mb4.9,baz=73,slow=7.0,SNR=3.9
NWAO PcP PcP 12 23 07.9 +2.0
comp=Z,11nm,0.9s,baz=55,slow=5.3,SNR=6.0
NWAO Narrogin (SRO) 38.67 218 eP **P** **12 20 55.7 +1.9**
NWAO pmax pmax
comp=Z,61nm,1.3s
NWAO Narrogin (SRO) 38.67 218 eP **P** **12 20 53.5 -0.3**
comp=Z,61nm,1.3s,mb5.2
JNU Nakatsue 38.67 342 S **P** **12 20 50.7 -3.0**
MUN Mundaring 38.68 220 eP **P** **12 20 52.4 -1.4**
JOD2 Odawara 2 38.96 353 S **P** **12 20 52.3 -3.8**
JAD Aida 39.50 347 S **P** **12 21 01.4 +0.8**
JWT Wachi 39.56 348 S **P** **12 20 59.1 -2.1**
JRY Ryogami san 39.72 353 S **P** **12 21 00.3 -2.2**
JHS Saijyo 39.80 346 S **P** **12 21 03.8 +0.6**
MJAR Matsushiro Arr 40.33 352 P **P** **12 21 06.2 -1.3**
comp=Z,16nm,1.1s,mb4.7,baz=176,slow=8.2,SNR=13
MJAR PcP PcP 12 23 11.7 +0.7
comp=Z,5.7nm,0.9s,baz=180,slow=2.8,SNR=6.8
MAJO Matsushiro 40.33 352 eP **P** **12 21 07.5 0.0**
MAJO pmax pmax
comp=Z,196nm,1.8s,mb5.5
MAJO Matsushiro 40.33 352 eP **P** **12 21 07.5 0.0**
comp=Z,196nm,1.8s,mb5.5
MAT Matsushiro 40.33 352 P **P** **12 21 04.8 -2.7**
MAT Matsushiro 40.33 352 eS **P** **12 21 07.4 -0.1**
QIZ Qiongzhong 40.72 305 P **P** **12 21 11.1 +0.1**
QIZ S **S** **12 27 21.6 0.0**
QIZ AMB AMB
comp=Z,57nm,1.4s,mb5.0
QIZ LR LR
comp=E,2µm,17.3s
QIZ LR LR
comp=Z,4µm,18.1s,MS5.3
SSE Sheshan 40.95 329 P **P** **12 21 15.3 +2.5**
SSE AMB AMB
comp=Z,64nm,0.9s,mb5.2
SSE AMB AMB
comp=Z,276nm,3.1s
JMM Marumori 41.37 356 S **P** **12 21 14.0 -2.1**
JSD Sado 41.80 353 S **P** **12 21 14.8 -4.8**
JYA Atsumi 42.19 355 S **P** **12 21 21.1 -1.6**
NJ2 Nanjing 42.93 328 eP **P** **12 21 32.0 +3.1**
NJ2 AP pP 12 21 40.6 +8.6
NJ2 XP sP 12 21 44.7 +11
NJ2 PP PP 12 23 13.5 +4.8
NJ2 S **S** **12 27 54.0 0.0**
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
NJ2 AMB AMB
comp=Z,570nm,4.7s
NJ2 LR LR
comp=N,1µm,27.5s,MS5.0
NJ2 LR LR
comp=E,2µm,25.4s,MS5.0
NJ2 LR LR
comp=Z,2µm,25.4s,MS4.9
JOM Ohasama 42.94 357 S **P** **12 21 27.4 -1.4**
KSRS Korea Array 43.59 341 P **P** **12 21 33.1 -1.1**
comp=Z,9.6nm,0.7s,mb4.6,baz=160,slow=8.8,SNR=17
KSRS PcP PcP 12 23 23.2 +1.5
comp=Z,5.9nm,0.9s,baz=162,slow=4.8,SNR=7.4
KSRS LR LR 12 36 19.7
comp=Z,4µm,20.9s,MS5.3,baz=151,slow=32
INCN Inchon 44.05 340 eP **P** **12 21 37.4 -0.5**
comp=Z,77nm,1.1s,mb5.3
JTM Tenmabayashi 44.26 356 S **P** **12 21 36.3 -3.2**
WHN Wuhan 44.41 322 ⇑P **P** **12 21 43.4 +2.5**
WHN S **S** **12 28 21.0 +5.2**
WHN LR LR
comp=N,3µm,11.5s,MS5.5
WHN LR LR
comp=E,3µm,12.0s,MS5.5
WHN LR LR
comp=Z,6µm,15.3s,MS5.6
URZ Urewera 45.65 143 P **P** **12 21 53.5 +2.8**
comp=Z,16nm,0.7s,mb5.1,baz=192,slow=22,SNR=5.8
JSH Shimam 46.18 356 S **P** **12 21 53.1 -1.6**
JEW Eniwo 46.28 357 S **P** **12 21 56.6 +1.1**
RPZ Rata Peaks 46.43 153 P **P** **12 21 59.4 +2.7**
comp=Z,43nm,1.0s,mb5.3,baz=34,slow=8.3,SNR=6.5
GYA Guiyang 47.11 312⇓iP **P** **12 22 03.2 +0.9**
GYA AP pP 12 22 13.1 +7.6
GYA XP sP 12 22 18.1 +11
GYA PCP PcP 12 23 36.5 +2.3
GYA PP PP 12 23 53.0 -0.3
GYA PPP 12 24 41.5
GYA SCP ScP 12 27 25.1 -3.3
GYA S **S** **12 28 53.7 -1.2**
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,670nm,7.0s
GYA LR LR
comp=N,700nm,13.0s,MS5.2
GYA LR LR
comp=E,2µm,13.5s,MS5.2
GYA LR LR
comp=Z,2µm,14.4s,MS5.1
DL2 Dalian 47.20 336 eP **P** **12 22 06.1 +3.3**
DL2 eS **S** **12 28 58.8 +3.1**
DL2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
DL2 AMB AMB
comp=Z,180nm,3.5s
DL2 LR LR
comp=N,940nm,16.1s
DL2 LR LR
comp=Z,1µm,19.0s,MS4.9
JMP Maruseppu 47.38 359 S **P** **12 22 01.5 -2.6**
ASAJ Asahikawa 47.51 358 P **P** **12 22 05.2 0.0**
comp=Z,62nm,1.1s,mb5.5,baz=228,slow=12,SNR=6.3
ASAJ Asahikawa 47.51 358 P **P** **12 22 05.2 +0.1**
ASAJ pmax pmax
comp=Z,62nm,1.1s
ASAJ Asahikawa 47.51 358 S **P** **12 22 04.2 -0.9**
NST Nakhon Sawan 47.75 295 P **P** **12 22 07.8 +0.4**
SNY Shenyang 48.99 339 ⇑P **P** **12 22 18.2 +1.6**
SNY AMB AMB
comp=Z,43nm,1.2s,mb5.3
KMI Kunming 49.44 308 P **P** **12 22 23.7 +3.4**
KMI AP pP 12 22 33.9 +10
KMI XP sP 12 22 38.0 +13
KMI PCP PcP 12 23 44.4 +1.8
KMI PP PP 12 24 19.4 +4.8
KMI S **S** **12 29 28.1 +0.3**
KMI XS sS 12 29 44.8 +12
KMI SCS ScS 12 32 09.3 -3.6
KMI SS SS 12 32 55.8 -4.1
KMI AMB AMB
comp=Z,29nm,1.5s,mb5.1
KMI AMB AMB
comp=Z,816nm,4.7s
KMI LR LR
comp=N,1µm,18.6s,MS5.2
KMI LR LR
comp=E,2µm,17.5s,MS5.2
KMI LR LR
comp=Z,2µm,16.3s,MS5.2
CHRT Chiangrai 49.59 300 ⇑P **P** **12 22 22.5 +1.0**
comp=Z,579nm,0.7s,mb6.7
MDJ Mudanjiang 49.77 346 P **P** **12 22 22.4 -0.1**
MDJ AP pP 12 22 30.7 +5.1
MDJ XP sP 12 22 34.1 +7.2
MDJ PCP PcP 12 23 43.4 0.0
MDJ SCP ScP 12 27 36.3 -3.0
MDJ PCS PcS 12 27 39.9 -0.1
MDJ S **S** **12 29 27.4 -4.4**
MDJ AMB AMB
comp=Z,18nm,1.7s,mb4.8
MDJ AMB AMB
comp=Z,531nm,8.2s
MDJ LR LR
comp=N,2µm,22.9s,MS5.1
MDJ LR LR
comp=E,1µm,25.0s,MS5.1
MDJ LR LR
comp=Z,2µm,22.2s,MS5.1
MDJ Mudanjiang 49.77 346 eP **P** **12 22 22.5 0.0**
comp=Z,39nm,1.4s,mb5.2
CMAR Chiang Mai Arr 49.79 298 P **P** **12 22 22.3 -0.8**
comp=Z,66nm,0.8s,mb5.7,baz=119,slow=6.0,SNR=32
CMAR Chiang Mai Arr 49.79 298⇑eP **P** **12 22 24.0 +0.9**
CHTO Chiang Mai 49.92 298 eP **P** **12 22 24.5 +0.4**
CHTO pmax pmax
comp=Z,119nm,1.1s,mb5.8
CHTO Chiang Mai 49.92 298 eP **P** **12 22 24.5 +0.4**
comp=Z,119nm,1.1s,mb5.8
CN2 Changchun 50.14 342 eP **P** **12 22 26.0 +0.7**
CN2 eXP sP 12 22 39.8 +10
CN2 PCP PcP 12 23 45.5 +0.8
CN2 AMB AMB
comp=Z,20nm,1.4s,mb5.0
CN2 AMB AMB
comp=Z,800nm,5.0s
CN2 LR LR
comp=N,2µm,15.0s,MS5.4
CN2 LR LR
comp=E,2µm,15.0s,MS5.4
CN2 LR LR
comp=Z,3µm,16.0s,MS5.4
XAN Xi'an 50.15 321 P **P** **12 22 26.9 +1.3**
XAN AP pP 12 22 36.7 +8.0
XAN PP PP 12 24 23.2 +2.2
XAN PPP 12 25 20.0
XAN S **S** **12 29 38.8 +1.3**
XAN AMB AMB
comp=Z,119nm,1.5s,mb5.7
XAN LR LR
comp=N,594nm,21.9s,MS4.8
XAN LR LR
comp=E,894nm,18.6s,MS4.8
XAN LR LR
comp=Z,2µm,18.6s,MS5.1
YSS Yuzh-Sakhalins 50.34 359 eP **P** **12 22 24.4 -2.4**
YSS pmax pmax
comp=Z,250nm,1.6s,mb6.0
YSS pmax pmax
comp=Z,900nm,4.0s
YSS Yuzh-Sakhalins 50.34 359 eP **P** **12 22 25.4 -1.4**
comp=Z,88nm,1.2s,mb5.7
BJT Baijiatuau 50.52 332 eP **P** **12 22 29.1 +0.9**
BJT pmax pmax
comp=Z,143nm,1.4s
BJT Baijiatuau 50.52 332 eP **P** **12 22 29.1 +0.8**
comp=Z,143nm,1.4s,mb5.7
BJI Beijing 50.53 332 P **P** **12 22 27.3 -1.1**
BJI AMB AMB
comp=Z,42nm,1.6s,mb5.1
CD2 Chengdu 51.71 315⇑iP **P** **12 22 37.8 +0.4**
CD2 AP pP 12 22 47.8 +7.3
CD2 XP sP 12 22 51.5 +10
CD2 PCP PcP 12 23 50.8 0.0
CD2 PP PP 12 24 36.3 +1.2
CD2 PCS PcS 12 27 47.3 -1.6
CD2 S **S** **12 29 57.4 -1.8**
CD2 XS sS 12 30 14.0 +10
CD2 SCS ScS 12 32 22.1 -6.1
CD2 SS SS 12 33 32.5 -3.4
CD2 AMB AMB
comp=Z,160nm,1.0s,mb5.9
CD2 AMB AMB
comp=Z,540nm,5.9s
CD2 LR LR
comp=N,2µm,16.8s,MS5.5
CD2 LR LR
comp=E,3µm,14.4s,MS5.5
CD2 LR LR
comp=Z,2µm,16.7s,MS5.3
HABR Khabarovsk 52.48 352 eP **P** **12 22 41.7 -1.0**
HABR e*SP sP 12 22 55.7 +8.6
HABR e 12 23 51.4
HABR eS **S** **12 30 07.0 -2.1**
HABR e*SS sS 12 30 24.0 +10
HHC Hu-ho-hao-te 53.41 329 eP **P** **12 22 51.5 +1.7**

HHC AP pP 12 23 02.1 +9.1
HHC XP sP 12 23 05.9 +12
HHC PCP PcP 12 23 57.0 0.0
HHC PP PP 12 24 53.9 +3.5
HHC PCS PcS 12 27 54.8 -1.1
HHC S **S** **12 30 22.3 +0.2**
HHC XS sS 12 30 39.0 +12
HHC SCS ScS 12 32 35.5 -4.2
HHC SS SS 12 34 03.5 +1.0
HHC AMB AMB
comp=Z,48nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,785nm,5.0s
HHC LR LR
comp=N,2µm,16.7s,MS5.3
HHC LR LR
comp=E,1µm,21.4s,MS5.3
HHC LR LR
comp=Z,3µm,17.8s,MS5.4
LZH Lanzhou 54.67 320 ⇑P **P** **12 23 02.0 +2.9**
LZH AP pP 12 23 12.4 +10
LZH XP sP 12 23 15.8 +12
LZH PP PP 12 25 07.0 +5.2
LZH S **S** **12 30 39.0 -0.3**
LZH SS SS 12 34 22.0 -0.5
LZH AMB AMB
comp=Z,361nm,1.5s,mb6.2
LZH AMB AMB
comp=Z,1µm,4.3s
LZH LR LR
comp=N,4µm,14.8s
LZH LR LR
comp=Z,4µm,16.4s,MS5.6
HIA Hailar 56.80 341 *e*P **P** **12 23 13.5 -0.7**
HIA pmax pmax
comp=Z,74nm,1.0s
HIA Hailar 56.80 341 *e*P **P** **12 23 13.4 -0.7**
comp=Z,74nm,1.0s,mb5.7
PEA0B Petropavlovsk- 57.59 9 *e*P **P** **12 23 18.2 -1.5**
PETK Petropavlovsk- 57.59 9 P **P** **12 23 18.4 -1.3**
comp=Z,53nm,0.8s,mb5.6,baz=165,slow=4.5,SNR=19
PETK PcP PcP 12 24 13.7 +0.8
comp=Z,14nm,0.8s,baz=175,slow=3.9,SNR=4.6
PETK Petropavlovsk- 57.59 9 P **P** **12 23 18.4 -1.3**
PETK PcP PcP 12 24 13.7 +0.8
PET Petropavlovsk 57.68 10 *e*P **P** **12 23 19.8 -0.5**
PET pmax pmax
comp=Z,72nm,1.0s,mb5.7
PET MLR MLR
comp=Z,1µm,14.0s,MS5.2
PET MLR MLR
comp=Z,1µm,20.0s
PET Petropavlovsk 57.68 10 *e*P **P** **12 23 19.4 -0.9**
comp=Z,75nm,1.1s,mb5.6
GTA Gaotai 59.21 321 P **P** **12 23 31.5 +0.2**
GTA AP pP 12 23 41.9 +7.5
GTA XP sP 12 23 46.0 +10
GTA S **S** **12 31 32.1 -7.1**
GTA AMB AMB
comp=Z,23nm,1.4s,mb5.0
GTA AMB AMB
comp=Z,626nm,5.4s
GTA LR LR
comp=N,1µm,19.5s,MS5.1
GTA LR LR
comp=E,825nm,19.2s,MS5.1
GTA LR LR
comp=Z,1µm,20.1s,MS5.0
LSA Lhasa 60.69 307 *e*P **P** **12 23 42.9 +1.3**
ULN Ulaanbaatar 60.74 332 *i*P **P** **12 23 42.9 +1.3**
ULN Ulaanbaatar 60.74 332 *e*P **P** **12 23 42.2 +0.6**
comp=Z,164nm,1.3s,mb6.0
SONM Songino Array 61.03 332 P **P** **12 23 42.9 -0.7**
comp=Z,27nm,0.9s,mb5.4,baz=142,slow=5.0,SNR=18
SONM PKP2bc 12 53 10.2
comp=Z,7.0nm,1.2s,baz=350,slow=7.5,SNR=12
SONM Songino Array 61.03 332 P **P** **12 23 42.9 -0.7**
SONM ⇑*e* 12 53 10.2
FX1 Attu Island--F 61.28 19 P **P** **12 23 45.2 +0.1**
comp=Z,50nm,0.7s,mb5.8,baz=330,slow=3.8,SNR=11
KIP Kipapa 61.63 63 *e*P **P** **12 23 49.1 +0.9**
KIP pmax pmax
comp=Z,210nm,1.1s,mb6.2
KIP Kipapa 61.63 63 *e*P **P** **12 23 49.1 +0.9**
comp=Z,210nm,1.1s,mb6.2
CLNS Chul'man 62.27 348 *e*P **P** **12 23 52.1 +0.4**
CLNS *e**PP pP 12 24 05.4 +10
CLNS *e* 12 24 27.7
CLNS *e* 12 26 07.9
CLNS *e*PPP 12 27 36.1
CLNS *e*S **S** **12 32 19.6 +2.0**
CLNS pmax pmax
comp=Z,65nm,1.4s,mb5.6
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=N,69nm,1.4s
CLNS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
CLNS pmax pmax
comp=N,9.0nm,1.3s
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS smax
comp=N,359nm,12.0s
CLNS smax
comp=E,265nm,11.3s
CLNS MLR MLR
comp=Z,646nm,14.0s,MS4.9
CLNS MLR MLR
comp=N,509nm,13.0s,MS5.0
CLNS MLR MLR
comp=E,565nm,16.0s,MS5.0
TAPN Taplejung 62.62 303 *e*P **P** **12 23 53.8 -0.9**
comp=E,125nm,1.1s,mb6.0
ODAN Odare 62.73 303 *e*P **P** **12 23 55.8 +0.4**
comp=E,204nm,1.0s,mb6.2
DRV Dumont d'Urvil 63.03 182 P **P** **12 24 01.0 +4.3**
DRV S **S** **12 32 26.0 -1.1**
DRV SS SS 12 36 32.0 -0.7
DRV R 12 44 00.0
RAMN Ramite 63.42 302 *e*P **P** **12 24 00.4 +0.4**
comp=E,78nm,0.8s,mb5.9
JIRN Jiri 64.00 303 *e*P **P** **12 24 04.2 +0.3**
comp=E,151nm,1.2s,mb5.9
ZAK Zakamensk 64.28 332 *e*P **P** **12 24 06.5 +1.3**
ZAK pmax pmax
comp=Z,135nm,1.1s,mb5.9
GUN Gumba 64.34 303 *e*P **P** **12 24 06.4 +0.3**
comp=Z,363nm,1.2s,mb6.3
PKI Pulchoki 64.62 303 *e*P **P** **12 24 07.9 -0.1**
comp=Z,317nm,1.4s,mb6.2
PKI Pulchoki 64.62 303 *e*P **P** **12 24 07.9 -0.1**
PKI pmax pmax
comp=Z,317nm,1.4s,mb6.2
KKN Kakani 64.80 303 *e*P **P** **12 24 09.2 +0.1**
comp=Z,266nm,1.0s,mb6.2
KKN Kakani 64.80 303 *e*P **P** **12 24 09.2 +0.1**
KKN pmax pmax
comp=Z,266nm,1.0s,mb6.2
DMN Daman 64.89 303 *e*P **P** **12 24 10.2 +0.5**
comp=Z,348nm,1.1s,mb6.3
TLY Talaya 65.01 333 P **P** **12 24 12.3 +2.4**
comp=Z,441nm,1.2s,mb6.4,SNR=13
TLY Talaya 65.01 333 *e*P **P** **12 24 11.2 +1.3**
TLY pmax pmax
comp=Z,118nm,1.2s,mb5.8
TLY Talaya 65.01 333 *e*P **P** **12 24 12.0 +2.0**
comp=Z,118nm,1.2s,mb5.8
IRK Irkutsk 65.13 334 *e*P **P** **12 24 11.5 +0.8**
IRK pmax pmax
comp=Z,95nm,1.5s,mb5.6
GKN Gorkha 65.41 303 *e*P **P** **12 24 13.3 +0.2**
comp=Z,377nm,1.1s,mb6.3
BOD Bodaibo 65.89 343 *e*P **P** **12 24 14.1 -1.4**
BOD pmax pmax
comp=Z,42nm,1.3s,mb5.3
KOLN Koldanda 66.21 302 *e*P **P** **12 24 18.5 +0.3**
comp=Z,252nm,0.8s,mb6.3
DANN Dangsing 66.25 303 *e*P **P** **12 24 18.6 +0.1**
comp=Z,268nm,1.0s,mb6.2
YAK Yakutsk 66.39 353 *e*P **P** **12 24 17.6 -1.1**
YAK *e**PP pP 12 24 27.9 +6.0
YAK *e* 12 24 44.3
YAK *e* 12 26 43.9
YAK *e*PPP 12 28 16.1

YAK *e*S S 12 33 08.1 -0.4
YAK *e**SS sS 12 33 25.3 +11
YAK *e* 12 34 16.7
YAK *e*SS SS 12 37 26.3 +1.0
YAK pmax pmax
comp=Z,202nm,1.5s,mb5.9
YAK pmax pmax
comp=N,84nm,1.4s
YAK pmax pmax
comp=E,20nm,1.2s
YAK pmax pmax
comp=Z,151nm,3.4s
YAK smax
comp=N,231nm,3.5s
YAK smax
comp=E,157nm,3.1s
YAK MLR MLR
comp=Z,849nm,15.0s,MS5.1
YAK MLR MLR
comp=E,535nm,20.0s
YAK MLR MLR
comp=N,626nm,14.0s
YAK Yakutsk 66.39 353 *e*P **P** **12 24 18.1 -0.6**
comp=N,141nm,0.9s,mb6.0
SEY Seymchan 66.62 4 *i*P **P** **12 24 21.7 +1.6**
HYB Hyderabad 68.15 290 *i*P **P** **12 24 29.5 -1.2**
HYB Hyderabad 68.15 290 *e*P **P** **12 24 29.5 -1.2**
WMQ Urumqi 69.25 320 P **P** **12 24 38.9 +1.8**
WMQ PP PP 12 27 14.6 +4.4
WMQ S S 12 33 40.9 -2.6
WMQ XS sS 12 33 59.5 +11
WMQ PS 12 34 11.2
WMQ SCS ScS 12 34 33.8 -4.5
WMQ SS SS 12 38 09.7 -0.6
WMQ AMB AMB
comp=Z,92nm,1.6s,mb5.5
WMQ AMB AMB
comp=Z,401nm,3.0s
WMQ LR LR
comp=N,1µm,15.5s,MS5.4
WMQ LR LR
comp=E,1µm,15.5s,MS5.4
WMQ LR LR
comp=Z,671nm,19.0s,MS4.9
MIR Mirnyy 72.15 199 *e*P **P** **12 24 51.0 -3.3**
MIR pmax pmax
comp=Z,200nm,2.0s,mb5.7
BILL Bilibino 73.10 8 *e*P **P** **12 25 01.0 +1.1**
BILL *PP pP 12 25 11.0 +7.8
BILL *SP sP 12 25 14.0 +10
BILL *e*SS SS 12 39 05.4 -3.0
BILL pmax pmax
comp=Z,54nm,1.5s,mb5.3
BILL MLR MLR
comp=Z,800nm,16.0s,MS5.1
BILL Bilibino 73.10 8 *e*P **P** **12 25 00.5 +0.6**
comp=Z,48nm,1.3s,mb5.3
MK31 Makanchi Array 73.97 321 *e*P **P** **12 25 05.4 0.0**
MKAR Makanchi Array 73.97 321 P **P** **12 25 04.9 -0.5**
comp=Z,32nm,0.9s,mb5.2,baz=106,slow=7.1,SNR=21
VNDA Vanda 74.47 176 P **P** **12 25 07.0 -0.9**
comp=Z,6.7nm,0.8s,mb4.7,baz=323,slow=6.6,SNR=15
VNDA Vanda 74.47 176 P **P** **12 25 07.0 -0.9**
VNDA pmax pmax
comp=Z,7.0nm,0.8s
VNDA Vanda 74.47 176 *e*P **P** **12 25 06.2 -1.7**
SBA Scott Base 75.16 175 *e*P **P** **12 25 14.5 +2.7**
SBA Scott Base 75.16 175 *e*P **P** **12 25 12.6 +0.7**
ZAA0 Zalesovo Array 75.58 328 *e*P **P** **12 25 13.2 -1.4**
ZALV Zalesovo Beam 75.58 328 P **P** **12 25 12.2 -2.5**
comp=Z,68nm,0.8s,mb5.6,baz=106,slow=5.0,SNR=30
TIXI Tiksi 75.77 355 ⇑*e*P **P** **12 25 14.7 -0.7**
TIXI pmax pmax
comp=Z,66nm,1.5s,mb5.3
TIXI Tiksi 75.77 355 *e*P **P** **12 25 14.8 -0.6**
comp=Z,46nm,1.0s,mb5.4
KSH Kashi 75.81 312 P **P** **12 25 21.5 +5.2**
KSH AP pP 12 25 31.8 +12
KSH PCP PcP 12 25 33.2 +4.3
KSH XP sP 12 25 35.7 +15
KSH PP PP 12 28 14.6 +8.2
KSH PPP 12 30 02.2
KSH S S 12 35 03.6 +5.0
KSH XS sS 12 35 20.3 +16
KSH AMB AMB
comp=Z,11nm,1.3s,mb4.6
KSH AMB AMB
comp=Z,106nm,3.7s
KSH LR LR
comp=N,121nm,10.9s,MS4.8
KSH LR LR
comp=E,262nm,15.1s,MS4.8
NVS Novosibirsk 76.81 329 ⇑*i*P **P** **12 25 19.3 -2.3**
NVS *e*S S 12 34 57.8 -11
NVS pmax pmax
comp=Z,324nm,1.7s,mb6.0
NVS pmax pmax
comp=N,142nm,1.6s
NVS pmax pmax
comp=E,190nm,1.6s
NVS smax
comp=N,28nm,3.0s
NVS smax
comp=E,60nm,3.4s
KZA Kyzart 77.08 314 P **P** **12 25 24.5 +1.1**
SNR=16
TKM2 Tokmak 2 77.08 315 *e*P **P** **12 25 27.2 +3.8**
TKM2 Tokmak 2 77.08 315 P **P** **12 25 26.9 +3.4**
SNR=5.6
TKM2 Tokmak 2 77.08 315 *e*P **P** **12 25 26.3 +2.9**
UCH Uchtor 77.64 314 *e*P **P** **12 25 27.7 +1.1**
comp=E,32nm,1.3s,mb5.1
CHMS Chumysh 77.70 315 P **P** **12 25 29.9 +3.0**
SNR=11
KURK Kurchatov 77.71 324 P **P** **12 25 28.3 +1.6**
comp=E,612nm,1.1s,mb6.5,SNR=14
KURK Kurchatov 77.71 324 P **P** **12 25 26.2 -0.5**
comp=E,27nm,1.0s,mb5.1,baz=110,slow=5.3,SNR=20
KURK LR LR 12 59 55.8
comp=E,770nm,19.8s,MS5.0,baz=75,slow=36
KURK Kurchatov 77.71 324 *e*P **P** **12 25 28.4 +1.6**
KURK Kurchatov 77.71 324 *e*P **P** **12 25 26.4 -0.4**
AAK Ala-Archa 77.77 315 P **P** **12 25 30.9 +3.6**
SNR=10
AAK Ala-Archa 77.77 315 *e*P **P** **12 25 29.5 +2.2**
USP Ospenovka 77.95 315 P **P** **12 25 28.9 +0.7**
SNR=13
AML Almayashu 78.20 314 P **P** **12 25 31.7 +2.0**
SNR=15
AML Almayashu 78.20 314 *e*P **P** **12 25 29.4 -0.3**
EKS2 Erkin-Say 78.29 315 P **P** **12 25 30.1 -0.1**
SNR=9.1
EKS2 Erkin-Say 78.29 315 *e*P **P** **12 25 30.4 +0.2**
comp=E,40nm,1.1s,mb5.3
KDAK Kodiak Island 79.06 29 P **P** **12 25 35.4 +1.3**
comp=E,30nm,0.9s,mb5.2,baz=242,slow=4.3,SNR=4.1
SVW2 Sparrevohn 79.19 25 *e*P **P** **12 25 36.7 +2.1**
KBL Kabul 79.98 306 *e*P **P** **12 25 41.7 +2.1**
KBL pmax pmax
comp=Z,14nm,0.9s,mb4.9
KBL Kabul 79.98 306 *e*P **P** **12 25 39.3 -0.3**
comp=Z,14nm,0.9s,mb4.9
PPLA Purkeypile 81.43 24 *e*P **P** **12 25 44.7 -2.1**
comp=Z,24nm,0.9s,mb5.1
RC01 Rabbit Creek A 81.74 27 *e*P **P** **12 25 47.8 -0.6**
comp=Z,46nm,1.1s,mb5.3
CHUM Lake Minchumin 81.81 24 *e*P **P** **12 25 47.8 -0.9**
comp=Z,114nm,1.0s,mb5.8
PMR Palmer 82.21 26 *e*P **P** **12 25 51.4 +0.5**
PMR pmax pmax
comp=Z,69nm,0.3s,mb6.1
PMR Palmer 82.21 26 *e*P **P** **12 25 51.4 +0.5**
comp=Z,70nm,0.3s,mb6.1
KTH Kantishna Hill 82.23 24 *e*P **P** **12 25 50.7 -0.2**
comp=Z,93nm,1.4s,mb5.5
TRF Thorofare Moun 82.45 24 *e*P **P** **12 25 51.2 -0.9**
comp=Z,20nm,0.9s,mb5.0
MCK McKinley 83.11 24 *e*P **P** **12 25 55.2 -0.3**
BVAR Borovoye Array 83.28 324 P **P** **12 25 56.1 -0.5**
comp=Z,88nm,0.8s,mb5.8,baz=111,slow=5.1,SNR=35
BRVK Borovoye 83.35 324 P **P** **12 25 59.2 +2.2**
comp=Z,756nm,0.9s,mb6.7,SNR=12
BRVK Borovoye 83.35 324 *e*P **P** **12 25 56.0 -1.0**
MAW Mawson 83.45 202 P **P** **12 25 55.8 -1.4**
comp=Z,14nm,0.6s,mb5.2,baz=84,slow=7.8,SNR=8.4
MAW Mawson 83.45 202 *e*P **P** **12 25 56.3 -1.0**

MAW pmax pmax
comp=Z,21nm,0.8s
MAW Mawson 83.45 202 *e*P **P** **12 25 56.1 -1.1**
comp=Z,4.1nm,0.8s,mb4.5
COLA College 83.98 23 *i*P **P** **12 25 59.4 -0.6**
COLA College 83.98 23 *e*P **P** **12 25 58.8 -1.2**
comp=Z,52nm,1.1s,mb5.6
COLD Coldfoot 84.02 21 *e*P **P** **12 26 00.8 +0.6**
MENT Mentasta 85.05 26 *e*P **P** **12 26 05.2 -0.2**
QSPA South Pole Qui 86.37 180 P **P** **12 26 11.4 -0.3**
comp=Z,22nm,1.0s,mb5.3,baz=350,slow=1.4,SNR=11
EGAK Eagle 86.66 24 *e*P **P** **12 26 13.2 -0.2**
comp=Z,49nm,1.3s,mb5.6
DAWY Dawson 87.22 25 *e*P **P** **12 26 16.3 +0.2**
SKAG Skagway 88.15 30 *e*P **P** **12 26 21.7 +1.0**
SVE Sverdlovsk 89.53 327 *e*P **P** **12 26 28.0 +0.8**
SVE pmax pmax
comp=Z,32nm,1.5s,mb5.4
INK Inuvik 90.39 22 *e*P **P** **12 26 30.6 -0.4**
AKTK Aktyubinsk 90.40 320 P **P** **12 26 28.9 -2.5**
AKTO Aktyubinsk 90.40 320 P **P** **12 26 28.9 -2.5**
comp=Z,16nm,0.8s,mb5.4,baz=89,slow=4.2,SNR=21
ARU Arti 90.62 326 *c i*P **P** **12 26 32.1 -0.2**
ARU 12 30 07.2
ARU S SKSac 12 37 00.5 -3.5
ARU SS SS 12 43 25.0 -4.5
ARU pmax pmax
comp=Z,33nm,1.6s,mb5.4
ARU Arti 90.62 326 *e*P **P** **12 26 31.7 -0.6**
SYO Syowa Base 91.93 200 ⇓*e*P **P** **12 26 35.2 -3.0**
SYO Syowa Base 91.93 200 ⇓*i*PcP PcP 12 26 40.4 +1.4
YBH Yreka Blue Hor 94.56 49 P **P** **12 26 52.9 +2.0**
comp=Z,1.9nm,0.8s,mb4.6,baz=254,slow=8.0,SNR=3.6
WDC Whiskeytown Da 94.68 50 *e*P **P** **12 26 53.5 +2.0**
JCW Jim Creek 95.14 42 *e*P **P** **12 26 49.7 -3.7**
RSW Rattlesnake Hi 96.77 44 *e*P **P** **12 27 03.1 +2.3**
MIB Mutribah 97.85 299 *e*P **P** **12 27 04.0 -2.1**
MIB AMb AMB 12 27 09.4
comp=Z,31nm,1.2s,mb5.7
NAY Al-Naaiem 97.94 299 *e*P **P** **12 27 04.2 -2.3**
NAY AMb AMB 12 27 10.2
comp=Z,21nm,1.0s,mb5.6
NVAR Mina Array Bea 97.97 52 P **P** **12 27 07.8 +1.3**
comp=Z,1.1nm,0.8s,mb4.5,baz=269,slow=6.1,SNR=6.7
NVAR Mina Array Bea 97.97 52 P **P** **12 27 07.8 +1.3**
YKA Yellowknife Ar 98.27 27 P **P** **12 27 06.8 -0.4**
comp=Z,3.3nm,0.9s,mb4.9,baz=281,slow=4.6,SNR=21
YKA PP PP 12 31 05.9 -0.8
comp=Z,2.5nm,1.2s,baz=274,slow=7.6,SNR=4.9
YKA PKiKP PKiKP 12 31 39.6 -0.1
comp=Z,0.5nm,0.7s,baz=282,slow=1.3,SNR=4.2
YKA PKKPbc PKKPbc 12 43 37.9 -3.4
comp=Z,0.7nm,0.7s,baz=94,slow=3.0,SNR=10
YKA Yellowknife Ar 98.27 27 P **P** **12 27 06.8 -0.4**
YKA PP PP 12 31 06.0 -0.8
BMO Blue Mountains 98.44 45 *e*P **P** **12 27 09.6 +1.2**
KIV Kislovodsk 100.87 314 *e*P Pdif 12 27 22.7 +3.7
KIV *e* 12 31 30.3
KIV *e*SS SS 12 45 58.3 +2.8
KIV pmax pmax
comp=Z,6.0nm,0.9s
APA Apatity 101.20 339 ⇑*e*P Pdif 12 27 18.4 -2.1
APA MLR MLR
comp=Z,2µm,17.0s,MS5.6
BOZ Bozeman (W) 102.35 44 *e*P Pdif 12 27 34.2 +8.6
BOZ pmax pmax
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 103.15 342 Pdiff Pdif 12 27 29.1 -0.1
comp=Z,4.2nm,0.8s,baz=339,slow=6.5,SNR=4.3
PDAR Pinedale Array 104.23 47 Pdiff Pdif 12 27 36.1 +2.2
comp=Z,0.6nm,0.8s,baz=248,slow=1.6,SNR=4.2
PDAR PP PP 12 31 50.9 -1.5
comp=Z,2.3nm,1.1s,baz=256,slow=4.4,SNR=7.6
BRTR Keskin Array B 108.16 311 PKiKP PKiKP 12 32 00.7 +2.1
comp=Z,1.7nm,0.9s,baz=130,slow=1.9,SNR=5.3
BRTR PP PP 12 32 22.1 +0.6
comp=Z,1.5nm,0.8s,baz=92,slow=2.8,SNR=4.0
AKASG Malin Array Be 108.51 323 PP PP 12 32 24.4 +0.9
comp=Z,4.3nm,0.9s,baz=63,slow=6.7,SNR=8.5
TXAR Lajitas Array 110.89 60 PKiKP PKiKP 12 32 05.2 +1.2
comp=Z,1.2nm,0.9s,baz=346,slow=0.5,SNR=7.7
TXAR PKKPab PKKPab 12 43 11.2 -0.6
comp=Z,1.8nm,0.9s,baz=129,slow=6.5,SNR=9.5
MLR Muntele Rosu 112.22 318 PKiKP PKiKP 12 32 08.8 +2.8
comp=Z,3.6nm,0.7s,baz=201,slow=9.0,SNR=4.9
MLR PP PP 12 32 56.0 +5.5
comp=Z,5.4nm,0.9s,baz=14,slow=6.5,SNR=3.8
NOA NORSAR Array B 112.73 337 PKKPbc PKKPbc 12 42 58.3 +1.3
comp=Z,1.0nm,0.7s,baz=207,slow=1.8,SNR=4.0
KOLS Kolonicke sedl 113.34 323 *e*PKP PKiKP 12 32 09.0 +1.0
KOLS Kolonicke sedl 113.34 323 *e*P PKiKP 12 32 09.1 +1.1
CRVS Cervenica-Dubn 113.84 323 *e*PKP PKiKP 12 32 09.3 +0.3
CRVS Cervenica-Dubn 113.84 323 *e* PKiKP 12 32 09.3 +0.3
JCT Junction City 114.02 58 *e*PKIKP PKiKP 12 32 10.5 +0.6
LSZ Lusaka 114.10 252 *e*PKIKP PKiKP 12 32 13.9 +3.5
BRG Berggiesshubel 117.25 327 *e*P PKPdf 12 32 16.7 +1.2
comp=Z,8.0nm,1.1s
BRG *e* 12 32 19.0
comp=Z,27nm,1.5s
BRG *e* 12 33 15.9
comp=Z,33nm,1.9s
CLL Collm 117.53 328 *e*PKIKP PKPdf 12 32 19.0 +3.0
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 117.53 328 *e*PKPdf PKPdf 12 32 17.0 +1.0
CLL *i* pPKPdf pPKPdf 12 32 19.3 -0.1
comp=Z,12nm,1.0s
MIAR Mount Ida 118.20 53 *e*PKIKP PKPdf 12 32 19.1 +1.3
KHC Kasperske Hory 118.36 326 *i* PKIKP PKPdf 12 32 19.4 +1.8
KHC Kasperske Hory 118.36 326 *e*PKP PKPdf 12 32 19.0 +1.4
GEC2 GERESS Array S 118.43 325 *e*PKIKP PKPdf 12 32 18.8 +1.0
GERES GERESS Array B 118.43 325 PKP PKPdf 12 32 16.0 -1.8
comp=Z,3.4nm,0.8s,baz=48,slow=2.0,SNR=14
GERES PP PP 12 33 37.3 +3.4
comp=Z,0.2nm,0.3s,baz=35,slow=4.9,SNR=5.4
SOKA Soboth 118.72 323 ⇑*i*PKiKP PKiKP 12 32 19.7 +1.2
comp=Z,1.1nm,1.1s
CCM Cathedral Cave 118.91 48 *e*PKIKP PKPdf 12 32 18.1 -0.9
ABTA Abfaltersbach 120.19 324 ⇑*i*PKiKP PKiKP 12 32 22.1 +0.8
comp=Z,1.6nm,1.4s
WTTA Wattenberg 120.44 325 ⇑*i*PKiKP PKiKP 12 32 21.0 -0.8
comp=Z,30nm,1.1s
FETA Feichten 121.09 325 ⇑*i*pPKPdf pPKPdf 12 32 24.7 -1.7
comp=Z,16nm,1.0s
DAVA Damuels 121.43 325 ⇑*i*pPKPdf pPKPdf 12 32 25.3 -1.7
comp=Z,16nm,0.9s
MEM Membach 121.53 330 PKPdf PKPdf 12 32 22.3 -1.4
MEM aPKPdf 12 32 35.5
BCLA Clavier 122.00 330 PKPdf PKPdf 12 32 25.6 +1.0
WLF Walferdange 122.05 329 PKPdf PKPdf 12 32 23.3 -0.9
GIVF Givet 122.44 330 *e*PKP1 PKPdf 12 32 24.7 -0.8
WCI Wyandotte Cave 122.47 46 *e*PKIKP PKPdf 12 32 27.7 +1.8
BAIF Baives 122.77 331 *e*PKP1 PKPdf 12 32 24.9 -1.2
HINF Hinteralfeld 122.81 327 *e*PKP1 PKPdf 12 32 25.2 -1.0
comp=Z,58nm,1.2s
HAU Haudompre 122.96 328 *e*PKP1 PKPdf 12 32 24.6 -1.9
comp=Z,39nm,1.0s
SCHQ Schefferville 123.00 21 PKP PKPdf 12 32 27.0 +0.6
comp=Z,5.8nm,0.8s,baz=151,slow=1.3,SNR=4.6
SCHQ Schefferville 123.00 21 PKP PKPdf 12 32 27.0 +0.6
ACSO Alum Creek Sta 123.91 43 *e*PKPdf PKPdf 12 32 28.4 -0.2
CABF La Chapelle 123.95 326 *e*PKP1 PKPdf 12 32 28.1 -0.4
comp=Z,88nm,1.1s
LPG La Plagne 124.23 325 *e*PKP1 PKPdf 12 32 27.3 -1.7
comp=Z,26nm,1.0s
LPL La Plagne 124.23 325 *e*PKP1 PKPdf 12 32 27.0 -2.0
comp=Z,21nm,0.9s
BRAL Brewton 124.50 55 *e*PKPdf PKPdf 12 32 29.8 -0.2
LOR Lormes 124.74 328 *e*PKP1 PKPdf 12 32 27.6 -2.4
comp=Z,66nm,1.5s
SSF Saint Saulge 125.06 328 *e*PKP1 PKPdf 12 32 29.9 -0.7
comp=Z,57nm,1.2s
ORIF Oris-en-Rattie 125.07 325 *e*PKP1 PKPdf 12 32 29.9 -0.8
comp=Z,32nm,1.0s
SMF Signal de Mont 125.15 328 *e*PKP1 PKPdf 12 32 30.3 -0.5
AVF Avril sur Loir 125.31 328 *e*PKP1 PKPdf 12 32 30.0 -1.1
comp=Z,52nm,1.4s
TKL Tuckaleechee C 125.36 48 *e*PKPdf PKPdf 12 32 29.7 -1.8
FRF La Foret Royal 125.40 323 *e*PKP1 PKPdf 12 32 30.4 -1.0
comp=Z,144nm,1.4s
PLCA Paso Flores 125.57 148 PKP PKPdf 12 32 33.4 +1.6
comp=Z,7.0nm,0.7s,baz=274,slow=0.8,SNR=13
SMRF Simiane la Rot 125.80 324 *e*PKP1 PKPdf 12 32 30.1 -2.0
comp=Z,153nm,1.5s
TCF Toulx Ste Croi 126.24 328 *e*PKP1 PKPdf 12 32 32.3 -0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,44nm,1.0s						
GOGA	Godfrey	126.49	50	ePKIKP	PKPdf	12 32 34.0	+0.2
KEST	Kesra	127.61	313	PKP	PKPdf	12 32 37.2	+1.4
	comp=Z,7.4nm,1.0s,baz=246,slow=3.0,SNR=4.1						
CFAA	Coronel Fontan	133.25	141	PKP	PKPdf	12 32 48.2	+1.5
	comp=Z,0.9nm,0.7s,baz=244,slow=1.3,SNR=9.7						
TAM	Tamanrasset	135.82	299	ePKIKP	PKPdf	12 32 53.1	+1.4
LVC	Limon Verde	138.37	130	PKP	PKPdf	12 32 54.7	-1.7
	comp=Z,1.9nm,0.7s,baz=292,slow=3.2,SNR=3.6						
ROSC	El Rosal	141.41	87	PKP	PKPdf	12 33 02.6	+0.4
	comp=Z,8.7nm,0.4s,baz=105,slow=21,SNR=4.0						
TOA0	Torodi Ar. Sit	141.90	287	ePKPdf	PKPdf	12 33 03.5	+0.5
TORD	Torodi Ar. Bea	141.90	287	PKhKP		12 32 48.4	
	comp=Z,3.3nm,1.1s,baz=80,slow=2.7,SNR=5.6						
TORD				PKP	PKPdf	12 33 01.3	-1.7
	comp=Z,10nm,1.0s,baz=73,slow=2.4,SNR=11						
TORD				PP	PP	12 36 07.9	-0.1
	comp=Z,4.9nm,1.0s,baz=86,slow=4.1,SNR=6.8						
TORD	Torodi Ar. Bea	141.90	287	PKP		12 32 48.4	
TORD				PKP	PKPdf	12 33 01.3	-1.7
TORD				PP	PP	12 36 07.9	-0.1
CPUP	Villa Florida	143.61	146	PKP	PKPdf	12 33 04.0	-1.7
	comp=Z,2.4nm,0.6s,baz=199,slow=3.2,SNR=6.3						
CPUP	Villa Florida	143.61	146	ePKPdf	PKPdf	12 33 04.1	-1.7
SDV	Santo Domingo	144.85	80	ePKPdf	PKPdf	12 33 05.8	-2.5
SJG	San Juan	146.84	62	ePKP2	PKPab	12 33 12.8	-1.8
SIV	San Ignacio	148.21	128	PKPbc	PKPbc	12 33 15.6	-1.6
	comp=Z,40nm,0.7s,baz=232,slow=2.4,SNR=20						
KIC	Kosan Boka	149.09	276	eP	PKPbc	12 33 18.2	-1.3
	comp=Z,553nm,1.2s						
DBIC	Dimbokro	149.18	277	PKPbc	PKPbc	12 33 18.5	-1.2
	comp=Z,21nm,0.7s,baz=67,slow=2.2,SNR=14						
DBIC	Dimbokro	149.18	277	ePKP2	PKPbc	12 33 18.9	-0.8
DBIC	Dimbokro	149.18	277	ePKPbc	PKPbc	12 33 18.7	-1.0
TIC	Toumodi	149.34	277	eP	PKPbc	12 33 20.1	0.0
	comp=Z,459nm,1.1s						
LIC	Lamto	149.38	276	ePKIKP	PKPbc	12 33 18.9	-1.3
	comp=Z,228nm,0.8s						
LIC	Lamto	149.38	276	eP	PKPbc	12 33 20.2	0.0
	comp=Z,494nm,1.2s						
LZG	Guadaloupe-1	151.45	62	eP	PKPbc	12 33 23.2	-1.8
TBG	Guadaloupe-3	151.68	63	eP	PKPbc	12 33 23.9	-1.7
BDFB	Brasilia	157.31	148	PKPbc	PKPdf	12 33 40.3	+13
	comp=Z,1.3nm,0.5s,baz=333,slow=26,SNR=4.5						

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*NNC **10** 12:13:45.7±20.0, 3847N×5609E, h0km, mb3.7, Error ellipse: s-maj=256.0km s-min=95.9km az=11.0*
*IDC **10** 12:13:51.1±1.7, 3885N×5547E, h0km, mb3.3/5, mb1 3.7/7, mb1mx3.6/23, mbtmp3.6/7, ML4.0/2, Error ellipse: s-maj=31.9km s-min=19.6km az=126.0*
*ISCJB **10** 12:13:53.4±1.5, 390N±02×558E±01, h33km, mb3.5/3, Error ellipse: s-maj=26.3km s-min=12.1km az=159.9*
ISC 10 12:13:56.4±1.2, 391N±01×557E±01, h35km, n10, $\sigma 1^{s}36$/12, mb3.5/3, 3C-1D, Turkmenistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AB01	Akbulak array	10.55	15	⇓P	Pn	12 16 24.9	0.0
	1.3nm,0.3s						
AKTO	Aktyubinsk	11.40	7	Pn	Pn	12 16 38.0	+1.5
	0.6nm,0.3s,baz=179,slow=15,SNR=9.3						
AKTO				Sn	Sn	12 18 41.5	-1.2
	1.4nm,0.3s,baz=42,slow=19,SNR=11						
KK31	Karatay Array	11.82	66	⇑P	Pn	12 16 35.5	-6.8
	0.5nm,0.3s,baz=250,slow=14,SNR=6.9						
KK31				⇑S	Sn	12 18 50.7	-2.1
	1.1nm,0.5s,baz=131,slow=16,SNR=4.9						
BVA0	Borovoye Array	17.15	31	⇑P	Pn	12 17 54.3	+1.2
	0.5nm,0.6s,baz=201,slow=11,SNR=4.0						
BVAR	Borovoye Array	17.15	31	Pn	Pn	12 17 53.8	+0.7
	0.8nm,0.3s,baz=214,slow=12,SNR=16						
KURK	Kurchatov	19.82	47	P	Pn	12 18 25.1	-0.3
	0.7nm,0.7s,baz=245,slow=11,SNR=3.5						
MKAR	Makanchi Array	20.81	60	P	P	12 18 36.7	+2.2
	1.2nm,0.9s,baz=255,slow=9.4,SNR=6.0						
AKASG	Malin Array Be	21.92	310	P	P	12 18 45.0	-1.4
	2.6nm,0.6s,mb3.8,baz=111,slow=9.6,SNR=6.2						
TORD	Torodi Ar. Bea	54.07	257	P	P	12 23 16.1	-1.5
	0.4nm,0.8s,mb3.4,baz=38,slow=7.3,SNR=2.8						
YKA	Yellowknife Ar	78.41	355	P	P	12 25 54.3	+1.4
	0.4nm,0.9s,mb3.4,baz=7.3,slow=5.8,SNR=6.0						

GUC 10 12:16:18.6±0.6, 2241S×6865W, h108km±4km, MD3.7, ML3.6, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.32	230⇑	eP	Pn	12 16 34.9	+0.7
LVC				eS	Sn	12 16 47.5	+1.6
LVC				AML	AML	12 16 49.9	
	comp=E,2μm,0.2s						
SPCH	San Pedro de A	0.65	140	eP	Pn	12 16 37.4	+1.1
SPCH				eS	Sn	12 16 53.1	+3.4
SPCH				AML	AML	12 16 54.0	
	comp=N,6μm,0.4s						
PB04	Plate Boundary	0.79	280⇑	iP	Pn	12 16 44.8	+7.3
PB04				i S	Sn	12 17 05.0	+13
PECH	Pedro de Valdi	0.97	258⇓	eP	Pn	12 16 40.1	+0.9
PECH				i S	Sn	12 16 57.6	+2.7
PECH				AML	AML	12 16 58.9	
	comp=N,2μm,0.7s						
MACH	Maria Elena	1.05	281⇑	iP	Pn	12 16 41.0	+0.8
MACH				i S	Sn	12 16 57.9	+1.5
PB01	Plate Boundary	1.56	330	eP	Pn	12 16 45.3	-0.8
PB01				i S	Sn	12 17 05.7	-1.3
PB01				AML	AML	12 17 06.9	
	comp=E,492nm,0.4s						
CEN1	Los Morros	1.73	235	eP	Pn	12 16 51.5	+3.3
CEN1				i S	Sn	12 17 16.7	+6.1
CEN1				AML	AML	12 17 27.4	
	comp=N,366nm,0.7s						
ANCH	Antofagasta	2.06	232	eP	Pn	12 16 54.3	+2.1
ANCH				i S	Sn	12 17 20.1	+2.2

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*ISCJB **10** 12:21:52.6±1.1, 2986N±004×3628E±006, h0km, Error ellipse: s-maj=7.8km s-min=6.4km az=0.7*
*CSEM **10** 12:21:52.2, 3010N×3628E, h4km, ML2.8, After SNSN*
*SGS **10** 12:21:52.2, 3010N×3628E, h4km*
*GII **10** 12:21:54.2±1.1, 2991N×3618E, h0km, ML2.2/5, EXPLOSION*
ISC 10 12:21:52.6±1.2, 2985N±005×3633E±007, h0km, n11, $\sigma 0^{s}58$/16, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.12	264	Pg	Pg	12 22 15.1	+1.0
HRFI	Mount Harif	1.14	280	Pg	Pg	12 22 13.7	-0.8
HRFI				Sg	Sg	12 22 29.2	-0.1
EIL	Elat	1.21	262	Pg	Pg	12 22 16.0	+0.2
EIL				Sg	Sg	12 22 32.0	+0.4
HQLS		1.23	244	P	Pg	12 22 15.5	-0.7
MBRI	Mt Berech	1.23	268	Pg	Pg	12 22 15.5	-0.8
MBRI				Sg	Sg	12 22 32.7	+0.4
PRNI	Paran	1.26	294	Pg	Pg	12 22 15.5	-1.2
PRNI				Sg	Sg	12 22 33.0	0.0
JLOS		1.33	214	P	Pg	12 22 18.3	+0.3
MZDA	Masada	1.68	330	Pn	Pn	12 22 23.3	0.0
BDAS	Al Bad‘	1.78	218	S	Sn	12 22 48.2	+0.4
BDAS	Al Bad‘	1.78	218	P	Pn	12 22 24.2	-0.4
DSI	Dead Sea	1.90	335	Pn	Pn	12 22 27.0	+0.7
DSI				Sn	Sn	12 22 51.4	+0.4

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*CSEM **10** 12:29:42.0, 3629N×633E, h0km, ML3.5, After ALG*
CRAAG 10 12:29:42.0, 3629N×633E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CASM	Ain Smara	0.13	105	P	Pg	12 29 45.5	+1.0
CTEI	Djebel Teioual	0.24	166	P	Pg	12 29 48.0	+1.5
CKFL	Kef-Lekhel	0.33	71	P	Pg	12 29 49.0	+0.7
DFRA	Djebel Bou Aff	0.45	304	P	Pg	12 29 51.0	+0.4
SET	Setif	0.76	263	P	Pg	12 30 01.0	+4.4
CMAH	Djebel Manchou	0.94	69	P	Pg	12 30 01.0	+1.1

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*ISCJB **10** 12:30:20.9±0.5, 4288N±004×102W±003, h19km±5km, Error ellipse: s-maj=6.0km s-min=4.0km az=2.3*
*CSEM **10** 12:30:20.9±0.1, 4282N×102W, h2km, ML2.4/4, Error ellipse: s-maj=1.6km s-min=0.8km az=4.0*
*MDD **10** 12:30:21.1±0.3, 4283N×102W, h9km±5km, mbLg1.8/18, Error ellipse: s-maj=2.7km s-min=1.6km az=170.0, PRXIMO*
*LDG **10** 12:30:21.0±0.1, 4283N×101W, h3km, Md2.3/2, Ml2.3/4, Error ellipse: s-maj=1.4km s-min=1.0km az=12.0*
*STR **10** 12:30:21.0±0.3, 4283N×104W, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 10 12:30:20.7±0.4, 4285N±003×101W±003, h16km±4km, n44, $\sigma 0^{s}80$/57, 2C-1D, Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LARF	Larrau	0.19	4	Pg	Pg	12 30 25.4	+0.2
LARF				Sg	Sg	12 30 29.1	+0.9
LARF	Larrau	0.19	4	P	Pg	12 30 25.5	+0.3
LARF				S	Sg	12 30 28.9	+0.7
EORO	Oroz-Betelu	0.23	280	Pg	Pg	12 30 25.3	-0.5
	45nm,0.3s,SNR=18						
EORO				Lg		12 30 28.8	
	204nm,0.2s,SNR=9.2						
EORO	Oroz-Betelu	0.23	280	⇓Pg	Pg	12 30 25.3	-0.5
	45nm,0.3s,SNR=18						
EORO				Lg		12 30 28.8	
	204nm,0.2s,SNR=9.2						
IPRE	Itoiz	0.26	260	Pg	Pg	12 30 25.7	-0.7
	26nm,0.3s,SNR=18						
IPRE	Itoiz	0.26	260	⇑Pg	Pg	12 30 25.7	-0.7
	26nm,0.3s,SNR=18						
IPRE				Lg		12 30 29.9	
	30nm,0.2s,SNR=17						
SJPF	Ste Jean	0.31	328	ePg	Pg	12 30 27.2	0.0
SJPF				eSg	Sg	12 30 31.8	+0.3
	168nm,0.2s						
SJPF	Ste Jean	0.31	328	ePg	Pg	12 30 27.2	0.0
SJPF				eSg	Sg	12 30 31.8	+0.3
	84nm,0.2s						
ATE	Arette	0.32	44	Pg	Pg	12 30 28.0	+0.5
ATE				Sg	Sg	12 30 33.1	+1.1
FDAF	Les Forges d’A	0.33	96	P	Pg	12 30 27.4	-0.1
FDAF				S	Sg	12 30 33.1	+1.1
IZUN	Zunzarren	0.33	272	Pg	Pg	12 30 27.0	-0.6
	2.2nm,0.3s,SNR=18						
IZUN	Zunzarren	0.33	272	⇑Pg	Pg	12 30 27.1	-0.5
	2.2nm,0.3s,SNR=18						
IZUN				Lg		12 30 32.1	
	24nm,0.2s,SNR=7.9						
ETSF	Etsaut	0.33	82	ePg	Pg	12 30 27.7	+0.1
ETSF				eSg	Sg	12 30 31.7	-0.5
	94nm,0.3s						
ETSF	Etsaut	0.33	82	ePg	Pg	12 30 27.7	+0.1
ETSF				eSg	Sg	12 30 31.7	-0.5
	47nm,0.3s						
IUNC	Unciti	0.38	255	Pg	Pg	12 30 28.0	-0.4
	14nm,0.3s,SNR=13						
IUNC	Unciti	0.38	255	Pg	Pg	12 30 28.0	-0.4
	14nm,0.3s,SNR=13						
IUNC				Lg		12 30 33.9	
	33nm,0.4s,SNR=12						
IUSE	Utxeti	0.41	284	Pg	Pg	12 30 28.6	-0.4
	15nm,0.3s,SNR=21						
IUSE	Utxeti	0.41	284	Pg	Pg	12 30 28.6	-0.3
	15nm,0.3s,SNR=21						
IUSE				Lg		12 30 35.1	
	17nm,0.3s,SNR=14						
OSSF	Osses	0.45	335	Pg	Pg	12 30 29.9	+0.3
OSSF				Sg	Sg	12 30 35.9	+0.2
OSSF	Osses	0.45	335	P	Pg	12 30 29.9	+0.3
OSSF				S	Sg	12 30 35.3	-0.3
ELIZ	Elizondo	0.49	309	Pg	Pg	12 30 30.3	-0.2
	21nm,0.2s,SNR=7.9						
ELIZ				Lg		12 30 37.8	
	32nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.52	315	Pg	Pg	12 30 31.2	+0.2
	14nm,0.5s,SNR=8.6						
EALK				Lg		12 30 38.2	
	31nm,0.2s,SNR=12						
EBIE	Bielsa	0.86	101	Pg	Pg	12 30 37.1	-0.3
	3.0nm,0.3s,SNR=14						
EBIE	Bielsa	0.86	101	Pg	Pg	12 30 37.1	-0.3
	3.0nm,0.3s,SNR=14						
EBIE				Lg		12 30 47.5	
	5.0nm,0.2s,SNR=5.8						
EPF	Esparros	1.00	79	ePg	Pg	12 30 39.8	-0.3
EPF				eSg	Sg	12 30 53.4	+0.1
	18nm,0.4s						
EPF	Esparros	1.00	79	ePg	Pg	12 30 39.8	-0.3
EPF				eSg	Sg	12 30 53.4	+0.1
	8.9nm,0.4s						
ECRI	Cripan	1.13	258	Pg	Pg	12 30 43.1	+0.5
	1.7nm,0.1s,SNR=7.9						
ECRI				Lg		12 30 56.6	
	7.4nm,0.3s,SNR=7.9						
ESAC	San Caprasio	1.20	160	Pg	Pg	12 30 43.6	-0.2
	27nm,0.3s,SNR=6.5						
ESAC	San Caprasio	1.20	160	Pg	Pg	12 30 43.6	-0.2
	27nm,0.3s,SNR=6.5						
ESAC				Lg		12 30 57.5	
	61nm,0.4s,SNR=4.9						
ELAN	Lanestosa	1.82	283	Pg	Pg	12 30 54.9	-0.8
	SNR=7.9						
ELAN				Lg		12 31 17.8	
	SNR=7.9						
EMIR	Miracle	2.10	116	Lg		12 31 27.5	
	12nm,0.5s,SNR=7.9						
ERTA	Horta de San J	2.14	152	Lg		12 31 29.0	
	1.1nm,0.1s,SNR=7.9						
EPOB	Poblet	2.16	133	Pn	Pn	12 30 56.8	+0.8
	2.3nm,0.2s,SNR=7.9						
EPOB	Poblet	2.16	133	Pg	Pg	12 31 01.0	-1.1
	0.2nm,0.1s,SNR=7.9						
EPOB	Poblet	2.16	133	Pn	Pn	12 30 56.8	+0.9
	2.3nm,0.2s,SNR=7.9						
EPOB				Pg	Pg	12 31 01.0	-1.0
	0.2nm,0.1s,SNR=7.9						
EPOB				Lg		12 31 28.7	
	1.4nm,0.2s,SNR=7.9						
ETOR	Torete	2.18	201	Pn	Pn	12 30 58.8	+2.5
	5.6nm,0.3s,SNR=7.9						
ETOR				Pg	Pg	12 31 02.9	+0.4
	5.9nm,0.3s,SNR=7.9						
ETOR				Lg		12 31 29.4	
	5.1nm,0.2s,SNR=7.9						
MTLF	Montolieu	2.41	77	eP	Pn	12 31 02.1	+2.6
MTLF	Montolieu	2.41	77	ePg	Pg	12 31 05.7	-1.2
MTLF				eSg	Sg	12 31 37.0	-1.2
	3.3nm,0.3s						
MTLF	Montolieu	2.41	77	ePg	Pg	12 31 05.7	-1.2
MTLF				eSg	Sg	12 31 37.0	-1.2
	1.6nm,0.3s						
LFF	La Frestale	2.44	31	eSn	Sn	12 31 29.1	-0.3
	3.5nm,0.3s						
LFF	La Frestale	2.44	31	eSn	Sn	12 31 29.1	-0.3
	1.8nm,0.3s						
CAF	Calviac	3.04	46	eSn	Sn	12 31 42.9	-1.2
	1.6nm,0.2s						
CAF	Calviac	3.04	46	eSn	Sn	12 31 42.9	-1.2
	0.8nm,0.2s						
ERUA	La Rua	4.55	266	Lg		12 30 24.4	
	2.0nm,0.2s,SNR=7.9						

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*BJI **10** 12:33:44.9, 2552S×17727W, h141km, mB5.5, mb4.9*
*NEIC **10** 12:33:45.5±1.3, 2584S×17741W, h147km±11km, mb5.1/17, Error ellipse: s-maj=11.5km s-min=9.8km az=138.0*
*ISCJB **10** 12:33:46.9±1.3, 2607S±007×17760W±008, h164km±11km, mb4.8/34, Error ellipse: s-maj=12.5km s-min=11.1km az=143.6*
*MOS **10** 12:33:46.8±1.3, 2597S×17755W, h163km, mb5.2/10, Error ellipse: s-maj=13.4km s-min=12.3km az=104.8*
*IDC **10** 12:33:48.7±0.7, 2596S×17754W, h168km±6km, mb4.3/18, mb1 4.4/19, mb1mx4.4/21, mbtmp4.3/19, MS4.7/3, Ms1 4.7/3, ms1mx4.0/32, Error ellipse: s-maj=14.0km s-min=12.1km az=91.0*
*DJA **10** 12:34:12, 2698S×17900W, h315km, mb5.1/12*
ISC 10 12:33:47.4±1.3, 2604S±007×17754W±008, h156km±11km, h169km±1.7km:pP-P, n133, $\sigma 1^{s}04$/82, mb4.8/34, 10C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.22	186	P	Pn	12 34 38.9	+1.2
	154nm,0.3s,baz=117,slow=22,SNR=2.1						
RAO				S	Sn	12 35 15.7	-1.2
	1μm,0.3s,baz=84,slow=21,SNR=11						
URZ	Urewera	13.00	199	P	Pn	12 36 41.2	-5.1
	1.8nm,0.3s,baz=142,slow=4.3,SNR=8.9						
URZ				S	Sn	12 39 00.0	-10
	18nm,0.3s,baz=148,slow=20,SNR=10						
AFI	Afiamalu	13.22	25	P	Pn	12 36 41.4	-7.9
	12nm,0.3s,baz=6.7,slow=3.0,SNR=17						
AFI				S	Sn	12 38 57.1	-19
	12nm,0.3s,baz=199,slow=14,SNR=8.8						
DZM	Mont Dzumac	15.15	282	eP	Pn	12 37 19.4	+5.9
DZM	Mont Dzumac	15.15	282	ePn	Pn	12 37 14.3	+0.8
	37nm,0.7s						
NOUC	Port Laguerre	15.27	281	eP	Pn	12 37 21.1	+6.1
SNZO	South Karori	16.53	201	eP	Pn	12 37 26.2	-3.9
	25nm,0.6s						
RPZ	Rata Peaks	19.93	205	P	P	12 38 03.0	-4.0
	15nm,0.7s,baz=22,slow=1.8,SNR=7.9						
RPZ				S	S	12 41 29.8	-13
	15nm,0.6s,baz=349,slow=19,SNR=10						
HNR	Honiara	26.99	304	P	P	12 39 13.0	-1.9
	37nm,0.4s,mb5.3,baz=158,slow=22,SNR=7.1						
ARMA	Armidale	27.47	254	eP	P	12 39 21.5	+2.5
EIDS	Eidsvold	28.25	264	eP	P	12 39 26.7	+0.7
	22nm,0.7s,mb5.0						
CNB	Canberra Magne	29.82	244	eP	P	12 39 41.4	+1.6
TOO	Toolangi	33.26	241	eP	P	12 40 10.6	+0.7
CTA	Charters Tower	33.76	272	eP	P	12 40 15.2	+0.8
	76nm,0.6s,mb5.6						
CTA	Charters Tower	33.76	272	P	P	12 40 15.3	+0.9
	100nm,0.7s,mb5.6,baz=104,slow=11,SNR=114						
CTA	Charters Tower	33.76	272	eP	P	12 40 15.2	+0.8
CTA				pmax	pmax		
	comp=Z,77nm,0.6s						
CTAO	Charters Tower	33.76	272	eP	P	12 40 15.2	+0.8
CTAO				pmax	pmax		
	comp=Z,70nm,0.6s,mb5.6						
CTAO	Charters Tower	33.76	272	eP	P	12 40 15.2	+0.8
	comp=Z,70nm,0.6s,mb5.6						
STKA	Stephens Creek	36.07	251	eP	P	12 40 33.9	-0.2
	comp=Z,15nm,0.5s,mb4.9						
STKA	Stephens Creek	36.07	251	P	P	12 40 34.8	+0.7
	comp=Z,18nm,0.5s,mb4.9,baz=95,slow=10,SNR=50						
STKA				PcP	PcP	12 42 57.8	+0.9
	comp=Z,4.9nm,0.6s,baz=76,slow=6.7,SNR=3.8						
STKA	Stephens Creek	36.07	251	eP	P	12 40 34.3	+0.2
	comp=Z,0.9nm,0.5s,mb3.7						
PMG	Port Moresby	37.31	290⇑	eP	P	12 40 47.1	+2.4
PMG				pmax	pmax		
	comp=Z,22nm,1.2s						
PMG	Port Moresby	37.31	290	P	P	12 40 45.0	+0.2
	comp=Z,14nm,0.8s,mb4.6						
COEN	Coen	38.68	280	eP	P	12 40 56.1	-0.1
	comp=Z,18nm,0.8s,mb4.7						
WB2	Warramunga Arr	44.51	267	eP	P	12 41 42.5	-1.1
WRAB	Tennant Creek	44.51	267	i P	P	12 41 46.5	+2.9
WRAB	Tennant Creek	44.51	267	eP	P	12 41 42.5	-1.1
	comp=Z,53nm,0.7s,mb5.3						
FORT	Forrest	47.70	251	eP	P	12 42 07.0	-1.4
	comp=Z,165nm,0.5s,mb5.9						
KAKA	Kakadu	48.74	276	eP	x	12 41 55.9	
	comp=Z,12nm,0.3s						
SBA	Scott Base	52.40	184	eP	P	12 42 45.1	+2.0
SBA				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.0						
SBA	Scott Base	52.40	184	eP	P	12 42 45.0	+1.9
	comp=Z,55nm,1.4s,mb5.0						
VNDA	Vanda	52.46	186	P	P	12 42 45.0	+1.4
	comp=Z,11nm,0.6s,mb4.7,baz=11,slow=8.1,SNR=69						
FITZ	Fitzroy Crossi	52.91	266	eP	P	12 42 47.1	-0.6
	comp=Z,54nm,0.6s,mb5.5						
KLBR	Kellerberrin	56.25	248	eP	P	12 43 10.0	-1.6
	comp=Z,23nm,0.5s,mb5.3						
NWAO	Narrogin (SRO)	56.41	246	P	P	12 43 11.0	-1.8
	comp=Z,6.3nm,0.6s,mb4.6,baz=119,slow=8.1,SNR=6.2						
MUN	Mundaring	57.45	247	eP	P	12 43 18.8	-1.3
BATI	Baumata	57.61	274	P	P	12 43 21.9	+0.4
	comp=Z,27nm,0.6s,mb5.2,baz=144,slow=3.5,SNR=6.4						
CASY	Casey	59.19	207	eP	P	12 43 30.9	-0.7
KAPI	Kappang	63.33	278	P	P	12 44 00.1	-0.2
	comp=Z,9.5nm,0.6s,mb4.8,baz=141,slow=12,SNR=5.5						
QSPA	South Pole Qui	64.06	180	P	P	12 44 05.1	+1.1
	comp=Z,29nm,0.9s,mb5.1,baz=42,slow=2.4,SNR=46						
MIR	Mirnyy	66.20	206⇑	iP	P	12 44 14.0	-4.0
MIR				pmax	pmax		
	comp=Z,200nm,1.8s,mb5.7						
MJAR	Matsushiro Arr	74.92	324	P	P	12 45 10.8	-0.3
	comp=Z,2.9nm,0.8s,mb4.0,baz=164,slow=5.9,SNR=11						
MAT	Matsushiro	74.92	324	P	P	12 45 10.6	-0.5
MAW	Mawson	76.53	200	eP	P	12 45 20.2	+0.3
	comp=Z,23nm,0.5s,mb5.1						
MAW	Mawson	76.53	200	P	P	12 45 20.2	+0.3
	comp=Z,26nm,0.6s,mb5.1,baz=133,slow=6.9,SNR=67						
MAW	Mawson	76.53	200	eP	P	12 45 20.2	+0.3
MAW				pmax	pmax		
	comp=Z,23nm,0.5s						
USHA	Ushuaia	79.30	146	LR	LR	13 10 47.0	
	comp=Z,612nm,21.2s,baz=201,slow=28						
YSS	Yuzh-Sakhalins	81.02	334⇑	iP	P	12 45 45.0	+0.5
YSS				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.0						
YSS	Yuzh-Sakhalins	81.02	334	eP	P	12 45 44.8	+0.3
	comp=Z,24nm,0.8s,mb4.9						
KSRS	Korea Array	81.31	319	P	P	12 45 47.1	+0.8
	comp=Z,1.6nm,0.6s,mb3.9,baz=130,slow=5.9,SNR=8.4						
PETK	Petropavlovsk-	81.71	345	P	P	12 45 47.9	-0.1
	comp=Z,2.2nm,0.6s,mb4.0,baz=127,slow=6.0,SNR=3.3						
SNAA	Sanae	82.49	178	eP	P	12 45 51.2	-0.8
SNAA				e		12 45 56.3	
SNAA	Sanae	82.49	178	eP	P	12 45 51.2	-0.8
SNAA				pmax	pmax		
	comp=Z,29nm,1.3s						
SNAA	Sanae	82.49	178	eP	P	12 45 51.2	-0.8
	comp=Z,29nm,1.3s,mb4.8						
VNA3	Neumayer Olymp	82.61	176	eP	P	12 45 51.9	-0.8
VNA3				e		12 45 56.2	
VNA2	Neumayer--Watz	83.06	177	eP	P	12 45 54.7	-0.3
	baz=182,slow=2.8						
VNA2				e		12 45 59.2	
VNA1	Neumayer--Stat	83.28	176	eP	P	12 45 56.0	-0.1
VNA1				e		12 46 00.6	
NJ2	Nanjing	83.74	310	eP	P	12 45 59.3	+0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
YBH	Yreka Blue Hor	84.35	38	P	P	12 46 02.0	+0.1
	comp=Z,1.2nm,0.8s,mb3.7,baz=258,slow=7.7,SNR=3.6						
NVAR	Mina Array Bea	84.77	43	P	P	12 46 04.0	-0.1
	comp=Z,1.2nm,0.8s,mb3.7,baz=221,slow=8.6,SNR=7.6						
NVAR				pP	pP	12 46 45.2	+2.3
	comp=Z,3.2nm,1.0s,baz=218,slow=8.4,SNR=5.8						
NVAR				PKKPbc	PKKPbc	13 04 12.8	-0.8
	comp=Z,0.4nm,0.7s,baz=209,slow=1.7,SNR=4.2						
NVAR	Mina Array Bea	84.77	43	P	P	12 46 04.0	-0.1
NVAR				pP	pP	12 46 45.2	+2.3
NVAR				PKKPbc	PKKPbc	13 04 12.8	-0.8
MDJ	Mudanjiang	85.28	325	P	P	12 46 06.8	+0.4
MDJ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
PSI	Prapat	85.42	275	P	P	12 46 06.6	-1.3
	comp=Z,6.1nm,0.7s,mb4.4,baz=166,slow=4.1,SNR=6.9						
HABR	Khabarovsk	85.45	331	eP	P	12 46 07.3	+0.1
HABR				e		12 49 29.5	
HABR				e		12 56 19.9	
HABR				e		12 57 40.2	
HABR				eSSS		13 05 31.7	
CN2	Changchun	86.93	323	eP	P	12 46 14.4	-0.1
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
KLR	Kul’dur	87.49	329	eP	P	12 46 13.7	-3.4
TXAR	Lajitas Array	89.69	57	P	P	12 46 28.0	+0.1
	comp=Z,0.5nm,0.8s,baz=207,slow=5.3,SNR=4.1						
TXAR				pP	pP	12 47 10.7	+3.4
	comp=Z,1.0nm,0.9s,baz=195,slow=7.5,SNR=5.4						
TXAR				PKKPbc	PKKPbc	13 04 01.7	+0.7
	comp=Z,0.3nm,0.6s,baz=106,slow=4.0,SNR=3.9						
TXAR	Lajitas Array	89.69	57	P	P	12 46 28.0	+0.1
TXAR				*PP	pP	12 47 10.7	+3.5
TXAR	Lajitas Array	89.69	57	P	P	12 46 28.0	+0.1
TXAR				pP	pP	12 47 10.7	+3.4
TXAR				PKKPbc	PKKPbc	13 04 01.7	+0.7
ANMO	Albuquerque	90.53	51⇑	eP	P	12 46 32.2	+0.5
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.5s						
CFAA	Coronel Fontan	91.49	126	LR	LR	13 19 04.2	
	comp=Z,142nm,21.1s,baz=256,slow=30						
SEY	Seymchan	91.84	347⇑	eP	P	12 46 36.5	-0.6
CHRT	Chiangrai	92.27	291	⇑P	P	12 46 41.5	+1.4
CMAR	Chiang Mai Arr	92.35	289	P	P	12 46 41.4	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,6.4nm,0.9s,mb4.7,baz=140,slow=3.3,SNR=39						
CMAR	Chiang Mai Arr	92.35	289⇑	eP	P	12 46 42.0	+1.5
CHG	Chiang Mai	92.51	290	⇓P	P	12 46 42.6	+1.4
	comp=Z,12nm,0.9s,mb5.0						
CHTO	Chiang Mai	92.51	290	eP	P	12 46 42.1	+0.9
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
CHTO	Chiang Mai	92.51	290	eP	P	12 46 42.1	+0.8
	comp=Z,12nm,1.0s,mb5.0						
PDAR	Pinedale Array	92.69	43	P	P	12 46 41.4	-0.2
	comp=Z,0.9nm,0.9s,mb3.9,baz=222,slow=2.0,SNR=6.6						
PDAR				pP	pP	12 47 23.7	+2.8
	comp=Z,1.6nm,0.9s,baz=215,slow=2.4,SNR=7.1						
PDAR				PKKPbc	PKKPbc	13 03 51.9	-2.1
	comp=Z,0.4nm,0.7s,baz=82,slow=5.4,SNR=4.1						
HHC	Hu-ho-hao-te	93.50	314	eP	P	12 46 45.4	+0.1
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.1						
BILL	Bilibino	94.56	354	i P	P	12 46 48.2	-1.3
BILL				pmax	pmax		
	comp=Z,13nm,2.5s,mb4.7						
LVC	Limon Verde	95.66	118	LR	LR	13 21 37.0	
	comp=Z,847nm,20.9s,baz=187,slow=30						
ULN	Ulaanbaatar	99.80	319	i P	Pdif	12 47 13.4	-0.4
YKA	Yellowknife Ar	101.34	25	PKKPbc	PKKPbc	13 03 27.6	-3.4
	comp=Z,0.6nm,0.8s,baz=42,slow=2.7,SNR=9.0						
ZALV	Zalesovo Beam	115.02	320	PKP	PKiKP	12 52 07.1	-2.3
	comp=Z,1.8nm,0.7s,baz=168,slow=0.4,SNR=9.9						
ZALV	Zalesovo Beam	115.02	320	PKP	PKiKP	12 52 07.1	-2.3
MK31	Makanchi Array	115.24	312	ePKIKP	PKPdf	12 52 08.6	-1.4
MKAR	Makanchi Array	115.24	312	PKP	PKPdf	12 52 08.3	-1.7
	comp=Z,2.6nm,0.7s,baz=63,slow=2.5,SNR=23						
MKAR	Makanchi Array	115.24	312	PKP	PKPdf	12 52 08.3	-1.7
KURK	Kurchatov	118.28	315⇑	iPKIKP	PKPdf	12 52 13.6	-2.2
AAK	Ala-Archa	119.96	306⇑	iPKIKP	PKPdf	12 52 18.0	-1.3
BOSA	Boshof	121.42	204	PKP	PKPdf	12 52 22.4	-0.3
	comp=Z,5.4nm,0.9s,baz=228,slow=6.2,SNR=4.4						
KBL	Kabul	122.79	296	ePKIKP	PKPdf	12 52 24.8	-0.2
ARU	Arti	129.92	323	i PKIKP	PKPdf	12 52 37.2	-0.7
ARU						12 54 55.3	
ARU				SS	SS	13 11 57.0	-6.9
ARCES	ARCESS Array B	134.41	349	PKP	PKPdf	12 52 44.0	-2.0
	comp=Z,3.4nm,0.6s,baz=346,slow=0.6,SNR=12						
OBN	Obninsk	141.75	329⇓	iPKIKP	PKPdf	12 52 55.7	-4.2
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NB2	NORSAR Subarra	144.50	353	PKP	PKPdf	12 53 02.4	-2.1
	comp=Z,40nm,1.0s,baz=11,slow=3.6						
NB2	NORSAR Subarra	144.50	353	PKP	PKPdf	12 53 02.4	-2.1
	baz=11,slow=3.6						
NOA	NORSAR Array B	144.50	353	PKP	PKPdf	12 53 01.6	-2.9
	comp=Z,20nm,0.8s,baz=14,slow=2.4,SNR=50						
NOA				pPKP	pPKPdf	12 53 47.1	+1.4
	comp=Z,2.7nm,0.8s,baz=12,slow=2.3,SNR=2.6						
NAO01	NORSAR Array S	144.73	353	ePKPbc	PKPdf	12 53 03.2	-1.8
MNK	Minsk	145.97	333	ePKP2	PKPdf	12 53 07.0	-0.3
KONO	Kongsberg	146.04	354⇑	iPKP2	PKPdf	12 53 07.0	-0.2
AKASG	Malin Array Be	147.97	327	PKPbc	PKPbc	12 53 12.7	-1.3
	comp=Z,15nm,0.8s,baz=44,slow=4.1,SNR=18						
AKASG				pPKP	pPKPdf	12 53 54.9	+2.9
	comp=Z,5.9nm,0.8s,baz=43,slow=4.2,SNR=1.1						
KIEV	Kiev	147.98	327	ePKP2	PKPdf	12 53 12.8	+2.0
SIM	Simferopol'	148.34	315	PKIKP	PKPdf	12 53 11.1	-0.4
SIM				pmax	pmax		
	comp=Z,23nm,0.7s						
BR131	Keskin Array S	150.64	305	ePKPbc	PKPbc	12 53 20.1	-0.9
BRTR	Keskin Array B	150.64	305	PKPbc	PKPbc	12 53 20.2	-0.8
	comp=Z,9.5nm,0.8s,baz=145,slow=4.5,SNR=34						
BRTR				PKPab	PKPab	12 53 28.6	+0.1
	comp=Z,9.8nm,0.7s,baz=113,slow=2.9,SNR=14						
KWP	Kalwaria	151.71	332	ePKP	PKPbc	12 53 22.9	-0.2
BUR08	Bucovina Ar. S	151.97	326	ePKPbc	PKPbc	12 53 23.7	-0.1
OJC	Ojcow	152.41	336	ePKP	PKPbc	12 53 24.1	-0.6
KOLS	Kolonicke sedl	152.42	331	ePKP	PKPdf	12 53 16.7	-1.0
KOLS				e		12 53 24.8	
STHS	Stebnicka Huta	152.48	333	ePKP	PKPbc	12 53 25.0	+0.1
UZH	Uzhgorod	152.64	331	ePKIKP	PKPbc	12 53 24.8	-0.4
UZH				e		12 53 31.4	
KSP	Ksiaz	153.06	340	ePKP	PKPbc	12 53 26.1	0.0
KSP	Ksiaz	153.06	340	ePKP	PKPbc	12 53 25.7	-0.4
KSP				e		12 53 29.2	
OKC	Ostrava-Krasne	153.32	337	ePKPbc	PKPbc	12 53 25.8	-0.9
UPC	Upice	153.44	340	ePKPbc	PKPbc	12 53 26.0	-0.9
DPC	Dobruska-Polom	153.48	340	ePKPbc	PKPbc	12 53 26.9	-0.1
CLL	Collm	153.51	345	i PKIKP	PKPbc	12 53 26.5	-0.6
CLL				i		12 53 38.9	
CLL				pmax	pmax		
	comp=Z,18nm,1.2s						
CLL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CLL	Collm	153.51	345	i PKPbc	PKPbc	12 53 26.5	-0.6
	comp=Z,18nm,1.2s						
CLL				i x	x	12 53 30.1	
CLL				i PKPab	PKPab	12 53 38.9	-1.1
	comp=Z,9.0nm,0.7s						
BRG	Berggiesshubel	153.69	343	ePKP	PKPbc	12 53 26.6	-0.8
	comp=Z,12nm,1.4s						
BRG				e		12 53 30.8	
	comp=Z,7.3nm,0.8s						
BRG				e		12 53 40.5	
	comp=Z,7.3nm,0.8s						
VYHS	Vyhne	154.18	334	ePKP	PKPab	12 53 42.8	-0.1
KHC	Kasperske Hory	155.37	342	ePKPdf	PKPdf	12 53 24.5	+2.6
KHC				ePKPab	PKPab	12 53 48.3	+0.3
KHC	Kasperske Hory	155.37	342	ePKP	PKPdf	12 53 24.5	+2.6
KHC				ePKPab	PKPab	12 53 48.3	+0.3
KHC				e		12 53 48.3	
GERES	GERESS Array B	155.60	342	PKPbc	PKPdf	12 53 30.7	+8.5
	comp=Z,0.7nm,0.6s,baz=26,slow=5.4,SNR=4.1						
GERES				PKPab	PKPab	12 53 48.3	-0.7
	comp=Z,1.7nm,0.9s,baz=9.2,slow=4.2,SNR=5.8						
GERES	GERESS Array B	155.60	342	PKP2	PKPab	12 53 48.3	-0.7
LIC	Lamto	159.04	159	eP	PKPab	12 54 03.9	-0.8
	comp=Z,25nm,1.0s						
KIC	Kosan Boka	159.26	159	eP	PKPab	12 54 05.0	-0.7
	comp=Z,30nm,0.9s						
TIC	Toumodi	159.44	158	eP	PKPab	12 54 05.7	-0.7
	comp=Z,5.0nm,0.2s						
DBIC	Dimbokro	159.51	159	PKP	PKPdf	12 53 27.2	-1.0
	comp=Z,1.9nm,0.8s,baz=249,slow=5.1,SNR=3.5						
DBIC				PKPab	PKPab	12 54 06.7	0.0
	comp=Z,2.2nm,0.8s,baz=104,slow=3.3,SNR=4.2						
DBIC	Dimbokro	159.51	159	PKP	PKPdf	12 53 27.2	-1.0
DBIC				PKPab	PKPab	12 54 06.7	-0.1
TORD	Torodi Ar. Bea	167.16	177	PKP	PKPdf	12 53 34.0	-1.4
	comp=Z,1.7nm,0.7s,baz=324,slow=0.8,SNR=14						
TORD				PKPab	PKPab	12 54 39.1	-1.0
	comp=Z,3.1nm,1.0s,baz=169,slow=3.9,SNR=11						
TORD				pPKPab	pPKPab	12 55 20.7	+1.0
	comp=Z,0.7nm,0.7s,baz=178,slow=2.6,SNR=2.6						
TORD				PP	PP	12 58 27.2	0.0
	comp=Z,0.5nm,0.8s,baz=180,slow=3.7,SNR=3.6						
MDT	Midelt	170.85	41	PKP	PKPdf	12 53 37.5	+0.3
	comp=Z,0.9nm,0.7s,baz=49,slow=6.0,SNR=3.7						

IDC 10 12:51:16.9±51.0**, 178S**×**14382E, h0**km**, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/14**, mbtmp3.9**/4**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.3**/18**, Error ellipse: s-maj=1323.0km s-min=109.4km az=159.0, Ninigo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	41.72	341	LR	LR	13 13 44.6	
	comp=Z,198nm,19.6s,baz=85,slow=32						
CMAR	Chiang Mai Arr	48.50	297	P	P	13 00 01.6	-0.3
	0.3nm,0.3s,baz=111,slow=5.1,SNR=4.2						
MKAR	Makanchi Array	72.24	321	P	P	13 02 44.8	+0.8
	1.0nm,1.0s,baz=97,slow=11,SNR=4.2						
ZALV	Zalesovo Beam	73.77	328	P	P	13 02 52.7	-0.1
	1.6nm,0.8s,baz=100,slow=6.0,SNR=7.2						
KURK	Kurchatov	75.95	323	P	P	13 03 05.6	0.0
	0.9nm,0.9s,baz=110,slow=5.5,SNR=3.8						

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*ISCJB **10** 12:53:58.6±1.3, 2302S±004×7090W±005, h14km±7km, mb3.8/2, Error ellipse: s-maj=8.3km s-min=6.0km az=172.2*

*IDC **10** 12:53:58.3±1.3, 23.13S×7079W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/17, mbtmp3.9/3, ML3.3/2, Error ellipse: s-maj=36.2km s-min=16.3km az=166.0*

*NEIC **10** 12:54:01.1, 2305S×7075W, h30km, ML3.9(GUC), After GUC.*

*GUC **10** 12:54:01.1±0.6, 2305S×7075W, h30km±4km, MD4.3, ML3.9*

ISC 10 12:53:58.6±1.3**, 2300S**±003×**7086W**±006**, h2**km±7km**, n19,** σ**0.97**/26**, mb3.8**/2**, 2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.40	105⇓	iP	Pg	12 54 07.9	+1.7
MECH				i S	Sg	12 54 12.9	+1.6
MECH				AML	AML	12 54 19.5	
	comp=N,35μm,0.6s						
CEN1	Los Morros	0.72	122⇓	iP	Pg	12 54 13.2	+0.8
CEN1				i S	Sg	12 54 22.0	+0.2
ANCH	Antofagasta	0.80	148⇑	iP	Pg	12 54 13.8	0.0
ANCH				i S	Sg	12 54 23.6	-0.5
PECH	Pedro de Valdi	1.17	70⇓	eP	Pg	12 54 20.4	-0.6
PECH				i S	Sg	12 54 35.3	-0.8
PECH				AML	AML	12 54 38.7	
	comp=N,7μm,0.4s						
MACH	Maria Elena	1.30	52	eP	Pg	12 54 23.2	-0.2
MACH				i S	Sg	12 54 39.7	-0.6
PB04	Plate Boundary	1.47	60	eP	Pn	12 54 17.6	-8.4
PB04				i S	Sb	12 54 30.1	-16
CPN1	Cerro Paranal	1.67	166⇑	iP	Pn	12 54 28.0	-0.8
CPN1				AML	AML	12 54 54.3	
	comp=E,2μm,0.6s						
LVC	Limon Verde	1.84	78	Pg	Pg	12 54 32.0	-1.9
	comp=E,102nm,0.3s,baz=251,slow=13,SNR=568						
LVC				Lg		12 54 55.7	
	comp=E,253nm,0.3s,baz=355,slow=18,SNR=20						
LVC	Limon Verde	1.84	78	eP	Pn	12 54 31.7	+0.5
LVC				i S	Sn	12 54 54.5	-0.6
LVC				AML	AML	12 54 59.0	
	comp=N,2μm,0.6s						
PB01	Plate Boundary	2.33	33	eP	Pn	12 54 39.4	+1.5
PB01				i S	Sn	12 55 07.2	+0.2
SPCH	San Pedro de A	2.46	88	eP	Pn	12 54 44.4	+4.7
ARE	Arequipa	6.53	355	eP	Pn	12 55 36.0	+0.3
ARE				eS	Sn	12 56 51.0	+0.2
CFAA	Coronel Fontan	8.88	165	Pn	Pn	12 56 06.4	-1.5
	comp=N,0.1nm,0.3s,baz=15,slow=12,SNR=3.6						
SIV	San Ignacio	11.57	55	Pn	Pn	12 56 44.3	-0.5
	comp=N,0.6nm,0.3s,baz=245,slow=13,SNR=11						
CPUP	Villa Florida	12.74	108	Pn	Pn	12 57 04.1	+3.3
	comp=N,0.3nm,0.3s,baz=184,slow=20,SNR=2.6						
TORD	Torodi Ar. Bea	79.56	71	P	P	13 06 06.9	-0.6
	comp=N,1.0nm,0.8s,mb3.8,baz=252,slow=5.0,SNR=6.7						
YKA	Yellowknife Ar	92.01	341	P	P	13 07 09.1	+0.8
	comp=N,0.4nm,0.7s,mb3.9,baz=136,slow=4.4,SNR=12						
ZALV	Zalesovo Beam	144.07	25	PKP	PKPdf	13 13 35.9	+0.4
	comp=N,0.3nm,0.4s,baz=267,slow=2.9,SNR=2.9						
MKAR	Makanchi Array	147.91	36	PKPbc	PKPbc	13 13 45.3	+0.1
	comp=N,0.6nm,0.7s,baz=318,slow=3.1,SNR=5.5						

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*SGS **10** 12:57:06.7, 30.10N×3623E, h7km*

*CSEM **10** 12:57:06.7, 30.10N×3623E, h7km, ML3.0, After SNSN*

*ISCJB **10** 12:57:07.5±0.8, 2988N±003×3621E±005, h0km, Error ellipse: s-maj=5.7km s-min=4.2km az=170.0*

*GII **10** 12:57:08.7±1.0, 2990N×36.11E, h0km, ML2.3/6, EXPLOSION*

ISC 10 12:57:07.5±0.8**, 2987N**±003×**3626E**±005**, h0**km**, n20,** σ**0.71**/32**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.06	262	Pg	Pg	12 57 28.0	+0.2
HRFI	Mount Harif	1.07	279	Pg	Pg	12 57 27.9	-0.2
HRFI				Sg	Sg	12 57 42.3	+0.4
EIL	Elat	1.15	260	Pg	Pg	12 57 29.2	-0.4
EIL				Sg	Sg	12 57 44.7	+0.2
ZFRI	Zfri	1.16	306	Pg	Pg	12 57 29.3	-0.3
ZFRI				Sg	Sg	12 57 45.4	+0.8
MBRI	Mt Berech	1.17	266	Pg	Pg	12 57 29.3	-0.6
MBRI				Sg	Sg	12 57 46.1	+1.0
PRNI	Paran	1.19	294	Pg	Pg	12 57 29.3	-0.9
PRNI				Sg	Sg	12 57 45.3	-0.3
HQLS		1.19	242	P	Pg	12 57 29.2	-1.0
HQLS		1.19	242	P	Pg	12 57 29.2	-1.0
HQLS				S	Sg	12 57 46.2	+0.6
JLOS		1.32	211	P	Pg	12 57 32.2	-0.5
JLOS		1.32	211	P	Pg	12 57 32.2	-0.5
JLOS				S	Sg	12 57 51.4	+1.6
KRMI	Paran Flat	1.35	281	Pg	Pg	12 57 32.3	-1.1
KRMI				Sg	Sg	12 57 50.1	-0.8
RMNI	Mount Ramon	1.48	300	Pn	Pn	12 57 35.4	0.0
MZDA	Masada	1.63	332	Pn	Pn	12 57 37.4	+0.1
MZDA				Sn	Sn	12 57 59.0	0.0
TBKS	Tabuk	1.67	171	P	Pn	12 57 38.4	+0.5
BDAS	Al Bad'	1.76	215	P	Pn	12 57 38.7	-0.5
RTMI	Retamim	1.79	311	Pn	Pn	12 57 40.0	+0.3
RTMI				Sn	Sn	12 58 03.8	+0.7
DSI	Dead Sea	1.85	336	Pn	Pn	12 57 40.9	+0.4
DSI				Sn	Sn	12 58 06.3	+1.7
KZIT	Kziot	1.91	303	Pn	Pn	12 57 41.0	-0.3
KZIT				Sn	Sn	12 58 04.8	-1.2
RSHS		2.02	220	P	Pn	12 57 42.5	-0.3
RSHS		2.02	220	P	Pn	12 57 42.5	-0.3

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*ISCJB **10** 13:13:39.4±0.2, 1164N±004×8585W±005, h204km±2km, mb4.5/49, Error ellipse: s-maj=9.6km s-min=4.2km az=143.6*

*NEIC **10** 13:13:40.8±0.4, 1163N×8583W, h204km±4km, mb5.0/31, MD4.7(CASC), Error ellipse: s-maj=7.8km s-min=4.9km az=60.0*

*CASC **10** 13:13:40.5±1.3, 1159N×8591W, h188km±3km, MD4.2, ML3.5, mb5.0(NEIC)*

*BJI **10** 13:13:40.7, 1160N×8580W, h204km, mB5.1*

*IDC **10** 13:13:41.2±0.5, 1174N×8566W, h206km±4km, mb4.0/24, mb1 4.2/27, mb1mx4.1/32, mbtmp4.1/27, Error ellipse: s-maj=12.3km s-min=6.2km az=62.0*

*MOS **10** 13:13:43.4±1.1, 1159N×8586W, h254km, mb5.0/9, Error ellipse: s-maj=15.4km s-min=8.0km az=96.3*

ISC 10 13:13:40.3±0.2**, 1163N**±004×**8585W**±005**, h198**km±2km**, h209**km±1.7km**: pP-P, n186,** σ**1.04**/145**, mb4.5**/49**, 28C-10D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONN	Concepcion	0.23	107	eP	Pn	13 14 06.5	+0.1
SSN	San Juan del S	0.33	181⇑	iP	Pn	13 14 06.3	-0.4
SSN				eS	Sn	13 14 25.4	-1.7
APON	Apoyo	0.35	323	eP	Pn	13 14 06.9	+0.2
TICN	Ticuantepe	0.55	317	eP	Pn	13 14 07.3	-0.1
CRUN	El Crucero	0.56	308	eP	Pn	13 14 08.0	+0.5
MGAN	Managua	0.64	323	eP	Pn	13 14 07.6	-0.2
TISN	Laguna Tiscapa	0.65	321	i P	Pn	13 14 07.8	-0.1
XAVN	Gruta Xavier	0.69	318	eP	Pn	13 14 07.9	-0.1
HUEN		0.77	336⇑	iP	Pn	13 14 08.7	+0.2
CSAN		0.78	314	eP	Pn	13 14 08.3	-0.2
COPN	Copaltepe	0.91	307⇓	iP	Pn	13 14 08.6	-0.7
MOMN	Momotombo	1.02	319	i P	Pn	13 14 10.1	+0.1
LIM1	Limonal	1.10	148⇑	iP	Pn	13 14 10.4	-0.2
LIM1				i S	Sn	13 14 32.5	-1.5
MIRN	Miramar	1.16	314	eP	Pn	13 14 10.8	-0.3
CUI	Cuipilapa	1.18	145⇑	eP	Pn	13 14 11.3	+0.1
CUI				eS	Sn	13 14 34.4	-0.7
CNGN	Cerro Negro	1.20	316	eP	Pn	13 14 11.0	-0.3
CNGN				⇑eP		13 14 11.1	
2RIO	Dos Rios de Up	1.25	151⇑	eP	Pn	13 14 09.7	-2.1
TEL3	Telica 3	1.35	314	i P	Pn	13 14 12.5	0.0
VCR	Vista de Mar	1.51	172⇑	eP	Pn	13 14 13.6	-0.3
CRIN	San Cristobal	1.58	312	eP	Pn	13 14 14.5	-0.1
FORC	Fortuna	1.64	135⇓	eP	Pn	13 14 15.4	+0.2
JCR	Jicaral	1.92	158⇑	eP	Pn	13 14 17.8	-0.1
CGA2	Cerro Gallo 2	2.10	140⇑	eP	Pn	13 14 20.1	+0.3
PRS1	Puriscal	2.23	137⇓	eP	Pn	13 14 22.3	+1.2
LAJ	Bijagual	2.44	136⇑	eP	Pn	13 14 21.9	-1.5
CNCH	Conchagua	2.53	310⇑	eP	x	13 14 24.6	
CNCH				eS	x	13 14 59.9	
URSC	Urasca	2.71	131⇑	eP	Pn	13 14 27.1	+0.6
URSC	Urasca	2.71	131	eP	Pn	13 14 27.4	+0.9
QCR	Quepos	2.75	143⇓	eP	Pn	13 14 28.3	+1.3
TGUH	Tegucigalpa,Un	2.78	330⇑	iPn	Pn	13 14 28.6	+1.3
BUS	Buena Vista	2.91	135⇑	eP	Pn	13 14 30.4	+1.5
BUS	Buena Vista	2.91	135	eP	Pn	13 14 30.4	+1.6
BLLM	Bellamira	2.94	308⇑	eP	x	13 14 29.8	
BLLM				eS	x	13 15 07.6	
VSM	San Miguel	2.96	307⇓	eP	x	13 14 30.4	
CAHU	Cacacuatique	3.13	313⇑	eP	x	13 14 32.4	
BAR1		3.45	133⇓	eP	Pn	13 14 36.1	+0.9
SNVI	San Vicente	3.52	304⇓	eP	x	13 14 36.8	
LBRS	Las Brisas	3.75	304⇓	eP	x	13 14 40.2	
LFU	La Fuente	3.82	304⇑	eP	x	13 14 41.3	
SNET	Serv Nac Est T	3.88	302	eP	x	13 14 41.7	
BOQS	Boqueron	3.94	302⇑	eP	x	13 14 42.5	
BOQS				eS	x	13 15 31.8	
ACR	Cerro Adams	3.97	138⇑	eP	Pn	13 14 41.6	0.0
SBLS	San Blas	4.29	301⇑	eP	x	13 14 46.8	
SNJE	San Jose	4.29	302⇑	eP	x	13 14 46.7	
SNJE				eS	x	13 15 37.8	
RTR	El Retiro	4.33	302⇑	eP	x	13 14 47.5	
MTO2	Montecristo 2	4.39	309⇑	eP	x	13 14 48.2	
RBDL	Robledal	4.48	304⇑	eP	x	13 14 49.0	
BCIP	Isla Barro Col	6.40	112⇑	iPn	Pn	13 15 12.8	-0.1
CMIG	Matias Romero	10.30	303	P	Pn	13 16 03.6	+0.2
	8.6nm,0.3s,baz=136,slow=8.7,SNR=75						
CMIG				S	Sn	13 17 48.7	-10
	2.6nm,0.3s,baz=11,slow=12,SNR=4.2						
PAYG	Puerto Ayora	13.00	200	eP	Pn	13 16 41.0	+3.1
	125nm,0.8s						
ROSC	El Rosal	13.24	120	P	Pn	13 16 42.4	+1.4
	3.1nm,0.3s,baz=280,slow=18,SNR=31						
ROSC	El Rosal	13.24	120	eP	Pn	13 16 44.1	+3.2
OTAV	Otavalo	13.50	147	eP	Pn	13 16 45.7	+1.5
CHI2		13.85	119	eP	x	13 14 14.0	
LAPE	La Pedrera	14.64	105⇑	iP	x	13 14 09.1	
LAPE				i S	x	13 14 30.2	
SDV	Santo Domingo	15.22	99	P	Pn	13 17 05.8	+0.4
	3.1nm,0.3s,baz=286,slow=6.1,SNR=120						
SDV				ScP	ScP	13 25 12.7	-0.6
	0.3nm,0.3s,baz=21,slow=19,SNR=3.9						
SDV	Santo Domingo	15.22	99	eP	Pn	13 17 05.6	+0.1
	173nm,1.0s						
SDDR	Presa de Saban	15.83	61	eP	Pn	13 17 15.3	+2.5
CRPR	Cabo Rojo, PR	19.19	68	eP	P	13 17 49.8	+0.6
ICM	Isla Caja Muer	19.69	69	eP	P	13 17 55.3	+0.7
ATAH	Atahualpa	19.94	158	P	P	13 18 00.6	+3.3
	21nm,0.8s,baz=344,slow=7.9,SNR=18						
SJG	San Juan	20.09	69	eP	P	13 18 00.1	+1.2
SJG				pmax	pmax		
	comp=Z,130nm,0.9s						
SJG	San Juan	20.09	69	eP	P	13 18 00.1	+1.2
	comp=Z,130nm,0.9s						
CBYP	Canovanas	20.40	69	eP	P	13 18 01.9	-0.3
	comp=Z,93nm,0.8s						
HKT	Hockley	20.45	334	eP	P	13 18 03.1	+0.4
HKT				pmax	pmax		
	comp=Z,18nm,1.5s						
HKT	Hockley	20.45	334	eP	P	13 18 03.1	+0.5
	comp=Z,18nm,1.5s						
PCRV	Puerto La Cruz	20.88	92	P	P	13 18 07.9	+0.5
	comp=Z,150nm,0.6s,baz=247,slow=5.9,SNR=66						
LRAL	Lakeview Retre	21.33	357	eP	P	13 18 12.5	+0.6
	comp=Z,86nm,1.2s,mb5.2						
GOGA	Godfrey	21.79	5	eP	P	13 18 17.6	+0.9
GOGA				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.0						
GOGA	Godfrey	21.79	5	eP	P	13 18 17.6	+0.9
	comp=Z,59nm,1.3s,mb5.0						
OXF	Oxford	23.00	352	eP	P	13 18 28.0	+0.2
OXF				e*PP		13 19 09.5	
OXF				pmax	pmax		
	comp=Z,123nm,1.2s,mb5.3						
OXF	Oxford	23.00	352	eP	P	13 18 28.0	+0.2
	comp=Z,123nm,1.2s,mb5.3						
OXF				epP		13 19 09.4	
GRGR	Grenville	23.68	86	eP	P	13 18 35.0	+0.8
	comp=Z,611nm,0.9s						
MIAR	Mount Ida	23.87	344	eP	P	13 18 35.3	-0.4
MIAR				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.9						
MIAR	Mount Ida	23.87	344	eP	P	13 18 35.3	-0.4
	comp=Z,26nm,0.8s,mb4.9						
TKL	Tuckaleechee C	23.99	4	P	P	13 18 37.6	+0.8
	comp=Z,19nm,0.6s,mb4.9,baz=173,slow=11,SNR=26						
TKL	Tuckaleechee C	23.99	4	eP	P	13 18 37.6	+0.8
TXAR	Lajitas Array	24.20	319	P	P	13 18 39.1	+0.3
	comp=Z,2.2nm,0.7s,mb3.9,baz=146,slow=8.8,SNR=23						
TXAR				pP		13 19 19.3	
	comp=Z,9.3nm,1.1s,baz=149,slow=10,SNR=6.5						
TXAR				PcP	PcP	13 22 14.2	+0.3
	comp=Z,1.6nm,0.8s,baz=145,slow=5.2,SNR=6.0						
TXAR				ScP	ScP	13 25 33.9	0.0
	comp=Z,3.6nm,0.9s,baz=130,slow=6.7,SNR=19						
TXAR	Lajitas Array	24.20	319	P	P	13 18 39.1	+0.3
TXAR						13 22 14.3	
FDF	Fort de France	24.24	80	eP	P	13 18 39.5	+0.1
FDF	Fort de France	24.24	80	P	P	13 18 38.4	-0.9
BIM	Bigot	24.30	81	eP	P	13 18 40.1	+0.2
WVT	Waverly	24.45	356	eP	P	13 18 40.9	-0.1
WVT				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
WVT	Waverly	24.45	356	eP	P	13 18 40.9	-0.1
	comp=Z,20nm,0.9s,mb4.7						
TZTN	Tazewell	24.89	4	eP	P	13 18 45.9	+1.0
	comp=Z,21nm,0.8s,mb4.8						
NNA	Nana	25.11	159	P	P	13 18 48.5	+1.4
	comp=Z,6.3nm,0.4s,mb4.6,baz=322,slow=8.5,SNR=5.4						
BLA	Blacksburg	25.93	10	eP	P	13 18 55.6	+1.3
BLA				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.2						
BLA	Blacksburg	25.93	10	eP	P	13 18 55.5	+1.2
	comp=Z,67nm,1.1s,mb5.2						
WCI	Wyandotte Cave	26.49	359	eP	P	13 18 59.1	-0.2
WCI				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.2						
WCI	Wyandotte Cave	26.49	359	eP	P	13 18 59.1	-0.2
	comp=Z,60nm,0.9s,mb5.2						
WCI				epP	pP	13 19 41.7	+2.5
CCM	Cathedral Cave	26.75	351	eP	P	13 19 01.6	0.0
CCM				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.0						
CCM	Cathedral Cave	26.75	351	eP	P	13 19 01.6	0.0
	comp=Z,42nm,1.1s,mb5.0						
CCM				epP	pP	13 19 42.8	+1.2
MCWV	Mont Chateau	28.42	10	eP	P	13 19 17.5	+1.1
	comp=Z,31nm,0.8s,mb5.0						
ACSO	Alum Creek Sta	28.60	5	eP	P	13 19 18.6	+0.6
	comp=Z,75nm,0.6s,mb5.5						
SSPA	Standing Stone	29.73	12	eP	P	13 19 29.3	+1.3
	comp=Z,49nm,1.1s,mb5.0						
ANMO	Albuquerque	29.83	324	P	P	13 19 30.4	+1.4
	comp=Z,0.9nm,0.8s,mb3.5,baz=162,slow=12,SNR=3.6						
ANMO				pP	pP	13 20 13.2	+3.9
	comp=Z,1.1nm,0.7s,baz=153,slow=6.4,SNR=3.9						
ERPA	Erie	30.80	9	eP	P	13 19 37.5	+0.2
	comp=Z,69nm,0.7s,mb5.4						
SCIA	State Center	30.84	349	eP	P	13 19 38.1	+0.4
	comp=Z,21nm,0.8s,mb4.8						
JFWS	Jewell Farm	31.40	354	eP	P	13 19 42.4	-0.2
JFWS				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.9						
JFWS	Jewell Farm	31.40	354	eP	P	13 19 42.4	-0.2
	comp=Z,27nm,0.8s,mb4.9						
BINY	Binghamton	31.65	14	eP	P	13 19 45.6	+0.8
	comp=Z,62nm,1.0s,mb5.1						
SADO	Sadowa	33.52	9	P	P	13 20 00.9	-0.1
	comp=Z,44nm,0.7s,mb5.1,baz=214,slow=8.7,SNR=36						
SADO				ScP	ScP	13 26 01.9	-1.1
	comp=Z,6.5nm,0.9s,baz=228,slow=2.4,SNR=3.4						
PKME	Peaks-Kenny Pk	36.38	20	eP	P	13 20 26.1	+0.5
	comp=Z,49nm,1.3s,mb4.9						
SIV	San Ignacio	36.80	138	P	P	13 20 29.1	-0.4
	comp=Z,184nm,0.6s,baz=316,slow=8.8,SNR=1128						
SIV				ScP	ScP	13 26 15.0	-0.4
	comp=Z,0.9nm,0.6s,baz=322,slow=5.2,SNR=3.1						
PDAR	Pinedale Array	37.24	331	P	P	13 20 32.8	0.0
	comp=Z,0.8nm,0.6s,mb3.4,baz=135,slow=8.4,SNR=9.9						
PDAR				pP	pP	13 21 16.2	+1.9
	comp=Z,1.5nm,0.8s,baz=126,slow=11,SNR=5.0						
PDAR				PcP	PcP	13 22 47.9	-0.3
	comp=Z,0.8nm,0.6s,baz=135,slow=4.4,SNR=4.8						
PDAR				ScP	ScP	13 26 16.6	0.0
	comp=Z,1.9nm,1.0s,baz=130,slow=3.6,SNR=9.5						
LVC	Limon Verde	37.87	154	P	P	13 20 40.3	+2.0
	comp=Z,6.5nm,0.8s,mb4.2,baz=29,slow=6.5,SNR=6.6						
LVC	Limon Verde	37.87	154	eP	P	13 20 39.9	+1.6
REDW	Red Top Meadow	38.31	330	eP	P	13 20 42.0	+0.3
	comp=Z,20nm,1.1s,mb4.6						
REDW				epP	pP	13 21 25.4	+1.9
IMW	Indian Meadow	38.75	331	eP	P	13 20 45.7	+0.3
NVAR	Mina Array Bea	39.35	318	P	P	13 20 52.4	+1.9
	comp=Z,3.4nm,0.7s,mb4.0,baz=127,slow=7.1,SNR=26						
NVAR				PcP	PcP	13 22 55.5	+0.7
	comp=Z,3.2nm,0.6s,baz=135,slow=4.2,SNR=13						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NVAR				ScP	ScP	13 26 25.1	+0.3
	comp=Z,1.5nm,0.9s,baz=151,slow=4.0,SNR=7.5						
ULM	**Lac du Bonnet**	**39.38**	**350**	P	**P**	**13 20 50.2**	**-0.3**
	comp=Z,9.7nm,0.7s,mb4.5,baz=162,slow=7.1,SNR=9.8						
ULM				pP	pP	13 21 32.4	0.0
	comp=Z,9.1nm,1.0s,baz=144,slow=7.0,SNR=4.1						
ULM	**Lac du Bonnet**	**39.38**	**350**	eP	**P**	**13 20 48.9**	**-1.6**
	comp=Z,9.4nm,0.9s,mb4.3						
ULM				epP	pP	13 21 31.0	-1.4
DGMT	**Dagmar**	**39.79**	**341**	eP	**P**	**13 20 55.5**	**+1.6**
	comp=Z,75nm,1.5s,mb4.9						
DGMT				epP	pP	13 21 37.1	+1.2
HLID	**Hailey**	**40.26**	**327**	eP	**P**	**13 20 58.8**	**+0.9**
	comp=Z,1.6nm,0.7s,mb3.6						
LCO	**Las Campanas**	**42.97**	**160**	eP	**P**	**13 21 21.0**	**+1.0**
FFC	**Flin Flon**	**44.83**	**347**	eP	**P**	**13 21 33.6**	**-0.9**
	comp=Z,3.4nm,0.9s,mb3.7						
SCHQ	**Schefferville**	**45.63**	**15**	P	**P**	**13 21 40.1**	**-0.7**
	comp=Z,38nm,0.6s,mb4.9,baz=216,slow=6.6,SNR=46						
SCHQ	**Schefferville**	**45.63**	**15**	eP	**P**	**13 21 39.6**	**-1.1**
	comp=Z,121nm,1.4s,mb5.0						
SCHQ				epP	pP	13 22 26.1	+2.4
CFAA	**Coronel Fontan**	**46.19**	**159**	P	**P**	**13 21 46.2**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=335,slow=6.1,SNR=14						
CFAA				PcP	PcP	13 23 17.9	+0.1
	comp=Z,0.7nm,0.8s,baz=305,slow=3.8,SNR=6.4						
CFAA	**Coronel Fontan**	**46.19**	**159**	P	**P**	**13 21 46.2**	**+0.8**
CFAA				PcP	PcP	13 23 17.9	+0.1
BDFB	**Brasilia**	**46.23**	**125**	P	**P**	**13 21 44.5**	**-1.5**
	comp=Z,8.1nm,0.7s,mb4.2,baz=278,slow=16,SNR=24						
CPUP	**Villa Florida**	**46.83**	**144**	P	**P**	**13 21 49.0**	**-1.6**
	comp=Z,4.8nm,0.6s,mb4.0,baz=312,slow=8.2,SNR=25						
CPUP	**Villa Florida**	**46.83**	**144**	eP	**P**	**13 21 48.8**	**-1.7**
CPUP				pmax	pmax		
	comp=Z,28nm,0.6s						
CPUP	**Villa Florida**	**46.83**	**144**	eP	**P**	**13 21 48.8**	**-1.7**
	comp=Z,28nm,0.6s,mb4.8						
FCC	**Fort Churchill**	**47.44**	**354**	eP	**P**	**13 21 53.5**	**-1.2**
	comp=Z,0.4nm,0.9s						
PLCA	**Paso Flores**	**53.99**	**166**	P	**P**	**13 22 43.4**	**-0.5**
	comp=Z,14nm,0.9s,mb4.5,baz=344,slow=9.1,SNR=16						
PLCA				PcP	PcP	13 23 46.4	0.0
	comp=Z,5.4nm,0.8s,baz=303,slow=4.8,SNR=5.7						
PLCA	**Paso Flores**	**53.99**	**166**	eP	**P**	**13 22 43.6**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,17nm,1.0s						
PLCA	**Paso Flores**	**53.99**	**166**	eP	**P**	**13 22 43.6**	**-0.3**
	comp=Z,17nm,1.0s,mb4.5						
YKA	**Yellowknife Ar**	**54.81**	**344**	P	**P**	**13 22 47.8**	**-1.7**
	comp=Z,1.8nm,0.4s,mb3.9,baz=140,slow=7.0,SNR=53						
YKA				pP	pP	13 23 34.5	+0.4
	comp=Z,11nm,1.0s,baz=137,slow=7.6,SNR=12						
YKA				ScP	ScP	13 27 26.3	-2.6
	comp=Z,0.4nm,0.6s,baz=143,slow=4.5,SNR=6.8						
YKA	**Yellowknife Ar**	**54.81**	**344**	P	**P**	**13 22 47.9**	**-1.7**
YKA				pP	pP	13 23 34.5	+0.4
YKA				ScP	ScP	13 27 26.3	-2.6
SFJD	**Kangerlussuaq**	**60.08**	**15**	P	**P**	**13 23 24.2**	**-2.0**
	comp=Z,10nm,0.6s,mb4.7,baz=174,slow=5.6,SNR=5.7						
RES	**Resolute Bay**	**63.24**	**357**	P	**P**	**13 23 46.1**	**-1.1**
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
RES	**Resolute Bay**	**63.24**	**357**	P	**P**	**13 23 46.0**	**-1.2**
	comp=Z,4.7nm,0.7s,mb4.2						
RES				epP	pP	13 24 34.5	+1.5
INK	**Inuvik**	**64.45**	**342**	eP	**P**	**13 23 54.4**	**-0.8**
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	**Inuvik**	**64.45**	**342**	eP	**P**	**13 23 54.4**	**-0.8**
	comp=Z,3.7nm,1.0s,mb4.0						
EKA	**Eskdalemuir Ar**	**76.37**	**36**	P	**P**	**13 25 06.2**	**-1.3**
	comp=Z,6.4nm,0.6s,mb4.4,baz=261,slow=6.1,SNR=25						
EKA				pP	pP	13 25 55.4	+0.3
	comp=Z,4.7nm,0.9s,baz=247,slow=5.3,SNR=4.4						
MDT	**Midelt**	**76.48**	**59**	P	**P**	**13 25 07.9**	**-0.8**
	comp=Z,6.2nm,1.1s,mb4.2,baz=268,slow=10,SNR=3.6						
TIC	**Toumodi**	**79.74**	**85**	eP	**P**	**13 25 24.9**	**-2.0**
	comp=Z,12nm,0.2s,mb5.2						
LIC	**Lamto**	**79.81**	**86**	eP	**P**	**13 25 25.3**	**-2.0**
	comp=Z,20nm,0.7s,mb4.8						
DBIC	**Dimbokro**	**79.89**	**85**	P	**P**	**13 25 26.1**	**-1.7**
	comp=Z,4.2nm,0.9s,mb4.1,baz=295,slow=6.7,SNR=5.1						
DBIC	**Dimbokro**	**79.89**	**85**	eP	**P**	**13 25 25.3**	**-2.5**
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC	**Dimbokro**	**79.89**	**85**	eP	**P**	**13 25 25.3**	**-2.5**
	comp=Z,4.3nm,1.0s,mb4.0						
KIC	**Kosan Boka**	**80.06**	**86**	eP	**P**	**13 25 26.8**	**-1.9**
	comp=Z,30nm,1.0s,mb4.9						
NB2	**NORSAR Subarra**	**83.32**	**29**	P	**P**	**13 25 44.8**	**+0.1**
	comp=Z,1.4nm,0.8s,mb3.7,baz=283,slow=5.3						
NOA	**NORSAR Array B**	**83.32**	**29**	P	**P**	**13 25 43.6**	**-1.1**
	comp=Z,1.3nm,0.8s,mb3.7,baz=286,slow=5.1,SNR=6.3						
NOA				pP	pP	13 26 33.5	+0.5
	comp=Z,1.5nm,0.8s,baz=285,slow=4.9,SNR=3.9						
HFS	**Hagfors**	**84.71**	**30**	P	**P**	**13 25 50.4**	**-1.4**
	comp=Z,3.8nm,0.8s,mb4.2,baz=250,slow=4.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**85.06**	**78**	P	**P**	**13 25 51.9**	**-2.6**
	comp=Z,0.4nm,0.5s,mb3.4,baz=289,slow=6.4,SNR=9.3						
TORD				pP	pP	13 26 42.8	-0.1
	comp=Z,0.6nm,0.9s,baz=300,slow=4.8,SNR=2.8						
TORD				PKKPbc	PKKPbc	13 44 01.0	+1.1
	comp=Z,0.4nm,0.6s,baz=74,slow=2.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**85.06**	**78**	P	**P**	**13 25 51.9**	**-2.6**
TORD				pP	pP	13 26 42.8	-0.1
TORD				PKKPbc	PKKPbc	13 44 01.0	+1.1
ARCES	**ARCESS Array B**	**86.44**	**19**	P	**P**	**13 25 58.3**	**-1.9**
	comp=Z,1.9nm,0.6s,mb4.0,baz=286,slow=4.1,SNR=7.5						
ARCES				PKKPbc	PKKPbc	13 43 54.6	-3.9
	comp=Z,1.9nm,0.8s,baz=89,slow=3.0,SNR=5.2						
GERES	**GERESS Array B**	**87.54**	**41**	P	**P**	**13 26 04.0**	**-1.8**
	comp=Z,0.6nm,0.6s,mb3.6,baz=277,slow=5.2,SNR=4.4						
GERES				pP	pP	13 26 56.1	+1.5
	comp=Z,0.3nm,0.6s,baz=258,slow=6.7,SNR=2.9						
VTS	**Vitosha**	**95.81**	**45**	⇑iP	**P**	**13 26 41.0**	**-3.2**
VTS	**Vitosha**	**95.81**	**45**	⇑P	**P**	**13 26 41.0**	**-3.2**
VNA3	**Neumayer Olymp**	**96.54**	**162**	eP	**P**	**13 26 46.8**	**0.0**
VNA3				e		13 26 52.0	
VRI	**Vrincioaia**	**96.86**	**41**	⇓iP	**P**	**13 26 49.3**	**+0.3**
VRI	**Vrincioaia**	**96.86**	**41**	⇓P	**P**	**13 26 49.3**	**+0.3**
VNA2	**Neumayer--Watz**	**97.17**	**161**	eP	**P**	**13 26 49.6**	**-0.1**
SNAA	**Sanae**	**98.76**	**161**	eP	**P**	**13 26 57.2**	**+0.4**
ZALV	**Zalesovo Beam**	**114.20**	**6**	PP	PP	13 32 50.8	-2.2
	comp=Z,1.0nm,0.6s,baz=355,slow=7.4,SNR=6.5						
MDJ	**Mudanjiang**	**115.46**	**333**	PKP	PKPdf	13 31 54.6	-4.2
CN2	**Changchun**	**117.90**	**335**	ePKP	PKPdf	13 32 00.3	-3.2
CN2				PP	PP	13 33 21.0	+1.7
SONM	**Songino Array**	**119.80**	**351**	PKP	PKPdf	13 32 05.4	-1.6
	comp=Z,0.5nm,0.4s,baz=245,slow=0.8,SNR=7.0						
SONM				PKKPbc	PKKPbc	13 42 16.5	-2.7
	comp=Z,0.9nm,0.8s,baz=158,slow=2.4,SNR=5.8						
MKAR	**Makanchi Array**	**120.88**	**9**	PKP	PKPdf	13 32 06.1	-3.0
	comp=Z,0.2nm,0.6s,baz=243,slow=1.4,SNR=3.6						
MKAR				PP	PP	13 33 35.1	-4.3
	comp=Z,0.5nm,0.8s,baz=335,slow=8.0,SNR=3.7						
KSRS	**Korea Array**	**121.79**	**329**	PKP	PKPdf	13 32 10.8	-0.4
	comp=Z,1.7nm,0.7s,baz=358,slow=1.3,SNR=7.4						
WMQ	**Urumqi**	**124.50**	**6**	ePKP	PKPdf	13 32 15.2	-1.0
BJI	**Beijing**	**124.67**	**340**	PKP	PKPdf	13 32 15.8	-0.8
HHC	**Hu-ho-hao-te**	**125.36**	**344**	ePKP	PKPdf	13 32 11.8	-6.1
HHC				XPKP		13 33 32.1	
HHC				PKS		13 35 47.4	
HHC				PP	PP		
	comp=Z,145nm,5.2s						
HHC				LR	LR		
	comp=N,194nm,19.0s						
HHC				LR	LR		
	comp=E,533nm,14.3s						
HHC				LR	LR		
	comp=Z,104nm,16.7s						
TOO	**Toolangi**	**127.44**	**231**	ePKP	PKPdf	13 32 22.7	+0.8
CTA	**Charters Tower**	**129.35**	**254**	PKP	PKPdf	13 32 26.6	+0.5
	comp=Z,0.8nm,0.3s,baz=69,slow=8.6,SNR=4.0						
NJ2	**Nanjing**	**130.54**	**332**	ePKP	PKPdf	13 32 24.8	-3.3
STKA	**Stephens Creek**	**131.99**	**237**	ePKP	PKPdf	13 32 31.2	+0.5
	comp=Z,4.9nm,0.5s						
STKA	**Stephens Creek**	**131.99**	**237**	PKP	PKPdf	13 32 31.5	+0.8
	comp=Z,7.1nm,0.6s,baz=71,slow=2.6,SNR=17						
XAN	**Xi'an**	**132.46**	**343**	PKP	PKPdf	13 32 29.0	-2.6
XAN				XPKP		13 33 49.3	
XAN				PP	PP	13 34 57.8	+2.0
XAN				PPP		13 37 51.4	
XAN				SKS	SKSdf	13 39 16.2	-8.2
XAN				SKKS	SKKSac	13 41 24.3	-9.1
XAN				LR	LR		
	comp=N,29nm,31.9s						
XAN				LR	LR		
	comp=E,51nm,31.9s						
XAN				LR	LR		
	comp=Z,138nm,29.1s						
CD2	**Chengdu**	**136.71**	**348**	ePKP	PKPdf	13 32 36.0	-3.7
CD2				XPKP		13 33 56.8	
CD2				PP	PP	13 35 24.0	+1.4
CD2				PKS		13 36 11.0	
CD2				SKS	SKSdf	13 39 22.9	-9.1
CD2				SS	SS	13 53 06.4	-2.6
CD2				PP	PP		
	comp=Z,220nm,10.1s						
GYA	**Guiyang**	**140.23**	**342**	ePKP	PKPdf	13 32 45.3	-1.0
GYA				XPKP		13 34 03.4	
GYA				PP	PP	13 35 46.5	+2.1
GYA				PP	PP		
	comp=Z,120nm,8.4s						
WB2	**Warramunga Arr**	**140.52**	**253**	ePKP	PKPdf	13 32 47.3	+0.4
WRAB	**Tennant Creek**	**140.53**	**253**	ePKPpre		13 32 40.4	
WRAB				ePKPdf	PKPdf	13 32 47.5	+0.6
KMI	**Kunming**	**142.52**	**347**	PKP	PKPdf	13 32 48.2	-2.2
FORT	**Forrest**	**143.30**	**233**	ePKP	PKPdf	13 32 48.5	-3.1
	comp=Z,33nm,0.7s						
FITZ	**Fitzroy Crossi**	**148.92**	**254**	ePKP	PKPbc	13 33 06.1	+0.5
	comp=Z,28nm,0.9s						
FITZ	**Fitzroy Crossi**	**148.92**	**254**	ePKPdf	PKPdf	13 33 01.6	+0.2
FITZ				ePKPbc	PKPbc	13 33 05.9	+0.3
FITZ				ePKP	PKPbc	13 33 06.1	+0.5
CMAR	**Chiang Mai Arr**	**149.73**	**351**	PKPbc	PKPbc	13 33 06.5	-1.0
	comp=Z,1.5nm,0.8s,baz=332,slow=2.8,SNR=6.7						
CMAR				pPKPbc	pPKPbc	13 34 00.3	+1.7
	comp=Z,1.9nm,1.0s,baz=328,slow=3.1,SNR=2.8						
NWAO	**Narrogin (SRO)**	**150.04**	**221**	PKPbc	PKPbc	13 33 07.9	-0.1
	comp=Z,27nm,0.8s,baz=122,slow=2.2,SNR=16						
KLBR	**Kellerberrin**	**150.52**	**224**	ePKP	PKPbc	13 33 09.1	0.0
	comp=Z,17nm,0.7s						
BATI	**Baumata**	**150.99**	**270**	PKPbc	PKPbc	13 33 12.1	+1.4
	comp=Z,18nm,0.6s,baz=248,slow=6.2,SNR=6.6						
MUN	**Mundaring**	**151.31**	**222**	ePKP	PKPbc	13 33 10.8	-0.1
MBWA	**Marble Bar**	**153.73**	**246**	ePKPdf	PKPdf	13 33 09.0	+0.4
MBWA				ePKPbc	PKPbc	13 33 16.7	+0.1

IDC ***10*** *13:19:43.1±1.8, 5250N×3503W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/29, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=52.3km s-min=27.9km az=10.0*
ISCJB ***10*** *13:19:46.0±1.6, 535N±03×354W±02, h10km, mb3.6/5, Error ellipse: s-maj=40.6km s-min=17.4km az=0.8*
NEIC ***10*** *13:19:48.0±1.4, 5353N×3542W, h10km, mb4.0/1, Error ellipse: s-maj=31.4km s-min=17.7km az=186.0*
ISC 10 13:19:44.1±1.3**, 525N**±03×**351W**±02**, h10**km**, n9,** σ**0s75**/9**, mb3.6**/5**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**16.46**	**338**	eP	**Pn**	**13 23 25.3**	**-10**
EKA	**Eskdalemuir Ar**	**18.97**	**69**	P	**Pn**	**13 24 05.7**	**-0.3**
	0.1nm,0.3s,baz=273,slow=13,SNR=4.0						
SUMG	**Summit**	**20.25**	**357**	eP	**P**	**13 24 10.7**	**-8.4**
	9.7nm,1.1s						
ESDC	**Sonseca Array**	**24.90**	**108**	P	**P**	**13 25 07.0**	**+0.1**
	2.2nm,0.8s,mb3.7,baz=289,slow=5.8,SNR=2.1						
BW06	**Boulder Array**	**49.00**	**290**	P	**P**	**13 28 29.1**	**-1.5**
PDAR	**Pinedale Array**	**49.00**	**290**	P	**P**	**13 28 31.9**	**+1.3**
	0.4nm,0.6s,mb3.6,baz=56,slow=6.7,SNR=5.1						
BVAR	**Borovoye Array**	**57.91**	**43**	P	**P**	**13 29 36.2**	**+0.4**
	0.5nm,0.6s,mb3.7,baz=335,slow=6.4,SNR=2.7						
MKAR	**Makanchi Array**	**67.61**	**41**	P	**P**	**13 30 40.4**	**-0.2**
	0.3nm,0.7s,mb3.5,baz=334,slow=6.0,SNR=3.8						
SONM	**Songino Array**	**74.84**	**26**	P	**P**	**13 31 24.5**	**+0.2**
	0.7nm,0.9s,mb3.6,baz=330,slow=5.5,SNR=3.8						

CSEM ***10*** *13:25:07.0±0.0, 3952N×2803E, h2km, MD3.4, Error ellipse: s-maj=1.0km s-min=0.9km az=98.0*
ISK ***10*** *13:25:07.3, 3953N×2803E, h4km, ML3.6*
DDA ***10*** *13:25:07.7, 3954N×2804E, h7km±3km, Md3.4*
ISCJB ***10*** *13:25:08.1±0.4, 3954N±002×2802E±002, h5km±3km, Error ellipse: s-maj=2.8km s-min=2.7km az=28.3*
THE ***10*** *13:25:09.2, 3957N×2798E, h2km±4km, ML4.2/2, Error ellipse: s-maj=6.1km s-min=1.3km az=82.0*
ISC 10 13:25:08.5±0.4**, 3954N**±002×**2802E**±002**, h6**km±3km**, n72,** σ**0s77**/90**, 3C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.15**	**313**	PG	**Pg**	**13 25 11.3**	**-0.2**
BALB				eSG	**Sg**	**13 25 15.1**	**+1.5**
BALY	**Balya**	**0.37**	**303**	iP	**Pg**	**13 25 15.8**	**+0.1**
BALY				iS	**Sg**	**13 25 21.4**	**+0.9**
DST	**Dursunbey**	**0.47**	**82**	PG	**Pg**	**13 25 17.0**	**-0.6**
AKHS	**Akhisar**	**0.68**	**194**	iP	**Pg**	**13 25 21.2**	**-0.4**
AKHS				iS	**Sg**	**13 25 31.2**	**+0.8**
AKS	**Akhisar**	**0.68**	**194**	ePG	**Pg**	**13 25 21.1**	**-0.5**
AKS				eSG	**Sg**	**13 25 30.9**	**+0.5**
KCT	**Karacabey**	**0.77**	**19**	ePG	**Pg**	**13 25 22.5**	**-0.8**
EDC	**Edincik**	**0.81**	**351**	ePG	**Pg**	**13 25 24.0**	**-0.2**
BNT	**Bandirma**	**0.82**	**355**	ePG	**Pg**	**13 25 24.0**	**-0.2**
ULDT	**Uludag**	**1.05**	**55**	iP	**Pg**	**13 25 28.0**	**-0.6**
ULDT				iS	**Sg**	**13 25 41.8**	**-0.4**
AYVA	**Ayvalik**	**1.06**	**258**	iP	**Pg**	**13 25 28.7**	**-0.1**
AYVA				iS	**Sg**	**13 25 43.0**	**+0.6**
MRMT	**Marmara Adasi**	**1.11**	**343**	ePN	**Pn**	**13 25 29.6**	**-1.0**
KULA	**Kula-Manisa**	**1.14**	**154**	ePN	**Pn**	**13 25 29.7**	**-1.3**
GDZ	**Gediz**	**1.22**	**111**	iP	**Pg**	**13 25 31.0**	**-0.9**
GDZ				iS	**Sg**	**13 25 48.3**	**+0.6**
GEMT	**Gemlik**	**1.27**	**45**	ePN	**Pn**	**13 25 32.0**	**-0.7**
LPK	**Lapseki**	**1.28**	**311**	ePN	**Pn**	**13 25 32.5**	**-0.3**
KDAG	**Bornova**	**1.28**	**208**	iP	**Pn**	**13 25 31.4**	**-1.4**
KDAG				iS	**Sg**	**13 25 48.8**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.32**	**331**	ePN	**Pn**	**13 25 32.5**	**-0.9**
SART	**Tekirdag**	**1.32**	**331**	iP	**Pn**	**13 25 32.9**	**-0.5**
SART				iS	**Sb**	**13 25 51.4**	**+0.6**
SART	**Tekirdag**	**1.32**	**331**	iP	**Pn**	**13 25 32.9**	**-0.5**
SART				iS	**Sb**	**13 25 51.3**	**+0.6**
EZN	**Ezine**	**1.34**	**283**	ePN	**Pn**	**13 25 33.4**	**-0.3**
BLCB	**Balcova**	**1.38**	**214**	P	**Pn**	**13 25 34.4**	**+0.1**
BLCB				S	**Sb**	**13 25 54.1**	**+1.5**
BLCB	**Balcova**	**1.38**	**214**	ePn	**Pn**	**13 25 33.7**	**-0.6**
BLCB	**Balcova**	**1.38**	**214**	P	**Pn**	**13 25 34.4**	**+0.1**
BLCB				S	**Sb**	**13 25 54.1**	**+1.5**
PRK	**Paraskevi**	**1.39**	**258**	P	**Pn**	**13 25 34.0**	**-0.4**
PRK				S	**Sb**	**13 25 52.9**	**+0.2**
YLV	**Yalova**	**1.46**	**45**	ePN	**Pn**	**13 25 35.1**	**-0.2**
TKR	**Tekirdag**	**1.50**	**346**	ePN	**Pn**	**13 25 36.1**	**+0.3**
CAVI	**Cavuskoy**	**1.55**	**64**	ePN	**Pn**	**13 25 36.9**	**+0.3**
ADVT	**Abdulvahap**	**1.59**	**55**	ePN	**Pn**	**13 25 38.0**	**+0.8**
URLA	**Izmir**	**1.62**	**224**	iP	**Pn**	**13 25 35.8**	**-1.7**
CTT	**Catalca**	**1.64**	**11**	ePN	**Pn**	**13 25 38.0**	**+0.2**
ELBA	**Catalca**	**1.64**	**11**	iP	**Pn**	**13 25 37.3**	**-0.4**
KHAL	**Karahalli**	**1.64**	**135**	iP	**Pn**	**13 25 37.5**	**-0.3**
KHAL				iS	**Sn**	**13 26 00.5**	**+1.4**
KHL	**Karahalli**	**1.69**	**136**	ePN	**Pn**	**13 25 38.0**	**-0.4**
ALT	**Altintas**	**1.69**	**106**	ePN	**Pn**	**13 25 38.2**	**-0.4**
SLVT	**Silivri**	**1.69**	**5**	ePN	**Pn**	**13 25 38.7**	**+0.1**
ISK	**Istanbul-Kandi**	**1.72**	**27**	ePN	**Pn**	**13 25 38.6**	**-0.4**
CTKS	**Kestanelik-??a**	**1.73**	**12**	ePN	**Pn**	**13 25 39.3**	**+0.2**
BGKT	**Bogazkoy**	**1.74**	**19**	ePN	**Pn**	**13 25 39.6**	**+0.4**
GADA	**Gvkgeada**	**1.76**	**292**	ePN	**Pn**	**13 25 39.1**	**-0.4**
HRT	**Hereke**	**1.80**	**44**	ePN	**Pn**	**13 25 40.6**	**+0.5**
ENEZ	**Enez**	**1.86**	**310**	ePN	**Pn**	**13 25 41.5**	**+0.6**
KLYT	**Kilyos**	**1.88**	**24**	ePN	**Pn**	**13 25 41.1**	**0.0**
BORA	**Eskisehir**	**1.91**	**79**	iP	**Pn**	**13 25 41.3**	**-0.2**
BORA				iS	**Sn**	**13 26 09.2**	**+3.4**
GPA	**Golpazari**	**1.91**	**66**	ePN	**Pn**	**13 25 41.3**	**-0.3**
CHOS	**Chios island**	**1.92**	**234**	P	**Pn**	**13 25 40.7**	**-0.9**
CHOS				S	**Sn**	**13 26 06.4**	**+0.4**
EYL	**Eskiyayla**	**1.93**	**57**	ePN	**Pn**	**13 25 41.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.94**	**199**	iP	**Pn**	**13 25 39.4**	**-2.6**
CTYL	**Yal??k??y-??at**	**1.94**	**6**	ePN	**Pn**	**13 25 42.5**	**+0.5**
DENT	**Denizli**	**1.95**	**156**	ePN	**Pn**	**13 25 42.3**	**+0.2**
ALN	**Alexandroupoli**	**2.03**	**313**	P	**Pn**	**13 25 42.8**	**-0.4**
ALN				S	**Sn**	**13 26 07.8**	**-1.1**
SILT	**Sile**	**2.03**	**37**	ePN	**Pn**	**13 25 43.6**	**+0.3**
GULT	**Gulveren**	**2.11**	**64**	ePN	**Pn**	**13 25 44.5**	**+0.2**
ESKT	**Eskisehir**	**2.19**	**90**	ePN	**Pn**	**13 25 45.6**	**+0.3**
SHUT	**Suhut-Afyon**	**2.20**	**116**	ePN	**Pn**	**13 25 45.6**	**+0.1**
LIA	**Limnos Island**	**2.22**	**280**	P	**Pn**	**13 25 45.8**	**0.0**
LIA				S	**Sn**	**13 26 13.8**	**+0.3**
MLSB	**Milas**	**2.25**	**185**	ePN	**Pn**	**13 25 46.7**	**+0.5**
YER	**Yerkesik**	**2.41**	**175**	ePN	**Pn**	**13 25 48.9**	**+0.5**
EDRB	**Edirne**	**2.50**	**338**	ePN	**Pn**	**13 25 50.4**	**+0.8**
BODT	**Bodrum**	**2.54**	**193**	ePN	**Pn**	**13 25 50.5**	**+0.3**
MDU	**Mudurnu**	**2.62**	**68**	ePN	**Pn**	**13 25 51.8**	**+0.5**
DAT	**Datca**	**2.83**	**187**	ePN	**Pn**	**13 25 54.7**	**+0.5**
KIZT	**Kizilcal**	**3.07**	**101**	ePN	**Pn**	**13 25 58.0**	**+0.5**
APE	**Apeiranthos**	**3.15**	**219**	P	**Pn**	**13 25 58.4**	**-0.2**
APE	**Apeiranthos**	**3.15**	**219**	⇑iP	**Pn**	**13 25 59.2**	**+0.6**
OUR	**Ouranopolis**	**3.21**	**286**	P	**Pn**	**13 25 58.8**	**-0.6**
LADK	**Ladik-KONYA**	**3.65**	**110**	ePN	**Pn**	**13 26 06.1**	**+0.7**
SAFT	**Safranbolu**	**3.95**	**63**	ePN	**Pn**	**13 26 10.9**	**+1.4**
TIRR	**Tirgusor**	**4.92**	**3**	⇓iP	**Pn**	**13 26 23.2**	**+0.2**
TIRR	**Tirgusor**	**4.92**	**3**	S	**Sn**	**13 27 17.0**	**-3.2**
MLR	**Muntele Rosu**	**6.14**	**346**	⇓iP	**Pn**	**13 26 41.6**	**+1.9**
VOIR		**6.29**	**341**	⇑iP	**Pn**	**13 26 45.3**	**+3.6**
VOIR		**6.29**	**341**	⇑P	**Pn**	**13 26 45.3**	**+3.5**

NEIC ***10*** *13:29:16.7±0.7, 360S×14448E, h10km, mb4.3/3, Error ellipse: s-maj=23.7km s-min=11.9km az=80.0*
ISCJB ***10*** *13:29:18.1±3.5, 35S±0.1×1447E±02, h38km±35km, mb4.0/11, Error ellipse: s-maj=28.6km s-min=20.2km az=6.2*
IDC ***10*** *13:29:21.1±8.5, 356S×14465E, h46km±80km, mb3.7/9, mb1 3.8/9, mb1mx3.8/14, mbtmp3.8/9, MS3.5/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=41.1km s-min=19.2km az=81.0*
ISC 10 13:29:20.7±2.7**, 36S**±01×**1446E**±02**, h42**km±29km**, n18,** σ**0s78**/13**, mb4.0**/11**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.30**	**157**	eP	**Pn**	**13 30 51.1**	**0.0**
	34nm,0.9s						
HNR	**Honiara**	**16.27**	**112**	LR	LR	13 38 31.7	
	comp=Z,73nm,19.4s,baz=330,slow=34						
GUMO	**Guam**	**17.07**	**1**	LR	LR	13 38 09.2	
	comp=Z,156nm,20.1s,baz=218,slow=31						
WRAB	**Tennant Creek**	**19.10**	**211**	eP	**Pn**	**13 33 37.2**	**-4.0**
	9.5nm,0.9s						
BATI	**Baumata**	**21.83**	**251**	P	**P**	**13 34 10.3**	**+0.5**
	21nm,0.9s,mb4.6,baz=132,slow=1.9,SNR=2.8						
FITZ	**Fitzroy Crossi**	**23.55**	**231**	eP	**P**	**13 34 27.1**	**-0.5**
	12nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**28.29**	**185**	P	**P**	**13 35 10.7**	**+0.4**
	1.8nm,0.8s,mb3.8,baz=334,slow=11,SNR=2.3						
STKA				LR	LR	13 47 36.3	
	comp=Z,171nm,20.7s,baz=204,slow=39						
KSRS	**Korea Array**	**43.69**	**341**	P	**P**	**13 37 21.0**	**-0.6**
	1.0nm,0.7s,mb3.6,baz=165,slow=9.7,SNR=3.6						
CMAR	**Chiang Mai Arr**	**50.05**	**298**	P	**P**	**13 38 11.6**	**-0.1**
	1.0nm,0.8s,mb3.9,baz=115,slow=6.8,SNR=7.4						
PETK	**Petropavlovsk-**	**57.55**	**9**	P	**P**	**13 39 06.0**	**+0.2**
	4.9nm,0.9s,mb4.5,baz=159,slow=6.8,SNR=7.3						
SONM	**Songino Array**	**61.17**	**332**	P	**P**	**13 39 31.2**	**+0.2**
	0.7nm,1.0s,mb3.8,baz=126,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**74.15**	**321**	P	**P**	**13 40 52.4**	**-0.6**
	0.5nm,0.7s,mb3.5,baz=100,slow=6.5,SNR=5.6						
VNDA	**Vanda**	**74.45**	**176**	P	**P**	**13 40 53.9**	**-0.3**
	1.1nm,0.8s,mb3.8,baz=4.7,slow=2.4,SNR=7.8						
ZALV	**Zalesovo Beam**	**75.73**	**328**	P	**P**	**13 41 01.1**	**-0.7**
	0.9nm,0.5s,mb4.0,baz=97,slow=6.0,SNR=5.7						
KURK	**Kurchatov**	**77.89**	**324**	eP	**P**	**13 41 16.7**	**+2.6**
	2.5nm,0.8s,mb4.2						
TORD	**Torodi Ar. Bea**	**142.19**	**287**	PKhKP	PKPdf	13 48 47.1	-2.5
	0.3nm,0.9s,baz=43,slow=2.4,SNR=3.1						
DBIC	**Dimbokro**	**149.47**	**277**	PKPbc	PKPbc	13 49 06.9	+0.4
	2.5nm,0.7s,baz=90,slow=1.5,SNR=6.7						
DBIC	**Dimbokro**	**149.47**	**277**	ePKPbc	PKPbc	13 49 06.6	+0.1

ISCJB ***10*** *13:43:12.5±1.0, 365S±009×1446E±02, h33km, mb3.9/7, MS3.6/2, Error ellipse: s-maj=26.0km s-min=12.4km az=168.9*
IDC ***10*** *13:43:12.5±1.9, 305S×14442E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.9/14, mbtmp3.9/6, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/29, Error ellipse: s-maj=92.4km s-min=27.2km az=68.0*
NEIC ***10*** *13:43:15.3±1.2, 334S×14379E, h10km, mb4.2/3, Error ellipse: s-maj=38.1km s-min=15.4km az=83.0*
ISC 10 13:43:14.7±1.3**, 369S**±009×**1445E**±02**, h35**km**, n17,** σ**0s65**/13**, mb3.9**/7**, MS3.6**/2**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.25**	**155**	eP	**Pn**	**13 44 45.4**	**+0.8**
KAKA	**Kakadu**	**14.95**	**232**	eP	x	13 46 23.5	
	5.1nm,0.6s						
CTA	**Charters Tower**	**16.39**	**174**	P	**Pn**	**13 47 11.9**	**+10**
	0.3nm,0.3s,baz=352,slow=13,SNR=3.8						
CTA				LR	LR	13 53 12.2	
	comp=Z,255nm,18.1s,baz=137,slow=35						
CTA	**Charters Tower**	**16.39**	**174**	P	**Pn**	**13 47 11.9**	**+10**
CTA				LR	LR	13 53 12.2	
GUMO	**Guam**	**17.17**	**1**	LR	LR	13 51 52.3	
	comp=Z,232nm,19.3s,baz=139,slow=31						
WRAB	**Tennant Creek**	**18.96**	**211**	eP	**Pn**	**13 47 33.0**	**-0.9**
	12nm,1.1s						
WB2	**Warramunga Arr**	**18.96**	**211**	eP	**Pn**	**13 47 33.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.40**	**231**	eP	**P**	**13 48 21.7**	**+0.8**
	8.5nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**28.18**	**185**	LR	LR	14 00 25.3	
	comp=Z,203nm,20.6s,MS3.7,baz=115,slow=36						
KSRS	**Korea Array**	**43.75**	**341**	LR	LR	14 08 40.1	
	comp=Z,49nm,18.7s,MS3.4,baz=320,slow=35						
CMAR	**Chiang Mai Arr**	**50.00**	**298**	P	**P**	**13 52 06.0**	**0.0**
	2.5nm,1.0s,mb4.2,baz=115,slow=6.0,SNR=15						
CHTO	**Chiang Mai**	**50.13**	**298**	eP	**P**	**13 52 07.7**	**+0.7**
	3.8nm,1.1s,mb4.3						
SONM	**Songino Array**	**61.21**	**332**	P	**P**	**13 53 26.2**	**+0.2**
	0.9nm,1.1s,mb3.8,baz=130,slow=6.6,SNR=4.1						
MKAR	**Makanchi Array**	**74.16**	**321**	P	**P**	**13 54 47.8**	**+0.1**
	0.6nm,0.9s,mb3.5,baz=95,slow=11,SNR=3.5						
VNDA	**Vanda**	**74.36**	**176**	P	**P**	**13 54 55.6**	**+7.2**
	0.6nm,0.8s,mb3.6,baz=324,slow=5.4,SNR=4.1						
ZAA0	**Zalesovo Array**	**75.76**	**328**	eP	**P**	**13 54 56.9**	**0.0**
ZALV	**Zalesovo Beam**	**75.76**	**328**	P	**P**	**13 54 55.6**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=138,slow=7.1,SNR=4.6						

CSEM ***10*** *13:46:20.2±0.2, 40.11N×4203E, h10km, MD3.0, Error ellipse: s-maj=3.7km s-min=3.3km az=20.0*
DDA ***10*** *13:46:20.9, 40.11N×42.12E, h7km±1km, Md3.0*
ISCJB ***10*** *13:46:21.4±0.5, 40.13N±003×4209E±004, h3km±7km, Error ellipse: s-maj=4.9km s-min=4.4km az=24.4*
ISK ***10*** *13:46:21.1, 40.14N×4208E, h8km, MD2.9*
ISC 10 13:46:22.0±0.5**, 4013N**±003×**4208E**±003**, h9**km±8km**, n12,** σ**0s88**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.16**	**239**	iP	**Pg**	**13 46 24.6**	**-0.8**
HOMI				iS	**Sg**	**13 46 27.5**	**-0.1**
ERZM	**Erzurum**	**0.59**	**248**	iP	**Pg**	**13 46 33.1**	**-0.3**
EZM	**Erzurum**	**0.60**	**248**	ePG	**Pg**	**13 46 33.2**	**-0.2**
EZM				eSG	**Sg**	**13 46 42.0**	**+0.7**
DDEM	**Demirkent**	**0.81**	**342**	iP	**Pg**	**13 46 37.2**	**-0.2**
DDEM				iS	**Sg**	**13 46 49.1**	**+1.1**
AGRB	**Hanur-Agry**	**0.89**	**128**	ePG	**Pg**	**13 46 38.3**	**-0.8**
AGRB				eSG	**Sg**	**13 46 52.1**	**+1.5**
KARS	**Kars**	**0.91**	**58**	ePG	**Pg**	**13 46 39.0**	**-0.5**
KARS				eSG	**Sg**	**13 46 52.0**	**+0.7**
TUTA	**Tutak**	**0.92**	**142**	iP	**Pg**	**13 46 38.8**	**-0.8**
TUTA				iS	**Sg**	**13 46 54.1**	**+2.6**
DAGI	**Agillar**	**0.96**	**352**	iP	**Pg**	**13 46 39.5**	**-0.9**
DAGI				iS	**Sg**	**13 46 53.5**	**+0.6**
DIGO	**Kars**	**1.03**	**73**	iP	**Pg**	**13 46 40.3**	**-1.4**
DIGO				iS	**Sg**	**13 46 54.7**	**-0.4**
ARTV	**Artvin**	**1.06**	**354**	iP	**Pg**	**13 46 41.8**	**-0.6**
ARTV				iS	**Sg**	**13 46 57.1**	**+0.9**
BCA	**Borcka**	**1.36**	**345**	ePN	**Pn**	**13 46 46.7**	**-0.4**
GUMT	**Gumushane**	**2.02**	**280**	ePN	**Pn**	**13 46 56.7**	**+0.6**

ISCJB ***10*** *14:16:38.5±0.5, 5980N±003×2422E±007, h0km, Error ellipse: s-maj=4.9km s-min=3.6km az=14.4*
HEL ***10*** *14:16:41.0±0.1, 5983N×2421E, h0km, ML2.3, ML2.4(NAO), Explosion*
NAO ***10*** *14:16:41.3±1.0, 5981N×2432E, ML2.4*
BER ***10*** *14:16:41.8±4.7, 5982N×2428E, h0km, ML2.4(NAO), Suspected explosion*

*IDC **10** 14:16:44.0±1.2, 5991N×2409E, h0km, mb1 3.5/4, mb1mx3.2/26, mbtmp3.4/4, ML3.7/3, Error ellipse: s-maj=15.4km s-min=11.4km az=5.0*

ISC 10 14:16:39.8±0.4**, 5981N**±002×**2425E**±006**, h0**km**, n21, σ1ˢ03**/36**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	**Pernaja**	**1.09**	**47**	*e*P	**Pg**	**14 17 00.5**	**-0.2**
PVF				*e*S	**Sg**	**14 17 14.4**	**-0.4**
PVF				*e*RG		14 17 21.6	
MTSE	**Matsula**	**1.12**	**192**	*e*P	**Pg**	**14 17 00.9**	**-0.4**
MTSE				*e*SB	**Sb**	**14 17 17.2**	**0.0**
MTSE				*e*RG		14 17 21.9	
RAF	**Rauma**	**1.73**	**316**	*e*P	**Pn**	**14 17 11.6**	**+0.5**
	baz=142						
RAF				*e*SN	**Sn**	**14 17 35.9**	**+2.0**
VJF	**Virojoki**	**1.81**	**65**	*e*P	**Pn**	**14 17 13.0**	**+0.9**
VJF				*e*S	**Sn**	**14 17 36.5**	**+0.8**
VJF				MSG		14 17 36.5	
	comp=Z,16nm,0.4s						
VSU	**Vasula**	**1.86**	**136**	*e*PG	**Pg**	**14 17 14.8**	**-0.7**
VSU				*e*SG	**Sg**	**14 17 39.4**	**-0.2**
FIA0	**FINESS Array S**	**1.87**	**28**	*e*P	**Pn**	**14 17 14.0**	**+1.0**
	baz=204						
FIA0				*e*S	**Sn**	**14 17 38.1**	**+0.9**
FIA0				MSG		14 17 38.1	
	comp=Z,15nm,0.2s						
FIA0				*e*RG		14 17 48.9	
FIA0	**FINESS Array S**	**1.87**	**28**	Pg	**Pg**	**14 17 14.2**	**-1.4**
	baz=216,slow=16						
FIA0				Lg		14 17 39.8	
	baz=222,slow=28						
FIA1	**FINESS Array S**	**1.87**	**28**	*e*PN	**Pn**	**14 17 14.2**	**+1.2**
FIA1				*e*SG	**Sg**	**14 17 40.1**	**+0.3**
FIA1				MSG		14 17 40.1	
	comp=Z,46nm,0.1s						
KEF	**Keuruu**	**2.38**	**7**	*e*P	**Pn**	**14 17 21.5**	**+1.5**
KEF				*e*S	**Sn**	**14 17 50.7**	**+0.8**
KEF				MSG		14 17 50.7	
	comp=Z,16nm,0.4s						
KAF	**Kangasniemi**	**2.52**	**23**	*e*PB	**Pb**	**14 17 24.0**	**-1.8**
KAF				*e*SB	**Sb**	**14 17 56.2**	**-1.0**
KAF				MSG		14 17 56.2	
	comp=Z,13nm,0.2s						
SUF	**Sumiainen**	**3.06**	**17**	*e*PB	**Pb**	**14 17 32.8**	**-2.2**
SUF				*e*SB	**Sb**	**14 18 12.1**	**-0.8**
SUF				MSG		14 18 12.1	
	comp=Z,3.7nm,0.4s						
HFS	**Hagfors**	**5.31**	**278**	Pn	**Pn**	**14 18 01.5**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=92,slow=12,SNR=7.9						
HFS				Pg	**Pg**	**14 18 14.4**	**-7.2**
	comp=Z,0.4nm,0.3s,baz=94,slow=17,SNR=5.2						
HFS				Sn	**Sn**	**14 19 01.6**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=101,slow=24,SNR=9.2						
HFS				Lg		14 19 29.3	
	comp=Z,2.1nm,0.3s,baz=97,slow=30,SNR=6.7						
HFS	**Hagfors**	**5.31**	**278**	*e*P	**Pn**	**14 18 01.2**	**+0.9**
HFS				*e*S	**Sn**	**14 19 00.5**	**-1.6**
HFS	**Hagfors**	**5.31**	**278**	Pn	**Pn**	**14 18 01.2**	**+0.9**
	baz=122,slow=12						
HFS				Sn	**Sn**	**14 19 00.5**	**-1.6**
	baz=90,slow=22						
NB2	**NORSAR Subarra**	**6.57**	**286**	Pn	**Pn**	**14 18 17.2**	**-0.3**
	baz=91,slow=14						
NB2	**NORSAR Subarra**	**6.57**	**286**	*e*P	**Pn**	**14 18 17.2**	**-0.3**
NOA	**NORSAR Array B**	**6.57**	**286**	Pn	**Pn**	**14 18 17.3**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=91,slow=13,SNR=17						
NOA				Sn	**Sn**	**14 19 29.7**	**-3.4**
	comp=Z,0.5nm,0.3s,baz=118,slow=17,SNR=2.4						
AKASG	**Malin Array Be**	**9.56**	**161**	Pn	**Pn**	**14 18 59.1**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=341,slow=12,SNR=3.4						
ARA0	**ARCESS Array S**	**9.78**	**3**	Pn	**Pn**	**14 19 01.1**	**-0.3**
	baz=184,slow=16						
ARA0	**ARCESS Array S**	**9.78**	**3**	*e*P	**Pn**	**14 19 01.1**	**-0.3**
ARCES	**ARCESS Array B**	**9.78**	**3**	Pn	**Pn**	**14 19 01.7**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=180,slow=13,SNR=34						

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*ISCJB **10** 14:17:07.4±0.9, 5975N±006×243E±0.1, h0km, Error ellipse: s-maj=9.4km s-min=6.6km az=139.2*
*HEL **10** 14:17:09.3±0.5, 5976N×2427E, h0km, ML2.4, Explosion*
*IDC **10** 14:17:13.4±1.1, 5991N×2403E, h0km, mb1 3.4/4, mb1mx3.1/26, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=17.5km s-min=12.3km az=43.0*

ISC 10 14:17:09.6±0.9**, 5984N**±006×**2420E**±009**, h0**km**, n10, σ1ˢ03**/14**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	**Pernaja**	**1.09**	**49**	*e*S	**Sg**	**14 17 43.6**	**-1.0**
RAF	**Rauma**	**1.70**	**316**	*e*P	**Pn**	**14 17 40.9**	**+0.5**
RAF				*e*S	**Sn**	**14 18 03.0**	**+0.2**
FIA0	**FINESS Array S**	**1.86**	**29**	*e*S	**Sn**	**14 18 07.9**	**+1.1**
FIA0				MSG		14 18 11.5	
	comp=Z,23nm,0.2s						
KEF	**Keuruu**	**2.36**	**8**	*e*S	**Sn**	**14 18 20.2**	**+1.0**
KEF				MSG		14 18 24.2	
	comp=Z,22nm,0.2s						
KAF	**Kangasniemi**	**2.50**	**23**	*e*P	**Pn**	**14 17 51.9**	**+0.4**
KAF				*e*S	**Sn**	**14 18 23.4**	**+0.6**
KAF				*e*SG	**Sg**	**14 18 27.3**	**-2.7**
KAF				MSG		14 18 27.6	
	comp=Z,16nm,0.2s						
SUF	**Sumiainen**	**3.04**	**17**	*e*P	**Pn**	**14 17 58.9**	**0.0**
HFS	**Hagfors**	**5.28**	**278**	Pn	**Pn**	**14 18 30.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=112,slow=11,SNR=4.8						
NOA	**NORSAR Array B**	**6.54**	**286**	Pn	**Pn**	**14 18 46.5**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=92,slow=13,SNR=8.9						
NOA				Sn	**Sn**	**14 19 59.5**	**-2.5**
	comp=Z,1.0nm,0.3s,baz=189,slow=13,SNR=3.3						
AKASG	**Malin Array Be**	**9.59**	**160**	Pn	**Pn**	**14 19 28.4**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=340,slow=13,SNR=2.6						
ARCES	**ARCESS Array B**	**9.76**	**3**	Pn	**Pn**	**14 19 30.9**	**0.0**
	comp=Z,0.6nm,0.3s,baz=178,slow=15,SNR=7.1						

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*DJA **10** 14:27:56, 752S×7522W, h10km, mb5.2/2*
*MOS **10** 14:28:00.8±0.7, 741S×7571W, h64km, mb5.3/12, Error ellipse: s-maj=14.6km s-min=11.2km az=102.0*
*ISCJB **10** 14:28:07.9±0.8, 749S±004×7571W±005, h129km±7km, mb4.4/46, Error ellipse: s-maj=9.5km s-min=4.9km az=137.2*
*NEIC **10** 14:28:09.5±0.2, 747S×7569W, mb4.8/33, Error ellipse: s-maj=6.4km s-min=4.0km az=68.0*
*IDC **10** 14:28:09.3±0.4, 755S×7575W, h131km±3km, mb4.1/19, mb1 4.3/24, mb1mx4.3/27, mbtmp4.1/24, Error ellipse: s-maj=9.1km s-min=7.1km az=52.0*
*BJI **10** 14:28:09.4, 750S×7570W, h130km, mB5.1*

ISC 10 14:28:08.6±0.7**, 752S**±004×**7563W**±004**, h118**km±6km**, h132**km±1.1km**:pP-P, n331, σ0ˢ52**/295**, mb4.6**/46**, 97C-89D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.79**	**280**	P	**Pn**	**14 28 51.9**	**-0.2**
	74nm,0.3s,baz=110,slow=10.0,SNR=434						
ATAH				S	**Sn**	**14 29 24.6**	**0.0**
	144nm,0.3s,baz=314,slow=8.4,SNR=20						
NNA	**Nana**	**4.60**	**195**	P	**Pn**	**14 29 16.8**	**+0.7**
	63nm,0.3s,baz=30,slow=11,SNR=74						
NNA				S	**Sn**	**14 30 06.5**	**-1.8**
	238nm,0.3s,baz=283,slow=20,SNR=14						
NNA	**Nana**	**4.60**	**195**	*e*Pn	**Pn**	**14 29 16.2**	**+0.1**
OTAV	**Otavalo**	**8.20**	**340**	P	**Pn**	**14 30 05.9**	**+0.9**
	12nm,0.6s						
ROSC	**El Rosal**	**12.36**	**6**	P	**Pn**	**14 31 06.6**	**+6.0**
	0.5nm,0.3s,baz=93,slow=23,SNR=2.7						
ROSC				S	**Sn**	**14 33 30.8**	**+14**
	1.3nm,0.3s,baz=260,slow=23,SNR=1.7						
ROSC	**El Rosal**	**12.36**	**6**	*e*P	**Pn**	**14 31 07.1**	**+6.5**
LVC	**Limon Verde**	**16.34**	**157**	P	**Pn**	**14 31 52.6**	**+1.4**
	1.0nm,0.3s,baz=321,slow=7.6,SNR=11						
LVC	**Limon Verde**	**16.34**	**157**	*e*P	**Pn**	**14 31 54.5**	**+3.3**
	6.4nm,0.6s						
SIV	**San Ignacio**	**16.54**	**122**	P	**Pn**	**14 31 54.8**	**+1.2**
	3.8nm,0.3s,baz=302,slow=12,SNR=37						
SIV				S	**S**	**14 34 58.5**	**+0.2**
	1.1nm,0.3s,baz=227,slow=20,SNR=3.3						
SDV	**Santo Domingo**	**17.04**	**17**	P	**Pn**	**14 32 00.4**	**+0.7**
	4.0nm,0.3s,baz=203,slow=12,SNR=20						
SDV				S	**S**	**14 35 14.1**	**+4.2**
	0.6nm,0.3s,baz=65,slow=22,SNR=3.4						
SDV	**Santo Domingo**	**17.04**	**17**	*e*P	**Pn**	**14 32 00.1**	**+0.3**
	24nm,0.4s						
PCRV	**Puerto La Cruz**	**20.71**	**32**	P	**P**	**14 32 40.3**	**+0.7**
	46nm,0.8s,baz=150,slow=7.6,SNR=4.3						
GRGR	**Grenville**	**23.96**	**36**	*e*P	**P**	**14 33 11.6**	**-0.6**
	147nm,0.9s,mb5.3						
CFAA	**Coronel Fontan**	**24.93**	**165**	P	**P**	**14 33 21.6**	**+0.7**
	0.8nm,0.6s,baz=348,slow=8.1,SNR=12						
CPUP	**Villa Florida**	**25.55**	**139**	P	**P**	**14 33 26.1**	**-0.4**
	6.4nm,0.6s,mb4.2,baz=307,slow=9.6,SNR=26						
CPUP				pP	pP	14 33 53.4	+1.5
	2.7nm,0.6s,baz=312,slow=9.3,SNR=3.1						
CPUP	**Villa Florida**	**25.55**	**139**	*e*P	**P**	**14 33 26.1**	**-0.4**
CPUP				pmax	pmax		
	comp=Z,30nm,0.6s						
CPUP	**Villa Florida**	**25.55**	**139**	*e*P	**P**	**14 33 26.1**	**-0.4**
	comp=Z,30nm,0.6s,mb4.9						
BDFB	**Brasilia**	**28.20**	**109**	P	**P**	**14 33 51.2**	**+0.9**
	comp=Z,3.5nm,0.7s,mb4.0,baz=269,slow=18,SNR=10						
PLCA	**Paso Flores**	**33.38**	**173**	P	**P**	**14 34 36.1**	**+0.5**
	comp=Z,8.0nm,0.9s,mb4.5,baz=343,slow=9.4,SNR=9.7						
PLCA				PcP	PcP	14 37 14.7	+0.1
	comp=Z,1.1nm,0.6s,baz=57,slow=14,SNR=3.4						
TXAR	**Lajitas Array**	**45.51**	**325**	P	**P**	**14 36 16.4**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.8,baz=151,slow=9.0,SNR=16						
TXAR				pP	pP	14 36 45.6	+2.0
	comp=Z,2.4nm,0.9s,baz=148,slow=7.4,SNR=8.7						
TXAR				PcP	PcP	14 37 52.1	-1.2
	comp=Z,1.4nm,0.7s,baz=150,slow=6.1,SNR=7.2						
319A	**Douglas**	**50.31**	**322**	⇑P	**P**	**14 36 53.8**	**+0.4**
	baz=50						
219A	**White Tail Can**	**50.74**	**323**	⇑P	**P**	**14 36 56.6**	**0.0**
	baz=51,SNR=7.5						
218A	**Dragoon**	**51.20**	**322**	⇓P	**P**	**14 37 00.6**	**+0.6**
	baz=51						
ANMO	**Albuquerque**	**51.30**	**327**	*e*P	**P**	**14 37 00.6**	**-0.1**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	**Albuquerque**	**51.30**	**327**	*e*P	**P**	**14 37 00.6**	**-0.1**
	comp=Z,3.8nm,1.3s,mb4.3						
ANMO				*e*pP	pP	14 37 31.3	+2.9
ANMO				*e*sP	sP	14 37 41.5	-0.1
217A	**Green Valley**	**51.54**	**321**	⇓P	**P**	**14 37 02.7**	**+0.2**
	baz=52,SNR=5.4						
118A	**Homack Ranch,**	**51.62**	**323**	⇑P	**P**	**14 37 03.0**	**-0.1**
	baz=52,SNR=6.3						
117A	**Oracle**	**52.03**	**322**	⇓P	**P**	**14 37 06.3**	**+0.1**
	baz=52,SNR=8.1						
214A	**Organ Pipe Nat**	**52.91**	**320**	⇓P	**P**	**14 37 12.8**	**+0.1**
	baz=53,SNR=6.4						
SDCO	**Great Sand Dun**	**52.97**	**330**	*e*P	**P**	**14 37 12.9**	**-0.1**
	comp=Z,9.1nm,1.2s,mb4.7						
SDCO				*e*pP	pP	14 37 43.8	+2.9
Y16A	**Circle Bar Ran**	**53.38**	**323**	⇑P	**P**	**14 37 16.4**	**+0.3**
	baz=54,SNR=5.8						
X16A	**Lo Mia Camp, P**	**53.73**	**323**	⇓P	**P**	**14 37 19.1**	**+0.4**
	baz=54,SNR=6.0						
X15A	**Humboldt**	**54.26**	**323**	⇓P	**P**	**14 37 22.7**	**+0.2**
	baz=54						
WUAZ	**Wupatki**	**54.46**	**324**	⇓P	**P**	**14 37 24.2**	**+0.3**
	baz=54						
WUAZ	**Wupatki**	**54.46**	**324**	*e*P	**P**	**14 37 24.3**	**+0.4**
	comp=Z,3.1nm,0.9s,mb4.3						
WUAZ				*e*pP	pP	14 37 55.0	+3.0
R21A	**Cimarron**	**54.47**	**329**	⇓P	**P**	**14 37 24.3**	**+0.4**
	baz=55						
X14A	**Yava**	**54.64**	**322**	⇑P	**P**	**14 37 25.2**	**0.0**
	baz=55,SNR=5.1						
T18A	**Mexican Hat**	**54.77**	**327**	⇑P	**P**	**14 37 25.9**	**-0.2**
	baz=55						
S19A	**Harvey Farm, M**	**54.82**	**328**	⇓P	**P**	**14 37 26.3**	**-0.1**
	baz=55						
GLA	**Glamis**	**54.92**	**320**	⇑P	**P**	**14 37 27.6**	**+0.3**
	baz=55						
T17A	**Navajo Res., N**	**55.18**	**326**	⇑P	**P**	**14 37 29.5**	**+0.4**
	baz=55						
S18A	**Hurst Farm, Bl**	**55.24**	**327**	⇓P	**P**	**14 37 29.9**	**+0.4**
	baz=55						
V14A	**Boquillas Ranc**	**55.56**	**323**	⇓P	**P**	**14 37 32.4**	**+0.6**
	baz=56,SNR=5.2						
U15A	**North Rim**	**55.63**	**324**	⇓P	**P**	**14 37 33.0**	**+0.7**
	baz=56						
S17A	**Black Ridge (B**	**55.64**	**326**	⇓P	**P**	**14 37 33.3**	**+0.9**
	baz=56						
Q19A	**Hogan Spring (**	**55.79**	**329**	⇑P	**P**	**14 37 33.3**	**-0.1**
	baz=56,SNR=7.5						
IRM	**Iron Mountain**	**55.84**	**320**	⇑P	**P**	**14 37 34.2**	**+0.4**
	baz=56						
O21A	**Pagoda**	**55.85**	**331**	⇑P	**P**	**14 37 34.8**	**+1.0**
	baz=56						
T15A	**Red Dirt Ranch**	**56.09**	**325**	⇑P	**P**	**14 37 36.3**	**+0.7**
	baz=56						
U14A	**Mt Trumbull**	**56.14**	**324**	⇑P	**P**	**14 37 36.2**	**+0.2**
	baz=56,SNR=5.9						
S16A	**Weppner Ranch,**	**56.14**	**326**	⇑P	**P**	**14 37 36.1**	**+0.1**
	baz=56						
P19A	**Cripple Cowboy**	**56.15**	**329**	⇑P	**P**	**14 37 36.4**	**+0.4**
	baz=56						
R17A	**Hanksville Air**	**56.16**	**327**	⇑P	**P**	**14 37 36.1**	**+0.1**
	baz=56,SNR=6.7						
V13A	**Grand Canyon W**	**56.23**	**323**	⇑P	**P**	**14 37 37.2**	**+0.6**
	baz=56						
N21A	**Black Mountain**	**56.29**	**331**	⇓P	**P**	**14 37 37.7**	**+0.8**
	baz=56						
Q18A	**Rafter H Ranch**	**56.35**	**328**	⇓P	**P**	**14 37 37.4**	**0.0**
	baz=56,SNR=5.2						
R16A	**Teasdale**	**56.48**	**326**	⇑P	**P**	**14 37 38.6**	**+0.3**
	baz=57						
GMRC	**Granite Mounta**	**56.56**	**321**	⇓P	**P**	**14 37 39.4**	**+0.4**
	baz=57						
SRU	**San Rafael**	**56.56**	**328**	⇑P	**P**	**14 37 39.2**	**+0.4**
	baz=57						
N20A	**Spence Gulch,**	**56.71**	**331**	⇓P	**P**	**14 37 40.2**	**+0.4**
	baz=57						
M21A	**Separation Pea**	**56.88**	**332**	⇓P	**P**	**14 37 41.4**	**+0.3**
	baz=57						
L21A	**Rawlins**	**57.16**	**332**	⇓P	**P**	**14 37 43.1**	**+0.1**
	baz=57						
M20A	**Sweetwater, Wa**	**57.18**	**331**	⇑P	**P**	**14 37 43.3**	**+0.1**
	baz=57						
N19A	**John Jarvie Ra**	**57.20**	**330**	⇓P	**P**	**14 37 43.6**	**+0.2**
	baz=57						
S13A	**Holt Ranch, En**	**57.33**	**324**	⇓P	**P**	**14 37 44.7**	**+0.3**
	baz=57,SNR=6.5						
O17A	**Robinson Place**	**57.47**	**328**	⇓P	**P**	**14 37 45.2**	**-0.1**
	baz=58						
R13A	**O'Grain Ranch,**	**57.80**	**325**	⇑P	**P**	**14 37 48.1**	**+0.4**
	baz=58,SNR=5.2						
Q14A	**Sevier Lake (B**	**57.97**	**326**	⇓P	**P**	**14 37 48.9**	**+0.1**
	baz=58,SNR=5.1						
N17A	**Moffit Pass**	**58.07**	**329**	⇑P	**P**	**14 37 49.7**	**+0.3**
	baz=58						
R12A	**Pony Springs,**	**58.27**	**324**	⇓P	**P**	**14 37 51.1**	**+0.2**
	baz=58						
P14A	**Drum Mountains**	**58.28**	**326**	⇓P	**P**	**14 37 51.3**	**+0.4**
	baz=58						
TPNV	**Topopah Spring**	**58.33**	**322**	⇑P	**P**	**14 37 51.3**	**0.0**
	baz=58						
TPNV	**Topopah Spring**	**58.33**	**322**	*e*P	**P**	**14 37 50.9**	**-0.4**
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
TPNV	**Topopah Spring**	**58.33**	**322**	*e*P	**P**	**14 37 50.9**	**-0.4**
	comp=Z,2.7nm,1.0s,mb4.2						
Q13A	**Wheeler Ranch,**	**58.36**	**325**	⇓P	**P**	**14 37 51.8**	**+0.3**
	baz=58						
AGMN	**Agassiz Refuge**	**58.37**	**344**	*e*P	**P**	**14 37 49.8**	**-1.6**
	comp=Z,18nm,1.1s,mb5.0						
K19A	**Absolon Red Bu**	**58.52**	**332**	⇑P	**P**	**14 37 51.8**	**-0.7**
	baz=59						
P13A	**Bates Ranch, G**	**58.71**	**326**	⇑P	**P**	**14 37 54.4**	**+0.5**
	baz=59						
BW06	**Boulder Array**	**58.81**	**331**	⇓P	**P**	**14 37 54.4**	**-0.1**
	baz=59						
PDAR	**Pinedale Array**	**58.81**	**331**	P	**P**	**14 37 53.8**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.9,baz=122,slow=9.6,SNR=8.3						
PDAR				pP	pP	14 38 26.6	+3.7
	comp=Z,1.2nm,0.4s,baz=126,slow=10,SNR=7.7						
PDAR				PcP	PcP	14 38 41.3	-1.6
	comp=Z,2.2nm,0.8s,baz=134,slow=4.3,SNR=8.7						
R11A	**Troy Canyon, C**	**58.85**	**324**	⇓P	**P**	**14 37 55.4**	**+0.4**
	baz=59						
O13A	**Hicks Ranch, I**	**59.16**	**326**	⇑P	**P**	**14 37 57.4**	**+0.4**
	baz=59						
S10A	**Tonopah Range,**	**59.17**	**323**	⇑P	**P**	**14 37 57.6**	**+0.5**
	baz=59						
P12A	**McGill**	**59.22**	**325**	⇑P	**P**	**14 37 57.6**	**+0.1**
	baz=59						
Q11A	**Duckwater**	**59.22**	**324**	⇓P	**P**	**14 37 57.6**	**+0.1**
	baz=59,SNR=7.1						
N14A	**Grayback Hills**	**59.23**	**327**	⇑P	**P**	**14 37 57.2**	**-0.3**
	baz=59						
J18A	**Kendall Valley**	**59.37**	**331**	⇑P	**P**	**14 37 57.6**	**-0.8**
	baz=60,SNR=6.8						
L15A	**Malad City**	**59.64**	**329**	⇑P	**P**	**14 37 59.6**	**-0.6**
	baz=60,SNR=5.2						
Q10A	**Clear Creek Ra**	**59.65**	**324**	⇑P	**P**	**14 38 00.9**	**+0.6**
	baz=60						
I18A	**Diamond G Ranc**	**59.65**	**332**	⇑P	**P**	**14 37 59.8**	**-0.4**
	baz=60,SNR=5.2						
O12A	**Currie**	**59.67**	**326**	⇓P	**P**	**14 38 00.2**	**-0.4**
	baz=60,SNR=7.2						
M14A	**Sheep Mountain**	**59.78**	**328**	⇑P	**P**	**14 38 01.0**	**-0.3**
	baz=60						
J17A	**Brown Place, J**	**59.81**	**331**	⇓P	**P**	**14 38 01.7**	**+0.3**
	baz=60						
O11A	**Cowboy Ranch,**	**60.09**	**325**	⇑P	**P**	**14 38 02.8**	**-0.6**
	baz=60						
RRI2	**Red Ridge**	**60.10**	**331**	*e*P	**P**	**14 38 03.1**	**-0.2**
	comp=Z,4.5nm,0.9s,mb4.5						
L14A	**Malta**	**60.10**	**328**	⇓P	**P**	**14 38 03.3**	**-0.1**
	baz=60						
Q09A	**Carvers**	**60.11**	**323**	⇑P	**P**	**14 38 03.2**	**-0.3**
	baz=60						
M13A	**Montello**	**60.12**	**327**	⇓P	**P**	**14 38 03.6**	**+0.1**
	baz=60						
ULM	**Lac du Bonnet**	**60.16**	**345**	P	**P**	**14 38 02.2**	**-1.5**
	comp=Z,11nm,0.6s,mb5.1,baz=157,slow=6.9,SNR=14						
ULM				pP	pP	14 38 35.6	+3.4
	comp=Z,6.0nm,0.8s,baz=132,slow=3.3,SNR=3.3						
ULM				PcP	PcP	14 38 47.1	-1.0
	comp=Z,2.5nm,0.5s,baz=144,slow=9.0,SNR=3.0						
ULM	**Lac du Bonnet**	**60.16**	**345**	*e*P	**P**	**14 38 01.9**	**-1.8**
	comp=Z,18nm,1.1s,mb5.0						
IMW	**Indian Meadow**	**60.33**	**331**	*e*P	**P**	**14 38 04.5**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.2						
IMW				*e*pP	pP	14 38 36.5	+3.0
IMW				*e*PcP	PcP	14 38 48.3	-0.6
K14A	**Jones Ranch, D**	**60.44**	**329**	⇑P	**P**	**14 38 04.9**	**-0.8**
	baz=60						
RLMT	**Red Lodge**	**60.49**	**333**	⇓P	**P**	**14 38 05.7**	**-0.3**
	baz=61						
L13A	**Double Diamond**	**60.51**	**328**	⇑P	**P**	**14 38 06.1**	**-0.1**
	baz=61						
NVAR	**Mina Array Bea**	**60.52**	**322**	P	**P**	**14 38 06.7**	**+0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=126,slow=7.0,SNR=8.2						
NVAR				pP	pP	14 38 37.8	+2.9
	comp=Z,2.4nm,0.9s,baz=147,slow=7.2,SNR=8.5						
NVAR	**Mina Array Bea**	**60.52**	**322**	P	**P**	**14 38 06.7**	**+0.3**
NVAR				pP	pP	14 38 37.8	+2.9
M12A	**Wells**	**60.56**	**327**	⇓P	**P**	**14 38 06.3**	**-0.3**
	baz=61						
I16A	**Newdale**	**60.57**	**331**	⇓P	**P**	**14 38 06.5**	**-0.1**
	baz=61						
O10A	**Cortez Mining,**	**60.68**	**325**	⇓P	**P**	**14 38 07.5**	**+0.1**
	baz=61						
G18A	**Lazy EL Ranch,**	**60.77**	**333**	⇓P	**P**	**14 38 07.4**	**-0.5**
	baz=61						
O09A	**Fish Creek Ran**	**60.99**	**324**	⇓P	**P**	**14 38 09.2**	**-0.3**
	baz=61						
H16A	**Russell Place,**	**61.08**	**332**	⇓P	**P**	**14 38 10.4**	**+0.4**
	baz=61,SNR=10.0						
DGMT	**Dagmar**	**61.15**	**339**	⇑P	**P**	**14 38 10.5**	**+0.1**
	baz=61						
J14A	**Carey**	**61.17**	**329**	⇑P	**P**	**14 38 10.6**	**-0.1**
	baz=61,SNR=7.7						
F18A	**Big Timber**	**61.29**	**333**	⇑P	**P**	**14 38 11.5**	**0.0**
	baz=61,SNR=11						
K12A	**Draper Farm, C**	**61.40**	**328**	⇑P	**P**	**14 38 12.1**	**-0.1**
	baz=62						
L11A	**Cat Creek Ranc**	**61.53**	**327**	⇑P	**P**	**14 38 13.2**	**+0.1**
	baz=62						
J13A	**Cove Ranch, Pi**	**61.56**	**329**	⇓P	**P**	**14 38 13.2**	**-0.1**
	baz=62						
I14A	**Mackay**	**61.58**	**330**	⇑P	**P**	**14 38 13.3**	**0.0**
	baz=62						
O08A	**Rochester Mine**	**61.63**	**324**	⇓P	**P**	**14 38 13.9**	**+0.1**
	baz=62						
H15A	**Lima**	**61.68**	**331**	⇓P	**P**	**14 38 14.5**	**+0.5**
	baz=62						
F17A	**Fitzpatrick Pl**	**61.72**	**333**	⇓P	**P**	**14 38 14.7**	**+0.5**
	baz=62						
G16A	**Moss Hill, Enn**	**61.73**	**332**	⇓P	**P**	**14 38 14.6**	**+0.2**
	baz=62						
HLID	**Hailey**	**61.80**	**329**	⇑P	**P**	**14 38 14.9**	**0.0**
	baz=62						
L10A	**Juniper Basin**	**61.86**	**326**	⇑P	**P**	**14 38 15.4**	**+0.1**
	baz=62						
E18A	**Harlowton**	**61.89**	**334**	⇓P	**P**	**14 38 15.3**	**-0.1**
	baz=62						
I13A	**Wildhorse Cree**	**61.90**	**329**	⇓P	**P**	**14 38 15.8**	**+0.3**
	baz=62						
WCN	**Washoe City**	**61.95**	**322**	⇑P	**P**	**14 38 16.4**	**+0.4**
	baz=62						
BOZ	**Bozeman (W)**	**61.96**	**332**	⇓P	**P**	**14 38 15.9**	**-0.1**
	baz=62						
BOZ	**Bozeman (W)**	**61.96**	**332**	*e*P	**P**	**14 38 15.5**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
BOZ	**Bozeman (W)**	**61.96**	**332**	*e*P	**P**	**14 38 15.5**	**-0.4**
	comp=Z,6.8nm,1.3s,mb4.5						
BOZ				*e*pP	pP	14 38 45.9	+1.2
M09A	**Marrel Ranch,**	**61.97**	**325**	⇑P	**P**	**14 38 15.8**	**-0.2**
	baz=62						
O07A	**Toulon**	**61.97**	**323**	⇑P	**P**	**14 38 16.0**	**-0.1**
	baz=62						
H14A	**Leadore**	**62.03**	**330**	⇓P	**P**	**14 38 16.6**	**+0.2**
	baz=62,SNR=5.5						
F16A	**Kennard Place,**	**62.07**	**332**	⇑P	**P**	**14 38 16.7**	**+0.1**
	baz=62						
K11A	**Parker Ranch,**	**62.10**	**327**	⇓P	**P**	**14 38 16.9**	**0.0**
	baz=62						
E17A	**Martinsdale**	**62.23**	**333**	⇓P	**P**	**14 38 17.9**	**+0.2**
	baz=62						
I12A	**Atlanta**	**62.33**	**329**	⇑P	**P**	**14 38 18.5**	**0.0**
	baz=62						
D18A	**Linhart Farms,**	**62.33**	**334**	⇑P	**P**	**14 38 18.6**	**+0.3**
	baz=62						
MFID	**Camas Ranch**	**62.43**	**328**	⇓P	**P**	**14 38 19.4**	**+0.2**
	baz=62						
H13A	**Challis**	**62.43**	**330**	⇑P	**P**	**14 38 19.3**	**+0.2**
	baz=62						
L09A	**Wilkinson Ranc**	**62.48**	**326**	⇑P	**P**	**14 38 19.5**	**0.0**
	baz=63						
K10A	**MacKenzie Ranc**	**62.55**	**327**	⇑P	**P**	**14 38 19.5**	**-0.4**
	baz=63						
SCHQ	**Schefferville**	**62.56**	**6**	P	**P**	**14 38 16.7**	**-3.0**
	comp=Z,3.3nm,0.6s,mb4.5,baz=214,slow=7.3,SNR=4.2						
SCHQ	**Schefferville**	**62.56**	**6**	P	**P**	**14 38 16.7**	**-3.0**
E16A	**East Helena**	**62.65**	**333**	⇑P	**P**	**14 38 20.3**	**-0.2**
	baz=63						
BEKR	**Beckwourth**	**62.67**	**322**	⇓P	**P**	**14 38 20.4**	**-0.4**
	baz=63						
D17A	**Six Diamond Ra**	**62.68**	**334**	⇑P	**P**	**14 38 20.7**	**0.0**
	baz=63						
H12A	**Diamond D Ranc**	**62.72**	**329**	⇑P	**P**	**14 38 21.0**	**-0.1**
	baz=63						
G13A	**Cobalt**	**62.80**	**330**	⇑P	**P**	**14 38 21.9**	**+0.3**
	baz=63						
I11A	**Placerville**	**62.84**	**328**	⇑P	**P**	**14 38 21.6**	**-0.2**
	baz=63,SNR=6.2						
N06A	**Buffalo Meadow**	**62.91**	**323**	⇓P	**P**	**14 38 22.3**	**0.0**
	baz=63,SNR=6.7						
EGMT	**Eagleton**	**62.96**	**335**	⇑P	**P**	**14 38 22.3**	**-0.2**
	baz=63						
K09A	**Rome**	**62.97**	**326**	⇑P	**P**	**14 38 22.7**	**+0.1**
	baz=63						
D16A	**Dana Ranch, Ca**	**62.97**	**333**	⇑P	**P**	**14 38 22.7**	**+0.1**
	baz=63						
L08A	**Fields**	**62.97**	**326**	⇑P	**P**	**14 38 22.4**	**-0.4**
	baz=63						
C17A	**Wharram Farm,**	**63.09**	**334**	⇓P	**P**	**14 38 23.4**	**0.0**
	baz=63						
B18A	**Beardsley Farm**	**63.26**	**335**	⇓P	**P**	**14 38 24.5**	**+0.1**
	baz=63						
F13A	**Darby**	**63.35**	**331**	⇑P	**P**	**14 38 25.0**	**-0.1**
	baz=64						
E14A	**Clinton**	**63.41**	**332**	⇑P	**P**	**14 38 26.1**	**+0.7**
	baz=64						
K08A	**Mann Creek Ran**	**63.41**	**326**	⇓P	**P**	**14 38 25.5**	**-0.1**
	baz=64						
J09A	**Fry Pan Ranch,**	**63.41**	**327**	⇓P	**P**	**14 38 25.4**	**-0.2**
	baz=64						
D15A	**Lincoln**	**63.42**	**333**	⇓P	**P**	**14 38 26.2**	**+0.7**
	baz=64						
L07A	**Adell**	**63.43**	**325**	⇑P	**P**	**14 38 25.6**	**-0.1**
	baz=64						

C16A	Fuhringer Ranc	63.64	334	⇓P	P	14 38 27.0	0.0
	baz=64						
A18A	Metzger Ranch,	63.70	336	⇑P	P	14 38 26.8	-0.6
	baz=64						
E13A	Victor	63.75	331	⇓P	P	14 38 27.9	+0.1
	baz=64						
F12A	Elk City	63.78	330	⇑P	P	14 38 28.0	+0.1
	baz=64						
K07A	Rock Creek Ran	63.81	325	⇑P	P	14 38 28.6	+0.4
	baz=64						
J08A	Circle Bar Ran	63.81	326	⇓P	P	14 38 28.3	+0.1
	baz=64						
C15A	Salmond Ranch,	64.00	333	⇑P	P	14 38 30.4	+1.0
	baz=64,SNR=6.5						
G11A	Walters Elk Ra	64.03	329	⇓P	P	14 38 28.8	-0.8
	baz=64						
A17A	Triple J Farms	64.07	335	⇑P	P	14 38 29.5	-0.3
	baz=64						
F11A	Grangeville	64.32	330	⇓P	P	14 38 30.9	-0.5
	baz=64						
D13A	Huson	64.35	332	⇓P	P	14 38 31.3	-0.3
	baz=64						
B15A	Bradely Ranch,	64.39	334	⇑P	P	14 38 31.7	-0.1
	baz=64						
G10A	Bishop Farm, J	64.40	329	⇓P	P	14 38 32.2	+0.2
	baz=64,SNR=5.0						
E12A	Beaver Dam Sad	64.40	330	⇓P	P	14 38 32.0	0.0
	baz=64						
A16A	West Butte Ran	64.45	335	⇑P	P	14 38 33.0	+0.8
	baz=65						
C14A	Swan Lake	64.52	333	⇑P	P	14 38 32.8	+0.1
	baz=65						
E11A	Bogner Ranch,	64.67	330	⇑P	P	14 38 33.5	-0.3
	baz=65						
J06A	Christmas Vall	64.68	325	⇓P	P	14 38 33.8	-0.1
	baz=65						
H08A	Prairie City	64.69	327	⇑P	P	14 38 34.3	+0.3
	baz=65						
G09A	Cove	64.73	328	⇑P	P	14 38 33.9	-0.2
	baz=65						
B14A	Marquette Ranc	64.74	333	⇓P	P	14 38 34.2	0.0
	baz=65,SNR=9.0						
D12A	Red Ives Fores	64.75	331	⇓P	P	14 38 33.6	-0.6
	baz=65						
K05A	Summer Lake	64.77	325	⇓P	P	14 38 34.8	+0.3
	baz=65						
C13A	Hot Springs	64.83	332	⇓P	P	14 38 34.9	+0.2
	baz=65						
I07A	Izee	64.85	327	⇑P	P	14 38 34.9	-0.1
	baz=65,SNR=6.8						
F10A	Beach Ranch, E	64.92	329	⇑P	P	14 38 35.5	+0.2
	baz=65						
F09A	S2 Ranch, Elgi	65.09	329	⇑P	P	14 38 36.4	-0.1
	baz=65						
I06A	Prineville	65.15	326	⇓P	P	14 38 37.1	+0.1
	baz=65,SNR=5.6						
H07A	Lands Inn, Kim	65.22	327	⇑P	P	14 38 37.5	+0.2
	baz=65						
YBH	Yreka Blue Hor	65.22	323	P	P	14 38 35.4	-2.0
	comp=Z,1.4nm,0.8s,mb3.8,baz=80,slow=8.6,SNR=4.2						
YBH				PcP	PcP	14 39 06.4	-2.5
	comp=Z,2.8nm,0.9s,baz=118,slow=4.3,SNR=3.9						
A14A	Double T Ranch	65.26	334	⇓P	P	14 38 37.1	-0.4
	baz=65						
B13A	Whitefish	65.29	333	⇓P	P	14 38 37.3	-0.4
	baz=65						
G08A	Pilot Rock	65.35	328	⇑P	P	14 38 38.2	0.0
	baz=65						
WALA	Waterton Lakes	65.54	333	eP	P	14 38 38.8	-0.5
	comp=Z,0.1nm,0.8s						
WALA				e	pP	14 39 09.6	+1.2
A13A	Flathead Natio	65.67	333	⇑P	P	14 38 40.3	+0.1
	baz=66						
D10A	Wagner Farm, O	65.69	330	⇓P	P	14 38 39.8	-0.5
	baz=66						
H06A	Lindquist Farm	65.73	327	⇑P	P	14 38 40.8	+0.2
	baz=66						
C11A	Tepee Creek (N	65.74	331	⇑P	P	14 38 40.5	-0.1
	baz=66						
E09A	Wood Farm, Sta	65.75	329	⇑P	P	14 38 40.7	-0.1
	baz=66						
G06A	Carlson Farm,	66.21	327	⇑P	P	14 38 43.8	+0.1
	baz=66						
A12A	Yaak River Ran	66.24	332	⇓P	P	14 38 44.3	+0.5
	baz=66						
F07A	Phinny Hill Vi	66.26	328	⇑P	P	14 38 44.6	+0.6
	baz=66						
A11A	Hall Mountain,	66.58	332	⇓P	P	14 38 46.8	+0.8
	baz=67						
F06A	Goldendale	66.63	327	⇓P	P	14 38 46.8	+0.4
	baz=67						
E07A	Sunnyside	66.66	328	⇓P	P	14 38 47.0	+0.5
	baz=67						
B09A	Rice	67.06	331	⇓P	P	14 38 49.1	+0.1
	baz=67						
D07A	Quincy	67.14	329	⇑P	P	14 38 50.0	+0.4
	baz=67						
H03A	Soap Creek Ran	67.34	325	⇓P	P	14 38 50.9	0.0
	baz=67						
C07A	Waterville	67.51	329	⇑P	P	14 38 52.2	+0.3
	baz=68						
D06A	Cle Elum	67.59	328	⇓P	P	14 38 52.8	+0.4
	baz=68						
B08A	Colville Reser	67.59	330	⇓P	P	14 38 52.1	-0.3
	baz=68						
FCC	Fort Churchill	67.72	350	eP	P	14 38 51.4	-1.5
	comp=Z,0.5nm,1.0s						
EDM	Edmonton	68.43	337	eP	P	14 38 56.4	-1.1
A07A	Ashnola River,	68.57	330	⇓P	P	14 38 58.9	+0.4
	baz=69						
C04A	Brinnon	69.04	328	⇑P	P	14 39 01.9	+0.5
	baz=69						
A05A	Maple Falls	69.39	329	⇓P	P	14 39 03.3	-0.2
	baz=70						
LIC	Lamto	71.73	81	eP	P	14 39 18.0	-0.6
	comp=Z,15nm,0.5s,mb4.8						
LIC	Lamto	71.73	81	⇓iP	P	14 39 18.0	-0.6
	comp=Z,26nm,0.5s,mb5.3						
LIC	Lamto	71.73	81	eP	P	14 39 18.0	-0.6
	comp=Z,7.3nm,0.5s,mb4.8						
TIC	Toumodi	71.81	80	⇓iP	P	14 39 18.6	-0.4
	comp=Z,129nm,0.9s						
DBIC	Dimbokro	71.98	81	P	P	14 39 19.8	-0.2
	comp=Z,30nm,0.5s,mb5.3,baz=242,slow=5.5,SNR=84						
DBIC	Dimbokro	71.98	81	eP	P	14 39 19.7	-0.3
DBIC				pmax	pmax		
	comp=Z,35nm,0.7s						
DBIC	Dimbokro	71.98	81	eP	P	14 39 19.7	-0.3
	comp=Z,35nm,0.7s,mb5.3						
KIC	Kosan Boka	72.04	81	⇓iP	P	14 39 20.1	-0.3
	comp=Z,156nm,0.7s						
VNA3	Neumayer Olymp	75.30	162	eP	P	14 39 38.5	+0.1
VNA3				e		14 39 40.8	
VNA1	Neumayer--Stat	75.54	161	eP	P	14 39 40.6	+0.9
VNA1				e		14 39 42.7	
VNA2	Neumayer--Watz	75.90	162	eP	P	14 39 42.5	+0.7
	baz=294,slow=6.0						
VNA2				e		14 39 44.6	
YKA	Yellowknife Ar	75.95	342	P	P	14 39 41.0	-1.1
	comp=Z,4.5nm,0.7s,mb4.3,baz=141,slow=6.1,SNR=79						
YKA	Yellowknife Ar	75.95	342	P	P	14 39 41.0	-1.1
SNAA	Sanae	77.52	162	eP	P	14 39 51.2	+0.4
SNAA				e		14 39 53.0	
SNAA	Sanae	77.52	162	eP	P	14 39 51.3	+0.5
SNAA				pmax	pmax		
	comp=Z,15nm,0.9s						
SNAA	Sanae	77.52	162	eP	P	14 39 51.3	+0.5
	comp=Z,15nm,0.9s,mb4.7						
MDT	Midelt	78.37	54	P	P	14 39 56.6	+0.3
	comp=Z,1.4nm,0.7s,mb3.8,baz=325,slow=5.5,SNR=4.1						
DLBC	Dease Lake	78.87	334	P	P	14 39 58.0	-0.4
	comp=Z,4.9nm,1.0s,mb4.3,baz=126,slow=5.6,SNR=5.1						
DLBC				pP	pP	14 40 29.9	+1.6
	comp=Z,6.4nm,1.1s,baz=340,slow=5.1,SNR=3.1						
TOA0	Torodi Ar. Sit	79.48	75	eP	P	14 40 02.0	-0.7
TORD	Torodi Ar. Bea	79.48	75	P	P	14 40 02.1	-0.6
	comp=Z,9.1nm,0.7s,mb4.7,baz=288,slow=6.1,SNR=54						
TORD				pP	pP	14 40 34.7	+2.0
	comp=Z,2.2nm,0.6s,baz=289,slow=6.2,SNR=3.6						
TORD	Torodi Ar. Bea	79.48	75	P	P	14 40 02.1	-0.6
TORD				pP	pP	14 40 34.7	+2.0
ESDC	Sonseca Array	80.91	48	P	P	14 40 09.2	-0.7
	comp=Z,3.2nm,0.7s,mb4.3,baz=258,slow=5.6,SNR=9.5						
QSPA	South Pole Qui	82.58	180	P	P	14 40 18.6	+0.6
	comp=Z,14nm,0.7s,mb4.9,baz=142,slow=2.1,SNR=36						
QSPA				pP	pP	14 40 50.9	+2.8
	comp=Z,2.9nm,0.7s,baz=198,slow=3.6,SNR=1.9						
QSPA	South Pole Qui	82.58	180	eP	P	14 40 19.1	+1.1
	comp=Z,16nm,0.8s,mb4.9						
RES	Resolute Bay	82.91	355	eP	P	14 40 18.4	-1.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
RES	Resolute Bay	82.91	355	eP	P	14 40 18.4	-1.3
	comp=Z,3.6nm,0.9s,mb4.2						
SUMG	Summit	83.45	11	eP	P	14 40 22.4	0.0
	comp=Z,7.6nm,0.8s,mb4.6						
ETSF	Etsaut	84.28	46	eP	P	14 40 27.7	+0.4
TAM	Tamanrasset	84.80	66	eP	P	14 40 31.1	+0.8
TAM				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
TAM	Tamanrasset	84.80	66	eP	P	14 40 31.1	+0.8
	comp=Z,22nm,1.5s,mb4.9						
EPF	Esparros	84.96	46	eP	P	14 40 30.1	-0.6
	comp=Z,19nm,0.9s,mb4.7						
EPF	Esparros	84.96	46	eP	P	14 40 30.1	-0.6
EPF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
EPF	Esparros	84.96	46	eP	P	14 40 30.1	-0.6
	comp=Z,9.4nm,0.9s,mb4.7						
LFF	La Frestale	85.73	44	eP	P	14 40 33.5	-1.0
MTLF	Montolieu	86.36	46	eP	P	14 40 36.7	-0.9
CAF	Calviac	86.64	44	eP	P	14 40 38.7	-0.2
	comp=Z,46nm,1.2s,mb5.0						
CAF	Calviac	86.64	44	eP	P	14 40 38.7	-0.2
CAF				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
CAF	Calviac	86.64	44	eP	P	14 40 38.7	-0.2
	comp=Z,23nm,1.2s,mb5.0						
LASF	Ste Croix	87.69	45	eP	P	14 40 43.5	-0.5
	comp=Z,35nm,1.1s,mb5.0						
VIVF	Saint-Julien-l	88.43	45	eP	P	14 40 47.2	-0.3
ORIF	Oris-en-Rattie	89.28	45	eP	P	14 40 51.6	+0.1
	comp=Z,18nm,0.7s,mb4.9						
ORIF	Oris-en-Rattie	89.28	45	eP	P	14 40 51.6	+0.1
ORIF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
ORIF	Oris-en-Rattie	89.28	45	eP	P	14 40 51.6	+0.1
	comp=Z,8.9nm,0.7s,mb4.9						
COLA	College	89.33	336	⇑iP	P	14 40 51.0	-0.3
COLA	College	89.33	336	eP	P	14 40 50.5	-0.8
	comp=Z,13nm,0.9s,mb5.0						
VNDA	Vanda	89.37	191	P	P	14 40 51.5	+0.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=38,slow=0.1,SNR=11						
VNDA				pP	pP	14 41 25.5	+3.6
	comp=Z,0.7nm,0.9s,baz=160,slow=3.1,SNR=2.3						
LMR	La Mourre	89.42	46	eP	P	14 40 51.8	-0.4
	comp=Z,65nm,1.2s,mb5.2						
LMR	La Mourre	89.42	46	eP	P	14 40 51.8	-0.4
LMR				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.2						
LMR	La Mourre	89.42	46	eP	P	14 40 51.8	-0.4
	comp=Z,33nm,1.3s,mb5.2						
GIVF	Givet	89.63	39	eP	P	14 40 52.4	-0.6
	comp=Z,14nm,0.6s,mb4.9						
GIVF	Givet	89.63	39	eP	P	14 40 52.4	-0.6
GIVF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
GIVF	Givet	89.63	39	eP	P	14 40 52.4	-0.6
	comp=Z,6.8nm,0.6s,mb5.0						
MBDF	Montbardon	89.87	45	eP	P	14 40 54.1	-0.1
	comp=Z,22nm,1.1s,mb4.9						
MBDF	Montbardon	89.87	45	eP	P	14 40 54.1	-0.1
MBDF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
MBDF	Montbardon	89.87	45	eP	P	14 40 54.1	-0.1
	comp=Z,11nm,1.0s,mb4.9						
LPL	La Plagne	89.99	44	eP	P	14 40 54.3	-0.5
	comp=Z,18nm,0.9s,mb4.9						
LPL	La Plagne	89.99	44	eP	P	14 40 54.3	-0.5
LPL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
LPL	La Plagne	89.99	44	eP	P	14 40 54.3	-0.5
	comp=Z,8.9nm,0.9s,mb4.9						
LPG	La Plagne	90.00	44	eP	P	14 40 55.2	+0.4
	comp=Z,24nm,0.9s,mb5.0						
LPG	La Plagne	90.00	44	eP	P	14 40 55.2	+0.4
LPG				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0						
LPG	La Plagne	90.00	44	eP	P	14 40 55.2	+0.4
	comp=Z,12nm,0.9s,mb5.0						
SBF	Sospel	90.18	46	eP	P	14 40 55.1	-0.6
	comp=Z,179nm,1.2s						
SBF	Sospel	90.18	46	eP	P	14 40 55.1	-0.6
	comp=Z,90nm,1.2s						
KEST	Kesra	90.28	54	P	P	14 40 55.6	-0.8
	comp=Z,2.6nm,0.8s,mb4.4,baz=236,slow=3.6,SNR=4.7						
TSUM	Tsumeb	90.57	109	eP	P	14 40 59.0	+0.9
	comp=Z,4.3nm,0.8s,mb4.6						
SYO	Syowa Base	91.77	161	⇑iP	P	14 41 01.2	-1.4
SYO	Syowa Base	91.77	161	⇑eX		14 41 31.0	
CLL	Collm	94.95	39	eP	P	14 41 18.0	+0.4
CLL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
CLL	Collm	94.95	39	eP	P	14 41 18.0	+0.4
	comp=Z,2.0nm,0.8s,mb4.6						
GERES	GERESS Array B	95.16	42	P	P	14 41 18.2	-0.4
	comp=Z,0.5nm,0.7s,mb4.0,baz=316,slow=3.7,SNR=3.7						
BOSA	Boshof	95.89	120	P	P	14 41 22.4	0.0
	comp=Z,1.5nm,0.5s,mb4.7,baz=230,slow=14,SNR=4.7						
STKA	Stephens Creek	127.11	220	ePKP	PKPdf	14 46 58.7	-0.8
	comp=Z,3.6nm,0.6s						
STKA	Stephens Creek	127.11	220	PKP	PKPdf	14 46 58.9	-0.6
	comp=Z,4.5nm,0.6s,baz=91,slow=2.5,SNR=16						
ZAA0	Zalesovo Array	131.08	15	ePKPdf	PKPdf	14 47 05.6	-0.8
ZALV	Zalesovo Beam	131.08	15	PKP	PKPdf	14 47 05.9	-0.5
	comp=Z,2.9nm,0.4s,baz=263,slow=2.5,SNR=23						
ZALV				pPKP	pPKPdf	14 47 40.4	+2.1
	comp=Z,2.5nm,0.7s,baz=302,slow=2.8,SNR=5.0						
ZALV				SKPbc	SKPbc	14 50 18.6	-1.6
	comp=Z,0.9nm,0.7s,baz=328,slow=5.3,SNR=3.7						
HABR	Khabarovsk	131.65	333	ePKIKP	PKPdf	14 47 05.4	-2.2
HABR				e		14 49 26.1	
HABR				ePPP		14 52 15.0	
HABR				ePS	PS	14 59 41.9	-2.4
HABR				eSSS		15 11 44.6	
KURK	Kurchatov	131.92	22	⇑iPKIKP	PKPdf	14 47 08.5	+0.5
MK31	Makanchi Array	136.53	22	ePKIKP	PKPdf	14 47 16.1	-0.7
MKAR	Makanchi Array	136.53	22	PKP	PKPdf	14 47 16.2	-0.6
	comp=Z,1.4nm,0.5s,baz=322,slow=2.0,SNR=11						
MKAR				pPKP	pPKPdf	14 47 51.0	+2.2
	comp=Z,1.2nm,0.8s,baz=268,slow=3.2,SNR=4.1						
MKAR	Makanchi Array	136.53	22	PKP	PKPdf	14 47 16.2	-0.6
MKAR				pPKP	pPKPdf	14 47 51.0	+2.2
CN2	Changchun	139.43	336	ePKP	PKPdf	14 47 21.0	-1.2
CN2				PP	PP	14 50 21.0	+4.3
ULN	Ulaanbaatar	139.73	357	i PKIKP	PKPdf	14 47 20.9	-1.8
SONM	Songino Array	139.79	358	PKhKP		14 47 14.4	
	comp=Z,0.7nm,0.6s,baz=330,slow=2.8,SNR=5.8						
SONM				PKP	PKPdf	14 47 21.4	-1.4
	comp=Z,0.9nm,0.7s,baz=29,slow=0.6,SNR=5.5						
WB2	Warramunga Arr	139.81	227	ePKP	PKPdf	14 47 22.7	-0.9
WB2				ePKIKP	PKPdf	14 47 25.2	+1.6
WB2				e		14 47 58.4	
WB2				e		14 48 59.9	
WRAB	Tennant Creek	139.82	227	⇑iPKIKP	PKPdf	14 47 23.2	-0.5
WRAB	Tennant Creek	139.82	227	ePKPdf	PKPdf	14 47 22.5	-1.1
WRA	Warramunga Arr	139.82	227	PKhKP		14 47 16.1	
	comp=Z,5.0nm,0.8s,baz=126,slow=1.5,SNR=10						
WRA				PKP	PKPdf	14 47 22.7	-0.9
	comp=Z,4.2nm,0.6s,baz=129,slow=1.8,SNR=49						
WRA				SKPbc	SKPbc	14 50 46.2	-2.6
	comp=Z,0.7nm,0.9s,baz=124,slow=2.8,SNR=3.3						
WRA	Warramunga Arr	139.82	227	PKHKP		14 47 16.1	
WRA						14 47 22.7	
WMQ	Urumqi	141.00	19	ePKP	PKPdf	14 47 23.8	-1.3
KSRS	Korea Array	143.33	328	PKhKP		14 47 23.1	
	comp=Z,1.4nm,0.6s,baz=52,slow=2.9,SNR=6.3						
KSRS				PKP	PKPdf	14 47 29.1	-0.3
	comp=Z,1.7nm,0.8s,baz=338,slow=1.3,SNR=4.7						
KAKA	Kakadu	145.62	234	ePKP	x	14 47 14.2	
	comp=Z,7.7nm,0.6s						
BJI	Beijing	145.94	344	PKP	PKPdf	14 47 32.6	-1.3
HHC	Hu-ho-hao-te	146.20	350	ePKP	PKPdf	14 47 30.9	-3.4
HHC				APKP		14 48 12.8	
HHC				PP	PP	14 50 58.1	+0.9
HHC				PKS		14 51 05.3	
HHC				SKS	SKSdf	14 54 21.5	-11
HHC				PP	PP		
	comp=Z,155nm,5.6s						
HHC				LR	LR		
	comp=N,143nm,19.0s						
HHC				LR	LR		
	comp=E,361nm,22.6s						
HHC				LR	LR		
	comp=Z,128nm,19.0s						
FITZ	Fitzroy Crossi	147.00	219	ePKP	PKPdf	14 47 35.9	-0.4
	comp=Z,4.3nm,0.5s						
FITZ				ePKIKP	PKPdf	14 47 38.3	+2.0
FITZ				e		14 47 51.9	
FITZ				e		14 48 11.0	
GTA	Gaotai	147.99	7	PKP	PKPdf	14 47 40.0	+2.7
GTA				APKP		14 48 08.9	
GTA				XPKP		14 48 19.4	
DANN	Dangsing	151.57	41	eP	PKPbc	14 47 49.7	+0.1
	comp=Z,66nm,0.7s						
KOLN	Koldanda	151.85	42	eP	PKPbc	14 47 49.7	-0.6
	comp=Z,22nm,1.0s						
GKN	Gorkha	152.37	40	eP	PKPbc	14 47 51.1	-0.3
	comp=Z,20nm,0.4s						
KKN	Kakani	152.92	40	eP	PKPbc	14 47 52.2	-0.5
DMN	Daman	152.94	40	eP	PKPbc	14 47 52.3	-0.4
	comp=Z,27nm,0.8s						
HYB	Hyderabad	152.97	66	eP	PKPab	14 48 03.5	-1.2
PKI	Pulchoki	153.16	40	eP	PKPbc	14 47 52.5	-0.7
GUN	Gumba	153.21	39	eP	PKPbc	14 47 53.0	-0.3
JIRN	Jiri	153.58	38	eP	PKPbc	14 47 53.5	-0.6
RAMN	Ramite	154.34	39	eP	PKPbc	14 47 55.1	-0.7
TAPN	Taplejung	154.73	37	eP	PKPbc	14 47 56.2	-0.4
ODAN	Odare	154.90	38	eP	PKPbc	14 47 55.8	-1.1
CD2	Chengdu	156.72	1	ePKP	PKPdf	14 47 44.3	-6.2
GYA	Guiyang	161.04	354	ePKP	PKPdf	14 47 53.2	-2.5
GYA				APKP		14 48 27.5	
GYA				PKP2	PKPab	14 48 37.8	-1.1
GYA				PKS		14 51 25.4	
GYA				PP	PP	14 52 21.9	+1.2
GYA				PP	PP		
	comp=Z,90nm,8.0s						
KMI	Kunming	162.43	5	PKP	PKPdf	14 47 56.9	-0.2
CMAR	Chiang Mai Arr	167.91	25	PKP	PKPdf	14 48 01.1	-0.8
	comp=Z,1.3nm,0.8s,baz=297,slow=2.6,SNR=9.4						
CMAR				PKPab	PKPab	14 49 08.7	-0.7
	comp=Z,2.0nm,0.8s,baz=327,slow=5.6,SNR=13						

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*IDC **10** 14:30:33.6±6.7, 5428N×16171W, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/25, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=202.2km s-min=25.0km az=168.0*

*ISCJB **10** 14:30:35.7±1.5, 542N±02×1615W±02, h33km, mb3.4/3, Error ellipse: s-maj=29.5km s-min=10.2km az=141.8*

*NEIC **10** 14:30:35.0±2.2, 5430N×16168W, h10km, ML3.5(AEIC), Error ellipse: s-maj=54.1km s-min=11.8km az=158.0*

ISC 10 14:30:38.3±1.6**, 543N**±02×**1616W**±03**, h35km, n8,** σ**0s96**/11**, mb3.4**/3**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	Sand Point	1.25	32	P	Pn	14 30 58.3	-0.9
SDPT				S	Sn	14 31 14.1	-0.7
CHGN	Chignik	2.73	41	ePn	Pn	14 31 20.1	+0.7
CHGN				eSn	Sn	14 31 53.0	+1.9
KDAK	Kodiak Island	6.16	52	Pn	Pn	14 32 05.4	-1.2
	1.0nm,0.3s,baz=137,slow=23,SNR=5.9						
KDAK				Sn	Sn	14 33 09.2	-6.5
	0.6nm,0.3s,baz=135,slow=10,SNR=3.1						
FIB	Fire Island	9.21	37	P	Pn	14 32 47.6	-0.8
PETK	Petropavlovsk-	23.87	284	P	P	14 35 47.8	-0.3
	2.3nm,0.5s,mb3.9,baz=81,slow=13,SNR=9.9						
YKA	Yellowknife Ar	25.44	52	P	P	14 36 03.0	+0.7
	0.2nm,0.5s,mb2.9,baz=272,slow=9.0,SNR=4.8						
YKA	Yellowknife Ar	25.44	52	P	P	14 36 03.0	+0.7
SONM	Songino Array	54.18	304	P	P	14 40 00.6	+0.9
	0.6nm,0.9s,mb3.5,baz=54,slow=5.3,SNR=3.5						

IDC 10 14:41:07.8±3.6**, 157N**×**9783E, h0km, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.6**/20**, mbtmp3.8**/3**, ML4.2**/1**, Error ellipse: s-maj=142.5km s-min=28.3km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.82	4	Pn	Pn	14 45 06.5	+1.7
	0.3nm,0.3s,baz=191,slow=11,SNR=9.8						
WRA	Warramunga Arr	41.70	123	P	P	14 48 58.7	+0.1
	1.1nm,0.3s,baz=308,slow=9.5,SNR=30						
MKAR	Makanchi Array	47.04	345	P	P	14 49 40.5	-0.5
	0.2nm,0.3s,baz=142,slow=8.3,SNR=2.6						

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*ISCJB **10** 14:57:19.8±0.4, 5982N±002×2434E±005, h0km, Error ellipse: s-maj=3.9km s-min=3.0km az=14.9*

*HEL **10** 14:57:21.7±0.1, 5984N×2422E, h0km, ML2.1, ML2.3(UPP), ML2.3(NAO), Explosion*

*NAO **10** 14:57:22.0±1.0, 5982N×2435E, ML2.3*

*BER **10** 14:57:22.6±4.0, 5984N×2434E, h0km, ML2.3(NAO), Suspected explosion*

*IDC **10** 14:57:24.6±1.2, 5993N×2405E, h0km, mb1 3.5/3, mb1mx3.1/25, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=15.4km s-min=13.2km az=88.0*

ISC 10 14:57:21.0±0.3**, 5985N**±002×**2428E**±005**, h0km, n27,** σ**1s18**/44**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	Pernaja	1.06	48	eP	Pg	14 57 40.9	-0.3
PVF				eS	Sg	14 57 54.8	-0.1
MTSE	Matsula	1.16	192	eP	Pg	14 57 41.5	-1.7
MTSE				eSB	Sb	14 57 58.5	-0.9
MTSE				eRG		14 58 02.1	
RAF	Rauma	1.71	315	eP	Pn	14 57 51.9	-0.1
	baz=128						
RAF				eSN	Sn	14 58 15.3	+0.7
VJF	Virojoki	1.78	66	eP	Pn	14 57 52.6	-0.3
VJF				eSN	Sn	14 58 18.3	+2.1
VJF				MSG		14 58 18.3	
	comp=Z,4.4nm,0.1s						
FIA0	FINESS Array S	1.83	28	ePN	Pn	14 57 54.5	+0.9
	baz=206						
FIA0				MSG		14 58 19.4	
	comp=Z,16nm,0.3s						
FIA0				eSG	Sg	14 58 19.4	-0.3
FIA0				eRG		14 58 29.7	
FIA0	FINESS Array S	1.83	28	Pg	Pg	14 57 54.6	-1.4
	baz=195,slow=18						
FIA0				Lg		14 58 20.0	
	baz=210,slow=28						
FIA1	FINESS Array S	1.83	28	ePN	Pn	14 57 54.6	+1.0
FIA1				eSN	Sn	14 58 18.6	+1.1
FIA1				MSG		14 58 18.6	
	comp=Z,35nm,0.4s						
VSU	Vasula	1.88	137	ePG	Pg	14 57 55.9	-1.1
VSU				eSG	Sg	14 58 20.3	-1.0
AAL	Aland	2.18	281	eP	Pn	14 57 58.8	+0.5
AAL				eS	Sn	14 58 28.1	+2.2
KEF	Keuruu	2.35	7	eP	Pn	14 58 01.9	+1.2
KEF				eSB	Sb	14 58 32.8	-0.7
KEF				MSG		14 58 32.8	
	comp=Z,26nm,0.2s						
KAF	Kangasniemi	2.48	23	eP	Pn	14 58 04.1	+1.6
KAF				eSB	Sb	14 58 37.0	-0.3
KAF				MSG		14 58 37.0	
	comp=Z,8.5nm,0.1s						
NRTU	Norrtaelje	2.86	269	eP	Pn	14 58 08.2	+0.5
GRAU	Graesoe	2.92	282	eP	Pn	14 58 08.2	-0.3
SUF	Sumiainen	3.02	17	ePB	Pb	14 58 13.1	-2.4
SUF				eSB	Sb	14 58 52.5	-0.4
SUF				MSG		14 58 52.5	
	comp=Z,4.6nm,0.2s						
FORU	Forsmark	3.10	283	eP	Pn	14 58 12.7	+1.7
FLYU	Flymyra	3.22	278	eP	Pn	14 58 12.8	+0.1
VAF	Ylistaro	3.30	347	eP	Pn	14 58 16.5	+2.7
VAF				eSB	Sb	14 58 59.3	-1.6
VAF				MSG		14 58 59.3	
	comp=Z,2.1nm,0.4s						
NYNU	Nynaeshamn	3.31	258	eP	Pn	14 58 14.7	+0.7
HFS	Hagfors	5.32	278	Pn	Pn	14 58 42.1	+0.6
	baz=114,slow=12						
HFS				Sn	Sn	14 59 41.9	-1.5
	baz=94,slow=28						
HFS	Hagfors	5.32	278	eP	Pn	14 58 42.1	+0.6
HFS				eS	Sn	14 59 41.9	-1.5
NB2	NORSAR Subarra	6.57	286	Pn	Pn	14 58 57.9	-0.8
	baz=90,slow=14						
NB2	NORSAR Subarra	6.57	286	eP	Pn	14 58 57.9	-0.8
NOA	NORSAR Array B	6.57	286	Pn	Pn	14 58 57.9	-0.8
	comp=Z,0.5nm,0.3s,baz=88,slow=12,SNR=25						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NOA				Sn	**Sn**	**15 00 11.4**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=100,slow=20,SNR=4.0						
NOA				Lg		15 00 42.1	
	comp=Z,0.7nm,0.3s,baz=273,slow=19,SNR=3.1						
AKASG	**Malin Array Be**	**9.59**	**161**	Pn	**Pn**	**14 59 40.3**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=338,slow=12,SNR=3.4						
AKASG				Sn	**Sn**	**15 01 30.3**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=246,slow=40,SNR=3.2						
ARA0	**ARCESS Array S**	**9.74**	**3**	Pn	**Pn**	**14 59 41.3**	**-0.8**
	baz=184,slow=14						
ARA0	**ARCESS Array S**	**9.74**	**3**	eP	**Pn**	**14 59 41.3**	**-0.8**
ARCES	**ARCESS Array B**	**9.74**	**3**	Pn	**Pn**	**14 59 41.4**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=179,slow=14,SNR=30						
ARCES				Sn	**Sn**	**15 01 27.8**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=184,slow=22,SNR=3.7						

TRN 10 14:58:03.1, 1671N×6068W, h42km, MD3.4, M3.9(FDF), 2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
DEG	**La Desirade**	**0.54**	**222**	eP	Pn	14 58 15.7	+1.3
MGG	**Marie-Galante**	**1.00**	**218**	eP	Pn	14 58 22.2	+1.6
BPA	**Boggy Peak**	**1.17**	**287**	eP	Pn	14 58 24.8	+1.8
BPA				eS	Sn	14 58 40.0	+2.2
LZG	**Guadaloupe-1**	**1.19**	**242**	eP	Pn	14 58 24.9	+1.6
TBG	**Guadaloupe-3**	**1.26**	**227**	eP	Pn	14 58 26.1	+1.9
FDF	**Fort de France**	**2.02**	**193**	⇓eP	Pn	14 58 36.0	+1.4
FDF				⇓eS	Sn	14 59 10.0	+11
MVM	**Montagne Vaucl**	**2.15**	**186**	eP	Pn	14 58 38.3	+1.8
MVM				eS	Sn	14 59 14.0	+12
BIM	**Bigot**	**2.21**	**190**	eP	Pn	14 58 38.9	+1.6

IDC 10 15:08:48.8±3.1, 1306N×9099W, h0km, mb3.2/2, mb1 3.9/4, mb1mx3.6/21, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=61.9km s-min=43.7km az=32.0
CASC 10 15:08:53.5±1.7, 1342N×9096W, h6km±9km, MD4.1
ISC 10 15:08:50.4±3.5, **130N**±03×**909W**±01, **h35km, n18, σ0.97**/9, **2C-8D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.28**	**20**	⇓eP	**Pn**	**15 09 11.7**	**0.0**
PCG	**Pacaya**	**1.45**	**11**	⇑eP	**Pn**	**15 09 13.6**	**-0.5**
FUG	**Fuego 3**	**1.48**	**2**	⇓eP	**Pn**	**15 09 13.4**	**-1.1**
JAT	**Jato**	**1.53**	**332**	⇓eP	**Pn**	**15 09 14.4**	**-0.8**
RTR	**El Retiro**	**1.53**	**52**	⇓eP	x	15 09 18.3	
SNJE	**San Jose**	**1.54**	**54**	⇓eP	x	15 09 19.3	
RBDL	**Robledal**	**1.64**	**46**	⇓eP	x	15 09 19.0	
BOQS	**Boqueron**	**1.75**	**64**	⇓eP	x	15 09 23.2	
BOQS				eS	x	15 09 46.5	
LFRS	**El Faro**	**1.90**	**70**	⇑eP	x	15 09 26.1	
LFRS				eS	x	15 09 50.9	
LBRS	**Las Brisas**	**1.96**	**67**	eP	x	15 09 26.1	
LBRS				eS	x	15 09 51.6	
MTO2	**Montecristo 2**	**2.07**	**46**	eP	x	15 09 24.7	
MTO2				eS	x	15 09 49.6	
SNVI	**San Vicente**	**2.10**	**72**	⇓eP	x	15 09 29.0	
SNVI				eS	x	15 09 57.1	
CAHU	**Cacacuatique**	**2.73**	**73**	eP	x	15 09 37.2	
CMIG	**Matias Romero**	**5.63**	**317**	Pn	**Pn**	**15 10 10.5**	**-1.1**
	0.9nm,0.3s,baz=104,slow=8.4,SNR=9.1						
CMIG				Sn	**Sn**	**15 11 15.8**	**+0.6**
	1.5nm,0.3s,baz=274,slow=12,SNR=5.3						
TEIG	**Tepich**	**7.65**	**19**	Pn	**Pn**	**15 10 40.8**	**+1.5**
	3.7nm,0.3s,baz=206,slow=4.6,SNR=12						
TXAR	**Lajitas Array**	**20.15**	**326**	P	**P**	**15 13 22.9**	**+1.3**
	0.4nm,0.7s,baz=151,slow=11,SNR=6.7						
NVAR	**Mina Array Bea**	**35.15**	**321**	P	**P**	**15 15 45.4**	**+4.6**
	0.5nm,0.7s,baz=134,slow=7.8,SNR=4.0						
CMAR	**Chiang Mai Arr**	**147.31**	**343**	PKPbc	PKPbc	15 28 33.3	+2.2
	0.5nm,0.6s,baz=354,slow=3.0,SNR=5.2						

ISCJB 10 16:28:32.2±0.5, 2747N±006×1402E±0.1, h485km±7km, mb3.8/13, Error ellipse: s-maj=19.0km s-min=9.0km az=174.1
IDC 10 16:28:32.5±0.7, 2748N×14022E, h471km±9km, mb3.1/6, mb1 3.2/9, mb1mx3.0/21, mbtmp3.2/9, Error ellipse: s-maj=24.6km s-min=19.1km az=75.0
NEIC 10 16:28:33.2±1.1, 2746N×14021E, h483km±9km, mb4.2/6, Error ellipse: s-maj=14.2km s-min=9.4km az=116.0
JMA 10 16:28:33.8±0.2, 2767N×14071E, h488km±4km, M3.5
ISC 10 16:28:33.2±0.5, **2750N**±006×**1403E**±01, **h480km**±7km, **n35, σ0.80**/38, **mb3.8**/13, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.76**	**103**	P	**P**	**16 29 35.6**	**+0.3**
	34nm,0.3s,baz=273,slow=2.8,SNR=46						
CBIJ				S	**S**	**16 30 23.6**	**-2.0**
	63nm,0.3s,baz=289,slow=22,SNR=11						
CBIJ	**Chichi jima**	**1.76**	**103**	P	**P**	**16 29 35.5**	**+0.2**
CBIJ				eS	**S**	**16 30 25.1**	**-0.5**
JHHJ	**Haha-jima-NKT**	**1.92**	**116**	P	**P**	**16 29 36.9**	**+0.9**
JHHJ				eS	**S**	**16 30 26.9**	**-0.1**
JHJ2	**Mitsune**	**5.61**	**356**	P	**P**	**16 30 05.1**	**+0.4**
JHJ2				eS	**S**	**16 31 19.2**	**-0.4**
JHJ	**Hachijo jima 2**	**5.62**	**356**	P	**P**	**16 30 05.0**	**+0.3**
	6.5nm,0.3s,baz=61,slow=19,SNR=5.2						
JHJ				S	**S**	**16 31 17.7**	**-2.0**
	5.1nm,0.3s,baz=73,slow=19,SNR=2.9						
BSO3	**Boso 3**	**7.29**	**2**	eS	**S**	**16 31 49.2**	**-1.2**
JIE	**Ise**	**7.52**	**337**	P	**P**	**16 30 26.4**	**+2.5**
JKN2	**Miekihoku**	**7.54**	**334**	P	**P**	**16 30 26.9**	**+2.7**
JAG	**Ashikaga**	**8.93**	**356**	P	**P**	**16 30 39.4**	**+0.6**
JHO	**Hitachi**	**9.09**	**2**	P	**P**	**16 30 41.9**	**+1.4**
MJAR	**Matsushiro Arr**	**9.19**	**350**	P	**P**	**16 30 41.6**	**+0.1**
	0.5nm,0.3s,baz=171,slow=11,SNR=4.0						
JOW	**Kunigami**	**10.69**	**269**	P	**P**	**16 30 57.6**	**-0.1**
	3.9nm,0.3s,baz=110,slow=13,SNR=25						
PETK	**Petropavlovsk-**	**28.68**	**22**	ScP	ScP	16 39 40.7	-0.2
	3.2nm,0.9s,baz=251,slow=4.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**38.94**	**266**	P	**P**	**16 35 16.1**	**-0.9**
	0.5nm,0.5s,mb3.2,baz=61,slow=6.5,SNR=6.8						
TAPN	**Taplejung**	**46.34**	**283**	eP	**P**	**16 36 15.3**	**+0.1**
ODAN	**Odare**	**46.73**	**282**	eP	**P**	**16 36 17.8**	**-0.3**
	6.1nm,0.5s,mb4.3						
RAMN	**Ramite**	**47.39**	**282**	eP	**P**	**16 36 23.2**	**0.0**
WRAB	**Tennant Creek**	**47.49**	**188**	eP	**P**	**16 36 23.6**	**-0.3**
	0.6nm,0.4s,mb3.4						
JIRN	**Jiri**	**47.59**	**283**	eP	**P**	**16 36 24.9**	**+0.3**
	17nm,0.7s,mb4.5						
GUN	**Gumba**	**47.80**	**284**	eP	**P**	**16 36 26.7**	**+0.5**
ZALV	**Zalesovo Beam**	**48.06**	**319**	P	**P**	**16 36 27.4**	**-0.3**
	1.2nm,0.3s,mb3.7,baz=116,slow=6.8,SNR=8.9						
ZALV				PcP	PcP	16 37 46.1	-0.4
	0.6nm,0.5s,baz=54,slow=2.6,SNR=3.7						
KKN	**Kakani**	**48.34**	**284**	eP	**P**	**16 36 30.0**	**-0.3**
DMN	**Daman**	**48.53**	**284**	eP	**P**	**16 36 31.5**	**-0.2**
GKN	**Gorkha**	**48.85**	**284**	eP	**P**	**16 36 33.4**	**-0.7**
MK31	**Makanchi Array**	**48.90**	**309**	eP	**P**	**16 36 34.0**	**-0.1**
MKAR	**Makanchi Array**	**48.90**	**309**	P	**P**	**16 36 33.9**	**-0.2**
	0.6nm,0.4s,mb3.3,baz=88,slow=10,SNR=18						
MKAR				PcP	PcP	16 37 49.8	+0.1
	0.4nm,0.7s,baz=107,slow=3.5,SNR=2.8						
MKAR				ScP	ScP	16 40 58.4	0.0
	0.3nm,0.7s,baz=95,slow=3.5,SNR=3.8						
DANN	**Dangsing**	**49.52**	**285**	eP	**P**	**16 36 39.1**	**0.0**
	12nm,0.6s,mb4.4						
KURK	**Kurchatov**	**51.48**	**314**	eP	**P**	**16 36 52.8**	**-0.2**
BRVK	**Borovoye**	**56.65**	**317**	eP	**P**	**16 37 29.7**	**+0.2**
	4.8nm,0.5s,mb4.1						
ARCES	**ARCESS Array B**	**72.60**	**340**	P	**P**	**16 39 11.4**	**+1.0**
	1.0nm,0.5s,mb3.6,baz=76,slow=8.5,SNR=9.3						
JOF	**Joensuu**	**73.96**	**333**	ep	**P**	**16 39 18.3**	**-0.1**
	0.9nm,0.3s,mb3.8						
KAF	**Kangasniemi**	**76.36**	**334**	ep	**P**	**16 39 31.6**	**-0.3**
	1.3nm,0.4s,mb3.8						
NOA	**NORSAR Array B**	**82.60**	**338**	P	**P**	**16 40 04.6**	**-0.3**
	1.0nm,0.6s,mb3.5,baz=46,slow=4.9,SNR=3.3						
BRTR	**Keskin Array B**	**84.47**	**312**	P	**P**	**16 40 14.1**	**-0.6**
	0.7nm,0.9s,mb3.2,baz=65,slow=3.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**123.02**	**310**	PKP	PKPdf	16 46 34.9	-0.2
	0.2nm,0.6s,baz=22,slow=1.0,SNR=2.3						

NEIC 10 16:31:18.0, 2001N×15627W, h32km, MD4.0(HVO), 1C, After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.74**	**110**	eP	Pn	16 31 30.8	-1.5
POHA				eS	Sb	16 31 35.2	-7.1
KHU	**Kahuku**	**0.98**	**141**	⇑iPn	Pn	16 31 33.7	-1.8
PUH	**Pauahi**	**1.18**	**122**	ePn	Pn	16 31 35.8	-2.4
STCH	**Steam Cracks**	**1.24**	**120**	ePn	Pn	16 31 37.3	-1.9
HON	**Honolulu**	**2.08**	**309**	ePn	Pn	16 31 43.4	-7.2
KIP	**Kipapa**	**2.15**	**311**	ePn	Pn	16 31 44.3	-7.3

CSEM 10 16:38:49.2±0.1, 3886N×3907E, h5km, MD2.9, Error ellipse: s-maj=4.3km s-min=3.4km az=171.0
ISCJB 10 16:38:50.6±0.8, 3886N±005×3910E±006, h4km±14km, Error ellipse: s-maj=8.5km s-min=7.3km az=146.5
DDA 10 16:38:50.5, 3883N×3906E, h7km±2km, Md2.9
ISC 10 16:38:50.6±1.1, **3886N**±005×**3913E**±008, **h14km**±13km, **n6, σ0.51**/10, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.21**	**81**	ePG	**Pg**	**16 38 55.1**	**-0.1**
PTK				eSG	**Sg**	**16 38 58.9**	**+0.5**
ELZG	**Elazig**	**0.38**	**197**	eP	**Pg**	**16 38 57.9**	**-0.3**
ELZG				eS	**Sg**	**16 39 03.6**	**+0.3**
ELZG	**Elazig**	**0.38**	**197**	eP	**Pg**	**16 38 57.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**0.50**	**164**	ePG	**Pg**	**16 38 59.9**	**-0.5**
KEMA	**Kemaliye**	**0.64**	**310**	⇑iP	**Pg**	**16 39 02.2**	**-0.9**
KEMA				i S	**Sg**	**16 39 12.0**	**+0.4**
AKCD	**Akcadag**	**1.10**	**240**	eP	**Pb**	**16 39 12.1**	**+0.8**
AKCD				eS	**Sb**	**16 39 25.5**	**-0.1**

ISCJB 10 16:39:49.7±2.5, 203S±03×1782W±02, h499km±42km, mb4.0/5, Error ellipse: s-maj=43.8km s-min=28.2km az=2.0
IDC 10 16:39:51.4±3.0, 2036S×17795W, h520km±28km, mb3.5/3, mb1 3.6/4, mb1mx3.1/16, mbtmp3.6/4, Error ellipse: s-maj=97.8km s-min=22.2km az=146.0
NEIC 10 16:39:51.8±1.2, 20.19S×17808W, h524km±14km, mb4.3/4, Error ellipse: s-maj=26.0km s-min=13.1km az=156.0
ISC 10 16:39:50.9±2.3, **203S**±03×**1782W**±02, **h499km**±40km, **n21, σ0.56**/14, **mb4.0**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.82**	**45**	P	**P**	**16 41 55.8**	**-0.1**
	2.9nm,0.3s,baz=45,slow=19,SNR=4.4						
AFI				S	**S**	**16 43 19.8**	**-19**
	4.1nm,0.3s,baz=223,slow=23,SNR=8.3						
CTA	**Charters Tower**	**33.33**	**264**	eP	**P**	**16 45 47.5**	**+0.5**
	3.2nm,0.3s,mb4.2						
CTA	**Charters Tower**	**33.33**	**264**	P	**P**	**16 45 47.7**	**+0.7**
	6.0nm,0.5s,mb4.3,baz=88,slow=11,SNR=9.1						
CTAO	**Charters Tower**	**33.33**	**264**	eP	**P**	**16 45 47.7**	**+0.7**
	4.6nm,0.4s,mb4.3						
PMG	**Port Moresby**	**35.12**	**283**	eP	**P**	**16 46 02.8**	**+0.7**
STKA	**Stephens Creek**	**37.72**	**244**	eP	**P**	**16 46 23.7**	**+0.3**
	2.3nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**37.72**	**244**	P	**P**	**16 46 23.9**	**+0.4**
	3.6nm,0.6s,mb4.0,baz=94,slow=10,SNR=10						
STKA	**Stephens Creek**	**37.72**	**244**	eP	**P**	**16 46 23.9**	**+0.4**
WB2	**Warramunga Arr**	**44.44**	**262**	eP	**P**	**16 47 16.2**	**-0.9**
WRAB	**Tennant Creek**	**44.44**	**262**	eP	**P**	**16 47 16.3**	**-0.8**
	10.0nm,1.0s,mb4.2						
KAKA	**Kakadu**	**47.79**	**271**	eP	x	16 47 23.1	
	5.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.88**	**262**	eP	**P**	**16 48 19.7**	**-0.3**
	4.2nm,0.5s,mb4.0						
QSPA	**South Pole Qui**	**69.79**	**180**	eP	**P**	**16 50 10.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**89.87**	**290**	P	**P**	**16 51 56.8**	**+0.2**
	0.5nm,0.5s,mb3.6,baz=85,slow=2.3,SNR=5.4						
MKAR	**Makanchi Array**	**110.92**	**313**	PKiKP	PKiKP	16 57 24.5	-2.3
	0.5nm,0.6s,baz=77,slow=0.5,SNR=4.6						
MKAR	**Makanchi Array**	**110.92**	**313**	PKPdf	PKiKP	16 57 24.5	-2.4
AKASG	**Malin Array Be**	**142.74**	**331**	PKhKP		16 58 21.2	
	2.4nm,0.5s,baz=42,slow=4.3,SNR=16						
BR131	**Keskin Array S**	**146.56**	**312**	ePKPbc	PKPbc	16 58 34.6	-1.6
BRTR	**Keskin Array B**	**146.56**	**312**	PKPbc	PKPbc	16 58 34.5	-1.7
	1.2nm,0.6s,baz=146,slow=3.9,SNR=6.1						
CLL	**Collm**	**147.81**	**347**	i PKPbc	PKPbc	16 58 38.1	-1.0
	comp=Z,7.0nm,0.9s						
GERES	**GERESS Array B**	**149.94**	**344**	PKPbc	PKPbc	16 58 43.2	-1.2
	comp=Z,0.2nm,0.2s,baz=41,slow=2.6,SNR=5.1						

MAN 10 17:03:25, 993N×12636E, h1km, mb4.3, ML3.1, MS2.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.87**	**261**	eP	Pg	17 03 42.4	+0.7
SCPH				eS	Sg	17 03 53.2	+0.1
BUTP	**Butuan**	**1.20**	**218**	eP	Pg	17 03 47.2	-0.9
BUTP				eS	Sg	17 04 05.9	+2.3
MSLP	**Maasin**	**1.50**	**278**	eP	Pn	17 03 52.8	-0.2
MSLP				eS	Sb	17 04 13.6	+0.5
PLP	**Palo**	**1.83**	**312**	⇓eP	Pn	17 03 57.6	0.0
PLP				eS	Sn	17 04 23.3	+1.7
BESP	**Borongan**	**1.90**	**331**	eP	Pn	17 03 58.0	-0.5
BESP				eS	Sn	17 04 25.2	+2.1
OCLP	**Ormoc**	**2.06**	**303**	eP	Pn	17 04 02.5	+1.8
BUKP	**Musuan**	**2.41**	**212**	eP	Pn	17 04 08.0	+2.4
BUKP				eS	Sn	17 04 40.6	+5.0
TBP	**Tagbilaran**	**2.48**	**265**	eP	Pn	17 04 07.1	+0.6
TBP				eS	Sn	17 04 38.1	+0.7
PAGZ	**Pagadian**	**3.60**	**235**	eP	Pn	17 04 24.1	+2.2
PVCP	**Virac**	**4.24**	**330**	eP	Pn	17 04 27.1	-3.7

HLW 10 17:06:32.8, 3428N×2532E, h33km, Mb3.7
CSEM 10 17:06:33.3±0.1, 3399N×2539E, h30km, MD3.9, Error ellipse: s-maj=3.5km s-min=1.5km az=41.0
ISCJB 10 17:06:35.0±0.3, 3403N±002×2544E±003, h54km±6km, mb3.7/9, Error ellipse: s-maj=5.1km s-min=3.5km az=151.1
ATH 10 17:06:35.5, 3406N×2523E, h32km±6km, MD3.9/7
IDC 10 17:06:36.9±1.9, 34.10N×2525E, h43km±16km, mb3.6/8, mb1 3.7/14, mb1mx3.6/27, mbtmp3.6/14, ML4.1/5, MS2.7/1, Ms1 2.7/1, ms1mx2.1/31, Error ellipse: s-maj=20.0km s-min=13.2km az=53.0
NEIC 10 17:06:36.3, 34.13N×2523E, h35km, mb3.6/1, ML3.5(ATH), After ATH.
GII 10 17:06:47.1±0.0, 3375N×26.16E, h30km±1km, mb4.5/9, ML4.4/9
ISC 10 17:06:36.1±0.3, **3404N**±002×**2531E**±003, **h38km**±6km, **n91, σ1.11**/117, **mb3.7**/9, **3D, Crete**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NPS	**Neapolis**	**1.24**	**12**	ePN	**Pn**	**17 06 58.1**	**+1.1**
GVD	**Gavdhos**	**1.29**	**309**	ePN	**Pn**	**17 06 58.0**	**+0.4**
IDI	**Anoyia**	**1.29**	**345**	P	**Pn**	**17 06 57.5**	**-0.2**
	80nm,0.3s,baz=176,slow=18,SNR=258						
IDI				S	**Sn**	**17 07 13.1**	**-0.6**
	66nm,0.3s,baz=311,slow=20,SNR=10						
VAM	**Vamos**	**1.64**	**326**	ePN	**Pn**	**17 07 03.5**	**+1.1**
KARP	**Karpathos**	**2.14**	**45**	ePN	**Pn**	**17 07 11.7**	**+2.4**
LTBQ	**Tobruq**	**2.30**	**211**	i P	**Pn**	**17 07 13.2**	**+1.7**
	SNR=44						
LTBQ				eS	**Sn**	**17 07 38.9**	**+0.4**
	116nm,0.3s,SNR=44						
SLUM		**2.54**	**182**	⇓iP	**Pn**	**17 07 15.0**	**+0.2**
SLUM				S	**Sn**	**17 07 45.6**	**+1.0**
APE	**Apeiranthos**	**3.03**	**3**	ePN	**Pn**	**17 07 23.1**	**+1.6**
APE	**Apeiranthos**	**3.03**	**3**	ePn	**Pn**	**17 07 22.1**	**+0.6**
ARG	**Arkhangelos**	**3.17**	**46**	ePN	**Pn**	**17 07 25.9**	**+2.5**
HMAT	**Matruh**	**3.30**	**152**	P	**Pn**	**17 07 25.1**	**-0.3**
HMAT				S	**Sn**	**17 08 03.0**	**-0.3**
HMAT	**Matruh**	**3.30**	**152**	P	**Pn**	**17 07 25.0**	**-0.3**
HMAT				S	**Sn**	**17 08 03.0**	**-0.3**
SMG	**Samos**	**3.86**	**18**	ePN	**Pn**	**17 07 35.2**	**+2.2**
SMG	**Samos**	**3.86**	**18**	ePn	**Pn**	**17 07 34.2**	**+1.2**
SWA2		**4.79**	**178**	P	**Pn**	**17 07 46.2**	**+0.5**
SWA2				S	**Sn**	**17 08 39.5**	**-0.4**
LKR	**Lokris**	**4.96**	**339**	P	**Pn**	**17 07 48.8**	**+0.7**
VLS	**Valsamata**	**5.62**	**319**	P	**Pn**	**17 07 59.2**	**+2.0**
AYT	**Al ‘Ayyat**	**6.59**	**129**	P	**Pn**	**17 08 10.0**	**-0.5**
CSS	**Prodhromos**	**6.69**	**80**	ePn	**Pn**	**17 08 12.6**	**+0.8**
CSS	**Prodhromos**	**6.69**	**80**	ePn	**Pn**	**17 08 12.6**	**+0.8**
KOT	**Kottamia**	**6.89**	**125**	P	**Pn**	**17 08 13.7**	**-0.9**
KOT				S	**Sn**	**17 09 27.9**	**-3.8**
HSAF	**As Saff**	**6.90**	**128**	P	**Pn**	**17 08 14.1**	**-0.7**
GLL	**Jalalah**	**7.03**	**128**	P	**Pn**	**17 08 16.1**	**-0.5**
GLL	**Jalalah**	**7.03**	**128**	P	**Pn**	**17 08 16.0**	**-0.5**
HHAG	**Hagoal**	**7.06**	**123**	P	**Pn**	**17 08 16.4**	**-0.6**
HHAG				S	**Sn**	**17 09 31.8**	**-4.1**
HFRF	**Wahat Farafira**	**7.34**	**159**	P	**Pn**	**17 08 20.8**	**0.0**
AMAG	**Maghara**	**7.49**	**115**	P	**Pn**	**17 08 21.8**	**-1.1**
SUZ		**7.64**	**121**	P	**Pn**	**17 08 24.1**	**-0.8**
RSH		**7.74**	**111**	P	**Pn**	**17 08 25.0**	**-1.3**
ZAF		**7.78**	**126**	P	**Pn**	**17 08 26.2**	**-0.6**
ZNM		**7.95**	**124**	P	**Pn**	**17 08 28.4**	**-0.7**
OFRI	**‘Ofer**	**8.22**	**97**	Sn	**Sn**	**17 09 58.8**	**-5.6**
HNTI	**Hanita**	**8.29**	**94**	Sn	**Sn**	**17 10 00.9**	**-5.2**
KZIT	**Kziot**	**8.29**	**110**	Pn	**Pn**	**17 08 33.3**	**-0.5**
KZIT				Sn	**Sn**	**17 09 58.5**	**-7.6**
SLTI	**Sal’it**	**8.36**	**100**	Pn	**Pn**	**17 08 34.5**	**-0.2**
SLTI				Sn	**Sn**	**17 10 01.4**	**-6.3**
HNKL	**Nakhl**	**8.43**	**117**	P	**Pn**	**17 08 34.9**	**-0.8**
HNKL				S	**Sn**	**17 10 04.2**	**-5.3**
HRSH	**Kfar Ka’horesh**	**8.45**	**96**	P	**Pn**	**17 08 24.9**	**-11**
MMAI	**Mount Meron Ar**	**8.49**	**94**	P	**Pn**	**17 08 36.5**	**0.0**
	1.6nm,0.3s,baz=271,slow=12,SNR=6.7						
MMAI				S	**Sn**	**17 10 08.6**	**-2.5**
	6.3nm,0.3s,baz=278,slow=18,SNR=7.8						
MMA1	**Mount Meron ar**	**8.49**	**94**	Pn	**Pn**	**17 08 38.2**	**+1.7**
TIP	**Timpagrande**	**8.57**	**309**	ePn	**Pn**	**17 08 35.8**	**-1.8**
TIP	**Timpagrande**	**8.57**	**309**	ePn	**Pn**	**17 08 35.8**	**-1.8**
MMLI	**Mount Malkishu**	**8.62**	**98**	Pn	**Pn**	**17 08 38.7**	**+0.4**
MMLI				Sn	**Sn**	**17 10 07.8**	**-6.5**
YTIR	**Yattir**	**8.69**	**105**	Pn	**Pn**	**17 08 39.4**	**+0.2**
HMDT	**Nahal Hemdat**	**8.75**	**99**	Pn	**Pn**	**17 08 40.8**	**+0.7**
HMDT				Sn	**Sn**	**17 10 11.7**	**-5.8**
BRTR	**Keskin Array B**	**8.76**	**47**	P	**Pn**	**17 08 42.8**	**+2.7**
	0.1nm,0.3s,baz=228,slow=15,SNR=3.7						
BRTR				S	**Sn**	**17 10 16.2**	**-1.3**
	0.1nm,0.3s,baz=219,slow=26,SNR=2.7						
DSI	**Dead Sea**	**8.83**	**103**	Pn	**Pn**	**17 08 42.1**	**+1.0**
DSI				Sn	**Sn**	**17 10 12.2**	**-7.2**
KRMI	**Paran Flat**	**8.89**	**114**	Pn	**Pn**	**17 08 42.5**	**+0.5**
KRMI				Sn	**Sn**	**17 10 13.5**	**-7.5**
SSY	**Sortino**	**8.90**	**293**	Pn	**Pn**	**17 08 40.0**	**-2.1**
SSY				Sn	**Sn**	**17 10 11.2**	**-10**
MZDA	**Masada**	**8.90**	**105**	Pn	**Pn**	**17 08 43.0**	**+0.8**
MZDA				Sn	**Sn**	**17 10 13.5**	**-7.7**
PRNI	**Paran**	**9.00**	**111**	Pn	**Pn**	**17 08 44.5**	**+1.0**
PRNI				Sn	**Sn**	**17 10 16.8**	**-6.8**
ZFRI	**Zfri**	**9.05**	**110**	Sn	**Sn**	**17 10 16.8**	**-8.0**
HMDC	**Modica**	**9.06**	**292**	Pn	**Pn**	**17 08 41.9**	**-2.5**
HMDC				Sn	**Sn**	**17 10 15.3**	**-10**
TR2		**9.14**	**126**	⇓iP	**Pn**	**17 08 44.6**	**-0.9**
HRFI	**Mount Harif**	**9.17**	**113**	Pn	**Pn**	**17 08 46.1**	**+0.3**
HRFI				Sn	**Sn**	**17 10 21.0**	**-6.8**
HVZN	**Vizzini**	**9.18**	**293**	Pn	**Pn**	**17 08 43.3**	**-2.6**
HVZN				Sn	**Sn**	**17 10 16.2**	**-12**
MBRI	**Mt Berech**	**9.19**	**115**	Pn	**Pn**	**17 08 46.7**	**+0.5**
MBRI				Sn	**Sn**	**17 10 21.3**	**-7.1**
HKAT	**Jabal Katrina**	**9.24**	**124**	⇓iP	**Pn**	**17 08 46.2**	**-0.6**
EIL	**Elat**	**9.28**	**115**	P	**Pn**	**17 08 47.1**	**-0.3**
	1.2nm,0.3s,baz=246,slow=10,SNR=16						
EIL				S	**Sn**	**17 10 24.7**	**-5.9**
	1.2nm,0.3s,baz=106,slow=19,SNR=3.8						
EIL	**Elat**	**9.28**	**115**	Pn	**Pn**	**17 08 47.6**	**+0.2**
EIL				Sn	**Sn**	**17 10 22.8**	**-7.8**
VAE	**Valguarnera**	**9.50**	**294**	S	**Sn**	**17 10 27.3**	**-8.4**
	1.0nm,0.3s,baz=87,slow=18,SNR=2.1						
AKRG	**Al Kharijah**	**9.63**	**151**	P	**Pn**	**17 08 52.6**	**+0.5**
CUC	**Castrocucco**	**9.64**	**311**	ePn	**Pn**	**17 08 50.8**	**-1.4**
GTR	**Jabal at Tayr**	**9.65**	**150**	P	**Pn**	**17 08 52.7**	**+0.3**
HMSM	**Jabal Masmas**	**12.53**	**151**	P	**Pn**	**17 09 33.2**	**+1.3**
BOJS	**Bojanci**	**13.80**	**329**	i Pn	**Pn**	**17 09 47.5**	**-1.6**
BOJS				i Sn	**Sn**	**17 12 08.1**	**-13**
JAVS	**Javornik**	**14.63**	**327**	i Pn	**Pn**	**17 10 04.9**	**+4.6**
JAVS				i Sn	**Sn**	**17 12 25.1**	**-16**
AKASG	**Malin Array Be**	**16.89**	**9**	P	**Pn**	**17 10 29.5**	**0.0**
	2.0nm,0.3s,baz=200,slow=11,SNR=7.9						
GEC2	**GERESS Array S**	**17.13**	**333**	ePn	**Pn**	**17 10 32.1**	**-0.3**
GEC2	**GERESS Array S**	**17.13**	**333**	ePn	**Pn**	**17 10 32.1**	**-0.3**
GERES	**GERESS Array B**	**17.13**	**333**	P	**Pn**	**17 10 33.2**	**+0.8**
	0.6nm,0.3s,baz=148,slow=12,SNR=19						
DAVOX	**Davos/Dischmat**	**17.28**	**322**	P	**Pn**	**17 10 35.6**	**+1.3**
	0.1nm,0.3s,baz=171,slow=19,SNR=2.6						
KHC	**Kasperske Hory**	**17.41**	**333**	eP	**Pn**	**17 10 34.5**	**-1.4**
MIB	**Mutribah**	**19.16**	**97**	eP	**Pn**	**17 10 52.7**	**-4.7**
MIB				AMb	AMB	17 10 57.8	
	comp=Z,24nm,1.8s						
NAY	**Al-Naaiem**	**19.27**	**98**	eP	**Pn**	**17 10 48.9**	**-10**
NAY				AMb	AMB	17 11 05.6	
	comp=Z,23nm,1.5s						
CLL	**Collm**	**19.44**	**336**	epP	pP	17 11 05.0	-3.8
HFS	**Hagfors**	**27.19**	**347**	P	**P**	**17 12 15.3**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.5,baz=160,slow=8.9,SNR=4.0						
NOA	**NORSAR Array B**	**28.51**	**346**	P	**P**	**17 12 25.8**	**-1.7**
	comp=Z,0.5nm,0.6s,mb3.4,baz=147,slow=7.4,SNR=2.7						
TOA0	**Torodi Ar. Sit**	**29.88**	**232**	eP	**P**	**17 12 40.9**	**+0.7**
TOA0	**Torodi Ar. Sit**	**29.88**	**232**	eP	**P**	**17 12 40.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**29.88**	**232**	P	**P**	**17 12 41.0**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.8,baz=31,slow=8.5,SNR=13						
TORD	**Torodi Ar. Bea**	**29.88**	**232**	P	**P**	**17 12 41.0**	**+0.8**
ARCES	**ARCESS Array B**	**35.55**	**0**	P	**P**	**17 13 27.1**	**-2.0**
	comp=Z,3.2nm,0.9s,mb4.2,baz=186,slow=9.6,SNR=5.3						
KMBO	**Kilima Mbogo**	**36.74**	**160**	LR	LR	17 30 24.9	
	comp=Z,13nm,21.3s,baz=90,slow=39						
KURK	**Kurchatov**	**41.80**	**50**	eP	**P**	**17 14 22.1**	**+0.4**
KURK	**Kurchatov**	**41.80**	**50**	eP	**P**	**17 14 22.1**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.5						
MK31	**Makanchi Array**	**44.30**	**56**	eP	**P**	**17 14 43.0**	**+1.0**
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**17 14 43.2**	**+1.2**
	comp=Z,1.5nm,0.5s,mb3.9,baz=276,slow=6.9,SNR=16						
MKAR	**Makanchi Array**	**44.30**	**56**	P	**P**	**17 14 43.2**	**+1.2**
ZALV	**Zalesovo Beam**	**45.70**	**45**	P	**P**	**17 14 53.1**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.1,baz=264,slow=7.3,SNR=7.5						
SONM	**Songino Array**	**60.10**	**50**	P	**P**	**17 16 40.6**	**+1.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=284,slow=6.9,SNR=7.2						
YKA	**Yellowknife Ar**	**78.55**	**342**	P	**P**	**17 18 33.1**	**0.0**
	comp=Z,0.1nm,0.4s,mb3.1,baz=27,slow=5.8,SNR=2.9						

GUC 10 17:16:52.0±0.8, **2249S**×**7024W, h38km**±2km, **ML3.5, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.40**	**6**	eP	Pn	17 17 00.9	-0.5
TOCH				i S	Sn	17 17 07.5	-0.4
TOCH				AML	AML	17 17 07.9	
	comp=E,14μm,0.3s						
PECH	**Pedro de Valdi**	**0.54**	**101**	⇑iP	Pn	17 17 03.5	+0.4
PECH				i S	Sn	17 17 11.5	+0.4
PECH				AML	AML	17 17 12.2	
	comp=N,2μm,0.5s						
MACH	**Maria Elena**	**0.54**	**57**	⇑iP	Pn	17 17 03.5	+0.3
MACH				i S	Sn	17 17 11.7	+0.6
PB04	**Plate Boundary**	**0.74**	**72**	⇓iP	Pn	17 16 59.2	-6.7
PB04				i S	Sn	17 17 04.2	-12
PB04				AML	AML	17 17 04.4	
	comp=N,8μm,0.1s						
CEN1	**Los Morros**	**0.89**	**177**	eP	Pn	17 17 11.2	+3.2
CEN1				i S	Sn	17 17 25.5	+5.7
LVC	**Limon Verde**	**1.24**	**96**	⇓iP	Pn	17 17 14.6	+1.8
LVC				i S	Sn	17 17 31.0	+2.7
PB01	**Plate Boundary**	**1.60**	**26**	eP	Pn	17 17 19.3	+1.5
PB01				i S	Sn	17 17 40.2	+2.8
PB01				AML	AML	17 17 42.9	
	comp=E,292nm,0.7s						

ISCJB 10 17:25:44.9±0.4, 3690N±002×828W±003, h10km, Error ellipse: s-maj=4.0km s-min=2.4km az=43.3
CSEM 10 17:25:46.1±0.1, 3673N×821W, h15km, ML3.7/6, Error ellipse: s-maj=2.9km s-min=1.5km az=64.0
LDG 10 17:25:46.4±0.2, 3680N×846W, h10km, Md3.7/1, Ml3.8/4, Error ellipse: s-maj=4.0km s-min=2.2km az=33.0
NEIC 10 17:25:47.2, 3690N×850W, h17km, MN3.1(MDD), After MDD.
MDD 10 17:25:47.4±0.5, 3682N×854W, h30km±6km, mbLg3.2/23, Error ellipse: s-maj=6.7km s-min=3.7km az=57.0, PRXIMO
INMG 10 17:25:47.9±1.4, 3684N×850W, h24km±4km, MD2.8, ML3.0, Error ellipse: s-maj=5.0km s-min=2.7km az=59.0
IGIL 10 17:25:47.6, 3682N×851W, h24km, ML3.2
CNRM 10 17:25:47.2, 3666N×872W, h30km, MD3.6
ISC 10 17:25:46.3±0.4, **3691N**±002×**829W**±003, **h10km, n105,**

σ1^{s}33/192,4C-3D,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.44**	**41**	*i* Pg	**Pg**	**17 25 59.6**	**+4.7**
PBDV				*e*Sg	**Sg**	**17 26 08.2**	**+7.5**
PBDV				A		17 26 10.2	
	285nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.44**	**41**	*e*Sg	**Sg**	**17 26 08.2**	**+7.5**
	285nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.44**	**41**	⇑Pg	**Pg**	**17 25 59.6**	**+4.7**
PBDV				Lg		17 26 08.2	
	285nm,0.2s						
PFVI	**Vila Bisbo**	**0.48**	**298**	*i* Pg	**Pg**	**17 25 55.8**	**+0.1**
PFVI				*e*Sg	**Sg**	**17 26 01.6**	**-0.5**
PFVI				A		17 26 02.6	
	964nm,0.2s						
PFVI	**Vila Bisbo**	**0.48**	**298**	*e*Sg	**Sg**	**17 26 01.6**	**-0.5**
	964nm,0.2s						
PFVI	**Vila Bisbo**	**0.48**	**298**	⇓Pg	**Pg**	**17 25 55.8**	**+0.1**
PFVI				Lg		17 26 01.6	
	482nm,0.2s						
MORF	**Marmelete**	**0.49**	**324**	*e*Pg	**Pg**	**17 25 57.4**	**+1.6**
MORF				*e*Sg	**Sg**	**17 26 04.4**	**+2.1**
MORF				A		17 26 05.5	
	2μm,0.4s						
MORF	**Marmelete**	**0.49**	**324**	*e*Pg	**Pg**	**17 25 57.4**	**+1.6**
MORF				*e*Sg	**Sg**	**17 26 04.4**	**+2.1**
	2μm,0.4s						
PVAQ	**Vaqueiros**	**0.67**	**43**	*e*P	**Pg**	**17 26 02.7**	**+3.4**
PVAQ				*e*S	**Sg**	**17 26 13.8**	**+5.7**
PVAQ				A		17 26 14.4	
	251nm,0.1s						
PVAQ	**Vaqueiros**	**0.67**	**43**	⇑P	**Pg**	**17 26 02.7**	**+3.4**
PVAQ				S	**Sg**	**17 26 13.8**	**+5.7**
	251nm,0.1s						
PTEO	**Sao Teotonio**	**0.72**	**332**	*i* P	**Pg**	**17 26 01.0**	**+0.7**
PTEO				*e*S	**Sg**	**17 26 10.6**	**+0.9**
PTEO				A		17 26 12.5	
	431nm,0.4s						
PTEO	**Sao Teotonio**	**0.72**	**332**	*e*S	**Sg**	**17 26 10.6**	**+0.9**
	431nm,0.4s						
PTEO	**Sao Teotonio**	**0.72**	**332**	⇓P	**Pg**	**17 26 01.0**	**+0.7**
PTEO				S	**Sg**	**17 26 10.6**	**+0.9**
	215nm,0.4s						
EGRO	**El Granado**	**0.90**	**46**	P	**Pg**	**17 26 05.9**	**+2.3**
	42nm,0.1s,SNR=18						
EGRO				S	**Sg**	**17 26 19.4**	**+4.1**
	100nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**0.90**	**46**	⇑P	**Pg**	**17 26 05.9**	**+2.3**
	42nm,0.1s,SNR=18						
EGRO				S	**Sg**	**17 26 19.4**	**+4.1**
	100nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.55**	**56**	P	**Pn**	**17 26 14.6**	**+0.7**
	2.4nm,0.1s,SNR=53						
EMIN				S	**Sn**	**17 26 35.4**	**+1.3**
	36nm,0.1s,SNR=7.1						
EMIN	**Mina Concepcio**	**1.55**	**56**	P	**Pn**	**17 26 14.6**	**+0.7**
	2.4nm,0.1s,SNR=53						
EMIN				S	**Sn**	**17 26 35.4**	**+1.4**
	36nm,0.1s,SNR=7.1						
PBAR	**Barrancos**	**1.61**	**38**	*e*P	**Pn**	**17 26 15.1**	**+0.4**
PBAR				*e*S	**Sn**	**17 26 36.2**	**+0.7**
PBAR				A		17 26 53.6	
	71nm,0.4s						
PBAR	**Barrancos**	**1.61**	**38**	*e*P	**Pn**	**17 26 15.1**	**+0.4**
PBAR				*e*S	**Sn**	**17 26 36.2**	**+0.7**
	71nm,0.4s						
MOE	**Montemor**	**1.61**	**358**	*e*P	**Pn**	**17 26 14.4**	**-0.4**
MOE				S	**Sn**	**17 26 34.9**	**-0.7**
EVOP	**Sao Brissos**	**1.62**	**5**	*e*Pn	**Pn**	**17 26 14.1**	**-0.8**
EVOP	**Sao Brissos**	**1.62**	**5**	*e*Pg	**Pg**	**17 26 20.3**	**+2.9**
EVOP				*e*Sn	**Sn**	**17 26 35.9**	**+0.1**
	49nm,0.3s						
EVO	**Evora**	**1.63**	**8**	*e*Pn	**Pn**	**17 26 14.1**	**-1.0**
EVO	**Evora**	**1.63**	**8**	*e*Pg	**Pg**	**17 26 20.3**	**+2.6**
EVO				*e*Sn	**Sn**	**17 26 35.9**	**-0.3**
	98nm,0.3s						
EVO	**Evora**	**1.63**	**8**	*i* P	**Pn**	**17 26 14.8**	**-0.3**
EVO				*e*S	**Sn**	**17 26 35.5**	**-0.7**
EVO				A		17 26 45.7	
	87nm,0.1s						
EVO	**Evora**	**1.63**	**8**	⇓P	**Pn**	**17 26 14.8**	**-0.3**
EVO				S	**Sn**	**17 26 35.5**	**-0.7**
	87nm,0.1s						
ESPR	**Espera**	**1.95**	**91**	P	**Pn**	**17 26 20.9**	**+1.4**
	11nm,0.2s,SNR=50						
ESPR				S	**Sn**	**17 26 44.3**	**+0.3**
	21nm,0.2s						
ESPR	**Espera**	**1.95**	**91**	P	**Pn**	**17 26 20.9**	**+1.4**
	11nm,0.2s,SNR=50						
ESPR				S	**Sn**	**17 26 44.3**	**+0.3**
	21nm,0.2s						
PESTR	**Estremoz**	**2.03**	**16**	*e*Pn	**Pn**	**17 26 20.2**	**-0.4**
PESTR				*e*Sn	**Sn**	**17 26 46.4**	**+0.4**
PESTR				A		17 27 03.9	
	41nm,0.4s						
PESTR	**Estremoz**	**2.03**	**16**	*e*Pn	**Pn**	**17 26 20.2**	**-0.4**
PESTR				*e*Sn	**Sn**	**17 26 46.4**	**+0.4**
	41nm,0.4s						
EBAD	**Badajoz**	**2.10**	**28**	P	**Pn**	**17 26 21.5**	**0.0**
	27nm,0.1s,SNR=57						
EBAD				S	**Sn**	**17 26 47.9**	**+0.2**
	73nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.10**	**28**	P	**Pn**	**17 26 21.5**	**0.0**
	27nm,0.1s,SNR=57						
EBAD				S	**Sn**	**17 26 47.9**	**+0.1**
	73nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**2.19**	**339**	*e*Pn	**Pn**	**17 26 21.6**	**-1.1**
PMAFR				*e*Sn	**Sn**	**17 26 46.4**	**-3.4**
PMAFR				A		17 26 49.3	
	199nm,0.2s						
PMAFR	**Mafra**	**2.19**	**339**	*e*Pn	**Pn**	**17 26 21.6**	**-1.1**
PMAFR				*e*Sn	**Sn**	**17 26 46.4**	**-3.4**
	199nm,0.2s						
ALMR	**Almeirim**	**2.25**	**354**	*e*P	**Pn**	**17 26 22.8**	**-0.8**
ALMR				*e*S	**Sn**	**17 26 48.7**	**-2.8**
ALMR				*e*S	**Sn**	**17 26 48.7**	**-2.7**
ALMR				AML	AML	17 26 50.8	
	comp=E,98nm,0.7s						
ALMR	**Almeirim**	**2.25**	**354**	*e*P	**Pn**	**17 26 22.8**	**-0.8**
ALMR				*e*S	**Sn**	**17 26 48.7**	**-2.7**
ALMR	**Almeirim**	**2.25**	**354**	P	**Pn**	**17 26 22.8**	**-0.8**
ALMR				S	**Sn**	**17 26 48.7**	**-2.8**
EJIF	**Jimena Fronter**	**2.31**	**101**	P	**Pn**	**17 26 26.1**	**+1.6**
	comp=E,10nm,0.3s,SNR=7.9						
EJIF				S	**Sn**	**17 26 53.9**	**+0.9**
	comp=E,6.6nm,0.3s,SNR=7.9						
ECEU	**Ceuta**	**2.56**	**112**	P	**Pn**	**17 26 29.1**	**+1.3**
	comp=E,20nm,0.1s,SNR=18						
ECEU				S	**Sn**	**17 27 01.4**	**+2.4**
	comp=E,3.9nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**2.56**	**112**	⇑P	**Pn**	**17 26 29.1**	**+1.3**
	comp=E,20nm,0.1s,SNR=18						
ECEU				S	**Sn**	**17 27 01.4**	**+2.4**
	comp=E,3.9nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**2.61**	**15**	*e*Pn	**Pn**	**17 26 28.4**	**-0.1**
PMRV				*e*Sn	**Sn**	**17 26 59.6**	**-0.7**
PMRV				*e*Sg	**Sg**	**17 27 12.1**	**+1.9**
PMRV				A		17 27 22.1	
	comp=E,52nm,0.3s						
EMIJ	**Mijas**	**2.85**	**96**	P	**Pn**	**17 26 31.9**	**+0.1**
	comp=E,0.5nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**17 27 03.9**	**-2.2**
	comp=E,18nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**2.99**	**12**	*e*Pn	**Pn**	**17 26 33.6**	**-0.2**
PCBR				*e*Sn	**Sn**	**17 27 08.3**	**-1.4**
PCBR				*e*Sg	**Sg**	**17 27 24.8**	**+2.3**
PCBR				A		17 27 27.3	
	comp=E,30nm,0.6s						
PCBR	**Castelo Branco**	**2.99**	**12**	*e*Pn	**Pn**	**17 26 33.6**	**-0.2**
PCBR				*e*Sn	**Sn**	**17 27 08.3**	**-1.4**
PCBR	**Castelo Branco**	**2.99**	**12**	Pn	**Pn**	**17 26 33.6**	**-0.2**
PCBR				Sn	**Sn**	**17 27 08.3**	**-1.4**
PCBR				Lg		17 27 24.8	
	comp=E,15nm,0.6s						
EADA	**Adamuz**	**3.21**	**66**	P	**Pn**	**17 26 37.9**	**+1.2**
	comp=E,5.1nm,0.1s,SNR=85						
EADA				S	**Sn**	**17 27 14.0**	**-1.0**
	comp=E,25nm,0.1s						
EADA	**Adamuz**	**3.21**	**66**	P	**Pn**	**17 26 37.9**	**+1.1**
	comp=E,5.1nm,0.1s,SNR=85						
EADA				S	**Sn**	**17 27 14.0**	**-1.0**
	comp=E,25nm,0.1s						
ELUQ	**Luque**	**3.28**	**77**	P	**Pn**	**17 26 39.0**	**+1.3**
	comp=E,3.4nm,0.1s,SNR=7.9						
ELUQ				S	**Sn**	**17 27 17.6**	**+0.9**
	comp=E,10nm,0.1s,SNR=7.9						
ELOJ	**Sierra Loja**	**3.32**	**85**	P	**Pn**	**17 26 38.5**	**+0.2**
	comp=E,0.9nm,0.1s,SNR=7.9						
ELOJ				S	**Sn**	**17 27 18.3**	**+0.5**
	comp=E,6.6nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**3.53**	**9**	*e*Pn	**Pn**	**17 26 40.9**	**-0.3**
MTE				*e*Sn	**Sn**	**17 27 20.7**	**-2.3**
MTE				A		17 27 52.9	
	comp=E,48nm,0.6s						
MTE	**Manteigas**	**3.53**	**9**	*e*Pn	**Pn**	**17 26 40.9**	**-0.3**
MTE				*e*Sn	**Sn**	**17 27 20.7**	**-2.3**
	comp=E,48nm,0.6s						
ERON	**Agron**	**3.59**	**87**	S	**Sn**	**17 27 28.3**	**+3.8**
	comp=E,4.9nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**3.79**	**90**	P	**Pn**	**17 26 47.3**	**+2.5**
	comp=E,0.6nm,0.1s,SNR=7.9						
EGUA				S	**Sn**	**17 27 27.3**	**-2.1**
	comp=E,5.8nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**3.79**	**69**	P	**Pn**	**17 26 45.7**	**+0.9**
	comp=E,6.1nm,0.1s,SNR=21						
EBAN				S	**Sn**	**17 27 27.2**	**-2.3**
	comp=E,17nm,0.1s						
ECOG	**Cogollos-Vega**	**3.80**	**83**	P	**Pn**	**17 26 45.0**	**+0.2**
	comp=E,0.9nm,0.1s,SNR=7.9						
ECOG				S	**Sn**	**17 27 29.5**	**0.0**
	comp=E,2.8nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**3.81**	**5**	*e*Pn	**Pn**	**17 26 45.1**	**+0.1**
PVIS				*e*Sn	**Sn**	**17 27 27.8**	**-2.1**
EQUE	**Quentar**	**3.89**	**84**	P	**Pn**	**17 26 48.4**	**+2.3**
	comp=E,3.4nm,0.3s,SNR=8.9						
EQUE				S	**Sn**	**17 27 32.4**	**+0.5**
	comp=E,8.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.25**	**76**	P	**Pn**	**17 26 52.3**	**+1.2**
	comp=E,1.5nm,0.1s,SNR=15						
EQES				S	**Sn**	**17 27 40.6**	**-0.2**
	comp=E,28nm,0.3s						
EQES	**Quesada**	**4.25**	**76**	P	**Pn**	**17 26 52.3**	**+1.2**
	comp=E,1.5nm,0.1s,SNR=15						
EQES				S	**Sn**	**17 27 40.6**	**-0.2**
	comp=E,28nm,0.3s						
MIF	**Mishlifen**	**4.30**	**143**	*i* P	**Pn**	**17 26 51.0**	**-0.8**
MIF				*i* S	**Sn**	**17 27 37.0**	**-5.0**
EBER	**Berja**	**4.33**	**89**	P	**Pn**	**17 26 54.7**	**+2.5**
	comp=E,3.9nm,0.4s,SNR=11						
EBER				S	**Sn**	**17 27 42.5**	**-0.2**
	comp=E,1.6nm,0.2s						
EBER	**Berja**	**4.33**	**89**	P	**Pn**	**17 26 54.7**	**+2.5**
	comp=E,3.9nm,0.4s,SNR=11						
EBER				S	**Sn**	**17 27 42.5**	**-0.1**
	comp=E,1.6nm,0.2s						
MVO	**Moncorvo**	**4.36**	**13**	*e*Pn	**Pn**	**17 26 52.2**	**-0.4**
MVO				*e*Sn	**Sn**	**17 27 40.6**	**-2.8**
MVO				A		17 28 18.8	
	comp=E,17nm,0.4s						
MVO	**Moncorvo**	**4.36**	**13**	*e*Pn	**Pn**	**17 26 52.2**	**-0.4**
MVO				*e*Sn	**Sn**	**17 27 40.6**	**-2.8**
	comp=E,17nm,0.4s						
TZK	**Tazeka**	**4.38**	**129**	*i* P	**Pn**	**17 26 52.0**	**-0.8**
TZK				*i* S	**Sn**	**17 27 41.0**	**-2.9**
ESDC	**Sonseca Array**	**4.38**	**50**	P	**Pn**	**17 26 53.7**	**+0.8**
	comp=E,4.6nm,0.2s,SNR=28						
ESDC				S	**Sn**	**17 27 44.0**	**0.0**
	comp=E,8.0nm,0.3s,SNR=66						
ESDC	**Sonseca Array**	**4.38**	**50**	P	**Pn**	**17 26 53.7**	**+0.8**
	comp=E,4.6nm,0.2s,baz=235,slow=13,SNR=28						
ESDC				S	**Sn**	**17 27 44.0**	**0.0**
	comp=E,8.0nm,0.3s,baz=234,slow=24,SNR=66						
CZD	**Col de Zad**	**4.70**	**144**	*i* P	**Pn**	**17 26 56.0**	**-1.2**
CZD				*i* S	**Sn**	**17 27 46.0**	**-5.8**
KIB	**El Ksiba**	**4.71**	**156**	*i* P	**Pn**	**17 26 55.0**	**-2.3**
KIB				*i* S	**Sn**	**17 27 45.0**	**-7.0**
PCAB	**Cabril**	**4.80**	**2**	*e*Pn	**Pn**	**17 26 58.3**	**-0.3**
PCAB				*e*Sn	**Sn**	**17 27 49.5**	**-4.7**
PCAB				A		17 27 53.3	
	comp=E,11nm,0.2s						
PCAB	**Cabril**	**4.80**	**2**	*e*Pn	**Pn**	**17 26 58.3**	**-0.3**
PCAB				*e*Sn	**Sn**	**17 27 49.5**	**-4.7**
	comp=E,11nm,0.2s						
EVIA	**Vianos**	**4.90**	**68**	P	**Pn**	**17 27 00.8**	**+0.8**
	comp=E,1.7nm,0.1s,SNR=17						
EVIA				S	**Sn**	**17 27 53.4**	**-3.3**
	comp=E,8.6nm,0.2s						
EVIA	**Vianos**	**4.90**	**68**	P	**Pn**	**17 27 00.8**	**+0.8**
EVIA				S	**Sn**	**17 27 53.4**	**-3.3**
GUD	**Guadarrama**	**4.93**	**40**	P	**Pn**	**17 27 00.7**	**+0.3**
	comp=E,1.1nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**17 27 56.0**	**-1.5**
	comp=E,4.5nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**4.95**	**2**	P	**Pn**	**17 27 00.1**	**-0.6**
	comp=E,1.9nm,0.0s,SNR=9.1						
ELOB	**Lobios**	**4.95**	**2**	P	**Pn**	**17 27 00.1**	**-0.6**
	comp=E,1.9nm,0.0s,SNR=9.1						
ELOB				S	**Sn**	**17 27 53.0**	**-5.0**
	comp=E,16nm,0.1s						
TZC	**Tazercounte**	**4.98**	**162**	*i* P	**Pn**	**17 26 57.0**	**-4.1**
TZC	**Tazercounte**	**4.98**	**162**	P	**Pn**	**17 26 57.0**	**-4.1**
TZC				S	**Sn**	**17 27 49.0**	**-10**
PBRG	**Braganca**	**5.03**	**13**	*e*Pn	**Pn**	**17 27 01.1**	**-0.7**
PBRG				*e*Sn	**Sn**	**17 27 56.6**	**-3.4**
PBRG				A		17 27 59.1	
	comp=E,7.9nm,0.3s						
PBRG	**Braganca**	**5.03**	**13**	*e*Pn	**Pn**	**17 27 01.1**	**-0.7**
PBRG				*e*Sn	**Sn**	**17 27 56.6**	**-3.4**
	comp=E,7.9nm,0.3s						
ECAL	**Calabor**	**5.17**	**13**	P	**Pn**	**17 27 03.7**	**+0.1**
	comp=E,1.3nm,0.1s,SNR=11						
ECAL	**Calabor**	**5.17**	**13**	P	**Pn**	**17 27 03.7**	**0.0**
	comp=E,1.3nm,0.1s,SNR=11						
ECAL				S	**Sn**	**17 28 00.2**	**-3.1**
	comp=E,9.9nm,0.3s						
EZAM	**Zamans**	**5.24**	**357**	P	**Pn**	**17 27 04.7**	**0.0**
	comp=E,0.9nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**17 27 59.6**	**-5.5**
	comp=E,2.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.62**	**70**	P	**Pn**	**17 27 10.5**	**+0.7**
	comp=E,1.5nm,0.1s,SNR=16						
ETOB	**Tobarra**	**5.62**	**70**	P	**Pn**	**17 27 10.5**	**+0.7**
	comp=E,1.5nm,0.1s,SNR=16						
ETOB				S	**Sn**	**17 28 13.0**	**-1.4**
	comp=E,4.7nm,0.1s						
ZFT	**Errachidia**	**5.85**	**145**	*i* P	**Pn**	**17 27 12.0**	**-1.1**
ZFT				*i* S	**Sn**	**17 28 15.0**	**-5.2**
EMAZ	**Mazaricos**	**6.05**	**355**	P	**Pn**	**17 27 15.7**	**-0.1**
	comp=E,2.1nm,0.1s,SNR=6.3						
EMAZ				S	**Sn**	**17 28 18.2**	**-6.9**
	comp=E,7.3nm,0.1s						
ETOR	**Torete**	**6.24**	**49**	P	**Pn**	**17 27 20.0**	**+1.7**
	comp=E,16nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**17 28 28.8**	**-0.9**
	comp=E,44nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**6.63**	**72**	P	**Pn**	**17 27 24.1**	**+0.3**
	comp=E,1.2nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**6.63**	**72**	P	**Pn**	**17 27 24.1**	**+0.3**
	comp=E,1.2nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**17 28 36.8**	**-2.6**
	comp=E,3.7nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**7.02**	**58**	P	**Pn**	**17 27 31.1**	**+1.9**
	comp=E,0.4nm,0.1s,SNR=13						
EMOS	**Mosqueruela**	**7.02**	**58**	P	**Pn**	**17 27 31.1**	**+1.9**
	comp=E,0.4nm,0.1s,SNR=13						
EMOS				S	**Sn**	**17 28 46.7**	**-2.3**
	comp=E,3.1nm,0.3s,SNR=7.9						
ECRI	**Cripan**	**7.22**	**36**	P	**Pn**	**17 27 31.9**	**0.0**
	comp=E,0.7nm,0.1s,SNR=7.9						
ECRI				S	**Sn**	**17 28 52.0**	**-2.0**
	comp=E,2.8nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**8.23**	**39**	*e*Pn	**Pn**	**17 27 46.3**	**+0.6**
SJPF				*e*Sn	**Sn**	**17 29 14.9**	**-3.8**
	comp=E,9.1nm,0.2s						
SJPF	**Ste Jean**	**8.23**	**39**	*e*Pn	**Pn**	**17 27 46.3**	**+0.6**
SJPF				*e*Sn	**Sn**	**17 29 14.9**	**-3.8**
	comp=E,4.6nm,0.2s						
ETSF	**Etsaut**	**8.43**	**42**	*e*Pn	**Pn**	**17 27 48.9**	**+0.5**
ETSF	**Etsaut**	**8.43**	**42**	*e*Pn	**Pn**	**17 27 48.9**	**+0.5**
EBIE	**Bielsa**	**8.68**	**46**	P	**Pn**	**17 27 53.2**	**+1.3**
	comp=E,3.6nm,0.6s,SNR=8.2						
EBIE	**Bielsa**	**8.68**	**46**	P	**Pn**	**17 27 53.2**	**+1.4**
	comp=E,3.6nm,0.6s,SNR=8.2						
EBIE				S	**Sn**	**17 29 26.6**	**-3.2**
	comp=E,1.6nm,0.3s,SNR=7.9						
EPF	**Esparros**	**9.01**	**45**	*e*Pn	**Pn**	**17 27 56.9**	**+0.5**
EPF				*e*Sn	**Sn**	**17 29 33.7**	**-4.2**
	comp=E,4.4nm,0.4s						
EPF	**Esparros**	**9.01**	**45**	*e*Pn	**Pn**	**17 27 56.9**	**+0.5**
EPF				*e*Sn	**Sn**	**17 29 33.7**	**-4.2**
	comp=E,2.2nm,0.4s						
CAF	**Calviac**	**11.19**	**41**	*e*Pn	**Pn**	**17 28 25.8**	**-0.5**
QUIF	**Quistinic**	**11.63**	**17**	*e*Pn	**Pn**	**17 28 30.7**	**-1.5**
LASF	**Ste Croix**	**11.69**	**48**	*e*P	**Pn**	**17 28 38.5**	**+5.5**
CASM	**Ain Smara**	**11.90**	**89**	P	**Pn**	**17 28 34.0**	**-2.0**

NEIC ***10*** *18:00:16.0, 19.39N×71.89W, h96km, MD4.4(RSPR), After RSPR.*

RSPR 10 18:00:16.0,19.39N×71.89W,h96km±5km,MD4.4/6, MD4.4/6,6C-1D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.70**	**125**	⇓*e*P	Pn	18 00 32.5	-0.6
SDDR				*e*S	Sn	18 00 45.7	-0.2
LSP	**Las Mesas**	**4.71**	**104**	⇑*e*P	Pn	18 01 25.2	+0.4
CRPR	**Cabo Rojo, PR**	**4.74**	**106**	⇑*e*P	Pn	18 01 25.6	+0.4
LRS	**Lares**	**4.90**	**102**	⇑*e*P	Pn	18 01 28.4	+1.0
LRS				*e*S	Sn	18 02 24.2	+1.3
AOPR	**Arecibo Observ**	**4.97**	**101**	⇑*e*P	Pn	18 01 29.0	+0.6
CELP	**Cerrillos**	**5.20**	**104**	⇑*e*P	Pn	18 01 32.1	+0.6
CELP				*e*S	Sn	18 02 31.2	+1.0
SJG	**San Juan**	**5.59**	**102**	⇑*e*P	Pn	18 01 37.3	+0.6

IGQ ***10*** *18:18:58.5, 0.90N×80.24W, h20km±7km, Mb5.1, Ms5.0, Error ellipse: s-maj=9.5km s-min=4.7km az=36.5*

IDC ***10*** *18:19:04.7±3.1, 0.73N×79.89W, h19km±19km, mb4.5/20, mb1 4.7/22, mb1mx4.6/26, mbtmp4.5/22, ML4.3/2, MS4.4/16, Ms1 4.3/16, ms1mx4.1/32, Error ellipse: s-maj=23.4km s-min=10.2km az=62.0*

MOS ***10*** *18:19:05.7±0.7, 0.59N×80.00W, h33km, mb5.3/28, MS4.5/4, Error ellipse: s-maj=12.1km s-min=8.7km az=65.5*

BJI ***10*** *18:19:07.3, 0.60N×80.00W, h38km, mB5.4, Ms5.6, Msz5.2*

NEIC ***10*** *18:19:07.4±0.8, 0.59N×80.01W, h39km±6km, mb5.1/49, Error ellipse: s-maj=7.3km s-min=4.8km az=58.0*

NEIC Felt [II] at Quito. Also felt at Esmeraldas.

GCMT ***10*** *18:19:07.4±0.3, 0.64N×80.11W, h28km±1km, MW5.1/51, Moment Tensor Solution. s27,c33; s51,c69; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.89±.22; $M_{\theta\theta}$0.06±.14; $M_{\phi\phi}$-3.96±.16; $M_{r\theta}$-0.65±.23; $M_{\theta\phi}$-0.06±.10; $M_{\phi r}$-2.70±.25; Best double couple: $M_0$4.80900×10^{16} NP1:ϕ_s354.00000°,δ28.00000°,λ77.00000°. NP2: ϕ_s188.00000°,δ63.00000°,λ97.00000°. Principal axes: T 4.8060, Plg71.0000°, Azm113.0000°; N 0.0000, Plg6.0000°, Azm5.0000°; P -4.8120, Plg17.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***10*** *18:19:07.3±0.4, 0.59N±0.03×80.00W±0.03, h48km±4km, mb4.9/76, MS4.5/26 Error ellipse: s-maj=6.6km s-min=3.7km az=36.1*

ISC 10 18:19:08.8±0.4,0.58N±0.03×79.92W±0.03,h47km±4km, h33km±6.5km:pP-P,n451,σ0^{s}70/407,mb4.9/76,MS4.5/26, 122C-97D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.88**	**199**	⇑P	**Pn**	**18 19 19.5**	**-5.3**
PINO	**Pino**	**1.50**	**119**	⇓P	**Pn**	**18 19 32.0**	**-1.4**
OTAV	**Otavalo**	**1.51**	**103**	⇓P	**Pn**	**18 19 32.3**	**-1.1**
OTAV	**Otavalo**	**1.51**	**103**	⇓S	**Sn**	**18 19 55.1**	**+3.2**
OTAV	**Otavalo**	**1.51**	**103**	*e*P	**Pn**	**18 19 31.9**	**-1.5**
TERV	**Terraza Guagua**	**1.51**	**119**	⇓P	**Pn**	**18 19 32.2**	**-1.3**
YANA	**Yana**	**1.52**	**117**	⇓P	**Pn**	**18 19 32.2**	**-1.3**
GGP	**Refugio Guagua**	**1.52**	**119**	⇓P	**Pn**	**18 19 32.2**	**-1.4**
COTA	**Cotacachi**	**1.60**	**99**	⇑P	**Pn**	**18 19 34.1**	**-0.6**
QUEM	**Puengasi**	**1.64**	**120**	P	**Pn**	**18 19 34.5**	**-0.7**
QUEM	**Puengasi**	**1.64**	**120**	S	**Sn**	**18 20 01.5**	**+6.5**
QIL2	**Quilotoa**	**1.75**	**145**	P	**Pn**	**18 19 34.6**	**-2.2**
CHIS	**Cerro-Chispas-**	**1.80**	**206**	P	**Pn**	**18 19 32.2**	**-5.2**
CAMI	**Rancho Maria**	**1.89**	**131**	P	**Pn**	**18 19 38.3**	**-0.3**
VC1	**Cotopaxi 1**	**1.94**	**129**	⇓P	**Pn**	**18 19 39.5**	**+0.2**
CAYA	**Cayambe**	**2.00**	**105**	⇓P	**Pn**	**18 19 41.1**	**+1.0**
TAMB	**Tambo**	**2.00**	**129**	P	**Pn**	**18 19 40.4**	**+0.2**
ANTI	**Antisana**	**2.03**	**120**	P	**Pn**	**18 19 40.9**	**+0.3**
PISA	**Pisayambo**	**2.23**	**137**	⇑P	**Pn**	**18 19 43.9**	**+0.5**
CONE	**Cono NE Rev Vo**	**2.37**	**106**	P	**Pn**	**18 19 47.5**	**+2.3**
LAV3	**Lava3-Reventad**	**2.38**	**106**	P	**Pn**	**18 19 47.6**	**+2.1**
IGUA	**Igualata**	**2.42**	**148**	P	**Pn**	**18 19 46.2**	**+0.2**
IGUA	**Igualata**	**2.42**	**148**	S	**Sn**	**18 20 18.3**	**+4.0**
JUI6	**Juive**	**2.46**	**144**	P	**Pn**	**18 19 47.0**	**+0.5**
BIL2	**Estacion Bilba**	**2.47**	**145**	⇓P	**Pn**	**18 19 47.5**	**+0.9**
RUN5	**Runtun**	**2.48**	**143**	P	**Pn**	**18 19 47.5**	**+0.7**
RETU	**Refugio**	**2.50**	**144**	P	**Pn**	**18 19 48.5**	**+1.5**
RETU	**Refugio**	**2.50**	**144**	S	**Sn**	**18 20 22.6**	**+6.4**
ULBA	**Ulba**	**2.52**	**143**	⇑P	**Pn**	**18 19 48.0**	**+0.7**
ARRY	**Arrayan**	**2.54**	**145**	⇑P	**Pn**	**18 19 48.1**	**+0.6**
PATA	**Patacocha**	**2.54**	**144**	⇑P	**Pn**	**18 19 48.6**	**+1.0**
ROSC	**El Rosal**	**7.02**	**53**	Pn	**Pn**	**18 20 50.2**	**+1.1**
	12nm,0.3s,baz=80,slow=2.3,SNR=24						
ROSC				Sn	**Sn**	**18 22 13.0**	**+5.4**
	baz=105,slow=20,SNR=2.2						
ROSC	**El Rosal**	**7.02**	**53**	*e*P	**Pn**	**18 20 50.3**	**+1.2**
ATAH	**Atahualpa**	**7.68**	**169**	Pn	**Pn**	**18 21 01.8**	**+3.6**
	2.9nm,0.3s,baz=13,slow=8.5,SNR=22						
ATAH				Sn	**Sn**	**18 22 14.8**	**-9.0**
	3.9nm,0.3s,baz=314,slow=4.3,SNR=4.5						
ATAH				LR	LR	18 24 11.9	
	comp=Z,1μm,18.1s,baz=168,slow=39						
SDV	**Santo Domingo**	**12.40**	**48**	Pn	**Pn**	**18 22 02.7**	**-0.1**
	1.9nm,0.3s,baz=251,slow=9.9,SNR=15						
SDV				Sn	**Sn**	**18 24 15.9**	**-3.7**
	0.4nm,0.3s,baz=308,slow=18,SNR=2.0						
SDV	**Santo Domingo**	**12.40**	**48**	*e*P	**Pn**	**18 22 02.8**	**+0.1**
	79nm,0.9s						
NNA	**Nana**	**12.85**	**166**	Pn	**Pn**	**18 22 07.7**	**-1.2**
	1.9nm,0.3s,baz=338,slow=10,SNR=10.0						
NNA				Sn	**Sn**	**18 24 27.9**	**-2.7**
	3.8nm,0.3s,baz=184,slow=13,SNR=4.3						
NNA	**Nana**	**12.85**	**166**	*e*P	**Pn**	**18 22 07.4**	**-1.6**
	60nm,0.9s						
TGUH	**Tegucigalpa,Un**	**15.24**	**332**	*e*P	**Pn**	**18 22 41.0**	**-0.1**
	111nm,1.1s						
PCRV	**Puerto La Cruz**	**17.95**	**57**	P	**Pn**	**18 23 15.6**	**+0.5**
	2.7nm,0.3s,baz=273,slow=2.9,SNR=5.7						
PCRV				LR	LR	18 31 12.9	
	comp=Z,2μm,19.9s,baz=220,slow=41						
PCRV	**Puerto La Cruz**	**17.95**	**57**	P	**Pn**	**18 23 15.6**	**+0.6**
PCRV				LR	LR	18 31 12.9	
ARE	**Arequipa**	**18.86**	**154**	*e*P	**Pn**	**18 23 26.0**	**-0.2**
SDDR	**Presa de Saban**	**20.16**	**24**	*e*P	**P**	**18 23 37.6**	**-1.8**
	98nm,1.1s						
CRPR	**Cabo Rojo, PR**	**21.42**	**35**	*e*P	**P**	**18 23 51.2**	**-1.8**
	78nm,1.1s,mb5.0						
CMIG	**Matias Romero**	**22.05**	**319**	P	**P**	**18 23 58.2**	**-1.6**
	13nm,1.1s,mb4.2,baz=119,slow=5.7,SNR=6.5						
CMIG				LR	LR	18 30 50.1	
	comp=Z,548nm,20.5s,MS4.0,baz=289,slow=32						
CMIG	**Matias Romero**	**22.05**	**319**	P	**P**	**18 23 58.2**	**-1.6**
CMIG				LR	LR	18 30 50.1	
SJG	**San Juan**	**22.07**	**37**	*e*P	**P**	**18 23 59.2**	**-0.7**
SJG				pmax	pmax		
	comp=Z,240nm,1.2s						
SJG	**San Juan**	**22.07**	**37**	*e*P	**P**	**18 23 59.2**	**-0.7**
	comp=Z,240nm,1.2s,mb5.5						
CBYP	**Canovanas**	**22.36**	**37**	*e*P	**P**	**18 24 03.7**	**+0.7**
	comp=Z,233nm,1.2s,mb5.5						
SIV	**San Ignacio**	**24.85**	**132**	P	**P**	**18 24 27.3**	**+0.2**
	comp=Z,25nm,0.8s,mb4.8,baz=306,slow=10,SNR=88						
LVC	**Limon Verde**	**25.42**	**156**	P	**P**	**18 24 33.9**	**+1.7**
	comp=Z,37nm,0.9s,mb4.9,baz=327,slow=5.3,SNR=16						
LVC	**Limon Verde**	**25.42**	**156**	*e*P	**P**	**18 24 33.3**	**+1.1**
	comp=Z,57nm,1.0s,mb5.1						
LRAL	**Lakeview Retre**	**32.97**	**349**	*e*P	**P**	**18 25 37.2**	**-2.0**
	comp=Z,6.7nm,0.6s,mb4.8						
CFAA	**Coronel Fontan**	**33.87**	**162**	P	**P**	**18 25 47.3**	**+0.2**
	comp=Z,1.0nm,0.9s,mb3.7,baz=336,slow=8.1,SNR=10						
CPUP	**Villa Florida**	**34.50**	**143**	P	**P**	**18 25 51.1**	**-1.5**
	comp=Z,11nm,0.8s,mb4.8,baz=302,slow=9.0,SNR=25						
CPUP				LR	LR	18 42 59.5	
	comp=Z,1μm,19.4s,MS4.6,baz=305,slow=42						
CPUP	**Villa Florida**	**34.50**	**143**	*e*P	**P**	**18 25 51.0**	**-1.6**
CPUP				pmax	pmax		
	comp=Z,45nm,0.8s						
CPUP	**Villa Florida**	**34.50**	**143**	*e*P	**P**	**18 25 51.0**	**-1.6**
	comp=Z,45nm,0.8s,mb5.5						
TKL	**Tuckaleechee C**	**35.09**	**355**	P	**P**	**18 25 53.8**	**-3.7**
	comp=Z,7.5nm,0.9s,mb4.6,baz=164,slow=8.0,SNR=7.5						
JCT	**Junction City**	**35.23**	**329**	*e*P	**P**	**18 25 58.8**	**-0.1**
JCT				pmax	pmax		

comp=Z,57nm,1.3s,mb5.3
JCT Junction City 35.23 329 *e*P P 18 25 58.8 -0.1
comp=Z,57nm,1.3s,mb5.3
BDFB Brasilia 35.40 118 P P 18 26 00.0 -0.5
comp=Z,16nm,0.8s,mb5.0,baz=276,slow=17,SNR=36
BDFB LR LR 18 41 51.3
comp=Z,301nm,18.7s,MS4.1,baz=110,slow=39
BDFB Brasilia 35.40 118 *e*P P 18 26 00.0 -0.5
TZTN Tazewell 35.95 355 *e*P P 18 26 03.5 -1.5
comp=Z,36nm,1.2s,mb5.2
WVT Waverly 36.13 349 *e*P P 18 26 03.4 -3.1
WVT pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
WVT Waverly 36.13 349 *e*P P 18 26 03.4 -3.1
comp=Z,6.5nm,0.7s,mb4.7
TXAR Lajitas Array 36.48 324 P P 18 26 08.1 -1.5
comp=Z,1.6nm,0.9s,mb3.9,baz=152,slow=7.6,SNR=8.7
TXAR PcP PcP 18 28 32.6 -0.3
comp=Z,1.2nm,0.8s,baz=139,slow=6.6,SNR=5.5
TXAR Lajitas Array 36.48 324 P P 18 26 08.1 -1.5
TXAR PcP PcP 18 28 32.6 -0.3
AMTX Amarillo 39.72 332 *e*P P 18 26 35.6 -1.2
comp=Z,22nm,0.9s,mb4.9
319A Douglas 41.36 321 ⇓P P 18 26 49.7 -0.7
baz=42
BINY Binghamton 41.59 4 *e*P P 18 26 51.2 -0.9
comp=Z,19nm,0.9s,mb4.7
219A White Tail Can 41.76 321 ⇑P P 18 26 53.3 -0.4
baz=42
318A Bisbee 41.85 320 ⇓P P 18 26 54.0 -0.4
baz=42
PLCA Paso Flores 41.99 169 P P 18 26 55.6 +0.2
comp=Z,26nm,0.8s,mb4.9,baz=342,slow=10.0,SNR=35
CBKS Cedar Bluff 42.17 337 *e*P P 18 26 56.2 -0.7
CBKS pmax pmax
comp=Z,65nm,1.1s,mb5.2
CBKS Cedar Bluff 42.17 337 *e*P P 18 26 56.2 -0.7
comp=Z,65nm,1.1s,mb5.2
ANMO Albuquerque 42.22 327 *e*P P 18 26 57.9 +0.5
ANMO pmax pmax
comp=Z,40nm,1.0s
ANMO Albuquerque 42.22 327 *e*P P 18 26 57.9 +0.5
comp=Z,40nm,1.0s,mb5.0
218A Dragoon 42.24 321 ⇑P P 18 26 57.3 -0.3
baz=42
119A Ashpeak Ranch, 42.31 322 ⇓P P 18 26 57.9 -0.2
baz=42
217A Green Valley 42.60 320 ⇑P P 18 26 60.0 -0.6
baz=43
118A Homack Ranch, 42.64 321 ⇑P P 18 27 00.6 -0.3
baz=43
Z19A T-Link Ranch, 42.65 323 ⇓P P 18 27 01.2 +0.3
baz=43
TUC Tucson 42.93 320 *e*P P 18 27 03.1 -0.1
TUC pmax pmax
comp=Z,29nm,1.7s,mb4.7
TUC Tucson 42.93 320 *e*P P 18 27 03.1 -0.1
comp=Z,29nm,1.7s,mb4.7
CAM4 Nova Friburgo 42.94 124 ⇑*i*P P 18 27 02.3 -1.1
CAM4 *i* 18 27 03.6
CAM4 *i* 18 27 07.4
CAM4 *i* pP 18 27 16.5 +0.3
CAM4 *i* 18 27 21.9
CAM4 *i* 18 27 30.1
117A Oracle 43.08 321 ⇓P P 18 27 03.5 -0.9
baz=43
Y19A Nutrioso 43.10 323 ⇑P P 18 27 05.1 +0.5
baz=43
Y18A Canyon Day Jun 43.45 323 ⇓P P 18 27 07.4 0.0
baz=44,SNR=5.7
X19A St. Johns 43.45 324 ⇑P P 18 27 07.5 +0.1
baz=44
116A Eloy 43.69 320 ⇓P P 18 27 09.1 -0.2
baz=44
SDCO Great Sand Dun 43.86 330 *e*P P 18 27 10.7 +0.1
comp=Z,47nm,1.3s,mb5.1
Y17A Roosevelt 43.89 322 ⇓P P 18 27 11.4 +0.5
baz=44
X18A Snowflake 43.91 323 ⇓P P 18 27 11.4 +0.3
baz=44,SNR=5.5
CAM3 Guarapari 43.96 121 ⇑*i*P P 18 27 10.2 -1.6
CAM3 *i* 18 27 13.3
W19A Sanders 43.99 325 ⇑P P 18 27 11.7 0.0
baz=44
SADO Sadowa 44.01 1 P P 18 27 08.7 -3.0
comp=Z,1.6nm,0.4s,mb4.1,baz=209,slow=8.3,SNR=3.5
115A Sonoran Desert 44.11 320 ⇓P P 18 27 12.3 -0.5
baz=44
W18A Petrified Fore 44.20 324 ⇓P P 18 27 13.8 +0.4
baz=44,SNR=6.4
Y16A Circle Bar Ran 44.41 322 ⇑P P 18 27 15.6 +0.6
baz=44,SNR=11
V18A Ganado 44.73 325 ⇑P P 18 27 17.8 +0.2
baz=45,SNR=6.6
X16A Lo Mia Camp, P 44.74 322 ⇑P P 18 27 17.6 -0.1
baz=45
Y15A Casa Rosa Ranc 44.99 321 ⇑P P 18 27 19.0 -0.7
baz=45
MVCO Mesa Verde 45.00 327 ⇑P P 18 27 19.4 -0.3
baz=45
MVCO Mesa Verde 45.00 327 *e*P P 18 27 20.8 +1.0
comp=Z,46nm,1.5s,mb5.1
T19A Beclabito 45.01 327 ⇑P P 18 27 19.7 -0.1
baz=45,SNR=6.2
113A Mohawk Valley, 45.16 319 ⇑P P 18 27 20.9 -0.3
baz=45
U18A Rough Rock, Ch 45.19 325 ⇑P P 18 27 21.1 -0.1
baz=45
W16A Flagstaff 45.25 323 ⇓P P 18 27 21.8 0.0
baz=45
X15A Humboldt 45.28 322 ⇓P P 18 27 22.1 +0.1
baz=45,SNR=5.3
R21A Cimarron 45.37 329 ⇓P P 18 27 22.0 -0.6
baz=46
Y14A Wickenburg 45.40 320 ⇓P P 18 27 22.1 -0.9
baz=46
WUAZ Wupatki 45.44 323 ⇑P P 18 27 23.9 +0.7
baz=46
WUAZ Wupatki 45.44 323 *e*P P 18 27 23.7 +0.4
comp=Z,82nm,1.2s,mb5.4
ECSD EROS,Sioux Fal 45.48 343 *e*P P 18 27 20.4 -3.0
comp=Z,9.8nm,1.0s,mb4.6
X14A Yava 45.67 321 ⇑P P 18 27 25.0 -0.2
baz=46
T18A Mexican Hat 45.70 326 ⇑P P 18 27 25.3 0.0
baz=46,SNR=7.2
U16A Tuba City 45.72 324 ⇓P P 18 27 25.3 -0.2
baz=46,SNR=5.8
S19A Harvey Farm, M 45.74 327 ⇑P P 18 27 25.5 -0.1
baz=46,SNR=6.7
W15A Williams 45.75 322 ⇑P P 18 27 26.0 +0.2
baz=46
U17A Shonto 45.77 325 ⇓P P 18 27 26.2 +0.3
baz=46
Y13A Salome 45.85 320 ⇓P P 18 27 26.7 +0.1
baz=46
V15A Kaibab Nationa 46.12 323 ⇑P P 18 27 29.0 +0.4
baz=46,SNR=8.3
T17A Navajo Res., N 46.13 325 ⇑P P 18 27 28.4 -0.3
baz=46
S18A Hurst Farm, BI 46.17 327 ⇓P P 18 27 29.1 +0.1
baz=46,SNR=7.4
R19A Curley Farm, L 46.20 328 ⇓P P 18 27 29.3 +0.1
baz=46
W14A Seligman 46.28 322 ⇑P P 18 27 30.1 +0.2
baz=46,SNR=5.1
X13A Yucca 46.35 320 ⇓P P 18 27 30.5 +0.1
baz=46
V14A Boquillas Ranc 46.57 322 ⇓P P 18 27 32.4 +0.2
baz=47,SNR=6.8
S17A Black Ridge (B 46.58 326 ⇑P P 18 27 33.0 +0.9
baz=47,SNR=5.4
U15A North Rim 46.60 324 ⇑P P 18 27 33.3 +0.9
baz=47,SNR=6.8
R18A Canyonlands Na 46.61 327 ⇑P P 18 27 32.0 -0.4
baz=47,SNR=5.4
DVTC Desert V Tower 46.67 317 ⇑P P 18 27 33.5 +0.5
baz=47
Q19A Hogan Spring (46.69 328 ⇑P P 18 27 33.2 +0.1
baz=47,SNR=5.6
W13A Hualapai Mount 46.70 321 ⇓P P 18 27 33.2 -0.1
baz=47
N22A Wattenberg Ran 46.71 332 ⇓P P 18 27 34.0 +0.8
baz=47
O21A Pagoda 46.74 331 ⇓P P 18 27 33.9 +0.5
baz=47
BC3 Big Chuckw Mtn 46.82 318 ⇓P P 18 27 33.7 -0.5
baz=47

IRM Iron Mountain 46.93 319 ⇓P P 18 27 35.2 +0.2
baz=47
MONP Monument Peak 47.02 317 ⇓P P 18 27 35.8 +0.1
baz=47
P19A Cripple Cowboy 47.05 329 ⇓P P 18 27 36.2 +0.4
baz=47
R17A Hanksville Air 47.08 327 ⇑P P 18 27 36.8 +0.6
baz=47
S16A Weppner Ranch, 47.09 325 ⇓P P 18 27 36.4 +0.2
baz=47
N21A Black Mountain 47.18 331 ⇑P P 18 27 37.8 +0.9
baz=47
V13A Grand Canyon W 47.25 322 ⇑P P 18 27 37.7 +0.2
baz=47
Q18A Rafter H Ranch 47.26 328 ⇑P P 18 27 37.8 +0.3
baz=47,SNR=7.2
BELC Belle Mtn. 47.39 318 ⇓P P 18 27 38.5 -0.2
baz=48
R16A Teasdale 47.41 326 ⇑P P 18 27 39.1 +0.4
baz=48
SRU San Rafael 47.48 327 ⇓P P 18 27 39.6 +0.4
baz=48
N20A Spence Gulch, 47.60 331 ⇓P P 18 27 40.5 +0.4
baz=48
GMRC Granite Mounta 47.64 319 ⇑P P 18 27 40.3 -0.2
baz=48
L22A Ellis Ranch, M 47.68 333 ⇓P P 18 27 41.8 +1.1
baz=48
Q16A Castle Valley 47.69 327 ⇑P P 18 27 41.9 +1.0
baz=48
P18A Preston Nutter 47.70 328 ⇓P P 18 27 41.5 +0.6
baz=48
V12A Nelson 47.71 321 ⇑P P 18 27 41.4 +0.3
baz=48
M21A Separation Pea 47.77 332 ⇑P P 18 27 42.1 +0.7
baz=48
P17A Butcher Ranch, 47.85 328 ⇑P P 18 27 42.9 +0.8
baz=48
O18A Roosevelt 48.05 329 ⇑P P 18 27 44.1 +0.5
baz=48
L21A Rawlins 48.05 332 ⇑P P 18 27 44.3 +0.7
baz=48,SNR=5.1
M20A Sweetwater, Wa 48.07 331 ⇑P P 18 27 43.6 -0.1
baz=48
N19A John Jarvie Ra 48.10 330 ⇑P P 18 27 44.2 +0.3
baz=48
O17A Robinson Place 48.38 328 ⇓P P 18 27 46.2 +0.1
baz=48
N18A Larsen Ranch, 48.41 330 ⇓P P 18 27 46.7 +0.4
baz=48
GSC Goldstone 48.70 319 ⇑P P 18 27 48.6 -0.1
baz=49
P15A Leamington 48.76 327 ⇑P P 18 27 49.6 +0.5
baz=49
R13A O'Grain Ranch, 48.77 324 ⇑P P 18 27 49.6 +0.4
baz=49,SNR=6.0
O16A Springville 48.79 328 ⇑P P 18 27 49.7 +0.4
baz=49
T11A Corn Creek, Al 48.91 322 ⇓P P 18 27 50.7 +0.5
baz=49
Q14A Sevier Lake (B 48.91 325 ⇑P P 18 27 50.6 +0.3
baz=49,SNR=5.3
N17A Moffit Pass 48.97 329 ⇑P P 18 27 51.0 +0.3
baz=49
L19A Farson 49.10 331 ⇑P P 18 27 51.9 +0.3
baz=49
P14A Drum Mountains 49.21 326 ⇑P P 18 27 52.9 +0.4
baz=49,SNR=6.9
EDW2 Edwards Air Fo 49.24 318 ⇓P P 18 27 52.6 -0.3
baz=49
R12A Pony Springs, 49.24 324 ⇓P P 18 27 53.8 +1.0
baz=49
N16A Rees Ranch, Co 49.25 328 ⇑P P 18 27 53.5 +0.7
baz=49
M17A Scullys Gap (B 49.28 330 ⇑P P 18 27 52.7 -0.3
baz=49
Q13A Wheeler Ranch, 49.32 325 ⇑P P 18 27 53.7 +0.3
baz=49
LRMC Laurel Mountai 49.39 319 ⇓P P 18 27 53.8 -0.2
baz=50
K19A Absolon Red Bu 49.41 332 ⇑P P 18 27 53.4 -0.5
baz=50
MPMC Manual Prospec 49.60 320 ⇓P P 18 27 55.6 0.0
baz=50
P13A Bates Ranch, G 49.65 325 ⇓P P 18 27 55.5 -0.4
baz=50,SNR=6.9
PDAR Pinedale Array 49.70 331 P P 18 27 55.2 -1.0
comp=Z,1.4nm,0.8s,mb4.1,baz=133,slow=11,SNR=4.7
PDAR LR LR 18 49 54.8
comp=Z,339nm,18.4s,MS4.4,baz=238,slow=37
K18A Tohan Ranch, 49.84 331 ⇑P P 18 27 57.1 -0.1
baz=50,SNR=10
R11A Troy Canyon, C 49.84 323 ⇓P P 18 27 57.6 +0.3
baz=50
Q12A Willow Creek R 49.84 324 ⇓P P 18 27 58.3 +0.9
baz=50
ISA Isabella 50.02 319 ⇑P P 18 27 58.5 -0.3
baz=50
L16A Fish Haven 50.06 329 ⇓P P 18 27 59.8 +0.9
baz=50
N14A Grayback Hills 50.15 327 ⇑P P 18 27 59.6 -0.1
baz=50,SNR=6.9
P12A McGill 50.18 325 ⇑P P 18 27 59.6 -0.3
baz=50
S10A Tonopah Range, 50.18 322 ⇓P P 18 27 59.8 -0.1
baz=50
M15A Larsen Ranch, 50.19 328 ⇑P P 18 27 59.5 -0.4
baz=50
Q11A Duckwater 50.20 324 ⇑P P 18 28 00.4 +0.3
baz=50,SNR=5.3
J18A Kendall Valley 50.26 332 ⇓P P 18 28 00.7 +0.3
baz=50
S09A Goldfield 50.45 321 ⇓P P 18 28 02.4 +0.5
baz=51
I18A Diamond G Ranc 50.54 332 ⇑P P 18 28 02.6 +0.1
baz=51
L15A Malad City 50.55 329 ⇑P P 18 28 02.2 -0.4
baz=51,SNR=13
O12A Currie 50.62 326 ⇓P P 18 28 03.8 +0.6
baz=51,SNR=8.6
Q10A Clear Creek Ra 50.63 323 ⇓P P 18 28 04.0 +0.6
baz=51,SNR=6.1
R09A Tonopah 50.67 322 ⇓P P 18 28 03.4 -0.3
baz=51
M14A Sheep Mountain 50.70 328 ⇑P P 18 28 03.3 -0.4
baz=51,SNR=5.5
J17A Brown Place, J 50.70 331 ⇑P P 18 28 03.5 -0.3
baz=51
REDW Red Top Meadow 50.77 331 *e*P P 18 28 05.0 +0.7
comp=Z,34nm,1.5s,mb5.0
LOHW Long Hollow 50.84 331 *e*P P 18 28 09.0 +4.2
comp=Z,5.8nm,1.2s,mb4.4
RRI2 Red Ridge 50.99 331 *e*P P 18 28 05.6 -0.3
comp=Z,9.0nm,0.8s,mb4.8
L14A Malta 51.01 328 ⇓P P 18 28 05.8 -0.3
baz=51
I17A Pilom Creek 51.06 332 ⇑P P 18 28 07.0 +0.6
baz=51
K15A Arbon 51.11 329 ⇓P P 18 28 07.7 +0.9
baz=51
ULM Lac du Bonnet 51.33 347 P P 18 28 05.8 -2.6
comp=Z,5.6nm,0.5s,mb4.7,baz=162,slow=8.0,SNR=7.2
K14A Jones Ranch, D 51.34 329 ⇓P P 18 28 08.9 +0.3
baz=52
NVAR Mina Array Bea 51.55 321 P P 18 28 10.7 +0.4
comp=Z,6.0nm,0.7s,mb4.6,baz=130,slow=6.4,SNR=34
J15A Blackfoot 51.58 330 ⇑P P 18 28 10.2 -0.1
baz=52,SNR=12
O10A Cortez Mining, 51.64 324 ⇓P P 18 28 11.2 +0.3
baz=52
O09A Fish Creek Ran 51.96 324 ⇑P P 18 28 13.7 +0.4
baz=52
M11A Holland Ranch, 51.98 326 ⇓P P 18 28 13.8 +0.4
baz=52
L12A House Creek Ra 52.04 327 ⇑P P 18 28 14.2 +0.4
baz=52
J14A Carey 52.07 329 ⇑P P 18 28 14.2 +0.2
baz=52,SNR=24
F18A Big Timber 52.19 334 ⇑P P 18 28 14.6 -0.2
baz=52,SNR=13
G17A Pierce Place, 52.20 333 ⇑P P 18 28 15.3 +0.3
baz=52,SNR=9.7
K12A Draper Farm, C 52.31 328 ⇓P P 18 28 15.8 -0.1
baz=52
L11A Cat Creek Ranc 52.46 327 ⇓P P 18 28 16.9 0.0
baz=53
J13A Cove Ranch, Pi 52.46 329 ⇑P P 18 28 17.3 +0.3
baz=53

I14A Mackay 52.47 330 ⇑P P 18 28 17.2 +0.2
baz=53
H15A Lima 52.57 331 ⇓P P 18 28 18.4 +0.6
baz=53,SNR=5.8
G16A Moss Hill, Enn 52.62 332 ⇑P P 18 28 18.7 +0.7
baz=53
HLID Hailey 52.70 329 ⇑P P 18 28 19.0 +0.3
baz=53
E18A Harlowton 52.79 334 ⇓P P 18 28 19.5 +0.3
baz=53
I13A Wildhorse Cree 52.80 329 ⇑P P 18 28 19.7 +0.3
baz=53,SNR=18
J12A Stokes Ranch, 52.84 328 ⇑P P 18 28 19.8 +0.1
baz=53,SNR=6.0
BOZ Bozeman (W) 52.85 332 ⇓P P 18 28 19.8 +0.1
baz=53
N08A GE Springer Mi 52.91 324 ⇑P P 18 28 20.4 +0.2
baz=53
H14A Leadore 52.92 330 ⇑P P 18 28 20.2 -0.1
baz=53
F16A Kennard Place, 52.95 333 ⇑P P 18 28 20.8 +0.3
baz=53
K11A Parker Ranch, 53.02 327 ⇓P P 18 28 21.3 +0.3
baz=53
E17A Martinsdale 53.12 334 ⇓P P 18 28 22.0 +0.2
baz=53
D18A Linhart Farms, 53.23 335 ⇓P P 18 28 22.8 +0.3
baz=53
I12A Atlanta 53.24 329 ⇓P P 18 28 22.3 -0.3
baz=53
H13A Challis 53.33 330 ⇓P P 18 28 23.5 +0.2
baz=54
MFID Camas Ranch 53.34 328 ⇑P P 18 28 23.3 -0.1
baz=54,SNR=5.4
F15A Butte 53.40 332 ⇓P P 18 28 24.0 +0.2
baz=54
K10A MacKenzie Ranc 53.48 327 ⇓P P 18 28 24.8 +0.4
baz=54
O06A Flanigan 53.54 322 ⇓P P 18 28 25.3 +0.3
baz=54
D17A Six Diamond Ra 53.58 334 ⇓P P 18 28 25.0 -0.1
baz=54
H12A Diamond D Ranc 53.62 329 ⇑P P 18 28 24.9 -0.5
baz=54
BEKR Beckwourth 53.69 322 ⇓P P 18 28 25.1 -0.9
baz=54
I11A Placerville 53.75 328 ⇑P P 18 28 26.2 -0.2
baz=54
D16A Dana Ranch, Ca 53.86 334 ⇓P P 18 28 26.9 -0.3
baz=54,SNR=10
N06A Buffalo Meadow 53.90 323 ⇑P P 18 28 26.9 -0.6
baz=54
K09A Rome 53.90 326 ⇓P P 18 28 27.5 0.0
baz=54,SNR=21
L08A Fields 53.92 325 ⇑P P 18 28 27.4 -0.3
baz=54
C17A Wharram Farm, 53.98 335 ⇑P P 18 28 27.7 -0.4
baz=54,SNR=9.6
B18A Beardsley Farm 54.16 336 ⇑P P 18 28 28.8 -0.6
baz=54
J09A Fry Pan Ranch, 54.34 327 ⇑P P 18 28 30.1 -0.6
baz=54
K08A Mann Creek Ran 54.35 326 ⇓P P 18 28 30.5 -0.3
baz=54
A18A Metzger Ranch, 54.61 336 ⇓P P 18 28 32.4 -0.2
baz=55
F12A Elk City 54.67 330 ⇑P P 18 28 32.9 -0.1
baz=55
I09A Lost Marbles R 54.74 327 ⇑P P 18 28 33.3 -0.4
baz=55
C15A Salmond Ranch, 54.90 334 ⇑P P 18 28 34.5 -0.2
baz=55
B16A M & M Farms, S 54.99 335 ⇓P P 18 28 34.8 -0.5
baz=55
SCHQ Schefferville 55.13 9 P P 18 28 34.1 -2.1
comp=Z,9.8nm,1.0s,mb4.8,baz=124,slow=5.7,SNR=4.1
SCHQ PcP PcP 18 29 36.7 -0.3
comp=Z,9.4nm,0.9s,baz=252,slow=6.4,SNR=3.7
SCHQ Schefferville 55.13 9 P P 18 28 34.1 -2.1
SCHQ PcP PcP 18 29 36.7 -0.3
J07A Hines 55.23 326 ⇑P P 18 28 37.1 0.0
baz=55
D13A Huson 55.24 332 ⇓P P 18 28 37.2 0.0
baz=55
B15A Bradely Ranch, 55.28 334 ⇓P P 18 28 37.0 -0.4
baz=55
E11A Bogner Ranch, 55.57 330 ⇑P P 18 28 38.5 -1.0
baz=56
B14A Marquette Ranc 55.63 334 ⇓P P 18 28 39.8 -0.2
baz=56
I07A Izee 55.78 326 ⇓P P 18 28 41.1 0.0
baz=56
A15A Johnson Ranch, 55.86 334 ⇑P P 18 28 41.6 0.0
baz=56
F09A S2 Ranch, Elgi 55.99 329 ⇓P P 18 28 42.5 -0.1
baz=56
H07A Lands Inn, Kim 56.14 327 ⇑P P 18 28 43.9 +0.2
baz=56
C12B Naegeli Ranch, 56.17 332 ⇑P P 18 28 43.6 -0.2
baz=56
G08A Pilot Rock 56.27 328 ⇓P P 18 28 44.2 -0.4
baz=56
F08A Pendleton 56.50 328 ⇑P P 18 28 46.1 -0.1
baz=57
D10A Wagner Farm, O 56.58 330 ⇑P P 18 28 46.1 -0.6
baz=57
E09A Wood Farm, Sta 56.65 329 ⇓P P 18 28 47.1 -0.2
baz=57
H06A Lindquist Farm 56.66 326 ⇑P P 18 28 46.9 -0.4
baz=57
D09A Jones Farm, Ri 57.10 330 ⇓P P 18 28 50.9 +0.5
baz=57
G06A Carlson Farm, 57.14 327 ⇑P P 18 28 51.6 +0.9
baz=57
G05A Wamic 57.52 326 ⇓P P 18 28 53.5 +0.1
baz=58
F06A Goldendale 57.55 327 ⇓P P 18 28 54.3 +0.6
baz=58
B09A Rice 57.95 331 ⇑P P 18 28 56.5 +0.1
baz=58
C08A Higginbotham F 57.96 330 ⇑P P 18 28 56.8 +0.3
baz=58
RKT Rikitea 58.44 242 *e*S S 18 37 01.6 +1.2
comp=Z,248nm,26.0s
RKT *e*LR LR 18 46 05.5
comp=Z,390nm,27.2s
A09A Danville 58.54 331 ⇓P P 18 29 00.3 -0.1
baz=59
A08A Turner Farm, O 58.85 331 ⇑P P 18 29 01.9 -0.8
baz=59
A07A Ashnola River, 59.47 330 ⇑P P 18 29 07.0 +0.1
baz=60,SNR=5.8
TAOE Nuku Hiva Isla 60.71 260 *e*LR LR 18 47 22.4
comp=Z,1µm,23.0s
YKA Yellowknife Ar 67.01 343 P P 18 29 54.8 -1.8
comp=Z,3.9nm,0.8s,mb4.5,baz=196,slow=6.0,SNR=54
YKA Yellowknife Ar 67.01 343 P P 18 29 54.8 -1.8
DLBC Dease Lake 69.77 335 P P 18 30 12.4 -1.6
comp=Z,1.1nm,0.3s,mb4.3,baz=104,slow=11,SNR=3.7
PPT Papeete 70.81 251 *e*S S 18 39 30.9 -2.3
comp=Z,91nm,23.2s
PPT Papeete 70.81 251 *e*LR LR 18 51 56.1
comp=Z,335nm,21.8s
PPT Papeete 70.81 251 LR LR 18 54 49.8
comp=Z,442nm,20.9s,MS4.7,baz=81,slow=30
MORF Marmelete 74.81 51 *e*P P 18 30 45.4 +0.9
LIC Lamto 74.92 84 ⇑*i*P P 18 30 45.1 -0.5
comp=Z,57nm,1.1s,mb5.1
LIC *e*MLR MLR
comp=Z,399nm,18.2s,MS4.5
LIC Lamto 74.92 84 *e*P P 18 30 44.8 -0.8
comp=Z,71nm,1.1s,mb5.5
LIC Lamto 74.92 84 ⇑*i*P P 18 30 45.1 -0.5
comp=Z,28nm,1.1s,mb5.1
LIC LR LR
comp=Z,200nm,18.3s,MS4.5
TIC Toumodi 74.94 83 *e*P P 18 30 45.1 -0.6
comp=Z,115nm,1.0s,mb5.7
DBIC Dimbokro 75.10 83 P P 18 30 46.0 -0.6
comp=Z,12nm,0.9s,mb4.8,baz=257,slow=5.7,SNR=18
DBIC LR LR 19 01 47.7
comp=Z,259nm,18.1s,MS4.6,baz=245,slow=34
KIC Kosan Boka 75.21 84 *e*P P 18 30 46.8 -0.5
comp=Z,166nm,1.0s,mb5.9
EVO Evora 75.54 50 *e*P P 18 30 47.9 -0.8
comp=Z,14nm,0.8s,mb4.7
EVO *e*MLR MLR
comp=Z,194nm,17.0s,MS4.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PESTR	**Estremoz**	**75.93**	**50**	*e*P	**P**	**18 30 51.3**	**+0.4**
	comp=Z,41nm,1.5s,mb5.1						
PVIS	**Viseu**	**76.05**	**48**	*e*P	**P**	**18 30 51.6**	**0.0**
PCBR	**Castelo Branco**	**76.20**	**49**	*e*P	**P**	**18 30 53.0**	**+0.6**
PBAR	**Barrancos**	**76.23**	**51**	*e*P	**P**	**18 30 53.3**	**+0.7**
	comp=Z,40nm,1.7s,mb5.1						
INK	**Inuvik**	**76.71**	**342**	*e*P	**P**	**18 30 53.5**	**-1.2**
INK				pmax	pmax		
	comp=Z,13nm,1.0s						
INK	**Inuvik**	**76.71**	**342**	*e*P	**P**	**18 30 53.5**	**-1.2**
	comp=Z,13nm,1.0s,mb4.8						
MVO	**Moncorvo**	**76.78**	**48**	*e*P	**P**	**18 30 56.1**	**+0.4**
	comp=Z,58nm,1.7s,mb5.2						
PBRG	**Braganca**	**77.12**	**47**	*e*P	**P**	**18 30 57.9**	**+0.3**
PAB	**San Pablo**	**78.53**	**50**	*e*P	**P**	**18 31 05.7**	**+0.3**
PAB				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
PAB	**San Pablo**	**78.53**	**50**	*e*P	**P**	**18 31 05.7**	**+0.3**
	comp=Z,14nm,1.0s,mb4.9						
ESDC	**Sonseca Array**	**78.84**	**50**	P	**P**	**18 31 07.6**	**+0.4**
	comp=Z,8.3nm,0.8s,mb4.7,baz=267,slow=5.6,SNR=21						
ESDC	**Sonseca Array**	**78.84**	**50**	P	**P**	**18 31 07.6**	**+0.4**
ROSF	**Rostrenen**	**80.71**	**41**	*e*P	**P**	**18 31 16.9**	**-0.2**
	comp=Z,166nm,1.5s,mb5.5						
ROSF	**Rostrenen**	**80.71**	**41**	*e*P	**P**	**18 31 16.9**	**-0.2**
ROSF				pmax	pmax		
	comp=Z,83nm,1.5s,mb5.4						
ROSF	**Rostrenen**	**80.71**	**41**	*e*P	**P**	**18 31 16.9**	**-0.2**
	comp=Z,83nm,1.5s,mb5.4						
QUIF	**Quistinic**	**80.71**	**42**	*e*P	**P**	**18 31 17.0**	**-0.1**
SJPF	**Ste Jean**	**81.36**	**47**	*e*P	**P**	**18 31 21.3**	**+0.6**
	comp=Z,143nm,1.5s,mb5.4						
SJPF	**Ste Jean**	**81.36**	**47**	*e*P	**P**	**18 31 21.3**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,71nm,1.5s,mb5.4						
SJPF	**Ste Jean**	**81.36**	**47**	*e*P	**P**	**18 31 21.3**	**+0.6**
	comp=Z,71nm,1.5s,mb5.4						
TORD	**Torodi Ar. Bea**	**81.70**	**77**	P	**P**	**18 31 22.4**	**-0.6**
	comp=Z,9.2nm,0.5s,mb5.0,baz=280,slow=6.2,SNR=168						
TORD				LR	LR	19 05 05.8	
	comp=Z,252nm,18.8s,MS4.6,baz=275,slow=34						
ETSF	**Etsaut**	**81.81**	**47**	*e*P	**P**	**18 31 24.0**	**+0.9**
GRR	**Gorron**	**82.31**	**41**	*e*P	**P**	**18 31 25.6**	**+0.1**
EPF	**Esparros**	**82.48**	**47**	*e*P	**P**	**18 31 27.2**	**+0.6**
MFF	**Saint Martin d**	**82.55**	**43**	*e*P	**P**	**18 31 26.9**	**0.0**
	comp=Z,37nm,1.0s,mb5.1						
MFF	**Saint Martin d**	**82.55**	**43**	*e*P	**P**	**18 31 26.9**	**0.0**
MFF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
MFF	**Saint Martin d**	**82.55**	**43**	*e*P	**P**	**18 31 26.9**	**0.0**
	comp=Z,19nm,1.0s,mb5.1						
FLN	**La Foliniere**	**82.60**	**41**	*e*P	**P**	**18 31 27.1**	**0.0**
	comp=Z,28nm,0.7s,mb5.1						
FLN				*e*MLR	MLR		
	comp=Z,187nm,19.5s,MS4.2						
FLN	**La Foliniere**	**82.60**	**41**	*e*P	**P**	**18 31 27.1**	**0.0**
FLN				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
FLN				MLR	MLR		
	comp=Z,190nm,19.5s,MS4.5						
FLN	**La Foliniere**	**82.60**	**41**	*e*P	**P**	**18 31 27.1**	**0.0**
	comp=Z,14nm,0.7s,mb5.1						
FLN				LR	LR		
	comp=Z,190nm,19.5s,MS4.5						
LDF	**La Druitiere**	**82.82**	**41**	*e*P	**P**	**18 31 28.2**	**0.0**
	comp=Z,21nm,0.7s,mb5.0						
LDF	**La Druitiere**	**82.82**	**41**	*e*P	**P**	**18 31 28.2**	**0.0**
LDF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
LDF	**La Druitiere**	**82.82**	**41**	*e*P	**P**	**18 31 28.2**	**0.0**
	comp=Z,10nm,0.7s,mb5.0						
LFF	**La Frestale**	**82.98**	**45**	*e*P	**P**	**18 31 29.1**	**0.0**
RJF	**Les Rejaudoux**	**83.56**	**45**	*e*P	**P**	**18 31 32.2**	**+0.1**
	comp=Z,54nm,1.1s,mb5.3						
RJF				*e*MLR	MLR		
	comp=Z,189nm,17.5s,MS4.2						
RJF	**Les Rejaudoux**	**83.56**	**45**	*e*P	**P**	**18 31 32.2**	**+0.1**
RJF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.3						
RJF				MLR	MLR		
	comp=Z,190nm,17.5s,MS4.5						
RJF	**Les Rejaudoux**	**83.56**	**45**	*e*P	**P**	**18 31 32.2**	**+0.1**
	comp=Z,27nm,1.1s,mb5.3						
RJF				LR	LR		
	comp=Z,190nm,17.5s,MS4.5						
MTLF	**Montolieu**	**83.88**	**47**	*e*P	**P**	**18 31 33.9**	**+0.1**
	comp=Z,43nm,0.9s,mb5.3						
MTLF	**Montolieu**	**83.88**	**47**	*e*P	**P**	**18 31 33.9**	**+0.1**
MTLF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
MTLF	**Montolieu**	**83.88**	**47**	*e*P	**P**	**18 31 33.9**	**+0.1**
	comp=Z,22nm,0.9s,mb5.3						
CAF	**Calviac**	**83.91**	**45**	*e*P	**P**	**18 31 34.0**	**+0.1**
TCF	**Toulx Ste Croi**	**84.14**	**44**	*e*P	**P**	**18 31 34.8**	**-0.2**
VNA3	**Neumayer Olymp**	**84.27**	**162**	*e*P	**P**	**18 31 34.8**	**-0.4**
VNA3				*e*		18 31 38.2	
VNA3				*e*	pP	18 31 44.2	-4.8
VNA1	**Neumayer--Stat**	**84.52**	**161**	*e*P	**P**	**18 31 36.5**	**0.0**
BGF	**Bois d'Agland**	**84.60**	**43**	*e*P	**P**	**18 31 37.4**	**0.0**
	comp=Z,54nm,1.0s,mb5.3						
BGF	**Bois d'Agland**	**84.60**	**43**	*e*P	**P**	**18 31 37.4**	**0.0**
BGF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
BGF	**Bois d'Agland**	**84.60**	**43**	*e*P	**P**	**18 31 37.4**	**0.0**
	comp=Z,27nm,1.0s,mb5.3						
VNA2	**Neumayer--Watz**	**84.88**	**162**	*e*P	**P**	**18 31 37.4**	**-0.8**
VNA2				*e*		18 31 40.5	
VNA2				*e*	pP	18 31 46.3	-5.8
AVF	**Avril sur Loir**	**84.97**	**43**	*e*P	**P**	**18 31 38.8**	**-0.4**
	comp=Z,22nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**84.97**	**43**	*e*P	**P**	**18 31 38.8**	**-0.4**
AVF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**84.97**	**43**	*e*P	**P**	**18 31 38.8**	**-0.4**
	comp=Z,11nm,1.0s,mb4.9						
SSF	**Saint Saulge**	**85.09**	**43**	*e*P	**P**	**18 31 39.4**	**-0.4**
	comp=Z,16nm,0.8s,mb4.9						
SSF	**Saint Saulge**	**85.09**	**43**	*e*P	**P**	**18 31 39.4**	**-0.4**
SSF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
SSF	**Saint Saulge**	**85.09**	**43**	*e*P	**P**	**18 31 39.4**	**-0.4**
	comp=Z,8.2nm,0.8s,mb4.9						
SMF	**Signal de Mont**	**85.29**	**43**	*e*P	**P**	**18 31 40.5**	**-0.3**
	comp=Z,28nm,1.0s,mb5.0						
SMF	**Signal de Mont**	**85.29**	**43**	*e*P	**P**	**18 31 40.5**	**-0.3**
SMF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
SMF	**Signal de Mont**	**85.29**	**43**	*e*P	**P**	**18 31 40.5**	**-0.3**
	comp=Z,14nm,1.0s,mb5.0						
LOR	**Lormes**	**85.35**	**43**	*e*P	**P**	**18 31 40.7**	**-0.4**
	comp=Z,7.3nm,0.6s,mb4.7						
LOR				*e*MLR	MLR		
	comp=Z,209nm,17.5s,MS4.3						
LOR	**Lormes**	**85.35**	**43**	*e*P	**P**	**18 31 40.7**	**-0.4**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
LOR				MLR	MLR		
	comp=Z,210nm,17.5s,MS4.6						
LOR	**Lormes**	**85.35**	**43**	*e*P	**P**	**18 31 40.7**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.7						
LOR				LR	LR		
	comp=Z,210nm,17.5s,MS4.6						
TAM	**Tamanrasset**	**85.58**	**67**	*e*P	**P**	**18 31 43.7**	**+0.9**
TAM				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
TAM	**Tamanrasset**	**85.58**	**67**	*e*P	**P**	**18 31 43.6**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	**85.76**	**45**	*e*P	**P**	**18 31 43.7**	**+0.5**
BAIF	**Baives**	**85.78**	**40**	*e*P	**P**	**18 31 42.9**	**-0.3**
	comp=Z,29nm,1.1s,mb5.1						
BAIF	**Baives**	**85.78**	**40**	*e*P	**P**	**18 31 42.9**	**-0.3**
BAIF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
BAIF	**Baives**	**85.78**	**40**	*e*P	**P**	**18 31 42.9**	**-0.3**
	comp=Z,14nm,1.1s,mb5.1						
UCC	**Uccle**	**85.93**	**39**	P	**P**	**18 31 43.7**	**-0.3**
	comp=Z,53nm,2.9s,mb5.3						
DOU	**Dourbes**	**86.03**	**40**	P	**P**	**18 31 44.4**	**0.0**
	comp=Z,30nm,3.3s						
GIVF	**Givet**	**86.18**	**40**	*e*P	**P**	**18 31 45.3**	**+0.1**
	comp=Z,30nm,0.6s,mb5.4						
GIVF	**Givet**	**86.18**	**40**	*e*P	**P**	**18 31 45.3**	**+0.1**
GIVF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.4						
GIVF	**Givet**	**86.18**	**40**	*e*P	**P**	**18 31 45.3**	**+0.1**
	comp=Z,15nm,0.6s,mb5.4						
MEZF	**Maizieres J'vi**	**86.23**	**42**	*e*P	**P**	**18 31 45.4**	**-0.1**
	comp=Z,20nm,0.6s,mb5.2						
MEZF	**Maizieres J'vi**	**86.23**	**42**	*e*P	**P**	**18 31 45.4**	**-0.1**
	comp=Z,20nm,0.6s,mb5.5						
SMRF	**Simiane la Rot**	**86.36**	**46**	*e*P	**P**	**18 31 46.6**	**+0.4**
SNAA	**Sanae**	**86.49**	**162**	*e*P	**P**	**18 31 45.5**	**-0.7**
SNAA				*e*		18 31 48.5	
SNAA	**Sanae**	**86.49**	**162**⇑	*e*P	**P**	**18 31 46.3**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,13nm,1.5s						
BCLA	**Clavier**	**86.51**	**40**	P	**P**	**18 31 46.9**	**+0.2**
	comp=Z,25nm,2.6s,mb5.0						
ORIF	**Oris-en-Rattie**	**86.62**	**45**	*e*P	**P**	**18 31 48.2**	**+0.8**
ORIF				*e*MLR	MLR		
	comp=Z,185nm,17.0s,MS4.2						
BEBN	**Eben Emael**	**86.77**	**39**	P	**P**	**18 31 48.1**	**0.0**
CABF	**La Chapelle**	**86.84**	**44**	*e*P	**P**	**18 31 48.0**	**-0.5**
	comp=Z,10nm,0.7s,mb4.9						
CABF	**La Chapelle**	**86.84**	**44**	*e*P	**P**	**18 31 48.0**	**-0.5**
CABF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
CABF	**La Chapelle**	**86.84**	**44**	*e*P	**P**	**18 31 48.0**	**-0.5**
	comp=Z,5.1nm,0.7s,mb4.9						
HGN	**Heimansgroeve**	**86.93**	**39**	*e*P	**P**	**18 31 48.7**	**-0.1**
	comp=Z,24nm,0.3s,mb5.8						
MEM	**Membach**	**86.97**	**40**	P	**P**	**18 31 49.0**	**0.0**
WLF	**Walferdange**	**87.02**	**40**	P	**P**	**18 31 49.9**	**+0.6**
HAU	**Haudompre**	**87.07**	**42**	*e*P	**P**	**18 31 50.3**	**+0.7**
	comp=Z,16nm,0.8s,mb5.0						
HAU				*e*MLR	MLR		
	comp=Z,173nm,20.2s,MS4.2						
HAU	**Haudompre**	**87.07**	**42**	*e*P	**P**	**18 31 50.3**	**+0.7**
HAU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
HAU				MLR	MLR		
	comp=Z,170nm,20.3s,MS4.4						
HAU	**Haudompre**	**87.07**	**42**	*e*P	**P**	**18 31 50.3**	**+0.7**
	comp=Z,7.9nm,0.8s,mb5.0						
HAU				LR	LR		
	comp=Z,170nm,20.3s,MS4.4						
FRF	**La Foret Royal**	**87.11**	**47**	*e*P	**P**	**18 31 49.6**	**-0.3**
	comp=Z,23nm,0.9s,mb5.1						
FRF	**La Foret Royal**	**87.11**	**47**	*e*P	**P**	**18 31 49.6**	**-0.3**
FRF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1						
FRF	**La Foret Royal**	**87.11**	**47**	*e*P	**P**	**18 31 49.6**	**-0.3**
	comp=Z,11nm,0.9s,mb5.1						
LPL	**La Plagne**	**87.24**	**45**	*e*P	**P**	**18 31 51.5**	**+1.0**
	comp=Z,11nm,0.9s,mb4.8						
LPL	**La Plagne**	**87.24**	**45**	*e*P	**P**	**18 31 51.5**	**+1.0**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
LPL	**La Plagne**	**87.24**	**45**	*e*P	**P**	**18 31 51.5**	**+1.0**
	comp=Z,5.3nm,0.9s,mb4.8						
LPG	**La Plagne**	**87.25**	**45**	*e*P	**P**	**18 31 51.7**	**+1.2**
	comp=Z,40nm,1.3s,mb5.2						
LPG	**La Plagne**	**87.25**	**45**	*e*P	**P**	**18 31 51.7**	**+1.2**
LPG				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.2						
LPG	**La Plagne**	**87.25**	**45**	*e*P	**P**	**18 31 51.7**	**+1.2**
	comp=Z,20nm,1.3s,mb5.2						
HINF	**Hinteralfeld**	**87.41**	**42**	*e*P	**P**	**18 31 50.8**	**-0.4**
WTSB	**Winterswijk**	**87.52**	**38**	*e*P	**P**	**18 31 51.6**	**-0.1**
	comp=Z,17nm,0.7s,mb5.4						
ECH	**Echery**	**87.62**	**42**	*e*P	**P**	**18 31 52.3**	**+0.1**
ECH				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.0						
ECH	**Echery**	**87.62**	**42**	*e*P	**P**	**18 31 52.3**	**0.0**
	comp=Z,14nm,1.4s,mb5.0						
SBF	**Sospel**	**87.69**	**46**	*e*P	**P**	**18 31 53.2**	**+0.5**
CDF	**Champ du Feu**	**87.71**	**42**	*e*P	**P**	**18 31 52.6**	**0.0**
KEST	**Kesra**	**89.07**	**54**	P	**P**	**18 31 59.6**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.5,baz=61,slow=16,SNR=4.1						
KEST				LR	LR	19 07 08.3	
	comp=Z,59nm,18.9s,MS4.0,baz=231,slow=32						
DAVOX	**Davos/Dischmat**	**89.45**	**43**	LR	LR	19 08 53.0	
	comp=Z,142nm,20.1s,MS4.4,baz=354,slow=34						
FETA	**Feichten**	**90.03**	**43**⇑	*i*PcP	PcP	18 32 03.8	-1.0
	comp=Z,10.0nm,1.0s						
NOA	**NORSAR Array B**	**90.05**	**29**	LR	LR	19 09 13.1	
	comp=Z,69nm,20.4s,MS4.1,baz=270,slow=34						
ABTA	**Abfaltersbach**	**91.26**	**43**⇑	*i*PcP	PcP	18 32 09.6	-0.7
	comp=Z,9.7nm,1.2s						
HFS	**Hagfors**	**91.31**	**30**	LR	LR	19 08 15.6	
	comp=Z,166nm,18.2s,MS4.5,baz=247,slow=32						
KHC	**Kasperske Hory**	**91.87**	**41**⇑	*e*P	**P**	**18 32 12.4**	**+0.3**
AFI	**Afiamalu**	**91.94**	**256**	LR	LR	19 01 19.8	
	comp=Z,1μm,21.1s,MS5.3,baz=143,slow=28						
GERES	**GERESS Array B**	**91.96**	**41**	P	**P**	**18 32 13.0**	**+0.5**
	comp=Z,1.5nm,0.9s,mb4.3,baz=250,slow=2.7,SNR=7.6						
GERES				LR	LR	19 08 56.9	
	comp=Z,104nm,18.5s,MS4.3,baz=268,slow=33						
JAVS	**Javornik**	**92.37**	**44**	*i* P	**P**	**18 32 16.4**	**+1.9**
PERS	**Pernice**	**93.06**	**43**	*i* P	**P**	**18 32 18.7**	**+1.1**
VRAC	**Vranov**	**93.83**	**41**	LR	LR	19 07 59.5	
	comp=Z,84nm,20.2s,MS4.2,baz=243,slow=31						
TSUM	**Tsumeb**	**97.28**	**109**	*e*P	**P**	**18 32 36.6**	**-0.9**
	comp=Z,3.5nm,1.1s,mb4.7						
GNI	**Garni**	**115.44**	**44**⇑	*i*PKIKP	PKPdf	18 37 45.3	-0.6
ZALV	**Zalesovo Beam**	**124.21**	**11**	PKP	PKPdf	18 38 00.3	-2.0
	comp=Z,1.7nm,0.4s,baz=318,slow=2.0,SNR=15						
KURK	**Kurchatov**	**125.73**	**17**⇑	*i*PKIKP	PKPdf	18 38 04.3	-1.1
MDJ	**Mudanjiang**	**127.92**	**334**	PKP	PKPdf	18 38 09.1	-0.6
MDJ				PP	PP	18 40 10.6	-1.0
STKA	**Stephens Creek**	**129.96**	**227**	PKP	PKPdf	18 38 13.4	-0.6
	comp=Z,1.4nm,0.8s,baz=106,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**130.31**	**16**	PKP	PKPdf	18 38 13.1	-1.2
	comp=Z,2.8nm,0.9s,baz=338,slow=2.6,SNR=19						
CN2	**Changchun**	**130.34**	**336**	*e*PKP	PKPdf	18 38 14.4	0.0
CN2				PP	PP	18 40 31.3	+3.9
AAK	**Ala-Archa**	**131.21**	**25**⇑	*i*PKIKP	PKPdf	18 38 16.4	+0.3
ULN	**Ulaanbaatar**	**131.38**	**354**⇑	*i*PKIKP	PKPdf	18 38 16.1	-0.1
SONM	**Songino Array**	**131.47**	**354**	PKP	PKPdf	18 38 15.0	-1.4
	comp=Z,0.9nm,1.0s,baz=54,slow=1.0,SNR=4.6						
SONM				SKPbc	SKPbc	18 41 39.4	+1.4
	comp=Z,1.6nm,1.0s,baz=11,slow=1.5,SNR=7.0						
KSRS	**Korea Array**	**134.24**	**329**	PKP	PKPdf	18 38 21.2	-0.8
	comp=Z,1.1nm,0.7s,baz=16,slow=1.5,SNR=4.5						
WMQ	**Urumqi**	**134.43**	**13**	*e*PKP	PKPdf	18 38 20.5	-1.6
BJI	**Beijing**	**136.99**	**342**	PKP	PKPdf	18 38 25.4	-1.6
HHC	**Hu-ho-hao-te**	**137.47**	**347**	*e*PKP	PKPdf	18 38 23.2	-4.6
HHC				PP	PP	18 41 11.6	-0.8
HHC				PKS		18 41 57.4	
HHC				SKS	SKSdf	18 45 28.4	-6.6
HHC				SKKS	SKKSac	18 47 58.9	-5.5
HHC				SS	SS	18 59 13.1	-2.9
HHC				PP	PP		
	comp=Z,97nm,6.4s						
HHC				LR	LR		
	comp=N,210nm,20.2s,MS5.3						
HHC				LR	LR		
	comp=E,491nm,16.6s,MS5.3						
HHC				LR	LR		
	comp=Z,207nm,14.3s,MS5.0						
GTA	**Gaotai**	**140.21**	**0**	PKP	PKPdf	18 38 31.2	-1.7
GTA				XPKP		18 38 45.3	
WB2	**Warramunga Arr**	**141.33**	**238**	*e*P	PKPdf	18 38 27.8	-7.6
NJ2	**Nanjing**	**143.00**	**333**	*e*PKP	PKPdf	18 38 38.1	0.0
LZH	**Lanzhou**	**143.36**	**355**	*e*PKP	PKPdf	18 38 39.1	+0.5
LZH				APKP		18 38 52.8	
LZH				XPKP		18 38 57.1	
LZH				PP	PP	18 41 53.6	+5.2
LZH				SKKS	SKKSac	18 48 35.5	-3.4
LZH				SS	SS	19 00 26.8	+2.1
LZH				PP	PP		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=E,340nm,16.4s						
LZH				LR	LR		
	comp=Z,436nm,18.0s,MS5.3						
XAN	**Xi'an**	**144.58**	**347**	PKP	PKPdf	18 38 37.9	-2.9
XAN				APKP		18 38 48.5	
XAN				XPKP		18 38 52.6	
XAN				PP	PP	18 41 57.3	+1.5
XAN				PKS		18 42 12.2	
XAN				SKS	SKSdf	18 45 42.6	-4.1
XAN				SKKS	SKKSac	18 48 42.7	-3.3
XAN				SS	SS	19 00 38.2	-0.8
XAN				LR	LR		
	comp=N,64nm,26.5s,MS4.6						
XAN				LR	LR		
	comp=E,96nm,21.7s,MS4.6						
XAN				LR	LR		
	comp=Z,119nm,23.3s,MS4.6						
KAKA	**Kakadu**	**145.73**	**248**	*e*P	x	18 38 21.1	
	comp=Z,9.5nm,0.6s						
DANN	**Dangsing**	**147.26**	**27**	*e*P	PKPdf	18 38 45.6	0.0
	comp=Z,80nm,0.9s						
KOLN	**Koldanda**	**147.68**	**28**	*e*P	PKPdf	18 38 45.9	-0.4
	comp=Z,40nm,1.1s						
GKN	**Gorkha**	**147.95**	**26**	*e*P	PKPdf	18 38 46.5	-0.2
	comp=Z,85nm,1.2s						
KKN	**Kakani**	**148.42**	**26**	*e*P	PKPdf	18 38 46.8	-0.7
CD2	**Chengdu**	**148.49**	**354**	*e*PKP	PKPdf	18 38 46.3	-1.2
CD2				APKP		18 38 57.0	
CD2				XPKP		18 39 00.7	
CD2				PP	PP	18 42 22.9	+4.0
CD2				SKS	SKSdf	18 45 49.0	-3.4
CD2				SKKS	SKKSac	18 49 05.9	-2.2
CD2				SS	SS	19 01 21.5	-1.7
CD2				PP	PP		
	comp=Z,170nm,5.3s						
CD2				LR	LR		
	comp=N,470nm,18.6s,MS5.5						
CD2				LR	LR		
	comp=E,570nm,19.2s,MS5.5						
CD2				LR	LR		
	comp=Z,270nm,15.0s,MS5.2						
DMN	**Daman**	**148.50**	**26**	*e*P	PKPdf	18 38 47.5	-0.1
	comp=Z,51nm,1.1s						
GUN	**Gumba**	**148.57**	**25**	*e*P	PKPdf	18 38 47.5	-0.2
	comp=Z,59nm,1.0s						
PKI	**Pulchoki**	**148.67**	**26**	*e*P	PKPdf	18 38 47.3	-0.6
LSA	**Lhasa**	**148.71**	**15**	PKP	PKPdf	18 38 48.8	+0.9
JIRN	**Jiri**	**148.92**	**24**	*e*P	PKPdf	18 38 48.2	-0.1
FITZ	**Fitzroy Crossi**	**149.44**	**234**	*e*P	PKPdf	18 38 50.0	+0.6
	comp=Z,8.5nm,0.8s						
RAMN	**Ramite**	**149.71**	**24**	*e*P	PKPdf	18 38 49.2	-0.4
	comp=Z,57nm,1.1s						
TAPN	**Taplejung**	**149.80**	**22**	*e*P	PKPdf	18 38 49.7	0.0
	comp=Z,74nm,1.3s						
ODAN	**Odare**	**150.11**	**23**	*e*P	PKPdf	18 38 50.1	-0.1
	comp=Z,50nm,1.1s						
GYA	**Guiyang**	**152.38**	**347**	PKP	PKPdf	18 38 50.6	-3.1
GYA				APKP		18 39 03.4	
GYA				XPKP		18 39 11.6	
GYA				PKS		18 42 23.1	
GYA				PP	PP	18 42 42.6	+1.3
GYA				SKS	SKSdf	18 45 51.2	-6.4
GYA				SKKS	SKKSac	18 49 25.8	-3.9
GYA				SS	SS	19 02 05.4	-1.1
GYA				PP	PP		
	comp=Z,120nm,8.6s						
GYA				LR	LR		
	comp=N,160nm,23.0s,MS4.9						
GYA				LR	LR		
	comp=E,140nm,23.5s,MS4.9						
GYA				LR	LR		
	comp=Z,190nm,24.4s,MS4.8						
KMI	**Kunming**	**154.32**	**354**	PKP	PKPdf	18 38 54.5	-2.0
CMAR	**Chiang Mai Arr**	**161.05**	**3**	PKP	PKPdf	18 39 04.0	-1.0
	comp=Z,1.3nm,0.9s,baz=309,slow=2.3,SNR=9.9						
CMAR				PKPab	PKPab	18 39 46.1	-1.7
	comp=Z,1.7nm,0.9s,baz=334,slow=5.3,SNR=8.0						

NIED ***10*** *18:35:00, 4040N×14520E, h8km, Mw3.6 Best double couple: $M_0$2.63000×10^14 NP1:ϕ_s214.00000°, δ63.00000°, λ-84.00000°. NP2:ϕ_s20.00000°, δ28.00000°, λ-102.00000°.*

JMA ***10*** *18:35:03.9±0.3, 4041N×14520E, h50km, M3.7*

ISCJB ***10*** *18:35:05.1±0.8, 4047N±003×14504E±006, h33km, mb3.5/3, Error ellipse: s-maj=7.6km s-min=3.6km az=30.5*

IDC ***10*** *18:35:08.8±18.0, 4021N×14480E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=320.7km s-min=52.1km az=111.0*

ISC 10 18:35:06.4±0.8**, 4047N**±004×**14508E**±006**, h35**km**, n27, σ1**s**03**/46**, mb3.5**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**2.12**	**317**	P	**Pn**	**18 35 39.8**	**+0.6**
JEM				*e*S	**Sn**	**18 36 04.7**	**+0.5**
JCH	**Churui**	**2.50**	**329**	P	**Pn**	**18 35 44.6**	**+0.2**
JCH				*e*S	**Sn**	**18 36 13.4**	**-0.3**
JNBK	**Urakawa-nobuka**	**2.52**	**317**	P	**Pn**	**18 35 45.9**	**+1.2**
JNBK				*e*S	**Sn**	**18 36 16.3**	**+2.2**
JTH	**Tanohata**	**2.52**	**259**	P	**Pn**	**18 35 44.3**	**-0.5**
JTH				*e*S	**Sn**	**18 36 11.8**	**-2.4**
JAK	**Akkeshi**	**2.54**	**354**	P	**Pn**	**18 35 44.1**	**-0.9**
JAK				*e*S	**Sn**	**18 36 14.0**	**-0.6**
JANG	**Nango**	**2.72**	**269**	P	**Pn**	**18 35 47.3**	**-0.2**
NEM2	**Nemuro 2**	**2.93**	**10**	P	**Pn**	**18 35 49.2**	**-1.2**
NEM2				*e*S	**Sn**	**18 36 22.1**	**-2.3**
JAR	**Ashorobuto**	**2.99**	**341**	P	**Pn**	**18 35 50.8**	**-0.4**
JAR				*e*S	**Sn**	**18 36 25.2**	**-0.5**
JTM	**Tenmabayashi**	**3.07**	**277**	P	**Pn**	**18 35 52.9**	**+0.6**
JTM				*e*S	**Sn**	**18 36 26.8**	**-1.0**
JOM	**Ohasama**	**3.08**	**252**	P	**Pn**	**18 35 52.9**	**+0.5**
JOM				*e*S	**Sn**	**18 36 27.6**	**-0.4**
JOT	**Ohata**	**3.19**	**288**	P	**Pn**	**18 35 54.6**	**+0.7**
JOT				*e*S	**Sn**	**18 36 30.6**	**-0.1**
JFR	**Furan**	**3.27**	**326**	P	**Pn**	**18 35 55.2**	**+0.2**
JFR				*e*S	**Sn**	**18 36 31.8**	**-0.8**
JMK	**Ichinoseki**	**3.34**	**244**	P	**Pn**	**18 35 56.1**	**0.0**
JMK				*e*S	**Sn**	**18 36 32.6**	**-1.9**
JKB	**Kayabe**	**3.37**	**296**	P	**Pn**	**18 35 57.2**	**+0.8**
JKB				*e*S	**Sn**	**18 36 34.8**	**-0.3**
JAH	**Hinai**	**3.41**	**267**	P	**Pn**	**18 35 57.8**	**+0.8**
JAH				*e*S	**Sn**	**18 36 35.2**	**-0.9**
JRA	**Rausu**	**3.46**	**1**	P	**Pn**	**18 35 57.0**	**-0.7**
JRA				*e*S	**Sn**	**18 36 35.3**	**-2.1**
JRG	**Rokugo**	**3.58**	**254**	P	**Pn**	**18 36 00.1**	**+0.7**
JRG				*e*S	**Sn**	**18 36 39.7**	**-0.8**
JTKR	**Abashiri--Toko**	**3.60**	**346**	P	**Pn**	**18 36 00.2**	**+0.6**
JTKR				*e*S	**Sn**	**18 36 41.2**	**+0.3**
JEW	**Eniwo**	**3.60**	**312**	P	**Pn**	**18 36 01.4**	**+1.8**
JEW				S	**Sn**	**18 36 42.7**	**+1.8**
JKK2	**Kamakawa 2**	**3.81**	**334**	P	**Pn**	**18 36 03.3**	**+0.8**
JYK	**Kaneyama**	**3.96**	**248**	P	**Pn**	**18 36 05.1**	**+0.6**
JYK				*e*S	**Sn**	**18 36 48.7**	**-1.0**
JHR	**Hokuryu**	**4.11**	**324**	P	**Pn**	**18 36 08.4**	**+1.8**
JOSM	**Okushiri--Mats**	**4.52**	**293**	P	**Pn**	**18 36 12.6**	**+0.4**
MJAR	**Matsushiro Arr**	**6.67**	**236**	Pn	**Pn**	**18 36 43.2**	**+1.5**
	0.4nm,0.3s,baz=52,slow=11,SNR=4.5						
SONM	**Songino Array**	**28.48**	**298**	P	**P**	**18 41 05.1**	**+7.1**
	0.7nm,0.6s,mb3.5,baz=82,slow=9.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**41.82**	**310**	P	**P**	**18 42 59.7**	**+7.3**
	0.8nm,0.5s,mb3.6,baz=90,slow=7.6,SNR=4.2						
MKAR	**Makanchi Array**	**44.81**	**300**	P	**P**	**18 43 24.0**	**+7.4**
	0.3nm,0.6s,mb3.3,baz=79,slow=9.2,SNR=4.0						

IDC ***10*** *18:44:54.0±3.7, 2584S×17752W, h250km±22km, mb3.5/5, mb1 3.8/5, mb1mx3.5/13, mbtmp3.5/5, Error ellipse: s-maj=83.8km s-min=26.1km az=162.0*

ISCJB ***10*** *18:44:56.5±1.8, 261S±02×1777W±02, h295km±20km, mb3.7/7, Error ellipse: s-maj=35.7km s-min=20.8km az=167.3*

NEIC ***10*** *18:44:57.0±1.6, 2605S×17764W, h283km±17km, mb3.8/2, Error ellipse: s-maj=28.4km s-min=15.7km az=168.0*

ISC 10 18:44:57.1±1.8**, 261S**±02×**1776W**±02**, h286**km±20km**, n21, σ1**s**06**/13**, mb3.7**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.18**	**184**	Pn	**Pn**	**18 45 53.8**	**0.0**
EIDS	**Eidsvold**	**28.16**	**264**	*e*P	**P**	**18 50 24.6**	**+1.0**
CTA	**Charters Tower**	**33.68**	**273**	P	**P**	**18 51 12.2**	**+0.4**
	3.4nm,0.5s,mb4.2,baz=86,slow=10,SNR=11						
STKA	**Stephens Creek**	**35.98**	**251**	P	**P**	**18 51 32.5**	**+1.2**
WB2	**Warramunga Arr**	**44.42**	**268**	*e*P	**P**	**18 52 38.6**	**-1.7**
WRAB	**Tennant Creek**	**44.43**	**268**	*e*P	**P**	**18 52 38.6**	**-1.8**
	2.6nm,0.7s,mb3.6						
VNDA	**Vanda**	**52.42**	**186**	*e*P	**P**	**18 53 39.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.82**	**266**	*e*P	**P**	**18 53 43.6**	**-0.3**
	3.7nm,0.7s,mb3.8						
PETK	**Petropavlovsk-**	**81.71**	**345**	P	**P**	**18 56 42.9**	**-0.5**
	1.7nm,0.6s,mb4.0,baz=105,slow=9.5,SNR=8.0						
PETK	**Petropavlovsk-**	**81.71**	**345**	P	**P**	**18 56 42.9**	**-0.5**
NVAR	**Mina Array Bea**	**84.84**	**43**	P	**P**	**18 56 60.0**	**+0.2**
	0.2nm,0.4s,mb3.3,baz=210,slow=6.9,SNR=4.7						
CMAR	**Chiang Mai Arr**	**92.28**	**289**	P	**P**	**18 57 37.9**	**+2.6**
	0.4nm,0.8s,mb3.4,baz=127,slow=3.0,SNR=4.4						
PDAR	**Pinedale Array**	**92.77**	**43**	P	**P**	**18 57 36.9**	**-0.1**
	0.4nm,0.6s,mb3.5,baz=202,slow=6.4,SNR=3.8						
MKAR	**Makanchi Array**	**115.19**	**312**	PKP	PKPdf	19 03 04.4	+0.2

	0.2nm,0.5s,baz=164,slow=1.3,SNR=3.7						
ARCES	**ARCESS Array B**	**134.43**	**349**	PKP	PKPdf	19 03 41.4	+1.1
	2.9nm,0.9s,baz=28,slow=2.1,SNR=5.3						
NB2	**NORSAR Subarra**	**144.52**	**353**	PKP	PKPdf	19 03 57.6	-1.2
	comp=Z,1.2nm,0.6s,baz=12,slow=3.4						
NOA	**NORSAR Array B**	**144.52**	**353**	PKP	PKPdf	19 03 58.1	-0.6
	comp=Z,2.0nm,0.8s,baz=10,slow=2.3,SNR=6.7						
NAO01	**NORSAR Array S**	**144.75**	**353**	*e*PKP	PKPdf	19 03 59.3	+0.1
HFS	**Hagfors**	**145.06**	**350**	PKP	PKPdf	19 03 59.9	+0.2
	comp=Z,4.3nm,0.6s,baz=84,slow=4.5,SNR=9.6						
HFS				SKP		19 07 09.7	
	comp=Z,0.8nm,0.4s,baz=46,slow=6.2,SNR=7.8						
AKASG	**Malin Array Be**	**147.95**	**327**	PKPbc	PKPbc	19 04 08.5	+0.1
	comp=Z,1.5nm,0.6s,baz=44,slow=4.0,SNR=7.3						
BRTR	**Keskin Array B**	**150.59**	**305**	PKPbc	PKPbc	19 04 16.2	+1.0
	comp=Z,0.7nm,0.6s,baz=185,slow=6.1,SNR=3.9						
BRTR				PKPab	PKPab	19 04 24.1	+0.9
	comp=Z,1.2nm,0.6s,baz=105,slow=3.1,SNR=6.6						
BRTR				SKPbc		19 07 33.0	
	comp=Z,1.3nm,0.6s,baz=98,slow=3.3,SNR=7.7						

DJA 10 19:03:18,591S×10521E,h10km,MLv3.6/4,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.94**	**103**	P	Pg	19 03 33.7	-2.4
SBJI				S	Sg	19 03 42.4	-5.9
KLI	**Kotabumi**	**1.10**	**341**	P	Pb	19 03 37.6	-1.5
KLI				S	Sg	19 03 54.4	+1.0
DBJI	**Dramaga**	**1.66**	**113**	P	Pn	19 03 46.2	-1.0
CBJI	**Citeko**	**1.71**	**107**	P	Pn	19 03 50.8	+3.0
TPI	**Tanjungpandan**	**3.97**	**38**	P	Pn	19 04 27.1	+8.1
TPI				S	Sn	19 05 08.3	+2.7

*ISK **10** 19:13:40.8,3979N×2676E,h5km,MD3.2*
*DDA **10** 19:13:40.9,3976N×2683E,h7km±4km,Md3.2*
*CSEM **10** 19:13:40.3±0.1,3978N×2678E,h2km,MD3.2,Error ellipse: s-maj=1.4km s-min=1.4km az=28.0*
*ISCJB **10** 19:13:41.2±0.3,3978N±002×2675E±003,h10km,Error ellipse: s-maj=3.2km s-min=2.8km az=16.6*
*ATH **10** 19:13:47.2,3964N×2627E,h31km,MD3.4/3*
ISC 10 19:13:41.3±0.4**,3978N**±002×**2679E**±003**,h1**km±4km**,n41,** σ**0^{s}68**/51**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.36**	**277**	*e*PG	**Pg**	**19 13 48.3**	**+0.2**
EZN				*e*SG	**Sg**	**19 13 52.6**	**-0.2**
AYVA	**Ayvalik**	**0.48**	**189**	*i* P	**Pg**	**19 13 50.5**	**+0.1**
AYVA				*i* S	**Sg**	**19 13 56.6**	**+0.1**
LPK	**Lapseki**	**0.59**	**358**	*e*PG	**Pg**	**19 13 53.0**	**+0.4**
BALY	**Balya**	**0.64**	**93**	*i* P	**Pg**	**19 13 52.7**	**-0.9**
BALY				*i* S	**Sg**	**19 14 01.7**	**-0.2**
PRK	**Paraskevi**	**0.67**	**217**	*e*PB	**Pg**	**19 13 56.5**	**+2.5**
PRK				*e*SB	**Sg**	**19 14 03.0**	**+0.4**
PRK	**Paraskevi**	**0.67**	**217**	*e*Pn	**Pg**	**19 13 53.5**	**-0.5**
PRK				*e*Sn	**Sg**	**19 14 03.4**	**+0.8**
GADA	**Gvkgeada**	**0.80**	**301**	*e*PG	**Pg**	**19 13 56.2**	**-0.3**
GADA				*e*SG	**Sg**	**19 14 06.9**	**+0.1**
BALB	**Balikesir**	**0.86**	**99**	*e*PG	**Pg**	**19 13 57.4**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.95**	**18**	*e*PG	**Pg**	**19 13 58.6**	**-0.9**
SART	**Tekirdag**	**0.96**	**18**	*i* P	**Pg**	**19 13 59.5**	**-0.1**
SART				*i* S	**Sg**	**19 14 12.6**	**+0.5**
EDC	**Edincik**	**1.00**	**55**	*e*PG	**Pg**	**19 14 00.7**	**+0.2**
BNT	**Bandirma**	**1.04**	**56**	*e*PG	**Pg**	**19 14 01.2**	**0.0**
ENEZ	**Enez**	**1.07**	**333**	*e*PG	**Pg**	**19 14 01.9**	**+0.1**
AKHS	**Akhisar**	**1.20**	**138**	*i* P	**Pg**	**19 14 03.8**	**-0.5**
AKHS				*i* S	**Sg**	**19 14 19.9**	**0.0**
AKS	**Akhisar**	**1.20**	**138**	*e*PN	**Pn**	**19 14 04.3**	**-1.0**
LIA	**Limnos Island**	**1.24**	**276**	*e*PN	**Pn**	**19 14 04.3**	**-1.4**
KCT	**Karacabey**	**1.30**	**68**	*e*PN	**Pn**	**19 14 05.3**	**-1.3**
TKR	**Tekirdag**	**1.34**	**25**	*e*PN	**Pn**	**19 14 05.8**	**-1.3**
BLCB	**Balcova**	**1.41**	**172**	*e*PN	**Pn**	**19 14 07.9**	**-0.1**
KDAG	**Bornova**	**1.43**	**165**	*i* P	**Pn**	**19 14 07.3**	**-1.0**
KDAG				*i* S	**Sg**	**19 14 27.0**	**-0.1**
URLA	**Izmir**	**1.43**	**186**	*i* P	**Pn**	**19 14 04.6**	**-3.7**
URLA				*i* S	**Sg**	**19 14 27.8**	**+0.7**
CRLT	**Corlu**	**1.53**	**28**	*e*PN	**Pn**	**19 14 08.8**	**-1.0**
SLVT	**Silivri**	**1.81**	**36**	*e*PN	**Pn**	**19 14 14.4**	**+0.8**
CTT	**Catalca**	**1.85**	**42**	*e*PN	**Pn**	**19 14 14.9**	**+0.7**
KULA	**Kula-Manisa**	**1.93**	**130**	*e*PN	**Pn**	**19 14 15.4**	**+0.2**
GEMT	**Gemlik**	**1.96**	**70**	*e*PN	**Pn**	**19 14 16.4**	**+0.8**
CTKS	**Kestanelik-??a**	**1.96**	**42**	*e*PN	**Pn**	**19 14 15.8**	**+0.2**
CTYL	**Yal??k??y-??at**	**2.04**	**34**	*e*PN	**Pn**	**19 14 16.4**	**-0.4**
BGKT	**Bogazkoy**	**2.06**	**47**	*e*PN	**Pn**	**19 14 16.9**	**-0.2**
EDRB	**Edirne**	**2.06**	**359**	*e*PN	**Pn**	**19 14 17.8**	**+0.7**
SMG	**Samos**	**2.07**	**179**	*e*PN	**Pg**	**19 14 20.7**	**-0.2**
YLV	**Yalova**	**2.13**	**68**	*e*PN	**Pn**	**19 14 18.5**	**+0.5**
ISK	**Istanbul-Kandi**	**2.16**	**53**	*e*PN	**Pn**	**19 14 19.0**	**+0.6**
KLYT	**Kilyos**	**2.26**	**49**	*e*PN	**Pn**	**19 14 19.8**	**0.0**
ADVT	**Abdulvahap**	**2.36**	**73**	*e*PN	**Pn**	**19 14 21.3**	**+0.2**
CAVI	**Cavuskoy**	**2.39**	**79**	*e*PN	**Pn**	**19 14 22.0**	**+0.5**
HRT	**Hereke**	**2.44**	**64**	*e*PN	**Pn**	**19 14 22.3**	**+0.1**
SILT	**Sile**	**2.58**	**57**	*e*PN	**Pn**	**19 14 25.2**	**+1.1**
KHL	**Karahalli**	**2.58**	**123**	*e*PN	**Pn**	**19 14 25.2**	**+1.1**
ALT	**Altintas**	**2.67**	**105**	*e*PN	**Pn**	**19 14 26.2**	**+0.8**
EYL	**Eskiyayla**	**2.70**	**72**	*e*PN	**Pn**	**19 14 25.5**	**-0.3**

*CSEM **10** 19:18:32.7±0.1,3747N×3560E,h10km,MD3.2,Error ellipse: s-maj=1.8km s-min=1.6km az=148.0*
*DDA **10** 19:18:32.7,3757N×3557E,h7km±6km,Md3.2*
*ISK **10** 19:18:32.8,3749N×3560E,h12km,MD3.2*
*ISCJB **10** 19:18:33.2±0.5,3748N±004×3557E±004,h8km±6km, Error ellipse: s-maj=6.2km s-min=4.7km az=159.9*
ISC 10 19:18:33.6±0.5**,3749N**±004×**3557E**±004**,h10**km±5km**,n18,** σ**1^{s}03**/26**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.20**	**92**	*e*PG	**Pg**	**19 18 36.7**	**-1.2**
KOZT				*e*SG	**Sg**	**19 18 40.3**	**-0.5**
KARA	**Karaisali**	**0.47**	**241**	*e*PG	**Pg**	**19 18 42.6**	**-0.2**
KARA				*e*SG	**Sg**	**19 18 49.7**	**+0.7**
CEYT	**Ceyhan**	**0.50**	**164**	*e*PG	**Pg**	**19 18 43.8**	**+0.5**
ANDN	**Andirin**	**0.62**	**81**	*i* P	**Pg**	**19 18 45.9**	**+0.3**
ANDN				*i* S	**Sg**	**19 18 55.8**	**+2.0**
KRTS	**Karatas**	**0.93**	**190**	*e*PG	**Pg**	**19 18 50.8**	**-0.7**
NIG	**Nigde**	**0.98**	**309**	*e*PG	**Pg**	**19 18 53.1**	**+0.5**
MERS	**Mersin**	**1.04**	**234**	*e*PG	**Pg**	**19 18 54.4**	**+0.7**
KMRS	**Kahramanmaras**	**1.05**	**89**	*e*PG	**Pg**	**19 18 53.2**	**-0.7**
COBT	**Iskenderun**	**1.11**	**150**	*i* P	**Pb**	**19 18 54.1**	**-0.7**
COBT				*i* S	**Sb**	**19 19 11.5**	**+2.2**
GAZ	**Gaziantep**	**1.34**	**103**	*e*PN	**Pn**	**19 18 56.9**	**-1.5**
PINB	**Pinarbasi**	**1.35**	**29**	*i* P	**Pn**	**19 18 58.0**	**-0.5**
PINB				*i* P		19 18 58.3	
PINB				*i* S	**Sb**	**19 19 17.7**	**+1.3**
PINB				*i* S	**Sb**	**19 19 18.0**	**+1.6**
PINB	**Pinarbasi**	**1.35**	**29**	*i* P	**Pn**	**19 18 58.3**	**-0.2**
PINB				*i* S	**Sb**	**19 19 17.7**	**+1.3**
BNN	**Bunyan**	**1.38**	**9**	*e*PN	**Pn**	**19 18 58.0**	**-0.9**
AVNT	**Avonos**	**1.41**	**337**	*i* P	**Pn**	**19 18 56.4**	**-2.9**
AVNT				*i* S	**Sn**	**19 19 18.3**	**+0.5**
HTY	**Hatay**	**1.44**	**161**	*e*PN	**Pn**	**19 18 59.4**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.48**	**36**	*e*PN	**Pn**	**19 18 55.2**	**-5.1**
DARE	**Darende-Malaty**	**2.29**	**50**	*e*PN	**Pn**	**19 19 04.9**	**-6.4**
SVSK	**Karacayir**	**2.67**	**24**	*e*PN	**Pn**	**19 19 17.2**	**+0.6**

*IDC **10** 19:24:08.4±3.3,2508S×17955E,h523km±34km,mb3.4/11, mb1 3.6/12,mb1mx3.6/15,mbtmp3.4/12,Error ellipse: s-maj=22.9km s-min=14.9km az=77.0*
*ISCJB **10** 19:24:09.7±2.1,2509S±009×1794E±0.1,h548km±25km, mb3.9/14,Error ellipse: s-maj=21.6km s-min=12.4km az=158.4*
*NEIC **10** 19:24:09.4±1.6,25.13S×17948E,h539km±16km,mb4.3/5, Error ellipse: s-maj=16.6km s-min=13.0km az=48.0*
ISC 10 19:24:09.4±1.9**,2515S**±009×**1795E**±01**,h532**km±21km**, n60,** σ**0^{s}81**/25**,mb3.9**/14**,2C-14D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.32**	**282**	*e*Pn	**P**	**19 26 52.4**	**+1.2**
URZ	**Urewera**	**13.22**	**188**	P	**P**	**19 26 59.5**	**-0.9**
	1.1nm,0.3s,baz=51,slow=14,SNR=5.7						
URZ				S	**S**	**19 29 21.4**	**0.0**
	1.6nm,0.3s,baz=104,slow=22,SNR=12						
CTA	**Charters Tower**	**31.01**	**273**	*e*P	**P**	**19 29 44.0**	**+0.3**
	5.0nm,0.4s,mb4.4						
CTA	**Charters Tower**	**31.01**	**273**	P	**P**	**19 29 44.0**	**+0.4**
	7.2nm,0.4s,mb4.5,baz=93,slow=11,SNR=22						
CTAO	**Charters Tower**	**31.01**	**273**	*e*P	**P**	**19 29 43.8**	**+0.1**
	7.5nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**33.81**	**250**	P	**P**	**19 30 08.0**	**+0.6**
	0.8nm,0.4s,mb3.6,baz=99,slow=11,SNR=3.3						
STKA				PcP	PcP	19 32 31.4	+0.5
	1.2nm,0.6s,baz=187,slow=7.7,SNR=4.4						
STKA	**Stephens Creek**	**33.81**	**250**	*e*P	**P**	**19 30 07.7**	**+0.3**
STKA				PcP	PcP	19 32 31.4	+0.5
WB2	**Warramunga Arr**	**41.84**	**268**	*e*P	**P**	**19 31 11.9**	**-1.0**
WRAB	**Tennant Creek**	**41.84**	**268**	*e*P	**P**	**19 31 11.8**	**-1.2**
	3.8nm,0.5s,mb4.2						
KAKA	**Kakadu**	**45.95**	**277**	*e*P	x	19 31 24.3	
	3.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.25**	**267**	*e*P	**P**	**19 32 16.6**	**-0.3**
	6.1nm,0.6s,mb4.2						
VNDA	**Vanda**	**53.10**	**185**	P	**P**	**19 32 36.6**	**+0.1**
	0.7nm,0.5s,mb3.3,baz=339,slow=4.8,SNR=7.9						
VNDA	**Vanda**	**53.10**	**185**	*e*P	**P**	**19 32 36.3**	**-0.2**
	0.8nm,0.6s,mb3.2						
QSPA	**South Pole Qui**	**64.94**	**180**	*e*P	**P**	**19 33 57.3**	**+1.5**
	9.3nm,1.2s,mb4.1						
MJAR	**Matsushiro Arr**	**72.65**	**326**	P	**P**	**19 34 42.0**	**-1.0**
	4.6nm,0.7s,mb4.0,baz=162,slow=5.8,SNR=12						
MAW	**Mawson**	**76.41**	**201**	P	**P**	**19 35 04.2**	**+0.5**
	3.0nm,0.5s,mb4.0,baz=136,slow=9.5,SNR=14						
KSRS	**Korea Array**	**78.89**	**321**	P	**P**	**19 35 17.6**	**+0.1**
	3.4nm,0.7s,mb3.8,baz=138,slow=5.4,SNR=13						
PETK	**Petropavlovsk-**	**80.19**	**347**	P	**P**	**19 35 23.5**	**-0.5**
	3.3nm,0.6s,mb3.9,baz=116,slow=7.6,SNR=16						
SNAA	**Sanae**	**83.43**	**179**	*e*	**P**	**19 35 39.7**	**-0.7**
SNAA				*e*		19 35 41.3	
VNA3	**Neumayer Olymp**	**83.66**	**177**	*e*	**P**	**19 35 41.3**	**-0.2**
VNA3				*e*		19 35 42.7	
VNA2	**Neumayer--Watz**	**84.07**	**178**	*e*	**P**	**19 35 43.6**	**0.0**
VNA2				*e*		19 35 45.0	
NVAR	**Mina Array Bea**	**85.99**	**44**	P	**P**	**19 35 53.8**	**+0.5**
	1.1nm,0.7s,mb3.6,baz=224,slow=9.2,SNR=6.0						
CMAR	**Chiang Mai Arr**	**89.50**	**291**	P	**P**	**19 36 11.8**	**+1.6**
	1.3nm,0.9s,mb3.8,baz=141,slow=3.2,SNR=6.2						
TXAR	**Lajitas Array**	**91.50**	**58**	P	**P**	**19 36 20.1**	**+0.9**
	0.7nm,0.8s,mb3.8,baz=202,slow=6.3,SNR=8.0						
PDAR	**Pinedale Array**	**93.92**	**44**	P	**P**	**19 36 28.9**	**-1.1**
	0.3nm,0.7s,mb3.6,baz=186,slow=5.2,SNR=3.2						
MKAR	**Makanchi Array**	**112.63**	**312**	PKiKP	PKiKP	19 41 43.6	-1.5
	0.3nm,0.6s,baz=213,slow=2.0,SNR=5.2						
BVAR	**Borovoye Array**	**121.04**	**318**	PKP	PKPdf	19 41 60.0	-1.1
	1.8nm,0.4s,baz=128,slow=2.4,SNR=19						
AKTK	**Aktyubinsk**	**128.85**	**316**	PKP	PKPdf	19 42 16.0	-0.1
AKTO	**Aktyubinsk**	**128.85**	**316**	PKP	PKPdf	19 42 16.0	-0.1
	0.3nm,0.3s,baz=0.0,slow=0.0,SNR=3.7						
ARCES	**ARCESS Array B**	**133.00**	**348**	PKP	PKPdf	19 42 22.0	-1.4
	2.8nm,0.6s,baz=64,slow=1.6,SNR=8.1						
NB2	**NORSAR Subarra**	**143.23**	**350**	PKP	PKPdf	19 42 38.8	-3.5
	comp=Z,4.1nm,0.7s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**143.23**	**350**	PKhKP		19 42 38.0	
	comp=Z,3.8nm,0.9s,baz=13,slow=4.1,SNR=26						
NAO01	**NORSAR Array S**	**143.47**	**351**	*e*PKPpre		19 42 40.0	
AKASG	**Malin Array Be**	**145.74**	**326**	PKPbc	PKPbc	19 42 47.1	-1.4
	comp=Z,2.5nm,0.5s,baz=43,slow=4.3,SNR=17						
ASF	**Jabal al Asfar**	**146.53**	**291**	PKPbc	PKPbc	19 42 52.1	+0.7
	comp=Z,2.5nm,0.6s,baz=16,slow=7.4,SNR=3.3						
BR131	**Keskin Array S**	**147.91**	**305**	*e*PKPbc	PKPbc	19 42 53.7	-1.1
BRTR	**Keskin Array B**	**147.91**	**305**	PKPbc	PKPbc	19 42 54.1	-0.7
	comp=Z,3.4nm,0.8s,baz=149,slow=2.6,SNR=9.8						
EIL	**Elat**	**148.25**	**286**	PKPbc	PKPbc	19 42 56.0	0.0
	comp=Z,3.8nm,0.8s,baz=190,slow=5.4,SNR=3.7						
EIL	**Elat**	**148.25**	**286**	PKPbc	PKPbc	19 42 56.0	0.0
TLCR		**149.03**	**318**	⇑*i*P	PKPbc	19 42 57.0	-0.3
TLCR		**149.03**	**318**	⇑P	PKPbc	19 42 57.0	-0.4
KWP	**Kalwaria**	**149.60**	**330**	⇓*i*P	PKPbc	19 42 58.2	-0.4
KWP	**Kalwaria**	**149.60**	**330**	⇓P	PKPbc	19 42 58.2	-0.3
BUR08	**Bucovina Ar. S**	**149.70**	**324**	*e*PKPbc	PKPbc	19 42 59.0	+0.1
BURAR	**Bucovina Array**	**149.71**	**324**	⇓*i*P	PKPbc	19 42 59.6	+0.7
BURAR	**Bucovina Array**	**149.71**	**324**	⇓P	PKPbc	19 42 59.6	+0.7
MLR	**Muntele Rosu**	**150.57**	**320**	⇓*i*P	PKPbc	19 43 00.3	-0.7
MLR	**Muntele Rosu**	**150.57**	**320**	⇓P	PKPbc	19 43 00.3	-0.7
TRPA	**Tarpa**	**150.73**	**328**	⇓*i*P	PKPbc	19 43 00.4	-0.8
VOIR		**151.12**	**321**	⇓*i*P	PKPbc	19 43 01.8	-0.4
VOIR		**151.12**	**321**	⇓P	PKPbc	19 43 01.8	-0.5
CLL	**Collm**	**151.89**	**342**	⇓*i*PKPbc	PKPbc	19 43 03.2	-0.5
	comp=Z,10.0nm,0.9s						
CLL				*i* PKPab	PKPab	19 43 14.5	-1.0
BRG	**Berggiesshubel**	**152.00**	**340**	*i* P	PKPbc	19 43 03.5	-0.5
	comp=Z,7.5nm,1.1s						
BZS	**Buzias**	**152.89**	**324**	⇓*i*P	PKPbc	19 43 05.2	-0.9
BZS	**Buzias**	**152.89**	**324**	⇓P	PKPbc	19 43 05.2	-1.0
GERES	**GERESS Array B**	**153.84**	**338**	PKPbc	PKPbc	19 43 07.5	-0.6
	comp=Z,0.2nm,0.5s,baz=48,slow=1.6,SNR=4.6						
GERES				PKPab	PKPab	19 43 23.5	-0.4
	comp=Z,0.3nm,0.6s,baz=28,slow=6.0,SNR=4.5						
PKSM	**Moragy**	**153.96**	**329**	⇓*i*P	PKPbc	19 43 07.6	-0.8
PKSM	**Moragy**	**153.96**	**329**	⇓P	PKPbc	19 43 07.6	-0.8
TORD	**Torodi Ar. Bea**	**167.88**	**190**	PKP	PKPdf	19 43 13.7	-1.7
	comp=Z,0.9nm,1.0s,baz=222,slow=0.8,SNR=3.6						
TORD				PKPab	PKPab	19 44 25.7	-0.3
	comp=Z,1.5nm,0.8s,baz=168,slow=3.0,SNR=8.9						
TORD	**Torodi Ar. Bea**	**167.88**	**190**	PKP	PKPdf	19 43 13.7	-1.7
TORD				PKPab	PKPab	19 44 25.7	-0.3

*IDC **10** 19:27:02.6±1.1,408S×10104E,h0km,mb4.4/15, mb1 4.5/17,mb1mx4.3/25,mbtmp4.4/17,ML4.2/2,MS3.8/3, Ms1 3.8/3,ms1mx3.2/25,Error ellipse: s-maj=34.0km s-min=15.9km az=43.0*
*DJA **10** 19:27:04,428S×10089E,h0km,MLv4.8/5*
*BJI **10** 19:27:06.4,386S×10104E,h23km,mB5.0,mb4.9,Ms4.4, Msz4.2*
*MOS **10** 19:27:07.2±1.3,379S×10125E,h33km,mb4.8/16,Error ellipse: s-maj=19.1km s-min=7.3km az=104.8*
*NEIC **10** 19:27:08.4±1.8,4.11S×10105E,h40km±13km,mb4.9/17, Error ellipse: s-maj=18.4km s-min=5.9km az=222.0*
*ISCJB **10** 19:27:08.2±1.3,406S±008×101.12E±008,h55km±9km, mb4.8/51,MS3.8/4,Error ellipse: s-maj=17.6km s-min=6.9km az=43.9*
ISC 10 19:27:10.3±1.1**,407S**±008×**10115E**±007**,h56**km±8km**, h31**km±3.4km**:pP-P,n106,** σ**0^{s}94**/100**,mb4.8**/51**,MS3.8**/4**, 12C,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.50**	**74**	P	**Pn**	**19 27 34.9**	**0.0**
KSI				S	**Sn**	**19 28 01.4**	**+8.0**
PDSI	**Padang**	**3.21**	**348**	P	**Pn**	**19 27 55.3**	**-3.0**
PPI	**Padang Panjang**	**3.66**	**348**	P	**Pn**	**19 28 02.2**	**-2.3**
KLI	**Kotabumi**	**3.78**	**102**	P	Px	19 28 20.2	
DBJI	**Dramaga**	**6.10**	**114**	P	**Pn**	**19 28 38.0**	**0.0**
	73nm,0.8s,2µm0.5nm						
LEM	**Lembang**	**7.00**	**113**	P	**Pn**	**19 28 51.3**	**+1.0**
PSI	**Prapat**	**7.17**	**342**	Pn	**Pn**	**19 28 47.6**	**-5.0**
	3.2nm,0.3s,baz=158,slow=12,SNR=11						
PSI				LR	LR	19 32 25.6	
	comp=Z,870nm,18.4s,baz=146,slow=46						
IPM	**Ipoh**	**8.49**	**359**	⇑P	**Pn**	**19 29 13.7**	**+3.0**
IPM	**Ipoh**	**8.49**	**359**	P	**Pn**	**19 29 18.7**	**+8.0**
KULM	**Kulim**	**9.31**	**357**	⇑P	**Pn**	**19 29 21.9**	**0.0**
KSM	**Kuching**	**10.68**	**59**	*e*P	**Pn**	**19 29 41.6**	**+0.9**
KKM	**Kota Kinabalu**	**18.09**	**56**	*e*P	**Pn**	**19 31 18.9**	**+1.1**
KAPI	**Kappang**	**18.57**	**94**	P	**Pn**	**19 31 21.3**	**-2.3**
	1.0nm,0.3s,baz=275,slow=10,SNR=8.7						
KAPI	**Kappang**	**18.57**	**94**	*e*P	**Pn**	**19 31 22.9**	**-0.7**
SDKM	**Sandakan**	**18.70**	**59**	⇑P	**Pn**	**19 31 29.5**	**+4.3**
KDM	**Kudat**	**19.08**	**55**	⇑P	**Pn**	**19 31 33.6**	**+3.8**
CMAR	**Chiang Mai Arr**	**22.48**	**355**	P	**P**	**19 32 03.0**	**-2.1**
	9.5nm,0.7s,mb4.3,baz=184,slow=8.6,SNR=37						
CMAR	**Chiang Mai Arr**	**22.48**	**355**	*i* P	**P**	**19 32 05.8**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CHG	**Chiang Mai**	**22.84**	**355**	⇑P	**P**	**19 32 08.1**	**-0.7**
	comp=Z,12nm,0.7s,mb4.4						
CHTO	**Chiang Mai**	**22.84**	**355**	*e*P	**P**	**19 32 08.3**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2						
CHTO	**Chiang Mai**	**22.84**	**355**	*e*P	**P**	**19 32 08.3**	**-0.5**
	comp=Z,11nm,1.0s,mb4.2						
BATI	**Baumata**	**23.15**	**106**	P	**P**	**19 32 11.3**	**-0.9**
	comp=Z,10nm,0.4s,mb4.6,baz=347,slow=6.3,SNR=4.7						
BATI				S	**S**	**19 36 19.6**	**0.0**
	comp=Z,10nm,0.6s,baz=270,slow=20,SNR=4.8						
CHRT	**Chiangrai**	**23.82**	**357**	⇑P	**P**	**19 32 17.5**	**-0.8**
	comp=Z,147nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**27.73**	**122**	*e*P	**P**	**19 32 54.3**	**+0.5**
	comp=Z,14nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**27.73**	**122**	*e*P	**P**	**19 32 54.3**	**+0.5**
SHL	**Shillong**	**30.80**	**344**	*e*x	**P**	**19 33 21.0**	**+0.2**
KAKA	**Kakadu**	**32.09**	**107**	*e*P	x	19 33 12.2	
	comp=Z,7.8nm,0.8s						
ODAN	**Odare**	**33.50**	**337**	*e*P	**P**	**19 33 45.3**	**+0.8**
	comp=Z,51nm,0.9s,mb5.5						
TAPN	**Taplejung**	**33.82**	**338**	*e*P	**P**	**19 33 48.6**	**+1.3**
	comp=Z,96nm,0.9s,mb5.7						
RAMN	**Ramite**	**33.89**	**336**	*e*P	**P**	**19 33 49.0**	**+1.1**
	comp=Z,22nm,0.7s,mb5.2						
JIRN	**Jiri**	**34.68**	**336**	*e*P	**P**	**19 33 56.0**	**+1.2**
	comp=Z,89nm,1.0s,mb5.6						
CD2	**Chengdu**	**34.87**	**4**	⇑*i*P	**P**	**19 33 55.7**	**-0.6**
CD2				AP	pP	19 34 03.4	-7.1
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
LSA	**Lhasa**	**34.91**	**345**	P	**P**	**19 33 57.6**	**+0.9**
LSA	**Lhasa**	**34.91**	**345**	*e*P	**P**	**19 33 57.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LSA	**Lhasa**	**34.91**	**345**	*e*P	**P**	**19 33 57.5**	**+0.8**
	comp=Z,3.5nm,0.6s,mb4.5						
PKI	**Pulchoki**	**34.93**	**335**	*e*P	**P**	**19 33 57.6**	**+0.7**
GUN	**Gumba**	**35.03**	**336**	*e*P	**P**	**19 33 58.9**	**+1.1**
	comp=Z,60nm,0.8s,mb5.6						
DMN	**Daman**	**35.09**	**335**	*e*P	**P**	**19 33 58.9**	**+0.6**
	comp=Z,15nm,0.8s,mb5.0						
KKN	**Kakani**	**35.17**	**335**	*e*P	**P**	**19 33 59.3**	**+0.3**
GKN	**Gorkha**	**35.63**	**334**	*e*P	**P**	**19 34 03.5**	**+0.6**
KOLN	**Koldanda**	**35.89**	**333**	*e*P	**P**	**19 34 05.9**	**+0.7**
	comp=Z,24nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**35.99**	**119**	*e*P	**P**	**19 34 06.6**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**35.99**	**119**	*e*P	**P**	**19 34 06.6**	**+0.5**
	comp=Z,7.3nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**35.99**	**119**	*e*P	**P**	**19 34 06.0**	**-0.2**
WB2				*e*S	PcP	19 36 46.5	+15
DANN	**Dangsing**	**36.31**	**334**	*e*P	**P**	**19 34 09.4**	**+0.6**
	comp=Z,15nm,0.4s,mb5.3						
XAN	**Xi'an**	**38.60**	**10**	P	**P**	**19 34 27.9**	**-0.1**
XAN				AP	pP	19 34 34.9	-7.5
XAN				AMB	AMB		
	comp=Z,25nm,0.9s,mb4.9						
NJ2	**Nanjing**	**39.67**	**24**	*e*P	**P**	**19 34 35.4**	**-1.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
LZH	**Lanzhou**	**40.02**	**3**	*e*P	**P**	**19 34 41.0**	**+1.2**
LZH				AP	pP	19 34 48.0	-6.3
LZH				XP	sP	19 34 51.0	-10
LZH				AMB	AMB		
	comp=Z,58nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,287nm,4.6s						
GTA	**Gaotai**	**43.28**	**358**	P	**P**	**19 35 07.1**	**+0.7**
GTA				AP	pP	19 35 14.7	-6.3
GTA				XP	sP	19 35 18.8	-8.7
GTA				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.3						
GTA				AMB	AMB		
	comp=Z,76nm,5.7s						
GTA				LR	LR		
	comp=N,164nm,13.8s,MS4.2						
GTA				LR	LR		
	comp=E,172nm,17.4s,MS4.2						
GTA				LR	LR		
	comp=Z,186nm,17.1s,MS4.0						
CTA	**Charters Tower**	**46.70**	**114**	*e*P	**P**	**19 35 34.5**	**+0.5**
	comp=Z,5.1nm,0.9s,mb4.5						
CTA	**Charters Tower**	**46.70**	**114**	P	**P**	**19 35 34.7**	**+0.7**
	comp=Z,5.1nm,1.0s,mb4.4,baz=315,slow=12,SNR=3.1						
CTA	**Charters Tower**	**46.70**	**114**	*e*P	**P**	**19 35 34.5**	**+0.5**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**46.93**	**131**	*e*P	**P**	**19 35 44.6**	**+9.0**
	comp=Z,4.9nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**46.93**	**131**	P	**P**	**19 35 35.8**	**+0.1**
	comp=Z,2.6nm,0.8s,mb4.2,baz=326,slow=9.0,SNR=4.1						
STKA				LR	LR	19 54 50.5	
	comp=Z,111nm,19.2s,MS3.8,baz=206,slow=36						
KSRS	**Korea Array**	**48.23**	**29**	P	**P**	**19 35 46.0**	**+0.5**
	comp=Z,6.5nm,0.9s,mb4.6,baz=216,slow=8.4,SNR=16						
WMQ	**Urumqi**	**49.18**	**347**	P	**P**	**19 35 53.6**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,184nm,4.5s						
WMQ				LR	LR		
	comp=N,53nm,23.0s						
WMQ				LR	LR		
	comp=E,57nm,16.0s						
WMQ				LR	LR		
	comp=Z,45nm,25.0s,MS3.4						
SONM	**Songino Array**	**51.88**	**4**	P	**P**	**19 36 14.3**	**+1.3**
	comp=Z,14nm,0.8s,mb4.9,baz=184,slow=9.2,SNR=101						
SONM				PcP	PcP	19 37 26.3	+1.1
	comp=Z,2.0nm,0.8s,baz=183,slow=4.1,SNR=3.2						
ULN	**Ulaanbaatar**	**51.97**	**5**	*e*P	**P**	**19 36 14.3**	**+0.6**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**51.97**	**5**	*e*P	**P**	**19 36 14.3**	**+0.6**
	comp=Z,8.5nm,0.9s,mb4.7						
TKM2	**Tokmak 2**	**52.17**	**336**	*e*P	**P**	**19 36 15.1**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**52.17**	**336**	*e*P	**P**	**19 36 15.1**	**-0.2**
	comp=Z,9.2nm,0.8s,mb4.8						
AML	**Almayashu**	**52.31**	**334**	*e*P	**P**	**19 36 17.1**	**+0.8**
	comp=Z,5.1nm,0.7s,mb4.6						
AAK	**Ala-Archa**	**52.38**	**335**	⇑*e*P	**P**	**19 36 17.1**	**+0.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,2.7s,mb3.9						
CN2	**Changchun**	**52.43**	**22**	*e*P	**P**	**19 36 17.1**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
EKS2	**Erkin-Say**	**52.71**	**335**	*e*P	**P**	**19 36 18.9**	**-0.3**
	comp=Z,8.2nm,0.7s,mb4.8						
MAT	**Matsushiro**	**53.18**	**37**	P	**P**	**19 36 22.1**	**-0.7**
MJAR	**Matsushiro Arr**	**53.18**	**37**	P	**P**	**19 36 22.4**	**-0.4**
	comp=Z,4.8nm,0.9s,mb4.4,baz=218,slow=7.0,SNR=9.9						
MJAR	**Matsushiro Arr**	**53.18**	**37**	P	**P**	**19 36 22.4**	**-0.4**
MK31	**Makanchi Array**	**53.31**	**344**	*e*P	**P**	**19 36 23.5**	**-0.1**
MKAR	**Makanchi Array**	**53.31**	**344**	P	**P**	**19 36 23.7**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9,baz=148,slow=8.0,SNR=103						
ZAK	**Zakamensk**	**54.26**	**2**	*e*P	**P**	**19 36 30.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KK31	**Karatay Array**	**54.50**	**333**	*i* P	**P**	**19 36 34.2**	**+1.8**
KURK	**Kurchatov**	**57.90**	**343**	P	**P**	**19 36 56.1**	**-0.4**
	comp=Z,9.8nm,0.8s,mb4.9,baz=161,slow=6.8,SNR=22						
ZAA0	**Zalesovo Array**	**59.40**	**349**	*e*P	**P**	**19 37 06.5**	**-0.3**
ZALV	**Zalesovo Beam**	**59.40**	**349**	P	**P**	**19 37 06.4**	**-0.4**
	comp=Z,19nm,0.9s,mb5.1,baz=174,slow=5.2,SNR=69						
HABR	**Khabarovsk**	**60.10**	**25**	*e*P	**P**	**19 37 09.8**	**-2.0**
HABR				*e**PP	pP	19 37 20.9	-6.1
HABR				*e**SP	sP	19 37 25.0	-8.4
HABR				*e*		19 39 24.2	
HABR				*e*PPP		19 40 47.8	
HABR				*e*S	**S**	**19 45 23.4**	**+2.6**
HABR				*e*		19 45 37.3	
HABR				*e*		19 46 58.6	
NVS	**Novosibirsk**	**60.55**	**348**	*e*P	**P**	**19 37 12.8**	**-1.9**
NVS				*e*S	**S**	**19 45 18.8**	**-7.5**
NVS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,7.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.5s						
NVS				smax			
	comp=N,19nm,2.5s						
BVA0	**Borovoye Array**	**62.51**	**340**	P	**P**	**19 37 26.8**	**-1.1**
BVAR	**Borovoye Array**	**62.51**	**340**	P	**P**	**19 37 27.2**	**-0.7**
	comp=N,3.2nm,0.6s,mb4.6,baz=142,slow=9.0,SNR=30						
BOD	**Bodaibo**	**62.55**	**8**	*e*P	**P**	**19 37 28.5**	**+0.4**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
BRVK	**Borovoye**	**62.57**	**340**	*e*P	**P**	**19 37 26.5**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
BRVK	**Borovoye**	**62.57**	**340**	*e*P	**P**	**19 37 26.5**	**-1.9**
	comp=Z,7.4nm,0.9s,mb4.8						
AB31	**Akbulak array**	**63.99**	**331**	P	**P**	**19 37 36.7**	**-1.1**
AB31				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						

AKTK	Aktyubinsk	65.71	331	P	P	19 37 48.0	-0.9
AKTO	Aktyubinsk	65.71	331	P	P	19 37 48.0	-0.9
	comp=Z,0.6nm,0.5s,mb3.9,baz=89,slow=12,SNR=4.1						
AKTO	Aktyubinsk	65.71	331	P	P	19 37 50.3	+1.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,2.0s,mb3.8						
SVE	Sverdlovsk	69.02	338⇑	eP	P	19 38 10.2	+0.4
SVE				e	pP	19 38 21.3	-4.0
SVE				eS	S	19 47 02.6	-7.7
SVE				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
YAK	Yakutsk	69.45	14	eP	P	19 38 10.9	-1.4
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
YAK	Yakutsk	69.45	14	eP	P	19 38 10.9	-1.4
	comp=Z,22nm,1.1s,mb5.0						
ARU	Arti	69.55	336c	iP	P	19 38 12.4	-0.6
ARU				e		19 40 50.4	
ARU				S	S	19 47 19.8	+3.2
ARU				SS	SS	19 51 47.0	+1.7
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
PETK	Petropavlovsk-	74.02	32	P	P	19 38 39.4	-0.6
	comp=Z,2.6nm,0.9s,mb4.2,baz=352,slow=3.0,SNR=4.8						
BRTR	Keskin Array B	75.55	313	P	P	19 38 48.5	-0.7
	comp=Z,1.8nm,0.9s,mb4.0,baz=152,slow=6.3,SNR=6.1						
BOSA	Boshof	75.68	242	LR	LR	20 06 41.4	
	comp=Z,53nm,20.0s,MS3.8,baz=272,slow=32						
SEY	Seymchan	77.11	21⇑	eP	P	19 38 57.3	-0.1
TIXI	Tiksi	77.71	9⇑	eP	P	19 39 00.1	-0.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
OBN	Obninsk	79.14	328	P	P	19 39 09.0	+0.1
OBN				e		19 39 15.0	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
AKASG	Malin Array Be	81.81	322	iP	P	19 39 30.7	+7.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BILL	Bilibino	84.69	20	P	P	19 39 37.0	-0.7
BILL				e	pP	19 39 48.9	-4.8
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
GERES	GERESS Array B	91.35	319	P	P	19 40 10.1	+0.1
	comp=Z,0.6nm,0.8s,mb4.0,baz=354,slow=2.7,SNR=4.6						
PDAR	Pinedale Array	132.78	31	PKP	PKPdf	19 46 20.3	+1.0
	comp=Z,0.2nm,0.6s,baz=318,slow=2.6,SNR=2.8						
WMOK	Wichita Mounta	144.32	29	ePKIKP	PKPdf	19 46 39.4	-1.3
WCI	Wyandotte Cave	145.32	10	ePKIKP	PKPdf	19 46 42.2	-0.1
WCI				e		19 46 50.1	
TXAR	Lajitas Array	145.58	40	PKPbc	PKPbc	19 46 44.9	+1.6
	comp=Z,8.6nm,0.9s,baz=286,slow=1.7,SNR=58						
MIAR	Mount Ida	146.73	22	ePKP2	PKPab	19 46 46.8	-1.0
WVT	Waverly	147.03	13	ePKP2	PKPab	19 46 47.5	-1.4
JCT	Junction City	147.12	35	ePKIKP	PKPdf	19 46 45.9	+0.3
JCT				e		19 46 48.4	

*IDC **10** 19:43:01.6±12.0, 3629N×7123E, h55km±109km, mb3.3/4, mb1 3.3/6, mb1mx3.1/23, mbtmp3.3/6, ML3.3/2, Error ellipse: s-maj=77.4km s-min=51.2km az=149.0*
*ISCJB **10** 19:43:04.2±0.8, 3636N±006×714E±01, h108km±13km, mb3.6/3, Error ellipse: s-maj=13.8km s-min=8.8km az=163.8*
*NEIC **10** 19:43:06.9±0.9, 3651N×71.15E, h98km±11km, Error ellipse: s-maj=26.9km s-min=8.0km az=124.0*
*NNC **10** 19:43:11.0±14.0, 3687N×7105E, h139km±254km, mb2.9, mpv3.6, Error ellipse: s-maj=187.6km s-min=84.8km az=45.0*
ISC 10 19:43:05.6±0.8, **3636N**±006×**714E**±01, **h103**km±12km, **n18**, σ**0.98**/21, **mb3.6**/3, **3C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.64	227	ePn	Pn	19 43 47.6	+1.0
AML	Almayashu	6.04	17	eP	Pn	19 44 32.9	+0.6
	11nm,0.4s						
EKS2	Erkin-Say	6.56	16	eP	Pn	19 44 39.8	+0.4
	6.8nm,0.8s						
AAK	Ala-Archa	6.71	20	eP	Pn	19 44 42.3	+0.9
	8.9nm,0.3s						
KK31	Karatay Array	6.77	355	P	Pn	19 44 41.0	-1.2
	2.5nm,0.3s,baz=181,slow=13,SNR=160						
KK31				⇑S	Sn	19 45 51.3	-6.5
	12nm,0.6s,baz=186,slow=24,SNR=14						
SMLA	Simla	7.10	136	iP	Pn	19 44 47.0	+0.2
SMLA				iS	Sn	19 46 04.6	-1.4
SMLA				iS	Sn	19 46 04.6	-1.4
SMLA				ex	x	19 46 06.8	
	comp=E,211nm,0.4s						
SMLA				ex	x	19 46 08.5	
	comp=N,270nm,0.3s						
TKM2	Tokmak 2	7.31	25	⇑P	Pn	19 44 50.4	+0.8
	comp=N,1.8nm,0.5s						
TKM2	Tokmak 2	7.31	25	ePn	Pn	19 44 50.5	+0.8
AB01	Akbulak array	15.36	331	⇑P	Pn	19 46 32.9	-3.5
	comp=N,0.8nm,0.6s						
BVAR	Borovoye Array	16.68	358	P	Pn	19 46 51.7	-1.2
	comp=N,0.1nm,0.3s,baz=162,slow=12,SNR=4.1						
AKTK	Aktyubinsk	17.06	330	P	Pn	19 46 56.4	-1.1
AKTO	Aktyubinsk	17.06	330	P	Pn	19 46 56.4	-1.1
	comp=N,0.1nm,0.3s,baz=138,slow=17,SNR=3.7						
ZALV	Zalesovo Beam	19.92	24	P	P	19 47 30.0	+1.2
	comp=N,0.4nm,0.3s,baz=208,slow=15,SNR=2.5						
ZALV	Zalesovo Beam	19.92	24	P	P	19 47 30.0	+1.2
HFS	Hagfors	43.37	322	P	P	19 50 58.3	+1.0
	comp=N,0.7nm,0.4s,mb3.7,baz=101,slow=12,SNR=5.6						
NOA	NORSAR Array B	44.68	323	P	P	19 51 07.9	+0.2
	comp=N,0.6nm,0.7s,mb3.5,baz=97,slow=7.7,SNR=3.0						
TORD	Torodi Ar. Bea	66.02	269	P	P	19 53 41.9	+0.4
	comp=N,0.5nm,0.5s,mb3.6,baz=47,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	66.02	269	P	P	19 53 41.9	+0.4

IGQ 10 20:16:45.4, 059N×8016W, h10km±6km, Mb4.0, Ms3.8, 1D, Error ellipse: s-maj=7.7km s-min=4.1km az=85.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINO	Pino	1.72	115	P	Pn	20 17 17.1	+1.7
PINO	Pino	1.72	115	S	Sn	20 17 42.5	+5.0
TERV	Terraza Guagua	1.73	116	P	Pn	20 17 18.2	+2.6
YANA	Yana	1.74	114	P	Pn	20 17 17.4	+1.8
GGP	Refugio Guagua	1.74	116	P	Pn	20 17 17.4	+1.7
COTA	Cotacachi	1.84	98	P	Pn	20 17 19.3	+2.3
COTA	Cotacachi	1.84	98	S	Sn	20 17 44.5	+4.0
QIL2	Quilotoa	1.91	139	⇓P	Pn	20 17 20.1	+2.1
CAMI	Rancho Maria	2.08	127	P	Pn	20 17 23.4	+3.1
VC1	Cotopaxi 1	2.14	125	P	Pn	20 17 24.6	+3.4
TAMB	Tambo	2.20	125	P	Pn	20 17 25.6	+3.6
TAMB	Tambo	2.20	125	S	Sn	20 17 56.2	+6.9
CAYA	Cayambe	2.23	103	P	Pn	20 17 26.4	+3.9
CAYA	Cayambe	2.23	103	S	Sn	20 17 56.4	+6.3
ANTI	Antisana	2.25	117	P	Pn	20 17 26.7	+4.0
PISA	Pisayambo	2.42	133	P	Pn	20 17 28.7	+3.8
ARRY	Arrayan	2.69	141	P	Pn	20 17 33.0	+4.2

*ISCJB **10** 21:20:33.9±0.8, 3858N±003×4084E±005, h2km±7km, Error ellipse: s-maj=7.2km s-min=4.3km az=26.4*
*CSEM **10** 21:20:33.2±0.1, 3861N×4079E, h2km, MD3.2, Error ellipse: s-maj=4.5km s-min=2.8km az=145.0*
*DDA **10** 21:20:33.5, 3859N×4086E, h19km±3km, Md3.1*
*ISK **10** 21:20:34.6, 3862N×4082E, h12km, MD3.2*
ISC 10 21:20:34.4±0.7, **3859N**±003×**4084E**±006, **h3**km±8km, **n13**, σ**0.90**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.44	34	iP	Pg	21 20 41.9	-0.9
BNGL				iS	Sg	21 20 49.3	+0.8
BEST	Besiri	0.78	154	iP	Pg	21 20 48.2	-1.0
BEST				iS	Sg	21 21 00.1	+0.7
DIYA	Diyarbakir	0.87	220	iP	Pg	21 20 51.1	+0.1
DIYA				iS	Sg	21 21 03.9	+1.6
PTK	Pertek	1.17	285	ePN	Pn	21 20 56.3	-1.3
PTK				eSN	Sn	21 21 14.2	+0.1
SVRC	Sivrice-ELAZID	1.22	261	ePN	Pn	21 20 57.6	-0.7
SVRC				eSN	Sn	21 21 14.7	-0.5
MARD	Mardin	1.27	182	iP	Pg	21 20 57.2	-1.6
MARD				iS	Sg	21 21 14.6	-0.7
EZM	Erzurum	1.38	17	ePN	Pn	21 20 59.8	-0.7
ERZM	Erzurum	1.38	17	iP	Pn	21 20 60.0	-0.5
ERZM				iS	Sg	21 21 19.3	+0.6
AGRB	Hanur-Agry	1.94	59	ePN	Pn	21 21 08.4	+0.1
URFA	Urfa	1.96	235	ePN	Pn	21 21 08.9	+0.4
CUKT	Cukurca	2.57	121	ePN	Pn	21 21 18.1	+1.3
GAZ	Gaziantep	3.20	245	ePN	Pn	21 21 26.3	+0.8
KMRS	Kahramanmaras	3.29	252	ePN	Pn	21 21 28.2	+1.5

IGQ 10 21:37:29.4, 061S×8118W, h5km±7km, Mb4.5, Ms4.3, 2C, Error ellipse: s-maj=16.2km s-min=5.6km az=153.1, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.63	134	⇑P	Pg	21 37 41.9	+0.4
QIL2	Quilotoa	2.28	96	P	Pn	21 38 09.5	+1.9
PINO	Pino	2.61	80	P	Pn	21 38 17.9	+5.6
PINO	Pino	2.61	80	S	Sn	21 38 55.3	+11
TERV	Terraza Guagua	2.61	80	P	Pn	21 38 19.1	+6.8
GGP	Refugio Guagua	2.62	81	P	Pn	21 38 16.9	+4.5
YANA	Yana	2.65	79	⇑P	Pn	21 38 19.9	+7.1
CAMI	Rancho Maria	2.68	91	P	Pn	21 38 18.5	+5.4
IGUA	Igualata	2.69	109	P	Pn	21 38 15.0	+1.7
IGUA	Igualata	2.69	109	S	Sn	21 38 49.2	+3.0
VC1	Cotopaxi 1	2.78	91	P	Pn	21 38 19.8	+5.3
BIL2	Estacion Bilba	2.81	107	P	Pn	21 38 20.3	+5.3
TAMB	Tambo	2.81	92	P	Pn	21 38 20.2	+5.2
JUI6	Juive	2.83	107	P	Pn	21 38 19.1	+3.8
PISA	Pisayambo	2.83	99	P	Pn	21 38 18.9	+3.6
RETU	Refugio	2.86	107	P	Pn	21 38 18.1	+2.5
ARRY	Arrayan	2.87	108	P	Pn	21 38 17.8	+2.0
RUN5	Runtun	2.87	106	P	Pn	21 38 18.0	+2.2
PATA	Patacocha	2.89	108	P	Pn	21 38 18.4	+2.3
ULBA	Ulba	2.90	107	P	Pn	21 38 19.1	+2.9
COTA	Cotacachi	2.99	72	P	Pn	21 38 25.2	+7.7
COTA	Cotacachi	2.99	72	S	Sn	21 39 05.3	+12
ANTI	Antisana	3.02	87	P	Pn	21 38 23.7	+5.8
ANTI	Antisana	3.02	87	S	Sn	21 39 03.3	+8.8
CAYA	Cayambe	3.26	78	P	Pn	21 38 29.4	+8.2
CONE	Cono NE Rev Vo	3.58	81	P	Pn	21 38 34.4	+8.8

*IPEC **10** 21:40:52.7±0.1, 5026N×1884E, h0km, ML1.7/2, Error ellipse: s-maj=2.4km s-min=0.8km az=171.0*
*PRU **10** 21:40:53.3, 5028N×1878E, h0km*
*CSEM **10** 21:40:54.5±0.5, 5028N×1872E, h0km±1km, ML1.7/2, Error ellipse: s-maj=9.4km s-min=4.2km az=15.0*
WAR 10 21:40:52.6, 5026N×1889E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.58	94	ePg	Pg	21 41 04.2	+0.4
OJC				eSg	Sg	21 41 12.4	+1.0
OJC	Ojcow	0.58	94	ePg	Pg	21 41 04.1	+0.3
OJC				eSg	Sg	21 41 12.5	+1.1
OKC	Ostrava-Krasne	0.64	229	ePG	Pg	21 41 04.9	+0.1
OKC				eSG	Sg	21 41 12.8	-0.2
	comp=Z,17nm,0.7s						
NIE	Niedzica	1.25	132	ePg	Pg	21 41 16.5	0.0
NIE				eSg	Sg	21 41 34.2	+1.6
DPC	Dobruska-Polom	1.65	274	ePG	Pg	21 41 21.8	-2.4
DPC				eSG	Sg	21 41 43.6	-1.9
	comp=Z,17nm,0.6s						
KOLL	Kolacno	1.71	191	ePN	Pn	21 41 25.0	+1.4
KOLL				eSN	Sn	21 41 47.2	+1.0
STHS	Stebnicka Huta	1.74	118	ePN	Pn	21 41 25.6	+1.6
STHS				eSN	Sn	21 41 48.5	+1.6
KSP	Ksiaz	1.76	290	ePn	Pn	21 41 25.4	+1.2
KSP				eSg	Sg	21 41 49.2	+0.3
KSP	Ksiaz	1.76	290	ePg	Pg	21 41 25.3	-0.9
KSP				eSg	Sg	21 41 48.4	-0.6
VRAC	Vranov	1.77	238	ePn	Pn	21 41 24.3	-0.1
VRAC				eSg	Sg	21 41 47.2	-2.1
VYHS	Vyhne	1.77	181	ePN	Pn	21 41 23.3	-1.1
VYHS				eSN	Sn	21 41 47.7	+0.2
UPC	Upice	1.86	279	eSG	Sg	21 41 50.4	-1.9
KRUC	Moravsky	2.02	234	ePn	Pn	21 41 27.8	0.0
KRUC				eSg	Sg	21 41 54.5	-2.8
CRVS	Cervenica-Dubn	2.16	128	ePN	Pn	21 41 31.5	+1.8
CRVS				eSN	Sn	21 42 00.6	+3.5
PVCC	Panska Ves	2.78	277	eSG	Sg	21 42 19.2	-2.6
	comp=Z,14nm,0.4s						
PRU	Pruhonice	2.81	266	eSG	Sg	21 42 18.9	-4.0
	comp=Z,4.5nm,0.5s						
BRG	Berggiesshubel	3.21	283	SG	Sg	21 42 34.5	-1.3
	comp=Z,4.5nm,0.6s						
KHC	Kasperske Hory	3.63	254	ePG	Pg	21 41 56.6	-5.5
KHC				eSG	Sg	21 42 46.8	-2.3

*ISCJB **10** 21:42:23.9±0.6, 3859N±003×4089E±005, h10km, Error ellipse: s-maj=6.1km s-min=4.3km az=25.3*
*DDA **10** 21:42:23.8, 3858N×4088E, h9km±3km, Md3.1*
*CSEM **10** 21:42:24.7±0.1, 3867N×4076E, h8km, MD3.1, Error ellipse: s-maj=4.6km s-min=2.5km az=171.0*
*ISK **10** 21:42:25.4, 3871N×4074E, h13km, MD3.1*
ISC 10 21:42:24.0±0.6, **3859N**±003×**4088E**±006, **h6**km±8km, **n12**, σ**1.16**/17, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.42	30	iP	Pg	21 42 32.2	0.0
BNGL				iS	Sg	21 42 39.4	+1.7
BEST	Besiri	0.76	156	iP	Pg	21 42 38.1	-0.6
BEST				iS	Sg	21 42 49.7	+1.1
DIYA	Diyarbakir	0.89	222	iP	Pg	21 42 41.3	+0.1
DIYA				iS	Sg	21 42 53.8	+1.1
PTK	Pertek	1.20	285	ePG	Pg	21 42 46.4	-0.7
SVRC	Sivrice-ELAZID	1.25	261	ePN	Pn	21 42 47.6	-0.5
SVRC				eSN	Sn	21 43 04.7	-0.5
MARD	Mardin	1.27	184	iP	Pn	21 42 47.1	-1.2
MARD				iS	Sg	21 43 05.2	+0.2
EZM	Erzurum	1.37	16	ePN	Pn	21 42 49.7	0.0
AGRB	Hanur-Agry	1.92	58	ePN	Pg	21 42 59.5	-1.3
URFA	Urfa	1.99	235	ePN	Pg	21 42 59.9	-2.2
CUKT	Cukurca	2.54	121	ePN	Pg	21 43 09.2	-3.5
GAZ	Gaziantep	3.23	245	ePN	Pn	21 43 17.2	+2.0
KMRS	Kahramanmaras	3.32	252	ePN	Pn	21 43 18.0	+1.5

*IDC **10** 21:49:31.0±6.0, 132N×9699E, h0km, mb4.1/6, mb1 4.1/8, mb1mx3.8/23, mbtmp4.0/8, ML3.4/2, Error ellipse: s-maj=116.2km s-min=35.4km az=179.0*
*ISCJB **10** 21:49:31.3±6.2, 12N±0.1×970E±0.1, h21km±43km, mb4.0/14, Error ellipse: s-maj=27.3km s-min=10.9km az=146.3*
*BJI **10** 21:49:31.5, 130N×97.10E, h25km, mb4.0*
*NEIC **10** 21:49:35.5±0.5, 127N×9705E, h35km, mb4.0/7, Error ellipse: s-maj=10.9km s-min=6.8km az=49.0*
ISC 10 21:49:31.3±8.5, **12N**±01×**970E**±01, **h6**km±52km, **n29**, σ**0.71**/29, **mb4.0**/14, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.47	51	Pn	Pn	21 50 11.5	-0.6
	1.3nm,0.3s,baz=236,slow=5.5,SNR=24						
PSI	Prapat	2.47	51	Pn	Pn	21 50 11.5	-0.6
KSM	Kuching	13.30	89	Pn	Pn	21 52 40.8	0.0
CM31	Chiang Mai Arr	17.23	6	ePn	Pn	21 53 34.1	+1.4
CMAR	Chiang Mai Arr	17.23	6	P	Pn	21 53 31.4	-1.3
	0.2nm,0.3s,baz=199,slow=11,SNR=17						
KMI	Kunming	24.39	13	P	P	21 54 51.5	+1.0
KMI				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.0						
LSA	Lhasa	28.86	349	eP	P	21 55 31.6	+0.8
	comp=Z,1.7nm,0.5s,mb4.0						
DAV	Davao City (W)	29.07	78	P	P	21 55 33.1	+0.2
MBWA	Marble Bar	31.45	136	eP	P	21 55 54.9	+1.1
FITZ	Fitzroy Crossi	34.10	126	eP	P	21 56 15.8	-1.2
	comp=Z,1.2nm,0.7s,mb3.9						
GTA	Gaotai	38.09	4	eP	P	21 56 51.1	+0.2
GTA				AP	pP	21 56 55.3	+2.6
GTA				XP	sP	21 56 58.7	+5.2
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb3.9						
WRAB	Tennant Creek	42.22	122	eP	P	21 57 25.3	-0.2
	comp=Z,1.9nm,0.8s,mb3.8						
TKM2	Tokmak 2	45.72	338	eP	P	21 57 52.9	-0.3
KSRS	Korea Array	45.93	35	P	P	21 57 54.6	-0.5
	comp=Z,3.3nm,1.0s,mb4.2,baz=226,slow=9.2,SNR=8.0						
EKS2	Erkin-Say	46.21	336	P	P	21 57 58.4	+1.3
SONM	Songino Array	47.13	9	P	P	21 58 04.3	0.0
	comp=Z,1.9nm,0.8s,mb4.1,baz=188,slow=9.5,SNR=16						
MK31	Makanchi Array	47.17	346	eP	P	21 58 04.4	-0.1
MKAR	Makanchi Array	47.17	346	P	P	21 58 04.8	+0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=159,slow=9.1,SNR=16						
ULN	Ulaanbaatar	47.26	9	eP	P	21 58 05.3	0.0
	comp=Z,1.4nm,0.7s,mb4.0						
KURK	Kurchatov	51.72	345	P	P	21 58 39.0	-0.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=160,slow=6.6,SNR=10						
KURK	Kurchatov	51.72	345	eP	P	21 58 39.0	-0.2
	comp=Z,1.1nm,0.6s,mb4.0						
MDJ	Mudanjiang	51.94	29	eP	P	21 58 40.9	-0.1
ZAA0	Zalesovo Array	53.50	351	eP	P	21 58 52.5	+0.1
ZALV	Zalesovo Beam	53.50	351	P	P	21 58 52.4	0.0
	comp=Z,4.4nm,0.6s,mb4.6,baz=179,slow=7.4,SNR=20						
STKA	Stephens Creek	53.52	132	eP	P	21 58 53.6	+0.6
	comp=Z,0.3nm,0.7s,mb3.3						
BVAR	Borovoye Array	56.16	341	P	P	21 59 11.3	-0.4
	comp=Z,1.7nm,0.7s,mb4.2,baz=143,slow=9.2,SNR=10						
BRVK	Borovoye	56.22	341	eP	P	21 59 11.5	-0.6
	comp=Z,1.0nm,0.6s,mb4.0						
KIV	Kislovodsk	64.16	319	P	P	22 00 05.4	-1.4
LSZ	Lusaka	69.94	253	P	P	22 00 44.1	0.0

*ISCJB **10** 21:50:06.3±0.4, 3875N±001×2775E±002, h11km±2km, mb3.7/9, Error ellipse: s-maj=2.4km s-min=2.1km az=167.4*
*NEIC **10** 21:50:06.4, 3877N×2771E, h14km, ML3.8(ATH), ML4.1(ISK), After ISK.*
*CSEM **10** 21:50:06.5±0.0, 3876N×2772E, h15km, MD4.0, Error ellipse: s-maj=1.0km s-min=0.9km az=175.0*
*DDA **10** 21:50:06.2, 3878N×2774E, h21km±1km, Md4.0*
*THE **10** 21:50:06.4, 3867N×2784E, h6km±1km, ML4.6/5, Error ellipse: s-maj=2.2km s-min=0.8km az=120.0*
*ISK **10** 21:50:06.4, 3877N×2771E, h14km, ML4.2*
*ATH **10** 21:50:08.0, 3874N×2768E, h77km±4km, ML3.8*
*IDC **10** 21:50:10.8±2.0, 3845N×2797E, h35km±19km, mb3.5/7, mb1 3.7/14, mb1mx3.6/30, mbtmp3.6/14, ML3.5/6, MS3.1/2, Ms1 3.1/2, ms1mx2.5/40, Error ellipse: s-maj=13.8km s-min=11.3km az=149.0*
*BEO **10** 21:50:14.7±3.4, 39.16N×2780E, ML3.9/2*
*HLW **10** 21:50:27.0, 3709N×2759E, h33km, Mb3.4*
ISC 10 21:50:06.9±0.3, **3874N**±001×**2776E**±002, **h8**km±2km, **n188**, σ**0.96**/225, **mb3.7**/9, **17C-17D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.15	16⇑	iP	Pg	21 50 10.5	+0.5
AKHS				iS	Sg	21 50 13.2	+1.0
AKS	Akhisar	0.15	16	PG	Pg	21 50 10.5	+0.4
KDAG	Bornova	0.51	229⇑	iP	Pg	21 50 17.1	+0.3
KDAG				iS	Sg	21 50 24.3	+0.9
BLCB	Balcova	0.66	238	PG	Pg	21 50 19.4	-0.2
BLCB				eSG	Sg	21 50 29.1	+0.8
BLCB	Balcova	0.66	238	P	Pg	21 50 19.7	0.0
BLCB				eSg	Sg	21 50 29.1	+0.8
BLCB				S	Sg	21 50 30.0	+1.7
MANT	Manisa	0.67	111⇓	iP	Pg	21 50 20.9	+1.2
MANT				iS	Sg	21 50 30.1	+1.6
KULA	Kula-Manisa	0.74	107	ePG	Pg	21 50 22.2	+1.1
BALB	Balikesir	0.91	6	ePG	Pg	21 50 23.7	-0.6
URLA	Izmir	0.99	248⇑	iP	Pg	21 50 25.5	-0.4
URLA				iS	Sg	21 50 39.0	+0.4
BALY	Balya	1.01	354⇑	iP	Pg	21 50 25.5	-0.7
BALY				iS	Sg	21 50 38.3	-1.1
AYVA	Ayvalik	1.01	305⇓	iP	Pg	21 50 26.0	-0.3
AYVA				iS	Sg	21 50 39.3	-0.1
GCAM	G?zelcaml?	1.11	202⇑	iP	Pg	21 50 27.6	-0.7
SMG	Samos	1.26	216	eP	Pn	21 50 30.9	+0.2
SMG	Samos	1.26	216	eP	Pn	21 50 31.0	+0.3
PRK	Paraskevi	1.27	294	eP	Pn	21 50 30.0	-0.9
PRK	Paraskevi	1.27	294	eP	Pn	21 50 30.2	-0.7
PRK				S	Sb	21 50 48.0	+0.5
CHOS	Chios island	1.38	256	P	Pn	21 50 31.7	-0.7
CHOS				S	Sb	21 50 50.8	+0.1
GDZ	Gediz	1.39	75	iP	Pn	21 50 32.1	-0.4
GDZ				iS	Sb	21 50 51.4	+0.5
DENT	Denizli	1.40	134	ePN	Pn	21 50 32.6	-0.1
KHAL	Karahalli	1.41	105⇓	iP	Pn	21 50 33.0	+0.2
KHAL				iS	Sb	21 50 50.8	-0.6
MLSB	Milas	1.44	180	ePN	Pn	21 50 32.9	-0.3
KHL	Karahalli	1.44	106	ePN	Pn	21 50 33.6	+0.4
EZN	Ezine	1.56	315	ePN	Pn	21 50 34.2	-0.7
EDC	Edincik	1.61	3	ePN	Pn	21 50 34.2	-1.4
EDC	Edincik	1.61	3	Pn	Pn	21 50 34.8	-0.8
EDC	Edincik	1.61	3	Pn	Pn	21 50 34.8	-0.8
BNT	Bandirma	1.62	4	ePN	Pn	21 50 34.7	-1.0
YER	Yerkesik	1.65	165	ePN	Pn	21 50 37.2	+1.1
YER	Yerkesik	1.65	165	Pn	Pn	21 50 36.9	+0.8
YER	Yerkesik	1.65	165	Pn	Pn	21 50 36.9	+0.8
BDRM	Kayabasi	1.69	189⇑	iP	Pn	21 50 35.6	-1.0
BODT	Bodrum	1.71	192	ePN	Pn	21 50 36.0	-0.9
LPK	Lapseki	1.81	335	ePN	Pn	21 50 37.8	-0.6
ALT	Altintas	1.86	79	ePN	Pn	21 50 39.1	+0.1
MRMT	Marmara Adasi	1.87	356	ePN	Pn	21 50 38.3	-0.9
TURN	Turunc	1.98	160	iP	Pn	21 50 40.3	-0.3
RKY	Sarkoy-Tekirda	2.00	347	ePN	Pn	21 50 40.3	-0.7
SART	Tekirdag	2.00	347	iP	Pn	21 50 40.1	-0.9
SART				iS	Sn	21 51 00.4	-5.8
DAT	Datca	2.01	184	ePN	Pn	21 50 41.6	+0.5
GEMT	Gemlik	2.02	33	ePN	Pn	21 50 40.7	-0.6
GEMT	Gemlik	2.02	33	Pn	Pn	21 50 41.6	+0.3
GADA	Gvkgeada	2.05	316	ePN	Pn	21 50 39.9	-1.7
GADA	Gvkgeada	2.05	316	Pn	Pn	21 50 40.7	-0.9
GADA	Gvkgeada	2.05	316	Pn	Pn	21 50 40.6	-0.9
GOLH	Golhisar	2.06	136⇓	iP	Pn	21 50 42.7	+0.9
GOLH				iS	Sg	21 51 13.8	+0.6
CAVI	Cavuskoy	2.18	47	ePN	Pn	21 50 43.1	-0.3
SHUT	Suhut-Afyon	2.19	94	ePN	Pn	21 50 43.7	+0.1
YLV	Yalova	2.21	34	ePN	Pn	21 50 43.8	0.0
TKR	Tekirdag	2.26	356	ePN	Pn	21 50 44.2	-0.3
ADVT	Abdulvahap	2.28	41	ePN	Pn	21 50 44.4	-0.4
LIA	Limnos Island	2.31	301	P	Pn	21 50 44.6	-0.6
LIA				S	Sn	21 51 15.6	+1.7
LIA	Limnos Island	2.31	301	eP	Pn	21 50 44.8	-0.4
ENEZ	Enez	2.35	329	ePN	Pn	21 50 45.4	-0.3
BORA	Eskisehir	2.38	60	iP	Pn	21 50 45.6	-0.5
BORA				iS	Sn	21 51 17.2	+1.7
CRLT	Corlu	2.39	360	ePN	Pn	21 50 46.2	-0.1
APE	Apeiranthos	2.42	227	P	Pn	21 50 45.5	-1.3
APE				S	Sn	21 51 15.7	-0.9
APE	Apeiranthos	2.42	227	eP	Pn	21 50 46.2	-0.6
APE	Apeiranthos	2.42	227	eP	Pn	21 50 45.6	-1.2
APE				S	Sn	21 51 15.7	-0.9
APE	Apeiranthos	2.42	227⇑	iP	Pn	21 50 45.4	-1.4
CTT	Catalca	2.46	12	ePN	Pn	21 50 46.5	-0.8
CTT	Catalca	2.46	12	Pn	Pn	21 50 47.0	-0.3
CTT	Catalca	2.46	12	Pn	Pn	21 50 47.0	-0.3
ELBA	Catalca	2.46	12	iP	Pn	21 50 45.6	-1.7
BOLV	Bolvadin	2.49	89⇓	iP	Pn	21 50 48.5	+0.8
GPA	Golpazari	2.51	51	ePN	Pn	21 50 48.6	+0.7
SLVT	Silivri	2.52	8	ePN	Pn	21 50 47.5	-0.6
ESKT	Eskisehir	2.53	71	ePN	Pn	21 50 48.7	+0.5
ESKT	Eskisehir	2.53	71	iP	Pn	21 50 48.4	+0.2
SEYT	Eskypehyr	2.53	71	iP	Pn	21 50 48.4	+0.2
ALN	Alexandroupoli	2.53	329	P	Pn	21 50 47.6	-0.6
ALN				S	Sn	21 51 20.7	+1.5
ARG	Arkhangelos	2.53	173	eP	Pn	21 50 48.8	+0.5
ISK	Istanbul-Kandi	2.53	23	ePN	Pn	21 50 47.2	-1.1
ISK	Istanbul-Kandi	2.53	23	Pn	Pn	21 50 47.0	-1.2
HRT	Hereke	2.55	35	ePN	Pn	21 50 49.2	+0.7
CTKS	Kestanelik-??a	2.56	13	ePN	Pn	21 50 48.0	-0.6
BGKT	Bogazkoy	2.56	17	ePN	Pn	21 50 48.8	+0.1
BCK	Bucak	2.57	119	ePN	Pn	21 50 49.7	+0.9
EYL	Eskiyayla	2.60	45	ePN	Pn	21 50 49.8	+0.6
EYL	Eskiyayla	2.60	45	Pn	Pn	21 50 49.7	+0.5
ELL	Elmali	2.61	139	ePN	Pn	21 50 50.4	+1.0
KLYT	Kilyos	2.70	21	ePN	Pn	21 50 49.7	-0.9
GULT	Gulveren	2.72	51	ePN	Pn	21 50 51.2	+0.4
GULT	Gulveren	2.72	51	Pn	Pn	21 50 51.1	+0.3
GULT	Gulveren	2.72	51	Pn	Pn	21 50 51.1	+0.2
CTYL	Yal??k??y-??at	2.77	8	ePN	Pn	21 50 50.5	-1.0
SILT	Sile	2.81	30	ePN	Pn	21 50 52.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANTB	**Antalya**	**2.93**	**128**	*e*PN	**Pn**	**21 50 54.9**	**+1.1**
RDO	**Rodhopi**	**2.95**	**325**	*e*P	**Pn**	**21 50 53.8**	**-0.2**
MDU	**Mudurnu**	**3.18**	**56**	*e*PN	**Pn**	**21 50 58.1**	**+1.0**
EDRB	**Edirne**	**3.20**	**346**	*e*PN	**Pn**	**21 50 56.9**	**-0.6**
KARP	**Karpathos**	**3.22**	**189**	*e*P	**Pn**	**21 50 57.8**	**+0.1**
KIZT	**Kizilcal**	**3.22**	**86**	*e*PN	**Pn**	**21 50 58.6**	**+0.8**
ATH	**Athens Observa**	**3.27**	**258**	*e*P	**Pn**	**21 50 58.0**	**-0.4**
OUR	**Ouranopolis**	**3.33**	**300**	P	**Pn**	**21 50 59.0**	**-0.2**
PAIG	**Paliouri**	**3.38**	**292**	P	**Pn**	**21 50 59.4**	**-0.5**
PAIG				S	**Sn**	**21 51 41.2**	**+1.0**
NEO	**Neokhori**	**3.58**	**281**	P	**Pn**	**21 51 04.5**	**+1.8**
PLG	**Polygyros**	**3.71**	**297**	P	**Pn**	**21 51 04.9**	**+0.4**
PLG	**Polygyros**	**3.71**	**297**	*e*P	**Pn**	**21 51 04.0**	**-0.5**
LKR	**Lokris**	**3.73**	**270**	P	**Pn**	**21 51 05.4**	**+0.7**
DID	**Didima**	**3.77**	**252**	P	**Pn**	**21 51 04.3**	**-1.0**
DID				S	**Sn**	**21 51 50.2**	**+0.3**
KDZE	**Karadeniz Ereo**	**3.82**	**47**	*e*PN	**Pn**	**21 51 07.0**	**+1.0**
JMB	**Yambol**	**3.83**	**347**	P	**Pn**	**21 51 06.4**	**+0.3**
JMB				S	**Sn**	**21 51 52.1**	**+0.7**
LTK	**Loutraki**	**3.83**	**261**	P	**Pn**	**21 51 05.8**	**-0.4**
NPS	**Neapolis**	**3.87**	**207**	*e*P	**Pn**	**21 51 06.3**	**-0.4**
NVR	**Nevrokopi**	**3.97**	**312**	*e*P	**Pn**	**21 51 08.2**	**+0.2**
SOH	**Sokhos**	**3.98**	**303**	P	**Pn**	**21 51 07.9**	**-0.3**
SOH				S	**Sn**	**21 51 57.0**	**+1.9**
PLD	**Plovdiv**	**4.09**	**326**	P	**Pn**	**21 51 09.8**	**+0.1**
IDI	**Anoyia**	**4.14**	**215**	Pn	**Pn**	**21 51 09.5**	**-0.8**
	2.5nm,0.3s,baz=36,slow=15,SNR=16						
IDI				Sn	**Sn**	**21 51 55.1**	**-3.8**
	3.4nm,0.3s,baz=288,slow=20,SNR=3.3						
IDI				Lg		21 52 23.0	
	6.3nm,0.3s,baz=321,slow=15,SNR=3.7						
IDI	**Anoyia**	**4.14**	**215**	Pn	**Pn**	**21 51 09.5**	**-0.8**
IDI				Sn	**Sn**	**21 51 55.1**	**-3.8**
AGG	**Agios Georgios**	**4.25**	**276**	P	**Pn**	**21 51 11.7**	**-0.1**
KNT	**Kendrikon**	**4.45**	**304**	P	**Pn**	**21 51 15.4**	**+0.7**
BR131	**Keskin Array S**	**4.67**	**76**	*e*Pn	**Pn**	**21 51 18.4**	**+0.8**
BR131	**Keskin Array S**	**4.67**	**76**	*e*Pg	**Pg**	**21 51 36.2**	**-0.1**
BR131	**Keskin Array S**	**4.67**	**76**	*e*Pn	**Pn**	**21 51 18.4**	**+0.8**
BR131				*e*Pg	**Pg**	**21 51 36.2**	**-0.1**
BR131				Sn	**Sn**	**21 52 16.5**	**+4.5**
BR131				*e*Sg	**Sg**	**21 52 42.5**	**+5.7**
BRTR	**Keskin Array B**	**4.67**	**76**	Pn	**Pn**	**21 51 18.8**	**+1.1**
	1.7nm,0.3s,baz=253,slow=15,SNR=49						
BRTR				Pg	**Pg**	**21 51 35.7**	**-0.6**
	2.5nm,0.3s,baz=252,slow=17,SNR=34						
BRTR				Lg		21 52 38.8	
	0.4nm,0.3s,baz=262,slow=28,SNR=6.4						
BRTR	**Keskin Array B**	**4.67**	**76**	Pg	**Pg**	**21 51 35.7**	**-0.6**
GRG	**Griva**	**4.68**	**300**	P	**Pn**	**21 51 18.7**	**+0.9**
GRG				S	**Sn**	**21 52 14.2**	**+1.9**
VAY	**Valandovo**	**4.75**	**305**	*e*Pn	**Pn**	**21 51 18.4**	**-0.3**
VAY	**Valandovo**	**4.75**	**305**	*e*Pn	**Pn**	**21 51 18.5**	**-0.2**
VAY				*e*Sn	**Sg**	**21 52 33.7**	**-5.6**
ITM	**Ithomi**	**4.87**	**253**	P	**Pn**	**21 51 21.5**	**+1.2**
VTS	**Vitosha**	**5.18**	**319**	*e*Pn	**Pn**	**21 51 23.5**	**-1.1**
VTS				*e*Sg	**Sg**	**21 52 50.1**	**-3.0**
VTS	**Vitosha**	**5.18**	**319**	⇓P	**Pn**	**21 51 24.0**	**-0.6**
VTS				*e*Sg	**Sg**	**21 52 50.1**	**-3.0**
VTS	**Vitosha**	**5.18**	**319**	⇓*i*P	**Pn**	**21 51 24.0**	**-0.6**
VTS	**Vitosha**	**5.18**	**319**	⇓P	**Pn**	**21 51 24.0**	**-0.6**
STIP	**Stip**	**5.19**	**306**	*e*Pn	**Pn**	**21 51 27.0**	**+2.2**
BIA	**Bitola**	**5.45**	**297**	*e*Pn	**Pn**	**21 51 30.7**	**+2.3**
BIA	**Bitola**	**5.45**	**297**	*e*Pn	**Pn**	**21 51 30.8**	**+2.4**
KRUS	**Krusevo**	**5.65**	**300**	*e*Pn	**Pn**	**21 51 30.2**	**-0.8**
KRUS	**Krusevo**	**5.65**	**300**	*e*Pn	**Pn**	**21 51 30.3**	**-0.8**
TIRR	**Tirgusor**	**5.74**	**5**	⇓*i*P	**Pn**	**21 51 31.3**	**-1.0**
TIRR	**Tirgusor**	**5.74**	**5**	⇓P	**Pn**	**21 51 31.3**	**-1.0**
SKO	**Skopje**	**5.81**	**306**	*e*Pn	**Pn**	**21 51 35.9**	**+2.6**
SKO	**Skopje**	**5.81**	**306**	*e*Pn	**Pn**	**21 51 36.0**	**+2.7**
BARS	**Barje**	**6.08**	**314**	*e*Pn	**Pn**	**21 51 37.5**	**+0.5**
BARS				*e*Sg	**Sg**	**21 53 19.2**	**-2.8**
TLCR		**6.49**	**7**	⇑*i*P	**Pn**	**21 51 42.1**	**-0.6**
TLCR		**6.49**	**7**	⇑P	**Pn**	**21 51 42.1**	**-0.5**
BOLS	**Boljevac**	**6.71**	**321**	*e*Pn	**Pn**	**21 51 44.5**	**-1.1**
MLR	**Muntele Rosu**	**6.88**	**349**	Pn	**Pn**	**21 51 48.7**	**+0.6**
	0.5nm,0.3s,baz=181,slow=5.5,SNR=6.2						
MLR				LR	LR	21 54 26.9	
	comp=Z,65nm,18.6s,baz=178,slow=36						
MLR	**Muntele Rosu**	**6.88**	**349**	⇑*i*P	**Pn**	**21 51 48.4**	**+0.4**
MLR	**Muntele Rosu**	**6.88**	**349**	⇑P	**Pn**	**21 51 48.4**	**+0.4**
VOIR		**6.99**	**344**	⇑*i*P	**Pn**	**21 51 50.0**	**+0.5**
VOIR		**6.99**	**344**	⇑P	**Pn**	**21 51 50.0**	**+0.5**
ODB	**Odobesti**	**7.05**	**356**	⇑*i*P	**Pn**	**21 51 51.1**	**+0.7**
ODB	**Odobesti**	**7.05**	**356**	⇑P	**Pn**	**21 51 51.1**	**+0.7**
PLOR	**Plostina**	**7.16**	**354**	⇓*i*P	**Pn**	**21 51 51.5**	**-0.3**
VRI	**Vrincioaia**	**7.17**	**354**	⇓*i*P	**Pn**	**21 51 52.5**	**+0.6**
VRI	**Vrincioaia**	**7.17**	**354**	⇓P	**Pn**	**21 51 52.5**	**+0.6**
GZR	**Gura Zlata**	**7.61**	**332**	⇓*i*P	**Pn**	**21 51 57.4**	**-0.6**
GZR	**Gura Zlata**	**7.61**	**332**	⇓P	**Pn**	**21 51 57.4**	**-0.6**
HMAT	**Matruh**	**7.64**	**184**	P	**Pn**	**21 51 53.9**	**-4.6**
BZS	**Buzias**	**8.25**	**328**	*e*Pn	**Pn**	**21 52 05.4**	**-1.4**
BZS	**Buzias**	**8.25**	**328**	⇓*i*P	**Pn**	**21 52 05.4**	**-1.4**
BZS	**Buzias**	**8.25**	**328**	⇓P	**Pn**	**21 52 05.4**	**-1.4**
MMAI	**Mount Meron Ar**	**8.43**	**130**	Pn	**Pn**	**21 52 07.1**	**-2.2**
	2.6nm,0.3s,baz=308,slow=13,SNR=13						
MMAI				Sn	**Sn**	**21 53 38.5**	**-6.0**
	0.5nm,0.3s,baz=244,slow=43,SNR=2.1						
BURAR	**Bucovina Array**	**9.07**	**349**	⇑*i*P	**Pn**	**21 52 18.8**	**+0.8**
BURAR	**Bucovina Array**	**9.07**	**349**	⇑P	**Pn**	**21 52 18.8**	**+0.9**
BUR08	**Bucovina Ar. S**	**9.10**	**349**	*e*Pn	**Pn**	**21 52 19.3**	**+0.9**
HSAF	**As Saff**	**9.62**	**160**	P	**Pn**	**21 52 23.8**	**-1.8**
SWA2		**9.66**	**192**	P	**Pn**	**21 52 22.0**	**-4.2**
SWA2				S	Sx	21 53 45.8	
GLL	**Jalalah**	**9.70**	**159**	P	**Pn**	**21 52 25.3**	**-1.5**
SUZ		**9.81**	**153**	P	**Pn**	**21 52 27.7**	**-0.5**
EIL	**Elat**	**10.82**	**145**	Pn	**Pn**	**21 52 39.6**	**-2.5**
	0.4nm,0.3s,baz=302,slow=9.5,SNR=5.3						
EIL				Sn	**Sn**	**21 54 36.5**	**-6.8**
	1.2nm,0.3s,baz=108,slow=22,SNR=4.9						
EIL	**Elat**	**10.82**	**145**	Sn	**Sn**	**21 54 36.5**	**-6.9**
HKAT	**Jabal Katrina**	**11.43**	**151**	P	**Pn**	**21 52 50.8**	**+0.4**
TR2		**11.45**	**153**	P	**Pn**	**21 52 50.2**	**-0.5**
HFRF	**Wahat Farafira**	**11.56**	**178**	P	**Pn**	**21 52 48.4**	**-3.9**
AKASG	**Malin Array Be**	**12.01**	**4**	Pn	**Pn**	**21 53 03.7**	**+5.5**
	0.6nm,0.3s,baz=161,slow=12,SNR=2.8						
AKASG				Sn	**Sn**	**21 55 16.0**	**+3.7**
	0.6nm,0.3s,baz=190,slow=26,SNR=4.1						
GERES	**GERESS Array B**	**14.30**	**319**	Pn	**Pn**	**21 53 37.0**	**+7.5**
	baz=121,slow=12,SNR=3.6						
KEST	**Kesra**	**14.97**	**264**	Pn	**Pn**	**21 53 43.5**	**+4.7**
	0.1nm,0.3s,baz=54,slow=2.0,SNR=2.9						
DAVOX	**Davos/Dischmat**	**15.38**	**307**	Pn	**Pn**	**21 53 52.9**	**+8.9**
	0.2nm,0.3s,baz=114,slow=16,SNR=3.3						
CDF	**Champ du Feu**	**17.67**	**310**	*e*P	**Pn**	**21 54 19.6**	**+6.4**
CABF	**La Chapelle**	**17.74**	**303**	*e*P	**Pn**	**21 54 20.9**	**+6.8**
	17nm,0.8s						
MIB	**Mutribah**	**18.44**	**113**	*e*P	**Pn**	**21 54 21.5**	**-1.4**
MIB				AMb	AMB	21 54 23.7	
	comp=Z,21nm,0.7s						
SSF	**Saint Saulge**	**19.56**	**303**	*e*P	**Pn**	**21 54 41.8**	**+5.5**
GRR	**Gorron**	**22.76**	**304**	*e*P	**P**	**21 55 12.1**	**+2.7**
	comp=Z,25nm,1.0s,mb4.3						
HFS	**Hagfors**	**23.19**	**342**	LR	LR	22 05 11.5	
	comp=Z,93nm,19.2s,baz=62,slow=38						
AKTK	**Aktyubinsk**	**24.34**	**51**	P	**P**	**21 55 31.2**	**+6.3**
AKTO	**Aktyubinsk**	**24.34**	**51**	P	**P**	**21 55 31.2**	**+6.3**
	comp=Z,1.1nm,0.6s,mb3.4,baz=263,slow=17,SNR=2.4						
ESDC	**Sonseca Array**	**24.54**	**282**	P	**P**	**21 55 29.0**	**+2.1**
	comp=Z,1.5nm,0.6s,mb3.7,baz=76,slow=10.0,SNR=7.2						
EKA	**Eskdalemuir Ar**	**26.52**	**319**	P	**P**	**21 55 46.9**	**+2.2**
	comp=Z,1.6nm,0.9s,mb3.5,baz=114,slow=16,SNR=3.9						
EKA	**Eskdalemuir Ar**	**26.52**	**319**	P	**P**	**21 55 46.8**	**+2.2**
TORD	**Torodi Ar. Bea**	**34.39**	**229**	P	**P**	**21 56 54.0**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=40,slow=8.4,SNR=6.6						
KURK	**Kurchatov**	**37.36**	**54**	P	**P**	**21 57 18.4**	**-1.3**
	comp=Z,0.5nm,0.4s,mb3.7,baz=276,slow=8.7,SNR=6.0						
MK31	**Makanchi Array**	**40.13**	**60**	*e*P	**P**	**21 57 42.8**	**-0.2**
MK31	**Makanchi Array**	**40.13**	**60**	*e*P	**P**	**21 57 42.8**	**-0.2**
MKAR	**Makanchi Array**	**40.13**	**60**	P	**P**	**21 57 42.9**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.1,baz=267,slow=8.8,SNR=40						
SONM	**Songino Array**	**55.64**	**53**	P	**P**	**21 59 42.8**	**-0.3**
	comp=Z,0.5nm,0.8s,mb3.6,baz=296,slow=7.3,SNR=3.7						
CMAR	**Chiang Mai Arr**	**64.18**	**86**	P	**P**	**22 00 41.3**	**-1.0**
	comp=Z,0.6nm,0.8s,mb3.7,baz=298,slow=8.0,SNR=6.7						

*DJA **10** 22:04:08, 18.73S×176.23E, h20km, mb5.0/9*
*IDC **10** 22:04:22.0±0.5, 15.60S×173.36E, h0km, mb4.6/20, mb1 4.7/20, mb1mx4.7/22, mbtmp4.6/20, MS4.1/13, Ms1 4.1/13, ms1mx4.0/19, Error ellipse: s-maj=17.4km s-min=14.1km az=115.0*

*ISCJB **10** 22:04:23.3±2.9, 15.67S±0.05×173.19E±0.04, h14km±17km, mb4.8/55, MS4.3/24, Error ellipse: s-maj=8.4km s-min=5.1km az=147.8*
*BJI **10** 22:04:24.1, 15.00S×173.10E, h3km, mB5.2, mb5.0, Ms5.2, Msz4.7*
*LDG **10** 22:04:25.8±0.2, 15.19S×172.32E, h10km, Mb4.9/4, Ms4.4/8, Error ellipse: s-maj=19.0km s-min=6.2km az=119.0*
*MOS **10** 22:04:26.1±1.1, 15.68S×173.15E, h33km, mb5.1/19, MS4.6/4, Error ellipse: s-maj=10.8km s-min=10.6km az=88.4*
*NEIC **10** 22:04:27.8±0.2, 15.63S×173.23E, h35km, mb4.9/30, MS4.8/2, Error ellipse: s-maj=10.1km s-min=6.6km az=141.0*
*GCMT **10** 22:04:27.8±0.2, 15.50S×173.21E, h12km, MW5.0/73, Moment Tensor Solution. s40,c50; s73,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.96±.11; $M_{\theta\theta}$0.56±.12; $M_{\phi\phi}$3.40±.10; $M_{r\theta}$-0.06±.34; $M_{\theta\phi}$-2.29±.09; $M_{\phi r}$-0.23±.29; Best double couple: $M_0$4.32500×10^{16} NP1:ϕ_s148.00000°,δ44.00000°,λ-94.00000°. NP2: ϕ_s334.00000°,δ46.00000°,λ-86.00000°. Principal axes: T 4.6780, Plg1.0000°, Azm61.0000°; N -0.7060, Plg3.0000°, Azm151.0000°; P -3.9710, Plg87.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 10 22:04:25.7±3.3**, 15.64S**±0.05×**173.24E**±0.04**, h18**km±20km**, h15**km±1.6km**:pP-P, n455, σ0.55**/362**, mb4.8**/55**, MS4.3**/24**, 121C-125D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.07**	**224**	*e*Pn	**Pn**	**22 06 35.7**	**0.0**
	30nm,0.9s						
DZM				*e*Sn	**Sn**	**22 08 18.4**	**+1.1**
FUNA	**Funafuti**	**9.16**	**40**	*e*Pn	**Pn**	**22 06 31.9**	**-5.1**
	683nm,0.4s						
NOUC	**Port Laguerre**	**9.19**	**225**	*e*P	**Pn**	**22 06 38.8**	**+1.5**
AFI	**Afiamalu**	**14.60**	**85**	LR	LR	22 12 05.9	
	comp=Z,2μm,20.7s,baz=250,slow=32						
URZ	**Urewera**	**22.79**	**172**	P	**P**	**22 09 26.6**	**-0.7**
	36nm,0.9s,mb4.8,baz=345,slow=5.3,SNR=8.4						
URZ				LR	LR	22 17 10.9	
	comp=Z,82nm,19.0s,MS3.2,baz=350,slow=34						
EIDS	**Eidsvold**	**22.87**	**241**	*e*P	**P**	**22 09 29.6**	**+1.4**
	33nm,1.1s,mb4.7						
SNZO	**South Karori**	**25.61**	**177**	*e*P	**P**	**22 09 53.5**	**-0.4**
	17nm,0.6s,mb4.8						
CTA	**Charters Tower**	**26.05**	**256**	*e*P	**P**	**22 09 56.5**	**-1.6**
	13nm,0.8s,mb4.5						
CTA	**Charters Tower**	**26.05**	**256**	P	**P**	**22 09 59.1**	**+1.1**
	10nm,0.7s,mb4.5,baz=84,slow=11,SNR=16						
CTA				LR	LR	22 18 38.6	
	comp=Z,574nm,21.0s,MS4.1,baz=88,slow=33						
CTA	**Charters Tower**	**26.05**	**256**	*e*P	**P**	**22 09 56.5**	**-1.6**
CTA				pmax	pmax		
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**26.05**	**256**	*e*P	**P**	**22 09 57.3**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**26.05**	**256**	*e*P	**P**	**22 09 57.3**	**-0.7**
	comp=Z,17nm,0.8s,mb4.6						
PMG	**Port Moresby**	**26.18**	**281**	*i* P	**P**	**22 09 59.8**	**+0.4**
PMG	**Port Moresby**	**26.18**	**281**	*e*P	**P**	**22 09 59.2**	**-0.1**
RAR	**Rarotonga**	**26.18**	**106**	LR	LR	22 18 21.6	
	comp=Z,471nm,21.4s,MS4.0,baz=191,slow=32						
RAR	**Rarotonga**	**26.18**	**106**	P	**P**	**22 09 59.7**	**+0.4**
RPZ	**Rata Peaks**	**28.05**	**183**	P	**P**	**22 10 16.7**	**+0.9**
	comp=Z,9.8nm,0.7s,mb4.5,baz=258,slow=3.5,SNR=3.1						
RPZ				LR	LR	22 19 53.0	
	comp=Z,752nm,18.5s,MS4.3,baz=0.8,slow=33						
COEN	**Coen**	**29.10**	**269**	P	**P**	**22 10 24.2**	**-1.3**
STKA	**Stephens Creek**	**33.01**	**235**	*e*P	**P**	**22 11 00.5**	**+0.7**
	comp=Z,12nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**33.01**	**235**	P	**P**	**22 11 00.9**	**+1.1**
	comp=Z,7.2nm,0.7s,mb4.7,baz=59,slow=7.8,SNR=17						
STKA				PcP	PcP	22 13 42.9	-0.6
	comp=Z,3.3nm,0.8s,baz=318,slow=6.0,SNR=4.6						
STKA				LR	LR	22 23 30.9	
	comp=Z,603nm,18.3s,MS4.3,baz=38,slow=35						
MOO	**Moorlands**	**34.83**	**215**	*e*P	**P**	**22 11 14.9**	**-0.6**
PPT	**Papeete**	**35.66**	**98**	*e*S	**S**	**22 16 59.8**	**+1.1**
	comp=Z,157nm,26.0s						
PPT				*e*LR	LR	22 21 12.2	
	comp=Z,1μm,29.2s						
PPT	**Papeete**	**35.66**	**98**	LR	LR	22 23 01.5	
	comp=Z,75nm,21.2s,MS3.4,baz=16,slow=32						
WB2	**Warramunga Arr**	**37.22**	**258**	*e*P	**P**	**22 11 34.6**	**-1.6**
WRAB	**Tennant Creek**	**37.22**	**258**	*e*P	**P**	**22 11 35.6**	**-0.6**
WRAB						22 13 55.9	
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**37.22**	**258**	*e*P	**P**	**22 11 35.6**	**-0.6**
	comp=Z,15nm,1.0s,mb4.8						
WRAB				PcP	PcP	22 13 55.9	-0.1
KAKA	**Kakadu**	**39.62**	**269**	*e*P	x	22 11 37.1	
	comp=Z,9.5nm,0.6s						
GUMO	**Guam**	**40.38**	**315**	P	**P**	**22 12 03.2**	**+0.5**
FORT	**Forrest**	**43.87**	**242**	*e*P	**P**	**22 12 32.4**	**+1.3**
	comp=Z,18nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**45.52**	**260**	*e*P	**P**	**22 12 44.5**	**0.0**
	comp=Z,16nm,0.9s,mb5.0						
TAOE	**Nuku Hiva Isla**	**45.98**	**87**	*e*LR	LR	22 25 49.6	
	comp=Z,4μm,28.6s						
BATI	**Baumata**	**48.53**	**270**	P	**P**	**22 13 09.5**	**+1.5**
	comp=Z,9.8nm,0.5s,mb5.1,baz=84,slow=9.2,SNR=3.3						
RKT	**Rikitea**	**49.22**	**107**	*e*LR	LR	22 27 29.9	
	comp=Z,776nm,26.2s						
MBWA	**Marble Bar**	**50.88**	**255**	*e*P	**P**	**22 13 25.2**	**-0.6**
	comp=Z,30nm,1.2s,mb5.1						
NWAO	**Narrogin (SRO)**	**53.27**	**240**	*e*P	**P**	**22 13 43.2**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,15nm,0.9s						
NWAO	**Narrogin (SRO)**	**53.27**	**240**	*e*P	**P**	**22 13 43.2**	**-0.4**
	comp=Z,15nm,0.9s,mb4.9						
KAPI	**Kappang**	**53.53**	**275**	P	**P**	**22 13 45.4**	**-0.3**
	comp=Z,3.2nm,0.4s,mb4.7,baz=65,slow=7.0,SNR=5.4						
KAPI	**Kappang**	**53.53**	**275**	*e*P	**P**	**22 13 46.3**	**+0.7**
	comp=Z,13nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**61.54**	**328**	P	**P**	**22 14 40.8**	**-0.8**
	comp=Z,7.9nm,0.9s,mb4.9,baz=161,slow=7.0,SNR=17						
MAJO	**Matsushiro**	**61.54**	**328**	*e*P	**P**	**22 14 41.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.1						
MAJO	**Matsushiro**	**61.54**	**328**	*e*P	**P**	**22 14 41.2**	**-0.4**
	comp=Z,17nm,1.0s,mb5.1						
MAT	**Matsushiro**	**61.54**	**328**	P	**P**	**22 14 40.8**	**-0.8**
VNDA	**Vanda**	**62.16**	**183**	P	**P**	**22 14 44.1**	**-1.2**
	comp=Z,0.8nm,0.6s,mb4.0,baz=359,slow=6.2,SNR=4.7						
VNDA				LR	LR	22 36 13.6	
	comp=Z,318nm,21.9s,MS4.4,baz=16,slow=31						
VNDA	**Vanda**	**62.16**	**183**	*e*P	**P**	**22 14 44.4**	**-0.9**
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VNDA	**Vanda**	**62.16**	**183**	*e*P	**P**	**22 14 44.4**	**-1.0**
	comp=Z,3.4nm,1.1s,mb4.4						
VNDA				LR	LR	22 36 13.6	
SBA	**Scott Base**	**62.32**	**182**	*e*P	**P**	**22 14 47.0**	**+0.7**
SBA				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
SBA	**Scott Base**	**62.32**	**182**	*e*P	**P**	**22 14 47.0**	**+0.6**
	comp=Z,14nm,1.0s,mb5.1						
KSM	**Kuching**	**64.44**	**279**	P	**P**	**22 15 01.0**	**-0.4**
KSRS	**Korea Array**	**67.85**	**322**	P	**P**	**22 15 22.3**	**-0.6**
	comp=Z,4.1nm,1.0s,mb4.4,baz=142,slow=6.0,SNR=9.8						
KSRS				LR	LR	22 44 38.6	
	comp=Z,42nm,18.2s,MS3.7,baz=90,slow=36						
PETK	**Petropavlovsk-**	**69.76**	**350**	P	**P**	**22 15 33.4**	**-1.0**
	comp=Z,8.3nm,0.8s,mb4.7,baz=144,slow=10,SNR=8.7						
PETK				LR	LR	22 39 08.9	
	comp=Z,130nm,20.5s,MS4.2,baz=159,slow=30						
NJ2	**Nanjing**	**70.43**	**313**	*e*P	**P**	**22 15 39.4**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
QIZ	**Qiongzhong**	**71.25**	**297**	P	**P**	**22 15 43.7**	**-0.5**
QIZ				S	S	22 25 04.9	+3.7
QIZ				AMB	AMB		
	comp=Z,115nm,3.8s						
QIZ				LR	LR		
	comp=Z,78nm,24.1s,MS3.9						
MDJ	**Mudanjiang**	**71.91**	**329**	P	**P**	**22 15 48.7**	**+1.0**
MDJ				XP	sP	22 15 53.7	-2.3
MDJ				PP	PP	22 18 28.4	+0.6
MDJ				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,50nm,4.2s						
MDJ	**Mudanjiang**	**71.91**	**329**	*e*P	**P**	**22 15 47.0**	**-0.7**
	comp=Z,23nm,1.3s,mb4.9						
WHN	**Wuhan**	**72.90**	**309**	P	**P**	**22 15 54.1**	**+0.2**
CN2	**Changchun**	**73.50**	**326**	*e*P	**P**	**22 15 57.4**	**+0.3**
CN2				*e*AP	pP	22 16 02.1	-1.1
CN2				*e*XP	sP	22 16 04.4	-1.0
CN2				*e*S	S	22 25 26.6	+0.6
CN2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
BJI	**Beijing**	**76.67**	**319**	P	**P**	**22 16 15.6**	**+0.1**
BJI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
BJI				AMB	AMB		
	comp=Z,71nm,6.2s						
GYA	**Guiyang**	**77.01**	**302**	⇑*i*P	**P**	**22 16 17.8**	**0.0**
GYA				PCP	PcP	22 16 28.9	+0.2
GYA				PP	PP	22 19 13.4	+1.9
GYA				S	S	22 26 05.9	+0.2
GYA				SKS		22 26 25.8	
GYA				PS		22 26 47.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,560nm,17.0s,MS5.0						
GYA				LR	LR		
	comp=E,440nm,19.5s,MS5.0						
GYA				LR	LR		
	comp=Z,590nm,17.4s,MS5.0						
XAN	**Xi'an**	**78.61**	**310**	P	**P**	**22 16 26.7**	**+0.2**
XAN				AP	pP	22 16 30.2	-2.4
XAN				PP	PP	22 19 24.8	+0.1
XAN				PPP		22 21 15.9	
XAN				S	S	22 26 25.2	+2.6
XAN				SKS		22 26 36.5	
XAN				PS		22 27 07.3	
XAN				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7						
XAN				LR	LR		
	comp=Z,112nm,28.6s,MS4.0						
KMI	**Kunming**	**79.72**	**300**	P	**P**	**22 16 33.7**	**+0.9**
KMI				PP	PP	22 19 37.4	+3.3
KMI				S	S	22 26 35.3	+0.5
KMI				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.6						
KMI				AMB	AMB		
	comp=Z,85nm,3.1s						
KMI				LR	LR		
	comp=N,109nm,19.0s,MS4.4						
KMI				LR	LR		
	comp=E,104nm,17.1s,MS4.4						
KMI				LR	LR		
	comp=Z,97nm,20.1s,MS4.1						
SEY	**Seymchan**	**80.00**	**350**	*i* P	**P**	**22 16 32.1**	**-1.3**
HIA	**Hailar**	**80.03**	**328**	⇓*e*P	**P**	**22 16 33.7**	**-0.2**
HHC	**Hu-ho-hao-te**	**80.08**	**317**	*e*P	**P**	**22 16 34.4**	**+0.1**
HHC				AP	pP	22 16 38.6	-1.9
HHC				S	S	22 26 37.5	-0.5
HHC				SKS		22 26 46.8	
HHC				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,167nm,3.7s						
HHC				LR	LR		
	comp=N,137nm,26.2s,MS4.6						
HHC				LR	LR		
	comp=E,299nm,23.8s,MS4.6						
HHC				LR	LR		
	comp=Z,130nm,19.0s,MS4.3						
CHRT	**Chiangrai**	**80.34**	**294**	⇓P	**P**	**22 16 37.0**	**+0.8**
	comp=Z,105nm,1.3s,mb5.6						
CMAR	**Chiang Mai Arr**	**80.60**	**292**	P	**P**	**22 16 38.5**	**+0.9**
	comp=Z,15nm,0.9s,mb4.9,baz=120,slow=3.8,SNR=67						
CHG	**Chiang Mai**	**80.72**	**292**	⇓P	**P**	**22 16 39.1**	**+0.8**
	comp=Z,19nm,1.3s,mb4.9						
CHTO	**Chiang Mai**	**80.72**	**292**	*e*P	**P**	**22 16 39.1**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
CHTO	**Chiang Mai**	**80.72**	**292**	*e*P	**P**	**22 16 39.1**	**+0.8**
	comp=Z,19nm,1.1s,mb4.9						
CD2	**Chengdu**	**81.18**	**305**	*e*P	**P**	**22 16 41.4**	**+0.9**
CD2				AP	pP	22 16 45.9	-0.7
CD2				XP	sP	22 16 48.2	-0.6
CD2				PP	PP	22 19 48.8	+2.7
CD2				S	S	22 26 50.0	+0.1
CD2				SKS		22 26 55.2	
CD2				XS	sS	22 26 57.4	-2.6
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CD2				AMB	AMB		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=N,270nm,4.9s						
CD2				LR	LR		
	comp=E,350nm,9.4s						
CD2				LR	LR		
	comp=Z,230nm,5.4s						
CMB	**Columbia Colle**	**81.92**	**47**	*e*P	**P**	**22 16 44.3**	**0.0**
CMB				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CMB	**Columbia Colle**	**81.92**	**47**	*e*P	**P**	**22 16 44.3**	**0.0**
	comp=Z,6.5nm,1.0s,mb4.5						
YBH	**Yreka Blue Hor**	**82.08**	**43**	P	**P**	**22 16 44.3**	**-0.6**
	comp=Z,3.7nm,0.9s,mb4.3,baz=224,slow=4.8,SNR=6.0						
PMR	**Palmer**	**82.55**	**17**	P	**P**	**22 16 49.2**	**+2.2**
MONP	**Monument Peak**	**82.65**	**53**	⇑P	**P**	**22 16 48.6**	**+0.4**
	baz=83						
BEKR	**Beckwourth**	**82.78**	**45**	⇓P	**P**	**22 16 48.9**	**+0.3**
	baz=83						
R06C	**Coleville**	**82.80**	**47**	⇓P	**P**	**22 16 49.7**	**+0.8**
	baz=83						
CWC	**Cottonwood Cre**	**82.88**	**49**	⇑P	**P**	**22 16 49.5**	**+0.2**
	baz=83						
WCN	**Washoe City**	**82.93**	**46**	⇓P	**P**	**22 16 50.1**	**+0.6**
	baz=83						
H03A	**Soap Creek Ran**	**83.15**	**40**	⇓P	**P**	**22 16 50.9**	**+0.4**
	baz=83						
MPMC	**Manual Prospec**	**83.15**	**50**	⇓P	**P**	**22 16 50.8**	**+0.1**
	baz=83						
DAC	**Darwin (Calif)**	**83.16**	**50**	*e*P	**P**	**22 16 43.1**	**-7.7**
DAC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
DAC	**Darwin (Calif)**	**83.16**	**50**	*e*P	**P**	**22 16 43.1**	**-7.7**
	comp=Z,3.2nm,0.6s,mb4.5						
MAW	**Mawson**	**83.17**	**201**	*e*P	**P**	**22 16 48.3**	**-2.0**
	comp=Z,9.1nm,0.9s,mb4.8						
MAW	**Mawson**	**83.17**	**201**	P	**P**	**22 16 49.1**	**-1.2**
	comp=Z,11nm,0.9s,mb4.9,baz=117,slow=7.4,SNR=12						
MAW				LR	LR	22 49 15.3	
	comp=Z,139nm,18.7s,MS4.4,baz=342,slow=32						
MAW	**Mawson**	**83.17**	**201**	*e*P	**P**	**22 16 48.3**	**-2.0**
MAW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LZH	**Lanzhou**	**83.25**	**310**	*e*P	**P**	**22 16 52.0**	**+0.8**
LZH				AP	pP	22 16 55.0	-2.3
LZH				XP	sP	22 16 56.6	-2.9
LZH				PP	PP	22 20 06.3	+3.3
LZH				*e*S	S	22 27 12.0	+1.1
LZH				XS	sS	22 27 15.2	-5.9
LZH				AMB	AMB		
	comp=Z,37nm,1.3s,mb5.2						
LZH				AMB	AMB		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=E,580nm,16.4s						
LZH				LR	LR		
	comp=Z,856nm,18.0s,MS5.2						
O06A	**Flanigan**	**83.27**	**45**	⇓P	**P**	**22 16 51.5**	**+0.3**
	baz=83						
GSC	**Goldstone**	**83.34**	**51**	⇓P	**P**	**22 16 51.4**	**-0.3**
	baz=84						
BELC	**Belle Mtn.**	**83.42**	**52**	⇑P	**P**	**22 16 52.3**	**+0.1**
	baz=84						
HEC	**Hector,Ludlow**	**83.50**	**51**	⇑P	**P**	**22 16 52.3**	**-0.3**
	baz=84						
NVAR	**Mina Array Bea**	**83.57**	**47**	P	**P**	**22 16 52.8**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.5,baz=228,slow=8.8,SNR=10.0						
BILL	**Bilibino**	**83.60**	**357**	P	**P**	**22 16 51.0**	**-1.3**
BILL				pmax	pmax		
	comp=Z,23nm,2.2s,mb4.9						
BILL	**Bilibino**	**83.60**	**357**	*e*P	**P**	**22 16 50.9**	**-1.4**

comp=Z,2.0nm,0.7s,mb4.4
BC3 Big Chuckw Mtn 83.70 53 ⇓P P 22 16 53.7 +0.1
baz=84
K05A Summer Lake 83.73 43 ⇑P P 22 16 54.0 +0.5
baz=84
O07A Toulon 83.92 46 ⇓P P 22 16 55.2 +0.6
baz=84
GLA Glamis 83.95 53 ⇓P P 22 16 54.9 0.0
baz=84
GMRC Granite Mounta 83.99 52 ⇓P P 22 16 54.8 -0.3
baz=84
Q08A Gabbs 84.02 47 ⇓P P 22 16 55.1 +0.1
baz=84
S09A Goldfield 84.04 48 ⇑P P 22 16 55.2 0.0
baz=84
TUQ Turquoise Moun 84.05 51 ⇑P P 22 16 55.4 0.0
baz=84
D03A Wishkah Elem. 84.08 38 ⇑P P 22 16 55.9 +0.7
baz=84
IRM Iron Mountain 84.13 52 ⇓P P 22 16 55.9 +0.1
baz=84
N07B Gerlach 84.13 45 ⇑P P 22 16 56.1 +0.5
baz=84
U10A Ash Meadows, A 84.15 50 ⇓P P 22 16 56.0 +0.2
baz=84
TPH Tonopah 84.19 48 eP P 22 16 55.2 -0.8
M07A Soldier Meadow 84.27 44 ⇑P P 22 16 56.8 +0.5
baz=84
MCK McKinley 84.33 16 P P 22 16 55.3 -0.8
R09A Tonopah 84.36 48 ⇑P P 22 16 56.6 -0.2
baz=84
H05A Madras 84.42 41 ⇓P P 22 16 57.2 +0.2
baz=85
TPNV Topopah Spring 84.43 49 ⇑P P 22 16 57.0 -0.2
baz=85
TPNV Topopah Spring 84.43 49 eP P 22 16 57.3 +0.1
L07A Adell 84.44 44 ⇑P P 22 16 57.1 -0.1
baz=85
Y12C Blythe 84.45 53 ⇑P P 22 16 57.5 0.0
baz=85
J06A Christmas Vall 84.46 42 ⇓P P 22 16 57.2 0.0
baz=85
S10A Tonopah Range, 84.58 48 ⇑P P 22 16 58.3 +0.4
baz=85
G05A Wamic 84.65 40 ⇓P P 22 16 58.5 +0.3
baz=85
113A Mohawk Valley, 84.66 54 ⇑P P 22 16 58.9 +0.4
baz=85
YAK Yakutsk 84.67 341 eP P 22 16 56.6 -1.2
YAK pmax pmax
comp=Z,25nm,0.4s,mb5.7
YAK Yakutsk 84.67 341 eP P 22 16 56.6 -1.2
comp=Z,25nm,0.4s,mb5.7
I06A Prineville 84.74 42 ⇓P P 22 16 59.0 +0.4
baz=85
K07A Rock Creek Ran 84.80 43 ⇓P P 22 16 59.2 +0.2
baz=85
C04A Brinnon 84.85 37 ⇑P P 22 16 59.8 +0.7
baz=85
V12A Nelson 84.97 51 ⇓P P 22 17 00.1 +0.1
baz=85
Y13A Salome 85.01 53 ⇑P P 22 17 00.5 +0.3
baz=85
H06A Lindquist Farm 85.03 41 ⇑P P 22 17 00.1 0.0
baz=85
J07A Hines 85.06 43 ⇑P P 22 17 00.6 +0.3
baz=85
G06A Carlson Farm, 85.07 40 ⇓P P 22 17 00.3 +0.1
baz=85
Q10A Clear Creek Ra 85.09 48 ⇑P P 22 17 00.9 +0.4
baz=85
WVOR Wild Horse Val 85.09 44 eP P 22 17 00.6 +0.2
WVOR pmax pmax
comp=Z,14nm,1.1s,mb5.0
WVOR Wild Horse Val 85.09 44 eP P 22 17 00.6 +0.2
comp=Z,14nm,1.1s,mb5.0
O09A Fish Creek Ran 85.09 46 ⇓P P 22 17 00.6 +0.1
baz=85
L08A Fields 85.17 44 ⇓P P 22 17 01.0 +0.2
baz=85
I07A Izee 85.26 42 ⇓P P 22 17 01.5 +0.2
baz=85
T11A Corn Creek, Al 85.30 49 ⇓P P 22 17 01.6 +0.1
baz=85
X13A Yucca 85.30 52 ⇑P P 22 17 01.4 -0.3
baz=85
M09A Marrel Ranch, 85.45 45 ⇑P P 22 17 02.6 +0.4
baz=86
H07A Lands Inn, Kim 85.45 41 ⇑P P 22 17 02.1 -0.1
baz=86
W13A Hualapai Mount 85.45 52 ⇑P P 22 17 02.5 +0.1
baz=86
R11A Troy Canyon, C 85.48 48 ⇓P P 22 17 01.6 -0.9
baz=86
U12A Valley of Fire 85.48 50 ⇓P P 22 17 02.7 +0.1
baz=86
COLA College 85.53 16 ⇓eP P 22 17 00.2 -1.9
L09A Wilkinson Ranc 85.56 44 ⇑P P 22 17 02.8 0.0
baz=86
J08A Circle Bar Ran 85.60 43 ⇓P P 22 17 03.0 +0.1
baz=86
Q11A Duckwater 85.63 48 ⇓P P 22 17 03.3 +0.1
baz=86
V13A Grand Canyon W 85.67 51 ⇓P P 22 17 03.5 0.0
baz=86
G07A Ruggs Ranch, H 85.69 41 ⇑P P 22 17 03.4 0.0
baz=86
S12A Delamar Landin 85.71 49 ⇑P P 22 17 03.5 -0.2
baz=86
K09A Rome 85.81 44 ⇓P P 22 17 03.9 -0.1
baz=86
U13A Pakoon Wash 85.90 51 ⇓P P 22 17 04.5 -0.1
baz=86
X14A Yava 85.98 53 ⇓P P 22 17 05.3 +0.3
baz=86
J09A Fry Pan Ranch, 86.07 43 ⇓P P 22 17 05.6 +0.3
baz=86
W14A Seligman 86.11 52 ⇓P P 22 17 06.0 +0.3
baz=86
M10A I.L. Ranch, Tu 86.11 45 ⇓P P 22 17 06.1 +0.6
baz=86
O11A Cowboy Ranch, 86.15 47 ⇓P P 22 17 05.9 +0.2
baz=86
G08A Pilot Rock 86.15 41 ⇑P P 22 17 05.6 0.0
baz=86
R12A Pony Springs, 86.17 49 ⇓P P 22 17 06.0 +0.1
baz=86
T13A Saint George 86.18 50 ⇑P P 22 17 06.3 +0.4
baz=86
Y15A Casa Rosa Ranc 86.22 53 ⇑P P 22 17 06.0 -0.3
baz=86
V14A Boquillas Ranc 86.25 52 ⇓P P 22 17 06.5 +0.2
baz=86
ULN Ulaanbaatar 86.33 322 eP P 22 17 06.6 +0.1
ULN pmax pmax
comp=Z,8.0nm,1.3s,mb4.8
ULN Ulaanbaatar 86.33 322 eP P 22 17 06.6 +0.2
comp=Z,8.3nm,1.3s,mb4.8
L10A Juniper Basin 86.39 45 ⇑P P 22 17 07.4 +0.5
baz=86
P12A McGill 86.41 47 ⇓P P 22 17 07.4 +0.4
baz=86
K10A MacKenzie Ranc 86.41 44 ⇑P P 22 17 07.0 0.0
baz=87
S13A Holt Ranch, En 86.43 50 ⇑P P 22 17 07.2 0.0
baz=87
X15A Humboldt 86.48 53 ⇑P P 22 17 07.3 -0.2
baz=87
U14A Mt Trumbull 86.49 51 ⇑P P 22 17 07.9 +0.4
baz=87,SNR=12
F08A Pendleton 86.49 41 ⇓P P 22 17 07.6 +0.3
baz=87
C07A Waterville 86.56 38 ⇓P P 22 17 07.6 0.0
baz=87
R13A O'Grain Ranch, 86.58 49 ⇑P P 22 17 07.7 -0.2
baz=87
M11A Holland Ranch, 86.58 45 ⇑P P 22 17 07.9 +0.1
baz=87
E08A Dider Farm, El 86.62 40 ⇓P P 22 17 08.1 +0.2
baz=87
ELK Elko 86.69 46 P P 22 17 08.5 +0.1
comp=Z,2.9nm,0.9s,mb4.5,baz=252,slow=4.5,SNR=9.2
ELK Elko 86.69 46 eP P 22 17 08.8 +0.4
ELK pmax pmax
comp=Z,6.0nm,1.2s
ELK Elko 86.69 46 eP P 22 17 08.8 +0.4
comp=Z,5.8nm,1.2s,mb4.7
H09A Durkee 86.70 42 ⇓P P 22 17 08.4 +0.1
baz=87
SONM Songino Array 86.71 322 P P 22 17 07.6 -0.7
comp=Z,2.3nm,1.0s,mb4.3,baz=129,slow=2.5,SNR=9.4
O12A Currie 86.84 47 ⇓P P 22 17 09.0 -0.1
baz=87
Q13A Wheeler Ranch, 86.84 48 ⇑P P 22 17 09.0 -0.2
baz=87
Y16A Circle Bar Ran 86.85 54 ⇑P P 22 17 09.2 -0.2
baz=87
N12A Clover Valley, 86.87 46 ⇓P P 22 17 09.6 +0.3
baz=87
B07A Winthrop 86.89 38 ⇑P P 22 17 08.5 -0.6
baz=87
G09A Cove 86.89 41 ⇑P P 22 17 09.5 +0.2
baz=87
L11A Cat Creek Ranc 86.91 45 ⇓P P 22 17 09.7 +0.2
baz=87
D08A Wollman Farm, 86.96 39 ⇑P P 22 17 09.8 +0.2
baz=87
117A Oracle 86.97 55 ⇓P P 22 17 09.0 -1.0
baz=87
K11A Parker Ranch, 86.97 44 ⇑P P 22 17 09.7 0.0
baz=87
A07A Ashnola River, 87.00 37 ⇑P P 22 17 09.9 +0.1
baz=87
V15A Kaibab Nationa 87.02 52 ⇓P P 22 17 10.4 +0.3
baz=87
P13A Bates Ranch, G 87.04 48 ⇑P P 22 17 10.3 +0.2
baz=87,SNR=8.4
X16A Lo Mia Camp, P 87.07 53 ⇓P P 22 17 10.4 0.0
baz=87
U15A North Rim 87.16 51 ⇑P P 22 17 11.3 +0.5
baz=87,SNR=5.8
M12A Wells 87.18 46 ⇑P P 22 17 11.1 +0.3
baz=87
E09A Wood Farm, Sta 87.20 40 ⇓P P 22 17 10.9 +0.1
baz=87
C08A Higginbotham F 87.22 39 ⇓P P 22 17 10.6 -0.2
baz=87
H10A Noah's Angus R 87.26 42 ⇓P P 22 17 11.1 +0.1
baz=87
B08A Colville Reser 87.30 38 ⇓P P 22 17 10.9 -0.3
baz=88
T15A Red Dirt Ranch 87.31 51 ⇓P P 22 17 11.5 0.0
baz=87
218A Dragoon 87.31 56 ⇓P P 22 17 11.4 -0.3
baz=87
G10A Bishop Farm, J 87.32 41 ⇓P P 22 17 10.9 -0.4
baz=88
O13A Hicks Ranch, I 87.33 47 ⇓P P 22 17 11.4 -0.1
baz=88
MFID Camas Ranch 87.37 44 ⇓P P 22 17 11.5 -0.1
baz=88
Q14A Sevier Lake (B 87.39 48 ⇓P P 22 17 11.9 +0.1
baz=88,SNR=8.3
L12A House Creek Ra 87.40 45 ⇑P P 22 17 12.0 +0.2
baz=88
GTA Gaotai 87.50 312 P P 22 17 12.8 +0.4
GTA AP pP 22 17 17.0 -1.6
GTA XP sP 22 17 20.2 -0.6
GTA AMB AMB
comp=Z,11nm,1.3s,mb4.9
WUAZ Wupatki 87.52 52 ⇓P P 22 17 12.4 -0.1
baz=88
F10A Beach Ranch, E 87.54 41 ⇑P P 22 17 12.1 -0.3
baz=88
K12A Draper Farm, C 87.68 45 ⇓P P 22 17 13.6 +0.4
baz=88
M13A Montello 87.68 46 ⇓P P 22 17 13.3 +0.1
baz=88
319A Douglas 87.72 57 ⇓P P 22 17 13.3 -0.3
baz=88
P14A Drum Mountains 87.77 48 ⇑P P 22 17 13.7 0.0
baz=88
J12A Stokes Ranch, 87.79 44 ⇓P P 22 17 14.0 +0.3
baz=88,SNR=7.6
G11A Walters Elk Ra 87.91 42 ⇑P P 22 17 13.6 -0.5
baz=88,SNR=7.1
D10A Wagner Farm, O 87.97 40 ⇓P P 22 17 14.3 -0.1
baz=88
I12A Atlanta 87.99 43 ⇓P P 22 17 14.6 0.0
baz=88
MSU Marysvale 88.01 49 eP P 22 17 16.0 +1.2
L13A Double Diamond 88.11 45 ⇑P P 22 17 15.5 +0.3
baz=88
S16A Weppner Ranch, 88.14 50 ⇓P P 22 17 15.4 0.0
baz=88
N14A Grayback Hills 88.16 47 ⇑P P 22 17 15.3 -0.2
baz=88
F11A Grangeville 88.18 41 ⇓P P 22 17 14.5 -0.9
baz=88
X18A Snowflake 88.26 54 ⇑P P 22 17 15.6 -0.6
baz=88
M14A Sheep Mountain 88.30 46 ⇑P P 22 17 16.4 +0.2
baz=88,SNR=9.4
E11A Bogner Ranch, 88.34 41 ⇓P P 22 17 15.8 -0.4
baz=88
HLID Hailey 88.37 44 ⇑P P 22 17 16.4 -0.1
baz=88
HLID Hailey 88.37 44 eP P 22 17 16.8 +0.3
comp=Z,5.9nm,1.2s,mb4.7
R16A Teasdale 88.43 50 ⇓P P 22 17 16.9 +0.1
baz=89
O15A The Old Anders 88.45 47 ⇑P P 22 17 16.8 -0.1
baz=89
J13A Cove Ranch, Pi 88.47 44 ⇓P P 22 17 17.4 +0.6
baz=89
H12A Diamond D Ranc 88.47 43 ⇓P P 22 17 16.7 -0.2
baz=89,SNR=12
T17A Navajo Res., N 88.47 51 ⇑P P 22 17 17.4 +0.3
baz=89
L14A Malta 88.58 46 ⇑P P 22 17 17.4 0.0
baz=89
Y19A Nutrioso 88.61 54 ⇑P P 22 17 17.1 -0.7
baz=89
W18A Petrified Fore 88.63 53 ⇓P P 22 17 17.6 -0.3
baz=89
A10A Northport 88.64 38 ⇑P P 22 17 17.3 -0.2
baz=89
N15A Stanbury Isla 88.64 47 ⇑P P 22 17 18.0 +0.2
baz=89
V18A Ganado 88.69 52 ⇓P P 22 17 18.1 0.0
baz=89
F12A Elk City 88.70 42 ⇑P P 22 17 17.6 -0.3
baz=89
S17A Black Ridge (B 88.70 50 ⇓P P 22 17 17.9 -0.2
baz=89
I13A Wildhorse Cree 88.71 44 ⇑P P 22 17 18.2 +0.2
baz=89,SNR=12
X19A St. Johns 88.74 54 ⇓P P 22 17 18.8 +0.4
baz=89
E12A Beaver Dam Sad 88.77 41 ⇑P P 22 17 18.0 -0.2
baz=89
HVU Hansel Valley 88.80 46 eP P 22 17 19.2 +0.7
HVU pmax pmax
comp=Z,17nm,1.1s,mb5.3
HVU Hansel Valley 88.80 46 eP P 22 17 19.2 +0.7
comp=Z,17nm,1.1s,mb5.3
K14A Lees Ranch, D 88.81 45 ⇑P P 22 17 18.4 -0.1
baz=89
H13A Challis 88.87 43 ⇑P P 22 17 18.8 0.0
baz=89,SNR=10
J14A Carey 88.88 44 ⇑P P 22 17 19.1 +0.3
baz=89,SNR=9.5
Q16A Castle Valley 88.89 49 ⇓P P 22 17 19.4 +0.5
baz=89
M15A Larsen Ranch, 88.91 46 ⇓P P 22 17 18.5 -0.5
baz=89,SNR=6.1
C11A Tepee Creek (N 88.93 39 ⇑P P 22 17 18.6 -0.4
baz=89,SNR=8.1
U18A Rough Rock, Ch 88.98 52 ⇓P P 22 17 18.8 -0.6
baz=89
TMUT Trail Mountain 89.00 49 eP P 22 17 21.2 +1.7
R17A Hanksville Air 89.05 50 ⇓P P 22 17 19.6 -0.2
baz=89
G13A Cobalt 89.10 43 ⇓P P 22 17 19.3 -0.5
baz=89,SNR=7.1
O16A Springville 89.11 48 ⇑P P 22 17 19.9 -0.1
baz=89
B11A Sandpoint 89.12 39 ⇑P P 22 17 19.8 0.0
baz=89
L15A Malad City 89.15 46 ⇑P P 22 17 20.0 -0.1
baz=89
I14A Mackay 89.16 44 ⇓P P 22 17 20.7 +0.6
baz=89,SNR=16
D12A Red Ives Fores 89.17 40 ⇓P P 22 17 19.8 -0.3
baz=89
T18A Mexican Hat 89.22 51 ⇑P P 22 17 20.7 +0.1
baz=89
F13A Darby 89.31 42 ⇓P P 22 17 20.2 -0.6
baz=90,SNR=11
K15A Arbon 89.31 45 ⇑P P 22 17 20.9 0.0
baz=89
S18A Hurst Farm, Bl 89.32 51 ⇓P P 22 17 20.8 -0.2
baz=89
A11A Hall Mountain, 89.34 38 ⇓P P 22 17 21.2 +0.4
baz=90
C12B Naegeli Ranch, 89.36 40 ⇓P P 22 17 21.1 +0.1
baz=90
DAU Daniels Canyon 89.36 48 eP P 22 17 22.3 +1.1
N16A Rees Ranch, Co 89.41 47 ⇓P P 22 17 21.3 -0.1
baz=90
SYO Syowa Base 89.41 195 ⇑eP P 22 17 18.0 -2.9
SYO Syowa Base 89.41 195 ⇓ePcP PcP 22 17 20.0 -2.3
M16A Huntsville 89.43 47 ⇓P P 22 17 21.5 +0.1
baz=90
SRU San Rafael 89.43 49 ⇓P P 22 17 21.4 -0.2
baz=90
SRU San Rafael 89.43 49 eP P 22 17 22.0 +0.5
SRU pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
SRU San Rafael 89.43 49 eP P 22 17 21.9 +0.4
comp=Z,4.1nm,1.0s,mb4.7
H14A Leadore 89.48 43 ⇑P P 22 17 21.9 +0.3
baz=90,SNR=9.5
B12A Libby 89.60 39 ⇑P P 22 17 22.3 +0.2
baz=90
R18A Canyonlands Na 89.64 50 ⇑P P 22 17 22.6 +0.1
baz=90,SNR=7.9
J15A Blackfoot 89.64 45 ⇑P P 22 17 22.9 +0.5
baz=90,SNR=9.5
O17A Robinson Place 89.66 48 ⇓P P 22 17 23.2 +0.7
baz=90,SNR=9.6
E13A Victor 89.66 41 ⇑P P 22 17 22.4 0.0
baz=90
Q18A Rafter H Ranch 89.71 49 ⇓P P 22 17 22.9 +0.1
baz=90
D13A Huson 89.74 41 ⇓P P 22 17 22.5 -0.3
baz=90
A12A Yaak River Ran 89.75 39 ⇑P P 22 17 22.9 +0.1
baz=90
T19A Beclabito 89.75 52 ⇓P P 22 17 23.2 +0.1
baz=90
P18A Preston Nutter 89.81 49 ⇑P P 22 17 23.1 -0.1
baz=90
L16A Fish Haven 89.82 46 ⇓P P 22 17 23.1 -0.2
baz=90
I15A Monteview 89.83 44 ⇑P P 22 17 23.4 +0.2
baz=90
BSMT Bassoo Peak 89.84 40 eP P 22 17 23.0 -0.2
N17A Moffit Pass 89.85 47 ⇑P P 22 17 23.4 -0.1
baz=90
F14A Wisdom 89.94 42 ⇓P P 22 17 23.8 +0.1
baz=90
H15A Lima 89.96 43 ⇑P P 22 17 24.1 +0.3
baz=90,SNR=11
S19A Harvey Farm, M 89.98 51 ⇓P P 22 17 24.3 +0.1
baz=90
K16A Soda Springs 90.01 45 ⇓P P 22 17 24.7 +0.6
baz=90,SNR=7.1
TLY Talaya 90.03 324 P P 22 17 23.6 -0.4
R19A Curley Farm, L 90.07 50 ⇓P P 22 17 24.6 0.0
baz=90
E14A Clinton 90.09 41 ⇓P P 22 17 23.9 -0.5
baz=90
M17A Scullys Gap (B 90.16 47 ⇓P P 22 17 24.5 -0.3
baz=90
O18A Roosevelt 90.20 48 ⇓P P 22 17 25.0 -0.1
baz=90
B13A Whitefish 90.25 39 ⇓P P 22 17 24.9 -0.2
baz=90
G15A Dillon 90.26 43 ⇓P P 22 17 25.2 0.0
baz=90
PV10 Paradox Valley 90.27 50 eP P 22 17 25.0 -0.4
comp=Z,208nm,1.0s
Q19A Hogan Spring (90.30 50 ⇑P P 22 17 25.3 -0.3
baz=90
D14A Greenough 90.34 41 ⇑P P 22 17 25.2 -0.3
baz=90
PV04 Paradox Valley 90.37 50 eP P 22 17 26.6 +0.7
RRI2 Red Ridge 90.38 45 eP P 22 17 26.6 +0.8
comp=Z,19nm,1.0s,mb5.2
CHMT Chamberlain Mo 90.43 41 eP P 22 17 25.6 -0.4
C14A Swan Lake 90.45 40 ⇑P P 22 17 25.5 -0.6
baz=91
I16A Newdale 90.45 44 ⇑P P 22 17 26.3 +0.1
baz=91
A13A Flathead Natio 90.50 39 ⇓P P 22 17 26.5 +0.2
baz=91
F15A Butte 90.51 42 ⇑P P 22 17 26.5 +0.1
baz=91
PV01 Paradox Valley 90.53 51 eP P 22 17 26.8 +0.1
comp=Z,510nm,1.1s
LRM Limekiln Ridge 90.53 42 eP P 22 17 26.1 -0.4
M18A Lyman 90.56 47 ⇑P P 22 17 26.8 0.0
baz=91
E15A Deer Lodge 90.64 42 ⇑P P 22 17 26.6 -0.4
baz=91
N18A Larsen Ranch, 90.69 48 ⇓P P 22 17 27.0 -0.4
baz=91
REDW Red Top Meadow 90.70 45 eP P 22 17 28.5 +1.1
comp=Z,25nm,1.6s,mb5.3
P19A Cripple Cowboy 90.73 49 ⇓P P 22 17 27.4 -0.2
baz=91
G16A Moss Hill, Enn 90.74 43 ⇑P P 22 17 27.5 +0.1
baz=91
L18A Fontenelle, Gr 90.76 47 ⇑P P 22 17 27.6 -0.1
baz=91
J17A Brown Place, J 90.80 45 ⇓P P 22 17 27.6 -0.1
baz=91
WALA Waterton Lakes 90.85 39 eP P 22 17 27.7 -0.2
comp=Z,0.1nm,0.7s
H16A Russell Place, 90.92 44 ⇓P P 22 17 28.7 +0.4
baz=91,SNR=6.8
D15A Lincoln 90.95 41 ⇑P P 22 17 28.5 +0.1
baz=91
LSA Lhasa 90.95 300 P P 22 17 30.0 +1.2
LSA Lhasa 90.95 300 eP P 22 17 29.8 +1.0
LSA pmax pmax
comp=Z,14nm,1.1s,mb5.2
LSA Lhasa 90.95 300 eP P 22 17 29.8 +0.9
comp=Z,14nm,1.1s,mb5.2
B14A Marquette Ranc 90.97 40 ⇑P P 22 17 27.8 -0.7
baz=91,SNR=9.9
BOZ Bozeman (W) 91.00 43 ⇑P P 22 17 28.8 +0.1
baz=91
BOZ Bozeman (W) 91.00 43 eP P 22 17 29.6 +0.9
N19A John Jarvie Ra 91.01 48 ⇓P P 22 17 28.5 -0.4
baz=91
F16A Kennard Place, 91.06 43 ⇓P P 22 17 29.0 +0.1
baz=91
I17A Pilgram Creek 91.09 45 ⇓P P 22 17 29.1 0.0
baz=91
ANMO Albuquerque 91.12 54 P P 22 17 29.1 -0.4
comp=Z,3.3nm,0.9s,mb4.7,baz=230,slow=3.7,SNR=7.0
ANMO Albuquerque 91.12 54 eP P 22 17 29.7 +0.2
A14A Double T Ranch 91.12 39 ⇑P P 22 17 29.1 0.0
baz=91
C15A Salmond Ranch, 91.17 40 ⇑P P 22 17 28.5 -0.9
baz=91,SNR=7.2
J18A Kendall Valley 91.22 45 ⇑P P 22 17 29.8 +0.1
baz=91
M19A Rock Springs 91.23 47 ⇑P P 22 17 29.9 0.0
baz=91
L19A Farson 91.30 47 ⇑P P 22 17 30.2 0.0
baz=91
E16A East Helena 91.30 42 ⇓P P 22 17 30.0 0.0
baz=91
R21A Cimarron 91.37 51 ⇑P P 22 17 30.3 -0.2
baz=92
PDAR Pinedale Array 91.38 46 P P 22 17 29.4 -1.1
comp=Z,1.7nm,1.1s,mb4.3,baz=289,slow=4.5,SNR=5.3
B15A Bradely Ranch, 91.40 40 ⇑P P 22 17 29.7 -0.7
baz=92
A15A Johnson Ranch, 91.54 39 ⇓P P 22 17 30.9 -0.2
baz=92
D16A Dana Ranch, Ca 91.56 41 ⇑P P 22 17 31.0 -0.3
baz=92
TXAR Lajitas Array 91.69 60 P P 22 17 32.1 -0.2
comp=Z,1.6nm,0.7s,mb4.4,baz=219,slow=5.0,SNR=20
TXAR LR LR 22 50 21.8
comp=Z,264nm,19.4s,MS4.7,baz=55,slow=30
TXAR Lajitas Array 91.69 60 P P 22 17 32.1 -0.2
TXAR LR LR 22 50 21.8
C16A Fuhringer Ranc 91.72 41 ⇓P P 22 17 31.3 -0.6
baz=92

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
F17A	**Fitzpatrick Pl**	**91.73**	**43**	⇓P	**P**	**22 17 32.0**	**-0.1**
	baz=92						
M20A	**Sweetwater, Wa**	**91.92**	**47**	⇑P	**P**	**22 17 33.0**	**0.0**
	baz=92						
TIXI	**Tiksi**	**92.06**	**347**	*i* P	**P**	**22 17 31.4**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.8						
D17A	**Six Diamond Ra**	**92.15**	**42**	⇑P	**P**	**22 17 34.1**	**+0.1**
	baz=92						
N21A	**Black Mountain**	**92.16**	**48**	⇑P	**P**	**22 17 34.2**	**+0.1**
	baz=92						
C17A	**Wharram Farm,**	**92.27**	**41**	⇑P	**P**	**22 17 34.6**	**+0.1**
	baz=92						
F18A	**Big Timber**	**92.35**	**43**	⇓P	**P**	**22 17 35.0**	**0.0**
	baz=92						
RLMT	**Red Lodge**	**92.38**	**44**	⇑P	**P**	**22 17 35.2**	**+0.1**
	baz=92						
E18A	**Harlowton**	**92.45**	**42**	⇑P	**P**	**22 17 35.7**	**+0.3**
	baz=93						
B17A	**L&G Farms, Che**	**92.48**	**40**	⇑P	**P**	**22 17 35.6**	**+0.1**
	baz=93						
M21A	**Separation Pea**	**92.54**	**48**	⇑P	**P**	**22 17 35.5**	**-0.4**
	baz=93						
A17A	**Triple J Farms**	**92.78**	**40**	⇑P	**P**	**22 17 37.0**	**+0.1**
	baz=93						
SNAA	**Sanae**	**92.87**	**181**	*e*P	**P**	**22 17 34.7**	**-2.2**
SNAA				*e*		22 17 36.6	
SNAA				*e*		22 17 42.4	
SNAA	**Sanae**	**92.87**	**181**	*e*P	**P**	**22 17 34.6**	**-2.3**
B18A	**Beardsley Farm**	**93.16**	**41**	⇑P	**P**	**22 17 38.6**	**0.0**
	baz=93						
VNA3	**Neumayer Olymp**	**93.31**	**179**	*e*P	**P**	**22 17 36.8**	**-2.2**
VNA3				*e*		22 17 38.8	
VNA3				*e*		22 17 44.5	
VNA2	**Neumayer--Watz**	**93.66**	**180**	*e*P	**P**	**22 17 39.2**	**-1.4**
VNA2				*e*		22 17 41.0	
VNA2				*e*	pP	22 17 46.4	-0.4
HVS	**Khovu-Aksy**	**95.61**	**321**	*i* P	**P**	**22 17 49.7**	**-0.1**
YKA	**Yellowknife Ar**	**95.75**	**26**	P	**P**	**22 17 49.1**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.5,baz=255,slow=4.8,SNR=20						
YKA				LR	LR	22 52 57.0	
	comp=Z,90nm,19.7s,MS4.2,baz=165,slow=30						
YKA	**Yellowknife Ar**	**95.75**	**26**	P	**P**	**22 17 49.1**	**-1.1**
YKA				LR	LR	22 52 57.0	
WMQ	**Urumqi**	**97.50**	**313**	*e*P	**P**	**22 17 59.1**	**+0.5**
WMQ				LR	LR		
	comp=N,41nm,31.0s						
WMQ				LR	LR		
	comp=E,40nm,22.0s						
WMQ				LR	LR		
	comp=Z,29nm,18.0s						
ZALV	**Zalesovo Beam**	**101.56**	**323**	P	Pdif	22 18 15.1	-1.4
	comp=Z,0.3nm,0.3s,baz=35,slow=3.5,SNR=2.6						
MK31	**Makanchi Array**	**101.86**	**315**	*e*P	Pdif	22 18 17.0	-0.9
MKAR	**Makanchi Array**	**101.86**	**315**	P	Pdif	22 18 18.1	+0.2
	comp=Z,0.7nm,0.8s,baz=104,slow=7.6,SNR=4.8						
MKAR	**Makanchi Array**	**101.86**	**315**	*i* P	Pdif	22 18 19.5	+1.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WVT	**Waverly**	**106.16**	**56**	PKPdf	PKiKP	22 22 43.2	-5.9
ARU	**Arti**	**116.50**	**326**	*e*PKIKP	PKPdf	22 23 05.6	-2.5
AKTK	**Aktyubinsk**	**117.93**	**319**	PKP	PKPdf	22 23 09.8	-1.2
AKTO	**Aktyubinsk**	**117.93**	**319**	PKP	PKPdf	22 23 09.8	-1.2
	comp=Z,1.7nm,0.9s,baz=92,slow=5.2,SNR=3.9						
ARCES	**ARCESS Array B**	**122.50**	**347**	PKP	PKPdf	22 23 17.7	-1.6
	comp=Z,2.1nm,0.7s,baz=29,slow=2.8,SNR=8.6						
ARCES	**ARCESS Array B**	**122.50**	**347**	PKP	PKPdf	22 23 17.7	-1.6
OBN	**Obninsk**	**128.45**	**330**	⇑*i*PKIKP	PKPdf	22 23 30.0	-1.1
OBN				pmax	pmax		
	comp=Z,17nm,1.5s						
BDFB	**Brasilia**	**128.76**	**125**	PKP	PKPdf	22 23 32.1	-0.8
	comp=Z,2.6nm,1.0s,baz=54,slow=3.3,SNR=4.7						
HFS	**Hagfors**	**133.13**	**346**	PKP	PKPdf	22 23 38.1	-1.7
	comp=Z,2.5nm,0.9s,baz=64,slow=5.1,SNR=3.6						
CLL	**Collm**	**141.05**	**340**	*i* PKPdf	PKPdf	22 23 56.3	+1.6
GERES	**GERESS Array B**	**142.88**	**337**	PKP	PKPdf	22 23 55.4	-2.6
	comp=Z,0.8nm,0.8s,baz=64,slow=2.3,SNR=3.7						
VAY	**Valandovo**	**143.98**	**321**	*e*PKP	PKPdf	22 23 49.5	-11
STIP	**Stip**	**143.99**	**322**	*e*PKP	PKPdf	22 23 55.9	-4.3
SKO	**Skopje**	**144.25**	**323**	*e*PKP	PKPdf	22 23 57.4	-3.3
GIVF	**Givet**	**144.36**	**347**	*e*PKP1	PKPdf	22 23 58.2	-2.4
BAIF	**Baives**	**144.53**	**348**	*e*PKP1	PKPdf	22 23 59.2	-1.7
KRUS	**Krusevo**	**144.74**	**322**	*e*PKP	PKPdf	22 23 57.5	-4.1
VISS	**Visnje**	**144.89**	**333**	*i* PKPbc	PKPdf	22 24 00.3	-1.3
BIA	**Bitola**	**144.91**	**322**	*e*PKP	PKPdf	22 23 56.7	-5.2
BOJS	**Bojanci**	**144.94**	**333**	*i* PKPbc	PKPdf	22 24 00.7	-1.1
BOJS				*i* PKPab	PKPdf	22 24 08.9	+7.2
WTTA	**Wattenberg**	**144.96**	**338**	⇓*i*PKPdf	PKPdf	22 24 00.8	-0.9
	comp=Z,16nm,1.3s						
ABTA	**Abfaltersbach**	**145.07**	**337**	⇑*i*PKPab	PKPab	22 24 00.1	-1.3
	comp=Z,18nm,1.4s,SNR=6.9						
RETA	**Reutte**	**145.08**	**339**	⇑*i*PKPdf	PKPdf	22 24 01.0	-0.9
	comp=Z,19nm,1.4s						
MOTA	**Moosalm**	**145.08**	**339**	⇑*i*PKPab	PKPab	22 24 00.1	-1.2
	comp=Z,18nm,1.2s						
BFO	**Black Forest**	**145.11**	**342**	*e*PKPdf	PKPdf	22 24 00.4	-1.6
JAVS	**Javornik**	**145.15**	**334**	*i* PKPbc	PKPbc	22 24 00.8	-0.8
JAVS				*i* PKPab	PKPab	22 24 08.6	+6.9
SPAK	**Spaichingen-Ko**	**145.18**	**342**	PKP	PKPdf	22 24 01.6	-0.5
CDF	**Champ du Feu**	**145.34**	**343**	*e*PKP1	PKPbc	22 24 01.6	-0.6
	comp=Z,135nm,1.6s						
FETA	**Feichten**	**145.49**	**339**	*i* PKPab	PKPab	22 24 02.3	-0.6
	comp=Z,26nm,1.2s,SNR=16						
ECH	**Echery**	**145.55**	**343**	PKP	PKPdf	22 24 02.4	-0.3
ECH	**Echery**	**145.55**	**343**	*e*PKPbc	PKPbc	22 24 02.5	-0.4
DAVA	**Damuels**	**145.55**	**340**	⇓*i*PKPab	PKPab	22 24 02.5	-0.6
	comp=Z,47nm,1.2s,SNR=8.8						
FELD	**Feldberg im Sc**	**145.62**	**342**	PKP	PKPdf	22 24 02.6	-0.2
MEZF	**Maizieres J'vi**	**145.82**	**346**	*e*PKP1	PKPbc	22 24 03.4	-0.3
	comp=Z,78nm,1.2s						
MOF	**Molkenrain**	**145.89**	**343**	PKP	PKPdf	22 24 03.5	+0.2
HAU	**Haudompre**	**145.96**	**344**	*e*PKP1	PKPbc	22 24 03.5	-0.6
	comp=Z,81nm,1.3s						
HAU				*e*MLR	MLR		
	comp=Z,118nm,22.8s,MS4.3						
HAU	**Haudompre**	**145.96**	**344**	*e*PKP	PKPdf	22 24 03.5	+0.1
HAU				LR	LR		
	comp=Z,120nm,22.8s,MS4.6						
DAVOS	**Davos**	**145.97**	**340**	PKP2	PKPab	22 24 04.1	-0.6
DAVOX	**Davos/Dischmat**	**145.99**	**339**	PKPbc	PKPbc	22 24 04.1	-0.2
	comp=Z,12nm,0.9s,baz=117,slow=2.0,SNR=10						
HINF	**Hinteralfeld**	**146.00**	**344**	*e*PKP1	PKPbc	22 24 03.4	-0.8
	comp=Z,38nm,1.2s						
TUE	**Stuetta**	**146.44**	**340**	*e*PKPbc	PKPbc	22 24 05.9	+0.3
FLN	**La Foliniere**	**146.57**	**352**	*e*PKP1	PKPbc	22 24 04.8	-1.1
FLN				*e*MLR	MLR		
	comp=Z,186nm,18.8s,MS4.6						
FLN	**La Foliniere**	**146.57**	**352**	*e*PKP	PKPdf	22 24 04.8	+0.4
FLN				LR	LR		
	comp=Z,190nm,18.8s,MS4.9						
LDF	**La Druitiere**	**146.69**	**352**	*e*PKP1	PKPbc	22 24 05.1	-1.2
	comp=Z,46nm,1.1s						
GRR	**Gorron**	**146.98**	**353**	*e*PKP1	PKPbc	22 24 07.1	0.0
LOR	**Lormes**	**147.25**	**347**	*e*PKP1	PKPbc	22 24 07.2	-0.7
	comp=Z,49nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,128nm,21.8s,MS4.4						
LOR	**Lormes**	**147.25**	**347**	*e*PKP	PKPdf	22 24 07.2	+1.6
LOR				LR	LR		
	comp=Z,130nm,21.8s,MS4.7						
ROSF	**Rostrenen**	**147.27**	**356**	*e*PKP1	PKPbc	22 24 06.9	-1.0
	comp=Z,128nm,1.4s						
SGMF	**Saint Gilles**	**147.29**	**355**	*e*PKP1	PKPbc	22 24 07.0	-1.0
	comp=Z,99nm,1.2s						
CABF	**La Chapelle**	**147.31**	**344**	*e*PKP1	PKPbc	22 24 08.0	-0.1
	comp=Z,152nm,1.4s						
SSF	**Saint Saulge**	**147.52**	**347**	*e*PKP1	PKPbc	22 24 08.2	-0.5
	comp=Z,44nm,1.1s						
AVF	**Avril sur Loir**	**147.81**	**347**	*e*PKP1	PKPbc	22 24 08.6	-0.9
	comp=Z,79nm,1.6s						
SMF	**Signal de Mont**	**147.84**	**346**	*e*PKP1	PKPbc	22 24 08.8	-0.8
	comp=Z,32nm,1.1s						
LPL	**La Plagne**	**148.12**	**342**	*e*PKP1	PKPbc	22 24 10.2	-0.1
	comp=Z,35nm,1.1s						
LPG	**La Plagne**	**148.13**	**342**	*e*PKP1	PKPbc	22 24 10.5	+0.1
	comp=Z,41nm,1.2s						
BGF	**Bois d'Agland**	**148.15**	**347**	*e*PKP1	PKPbc	22 24 09.6	-0.8
	comp=Z,18nm,0.8s						
PLDF	**La Plantade**	**148.53**	**346**	PKP	PKPbc	22 24 09.6	-1.8
TCF	**Toulx Ste Croi**	**148.53**	**348**	*e*PKP1	PKPbc	22 24 10.7	-0.7
	comp=Z,102nm,1.5s						
MFF	**Saint Martin d**	**148.64**	**351**	*e*PKP1	PKPbc	22 24 10.6	-1.0
	comp=Z,151nm,1.5s						
MBDF	**Montbardon**	**148.82**	**341**	*e*PKP1	PKPbc	22 24 11.5	-0.7
	comp=Z,12nm,0.8s						
PYM	**Petit Puy Mans**	**148.88**	**347**	PKP	PKPbc	22 24 12.5	+0.2
ORIF	**Oris-en-Rattie**	**148.92**	**342**	*e*PKP1	PKPbc	22 24 12.0	-0.4
	comp=Z,69nm,1.4s						
ORIF				*e*MLR	MLR		
	comp=Z,127nm,18.0s,MS4.5						
VIVF	**Saint-Julien-l**	**149.31**	**344**	*e*PKP1	PKPbc	22 24 12.9	-0.5
	comp=Z,69nm,1.4s						
SBF	**Sospel**	**149.38**	**340**	*e*PKP1	PKPbc	22 24 13.3	-0.3
RJF	**Les Rejaudoux**	**149.61**	**348**	*e*PKP1	PKPbc	22 24 13.3	-0.8
RJF				*e*MLR	MLR		
	comp=Z,97nm,17.2s,MS4.4						
RJF	**Les Rejaudoux**	**149.61**	**348**	*e*PKP	PKPbc	22 24 13.3	-0.8
RJF				LR	LR		
	comp=Z,100nm,17.3s,MS4.7						
CAF	**Calviac**	**149.87**	**347**	*e*PKP1	PKPbc	22 24 14.2	-0.6
	comp=Z,69nm,1.5s						
SMRF	**Simiane la Rot**	**149.87**	**342**	*e*PKP1	PKPbc	22 24 14.5	-0.3
	comp=Z,50nm,1.2s						
FRF	**La Foret Royal**	**149.91**	**340**	*e*PKP1	PKPbc	22 24 13.8	-1.1
	comp=Z,37nm,1.1s						
LFF	**La Frestale**	**150.11**	**349**	*e*PKP1	PKPbc	22 24 14.7	-0.7
	comp=Z,19nm,0.9s						
LMR	**La Mourre**	**150.16**	**340**	*e*PKP1	PKPbc	22 24 14.6	-0.9
	comp=Z,24nm,0.8s						
LASF	**Ste Croix**	**150.25**	**344**	*e*PKP1	PKPbc	22 24 15.4	-0.3
	comp=Z,56nm,1.1s						
MTLF	**Montolieu**	**151.34**	**346**	*e*PKP1	PKPbc	22 24 17.7	-0.6
EPF	**Esparros**	**152.03**	**349**	*e*PKP1	PKPbc	22 24 19.5	-0.4
	comp=Z,21nm,1.0s						
ETSF	**Etsaut**	**152.32**	**350**	*e*PKP1	PKPbc	22 24 20.3	-0.3
	comp=Z,69nm,1.3s						
ESDC	**Sonseca Array**	**155.93**	**355**	PKPab	PKPab	22 24 44.5	-1.3
	comp=Z,0.3nm,0.5s,baz=350,slow=7.5,SNR=4.9						
EVO	**Evora**	**157.17**	**3**	*e*PKIKP	PKPdf	22 24 21.3	+0.7
	comp=Z,61nm,1.5s						
EVO				*e*MLR	MLR		
	comp=Z,192nm,21.0s,MS4.6						
LIC	**Lamto**	**170.49**	**191**	*e*PKIKP	PKPdf	22 24 32.0	-1.6
	comp=Z,41nm,1.6s						
KIC	**Kosan Boka**	**170.57**	**192**	*e*PKIKP	PKPdf	22 24 32.0	-1.6
	comp=Z,36nm,1.1s						
DBIC	**Dimbokro**	**170.89**	**192**	PKP	PKPdf	22 24 31.4	-2.3
	comp=Z,3.9nm,1.0s,baz=134,slow=3.3,SNR=4.3						
DBIC				PKPab	PKPab	22 25 50.8	-1.1
	comp=Z,3.3nm,0.8s,baz=74,slow=5.6,SNR=5.1						
TIC	**Toumodi**	**170.90**	**191**	*e*PKIKP	PKPdf	22 24 32.3	-1.5
	comp=Z,6.6nm,0.2s						
TOA0	**Torodi Ar. Sit**	**171.44**	**254**	*e*PKPdf	PKPdf	22 24 32.6	-1.4
TORD	**Torodi Ar. Bea**	**171.44**	**254**	PKP	PKPdf	22 24 32.0	-2.0
	comp=Z,4.4nm,1.1s,baz=8.0,slow=1.1,SNR=14						
TORD				PKPab	PKPab	22 25 53.8	-1.0
	comp=Z,1.9nm,0.8s,baz=99,slow=3.8,SNR=9.8						

ISCJB ***10*** *22:30:41.7±0.8, 2478N±006×12261E±002, h95km±7km, Error ellipse: s-maj=9.3km s-min=3.6km az=175.2*
JMA ***10*** *22:30:41.0±0.2, 2485N×12260E, h100km, M1.6*
TAP ***10*** *22:30:42.2, 2473N×12263E, h84km±1km, ML3.4, D*
ISC 10 22:30:42.3±0.8**, 2478N**±006×**12261E**±002**, h93**km±7km**, n33,** σ0.55/54**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**131**	P	**Pn**	**22 30 57.0**	**-0.2**
YOJ				S	**Sn**	**22 31 09.4**	**+1.1**
TWB1	**Santiao Chiao**	**0.60**	**292**	*i* P	**Pn**	**22 30 58.2**	**+0.1**
	baz=295						
TWC	**Suao**	**0.71**	**256**	*i* P	**Pn**	**22 30 58.7**	**-0.4**
	baz=260						
TWC				*i* S	**Sn**	**22 31 11.0**	**-0.7**
	baz=260						
NWF	**Wu-fen Shan**	**0.80**	**291**	*e*P	**Pn**	**22 30 59.9**	**-0.1**
	baz=293						
TWE	**Neicheng**	**0.86**	**266**	*i* P	**Pn**	**22 31 00.6**	**0.0**
	baz=269						
TWE				S	**Sn**	**22 31 13.7**	**-0.6**
	baz=269						
ENA	**Nanau**	**0.86**	**246**	P	**Pn**	**22 31 00.6**	**0.0**
	baz=249						
ENA				*e*S	**Sn**	**22 31 15.1**	**+0.7**
	baz=249						
ENTT	**Nioudou**	**0.96**	**262**	P	**Pn**	**22 31 01.9**	**+0.3**
	baz=264						
IRIF	**Iriomote-Funau**	**1.12**	**113**	*e*S	**Sn**	**22 31 19.3**	**-0.1**
TWS1	**Kuangyinshan**	**1.12**	**287**	*e*P	**Pn**	**22 31 03.6**	**0.0**
	baz=288						
NSK	**Sanguang**	**1.14**	**265**	*i* P	**Pn**	**22 31 03.8**	**+0.1**
	baz=267						
NSK				S	**Sn**	**22 31 19.9**	**0.0**
	baz=267						
TWD	**Chiawan**	**1.16**	**233**	*i* P	**Pn**	**22 31 03.7**	**-0.2**
	baz=235						
TWD				*i* S	**Sn**	**22 31 19.5**	**-0.8**
	baz=235						
NNS	**Nan Shan**	**1.17**	**253**	*i* P	**Pn**	**22 31 04.1**	**0.0**
	baz=255						
NNS				S	**Sn**	**22 31 20.4**	**-0.2**
	baz=255						
HATJ	**Hateruma jima**	**1.31**	**123**	*e*S	**Sn**	**22 31 24.3**	**+0.8**
WHF	**Hehuan Shan**	**1.38**	**243**	P	**Pn**	**22 31 06.5**	**-0.1**
	baz=244						
WHF				S	**Sn**	**22 31 24.9**	**-0.1**
	baz=244						
JKRS	**Kuro-shima**	**1.39**	**113**	P	**Pn**	**22 31 06.6**	**-0.1**
JKRS				*e*S	**Sn**	**22 31 25.7**	**+0.5**
TWT	**Tachien**	**1.41**	**248**	*i* P	**Pn**	**22 31 07.6**	**+0.6**
	baz=250						
TWT				S	**Sn**	**22 31 26.0**	**+0.3**
	baz=250						
ESL	**Shilin**	**1.44**	**228**	*e*P	**Pn**	**22 31 07.0**	**-0.4**
	baz=229						
JIJ	**Ishigaki jima**	**1.46**	**106**	P	**Pn**	**22 31 07.1**	**-0.5**
JIJ				S	**Sn**	**22 31 26.4**	**-0.4**
NSTT	**Nanjuang**	**1.47**	**264**	*e*P	**Pn**	**22 31 07.5**	**-0.2**
	baz=266						
NSTT				*e*S	**Sn**	**22 31 26.8**	**-0.2**
	baz=266						
EHY	**Hungye**	**1.73**	**223**	*e*P	**Pn**	**22 31 11.3**	**+0.2**
	baz=224						
SMLT	**Sun Moon Lake**	**1.80**	**240**	P	**Pn**	**22 31 12.2**	**+0.3**
	baz=241						
SMLT				*e*S	**Sn**	**22 31 34.6**	**+0.2**
	baz=241						
TYC	**Yuchr**	**1.82**	**242**	P	**Pn**	**22 31 13.0**	**+0.8**
	baz=242						
TYC				*e*S	**Sn**	**22 31 35.0**	**0.0**
	baz=242						
TWF1	**Yuli**	**1.86**	**220**	*e*P	**Pn**	**22 31 11.3**	**-1.4**
	baz=221						
JTJ	**Tarama**	**1.91**	**94**	P	**Pn**	**22 31 13.3**	**-0.1**
JTJ				S	**Sn**	**22 31 36.5**	**-0.6**
ALS	**Alishan**	**2.08**	**233**	P	**Pn**	**22 31 16.1**	**+0.5**
	baz=233						
ALS				*e*S	**Sn**	**22 31 40.8**	**-0.1**
	baz=233						
CHN5	**Tsauling**	**2.12**	**237**	P	**Pn**	**22 31 16.3**	**+0.2**
	baz=237						
CHN5				*e*S	**Sn**	**22 31 43.2**	**+1.2**
	baz=237						
ELDTW	**Lidau**	**2.15**	**223**	P	**Pn**	**22 31 16.6**	**+0.1**
	baz=223						
ELDTW				*e*S	**Sn**	**22 31 41.2**	**-1.6**
	baz=223						
CHN4	**Tsaushan**	**2.33**	**233**	*e*P	**Pn**	**22 31 19.4**	**+0.5**
	baz=233						
CHN4				*e*S	**Sn**	**22 31 47.5**	**+0.6**
	baz=233						
STYT	**Tauyuan**	**2.34**	**227**	P	**Pn**	**22 31 19.3**	**+0.3**
	baz=227						
STYT				*e*S	**Sn**	**22 31 46.3**	**-0.8**
	baz=227						
WTP	**Ta-pu**	**2.38**	**230**	*e*P	**Pn**	**22 31 19.8**	**+0.2**
	baz=231						
CHN1	**Nanshi**	**2.48**	**231**	P	**Pn**	**22 31 21.7**	**+0.8**
	baz=231						
CHN1				*e*S	**Sn**	**22 31 50.5**	**0.0**
	baz=231						
ECL	**Taimali**	**2.65**	**215**	*e*P	**Pn**	**22 31 22.0**	**-1.1**
	baz=215						
SSD	**Sandimen**	**2.72**	**222**	*e*P	**Pn**	**22 31 24.5**	**+0.4**
	baz=222						

KRSC 10 22:38:21.6±0.7**, 5349N**×**16092E, h25**km±24km**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.67**	**234**	*e*P	Pb	22 38 34.6	0.0
SPN				*i* S	Sb	22 38 43.6	+0.2
NLC	**Nalytchevo**	**1.00**	**252**	*e*P	Pn	22 38 39.8	-0.1
NLC				*i* S	Sb	22 38 53.5	+0.7
KII	**Karymskiy**	**1.03**	**303**	P	Pn	22 38 39.7	-0.7
MKZ	**Mys Kozlova**	**1.17**	**24**	*e*P	Pn	22 38 41.3	-1.0
MKZ				*i* S	Sn	22 38 55.9	-1.6
AVH	**Avacha**	**1.33**	**261**	P	Pn	22 38 45.2	+0.7
AVH				*i* S	Sn	22 39 03.2	+1.9
GNL	**Ganaly**	**1.79**	**278**	P	Pn	22 38 52.1	+1.3
RUS	**Russkaya**	**1.80**	**235**	P	Pn	22 38 50.7	-0.3
RUS				*i* S	Sn	22 39 11.9	-1.1
TUMR	**Tumrok**	**1.85**	**346**	P	Pn	22 38 52.0	+0.3
KMNR	**Kamenistaya**	**2.31**	**350**	P	Pn	22 38 59.1	+1.2
BZGR	**Bezymyannyi-Gr**	**2.46**	**357**	P	Pn	22 39 01.1	+1.1
BZMR	**Bezymyannaya**	**2.46**	**354**	P	Pn	22 39 01.9	+1.8
BZWR	**Bezymyannyi-We**	**2.49**	**355**	P	Pn	22 39 02.0	+1.5
ZLN	**Zelenaya**	**2.53**	**359**	P	Pn	22 39 02.7	+1.6
CIRR	**Tsirk**	**2.63**	**358**	P	Pn	22 39 03.8	+1.4
MIPR	**Malaya Ipel'ka**	**2.80**	**246**	P	Pn	22 39 07.5	+2.8
SRDR	**Sredinnyy**	**2.92**	**347**	P	Pn	22 39 07.3	+1.0
KBTR	**Krutoberegovo**	**2.94**	**21**	P	Pn	22 39 06.6	0.0

ISCJB ***10*** *22:47:14.7±0.3, 3895N±001×821W±002, h9km±2km, Error ellipse: s-maj=2.8km s-min=1.9km az=171.0*
MDD ***10*** *22:47:16.7±0.2, 3892N×827W, h4km±3km, mbLg3.4/31, Error ellipse: s-maj=2.4km s-min=1.9km az=65.0, PRXIMO*
NEIC ***10*** *22:47:16.4, 3894N×828W, h2km, ML3.4(LIS), MN3.3(MDD), After MDD.*
IGIL ***10*** *22:47:16.9, 3890N×828W, h2km, ML3.1*
CSEM ***10*** *22:47:16.8±0.1, 3890N×828W, h5km, ML3.7/31, Error ellipse: s-maj=1.4km s-min=0.7km az=83.0*
INMG ***10*** *22:47:16.8±1.4, 3891N×828W, h7km±2km, MD3.2, ML3.4, Error ellipse: s-maj=1.6km s-min=1.3km az=85.0*
LDG ***10*** *22:47:16.6±0.1, 3889N×836W, h5km, Md3.9/1, Ml3.2/3, Error ellipse: s-maj=3.8km s-min=1.8km az=79.0*
ISC 10 22:47:15.9±0.3**, 3892N**±001×**826W**±002**, h11**km±2km**, n153,** σ0.99/276**, 3C-6D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALMR	**Almeirim**	**0.34**	**314**	*e*P	**Pg**	**22 47 23.1**	**+0.3**
ALMR				*e*S	**Sg**	**22 47 27.6**	**+0.3**
ALMR				*e*S	**Sg**	**22 47 27.6**	**+0.3**
ALMR				AML	AML	22 47 28.5	
	comp=E,2µm,0.3s						
ALMR	**Almeirim**	**0.34**	**314**	*e*P	**Pg**	**22 47 23.1**	**+0.4**
ALMR				*e*S	**Sg**	**22 47 27.6**	**+0.3**
MOE	**Montemor**	**0.40**	**190**	*i* Pg	**Pg**	**22 47 23.7**	**-0.2**
MOE				*e*Sg	**Sg**	**22 47 28.6**	**-0.7**
MOE	**Montemor**	**0.40**	**190**	*e*Sg	**Sg**	**22 47 28.6**	**-0.7**
EVOP	**Sao Brissos**	**0.41**	**165**	*e*Pg	**Pg**	**22 47 23.9**	**-0.1**
EVOP				*e*Sg	**Sg**	**22 47 29.3**	**-0.1**
	comp=E,2µm,0.4s						
EVO	**Evora**	**0.43**	**153**	*e*Pg	**Pg**	**22 47 23.9**	**-0.6**
EVO				*e*Sg	**Sg**	**22 47 29.3**	**-0.9**
	comp=E,4µm,0.4s						
EVO	**Evora**	**0.43**	**153**	*i* Pg	**Pg**	**22 47 24.7**	**+0.2**
EVO				*e*Sg	**Sg**	**22 47 30.3**	**+0.1**
EVO				A		22 47 30.5	
	comp=E,3µm,0.1s						
EVO	**Evora**	**0.43**	**153**	*e*Sg	**Sg**	**22 47 30.3**	**+0.1**
	comp=E,3µm,0.1s						
EVO	**Evora**	**0.43**	**153**	⇓Pg	**Pg**	**22 47 24.7**	**+0.2**
EVO				Lg		22 47 30.3	
	comp=E,3µm,0.1s						
PESTR	**Estremoz**	**0.53**	**96**	*e*Pg	**Pg**	**22 47 26.8**	**+0.6**
PESTR				*e*Sg	**Sg**	**22 47 34.1**	**+0.9**
PESTR				A		22 47 35.0	
	comp=E,572nm,0.1s						
PESTR	**Estremoz**	**0.53**	**96**	*e*Pg	**Pg**	**22 47 26.8**	**+0.6**
PESTR				*e*Sg	**Sg**	**22 47 34.1**	**+0.9**
	comp=E,572nm,0.1s						
INMG	**Instituto de M**	**0.69**	**258**	*e*P	**Pg**	**22 47 29.8**	**+0.5**
INMG				*e*S	**Sg**	**22 47 39.4**	**+1.0**
INMG				A		22 47 42.7	
	comp=E,706nm,0.2s						
INMG	**Instituto de M**	**0.69**	**258**	P	**Pg**	**22 47 29.8**	**+0.5**
INMG				S	**Sg**	**22 47 39.4**	**+1.0**
	comp=E,353nm,0.2s						
LIS	**Lisbon**	**0.72**	**254**	*e*P	**Pg**	**22 47 29.6**	**-0.3**
LIS				AML	AML	22 47 38.7	
	comp=E,355nm,0.2s						
LIS	**Lisbon**	**0.72**	**254**	P	**Pg**	**22 47 29.6**	**-0.3**
LIS				P		22 47 29.6	
PMAFR	**Mafra**	**0.80**	**273**	*e*P	**Pg**	**22 47 31.4**	**+0.1**
PMAFR				*e*S	**Sg**	**22 47 41.8**	**0.0**
PMAFR				A		22 47 42.9	
	comp=E,1µm,0.2s						
PMAFR	**Mafra**	**0.80**	**273**	P	**Pg**	**22 47 31.4**	**+0.1**
PMAFR				S	**Sg**	**22 47 41.8**	**0.0**
	comp=E,1µm,0.2s						
PMRV	**Marv??o**	**0.84**	**53**	*e*P	**Pg**	**22 47 33.1**	**+0.9**
PMRV				*e*S	**Sg**	**22 47 44.8**	**+1.5**
PMRV				A		22 47 47.0	
	comp=E,440nm,0.1s						
EBAD	**Badajoz**	**0.99**	**99**	Pg	**Pg**	**22 47 35.3**	**+0.3**
	SNR=18						
EBAD	**Badajoz**	**0.99**	**99**	⇓Pg	**Pg**	**22 47 35.3**	**+0.4**
	SNR=18						
EBAD				Lg		22 47 48.5	
	comp=E,3µm,0.2s,SNR=72						
PCBR	**Castelo Branco**	**1.10**	**33**	*e*P	**Pb**	**22 47 37.8**	**+0.9**
PCBR				*e*S	**Sb**	**22 47 52.7**	**+1.4**
PCBR				A		22 47 53.7	
	comp=E,268nm,0.3s						
PCBR	**Castelo Branco**	**1.10**	**33**	⇑P	**Pb**	**22 47 37.8**	**+0.9**
PCBR				S	**Sb**	**22 47 52.7**	**+1.4**
	comp=E,134nm,0.3s						
PBAR	**Barrancos**	**1.21**	**127**	*e*P	**Pn**	**22 47 38.5**	**-0.3**
PBAR				*e*S	**Sb**	**22 47 55.5**	**+1.0**
PBAR				A		22 47 57.7	
	comp=E,188nm,0.2s						
PBAR	**Barrancos**	**1.21**	**127**	*e*P	**Pn**	**22 47 38.5**	**-0.3**
PBAR				*e*S	**Sb**	**22 47 55.5**	**+1.0**
	comp=E,188nm,0.2s						
PTEO	**Sao Teotonio**	**1.42**	**195**	*e*P	**Pn**	**22 47 42.4**	**+0.8**
PTEO				*e*S	**Sn**	**22 47 59.9**	**-0.3**
PTEO				A		22 48 02.5	
	comp=E,813nm,0.3s						
PTEO	**Sao Teotonio**	**1.42**	**195**	⇑P	**Pn**	**22 47 42.4**	**+0.8**
PTEO				S	**Sn**	**22 47 59.9**	**-0.3**
	comp=E,406nm,0.3s						
EGRO	**El Granado**	**1.51**	**156**	Pn	**Pn**	**22 47 42.7**	**-0.2**
	comp=E,4.2nm,0.1s,SNR=18						
EGRO	**El Granado**	**1.51**	**156**	Pg	**Pg**	**22 47 44.1**	**-0.9**
	comp=E,31nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.51**	**156**	⇓Pn	**Pn**	**22 47 42.7**	**-0.2**
	comp=E,4.2nm,0.1s,SNR=18						
EGRO				Pg	**Pg**	**22 47 44.1**	**-0.9**
	comp=E,31nm,0.1s,SNR=7.9						
EGRO				Lg		22 48 04.7	
	comp=E,438nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.51**	**156**	⇓Pn	**Pn**	**22 47 42.7**	**-0.2**
EGRO				Pg	**Pg**	**22 47 44.1**	**-0.9**
EGRO				Lg		22 48 04.7	
PVAQ	**Vaqueiros**	**1.57**	**164**	*e*Pn	**Pn**	**22 47 43.4**	**-0.3**
PVAQ	**Vaqueiros**	**1.57**	**164**	*e*Pg	**Pg**	**22 47 45.0**	**-1.1**
PVAQ				*e*Sn	**Sn**	**22 48 04.9**	**+0.9**
PVAQ				A		22 48 07.2	
	comp=E,346nm,0.2s						
PVAQ	**Vaqueiros**	**1.57**	**164**	*e*Pg	**Pg**	**22 47 45.0**	**-1.1**
PVAQ				*e*Sn	**Sn**	**22 48 04.9**	**+0.9**
	comp=E,346nm,0.2s						
PVAQ	**Vaqueiros**	**1.57**	**164**	⇓Pn	**Pn**	**22 47 43.4**	**-0.3**
PVAQ				Pg	**Pg**	**22 47 45.0**	**-1.1**
PVAQ				Sn	**Sn**	**22 48 04.9**	**+0.9**
	comp=E,346nm,0.2s						
MTE	**Manteigas**	**1.58**	**20**	*e*Pn	**Pn**	**22 47 44.0**	**+0.2**
MTE	**Manteigas**	**1.58**	**20**	*e*Pg	**Pg**	**22 47 46.2**	**0.0**
MTE				*e*Sn	**Sn**	**22 48 06.6**	**+2.5**
MTE				A		22 48 09.4	
	comp=E,411nm,0.3s						
MTE	**Manteigas**	**1.58**	**20**	*e*Pg	**Pg**	**22 47 46.2**	**0.0**
MTE				*e*Sn	**Sn**	**22 48 06.6**	**+2.5**
	comp=E,411nm,0.3s						
MTE	**Manteigas**	**1.58**	**20**	*e*Pn	**Pn**	**22 47 44.0**	**+0.2**
MTE				*e*Sn	**Sn**	**22 48 06.7**	**+2.6**
MORF	**Marmelete**	**1.64**	**191**	*e*Pn	**Pn**	**22 47 44.1**	**-0.5**
MORF	**Marmelete**	**1.64**	**191**	*e*Pg	**Pg**	**22 47 46.8**	**-0.6**
MORF				*e*Sn	**Sn**	**22 48 06.7**	**+1.0**

MORF A 22 48 09.4
comp=E,555nm,0.1s
MORF Marmelete 1.64 191 ePg **Pg** **22 47 46.8 -0.6**
MORF eSn **Sn** **22 48 06.7 +1.0**
comp=E,555nm,0.1s
MORF Marmelete 1.64 191 ⇑Pn **Pn** **22 47 44.1 -0.5**
MORF Pg **Pg** **22 47 46.8 -0.6**
MORF Sn **Sn** **22 48 06.7 +1.0**
comp=E,555nm,0.1s
PBDV Barranco-do-Ve 1.69 171 ePn **Pn** **22 47 45.3 -0.1**
PBDV Barranco-do-Ve 1.69 171 ePg **Pg** **22 47 47.3 -1.2**
PBDV eSn **Sn** **22 48 08.0 +1.0**
PBDV A 22 48 12.8
comp=E,232nm,0.2s
PBDV Barranco-do-Ve 1.69 171 ePg **Pg** **22 47 47.3 -1.2**
PBDV eSn **Sn** **22 48 08.0 +1.0**
comp=E,232nm,0.2s
PBDV Barranco-do-Ve 1.69 171 Pn **Pn** **22 47 45.3 -0.1**
PBDV Pg **Pg** **22 47 47.3 -1.2**
PBDV Sn **Sn** **22 48 08.0 +1.0**
comp=E,232nm,0.2s
EMIN Mina Concepcio 1.70 132 Pn **Pn** **22 47 45.5 +0.1**
comp=E,2.2nm,0.1s,SNR=18
EMIN Mina Concepcio 1.70 132 Pg **Pg** **22 47 46.9 -1.6**
comp=E,18nm,0.1s,SNR=7.1
EMIN Mina Concepcio 1.70 132 ⇓Pn **Pn** **22 47 45.5 0.0**
comp=E,2.2nm,0.1s,SNR=18
EMIN Pg **Pg** **22 47 46.9 -1.7**
comp=E,18nm,0.1s,SNR=7.1
EMIN Lg 22 48 10.5
comp=E,115nm,0.2s,SNR=17
PVIS Viseu 1.81 9 ePn **Pn** **22 47 48.1 +1.1**
PVIS Viseu 1.81 9 ePg **Pg** **22 47 50.2 -0.5**
PVIS eSg **Sg** **22 48 15.0 +0.7**
PVIS A 22 48 16.5
comp=E,451nm,0.1s
PVIS Viseu 1.81 9 ePg **Pg** **22 47 50.2 -0.5**
PVIS eSg **Sg** **22 48 15.0 +0.7**
comp=E,451nm,0.1s
PVIS Viseu 1.81 9 Pn **Pn** **22 47 48.1 +1.1**
PVIS Pg **Pg** **22 47 50.2 -0.5**
PVIS Lg 22 48 15.0
comp=E,226nm,0.1s
PFVI Vila Bisbo 1.84 194 ePn **Pn** **22 47 46.8 -0.6**
PFVI Vila Bisbo 1.84 194 ePg **Pg** **22 47 50.1 -1.1**
PFVI eSg **Sg** **22 48 13.5 -1.6**
PFVI A 22 48 16.7
comp=E,148nm,0.3s
PFVI Vila Bisbo 1.84 194 ePg **Pg** **22 47 50.1 -1.1**
PFVI eSg **Sg** **22 48 13.5 -1.6**
comp=E,148nm,0.3s
PFVI Vila Bisbo 1.84 194 Pn **Pn** **22 47 46.8 -0.6**
PFVI Pg **Pg** **22 47 50.1 -1.1**
PFVI Lg 22 48 13.5
comp=E,74nm,0.3s
PTO Porto 2.23 353 ePg **Pg** **22 47 58.2 -0.5**
PTO eSn **Sn** **22 48 19.5 -0.8**
PTO eSg **Sg** **22 48 28.0 +0.4**
MVO Moncorvo 2.43 22 ePn **Pn** **22 47 55.6 +0.1**
MVO Moncorvo 2.43 22 ePg **Pg** **22 48 03.4 +0.8**
MVO eSn **Sn** **22 48 25.9 +0.7**
MVO eSg **Sg** **22 48 34.0 -0.1**
MVO A 22 48 39.0
comp=E,153nm,0.3s
MVO Moncorvo 2.43 22 ePg **Pg** **22 48 03.4 +0.8**
MVO eSn **Sn** **22 48 25.9 +0.7**
MVO eSg **Sg** **22 48 34.0 -0.1**
comp=E,153nm,0.3s
MVO Moncorvo 2.43 22 Pn **Pn** **22 47 55.6 +0.1**
MVO Pg **Pg** **22 48 03.4 +0.8**
MVO Sn **Sn** **22 48 25.9 +0.7**
MVO Lg 22 48 34.0
comp=E,76nm,0.3s
PCAB Cabril 2.79 4 ePn **Pn** **22 48 00.7 +0.2**
PCAB eSn **Sn** **22 48 33.9 -0.2**
PCAB eSg **Sg** **22 48 44.8 -0.8**
PCAB A 22 48 48.3
comp=E,154nm,0.3s
PCAB Cabril 2.79 4 ePn **Pn** **22 48 00.7 +0.2**
PCAB eSn **Sn** **22 48 33.9 -0.2**
PCAB eSg **Sg** **22 48 44.8 -0.8**
comp=E,154nm,0.3s
ESPR Espera 2.80 136 Pn **Pn** **22 48 01.1 +0.6**
comp=E,8.4nm,0.1s,SNR=19
ESPR Espera 2.80 136 Pg **Pg** **22 48 08.7 -0.8**
comp=E,40nm,0.3s,SNR=35
ESPR Espera 2.80 136 Pn **Pn** **22 48 01.1 +0.6**
comp=E,8.4nm,0.1s,SNR=19
ESPR Pg **Pg** **22 48 08.7 -0.8**
comp=E,40nm,0.3s,SNR=35
ESPR Lg 22 48 45.8
comp=E,37nm,0.3s
ELOB Lobios 2.95 3 Pn **Pn** **22 48 03.0 +0.4**
comp=E,2.8nm,0.1s,SNR=18
ELOB Lobios 2.95 3 Pg **Pg** **22 48 11.2 -1.2**
comp=E,2.6nm,0.1s,SNR=9.5
ELOB Sn **Sn** **22 48 36.9 -1.0**
comp=E,21nm,0.1s,SNR=7.9
ELOB Lobios 2.95 3 Pn **Pn** **22 48 03.0 +0.4**
comp=E,2.8nm,0.1s,SNR=18
ELOB Pg **Pg** **22 48 11.2 -1.2**
comp=E,2.6nm,0.1s,SNR=9.5
ELOB Sn **Sn** **22 48 36.9 -1.0**
comp=E,21nm,0.1s,SNR=7.9
ELOB Lg 22 48 48.8
comp=E,24nm,0.1s
ELOB Lobios 2.95 3 Pn **Pn** **22 48 03.0 +0.4**
ELOB Pg **Pg** **22 48 11.2 -1.2**
ELOB Sn **Sn** **22 48 36.9 -1.0**
ELOB Lg 22 48 48.8
EADA Adamuz 2.98 103 Pn **Pn** **22 48 03.0 -0.1**
comp=E,1.7nm,0.1s,SNR=20
EADA Adamuz 2.98 103 Pg **Pg** **22 48 11.7 -1.4**
comp=E,3.1nm,0.1s,SNR=11
EADA Sn **Sn** **22 48 39.1 +0.2**
comp=E,20nm,0.1s,SNR=5.6
EADA Adamuz 2.98 103 Pn **Pn** **22 48 03.0 -0.1**
comp=E,1.7nm,0.1s,SNR=20
EADA Pg **Pg** **22 48 11.7 -1.4**
comp=E,3.1nm,0.1s,SNR=11
EADA Sn **Sn** **22 48 39.1 +0.2**
comp=E,20nm,0.1s,SNR=5.6
EADA Lg 22 48 51.2
comp=E,70nm,0.2s,SNR=9.0
PAB San Pablo 3.10 77 ePn **Pn** **22 48 05.9 +1.2**
PAB eSn **Sn** **22 48 43.5 +1.7**
PAB San Pablo 3.10 77 ePn **Pn** **22 48 05.9 +1.2**
PAB eSn **Sn** **22 48 43.5 +1.8**
PBRG Braganca 3.11 21 ePn **Pn** **22 48 05.1 +0.3**
PBRG eSn **Sn** **22 48 41.3 -0.5**
PBRG eSg **Sg** **22 48 55.0 -0.7**
PBRG A 22 48 58.5
comp=E,52nm,0.2s
PBRG Braganca 3.11 21 ePn **Pn** **22 48 05.1 +0.3**
PBRG eSn **Sn** **22 48 41.3 -0.5**
PBRG eSg **Sg** **22 48 55.0 -0.7**
comp=E,52nm,0.2s
ECAL Calabor 3.23 21 Pn **Pn** **22 48 07.0 +0.5**
comp=E,13nm,0.2s,SNR=58
ECAL Calabor 3.23 21 Pg **Pg** **22 48 14.8 -3.1**
comp=E,11nm,0.1s,SNR=7.9
ECAL Sn **Sn** **22 48 44.6 -0.4**
comp=E,40nm,0.3s,SNR=7.9
ECAL Calabor 3.23 21 Pn **Pn** **22 48 07.0 +0.4**
comp=E,13nm,0.2s,SNR=58
ECAL Pg **Pg** **22 48 14.8 -3.0**
comp=E,11nm,0.1s,SNR=7.9
ECAL Sn **Sn** **22 48 44.6 -0.3**
comp=E,40nm,0.3s,SNR=7.9
ECAL Lg 22 48 59.9
comp=E,154nm,0.4s,SNR=5.0
EZAM Zamans 3.24 354 Pn **Pn** **22 48 05.8 -0.8**
comp=E,1.5nm,0.2s,SNR=7.9
EZAM Sn **Sn** **22 48 44.2 -1.0**
comp=E,2.3nm,0.1s,SNR=7.9
EZAM Zamans 3.24 354 Pn **Pn** **22 48 05.8 -0.9**
comp=E,1.5nm,0.2s,SNR=7.9
EZAM Sn **Sn** **22 48 44.2 -1.0**
comp=E,2.3nm,0.1s,SNR=7.9
EZAM Lg 22 48 56.3
comp=E,3.9nm,0.1s,SNR=7.9
EJIF Jimena Fronter 3.31 137 Pn **Pn** **22 48 08.4 +0.8**
comp=E,1.2nm,0.2s,SNR=7.9
EJIF Lg 22 49 02.2
comp=E,11nm,0.4s,SNR=7.9

ESDC Sonseca Array 3.42 76 Pn **Pn** **22 48 09.8 +0.7**
comp=E,13nm,0.2s,SNR=264
ESDC Sn **Sn** **22 48 49.3 -0.3**
comp=E,6.4nm,0.2s,SNR=9.6
ESDC Sonseca Array 3.42 76 Pn **Pn** **22 48 09.8 +0.7**
comp=E,13nm,0.2s,baz=260,slow=13,SNR=264
ESDC Sn **Sn** **22 48 49.3 -0.2**
comp=E,6.4nm,0.2s,baz=261,slow=23,SNR=9.6
ESDC Lg 22 49 00.5
comp=E,21nm,0.3s,baz=264,slow=28,SNR=14
ELUQ Luque 3.43 112 Pn **Pn** **22 48 09.7 +0.5**
comp=E,4.6nm,0.3s,SNR=7.9
ELUQ Sn **Sn** **22 48 50.8 +1.1**
SNR=7.9
ELUQ Luque 3.43 112 Pn **Pn** **22 48 09.7 +0.5**
comp=E,4.6nm,0.3s,SNR=7.9
ELUQ Sn **Sn** **22 48 50.8 +1.0**
SNR=7.9
ELUQ Lg 22 49 07.0
comp=E,24nm,0.2s,SNR=7.9
ELUQ Luque 3.43 112 Pn **Pn** **22 48 09.7 +0.5**
ELUQ Sn **Sn** **22 48 50.8 +1.0**
ELUQ Lg 22 49 07.0
ERUA La Rua 3.57 13 Pn **Pn** **22 48 11.4 +0.2**
comp=E,10nm,0.1s,SNR=7.9
ERUA Sn **Sn** **22 48 52.3 -1.0**
SNR=7.9
ERUA La Rua 3.57 13 Pn **Pn** **22 48 11.4 +0.2**
comp=E,10nm,0.1s,SNR=7.9
ERUA Sn **Sn** **22 48 52.3 -1.1**
SNR=7.9
ERUA Lg 22 49 09.2
comp=E,16nm,0.3s,SNR=7.9
EBAN Banos Encina 3.59 101 Pn **Pn** **22 48 11.6 +0.2**
comp=E,1.3nm,0.1s,SNR=6.5
EBAN Sn **Sn** **22 48 52.8 -1.0**
comp=E,36nm,0.4s,SNR=15
EBAN Banos Encina 3.59 101 Pn **Pn** **22 48 11.6 +0.2**
comp=E,1.3nm,0.1s,SNR=6.5
EBAN Sn **Sn** **22 48 52.8 -1.0**
comp=E,36nm,0.4s,SNR=15
EBAN Lg 22 49 10.0
comp=E,134nm,0.5s,SNR=17
GUD Guadarrama 3.60 60 Pn **Pn** **22 48 11.5 -0.1**
comp=E,1.2nm,0.2s,SNR=7.9
GUD Pg **Pg** **22 48 21.8 -3.2**
comp=E,3.8nm,0.2s,SNR=7.9
GUD Sn **Sn** **22 48 54.2 +0.1**
comp=E,3.8nm,0.2s,SNR=7.9
GUD Lg 22 49 11.0
comp=E,25nm,0.2s,SNR=7.9
GUD Guadarrama 3.60 60 Pn **Pn** **22 48 11.5 -0.1**
GUD Pg **Pg** **22 48 21.8 -3.2**
GUD Sn **Sn** **22 48 54.1 +0.1**
GUD Lg 22 49 11.0
EMIJ Mijas 3.63 129 Pn **Pn** **22 48 13.4 +1.4**
comp=E,2.5nm,0.1s,SNR=19
EMIJ Sn **Sn** **22 48 54.3 -0.5**
comp=E,6.5nm,0.3s,SNR=7.9
EMIJ Mijas 3.63 129 Pn **Pn** **22 48 13.4 +1.4**
comp=E,2.5nm,0.1s,SNR=19
EMIJ Sn **Sn** **22 48 54.3 -0.5**
comp=E,6.5nm,0.3s,SNR=7.9
EMIJ Lg 22 49 14.6
comp=E,4.6nm,0.2s,SNR=5.0
EMIJ Mijas 3.63 129 Pn **Pn** **22 48 13.4 +1.4**
EMIJ Sn **Sn** **22 48 54.3 -0.5**
EMIJ Lg 22 49 14.6
ELOJ Sierra Loja 3.69 117 Pn **Pn** **22 48 13.6 +0.7**
comp=E,0.8nm,0.2s,SNR=6.9
ELOJ Sn **Sn** **22 48 56.0 -0.4**
comp=E,7.5nm,0.3s,SNR=7.9
ELOJ Sierra Loja 3.69 117 Pn **Pn** **22 48 13.6 +0.7**
comp=E,0.8nm,0.2s,SNR=6.9
ELOJ Sn **Sn** **22 48 56.0 -0.4**
comp=E,7.5nm,0.3s,SNR=7.9
ELOJ Lg 22 49 15.6
comp=E,7.0nm,0.2s,SNR=9.6
ECEU Ceuta 3.79 142 Pn **Pn** **22 48 15.8 +1.6**
comp=E,4.3nm,0.1s,SNR=12
ECEU Ceuta 3.79 142 Pn **Pn** **22 48 15.8 +1.6**
comp=E,4.3nm,0.1s,SNR=12
STS Santiago 3.97 357 Pn **Pn** **22 48 17.4 +0.8**
comp=E,2.7nm,0.2s,SNR=7.4
STS Sn **Sn** **22 49 01.9 -1.2**
comp=E,5.8nm,0.2s,SNR=7.9
STS Santiago 3.97 357 Pn **Pn** **22 48 17.4 +0.8**
comp=E,2.7nm,0.2s,SNR=7.4
STS Sn **Sn** **22 49 01.9 -1.1**
comp=E,5.8nm,0.2s,SNR=7.9
STS Lg 22 49 20.6
comp=E,12nm,0.2s,SNR=6.2
ERON Agron 4.00 117 Sn **Sn** **22 49 04.2 +0.3**
comp=E,5.5nm,0.3s,SNR=7.9
ERON Lg 22 49 22.6
comp=E,15nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 4.05 112 Pn **Pn** **22 48 20.1 +2.3**
comp=E,0.4nm,0.1s,SNR=5.2
ECOG Sn **Sn** **22 49 04.9 -0.3**
comp=E,3.6nm,0.2s,SNR=7.9
ECOG Cogollos-Vega 4.05 112 Pn **Pn** **22 48 20.1 +2.3**
comp=E,0.4nm,0.1s,SNR=5.2
ECOG Sn **Sn** **22 49 04.9 -0.3**
comp=E,3.6nm,0.2s,SNR=7.9
ECOG Lg 22 49 28.1
comp=E,7.7nm,0.2s,SNR=8.3
EMAZ Mazaricos 4.06 353 Pn **Pn** **22 48 18.7 +0.8**
comp=E,0.3nm,0.1s,SNR=8.9
EMAZ Sn **Sn** **22 49 02.4 -3.0**
comp=E,2.5nm,0.2s,SNR=7.4
EMAZ Mazaricos 4.06 353 Pn **Pn** **22 48 18.7 +0.8**
comp=E,0.3nm,0.1s,SNR=8.9
EMAZ Sn **Sn** **22 49 02.4 -3.0**
comp=E,2.5nm,0.2s,SNR=7.4
EMAZ Lg 22 49 22.6
comp=E,14nm,0.2s,SNR=5.0
EQUE Quentar 4.17 113 Pn **Pn** **22 48 21.4 +1.9**
comp=E,1.3nm,0.1s,SNR=6.6
EQUE Pg **Pg** **22 48 36.6 +0.8**
comp=E,3.5nm,0.3s,SNR=7.9
EQUE Sn **Sn** **22 49 07.9 -0.3**
comp=E,12nm,0.2s,SNR=6.4
EQUE Lg 22 49 31.4
comp=E,21nm,0.3s,SNR=6.1
EQES Quesada 4.23 104 Pn **Pn** **22 48 21.2 +1.0**
comp=E,0.5nm,0.2s,SNR=9.5
EQES Sn **Sn** **22 49 08.8 -0.8**
comp=E,9.2nm,0.2s,SNR=8.9
EQES Quesada 4.23 104 Pn **Pn** **22 48 21.2 +1.0**
comp=E,0.5nm,0.2s,SNR=9.5
EQES Sn **Sn** **22 49 08.8 -0.8**
comp=E,9.2nm,0.2s,SNR=8.9
EQES Lg 22 49 31.7
comp=E,12nm,0.2s,SNR=5.0
EGUA Guajares 4.26 118 Pn **Pn** **22 48 21.9 +1.3**
comp=E,1.4nm,0.2s,SNR=7.9
EGUA Sn **Sn** **22 49 08.0 -2.3**
comp=E,3.4nm,0.2s,SNR=7.9
EGUA Guajares 4.26 118 Pn **Pn** **22 48 21.9 +1.3**
comp=E,1.4nm,0.2s,SNR=7.9
EGUA Sn **Sn** **22 49 08.0 -2.3**
comp=E,3.4nm,0.2s,SNR=7.9
EGUA Lg 22 49 34.1
comp=E,36nm,0.7s,SNR=7.9
EPON Pontenova 4.48 10 Pn **Pn** **22 48 25.0 +1.3**
comp=E,0.7nm,0.2s,SNR=7.9
EPON Pontenova 4.48 10 Pn **Pn** **22 48 25.0 +1.3**
comp=E,0.7nm,0.2s,SNR=7.9
EPON Sn **Sn** **22 49 12.0 -3.7**
comp=E,4.2nm,0.3s,SNR=7.9
EPON Lg 22 49 39.3
comp=E,12nm,0.3s,SNR=7.9
EVIA Vianos 4.51 92 Pn **Pn** **22 48 24.2 +0.1**
comp=E,0.9nm,0.1s,SNR=6.0
EVIA Sn **Sn** **22 49 14.2 -2.3**
comp=E,4.4nm,0.3s,SNR=4.6
EVIA Vianos 4.51 92 Pn **Pn** **22 48 24.2 +0.1**
comp=E,0.9nm,0.1s,SNR=6.0
EVIA Sn **Sn** **22 49 14.2 -2.3**
comp=E,4.4nm,0.3s,SNR=4.6
EVIA Lg 22 49 41.8
comp=E,30nm,0.2s,SNR=15
EBER Berja 4.70 114 Pn **Pn** **22 48 28.9 +2.1**
comp=E,0.4nm,0.1s,SNR=11
EBER Sn **Sn** **22 49 20.6 -0.7**
comp=E,10nm,0.4s,SNR=5.0
EBER Berja 4.70 114 Pn **Pn** **22 48 28.9 +2.1**
comp=E,0.4nm,0.1s,SNR=11
EBER Sn **Sn** **22 49 20.6 -0.7**
comp=E,10nm,0.4s,SNR=5.0
EBER Lg 22 49 49.2
comp=E,23nm,0.4s,SNR=5.0
EARI Arriondas 4.95 27 Pn **Pn** **22 48 31.5 +1.4**
comp=E,1.2nm,0.2s,SNR=8.3
EARI Arriondas 4.95 27 Pn **Pn** **22 48 31.5 +1.4**
comp=E,1.2nm,0.2s,SNR=8.3
EARI Lg 22 49 54.4
comp=E,277nm,1.7s,SNR=5.0
ETOR Torete 5.14 66 Pn **Pn** **22 48 33.0 +0.3**
comp=E,9.1nm,0.2s,SNR=7.9
ETOR Sn **Sn** **22 49 28.8 -3.1**
comp=E,25nm,0.2s,SNR=7.9
ETOR Torete 5.14 66 Pn **Pn** **22 48 33.0 +0.3**
comp=E,9.1nm,0.2s,SNR=7.9
ETOR Sn **Sn** **22 49 28.8 -3.1**
comp=E,25nm,0.2s,SNR=7.9
ETOR Lg 22 49 59.4
comp=E,23nm,0.3s,SNR=7.9
ENIJ Nijar 5.17 110 Lg 22 50 02.8
comp=E,22nm,0.7s,SNR=4.9
ETOB Tobarra 5.25 91 Pn **Pn** **22 48 34.6 +0.3**
comp=E,0.7nm,0.3s,SNR=7.9
ETOB Sn **Sn** **22 49 31.8 -3.0**
comp=E,4.2nm,0.3s,SNR=6.0
ETOB Tobarra 5.25 91 Pn **Pn** **22 48 34.6 +0.3**
comp=E,0.7nm,0.3s,SNR=7.9
ETOB Sn **Sn** **22 49 31.8 -3.0**
comp=E,4.2nm,0.3s,SNR=6.0
ETOB Lg 22 50 02.9
comp=E,25nm,0.4s,SNR=7.9
EMUR La Murta 5.62 99 Sn **Sn** **22 49 42.3 -1.6**
comp=E,4.5nm,0.3s,SNR=5.8
EMUR La Murta 5.62 99 Sn **Sn** **22 49 42.3 -1.6**
comp=E,4.5nm,0.3s,SNR=5.8
EMUR Lg 22 50 14.4
comp=E,32nm,0.6s,SNR=7.9
ELAN Lanestosa 5.64 39 Pn **Pn** **22 48 40.7 +1.1**
comp=E,0.7nm,0.2s,SNR=7.9
ELAN Lanestosa 5.64 39 Pn **Pn** **22 48 40.7 +1.1**
comp=E,0.7nm,0.2s,SNR=7.9
ELAN Lg 22 50 15.9
comp=E,3.8nm,0.4s,SNR=7.9
ECHE Chera 5.70 81 Lg 22 50 18.4
comp=E,18nm,0.7s,SNR=4.6
ECRI Cripan 5.71 48 Pn **Pn** **22 48 40.9 +0.3**
comp=E,1.5nm,0.2s,SNR=7.9
ECRI Lg 22 50 19.4
comp=E,9.5nm,0.5s,SNR=7.9
EBEN Beniarda 6.28 89 Lg 22 50 36.7
comp=E,9.4nm,0.4s,SNR=5.5
SJPF Ste Jean 6.77 50 ePn **Pn** **22 48 56.0 +0.9**
SJPF eSn **Sn** **22 50 09.1 -3.0**
comp=E,2.0nm,0.3s
SJPF Ste Jean 6.77 50 ePn **Pn** **22 48 56.0 +0.9**
SJPF eSn **Sn** **22 50 09.1 -3.0**
comp=E,1.0nm,0.3s
ETSF Etsaut 7.06 53 eP **Pn** **22 49 04.5 +5.4**
ETSF eSn **Sn** **22 50 16.0 -3.2**
comp=E,5.1nm,0.5s
ETSF Etsaut 7.06 53 eP **Pn** **22 49 04.5 +5.4**
ETSF eSn **Sn** **22 50 16.0 -3.2**
comp=E,2.5nm,0.5s
ETSF Etsaut 7.06 53 Pn **Pn** **22 48 59.3 +0.2**
ETSF Sn **Sn** **22 50 16.0 -3.2**
comp=E,2.6nm,0.5s
ETSF Etsaut 7.06 53 ePn **Pn** **22 48 59.3 +0.2**
ETSF eP 22 49 04.5
ETSF eSn **Sn** **22 50 16.0 -3.2**
EBIE Bielsa 7.40 57 Pn **Pn** **22 49 04.6 +0.8**
comp=E,3.7nm,0.4s,SNR=11
EBIE Bielsa 7.40 57 Pn **Pn** **22 49 04.6 +0.8**
comp=E,3.7nm,0.4s,SNR=11
EBIE Sn **Sn** **22 50 23.4 -4.2**
comp=E,65nm,1.7s,SNR=5.0
EPF Esparros 7.69 55 eP **Pn** **22 49 13.1 +5.3**
EPF eSn **Sn** **22 50 31.2 -3.6**
comp=E,2.4nm,0.4s
EPF Esparros 7.69 55 eP **Pn** **22 49 13.1 +5.3**
EPF eSn **Sn** **22 50 31.2 -3.6**
comp=E,1.2nm,0.4s
EPF Esparros 7.69 55 Pn **Pn** **22 49 07.8 0.0**
EPF Sn **Sn** **22 50 31.2 -3.6**
comp=E,1.2nm,0.4s
EPF Esparros 7.69 55 ePn **Pn** **22 49 07.8 0.0**
EPF eP 22 49 13.1
EPF eSn **Sn** **22 50 31.2 -3.6**
LFF La Frestale 9.01 45 ePn **Pn** **22 49 25.2 -0.6**
RJF Les Rejaudoux 9.66 46 ePn **Pn** **22 49 34.1 -0.7**
MFF Saint Martin d 9.72 35 ePn **Pn** **22 49 34.8 -0.7**
QUIF Quistinic 9.72 21 ePn **Pn** **22 49 34.9 -0.7**
CAF Calviac 9.75 49 ePn **Pn** **22 49 36.0 0.0**
ROSF Rostrenen 10.08 19 ePn **Pn** **22 49 39.9 -0.6**
SGMF Saint Gilles 10.20 22 ePn **Pn** **22 49 41.0 -1.1**

ISCJB ***10*** *22:59:13.6±0.5,2393N±003×12292E±002,h16km±7km,*
Error ellipse: s-maj=5.5km s-min=3.7km az=9.5
JMA ***10*** *22:59:14.9±0.2,2404N×12295E,h26km,M3.4*
TAP ***10*** *22:59:15.2,2397N×12291E,h52km±2km,ML3.7,D*
ISC 10 22:59:14.1±0.8,2397N±003×12294E±002,h19km±6km,
n45,σ0s94/68,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**8**	P			**Pg**	**22 59 23.8**	**-0.3**
YOJ				S			**Sg**	**22 59 29.8**	**-1.0**
HATJ	**Hateruma jima**	**0.80**	**84**	P			**Pb**	**22 59 29.3**	**0.0**
HATJ				S			**Sb**	**22 59 40.4**	**+0.7**
IRIF	**Iriomote-Funau**	**0.81**	**63**	P			**Pb**	**22 59 29.4**	**-0.1**
JKRS	**Kuro-shima**	**1.01**	**75**	P			**Pb**	**22 59 32.9**	**-0.1**
JKRS				eS			**Sb**	**22 59 46.6**	**+0.6**
JIJ	**Ishigaki jima**	**1.17**	**70**	P			**Pn**	**22 59 34.8**	**-0.6**
JIJ				eS			**Sb**	**22 59 48.3**	**-2.1**
TWC	**Suao**	**1.18**	**303**	*i* P	baz=303		**Pn**	**22 59 35.3**	**-0.3**
TWC				eS	baz=303		**Sb**	**22 59 49.4**	**-1.4**
ENA	**Nanau**	**1.19**	**293**	*i* P	baz=293		**Pn**	**22 59 35.3**	**-0.4**
ENA				S	baz=293		**Sb**	**22 59 50.6**	**-0.3**
TWD	**Chiawan**	**1.23**	**275**	P	baz=275		**Pn**	**22 59 35.1**	**-1.2**
ILA	**Ilan**	**1.34**	**306**	eP	baz=306		**Pn**	**22 59 39.1**	**+1.2**
TWB1	**Santiao Chiao**	**1.35**	**320**	eP	baz=320		**Pn**	**22 59 37.5**	**-0.4**
TWB1				eS	baz=320		**Sn**	**22 59 54.9**	**-0.4**
TWE	**Neicheng**	**1.38**	**303**	*i* P	baz=294		**Pn**	**22 59 39.0**	**+0.6**
TWE				S	baz=294		**Sn**	**22 59 55.9**	**-0.3**
ESL	**Shilin**	**1.39**	**264**	P	baz=256		**Pn**	**22 59 36.9**	**-1.6**
ENTT	**Nioudou**	**1.42**	**298**	*i* P	baz=298		**Pn**	**22 59 39.4**	**+0.5**
ENTT				eS	baz=298		**Sn**	**22 59 57.3**	**+0.2**
NNS	**Nan Shan**	**1.50**	**288**	eP	baz=288		**Pn**	**22 59 40.3**	**+0.2**
NNS				eS	baz=288		**Sn**	**23 00 00.5**	**+1.3**
NWF	**Wu-fen Shan**	**1.52**	**316**	*i* P	baz=316		**Pn**	**22 59 40.2**	**-0.1**
NWF				S	baz=316		**Sn**	**23 00 00.0**	**+0.4**
WHF	**Hehuan Shan**	**1.54**	**277**	P	baz=276		**Pn**	**22 59 40.3**	**-0.3**
EHY	**Hungye**	**1.55**	**253**	P	baz=253		**Pn**	**22 59 39.9**	**-0.9**
EHY				eS	baz=253		**Sn**	**22 59 59.0**	**-1.4**
NSK	**Sanguang**	**1.60**	**296**	P	baz=296		**Pn**	**22 59 42.0**	**+0.5**
NSK				eS	baz=296		**Sn**	**23 00 01.3**	**-0.4**
TWF1	**Yuli**	**1.63**	**248**	P	baz=241		**Pn**	**22 59 40.7**	**-1.1**
TWF1				S	baz=241		**Sn**	**23 00 01.3**	**-0.9**
TWT	**Tachien**	**1.64**	**280**	eP	baz=280		**Pn**	**22 59 43.1**	**+1.2**
CHKT	**Chengkung**	**1.69**	**239**	P			**Pn**	**22 59 41.0**	**-1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=230						
CHKT				eS	Sn	23 00 00.2	-3.4
	baz=230						
JTJ	Tarama	1.74	67	P	Pn	22 59 43.5	+0.2
TWY	Chenhua	1.78	317	eP	Pn	22 59 44.2	+0.3
	baz=317						
TWS1	Kuangyinshan	1.79	309	eP	Pn	22 59 44.2	+0.2
	baz=309						
SMLT	Sun Moon Lake	1.87	268	P	Pn	22 59 45.2	+0.1
	baz=259						
NSTT	Nanjuang	1.89	291	eP	Pn	22 59 46.4	+1.1
	baz=291						
TYC	Yuchr	1.91	268	P	Pn	22 59 45.6	0.0
	baz=259						
ELDTW	Lidau	1.93	247	iP	Pn	22 59 44.8	-1.1
	baz=238						
ALS	Alishan	2.01	257	eP	Pn	22 59 47.5	+0.4
	baz=257						
ALS				eS	Sn	23 00 11.9	+0.3
	baz=257						
TWQ1	Liyutan	2.02	281	eP	Pn	22 59 47.7	+0.6
	baz=281						
TWG	Pinlang	2.06	237	P	Pn	22 59 46.8	-0.9
	baz=230						
TWG				eS	Sn	23 00 11.3	-1.6
	baz=230						
WNT	Mingjian	2.07	268	eP	Pn	22 59 49.4	+1.6
	baz=267						
CHN5	Tsauling	2.10	260	P	Pn	22 59 49.3	+1.0
	baz=260						
STYT	Tauyuan	2.16	249	eP	Pn	22 59 49.0	-0.1
	baz=242						
STYT				eS	Sn	23 00 14.5	-0.8
	baz=242						
CHN4	Tsaushan	2.24	254	eP	Pn	22 59 51.9	+1.7
	baz=248						
CHN4				eS	Sn	23 00 16.3	-1.0
	baz=248						
WTP	Ta-pu	2.25	252	eP	Pn	22 59 51.3	+0.9
	baz=244						
ECL	Taimali	2.28	234	P	Pn	22 59 49.6	-1.1
	baz=233						
CHN1	Nanshi	2.35	251	P	Pn	22 59 52.9	+1.2
	baz=251						
CHN1				eS	Sn	23 00 19.7	-0.3
	baz=251						
TWK	Hsinying	2.36	253	eP	Pn	22 59 53.2	+1.4
	baz=253						
SSD	Sandimen	2.45	241	eP	Pn	22 59 53.4	+0.4
	baz=236						
TWM1	Shoushan	2.58	244	eP	Pn	22 59 56.9	+2.1
	baz=244						
SCZT	Fangliau	2.66	234	eP	Pn	22 59 56.8	+0.8
	baz=233						
SCZT				eS	Sn	23 00 27.1	-0.7
	baz=233						
TWK1	Hengchun	2.82	225	eP	Pn	22 59 58.6	+0.4
	baz=224						
TWK1				eS	Sn	23 00 32.6	+0.9
	baz=224						
TWP	Hsiaoliuchiu	2.87	236	eP	Pn	23 00 02.7	+3.9
	baz=234						
PNG	Penghu	3.13	263	eP	Pn	23 00 03.8	+1.4
	baz=263						
PNG				eS	Sn	23 00 40.1	+0.9
	baz=263						

*NEIC **10** 23:13:02.8, 1747N×9777W, h65km, MD3.6(MEX), After MEX.*

MEX 10 23:13:02.8±0.6**, 1747N×9777W, h65**km±7km**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UTMO	Huajuapan	0.36	355	iP	Pn	23 13 13.0	-0.9
UTMO				iS	Sn	23 13 20.4	-1.6
VHO	Vista Hermosa	1.07	112	iP	Pn	23 13 21.5	-0.5
VHO				iS	Sn	23 13 34.7	-1.6
OXX	Oaxaca	1.07	111	eP	Pn	23 13 20.5	-1.5
OXX				iS	Sn	23 13 34.4	-1.9
PNIG	Pinotepa	1.13	198	iP	Pn	23 13 21.6	-1.1
PNIG				iS	Sn	23 13 35.7	-1.8
PPM	Popocatepetl	1.78	333	iP	Pn	23 13 30.6	-0.8
PPM				iS	Sn	23 13 51.9	-1.2
ACX	Acapulco	2.14	254	eP	Pn	23 13 34.4	-1.8
ACX				iS	Sn	23 13 59.7	-1.9
HUIG	Huatulco	2.33	136	iP	Pn	23 13 36.9	-1.9
HUIG				iS	Sn	23 14 03.3	-3.0
CAIG	El Cayaco	2.42	260	iP	Pn	23 13 39.2	-0.9
CAIG				iS	Sn	23 14 07.1	-1.5
CMIG	Matias Romero	2.79	97	iP	Pn	23 13 43.2	-1.9
CMIG				iS	Sn	23 14 15.3	-2.2
ZIIG	Zihuatanejo	3.52	273	eP	Pn	23 13 52.6	-2.5
ZIIG				iS	Sn	23 14 35.1	-0.6

IDC 10 23:15:19.8±5.5**, 479S×10110E, h0**km**, mb3.6**/3**, mb1 3.6**/3**, mb1mx3.4**/18**, mbtmp3.6**/3**, Error ellipse: s-maj=206.5km s-min=76.2km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	52.60	4	P	P	23 24 35.4	+0.1
	0.3nm,0.5s,baz=188,slow=8.6,SNR=3.7						
MKAR	Makanchi Array	53.99	344	P	P	23 24 45.2	-0.4
	0.6nm,0.8s,baz=147,slow=8.2,SNR=5.3						
ZALV	Zalesovo Beam	60.09	349	P	P	23 25 29.2	+0.5
	0.2nm,0.3s,baz=165,slow=6.0,SNR=3.6						
TXAR	Lajitas Array	146.16	41	PKPbc	PKPbc	23 35 02.0	-0.7
	0.3nm,0.7s,baz=320,slow=1.6,SNR=4.8						

*BJI **10** 23:27:54.4, 760S×12870E, h132km, mB5.1, mb4.7*
*MOS **10** 23:27:56.2±0.8, 741S×12869E, h132km, mb4.1/6, Error ellipse: s-maj=17.9km s-min=9.7km az=134.0*
*NEIC **10** 23:27:57.5±1.3, 755S×12872E, h132km±13km, mb4.6/28, Error ellipse: s-maj=11.2km s-min=6.5km az=225.0*
*ISCJB **10** 23:27:59.1±0.9, 768S±006×12868E±006, h170km±9km, mb4.4/31, Error ellipse: s-maj=11.6km s-min=7.6km az=137.6*
*IDC **10** 23:27:59.7±2.9, 746S×12870E, h148km±26km, mb3.8/9, mb1 3.8/10, mb1mx3.7/17, mbtmp3.8/10, Error ellipse: s-maj=26.3km s-min=13.4km az=68.0*
*DJA **10** 23:28:01, 793S×12870E, h91km, mb4.8/7*

ISC 10 23:27:58.8±1.1**, 758S**±006×**12870E**±006**, h143**km±11km**, n80, σ0.98**/82**, mb4.4**/31**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.90	353	P	Pn	23 29 04.3	+6.7
BATI	Baumata	5.62	242	P	Pn	23 29 21.0	+0.7
	113nm,0.3s,baz=112,slow=2.9,SNR=92						
BATI				S	Sn	23 30 21.4	-2.6
	124nm,0.3s,baz=96,slow=16,SNR=15						
BATI	Baumata	5.62	242	P	Pn	23 29 20.8	+0.5
	276nm,0.8s,4μm1.5nm						
KAKA	Kakadu	6.29	144	⇓iP	x	23 29 09.2	
	54nm,0.1s						
KAKA				eS	x	23 30 03.2	
KDI	Kendari	7.04	300	P	Pn	23 29 42.2	+2.8
	46nm,0.9s,4μm0.1nm						
KAPI	Kappang	9.25	285	P	Pn	23 30 11.4	+2.4
	0.4nm,0.3s,baz=96,slow=15,SNR=3.0						
FITZ	Fitzroy Crossi	10.87	196	eP	Pn	23 30 27.1	-3.4
	9.2nm,0.3s						
FITZ				eS	Sn	23 32 22.2	-8.5
FITZ	Fitzroy Crossi	10.87	196	P	Pn	23 30 28.8	-1.7
	29nm,0.6s						
WRAB	Tennant Creek	13.45	157	eP	Pn	23 31 01.0	-2.9
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.4s						
WRAB	Tennant Creek	13.45	157	ePn	Pn	23 31 01.0	-2.9
	comp=Z,6.3nm,0.4s						
WRAB				eSn	Sn	23 33 22.8	-10
WRAB	Tennant Creek	13.45	157	P	Pn	23 31 01.9	-2.0
	comp=Z,13nm,0.7s						
WB2	Warramunga Arr	13.46	157	eP	Pn	23 31 00.7	-3.4
WB2				eS	Sn	23 33 21.1	-12
BBKI	Banjar Baru	14.38	286	P	Pn	23 31 22.0	+6.1
	comp=Z,62nm,1.1s						
COEN	Coen	15.56	115	ePn	Pn	23 31 29.9	-0.7
	comp=Z,21nm,0.8s						
COEN	Coen	15.56	115	P	Pn	23 31 33.0	+2.4
	comp=Z,15nm,1.1s						
PLKI	Palangkaraya	15.63	289	P	Pn	23 31 36.0	+4.6
MBWA	Marble Bar	16.04	212	ePn	Pn	23 31 36.6	+0.2
	comp=Z,4.9nm,0.3s						
MBWA				eSn	Sn	23 34 22.5	-13
PMG	Port Moresby	18.35	97	eP	P	23 32 02.5	0.0
PMG				pmax	pmax		
	comp=Z,56nm,1.4s						
PMG	Port Moresby	18.35	97	eP	P	23 32 02.5	+0.1
	comp=Z,56nm,1.4s						
KKM	Kota Kinabalu	18.39	317	eP	P	23 32 01.9	-1.1
	comp=Z,5.4nm,0.4s						
KSM	Kuching	20.43	295	eP	P	23 32 26.1	+1.0
	comp=Z,28nm,0.9s						
CTA	Charters Tower	21.07	128	P	P	23 32 33.5	+1.7
	comp=Z,2.4nm,0.6s,mb3.7,baz=299,slow=9.8,SNR=4.2						
CTAO	Charters Tower	21.07	128	eP	P	23 32 33.5	+1.7
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
CTAO	Charters Tower	21.07	128	eP	P	23 32 33.5	+1.7
	comp=Z,2.4nm,0.5s,mb3.8						
FORT	Forrest	23.09	181	eP	P	23 32 53.2	+1.3
	comp=Z,15nm,0.7s,mb4.5						
KLBR	Kellerberrin	25.98	202	eP	P	23 33 19.1	+0.9
	comp=Z,8.5nm,0.7s,mb4.5						
STKA	Stephens Creek	27.00	155	eP	P	23 33 28.4	+1.1
	comp=Z,2.6nm,1.1s,mb3.8						
STKA	Stephens Creek	27.00	155	P	P	23 33 28.5	+1.2
	comp=Z,2.3nm,0.8s,mb3.9,baz=335,slow=7.6,SNR=4.0						
STKA	Stephens Creek	27.00	155	eP	P	23 33 28.3	+1.0
	comp=Z,0.5nm,0.6s,mb3.3						
NWAO	Narrogin (SRO)	27.37	201	P	P	23 33 32.0	+1.3
	comp=Z,4.8nm,0.4s,mb4.5,baz=33,slow=11,SNR=7.6						
NWAO	Narrogin (SRO)	27.37	201	eP	P	23 33 31.6	+1.0
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NWAO	Narrogin (SRO)	27.37	201	eP	P	23 33 31.6	+1.0
	comp=Z,4.4nm,0.4s,mb4.4						
COCO	West Island	31.71	259	eP	P	23 34 10.3	+1.1
COCO				pmax	pmax		
	comp=Z,26nm,0.5s,mb5.2						
COCO	West Island	31.71	259	eP	P	23 34 10.3	+1.1
	comp=Z,26nm,0.5s,mb5.2						
CMAR	Chiang Mai Arr	39.13	312	P	P	23 35 12.3	-0.3
	comp=Z,1.6nm,0.6s,mb3.8,baz=139,slow=6.9,SNR=16						
CMAR				PcP	PcP	23 37 19.4	-0.1
	comp=Z,0.6nm,0.3s,baz=122,slow=1.2,SNR=4.5						
CHTO	Chiang Mai	39.35	312	eP	P	23 35 14.2	-0.2
	comp=Z,0.9nm,0.6s,mb3.6						
CHTO				e	pP	23 35 42.8	-3.1
XAN	Xi’an	45.44	337	P	P	23 36 01.9	-1.5
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.3						
LZH	Lanzhou	49.32	333	eP	P	23 36 33.7	+0.3
LZH				AMB	AMB		
	comp=Z,31nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,128nm,4.3s						
LSA	Lhasa	51.74	318	eP	P	23 36 51.8	+0.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
LSA	Lhasa	51.74	318	eP	P	23 36 51.8	+0.1
	comp=Z,3.8nm,0.6s,mb4.2						
TAPN	Taplejung	52.72	313	eP	P	23 36 58.5	-0.5
	comp=Z,7.5nm,0.4s,mb4.8						
RAMN	Ramite	53.31	312	eP	P	23 37 03.1	-0.2
	comp=Z,23nm,0.6s,mb5.1						
GTA	Gaotai	53.87	332	eP	P	23 37 07.0	-0.1
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
JIRN	Jiri	54.01	312	eP	P	23 37 08.1	-0.2
	comp=Z,9.0nm,0.6s,mb4.7						
GUN	Gumba	54.37	312	eP	P	23 37 10.6	-0.4
	comp=Z,19nm,0.6s,mb5.0						
RAO	Raoul Island	54.52	121	P	P	23 37 11.9	-0.2
PKI	Pulchoki	54.53	312	eP	P	23 37 12.4	+0.2
KKN	Kakani	54.75	312	eP	P	23 37 13.2	-0.5
	comp=Z,8.1nm,0.5s,mb4.7						
KKN	Kakani	54.75	312	eP	P	23 37 13.2	-0.5
KKN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
DMN	Daman	54.78	311	eP	P	23 37 13.5	-0.4
GKN	Gorkha	55.34	312	eP	P	23 37 17.5	-0.5
	comp=Z,18nm,0.4s,mb5.1						
KOLN	Koldanda	55.99	311	eP	P	23 37 22.1	-0.5
	comp=Z,16nm,0.8s,mb4.9						
DANN	Dangsing	56.18	311	eP	P	23 37 23.4	-0.5
	comp=Z,5.8nm,0.5s,mb4.6						
ULN	Ulaanbaatar	58.43	343	eP	P	23 37 38.8	-0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
ULN	Ulaanbaatar	58.43	343	eP	P	23 37 38.8	-0.5
	comp=Z,1.0nm,0.6s,mb3.8						
SONM	Songino Array	58.59	343	P	P	23 37 40.8	+0.3
	comp=Z,1.0nm,0.7s,mb3.8,baz=169,slow=7.8,SNR=10.0						
PETK	Petropavlovsk-	65.28	19	P	P	23 38 25.2	+0.2
	comp=Z,1.1nm,0.5s,mb3.9,baz=190,slow=7.2,SNR=3.6						
MK31	Makanchi Array	68.01	328	eP	P	23 38 42.0	-0.5
MKAR	Makanchi Array	68.01	328	P	P	23 38 42.2	-0.3
	comp=Z,3.5nm,0.6s,mb4.3,baz=121,slow=7.9,SNR=93						
TKM2	Tokmak 2	69.62	321	eP	P	23 38 52.8	+0.3
TKM2				pmax	pmax		
	comp=Z,37nm,2.1s,mb4.8						
TKM2	Tokmak 2	69.62	321	eP	P	23 38 52.8	+0.3
	comp=Z,37nm,2.1s,mb4.8						
UCH	Uchtor	69.93	320	P	P	23 38 55.2	+0.7
AAK	Ala-Archa	70.16	320	eP	P	23 38 56.2	+0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
AAK	Ala-Archa	70.16	320	eP	P	23 38 56.2	+0.3
	comp=Z,3.4nm,0.8s,mb4.1						
KBL	Kabul	70.16	311	P	P	23 38 55.6	-0.4
EKS2	Erkin-Say	70.62	320	eP	P	23 38 59.3	+0.6
	comp=Z,5.1nm,1.1s,mb4.2						
ZAA0	Zalesovo Array	71.54	334	eP	P	23 39 02.8	-1.1
ZALV	Zalesovo Beam	71.54	334	P	P	23 39 02.9	-1.0
	comp=Z,3.2nm,0.6s,mb4.3,baz=135,slow=6.0,SNR=20						
ZALV	Zalesovo Beam	71.54	334	P	P	23 39 02.9	-1.0
KURK	Kurchatov	72.34	329	eP	P	23 39 08.6	-0.2
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
KURK	Kurchatov	72.34	329	eP	P	23 39 08.6	-0.2
	comp=Z,7.5nm,1.3s,mb4.3						
MAW	Mawson	73.94	201	P	P	23 39 20.0	+2.0
	comp=Z,3.4nm,0.9s,mb4.1,baz=95,slow=12,SNR=2.9						
BRVK	Borovoye	77.94	328	eP	P	23 39 40.2	-0.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
BRVK	Borovoye	77.94	328	eP	P	23 39 40.2	-0.6
	comp=Z,1.0nm,0.5s,mb3.7						
KIV	Kislovodsk	92.34	314	eP	P	23 40 53.6	+0.6
KIV	Kislovodsk	92.34	314	eP	P	23 40 53.6	+0.6
PMR	Palmer	92.89	28	P	P	23 40 55.6	+0.5
LBTB	Lobatse	98.56	243	P	P	23 41 21.3	-0.5
TORD	Torodi Ar. Bea	127.65	281	PKP	PKPdf	23 46 48.4	+0.3
	comp=Z,0.5nm,0.7s,baz=118,slow=2.7,SNR=3.7						
CPUP	Villa Florida	145.79	170	PKPbc	PKPbc	23 47 21.1	-0.7
	comp=Z,0.8nm,0.5s,baz=150,slow=1.5,SNR=4.8						

*NIED **10** 23:52:00, 3120N×13040E, h165km, Mw3.9 Best double couple: M0 8.70000×10¹⁴ NP1: φs 160.00000°, δ 81.00000°, λ 107.00000°. NP2: φs 277.00000°, δ 19.00000°, λ 28.00000°.*
*ISCJB **10** 23:52:23.1±0.5, 31.14N±006×13032E±009, h164km±3km, mb3.3/6, Error ellipse: s-maj=13.7km s-min=8.2km az=23.6*
*IDC **10** 23:52:23.1±1.5, 31.10N×13044E, h156km±19km, mb3.2/6, mb1 3.4/9, mb1mx3.2/23, mbtmp3.2/9, Error ellipse: s-maj=25.6km s-min=15.9km az=115.0*
*NEIC **10** 23:52:23.7±1.1, 31.13N×13043E, h160km±15km, MG3.8(JMA), Error ellipse: s-maj=25.1km s-min=13.3km az=140.0*
*JMA **10** 23:52:24.9±0.1, 3123N×13038E, h158km±1km, M3.8*
JMA Felt I J1.

ISC 10 23:52:24.1±0.5**, 3114N**±006×**13032E**±009**, h161**km±3km**, n18, σ0.84**/25**, mb3.3**/6**, 3C-3D, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.39	17	⇑P	Pn	23 52 46.5	+0.3
JSU				S	Sn	23 53 02.9	-0.3
JTSR	Tashiro 2	0.51	87	⇓P	Pn	23 52 47.0	+0.3
JTSR				S	Sn	23 53 03.2	-0.8
JTN	Tanegashima 3	0.74	130	⇑P	Pn	23 52 48.8	+0.8
JTN				S	Sn	23 53 06.7	+0.4
JSJ	Shimokoshiki	0.75	316	⇑P	Pn	23 52 48.3	+0.3
JSJ				S	Sn	23 53 06.3	-0.1
JTZ	Takazaki	1.00	40	⇓P	Pn	23 52 49.7	-0.2
JTZ				S	Sn	23 53 09.1	-0.6
JNN	Nakanoshima	1.35	197	P	Pn	23 52 54.4	+1.4
JIU2	Izumi 2	1.47	16	⇓P	Pn	23 52 53.9	-0.2
JOW	Kunigami	4.65	203	P	Pn	23 53 33.1	0.0
	4.7nm,0.3s,baz=81,slow=14,SNR=36						
JOW				S	Sn	23 54 25.6	-1.4
	12nm,0.3s,baz=144,slow=18,SNR=12						
KSRS	Korea Array	6.61	343	P	Pn	23 53 58.6	-0.2
	0.2nm,0.3s,baz=175,slow=16,SNR=6.5						
MAT	Matsushiro	8.49	48	P	Pn	23 54 26.0	+2.2
MAT				S	Sn	23 56 04.0	+5.7
MJAR	Matsushiro Arr	8.49	48	P	Pn	23 54 22.7	-1.1
	2.7nm,0.3s,baz=242,slow=14,SNR=12						
SONM	Songino Array	24.73	319	P	P	23 57 31.9	+1.6
	0.2nm,0.4s,mb3.0,baz=147,slow=10,SNR=3.2						
PETK	Petropavlovsk-	29.59	34	P	P	23 58 12.3	-1.3
	1.9nm,0.8s,mb3.9,baz=258,slow=6.8,SNR=4.2						
MKAR	Makanchi Array	39.84	307	P	P	23 59 41.0	-0.5
	0.1nm,0.5s,mb2.7,baz=92,slow=10,SNR=3.2						
YKA	Yellowknife Ar	73.32	26	P	P	00 03 37.0	-0.5
	0.4nm,0.6s,mb3.3,baz=306,slow=5.7,SNR=7.7						
YKA	Yellowknife Ar	73.32	26	P	P	00 03 37.0	-0.5
NVAR	Mina Array Bea	85.81	47	P	P	00 04 45.8	+0.4
	0.6nm,0.5s,mb3.5,baz=286,slow=6.5,SNR=3.5						
PDAR	Pinedale Array	88.21	40	P	P	00 04 56.8	-0.1
	0.3nm,0.7s,mb3.2,baz=9.1,slow=2.3,SNR=3.0						

*ISK **10** 23:52:30.4, 3784N×3070E, h5km, ML3.6*
*IDC **10** 23:52:31.3±1.0, 3788N×3075E, h0km, mb3.6/6, mb1 3.7/11, mb1mx3.6/26, mbtmp3.6/11, ML3.2/4, MS3.1/2, Ms1 3.1/2, ms1mx2.5/47, Error ellipse: s-maj=19.3km s-min=18.7km az=164.0*
*NEIC **10** 23:52:31.0, 3785N×3070E, h7km, ML3.6(ISK), After ISK.*
*CSEM **10** 23:52:31.2±0.1, 3786N×3071E, h5km, ML3.6, Error ellipse: s-maj=1.6km s-min=1.4km az=152.0*
*ISCJB **10** 23:52:31.4±0.6, 3784N±002×3072E±003, h6km±5km, mb3.5/6, Error ellipse: s-maj=4.5km s-min=3.2km az=157.7*
*DDA **10** 23:52:32.0, 3788N×3070E, h4km, Md3.4*

ISC 10 23:52:32.0±0.6**, 3784N**±002×**3070E**±003**, h1**km±4km**, n83, σ1.04**/92**, mb3.5**/6**, 9C-7D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BCK	Bucak	0.39	194	ePG	Pg	23 52 38.4	-1.0
BCK				eSG	Sg	23 52 44.7	+0.3
SHUT	Suhut-Afyon	0.72	351	ePG	Pg	23 52 45.0	-1.0
SHUT				eSG	Sg	23 52 56.2	+0.8
BOLV	Bolvadin	0.90	12	iP	Pg	23 52 48.7	-0.6
BOLV				iS	Sg	23 53 04.4	+3.4
ANTB	Antalya	0.94	182	ePG	Pg	23 52 50.0	0.0
KHL	Karahalli	1.05	298	ePG	Pg	23 52 51.5	-0.7
GOLH	Golhisar	1.09	237	iP	Pg	23 52 53.6	+0.7
GOLH				iS	Sg	23 53 11.4	+4.4
KHAL	Karahalli	1.09	299	iP	Pg	23 52 52.1	-0.9
KHAL				iS	Sg	23 53 11.1	+3.9
ELL	Elmali	1.26	210	ePN	Pn	23 52 55.7	-1.1
ELL	Elmali	1.26	210	Pn	Pn	23 52 56.4	-0.3
ALT	Altintas	1.30	339	ePN	Pn	23 52 55.4	-2.0
KDHN	Kadinhani	1.31	58	iP	Pg	23 52 55.5	-1.6
KDHN				iS	Sg	23 53 16.3	+2.3
KONT	Konya--Tatoy	1.32	85	ePN	Pn	23 52 55.9	-1.6
KONT	Konya--Tatoy	1.32	85	Pn	Pn	23 52 56.2	-1.4
KONT	Konya--Tatoy	1.32	85	Pn	Pn	23 52 56.2	-1.4
DENT	Denizli	1.32	267	ePN	Pn	23 52 56.6	-1.1
DENT	Denizli	1.32	267	Pn	Pn	23 52 56.9	-0.8
DENT	Denizli	1.32	267	Pn	Pn	23 52 56.9	-0.8
LADK	Ladik-KONYA	1.36	74	ePN	Pn	23 52 57.2	-1.0
KIZT	Kizilcal	1.39	41	ePN	Pn	23 52 58.0	-0.6
GDZ	Gediz	1.57	323	iP	Pn	23 53 00.3	-0.8
GDZ				iS	Sn	23 53 23.4	+1.3
ESKT	Eskisehir	1.68	4	ePN	Pn	23 53 01.9	-0.7
KULA	Kula-Manisa	1.75	293	ePN	Pn	23 53 02.3	-1.2
YER	Yerkesik	2.05	251	ePN	Pn	23 53 07.9	+0.2
MLSB	Milas	2.39	258	ePN	Pn	23 53 12.0	-0.3
CAVI	Cavuskoy	2.46	344	ePN	Pn	23 53 13.1	-0.2
GPA	Golpazari	2.47	353	ePN	Pn	23 53 13.5	+0.1
AKS	Akhisar	2.50	295	ePN	Pn	23 53 13.2	-0.6
GULT	Gulveren	2.60	357	ePN	Pn	23 53 15.0	-0.2
LOD	Lodumlu	2.60	38	ePN	Pn	23 53 14.9	-0.4
LOD	Lodumlu	2.60	38	Pn	Pn	23 53 15.2	-0.1
MDU	Mudurnu	2.65	8	ePN	Pn	23 53 16.6	+0.7
ADVT	Abdulvahap	2.70	344	ePN	Pn	23 53 16.7	+0.1
DAT	Datca	2.73	247	ePN	Pn	23 53 17.7	+0.7
BODT	Bodrum	2.81	255	ePN	Pn	23 53 17.9	-0.2
KAMT	Kaman	2.81	56	ePN	Pn	23 53 18.0	-0.1
BALB	Balikesir	2.85	310	ePN	Pn	23 53 18.1	-0.5
GEMT	Gemlik	2.85	336	ePN	Pn	23 53 18.6	-0.1
IKL	Isikli	2.87	123	ePN	Pn	23 53 19.4	+0.4
YLV	Yalova	2.92	340	ePN	Pn	23 53 19.8	+0.2
BLCB	Balcova	2.94	282	ePN	Pn	23 53 19.9	0.0
BRTR	Keskin Array B	2.97	50	Pn	Pn	23 53 20.0	-0.3
	4.2nm,0.3s,baz=222,slow=14,SNR=103						
BRTR				Lg		23 53 58.6	
	4.9nm,0.3s,baz=219,slow=24,SNR=12						
KCT	Karacabey	3.04	324	ePN	Pn	23 53 21.2	0.0
HRT	Hereke	3.09	345	ePN	Pn	23 53 21.7	-0.2
NIG	Nigde	3.10	84	ePN	Pn	23 53 22.5	+0.4
MERS	Mersin	3.19	106	ePN	Pn	23 53 24.5	+1.1
LEF	Lefka	3.23	146	ePN	Pn	23 53 24.4	+0.5
BNT	Bandirma	3.32	320	ePN	Pn	23 53 25.0	-0.1
EDC	Edincik	3.34	319	ePN	Pn	23 53 25.1	-0.3
EDC	Edincik	3.34	319	Pn	Pn	23 53 25.5	+0.1
EDC	Edincik	3.34	319	Pn	Pn	23 53 25.5	+0.1
LFK	Lefkose	3.42	137	ePN	Pn	23 53 27.3	+0.8
KARA	Karaisali	3.51	98	ePN	Pn	23 53 27.0	-0.7
CSS	Prodhromos	3.57	143	ePn	Pn	23 53 28.6	+0.1
CSS				Sn	Sn	23 54 11.2	-0.1
CSS	Prodhromos	3.57	143	ePn	Pn	23 53 28.6	0.0
CSS				Sn	Sn	23 54 11.2	-0.1
IDI	Anoyia	5.33	243	Pn	Pn	23 53 54.6	+1.9
	0.5nm,0.3s,baz=12,slow=19,SNR=3.5						
MMAI	Mount Meron Ar	6.15	140	Pn	Pn	23 54 05.2	+1.1
	2.0nm,0.3s,baz=323,slow=12,SNR=9.9						
MMAI				Sn	Sn	23 55 17.0	+1.9
	1.6nm,0.3s,baz=309,slow=23,SNR=3.1						
TIRR	Tirgusor	6.84	346	⇑iP	Pn	23 54 13.7	+0.3
TIRR	Tirgusor	6.84	346	⇑P	Pn	23 54 13.7	+0.2
TLCR		7.48	350	⇓iP	Pn	23 54 22.2	0.0
ASF	Jabal al Asfar	7.60	136	Pn	Pn	23 54 25.2	+1.2
	0.1nm,0.3s,baz=173,slow=17,SNR=3.0						
MLR	Muntele Rosu	8.43	337	Pn	Pn	23 54 37.1	+1.8
	baz=126,slow=8.7						
MLR				LR	LR	23 57 21.0	
	comp=Z,61nm,20.2s,baz=175,slow=34						
MLR	Muntele Rosu	8.43	337	⇑iP	Pn	23 54 37.6	+2.3
MLR	Muntele Rosu	8.43	337	⇑P	Pn	23 54 37.6	+2.3
VRI	Vrincioaia	8.55	341	⇑iP	Pn	23 54 38.7	+1.7
VRI	Vrincioaia	8.55	341	⇑P	Pn	23 54 38.7	+1.7
PLOR	Plostina	8.56	341	⇑iP	Pn	23 54 38.5	+1.5
VOIR		8.69	333	⇓iP	Pn	23 54 40.8	+1.9
VOIR		8.69	333	⇓P	Pn	23 54 40.8	+2.0
BZS	Buzias	10.31	322	⇑iP	Pn	23 55 03.6	+2.5
BZS	Buzias	10.31	322	⇑P	Pn	23 55 03.6	+2.5
BURAR	Bucovina Array	10.57	339	⇓iP	Pn	23 55 07.0	+2.4
BURAR	Bucovina Array	10.57	339	⇓P	Pn	23 55 07.0	+2.4
BUR08	Bucovina Ar. S	10.60	339	Pn	Pn	23 55 04.6	-0.4
PKSM	Moragy	12.25	317	⇓iP	Pn	23 55 27.7	+0.1
PKSM	Moragy	12.25	317	⇓P	Pn	23 55 27.7	0.0
DAVOX	Davos/Dischmat	17.77	307	LR	LR	00 04 28.5	
	comp=Z,102nm,18.7s,baz=67,slow=40						
TORD	Torodi Ar. Bea	35.65	234	P	P	23 59 30.3	-1.5
	0.6nm,0.9s,mb3.4,baz=38,slow=8.4,SNR=4.3						
TORD	Torodi Ar. Bea	35.65	234	P	P	23 59 30.3	-1.5
KURK	Kurchatov	36.02	53	P	P	23 59 32.6	-1.9
	0.8nm,0.4s,mb3.9,baz=275,slow=8.8,SNR=2.0						
MKAR	Makanchi Array	38.57	60	P	P	23 59 55.0	-1.3
	0.8nm,0.7s,mb3.4,baz=278,slow=8.1,SNR=9.2						
ZALV	Zalesovo Beam	39.91	48	P	P	00 00 05.3	-2.1
	0.4nm,0.4s,mb3.4,baz=264,slow=7.1,SNR=2.6						
SONM	Songino Array	54.32	53	P	P	00 01 59.0	-0.9
	0.2nm,0.5s,mb3.4,baz=280,slow=8.6,SNR=2.8						
YKA	Yellowknife Ar	76.19	344	P	P	00 04 20.4	-1.1
	0.2nm,0.6s,mb3.4,baz=30,slow=5.9,SNR=5.3						

*NEIC **11** 00:02:06.9, 15.41N×60.55W, h24km, MD3.5(TRN), After TRN.*

TRN 11 00:02:02.4, 15.59N×60.35W, h67km, MD3.6, M3.0(FDF), 2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	La Plaine	0.90	253	eP	Pn	00 02 21.3	+1.8
DLPL				eS	Sn	00 02 34.3	+2.1
DWS	Wesley	0.93	269	eP	Pn	00 02 21.5	+1.7
DWS				eS	Sn	00 02 35.6	+2.8
DWS	Wesley	0.93	269	eP	Pn	00 02 24.4	+4.5
DWS				eS	Sn	00 02 35.6	+2.8
MGG	Marie-Galante	0.98	289	eP	Pn	00 02 21.6	+1.0
DEG	La Desirade	0.99	316	eP	Pn	00 02 21.0	+0.4
DEG				eS	Sn	00 02 33.0	-1.1
FDF	Fort de France	1.15	222	⇓eP	Pn	00 02 24.6	+1.8
FDF				⇓eS	Sn	00 02 40.0	+2.1
MVM	Montagne Vaucl	1.16	207	eP	Pn	00 02 24.7	+1.9
TBG	Guadaloupe-3	1.27	282	eP	Pn	00 02 25.7	+1.5
BIM	Bigot	1.28	213	eP	Pn	00 02 26.2	+1.9
BIM				eS	Sn	00 02 42.0	+1.2
DOG	Dongo Capester	1.30	290	eP	Pn	00 02 25.9	+1.4
SCG	Saint Claude	1.35	289	eP	Pn	00 02 26.9	+1.6
HMG	Houelmont	1.36	287	eP	Pn	00 02 27.1	+1.7
SLW	Petit Monier	1.67	200	eP	Pn	00 02 31.4	+1.9
SLW				eS	Sn	00 02 51.0	+1.0
SLB	Belfond	1.88	201	eP	Pn	00 02 33.9	+1.5
SLB				eS	Sn	00 02 56.8	+1.6
SLB	Belfond	1.88	201	eP	Pn	00 02 36.2	+3.8
SLB				eS	Sn	00 02 58.9	+3.8
MCLT	Moule a Chique	1.96	197	eP	Pn	00 02 37.0	+3.6
MCLT				eS	Sn	00 02 59.3	+2.2
SVB	Belmont	2.47	201	eP	Pn	00 02 44.9	+4.5
SVB				eS	Sn	00 03 10.4	+1.0

*IDC **11** 00:03:35.0±1.0, 51.16N×157.87E, h0km, mb3.9/13, mb1 4.1/15, mb1mx4.0/25, mbtmp3.9/15, ML4.1/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/48, Error ellipse: s-maj=22.8km s-min=13.2km az=175.0*

*MOS **11** 00:03:39.2±1.3, 51.17N×158.15E, h49km, mb4.3/8, Error ellipse: s-maj=16.3km s-min=7.0km az=76.9*

*ISCJB **11** 00:03:40.7±0.7, 51.20N±0.05×158.24E±0.08, h60km±6km, mb4.0/12, MS3.5/2, Error ellipse: s-maj=10.0km s-min=5.7km az=136.2*

*NEIC **11** 00:03:40.6±1.3, 51.16N×158.07E, h42km±11km, mb4.5/4, Error ellipse: s-maj=12.3km s-min=9.9km az=172.0*

*KRSC **11** 00:03:41.5±0.9, 51.42N×158.47E, h10km±10km, ML4.5*

ISC 11 00:03:41.8±0.7, 51.20N±0.05×158.20E±0.07, h52km±6km, n73, σ1.31/85, mb4.0/12, MS3.5/2, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.25	9	eP	Pn	00 04 01.1	-1.8
RUS				i S	Sn	00 04 15.0	-3.6
GRL	Gorelyy	1.35	357	eP	Pn	00 04 04.2	-0.1
GRL				i S	Sn	00 04 20.4	-0.8
MIPR	Malaya Ipel'ka	1.40	321	eP	Pn	00 04 06.0	+1.0
MIPR				i S	Sn	00 04 23.6	+1.3
SKR	Severo-Kuril's	1.42	249	ePN	Pn	00 04 05.0	-0.2
SKR				i S	Sn	00 04 22.5	-0.2
SKR				pmax	pmax		
	comp=E,160nm,0.3s						
SKR				pmax	pmax		
	comp=Z,160nm,0.3s						
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				smax			
	comp=N,1μm,0.4s						
SKR				smax			
	comp=E,980nm,0.4s						
SKR				smax			
	comp=E,2μm,2.0s						
PET	Petropavlovsk	1.85	8	⇑ePN	Pn	00 04 10.0	-1.0
PET				eS	Sn	00 04 30.6	-2.6
PET				pmax	pmax		
	comp=Z,100nm,0.3s						
PET				pmax	pmax		
	comp=Z,164nm,0.6s						
PET				smax			
	comp=N,900nm,0.4s						
PET				smax			
	comp=N,1μm,0.5s						
PET				smax			
	comp=E,1μm,0.5s						
PET	Petropavlovsk	1.85	8	eP	Pn	00 04 10.1	-0.9
PET				i S	Sn	00 04 31.1	-2.1
PET	Petropavlovsk	1.85	8	ePn	Pn	00 04 09.9	-1.1
PET				eSn	Sn	00 04 30.4	-2.7
INSR	Institute	1.88	7	P	Pn	00 04 11.1	-0.4
INSR				i S	Sn	00 04 33.0	-1.1
PEA0B	Petropavlovsk-	1.93	351	ePn	Pn	00 04 12.4	+0.1
PEA0B				eSn	Sn	00 04 35.0	-0.3
PETK	Petropavlovsk-	1.93	351	Pg	Pn	00 04 12.6	+0.3
	comp=E,29nm,0.3s,baz=151,slow=16,SNR=160						
PETK				Sn	Sn	00 04 36.3	+0.9
	comp=E,39nm,0.3s,baz=155,slow=17,SNR=8.3						
AVH	Avacha	2.09	9	P	Pn	00 04 15.3	+0.9
NLC	Nalytchevo	2.09	19	eP	Pn	00 04 12.1	-2.3
NLC				i S	Sn	00 04 34.1	-5.1
SPN	Mys Shipunski	2.21	30	eP	Pn	00 04 15.1	-0.8
SPN				i S	Sn	00 04 39.7	-2.3
GNL	Ganaly	2.50	356	eP	Pn	00 04 20.6	+0.6
KII	Karymskiy	2.94	15	eP	Pn	00 04 26.7	+0.7
MKZ	Mys Kozlova	3.98	31	eP	Pn	00 04 39.7	-0.5
MKZ				i S	Sn	00 05 21.6	-4.0
TUMR	Tumrok	4.25	15	P	Pn	00 04 45.5	+1.6
KMNR	Kamenistaya	4.72	14	P	Pn	00 04 53.1	+2.7
BZMR	Bezymyannaya	4.93	15	P	Pn	00 04 55.5	+2.2
BZWR	Bezymyannyi-We	4.96	15	P	Pn	00 04 55.4	+1.7
BZGR	Bezymyannyi-Gr	4.97	16	P	Pn	00 04 56.3	+2.5
SRDR	Sredinnyy	5.20	9	P	Pn	00 04 59.4	+2.4
KRSR	Krestovskiy	5.22	15	P	Pn	00 05 00.2	+3.0
KBTR	Krutoberegovo	5.71	27	P	Pn	00 05 04.4	+0.4
FX1	Attu Island--F	9.38	74	Pn	Pn	00 05 53.1	-1.0
	comp=E,5.9nm,0.3s,baz=334,slow=5.8,SNR=37						
FX1				Sn	Sn	00 07 29.6	-8.3
	comp=E,5.9nm,0.3s,baz=120,slow=20,SNR=14						
ASAJ	Asahikawa	12.67	242	Pn	Pn	00 06 31.2	-7.9
	comp=E,1.8nm,0.3s,baz=63,slow=4.5,SNR=3.7						
ASAJ	Asahikawa	12.67	242	PN	Pn	00 06 31.3	-7.8
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	Erimo	13.81	234	i P	Pn	00 06 58.7	+4.0
BILL	Bilibino	17.35	10	P	Pn	00 07 38.4	-1.5
BILL	Bilibino	17.35	10	Pn	Pn	00 07 38.4	-1.4
YAK	Yakutsk	18.90	316	eP	Pn	00 07 52.0	-6.7
YAK				pmax	pmax		
	comp=Z,26nm,0.5s						
YAK	Yakutsk	18.90	316	eP	Pn	00 07 52.0	-6.7
	comp=Z,26nm,0.5s						
MJAR	Matsushiro Arr	20.46	232	P	P	00 08 18.4	+3.5
	comp=Z,1.3nm,0.7s,baz=48,slow=6.9,SNR=4.4						
MJAR	Matsushiro Arr	20.46	232	P	P	00 08 18.4	+3.5
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAJO	Matsushiro	20.46	232	P	P	00 08 12.0	-2.9
ULN	Ulaanbaatar	32.82	285	P	P	00 10 08.9	-1.1
SONM	Songino Array	33.23	285	P	P	00 10 15.3	+1.7
	comp=Z,0.2nm,0.4s,baz=88,slow=8.4,SNR=2.2						
INK	Inuvik	36.09	36	eP	P	00 10 38.8	+0.8
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	36.09	36	eP	P	00 10 38.8	+0.9
	comp=Z,1.0nm,0.6s,mb3.9						
ZALV	Zalesovo Beam	42.84	304	LR	LR	00 30 35.8	
	comp=Z,23nm,19.1s,MS3.1,baz=98,slow=38						
YKA	Yellowknife Ar	45.35	41	P	P	00 11 55.0	+0.7
	comp=Z,0.4nm,0.6s,mb3.5,baz=295,slow=7.7,SNR=6.2						
YKA	Yellowknife Ar	45.35	41	eP	P	00 11 55.2	+0.9
YKA	Yellowknife Ar	45.35	41	P	P	00 11 55.0	+0.7
RES	Resolute Bay	45.51	21	P	P	00 11 56.2	+0.7
	comp=Z,0.8nm,0.5s,mb3.9,baz=328,slow=5.3,SNR=7.4						
RES	Resolute Bay	45.51	21	P	P	00 11 56.2	+0.7
RES				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
RES	Resolute Bay	45.51	21	P	P	00 11 56.2	+0.7
KURK	Kurchatov	47.75	302	P	P	00 12 12.8	-0.4
	comp=Z,1.0nm,0.4s,mb4.2,baz=63,slow=7.4,SNR=7.4						
KURK	Kurchatov	47.75	302	P	P	00 12 12.8	-0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KURK	Kurchatov	47.75	302	eP	P	00 12 12.0	-1.2
	comp=Z,7.3nm,1.6s,mb4.5						
MKAR	Makanchi Array	47.93	296	P	P	00 12 13.7	-1.0
	comp=Z,0.2nm,0.4s,mb3.5,baz=54,slow=7.8,SNR=8.3						
BVAR	Borovoye Array	50.66	309	P	P	00 12 34.3	-1.1
	comp=Z,0.2nm,0.4s,baz=44,slow=12,SNR=2.7						
TKM2	Tokmak 2	54.06	296	P	P	00 12 59.6	-1.2
ARCES	ARCESS Array B	54.72	342	P	P	00 13 05.6	+0.5
	comp=Z,9.0nm,1.1s,mb4.7,baz=22,slow=10,SNR=3.4						
ARCES	ARCESS Array B	54.72	342	P	P	00 13 05.6	+0.5
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	Chiang Mai	56.37	258	eP	P	00 13 16.6	-1.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
CHTO	Chiang Mai	56.37	258	eP	P	00 13 16.6	-1.1
	comp=Z,2.4nm,0.4s,mb4.6						
CMAR	Chiang Mai Arr	56.64	258	P	P	00 13 20.1	+0.5
	comp=Z,0.9nm,0.4s,mb4.2,baz=28,slow=7.3,SNR=6.0						
CMAR	Chiang Mai Arr	56.64	258	eP	P	00 13 22.0	+2.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	59.48	59	P	P	00 13 41.4	+2.2
	comp=Z,0.2nm,0.7s,baz=273,slow=5.3,SNR=2.3						
PMG	Port Moresby	61.11	192	P	P	00 13 50.2	-0.3
NB2	NORSAR Subarra	65.02	343	P	P	00 14 15.6	-0.3
	comp=Z,1.1nm,0.6s,mb4.1,baz=25,slow=6.9						
NOA	NORSAR Array B	65.02	343	P	P	00 14 15.0	-0.9
	comp=Z,1.0nm,0.6s,mb4.1,baz=15,slow=5.4,SNR=5.1						
NOA	NORSAR Array B	65.02	343	eP	P	00 14 15.7	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	65.38	341	P	P	00 14 17.6	-0.7
	comp=Z,1.5nm,0.6s,mb4.2,baz=46,slow=6.9,SNR=5.9						
HFS	Hagfors	65.38	341	P	P	00 14 17.6	-0.7
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PSI	Prapat	68.98	247	LR	LR	00 47 07.3	
	comp=Z,82nm,18.1s,MS4.0,baz=345,slow=38						
TXAR	Lajitas Array	72.47	65	P	P	00 15 04.9	+2.1
	comp=Z,0.3nm,0.6s,baz=316,slow=5.0,SNR=6.1						
TXAR				pP	pP	00 15 17.4	0.0
	comp=Z,0.3nm,0.5s,baz=298,slow=5.0,SNR=6.2						
EKA	Eskdalemuir Ar	72.71	349	P	P	00 15 03.8	+0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=11,slow=4.9,SNR=6.0						
EKA	Eskdalemuir Ar	72.71	349	P	P	00 15 03.8	+0.1
EKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FITZ	Fitzroy Crossi	74.68	212	eP	P	00 15 14.3	-1.3
GERES	GERESS Array B	75.81	337	P	P	00 15 22.2	+0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=32,slow=5.8,SNR=12						
GERES	GERESS Array B	75.81	337	P	P	00 15 22.2	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
STKA	Stephens Creek	84.00	194	P	P	00 16 05.6	-0.5

*BJI **11** 00:14:10.6, 25.30S×177.30W, h98km, mB5.4, mb4.9*

*MOS **11** 00:14:12.1±1.9, 25.12S×177.19W, h99km, mb4.9/7, Error ellipse: s-maj=14.0km s-min=11.2km az=63.7*

*NEIC **11** 00:14:13.2±1.6, 25.30S×177.29W, h99km±14km, mb4.6/12, Error ellipse: s-maj=12.4km s-min=8.1km az=138.0*

*ISCJB **11** 00:14:17.7±1.4, 25.39S±0.08×177.48W±0.07, h149km±13km, mb4.4/28, Error ellipse: s-maj=12.5km s-min=10.7km az=175.3*

*IDC **11** 00:14:19.6±0.9, 25.33S×177.28W, h156km±7km, mb4.1/16, mb1 4.2/17, mb1mx4.1/21, mbtmp4.1/17, MS3.8/3, Ms1 3.8/3, ms1mx3.2/29, Error ellipse: s-maj=18.5km s-min=13.0km az=137.0*

ISC 11 00:14:18.6±1.4, 25.38S±0.08×177.43W±0.07, h144km±13km, h153km±4.2km:pP-P, n158, σ0.92/76, mb4.4/27, 13C-13D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.88	186	P	Pn	00 15 17.4	+0.3
	222nm,0.3s,baz=237,slow=22,SNR=2.1						
RAO				S	Sn	00 16 02.5	0.0
	818nm,0.3s,baz=46,slow=22,SNR=6.6						
RAO	Raoul Island	3.88	186	P	Pn	00 15 17.4	+0.3
RAO				S	Sn	00 16 02.5	0.0
AFI	Afiamalu	12.59	26	P	Pn	00 17 04.4	-8.4
	9.7nm,0.3s,baz=174,slow=1.9,SNR=11						
AFI				S	Sn	00 19 11.6	-20
	23nm,0.3s,baz=45,slow=21,SNR=8.3						
AFI	Afiamalu	12.59	26	eP	Pn	00 17 04.3	-8.4
AFI				pmax	pmax		
	comp=Z,38nm,0.6s						
AFI	Afiamalu	12.59	26	ePn	Pn	00 17 04.3	-8.5
	comp=Z,38nm,0.6s						
URZ	Urewera	13.65	199	P	Pn	00 17 25.0	-1.2
	comp=Z,8.7nm,0.3s,baz=279,slow=1.8,SNR=22						
URZ				S	Sn	00 19 43.1	-14
	comp=Z,9.2nm,0.3s,baz=348,slow=20,SNR=15						
DZM	Mont Dzumac	15.14	279	ePn	Pn	00 17 44.8	-0.2
	comp=Z,7.4nm,0.6s						
RAR	Rarotonga	16.74	79	P	Pn	00 17 53.7	-11
SNZO	South Karori	17.18	200	P	Pn	00 18 06.1	-3.6
RPZ	Rata Peaks	20.57	204	P	P	00 18 47.1	+1.2
	comp=Z,4.9nm,0.4s,baz=352,slow=7.1,SNR=2.8						
RPZ				S	S	00 22 16.3	-11
	comp=Z,6.3nm,0.4s,baz=58,slow=15,SNR=4.4						
RPZ				LR	LR	00 25 20.8	
	comp=Z,132nm,21.6s,baz=146,slow=32						
PPT	Papeete	27.02	79	LR	LR	00 28 05.8	
	comp=Z,218nm,20.5s,baz=256,slow=31						
EIDS	Eidsvold	28.42	263	eP	P	00 20 01.9	+2.1
	comp=Z,34nm,1.6s,mb4.8						
CTA	Charters Tower	33.84	271	eP	P	00 20 48.5	+1.1
	comp=Z,3.6nm,0.4s,mb4.5						
CTA	Charters Tower	33.84	271	P	P	00 20 48.4	+1.0
	comp=Z,6.0nm,0.5s,mb4.6,baz=96,slow=12,SNR=10						
CTA				pP	pP	00 21 23.4	+5.0
	comp=Z,1.3nm,0.4s,baz=87,slow=7.8,SNR=2.7						
CTA	Charters Tower	33.84	271	eP	P	00 20 48.5	+1.1
CTA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CTAO	Charters Tower	33.84	271	eP	P	00 20 48.6	+1.2
CTAO				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.7						
CTAO	Charters Tower	33.84	271	eP	P	00 20 48.6	+1.2
	comp=Z,22nm,1.5s,mb4.7						
STKA	Stephens Creek	36.39	250	eP	P	00 21 09.5	+0.5
	comp=Z,3.4nm,0.4s,mb4.3						
STKA	Stephens Creek	36.39	250	P	P	00 21 09.8	+0.8
	comp=Z,3.8nm,0.5s,mb4.3,baz=95,slow=9.8,SNR=23						
STKA				PcP	PcP	00 23 30.9	+0.6
	comp=Z,1.9nm,0.5s,baz=84,slow=5.5,SNR=5.3						
STKA	Stephens Creek	36.39	250	eP	P	00 21 09.7	+0.6
	comp=Z,0.7nm,0.4s,mb3.6						
WB2	Warramunga Arr	44.64	267	eP	P	00 22 15.7	-1.3
WRAB	Tennant Creek	44.65	267	eP	P	00 22 16.8	-0.2
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
WRAB	Tennant Creek	44.65	267	eP	P	00 22 16.8	-0.3
	comp=Z,2.1nm,0.4s,mb4.1						
FORT	Forrest	48.01	251	eP	P	00 22 41.9	-1.3
	comp=Z,11nm,0.4s,mb4.8						
KAKA	Kakadu	48.78	275	eP	x	00 22 29.0	
	comp=Z,2.8nm,0.4s						
FITZ	Fitzroy Crossi	53.05	266	eP	P	00 23 20.6	-0.6
	comp=Z,3.2nm,0.4s,mb4.4						
NWAO	Narrogin (SRO)	56.77	246	P	P	00 23 49.8	+2.1
	comp=Z,6.3nm,0.8s,mb4.5,baz=342,slow=3.2,SNR=2.4						
MBWA	Marble Bar	57.43	260	eP	P	00 23 51.5	-1.0
	comp=Z,4.3nm,0.8s,mb4.3						
CASY	Casey	59.82	206	P	P	00 24 08.3	0.0
CBIJ	Chichi jima	65.10	320	LR	LR	00 48 15.0	
	comp=Z,166nm,18.8s,baz=111,slow=31						
JOW	Kunigami	73.72	311	P	P	00 25 36.5	-0.3
	comp=Z,6.3nm,0.4s,mb4.7,baz=130,slow=12,SNR=7.9						
MAW	Mawson	77.17	200	P	P	00 25 56.5	+0.5
	comp=Z,2.8nm,0.6s,mb4.1,baz=139,slow=9.1,SNR=11						
MAW	Mawson	77.17	200	eP	P	00 25 55.4	-0.6
YSS	Yuzh-Sakhalins	80.48	334	⇑eP	P	00 26 14.8	+0.7
YSS				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.0						
YSS	Yuzh-Sakhalins	80.48	334	eP	P	00 26 13.7	-0.5
KSRS	Korea Array	80.89	319	P	P	00 26 17.6	+1.0
	comp=Z,0.8nm,0.3s,mb3.8,baz=134,slow=5.4,SNR=5.3						
PEA0B	Petropavlovsk-	81.11	345	eP	P	00 26 16.3	-1.0
PETK	Petropavlovsk-	81.11	345	P	P	00 26 16.6	-0.7
	comp=Z,26nm,0.9s,mb4.8,baz=109,slow=7.0,SNR=29						
SNAA	Sanae	83.14	178	eP	P	00 26 26.9	-1.0
SNAA				e		00 26 29.4	
SNAA	Sanae	83.14	178	⇑eP	P	00 26 26.7	-1.2
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
SNAA	Sanae	83.14	178	eP	P	00 26 27.3	-0.5
	comp=Z,2.0nm,0.8s,mb3.9						
GLA	Glamis	83.21	49	eP	P	00 26 29.8	+1.0
VNA3	Neumayer Olymp	83.26	176	eP	P	00 26 28.0	-0.5
VNA3				e		00 26 30.3	
NJ2	Nanjing	83.40	310	eP	P	00 26 29.3	-0.5
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
VNA2	Neumayer--Watz	83.70	177	eP	P	00 26 30.7	0.0
	baz=193,slow=5.3						
VNA2				e		00 26 33.0	
YBH	Yreka Blue Hor	83.78	38	P	P	00 26 31.5	+0.1
	comp=Z,3.1nm,0.8s,mb4.1,baz=9.8,slow=1.3,SNR=4.7						
VNA1	Neumayer--Stat	83.93	176	eP	P	00 26 31.9	0.0
VNA1				e		00 26 34.0	
NVAR	Mina Array Bea	84.22	43	P	P	00 26 32.9	-0.9
	comp=Z,3.9nm,0.9s,mb4.1,baz=227,slow=8.8,SNR=11						
HABR	Khabarovsk	84.94	330	eP	P	00 26 36.1	-1.0
HABR				e*PP	pP	00 27 13.3	-0.1
HABR				eS	S	00 36 45.7	-7.9
HABR				e*SS	sS	00 37 54.2	-2.1
HABR				eSS	SS	00 42 31.4	+1.0
HABR				eSSS		00 46 04.1	
MOD	Modoc	85.24	39	eP	P	00 26 39.2	+0.3
PLCA	Paso Flores	85.55	133	P	P	00 26 40.1	-0.5
TUC	Tucson	85.59	51	eP	P	00 26 41.8	+1.0
CN2	Changchun	86.48	322	eP	P	00 26 45.0	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
KLR	Kul'dur	86.98	329	eP	P	00 26 42.4	-4.8
KLR				pmax	pmax		
	comp=E,20nm,1.4s						
KLR				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
ELK	Elko	87.51	42	P	P	00 26 48.8	-1.1
	comp=Z,1.9nm,1.0s,mb3.9,baz=201,slow=8.2,SNR=5.0						
HAWA	Hanford	88.56	36	eP	P	00 26 55.7	+0.9
ETW	Entiat	88.93	35	eP	P	00 26 56.7	+0.2
TXAR	Lajitas Array	89.25	57	P	P	00 26 58.5	+0.1
	comp=Z,1.5nm,1.0s,mb3.9,baz=220,slow=4.9,SNR=8.5						
ANMO	Albuquerque	90.04	51	P	P	00 27 02.5	+0.5
	comp=Z,2.1nm,1.0s,mb4.0,baz=187,slow=3.8,SNR=4.6						
ANMO				pP	pP	00 27 40.2	+1.6
	comp=Z,1.6nm,0.9s,baz=225,slow=8.6,SNR=2.5						
SEY	Seymchan	91.23	347	⇑eP	P	00 27 06.3	-0.5
RRI2	Red Ridge	91.39	42	eP	P	00 27 08.4	+0.4
REDW	Red Top Meadow	91.68	42	eP	P	00 27 09.6	+0.2
DLMT	Dillon	91.78	40	eP	P	00 27 10.6	+0.8
IMW	Indian Meadow	91.93	42	eP	P	00 27 11.1	+0.6
LOHW	Long Hollow	91.97	42	eP	P	00 27 11.5	+0.8
SDCO	Great Sand Dun	92.14	49	eP	P	00 27 11.4	-0.2
PDAR	Pinedale Array	92.15	43	P	P	00 27 10.8	-0.8
	comp=Z,1.9nm,0.8s,mb4.2,baz=211,slow=3.5,SNR=16						
CMAR	Chiang Mai Arr	92.23	289	P	P	00 27 13.8	+1.3
	comp=Z,3.6nm,1.0s,mb4.3,baz=147,slow=2.8,SNR=15						
CMAR	Chiang Mai Arr	92.23	289	⇑eP	P	00 27 14.8	+2.3
CHTO	Chiang Mai	92.38	290	eP	P	00 27 14.7	+1.5
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
CHTO	Chiang Mai	92.38	290	eP	P	00 27 14.7	+1.5
	comp=Z,1.5nm,0.5s,mb4.3						
BILL	Bilibino	93.92	354	eP	P	00 27 17.6	-1.5
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.8						
BILL	Bilibino	93.92	354	eP	P	00 27 17.6	-1.5
	comp=Z,10nm,1.3s,mb4.8						
YAK	Yakutsk	96.82	338	⇑eP	P	00 27 30.6	-1.8
YAK				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.5						
SONM	Songino Array	99.76	318	P	Pdif	00 27 46.1	-0.1
	comp=Z,0.3nm,0.4s,baz=129,slow=4.0,SNR=5.0						
ZALV	Zalesovo Beam	114.58	320	PKP	PKiKP	00 32 39.2	-2.0
	comp=Z,0.5nm,0.4s,baz=163,slow=1.5,SNR=4.2						
MK31	Makanchi Array	114.88	312	PKIKP	PKiKP	00 32 40.5	-1.5
MKAR	Makanchi Array	114.88	312	PKP	PKiKP	00 32 40.5	-1.5
	comp=Z,0.6nm,0.6s,baz=139,slow=1.1,SNR=7.5						
MKAR	Makanchi Array	114.88	312	PKP	PKiKP	00 32 40.5	-1.5
KURK	Kurchatov	117.89	316	PKP	PKPdf	00 32 46.2	-1.4
	comp=Z,1.0nm,0.5s,baz=112,slow=1.9,SNR=9.3						
KURK	Kurchatov	117.89	316	⇑iPKIKP	PKPdf	00 32 46.5	-1.1
KURK	Kurchatov	117.89	316	PKP	PKPdf	00 32 46.2	-1.4
OPO	Ambohidratompo	118.42	229	PKP	PKPdf	00 32 48.9	-0.8
	comp=Z,0.9nm,0.8s,baz=170,slow=2.9						
FRB	Frobisher Bay	120.80	29	PKP	PKPdf	00 32 51.8	-1.0
	comp=Z,1.0nm,0.5s,baz=47,slow=19,SNR=2.2						
BOSA	Boshof	122.05	204	PKP	PKPdf	00 32 56.0	-0.5
	comp=Z,1.6nm,0.9s,baz=294,slow=5.5,SNR=3.6						
BOSA	Boshof	122.05	204	PKP	PKPdf	00 32 56.0	-0.5
KBL	Kabul	122.60	296	ePKIKP	PKPdf	00 32 56.2	-1.0
BVAR	Borovoye Array	123.10	318	PKP	PKPdf	00 32 56.5	-1.1
	comp=Z,1.4nm,0.5s,baz=114,slow=1.1,SNR=12						
ARU	Arti	129.46	323	i PKIKP	PKPdf	00 33 09.0	-0.6
ARU						00 35 19.0	
ARCES	ARCESS Array B	133.80	349	PKhKP		00 33 05.8	
	comp=Z,1.9nm,0.9s,baz=103,slow=1.6,SNR=5.4						
ARCES				PKP	PKPdf	00 33 17.5	0.0
	comp=Z,2.1nm,0.4s,baz=5.7,slow=1.8,SNR=23						
JOF	Joensuu	137.91	341	ep	PKPdf	00 33 17.0	-8.3
	comp=Z,0.9nm,0.4s						
KAF	Kangasniemi	139.96	343	ep	PKPdf	00 33 22.2	-6.8
	comp=Z,0.7nm,0.4s						
OBN	Obninsk	141.25	329	⇓iPKIKP	PKPdf	00 33 31.2	-0.4
OBN				e		00 36 35.2	
OBN				e		00 40 36.4	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIV	Kislovodsk	142.61	310	ePKIKP	PKPdf	00 33 33.8	-0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NB2	NORSAR Subarra	143.87	353	PKP	PKPdf	00 33 32.6	-3.5
	comp=Z,18nm,1.1s,baz=15,slow=3.5						
NOA	NORSAR Array B	143.87	353	PKP	PKPdf	00 33 33.0	-3.1
	comp=Z,5.7nm,0.9s,baz=14,slow=2.4,SNR=17						
NOA				pPKP	pPKPdf	00 34 14.5	0.0
	comp=Z,0.9nm,0.7s,baz=15,slow=4.9,SNR=2.0						
KONO	Kongsberg	145.41	354	⇑iPKIKP	PKPdf	00 33 37.8	-0.9
MNK	Minsk	145.43	334	ePKIKP	PKiKP	00 33 47.0	+4.0
ANN	Anapa	145.88	314	i PKHKP		00 33 35.4	
ANN				pmax	pmax		
	comp=Z,163nm,1.5s						
AKASG	Malin Array Be	147.47	328	PKPbc	PKPbc	00 33 43.9	-1.4
	comp=Z,3.8nm,0.4s,baz=44,slow=3.8,SNR=23						
AKBB	Malin Array Si	147.47	328	ePKIKP	PKPdf	00 33 42.8	+0.3
KIEV	Kiev	147.49	328	ePKIKP	PKPdf	00 33 41.6	-0.9
SUW	Suwalki	147.55	337	ePKP	PKPdf	00 33 44.0	+1.4
SUW	Suwalki	147.55	337	ePKP	PKPdf	00 33 44.0	+1.5
ASF	Jabal al Asfar	149.26	291	PKPbc	PKPbc	00 33 51.1	+0.6
	comp=Z,2.0nm,0.5s,baz=123,slow=4.0,SNR=3.1						
GKP	Gorka Klasztor	150.05	342	ePKP	PKPbc	00 33 52.0	+0.3
GKP	Gorka Klasztor	150.05	342	ePKP	PKPbc	00 33 52.0	+0.3
BRTR	Keskin Array B	150.34	306	PKPbc	PKPbc	00 33 52.0	-0.9
	comp=Z,3.4nm,0.6s,baz=134,slow=4.2,SNR=20						
BRTR				PKPab	PKPab	00 34 00.1	+0.4
	comp=Z,3.3nm,0.7s,baz=110,slow=3.2,SNR=10						
MMAI	Mount Meron Ar	150.44	293	PKPbc	PKPbc	00 33 54.0	+0.7
	comp=Z,5.9nm,0.4s,baz=78,slow=8.1,SNR=25						
MMAI				PKPab	PKPab	00 33 58.8	-1.6
	comp=Z,1.4nm,0.4s,baz=81,slow=6.2,SNR=12						
LVV	L'vov	150.47	331	ePKIKP	PKPbc	00 33 52.1	-0.7
EIL	Elat	151.03	286	PKPbc	PKPbc	00 33 55.2	+0.4
	comp=Z,11nm,1.0s,baz=68,slow=5.4,SNR=5.5						
EIL	Elat	151.03	286	PKPbc	PKPbc	00 33 55.2	+0.4
KWP	Kalwaria	151.18	332	ePKP	PKPbc	00 33 54.1	-0.4
KWP	Kalwaria	151.18	332	⇓iP	PKPbc	00 33 54.2	-0.3
KWP	Kalwaria	151.18	332	ePKP	PKPbc	00 33 54.1	-0.4
BUR08	Bucovina Ar. S	151.48	327	PKPdf	PKPdf	00 33 47.4	-1.6
BUR08				ePKPbc	PKPbc	00 33 56.2	+0.9
BURAR	Bucovina Array	151.50	327	⇓iP	PKPbc	00 33 55.5	+0.2
BURAR	Bucovina Array	151.50	327	⇓P	PKPbc	00 33 55.5	+0.3
TIRR	Tirgusor	151.71	319	⇑iP	PKPdf	00 33 41.7	-7.8
TIRR	Tirgusor	151.71	319	⇑P	PKPdf	00 33 41.7	-7.7
OJC	Ojcow	151.85	336	ePKP	PKPbc	00 33 55.9	-0.1
KOLS	Kolonicke sedl	151.90	332	ePKIKP	PKPbc	00 33 55.7	-0.5
KOLS	Kolonicke sedl	151.90	332	ePKP	PKPbc	00 33 55.7	-0.5
KOLS	Kolonicke sedl	151.90	332	ePKP	PKPbc	00 33 55.7	-0.5
STHS	Stebnicka Huta	151.95	334	ePKP	PKPbc	00 33 56.4	+0.1
STHS				e		00 34 05.6	
STHS	Stebnicka Huta	151.95	334	ePKP	PKPbc	00 33 56.4	+0.1
STHS				e		00 34 05.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRVS	Cervenica-Dubn	152.26	333	ePKP	PKPbc	00 33 57.0	0.0
CRVS				e		00 34 05.8	
NIE	Niedzica	152.31	335	ePKP	PKPbc	00 33 57.5	+0.4
TRPA	Tarpa	152.39	330	⇓iP	PKPbc	00 33 56.8	-0.5
KSP	Ksiaz	152.48	341	ePKP	PKPbc	00 33 57.6	+0.3
KSP	Ksiaz	152.48	341	ePKP	PKPbc	00 33 57.8	+0.4
MLR	Muntele Rosu	152.51	323	PKPbc	PKPbc	00 33 57.2	-0.4
	comp=Z,1.3nm,0.5s,baz=316,slow=8.0,SNR=11						
UPC	Upice	152.86	341	ePKPbc	PKPbc	00 33 57.9	-0.4
UPC				ePKPab	PKPab	00 34 10.2	+0.4
DPC	Dobruska-Polom	152.91	340	ePKPbc	PKPbc	00 33 58.0	-0.4
DPC				ePKPab	PKPab	00 34 10.6	+0.6
CLL	Collm	152.91	346	⇓iPKPbc	PKPbc	00 33 57.6	-0.7
	comp=Z,11nm,1.1s						
CLL				i PKPab	PKPab	00 34 09.1	-0.9
	comp=Z,17nm,1.3s						
BRG	Berggiesshubel	153.09	344	ePKP	PKPbc	00 33 58.6	-0.1
	comp=Z,8.5nm,1.0s						
DRGR		153.29	328	⇓iP	PKPbc	00 33 59.7	+0.4
DRGR		153.29	328	⇓P	PKPbc	00 33 59.6	+0.3
VYHS	Vyhne	153.63	335	ePKIKP	PKPbc	00 33 59.7	-0.3
VYHS				e		00 34 12.7	
VYHS	Vyhne	153.63	335	ePKP	PKPbc	00 33 59.6	-0.4
VYHS				e		00 34 12.7	
VYHS				e		00 37 32.8	
VYHS	Vyhne	153.63	335	ePKP	PKPbc	00 33 59.7	-0.3
VYHS				e		00 34 12.7	
VYHS				ePP	PP	00 37 32.8	-15
PSZ	Piszkesteto	153.68	333	⇓iP	PKPab	00 34 14.2	+0.8
PSZ	Piszkesteto	153.68	333	⇓P	PKPab	00 34 14.2	+0.9
KOLL	Kolacno	153.73	336	ePKP	PKPbc	00 33 59.6	-0.6
KOLL				e		00 34 13.9	
PRU	Pruhonice	153.74	342	ePKPbc	PKPbc	00 33 59.5	-0.7
PRU				ePKPab	PKPab	00 34 13.3	-0.3
NKC	Novy Kostel	154.04	345	ePKPab	PKPab	00 34 14.9	+0.1
BZS	Buzias	154.66	328	⇑iP	PKPbc	00 34 01.6	-0.7
BZS	Buzias	154.66	328	⇑P	PKPbc	00 34 01.6	-0.7
KHC	Kasperske Hory	154.78	343	ePKPab	PKPab	00 34 17.7	-0.3
GERES	GERESS Array B	155.01	342	PKP	PKPdf	00 33 53.3	-0.8
	comp=Z,0.2nm,0.3s,baz=44,slow=6.0,SNR=4.4						
GERES				PKPbc	PKPdf	00 34 03.2	+9.1
	comp=Z,0.4nm,0.6s,baz=254,slow=0.7,SNR=5.8						
GERES				PKPab	PKPab	00 34 19.3	+0.3
	comp=Z,0.5nm,0.6s,baz=16,slow=4.4,SNR=5.7						
CONA	Conrad Observa	155.17	338	⇑iPKPab	PKPab	00 34 19.3	-0.4
	comp=Z,10.0nm,1.2s						
CSNA	Conrad Observa	155.18	338	⇓iPKPab	PKPab	00 34 19.6	-0.2
	comp=Z,9.0nm,1.2s						
PKSM	Moragy	155.56	332	⇓iP	PKPdf	00 33 53.9	-1.0
PKSM	Moragy	155.56	332	⇓P	PKPdf	00 33 53.9	-1.0
SOKA	Soboth	156.54	338	⇑iPKPab	PKPab	00 34 25.8	+0.1
	comp=Z,11nm,1.6s						
TOA0	Torodi Ar. Sit	167.80	176	ePKPdf	PKPdf	00 34 06.7	-1.7
TORD	Torodi Ar. Bea	167.80	176	PKP	PKPdf	00 34 07.0	-1.4
	comp=Z,2.9nm,1.1s,baz=314,slow=0.8,SNR=9.2						
TORD				PKPab	PKPab	00 35 15.3	-0.2
	comp=Z,0.6nm,0.9s,baz=167,slow=3.2,SNR=5.2						
KEST	Kesra	168.16	332	PKPab	PKPab	00 35 17.5	+0.7
	comp=Z,4.0nm,1.2s,baz=294,slow=10,SNR=4.2						

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*NEIC **11** 00:15:23.8, 6004N×14004W, h16km, ML2.9(PGC), ML2.9(AEIC), After AEIC.*

PGC 11 00:15:23.6±2.1**, 5989N×14017W, h1**km**, ML2.9**/5**, 6D, 76km northwest of Yakutat, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNL	Peninsula	0.45	119	P	Pg	00 15 33.4	+1.2
PNL				S	Sg	00 15 41.1	+3.1
HYT	Haines Junctio	1.62	54	⇓Pn	Pn	00 15 52.3	-0.9
HYT				⇑Sg	Sg	00 16 13.6	-2.0
PLBC	Pleasant Camp	1.98	101	⇓Pn	Pn	00 15 57.9	-0.2
PLBC				⇓Sg	Sg	00 16 24.3	-2.8
SKAG	Skagway	2.49	98	ePn	Pn	00 16 05.6	+0.4
SKAG				eSn	Sn	00 16 34.0	-2.3
WHY	Whitehorse	2.75	71	⇑Pn	Pn	00 16 08.1	-0.6
WHY				⇓Sn	Sn	00 16 41.9	-0.5
WHY				⇓Sg	Sg	00 16 49.3	-2.4
BCA3	Beaver Creek A	3.28	347	P	Pn	00 16 14.2	-1.8
DAWY	Dawson	4.21	5	⇓Pn	Pn	00 16 28.0	-0.7
DAWY				⇑Sn	Sn	00 17 15.4	-3.0
DAWY				⇑Sg	Sg	00 17 33.9	-4.7
DLBC	Dease Lake	5.42	101	⇑Sn	Sn	00 17 44.4	-3.8
DLBC				⇑Sg	Sg	00 18 11.9	-5.5

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*SKO **11** 00:16:05.5, 3953N×1996E, h0km*

*ISCJB **11** 00:16:06.9±0.8, 3928N±005×2029E±007, h10km, Error ellipse: s-maj=8.2km s-min=6.2km az=141.5*

*CSEM **11** 00:16:06.8±0.2, 3929N×2023E, h12km, MD3.3, Error ellipse: s-maj=5.6km s-min=3.6km az=60.0*

*NEIC **11** 00:16:06.9, 3928N×2029E, h13km, MD3.3(ATH), After ATH.*

*ATH **11** 00:16:06.5, 3929N×2025E, h13km, MD3.4/5*

ISC 11 00:16:06.9±1.0**, 3927N**±005×**2030E**±007**, h1**km±13km**, n10, σ0s75**/13**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.58	47	ePB	Pg	00 16 17.1	-0.9
JAN				eSB	Sg	00 16 26.2	+0.8
JAN	Janina	0.58	47	ePb	Pg	00 16 16.9	-1.1
JAN				eSb	Sg	00 16 26.2	+0.8
KEK	Kerkira	0.59	319	ePb	Pg	00 16 17.2	-1.1
KEK				eSb	Sg	00 16 27.1	+1.1
VLS	Valsamata	1.11	168	ePB	Pg	00 16 28.3	+0.1
EVR	Evrytania	1.22	106	ePB	Pb	00 16 30.7	-0.1
EVR	Evrytania	1.22	106	ePb	Pb	00 16 31.0	+0.2
RLS	Riolos of Patr	1.51	143	ePB	Pb	00 16 36.1	+0.4
RLS	Riolos of Patr	1.51	143	ePb	Pb	00 16 36.2	+0.5
BIA	Bitola	1.92	24	ePn	Pn	00 16 41.1	+0.4
KRUS	Krusevo	2.22	19	ePn	Pn	00 16 44.0	-0.9

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*TEH **11** 00:29:37.2, 2960N×5131E, h10km, ML3.7*

*THR **11** 00:29:42.1±0.8, 2956N×5132E, h6km±10km, ML3.8*

*NEIC **11** 00:29:43.5, 2960N×5137E, h14km, ML3.8(THR), MN3.7(TEH), After THR.*

*ISCJB **11** 00:29:43.5±0.3, 2961N±002×5133E±003, h10km, mb3.9/17, Error ellipse: s-maj=3.5km s-min=3.4km az=145.8*

*IDC **11** 00:29:44.0±1.0, 2938N×5145E, h17km±4km, mb3.8/17, mb1 4.0/18, mb1mx3.9/27, mbtmp3.9/18, ML0.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=22.4km s-min=13.8km az=159.0*

*CSEM **11** 00:29:44.7±0.1, 2961N×5131E, h18km, ML3.8, Error ellipse: s-maj=2.0km s-min=1.5km az=42.0*

ISC 11 00:29:46.0±1.0**, 2958N**±003×**5134E**±003**, h17**km±7km**, h17**km±.6km**:pP-P, n94, σ1s00**/112**, mb3.9**/17**, 1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMOK	Mouk	1.31	114	ePg	Pg	00 30 09.3	-2.1
IMOK				Sg	Sg	00 30 28.1	-0.5
IMOK	Mouk	1.31	114	ePg	Pg	00 30 09.3	-2.1
IMOK				eSg	Sg	00 30 28.2	-0.4
IMOK				e		00 30 44.8	
ISRV	Sarvestan	1.56	97	ePn	Pn	00 30 13.9	+1.0
ISRV				eSn	Sn	00 30 35.4	+2.7
ISRV	Sarvestan	1.56	97	Pn	Pn	00 30 13.8	+0.9
ISRV				Sn	Sn	00 30 35.4	+2.7
ISRV	Sarvestan	1.56	97	ePn	Pn	00 30 13.9	+1.0
ISRV				eSn	Sn	00 30 35.4	+2.7
ISRV				e		00 30 40.8	
GHIR	Ghir-Karzin	1.94	131	ePg	Pg	00 30 18.8	-4.5
GHIR				AML	AML	00 30 57.0	
	comp=N,944nm,0.6s						
GHIR	Ghir-Karzin	1.94	131	eP	Pn	00 30 18.0	-0.1
ISAD	Sadrabad	3.08	40	Pn	Pn	00 30 35.0	+1.2
ISAD				eSn	Sn	00 31 10.4	+0.2
ISAD	Sadrabad	3.08	40	Pn	Pn	00 30 35.0	+1.2
ISAD				Sn	Sn	00 31 10.3	+0.1
ISAD	Sadrabad	3.08	40	ePn	Pn	00 30 35.1	+1.3
ISAD				eSn	Sn	00 31 10.4	+0.2
ISAD				e		00 31 28.8	
QRN	Al-Qurain	3.11	255	eP	Pn	00 30 35.4	+1.2
	baz=255						
QRN				AML	AML	00 31 15.5	
	comp=Z,267nm,0.5s,baz=255						
IPIR	Pirpir	3.11	353	Pn	Pn	00 30 35.6	+1.3
IPIR				Sn	Sn	00 31 11.2	+0.1
IPIR	Pirpir	3.11	353	ePn	Pn	00 30 35.7	+1.4
IPIR				eSn	Sn	00 31 11.3	+0.2
IPIR				e		00 31 30.7	
UMR	Umm Al-Rimmam	3.16	270	eP	Pn	00 30 36.2	+1.3
	baz=270						
UMR				AML	AML	00 31 17.7	
	comp=Z,311nm,0.4s,baz=270						
KBD	Kabd	3.21	264	eP	Pn	00 30 37.2	+1.6
	baz=263						
KBD				AML	AML	00 31 19.0	
	comp=Z,87nm,0.4s,baz=263						
KFJS		3.29	246	P	Pn	00 30 37.2	+0.4
SHGR	Shooshtar-Gavs	3.33	320	ePn	Pn	00 30 37.0	-0.3
SHGR				Sn	Sn	00 31 16.6	+0.2
SHGR				AML	AML	00 31 42.6	
	comp=N,178nm,0.1s						
IMEH	Mehriz	3.35	57	Pn	Pn	00 30 38.5	+0.9
IMEH				eSn	Sn	00 31 17.3	+0.4
IMEH	Mehriz	3.35	57	ePn	Pn	00 30 38.6	+1.0
IMEH				eSn	Sn	00 31 17.3	+0.4
IMEH				e		00 31 43.4	
IZEF	Zefreh	3.41	14	⇓ePn	Pn	00 30 38.9	+0.5
IZEF	Zefreh	3.41	14	Pn	Pn	00 30 39.2	+0.8
IZEF	Zefreh	3.41	14	ePn	Pn	00 30 39.3	+0.9
IZEF				e		00 31 01.0	
NASN	Na'in	3.44	21	ePn	Pn	00 30 39.0	+0.2
NASN				Sn	Sn	00 31 20.5	+1.3
NASN	Na'in	3.44	21	eP	Pn	00 30 38.9	+0.1
	SNR=52						
NASN	Na'in	3.44	21	eP	Pn	00 30 38.0	-0.8
MIB	Mutribah	3.49	275	eP	Pn	00 30 40.4	+0.9
	baz=274						
MIB				AML	AML	00 31 27.1	
	comp=Z,174nm,0.6s,baz=274						
NAY	Al-Naaiem	3.59	266	eP	Pn	00 30 42.4	+1.5
	baz=265						
NAY				AML	AML	00 31 31.9	
	comp=Z,70nm,0.5s,baz=265						
IKLH	Kolahrood	3.73	3	Pn	Pn	00 30 43.1	+0.3
IKLH				eSn	Sn	00 31 25.1	-1.2
IKLH	Kolahrood	3.73	3	Pn	Pn	00 30 43.1	+0.3
IKLH				Sn	Sn	00 31 25.0	-1.3
IKLH	Kolahrood	3.73	3	ePn	Pn	00 30 43.2	+0.4
IKLH				eSn	Sn	00 31 25.1	-1.2
IKLH				e		00 32 01.8	
ICHK	Chekchek	3.74	44	ePn	Pn	00 30 43.8	+0.9
ICHK				e		00 31 30.5	
BOQSS		4.09	206	P	Pn	00 30 49.0	+1.2
IBAF	Bafgh	4.16	60	Pn	Pn	00 30 49.2	+0.5
IBAF	Bafgh	4.16	60	ePn	Pn	00 30 49.3	+0.6
IBAF				e		00 32 06.6	
KRBR	Kerman	4.73	84	ePn	Pn	00 30 57.1	+0.6
KRBR				AML	AML	00 32 19.5	
	comp=N,91nm,0.7s						
KRBR	Kerman	4.73	84	eP	Pn	00 30 56.5	0.0
	SNR=52						
KRBR				eSg	Sg	00 32 09.0	-8.9
KRBR	Kerman	4.73	84	eP	Pn	00 30 56.0	-0.5
KRBR				eSg	Sg	00 32 09.0	-8.9
BNDS	Bandar-Abbas	4.78	116	ePn	Pn	00 30 57.1	-0.1
BNDS				AML	AML	00 32 01.5	
	comp=N,86nm,0.3s						
BNDS	Bandar-Abbas	4.78	116	eP	Pn	00 30 57.0	-0.2
SLWS		4.81	188	P	Pn	00 30 58.6	+1.0
ISFB	Sefidab	4.81	9	Pn	Pn	00 30 57.6	-0.1
ISFB	Sefidab	4.81	9	ePn	Pn	00 30 57.7	0.0
ISFB				e		00 31 58.1	
ASAO	Ashtian	5.07	348	ePn	Pn	00 31 01.8	+0.5
IVRN	Varamin	5.41	3	ePn	Pn	00 31 05.3	-0.5
IVRN				e		00 31 14.1	
BTHS		5.53	185	P	Pn	00 31 07.9	+0.3
IKOM	Komasi	5.62	326	ePn	Pn	00 31 08.6	-0.1
IKOM				e		00 32 34.1	
IRAZ	Razeghan	5.92	349	Pn	Pn	00 31 12.7	-0.2
IRAZ	Razeghan	5.92	349	ePn	Pn	00 31 12.8	-0.1
IRAZ				e		00 32 33.7	
IDMV	Damavand	6.00	5	ePn	Pn	00 31 14.4	+0.4
IDMV				e		00 31 22.5	
DAMV	Damavand	6.05	5	ePn	Pn	00 31 14.4	-0.3
IVIS	Veis	6.23	323	ePn	Pn	00 31 16.8	-0.3
IVIS	Veis	6.23	323	ePn	Pn	00 31 16.8	-0.3
IANJ	Anjilo	6.26	20	ePn	Pn	00 31 17.4	-0.1
IANJ				e		00 33 27.5	
ISHM	Shahmirzad	6.42	14	ePn	Pn	00 31 19.3	-0.4
ISHM	Shahmirzad	6.42	14	ePn	Pn	00 31 19.3	-0.4
ILIN	Lien	6.48	326	ePn	Pn	00 31 19.3	-1.3
ILIN				e		00 32 38.3	
ASYS		6.50	253	P	Pn	00 31 18.5	-2.3
IALA	Alasht	6.60	10	ePn	Pn	00 31 22.3	+0.1
IALA	Alasht	6.60	10	ePn	Pn	00 31 21.9	-0.3
IALA				e		00 31 29.0	
IDHR	Dehrash	6.61	322	ePn	Pn	00 31 22.6	+0.3
IDHR				e		00 32 44.2	
HRDDS		6.84	195	P	Pn	00 31 25.8	+0.2
IKIA	Kiasar	6.89	16	ePn	Pn	00 31 26.4	+0.2
IKIA				e		00 31 37.1	
ITEG	Tejag	7.15	61	ePn	Pn	00 31 30.5	+0.7
ITEG	Tejag	7.15	61	ePn	Pn	00 31 30.5	+0.7
ITEG				e		00 33 49.9	
LYLS		8.37	207	P	Pn	00 31 45.3	-1.3
GNI	Garni	11.85	335	Pn	Pn	00 32 39.5	+5.4
	comp=N,0.1nm,0.3s,baz=216,slow=23,SNR=3.0						
ASF	Jabal al Asfar	12.67	285	Pn	Pn	00 32 47.8	+2.3
	comp=N,0.4nm,0.3s,baz=251,slow=18,SNR=3.5						
EIL	Elat	14.26	274	LR	LR	00 38 59.3	
	comp=N,40nm,21.5s,baz=56,slow=39						
AKTK	Aktyubinsk	21.43	12	P	P	00 34 32.3	-0.7
AKTK				pP		00 34 38.7	
AKTK	Aktyubinsk	21.43	12	P	P	00 34 32.3	-0.7
AKTK				pP		00 34 38.6	
AKTO	Aktyubinsk	21.43	12	P	P	00 34 32.3	-0.7
	comp=N,1.1nm,0.5s,mb3.4,baz=197,slow=11,SNR=6.2						
AKTO				pP		00 34 38.6	
	comp=N,1.8nm,0.5s,baz=128,slow=6.1,SNR=5.3						
IDI	Anoyia	23.00	291	P	P	00 34 49.7	-0.3
	comp=N,12nm,1.1s,mb4.3,baz=78,slow=14,SNR=3.7						
MLR	Muntele Rosu	25.49	316	P	P	00 35 14.2	+0.9
	comp=N,4.3nm,0.7s,mb4.1,baz=240,slow=23,SNR=11						
AKASG	Malin Array Be	26.84	328	P	P	00 35 24.2	-1.2
	comp=N,0.7nm,0.3s,mb3.6,baz=137,slow=9.6,SNR=4.7						
BVAR	Borovoye Array	27.28	25	P	P	00 35 29.1	-0.1
	comp=N,0.7nm,0.5s,mb3.5,baz=226,slow=8.6,SNR=5.6						
BVAR				pP	pP	00 35 34.1	-0.5
	comp=N,0.7nm,0.6s,baz=224,slow=9.1,SNR=4.2						
KURK	Kurchatov	29.39	36	P	P	00 35 47.1	-1.0
	comp=N,0.6nm,0.6s,mb3.5,baz=236,slow=9.2,SNR=8.0						
KURK	Kurchatov	29.39	36	P	P	00 35 47.1	-1.0
ZALV	Zalesovo Beam	34.35	35	P	P	00 36 30.9	-0.8
	comp=N,1.4nm,0.6s,mb4.1,baz=252,slow=9.1,SNR=7.6						
GERES	GERESS Array B	34.47	315	P	P	00 36 33.9	+1.2
	comp=N,0.3nm,0.6s,mb3.4,baz=88,slow=9.9,SNR=3.5						
CLL	Collm	35.78	318	i P	P	00 36 43.1	-0.9
CLL				i pP	pP	00 36 47.7	-1.7
NB2	NORSAR Subarra	41.13	332	P	P	00 37 26.4	-2.4
	comp=Z,0.7nm,0.5s,mb3.5,baz=123,slow=8.6						
NOA	NORSAR Array B	41.13	332	P	P	00 37 26.7	-2.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=122,slow=8.5,SNR=4.2						
ARCES	ARCESS Array B	42.65	347	P	P	00 37 40.4	-0.7
	comp=Z,2.5nm,0.9s,mb4.0,baz=128,slow=7.9,SNR=5.7						
ARCES	ARCESS Array B	42.65	347	P	P	00 37 40.4	-0.7
CMAR	Chiang Mai Arr	44.60	93	P	P	00 37 54.2	-3.3
	comp=Z,0.6nm,0.4s,mb3.8,baz=217,slow=45,SNR=3.9						
SONM	Songino Array	45.64	51	P	P	00 38 05.6	+0.1
	comp=Z,0.2nm,0.4s,mb3.4,baz=294,slow=11,SNR=3.0						
TOA0	Torodi Ar. Sit	48.67	261	eP	P	00 38 27.7	-1.8
TOA0	Torodi Ar. Sit	48.67	261	eP	P	00 38 27.7	-1.8
TORD	Torodi Ar. Bea	48.67	261	P	P	00 38 28.3	-1.2
	comp=Z,3.1nm,0.7s,mb4.5,baz=55,slow=7.9,SNR=18						
TORD				pP	pP	00 38 32.8	-2.2
	comp=Z,3.1nm,0.7s,baz=56,slow=7.9,SNR=18						
DBIC	Dimbokro	57.45	258	P	P	00 39 33.2	-1.0
	comp=Z,2.2nm,0.8s,mb4.2,baz=35,slow=10,SNR=4.4						
DBIC				pP	pP	00 39 38.4	-1.5
	comp=Z,2.9nm,1.0s,baz=35,slow=11,SNR=3.1						
DBIC	Dimbokro	57.45	258	P	P	00 39 33.2	-1.1
DBIC				pP	pP	00 39 38.4	-1.4
KSRS	Korea Array	62.72	61	P	P	00 40 06.6	-3.5
	comp=Z,0.7nm,0.3s,mb4.2,baz=284,slow=7.2,SNR=3.2						
SCHQ	Schefferville	80.64	329	P	P	00 41 56.4	-1.2
	comp=Z,4.2nm,0.9s,mb4.3,baz=42,slow=12,SNR=4.2						
YKA	Yellowknife Ar	87.55	354	P	P	00 42 31.8	-0.9
	comp=Z,0.4nm,0.6s,mb3.8,baz=11,slow=5.0,SNR=7.5						

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*GII **11** 00:43:15.9±0.8, 3333N×3547E, h0km±3km, ML2.2/4, Mw2.0/2*

*ISCJB **11** 00:43:16.2±0.5, 3340N±003×3546E±006, h3km±5km, Error ellipse: s-maj=8.4km s-min=3.6km az=21.6*

*CSEM **11** 00:43:16.0, 3334N×3544E, h6km, ML2.7, After GRAL*

*GRAL **11** 00:43:16.0±0.4, 3334N×3544E, h7km±3km, MD2.7*

ISC 11 00:43:16.6±0.5**, 3341N**±003×**3545E**±006**, h1**km±6km**, n17, σ0s78**/28**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATL	Matirih	0.13	308	eP	Pg	00 43 19.4	+0.3
RCY	Rachaya	0.32	76	eP	Pg	00 43 22.6	-0.1
RCY				eS	Sg	00 43 27.7	+0.9
RCY	Rachaya	0.32	76	eP	Pg	00 43 22.6	-0.1
RCY				eS	Sg	00 43 27.7	+0.8
MMC7	Mount Meron ar	0.39	187	Pg	Pg	00 43 23.6	-0.6
MMA0	Mount Meron ar	0.40	186	Pg	Pg	00 43 23.7	-0.5
MMA0				Sg	Sg	00 43 30.0	+0.7
HNTI	Hanita	0.40	215	Pg	Pg	00 43 23.4	-0.9
HNTI				Sg	Sg	00 43 30.7	+1.2
BHL	Bhannes	0.52	19	eP	Pg	00 43 26.6	-0.1
BHL				eS	Sg	00 43 34.7	+1.2
BHL	Bhannes	0.52	19	eP	Pg	00 43 26.5	-0.2
BHL				eS	Sg	00 43 34.7	+1.3
BLGI	Bet Lehem HaGe	0.71	198	Pg	Pg	00 43 29.9	-0.3
BLGI				Sg	Sg	00 43 41.3	+1.9
OFRI	'Ofer	0.88	207	Pg	Pg	00 43 33.1	-0.3
HWQ	Hawqa	0.96	25	eP	Pg	00 43 34.4	-0.7
MMLI	Mount Malkishu	0.97	181	Pg	Pg	00 43 34.5	-0.8
MMLI				Sg	Sg	00 43 48.1	+0.3
HMDT	Nahal Hemdat	1.16	177	Pg	Pg	00 43 37.6	-1.2
HMDT				Sg	Sg	00 43 53.8	0.0
SLTI	Sal'it	1.22	197	Pg	Pg	00 43 39.2	-0.8
SLTI				Sg	Sg	00 43 56.0	+0.3
DSI	Dead Sea	1.83	182	Pn	Pn	00 43 48.1	-1.2
DSI				Sn	Sn	00 44 12.7	-0.3
MZDA	Masada	2.10	182	Sn	Sn	00 44 20.0	+0.5
PRNI	Paran	3.07	187	Sn	Sn	00 44 44.4	+0.7

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*NOU **11** 00:44:31.0±0.7, 1681S×17069E, h30km, MD3.5, ML3.7*

*ISCJB **11** 00:44:58.9±0.8, 1896S±007×16934E±006, h270km±8km, mb4.2/20, Error ellipse: s-maj=11.2km s-min=8.4km az=173.1*

*NEIC **11** 00:45:00.0±0.8, 1891S×16933E, h270km±8km, mb4.5/12, Error ellipse: s-maj=7.6km s-min=5.4km az=172.0*

*IDC **11** 00:45:01.1±3.5, 1891S×16940E, h280km±34km, mb3.9/13, mb1 4.0/14, mb1mx3.9/20, mbtmp4.0/14, Error ellipse: s-maj=19.0km s-min=14.4km az=10.0*

*LDG **11** 00:45:04.0±0.3, 1894S×16783E, h300km, Error ellipse: s-maj=33.3km s-min=6.4km az=99.0*

ISC 11 00:44:59.6±0.8**, 1895S**±007×**16936E**±005**, h264**km±8km**, n92, σ0s68**/67**, mb4.2**/20**, 3C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.14	221	eP	Pn	00 46 04.5	-1.0
DZM				eS	S	00 47 14.0	+16
DZM				AMP		00 47 23.6	
	comp=Z,657nm,3.6s						
DZM	Mont Dzumac	4.14	221	⇑ePn	Pn	00 46 05.1	-0.5
DZM				eS	S	00 46 59.1	+1.0
LASL	Noumea	4.20	218	eP	Pn	00 46 06.0	-0.3
NOUC	Port Laguerre	4.25	222	eP	Pn	00 46 06.6	-0.2
NOUC				eS	S	00 47 17.8	+17
NOUC				AMP		00 47 19.2	
	comp=Z,30nm,0.0s						
ONTRN	Noumea	4.31	219	eP	Pn	00 46 07.3	-0.2
HNR	Honiara	13.13	315	P	Pn	00 47 56.6	-0.3
	comp=Z,23nm,0.3s,baz=211,slow=2.6,SNR=14						
HNR	Honiara	13.13	315	eP	Pn	00 47 56.3	-0.6
RAO	Raoul Island	15.49	134	P	Pn	00 48 25.4	+0.3
EIDS	Eidsvold	18.08	246	eP	P	00 48 54.1	+1.8
	comp=Z,10nm,0.5s						
AFI	Afiamalu	18.77	77	P	P	00 48 59.5	-0.3
ARMA	Armidale	19.72	231	eP	P	00 49 10.9	+1.2
URZ	Urewera	20.40	162	P	P	00 49 18.4	+1.6
	comp=Z,3.7nm,0.4s,baz=339,slow=14,SNR=3.0						
CTA	Charters Tower	21.80	263	⇑iP	P	00 49 31.0	+0.2
	comp=Z,7.6nm,0.5s,mb4.3						
CTA	Charters Tower	21.80	263	P	P	00 49 31.3	+0.6
	comp=Z,8.7nm,0.6s,mb4.3,baz=84,slow=13,SNR=18						
CTA				pP		00 50 19.4	
	comp=Z,2.9nm,0.6s,baz=76,slow=15,SNR=1.7						
CTAO	Charters Tower	21.80	263	eP	P	00 49 31.0	+0.3
	comp=Z,24nm,1.1s,mb4.4						
SNZO	South Karori	22.76	170	eP	P	00 49 39.6	+0.4
	comp=Z,12nm,0.7s,mb4.3						
PMG	Port Moresby	23.49	291	eP	P	00 49 46.5	+0.3
	comp=Z,47nm,0.7s,mb4.9						
STKA	Stephens Creek	28.09	237	eP	P	00 50 27.9	+0.6
	comp=Z,8.5nm,0.6s,mb4.3						
STKA	Stephens Creek	28.09	237	P	P	00 50 28.1	+0.9
	comp=Z,9.5nm,0.6s,mb4.4,baz=63,slow=8.3,SNR=34						
STKA				pP	pP	00 51 19.9	+1.3
	comp=Z,2.9nm,0.7s,baz=71,slow=5.6,SNR=2.2						
RAR	Rarotonga	29.06	100	P	P	00 50 34.7	-1.2
	comp=Z,17nm,0.5s,mb4.7,baz=225,slow=1.4,SNR=3.3						
RAR	Rarotonga	29.06	100	eP	P	00 50 35.8	-0.1
TAU	Tasmania Unive	30.29	213	P	P	00 50 45.6	-0.8
WB2	Warramunga Arr	32.99	262	⇓iP	P	00 51 09.1	-1.2
WRAB	Tennant Creek	32.99	262	eP	P	00 51 09.0	-1.3
	comp=Z,11nm,1.0s,mb4.3						
KAKA	Kakadu	36.00	274	eP	x	00 51 15.8	
	comp=Z,7.5nm,0.4s						
FITZ	Fitzroy Crossi	41.38	264	⇓iP	P	00 52 20.6	0.0
	comp=Z,30nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	41.38	264	eP	P	00 52 20.9	+0.3
	comp=Z,15nm,0.5s,mb4.5						
BATI	Baumata	44.96	274	P	P	00 52 49.5	+0.4
	comp=Z,22nm,0.6s,mb4.6,baz=80,slow=6.0,SNR=6.9						
MBWA	Marble Bar	46.52	259	eP	P	00 53 01.2	-0.1
	comp=Z,17nm,0.5s,mb4.6						
NWAO	Narrogin (SRO)	48.44	243	eP	P	00 53 15.7	-0.1
KAPI	Kappang	50.27	279	P	P	00 53 29.4	-0.4
	comp=Z,2.1nm,0.3s,mb4.0,baz=159,slow=15,SNR=5.2						
KKM	Kota Kinabalu	57.93	290	eP	P	00 54 24.8	-0.2
VNDA	Vanda	58.73	182	P	P	00 54 29.4	0.0
	comp=Z,0.6nm,0.8s,mb3.1,baz=21,slow=8.6,SNR=2.7						
VNDA	Vanda	58.73	182	P	P	00 54 29.4	0.0
KSM	Kuching	61.42	283	eP	P	00 54 48.2	-0.5
MAJO	Matsushiro	62.55	332	eP	P	00 54 58.8	+3.2
COCO	West Island	69.78	264	P	P	00 55 41.9	-0.1
PETK	Petropavlovsk-	72.46	353	P	P	00 55 57.1	0.0
	comp=Z,5.6nm,0.8s,mb4.2,baz=123,slow=8.9,SNR=5.7						
CMAR	Chiang Mai Arr	78.48	294	P	P	00 56 33.1	+1.0
	comp=Z,1.6nm,0.7s,mb3.9,baz=123,slow=3.9,SNR=7.9						
SAO	San Andreas Ge	85.55	49	eP	P	00 57 08.4	+0.2
BILL	Bilibino	86.76	359	eP	P	00 57 12.8	-0.6
CMB	Columbia Colle	86.88	48	eP	P	00 57 14.6	-0.1
YBH	Yreka Blue Hor	87.01	44	P	P	00 57 15.3	0.0
	comp=Z,5.0nm,0.7s,mb4.5,baz=187,slow=1.8,SNR=10						
SONM	Songino Array	87.05	323	P	P	00 57 15.3	+0.1
	comp=Z,0.5nm,0.6s,mb3.5,baz=141,slow=5.5,SNR=4.3						
ISA	Isabella	87.21	51	eP	P	00 57 16.4	+0.1
HUMO	Hull Mountain	87.27	43	eP	P	00 57 17.0	+0.5
LBCM	Butte Creek Ri	87.50	45	P	P	00 57 17.7	+0.1
NVAR	Mina Array Bea	88.53	48	P	P	00 57 22.7	+0.2
	comp=Z,2.5nm,0.7s,mb4.2,baz=226,slow=8.5,SNR=9.8						
NVAR	Mina Array Bea	88.53	48	P	P	00 57 22.7	+0.2
MOD	Modoc	88.68	45	eP	P	00 57 23.3	+0.2
FL2	Flat Top 2	89.37	40	P	P	00 57 26.7	+0.5
TPNV	Topopah Spring	89.38	51	eP	P	00 57 26.8	+0.3
SNAA	Sanae	89.46	182	e	P	00 57 24.8	-1.5
SNAA	Sanae	89.46	182	eP	P	00 57 25.2	-1.1
	comp=Z,1.6nm,0.6s,mb4.0						
TDL	Tradedollar La	89.53	40	P	P	00 57 27.4	+0.5
VIPM	Ingram Point	89.66	42	P	P	00 57 27.8	+0.2
WVOR	Wild Horse Val	90.03	45	eP	P	00 57 29.2	-0.2
	comp=Z,3.6nm,0.9s,mb4.2						
VNA3	Neumayer Olymp	90.05	180	e	P	00 57 27.4	-1.7
VNA2	Neumayer--Watz	90.34	181	e	P	00 57 29.7	-0.7
	baz=190,slow=4.4						
JCW	Jim Creek	90.57	39	P	P	00 57 31.9	+0.1
RPW	Rockport	90.93	38	eP	P	00 57 32.9	-0.5
RSW	Rattlesnake Hi	91.16	41	eP	P	00 57 34.6	+0.1

HAWA	**Hanford**	**91.19**	**41**	eP	**P**	**00 57 34.8**	**+0.1**
TUC	**Tucson**	**91.75**	**57**	eP	**P**	**00 57 37.9**	**+0.2**
	comp=Z,2.8nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**96.53**	**61**	P	**P**	**00 57 59.4**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.8,baz=216,slow=5.5,SNR=7.5						
YKA	**Yellowknife Ar**	**100.36**	**27**	P	Pdif	00 58 16.0	-0.2
	comp=Z,1.0nm,0.7s,baz=253,slow=4.6,SNR=14						
BOSA	**Boshof**	**121.36**	**217**	PKP	PKPdf	01 03 21.8	-0.2
	comp=Z,2.2nm,1.0s,baz=59,slow=5.9,SNR=3.7						
BOSA	**Boshof**	**121.36**	**217**	PKP	PKPdf	01 03 21.8	-0.2
ARCES	**ARCESS Array B**	**124.81**	**345**	PKP	PKPdf	01 03 25.7	-1.6
	comp=Z,1.2nm,0.6s,baz=85,slow=2.6,SNR=11						
GERES	**GERESS Array B**	**144.28**	**332**	PKP	PKPdf	01 04 02.1	-2.0
	comp=Z,1.6nm,0.8s,baz=30,slow=4.5,SNR=11						
MOA	**Molln**	**144.76**	**331**	⇑iPKPdf	PKPdf	01 04 03.9	-1.0
	comp=Z,8.7nm,1.2s						
BAIF	**Baives**	**146.76**	**342**	ePKP1	PKPbc	01 04 08.7	-1.7
FETA	**Feichten**	**146.97**	**333**	⇓iPKPbc	PKPbc	01 04 10.3	-0.8
	comp=Z,7.3nm,1.1s						
CDF	**Champ du Feu**	**147.21**	**338**	ePKP1	PKPbc	01 04 09.8	-1.9
HINF	**Hinteralfeld**	**147.87**	**338**	ePKP1	PKPbc	01 04 11.2	-2.3
HAU	**Haudompre**	**147.88**	**338**	ePKP1	PKPbc	01 04 11.3	-2.2
MEZF	**Maizieres J'vi**	**147.89**	**340**	ePKP1	PKPbc	01 04 12.0	-1.5
CABF	**La Chapelle**	**149.16**	**337**	ePKP1	PKPbc	01 04 15.9	-0.9
LOR	**Lormes**	**149.36**	**340**	ePKP1	PKPbc	01 04 16.0	-1.2
	comp=Z,11nm,0.8s						
SSF	**Saint Saulge**	**149.65**	**341**	ePKP1	PKPbc	01 04 16.8	-1.2
	comp=Z,8.9nm,0.8s						
LPL	**La Plagne**	**149.84**	**335**	ePKP1	PKPbc	01 04 17.8	-0.7
	comp=Z,4.1nm,0.7s						
LPG	**La Plagne**	**149.84**	**335**	ePKP1	PKPbc	01 04 17.8	-0.7
	comp=Z,24nm,1.0s						
MBDF	**Montbardon**	**150.47**	**334**	ePKP1	PKPbc	01 04 18.6	-1.4
ORIF	**Oris-en-Rattie**	**150.67**	**336**	ePKP1	PKPbc	01 04 19.3	-1.1
	comp=Z,10nm,0.7s						
SBF	**Sospel**	**150.89**	**333**	ePKP1	PKPbc	01 04 18.2	-2.8
	comp=Z,88nm,1.1s						
FRF	**La Foret Royal**	**151.47**	**333**	ePKP1	PKPbc	01 04 20.6	-1.7
SMRF	**Simiane la Rot**	**151.57**	**335**	ePKP1	PKPbc	01 04 20.7	-1.9
LMR	**La Mourre**	**151.71**	**333**	ePKP1	PKPbc	01 04 20.5	-2.4
DBIC	**Dimbokro**	**166.56**	**206**	PKP	PKPdf	01 04 31.7	-2.6
	comp=Z,2.2nm,1.0s,baz=0.0,slow=4.0,SNR=2.9						
DBIC				PKPab	PKPab	01 05 30.4	-7.4
	comp=Z,3.3nm,1.1s,baz=180,slow=7.1,SNR=2.9						
DBIC	**Dimbokro**	**166.56**	**206**	PKP	PKPdf	01 04 31.7	-2.6
DBIC				PKPab	PKPab	01 05 30.4	-7.4
TORD	**Torodi Ar. Bea**	**166.82**	**246**	PKP	PKPdf	01 04 33.2	-1.2
	comp=Z,1.1nm,0.9s,baz=274,slow=0.5,SNR=5.6						
TORD	**Torodi Ar. Bea**	**166.82**	**246**	PKP	PKPdf	01 04 33.2	-1.2

*NIED **11** 00:45:00, 2870N×14260E, h8km, Mw3.9 Best double couple: M0 8.60000×10^14 NP1:φs 72.00000°, δ70.00000°, λ146.00000°. NP2:φs 175.00000°, δ58.00000°, λ24.00000°.*
*IDC **11** 00:45:44.8±1.3, 2859N×14267E, h0km, mb4.1/8, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, ML4.2/2, MS3.3/3, Ms1 3.4/3, ms1mx2.9/35, Error ellipse: s-maj=37.3km s-min=18.6km az=91.0*
*ISCJB **11** 00:45:45.5±0.6, 2879N±003×1429E±01, h33km, mb4.6/23, MS3.4/2, Error ellipse: s-maj=13.4km s-min=3.6km az=178.1*
*NEIC **11** 00:45:46.8±0.7, 2897N×14303E, h35km, mb4.6/10, MW3.9(NIED), Error ellipse: s-maj=17.2km s-min=12.5km az=79.0*
*JMA **11** 00:45:47.5±0.1, 2874N×14257E, h67km, M4.0*
ISC 11 00:45:47.4±0.5**, 2878N**±003×**1430E**±01**, h35**km**, n56, σ1§40**/60**, mb4.6**/23**, MS3.4**/2**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.84**	**205**	Pn	**Pn**	**00 46 13.8**	**-2.6**
	16nm,0.3s,baz=279,slow=19,SNR=6.2						
CBIJ				Sn	**Sn**	**00 46 34.0**	**-4.4**
	76nm,0.3s,baz=266,slow=24,SNR=11						
CBIJ	**Chichi jima**	**1.84**	**205**	P	**Pn**	**00 46 15.4**	**-1.1**
CBIJ				eS	**Sn**	**00 46 35.4**	**-3.1**
JHHJ	**Haha-jima-NKT**	**2.27**	**200**	P	**Pn**	**00 46 21.3**	**-1.1**
JHHJ				eS	**Sn**	**00 46 47.4**	**-1.8**
JHJ	**Hachijo jima 2**	**5.16**	**328**	LR	LR	00 48 55.0	
	comp=Z,186nm,18.9s,baz=346,slow=37						
BSO1	**Boso 1**	**6.12**	**344**	P	**Pn**	**00 47 15.0**	**-0.3**
BSO1				eS	**Sn**	**00 48 22.6**	**-1.4**
BSO2	**Boso 2**	**6.27**	**342**	eS	**Sn**	**00 48 26.4**	**-1.3**
BSO3	**Boso 3**	**6.38**	**341**	eS	**Sn**	**00 48 30.0**	**-0.5**
BSO4	**Boso 4**	**6.61**	**340**	P	**Pn**	**00 47 23.3**	**+1.3**
JOD2	**Odawara 2**	**7.29**	**334**	P	**Pn**	**00 47 32.7**	**+1.4**
JHU	**Hanno**	**7.74**	**337**	P	**Pn**	**00 47 38.1**	**+0.6**
JHU				eS	**Sn**	**00 49 00.2**	**-3.7**
JRY	**Ryogami san**	**8.02**	**335**	P	**Pn**	**00 47 42.2**	**+0.8**
JRY				eS	**Sn**	**00 49 09.6**	**-1.3**
JAG	**Ashikaga**	**8.21**	**339**	eS	**Sn**	**00 49 10.6**	**-4.8**
MJAR	**Matsushiro Arr**	**8.75**	**334**	Pn	**Pn**	**00 47 52.6**	**+1.2**
	2.1nm,0.3s,baz=158,slow=11,SNR=9.3						
MAJO	**Matsushiro**	**8.75**	**333**	ePn	**Pn**	**00 47 46.8**	**-4.6**
MAT	**Matsushiro**	**8.75**	**333**	P	**Pn**	**00 47 52.7**	**+1.3**
JFK	**Kawauchi**	**8.76**	**349**	eS	**Sn**	**00 49 23.9**	**-5.0**
GUMO	**Guam**	**15.21**	**173**	ePn	**Pn**	**00 49 19.2**	**-0.3**
	136nm,1.0s						
ASAJ	**Asahikawa**	**15.31**	**359**	Pn	**Pn**	**00 49 24.8**	**+4.0**
	2.0nm,0.3s,baz=254,slow=19,SNR=3.2						
KSRS	**Korea Array**	**15.33**	**308**	Pn	**Pn**	**00 49 19.9**	**-1.2**
	baz=128,slow=14,SNR=3.0						
YHNB	**Yeheng**	**19.78**	**263**	eP	**Pn**	**00 50 11.7**	**-4.6**
ULN	**Ulaanbaatar**	**33.66**	**314**	P	**P**	**00 52 22.1**	**-2.6**
	2.3nm,0.8s,mb4.2						
SONM	**Songino Array**	**34.06**	**314**	P	**P**	**00 52 30.1**	**+1.9**
	1.2nm,0.8s,mb3.9,baz=121,slow=5.4,SNR=6.2						
TLY	**Talaya**	**37.14**	**319**	eP	**P**	**00 52 49.1**	**-5.5**
	5.7nm,0.6s,mb4.6						
CMAR	**Chiang Mai Arr**	**41.49**	**266**	LR	LR	01 13 23.2	
	comp=Z,42nm,18.2s,MS3.3,baz=70,slow=40						
UNV	**Unalaska Valle**	**44.20**	**41**	P	**P**	**00 53 53.2**	**+0.4**
TAPN	**Taplejung**	**48.47**	**282**	eP	**P**	**00 54 27.8**	**+1.1**
ZALV	**Zalesovo Beam**	**48.73**	**318**	P	**P**	**00 54 30.5**	**+2.2**
	1.3nm,0.4s,mb4.3,baz=89,slow=9.0,SNR=8.8						
ZALV				PcP	PcP	00 55 55.8	+2.8
	0.5nm,0.6s,baz=76,slow=6.1,SNR=3.1						
ZALV				LR	LR	01 14 38.7	
	comp=Z,34nm,18.0s,MS3.4,baz=68,slow=36						
ZALV	**Zalesovo Beam**	**48.73**	**318**	P	**P**	**00 54 30.5**	**+2.2**
ZALV				PcP	PcP	00 55 55.8	+2.8
ZALV				LR	LR	01 14 38.7	
WRAB	**Tennant Creek**	**49.15**	**191**	eP	**P**	**00 54 33.5**	**+1.7**
	7.4nm,0.4s,mb5.1						
WB2	**Warramunga Arr**	**49.16**	**191**	eP	**P**	**00 54 33.1**	**+1.2**
RAMN	**Ramite**	**49.53**	**282**	eP	**P**	**00 54 35.0**	**+0.1**
	20nm,1.0s,mb5.1						
FITZ	**Fitzroy Crossi**	**49.55**	**202**	eP	**P**	**00 54 34.9**	**0.0**
	1.6nm,0.6s,mb4.2						
JIRN	**Jiri**	**49.69**	**283**	eP	**P**	**00 54 36.9**	**+0.8**
	22nm,0.7s,mb5.3						
GUN	**Gumba**	**49.89**	**284**	eP	**P**	**00 54 38.3**	**+0.7**
	22nm,0.8s,mb5.3						
MKAR	**Makanchi Array**	**50.01**	**309**	P	**P**	**00 54 39.5**	**+1.3**
	1.7nm,0.8s,mb4.1,baz=92,slow=9.9,SNR=13						
MKAR				PcP	PcP	00 56 00.8	+3.0
	0.4nm,0.6s,baz=51,slow=5.7,SNR=3.0						
KKN	**Kakani**	**50.43**	**284**	eP	**P**	**00 54 42.1**	**+0.4**
	14nm,0.9s,mb5.0						
DMN	**Daman**	**50.63**	**283**	eP	**P**	**00 54 43.7**	**+0.5**
GKN	**Gorkha**	**50.92**	**284**	eP	**P**	**00 54 45.7**	**+0.3**
	12nm,0.9s,mb4.8						
DANN	**Dangsing**	**51.58**	**285**	eP	**P**	**00 54 51.1**	**+0.8**
	23nm,0.7s,mb5.2						
KOLN	**Koldanda**	**51.87**	**284**	eP	**P**	**00 54 53.0**	**+0.5**
	17nm,0.7s,mb5.1						
KURK	**Kurchatov**	**52.37**	**314**	P	**P**	**00 54 57.8**	**+2.0**
	4.8nm,0.6s,mb4.6,baz=91,slow=8.2,SNR=30						
KURK	**Kurchatov**	**52.37**	**314**	P	**P**	**00 54 54.5**	**-1.3**
	14nm,1.0s,mb4.8						
PMR	**Palmer**	**54.62**	**33**	P	**P**	**00 55 10.5**	**-1.7**
TKM2	**Tokmak 2**	**55.09**	**304**	P	**P**	**00 55 16.8**	**+0.9**
UCH	**Uchtor**	**55.99**	**304**	eP	**P**	**00 55 20.1**	**-2.3**
AML	**Almayashu**	**56.61**	**304**	P	**P**	**00 55 26.3**	**-0.5**
	3.1nm,0.5s,mb4.6						
BVAR	**Borovoye Array**	**57.33**	**317**	P	**P**	**00 55 34.0**	**+2.3**
	4.5nm,0.6s,mb4.7,baz=93,slow=7.7,SNR=43						
BRVK	**Borovoye**	**57.39**	**317**	P	**P**	**00 55 29.6**	**-2.5**
	4.1nm,0.6s,mb4.6						
INK	**Inuvik**	**61.19**	**25**	eP	**P**	**00 55 55.9**	**-2.2**
ARU	**Arti**	**63.57**	**322**	P	**P**	**00 56 12.9**	**-1.4**
	5.5nm,1.0s,mb4.5						
YKA	**Yellowknife Ar**	**70.31**	**29**	P	**P**	**00 57 01.7**	**+4.8**
	0.2nm,0.6s,mb3.3,baz=293,slow=6.2,SNR=4.8						
KIV	**Kislovodsk**	**77.45**	**313**	eP	**P**	**00 57 37.4**	**-1.8**
	3.8nm,0.7s,mb4.4						
NB2	**NORSAR Subarra**	**82.33**	**339**	P	**P**	**00 58 07.2**	**+2.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=41,slow=5.1						
NOA	**NORSAR Array B**	**82.33**	**339**	P	**P**	**00 58 07.5**	**+2.3**
	comp=Z,1.0nm,0.6s,mb3.9,baz=42,slow=5.2,SNR=5.0						
BRTR	**Keskin Array B**	**85.42**	**313**	P	**P**	**00 58 24.6**	**+3.2**
	comp=Z,1.7nm,0.7s,mb4.3,baz=110,slow=4.3,SNR=8.3						
PSZ	**Piszkesteto**	**88.20**	**326**	eP	**P**	**00 58 32.8**	**-2.0**

*MOS **11** 01:08:00.6±1.6, 5052N×15580E, h174km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=22.9km az=62.6*
KRSC 11 01:08:00.6±0.9**, 5052N**×**15580E, h174**km±83km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.26**	**51**	ePN	Pn	01 08 18.5	-5.3
SKR				pmax	pmax		
	comp=Z,120nm,0.2s						
SKR				pmax	pmax		
	comp=N,50nm,0.4s						
MIPR	**Malaya Ipel'ka**	**1.86**	**18**	P	Pn	01 08 38.0	+2.4
RUS	**Russkaya**	**2.56**	**40**	eP	Pn	01 08 45.3	+1.8
RUS				iS	Sn	01 09 18.6	+1.7
NLC	**Nalytchevo**	**3.45**	**38**	P	Pn	01 08 56.2	+1.8
NLC				iS	Sn	01 09 36.3	0.0
SPN	**Mys Shipunski**	**3.68**	**44**	eP	Pn	01 09 00.1	+2.8
SPN				iS	Sn	01 09 42.3	+0.7
MKZ	**Mys Kozlova**	**5.42**	**40**	P	Pn	01 09 22.0	+2.2
MKZ				iS	Sn	01 10 20.9	-1.1
KBTR	**Krutoberegovo**	**7.08**	**34**	P	Pn	01 09 44.8	+3.3

*NEIC **11** 01:28:53.2, 1570N×9689W, h16km, mb4.9/44, MD4.6(MEX), After MEX.*
NEIC Felt at Puerto Escondido.
*MEX **11** 01:28:53.2±0.7, 1572N×9689W, h16km±20km, MD4.6*
*ISCJB **11** 01:28:54.8±0.8, 1598N±004×9661W±003, h33km±5km, mb4.6/49, MS4.0/11, Error ellipse: s-maj=6.9km s-min=3.8km az=21.6*
*IDC **11** 01:28:55.4±3.9, 1591N×9670W, h34km±28km, mb4.0/18, mb1 4.2/20, mb1mx4.0/29, mbtmp4.0/20, ML3.8/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/34, Error ellipse: s-maj=24.8km s-min=12.5km az=48.0*
*BJI **11** 01:28:57.2, 1570N×9690W, h16km, mB5.4, Ms5.1, Msz4.6*
ISC 11 01:28:55.6±0.8**, 1602N**±004×**9658W**±003**, h25**km±6km**, n360, σ0§79**/366**, mb4.6**/48**, MS4.0**/11**, 95C-112D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.52**	**119**	iP	**Pb**	**01 29 05.7**	**-0.4**
HUIG				eS	**Sb**	**01 29 14.0**	**+0.8**
VHO	**Vista Hermosa**	**1.05**	**352**	eP	**Pn**	**01 29 14.5**	**-0.3**
VHO				iS	**Sn**	**01 29 30.0**	**+1.2**
OXX	**Oaxaca**	**1.06**	**353**	eP	**Pn**	**01 29 15.2**	**+0.3**
OXX				iS	**Sn**	**01 29 30.9**	**+2.0**
PNIG	**Pinotepa**	**1.53**	**284**	eP	**Pn**	**01 29 14.1**	**-7.3**
PNIG				iS	**Sn**	**01 29 29.7**	**-11**
CMIG	**Matias Romero**	**1.94**	**57**	Pn	**Pn**	**01 29 27.9**	**+0.9**
	36nm,0.3s,baz=250,slow=11,SNR=131						
CMIG				Pg	**Pn**	**01 29 34.8**	**+7.7**
	146nm,0.3s,baz=229,slow=16,SNR=55						
CMIG				Lg		01 30 04.8	
	516nm,0.3s,baz=147,slow=21,SNR=13						
CMIG				LR	LR	01 30 42.7	
	comp=Z,3μm,19.1s,baz=234,slow=51						
CMIG	**Matias Romero**	**1.94**	**57**	eP	**Pn**	**01 29 27.4**	**+0.4**
CMIG				eS	**Sn**	**01 29 55.2**	**+4.5**
CMIG	**Matias Romero**	**1.94**	**57**	eP	**Pn**	**01 29 27.4**	**+0.4**
CMIG				Pn	**Pn**	**01 29 27.9**	**+0.9**
CMIG				Pg	**Pn**	**01 29 34.8**	**+7.7**
CMIG				eS	**Sn**	**01 29 55.2**	**+4.5**
CMIG				Lg		01 30 04.8	
CMIG				LR	LR	01 30 42.7	
UTMO	**Huajuapan**	**2.15**	**327**	eP	**Pn**	**01 29 28.2**	**-1.6**
UTMO				iS	**Sn**	**01 29 54.5**	**-1.2**
PCIG		**3.25**	**95**	iP	**Pn**	**01 29 44.8**	**-0.2**
PCIG				iS	**Sn**	**01 30 25.9**	**+3.0**
ACX	**Acapulco**	**3.31**	**285**	iP	**Pn**	**01 29 38.7**	**-7.2**
ACX				iS	**Sn**	**01 30 15.1**	**-9.3**
TGIG		**3.40**	**77**	eP	**Pn**	**01 29 49.0**	**+1.9**
TGIG				iS	**Sn**	**01 30 30.6**	**+4.0**
MEIG	**Mezcala**	**3.47**	**303**	eP	**Pn**	**01 29 43.6**	**-4.5**
MEIG				iS	**Sn**	**01 30 22.1**	**-6.3**
PPM	**Popocatepetl**	**3.60**	**327**	iP	**Pn**	**01 29 47.7**	**-2.2**
PPM				eP		01 29 48.9	
PPM				iS	**Sn**	**01 30 31.6**	**0.0**
PLIG	**Platanillo**	**3.66**	**311**	eP	**Pn**	**01 29 46.8**	**-3.8**
PLIG				iS	**Sn**	**01 30 27.9**	**-5.1**
CAIG	**El Cayaco**	**3.68**	**287**	iP	**Pn**	**01 29 44.4**	**-6.6**
CAIG				iS	**Sn**	**01 30 24.1**	**-9.5**
YAIG	**Yautepec**	**3.69**	**320**	iP	**Pn**	**01 29 49.2**	**-1.8**
YAIG				iS	**Sn**	**01 30 30.6**	**-3.3**
SCX	**San Cristobal**	**3.85**	**79**	iP	**Pn**	**01 29 59.3**	**+6.0**
UNM	**Universidad Na**	**4.12**	**323**	iP	**Pn**	**01 29 54.9**	**-2.1**
UNM				iS	**Sn**	**01 30 42.2**	**-2.2**
ZIIG	**Zihuatanejo**	**4.94**	**289**	eP	**Pn**	**01 30 02.9**	**-5.3**
ZIIG				iS	**Sn**	**01 30 55.9**	**-8.7**
SFJM	**Santa Fe**	**7.58**	**307**	iP	**Pn**	**01 30 44.1**	**-0.3**
TEIG	**Tepich**	**8.93**	**61**	Pn	**Pn**	**01 31 02.7**	**-0.4**
	35nm,0.3s,baz=257,slow=1.8,SNR=68						
TEIG				Sn	**Sn**	**01 32 44.8**	**+1.9**
	31nm,0.3s,baz=62,slow=21,SNR=9.2						
TEIG				LR	LR	01 35 07.8	
	comp=Z,428nm,19.6s,baz=144,slow=41						
TEIG	**Tepich**	**8.93**	**61**	Pn	**Pn**	**01 31 02.7**	**-0.4**
TEIG				Sn	**Sn**	**01 32 44.8**	**+1.9**
TEIG				LR	LR	01 35 07.8	
TGUH	**Tegucigalpa,Un**	**9.20**	**101**	Pn	**Pn**	**01 31 13.7**	**+6.9**
JCT	**Junction City**	**14.69**	**349**	ePn	**Pn**	**01 32 21.9**	**+0.1**
TXAR	**Lajitas Array**	**14.77**	**335**	Pn	**Pn**	**01 32 23.4**	**+0.5**
	0.1nm,0.3s,baz=156,slow=12,SNR=22						
TXAR				LR	LR	01 39 11.7	
	comp=Z,230nm,18.3s,baz=5.0,slow=42						
VBMS	**Vicksburg**	**17.04**	**18**	eP	**Pn**	**01 32 54.6**	**+2.4**
	63nm,0.7s						
MNTX	**Cornudas Mount**	**17.55**	**334**	Pn	**Pn**	**01 32 56.9**	**-1.6**
DWPF	**Disney**	**18.46**	**47**	eP	**Pn**	**01 33 11.1**	**+1.2**
	94nm,1.7s						
MIAR	**Mount Ida**	**18.64**	**8**	ePn	**Pn**	**01 33 11.0**	**-0.9**
	144nm,0.9s						
WMOK	**Wichita Mounta**	**18.74**	**354**	eP	**Pn**	**01 33 11.1**	**-2.1**
	30nm,1.1s						
WMOK				eS	**Sn**	**01 36 32.6**	**-10**
LRAL	**Lakeview Retre**	**19.03**	**25**	ePn	**Pn**	**01 33 16.3**	**-0.3**
	20nm,0.5s						
UALR	**University of**	**19.06**	**11**	ePn	**Pn**	**01 33 17.1**	**+0.2**
	64nm,0.9s						
319A	**Douglas**	**19.18**	**325**	⇑P	**Pn**	**01 33 18.0**	**-0.4**
	baz=19						
AMTX	**Amarillo**	**19.33**	**347**	eP	**Pn**	**01 33 18.1**	**-2.2**
	39nm,0.8s						
OXF	**Oxford**	**19.51**	**18**	eP	**Pn**	**01 33 20.8**	**-1.6**
	116nm,1.0s						
318A	**Bisbee**	**19.62**	**324**	⇓P	**Pn**	**01 33 23.6**	**-0.1**
	baz=19,SNR=8.6						
219A	**White Tail Can**	**19.65**	**326**	⇑P	**Pn**	**01 33 23.2**	**-0.8**
	baz=19						
218A	**Dragoon**	**20.06**	**325**	⇓P	**P**	**01 33 27.6**	**+0.5**
	baz=20						
BNM	**Barren Site**	**20.19**	**335**	eP	**P**	**01 33 29.2**	**+0.7**
	74nm,1.2s						
Y22D	**IRIS PASSCAL I**	**20.25**	**334**	⇓P	**P**	**01 33 28.8**	**-0.2**
	baz=20						
119A	**Ashpeak Ranch,**	**20.27**	**328**	⇑P	**P**	**01 33 29.9**	**+0.6**
	baz=20						
LPM	**Los Pinos Moun**	**20.33**	**335**	eP	**P**	**01 33 30.8**	**+0.8**
217A	**Green Valley**	**20.34**	**323**	⇓P	**P**	**01 33 30.8**	**+0.7**
	baz=20						
LENM	**Lemitar**	**20.35**	**335**	ePn	**P**	**01 33 31.2**	**+1.1**
118A	**Homack Ranch,**	**20.52**	**326**	⇑P	**P**	**01 33 33.0**	**+0.9**
	baz=20,SNR=6.3						
TUC	**Tucson**	**20.72**	**324**	eP	**P**	**01 33 34.9**	**+0.7**
	4.0nm,0.7s						
ANMO	**Albuquerque**	**20.83**	**337**	P	**P**	**01 33 35.6**	**+0.3**
	14nm,0.7s,baz=150,slow=13,SNR=60						
ANMO				LR	LR	01 42 41.9	
	comp=Z,223nm,20.1s,MS3.5,baz=67,slow=40						
ANMO	**Albuquerque**	**20.83**	**337**	eP	**P**	**01 33 35.5**	**+0.2**
	14nm,0.6s						
216A	**Three Points,**	**20.88**	**322**	⇑P	**P**	**01 33 36.5**	**+0.5**
	baz=20						
117A	**Oracle**	**20.89**	**325**	⇓P	**P**	**01 33 36.5**	**+0.4**
	baz=20,SNR=11						
GOGA	**Godfrey**	**20.98**	**32**	eP	**P**	**01 33 36.1**	**-0.9**
	30nm,0.6s						
GLAT	**Glass**	**21.18**	**16**	eP	**P**	**01 33 39.5**	**+0.3**
Y19A	**Nutrioso**	**21.20**	**330**	⇓P	**P**	**01 33 40.5**	**+1.1**
	baz=21						
Z17A	**San Carlos Hig**	**21.30**	**326**	⇓P	**P**	**01 33 41.5**	**+1.1**
	baz=21,SNR=5.8						
SWET	**Sewanee**	**21.36**	**25**	eP	**P**	**01 33 40.5**	**-0.6**
UTMT	**University of**	**21.37**	**17**	eP	**P**	**01 33 41.1**	**-0.1**
	208nm,0.9s,mb5.5						
PARMO	**Parma**	**21.43**	**15**	eP	**P**	**01 33 42.6**	**+0.7**
Y18A	**Canyon Day Jun**	**21.44**	**328**	⇑P	**P**	**01 33 42.4**	**+0.4**
	baz=21,SNR=7.9						
WVT	**Waverly**	**21.49**	**20**	eP	**P**	**01 33 41.5**	**-1.0**
	42nm,0.8s,mb4.8						
X19A	**St. Johns**	**21.60**	**330**	⇓P	**P**	**01 33 44.2**	**+0.5**
	baz=21,SNR=8.7						
214A	**Organ Pipe Nat**	**21.67**	**320**	⇓P	**P**	**01 33 45.7**	**+1.2**
	baz=21						
Y17A	**Roosevelt**	**21.80**	**326**	⇓P	**P**	**01 33 46.6**	**+0.7**
	baz=21,SNR=11						
115A	**Sonoran Desert**	**21.84**	**322**	⇓P	**P**	**01 33 46.8**	**+0.5**
	baz=21						
Z16A	**Peralta Trail,**	**21.85**	**325**	⇓P	**P**	**01 33 47.0**	**+0.6**
	baz=21						
X18A	**Snowflake**	**22.00**	**329**	⇓P	**P**	**01 33 48.9**	**+0.9**
	baz=21,SNR=16						
CPCT	**Cooper Cave**	**22.15**	**27**	eP	**P**	**01 33 47.7**	**-1.9**
W19A	**Sanders**	**22.20**	**331**	⇓P	**P**	**01 33 50.4**	**+0.2**
	baz=22						
Y16A	**Circle Bar Ran**	**22.28**	**326**	⇓P	**P**	**01 33 51.8**	**+0.8**
	baz=22,SNR=7.7						
CCM	**Cathedral Cave**	**22.45**	**11**	eP	**P**	**01 33 51.9**	**-0.8**
	106nm,0.7s,mb5.4						
FVM	**French Village**	**22.54**	**13**	eP	**P**	**01 33 52.9**	**-0.8**
	24nm,0.9s,mb4.6						
SIUC	**Southern Illin**	**22.57**	**15**	eP	**P**	**01 33 53.6**	**-0.3**
	72nm,0.8s,mb5.2						
NHSC	**New Hope**	**22.57**	**38**	eP	**P**	**01 33 54.1**	**+0.1**
	69nm,1.0s,mb5.0						
TKL	**Tuckaleechee C**	**22.66**	**28**	P	**P**	**01 33 53.5**	**-1.4**
	22nm,0.7s,mb4.7,baz=195,slow=9.1,SNR=20						
TKL				LR	LR	01 43 55.2	
	comp=Z,121nm,21.2s,MS3.3,baz=71,slow=40						
TKL	**Tuckaleechee C**	**22.66**	**28**	eP	**P**	**01 33 53.4**	**-1.6**
X16A	**Lo Mia Camp, P**	**22.67**	**327**	⇑P	**P**	**01 33 56.0**	**+0.9**
	baz=22,SNR=20						
Y15A	**Casa Rosa Ranc**	**22.81**	**324**	⇑P	**P**	**01 33 57.0**	**+0.4**
	baz=22,SNR=6.1						
W17A	**Winslow**	**22.81**	**329**	⇑P	**P**	**01 33 57.0**	**+0.4**
	baz=22						
CBKS	**Cedar Bluff**	**22.87**	**354**	eP	**P**	**01 33 57.8**	**+0.6**
	75nm,0.8s,mb5.2						
V18A	**Ganado**	**22.95**	**331**	⇓P	**P**	**01 33 58.3**	**+0.3**
	baz=22,SNR=5.6						
KSU1	**Kansas State U**	**22.99**	**360**	eP	**P**	**01 33 58.2**	**-0.2**
	44nm,0.9s,mb4.9						
SDCO	**Great Sand Dun**	**23.03**	**342**	eP	**P**	**01 33 58.0**	**-0.9**
	8.2nm,0.7s,mb4.3						
X15A	**Humboldt**	**23.15**	**325**	⇓P	**P**	**01 34 00.4**	**+0.2**
	baz=23						
Y14A	**Wickenburg**	**23.18**	**323**	⇑P	**P**	**01 34 00.5**	**0.0**
	baz=23						
SLM	**Saint Louis**	**23.21**	**13**	eP	**P**	**01 33 59.3**	**-1.5**
	22nm,0.6s,mb4.8						
USIN	**University of**	**23.23**	**18**	eP	**P**	**01 33 59.9**	**-1.1**
	21nm,0.6s,mb4.8						
W16A	**Flagstaff**	**23.24**	**328**	⇓P	**P**	**01 34 02.1**	**+1.0**
	baz=23						
T19A	**Beclabito**	**23.49**	**334**	⇑P	**P**	**01 34 03.2**	**-0.4**
	baz=23,SNR=6.5						
WUAZ	**Wupatki**	**23.49**	**328**	⇓P	**P**	**01 34 03.6**	**-0.1**
	baz=23						
WUAZ	**Wupatki**	**23.49**	**328**	eP	**P**	**01 34 04.6**	**+0.9**
	21nm,1.1s,mb4.5						
TZTN	**Tazewell**	**23.49**	**27**	eP	**P**	**01 34 02.1**	**-1.6**
	52nm,1.1s,mb4.9						
X14A	**Yava**	**23.50**	**324**	⇑P	**P**	**01 34 03.8**	**0.0**
	baz=23						
U18A	**Rough Rock, Ch**	**23.51**	**332**	⇓P	**P**	**01 34 03.7**	**-0.2**
	baz=23,SNR=6.8						
Y13A	**Salome**	**23.57**	**322**	⇑P	**P**	**01 34 04.5**	**0.0**
	baz=23						
MVCO	**Mesa Verde**	**23.60**	**336**	⇑P	**P**	**01 34 04.2**	**-0.5**
	baz=23						
MVCO	**Mesa Verde**	**23.60**	**336**	eP	**P**	**01 34 04.8**	**+0.1**
	21nm,0.9s,mb4.6						
GLA	**Glamis**	**23.66**	**319**	⇓P	**P**	**01 34 05.2**	**-0.1**
	baz=23						
GLA	**Glamis**	**23.66**	**319**	eP	**P**	**01 34 05.0**	**-0.4**
	17nm,1.0s,mb4.4						
W15A	**Williams**	**23.69**	**327**	⇑P	**P**	**01 34 05.3**	**-0.2**
	baz=23						
OTAV	**Otavalo**	**23.79**	**130**	P	pP	01 34 13.8	-0.1
	8.1nm,1.1s						
OLIL	**Olney**	**23.82**	**17**	eP	**P**	**01 34 06.2**	**-0.5**
	51nm,0.9s,mb5.0						
U16A	**Tuba City**	**23.87**	**330**	⇓P	**P**	**01 34 07.1**	**-0.1**
	baz=23,SNR=6.9						
WCI	**Wyandotte Cave**	**23.91**	**20**	eP	**P**	**01 34 06.9**	**-0.6**
Y12C	**Blythe**	**23.95**	**321**	⇓P	**P**	**01 34 08.5**	**+0.6**
	baz=23						
U17A	**Shonto**	**24.02**	**331**	⇓P	**P**	**01 34 08.4**	**-0.1**
	baz=23						
T18A	**Mexican Hat**	**24.11**	**333**	⇓P	**P**	**01 34 09.3**	**-0.1**
	baz=24,SNR=7.3						
X13A	**Yucca**	**24.12**	**323**	⇑P	**P**	**01 34 09.5**	**0.0**
	baz=24						
V15A	**Kaibab Nationa**	**24.13**	**328**	⇓P	**P**	**01 34 09.9**	**+0.3**
	baz=24,SNR=6.0						
W14A	**Seligman**	**24.16**	**325**	⇓P	**P**	**01 34 09.9**	**+0.1**
	baz=24						
R21A	**Cimarron**	**24.27**	**339**	⇓P	**P**	**01 34 11.2**	**+0.5**
	baz=24,SNR=7.6						
SDDR	**Presa de Saban**	**24.29**	**79**	P	**P**	**01 34 13.6**	**+2.3**
S19A	**Harvey Farm, M**	**24.32**	**335**	⇓P	**P**	**01 34 11.3**	**+0.1**
	baz=24,SNR=15						
T17A	**Navajo Res., N**	**24.41**	**332**	⇓P	**P**	**01 34 12.8**	**+0.8**
	baz=24,SNR=8.1						
BC3	**Big Chuckw Mtn**	**24.45**	**319**	⇑P	**P**	**01 34 12.6**	**+0.1**
	baz=24						
V14A	**Boquillas Ranc**	**24.48**	**326**	⇑P	**P**	**01 34 13.3**	**+0.6**
	baz=24						
ROSC	**El Rosal**	**24.50**	**115**	eP	sP	01 34 25.2	+1.7
W13A	**Hualapai Mount**	**24.52**	**324**	⇑P	**P**	**01 34 13.4**	**+0.3**
	baz=24						
IRM	**Iron Mountain**	**24.60**	**321**	⇑P	**P**	**01 34 13.5**	**-0.4**
	baz=24						
S18A	**Hurst Farm, Bl**	**24.62**	**334**	⇓P	**P**	**01 34 14.6**	**+0.6**
	baz=24,SNR=12						
U15A	**North Rim**	**24.66**	**328**	⇑P	**P**	**01 34 15.7**	**+1.3**
	baz=24,SNR=8.8						
BLO	**Bloomington**	**24.69**	**19**	eP	**P**	**01 34 13.9**	**-0.7**
	52nm,0.9s,mb5.1						
PV04	**Paradox Valley**	**24.79**	**336**	eP	**P**	**01 34 17.1**	**+1.6**
R19A	**Curley Farm, L**	**24.84**	**336**	⇑P	**P**	**01 34 16.6**	**+0.6**
	baz=24,SNR=6.1						
S17A	**Black Ridge (B**	**24.93**	**332**	⇑P	**P**	**01 34 17.7**	**+0.9**
	baz=24,SNR=7.7						
ISCO	**Idaho Springs**	**24.97**	**343**	eP	**P**	**01 34 17.3**	**+0.1**
	55nm,1.5s,mb4.9						
BELC	**Belle Mtn.**	**25.02**	**319**	⇓P	**P**	**01 34 18.6**	**+0.8**
	baz=24						
Q20A	**Ridgley Place,**	**25.05**	**338**	⇑P	**P**	**01 34 18.8**	**+0.9**
	baz=24,SNR=6.5						
PFO	**Pinyon Flat Ob**	**25.06**	**318**	eP	**P**	**01 34 15.9**	**-2.1**
U14A	**Mt Trumbull**	**25.11**	**327**	⇓P	**P**	**01 34 18.9**	**+0.4**
	baz=24						
V13A	**Grand Canyon W**	**25.12**	**325**	⇓P	**P**	**01 34 19.2**	**+0.6**
	baz=24,SNR=5.8						
R18A	**Canyonlands Na**	**25.17**	**335**	⇓P	**P**	**01 34 19.4**	**+0.4**
	baz=24,SNR=8.4						
T15A	**Red Dirt Ranch**	**25.17**	**329**	⇓P	**P**	**01 34 20.3**	**+1.3**
	baz=25						
LDFC	**Landfair**	**25.21**	**322**	P	**P**	**01 34 20.1**	**+0.8**
OGNE	**Ogallala**	**25.28**	**350**	eP	**P**	**01 34 21.1**	**+1.1**
	68nm,0.8s,mb5.2						
S16A	**Weppner Ranch,**	**25.36**	**331**	⇓P	**P**	**01 34 21.3**	**+0.6**
	baz=25						
Q19A	**Hogan Spring (**	**25.41**	**336**	⇓P	**P**	**01 34 21.7**	**+0.5**
	baz=25,SNR=11						
BLA	**Blacksburg**	**25.50**	**31**	eP	**P**	**01 34 21.1**	**-0.9**
	62nm,0.8s,mb5.2						
V12A	**Nelson**	**25.52**	**324**	⇑P	**P**	**01 34 22.6**	**+0.4**
	baz=25						

U13A **Pakoon Wash** 25.53 326 ⇓P P 01 34 22.6 +0.3
baz=25
R17A **Hanksville Air** 25.54 344 ⇑P P 01 34 23.1 +0.7
baz=25
R16A **Teasdale** 25.77 332 ⇑P P 01 34 26.1 +1.6
baz=25,SNR=6.6
HEC **Hector,Ludlow** 25.77 320 ⇓P P 01 34 26.1 +1.5
baz=25
U12A **Valley of Fire** 25.85 325 ⇓P P 01 34 26.1 +0.9
baz=25
P19A **Cripple Cowboy** 25.90 338 ⇓P P 01 34 26.2 +0.6
baz=25
O21A **Pagoda** 25.90 341 ⇑P P 01 34 26.1 +0.5
baz=25
V11A **Goodsprings** 25.93 323 ⇑P P 01 34 26.6 +0.7
baz=25
T13A **Saint George** 25.95 327 ⇓P P 01 34 26.7 +0.7
baz=25
SCIA **State Center** 25.96 6 *e*P P 01 34 25.6 -0.5
107nm,0.7s,mb5.5
SRU **San Rafael** 26.05 335 ⇓P P 01 34 26.7 -0.2
baz=25
O20A **White River Ci** 26.08 339 ⇓P P 01 34 27.5 +0.3
baz=25,SNR=6.6
N22A **Wattenberg Ran** 26.14 343 ⇓P P 01 34 27.4 -0.3
baz=26
Q16A **Castle Valley** 26.16 334 ⇑P P 01 34 28.4 +0.5
baz=26,SNR=5.6
SDV **Santo Domingo** 26.29 103 P P 01 34 29.9 +0.5
4.5nm,0.8s,mb4.1,baz=296,slow=3.4,SNR=7.4
SDV **Santo Domingo** 26.29 103 *e*P P 01 34 30.4 +1.0
PHWY **Pilot Hill** 26.34 345 *e*P P 01 34 29.7 +0.2
39nm,1.8s,mb4.6
S13A **Holt Ranch, En** 26.35 328 ⇓P P 01 34 30.2 +0.5
baz=26
N21A **Black Mountain** 26.41 341 ⇓P P 01 34 30.8 +0.6
baz=26
TMUT **Trail Mountain** 26.49 334 *e*P P 01 34 34.2 +3.3
TMUT *e*pP pP 01 34 45.2 +6.9
M22A **Cedar Creek Ra** 26.73 343 ⇓P P 01 34 33.4 +0.3
baz=26,SNR=13
T11A **Corn Creek, Al** 26.82 326 ⇓P P 01 34 35.0 +1.1
baz=26
ACSO **Alum Creek Sta** 26.87 23 *e*P P 01 34 34.3 0.0
O17A **Robinson Place** 27.06 336 ⇓P P 01 34 36.6 +0.6
baz=26
N19A **John Jarvie Ra** 27.08 339 ⇓P P 01 34 36.6 +0.3
baz=26
M21A **Separation Pea** 27.14 342 ⇓P P 01 34 37.3 +0.5
baz=26,SNR=5.7
Q14A **Sevier Lake (B** 27.16 331 ⇓P P 01 34 37.5 +0.5
baz=27
RWWY **Rawlins** 27.17 342 *e*P P 01 34 38.1 +1.0
9.6nm,0.8s,mb4.4
P15A **Leamington** 27.18 333 ⇓P P 01 34 37.9 +0.8
baz=27
JSRW **J. Sargeant Re** 27.18 34 *e*P P 01 34 36.5 -0.7
L22A **Ellis Ranch, M** 27.27 344 ⇑P P 01 34 38.3 +0.3
baz=27
MPMC **Manual Prospec** 27.30 321 ⇓P P 01 34 38.8 +0.5
baz=27
N18A **Larsen Ranch,** 27.33 338 ⇓P P 01 34 39.0 +0.5
baz=27
JFWS **Jewell Farm** 27.34 10 *e*P P 01 34 38.0 -0.6
L21A **Rawlins** 27.47 342 ⇑P P 01 34 39.7 0.0
baz=27
Q13A **Wheeler Ranch,** 27.49 330 ⇓P P 01 34 40.2 +0.2
baz=27
P14A **Drum Mountains** 27.55 332 ⇑P P 01 34 40.8 +0.4
baz=27
ECSD **EROS,Sioux Fal** 27.62 360 *e*P P 01 34 40.1 -1.0
MCWV **Mont Chateau** 27.71 29 *e*P P 01 34 42.3 +0.4
N17A **Moffit Pass** 27.73 336 ⇓P P 01 34 42.2 +0.1
baz=27
R10A **Warm Springs** 28.16 326 ⇓P P 01 34 45.9 -0.1
baz=28
Q11A **Duckwater** 28.23 327 ⇓P P 01 34 47.0 +0.5
baz=28
S09A **Goldfield** 28.27 324 ⇓P P 01 34 47.9 +0.9
baz=28
M16A **Huntsville** 28.36 336 ⇑P P 01 34 48.1 +0.4
baz=28,SNR=5.8
K20A **Yellowstone Ra** 28.40 342 ⇑P P 01 34 47.4 -0.6
baz=28
R09A **Tonopah** 28.55 325 ⇑P P 01 34 49.5 +0.1
baz=28
N14A **Grayback Hills** 28.62 333 ⇓P P 01 34 50.4 +0.3
baz=28
K19A **Absolon Red Bu** 28.70 341 ⇑P P 01 34 49.9 -0.8
baz=28,SNR=6.4
BW06 **Boulder Array** 28.88 340 ⇑P P 01 34 52.4 +0.1
baz=28
BW06 **Boulder Array** 28.88 340 *e*P P 01 34 52.1 -0.2
PDAR **Pinedale Array** 28.88 340 P P 01 34 51.6 -0.7
2.7nm,0.7s,mb4.1,baz=136,slow=9.1,SNR=28
K18A **Toltan Ranch,** 28.93 339 ⇓P P 01 34 53.7 +1.0
baz=28,SNR=6.0
SDMD **Soldier's Deli** 29.00 33 *e*P P 01 34 52.8 -0.6
15nm,1.0s,mb4.7
ATAH **Atahualpa** 29.11 140 LR LR 01 43 03.6
comp=Z,79nm,18.4s,MS3.4,baz=173,slow=29
O11A **Cowboy Ranch,** 29.20 329 ⇓P P 01 34 55.5 +0.3
baz=29
ALLY **Alegheny Colle** 29.21 26 *e*P P 01 34 55.4 +0.1
64nm,0.8s,mb5.4
M14A **Sheep Mountain** 29.23 334 ⇓P P 01 34 55.6 +0.2
baz=29
L15A **Malad City** 29.25 335 ⇑P P 01 34 56.0 +0.4
baz=29
K17A **Gardner Place,** 29.33 338 ⇑P P 01 34 56.4 +0.1
baz=29
NVAR **Mina Array Bea** 29.38 324 P P 01 34 57.5 +0.7
1.1nm,0.6s,mb3.7,baz=141,slow=8.8,SNR=6.0
J18A **Kendall Valley** 29.43 340 ⇑P P 01 34 57.0 -0.1
baz=29,SNR=5.8
ELK **Elko** 29.47 330 P P 01 34 58.5 +1.0
0.7nm,0.7s,mb3.5,baz=146,slow=7.3,SNR=4.6
ELK LR LR 01 48 28.2
comp=Z,428nm,18.7s,MS4.1,baz=322,slow=40
L14A **Malta** 29.62 334 ⇓P P 01 34 59.1 +0.2
baz=29,SNR=7.6
ERPA **Erie** 29.66 25 *e*P P 01 34 59.3 0.0
MVL **Millersville** 29.68 32 *e*P P 01 34 59.1 -0.4
11nm,0.8s,mb4.6
MTP **Monte Pirata** 29.72 81 P P 01 35 04.2 +4.2
J17A **Brown Place, J** 29.80 339 ⇑P P 01 35 00.6 +0.2
baz=29,SNR=7.3
I18A **Diamond G Ranc** 29.80 340 ⇑P P 01 35 00.4 0.0
baz=29
REDW **Red Top Meadow** 29.85 339 *e*P P 01 35 00.8 -0.1
9.2nm,1.0s,mb4.5
K15A **Arbon** 29.88 336 ⇑P P 01 35 01.2 0.0
baz=29
SNOW **Snow King Moun** 29.90 339 *e*P P 01 35 02.0 +0.6
LOHW **Long Hollow** 29.98 339 *e*P P 01 35 02.1 +0.1
TPAW **Teton Pass** 29.99 339 *e*P P 01 35 02.7 +0.5
RRI2 **Red Ridge** 30.00 338 *e*P P 01 35 02.5 +0.3
K14A **Jones Ranch, D** 30.02 335 ⇓P P 01 35 02.6 +0.2
baz=29
MOOW **Moose Ponds** 30.15 339 *e*P P 01 35 03.8 +0.3
DCID1 **Drake Creek** 30.16 339 *e*P P 01 35 04.8 +1.1
I17A **Pilgram Creek** 30.24 340 ⇑P P 01 35 04.9 +0.5
baz=30,SNR=6.5
IMW **Indian Meadow** 30.35 339 *e*P P 01 35 05.6 +0.3
J15A **Blackfoot** 30.45 337 ⇑P P 01 35 06.6 +0.4
baz=30
I16A **Newdale** 30.52 339 ⇑P P 01 35 06.6 -0.2
baz=30
O08A **Rochester Mine** 30.60 326 ⇑P P 01 35 08.6 +1.0
baz=30
J14A **Carey** 30.81 335 ⇑P P 01 35 09.4 0.0
baz=30
K12A **Draper Farm, C** 30.82 333 ⇑P P 01 35 09.4 -0.1
baz=30
L11A **Cat Creek Ranc** 30.83 332 ⇓P P 01 35 09.6 +0.1
baz=30
O07A **Toulon** 30.90 326 ⇓P P 01 35 10.8 +0.6
baz=30
RLMT **Red Lodge** 30.92 342 ⇑P P 01 35 10.1 -0.2
baz=30
RLMT **Red Lodge** 30.92 342 *e*P P 01 35 10.3 0.0
17nm,0.8s,mb4.9
L10A **Juniper Basin** 31.09 331 ⇓P P 01 35 12.6 +0.7
baz=30
J13A **Cove Ranch, Pi** 31.14 335 ⇑P P 01 35 12.2 -0.1
baz=30
H16A **Russell Place,** 31.16 340 ⇓P P 01 35 12.9 +0.4
baz=30,SNR=5.2
G18A **Lazy EL Ranch,** 31.18 342 ⇓P P 01 35 12.5 -0.2
baz=30,SNR=7.8
I14A **Mackay** 31.29 336 ⇑P P 01 35 14.0 +0.4
baz=31,SNR=6.4
HLID **Hailey** 31.37 335 ⇓P P 01 35 14.6 +0.3
baz=31
K11A **Parker Ranch,** 31.43 332 ⇑P P 01 35 15.0 +0.2
baz=31
BINY **Binghamton** 31.52 30 *e*P P 01 35 14.9 -0.7
I13A **Wildhorse Cree** 31.54 335 ⇓P P 01 35 16.2 +0.4
baz=31
G17A **Pierce Place,** 31.54 341 ⇑P P 01 35 16.3 +0.5
baz=31,SNR=6.2
H15A **Lima** 31.57 338 ⇑P P 01 35 16.7 +0.6
baz=31
L09A **Wilkinson Ranc** 31.62 329 ⇓P P 01 35 17.1 +0.5
baz=31
PCRV **Puerto La Cruz** 31.62 97 LR LR 01 47 46.4
comp=Z,137nm,20.4s,MS3.6,baz=55,slow=36
F18A **Big Timber** 31.76 342 ⇑P P 01 35 17.7 0.0
baz=31,SNR=20
G16A **Moss Hill, Enn** 31.81 339 ⇑P P 01 35 18.3 +0.2
baz=31,SNR=12
N06A **Buffalo Meadow** 31.83 325 ⇑P P 01 35 18.8 +0.3
baz=31
H14A **Leadore** 31.84 337 ⇑P P 01 35 18.9 +0.5
baz=31,SNR=5.5
G15A **Dillon** 31.99 339 ⇑P P 01 35 20.5 +0.7
baz=31,SNR=14
F17A **Fitzpatrick Pl** 32.04 341 ⇓P P 01 35 20.6 +0.4
baz=31,SNR=28
L08A **Fields** 32.09 329 ⇓P P 01 35 20.8 +0.2
baz=32
EYMN **Ely** 32.11 6 *e*P P 01 35 19.6 -1.2
BOZ **Bozeman (W)** 32.12 340 ⇓P P 01 35 20.9 0.0
baz=32
H13A **Challis** 32.14 336 ⇑P P 01 35 21.3 +0.3
baz=32
K09A **Rome** 32.16 330 ⇓P P 01 35 21.8 +0.5
baz=32
AGMN **Agassiz Refuge** 32.19 1 *e*P P 01 35 20.5 -0.9
14nm,0.8s,mb4.8
DLMT **Dillon** 32.20 339 *e*P P 01 35 22.2 +0.6
F16A **Kennard Place,** 32.24 340 ⇓P P 01 35 22.2 +0.3
baz=32,SNR=9.2
H12A **Diamond D Ranc** 32.37 335 ⇑P P 01 35 23.6 +0.6
baz=32,SNR=18
E18A **Harlowton** 32.42 343 ⇓P P 01 35 23.6 +0.1
baz=32,SNR=18
L07A **Adell** 32.47 328 ⇑P P 01 35 23.8 -0.1
baz=32
LRM **Limekiln Ridge** 32.55 339 *e*P P 01 35 24.9 +0.3
K08A **Mann Creek Ran** 32.56 329 ⇓P P 01 35 25.4 +0.7
baz=32
G13A **Cobalt** 32.57 336 ⇓P P 01 35 25.1 +0.3
baz=32,SNR=7.8
F15A **Butte** 32.58 339 ⇓P P 01 35 25.5 +0.6
baz=32,SNR=12
E17A **Martinsdale** 32.60 342 ⇓P P 01 35 25.2 +0.1
baz=32,SNR=11
F14A **Wisdom** 32.86 338 ⇑P P 01 35 27.6 +0.2
baz=32
K07A **Rock Creek Ran** 32.91 328 ⇓P P 01 35 28.1 +0.3
baz=32
E16A **East Helena** 32.92 341 ⇓P P 01 35 28.2 +0.3
baz=32,SNR=17
D18A **Linhart Farms,** 32.96 343 ⇑P P 01 35 28.4 +0.2
baz=32,SNR=20
H11A **Donnelly** 32.97 334 ⇓P P 01 35 28.7 +0.3
baz=32
J08A **Circle Bar Ran** 33.02 330 ⇑P P 01 35 29.2 +0.4
baz=32
HRY **Holter Researc** 33.13 341 *e*P P 01 35 29.9 +0.2
E15A **Deer Lodge** 33.14 340 ⇑P P 01 35 29.9 +0.1
baz=32,SNR=11
D17A **Six Diamond Ra** 33.17 342 ⇑P P 01 35 30.1 0.0
baz=32,SNR=16
H10A **Noah's Angus R** 33.19 333 ⇓P P 01 35 29.9 -0.4
baz=33
F13A **Darby** 33.20 337 ⇑P P 01 35 29.9 -0.4
baz=33,SNR=8.6
D16A **Dana Ranch, Ca** 33.32 341 ⇓P P 01 35 31.3 -0.1
baz=33,SNR=11
E14A **Clinton** 33.43 339 ⇓P P 01 35 32.1 -0.2
baz=33,SNR=5.9
F12A **Elk City** 33.52 336 ⇑P P 01 35 32.9 -0.2
baz=33,SNR=14
ACCN **Adirondack Com** 33.54 31 *e*P P 01 35 33.5 +0.1
C17A **Wharram Farm,** 33.63 343 ⇓P P 01 35 33.7 -0.4
baz=33,SNR=22
G11A **Walters Elk Ra** 33.64 335 ⇑P P 01 35 33.6 -0.5
baz=33,SNR=8.5
D15A **Lincoln** 33.64 340 ⇓P P 01 35 34.1 -0.1
baz=33,SNR=5.1
H09A **Durkee** 33.65 332 ⇑P P 01 35 33.8 -0.5
baz=33
E13A **Victor** 33.70 338 ⇑P P 01 35 34.0 -0.6
baz=33,SNR=9.7
NCB **Newcomb** 33.70 30 *e*P P 01 35 34.5 -0.3
EGMT **Eagleton** 33.71 344 ⇑P P 01 35 34.4 -0.3
baz=33
EGMT **Eaton** 33.71 344 *e*P P 01 35 34.8 0.0
CHMT **Chamberlain Mo** 33.77 339 *e*P P 01 35 35.2 -0.1
G10A **Bishop Farm, J** 33.91 334 ⇑P P 01 35 35.8 -0.8
baz=33,SNR=6.9
MSO **Missoula** 33.94 338 *e*P P 01 35 36.2 -0.5
4.2nm,0.9s,mb4.4
F11A **Grangeville** 33.99 335 ⇓P P 01 35 36.1 -1.1
baz=33
H08A **Prairie City** 33.99 331 ⇓P P 01 35 36.7 -0.5
baz=33,SNR=5.6
D14A **Greough** 34.01 339 ⇓P P 01 35 36.5 -0.8
baz=33,SNR=9.2
C16A **Fuhringer Ranc** 34.07 342 ⇑P P 01 35 37.4 -0.5
baz=33,SNR=7.3
YBH **Yreka Blue Hor** 34.09 324 P P 01 35 36.2 -2.0
1.0nm,0.5s,mb4.0,baz=126,slow=8.7,SNR=3.8
SLMT **Seeley Lake** 34.14 339 *e*P P 01 35 38.0 -0.5
ULM **Lac du Bonnet** 34.15 1 P P 01 35 36.9 -1.6
7.9nm,0.7s,mb4.7,baz=184,slow=9.7,SNR=10
ULM LR LR 01 51 01.7
comp=Z,199nm,19.1s,MS3.9,baz=227,slow=39
G09A **Cove** 34.18 333 ⇑P P 01 35 38.3 -0.6
baz=34
E12A **Beaver Dam Sad** 34.19 336 ⇓P P 01 35 38.2 -0.7
baz=34
MDV **Middlebury** 34.23 31 *e*P P 01 35 38.8 -0.5
B17A **L&G Farms, Che** 34.24 343 ⇑P P 01 35 38.9 -0.4
baz=34,SNR=5.3
C15A **Salmond Ranch,** 34.32 341 ⇓P P 01 35 38.9 -1.1
baz=34
D13A **Huson** 34.35 338 ⇓P P 01 35 39.7 -0.7
baz=34,SNR=8.9
E11A **Bogner Ranch,** 34.39 336 ⇓P P 01 35 39.5 -1.2
baz=34,SNR=5.3
H07A **Lands Inn, Kim** 34.47 330 ⇓P P 01 35 40.7 -0.6
baz=34
F10A **Beach Ranch, E** 34.50 334 ⇑P P 01 35 41.7 +0.1
baz=34,SNR=11
SWMT **Swartz Lake** 34.55 339 *e*P P 01 35 41.4 -0.6
A18A **Metzger Ranch,** 34.56 345 ⇑P P 01 35 41.2 -0.9
baz=34
F09A **S2 Ranch, Elgi** 34.58 333 ⇑P P 01 35 42.1 -0.2
baz=34
B16A **M & M Farms, S** 34.61 342 ⇑P P 01 35 41.9 -0.6
baz=34
D12A **Red Ives Fores** 34.64 337 ⇑P P 01 35 42.0 -0.9
baz=34
C14A **Swan Lake** 34.68 340 ⇑P P 01 35 42.3 -0.9
baz=34
G08A **Pilot Rock** 34.72 332 ⇑P P 01 35 42.7 -0.8
baz=34
B15A **Bradely Ranch,** 34.78 341 ⇓P P 01 35 43.0 -1.0
baz=34
JTMT **Jette** 34.85 339 *e*P P 01 35 44.5 -0.2
YBMT **Yellow Bay** 34.85 339 *e*P P 01 35 44.6 -0.1
C13A **Hot Springs** 34.89 339 ⇑P P 01 35 43.8 -1.2
baz=34
A16A **West Butte Ran** 35.06 343 ⇓P P 01 35 45.9 -0.5
baz=34,SNR=10.0
C12B **Naegeli Ranch,** 35.24 338 ⇑P P 01 35 47.0 -1.0
baz=35
D10A **Wagner Farm, O** 35.39 335 ⇑P P 01 35 48.2 -1.0
baz=35
A15A **Johnson Ranch,** 35.42 342 ⇓P P 01 35 48.7 -0.9
baz=35
B13A **Whitefish** 35.45 339 ⇑P P 01 35 49.1 -0.7
baz=35
A14A **Double T Ranch** 35.63 341 ⇓P P 01 35 51.0 -0.3
baz=35,SNR=10
C11A **Tepee Creek (N** 35.64 337 ⇑P P 01 35 50.8 -0.6
baz=35
WALA **Waterton Lakes** 35.86 340 *e*P P 01 35 53.2 -0.1
A13A **Flathead Natio** 35.91 340 ⇓P P 01 35 53.5 -0.3
baz=35
B12A **Libby** 35.92 338 ⇓P P 01 35 54.0 +0.1
baz=35
A12A **Yaak River Ran** 36.34 339 ⇓P P 01 35 57.4 0.0
baz=36
C09A **Chrisman Ranch** 36.39 335 ⇑P P 01 35 58.1 +0.2
baz=36
E06A **Yakima** 36.59 331 ⇑P P 01 35 59.9 +0.3
baz=36
A11A **Hall Mountain,** 36.61 338 ⇓P P 01 35 59.1 -0.6
baz=36,SNR=6.7
C08A **Higginbotham F** 36.69 334 ⇑P P 01 36 00.4 0.0
baz=36
B09A **Rice** 36.84 336 ⇑P P 01 36 01.0 -0.7
baz=36,SNR=6.8
A08A **Turner Farm, O** 37.71 335 ⇓P P 01 36 08.4 -0.6
baz=37
FFC **Flin Flon** 38.85 355 *e*P P 01 36 17.9 -0.6
15nm,0.8s,mb4.8
A04A **Legoe Bay, Lum** 38.99 332 ⇓P P 01 36 19.0 -0.8
baz=38
EDM **Edmonton** 39.39 344 *e*P P 01 36 22.4 -0.7
FCC **Fort Churchill** 42.71 2 *e*P P 01 36 49.6 -0.7
0.4nm,0.7s
BBB **Bella Bella** 43.88 332 P P 01 36 59.2 -0.7
9.1nm,0.8s,mb4.5,baz=217,slow=5.1,SNR=2.5
BBB **Bella Bella** 43.88 332 P P 01 36 59.2 -0.7
SCHQ **Schefferville** 45.02 24 P P 01 37 07.8 -1.2
9.8nm,0.9s,mb4.6,baz=208,slow=8.1,SNR=4.8
SCHQ LR LR 02 00 46.2
comp=Z,247nm,18.4s,MS4.2,baz=98,slow=42
SIV **San Ignacio** 47.33 131 P P 01 37 25.4 -2.3
0.6nm,0.7s,mb3.6,baz=343,slow=11,SNR=3.3
YKA **Yellowknife Ar** 48.12 349 P P 01 37 31.4 -1.8
2.4nm,0.7s,mb4.3,baz=154,slow=7.3,SNR=29
DLBC **Dease Lake** 49.05 337 P P 01 37 40.4 0.0
4.3nm,0.9s,mb4.5,baz=153,slow=11,SNR=4.6
RKT **Rikitea** 54.07 225 *e*T 02 35 55.5
14nm,0.2s
CFAA **Coronel Fontan** 54.61 150 P P 01 38 20.6 -1.6
0.1nm,0.5s,baz=323,slow=15,SNR=2.6
CPUP **Villa Florida** 56.82 137 P P 01 38 36.4 -1.7
0.2nm,0.3s,mb3.6,baz=63,slow=2.3,SNR=2.4
CPUP **Villa Florida** 56.82 137 P P 01 38 36.4 -1.7
PLCA **Paso Flores** 61.42 158 P P 01 39 07.4 -2.3
3.8nm,1.1s,mb4.4,baz=287,slow=5.4,SNR=2.8
PPT **Papeete** 61.98 240 *e*LR LR 01 57 05.0
69nm,25.0s
ESDC **Sonseca Array** 81.92 51 P P 01 41 12.8 -0.5
0.4nm,0.6s,mb3.5,baz=307,slow=5.6,SNR=3.5
MDT **Midelt** 83.10 58 P P 01 41 19.5 -0.1
0.7nm,0.7s,mb3.8,baz=304,slow=3.6,SNR=2.7
NB2 **NORSAR Subarra** 84.46 28 P pP 01 41 33.6 -0.4
comp=Z,14nm,1.4s,baz=299,slow=5.6
NOA **NORSAR Array B** 84.46 28 P P 01 41 26.4 +0.4
comp=Z,0.9nm,0.8s,mb3.9,baz=54,slow=13,SNR=3.4
TORD **Torodi Ar. Bea** 94.17 75 LR LR 02 23 35.0
comp=Z,46nm,19.5s,MS4.0,baz=320,slow=35
BJI **Beijing** 116.43 332 PKP PKPdf 01 47 41.3 +3.8
HHC **Hu-ho-hao-te** 117.68 336 *e*PKP PKPdf 01 47 40.3 +0.4
HHC XPKP 01 47 54.7
HHC PKS 01 51 15.5
HHC SKS SKSdf 01 54 47.4 -3.2
HHC PP PP
comp=Z,95nm,4.9s
HHC LR LR
comp=N,185nm,14.3s,MS4.9
HHC LR LR
comp=E,72nm,14.3s,MS4.9
HHC LR LR
comp=Z,99nm,16.7s,MS4.5
WMQ **Urumqi** 120.32 356 *e*PKP PKPdf 01 47 48.9 +4.0
XAN **Xi'an** 124.61 334 PKP PKPdf 01 48 00.2 +6.8
XAN SKS SKSdf 01 55 07.3 +3.2
XAN SKKS SKKSac 01 56 39.9 +2.5
XAN SS SS 02 06 42.3 +12
XAN LR LR
comp=E,52nm,27.9s
XAN LR LR
comp=Z,59nm,25.6s,MS4.1
LZH **Lanzhou** 124.69 340 *e*PKP PKPdf 01 47 58.2 +4.7
LZH PP PP
comp=Z,56nm,4.3s
GYA **Guiyang** 132.11 332 *e*PDIF Pdif 01 45 01.8 +0.5
GYA PKP PKPdf 01 48 10.3 +2.4
GYA PP PP 01 50 31.6 +3.2
GYA PKS 01 51 45.5
GYA SKS SKSdf 01 55 14.9 -3.3
GYA PP PP
comp=Z,90nm,7.8s
GYA LR LR
comp=N,140nm,18.4s,MS4.8
GYA LR LR
comp=E,110nm,19.5s,MS4.8
GYA LR LR
comp=Z,120nm,18.9s,MS4.6
KMI **Kunming** 134.98 335 PKP PKPdf 01 48 15.6 +2.2
HYB **Hyderabad** 146.43 8 *i* PKP PKPab 01 48 39.0 +2.8
HYB **Hyderabad** 146.43 8 *e*P PKPab 01 48 39.0 +2.8

TAP 11 01:37:39.6,2117N×12248E,h140km±2km,ML3.6,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWK1	**Hengchun**	**1.73**	**297**	*e*P	Pn	01 38 13.1	+2.1
	baz=292						
TWK1				S	Sn	01 38 34.9	-0.1
	baz=292						
HEN	**Hengchun**	**1.82**	**297**	*e*P	Pn	01 38 11.9	0.0
	baz=298						
HEN				*e*S	Sn	01 38 37.5	+0.8
	baz=298						
ECL	**Taimali**	**2.00**	**315**	*e*P	Pn	01 38 15.1	+1.0
	baz=315						
ECL				*e*S	Sn	01 38 39.7	-0.9
	baz=315						
TWG	**Pinlang**	**2.09**	**322**	*e*P	Pn	01 38 16.5	+1.3
	baz=322						
TWG				*e*S	Sn	01 38 42.1	-0.5
	baz=322						
SCZT	**Fangliau**	**2.10**	**305**	P	Pn	01 38 15.9	+0.7
	baz=305						
SCZT				*e*S	Sn	01 38 40.9	-1.8
	baz=305						
TWP	**Hsiaoliuchiu**	**2.28**	**301**	*e*P	Pn	01 38 19.1	+1.6
	baz=291						
TWP				*e*S	Sn	01 38 48.1	+1.4
	baz=291						
SSD	**Sandimen**	**2.32**	**313**	*e*P	Pn	01 38 18.7	+0.8
	baz=313						
ELDTW	**Lidau**	**2.42**	**326**	*e*S	Sn	01 38 50.6	+0.9
	baz=322						
TWM1	**Shoushan**	**2.51**	**311**	*e*P	Pn	01 38 22.9	+2.5
	baz=311						
STYT	**Tauyuan**	**2.54**	**322**	*e*S	Sn	01 38 51.9	-0.5
	baz=325						
EHY	**Hungye**	**2.56**	**336**	*e*S	Sn	01 38 54.4	+1.6
	baz=337						
CHN1	**Nanshi**	**2.69**	**318**	P	Pn	01 38 23.7	+1.0
	baz=310						
CHN1				S	Sn	01 38 54.6	-1.3
	baz=310						
TWK	**Hsinying**	**2.78**	**319**	*e*S	Sn	01 38 56.7	-1.1
	baz=310						
ALS	**Alishan**	**2.79**	**327**	*e*P	Pn	01 38 25.9	+1.9
	baz=320						
TYC	**Yuchr**	**3.10**	**331**	*e*S	Sn	01 39 05.9	+0.7
	baz=321						

*NEIC **11** 01:52:43.3, 1470N×9457W, h20km, MD4.0(MEX), After MEX.*

MEX 11 01:52:43.3±0.9,1469N×9457W,h20km±31km,MD4.0,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.64**	**52**	*i* P	Pn	01 53 07.5	-3.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG				*i* S	Sn	01 53 27.3	-4.3
HUIG	Huatulco	1.83	306	*i* P	Pn	01 53 10.3	-3.3
HUIG				*i* S	Sn	01 53 33.0	-3.3
CMIG	Matias Romero	2.40	353	*i* P	Pn	01 53 20.4	-1.1
CMIG				*i* S	Sn	01 53 46.2	-4.2
CMIG	Matias Romero	2.40	353	*i* P	Pn	01 53 20.4	-1.1
CMIG				*i* S	Sn	01 53 45.7	-4.7
TGIG		2.50	34	*i* P	Pn	01 53 21.3	-1.5
TGIG				*i* S	Sn	01 53 49.7	-3.0
SCX	San Cristobal	2.75	42	*i* P	Pn	01 53 24.6	-1.7
SCX				*i* S	Sn	01 53 56.3	-2.7
SCX	San Cristobal	2.75	42	*i* P	Pn	01 53 26.0	-0.4
CCIG	Comitan	2.82	56	*i* P	Pn	01 53 26.2	-1.1
CCIG				*i* S	Sn	01 53 57.4	-3.3
VHO	Vista Hermosa	3.15	319	*e*P	Pn	01 53 31.6	-0.2
VHO				*i* S	Sn	01 54 05.6	-3.3
VHO	Vista Hermosa	3.15	319	*e*P	Pn	01 53 27.6	-4.2
VHO				*i* S	Sn	01 54 08.6	-0.3
PNIG	Pinotepa	3.83	297	*e*P	Pn	01 53 40.6	-0.5
PNIG				*i* S	Sn	01 54 21.2	-4.3
UTMO	Huajuapan	4.40	316	*e*P	Pn	01 53 47.8	-1.2
UTMO				*i* S	Sn	01 54 37.2	-2.6

THE 11 02:33:33.1, 3896N×2209E, h13^{km}±4^{km}, ML1.8/1, Error ellipse: s-maj=5.7km s-min=0.5km az=53.0, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.20	73	P	Pg	02 33 37.5	0.0
AGG				S	Sg	02 33 40.8	+0.3
THL	Klokotos Trika	0.60	355	P	Pg	02 33 44.4	-0.5
THL				S	Sg	02 33 53.7	+0.9
LKR	Lokris	0.78	113	P	Pg	02 33 48.0	-0.2
LKR				S	Sg	02 33 59.2	+0.8
CHG	Chiang Mai	68.37	83	PG	P	02 44 07.1	-27
CHG				SG		02 44 11.5	
CHRT	Chiangrai	68.41	81	PG	P	02 44 25.0	-10
CHRT				SG		02 44 39.5	

*SKO **11** 02:34:09.9, 3939N×2074E, h6^{km}*
*THE **11** 02:34:10.4, 3939N×2073E, h2^{km}±2^{km}, ML3.1/7, Error ellipse: s-maj=2.8km s-min=0.9km az=213.0*
*ISCJB **11** 02:34:10.6±0.5, 3943N±003×2064E±004, h17^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=4.4km az=174.4*
*CSEM **11** 02:34:10.1±0.1, 3942N×2069E, h10^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.7km az=72.0*
*ATH **11** 02:34:10.1, 3942N×2068E, h17^{km}±3^{km}, MD3.3/5*
*NEIC **11** 02:34:10.4, 3939N×2073E, h2^{km}, MD3.3(ATH), ML3.1(THE), After THE.*
ISC 11 02:34:10.4±0.6, 3941N±003×2066E±004, h11^{km}±4^{km}, n35, σ1^{s}06/60, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.29	296	P	Pg	02 34 16.1	-0.1
IGT				S	Sg	02 34 22.0	+1.9
JAN	Janina	0.29	30	*e*PB	Pg	02 34 15.7	-0.6
JAN				*e*SB	Sg	02 34 20.5	+0.3
JAN	Janina	0.29	30	*e*Pb	Pg	02 34 15.6	-0.7
JAN				*e*Sb	Sg	02 34 20.6	+0.4
KEK	Kerkira	0.74	295	*e*PN	Pn	02 34 24.4	-2.4
EVR	Evrytania	1.01	118	*e*PN	Pn	02 34 29.1	-1.5
THL	Klokotos Trika	1.06	81	P	Pb	02 34 28.7	-2.0
THL				S	Sg	02 34 44.1	-0.4
VLS	Valsamata	1.23	183	P	Pn	02 34 32.8	-0.7
VLS				S	Sb	02 34 50.1	+0.6
VLS	Valsamata	1.23	183	*e*Pn	Pn	02 34 34.1	+0.6
VLS				S	Sb	02 34 50.1	+0.6
VLS	Valsamata	1.23	183	P	Pn	02 34 32.8	-0.7
VLS				*e*Pn	Pn	02 34 34.1	+0.6
KFL	Anninata	1.30	176	P	Pn	02 34 34.5	0.0
AGG	Agios Georgios	1.35	106	P	Pn	02 34 34.0	-1.2
AGG				S	Sb	02 34 53.4	+0.4
FNA	Florina	1.48	21	P	Pn	02 34 36.9	-0.1
FNA				S	Sn	02 34 57.9	+1.6
RLS	Riolos of Patr	1.48	155	*e*PN	Pn	02 34 38.4	+1.4
LIT	Litokhoron	1.57	63	P	Pn	02 34 37.7	-0.5
LIT				S	Sn	02 34 59.2	+0.7
BIA	Bitola	1.69	17	P	Pn	02 34 40.1	+0.2
BIA				S	Sn	02 35 04.0	+2.5
BIA	Bitola	1.69	17	*e*Pn	Pn	02 34 41.0	+1.1
BIA				*e*Sn	Sn	02 35 03.3	+1.8
BIA	Bitola	1.69	17	*e*Pn	Pn	02 34 41.1	+1.2
BIA				*e*Sn	Sn	02 35 03.3	+1.8
XOR	Xorichti	1.96	90	P	Pn	02 34 44.2	+0.6
LKR	Lokris	1.97	112	P	Pn	02 34 44.2	+0.5
LKR				S	Sn	02 35 08.8	+0.4
KRUS	Krusevo	2.01	13	*e*Pn	Pn	02 34 45.5	+1.2
KRUS				*e*Sn	Sn	02 35 09.8	+0.4
GRG	Griva	2.04	40	P	Pn	02 34 45.5	+0.8
GRG				S	Sn	02 35 11.2	+1.0
LTK	Loutraki	2.27	127	P	Pn	02 34 48.5	+0.7
PLG	Polygyros	2.35	65	P	Pn	02 34 48.9	0.0
PLG				S	Sn	02 35 16.5	-1.2
PAIG	Paliouri	2.38	76	P	Pn	02 34 48.7	-0.7
VAY	Valandovo	2.40	37	*e*Pn	Pn	02 34 49.4	-0.3
VAY				*e*Sn	Sn	02 35 17.3	-1.8
VAY	Valandovo	2.40	37	*e*Pn	Pn	02 34 49.4	-0.3
VAY				*e*Sn	Sn	02 35 17.4	-1.7
KNT	Kendrikon	2.45	44	P	Pn	02 34 50.1	-0.2
SOH	Sokhos	2.50	55	P	Pn	02 34 52.1	+1.1
SOH				S	Sn	02 35 22.3	+0.8
STIP	Stip	2.56	26	*e*Pn	Pn	02 34 51.5	-0.4
STIP	Stip	2.56	26	P	Pn	02 34 52.3	+0.4
STIP				*e*Sn	Sn	02 35 21.2	-1.8
STIP	Stip	2.56	26	*e*Pn	Pn	02 34 51.6	-0.3
STIP				*e*Sn	Sn	02 35 21.2	-1.8
OUR	Ouranopolis	2.72	69	P	Pn	02 34 54.4	+0.4
STON	Ston	4.12	328	*e*Pn	Pn	02 35 11.4	-1.9
STON				Sn	Sn	02 35 57.0	-4.5
NVLJ	Novalja	6.72	322	*e*Pn	Pn	02 35 47.7	-1.3
NVLJ				Sn	Sn	02 37 00.2	-5.3
NVLJ	Novalja	6.72	322	*e*Pn	Pn	02 35 47.6	-1.4
NVLJ				Sn	Sn	02 37 00.2	-5.3

IGQ 11 03:07:41.5, 073N×8031W, h10^{km}±20^{km}, Mb4.2, Ms4.0, 6C, Error ellipse: s-maj=19.1km s-min=7.1km az=30.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PINO	Pino	1.92	117	⇑P	Pn	03 08 16.9	+2.6
PINO	Pino	1.92	117	⇑S	Sn	03 08 42.8	+4.3
TERV	Terraza Guagua	1.93	118	P	Pn	03 08 17.3	+2.9
YANA	Yana	1.94	116	P	Pn	03 08 17.0	+2.5
YANA	Yana	1.94	116	S	Sn	03 08 41.8	+3.0
GGP	Refugio Guagua	1.94	118	⇑P	Pn	03 08 17.1	+2.6
GGP	Refugio Guagua	1.94	118	⇑S	Sn	03 08 43.2	+4.3
COTA	Cotacachi	2.02	101	P	Pn	03 08 18.9	+3.4
COTA	Cotacachi	2.02	101	S	Sn	03 08 45.5	+4.7
QIL2	Quilotoa	2.12	139	P	Pn	03 08 19.5	+2.6
CAMI	Rancho Maria	2.29	128	P	Pn	03 08 22.7	+3.4
VC1	Cotopaxi 1	2.35	125	P	Pn	03 08 24.1	+4.0
TAMB	Tambo	2.41	126	P	Pn	03 08 25.1	+4.2
CAYA	Cayambe	2.41	106	⇑P	Pn	03 08 26.2	+5.2
CAYA	Cayambe	2.41	106	⇑S	Sn	03 08 56.2	+5.6
ANTI	Antisana	2.45	119	P	Pn	03 08 25.7	+4.1
PISA	Pisayambo	2.62	133	P	Pn	03 08 28.4	+4.5
CONE	Cono NE Rev Vo	2.79	107	P	Pn	03 08 33.6	+7.4

*ISCJB **11** 03:30:22.8±1.0, 1065N±009×6186W±004, h53^{km}±9^{km}, Error ellipse: s-maj=15.6km s-min=6.4km az=9.7*
*FUNV **11** 03:30:23.3, 1063N×6179W, h40^{km}, MW2.4*
*TRN **11** 03:30:24.8, 1065N×6175W, h46^{km}, MD2.7*
*NEIC **11** 03:30:24.8, 1065N×6175W, h46^{km}, MD2.7(TRN), After TRN.*
ISC 11 03:30:23.1±1.0, 1064N±009×6184W±004, h52^{km}±10^{km}, n8, σ0^{s}84/16, 2C, Trinidad

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TCE	Chacachacare	0.10	58	*e*P	Pn	03 30 32.2	+1.0
TCE				*e*S	Sn	03 30 37.3	+0.3
GUIV	Guiria	0.37	271	⇑*e*P	Pn	03 30 32.7	-0.4
GUIV				*e*S	Sn	03 30 39.8	-0.5
TRN	Trinidad (W)	0.43	89	⇑*e*P	Pn	03 30 33.5	-0.2
TRN				*e*S	Sn	03 30 41.3	-0.1
TPP	Pointe-a-Pierr	0.50	130	*e*P	Pn	03 30 35.7	+1.2
TPP				*e*S	Sn	03 30 42.5	-0.2
TBH	Brigand Hill	0.78	101	*e*P	Pn	03 30 38.4	+0.5
TBH				*e*S	Sn	03 30 46.0	-2.7
GUNV	Guanoco	1.18	246	*e*P	Pn	03 30 44.3	+1.0
GUNV				*e*S	Sn	03 30 58.6	+0.3
CRUV	Carupano	1.37	272	*e*P	Pn	03 30 44.8	-1.0
CRUV				*e*S	Sn	03 31 01.9	-1.0
ITEV	Isla Los Testi	1.45	299	*e*P	Pn	03 30 47.2	+0.2
ITEV				*e*S	Sn	03 31 05.3	+0.4

IGQ 11 04:10:27.9, 058N×7994W, h20^{km}±6^{km}, Mb4.0, Ms3.8, 3C-1D, Error ellipse: s-maj=7.0km s-min=2.9km az=66.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.87	198	P	Pb	04 10 43.4	-1.0
JAMA	Jama	0.87	198	S	Sb	04 10 55.6	+0.1
PINO	Pino	1.52	119	P	Pn	04 10 55.2	+1.2
PINO	Pino	1.52	119	S	Sn	04 11 18.5	+5.3
TERV	Terraza Guagua	1.53	119	P	Pn	04 10 55.8	+1.7
YANA	Yana	1.54	117	P	Pn	04 10 55.6	+1.5
YANA	Yana	1.54	117	S	Sn	04 11 18.8	+5.3
GGP	Refugio Guagua	1.54	119	⇑P	Pn	04 10 55.6	+1.4
COTA	Cotacachi	1.62	98	P	Pn	04 10 57.4	+2.1
COTA	Cotacachi	1.62	98	S	Sn	04 11 22.4	+6.8
QIL2	Quilotoa	1.77	144	P	Pn	04 10 58.4	+1.1
CHIS	Cerro-Chispas-	1.79	206	P	Pn	04 11 00.2	+2.5
CHIS	Cerro-Chispas-	1.79	206	S	Sn	04 11 26.8	+6.9
CAMI	Rancho Maria	1.90	131	P	Pn	04 11 03.0	+3.8
VC1	Cotopaxi 1	1.96	128	⇓P	Pn	04 11 04.5	+4.5
CAYA	Cayambe	2.02	104	⇑P	Pn	04 11 04.7	+3.9
CAYA	Cayambe	2.02	104	⇑S	Sn	04 11 33.0	+7.6
TAMB	Tambo	2.02	129	P	Pn	04 11 03.9	+3.1
ANTI	Antisana	2.05	120	P	Pn	04 11 05.3	+4.0
PISA	Pisayambo	2.25	136	P	Pn	04 11 07.7	+3.7
CONE	Cono NE Rev Vo	2.39	106	P	Pn	04 11 11.2	+5.4
ARRY	Arrayan	2.55	144	P	Pn	04 11 11.8	+3.7

IGQ 11 04:44:42.1, 062N×8006W, h20^{km}±7^{km}, Mb4.2, Ms4.0, 5C, Error ellipse: s-maj=9.6km s-min=4.3km az=47.4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.88	190	P	Pb	04 44 58.8	0.0
JAMA				S	Sb	04 45 11.1	+0.9
PINO	Pino	1.64	118	⇑P	Pn	04 45 11.8	+1.9
PINO	Pino	1.64	118	⇑S	Sn	04 45 37.7	+7.3
TERV	Terraza Guagua	1.65	118	P	Pn	04 45 11.9	+1.9
YANA	Yana	1.66	116	P	Pn	04 45 11.9	+1.8
YANA	Yana	1.66	116	S	Sn	04 45 35.9	+5.2
GGP	Refugio Guagua	1.66	118	P	Pn	04 45 11.9	+1.8
COTA	Cotacachi	1.74	99	P	Pn	04 45 13.9	+2.6
COTA	Cotacachi	1.74	99	S	Sn	04 45 38.5	+5.6
CHIS	Cerro-Chispas-	1.78	202	P	Pn	04 45 12.0	+0.1
QIL2	Quilotoa	1.86	142	P	Pn	04 45 14.3	+1.3
QIL2	Quilotoa	1.86	142	S	Sn	04 45 39.9	+3.9
CAMI	Rancho Maria	2.01	130	P	Pn	04 45 18.1	+3.1
VC1	Cotopaxi 1	2.07	127	P	Pn	04 45 19.2	+3.4
TAMB	Tambo	2.13	128	⇑P	Pn	04 45 20.2	+3.5
CAYA	Cayambe	2.14	105	⇑P	Pn	04 45 21.1	+4.4
CAYA	Cayambe	2.14	105	⇑S	Sn	04 45 50.6	+7.9
ANTI	Antisana	2.17	119	P	Pn	04 45 21.1	+3.9
PISA	Pisayambo	2.36	135	P	Pn	04 45 24.0	+4.2
CONE	Cono NE Rev Vo	2.51	106	P	Pn	04 45 27.7	+5.9
RUN5	Runtun	2.59	141	P	Pn	04 45 28.2	+5.2
ULBA	Ulba	2.63	141	P	Pn	04 45 25.2	+1.7
ARRY	Arrayan	2.65	143	P	Pn	04 45 27.5	+3.8
PATA	Patacocha	2.66	142	P	Pn	04 45 28.2	+4.3

*NIED **11** 05:05:00, 3030N×13140E, h29^{km}, Mw4.4 Best double couple: $M_0$4.87000×10^{15} NP1:ϕ_s48.00000°, δ58.00000°, λ127.00000°. NP2:ϕ_s172.00000°, δ47.00000°, λ45.00000°.*
*BJI **11** 05:05:47.9, 2980N×13201E, h35^{km}, mB4.5, mb4.1, Ms3.8, Msz3.8*
*JMA **11** 05:05:53.8±0.1, 3034N×13137E, h27^{km}±1^{km}, M4.3*
JMA Felt I J1.
*ISCJB **11** 05:05:54.3±0.7, 3036N±004×13133E±005, h44^{km}±5^{km}, mb4.2/20, MS3.7/5, Error ellipse: s-maj=9.2km s-min=5.7km az=40.6*
*NEIC **11** 05:05:55.7±0.9, 3045N×131.11E, h35^{km}±9^{km}, mb4.4/7, Error ellipse: s-maj=10.2km s-min=7.7km az=109.0*
NEIC Recorded [1 JMA] on Tanega-shima.
*IDC **11** 05:05:56.2±2.2, 3038N×13107E, h42^{km}±21^{km}, mb3.9/13, mb1 4.1/16, mb1mx4.0/23, mbtmp3.9/16, ML3.7/3, MS3.6/8, Ms1 3.6/8, ms1mx3.5/29, Error ellipse: s-maj=20.4km s-min=13.2km az=98.0*
ISC 11 05:05:55.0±0.9, 3035N±004×13126E±005, h31^{km}±6^{km}, n46, σ1^{s}01/52, mb4.2/20, MS3.7/5, 3C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.39	322	⇓P	Pb	05 06 03.2	-0.6
JTN				S	Sb	05 06 09.9	+0.1
JTSR	Tashiro 2	0.87	341	⇑P	Pn	05 06 10.5	-0.6
JTSR				S	Sn	05 06 22.6	0.0
JKC	Kuchinoerabu	0.92	277	⇓P	Pn	05 06 12.3	+0.4
JKC				*e*S	Sn	05 06 25.7	+1.6
JNAR	Kushima--Naru	1.18	1	P	Pn	05 06 15.1	-0.2
JNN	Nakanoshima	1.30	248	P	Pn	05 06 17.8	+0.8
JNN				*e*S	Sn	05 06 34.8	+1.5
JSU	Suzuyama	1.34	329	⇑P	Pn	05 06 17.5	-0.2
JSU				*e*S	Sn	05 06 36.0	+1.5
JTZ	Takazaki	1.56	355	P	Pn	05 06 20.6	0.0
JTZ				*e*S	Sn	05 06 39.9	+0.2
JSJ	Shimokoshiki	1.87	315	P	Pn	05 06 24.4	-0.5
JZO	Okuchi	1.87	343	⇑P	Pn	05 06 24.7	-0.2
JTSN	Tsuno	1.90	6	P	Pn	05 06 25.0	-0.4
JOW	Kunigami	4.38	218	P	Pn	05 07 00.6	+1.3
	6.0nm,0.3s,baz=97,slow=21,SNR=7.5						
JOW				S	Sn	05 07 47.6	-1.6
	4.7nm,0.3s,baz=207,slow=29,SNR=7.0						
JOW				LR	LR	05 08 01.1	
	comp=Z,146nm,20.4s,baz=329,slow=29						
JOW	Kunigami	4.38	218	P	Pn	05 07 00.6	+1.3
JOW				S	Sn	05 07 47.6	-1.6
KSRS	Korea Array	7.61	340	P	Pn	05 07 45.1	+1.4
	0.8nm,0.3s,baz=151,slow=14,SNR=7.2						
MAJO	Matsushiro	8.48	41	*e*Pn	Pn	05 07 55.7	0.0
MAT	Matsushiro	8.48	41	P	Pn	05 07 55.6	0.0
MAT				*e*S	Sn	05 09 32.0	+1.8
MJAR	Matsushiro Arr	8.48	41	P	Pn	05 07 56.1	+0.4
	2.9nm,0.3s,baz=226,slow=14,SNR=11						
CBIJ	Chichi jima	10.12	106	LR	LR	05 11 42.5	
	comp=Z,360nm,18.7s,baz=328,slow=34						
ASAJ	Asahikawa	16.42	30	LR	LR	05 17 09.1	
	comp=Z,226nm,18.1s,baz=130,slow=41						
XAN	Xi'an	19.25	287	P	Pn	05 10 21.3	+3.3
XAN				AP	pP	05 10 29.3	+4.2
XAN				AMB	AMB		
	comp=Z,3.0nm,0.5s						
XAN				AMB	AMB		
	comp=Z,67nm,5.4s						
XAN				LR	LR		
	comp=E,189nm,17.4s						
XAN				LR	LR		
	comp=Z,286nm,17.4s						
ULN	Ulaanbaatar	25.50	320	*e*P	P	05 11 19.3	-1.2
	comp=Z,6.5nm,0.9s,mb4.2						
SONM	Songino Array	25.85	319	P	P	05 11 22.6	-1.0
	comp=Z,1.1nm,0.3s,mb3.9,baz=140,slow=11,SNR=22						
SONM				LR	LR	05 23 29.6	
	comp=Z,223nm,18.8s,MS3.7,baz=142,slow=41						
PETK	Petropavlovsk-	29.80	33	LR	LR	05 26 57.7	
	comp=Z,97nm,18.0s,MS3.5,baz=56,slow=42						
ZALV	Zalesovo Beam	40.74	319	P	P	05 13 30.6	-2.3
	comp=Z,0.6nm,0.3s,mb3.7,baz=99,slow=7.8,SNR=6.1						
ZALV				LR	LR	05 31 41.6	
	comp=Z,117nm,18.3s,MS3.8,baz=128,slow=38						
MKAR	Makanchi Array	40.96	308	P	P	05 13 34.2	-0.5
	comp=Z,0.9nm,0.7s,mb3.5,baz=90,slow=11,SNR=10.0						
MKAR				LR	LR	05 31 39.2	
	comp=Z,96nm,18.4s,MS3.7,baz=281,slow=38						
MKAR	Makanchi Array	40.96	308	P	P	05 13 34.2	-0.5
KURK	Kurchatov	43.82	313	*e*P	P	05 13 57.0	-1.0
	comp=Z,1.3nm,0.4s,mb4.0						
BRVK	Borovoye	49.16	316	*e*P	P	05 14 39.4	-0.4
	comp=Z,4.6nm,0.4s,mb4.9						
WRAB	Tennant Creek	50.08	176	*e*P	P	05 14 47.2	+0.1
	comp=Z,1.9nm,0.7s,mb4.2						
WRA	Warramunga Arr	50.09	176	P	P	05 14 47.3	+0.2
	comp=Z,2.9nm,1.0s,mb4.3,baz=353,slow=8.1,SNR=7.3						
WRA	Warramunga Arr	50.09	176	P	P	05 14 47.3	+0.2
STKA	Stephens Creek	62.66	170	P	P	05 16 16.7	+0.2
	comp=Z,1.8nm,0.5s,mb4.5,baz=319,slow=6.9,SNR=5.9						
STKA	Stephens Creek	62.66	170	*e*P	P	05 16 17.5	+1.0
	comp=Z,0.4nm,0.5s,mb3.8						
ARCES	ARCESS Array B	67.17	338	P	P	05 16 43.9	-1.5
	comp=Z,2.8nm,0.9s,mb4.3,baz=37,slow=6.3,SNR=5.4						
ARCES	ARCESS Array B	67.17	338	P	P	05 16 43.9	-1.6
JOF	Joensuu	67.75	331	*e*p	P	05 16 47.7	-1.6
	comp=Z,4.7nm,0.5s,mb4.8						
KAF	Kangasniemi	70.20	331	*e*p	P	05 17 03.1	-1.4
	comp=Z,4.7nm,0.8s,mb4.5,baz=59,slow=5.7						
YKA	Yellowknife Ar	73.67	26	P	P	05 17 25.5	+0.2
	comp=Z,0.8nm,0.8s,mb3.7,baz=308,slow=5.3,SNR=6.9						
AKASG	Malin Array Be	74.14	320	P	P	05 17 27.4	-0.8
	comp=Z,1.7nm,0.4s,mb4.3,baz=56,slow=6.0,SNR=10						
BRTR	Keskin Array B	76.61	308	P	P	05 17 42.8	+0.1
	comp=Z,5.7nm,0.8s,mb4.5,baz=103,slow=4.6,SNR=27						
NB2	NORSAR Subarra	76.79	334	P	P	05 17 42.6	-0.7
	comp=Z,1.6nm,0.7s,mb4.1,baz=50,slow=5.9						
NOA	NORSAR Array B	76.79	334	P	P	05 17 41.6	-1.7
	comp=Z,1.7nm,0.8s,mb4.0,baz=50,slow=5.5,SNR=5.2						
NOA				LR	LR	05 58 37.9	
	comp=Z,50nm,18.9s,MS3.9,baz=300,slow=41						
CLL	Collm	82.27	326	*i* P	P	05 18 13.7	+0.4
	comp=Z,9.0nm,1.0s,mb4.7						
GERES	GERESS Array B	83.50	324	P	P	05 18 18.8	-0.9
	comp=Z,0.8nm,0.7s,mb3.9,baz=46,slow=5.8,SNR=6.8						
NVAR	Mina Array Bea	85.75	48	P	P	05 18 32.8	+1.5
	comp=Z,1.2nm,0.7s,mb4.3,baz=276,slow=5.3,SNR=6.2						
PDAR	Pinedale Array	88.30	40	P	P	05 18 44.4	+0.8
	comp=Z,0.9nm,0.8s,mb4.0,baz=342,slow=1.9,SNR=7.5						
PV10	Paradox Valley	91.48	43	*e*P	P	05 19 00.4	+1.9

*ISCJB **11** 05:11:13.5±1.3, 1179N±004×6020W±006, h8^{km}±9^{km}, mb3.4/4, Error ellipse: s-maj=10.3km s-min=4.7km az=22.6*
*IDC **11** 05:11:13.5±1.6, 1196N×60.18W, h0^{km}, mb3.4/4, mb1 3.8/5, mb1mx3.5/21, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=55.2km s-min=26.1km az=5.0*
*NEIC **11** 05:11:13.6, 1182N×6026W, h5^{km}, MD3.6(TRN), After TRN.*
*TRN **11** 05:11:14.7, 1177N×6031W, h6^{km}, MD3.6*
ISC 11 05:11:14.5±1.3, 1179N±003×6027W±006, h3^{km}±7^{km}, n23, σ0^{s}96/35, mb3.4/4, 2C, Windward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPR	Prospect	0.78	219	*e*P	Pg	05 11 28.7	-0.8
TPR				*e*S	Sg	05 11 40.3	+0.7
GRGR	Grenville	1.40	284	*e*Pn	Pn	05 11 39.9	-0.9
GRGR				*e*Sn	Sn	05 11 58.1	-1.7
GRW	Mount Saint Ca	1.41	285	*e*P	Pn	05 11 40.4	-0.6
GRW				*e*S	Sg	05 11 59.5	-0.3
TBH	Brigand Hill	1.52	211	⇑*e*P	Pn	05 11 42.1	-0.4
TBH				*e*S	Sn	05 11 60.0	-2.8
TBH	Brigand Hill	1.52	211	⇑*e*P	Pn	05 11 42.1	-0.4
TBH				*e*S	Sn	05 12 06.2	+3.4
TRN	Trinidad (W)	1.59	224	*e*P	Pn	05 11 42.9	-0.6
TRN				*e*S	Sn	05 12 05.5	+0.9
TRN	Trinidad (W)	1.59	224	*e*P	Pn	05 11 42.9	-0.6
TRN				*e*S	Sn	05 12 05.5	+1.0
TCE	Chacachacare	1.82	233	*e*P	Pn	05 11 46.2	-0.4
TCE				*e*S	Sn	05 12 10.9	+0.7
TCE	Chacachacare	1.82	233	*e*P	Pn	05 11 46.2	-0.4
TCE				*e*S	Sn	05 12 11.1	+0.9
TPP	Pointe-a-Pierr	1.87	218	*e*P	Pn	05 11 47.4	0.0
TPP				*e*S	Sn	05 12 12.4	+0.9
TPP	Pointe-a-Pierr	1.87	218	*e*P	Pn	05 11 47.4	0.0
TPP				*e*S	Sn	05 12 12.7	+1.2
MVM	Montagne Vaucl	2.81	348	*e*P	Pn	05 12 00.2	-0.1
MVM				*e*S	Sn	05 12 35.0	+0.2
BIM	Bigot	2.82	344	*e*P	Pn	05 12 00.5	0.0
FDF	Fort de France	3.05	344	*e*P	Pn	05 12 03.8	+0.2
MGG	Marie-Galante	4.22	346	*e*P	Pn	05 12 20.2	+0.4
TBG	Guadaloupe-3	4.25	342	*e*P	Pn	05 12 21.7	+1.6
HMG	Houelmont	4.39	342	*e*P	Pn	05 12 23.6	+1.6
LZG	Guadaloupe-1	4.56	342	*e*P	Pn	05 12 25.7	+1.2
PCRV	Puerto La Cruz	4.58	250	Pn	Pn	05 12 24.9	+0.3
	3.0nm,0.3s,baz=188,slow=2.6,SNR=11						
TXAR	Lajitas Array	43.93	300	P	P	05 19 23.7	+0.8
	0.1nm,0.6s,mb2.8,baz=100,slow=10,SNR=3.0						
PDAR	Pinedale Array	52.58	315	P	P	05 20 28.3	-1.2
	0.7nm,0.6s,mb3.8,baz=115,slow=8.9,SNR=5.7						
TORD	Torodi Ar. Bea	60.38	82	P	P	05 21 24.4	-1.2
	0.6nm,0.9s,mb3.6,baz=286,slow=5.9,SNR=12						
YKA	Yellowknife Ar	63.58	335	P	P	05 21 44.7	-1.5
	0.4nm,0.7s,mb3.6,baz=108,slow=7.3,SNR=3.8						

IGQ 11 05:15:46.3, 040N×7986W, h20^{km}±2^{km}, Mb4.5, Ms4.3, 5C-1D, Error ellipse: s-maj=8.4km s-min=1.9km az=59.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.74	208	P	Pb	05 15 58.9	-1.6
JAMA				S	Sb	05 16 10.2	+0.1
PINO	Pino	1.37	114	⇓P	Pn	05 16 11.8	+1.5
TERV	Terraza Guagua	1.38	114	P	Pn	05 16 12.1	+1.7
GGP	Refugio Guagua	1.39	114	P	Pn	05 16 11.9	+1.4
YANA	Yana	1.39	112	P	Pn	05 16 12.0	+1.5
COTA	Cotacachi	1.53	92	P	Pn	05 16 14.0	+1.5
QIL2	Quilotoa	1.57	143	P	Pn	05 16 14.5	+1.4
CHIS	Cerro-Chispas-	1.67	211	P	Pn	05 16 13.3	-1.2
CAMI	Rancho Maria	1.73	128	P	Pn	05 16 18.1	+3.0
VC1	Cotopaxi 1	1.79	125	⇑P	Pn	05 16 19.5	+3.4
TAMB	Tambo	1.84	126	⇑P	Pn	05 16 20.5	+3.6
ANTI	Antisana	1.90	116	P	Pn	05 16 21.3	+3.7
CAYA	Cayambe	1.90	100	⇑P	Pn	05 16 21.4	+3.8
PISA	Pisayambo	2.06	134	⇑P	Pn	05 16 24.2	+4.3
PISA	Pisayambo	2.06	134	⇑S	Sn	05 16 54.9	+10
IGUA	Igualata	2.24	147	P	Pn	05 16 25.0	+2.8
CONE	Cono NE Rev Vo	2.27	102	P	Pn	05 16 27.7	+5.1
JUI6	Juive	2.28	142	P	Pn	05 16 27.4	+4.5
LAV3	Lava3-Reventad	2.28	102	P	Pn	05 16 27.7	+4.8
BIL2	Estacion Bilba	2.29	144	P	Pn	05 16 27.3	+4.4
RUN5	Runtun	2.30	141	P	Pn	05 16 27.5	+4.4
ULBA	Ulba	2.34	142	P	Pn	05 16 27.7	+4.1
ARRY	Arrayan	2.35	143	P	Pn	05 16 27.5	+3.6
PATA	Patacocha	2.37	143	P	Pn	05 16 28.1	+4.0
PATA	Patacocha	2.37	143	S	Sn	05 17 02.0	+10

MAN 11 05:29:01, 1214N×12520E, h10^{km}, mb4.0, ML2.7, MS2.4, 1D, Samar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.58	157	*e*P	Pg	05 29 13.7	+1.3
BESP				*e*S	Sg	05 29 26.0	+6.0
CNP	Catarman	0.64	305	*e*P	Pg	05 29 14.3	+0.9
CNP				*e*S	Sg	05 29 27.6	+5.7
PLP	Palo	0.99	193	⇓*e*P	Pg	05 29 20.7	+0.6
PLP				*e*S	Sg	05 29 37.0	+3.9
PVCP	Virac	1.77	325	*e*P	Pn	05 29 32.9	+1.1

*NEIC **11** 05:31:11.0, 1696N×100.18W, h10^{km}, MD3.6(MEX), After MEX.*
MEX 11 05:31:10.5±0.5, 1693N×10020W, h10^{km}±3^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.13	330	*i* P	Pg	05 31 12.8	-0.7
CAIG				*i* S	Sg	05 31 15.4	-0.3
ACX	Acapulco	0.28	104	*i* P	Pg	05 31 15.6	-0.5
ACX				*i* S	Sg	05 31 20.1	+0.2
MEIG	Mezcala	1.13	29	*e*P	Pb	05 31 29.0	-3.2
MEIG				*i* S	Sb	05 31 42.9	-4.1
ZIIG	Zihuatanejo	1.38	299	*e*P	Pn	05 31 32.7	-3.2
ZIIG				*i* S	Sb	05 31 49.3	-4.9
ZIIG	Zihuatanejo	1.38	299	*e*P	Pn	05 31 33.9	-2.0

ZIIG				*i* S	Sb	05 31 50.9	-3.3
PNIG	**Pinotepa**	**2.06**	**105**	*i* P	Pn	05 31 41.5	-3.7
PNIG				*i* S	Sn	05 32 06.2	-4.7
PNIG	**Pinotepa**	**2.06**	**105**	*i* P	Pn	05 31 43.6	-1.6
PNIG				*i* S	Sn	05 32 08.8	-2.2
MZVM		**2.42**	**22**	*e*P	Pn	05 31 48.9	-1.4
MZVM				*i* S	Sn	05 32 17.7	-2.4
UTMO	**Huajuapan**	**2.46**	**68**	*i* P	Pn	05 31 48.5	-2.2
UTMO				*i* S	Sn	05 32 17.6	-3.2
PPM	**Popocatepetl**	**2.60**	**35**	*e*P	Pn	05 31 50.3	-2.3
PPM				*i* S	Sn	05 32 19.0	-5.3
IIO	**Organos**	**2.99**	**28**	*e*P	Pn	05 31 55.5	-2.6
IIO				*i* S	Sn	05 32 30.4	-3.6
IIO	**Organos**	**2.99**	**28**	*e*P	Pn	05 31 55.5	-2.6
IIO				*i* S	Sn	05 32 26.3	-7.7

IGQ 11 05:36:08.2, 052N×7994W, h20km±4km, Mb4.2, Ms4.0, 3C, Error ellipse: s-maj=6.6km s-min=1.8km az=62.7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.82**	**199**	P	Pb	05 36 22.7	-1.1
JAMA				S	Sb	05 36 35.2	+0.8
PINO	**Pino**	**1.49**	**117**	⇑P	Pn	05 36 35.9	+2.0
TERV	**Terraza Guagua**	**1.50**	**117**	P	Pn	05 36 36.3	+2.3
YANA	**Yana**	**1.50**	**115**	P	Pn	05 36 36.1	+2.1
YANA	**Yana**	**1.50**	**115**	S	Sn	05 37 01.2	+8.1
GGP	**Refugio Guagua**	**1.51**	**117**	P	Pn	05 36 36.0	+1.9
COTA	**Cotacachi**	**1.61**	**97**	P	Pn	05 36 38.0	+2.5
QIL2	**Quilotoa**	**1.71**	**144**	P	Pn	05 36 38.6	+1.6
CHIS	**Cerro-Chispas-**	**1.75**	**207**	P	Pn	05 36 39.4	+2.0
CAMI	**Rancho Maria**	**1.86**	**130**	P	Pn	05 36 42.2	+3.3
VC1	**Cotopaxi 1**	**1.92**	**127**	P	Pn	05 36 43.3	+3.5
TAMB	**Tambo**	**1.98**	**128**	P	Pn	05 36 44.3	+3.7
CAYA	**Cayambe**	**2.00**	**103**	⇑P	Pn	05 36 45.2	+4.3
CAYA	**Cayambe**	**2.00**	**103**	⇑S	Sn	05 37 15.6	+10
ANTI	**Antisana**	**2.02**	**118**	P	Pn	05 36 45.0	+3.9
PISA	**Pisayambo**	**2.21**	**135**	P	Pn	05 36 48.0	+4.3
CONE	**Cono NE Rev Vo**	**2.37**	**104**	P	Pn	05 36 51.7	+5.8
LAV3	**Lava3-Reventad**	**2.38**	**105**	P	Pn	05 36 49.5	+3.3

MAN 11 05:46:24, 1257N×12432E, h36km, mb4.0, ML2.8, MS2.5, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.34**	**100**	*e*P	Pn	05 46 33.9	+1.5
CNP				*e*S	Sn	05 46 46.4	+8.2
PVCP	**Virac**	**1.03**	**351**	*e*P	Pn	05 46 42.3	+0.2
BESP	**Borongan**	**1.45**	**131**	*e*P	Pn	05 46 48.4	+0.6
BESP				*e*S	Sn	05 47 02.0	-3.6
PLP	**Palo**	**1.54**	**155**	⇓*e*P	Pn	05 46 49.8	+0.9
PLP				*e*S	Sn	05 47 08.2	+0.6

*IDC **11** 05:54:46.4±3.3, 1290N×8937W, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.9/21, mbtmp3.9/6, ML3.0/1, MS3.7/2, Ms1 3.7/2, ms1mx2.9/27, Error ellipse: s-maj=65.0km s-min=34.0km az=8.0*
*CASC **11** 05:54:47.3±1.2, 1263N×9008W, h18km±7km, MD4.0, ML3.7, mb3.7(NEIC)*
*ISCJB **11** 05:54:56.7±0.9, 134N±02×8918W±009, h67km±14km, mb3.9/5, Error ellipse: s-maj=29.1km s-min=7.0km az=25.3*
*NEIC **11** 05:55:00.0±2.0, 1327N×8940W, h93km±11km, mb3.7/1, Error ellipse: s-maj=38.1km s-min=12.5km az=184.0*
ISC 11 05:54:58.2±0.9, **134N**±02×**8918W**±009, **h67**km±13km, **n32**, σ**1^{s}44**/20, **mb3.9**/5, **6C-2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.34**	**351**	*e*P	x	05 55 10.6	
SNET				*e*P	x	05 55 11.0	
BOQS	**Boqueron**	**0.39**	**345**	⇓*e*P	x	05 55 11.0	
BOQS				*e*S	x	05 55 31.4	
BOQS				AML	x	05 55 35.4	
	comp=Z,2μm,0.7s						
LFU	**La Fuente**	**0.40**	**9**	*e*P	x	05 55 12.8	
LBRS	**Las Brisas**	**0.40**	**19**	⇓*e*P	x	05 55 13.2	
SNVI	**San Vicente**	**0.42**	**52**	*e*P	x	05 55 14.2	
SNVI				*e*S	x	05 55 34.4	
SBLS	**San Blas**	**0.65**	**318**	⇑*e*P	x	05 55 10.3	
SBLS				AML	x	05 55 34.6	
	comp=Z,1μm,0.5s						
SNJE	**San Jose**	**0.66**	**321**	⇑*e*P	x	05 55 10.8	
SNJE				*e*S	x	05 55 28.6	
RTR	**El Retiro**	**0.71**	**320**	⇑*e*P	x	05 55 11.2	
RTR				*e*S	x	05 55 29.4	
VSM	**San Miguel**	**0.88**	**85**	⇑*e*P	x	05 55 19.5	
RBDL	**Robledal**	**0.90**	**327**	*e*P	x	05 55 14.2	
BLLM	**Bellamira**	**0.92**	**84**	*e*P	x	05 55 19.8	
CAHU	**Cacacuatique**	**1.03**	**66**	⇑*e*P	x	05 55 22.6	
MTO2	**Montecristo 2**	**1.05**	**350**	*e*P	x	05 55 19.4	
CNCH	**Conchagua**	**1.31**	**93**	⇑*e*P	x	05 55 24.9	
TGUH	**Tegucigalpa,Un**	**1.98**	**69**	*e*Pn	**Pn**	**05 55 35.0**	**+5.5**
MIRN	**Miramar**	**2.57**	**110**	*e*P	**Pn**	**05 55 37.9**	**+0.3**
COPN	**Copaltepe**	**2.78**	**115**	*e*P	**Pn**	**05 55 39.6**	**-0.8**
CCIG	**Comitan**	**4.08**	**316**	*i* P	**Pn**	**05 55 58.0**	**-0.1**
CCIG				*i* S	**Sn**	**05 56 43.2**	**-1.5**
CMIG	**Matias Romero**	**6.64**	**305**	Pn	**Pn**	**05 56 27.4**	**-5.8**
	comp=Z,0.3nm,0.3s,baz=126,slow=11,SNR=8.9						
CMIG				Sn	**Sn**	**05 57 45.7**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=2.7						
HUIG	**Huatulco**	**7.13**	**291**	*e*P	**Pn**	**05 56 39.7**	**-0.1**
HUIG				*i* S	**Sn**	**05 58 01.4**	**+2.0**
VHO	**Vista Hermosa**	**8.18**	**298**	*e*P	**Pn**	**05 56 55.1**	**+0.9**
VHO				*i* S	**Sn**	**05 58 29.2**	**+4.1**
PNIG	**Pinotepa**	**9.16**	**290**	*e*P	Px	05 56 53.3	
PPM	**Popocatepetl**	**10.70**	**303**	*e*P	**Pn**	**05 57 22.0**	**-6.7**
PPM				*i* S	**Sn**	**05 59 29.2**	**+2.3**
TXAR	**Lajitas Array**	**20.82**	**322**	P	**P**	**05 59 32.1**	**-2.1**
	comp=Z,1.4nm,0.6s,baz=144,slow=11,SNR=19						
MIAR	**Mount Ida**	**21.47**	**350**	*e*P	**P**	**05 59 43.1**	**+1.9**
	comp=Z,2.4nm,0.6s,mb3.7						
TKL	**Tuckaleechee C**	**22.74**	**11**	P	**P**	**05 59 56.6**	**+2.0**
	comp=Z,2.1nm,0.7s,mb3.6,baz=172,slow=10,SNR=5.6						
TKL				LR	LR	06 09 33.0	
	comp=Z,206nm,18.1s,baz=302,slow=38						
PCRV	**Puerto La Cruz**	**24.23**	**95**	LR	LR	06 09 15.1	
	comp=Z,124nm,20.7s,baz=69,slow=36						
NVAR	**Mina Array Bea**	**35.92**	**319**	P	**P**	**06 01 51.6**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.0,baz=127,slow=8.3,SNR=6.1						
SCHQ	**Schefferville**	**44.92**	**18**	P	**P**	**06 03 06.5**	**+0.4**
	comp=Z,3.8nm,0.5s,mb4.3,baz=216,slow=8.7,SNR=9.1						
YKA	**Yellowknife Ar**	**52.31**	**345**	P	**P**	**06 04 00.7**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.9,baz=145,slow=7.5,SNR=12						
YKA	**Yellowknife Ar**	**52.31**	**345**	P	**P**	**06 04 00.7**	**-2.0**
CMAR	**Chiang Mai Arr**	**147.39**	**346**	PKPbc	PKPbc	06 14 34.0	-1.2
	comp=Z,1.2nm,0.4s,baz=328,slow=3.4,SNR=4.4						

DJA 11 06:13:19, 153S×9942E, h20km, MLv3.6/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.21**	**59**	P	Pn	06 13 39.3	-1.5
PDSI				S	Sb	06 13 56.4	0.0
PPI	**Padang Panjang**	**1.45**	**43**	P	Pn	06 13 44.1	+0.1
PPI				S	Sn	06 14 02.1	-0.3

IGQ 11 06:21:21.8, 062N×8005W, h12km±7km, Mb4.0, Ms3.8, 1C-2D, Error ellipse: s-maj=9.8km s-min=4.4km az=116.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINO	**Pino**	**1.63**	**118**	P	Pn	06 21 51.5	+1.2
PINO	**Pino**	**1.63**	**118**	S	Sn	06 22 15.0	+3.7
TERV	**Terraza Guagua**	**1.64**	**119**	P	Pn	06 21 52.8	+2.3
YANA	**Yana**	**1.65**	**116**	P	Pn	06 21 52.1	+1.6
YANA	**Yana**	**1.65**	**116**	S	Sn	06 22 16.1	+4.5
GGP	**Refugio Guagua**	**1.65**	**119**	P	Pn	06 21 51.9	+1.2
COTA	**Cotacachi**	**1.73**	**99**	P	Pn	06 21 53.9	+2.2
COTA	**Cotacachi**	**1.73**	**99**	S	Sn	06 22 21.2	+7.5
CHIS	**Cerro-Chispas-**	**1.79**	**202**	P	Pn	06 21 56.6	+4.0
QIL2	**Quilotoa**	**1.86**	**143**	⇓P	Pn	06 21 54.8	+1.3
CAMI	**Rancho Maria**	**2.01**	**130**	⇓P	Pn	06 21 58.9	+3.4
VC1	**Cotopaxi 1**	**2.07**	**127**	P	Pn	06 21 59.1	+2.8
TAMB	**Tambo**	**2.13**	**128**	P	Pn	06 22 00.1	+3.0
CAYA	**Cayambe**	**2.13**	**105**	P	Pn	06 22 01.2	+4.0
CAYA	**Cayambe**	**2.13**	**105**	S	Sn	06 22 32.8	+9.3
ANTI	**Antisana**	**2.16**	**119**	⇑P	Pn	06 22 01.8	+4.1
ARRY	**Arrayan**	**2.65**	**143**	P	Pn	06 22 05.5	+1.2

GUC 11 06:32:53.5±1.0, **2311S**×**6997W, h45**km±9km, **MD3.9, ML2.8, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.35**	**218**	*e*P	Pn	06 33 04.5	+1.8
CEN1				*i* S	Sn	06 33 13.0	+3.8
CEN1				AML	AML	06 33 16.2	
	comp=N,341nm,0.4s						
MECH	**Mejillones**	**0.44**	**271**	⇑*e*P	Pn	06 33 03.4	-0.3
MECH				*i* S	Sn	06 33 11.6	+0.5
MECH				AML	AML	06 33 16.5	
	comp=E,1μm,0.5s						
ANCH	**Antofagasta**	**0.70**	**215**	*e*P	Pn	06 33 07.2	+0.1
MACH	**Maria Elena**	**0.93**	**12**	⇑*e*P	Pn	06 33 11.2	+1.0
MACH				*i* S	Sn	06 33 24.2	+1.8
PB04	**Plate Boundary**	**0.95**	**28**	⇑*e*P	Pn	06 33 09.2	-1.2
PB04				*i* S	Sn	06 33 21.0	-1.8
PB04				AML	AML	06 33 24.1	
	comp=E,1μm,0.4s						
TOCH	**Tocopilla**	**1.03**	**348**	⇓*i*P	Pn	06 33 12.4	+0.9
TOCH				*i* S	Sn	06 33 26.6	+1.7
TOCH				AML	AML	06 33 27.5	
	comp=E,667nm,0.3s						
LVC	**Limon Verde**	**1.09**	**63**	*e*P	Pn	06 33 13.7	+1.3
LVC				*i* S	Sn	06 33 29.1	+2.8
LVC				AML	AML	06 33 30.0	
	comp=E,326nm,0.2s						
SPCH	**San Pedro de A**	**1.64**	**83**	*e*P	Pn	06 33 23.5	+3.7

*CSEM **11** 06:35:24.3±0.3, 3858N×3969E, h25km, MD2.9, Error ellipse: s-maj=6.6km s-min=4.8km az=124.0*
*DDA **11** 06:35:28.4, 38.11N×39.40E, h7km±3km, Md3.1*
ISK 11 06:35:23.7, 3857N×3973E, h21km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.39**	**240**	*e*PG	Pb	06 35 32.9	+1.0
SVRC				*e*SG	Sb	06 35 38.1	+0.7
PTK	**Pertek**	**0.41**	**320**	*e*PG	Pb	06 35 33.0	+0.6
PTK				*e*SG	Sb	06 35 39.3	+1.1
EZM	**Erzurum**	**1.84**	**43**	*e*PN	Pn	06 35 54.5	+0.5
GAZ	**Gaziantep**	**2.44**	**236**	*e*PN	Pn	06 36 02.9	+0.7
KMRS	**Kahramanmaras**	**2.48**	**245**	*e*PN	Pn	06 36 04.6	+1.8

*ISCJB **11** 06:54:19.5±1.2, 071N±004×8019W±005, h18km±9km, mb4.0/13, MS3.2/2, Error ellipse: s-maj=8.2km s-min=6.0km az=157.4*
*IGQ **11** 06:54:20.1, 062N×7999W, h20km±5km, Mb4.6, Ms4.4, Error ellipse: s-maj=10.1km s-min=2.9km az=55.4*
*NEIC **11** 06:54:25.8±1.5, 060N×7987W, h58km±14km, mb4.4/4, Error ellipse: s-maj=18.4km s-min=10.0km az=77.0*
*IDC **11** 06:54:27.8±2.4, 068N×7982W, h75km±23km, mb3.7/11, mb1 3.9/14, mb1mx3.8/23, mbtmp3.7/14, MS3.4/4, Ms1 3.4/4, ms1mx3.1/20, Error ellipse: s-maj=23.3km s-min=12.3km az=69.0*
ISC 11 06:54:19.2±1.7, **067N**±004×**8017W**±005, **h4**km±11km, **n54**, σ**1^{s}36**/55, **mb4.0**/13, **MS3.2**/2, **3C-4D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.93**	**182**	P	**Pb**	**06 54 36.4**	**-1.5**
JAMA	**Jama**	**0.93**	**182**	S	**Sb**	**06 54 49.4**	**-1.1**
PINO	**Pino**	**1.76**	**118**	⇓P	**Pn**	**06 54 48.9**	**-1.6**
OTAV	**Otavalo**	**1.77**	**104**	*e*Pn	**Pn**	**06 54 49.0**	**-1.6**
OTAV				*e*Sn	**Sn**	**06 55 11.5**	**-2.0**
TERV	**Terraza Guagua**	**1.77**	**118**	P	**Pn**	**06 54 49.1**	**-1.5**
YANA	**Yana**	**1.78**	**116**	P	**Pn**	**06 54 49.2**	**-1.5**
GGP	**Refugio Guagua**	**1.78**	**118**	⇓P	**Pn**	**06 54 49.1**	**-1.6**
CHIS	**Cerro-Chispas-**	**1.80**	**198**	P	**Pn**	**06 54 50.8**	**-0.2**
COTA	**Cotacachi**	**1.86**	**100**	⇑P	**Pn**	**06 54 50.9**	**-0.9**
QIL2	**Quilotoa**	**1.98**	**141**	P	**Pn**	**06 54 51.7**	**-1.7**
CAMI	**Rancho Maria**	**2.13**	**129**	P	**Pn**	**06 54 55.3**	**-0.3**
VC1	**Cotopaxi 1**	**2.19**	**127**	P	**Pn**	**06 54 56.5**	**+0.1**
TAMB	**Tambo**	**2.25**	**127**	P	**Pn**	**06 54 57.4**	**+0.2**
CAYA	**Cayambe**	**2.26**	**105**	⇓P	**Pn**	**06 54 58.0**	**+0.7**
ANTI	**Antisana**	**2.29**	**119**	P	**Pn**	**06 54 57.8**	**0.0**
PISA	**Pisayambo**	**2.48**	**134**	P	**Pn**	**06 55 01.2**	**+0.9**
CONE	**Cono NE Rev Vo**	**2.63**	**106**	P	**Pn**	**06 55 04.9**	**+2.5**
CONE	**Cono NE Rev Vo**	**2.63**	**106**	S	**Sn**	**06 55 39.0**	**+4.2**
IGUA	**Igualata**	**2.64**	**145**	P	**Pn**	**06 55 02.1**	**-0.4**
LAV3	**Lava3-Reventad**	**2.65**	**107**	P	**Pn**	**06 55 05.0**	**+2.3**
JUI6	**Juive**	**2.69**	**141**	⇓P	**Pn**	**06 55 04.3**	**+1.1**
BIL2	**Estacion Bilba**	**2.69**	**142**	P	**Pn**	**06 55 03.0**	**-0.3**
BIL2	**Estacion Bilba**	**2.69**	**142**	S	**Sn**	**06 55 37.2**	**+1.0**
RUN5	**Runtun**	**2.71**	**140**	P	**Pn**	**06 55 04.3**	**+0.8**
RUN5	**Runtun**	**2.71**	**140**	S	**Sn**	**06 55 37.7**	**+1.0**
RETU	**Refugio**	**2.72**	**141**	P	**Pn**	**06 55 04.9**	**+1.2**
ULBA	**Ulba**	**2.75**	**140**	P	**Pn**	**06 55 04.6**	**+0.6**
ARRY	**Arrayan**	**2.76**	**142**	⇑P	**Pn**	**06 55 04.9**	**+0.7**
ARRY	**Arrayan**	**2.76**	**142**	⇑S	**Sn**	**06 55 38.5**	**+0.5**
PATA	**Patacocha**	**2.77**	**141**	P	**Pn**	**06 55 05.4**	**+1.0**
PATA	**Patacocha**	**2.77**	**141**	S	**Sn**	**06 55 39.8**	**+1.5**
ROSC	**El Rosal**	**7.16**	**54**	P	**Pn**	**06 56 07.4**	**+2.7**
	3.6nm,0.3s,baz=244,slow=3.9,SNR=17						
ROSC				S	**Sn**	**06 57 34.6**	**+8.1**
	0.4nm,0.3s,baz=73,slow=20,SNR=2.9						
ATAH	**Atahualpa**	**7.83**	**167**	P	**Pn**	**06 56 19.6**	**+5.8**
	2.0nm,0.3s,baz=20,slow=10,SNR=9.4						
ATAH				S	**Sn**	**06 57 49.6**	**+6.7**
	1.9nm,0.3s,baz=359,slow=1.4,SNR=3.9						
SDV	**Santo Domingo**	**12.52**	**49**	P	**Pn**	**06 57 19.2**	**+1.0**
	0.2nm,0.3s,baz=229,slow=9.3,SNR=3.2						
SDV				LR	LR	07 02 38.8	
	comp=Z,177nm,18.6s,baz=153,slow=40						
NNA	**Nana**	**13.00**	**165**	P	**Pn**	**06 57 25.8**	**+1.0**
	0.8nm,0.3s,baz=147,slow=0.3,SNR=3.5						
NNA				S	**Sn**	**06 59 51.7**	**+1.6**
	0.7nm,0.3s,baz=282,slow=22,SNR=3.5						
PCRV	**Puerto La Cruz**	**18.10**	**58**	LR	LR	07 06 29.7	
	comp=Z,156nm,20.4s,baz=343,slow=40						
SIV	**San Ignacio**	**25.09**	**132**	P	**P**	**06 59 43.3**	**-1.8**
	3.4nm,0.8s,mb4.0,baz=300,slow=10,SNR=16						
LVC	**Limon Verde**	**25.61**	**155**	P	**P**	**06 59 50.9**	**+1.1**
	3.5nm,0.7s,mb4.0,baz=314,slow=7.5,SNR=4.0						
LVC	**Limon Verde**	**25.61**	**155**	P	**P**	**06 59 50.9**	**+1.1**
CPUP	**Villa Florida**	**34.73**	**142**	P	**P**	**07 01 07.8**	**-2.7**
	2.4nm,0.9s,mb4.1,baz=294,slow=8.7,SNR=5.1						
CPUP				LR	LR	07 15 59.1	
	comp=Z,65nm,19.4s,MS3.4,baz=165,slow=37						
BDFB	**Brasilia**	**35.66**	**118**	P	**P**	**07 01 15.5**	**-3.2**
	1.1nm,0.7s,mb3.9,baz=291,slow=19,SNR=3.7						
BDFB				LR	LR	07 15 41.2	
	comp=Z,36nm,21.4s,MS3.1,baz=108,slow=36						
TXAR	**Lajitas Array**	**36.26**	**324**	PcP	PcP	07 03 48.7	-0.2
	0.4nm,0.9s,baz=122,slow=4.5,SNR=4.4						
ANMO	**Albuquerque**	**42.01**	**327**	P	**P**	**07 02 13.4**	**+1.7**
	4.2nm,1.0s,mb4.0,baz=147,slow=13,SNR=9.0						
ANMO	**Albuquerque**	**42.01**	**327**	*e*P	**P**	**07 02 13.9**	**+2.2**
	5.6nm,1.0s,mb4.2						
PLCA	**Paso Flores**	**42.13**	**169**	P	**P**	**07 02 11.9**	**-0.6**
	5.2nm,0.8s,mb4.2,baz=341,slow=9.1,SNR=11						
PLCA	**Paso Flores**	**42.13**	**169**	*e*P	**P**	**07 02 11.5**	**-1.1**
	13nm,1.2s,mb4.4						
WUAZ	**Wupatki**	**45.22**	**323**	*e*P	**P**	**07 02 44.2**	**+6.7**
	7.8nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**49.50**	**332**	P	**P**	**07 03 11.7**	**+0.9**
	0.8nm,0.8s,mb3.8,baz=109,slow=8.0,SNR=4.2						
NVAR	**Mina Array Bea**	**51.32**	**322**	P	**P**	**07 03 27.9**	**+3.2**
	2.8nm,0.8s,mb4.2,baz=136,slow=7.9,SNR=8.4						
HLID	**Hailey**	**52.49**	**329**	*e*P	**P**	**07 03 34.3**	**+1.0**
	2.0nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**66.84**	**343**	P	**P**	**07 05 10.4**	**-1.5**
	0.9nm,0.8s,mb3.8,baz=136,slow=6.0,SNR=13						
ESDC	**Sonseca Array**	**78.96**	**50**	P	**P**	**07 06 22.7**	**-1.6**
	0.3nm,0.3s,mb3.7,baz=344,slow=22,SNR=5.4						
TORD	**Torodi Ar. Bea**	**81.92**	**77**	P	**P**	**07 06 38.7**	**-2.0**
	1.1nm,0.5s,mb4.0,baz=280,slow=6.1,SNR=18						
MKAR	**Makanchi Array**	**130.28**	**16**	PKP	PKPdf	07 13 29.9	-1.1
	0.3nm,0.5s,baz=268,slow=4.8,SNR=3.0						

*NIED **11** 06:59:00, 3030N×13140E, h29km, Mw4.0 Best double couple: $M_0$1.09000×10^{15} NP1:ϕ_s42.00000°, δ56.00000°, λ128.00000°. NP2:ϕ_s168.00000°, δ49.00000°, λ48.00000°.*
*JMA **11** 06:59:33.6±0.2, 3033N×13140E, h25km±1km, M3.9*
JMA Felt I J1.
*ISCJB **11** 06:59:35.7±0.8, 3039N±004×13128E±007, h53km±6km, mb3.8/12, Error ellipse: s-maj=10.6km s-min=5.8km az=31.4*
*IDC **11** 06:59:40.2±2.9, 3043N×13099E, h74km±27km, mb3.6/12, mb1 3.7/14, mb1mx3.7/23, mbtmp3.6/14, MS3.1/2, Ms1 3.1/2, ms1mx2.7/21, Error ellipse: s-maj=25.9km s-min=16.2km az=84.0*
ISC 11 06:59:35.5±2.1, **3037N**±004×**13134E**±006, **h34**km±16km, **n25**, σ**1^{s}00**/32, **mb3.8**/12, **2C, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	**Tashiro 2**	**0.88**	**336**	⇑P	**Pn**	**06 59 50.7**	**-0.7**
JTSR				S	**Sn**	**07 00 03.2**	**+0.2**
JKC	**Kuchinoerabu**	**0.99**	**276**	P	**Pn**	**06 59 52.7**	**-0.3**
JKC				S	**Sn**	**07 00 06.6**	**+0.7**
JNAR	**Kushima--Naru**	**1.16**	**357**	P	**Pn**	**06 59 55.3**	**0.0**
JSU	**Suzuyama**	**1.37**	**326**	P	**Pn**	**06 59 57.7**	**-0.5**
JSU				S	**Sn**	**07 00 16.1**	**+1.0**
JNN	**Nakanoshima**	**1.38**	**248**	P	**Pn**	**06 59 58.0**	**-0.3**
JNN				*e*S	**Sn**	**07 00 15.9**	**+0.6**
JTZ	**Takazaki**	**1.54**	**352**	P	**Pn**	**07 00 00.9**	**+0.3**
JTSN	**Tsuno**	**1.88**	**4**	P	**Pn**	**07 00 05.1**	**-0.1**
JZO	**Okuchi**	**1.88**	**340**	P	**Pn**	**07 00 04.9**	**-0.3**
JZO				S	**Sn**	**07 00 29.8**	**+2.1**
JSJ	**Shimokoshiki**	**1.91**	**314**	⇑P	**Pn**	**07 00 04.6**	**-1.1**
JSJ				S	**Sn**	**07 00 28.6**	**0.0**
JOW	**Kunigami**	**4.43**	**218**	P	**Pn**	**07 00 44.5**	**+4.2**
	3.7nm,0.3s,baz=96,slow=21,SNR=3.9						
JOW				S	**Sn**	**07 01 32.0**	**+1.2**
	5.4nm,0.3s,baz=134,slow=28,SNR=3.8						
KSRS	**Korea Array**	**7.62**	**339**	P	**Pn**	**07 01 26.0**	**+2.0**
	0.5nm,0.3s,baz=151,slow=15,SNR=3.4						
KSRS				LR	LR	07 04 31.9	
	comp=Z,87nm,21.4s,baz=163,slow=39						
MAT	**Matsushiro**	**8.41**	**41**	P	**Pn**	**07 01 36.0**	**+1.0**
MAT				*e*S	**Sn**	**07 03 13.6**	**+4.9**
ASAJ	**Asahikawa**	**16.37**	**30**	LR	LR	07 09 57.4	
	comp=Z,87nm,18.1s,baz=195,slow=38						
SONM	**Songino Array**	**25.88**	**319**	P	**P**	**07 05 02.7**	**-1.3**
	0.7nm,0.3s,mb3.6,baz=141,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**40.78**	**319**	P	**P**	**07 07 11.3**	**-1.9**
	0.5nm,0.4s,mb3.5,baz=97,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**41.01**	**308**	P	**P**	**07 07 13.5**	**-1.7**
	0.3nm,0.4s,mb3.3,baz=92,slow=9.1,SNR=5.7						
KURK	**Kurchatov**	**43.86**	**313**	P	**P**	**07 07 37.6**	**-0.7**
	0.7nm,0.3s,mb3.8,baz=94,slow=9.2,SNR=5.4						
STKA	**Stephens Creek**	**62.66**	**170**	P	**P**	**07 09 57.7**	**+1.1**
	0.8nm,0.5s,mb4.1,baz=353,slow=7.2,SNR=4.3						
ARCES	**ARCESS Array B**	**67.18**	**338**	P	**P**	**07 10 24.6**	**-1.0**
	4.7nm,1.0s,mb4.5,baz=51,slow=9.6,SNR=3.6						
YKA	**Yellowknife Ar**	**73.62**	**26**	P	**P**	**07 11 05.6**	**+0.5**
	0.1nm,0.5s,mb3.0,baz=82,slow=38,SNR=3.3						
AKASG	**Malin Array Be**	**74.17**	**320**	P	**P**	**07 11 07.2**	**-1.3**
	0.8nm,0.3s,mb4.1,baz=57,slow=6.4,SNR=4.3						
BRTR	**Keskin Array B**	**76.65**	**308**	P	**P**	**07 11 22.0**	**-1.0**
	2.0nm,0.9s,mb4.1,baz=119,slow=4.4,SNR=7.0						
NOA	**NORSAR Array B**	**76.81**	**334**	P	**P**	**07 11 22.7**	**-0.7**
	0.7nm,0.5s,mb3.8,baz=50,slow=5.7,SNR=3.0						
NVAR	**Mina Array Bea**	**85.69**	**48**	P	**P**	**07 12 12.2**	**+1.2**
	0.8nm,0.7s,mb4.0,baz=354,slow=7.3,SNR=3.6						
PDAR	**Pinedale Array**	**88.24**	**40**	P	**P**	**07 12 24.1**	**+0.8**
	0.3nm,0.9s,mb3.5,baz=256,slow=0.6,SNR=3.6						

IDC 11 07:08:24.1±40.0, **1097S**×**11853E, h0**km, **mb4.1**/3, **mb1 4.1**/3, **mb1mx3.8**/14, **mbtmp4.1**/3, **Error ellipse: s-maj=936.7km s-min=198.7km az=146.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.88**	**137**	*e*P	Sn	07 12 18.4	-21
	2.2nm,0.3s						
KAKA	**Kakadu**	**13.73**	**99**	*e*P	x	07 12 26.8	
	3.5nm,0.4s						
SONM	**Songino Array**	**59.53**	**351**	P	P	07 18 29.3	+0.2
	1.4nm,0.4s,baz=169,slow=8.6,SNR=12						
MKAR	**Makanchi Array**	**65.99**	**334**	P	P	07 19 12.5	+0.2
	0.4nm,0.3s,baz=142,slow=8.2,SNR=7.7						
ZALV	**Zalesovo Beam**	**70.71**	**340**	P	P	07 19 41.6	-0.1
	0.9nm,0.3s,baz=115,slow=6.0,SNR=3.9						

*THR **11** 08:00:46.6±0.5, 3174N×5032E, h14km±3km, ML3.0*
*KISR **11** 08:00:47.2, 3163N×5042E, h22km, ML3.0*
*CSEM **11** 08:00:47.9±0.1, 3180N×5032E, h18km, ML3.0, Error ellipse: s-maj=3.9km s-min=1.8km az=127.0*
*ISCJB **11** 08:00:48.3±0.6, 3183N±004×5020E±005, h10km, Error ellipse: s-maj=8.1km s-min=4.5km az=44.2*
ISC 11 08:00:49.5±0.6, **3186N**±004×**5019E**±005, **h10**km, **n14**, σ**0^{s}92**/24, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.21**	**282**	*e*Pg	**Pn**	**08 01 11.3**	**-1.1**
SHGR				*e*Sg	**Sg**	**08 01 29.3**	**+0.8**
SHGR				AML	AML	08 01 36.2	
	comp=E,423nm,0.3s						
SHGR	**Shooshtar-Gavs**	**1.21**	**282**	*e*Pg	**Pn**	**08 01 11.3**	**-1.2**
	SNR=90						
SHGR				*e*Sg	**Sg**	**08 01 29.3**	**+0.8**
	SNR=90						
NASN	**Na'in**	**2.40**	**66**	*e*Pn	**Pn**	**08 01 27.4**	**-1.5**
NASN				*e*Sg	**Sn**	**08 02 00.8**	**+2.4**
ASAO	**Ashtian**	**2.69**	**357**	*e*Pn	**Pn**	**08 01 33.3**	**+0.5**
ASAO				*e*Sg	**Sg**	**08 02 14.7**	**-1.1**
GHVR	**GHOM**	**2.77**	**19**	*e*Pn	**Pn**	**08 01 33.6**	**-0.4**
GHVR				AML	AML	08 02 23.0	
	comp=E,40nm,0.6s						
GHVR				AML	AML	08 02 25.1	
	comp=N,54nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.14**	**224**	*e*P	**Pn**	**08 01 38.6**	**-0.3**
UMR				*e*S	**Sn**	**08 02 16.8**	**+0.4**
UMR	**Umm Al-Rimmam**	**3.14**	**224**	*e*P	**Pn**	**08 01 38.6**	**-0.4**
	baz=229						
UMR				*e*S	**Sn**	**08 02 16.8**	**+0.3**
	baz=229						
UMR				AML	AML	08 02 22.6	
	comp=Z,42nm,0.3s,baz=229						
KBD	**Kabd**	**3.44**	**220**	*e*P	**Pn**	**08 01 42.2**	**-0.9**
KBD				*e*S	**Sn**	**08 02 23.8**	**0.0**
KBD	**Kabd**	**3.44**	**220**	*e*P	**Pn**	**08 01 42.2**	**-0.8**
	baz=225						
KBD				*e*S	**Sn**	**08 02 23.8**	**-0.1**
	baz=225						
KBD				AML	AML	08 02 27.4	
	comp=Z,30nm,0.4s,baz=225						
NAY	**Al-Naaiem**	**3.64**	**225**	*e*P	**Pn**	**08 01 45.6**	**-0.3**
NAY				*e*S	**Sn**	**08 02 29.3**	**+0.4**
NAY	**Al-Naaiem**	**3.64**	**225**	*e*P	**Pn**	**08 01 45.6**	**-0.2**
	baz=230						
NAY				*e*S	**Sn**	**08 02 29.3**	**+0.5**
	baz=230						
NAY				AML	AML	08 02 34.0	
	comp=Z,24nm,0.6s,baz=230						
SNGE	**Sanandaj**	**4.01**	**324**	*e*Pn	**Pn**	**08 01 52.3**	**+1.3**
SNGE				AML	AML	08 03 01.8	
	comp=E,18nm,0.6s						
SNGE				AML	AML	08 03 13.4	
	comp=N,19nm,0.6s						
DAMV	**Damavand**	**4.04**	**21**	*e*Pn	**Pn**	**08 01 51.3**	**-0.1**
DAMV				AML	AML	08 03 08.4	
	comp=E,16nm,0.5s						
CHTH	**Charan**	**4.11**	**11**	*e*Pn	**Pn**	**08 01 53.0**	**+0.6**

*ISCJB **11** 08:04:44.4±0.7, 3652N±003×12124W±006, h15km±7km, Error ellipse: s-maj=8.6km s-min=4.7km az=170.7*
*NEIC **11** 08:04:44.9, 3655N×121.12W, h5km, MW3.5(BRK), After NCEDC.*
ISC 11 08:04:44.4±0.6, **3654N**±003×**12119W**±004, **h7**km±4km, **n36**, σ**1^{s}13**/53, **12C-16D, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAO	**San Andreas Ge**	**0.31**	**318**	*e*Pg	**Pg**	**08 04 51.4**	**+1.0**
SAO				*e*Sg	**Sg**	**08 04 53.8**	**-0.7**

U04C	**Hernandez Rese**	**0.37**	**118**	⇑P	**Pg**	**08 04 52.3**	**+0.6**
	baz=0.3						
U04C				⇓S	**Sg**	**08 04 57.7**	**+1.2**
	baz=0.3						
SMMC	**Simmler**	**1.56**	**141**	⇓P	**Pn**	**08 05 11.5**	**-1.0**
	baz=1.5						
SMMC				⇑S	**Sn**	**08 05 32.7**	**-0.3**
	baz=1.5						
RCTC	**Rector, Farmer**	**1.59**	**98**	⇓P	**Pn**	**08 05 12.0**	**-0.9**
	baz=1.5						
RCTC				⇑S	**Sn**	**08 05 33.3**	**-0.4**
	baz=1.5						
CMB	**Columbia Colle**	**1.63**	**23**	*e*Pn	**Pn**	**08 05 12.9**	**-0.5**
CMB				*e*Sn	**Sn**	**08 05 33.0**	**-1.6**
VES	**Vestal, Richgr**	**1.84**	**112**	⇑P	**Pn**	**08 05 15.4**	**-1.0**
	baz=1.8						
VES				⇑S	**Sn**	**08 05 38.8**	**-1.1**
	baz=1.8						
PKM	**Peak Mountain**	**1.98**	**145**	⇑P	**Pn**	**08 05 17.8**	**-0.5**
	baz=2.0						
PKM				⇑S	**Sn**	**08 05 42.8**	**-0.6**
	baz=2.0						
MCCM	**Marconi Confer**	**2.10**	**321**	*e*Pn	**Pn**	**08 05 19.6**	**-0.3**
MCCM				*e*Pg	**Pg**	**08 05 26.3**	**+1.7**
MCCM				*e*Sg	**Sg**	**08 05 54.8**	**+3.1**
MLAC	**Mammoth Lakes**	**2.18**	**59**	⇓P	**Pn**	**08 05 21.6**	**+0.6**
	baz=2.1						
MLAC				⇓S	**Sn**	**08 05 48.2**	**-0.1**
	baz=2.1						
ISA	**Isabella**	**2.37**	**111**	⇓P	**Pn**	**08 05 23.4**	**-0.3**
	baz=2.3						
ISA				⇓S	**Sn**	**08 05 52.5**	**-0.4**
	baz=2.3						
ISA	**Isabella**	**2.37**	**111**	*e*Pn	**Pn**	**08 05 23.6**	**0.0**
ISA				*e*Sn	**Sn**	**08 05 52.1**	**-0.8**
TIN	**Tinemaha**	**2.44**	**77**	⇓S	**Sn**	**08 05 55.4**	**+0.8**
	baz=2.4						
OSI	**Osito Adit**	**2.78**	**133**	*e*Pn	**Pn**	**08 05 31.1**	**+1.8**
OSI				*e*Sn	**Sn**	**08 06 04.7**	**+1.7**
BSC	**Santa Cruz Isl**	**2.84**	**153**	⇑S	**Sn**	**08 06 04.0**	**-0.5**
	baz=2.8						
HOPS	**Hopland**	**2.87**	**329**	*e*Pg	**Pg**	**08 05 36.4**	**-3.0**
BLG	**Laguna Peak**	**2.98**	**144**	⇓S	**Sn**	**08 06 06.1**	**-1.9**
	baz=3.0						
WCN	**Washoe City**	**2.98**	**22**	⇑P	**Pn**	**08 05 33.4**	**+1.3**
	baz=3.0						
MPMC	**Manual Prospec**	**3.03**	**98**	⇓P	**Pn**	**08 05 32.8**	**+0.1**
	baz=3.0						
R08A	**Mina**	**3.05**	**53**	⇓S	**Sn**	**08 06 10.8**	**+1.1**
	baz=3.0						
S09A	**Goldfield**	**3.38**	**68**	⇑P	**Pn**	**08 05 37.9**	**+0.3**
	baz=3.3,SNR=20						
S09A				⇑Sb	**Sb**	**08 06 30.3**	**+4.3**
	baz=3.3						
PASC	**Pasadena Art C**	**3.41**	**133**	*e*Pn	**Pn**	**08 05 38.3**	**+0.4**
MWC	**Mount Wilson**	**3.45**	**131**	*e*Pn	**Pn**	**08 05 38.9**	**+0.4**
MWC				*e*S	**Sn**	**08 06 24.2**	**+4.6**
TPH	**Tonopah**	**3.52**	**63**	*e*Pg	**Pg**	**08 05 49.3**	**-2.5**
R09A	**Tonopah**	**3.70**	**61**	⇓Pb	**Pb**	**08 05 50.2**	**+0.2**
	baz=3.6,SNR=31						
GSC	**Goldstone**	**3.77**	**108**	*e*Pn	**Pn**	**08 05 43.1**	**+0.3**
S10A	**Tonopah Range,**	**3.92**	**68**	⇓Pb	**Pb**	**08 05 54.0**	**+0.1**
	baz=3.9,SNR=12						
Q09A	**Carvers**	**3.92**	**53**	⇑Pb	**Pb**	**08 05 54.9**	**+1.1**
	baz=3.9,SNR=21						
TPNV	**Topopah Spring**	**3.99**	**83**	⇓P	**Pn**	**08 05 46.7**	**+0.8**
	baz=3.9						
TPNV	**Topopah Spring**	**3.99**	**83**	*e*Pn	**Pn**	**08 05 47.5**	**+1.6**
WDC	**Whiskeytown Da**	**4.17**	**346**	*e*Pg	**Pg**	**08 06 02.6**	**-1.8**
Q10A	**Clear Creek Ra**	**4.43**	**58**	⇓Pb	**Pb**	**08 06 03.1**	**+0.5**
	baz=4.4,SNR=10						
PFO	**Pinyon Flat Ob**	**4.86**	**126**	⇓P	**Pn**	**08 05 58.8**	**+0.9**
	baz=4.8						
PFO	**Pinyon Flat Ob**	**4.86**	**126**	*e*Pn	**Pn**	**08 05 59.7**	**+1.8**
BMN	**Battle Mountai**	**4.98**	**37**	*e*Pg	**Pg**	**08 06 13.3**	**-6.6**
LDFC	**Landfair**	**5.15**	**105**	*e*Pn	**Pn**	**08 06 03.0**	**+1.1**
	26nm,0.9s						
LDFC				*e*Pg	**Pg**	**08 06 21.1**	**-2.1**
WVOR	**Wild Horse Val**	**6.21**	**18**	*e*Pn	**Pn**	**08 06 17.0**	**+0.6**
	24nm,1.6s						
WVOR				*e*Pg	**Pg**	**08 06 41.4**	**-2.0**

*BJI **11** 08:07:57.8, 4803N×15479E, h45km, mB4.7, mb4.5, Ms4.2, Msz3.8*
*SKHL **11** 08:07:57.1±2.7, 4800N×15470E, h60km±19km, mb5.0/7, ms3.9/1*
*ISCJB **11** 08:07:59.8±0.3, 4821N±004×15433E±005, h46km, mb4.5/57, MS3.6/11, Error ellipse: s-maj=6.7km s-min=3.0km az=146.3*
*MOS **11** 08:08:00.2±0.9, 4823N×15409E, h48km, mb4.6/24, Error ellipse: s-maj=11.3km s-min=7.2km az=72.1*
*NEIC **11** 08:08:01.6±0.3, 4822N×15422E, mb4.6/28, Error ellipse: s-maj=9.3km s-min=4.7km az=148.0*
*IDC **11** 08:08:01.8±0.8, 4837N×15403E, h48km±6km, mb3.9/18, mb1 4.1/19, mb1mx4.0/25, mbtmp3.9/19, MS3.5/10, Ms1 3.5/10, ms1mx3.3/35, Error ellipse: s-maj=22.9km s-min=11.5km az=163.0*
ISC 11 08:08:01.8±0.3, **4823N**±004×**15432E**±004, **h48**km, **h48**km±1.2km**:pP-P, n172,** σ1**°14**/179, **mb4.5**/57, **MS3.6**/11, **4C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.72**	**25**	*e*PN	**Pn**	**08 08 41.6**	**-1.4**
SKR				*e*S	**Sn**	**08 09 13.0**	**-1.6**
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=N,830nm,0.5s						
SKR				smax			
	comp=E,950nm,0.5s						
SKR	**Severo-Kuril's**	**2.72**	**25**	*e*P	**Pn**	**08 08 41.6**	**-1.4**
SKR				AMB	AMB	08 08 43.9	
	comp=E,50nm,0.5s						
SKR				AMB	AMB	08 08 43.9	
	comp=E,150nm,0.5s						
SKR				*e*S	**Sn**	**08 09 13.0**	**-1.6**
SKR				A		08 09 28.0	
	comp=E,540nm,0.7s						
SKR				A		08 09 28.0	
	comp=E,830nm,0.5s						
SKR				A		08 09 28.0	
	comp=E,950nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.34**	**22**	*e*Pn	**Pn**	**08 09 20.9**	**+2.1**
PETK	**Petropavlovsk-**	**5.34**	**22**	P	**Pn**	**08 09 20.6**	**+1.8**
	comp=E,5.5nm,0.3s,baz=184,slow=11,SNR=186						
PETK				S	**Sn**	**08 10 25.3**	**+6.4**
	comp=E,2.1nm,0.3s,baz=166,slow=18,SNR=3.7						
PETK				LR	LR	08 11 43.5	
	comp=E,200nm,19.4s,baz=204,slow=42						
PETK	**Petropavlovsk-**	**5.34**	**22**	P	**Pn**	**08 09 20.6**	**+1.8**
PETK				S	**Sn**	**08 10 25.3**	**+6.4**
PETK				LR	LR	08 11 43.5	
KUR	**Kuril'sk**	**5.35**	**238**	*e*PN	**Pn**	**08 09 17.6**	**-1.5**
KUR				*e*S	**Sn**	**08 10 20.0**	**+0.6**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,70nm,0.5s						
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,330nm,0.7s						
KUR				smax			
	comp=E,170nm,0.7s						
KUR	**Kuril'sk**	**5.35**	**238**	*e*P	**Pn**	**08 09 17.6**	**-1.5**
KUR				AMB	AMB	08 09 22.0	
	comp=E,80nm,0.5s						
KUR				AMB	AMB	08 09 22.0	
	comp=E,70nm,0.5s						
KUR				AMB	AMB	08 09 22.0	
	comp=E,150nm,0.5s						
KUR				*e*S	**Sn**	**08 10 20.0**	**+0.6**
KUR				A		08 10 44.8	
	comp=E,330nm,0.7s						
KUR				A		08 10 44.8	
	comp=E,170nm,0.7s						
PET	**Petropavlovsk**	**5.54**	**28**	*e*PN	**Pn**	**08 09 24.9**	**+3.4**
PET				pmax	pmax		
	comp=Z,69nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	**Petropavlovsk**	**5.54**	**28**	*e*Pn	**Pn**	**08 09 24.2**	**+2.7**
PET				*e*Sn	**Sn**	**08 10 24.3**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**7.22**	**238**	PN	**Pn**	**08 09 42.5**	**-2.1**
YUK				*e*S	**Sn**	**08 11 09.0**	**+3.8**
YUK				pmax	pmax		
	comp=Z,180nm,0.5s						
YUK				smax			
	comp=E,380nm,0.8s						
YUK				smax			
	comp=N,190nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**7.22**	**238**	*e*P	**Pn**	**08 09 42.5**	**-2.1**
YUK				AMB	AMB	08 09 50.4	
	comp=N,180nm,0.5s						
YUK				*e*S	**Sn**	**08 11 09.0**	**+3.8**
YUK				A		08 11 31.0	
	comp=N,380nm,0.8s						
YUK				A		08 11 31.0	
	comp=N,190nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.92**	**265**	⇓*e*PN	**Pn**	**08 09 57.8**	**+3.5**
YSS				*e*S	**Sn**	**08 11 23.8**	**+1.3**
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				pmax	pmax		
	comp=N,30nm,0.7s						
YSS				pmax	pmax		
	comp=E,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.92**	**265**	⇓*e*P	**Pn**	**08 09 57.8**	**+3.5**
YSS				AMB	AMB	08 09 58.2	
	comp=E,50nm,0.6s						
YSS				AMB	AMB	08 09 58.2	
	comp=E,30nm,0.7s						
YSS				AMB	AMB	08 09 58.2	
	comp=E,50nm,0.8s						
YSS				*e*S	**Sn**	**08 11 23.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**7.92**	**265**	*e*Pn	**Pn**	**08 09 57.8**	**+3.5**
TYV	**Tymovskoe**	**8.03**	**294**	*e*P	**Pn**	**08 09 58.1**	**+2.4**
TYV				AMB	AMB	08 09 59.2	
	comp=E,33nm,0.8s						
TYV				AMB	AMB	08 09 59.2	
	comp=E,22nm,1.0s						
UGL	**Uglegorsk**	**8.16**	**281**	*e*P	**Pn**	**08 10 01.5**	**+4.0**
UGL				AMB	AMB	08 10 02.5	
	comp=E,73nm,0.5s						
UGL				AMS	AMS	08 13 16.0	
	comp=E,700nm,19.0s						
UGL				AMS	AMS	08 13 16.0	
	comp=E,400nm,15.0s						
UGL				AMS	AMS	08 13 16.0	
	comp=E,300nm,15.0s						
ASAJ	**Asahikawa**	**9.11**	**248**	P	**Pn**	**08 10 14.4**	**+3.9**
	comp=E,5.7nm,0.3s,baz=75,slow=12,SNR=39						
ASAJ				LR	LR	08 13 20.6	
	comp=E,187nm,21.1s,baz=359,slow=36						
ASAJ	**Asahikawa**	**9.11**	**248**	PN	**Pn**	**08 10 14.5**	**+3.9**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,187nm,21.1s						
NKL	**Nikolayevsk**	**9.96**	**305**	*e*P	**Pn**	**08 10 21.0**	**-1.0**
NKL				AMB	AMB	08 10 22.6	
	comp=Z,26nm,1.0s						
ERM	**Erimo**	**10.04**	**236**	⇑*e*PN	**Pn**	**08 10 22.9**	**-0.3**
ERM	**Erimo**	**10.04**	**236**	*e*Pn	**Pn**	**08 10 23.0**	**-0.2**
HABR	**Khabarovsk**	**12.82**	**278**	*e*PN	**Pn**	**08 11 00.9**	**-0.3**
HABR				*e*S	**Sn**	**08 13 22.9**	**+0.6**
FX1	**Attu Island--F**	**12.85**	**62**	P	**Pn**	**08 11 00.5**	**-1.0**
	comp=Z,7.2nm,0.3s,baz=39,slow=0.8,SNR=48						
FX1				LR	LR	08 15 17.0	
	comp=Z,115nm,18.6s,baz=70,slow=34						
FX1	**Attu Island--F**	**12.85**	**62**	PN	**Pn**	**08 11 00.5**	**-1.0**
FX1				pmax	pmax		
	comp=Z,7.0nm,0.3s						
FX1				MLR	MLR		
	comp=Z,115nm,18.6s						
SMY	**Shemya**	**13.37**	**63**	*e*P	**Pn**	**08 11 07.6**	**-1.0**
SEY	**Seymchan**	**14.78**	**357**	*i* P	**Pn**	**08 11 30.5**	**+3.0**
KLR	**Kul'dur**	**14.92**	**282**	*e*P	**Pn**	**08 11 30.7**	**+1.2**
MJAR	**Matsushiro Arr**	**16.64**	**231**	P	**Pn**	**08 11 49.5**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=5.6						
MJAR	**Matsushiro Arr**	**16.64**	**231**	P	**Pn**	**08 11 49.5**	**-2.0**
MAJO	**Matsushiro**	**16.64**	**231**	*e*P	**Pn**	**08 11 51.6**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,14nm,0.7s						
MAJO	**Matsushiro**	**16.64**	**231**	*e*P	**Pn**	**08 11 51.6**	**+0.1**
	comp=Z,14nm,0.7s						
MAT	**Matsushiro**	**16.64**	**231**	P	**Pn**	**08 11 52.8**	**+1.4**
MAT				*e*S	**Sn**	**08 14 53.0**	**-2.1**
MDJ	**Mudanjiang**	**17.40**	**267**	P	**Pn**	**08 12 02.8**	**+1.9**
MDJ				AP	pP	08 12 13.5	+0.7
MDJ				XP	sP	08 12 19.3	+0.4
MDJ				S	**S**	**08 15 16.3**	**-3.7**
MDJ				PCP	PcP	08 16 40.4	+0.4
MDJ				SCP	ScP	08 20 12.0	+1.3
MDJ				PCS	PcS	08 20 17.3	+1.3
MDJ				SCS	ScS	08 23 53.7	+3.1
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,120nm,4.7s						
YAK	**Yakutsk**	**19.56**	**324**	*e*P	**Pn**	**08 12 25.7**	**-1.2**
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK	**Yakutsk**	**19.56**	**324**	*e*P	**Pn**	**08 12 26.6**	**-0.3**
	comp=E,39nm,0.7s						
CLNS	**Chul'man**	**19.73**	**307**	*e*P	**Pn**	**08 12 28.3**	**-0.6**
CLNS				*e*S	**S**	**08 16 06.7**	**0.0**
CLNS				pmax	pmax		
	comp=Z,33nm,0.9s						
CLNS				pmax	pmax		
	comp=E,19nm,0.9s						
CLNS				pmax	pmax		
	comp=N,21nm,0.8s						
CLNS				smax			
	comp=N,6.0nm,0.7s						
CLNS				smax			
	comp=E,7.0nm,0.8s						
CN2	**Changchun**	**20.47**	**268**	*e*P	**P**	**08 12 33.2**	**-2.1**
CN2				*e*AP		08 12 44.1	
CN2				*e*XP	sP	08 12 49.8	-2.8
CN2				*e*S	**S**	**08 16 16.1**	**-5.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
BILL	**Bilibino**	**20.77**	**13**	⇑*e*P	**P**	**08 12 41.8**	**+3.6**
BILL				*e*S	**S**	**08 16 27.0**	**0.0**
BILL				pmax	pmax		
	comp=Z,11nm,2.0s						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.3						
KSRS	**Korea Array**	**22.04**	**251**	P	**P**	**08 12 51.9**	**-0.3**
	comp=Z,15nm,0.7s,mb4.5,baz=47,slow=10,SNR=36						
KSRS				LR	LR	08 21 02.1	
	comp=Z,79nm,18.1s,MS3.2,baz=164,slow=36						
KSRS	**Korea Array**	**22.04**	**251**	P	**P**	**08 12 51.9**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.5						
KSRS				MLR	MLR		
	comp=Z,79nm,18.1s,MS3.2						
HIA	**Hailar**	**22.71**	**286**	*i* P	**P**	**08 13 02.0**	**+2.9**
BOD	**Bodaibo**	**25.71**	**307**	*e*P	pP	08 13 44.1	+4.5
BJI	**Beijing**	**28.34**	**268**	P	**P**	**08 13 52.5**	**+1.6**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.5						
JOW	**Kunigami**	**29.47**	**233**	P	**P**	**08 14 01.2**	**+0.2**
	comp=Z,11nm,0.7s,mb4.7,baz=61,slow=13,SNR=3.7						
HHC	**Hu-ho-hao-te**	**31.03**	**272**	*e*P	**P**	**08 14 16.5**	**+1.8**
HHC				AP	pP	08 14 27.8	+0.5
HHC				XP	sP	08 14 33.9	+0.8
HHC				PP	PP	08 15 19.6	-5.6
HHC				*e*S	**S**	**08 19 17.4**	**+1.3**
HHC				XS	sS	08 19 36.5	-0.9
HHC				SS	SS	08 21 02.9	-27
HHC				SCS	ScS	08 24 44.5	-0.5
HHC				AMB	AMB		
	comp=Z,18nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,77nm,5.0s						
HHC				LR	LR		
	comp=N,63nm,17.8s,MS3.6						
HHC				LR	LR		
	comp=E,108nm,16.6s,MS3.6						
HHC				LR	LR		
	comp=Z,85nm,12.5s,MS3.6						
SONM	**Songino Array**	**31.64**	**288**	P	**P**	**08 14 18.9**	**-1.1**
	comp=Z,0.6nm,0.7s,mb3.5,baz=66,slow=8.2,SNR=4.0						
SONM				PcP	PcP	08 17 09.5	-1.5
	comp=Z,1.5nm,0.8s,baz=119,slow=2.4,SNR=7.0						
SONM				LR	LR	08 27 46.3	
	comp=Z,121nm,19.5s,MS3.6,baz=133,slow=38						
SONM	**Songino Array**	**31.64**	**288**	P	**P**	**08 14 18.9**	**-1.1**
SONM						08 17 09.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,121nm,19.5s						
COLA	**College**	**34.47**	**40**	*e*P	**P**	**08 14 45.4**	**+0.9**
COLA				*e**PP	pP	08 14 57.6	+0.4
COLA				*e**SP	sP	08 15 04.9	+1.9
COLA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
COLA	**College**	**34.47**	**40**	*e*P	**P**	**08 14 45.4**	**+0.9**
	comp=Z,4.4nm,0.6s,mb4.6						
COLA				*e*pP	pP	08 14 57.6	+0.4
COLA				*e*sP	sP	08 15 04.9	+2.0
WHN	**Wuhan**	**35.11**	**255**	⇑P	**P**	**08 14 49.9**	**-0.4**
WHN				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
XAN	**Xi'an**	**36.47**	**264**	P	**P**	**08 15 01.1**	**-0.9**
XAN				AP	pP	08 15 13.5	-1.3
XAN				PP	PP	08 16 27.0	+1.5
XAN				S	**S**	**08 20 43.5**	**+3.1**
XAN				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.2						
XAN				LR	LR		
	comp=N,63nm,31.7s						
XAN				LR	LR		
	comp=E,36nm,22.4s						
HVS	**Khovu-Aksy**	**38.36**	**298**	*i* P	**P**	**08 15 15.9**	**-1.9**
HVS				pmax	pmax		
	comp=Z,27nm,1.9s,mb4.7						
LZH	**Lanzhou**	**38.67**	**271**	*e*P	**P**	**08 15 21.5**	**+0.9**
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,59nm,4.5s						
GTA	**Gaotai**	**39.56**	**278**	*e*P	**P**	**08 15 29.1**	**+1.1**
GTA				AP	pP	08 15 41.6	+0.7
GTA				XP	sP	08 15 47.4	+0.9
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0						
INK	**Inuvik**	**39.97**	**33**	*e*P	**P**	**08 15 31.9**	**+0.9**
INK				*e**PP	pP	08 15 44.4	+0.5
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	**Inuvik**	**39.97**	**33**	*e*P	**P**	**08 15 31.9**	**+0.9**
	comp=Z,3.9nm,0.8s,mb4.2						
INK				*e*pP	pP	08 15 44.4	+0.5
CD2	**Chengdu**	**41.83**	**264**	*e*P	**P**	**08 15 49.4**	**+2.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
CD2				AMB	AMB		
	comp=Z,20nm,4.8s						
ZALV	**Zalesovo Beam**	**42.42**	**305**	P	**P**	**08 15 48.8**	**-2.5**
	comp=Z,0.6nm,0.4s,mb3.6,baz=30,slow=6.8,SNR=2.9						
ZALV				PcP	PcP	08 17 42.7	-0.8
	comp=Z,3.8nm,0.8s,baz=5.7,slow=1.5,SNR=3.9						
ZALV				LR	LR	08 34 16.8	
	comp=Z,56nm,19.3s,MS3.5,baz=73,slow=37						
ZALV	**Zalesovo Beam**	**42.42**	**305**	P	**P**	**08 15 48.8**	**-2.5**
ZALV						08 17 42.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ZALV				MLR	MLR		
	comp=Z,56nm,19.3s,MS3.5						
GYA	**Guiyang**	**42.84**	**257**	⇑*i*P	**P**	**08 15 55.3**	**+0.3**
GYA				AP	pP	08 16 08.6	+0.6
GYA				XP	sP	08 16 14.0	+0.3
GYA				PP	PP	08 17 36.3	+1.3
GYA				PCP	PcP	08 17 46.5	+1.1
GYA				SCP	ScP	08 21 32.1	0.0
GYA				PCS	PcS	08 21 39.5	+1.7
GYA				S	**S**	**08 22 16.6**	**+0.7**
GYA				SCS	ScS	08 25 48.2	-3.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA				AMB	AMB		
	comp=Z,60nm,6.0s						
GYA				LR	LR		
	comp=N,78nm,17.4s,MS3.8						
GYA				LR	LR		
	comp=E,84nm,18.2s,MS3.8						
GYA				LR	LR		
	comp=Z,90nm,18.7s,MS3.7						
DLBC	**Dease Lake**	**43.98**	**47**	P	**P**	**08 16 05.8**	**+2.0**
	comp=Z,2.0nm,0.8s,mb3.9,baz=297,slow=9.0,SNR=3.1						
WMQ	**Urumqi**	**45.16**	**290**	*e*P	**P**	**08 16 16.2**	**+2.7**
WMQ				AMB	AMB		
	comp=Z,151nm,4.5s						
WMQ				LR	LR		
	comp=N,60nm,19.0s,MS3.6						
WMQ				LR	LR		
	comp=E,30nm,17.0s,MS3.6						
WMQ				LR	LR		
	comp=Z,58nm,19.0s,MS3.5						
KMI	**Kunming**	**46.32**	**259**	P	**P**	**08 16 26.6**	**+3.8**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
MK31	**Makanchi Array**	**47.00**	**297**	*e*P	**P**	**08 16 25.4**	**-2.4**
MKAR	**Makanchi Array**	**47.00**	**297**	P	**P**	**08 16 25.2**	**-2.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=68,slow=8.3,SNR=12						
MKAR				LR	LR	08 37 30.8	
	comp=Z,81nm,19.2s,MS3.7,baz=260,slow=38						
MKAR	**Makanchi Array**	**47.00**	**297**	P	**P**	**08 16 25.2**	**-2.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,81nm,19.3s						
KURK	**Kurchatov**	**47.24**	**303**	P	**P**	**08 16 28.0**	**-1.7**
	comp=Z,1.6nm,0.6s,mb4.2,baz=68,slow=8.3,SNR=12						
KURK				PcP	PcP	08 18 00.4	+0.3
	comp=Z,2.7nm,0.9s,baz=58,slow=3.4,SNR=5.8						
KURK	**Kurchatov**	**47.24**	**303**	P	**P**	**08 16 28.0**	**-1.6**
KURK						08 18 00.4	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**47.24**	**303**	*e*P	**P**	**08 16 27.7**	**-1.9**
	comp=Z,2.6nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**49.25**	**38**	P	**P**	**08 16 45.6**	**+0.7**
	comp=Z,3.9nm,0.8s,mb4.5,baz=298,slow=7.3,SNR=33						
YKA				pP	pP	08 16 58.5	+0.3
	comp=Z,2.2nm,0.8s,baz=298,slow=7.6,SNR=8.0						
YKA				PcP	PcP	08 18 07.8	+0.6
	comp=Z,0.2nm,0.6s,baz=300,slow=3.5,SNR=2.9						
YKA	**Yellowknife Ar**	**49.25**	**38**	P	**P**	**08 16 45.6**	**+0.6**
YKA				*PP	pP	08 16 58.5	+0.3
YKA						08 18 07.8	
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**49.25**	**38**	P	**P**	**08 16 45.6**	**+0.7**
YKA				pP	pP	08 16 58.5	+0.3
YKA				PcP	PcP	08 18 07.8	+0.6
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**08 16 53.0**	**-2.0**
	comp=Z,1.8nm,0.4s,mb4.3,baz=52,slow=7.2,SNR=11						
BVAR				PcP	PcP	08 18 10.9	-1.3
	comp=Z,2.1nm,0.6s,baz=56,slow=3.9,SNR=6.4						
BVAR				LR	LR	08 39 33.8	
	comp=Z,100nm,19.8s,MS3.8,baz=55,slow=38						
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**08 16 53.0**	**-2.0**
BVAR						08 18 10.9	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,101nm,19.8s						
CHTO	**Chiang Mai**	**53.26**	**257**	*e*P	**P**	**08 17 15.8**	**+0.3**
CHTO				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,8.0nm,0.8s,mb4.7						
CHTO	**Chiang Mai**	**53.26**	**257**	*e*P	**P**	**08 17 15.8**	**+0.3**
	comp=Z,8.1nm,0.8s,mb4.7						
CMAR	**Chiang Mai Arr**	**53.52**	**256**	P	**P**	**08 17 17.4**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.5,baz=34,slow=7.0,SNR=14						
CMAR				PcP	PcP	08 18 21.5	-2.3
	comp=Z,2.3nm,0.3s,baz=6.5,slow=5.2,SNR=9.8						
CMAR	**Chiang Mai Arr**	**53.52**	**256**	P	**P**	**08 17 17.4**	**0.0**
CMAR						08 18 21.5	
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
EDM	**Edmonton**	**54.70**	**47**	*e*P	**P**	**08 17 26.1**	**+0.4**
EDM				*e**PP	pP	08 17 36.3	-2.7
TAPN	**Taplejung**	**54.84**	**273**	*e*P	**P**	**08 17 28.3**	**+1.3**
JIRN	**Jiri**	**55.65**	**274**	*e*P	**P**	**08 17 33.5**	**+0.7**
	comp=Z,7.1nm,0.5s,mb4.9						
GUN	**Gumba**	**55.69**	**275**	*e*P	**P**	**08 17 33.1**	**0.0**
	comp=Z,9.1nm,0.5s,mb5.1						
RAMN	**Ramite**	**55.84**	**273**	*e*P	**P**	**08 17 34.6**	**+0.4**
DMN	**Daman**	**56.40**	**275**	*e*P	**P**	**08 17 39.0**	**+0.8**
	comp=Z,17nm,0.7s,mb5.2						
GKN	**Gorkha**	**56.46**	**276**	*e*P	**P**	**08 17 39.1**	**+0.5**
	comp=Z,14nm,0.5s,mb5.2						
ARCES	**ARCESS Array B**	**56.73**	**341**	LR	LR	08 47 18.6	
	comp=Z,75nm,18.7s,MS3.8,baz=222,slow=42						
DANN	**Dangsing**	**56.81**	**277**	*e*P	**P**	**08 17 42.1**	**+1.0**
	comp=Z,18nm,0.6s,mb5.3						
WALA	**Waterton Lakes**	**56.87**	**52**	*e*P	**P**	**08 17 40.7**	**-0.5**
	comp=Z,0.1nm,0.7s						
WALA				*e*pP	pP	08 17 54.0	-0.8
KOLN	**Koldanda**	**57.30**	**276**	*e*P	**P**	**08 17 45.1**	**+0.5**
	comp=Z,11nm,0.7s,mb5.0						
FFC	**Flin Flon**	**59.08**	**41**	*e*P	**P**	**08 17 57.6**	**+1.0**
FFC				*e**PP	pP	08 18 10.8	+0.7
FCC	**Fort Churchill**	**59.58**	**34**	*e*P	**P**	**08 17 59.9**	**-0.1**
	comp=Z,0.1nm,0.7s						
FCC				*e*pP	pP	08 18 12.5	-1.0
BOZ	**Bozeman (W)**	**60.21**	**54**	*e*P	**P**	**08 18 05.7**	**+1.2**
BOZ				*e**PP	pP	08 18 17.6	-0.5
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.3						
BOZ	**Bozeman (W)**	**60.21**	**54**	*e*P	**P**	**08 18 05.7**	**+1.1**
	comp=Z,5.4nm,1.5s,mb4.4						
BOZ				*e*pP	pP	08 18 17.6	-0.5
NVAR	**Mina Array Bea**	**61.03**	**64**	P	**P**	**08 18 11.7**	**+1.5**
	comp=Z,0.3nm,0.3s,mb3.9,baz=287,slow=5.1,SNR=5.2						
RRI2	**Red Ridge**	**61.87**	**56**	*e*P	**P**	**08 18 17.1**	**+1.3**
	comp=Z,4.8nm,1.0s,mb4.6						
RRI2				*e*pP	pP	08 18 31.0	+1.6
BW06	**Boulder Array**	**63.22**	**55**	*e*P	**P**	**08 18 25.0**	**+0.2**
	comp=Z,3.7nm,0.9s,mb4.5						
BW06				*e*pP	pP	08 18 39.0	+0.5
PDAR	**Pinedale Array**	**63.22**	**55**	P	**P**	**08 18 25.4**	**+0.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=320,slow=1.2,SNR=9.4						
PDAR				pP	pP	08 18 38.9	+0.4
	comp=Z,2.6nm,0.9s,baz=305,slow=1.6,SNR=12						
RSSD	**Black Hills**	**65.25**	**51**	*e*P	**P**	**08 18 38.9**	**+0.8**
RSSD				*e**PP	pP	08 18 52.5	+0.7
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
RSSD	**Black Hills**	**65.25**	**51**	*e*P	**P**	**08 18 38.9**	**+0.8**
	comp=Z,3.3nm,0.6s,mb4.5						
RSSD				*e*pP	pP	08 18 52.5	+0.7
PV10	**Paradox Valley**	**66.49**	**58**	*e*P	**P**	**08 18 47.5**	**+1.4**
NOA	**NORSAR Array B**	**67.09**	**342**	P	**P**	**08 18 48.6**	**-1.0**
	comp=Z,1.4nm,0.9s,mb4.0,baz=26,slow=6.3,SNR=3.6						
NOA	**NORSAR Array B**	**67.09**	**342**	P	**P**	**08 18 48.6**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HFS	**Hagfors**	**67.36**	**340**	LR	LR	08 50 22.7	
	comp=Z,91nm,18.3s,MS4.0,baz=68,slow=38						
SDCO	**Great Sand Dun**	**68.92**	**57**	*e*P	**P**	**08 19 02.6**	**+1.1**
	comp=Z,4.2nm,0.9s,mb4.4						
ECSD	**EROS,Sioux Fal**	**69.27**	**47**	*e*P	**P**	**08 19 02.3**	**-1.3**
	comp=Z,7.9nm,1.4s,mb4.5						
ECSD				*e*pP	pP	08 19 15.6	-1.8
WRAB	**Tennant Creek**	**70.17**	**200**	⇓*e*P	**P**	**08 19 08.9**	**-0.3**
WRAB	**Tennant Creek**	**70.17**	**200**	*e*P	**P**	**08 19 08.6**	**-0.5**
	comp=Z,6.6nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**70.18**	**200**	*e*P	**P**	**08 19 08.5**	**-0.7**
ANMO	**Albuquerque**	**70.36**	**59**	*e*P	**P**	**08 19 10.0**	**-0.4**
ANMO				*e**PP	pP	08 19 25.5	+1.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ANMO	**Albuquerque**	**70.36**	**59**	*e*P	**P**	**08 19 10.0**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.7						
ANMO				*e*pP	pP	08 19 25.5	+1.2
AKASG	**Malin Array Be**	**70.77**	**327**	P	**P**	**08 19 10.9**	**-1.7**
	comp=Z,1.5nm,0.6s,mb4.1,baz=34,slow=5.9,SNR=4.3						
AKASG	**Malin Array Be**	**70.77**	**327**	P	**P**	**08 19 10.9**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**70.83**	**209**	*e*P	**P**	**08 19 13.4**	**+0.1**
	comp=Z,4.3nm,0.7s,mb4.5						
SCHQ	**Schefferville**	**71.63**	**24**	P	**P**	**08 19 17.1**	**-0.6**
	comp=Z,15nm,1.2s,mb4.8,baz=250,slow=4.8,SNR=9.2						
DPC	**Dobruska-Polom**	**75.37**	**334**	*e*P	**P**	**08 19 39.7**	**-0.1**
CLL	**Collm**	**75.45**	**336**	*i* P	**P**	**08 19 39.3**	**-0.9**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
CLL	**Collm**	**75.45**	**336**	*i* P	**P**	**08 19 39.3**	**-0.9**
	comp=Z,7.0nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**08 19 44.6**	**+0.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=302,slow=5.2,SNR=30						
TXAR				pP	pP	08 19 58.7	+0.7
	comp=Z,0.8nm,0.6s,baz=299,slow=4.8,SNR=5.9						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**08 19 44.6**	**+0.5**
TXAR				*PP	pP	08 19 58.7	+0.6
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**08 19 44.6**	**+0.5**
TXAR				pP	pP	08 19 58.7	+0.7
KHC	**Kasperske Hory**	**77.26**	**335**	*e*P	**P**	**08 19 50.3**	**-0.2**
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**08 19 51.1**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=24,slow=7.5,SNR=8.0						
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**08 19 51.1**	**-0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**77.87**	**317**	P	**P**	**08 19 53.5**	**-0.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=38,slow=2.2,SNR=6.6						
BRTR	**Keskin Array B**	**77.87**	**317**	P	**P**	**08 19 53.5**	**-0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GIVF	**Givet**	**78.59**	**341**	*e*P	**P**	**08 19 58.1**	**+0.2**
MIV	**Mineville/With**	**78.93**	**33**	*e*P	**P**	**08 19 58.8**	**-1.0**
CDF	**Champ du Feu**	**79.59**	**338**	*e*P	**P**	**08 20 02.8**	**-0.6**
	comp=Z,18nm,1.2s,mb4.6						
CDF	**Champ du Feu**	**79.59**	**338**	*e*P	**P**	**08 20 02.8**	**-0.6**
CDF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
CDF	**Champ du Feu**	**79.59**	**338**	*e*P	**P**	**08 20 02.8**	**-0.6**
	comp=Z,9.1nm,1.2s,mb4.6						
FLN	**La Foliniere**	**80.96**	**343**	*e*P	**P**	**08 20 10.2**	**-0.5**
LDF	**La Druitiere**	**81.05**	**343**	*e*P	**P**	**08 20 10.3**	**-0.9**
GRR	**Gorron**	**81.39**	**344**	*e*P	**P**	**08 20 12.4**	**-0.6**
LOR	**Lormes**	**81.47**	**340**	*e*P	**P**	**08 20 12.7**	**-0.8**
CABF	**La Chapelle**	**81.56**	**338**	*e*P	**P**	**08 20 13.6**	**-0.4**
SSF	**Saint Saulge**	**81.75**	**340**	*e*P	**P**	**08 20 14.3**	**-0.6**
	comp=Z,20nm,1.1s,mb4.7						
SGMF	**Saint Gilles**	**81.83**	**345**	*e*P	**P**	**08 20 14.9**	**-0.4**
ROSF	**Rostrenen**	**81.87**	**345**	*e*P	**P**	**08 20 15.2**	**-0.4**
AVF	**Avril sur Loir**	**82.04**	**340**	*e*P	**P**	**08 20 15.9**	**-0.6**
	comp=Z,15nm,1.0s,mb4.6						
AVF	**Avril sur Loir**	**82.04**	**340**	*e*P	**P**	**08 20 15.9**	**-0.6**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
AVF	**Avril sur Loir**	**82.04**	**340**	*e*P	**P**	**08 20 15.9**	**-0.6**
	comp=Z,7.7nm,1.0s,mb4.6						
SMF	**Signal de Mont**	**82.06**	**340**	*e*P	**P**	**08 20 16.2**	**-0.4**
	comp=Z,32nm,1.1s,mb4.8						
FORT	**Forrest**	**82.10**	**203**	*e*P	**P**	**08 20 16.9**	**+0.2**
	comp=Z,18nm,0.6s,mb5.2						
QUIF	**Quistinic**	**82.26**	**345**	*e*P	**P**	**08 20 17.0**	**-0.6**
	comp=Z,75nm,1.3s,mb5.2						
BGF	**Bois d'Agland**	**82.37**	**341**	*e*P	**P**	**08 20 17.8**	**-0.4**
LPL	**La Plagne**	**82.42**	**338**	*e*P	**P**	**08 20 18.4**	**-0.1**
	comp=Z,7.4nm,0.7s,mb4.4						
LPL	**La Plagne**	**82.42**	**338**	*e*P	**P**	**08 20 18.4**	**-0.1**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**82.42**	**338**	*e*P	**P**	**08 20 18.4**	**-0.1**
	comp=Z,3.7nm,0.7s,mb4.4						
LPG	**La Plagne**	**82.44**	**338**	*e*P	**P**	**08 20 18.6**	**0.0**
TCF	**Toulx Ste Croi**	**82.77**	**341**	*e*P	**P**	**08 20 20.0**	**-0.3**
	comp=Z,9.0nm,0.7s,mb4.6						
TCF	**Toulx Ste Croi**	**82.77**	**341**	*e*P	**P**	**08 20 20.0**	**-0.3**
TCF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
TCF	**Toulx Ste Croi**	**82.77**	**341**	*e*P	**P**	**08 20 20.0**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.6						
MFF	**Saint Martin d**	**82.96**	**343**	*e*P	**P**	**08 20 21.0**	**-0.3**
MBDF	**Montbardon**	**83.15**	**337**	*e*P	**P**	**08 20 22.0**	**-0.3**
	comp=Z,7.6nm,0.7s,mb4.5						
MBDF	**Montbardon**	**83.15**	**337**	*e*P	**P**	**08 20 22.0**	**-0.3**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MBDF	**Montbardon**	**83.15**	**337**	*e*P	**P**	**08 20 22.0**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.20**	**338**	*e*P	**P**	**08 20 22.8**	**+0.3**
	comp=Z,24nm,1.1s,mb4.8						
VIVF	**Saint-Julien-l**	**83.55**	**339**	*e*P	**P**	**08 20 24.4**	**0.0**
SMRF	**Simiane la Rot**	**84.16**	**338**	*e*P	**P**	**08 20 27.6**	**+0.1**
FRF	**La Foret Royal**	**84.27**	**337**	*e*P	**P**	**08 20 27.5**	**-0.6**
LMR	**La Mourre**	**84.52**	**337**	*e*P	**P**	**08 20 28.8**	**-0.5**
SJPF	**Ste Jean**	**86.52**	**342**	*e*P	**P**	**08 20 38.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**114.23**	**331**	PKP	PKiKP	08 26 34.5	-1.6
	comp=Z,0.7nm,0.6s,baz=2.2,slow=2.3,SNR=11						
DBIC	**Dimbokro**	**122.34**	**335**	PKP	PKPdf	08 26 50.6	-1.1
	comp=Z,2.4nm,0.7s,baz=206,slow=2.7,SNR=4.4						
DBIC	**Dimbokro**	**122.34**	**335**	PKIKP	PKPdf	08 26 50.6	-1.1
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP	**Villa Florida**	**147.02**	**60**	PKPbc	PKPbc	08 27 37.9	-1.1
	comp=Z,1.4nm,0.6s,baz=340,slow=2.2,SNR=5.4						
CPUP	**Villa Florida**	**147.02**	**60**	PKP2	PKPbc	08 27 37.9	-1.1
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CPUP	**Villa Florida**	**147.02**	**60**	*e*PKPbc	PKPbc	08 27 37.9	-1.1
PLCA	**Paso Flores**	**147.50**	**94**	PKPbc	PKPbc	08 27 39.1	-0.8
	comp=Z,1.9nm,0.8s,baz=97,slow=1.6,SNR=5.0						
PLCA	**Paso Flores**	**147.50**	**94**	PKP2	PKPbc	08 27 39.1	-0.8
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VNA2	**Neumayer--Watz**	**155.64**	**194**	*e*PKPdf	PKPab	08 28 14.8	-0.3
	baz=250,slow=0.5						
VNA2				*e*		08 28 17.8	
VNA3	**Neumayer Olymp**	**155.72**	**193**	*e*PKPdf	PKPab	08 28 14.4	-1.0
VNA3				*e*		08 28 17.3	

CASC 11 08:15:26.9±1.9**,1269N**×**8999W,h20**^{km}±6^{km}**,MD4.0, ML3.0,3C-6D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.20**	**17**	⇑*e*P	x	08 15 48.0	
SBLS				*e*S	x	08 16 06.1	
SBLS				AML	x	08 16 11.5	
	comp=Z,682nm,0.6s						
SNJE	**San Jose**	**1.23**	**18**	*e*P	x	08 15 48.5	
SNJE				*e*S	x	08 16 07.1	
SNET	**Serv Nac Est T**	**1.24**	**37**	*e*P	x	08 15 48.6	
SNET				*e*S	x	08 16 05.6	
RTR	**El Retiro**	**1.25**	**16**	⇑*e*P	x	08 15 48.9	
RTR				*e*S	x	08 16 06.8	
BOQS	**Boqueron**	**1.25**	**34**	⇓*e*P	x	08 15 48.7	
BOQS				*e*S	x	08 16 07.0	
LBRS	**Las Brisas**	**1.39**	**41**	⇓*e*P	x	08 15 51.0	
LBRS				*e*S	x	08 16 09.1	
RBDL	**Robledal**	**1.45**	**12**	*e*P	x	08 15 51.5	
RBDL				*e*S	x	08 16 11.4	
SNVI	**San Vicente**	**1.45**	**51**	*e*P	x	08 15 52.3	
SNVI				*e*S	x	08 16 13.5	
SNVI				AML	x	08 16 22.2	
	comp=Z,109nm,0.5s						
IXG	**Ixpaco**	**1.54**	**343**	⇑*e*P	Pn	08 15 53.1	-0.2
MTO2	**Montecristo 2**	**1.81**	**20**	*e*P	x	08 15 56.6	
MTO2				*e*S	x	08 16 20.6	
VSM	**San Miguel**	**1.83**	**66**	⇓*e*P	x	08 15 58.3	
BLLM	**Bellamira**	**1.87**	**66**	*e*P	x	08 15 57.7	
BLLM				*e*S	x	08 16 20.7	
NBG	**Las Nubes**	**1.92**	**350**	⇓*e*P	Pn	08 16 00.1	+1.5
FUG	**Fuego 3**	**1.94**	**335**	*e*P	Pn	08 15 59.7	+1.0
CAHU	**Cacacuatique**	**2.04**	**58**	⇓*e*P	x	08 16 01.2	
CNCH	**Conchagua**	**2.18**	**74**	⇓*e*P	x	08 16 03.2	
CRIN	**San Cristobal**	**2.87**	**89**	*e*P	Pn	08 16 12.7	+1.1
COPN	**Copaltepe**	**3.36**	**98**	*e*P	Pn	08 16 18.5	+0.2

*ISCJB **11** 08:18:32.4±1.6, 480N±0.1×1546E±02, h40^{km}±18^{km}, mb3.3/4, Error ellipse: s-maj=28.7km s-min=9.3km az=135.7*
*MOS **11** 08:18:33.4±1.8, 48.15N×154.44E, h46^{km}, mb3.5/3, Error ellipse: s-maj=37.4km s-min=14.6km az=55.3*
*IDC **11** 08:18:36.5±3.0, 4808N×15453E, h68^{km}±26^{km}, mb3.1/4, mb1 3.5/7, mb1mx3.4/24, mbtmp3.4/7, Error ellipse: s-maj=38.2km s-min=16.0km az=143.0*
ISC 11 08:18:35.2±1.2**,480N**±01×**1546E**±02**,h50**^{km}±14^{km}**,n15, σ1§22**/17**,mb3.3**/4**,1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.86**	**19**	*e*PN	**Pn**	**08 19 16.0**	**-2.2**
SKR				*e*S	**Sn**	**08 19 45.5**	**-5.9**
SKR				pmax	pmax		
	comp=Z,80nm,0.4s						
SKR				smax			
	comp=N,240nm,0.2s						
SKR				smax			
	comp=E,360nm,0.2s						
PETK	**Petropavlovsk-**	**5.48**	**20**	P	**Pn**	**08 19 53.9**	**-0.2**
	comp=E,1.2nm,0.3s,baz=181,slow=11,SNR=54						
PETK				S	**Sn**	**08 20 57.3**	**+1.5**
	comp=E,0.1nm,0.3s,baz=196,slow=20,SNR=2.3						
PET	**Petropavlovsk**	**5.65**	**25**	⇓*e*PN	**Pn**	**08 19 56.7**	**+0.2**
ASAJ	**Asahikawa**	**9.22**	**250**	P	**Pn**	**08 20 47.0**	**+1.5**
	comp=E,1.4nm,0.3s,baz=75,slow=16,SNR=8.9						
ASAJ	**Asahikawa**	**9.22**	**250**	PN	**Pn**	**08 20 47.0**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**10.08**	**238**	*i* PN	**Pn**	**08 20 56.4**	**-0.8**
FX1	**Attu Island--F**	**12.77**	**61**	P	**Pn**	**08 21 33.6**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=87,slow=17,SNR=14						
FX1	**Attu Island--F**	**12.77**	**61**	PN	**Pn**	**08 21 33.7**	**-0.1**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**22.17**	**251**	P	**P**	**08 23 27.1**	**+0.4**
	comp=Z,0.7nm,0.6s,mb3.3,baz=43,slow=10,SNR=4.5						
KSRS	**Korea Array**	**22.17**	**251**	*e*P	**P**	**08 23 28.1**	**+1.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
MKAR	**Makanchi Array**	**47.30**	**297**	P	**P**	**08 27 01.2**	**-2.1**
	comp=Z,0.2nm,0.6s,mb3.3,baz=65,slow=9.0,SNR=2.3						
YKA	**Yellowknife Ar**	**49.31**	**38**	P	**P**	**08 27 18.0**	**-0.6**
	comp=Z,0.5nm,0.9s,mb3.5,baz=296,slow=7.4,SNR=4.1						
YKA	**Yellowknife Ar**	**49.31**	**38**	*e*P	**P**	**08 27 19.5**	**+0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**75.99**	**62**	P	**P**	**08 30 16.9**	**0.0**
	comp=Z,0.1nm,0.4s,mb3.1,baz=300,slow=4.3,SNR=4.8						
TXAR	**Lajitas Array**	**75.99**	**62**	*e*P	**P**	**08 30 18.3**	**+1.4**

*NIED **11** 08:27:00, 3030N×13140E, h29^{km}, Mw4.1 Best double couple: M$_0$1.40000×10^{15} NP1:φ$_s$49.00000°, δ61.00000°, λ136.00000°. NP2:φ$_s$164.00000°, δ52.00000°, λ38.00000°.*
*ISCJB **11** 08:27:16.3±0.9, 3033N±005×13137E±007, h46^{km}±6^{km}, mb3.9/8, MS3.4/3, Error ellipse: s-maj=11.7km s-min=6.0km az=30.0*
*JMA **11** 08:27:16.1±0.1, 3034N×13138E, h27^{km}±1^{km}, M4.0*
JMA Felt I J1.
*IDC **11** 08:27:18.9±2.5, 3032N×13124E, h54^{km}±22^{km}, mb3.7/8, mb1 3.7/11, mb1mx3.6/24, mbtmp3.7/11, ML3.1/3, MS3.4/3, Ms1 3.4/3, ms1mx2.9/28, Error ellipse: s-maj=46.7km s-min=16.1km az=119.0*
ISC 11 08:27:17.2±1.1**,3036N**±004×**13132E**±006**,h31**^{km}±6^{km}**, n23,**σ**1§06**/30**,mb3.9**/8**,MS3.4**/3**,4C-1D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.42**	**315**	⇓P	**Pb**	**08 27 25.5**	**-0.8**
JTN				S	**Sb**	**08 27 32.3**	**-0.4**
JTSR	**Tashiro 2**	**0.88**	**337**	⇑P	**Pn**	**08 27 32.9**	**-0.5**
JTSR				S	**Sn**	**08 27 44.9**	**-0.2**
JKC	**Kuchinoerabu**	**0.98**	**276**	P	**Pn**	**08 27 34.7**	**0.0**
JKC				S	**Sn**	**08 27 48.5**	**+1.0**
JNAR	**Kushima--Naru**	**1.17**	**358**	P	**Pn**	**08 27 37.4**	**0.0**
JNAR				*e*S	**Sn**	**08 27 52.3**	**+0.1**
JNN	**Nakanoshima**	**1.35**	**248**	P	**Pn**	**08 27 40.5**	**+0.6**
JNN				S	**Sn**	**08 27 58.2**	**+1.3**
JSU	**Suzuyama**	**1.36**	**327**	⇑P	**Pn**	**08 27 39.8**	**-0.3**
JTZ	**Takazaki**	**1.55**	**353**	⇑P	**Pn**	**08 27 43.0**	**+0.3**
JTZ				S	**Sn**	**08 28 03.0**	**+1.3**
JZO	**Okuchi**	**1.88**	**341**	⇑P	**Pn**	**08 27 47.1**	**-0.1**
JSJ	**Shimokoshiki**	**1.91**	**314**	P	**Pn**	**08 27 46.8**	**-0.7**
JSJ				S	**Sn**	**08 28 10.8**	**+0.3**
JOW	**Kunigami**	**4.42**	**218**	P	**Pn**	**08 28 24.3**	**+2.2**
	1.0nm,0.3s,baz=100,slow=17,SNR=3.6						
JOW				S	**Sn**	**08 29 11.7**	**-0.8**
	2.0nm,0.3s,baz=97,slow=29,SNR=3.2						
KSRS	**Korea Array**	**7.62**	**339**	P	**Pn**	**08 29 08.6**	**+2.5**
	0.4nm,0.3s,baz=148,slow=14,SNR=3.9						
MAT	**Matsushiro**	**8.43**	**41**	P	**Pn**	**08 29 18.3**	**+1.1**
MAT				*e*S	**Sn**	**08 30 46.0**	**-5.3**
MJAR	**Matsushiro Arr**	**8.43**	**41**	P	**Pn**	**08 29 18.5**	**+1.3**
	1.1nm,0.3s,baz=247,slow=14,SNR=7.9						
SONM	**Songino Array**	**25.88**	**319**	P	**P**	**08 32 45.1**	**-0.9**
	0.8nm,0.7s,mb3.4,baz=141,slow=9.6,SNR=4.7						
SONM				LR	LR	08 44 32.8	
	comp=Z,68nm,18.3s,MS3.2,baz=19,slow=40						
ZALV	**Zalesovo Beam**	**40.77**	**319**	LR	LR	08 53 13.8	
	comp=Z,38nm,18.6s,MS3.3,baz=32,slow=38						
MKAR	**Makanchi Array**	**41.00**	**308**	P	**P**	**08 34 55.2**	**-1.9**
	0.7nm,0.8s,mb3.4,baz=88,slow=8.6,SNR=6.4						
BVAR	**Borovoye Array**	**49.12**	**316**	P	**P**	**08 36 00.6**	**-1.1**
	0.8nm,0.4s,mb4.1,baz=91,slow=9.5,SNR=4.8						
AKTO	**Aktyubinsk**	**56.95**	**313**	LR	LR	09 02 30.6	
	comp=Z,56nm,18.5s,MS3.7,baz=280,slow=37						
ARCES	**ARCESS Array B**	**67.18**	**338**	P	**P**	**08 38 08.2**	**+0.5**
	3.2nm,0.9s,mb4.3,baz=51,slow=20,SNR=3.3						
AKASG	**Malin Array Be**	**74.16**	**320**	P	**P**	**08 38 48.7**	**-1.9**
	0.8nm,0.5s,mb3.9,baz=60,slow=5.4,SNR=3.5						
HFS	**Hagfors**	**76.42**	**333**	P	**P**	**08 39 02.3**	**-1.1**
	2.2nm,0.8s,mb4.1,baz=79,slow=7.5,SNR=4.6						
BRTR	**Keskin Array B**	**76.64**	**308**	P	**P**	**08 39 05.6**	**+0.6**
	2.4nm,0.8s,mb4.2,baz=99,slow=6.4,SNR=10.0						
NOA	**NORSAR Array B**	**76.81**	**334**	P	**P**	**08 39 03.7**	**-1.8**
	0.7nm,0.6s,mb3.7,baz=50,slow=5.6,SNR=2.7						

*ISCJB **11** 08:38:05.9±0.8, 2866N±003×3481E±006, h10^{km}, Error ellipse: s-maj=8.2km s-min=4.2km az=162.1*
*SGS **11** 08:38:05.4, 2858N×3477E, h20^{km}*
*CSEM **11** 08:38:06.1±0.1, 2846N×3496E, h10^{km}, ML3.4, Error ellipse: s-maj=2.6km s-min=1.3km az=114.0*
*NEIC **11** 08:38:08.9, 2884N×3487E, h1^{km}, MD4.0(GII), After GII.*
*GII **11** 08:38:08.0±1.1, 2884N×3486E, h0^{km}±3^{km}, mb4.1/4, ML3.9/5, Mw3.0/2*
ISC 11 08:38:06.3±0.8**,2864N**±003×**3481E**±006**,h10**^{km}**,n26, σ1§07**/35**,1C,Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDAS	**Al Bad'**	**0.33**	**129**	P	**Pg**	**08 38 12.5**	**-0.3**
RSHS		**0.34**	**182**	P	**Pg**	**08 38 11.8**	**-1.2**
JLOS		**0.61**	**81**	P	**Pg**	**08 38 17.9**	**-0.2**
JLOS		**0.61**	**81**	P	**Pg**	**08 38 17.9**	**-0.2**
JLOS				S	**Sg**	**08 38 27.0**	**+0.9**
HQLS		**0.70**	**19**	P	**Pg**	**08 38 19.2**	**-0.6**
HQLS		**0.70**	**19**	P	**Pg**	**08 38 19.2**	**-0.6**
HQLS				S	**Sg**	**08 38 29.9**	**+0.9**
GLFJ		**0.89**	**11**	*e*P	**Pg**	**08 38 23.2**	**-0.2**
	SNR=44						
EIL	**Elat**	**1.04**	**7**	⇑Pg	**Pg**	**08 38 25.8**	**-0.5**
EIL	**Elat**	**1.04**	**7**	Pg	**Pg**	**08 38 25.0**	**-1.3**
EIL				Sg	**Sg**	**08 38 38.7**	**-1.1**
AQBJ	**Aqaba**	**1.11**	**11**	Pg	**Pg**	**08 38 27.0**	**-0.7**
MBRI	**Mt Berech**	**1.16**	**5**	Pg	**Pg**	**08 38 27.6**	**-0.9**
MBRI				Sg	**Sg**	**08 38 43.2**	**-0.4**
HRFI	**Mount Harif**	**1.41**	**8**	Pg	**Pg**	**08 38 32.1**	**-1.3**
HRFI				Sg	**Sg**	**08 38 50.2**	**-1.5**
KRMI	**Paran Flat**	**1.48**	**357**	Pg	**Pg**	**08 38 33.3**	**-1.4**
KRMI	**Paran Flat**	**1.48**	**357**	Pg	**Pg**	**08 38 33.0**	**-1.7**
KRMI				Sg	**Sg**	**08 38 53.6**	**-0.3**
TBKS	**Tabuk**	**1.58**	**105**	P	**Pn**	**08 38 33.8**	**-0.6**
PRNI	**Paran**	**1.72**	**6**	Pn	**Pn**	**08 38 37.6**	**+1.3**
PRNI				S	**Sn**	**08 38 59.0**	**+0.7**
PRNI	**Paran**	**1.72**	**6**	Pn	**Pn**	**08 38 37.4**	**+1.1**
PRNI				Sn	**Sn**	**08 38 59.0**	**+0.7**
ZFRI	**Zfri**	**1.94**	**9**	Pn	**Pn**	**08 38 41.8**	**+2.5**
ZFRI	**Zfri**	**1.94**	**9**	Pn	**Pn**	**08 38 40.5**	**+1.2**
RMNI	**Mount Ramon**	**1.95**	**359**	Pn	**Pn**	**08 38 41.2**	**+1.7**
RMNI	**Mount Ramon**	**1.95**	**359**	Pn	**Pn**	**08 38 41.0**	**+1.5**
KZIT	**Kziot**	**2.29**	**351**	Pn	**Pn**	**08 38 44.9**	**+0.7**
KZIT				Sn	**Sn**	**08 39 14.0**	**+1.6**
RTMI	**Retamim**	**2.41**	**358**	Pn	**Pn**	**08 38 47.5**	**+1.7**
RTMI	**Retamim**	**2.41**	**358**	Pn	**Pn**	**08 38 46.5**	**+0.7**
HMDT	**Nahal Hemdat**	**3.66**	**10**	Pn	**Pn**	**08 39 04.8**	**+1.8**
HMDT	**Nahal Hemdat**	**3.66**	**10**	Pn	**Pn**	**08 39 04.4**	**+1.4**

GUC 11 09:06:28.3±0.8**,3216S**×**7166W,h24**^{km}±4^{km}**,MD3.7, ML2.5,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.30**	**26**	*e*P	Pb	09 06 35.0	-0.3
CHNG				*e*S	Sb	09 06 40.4	+0.4
PEL	**Peldehue**	**1.28**	**141**	*e*P	Pn	09 06 50.4	-0.3
PEL				*i* S	Sn	09 07 07.9	+0.8
PEL				AML	AML	09 07 13.7	
	comp=E,218nm,0.3s						
CLCH	**Cerro Calan**	**1.55**	**143**	*e*P	Pn	09 06 55.1	+0.6
CLCH				*i* S	Sn	09 07 15.5	+1.7
CLCH				AML	AML	09 07 19.2	
	comp=E,128nm,0.3s						
TACH	**Talagante**	**1.61**	**158**	*e*P	Pn	09 06 55.9	+0.6
FCH	**Farellones**	**1.64**	**136**	*e*P	Pn	09 06 56.6	+1.0
FCH				*i* S	Sn	09 07 18.0	+2.1
FCH				AML	AML	09 07 21.2	
	comp=E,68nm,0.4s						
PCH	**Pirque**	**1.75**	**147**	*e*P	Pn	09 06 57.3	+0.2
TLL	**Tololo Astrono**	**2.11**	**20**	*e*P	Pn	09 07 03.7	+1.6
TLL				*i* S	Sn	09 07 31.1	+3.5
TLL				AML	AML	09 07 38.8	
	comp=N,58nm,0.5s						

MAN 11 09:09:41,960N×**12219E,h30**^{km}**,mb4.4,ML3.2,MS3.0, 1C-1D,Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.06**	**104**	⇓*i*P	Pn	09 10 00.5	+0.7
SNPH				*i* S	Sn	09 10 14.0	+0.5
GUIM	**Jordan**	**1.09**	**21**	*e*P	Pn	09 09 59.2	-1.1
GUIM				*e*S	Sn	09 10 12.4	-2.1
TBP	**Tagbilaran**	**1.65**	**87**	*e*P	Pn	09 10 08.4	+0.5
TBP				*e*S	Sn	09 10 29.5	+1.4
CUYO	**Cuyo Island**	**1.70**	**317**	*e*P	Pn	09 10 09.9	+1.2
CUYO				*e*S	Sn	09 10 30.2	+0.8
IPIL	**Ipil**	**1.83**	**168**	*e*P	Pn	09 10 11.4	+0.9
IPIL				*e*S	Sn	09 10 33.3	+0.6
LLP	**Lapu-Lapu**	**1.89**	**68**	*e*P	Pn	09 10 11.7	+0.5
LLP				*e*S	Sn	09 10 30.7	-3.3
RCP	**Roxas**	**2.03**	**15**	⇑*e*P	Pn	09 10 15.4	+2.2
RCP				*e*S	Sn	09 10 38.8	+1.4
KALP	**Kalibo**	**2.07**	**4**	*e*P	Sx	09 10 56.0	
PAGZ	**Pagadian**	**2.10**	**146**	*e*P	Pn	09 10 17.6	+3.5
MSLP	**Maasin**	**2.68**	**78**	*e*P	Pn	09 10 24.6	+2.5
MSLP				*e*S	Sn	09 10 57.3	+3.7
OTRP	**Odiongan**	**2.75**	**356**	*e*P	Pn	09 10 24.7	+1.5
BUSP	**Coron**	**3.09**	**321**	*e*P	Pn	09 10 29.2	+1.4
BUSP				*e*S	Sn	09 11 03.4	-0.4
ENPP	**El Nido**	**3.16**	**301**	*e*P	Pn	09 10 30.4	+1.7
ENPP				*e*S	Sn	09 11 04.8	-0.6

IDC 11 09:10:05.0±15.0**,656S**×**1497W,h0**^{km}**,mb3.8**/3**, mb1 3.9**/3**,mb1mx3.6**/20**,mbtmp3.8**/3**,MS3.5**/3**,Ms1 3.5**/3**, ms1mx3.2**/22**,Error ellipse: s-maj=438.9km s-min=126.4km az=163.0,Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**25.64**	**40**	P	P	09 15 36.6	+0.1
	2.7nm,0.9s,baz=218,slow=8.7,SNR=8.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TORD				LR	LR	09 24 45.7	
	comp=Z,141nm,19.0s,baz=245,slow=34						
BDFB	**Brasilia**	**33.61**	**252**	LR	LR	09 27 46.2	
	comp=Z,46nm,21.9s,baz=264,slow=32						
CPUP	**Villa Florida**	**44.85**	**239**	LR	LR	09 33 52.4	
	comp=Z,83nm,18.8s,baz=11,slow=32						
GERES	**GERESS Array B**	**60.62**	**21**	P	P	09 20 17.7	+0.1
	0.2nm,0.3s,baz=209,slow=7.9,SNR=2.3						
AKASG	**Malin Array Be**	**68.57**	**28**	P	P	09 21 09.6	+0.1
	1.5nm,0.6s,baz=226,slow=7.2,SNR=5.9						

*DJA **11** 09:34:32, 26.28S×177.67W, h10^{km}, mb5.4/6*
*ISCJB **11** 09:34:41.1±1.2, 25.54S±0.07×177.36W±0.07, h137^{km}±11^{km}, mb4.5/21, Error ellipse: s-maj=12.9km s-min=9.2km az=142.7*
*NEIC **11** 09:34:44.7±0.3, 25.64S×177.33W, mb4.9/10, Error ellipse: s-maj=11.6km s-min=8.6km az=142.0*
*GCMT **11** 09:34:44.7±0.4, 25.69S×177.28W, h183^{km}±3^{km}, MW5.0/63, Moment Tensor Solution. s28,c35; s63,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.58±.14; $M_{\theta\theta}$0.32±.21; $M_{\phi\phi}$-1.90±.19; $M_{r\theta}$-1.02±.14; $M_{\theta\phi}$-3.41±.13; $M_{\phi r}$1.93±.12; Best double couple: $M_0$4.41000×10^{16} NP1:ϕ_s255.00000°,δ57.00000°,λ159.00000°. NP2: ϕ_s357.00000°,δ72.00000°,λ35.00000°. Principal axes: T 4.2790, Plg37.0000°, Azm221.0000°; N 0.2650, Plg51.0000°, Azm21.0000°; P -4.5410, Plg10.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **11** 09:34:45.2±0.7, 25.68S×177.33W, h160^{km}±6^{km}, mb4.1/12, mb1 4.4/15, mb1mx4.4/16, mbtmp4.2/15, MS3.9/4, Ms1 3.9/4, ms1mx3.4/23 Error ellipse: s-maj=15.7km s-min=9.8km az=102.0*
ISC 11 09:34:42.4±1.2**, 25.54S**±0.07×**177.34W**±0.08**, h136**^{km}±11^{km}**, h161**^{km}±2.4^{km}**:pP-P, n90,** σ1^{s}**17**/53**, mb4.5**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.73**	**188**	P	**Pn**	**09 35 38.6**	**-0.2**
	78nm,0.3s,baz=36,slow=19,SNR=2.4						
RAO				S	**Sn**	**09 36 23.3**	**+0.9**
	628nm,0.3s,baz=88,slow=23,SNR=14						
RAO				LR	LR	09 36 34.6	
	comp=Z,464nm,20.3s,baz=352,slow=30						
AFI	**Afiamalu**	**12.70**	**25**	P	**Pn**	**09 37 35.6**	**-2.7**
	9.1nm,0.3s,baz=213,slow=8.3,SNR=14						
AFI				S	**Sn**	**09 39 46.6**	**-12**
	16nm,0.3s,baz=232,slow=21,SNR=8.3						
AFI	**Afiamalu**	**12.70**	**25**	*e*Pn	**Pn**	**09 37 35.2**	**-3.0**
AFI				S	**Sn**	**09 39 46.6**	**-12**
URZ	**Urewera**	**13.52**	**199**	P	**Pn**	**09 37 48.9**	**+0.2**
	1.7nm,0.3s,baz=344,slow=3.2,SNR=14						
URZ				S	**Sn**	**09 40 03.3**	**-15**
	11nm,0.3s,baz=311,slow=18,SNR=15						
DZM	**Mont Dzumac**	**15.24**	**280**	*e*P	**Pn**	**09 38 17.8**	**+7.2**
RAR	**Rarotonga**	**16.69**	**79**	P	**Pn**	**09 38 27.8**	**-0.5**
	1.3nm,0.3s,baz=236,slow=7.3,SNR=2.5						
RAR				S	**S**	**09 41 24.6**	**-10**
	2.6nm,0.3s,baz=256,slow=16,SNR=4.0						
SNZO	**South Karori**	**17.06**	**201**	*e*P	**Pn**	**09 38 26.9**	**-5.8**
RPZ	**Rata Peaks**	**20.45**	**205**	P	**P**	**09 39 03.6**	**-5.6**
	5.7nm,0.6s,baz=70,slow=15,SNR=5.1						
RPZ				S	**S**	**09 42 33.6**	**-17**
	8.0nm,0.5s,baz=142,slow=12,SNR=7.3						
PPT	**Papeete**	**26.97**	**78**	*e*LR	LR	09 46 48.2	
	130nm,29.8s						
ARMA	**Armidale**	**27.79**	**253**	*e*P	**P**	**09 40 21.0**	**+2.3**
EIDS	**Eidsvold**	**28.48**	**263**	*e*P	**P**	**09 40 26.1**	**+1.2**
	36nm,0.8s,mb5.2						
CNB	**Canberra Magne**	**30.20**	**243**	*e*P	**P**	**09 40 41.0**	**+1.0**
CAN	**Canberra**	**30.50**	**243**	*e*P	**P**	**09 40 43.8**	**+1.2**
TOO	**Toolangi**	**33.66**	**240**	*e*P	**P**	**09 41 10.3**	**0.0**
CTA	**Charters Tower**	**33.93**	**272**	*e*P	**P**	**09 41 13.2**	**+0.5**
	11nm,0.4s,mb4.9						
CTA	**Charters Tower**	**33.93**	**272**	P	**P**	**09 41 13.3**	**+0.6**
	12nm,0.4s,mb5.0,baz=98,slow=10,SNR=33						
CTAO	**Charters Tower**	**33.93**	**272**	*e*P	**P**	**09 41 13.0**	**+0.3**
	14nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**36.41**	**250**	*e*P	**P**	**09 41 33.6**	**-0.3**
	7.0nm,0.4s,mb4.6						
STKA				*e*		09 43 55.9	
STKA	**Stephens Creek**	**36.41**	**250**	P	**P**	**09 41 33.8**	**-0.1**
	6.6nm,0.4s,mb4.7,baz=97,slow=10,SNR=42						
STKA				PcP	PcP	09 43 55.7	+0.4
	2.1nm,0.5s,baz=71,slow=6.4,SNR=4.4						
STKA	**Stephens Creek**	**36.41**	**250**	*e*P	**P**	**09 41 33.4**	**-0.5**
STKA				*e*		09 43 55.9	
WB2	**Warramunga Arr**	**44.72**	**267**	*e*P	**P**	**09 42 40.9**	**-1.4**
WB2				*e*S	**S**	**09 49 03.4**	**-5.5**
WRAB	**Tennant Creek**	**44.72**	**267**	*e*P	**P**	**09 42 41.0**	**-1.3**
	14nm,0.5s,mb4.8						
FORT	**Forrest**	**48.03**	**251**	*e*P	**P**	**09 43 05.8**	**-2.3**
	60nm,0.6s,mb5.4						
SBA	**Scott Base**	**52.91**	**184**	*e*P	**P**	**09 43 45.7**	**+1.8**
	16nm,0.8s,mb4.8						
VNDA	**Vanda**	**52.97**	**186**	P	**P**	**09 43 45.1**	**+0.7**
	5.3nm,0.7s,mb4.4,baz=34,slow=9.8,SNR=24						
FITZ	**Fitzroy Crossi**	**53.12**	**266**	*e*P	**P**	**09 43 45.8**	**-0.6**
	24nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**53.12**	**266**	*e*P	**P**	**09 43 45.9**	**-0.6**
GUMO	**Guam**	**53.56**	**312**	LR	LR	10 01 58.8	
	comp=Z,112nm,20.9s,baz=100,slow=30						
KLBR	**Kellerberrin**	**56.60**	**248**	*e*P	**P**	**09 44 09.1**	**-2.2**
	8.7nm,0.5s,mb4.8						
BATI	**Baumata**	**57.76**	**274**	LR	LR	10 06 34.3	
	comp=Z,209nm,18.5s,baz=309,slow=33						
MUN	**Mundaring**	**57.81**	**247**	*e*P	**P**	**09 44 18.2**	**-1.6**
CASY	**Casey**	**59.71**	**206**	*e*P	**P**	**09 44 31.1**	**-1.2**
JOW	**Kunigami**	**73.89**	**311**	LR	LR	10 12 41.5	
	comp=Z,122nm,19.6s,baz=103,slow=31						
MJAR	**Matsushiro Arr**	**74.63**	**324**	P	**P**	**09 46 06.8**	**+0.1**
	0.9nm,0.7s,mb3.5,baz=159,slow=4.8,SNR=3.1						
MAW	**Mawson**	**77.05**	**200**	*e*P	**P**	**09 46 19.7**	**-0.4**
	16nm,0.5s,mb4.9						
MAW	**Mawson**	**77.05**	**200**	P	**P**	**09 46 19.8**	**-0.3**
	24nm,0.6s,mb5.0,baz=123,slow=7.5,SNR=42						
KSRS	**Korea Array**	**81.06**	**319**	P	**P**	**09 46 43.5**	**+1.2**
	2.7nm,0.5s,mb4.1,baz=130,slow=5.8,SNR=14						
PETK	**Petropavlovsk-**	**81.28**	**345**	P	**P**	**09 46 43.6**	**+0.6**
	3.3nm,0.6s,mb4.2,baz=115,slow=5.7,SNR=8.8						
SNAA	**Sanae**	**82.98**	**178**	*e*	**P**	**09 46 50.5**	**-1.3**
SNAA				*e*		09 46 53.1	
SNAA	**Sanae**	**82.98**	**178**	*e*P	**P**	**09 46 50.4**	**-1.5**
	20nm,0.9s,mb4.8						
VNA3	**Neumayer Olymp**	**83.09**	**176**	*e*	**P**	**09 46 51.1**	**-1.4**
VNA3				*e*		09 46 53.7	
VNA2	**Neumayer--Watz**	**83.54**	**177**	*e*	**P**	**09 46 53.9**	**-0.8**
	baz=191,slow=2.9						
VNA2				*e*		09 46 56.5	
VNA1	**Neumayer--Stat**	**83.76**	**176**	*e*	**P**	**09 46 55.4**	**-0.5**
NVAR	**Mina Array Bea**	**84.28**	**43**	P	**P**	**09 46 60.0**	**+1.1**
	2.4nm,0.7s,mb4.0,baz=226,slow=8.9,SNR=6.4						
NVAR				pP	pP	09 47 40.4	+7.1
	1.5nm,0.8s,baz=224,slow=6.2,SNR=2.7						
PLCA	**Paso Flores**	**85.38**	**133**	P	**P**	**09 47 04.5**	**-0.1**
	3.1nm,1.1s,mb4.0,baz=231,slow=6.5,SNR=6.0						
PLCA				pP	pP	09 47 45.6	+6.6
	3.1nm,1.0s,baz=260,slow=3.3,SNR=3.0						
TXAR	**Lajitas Array**	**89.27**	**57**	P	**P**	**09 47 24.7**	**+1.4**
	0.7nm,0.8s,mb3.6,baz=210,slow=7.2,SNR=7.9						
TXAR				pP	pP	09 48 03.4	+5.4
	0.2nm,0.8s,baz=171,slow=30,SNR=1.8						
BW06	**Boulder Array**	**92.21**	**43**	*e*P	**P**	**09 47 37.5**	**+0.8**
	1.1nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**92.21**	**43**	P	**P**	**09 47 37.3**	**+0.7**
	1.2nm,0.6s,mb4.1,baz=223,slow=3.5,SNR=14						
PDAR				pP	pP	09 48 18.0	+6.6
	1.6nm,1.1s,baz=198,slow=4.4,SNR=5.0						
PDAR				PKKP	PKKPbc	10 04 50.0	-2.8
	0.5nm,0.7s,baz=57,slow=3.3,SNR=4.6						
PDAR	**Pinedale Array**	**92.21**	**43**	P	**P**	**09 47 37.3**	**+0.7**
PDAR				pP	pP	09 48 18.0	+6.6
PDAR				PKKP	PKKPbc	10 04 50.0	-2.8
CMAR	**Chiang Mai Arr**	**92.36**	**289**	P	**P**	**09 47 39.8**	**+1.8**
	1.5nm,0.3s,mb4.5,baz=137,slow=5.3,SNR=7.4						
SONM	**Songino Array**	**99.93**	**318**	P	Pdif	09 48 13.7	+1.9
	0.2nm,0.4s,baz=134,slow=2.1,SNR=2.8						
YKA	**Yellowknife Ar**	**100.81**	**25**	PKKPbc	PKKPbc	10 04 26.5	-3.4
	0.3nm,0.9s,baz=41,slow=2.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**114.76**	**320**	PKP	PKiKP	09 53 05.0	-1.4
	2.2nm,0.6s,baz=84,slow=4.5,SNR=7.4						
MKAR	**Makanchi Array**	**115.05**	**312**	PKP	PKiKP	09 53 05.6	-1.5
	2.0nm,0.5s,baz=73,slow=2.0,SNR=9.7						
KURK	**Kurchatov**	**118.06**	**316**	PKP	PKPdf	09 53 11.7	-1.1
	3.3nm,0.6s,baz=104,slow=1.8,SNR=13						
BOSA	**Boshof**	**121.94**	**203**	PKP	PKPdf	09 53 20.6	-0.6
	1.9nm,0.5s,baz=186,slow=2.0,SNR=7.4						
BVAR	**Borovoye Array**	**123.27**	**318**	PKP	PKPdf	09 53 22.0	-0.7
	5.1nm,0.6s,baz=121,slow=3.5,SNR=21						
AKTK	**Aktyubinsk**	**131.16**	**316**	PKP	PKPdf	09 53 37.3	-0.6
AKTO	**Aktyubinsk**	**131.16**	**316**	PKP	PKPdf	09 53 37.3	-0.6
	2.6nm,0.7s,baz=98,slow=2.3,SNR=12						
ARCES	**ARCESS Array B**	**133.97**	**349**	PKP	PKPdf	09 53 41.9	-0.7
	4.0nm,0.5s,baz=77,slow=1.8,SNR=22						
ARCES	**ARCESS Array B**	**133.97**	**349**	PKP	PKPdf	09 53 41.9	-0.7
JOF	**Joensuu**	**138.08**	**341**	*e*p	PKPdf	09 53 50.7	+0.2
	2.0nm,0.3s						
JOF	**Joensuu**	**138.08**	**341**	*e*p	PKPdf	09 53 50.7	+0.2
	2.0nm,0.3s						
KAF	**Kangasniemi**	**140.14**	**343**	*e*p	PKPdf	09 53 55.5	+1.3
	1.3nm,0.4s						
KAF	**Kangasniemi**	**140.14**	**343**	*e*p	PKPdf	09 53 55.4	+1.2
	1.3nm,0.4s						
KAF	**Kangasniemi**	**140.14**	**343**	*e*P	PKPdf	09 53 55.4	+1.2
NB2	**NORSAR Subarra**	**144.04**	**353**	PKP	PKPdf	09 53 58.9	-2.3
	comp=Z,16nm,0.6s,baz=9.3,slow=3.3						
NOA	**NORSAR Array B**	**144.04**	**353**	PKP	PKPdf	09 53 58.8	-2.4
	comp=Z,8.3nm,0.7s,baz=18,slow=2.8,SNR=57						
AKASG	**Malin Array Be**	**147.65**	**328**	PKPbc	PKPbc	09 54 09.4	-1.2
	comp=Z,7.6nm,0.4s,baz=44,slow=3.9,SNR=33						
AKBB	**Malin Array Si**	**147.65**	**328**	*e*PKPbc	PKPbc	09 54 09.6	-1.0
KIEV	**Kiev**	**147.66**	**328**	*e*PKPbc	PKPbc	09 54 09.5	-1.1
BR131	**Keskin Array S**	**150.50**	**306**	*e*PKPbc	PKPbc	09 54 17.7	-0.5
BR131				*e*PKPab	PKPab	09 54 25.8	+0.6
BRTR	**Keskin Array B**	**150.50**	**306**	PKPbc	PKPbc	09 54 17.3	-0.8
	comp=Z,5.3nm,0.6s,baz=138,slow=4.5,SNR=22						
BRTR				PKPab	PKPab	09 54 25.6	+0.4
	comp=Z,8.0nm,0.7s,baz=104,slow=4.4,SNR=16						
BRTR	**Keskin Array B**	**150.50**	**306**	PKPbc	PKPbc	09 54 17.3	-0.8
BRTR				PKPab	PKPab	09 54 25.6	+0.4
BUR08	**Bucovina Ar. S**	**151.66**	**327**	*e*PKPbc	PKPbc	09 54 21.0	+0.5
KOLS	**Kolonicke sedl**	**152.07**	**332**	*e*PKP	PKPbc	09 54 22.5	+1.1
KOLS	**Kolonicke sedl**	**152.07**	**332**	*e*PKP	PKPbc	09 54 22.5	+1.1
CLL	**Collm**	**153.08**	**346**	*i* PKPbc	PKPbc	09 54 23.7	+0.1
	comp=Z,11nm,0.7s						
BRG	**Berggiesshubel**	**153.26**	**344**	*e*PKP	PKPbc	09 54 24.3	+0.3
	comp=Z,6.3nm,0.6s						
BRG				*e*		09 54 37.4	
	comp=Z,6.2nm,0.8s						
VYHS	**Vyhne**	**153.81**	**335**	*e*PKP	PKPbc	09 54 27.8	+2.5
VYHS				*e*		09 54 40.2	
VYHS	**Vyhne**	**153.81**	**335**	*e*PKP	PKPbc	09 54 27.8	+2.5
VYHS				*e*		09 54 40.2	
GERES	**GERESS Array B**	**155.19**	**342**	PKPbc	PKPdf	09 54 28.0	+8.8
	comp=Z,0.6nm,0.6s,baz=352,slow=2.0,SNR=4.3						
GERES				PKPab	PKPab	09 54 45.3	+0.7
	comp=Z,0.8nm,0.6s,baz=32,slow=7.8,SNR=4.9						
LIC	**Lamto**	**159.43**	**158**	*e*PKP1	PKPab	09 55 02.8	-1.0
	comp=Z,28nm,0.7s						
KIC	**Kosan Boka**	**159.65**	**158**	*e*PKP1	PKPab	09 55 03.6	-1.2
	comp=Z,63nm,0.8s						
TIC	**Toumodi**	**159.82**	**157**	*e*PKP1	PKPab	09 55 04.2	-1.3
	comp=Z,13nm,0.3s						
DBIC	**Dimbokro**	**159.90**	**158**	PKP	PKPdf	09 54 25.4	-0.8
	comp=Z,2.2nm,0.7s,baz=236,slow=3.6,SNR=3.6						
DBIC				PKPab	PKPab	09 55 04.8	-1.0
	comp=Z,5.9nm,0.8s,baz=175,slow=5.4,SNR=9.2						
DBIC	**Dimbokro**	**159.90**	**158**	PKP	PKPdf	09 54 25.4	-0.8
DBIC				*e*PKPdf	PKPdf	09 54 25.9	-0.3
DBIC				PKPab	PKPab	09 55 04.8	-1.0
DBIC				*e*PKPab	PKPab	09 55 05.3	-0.6
TOA0	**Torodi Ar. Sit**	**167.64**	**176**	*e*PKPdf	PKPdf	09 54 32.0	-1.1
TORD	**Torodi Ar. Bea**	**167.64**	**176**	PKP	PKPdf	09 54 31.2	-1.9
	comp=Z,1.8nm,0.7s,baz=171,slow=2.4,SNR=13						
TORD				PKPab	PKPab	09 55 38.2	-1.5
	comp=Z,3.7nm,0.8s,baz=177,slow=3.8,SNR=20						
TORD				PP	PP	09 59 26.6	-0.3
	comp=Z,0.8nm,0.9s,baz=173,slow=4.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**167.64**	**176**	PKP	PKPdf	09 54 31.2	-1.9
TORD				PKPab	PKPab	09 55 38.2	-1.5
TORD				PP	PP	09 59 26.6	-0.3

KRSC 11 09:38:19.0±1.2**, 49.44N**×**157.03E, h40**^{km}±40^{km}**, ML3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.84**	**357**	*e*P	Pn	09 39 03.9	+2.1
MIPR				*e*S	Sn	09 39 37.2	+2.4
RUS	**Russkaya**	**3.14**	**17**	*e*P	Pn	09 39 08.8	+2.9
RUS				*e*S	Sn	09 39 44.5	+2.4
AVH	**Avacha**	**3.98**	**15**	*e*P	Pn	09 39 20.2	+2.8
AVH				*e*S	Sn	09 40 04.9	+2.2
NLC	**Nalytchevo**	**4.01**	**20**	*e*S	Sn	09 40 05.7	+2.2
SPN	**Mys Shipunski**	**4.12**	**26**	*e*P	Pn	09 39 22.5	+3.2
SPN				*e*S	Sn	09 40 08.4	+2.3
GNL	**Ganaly**	**4.30**	**7**	*e*P	Pn	09 39 26.0	+4.2
MKZ	**Mys Kozlova**	**5.89**	**28**	P	Pn	09 39 46.0	+2.4
MKZ				S	Sn	09 40 50.9	+1.2
KBTR	**Krutoberegovo**	**7.63**	**25**	P	Pn	09 40 11.6	+4.1

*NEIC **11** 09:38:36.9, 17.17N×101.37W, h10^{km}, MD3.9(MEX), After MEX.*
MEX 11 09:38:37.6±0.8**, 17.16N**×**101.37W, h17**^{km}±36^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.45**	**348**	*i* P	Pg	09 38 45.2	-1.6
ZIIG				*i* S	Sg	09 38 51.3	-1.7
CAIG	**El Cayaco**	**1.06**	**96**	*i* P	Pb	09 38 54.2	-3.3
CAIG				*i* S	Sb	09 39 06.1	-5.0
ACX	**Acapulco**	**1.42**	**102**	*i* P	Pn	09 38 59.8	-2.9
ACX				*i* S	Sn	09 39 15.8	-5.1
ACX	**Acapulco**	**1.42**	**102**	*i* P	Pn	09 38 57.6	-5.1
ACX				*i* S	Sn	09 39 18.1	-2.9
MEIG	**Mezcala**	**1.83**	**65**	*e*P	Pn	09 39 06.2	-2.1
MEIG				*i* S	Sn	09 39 26.9	-4.3
PLIG	**Platanillo**	**2.16**	**55**	*i* P	Pn	09 39 09.9	-2.9
PLIG				*i* S	Sn	09 39 35.6	-3.6
MMIG	**Aquila**	**2.19**	**301**	*e*P	Pn	09 39 10.6	-2.6
MMIG				*i* S	Sn	09 39 35.7	-4.3
MOIG	**Morelia**	**2.51**	**4**	*i* P	Pn	09 39 14.4	-3.2
MOIG				*i* S	Sn	09 39 45.1	-2.7
MOIG	**Morelia**	**2.51**	**4**	*i* P	Pn	09 39 14.4	-3.2
MOIG				*i* S	Sn	09 39 45.4	-2.4
MZVM		**2.87**	**45**	*i* P	Pn	09 39 20.1	-2.4
MZVM				*i* S	Sn	09 39 52.5	-4.2
PNIG	**Pinotepa**	**3.20**	**103**	*e*P	Pn	09 39 24.1	-2.9
PNIG				*i* S	Sn	09 40 01.7	-3.1
PTVM	**Pico Tres Padr**	**3.23**	**41**	*e*P	Pn	09 39 23.3	-4.3
PTVM				*i* S	Sn	09 40 05.8	+0.1
UTMO	**Huajuapan**	**3.47**	**78**	*i* P	Pn	09 39 29.8	-1.0
UTMO				*i* S	Sn	09 40 08.2	-3.3
IIO	**Organos**	**3.49**	**46**	*i* P	Pn	09 39 34.9	+3.9
IIO				*i* S	Sn	09 40 09.7	-2.3
TPIG	**Tehuac#an**	**4.02**	**71**	*i* S	Sn	09 40 27.1	+2.0
VHO	**Vista Hermosa**	**4.43**	**90**	*e*P	Pn	09 39 43.9	-0.2
VHO				*i* S	Sn	09 40 34.6	-0.7
CMIG	**Matias Romero**	**6.20**	**90**	*e*P	Pn	09 40 09.4	+1.0
CMIG				*i* S	Sn	09 41 22.5	+3.5

*BJI **11** 09:49:00.8, 13.12N×121.29E, h38^{km}, mB5.1, mb4.6*
*MAN **11** 09:49:03, 12.96N×120.50E, h17^{km}, mb4.8, ML3.7, MS3.7*
MAN INTENSITY I - PTO GALERA, ORIENTAL, MINDORO.
*ISCJB **11** 09:49:04.3±0.4, 12.98N±0.03×120.50E±0.05, h48^{km}±5^{km}, mb4.6/31, MS3.7/10, Error ellipse: s-maj=7.9km s-min=4.4km az=178.0*
*NEIC **11** 09:49:10.2±3.0, 13.17N×120.65E, h87^{km}±27^{km}, mb5.1/14, Error ellipse: s-maj=11.9km s-min=8.6km az=49.0*
NEIC Felt [I PIVS] at Puerto Galera.
*IDC **11** 09:49:10.7±5.1, 13.13N×120.49E, h89^{km}±46^{km}, mb3.9/15, mb1 4.0/15, mb1mx3.9/22, mbtmp3.9/15, MS3.7/11, Ms1 3.7/11, ms1mx3.4/37, Error ellipse: s-maj=24.9km s-min=17.1km az=68.0*
*DJA **11** 09:49:38, 10.18N×122.23E, h30^{km}, mb4.6/6*
ISC 11 09:49:04.8±0.9**, 12.98N**±0.03×**120.48E**±0.05**, h33**^{km}±7^{km}**, n65,** σ1^{s}**18**/65**, mb4.6**/31**, MS3.7**/10**, 1C-3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.79**	**343**	*e*P	**Pn**	**09 49 17.6**	**-2.0**
LUBP				*e*S	**Sb**	**09 49 29.5**	**-1.0**
SJMP	**San Jose**	**0.81**	**130**	*e*P	**Pn**	**09 49 18.5**	**-1.4**
SJMP				*e*S	**Sb**	**09 49 30.5**	**-0.6**
BUSP	**Coron**	**1.01**	**196**	*e*P	**Pn**	**09 49 22.0**	**-0.7**
BUSP				*e*S	**Sn**	**09 49 37.2**	**+1.5**
ENPP	**El Nido**	**2.04**	**211**	*e*P	**Pn**	**09 49 36.1**	**-0.8**
ENPP				*e*S	**Sn**	**09 50 10.4**	**+9.2**
CUYO	**Cuyo Island**	**2.18**	**166**	*e*P	**Pn**	**09 49 38.1**	**-0.7**
CUYO				*e*S	**Sn**	**09 50 03.9**	**-0.7**
KALP	**Kalibo**	**2.23**	**125**	*e*P	**Pn**	**09 49 46.0**	**+6.6**
POLP	**Polilio Island**	**2.24**	**39**	*e*P	**Pn**	**09 49 40.3**	**+0.7**
RCP	**Roxas**	**2.62**	**122**⇓	*e*P	**Pn**	**09 49 45.6**	**+0.7**
PCPH	**Palayan**	**2.64**	**13**⇓	*e*P	**Pn**	**09 49 44.6**	**-0.4**
PCPH				*i* S	**Sn**	**09 50 17.4**	**+1.5**
BALP	**Baler**	**2.94**	**21**	*e*P	**Pn**	**09 49 49.9**	**+0.7**
BALP				*e*S	**Sn**	**09 50 30.4**	**+6.9**
BOLP	**Bolinao**	**3.43**	**351**	*e*P	**Pn**	**09 49 57.3**	**+1.4**
PPR	**Puerto Princes**	**3.62**	**209**⇑	*i*P	**Pn**	**09 49 58.7**	**+0.2**
PVCP	**Virac**	**3.63**	**80**⇓	*e*P	**Pn**	**09 50 00.4**	**+1.8**
CAUP	**Cauayan**	**4.15**	**18**	*e*P	**Pn**	**09 50 07.1**	**+1.2**
PALP	**Palanan**	**4.47**	**25**	*e*P	**Pn**	**09 50 11.0**	**+0.7**
ABRA	**Dolores**	**4.65**	**3**	*e*P	**Pn**	**09 50 09.8**	**-2.9**
CVP	**Callao Caves**	**4.87**	**15**	*e*P	**Pn**	**09 50 17.2**	**+1.4**
APYP	**Conner**	**4.91**	**8**	*e*P	**Pn**	**09 50 19.3**	**+3.0**
JOW	**Kunigami**	**15.60**	**27**	LR	LR	09 58 12.7	
	comp=Z,164nm,21.0s,baz=345,slow=35						
CMAR	**Chiang Mai Arr**	**21.43**	**287**	P	**P**	**09 53 51.6**	**+1.4**
	2.4nm,0.8s,mb3.6,baz=98,slow=9.0,SNR=16						
BATI	**Baumata**	**23.25**	**172**	P	**P**	**09 54 11.0**	**+1.4**
	29nm,0.8s,mb4.8,baz=326,slow=3.6,SNR=4.2						
XAN	**Xi'an**	**23.46**	**335**	P	**P**	**09 54 09.9**	**-1.6**
CD2	**Chengdu**	**23.59**	**322**	P	**P**	**09 54 13.0**	**+0.2**
CD2				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
PSI	**Prapat**	**23.60**	**246**	LR	LR	10 02 57.0	
	comp=Z,118nm,18.0s,MS3.4,baz=37,slow=35						
KSRS	**Korea Array**	**25.27**	**14**	P	**P**	**09 54 28.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=200,slow=12,SNR=2.8						
KSRS				LR	LR	10 04 41.8	
	comp=Z,158nm,21.5s,MS3.5,baz=194,slow=37						
JHJ	**Hachijo jima 2**	**26.69**	**38**	LR	LR	10 04 05.1	
	comp=Z,175nm,18.9s,MS3.6,baz=65,slow=34						
LZH	**Lanzhou**	**27.45**	**330**	*e*P	**P**	**09 54 48.0**	**+0.2**
LZH				AP	pP	09 54 58.0	+0.7
LZH				XP	sP	09 55 02.5	+1.2
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.5						
LZH				AMB	AMB		
	comp=Z,107nm,5.0s						
MJAR	**Matsushiro Arr**	**28.35**	**31**	P	**P**	**09 54 55.1**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.6,baz=223,slow=8.3,SNR=4.0						
GTA	**Gaotai**	**32.04**	**329**	*e*P	**P**	**09 55 28.9**	**+0.5**
GTA				AP	pP	09 55 40.2	+2.3
GTA				XP	sP	09 55 46.0	+4.0
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.3						
TAPN	**Taplejung**	**33.80**	**300**	*e*P	**P**	**09 55 45.1**	**+1.2**
	comp=Z,8.4nm,0.6s,mb4.8						
ODAN	**Odare**	**33.92**	**299**	*e*P	**P**	**09 55 45.9**	**+0.9**
	comp=Z,20nm,0.8s,mb5.1						
RAMN	**Ramite**	**34.62**	**299**	*e*P	**P**	**09 55 52.3**	**+1.2**
	comp=Z,26nm,0.7s,mb5.2						
JIRN	**Jiri**	**35.18**	**300**	*e*P	**P**	**09 55 57.0**	**+1.1**
	comp=Z,27nm,0.7s,mb5.3						
WRAB	**Tennant Creek**	**35.44**	**157**	*e*P	**P**	**09 55 57.8**	**-0.3**
	comp=Z,6.1nm,0.8s,mb4.6						
GUN	**Gumba**	**35.51**	**300**	*e*P	**P**	**09 56 00.0**	**+1.2**
	comp=Z,33nm,0.6s,mb5.4						
PKI	**Pulchoki**	**35.81**	**299**	*e*P	**P**	**09 56 02.1**	**+0.8**
	comp=Z,32nm,0.9s,mb5.2						
KKN	**Kakani**	**35.98**	**300**	*e*P	**P**	**09 56 03.7**	**+0.9**
	comp=Z,28nm,0.9s,mb5.2						
DMN	**Daman**	**36.08**	**299**	*e*P	**P**	**09 56 04.4**	**+0.8**
	comp=Z,28nm,0.9s,mb5.2						
ULN	**Ulaanbaatar**	**36.54**	**345**	*e*P	**P**	**09 56 06.3**	**-0.9**
	comp=Z,2.2nm,0.6s,mb4.2						
GKN	**Gorkha**	**36.59**	**300**	*e*P	**P**	**09 56 08.4**	**+0.4**
SONM	**Songino Array**	**36.69**	**344**	P	**P**	**09 56 06.9**	**-1.6**
	comp=Z,5.6nm,0.7s,mb4.5,baz=162,slow=10,SNR=49						
SONM				PcP	PcP	09 58 29.4	-1.3
	comp=Z,0.5nm,0.5s,baz=165,slow=3.1,SNR=3.4						
SONM				LR	LR	10 12 23.6	
	comp=Z,117nm,18.9s,MS3.7,baz=163,slow=38						
KOLN	**Koldanda**	**37.41**	**299**	*e*P	**P**	**09 56 15.7**	**+0.8**
	comp=Z,17nm,0.8s,mb4.9						
DANN	**Dangsing**	**37.43**	**300**	*e*P	**P**	**09 56 15.6**	**+0.5**
	comp=Z,29nm,1.0s,mb5.1						
MK31	**Makanchi Array**	**46.49**	**324**	*e*P	**P**	**09 57 28.8**	**0.0**
MKAR	**Makanchi Array**	**46.49**	**324**	P	**P**	**09 57 28.6**	**-0.2**
	comp=Z,4.2nm,0.8s,mb4.4,baz=123,slow=8.8,SNR=21						
MKAR				PcP	PcP	09 59 02.7	-0.3
	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=3.0						
MKAR				LR	LR	10 18 27.2	
	comp=Z,68nm,18.9s,MS3.6,baz=114,slow=38						
STKA	**Stephens Creek**	**48.98**	**156**	P	**P**	**09 57 50.1**	**+1.9**
	comp=Z,1.7nm,0.7s,mb4.2,baz=335,slow=8.9,SNR=3.7						
ZAA0	**Zalesovo Array**	**49.60**	**333**	*e*P	**P**	**09 57 50.2**	**-2.5**
ZALV	**Zalesovo Beam**	**49.60**	**333**	P	**P**	**09 57 51.1**	**-1.6**
	comp=Z,2.4nm,0.3s,mb4.7,baz=128,slow=7.8,SNR=8.8						
KURK	**Kurchatov**	**50.67**	**327**	P	**P**	**09 58 00.3**	**-0.6**
	comp=Z,15nm,0.8s,mb5.0,baz=136,slow=7.4,SNR=18						
KURK	**Kurchatov**	**50.67**	**327**	*e*P	**P**	**09 58 00.6**	**-0.3**
	comp=Z,33nm,0.6s,mb5.4						
BVAR	**Borovoye Array**	**56.25**	**326**	P	**P**	**09 58 40.6**	**-1.2**
	comp=Z,2.4nm,0.7s,mb4.3,baz=129,slow=12,SNR=8.2						
BRVK	**Borovoye**	**56.32**	**326**	*e*P	**P**	**09 58 41.7**	**-0.6**
	comp=Z,12nm,1.0s,mb4.9						
TIXI	**Tiksi**	**58.86**	**3**	*e*P	**P**	**09 58 56.8**	**-3.1**
	comp=Z,2.4nm,0.5s,mb4.5						
AKTK	**Aktyubinsk**	**62.63**	**320**	P	**P**	**09 59 24.9**	**-1.0**
AKTO	**Aktyubinsk**	**62.63**	**320**	P	**P**	**09 59 24.9**	**-1.0**
	comp=Z,4.5nm,0.8s,mb4.7,baz=92,slow=7.1,SNR=15						
GNI	**Garni**	**70.89**	**308**	LR	LR	10 37 07.3	
	comp=Z,33nm,18.6s,MS3.6,baz=278,slow=41						
BRTR	**Keskin Array B**	**79.43**	**308**	P	**P**	**10 01 07.3**	**-0.7**
	comp=Z,1.3nm,0.8s,mb3.9,baz=67,slow=4.7,SNR=5.8						
BRTR				LR	LR	10 36 57.2	
	comp=Z,30nm,20.4s,MS3.6,baz=88,slow=36						
ARCES	**ARCESS Array B**	**79.68**	**339**	P	**P**	**10 01 07.2**	**-1.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=65,slow=5.8,SNR=8.6						
ARCES				LR	LR	10 43 08.6	
	comp=Z,66nm,18.9s,MS4.0,baz=306,slow=41						
BUR08	**Bucovina Ar. S**	**84.05**	**317**	*e*P	**P**	**10 01 31.9**	**-0.3**
HFS	**Hagfors**	**87.00**	**331**	LR	LR	10 41 17.5	
	comp=Z,77nm,18.9s,MS4.1,baz=245,slow=36						
NB2	**NORSAR Subarra**	**87.80**	**333**	P	**P**	**10 01 48.6**	**-1.9**
	comp=Z,1.7nm,0.8s,mb4.3,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**87.80**	**333**	P	**P**	**10 01 48.3**	**-2.2**
	comp=Z,1.0nm,0.6s,mb4.2,baz=67,slow=4.6,SNR=4.8						
NOA				LR	LR	10 45 13.2	
	comp=Z,52nm,18.3s,MS4.0,baz=175,slow=38						
YKA	**Yellowknife Ar**	**93.52**	**22**	P	**P**	**10 02 14.6**	**-2.5**
	comp=Z,1.3nm,0.7s,mb4.5,baz=308,slow=4.4,SNR=21						
TORD	**Torodi Ar. Bea**	**114.01**	**291**	PKiKP	PKiKP	10 07 40.5	-1.0
	comp=Z,0.2nm,0.7s,baz=51,slow=2.1,SNR=2.5						
TXAR	**Lajitas Array**	**120.13**	**45**	PKP	PKPdf	10 07 51.5	-1.4
	comp=Z,0.3nm,0.7s,baz=334,slow=3.1,SNR=3.7						

MEX 11 09:59:20.4±0.4**, 14.17N**×**92.89W, h61**^{km}±19^{km}**, MD4.2, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.94**	**39**	*i* P	Pn	09 59 36.3	-1.5
THIG				*i* S	Sn	09 59 49.0	-1.7
PCIG		**1.56**	**348**	*i* P	Pn	09 59 44.4	-1.5
PCIG				*i* S	Sn	10 00 03.0	-2.1
CCIG	**Comitan**	**2.22**	**19**	*e*P	Pn	09 59 53.7	-1.1
CCIG				*i* S	Sn	10 00 20.0	-1.2
TGIG		**2.60**	**355**	*i* P	Pn	09 59 58.7	-1.4
TGIG				*i* S	Sn	10 00 28.7	-1.8
CMIG	**Matias Romero**	**3.48**	**327**	*i* P	Pn	10 00 12.0	-0.1
CMIG				*i* S	Sn	10 00 51.2	-1.0
UTMO	**Huajuapan**	**5.96**	**308**	*e*P	Pn	10 00 46.9	+0.8
UTMO				*i* S	Sn	10 01 52.4	-0.8

*ISCJB **11** 10:12:59.7±1.9, 23.8N±0.1×141.6E±0.3, h132^{km}±18^{km}, mb3.5/4, Error ellipse: s-maj=39.5km s-min=19.9km az=0.2*
*IDC **11** 10:13:01.2±2.1, 23.91N×141.22E, h137^{km}±30^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.3/20, mbtmp3.5/5, MS2.7/1, Ms1 2.7/1,*

ms1mx2.3/18, Error ellipse: s-maj=152.9km s-min=19.1km az=109.0

*JMA **11** 10:13:02.4±0.1, 23.94N×141.53E, h143km, M4.2*

ISC 11 10:13:01.4±1.8**, 23.8N**±0.1×**141.5E**±0.3**, h133**km±17km**, n13, σ0.68**/15**, mb3.5**/4**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.86**	**12**	P	**Pn**	**10 13 46.7**	**+0.5**
JHHJ				*e*S	**Sn**	**10 14 20.3**	**-0.6**
CBIJ	**Chichi jima**	**3.31**	**10**	P	**Pn**	**10 13 52.7**	**+0.5**
	31nm,0.3s,baz=204,slow=19,SNR=159						
CBIJ				S	**Sn**	**10 14 31.0**	**-0.4**
	43nm,0.3s,baz=270,slow=20,SNR=11						
CBIJ	**Chichi jima**	**3.31**	**10**	P	**Pn**	**10 13 52.5**	**+0.3**
CBIJ				*e*S	**Sn**	**10 14 31.5**	**+0.1**
GUMO	**Guam**	**10.66**	**162**	LR	LR	10 18 44.6	
	comp=Z,45nm,21.2s,baz=89,slow=32						
BSO1	**Boso 1**	**10.80**	**358**	P	**Pn**	**10 15 32.6**	**+0.3**
JOD2	**Odawara 2**	**11.60**	**350**	P	**Pn**	**10 15 44.3**	**+1.5**
JHU	**Hanno**	**12.15**	**351**	P	**Pn**	**10 15 49.5**	**-0.5**
JRY	**Ryogami san**	**12.37**	**350**	P	**Pn**	**10 15 53.0**	**+0.2**
JAG	**Ashikaga**	**12.69**	**352**	P	**Pn**	**10 15 55.5**	**-1.5**
WRA	**Warramunga Arr**	**44.06**	**190**	P	**P**	**10 20 55.8**	**-0.4**
	0.8nm,0.4s,mb3.7,baz=7.6,slow=8.5,SNR=25						
STKA	**Stephens Creek**	**55.38**	**180**	P	**P**	**10 22 21.6**	**-0.1**
	0.7nm,0.5s,mb3.7,baz=350,slow=6.1,SNR=2.8						
YKA	**Yellowknife Ar**	**75.30**	**28**	P	**P**	**10 24 30.0**	**+0.5**
	0.4nm,0.5s,mb3.3,baz=292,slow=5.9,SNR=4.5						
NVAR	**Mina Array Bea**	**83.01**	**51**	P	**P**	**10 25 11.9**	**-0.1**
	0.3nm,0.3s,mb3.4,baz=256,slow=6.4,SNR=2.4						

MAN 11 10:16:09, 18.11N×120.12E, h16km, mb4.4, ML3.2, MS3.1, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.37**	**119**	⇑*i*P	Pg	10 16 18.8	+2.2
SIPP				*i* S	Sg	10 16 24.7	+3.0
PIP	**Pasuquin**	**0.52**	**65**	⇓*i*P	Pg	10 16 22.6	+3.2
PIP				*e*S	Sg	10 16 30.4	+4.0
ABRA	**Dolores**	**0.72**	**129**	*e*P	Pg	10 16 23.1	-0.1
ABRA				*e*S	Sg	10 16 32.0	-0.7
APYP	**Conner**	**1.10**	**103**	*e*P	Pb	10 16 29.0	-0.6
APYP				*e*S	Sb	10 16 42.9	-0.8
CVP	**Callao Caves**	**1.67**	**104**	⇑*i*P	Pn	10 16 37.9	+0.3
CVP				*i* S	Sn	10 16 58.8	+0.2
BOLP	**Bolinao**	**1.73**	**187**	*e*P	Pn	10 16 38.9	+0.6
BOLP				*e*S	Sn	10 17 02.1	+2.0
SGCP	**Mt. Cagua**	**1.84**	**85**	*e*P	Pn	10 16 41.3	+1.4
CAUP	**Cauayan**	**1.99**	**125**	*e*P	Pn	10 16 43.6	+1.5
CAUP				*e*S	Sn	10 17 09.3	+2.6
SCZP	**Santa Cruz**	**2.33**	**185**	*e*P	Pn	10 16 46.2	-0.4
PALP	**Palanan**	**2.43**	**115**	*e*P	Pn	10 16 49.1	+1.1
PALP				*e*S	Sn	10 17 19.0	+1.5
PALP	**Palanan**	**2.43**	**115**	⇓*e*P	Pn	10 16 49.2	+1.1
PALP				*i* S	Sn	10 17 20.0	+2.6
BALP	**Baler**	**2.73**	**149**	*e*P	Pn	10 16 53.1	+0.9
BALP				*e*S	Sn	10 17 25.0	0.0

*ISCJB **11** 10:26:02.9±0.6, 38.74N±0.02×26.11E±0.02, h9km±4km, mb3.4/4, Error ellipse: s-maj=2.9km s-min=2.6km az=138.2*

*IDC **11** 10:26:02.5±1.1, 38.78N×25.97E, h0km, mb3.4/5, mb1 3.6/9, mb1mx3.5/28, mbtmp3.5/9, ML3.5/3, Error ellipse: s-maj=24.9km s-min=17.1km az=97.0*

*BEO **11** 10:26:02.1, 38.60N×26.51E, h14km*

*ISK **11** 10:26:02.8, 38.74N×26.12E, h14km, ML3.5*

*DDA **11** 10:26:02.5, 38.71N×26.05E, h25km±2km, Md3.6*

*ATH **11** 10:26:03.4, 38.71N×26.16E, h28km±2km, MD3.8/11*

*CSEM **11** 10:26:03.4±0.0, 38.75N×26.16E, h15km, ML3.9/7, Error ellipse: s-maj=1.0km s-min=0.8km az=14.0*

*THE **11** 10:26:04.1, 38.68N×26.21E, h12km, ML3.9/7, Error ellipse: s-maj=2.0km s-min=0.6km az=102.0*

*NEIC **11** 10:26:04.0, 38.73N×26.15E, h19km, ML3.6(ATH), ML3.6(ISK), After ISK.*

*MOS **11** 10:26:05.1±0.8, 38.76N×26.18E, h33km, mb3.7/2, Error ellipse: s-maj=15.5km s-min=6.6km az=92.6*

ISC 11 10:26:04.3±0.5**, 38.71N**±0.02×**26.12E**±0.02**, h13**km±3km**, n147, σ0.87**/171**, mb3.4**/4**, 10C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.33**	**189**	P	**Pg**	**10 26 11.4**	**+0.5**
CHOS				S	**Sg**	**10 26 15.3**	**-0.1**
URLA	**Izmir**	**0.51**	**133**	*i* P	**Pg**	**10 26 14.4**	**+0.1**
URLA				*i* S	**Sg**	**10 26 21.6**	**+0.6**
URLA	**Izmir**	**0.51**	**133**	*i* P	**Pg**	**10 26 14.7**	**+0.4**
URLA	**Izmir**	**0.51**	**133**	*i* P	**Pg**	**10 26 14.4**	**+0.1**
URLA				*i* S	**Sg**	**10 26 21.6**	**+0.5**
PRK	**Paraskevi**	**0.55**	**12**	*e*Pn	**Pg**	**10 26 14.6**	**-0.4**
PRK				S	**Sg**	**10 26 23.5**	**+1.3**
AYVA	**Ayvalik**	**0.74**	**36**	*i* P	**Pg**	**10 26 18.4**	**-0.3**
AYVA	**Ayvalik**	**0.74**	**36**	*i* P	**Pg**	**10 26 18.4**	**-0.3**
AYVA				*i* S	**Sg**	**10 26 30.0**	**+1.6**
KDAG	**Bornova**	**0.95**	**109**	*i* P	**Pb**	**10 26 21.9**	**-0.7**
KDAG				*i* S	**Sb**	**10 26 38.1**	**+3.1**
KDAG	**Bornova**	**0.95**	**109**	*i* P	**Pb**	**10 26 22.6**	**+0.1**
KDAG	**Bornova**	**0.95**	**109**	*i* P	**Pb**	**10 26 21.9**	**-0.6**
KDAG				*i* S	**Sb**	**10 26 36.3**	**+1.3**
EZN	**Ezine**	**1.12**	**8**	*e*PN	**Pn**	**10 26 24.7**	**-1.0**
EZN				*e*SN	**Sn**	**10 26 40.5**	**-0.4**
SMG	**Samos**	**1.15**	**150**	*e*PN	**Pn**	**10 26 25.2**	**-0.8**
SMG	**Samos**	**1.15**	**150**	*e*Pn	**Pn**	**10 26 25.3**	**-0.7**
AKS	**Akhisar**	**1.33**	**82**	*e*PN	**Pn**	**10 26 27.9**	**-0.6**
AKS				*e*SN	**Sn**	**10 26 45.4**	**-0.6**
AKHS	**Akhisar**	**1.33**	**82**	*i* P	**Pn**	**10 26 27.9**	**-0.7**
AKHS	**Akhisar**	**1.33**	**82**	*i* P	**Pn**	**10 26 27.9**	**-0.6**
AKHS				*i* S	**Sb**	**10 26 47.4**	**+1.4**
GCAM	**G?zelcaml?**	**1.34**	**139**	*i* P	**Pn**	**10 26 29.2**	**+0.6**
GCAM	**G?zelcaml?**	**1.34**	**139**	*i* P	**Pn**	**10 26 29.2**	**+0.6**
GCAM				*i* S	**Sb**	**10 26 47.2**	**+1.1**
LIA	**Limnos Island**	**1.39**	**329**	P	**Pn**	**10 26 28.9**	**-0.5**
LIA				S	**Sn**	**10 26 49.1**	**+1.5**
LIA	**Limnos Island**	**1.39**	**329**	*e*PN	**Pn**	**10 26 28.9**	**-0.5**
LIA				*e*SN	**Sn**	**10 26 48.2**	**+0.6**
LIA	**Limnos Island**	**1.39**	**329**	*e*Pn	**Pn**	**10 26 28.9**	**-0.5**
LIA				*e*Sn	**Sn**	**10 26 49.0**	**+1.4**
LOS	**Limnos**	**1.46**	**327**	P	**Pn**	**10 26 30.7**	**+0.3**
GADA	**Gvkgeada**	**1.49**	**353**	*e*PN	**Pn**	**10 26 29.4**	**-1.2**
BALY	**Balya**	**1.55**	**48**	*i* P	**Pn**	**10 26 30.9**	**-0.7**
BALY	**Balya**	**1.55**	**48**	*i* P	**Pn**	**10 26 30.9**	**-0.6**
BALY				*i* S	**Sn**	**10 26 52.5**	**+1.0**
BALB	**Balikesir**	**1.65**	**55**	*e*PN	**Pn**	**10 26 31.9**	**-1.0**
APE	**Apeiranthos**	**1.71**	**196**	P	**Pn**	**10 26 32.4**	**-1.3**
APE				S	**Sn**	**10 26 54.6**	**-0.7**
APE	**Apeiranthos**	**1.71**	**196**	*e*PB	**Pb**	**10 26 32.8**	**-2.7**
APE	**Apeiranthos**	**1.71**	**196**	*e*Pb	**Pb**	**10 26 32.7**	**-2.8**
APE				S	**Sn**	**10 26 54.6**	**-0.7**
APE	**Apeiranthos**	**1.71**	**196**	⇓*i*P	**Pn**	**10 26 32.5**	**-1.2**
LPK	**Lapseki**	**1.73**	**16**	*e*PN	**Pn**	**10 26 32.8**	**-1.3**
AOS	**Alonnisos**	**1.81**	**285**	P	**Pn**	**10 26 35.0**	**-0.1**
PTL	**Penteli**	**1.90**	**250**	*e*PN	**Pn**	**10 26 35.7**	**-0.6**
MANT	**Manisa**	**1.92**	**96**	*i* P	**Pn**	**10 26 36.9**	**+0.2**
MANT				*i* S	**Sn**	**10 27 03.9**	**+3.3**
MLSB	**Milas**	**1.93**	**137**	*e*PN	**Pn**	**10 26 36.7**	**0.0**
BDRM	**Kayabasi**	**1.95**	**147**	*i* P	**Pn**	**10 26 36.6**	**-0.4**
BDRM	**Kayabasi**	**1.95**	**147**	*i* P	**Pn**	**10 26 36.6**	**-0.4**
BDRM				*i* S	**Sn**	**10 27 04.5**	**+3.2**
KULA	**Kula-Manisa**	**2.00**	**95**	*e*PN	**Pn**	**10 26 37.2**	**-0.5**
ENEZ	**Enez**	**2.02**	**1**	*e*PN	**Pn**	**10 26 37.1**	**-0.9**
ATH	**Athens Observa**	**2.03**	**249**	*e*PB	**Pb**	**10 26 38.9**	**-2.1**
EDC	**Edincik**	**2.12**	**39**	*e*PN	**Pn**	**10 26 38.5**	**-0.9**
RKY	**Sarkoy-Tekirda**	**2.13**	**22**	*e*PN	**Pn**	**10 26 38.0**	**-1.6**
DST	**Dursunbey**	**2.14**	**65**	*e*PN	**Pn**	**10 26 39.2**	**-0.4**
BNT	**Bandirma**	**2.15**	**40**	*e*PN	**Pn**	**10 26 38.3**	**-1.5**
ALN	**Alexandroupoli**	**2.18**	**358**	P	**Pn**	**10 26 39.6**	**-0.7**
ALN				S	**Sn**	**10 27 06.8**	**-0.3**
MRMT	**Marmara Adasi**	**2.20**	**31**	*e*PN	**Pn**	**10 26 39.8**	**-0.8**
PAIG	**Paliouri**	**2.25**	**303**	P	**Pn**	**10 26 40.7**	**-0.5**
PAIG				S	**Sn**	**10 27 09.8**	**+1.0**
DAT	**Datca**	**2.29**	**149**	*e*PN	**Pn**	**10 26 41.2**	**-0.5**
OUR	**Ouranopolis**	**2.32**	**315**	P	**Pn**	**10 26 41.7**	**-0.4**
KCT	**Karacabey**	**2.32**	**47**	*e*PN	**Pn**	**10 26 41.7**	**-0.5**
YER	**Yerkesik**	**2.32**	**132**	*e*PN	**Pn**	**10 26 42.6**	**+0.5**
XOR	**Xorichti**	**2.38**	**287**	P	**Pn**	**10 26 42.7**	**-0.2**
LKR	**Lokris**	**2.45**	**270**	P	**Pn**	**10 26 43.4**	**-0.5**
LKR	**Lokris**	**2.45**	**270**	P	**Pn**	**10 26 43.9**	**0.0**
RDO	**Rodhopi**	**2.47**	**350**	*e*PN	**Pn**	**10 26 43.9**	**-0.3**
RDO	**Rodhopi**	**2.47**	**350**	*e*Pn	**Pn**	**10 26 43.5**	**-0.7**
DENT	**Denizli**	**2.48**	**112**	*e*PN	**Pn**	**10 26 44.4**	**+0.1**
TKR	**Tekirdag**	**2.52**	**25**	*e*PN	**Pn**	**10 26 44.5**	**-0.4**
LTK	**Loutraki**	**2.58**	**255**	P	**Pn**	**10 26 45.4**	**-0.2**
GDZ	**Gediz**	**2.65**	**81**	*i* P	**Pn**	**10 26 46.1**	**-0.5**
PLG	**Polygyros**	**2.65**	**310**	*e*PN	**Pn**	**10 26 46.9**	**+0.2**
PLG	**Polygyros**	**2.65**	**310**	P	**Pn**	**10 26 46.6**	**-0.1**
PLG	**Polygyros**	**2.65**	**310**	*e*Pn	**Pn**	**10 26 47.5**	**+0.8**
PLG	**Polygyros**	**2.65**	**310**	*e*Pn	**Pn**	**10 26 47.5**	**+0.8**
KHAL	**Karahalli**	**2.66**	**96**	*i* P	**Pn**	**10 26 46.2**	**-0.6**
GEMT	**Gemlik**	**2.93**	**53**	*e*PN	**Pn**	**10 26 50.9**	**+0.4**
ARG	**Arkhangelos**	**2.96**	**147**	*e*PN	**Pn**	**10 26 51.2**	**+0.3**
AGG	**Agios Georgios**	**2.98**	**277**	P	**Pn**	**10 26 51.4**	**+0.2**
SLVT	**Silivri**	**2.98**	**32**	*e*PN	**Pn**	**10 26 50.9**	**-0.3**
HORT	**Hortiatis**	**3.00**	**310**	P	**Pn**	**10 26 51.8**	**+0.3**
SOH	**Sokhos**	**3.00**	**316**	P	**Pn**	**10 26 51.8**	**+0.3**
CTT	**Catalca**	**3.01**	**35**	*e*PN	**Pn**	**10 26 51.5**	**-0.2**
THE	**Thessaloniki**	**3.10**	**309**	P	**Pn**	**10 26 53.1**	**+0.2**
CTKS	**Kestanelik-??a**	**3.12**	**35**	*e*PN	**Pn**	**10 26 51.9**	**-1.2**
YLV	**Yalova**	**3.12**	**53**	*e*PN	**Pn**	**10 26 53.7**	**+0.6**
ALT	**Altintas**	**3.13**	**82**	*e*PN	**Pn**	**10 26 53.3**	**0.0**
LIT	**Litokhoron**	**3.14**	**297**	P	**Pn**	**10 26 53.0**	**-0.4**
NVR	**Nevrokopi**	**3.16**	**327**	*e*PN	**Pn**	**10 26 53.7**	**+0.1**
NVR	**Nevrokopi**	**3.16**	**327**	*e*Pn	**Pn**	**10 26 53.6**	**0.0**
EDRB	**Edirne**	**3.17**	**8**	*e*PN	**Pn**	**10 26 52.5**	**-1.3**
BGKT	**Bogazkoy**	**3.20**	**39**	*e*PN	**Pn**	**10 26 53.1**	**-1.1**
CTYL	**Yal??k??y-??at**	**3.22**	**30**	*e*PN	**Pn**	**10 26 54.9**	**+0.4**
CAVI	**Cavuskoy**	**3.24**	**61**	*e*PN	**Pn**	**10 26 55.2**	**+0.4**
ISK	**Istanbul-Kandi**	**3.26**	**43**	*e*PN	**Pn**	**10 26 54.8**	**-0.3**
KARP	**Karpathos**	**3.27**	**165**	*e*PN	**Pn**	**10 26 55.0**	**-0.1**
ADVT	**Abdulvahap**	**3.28**	**57**	*e*PN	**Pn**	**10 26 55.0**	**-0.3**
THL	**Klokotos Trika**	**3.31**	**286**	P	**Pn**	**10 26 56.0**	**+0.3**
KLYT	**Kilyos**	**3.39**	**41**	*e*PN	**Pn**	**10 26 57.3**	**+0.5**
HRT	**Hereke**	**3.45**	**51**	*e*PN	**Pn**	**10 26 57.7**	**0.0**
NPS	**Neapolis**	**3.47**	**187**	P	**Pn**	**10 26 58.9**	**+1.0**
SHUT	**Suhut-Afyon**	**3.47**	**91**	*e*PN	**Pn**	**10 26 58.3**	**+0.3**
KNT	**Kendrikon**	**3.48**	**316**	P	**Pn**	**10 26 58.7**	**+0.6**
IDI	**Anoyia**	**3.56**	**196**	Pn	**Pn**	**10 26 59.6**	**+0.4**
	4.2nm,0.3s,baz=346,slow=15,SNR=10						
IDI				Sn	**Sn**	**10 27 45.0**	**+4.0**
	6.4nm,0.3s,baz=339,slow=12,SNR=4.5						
IDI	**Anoyia**	**3.56**	**196**	Pn	**Pn**	**10 26 59.5**	**+0.4**
IDI				Sn	**Sn**	**10 27 45.0**	**+4.0**
PLD	**Plovdiv**	**3.56**	**343**	P	**Pn**	**10 26 59.5**	**+0.4**
PLD	**Plovdiv**	**3.56**	**343**	*e*Pn	**Pn**	**10 26 59.6**	**+0.5**
GPA	**Golpazari**	**3.60**	**63**	*e*PN	**Pn**	**10 26 59.8**	**+0.1**
GRG	**Griva**	**3.64**	**309**	P	**Pn**	**10 27 01.3**	**+1.1**
SILT	**Sile**	**3.64**	**47**	*e*PN	**Pn**	**10 26 59.7**	**-0.6**
ITM	**Ithomi**	**3.65**	**247**	P	**Pn**	**10 27 01.5**	**+1.0**
ESKT	**Eskisehir**	**3.76**	**76**	*e*PN	**Pn**	**10 27 01.9**	**-0.1**
JMB	**Yambol**	**3.77**	**5**	P	**Pn**	**10 27 01.3**	**-0.7**
VAY	**Valandovo**	**3.77**	**315**	P	**Pn**	**10 27 02.6**	**+0.5**
VAY	**Valandovo**	**3.77**	**315**	*e*Pn	**Pn**	**10 27 02.4**	**+0.3**
VAY	**Valandovo**	**3.77**	**315**	*e*Pn	**Pn**	**10 27 02.5**	**+0.4**
GULT	**Gulveren**	**3.80**	**62**	*e*PN	**Pn**	**10 27 03.0**	**+0.4**
FNA	**Florina**	**4.20**	**301**	P	**Pn**	**10 27 09.3**	**+1.3**
VTS	**Vitosha**	**4.46**	**331**	⇑*i*Pn	**Pn**	**10 27 12.6**	**+1.0**
VTS	**Vitosha**	**4.46**	**331**	⇑*i*P	**Pn**	**10 27 12.7**	**+1.1**
VTS	**Vitosha**	**4.46**	**331**	⇑P	**Pn**	**10 27 12.7**	**+1.1**
KIZT	**Kizilcal**	**4.50**	**86**	*e*PN	**Pn**	**10 27 12.1**	**0.0**
KRUS	**Krusevo**	**4.59**	**307**	*e*Pn	**Pn**	**10 27 14.8**	**+1.5**
BARS	**Barje**	**5.25**	**323**	⇓*i*Pn	**Pn**	**10 27 23.2**	**+0.9**
BR131	**Keskin Array S**	**5.92**	**78**	*e*P	**Pn**	**10 27 32.7**	**+1.1**
	2.7nm,0.6s						
BRTR	**Keskin Array B**	**5.92**	**78**	Pn	**Pn**	**10 27 32.4**	**+0.8**
	0.5nm,0.3s,baz=256,slow=13,SNR=12						
BRTR				Pg	**Pg**	**10 27 55.6**	**-2.1**
	0.4nm,0.3s,baz=258,slow=16,SNR=6.3						
BRTR	**Keskin Array B**	**5.92**	**78**	Pg	**Pg**	**10 27 55.6**	**-2.1**
TIRR	**Tirgusor**	**5.99**	**16**	*e*P	**Pn**	**10 27 32.0**	**-0.6**
TIRR	**Tirgusor**	**5.99**	**16**	⇓*i*P	**Pn**	**10 27 32.2**	**-0.4**
TIRR	**Tirgusor**	**5.99**	**16**	*e*P	**Pn**	**10 27 31.9**	**-0.6**
BOLS	**Boljevac**	**6.00**	**330**	⇓*i*Pn	**Pn**	**10 27 33.0**	**+0.3**
VOIR		**6.77**	**354**	⇑*i*P	**Pn**	**10 27 43.1**	**-0.1**
MLR	**Muntele Rosu**	**6.78**	**359**	Pn	**Pn**	**10 27 43.7**	**+0.4**
GZR	**Gura Zlata**	**7.12**	**341**	⇓*i*P	**Pn**	**10 27 47.6**	**-0.5**
GZR	**Gura Zlata**	**7.12**	**341**	⇓P	**Pn**	**10 27 47.6**	**-0.5**
PLOR	**Plostina**	**7.14**	**3**	⇓*i*P	**Pn**	**10 27 49.7**	**+1.3**
VRI	**Vrincioaia**	**7.16**	**3**	⇑*i*P	**Pn**	**10 27 50.2**	**+1.6**
VRI	**Vrincioaia**	**7.16**	**3**	⇑P	**Pn**	**10 27 50.2**	**+1.6**
TIP	**Timpagrande**	**7.32**	**277**	*e*P	**Pn**	**10 27 51.1**	**+0.3**
TIP	**Timpagrande**	**7.32**	**277**	*e*P	**Pn**	**10 27 51.1**	**+0.4**
BZS	**Buzias**	**7.67**	**336**	⇑*i*P	**Pn**	**10 27 55.4**	**-0.2**
BZS	**Buzias**	**7.67**	**336**	⇑P	**Pn**	**10 27 55.4**	**-0.2**
BURAR	**Bucovina Array**	**8.92**	**356**	⇑*i*P	**Pn**	**10 28 14.9**	**+2.1**
BURAR	**Bucovina Array**	**8.92**	**356**	⇑P	**Pn**	**10 28 14.9**	**+2.1**
BUR08	**Bucovina Ar. S**	**8.95**	**356**	*e*P	**Pn**	**10 28 14.8**	**+1.6**
BUR08	**Bucovina Ar. S**	**8.95**	**356**	*e*P	**Pn**	**10 28 14.8**	**+1.6**
MMAI	**Mount Meron Ar**	**9.43**	**124**	Pn	**Pn**	**10 28 20.8**	**+0.9**
	1.3nm,0.3s,baz=312,slow=14,SNR=3.3						
HFS	**Hagfors**	**22.84**	**344**	P	**P**	**10 31 04.8**	**-1.9**
	2.4nm,1.0s,mb3.6,baz=206,slow=9.9,SNR=4.4						
HFS	**Hagfors**	**22.84**	**344**	P	**P**	**10 31 04.8**	**-2.0**
HFS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NB2	**NORSAR Subarra**	**24.21**	**342**	P	**P**	**10 31 19.6**	**-0.7**
	comp=Z,1.0nm,0.5s,mb3.5,baz=145,slow=10						
NOA	**NORSAR Array B**	**24.21**	**342**	P	**P**	**10 31 19.6**	**-0.6**
	comp=Z,1.5nm,0.8s,mb3.5,baz=147,slow=9.5,SNR=4.7						
NOA	**NORSAR Array B**	**24.21**	**342**	P	**P**	**10 31 19.6**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTK	**Aktyubinsk**	**25.36**	**52**	P	**P**	**10 31 30.9**	**+0.1**
AKTK	**Aktyubinsk**	**25.36**	**52**	P	**P**	**10 31 30.9**	**0.0**
AKTO	**Aktyubinsk**	**25.36**	**52**	P	**P**	**10 31 30.9**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.2,baz=232,slow=12,SNR=3.5						
TORD	**Torodi Ar. Bea**	**33.42**	**227**	P	**P**	**10 32 42.5**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=40,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**41.25**	**60**	P	**P**	**10 33 50.8**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=272,slow=9.2,SNR=2.7						
MKAR	**Makanchi Array**	**41.25**	**60**	P	**P**	**10 33 50.8**	**+1.9**

MAN 11 10:37:04, 10.11N×126.62E, h5km, mb3.7, ML2.5, MS2.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.16**	**254**	*e*P	Pg	10 37 25.9	-0.3
SCPH				*e*S	Sg	10 37 43.5	+2.4
BUTP	**Butuan**	**1.50**	**221**	*e*P	Pn	10 37 29.7	-1.9
BUTP				*e*S	Sn	10 37 48.1	-3.4
BUKP	**Musuan**	**2.69**	**215**	*e*P	Pn	10 37 49.5	+1.4
BUKP				*e*S	Sn	10 38 25.8	+4.7

*CSEM **11** 10:45:10.3±0.3, 39.17N×20.59E, h8km, ML2.9/3, Error ellipse: s-maj=9.3km s-min=7.1km az=82.0*

*ISCJB **11** 10:45:11.6±1.3, 39.22N±0.05×20.50E±0.08, h15km±15km, Error ellipse: s-maj=11.3km s-min=6.5km az=34.1*

*NEIC **11** 10:45:11.1, 39.25N×20.66E, h15km, MD3.3(ATH), After ATH.*

*ATH **11** 10:45:11.1, 39.25N×20.66E, h15km±8km, MD3.3/4*

*THE **11** 10:45:11.1, 39.16N×20.59E, h0km±2km, ML2.9/3, Error ellipse: s-maj=2.8km s-min=0.8km az=271.0*

ISC 11 10:45:11.0±0.7**, 39.19N**±0.03×**20.55E**±0.06**, h9**km±7km**, n10, σ1.19**/18**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.38**	**334**	P	**Pg**	**10 45 19.5**	**+1.1**
IGT				S	**Sg**	**10 45 25.2**	**+1.7**
JAN	**Janina**	**0.52**	**27**	*e*PB	**Pg**	**10 45 19.5**	**-1.6**
KEK	**Kerkira**	**0.78**	**312**	*e*PN	**Pn**	**10 45 26.6**	**-1.6**
VLS	**Valsamata**	**1.01**	**178**	P	**Pg**	**10 45 29.3**	**-1.1**
VLS				S	**Sg**	**10 45 44.4**	**+0.8**
VLS	**Valsamata**	**1.01**	**178**	*e*PN	**Pn**	**10 45 31.6**	**+0.2**
VLS				*e*SN	**Sn**	**10 45 47.0**	**+1.3**
VLS	**Valsamata**	**1.01**	**178**	*e*Pn	**Pn**	**10 45 31.4**	**0.0**
VLS				S	**Sg**	**10 45 44.4**	**+0.8**
VLS				*e*Sn	**Sn**	**10 45 47.0**	**+1.3**
EVR	**Evrytania**	**1.02**	**105**	*e*PN	**Pn**	**10 45 29.4**	**-2.0**
KFL	**Anninata**	**1.10**	**170**	P	**Pg**	**10 45 30.7**	**-1.3**
KFL				S	**Sg**	**10 45 46.7**	**+0.5**
THL	**Klokotos Trika**	**1.20**	**71**	P	**Pb**	**10 45 33.7**	**-0.1**
THL				S	**Sb**	**10 45 49.8**	**+0.4**
AGG	**Agios Georgios**	**1.40**	**96**	P	**Pn**	**10 45 36.4**	**-0.2**
AGG				S	**Sb**	**10 45 56.9**	**+1.8**

*SZGRF **11** 11:05:27.2, 19.56S×178.66W, h33km, Fiji Islands region*

*DJA **11** 11:06:17, 18.23S×177.76W, h471km, Mw5.3/8*

*BJI **11** 11:06:25.9, 17.76S×178.16W, h531km, mB4.7, mb4.5*

*ISCJB **11** 11:06:28.3±0.6, 17.78S±0.05×178.67W±0.04, h537km±7km, mb4.7/65, Error ellipse: s-maj=8.6km s-min=4.4km az=154.5*

*MOS **11** 11:06:28.5±1.3, 17.68S×178.63W, h535km, mb4.9/18, Error ellipse: s-maj=10.9km s-min=7.6km az=136.5*

*NEIC **11** 11:06:29.8±0.6, 17.75S×178.65W, h544km±7km, mb4.9/37, Error ellipse: s-maj=7.6km s-min=4.1km az=153.0*

*GCMT **11** 11:06:29.8±0.5, 17.87S×178.47W, h594km±4km, MW5.2/37, Moment Tensor Solution. s37,c51; Duration: 1.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.16±.04; $M_{\theta\theta}$0.73±.06; $M_{\phi\phi}$-0.89±.05; $M_{r\theta}$0.32±.06; $M_{\theta\phi}$0.02±.06; $M_{\phi r}$-0.24±.06; Best double couple: $M_0$0.91400×10^{17} NP1:ϕ_s43.00000°, δ63.00000°, λ171.00000°. NP2:ϕ_s137.00000°, δ82.00000°, λ28.00000°. Principal axes: T 0.8770, Plg25.0000°, Azm3.0000°; N 0.0750, Plg61.0000°, Azm152.0000°; P -0.9510, Plg13.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s.*

*IDC **11** 11:06:30.2±0.7, 17.83S×178.60W, h557km±8km, mb4.1/22, mb1 4.2/24, mb1mx4.2/27, mbtmp4.1/24 Error ellipse: s-maj=12.6km s-min=8.6km az=127.0*

ISC 11 11:06:29.1±0.6**, 17.76S**±0.05×**178.66W**±0.04**, h534**km±7km**, h545**km±3.2km**: pP-P, n695, σ0.59**/542**, mb4.7**/65**, 219C-216D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.65**	**61**	P	**P**	**11 08 22.9**	**0.0**
	77nm,0.3s,baz=234,slow=6.3,SNR=72						
AFI				S	**S**	**11 09 54.5**	**-1.7**
	7.7nm,0.3s,baz=253,slow=19,SNR=2.5						
AFI	**Afiamalu**	**7.65**	**61**	*e*P	**P**	**11 08 22.1**	**-0.8**
AFI				*e*S	**S**	**11 09 54.2**	**-1.9**
AFI				pmax	pmax		
	comp=Z,613nm,0.7s						
AFI	**Afiamalu**	**7.65**	**61**	*e*P	**P**	**11 08 22.1**	**-0.8**
	comp=Z,613nm,0.7s						
AFI				*e*S	**S**	**11 09 54.2**	**-1.9**
FUNA	**Funafuti**	**9.41**	**347**	*e*P	**P**	**11 08 42.7**	**+1.9**
	comp=Z,139nm,0.7s						
DZM	**Mont Dzumac**	**14.65**	**251**	*e*P	**P**	**11 09 35.8**	**+0.6**
NOUC	**Port Laguerre**	**14.79**	**251**	*e*P	**P**	**11 09 36.9**	**+0.3**
RAR	**Rarotonga**	**18.13**	**104**	P	**P**	**11 10 08.3**	**-0.6**
	comp=Z,5.9nm,0.3s,baz=250,slow=17,SNR=5.7						
RAR	**Rarotonga**	**18.13**	**104**	*e*P	**P**	**11 10 03.6**	**-5.3**
TARA	**Tarawa**	**20.73**	**336**	*e*P	**P**	**11 10 32.8**	**+0.2**
	comp=Z,404nm,1.1s						
URZ	**Urewera**	**20.76**	**189**	P	**P**	**11 10 30.2**	**-2.4**
	comp=Z,19nm,0.6s,baz=358,slow=9.0,SNR=14						
URZ				S	**S**	**11 13 44.0**	**-5.8**
	comp=Z,10nm,0.9s,baz=66,slow=22,SNR=11						
RPZ	**Rata Peaks**	**27.30**	**196**	P	**P**	**11 11 30.6**	**-0.1**
	comp=Z,4.2nm,0.6s,mb4.2,baz=8.8,slow=15,SNR=3.4						
PAE	**Paea**	**27.69**	**94**	*e*P	**P**	**11 11 33.7**	**-0.8**
	comp=Z,673nm,1.3s						
PAE	**Paea**	**27.69**	**94**	*e*P	**P**	**11 11 33.7**	**-0.8**
PAE				pmax	pmax		
	comp=Z,673nm,1.3s						
PPT	**Papeete**	**27.70**	**94**	*e*P	**P**	**11 11 34.2**	**-0.4**
	comp=Z,54nm,1.3s,mb5.0						
PPT	**Papeete**	**27.70**	**94**	*e*P	**P**	**11 11 34.2**	**-0.4**
PPT				pmax	pmax		
	comp=Z,54nm,1.3s						
TIAR	**Tiarei**	**27.92**	**94**	*e*P	**P**	**11 11 36.2**	**-0.3**
	comp=Z,1μm,1.5s						
TVO	**Taravao**	**27.99**	**95**	*e*P	**P**	**11 11 36.7**	**-0.4**
	comp=Z,514nm,1.1s						
TVO	**Taravao**	**27.99**	**95**	*e*P	**P**	**11 11 36.7**	**-0.4**
TVO				pmax	pmax		
	comp=Z,514nm,1.1s						
EIDS	**Eidsvold**	**29.10**	**250**	*e*P	**P**	**11 11 46.6**	**-0.1**
	comp=Z,83nm,0.9s,mb5.4						
PMOR	**Pomariorio Ree**	**29.62**	**89**	*e*P	**P**	**11 11 50.9**	**-0.5**
	comp=Z,148nm,1.3s,mb5.3						
ARMA	**Armidale**	**29.81**	**239**	⇓*i*P	**P**	**11 11 54.2**	**+1.4**
VAH	**Vaihoa**	**29.84**	**90**	*e*P	**P**	**11 11 52.5**	**-0.7**
	comp=Z,50nm,1.1s,mb4.9						
CTA	**Charters Tower**	**33.24**	**260**	*e*P	**P**	**11 12 22.6**	**+0.4**
	comp=Z,45nm,0.8s,mb5.0						
CTA	**Charters Tower**	**33.24**	**260**	P	**P**	**11 12 22.4**	**+0.1**
	comp=Z,44nm,0.6s,mb5.2,baz=90,slow=10,SNR=78						
CTA	**Charters Tower**	**33.24**	**260**	*e*P	**P**	**11 12 22.6**	**+0.4**
CTA				pmax	pmax		
	comp=Z,45nm,0.8s						
CTAO	**Charters Tower**	**33.24**	**260**	*e*P	**P**	**11 12 22.7**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.2						
CTAO	**Charters Tower**	**33.24**	**260**	*e*P	**P**	**11 12 22.7**	**+0.5**
	comp=Z,60nm,0.8s,mb5.2						
CNB	**Canberra Magne**	**33.33**	**232**	*e*P	**P**	**11 12 24.0**	**+1.2**
CAN	**Canberra**	**33.61**	**232**	*e*P	**P**	**11 12 25.8**	**+0.7**
CAN				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.1						
CAN	**Canberra**	**33.61**	**232**	*e*P	**P**	**11 12 25.8**	**+0.6**
	comp=Z,61nm,1.0s,mb5.1						
PMG	**Port Moresby**	**34.20**	**279**	*d i*P	**P**	**11 12 31.8**	**+1.4**
PMG				pmax	pmax		
	comp=Z,323nm,1.2s						
PMG	**Port Moresby**	**34.20**	**279**	*e*P	**P**	**11 12 31.7**	**+1.2**
	comp=Z,223nm,0.9s,mb5.7						
COEN	**Coen**	**36.87**	**270**	*e*P	**P**	**11 12 53.5**	**+0.9**
	comp=Z,112nm,0.8s,mb5.4						
TOO	**Toolangi**	**37.08**	**231**	⇓*i*P	**P**	**11 12 54.9**	**+0.9**
MOO	**Moorlands**	**38.04**	**222**	*e*P	**P**	**11 13 02.3**	**+0.6**
TAU	**Tasmania Unive**	**38.19**	**222**	*e*P	**P**	**11 13 02.8**	**-0.2**
TAU				pmax	pmax		
	comp=Z,34nm,0.9s,mb4.9						
TAU	**Tasmania Unive**	**38.19**	**222**	*e*P	**P**	**11 13 02.8**	**-0.2**
	comp=Z,34nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**38.49**	**241**	⇓*i*P	**P**	**11 13 06.6**	**+1.0**
	comp=Z,57nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**11 13 06.4**	**+0.8**
	comp=Z,67nm,0.6s,mb5.4,baz=89,slow=9.1,SNR=168						
STKA	**Stephens Creek**	**38.49**	**241**	*e*P	**P**	**11 13 06.3**	**+0.7**
ADE	**Adelaide**	**41.52**	**237**	⇓*i*P	**P**	**11 13 30.2**	**+0.4**
WB2	**Warramunga Arr**	**44.42**	**259**	⇓*i*P	**P**	**11 13 51.9**	**-0.7**
WB2				*e*S	**S**	**11 19 43.7**	**-5.0**
WB2				*e*SCS	ScS	11 22 49.9	-1.8
WRAB	**Tennant Creek**	**44.42**	**259**	*d i*P	**P**	**11 13 51.9**	**-0.8**
WRAB	**Tennant Creek**	**44.42**	**259**	*e*P	**P**	**11 13 52.0**	**-0.6**
	comp=Z,82nm,1.1s,mb5.2						
KAKA	**Kakadu**	**47.35**	**269**	⇓*i*P	x	11 13 55.4	
	comp=Z,38nm,0.6s						
FORT	**Forrest**	**49.86**	**244**	*e*P	**P**	**11 14 32.8**	**-0.7**
	comp=Z,52nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**52.82**	**260**	⇓*i*P	**P**	**11 14 55.0**	**-0.1**
	comp=Z,17nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**57.88**	**256**	*e*P	**P**	**11 15 29.8**	**-0.5**
	comp=Z,81nm,1.4s,mb4.8						
KLBR	**Kellerberrin**	**58.68**	**243**	*e*P	**P**	**11 15 34.6**	**-1.0**
	comp=Z,44nm,0.9s,mb4.7						
NWAO	**Narrogin (SRO)**	**59.07**	**242**	P	**P**	**11 15 37.0**	**-1.1**
	comp=Z,3.0nm,0.6s,mb3.7,baz=86,slow=6.0,SNR=5.7						
MUN	**Mundaring**	**59.98**	**243**	*e*P	**P**	**11 15 43.9**	**-0.3**
VNDA	**Vanda**	**60.57**	**185**	P	**P**	**11 15 47.0**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=33,slow=6.7,SNR=4.3						
KAPI	**Kappang**	**61.45**	**274**	P	**P**	**11 15 52.6**	**-1.6**
	comp=Z,18nm,1.0s,mb4.4,baz=90,slow=4.0,SNR=5.7						
KAPI	**Kappang**	**61.45**	**274**	*e*P	**P**	**11 15 53.0**	**-1.2**
	comp=Z,47nm,1.5s,mb4.6						
MJAR	**Matsushiro Arr**	**67.65**	**323**	P	**P**	**11 16 32.2**	**-0.7**
	comp=Z,13nm,0.8s,mb4.5,baz=160,slow=6.1,SNR=27						
MAJO	**Matsushiro**	**67.65**	**323**	*e*P	**P**	**11 16 32.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.6						
MAJO	**Matsushiro**	**67.65**	**323**	*e*P	**P**	**11 16 32.3**	**-0.6**
	comp=Z,18nm,0.9s,mb4.6						
MAT	**Matsushiro**	**67.65**	**323**	P	**P**	**11 16 32.4**	**-0.5**
FX1	**Attu Island--F**	**70.70**	**355**	P	**P**	**11 16 49.5**	**-1.3**
	comp=Z,36nm,0.7s,mb5.0,baz=180,slow=3.0,SNR=17						
KSM	**Kuching**	**72.43**	**277**	*e*P	**P**	**11 17 02.2**	**+0.3**
	comp=Z,43nm,1.0s,mb4.8						
PET	**Petropavlovsk**	**73.17**	**346**	*e*P	**P**	**11 17 04.2**	**-1.0**
PET				pmax	pmax		
	comp=Z,31nm,0.6s,mb4.9						
YSS	**Yuzh-Sakhalins**	**73.18**	**333**	⇑*e*P	**P**	**11 17 06.0**	**+0.6**
YSS				pmax	pmax		
	comp=Z,46nm,1.4s,mb4.7						
YSS	**Yuzh-Sakhalins**	**73.18**	**333**	*e*P	**P**	**11 17 06.2**	**+0.8**
PEA0B	**Petropavlovsk-**	**73.48**	**345**	*e*P	**P**	**11 17 06.4**	**-0.5**

PETK **Petropavlovsk-** 73.48 345 P P 11 17 06.3 -0.6
comp=Z,31nm,0.8s,mb4.8,baz=125,slow=8.1,SNR=44
KSRS **Korea Array** 74.43 318 P P 11 17 13.2 +0.5
comp=Z,2.1nm,0.7s,mb3.7,baz=127,slow=6.1,SNR=8.4
BSC **Santa Cruz Isl** 76.19 47 ⇑P P 11 17 22.9 +0.3
baz=76
SAO **San Andreas Ge** 76.48 44 eP P 11 17 24.9 +0.8
SAO pmax pmax
comp=Z,25nm,0.8s,mb4.7
SAO **San Andreas Ge** 76.48 44 eP P 11 17 24.9 +0.8
comp=Z,25nm,0.8s,mb4.7
PKM **Peak Mountain** 76.54 46 ⇓P P 11 17 25.0 +0.5
baz=77
SMMC **Simmler** 76.64 46 ⇑P P 11 17 25.6 +0.5
baz=77
U04C **Hernandez Rese** 76.70 45 ⇓P P 11 17 26.0 +0.7
baz=77
ARVC **Arvin** 77.35 47 ⇓P P 11 17 29.0 +0.1
baz=78
109C **Camp Elliot, M** 77.40 49 ⇓P P 11 17 29.2 -0.1
baz=78
MWC **Mount Wilson** 77.41 48 eP P 11 17 29.3 0.0
VES **Vestal, Richgr** 77.56 46 ⇓P P 11 17 29.9 -0.2
baz=78
HABR **Khabarovsk** 77.77 331 eP P 11 17 31.3 +0.5
HABR e 11 17 37.8
HABR e*PP pP 11 19 25.8 +1.3
HABR ePPP 11 22 29.3
HABR eS S 11 26 39.5 -0.1
HABR e 11 26 58.7
HABR eSS SS 11 31 56.0 +0.5
HABR eSSS 11 35 26.6
EDW2 **Edwards Air Fo** 77.81 47 ⇑P P 11 17 31.6 +0.2
baz=78
ISA **Isabella** 77.88 46 ⇓P P 11 17 32.1 +0.3
baz=78
ISA **Isabella** 77.88 46 eP P 11 17 32.0 +0.2
ISA pmax pmax
comp=Z,27nm,1.0s,mb4.5
ISA **Isabella** 77.88 46 eP P 11 17 32.0 +0.2
comp=Z,27nm,1.0s,mb4.5
CMB **Columbia Colle** 77.89 43 eP P 11 17 31.8 0.0
MONP **Monument Peak** 77.90 50 ⇑P P 11 17 32.3 +0.4
baz=78
MDJ **Mudanjiang** 77.93 325 P P 11 17 32.7 +0.9
MDJ PCP PcP 11 17 39.7 +0.5
MDJ AP pP 11 19 25.6 0.0
MDJ XP sP 11 20 23.7 +3.3
MDJ PP PP 11 20 37.7 -0.1
MDJ S S 11 26 43.1 +1.6
MDJ SCS ScS 11 27 01.1 -0.8
MDJ XS sS 11 30 07.2 +2.9
MDJ SS SS 11 31 59.9 +1.8
MDJ AMB AMB
comp=Z,30nm,0.8s,mb4.7
MDJ AMB AMB
comp=Z,84nm,4.7s
MDJ **Mudanjiang** 77.93 325 eP P 11 17 32.5 +0.6
comp=Z,25nm,0.9s,mb4.5
WDC **Whiskeytown Da** 77.98 40 eP P 11 17 32.7 +0.5
WDC pmax pmax
comp=Z,32nm,1.4s,mb4.5
WDC **Whiskeytown Da** 77.98 40 eP P 11 17 32.7 +0.5
comp=Z,32nm,1.4s,mb4.5
DVTC **Desert V Tower** 78.01 50 ⇓P P 11 17 32.9 +0.4
baz=78
PFO **Pinyon Flat Ob** 78.24 49 ⇑P P 11 17 33.8 +0.1
baz=78
KDAK **Kodiak Island** 78.31 14 P P 11 17 31.4 -2.1
comp=Z,31nm,0.7s,mb4.7,baz=203,slow=5.1,SNR=8.7
KDAK **Kodiak Island** 78.31 14 P P 11 17 31.4 -2.1
SWSC **Sam W. Stewart** 78.38 50 ⇓P P 11 17 34.6 +0.1
baz=78
YBH **Yreka Blue Hor** 78.56 39 P P 11 17 35.5 +0.3
comp=Z,16nm,0.8s,mb4.4,baz=182,slow=5.4,SNR=35
YBH **Yreka Blue Hor** 78.56 39 eP P 11 17 35.7 +0.5
BELC **Belle Mtn.** 78.76 49 ⇑P P 11 17 36.9 +0.3
baz=79
MPMC **Manual Prospec** 78.77 46 ⇑P P 11 17 36.9 +0.4
baz=79
WAKR **Walker** 78.77 43 eP P 11 17 36.8 +0.3
R06C **Coleville** 78.78 43 ⇑P P 11 17 37.0 +0.5
baz=79,SNR=12
TIN **Tinemaha** 78.79 45 ⇑P P 11 17 37.0 +0.4
baz=79
GSC **Goldstone** 78.85 47 ⇑P P 11 17 37.2 +0.2
baz=79
HUMO **Hull Mountain** 78.93 38 eP P 11 17 37.5 +0.3
comp=Z,24nm,1.1s,mb4.4
BEKR **Beckwourth** 78.94 42 ⇑P P 11 17 37.6 +0.2
baz=79
HEC **Hector,Ludlow** 78.95 48 ⇓P P 11 17 37.5 0.0
baz=79
BC3 **Big Chuckw Mtn** 78.98 49 ⇓P P 11 17 38.1 +0.4
baz=79
WCN **Washoe City** 79.01 43 ⇓P P 11 17 38.2 +0.4
baz=79
112A **Yuma** 79.07 51 ⇓P P 11 17 38.7 +0.5
baz=79
P06A **Stead Airport,** 79.13 42 ⇓P P 11 17 38.9 +0.5
baz=79
GLA **Glamis** 79.14 50 ⇑P P 11 17 39.2 +0.6
baz=79
GLA **Glamis** 79.14 50 eP P 11 17 39.8 +1.2
GLA pmax pmax
comp=Z,18nm,0.9s,mb4.4
GLA **Glamis** 79.14 50 eP P 11 17 39.8 +1.3
comp=Z,18nm,0.9s,mb4.4
BUOR **Burton Butte** 79.16 39 P P 11 17 39.1 +0.7
I02A **Mapleton** 79.27 37 ⇓P P 11 17 39.2 +0.3
baz=80
GRAC **Grapevine Rang** 79.35 46 ⇓P P 11 17 39.8 +0.2
baz=80
GMRC **Granite Mounta** 79.40 48 ⇑P P 11 17 40.1 +0.2
baz=80
FURC **Furnace Creek,** 79.42 46 ⇑P P 11 17 40.0 +0.1
baz=80
Q07A **Schurz** 79.42 43 ⇑P P 11 17 40.3 +0.4
baz=80
O06A **Flanigan** 79.44 42 ⇓P P 11 17 40.3 +0.3
baz=80,SNR=11
IRM **Iron Mountain** 79.45 49 ⇓P P 11 17 40.5 +0.3
baz=80
NVAR **Mina Array Bea** 79.48 44 P P 11 17 40.3 +0.1
comp=Z,16nm,0.9s,mb4.4,baz=224,slow=8.9,SNR=46
NVAR pP pP 11 19 38.6 +4.1
comp=Z,1.8nm,0.8s,baz=230,slow=9.1,SNR=4.3
SHOC **Shoshone** 79.53 47 ⇓P P 11 17 40.7 +0.2
baz=80
TUQ **Turquoise Moun** 79.54 48 ⇑P P 11 17 40.7 +0.1
baz=80
R08A **Mina** 79.57 44 ⇑P P 11 17 40.9 +0.2
baz=80
Y12C **Blythe** 79.70 50 ⇑P P 11 17 42.0 +0.5
baz=80,SNR=7.1
U10A **Ash Meadows, A** 79.76 47 ⇑P P 11 17 42.2 +0.4
baz=80
CN2 **Changchun** 79.76 322 eP P 11 17 41.9 +0.3
CN2 eS S 11 27 02.4 +1.9
CN2 SS SS 11 32 29.5 +4.2
CN2 AMB AMB
comp=Z,20nm,1.2s,mb4.3
CN2 AMB AMB
comp=Z,200nm,5.0s
N06A **Buffalo Meadow** 79.76 41 ⇓P P 11 17 41.9 +0.2
baz=80,SNR=11
113A **Mohawk Valley,** 79.78 51 ⇑P P 11 17 42.2 +0.2
baz=80
S09A **Goldfield** 79.83 45 ⇑P P 11 17 42.0 -0.1
baz=80,SNR=6.7
LDFC **Landfair** 79.94 48 eP P 11 17 42.9 +0.2
Q08A **Gabbs** 79.96 44 ⇑P P 11 17 42.7 0.0
baz=80,SNR=9.2
H03A **Soap Creek Ran** 79.98 37 ⇓P P 11 17 43.1 +0.4
baz=80,SNR=5.9
TPH **Tonopah** 80.01 45 eP P 11 17 43.6 +0.6
O07A **Toulon** 80.05 42 ⇑P P 11 17 43.3 +0.1
baz=80,SNR=14
TPNV **Topopah Spring** 80.09 46 ⇓P P 11 17 43.8 +0.3
baz=80
V11A **Goodsprings** 80.09 47 ⇑P P 11 17 43.7 +0.2
baz=80,SNR=6.8
214A **Organ Pipe Nat** 80.11 52 ⇓P P 11 17 44.0 +0.3
baz=80
MOD **Modoc** 80.12 40 eP P 11 17 43.9 +0.3
R09A **Tonopah** 80.20 45 ⇓P P 11 17 44.2 +0.1
baz=80,SNR=6.5

K05A **Summer Lake** 80.23 39 ⇑P P 11 17 44.6 +0.5
baz=80,SNR=18
Y13A **Salome** 80.24 50 ⇓P P 11 17 44.8 +0.4
baz=80,SNR=7.3
P08A **Dixie Valley** 80.31 43 ⇑P P 11 17 45.0 +0.4
baz=80
N07B **Gerlach** 80.33 42 ⇓P P 11 17 44.8 +0.2
baz=80,SNR=7.4
S10A **Tonopah Range,** 80.35 45 ⇓P P 11 17 45.1 +0.2
baz=80,SNR=12
G03A **Yamhill** 80.37 36 ⇓P P 11 17 44.9 +0.2
baz=81
U11A **Corn Creek** 80.42 47 ⇓P P 11 17 45.5 +0.3
baz=81
Q09A **Carvers** 80.44 44 ⇑P P 11 17 45.6 +0.3
baz=81
V12A **Nelson** 80.44 48 ⇑P P 11 17 45.5 +0.2
baz=81,SNR=6.2
M07A **Soldier Meadow** 80.54 41 ⇑P P 11 17 46.1 +0.4
baz=81,SNR=21
O08A **Rochester Mine** 80.58 42 ⇓P P 11 17 46.3 +0.4
baz=81,SNR=20
X13A **Yucca** 80.61 49 ⇓P P 11 17 46.7 +0.4
baz=81,SNR=7.5
SHPR **Sheep Range** 80.61 47 eP P 11 17 47.1 +0.8
H04A **Detroit Lake** 80.62 37 ⇓P P 11 17 45.7 -0.3
baz=81
Z14A **Wintersburg** 80.67 51 ⇓P P 11 17 47.1 +0.5
baz=81,SNR=5.7
R10A **Warm Springs** 80.74 45 ⇑P P 11 17 47.4 +0.6
baz=81,SNR=18
G04A **Mulino** 80.76 37 ⇑P P 11 17 47.0 +0.2
baz=81
L07A **Adell** 80.78 40 ⇑P P 11 17 47.7 +0.7
baz=81
S11A **Rachel** 80.79 46 ⇑P P 11 17 47.4 +0.3
baz=81
W13A **Hualapai Mount** 80.82 49 ⇑P P 11 17 47.8 +0.5
baz=81
N08A **GE Springer Mi** 80.86 42 ⇓P P 11 17 47.6 +0.2
baz=81,SNR=25
Y14A **Wickenburg** 80.90 50 ⇓P P 11 17 48.0 +0.2
baz=81,SNR=8.5
T11A **Corn Creek, Al** 80.94 46 ⇑P P 11 17 48.1 +0.2
baz=81,SNR=12
Q10A **Clear Creek Ra** 80.95 44 ⇓P P 11 17 48.1 +0.2
baz=81
E03A **Lebam** 80.97 35 ⇓P P 11 17 48.0 +0.2
baz=81
J06A **Christmas Vall** 80.98 39 ⇓P P 11 17 47.8 -0.1
baz=81,SNR=18
U12A **Valley of Fire** 81.01 47 ⇓P P 11 17 48.5 +0.2
baz=81,SNR=11
T12A **Moapa** 81.03 47 ⇑P P 11 17 48.6 +0.2
baz=81
V13A **Grand Canyon W** 81.12 48 ⇑P P 11 17 49.0 +0.1
baz=81,SNR=6.9
O09A **Fish Creek Ran** 81.14 43 ⇑P P 11 17 49.0 +0.2
baz=81,SNR=12
216A **Three Points,** 81.15 52 ⇓P P 11 17 49.8 +0.7
baz=81,SNR=7.5
H05A **Madras** 81.15 38 ⇑P P 11 17 48.8 0.0
baz=81,SNR=5.3
K07A **Rock Creek Ran** 81.21 40 ⇑P P 11 17 49.5 +0.4
baz=81,SNR=34
Z15A **Gila River Ind** 81.22 51 ⇑P P 11 17 49.7 +0.3
baz=81
116A **Eloy** 81.22 52 ⇓P P 11 17 50.1 +0.6
baz=81
F04A **Amboy** 81.23 36 ⇑P P 11 17 49.0 -0.2
baz=81
X14A **Yava** 81.23 50 ⇓P P 11 17 49.9 +0.4
baz=81,SNR=14
R11A **Troy Canyon, C** 81.26 45 ⇑P P 11 17 49.4 -0.1
baz=81,SNR=12
BMN **Battle Mountai** 81.26 43 eP P 11 17 49.8 +0.3
N09A **Rock Creek Ran** 81.29 42 ⇑P P 11 17 49.9 +0.3
baz=82,SNR=8.2
HOOD **Mount Hood Mea** 81.30 37 eP P 11 17 49.0 -0.5
comp=Z,26nm,1.1s,mb4.6
P10A **Eureka** 81.33 44 ⇑P P 11 17 50.0 +0.2
baz=82
I06A **Prineville** 81.34 39 ⇓P P 11 17 50.3 +0.5
baz=82,SNR=36
OOW **Octopus West** 81.36 34 P P 11 17 50.4 +0.6
S12A **Delamar Landin** 81.38 46 ⇑P P 11 17 51.0 +0.8
baz=82,SNR=19
Y15A **Casa Rosa Ranc** 81.40 50 ⇑P P 11 17 50.8 +0.5
baz=82,SNR=18
U13A **Pakoon Wash** 81.41 48 ⇑P P 11 17 50.9 +0.6
baz=82,SNR=20
VIPM **Ingram Point** 81.42 38 P P 11 17 50.4 +0.2
G05A **Winc** 81.44 37 ⇓P P 11 17 50.3 0.0
baz=82
WVOR **Wild Horse Val** 81.45 40 eP P 11 17 50.4 0.0
WVOR pmax pmax
comp=Z,30nm,1.0s,mb4.7
WVOR **Wild Horse Val** 81.45 40 eP P 11 17 50.4 +0.1
comp=Z,30nm,1.0s,mb4.7
W14A **Seligman** 81.45 49 ⇓P P 11 17 51.4 +0.8
baz=82,SNR=16
Q11A **Duckwater** 81.46 45 ⇓P P 11 17 50.9 +0.3
baz=82,SNR=7.2
L08A **Fields** 81.49 41 ⇑P P 11 17 51.0 +0.3
baz=82,SNR=34
217A **Green Valley** 81.53 53 ⇓P P 11 17 51.9 +0.8
baz=82,SNR=11
J07A **Hines** 81.56 39 ⇑P P 11 17 51.1 +0.2
baz=82,SNR=10
TDL **Tradedollar La** 81.59 36 P P 11 17 51.4 +0.4
V14A **Boquillas Ranc** 81.64 49 ⇑P P 11 17 52.0 +0.5
baz=82,SNR=28
M09A **Marrel Ranch,** 81.64 42 ⇓P P 11 17 51.9 +0.5
baz=82,SNR=16
O10A **Cortez Mining,** 81.65 43 ⇑P P 11 17 51.7 +0.2
baz=82,SNR=7.6
K08A **Mann Creek Ran** 81.70 40 ⇑P P 11 17 52.1 +0.4
baz=82,SNR=42
H06A **Lindquist Farm** 81.72 38 ⇓P P 11 17 51.6 -0.1
baz=82,SNR=38
X15A **Humoldt** 81.72 50 ⇓P P 11 17 52.6 +0.7
baz=82,SNR=17
F05A **White Salmon** 81.74 36 ⇓P P 11 17 51.7 -0.1
baz=82,SNR=6.8
T13A **Saint George** 81.74 47 ⇓P P 11 17 52.4 +0.4
baz=82,SNR=12
P11A **Circle Ranch,** 81.76 44 ⇓P P 11 17 52.3 +0.3
baz=82
Z16A **Peralta Trail,** 81.78 51 ⇓P P 11 17 52.8 +0.5
baz=82,SNR=6.2
TUC **Tucson** 81.80 52 eP P 11 17 53.1 +0.7
L09A **Wilkinson Ranc** 81.83 41 ⇑P P 11 17 52.5 +0.2
baz=82,SNR=13
G06A **Carlson Farm,** 81.83 37 ⇑P P 11 17 52.1 -0.2
baz=82,SNR=8.1
I07A **Izee** 81.84 39 ⇑P P 11 17 52.6 +0.2
baz=82,SNR=28
N10A **Dunphy** 81.87 43 ⇑P P 11 17 53.0 +0.4
baz=82,SNR=7.8
R12A **Pony Springs,** 81.91 46 ⇑P P 11 17 53.2 +0.3
baz=82,SNR=8.7
117A **Oracle** 81.95 52 ⇓P P 11 17 53.9 +0.7
baz=82,SNR=11
U14A **Mt Trumbull** 81.96 48 ⇑P P 11 17 53.8 +0.7
baz=82,SNR=37
E05A **Randle** 81.97 36 ⇓P P 11 17 52.6 -0.4
baz=82,SNR=11
Y16A **Circle Bar Ran** 81.99 51 ⇑P P 11 17 54.0 +0.6
baz=82,SNR=12
C04A **Brinnon** 82.00 34 ⇑P P 11 17 53.1 +0.1
baz=82,SNR=6.9
318A **Bisbee** 82.01 54 ⇓P P 11 17 54.5 +0.9
baz=82,SNR=8.8
W15A **Williams** 82.02 49 ⇑P P 11 17 54.2 +0.7
baz=82,SNR=7.7
S13A **Holt Ranch, En** 82.05 47 ⇑P P 11 17 54.0 +0.4
baz=82,SNR=12
LON **Longmire** 82.05 36 eP P 11 17 52.7 -0.7
LON pmax pmax
comp=Z,8.0nm,1.2s,mb4.0
LON **Longmire** 82.05 36 eP P 11 17 52.6 -0.7
comp=Z,8.3nm,1.2s,mb4.0
F06A **Goldendale** 82.06 37 ⇓P P 11 17 53.2 -0.2
baz=82,SNR=6.1
J08A **Circle Bar Ran** 82.06 40 ⇑P P 11 17 53.6 +0.2
baz=82,SNR=29
H07A **Lands Inn, Kim** 82.09 38 ⇓P P 11 17 53.6 0.0
baz=82,SNR=29

Q12A **Willow Creek R** 82.11 45 ⇑P P 11 17 54.1 +0.2
baz=82,SNR=13
O11A **Cowboy Ranch,** 82.12 44 ⇓P P 11 17 54.2 +0.3
baz=82,SNR=24
K09A **Rome** 82.16 41 ⇑P P 11 17 54.3 +0.4
baz=82,SNR=34
218A **Dragoon** 82.20 53 ⇑P P 11 17 55.4 +0.9
baz=82,SNR=16
D05A **Enumclaw** 82.22 35 ⇓P P 11 17 54.4 +0.3
baz=82,SNR=9.4
X16A **Lo Mia Camp, P** 82.27 50 ⇑P P 11 17 55.4 +0.6
baz=82,SNR=29
R13A **O'Grain Ranch,** 82.27 46 ⇑P P 11 17 55.2 +0.5
baz=82,SNR=5.9
M10A **I.L. Ranch, Tu** 82.27 42 ⇑P P 11 17 55.1 +0.5
baz=82,SNR=22
P12A **McGill** 82.28 44 ⇓P P 11 17 54.8 +0.1
baz=82
BBB **Bella Bella** 82.30 29 P P 11 17 54.0 -0.4
comp=Z,17nm,0.8s,mb4.5,baz=233,slow=3.3,SNR=3.4
I08A **Drewsey** 82.30 39 ⇓P P 11 17 54.7 0.0
baz=82,SNR=32
T14A **Hurricane** 82.34 47 ⇓P P 11 17 55.4 +0.4
baz=82,SNR=16
Y17A **Roosevelt** 82.38 51 ⇓P P 11 17 55.6 +0.3
baz=82,SNR=6.0
V15A **Kaibab Nationa** 82.39 49 ⇓P P 11 17 55.9 +0.5
baz=83,SNR=20
E06A **Yakima** 82.39 36 ⇑P P 11 17 54.7 -0.4
baz=83,SNR=9.3
G07A **Ruggs Ranch, H** 82.41 38 ⇑P P 11 17 55.0 -0.2
baz=83,SNR=18
N11A **Elko Archery C** 82.42 43 ⇓P P 11 17 55.2 -0.2
baz=83,SNR=7.2
J09A **Fry Pan Ranch,** 82.49 40 ⇓P P 11 17 55.8 +0.2
baz=83,SNR=30
PMR **Palmer** 82.51 14 eP P 11 17 54.2 -1.1
PMR pmax pmax
comp=Z,22nm,0.8s,mb4.7
PMR **Palmer** 82.51 14 eP P 11 17 54.2 -1.1
comp=Z,22nm,0.8s,mb4.7
W16A **Flagstaff** 82.52 50 ⇑P P 11 17 56.5 +0.5
baz=83,SNR=14
319A **Douglas** 82.53 54 ⇑P P 11 17 56.9 +0.7
baz=83,SNR=10
118A **Homack Ranch,** 82.56 52 ⇑P P 11 17 56.8 +0.5
baz=83,SNR=9.1
H08A **Prairie City** 82.58 39 ⇑P P 11 17 55.8 -0.2
baz=83,SNR=11
U15A **North Rim** 82.59 48 ⇓P P 11 17 57.1 +0.7
baz=83,SNR=39
L10A **Juniper Basin** 82.61 42 ⇓P P 11 17 56.6 +0.4
baz=83
F07A **Phinny Hill Vi** 82.62 37 ⇑P P 11 17 56.1 -0.2
baz=83,SNR=6.3
S14A **Cedar City** 82.62 47 ⇓P P 11 17 56.8 +0.4
baz=83,SNR=7.8
Q13A **Wheeler Ranch,** 82.62 45 ⇑P P 11 17 56.6 +0.1
baz=83,SNR=23
C05A **Tolt Reservoir** 82.68 35 ⇑P P 11 17 56.2 -0.3
baz=83
M11A **Holland Ranch,** 82.70 42 ⇓P P 11 17 57.1 +0.3
baz=83,SNR=12
ELK **Elko** 82.71 43 P P 11 17 56.5 -0.3
comp=Z,11nm,0.9s,mb4.4,baz=244,slow=4.9,SNR=47
ELK **Elko** 82.71 43 eP P 11 17 57.0 +0.1
K10A **MacKenzie Ranc** 82.73 41 ⇓P P 11 17 57.1 +0.2
baz=83,SNR=27
A04A **Legoe Bay, Lum** 82.75 34 ⇓P P 11 17 57.0 +0.2
baz=83
O12A **Currie** 82.79 44 ⇓P P 11 17 57.4 +0.1
baz=83,SNR=13
B05A **Bryant** 82.80 34 ⇓P P 11 17 56.9 -0.2
baz=83,SNR=9.5
T15A **Red Dirt Ranch** 82.81 48 ⇑P P 11 17 57.9 +0.5
baz=83,SNR=22
219A **White Tail Can** 82.82 53 ⇓P P 11 17 58.2 +0.6
baz=83,SNR=7.9
WUAZ **Wupatki** 82.83 49 ⇓P P 11 17 57.9 +0.4
baz=83
WUAZ **Wupatki** 82.83 49 eP P 11 17 57.9 +0.3
G08A **Pilot Rock** 82.84 38 ⇓P P 11 17 57.1 -0.3
baz=83,SNR=24
I09A **Lost Marbles R** 82.84 39 ⇑P P 11 17 57.2 -0.2
baz=83,SNR=6.7
JCW **Jim Creek** 82.85 34 eP P 11 17 57.2 -0.1
D06A **Cle Elum** 82.85 36 ⇓P P 11 17 57.1 -0.3
baz=83,SNR=7.6
P13A **Bates Ranch, G** 82.87 45 ⇓P P 11 17 57.8 +0.1
baz=83,SNR=29
N12A **Clover Valley,** 82.89 43 ⇑P P 11 17 57.9 +0.1
baz=83,SNR=11
TBM **Table Mountain** 82.97 36 P P 11 17 58.2 +0.2
Y18A **Canyon Day Jun** 83.02 51 ⇓P P 11 17 59.2 +0.7
baz=83,SNR=17
E07A **Sunnyside** 83.04 36 ⇑P P 11 17 58.3 0.0
baz=83,SNR=18
RSW **Rattlesnake Hi** 83.09 37 P P 11 17 58.8 +0.1
W17A **Winslow** 83.10 50 ⇓P P 11 17 59.5 +0.6
baz=83
L11A **Cat Creek Ranc** 83.11 42 ⇓P P 11 17 59.3 +0.5
baz=83,SNR=21
119A **Ashpeak Ranch,** 83.12 53 ⇓P P 11 17 59.9 +0.8
baz=83
HAWA **Hanford** 83.13 37 eP P 11 17 58.7 0.0
S15A **Panguitch** 83.14 47 ⇓P P 11 18 00.0 +1.0
baz=83
J10A **Berg Farm, Mel** 83.14 40 ⇓P P 11 17 58.9 0.0
baz=83,SNR=10
Q14A **Sevier Lake (B** 83.14 46 ⇓P P 11 17 59.3 +0.3
baz=83,SNR=26
RPW **Rockport** 83.22 34 eP P 11 17 58.5 -0.6
F08A **Pendleton** 83.23 38 ⇑P P 11 17 59.2 -0.1
baz=83
O13A **Hicks Ranch, I** 83.23 44 ⇓P P 11 17 59.7 +0.2
baz=83
A05A **Maple Falls** 83.25 34 ⇓P P 11 17 59.0 -0.3
baz=84
C06A **Tall Timber Ra** 83.25 35 ⇑P P 11 17 59.0 -0.4
baz=83
K11A **Parker Ranch,** 83.25 41 ⇓P P 11 17 59.6 +0.1
baz=83,SNR=22
H09A **Durkee** 83.26 39 ⇓P P 11 17 59.5 0.0
baz=84,SNR=19
M12A **Wells** 83.26 43 ⇑P P 11 17 59.6 +0.1
baz=83,SNR=15
B06A **Marblemount** 83.28 34 ⇑P P 11 17 59.3 -0.2
baz=84
U16A **Tuba City** 83.29 49 ⇓P P 11 18 00.1 +0.3
baz=84,SNR=23
D07A **Quincy** 83.33 36 ⇓P P 11 17 59.7 -0.1
baz=84,SNR=8.6
ETW **Entiat** 83.37 35 eP P 11 17 59.8 -0.2
Z19A **T-Link Ranch,** 83.38 52 ⇓P P 11 18 00.8 +0.4
baz=84
T16A **Glen Canyon Da** 83.41 48 ⇓P P 11 18 01.0 +0.6
baz=84,SNR=6.5
X18A **Snowflake** 83.42 51 ⇓P P 11 18 00.8 +0.3
baz=84,SNR=7.6
R15A **Junction** 83.45 47 ⇑P P 11 18 01.4 +0.8
baz=84
I10A **Payette** 83.47 40 ⇓P P 11 18 00.9 +0.4
baz=84
BJI **Beijing** 83.51 315 P P 11 18 01.6 +0.7
BJI AP pP 11 19 58.5 +1.9
BJI XP sP 11 20 53.9 +2.9
BJI S S 11 27 39.9 +1.5
BJI AMB AMB
comp=Z,11nm,0.7s,mb4.5
BJI AMB AMB
comp=Z,73nm,6.6s
G09A **Cove** 83.52 38 ⇓P P 11 18 00.5 -0.3
baz=84,SNR=12
C07A **Waterville** 83.57 35 ⇓P P 11 18 00.3 -0.7
baz=84,SNR=15
L12A **House Creek Ra** 83.57 42 ⇓P P 11 18 01.3 +0.2
baz=84,SNR=13
P14A **Drum Mountains** 83.57 45 ⇓P P 11 18 01.1 -0.1
baz=84,SNR=12
BMO **Blue Mountains** 83.58 39 eP P 11 18 00.5 -0.6
SEY **Seymchan** 83.58 347 ⇓eP P 11 17 59.2 -1.4
MSU **Marysvale** 83.66 46 eP P 11 18 02.5 +0.8
Y19A **Nutrioso** 83.68 52 ⇑P P 11 18 02.6 +0.7
baz=84
F09A **S2 Ranch, Elgi** 83.68 38 ⇑P P 11 18 01.3 -0.3
baz=84,SNR=11
S16A **Weppner Ranch,** 83.69 47 ⇑P P 11 18 01.7 -0.1
baz=84,SNR=7.1

Sta	Name	Dist	Az	Phase	ISC	Time	Res
MFID	Camas Ranch	83.71	41	⇑P	P	11 18 01.6	-0.2
	baz=84,SNR=18						
M13A	Montello	83.72	43	⇓P	P	11 18 01.8	0.0
	baz=84,SNR=19						
Q15A	Fillmore	83.76	46	⇑P	P	11 18 02.3	+0.2
	baz=84						
H10A	Noah's Angus R	83.77	39	⇓P	P	11 18 01.6	-0.4
	baz=84,SNR=26						
U17A	Shonto	83.83	49	⇑P	P	11 18 03.1	+0.5
	baz=84,SNR=7.9						
W18A	Petrified Fore	83.84	50	⇑P	P	11 18 02.7	+0.1
	baz=84						
D08A	Wollman Farm,	83.85	36	⇑P	P	11 18 02.1	-0.3
	baz=84,SNR=14						
X19A	St. Johns	83.86	51	⇓P	P	11 18 03.1	+0.4
	baz=84						
KTH	Kantishna Hill	83.88	12	eP	P	11 17 59.9	-2.2
	comp=Z,25nm,0.8s,mb4.8						
K12A	Draper Farm, C	83.89	42	⇓P	P	11 18 02.6	-0.1
	baz=84,SNR=12						
I11A	Placerville	83.89	40	⇓P	P	11 18 02.4	-0.2
	baz=84,SNR=25						
CHUM	Lake Minchumin	83.91	11	eP	P	11 18 00.3	-1.9
	comp=Z,36nm,1.1s,mb4.8						
T17A	Navajo Res., N	83.92	48	⇓P	P	11 18 03.6	+0.7
	baz=84,SNR=12						
TRF	Thorofare Moun	83.92	12	eP	P	11 18 00.8	-1.5
	comp=Z,48nm,0.7s,mb5.1						
MAW	Mawson	83.92	200	P	P	11 18 01.9	-0.5
	comp=Z,3.6nm,1.0s,mb3.9,baz=104,slow=8.3,SNR=3.5						
G10A	Bishop Farm, J	83.92	39	⇑P	P	11 18 02.3	-0.5
	baz=84,SNR=19						
V18A	Ganado	83.96	50	⇑P	P	11 18 03.4	+0.2
	baz=84,SNR=9.0						
B07A	Winthrop	83.98	35	⇓P	P	11 18 02.5	-0.4
	baz=84,SNR=15						
E09A	Wood Farm, Sta	83.99	37	⇑P	P	11 18 02.5	-0.6
	baz=84,SNR=7.6						
R16A	Teasdale	84.04	47	⇓P	P	11 18 04.2	+0.7
	baz=84,SNR=6.8						
J12A	Stokes Ranch,	84.08	41	⇑P	P	11 18 03.8	+0.2
	baz=84,SNR=18						
OD2	Odessa Site #2	84.15	36	eP	P	11 18 04.0	+0.2
A07A	Ashnola River,	84.18	34	⇓P	P	11 18 03.6	-0.4
	baz=84,SNR=7.4						
C08A	Higginbotham F	84.19	36	⇓P	P	11 18 03.5	-0.5
	baz=84,SNR=7.1						
D09A	Jones Farm, Ri	84.20	37	⇑P	P	11 18 03.8	-0.3
	baz=84						
S17A	Black Ridge (B	84.21	48	⇑P	P	11 18 04.3	-0.1
	baz=84						
F10A	Beach Ranch, E	84.23	38	⇓P	P	11 18 03.8	-0.4
	baz=84,SNR=28						
L13A	Double Diamond	84.23	43	⇑P	P	11 18 04.4	0.0
	baz=84,SNR=6.9						
H11A	Donnelly	84.28	40	⇓P	P	11 18 04.3	-0.2
	baz=84,SNR=20						
U18A	Rough Rock, Ch	84.32	49	⇑P	P	11 18 05.1	+0.1
	baz=84,SNR=7.3						
M14A	Sheep Mountain	84.33	43	⇓P	P	11 18 04.6	-0.3
	baz=84,SNR=16						
I12A	Atlanta	84.34	41	⇑P	P	11 18 04.8	0.0
	baz=84						
B08A	Colville Reser	84.35	35	⇓P	P	11 18 04.0	-0.9
	baz=85,SNR=15						
K13A	Stover Farm, H	84.42	42	⇑P	P	11 18 05.3	+0.1
	baz=85,SNR=13						
MCK	McKinley	84.45	13	eP	P	11 18 03.5	-1.4
G11A	Walters Elk Ra	84.49	39	⇓P	P	11 18 05.1	-0.4
	baz=85,SNR=36						
E10A	Myers Farm, Un	84.57	38	⇓P	P	11 18 05.7	-0.2
	baz=85,SNR=5.5						
C09A	Chrisman Ranch	84.63	36	⇓P	P	11 18 05.7	-0.4
	baz=85,SNR=9.3						
R17A	Hanksville Air	84.64	47	⇑P	P	11 18 06.4	-0.1
	baz=85,SNR=6.2						
T18A	Mexican Hat	84.64	48	⇑P	P	11 18 06.9	+0.4
	baz=85,SNR=29						
L14A	Malta	84.66	43	⇓P	P	11 18 06.5	0.0
	baz=85,SNR=6.0						
HLID	Hailey	84.67	41	⇑P	P	11 18 06.5	0.0
	baz=85						
TMUT	Trail Mountain	84.70	46	eP	P	11 18 07.5	+0.7
A08A	Turner Farm, O	84.72	35	⇑P	P	11 18 06.2	-0.4
	baz=85,SNR=20						
J13A	Cove Ranch, Pi	84.74	41	⇓P	P	11 18 07.1	+0.2
	baz=85,SNR=27						
GYA	Guiyang	84.76	300	P	P	11 18 06.2	-1.1
GYA				AP	pP	11 20 05.8	+2.3
GYA				XP	sP	11 21 00.3	+2.5
GYA				PP	PP	11 21 37.9	+4.3
GYA				SKS		11 27 39.1	
GYA				XS	sS	11 31 19.2	+1.0
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
GYA				AMB	AMB		
	comp=Z,89nm,7.0s						
D10A	Wagner Farm, O	84.78	37	⇑P	P	11 18 06.0	-0.9
	baz=85,SNR=15						
S18A	Hurst Farm, Bl	84.81	48	⇓P	P	11 18 06.8	-0.5
	baz=85						
F11A	Grangeville	84.81	38	⇑P	P	11 18 05.6	-1.5
	baz=85,SNR=7.9						
H12A	Diamond D Ranc	84.90	40	⇑P	P	11 18 07.4	-0.2
	baz=85,SNR=26						
O16A	Springville	84.93	45	⇓P	P	11 18 07.7	-0.1
	baz=85						
K14A	Jones Ranch, D	84.95	42	⇑P	P	11 18 08.1	+0.3
	baz=85,SNR=10						
MENT	Mentasta	84.97	15	eP	P	11 18 06.7	-0.7
E11A	Bogner Ranch,	85.03	38	⇑P	P	11 18 06.7	-1.4
	baz=85,SNR=8.2						
I13A	Wildhorse Cree	85.04	41	⇓P	P	11 18 08.4	+0.2
	baz=85,SNR=6.6						
B09A	Rice	85.04	36	⇑P	P	11 18 07.7	-0.5
	baz=85,SNR=14						
SRU	San Rafael	85.08	46	⇓P	P	11 18 08.6	0.0
	baz=85						
SRU	San Rafael	85.08	46	eP	P	11 18 08.7	+0.1
A09A	Danville	85.11	35	⇓P	P	11 18 08.2	-0.3
	baz=85,SNR=14						
T19A	Beclabito	85.11	49	⇑P	P	11 18 08.6	-0.2
	baz=85,SNR=5.5						
J14A	Carey	85.12	42	⇓P	P	11 18 09.3	+0.7
	baz=85,SNR=18						
C10A	Spilker Farm,	85.18	36	⇑P	P	11 18 08.3	-0.5
	baz=85,SNR=6.2						
R18A	Canyonlands Na	85.19	47	⇓P	P	11 18 08.8	-0.3
	baz=85,SNR=6.6						
L15A	Malad City	85.20	43	⇓P	P	11 18 08.9	-0.2
	baz=85,SNR=6.4						
H13A	Challis	85.28	40	⇓P	P	11 18 09.2	-0.2
	baz=86,SNR=14						
F12A	Elk City	85.28	39	⇑P	P	11 18 09.2	-0.2
	baz=86						
N16A	Rees Ranch, Co	85.29	45	⇑P	P	11 18 09.5	-0.1
	baz=86						
D11A	Klaveano Farm,	85.32	37	⇑P	P	11 18 08.6	-1.0
	baz=86,SNR=16						
Q18A	Rafter H Ranch	85.35	47	⇓P	P	11 18 09.5	-0.5
	baz=86,SNR=5.2						
M16A	Huntsville	85.36	44	⇑P	P	11 18 09.7	-0.2
	baz=86						
K15A	Arbon	85.43	43	⇓P	P	11 18 10.2	0.0
	baz=86,SNR=6.9						
E12A	Beaver Dam Sad	85.44	38	⇓P	P	11 18 09.4	-0.7
	baz=86						
O17A	Robinson Place	85.44	45	⇓P	P	11 18 10.7	+0.4
	baz=86,SNR=9.1						
S19A	Harvey Farm, M	85.44	48	⇓P	P	11 18 10.1	-0.3
	baz=86,SNR=5.4						
I14A	Mackay	85.46	41	⇑P	P	11 18 10.7	+0.4
	baz=86,SNR=25						
P18A	Preston Nutter	85.51	46	⇓P	P	11 18 10.7	0.0
	baz=86						
NEW	Newport	85.53	36	eP	P	11 18 09.6	-0.9
G13A	Cobalt	85.56	40	⇓P	P	11 18 10.5	-0.2
	baz=86,SNR=11						
R19A	Curley Farm, L	85.59	48	⇑P	P	11 18 10.7	-0.4
	baz=86,SNR=7.6						
MVCO	Mesa Verde	85.66	49	⇑P	P	11 18 11.0	-0.5
	baz=86						
MVCO	Mesa Verde	85.66	49	eP	P	11 18 10.9	-0.5
A10A	Northport	85.68	35	⇑P	P	11 18 10.8	-0.4
	baz=86,SNR=13						
COLA	College	85.68	13c	iP	P	11 18 09.1	-1.8
COLA	College	85.68	13	eP	P	11 18 09.0	-1.8
	comp=Z,41nm,1.3s,mb4.9						
N17A	Moffit Pass	85.72	45	⇑P	P	11 18 11.4	-0.2
	baz=86						
DLBC	Dease Lake	85.79	23	P	P	11 18 10.9	-0.6
	comp=Z,6.5nm,0.8s,mb4.3,baz=218,slow=5.1,SNR=9.9						
C11A	Tepee Creek (N	85.79	37	⇓P	P	11 18 11.6	-0.2
	baz=86,SNR=31						
J15A	Blackfoot	85.84	42	⇓P	P	11 18 12.5	+0.3
	baz=86,SNR=28						
F13A	Darby	85.85	39	⇓P	P	11 18 11.7	-0.4
	baz=86,SNR=20						
H14A	Leadore	85.85	41	⇑P	P	11 18 12.5	+0.3
	baz=86,SNR=17						
PV04	Paradox Valley	85.89	48	eP	P	11 18 12.4	-0.1
D12A	Red Ives Fores	85.90	38	⇑P	P	11 18 11.6	-0.7
	baz=86						
O18A	Roosevelt	85.97	46	⇑P	P	11 18 12.2	-0.6
	baz=86						
XAN	Xi'an	85.98	307	P	P	11 18 14.0	+0.9
XAN				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.6						
XAN				AMB	AMB		
	comp=Z,85nm,6.5s						
B11A	Sandpoint	86.05	36	⇑P	P	11 18 12.4	-0.6
	baz=86,SNR=10						
M17A	Scullys Gap (B	86.08	44	⇓P	P	11 18 12.5	-0.8
	baz=86						
I15A	Monteview	86.10	41	⇓P	P	11 18 13.7	+0.3
	baz=86,SNR=7.2						
K16A	Soda Springs	86.11	43	⇓P	P	11 18 13.7	+0.3
	baz=86,SNR=11						
TXAR	Lajitas Array	86.11	58	P	P	11 18 14.5	+0.7
	comp=Z,10.0nm,0.8s,mb4.5,baz=219,slow=5.8,SNR=103						
TXAR				pP	pP	11 20 13.9	+3.5
	comp=Z,0.1nm,0.8s,baz=165,slow=37,SNR=1.7						
C12B	Naegeli Ranch,	86.17	37	⇑P	P	11 18 13.1	-0.5
	baz=86,SNR=15						
ANMO	Albuquerque	86.19	52⇓	eP	P	11 18 13.4	-0.6
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANMO	Albuquerque	86.19	52	eP	P	11 18 14.0	0.0
BILL	Bilibino	86.26	354⇓	eP	P	11 18 12.4	-1.2
BILL				e		11 21 44.5	
BILL				eS	S	11 27 50.2	-13
BILL				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
E13A	Victor	86.27	39	⇓P	P	11 18 13.2	-0.9
	baz=86,SNR=7.9						
H15A	Lima	86.30	41	⇓P	P	11 18 14.3	0.0
	baz=86,SNR=26						
A11A	Hall Mountain,	86.33	36	⇑P	P	11 18 14.4	0.0
	baz=86,SNR=14						
P19A	Cripple Cowboy	86.39	47	⇑P	P	11 18 14.1	-0.7
	baz=86						
D13A	Huson	86.44	38	⇓P	P	11 18 14.4	-0.5
	baz=87,SNR=7.0						
F14A	Wisdom	86.45	40	⇑P	P	11 18 14.4	-0.5
	baz=87						
M18A	Lyman	86.46	45	⇑P	P	11 18 14.8	-0.3
	baz=87,SNR=9.5						
B12A	Libby	86.50	36	⇓P	P	11 18 15.1	-0.1
	baz=87						
K17A	Gardner Place,	86.51	43	⇑P	P	11 18 15.3	0.0
	baz=87,SNR=9.6						
N18A	Larsen Ranch,	86.52	45	⇓P	P	11 18 15.1	-0.3
	baz=87						
RRI2	Red Ridge	86.53	42	eP	P	11 18 15.8	+0.4
Q20A	Ridgley Place,	86.56	47	⇓P	P	11 18 15.6	-0.1
	baz=87,SNR=5.9						
MSO	Missoula	86.61	38	eP	P	11 18 14.2	-1.5
BSMT	Bassoo Peak	86.64	37	eP	P	11 18 15.2	-0.6
G15A	Dillon	86.67	40	⇑P	P	11 18 16.2	+0.2
	baz=87,SNR=24						
E14A	Clinton	86.67	39	⇓P	P	11 18 15.5	-0.5
	baz=87,SNR=17						
I16A	Newdale	86.67	42	⇓P	P	11 18 16.4	+0.4
	baz=87,SNR=18						
C13A	Hot Springs	86.67	38	⇑P	P	11 18 15.2	-0.8
	baz=87						
GDL2	Guadalupe Moun	86.68	55	eP	P	11 18 17.2	+0.8
L18A	Fontenelle, Gr	86.71	44	⇑P	P	11 18 15.6	-0.6
	baz=87						
A12A	Yaak River Ran	86.71	36	⇑P	P	11 18 15.9	-0.2
	baz=87,SNR=10						
DCID1	Drake Creek	86.73	42	eP	P	11 18 17.2	+0.9
N19A	John Jarvie Ra	86.81	45	⇑P	P	11 18 15.9	-0.9
	baz=87						
R21A	Cimarron	86.84	48	⇑P	P	11 18 17.2	+0.2
	baz=87,SNR=12						
REDW	Red Top Meadow	86.84	43	eP	P	11 18 17.2	+0.4
J17A	Brown Place, J	86.93	43	⇑P	P	11 18 17.5	+0.2
	baz=87,SNR=17						
SNOW	Snow King Moun	86.95	43	eP	P	11 18 17.8	+0.4
F15A	Butte	86.99	40	⇓P	P	11 18 17.2	-0.3
	baz=87,SNR=7.0						
D14A	Greenough	87.00	38	⇑P	P	11 18 16.9	-0.6
	baz=87,SNR=8.6						
HHC	Hu-ho-hao-te	87.00	315	eP	P	11 18 19.0	+1.3
HHC				AP	pP	11 20 16.6	+1.9
HHC				XP	sP	11 21 11.2	+2.5
HHC				PP	PP	11 21 54.6	+3.5
HHC				SKS		11 27 53.8	
HHC				eS	S	11 28 11.3	-0.5
HHC				SS	SS	11 34 13.6	+2.4
HHC				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,208nm,4.7s						
DAWY	Dawson	87.01	16	eP	P	11 18 16.4	-0.8
LRM	Limekiln Ridge	87.01	40	eP	P	11 18 17.8	+0.2
K18A	Toltan Ranch,	87.03	43	⇓P	P	11 18 17.9	+0.2
	baz=87,SNR=18						
IMW	Indian Meadow	87.03	42	eP	P	11 18 18.3	+0.5
CHMT	Chamberlain Mo	87.06	39	eP	P	11 18 17.2	-0.7
MOOW	Moose Ponds	87.09	42	eP	P	11 18 18.2	+0.2
B13A	Whitefish	87.09	37	⇑P	P	11 18 17.2	-0.7
	baz=87						
M19A	Rock Springs	87.10	45	⇑P	P	11 18 17.7	-0.4
	baz=87,SNR=6.4						
LOHW	Long Hollow	87.11	42	eP	P	11 18 18.4	+0.3
O20A	White River Ci	87.12	46	⇑P	P	11 18 17.8	-0.5
	baz=87						
G16A	Moss Hill, Enn	87.12	41	⇑P	P	11 18 18.2	0.0
	baz=87,SNR=9.1						
EGAK	Eagle	87.13	15	eP	P	11 18 17.1	-0.6
QLMT	Earthquake Lak	87.16	41	eP	P	11 18 19.3	+0.9
E15A	Deer Lodge	87.19	39	⇓P	P	11 18 17.9	-0.5
	baz=87						
H16A	Russell Place,	87.22	41	⇑P	P	11 18 19.2	+0.5
	baz=87,SNR=32						
L19A	Farson	87.24	44	⇑P	P	11 18 18.7	0.0
	baz=87,SNR=15						
I17A	Pilgram Creek	87.28	42	⇓P	P	11 18 19.3	+0.4
	baz=87						
J18A	Kendall Valley	87.31	43	⇓P	P	11 18 19.1	0.0
	baz=88,SNR=35						
COLD	Coldfoot	87.31	11	eP	P	11 18 17.9	-0.6
	comp=Z,17nm,1.1s,mb4.6						
YFT	Old Faithful	87.36	42	eP	P	11 18 21.3	+2.0
BW06	Boulder Array	87.41	44	⇓P	P	11 18 19.1	-0.5
	baz=88						
BW06	Boulder Array	87.41	44	eP	P	11 18 19.1	-0.4
PDAR	Pinedale Array	87.41	44	P	P	11 18 19.1	-0.4
	comp=Z,7.8nm,0.7s,mb4.5,baz=214,slow=3.3,SNR=64						
PDAR				pP	pP	11 20 21.2	+4.5
	comp=Z,1.5nm,1.1s,baz=208,slow=2.9,SNR=4.5						
PDAR				PP	PP	11 21 51.9	-2.4
	comp=Z,2.0nm,1.1s,baz=249,slow=4.1,SNR=6.4						
A13A	Flathead Natio	87.41	36	⇑P	P	11 18 19.1	-0.3
	baz=88,SNR=5.8						
N20A	Spence Gulch,	87.41	46	⇓P	P	11 18 19.2	-0.4
	baz=88						
BOZ	Bozeman (W)	87.43	40	⇑P	P	11 18 19.5	0.0
	baz=88						
BOZ	Bozeman (W)	87.43	40	eP	P	11 18 19.6	0.0
F16A	Kennard Place,	87.50	40	⇑P	P	11 18 19.9	0.0
	baz=88,SNR=11						
H17A	Grant Village	87.50	42	⇑P	P	11 18 20.9	+1.0
	baz=88,SNR=5.3						
KMI	Kunming	87.55	297	P	P	11 18 22.5	+1.8
KMI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
D15A	Lincoln	87.56	39	⇓P	P	11 18 19.8	-0.4
	baz=88,SNR=12						
YNR	Norris Junctio	87.58	41	eP	P	11 18 22.5	+2.2
I18A	Diamond G Ranc	87.66	43	⇓P	P	11 18 20.7	0.0
	baz=88,SNR=7.7						
O21A	Pagoda	87.69	47	⇓P	P	11 18 20.6	-0.4
	baz=88						
M20A	Sweetwater, Wa	87.75	45	⇑P	P	11 18 20.9	-0.3
	baz=88						
WALA	Waterton Lakes	87.76	37	eP	P	11 18 21.1	0.0
B14A	Marquette Ranc	87.77	37	⇓P	P	11 18 20.5	-0.6
	baz=88,SNR=20						
HRY	Holter Researc	87.82	39	eP	P	11 18 21.6	+0.2
E16A	East Helena	87.83	39	⇓P	P	11 18 21.1	-0.3
	baz=88,SNR=7.5						
G17A	Pierce Place,	87.83	41	⇓P	P	11 18 21.8	+0.4
	baz=88,SNR=7.9						
C15A	Salmond Ranch,	87.87	38	⇓P	P	11 18 20.9	-0.7
	baz=88,SNR=9.9						
L20A	Wamsutter	87.87	45	⇑P	P	11 18 21.9	+0.2
	baz=88,SNR=12						
N21A	Black Mountain	87.89	46	⇓P	P	11 18 22.1	+0.2
	baz=88,SNR=12						
K19A	Absolon Red Bu	87.90	44	⇓P	P	11 18 21.1	-0.7
	baz=88,SNR=12						
A14A	Double T Ranch	87.99	37	⇓P	P	11 18 21.6	-0.6
	baz=88,SNR=13						
D16A	Dana Ranch, Ca	88.14	39	⇓P	P	11 18 22.8	-0.1
	baz=88,SNR=5.6						
F17A	Fitzpatrick Pl	88.15	40	⇓P	P	11 18 23.0	+0.1
	baz=88,SNR=8.5						
K20A	Yellowstone Ra	88.16	44	⇓P	P	11 18 22.4	-0.7
	baz=88,SNR=13						
B15A	Bradely Ranch,	88.16	38	⇓P	P	11 18 21.7	-1.2
	baz=88,SNR=9.7						
E17A	Martinsdale	88.29	40	⇓P	P	11 18 22.6	-1.0
	baz=88						
M21A	Separation Pea	88.36	45	⇑P	P	11 18 23.6	-0.4
	baz=88,SNR=8.3						
A15A	Johnson Ranch,	88.39	37	⇓P	P	11 18 23.2	-0.8
	baz=89,SNR=8.1						
C16A	Fuhringer Ranc	88.39	38	⇓P	P	11 18 23.4	-0.6
	baz=89,SNR=6.6						
RWWY	Rawlins	88.50	45	eP	P	11 18 24.9	+0.2
L21A	Rawlins	88.51	45	⇑P	P	11 18 24.2	-0.5
	baz=89,SNR=5.6						
G18A	Lazy EL Ranch,	88.56	41	⇓P	P	11 18 24.9	+0.1
	baz=89,SNR=5.5						
CMAR	Chiang Mai Arr	88.61	290	P	P	11 18 26.8	+1.1
	comp=Z,2.7nm,0.9s,mb4.1,baz=102,slow=2.8,SNR=17						
CMAR				PP	PP	11 22 04.0	-0.2
	comp=Z,0.3nm,0.3s,baz=111,slow=4.8,SNR=3.6						
N22A	Wattenberg Ran	88.64	46	⇓P	P	11 18 25.2	-0.1
	baz=89,SNR=12						
RLMT	Red Lodge	88.66	42	⇓P	P	11 18 25.1	-0.2
	baz=89						
RLMT	Red Lodge	88.66	42	eP	P	11 18 26.1	+0.8
B16A	M & M Farms, S	88.71	38	⇑P	P	11 18 24.5	-1.0
	baz=89						
D17A	Six Diamond Ra	88.72	39	⇓P	P	11 18 25.4	-0.2
	baz=89						
F18A	Big Timber	88.73	41	⇑P	P	11 18 25.7	0.0
	baz=89,SNR=5.4						
CD2	Chengdu	88.79	303	eP	P	11 18 26.7	+0.4
CD2				AP	pP	11 20 26.1	+2.3
CD2				XP	sP	11 21 18.4	+0.7
CD2				PP	PP	11 22 08.1	+2.7
CD2				SKS		11 28 04.2	
CD2				S	S	11 28 26.5	-2.3
CD2				XS	sS	11 31 59.0	+0.6
CD2				SS	SS	11 34 39.0	+1.6
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
CD2				AMB	AMB		
	comp=Z,140nm,6.4s						
M22A	Cedar Creek Ra	88.79	46	⇑P	P	11 18 25.9	-0.2
	baz=89,SNR=7.3						
ISCO	Idaho Springs	88.81	47	eP	P	11 18 26.8	+0.6
C17A	Wharram Farm,	88.90	39	⇓P	P	11 18 26.2	-0.2
	baz=89,SNR=16						
E18A	Harlowton	88.92	40	⇑P	P	11 18 26.7	+0.2
	baz=89,SNR=6.7						
A16A	West Butte Ran	89.03	37	⇑P	P	11 18 26.7	-0.3
	baz=89,SNR=19						
L22A	Ellis Ranch, M	89.17	45	⇑P	P	11 18 28.1	+0.3
	baz=89						
B17A	L&G Farms, Che	89.19	38	⇑P	P	11 18 27.3	-0.4
	baz=89						
D18A	Linhart Farms,	89.27	40	⇑P	P	11 18 28.3	+0.2
	baz=89,SNR=7.1						
YAK	Yakutsk	89.35	338⇑	eP	P	11 18 26.7	-1.4
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
PHWY	Pilot Hill	89.53	46	eP	P	11 18 29.4	0.0
A17A	Triple J Farms	89.55	38	⇑P	P	11 18 29.1	-0.3
	baz=90,SNR=11						
JCT	Junction City	89.65	58	eP	P	11 18 30.3	0.0
EGMT	Eagleton	89.68	39	⇑P	P	11 18 29.3	-0.7
	baz=90						
AMTX	Amarillo	89.77	53	eP	P	11 18 30.7	-0.1
B18A	Beardsley Farm	89.84	38	⇓P	P	11 18 30.3	-0.4
	baz=90,SNR=14						
A18A	Metzger Ranch,	90.04	38	⇓P	P	11 18 31.1	-0.6
	baz=90						
EDM	Edmonton	90.16	33	eP	P	11 18 31.2	-0.9
LZH	Lanzhou	90.61	308	eP	P	11 18 35.5	+0.9
LZH				AP	pP	11 20 37.1	+4.6
LZH				PP	PP	11 22 23.0	+3.4
LZH				eSKS		11 28 16.0	
LZH				eS	S	11 28 43.6	-1.4
LZH				XS	sS	11 32 15.5	-0.2
LZH				SS	SS	11 35 03.0	-0.2
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
SNAA	Sanae	90.75	179⇑	eP	P	11 18 33.3	-1.3
SNAA				pmax	pmax		
	comp=Z,11nm,2.0s						
VNA3	Neumayer Olymp	90.90	176	eP	P	11 18 34.3	-1.0
VNA2	Neumayer--Watz	91.34	177	eP	P	11 18 36.2	-1.2
RSSD	Black Hills	91.62	44	eP	P	11 18 36.9	-2.2
RSSD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
RSSD	Black Hills	91.62	44	eP	P	11 18 36.9	-2.2
	comp=Z,8.0nm,1.0s,mb4.7						
INK	Inuvik	91.81	15	eP	P	11 18 37.8	-1.6
ULN	Ulaanbaatar	92.89	320⇓	eP	P	11 18 45.0	+0.2
DGMT	Dagmar	93.23	40	⇑P	P	11 18 46.1	-0.3
	baz=93						
DGMT	Dagmar	93.23	40	eP	P	11 18 45.9	-0.5
SONM	Songino Array	93.28	319	P	P	11 18 46.2	-0.4
	comp=Z,0.6nm,0.5s,mb3.9,baz=99,slow=3.5,SNR=6.5						
SONM				PP	PP	11 22 43.4	+3.4
	comp=Z,0.6nm,1.0s,baz=123,slow=5.3,SNR=2.9						
YKA	Yellowknife Ar	94.30	25	P	P	11 18 49.4	-1.4
	comp=Z,4.1nm,0.8s,mb4.6,baz=245,slow=4.4,SNR=45						
YKA				PP	PP	11 22 40.5	-6.8
	comp=Z,0.6nm,0.9s,baz=236,slow=7.3,SNR=5.3						
YKA	Yellowknife Ar	94.30	25	P	P	11 18 49.4	-1.4
YKA				PP	PP	11 22 40.5	-6.8
GTA	Gaotai	94.76	310	eP	P	11 18 53.5	0.0
GTA				AP	pP	11 20 56.0	+4.3
GTA				XP	sP	11 21 47.1	+1.7
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.3						
HVS	Khovu-Aksy	102.17	320	i P	Pdif	11 19 28.2	+1.7
ZALV	Zalesovo Beam	107.97	322	PKiKP	PKiKP	11 23 53.4	-2.3
	comp=Z,0.8nm,0.5s,baz=131,slow=1.6,SNR=6.2						
MKAR	Makanchi Array	108.86	314	PKiKP	PKiKP	11 23 55.5	-2.2
	comp=Z,1.1nm,0.5s,baz=112,slow=4.6,SNR=17						
MKAR	Makanchi Array	108.86	314	PKPdf	PKiKP	11 23 55.5	-2.2
KURK	Kurchatov	111.56	318⇓	iPKIKP	PKiKP	11 24 01.1	-1.5
AAK	Ala-Archa	114.11	309	i PKIKP	PKiKP	11 24 05.8	-2.0
ARU	Arti	122.60	326	i PKIKP	PKPdf	11 24 22.2	-1.4
ARU						11 26 08.4	
ARCES	ARCESS Array B	126.13	350	PKP	PKPdf	11 24 28.8	-1.3
	comp=Z,5.7nm,0.8s,baz=31,slow=4.2,SNR=16						
JOF	Joensuu	130.34	343	ep	PKPdf	11 24 36.8	-1.4
	comp=Z,4.5nm,0.6s						
OBN	Obninsk	134.06	333⇓	iPKIKP	PKPdf	11 24 47.2	+1.7
OBN				e		11 27 20.9	
OBN				eSS	SS	11 44 38.7	+8.9
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NB2	NORSAR Subarra	136.20	353	PKP	PKPdf	11 24 36.1	-13
	comp=Z,1.4nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	136.20	353	PKP	PKPdf	11 24 47.7	-1.6
	comp=Z,1.5nm,0.7s,baz=14,slow=4.1,SNR=5.8						
AKASG	Malin Array Be	140.32	332	PKhKP		11 24 49.1	
	comp=Z,1.0nm,0.3s,baz=43,slow=4.0,SNR=5.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG				PKP	PKPdf	11 24 57.5	+0.4
	comp=Z,1.7nm,0.4s,baz=41,slow=2.4,SNR=5.1						
LVV	L'vov	143.18	335	i PKHKP	PKPdf	11 24 59.1	-3.1
BSEG	Bad Segeberg	143.23	351	ePKPbc	PKPdf	11 24 59.3	-2.9
KWP	Kalwaria	143.84	336	ePKP	PKPdf	11 25 02.1	-1.3
KWP	Kalwaria	143.84	336	⇑iP	PKPdf	11 25 02.0	-1.4
KWP	Kalwaria	143.84	336	ePKP	PKPdf	11 25 02.1	-1.3
BUR08	Bucovina Ar. S	144.36	332	ePKPdf	PKPdf	11 25 04.3	-0.1
BURAR	Bucovina Array	144.37	332	⇓iP	PKPdf	11 25 04.4	0.0
BURAR	Bucovina Array	144.37	332	⇓P	PKPdf	11 25 04.4	0.0
OJC	Ojcow	144.39	340	ePKP	PKPdf	11 25 03.5	-0.8
BR131	Keskin Array S	144.51	315	ePKPdf	PKPdf	11 25 04.1	-0.8
BRTR	Keskin Array B	144.51	315	PKP	PKPdf	11 25 03.9	-1.0
	comp=Z,14nm,0.9s,baz=122,slow=3.5,SNR=46						
STHS	Stebnicka Huta	144.56	337	ePKP	PKPdf	11 25 04.6	-0.1
KOLS	Kolonicke sedl	144.57	336	ePKP	PKPdf	11 25 04.6	-0.1
NRDL	Niedersach Rie	144.66	351	ePKPbc	PKPdf	11 25 04.0	-0.7
UZH	Uzhgorod	144.81	336	d iPKIKP	PKPdf	11 25 04.4	-0.7
NIE	Niedzica	144.90	338	ePKP	PKPdf	11 25 05.6	+0.4
KSP	Ksiaz	144.90	343	ePKP	PKPdf	11 25 05.5	+0.3
KSP	Ksiaz	144.90	343	ePKP	PKPdf	11 25 05.3	+0.1
CRVS	Cervenica-Dubn	144.91	337	ePKP	PKPdf	11 25 05.2	-0.1
VRI	Vrincioaia	144.93	329	⇓iP	PKPdf	11 25 05.4	0.0
VRI	Vrincioaia	144.93	329	⇓P	PKPdf	11 25 05.4	0.0
PLOR	Plostina	144.98	329	⇑iP	PKPdf	11 25 05.9	+0.4
TIRR	Tirgusor	145.01	325	⇓iP	PKPdf	11 25 04.4	-1.2
TIRR	Tirgusor	145.01	325	⇓P	PKPdf	11 25 04.4	-1.2
TRPA	Tarpa	145.11	335	⇓iP	PKPdf	11 25 05.7	+0.1
HARR	Harsova	145.12	326	⇓iP	PKPdf	11 25 06.7	+0.9
HARR	Harsova	145.12	326	P	PKPdf	11 25 06.5	+0.8
CLZ	Clausthal	145.25	350	ePKPbc	PKPbc	11 25 06.1	-0.7
OKC	Ostrava-Krasne	145.26	341	ePKP	PKPdf	11 25 06.3	+0.5
CLL	Collm	145.27	347	ePKPbc	PKPbc	11 25 06.1	-0.7
CLL	Collm	145.27	347	⇑iPKPbc	PKPbc	11 25 06.1	-0.7
	comp=Z,43nm,0.7s						
UPC	Upice	145.28	344	ePKP	PKPdf	11 25 06.4	+0.5
DPC	Dobruska-Polom	145.34	343	ePKP	PKPdf	11 25 06.8	+0.8
BRG	Berggiesshubel	145.47	346	ePKPbc	PKPbc	11 25 06.8	-0.6
BRG	Berggiesshubel	145.47	346	ePKP	PKPdf	11 25 06.9	+0.7
	comp=Z,40nm,1.2s						
ISR	Istrita	145.55	328	⇑iP	PKPbc	11 25 08.1	+0.2
PVCC	Panska Ves	145.64	345	ePKP	PKPbc	11 25 07.6	-0.3
VOIR		146.06	330	⇑iP	PKPbc	11 25 08.8	-0.5
VOIR		146.06	330	P	PKPbc	11 25 08.9	-0.4
DRGR		146.10	333	⇓iP	PKPbc	11 25 09.2	-0.2
DRGR		146.10	333	P	PKPbc	11 25 09.1	-0.3
PRU	Pruhonice	146.14	345	ePKP	PKPbc	11 25 08.7	-0.7
PRU				ex	x	11 25 11.0	
MOX	Moxa	146.18	348	ePKP	PKPbc	11 25 08.7	-0.8
	comp=Z,24nm,1.6s						
MOX	Moxa	146.18	348	ePKPbc	PKPbc	11 25 08.5	-1.0
VYHS	Vyhne	146.20	339	ePKP	PKPdf	11 25 07.0	-0.5
VYHS				e		11 25 09.2	
VYHS				e		12 31 12.5	
VYHS	Vyhne	146.20	339	eP	PKPdf	11 25 07.0	-0.5
VYHS				ePKP	PKPbc	11 25 09.2	-0.4
VRAC	Vranov	146.20	342	⇑iP	PKPdf	11 25 09.0	+1.6
VRAC	Vranov	146.20	342	P	PKPbc	11 25 09.4	-0.2
TANN	Tannenbergstha	146.22	347	ePKPbc	PKPbc	11 25 08.9	-0.7
KOLL	Kolacno	146.27	339	ePKP	PKPbc	11 25 09.7	-0.1
UBBA	Unterbreizbach	146.30	350	ePKPbc	PKPbc	11 25 08.5	-1.3
PSZ	Piszkesteto	146.31	337	⇑ePKP	PKPbc	11 25 09.3	-0.6
PSZ	Piszkesteto	146.31	337	⇑iP	PKPbc	11 25 09.3	-0.6
PSZ	Piszkesteto	146.31	337	ePKPbc	PKPbc	11 25 09.1	-0.8
NKC	Novy Kostel	146.40	347	ePKP	PKPbc	11 25 09.5	-0.6
TREC	Trest	146.53	343	ePKP	PKPbc	11 25 09.8	-0.7
ROTZ	Rotzenmuhle	146.89	347	ePKPbc	PKPbc	11 25 11.1	-0.3
BUD	Budapest	146.99	338	⇓ePKP	PKPbc	11 25 11.6	-0.2
ZST	Bratislava	147.03	340	ePKP	PKPbc	11 25 11.4	-0.4
GZR	Gura Zlata	147.16	332	⇓iP	PKPbc	11 25 11.4	-0.9
GZR	Gura Zlata	147.16	332	P	PKPbc	11 25 11.3	-1.0
GRA1	Grafenberg Arr	147.16	348	ePKPbc	PKPbc	11 25 11.8	-0.4
GRA1				ePKPab	PKPab	11 25 15.2	-0.3
GRF	Grafenberg Arr	147.16	348	ePKPbc	PKPbc	11 25 11.8	-0.4
GRF				ePKPab	PKPab	11 25 15.2	-0.3
KHC	Kasperske Hory	147.17	345	ePKP	PKPdf	11 25 08.0	-1.1
KHC				x	PKPbc	11 25 11.7	-0.5
KHC				ex	PKPab	11 25 14.8	-0.8
KHC	Kasperske Hory	147.17	345	ePKPbc	PKPbc	11 25 11.7	-0.5
SNF	Seneffe	147.24	357	PKPbc	PKPab	11 25 14.9	-0.9
BCLA	Clavier	147.26	355	PKPbc	PKPab	11 25 14.5	-1.4
WET	Wettzell	147.33	346	ePKPbc	PKPbc	11 25 11.8	-0.8
WET				ePKPab	PKPab	11 25 15.5	-0.7
GEC2	GERESS Array S	147.41	345	ePKPbc	PKPbc	11 25 12.2	-0.6
GEC2				ePKPab	PKPab	11 25 15.8	-0.7
GERES	GERESS Array B	147.41	345	PKPbc	PKPbc	11 25 12.1	-0.7
	comp=Z,13nm,0.6s,baz=24,slow=2.9,SNR=91						
BZS	Buzias	147.50	333	⇓iP	PKPbc	11 25 12.5	-0.7
BZS	Buzias	147.50	333	⇓P	PKPbc	11 25 12.5	-0.7
GIVF	Givet	147.61	356	⇑iPKP1	PKPbc	11 25 12.7	-0.6
	comp=Z,68nm,1.0s						
DOU	Dourbes	147.64	356	PKPbc	PKPbc	11 25 12.6	-0.7
CONA	Conrad Observa	147.65	342	⇑iPKPbc	PKPbc	11 25 13.3	-0.2
	comp=Z,27nm,1.1s,SNR=12						
CSNA	Conrad Observa	147.65	342	⇑iPKPbc	PKPbc	11 25 13.2	-0.2
	comp=Z,29nm,1.1s						
SOP	Sopron	147.65	341	⇑ePKP	PKPbc	11 25 13.1	-0.4
BAIF	Baives	147.70	357	⇑iPKP1	PKPbc	11 25 13.0	-0.5
	comp=Z,27nm,0.7s						
WLF	Walferdange	147.94	354	PKPbc	PKPbc	11 25 14.1	-0.1
WLF	Walferdange	147.94	354	ePKPbc	PKPbc	11 25 13.9	-0.2
WLF				ePKPab	PKPab	11 25 18.5	-0.2
WLF	Walferdange	147.94	354	ePKPbc	PKPbc	11 25 13.7	-0.4
MOA	Molln	148.18	343	⇑iPKPbc	PKPbc	11 25 14.0	-0.8
	comp=Z,17nm,1.2s,SNR=7.9						
PKSM	Moragy	148.21	337	⇓iP	PKPbc	11 25 14.0	-0.9
PKSM	Moragy	148.21	337	P	PKPbc	11 25 13.9	-1.0
ARSA	Arzberg	148.36	341	⇑iPKiKP	PKiKP	11 25 15.3	-1.2
	comp=Z,7.3nm,0.9s						
STU	Stuttgart	148.41	350	ePKPbc	PKPbc	11 25 14.8	-0.6
STU				ePKPab	PKPab	11 25 20.0	-0.7
FUR	Furstenfeldbru	148.61	347	ePKPbc	PKPbc	11 25 15.2	-0.7
FUR				ePKPab	PKPab	11 25 21.0	-0.5
RJOB	Jochberg	148.66	345	ePKPbc	PKPbc	11 25 15.1	-0.9
RJOB				ePKPab	PKPab	11 25 22.0	+0.3
BFO	Black Forest	148.98	351	ePKPbc	PKPbc	11 25 15.9	-0.9
BFO				ePKPab	PKPab	11 25 22.1	-0.9
SOKA	Soboth	149.02	342	⇓iPKPbc	PKPbc	11 25 15.6	-1.3
	comp=Z,17nm,1.2s						
VTS	Vitosha	149.04	328	⇓iP	PKPbc	11 25 16.7	-0.4
VTS	Vitosha	149.04	328	⇓P	PKPbc	11 25 16.7	-0.4
FLN	La Foliniere	149.04	2	⇑iPKP1	PKPbc	11 25 15.8	-1.1
	comp=Z,47nm,0.7s						
CDF	Champ du Feu	149.05	352	⇑iPKP1	PKPbc	11 25 16.3	-0.6
	comp=Z,14nm,0.5s						
KBA	Koelnbreinsper	149.13	344	⇑iPKPdf	PKPdf	11 25 12.9	+0.5
	comp=Z,7.7nm,0.7s						
MEZF	Maizieres J'vi	149.19	355	⇑iPKP1	PKPbc	11 25 16.7	-0.6
	comp=Z,30nm,0.7s						
LDF	La Druitiere	149.22	2	⇑iPKP1	PKPbc	11 25 16.2	-1.1
	comp=Z,20nm,0.5s						
ROSF	Rostrenen	149.27	6	⇑iPKP1	PKPbc	11 25 16.1	-1.4
WATA	Walderalm	149.33	346	⇑iPKPdf	PKPdf	11 25 12.9	+0.3
	comp=Z,2.4nm,0.4s						
WATA				⇑iPKPbc	PKPbc	11 25 16.7	-1.0
	comp=Z,9.6nm,0.5s						
RETA	Reutte	149.36	347	⇑iPKPbc	PKPbc	11 25 16.8	-0.9
	comp=Z,15nm,1.1s						
WTTA	Wattenberg	149.38	346	⇑iPKPbc	PKPbc	11 25 17.1	-0.7
	comp=Z,27nm,0.7s						
GRR	Gorron	149.40	3	⇑iPKP1	PKPbc	11 25 16.8	-1.0
	comp=Z,27nm,0.5s						
SGMF	Saint Gilles	149.42	5	⇑iPKP1	PKPbc	11 25 16.6	-1.2
	comp=Z,122nm,1.3s						
MOTA	Moosalm	149.42	347	⇓iPKPbc	PKPbc	11 25 16.8	-1.0
	comp=Z,16nm,0.9s						
MOTA				⇓iPKPab	PKPab	11 25 23.4	-1.4
	comp=Z,11nm,0.7s						
MYKA	Terra Mystica	149.47	343	⇑iPKPbc	PKPbc	11 25 16.4	-1.6
	comp=Z,11nm,0.5s						
HAU	Haudompre	149.56	353	⇑iPKP1	PKPbc	11 25 17.4	-0.8
	comp=Z,29nm,0.8s						
PDKS	Podkum	149.59	341	i PKPbc	PKPbc	11 25 17.3	-1.0
CRES	Cresnjev	149.65	340	i PKPbc	PKPbc	11 25 17.5	-1.0
ABTA	Abfaltersbach	149.66	345	⇑iPKPbc	PKPbc	11 25 16.9	-1.5
	comp=Z,20nm,0.6s						
HINF	Hinteralfeld	149.69	353	⇑iPKP1	PKPbc	11 25 17.5	-1.0
	comp=Z,17nm,0.7s						
QUIF	Quistinic	149.70	6	ePKP1	PKPbc	11 25 17.3	-1.2
DAVA	Damuels	149.73	348	⇑iPKPbc	PKPbc	11 25 18.0	-0.6
	comp=Z,32nm,1.2s						
LJU	Ljubljana	149.74	342	ePKPdf	PKPdf	11 25 12.5	-0.8
LJU				i PKPbc	PKPbc	11 25 17.7	-1.0
FETA	Feichten	149.81	347	⇑iPKPdf	PKPdf	11 25 13.1	-0.2
	comp=Z,10nm,1.2s						
FETA				⇑iPKPbc	PKPbc	11 25 18.2	-0.6
	comp=Z,23nm,1.0s						
VOJS	Vojsko	149.94	342	i PKPbc	PKPbc	11 25 17.6	-1.5
BOJS	Bojanci	150.00	340	i PKPbc	PKPbc	11 25 18.7	-0.6
VAY	Valandovo	150.28	327	ePKP	PKPbc	11 25 17.8	-2.3
SKO	Skopje	150.38	329	ePKP	PKPbc	11 25 19.8	-0.5
LOR	Lormes	150.50	357	⇑iPKP1	PKPbc	11 25 19.7	-0.7
	comp=Z,32nm,0.5s						
HYF	Humbligny	150.55	358	ePKP1	PKPbc	11 25 20.1	-0.4
TUE	Stuetta	150.61	349	ePKPbc	PKPbc	11 25 19.9	-0.8
SSF	Saint Saulge	150.72	357	⇑iPKP1	PKPbc	11 25 20.2	-0.7
	comp=Z,32nm,0.6s						
KRUS	Krusevo	150.93	328	ePKP	PKPbc	11 25 20.5	-1.1
CABF	La Chapelle	150.96	353	⇑iPKP1	PKPbc	11 25 21.3	-0.2
	comp=Z,50nm,1.0s						
AVF	Avril sur Loir	151.00	357	⇑iPKP1	PKPbc	11 25 20.4	-1.2
	comp=Z,9.0nm,0.7s						
SMF	Signal de Mont	151.12	356	ePKP1	PKPbc	11 25 20.9	-0.9
MFF	Saint Martin d	151.21	2	⇑iPKP1	PKPbc	11 25 21.0	-1.1
	comp=Z,26nm,0.7s						
BGF	Bois d'Agland	151.26	358	⇑iPKP1	PKPbc	11 25 21.3	-0.9
	comp=Z,34nm,0.8s						
TCF	Toulx Ste Croi	151.54	359	⇑iPKP1	PKPbc	11 25 21.8	-1.0
	comp=Z,20nm,0.8s						
LPL	La Plagne	151.96	352	ePKP1	PKPbc	11 25 23.8	0.0
	comp=Z,15nm,0.8s						
LPG	La Plagne	151.98	352	⇑iPKP1	PKPbc	11 25 23.9	+0.1
	comp=Z,12nm,0.8s						
RJF	Les Rejaudoux	152.54	360	ePKP1	PKPbc	11 25 24.0	-1.0
	comp=Z,18nm,0.8s						
ORIF	Oris-en-Rattie	152.66	353	ePKP1	PKPbc	11 25 24.7	-0.6
MBDF	Montbardon	152.73	352	ePKP1	PKPbc	11 25 24.9	-0.6
	comp=Z,23nm,0.8s						
VIVF	Saint-Julien-l	152.84	355	⇑iPKP1	PKPbc	11 25 25.1	-0.6
	comp=Z,8.1nm,0.7s						
LFF	La Frestale	152.90	1	⇑iPKP1	PKPbc	11 25 24.8	-1.0
CAF	Calviac	152.91	359	ePKP1	PKPbc	11 25 25.0	-0.9
SBF	Sospel	153.47	350	⇑iPKP1	PKPbc	11 25 25.8	-1.3
ESDC	Sonseca Array	157.68	11	PKPab	PKPab	11 25 58.9	-1.4
	comp=Z,1.0nm,0.5s,baz=356,slow=6.5,SNR=6.9						
KEST	Kesra	160.74	340	PKPab	PKPab	11 26 12.5	-1.3
	comp=Z,1.1nm,0.6s,baz=48,slow=5.0,SNR=3.4						
DBIC	Dimbokro	167.43	150	PKP	PKPdf	11 25 33.2	-1.6
	comp=Z,1.0nm,0.7s,baz=177,slow=3.9,SNR=3.1						
DBIC				PKPab	PKPab	11 26 40.1	-3.7
	comp=Z,0.9nm,0.3s,baz=245,slow=11,SNR=6.1						
DBIC	Dimbokro	167.43	150	PKP	PKPdf	11 25 33.2	-1.6
DBIC				PKPab	PKPab	11 26 40.1	-3.7
TORD	Torodi Ar. Bea	175.40	184	PKP	PKPdf	11 25 36.3	-2.3
	comp=Z,1.2nm,0.8s,baz=254,slow=1.8,SNR=7.8						
TORD				PKPab	PKPab	11 27 17.7	-1.2
	comp=Z,0.6nm,0.7s,baz=191,slow=4.8,SNR=4.2						
TORD				pPKPab	pPKPab	11 29 20.7	+3.1
	comp=Z,1.0nm,0.9s,baz=180,slow=3.7,SNR=5.4						
TORD	Torodi Ar. Bea	175.40	184	PKP	PKPdf	11 25 36.3	-2.3
TORD				PKPab	PKPab	11 27 17.7	-1.2
TORD				pPKPab	pPKPab	11 29 20.7	+3.1

NNC 11 11:24:02.9±4.3, 3689N×7123E, h173km±80km, mb3.0, mpv4.0, 3C-2D, Error ellipse: s-maj=46.2km s-min=24.5km az=18.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.23	355	⇓P	Pn	11 25 32.5	-0.2
	7.1nm,0.3s,baz=179,slow=12,SNR=193						
KK31				⇓S	Sn	11 26 44.2	+0.9
	2.3nm,0.4s,baz=179,slow=23,SNR=8.4						
TKM2	Tokmak 2	6.89	28	⇑P	Pn	11 25 42.0	+0.6
	5.6nm,0.6s						
TKM2				⇑S	Sn	11 26 59.5	+0.4
	3.9nm,0.8s						
AB09	Akbulak array	14.85	330	⇑P	Pn	11 27 24.2	0.0
	0.5nm,0.6s						

KRSC 11 11:28:57.4±0.2, 5229N×16109E, h22km±22km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.04	322	eP	Pn	11 29 17.0	+0.4
SPN				i S	Sb	11 29 31.7	+1.9
NLC	Nalytchevo	1.38	310	eP	Pn	11 29 22.0	+0.7
NLC				i S	Sn	11 29 39.1	+0.3
RUS	Russkaya	1.59	276	eP	Pn	11 29 24.4	+0.3
RUS				i S	Sn	11 29 44.7	+0.8
PET	Petropavlovsk	1.66	297	eP	Pn	11 29 26.0	+0.9
PET				i S	Sn	11 29 47.6	+1.9
AVH	Avacha	1.73	305	eP	Pn	11 29 27.9	+1.8
AVH				i S	Sn	11 29 49.9	+2.4
GRL	Gorelyy	1.87	279	eP	Pn	11 29 29.9	+1.9
KII	Karymskiy	2.01	331	eP	Pn	11 29 32.2	+2.3
KII				i S	Sn	11 29 57.8	+3.5
MKZ	Mys Kozlova	2.30	9	eP	Pn	11 29 35.2	+1.2
MKZ				i S	Sn	11 30 02.4	+0.8
GNL	Ganaly	2.37	308	eP	Pn	11 29 37.6	+2.8
GNL				i S	Sn	11 30 06.9	+3.7
MIPR	Malaya Ipel'ka	2.66	271	eP	Pn	11 29 40.4	+1.5
MIPR				i S	Sn	11 30 10.8	+0.4
TUMR	Tumrok	3.05	350	i P	Pn	11 29 46.3	+2.1
TUMR				i S	Sn	11 30 21.2	+1.2
KMNR	Kamenistaya	3.51	352	eP	Pn	11 29 54.1	+3.6
KMNR				i S	Sn	11 30 33.9	+2.6
ZLN	Zelenaya	3.74	358	eP	Pn	11 29 56.5	+2.8
ZLN				i S	Sn	11 30 41.1	+4.1
KLY	Klyuchi	4.04	357	P	Pn	11 29 59.3	+1.5
KLY				i S	Sn	11 30 44.2	-0.2
KBTR	Krutoberegovo	4.05	14	eP	Pn	11 30 00.3	+2.3
KBTR				i S	Sn	11 30 45.1	+0.3
SRDR	Sredinnyy	4.12	349	i P	Pn	11 30 02.5	+3.7

ISCJB 11 11:54:25.9±0.8, 176S±0.1×1787W±0.1, h551km±14km, mb3.7/12, Error ellipse: s-maj=24.9km s-min=9.3km az=145.2
IDC 11 11:54:26.9±1.7, 1773S×17860W, h554km±21km, mb3.3/10, mb1 3.6/11, mb1mx3.5/18, mbtmp3.4/11, Error ellipse: s-maj=27.1km s-min=14.9km az=150.0
NEIC 11 11:54:26.7±0.8, 1767S×17865W, h553km±10km, mb3.9/5, Error ellipse: s-maj=18.0km s-min=7.9km az=152.0
ISC 11 11:54:26.3±0.8, 176S±01×1787W±01, h541km±12km, n38, σ0.54/30, mb3.7/12, 3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.60	62	P	P	11 56 20.1	+0.2
	9.1nm,0.3s,baz=243,slow=9.0,SNR=12						
AFI				S	S	11 57 52.6	-0.3
	2.1nm,0.3s,baz=274,slow=19,SNR=2.5						
AFI	Afiamalu	7.60	62	eP	P	11 56 20.4	+0.5
AFI				S	S	11 57 52.6	-0.3
RAO	Raoul Island	11.61	177	P	P	11 57 00.8	+0.2
	290nm,0.3s,baz=353,slow=19,SNR=4.1						
DZM	Mont Dzumac	14.68	250	eP	P	11 57 32.7	+0.1
	7.6nm,0.5s						
EIDS	Eidsvold	29.12	249	eP	P	11 59 43.2	-0.5
ARMA	Armidale	29.86	239	eP	P	11 59 50.4	+0.3
CTA	Charters Tower	33.24	260	eP	P	12 00 18.9	-0.1
	2.6nm,0.8s,mb3.8						
CTA	Charters Tower	33.24	260	P	P	12 00 18.7	-0.4
	3.1nm,0.7s,mb3.9,baz=70,slow=12,SNR=5.7						
CTAO	Charters Tower	33.24	260	eP	P	12 00 18.9	-0.1
	2.5nm,0.5s,mb4.0						
CNB	Canberra Magne	33.40	232	eP	P	12 00 20.6	+0.4
COEN	Coen	36.84	270	eP	P	12 00 49.9	+0.7
TOO	Toolangi	37.15	230	eP	P	12 00 51.5	+0.2
STKA	Stephens Creek	38.54	241	⇓iP	P	12 01 02.9	+0.1
	4.2nm,0.6s,mb4.2						
STKA	Stephens Creek	38.54	241	P	P	12 01 02.7	0.0
	4.5nm,0.4s,mb4.3,baz=86,slow=9.8,SNR=19						
STKA	Stephens Creek	38.54	241	eP	P	12 01 02.9	+0.2
WB2	Warramunga Arr	44.42	259	⇓iP	P	12 01 48.3	-1.1
WRAB	Tennant Creek	44.42	259	eP	P	12 01 48.3	-1.1
	1.5nm,0.4s,mb3.9						
KAKA	Kakadu	47.33	269	eP	x	12 01 52.0	
	2.5nm,0.3s						
FITZ	Fitzroy Crossi	52.82	260	eP	P	12 02 51.6	-0.2
	2.9nm,1.1s,mb3.5						
MJAR	Matsushiro Arr	67.52	323	P	P	12 04 28.6	-0.1
	2.7nm,0.7s,mb3.9,baz=157,slow=6.5,SNR=6.6						
PETK	Petropavlovsk-	73.33	345	P	P	12 05 03.0	+0.3
	4.1nm,0.7s,mb4.0,baz=125,slow=8.2,SNR=7.4						
KSRS	Korea Array	74.31	318	P	P	12 05 09.8	+1.1
	0.6nm,0.5s,mb3.3,baz=138,slow=6.6,SNR=4.0						
NVAR	Mina Array Bea	79.39	44	P	P	12 05 37.0	+0.6
	0.9nm,0.5s,mb3.4,baz=228,slow=10,SNR=4.5						
TXAR	Lajitas Array	86.06	58	P	P	12 06 10.3	+0.2
	0.8nm,0.8s,mb3.4,baz=221,slow=6.4,SNR=10.0						
BW06	Boulder Array	87.32	44	eP	P	12 06 15.3	-0.4
PDAR	Pinedale Array	87.32	44	P	P	12 06 15.2	-0.5
	0.7nm,0.6s,mb3.5,baz=227,slow=4.4,SNR=8.5						
CMAR	Chiang Mai Arr	88.54	290	P	P	12 06 22.5	+0.5
	0.4nm,0.4s,mb3.6,baz=121,slow=2.1,SNR=5.4						
YKA	Yellowknife Ar	94.17	25	P	P	12 06 46.2	-0.7
	0.5nm,0.8s,mb3.7,baz=254,slow=4.0,SNR=6.4						
YKA	Yellowknife Ar	94.17	25	P	P	12 06 46.2	-0.7
MKAR	Makanchi Array	108.74	314	PKiKP	PKiKP	12 11 52.0	-1.9
	0.4nm,0.5s,baz=92,slow=1.2,SNR=8.2						
MKAR	Makanchi Array	108.74	314	PKPdf	PKiKP	12 11 52.0	-1.9
ARCES	ARCESS Array B	125.98	350	PKP	PKPdf	12 12 25.4	-0.9
	5.2nm,1.0s,baz=38,slow=2.2,SNR=5.5						
BR131	Keskin Array S	144.39	315	ePKP	PKPdf	12 13 00.8	-0.4
BRTR	Keskin Array B	144.39	315	PKP	PKPdf	12 13 00.5	-0.7
	2.0nm,0.6s,baz=122,slow=1.6,SNR=10						
CLL	Collm	145.12	347	⇓iPKPbc	PKPbc	12 13 02.6	-0.3
	comp=Z,9.0nm,0.9s						
BRG	Berggiesshubel	145.32	346	eP	PKPdf	12 13 03.2	+0.8
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	147.26	345	PKPbc	PKPbc	12 13 08.3	-0.7
	comp=Z,2.5nm,0.5s,baz=24,slow=3.3,SNR=21						
TORD	Torodi Ar. Bea	175.54	185	PKP	PKPdf	12 13 31.9	-3.2
	comp=Z,0.7nm,1.2s,baz=134,slow=4.2,SNR=2.1						

ISCJB 11 12:11:08.4±0.5, 24.18N±0.03×121.88E±0.03, h57km±6km, Error ellipse: s-maj=5.8km s-min=2.9km az=148.1
TAP 11 12:11:08.3, 2421N×12183E, h60km, ML3.0, D
JMA 11 12:11:08.6±0.3, 2433N×12192E, h83km, M2.1
ISC 11 12:11:08.9±0.5, 2419N±003×12187E±003, h55km±7km, n31, σ0.61/62, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.27	334	i P	Pn	12 11 18.2	-0.2
	baz=340						
ENA				i S	Sn	12 11 26.0	+0.9
	baz=340						
TWD	Chiawan	0.27	247	i P	Pn	12 11 18.2	-0.1
	baz=238						
TWD				i S	Sn	12 11 25.6	+0.5
	baz=238						
TWC	Suao	0.42	357	i P	Pn	12 11 19.8	+0.1
	baz=3.0						
TWC				i S	Sn	12 11 28.0	+0.6
	baz=3.0						
NNS	Nan Shan	0.52	299	P	Pn	12 11 20.3	-0.4
	baz=299						
NNS				S	Sn	12 11 29.2	-0.2
	baz=299						
ENTT	Nioudou	0.53	328	P	Pn	12 11 20.6	-0.3
	baz=331						
ENTT				S	Sn	12 11 29.2	-0.4
	baz=331						
ESL	Shilin	0.55	227	P	Pn	12 11 20.2	-0.9
	baz=222						
ESL				eS	Sn	12 11 29.0	-0.8
	baz=222						
WHF	Hehuan Shan	0.56	266	P	Pn	12 11 20.9	-0.3
	baz=263						
WHF				S	Sn	12 11 30.2	+0.2
	baz=263						
TWE	Neicheng	0.56	341	P	Pn	12 11 20.9	-0.4
	baz=344						
TWE				S	Sn	12 11 30.6	+0.4
	baz=344						
TWT	Tachien	0.64	276	P	Pn	12 11 22.4	+0.2
	baz=274						
TWT				S	Sn	12 11 32.1	+0.3
	baz=274						
NSK	Sanguang	0.68	316	eP	Pn	12 11 22.1	-0.5
	baz=317						
NSK				eS	Sn	12 11 31.5	-1.1
	baz=317						
TWB1	Santiao Chiao	0.82	7	P	Pn	12 11 24.5	-0.1
	baz=10.0						
TWB1				S	Sn	12 11 36.0	0.0
	baz=10.0						
EHY	Hungye	0.84	217	eP	Pn	12 11 24.1	-0.6
	baz=213						
EHY				eS	Sn	12 11 34.8	-1.6
	baz=213						
NSTT	Nanjuang	0.91	299	eP	Pn	12 11 25.5	-0.1
	baz=299						
NSTT				eS	Sn	12 11 37.9	0.0
	baz=299						
SMLT	Sun Moon Lake	0.94	251	P	Pn	12 11 26.2	+0.2
	baz=249						
SMLT				eS	Sn	12 11 40.3	+1.8
	baz=249						
TYC	Yuchr	0.97	253	P	Pn	12 11 26.5	+0.1
	baz=251						
TYC				eS	Sn	12 11 39.2	-0.1
	baz=251						
TWF1	Yuli	0.98	213	eP	Pn	12 11 25.1	-1.5
	baz=209						
TWF1				eS	Sn	12 11 39.1	-0.5
	baz=209						
TWQ1	Liyutan	1.02	279	eP	Pn	12 11 26.7	-0.3
	baz=278						
TWQ1				eS	Sn	12 11 39.5	-0.8
	baz=278						
YOJ	Yonaguni jima	1.07	75	P	Pn	12 11 28.0	+0.2
YOJ				eS	Sn	12 11 42.5	+0.7
WNT	Mingjian	1.13	254	eP	Pn	12 11 29.4	+0.9
	baz=252						
WNT				eS	Sn	12 11 42.6	-0.4
	baz=252						
ALS	Alishan	1.19	236	eP	Pn	12 11 30.0	+0.7
	baz=233						
ALS				eS	Sn	12 11 45.0	+0.6
	baz=233						
CHN5	Tsauling	1.24	242	eP	Pn	12 11 30.6	+0.6
	baz=239						
CHN5				eS	Sn	12 11 45.6	-0.2
	baz=239						
ELDTW	Lidau	1.27	218	eP	Pn	12 11 29.3	-1.1
	baz=216						
ELDTW				eS	Sn	12 11 46.4	+0.1
	baz=216						
CHN4	Tsaushan	1.44	235	eP	Pn	12 11 33.2	+0.6
	baz=232						
CHN4				eS	Sn	12 11 51.8	+1.3
	baz=232						
STYT	Tauyuan	1.44	225	eP	Pn	12 11 32.2	-0.6
	baz=223						
STYT				eS	Sn	12 11 51.4	+0.8
	baz=223						
WTP	Ta-pu	1.48	231	eP	Pn	12 11 34.2	+0.9
	baz=229						
WTP				eS	Sn	12 11 51.4	-0.2
	baz=229						
TWK	Hsinying	1.56	234	eP	Pn	12 11 34.7	+0.3
	baz=232						
TWK				eS	Sn	12 11 53.7	+0.1
	baz=232						
CHN1	Nanshi	1.58	231	eP	Pn	12 11 35.0	+0.3
	baz=229						
CHN1				eS	Sn	12 11 54.2	+0.1
	baz=229						
IRIF	Iriomote-Funau	1.70	85	P	Pn	12 11 36.1	-0.2
IRIF				eS	Sn	12 11 57.2	+0.3
JKRS	Kuro-shima	1.95	88	P	Pn	12 11 40.1	+0.4
JKRS				eS	Sn	12 12 03.6	+0.6
JIJ	Ishigaki jima	2.08	85	P	Pn	12 11 41.2	-0.2
JIJ				eS	Sn	12 12 05.4	-0.8
JTJ	Tarama	2.62	79	P	Pn	12 11 49.0	+0.2
JTJ				eS	Sn	12 12 19.0	-0.4

GII 11 12:14:00.0±0.8, 2990N×36.11E, h0km, ML2.4/4, EXPLOSION
SGS 11 12:15:01.6, 30.12N×3628E, h7km
ISCJB 11 12:15:02.6±0.7, 2984N±0.03×3622E±0.04, h0km, Error ellipse: s-maj=5.7km s-min=4.2km az=166.3
CSEM 11 12:15:02.8±0.6, 2987N×3631E, h15km, ML2.8, Error

ellipse: s-maj=15.5km s-min=6.6km az=68.0
*HLW **11** 12:15:04.1, 2988N×3641E, h25km, Mb2.8*
ISC 11 12:15:02.7±0.7, **2984N**±003×**3627E**±005, **h0km, n24, σ0.60**/34, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.06	264	Pg	Pg	12 15 23.6	+0.6
HRFI	Mount Harif	1.09	281	Pg	Pg	12 15 23.0	-0.5
HRFI				Sg	Sg	12 15 38.0	+0.3
EIL	Elat	1.16	262	Pg	Pg	12 15 25.0	+0.2
EIL				Sg	Sg	12 15 40.2	+0.3
MBRI	Mt Berech	1.18	268	Pg	Pg	12 15 25.0	-0.2
MBRI				Sg	Sg	12 15 41.5	+0.9
HQLS		1.18	243	P	Pg	12 15 25.0	-0.3
ZFRI	Zfri	1.18	307	Pg	Pg	12 15 24.2	-1.1
ZFRI				Sg	Sg	12 15 40.5	-0.3
PRNI	Paran	1.21	295	Pg	Pg	12 15 25.0	-0.9
PRNI				Sg	Sg	12 15 41.5	0.0
JLOS		1.29	212	P	Pg	12 15 27.7	+0.2
KRMI	Paran Flat	1.37	282	Pg	Pg	12 15 27.3	-1.6
KRMI				Sg	Sg	12 15 46.6	-0.1
HBST	Basata	1.48	246	P	Pn	12 15 31.3	+0.8
RMNI	Mount Ramon	1.51	300	Pn	Pn	12 15 31.1	+0.1
TBKS	Tabuk	1.63	172	P	Pn	12 15 32.8	+0.2
MZDA	Masada	1.66	332	Pn	Pn	12 15 32.8	-0.2
MZDA				Sn	Sn	12 15 55.7	+0.7
BDAS	Al Bad‘	1.74	216	S	Sn	12 15 57.7	+0.7
BDAS	Al Bad‘	1.74	216	P	Pn	12 15 33.7	-0.4
YTIR	Yattir	1.81	327	Pn	Pn	12 15 35.2	0.0
RTMI	Retamim	1.82	312	Pn	Pn	12 15 35.4	+0.1
RTMI				Sn	Sn	12 15 59.2	+0.1
DSI	Dead Sea	1.89	336	Pn	Pn	12 15 36.3	+0.1
DSI				Sn	Sn	12 16 02.2	+1.5
HNKL	Nakhl	1.99	273	P	Pn	12 15 38.1	+0.5
HNKL				S	Sn	12 16 02.6	-0.6
RSHS		2.00	220	P	Pn	12 15 37.0	-0.8
HKAT	Jabal Katrina	2.38	237	P	Pn	12 15 43.2	+0.2
RSH		2.47	298	P	Pn	12 15 43.6	-0.5
TR2		2.66	238	P	Pn	12 15 46.6	-0.1
HRSH	Kfar Ka’horesh	2.98	344	P	Pn	12 15 43.6	-7.5

GUC 11 12:50:26.7±0.8, **2430S**×**6746W, h162km**±26km, **ML3.8, 2C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.14	321	⇓iP	Pn	12 51 05.7	+1.5
LVC				iS	Sn	12 51 35.6	+2.6
LVC				AML	AML	12 51 39.7	
	comp=N,175nm,0.4s						
PECH	Pedro de Valdi	2.64	309	iS	Sn	12 51 45.5	+1.8
PECH				AML	AML	12 51 46.3	
	comp=E,840nm,0.4s						
CEN1	Los Morros	2.66	289	⇓iP	Pn	12 51 12.7	+2.3
CEN1				iS	Sn	12 51 47.5	+3.3
CEN1				AML	AML	12 51 49.0	
	comp=N,225nm,0.8s						
CPN1	Cerro Paranal	2.70	262	⇑iP	Pn	12 51 12.6	+1.7
CPN1				iS	Sn	12 51 47.8	+2.8
CPN1				AML	AML	12 51 49.2	
	comp=E,152nm,0.5s						
ANCH	Antofagasta	2.77	282	⇑iP	Pn	12 51 13.1	+1.4
ANCH				iS	Sn	12 51 48.1	+1.7

*ISCJB **11** 13:00:59.0±3.1, 193S±006×9977E±009, h25km±23km, mb3.8/6, Error ellipse: s-maj=15.6km s-min=9.7km az=175.1*
*DJA **11** 13:01:01, 189S×9984E, h50km, MLv4.4/4*
*NEIC **11** 13:01:02.5±1.2, 188S×9989E, mb3.8/1, Error ellipse: s-maj=52.1km s-min=9.0km az=58.0*
*IDC **11** 13:01:03.6±2.3, 175S×10000E, h33km±6km, mb3.5/6, mb1 3.6/7, mb1mx3.5/22, mbtmp3.5/7, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/21, Error ellipse: s-maj=101.6km s-min=17.2km az=55.0*
ISC 11 13:00:59.8±3.3, **189S**±006×**9987E**±009, **h13km**±21km, **h34km**±.5km**:pP-P, n17, σ0.36**/18, **mb3.8**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	1.14	32	P	Pb	13 01 21.2	-0.1
PDSI				S	Sb	13 01 36.6	+0.6
PPI	Padang Panjang	1.52	21	P	Pn	13 01 26.5	-0.2
PPI				S	Sn	13 01 45.9	-0.4
RGRI	Rengat	2.90	58	P	Pn	13 01 45.6	-0.1
KSI	Kapahiang	3.24	123	P	Pn	13 01 50.1	-0.3
PSI	Prapat	4.75	349	Pn	Pn	13 02 11.6	+0.5
	1.4nm,0.3s,baz=127,slow=22,SNR=3.2						
CMAR	Chiang Mai Arr	20.23	357	P	P	13 05 34.1	-0.8
	0.4nm,0.4s,baz=189,slow=11,SNR=4.4						
FITZ	Fitzroy Crossi	29.99	124	eP	P	13 07 08.4	0.0
WRA	Warramunga Arr	38.17	120	P	P	13 08 19.8	+0.5
	0.6nm,0.4s,mb3.7,baz=303,slow=9.0,SNR=14						
WRA				pP	pP	13 08 29.6	+6.3
	0.8nm,0.4s,baz=304,slow=9.0,SNR=6.9						
WRAB	Tennant Creek	38.17	120	eP	P	13 08 19.4	+0.1
	0.9nm,0.6s,mb3.7						
SONM	Songino Array	49.84	6	P	P	13 09 52.2	-0.3
	0.7nm,0.7s,mb3.8,baz=178,slow=9.7,SNR=5.6						
SONM				LR	LR	13 32 48.4	
	comp=Z,58nm,18.6s,baz=142,slow=38						
MK31	Makanchi Array	50.88	344	eP	P	13 10 00.9	+0.4
MKAR	Makanchi Array	50.88	344	P	P	13 10 00.9	+0.4
	1.3nm,0.7s,mb4.0,baz=145,slow=8.1,SNR=11						
MKAR				pP	pP	13 10 10.5	+5.9
	1.5nm,0.5s,baz=165,slow=8.5,SNR=9.5						
KURK	Kurchatov	55.46	344	P	P	13 10 33.9	-0.2
	0.2nm,0.3s,mb3.6,baz=167,slow=6.8,SNR=3.1						
KURK				pP	pP	13 10 43.5	+5.2
	1.0nm,0.6s,baz=166,slow=7.6,SNR=4.4						
KURK	Kurchatov	55.46	344	P	P	13 10 33.9	-0.2
KURK				pP	pP	13 10 43.5	+5.2
ZAA0	Zalesovo Array	57.03	349	eP	P	13 10 45.2	-0.1
ZALV	Zalesovo Beam	57.03	349	P	P	13 10 45.4	+0.1
	1.0nm,0.4s,mb4.2,baz=186,slow=6.0,SNR=8.2						
TXAR	Lajitas Array	144.69	37	PKP	PKPdf	13 20 35.9	-1.2
	0.1nm,0.5s,baz=352,slow=2.7,SNR=3.3						
TXAR				pPKP	pPKPdf	13 20 48.0	+6.4
	0.6nm,0.5s,baz=286,slow=1.2,SNR=8.5						

*ISCJB **11** 13:07:09.8±4.6, 234S±0.1×179.1W±0.1, h414km±47km, mb3.9/16, Error ellipse: s-maj=22.0km s-min=17.0km az=152.1*
*IDC **11** 13:07:10.3±5.2, 2321S×17899W, h403km±54km, mb3.5/12, mb1 3.7/13, mb1mx3.7/17, mbtmp3.5/13, Error ellipse: s-maj=24.7km s-min=17.2km az=65.0*
*NEIC **11** 13:07:11.4±2.7, 2331S×17903W, h419km±29km, mb4.5/6, Error ellipse: s-maj=17.7km s-min=14.6km az=188.0*
ISC 11 13:07:11.5±3.1, **234S**±01×**1790W**±01, **h418km**±33km, **n34, σ0.71**/26, **mb3.9**/16, **1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.22	192	P	P	13 10 25.2	-0.4
	2.6nm,0.3s,baz=88,slow=5.7,SNR=17						
CTA	Charters Tower	32.35	269	eP	P	13 13 05.4	+0.9
	8.3nm,0.3s,mb4.5						
CTA	Charters Tower	32.35	269	P	P	13 13 05.5	+1.0
	12nm,0.4s,mb4.6,baz=96,slow=11,SNR=33						
CTAO	Charters Tower	32.35	269	eP	P	13 13 05.4	+1.0
	10nm,0.4s,mb4.5						
PMG	Port Moresby	35.15	288	eP	P	13 13 28.5	+0.1
	25nm,0.9s,mb4.5						
STKA	Stephens Creek	35.74	247	P	P	13 13 33.3	+0.2
	2.4nm,0.5s,mb3.8,baz=83,slow=7.8,SNR=4.9						
WB2	Warramunga Arr	43.31	265	⇓iP	P	13 14 34.0	-0.7
KAKA	Kakadu	47.14	274	eP	x	13 14 43.5	
	2.3nm,0.3s						
FORT	Forrest	47.32	249	eP	P	13 15 05.3	-0.3
	23nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	51.75	265	eP	P	13 15 39.2	+0.5
	4.2nm,0.8s,mb3.7						
VNDA	Vanda	55.00	185	P	P	13 16 02.8	+1.8
	3.2nm,0.7s,mb3.6,baz=359,slow=8.6,SNR=20						
KLBR	Kellerberrin	56.01	247	eP	P	13 16 08.6	-0.3
	11nm,0.7s,mb4.3						
NWAO	Narrogin (SRO)	56.26	245	P	P	13 16 10.8	+0.2
	8.5nm,1.1s,mb4.0,baz=198,slow=12,SNR=5.1						
NWAO	Narrogin (SRO)	56.26	245	P	P	13 16 10.8	+0.2
MBWA	Marble Bar	56.33	259	eP	P	13 16 10.4	-0.9
MUN	Mundaring	57.25	246	eP	P	13 16 17.6	+0.1
MJAR	Matsushiro Arr	71.95	325	P	P	13 17 50.4	-0.6
	3.5nm,0.9s,mb3.9,baz=157,slow=6.1,SNR=5.8						
KSRS	Korea Array	78.39	320	P	P	13 18 26.9	-0.3
	0.9nm,0.7s,mb3.5,baz=141,slow=7.9,SNR=4.7						
MAW	Mawson	78.56	200	P	P	13 18 27.7	-0.1
	2.3nm,0.7s,mb3.9,baz=98,slow=7.1,SNR=3.4						
PETK	Petropavlovsk-	78.78	346	P	P	13 18 28.1	-0.9
	2.2nm,0.7s,mb3.9,baz=134,slow=4.3,SNR=5.0						
NVAR	Mina Array Bea	83.75	44	P	P	13 18 55.5	+0.4
	0.4nm,0.4s,mb3.5,baz=216,slow=7.6,SNR=2.8						
SNAA	Sanae	85.20	179	e	P	13 19 01.1	-0.7
SNAA				e		13 19 06.3	
VNA3	Neumayer Olymp	85.37	177	e	P	13 19 02.0	-0.6
VNA3				e		13 19 06.7	
VNA2	Neumayer--Watz	85.80	177	e	P	13 19 04.2	-0.5
	baz=195,slow=4.1						
VNA2				e		13 19 08.4	
TXAR	Lajitas Array	89.40	58	P	P	13 19 22.9	+0.5
	0.3nm,0.8s,mb3.1,baz=211,slow=6.3,SNR=3.0						
CMAR	Chiang Mai Arr	90.16	290	P	P	13 19 27.9	+1.8
	1.8nm,0.9s,mb3.9,baz=127,slow=3.3,SNR=12						
PDAR	Pinedale Array	91.69	44	P	P	13 19 32.8	+0.1
	0.8nm,1.0s,mb3.6,baz=223,slow=2.2,SNR=3.6						
AKASG	Malin Array Be	144.98	328	PKP	PKPdf	13 25 57.2	-2.4
	1.4nm,0.5s,baz=46,slow=4.0,SNR=4.4						
AKASG	Malin Array Be	144.98	328	PKP	PKPdf	13 25 57.2	-2.4
BRTR	Keskin Array B	147.94	308	PKPbc	PKPbc	13 26 08.8	+0.3
	0.7nm,0.6s,baz=142,slow=4.9,SNR=2.8						
LIC	Lamto	162.02	160	eP	PKPab	13 27 12.3	-0.9
	12nm,0.7s						
KIC	Kosan Boka	162.24	161	eP	PKPab	13 27 14.2	0.0
	20nm,0.7s						
TIC	Toumodi	162.42	160	eP	PKPab	13 27 14.9	-0.1
	8.7nm,0.2s						
DBIC	Dimbokro	162.50	160	PKPab	PKPab	13 27 15.4	+0.1
	1.9nm,0.7s,baz=181,slow=8.9,SNR=5.2						

NEIC 11 13:11:49.3, 4091S×**17222E, h19km, ML4.3**(WEL)**, After WEL., Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.25	71	P	Pg	13 11 55.4	+0.3
QRZ				S	Sg	13 11 58.8	-0.2
DSZ	Denniston Nort	0.89	200	P	Pb	13 12 05.9	-0.3
DSZ				S	Sb	13 12 17.1	-0.6
NNZ	Nelson	0.93	110	P	Pb	13 12 03.9	-2.9
THZ	Tophouse	1.00	149	P	Pb	13 12 05.0	-2.9
BSWZ	Blackbirch Sta	1.48	123	P	Pn	13 12 14.2	-0.7
TCW	Tory Channel	1.58	102	P	Pn	13 12 15.4	-0.9
CMWZ	Cape Campbell	1.72	120	P	Pn	13 12 19.0	+0.8
KHZ	Kahutara	1.80	147	P	Pn	13 12 19.6	+0.3
LTZ	Lake Taylor	1.87	179	P	Pn	13 12 19.9	-0.4
MRW	Makara Radio	1.90	100	P	Pn	13 12 21.1	+0.4
SNZO	South Karori	1.92	103	P	Pn	13 12 21.0	+0.1
WEL	Wellington	1.96	102	P	Pn	13 12 22.3	+0.8
KIW	Kapiti Island	2.04	90	P	Pn	13 12 23.3	+0.7
BHW	Baring Head	2.06	105	P	Pn	13 12 23.2	+0.3
CAW	Cannon Point	2.16	96	P	Pn	13 12 25.1	+0.8
NEZ	North Egmont	2.18	42	P	Pn	13 12 26.5	+2.0
PKE	Pukeiti	2.19	39	P	Pn	13 12 26.6	+2.0
MSWZ	Moikau Station	2.34	103	P	Pn	13 12 26.4	-0.3
WAZ	Wanganui	2.41	62	P	Pn	13 12 29.3	+1.7
WVZ	Waitaha Valley	2.43	207	P	Pn	13 12 28.8	+0.8
PAWZ	Paruwai Farm	2.47	102	P	Pn	13 12 27.9	-0.6
MTW	Mount Morrison	2.50	97	P	Pn	13 12 29.0	+0.2
MRZ	Mangatainoka R	2.56	86	P	Pn	13 12 30.6	+0.8
VRZ	Vera Road	2.64	48	P	Pn	13 12 32.3	+1.5
CRLZ	Canterbury Las	2.68	174	P	Pn	13 12 29.9	-1.5
MQZ	McQueen’s Vall	2.81	174	P	Pn	13 12 31.9	-1.3
RPZ	Rata Peaks	2.94	197	P	Pn	13 12 35.0	+0.1
TSZ	Takapari Road	2.98	75	P	Pn	13 12 36.1	+0.6
WNVZ	Wahianoa	3.03	60	P	Pn	13 12 38.3	+2.1
FWVZ	Far West T-bar	3.04	58	P	Pn	13 12 38.1	+1.7
BFZ	Birch Farm	3.06	87	P	Pn	13 12 36.4	-0.3
TWVZ	Taurewa	3.08	54	P	Pn	13 12 38.3	+1.4
MOVZ	Moawhango	3.10	62	P	Pn	13 12 39.0	+1.9
TUVZ	Tukino	3.10	59	P	Pn	13 12 39.5	+2.3
NGZ	Ngauruhoe	3.12	57	P	Pn	13 12 39.6	+2.2
HIZ	Hauiti	3.14	41	P	Pn	13 12 38.9	+1.2
WTVZ	West Tongariro	3.15	56	P	Pn	13 12 40.0	+2.2
FOZ	Fox Glacier	3.25	214	P	Pn	13 12 38.6	-0.6
RATZ	Rangitukua	3.41	54	P	Pn	13 12 43.6	+2.2
BKZ	Black Stump Fm	3.71	63	P	Pn	13 12 47.2	+1.6
LBZ	Lake Benmore	3.79	203	P	Pn	13 12 46.5	-0.1
JCZ	Jackson Bay	4.07	218	P	Pn	13 12 52.2	+1.7
TOZ	Tahuroa Road	4.07	40	P	Pn	13 12 51.5	+1.0
ODZ	Otahua Downs	4.29	195	P	Pn	13 12 52.6	-0.9
WTAZ	Waiatarua	4.37	26	P	Pn	13 12 57.4	+2.7
WKZ	Wanaka	4.57	210	P	Pn	13 12 57.1	-0.2
EAZ	Earnscleugh	4.82	205	P	Pn	13 13 01.3	+0.5
WCZ	Waipu Caves	5.23	19	P	Pn	13 13 08.7	+2.2
MLZ	Mavora Lakes	5.33	212	P	Pn	13 13 09.2	+1.4
TUZ	Tuapeka	5.38	200	P	Pn	13 13 07.7	-0.8

*ISCJB **11** 13:24:50.5±0.9, 3527N±005×14155E±008, h33km, mb3.8/5, Error ellipse: s-maj=9.5km s-min=7.1km az=6.1*
*NEIC **11** 13:24:51.0±4.3, 3525N×14157E, h23km±30km, mb4.2/2, Error ellipse: s-maj=19.4km s-min=16.4km az=145.0*
*JMA **11** 13:24:50.6±0.2, 3526N×14150E, h49km±3km, M3.1*
*IDC **11** 13:24:51.6±9.8, 3603N×14160E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.5/21, mbtmp3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx2.8/24, Error ellipse: s-maj=179.8km s-min=77.2km az=153.0*
ISC 11 13:24:51.7±1.4, **3525N**±005×**14146E**±009, **h28km**±8km, **n20, σ0.83**/24, **mb3.8**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.67	313	P	Pb	13 25 03.9	-0.9
CHOJ				eS	Sb	13 25 14.5	+0.7
BSO1	Boso 1	0.71	214	P	Pb	13 25 05.2	-0.3
BSO1				eS	Sb	13 25 15.9	+0.9
BSO3	Boso 3	0.90	241	P	Pn	13 25 07.5	-0.9
KTR	Katsuura	0.94	264	P	Pn	13 25 08.1	-1.0
KTR				eS	Sb	13 25 21.6	0.0
BSO4	Boso 4	0.96	255	P	Pn	13 25 08.3	-0.9
JCN	Nagara	1.04	280	P	Pn	13 25 10.1	-0.3
JIM2	Oshima 3	1.75	253	P	Pn	13 25 18.8	-1.3
MJAR	Matsushiro Arr	2.94	297	Pn	Pn	13 25 36.9	+0.4
	2.5nm,0.3s,baz=95,slow=12,SNR=17						
MJAR				LR	LR	13 26 51.2	
	comp=Z,299nm,20.8s,baz=115,slow=44						
MJAR	Matsushiro Arr	2.94	297	Pn	Pn	13 25 36.9	+0.4
MJAR				LR	LR	13 26 51.2	
MAJO	Matsushiro	2.94	297	eP	Pn	13 25 37.8	+1.3
MAT	Matsushiro	2.94	297	P	Pn	13 25 37.4	+0.9
MAT				eS	Sn	13 26 10.2	-0.7
ERM	Erimo	6.89	11	eP	Pn	13 26 30.2	-0.5
ERM				eS	Sn	13 27 44.3	-3.8
KSRS	Korea Array	11.14	285	LR	LR	13 31 54.2	
	comp=Z,124nm,19.1s,baz=156,slow=38						
SONM	Songino Array	28.85	307	P	P	13 30 49.2	+1.6
	0.6nm,0.6s,mb3.5,baz=98,slow=7.9,SNR=3.5						
ZALV	Zalesovo Beam	43.16	314	P	P	13 32 50.2	+0.6
	0.5nm,0.4s,mb3.6,baz=92,slow=6.5,SNR=4.1						
MK31	Makanchi Array	45.12	304	eP	P	13 33 05.5	+0.1
MKAR	Makanchi Array	45.12	304	P	P	13 33 05.8	+0.4
	0.6nm,0.6s,mb3.6,baz=92,slow=8.9,SNR=4.4						
MKAR	Makanchi Array	45.12	304	P	P	13 33 05.8	+0.4
KURK	Kurchatov	47.08	309	eP	P	13 33 21.1	+0.4
	1.7nm,0.6s,mb4.2						
WRAB	Tennant Creek	55.29	188	eP	P	13 34 22.8	+0.2
	1.6nm,0.6s,mb4.2						

*NEIC **11** 13:28:03.4, 15.12N×9272W, h100km, MD3.9(MEX), After MEX.*
MEX 11 13:28:02.8±0.7, **1508N**×**9273W, h103km**±7km, **MD3.9, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.48	111	iP	Pn	13 28 17.3	-1.5
THIG				iS	Sn	13 28 29.0	-1.7
PCIG		0.78	322	iP	Pn	13 28 20.0	-1.3
PCIG				iS	Sn	13 28 33.8	-1.3
CCIG	Comitan	1.32	25	iP	Pn	13 28 26.6	-0.5
CCIG				iS	Sn	13 28 43.8	-1.6
SCX	San Cristobal	1.65	3	iP	Pn	13 28 30.2	-0.8
SCX				iS	Sn	13 28 50.3	-2.1
TGIG		1.73	347	iP	Pn	13 28 31.5	-0.5
TGIG				iS	Sn	13 28 51.6	-2.7
CMIG	Matias Romero	2.88	314	eP	Pn	13 28 45.3	-1.7
CMIG				iS	Sn	13 29 19.7	-1.4
CMIG	Matias Romero	2.88	314	eP	Pn	13 28 45.3	-1.7
CMIG				iS	Sn	13 29 24.4	+3.3
HUIG	Huatulco	3.33	282	eP	Pn	13 28 53.0	-0.1
HUIG				iS	Sn	13 29 28.9	-3.1
PNIG	Pinotepa	5.36	285	eP	Pn	13 29 20.2	-0.3
PNIG				iS	Sn	13 30 17.8	-3.2
PNIG	Pinotepa	5.36	285	eP	Pn	13 29 20.2	-0.3
PNIG				iS	Sn	13 30 14.0	-7.0
UTMO	Huajuapan	5.58	300	eP	Pn	13 29 23.8	+0.3
UTMO				iS	Sn	13 30 23.6	-2.8

*ISCJB **11** 13:45:10.9±0.6, 24.19N±008×94.12E±006, h87km±6km, mb3.7/8, Error ellipse: s-maj=14.8km s-min=5.8km az=29.1*
*NEIC **11** 13:45:11.9±0.6, 2431N×9431E, h76km±6km, mb4.3/2, Error ellipse: s-maj=12.8km s-min=5.0km az=224.0*
*IDC **11** 13:45:12.7±4.5, 2439N×9449E, h81km±46km, mb3.4/6, mb1 3.5/7, mb1mx3.3/21, mbtmp3.3/7, Error ellipse: s-maj=51.2km s-min=26.3km az=91.0*
ISC 11 13:45:12.5±0.6, **2426N**±008×**9419E**±006, **h80km**±6km, **n31, σ1.12**/40, **mb3.7**/8, **1C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	0.57	336	iP	Pn	13 45 26.0	-0.9
IMP				iS	Sn	13 45 37.0	-0.6
SHL	Shillong	2.46	302	⇑iP	Pn	13 45 52.5	+1.9
SHL				iS	Sn	13 46 21.0	+1.2
LSA	Lhasa	6.06	334	eP	Pn	13 46 40.1	+0.6
	20nm,0.3s						
TAPN	Taplejung	6.60	299	ePn	Pn	13 46 48.2	+1.4
ODAN	Odare	6.66	294	ePn	Pn	13 46 48.9	+1.2
ODAN				eSn	Sn	13 48 01.7	-0.5
	257nm,0.5s						
CHTO	Chiang Mai	7.00	140	eP	Pn	13 46 51.7	-0.6
CMAR	Chiang Mai Arr	7.28	142	P	Pn	13 46 55.2	-1.0
	baz=320,slow=14,SNR=6.0						
RAMN	Ramite	7.35	293	ePn	Pn	13 46 58.3	+1.1
JIRN	Jiri	7.95	297	ePn	Pn	13 47 06.5	+1.2
JIRN				eSn	Sn	13 48 32.2	-1.5
	80nm,0.2s						
GUN	Gumba	8.30	298	ePn	Pn	13 47 11.1	+0.9
GUN				eSn	Sn	13 48 40.9	-1.4
	63nm,0.3s						
PKI	Pulchoki	8.56	295	ePn	Pn	13 47 14.6	+0.9
PKI				eSn	Sn	13 48 47.2	-1.4
	39nm,0.4s						
PKIN	Phulchoki	8.57	295	ePn	Pn	13 47 14.5	+0.7
PKIN				eSn	Sn	13 48 47.6	-1.3
	33nm,0.3s						
KKN	Kakani	8.75	296	ePn	Pn	13 47 17.0	+0.8
KKN				eSn	Sn	13 48 51.3	-1.9
	79nm,0.5s						
DMN	Daman	8.83	294	ePn	Pn	13 47 17.8	+0.5
GKN	Gorkha	9.35	296	ePn	Pn	13 47 24.7	+0.2
GKN				eSn	Sn	13 49 04.5	-3.5
	76nm,0.3s						
KOLN	Koldanda	10.14	292	ePn	Pn	13 47 35.3	+0.1
KOLN				eSn	Sn	13 49 23.2	-4.0
	50nm,0.4s						
DANN	Dangsing	10.20	296	ePn	Pn	13 47 35.8	-0.2
DANN				eSn	Sn	13 49 24.8	-3.9
	27nm,0.3s						
MK31	Makanchi Array	24.42	340	eP	P	13 50 24.0	+0.5
MKAR	Makanchi Array	24.42	340	P	P	13 50 24.3	+0.8
	0.5nm,0.5s,mb3.1,baz=147,slow=9.9,SNR=5.8						
MKAR				PcP	PcP	13 54 00.9	+0.4
	0.2nm,0.4s,baz=197,slow=0.9,SNR=3.2						
MKAR	Makanchi Array	24.42	340	P	P	13 50 24.3	+0.8
MKAR				PcP	PcP	13 54 00.9	+0.4
SONM	Songino Array	25.45	19	P	P	13 50 31.5	-1.3
	0.6nm,0.8s,mb3.1,baz=198,slow=8.7,SNR=5.0						
MBWA	Marble Bar	51.53	149	eP	P	13 54 09.3	-1.0
	3.4nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	52.09	141	eP	P	13 54 14.4	-0.2
WRAB	Tennant Creek	58.82	135	eP	P	13 55 01.5	-1.3
	0.7nm,0.5s,mb4.0						
ARCES	ARCESS Array B	60.05	338	P	P	13 55 09.7	-0.9
	0.8nm,0.6s,mb3.9,baz=98,slow=8.7,SNR=5.0						
NOA	NORSAR Array B	65.72	328	P	P	13 55 48.1	-0.2
	0.3nm,0.6s,mb3.3,baz=105,slow=10,SNR=2.5						
GERES	GERESS Array B	66.02	315	pP	pP	13 56 12.5	+1.2
	0.3nm,0.3s,baz=94,slow=5.5,SNR=3.0						
BOSA	Boshof	84.61	235	P	P	13 57 39.7	+2.3
	1.9nm,0.7s,mb4.1,baz=50,slow=4.9,SNR=3.9						
BOSA	Boshof	84.61	235	P	P	13 57 39.7	+2.3
TORD	Torodi Ar. Bea	86.92	283	P	P	13 57 50.3	+1.2
	1.2nm,1.3s,mb3.7,baz=44,slow=3.4,SNR=2.4						
TXAR	Lajitas Array	124.02	19	PKP	PKPdf	14 04 01.3	-0.8
	0.2nm,0.6s,baz=296,slow=2.5,SNR=3.4						

*MOS **11** 14:33:38.9±1.7, 8141N×12009E, h10km, mb3.9/7, Error ellipse: s-maj=89.3km s-min=16.4km az=87.8*
*ISCJB **11** 14:33:39.4±0.5, 8129N±009×1202E±04, h10km, mb3.8/18, MS3.4/15, Error ellipse: s-maj=13.6km s-min=9.3km az=168.1*
*IDC **11** 14:33:39.6±0.9, 8127N×12029E, h0km, mb3.7/14, mb1 3.8/14, mb1mx3.8/26, mbtmp3.7/14, MS3.5/15, Ms1 3.5/15, ms1mx3.3/37, Error ellipse: s-maj=23.2km s-min=17.2km az=125.0*
*NEIC **11** 14:33:41.1±0.5, 8132N×12021E, h10km, mb4.2/3, Error ellipse: s-maj=13.0km s-min=9.2km az=170.0*
ISC 11 14:33:41.3±0.5, **8137N**±009×**1202E**±04, **h10km, n37, σ1.12**/30, **mb3.8**/18, **MS3.4**/15, **East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BILL	Bilibino	17.18	114	eP	Pn	14 37 41.0	0.0
BILL				pmax	pmax		
	comp=Z,25nm,1.4s						
BILL	Bilibino	17.18	114	eP	Pn	14 37 41.0	0.0
	comp=Z,25nm,1.4s						
ARCES	ARCESS Array B	22.93	296	P	P	14 38 43.3	-1.6
	comp=Z,6.1nm,0.9s,mb4.0,baz=29,slow=10,SNR=6.2						
ARCES				LR	LR	14 49 25.4	
	comp=Z,54nm,18.4s,MS3.0,baz=42,slow=41						
ARCES	ARCESS Array B	22.93	296	P	P	14 38 43.3	-1.6
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,54nm,18.4s						
ARE0	ARCESS Array S	22.93	296	P	P	14 38 44.5	-0.4
RES	Resolute Bay	23.05	23	LR	LR	14 46 32.1	
	comp=Z,68nm,20.9s,MS3.1,baz=207,slow=33						
BOD	Bodaibo	23.74	188	eP	P	14 38 55.9	+2.7
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb3.6						
COLD	Coldfoot	24.36	71	eP	P	14 38 58.4	-0.4
	comp=Z,4.4nm,0.9s,mb3.9						
INK	Inuvik	25.58	56	eP	P	14 39 09.6	-0.3
INK				pmax	pmax		
	comp=Z,12nm,1.1s						
INK	Inuvik	25.58	56	eP	P	14 39 09.6	-0.3
	comp=Z,12nm,1.1s,mb4.3						
SOKR	Solikamsk	27.72	258	eP	P	14 39 37.5	+8.3
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
NVS	Novosibirsk	28.82	226	eP	P	14 39 49.2	+10
ZALV	Zalesovo Beam	29.53	224	P	P	14 39 43.2	-2.1
	comp=Z,0.3nm,0.4s,mb3.4,baz=82,slow=24,SNR=2.5						
ZALV				LR	LR	14 52 19.0	
	comp=Z,74nm,19.6s,MS3.3,baz=49,slow=38						
BVAR	Borovoye Array	32.15	240	P	P	14 40 09.0	+0.5
	comp=Z,1.1nm,1.0s,mb3.6,baz=34,slow=3.7,SNR=5.5						
BVAR				LR	LR	14 55 47.8	
	comp=Z,161nm,18.3s,MS3.8,baz=191,slow=41						
BVAR	Borovoye Array	32.15	240	P	P	14 40 09.0	+0.6
BVAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR				MLR	MLR		
	comp=Z,161nm,18.3s						
NOA	NORSAR Array B	32.90	302	P	P	14 40 14.8	-0.1
	comp=Z,0.7nm,0.8s,mb3.6,baz=12,slow=8.7,SNR=2.2						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NOA	NORSAR Array B	32.90	302	P	P	14 40 14.8	-0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	33.37	44	P	P	14 40 18.0	-1.0
	comp=Z,0.3nm,0.6s,mb3.4,baz=348,slow=7.6,SNR=6.0						
YKA				LR	LR	14 52 51.8	
	comp=Z,36nm,19.9s,MS3.1,baz=95,slow=34						
KURK	Kurchatov	33.40	230	LR	LR	14 55 37.1	
	comp=Z,72nm,18.7s,MS3.4,baz=75,slow=39						
HFS	Hagfors	33.46	300	LR	LR	14 54 14.7	
	comp=Z,65nm,19.5s,MS3.4,baz=241,slow=37						
SONM	Songino Array	33.98	197	P	P	14 40 23.4	-1.0
	comp=Z,0.2nm,0.4s,mb3.4,baz=3.5,slow=4.8,SNR=2.9						
SONM				LR	LR	14 55 03.6	
	comp=Z,93nm,18.7s,MS3.5,baz=27,slow=38						
AKTK	Aktyubinsk	36.39	252	P	P	14 40 45.7	+0.5
AKTO	Aktyubinsk	36.39	252	P	P	14 40 45.7	+0.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=360,slow=7.6,SNR=3.0						
AKTO	Aktyubinsk	36.39	252	P	P	14 40 45.7	+0.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
MKAR	Makanchi Array	36.86	225	P	P	14 40 49.6	+0.4
	comp=Z,0.3nm,0.3s,mb3.7,baz=346,slow=8.8,SNR=3.6						
MKAR				LR	LR	14 56 51.5	
	comp=Z,55nm,18.2s,MS3.4,baz=1.6,slow=38						
AKASG	Malin Array Be	40.43	281	P	P	14 41 18.9	-0.2
	comp=Z,0.5nm,0.3s,mb3.7,baz=13,slow=8.4,SNR=3.4						
AKASG	Malin Array Be	40.43	281	P	P	14 41 18.9	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	44.13	171	LR	LR	15 02 51.8	
	comp=Z,30nm,18.7s,MS3.2,baz=140,slow=40						
GERES	GERESS Array B	44.46	295	LR	LR	15 04 20.9	
	comp=Z,76nm,19.6s,MS3.6,baz=64,slow=41						
BRTR	Keskin Array B	50.49	274	P	P	14 42 40.4	+1.5
	comp=Z,1.0nm,0.6s,mb4.0,baz=22,slow=6.3,SNR=4.7						
BRTR				LR	LR	15 06 26.1	
	comp=Z,32nm,18.7s,MS3.4,baz=290,slow=39						
BRTR	Keskin Array B	50.49	274	P	P	14 42 40.4	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR				MLR	MLR		
	comp=Z,32nm,18.7s						
YBH	Yreka Blue Hor	52.84	57	LR	LR	15 05 47.1	
	comp=Z,64nm,18.1s,MS3.7,baz=348,slow=36						
PDAR	Pinedale Array	53.35	45	P	P	14 43 02.2	+2.1
	comp=Z,0.4nm,0.9s,mb3.4,baz=339,slow=7.9,SNR=2.8						
PDAR				LR	LR	15 05 35.0	
	comp=Z,75nm,18.4s,MS3.8,baz=204,slow=36						
ESDC	Sonseca Array	55.73	309	P	P	14 43 18.7	+1.2
	comp=Z,0.2nm,0.3s,mb3.6,baz=19,slow=8.3,SNR=3.3						
CMAR	Chiang Mai Arr	63.60	203	P	P	14 44 10.2	-1.6
	comp=Z,0.3nm,0.4s,mb3.6,baz=354,slow=7.7,SNR=4.8						
TXAR	Lajitas Array	67.25	41	LR	LR	15 14 12.4	
	comp=Z,50nm,21.2s,MS3.7,baz=235,slow=36						
TORD	Torodi Ar. Bea	81.19	300	P	P	14 45 56.6	-0.2
	comp=Z,2.2nm,0.8s,mb4.1,baz=359,slow=5.7,SNR=14						

MEX 11 14:50:40.8±1.0**,1695N×9923W,h40**^{km}±44^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ACX	Acapulco	0.66	263	*i* P	Pn	14 50 52.5	-1.2
ACX				*i* S	Sn	14 51 00.6	-2.3
CAIG	El Cayaco	1.00	276	*i* P	Pn	14 50 57.0	-1.2
CAIG				*i* S	Sn	14 51 07.2	-3.9
MEIG	Mezcala	1.04	339	*i* P	Pn	14 50 57.0	-2.0
MEIG				*i* S	Sn	14 51 10.7	-1.6
PNIG	Pinotepa	1.19	117	*i* P	Pn	14 50 59.3	-1.7
PNIG				*i* S	Sn	14 51 12.7	-3.3
UTMO	Huajuapan	1.62	57	*i* P	Pn	14 51 05.0	-1.9
UTMO				*i* S	Sn	14 51 25.1	-1.5

IGQ 11 14:56:45.8,051N×7996W,h12^{km}±3^{km}**,Mb4.2,Ms4.0,4C, Error ellipse: s-maj=6.2km s-min=1.4km az=55.1,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JAMA	Jama	0.81	198	⇑P	Pg	14 57 00.8	-0.6
JAMA				⇑S	Sg	14 57 12.1	+0.2
PINO	Pino	1.51	116	⇑P	Pn	14 57 14.2	+1.5
TERV	Terraza Guagua	1.52	117	P	Pn	14 57 14.4	+1.6
TERV	Terraza Guagua	1.52	117	S	Sn	14 57 39.2	+6.7
YANA	Yana	1.53	114	P	Pn	14 57 14.4	+1.5
YANA	Yana	1.53	114	S	Sn	14 57 39.1	+6.4
GGP	Refugio Guagua	1.53	116	⇑P	Pn	14 57 14.4	+1.5
COTA	Cotacachi	1.64	96	P	Pn	14 57 16.2	+1.9
QIL2	Quilotoa	1.73	143	P	Pn	14 57 16.9	+1.3
CHIS	Cerro-Chispas-	1.73	206	P	Pn	14 57 14.9	-0.8
CAMI	Rancho Maria	1.88	129	P	Pn	14 57 20.6	+2.9
VC1	Cotopaxi 1	1.94	126	P	Pn	14 57 21.6	+3.1
TAMB	Tambo	2.00	127	P	Pn	14 57 22.6	+3.3
CAYA	Cayambe	2.02	102	P	Pn	14 57 23.4	+3.7
CAYA	Cayambe	2.02	102	S	Sn	14 57 52.9	+8.0
ANTI	Antisana	2.04	118	P	Pn	14 57 23.4	+3.5
ANTI	Antisana	2.04	118	S	Sn	14 57 55.7	+10
PISA	Pisayambo	2.22	135	P	Pn	14 57 25.8	+3.3
CONE	Cono NE Rev Vo	2.39	104	P	Pn	14 57 29.9	+5.1
LAV3	Lava3-Reventad	2.41	105	P	Pn	14 57 30.8	+5.8
RUN5	Runtun	2.46	141	P	Pn	14 57 29.6	+3.9
ULBA	Ulba	2.49	141	P	Pn	14 57 29.7	+3.5
ARRY	Arrayan	2.51	143	P	Pn	14 57 29.7	+3.3
PATA	Patacocha	2.52	143	P	Pn	14 57 29.7	+3.2

*ISCJB **11** 15:08:04.2±0.3,2896N±004×12897E±007,h145^{km}±4^{km}, mb3.7/13,Error ellipse: s-maj=10.5km s-min=3.6km az=28.5*
*IDC **11** 15:08:05.0±0.9,2888N×12898E,h145^{km}±14^{km},mb3.6/11, mb1 3.7/16,mb1mx3.6/27,mbtmp3.7/16,Error ellipse: s-maj=21.4km s-min=12.9km az=134.0*
*JMA **11** 15:08:05.5±0.1,2902N×12890E,h130^{km}±3^{km},M4.0*
*NEIC **11** 15:08:06.2±1.1,2896N×12894E,h150^{km}±12^{km},mb3.8/2, Error ellipse: s-maj=15.6km s-min=11.3km az=86.0*
ISC 11 15:08:05.3±0.3**,2897N**±004×**12896E**±006**,h139**^{km}±4^{km}**, n42,**$\sigma 0^{s}$**93**/56**,mb3.7**/13**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.79	134	P	Pn	15 08 27.0	-0.3
JAM				*e*S	Sn	15 08 42.7	-1.2
JZK	Kikaishima	1.10	126	P	Pn	15 08 30.8	+0.8
JZK				*e*S	Sn	15 08 50.1	+1.4
JTK	Tokunoshima	1.18	180	P	Pn	15 08 31.3	+0.6
JTK				*e*S	Sn	15 08 49.9	0.0
JNN	Nakanoshima	1.19	42	P	Pn	15 08 30.4	-0.3
JKC	Kuchinoerabu	1.84	36	P	Pn	15 08 37.9	0.0
JKC				*e*S	Sn	15 09 01.5	-1.3
JIH	Iheya	2.11	205	P	Pn	15 08 41.5	+0.4
JIH				*e*S	Sn	15 09 08.2	-0.4
JOW	Kunigami	2.21	196	P	Pn	15 08 42.2	-0.1
	123nm,0.3s,baz=90,slow=12,SNR=681						
JOW				S	Sn	15 09 09.5	-1.2
	98nm,0.3s,baz=101,slow=28,SNR=15						
JOW	Kunigami	2.21	196	P	Pn	15 08 42.2	-0.1
JOW				*e*S	Sn	15 09 10.2	-0.5
JTN	Tanegashima 3	2.44	46	P	Pn	15 08 44.8	-0.3
JTN				*e*S	Sn	15 09 15.2	-0.5
JTSR	Tashiro 2	2.78	37	P	Pn	15 08 49.4	0.0
JTSR				*e*S	Sn	15 09 22.0	-1.4
JSJ	Shimokoshiki	2.78	13	P	Pn	15 08 49.9	+0.5
JAGN	Aguni-jima	2.81	213	P	Pn	15 08 50.0	+0.1
JAGN				*e*S	Sn	15 09 23.4	-0.8
JSU	Suzuyama	2.85	27	P	Pn	15 08 50.3	+0.1
JJT2	Tamagusuku 2	3.01	201	P	Pn	15 08 52.8	+0.4
JJT2				*e*S	Sn	15 09 28.5	-0.3
JNAR	Kushima--Naru	3.25	38	P	Pn	15 08 55.5	+0.1
JNAR				*e*S	Sn	15 09 34.2	+0.1
JKE	Kume jima 2	3.26	217	P	Pn	15 08 55.5	-0.1
JKE				*e*S	Sn	15 09 34.3	-0.1
JTZ	Takazaki	3.46	32	P	Pn	15 08 58.1	0.0
JTZ				S	Sn	15 09 38.8	-0.3
JZO	Okuchi	3.47	24	P	Pn	15 08 58.9	+0.6
JFU	Fukue jima 2	3.68	357	P	Pn	15 09 02.5	+1.4
KSRS	Korea Array	8.51	354	P	Pn	15 10 06.6	+1.1
	0.7nm,0.3s,baz=169,slow=12,SNR=28						
JHJ	Hachijo jima 2	10.17	63	P	Pn	15 10 29.9	+2.2
	18nm,0.3s,baz=202,slow=18,SNR=4.6						
MJAR	Matsushiro Arr	10.85	43	P	Pn	15 10 39.0	+2.3
	0.5nm,0.3s,baz=246,slow=14,SNR=5.5						
MJAR	Matsushiro Arr	10.85	43	P	Pn	15 10 39.0	+2.3
BJT	Baijiatuau	15.24	320	*e*P	Pn	15 11 35.0	+2.0
ASAJ	Asahikawa	18.64	32	P	P	15 12 10.9	-1.2
	0.5nm,0.3s,baz=94,slow=28,SNR=6.4						
ULN	Ulaanbaatar	25.36	324	*e*P	P	15 13 20.2	+0.9
	1.2nm,0.5s,mb3.7						
SONM	Songino Array	25.68	323	P	P	15 13 23.2	+1.0
	1.2nm,0.6s,mb3.7,baz=143,slow=10,SNR=10.0						
PETK	Petropavlovsk-	32.05	33	P	P	15 14 17.6	-1.0
	1.8nm,0.8s,mb3.9,baz=185,slow=8.9,SNR=4.6						
MKAR	Makanchi Array	40.25	309	P	P	15 15 27.9	-0.4
	0.5nm,0.5s,mb3.4,baz=93,slow=11,SNR=6.4						
MKAR				PcP	PcP	15 17 29.2	-0.2
	0.5nm,0.4s,baz=76,slow=3.9,SNR=9.4						
KURK	Kurchatov	43.33	315	P	P	15 15 52.0	-1.3
	0.5nm,0.5s,mb3.5,baz=102,slow=7.6,SNR=3.7						
KURK				PcP	PcP	15 17 39.2	-0.3
	0.1nm,0.2s,baz=101,slow=4.8,SNR=3.0						
FITZ	Fitzroy Crossi	46.90	184	*e*P	P	15 16 22.9	+1.1
	2.5nm,0.9s,mb3.8						
BVAR	Borovoye Array	48.70	317	P	P	15 16 34.6	-0.7
	0.4nm,0.3s,mb3.5,baz=87,slow=9.3,SNR=5.8						
BVAR				PcP	PcP	15 17 58.5	+0.1
	1.1nm,0.4s,baz=120,slow=3.2,SNR=12						
WRAB	Tennant Creek	48.89	173	*e*P	P	15 16 37.7	+0.6
WB2	Warramunga Arr	48.90	173	*e*P	P	15 16 37.7	+0.5
KDAK	Kodiak Island	59.95	37	P	P	15 17 55.0	-1.6
	4.3nm,0.4s,mb4.6,baz=281,slow=7.6,SNR=9.4						
ARCES	ARCESS Array B	67.71	338	P	P	15 18 45.3	-1.9
	7.3nm,1.3s,mb4.3,baz=68,slow=7.2,SNR=3.7						
AKASG	Malin Array Be	73.88	319	P	P	15 19 24.0	-0.8
	0.7nm,0.4s,mb3.7,baz=60,slow=5.4,SNR=4.0						
YKA	Yellowknife Ar	75.79	25	P	P	15 19 35.4	-0.1
	0.7nm,0.5s,mb3.5,baz=298,slow=5.6,SNR=9.9						
YKA	Yellowknife Ar	75.79	25	P	P	15 19 35.4	-0.1
BRTR	Keskin Array B	75.87	308	P	P	15 19 37.6	+1.1
	1.0nm,0.7s,mb3.5,baz=111,slow=5.4,SNR=5.3						
NB2	NORSAR Subarra	77.15	334	P	P	15 19 41.8	-1.5
	comp=Z,0.9nm,0.5s,mb3.7,baz=48,slow=5.6						
NOA	NORSAR Array B	77.15	334	P	P	15 19 41.9	-1.4
	comp=Z,0.8nm,0.8s,mb3.4,baz=50,slow=5.5,SNR=5.4						

IDC 11 15:34:10.9±5.8**,892S×10653E,h0**^{km}**,mb3.8**/3**,mb1 3.9**/3**, mb1mx3.6**/15**,mbtmp3.8**/3**,Error ellipse: s-maj=369.3km s-min=30.0km az=56.0,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	28.21	345	P	P	15 40 05.8	+0.1
	0.4nm,0.5s,baz=179,slow=7.9,SNR=4.6						
STKA	Stephens Creek	39.74	130	P	P	15 41 45.4	-0.1
	1.4nm,0.9s,baz=291,slow=8.6,SNR=3.0						
MKAR	Makanchi Array	59.53	341	P	P	15 44 16.0	0.0
	0.8nm,0.5s,baz=154,slow=7.8,SNR=19						

MAN 11 15:52:03,636N×12681E,h106^{km}**,mb4.7,ML3.5,MS3.5, 1C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	1.48	299	⇑*e*P	Pn	15 52 30.6	+1.3
DMPH				*e*S	Sn	15 52 51.3	+2.0
KCP	Kidapawan	1.83	291	⇓*e*P	Pn	15 52 34.1	+0.5
KCP				*i* S	Sn	15 52 58.3	+1.3
BIPH	Bislig	1.86	346	⇓*e*P	Pn	15 52 33.2	-0.9
BIPH				*i* S	Sn	15 52 53.5	-4.3
BUKP	Musuan	2.30	311	*e*P	Pn	15 52 40.0	+0.3
BUKP				*e*S	Sn	15 53 08.6	+0.8
BUTP	Butuan	2.84	336	*e*P	Pn	15 52 49.0	+2.1
BUTP				*e*S	Sn	15 53 25.5	+4.9
PAGZ	Pagadian	3.71	294	*e*P	Pn	15 52 60.0	+1.6
IPIL	Ipil	4.44	289	*e*P	Pn	15 53 11.1	+2.8

*NNC **11** 15:56:31.3±4.9,34.14N×7767E,h36^{km}±42^{km},mb5.0, mpv5.5,Error ellipse: s-maj=49.2km s-min=26.7km az=112.0*
*LDG **11** 15:56:34.9±0.1,3499N×7738E,h10^{km},Mb5.2/33,Ms3.9/9, Error ellipse: s-maj=9.0km s-min=4.9km az=53.0*
*ISCJB **11** 15:56:36.7±0.1,3500N±002×7747E±002,h14^{km}, mb5.1/185,MS4.3/51,Error ellipse: s-maj=2.6km s-min=2.0km az=137.6*
*IDC **11** 15:56:36.2±0.4,3499N×7736E,h0^{km},mb4.9/23, mb1 5.0/27,mb1mx5.0/27,mbtmp4.9/27,ML4.9/3,MS4.1/20, Ms1 4.1/20,ms1mx4.0/30,Error ellipse: s-maj=12.5km s-min=8.1km az=47.0*
*BJI **11** 15:56:37.7,35.12N×7741E,h19^{km},mB5.0,mb4.8,ML4.9, Ms4.7,Msz4.5*
*NEIC **11** 15:56:38.6±0.1,3499N×7748E,mb5.2/113,Error ellipse: s-maj=4.4km s-min=2.4km az=34.0*
*GCMT **11** 15:56:38.6±0.2,3506N×7753E,h20^{km}±1^{km},MW5.1/63, Moment Tensor Solution. s34,c45; s63,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.22±.19; $M_{\theta\theta}$0.17±.14; $M_{\phi\phi}$1.05±.14; $M_{r\theta}$0.44±.28; $M_{\theta\phi}$3.89±.13; $M_{\phi r}$-2.73±.31; Best double couple: $M_0$4.90000×10^{16} NP1:ϕ_s263.00000°,δ53.00000°,λ-13.00000°. NP2: ϕ_s1.00000°,δ79.00000°,λ-143.00000°. Principal axes: T 5.0560, Plg17.0000°, Azm127.0000°; N -0.3110, Plg51.0000°, Azm15.0000°; P -4.7450, Plg34.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **11** 15:56:40.1±1.0,3501N×7745E,h41^{km},mb5.3/83, MS4.1/27 Error ellipse: s-maj=6.4km s-min=3.3km az=128.1*
*DJA **11** 15:56:46,3508N×7752E,h69^{km},Mw5.4/5*
*SZGRF **11** 15:56:48.2,3588N×7640E,h16^{km},mb5.1,MS4.1, Eastern Kashmir*
ISC 11 15:56:38.9±0.1**,3504N**±002×**7748E**±002**,h15**^{km}±1.3^{km}**:pP-P,n576,**$\sigma 1^{s}$**01**/617**,mb5.1**/185**,MS4.3**/51**, 40C-52D,Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
DLH	Dalhousie	2.80	207	*e*P	Pn	15 57 26.0	+3.0
DLH				*e*x	x	15 58 06.0	
THN	Thein Dam	2.99	210	*e*P	Pn	15 57 27.5	+1.8
THN				*e*x	x	15 58 11.9	
JMU	Jammu	3.16	223	*e*P	Pn	15 57 32.0	+3.9
JMU				*e*x	Sn	15 58 17.5	+12
SDNR	Sundarnagar	3.56	187	*e*P	Pn	15 57 36.4	+2.8
SDNR				*e*x	x	15 58 28.0	
BHK	Bhakra	3.73	194	*e*P	Pn	15 57 35.8	0.0
BHK				*e*S	Sn	15 58 22.6	+3.2
SMLA	Simla	3.91	184	*e*P	Pn	15 57 41.0	+2.6
SMLA				*e*S	Sn	15 58 26.9	+2.8
SMLA				*e*x	x	15 58 41.4	
	comp=N,10μm,0.3s						
SMLA				*e*x	x	15 58 47.4	
	comp=E,10μm,0.3s						
KSH	Kashi	4.62	345	PG	Pn	15 57 54.4	+6.3
KSH				S	Sn	15 58 46.8	+5.3
KSH				Smax			
	comp=N,2μm,1.2s						
KSH				Smax			
	comp=E,1μm,0.9s						
DDI	Dehra Dun	4.73	174	*e*P	Pn	15 57 49.0	-0.7
DDI				*e*x	Sn	15 58 49.6	+5.3
JOSI	Joshimath	4.81	158	*e*P	Pn	15 57 54.6	+3.9
JOSI				*e*S	Sn	15 58 52.0	+5.9
JOSI				AML	AML	15 59 02.3	
	comp=N,3μm,0.8s						
JOSI				AML	AML	15 59 02.5	
	comp=E,5μm,0.8s						
KKR	Kurukshetra	5.10	186	*e*P	Pn	15 57 56.5	+1.8
KALG	Kalgarh	5.63	169	*e*P	Pn	15 57 55.8	-6.2
KALG				*e*S	Sn	15 58 59.1	-7.2
PTH	Pithoragarh	5.95	156	*e*x	Pn	15 58 08.8	+2.4
PTH				*e*x	x	15 59 20.0	
LGTI	Lohaghat	6.05	156	*e*x	Pn	15 58 09.8	+2.0
LGTI				*e*x	x	15 59 20.1	
NDI	New Delhi	6.35	182	*e*P	Pn	15 58 13.0	+1.1
NDI				*e*x	x	15 59 22.0	
AYAN	Aya Nagar	6.55	183	*e*P	Pn	15 58 15.1	+0.4
SONA	Sohna	6.78	183	*e*P	Pn	15 58 19.1	+1.2
SONA				*e*S	Sn	15 59 35.4	+0.6
KUDL	Kundal	6.93	187	*e*P	Pn	15 58 21.2	+1.4
KUDL				*e*S	Sn	15 59 37.9	-0.6
KBL	Kabul	6.96	268	*e*P	Pn	15 58 19.6	-0.7
KBL				pmax	pmax		
	comp=Z,268nm,0.8s						
KBL	Kabul	6.96	268	*e*P	Pn	15 58 19.6	-0.7
	comp=Z,268nm,0.8s						
KHET	Khetri	7.09	192	*e*P	Pn	15 58 22.1	0.0
KHET				*e*S	Sn	15 59 41.7	-0.7
KZA	Kyzart	7.24	347	P	Pn	15 58 29.1	+5.1
	SNR=14						
ULHL	Ulahol	7.25	353	P	Pn	15 58 32.8	+8.5
	SNR=7.6						
UCH	Uchtor	7.54	343	P	Pn	15 58 33.1	+4.9
	SNR=17						
UCH	Uchtor	7.54	343	*e*P	Pn	15 58 32.6	+4.4
	comp=Z,173nm,0.9s						
AML	Almayashu	7.67	338	P	Pn	15 58 33.6	+3.6
	SNR=34						
AML	Almayashu	7.67	338	*e*P	Pn	15 58 33.3	+3.3
	comp=Z,263nm,0.8s						
AGRA	Agra	7.80	177	*e*P	Pn	15 58 31.8	-0.1
KBK	Karagaybulak	7.85	346	P	Pn	15 58 38.4	+5.9
	SNR=13						
AAK	Ala-Archa	7.93	344	Pn	Pn	15 58 38.0	+4.5
	comp=Z,926nm,0.9s,SNR=12						
AAK	Ala-Archa	7.93	344	*d i*P	Pn	15 58 37.9	+4.4
AAK	Ala-Archa	7.93	344	P	Pn	15 58 40.3	+6.8
	SNR=26						
AAK	Ala-Archa	7.93	344	*e*P	Pn	15 58 37.9	+4.4
	comp=Z,447nm,1.1s						
TKM2	Tokmak 2	8.00	350	⇓P	Pn	15 58 38.2	+3.7
	comp=Z,145nm,0.8s						
TKM2				⇑S	Sn	16 00 15.6	+11
	comp=Z,634nm,1.1s						
TKM2	Tokmak 2	8.00	350	*e*P	Pn	15 58 38.8	+4.3
TKM2				pmax	pmax		
	comp=Z,150nm,0.8s						
TKM2	Tokmak 2	8.00	350	P	Pn	15 58 40.0	+5.5
	SNR=16						
TKM2	Tokmak 2	8.00	350	*e*P	Pn	15 58 38.8	+4.3
	comp=Z,150nm,0.8s						
FRU	Bishkek	8.09	345	*e*P	Pn	15 58 42.0	+6.3
FRU				pmax	pmax		
	comp=Z,880nm,1.2s						
EKS2	Erkin-Say	8.13	340	P	Pn	15 58 41.2	+4.9
	SNR=7.5						
EKS2	Erkin-Say	8.13	340	*e*P	Pn	15 58 39.4	+3.0
	comp=Z,93nm,0.7s						
KNDC	Almaty	8.17	357	⇑P	Pn	15 58 42.8	+5.9
	comp=Z,492nm,1.1s						
KNDC				⇓S	Sn	16 00 21.3	+12
	comp=Z,604nm,1.1s						
AAA	Alma-Ata	8.23	357	*e*P	Pn	15 58 46.0	+8.4
AAA				pmax	pmax		
	comp=Z,900nm,1.0s						
AAA				MLR	MLR		
	comp=Z,9μm,10.0s						
USP	Ospenovka	8.53	345	P	Pn	15 58 46.5	+4.7
	SNR=11						
DANN	Dangsing	8.55	140	*e*P	Pn	15 58 43.1	+1.0
	comp=Z,512nm,0.6s						
AJM	Ajmer	8.88	197	*e*P	Pn	15 58 46.8	+0.2
AJM				*e*S	Sn	16 00 22.8	-3.6
KOLN	Koldanda	8.94	143	*e*P	Pn	15 58 47.9	+0.5
	comp=Z,436nm,0.9s						
GKN	Gorkha	9.30	137	*e*P	Pn	15 58 52.7	+0.3
	comp=Z,314nm,0.6s						
KK31	Karatay Array	9.70	328	⇑P	Pn	15 58 58.0	+0.2
	comp=Z,69nm,0.7s,baz=146,slow=13						
KK31	Karatay Array	9.70	328	*i* P	Pn	15 58 58.0	+0.2
KK31				*i* S	Sn	16 00 44.9	-1.5
KK31				pmax	pmax		
	comp=Z,84nm,0.7s						
KK31				smax			
	comp=Z,193nm,0.8s						
KKN	Kakani	9.83	135	*e*P	Pn	15 58 59.1	-0.6
	comp=Z,407nm,0.6s						
KKN	Kakani	9.83	135	*e*P	Pn	15 58 59.1	-0.6
KKN				pmax	pmax		
	comp=Z,407nm,0.6s						
DMN	Daman	9.87	137	*e*P	Pn	15 59 00.3	+0.1
	comp=Z,388nm,0.6s						
PKI	Pulchoki	10.07	136	*e*P	Pn	15 59 03.1	+0.2
	comp=Z,432nm,0.7s						
PKI	Pulchoki	10.07	136	*e*P	Pn	15 59 03.1	+0.2
PKI				pmax	pmax		
	comp=Z,432nm,0.7s						
GUN	Gumba	10.10	132	*e*P	Pn	15 59 02.8	-0.5
	comp=Z,318nm,0.6s						
ALBI	Allahabad	10.40	158	*e*P	Pn	15 59 06.0	-1.5
JIRN	Jiri	10.46	132	*e*P	Pn	15 59 08.0	-0.4
	comp=Z,588nm,0.6s						
RAMN	Ramite	11.23	133	*e*P	Pn	15 59 17.6	-1.3
	comp=Z,459nm,0.9s						
TAPN	Taplejung	11.63	128	*e*P	Pn	15 59 23.1	-1.3
	comp=Z,415nm,0.8s						
BHPL	Bhopal	11.76	180	*e*P	Pn	15 59 25.1	-1.1
BHPL				*e*S	Sn	16 01 31.8	-5.3
ODAN	Odare	11.78	131	*e*P	Pn	15 59 24.7	-1.6
	comp=Z,268nm,0.7s						
WMQ	Urumqi	11.79	39	P	Pn	15 59 28.0	+1.6
WMQ				XP		15 59 43.0	
WMQ				S	Sn	16 01 39.5	+1.9
WMQ				SS		16 01 54.7	
WMQ				AMB	AMB		
	comp=Z,358nm,3.0s						
WMQ				LR	LR		
	comp=N,2μm,7.0s						
WMQ				LR	LR		
	comp=E,1μm,7.0s						
MK31	Makanchi Array	12.29	16	⇑P	Pn	15 59 34.8	+1.7
	comp=E,79nm,0.8s,baz=192,slow=15,SNR=364						
MK31	Makanchi Array	12.29	16	*i* P	Pn	15 59 34.8	+1.6
MK31				pmax	pmax		
	comp=Z,52nm,0.5s						
MK31	Makanchi Array	12.29	16	*e*P	Pn	15 59 34.9	+1.7
MKAR	Makanchi Array	12.29	16	Pn	Pn	15 59 34.0	+0.8
	comp=Z,3.2nm,0.3s,baz=197,slow=13,SNR=87						
MKAR				Sn	Sn	16 01 46.4	-3.3
	comp=Z,1.4nm,0.3s,baz=201,slow=20,SNR=6.7						
MKAR				LR	LR	16 04 25.8	
	comp=Z,316nm,21.6s,baz=195,slow=38						
MKAR	Makanchi Array	12.29	16	P	Pn	15 59 34.0	+0.8
MKAR						16 01 46.4	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR				smax			
	comp=N,1.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,316nm,21.6s						
LSA	Lhasa	12.72	111	*e*P	Pn	15 59 40.0	+0.8
LSA				pmax	pmax		
	comp=Z,42nm,0.7s						
LSA	Lhasa	12.72	111	*e*P	Pn	15 59 40.0	+0.8
	comp=Z,42nm,0.7s						
BOK	Bokaro	13.38	145	*e*P	Pn	15 59 45.8	-2.5
BOK				*e*x	x	16 02 06.0	
BHJ	Bhuj	13.59	212	*e*P	Pn	15 59 50.4	-0.6
BHJ				*e*x	x	16 02 17.0	
NGP	Nagpur	13.91	174	⇑*e*x	Pn	15 59 52.0	-3.5
NGP				*e*x	x	16 02 18.5	
AKL	Akola	14.29	182	*e*x	Pn	15 59 59.1	-1.6
KURBB	Kurchatov Arra	15.59	2	⇑P	Pn	16 00 18.9	+1.0
	comp=Z,13nm,1.2s,baz=192,slow=10						
KURBB				⇑S	Sn	16 03 23.6	+13
	comp=Z,11nm,1.1s						
SHL	Shillong	15.60	123	*i* P	Pn	16 00 13.8	-4.4
SHL				*i* x	x	16 02 59.0	
CAL	Calcutta	15.66	140	*e*P	Pn	16 00 15.9	-3.1
CAL				*e*x	x	16 02 42.7	
KURK	Kurchatov	15.69	3	⇑P	Pn	16 00 19.7	+0.6
	comp=Z,56nm,0.7s						
KURK				⇓S	Sn	16 03 24.4	+12
	comp=Z,70nm,1.3s						
KURK	Kurchatov	15.69	3	Pn	Pn	16 00 17.9	-1.2
	comp=Z,569nm,0.6s,SNR=13						
KURK	Kurchatov	15.69	3	Pn	Pn	16 00 15.9	-3.2
	comp=Z,0.0nm,0.3s,baz=188,slow=12,SNR=18						
KURK				Sn	Sn	16 03 20.4	+7.9
	baz=186,slow=18,SNR=2.4						
KURK				LR	LR	16 06 46.9	
	comp=Z,1μm,18.5s,baz=190,slow=39						
KURK	Kurchatov	15.69	3	*e*P	Pn	16 00 17.1	-2.1
	comp=Z,56nm,0.7s						
ABKT	Ailbek	15.84	286	Pn	Pn	16 00 16.2	-5.0
	comp=Z,220nm,0.7s,SNR=6.3						
VAN	Vannovskaya	15.85	286	*e*P	Pn	16 00 16.2	-5.1

BWNR Bhubaneshwar 16.43 151 eP Pn 16 00 28.2 -0.7
BWNR ex x 16 03 20.6
LATR Latur 16.58 183 ex Pn 16 00 25.0 -5.9
LATR ex x 16 03 13.2
POO Poona 16.76 192 eP Pn 16 00 31.9 -1.3
IMP Imphal 17.53 121 eP Pn 16 00 41.0 -1.7
IMP ex x 16 03 48.0
HYB Hyderabad 17.58 177 eP Pn 16 00 39.0 -4.4
HYB pmax pmax
comp=Z,100nm,1.0s
HYB Hyderabad 17.58 177 *i* P Pn 16 00 39.0 -4.4
comp=Z,100nm,1.0s
HYB *e* 16 00 44.0
HYB *e*S **Sn 16 03 44.0 -15**
HYB LR LR 16 07 24.0
comp=Z,3.0nm,10.0s
HYB Hyderabad 17.58 177 *e*P Pn 16 00 39.0 -4.4
comp=Z,100nm,1.0s
HYB *e* 16 00 44.0
HYB *e*S **Sn 16 03 41.5 -17**
HYB *e* 16 07 24.0
KAD Karad 17.91 190 *i* x Pn 16 00 44.5 -2.9
KAD *i* x x 16 03 53.2
VIS Vishakhapatnam 18.02 162 eP Pn 16 00 47.4 -1.5
VOSK Vostochnaya 18.27 347 ⇓P Pn 16 00 51.8 +0.2
comp=Z,60nm,1.0s
VOSK Vostochnaya 18.27 347 P Pn 16 00 51.8 +0.2
VOSK pmax pmax
comp=Z,60nm,1.0s
GTA Gaotai 18.30 70 ⇓P Pn 16 00 53.8 +1.7
GTA AP pP 16 01 03.3 +6.8
GTA S **Sn 16 04 15.2 -1.0**
GTA XS sS 16 04 28.0 +0.2
GTA SS 16 04 38.7
GTA AMB AMB
comp=Z,23nm,1.0s
GTA AMB AMB
comp=Z,308nm,5.4s
GTA LR LR
comp=N,1μm,10.2s
GTA LR LR
comp=E,1μm,11.1s
GTA LR LR
comp=Z,1μm,12.6s
BVA0 Borovoye Array 18.67 347 ⇑P Pn 16 00 56.2 -0.3
comp=Z,18nm,0.9s,baz=173,slow=12
BVA0 Borovoye Array 18.67 347 P Pn 16 00 56.1 -0.4
BVA0 pmax pmax
comp=Z,18nm,0.9s
BVAR Borovoye Array 18.67 347 P Pn 16 00 56.6 +0.1
comp=Z,11nm,0.3s,baz=159,slow=11,SNR=395
BVAR S **Sn 16 04 30.7 +5.9**
comp=Z,0.0nm,0.3s,baz=162,slow=25,SNR=3.8
BVAR PcP PcP 16 05 25.3 +1.3
comp=Z,0.6nm,0.3s,baz=188,slow=2.9,SNR=6.0
BVAR LR LR 16 08 43.0
comp=Z,727nm,20.0s,baz=162,slow=39
BVAR Borovoye Array 18.67 347 P Pn 16 00 56.6 +0.1
BVAR S **Sn 16 04 30.7 +5.9**
BVAR pmax pmax
comp=Z,11nm,0.3s
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR MLR MLR
comp=Z,727nm,20.0s
BRVK Borovoye 18.72 346 P Pn 16 00 57.2 +0.1
comp=Z,866nm,0.6s,SNR=95
BRVK Borovoye 18.72 346 P Pn 16 00 57.4 +0.3
SNR=63
BRVK Borovoye 18.72 346 *e*P Pn 16 00 57.0 -0.1
BRVK pmax pmax
comp=Z,91nm,0.6s
BRVK Borovoye 18.72 346 *e*P Pn 16 00 57.0 -0.1
comp=Z,91nm,0.6s
AB01 Akbulak array 19.19 323 ⇑P Pn 16 01 00.2 -2.6
comp=Z,37nm,0.7s,baz=130,slow=12
AB31 Akbulak array 19.19 323 P Pn 16 01 00.1 -2.7
AB31 pmax pmax
comp=Z,45nm,0.7s
ZAA0 Zalesovo Array 19.59 13 *e*P Pn 16 01 05.2 -2.4
ZALV Zalesovo Beam 19.59 13 P Pn 16 01 05.2 -2.4
comp=Z,1.9nm,0.3s,baz=193,slow=10,SNR=68
ZALV LR LR 16 09 29.3
comp=Z,33nm,18.3s,baz=24,slow=39
ZALV Zalesovo Beam 19.59 13 P Pn 16 01 05.2 -2.4
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV MLR MLR
comp=Z,33nm,18.3s
HVS Khovu-Aksy 19.90 31 ⇓*e*P Pn 16 01 10.4 -0.9
HVS pmax pmax
comp=Z,56nm,0.6s
HVS MLR MLR
comp=Z,9μm,14.0s
NVS Novosibirsk 20.20 10 ⇓*i*P P 16 01 11.4 -1.4
NVS pmax pmax
comp=Z,237nm,1.4s
NVS pmax pmax
comp=N,288nm,1.7s
AKTK Aktyubinsk 20.90 323 P P 16 01 19.9 -0.6
AKTK S **S 16 05 11.9 -1.0**
AKTK LR LR 16 10 41.8
AKTO Aktyubinsk 20.90 323 P P 16 01 19.7 -0.8
comp=N,26nm,1.1s
AKTO Aktyubinsk 20.90 323 P P 16 01 19.9 -0.6
comp=N,47nm,0.9s,baz=117,slow=10,SNR=59
AKTO S **S 16 05 11.9 -1.1**
comp=N,7.0nm,0.9s,baz=273,slow=19,SNR=3.8
AKTO LR LR 16 10 41.8
comp=N,170nm,20.4s,MS3.4,baz=134,slow=40
AKTO Aktyubinsk 20.90 323 P P 16 01 19.9 -0.6
AKTO S **S 16 05 11.9 -1.0**
AKTO pmax pmax
comp=Z,47nm,1.0s
AKTO smax
comp=N,7.0nm,0.9s
AKTO MLR MLR
comp=Z,171nm,20.4s,MS3.4
LZH Lanzhou 21.45 80 ⇑P P 16 01 27.6 +1.0
LZH AP 16 01 40.0
LZH PP 16 01 52.6
LZH S **S 16 05 18.1 -6.0**
LZH XS sS 16 05 34.3 +3.3
LZH SS 16 05 54.3
LZH AMB AMB
comp=Z,78nm,1.2s,mb4.9
LZH AMB AMB
comp=Z,330nm,4.7s
LZH LR LR
comp=N,1μm,12.0s
LZH LR LR
comp=Z,1μm,15.9s,MS4.5
MNGI Mangalore 22.14 187 *ex* P 16 01 34.5 +0.5
CD2 Chengdu 22.40 93 ⇓*i*P P 16 01 38.0 +1.2
CD2 AP 16 01 49.4
CD2 PP 16 02 06.6
CD2 S **S 16 05 38.2 -4.4**
CD2 XS sS 16 05 55.0 +5.4
CD2 SS 16 06 19.2
CD2 AMB AMB
comp=Z,120nm,1.1s,mb5.2
CD2 AMB AMB
comp=Z,200nm,6.0s
CD2 LR LR
comp=N,2μm,10.2s,MS5.0
CD2 LR LR
comp=E,2μm,10.8s,MS5.0
CD2 LR LR
comp=Z,2μm,10.8s,MS4.8
MOY Mondy 23.68 38 *e*P P 16 01 51.2 +1.4
MOY pmax pmax
comp=Z,7.0nm,2.3s
KMI Kunming 23.93 108 P P 16 01 53.1 +0.7
KMI AP 16 01 59.1
KMI XP sP 16 02 01.7 +2.8
KMI PP 16 02 25.3
KMI S **S 16 06 02.4 -5.9**
KMI SS 16 06 50.4
KMI AMB AMB
comp=Z,19nm,0.9s,mb4.5
KMI AMB AMB
comp=Z,198nm,3.6s
KMI LR LR
comp=N,612nm,11.9s,MS4.4
KMI LR LR
comp=E,499nm,10.8s,MS4.4
KMI LR LR
comp=Z,792nm,10.8s,MS4.5
ZAK Zakamensk 24.21 43 *e*P P 16 01 55.1 +0.4
ZAK pmax pmax
comp=Z,18nm,1.5s,mb4.3
MAK Makhachkala 24.50 298 *e*P P 16 01 55.5 -2.0
MAK *e*PPP 16 02 37.5
MAK S **S 16 06 16.3 -1.0**
MAK *e*SS 16 07 03.4
MAK pmax pmax
comp=Z,374nm,1.2s,mb5.8
MAK MLR MLR
comp=Z,2μm,12.0s,MS4.8
SVE Sverdlovsk 24.60 338⇑*e*P P 16 01 58.4 +0.2
SVE pmax pmax
comp=Z,95nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,584nm,10.0s,MS4.4
KOD Kodaikanal 24.70 180 *ex* P 16 01 59.9 +0.5
KOD *e*S **S 16 06 32.4 +12**
CHRT Chiangrai 24.82 122 ⇑P P 16 02 01.0 +0.5
comp=Z,605nm,1.0s,mb6.1
CHG Chiang Mai 24.97 125 ⇑P P 16 02 01.3 -0.5
comp=Z,56nm,0.7s,mb5.2
CHTO Chiang Mai 24.97 125 *e*P P 16 02 01.0 -0.8
CHTO pmax pmax
comp=Z,55nm,1.0s,mb5.0
CHTO Chiang Mai 24.97 125 *e*P P 16 02 01.0 -0.8
comp=Z,55nm,1.0s,mb5.0
ARU Arti 24.97 335 P P 16 02 01.8 +0.2
comp=Z,641nm,0.6s,mb6.3,SNR=39
ARU Arti 24.97 335*d i*P P 16 02 01.5 -0.1
ARU *e*PPP 16 02 43.5
ARU *e*S **S 16 06 23.5 -1.0**
ARU *e*SS 16 07 14.4
ARU pmax pmax
comp=Z,90nm,0.8s,mb5.3
ARU Arti 24.97 335 *e*P P 16 02 01.4 -0.2
comp=Z,65nm,0.7s,mb5.3
SONM Songino Array 25.00 50 P P 16 02 03.4 +1.5
comp=Z,30nm,0.7s,mb4.9,baz=245,slow=8.3,SNR=70
SONM PcP PcP 16 05 37.0 +0.4
comp=Z,2.6nm,0.8s,baz=220,slow=4.8,SNR=3.6
SONM LR LR 16 13 27.9
comp=Z,1μm,18.7s,MS4.3,baz=8.9,slow=40
SONM Songino Array 25.00 50 P P 16 02 03.4 +1.5
SONM 16 05 37.0
SONM pmax pmax
comp=Z,30nm,0.7s
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM MLR MLR
comp=Z,1μm,18.7s
TLY Talaya 25.07 40 *e*P P 16 02 03.5 +1.1
TLY *e*SS 16 07 29.7
TLY pmax pmax
comp=Z,22nm,1.1s,mb4.6
TLY MLR MLR
comp=Z,1μm,16.0s,MS4.5
TLY Talaya 25.07 40 P P 16 02 01.5 -0.9
comp=Z,21nm,1.0s,mb4.6
CMAR Chiang Mai Arr 25.22 125 P P 16 02 03.6 -0.5
comp=Z,36nm,0.9s,mb4.9,baz=320,slow=9.3,SNR=98
CMAR S **S 16 06 36.8 +7.8**
comp=Z,0.4nm,0.3s,baz=316,slow=13,SNR=2.6
CMAR ScP ScP 16 09 16.6 +0.4
comp=Z,0.9nm,0.5s,baz=295,slow=4.8,SNR=5.4
CMAR PKiKP PKiKP 16 13 18.1 -0.5
comp=Z,0.3nm,0.4s,baz=289,slow=2.8,SNR=4.1
ULN Ulaanbaatar 25.43 51 ⇓*e*P P 16 02 06.0 +0.2
ULN Ulaanbaatar 25.43 51 *e*P P 16 02 06.7 +0.9
comp=Z,78nm,1.1s,mb5.2
IRK Irkutsk 25.69 40 *e*P P 16 02 11.6 +3.5
IRK *e* 16 02 50.5
IRK pmax pmax
comp=Z,42nm,2.0s,mb4.6
UMR Umm Al-Rimmam 25.70 266 *e*P P 16 02 08.9 +0.5
baz=271
UMR AMb AMB 16 02 10.3
comp=Z,213nm,0.7s,mb5.8,baz=271
QRN Al-Qurain 25.82 264 *e*P P 16 02 09.2 -0.3
baz=270
QRN AMb AMB 16 02 11.4
comp=Z,196nm,1.2s,mb5.5,baz=270
KBD Kabd 25.84 265 *e*P P 16 02 10.2 +0.5
baz=271
KBD AMb AMB 16 02 12.1
comp=Z,152nm,1.0s,mb5.5,baz=271
XAN Xi'an 25.87 83 P P 16 02 10.0 +0.1
XAN AP pP 16 02 19.0 +4.5
XAN PP 16 02 56.0
XAN S **S 16 06 40.3 +1.1**
XAN AMB AMB
comp=Z,8.0nm,1.2s,mb4.1
XAN AMB AMB
comp=Z,41nm,3.2s
XAN LR LR
comp=N,641nm,17.8s,MS4.3
XAN LR LR
comp=E,494nm,19.3s,MS4.3
XAN LR LR
comp=Z,709nm,11.6s
DGRG David-gareji 25.92 294 P P 16 02 11.2 +0.9
MIB Mutribah 25.92 267 *e*P P 16 02 11.0 +0.6
baz=272
MIB AMb AMB 16 02 17.6
comp=Z,203nm,0.8s,mb5.7,baz=272
BDT Bhumibol Dam 26.12 127 P P 16 02 12.5 +0.1
NAY Al-Naaiem 26.19 266 *e*P P 16 02 13.2 +0.4
baz=271
NAY AMb AMB 16 02 14.7
comp=Z,116nm,0.8s,mb5.5,baz=271
BTO Baotou 26.20 68 *e*P P 16 02 14.3 +1.4
GNI Garni 26.34 291 P P 16 02 14.8 +0.6
comp=Z,17nm,0.7s,mb4.7,baz=30,slow=3.2,SNR=10
GNI Garni 26.34 291⇑*e*P P 16 02 13.6 -0.6
GNI pmax pmax
comp=Z,64nm,1.5s
GNI MLR MLR
comp=Z,300nm,14.0s
GNI Garni 26.34 291 *e*P P 16 02 16.1 +1.9
comp=Z,66nm,0.9s,mb5.2
TBLG Delisi 26.41 294 P pP 16 02 26.4 +7.0
GYA Guiyang 26.43 101⇑*i*P P 16 02 15.7 +0.6
GYA AP pP 16 02 27.4 +7.7
GYA PP 16 03 02.7
GYA PCP PcP 16 05 41.4 +1.1
GYA S **S 16 06 54.5 +6.3**
GYA XS sS 16 07 05.4 +10
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
GYA AMB AMB
comp=Z,78nm,6.0s
GYA LR LR
comp=N,810nm,17.3s,MS4.5
GYA LR LR
comp=E,940nm,18.9s,MS4.5
GYA LR LR
comp=Z,970nm,18.6s,MS4.4
GOR Gori 26.90 295 P P 16 02 18.4 -0.8
HHC Hu-ho-hao-te 27.38 68 *e*P P 16 02 24.1 +0.6
HHC AP pP 16 02 35.8 +7.7
HHC PCP PcP 16 05 43.1 +0.8
HHC *e*S **S 16 06 57.2 -5.8**
HHC XS sS 16 07 17.9 +7.3
HHC SS 16 08 15.2
HHC SCS ScS 16 13 07.9 -5.7
HHC AMB AMB
comp=Z,14nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,118nm,4.6s
HHC LR LR
comp=N,548nm,12.0s,MS4.5
HHC LR LR
comp=E,561nm,15.3s,MS4.5
HHC LR LR
comp=Z,785nm,15.3s,MS4.4
ONI Oni 27.43 296 P P 16 02 25.3 +1.4
MSL Mosul 27.85 283 *e*P P 16 02 27.5 -0.3
NST Nakhon Sawan 28.01 128 P P 16 02 30.0 +0.7
comp=Z,42nm,1.0s,mb5.0
SOKR Solikamsk 28.02 337*c i*P P 16 02 28.0 -1.0
SOKR S **S 16 07 16.0 +3.3**
SOKR pmax pmax
comp=Z,30nm,0.8s,mb5.0
SOKR MLR MLR
comp=Z,200nm,13.0s,MS3.9
KIV Kislovodsk 28.11 299 *e*P P 16 02 28.0 -2.0
KIV *e*S **S 16 07 12.3 -2.1**
KIV pmax pmax
comp=Z,12nm,0.7s,mb4.6
KIV MLR MLR
comp=Z,499nm,15.0s,MS4.2
KIV Kislovodsk 28.11 299 *e*P P 16 02 30.0 0.0
comp=Z,40nm,0.9s,mb5.0
VRHR Novokhopersk 30.34 313 *e*P P 16 02 50.0 +0.3
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,40nm,1.2s
VRHR pmax pmax
comp=E,60nm,1.1s
BJT Baijiatuao 30.91 69 *e*P P 16 02 55.9 +1.0
BJT pmax pmax
comp=Z,80nm,1.0s
BJT Baijiatuao 30.91 69 *e*P P 16 02 55.9 +1.0
comp=Z,80nm,1.0s,mb5.5
BJI Beijing 30.91 69 P P 16 02 54.6 -0.3
BJI AP pP 16 03 06.6 +7.0
BJI S **S 16 07 56.4 -2.1**
BJI AMB AMB
comp=Z,27nm,0.8s,mb5.1
BJI AMB AMB
comp=Z,92nm,3.5s
BJI LR LR
comp=N,707nm,15.1s,MS4.6
BJI LR LR
comp=E,764nm,14.2s,MS4.6
BJI LR LR
comp=Z,466nm,18.4s,MS4.2
WHN Wuhan 31.20 88 ⇓P P 16 02 58.3 +0.8
WHN S **S 16 08 04.5 +1.3**
WHN AMB AMB
comp=Z,26nm,0.8s,mb5.1
WHN LR LR
comp=N,881nm,10.9s,MS5.0
WHN LR LR
comp=E,1μm,11.5s,MS5.0
WHN LR LR
comp=Z,2μm,15.9s,MS4.9
VORD Divnogorie 31.72 312 *e*P P 16 03 02.0 +0.1
VORD pmax pmax
comp=Z,30nm,1.2s,mb5.0
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,50nm,0.8s
VSR Storozhevoye 31.86 312 *e*P P 16 03 02.6 -0.5
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,30nm,1.0s
VOR Voronezh 31.98 313 P P 16 03 04.0 -0.2
VOR pmax pmax
comp=Z,100nm,1.0s,mb5.6
QIZ Qiongzhong 32.76 111 P P 16 03 12.0 +0.7
QIZ S **S 16 08 25.6 -2.1**
QIZ AMB AMB
comp=Z,8.0nm,1.2s,mb4.5
QIZ LR LR
comp=E,550nm,12.1s
QIZ LR LR
comp=Z,602nm,11.8s,MS4.5
MUKL Al Mukalla 32.77 238⇓*e*P P 16 03 12.2 +0.7
BOD Bodaibo 33.31 35 *e*P P 16 03 15.6 -0.1
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
HIA Hailar 33.93 52 *e*P P 16 03 22.3 +1.1
HIA pmax pmax
comp=Z,8.0nm,1.1s
HIA Hailar 33.93 52 *e*P P 16 03 22.3 +1.0
comp=Z,8.4nm,1.1s,mb4.6
MOS Moscow 34.14 320 *e*P P 16 03 22.3 -0.7
MOS *e* 16 04 38.4
MOS *e*S **S 16 08 45.8 -2.6**
MOS pmax pmax
comp=Z,101nm,1.1s,mb5.7
SIM Simferopol' 34.30 300 *e*P P 16 03 18.9 -5.6
SIM *e*S **S 16 08 45.0 -6.1**
SIM pmax pmax
comp=Z,29nm,0.8s,mb5.3
OBN Obninsk 34.50 318⇓*e*P P 16 03 25.6 -0.5
OBN *e* 16 04 39.3
OBN pmax pmax
comp=Z,144nm,1.6s,mb5.7
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.1
OBN Obninsk 34.50 318 *e*P P 16 03 25.7 -0.4
comp=Z,153nm,1.3s,mb5.8
BR131 Keskin Array S 34.89 291 *e*P P 16 03 29.8 +0.2
comp=Z,14nm,0.6s,mb5.1
BRTR Keskin Array B 34.89 291 P P 16 03 29.9 +0.3
comp=Z,19nm,0.7s,mb5.2,baz=108,slow=9.5,SNR=90
BRTR Keskin Array B 34.89 291 P P 16 03 30.0 +0.4
BRTR pmax pmax
comp=Z,19nm,0.7s
BDHA Al Bayda' 35.58 242⇑*e*P P 16 03 36.9 +1.1
BDHA AMb AMB 16 03 37.5
comp=Z,58nm,1.1s,mb5.5
LBOS 35.88 242⇓*e*P P 16 03 39.4 +1.1
DHBB Dhamar BB 36.05 244 *e*P P 16 03 40.9 +1.1
DHBB AMb AMB 16 03 42.3
comp=Z,40nm,0.7s,mb5.4
SNY Shenyang 36.39 65 ⇑P P 16 03 46.4 +3.9
SNY AMB AMB
comp=Z,18nm,1.3s,mb4.8
SNY AMB AMB
comp=Z,126nm,3.5s
SNY LR LR
comp=N,581nm,13.7s,MS4.7
SNY LR LR
comp=E,382nm,10.0s,MS4.7
SNY LR LR
comp=Z,510nm,13.3s,MS4.5
SSE Sheshan 36.62 84 P P 16 03 45.6 +1.0
SSE S **S 16 09 24.8 -2.2**
SSE AMB AMB
comp=Z,36nm,0.9s,mb5.2
SSE AMB AMB
comp=Z,65nm,3.6s
SSE LR LR
comp=N,309nm,13.5s,MS4.3
SSE LR LR
comp=E,140nm,13.5s,MS4.3
SSE LR LR
comp=Z,186nm,15.8s,MS4.0
CN2 Changchun 37.62 62 *e*P P 16 03 53.8 +0.8
CN2 *e*AP pP 16 04 03.6 +5.9
CN2 *e*XP sP 16 04 07.6 +8.1
CN2 *e*S **S 16 09 41.2 -0.8**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,11.0s,MS4.7
CN2 LR LR
comp=E,500nm,11.0s,MS4.7
CN2 LR LR
comp=Z,600nm,13.0s,MS4.6
AKASG Malin Array Be 37.95 310 P P 16 03 55.2 -0.5
comp=Z,7.6nm,0.4s,mb4.8,baz=84,slow=7.9,SNR=41
AKASG LR LR 16 22 51.6
comp=Z,174nm,18.4s,MS3.9,baz=75,slow=42
AKASG Malin Array Be 37.95 310 P P 16 03 55.2 -0.4
AKASG pmax pmax
comp=Z,8.0nm,0.4s
AKASG MLR MLR
comp=Z,175nm,18.4s
AKASG Malin Array Be 37.95 310 P P 16 03 55.2 -0.5
AKASG LR LR 16 22 51.6
AKBB Malin Array Si 37.95 310 *e*P P 16 03 55.1 -0.5
KIEV Kiev 37.96 309 *e*P P 16 03 54.8 -0.9
KIEV pmax pmax
comp=Z,9.0nm,0.4s,mb4.8
KIEV Kiev 37.96 309 *e*P P 16 03 54.8 -0.9
comp=Z,9.4nm,0.4s,mb4.9
KIS Kishinev 38.03 303 *e*P P 16 03 55.0 -1.4
KIS *e* 16 09 39.0

KIS Kishinev 38.03 303 eP P 16 03 55.0 -1.4
KIS LRM 16 24 25.0
comp=Z,400nm,15.0s
HARR Harsova 38.71 300⇓ iP P 16 04 03.1 +1.0
HARR Harsova 38.71 300 ⇓P P 16 04 03.1 +1.0
MNK Minsk 39.27 315 eP P 16 04 05.0 -1.6
INCN Inchon 39.35 72 eP P 16 04 08.0 +0.4
comp=Z,86nm,1.1s,mb5.4
VRI Vrincioaia 39.50 302⇑ iP P 16 04 10.1 +1.4
VRI Vrincioaia 39.50 302 P P 16 04 10.4 +1.7
PLOR Plostina 39.55 302 P P 16 04 10.6 +1.5
PLOR Plostina 39.55 302⇑ iP P 16 04 10.7 +1.6
YULB Yu-li 39.68 95 eP P 16 04 12.5 +2.1
comp=Z,43nm,1.2s,mb5.1
TWG Pinlang 39.76 96 eP P 16 04 10.9 -0.2
comp=Z,130nm,1.4s,mb5.5
JOF Joensuu 39.80 329 ep P 16 04 10.3 -0.6
comp=Z,17nm,0.4s,mb5.1
JOF Joensuu 39.80 329 eP P 16 04 10.3 -0.6
JOF pmax pmax
comp=Z,17nm,0.4s,mb5.1
KSRS Korea Array 40.36 71 P P 16 04 16.1 +0.1
comp=Z,15nm,0.9s,mb4.7,baz=283,slow=7.8,SNR=39
KSRS LR LR 16 21 54.3
comp=Z,136nm,21.3s,MS3.8,baz=130,slow=38
KSRS Korea Array 40.36 71 P P 16 04 16.1 +0.1
KSRS pmax pmax
comp=Z,15nm,0.9s,mb4.7
KSRS MLR MLR
comp=Z,136nm,21.3s,MS3.8
BURAR Bucovina Array 40.48 304⇓ iP P 16 04 17.3 +0.5
BURAR Bucovina Array 40.48 304 ⇓P P 16 04 17.3 +0.5
BUR08 Bucovina Ar. S 40.49 305 eP P 16 04 17.1 +0.3
MDJ Mudanjiang 40.54 60 P P 16 04 17.7 +0.4
MDJ AP pP 16 04 28.6 +6.6
MDJ PP PP 16 05 53.6 +3.0
MDJ PCP PcP 16 06 20.1 +0.6
MDJ SCP ScP 16 10 05.5 -2.9
MDJ PCS PcS 16 10 08.7 -1.3
MDJ S **S 16 10 22.5 -3.3**
MDJ SS SS 16 13 24.6 -0.8
MDJ SCS ScS 16 14 21.9 -0.6
MDJ AMB AMB
comp=Z,18nm,1.0s,mb4.7
MDJ AMB AMB
comp=Z,69nm,4.7s
MDJ LR LR
comp=N,213nm,16.4s,MS4.4
MDJ LR LR
comp=E,416nm,16.0s,MS4.4
MDJ LR LR
comp=Z,459nm,12.5s,MS4.5
MDJ Mudanjiang 40.54 60 eP P 16 04 18.8 +1.4
comp=Z,30nm,0.9s,mb4.9
VSU Vasula 40.61 321⇑ eP P 16 04 16.9 -0.8
VSU pmax pmax
comp=Z,76nm,1.5s,mb5.1
VSU MLR MLR
comp=Z,400nm,18.0s,MS4.3
VOIR 40.70 301⇑ iP P 16 04 19.5 +0.9
VOIR 40.70 301 P P 16 04 19.6 +1.0
LVZ Lovozero 40.81 337 P P 16 04 19.3 0.0
comp=Z,370nm,0.8s,mb6.1,SNR=5.2
LVZ Lovozero 40.81 337⇑ eP P 16 04 18.5 -0.8
LVZ MLR MLR
comp=Z,300nm,19.0s,MS4.2
APA Apatity 41.06 336⇓ eP P 16 04 23.8 +2.5
APA pmax pmax
comp=Z,27nm,1.4s,mb4.7
APA MLR MLR
comp=Z,500nm,12.0s,MS4.6
LVV L'vov 41.23 308 i P P 16 04 23.0 0.0
APE Apeiranthos 41.62 288⇓ eP P 16 04 25.7 -0.6
APE Apeiranthos 41.62 288⇓ iP P 16 04 25.9 -0.4
APE Apeiranthos 41.62 288 ⇓P P 16 04 25.9 -0.5
KAF Kangasniemi 41.72 327 ep P 16 04 26.5 -0.3
comp=Z,3.2nm,0.4s,mb4.3,baz=105,slow=8.2
KAF Kangasniemi 41.72 327 eP P 16 04 26.5 -0.3
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
KLR Kul'dur 41.77 53 eP P 16 04 23.8 -3.6
KLR MLR MLR
comp=E,1μm,12.5s
KLR MLR MLR
comp=Z,5μm,12.5s,MS5.6
SUW Suwalki 41.92 314 eP P 16 04 28.0 -0.6
SUW Suwalki 41.92 314 eP P 16 04 28.0 -0.6
KWP Kalwaria 42.10 308 eP P 16 04 31.3 +1.3
KWP Kalwaria 42.10 308⇓ iP P 16 04 31.7 +1.6
KWP Kalwaria 42.10 308 eP P 16 04 31.3 +1.2
YAK Yakutsk 42.17 34 eP P 16 04 25.5 -5.0
YAK pmax pmax
comp=Z,40nm,1.0s,mb5.0
YAK pmax pmax
comp=E,21nm,1.2s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK MLR MLR
comp=Z,743nm,15.0s,MS4.7
YAK MLR MLR
comp=E,512nm,16.0s,MS4.5
YAK MLR MLR
comp=N,165nm,14.0s,MS4.5
YAK Yakutsk 42.17 34 eP P 16 04 30.1 -0.4
comp=N,29nm,0.7s,mb5.0
DRGR 42.22 303⇑ iP P 16 04 32.1 +1.0
DRGR 42.22 303 P P 16 04 32.4 +1.3
GZR Gura Zlata 42.30 301⇑ iP P 16 04 32.5 +0.7
GZR Gura Zlata 42.30 301 P P 16 04 32.4 +0.6
VTS Vitosha 42.33 297⇑ iP P 16 04 32.5 +0.4
VTS Vitosha 42.33 297 ⇑P P 16 04 32.5 +0.5
UZH Uzhgorod 42.40 306 eP P 16 04 32.8 +0.3
UZH eS **S 16 10 52.0 -1.3**
KOLS Kolonicke sedl 42.40 307 eP P 16 04 33.1 +0.6
KOLS pmax pmax
comp=Z,13nm,1.3s,mb4.4
KOLS Kolonicke sedl 42.40 307 eP P 16 04 33.1 +0.6
comp=Z,12nm,1.3s,mb4.4
KOLS ePP PP 16 06 19.4 +8.7
IDI Anoyia 42.56 286 P P 16 04 32.7 -1.4
comp=Z,7.6nm,0.7s,mb4.5,baz=53,slow=10,SNR=5.1
CRVS Cervenica-Dubn 42.94 307 eP P 16 04 37.3 +0.4
CRVS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
CRVS Cervenica-Dubn 42.94 307 eP P 16 04 37.3 +0.4
comp=Z,1.8nm,0.8s,mb3.9
STHS Stebnicka Huta 43.05 307 eP P 16 04 38.1 +0.2
STHS pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
STHS Stebnicka Huta 43.05 307 eP P 16 04 38.1 +0.2
comp=Z,10.0nm,0.6s,mb4.7
BZS Buzias 43.09 302⇑ iP P 16 04 39.2 +1.0
BZS Buzias 43.09 302 P P 16 04 39.1 +1.0
NIE Niedzica 43.66 307 eP P 16 04 44.1 +1.3
OJC Ojcow 43.96 309 eP P 16 04 44.9 -0.2
OJC epP pP 16 04 51.4 +1.5
HABR Khabarovsk 43.99 54 *de*P **P 16 04 45.3 -0.1**
HABR *e**SP sP 16 04 57.5 +5.5
HABR *e* 16 06 26.6
HABR *e* 16 06 27.7
HABR eS **S 16 11 16.6 0.0**
HABR *e**SS sS 16 11 32.7 +8.3
HABR *e* 16 14 39.8
HABR eSSS 16 15 14.9
HABR pmax pmax
comp=Z,23nm,0.8s,mb5.0
PSZ Piszkesteto 44.04 305⇓ eP P 16 04 46.7 +0.9
PSZ Piszkesteto 44.04 305⇓ iP P 16 04 46.9 +1.1
PSZ Piszkesteto 44.04 305 eP P 16 04 46.4 +0.5
comp=Z,9.6nm,0.9s,mb4.5
KEV Kevo 44.14 337 ep P 16 04 45.8 -0.5
comp=Z,2.3nm,0.4s,mb4.3
KEV Kevo 44.14 337 eP P 16 04 45.8 -0.5
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ARCES ARCESS Array B 44.53 337 P P 16 04 49.7 +0.2
comp=Z,30nm,0.7s,mb5.2,baz=112,slow=9.0,SNR=96
ARCES LR LR 16 24 32.7
comp=Z,158nm,21.8s,MS3.9,baz=113,slow=38
ARCES ARCESS Array B 44.53 337 P P 16 04 49.7 +0.2
ARCES pmax pmax
comp=Z,30nm,0.7s
ARCES MLR MLR
comp=Z,158nm,21.8s

ARE0 ARCESS Array S 44.53 337 eP P 16 04 49.7 +0.2
BUD Budapest 44.67 305⇑ eP P 16 04 52.1 +1.2
VYHS Vyhne 44.70 306 eP P 16 04 51.8 +0.7
VYHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.4
VYHS Vyhne 44.70 306 eP P 16 04 51.8 +0.7
comp=Z,7.9nm,1.3s,mb4.4
KOLL Kolacno 44.98 306 eP P 16 04 54.3 +1.0
OKC Ostrava-Krasne 45.04 308⇓ eP P 16 04 54.4 +0.6
PKSM Moragy 45.08 303⇓ iP P 16 04 54.5 +0.4
PKSM Moragy 45.08 303 ⇓P P 16 04 54.5 +0.4
TIXI Tiksi 45.22 20⇑ eP P 16 04 53.8 -1.1
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
TIXI MLR MLR
comp=Z,400nm,15.0s,MS4.5
TIXI Tiksi 45.22 20 eP P 16 04 54.1 -0.8
comp=Z,8.2nm,0.6s,mb4.7
GKP Gorka Klasztor 45.44 313 eP P 16 04 57.4 +0.5
GKP Gorka Klasztor 45.44 313 eP P 16 04 57.4 +0.5
KKM Kota Kinabalu 45.87 120 eP P 16 05 01.5 +0.8
comp=Z,103nm,1.3s,mb5.6
ZST Bratislava 45.88 306 eP P 16 05 01.2 +0.7
ZST pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ZST Bratislava 45.88 306 eP P 16 05 01.2 +0.7
comp=Z,9.4nm,1.0s,mb4.7
VRAC Vranov 46.09 307⇑ iP P 16 05 03.3 +1.2
VRAC Vranov 46.09 307 ⇑P P 16 05 03.3 +1.2
KSP Ksiaz 46.15 310⇓ eP P 16 05 03.1 +0.5
DPC Dobruska-Polom 46.17 309⇓ iP P 16 05 03.4 +0.7
SOP Sopron 46.30 305⇑ eP P 16 05 03.5 -0.3
UPC Upice 46.36 309⇓ eP P 16 05 04.9 +0.7
UPC epP pP 16 05 08.7 -0.2
KOGS Kog 46.69 304 *i* P **P 16 05 07.0 +0.2**
CONA Conrad Observa 46.74 306⇑ iP P 16 05 07.6 +0.4
comp=Z,33nm,1.1s,mb5.2,SNR=16
CSNA Conrad Observa 46.74 306⇓ iP P 16 05 07.8 +0.5
comp=Z,29nm,1.1s,mb5.1
ARSA Arzberg 47.06 305⇓ iP P 16 05 10.1 +0.3
comp=Z,13nm,0.8s,mb4.9
CRES Cresnjev 47.33 303 *i* P **P 16 05 12.4 +0.5**
PRU Pruhonice 47.35 309⇓ iP P 16 05 12.5 +0.6
PRU epP pP 16 05 15.9 -0.8
PERS Pernice 47.43 304 *i* P **P 16 05 13.1 +0.5**
SOKA Soboth 47.48 304⇓ iP P 16 05 13.6 +0.6
comp=Z,39nm,1.0s,mb5.3
BOJS Bojanci 47.53 302 *i* P **P 16 05 13.9 +0.5**
BRG Berggiesshubel 47.63 310 *i* P **P 16 05 14.6 +0.5**
BRG S **S 16 12 16.0 +7.0**
BRG pmax pmax
comp=Z,11nm,0.8s,mb4.9
BRG pmax pmax
comp=Z,14nm,0.9s,mb5.0
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BRG Berggiesshubel 47.63 310 eP P 16 05 14.5 +0.4
comp=Z,18nm,0.8s,mb5.2
BRG epP pP 16 05 18.4 -0.5
BRG Berggiesshubel 47.63 310 *i* P **P 16 05 14.6 +0.5**
comp=Z,18nm,0.8s,mb5.2
BRG *i* pP 16 05 18.1 -0.8
comp=Z,23nm,0.9s
BRG *e* 16 07 12.9
comp=Z,7.0nm,1.0s
BRG S **S 16 12 16.0 +7.0**
BRG *i* 16 13 00.0
BRG SS SS 16 15 43.0 +6.2
VNDS Vrh nad Dolski 47.80 303 eP P 16 05 16.1 +0.6
MOA Molln 47.81 306 *i* P **P 16 05 15.6 0.0**
comp=Z,15nm,0.9s,mb5.0,SNR=13
OBKA Obir 47.84 304⇓ iP P 16 05 16.5 +0.7
comp=Z,25nm,1.1s,mb5.2,SNR=7.6
LJU Ljubljana 47.93 303 *i* P **P 16 05 17.3 +0.8**
GEC2 GERESS Array S 48.04 307 eP P 16 05 17.4 +0.1
GEC2 pmax pmax
comp=Z,14nm,1.2s,mb4.9
GEC2 GERESS Array S 48.04 307 eP P 16 05 17.4 +0.1
comp=Z,14nm,1.2s,mb4.9
GERES GERESS Array B 48.04 307 P P 16 05 16.9 -0.4
comp=Z,3.6nm,0.9s,mb4.4,baz=69,slow=7.3,SNR=21
GERES LR LR 16 27 12.5
comp=Z,234nm,19.8s,MS4.2,baz=204,slow=38
GERES GERESS Array B 48.04 307 P P 16 05 16.9 -0.4
GERES pmax pmax
comp=Z,4.0nm,0.9s
GERES MLR MLR
comp=Z,234nm,19.8s
KHC Kasperske Hory 48.08 308⇓ iP P 16 05 18.1 +0.5
KHC epP pP 16 05 21.7 -0.7
CLL Collm 48.17 311⇓ iP P 16 05 18.1 -0.2
CLL eS **S 16 12 15.0 -1.7**
CLL pmax pmax
comp=Z,15nm,1.0s,mb5.0
CLL Collm 48.17 311 eP P 16 05 18.2 -0.1
comp=Z,14nm,1.0s,mb5.0
CLL Collm 48.17 311⇓ iP P 16 05 18.1 -0.2
comp=Z,15nm,1.0s,mb5.0
CLL epP pP 16 05 22.0 -1.1
CLL ePP PP 16 07 06.0 -4.4
CLL eS **S 16 12 15.0 -1.7**
CLL eSS SS 16 15 54.0 +8.4
CLL LmV 16 26 00.0
comp=Z,200nm,21.9s
CLL Collm 48.17 311⇓ iP P 16 05 18.1 -0.2
comp=Z,15nm,1.0s,mb5.0
CLL *e*S **S 16 12 15.0 -1.7**
CUC Castrocucco 48.31 295 eP P 16 05 20.8 +1.3
comp=Z,32nm,0.6s,mb5.5
VOY Vojsko 48.37 303 eP P 16 05 20.2 +0.3
VOY *e* pP 16 05 24.4 -0.3
VOY *e* 16 05 27.8
VOY *e* 16 05 35.6
FG5 Orsara di Pugl 48.40 297 P P 16 05 21.4 +1.2
CADS Cadrg 48.44 304 *i* P **P 16 05 20.4 -0.1**
WET Wettzell 48.53 308 eP P 16 05 21.5 +0.4
WET pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
WET Wettzell 48.53 308 eP P 16 05 21.5 +0.4
comp=Z,6.0nm,0.9s,mb4.6
MAJO Matsushiro 48.55 70 eP P 16 05 20.8 -0.6
MAJO pmax pmax
comp=Z,18nm,0.8s,mb5.2
MAJO Matsushiro 48.55 70 eP P 16 05 20.8 -0.7
comp=Z,18nm,0.8s,mb5.2
MAT Matsushiro 48.55 70 P P 16 05 20.8 -0.6
MAT eS **S 16 12 21.0 -1.4**
MJAR Matsushiro Arr 48.55 70 P P 16 05 21.4 -0.1
comp=Z,13nm,0.8s,mb5.0,baz=287,slow=9.8,SNR=10
MJAR LR LR 16 26 25.6
comp=Z,175nm,21.5s,MS4.0,baz=295,slow=37
MJAR Matsushiro Arr 48.55 70 P P 16 05 21.4 -0.1
MJAR pmax pmax
comp=Z,13nm,0.9s
MJAR MLR MLR
comp=Z,175nm,21.5s
TANN Tannenbergstha 48.62 309 eP P 16 05 21.9 +0.1
comp=Z,13nm,1.2s,mb4.8
NKC Novy Kostel 48.66 309⇓ eP P 16 05 22.2 +0.1
NKC epP pP 16 05 27.5 +0.7
NB2 NORSAR Subarra 48.69 324 P P 16 05 21.5 -0.7
comp=Z,19nm,0.7s,mb5.2,baz=91,slow=7.9
NOA NORSAR Array B 48.69 324 P P 16 05 21.6 -0.6
comp=Z,38nm,0.9s,mb5.4,baz=91,slow=7.5,SNR=58
NOA LR LR 16 26 39.3
comp=Z,226nm,18.6s,MS4.2,baz=90,slow=37
NOA NORSAR Array B 48.69 324 P P 16 05 21.6 -0.6
NOA pmax pmax
comp=Z,39nm,0.9s
NOA MLR MLR
comp=Z,226nm,18.6s
RJOB Jochberg 48.81 306 eP P 16 05 23.0 -0.3
comp=Z,10.0nm,1.0s,mb4.8
NAO01 NORSAR Array S 48.85 323 eP P 16 05 22.2 -1.2
comp=Z,24nm,0.8s,mb5.3
ROTZ Rotzenmuhle 48.88 309 eP P 16 05 24.9 +1.2
comp=Z,18nm,1.0s,mb5.1
MOX Moxa 49.13 310 eP P 16 05 25.9 +0.2
comp=Z,30nm,0.9s,mb5.3
MOX Moxa 49.13 310 eP P 16 05 25.9 +0.2
MOX pmax pmax
comp=Z,30nm,0.9s,mb5.3
MOX Moxa 49.13 310 eP P 16 05 25.7 0.0
comp=Z,15nm,0.9s,mb5.0
MOX epP pP 16 05 30.5 +0.1

YSS Yuzh-Sakhalins 49.34 55 eP P 16 05 27.0 -0.4
YSS MLR MLR
comp=Z,500nm,13.0s,MS4.7
YSS MLR MLR
comp=N,400nm,12.0s,MS4.7
YSS MLR MLR
comp=E,200nm,12.0s,MS4.7
YSS Yuzh-Sakhalins 49.34 55 *e*P **P 16 05 27.5 +0.1**
comp=E,31nm,1.0s,mb5.3
KONO Kongsberg 49.51 322⇑ eP P 16 05 27.8 -0.7
KONO pmax pmax
comp=Z,168μm,1.8s
KONO Kongsberg 49.51 322 eP P 16 05 27.8 -0.6
comp=Z,30nm,0.8s,mb5.4
BSEG Bad Segeberg 49.51 314 eP P 16 05 29.1 +0.5
BSEG pmax pmax
comp=Z,19nm,0.8s,mb5.2
BSEG Bad Segeberg 49.51 314 eP P 16 05 29.1 +0.5
comp=Z,19nm,0.8s,mb5.2
GRA1 Grafenberg Arr 49.52 309 eP P 16 05 29.5 +0.8
comp=Z,38nm,1.2s,mb5.3
GRA1 epP pP 16 05 33.2 -0.3
GRA1 *e*S **S 16 12 29.8 -5.9**
GRA1 LR LR
comp=Z,200nm,18.5s,MS4.2
GRF Grafenberg Arr 49.52 309 eP P 16 05 29.5 +0.8
GRF *e*S **S 16 12 29.8 -5.9**
GRF pmax pmax
comp=Z,38nm,1.2s,mb5.3
GRF MLR MLR
comp=Z,200nm,18.5s,MS4.2
GRF Grafenberg Arr 49.52 309 eP P 16 05 29.5 +0.8
GRF *e*S **S 16 12 29.8 -5.9**
GRF pmax pmax
comp=Z,38nm,1.2s,mb5.3
GRF epP pP 16 05 33.2 -0.3
GRF *e*S **S 16 12 29.8 -5.9**
GRF *e*L 16 30 08.9
comp=Z,187nm,18.5s
GRF Grafenberg Arr 49.52 309 eP P 16 05 29.5 +0.8
comp=Z,38nm,1.2s,mb5.3
GRF epP pP 16 05 33.2 -0.3
GRF *e*S **S 16 12 29.8 -5.9**
GRF LR LR
comp=Z,200nm,18.5s,MS4.2
PTQR Pietraquaria 49.57 298 P P 16 05 30.3 +1.1
comp=Z,90nm,0.8s,mb5.8
NRCA Norcia 49.58 299 P P 16 05 29.7 +0.4
comp=Z,23nm,0.9s,mb5.2
SNTG Esanatoglia 49.61 300 P P 16 05 30.1 +0.6
comp=Z,34nm,0.7s,mb5.5
FSSB Fossombrone 49.62 301 P P 16 05 30.1 +0.5
comp=Z,35nm,1.0s,mb5.3
SSY Sortino 49.66 292 P P 16 05 33.6 +3.7
WTTA Wattenberg 49.67 305⇑ iP P 16 05 29.4 -0.5
comp=Z,19nm,1.3s,mb5.0
CLZ Clausthal 49.73 311 eP P 16 05 30.7 +0.4
CLZ pmax pmax
comp=Z,25nm,1.2s,mb5.1
CLZ Clausthal 49.73 311 eP P 16 05 30.7 +0.4
comp=Z,25nm,1.2s,mb5.1
FUR Furstenfeldbru 49.74 307 eP P 16 05 31.2 +0.8
FUR pmax pmax
comp=Z,37nm,0.9s,mb5.4
FUR Furstenfeldbru 49.74 307 eP P 16 05 31.2 +0.8
comp=Z,37nm,0.9s,mb5.4
NRDL Niedersach Rie 49.81 312 eP P 16 05 30.8 0.0
comp=Z,69nm,1.6s,mb5.4
ASS Assisi 49.86 300 P P 16 05 32.9 +1.5
ASS pmax pmax
comp=Z,23nm,0.7s,mb5.3
ASS Assisi 49.86 300 P P 16 05 32.9 +1.5
comp=Z,23nm,0.7s,mb5.3
CTI Castel Tesino 49.90 304 P P 16 05 31.6 0.0
MURB Monte Urbino 49.90 300 P P 16 05 33.6 +1.9
comp=Z,71nm,0.8s,mb5.8
MOTA Moosalm 50.01 306⇓ iP P 16 05 31.8 -0.6
comp=Z,11nm,0.8s,mb4.9
BADI Badiali 50.04 300 P P 16 05 34.6 +1.8
comp=Z,57nm,0.9s,mb5.6
CDCA Citt' di Caste 50.06 300 P P 16 05 34.2 +1.3
comp=Z,76nm,0.8s,mb5.8
SFI Santa Sofia 50.23 301 P P 16 05 35.2 +1.0
SFI pmax pmax
comp=Z,411nm,3.0s
SFI Santa Sofia 50.23 301 P P 16 05 35.2 +1.0
comp=Z,411nm,3.0s
FETA Feichten 50.32 305⇓ iP P 16 05 34.2 -0.6
comp=Z,10nm,0.7s,mb5.0,SNR=10
VMG Vicchio 50.43 301 P P 16 05 37.5 +1.8
comp=Z,117nm,0.9s,mb5.9
SEI Scarperia 50.54 301 P P 16 05 38.4 +1.9
comp=Z,169nm,0.7s,mb6.1
ERM Erimo 50.73 61 P P 16 05 40.8 +2.8
comp=Z,121nm,0.8s,mb5.9,SNR=5.6
ERM Erimo 50.73 61 *i* P **P 16 05 39.1 +1.1**
DAVA Damuels 50.84 306⇓ iP P 16 05 38.4 -0.3
comp=Z,39nm,0.9s,mb5.3,SNR=12
STU Stuttgart 50.99 308 eP P 16 05 40.1 +0.3
comp=Z,28nm,0.8s,mb5.2
STU epP pP 16 05 44.5 -0.1
GSCL Gusciola 51.01 302 P P 16 05 41.6 +1.6
comp=Z,44nm,0.9s,mb5.4
TOD Tromm 51.08 309 P P 16 05 41.7 +1.2
VLC Villacollemand 51.19 302 eP P 16 05 41.7 +0.3
comp=Z,73nm,1.0s,mb5.6
PII Pisa 51.20 301 P P 16 05 41.0 -0.5
PII pmax pmax
comp=Z,22nm,0.7s,mb5.2
PII Pisa 51.20 301 P P 16 05 41.0 -0.5
comp=Z,22nm,0.7s,mb5.2
KBS Kingsbay 51.21 347⇓ eP P 16 05 41.0 -0.1
KBS pmax pmax
comp=Z,24nm,1.1s,mb5.0
KBS Kingsbay 51.21 347 eP P 16 05 41.4 +0.3
comp=Z,18nm,0.8s,mb5.0
TUE Stuetta 51.37 305 eP P 16 05 41.5 -1.2
comp=Z,6.2nm,0.8s,mb4.6
LANF Langenberg 51.84 308 eP P 16 05 46.7 +0.5
FELD Feldberg im Sc 51.95 307 PKP P 16 05 46.7 -0.3
MOF Molkenrain 52.53 307 eP P 16 05 51.2 -0.1
PGF Pioggiola 52.59 300 eP P 16 05 50.9 -1.0
MEM Membach 52.65 311 P P 16 05 52.3 +0.1
comp=Z,7.0nm,0.8s,mb4.6
SEY Seymchan 52.69 34⇑ eP P 16 05 52.5 +0.2
HINF Hinteralfeld 52.72 307 eP P 16 05 51.9 -0.8
comp=Z,59nm,0.6s,mb5.4
HINF Hinteralfeld 52.72 307 eP P 16 05 51.9 -0.8
HINF pmax pmax
comp=Z,29nm,0.6s,mb5.4
HINF Hinteralfeld 52.72 307 eP P 16 05 51.9 -0.8
comp=Z,29nm,0.6s,mb5.4
WLF Walferdange 52.76 309 P P 16 05 53.8 +0.8
comp=Z,15nm,1.1s,mb4.8
WLF Walferdange 52.76 309 eP P 16 05 52.8 -0.2
WLF pmax pmax
comp=Z,19nm,0.8s,mb5.1
WLF Walferdange 52.76 309 eP P 16 05 53.7 +0.7
comp=Z,19nm,0.9s,mb5.0
WLF Walferdange 52.76 309 eP P 16 05 52.8 -0.2
comp=Z,19nm,0.8s,mb5.1
IMI Imperia 52.99 302 P P 16 05 55.1 +0.3
HAU Haudompre 53.01 307 eP P 16 05 54.1 -0.8
comp=Z,50nm,0.9s,mb5.1
HAU *e*MLR MLR
comp=Z,100nm,18.0s,MS3.6
HAU Haudompre 53.01 307 eP P 16 05 54.1 -0.8
HAU pmax pmax
comp=Z,25nm,0.9s,mb5.1
HAU MLR MLR
comp=Z,100nm,18.0s,MS3.9
HAU Haudompre 53.01 307 eP P 16 05 54.1 -0.8
comp=Z,25nm,0.9s,mb5.1
HAU LR LR
comp=Z,100nm,18.0s,MS3.9
SAOF Saorge 53.21 302 eP P 16 05 57.1 +0.7
AUTN L'Aution 53.30 302 eP P 16 05 59.0 +1.9
SBF Sospel 53.33 302 eP P 16 05 57.0 -0.3
comp=Z,258nm,1.2s,mb5.8
SBF Sospel 53.33 302 eP P 16 05 57.0 -0.3
SBF pmax pmax
comp=Z,129nm,1.2s,mb5.7

SBF Sospel 53.33 302 *e*P P 16 05 57.0 -0.3
comp=Z,129nm,1.2s,mb5.7
LPG La Plagne 53.36 304 *e*P P 16 05 57.5 0.0
comp=Z,56nm,0.8s,mb5.2
LPG La Plagne 53.36 304 *e*P P 16 05 57.5 0.0
LPG pmax pmax
comp=Z,28nm,0.8s,mb5.2
LPG La Plagne 53.36 304 *e*P P 16 05 57.5 0.0
comp=Z,28nm,0.8s,mb5.2
LPL La Plagne 53.37 304 *e*P P 16 05 57.4 -0.2
comp=Z,68nm,0.9s,mb5.3
LPL La Plagne 53.37 304 *e*P P 16 05 57.4 -0.2
LPL pmax pmax
comp=Z,34nm,0.9s,mb5.3
LPL La Plagne 53.37 304 *e*P P 16 05 57.4 -0.2
comp=Z,34nm,0.9s,mb5.3
LUCF Luceram 53.38 302 *e*P P 16 05 58.3 +0.6
RSL Roselend 53.39 304 *e*P P 16 05 57.8 0.0
TOUF Mont Tournerai 53.41 302 *e*P P 16 05 58.8 +0.9
GIVF Givet 53.50 310 *e*P P 16 05 58.2 -0.3
comp=Z,56nm,1.0s,mb5.1
GIVF Givet 53.50 310 *e*P P 16 05 58.2 -0.3
GIVF pmax pmax
comp=Z,28nm,1.0s,mb5.2
GIVF Givet 53.50 310 *e*P P 16 05 58.2 -0.3
comp=Z,28nm,1.0s,mb5.2
MVIF Mont Vial 53.51 302 *e*P P 16 05 59.0 +0.3
CABF La Chapelle 53.52 306 *e*P P 16 05 58.0 -0.7
BNI Bardonecchia 53.53 304 *e*P P 16 05 58.7 0.0
BNI pmax pmax
comp=Z,37nm,1.3s,mb5.2
BNI Bardonecchia 53.53 304 *e*P P 16 05 58.7 -0.1
comp=Z,37nm,1.3s,mb5.2
MBDF Montbardon 53.55 303 *e*P P 16 05 58.0 -0.9
comp=Z,21nm,0.6s,mb4.9
MBDF Montbardon 53.55 303 *e*P P 16 05 58.0 -0.9
MBDF pmax pmax
comp=Z,11nm,0.6s,mb5.0
MBDF Montbardon 53.55 303 *e*P P 16 05 58.0 -0.9
comp=Z,11nm,0.6s,mb5.0
DOU Dourbes 53.65 310 P P 16 05 59.6 +0.1
comp=Z,12nm,1.2s,mb4.7
MEZF Maizieres J'vi 53.73 308 *e*P P 16 05 59.7 -0.5
comp=Z,53nm,1.0s,mb5.1
MEZF Maizieres J'vi 53.73 308 *e*P P 16 05 59.7 -0.5
comp=Z,53nm,1.0s,mb5.4
BAIF Baives 53.90 310 *e*P P 16 06 01.0 -0.4
comp=Z,27nm,0.9s,mb4.8
BAIF Baives 53.90 310 *e*P P 16 06 01.0 -0.4
BAIF pmax pmax
comp=Z,14nm,0.9s,mb4.9
BAIF Baives 53.90 310 *e*P P 16 06 01.0 -0.4
comp=Z,14nm,0.9s,mb4.9
FRF La Foret Royal 53.96 302 *e*P P 16 06 01.1 -0.8
comp=Z,101nm,1.1s,mb5.4
FRF La Foret Royal 53.96 302 *e*P P 16 06 01.1 -0.8
FRF pmax pmax
comp=Z,50nm,1.0s,mb5.4
FRF La Foret Royal 53.96 302 *e*P P 16 06 01.1 -0.8
comp=Z,50nm,1.0s,mb5.4
ORIF Oris-en-Rattie 54.11 304 *e*P P 16 06 02.4 -0.6
comp=Z,48nm,1.3s,mb5.0
ORIF *e*MLR MLR
comp=Z,102nm,17.7s,MS3.6
ORIF Oris-en-Rattie 54.11 304 *e*P P 16 06 02.4 -0.6
ORIF pmax pmax
comp=Z,24nm,1.3s,mb5.0
ORIF Oris-en-Rattie 54.11 304 *e*P P 16 06 02.4 -0.6
comp=Z,24nm,1.3s,mb5.0
LMR La Mourre 54.12 302 *e*P P 16 06 02.2 -0.9
comp=Z,108nm,1.5s,mb5.3
LMR La Mourre 54.12 302 *e*P P 16 06 02.2 -0.9
LMR pmax pmax
comp=Z,54nm,1.5s,mb5.3
LMR La Mourre 54.12 302 *e*P P 16 06 02.2 -0.9
comp=Z,54nm,1.5s,mb5.3
KEST Kesra 54.48 292 P P 16 06 06.5 +0.7
comp=Z,7.3nm,0.9s,mb4.6,baz=287,slow=5.0,SNR=9.0
SMRF Simiane la Rot 54.58 303 *e*P P 16 06 05.2 -1.3
LOR Lormes 54.82 307 *e*P P 16 06 06.8 -1.3
comp=Z,24nm,0.9s,mb4.9
LOR *e*MLR MLR
comp=Z,173nm,18.5s,MS3.9
LOR Lormes 54.82 307 *e*P P 16 06 06.8 -1.3
LOR pmax pmax
comp=Z,12nm,0.9s,mb4.9
LOR MLR MLR
comp=Z,170nm,18.5s,MS4.2
LOR Lormes 54.82 307 *e*P P 16 06 06.8 -1.3
comp=Z,12nm,0.9s,mb4.9
LOR LR LR
comp=Z,170nm,18.5s,MS4.2
VIVF Saint-Julien-l 54.95 304 *e*P P 16 06 08.7 -0.4
comp=Z,22nm,0.9s,mb4.9
VIVF Saint-Julien-l 54.95 304 *e*P P 16 06 08.7 -0.4
VIVF pmax pmax
comp=Z,11nm,0.9s,mb4.9
VIVF Saint-Julien-l 54.95 304 *e*P P 16 06 08.7 -0.4
comp=Z,11nm,0.9s,mb4.9
SMF Signal de Mont 55.00 306 *e*P P 16 06 08.5 -1.0
comp=Z,39nm,0.8s,mb5.2
SMF Signal de Mont 55.00 306 *e*P P 16 06 08.5 -1.0
SMF pmax pmax
comp=Z,20nm,0.8s,mb5.2
SMF Signal de Mont 55.00 306 *e*P P 16 06 08.5 -1.0
comp=Z,20nm,0.8s,mb5.2
SSF Saint Saulge 55.11 307 *e*P P 16 06 09.0 -1.2
comp=Z,40nm,1.0s,mb5.1
SSF Saint Saulge 55.11 307 *e*P P 16 06 09.0 -1.2
SSF pmax pmax
comp=Z,20nm,1.0s,mb5.1
SSF Saint Saulge 55.11 307 *e*P P 16 06 09.0 -1.2
comp=Z,20nm,1.0s,mb5.1
AVF Avril sur Loir 55.28 306 *e*P P 16 06 10.4 -1.1
comp=Z,35nm,0.9s,mb5.1
AVF Avril sur Loir 55.28 306 *e*P P 16 06 10.4 -1.1
AVF pmax pmax
comp=Z,18nm,0.9s,mb5.1
AVF Avril sur Loir 55.28 306 *e*P P 16 06 10.4 -1.1
comp=Z,18nm,0.9s,mb5.1
PLDF La Plantade 55.34 305 *e*P P 16 06 12.7 +0.8
AGO Saint Agoulin 55.64 306 *e*P P 16 06 14.6 +0.5
BGF Bois d'Agland 55.69 306 *e*P P 16 06 13.3 -1.1
LASF Ste Croix 55.74 303 *e*P P 16 06 14.3 -0.5
LBL Lubilhac 55.80 305 *e*P P 16 06 16.2 +0.9
PYM Petit Puy Mans 55.81 305 *e*P P 16 06 15.3 0.0
TCF Toulx Ste Croi 56.19 306 *e*P P 16 06 17.2 -0.8
comp=Z,54nm,1.2s,mb5.2
TCF Toulx Ste Croi 56.19 306 *e*P P 16 06 17.2 -0.8
TCF pmax pmax
comp=Z,27nm,1.2s,mb5.2
TCF Toulx Ste Croi 56.19 306 *e*P P 16 06 17.2 -0.8
comp=Z,27nm,1.2s,mb5.2
KAPI Kappang 56.27 126 P P 16 06 17.1 -1.9
comp=Z,5.8nm,0.7s,mb4.7,baz=280,slow=12,SNR=3.4
CAF Calviac 56.70 305 *e*P P 16 06 21.2 -0.4
comp=Z,18nm,0.8s,mb4.9
CAF Calviac 56.70 305 *e*P P 16 06 21.2 -0.4
CAF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CAF Calviac 56.70 305 *e*P P 16 06 21.2 -0.4
comp=Z,8.8nm,0.8s,mb4.8
RJF Les Rejaudoux 56.95 305 *e*P P 16 06 23.1 -0.3
comp=Z,18nm,0.9s,mb4.8
RJF *e*MLR MLR
comp=Z,140nm,19.2s,MS3.8
RJF Les Rejaudoux 56.95 305 *e*P P 16 06 23.1 -0.3
RJF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
RJF MLR MLR
comp=Z,140nm,19.3s,MS4.1
RJF Les Rejaudoux 56.95 305 *e*P P 16 06 23.1 -0.3
comp=Z,9.1nm,0.9s,mb4.8
RJF LR LR
comp=Z,140nm,19.3s,MS4.1
LDF La Druitiere 57.02 309 *e*P P 16 06 22.6 -1.2
comp=Z,31nm,0.6s,mb5.2
LDF La Druitiere 57.02 309 *e*P P 16 06 22.6 -1.2
LDF pmax pmax
comp=Z,16nm,0.6s,mb5.2
LDF La Druitiere 57.02 309 *e*P P 16 06 22.6 -1.2
comp=Z,16nm,0.6s,mb5.2
MTLF Montolieu 57.10 303 *e*P P 16 06 22.9 -1.6
FLN La Foliniere 57.19 310 *e*P P 16 06 23.7 -1.4
comp=Z,45nm,1.0s,mb5.2
FLN *e*MLR MLR
comp=Z,184nm,18.2s,MS3.9
FLN La Foliniere 57.19 310 *e*P P 16 06 23.7 -1.4
FLN pmax pmax
comp=Z,23nm,1.0s,mb5.2
FLN MLR MLR
comp=Z,180nm,18.3s,MS4.2
FLN La Foliniere 57.19 310 *e*P P 16 06 23.7 -1.4
comp=Z,23nm,1.0s,mb5.2
FLN LR LR
comp=Z,180nm,18.3s,MS4.2
PEA0B Petropavlovsk- 57.31 45 *e*P P 16 06 26.6 +0.8
PETK Petropavlovsk- 57.31 45 P P 16 06 24.6 -1.3
comp=Z,7.3nm,0.7s,mb4.8,baz=289,slow=2.9,SNR=10
PETK LR LR 16 33 43.6
comp=Z,209nm,18.1s,MS4.3,baz=148,slow=39
GRR Gorron 57.54 309 *e*P P 16 06 26.2 -1.4
comp=Z,64nm,0.9s,mb5.3
GRR Gorron 57.54 309 *e*P P 16 06 26.2 -1.4
GRR pmax pmax
comp=Z,32nm,0.9s,mb5.3
GRR Gorron 57.54 309 *e*P P 16 06 26.2 -1.4
comp=Z,32nm,0.9s,mb5.3
BILL Bilibino 57.58 26⇑*e*P P 16 06 28.2 +0.7
BILL *e* 16 08 36.8
BILL *e*S S 16 14 23.2 -1.3
BILL pmax pmax
comp=Z,12nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,600nm,16.0s,MS4.8
BILL Bilibino 57.58 26 *e*P P 16 06 28.1 +0.6
comp=Z,9.7nm,0.9s,mb4.8
LFF La Frestale 57.58 305 *e*P P 16 06 27.3 -0.6
MFF Saint Martin d 57.64 307 *e*P P 16 06 27.0 -1.3
comp=Z,47nm,1.2s,mb5.1
MFF Saint Martin d 57.64 307 *e*P P 16 06 27.0 -1.3
MFF pmax pmax
comp=Z,23nm,1.2s,mb5.1
MFF Saint Martin d 57.64 307 *e*P P 16 06 27.0 -1.3
comp=Z,23nm,1.2s,mb5.1
SGMF Saint Gilles 58.66 310 *e*P P 16 06 34.3 -1.1
comp=Z,70nm,1.2s,mb5.3
SGMF Saint Gilles 58.66 310 *e*P P 16 06 34.3 -1.1
SGMF pmax pmax
comp=Z,35nm,1.2s,mb5.3
SGMF Saint Gilles 58.66 310 *e*P P 16 06 34.3 -1.1
comp=Z,35nm,1.2s,mb5.3
ROSF Rostrenen 59.09 310 *e*P P 16 06 37.2 -1.2
QUIF Quistinic 59.16 309 *e*P P 16 06 37.4 -1.5
comp=Z,24nm,0.6s,mb5.1
QUIF Quistinic 59.16 309 *e*P P 16 06 37.4 -1.5
QUIF pmax pmax
comp=Z,12nm,0.6s,mb5.1
QUIF Quistinic 59.16 309 *e*P P 16 06 37.4 -1.5
comp=Z,12nm,0.6s,mb5.1
ETSF Etsaut 59.16 303 *e*P P 16 06 38.5 -0.5
comp=Z,49nm,1.1s,mb5.1
ETSF Etsaut 59.16 303 *e*P P 16 06 38.5 -0.5
ETSF pmax pmax
comp=Z,24nm,1.1s,mb5.1
ETSF Etsaut 59.16 303 *e*P P 16 06 38.5 -0.5
comp=Z,24nm,1.1s,mb5.1
SJPF Ste Jean 59.54 304 *e*P P 16 06 40.2 -1.4
ABPO Ambohimpanom 60.96 213 *e*P P 16 06 51.5 +0.1
comp=Z,44nm,1.4s,mb5.4
ESDC Sonseca Array 62.76 301 P P 16 07 02.8 -0.7
comp=Z,1.5nm,0.5s,mb4.4,baz=67,slow=7.0,SNR=7.0
TAM Tamanrasset 62.95 280 *e*P P 16 07 02.9 -2.1
TAM pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
TAM Tamanrasset 62.95 280 *e*P P 16 07 02.9 -2.2
comp=Z,9.3nm,0.9s,mb4.9
SUMG Summit 64.09 342 *e*P P 16 07 12.5 +0.7
comp=Z,58nm,1.0s,mb5.6
PMRV Marv??o 65.27 302 *e*P P 16 07 20.2 +0.2
PBAR Barrancos 65.57 300 *e*P P 16 07 22.0 0.0
comp=Z,37nm,1.5s,mb5.2
PVAQ Vaqueiros 66.39 300 *e*P P 16 07 27.4 +0.1
PBDV Barranco-do-Ve 66.62 300 *e*P P 16 07 29.5 +0.8
LSZ Lusaka 68.48 232 LR LR 16 36 32.9
comp=Z,95nm,20.3s,MS4.0,baz=49,slow=35
LSZ Lusaka 68.48 232 *e*P P 16 07 39.7 -0.9
LSZ pmax pmax
comp=Z,32nm,1.0s,mb5.3
LSZ Lusaka 68.48 232 *e*P P 16 07 39.7 -0.9
comp=Z,32nm,1.0s,mb5.3
FITZ Fitzroy Crossi 69.88 131 *e*P P 16 07 48.4 -0.8
comp=Z,13nm,0.8s,mb4.9
KAKA Kakadu 70.44 122 *e*P x 16 07 32.5
comp=Z,15nm,0.6s
TOA0 Torodi Ar. Sit 71.01 273 *e*P P 16 07 54.8 -1.6
TORD Torodi Ar. Bea 71.01 273 P P 16 07 55.0 -1.4
comp=Z,11nm,0.5s,mb5.1,baz=47,slow=5.8,SNR=180
TORD LR LR 16 42 43.7
comp=Z,239nm,19.7s,MS4.5,baz=70,slow=39
TORD Torodi Ar. Bea 71.01 273 P P 16 07 55.0 -1.4
TORD LR LR 16 42 43.7
COLD Coldfoot 71.85 18 *e*P P 16 08 00.5 -0.1
comp=Z,17nm,0.9s,mb5.0
COLA College 74.30 18⇑*e*P P 16 08 14.6 -0.5
COLA College 74.30 18 *e*P P 16 08 15.1 0.0
comp=Z,17nm,0.8s,mb5.0
INK Inuvik 74.39 11 *e*P P 16 08 14.8 -0.8
INK pmax pmax
comp=Z,14nm,0.8s
INK Inuvik 74.39 11 *e*P P 16 08 14.8 -0.8
comp=Z,14nm,0.8s,mb4.9
KTH Kantishna Hill 74.50 20 *e*P P 16 08 16.4 +0.1
comp=Z,19nm,0.8s,mb5.1
SVW2 Sparrevohn 74.93 24 *e*P P 16 08 20.2 +1.4
MUN Mundaring 75.95 147 *e*P P 16 08 23.8 -1.2
MUN *e*PCP PcP 16 08 27.5 -10
EGAK Eagle 76.00 16 *e*P P 16 08 24.2 -0.7
comp=Z,7.8nm,0.9s,mb4.6
KLBR Kellerberrin 76.33 145 *e*P P 16 08 25.5 -1.7
comp=Z,67nm,1.8s,mb5.3
PAX Paxson 76.46 19 *e*P P 16 08 27.4 -0.2
PAX pmax pmax
comp=Z,18nm,0.8s,mb5.0
PAX Paxson 76.46 19 *e*P P 16 08 27.4 -0.2
comp=Z,18nm,0.8s,mb5.0
WRAB Tennant Creek 76.81 126 P P 16 08 29.0 -1.1
comp=Z,357nm,0.8s,mb6.3,SNR=33
WRAB Tennant Creek 76.81 126 *e*P P 16 08 29.7 -0.4
WRAB pmax pmax
comp=Z,32nm,0.6s,mb5.4
WRAB Tennant Creek 76.81 126 *e*P P 16 08 29.6 -0.5
comp=Z,32nm,0.6s,mb5.4
WB2 Warramunga Arr 76.82 126⇓*i*P P 16 08 29.5 -0.6
WB2 *e*PCP PcP 16 08 33.7 -7.6
DAWY Dawson 77.01 16 *e*P P 16 08 30.4 -0.2
NWAO Narrogin (SRO) 77.22 147 LR LR 16 41 14.8
comp=Z,129nm,19.8s,MS4.2,baz=61,slow=35
LBTB Lobatse 77.34 227 *e*P P 16 08 33.3 +0.3
LBTB pmax pmax
comp=Z,54nm,0.8s,mb5.5
LBTB Lobatse 77.34 227 *e*P P 16 08 33.3 +0.3
comp=Z,54nm,0.8s,mb5.5
TSUM Tsumeb 78.34 237 *e*P P 16 08 38.8 +0.1
comp=Z,7.8nm,0.8s,mb4.7
PMG Port Moresby 79.14 110 *e*P P 16 08 42.7 -0.6
PMG pmax pmax
comp=Z,32nm,0.8s
PMG Port Moresby 79.14 110 *e*P P 16 08 42.7 -0.5
comp=Z,32nm,0.8s,mb5.3
DBIC Dimbokro 79.94 271 P P 16 08 46.9 -0.8
comp=Z,22nm,0.8s,mb5.2,baz=30,slow=6.9,SNR=43
DBIC LR LR 16 47 47.3
comp=Z,198nm,19.3s,MS4.5,baz=146,slow=38
DBIC Dimbokro 79.94 271 P P 16 08 46.9 -0.8
DBIC pmax pmax
comp=Z,22nm,0.8s
DBIC MLR MLR
comp=Z,198nm,19.3s
DBIC Dimbokro 79.94 271 *e*P P 16 08 46.8 -0.9
comp=Z,24nm,0.9s,mb5.1
KIC Kosan Boka 80.02 271⇓*i*P P 16 08 47.4 -0.7
comp=Z,149nm,0.8s,mb6.0
TIC Toumodi 80.09 271⇓*i*P P 16 08 47.7 -0.8
comp=Z,85nm,0.8s,mb5.7
BOSA Boshof 80.24 225 P P 16 08 48.5 -0.3
comp=Z,18nm,0.7s,mb5.1,baz=38,slow=6.2,SNR=39
BOSA LR LR 16 43 26.7
comp=Z,115nm,18.4s,MS4.3,baz=20,slow=35
BOSA Boshof 80.24 225 *e*P P 16 08 48.4 -0.4
BOSA pmax pmax
comp=Z,34nm,1.1s,mb5.2
BOSA Boshof 80.24 225 *e*P P 16 08 48.4 -0.4
comp=Z,34nm,1.1s,mb5.2
LIC Lamto 80.33 271⇓*i*P P 16 08 48.8 -1.0
comp=Z,40nm,0.7s,mb5.1
LIC *e*MLR MLR
comp=Z,356nm,21.0s,MS4.4
LIC Lamto 80.33 271⇓*i*P P 16 08 48.8 -1.0
comp=Z,20nm,0.7s,mb5.2
LIC LR LR
comp=Z,180nm,21.0s,MS4.4
FORT Forrest 80.94 138 *e*P P 16 08 52.5 -0.1
comp=Z,82nm,0.7s,mb5.8
FORT *e*PCP PcP 16 08 56.6 -2.5
SKAG Skagway 81.99 16 *e*P P 16 08 58.4 +0.6
comp=Z,26nm,0.9s,mb5.2
YKA Yellowknife Ar 82.31 6 P P 16 08 58.8 -0.7
comp=Z,13nm,0.7s,mb5.0,baz=345,slow=5.2,SNR=132
YKA PKKPbc PKKPbc 16 27 24.1 -2.7
comp=Z,0.2nm,0.5s,baz=166,slow=1.9,SNR=7.0
YKA LR LR 16 44 47.9
comp=Z,51nm,18.0s,MS3.9,baz=115,slow=35
YKA Yellowknife Ar 82.31 6 P P 16 08 58.8 -0.7
YKA PKKPbc PKKPbc 16 27 24.1 -2.7
YKA LR LR 16 44 47.9
CTA Charters Tower 85.18 118 *e*P P 16 09 14.4 -0.3
comp=Z,34nm,0.7s,mb5.6
CTA *e*PCP PcP 16 09 18.5 +0.6
CTA Charters Tower 85.18 118 *e*P P 16 09 14.4 -0.3
CTA pmax pmax
comp=Z,34nm,0.7s
CTAO Charters Tower 85.18 118 *e*P P 16 09 14.5 -0.2
CTAO pmax pmax
comp=Z,67nm,0.9s,mb5.8
CTAO Charters Tower 85.18 118 *e*P P 16 09 14.5 -0.2
comp=Z,67nm,0.9s,mb5.8
CTAO *e* pP 16 09 18.2 -1.6
SCHQ Schefferville 85.38 340 P P 16 09 14.0 -1.2
comp=Z,4.5nm,0.8s,mb4.6,baz=297,slow=2.3,SNR=3.4
SCHQ Schefferville 85.38 340 P P 16 09 14.0 -1.2
STKA Stephens Creek 89.75 130 *e*P P 16 09 35.2 -1.3
comp=Z,10nm,0.4s,mb5.5
STKA *e*PCP PcP 16 09 39.2 +1.4
STKA Stephens Creek 89.75 130 P P 16 09 35.6 -0.9
comp=Z,12nm,0.5s,mb5.5,baz=322,slow=5.0,SNR=61
STKA LR LR 16 59 00.4
comp=Z,107nm,18.3s,MS4.3,baz=28,slow=42
STKA Stephens Creek 89.75 130 *e*P P 16 09 35.6 -0.9
STKA *e*PcP PcP 16 09 39.2 +1.4
FFC Flin Flon 90.59 360 *e*P P 16 09 39.6 -0.7
FFC pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
FFC Flin Flon 90.59 360 *e*P P 16 09 39.6 -0.7
comp=Z,7.7nm,0.9s,mb5.0
FFC *e* pP 16 09 43.7 -1.6
EDM Edmonton 91.60 6 *e*P P 16 09 44.8 -0.1
EIDS Eidsvold 91.95 120 *e*P P 16 09 46.0 -0.9
comp=Z,20nm,0.9s,mb5.5
ULM Lac du Bonnet 94.87 356 P P 16 09 58.7 -1.4
comp=Z,2.8nm,0.6s,mb4.9,baz=340,slow=3.1,SNR=3.3
ULM LR LR 16 57 59.4
comp=Z,189nm,19.5s,MS4.6,baz=37,slow=39
ARMA Armidale 95.42 123 *e*P P 16 10 02.8 0.0
ARMA *e*PCP PcP 16 10 06.9 +3.9
TOO Toolangi 95.91 132 *e*P P 16 10 04.8 0.0
PDAR Pinedale Array 102.30 5 PKiKP PKiKP 16 14 55.6 +0.3
comp=Z,0.5nm,0.7s,baz=28,slow=2.1,SNR=3.9
TXAR Lajitas Array 115.96 1 PKP PKPdf 16 15 21.6 +0.2
comp=Z,0.6nm,0.8s,baz=178,slow=1.8,SNR=4.5
TXAR PKKPbc PKKPbc 16 25 54.3 +2.5
comp=Z,0.8nm,1.1s,baz=176,slow=3.8,SNR=3.9
TXAR Lajitas Array 115.96 1 PKIKP PKPdf 16 15 21.6 +0.2
TXAR 16 25 54.3
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,1.1s
SNAA Sanae 119.91 201 *e*PKPdf PKPdf 16 15 27.3 -0.2
SNAA *e* 16 15 31.7
VNA2 Neumayer--Watz 121.05 202 *e*PKPdf PKPdf 16 15 30.1 +0.4
baz=9.5,slow=4.3
VNA2 *e* 16 15 34.3
VNA2 *e* 16 15 43.6
VNA1 Neumayer--Stat 121.24 203 *e*PKPdf PKPdf 16 15 30.0 -0.1
VNA1 *e* 16 15 34.5
VNA3 Neumayer Olymp 121.85 202 *e*PKPdf PKPdf 16 15 31.0 -0.2
VNA3 *e* 16 15 35.4
VNA3 *e* 16 15 45.2
VNDA Vanda 122.71 165 PKP PKPdf 16 15 30.5 -2.3
comp=Z,1.1nm,0.7s,baz=272,slow=5.1,SNR=3.8
VNDA Vanda 122.71 165 PKIKP PKPdf 16 15 30.5 -2.3
VNDA pmax pmax
comp=Z,1.0nm,0.7s
QSPA South Pole Qui 124.83 180 *e*PKPdf PKPdf 16 15 36.3 -0.5
CPUP Villa Florida 140.46 270 PKP PKPdf 16 16 06.8 -0.9
comp=Z,0.7nm,0.5s,baz=134,slow=3.8,SNR=4.4
CPUP Villa Florida 140.46 270 PKIKP PKPdf 16 16 06.8 -0.9
CPUP pmax pmax
comp=Z,1.0nm,0.5s
PMSA Palmer Station 142.35 206 *e*PKPdf PKPdf 16 16 08.7 -1.2
ARE Arequipa 146.68 296 *e*PKP2 PKPab 16 16 22.0 +0.4
LVC Limon Verde 148.21 284 *e*PKPbc PKPbc 16 16 25.3 +0.7
PLCA Paso Flores 154.23 248 PKP PKPdf 16 16 31.1 +1.2
comp=Z,6.6nm,1.0s,baz=139,slow=0.6,SNR=8.8
PLCA PKPbc PKPbc 16 16 38.8 +0.7
comp=Z,5.2nm,0.6s,baz=110,slow=4.2,SNR=17
PLCA Paso Flores 154.23 248 PKIKP PKPdf 16 16 31.1 +1.2
PLCA 16 16 38.8
PLCA pmax pmax
comp=Z,7.0nm,1.0s
PLCA pmax pmax
comp=Z,5.0nm,0.6s

NEIC ***11*** *16:01:32.2±0.5, 3492N×7743E, h10^{km}, mb4.3/1, Error ellipse: s-maj=11.5km s-min=10.3km az=16.0*
ISCJB ***11*** *16:01:34.6±2.2, 3507N±008×7742E±009, h38^{km}±19^{km}, mb4.2/14, Error ellipse: s-maj=14.2km s-min=11.1km az=140.3*
IDC ***11*** *16:01:38.2±5.1, 3504N×7742E, h56^{km}±47^{km}, mb3.8/12, mb1 3.9/15, mb1mx3.8/23, mbtmp3.9/15, ML4.1/3, Error ellipse: s-maj=27.0km s-min=15.7km az=22.0*
ISC 11 16:01:37.1±1.8**, 3503N**±008×**7743E**±009**, h46**^{km}±16^{km}**,**
n23, σ0^{s}68/24**, mb4.2**/14**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**6.92**	**268**	Pn	**Pn**	**16 03 15.4**	**-0.5**
MKAR	**Makanchi Array**	**12.31**	**16**	P	**Pn**	**16 04 30.5**	**+1.0**
	0.4nm,0.3s,baz=203,slow=13,SNR=7.1						
MKAR				S	**Sn**	**16 06 44.6**	**-0.5**
	0.6nm,0.3s,baz=196,slow=22,SNR=5.4						
BVAR	**Borovoye Array**	**18.67**	**347**	P	**Pn**	**16 05 51.8**	**0.0**
	1.9nm,0.3s,baz=155,slow=10.0,SNR=15						
ZALV	**Zalesovo Beam**	**19.61**	**13**	P	**Pn**	**16 06 00.9**	**-2.1**
	0.3nm,0.3s,baz=195,slow=10,SNR=3.3						
AKTK	**Aktyubinsk**	**20.89**	**323**	P	**P**	**16 06 15.7**	**+0.5**
AKTO	**Aktyubinsk**	**20.89**	**323**	P	**P**	**16 06 15.7**	**+0.5**
	14nm,1.0s,baz=109,slow=15,SNR=2.7						
SONM	**Songino Array**	**25.04**	**50**	P	**P**	**16 06 57.9**	**+1.1**
	2.3nm,0.9s,mb3.7,baz=241,slow=10,SNR=3.6						
CMAR	**Chiang Mai Arr**	**25.24**	**125**	P	**P**	**16 06 59.1**	**+0.3**
	2.6nm,0.8s,mb3.8,baz=318,slow=9.8,SNR=5.0						
BRTR	**Keskin Array B**	**34.85**	**291**	P	**P**	**16 08 24.1**	**+0.3**
	1.4nm,0.6s,mb4.1,baz=110,slow=9.2,SNR=4.3						
AKASG	**Malin Array Be**	**37.92**	**310**	P	**P**	**16 08 50.2**	**+0.4**
	0.7nm,0.4s,mb3.8,baz=81,slow=7.5,SNR=3.4						
KSRS	**Korea Array**	**40.40**	**71**	P	**P**	**16 09 10.9**	**+0.2**
	0.8nm,0.5s,mb3.7,baz=284,slow=8.1,SNR=4.9						
ARCES	**ARCESS Array B**	**44.52**	**337**	P	**P**	**16 09 44.2**	**+0.5**
	7.2nm,1.0s,mb4.4,baz=110,slow=10,SNR=6.1						
NOA	**NORSAR Array B**	**48.68**	**324**	P	**P**	**16 10 15.9**	**-0.4**
	1.5nm,0.7s,mb4.1,baz=92,slow=7.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**70.97**	**273**	P	**P**	**16 12 50.0**	**-0.2**
	1.1nm,0.5s,mb4.1,baz=44,slow=5.9,SNR=9.3						
WRAB	**Tennant Creek**	**76.84**	**126**	*e*P	**P**	**16 13 24.0**	**-0.3**
	1.8nm,0.6s,mb4.2						
DBIC	**Dimbokro**	**79.90**	**271**	P	**P**	**16 13 41.6**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=40,slow=10,SNR=3.3						
KIC	**Kosan Boka**	**79.98**	**271**	*e*P	**P**	**16 13 42.7**	**+0.8**
	268nm,2.5s						
TIC	**Toumodi**	**80.05**	**271**	*e*P	**P**	**16 13 41.2**	**-1.1**
	6.6nm,0.2s,mb5.2						
LIC	**Lamto**	**80.29**	**271**	*e*P	**P**	**16 13 43.6**	**0.0**
	43nm,1.9s,mb5.0						
YKA	**Yellowknife Ar**	**82.33**	**6**	P	**P**	**16 13 53.0**	**-0.5**
	0.5nm,0.4s,mb3.8,baz=345,slow=5.3,SNR=4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**82.33**	**6**	P	**P**	**16 13 53.0**	**-0.5**
STKA	**Stephens Creek**	**89.78**	**130**	P	**P**	**16 14 29.9**	**-0.6**
	1.1nm,0.5s,mb4.5,baz=329,slow=9.1,SNR=4.2						
STKA	**Stephens Creek**	**89.78**	**130**	P	**P**	**16 14 29.9**	**-0.6**

*ISCJB **11** 16:17:12.6±0.5, 5150N±002×1617E±003, h0km, Error ellipse: s-maj=3.7km s-min=2.3km az=16.9*
*CSEM **11** 16:17:14.6±0.2, 5154N×1614E, h0km, ML3.6/8, Error ellipse: s-maj=3.1km s-min=1.7km az=22.0*
*NEIC **11** 16:17:14.3±0.5, 5155N×1615E, h5km, ML2.7(BRA), Error ellipse: s-maj=6.4km s-min=4.2km az=206.0*
*WAR **11** 16:17:15.9, 5151N×1613E, Mw2.8*
*PRU **11** 16:17:16.0, 5148N×1612E, h0km, Felt In Harrachov*
*VIE **11** 16:17:18.1±0.3, 5130N×1596E, h0km, mb2.4/3, ML2.9/3, Error ellipse: s-maj=2.8km s-min=2.0km az=94.0 77 km WNW of Wroclaw Suspected Mining induced.*
ISC 11 16:17:14.1±0.5**, 5154N**±002×**1615E**±003**, h0km, n33, σ0s78**/69**, 4C-4D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**173**	*e*Pg	**Pg**	**16 17 28.2**	**+0.7**
KSP				*e*Sg	**Sg**	**16 17 37.5**	**+0.9**
KSP	**Ksiaz**	**0.70**	**173**⇓	*i*Pg	**Pg**	**16 17 28.3**	**+0.8**
KSP				*e*Sg	**Sg**	**16 17 37.5**	**+0.9**
KSP	**Ksiaz**	**0.70**	**173**⇓	*i*Pg	**Pg**	**16 17 28.3**	**+0.8**
KSP				*e*Sg	**Sg**	**16 17 37.5**	**+0.9**
KSP				*e*		16 17 42.5	
UPC	**Upice**	**1.04**	**185**	*e*PG	**Pg**	**16 17 34.3**	**+0.4**
UPC				*e*SG	**Sg**	**16 17 47.9**	**+0.5**
DPC	**Dobruska-Polom**	**1.20**	**175**	*e*PG	**Pg**	**16 17 37.1**	**+0.1**
DPC				*e*SG	**Sg**	**16 17 52.2**	**-0.3**
	comp=Z,50nm,0.4s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pg**	**16 17 40.9**	**-0.4**
PVCC				*e*SG	**Sg**	**16 17 59.7**	**-0.1**
	comp=Z,179nm,0.3s						
BRG	**Berggiesshubel**	**1.54**	**245**	PN	**Pn**	**16 17 42.9**	**+0.1**
BRG				PG	**Pg**	**16 17 43.6**	**0.0**
BRG				SG	**Sg**	**16 18 04.4**	**+0.8**
	comp=Z,70nm,0.5s						
PRU	**Pruhonice**	**1.86**	**214**	*e*PN	**Pn**	**16 17 46.9**	**-0.2**
PRU				*e*PG	**Pg**	**16 17 48.9**	**-0.8**
PRU				*e*SG	**Sg**	**16 18 12.9**	**-0.9**
	comp=Z,55nm,0.4s						
RAC	**Raciborz**	**1.95**	**138**	*e*Pg	**Pg**	**16 17 52.7**	**+1.3**
RAC				*e*Sg	**Sg**	**16 18 18.1**	**+1.4**
CLL	**Collm**	**1.99**	**264**	*i* Pn	**Pn**	**16 17 48.3**	**-0.6**
	comp=Z,4.0nm,0.4s						
CLL				*i* Pg	**Pg**	**16 17 51.7**	**-0.4**
CLL				*e*x	x	16 17 56.0	
CLL				*e*Sg	**Sg**	**16 18 19.0**	**+1.2**
	comp=Z,55nm,0.9s						
CLL	**Collm**	**1.99**	**264**	*i* Pn	**Pn**	**16 17 48.3**	**-0.6**
CLL				*i* Pg	**Pg**	**16 17 51.7**	**-0.4**
CLL				*e*Sg	**Sg**	**16 18 19.0**	**+1.2**
OKC	**Ostrava-Krasne**	**2.13**	**143**	*e*PG	**Pg**	**16 17 54.5**	**-0.3**
OKC				*e*SG	**Sg**	**16 18 21.6**	**-0.7**
VRAC	**Vranov**	**2.25**	**173**	*e*Pn	**Pn**	**16 17 52.9**	**+0.4**
VRAC				*e*Sg	**Sg**	**16 18 25.3**	**-1.1**
TREC	**Trest**	**2.29**	**191**	*e*PN	**Pn**	**16 17 54.3**	**+1.3**
TREC				*e*PG	**Pg**	**16 17 57.5**	**-0.4**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**16 18 04.5**	**-0.5**
OJC				*e*Sg	**Sg**	**16 18 39.3**	**-0.2**
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**16 17 59.0**	**+0.5**
NKC				*e*PG	**Pg**	**16 18 05.2**	**-0.3**
NKC				*e*SG	**Sg**	**16 18 41.0**	**+0.7**
	comp=Z,53nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**16 18 01.6**	**-0.1**
KHC				*e*PG	**Pg**	**16 18 08.1**	**-1.9**
KHC				*e*SN	**Sn**	**16 18 38.5**	**+1.0**
KHC				*e*SG	**Sg**	**16 18 47.2**	**-0.7**
	comp=Z,15nm,0.3s						
MOX	**Moxa**	**3.00**	**254**	*e*PG	**Pg**	**16 18 11.5**	**0.0**
MOX				*e*SG	**Sg**	**16 18 51.3**	**+1.0**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	**Pn**	**16 18 05.1**	**+0.6**
WET	**Wettzell**	**3.19**	**222**	*e*Pn	**Pn**	**16 18 05.1**	**-0.3**
KOLL	**Kolacno**	**3.30**	**153**	*e*Pg	**Pg**	**16 18 16.3**	**-1.0**
KOLL				*e*Sg	**Sg**	**16 18 59.6**	**-0.4**
KOLL	**Kolacno**	**3.30**	**153**	*e*PG	**Pg**	**16 18 16.2**	**-1.1**
KOLL				*e*SG	**Sg**	**16 18 59.6**	**-0.4**
NIE	**Niedzica**	**3.40**	**127**	*e*P	**Pg**	**16 18 17.7**	**-1.5**
NIE				*e*S	**Sg**	**16 19 02.4**	**-0.9**
ZST	**Bratislava**	**3.41**	**169**	*e*PG	**Pg**	**16 18 19.3**	**0.0**
ZST				*e*SG	**Sg**	**16 19 02.6**	**-0.8**
VYHS	**Vyhne**	**3.51**	**149**	*e*PG	**Pg**	**16 18 21.8**	**+0.6**
VYHS				*e*SG	**Sg**	**16 19 06.2**	**-0.5**
CLZ	**Clausthal**	**3.61**	**277**	*e*Pn	**Pn**	**16 18 10.4**	**-0.8**
CONA	**Conrad Observa**	**3.62**	**183**⇑	*i*Pn	**Pn**	**16 18 12.2**	**+0.8**
CONA			⇑	*i*Sg	**Sg**	**16 19 09.7**	**-0.6**
	comp=Z,40nm,0.9s						
CSNA	**Conrad Observa**	**3.62**	**183**⇓	*i*Pn	**Pn**	**16 18 12.3**	**+1.0**
CSNA			⇓	*i*Sg	**Sg**	**16 19 10.1**	**-0.3**
	comp=Z,13nm,0.4s						
GRF	**Grafenberg Arr**	**3.65**	**241**	*e*Sg	**Sg**	**16 19 10.7**	**-0.4**
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**16 18 11.4**	**-0.4**
BSD				*i* S	**Sn**	**16 18 54.2**	**-1.4**
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PG	**Pg**	**16 18 29.3**	**+0.8**
STHS				*e*SG	**Sg**	**16 19 20.2**	**+1.4**
MOA	**Molln**	**3.89**	**199**⇑	*i*Pn	**Pn**	**16 18 15.6**	**+0.5**
MOA			⇑	*i*Sg	**Sg**	**16 19 18.6**	**-0.5**
	comp=Z,18nm,0.4s						
CRVS	**Cervenica-Dubn**	**4.31**	**126**	*e*PG	**Pg**	**16 18 38.0**	**+1.4**
CRVS				*e*SG	**Sg**	**16 19 37.1**	**+4.6**

*ISK **11** 16:17:47.9, 3993N×2736E, h5km, MD3.0*
*CSEM **11** 16:17:48.5±0.1, 3993N×2735E, h8km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.8km az=23.0*
*ISCJB **11** 16:17:49.1±0.5, 3996N±003×2736E±004, h3km±6km, Error ellipse: s-maj=5.2km s-min=3.9km az=137.9*
*DDA **11** 16:17:49.1, 3995N×2736E, h7km±2km, Md3.1*
ISC 11 16:17:49.6±0.4**, 3996N**±003×**2735E**±004**, h7km**±5km**, n25, σ0s90**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.30**	**137**	*i* P	**Pg**	**16 17 55.1**	**-0.3**
BALY				*i* S	**Sg**	**16 17 60.0**	**+0.6**
BALB	**Balikesir**	**0.52**	**128**	PG	**Pg**	**16 17 58.6**	**-1.0**
BALB				*e*SG	**Sg**	**16 18 06.6**	**+0.3**
BNT	**Bandirma**	**0.59**	**47**	PG	**Pg**	**16 18 00.8**	**-0.2**
LPK	**Lapseki**	**0.61**	**312**	*e*PG	**Pg**	**16 18 01.1**	**-0.3**
LPK				*e*SG	**Sg**	**16 18 12.0**	**+2.5**
RKY	**Sarkoy-Tekirda**	**0.74**	**350**	*e*PG	**Pg**	**16 18 03.1**	**-0.8**
SART	**Tekirdag**	**0.74**	**350**	*i* P	**Pg**	**16 18 04.0**	**+0.1**
EZN	**Ezine**	**0.80**	**261**	*e*PG	**Pg**	**16 18 04.8**	**-0.2**
EZN	**Ezine**	**0.80**	**261**	*e*Pg	**Pg**	**16 18 04.8**	**-0.2**
AYVA	**Ayvalik**	**0.83**	**218**	*i* P	**Pg**	**16 18 05.0**	**-0.5**
AYVA				*i* S	**Sg**	**16 18 18.1**	**+1.9**
KCT	**Karacabey**	**0.83**	**68**	*e*PG	**Pg**	**16 18 05.1**	**-0.4**
DURS	**Dursunbey**	**0.94**	**112**	*i* P	**Pg**	**16 18 06.8**	**-0.7**
DURS				*i* S	**Sg**	**16 18 20.5**	**+0.8**
DURS	**Dursunbey**	**0.94**	**112**	*i* P	**Pg**	**16 18 06.8**	**-0.8**
DURS				*i* S	**Sg**	**16 18 20.5**	**+0.8**
TKR	**Tekirdag**	**1.04**	**8**	*e*PG	**Pg**	**16 18 10.0**	**+0.4**
DST	**Dursunbey**	**1.04**	**109**	*e*PG	**Pg**	**16 18 08.4**	**-1.3**
AKHS	**Akhisar**	**1.14**	**162**	*i* P	**Pg**	**16 18 10.1**	**-1.3**
AKHS				*i* S	**Sg**	**16 18 27.2**	**+1.1**
AKS	**Akhisar**	**1.14**	**162**	*e*PN	**Pn**	**16 18 11.1**	**-0.9**
GADA	**Gvkgeada**	**1.14**	**282**	*e*PN	**Pn**	**16 18 10.8**	**-1.3**
ENEZ	**Enez**	**1.20**	**311**	*e*PN	**Pn**	**16 18 12.0**	**-0.9**
SLVT	**Silivri**	**1.43**	**27**	*e*PN	**Pn**	**16 18 16.7**	**+0.7**
GEMT	**Gemlik**	**1.48**	**71**	*e*PN	**Pn**	**16 18 17.6**	**+0.8**
CTKS	**Kestanelik-??a**	**1.55**	**34**	*e*PN	**Pn**	**16 18 17.3**	**-0.3**
YLV	**Yalova**	**1.66**	**68**	*e*PN	**Pn**	**16 18 20.0**	**+0.8**
KULA	**Kula-Manisa**	**1.76**	**144**	*e*PN	**Pn**	**16 18 20.2**	**-0.3**
ADVT	**Abdulvahap**	**1.89**	**75**	*e*PN	**Pn**	**16 18 23.3**	**+1.0**
CAVI	**Cavuskoy**	**1.93**	**82**	*e*PN	**Pn**	**16 18 23.6**	**+0.8**

*IDC **11** 16:28:22.8±3.7, 269N×9651E, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, ML4.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.8/23, Error ellipse: s-maj=84.6km s-min=32.7km az=23.0*
*ISCJB **11** 16:28:27.2±1.1, 28N±01×9665E±009, h33km, mb3.9/6, Error ellipse: s-maj=20.6km s-min=9.7km az=28.4*
*NEIC **11** 16:28:28.9±1.3, 276N×9659E, h35km, mb3.6/1, Error ellipse: s-maj=32.1km s-min=14.7km az=53.0*
ISC 11 16:28:29.4±1.1**, 28N**±01×**9670E**±009**, h35km, n12, σ1s22**/13**, mb3.9**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.23**	**90**	Pn	**Pn**	**16 29 03.1**	**-0.8**
	37nm,0.3s,baz=311,slow=14,SNR=130						
PSI				Sn	**Sn**	**16 29 29.5**	**-0.7**
	89nm,0.3s,baz=161,slow=22,SNR=12						
PSI				LR	LR	16 30 00.4	
	comp=Z,407nm,18.5s,baz=227,slow=41						
CMAR	**Chiang Mai Arr**	**15.69**	**8**	Pn	**Pn**	**16 32 08.8**	**+0.8**
	0.5nm,0.3s,baz=199,slow=11,SNR=14						
CHTO	**Chiang Mai**	**16.05**	**8**	*e*P	**Pn**	**16 32 14.8**	**+2.3**
WRAB	**Tennant Creek**	**43.33**	**123**	*e*P	**P**	**16 36 29.5**	**+1.1**
	0.7nm,0.6s,mb3.6						
WB2	**Warramunga Arr**	**43.34**	**123**	*e*P	**P**	**16 36 29.5**	**+1.0**
MKAR	**Makanchi Array**	**45.56**	**346**	P	**P**	**16 36 44.2**	**-1.5**
	0.5nm,0.4s,mb3.8,baz=160,slow=7.7,SNR=5.1						
SONM	**Songino Array**	**45.62**	**9**	P	**P**	**16 36 47.1**	**+0.9**
	0.4nm,0.4s,mb3.7,baz=191,slow=9.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**51.89**	**351**	P	**P**	**16 37 32.4**	**-1.9**
	1.3nm,0.5s,mb4.1,baz=180,slow=7.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**51.89**	**351**	P	**P**	**16 37 32.4**	**-1.9**
BVAR	**Borovoye Array**	**54.56**	**341**	P	**P**	**16 37 52.7**	**-1.3**
	0.9nm,0.6s,mb4.0,baz=142,slow=9.1,SNR=6.4						
ARCES	**ARCESS Array B**	**80.85**	**340**	P	**P**	**16 40 39.7**	**+0.3**
	3.0nm,0.9s,mb4.2,baz=72,slow=8.8,SNR=3.6						
ARCES	**ARCESS Array B**	**80.85**	**340**	P	**P**	**16 40 39.7**	**+0.3**

*NEIC **11** 16:30:05.3, 3832N×2045E, h19km, MD3.5(ATH), After ATH.*
*CSEM **11** 16:30:05.8±0.2, 3828N×2038E, h5km, ML3.1/2, Error ellipse: s-maj=6.5km s-min=3.1km az=70.0*
*ATH **11** 16:30:05.5, 3832N×2047E, h19km±2km, MD3.5/4*
*ISCJB **11** 16:30:06.4±1.3, 3822N±006×2038E±009, h12km±5km, Error ellipse: s-maj=13.2km s-min=7.1km az=146.3*
*THE **11** 16:30:07.2, 3831N×2045E, h0km±3km, ML3.1/2, Error ellipse: s-maj=5.2km s-min=0.7km az=248.0*
ISC 11 16:30:06.6±1.5**, 3824N**±006×**204E**±01**, h10km**±7km**, n16, σ0s93**/22**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.19**	**108**	P	**Pg**	**16 30 10.6**	**0.0**
VLS				S	**Sg**	**16 30 13.8**	**+0.5**
VLS	**Valsamata**	**0.19**	**108**	*e*PB	**Pg**	**16 30 10.7**	**+0.1**
VLS				*e*SB	**Sg**	**16 30 13.9**	**+0.6**
KFL	**Anninata**	**0.36**	**110**	P	**Pg**	**16 30 13.2**	**-0.5**
KFL				S	**Sg**	**16 30 18.2**	**-0.3**
RLS	**Riolos of Patr**	**0.89**	**101**	*e*PN	**Pn**	**16 30 21.8**	**-3.3**
RLS	**Riolos of Patr**	**0.89**	**101**	*e*Pn	**Pn**	**16 30 22.0**	**-3.1**
IGT	**Igoumenitsa**	**1.29**	**359**	P	**Pn**	**16 30 29.9**	**-0.8**
IGT				S	**Sb**	**16 30 47.5**	**-0.2**
EVR	**Evrytania**	**1.32**	**59**	*e*PN	**Pn**	**16 30 28.3**	**-2.8**
ITM	**Ithomi**	**1.63**	**130**	*e*PN	**Pn**	**16 30 35.0**	**-0.3**
AGG	**Agios Georgios**	**1.73**	**62**	P	**Pn**	**16 30 36.7**	**0.0**
AGG				S	**Sn**	**16 30 58.8**	**0.0**
PYL	**PYLOS**	**1.73**	**140**	P	**Pn**	**16 30 37.7**	**+1.0**
THL	**Klokotos Trika**	**1.85**	**44**	P	**Pn**	**16 30 38.0**	**-0.3**
THL				S	**Sn**	**16 31 02.1**	**+0.3**
LTK	**Loutraki**	**2.07**	**95**	P	**Pn**	**16 30 42.0**	**+0.7**
LKR	**Lokris**	**2.11**	**78**	P	**Pn**	**16 30 41.5**	**-0.5**
LIT	**Litokhoron**	**2.49**	**41**	P	**Pn**	**16 30 49.4**	**+2.3**
FNA	**Florina**	**2.66**	**17**	P	**Pn**	**16 30 49.6**	**+0.1**
GRG	**Griva**	**3.14**	**30**	P	**Pn**	**16 30 57.0**	**+0.9**

*CSEM **11** 16:34:00.9±0.1, 3562N×2839E, h10km, MD3.3, Error ellipse: s-maj=6.5km s-min=2.2km az=66.0*
*ISCJB **11** 16:34:03.6±0.5, 3565N±003×2835E±008, h33km, Error ellipse: s-maj=9.2km s-min=4.4km az=162.9*
*ISK **11** 16:34:05.4, 3574N×2826E, h33km, MD3.4*
*HLW **11** 16:34:06.5, 3571N×2849E, h30km, Mb3.0*
*DDA **11** 16:34:13.4, 3642N×2834E, h7km±5km, Md3.3*
ISC 11 16:34:02.1±1.4**, 3574N**±003×**2837E**±008**, h2km**±10km**, n19, σ1s05**/24**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**1.15**	**9**	*i* P	**Pg**	**16 34 23.4**	**-0.6**
TURN				*i* S	**Sg**	**16 34 37.6**	**-1.3**
DAT	**Datca**	**1.18**	**327**	*e*PN	**Pn**	**16 34 25.4**	**-0.1**
DAT				*e*SN	**Sn**	**16 34 39.6**	**-2.5**
YER	**Yerkesik**	**1.39**	**357**	*e*PN	**Pn**	**16 34 29.4**	**+0.9**
YER				*e*SN	**Sn**	**16 34 46.6**	**-0.8**
BDRM	**Kayabasi**	**1.52**	**331**	*i* P	**Pn**	**16 34 29.9**	**-0.3**
BDRM				*i* S	**Sn**	**16 34 46.8**	**-3.8**
MLSB	**Milas**	**1.62**	**343**	*e*PN	**Pn**	**16 34 32.4**	**+0.7**
GOLH	**Golhisar**	**1.77**	**32**	*i* P	**Pn**	**16 34 33.5**	**-0.3**
GOLH				*i* S	**Sn**	**16 34 56.0**	**-0.8**
DENT	**Denizli**	**2.08**	**15**	*e*PN	**Pn**	**16 34 39.3**	**+1.4**
BCK	**Bucak**	**2.48**	**45**	*e*PN	**Pn**	**16 34 44.9**	**+1.5**
KHL	**Karahalli**	**2.74**	**19**	*e*PN	**Pn**	**16 34 49.4**	**+2.4**
KULA	**Kula-Manisa**	**2.78**	**5**	*e*PN	**Pn**	**16 34 48.0**	**+0.5**
BLCB	**Balcova**	**2.85**	**338**	*e*PN	**Pn**	**16 34 49.5**	**+1.0**
AKS	**Akhisar**	**3.16**	**352**	*e*PN	**Pn**	**16 34 53.8**	**+1.0**
HMAT	**Matruh**	**4.76**	**193**	P	**Pn**	**16 35 15.6**	**+0.9**
HRSH	**Kfar Ka'horesh**	**6.47**	**116**	P	**Pn**	**16 35 38.6**	**+0.3**
AMAG	**Maghara**	**6.50**	**140**	P	**Pn**	**16 35 37.9**	**-0.8**
RSH		**6.54**	**135**	P	**Pn**	**16 35 38.6**	**-0.6**
HNKL	**Nakhl**	**7.47**	**139**	P	**Pn**	**16 35 51.1**	**-1.0**
HNKL				S	Sx	16 37 09.5	
HFRF	**Wahat Farafira**	**8.57**	**180**	P	**Pn**	**16 36 06.5**	**-0.6**
HKAT	**Jabal Katrina**	**8.63**	**145**	P	**Pn**	**16 36 07.1**	**-0.8**
HKAT				S	Sx	16 37 36.2	

MAN 11 16:58:48, 886N×12561E, h32km, mb4.2, ML3.0, MS2.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.11**	**5**	*e*P	Pb	16 58 56.5	+2.8
SCPH	**Surigao**	**0.92**	**353**	*e*P	Pn	16 59 04.9	+0.1
SCPH				*e*S	Sn	16 59 17.5	+0.5
BIPH	**Bislig**	**1.00**	**132**⇑	*i*P	Pn	16 59 04.7	-1.2
BIPH				*i* S	Sn	16 59 17.4	-1.4
BUKP	**Musuan**	**1.12**	**209**	*e*P	Pn	16 59 07.5	0.0
MSLP	**Maasin**	**1.47**	**330**	*e*P	Pn	16 59 12.5	+0.2
DMPH	**Davao City--Mi**	**1.77**	**183**⇑	*e*P	Pn	16 59 17.1	+0.7
DMPH				*e*S	Sn	16 59 39.4	+1.5
TBP	**Tagbilaran**	**1.91**	**296**	*e*P	Pn	16 59 19.1	+0.7
TBP				*e*S	Sn	16 59 43.0	+1.6
LLP	**Lapu-Lapu**	**2.17**	**312**	*e*P	Pn	16 59 33.8	+12
LLP				*e*S	Sn	16 59 49.2	+1.3
OCLP	**Ormoc**	**2.39**	**336**	*e*P	Pn	16 59 26.4	+1.5
SNPH	**Sibulan**	**2.39**	**282**	*e*P	Pn	16 59 27.5	+2.5
PAGZ	**Pagadian**	**2.42**	**246**	*e*P	Pn	16 59 27.1	+1.7
BESP	**Borongan**	**2.73**	**356**	*e*P	Sn	17 00 07.1	+5.6
IPIL	**Ipil**	**3.19**	**251**	*e*P	Pn	16 59 25.9	-10
GUIM	**Jordan**	**3.46**	**301**	*e*P	Pn	16 59 41.2	+1.6

NNC 11 17:14:19.1±4.3**, 4055N×7040E, h0km, mb3.5, mpv3.2, 4C-2D, Error ellipse: s-maj=40.3km s-min=21.8km az=4.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**2.55**	**2**	⇑Pn	Pn	17 15 03.1	+1.4
	8.6nm,0.4s,baz=179,slow=15						
KK31				⇓Lg		17 15 40.2	
	19nm,0.3s,baz=183,slow=29						
TKM2	**Tokmak 2**	**4.55**	**57**	⇑Pn	Pn	17 15 29.5	+0.3
	1.6nm,0.5s						
TKM2				⇑Lg		17 16 39.0	
	12nm,0.5s						
AB09	**Akbulak array**	**11.44**	**323**	⇑P	Pn	17 17 01.9	-1.7
	0.8nm,0.3s						
AKTO	**Aktyubinsk**	**13.14**	**323**	⇓P	Pn	17 17 25.1	-1.7
	0.1nm,0.4s						

*CSEM **11** 17:15:14.4±0.2, 4214N×2519E, h0km±2km, ML3.6/4, Error ellipse: s-maj=3.6km s-min=2.5km az=15.0*
*ISCJB **11** 17:15:15.4±0.5, 4216N±003×2508E±003, h10km, Error ellipse: s-maj=5.0km s-min=3.0km az=11.5*
*THE **11** 17:15:15.7, 4210N×2517E, h2km±3km, ML3.6/4, Error ellipse: s-maj=4.9km s-min=1.0km az=3.0*
*BEO **11** 17:15:17.3±1.1, 4227N×2522E, ML2.6/4*
ISC 11 17:15:16.0±0.5**, 4215N**±003×**2513E**±003**, h10km, n22, σ1s02**/40**, Bulgaria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.32**	**262**	P	**Pg**	**17 15 22.0**	**-0.4**
PLD				S	**Sg**	**17 15 26.6**	**-0.1**
JMB	**Yambol**	**1.12**	**73**	P	**Pb**	**17 15 36.5**	**-0.9**
JMB				S	**Sb**	**17 15 52.3**	**+0.3**
ALN	**Alexandroupoli**	**1.43**	**151**	P	**Pn**	**17 15 41.6**	**-0.3**
ALN				S	**Sn**	**17 15 59.8**	**-0.9**
VTS	**Vitosha**	**1.49**	**288**	*e*Pg	**Pg**	**17 15 44.3**	**-0.3**
VTS				*e*Sg	**Sg**	**17 16 05.7**	**+1.8**
SOH	**Sokhos**	**1.89**	**226**	P	**Pn**	**17 15 47.6**	**-0.6**
SOH				S	**Sn**	**17 16 12.3**	**+0.3**
KNT	**Kendrikon**	**1.94**	**240**	P	**Pn**	**17 15 49.8**	**+0.8**
KNT				S	**Sg**	**17 16 15.7**	**-2.7**
OUR	**Ouranopolis**	**2.01**	**206**	P	**Pn**	**17 15 50.1**	**+0.2**
VAY	**Valandovo**	**2.09**	**247**	P	**Pn**	**17 15 51.8**	**+0.8**
VAY				S	**Sn**	**17 16 19.1**	**+2.1**
VAY	**Valandovo**	**2.09**	**247**	*e*Pn	**Pg**	**17 15 54.5**	**-1.5**
VAY				S	**Sn**	**17 16 19.1**	**+2.1**
VAY				*e*Sn	**Sg**	**17 16 23.2**	**+0.1**
VAY	**Valandovo**	**2.09**	**247**	*e*Pn	**Pg**	**17 15 54.5**	**-1.5**
VAY				*e*Sn	**Sg**	**17 16 23.2**	**+0.2**
SART	**Tekirdag**	**2.12**	**133**	*i* P	**Pn**	**17 15 51.8**	**+0.3**
SART				*i* S	**Sn**	**17 16 19.4**	**+1.5**
HORT	**Hortiatis**	**2.18**	**225**	P	**Pn**	**17 15 51.5**	**-0.7**
PLG	**Polygyros**	**2.19**	**216**	P	**Pn**	**17 15 52.5**	**+0.2**
PLG				S	**Sn**	**17 16 20.1**	**+0.7**
LOS	**Limnos**	**2.22**	**181**	P	**Pn**	**17 15 52.5**	**-0.2**
STIP	**Stip**	**2.25**	**259**	*e*Pn	**Pg**	**17 15 57.2**	**-1.8**
STIP				*e*Sn	**Sg**	**17 16 28.1**	**0.0**
STIP	**Stip**	**2.25**	**259**	*e*Pn	**Pg**	**17 15 57.2**	**-1.7**
STIP				*e*Sn	**Sg**	**17 16 28.2**	**+0.1**
LIA	**Limnos Island**	**2.25**	**179**	P	**Pn**	**17 15 53.1**	**-0.1**
GRG	**Griva**	**2.37**	**241**	P	**Pn**	**17 15 54.5**	**-0.4**
GRG				S	**Sn**	**17 16 25.3**	**+1.3**
BARS	**Barje**	**2.54**	**286**	*e*Pn	**Pn**	**17 16 00.7**	**+3.5**
BARS				*e*Sg	**Sg**	**17 16 38.4**	**+0.8**
BOLS	**Boljevac**	**2.87**	**307**	*e*Sg	**Sg**	**17 16 48.5**	**+0.3**
KRUS	**Krusevo**	**3.01**	**256**	*e*Pn	**Pg**	**17 16 12.7**	**-0.9**
KRUS				*e*Sn	**Sg**	**17 16 51.8**	**-0.7**
BZS	**Buzias**	**4.29**	**325**	*e*Pn	**Pn**	**17 16 22.7**	**+1.4**
BZS				*e*Sg	**Sg**	**17 17 31.6**	**-2.2**

*ISCJB **11** 17:20:54.1±0.2, 6197S±003×657W±0.1, h10km, mb5.6/60, MS5.4/143, Error ellipse: s-maj=7.4km s-min=4.5km az=0.2*
*IDC **11** 17:20:54.2±0.4, 6188S×6529W, h0km, mb5.1/16, mb1 5.1/18, mb1mx5.1/19, mbtmp5.1/18, ML5.6/2, MS5.4/20, Ms1 5.4/20, ms1mx5.3/26, Error ellipse: s-maj=20.5km s-min=10.0km az=91.0*
*NEIC **11** 17:20:54.9±0.1, 6206S×6584W, h10km, mb5.7/50, MS5.4/110, MW5.8, Error ellipse: s-maj=8.6km s-min=6.0km az=94.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M_{rr}2.80; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$-1.43; $M_{r\theta}$-1.06; $M_{\theta\phi}$5.14; $M_{\phi r}$-0.86; Best double couple: $M_0$5.80000×10^{17} NP1:ϕ_s174.00000°, δ65.00000°, λ154.00000°. NP2:ϕ_s276.00000°, δ66.00000°, λ27.00000°. Principal axes: T 4.7100, Plg35.0000°, Azm135.0000°; N 1.8300, Plg54.0000°, Azm313.0000°; P -6.5400, Plg0.0000°, Azm45.0000°;*
*GCMT **11** 17:20:54.9±0.1, 6206S×6627W, h27km, MW5.9/108, Moment Tensor Solution. s93,c200; s108,c294; Duration: 2s1 Moment tensor: Scale 10^{17}Nm; M_{rr}3.84±.06; $M_{\theta\theta}$-2.00±.06; $M_{\phi\phi}$-1.84±.07; $M_{r\theta}$-0.58±.13; $M_{\theta\phi}$7.00±.06; $M_{\phi r}$-3.19±.15; Best double couple: $M_0$8.23800×10^{17} NP1:ϕ_s276.00000°, δ57.00000°, λ25.00000°. NP2:ϕ_s172.00000°, δ70.00000°, λ144.00000°. Principal axes: T 7.2870, Plg39.0000°, Azm129.0000°; N 1.9010, Plg49.0000°, Azm326.0000°; P -9.1880, Plg8.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MOS **11** 17:20:54.4±0.9, 6198S×6581W, h10km, mb5.9/24, MS5.4/36 Error ellipse: s-maj=25.4km s-min=8.8km az=86.2*
*DJA **11** 17:20:56, 6182S×6574W, h10km, Mw6.0/6*
*BJI **11** 17:20:57.2, 6173S×6651W, h44km, mB5.7, Ms5.8, Msz5.6*
ISC 11 17:20:55.9±0.2**, 6200S**±003×**657W**±01**, h10km, (h9km**±3.1km**:pP-P), n476, σ1s17**/141**, mb5.6**/59**, MS5.4**/143**, 17C-14D, Southern Pacific Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**2.88**	**166**	Pn	**Pn**	**17 21 40.9**	**-0.9**
	500nm,0.3s,baz=345,slow=12,SNR=600						
PMSA				Sn	**Sn**	**17 22 13.9**	**-2.6**
	7μm,0.3s,baz=228,slow=12,SNR=75						
PMSA	**Palmer Station**	**2.88**	**166**⇑	*e*Pn	**Pn**	**17 21 40.8**	**-1.0**
PMSA				*e*Sn	**Sn**	**17 22 11.2**	**-5.3**
USHA	**Ushuaia**	**7.33**	**348**	Pn	**Pn**	**17 22 42.3**	**-0.6**
	14nm,0.3s,baz=149,slow=14,SNR=33						
USHA				Sn	**Sn**	**17 24 02.1**	**-4.0**
	14nm,0.3s,baz=325,slow=18,SNR=3.1						
EFI	**East Falkland**	**11.16**	**25**	Pn	**Pn**	**17 23 37.2**	**+1.9**
	10μm,0.8s						
EFI	**East Falkland**	**11.16**	**25**⇓	*i*P	**Pn**	**17 23 36.2**	**+0.9**
EFI				*e*		17 25 39.2	
EFI				pmax	pmax		
	comp=Z,1μm,0.8s						
EFI	**East Falkland**	**11.16**	**25**⇓	*i*Pn	**Pn**	**17 23 36.2**	**+0.9**
	comp=Z,1μm,0.8s						
EFI				*e*Sn	**Sn**	**17 25 39.2**	**-0.7**
COYC	**Coyhaique**	**16.87**	**344**	*e*P	**Pn**	**17 24 52.8**	**+0.9**
PLCA	**Paso Flores**	**21.50**	**350**	P	**P**	**17 25 44.9**	**+0.3**
	comp=Z,28nm,0.9s,mb4.7,baz=168,slow=10,SNR=18						
PLCA				PcP	PcP	17 29 46.8	-0.1
	comp=Z,3.9nm,0.8s,baz=56,slow=4.0,SNR=3.5						
PLCA				LR	LR	17 33 53.3	
	comp=Z,21μm,18.8s,MS5.6,baz=168,slow=36						
PLCA	**Paso Flores**	**21.50**	**350**	P	**P**	**17 25 44.9**	**+0.3**
PLCA						17 29 46.8	
PLCA				pmax	pmax		
	comp=Z,28nm,0.9s						
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLCA				MLR	MLR		
	comp=Z,21μm,18.8s						
PLCA	**Paso Flores**	**21.50**	**350**	*e*P	**P**	**17 25 45.6**	**+0.9**
	comp=Z,122nm,1.1s,mb5.2						
PLCA				LR	LR		
	comp=Z,21μm,19.0s,MS5.5						
VNA3	**Neumayer Olymp**	**23.14**	**137**	*e*P	**P**	**17 26 03.1**	**+1.2**
VNA3				*e*		17 26 05.3	
VNA3				*e*		17 26 11.7	
VNA3				*e*		17 26 17.8	
VNA3				*e*		17 29 50.5	
VNA1	**Neumayer--Stat**	**23.67**	**136**	*e*P	**P**	**17 26 09.4**	**+2.2**
VNA1				*e*		17 26 11.5	
VNA1				*e*		17 26 16.8	
VNA1				*e*		17 26 21.6	
VNA2	**Neumayer--Watz**	**23.92**	**136**	*e*P	**P**	**17 26 11.4**	**+1.9**
	baz=257,slow=10						
VNA2				*e*		17 26 13.7	
VNA2				*e*		17 26 19.0	
VNA2				*e*		17 26 23.9	
VNA2				*e*		17 29 52.0	
SNAA	**Sanae**	**25.25**	**139**	*e*P	**P**	**17 26 23.5**	**+1.9**
SNAA				*e*	pP	17 26 25.7	+1.1
SNAA				*e*		17 26 32.1	
SNAA				*e*		17 26 35.9	
SNAA	**Sanae**	**25.25**	**139**⇑	*i*P	**P**	**17 26 23.5**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,1μm,1.2s						
SNAA	**Sanae**	**25.25**	**139**⇑	*i*P	**P**	**17 26 23.5**	**+1.9**
	comp=Z,1μm,1.2s,mb6.3						
LPA	**La Plata**	**27.56**	**14***d*	*e*P	**P**	**17 26 45.0**	**+2.3**
LPA				*e*S	**S**	**17 31 23.0**	**-0.7**
LPA							
	comp=Z,16μm,18.0s						
QSPA	**South Pole Qui**	**28.22**	**180**	P	**P**	**17 26 48.8**	**+0.6**
	comp=Z,66nm,1.0s,mb5.2,baz=154,slow=4.7,SNR=50						
QSPA				PcP	PcP	17 30 01.9	+0.8
	comp=Z,15nm,0.9s,baz=333,slow=4.5,SNR=5.0						
QSPA				LR	LR	17 38 26.3	

comp=Z,8µm,18.4s,MS5.4,baz=151,slow=37
QSPA South Pole Qui 28.22 180⇑ *e*P **P** **17 26 48.6 +0.4**
comp=Z,87nm,1.0s,mb5.3
QSPA LR LR
comp=Z,10µm,22.0s,MS5.4
FCH Farellones 28.84 352 *e*P **P** **17 26 55.0 +0.8**
MAIT Maitri 30.02 140 *e*P **P** **17 27 03.8 -0.5**
MAIT *e*PP PP 17 28 34.2 +22
MAIT *e*S S 17 32 26.6 +25
MAIT *e*ScP ScP 17 33 38.4 -9.2
MAIT *e*SS SS 17 34 42.2 +33
CFAA Coronel Fontan 30.45 356 LR LR 17 38 50.1
comp=Z,1µm,20.6s,MS4.6,baz=178,slow=36
LCO Las Campanas 33.16 352 *e*P **P** **17 27 33.8 +1.6**
comp=Z,115nm,1.5s,mb5.6
LCO LR LR
comp=Z,13µm,21.0s,MS5.6
CPUP Villa Florida 36.11 13 P **P** **17 27 57.2 -0.6**
comp=Z,37nm,0.8s,mb5.3,baz=172,slow=7.4,SNR=64
CPUP LR LR 17 43 30.0
comp=Z,11µm,18.1s,MS5.7,baz=55,slow=38
CPUP Villa Florida 36.11 13 *e*P **P** **17 27 56.8 -0.9**
comp=Z,209nm,0.8s,mb6.1
CPUP LR LR
comp=Z,1µm,20.0s,MS4.8
SBA Scott Base 36.80 196⇑ *e*P **P** **17 28 04.8 +1.7**
comp=Z,166nm,1.1s,mb5.8
SBA LR LR
comp=Z,5µm,20.0s,MS5.3
VNDA Vanda 37.69 195 P **P** **17 28 12.6 +1.8**
comp=Z,11nm,1.1s,mb4.5,baz=146,slow=8.3,SNR=13
VNDA S **S** **17 34 08.8 +8.6**
comp=Z,1.9nm,1.0s,baz=299,slow=18,SNR=4.5
VNDA LR LR 17 42 15.8
comp=Z,3µm,19.9s,MS5.1,baz=151,slow=34
VNDA Vanda 37.69 195 P **P** **17 28 12.6 +1.8**
VNDA S **S** **17 34 08.8 +8.6**
VNDA pmax pmax
comp=Z,11nm,1.1s
VNDA smax
comp=N,2.0nm,1.0s
VNDA MLR MLR
comp=Z,3µm,19.9s
VNDA Vanda 37.69 195 P **P** **17 28 12.6 +1.8**
VNDA S **S** **17 34 08.8 +8.6**
VNDA LR LR 17 42 15.8
SYO Syowa Base 38.96 146⇓ *e*P **P** **17 28 21.0 -0.5**
SYO Syowa Base 38.96 146⇓ *e*X **P** **17 28 24.0 +2.5**
LVC Limon Verde 39.43 355 LR LR 17 45 11.8
comp=Z,10µm,18.7s,MS5.7,baz=194,slow=37
LVC Limon Verde 39.43 355 *e*P **P** **17 28 26.2 +0.4**
comp=Z,191nm,1.1s,mb5.7
LVC LR LR
comp=Z,10µm,20.0s,MS5.7
TRIS Tristan da Cun 41.05 78 *e*P **P** **17 28 40.0 +0.9**
comp=Z,574nm,1.3s,mb6.0
TRIS LR LR
comp=Z,6µm,19.0s,MS5.5
CAM4 Nova Friburgo 42.69 32 *e*P **P** **17 28 49.4 -3.3**
CAM4 *i* pP 17 28 50.5 -5.2
CAM4 *i* 17 28 54.3
CAM4 *i* 17 29 00.1
CAM4 *i* 17 29 06.7
CAM4 *i* 17 29 19.5
CAM4 *i* 17 29 25.0
CAM4 *i* 17 29 40.2
CAM3 Guarapari 44.77 34⇑ *i*P **P** **17 29 07.6 -1.8**
CAM3 *i* pP 17 29 12.2 -0.3
CAM3 *i* 17 29 26.7
CAM3 *i* 17 29 35.5
CAM3 *i* 17 29 39.3
CAM3 *i* 17 29 54.9
RPN Rapa Nui 45.23 300 LR LR 17 42 49.2
comp=Z,5µm,21.4s,MS5.5,baz=131,slow=29
MAW Mawson 45.45 155 *e*P **P** **17 29 14.6 +0.3**
comp=Z,78nm,0.9s,mb5.5
MAW Mawson 45.45 155 P **P** **17 29 14.9 +0.6**
comp=Z,96nm,0.9s,mb5.6,baz=211,slow=8.3,SNR=53
MAW PcP PcP 17 30 53.3 +0.2
comp=Z,15nm,0.6s,baz=222,slow=7.0,SNR=7.9
MAW LR LR 17 48 50.1
comp=Z,11µm,19.7s,MS5.8,baz=206,slow=37
MAW Mawson 45.45 155⇑ *e*P **P** **17 29 14.4 +0.1**
MAW *e* 17 30 52.9
MAW pmax pmax
comp=Z,150nm,1.0s
ARE Arequipa 45.67 352 *e*P **P** **17 29 18.0 +1.4**
BDFB Brasilia 47.98 23 P **P** **17 29 34.7 0.0**
comp=Z,11nm,0.8s,mb4.9,baz=183,slow=8.5,SNR=20
BDFB Brasilia 47.98 23 *e*P **P** **17 29 34.0 -0.7**
BDFB pmax pmax
comp=Z,92nm,1.3s
BDFB MLR MLR
comp=Z,3µm,19.0s
BDFB Brasilia 47.98 23 *e*P **P** **17 29 34.0 -0.7**
comp=Z,92nm,1.3s,mb5.7
BDFB LR LR
comp=Z,3µm,19.0s,MS5.3
DRV Dumont d'Urvil 50.26 193 P **P** **17 29 57.0 +5.4**
DRV S **S** **17 37 05.0 +1.7**
DRV SS SS 17 40 33.0 -2.8
DRV R 17 43 00.0
NNA Nana 50.58 346 *e*P **P** **17 29 53.1 -1.5**
comp=Z,38nm,1.3s,mb5.2
MIR Mirnyy 50.80 169⇓ *i*P **P** **17 29 56.0 +0.3**
MIR pmax pmax
comp=Z,400nm,2.0s,mb6.0
MIR MLR MLR
comp=Z,10µm,20.0s,MS5.8
CASY Casey 51.99 178 *e*P **P** **17 30 05.3 +0.7**
ATAH Atahualpa 55.69 345 P **P** **17 30 31.9 -0.3**
comp=Z,17nm,0.8s,mb5.1,baz=90,slow=5.1,SNR=9.1
RKT Rikitea 60.13 277 *e*P **P** **17 31 05.0 +1.7**
comp=Z,153nm,1.2s,mb5.9
RKT *e*S **S** **17 39 13.9 -2.5**
comp=Z,3µm,25.5s
RKT *e*LQ 17 45 59.4
comp=Z,10µm,32.2s
RKT *e*LR LR 17 48 43.3
comp=Z,9µm,25.5s,baz=148
RKT Rikitea 60.13 277 *e*P **P** **17 31 05.0 +1.7**
RKT *e*S **S** **17 39 13.9 -2.5**
RKT pmax pmax
comp=Z,153nm,1.2s,mb5.9
RKT Rikitea 60.13 277 *e*P **P** **17 31 05.0 +1.7**
comp=Z,153nm,1.2s,mb5.9
RKT *e*S **S** **17 39 13.9 -2.5**
RKT *e*LQ 17 45 59.4
RCBR Riachuelo 60.25 35 *e*P **P** **17 31 02.6 -1.5**
comp=Z,70nm,1.4s,mb5.5
RCBR LR LR
comp=Z,2µm,19.0s,MS5.2
SUR Sutherland 60.39 104 P **P** **17 31 06.0 +1.0**
comp=Z,423nm,0.7s,mb6.6,SNR=25
SUR Sutherland 60.39 104 *e*P **P** **17 31 05.6 +0.6**
comp=Z,230nm,1.5s,mb6.0
SHEL Horse Pasture 62.09 70 *e*P **P** **17 31 16.6 -0.1**
comp=Z,334nm,1.3s,mb6.3
OTAV Otavalo 62.83 346 *e*P **P** **17 31 21.6 0.0**
comp=Z,259nm,1.4s,mb6.2
OTAV LR LR
comp=Z,2µm,20.0s,MS5.2
PAYG Puerto Ayora 63.93 332 *e*P **P** **17 31 31.0 +2.1**
comp=Z,136nm,1.2s,mb5.8
PAYG LR LR
comp=Z,2µm,21.0s,MS5.3
BOSA Boshof 65.61 105 P **P** **17 31 39.4 -0.4**
comp=Z,58nm,0.9s,mb5.6,baz=209,slow=7.0,SNR=81
BOSA LR LR 17 54 21.1
comp=Z,7µm,21.4s,MS5.8,baz=211,slow=31
BOSA Boshof 65.61 105 P **P** **17 31 39.4 -0.3**
BOSA pmax pmax
comp=Z,58nm,0.9s,mb5.6
BOSA MLR MLR
comp=Z,7µm,21.4s,MS5.8
BOSA Boshof 65.61 105 *e*P **P** **17 31 39.0 -0.8**
comp=Z,125nm,1.2s,mb5.8
BOSA LR LR
comp=Z,7µm,22.0s,MS5.8
SNZO South Karori 66.15 226 PFAKE 17 31 50.0 +6.9
SNZO LR LR
comp=Z,3µm,19.0s,MS5.5
ROSC El Rosal 67.00 351 P **P** **17 31 48.9 +0.2**
comp=Z,24nm,0.6s,mb5.4,baz=316,slow=22,SNR=4.8
ROSC LR LR 17 57 33.2
comp=Z,3µm,21.6s,MS5.5,baz=189,slow=33
ROSC El Rosal 67.00 351⇑ *e*P **P** **17 31 49.0 +0.3**
URZ Urewera 68.03 229 LR LR 17 55 56.4
comp=Z,2µm,18.2s,MS5.4,baz=35,slow=31
LBTB Lobatse 68.84 103 P **P** **17 31 59.9 -0.4**
LBTB pmax pmax
comp=Z,130nm,1.2s,mb5.7
LBTB Lobatse 68.84 103 *e*P **P** **17 31 59.6 -0.7**
comp=Z,130nm,1.2s,mb5.7
LBTB LR LR
comp=Z,4µm,19.0s,MS5.7
TSUM Tsumeb 70.11 93 *e*P **P** **17 32 07.8 -0.4**
comp=Z,49nm,1.4s,mb5.2
TSUM LR LR
comp=Z,2µm,20.0s,MS5.3
SDV Santo Domingo 70.78 355 P **P** **17 32 11.2 -1.0**
comp=Z,19nm,1.0s,mb5.0,baz=234,slow=5.0,SNR=17
SDV Santo Domingo 70.78 355 *e*P **P** **17 32 11.1 -1.1**
comp=Z,38nm,0.8s,mb5.4
SDV LR LR
comp=Z,851nm,20.0s,MS5.0
TVO Taravao 71.44 267 *e*P **P** **17 32 17.4 +1.1**
comp=Z,1µm,1.2s,mb6.7
TVO Taravao 71.44 267 *e*P **P** **17 32 17.4 +1.1**
TVO pmax pmax
comp=Z,1µm,1.2s,mb6.7
TIAR Tiarei 71.68 267 *e*P **P** **17 32 18.5 +0.7**
comp=Z,1µm,1.1s,mb6.7
PAE Paea 71.70 267 *e*P **P** **17 32 18.3 +0.4**
comp=Z,710nm,1.4s,mb6.4
PAE Paea 71.70 267 *e*P **P** **17 32 18.3 +0.4**
PAE pmax pmax
comp=Z,710nm,1.4s,mb6.4
PPT Papeete 71.78 267 *e*P **P** **17 32 19.4 +1.0**
comp=Z,87nm,1.4s,mb5.5
PPT *e*S S 17 41 35.6 -2.9
comp=Z,4µm,26.2s
PPT *e*LQ 17 50 44.9
comp=Z,3µm,25.8s
PPT *e*LR LR 17 54 09.6
comp=Z,9µm,27.8s,baz=154
PPT Papeete 71.78 267 LR LR 17 58 32.2
comp=Z,2µm,18.9s,MS5.4,baz=173,slow=31
PPT Papeete 71.78 267 *e*P **P** **17 32 19.4 +1.0**
PPT *e*S S 17 41 35.6 -2.9
PPT pmax pmax
comp=Z,87nm,1.4s
PPT Papeete 71.78 267 *e*P **P** **17 32 19.4 +1.0**
comp=Z,87nm,1.4s,mb5.5
PPT *e*S S 17 41 35.6 -2.9
PPT *e*LQ 17 50 44.9
BCIP Isla Barro Col 71.80 345 *e*P **P** **17 32 20.6 +2.2**
comp=Z,248nm,1.6s,mb5.9
BCIP LR LR
comp=Z,908nm,20.0s,MS5.0
PCRV Puerto La Cruz 71.96 1 P **P** **17 32 19.8 +0.5**
comp=Z,26nm,0.8s,mb5.2,baz=86,slow=1.7,SNR=4.3
TAU Tasmania Unive 72.09 205 *e*P **P** **17 32 19.1 -0.8**
TAU pmax pmax
comp=Z,84nm,1.2s,mb5.5
TAU Tasmania Unive 72.09 205 *e*P **P** **17 32 19.1 -0.8**
comp=Z,84nm,1.2s,mb5.5
MOO Moorlands 72.57 205 *e*P **P** **17 32 22.2 -0.6**
VAH Vaihoa 72.88 270 *e*P **P** **17 32 25.5 +0.6**
comp=Z,81nm,1.3s,mb5.5
PMOR Pomariorio Ree 73.21 270 *e*P **P** **17 32 27.5 +0.6**
comp=Z,79nm,1.4s,mb5.5
GRGR Grenville 73.97 4 PFAKE 17 32 40.0 +8.8
GRGR LR LR
comp=Z,3µm,19.0s,MS5.6
RAO Raoul Island 74.17 237 LR LR 18 03 13.2
comp=Z,2µm,18.3s,MS5.5,baz=131,slow=34
RAO Raoul Island 74.17 237 PFAKE 17 32 40.0 +7.6
RAO LR LR
comp=Z,3µm,21.0s,MS5.6
TAOE Nuku Hiva Isla 74.93 280 *e*S S 17 42 10.5 -3.7
comp=Z,2µm,25.1s
TAOE Nuku Hiva Isla 74.93 280 *e*LQ 17 52 33.4
comp=Z,14µm,26.9s
TAOE *e*LR LR 17 55 40.2
comp=Z,18µm,25.7s,baz=169
BBGH Gun Hill 75.06 6 PFAKE 17 32 50.0 +12
BBGH LR LR
comp=Z,4µm,22.0s,MS5.7
FDF Fort de France 76.57 5 *e*P **P** **17 32 46.5 +0.4**
FDF pmax pmax
comp=Z,160nm,1.2s,mb5.8
FDF Fort de France 76.57 5 *e*P **P** **17 32 46.5 +0.4**
comp=Z,160nm,1.2s,mb5.8
TOO Toolangi 77.61 205 *e*P **P** **17 32 51.3 -0.6**
TGUH Tegucigalpa,Un 77.69 339 *e*P **P** **17 32 51.5 -1.0**
comp=Z,263nm,1.3s,mb6.0
TGUH LR LR
comp=Z,1µm,19.0s,MS5.2
LSZ Lusaka 78.47 101 *e*P **P** **17 32 57.0 0.0**
LSZ pmax pmax
comp=Z,201nm,1.7s,mb5.8
LSZ MLR MLR
comp=Z,5µm,20.0s,MS5.8
LSZ Lusaka 78.47 101 *e*P **P** **17 32 57.0 +0.1**
comp=Z,201nm,1.7s,mb5.8
LSZ LR LR
comp=Z,5µm,20.0s,MS5.8
CNB Canberra Magne 78.96 209 *e*P **P** **17 32 59.1 -0.3**
CNB *e* 17 33 05.2
SJG San Juan 79.84 360 PFAKE 17 33 10.0 +5.8
SJG LR LR
comp=Z,2µm,22.0s,MS5.5
SDDR Presa de Saban 80.83 355 P **P** **17 33 10.8 +1.4**
comp=Z,32nm,0.9s,mb5.2
SDDR LR LR
comp=Z,2µm,19.0s,MS5.4
CMIG Matias Romero 82.15 332 P **P** **17 33 15.6 -1.0**
comp=Z,33nm,1.1s,mb5.2,baz=167,slow=4.4,SNR=9.7
LIC Lamto 82.26 61 *e*P **P** **17 33 16.9 -0.4**
comp=Z,238nm,1.5s,mb5.6
LIC *e*MLR MLR
comp=Z,2µm,18.5s,MS5.2
LIC Lamto 82.26 61 *e*P **P** **17 33 16.6 -0.7**
comp=Z,204nm,1.5s,mb5.8
LIC Lamto 82.26 61 *e*P **P** **17 33 16.9 -0.4**
comp=Z,119nm,1.5s,mb5.6
LIC LR LR
comp=Z,900nm,18.5s,MS5.2
KIC Kosan Boka 82.50 61 *e*P **P** **17 33 18.0 -0.5**
comp=Z,255nm,1.2s,mb6.0
TIC Toumodi 82.64 61 *e*P **P** **17 33 18.8 -0.5**
comp=Z,433nm,1.5s,mb6.3
DBIC Dimbokro 82.73 61 P **P** **17 33 19.2 -0.6**
comp=Z,19nm,1.1s,mb5.0,baz=189,slow=6.3,SNR=13
DBIC LR LR 18 02 36.6
comp=Z,1µm,19.2s,MS5.3,baz=188,slow=30
DBIC Dimbokro 82.73 61 P **P** **17 33 19.7 0.0**
DBIC pmax pmax
comp=Z,56nm,1.2s
DBIC Dimbokro 82.73 61 *e*P **P** **17 33 18.9 -0.8**
comp=Z,56nm,1.3s,mb5.4
DBIC LR LR
comp=Z,1µm,20.0s,MS5.3
ARMA Armidale 83.10 212 *e*P **P** **17 33 21.1 -0.5**
ARMA *e* 17 33 26.8
ABPO Ambohimpanom 83.60 119 *e*P **P** **17 33 25.0 +0.7**
comp=Z,47nm,1.4s,mb5.4
STKA Stephens Creek 83.88 203 *e*P **P** **17 33 24.8 -0.7**
comp=Z,6.5nm,0.8s,mb4.8
STKA *e* 17 33 30.7
STKA Stephens Creek 83.88 203 P **P** **17 33 24.7 -0.8**
comp=Z,6.4nm,0.8s,mb4.8,baz=171,slow=5.9,SNR=14
RER Riviere de l'E 85.04 127 *e*P **P** **17 33 32.9 +1.3**
comp=Z,89nm,0.9s,mb5.9
AFI Afiamalu 85.19 249 LR LR 18 04 17.8
comp=Z,1µm,18.9s,MS5.4,baz=189,slow=30
NWAO Narrogin (SRO) 85.38 182 LR LR 18 07 05.2
comp=Z,1µm,21.2s,MS5.2,baz=172,slow=32
NWAO Narrogin (SRO) 85.38 182 P **P** **17 33 31.7 -1.4**
NWAO pmax pmax
comp=Z,46nm,1.1s
NWAO Narrogin (SRO) 85.38 182 *e*P **P** **17 33 30.3 -2.7**
comp=Z,46nm,1.1s,mb5.5
NWAO LR LR
comp=Z,1µm,19.0s,MS5.4
MUN Mundaring 86.34 182 *e*P **P** **17 33 36.6 -1.3**
DZM Mont Dzumac 86.51 227 *e*P **P** **17 33 37.8 -1.0**
DZM Mont Dzumac 86.51 227 *e*P **P** **17 33 38.3 -0.5**
comp=Z,35nm,0.6s,mb5.8
KLBR Kellerberrin 86.69 183 *e*P **P** **17 33 38.6 -1.0**
comp=Z,26nm,0.6s,mb5.6
FORT Forrest 86.88 192 *e*P **P** **17 33 40.3 -0.2**
comp=Z,26nm,0.7s,mb5.6
EIDS Eidsvold 88.06 213 *e*P **P** **17 33 43.6 -2.7**
comp=Z,58nm,1.6s,mb5.6
DWPF Disney 90.69 346 PFAKE 17 34 10.0 +12
DWPF LR LR
comp=Z,205nm,19.0s,MS4.6
TOA0 Torodi Ar. Sit 91.30 64 *e*P **P** **17 34 00.8 -0.7**
TORD Torodi Ar. Bea 91.30 64 P **P** **17 34 01.1 -0.3**
comp=Z,20nm,1.2s,mb5.3,baz=226,slow=4.1,SNR=40
TORD LR LR 18 07 47.2
comp=Z,2µm,18.6s,MS5.5,baz=215,slow=31
XMAS Kiritimati 92.61 269 PFAKE 17 34 20.0 +12
XMAS LR LR
comp=Z,3µm,20.0s,MS5.7
KVTX Kingsville 92.92 332 PFAKE 17 34 20.0 +11
KVTX LR LR
comp=Z,1µm,21.0s,MS5.3
LPIG La Paz 92.92 320 LR LR 18 07 13.4
comp=Z,800nm,18.6s,MS5.2,baz=312,slow=30
BBSR BB Station 94.04 1 PFAKE 17 34 20.0 +6.4
BBSR LR LR
comp=Z,1µm,20.0s,MS5.3
BRAL Brewton 94.28 342 PFAKE 17 34 30.0 +15
BRAL LR LR
comp=Z,971nm,19.0s,MS5.3
CTA Charters Tower 94.31 210 *e*P **P** **17 34 13.5 -1.9**
comp=Z,9.3nm,1.1s,mb5.1
CTA Charters Tower 94.31 210 LR LR 18 09 51.9
comp=Z,985nm,19.9s,MS5.3,baz=157,slow=31
CTA Charters Tower 94.31 210 *e*P **P** **17 34 13.5 -1.9**
CTA pmax pmax
comp=Z,9.0nm,1.1s
CTAO Charters Tower 94.31 210 P **P** **17 34 14.0 -1.4**
CTAO pmax pmax
comp=Z,110nm,1.9s,mb6.0
CTAO Charters Tower 94.31 210 *e*P **P** **17 34 11.6 -3.9**
comp=Z,114nm,1.9s,mb6.0
HKT Hockley 94.80 334 *e*P **P** **17 34 21.4 +4.2**
HKT pmax pmax
comp=Z,63nm,1.5s,mb5.8
HKT MLR MLR
comp=Z,178nm,19.0s,MS4.5
HKT Hockley 94.80 334 *e*P **P** **17 34 21.4 +4.2**
comp=Z,63nm,1.5s,mb5.8
HKT LR LR
comp=Z,178nm,19.0s,MS4.5
NHSC New Hope 95.50 348 PFAKE 17 34 30.0 +10
NHSC LR LR
comp=Z,800nm,21.0s,MS5.2
VBMS Vicksburg 96.01 339 PFAKE 17 34 30.0 +7.4
VBMS LR LR
comp=Z,870nm,19.0s,MS5.2
TXAR Lajitas Array 96.02 327 P **P** **17 34 22.7 -0.1**
comp=Z,1.8nm,1.0s,mb4.5,baz=162,slow=5.4,SNR=11
TXAR PKKP PKKPbc 17 51 09.9 +1.1
comp=Z,0.9nm,0.8s,baz=267,slow=1.0,SNR=8.0
TXAR LR LR 18 09 41.8
comp=Z,1µm,20.5s,MS5.3,baz=70,slow=30
TXAR Lajitas Array 96.02 327 P **P** **17 34 22.7 -0.1**
TXAR pmax pmax
comp=Z,2.0nm,1.0s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,1µm,20.5s
TXAR Lajitas Array 96.02 327 P **P** **17 34 22.7 -0.1**
TXAR PKKP PKKPbc 17 51 09.9 +1.1
TXAR LR LR 18 09 41.8
GOGA Godfrey 96.16 345 PFAKE 17 34 30.0 +6.7
GOGA LR LR
comp=Z,1µm,19.0s,MS5.3
JCT Junction City 96.18 331 *e*P **P** **17 34 21.1 -2.4**
JCT pmax pmax
comp=Z,48nm,1.2s,mb5.8
JCT MLR MLR
comp=Z,673nm,19.0s,MS5.1
JCT Junction City 96.18 331 *e*P **P** **17 34 21.1 -2.3**
comp=Z,48nm,1.2s,mb5.8
JCT LR LR
comp=Z,673nm,19.0s,MS5.1
LRAL Lakeview Retre 96.26 342 PFAKE 17 34 30.0 +6.2
LRAL LR LR
comp=Z,842nm,19.0s,MS5.2
NATX Nacogdoches 96.32 335 PFAKE 17 34 30.0 +5.9
NATX LR LR
comp=Z,612nm,20.0s,MS5.1
WB2 Warramunga Arr 96.78 199 *e*P **P** **17 34 24.0 -2.7**
WRAB Tennant Creek 96.79 199⇓ *e*P **P** **17 34 24.8 -1.9**
WRAB Tennant Creek 96.79 199 *e*P **P** **17 34 22.8 -4.0**
comp=Z,30nm,1.4s,mb5.5
MBWA Marble Bar 97.01 185 *e*P **P** **17 34 25.8 -1.9**
comp=Z,15nm,1.0s,mb5.4
MBWA LR LR
comp=Z,2µm,19.0s,MS5.7
CNNC Cliffs of the 97.40 350 PFAKE 17 34 40.0 +11
CNNC LR LR
comp=Z,1µm,20.0s,MS5.4
OXF Oxford 98.07 340 PFAKE 17 34 40.0 +8.1
OXF LR LR
comp=Z,618nm,19.0s,MS5.1
MIAR Mount Ida 98.82 337 PFAKE 17 34 50.0 +15
MIAR LR LR
comp=Z,794nm,20.0s,MS5.2
WVT Waverly 99.42 342 P **P** **17 34 37.1 -0.8**
WVT pmax pmax
comp=Z,18nm,1.8s,mb5.3
WVT MLR MLR
comp=Z,635nm,20.0s,MS5.1
WVT Waverly 99.42 342 P **P** **17 34 37.1 -0.8**
comp=Z,18nm,1.8s,mb5.3
WVT LR LR
comp=Z,635nm,20.0s,MS5.1
BLA Blacksburg 99.58 348 PFAKE 17 34 50.0 +11
BLA LR LR
comp=Z,860nm,20.0s,MS5.2
FITZ Fitzroy Crossi 99.66 191 *e*P Pdif 17 34 37.3 -2.5
comp=Z,7.1nm,1.0s
WMOK Wichita Mounta 100.05 333 PFAKE 17 34 50.0 +8.5
WMOK LR LR
comp=Z,764nm,20.0s,MS5.2
CBN Corbin 100.31 351 PFAKE 17 34 50.0 +7.3
CBN LR LR
comp=Z,1µm,20.0s,MS5.3
AMTX Amarillo 100.83 331 PFAKE 17 34 50.0 +5.0
AMTX LR LR
comp=Z,1µm,19.0s,MS5.4
WCI Wyandotte Cave 101.27 344 PFAKE 17 35 00.0 +13
WCI LR LR
comp=Z,157nm,19.0s,MS4.5
CCM Cathedral Cave 101.83 340 PFAKE 17 35 00.0 +11
CCM LR LR
comp=Z,179nm,19.0s,MS4.6
MCWV Mont Chateau 101.96 349 PFAKE 17 35 00.0 +10
MCWV LR LR
comp=Z,1µm,20.0s,MS5.4
ANMO Albuquerque 102.07 327 *e*P Pdif **P** 17 34 48.6 -1.9
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 102.07 327 *e*Pdif Pdif 17 34 48.6 -1.9
comp=Z,3.8nm,1.2s
SSPA Standing Stone 102.76 351 PFAKE 17 35 00.0 +6.4
SSPA LR LR
comp=Z,173nm,20.0s,MS4.6
ACSO Alum Creek Sta 102.84 347 PFAKE 17 35 00.0 +6.1
ACSO LR LR
comp=Z,901nm,20.0s,MS5.3
WUAZ Wupatki 103.94 323 PFAKE 17 35 10.0 +11
WUAZ LR LR
comp=Z,952nm,19.0s,MS5.3
BINY Binghamton 104.18 352 PFAKE 17 35 10.0 +10
BINY LR LR
comp=Z,866nm,19.0s,MS5.3
PMG Port Moresby 104.35 214 PFAKE 17 35 10.0 +9.3
PMG LR LR
comp=Z,750nm,19.0s,MS5.2
ERPA Erie 104.41 349 PFAKE 17 35 10.0 +9.1
ERPA LR LR
comp=Z,748nm,21.0s,MS5.2
SDCO Great Sand Dun 104.48 328 PFAKE 17 35 10.0 +8.8
SDCO LR LR
comp=Z,1µm,20.0s,MS5.4
AAM Ann Arbor 104.96 346 PFAKE 17 39 30.0 +13
AAM LR LR
comp=Z,935nm,21.0s,MS5.3
NCB Newcomb 105.84 354 PFAKE 17 39 30.0 +11
NCB LR LR

comp=Z,1µm,20.0s,MS5.4
SCIA State Center 105.92 339 PFAKE 17 39 30.0 +11
SCIA LR LR
comp=Z,836nm,19.0s,MS5.3
LBNH Lisbon 106.01 355 PFAKE 17 39 30.0 +11
LBNH LR LR
comp=Z,1µm,20.0s,MS5.5
JFWS Jewell Farm 106.43 341 PFAKE 17 39 30.0 +10
JFWS LR LR
comp=Z,1µm,22.0s,MS5.4
ISCO Idaho Springs 106.45 329 PFAKE 17 39 30.0 +10
ISCO LR LR
comp=Z,870nm,19.0s,MS5.3
DAC Darwin (Calif) 106.50 318 PFAKE 17 39 30.0 +10
DAC LR LR
comp=Z,609nm,19.0s,MS5.2
TPNV Topopah Spring 106.70 320 PFAKE 17 39 30.0 +10
TPNV LR LR
comp=Z,977nm,21.0s,MS5.3
PKME Peaks-Kenny Pk 106.95 357 PFAKE 17 39 30.0 +9.4
PKME LR LR
comp=Z,1µm,20.0s,MS5.5
MVU Marysvale 106.96 323 PFAKE 17 39 30.0 +9.1
MVU LR LR
comp=Z,1µm,21.0s,MS5.5
POHA Pohakuloa 107.15 280 PFAKE 17 39 30.0 +8.2
POHA LR LR
comp=Z,2µm,20.0s,MS5.7
GLMI Grayling 107.56 346 PFAKE 17 39 30.0 +8.2
GLMI LR LR
comp=Z,1µm,19.0s,MS5.4
TPH Tonopah 108.04 319 PFAKE 17 39 30.0 +7.1
TPH LR LR
comp=Z,738nm,20.0s,MS5.2
SAO San Andreas Ge 108.18 316 PFAKE 17 39 30.0 +6.8
SAO LR LR
comp=Z,2µm,20.0s,MS5.7
ECSD EROS,Sioux Fal 108.29 337 PFAKE 17 39 30.0 +6.8
ECSD LR LR
comp=Z,731nm,20.0s,MS5.2
NVAR Mina Array Bea 108.70 319 PKiKP PKiKP 17 39 24.6 +0.5
comp=Z,1.1nm,0.8s,baz=199,slow=1.9,SNR=6.0
NVAR PP PP 17 39 54.0 +3.0
comp=Z,4.0nm,1.1s,baz=168,slow=7.0,SNR=7.6
NVAR PKKP PKKPab 17 50 46.5 +3.7
comp=Z,1.7nm,0.8s,baz=322,slow=4.4,SNR=8.1
CMB Columbia Colle 108.99 317 PFAKE 17 39 40.0 +15
CMB LR LR
comp=Z,2µm,21.0s,MS5.5
COWI Conover 109.39 343 PFAKE 17 39 40.0 +15
COWI LR LR
comp=Z,1µm,20.0s,MS5.4
MCCM Marconi Confer 109.91 315 PFAKE 17 39 40.0 +14
MCCM LR LR
comp=Z,2µm,19.0s,MS5.7
RSSD Black Hills 110.18 332 PFAKE 17 39 40.0 +13
RSSD LR LR
comp=Z,245nm,20.0s,MS4.8
BMN Battle Mountai 110.20 320 PFAKE 17 39 40.0 +13
BMN LR LR
comp=Z,531nm,20.0s,MS5.1
PDAR Pinedale Array 110.23 327 PKiKP PKiKP 17 39 26.1 -0.8
comp=Z,0.7nm,0.8s,baz=142,slow=4.6,SNR=4.9
PDAR PP PP 17 40 02.4 +0.3
comp=Z,8.0nm,1.2s,baz=134,slow=4.3,SNR=12
PDAR PKKPbc PKKPbc 17 50 26.0 -0.7
comp=Z,0.4nm,0.7s,baz=5.7,slow=1.5,SNR=3.5
BW06 Boulder Array 110.23 327 PFAKE 17 39 40.0 +13
BW06 LR LR
comp=Z,2µm,19.0s,MS5.6
AHID Auburn Hatcher 110.63 326 PFAKE 17 39 40.0 +12
AHID LR LR
comp=Z,935nm,20.0s,MS5.4
HOPS Hopland 110.74 315 PFAKE 17 39 40.0 +12
HOPS LR LR
comp=Z,2µm,19.0s,MS5.7
EYMN Ely 111.53 342 PFAKE 17 39 40.0 +11
EYMN LR LR
comp=Z,779nm,19.0s,MS5.3
WDC Whiskeytown Da 112.00 317 PFAKE 17 39 40.0 +10
WDC LR LR
comp=Z,1µm,20.0s,MS5.5
LKWY Lake 112.13 327 PFAKE 17 39 40.0 +10
LKWY LR LR
comp=Z,2µm,21.0s,MS5.6
HLID Hailey 112.27 324 PFAKE 17 39 40.0 +9.3
HLID LR LR
comp=Z,987nm,20.0s,MS5.4
RLMT Red Lodge 112.37 328 PFAKE 17 39 40.0 +9.2
RLMT LR LR
comp=Z,1µm,19.0s,MS5.6
WVOR Wild Horse Val 112.46 320 *e*PKiKP PKiKP 17 39 31.5 +0.4
WVOR MLR MLR
comp=Z,735nm,19.0s,MS5.3
AGMN Agassiz Refuge 112.57 339 PFAKE 17 39 40.0 +8.9
AGMN LR LR
comp=Z,846nm,19.0s,MS5.3
PAB San Pablo 112.60 47 PFAKE 17 39 40.0 +8.5
PAB LR LR
comp=Z,950nm,19.0s,MS5.4
ESLA Sonseca Array 112.85 48 PFAKE 17 39 40.0 +8.1
ESLA LR LR
comp=Z,7µm,21.0s,MS6.2
YBH Yreka Blue Hor 113.10 317 PFAKE 17 39 40.0 +7.7
YBH LR LR
comp=Z,1µm,20.0s,MS5.4
BOZ Bozeman (W) 113.46 327 PFAKE 17 39 40.0 +7.1
BOZ LR LR
comp=Z,702nm,20.0s,MS5.3
HUMO Hull Mountain 113.96 317 PFAKE 17 39 40.0 +6.0
HUMO LR LR
comp=Z,2µm,22.0s,MS5.6
BMO Blue Mountains 114.28 322 *e*PKiKP PKiKP 17 39 33.3 -1.2
BMO MLR MLR
comp=Z,846nm,20.0s,MS5.3
DGMT Dagmar 114.34 333 PFAKE 17 39 50.0 +16
DGMT LR LR
comp=Z,1µm,20.0s,MS5.5
MSO Missoula 115.16 326 PFAKE 17 39 50.0 +14
MSO LR LR
comp=Z,574nm,19.0s,MS5.2
EGMT Eagleton 115.20 329 PFAKE 17 39 50.0 +14
EGMT LR LR
comp=Z,798nm,19.0s,MS5.3
COR Corvallis 115.85 318 PFAKE 17 39 50.0 +12
COR LR LR
comp=Z,437nm,22.0s,MS5.0
HAWA Hanford 116.33 321 PFAKE 17 39 50.0 +12
HAWA LR LR
comp=Z,1µm,21.0s,MS5.5
SCHQ Schefferville 116.50 359 PKP PKPdf 17 39 37.8 -0.7
comp=Z,4.0nm,0.8s,baz=108,slow=3.2,SNR=4.0
NEW Newport 117.34 324 *e*PKiKP PKPdf 17 39 38.3 -2.0
NEW MLR MLR
comp=Z,1µm,19.0s
KSM Kuching 119.55 175 *e*PKPdf PKPdf 17 39 43.8 -2.0
LMR La Mourre 119.85 53 *e*PKP1 PKPdf 17 39 44.0 -1.3
FRF La Foret Royal 120.10 53 *e*PKP1 PKPdf 17 39 44.3 -1.4
PGF Pioggiola 120.14 56 *e*PKP1 PKPdf 17 39 44.0 -1.8
VIVF Saint-Julien-l 120.47 51 *e*PKP1 PKPdf 17 39 44.3 -2.1
comp=Z,27nm,1.1s
SBF Sospel 120.66 54 *e*PKP1 PKPdf 17 39 45.7 -1.1
TCF Toulx Ste Croi 120.81 48 *e*PKP1 PKPdf 17 39 45.9 -1.1
EDM Edmonton 120.88 329 *e*PKiKP PKPdf 17 39 44.7 -2.2
EDM *e* 17 41 14.4
MBDF Montbardon 121.14 53 *e*PKP1 PKPdf 17 39 45.8 -1.9
comp=Z,14nm,1.0s
BGF Bois d'Agland 121.27 49 *e*PKP1 PKPdf 17 39 46.9 -1.0
AVF Avril sur Loir 121.65 49 *e*PKP1 PKPdf 17 39 47.2 -1.4
comp=Z,22nm,1.2s
SMF Signal de Mont 121.70 49 *e*PKP1 PKPdf 17 39 47.3 -1.4
LPG La Plagne 121.79 52 *e*PKP1 PKPdf 17 39 48.8 -0.1
comp=Z,28nm,1.2s
LPL La Plagne 121.80 52 *e*PKP1 PKPdf 17 39 47.8 -1.1
SSF Saint Saulge 121.94 49 *e*PKP1 PKPdf 17 39 47.7 -1.4
LOR Lormes 122.24 49 *e*PKP1 PKPdf 17 39 48.5 -1.2
comp=Z,60nm,1.5s
LOR *e*MLR MLR
comp=Z,1µm,20.5s,MS5.3
LOR Lormes 122.24 49 *e*PKP PKPdf 17 39 48.5 -1.2
LOR LR LR
comp=Z,1µm,20.5s,MS5.6
TUE Stuetta 123.58 53 *e*PKPdf PKPdf 17 39 52.1 -0.3
MEZF Maizieres J'vi 123.71 49 *e*PKP1 PKPdf 17 39 51.7 -0.8
comp=Z,218nm,1.7s

HAU Haudompre 123.76 50 *e*PKP1 PKPdf 17 39 52.0 -0.6
HAU *e*MLR MLR
comp=Z,948nm,20.8s,MS5.1
HAU Haudompre 123.76 50 *e*PKP PKPdf 17 39 52.0 -0.6
HAU LR LR
comp=Z,950nm,20.8s,MS5.4
HINF Hinteralfeld 123.78 51 *e*PKP1 PKPdf 17 39 52.0 -0.7
comp=Z,60nm,1.6s
KRUS Krusevo 124.17 65 *e*PKP PKPdf 17 39 53.8 +0.1
CDF Champ du Feu 124.44 51 *e*PKP1 PKPdf 17 39 53.1 -0.8
comp=Z,30nm,1.3s
DAVA Damuels 124.46 53⇑ *i*PKPdf PKPdf 17 39 54.3 +0.3
comp=Z,19nm,0.9s
FETA Feichten 124.56 54⇑ *i*PKPdf PKPdf 17 39 53.6 -0.6
comp=Z,14nm,1.1s
VAY Valandovo 124.70 66 *e*PKP PKPdf 17 39 54.2 -0.5
BAIF Baives 124.73 47 *e*PKP1 PKPdf 17 39 52.5 -1.9
BFO Black Forest 124.75 51 *e*PKPdf PKPdf 17 39 54.5 0.0
STIP Stip 124.84 66 *e*PKP PKPdf 17 39 53.9 -1.0
CEY Cerknica 124.94 57 *i*PKPdf PKPdf 17 39 54.9 -0.1
MOTA Moosalm 124.98 54⇑ *i*PKPdf PKPdf 17 39 54.9 -0.1
comp=Z,15nm,1.0s
GIVF Givet 124.98 48 *e*PKP1 PKPdf 17 39 54.3 -0.6
comp=Z,34nm,1.1s
CADS Cadrg 125.07 57 *i*PKPdf PKPdf 17 39 55.1 -0.1
WTTA Wattenberg 125.11 54⇓ *i*PKPdf PKPdf 17 39 55.3 +0.1
comp=Z,24nm,1.0s
LJU Ljubljana 125.23 57 *e*PKPdf PKPdf 17 39 55.7 +0.2
KHAL Karahalli 125.36 74 *i*P PKPdf 17 39 56.5 +0.5
MYKA Terra Mystica 125.37 56⇑ *i*PKPdf PKPdf 17 39 55.0 -0.7
comp=Z,8.0nm,0.7s
PDKS Podkum 125.44 58 *e*PKPdf PKPdf 17 39 56.2 +0.3
FRB Frobisher Bay 125.45 358 PKP PKPdf 17 39 54.0 -1.3
comp=Z,14nm,0.9s,baz=160,slow=4.0,SNR=7.0
FRB Frobisher Bay 125.45 358 PKIKP PKPdf 17 39 54.0 -1.3
FRB pmax pmax
comp=Z,14nm,0.9s
OBKA Obir 125.62 57⇓ *i*PKPdf PKPdf 17 39 56.4 +0.1
comp=Z,11nm,0.9s
RJOB Jochberg 125.95 55 *e*PKPdf PKPdf 17 39 56.1 -0.7
PERS Pernice 125.95 57 *e*PKPdf PKPdf 17 39 56.8 -0.1
SOKA Soboth 125.95 57⇑ *i*PKPdf PKPdf 17 39 57.1 +0.3
comp=Z,7.9nm,1.1s
UMR Umm Al-Rimmam 126.59 95 *e*P PKPdf 17 39 58.2 -0.5
UMR AMb AMB 17 39 59.3
comp=Z,61nm,0.8s
MOA Molln 126.61 56⇓ *i*PKPdf PKPdf 17 39 57.7 -0.4
comp=Z,7.5nm,0.9s
MIB Mutribah 126.63 95 *e*P PKPdf 17 39 56.9 -1.8
MIB AMb AMB 17 39 58.9
comp=Z,28nm,0.9s
ESK Eskdalemuir 126.79 39 *e*PKIKP PKPdf 17 39 57.3 -0.9
ESKT Eskisehir 126.91 74 *i*P PKPdf 17 39 56.6 -2.3
GRA1 Grafenberg Arr 126.95 52 *e*PKPdf PKPdf 17 39 58.5 -0.2
GRA1 *e*PP PP 17 41 58.6 +0.9
GRA1 *e*SP SP 17 52 06.2 +6.2
GRA1 *e*SS SS 17 59 00.4 -4.4
GRA1 LR LR
comp=Z,800nm,19.8s,MS5.4
GRF Grafenberg Arr 126.95 52 *e*PKPdf PKPdf 17 39 58.5 -0.2
GRF *e*PP PP 17 41 58.6 +0.9
GRF *e*SP SP 17 52 06.2 +6.2
GRF *e*SS SS 17 59 00.4 -4.4
GRF *e*L 18 40 54.2
comp=Z,758nm,19.8s
GEC2 GERESS Array S 127.20 55 *e*PKPdf PKPdf 17 39 58.1 -1.1
GERES GERESS Array B 127.20 55 PKP PKPdf 17 39 57.5 -1.7
comp=Z,7.1nm,0.8s,baz=202,slow=1.4,SNR=56
GERES GERESS Array B 127.20 55 PKIKP PKPdf 17 39 57.5 -1.7
GERES pmax pmax
comp=Z,7.0nm,0.8s
SOP Sopron 127.38 57⇓ *e*PKP PKPdf 17 39 59.8 +0.3
KHC Kasperske Hory 127.39 54 *e*PKPdf PKPdf 17 39 58.9 -0.6
KHC *ex* x 17 40 15.0
KHC *ex* x 17 53 28.5
KHC *ex* x 17 59 38.2
KHC AMS AMS 18 30 00.0
comp=Z,1µm,18.2s
NKC Novy Kostel 127.86 53 *e*PKPdf PKPdf 17 40 01.4 +1.0
NKC *ex* x 17 59 30.9
NKC AMS AMS 18 27 40.0
comp=Z,900nm,19.3s
NKC Novy Kostel 127.86 53 *e*PKP PKPdf 17 40 01.4 +1.0
NKC *e* 17 59 30.9
MOX Moxa 127.88 52 *e*PKP PKPdf 17 40 00.2 -0.2
comp=Z,41nm,2.0s
MOX
comp=Z,800nm,20.0s
MOX Moxa 127.88 52 *e*PKIKP PKPdf 17 40 00.2 -0.2
MOX pmax pmax
comp=Z,41nm,2.0s
MOX MLR MLR
comp=Z,800nm,20.0s,MS5.4
HENT Hendek 127.98 73 *i*P PKPdf 17 40 00.5 -0.4
TANN Tannenbergstha 128.01 53 *e*PKPdf PKPdf 17 40 00.5 -0.2
BUD Budapest 128.21 59⇓ *e*PKP PKPdf 17 40 02.0 +0.9
GZT Gaziantep 128.25 81 *i*P PKPdf 17 40 00.1 -1.5
TREC Trest 128.26 55 *e*PKPdf PKPdf 17 40 00.8 -0.4
POO Poona 128.26 128 *ex* PKPdf 17 40 05.0 +2.8
BR131 Keskin Array S 128.34 76 *e*PKPdf PKPdf 17 40 00.7 -0.9
BRTR Keskin Array B 128.34 76 PKP PKPdf 17 40 00.0 -1.7
comp=Z,9.7nm,0.9s,baz=188,slow=4.6,SNR=36
BRTR PP PP 17 42 09.6 +2.6
comp=Z,4.3nm,1.0s,baz=195,slow=9.0,SNR=3.6
BRTR Keskin Array B 128.34 76 PKIKP PKPdf 17 40 00.0 -1.7
BRTR 17 42 09.6
BRTR pmax pmax
comp=Z,10.0nm,0.9s
BRTR pmax pmax
comp=Z,4.0nm,1.0s
CLZ Clausthal 128.40 50 *e*PKPdf PKPdf 17 40 02.6 +1.3
PRU Pruhonice 128.45 54 *e*PKPdf PKPdf 17 40 01.3 -0.2
PRU *ex* x 17 59 29.2
PRU AMS AMS 18 30 10.0
comp=Z,600nm,16.3s
NRDL Niedersach Rie 128.83 50 *e*PKPdf PKPdf 17 40 03.1 +1.0
KOLL Kolacno 128.83 58 *e*PKP PKPdf 17 40 02.4 +0.1
PVCC Panska Ves 128.90 54 *e*PKPdf PKPdf 17 40 02.2 -0.1
PVCC AMS AMS 18 30 50.0
comp=Z,900nm,17.4s
HYB Hyderabad 128.90 134 *i*PKP PKPdf 17 40 04.0 +0.6
HYB *e* 17 40 07.0
HYB Hyderabad 128.90 134 *e*P PKPdf 17 40 07.0 +3.6
PSZ Piszkesteto 128.91 60⇓ *e*PKP PKPdf 17 40 03.3 +0.8
PSZ Piszkesteto 128.91 60 *e*PKPdf PKPdf 17 40 01.7 -0.7
CLL Collm 128.93 52 *i*PKIKP PKPdf 17 40 02.1 -0.3
CLL *e* 17 42 11.0
CLL pmax pmax
comp=Z,27nm,1.5s
CLL MLR MLR
comp=Z,800nm,21.5s,MS5.4
CLL Collm 128.93 52 *e*PKPdf PKPdf 17 40 02.1 -0.3
CLL Collm 128.93 52 *i*PKPdf PKPdf 17 40 02.1 -0.3
comp=Z,27nm,1.5s
CLL *e*PP PP 17 42 11.0 +0.3
CLL *e*PKSdf 17 43 34.0
CLL *e*PS PS 17 52 20.0 +1.9
CLL *e*PPS 17 53 58.0
CLL *e*SS SS 17 59 42.0 +13
CLL *e*SSS 18 04 24.0
CLL *e*SSSS 18 08 04.0
CLL LmV 18 39 00.0
comp=Z,800nm,21.5s
CLL Collm 128.93 52 *i*PKP PKPdf 17 40 02.1 -0.3
CLL *e*PP PP 17 42 11.0 +0.3
CLL LR LR
comp=Z,800nm,21.5s,MS5.4
BRG Berggiesshubel 128.94 53 *e*PKIKP PKPdf 17 40 02.6 +0.2
BRG *i* 17 53 59.0
BRG SS SS 17 59 50.0 +21
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG MLR MLR
comp=N,193nm,17.3s,MS5.1
BRG MLR MLR
comp=E,259nm,18.3s,MS5.1
BRG MLR MLR
comp=Z,640nm,17.1s,MS5.4
BRG Berggiesshubel 128.94 53 *e*PKPdf PKPdf 17 40 02.5 +0.1
BRG Berggiesshubel 128.94 53 *e*PKP PKPdf 17 40 02.6 +0.2
comp=Z,12nm,1.4s
BRG PP SKPdf 17 43 29.0 -8.3
BRG *i* 17 53 59.0
BRG SS SS 17 59 50.0 +21

BRG
comp=N,322nm,17.3s
BRG
comp=E,433nm,18.3s
BRG
comp=Z,1µm,17.1s
VYHS Vyhne 128.94 58 *e*PKP PKPdf 17 40 02.3 -0.2
AKCD Akcadag 129.17 81 *i*P PKPdf 17 40 01.5 -1.8
DPC Dobruska-Polom 129.43 55 *e*PKPdf PKPdf 17 40 03.5 +0.1
DPC *ep*PKP pPKPdf 17 40 10.3 +3.5
DPC *ex* x 18 00 08.9
DPC AMS AMS 18 29 10.0
comp=Z,700nm,21.4s
UPC Upice 129.43 55 *e*PKPdf PKPdf 17 40 03.8 +0.4
UPC *ep*PKP pPKPdf 17 40 10.7 +3.9
YKA Yellowknife Ar 129.55 333 PKhKP 17 39 52.8
comp=Z,2.1nm,1.1s,baz=162,slow=1.5,SNR=5.9
YKA PKP PKPdf 17 40 01.2 -2.0
comp=Z,13nm,0.9s,baz=142,slow=2.5,SNR=44
YKA PP PP 17 42 18.7 +4.1
comp=Z,2.1nm,1.1s,baz=144,slow=5.8,SNR=5.2
OKC Ostrava-Krasne 129.73 57 *e*PKPdf PKPdf 17 40 04.0 0.0
OKC *ep*PKP pPKPdf 17 40 10.9 +3.5
OKC AMS AMS 18 33 30.0
comp=Z,700nm,23.5s
OKC Ostrava-Krasne 129.73 57 *e*PKP PKPdf 17 40 04.0 0.0
OKC *e* 17 40 10.9
KSP Ksiaz 129.81 55 *e*PKP PKPdf 17 40 04.9 +0.8
KSP *e* 17 42 10.0
KSP *e*PKS 17 43 28.0
KSP *e* 17 59 42.0
KSP LR LR
comp=Z,2µm,20.1s,MS5.8
ELZG Elazig 129.83 81 *i*P PKPdf 17 40 05.2 +0.7
DLBC Dease Lake 129.96 322 PKP PKPdf 17 40 03.9 -0.3
comp=Z,5.8nm,0.9s,baz=233,slow=5.8,SNR=5.3
BSEG Bad Segeberg 130.07 49 *e*PKPdf PKPdf 17 40 04.9 +0.4
KEMA Kemaliye 130.22 80 *i*P PKPdf 17 40 04.5 -0.8
CRVS Cervenica-Dubn 130.33 60 *e*PKP PKPdf 17 40 03.9 -1.2
UZH Uzhgorod 130.45 61 *e*PKIKP PKPdf 17 40 01.8 -3.6
UZH *e* 17 40 05.8
UZH *i* 17 42 22.0
UZH *e* 17 47 15.0
STHS Stebnicka Huta 130.64 59 *e*PKP PKPdf 17 40 04.5 -1.2
KOLS Kolonicke sedl 130.68 60 *e*PKP PKPdf 17 40 06.0 +0.2
OJC Ojcow 130.69 58 *e*PKP PKPdf 17 40 05.2 -0.6
BUR08 Bucovina Ar. S 130.89 63 *e*PKPdf PKPdf 17 40 06.0 -0.2
HAKT HAKKARI 131.29 86 *i*P PKPdf 17 40 12.4 +5.0
KWP Kalwaria 131.41 60 *e*PKIKP PKPdf 17 40 07.0 -0.1
KIS Kishinev 131.94 67 *e*PKIKP PKPdf 17 40 07.0 -1.2
KIS MLR MLR
comp=Z,600nm,19.0s,MS5.3
KIS MLR MLR
comp=Z,600nm,20.0s
LVV L'vov 132.09 61 *e*PKIKP PKPdf 17 40 07.8 -0.6
COP Copenhagen 132.20 48 *i*P PKPdf 17 40 19.7 +11
COP *i* 17 43 33.7
COP
comp=Z,440nm,19.0s
COP Copenhagen 132.20 48 *e*P PKPdf 17 40 19.7 +11
COP *i* 17 43 33.7
COP LR LR
comp=Z,450nm,19.0s,MS5.2
BSD Bornholm Skovb 132.65 50 *e*PKIKP PKPdf 17 40 12.8 +3.5
BSD MLR MLR
comp=Z,860nm,19.0s,MS5.5
BSD Bornholm Skovb 132.65 50 *i*P PKPdf 17 40 12.8 +3.5
BSD *i* 17 43 31.3
BSD
comp=Z,850nm,19.0s
BSD Bornholm Skovb 132.65 50 *e*P PKPdf 17 40 12.8 +3.5
BSD *i* 17 43 31.3
DDEM Demirkent 133.03 82 *i*P PKPdf 17 40 09.2 -1.3
ANN Anapa 134.07 75 *i*PKIKP PKPdf 17 40 18.0 +5.7
ANN *e* 17 47 27.4
ANN pmax pmax
comp=Z,94nm,1.8s
SOC Sochi 134.18 78 *i*PKIKP PKPdf 17 40 12.4 -0.2
SOC *e* 17 42 41.9
SOC *e*SSS 18 05 41.0
SOC pmax pmax
comp=Z,2µm,0.8s
KIEV Kiev 134.92 63 *e*PKHKP 17 40 04.6
AKASG Malin Array Be 134.93 63 PKhKP 17 40 06.2
comp=Z,1.3nm,0.5s,baz=228,slow=0.6,SNR=7.6
AKASG PKP PKPdf 17 40 12.1 -1.6
comp=Z,4.2nm,0.8s,baz=241,slow=2.0,SNR=9.3
AKASG PP PP 17 42 51.9 +2.6
comp=Z,2.5nm,0.9s,baz=214,slow=6.0,SNR=5.2
AKASG Malin Array Be 134.93 63 PKIKP 17 40 06.3
AKASG 17 40 12.1
AKASG 17 42 51.9
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKBB Malin Array Si 134.93 63 *e*PKIKP PKPdf 17 40 11.7 -2.0
CM31 Chiang Mai Arr 135.19 159 *e*PKPdf PKPdf 17 40 14.7 -0.6
CMAR Chiang Mai Arr 135.19 159 PKhKP 17 40 02.4
comp=Z,0.5nm,0.7s,baz=215,slow=3.0,SNR=5.2
CMAR PKP PKPdf 17 40 13.9 -1.3
comp=Z,2.4nm,0.8s,baz=214,slow=3.2,SNR=16
CMAR PP PP 17 42 43.1 -7.2
comp=Z,0.2nm,0.4s,baz=205,slow=5.9,SNR=4.1
CMAR Chiang Mai Arr 135.19 159 PKHKP 17 40 02.4
CMAR 17 40 14.0
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CHTO Chiang Mai 135.53 159 *e*PKIKP PKPdf 17 40 12.7 -3.2
CHTO *e* 17 42 51.4
CHTO Chiang Mai 135.53 159 *e*PKPdf PKPdf 17 40 12.7 -3.2
CHTO *ep*PP PP 17 42 51.4 -1.1
CHTO *e*SKP 17 43 53.4
SUMG Summit 135.59 11 *e*PKPdf PKPdf 17 40 14.6 +0.3
KIV Kislovodsk 135.84 80 *e*PKHKP 17 40 05.5
KIV *i* 17 40 14.0
KIV *e* 17 42 52.4
KIV *e* 17 47 20.6
KIV *e*PS PS 17 53 09.9 -7.6
KIV *e*SSS 18 05 52.0
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,920nm,20.0s,MS5.5
KIV Kislovodsk 135.84 80 *e*PKPdf PKPdf 17 40 13.4 -2.3
NB2 NORSAR Subarra135.91 43 PKPdf PKPdf 17 40 14.0 -1.2
comp=Z,12nm,1.1s,baz=221,slow=1.9
NB2 NORSAR Subarra135.91 43 PKPdf PKPdf 17 40 14.0 -1.2
baz=221,slow=1.9
NOA NORSAR Array B135.91 43 PKP PKPdf 17 40 13.8 -1.4
comp=Z,5.3nm,0.9s,baz=225,slow=2.0,SNR=9.0
NOA NORSAR Array B135.91 43 PKIKP PKPdf 17 40 13.9 -1.3
NOA pmax pmax
comp=Z,5.0nm,0.9s
QIZ Qiongzhong 136.96 174 PKP PKPdf 17 40 17.2 -1.3
QIZ PP PP 17 43 01.1 -0.3
QIZ LR LR
comp=N,875nm,20.1s
QIZ LR LR
comp=Z,1µm,20.0s,MS5.6
DAWY Dawson 137.18 322 *e*PKPdf PKPdf 17 40 15.8 -1.7
DAWY *e*PP PP 17 43 00.8 -2.4
MAK Makhachkala 137.33 84 *e*P Pdif 17 37 28.3 +1.0
MAK *e* 17 40 17.8
MAK *i* 17 43 01.9
MAK *e*PPP 17 46 09.9
MAK *e*SS SS 18 01 36.7 +26
MAK pmax pmax
comp=Z,672nm,1.5s
MAK MLR MLR
comp=Z,2µm,18.0s,MS5.8
MENT Mentasta 137.66 318 *e*PKPdf PKPdf 17 40 16.1 -2.3
RES Resolute Bay 137.77 349 PKP PKPdf 17 40 18.0 -0.4
comp=Z,11nm,0.9s,baz=200,slow=3.4,SNR=22
RES Resolute Bay 137.77 349 *e*PKPdf PKPdf 17 40 17.5 -0.8
EGAK Eagle 138.23 321 *e*PKPdf PKPdf 17 40 16.5 -3.0
PMR Palmer 138.45 314 *e*PKIKP PKPdf 17 40 17.9 -2.0
INK Inuvik 138.78 329 *e*PKHKP 17 40 09.0
INK *e* PKPdf 17 40 20.1 -0.2
VSU Vasula 139.52 54 *i*PKIKP PKPdf 17 40 21.0 -1.0

VSU	Vasula	139.52	54	*i* PKP	PKPdf	17 40 21.1	-0.9
MCK	McKinley	139.89	317	*e*PKIKP	PKPdf	17 40 18.1	-4.4
TRF	Thorofare Moun	140.13	316	*e*PKPpre	PKPdf	17 40 17.0	-5.9
KOLN	Koldanda	140.19	135	*e*P		17 40 16.0	
	comp=Z,22nm,0.8s						
COLA	College	140.33	319⇑	*i*PKIKP	PKPdf	17 40 22.1	-1.1
COLA	College	140.33	319	*e*PKPdf	PKPdf	17 40 21.4	-1.9
PPLA	Purkeypile	140.39	314	*e*PKPdf	PKPdf	17 40 19.3	-4.1
RAMN	Ramite	140.39	139	*e*P		17 40 16.9	
	comp=Z,60nm,0.9s						
KTH	Kantishna Hill	140.41	316	*e*PKPpre		17 40 15.9	
KBL	Kabul	140.53	113	*e*PKIKP	PKPdf	17 40 24.9	+0.3
DMN	Daman	140.54	137	*e*P		17 40 17.2	
	comp=Z,27nm,0.9s						
ODAN	Odare	140.55	141	*e*P		17 40 17.5	
	comp=Z,60nm,1.0s						
GKN	Gorkha	140.75	136	*e*P		17 40 17.0	
	comp=Z,31nm,0.9s						
KKN	Kakani	140.76	137	*e*P		17 40 18.0	
	comp=Z,29nm,0.9s						
DANN	Dangsing	140.78	135	*e*P		17 40 17.4	
	comp=Z,56nm,0.9s						
BPAW	Bear Paw Mtn.	140.80	316	*e*PKPdf		17 40 15.7	
JIRN	Jiri	140.93	138	*e*P		17 40 18.7	
	comp=Z,24nm,0.7s						
GUN	Gumba	141.06	138	*e*P		17 40 18.5	
	comp=Z,58nm,1.1s						
CHUM	Lake Minchumin	141.10	315	*e*PKPdf		17 40 19.0	
TAPN	Taplejung	141.10	141	*e*P		17 40 18.6	
	comp=Z,13nm,0.7s						
OBN	Obninsk	141.20	64⇑	*e*PKHKP		17 40 18.1	
OBN				*e*		17 43 26.5	
OBN				*e*SS	SS	18 01 50.9	-5.6
OBN				pmax	pmax		
	comp=Z,14nm,0.9s						
OBN				pmax	pmax		
	comp=Z,29nm,1.2s						
OBN				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.5						
OBN	Obninsk	141.20	64	*e*PKPdf	PKPdf	17 40 24.4	-0.8
MOS	Moscow	142.06	64	*e*PKIKP	PKPdf	17 40 22.2	-4.4
MOS				*e*		17 43 31.8	
KMI	Kunming	142.31	163	PKP	PKPdf	17 40 23.1	-5.0
KMI				APKP		17 40 37.8	
KMI				XPKP		17 40 43.7	
KMI				PP	PP	17 43 34.2	-0.3
KMI				PKS		17 43 57.7	
KMI				SKS	SKSdf	17 47 24.7	-13
KMI				PP	PP		
	comp=Z,290nm,6.7s						
KMI				LR	LR		
	comp=N,1µm,20.5s,MS5.8						
KMI				LR	LR		
	comp=E,1µm,18.5s,MS5.8						
KMI				LR	LR		
	comp=Z,1µm,20.5s,MS5.7						
COLD	Coldfoot	142.60	320	*e*PKPdf	PKPdf	17 40 24.3	-2.9
QZH	Quanzhou	142.84	186⇑	*i*PKP	PKPdf	17 40 23.8	-5.3
QZH				PP	PP		
	comp=Z,630nm,7.7s						
QZH				LR	LR		
	comp=N,920nm,13.7s,MS5.9						
QZH				LR	LR		
	comp=E,1µm,18.2s,MS5.9						
QZH				LR	LR		
	comp=Z,1µm,20.6s,MS5.6						
JOW	Kunigami	143.61	201	PKP	PKPdf	17 40 27.6	-2.8
	comp=Z,30nm,1.1s,baz=199,slow=6.8,SNR=8.4						
GYA	Guiyang	144.09	168	PKP	PKPdf	17 40 27.8	-3.4
GYA				APKP		17 40 40.4	
GYA				XPKP		17 40 46.2	
GYA				PP	PP	17 43 47.2	+2.0
GYA				PKS		17 44 02.1	
GYA				SKKS	SKKSac	17 50 32.8	-5.1
GYA				PP	PP		
	comp=Z,350nm,7.0s						
GYA				LR	LR		
	comp=N,900nm,22.1s,MS5.7						
GYA				LR	LR		
	comp=E,1µm,21.8s,MS5.7						
GYA				LR	LR		
	comp=Z,890nm,22.4s,MS5.5						
TRO	Tromso	144.14	37	*e*P	PKPdf	17 40 28.4	-1.5
LSA	Lhasa	144.31	144	PKP	PKPdf	17 40 30.0	-1.5
LSA				XPKP		17 40 46.5	
LSA				LR	LR		
	comp=N,960nm,22.0s,MS5.6						
LSA				LR	LR		
	comp=E,700nm,20.0s,MS5.6						
LSA				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
KTK1	Kautokeino	145.02	39	*e*P	PKPbc	17 40 30.8	-0.1
ARCES	ARCESS Array B	145.98	39	PKPbc	PKPdf	17 40 32.7	-0.4
	comp=Z,18nm,0.5s,baz=240,slow=2.7,SNR=131						
ARCES	ARCESS Array B	145.98	39	PKP2	PKPdf	17 40 32.7	-0.4
ARCES				pmax	pmax		
	comp=Z,18nm,0.5s						
ARCES	ARCESS Array B	145.98	39	PKPbc	PKPdf	17 40 32.7	-0.4
ARE0	ARCESS Array S	145.98	39	*e*PKPdf	PKPdf	17 40 32.5	-0.5
KEV	Kevo	146.55	39	*e*PKP2	PKPdf	17 40 34.1	+0.1
APA	Apatity	147.44	45⇑	*i*PKP2	PKPdf	17 40 37.4	+1.8
APA				pmax	pmax		
	comp=Z,160nm,1.4s						
APA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.7						
TNA	Tin City	147.48	311	*e*PKPdf	PKPdf	17 40 34.4	-1.3
SMY	Shemya	147.58	281	*e*PKHKP		17 40 33.6	
KBS	Kingsbay	147.73	21	*e*P	PKPbc	17 40 39.7	+0.9
KBS				AMb	AMB	17 40 44.6	
	comp=Z,109nm,4.2s						
KBS				*e*SS	SS	18 03 18.8	+8.1
KBS	Kingsbay	147.73	21	*e*PKPdf	PKPbc	17 40 38.8	+0.1
AB31	Akbulak array	147.81	88	PKHKP		17 40 34.6	
AB31				pmax	pmax		
	comp=Z,54nm,1.0s						
SPB4	Spitsbergen Ar	148.13	23	*e*PKPbc	PKPbc	17 40 39.0	-0.9
CD2	Chengdu	148.15	163	*e*PKP	PKPbc	17 40 39.8	-1.4
CD2				PP	PP	17 44 16.8	+7.6
CD2				PP	PP		
	comp=Z,720nm,8.8s						
CD2				LR	LR		
	comp=N,900nm,19.2s,MS5.8						
CD2				LR	LR		
	comp=E,920nm,16.8s,MS5.8						
CD2				LR	LR		
	comp=Z,1µm,21.4s,MS5.6						
KK31	Karatay Array	148.20	106	*i* PKP2	PKPbc	17 40 39.9	-1.1
KK31				pmax	pmax		
	comp=Z,104nm,1.1s						
WHN	Wuhan	148.53	180	⇓PKP	PKPdf	17 40 36.5	-2.1
WHN				PKP2	PKPab	17 40 46.2	+0.5
WHN				APKP		17 40 48.3	
WHN				LR	LR		
	comp=N,3µm,20.8s,MS6.1						
WHN				LR	LR		
	comp=E,2µm,23.8s,MS6.1						
WHN				LR	LR		
	comp=Z,3µm,22.4s,MS6.0						
SSE	Sheshan	148.76	191	PKP	PKPdf	17 40 38.0	-1.0
SSE				PP	PP	17 44 15.6	+2.9
SSE				SS	SS	18 03 19.8	-2.2
SSE				PP	PP		
	comp=Z,67nm,7.0s						
SSE				LR	LR		
	comp=N,345nm,14.9s,MS5.4						
SSE				LR	LR		
	comp=E,244nm,15.0s,MS5.4						
SSE				LR	LR		
	comp=Z,367nm,15.9s,MS5.3						
AML	Almayashu	148.85	111	P	PKPbc	17 40 42.9	+0.2
	SNR=34						
AML	Almayashu	148.85	111	*e*PKPdf	PKPdf	17 40 39.5	+0.8
AML				*e*PKPbc	PKPbc	17 40 42.9	+0.2
AML				*e*SKP		17 44 13.6	
UCH	Uchtor	149.29	112	*e*PKPbc	PKPbc	17 40 42.5	-1.2
EKS2	Erkin-Say	149.31	110	P	PKPbc	17 40 43.5	-0.3
	SNR=22						
EKS2	Erkin-Say	149.31	110	*e*PKPdf	PKPdf	17 40 38.1	-1.3
EKS2				*e*PKPbc	PKPbc	17 40 43.6	-0.2
KZA	Kyzart	149.49	113	P	PKPbc	17 40 44.7	+0.4
	SNR=14						
AAK	Ala-Archa	149.60	111	P	PKPbc	17 40 44.6	0.0
	SNR=19						
AAK	Ala-Archa	149.60	111	*e*PKPdf	PKPdf	17 40 39.3	-0.7
AAK				*e*PKPbc	PKPbc	17 40 44.5	0.0

FRU	Bishkek	149.82	111	*e*PKHKP	PKPdf	17 40 40.0	-0.3
FRU				pmax	pmax		
	comp=Z,370nm,1.6s						
FRU				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.8						
KBK	Karagaybulak	149.82	112	P	PKPbc	17 40 45.0	-0.1
	SNR=17						
NJ2	Nanjing	149.89	188	*e*PKP	PKPdf	17 40 41.0	+0.3
NJ2				APKP		17 40 51.4	
NJ2				XPKP		17 40 55.6	
NJ2				PP	PP	17 44 24.0	+4.7
NJ2				SKKS	SKKSac	17 51 08.0	-2.3
NJ2				PP	PP		
	comp=Z,60nm,7.6s						
NJ2				LR	LR		
	comp=N,1µm,18.5s,MS6.2						
NJ2				LR	LR		
	comp=E,4µm,21.0s,MS6.2						
NJ2				LR	LR		
	comp=Z,3µm,15.8s						
USP	Ospenovka	150.11	110	P	PKPbc	17 40 45.1	-0.7
	SNR=19						
TKM2	Tokmak 2	150.32	112	P	PKPbc	17 40 45.6	-0.6
	SNR=11						
TKM2	Tokmak 2	150.32	112	*e*PKPdf	PKPdf	17 40 39.5	-1.5
TKM2				*e*PKPbc	PKPbc	17 40 45.5	-0.7
MJAR	Matsushiro Arr	150.46	221	PKPbc	PKPbc	17 40 45.8	-1.0
	comp=Z,21nm,0.9s,baz=181,slow=2.7,SNR=37						
MJAR	Matsushiro Arr	150.46	221	PKIKP	PKPbc	17 40 45.8	-1.0
MJAR				pmax	pmax		
	comp=Z,21nm,0.9s						
MAJO	Matsushiro	150.46	221	*e*PKIKP	PKPbc	17 40 44.8	-2.0
MAT	Matsushiro	150.46	221	PKP	PKPbc	17 40 45.1	-1.7
ARU	Arti	151.73	76	*i* PKIKP	PKPdf	17 40 41.7	-1.0
ARU	Arti	151.73	76	*e*PKPdf	PKPdf	17 40 39.7	-3.0
ARU				*e*PKPbc	PKPbc	17 40 48.1	-1.0
XAN	Xi'an	151.81	171	PKP	PKPdf	17 40 42.9	-0.7
XAN				PKP2	PKPab	17 40 57.6	-1.4
XAN				PKS		17 44 15.9	
XAN				PP	PP	17 44 28.3	-2.0
XAN				SKKS	SKKSac	17 51 13.0	-7.7
XAN				LR	LR		
	comp=N,240nm,21.2s,MS5.5						
XAN				LR	LR		
	comp=E,681nm,19.9s,MS5.5						
XAN				LR	LR		
	comp=Z,191nm,21.2s,MS4.9						
SOKR	Solikamsk	152.62	69	*i* PKIKP	PKPbc	17 40 51.1	+0.1
SOKR						17 44 34.3	
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s						
SVE	Sverdlovsk	152.91	76	*i* PKIKP	PKPbc	17 40 49.9	-1.8
SVE				pmax	pmax		
	comp=Z,53nm,1.2s						
LZH	Lanzhou	153.24	161	*e*PKP	PKPdf	17 40 46.0	+0.3
LZH				APKP		17 40 58.5	
LZH				XPKP		17 41 04.2	
LZH				PP	PP	17 44 43.2	+4.7
LZH				SKKS	SKKSac	17 51 27.0	-1.4
LZH				PP	PP		
	comp=Z,290nm,5.1s						
LZH				LR	LR		
	comp=N,781nm,16.8s						
LZH				LR	LR		
	comp=Z,875nm,20.8s,MS5.5						
ERM	Erimo	153.62	234	*e*PKIKP	PKPdf	17 40 43.2	-2.8
KSRS	Korea Array	154.00	205	PKPbc	PKPbc	17 40 54.5	-0.3
	comp=Z,9.4nm,0.8s,baz=175,slow=2.3,SNR=28						
KSRS				PKPab	PKPab	17 41 08.9	+0.7
	comp=Z,5.8nm,0.8s,baz=162,slow=4.1,SNR=4.5						
KSRS	Korea Array	154.00	205	PKIKP	PKPbc	17 40 54.5	-0.3
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIA	Tai'an	154.12	185	*e*PKP	PKPdf	17 40 47.2	+0.3
PET	Petropavlovsk	155.01	269	*e*PKIKP	PKPdf	17 40 42.5	-5.1
PET				*e*		17 44 46.7	
PET				*e*PPS		17 57 59.1	
PET				pmax	pmax		
	comp=Z,100nm,13.7s						
BRVK	Borovoye	155.21	91	*e*PKIKP	PKPdf	17 40 46.9	-0.9
BRVK				*e*		17 44 49.3	
PEA0B	Petropavlovsk-	155.51	269	*e*PKPbc	PKPdf	17 40 56.9	+8.6
PETK	Petropavlovsk-	155.51	269	PKP	PKPdf	17 40 45.6	-2.6
	comp=Z,4.9nm,1.0s,baz=111,slow=6.3,SNR=3.3						
PETK				PKPbc	PKPdf	17 40 56.2	+8.0
	comp=Z,15nm,1.0s,baz=120,slow=5.3,SNR=8.7						
ASAJ	Asahikawa	155.62	236	PKPab	PKPab	17 41 17.9	+2.9
	comp=Z,31nm,0.9s,baz=222,slow=11,SNR=7.5						
ASAJ	Asahikawa	155.62	236	PKP2	PKPab	17 41 17.9	+2.9
ASAJ				pmax	pmax		
	comp=Z,31nm,1.0s						
GTA	Gaotai	155.71	152	PKP	PKPdf	17 40 48.9	-0.1
GTA				APKP		17 40 59.9	
GTA				XPKP		17 41 04.8	
GTA				PKS		17 44 21.1	
GTA				PP	PP	17 44 50.9	-1.5
GTA				SKKS	SKKSac	17 51 37.4	-4.2
GTA				PP	PP		
	comp=Z,669nm,7.2s						
GTA				LR	LR		
	comp=N,574nm,20.1s,MS5.6						
GTA				LR	LR		
	comp=E,573nm,18.0s,MS5.6						
GTA				LR	LR		
	comp=Z,828nm,19.2s,MS5.6						
WMQ	Urumqi	156.03	127	PKP	PKPdf	17 40 49.0	-0.3
WMQ				PKP2	PKPab	17 41 17.8	+1.1
WMQ				PKS		17 44 21.8	
WMQ				PP	PP	17 44 57.3	+2.9
WMQ				LR	LR		
	comp=N,897nm,18.0s,MS5.7						
WMQ				LR	LR		
	comp=E,540nm,18.0s,MS5.7						
WMQ				LR	LR		
	comp=Z,1µm,23.0s,MS5.6						
MK31	Makanchi Array	156.29	115	*e*PKPdf	PKPdf	17 40 47.1	-2.4
MK31				*e*PKPab	PKPab	17 41 17.3	-0.4
MKAR	Makanchi Array	156.29	115	PKP	PKPdf	17 40 47.5	-2.0
	comp=Z,1.5nm,0.9s,baz=270,slow=2.4,SNR=8.8						
MKAR				PKPab	PKPab	17 41 17.8	+0.1
	comp=Z,21nm,0.7s,baz=227,slow=2.2,SNR=45						
MKAR	Makanchi Array	156.29	115	PKIKP	PKPdf	17 40 47.5	-2.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,21nm,0.7s						
MKAR	Makanchi Array	156.29	115	PKP	PKPdf	17 40 47.5	-2.0
MKAR				PKPab	PKPab	17 41 17.8	+0.1
DL2	Dalian	156.44	194	⇑PKP	PKPdf	17 40 49.7	-0.3
DL2				PP	PP	17 44 52.5	-3.8
DL2				*e*SS	SS	18 04 37.2	-9.1
DL2				PP	PP		
	comp=Z,170nm,7.1s						
DL2				LR	LR		
	comp=N,360nm,20.3s						
DL2				LR	LR		
	comp=Z,400nm,22.7s,MS5.2						
KURK	Kurchatov	157.56	104	PKP	PKPdf	17 40 49.4	-1.6
	comp=Z,3.7nm,1.1s,baz=187,slow=1.2,SNR=2.6						
KURK				PKPab	PKPab	17 41 21.7	-1.5
	comp=Z,10nm,0.8s,baz=231,slow=4.5,SNR=4.8						
KURK	Kurchatov	157.56	104	PKIKP	PKPdf	17 40 49.4	-1.6
KURK						17 41 21.7	
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	Kurchatov	157.56	104	*e*PKPdf	PKPdf	17 40 49.8	-1.2
YSS	Yuzh-Sakhalins	157.89	240	*i* PKIKP	PKPdf	17 40 46.0	-5.5
YSS				*e*		17 41 24.0	
YSS				*e*SS	SS	18 05 06.0	+3.4
YSS				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.7						
YSS				MLR	MLR		
	comp=N,500nm,17.0s,MS5.6						
YSS				MLR	MLR		
	comp=E,600nm,17.0s,MS5.6						
HHC	Hu-ho-hao-te	158.75	174	*e*PKP	PKPdf	17 40 51.5	-1.3
HHC				APKP		17 41 02.4	
HHC				XPKP		17 41 05.9	
HHC				PKP2	PKPab	17 41 27.6	-0.9
HHC				PKS		17 44 24.1	
HHC				SKS	SKSdf	17 47 52.1	-5.8

HHC				SKKS	SKKSac	17 51 54.0	-3.5
HHC				PP	PP		
	comp=Z,333nm,12.0s						
HHC				LR	LR		
	comp=N,899nm,17.8s,MS5.7						
HHC				LR	LR		
	comp=E,405nm,16.6s,MS5.7						
HHC				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
MDJ	Mudanjiang	160.42	214	PKP	PKPdf	17 40 53.5	-1.1
MDJ				APKP		17 41 04.9	
MDJ				XPKP		17 41 08.1	
MDJ				PKS		17 44 28.1	
MDJ				PP	PP	17 45 17.3	-0.9
MDJ				LR	LR		
	comp=N,251nm,39.1s						
MDJ				LR	LR		
	comp=E,688nm,32.4s						
MDJ				LR	LR		
	comp=Z,618nm,21.6s						
CN2	Changchun	160.62	205	*e*PKP	PKPdf	17 40 53.1	-1.7
CN2				*e*APKP		17 41 04.0	
CN2				*e*XPKP		17 41 07.5	
CN2				PP	PP	17 45 20.4	+1.2
CN2				PP	PP		
	comp=Z,400nm,10.0s						
CN2				LR	LR		
	comp=N,600nm,18.0s						
CN2				LR	LR		
	comp=E,600nm,18.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
HABR	Khabarovsk	162.12	230c	*e*PKIKP	PKPdf	17 40 53.9	-2.3
HABR				*e*		17 41 42.1	
HABR				*e*		17 47 56.3	
HABR				*e*SS	SS	18 05 44.4	-2.6
HABR				*e*SSS		18 12 01.1	
NVS	Novosibirsk	162.37	100	*e*PKIKP	PKPdf	17 40 53.9	-2.4
NVS				*i*		17 41 41.5	
NVS				*i*		17 45 24.4	
NVS				pmax	pmax		
	comp=Z,30nm,1.9s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.5s						
ZAA0	Zalesovo Array	162.55	104	*e*PKPdf	PKPdf	17 40 54.8	-1.7
ZAA0				*e*PKPab	PKPab	17 41 43.0	-1.8
ZAA0				*e*PP	PP	17 45 25.5	-4.5
ZALV	Zalesovo Beam	162.55	104	PKP	PKPdf	17 40 54.3	-2.2
	comp=E,1.1nm,0.9s,baz=251,slow=7.2,SNR=6.5						
ZALV				PKPab	PKPab	17 41 42.8	-2.1
	comp=E,7.0nm,0.8s,baz=220,slow=3.5,SNR=11						
ZALV				PP	PP	17 45 31.6	+1.6
	comp=E,2.8nm,1.0s,baz=255,slow=5.8,SNR=4.2						
ZALV	Zalesovo Beam	162.55	104	PKIKP	PKPdf	17 40 54.3	-2.2
ZALV						17 41 42.8	
ZALV						17 45 31.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZALV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	Kul'dur	163.92	225	*e*PKIKP	PKPdf	17 40 51.2	-6.7
KLR				pmax	pmax		
	comp=Z,50nm,2.0s						
HVS	Khovu-Aksy	164.36	125	*i* PKIKP	PKPdf	17 40 56.5	-1.8
SONM	Songino Array	165.11	159	PKP	PKPdf	17 40 57.1	-1.9
	comp=Z,1.4nm,0.9s,baz=153,slow=1.6,SNR=10						
SONM				PKPab	PKPab	17 41 54.4	-1.7
	comp=Z,9.0nm,0.9s,baz=194,slow=3.1,SNR=22						
SONM				PP	PP	17 45 44.8	+1.8
	comp=Z,4.3nm,1.2s,baz=231,slow=4.7,SNR=4.0						
SONM	Songino Array	165.11	159	PKIKP	PKPdf	17 40 57.1	-1.9
SONM						17 41 54.4	
SONM						17 45 44.8	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	Ulaanbaatar	165.25	161	*e*PKIKP	PKPdf	17 40 58.0	-1.2
ULN				*e*		17 41 55.1	
ULN				*e*		17 45 40.6	
ZAK	Zakamensk	166.87	147	*e*PKIKP	PKPdf	17 40 56.9	-3.5
ZAK				*e*		17 42 02.6	
ZAK				*e*		17 45 56.2	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
MOY	Mondy	167.37	139	*e*PKIKP	PKPdf	17 41 01.2	+0.5
TLY	Talaya	168.15	146	*i* PKIKP	PKPdf	17 41 00.7	-0.5
TLY				*e*PPP		17 50 05.9	
TLY				pmax	pmax		
	comp=Z,34nm,2.1s						
TLY				MLR	MLR		
	comp=Z,1µm,21.0s						
TLY	Talaya	168.15	146	*e*PKPdf	PKPdf	17 41 00.7	-0.6
IRK	Irkutsk	168.82	147	*e*PKIKP	PKPdf	17 40 59.9	-1.8
IRK				*e*		17 41 05.9	
IRK				pmax	pmax		
	comp=Z,50nm,1.9s						
CIT	Chita	169.98	177	*e*PKP2	PKPab	17 42 16.3	-1.3
YAK	Yakutsk	172.75	277	*e*PKIKP	PKPdf	17 40 58.6	-4.8
YAK				*e*		17 42 28.7	
BOD	Bodaibo	175.80	178	*e*PKP2	PKPab	17 42 40.6	-2.6
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						

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*ISCJB **11** 17:34:45.2±0.5, 7.44N±0.08×53.45W±0.07, h10km, mb4.0/15, Error ellipse: s-maj=13.6km s-min=7.7km az=38.6*

*IDC **11** 17:34:45.5±0.7, 7.34N×53.32W, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.0/26, mbtmp4.0/15, ML4.1/2, Error ellipse: s-maj=19.9km s-min=17.1km az=30.0*

*NEIC **11** 17:34:46.9±0.5, 7.39N×53.38W, h10km, mb4.4/4, Error ellipse: s-maj=15.3km s-min=9.3km az=211.0*

ISC 11 17:34:45.6±4.0**, 7.42N**±0.09×**53.41W**±0.08**, h0**km±26km**, n29, σ1.28**/32**, mb4.1**/15**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**8.30**	**314**	Pn	**Pn**	**17 36 49.4**	**+2.0**
BBGH				*e*Sn	**Sn**	**17 38 13.8**	**-8.2**
GRGR	**Grenville**	**9.38**	**301**	*e*Pn	**Pn**	**17 37 00.9**	**-1.2**
GRGR				*e*Sn	**Sn**	**17 38 43.6**	**-4.8**
FDF	**Fort de France**	**10.51**	**314**	*e*Pn	**Pn**	**17 37 16.0**	**-1.7**
FDF				*e*Sn	**Sn**	**17 39 14.3**	**-2.0**
PCRV	**Puerto La Cruz**	**11.43**	**285**	Pn	**Pn**	**17 37 29.9**	**-0.3**
	1.3nm,0.3s,baz=16,slow=7.3,SNR=12						
SDV	**Santo Domingo**	**17.11**	**276**	P	**Pn**	**17 38 45.8**	**-0.6**
	0.6nm,0.3s,baz=79,slow=16,SNR=3.7						
ROSC	**El Rosal**	**20.95**	**264**	P	**P**	**17 39 32.6**	**+2.2**
	17nm,0.7s,baz=282,slow=23,SNR=8.1						
ROSC	**El Rosal**	**20.95**	**264**	P	**P**	**17 39 32.6**	**+2.2**
ROSC				*e*P		17 39 35.8	
RCBR	**Riachuelo**	**21.87**	**127**	P	**P**	**17 39 40.2**	**0.0**
	11nm,1.0s,mb4.2						
SIV	**San Ignacio**	**24.46**	**198**	P	**P**	**17 40 05.1**	**-1.3**
	1.7nm,0.7s,mb3.7,baz=35,slow=9.0,SNR=6.7						
OTAV	**Otavalo**	**25.97**	**255**	P	**P**	**17 40 16.1**	**-4.1**
CPUP	**Villa Florida**	**33.76**	**186**	P	**P**	**17 41 28.1**	**-1.1**
	0.6nm,0.4s,mb3.8,baz=352,slow=15,SNR=3.1						
CPUP	**Villa Florida**	**33.76**	**186**	P	**P**	**17 41 28.0**	**-1.2**
	10nm,0.9s,mb4.8						
TKL	**Tuckaleechee C**	**39.53**	**320**	P	**P**	**17 42 20.3**	**+2.0**
	1.8nm,0.3s,mb4.1,baz=138,slow=15,SNR=7.5						
DBIC	**Dimbokro**	**48.17**	**88**	P	**P**	**17 43 28.7**	**+0.5**
	2.8nm,0.6s,mb4.5,baz=267,slow=7.8,SNR=4.5						
DBIC	**Dimbokro**	**48.17**	**88**	P	**P**	**17 43 28.7**	**+0.5**
DBIC				*e*P		17 43 31.2	
WMOK	**Wichita Mounta**	**49.72**	**310**	P	**P**	**17 43 39.8**	**0.0**
	7.1nm,1.0s,mb4.5						
PLCA	**Paso Flores**	**50.45**	**197**	P	**P**	**17 43 45.8**	**+0.7**
	1.4nm,0.6s,mb4.0,baz=18,slow=9.4,SNR=4.2						
PLCA	**Paso Flores**	**50.45**	**197**	P	**P**	**17 43 45.8**	**+0.7**
PLCA				P		17 43 46.5	
TXAR	**Lajitas Array**	**51.96**	**302**	P	**P**	**17 43 58.2**	**+1.4**
	0.6nm,0.6s,mb3.7,baz=120,slow=7.4,SNR=5.1						
TOA0	**Torodi Ar. Sit**	**54.43**	**79**	P	**P**	**17 44 13.1**	**-2.2**
TORD	**Torodi Ar. Bea**	**54.43**	**79**	P	**P**	**17 44 13.1**	**-2.1**
	0.5nm,0.6s,mb3.7,baz=291,slow=6.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**54.43**	**79**	P	**P**	**17 44 13.1**	**-2.2**

ANMO Albuquerque 55.75 307 P P 17 44 24.9 +0.5
1.0nm,0.6s,mb4.0,baz=151,slow=3.2,SNR=4.0
LPIG La Paz 56.84 294 P P 17 44 33.1 +0.7
19nm,0.3s,baz=325,slow=1.4,SNR=3.7
PDAR Pinedale Array 60.42 315 P P 17 44 57.2 +0.1
0.7nm,0.9s,mb3.7,baz=115,slow=6.5,SNR=3.8
HLID Hailey 64.05 315 *e*P P 17 45 22.8 +1.4
1.9nm,0.9s,mb4.3
NVAR Mina Array Bea 65.80 309 P P 17 45 34.4 +1.5
0.9nm,0.6s,mb4.2,baz=98,slow=7.0,SNR=5.4
YKA Yellowknife Ar 70.40 334 P P 17 46 01.1 -0.2
1.0nm,0.8s,mb4.0,baz=108,slow=6.7,SNR=6.0
ARCES ARCESS Array B 79.22 21 P P 17 46 52.9 +0.6
1.8nm,0.6s,mb4.3,baz=263,slow=6.0,SNR=9.5

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*MOS **11** 17:45:58.2±1.2, 30.27S×178.00W, h33km, mb5.3/13, Error ellipse: s-maj=14.4km s-min=10.7km az=67.2*
*NEIC **11** 17:46:01.0±1.6, 30.24S×177.86W, h51km±13km, mb5.1/25, Error ellipse: s-maj=13.5km s-min=8.3km az=138.0*
*ISCJB **11** 17:46:00.3±0.3, 30.32S±0.06×177.96W±0.08, h52km, mb5.0/41, MS5.0/12, Error ellipse: s-maj=9.7km s-min=8.0km az=17.7*
*IDC **11** 17:46:01.9±0.5, 30.15S×177.90W, h52km±4km, mb4.3/12, mb1 4.4/12, mb1mx4.4/13, mbtmp4.2/12, MS4.4/3, Ms1 4.3/3, ms1mx3.8/17, Error ellipse: s-maj=17.5km s-min=8.4km az=89.0*
*BJI **11** 17:46:01.8, 30.48S×178.27W, h58km, mB5.4, mb5.1, Ms5.4, Msz5.2*
*DJA **11** 17:46:21, 30.78S×178.57W, h190km, mb5.0/15*
ISC 11 17:46:02.1±0.3, **30.30S**±0.06×**177.90W**±0.08, **h54**km, **h54**km±1.7km**:pP-P, n172,** σ1.23/96, **mb5.0**/41, **MS5.0**/12, **11C-3D, Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAO Raoul Island 1.05 359 P Pn 17 46 17.7 -2.8
607nm,0.3s,baz=114,slow=20,SNR=20
RAO S Sn 17 46 30.7 -3.5
7μm,0.3s,baz=78,slow=20,SNR=32
RAO Raoul Island 1.05 359 *e*Pn Pn 17 46 18.0 -2.5
RAO *e*Sn Sn 17 46 29.3 -4.8
URZ Urewera 8.95 206 P Pn 17 48 01.9 -6.7
2.7nm,0.3s,baz=228,slow=18,SNR=15
URZ S Sn 17 49 40.5 -7.3
16nm,0.3s,baz=224,slow=15,SNR=13
SNZO South Karori 12.51 207 *e*Pn Pn 17 48 49.1 -8.1
SNZO *e*Sn Sn 17 50 58.6 -16
RPZ Rata Peaks 16.01 210 P Pn 17 49 36.7 -6.8
1.0nm,0.3s,baz=144,slow=16,SNR=5.5
RPZ S S 17 52 22.5 -29
1.7nm,0.3s,baz=143,slow=20,SNR=8.0
RPZ Rata Peaks 16.01 210 P Pn 17 49 36.7 -6.9
RPZ S S 17 52 22.5 -29
DZM Mont Dzumac 16.26 297 *e*P Pn 17 49 51.5 +4.7
NOUC Port Laguerre 16.35 296 *i* P Pn 17 49 50.1 +2.1
AFI Afiamalu 17.26 20 *e*P Pn 17 49 57.0 -2.4
AFI pmax pmax
comp=Z,59nm,1.0s
AFI Afiamalu 17.26 20 *e*Pn Pn 17 49 57.0 -2.4
comp=Z,59nm,1.0s
ARMA Armidale 26.26 262 *e*P P 17 51 35.4 +3.2
EIDS Eidsvold 27.82 273⇑*e*P P 17 51 46.6 +0.4
comp=Z,29nm,0.9s,mb4.9
CNB Canberra Magne 27.89 251 *e*P P 17 51 48.4 +1.6
CAN Canberra 28.19 251⇑*e*P P 17 51 50.7 +1.2
CAN pmax pmax
comp=Z,48nm,0.9s,mb5.1
CAN Canberra 28.19 251⇑*e*P P 17 51 50.7 +1.2
comp=Z,48nm,0.9s,mb5.1
PPT Papeete 28.73 70 *e*LR LR 17 59 17.1
comp=Z,1μm,25.2s
TAU Tasmania Unive 30.41 236 *e*P P 17 52 06.5 -2.5
TAU pmax pmax
comp=Z,17nm,0.9s,mb4.8
TAU Tasmania Unive 30.41 236 *e*P P 17 52 06.5 -2.5
comp=Z,17nm,0.9s,mb4.8
TOO Toolangi 31.08 247 *e*P P 17 52 15.2 +0.1
CTA Charters Tower 33.87 279 *e*P P 17 52 40.7 +1.1
comp=Z,51nm,0.6s,mb5.6
CTA Charters Tower 33.87 279 P P 17 52 40.8 +1.2
comp=Z,81nm,0.8s,mb5.7,baz=104,slow=10,SNR=102
CTA Charters Tower 33.87 279 *e*P P 17 52 40.7 +1.1
CTA pmax pmax
comp=Z,51nm,0.6s
CTAO Charters Tower 33.87 279 *e*P P 17 52 40.6 +1.0
CTAO pmax pmax
comp=Z,77nm,0.8s,mb5.7
CTAO Charters Tower 33.87 279 *e*P P 17 52 40.5 +0.9
comp=Z,77nm,0.8s,mb5.7
STKA Stephens Creek 34.59 257 *e*P P 17 52 46.3 +0.6
comp=Z,96nm,0.9s,mb5.7
STKA Stephens Creek 34.59 257 P P 17 52 46.5 +0.7
comp=Z,115nm,0.8s,mb5.9,baz=93,slow=9.3,SNR=161
STKA LR LR 18 05 34.2
comp=Z,2μm,19.0s,MS4.9,baz=165,slow=34
RKT Rikitea 38.83 90 *e*LR LR 18 04 04.4
comp=Z,771nm,25.5s
COEN Coen 39.33 286 *e*P P 17 53 27.0 +0.9
comp=Z,20nm,0.8s,mb4.9
WB2 Warramunga Arr 44.17 272 *e*P P 17 54 04.4 -1.3
WRAB Tennant Creek 44.18 272 P P 17 54 05.0 -0.7
comp=Z,268nm,0.6s,mb6.2,SNR=23
WRAB Tennant Creek 44.18 272 *e*P P 17 54 04.6 -1.1
WRAB pmax pmax
comp=Z,25nm,0.6s,mb5.1
WRAB Tennant Creek 44.18 272 *e*P P 17 54 04.6 -1.2
comp=Z,24nm,0.6s,mb5.1
FORT Forrest 46.16 255 *e*P P 17 54 20.8 -0.5
comp=Z,35nm,0.6s,mb5.5
SBA Scott Base 48.14 184 *e*P P 17 54 38.2 +2.1
SBA pmax pmax
comp=Z,19nm,0.8s,mb5.2
SBA Scott Base 48.14 184 *e*P P 17 54 38.2 +2.1
comp=Z,19nm,0.8s,mb5.2
VNDA Vanda 48.20 186 P P 17 54 37.3 +0.7
comp=Z,3.0nm,0.6s,mb4.5,baz=5.3,slow=9.3,SNR=14
VNDA Vanda 48.20 186 *e*P P 17 54 37.6 +1.0
VNDA pmax pmax
comp=Z,29nm,1.6s
VNDA Vanda 48.20 186 *e*P P 17 54 37.6 +1.0
comp=Z,29nm,1.6s,mb5.1
KAKA Kakadu 49.00 280 *e*P x 17 54 23.3
comp=Z,14nm,0.8s
FITZ Fitzroy Crossi 52.45 270 *e*P P 17 55 08.3 -1.2
comp=Z,32nm,0.9s,mb5.2
KLBR Kellerberrin 54.46 251 *e*P P 17 55 22.2 -1.9
comp=Z,43nm,1.1s,mb5.3
NWAO Narrogin (SRO) 54.51 249 P P 17 55 24.1 -0.4
NWAO pmax pmax
comp=Z,18nm,1.3s
NWAO Narrogin (SRO) 54.51 249 P P 17 55 24.1 -0.3
comp=Z,18nm,1.3s,mb5.0
CASY Casey 55.27 208 *e*P P 17 55 27.7 -1.7
MUN Mundaring 55.61 250 *e*P P 17 55 30.4 -2.0
MBWA Marble Bar 56.32 264 *e*P P 17 55 32.5 -5.1
comp=Z,12nm,0.8s,mb5.0
BATI Baumata 57.73 277 P P 17 55 49.0 +1.4
comp=Z,7.5nm,0.6s,mb4.9,baz=213,slow=3.4,SNR=6.9
MIDW Midway 58.19 1 P P 17 55 46.8 -3.6
comp=Z,52nm,0.6s,mb5.7
RPN Rapa Nui 59.38 105 LR LR 18 14 37.4
comp=Z,310nm,20.5s,MS4.4,baz=246,slow=29
QSPA South Pole Qui 59.81 180 P P 17 56 02.4 +1.2
comp=Z,14nm,0.7s,mb5.1,baz=31,slow=1.8,SNR=28
QSPA South Pole Qui 59.81 180 *e*P P 17 56 01.5 +0.4
comp=Z,96nm,0.8s,mb5.9
QSPA *e* 17 56 08.2
MAW Mawson 72.43 201 *e*P P 17 57 22.1 -0.1
comp=Z,8.3nm,0.7s,mb4.8
MAW Mawson 72.43 201 P P 17 57 21.5 -0.7
comp=Z,10nm,0.7s,mb4.8,baz=147,slow=8.7,SNR=8.0
MAW LR LR 18 27 57.0
comp=Z,77nm,20.4s,MS4.0,baz=96,slow=35
MAW Mawson 72.43 201 *e*P P 17 57 22.1 -0.1
MAW pmax pmax
comp=Z,8.0nm,0.7s
KSM Kuching 75.09 281 *e*P P 17 57 37.0 -1.7
comp=Z,14nm,1.0s,mb4.8
SYO Syowa Base 77.23 193⇑*e*P P 17 57 48.0 -1.9
SYO Syowa Base 77.23 193⇓*e*PcP PcP 17 57 57.0 -3.4
MJAR Matsushiro Arr 78.21 325 P P 17 57 55.1 -0.6
comp=Z,2.1nm,0.8s,mb4.1,baz=169,slow=8.7,SNR=3.9
MJAR pP pP 17 58 10.2 -0.8
comp=Z,3.0nm,0.8s,baz=168,slow=6.1,SNR=4.1
SNAA Sanae 78.25 178 *e*P P 17 57 55.3 -0.2
SNAA *e* 17 58 01.5
SNAA *e* pP 17 58 12.5 +1.6
SNAA Sanae 78.25 178*d i*P P 17 57 55.6 +0.1
SNAA Sanae 78.25 178 *e*P P 17 57 54.8 -0.7
comp=Z,22nm,1.3s,mb4.9
VNA3 Neumayer Olymp 78.40 176 *e*P P 17 57 55.9 -0.4
VNA3 *e* 17 58 03.7
VNA2 Neumayer--Watz 78.83 177 *e*P P 17 57 58.9 +0.2
VNA2 *e* 17 58 06.4
VNA2 *e* pP 17 58 15.6 +1.5
VNA1 Neumayer--Stat 79.06 176 *e*P P 17 58 00.4 +0.4
VNA1 *e* 17 58 08.4
VNA1 *e* pP 17 58 16.9 +1.5
PLCA Paso Flores 82.51 133 P P 17 58 20.4 +1.4
comp=Z,8.5nm,1.2s,mb4.7,baz=223,slow=7.2,SNR=7.2
PLCA pP pP 17 58 34.9 +0.4
comp=Z,6.9nm,1.1s,baz=218,slow=4.9,SNR=5.3
PLCA Paso Flores 82.51 133 *e*P P 17 58 19.0 0.0
PLCA pmax pmax
comp=Z,19nm,1.4s
PLCA Paso Flores 82.51 133 *e*P P 17 58 19.0 +0.1
comp=Z,19nm,1.4s,mb4.9
KSRS Korea Array 84.33 320 P P 17 58 27.9 -0.1
comp=Z,1.5nm,0.8s,mb4.2,baz=154,slow=5.0,SNR=5.2
YSS Yuzh-Sakhalins 84.70 334⇑*e*P P 17 58 24.0 -5.7
YSS pmax pmax
comp=Z,26nm,1.6s,mb5.1
YSS Yuzh-Sakhalins 84.70 334 P P 17 58 30.2 +0.5
comp=Z,20nm,1.0s,mb5.2
PEA0B Petropavlovsk- 85.74 346 *e*P P 17 58 38.1 +3.4
PEA0B *e* 17 58 46.7
PETK Petropavlovsk- 85.74 346 P P 17 58 35.0 +0.2
comp=Z,9.0nm,0.8s,mb5.1,baz=112,slow=6.7,SNR=13
PETK Petropavlovsk- 85.74 346 P P 17 58 35.0 +0.2
ISA Isabella 86.17 45 *e*P P 17 58 37.2 -0.1
ISA pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
ISA Isabella 86.17 45 *e*P P 17 58 37.2 -0.1
comp=Z,10nm,1.1s,mb5.0
NJ2 Nanjing 86.25 311 *e*P P 17 58 37.3 -0.5
NJ2 PP PP 18 02 01.0 +1.4
NJ2 S S 18 09 05.0 -3.8
NJ2 AMB AMB
comp=Z,40nm,1.0s,mb5.6
NJ2 AMB AMB
comp=Z,1μm,4.2s
CMB Columbia Colle 86.63 42 P P 17 58 39.5 0.0
YBH Yreka Blue Hor 87.90 38 P P 17 58 46.7 +1.1
comp=Z,0.7nm,0.3s,mb4.4,baz=203,slow=18,SNR=2.6
NVAR Mina Array Bea 88.11 43 P P 17 58 47.6 +0.9
comp=Z,3.2nm,1.0s,mb4.5,baz=219,slow=8.1,SNR=11
NVAR pP pP 17 59 03.6 +1.3
comp=Z,2.3nm,0.7s,baz=225,slow=7.8,SNR=6.9
WHN Wuhan 88.36 307 P P 17 58 49.8 +1.8
WHN AP pP 17 59 00.8 -2.9
MDJ Mudanjiang 88.59 325 P P 17 58 49.1 +0.3
MDJ AMB AMB
comp=Z,6.0nm,1.8s,mb4.6
HABR Khabarovsk 89.00 331 *e*P P 17 58 49.6 -1.0
HABR *e**PP pP 17 59 03.0 -3.2
HABR *e*PPP 18 04 14.4
HABR *e*S SKSac 18 09 12.9 -2.4
HABR *e* 18 09 37.1
HABR *e*SS SS 18 15 27.1 -2.1
HABR *e*SSS 18 19 02.3
CN2 Changchun 90.12 323 *e*P P 17 58 55.9 0.0
CN2 *e*AP pP 17 59 08.3 -3.3
CN2 *e*XP sP 17 59 14.7 -2.8
CN2 *e*S S 18 09 45.0 0.0
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
KLR Kul'dur 90.99 330 *e*P P 17 58 57.7 -2.2
GYA Guiyang 91.58 300⇓*i*P P 17 59 02.1 -1.1
GYA AP pP 17 59 17.7 -1.1
GYA XP sP 17 59 23.4 -1.4
GYA PP PP 18 02 43.8 +1.5
GYA SKS 18 09 29.8
GYA S S 18 09 57.2 -1.9
GYA SS SS 18 16 07.4 +0.1
GYA AMB AMB
comp=Z,28nm,0.7s,mb5.7
GYA AMB AMB
comp=Z,80nm,7.0s
GYA LR LR
comp=N,540nm,20.2s,MS5.1
GYA LR LR
comp=E,482nm,19.6s,MS5.1
GYA LR LR
comp=Z,469nm,20.5s,MS4.9
TXAR Lajitas Array 92.26 57 P P 17 59 07.0 +0.8
comp=Z,0.4nm,0.9s,mb3.7,baz=212,slow=6.4,SNR=5.1
TXAR pP pP 17 59 22.0 +0.1
comp=Z,0.9nm,0.9s,baz=218,slow=7.8,SNR=4.6
TXAR Lajitas Array 92.26 57 P P 17 59 07.0 +0.8
TXAR pP pP 17 59 22.0 +0.1
BJI Beijing 92.92 315 P P 17 59 09.4 +0.4
BJI S S 18 10 11.6 +1.2
BJI AMB AMB
comp=Z,6.0nm,0.6s,mb5.2
BJI AMB AMB
comp=Z,116nm,6.6s
BJI LR LR
comp=N,304nm,29.4s,MS4.7
BJI LR LR
comp=E,287nm,30.3s,MS4.7
BJI LR LR
comp=Z,181nm,37.9s
CMAR Chiang Mai Arr 93.45 289 P P 17 59 13.0 +1.0
comp=Z,0.9nm,0.8s,mb4.2,baz=143,slow=4.2,SNR=6.8
CMAR pP pP 17 59 26.5 -1.2
comp=Z,2.2nm,0.9s,baz=142,slow=3.6,SNR=6.2
CMAR PP PP 18 02 54.0 -3.2
comp=Z,0.3nm,0.8s,baz=130,slow=3.3,SNR=4.1
CHTO Chiang Mai 93.63 290 P P 17 59 13.3 +0.5
CHTO *e* pP 17 59 27.6 -0.9
CHTO pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
CHTO Chiang Mai 93.63 290 P P 17 59 13.3 +0.5
comp=Z,5.0nm,1.1s,mb4.9
CHTO *e* pP 17 59 27.6 -0.8
KMI Kunming 93.86 297 P P 17 59 14.5 +0.8
KMI AP pP 17 59 30.3 +0.9
KMI XP sP 17 59 35.8 +0.5
KMI PP PP 18 03 03.5 +3.2
KMI S S 18 10 18.0 -1.4
KMI XS sS 18 10 42.1 -3.9
KMI AMB AMB
comp=Z,4.0nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,92nm,6.3s
KMI LR LR
comp=N,906nm,20.2s
KMI LR LR
comp=E,388nm,27.0s
KMI LR LR
comp=Z,2μm,25.8s
XAN Xi'an 94.12 307 P P 17 59 13.6 -1.1
XAN AP pP 17 59 29.5 -0.9
XAN PP PP 18 03 02.1 -0.1
XAN S S 18 10 22.4 +1.0
XAN SS SS 18 16 45.9 +2.3
XAN AMB AMB
comp=Z,1.0nm,0.6s,mb4.4
XAN LR LR
comp=E,683nm,34.8s
XAN LR LR
comp=Z,468nm,34.8s,MS4.7
SEY Seymchan 95.90 347 *i* P P 17 59 20.7 -1.4
PDAR Pinedale Array 96.00 43 PKKPbc PKKPbc 18 16 10.8 -1.0
comp=Z,0.8nm,0.8s,baz=66,slow=4.0,SNR=6.2
CD2 Chengdu 96.11 302 *e*P P 17 59 24.6 +0.7
CD2 AP pP 17 59 41.3 +1.7
CD2 XP sP 17 59 48.1 +2.6
CD2 PP PP 18 03 20.8 +3.1
CD2 SKS 18 09 54.2
CD2 S S 18 10 35.6 -3.2
CD2 XS sS 18 11 05.5 +0.1
CD2 SS SS 18 17 13.8 +1.9
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,390nm,13.1s
CD2 LR LR
comp=N,880nm,19.0s,MS5.3
CD2 LR LR
comp=E,180nm,16.4s,MS5.3
CD2 LR LR
comp=Z,1μm,21.4s,MS5.3
HHC Hu-ho-hao-te 96.23 314 *e*P P 17 59 24.5 +0.3
HHC AP pP 17 59 41.7 +1.8
HHC XP sP 17 59 48.3 +2.5
HHC PP PP 18 03 20.6 +2.2
HHC SKS 18 09 54.9
HHC S S 18 10 35.9 -3.4
HHC XS sS 18 11 05.6 -0.4
HHC SS SS 18 17 14.7 +1.5
HHC AMB AMB
comp=Z,7.0nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,194nm,5.7s
HHC LR LR
comp=N,666nm,22.6s,MS5.1
HHC LR LR
comp=E,319nm,21.4s,MS5.1
HHC LR LR
comp=Z,1μm,20.2s,MS5.4
LZH Lanzhou 98.73 307 *e*P P 17 59 38.4 +2.8
LZH AP pP 17 59 53.9 +2.6
LZH XP sP 18 00 00.6 +3.3
LZH PP PP 18 03 42.5 +4.7
LZH SKS 18 10 10.2
LZH S S 18 11 00.1 -0.8
LZH XS sS 18 11 29.8 +2.2
LZH SS SS 18 17 49.0 +0.3
LZH AMB AMB
comp=Z,69nm,1.6s,mb5.9
LZH AMB AMB
comp=Z,203nm,4.4s
LZH LR LR
comp=N,1μm,17.9s
LZH LR LR
comp=Z,2μm,18.7s,MS5.7
YKA Yellowknife Ar 105.32 25 PKKPbc PKKPbc 18 15 41.1 -4.4
comp=Z,1.3nm,0.8s,baz=39,slow=3.0,SNR=14
YKA PKKP PKKPbc 18 15 56.9 +11
comp=Z,0.9nm,0.8s,baz=54,slow=4.7,SNR=8.1
WMQ Urumqi 113.23 308 PDIF Pdif 18 00 40.2 +0.1
WMQ PKP PKiKP 18 04 32.6 -0.7
WMQ PP PP 18 05 28.1 +3.5
WMQ PKS 18 08 08.1
WMQ SKS SKSdf 18 11 36.4 -4.3
WMQ SKKS SKKSac 18 12 15.0 -6.2
WMQ SS SS 18 21 06.0 0.0
WMQ LR LR
comp=N,886nm,19.0s,MS5.5
WMQ LR LR
comp=E,535nm,19.0s,MS5.5
WMQ LR LR
comp=Z,1μm,23.0s,MS5.4
BOSA Boshof 117.39 203 PKP PKPdf 18 04 42.2 +0.3
comp=Z,3.6nm,1.0s,baz=292,slow=4.8,SNR=3.8
MKAR Makanchi Array 117.78 310 PKP PKPdf 18 04 40.4 -1.5
comp=Z,1.7nm,0.8s,baz=111,slow=0.7,SNR=9.7
MKAR Makanchi Array 117.78 310⇑*i*PKIKP PKPdf 18 04 40.4 -1.5
ZALV Zalesovo Beam 118.02 318 PKP PKPdf 18 04 40.4 -1.8
comp=Z,1.5nm,0.6s,baz=166,slow=2.4,SNR=9.2
NVS Novosibirsk 119.12 319 *e*PKIKP PKPdf 18 04 40.7 -3.5
KURK Kurchatov 121.04 314⇑*i*PKIKP PKPdf 18 04 46.0 -2.1
AAK Ala-Archa 122.13 304 *i* PKIKP PKPdf 18 04 49.5 -0.9
AAK MLR MLR
comp=Z,300nm,13.0s,MS5.1
AML Almayashu 122.59 303 *e*PKPdf PKPdf 18 04 51.0 -0.4
KBL Kabul 124.26 293 *e*PKIKP PKPdf 18 04 54.5 -0.3
LSZ Lusaka 128.19 213 *e*PKIKP PKPdf 18 05 03.0 +0.1
ARU Arti 133.07 321 *i* PKIKP PKPdf 18 05 10.4 -0.4
ARU 18 07 32.9
ARU Arti 133.07 321 *e*PKPdf PKPdf 18 05 09.7 -1.1
ARU *e* 18 05 26.6
ARCES ARCESS Array B 138.51 348 PKhKP 18 05 11.9
comp=Z,2.1nm,0.8s,baz=70,slow=1.7,SNR=6.5
VRHR Novokhopersk 144.13 317 *e*PKHKP 18 05 25.1
VRHR pmax pmax
comp=Z,6.0nm,1.1s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
HAKT HAKKARI 144.95 293 *i* P PKPdf 18 05 36.1 +3.0
OBN Obninsk 145.14 325⇑*i*PKIKP PKPdf 18 05 31.8 -1.0
OBN pmax pmax
comp=Z,68nm,1.3s
OBN MLR MLR
comp=Z,600nm,17.0s,MS5.4
TVAN Van 145.19 295 *i* P PKPbc 18 05 27.6 -5.6
KIV Kislovodsk 145.25 304 *e*PKIKP PKPdf 18 05 32.9 -0.5
KIV pmax pmax
comp=Z,17nm,1.1s
KIV Kislovodsk 145.25 304 *e*PKPdf PKPdf 18 05 33.2 -0.2
VSR Storozhevoye 145.52 318 *e*PKIKP PKPdf 18 05 33.0 -0.6
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.2s
DDEM Demirkent 146.33 299 *i* P PKPdf 18 05 36.1 +0.7
DBOC Borcka 146.34 300 *i* P PKPdf 18 05 29.4 -6.0
BNGL BINGOL 146.93 296 *i* P PKPdf 18 05 35.6 -0.8
VSU Vasula 147.17 336*c i*PKP2 PKPbc 18 05 37.7 -0.8
NB2 NORSAR Subarra 148.67 351 PKP PKPbc 18 05 41.0 -1.4
comp=Z,27nm,1.0s,baz=12,slow=2.7
NOA NORSAR Array B 148.67 351 PKPbc PKPbc 18 05 41.4 -1.0
comp=Z,14nm,0.9s,baz=14,slow=4.3,SNR=27
NOA pPKPbc pPKPbc 18 05 57.0 -1.4
comp=Z,2.8nm,0.6s,baz=17,slow=4.5,SNR=3.1
NAO01 NORSAR Array S 148.90 352 *e*PKPbc PKPbc 18 05 41.6 -1.4
KEMA Kemaliye 148.97 297 *i* P PKPdf 18 05 41.5 +1.7
HFS Hagfors 149.17 349 PKPbc PKPbc 18 05 41.8 -1.9
comp=Z,19nm,0.8s,baz=64,slow=3.4,SNR=5.3
HFS Hagfors 149.17 349 PKPbc PKPbc 18 05 41.8 -1.9
MNK Minsk 149.57 330 *e*PKHKP PKPbc 18 05 42.0 -2.8
GZT Gaziantep 149.84 293 *i* P PKPdf 18 05 41.0 -0.2
KONO Kongsberg 150.22 352 *e*PKPbc PKPbc 18 05 44.1 -2.1
KONO *e*PKPab PKPab 18 06 01.3 +8.8
ANDN Andirin 150.79 294 *i* P PKPdf 18 05 44.7 +2.0
COBT Iskenderun 150.93 291 *i* P PKPdf 18 05 42.0 -0.9
SIM Simferopol' 150.95 309 *e*PKIKP PKPdf 18 05 40.6 -2.1
SIM pmax pmax
comp=Z,21nm,0.9s
AKASG Malin Array Be 151.28 323 PKPbc PKPbc 18 05 47.6 -1.4
comp=Z,33nm,0.9s,baz=49,slow=2.6,SNR=71
AKASG pPKPbc pPKPbc 18 06 03.8 -1.4
comp=Z,7.4nm,0.6s,baz=49,slow=2.1,SNR=5.8
AKBB Malin Array Si 151.28 323 *e*PKIKP PKPbc 18 05 47.4 -1.6
KIEV Kiev 151.29 323 *e*PKIKP PKPbc 18 05 47.1 -2.0
AVNT Avonos 151.84 296 *i* P PKPbc 18 05 48.5 -2.2
BR131 Keskin Array S 152.63 299 *e*PKPdf PKPdf 18 05 43.6 -1.8
BR131 *e*PKPbc PKPbc 18 05 51.5 -0.9
BRTR Keskin Array B 152.63 299 PKPbc PKPbc 18 05 51.8 -0.7
comp=Z,7.6nm,0.9s,baz=180,slow=2.5,SNR=14
LIC Lamto 155.13 163 *e*PKP1 PKPab 18 06 13.8 -0.6
comp=Z,27nm,1.1s
BUR08 Bucovina Ar. S 155.20 321 *e*PKPbc PKPdf 18 05 58.2 +9.4
KIC Kosan Boka 155.33 164 *e*PKP1 PKPab 18 06 14.6 -0.6
comp=Z,27nm,0.8s
TIC Toumodi 155.53 163 *e*PKP1 PKPab 18 06 15.1 -1.0
comp=Z,29nm,0.7s
DBIC Dimbokro 155.60 163 PKPbc PKPdf 18 05 58.1 +7.7
comp=Z,1.2nm,0.5s,baz=129,slow=1.2,SNR=3.1
CLL Collm 157.50 342 *i* PKP2 PKPab 18 06 23.1 -0.5
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 157.50 342 *e*PKPab PKPab 18 06 22.5 -1.1
CLL Collm 157.50 342 *e*PKPdf PKPdf 18 05 53.0 +1.3
comp=Z,3.0nm,0.8s
CLL *e*PKPdif 18 06 03.0
CLL *i* PKPab PKPab 18 06 23.1 -0.5
comp=Z,6.0nm,0.9s
IBBN Ibbenburen 157.62 351 *e*PKPab PKPab 18 06 24.0 -0.1
BRG Berggiesshubel 157.62 340 *e*PKPab PKPab 18 06 23.9 -0.2
CLZ Clausthal 157.62 346 *e*PKPab PKPab 18 06 23.8 -0.3
CLZ Clausthal 157.62 346 *e*PKPab PKPab 18 06 23.8 -0.3
FBE Freiberg 157.75 341 *e*PKPab PKPab 18 06 25.0 +0.3
WERD Werda 158.47 342 *e*PKPab PKPab 18 06 28.0 +0.2
GUNZ Gunzen 158.54 342 *e*PKPab PKPab 18 06 28.2 +0.1
KHC Kasperske Hory 159.27 338 *e*PKPbc PKPdf 18 06 04.5 +11

KHC				ePKPab	PKPab	18 06 31.0	-0.3
GRA1	Grafenberg Arr	159.44	343	ePKPab	PKPab	18 06 31.7	-0.3
GRF	Grafenberg Arr	159.44	343	ePKPab	PKPab	18 06 31.7	-0.3
WET	Wettzell	159.48	339	ePKPab	PKPab	18 06 32.2	0.0
GERES	GERESS Array B	159.48	338	PKP	PKPdf	18 05 52.5	-1.6
	comp=Z,1.2nm,0.9s,baz=41,slow=4.3,SNR=5.4						
GERES				PKPab	PKPab	18 06 32.4	+0.1
	comp=Z,0.6nm,0.6s,baz=20,slow=5.0,SNR=4.0						
WLF	Walferdange	160.42	352	ePKPab	PKPab	18 06 36.8	+0.5
RJOB	Jochberg	160.74	338	ePKPab	PKPab	18 06 38.3	+0.5
DAVA	Damuels	162.01	343	⇑iPKPab	PKPab	18 06 46.8	+3.5
	comp=Z,9.3nm,1.2s						
FETA	Feichten	162.02	341	⇑iPKPab	PKPab	18 06 44.0	+0.7
	comp=Z,5.5nm,1.1s						
TORD	Torodi Ar. Bea	162.92	179	PKP	PKPdf	18 05 58.3	-0.5
	comp=Z,1.5nm,0.9s,baz=155,slow=1.8,SNR=5.2						
TORD				PKPab	PKPab	18 06 47.6	-0.4
	comp=Z,6.5nm,0.8s,baz=180,slow=3.1,SNR=23						
TORD				PP	PP	18 10 30.6	-0.9
	comp=Z,0.5nm,0.8s,baz=135,slow=8.2,SNR=3.6						
SSF	Saint Saulge	163.23	357	ePKP2	PKPab	18 06 48.2	-0.4
	comp=Z,21nm,1.1s						
AVF	Avril sur Loir	163.51	357	ePKP2	PKPab	18 06 49.2	-0.7
SMF	Signal de Mont	163.63	356	ePKP2	PKPab	18 06 49.9	-0.5
	comp=Z,19nm,1.1s						
LPL	La Plagne	164.38	348	ePKP2	PKPab	18 06 54.2	+0.4
LPG	La Plagne	164.40	348	ePKP2	PKPab	18 06 54.3	+0.5
	comp=Z,22nm,1.3s						

NEIC 11 17:53:25.7, 4105S×17245E, h12km, ML4.0(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.23	15	P	Pg	17 53 30.8	+0.2
NNZ	Nelson	0.72	104	P	Pg	17 53 39.3	-0.4
THZ	Tophouse	0.79	155	P	Pg	17 53 40.3	-0.7
DSZ	Denniston Nort	0.85	215	P	Pg	17 53 41.2	-0.9
SNZO	South Karori	1.72	99	ePn	Pn	17 53 56.7	+1.2
SNZO				eSn	Sn	17 54 18.3	+1.0
BKZ	Black Stump Fm	3.62	60	P	Pn	17 54 24.3	+2.7
WKZ	Wanaka	4.54	213	P	Pn	17 54 32.8	-1.4

*ISCJB **11** 18:08:47.2±1.3, 2555S±008×1775W±0.1, h102km±15km, mb4.2/12, Error ellipse: s-maj=23.5km s-min=8.9km az=28.7*
*NEIC **11** 18:08:49.6±1.5, 2570S×17732W, h125km±14km, mb4.7/6, Error ellipse: s-maj=20.3km s-min=13.1km az=130.0*
*IDC **11** 18:08:53.3±2.8, 2591S×17726W, h154km±25km, mb3.8/8, mb1 4.0/10, mb1mx3.9/16, mbtmp3.9/10, Error ellipse: s-maj=25.8km s-min=22.6km az=180.0*
ISC 11 18:08:48.2±1.0**, 2554S**±007×**1774W**±01**, h97**km±13km**, n37,** σ1^{s}**09**/26**, mb4.2**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.72	186	P	Pn	18 09 44.0	+0.4
	164nm,0.3s,baz=64,slow=24,SNR=2.8						
RAO				S	Sn	18 10 27.0	+0.5
	553nm,0.3s,baz=70,slow=23,SNR=7.0						
AFI	Afiamalu	12.74	26	P	Pn	18 11 46.0	+0.2
	5.3nm,0.3s,baz=192,slow=9.3,SNR=4.6						
AFI				S	Sn	18 14 05.0	-1.0
	1.9nm,0.3s,baz=270,slow=20,SNR=2.5						
AFI	Afiamalu	12.74	26	P	Pn	18 11 46.0	+0.2
AFI				ePn	Pn	18 11 46.1	+0.3
AFI				S	Sn	18 14 05.0	-1.0
URZ	Urewera	13.49	199	P	Pn	18 11 55.4	-0.2
	0.5nm,0.3s,baz=315,slow=19,SNR=3.6						
URZ				S	Sn	18 14 11.1	-13
	1.2nm,0.3s,baz=107,slow=20,SNR=4.2						
EIDS	Eidsvold	28.39	263	eP	P	18 14 34.3	+0.8
	12nm,1.1s,mb4.3						
CTA	Charters Tower	33.83	272	eP	P	18 15 23.0	+1.6
	9.7nm,0.7s,mb4.7						
CTA	Charters Tower	33.83	272	P	P	18 15 23.3	+1.9
	13nm,0.6s,mb4.9,baz=104,slow=10,SNR=22						
CTAO	Charters Tower	33.83	272	eP	P	18 15 21.8	+0.4
	12nm,0.7s,mb4.8						
STKA	Stephens Creek	36.32	250	eP	P	18 15 42.5	-0.2
	4.0nm,1.5s,mb4.1						
STKA	Stephens Creek	36.32	250	P	P	18 15 41.9	-0.8
	1.9nm,0.4s,mb4.4,baz=104,slow=10,SNR=12						
STKA	Stephens Creek	36.32	250	eP	P	18 15 39.1	-3.6
	1.0nm,0.9s,mb3.8						
WB2	Warramunga Arr	44.62	267	eP	P	18 16 49.7	-1.5
WRAB	Tennant Creek	44.62	267	eP	P	18 16 49.7	-1.6
	8.4nm,0.4s,mb4.8						
KAKA	Kakadu	48.77	275	eP	x	18 17 02.5	
	2.9nm,0.3s						
FITZ	Fitzroy Crossi	53.03	266	eP	P	18 17 54.1	-1.5
	11nm,0.8s,mb4.9						
QSPA	South Pole Qui	64.55	180	P	P	18 19 12.4	-2.0
	1.1nm,1.0s,mb3.6,baz=142,slow=5.2,SNR=5.4						
YSS	Yuzh-Sakhalins	80.61	334	eP	P	18 20 51.2	+1.2
	12nm,0.9s,mb4.7						
KSRS	Korea Array	81.00	319	P	P	18 20 53.7	+1.5
	0.5nm,0.4s,mb3.7,baz=122,slow=5.6,SNR=2.6						
PETK	Petropavlovsk-	81.25	345	P	P	18 20 54.0	+0.9
	2.1nm,0.6s,mb4.1,baz=100,slow=8.8,SNR=16						
NVAR	Mina Array Bea	84.34	43	P	P	18 21 10.4	+0.8
	1.0nm,0.6s,mb3.8,baz=218,slow=7.6,SNR=4.7						
CMAR	Chiang Mai Arr	92.27	289	P	P	18 21 48.6	+0.8
	0.9nm,0.8s,mb4.1,baz=132,slow=3.7,SNR=8.3						
PDAR	Pinedale Array	92.27	43	P	P	18 21 46.9	-0.4
	0.5nm,0.7s,mb3.8,baz=225,slow=6.1,SNR=3.7						
ZALV	Zalesovo Beam	114.69	320	PKP	PKiKP	18 27 14.7	-2.1
	0.4nm,0.5s,baz=171,slow=3.6,SNR=3.1						
MKAR	Makanchi Array	114.97	312	PKP	PKiKP	18 27 14.9	-2.7
	0.3nm,0.5s,baz=186,slow=1.1,SNR=6.6						
KURK	Kurchatov	117.99	316	PKP	PKPdf	18 27 21.1	-2.2
	0.6nm,0.2s,baz=109,slow=2.1,SNR=3.0						
BVAR	Borovoye Array	123.20	318	PKP	PKPdf	18 27 31.4	-1.8
	0.7nm,0.4s,baz=160,slow=0.6,SNR=8.4						
ARCES	ARCESS Array B	133.94	349	PKP	PKPdf	18 27 52.0	-1.2
	1.8nm,0.6s,baz=349,slow=2.6,SNR=8.3						
OBN	Obninsk	141.37	329	PFAKE		18 28 20.0	+13
OBN				LR	LR		
	comp=Z,937nm,21.0s						
NB2	NORSAR Subarra	144.02	353	PKP	PKPdf	18 28 08.8	-3.0
	comp=Z,6.5nm,0.8s,baz=9.1,slow=3.4						
NOA	NORSAR Array B	144.02	353	PKP	PKPdf	18 28 08.9	-2.9
	comp=Z,5.4nm,0.7s,baz=10,slow=2.3,SNR=20						
HFS	Hagfors	144.57	350	PKP	PKPdf	18 28 10.0	-2.8
	comp=Z,7.3nm,0.7s,baz=54,slow=3.8,SNR=15						
AKASG	Malin Array Be	147.60	328	PKPbc	PKPbc	18 28 19.3	-1.7
	comp=Z,1.9nm,0.5s,baz=46,slow=4.0,SNR=11						
AKASG	Malin Array Be	147.60	328	PKPbc	PKPbc	18 28 19.3	-1.7
BRTR	Keskin Array B	150.42	306	PKPbc	PKPbc	18 28 26.9	-1.6
	comp=Z,1.9nm,0.8s,baz=144,slow=4.3,SNR=6.8						
BRTR				PKPab	PKPab	18 28 34.8	-0.5
	comp=Z,2.7nm,0.7s,baz=105,slow=2.9,SNR=9.6						
MMAI	Mount Meron Ar	150.48	292	PKPbc	PKPbc	18 28 27.4	-1.5
	comp=Z,2.8nm,0.5s,baz=72,slow=8.0,SNR=9.2						
CLL	Collm	153.06	345	ePKPbc	PKPbc	18 28 33.0	-1.1
CLL				ePKPab	PKPab	18 28 46.0	+0.1
TORD	Torodi Ar. Bea	167.65	176	PKP	PKPdf	18 28 39.9	-3.9
	comp=Z,0.3nm,0.6s,baz=227,slow=2.3,SNR=2.8						

*IDC **11** 18:13:28.4±0.8, 32.16S×178.03W, h0km, mb4.3/5, mb1 4.4/6, mb1mx4.1/16, mbtmp4.3/6, ML4.0/1, Error ellipse: s-maj=31.9km s-min=26.2km az=112.0*
*ISCJB **11** 18:13:32.6±1.0, 3239S±008×1784W±02, h33km, mb4.5/10, Error ellipse: s-maj=20.7km s-min=10.6km az=19.5*
*NEIC **11** 18:13:33.8±0.6, 3231S×17824W, h35km, mb4.6/8, Error ellipse: s-maj=18.2km s-min=14.0km az=141.0*
ISC 11 18:13:34.7±0.9**, 3231S**±008×**1784W**±02**, h35**km**, n32,** σ1^{s}**06**/23**, mb4.5**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.00	211	Pn	Pn	18 15 13.6	-1.0
	2.7nm,0.3s,baz=54,slow=7.8,SNR=5.2						
URZ				Sn	Sn	18 16 32.7	-0.3
	11nm,0.3s,baz=143,slow=18,SNR=9.5						
AFI	Afiamalu	19.28	20	eP	Pn	18 17 48.2	-9.4
EIDS	Eidsvold	27.59	277	P	P	18 19 19.9	+1.3
	2.2nm,0.6s,mb4.0						
STKA	Stephens Creek	33.79	260	eP	P	18 20 15.7	+2.4
	1.5nm,0.6s,mb4.1						
STKA	Stephens Creek	33.79	260	P	P	18 20 15.6	+2.2
	1.6nm,0.6s,mb4.2,baz=112,slow=13,SNR=6.5						
STKA	Stephens Creek	33.79	260	eP	P	18 20 12.5	-0.8
	5.9nm,1.7s,mb4.2						
CTA	Charters Tower	33.85	282	eP	P	18 20 15.3	+1.4
	6.6nm,0.9s,mb4.6						
CTA	Charters Tower	33.85	282	P	P	18 20 15.3	+1.4
	6.7nm,0.7s,mb4.7,baz=104,slow=10.0,SNR=11						
CTAO	Charters Tower	33.85	282	eP	P	18 20 14.9	+0.9
	7.7nm,0.8s,mb4.7						
WB2	Warramunga Arr	43.89	274	eP	P	18 21 37.3	-0.7
WRAB	Tennant Creek	43.89	274	eP	P	18 21 37.4	-0.7
	42nm,1.6s,mb4.9						
FORT	Forrest	45.29	257	eP	P	18 21 48.6	-0.5
	25nm,0.6s,mb5.2						
KAKA	Kakadu	48.99	282	eP	x	18 21 59.4	
	4.5nm,0.6s						
FITZ	Fitzroy Crossi	52.08	272	eP	P	18 22 40.8	-0.6
	3.6nm,0.6s,mb4.5						
QSPA	South Pole Qui	57.81	180	P	P	18 23 23.0	+1.1
	2.4nm,0.8s,mb4.2,baz=16,slow=2.3,SNR=6.9						
QSPA	South Pole Qui	57.81	180	P	P	18 23 23.0	+1.1
QSPA				eP		18 23 23.7	
SNAA	Sanae	76.26	179	e	P	18 25 29.0	+10
SNAA	Sanae	76.26	179	eP	P	18 25 22.1	+2.9
	17nm,1.5s,mb4.8						
VNA3	Neumayer Olymp	76.43	176	e	P	18 25 25.8	+5.7
VNA3				e		18 25 30.3	
VNA3				e	pP	18 25 33.2	+2.1
VNA3				e		18 25 45.4	
VNA2	Neumayer--Watz	76.86	177	e	P	18 25 27.9	+5.4
	baz=181,slow=3.6						
VNA2				e		18 25 33.2	
VNA2				e	pP	18 25 35.8	+2.3
VNA2				e		18 25 47.2	
PETK	Petropavlovsk-	87.58	346	P	P	18 26 17.3	-1.3
	2.2nm,0.7s,mb4.5,baz=128,slow=7.0,SNR=7.4						
PETK	Petropavlovsk-	87.58	346	P	P	18 26 17.3	-1.3
NVAR	Mina Array Bea	89.84	43	P	P	18 26 29.2	-0.4
	0.3nm,0.5s,mb3.9,baz=214,slow=6.2,SNR=3.6						
BVAR	Borovoye Array	127.54	315	PKP	PKPdf	18 32 34.0	-1.4
	0.6nm,0.5s,baz=115,slow=2.1,SNR=5.1						
ARCES	ARCESS Array B	140.38	347	PKP	PKPdf	18 32 59.4	+0.4
	0.8nm,0.6s,baz=40,slow=4.7,SNR=3.9						
NB2	NORSAR Subarra	150.58	351	PKP	PKPdf	18 33 18.7	+2.1
	comp=Z,5.3nm,1.2s,baz=14,slow=4.3						
NOA	NORSAR Array B	150.58	351	PKPbc	PKPbc	18 33 19.3	-2.7
	comp=Z,0.8nm,0.6s,baz=14,slow=4.2,SNR=3.8						
HFS	Hagfors	151.04	348	PKPbc	PKPbc	18 33 22.6	-0.5
	comp=Z,2.4nm,0.9s,baz=101,slow=8.0,SNR=4.7						
MMAI	Mount Meron Ar	151.63	281	PKPbc	PKPbc	18 33 25.5	+0.1
	comp=Z,3.1nm,0.6s,baz=68,slow=6.7,SNR=6.1						
AKASG	Malin Array Be	152.60	320	PKPbc	PKPbc	18 33 26.2	-0.7
	comp=Z,0.9nm,0.5s,baz=42,slow=3.0,SNR=4.6						
BRTR	Keskin Array B	153.18	295	PKPbc	PKPbc	18 33 27.6	-1.1
	comp=Z,0.9nm,0.6s,baz=114,slow=1.5,SNR=5.3						
TORD	Torodi Ar. Bea	160.93	180	PKPab	PKPab	18 34 13.8	-0.4
	comp=Z,1.1nm,1.0s,baz=176,slow=3.1,SNR=3.9						

*NEIC **11** 18:21:26.9, 3492N×23.10E, h11km, MD3.7(ATH), After ATH.*
*ATH **11** 18:21:26.4, 3491N×2308E, h8km±2km, MD3.7/10*
*CSEM **11** 18:21:28.0±0.2, 3477N×23.16E, h25km, MD3.7, Error ellipse: s-maj=6.2km s-min=2.8km az=78.0*
*ISCJB **11** 18:21:28.4±0.7, 3477N±004×23.15E±007, h51km±6km, mb4.4/13, Error ellipse: s-maj=10.3km s-min=5.2km az=154.4*
*IDC **11** 18:21:30.0±3.5, 3464N×2322E, h58km±25km, mb3.7/6, mb1 3.6/11, mb1mx3.4/28, mbtmp3.5/11, ML4.0/4, Error ellipse: s-maj=29.5km s-min=20.7km az=33.0*
*HLW **11** 18:21:33.2, 3490N×2383E, h20km, Mb3.9*
ISC 11 18:21:30.5±0.6**, 3482N**±004×**2319E**±007**, h46**km±6km**, n58,** σ1^{s}**21**/63**, mb4.3**/12**, 8D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.74	88	ePG	Pn	18 21 42.0	-2.6
VAM	Vamos	1.01	54	ePN	Pn	18 21 46.8	-1.5
VAM	Vamos	1.01	54	ePn	Pn	18 21 47.5	-0.8
KYTH	Kithira	1.46	355	ePG	Pn	18 21 52.0	-2.4
IDI	Anoyia	1.47	71	P	Pn	18 21 55.7	+1.2
	20nm,0.3s,baz=38,slow=16,SNR=269						
IDI				S	Sn	18 22 13.5	+1.0
	20nm,0.3s,baz=299,slow=19,SNR=8.6						
NPS	Neapolis	2.04	77	ePN	Pn	18 22 04.0	+1.7
NPS	Neapolis	2.04	77	ePn	Pn	18 22 04.1	+1.8
ITM	Ithomi	2.57	337	ePN	Pn	18 22 09.4	-0.2
ITM	Ithomi	2.57	337	ePn	Pn	18 22 10.0	+0.4
APE	Apeiranthos	2.94	40	ePB	Pn	18 22 15.7	+1.0
APE	Apeiranthos	2.94	40	ePn	Pn	18 22 15.2	+0.5
PTL	Penteli	3.27	9	ePN	Pn	18 22 18.8	-0.4
PTL	Penteli	3.27	9	ePn	Pn	18 22 18.5	-0.7
KARP	Karpathos	3.33	76	ePN	Pn	18 22 22.1	+2.0
KARP	Karpathos	3.33	76	ePn	Pn	18 22 21.8	+1.7
SLUM		3.73	152	⇓P	Pn	18 22 27.3	+1.8
LKR	Lokris	3.82	358	ePN	Pn	18 22 26.8	0.0
LKR	Lokris	3.82	358	ePn	Pn	18 22 26.6	-0.2
VLS	Valsamata	3.95	329	P	Pn	18 22 27.8	-0.8
SMG	Samos	4.12	45	P	Pn	18 22 30.4	-0.5
EVR	Evrytania	4.23	345	ePN	Pn	18 22 33.0	+0.5
NEO	Neokhori	4.48	0	P	Pn	18 22 35.6	-0.2
HMAT	Matruh	4.96	137	⇓P	Pn	18 22 42.3	-0.1
PRK	Paraskevi	5.06	28	P	Pn	18 22 43.3	-0.4
SWA2		5.88	160	⇓P	Pn	18 22 57.6	+2.4
SWA2				S	Sn	18 23 59.5	-1.8
AWBH		8.11	142	⇓P	Pn	18 23 26.4	+0.7
HFRF	Wahat Farafira	8.82	149	⇓P	Pn	18 23 36.7	+1.3
GLL	Jalalah	8.91	124	⇓P	Pn	18 23 35.7	-0.9
AMAG	Maghara	9.41	114	P	Pn	18 23 41.2	-2.3
SUZ		9.55	119	⇓P	Pn	18 23 44.5	-0.8
BRTR	Keskin Array B	9.65	56	P	Pn	18 23 48.2	+1.5
	0.1nm,0.3s,baz=244,slow=9.5,SNR=3.7						
BRTR	Keskin Array B	9.65	56	P	Pn	18 23 48.2	+1.4
MMAI	Mount Meron Ar	10.31	97	P	Pn	18 23 54.0	-1.8
	0.9nm,0.3s,baz=282,slow=11,SNR=8.5						
MMAI				S	Sn	18 25 41.0	-8.9
	0.8nm,0.3s,baz=309,slow=35,SNR=2.9						
HDK1	Dakhla	10.69	148	⇓P	Pn	18 24 02.6	+1.6
TR2		11.03	123	P	Pn	18 24 04.5	-1.2
EIL	Elat	11.20	114	P	Pn	18 24 06.5	-1.5
	0.7nm,0.3s,baz=351,slow=2.7,SNR=9.1						
EIL				S	Sn	18 26 05.1	-6.7
	0.4nm,0.3s,baz=333,slow=16,SNR=4.9						
EIL	Elat	11.20	114	P	Pn	18 24 06.5	-1.5
EIL				S	Sn	18 26 05.1	-6.7
GERES	GERESS Array B	15.68	336	P	Pn	18 25 10.5	+2.4
	0.2nm,0.3s,baz=143,slow=13,SNR=5.2						
AKASG	Malin Array Be	16.47	14	P	Pn	18 25 20.1	+2.0
	1.9nm,0.3s,baz=210,slow=9.6,SNR=7.6						
AKASG	Malin Array Be	16.47	14	P	Pn	18 25 20.1	+2.0
MIB	Mutribah	21.00	97	eP	P	18 26 10.2	+0.2
	19nm,0.7s						
MIB	Mutribah	21.00	97	eP	P	18 26 10.2	+0.2
	baz=96						
MIB				AMb	AMB	18 26 10.7	
	comp=Z,19nm,0.7s,baz=96						
NAY	Al-Naaiem	21.11	99	eP	P	18 26 11.6	+0.3
	baz=98						
NAY				AMb	AMB	18 26 16.8	
	comp=Z,24nm,1.7s,mb4.2,baz=98						
UMR	Umm Al-Rimmam	21.39	97	eP	P	18 26 14.1	-0.1
	comp=Z,34nm,0.4s,mb5.0						
UMR	Umm Al-Rimmam	21.39	97	eP	P	18 26 14.1	-0.2
	baz=97						
UMR				AMb	AMB	18 26 15.1	
	comp=Z,34nm,0.4s,mb5.0,baz=97						
HFS	Hagfors	26.07	349	P	P	18 26 57.7	-1.7
	comp=Z,1.3nm,0.5s,mb3.7,baz=140,slow=11,SNR=7.6						
NOA	NORSAR Array B	27.34	347	P	P	18 27 11.1	+0.3
	comp=Z,0.6nm,0.6s,mb3.3,baz=152,slow=11,SNR=3.8						
ARCES	ARCESS Array B	34.79	1	P	P	18 28 15.3	-0.9
	comp=Z,3.7nm,1.0s,mb4.2,baz=202,slow=9.0,SNR=5.5						
ARCES	ARCESS Array B	34.79	1	P	P	18 28 15.3	-1.0
MKAR	Makanchi Array	45.31	56	P	P	18 29 43.1	-0.5
	comp=Z,0.7nm,0.3s,mb3.9,baz=269,slow=8.1,SNR=26						
ZALV	Zalesovo Beam	46.40	46	P	P	18 29 50.7	-1.4
	comp=Z,1.2nm,0.3s,mb4.3,baz=267,slow=8.4,SNR=8.9						
ZALV	Zalesovo Beam	46.40	46	P	P	18 29 50.7	-1.4
DANN	Dangsing	51.33	79	eP	P	18 30 30.8	+0.5
	comp=Z,7.8nm,0.3s						
GKN	Gorkha	52.18	79	eP	P	18 30 36.6	0.0
	comp=Z,6.1nm,0.4s,mb4.9						
DMN	Daman	52.72	80	eP	P	18 30 41.2	+0.6
	comp=Z,5.1nm,0.3s,mb4.9						
GUN	Gumba	53.22	79	eP	P	18 30 44.9	+0.6
	comp=Z,5.0nm,0.3s,mb4.9						
JIRN	Jiri	53.57	79	eP	P	18 30 47.0	+0.1
	comp=Z,3.2nm,0.4s,mb4.7						
SONM	Songino Array	60.95	50	P	P	18 31 38.8	+0.2
	comp=Z,0.5nm,0.4s,mb4.0,baz=280,slow=8.0,SNR=6.8						

IGQ 11 18:24:29.2, 076N×7990W, h20km±6km, Mb4.0, Ms3.8, 5C, Error ellipse: s-maj=5.6km s-min=2.1km az=92.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINO	Pino	1.58	125	⇑P	Pn	18 24 58.4	+2.4
PINO	Pino	1.58	125	⇑S	Sn	18 25 20.7	+4.8
YANA	Yana	1.59	123	P	Pn	18 24 58.4	+2.3
TERV	Terraza Guagua	1.59	126	P	Pn	18 24 58.7	+2.4
GGP	Refugio Guagua	1.60	125	P	Pn	18 24 58.5	+2.1
COTA	Cotacachi	1.62	105	P	Pn	18 24 60.0	+3.4
COTA	Cotacachi	1.62	105	S	Sn	18 25 26.1	+9.3
QIL2	Quilotoa	1.89	149	P	Pn	18 25 00.8	+0.5
CHIS	Cerro-Chispas-	1.98	205	P	Pn	18 25 03.7	+2.2
CHIS	Cerro-Chispas-	1.98	205	S	Sn	18 25 26.9	+1.2
CAMI	Rancho Maria	1.99	136	P	Pn	18 25 04.6	+2.8
CAYA	Cayambe	2.03	110	⇑P	Pn	18 25 07.7	+5.4
CAYA	Cayambe	2.03	110	⇑S	Sn	18 25 35.0	+8.0
VC1	Cotopaxi 1	2.04	133	P	Pn	18 25 05.9	+3.5
TAMB	Tambo	2.10	133	⇑P	Pn	18 25 07.0	+3.7
ANTI	Antisana	2.11	125	P	Pn	18 25 07.9	+4.5
PISA	Pisayambo	2.35	140	P	Pn	18 25 09.8	+3.1

*IDC **11** 19:16:35.2±2.8, 3327N×8586E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.4/22, mbtmp3.4/6, ML3.2/3, Error ellipse: s-maj=72.5km s-min=28.2km az=65.0*
*ISCJB **11** 19:16:36.6±4.4, 3337N±007×859E±0.1, h19km±41km, mb3.5/3, Error ellipse: s-maj=17.3km s-min=10.7km az=165.2*
*NEIC **11** 19:16:39.4±3.7, 3337N×8579E, h28km±35km, mb3.7/1, Error ellipse: s-maj=12.2km s-min=6.8km az=76.0*
ISC 11 19:16:39.9±4.4**, 3337N**±006×**858E**±01**, h30**km±42km**, n22,** σ0^{s}**94**/22**, mb3.5**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	5.30	200	eP	Pn	19 17 58.1	+1.0
	10nm,0.5s						
GUN	Gumba	5.44	179	eP	Pn	19 17 59.4	+0.5
	17nm,0.4s						
GKN	Gorkha	5.44	191	eP	Pn	19 17 59.3	+0.3
	22nm,0.6s						
KKN	Kakani	5.58	185	eP	Pn	19 18 01.4	+0.5
	11nm,0.5s						
JIRN	Jiri	5.70	177	eP	Pn	19 18 03.3	+0.8
	20nm,0.5s						
DMN	Daman	5.77	186	eP	Pn	19 18 04.1	+0.6
	11nm,0.6s						
PKI	Pulchoki	5.79	184	eP	Pn	19 18 04.3	+0.6
LSA	Lhasa	5.84	127	ePn	Pn	19 18 04.9	+0.5
	8.6nm,1.0s						
KOLN	Koldanda	5.90	199	eP	Pn	19 18 05.5	+0.3
	23nm,1.2s						
TAPN	Taplejung	6.22	164	eP	Pn	19 18 09.1	-0.5
	13nm,0.5s						
RAMN	Ramite	6.43	174	eP	Pn	19 18 11.1	-1.5
ODAN	Odare	6.63	168	eP	Pn	19 18 14.2	-1.1
	18nm,0.6s						
MKAR	Makanchi Array	13.68	350	Pn	Pn	19 19 51.3	-0.4
	0.0nm,0.3s,baz=160,slow=13,SNR=3.5						
KBL	Kabul	13.98	279	ePn	Pn	19 19 53.4	-2.5
	1.7nm,0.6s						
KURK	Kurchatov	18.12	345	P	Pn	19 20 49.5	+0.4
	0.1nm,0.3s,baz=158,slow=11,SNR=7.2						
CMAR	Chiang Mai Arr	18.94	138	P	Pn	19 20 57.5	-1.8
	0.0nm,0.3s,baz=310,slow=11,SNR=8.8						
ZALV	Zalesovo Beam	20.59	358	P	P	19 21 17.9	+1.7
	1.1nm,0.8s,baz=179,slow=10,SNR=5.6						
ZALV	Zalesovo Beam	20.59	358	P	P	19 21 17.9	+1.7
SONM	Songino Array	21.19	41	P	P	19 21 22.6	-0.2
	2.6nm,1.1s,mb3.5,baz=231,slow=11,SNR=9.7						
ULN	Ulaanbaatar	21.57	42	eP	P	19 21 27.2	+0.3
	3.5nm,1.1s,mb3.7						
YKA	Yellowknife Ar	83.07	9	P	P	19 29 01.8	-0.4
	0.2nm,0.6s,mb3.3,baz=337,slow=6.8,SNR=4.3						
YKA	Yellowknife Ar	83.07	9	P	P	19 29 01.8	-0.4

*BJI **11** 19:17:19.7, 4052N×127.13W, h9km, mB5.5, mb4.9, Ms5.3, Msz4.9*
*IDC **11** 19:17:21.2±0.9, 4062N×126.14W, h0km, mb4.0/16, mb1 4.2/20, mb1mx4.1/31, mbtmp4.0/20, ML3.4/3, MS4.0/9, Ms1 4.0/9, ms1mx3.7/33, Error ellipse: s-maj=20.1km s-min=10.1km az=16.0*
*NEIC **11** 19:17:21.9±0.5, 4042N×12628W, h10km, mb4.7/20, MW4.8(NCEDC), Error ellipse: s-maj=6.3km s-min=4.6km az=50.0*
*ISCJB **11** 19:17:21.7±0.3, 4058N±002×12620W±003, h10km, mb4.5/39, MS4.3/10, Error ellipse: s-maj=3.7km s-min=2.3km az=148.7*
*GCMT **11** 19:17:21.9±0.6, 4050N×12628W, h22km±1km, MW4.9/68, Moment Tensor Solution. s18,c20; s68,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.18; $M_{\theta\theta}$0.44±.15; $M_{\phi\phi}$-0.15±.16; $M_{r\theta}$-0.14±.24; $M_{\theta\phi}$-2.99±.12; $M_{\phi r}$-0.03±.26; Best double couple: $M_0$3.00800×10^{16} NP1:ϕ_s357.00000°, δ87.00000°, λ-1.00000°. NP2: ϕ_s87.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 3.1490, Plg1.0000°, Azm222.0000°; N -0.2810, Plg87.0000°, Azm106.0000°; P -2.8670, Plg3.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **11** 19:17:22.4±1.6, 4048N×12620W, h22km, mb4.9/9 Error ellipse: s-maj=6.3km s-min=6.1km az=168.8*
ISC 11 19:17:23.1±0.3**, 4056N**±002×**12633W**±003**, h10**km**, (h13**km±1.3km**:pP-P), n381,** σ1^{s}**03**/403**, mb4.5**/39**, MS4.3**/10**, 102C-112D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	2.00	80	ePn	Pn	19 17 53.4	-3.5
KRMB	Red Mountain	2.07	61	⇑P	Pn	19 17 54.7	-3.2
KSXB	Camp Six Broad	2.25	55	⇑P	Pn	19 17 57.7	-2.5
KBO	Bosley Butte	2.29	43	⇑P	Pn	19 17 58.7	-2.1
KTRM	Thompson Ridge	2.60	58	⇑P	Pn	19 18 02.7	-2.5
KEBM	Edson Butte	2.75	32	⇑P	Pn	19 18 05.3	-1.9
WDC	Whiskeytown Da	2.88	88	ePn	Pn	19 18 05.0	-4.0
WDC				eSn	Sn	19 18 39.5	-4.3
HOPS	Hopland	2.95	121	ePn	Pn	19 18 05.1	-4.9
HOPS				eSn	Sn	19 18 40.8	-4.7
YBH	Yreka Blue Hor	2.97	66	Pn	Pn	19 18 07.6	-2.7
	36nm,0.3s,baz=269,slow=9.6,SNR=386						
YBH				Sn	Sn	19 18 41.5	-4.4
	21nm,0.3s,baz=156,slow=21,SNR=4.9						
YBH				LR	LR	19 19 21.9	
	comp=Z,3μm,20.5s,baz=127,slow=43						
YBH	Yreka Blue Hor	2.97	66	ePn	Pn	19 18 08.0	-2.3
YBH				eSn	Sn	19 18 39.7	-6.2
LAMM	Antelope Mount	2.99	68	P	Pn	19 18 08.3	-2.2
HUMO	Hull Mountain	3.25	50	ePn	Pn	19 18 12.5	-1.6
LHEM	Herd Peak	3.29	70	P	Pn	19 18 12.4	-2.1
DBO	Dodson Butte	3.44	41	⇑P	Pn	19 18 15.8	-1.0
BUOR	Burton Butte	3.52	59	P	Pn	19 18 17.8	0.0
BBOR	Butler Butte	3.59	48	⇓P	Pn	19 18 18.0	-0.8
MCCM	Marconi Confer	3.60	131	ePn	Pn	19 18 12.9	-5.9
LAB	Little Aspen B	3.63	61	P	Pn	19 18 19.4	+0.1
LASM	Arnica Sink	3.74	72	P	Pn	19 18 18.9	-1.9
VSP	Spence Mountai	3.74	60	P	Pn	19 18 20.3	-0.5
HSO	Harness Mounta	3.82	38	P	Pn	19 18 21.2	-0.7
HOG	Hogback Mounta	3.86	63	P	Pn	19 18 21.6	-0.9
RNO	Roman Nose	3.87	29	P	Pn	19 18 21.5	-1.0
I02A	Mapleton	3.91	27	⇓P	Pn	19 18 21.5	-1.6
	baz=4.1						
I02A				⇑S	Sn	19 19 07.2	-1.9
	baz=4.1						
OHCM	Honcut	3.92	107	ePn	Pn	19 18 20.4	-2.8
I03A	Eugene	4.10	33	⇓P	Pn	19 18 24.3	-1.4
	baz=4.3						
SAC	San Andreas	4.25	133	eP	Pn	19 18 22.7	-5.1
HBO	Huckleberry Mo	4.43	41	P	Pn	19 18 30.5	+0.1
H02A	Toledo	4.46	22	⇑P	Pn	19 18 30.2	-0.5
	baz=4.6						

IRO Indian Ridge 4.58 40 ⇑P Pn 19 18 32.3 -0.1
COR Corvallis 4.61 28 ℯP Pn 19 18 32.6 -0.1
K05A Summer Lake 4.61 60 ⇑P Pn 19 18 31.8 -1.0
baz=4.7
BEKR Beckwourth 4.62 97 ⇓P Pn 19 18 31.2 -1.7
baz=4.6
BEKR ⇓S Sn 19 19 25.2 -1.4
baz=4.6
H03A Soap Creek Ran 4.69 28 ⇑P Pn 19 18 33.1 -0.7
baz=4.9
MOD Modoc 4.74 72 ℯPn Pn 19 18 32.2 -2.3
FRIS Frissel Point 4.81 39 ⇑P Pn 19 18 35.5 0.0
O06A Flanigan 4.98 92 ⇓S Sn 19 19 34.2 -1.3
baz=5.0
P06A Stead Airport, 5.01 98 ⇑S Sn 19 19 36.0 -0.2
baz=5.0
HEBO Mount Hebo 5.02 21 ℯPn Pn 19 18 39.2 +0.8
BKCOR Black Crater 5.07 41 P Pn 19 18 38.8 -0.4
BEND Bend 5.10 45 P Pn 19 18 39.5 -0.1
H04A Detroit Lake 5.13 35 ⇑P Pn 19 18 39.2 -0.7
baz=5.3,SNR=187
H04A ⇑S Sn 19 19 38.0 -1.2
baz=5.3
PINOR Pine Mountain 5.20 49 P Pn 19 18 41.0 +0.1
I05A Bend 5.20 44 ⇓P Pn 19 18 40.9 0.0
baz=5.3,SNR=7.1
CMB Columbia Colle 5.25 117 ℯPn Pn 19 18 39.7 -1.9
CMB ℯSn Sn 19 19 39.1 -3.1
G03A Yamhill 5.26 24 ⇓P Pn 19 18 41.4 -0.2
baz=5.4
G03A ⇑S Sn 19 19 41.5 -0.7
baz=5.4
BPO Bald Peter 5.33 38 P Pn 19 18 42.7 0.0
J06A Christmas Vall 5.34 58 ⇓P Pn 19 18 41.6 -1.1
baz=5.4
SAO San Andreas Ge 5.38 133 ℯPn Pn 19 18 37.7 -5.6
SAO ℯSn Sn 19 19 38.6 -6.7
G04A Mulino 5.44 30 ⇓P Pn 19 18 43.9 -0.2
baz=5.6
L07A Adell 5.46 72 ⇓P Pn 19 18 43.1 -1.4
baz=5.5
M07A Soldier Meadow 5.48 79 ⇓P Pn 19 18 42.6 -2.1
baz=5.5
KMOR Kings Mountain 5.49 21 P Pn 19 18 45.0 +0.3
H05A Madras 5.56 41 ⇓P Pn 19 18 45.4 -0.4
baz=5.7,SNR=65
N07B Gerlach 5.60 85 ⇓P Pn 19 18 45.1 -1.2
baz=5.6
I06A Prineville 5.66 51 ⇓P Pn 19 18 47.0 -0.2
baz=5.8
R06C Coleville 5.69 109 ⇑S Sn 19 19 52.9 0.0
baz=5.6
O07A Toulon 5.71 92 ⇑P Pn 19 18 45.4 -2.4
baz=5.7
O07A ⇓S Sn 19 19 52.2 -1.1
baz=5.7
WAKR Walker 5.71 109 ℯPn Pn 19 18 46.8 -1.1
K07A Rock Creek Ran 5.72 66 ⇓P Pn 19 18 46.6 -1.4
baz=5.8
F03A Seaside 5.74 20 ⇓P Pn 19 18 48.4 +0.1
baz=5.9
VIPM Ingram Point 5.78 45 P Pn 19 18 48.8 0.0
HOOD Mount Hood Mea 5.87 34 ℯPn Pn 19 18 50.3 +0.3
J07A Hines 5.94 59 ⇑P Pn 19 18 49.9 -1.1
baz=6.0
G05A Wamic 5.96 36 ⇓P Pn 19 18 51.3 +0.1
baz=6.1,SNR=24
WVOR Wild Horse Val 6.07 69 ℯP Pn 19 18 50.1 -2.7
H06A Lindquist Farm 6.08 45 ⇓P Pn 19 18 53.1 +0.2
baz=6.2,SNR=16
F04A Amboy 6.08 27 ⇑P Pn 19 18 53.1 +0.1
baz=6.3
I07A Izee 6.16 53 ⇑P Pn 19 18 54.3 +0.2
baz=6.3
L08A Fields 6.22 72 ⇑P Pn 19 18 53.6 -1.4
baz=6.3
VTHM Trough 6.27 41 P Pn 19 18 55.6 +0.1
G06A Carlson Farm, 6.27 40 P Pn 19 18 55.6 +0.1
baz=6.4,SNR=61
E03A Lebam 6.32 18 ⇑P Pn 19 18 56.8 +0.7
baz=6.5
FL2 Flat Top 2 6.34 26 P Pn 19 18 56.9 +0.4
H07A Lands Inn, Kim 6.42 49 ⇑P Pn 19 18 58.0 +0.5
baz=6.5
J08A Circle Bar Ran 6.49 62 ⇓P Pn 19 18 57.6 -1.0
baz=6.6
NVAR Mina Array Bea 6.56 106 Pn Pn 19 18 57.6 -1.9
2.7nm,0.3s,baz=284,slow=14,SNR=39
I08A Drewsey 6.66 57 ⇑P Pn 19 19 00.4 -0.5
baz=6.8
G07A Ruggs Ranch, H 6.79 44 ⇓P Pn 19 19 03.3 +0.7
baz=6.9,SNR=34
JBO Jordan Butte 6.83 42 P Pn 19 19 03.7 +0.5
E05A Randle 6.86 27 ⇑P Pn 19 19 04.4 +0.8
baz=7.0
H08A Prairie City 6.90 52 ⇓P Pn 19 19 04.4 +0.2
baz=7.0
BMN Battle Mountai 6.94 88 P Pn 19 19 02.3 -2.5
BMN pmax pmax
comp=Z,16nm,1.0s
BMN Battle Mountai 6.94 88 Pn Pn 19 19 02.3 -2.5
comp=Z,16nm,1.0s
BMN ℯPb Pb 19 19 21.6 -2.1
J09A Fry Pan Ranch, 6.97 64 ⇓P Pn 19 19 04.4 -0.8
baz=7.0
LON Longmire 7.00 26 ℯP Pn 19 19 05.9 +0.3
LON pmax pmax
comp=Z,53nm,0.9s
LON Longmire 7.00 26 ℯPn Pn 19 19 05.9 +0.3
comp=Z,53nm,0.9s
F07A Phinny Hill Vi 7.09 39 ⇓P Pn 19 19 06.8 0.0
baz=7.2,SNR=13
E06A Yakima 7.13 31 ⇓P Pn 19 19 08.3 +0.9
baz=7.3,SNR=6.7
G08A Pilot Rock 7.18 46 ⇑P Pn 19 19 08.7 +0.6
baz=7.3,SNR=37
I09A Lost Marbles R 7.23 59 ⇓P Pn 19 19 08.8 +0.1
baz=7.3
M10A I.L. Ranch, Tu 7.46 79 ⇑P Pn 19 19 11.5 -0.4
baz=7.5
TPH Tonopah 7.48 106 ℯP Pn 19 19 13.7 +1.5
L10A Juniper Basin 7.57 75 ⇓P Pn 19 19 13.3 -0.1
baz=7.6
H09A Durkee 7.59 54 ⇓P Pn 19 19 14.4 +0.7
baz=7.7
F08A Pendleton 7.61 44 ⇓P Pn 19 19 13.9 0.0
baz=7.7
RSW Rattlesnake Hi 7.62 38 ℯPn Pn 19 19 14.2 +0.1
E07A Sunnyside 7.62 36 ⇓P Pn 19 19 14.0 -0.1
baz=7.8
HAWA Hanford 7.64 38 ℯPn Pn 19 19 14.3 -0.1
G09A Cove 7.85 50 ⇓P Pn 19 19 17.7 +0.5
baz=8.0
Q10A Clear Creek Ra 7.85 100 ⇑P Pn 19 19 17.3 +0.1
baz=7.8
C05A Tolt Reservoir 7.88 23 ⇓P Pn 19 19 19.1 +1.5
baz=8.0
ISA Isabella 7.88 126 ℯP Pn 19 19 15.2 -2.5
ISA ℯ 19 20 42.7
ISA pmax pmax
comp=Z,51nm,0.7s
ISA Isabella 7.88 126 ℯPn Pn 19 19 15.2 -2.6
comp=Z,51nm,0.7s
ISA ℯPn Pn 19 19 15.4 -2.3
ISA ℯSn Sn 19 20 42.7 -4.3
I10A Payette 7.89 60 ⇓P Pn 19 19 17.8 0.0
baz=8.0
BMO Blue Mountains 7.91 54 ℯP Pn 19 19 18.3 +0.3
E08A Dider Farm, El 7.94 39 ⇓P Pn 19 19 18.4 0.0
baz=8.1
K11A Parker Ranch, 8.02 71 ⇓P Pn 19 19 19.9 +0.3
baz=8.1
F09A S2 Ranch, Elgi 8.02 47 ⇓P Pn 19 19 20.2 +0.6
baz=8.1
L11A Cat Creek Ranc 8.12 75 ⇑P Pn 19 19 20.5 -0.4
baz=8.1
H10A Noah's Angus R 8.14 57 ⇑P Pn 19 19 21.5 +0.4
baz=8.2
G10A Bishop Farm, J 8.25 52 ⇑P Pn 19 19 23.5 +0.8
baz=8.4
JCW Jim Creek 8.26 21 ℯPn Pn 19 19 24.1 +1.2
ETW Entiat 8.26 29 ℯPn Pn 19 19 24.6 +1.8
B05A Bryant 8.28 20 ⇑P Pn 19 19 24.3 +1.2
baz=8.5
MFID Camas Ranch 8.33 66 ⇑P Pn 19 19 24.1 +0.4
baz=8.4

C06A Tall Timber Ra 8.33 26 ⇓P Pn 19 19 25.0 +1.2
baz=8.5
PGC Sidney 8.35 13 ℯPn Pn 19 19 26.5 +2.4
comp=Z,2.6nm,1.0s
PGC ℯPn Pn 19 19 27.2 +3.1
I11A Placerville 8.39 63 ⇓P Pn 19 19 24.6 0.0
baz=8.5
D08A Wollman Farm, 8.42 37 ⇓P Pn 19 19 24.5 -0.5
baz=8.6
C07A Waterville 8.43 30 ⇑P Pn 19 19 26.0 +0.8
baz=8.6,SNR=11
ELK Elko 8.43 85 Pn Pn 19 19 25.2 0.0
comp=Z,0.1nm,0.3s,baz=270,slow=10,SNR=9.9
ELK LR LR 19 22 56.7
comp=Z,750nm,18.5s,baz=264,slow=40
F10A Beach Ranch, E 8.56 48 ⇑P Pn 19 19 27.6 +0.6
baz=8.7
N12A Clover Valley, 8.58 84 ⇓P Pn 19 19 27.7 +0.5
baz=8.6
RPW Rockport 8.61 22 ℯPn Pn 19 19 29.0 +1.4
TPNV Topopah Spring 8.66 111 ℯP Pn 19 19 29.8 +1.5
TPNV pmax pmax
comp=Z,15nm,1.1s
TPNV Topopah Spring 8.66 111 ℯPn Pn 19 19 29.8 +1.4
comp=Z,15nm,1.1s
H11A Donnelly 8.66 58 ⇓P Pn 19 19 28.9 +0.6
baz=8.7
B06A Marblemount 8.68 22 ⇓P Pn 19 19 30.0 +1.4
baz=8.8
OD2 Odessa Site #2 8.76 36 ℯPn Pn 19 19 29.3 -0.4
G11A Walters Elk Ra 8.82 53 ⇓P Pn 19 19 31.4 +0.9
baz=8.9
I12A Atlanta 8.92 65 ⇓P Pn 19 19 32.3 +0.4
baz=9.0
F11A Grangeville 9.14 51 ⇓P Pn 19 19 35.6 +0.7
baz=9.2
GSC Goldstone 9.17 122 ℯP Pn 19 19 33.2 -2.1
HLID Hailey 9.36 67 ⇓P Pn 19 19 38.4 +0.5
baz=9.4
HLID Hailey 9.36 67 ℯPn Pn 19 19 37.9 0.0
H12A Diamond D Ranc 9.36 61 ⇓P Pn 19 19 38.5 +0.6
baz=9.4
E11A Bogner Ranch, 9.36 48 ⇓P Pn 19 19 38.6 +0.6
baz=9.5
K13A Stover Farm, H 9.41 73 ⇑P Pn 19 19 38.4 -0.2
baz=9.4
O13A Hicks Ranch, I 9.44 89 ⇑P Pn 19 19 39.4 +0.3
baz=9.4
L13A Double Diamond 9.44 77 ⇑P Pn 19 19 38.9 -0.2
baz=9.5
A07A Ashnola River, 9.48 24 ⇓P Pn 19 19 41.2 +1.6
baz=9.6
J13A Cove Ranch, Pi 9.49 69 ⇓P Pn 19 19 40.0 +0.3
baz=9.5
F12A Elk City 9.61 54 ⇓P Pn 19 19 42.3 +0.9
baz=9.7
SHPR Sheep Range 9.64 111 ℯPn Pn 19 19 44.2 +2.5
I13A Wildhorse Cree 9.66 66 ⇓P Pn 19 19 42.1 +0.1
baz=9.7
E12A Beaver Dam Sad 9.76 50 ⇑P Pn 19 19 43.9 +0.4
baz=9.9
H13A Challis 9.77 62 ⇑P Pn 19 19 44.4 +0.9
baz=9.8
G13A Cobalt 9.97 59 ⇓P Pn 19 19 46.7 +0.4
baz=10
N14A Grayback Hills 9.99 84 ⇓P Pn 19 19 46.6 +0.1
baz=10.0
A09A Danville 10.05 31 ⇓P Pn 19 19 48.7 +1.3
baz=10
I14A Mackay 10.12 66 ⇑P Pn 19 19 49.2 +0.8
baz=10
NEW Newport 10.13 37 ℯP Pn 19 19 47.7 -0.8
F13A Darby 10.20 55 ⇑P Pn 19 19 50.0 +0.5
baz=10
D12A Red Ives Fores 10.25 47 ⇑P Pn 19 19 50.1 +0.1
baz=10
H14A Leadore 10.38 63 ⇑P Pn 19 19 52.2 +0.3
baz=10
A10A Northport 10.47 34 ⇓P Pn 19 19 53.8 +0.7
baz=11
G14A Jackson 10.54 59 P Pn 19 19 53.8 -0.2
baz=11
K15A Arbon 10.55 74 ⇑P Pn 19 19 53.9 -0.3
baz=11
C12B Naegeli Ranch, 10.57 44 ⇓P Pn 19 19 54.3 -0.2
baz=11
E13A Victor 10.60 52 ⇑P Pn 19 19 56.0 +1.2
baz=11
J15A Blackfoot 10.73 70 ⇓P Pn 19 19 57.7 +1.0
baz=11
D13A Huson 10.78 49 ⇓P Pn 19 19 57.5 +0.2
baz=11
F14A Wisdom 10.82 57 ⇓P Pn 19 19 58.6 +0.7
baz=11
I15A Monteview 10.82 67 ⇑P Pn 19 19 58.3 +0.3
baz=11
H15A Lima 10.87 64 ⇓P Pn 19 19 58.9 +0.2
baz=11
NLU North Lily Min 10.91 89 ℯPn Pn 19 20 01.4 +2.2
MSO Missoula 10.94 51 ℯPn Pn 19 20 00.2 +0.7
A11A Hall Mountain, 10.98 37 ⇓P Pn 19 20 01.0 +0.9
baz=11
E14A Clinton 11.01 54 ⇑P Pn 19 20 01.1 +0.6
baz=11
B12A Libby 11.01 40 ⇓P Pn 19 20 00.9 +0.4
baz=11
BSMT Bassoo Peak 11.03 45 ℯPn Pn 19 20 01.3 +0.6
C13A Hot Springs 11.04 46 ⇓P Pn 19 20 01.2 +0.2
baz=11
MSU Marysvale 11.12 96 ℯP Pn 19 20 04.4 +2.3
DLMT Dillon 11.15 60 ℯPn Pn 19 20 02.3 -0.1
comp=Z,109nm,1.1s
DLMT ℯPn Pn 19 20 03.4 +1.0
G15A Dillon 11.15 61 ⇓P Pn 19 20 01.9 -0.5
baz=11
JTMT Jette 11.24 46 ℯPn Pn 19 20 03.9 +0.3
W13A Hualapai Mount 11.24 115 ⇓P Pn 19 20 04.9 +1.1
baz=11
K16A Soda Springs 11.26 74 ⇓P Pn 19 20 04.4 +0.5
baz=11
SWMT Swartz Lake 11.26 48 ℯPn Pn 19 20 04.3 +0.3
A12A Yaak River Ran 11.29 39 ⇓P Pn 19 20 05.4 +1.0
baz=11
J16A Bone 11.30 71 ⇑P Pn 19 20 05.4 +0.9
baz=11
N16A Rees Ranch, Co 11.31 83 ⇓P Pn 19 20 05.5 +0.8
baz=11
D14A Greenough 11.32 51 ⇑P Pn 19 20 05.0 +0.2
baz=11
CHMT Chamberlain Mo 11.39 52 ℯPn Pn 19 20 06.2 +0.5
F15A Butte 11.39 58 ⇑P Pn 19 20 05.9 +0.2
baz=12
LRM Limekiln Ridge 11.41 58 ℯPn Pn 19 20 06.6 +0.6
SLMT Seeley Lake 11.41 50 ℯPn Pn 19 20 06.2 +0.2
DAU Daniels Canyon 11.48 86 ℯP Pn 19 20 08.7 +1.7
I16A Newdale 11.49 68 ⇓P Pn 19 20 07.5 +0.4
baz=12
V14A Boquillas Ranc 11.52 111 ⇑P Pn 19 20 09.1 +1.6
baz=11
B13A Whitefish 11.52 43 ⇑P Pn 19 20 07.4 -0.1
baz=12
RRI2 Red Ridge 11.52 71 ℯPn Pn 19 20 08.7 +1.2
comp=Z,28nm,1.3s
RRI2 ℯPn Pn 19 20 09.1 +1.6
E15A Deer Lodge 11.54 55 ⇓P Pn 19 20 09.2 +1.5
baz=12
C14A Swan Lake 11.55 47 ⇑P Pn 19 20 07.9 0.0
baz=12
X13A Yucca 11.56 117 ⇑P Pn 19 20 08.2 +0.1
baz=12
AHID Auburn Hatcher 11.61 74 ℯPn Pn 19 20 08.7 0.0
G16A Moss Hill, Enn 11.63 62 ⇑P Pn 19 20 09.1 +0.1
baz=12
TMUT Trail Mountain 11.68 91 ℯPn Pn 19 20 12.2 +2.5
W14A Seligman 11.74 113 ⇑P Pn 19 20 12.0 +1.4
baz=12
N17A Moffit Pass 11.76 83 ⇑P Pn 19 20 11.6 +0.7
baz=12
QLMT Earthquake Lak 11.76 64 ℯPn Pn 19 20 12.2 +1.4
TPAW Teton Pass 11.81 71 ℯPn Pn 19 20 10.6 -0.8
comp=Z,34nm,1.3s
TPAW ℯPn Pn 19 20 14.4 +3.0
H16A Russell Place, 11.85 65 ⇑P Pn 19 20 12.0 0.0
baz=12
REDW Red Top Meadow 11.86 71 ℯPn Pn 19 20 13.5 +1.3
comp=Z,31nm,1.3s
REDW ℯPn Pn 19 20 14.7 +2.6

BOZ Bozeman (W) 11.88 60 ⇓P Pn 19 20 12.3 -0.2
baz=12
BOZ Bozeman (W) 11.88 60 ℯPn Pn 19 20 11.1 -1.3
IMW Indian Meadow 11.89 69 ℯPn Pn 19 20 13.0 +0.4
comp=Z,22nm,1.1s
IMW ℯPn Pn 19 20 14.2 +1.6
D15A Lincoln 11.89 52 ⇓P Pn 19 20 12.6 0.0
baz=12
A13A Flathead Natio 11.90 41 ⇓P Pn 19 20 12.6 -0.1
baz=12
O17A Robinson Place 11.90 87 ⇑P Pn 19 20 12.7 -0.1
baz=12
F16A Kennard Place, 11.93 59 ⇑P Pn 19 20 13.5 +0.4
baz=12
MOOW Moose Ponds 12.00 69 ℯPn Pn 19 20 14.1 0.0
comp=Z,65nm,2.0s
MOOW ℯPn Pn 19 20 15.3 +1.2
P17A Butcher Ranch, 12.01 90 ⇓P Pn 19 20 14.8 +0.6
baz=12
LOHW Long Hollow 12.08 70 ℯPn Pn 19 20 14.8 -0.3
comp=Z,20nm,1.3s
LOHW ℯPn Pn 19 20 16.4 +1.3
YFT Old Faithful 12.08 66 ℯPn Pn 19 20 18.9 +3.8
V15A Kaibab Nationa 12.10 108 ⇑P Pn 19 20 16.3 +0.8
baz=12
B14A Marquette Ranc 12.15 46 ⇓P Pn 19 20 16.9 +0.8
baz=12
HRY Holter Researc 12.16 55 ℯPn Pn 19 20 17.8 +1.5
E16A East Helena 12.19 56 ⇓P Pn 19 20 16.8 +0.2
baz=12
C15A Salmond Ranch, 12.20 49 ⇑P Pn 19 20 17.3 +0.5
baz=12
WALA Waterton Lakes 12.23 42 ℯPn Pn 19 20 17.7 +0.5
comp=Z,1.0nm,1.2s
WALA ℯPn Pn 19 20 18.1 +0.9
SRU San Rafael 12.24 92 ⇑P Pn 19 20 18.0 +0.7
baz=12
SRU San Rafael 12.24 92 ℯPn Pn 19 20 19.7 +2.3
H17A Grant Village 12.25 67 ⇑P Pn 19 20 18.0 +0.5
baz=12
YNR Norris Junctio 12.25 65 ℯPn Pn 19 20 20.5 +3.0
R17A Hanksville Air 12.26 95 ⇓P Pn 19 20 18.8 +1.3
baz=12
X14A Yava 12.27 115 ⇓P Pn 19 20 19.1 +1.3
baz=12
M18A Lyman 12.32 81 ⇑P Pn 19 20 18.4 -0.1
baz=12
W15A Williams 12.34 111 ⇓P Pn 19 20 19.8 +1.1
baz=12
L18A Fontenelle, Gr 12.34 78 ⇑P Pn 19 20 19.0 +0.2
baz=12
K18A Toltan Ranch, 12.37 75 ⇑P Pn 19 20 19.5 +0.4
baz=12
G17A Pierce Place, 12.37 62 ⇑P Pn 19 20 19.2 +0.1
baz=12
LKWY Lake 12.41 66 ℯP Pn 19 20 20.9 +1.3
A14A Double T Ranch 12.43 43 ⇑P Pn 19 20 20.4 +0.4
baz=13
J18A Kendall Valley 12.44 72 ⇓P Pn 19 20 20.3 +0.2
baz=12
D16A Dana Ranch, Ca 12.48 54 ⇑P Pn 19 20 20.5 0.0
baz=13
B15A Bradely Ranch, 12.51 47 ⇑P Pn 19 20 21.3 +0.2
baz=13
Q18A Rafter H Ranch 12.54 91 ⇑P Pn 19 20 21.6 +0.1
baz=12
F17A Fitzpatrick Pl 12.61 60 ⇓P Pn 19 20 22.7 +0.3
baz=13
N18A Larsen Ranch, 12.64 83 ⇑P Pn 19 20 22.4 -0.4
baz=13
I18A Diamond G Ranc 12.65 70 ⇓P Pn 19 20 22.5 -0.5
baz=13
E17A Martinsdale 12.68 57 ⇑P Pn 19 20 23.0 -0.4
baz=13
X15A Humboldt 12.71 114 ⇑P Pn 19 20 24.6 +0.7
baz=13
C16A Fuhringer Ranc 12.72 50 ⇓P Pn 19 20 23.9 0.0
baz=13
U16A Tuba City 12.72 105 ⇑P Pn 19 20 24.8 +0.9
baz=13
BW06 Boulder Array 12.74 75 ⇑P Pn 19 20 24.1 0.0
baz=13
BW06 Boulder Array 12.74 75 ℯPn Pn 19 20 24.6 +0.4
PDAR Pinedale Array 12.74 75 Pn Pn 19 20 24.9 +0.8
comp=Z,0.0nm,0.3s,baz=278,slow=10,SNR=11
A15A Johnson Ranch, 12.80 44 ⇓P Pn 19 20 25.0 +0.1
baz=13
WUAZ Wupatki 12.81 108 ⇑P Pn 19 20 26.4 +1.2
baz=13
WUAZ Wupatki 12.81 108 ℯPn Pn 19 20 28.0 +2.7
L19A Farson 12.85 78 ⇓P Pn 19 20 25.6 -0.2
baz=13
R18A Canyonlands Na 12.88 94 ⇑P Pn 19 20 26.4 +0.2
baz=13
W16A Flagstaff 12.90 110 ⇓P Pn 19 20 27.5 +1.1
baz=13
Y15A Casa Rosa Ranc 12.94 116 ⇓P Pn 19 20 28.1 +1.1
baz=13
S18A Hurst Farm, Bl 13.00 97 ⇓P Pn 19 20 28.0 +0.2
baz=13
N19A John Jarvie Ra 13.02 83 ⇑P Pn 19 20 27.3 -0.7
baz=13
B16A M & M Farms, S 13.05 48 ⇓P Pn 19 20 28.5 +0.1
baz=13
D17A Six Diamond Ra 13.06 55 ⇓P Pn 19 20 27.7 -0.8
baz=13
G18A Lazy EL Ranch, 13.17 63 ⇓P Pn 19 20 29.7 -0.3
baz=13
C17A Wharram Farm, 13.22 53 ⇓P Pn 19 20 30.6 -0.2
baz=13
Q19A Hogan Spring (13.23 91 ⇓P Pn 19 20 31.1 +0.2
baz=13
F18A Big Timber 13.23 61 ⇓P Pn 19 20 30.5 -0.4
baz=13
K19A Absolon Red Bu 13.26 74 ⇓P Pn 19 20 30.6 -0.8
baz=13
X16A Lo Mia Camp, P 13.31 113 ⇑P Pn 19 20 33.1 +1.1
baz=13
RLMT Red Lodge 13.32 64 ℯPn Pn 19 20 33.1 +1.0
E18A Harlowton 13.32 58 ⇓P Pn 19 20 31.8 -0.3
baz=13
A16A West Butte Ran 13.40 46 ⇑P Pn 19 20 32.7 -0.4
baz=14
Z15A Gila River Ind 13.45 118 ⇓P Pn 19 20 33.8 -0.1
baz=13
B17A L&G Farms, Che 13.51 50 ⇓P Pn 19 20 33.9 -0.8
baz=14
Y16A Circle Bar Ran 13.57 115 ⇓P Pn 19 20 36.2 +0.6
baz=14
K20A Yellowstone Ra 13.62 75 ⇓P Pn 19 20 35.2 -1.1
baz=14
D18A Linhart Farms, 13.63 55 ⇓P Pn 19 20 36.8 +0.5
baz=14
PV04 Paradox Valley 13.63 93 ℯPn Pn 19 20 38.3 +1.9
S19A Harvey Farm, M 13.63 96 ⇑P Pn 19 20 36.8 +0.4
baz=14
M20A Sweetwater, Wa 13.73 80 ⇓P Pn 19 20 37.1 -0.6
baz=14
115A Sonoran Desert 13.76 120 ⇑P Pn 19 20 38.6 +0.4
baz=14
A17A Triple J Farms 13.90 48 ⇑P Pn 19 20 39.7 -0.2
baz=14
Z16A Peralta Trail, 13.91 116 ⇑P Pn 19 20 40.6 +0.4
baz=14
Q20A Ridgley Place, 13.97 91 ⇑P Pn 19 20 40.4 -0.5
baz=14
EGMT Eagleton 14.01 52 ⇓P Pn 19 20 40.8 -0.7
baz=14
EGMT Eagleton 14.01 52 ℯPn Pn 19 20 41.2 -0.2
T19A Beclabito 14.02 100 ⇑P Pn 19 20 42.4 +0.7
baz=14
Y17A Roosevelt 14.11 114 ⇑P Pn 19 20 43.3 +0.3
baz=14
B18A Beardsley Farm 14.16 51 ⇑P Pn 19 20 42.7 -0.8
baz=14
116A Eloy 14.19 120 ⇑P Pn 19 20 44.2 +0.2
baz=14
L21A Rawlins 14.33 78 ⇓P Pn 19 20 43.6 -2.3
baz=14
A18A Metzger Ranch, 14.37 49 ⇑P Pn 19 20 45.5 -0.9
baz=14
RWWY Rawlins 14.46 79 ℯPn Pn 19 20 46.5 -1.2
Y18A Canyon Day Jun 14.64 112 ⇑P Pn 19 20 50.5 +0.4
baz=15
216A Three Points, 14.71 121 ⇓P Pn 19 20 51.2 +0.1
baz=15
117A Oracle 14.83 118 ⇑P Pn 19 20 52.9 +0.1
baz=15

X19A	St. Johns	14.84	109	⇓P	Pn	19 20 53.0	+0.2
	baz=15						
SMCO	Snowmass	14.93	89	ePn	Pn	19 20 46.7	-7.4
	comp=Z,20nm,1.6s						
TUC	Tucson	14.96	118	eP	Pn	19 20 51.5	-3.0
L22A	Ellis Ranch, M	15.03	78	⇑P	Pn	19 20 53.6	-1.8
	baz=15						
217A	Green Valley	15.27	120	⇑P	Pn	19 20 58.0	-0.7
	baz=15						
118A	Homack Ranch,	15.32	116	⇓P	Pn	19 20 59.3	0.0
	baz=15						
EDM	Edmonton	15.43	30	ePn	Pn	19 20 58.8	-1.9
EDM				ePn	Pn	19 20 59.4	-1.3
218A	Dragoon	15.66	118	⇑P	Pn	19 21 03.5	-0.3
	baz=16						
PHWY	Pilot Hill	15.79	80	ePn	Pn	19 21 03.8	-1.6
	comp=Z,22nm,1.4s						
ISCO	Idaho Springs	15.85	86	eP	Pn	19 21 07.4	+1.2
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ISCO	Idaho Springs	15.85	86	ePn	Pn	19 21 07.4	+1.2
	comp=Z,9.7nm,1.2s						
318A	Bisbee	16.03	119	⇓P	Pn	19 21 08.7	+0.2
	baz=16						
219A	White Tail Can	16.18	116	⇑P	Pn	19 21 10.5	0.0
	baz=16						
SDCO	Great Sand Dun	16.40	93	ePn	Pn	19 21 13.8	+0.6
	comp=Z,35nm,1.4s						
319A	Douglas	16.54	118	⇓P	Pn	19 21 15.6	+0.5
	baz=16						
LENM	Lemitar	16.64	106	eP	Pn	19 21 19.7	+3.4
ANMO	Albuquerque	16.67	103	Pn	Pn	19 21 18.0	+1.3
	baz=307,slow=11,SNR=10.0						
ANMO				LR	LR	19 28 45.1	
	comp=Z,413nm,18.2s,baz=295,slow=41						
ANMO	Albuquerque	16.67	103	eP	Pn	19 21 17.7	+1.0
ANMO				pmax	pmax		
	comp=Z,36nm,1.8s						
ANMO	Albuquerque	16.67	103	ePn	Pn	19 21 17.7	+1.0
	comp=Z,36nm,1.8s						
LPM	Los Pinos Moun	16.83	105	eP	Pn	19 21 21.7	+3.0
DGMT	Dagmar	17.61	56	⇑P	Pn	19 21 28.0	-0.4
	baz=18						
DGMT	Dagmar	17.61	56	ePn	Pn	19 21 26.6	-1.9
	comp=Z,151nm,1.4s						
DLBC	Dease Lake	18.05	354	P	Pn	19 21 35.8	+2.0
	comp=Z,0.3nm,0.3s,baz=167,slow=14,SNR=5.3						
GDL2	Guadalupe Moun	19.52	108	ePn	Pn	19 21 57.5	+5.8
LPIG	La Paz	21.21	136	LR	LR	19 28 53.2	
	comp=Z,247nm,20.5s,MS3.6,baz=306,slow=33						
TXAR	Lajitas Array	21.63	114	P	P	19 22 13.6	+0.3
	comp=Z,7.5nm,1.1s,mb4.0,baz=301,slow=7.8,SNR=19						
TXAR				LR	LR	19 30 10.7	
	comp=Z,207nm,18.3s,MS3.6,baz=0.0,slow=36						
TXAR	Lajitas Array	21.63	114	P	P	19 22 13.6	+0.3
TXAR				LR	LR	19 30 10.7	
ECSD	EROS,Sioux Fal	22.20	72	ePn	P	19 22 17.8	-1.7
	comp=Z,64nm,1.1s,mb5.0						
WMOK	Wichita Mounta	22.52	96	eP	P	19 22 23.2	+0.3
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
WMOK	Wichita Mounta	22.52	96	ePn	P	19 22 23.2	+0.3
	comp=Z,7.0nm,0.9s,mb4.1						
AGMN	Agassiz Refuge	22.98	60	eP	P	19 22 26.9	-0.7
	comp=Z,355nm,2.3s,mb5.4						
YKA	Yellowknife Ar	23.07	14	P	P	19 22 28.6	+0.2
	comp=Z,1.8nm,0.7s,mb3.6,baz=199,slow=11,SNR=19						
ULM	Lac du Bonnet	23.33	55	P	P	19 22 30.3	-1.0
	comp=Z,19nm,0.8s,mb4.6,baz=258,slow=9.7,SNR=17						
ULM				LR	LR	19 32 17.8	
	comp=Z,673nm,21.4s,MS4.1,baz=158,slow=39						
ULM	Lac du Bonnet	23.33	55	eP	P	19 22 29.7	-1.6
	comp=Z,48nm,1.3s,mb4.8						
MENT	Mentasta	24.70	341	eP	P	19 22 46.0	+2.1
DAWY	Dawson	24.76	346	eP	P	19 22 50.3	+5.8
RC01	Rabbit Creek A	25.07	333	eP	P	19 22 48.2	+0.9
	comp=Z,29nm,1.3s,mb4.6						
PAX	Paxson	25.18	339	P	P	19 22 49.7	+1.4
PAX				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.4						
PAX	Paxson	25.18	339	P	P	19 22 49.7	+1.4
	comp=Z,22nm,1.6s,mb4.4						
PMR	Palmer	25.22	334	eP	P	19 22 48.1	-0.6
PMR				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
PMR	Palmer	25.22	334	eP	P	19 22 48.1	-0.6
	comp=Z,16nm,1.0s,mb4.5						
MIAR	Mount Ida	26.55	93	eP	P	19 23 04.4	+3.4
MIAR				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.5						
MIAR	Mount Ida	26.55	93	eP	P	19 23 04.4	+3.4
	comp=Z,26nm,1.4s,mb4.6						
MCK	McKinley	26.75	338	P	P	19 23 01.9	-0.6
MCK				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.6						
MCK	McKinley	26.75	338	P	P	19 23 01.9	-0.6
	comp=Z,28nm,1.5s,mb4.6						
JFWS	Jewell Farm	26.90	73	eP	P	19 23 00.6	-3.5
JFWS				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
JFWS	Jewell Farm	26.90	73	eP	P	19 23 00.6	-3.5
	comp=Z,24nm,1.1s,mb4.7						
TRF	Thorofare Moun	26.94	336	P	P	19 23 05.4	+1.2
	comp=Z,234nm,2.5s,mb5.3						
CCM	Cathedral Cave	27.16	84	eP	P	19 23 05.9	-0.5
CCM				pmax	pmax		
	comp=Z,69nm,1.9s,mb4.9						
CCM	Cathedral Cave	27.16	84	eP	P	19 23 05.9	-0.5
	comp=Z,69nm,1.9s,mb4.9						
FCC	Fort Churchill	27.30	37	eP	P	19 23 06.7	-0.8
FCC				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
FCC	Fort Churchill	27.30	37	eP	P	19 23 06.7	-0.8
	comp=Z,0.5nm,0.9s,mb3.0						
COLA	College	27.34	340	iP	P	19 23 10.5	+2.7
LRAL	Lakeview Retre	32.17	91	eP	P	19 23 50.7	-0.2
	comp=Z,7.3nm,0.9s,mb4.5						
CPCT	Cooper Cave	33.11	85	eP	P	19 24 00.2	+1.1
CMIG	Matias Romero	35.82	122	P	P	19 24 22.7	0.0
	comp=Z,0.9nm,0.4s,mb4.0,baz=333,slow=9.0,SNR=2.2						
RES	Resolute Bay	37.14	13	P	P	19 24 33.5	0.0
	comp=Z,4.8nm,0.9s,mb4.3,baz=222,slow=9.3,SNR=11						
SCHQ	Schefferville	41.23	49	P	P	19 25 06.7	-1.2
	comp=Z,9.8nm,0.9s,mb4.4,baz=305,slow=7.5,SNR=5.2						
SEY	Seymchan	51.05	324	iP	P	19 26 21.2	-3.8
PETK	Petropavlovsk-	51.09	311	P	P	19 26 24.9	-0.6
	comp=Z,1.0nm,0.7s,mb3.9,baz=75,slow=12,SNR=3.0						
TIXI	Tiksi	56.45	338	⇑eP	P	19 27 03.7	-0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
TIXI	Tiksi	56.45	338	eP	P	19 27 03.4	-1.1
	comp=Z,4.5nm,0.4s,mb4.8						
YAK	Yakutsk	61.03	328	⇓eP	P	19 27 35.3	-1.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
YAK	Yakutsk	61.03	328	eP	P	19 27 35.4	-1.0
	comp=Z,5.3nm,0.7s,mb4.8						
NB2	NORSAR Subarra	73.01	20	P	P	19 28 52.3	-0.3
	comp=Z,7.6nm,1.7s,mb4.3,baz=326,slow=5.9						
NOA	NORSAR Array B	73.01	20	P	P	19 28 52.3	-0.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=312,slow=7.0,SNR=2.5						
NOA				LR	LR	19 59 26.5	
	comp=Z,75nm,20.8s,MS4.0,baz=20,slow=35						
CN2	Changchun	74.09	314	eP	P	19 28 56.7	-2.5
CN2				eS	S	19 38 28.0	-3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SONM	Songino Array	80.35	327	P	P	19 29 34.1	-0.2
	comp=Z,0.8nm,0.8s,mb3.7,baz=27,slow=2.9,SNR=5.1						
NVS	Novosibirsk	81.67	343	eP	P	19 29 35.5	-5.7
BJI	Beijing	81.67	317	P	P	19 29 38.7	-2.8
BJI				AMB	AMB		
	comp=Z,6.0nm,0.4s,mb4.9						
BJI				AMB	AMB		
	comp=Z,302nm,5.3s						
BJI				LR	LR		
	comp=N,282nm,19.6s,MS5.0						
BJI				LR	LR		
	comp=E,619nm,17.0s,MS5.0						
BJI				LR	LR		
	comp=Z,545nm,24.8s						
ZALV	Zalesovo Beam	82.13	342	P	P	19 29 42.7	-0.9
	comp=Z,1.0nm,0.8s,mb3.8,baz=20,slow=4.6,SNR=3.4						
ZALV				LR	LR	20 08 31.2	
	comp=Z,174nm,21.6s,MS4.4,baz=76,slow=37						
ZALV	Zalesovo Beam	82.13	342	P	P	19 29 42.7	-0.9
ZALV				LR	LR	20 08 31.2	
HVS	Khovu-Aksy	82.22	336	iP	P	19 29 41.6	-2.5
HVS				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
ARU	Arti	83.29	357	iP	P	19 29 50.9	+1.3
HHC	Hu-ho-hao-te	83.41	320	eP	P	19 29 46.4	-4.1
HHC				AP	pP	19 29 50.4	-3.5
HHC				XP	sP	19 29 53.7	-1.3
HHC				PP	PP	19 32 58.3	-3.5
HHC				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,90nm,4.0s						
HHC				LR	LR		
	comp=N,347nm,13.1s,MS5.0						
HHC				LR	LR		
	comp=E,334nm,13.1s,MS5.0						
HHC				LR	LR		
	comp=Z,394nm,14.3s,MS4.9						
GERES	GERESS Array B	84.23	25	P	P	19 29 54.0	-0.6
	comp=Z,0.4nm,0.4s,mb3.9,baz=337,slow=9.6,SNR=3.7						
BVAR	Borovoye Array	85.68	350	P	P	19 30 01.4	-0.4
	comp=Z,1.2nm,0.7s,mb4.3,baz=346,slow=3.1,SNR=8.6						
KURK	Kurchatov	86.52	344	P	P	19 30 05.2	-0.8
	comp=Z,1.3nm,0.8s,mb4.2,baz=21,slow=4.5,SNR=4.1						
AKASG	Malin Array Be	86.63	15	P	P	19 30 05.4	-1.1
	comp=Z,0.5nm,0.4s,mb4.1,baz=333,slow=4.1,SNR=3.3						
AKTK	Aktyubinsk	89.31	357	P	P	19 30 18.8	-0.5
AKTO	Aktyubinsk	89.31	357	P	P	19 30 18.8	-0.5
	comp=Z,2.8nm,1.0s,mb4.5,baz=3.0,slow=6.3,SNR=6.1						
MKAR	Makanchi Array	89.37	341	P	P	19 30 19.6	0.0
	comp=Z,0.7nm,0.9s,mb4.0,baz=16,slow=3.5,SNR=3.6						
XAN	Xi'an	89.99	317	P	P	19 30 18.3	-4.5
XAN				AP	pP	19 30 23.0	-3.2
XAN				PP	PP	19 33 52.0	-3.0
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.4						
XAN				LR	LR		
	comp=N,15nm,19.1s,MS4.1						
XAN				LR	LR		
	comp=E,71nm,22.8s,MS4.1						
XAN				LR	LR		
	comp=Z,90nm,19.1s,MS4.2						
WMQ	Urumqi	90.59	336	eP	P	19 30 25.0	-0.4
LZH	Lanzhou	90.89	322	eP	P	19 30 24.0	-3.0
LZH				AP	pP	19 30 27.1	-3.2
LZH				XP	sP	19 30 28.9	-2.6
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,58nm,4.3s						
CD2	Chengdu	95.11	319	eP	P	19 30 42.6	-3.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,270nm,8.0s						
GYA	Guiyang	97.13	314	eP	P	19 30 53.2	-2.6
GYA				PP	PP	19 34 51.8	+0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,70nm,6.2s						
GYA				LR	LR		
	comp=N,440nm,20.9s,MS5.1						
GYA				LR	LR		
	comp=E,382nm,19.3s,MS5.1						
GYA				LR	LR		
	comp=Z,369nm,20.7s,MS4.8						
BRTR	Keskin Array B	98.04	15	LR	LR	20 21 19.3	
	comp=Z,66nm,20.1s,MS4.1,baz=192,slow=39						

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*JMA **11** 19:18:02.1±0.3, 2399N×12286E, h26^{km}±5^{km}, M2.2*
*ISCJB **11** 19:18:03.0±0.8, 2399N±005×12290E±003, h27^{km}±9^{km}, Error ellipse: s-maj=8.1km s-min=4.9km az=170.3*
*TAP **11** 19:18:04.5, 2398N×12271E, h12^{km}±1^{km}, ML2.6, D*
ISC 11 19:18:03.1±0.8, **2401N**±005×**12291E**±003, **h23**^{km}±8^{km}, **n23**, σ**0**^{s}**92**/38, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.47	12	P	Pb	19 18 12.0	-0.7
IRIF	Iriomote-Funau	0.82	66	P	Pb	19 18 17.9	-0.8
IRIF				eS	Sb	19 18 29.6	+0.2
HATJ	Hateruma jima	0.82	86	P	Pb	19 18 18.1	-0.6
JKRS	Kuro-shima	1.03	77	P	Pn	19 18 21.5	-0.7
TWC	Suao	1.14	302	P	Pn	19 18 23.6	0.0
	baz=308						
TWC				iS	Sb	19 18 38.2	-0.2
	baz=308						
ENA	Nanau	1.14	292	iP	Pn	19 18 23.6	-0.1
	baz=296						
ENA				eS	Sb	19 18 38.5	-0.2
	baz=296						
JIJ	Ishigaki jima	1.19	72	P	Pn	19 18 23.4	-0.9
JIJ				eS	Sn	19 18 39.9	+0.2
TWE	Neicheng	1.34	303	P	Pn	19 18 27.3	+0.9
	baz=307						
TWE				S	Sn	19 18 43.5	0.0
	baz=307						
ESL	Shilin	1.36	262	eP	Pn	19 18 25.3	-1.4
	baz=261						
ESL				eS	Sn	19 18 41.1	-2.9
	baz=261						
ENTT	Nioudou	1.38	298	P	Pn	19 18 27.8	+0.9
	baz=302						
ENTT				S	Sn	19 18 44.4	0.0
	baz=302						
NNS	Nan Shan	1.47	288	eP	Pn	19 18 28.9	+0.7
	baz=290						
NNS				eS	Sn	19 18 46.6	0.0
	baz=290						
WHF	Hehuan Shan	1.51	276	eP	Pn	19 18 29.2	+0.5
	baz=276						
WHF				eS	Sn	19 18 46.6	-1.0
	baz=276						
EHY	Hungye	1.53	251	eP	Pn	19 18 29.4	+0.3
	baz=249						
EHY				eS	Sn	19 18 47.7	-0.6
	baz=249						
NSK	Sanguang	1.56	296	eP	Pn	19 18 29.0	-0.5
	baz=299						
NSK				eS	Sn	19 18 49.3	+0.3
	baz=299						
TWF1	Yuli	1.61	247	eP	Pn	19 18 30.8	+0.7
	baz=244						
TWF1				eS	Sn	19 18 49.4	-0.8
	baz=244						
JTJ	Tarama	1.76	68	P	Pn	19 18 32.5	+0.4
SMLT	Sun Moon Lake	1.84	267	eP	Pn	19 18 33.8	+0.5
	baz=266						
TYC	Yuchr	1.88	267	eP	Pn	19 18 34.3	+0.5
	baz=267						
TYC				eS	Sn	19 18 56.2	-0.6
	baz=267						
ELDTW	Lidau	1.91	245	eP	Pn	19 18 34.4	+0.1
	baz=243						
ELDTW				eS	Sn	19 18 56.3	-1.4
	baz=243						
ALS	Alishan	1.99	256	eP	Pn	19 18 36.2	+0.8
	baz=254						
ALS				eS	Sn	19 18 59.1	-0.4
	baz=254						
CHN5	Tsauling	2.08	259	eP	Pn	19 18 39.1	+2.5
	baz=258						
WTP	Ta-pu	2.23	251	eP	Pn	19 18 41.2	+2.5
	baz=249						
CHN1	Nanshi	2.33	250	eP	Pn	19 18 42.7	+2.6
	baz=248						

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*BJI **11** 19:30:41.9, 390S×10107E, h56^{km}, mB5.0, mb4.9, Ms4.7, Msz4.5*
*MOS **11** 19:30:43.7±1.1, 320S×10093E, h33^{km}, mb5.1/26, MS4.4/5, Error ellipse: s-maj=13.3km s-min=6.1km az=105.9*
*IDC **11** 19:30:43.6±4.4, 327S×10081E, h19^{km}±27^{km}, mb4.4/22, mb1 4.5/24, mb1mx4.4/28, mbtmp4.5/24, ML4.5/2, MS4.2/8, Ms1 4.2/8, ms1mx3.8/25, Error ellipse: s-maj=18.0km s-min=12.3km az=59.0*
*ISCJB **11** 19:30:46.2±0.3, 326S±004×10083E±004, h53^{km}, mb4.9/77, MS4.4/23, Error ellipse: s-maj=5.9km s-min=4.0km az=43.4*
*NEIC **11** 19:30:47.4±1.3, 327S×10089E, h50^{km}±11^{km}, mb4.9/38, Error ellipse: s-maj=9.2km s-min=5.3km az=53.0*
*DJA **11** 19:30:47, 334S×10066E, h28^{km}, Mw5.2/10*
ISC 11 19:30:48.3±0.3, **328S**±004×**10085E**±004, **h55**^{km}, **h55**^{km}±2.5^{km}**:pP-P, n196**, σ**1**^{s}**02**/184, **mb4.9**/77, **MS4.4**/23, **21C-11D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	1.78	102	P	Pn	19 31 15.3	-1.5
PPI	Padang Panjang	2.84	351	P	Pn	19 31 29.8	-1.5
RGRI	Rengat	3.27	27	P	Pn	19 31 36.6	-0.6
KLI	Kotabumi	4.30	112	P	Pn	19 31 53.0	+1.8
PPBI	Pangkal Pinang	5.40	78	P	Pn	19 32 06.5	+0.1
	44nm,0.8s,1µm0.7nm						
KGM	Kluang	5.82	25	⇑P	Pn	19 32 12.0	-0.1
MYKOM	Kota Tinggi	5.87	31	⇑P	Pn	19 32 13.1	+0.3
MYKOM	Kota Tinggi	5.87	31	P	Pn	19 32 13.3	+0.5
	144nm,1.4s,1µm0.9nm						
SBJI	Serang	5.97	118	P	Px	19 32 27.2	
PSI	Prapat	6.34	342	Pn	Pn	19 32 15.5	-3.8
	10nm,0.3s,baz=136,slow=5.8,SNR=20						
PSI				Sn	Sn	19 33 36.3	+5.9
	1.6nm,0.3s,baz=203,slow=18,SNR=2.8						
PSI				LR	LR	19 35 30.0	
	comp=Z,3µm,18.1s,baz=157,slow=46						
PSI	Prapat	6.34	342	Pn	Pn	19 32 15.5	-3.8
PSI				Sn	Sn	19 33 36.3	+5.9
PSI				LR	LR	19 35 30.0	
FRIM	Kepong	6.52	7	⇑P	Pn	19 32 21.7	0.0
DBJI	Dramaga	6.72	119	P	Pn	19 32 21.6	-2.9
CBJI	Citeko	6.75	118	P	Pn	19 32 26.6	+1.8
	902nm,0.8s,8µm2.7nm						
LEM	Lembang	7.61	118	P	Pn	19 32 38.0	+1.4
	202nm,0.8s,0.6nm						
IPM	Ipoh	7.71	1	⇑P	Pn	19 32 38.7	+0.6
IPM	Ipoh	7.71	1	P	Pn	19 32 41.2	+3.1
	78nm,1.3s,823nm0.3nm						
JCJI	Jatiwangi	8.05	114	P	Px	19 32 56.0	
KULM	Kulim	8.52	359	⇓P	Pn	19 32 49.5	+0.4
KULM	Kulim	8.52	359	P	Pn	19 32 49.6	+0.5
	124nm,1.3s,814nm0.3nm						
KTGM	Kuala Trenggan	8.86	15	⇓P	Pn	19 32 55.8	+2.1
BSI	Banda Aceh	10.33	328	P	Pn	19 33 12.9	-1.1
	71nm,0.7s						
KSM	Kuching	10.57	64	ePn	Pn	19 33 16.4	-0.9
	12nm,0.8s						
KSM	Kuching	10.57	64	⇓P	Pn	19 33 19.1	+1.8
KSM	Kuching	10.57	64	P	Pn	19 33 19.5	+2.2
	22nm,1.1s						
STKI	Sintang	11.13	73	P	Pn	19 33 30.7	+5.8
	54nm,0.9s,9µm						
SJI	Sawahan	11.73	113	P	Pn	19 33 32.5	-0.6
	110nm,0.8s						
SBUM	Sibu	12.72	64	⇑P	Pn	19 33 49.0	+2.4
SBUM	Sibu	12.72	64	P	Pn	19 33 49.7	+3.2
	47nm,1.3s						
BTM	Bintulu	13.82	62	⇑P	Pn	19 34 08.8	+7.1
BBKI	Banjar Baru	13.97	91	P	Pn	19 34 10.0	+6.4
	167nm,1.0s,1µm						
SDKM	Sandakan	18.58	62	⇑P	Pn	19 35 01.9	0.0
TSM	Tawau	18.61	66	⇑P	Pn	19 35 02.1	-0.1
KAPI	Kappang	18.93	96	P	Pn	19 35 05.1	-1.0
	1.5nm,0.3s,baz=270,slow=11,SNR=9.3						
KAPI				LR	LR	19 44 50.1	
	comp=Z,187nm,18.7s,baz=290,slow=45						
KAPI	Kappang	18.93	96	eP	Pn	19 35 04.6	-1.6
	21nm,0.6s						
KAPI	Kappang	18.93	96	P	Pn	19 35 08.8	+2.7
	25nm,1.1s						
PCI	Palu	19.12	83	P	Pn	19 35 11.0	+2.6
	76nm,1.4s,820nm						
MYLDM	Lahad Datu	19.54	65	⇑P	Pn	19 35 13.5	+0.2
MYLDM	Lahad Datu	19.54	65	P	Pn	19 35 13.7	+0.4
	76nm,1.6s						
CM31	Chiang Mai Arr	21.68	355	eP	P	19 35 30.4	-4.3
CMAR	Chiang Mai Arr	21.68	355	P	P	19 35 31.4	-3.3
	2.8nm,0.6s,mb3.9,baz=185,slow=10.0,SNR=29						
CMAR				ScP	ScP	19 43 09.8	+2.7
	0.7nm,0.9s,baz=204,slow=5.8,SNR=4.1						
CMAR				LR	LR	19 44 59.2	
	comp=Z,603nm,19.2s,MS4.0,baz=189,slow=40						
KDI	Kendari	21.74	92	P	P	19 35 37.3	+1.9
	31nm,1.0s,3µm,mb4.7						
CHTO	Chiang Mai	22.04	355	eP	P	19 35 34.3	-4.1
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
CHTO	Chiang Mai	22.04	355	eP	P	19 35 34.3	-4.1
	comp=Z,7.9nm,1.0s,mb4.1						
BATI	Baumata	23.67	108	S	S	19 40 01.2	-5.0
	comp=Z,17nm,0.6s,baz=77,slow=3.7,SNR=4.9						
QIZ	Qiongzhong	23.88	21	P	P	19 35 56.8	-0.1
QIZ				S	S	19 40 10.4	+1.1
QIZ				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.3						
QIZ				LR	LR		
	comp=E,443nm,16.3s						
QIZ				LR	LR		
	comp=Z,546nm,15.9s,MS4.1						
QIZ	Qiongzhong	23.88	21	eP	P	19 35 55.8	-1.2
	comp=Z,28nm,1.3s,mb4.5						
MBWA	Marble Bar	25.56	136	eP	P	19 36 12.8	+0.5
	comp=Z,7.6nm,0.7s,mb4.3						
LBMI	Labuha	26.77	85	P	P	19 36 22.5	-0.8
	comp=Z,66nm,0.9s,comp=Z,1µm,mb5.2						
KMI	Kunming	28.30	4	P	P	19 36 38.2	+1.4
KMI				AP	pP	19 36 52.6	+2.0
KMI				XP	sP	19 37 00.4	+3.2
KMI				PP	PP	19 37 31.2	-10
KMI				S	S	19 41 21.1	+1.7
KMI				XS	sS	19 41 47.3	+4.4
KMI				SS	SS	19 42 48.2	-33
KMI				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.0						
KMI				AMB	AMB		
	comp=Z,82nm,4.8s						
KMI				LR	LR		
	comp=N,484nm,17.1s,MS4.4						
KMI				LR	LR		
	comp=E,676nm,18.6s,MS4.4						
KMI				LR	LR		
	comp=Z,702nm,17.1s,MS4.3						
FITZ	Fitzroy Crossi	28.40	123	eP	P	19 36 40.0	+2.1
	comp=Z,14nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	28.40	123	P	P	19 36 43.3	+5.4
	comp=Z,34nm,1.1s,mb4.9						
SHL	Shillong	29.97	344	eP	P	19 36 52.5	+0.9
GYA	Guiyang	30.10	10	⇑iP	P	19 36 52.0	-0.8
GYA				AP	pP	19 37 06.7	+0.1
GYA				XP	sP	19 37 14.1	+0.9
GYA				PP	PP	19 37 52.4	-9.2
GYA				S	S	19 41 44.3	-3.4
GYA				XS	sS	19 42 12.6	+1.4
GYA				SCP	ScP	19 43 28.9	-2.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,20nm,7.0s						
GYA				LR	LR		
	comp=N,740nm,11.0s,MS4.7						
GYA				LR	LR		
	comp=E,680nm,14.1s,MS4.7						
GYA				LR	LR		
	comp=Z,760nm,13.4s,MS4.5						
MUN	Mundaring	31.99	155	eP	P	19 37 09.7	+0.3
ODAN	Odare	32.66	337	eP	P	19 37 16.1	+0.7
	comp=Z,46nm,0.5s,mb5.6						
TAPN	Taplejung	32.99	338	eP	P	19 37 19.5	+1.3
	comp=Z,204nm,0.9s,mb6.0						
RAMN	Ramite	33.06	336	eP	P	19 37 20.0	+1.2
	comp=Z,23nm,0.3s,mb5.5						
NWAO	Narrogin (SRO)	33.24	154	P	P	19 37 19.2	-1.2
	comp=Z,13nm,0.8s,mb4.9,baz=323,slow=8.2,SNR=6.5						
NWAO	Narrogin (SRO)	33.24	154	eP	P	19 37 19.1	-1.3
NWAO				pmax	pmax		
	comp=Z,24nm,1.1s						
NWAO	Narrogin (SRO)	33.24	154	eP	P	19 37 19.1	-1.3
	comp=Z,24nm,1.1s,mb5.0						
JIRN	Jiri	33.85	336	eP	P	19 37 27.0	+1.3
	comp=Z,48nm,0.3s,mb5.8						
LSA	Lhasa	34.09	345	P	P	19 37 28.4	+0.7
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LSA	Lhasa	34.09	345	eP	P	19 37 28.1	+0.4
LSA				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.4						
LSA	Lhasa	34.09	345	eP	P	19 37 28.1	+0.4
	comp=Z,58nm,1.1s,mb5.4						

PKI Pulchoki 34.09 335 eP P 19 37 28.4 +0.6
comp=Z,58nm,1.2s,mb5.4
PKI Pulchoki 34.09 335 eP P 19 37 28.4 +0.6
PKI pmax pmax
comp=Z,58nm,1.2s,mb5.4
GUN Gumba 34.20 336 eP P 19 37 29.9 +1.2
comp=Z,90nm,0.4s
DMN Daman 34.26 335 eP P 19 37 29.7 +0.5
comp=Z,23nm,0.6s,mb5.3
KKN Kakani 34.34 335 eP P 19 37 30.6 +0.7
comp=Z,37nm,0.4s,mb5.7
KKN Kakani 34.34 335 eP P 19 37 30.6 +0.7
KKN pmax pmax
comp=Z,37nm,0.4s,mb5.7
GKN Gorkha 34.80 334 eP P 19 37 34.6 +0.7
comp=Z,35nm,0.3s,mb5.7
KOLN Koldanda 35.06 333 eP P 19 37 37.0 +0.8
comp=Z,49nm,0.8s,mb5.5
DANN Dangsing 35.49 334 eP P 19 37 40.6 +0.8
comp=Z,101nm,0.4s
WHN Wuhan 36.03 20 ⇓P P 19 37 43.5 -0.9
WHN LR LR
comp=Z,1μm,17.2s,MS4.7
WRA Warramunga Arr 36.62 120 P P 19 37 48.8 -0.9
comp=Z,2.9nm,0.5s,mb4.3,baz=305,slow=8.9
WRAB Tennant Creek 36.63 119⇓eP P 19 37 49.2 -0.5
WRAB Tennant Creek 36.63 119 eP P 19 37 48.9 -0.9
comp=Z,11nm,0.7s,mb4.8
WRAB Tennant Creek 36.63 119 P P 19 37 51.9 +2.2
WB2 Warramunga Arr 36.63 120 eP P 19 37 48.7 -1.1
XAN Xi'an 37.90 11 P P 19 37 58.8 -1.4
XAN AP pP 19 38 13.0 -1.4
XAN PP PP 19 39 30.6 +2.8
XAN AMB AMB
comp=Z,21nm,1.2s,mb4.7
XAN LR LR
comp=N,98nm,22.0s,MS4.2
XAN LR LR
comp=E,342nm,17.7s,MS4.2
XAN LR LR
comp=Z,639nm,23.2s
LZH Lanzhou 39.27 4 eP P 19 38 11.5 -0.2
LZH AP pP 19 38 27.0 +1.1
LZH XP sP 19 38 33.5 +1.2
LZH AMB AMB
comp=Z,26nm,1.2s,mb4.8
LZH AMB AMB
comp=Z,117nm,4.5s
JOW Kunigami 39.98 40 P P 19 38 16.9 -0.8
comp=Z,3.8nm,0.5s,mb4.3,baz=119,slow=13,SNR=6.0
GTA Gaotai 42.49 359 eP P 19 38 38.0 -0.2
GTA AP pP 19 38 52.3 -0.2
GTA XP sP 19 38 59.7 +0.8
GTA PCP PcP 19 40 30.8 +0.6
GTA AMB AMB
comp=Z,9.0nm,1.4s,mb4.2
GTA AMB AMB
comp=Z,110nm,5.1s
GTA LR LR
comp=N,403nm,16.2s,MS4.5
GTA LR LR
comp=E,313nm,15.3s,MS4.5
GTA LR LR
comp=Z,349nm,15.3s,MS4.4
HHC Hu-ho-hao-te 45.00 12 eP P 19 38 58.6 +0.3
HHC AP pP 19 39 13.6 +0.8
HHC XP sP 19 39 21.0 +1.9
HHC PCP PcP 19 40 39.2 +0.5
HHC PP PP 19 40 45.3 +0.8
HHC AMB AMB
comp=Z,18nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,110nm,5.5s
HHC LR LR
comp=N,358nm,15.5s,MS4.6
HHC LR LR
comp=E,334nm,13.1s,MS4.6
HHC LR LR
comp=Z,394nm,13.7s,MS4.5
BJI Beijing 45.35 17 P P 19 39 01.0 -0.1
BJI AMB AMB
comp=Z,11nm,0.7s,mb4.8
BJI AMB AMB
comp=Z,92nm,5.0s
BJI LR LR
comp=N,423nm,19.9s,MS4.6
BJI LR LR
comp=E,624nm,18.6s,MS4.6
BJI LR LR
comp=Z,541nm,22.0s,MS4.4
CTA Charters Tower 47.30 114 eP P 19 39 16.4 -0.4
comp=Z,12nm,0.9s,mb4.8
CTA Charters Tower 47.30 114 P P 19 39 16.5 -0.3
comp=Z,6.1nm,0.8s,mb4.6,baz=291,slow=7.1,SNR=7.7
CTA Charters Tower 47.30 114 eP P 19 39 16.4 -0.4
CTA pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 47.30 114 eP P 19 39 15.5 -1.3
CTAO pmax pmax
comp=Z,13nm,0.8s,mb4.9
CTAO Charters Tower 47.30 114 eP P 19 39 15.5 -1.2
comp=Z,13nm,0.8s,mb4.9
STKA Stephens Creek 47.67 131 eP P 19 39 19.4 -0.1
comp=Z,6.9nm,0.6s,mb4.9
STKA Stephens Creek 47.67 131 P P 19 39 19.6 +0.1
comp=Z,3.5nm,0.6s,mb4.6,baz=314,slow=7.2,SNR=14
STKA LR LR 19 59 27.6
comp=Z,395nm,19.6s,MS4.4,baz=116,slow=36
KSRS Korea Array 47.70 29 P P 19 39 19.3 -0.3
comp=Z,15nm,1.0s,mb5.0,baz=219,slow=8.4,SNR=37
KSRS LR LR 20 02 53.4
comp=Z,94nm,18.0s,MS3.8,baz=60,slow=40
KBL Kabul 48.06 324 eP P 19 39 22.6 +0.2
KBL pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
KBL Kabul 48.06 324 eP P 19 39 22.6 +0.2
comp=Z,10nm,1.1s,mb4.8
WMQ Urumqi 48.36 347 P P 19 39 24.7 +0.2
WMQ AP pP 19 39 37.5 -1.6
WMQ PCP PcP 19 40 49.8 -0.7
WMQ PP PP 19 41 17.5 -0.2
WMQ AMB AMB
comp=Z,37nm,1.1s,mb5.3
WMQ AMB AMB
comp=Z,224nm,5.0s
WMQ LR LR
comp=N,140nm,21.0s,MS4.2
WMQ LR LR
comp=E,197nm,20.0s,MS4.2
WMQ LR LR
comp=Z,214nm,20.0s,MS4.1
KZA Kyzart 50.78 335 P P 19 39 43.2 +0.2
SNR=11
SONM Songino Array 51.14 5 P P 19 39 46.3 +0.7
comp=Z,52nm,0.8s,mb5.5,baz=185,slow=8.5,SNR=336
SONM PcP PcP 19 41 00.4 -0.1
comp=Z,2.9nm,0.7s,baz=196,slow=5.0,SNR=3.5
ULN Ulaanbaatar 51.23 5 c iP P 19 39 46.7 +0.5
ULN Ulaanbaatar 51.23 5 eP P 19 39 46.6 +0.3
comp=Z,47nm,1.1s,mb5.3
ULN Ulaanbaatar 51.23 5 P P 19 39 46.5 +0.3
TKM2 Tokmak 2 51.34 336 P P 19 39 48.3 +1.1
SNR=9.2
KBK Karagaybulak 51.38 336 P P 19 39 48.8 +1.2
SNR=14
AML Almayashu 51.48 334 P P 19 39 49.2 +0.9
SNR=9.8
AAK Ala-Archa 51.55 335 c iP P 19 39 49.5 +0.7
AAK MLR MLR
comp=Z,100nm,16.0s,MS3.9
AAK Ala-Archa 51.55 335 eP P 19 39 49.1 +0.3
comp=Z,10.0nm,0.9s,mb4.8
AAK Ala-Archa 51.55 335 P P 19 39 49.8 +1.0
CN2 Changchun 51.83 23 ⇑P P 19 39 49.8 -1.0
CN2 eAP pP 19 40 05.3 -0.2
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.6
CN2 LR LR
comp=E,300nm,15.0s,MS4.6
CN2 LR LR
comp=Z,200nm,16.0s,MS4.2
EKS2 Erkin-Say 51.88 335 P P 19 39 52.2 +1.0
SNR=43
USP Ospenovka 52.07 336 P P 19 39 52.9 +0.3
SNR=18
MK31 Makanchi Array 52.48 344 eP P 19 39 55.0 -0.6
MKAR Makanchi Array 52.48 344 P P 19 39 55.4 -0.2
comp=Z,7.8nm,0.3s,mb5.1,baz=152,slow=9.2,SNR=89
MKAR Makanchi Array 52.48 344 P P 19 39 55.4 -0.2
MJAR Matsushiro Arr 52.75 38 P P 19 39 57.1 -0.7
comp=Z,8.4nm,0.8s,mb4.7,baz=214,slow=7.6,SNR=23
MJAR Matsushiro Arr 52.75 38 P P 19 39 57.1 -0.7
ZAK Zakamensk 53.49 2⇑iP P 19 40 03.2 +0.2
ZAK pmax pmax
comp=Z,15nm,0.9s,mb4.9
MDJ Mudanjiang 54.17 25 eP P 19 40 07.0 -1.1
comp=Z,26nm,1.3s,mb5.0
HVS Khovu-Aksy 54.55 354⇑eP P 19 40 10.2 -0.5
HVS pmax pmax
comp=Z,33nm,1.2s,mb5.2
HVS MLR MLR
comp=Z,3μm,23.0s,MS5.2
OPO Ambohidratompo 54.60 250 P P 19 40 11.9 +0.2
comp=Z,0.6nm,0.7s,baz=100,slow=6.1,SNR=3.1
MOY Mondy 54.74 0 eP P 19 40 12.4 +0.3
TLY Talaya 54.81 2 eP P 19 40 13.3 +0.8
TLY e 19 53 28.8
TLY pmax pmax
comp=Z,32nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,282nm,15.0s,MS4.5
TLY Talaya 54.81 2 eP P 19 40 13.2 +0.6
comp=Z,28nm,0.9s,mb5.3
HIA Hailar 54.85 15 eP P 19 40 10.7 -2.2
HIA pmax pmax
comp=Z,12nm,1.1s
HIA Hailar 54.85 15 eP P 19 40 10.7 -2.2
comp=Z,12nm,1.1s,mb4.8
ARMA Armidale 54.98 125 eP pP 19 40 24.5 -4.5
IRK Irkutsk 55.39 3 eP P 19 40 16.8 0.0
IRK pmax pmax
comp=Z,40nm,1.4s,mb5.3
KURK Kurchatov 57.07 343 c iP P 19 40 28.2 -0.5
KURK pmax pmax
comp=Z,16nm,0.7s,mb5.2
KURK MLR MLR
comp=Z,200nm,22.0s,MS4.2
KURK Kurchatov 57.07 343 eP P 19 40 28.1 -0.7
comp=Z,23nm,1.0s,mb5.2
ZAA0 Zalesovo Array 58.58 349 eP P 19 40 38.6 -0.7
ZALV Zalesovo Beam 58.58 349 P P 19 40 38.7 -0.6
comp=Z,22nm,0.7s,mb5.3,baz=164,slow=5.9,SNR=98
ZALV Zalesovo Beam 58.58 349 P P 19 40 38.7 -0.6
HABR Khabarovsk 59.54 26 eP P 19 40 38.5 -7.5
HABR e*PP pP 19 40 50.6 -10
HABR e 19 41 28.0
HABR e 19 42 51.3
HABR eS S 19 48 45.1 -6.6
HABR e 19 50 26.8
HABR eSS SS 19 52 41.6 -6.4
HABR MLR MLR
comp=Z,239nm,19.0s,MS4.3
HABR MLR MLR
comp=Z,270nm,20.0s
NVS Novosibirsk 59.73 348⇑iP P 19 40 44.8 -2.4
NVS eS S 19 48 49.3 -4.7
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.9
NVS pmax pmax
comp=N,13nm,1.6s
NVS pmax pmax
comp=E,9.0nm,1.2s
NVS smax
comp=N,20nm,2.0s
BVAR Borovoye Array 61.67 340 P P 19 40 59.5 -0.9
comp=N,4.5nm,0.4s,mb5.0,baz=127,slow=7.4,SNR=8.5
BRVK Borovoye 61.74 340 eP P 19 40 59.6 -1.3
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BRVK Borovoye 61.74 340 eP P 19 40 59.6 -1.3
comp=Z,4.0nm,0.6s,mb4.7
BOD Bodaibo 61.82 8 eP P 19 41 00.8 -0.6
BOD pmax pmax
comp=Z,15nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 62.13 31⇑eP P 19 41 03.0 -0.6
YSS e pP 19 41 14.5 -4.2
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.13 31 eP P 19 41 03.1 -0.5
comp=Z,33nm,0.8s,mb5.5
AKTK Aktyubinsk 64.88 331 P P 19 41 20.6 -1.1
AKTO Aktyubinsk 64.88 331 P P 19 41 20.6 -1.1
comp=Z,5.3nm,0.8s,mb4.6,baz=131,slow=4.9,SNR=12
MAK Makhachkala 66.49 320 eP P 19 41 37.0 +4.7
GNI Garni 67.03 316⇑eP P 19 41 36.3 +0.5
GNI pmax pmax
comp=Z,15nm,1.2s
SVE Sverdlovsk 68.18 338⇓eP P 19 41 42.4 -0.3
SVE e 19 44 10.4
SVE eS S 19 50 41.4 +2.7
SVE pmax pmax
comp=Z,37nm,1.1s,mb5.3
ARU Arti 68.71 336 d iP P 19 41 45.0 -1.0
ARU ePPP 19 45 52.6
ARU S S 19 50 47.0 +2.0
ARU SS SS 19 55 07.7 -3.0
ARU pmax pmax
comp=Z,18nm,1.0s,mb5.0
ARU Arti 68.71 336 eP P 19 41 45.2 -0.9
comp=Z,17nm,1.1s,mb4.9
YAK Yakutsk 68.77 14⇓eP P 19 41 45.2 -1.0
YAK pmax pmax
comp=Z,64nm,1.3s,mb5.4
YAK MLR MLR
comp=Z,400nm,19.0s,MS4.7
MAW Mawson 69.26 195 LR LR 20 04 50.5
comp=Z,280nm,20.4s,MS4.5,baz=193,slow=30
KIV Kislovodsk 70.06 319 eP P 19 41 54.8 +0.2
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
LSZ Lusaka 72.41 255 eP P 19 42 09.3 -0.1
LSZ pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
LSZ Lusaka 72.41 255 eP P 19 42 09.3 -0.1
comp=Z,6.5nm,1.3s,mb4.4
PETK Petropavlovsk- 73.52 32 P P 19 42 14.5 -0.6
comp=Z,2.4nm,0.6s,mb4.3,baz=234,slow=2.8,SNR=3.0
VRHR Novokhopersk 73.86 326 eP P 19 42 17.0 -0.2
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRHR pmax pmax
comp=N,10.0nm,1.2s
VRHR pmax pmax
comp=E,20nm,0.6s
BR131 Keskin Array S 74.81 313 eP P 19 42 21.9 -1.1
comp=E,3.3nm,0.9s,mb4.3
BRTR Keskin Array B 74.81 313 P P 19 42 22.4 -0.5
comp=E,2.9nm,0.8s,mb4.2,baz=134,slow=7.1,SNR=16
VORD Divnogorie 75.13 325 eP P 19 42 24.6 0.0
VORD pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.9s
LBTB Lobatse 75.25 245 P P 19 42 25.6 -0.3
LBTB pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LBTB Lobatse 75.25 245 P P 19 42 25.6 -0.3
comp=Z,1.7nm,0.6s,mb4.2
VSR Storozhevoye 75.31 325 eP P 19 42 25.2 -0.4
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=E,10.0nm,1.1s
BOSA Boshof 75.78 241 P P 19 42 28.9 0.0
comp=E,5.4nm,0.9s,mb4.5,baz=105,slow=9.3,SNR=6.7
BOSA LR LR 20 08 09.3
comp=E,191nm,20.3s,MS4.4,baz=28,slow=30
BOSA Boshof 75.78 241 eP P 19 42 27.3 -1.6
BOSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BOSA Boshof 75.78 241 eP P 19 42 27.3 -1.6
comp=Z,6.1nm,0.8s,mb4.6
SEY Seymchan 76.50 22⇓eP P 19 42 31.4 -0.7
TIXI Tiksi 76.98 9⇓eP P 19 42 32.4 -2.3
TIXI pmax pmax
comp=Z,16nm,1.6s,mb4.7
TIXI MLR MLR
comp=Z,200nm,17.0s,MS4.5
TIXI Tiksi 76.98 9 eP P 19 42 32.6 -2.2
comp=Z,12nm,1.0s,mb4.8
OBN Obninsk 78.32 328⇓eP P 19 42 42.6 +0.1
OBN eS S 19 52 28.7 -4.9
OBN pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
OBN Obninsk 78.32 328 P P 19 42 42.0 -0.5
comp=Z,19nm,0.9s,mb5.0
SUR Sutherland 79.83 238 eP P 19 42 52.6 +1.3
comp=Z,6.1nm,0.7s,mb4.6
VNDA Vanda 80.75 169 P P 19 42 55.6 +0.3
comp=Z,2.0nm,1.0s,mb4.0,baz=93,slow=2.5,SNR=4.1
VNDA LR LR 20 12 54.4
comp=Z,190nm,20.8s,MS4.4,baz=313,slow=31
AKASG Malin Array Be 81.01 322 P P 19 42 56.6 -0.6
comp=Z,2.4nm,0.9s,mb4.1,baz=101,slow=3.9,SNR=6.9
TSUM Tsumeb 82.57 251 eP P 19 43 06.5 +0.3
comp=Z,3.3nm,1.0s,mb4.3
BUR08 Bucovina Ar. S 82.79 319 eP P 19 43 07.7 +1.0
BILL Bilibino 84.06 20⇑eP P 19 43 10.9 -1.8
BILL e 19 46 21.3
BILL pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
ARCES ARCESS Array B 87.96 340 P P 19 43 32.8 +0.9
comp=Z,9.7nm,0.9s,mb5.0,baz=103,slow=5.5,SNR=16
BRG Berggiesshubel 90.56 321 eP pP 19 43 54.9 -5.5
BRG pmax pmax
comp=Z,4.0nm,1.5s,mb4.5
BRG pmax pmax
comp=Z,8.0nm,1.5s,mb4.8
BRG Berggiesshubel 90.56 321 eP pP 19 43 54.9 -5.4
comp=Z,6.3nm,1.5s
BRG e 19 43 58.7
comp=Z,13nm,1.5s
GERES GERESS Array B 90.56 319 P P 19 43 45.6 +1.0
comp=Z,0.4nm,0.4s,mb4.1,baz=100,slow=5.5,SNR=7.2
SNAA Sanae 91.19 198 eP P 19 43 48.3 +1.3
SNAA e 19 43 57.6
SNAA Sanae 91.19 198⇑eP P 19 43 48.6 +1.6
SNAA Sanae 91.19 198 P P 19 43 40.9 -6.2
comp=Z,2.4nm,0.8s,mb4.6
NB2 NORSAR Subarra 92.67 331 P P 19 43 54.3 +0.3
comp=Z,4.0nm,1.1s,mb4.8,baz=92,slow=4.6
NOA NORSAR Array B 92.67 331 P P 19 43 54.2 +0.2
comp=Z,1.1nm,0.9s,mb4.3,baz=85,slow=5.1,SNR=3.0
PPT Papeete 107.58 109 eLR LR 19 45 18.6
comp=Z,323nm,28.2s
YKA Yellowknife Ar 115.34 17 PKP PKPdf 19 49 22.9 -0.6
comp=Z,0.4nm,0.8s,baz=316,slow=2.6,SNR=3.9
YKA PP PP 19 50 21.7 -2.8
comp=Z,0.3nm,0.9s,baz=315,slow=7.7,SNR=4.9
NVAR Mina Array Bea 130.04 40 PKP PKPdf 19 49 54.4 +2.0
comp=Z,0.5nm,0.7s,baz=254,slow=2.6,SNR=2.7
PDAR Pinedale Array 132.27 30 SKPbc SKPbc 19 53 21.4 +2.8
comp=Z,0.5nm,0.8s,baz=280,slow=0.5,SNR=3.7
CPUP Villa Florida 143.77 214 PKP PKPdf 19 50 15.6 -2.5
comp=Z,1.5nm,0.6s,baz=98,slow=3.7,SNR=5.0
WMOK Wichita Mounta 143.78 28 ePKIKP PKPdf 19 50 14.4 -3.5
WCI Wyandotte Cave 144.61 10 ePKIKP PKPdf 19 50 16.9 -2.3
USIN University of 144.62 12 ePKPdf PKPdf 19 50 17.3 -1.9
TXAR Lajitas Array 145.18 39 PKPbc PKPbc 19 50 20.7 +0.5
comp=Z,7.3nm,0.6s,baz=269,slow=0.7,SNR=30
TXAR Lajitas Array 145.18 39 PKPbc PKPbc 19 50 20.7 +0.5
MIAR Mount Ida 146.13 22 ePKP2 PKPab 19 50 21.8 -1.8
WVT Waverly 146.35 13 ePKP2 PKPab 19 50 22.3 -2.0
JCT Junction City 146.64 34 ePKP2 PKPab 19 50 24.4 -1.3

IDC 11 19:36:00.9±1.4,247N×12663E,h0km,mb4.0/4,mb1 4.0/4, mb1mx3.7/16,mbtmp4.0/4,Error ellipse: s-maj=68.6km s-min=27.4km az=72.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**23.52**	**162**	*eP*	P	19 41 12.2	-0.8
STKA	**Stephens Creek**	**36.99**	**159**	*eP*	P	19 43 12.0	-0.2
	3.9nm,0.9s						
STKA	**Stephens Creek**	**36.99**	**159**	P	P	19 43 12.2	0.0
	3.7nm,0.7s,baz=346,slow=7.4,SNR=5.2						
SONM	**Songino Array**	**48.46**	**342**	P	P	19 44 45.6	+0.6
	0.4nm,0.8s,baz=155,slow=9.0,SNR=2.8						
PETK	**Petropavlovsk-**	**56.63**	**22**	P	P	19 45 45.6	-0.1
	2.8nm,0.9s,baz=231,slow=9.1,SNR=3.0						
MKAR	**Makanchi Array**	**58.53**	**326**	P	P	19 45 59.0	-0.2
	1.1nm,0.7s,baz=126,slow=8.3,SNR=5.1						

NIED ***11*** *19:36:00,4680N×15300E,h35km,Mw5.1 Best double couple: M0 4.55000×10^16 NP1:ϕs 104.00000°,δ64.00000°, λ-52.00000°. NP2:ϕs 223.00000°,δ45.00000°, λ-142.00000°.*

BJI ***11*** *19:36:20.1,4649N×15335E,h39km,mB4.8,mb4.4,Ms4.3, Msz4.2*

ISCJB ***11*** *19:36:21.5±0.5,4652N±005×15302E±005,h37km±4km, mb4.5/47,MS4.1/21,Error ellipse: s-maj=9.4km s-min=3.6km az=149.3*

MOS ***11*** *19:36:22.4±1.2,4651N×15304E,h48km,mb4.4/13,Error ellipse: s-maj=14.2km s-min=8.0km az=54.2*

SKHL ***11*** *19:36:22.7±3.1,4678N×15283E,h56km±24km,mb5.6/3, Ms4.5/3,msh5.4/3*

JMA ***11*** *19:36:22.6±0.8,4685N×15301E,h30km,M5.1*

NEIC ***11*** *19:36:24.3±1.0,4666N×15287E,h45km±9km,mb4.8/24, Error ellipse: s-maj=14.7km s-min=5.7km az=149.0*

IDC ***11*** *19:36:24.4±0.7,4691N×15272E,h36km±3km,mb3.9/13, mb1 4.1/14,mb1mx3.9/23,mbtmp4.0/14,ML4.9/1,MS4.0/14, Ms1 4.0/14,ms1mx3.8/31,Error ellipse: s-maj=25.4km s-min=12.3km az=157.0*

GCMT ***11*** *19:36:24.3±0.3,4681N×15294E,h49km±4km,MW5.0/75, Moment Tensor Solution. s12,c13; s75,c114; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.14±.29; Mθθ 1.99±.19; Mϕϕ-1.85±.17; Mrθ-1.95±.17; Mrϕ 0.03±.13; Mθϕ 1.72±.14; Best double couple: M0 3.23200×10^16 NP1:ϕs 225.00000°,δ36.00000°,λ-177.00000°. NP2: ϕs 133.00000°,δ89.00000°,λ-54.00000°. Principal axes: T 3.3040, Plg33.0000°, Azm192.0000°; N -0.1430, Plg36.0000°, Azm311.0000°; P -3.1600, Plg36.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 11 19:36:24.2±0.5,4653N±005×15302E±005,h42km±4km, h42km±2.1km:pP-P,n139,σ1§40/162,mb4.5/47,MS4.1/21, 2C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.82**	**252**	*eP*	**Pn**	**19 37 17.7**	**-2.7**
KUR				*eS*	**Sn**	**19 38 02.5**	**-1.6**
KUR				pmax	pmax		
	comp=Z,2μm,1.6s						
KUR				pmax	pmax		
	comp=N,160nm,0.4s						
KUR				pmax	pmax		
	comp=E,110nm,0.4s						
KUR				pmax	pmax		
	comp=Z,430nm,0.4s						
KUR				smax			
	comp=N,6μm,2.0s						
KUR				smax			
	comp=E,3μm,2.0s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,870nm,0.5s						
KUR	**Kuril'sk**	**3.82**	**252**	*eP*	**Pn**	**19 37 17.7**	**-2.7**
KUR				AMB	AMB	19 37 19.0	
	comp=E,2μm,1.6s						
KUR				AMB	AMB	19 37 19.5	
	comp=E,160nm,0.4s						
KUR				AMB	AMB	19 37 19.5	
	comp=E,110nm,0.4s						
KUR				AMB	AMB	19 37 19.5	
	comp=E,430nm,0.4s						
KUR				*eS*	**Sn**	**19 38 02.5**	**-1.6**
KUR				A		19 38 05.0	
	comp=E,6μm,2.0s						
KUR				A		19 38 05.0	
	comp=E,3μm,2.0s						
KUR				A		19 38 21.6	
	comp=E,1μm,0.5s						

KUR A 19 38 21.6
comp=E,870nm,0.5s
SKR Severo-Kuril's 4.64 25 *e*P **Pn** **19 37 29.0 -2.6**
SKR AMB AMB 19 37 31.1
comp=E,140nm,0.5s
SKR AMB AMB 19 37 31.1
comp=E,80nm,0.5s
SKR AMB AMB 19 37 31.1
comp=E,310nm,0.5s
SKR *e*S **Sn** **19 38 17.5 -6.7**
SKR A 19 38 22.0
comp=E,2µm,6.0s
SKR A 19 38 22.0
comp=E,3µm,6.0s
SKR A 19 38 22.0
comp=E,3µm,6.0s
SKR A 19 38 43.5
comp=E,400nm,0.5s
SKR A 19 38 43.5
comp=E,250nm,0.5s
SKR A 19 38 43.5
comp=E,150nm,0.5s
SKR AMS AMS 19 39 08.0
comp=E,5µm,18.0s
SKR AMS AMS 19 39 08.0
comp=E,3µm,18.0s
SKR AMS AMS 19 39 08.0
comp=E,5µm,18.0s
SKR AMS AMS 19 39 08.0
comp=E,4µm,18.0s
YUK Yuzh-Kuril'sk 5.63 246 *e*PN **Pn** **19 37 47.0 +1.7**
YUK *e*S **Sn** **19 38 49.0 +0.4**
YUK pmax pmax
comp=N,210nm,0.3s
YUK pmax pmax
comp=E,180nm,0.3s
YUK pmax pmax
comp=Z,550nm,0.3s
YUK pmax pmax
comp=Z,2µm,1.0s
YUK smax
comp=N,570nm,0.5s
YUK smax
comp=E,2µm,0.6s
YUK smax
comp=N,5µm,4.5s
YUK smax
comp=E,5µm,3.5s
YUK MLR MLR
comp=N,6µm,16.0s
YUK MLR MLR
comp=Z,3µm,16.0s
YUK Yuzh-Kuril'sk 5.63 246 *e*P **Pn** **19 37 47.0 +1.7**
YUK AMB AMB 19 37 48.9
comp=Z,210nm,0.2s
YUK AMB AMB 19 37 48.9
comp=Z,180nm,0.2s
YUK AMB AMB 19 37 48.9
comp=Z,550nm,0.2s
YUK AMB AMB 19 37 55.0
comp=Z,2µm,1.0s
YUK *e*S **Sn** **19 38 49.0 +0.4**
YUK A 19 39 12.4
comp=Z,570nm,0.5s
YUK A 19 39 12.4
comp=Z,2µm,0.6s
YUK A 19 39 14.0
comp=Z,5µm,3.5s
YUK A 19 39 14.0
comp=Z,5µm,4.5s
YUK AMS AMS 19 40 04.0
comp=Z,6µm,16.0s
YUK AMS AMS 19 40 04.0
comp=Z,3µm,16.0s
NEM2 Nemuro 2 6.05 241 P **Pn** **19 37 51.2 +0.1**
NEM2 *e*S **Sn** **19 38 56.6 -2.4**
JRA Rausu 6.15 248 P **Pn** **19 37 55.0 +2.7**
JNK Nakash 6.57 246 P **Pn** **19 38 00.1 +1.9**
JAK Akkeshi 6.89 242 P **Pn** **19 38 02.7 +0.1**
JTKR Abashiri--Toko 6.92 252 P **Pn** **19 38 05.4 +2.5**
YSS Yuzh-Sakhalins 7.07 277 *e*P **Pn** **19 38 06.5 +1.6**
YSS *e*pP 19 38 20.8
YSS *e*S **Sn** **19 39 23.3 -0.6**
YSS AMS AMS 19 40 30.0
comp=Z,1µm,17.0s
YSS AMS AMS 19 40 30.0
comp=Z,2µm,17.0s
YSS Yuzh-Sakhalins 7.07 277 *e*P **Pn** **19 38 06.8 +1.8**
comp=Z,34nm,0.8s
PEA0B Petropavlovsk- 7.25 23 *e*Pn **Pn** **19 38 07.1 -0.3**
PETK Petropavlovsk- 7.25 23 Pn **Pn** **19 38 07.3 -0.1**
comp=Z,2.0nm,0.3s,baz=175,slow=12,SNR=55
PETK Petropavlovsk- 7.25 23 Pn **Pn** **19 38 07.3 -0.1**
JMP Maruseppu 7.27 253 P **Pn** **19 38 10.2 +2.5**
JAR Ashorobuto 7.32 247 P **Pn** **19 38 10.2 +1.8**
JAR *e*S **Sn** **19 39 30.2 +0.1**
PET Petropavlovsk 7.46 27 *e*PN **Pn** **19 38 12.9 +2.7**
PET pmax pmax
comp=Z,400nm,4.3s
PET pmax pmax
comp=Z,62nm,1.2s
PET pmax pmax
comp=Z,300nm,8.1s
PET MLR MLR
comp=Z,2µm,18.0s
PET MLR MLR
comp=Z,700nm,18.0s
PET Petropavlovsk 7.46 27 *e*Pn **Pn** **19 38 09.1 -1.1**
PET *e*Sn **Sn** **19 39 31.1 -2.2**
JOB Onbets 7.48 244 P **Pn** **19 38 11.7 +1.1**
JOB *e*S **Sn** **19 39 32.2 -1.8**
JKK2 Kamakawa 2 7.72 254 P **Pn** **19 38 16.9 +2.9**
ASAJ Asahikawa 7.73 256 Pn **Pn** **19 38 17.5 +3.4**
comp=Z,5.8nm,0.3s,baz=88,slow=12,SNR=59
ASAJ LR LR 19 41 04.1
comp=Z,1µm,20.1s,baz=149,slow=37
ASAJ Asahikawa 7.73 256 PN **Pn** **19 38 17.5 +3.4**
ASAJ pmax pmax
comp=Z,6.0nm,0.3s
ASAJ MLR MLR
comp=Z,1µm,20.1s
JWK2 Keihoku 7.85 265 P **Pn** **19 38 21.0 +5.3**
JCH Churui 7.92 244 P **Pn** **19 38 17.4 +0.7**
JCH *e*S **Sn** **19 39 42.9 -2.1**
JFR Furan 8.13 249 P **Pn** **19 38 21.6 +2.0**
JAB Ashibetsu 8.22 252 P **Pn** **19 38 23.9 +3.1**
JEM Erimo 8.39 241 P **Pn** **19 38 24.2 +1.1**
ERM Erimo 8.39 241 *e*PN **Pn** **19 38 24.2 +1.1**
ERM *e* 19 40 01.4
ERM pmax pmax
comp=Z,57nm,0.4s
ERM Erimo 8.39 241 *e*Pn **Pn** **19 38 24.1 +1.1**
comp=Z,57nm,0.4s
ERM *e*Sn **Sn** **19 40 01.4 +5.0**
JBT2 Biratori 2 8.47 248 P **Pn** **19 38 24.8 +0.6**
JNBK Urakawa-nobuka 8.49 244 P **Pn** **19 38 24.1 -0.3**
JNBK *e*S **Sn** **19 39 55.2 -3.6**
JEW Eniwo 9.03 250 P **Pn** **19 38 34.1 +2.3**
JNB Noboribetsu 9.47 249 P **Pn** **19 38 38.6 +0.7**
JNB *e*S **Sn** **19 40 20.6 -2.4**
JKB Kayabe 9.77 246 P **Pn** **19 38 41.3 -0.7**
JKB *e*S **Sn** **19 40 25.2 -5.2**
JSH Shimam 10.04 252 P **Pn** **19 38 47.2 +1.6**
JYM2 Yakumo 2 10.08 249 P **Pn** **19 38 46.3 +0.1**
JSR Shiriuchi 10.36 246 P **Pn** **19 38 49.0 -1.0**
NKL Nikolayevsk 10.36 314 *e*P **Pn** **19 38 52.2 +2.2**
NKL *e*L 19 41 04.0
NKL AMS AMS 19 43 24.0
comp=Z,800nm,14.0s
NKL AMS AMS 19 43 24.0
comp=Z,1µm,14.0s
JANG Nango 10.38 238 P **Pn** **19 38 47.9 -2.4**
JANG *e*S **Sn** **19 40 36.3 -8.8**
JTM Tenmabayashi 10.38 241 P **Pn** **19 38 48.8 -1.6**
JTM *e*S **Sn** **19 40 37.3 -8.0**
JTH Tanohata 10.46 235 P **Pn** **19 38 49.3 -2.2**
JTH *e*S **Sn** **19 40 38.6 -8.7**
JOSM Okushiri--Mats 10.67 250 P **Pn** **19 38 54.2 -0.1**
OFUJ Ofunato 11.17 232 P **Pn** **19 38 59.2 -1.9**
JRG Rokugo 11.53 236 P **Pn** **19 39 04.9 -1.2**
JRG *e*S **Sn** **19 41 06.0 -7.4**
JIO Ouri 11.79 231 *e*S **Sn** **19 41 11.5 -8.3**
HABR Khabarovsk 12.31 286 *e*PN Px 19 39 31.7
HABR MLR MLR
comp=Z,746nm,15.0s
HABR MLR MLR
comp=Z,529nm,13.0s
JYA Atsumi 12.60 236 P **Pn** **19 39 19.3 -1.4**
FX1 Attu Island--F 14.48 57 Pn **Pn** **19 39 45.4 -0.8**
comp=Z,21nm,0.3s,baz=303,slow=7.3,SNR=66
FX1 LR LR 19 44 43.9
comp=Z,417nm,20.1s,baz=303,slow=35
FX1 Attu Island--F 14.48 57 P **Pn** **19 39 45.4 -0.8**
FX1 pmax pmax
comp=Z,21nm,0.3s
FX1 MLR MLR
comp=Z,417nm,20.1s
KLR Kul'dur 14.52 288 *e*P **Pn** **19 39 50.3 +3.5**
KLR pmax pmax
comp=E,80nm,2.0s
KLR pmax pmax
comp=Z,54nm,2.0s
KLR MLR MLR
comp=N,500nm,12.5s
KLR MLR MLR
comp=Z,2µm,12.5s
MAJO Matsushiro 14.89 233 *e*P **Pn** **19 39 50.6 -1.2**
comp=Z,26nm,0.8s
MAT Matsushiro 14.89 233 P **Pn** **19 39 50.0 -1.8**
MAT *e*S **Sn** **19 42 38.0 +2.6**
MJAR Matsushiro Arr 14.89 233 Pn **Pn** **19 39 50.2 -1.5**
comp=Z,0.6nm,0.3s,baz=25,slow=14,SNR=9.6
MJAR Matsushiro Arr 14.89 233 Pn **Pn** **19 39 50.2 -1.5**
SEY Seymchan 16.45 359⇓ *e*P **Pn** **19 40 12.6 +1.0**
MDJ Mudanjiang 16.50 272 P **Pn** **19 40 12.3 -0.1**
MDJ AP pP 19 40 24.1 -0.6
MDJ XP sP 19 40 29.9 -0.2
MDJ S **S** **19 43 14.0 -11**
MDJ PCP PcP 19 45 03.0 +1.3
MDJ SCP ScP 19 48 33.9 +1.2
MDJ PCS PcS 19 48 38.4 +1.0
MDJ SCS ScS 19 52 12.6 +0.8
MDJ AMB AMB
comp=Z,7.0nm,1.4s
MDJ AMB AMB
comp=Z,103nm,4.3s
MDJ LR LR
comp=N,388nm,16.6s
MDJ LR LR
comp=E,413nm,22.4s
MDJ LR LR
comp=Z,634nm,20.7s
CN2 Changchun 19.59 272 *e*P **Pn** **19 40 50.8 +0.6**
CN2 *e*S **S** **19 44 21.7 -5.6**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=N,400nm,15.0s
CN2 LR LR
comp=E,600nm,15.0s
CN2 LR LR
comp=Z,700nm,17.0s
YAK Yakutsk 20.48 328 *e*P **P** **19 41 05.8 +7.8**
YAK pmax pmax
comp=Z,23nm,1.1s
YAK pmax pmax
comp=E,15nm,1.8s
YAK pmax pmax
comp=N,11nm,1.5s
KSRS Korea Array 20.67 253 P **P** **19 41 01.3 +1.0**
comp=N,7.3nm,0.7s,baz=58,slow=10,SNR=20
KSRS LR LR 19 47 53.3
comp=N,383nm,20.1s,MS3.8,baz=62,slow=33
KSRS Korea Array 20.67 253 P **P** **19 41 01.3 +1.0**
KSRS pmax pmax
comp=Z,7.0nm,0.7s
KSRS MLR MLR
comp=Z,383nm,20.1s,MS3.8
CBIJ Chichi jima 21.21 208 P **P** **19 41 08.7 +2.6**
comp=Z,23nm,0.6s,mb4.7,baz=282,slow=20,SNR=2.7
CBIJ LR LR 19 48 48.2
comp=Z,237nm,18.6s,MS3.6,baz=333,slow=35
BILL Bilibino 22.62 13⇓ *e*P **P** **19 41 22.4 +1.5**
BILL *e* 19 41 46.2
BILL *e*S **S** **19 45 28.4 +2.5**
BILL pmax pmax
comp=Z,9.0nm,1.6s,mb4.0
BILL MLR MLR
comp=Z,700nm,18.0s,MS4.1
BJI Beijing 27.41 270 P **P** **19 42 05.8 +0.2**
BJI S **S** **19 46 42.8 0.0**
BJI AMB AMB
comp=Z,4.0nm,0.5s,mb4.2
BJI AMB AMB
comp=Z,67nm,5.1s
BJI LR LR
comp=N,282nm,19.1s,MS4.3
BJI LR LR
comp=E,618nm,15.6s,MS4.3
BJI LR LR
comp=Z,541nm,21.2s
NJ2 Nanjing 29.87 253 *e*P **P** **19 42 29.6 +2.1**
NJ2 AP pP 19 42 39.6 +0.7
NJ2 XP sP 19 42 46.2 +2.3
NJ2 PP PP 19 43 27.9 -7.4
NJ2 S **S** **19 47 22.1 +0.5**
NJ2 XS sS 19 47 41.2 +0.5
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,80nm,4.2s
NJ2 LR LR
comp=N,260nm,17.1s,MS4.2
NJ2 LR LR
comp=E,420nm,17.0s,MS4.2
HHC Hu-ho-hao-te 30.25 274 *e*P **P** **19 42 29.5 -1.3**
HHC AP pP 19 42 41.4 -0.8
HHC XP sP 19 42 47.2 0.0
HHC PP PP 19 43 28.1 -11
HHC *e*S **S** **19 47 23.3 -4.1**
HHC XS sS 19 47 42.6 -3.8
HHC PCS PcS 19 49 12.2 -1.8
HHC AMB AMB
comp=Z,14nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,89nm,6.2s
HHC LR LR
comp=N,234nm,14.3s,MS4.1
HHC LR LR
comp=E,274nm,17.8s,MS4.1
HHC LR LR
comp=Z,348nm,16.7s,MS4.1
SONM Songino Array 31.35 290 LR LR 19 56 03.9
comp=Z,386nm,18.3s,MS4.1,baz=93,slow=38
TLY Talaya 32.23 298 P **P** **19 42 43.9 -4.2**
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TLY Talaya 32.23 298 P **P** **19 42 43.9 -4.1**
comp=Z,7.1nm,1.0s,mb4.5
WHN Wuhan 33.81 256⇑ P **P** **19 42 59.6 -2.5**
KDAK Kodiak Island 34.30 51 P **P** **19 43 04.8 -1.2**
comp=Z,6.6nm,0.8s,mb4.6,baz=303,slow=13,SNR=24
XAN Xi'an 35.43 265 P **P** **19 43 15.5 -0.6**
XAN AP pP 19 43 27.4 -0.2
XAN PP PP 19 44 37.0 +0.1
XAN S **S** **19 48 48.4 +0.4**
XAN AMB AMB
comp=Z,5.0nm,0.7s,mb4.5
XAN LR LR
comp=E,139nm,18.5s
XAN LR LR
comp=Z,319nm,22.1s,MS4.0
MCK McKinley 35.86 40 *e*P **P** **19 43 19.7 +0.2**
MCK pmax pmax
comp=Z,17nm,1.1s,mb4.9
MCK McKinley 35.86 40 *e*P **P** **19 43 19.7 +0.2**
comp=Z,18nm,1.1s,mb4.9
COLA College 36.35 38 *e*P **P** **19 43 23.0 -0.6**
comp=Z,14nm,0.9s,mb4.9
ENH Enshi 37.26 260 *e*P **P** **19 43 34.4 +2.6**
comp=Z,0.9nm,0.7s,mb3.7
LZH Lanzhou 37.83 272 *e*P **P** **19 43 38.1 +1.6**
LZH AP pP 19 43 50.8 +2.7
LZH XP sP 19 43 55.0 +1.9
LZH AMB AMB
comp=Z,18nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,82nm,4.8s
GTA Gaotai 38.94 279 *e*P **P** **19 43 47.0 +1.2**
GTA AP pP 19 44 00.7 +3.3
GTA XP sP 19 44 05.9 +3.5
GTA S **S** **19 49 42.5 +1.2**
GTA XS sS 19 50 02.9 +2.3
GTA SS SS 19 52 29.9 -3.9
GTA AMB AMB
comp=Z,2.0nm,0.7s,mb4.0
GTA LR LR
comp=N,202nm,17.1s,MS4.2
GTA LR LR
comp=E,225nm,13.5s,MS4.2
GTA LR LR
comp=Z,231nm,13.8s,MS4.2
EGAK Eagle 39.22 38 *e*P **P** **19 43 46.7 -1.0**
comp=Z,13nm,1.0s,mb4.6
CD2 Chengdu 40.80 265⇓ *i*P **P** **19 44 01.3 0.0**
CD2 AP pP 19 44 14.0 +1.0
CD2 XP sP 19 44 19.0 +1.1
CD2 PP PP 19 45 40.0 +4.3
CD2 PCP PcP 19 46 03.6 +1.9
CD2 PCS PcS 19 49 53.4 +0.7
CD2 S **S** **19 50 08.8 -0.4**
CD2 XS sS 19 50 30.2 +1.6
CD2 SS SS 19 53 04.2 -6.9
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,180nm,6.1s
CD2 LR LR
comp=N,850nm,19.0s,MS4.7
CD2 LR LR
comp=E,290nm,15.6s,MS4.7
CD2 LR LR
comp=Z,680nm,20.2s,MS4.5
INK Inuvik 41.88 32 *e*P **P** **19 44 09.0 -0.7**
INK pmax pmax
comp=Z,21nm,1.2s
INK Inuvik 41.88 32 *e*P **P** **19 44 09.0 -0.7**
comp=Z,21nm,1.2s,mb4.6
ZALV Zalesovo Beam 42.69 306 P **P** **19 44 14.1 -2.4**
comp=Z,0.4nm,0.5s,mb3.4,baz=47,slow=6.9,SNR=2.2
WMQ Urumqi 44.95 291 *e*P **P** **19 44 35.6 +0.9**
WMQ LR LR
comp=N,140nm,21.0s,MS4.1
WMQ LR LR
comp=E,197nm,20.0s,MS4.1
WMQ LR LR
comp=Z,214nm,20.0s,MS4.1
KMI Kunming 45.14 260 P **P** **19 44 37.7 +1.2**
KMI AP pP 19 44 50.4 +2.1
KMI XP sP 19 44 57.4 +4.2
KMI S **S** **19 51 13.9 +0.9**
KMI SS SS 19 54 27.6 -8.7
KMI AMB AMB
comp=Z,4.0nm,1.6s,mb4.0
KMI AMB AMB
comp=Z,188nm,14.0s
KMI LR LR
comp=N,203nm,19.6s,MS4.1
KMI LR LR
comp=E,116nm,21.3s,MS4.1
KMI LR LR
comp=Z,195nm,20.4s,MS4.0
DLBC Dease Lake 45.80 46 P **P** **19 44 42.9 +1.6**
MKAR Makanchi Array 46.99 298 P **P** **19 44 48.4 -2.4**
comp=Z,0.8nm,0.7s,mb3.8,baz=67,slow=6.3,SNR=5.4
MKAR Makanchi Array 46.99 298 P **P** **19 44 48.4 -2.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
LSA Lhasa 50.22 273 P **P** **19 45 16.3 +0.5**
LSA AMB AMB
comp=Z,30nm,0.9s,mb5.3
LSA Lhasa 50.22 273 *e*P **P** **19 45 16.5 +0.7**
LSA pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LSA Lhasa 50.22 273 *e*P **P** **19 45 16.5 +0.6**
comp=Z,3.3nm,0.5s,mb4.6
YKA Yellowknife Ar 51.14 37 P **P** **19 45 22.5 +0.2**
comp=Z,0.8nm,0.7s,mb3.7,baz=297,slow=6.9,SNR=9.4
YKA pP pP 19 45 32.1 -2.1
comp=Z,4.1nm,0.9s,baz=297,slow=7.2,SNR=9.5
YKA sP sP 19 45 36.7 -2.5
comp=Z,2.7nm,0.6s,baz=296,slow=7.0,SNR=15
YKA LR LR 20 08 52.8
comp=Z,52nm,19.5s,MS3.6,baz=60,slow=38
YKA Yellowknife Ar 51.14 37 P **P** **19 45 22.5 +0.2**
YKA *SP sP 19 45 36.7 -2.5
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA pmax pmax
comp=Z,3.0nm,0.6s
YKA MLR MLR
comp=Z,53nm,19.5s
CHTO Chiang Mai 52.00 257 *e*P **P** **19 45 29.4 +0.1**
CHTO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CHTO Chiang Mai 52.00 257 *e*P **P** **19 45 29.4 0.0**
comp=Z,4.0nm,0.8s,mb4.4
CMAR Chiang Mai Arr 52.26 256 P **P** **19 45 31.7 +0.5**
comp=Z,2.2nm,0.8s,mb4.2,baz=37,slow=7.3,SNR=18
CMAR pP pP 19 45 41.5 -1.7
comp=Z,0.9nm,0.7s,baz=36,slow=5.7,SNR=4.2
CMAR LR LR 20 10 31.2
comp=Z,202nm,18.2s,MS4.2,baz=244,slow=39
CMAR Chiang Mai Arr 52.26 256 P **P** **19 45 31.7 +0.5**
CMAR *PP pP 19 45 41.5 -1.7
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR MLR MLR
comp=Z,202nm,18.2s
AAK Ala-Archa 53.88 296 *i* P **P** **19 45 43.0 +0.1**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
AAK Ala-Archa 53.88 296 P **P** **19 45 42.4 -0.4**
comp=Z,4.0nm,1.1s,mb4.3
TAPN Taplejung 54.05 273 *e*P **P** **19 45 44.3 0.0**
comp=Z,8.9nm,0.7s,mb4.8
ODAN Odare 54.58 273 *e*P **P** **19 45 47.5 -0.7**
comp=Z,23nm,1.1s,mb5.1
JIRN Jiri 54.90 275 *e*P **P** **19 45 50.8 +0.3**
comp=Z,10nm,0.5s,mb5.1
GUN Gumba 54.96 275 *e*P **P** **19 45 51.0 +0.1**
comp=Z,6.6nm,0.4s,mb5.0
RAMN Ramite 55.06 274 *e*P **P** **19 45 51.3 -0.4**
comp=Z,25nm,0.9s,mb5.2
KKN Kakani 55.44 275 *e*P **P** **19 45 54.1 -0.3**
comp=Z,8.0nm,0.6s,mb5.0
KKN Kakani 55.44 275 *e*P **P** **19 45 54.1 -0.3**
KKN pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
DMN Daman 55.68 275 *e*P **P** **19 45 55.9 -0.2**
comp=Z,6.7nm,0.6s,mb4.9
GKN Gorkha 55.75 276 *e*P **P** **19 45 56.3 -0.3**
comp=Z,15nm,0.7s,mb5.1
DANN Dangsing 56.14 277 *e*P **P** **19 45 59.4 0.0**
comp=Z,9.7nm,0.5s,mb5.1
KOLN Koldanda 56.61 277 *e*P **P** **19 46 02.5 -0.2**
comp=Z,8.3nm,0.8s,mb4.8
ARCES ARCESS Array B 58.04 341 P **P** **19 46 11.0 -1.3**
comp=Z,5.3nm,1.1s,mb4.5,baz=27,slow=11,SNR=3.8
ARCES LR LR 20 11 09.6
comp=Z,117nm,21.8s,MS4.0,baz=294,slow=36
ARCES ARCESS Array B 58.04 341 P **P** **19 46 11.0 -1.2**
ARCES pmax pmax
comp=Z,5.0nm,1.1s
ARCES MLR MLR
comp=Z,117nm,21.8s
MOD Modoc 59.26 60 P **P** **19 46 21.5 +0.4**
comp=Z,13nm,1.3s,mb4.8
FCC Fort Churchill 61.49 33 *e*P **P** **19 46 34.5 -1.6**
comp=Z,0.1nm,0.6s,mb3.1
HLID Hailey 61.69 56 P **P** **19 46 35.8 -1.9**
comp=Z,22nm,2.3s,mb4.9
NVAR Mina Array Bea 62.60 62 P **P** **19 46 45.8 +2.0**
comp=Z,1.0nm,0.6s,mb4.1,baz=297,slow=6.9,SNR=6.8
NVAR sP sP 19 47 00.9 0.0
comp=Z,2.1nm,0.7s,baz=293,slow=6.8,SNR=6.4
RLMT Red Lodge 63.56 52 P **P** **19 46 46.1 -4.0**
comp=Z,7.5nm,1.3s,mb4.6
RRI2 Red Ridge 63.57 54 *e*P **P** **19 46 52.0 +1.8**
comp=Z,4.4nm,0.8s,mb4.5
LOHW Long Hollow 63.80 54 P **P** **19 46 52.6 +0.9**
comp=Z,6.8nm,1.4s,mb4.5
TPNV Topopah Spring 64.79 62 *e*P **P** **19 46 59.1 +0.8**
PDAR Pinedale Array 64.93 54 P **P** **19 47 00.1 +1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.8nm,0.7s,mb3.9,baz=272,slow=2.3,SNR=8.4						
PDAR				pP	pP	19 47 11.4	0.0
	comp=Z,1.2nm,1.0s,baz=253,slow=1.5,SNR=4.6						
PDAR				LR	LR	20 13 19.2	
	comp=Z,118nm,20.2s,MS4.1,baz=341,slow=34						
PDAR	Pinedale Array	64.93	54	P	P	19 47 00.1	+1.0
PDAR				pP	pP	19 47 11.4	0.0
PDAR				LR	LR	20 13 19.2	
ULM	Lac du Bonnet	66.73	41	LR	LR	20 20 12.3	
	comp=Z,138nm,18.8s,MS4.2,baz=287,slow=40						
RSSD	Black Hills	67.02	50	eP	P	19 47 12.7	+0.2
	comp=Z,2.1nm,0.5s,mb4.4						
WRAB	Tennant Creek	68.27	199	P	P	19 47 19.9	-0.6
NB2	NORSAR Subarra	68.42	341	P	P	19 47 18.7	-2.3
	comp=Z,0.9nm,0.5s,mb4.1,baz=27,slow=6.5						
NOA	NORSAR Array B	68.42	341	P	P	19 47 19.0	-2.0
	comp=Z,1.1nm,0.6s,mb4.1,baz=27,slow=6.4,SNR=8.0						
NOA				LR	LR	20 21 00.3	
	comp=Z,101nm,19.9s,MS4.0,baz=30,slow=39						
NOA	NORSAR Array B	68.42	341	P	P	19 47 19.0	-2.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,101nm,19.9s						
NOA	NORSAR Array B	68.42	341	P	P	19 47 19.0	-2.0
NOA				LR	LR	20 21 00.3	
AKASG	Malin Array Be	71.70	326	P	P	19 47 39.0	-2.3
	comp=Z,1.3nm,0.4s,mb4.2,baz=33,slow=6.0,SNR=6.5						
AKASG	Malin Array Be	71.70	326	P	P	19 47 39.0	-2.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCHQ	Schefferville	73.54	23	LR	LR	20 19 05.5	
	comp=Z,154nm,22.0s,MS4.2,baz=58,slow=35						
BUR08	Bucovina Ar. S	75.72	327	eP	P	19 48 02.5	-2.4
CLL	Collm	76.64	336	esPcP		19 48 40.0	
CLL				LmV		19 26 00.0	
	comp=Z,200nm,19.7s						
TXAR	Lajitas Array	77.66	60	P	P	19 48 17.0	+0.8
	comp=Z,0.8nm,0.8s,mb3.7,baz=306,slow=4.9,SNR=9.3						
TXAR				pP	pP	19 48 28.4	-0.4
	comp=Z,1.5nm,0.5s,baz=291,slow=5.4,SNR=6.6						
TXAR				sP	sP	19 48 32.6	-0.9
	comp=Z,1.5nm,0.5s,baz=285,slow=4.6,SNR=13						
TXAR	Lajitas Array	77.66	60	P	P	19 48 17.0	+0.8
TXAR				pP	pP	19 48 28.4	-0.4
TXAR				sP	sP	19 48 32.6	-0.9
KHC	Kasperske Hory	78.41	334	eP	P	19 48 19.5	-0.5
KHC				epP	pP	19 48 30.5	-2.1
STKA	Stephens Creek	78.72	190	LR	LR	20 19 59.1	
	comp=Z,113nm,19.3s,MS4.2,baz=25,slow=33						
ESDC	Sonseca Array	91.75	342	LR	LR	20 32 28.3	
	comp=Z,109nm,21.8s,MS4.3,baz=65,slow=37						

*ISCJB **11** 19:39:40.3±0.8, 3.46S±0.09×100.6E±0.2, h33km, mb4.1/10, Error ellipse: s-maj=27.6km s-min=13.6km az=179.6*
*NEIC **11** 19:39:42.9±0.7, 3.41S×100.66E, h35km, mb4.2/6, Error ellipse: s-maj=28.2km s-min=14.2km az=88.0*
*IDC **11** 19:39:49.9±12.0, 2.76S×100.47E, h57km±98km, mb3.6/5, mb1 3.6/5, mb1mx3.4/19, mbtmp3.6/5, Error ellipse: s-maj=137.2km s-min=28.5km az=61.0*
ISC 11 19:39:42.9±0.8**, 3.46S**±0.10×**100.7E**±0.2**, h35**km**, n15, σ0.92**/13**, mb4.1**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCO	West Island	9.47	203	ePn	Pn	19 41 56.6	-0.3
	912nm,0.6s						
CMAR	Chiang Mai Arr	21.84	356	P	P	19 44 29.1	-3.4
	0.3nm,0.4s,mb3.1,baz=186,slow=10,SNR=5.4						
WRAB	Tennant Creek	36.70	119	eP	P	19 46 47.2	+0.3
	1.5nm,0.8s,mb3.9						
STKA	Stephens Creek	47.69	131	P	P	19 48 26.3	+10
	0.9nm,0.5s,mb4.0,baz=319,slow=9.3,SNR=2.9						
STKA	Stephens Creek	47.69	131	P	P	19 48 26.1	+10
	0.3nm,0.8s,mb3.4						
SONM	Songino Array	51.32	5	P	P	19 48 44.3	+0.6
	2.8nm,0.7s,mb4.3,baz=186,slow=10.0,SNR=22						
ULN	Ulaanbaatar	51.41	5	eP	P	19 48 43.6	-0.7
	4.0nm,1.1s,mb4.3						
TKM2	Tokmak 2	51.43	337	eP	P	19 48 46.0	+1.5
	3.9nm,0.5s,mb4.6						
EKS2	Erkin-Say	51.96	335	eP	P	19 48 49.9	+1.3
	3.6nm,0.7s,mb4.4						
MK31	Makanchi Array	52.60	344	eP	P	19 48 52.3	-1.0
MKAR	Makanchi Array	52.60	344	P	P	19 48 53.0	-0.3
	0.7nm,0.3s,mb4.0,baz=157,slow=8.7,SNR=21						
KURK	Kurchatov	57.19	344	P	P	19 49 26.1	-0.2
	1.5nm,0.8s,mb4.1						
ZALV	Zalesovo Beam	58.72	349	P	P	19 49 36.5	-0.5
	0.8nm,0.3s,mb4.2,baz=182,slow=4.3,SNR=6.0						
TXAR	Lajitas Array	145.42	39	PKPbc	PKPbc	19 59 18.8	+0.9
	0.8nm,0.5s,baz=227,slow=1.6,SNR=14						
TXAR	Lajitas Array	145.42	39	PKPbc	PKPbc	19 59 18.8	+0.8

MEX 11 20:25:38.7±0.5**, 17.10N**×**101.24W, h12**km±25km**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.55	337	i P	Pg	20 25 48.3	-1.1
ZIIG				i S	Sg	20 25 55.5	-1.1
CAIG	El Cayaco	0.93	93	i P	Pg	20 25 53.4	-3.3
CAIG				i S	Sg	20 26 05.4	-3.4
ACX	Acapulco	1.29	100	eP	Pn	20 25 59.3	-3.2
ACX				i S	Sb	20 26 14.3	-5.0
UTMO	Huajuapan	3.36	77	eP	Pn	20 26 28.3	-2.7
UTMO				i S	Sn	20 27 08.7	-2.1

*ISCJB **11** 20:29:11.7±0.2, 49.348N±0.010×6.77E±0.02, h0km, Error ellipse: s-maj=1.5km s-min=1.4km az=42.7*
*PRU **11** 20:29:13.7, 49.38N×6.82E, h0km*
*CSEM **11** 20:29:13.9±0.0, 49.39N×6.84E, h1km, ML3.8/35, Error ellipse: s-maj=0.6km s-min=0.6km az=50.0*
*BGR **11** 20:29:13.9±0.2, 49.37N×6.85E, h1km, ML3.2/17, Error ellipse: s-maj=3.3km s-min=2.2km az=127.0*
*STR **11** 20:29:13.8±0.2, 49.36N×6.80E, h1km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BNS **11** 20:29:14.7±1.2, 49.40N×6.93E, h1km, ML2.7*
*LDG **11** 20:29:14.2±0.1, 49.38N×6.82E, h1km, Md3.6/4, Ml3.7/35, Error ellipse: s-maj=1.2km s-min=0.9km az=178.0, Suspected Mining induced.*
*LEDBW **11** 20:29:14.4±0.2, 49.380N±0.009×6.85E±0.02, h1km, ML3.0, Error ellipse: s-maj=6.0km s-min=4.0km az=115.0*
*NEIC **11** 20:29:15.0, 49.37N×6.80E, h10km, ML3.2(STR), ML3.3(FUR), ML3.7(LDG), After LDG.*
ISC 11 20:29:12.6±0.1**, 49.364N**±0.009×**6.79E**±0.01**, h0**km**, n215, σ1.23**/418**, 14C-6D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.38	28	ePg	Pg	20 29 21.2	+1.2
	SNR=2.1						
WLF	Walferdange	0.51	306	ePg	Pg	20 29 24.6	+2.2
	SNR=56						
WLF				eSg	Sg	20 29 30.6	+1.6
	SNR=6.2						
WLF	Walferdange	0.51	306	P	Pg	20 29 24.7	+2.3
WLF	Walferdange	0.51	306	ePg	Pg	20 29 23.9	+1.5
WLF				eSg	Sg	20 29 30.5	+1.4
ABH	Alteburg	0.72	43	P*	Pb	20 29 27.1	-0.9
ABH	Alteburg	0.72	43	Pg	Pg	20 29 27.0	+0.6
ABH				Sg	Sg	20 29 37.6	+1.9
LANF	Langenberg	0.77	119	Pg	Pg	20 29 28.0	+0.6
LANF	Langenberg	0.77	119	Pg	Pg	20 29 28.2	+0.8
KTD	Kalmit	0.85	92	P*	Pb	20 29 30.2	-0.1
KTD	Kalmit	0.85	92	Pg	Pg	20 29 30.2	+1.3
KTD				Sg	Sg	20 29 42.3	+2.4
BGG	Burgeitz	0.92	23	ePg	Pg	20 29 30.5	+0.3
HILG	Hillesheim	0.93	356	ePg	Pg	20 29 31.9	+1.4
CDF	Champ du Feu	1.01	161	ePn	Pn	20 29 33.5	-0.5
	SNR=1.0						
CDF				eSg	Sg	20 29 46.6	+1.7
	328nm,0.3s,SNR=1.0						
CDF	Champ du Feu	1.01	161	ePn	Pn	20 29 33.5	-0.5
	SNR=1.0						
CDF				eSg	Sg	20 29 46.6	+1.7
	164nm,0.3s,SNR=1.0						
CDF	Champ du Feu	1.01	161	ePg	Pg	20 29 32.6	+0.7
CDF				ePn	Pn	20 29 33.5	-0.5
CDF				eSg	Sg	20 29 46.6	+1.7
RFYF	Reffroy	1.14	230	ePg	Pg	20 29 36.3	+1.9
RFYF				eSg	Sg	20 29 51.5	+2.4
	944nm,0.3s						
RFYF	Reffroy	1.14	230	ePg	Pg	20 29 36.3	+1.9
RFYF				eSg	Sg	20 29 51.5	+2.4
	472nm,0.3s						
ECH	Echery	1.18	168	Pg	Pg	20 29 35.8	+0.7
ECH				Sg	Sg	20 29 52.3	+2.0
ECH	Echery	1.18	168	Pn	Pn	20 29 36.0	-0.3
ECH	Echery	1.18	168	Pg	Pg	20 29 35.8	+0.7
ECH				eSg	Sg	20 29 51.8	+1.5
ECH	Echery	1.18	168	ePg	Pg	20 29 35.7	+0.6
ECH				eSg	Sg	20 29 51.8	+1.4
KOE	Koeppel	1.23	30	ePg	Pg	20 29 36.1	0.0
STB	Steinbach	1.23	2	ePg	Pg	20 29 36.7	+0.5
STB				eSg	Sg	20 29 53.5	+1.3
	118nm,0.8s						
THEF	They Montfort	1.25	205	Pg	Pg	20 29 37.8	+1.1
THEF				Sg	Sg	20 29 54.4	+1.5
THEF	They Montfort	1.25	205	Pn	Pn	20 29 37.8	+0.4
SWS	Schriesheim-Wi	1.26	84	P	Pg	20 29 36.5	-0.2
SWS				Pg	Pg	20 29 37.5	+0.8
SWS				Sg	Sg	20 29 53.3	+0.3
SWS	Schriesheim-Wi	1.26	84	Px	Px	20 29 37.5	
SWS				S	Sg	20 29 53.3	+0.3
KLL	Kalltalsperre	1.32	347	ePg	Pg	20 29 38.1	+0.1
LIBD	Limburg	1.33	156	P*	Pb	20 29 39.9	+1.5
TOD	Tromm	1.34	79	P	Pg	20 29 37.6	-0.7
TOD				Sg	Sg	20 29 56.9	+1.3
TOD	Tromm	1.34	79	Pg	Pg	20 29 38.4	+0.1
TOD				Sg	Sg	20 29 56.6	+1.0
TOD	Tromm	1.34	79	Pg	Pg	20 29 38.4	+0.1
TOD				Sg	Sg	20 29 56.6	+1.0
MEM	Membach	1.34	338	P	Pg	20 29 38.6	+0.2
DREG	Dreilaegerbach	1.35	345	ePg	Pg	20 29 38.9	+0.4
TNS	Taunus Mts	1.38	51	P	Pg	20 29 38.2	-0.8
TNS				Sg	Sg	20 29 58.4	+1.5
TNS	Taunus Mts	1.38	51	P	Pg	20 29 38.2	-0.8
TNS				eSg	Sg	20 29 58.1	+1.2
TNS	Taunus Mts	1.38	51	ePg	Pg	20 29 38.2	-0.8
TNS				eSg	Sg	20 29 58.1	+1.2
HAU	Haudompre	1.39	192	ePg	Pg	20 29 40.3	+1.0
	SNR=1.0						
HAU				eSg	Sg	20 29 59.1	+1.8
	297nm,0.2s,SNR=1.0						
HAU	Haudompre	1.39	192	ePg	Pg	20 29 40.3	+1.0
	SNR=1.0						
HAU				eSg	Sg	20 29 59.1	+1.8
	149nm,0.2s,SNR=1.0						
HAU	Haudompre	1.39	192	ePn	Pn	20 29 39.1	-0.1
HAU				ePg	Pg	20 29 40.3	+1.0
HAU				eSg	Sg	20 29 59.1	+1.8
BCLA	Clavier	1.43	318	P	Pn	20 29 40.2	+0.4
MEZF	Maizieres J'vi	1.43	234	ePg	Pg	20 29 41.2	+1.1
MEZF				eSg	Sg	20 30 00.4	+1.8
	239nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.43	234	ePg	Pg	20 29 41.2	+1.1
MEZF				eSg	Sg	20 30 00.4	+1.8
	119nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.43	234	ePn	Pn	20 29 39.8	0.0
MEZF				ePg	Pg	20 29 41.2	+1.1
MEZF				eSg	Sg	20 30 00.4	+1.8
BFO	Black Forest	1.45	135	⇓P	Pn	20 29 39.6	-0.5
BFO				S	Sg	20 29 58.4	-0.9
BFO				Sg	Sg	20 30 00.5	+1.2
BFO	Black Forest	1.45	135	ePn	Pn	20 29 39.6	-0.5
BFO				eSg	Sg	20 29 58.4	-0.9
GIVF	Givet	1.47	301	ePg	Pg	20 29 41.4	+0.6
	SNR=1.0						
GIVF				eSn	Sn	20 29 58.8	-1.5
	SNR=1.0						
GIVF				eSg	Sg	20 30 01.2	+1.3
	388nm,0.5s						
GIVF	Givet	1.47	301	ePg	Pg	20 29 41.4	+0.6
	SNR=1.0						
GIVF				eSn	Sn	20 29 58.8	-1.5
	SNR=1.0						
GIVF				eSg	Sg	20 30 01.2	+1.3
	194nm,0.5s						
GIVF	Givet	1.47	301	ePn	Pn	20 29 40.1	-0.3
GIVF				ePg	Pg	20 29 41.4	+0.6
GIVF				eSn	Sn	20 29 58.8	-1.5
GIVF				eSg	Sg	20 30 01.2	+1.3
LBG	Lerchenberg	1.50	117	P	Pn	20 29 40.2	-0.5
LBG				Pg	Pg	20 29 41.9	+0.6
LBG				S	Sg	20 29 58.8	-1.9
LBG				Sg	Sg	20 30 01.4	+0.7
LBG	Lerchenberg	1.50	117	Pn	Pn	20 29 40.2	-0.5
LBG				Sn	Sg	20 29 58.8	-1.9
LBG	Lerchenberg	1.50	117	P	Pg	20 29 41.9	+0.6
LBG				S	Sg	20 30 01.4	+0.7
HGN	Heimansgroeve	1.51	339	ePn	Pn	20 29 41.0	+0.2
HGN	Heimansgroeve	1.51	339	ePg	Pg	20 29 43.3	+1.8
	63nm,0.4s						
HGN				eSg	Sg	20 30 02.0	+1.0
HGN	Heimansgroeve	1.51	339	ePg	Pg	20 29 43.3	+1.8
	63nm,0.4s						
HGN				eSg	Sg	20 30 02.0	+1.0
HGN	Heimansgroeve	1.51	339	eRg		20 30 21.1	
MOF	Molkenrain	1.53	171	Pg	Pg	20 29 43.0	+1.0
MOF				Sg	Sg	20 30 02.9	+1.1
MOF	Molkenrain	1.53	171	P	Pn	20 29 43.3	+2.1
MOF				S	Sn	20 30 03.2	+1.5
FBB	Freiburg im Br	1.54	152	S*	Sb	20 30 03.9	+2.0
HINF	Hinteralfeld	1.55	178	ePg	Pg	20 29 43.1	+0.8
HINF				eSn	Sn	20 30 00.9	-1.3
	SNR=1.0						
HINF				eSg	Sg	20 30 04.0	+1.6
	285nm,0.3s						
HINF	Hinteralfeld	1.55	178	ePg	Pg	20 29 43.1	+0.8
HINF				eSn	Sn	20 30 00.9	-1.3
	SNR=1.0						
HINF				eSg	Sg	20 30 04.0	+1.6
	143nm,0.3s						
HINF	Hinteralfeld	1.55	178	ePn	Pn	20 29 41.4	0.0
HINF				ePg	Pg	20 29 43.1	+0.8
HINF				eSn	Sn	20 30 00.9	-1.3
HINF				eSg	Sg	20 30 04.0	+1.6
KIZ	Kirchzarten	1.60	152	P	Pn	20 29 41.6	-0.5
KIZ				Pg	Pg	20 29 43.7	+0.5
KIZ				S	Sn	20 30 01.0	-2.4
KIZ				Sg	Sg	20 30 05.0	+1.1
KIZ	Kirchzarten	1.60	152	Pn	Pn	20 29 41.6	-0.5
KIZ				Sn	Sn	20 30 01.0	-2.4
KIZ	Kirchzarten	1.60	152	P	Pg	20 29 43.7	+0.5
KIZ				S	Sg	20 30 05.0	+1.1
DOU	Dourbes	1.60	298	P	Pn	20 29 42.9	+0.7
DOU	Dourbes	1.60	298	P	Pn	20 29 42.8	+0.7
BEBN	Eben Emael	1.60	334	P	Pn	20 29 43.9	+1.7
BEBN	Eben Emael	1.60	334	P	Pn	20 29 43.8	+1.6
BNS	Bensberg	1.62	9	ePg	Pg	20 29 43.1	-0.6
SFTF	Sexfontaines	1.64	226	ePn	Pn	20 29 43.1	+0.5
SFTF				eSg	Sg	20 30 07.0	+1.8
	124nm,0.3s						
SFTF	Sexfontaines	1.64	226	ePn	Pn	20 29 43.1	+0.5
SFTF				eSg	Sg	20 30 07.0	+1.8
	62nm,0.3s						
HOBG	Hohbusch	1.66	12	ePg	Pg	20 29 43.9	-0.5
STU	Stuttgart	1.69	110	ePn	Pn	20 29 43.3	-0.1
	SNR=1.6						
STU				eSg	Sg	20 30 05.1	-1.9
STU	Stuttgart	1.69	110	ePn	Pn	20 29 42.0	-1.4
FELD	Feldberg im Sc	1.69	151	P	Pn	20 29 42.9	-0.5
FELD				Pg	Pg	20 29 46.2	+1.1
FELD				Sg	Sg	20 30 07.7	+0.7
FELD	Feldberg im Sc	1.69	151	P	Pg	20 29 46.2	+1.1
FELD	Feldberg im Sc	1.69	151	Pg	Pg	20 29 44.9	-0.2
FELD				Sg	Sg	20 30 08.6	+1.6
TUBL	Tuebingen-Lenn	1.73	118	Pg	Pg	20 29 46.3	+0.5
TUBL				Sg	Sg	20 30 08.6	+0.3
BAIF	Baives	1.81	294	eP	Pn	20 29 46.6	+1.5
	SNR=1.0						
BAIF	Baives	1.81	294	ePg	Pg	20 29 48.4	+1.0
BAIF				eSn	Sn	20 30 06.8	-1.9
	SNR=1.0						
BAIF				eSg	Sg	20 30 11.5	+0.7
	182nm,0.5s,SNR=1.0						
BAIF	Baives	1.81	294	eP	Pn	20 29 46.6	+1.5
	SNR=1.0						
BAIF	Baives	1.81	294	ePg	Pg	20 29 48.4	+1.0
BAIF				eSn	Sn	20 30 06.8	-1.9
	SNR=1.0						
BAIF				eSg	Sg	20 30 11.5	+0.7
	91nm,0.5s,SNR=1.0						
BAIF	Baives	1.81	294	ePn	Pn	20 29 44.7	-0.4
BAIF				eP		20 29 46.6	
BAIF				ePg	Pg	20 29 48.4	+1.0
BAIF				eSn	Sn	20 30 06.8	-1.9
BAIF				eSg	Sg	20 30 11.5	+0.7
SPAK	Spaichingen-Ko	1.83	133	Pg	Pg	20 29 48.3	+0.6
SPAK	Spaichingen-Ko	1.83	133	Pg	Pg	20 29 48.3	+0.6
SPAK				Sg	Sg	20 30 13.7	+2.3
SPAK	Spaichingen-Ko	1.83	133	Pg	Pg	20 29 48.2	+0.5
SPAK				Sg	Sg	20 30 13.7	+2.3
SIND	Sindeldorf	1.84	89	P	Pn	20 29 44.6	-0.9
BUCH	Bad Urach	1.93	117	P	Pn	20 29 46.8	+0.2
BBS	Basel-Blauen	1.96	166	Pg	Pg	20 29 50.9	+0.7
BBS	Basel-Blauen	1.96	166	Pg	Pg	20 29 51.0	+0.8
SNF	Seneffe	1.98	306	P	Pn	20 29 49.5	+2.1
SNF	Seneffe	1.98	306	P	Pn	20 29 49.4	+2.0
GUT	Gutenstein	2.01	129	P	Pn	20 29 47.7	-0.1
GUT				Pg	Pg	20 29 51.7	+0.5
GUT				Sg	Sg	20 30 17.5	+0.2
GUT	Gutenstein	2.01	129	P	Pg	20 29 51.7	+0.5
LOMF	Lomont	2.02	179	Pg	Pg	20 29 51.9	+0.7
LOMF				Sg	Sg	20 30 19.0	+1.7
LOMF	Lomont	2.02	179	ePn	Pn	20 29 48.2	+0.4
	SNR=2.1						
LOMF				Pg	Pg	20 29 51.9	+0.7
LOMF				Sg	Sg	20 30 18.7	+1.4
BUG	Bochum--Univer	2.10	8	eSg	Sg	20 30 19.5	-0.6
	SNR=4.9						
UCC	Uccle	2.12	313	P	Pn	20 29 54.5	+5.2
UCC	Uccle	2.12	313	P	Pn	20 29 54.4	+5.1
SISB	Singen-Schiene	2.22	138	P*	Pb	20 29 55.6	+2.1
SISB				S*	Sb	20 30 26.2	+4.7
SISB	Singen-Schiene	2.22	138	Px	Pb	20 29 55.6	+2.1
HDH	Heidenheim-Cha	2.38	108	Sg	Sg	20 30 29.5	+0.2
HROE	Hohe Rhon--Fla	2.47	60	⇑iPn	Pn	20 29 53.6	-0.5
UBBA	Unterbreizbach	2.53	54	eSg	Sg	20 30 33.2	-0.7
	SNR=3.6						
WTSB	Winterswijk	2.61	0	ePn	Pn	20 30 02.0	+6.0
	33nm,1.1s						
WTSB	Winterswijk	2.61	0	eSn	Sn	20 30 35.2	+7.0
UBR	Ueberruh	2.78	126	S*	Sb	20 30 43.9	+6.3
CABF	La Chapelle	2.79	190	ePg	Pg	20 30 06.3	+0.1
CABF				eSg	Sg	20 30 43.4	+1.0
	138nm,0.5s,SNR=1.0						
CABF	La Chapelle	2.79	190	ePg	Pg	20 30 06.3	+0.1
CABF				eSg	Sg	20 30 43.4	+1.0
	69nm,0.5s,SNR=1.0						
CABF	La Chapelle	2.79	190	ePn	Pn	20 29 58.4	-0.1
CABF				ePg	Pg	20 30 06.3	+0.1
CABF				eSg	Sg	20 30 43.4	+1.0
LOR	Lormes	2.87	224	ePn	Pn	20 29 59.4	-0.1
	SNR=1.0						
LOR				eSn	Sn	20 30 33.1	-1.6
LOR				eSg	Sg	20 30 44.4	-0.3
	128nm,0.4s,SNR=1.0						
LOR	Lormes	2.87	224	ePn	Pn	20 29 59.4	-0.1
	SNR=1.0						
LOR				eSn	Sn	20 30 33.1	-1.6
LOR				eSg	Sg	20 30 44.4	-0.3
	64nm,0.4s,SNR=1.0						
GRA1	Grafenberg Arr	2.91	82	Sg	Sg	20 30 46.7	+0.7
GRF	Grafenberg Arr	2.91	82	eSg	Sg	20 30 46.7	+0.7
DAVA	Damuels	2.93	134	⇑ePn	Pn	20 30 01.7	+1.3
	SNR=11						
DAVA				⇑iSn	Sn	20 30 35.5	-0.8
DAVA				⇑iSg	Sg	20 30 44.9	-1.8
	48nm,0.6s						
OBER	Oberstdorf	3.05	129	⇑iPn	Pn	20 30 03.5	+1.4
SSF	Saint Saulge	3.18	225	ePn	Pn	20 30 03.6	-0.3
	SNR=1.0						
SSF				eSn	Sn	20 30 40.4	-2.1
	SNR=1.0						
SSF				eSg	Sg	20 30 55.3	+0.5
	104nm,0.4s						
SSF	Saint Saulge	3.18	225	ePn	Pn	20 30 03.6	-0.3
	SNR=1.0						
SSF				eSn	Sn	20 30 40.4	-2.1
	SNR=1.0						
SSF				eSg	Sg	20 30 55.3	+0.5
	52nm,0.4s						
FUR	Furstenfeldbru	3.20	110	ePn	Pn	20 30 05.6	+1.4
FUR	Furstenfeldbru	3.20	110	ePn	Pn	20 30 05.6	+1.4
SMF	Signal de Mont	3.36	217	ePg	Pg	20 30 17.5	+0.4
	SNR=1.0						
SMF				eSn	Sn	20 30 44.2	-2.7
	SNR=1.0						
SMF				eSg	Sg	20 31 00.3	-0.3
	56nm,0.4s						
SMF	Signal de Mont	3.36	217	ePg	Pg	20 30 17.5	+0.4
	SNR=1.0						
SMF				eSn	Sn	20 30 44.2	-2.7
	SNR=1.0						
SMF				eSg	Sg	20 31 00.3	-0.3
	28nm,0.4s						
SMF	Signal de Mont	3.36	217	ePn	Pn	20 30 05.8	-0.6
SMF				ePg	Pg	20 30 17.5	+0.4
SMF				eSn	Sn	20 30 44.2	-2.7
SMF				eSg	Sg	20 31 00.3	-0.3
TUE	Stuetta	3.37	148	ePn	Pn	20 30 08.3	+1.9
TUE	Stuetta	3.37	148	ePn	Pn	20 30 08.3	+1.8
MOX	Moxa	3.37	66	ePg	Pg	20 30 15.4	-1.8
	SNR=2.5						
MOX				eSg	Sg	20 31 00.0	-0.8
MOX	Moxa	3.37	66	ePG	Pg	20 30 15.2	-2.0
MOX				eSG	Sg	20 31 00.0	-0.8
CLZ	Clausthal	3.37	41	ePn	Pn	20 30 05.4	-1.1
	SNR=2.7						
CLZ	Clausthal	3.37	41	ePn	Pn	20 30 06.8	+0.3
AVF	Avril sur Loir	3.45	223	ePn	Pn	20 30 07.0	-0.6
	SNR=1.0						
AVF				eSn	Sn	20 30 45.6	-3.6
	SNR=1.0						
AVF				eSg	Sg	20 31 04.0	+0.5
	46nm,0.4s,SNR=1.0						
AVF	Avril sur Loir	3.45	223	ePn	Pn	20 30 07.0	-0.6
	SNR=1.0						
AVF				eSn	Sn	20 30 45.6	-3.6
	SNR=1.0						
AVF				eSg	Sg	20 31 04.0	+0.5
	23nm,0.4s,SNR=1.0						
HYF	Humbligny	3.47	234	ePn	Pn	20 30 08.4	+0.5
HYF				eSg	Sg	20 31 04.1	0.0
MOTA	Moosalm	3.52	123	⇑iPn	Pn	20 30 09.9	+1.4
	SNR=6.3						
MOTA				⇑iSg	Sg	20 31 03.3	-2.2
	15nm,0.5s						
FETA	Feichten	3.53	130	⇑iPn	Pn	20 30 10.6	+1.9
	SNR=26						
FETA				⇑iSn	Sn	20 30 49.9	-1.2
ROTZ	Rotzenmuhle	3.55	81	eSg	Sg	20 31 05.9	-0.8
GUNZ	Gunzen	3.73	72	eSg	Sg	20 31 10.7	-1.6
	SNR=3.2						
WERD	Werda	3.73	71	ePn	Pn	20 30 11.8	+0.4
WERD				ePg	Pg	20 30 23.1	-0.9
	SNR=3.3						
WERD				eSg	Sg	20 31 11.3	-1.1
	SNR=5.2						
WERN	Wernitzgruen	3.74	74	ePn	Pn	20 30 11.5	0.0
WERN				eSg	Sg	20 31 10.6	-2.0
VAI	Varese	3.75	158	Pg	Pn	20 30 13.0	+1.4
NKC	Novy Kostel	3.77	75	ePN	Pn	20 30 13.1	+1.2
NKC				ePG	Pg	20 30 22.2	-2.6
NKC				eSG	Sg	20 31 12.4	-1.3
	comp=Z,29nm,0.6s						
TANN	Tannenbergstha	3.82	72	eSg	Sg	20 31 12.8	-2.5
	SNR=4.6						
ORO	Oropa	3.83	167	Pg	Pn	20 30 15.0	+2.3
LPL	La Plagne	3.85	181	ePn	Pn	20 30 12.8	-0.3
	SNR=1.0						
LPL				eSg	Sg	20 31 16.0	-0.3
	comp=Z,17nm,0.5s,SNR=1.0						
LPL	La Plagne	3.85	181	ePn	Pn	20 30 12.8	-0.3
	SNR=1.0						
LPL				eSg	Sg	20 31 16.0	-0.3
	comp=Z,8.7nm,0.5s,SNR=1.0						
BGF	Bois d'Agland	3.86	225	ePn	Pn	20 30 13.1	-0.1
	SNR=1.0						
BGF				eSn	Sn	20 30 57.1	-2.1
BGF				eSg	Sg	20 31 15.6	-0.9
	comp=Z,248nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.86	225	ePn	Pn	20 30 13.1	-0.1
	SNR=1.0						

BGF				eSn	Sn	20 30 57.1	-2.1
BGF				eSg	Sg	20 31 15.6	-0.9
	comp=Z,124nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**3.87**	**180**	ePn	**Pn**	**20 30 14.2**	**+0.9**
	SNR=1.0						
LPG				eSn	**Sn**	**20 30 57.3**	**-2.1**
	SNR=1.0						
LPG				eSg	**Sg**	**20 31 17.1**	**+0.2**
	comp=Z,26nm,0.6s,SNR=1.0						
LPG	**La Plagne**	**3.87**	**180**	ePn	**Pn**	**20 30 14.2**	**+0.9**
	SNR=1.0						
LPG				eSn	**Sn**	**20 30 57.3**	**-2.1**
	SNR=1.0						
LPG				eSg	**Sg**	**20 31 17.1**	**+0.2**
	comp=Z,13nm,0.6s,SNR=1.0						
WET	**Wettzell**	**4.00**	**91**	ePn	**Pn**	**20 30 15.5**	**+0.4**
	SNR=8.9						
WET	**Wettzell**	**4.00**	**91**	ePn	**Pn**	**20 30 15.9**	**+0.8**
RJOB	**Jochberg**	**4.31**	**110**	ePn	**Pn**	**20 30 21.0**	**+1.6**
BNI	**Bardonecchia**	**4.32**	**181**	ePn	**Pn**	**20 30 20.7**	**+1.3**
BNI				eSg	**Sg**	**20 31 30.4**	**-0.8**
BNI	**Bardonecchia**	**4.32**	**181**	ePn	**Pn**	**20 30 20.7**	**+1.2**
BNI				eSg	**Sg**	**20 31 30.4**	**-0.8**
TCF	**Toulx Ste Croi**	**4.36**	**227**	ePn	**Pn**	**20 30 19.8**	**-0.2**
TCF				eSg	**Sg**	**20 31 31.6**	**-0.9**
	comp=Z,66nm,0.6s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.36**	**227**	ePn	**Pn**	**20 30 19.8**	**-0.2**
TCF				eSg	**Sg**	**20 31 31.6**	**-0.9**
	comp=Z,33nm,0.6s,SNR=1.0						
SSB	**Saint Sauveur**	**4.36**	**201**	ePn	**Pn**	**20 30 20.3**	**+0.2**
SSB	**Saint Sauveur**	**4.36**	**201**	ePg	**Pg**	**20 30 36.9**	**+0.7**
SSB	**Saint Sauveur**	**4.36**	**201**	ePn	**Pn**	**20 30 20.3**	**+0.2**
SSB				ePg	**Pg**	**20 30 36.9**	**+0.7**
SSB				eSg	**Sg**	**20 31 30.2**	**-2.5**
CLL	**Collm**	**4.43**	**62**	i Pg	**Pg**	**20 30 38.1**	**+0.6**
CLL				eSg	**Sg**	**20 31 32.4**	**-2.5**
	SNR=3.2						
CLL	**Collm**	**4.43**	**62**	ePn	**Pn**	**20 30 14.0**	**-7.0**
	comp=Z,2.0nm,0.6s						
CLL				i Pg	**Pg**	**20 30 38.1**	**+0.6**
CLL				eSn	**Sn**	**20 30 58.0**	**-15**
CLL				eSg	**Sg**	**20 31 36.0**	**+1.1**
	comp=Z,18nm,1.0s						
KHC	**Kasperske Hory**	**4.46**	**90**	ePN	**Pn**	**20 30 21.7**	**+0.3**
KHC				ePG	**Pg**	**20 30 35.8**	**-2.2**
KHC				eSN	**Sn**	**20 31 11.1**	**-2.8**
KHC				eSG	**Sg**	**20 31 34.4**	**-1.3**
	comp=Z,15nm,0.9s						
ORIF	**Oris-en-Rattie**	**4.49**	**188**	ePn	**Pn**	**20 30 22.2**	**+0.3**
ORIF	**Oris-en-Rattie**	**4.49**	**188**	ePg	**Pg**	**20 30 37.1**	**-1.6**
	SNR=1.0						
ORIF				eSn	**Sn**	**20 31 10.0**	**-4.8**
	SNR=1.0						
ORIF				eSg	**Sg**	**20 31 36.1**	**-0.7**
	comp=Z,33nm,0.6s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.49**	**188**	ePg	**Pg**	**20 30 37.1**	**-1.6**
	SNR=1.0						
ORIF				eSg	**Sg**	**20 31 36.1**	**-0.7**
	comp=Z,17nm,0.6s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**4.49**	**188**	ePn	**Pn**	**20 30 22.2**	**+0.3**
ORIF				ePg	**Pg**	**20 30 37.1**	**-1.6**
ORIF				eSn	**Sn**	**20 31 10.0**	**-4.8**
ORIF				eSg	**Sg**	**20 31 36.1**	**-0.7**
GEC2	**GERESS Array S**	**4.57**	**94**	ePn	**Pn**	**20 30 23.7**	**+0.7**
	SNR=59						
GEC2	**GERESS Array S**	**4.57**	**94**	ePn	**Pn**	**20 30 23.7**	**+0.7**
LDF	**La Druitiere**	**4.62**	**263**	ePg	**Pg**	**20 30 39.7**	**-1.3**
	SNR=1.0						
LDF				eSn	**Sn**	**20 31 13.0**	**-4.8**
	SNR=1.0						
LDF				eSg	**Sg**	**20 31 40.0**	**-0.8**
	comp=Z,46nm,0.5s						
LDF	**La Druitiere**	**4.62**	**263**	ePg	**Pg**	**20 30 39.7**	**-1.3**
	SNR=1.0						
LDF				eSn	**Sn**	**20 31 13.0**	**-4.8**
	SNR=1.0						
LDF				eSg	**Sg**	**20 31 40.0**	**-0.8**
	comp=Z,23nm,0.5s						
LDF	**La Druitiere**	**4.62**	**263**	ePn	**Pn**	**20 30 23.8**	**+0.2**
LDF				ePg	**Pg**	**20 30 39.7**	**-1.3**
LDF				eSn	**Sn**	**20 31 13.0**	**-4.8**
LDF				eSg	**Sg**	**20 31 40.0**	**-0.8**
MBDF	**Montbardon**	**4.64**	**180**	ePg	**Pg**	**20 30 40.1**	**-1.4**
MBDF				eSg	**Sg**	**20 31 40.5**	**-1.1**
	comp=Z,11nm,0.6s						
MBDF	**Montbardon**	**4.64**	**180**	ePg	**Pg**	**20 30 40.1**	**-1.4**
MBDF				eSg	**Sg**	**20 31 40.5**	**-1.1**
	comp=Z,5.3nm,0.6s						
MBDF	**Montbardon**	**4.64**	**180**	ePn	**Pn**	**20 30 23.8**	**-0.1**
MBDF				ePg	**Pg**	**20 30 40.1**	**-1.4**
MBDF				eSg	**Sg**	**20 31 40.5**	**-1.1**
ABTA	**Abfaltersbach**	**4.65**	**122**	⇓iPn	**Pn**	**20 30 25.3**	**+1.3**
	SNR=7.7						
VIVF	**Saint-Julien-l**	**4.74**	**199**	ePg	**Pg**	**20 30 42.4**	**-0.9**
VIVF				eSn	**Sn**	**20 31 16.0**	**-4.8**
	SNR=1.0						
VIVF				eSg	**Sg**	**20 31 44.1**	**-0.6**
	comp=Z,31nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.74**	**199**	ePg	**Pg**	**20 30 42.4**	**-0.9**
VIVF				eSn	**Sn**	**20 31 16.0**	**-4.8**
	SNR=1.0						
VIVF				eSg	**Sg**	**20 31 44.1**	**-0.6**
	comp=Z,16nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.74**	**199**	ePn	**Pn**	**20 30 25.0**	**-0.2**
VIVF				ePg	**Pg**	**20 30 42.4**	**-0.9**
VIVF				eSn	**Sn**	**20 31 16.0**	**-4.8**
VIVF				eSg	**Sg**	**20 31 44.1**	**-0.6**
FLN	**La Foliniere**	**4.82**	**266**	ePg	**Pg**	**20 30 43.9**	**-1.0**
	SNR=1.0						
FLN				eSn	**Sn**	**20 31 18.8**	**-4.0**
	SNR=1.0						
FLN				eSg	**Sg**	**20 31 45.4**	**-1.9**
	comp=Z,44nm,0.4s,SNR=1.0						
FLN	**La Foliniere**	**4.82**	**266**	ePg	**Pg**	**20 30 43.9**	**-1.0**
	SNR=1.0						
FLN				eSn	**Sn**	**20 31 18.8**	**-4.0**
	SNR=1.0						
FLN				eSg	**Sg**	**20 31 45.4**	**-1.9**
	comp=Z,22nm,0.4s,SNR=1.0						
FLN	**La Foliniere**	**4.82**	**266**	ePn	**Pn**	**20 30 26.8**	**+0.5**
FLN				ePg	**Pg**	**20 30 43.9**	**-1.0**
FLN				eSn	**Sn**	**20 31 18.8**	**-4.0**
FLN				eSg	**Sg**	**20 31 45.4**	**-1.9**
BRG	**Berggiesshubel**	**4.85**	**69**	PN	**Pg**	**20 30 42.7**	**-2.8**
BRG				SG	**Sg**	**20 31 47.5**	**-0.7**
	comp=Z,15nm,1.0s						
PRU	**Pruhonice**	**5.08**	**80**	eSG	**Sg**	**20 31 52.6**	**-3.0**
	comp=Z,55nm,1.7s						
GRR	**Gorron**	**5.14**	**262**	ePg	**Pg**	**20 30 50.0**	**-1.0**
	SNR=1.0						
GRR				eSn	**Sn**	**20 31 26.6**	**-4.1**
	SNR=1.0						
GRR				eSg	**Sg**	**20 31 54.7**	**-2.9**
	comp=Z,44nm,0.7s,SNR=1.0						
GRR	**Gorron**	**5.14**	**262**	ePg	**Pg**	**20 30 50.0**	**-1.0**
	SNR=1.0						
GRR				eSn	**Sn**	**20 31 26.6**	**-4.1**
	SNR=1.0						
GRR				eSg	**Sg**	**20 31 54.7**	**-2.9**
	comp=Z,22nm,0.7s,SNR=1.0						
GRR	**Gorron**	**5.14**	**262**	ePn	**Pn**	**20 30 31.2**	**+0.5**
GRR				ePg	**Pg**	**20 30 50.0**	**-1.0**
GRR				eSn	**Sn**	**20 31 26.6**	**-4.1**
GRR				eSg	**Sg**	**20 31 54.7**	**-2.9**
PVCC	**Panska Ves**	**5.16**	**74**	eSG	**Sg**	**20 31 55.5**	**-2.8**
MOA	**Molln**	**5.19**	**104**	⇑iPn	**Pn**	**20 30 32.4**	**+1.0**
	SNR=17						
MOA				⇑iSn	**Sn**	**20 31 29.7**	**-2.3**
MOA				⇓iSg	**Sg**	**20 31 57.9**	**-1.3**
	comp=Z,4.6nm,0.5s						
MFF	**Saint Martin d**	**5.41**	**242**	ePn	**Pn**	**20 30 34.2**	**-0.3**
MFF				eSg	**Sg**	**20 32 05.2**	**-1.2**
	comp=Z,46nm,0.7s						
MFF	**Saint Martin d**	**5.41**	**242**	ePn	**Pn**	**20 30 34.2**	**-0.3**
MFF				eSg	**Sg**	**20 32 05.2**	**-1.2**
	comp=Z,23nm,0.7s						
RJF	**Les Rejaudoux**	**5.41**	**223**	ePn	**Pn**	**20 30 34.0**	**-0.5**
RJF				eSg	**Sg**	**20 32 05.1**	**-1.4**
	comp=Z,36nm,0.6s						
RJF	**Les Rejaudoux**	**5.41**	**223**	ePn	**Pn**	**20 30 34.0**	**-0.5**
RJF				eSg	**Sg**	**20 32 05.1**	**-1.4**
	comp=Z,18nm,0.6s						
CAF	**Calviac**	**5.48**	**218**	ePn	**Pn**	**20 30 34.9**	**-0.6**
	SNR=1.0						
CAF				eSg	**Sg**	**20 32 06.9**	**-1.8**
	comp=Z,29nm,0.5s						
CAF	**Calviac**	**5.48**	**218**	ePn	**Pn**	**20 30 34.9**	**-0.6**
	SNR=1.0						
CAF				eSg	**Sg**	**20 32 06.9**	**-1.8**
	comp=Z,14nm,0.5s						
LASF	**Ste Croix**	**5.66**	**202**	eSg	**Sg**	**20 32 12.6**	**-1.7**
	comp=Z,29nm,0.6s						
LASF	**Ste Croix**	**5.66**	**202**	eSg	**Sg**	**20 32 12.6**	**-1.7**
	comp=Z,14nm,0.6s						
VLC	**Villacollemand**	**5.76**	**153**	P	**Pn**	**20 30 41.1**	**+1.8**
	comp=Z,5.8nm,0.6s						
LFF	**La Frestale**	**6.05**	**225**	eSg	**Sg**	**20 32 25.3**	**-1.5**
	comp=Z,65nm,0.7s						
LFF	**La Frestale**	**6.05**	**225**	eSg	**Sg**	**20 32 25.3**	**-1.5**
	comp=Z,33nm,0.7s						
CSNA	**Conrad Observa**	**6.18**	**100**	⇓iPn	**Pn**	**20 30 45.9**	**+0.8**
CSNA				⇑iSn	**Sn**	**20 31 52.8**	**-3.6**
CSNA				⇓iSg	**Sg**	**20 32 30.2**	**-0.9**
	comp=Z,6.2nm,0.6s						
CONA	**Conrad Observa**	**6.18**	**100**	⇑iPn	**Pn**	**20 30 45.9**	**+0.8**
CONA				⇑iSn	**Sn**	**20 31 52.9**	**-3.6**
CONA				⇓iSg	**Sg**	**20 32 31.0**	**-0.1**
	comp=Z,7.4nm,0.6s						
DPC	**Dobruska-Polom**	**6.25**	**77**	eSG	**Sg**	**20 32 31.2**	**-1.9**
	comp=Z,11nm,0.9s						
SGMF	**Saint Gilles**	**6.27**	**263**	ePn	**Pn**	**20 30 45.4**	**-0.9**
	SNR=1.0						
SGMF				eSn	**Sn**	**20 31 53.0**	**-5.6**
SGMF				eSg	**Sg**	**20 32 31.8**	**-2.1**
	comp=Z,33nm,0.6s						
SGMF	**Saint Gilles**	**6.27**	**263**	ePn	**Pn**	**20 30 45.4**	**-0.9**
	SNR=1.0						
SGMF				eSn	**Sn**	**20 31 53.0**	**-5.6**
SGMF				eSg	**Sg**	**20 32 31.8**	**-2.1**
	comp=Z,16nm,0.6s						
VRAC	**Vranov**	**6.41**	**87**	eSg	**Sg**	**20 32 37.2**	**-1.2**
ROSF	**Rostrenen**	**6.72**	**265**	ePn	**Pn**	**20 30 51.7**	**-0.7**
ROSF				eSn	**Sn**	**20 32 06.2**	**-3.4**
	comp=Z,6.9nm,0.3s,SNR=1.0						
ROSF	**Rostrenen**	**6.72**	**265**	ePn	**Pn**	**20 30 51.7**	**-0.7**
ROSF				eSn	**Sn**	**20 32 06.2**	**-3.4**
	comp=Z,3.5nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	**6.75**	**261**	ePn	**Pn**	**20 30 52.3**	**-0.6**
	SNR=1.0						
QUIF				eSn	**Sn**	**20 32 03.4**	**-7.0**
QUIF				eSg	**Sg**	**20 32 46.6**	**-2.8**
	comp=Z,18nm,0.5s						
QUIF	**Quistinic**	**6.75**	**261**	ePn	**Pn**	**20 30 52.3**	**-0.6**
	SNR=1.0						
QUIF				eSn	**Sn**	**20 32 03.4**	**-7.0**
QUIF				eSg	**Sg**	**20 32 46.6**	**-2.8**
	comp=Z,8.8nm,0.5s						
MTLF	**Montolieu**	**6.80**	**209**	eSg	**Sg**	**20 32 48.6**	**-2.4**
	comp=Z,8.7nm,0.6s						
MTLF	**Montolieu**	**6.80**	**209**	eSg	**Sg**	**20 32 48.6**	**-2.4**
	comp=Z,4.3nm,0.6s						
EPF	**Esparros**	**7.75**	**218**	eSg	**Sg**	**20 33 18.5**	**-2.9**
	comp=Z,14nm,0.9s						
EPF	**Esparros**	**7.75**	**218**	eSg	**Sg**	**20 33 18.5**	**-2.9**
	comp=Z,6.9nm,0.9s						
VYHS	**Vyhne**	**7.99**	**92**	ePN	**Pn**	**20 31 10.7**	**+0.9**
VYHS				eSG	**Sg**	**20 33 29.3**	**+0.4**
PSZ	**Piszkesteto**	**8.80**	**94**	P	**Pn**	**20 31 21.0**	**-0.1**

*IDC **11** 20:29:36.1±1.6, 3967N×5181E, h0^{km}, mb3.5/10, mb1 3.7/14, mb1mx3.6/26, mbtmp3.6/14, ML4.1/2, Error ellipse: s-maj=35.1km s-min=13.2km az=170.0*
*CSEM **11** 20:29:39.3±0.2, 4020N×5179E, h10^{km}, mb3.6/1, Error ellipse: s-maj=7.1km s-min=3.2km az=169.0*
*MOS **11** 20:29:39.4±1.4, 4023N×5185E, h16^{km}, mb3.9/4, Error ellipse: s-maj=12.8km s-min=9.9km az=76.2*
*NEIC **11** 20:29:40.7±1.6, 4021N×5188E, h10^{km}, mb3.6/1, Error ellipse: s-maj=31.2km s-min=10.2km az=176.0*
*ISCJB **11** 20:29:42.5±0.7, 4034N±0.10×5179E±007, h33^{km}, mb3.5/9, Error ellipse: s-maj=14.7km s-min=5.9km az=159.0*
ISC 11 20:29:43.9±0.8**, 402N**±01×**5189E**±007**, h35^{km}, n43, σ1^{s}16**/51**, mb3.5**/9**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIZA	**Siyzn**	**2.44**	**292**	P	**Pn**	**20 30 24.8**	**+3.6**
	SNR=18						
GLBA	**Clilabad**	**2.86**	**252**	P	**Pn**	**20 30 27.1**	**+0.1**
	SNR=62						
GLBA				S	**Sn**	**20 30 59.5**	**-0.6**
SEKA	**Sheki**	**3.70**	**287**	P	**Pn**	**20 30 40.7**	**+2.1**
	SNR=3.6						
GNI	**Garni**	**5.47**	**272**	Pn	**Pn**	**20 31 02.1**	**-0.8**
	0.2nm,0.3s,baz=351,slow=17,SNR=2.4						
GNI	**Garni**	**5.47**	**272**	ePn	**Pn**	**20 30 54.1**	**-8.8**
GNI	**Garni**	**5.47**	**272**	ePn	**Pn**	**20 30 54.1**	**-8.8**
KIV	**Kislovodsk**	**7.80**	**302**	eP	**Pn**	**20 31 32.3**	**-2.6**
KIV	**Kislovodsk**	**7.80**	**302**	ePn	**Pn**	**20 31 32.3**	**-2.6**
AKTK	**Aktyubinsk**	**11.10**	**21**	Pn	**Pn**	**20 32 20.6**	**+0.5**
AKTK				Sn	**Sn**	**20 34 17.1**	**-5.7**
AKTK	**Aktyubinsk**	**11.10**	**21**	Pn	**Pn**	**20 32 20.6**	**+0.6**
AKTK				Sn	**Sn**	**20 34 17.1**	**-5.7**
AKTO	**Aktyubinsk**	**11.10**	**21**	Pn	**Pn**	**20 32 20.6**	**+0.6**
	0.7nm,0.3s,baz=185,slow=11,SNR=9.9						
AKTO				Sn	**Sn**	**20 34 17.1**	**-5.7**
	2.4nm,0.3s,baz=205,slow=22,SNR=12						
AKTO	**Aktyubinsk**	**11.10**	**21**	P	**Pn**	**20 32 20.6**	**+0.5**
AKTO						20 34 17.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
ARU	**Arti**	**16.82**	**13**	ePn	**Pn**	**20 33 33.8**	**-2.7**
ARU				eSn	**Sn**	**20 36 32.0**	**-10**
ARU	**Arti**	**16.82**	**13**	ePn	**Pn**	**20 33 33.8**	**-2.7**
ARU				eSn	**Sn**	**20 36 32.0**	**-10**
AAK	**Ala-Archa**	**17.13**	**74**	Pn	**Pn**	**20 33 34.7**	**-5.7**
AAK				eS	**S**	**20 37 18.6**	**+20**
AAK	**Ala-Archa**	**17.13**	**74**	Pn	**Pn**	**20 33 34.7**	**-5.7**
AAK				eS	**S**	**20 37 18.6**	**+20**
BRVK	**Borovoye**	**17.96**	**38**	ePn	**Pn**	**20 33 49.9**	**-0.7**
BRVK	**Borovoye**	**17.96**	**38**	ePn	**Pn**	**20 33 49.9**	**-0.7**
BVAR	**Borovoye Array**	**17.99**	**38**	P	**Pn**	**20 33 52.9**	**+1.9**
	comp=N,0.9nm,0.3s,baz=228,slow=11,SNR=32						
BVAR	**Borovoye Array**	**17.99**	**38**	P	**Pn**	**20 33 52.9**	**+1.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**18.98**	**311**	P	**Pn**	**20 34 02.5**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=98,slow=8.2,SNR=7.5						
AKASG	**Malin Array Be**	**18.98**	**311**	P	**Pn**	**20 34 02.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MLR	**Muntele Rosu**	**19.70**	**294**	P	**Pn**	**20 34 12.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=330,slow=9.3,SNR=6.2						
BUR08	**Bucovina Ar. S**	**20.54**	**300**	eP	**P**	**20 34 19.1**	**-0.1**
BUR08	**Bucovina Ar. S**	**20.54**	**300**	eP	**P**	**20 34 19.1**	**-0.1**
KURK	**Kurchatov**	**21.39**	**52**	P	**P**	**20 34 28.9**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.2,baz=248,slow=10,SNR=7.7						
KURK	**Kurchatov**	**21.39**	**52**	eP	**P**	**20 34 26.8**	**-1.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.6						
KURK	**Kurchatov**	**21.39**	**52**	eP	**P**	**20 34 26.8**	**-1.4**
	comp=Z,2.7nm,1.0s,mb3.5						
MK31	**Makanchi Array**	**22.93**	**63**	eP	**P**	**20 34 45.3**	**+0.6**
MK31	**Makanchi Array**	**22.93**	**63**	eP	**P**	**20 34 45.4**	**+0.7**
MKAR	**Makanchi Array**	**22.93**	**63**	P	**P**	**20 34 45.6**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=262,slow=7.6,SNR=4.3						
NVS	**Novosibirsk**	**25.47**	**44**	eP	**P**	**20 35 06.4**	**-2.0**
ZALV	**Zalesovo Beam**	**26.03**	**47**	P	**P**	**20 35 14.3**	**+0.8**
	comp=Z,0.5nm,0.5s,mb3.3,baz=254,slow=10,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.03**	**47**	P	**P**	**20 35 14.3**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
GERES	**GERESS Array B**	**28.31**	**301**	P	**P**	**20 35 34.6**	**+0.5**
	comp=Z,0.2nm,0.3s,mb3.2,baz=123,slow=6.6,SNR=3.2						
HFS	**Hagfors**	**30.92**	**323**	P	**P**	**20 35 57.4**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=126,slow=9.7,SNR=9.6						
HFS	**Hagfors**	**30.92**	**323**	P	**P**	**20 35 57.4**	**+0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**32.40**	**324**	P	**P**	**20 36 10.1**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.3,baz=113,slow=9.4,SNR=2.5						
ARCES	**ARCESS Array B**	**32.52**	**343**	P	**P**	**20 36 12.3**	**+1.4**
	comp=Z,1.4nm,0.9s,mb3.9,baz=138,slow=11,SNR=2.5						
SONM	**Songino Array**	**39.22**	**60**	P	**P**	**20 37 06.9**	**-1.7**
	comp=Z,0.1nm,0.3s,mb3.0,baz=278,slow=4.0,SNR=5.2						
KSRS	**Korea Array**	**57.56**	**66**	P	**P**	**20 39 30.0**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=289,slow=7.1,SNR=2.7						
KSRS	**Korea Array**	**57.56**	**66**	P	**P**	**20 39 30.0**	**0.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**77.08**	**354**	P	**P**	**20 41 33.2**	**+0.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=9.9,slow=6.0,SNR=4.0						

*ISCJB **11** 20:47:54.5±0.5, 4380N±004×105.18W±006, h0^{km}, Error ellipse: s-maj=5.8km s-min=5.1km az=172.8*
*NEIC **11** 20:47:56.1±0.4, 4379N×105.19W, h0^{km}, ML3.2, Error ellipse: s-maj=6.5km s-min=5.2km az=150.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
*IDC **11** 20:47:57.9±1.1, 4408N×10587W, h0^{km}, mb1 3.6/6, mb1mx3.4/27, mbtmp3.3/6, ML3.3/6, Error ellipse: s-maj=22.8km s-min=9.3km az=150.0*
ISC 11 20:47:56.4±0.5**, 4379N**±004×**10520W**±005**, h0^{km}, n32, σ0^{s}96**/38**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**68**	ePg	**Pg**	**20 48 15.0**	**+1.4**
PHWY	**Pilot Hill**	**2.50**	**185**	ePn	**Pn**	**20 48 37.7**	**-0.5**
PHWY				eSn	**Sn**	**20 49 09.4**	**+0.1**
RWWY	**Rawlins**	**2.57**	**216**	ePn	**Pn**	**20 48 39.5**	**+0.3**
RWWY				eSn	**Sn**	**20 49 11.7**	**+0.5**
RLMT	**Red Lodge**	**3.20**	**296**	ePn	**Pn**	**20 48 47.8**	**-0.2**
RLMT				eSn	**Sn**	**20 49 27.8**	**+1.0**
PDAR	**Pinedale Array**	**3.34**	**254**	Pn	**Pn**	**20 48 50.0**	**+0.1**
	4.2nm,0.3s,baz=76,slow=14,SNR=76						
PDAR				Lg		20 49 29.7	
	1.5nm,0.3s,baz=69,slow=20,SNR=3.0						
LKWY	**Lake**	**3.82**	**283**	ePn	**Pn**	**20 48 56.9**	**+0.5**
LOHW	**Long Hollow**	**3.92**	**269**	ePn	**Pn**	**20 48 56.7**	**-1.2**
ISCO	**Idaho Springs**	**4.00**	**185**	eP	**Pn**	**20 48 59.1**	**+0.2**
ISCO				eSn	**Sn**	**20 49 55.1**	**+8.6**
MOOW	**Moose Ponds**	**4.02**	**271**	ePn	**Pn**	**20 48 59.1**	**0.0**
SNOW	**Snow King Moun**	**4.05**	**267**	ePn	**Pn**	**20 49 03.4**	**+3.9**
REDW	**Red Top Meadow**	**4.13**	**266**	ePn	**Pn**	**20 49 02.2**	**+1.6**
IMW	**Indian Meadow**	**4.16**	**273**	ePn	**Pn**	**20 49 01.6**	**+0.6**
TPAW	**Teton Pass**	**4.19**	**268**	ePn	**Pn**	**20 49 01.7**	**+0.3**
DCID1	**Drake Creek**	**4.35**	**269**	ePn	**Pn**	**20 49 04.1**	**+0.5**
AHID	**Auburn Hatcher**	**4.43**	**259**	ePn	**Pn**	**20 49 05.6**	**+0.8**
RRI2	**Red Ridge**	**4.47**	**266**	ePn	**Pn**	**20 49 05.1**	**-0.2**
DGMT	**Dagmar**	**4.73**	**8**	ePn	**Pn**	**20 49 10.2**	**+1.3**
SMCO	**Snowmass**	**4.80**	**197**	ePn	**Pn**	**20 49 07.9**	**-2.0**
BOZ	**Bozeman (W)**	**4.95**	**294**	ePn	**Pn**	**20 49 10.5**	**-1.3**
EGMT	**Eagleton**	**5.29**	**325**	ePn	**Pn**	**20 49 15.8**	**-0.8**
	23nm,0.5s						
DLMT	**Dillon**	**5.51**	**289**	ePn	**Pn**	**20 49 18.9**	**-0.8**
	11nm,1.0s						
SDCO	**Great Sand Dun**	**6.04**	**182**	ePn	**Pn**	**20 49 26.2**	**-0.7**
	1.7nm,0.5s						
ECSD	**EROS,Sioux Fal**	**6.22**	**88**	ePn	**Pn**	**20 49 30.0**	**+0.7**
	6.3nm,0.4s						
DUG	**Dugway**	**6.71**	**240**	ePn	**Pn**	**20 49 34.6**	**-1.5**
	4.0nm,0.7s						
MVCO	**Mesa Verde**	**7.04**	**202**	ePn	**Pn**	**20 49 41.6**	**+1.0**
	3.9nm,0.5s						
AGMN	**Agassiz Refuge**	**7.90**	**52**	ePn	**Pn**	**20 49 48.9**	**-3.6**
	5.8nm,0.6s						
ELK	**Elko**	**8.04**	**251**	Pn	**Pn**	**20 49 54.5**	**0.0**
	0.5nm,0.3s,baz=62,slow=12,SNR=9.0						
ELK				Sn	**Sn**	**20 51 19.6**	**-6.5**
	0.0nm,0.3s,baz=199,slow=22,SNR=2.1						
ELK				Lg		20 51 57.3	
	0.1nm,0.3s,baz=80,slow=14,SNR=1.8						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**20 50 08.1**	**-0.3**
	0.6nm,0.3s,baz=233,slow=13,SNR=3.4						
ULM				Pg	**Pg**	**20 50 35.2**	**-15**
	0.3nm,0.3s,baz=115,slow=14,SNR=2.1						
ULM				Lg		20 52 32.9	
	0.3nm,0.3s,baz=126,slow=18,SNR=1.8						
WUAZ	**Wupatki**	**9.53**	**212**	ePn	**Pn**	**20 50 14.7**	**-0.2**
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**20 50 39.1**	**+0.9**
	0.1nm,0.3s,baz=52,slow=12,SNR=3.2						
TXAR	**Lajitas Array**	**14.48**	**175**	Pn	**Pn**	**20 51 30.0**	**+7.5**
	0.0nm,0.3s,baz=1.1,slow=9.0,SNR=3.4						
YKA	**Yellowknife Ar**	**19.53**	**347**	P	**Pn**	**20 52 23.7**	**-2.5**
	0.1nm,0.3s,baz=161,slow=13,SNR=4.2						

MAN 11 20:54:50, 1254N×12582E, h17^{km}, mb4.6, ML3.5, MS3.4, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.00**	**202**	eP	Pb	20 55 09.3	+0.4
BESP				eS	Sb	20 55 23.8	+1.9
CNP	**Catarman**	**1.13**	**269**	eP	Pn	20 55 10.4	-0.6
CNP				eS	Sb	20 55 24.9	-0.5
PLP	**Palo**	**1.59**	**211**	⇓eP	Pn	20 55 17.0	-0.4
PLP				eS	Sn	20 55 35.8	-1.9
OCLP	**Ormoc**	**1.89**	**219**	eP	Pn	20 55 23.5	+1.9
PVCP	**Virac**	**1.93**	**303**	eP	Pn	20 55 22.5	+0.4
PVCP				eS	Sn	20 55 48.0	+2.0
MSLP	**Maasin**	**2.57**	**202**	eP	Pn	20 55 32.8	+2.0
MSLP				eS	Sg	20 56 13.6	+0.9
RCP	**Roxas**	**3.16**	**252**	⇓eP	Pn	20 55 40.7	+1.7
BUTP	**Butuan**	**3.55**	**183**	eP	Pn	20 55 42.3	-2.1
GUIM	**Jordan**	**3.69**	**239**	eP	Pn	20 55 48.6	+2.3

*NIED **11** 21:12:00, 4530N×150.10E, h50^{km}, Mw4.3 Best double couple: $M_0$3.36000×10^{15} NP1:ϕ_s1.00000°, δ71.00000°, λ72.00000°. NP2:ϕ_s226.00000°, δ26.00000°, λ131.00000°.*
*BJI **11** 21:12:01.5, 4521N×15067E, h51^{km}, mB4.6, mb4.8, Ms4.0, Msz3.9*
*MOS **11** 21:12:06.2±0.8, 4533N×14993E, h50^{km}, mb4.9/46, Error ellipse: s-maj=7.2km s-min=5.4km az=97.1*
*ISCJB **11** 21:12:06.1±0.1, 4529N±003×15001E±002, h52^{km}, mb4.7/100, MS3.8/26, Error ellipse: s-maj=4.7km s-min=1.6km az=155.7*
*SKHL **11** 21:12:06.4±2.0, 4530N×150.10E, h46^{km}±15^{km}, mb5.2/5, ms3.7/1*
*JMA **11** 21:12:07.2±0.6, 4533N×15009E, h30^{km}, M5.0*
*NEIC **11** 21:12:08.3±0.2, 4539N×14988E, mb4.8/60, Error ellipse: s-maj=4.8km s-min=2.9km az=146.0*
*IDC **11** 21:12:08.3±0.5, 4552N×14977E, h50^{km}±3^{km}, mb4.1/19, mb1 4.2/22, mb1mx4.2/25, mbtmp4.1/22, MS3.6/18, Ms1 3.6/18, ms1mx3.4/53, Error ellipse: s-maj=16.4km s-min=9.8km az=162.0*
ISC 11 21:12:08.5±0.1**, 4536N**±003×**14994E**±003**, h54^{km}, h54^{km}**±.9^{km}**:pP-P, n517, σ0^{s}81**/532**, mb4.7**/100**, MS3.8**/26**, 157C-107D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.47**	**266**	⇑iPN	**Pn**	**21 12 29.0**	**-3.6**
KUR				i S	**Sn**	**21 12 47.5**	**-3.3**
KUR				pmax	pmax		
	comp=Z,7μm,0.5s						
KUR				pmax	pmax		
	comp=Z,8μm,1.5s						
KUR				smax			
	comp=N,25μm,1.2s						
KUR				smax			
	comp=E,15μm,1.2s						
KUR	**Kuril'sk**	**1.47**	**266**	⇑iP	**Pn**	**21 12 29.0**	**-3.6**
KUR				i P		21 12 29.0	
KUR				AMB	AMB	21 12 29.3	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	21 12 29.3	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	21 12 29.3	
	comp=E,7μm,0.5s						
KUR				AMB	AMB	21 12 30.0	
	comp=E,8μm,1.5s						
KUR				i S	**Sn**	**21 12 47.5**	**-3.3**
KUR				A		21 12 52.0	
	comp=E,25μm,1.2s						
KUR				A		21 12 52.0	
	comp=E,15μm,1.2s						
YUK	**Yuzh-Kuril'sk**	**3.20**	**247**	ePN	**Pn**	**21 12 57.2**	**+1.0**
YUK				eS	**Sn**	**21 13 33.8**	**+0.7**
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=N,210nm,0.3s						
YUK				pmax	pmax		
	comp=E,710nm,0.4s						

YUK pmax pmax
comp=Z,2µm,0.8s
YUK smax
comp=N,6µm,2.0s
YUK smax
comp=E,5µm,0.8s
YUK smax
comp=N,4µm,0.4s
YUK smax
comp=E,2.0nm,0.5s
YUK Yuzh-Kuril'sk 3.20 247 *e*P **Pn 21 12 57.2 +1.0**
YUK AMB AMB 21 12 58.6
comp=E,210nm,0.3s
YUK AMB AMB 21 12 58.6
comp=E,710nm,0.4s
YUK AMB AMB 21 12 58.6
comp=E,2µm,0.4s
YUK AMB AMB 21 12 58.9
comp=E,2µm,0.8s
YUK *e*S **Sn 21 13 33.8 +0.7**
YUK A 21 13 39.9
comp=E,5µm,0.8s
YUK A 21 13 39.9
comp=E,6µm,2.0s
YUK A 21 13 46.6
comp=E,2µm,0.5s
YUK A 21 13 46.6
comp=E,4µm,0.4s
NEM2 Nemuro 2 3.61 238 P **Pn 21 13 00.8 -1.1**
NEM2 *e*S **Sn 21 13 40.3 -3.0**
JRA Rausu 3.72 249 P **Pn 21 13 05.2 +1.8**
JRA *e*S **Sn 21 13 48.4 +2.4**
JNK Nakash 4.14 246 P **Pn 21 13 10.4 +1.3**
JNK *e*S **Sn 21 13 56.8 +0.6**
JAK Akkeshi 4.45 240 P **Pn 21 13 13.4 0.0**
JAK *e*S **Sn 21 14 02.4 -1.6**
JTKR Abashiri--Toko 4.53 254 P **Pn 21 13 16.2 +1.8**
JAR Ashorobuto 4.89 247 P **Pn 21 13 21.5 +2.1**
JAR *e*S **Sn 21 14 16.6 +2.0**
JMP Maruseppu 4.89 256 P **Pn 21 13 21.6 +2.2**
JOB Onbets 5.04 243 P **Pn 21 13 22.8 +1.4**
JOB *e*S **Sn 21 14 18.8 +0.5**
JSE Soyaes 5.22 268 P **Pn 21 13 27.4 +3.5**
YSS Yuzh-Sakhalins 5.24 290⇓ *e*PN **Pn 21 13 26.0 +1.8**
YSS *e*S **Sn 21 14 28.0 +4.7**
YSS pmax pmax
comp=Z,50nm,0.8s
YSS pmax pmax
comp=E,50nm,0.9s
YSS MLR MLR
comp=E,500nm,18.0s
YSS MLR MLR
comp=Z,500nm,18.0s
YSS Yuzh-Sakhalins 5.24 290⇓ *e*P **Pn 21 13 26.0 +1.8**
YSS AMB AMB 21 13 27.0
comp=Z,50nm,0.8s
YSS AMB AMB 21 13 27.0
comp=Z,50nm,0.9s
YSS *e*sP 21 13 43.0
YSS *e*S **Sn 21 14 21.0 -2.3**
YSS AMS AMS 21 15 23.0
comp=Z,500nm,18.0s
YSS AMS AMS 21 15 23.0
comp=Z,500nm,18.0s
YSS Yuzh-Sakhalins 5.24 290 *e*Pn **Pn 21 13 26.7 +2.5**
JKK2 Kamakawa 2 5.35 256 P **Pn 21 13 28.4 +2.7**
ASAJ Asahikawa 5.38 259 P **Pn 21 13 28.2 +2.1**
comp=Z,8.4nm,0.3s,baz=90,slow=14,SNR=64
ASAJ S **Sn 21 14 31.1 +4.4**
comp=Z,5.2nm,0.3s,baz=76,slow=17,SNR=1.9
ASAJ LR LR 21 15 40.5
comp=Z,374nm,21.8s,baz=183,slow=40
ASAJ Asahikawa 5.38 259 P **Pn 21 13 29.1 +3.0**
ASAJ Asahikawa 5.38 259 PN **Pn 21 13 28.2 +2.1**
ASAJ S **Sn 21 14 31.1 +4.4**
ASAJ pmax pmax
comp=Z,8.0nm,0.3s
ASAJ smax
comp=N,5.0nm,0.3s
ASAJ MLR MLR
comp=Z,374nm,21.8s
JCH Churui 5.49 242 P **Pn 21 13 27.9 +0.3**
JCH *e*S **Sn 21 14 28.3 -1.0**
JWK2 Keihoku 5.67 272 P **Pn 21 13 34.6 +4.5**
JFR Furan 5.72 250 P **Pn 21 13 33.2 +2.4**
JAB Ashibetsu 5.83 254 P **Pn 21 13 36.4 +4.1**
JEM Erimo 5.95 238 P **Pn 21 13 35.4 +1.5**
JEM *e*S **Sn 21 14 41.9 +1.2**
ERM Erimo 5.95 238 *e*PN **Pn 21 13 34.8 +0.9**
JBT2 Biratori 2 6.04 247 P **Pn 21 13 36.2 +1.0**
JBT2 *e*S **Sn 21 14 43.5 +0.6**
JNBK Urakawa-nobuka 6.05 242 P **Pn 21 13 35.0 -0.3**
JNBK *e*S **Sn 21 14 41.4 -1.7**
UGL Uglegorsk 6.53 308 *e*P **Pn 21 13 45.0 +3.2**
UGL AMB AMB 21 13 46.0
comp=Z,55nm,0.6s
UGL AMS AMS 21 16 23.0
comp=Z,400nm,17.0s
UGL AMS AMS 21 16 23.0
comp=Z,200nm,17.0s
UGL AMS AMS 21 16 23.0
comp=Z,1µm,19.0s
JEW Eniwo 6.62 251 P **Pn 21 13 45.6 +2.6**
SKR Severo-Kuril's 6.74 36 *e*PN **Pn 21 13 45.0 +0.3**
JNB Noboribetsu 7.05 249 P **Pn 21 13 49.9 +0.9**
JNB *e*S **Sn 21 15 07.7 0.0**
JKB Kayabe 7.34 245 P **Pn 21 13 53.1 +0.1**
JKB *e*S **Sn 21 15 11.0 -3.8**
JSH Shimam 7.64 253 P **Pn 21 13 58.9 +1.9**
JYM2 Yakumo 2 7.65 248 P **Pn 21 13 57.8 +0.5**
JSR Shiriuchi 7.92 244 P **Pn 21 14 00.9 0.0**
JSR *e*S **Sn 21 15 25.3 -3.7**
JTM Tenmabayashi 7.94 238 P **Pn 21 14 00.5 -0.8**
JTM *e*S **Sn 21 15 23.0 -6.7**
JANG Nango 7.95 234 P **Pn 21 13 58.7 -2.6**
JANG *e*S **Sn 21 15 20.6 -9.1**
JTH Tanohata 8.05 231 P **Pn 21 13 59.4 -3.3**
JTH *e*S **Sn 21 15 22.7 -10**
JOSM Okushiri--Mats 8.26 250 P **Pn 21 14 06.1 +0.5**
OFUJ Ofunato 8.78 227 P **Pn 21 14 09.6 -3.1**
OFUJ *e*S **Sn 21 15 40.5 -10**
JRG Rokugo 9.11 232 P **Pn 21 14 15.1 -2.1**
JRG *e*S **Sn 21 15 50.0 -8.2**
PEA0B Petropavlovsk- 9.26 30 *e*Pn **Pn 21 14 21.4 +2.2**
PETK Petropavlovsk- 9.26 30 P **Pn 21 14 21.3 +2.1**
comp=Z,1.6nm,0.3s,baz=206,slow=11,SNR=30
PETK S **Sn 21 15 57.6 -4.1**
baz=207,slow=6.3,SNR=1.4
PETK LR LR 21 17 45.0
comp=Z,144nm,21.6s,baz=54,slow=37
JIO Ouri 9.41 226 P **Pn 21 14 18.5 -2.9**
JIO *e*S **Sn 21 15 53.8 -12**
TEY Ternei 9.43 273 *e*P **Pn 21 14 26.5 +5.0**
NKL Nikolayevsk 9.86 326 *e*P **Pn 21 14 25.5 -1.9**
JYA Atsumi 10.18 232 P **Pn 21 14 30.2 -1.7**
JFK Kawauchi 10.49 224 P **Pn 21 14 33.5 -2.7**
JFK *e*S **Sn 21 16 21.2 -11**
HABR Khabarovsk 10.65 292 *ce*PN **Pn 21 14 44.2 +6.0**
HABR pmax pmax
comp=Z,58nm,1.1s
HABR MLR MLR
comp=Z,269nm,22.0s
HABR MLR MLR
comp=Z,172nm,16.0s
JFY Yanaizu 11.05 228 P **Pn 21 14 42.5 -1.3**
MJAR Matsushiro Arr 12.49 229 P **Pn 21 15 01.7 -1.7**
comp=Z,0.6nm,0.3s,baz=29,slow=14,SNR=8.7
MJAR LR LR 21 20 02.4
comp=Z,117nm,21.3s,baz=80,slow=38
MJAR Matsushiro Arr 12.49 229 PN **Pn 21 15 01.7 -1.7**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,117nm,21.3s
MAJO Matsushiro 12.49 229 *e*PN **Pn 21 15 02.1 -1.3**
KLR Kul'dur 12.94 294 *e*PN **Pn 21 15 09.0 -0.4**
MDJ Mudanjiang 14.42 274 P **Pn 21 15 29.5 0.0**
MDJ PCP PcP 21 20 42.4 +0.8
MDJ SCP ScP 21 24 11.3 +0.7
MDJ PCS PcS 21 24 17.4 +1.0
MDJ AMB AMB
comp=Z,7.0nm,0.9s
MDJ AMB AMB
comp=Z,31nm,4.2s

MDJ Mudanjiang 14.42 274 *e*Pn **Pn 21 15 29.3 -0.1**
comp=Z,19nm,1.0s
ZEA Zeya 16.89 308 *e*P **Pn 21 15 59.8 -1.1**
ZEA AMB AMB 21 16 01.8
comp=Z,17nm,1.0s
FX1 Attu Island--F 16.91 55 P **Pn 21 16 02.6 +1.4**
comp=Z,1.9nm,0.3s,baz=64,slow=20,SNR=10
FX1 S **S 21 18 57.3 -19**
comp=Z,1.6nm,0.3s,baz=20,slow=18,SNR=7.2
FX1 Attu Island--F 16.91 55 P **Pn 21 16 02.6 +1.4**
FX1 S **S 21 18 57.3 -19**
FX1 pmax pmax
comp=Z,2.0nm,0.3s
FX1 smax
comp=N,2.0nm,0.3s
CN2 Changchun 17.51 274 *e*P **Pn 21 16 09.3 +0.7**
CN2 *e*AP pP 21 16 20.0 -1.0
CN2 *e*XP sP 21 16 27.1 -0.7
CN2 *e*S **S 21 19 19.5 -8.6**
CN2 AMB AMB
comp=Z,10.0nm,0.5s
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
SEY Seymchan 17.66 4⇑ *e*P **Pn 21 16 12.5 +2.1**
KSRS Korea Array 18.27 252 P **Pn 21 16 16.9 -1.1**
comp=Z,0.8nm,0.3s,baz=59,slow=11,SNR=20
KSRS PcP PcP 21 20 48.2 +0.6
comp=Z,0.3nm,0.3s,baz=354,slow=2.5,SNR=5.6
KSRS LR LR 21 23 06.8
comp=Z,65nm,19.4s,baz=247,slow=36
YAK Yakutsk 20.41 332 *e*P **P 21 16 41.8 +1.1**
YAK pmax pmax
comp=Z,82nm,1.1s
YAK pmax pmax
comp=E,22nm,1.1s
YAK pmax pmax
comp=N,19nm,1.0s
YAK Yakutsk 20.41 332 *e*Pn **P 21 16 42.0 +1.3**
comp=N,78nm,0.8s
HIA Hailar 20.77 292 *e*P **P 21 16 45.4 +0.6**
BOD Bodaibo 25.23 313 *e*P **P 21 17 26.8 -2.2**
BJI Beijing 25.26 270 P **P 21 17 29.8 +0.3**
BJI S **S 21 21 51.9 +0.6**
BJI AMB AMB
comp=Z,14nm,0.6s,mb4.7
BJI AMB AMB
comp=Z,63nm,3.9s
BJI LR LR
comp=N,131nm,25.9s,MS3.5
BJI LR LR
comp=E,149nm,25.3s,MS3.5
BJT Baijiatuan 25.27 270 *e*P **P 21 17 29.8 +0.2**
JOW Kunigami 25.33 230 P **P 21 17 30.4 +0.2**
comp=E,7.3nm,0.6s,mb4.4,baz=32,slow=7.4,SNR=8.8
HHC Hu-ho-hao-te 28.20 275 *e*P **P 21 17 55.6 -0.3**
HHC AP pP 21 18 07.8 -1.6
HHC XP sP 21 18 13.4 -2.4
HHC PP PP 21 18 46.0 -14
HHC PCP PcP 21 21 08.5 +0.2
HHC *e*S **S 21 22 35.3 -2.3**
HHC PCS PcS 21 24 50.8 +0.3
HHC AMB AMB
comp=Z,17nm,0.8s,mb4.7
HHC AMB AMB
comp=Z,53nm,4.8s
HHC LR LR
comp=N,93nm,14.2s,MS3.8
HHC LR LR
comp=E,154nm,14.2s,MS3.8
HHC LR LR
comp=Z,117nm,13.1s,MS3.7
TIXI Tiksi 28.23 346 *i* P **P 21 17 54.6 -1.2**
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
TIXI Tiksi 28.23 346 *e*P **P 21 17 55.2 -0.6**
comp=Z,4.3nm,1.1s,mb4.0
ULN Ulaanbaatar 29.29 290⇑ *e*P **P 21 18 05.7 +0.2**
ULN Ulaanbaatar 29.29 290 *e*P **P 21 18 06.1 +0.6**
comp=Z,41nm,3.0s
SONM Songino Array 29.73 291 P **P 21 18 09.4 0.0**
comp=Z,1.3nm,0.7s,mb3.8,baz=83,slow=8.1,SNR=11
SONM PcP PcP 21 21 12.1 0.0
comp=Z,1.1nm,0.6s,baz=102,slow=2.0,SNR=7.0
SONM LR LR 21 30 31.9
comp=Z,87nm,21.5s,MS3.4,baz=358,slow=37
SONM Songino Array 29.73 291 P **P 21 18 09.4 0.0**
SONM 21 21 12.1
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,87nm,21.5s
YHNB Yeheng 30.94 238 P **P 21 18 20.9 +0.6**
NACB Ninganchiao 31.19 237 P **P 21 18 23.4 +0.9**
WHN Wuhan 31.44 254 P **P 21 18 24.3 -0.3**
WHN XP sP 21 18 41.2 -3.4
WHN AMB AMB
comp=Z,42nm,0.7s,mb5.4
GUMO Guam 31.96 189 *e*P **P 21 18 29.6 +0.3**
GUMO pmax pmax
comp=Z,340nm,1.4s,mb6.0
GUMO Guam 31.96 189 *e*P **P 21 18 29.6 +0.3**
comp=Z,340nm,1.4s,mb6.0
XAN Xi'an 33.19 265 P **P 21 18 39.6 -0.4**
XAN AP pP 21 18 53.3 -0.4
XAN PP PP 21 19 55.9 +0.2
XAN S **S 21 23 56.8 +1.0**
XAN AMB AMB
comp=Z,15nm,0.8s,mb5.0
XAN LR LR
comp=Z,77nm,34.5s,MS3.2
LZH Lanzhou 35.72 271 *e*P **P 21 19 02.5 +0.7**
LZH AP pP 21 19 16.0 +0.4
LZH XP sP 21 19 22.6 +0.7
LZH AMB AMB
comp=Z,41nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,132nm,4.0s
GTA Gaotai 37.01 279 *e*P **P 21 19 13.4 +0.7**
GTA AP pP 21 19 27.6 +1.1
GTA XP sP 21 19 34.8 +2.0
GTA PCP PcP 21 21 33.7 +1.1
GTA SCP ScP 21 25 15.7 +0.9
GTA AMB AMB
comp=Z,12nm,0.7s,mb4.8
HVS Khovu-Aksy 37.10 300⇑ *e*P **P 21 19 14.8 +1.4**
HVS pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
KTH Kantishna Hill 37.24 39 *e*P **P 21 19 15.3 +0.9**
comp=Z,5.8nm,0.9s,mb4.4
KTH *e* pP 21 19 27.3 -1.0
COLD Coldfoot 37.71 33 *e*P **P 21 19 18.4 +0.1**
comp=Z,12nm,0.9s,mb4.6
COLD *e*pP pP 21 19 32.2 0.0
PMR Palmer 38.12 43 P **P 21 19 20.6 -1.3**
MCK McKinley 38.13 39 *e*P **P 21 19 21.0 -0.9**
MCK *e**PP pP 21 19 35.5 -0.3
CD2 Chengdu 38.55 264⇑ *i*P **P 21 19 25.6 -0.3**
CD2 AP pP 21 19 39.6 -0.2
CD2 XP sP 21 19 48.4 +2.4
CD2 PP PP 21 20 59.2 +4.4
CD2 PCP PcP 21 21 35.6 -2.0
CD2 S **S 21 25 16.6 -1.3**
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,100nm,4.9s
CD2 LR LR
comp=N,160nm,15.3s,MS4.1
CD2 LR LR
comp=E,110nm,12.0s,MS4.1
CD2 LR LR
comp=Z,190nm,5.7s
COLA College 38.59 37 *e*P **P 21 19 25.8 +0.1**
COLA *e**PP pP 21 19 39.0 -0.6
COLA pmax pmax
comp=Z,13nm,0.8s,mb4.7
COLA College 38.59 37 *e*P **P 21 19 25.8 +0.1**
comp=Z,13nm,0.8s,mb4.7
COLA *e*pP pP 21 19 39.0 -0.6
GYA Guiyang 39.25 256⇑ *i*P **P 21 19 31.2 -0.5**
GYA AP pP 21 19 46.6 +1.0
GYA XP sP 21 19 53.6 +1.7
GYA PP PP 21 21 05.2 +2.7
GYA PCP PcP 21 21 40.5 +0.7
GYA S **S 21 25 26.7 -1.8**
GYA XS sS 21 25 51.7 -0.2
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
GYA AMB AMB
comp=Z,75nm,7.0s
GYA LR LR
comp=N,160nm,17.2s,MS4.2
GYA LR LR
comp=E,240nm,17.8s,MS4.2
GYA LR LR
comp=Z,210nm,16.3s,MS4.1
MENT Mentasta 40.53 40 P **P 21 19 42.2 +0.3**
EGAK Eagle 41.45 37 *e*P **P 21 19 49.0 -0.4**
comp=Z,14nm,1.1s,mb4.5
EGAK *e*pP pP 21 20 03.0 -0.4
ZALV Zalesovo Beam 41.64 306 P **P 21 19 49.8 -1.4**
comp=Z,0.5nm,0.3s,mb3.6,baz=68,slow=7.5,SNR=3.9
ZALV sP sP 21 20 07.8 -3.6
comp=Z,0.7nm,0.5s,baz=67,slow=8.3,SNR=2.7
ZALV PcP PcP 21 21 46.8 -0.3
comp=Z,3.7nm,0.6s,baz=72,slow=3.2,SNR=20
ZALV LR LR 21 38 14.6
comp=Z,49nm,21.6s,MS3.3,baz=66,slow=38
ZALV Zalesovo Beam 41.64 306 P **P 21 19 49.8 -1.3**
ZALV *SP sP 21 20 07.8 -3.6
ZALV 21 21 46.8
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
ZALV MLR MLR
comp=Z,49nm,21.6s,MS3.3
QIZ Qiongzhong 42.27 245 P **P 21 19 56.3 -0.3**
KMI Kunming 42.81 258 P **P 21 20 00.9 -0.1**
KMI AP pP 21 20 16.2 +1.2
KMI XP sP 21 20 22.8 +1.5
KMI PP PP 21 21 44.6 +3.6
KMI S **S 21 26 22.4 +1.1**
KMI XS sS 21 26 47.6 +2.6
KMI SS SS 21 29 28.8 -5.0
KMI AMB AMB
comp=Z,11nm,1.1s,mb4.5
KMI AMB AMB
comp=Z,150nm,5.3s
KMI LR LR
comp=N,80nm,26.8s
KMI LR LR
comp=E,63nm,19.9s
KMI LR LR
comp=Z,63nm,22.2s,MS3.5
WMQ Urumqi 43.37 291 *e*P **P 21 20 07.2 +1.9**
WMQ LR LR
comp=N,37nm,21.0s,MS3.5
WMQ LR LR
comp=E,43nm,20.0s,MS3.5
WMQ LR LR
comp=Z,43nm,21.0s,MS3.3
HYT Haines Junctio 43.80 42 *e*P **P 21 20 10.8 +2.3**
HYT *e*pP pP 21 20 23.6 +1.0
INK Inuvik 44.00 31 *e*P **P 21 20 09.7 -0.3**
INK *e**PP pP 21 20 25.3 +1.2
MK31 Makanchi Array 45.62 297 *e*P **P 21 20 23.6 +0.4**
MKAR Makanchi Array 45.62 297 P **P 21 20 23.5 +0.3**
comp=Z,1.1nm,0.5s,mb4.0,baz=76,slow=8.7,SNR=17
MKAR pP pP 21 20 34.7 -2.6
comp=Z,0.6nm,0.5s,baz=66,slow=8.0,SNR=2.9
MKAR sP sP 21 20 39.8 -3.8
comp=Z,0.7nm,0.6s,baz=80,slow=6.7,SNR=2.7
MKAR PcP PcP 21 22 00.5 -0.2
comp=Z,3.2nm,0.8s,baz=152,slow=0.3,SNR=7.5
MKAR LR LR 21 40 46.1
comp=Z,106nm,19.5s,MS3.8,baz=247,slow=38
MKAR Makanchi Array 45.62 297 P **P 21 20 23.5 +0.3**
MKAR *PP pP 21 20 34.7 -2.6
MKAR *SP sP 21 20 39.8 -3.8
MKAR 21 22 00.5
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,106nm,19.5s
KURK Kurchatov 46.29 304 *e*P **P 21 20 28.3 -0.2**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KURK Kurchatov 46.29 304 *e*P **P 21 20 28.3 -0.2**
comp=Z,3.4nm,0.8s,mb4.3
LSA Lhasa 48.13 272 *e*P **P 21 20 42.8 -0.2**
LSA pmax pmax
comp=Z,12nm,1.1s,mb4.8
LSA Lhasa 48.13 272 *e*P **P 21 20 42.8 -0.2**
comp=Z,12nm,1.1s,mb4.8
DLBC Dease Lake 48.14 44 P **P 21 20 44.0 +1.4**
comp=Z,4.0nm,0.8s,mb4.5,baz=298,slow=4.4,SNR=3.5
DLBC Dease Lake 48.14 44 P **P 21 20 43.1 +0.4**
CHTO Chiang Mai 49.64 255 *e*P **P 21 20 54.9 +0.2**
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CHTO Chiang Mai 49.64 255 *e*P **P 21 20 54.9 +0.2**
comp=Z,7.7nm,0.9s,mb4.7
CM31 Chiang Mai Arr 49.89 255 *e*P **P 21 20 56.6 0.0**
CMAR Chiang Mai Arr 49.89 255 P **P 21 20 57.0 +0.4**
comp=Z,2.7nm,0.6s,mb4.5,baz=42,slow=7.3,SNR=31
CMAR pP pP 21 21 11.4 +0.6
comp=Z,1.0nm,0.7s,baz=46,slow=7.6,SNR=2.8
CMAR PcP PcP 21 22 15.5 -0.9
comp=Z,1.0nm,0.6s,baz=2.8,slow=2.9,SNR=6.6
CMAR LR LR 21 42 55.5
comp=Z,26nm,19.7s,MS3.2,baz=190,slow=37
CMAR Chiang Mai Arr 49.89 255 P **P 21 20 57.0 +0.4**
CMAR *PP pP 21 21 11.4 +0.5
CMAR 21 22 15.5
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR MLR MLR
comp=Z,26nm,19.7s
BRVK Borovoye 50.07 309 *e*P **P 21 20 58.0 +0.5**
TKM2 Tokmak 2 51.62 296 *e*P **P 21 21 09.8 +0.5**
TAPN Taplejung 51.96 272 *e*P **P 21 21 12.8 +0.7**
comp=Z,23nm,0.7s,mb5.2
AAK Ala-Archa 52.46 296⇑ *e*P **P 21 21 16.0 +0.4**
AAK pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
AAK Ala-Archa 52.46 296 *e*P **P 21 21 15.6 0.0**
comp=Z,2.9nm,0.8s,mb4.3
ODAN Odare 52.48 272 *e*P **P 21 21 16.0 0.0**
comp=Z,15nm,0.9s,mb4.9
RES Resolute Bay 52.84 18 *e*P **P 21 21 17.1 -0.8**
RES pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
RES Resolute Bay 52.84 18 *e*P **P 21 21 17.1 -0.9**
comp=Z,7.3nm,1.0s,mb4.6
JIRN Jiri 52.84 273 *e*P **P 21 21 19.0 +0.4**
comp=Z,22nm,0.5s,mb5.4
EKS2 Erkin-Say 52.90 296 *e*P **P 21 21 18.7 -0.1**
comp=Z,3.4nm,0.7s,mb4.4
GUN Gumba 52.91 274 *e*P **P 21 21 19.6 +0.5**
comp=Z,29nm,0.6s,mb5.4
RAMN Ramite 52.98 272 *e*P **P 21 21 19.8 +0.1**
comp=Z,71nm,0.9s,mb5.6
AML Almayashu 53.23 296 *e*P **P 21 21 22.4 +1.1**
comp=Z,2.5nm,0.7s,mb4.2
SVE Sverdlovsk 53.34 317 *e*P **P 21 21 21.0 -0.8**
SVE pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
YKA Yellowknife Ar 53.34 35 P **P 21 21 21.7 0.0**
comp=Z,4.8nm,0.7s,mb4.5,baz=298,slow=7.0,SNR=38
YKA pP pP 21 21 36.4 +0.2

comp=Z,4.4nm,0.7s,baz=299,slow=6.9,SNR=15
YKA Yellowknife Ar 53.34 35 P **P** **21 21 21.7 -0.1**
YKA *PP pP 21 21 36.4 +0.2
YKA pmax pmax
comp=Z,5.0nm,0.7s
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 53.34 35 P **P** **21 21 21.8 0.0**
YKA pP pP 21 21 36.4 +0.2
KKN Kakani 53.40 274 *e*P **P** **21 21 23.1 +0.4**
comp=Z,35nm,0.9s,mb5.3
KKN Kakani 53.40 274 *e*P **P** **21 21 23.1 +0.4**
KKN pmax pmax
comp=Z,35nm,0.9s,mb5.3
DMN Daman 53.63 274 *e*P **P** **21 21 24.8 +0.4**
comp=Z,38nm,0.8s,mb5.4
GKN Gorkha 53.73 275 *e*P **P** **21 21 25.2 +0.1**
comp=Z,14nm,0.5s,mb5.2
DANN Dangsing 54.13 276 *e*P **P** **21 21 28.7 +0.7**
comp=Z,33nm,0.6s,mb5.4
ARU Arti 54.53 317 *d i*P **P** **21 21 29.4 -1.1**
ARU 21 22 30.7
ARU PPP 21 24 41.1
ARU *e*S **S** **21 29 05.8 +0.4**
ARU *e*SS SS 21 32 46.7 -1.2
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ARU Arti 54.53 317 *e*P **P** **21 21 29.5 -1.0**
comp=Z,6.3nm,0.7s,mb4.8
PMG Port Moresby 54.57 183 P **P** **21 21 31.9 +0.7**
KOLN Koldanda 54.59 275 *e*P **P** **21 21 31.7 +0.3**
comp=Z,28nm,0.9s,mb5.3
KSM Kuching 55.88 230 *e*P **P** **21 21 41.2 +0.4**
comp=Z,12nm,0.7s,mb5.0
LVZ Lovozero 57.15 336⇓ *e*P **P** **21 21 48.5 -0.6**
LVZ pmax pmax
comp=Z,57nm,1.8s,mb5.3
A07A Ashnola River, 57.54 51 ⇓P **P** **21 21 52.3 +0.2**
baz=57
A08A Turner Farm, O 58.20 51 ⇑P **P** **21 21 56.9 +0.2**
baz=58
ARCES ARCESS Array B 58.42 340 P **P** **21 21 55.5 -2.5**
comp=Z,2.7nm,0.8s,mb4.3,baz=122,slow=14,SNR=32
ARCES LR LR 21 49 57.1
comp=Z,59nm,19.9s,MS3.7,baz=208,slow=39
ARCES ARCESS Array B 58.42 340 P **P** **21 21 55.5 -2.5**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,59nm,19.9s
ARCES ARCESS Array B 58.42 340 P **P** **21 21 55.5 -2.5**
ARCES LR LR 21 49 57.1
B08A Colville Reser 58.50 51 ⇓P **P** **21 21 58.4 -0.4**
baz=58
A09A Danville 58.56 51 ⇑P **P** **21 21 59.5 +0.2**
baz=58
HOOD Mount Hood Mea 58.91 55 *e*P **P** **21 22 02.2 +0.5**
comp=Z,13nm,0.8s,mb5.0
C08A Higginbotham F 58.98 52 ⇑P **P** **21 22 01.7 -0.5**
baz=59
B09A Rice 59.12 51 ⇑P **P** **21 22 02.9 -0.2**
baz=59
A10A Northport 59.12 50 ⇑P **P** **21 22 02.3 -0.8**
baz=59
C09A Chrisman Ranch 59.40 52 ⇑P **P** **21 22 04.9 -0.2**
baz=59
H05A Madras 59.54 56 ⇓P **P** **21 22 06.2 +0.1**
baz=59
F07A Phinny Hill Vi 59.57 54 ⇑P **P** **21 22 06.1 -0.2**
baz=59
A11A Hall Mountain, 59.77 50 ⇓P **P** **21 22 07.2 -0.4**
baz=60
H06A Lindquist Farm 60.01 55 ⇑P **P** **21 22 09.7 +0.4**
baz=60
B11A Sandpoint 60.08 50 ⇓P **P** **21 22 09.8 +0.1**
baz=60
G07A Ruggs Ranch, H 60.08 55 ⇓P **P** **21 22 09.7 -0.1**
baz=60
E09A Wood Farm, Sta 60.22 53 ⇓P **P** **21 22 10.6 -0.2**
baz=60
F08A Pendleton 60.28 54 ⇑P **P** **21 22 10.8 -0.4**
baz=60
YBH Yreka Blue Hor 60.35 59 P **P** **21 22 13.1 +1.4**
comp=Z,1.1nm,0.4s,mb4.3,baz=338,slow=5.4,SNR=3.4
YBH pP pP 21 22 27.5 +1.1
comp=Z,2.0nm,0.8s,baz=252,slow=3.1,SNR=3.0
YBH Yreka Blue Hor 60.35 59 P **P** **21 22 13.1 +1.4**
YBH *PP pP 21 22 27.5 +1.1
YBH pmax pmax
comp=Z,1.0nm,0.4s
YBH pmax pmax
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 60.35 59 P **P** **21 22 13.1 +1.4**
YBH pP pP 21 22 27.5 +1.1
D10A Wagner Farm, O 60.39 52 ⇑P **P** **21 22 11.3 -0.5**
baz=60
G08A Pilot Rock 60.48 54 ⇑P **P** **21 22 12.1 -0.4**
baz=60
C11A Tepee Creek (N 60.49 51 ⇓P **P** **21 22 12.2 -0.3**
baz=60
KBL Kabul 60.51 291 *e*P **P** **21 22 11.4 -1.5**
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
KBL Kabul 60.51 291 *e*P **P** **21 22 11.3 -1.6**
comp=Z,8.8nm,0.8s,mb4.9
E10A Myers Farm, Un 60.82 52 ⇓P **P** **21 22 14.8 0.0**
baz=60
A13A Flathead Natio 60.83 49 ⇑P **P** **21 22 14.7 -0.2**
baz=60
K05A Summer Lake 60.85 58 ⇓P **P** **21 22 15.4 +0.3**
baz=61
I07A Izee 60.87 56 ⇓P **P** **21 22 15.1 -0.1**
baz=61
J06A Christmas Vall 60.98 57 ⇑P **P** **21 22 16.4 +0.4**
baz=61
H08A Prairie City 61.10 55 ⇑P **P** **21 22 16.9 +0.1**
baz=61
B13A Whitefish 61.13 49 ⇑P **P** **21 22 16.7 -0.2**
baz=61
G09A Cove 61.15 54 ⇑P **P** **21 22 17.1 0.0**
baz=61
A14A Double T Ranch 61.33 48 ⇓P **P** **21 22 17.8 -0.5**
baz=61
E11A Bogner Ranch, 61.39 52 ⇓P **P** **21 22 17.9 -0.8**
baz=61
C13A Hot Springs 61.49 50 ⇑P **P** **21 22 19.1 -0.3**
baz=61
I08A Drewsey 61.52 55 ⇑P **P** **21 22 20.2 +0.6**
baz=61
G10A Bishop Farm, J 61.52 53 ⇓P **P** **21 22 19.7 +0.1**
baz=61
A15A Johnson Ranch, 61.69 48 ⇓P **P** **21 22 20.0 -0.7**
baz=61
MOD Modoc 61.70 58 *e*P **P** **21 22 21.8 +1.0**
MOD *epP* pP 21 22 36.5 +0.9
F11A Grangeville 61.70 52 ⇓P **P** **21 22 21.0 +0.2**
baz=61
E12A Beaver Dam Sad 61.71 52 ⇑P **P** **21 22 21.3 +0.5**
baz=61
B14A Marquette Ranc 61.78 49 ⇓P **P** **21 22 21.2 -0.1**
baz=62
K07A Rock Creek Ran 61.85 57 ⇑P **P** **21 22 22.0 +0.1**
baz=62
C14A Swan Lake 61.88 49 ⇑P **P** **21 22 21.9 -0.1**
baz=62
J08A Circle Bar Ran 61.90 56 ⇑P **P** **21 22 21.1 -1.1**
baz=62
D13A Huson 61.91 50 ⇑P **P** **21 22 22.1 -0.1**
baz=62
G11A Walters Elk Ra 61.94 53 ⇓P **P** **21 22 22.0 -0.4**
baz=62
H10A Noah's Angus R 62.16 54 ⇑P **P** **21 22 23.8 0.0**
baz=62,SNR=5.4
B15A Bradely Ranch, 62.18 48 ⇑P **P** **21 22 23.7 -0.3**
baz=62
L07A Adell 62.20 57 ⇑P **P** **21 22 24.0 -0.2**
baz=62
SUMG Summit 62.22 3 *e*P **P** **21 22 23.8 0.0**
K08A Mann Creek Ran 62.27 56 ⇓P **P** **21 22 25.3 +0.6**
baz=62,SNR=6.0
F12A Elk City 62.28 52 ⇓P **P** **21 22 24.9 +0.2**
baz=62
A16A West Butte Ran 62.30 47 ⇓P **P** **21 22 24.5 -0.2**
baz=62
J09A Fry Pan Ranch, 62.33 55 ⇑P **P** **21 22 24.9 -0.1**
baz=62
I10A Payette 62.43 54 ⇓P **P** **21 22 25.3 -0.4**
baz=62
D14A Greenough 62.43 50 ⇓P **P** **21 22 26.0 +0.3**
baz=62
C15A Salmond Ranch, 62.49 49 ⇑P **P** **21 22 25.5 -0.6**
baz=62
B16A M & M Farms, S 62.57 48 ⇓P **P** **21 22 26.0 -0.6**
baz=62
N06A Buffalo Meadow 62.67 59 ⇓P **P** **21 22 27.0 -0.4**
baz=62
M07A Soldier Meadow 62.68 58 ⇓P **P** **21 22 27.7 +0.3**
baz=62,SNR=12
L08A Fields 62.69 57 ⇑P **P** **21 22 27.0 -0.5**
baz=62
A17A Triple J Farms 62.76 47 ⇓P **P** **21 22 27.4 -0.5**
baz=62
F13A Darby 62.78 52 ⇓P **P** **21 22 27.3 -0.7**
baz=62
E14A Clinton 62.85 51 ⇑P **P** **21 22 27.9 -0.5**
baz=63
BEKR Beckwourth 62.89 60 ⇓P **P** **21 22 28.7 -0.2**
baz=63
C16A Fuhringer Ranc 62.93 49 ⇑P **P** **21 22 29.0 0.0**
baz=63,SNR=5.9
O06A Flanigan 63.03 59 ⇓P **P** **21 22 30.1 +0.3**
baz=63
B17A L&G Farms, Che 63.12 48 ⇑P **P** **21 22 29.9 -0.3**
baz=63
N07B Gerlach 63.17 58 ⇓P **P** **21 22 30.6 -0.1**
baz=63
K10A MacKenzie Ranc 63.19 55 ⇓P **P** **21 22 30.8 0.0**
baz=63
FFC Flin Flon 63.21 38 *e*P **P** **21 22 30.4 -0.3**
FFC *e**PP pP 21 22 45.0 -0.5
FFC pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
FFC Flin Flon 63.21 38 *e*P **P** **21 22 30.4 -0.3**
comp=Z,3.6nm,0.7s,mb4.6
FFC *epP* pP 21 22 45.0 -0.5
A18A Metzger Ranch, 63.22 47 ⇓P **P** **21 22 30.5 -0.3**
baz=63
H12A Diamond D Ranc 63.25 53 ⇓P **P** **21 22 31.4 +0.2**
baz=63
G13A Cobalt 63.26 52 ⇓P **P** **21 22 30.7 -0.5**
baz=63,SNR=5.5
F14A Wisdom 63.29 51 ⇑P **P** **21 22 31.0 -0.4**
baz=63
E15A Deer Lodge 63.31 50 ⇑P **P** **21 22 31.6 +0.1**
baz=63
MFID Camas Ranch 63.40 54 ⇑P **P** **21 22 31.7 -0.5**
baz=63
D16A Dana Ranch, Ca 63.52 49 ⇑P **P** **21 22 32.7 -0.2**
baz=63
C17A Wharram Farm, 63.55 48 ⇓P **P** **21 22 32.9 -0.2**
baz=63,SNR=5.9
I12A Atlanta 63.56 54 ⇓P **P** **21 22 33.1 -0.1**
baz=63
H13A Challis 63.58 53 ⇑P **P** **21 22 32.9 -0.4**
baz=63
B18A Beardsley Farm 63.59 47 ⇓P **P** **21 22 33.1 -0.2**
baz=63
O07A Toulon 63.61 59 ⇑P **P** **21 22 33.4 -0.2**
baz=63
FCC Fort Churchill 63.62 32 *e*P **P** **21 22 32.7 -0.6**
FCC *e**PP pP 21 22 47.0 -1.1
N08A GE Springer Mi 63.67 58 ⇓P **P** **21 22 33.9 -0.1**
baz=63
K11A Parker Ranch, 63.68 55 ⇓P **P** **21 22 33.9 -0.1**
baz=63
M09A Marrel Ranch, 63.68 57 ⇓P **P** **21 22 34.2 +0.2**
baz=63
F15A Butte 63.75 51 ⇑P **P** **21 22 34.8 +0.3**
baz=64
E16A East Helena 63.76 50 ⇓P **P** **21 22 34.2 -0.3**
baz=64
EGMT Eagleton 63.83 47 ⇑P **P** **21 22 35.0 +0.1**
baz=64
D17A Six Diamond Ra 63.90 49 ⇓P **P** **21 22 35.1 -0.3**
baz=64
J12A Stokes Ranch, 63.92 54 ⇑P **P** **21 22 36.0 +0.4**
baz=64
H14A Leadore 64.04 52 ⇓P **P** **21 22 36.3 0.0**
baz=64
I13A Wildhorse Cree 64.06 53 ⇑P **P** **21 22 36.5 0.0**
baz=64
HLID Hailey 64.11 54 ⇑P **P** **21 22 36.8 0.0**
baz=64
M10A I.L. Ranch, Tu 64.16 56 ⇓P **P** **21 22 37.2 0.0**
baz=64
G15A Dillon 64.18 51 ⇑P **P** **21 22 37.1 -0.2**
baz=64
L11A Cat Creek Ranc 64.22 55 ⇑P **P** **21 22 37.4 -0.1**
baz=64
E17A Mainsdale 64.24 49 ⇑P **P** **21 22 38.2 +0.6**
baz=64
F16A Kennard Place, 64.26 50 ⇑P **P** **21 22 37.7 0.0**
baz=64
R06C Coleville 64.28 61 ⇑P **P** **21 22 38.2 +0.2**
baz=64
BOZ Bozeman (W) 64.34 50 ⇓P **P** **21 22 38.8 +0.5**
baz=64
BOZ Bozeman (W) 64.34 50 *e*P **P** **21 22 39.1 +0.8**
J13A Cove Ranch, Pi 64.35 54 ⇑P **P** **21 22 38.4 0.0**
baz=64
K12A Draper Farm, C 64.41 55 ⇓P **P** **21 22 39.2 +0.4**
baz=64
I14A Mackay 64.42 53 ⇑P **P** **21 22 39.0 +0.1**
baz=64,SNR=5.8
G16A Moss Hill, Enn 64.52 51 ⇑P **P** **21 22 39.6 +0.1**
baz=64,SNR=7.9
M11A Holland Ranch, 64.65 56 ⇓P **P** **21 22 40.7 +0.3**
baz=64
F17A Fitzpatrick Pl 64.70 50 ⇑P **P** **21 22 40.9 +0.2**
baz=64
J14A Carey 64.77 53 ⇑P **P** **21 22 41.2 +0.1**
baz=64,SNR=5.3
HYB Hyderabad 64.80 270 *i* P **P** **21 22 40.5 -1.2**
HYB Hyderabad 64.80 270 *e*P **P** **21 22 40.5 -1.2**
G17A Pierce Place, 65.03 50 ⇑P **P** **21 22 43.2 +0.3**
baz=65
NVAR Mina Array Bea 65.04 60 P **P** **21 22 43.7 +0.7**
comp=Z,3.2nm,0.7s,mb4.5,baz=298,slow=7.2,SNR=15
NVAR pP pP 21 22 58.7 +0.9
comp=Z,2.6nm,0.6s,baz=297,slow=6.8,SNR=10
NVAR sP sP 21 23 04.6 +0.7
comp=Z,1.2nm,0.7s,baz=292,slow=5.8,SNR=3.0
NVAR Mina Array Bea 65.04 60 P **P** **21 22 43.7 +0.7**
NVAR pP pP 21 22 58.7 +0.9
NVAR sP sP 21 23 04.6 +0.7
H16A Russell Place, 65.15 51 ⇑P **P** **21 22 44.0 +0.3**
baz=65
M12A Wells 65.17 56 ⇓P **P** **21 22 44.1 +0.3**
baz=65
F18A Big Timber 65.21 49 ⇓P **P** **21 22 44.0 +0.1**
baz=65
CTAO Charters Tower 65.22 184 P **P** **21 22 43.6 -0.6**
K14A Jones Ranch, D 65.46 54 ⇓P **P** **21 22 45.9 +0.3**
baz=65
O11A Cowboy Ranch, 65.55 57 ⇓P **P** **21 22 46.8 +0.5**
baz=65
M13A Montello 65.65 55 ⇑P **P** **21 22 47.4 +0.5**
baz=65
H17A Grant Village 65.72 51 ⇓P **P** **21 22 49.0 +1.7**
baz=65
K15A Arbon 65.73 53 ⇓P **P** **21 22 48.6 +1.2**
baz=66
L14A Malta 65.75 54 ⇑P **P** **21 22 48.4 +0.9**
baz=66
J16A Bone 65.87 52 ⇑P **P** **21 22 49.3 +1.0**
baz=66
RLMT Red Lodge 65.96 50 ⇓P **P** **21 22 49.7 +0.9**
baz=66
RRI2 Red Ridge 65.99 52 *e*P **P** **21 22 50.6 +1.6**
O12A Currie 66.00 57 ⇓P **P** **21 22 49.5 +0.3**
baz=66
M14A Sheep Mountain 66.03 55 ⇑P **P** **21 22 50.4 +1.1**
baz=66
I17A Pilgram Creek 66.03 51 ⇓P **P** **21 22 50.4 +1.1**
baz=66
MOOW Moose Ponds 66.05 51 *e*P **P** **21 22 50.8 +1.5**
comp=Z,23nm,2.3s,mb4.8
MOOW *epP* pP 21 23 04.5 +0.3
TPAW Teton Pass 66.10 52 *e*P **P** **21 22 50.9 +1.2**
K16A Soda Springs 66.17 53 ⇑P **P** **21 22 51.1 +0.9**
baz=66
DGMT Dagmar 66.35 44 ⇓P **P** **21 22 51.1 -0.2**
baz=66
WRAB Tennant Creek 66.51 196 *e*P **P** **21 22 51.6 -0.9**
WRAB *e**PP pP 21 23 06.7 -0.7
WB2 Warramunga Arr 66.52 196 *e*P **P** **21 22 51.8 -0.7**
M15A Larsen Ranch, 66.57 54 ⇑P **P** **21 22 52.9 +0.1**
baz=66
I18A Diamond G Ranc 66.59 51 ⇓P **P** **21 22 53.2 +0.3**
baz=66
R11A Troy Canyon, C 66.73 59 ⇑P **P** **21 22 53.5 -0.4**
baz=66
N15A Stansbury Isla 66.90 55 ⇓P **P** **21 22 55.0 +0.2**
baz=67
FITZ Fitzroy Crossi 66.91 205 *e*P **P** **21 22 54.9 -0.2**
comp=Z,3.3nm,0.9s,mb4.4
FITZ Fitzroy Crossi 66.91 205 *e*P **P** **21 22 55.2 +0.1**
P13A Bates Ranch, G 66.96 57 ⇑P **P** **21 22 55.2 -0.1**
baz=67
MPMC Manual Prospec 67.04 62 ⇓P **P** **21 22 55.8 -0.1**
baz=67
TPNV Topopah Spring 67.23 60 ⇓P **P** **21 22 56.9 -0.1**
baz=67
Q13A Wheeler Ranch, 67.28 57 ⇓P **P** **21 22 57.3 -0.1**
baz=67
BW06 Boulder Array 67.34 52 ⇓P **P** **21 22 57.4 -0.3**
baz=67
BW06 Boulder Array 67.34 52 *e*P **P** **21 22 58.1 +0.5**
BW06 *epP* pP 21 23 12.3 -0.2
PDAR Pinedale Array 67.34 52 P **P** **21 22 58.0 +0.4**
comp=Z,2.4nm,0.8s,mb4.3,baz=289,slow=1.8,SNR=21
PDAR pP pP 21 23 12.4 -0.2
comp=Z,2.5nm,0.7s,baz=2.9,slow=2.5,SNR=12
P14A Drum Mountains 67.43 56 ⇑P **P** **21 22 58.7 +0.4**
baz=67
T11A Corn Creek, Al 67.67 59 ⇓P **P** **21 23 00.1 +0.2**
baz=67
Q14A Sevier Lake (B 67.70 57 ⇑P **P** **21 23 00.4 +0.4**
baz=67
K19A Absolon Red Bu 67.70 51 ⇓P **P** **21 22 59.5 -0.4**
baz=67
N17A Moffit Pass 67.83 54 ⇓P **P** **21 23 00.7 -0.1**
baz=68
O17A Robinson Place 68.38 54 ⇓P **P** **21 23 04.5 +0.3**
baz=68
NB2 NORSAR Subarra 68.80 340 P **P** **21 23 04.5 -2.0**
comp=Z,0.7nm,0.4s,mb3.9,baz=28,slow=6.5
NOA NORSAR Array B 68.80 340 P **P** **21 23 05.0 -1.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=29,slow=6.4,SNR=12
NOA LR LR 21 57 55.1
comp=Z,30nm,19.0s,MS3.5,baz=135,slow=40
NOA NORSAR Array B 68.80 340 P **P** **21 23 05.0 -1.5**
NOA pmax pmax
comp=Z,1.0nm,0.4s
NOA MLR MLR
comp=Z,30nm,19.0s
M20A Sweetwater, Wa 68.95 52 ⇑P **P** **21 23 08.3 +0.5**
baz=69
HFS Hagfors 68.96 338 LR LR 21 56 58.3
comp=Z,72nm,18.7s,MS3.9,baz=250,slow=39
U13A Pakoon Wash 68.97 59 ⇑P **P** **21 23 08.3 +0.4**
baz=69
ULM Lac du Bonnet 69.00 39 P **P** **21 23 07.0 -1.0**
comp=Z,3.3nm,0.5s,mb4.5,baz=310,slow=5.3,SNR=4.4
P18A Preston Nutter 69.04 55 ⇓P **P** **21 23 08.5 +0.2**
baz=69
L21A Rawlins 69.09 51 ⇓P **P** **21 23 08.5 -0.1**
baz=69
LDFC Landfair 69.15 61 *epP* pP 21 23 18.0 -6.1
SRU San Rafael 69.22 55 ⇓P **P** **21 23 09.5 +0.1**
baz=69
SRU San Rafael 69.22 55 *e*P **P** **21 23 10.4 +0.9**
SRU *epP* pP 21 23 24.1 -0.4
M21A Separation Pea 69.33 51 ⇓P **P** **21 23 10.1 0.0**
baz=69
V13A Grand Canyon W 69.33 60 ⇑P **P** **21 23 10.3 +0.1**
baz=69
N20A Spence Gulch, 69.35 53 ⇑P **P** **21 23 10.5 +0.3**
baz=69
RSSD Black Hills 69.40 48 *e*P **P** **21 23 10.3 -0.2**
RSSD *e**PP pP 21 23 25.1 -0.3
U14A Mt Trumbull 69.44 59 ⇑P **P** **21 23 11.0 +0.1**
baz=69
S16A Weppner Ranch, 69.52 57 ⇓P **P** **21 23 11.7 +0.3**
baz=69
L22A Ellis Ranch, M 69.55 51 ⇑P **P** **21 23 11.1 -0.4**
baz=69
R17A Hanksville Air 69.58 56 ⇑P **P** **21 23 11.8 +0.1**
baz=69
IRM Iron Mountain 69.73 62 ⇑P **P** **21 23 12.2 -0.5**
baz=70
P19A Cripple Cowboy 69.76 54 ⇓P **P** **21 23 12.8 0.0**
baz=70
M22A Cedar Creek Ra 69.89 51 ⇓P **P** **21 23 12.8 -0.7**
baz=70
U15A North Rim 69.97 58 ⇓P **P** **21 23 13.9 -0.3**
baz=70
V14A Boquillas Ranc 70.01 59 ⇓P **P** **21 23 14.5 +0.1**
baz=70
S17A Black Ridge (B 70.05 56 ⇑P **P** **21 23 14.6 0.0**
baz=70
Q19A Hogan Spring (70.06 55 ⇓P **P** **21 23 14.2 -0.4**
baz=70
R18A Canyonlands Na 70.07 55 ⇑P **P** **21 23 14.4 -0.3**
baz=70
KIV Kislovodsk 70.16 313 *e*P **P** **21 23 16.7 +1.6**
KIV *eS* S 21 32 25.5 +3.3
KIV pmax pmax
comp=Z,24nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,84nm,18.0s,MS4.0
KIV Kislovodsk 70.16 313 *e*P **P** **21 23 15.8 +0.7**
comp=Z,19nm,0.8s,mb5.1
O21A Pagoda 70.22 53 ⇓P **P** **21 23 15.1 -0.5**
baz=70
X13A Yucca 70.26 61 ⇓P **P** **21 23 15.7 -0.2**
baz=70
W14A Seligman 70.31 60 ⇑P **P** **21 23 16.3 +0.1**
baz=70
N22A Wattenberg Ran 70.38 52 ⇑P **P** **21 23 16.7 +0.1**
baz=70
V15A Kaibab Nationa 70.45 59 ⇑P **P** **21 23 17.1 0.0**
baz=70
S18A Hurst Farm, Bl 70.48 56 ⇑P **P** **21 23 17.1 -0.2**
baz=70
GOR Gori 70.78 311 P **P** **21 23 19.9 +0.9**
U16A Tuba City 70.86 58 ⇑P **P** **21 23 19.6 0.0**
baz=71
X14A Yava 70.92 60 ⇑P **P** **21 23 20.1 +0.2**
baz=71
S19A Harvey Farm, M 70.95 55 ⇑P **P** **21 23 20.3 +0.2**
baz=71
Y14A Wickenburg 71.21 61 ⇑P **P** **21 23 21.6 -0.1**
baz=71
R21A Cimarron 71.44 54 ⇓P **P** **21 23 22.6 -0.4**
baz=71
AKASG Malin Array Be 71.44 325 P **P** **21 23 21.2 -1.6**
comp=Z,2.4nm,0.4s,mb4.5,baz=36,slow=5.9,SNR=12
AKASG Malin Array Be 71.44 325 P **P** **21 23 21.2 -1.6**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
MVCO Mesa Verde 71.68 55 ⇓P **P** **21 23 24.4 -0.2**
baz=71
GNI Garni 71.71 309 LR LR 21 56 13.2
comp=Z,51nm,19.9s,MS3.8,baz=88,slow=37
X16A Lo Mia Camp, P 71.84 59 ⇓P **P** **21 23 25.6 +0.1**
baz=72
V18A Ganado 71.86 57 ⇓P **P** **21 23 26.0 +0.4**
baz=72
ANN Anapa 72.19 316 *e*P **P** **21 23 32.3 +4.9**
ANN pmax pmax
comp=Z,135nm,1.5s,mb5.7
ECSD EROS,Sioux Fal 73.43 44 *e*P **P** **21 23 34.3 -0.5**
I18A Homack Ranch, 73.95 60 ⇓P **P** **21 23 38.1 +0.1**
baz=74
218A Dragoon 74.36 60 ⇓P **P** **21 23 40.6 +0.2**
baz=74
ANMO Albuquerque 74.44 56 pP pP 21 23 56.4 +0.4
comp=Z,2.8nm,0.8s,baz=295,slow=4.5,SNR=5.0
318A Bisbee 74.77 61 ⇑P **P** **21 23 43.2 +0.5**
baz=74
219A White Tail Can 74.83 60 ⇑P **P** **21 23 43.2 +0.1**
baz=75
KWP Kalwaria 74.85 328 *e*P **P** **21 23 39.5 -3.4**
KWP pmax pmax
comp=Z,15nm,0.5s,mb5.2
KWP Kalwaria 74.85 328 *e*P **P** **21 23 39.5 -3.5**
comp=Z,15nm,0.5s,mb5.2
319A Douglas 75.25 60 ⇓P **P** **21 23 45.6 +0.1**
baz=75
SCHQ Schefferville 75.42 21 P **P** **21 23 45.7 -0.5**
comp=Z,5.1nm,0.9s,mb4.4,baz=310,slow=7.9,SNR=3.8

BUR08 Bucovina Ar. S 75.48 325 eP P 21 23 46.2 -0.4
BURAR Bucovina Array 75.49 325⇓iP P 21 23 46.6 -0.1
BURAR Bucovina Array 75.49 325 ⇓P P 21 23 46.6 0.0
STHS Stebnicka Huta 75.57 328 eP P 21 23 47.7 +0.6
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
STHS Stebnicka Huta 75.57 328 eP P 21 23 47.7 +0.6
comp=Z,4.5nm,0.8s,mb4.5
KOLS Kolonicke sedl 75.58 327 eP P 21 23 47.5 +0.3
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KOLS Kolonicke sedl 75.58 327 eP P 21 23 47.5 +0.3
comp=Z,6.0nm,1.1s,mb4.4
TLCR 75.90 321⇑iP P 21 23 48.9 -0.1
TLCR 75.90 321 ⇑P P 21 23 48.9 -0.2
CRVS Cervenica-Dubn 75.91 328 eP P 21 23 48.9 -0.2
CRVS pmax pmax
comp=Z,75nm,3.6s
CRVS Cervenica-Dubn 75.91 328 eP P 21 23 48.9 -0.2
comp=Z,75nm,3.6s
TRPA Tarpa 76.14 327⇑iP P 21 23 50.6 +0.3
DPC Dobruska-Polom 76.53 332 eP P 21 23 52.5 0.0
DPC smax
comp=N,5.0nm,0.4s
TIRR Tirgusor 76.65 321⇓iP P 21 23 52.4 -0.9
TIRR Tirgusor 76.65 321 ⇓P P 21 23 52.4 -0.9
HARR Harsova 76.67 322⇓iP P 21 23 53.3 -0.2
HARR Harsova 76.67 322 ⇓P P 21 23 53.3 -0.2
CLL Collm 76.78 334 i P P 21 23 52.8 -1.1
CLL pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
CLL Collm 76.78 334 i P P 21 23 52.8 -1.1
comp=Z,6.0nm,0.6s,mb4.7
MLR Muntele Rosu 76.89 323 LR LR 22 01 30.8
comp=Z,68nm,19.9s,MS4.0,baz=311,slow=39
ISR Istrita 76.94 323⇓iP P 21 23 55.4 +0.5
ISR Istrita 76.94 323 ⇓P P 21 23 55.4 +0.5
PVCC Panska Ves 76.96 333 eP P 21 23 54.3 -0.6
VYHS Vyhne 77.22 329 eP P 21 23 56.4 -0.1
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 77.22 329 eP P 21 23 56.4 -0.1
comp=Z,2.7nm,1.0s,mb4.1
STKA Stephens Creek 77.25 187 P P 21 23 57.7 +1.2
comp=Z,0.8nm,0.6s,mb3.8,baz=329,slow=14,SNR=3.5
STKA pP pP 21 24 12.1 +0.3
comp=Z,1.6nm,0.7s,baz=149,slow=22,SNR=1.9
STKA LR LR 21 55 01.1
comp=Z,41nm,20.4s,MS3.7,baz=25,slow=33
STKA Stephens Creek 77.25 187 P P 21 23 57.6 +1.1
STKA pP pP 21 24 12.1 +0.3
STKA LR LR 21 55 01.1
VOIR 77.31 324⇑iP P 21 23 57.6 +0.6
VOIR 77.31 324 ⇑P P 21 23 57.6 +0.6
PSZ Piszkesteto 77.31 328⇓iP P 21 23 57.3 +0.3
PSZ Piszkesteto 77.31 328 ⇓P P 21 23 57.3 +0.3
VRAC Vranov 77.33 331 LR LR 22 00 57.8
comp=Z,60nm,21.4s,MS3.9,baz=249,slow=38
VRAC Vranov 77.33 331⇑iP P 21 23 57.3 +0.3
VRAC Vranov 77.33 331 ⇑P P 21 23 57.3 +0.2
UMR Umm Al-Rimmam 77.42 299 eP P 21 23 57.5 -0.4
baz=299
UMR AMb AMB 21 23 58.5
comp=Z,63nm,0.8s,mb5.6,baz=299
PRU Pruhonice 77.43 332 eP P 21 23 56.8 -0.8
MIB Mutribah 77.47 300 eP P 21 23 57.8 -0.4
baz=300
MIB AMb AMB 21 23 58.9
comp=Z,61nm,0.8s,mb5.6,baz=300
BR131 Keskin Array S 77.85 315 eP P 21 23 59.7 -0.4
comp=Z,2.3nm,0.8s,mb4.2
BRTR Keskin Array B 77.85 315 P P 21 24 00.1 -0.1
comp=Z,2.8nm,0.7s,mb4.3,baz=85,slow=4.3,SNR=15
BRTR Keskin Array B 77.85 315 P P 21 24 00.1 0.0
BRTR pmax pmax
comp=Z,3.0nm,0.7s
NAY Al-Naaiem 77.92 299 eP P 21 24 00.3 -0.4
baz=299
NAY AMb AMB 21 24 01.3
comp=Z,39nm,1.0s,mb5.3,baz=299
GZR Gura Zlata 78.28 325⇓iP P 21 24 01.9 -0.5
GZR Gura Zlata 78.28 325 ⇓P P 21 24 01.9 -0.5
KHC Kasperske Hory 78.49 332⇓eP P 21 24 02.5 -1.0
KHC Kasperske Hory 78.49 332 eP P 21 24 03.1 -0.4
BZS Buzias 78.56 326⇓iP P 21 24 03.1 -0.9
BZS Buzias 78.56 326 ⇓P P 21 24 03.1 -0.8
GERES GERESS Array B 78.70 332 P P 21 24 04.0 -0.7
comp=Z,1.8nm,0.5s,mb4.2,baz=35,slow=5.3,SNR=17
GERES LR LR 22 00 58.4
comp=Z,61nm,20.1s,MS3.9,baz=317,slow=37
GERES GERESS Array B 78.70 332 P P 21 24 04.0 -0.6
GERES pmax pmax
comp=Z,2.0nm,0.5s
GERES MLR MLR
comp=Z,61nm,20.1s
CONA Conrad Observa 78.76 330⇑iP P 21 24 05.0 0.0
comp=Z,4.9nm,0.6s,mb4.6
CSNA Conrad Observa 78.76 330⇑iP P 21 24 05.2 +0.2
comp=Z,4.4nm,0.6s,mb4.5
PKSM Moragy 79.21 328⇑iP P 21 24 07.1 -0.4
TXAR Lajitas Array 80.10 58 P P 21 24 12.6 0.0
comp=Z,3.6nm,0.5s,mb4.5,baz=299,slow=4.1,SNR=50
TXAR pP pP 21 24 27.8 -0.1
comp=Z,4.3nm,0.8s,baz=298,slow=4.1,SNR=8.7
TXAR Lajitas Array 80.10 58 P P 21 24 12.6 0.0
TXAR *PP pP 21 24 27.8 -0.1
TXAR pmax pmax
comp=Z,4.0nm,0.5s
TXAR pmax pmax
comp=Z,4.0nm,0.9s
SOKA Soboth 80.12 330⇑iP P 21 24 11.8 -0.6
comp=Z,4.4nm,0.6s,mb4.5
PERS Pernice 80.13 330 i P P 21 24 12.2 -0.3
VTS Vitosha 80.40 323⇑iP P 21 24 13.7 -0.3
VTS Vitosha 80.40 323 ⇑P P 21 24 13.7 -0.3
BAIF Baives 80.41 338 eP P 21 24 12.8 -1.1
WATA Walderalm 80.71 333⇑iP P 21 24 15.3 -0.2
comp=Z,5.9nm,0.4s,mb4.8
WTTA Wattenberg 80.75 333⇑iP P 21 24 15.6 -0.2
comp=Z,10nm,0.5s,mb5.0
MOTA Moosalm 80.85 333⇓iP P 21 24 15.9 -0.4
comp=Z,5.6nm,0.7s,mb4.6
CDF Champ du Feu 81.06 336 eP P 21 24 16.7 -0.7
comp=Z,12nm,0.8s,mb4.6
CDF Champ du Feu 81.06 336 eP P 21 24 16.7 -0.7
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CDF Champ du Feu 81.06 336 eP P 21 24 16.7 -0.7
comp=Z,6.2nm,0.8s,mb4.6
MEZF Maizieres J'vi 81.61 337⇑iP P 21 24 19.9 -0.4
comp=Z,8.8nm,0.6s,mb4.6
MEZF Maizieres J'vi 81.61 337⇑iP P 21 24 19.9 -0.4
comp=Z,8.8nm,0.6s,mb4.9
MIAR Mount Ida 81.91 48 eP P 21 24 21.8 -0.4
MIAR e*PP pP 21 24 35.7 -1.8
MIAR pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MIAR Mount Ida 81.91 48 eP P 21 24 21.8 -0.3
comp=Z,1.8nm,0.7s,mb4.1
MIAR ePcP PcP 21 24 27.1 -0.6
MIAR epP pP 21 24 35.7 -1.8
MMAI Mount Meron Ar 82.04 309 LR LR 22 02 26.1
comp=Z,45nm,20.6s,MS3.8,baz=15,slow=37
FLN La Foliniere 82.76 341⇑iP P 21 24 25.6 -0.7
comp=Z,8.8nm,0.6s,mb4.7
FLN eMLR MLR
comp=Z,90nm,17.0s,MS3.9
FLN La Foliniere 82.76 341⇑iP P 21 24 25.6 -0.7
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
FLN MLR MLR
comp=Z,90nm,17.0s,MS4.2
FLN La Foliniere 82.76 341⇑iP P 21 24 25.6 -0.7
comp=Z,4.4nm,0.6s,mb4.7
FLN LR LR
comp=Z,90nm,17.0s,MS4.2
LDF La Druitiere 82.83 340⇑iP P 21 24 25.9 -0.8
comp=Z,4.0nm,0.5s,mb4.4
LDF La Druitiere 82.83 340⇑iP P 21 24 25.9 -0.8
LDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
LDF La Druitiere 82.83 340⇑iP P 21 24 25.9 -0.8
comp=Z,2.0nm,0.5s,mb4.4
CABF La Chapelle 83.04 336 eP P 21 24 27.7 -0.1
LOR Lormes 83.06 337⇑iP P 21 24 27.1 -0.8
comp=Z,6.5nm,0.5s,mb4.6
LOR eMLR MLR
comp=Z,118nm,19.0s,MS4.0
LOR Lormes 83.06 337⇑iP P 21 24 27.1 -0.8
LOR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LOR MLR MLR
comp=Z,120nm,19.0s,MS4.3
LOR Lormes 83.06 337⇑iP P 21 24 27.1 -0.8
comp=Z,3.3nm,0.5s,mb4.6
LOR LR LR
comp=Z,120nm,19.0s,MS4.3
GRR Gorron 83.20 341⇑iP P 21 24 28.2 -0.4
comp=Z,21nm,0.6s,mb5.0
GRR Gorron 83.20 341⇑iP P 21 24 28.2 -0.4
GRR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
GRR Gorron 83.20 341⇑iP P 21 24 28.2 -0.4
comp=Z,10nm,0.6s,mb5.0
SSF Saint Saulge 83.34 338⇑iP P 21 24 28.6 -0.8
comp=Z,11nm,0.9s,mb4.6
SSF Saint Saulge 83.34 338⇑iP P 21 24 28.6 -0.8
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
SSF Saint Saulge 83.34 338⇑iP P 21 24 28.6 -0.8
comp=Z,5.5nm,0.9s,mb4.6
NWAO Narrogin (SRO) 83.38 207 eP P 21 24 29.4 -0.1
NWAO pmax pmax
comp=Z,7.0nm,0.8s
NWAO Narrogin (SRO) 83.38 207 eP P 21 24 29.4 -0.1
comp=Z,6.7nm,0.8s,mb4.7
AVF Avril sur Loir 83.63 338⇑iP P 21 24 30.3 -0.6
comp=Z,9.2nm,0.6s,mb4.8
AVF Avril sur Loir 83.63 338⇑iP P 21 24 30.3 -0.6
AVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
AVF Avril sur Loir 83.63 338⇑iP P 21 24 30.3 -0.6
comp=Z,4.6nm,0.6s,mb4.8
SMF Signal de Mont 83.64 337⇑iP P 21 24 30.3 -0.6
comp=Z,20nm,0.8s,mb5.0
SMF Signal de Mont 83.64 337⇑iP P 21 24 30.3 -0.6
SMF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
SMF Signal de Mont 83.64 337⇑iP P 21 24 30.3 -0.6
comp=Z,10.0nm,0.8s,mb5.0
SGMF Saint Gilles 83.71 342 eP P 21 24 30.8 -0.4
comp=Z,19nm,0.6s,mb5.1
SGMF Saint Gilles 83.71 342 eP P 21 24 30.8 -0.4
SGMF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
SGMF Saint Gilles 83.71 342 eP P 21 24 30.8 -0.4
comp=Z,9.7nm,0.6s,mb5.1
ROSF Rostrenen 83.78 342 eP P 21 24 31.2 -0.4
comp=Z,28nm,0.9s,mb5.1
ROSF Rostrenen 83.78 342 eP P 21 24 31.2 -0.4
ROSF pmax pmax
comp=Z,14nm,0.9s,mb5.1
ROSF Rostrenen 83.78 342 eP P 21 24 31.2 -0.4
comp=Z,14nm,0.9s,mb5.1
LPL La Plagne 83.84 335⇑iP P 21 24 32.0 0.0
comp=Z,13nm,0.8s,mb4.8
LPL La Plagne 83.84 335⇑iP P 21 24 32.0 0.0
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LPL La Plagne 83.84 335⇑iP P 21 24 32.0 0.0
comp=Z,6.4nm,0.8s,mb4.8
LPG La Plagne 83.85 335⇑iP P 21 24 32.2 +0.2
comp=Z,18nm,1.0s,mb4.9
LPG La Plagne 83.85 335⇑iP P 21 24 32.2 +0.2
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
LPG La Plagne 83.85 335⇑iP P 21 24 32.2 +0.2
comp=Z,9.0nm,1.0s,mb4.8
BGF Bois d'Agland 83.98 338⇑iP P 21 24 32.1 -0.6
comp=Z,8.9nm,0.6s,mb4.8
BGF Bois d'Agland 83.98 338⇑iP P 21 24 32.1 -0.6
BGF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BGF Bois d'Agland 83.98 338⇑iP P 21 24 32.1 -0.6
comp=Z,4.4nm,0.6s,mb4.8
QUIF Quistinic 84.16 342 eP P 21 24 32.9 -0.6
TCF Toulx Ste Croi 84.40 338⇑iP P 21 24 34.4 -0.4
comp=Z,19nm,1.1s,mb4.8
TCF Toulx Ste Croi 84.40 338⇑iP P 21 24 34.4 -0.4
TCF pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
TCF Toulx Ste Croi 84.40 338⇑iP P 21 24 34.4 -0.4
comp=Z,9.4nm,1.1s,mb4.8
MBDF Montbardon 84.54 335 eP P 21 24 34.9 -0.6
comp=Z,4.7nm,0.6s,mb4.5
MBDF Montbardon 84.54 335 eP P 21 24 34.9 -0.6
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
MBDF Montbardon 84.54 335 eP P 21 24 34.9 -0.6
comp=Z,2.3nm,0.6s,mb4.5
ORIF Oris-en-Rattie 84.64 335⇑iP P 21 24 35.9 -0.1
comp=Z,15nm,0.7s,mb5.0
ORIF eMLR MLR
comp=Z,84nm,21.2s,MS3.8
ORIF Oris-en-Rattie 84.64 335⇑iP P 21 24 35.9 -0.1
ORIF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
ORIF Oris-en-Rattie 84.64 335⇑iP P 21 24 35.9 -0.1
comp=Z,7.5nm,0.7s,mb4.9
MFF Saint Martin d 84.70 340⇑iP P 21 24 36.1 -0.2
comp=Z,17nm,0.7s,mb5.0
MFF Saint Martin d 84.70 340⇑iP P 21 24 36.1 -0.2
MFF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
MFF Saint Martin d 84.70 340⇑iP P 21 24 36.1 -0.2
comp=Z,8.6nm,0.7s,mb5.0
EIL Elat 84.83 308 LR LR 22 09 31.3
comp=Z,42nm,18.0s,MS3.9,baz=335,slow=41
RJF Les Rejaudoux 85.50 338 eP P 21 24 40.1 -0.2
RJF eMLR MLR
comp=Z,114nm,21.0s,MS3.9
RJF Les Rejaudoux 85.50 338 eP P 21 24 40.1 -0.2
RJF LR LR
comp=Z,110nm,21.0s,MS4.2
CAF Calviac 85.70 338⇑iP P 21 24 41.7 +0.4
comp=Z,24nm,0.9s,mb5.1
CAF Calviac 85.70 338⇑iP P 21 24 41.7 +0.4
CAF pmax pmax
comp=Z,12nm,0.9s,mb5.1
CAF Calviac 85.70 338⇑iP P 21 24 41.7 +0.4
comp=Z,12nm,0.9s,mb5.1
LFF La Frestale 86.04 339⇑iP P 21 24 43.2 +0.2
comp=Z,16nm,0.6s,mb5.1
LFF La Frestale 86.04 339⇑iP P 21 24 43.2 +0.2
LFF pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
LFF La Frestale 86.04 339⇑iP P 21 24 43.2 +0.2
comp=Z,8.1nm,0.6s,mb5.1
EPF Esparros 87.92 338 eP P 21 24 51.6 -0.6
ETSF Etsaut 88.28 339 eP P 21 24 53.1 -0.8
comp=Z,5.0nm,0.6s,mb4.6
ETSF Etsaut 88.28 339 eP P 21 24 53.1 -0.8
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
ETSF Etsaut 88.28 339 eP P 21 24 53.1 -0.8
comp=Z,2.5nm,0.6s,mb4.6
TORD Torodi Ar. Bea 115.07 326 PKP PKiKP 21 30 42.3 -1.5
comp=Z,0.3nm,0.4s,baz=32,slow=1.1,SNR=5.7
DBIC Dimbokro 123.49 330 PKP PKPdf 21 30 59.0 -1.1
comp=Z,2.3nm,0.6s,baz=106,slow=6.4,SNR=6.1
DBIC Dimbokro 123.49 330 PKIKP PKPdf 21 30 59.0 -1.1
DBIC pmax pmax
comp=Z,2.0nm,0.6s
BDFB Brasilia 146.74 33 PKPbc PKPbc 21 31 44.4 -0.2
comp=Z,4.0nm,0.7s,baz=265,slow=8.3,SNR=10
BDFB pPKPbc pPKPbc 21 31 58.9 -1.6
comp=Z,1.1nm,0.4s,baz=150,slow=23,SNR=2.8
BDFB Brasilia 146.74 33 PKP2 PKPab 21 31 44.4 -1.4
BDFB pmax pmax
comp=Z,4.0nm,0.7s
BDFB pmax pmax
comp=Z,1.0nm,0.4s
PLCA Paso Flores 150.27 96 PKPbc PKPbc 21 31 53.1 0.0
comp=Z,6.8nm,0.7s,baz=254,slow=3.3,SNR=18
PLCA PKPab PKPab 21 31 59.5 0.0
comp=Z,2.8nm,0.8s,baz=278,slow=6.8,SNR=3.5
PLCA pPKPbc pPKPbc 21 32 06.7 -2.4
comp=Z,2.7nm,0.6s,baz=280,slow=1.5,SNR=3.4
PLCA pPKPab pPKPab 21 32 15.6 +0.4
comp=Z,2.1nm,0.7s,baz=234,slow=2.4,SNR=2.2
PLCA Paso Flores 150.27 96 PKIKP PKPbc 21 31 53.1 +0.1
PLCA 21 32 06.7
PLCA 21 32 15.6
PLCA pmax pmax
comp=Z,7.0nm,0.7s
PLCA pmax pmax
comp=Z,3.0nm,0.8s
PLCA pmax pmax
comp=Z,3.0nm,0.6s
PLCA pmax pmax
comp=Z,2.0nm,0.7s
PLCA Paso Flores 150.27 96 PKPbc PKPbc 21 31 53.1 0.0
PLCA PKPab PKPab 21 31 59.5 0.0
PLCA pPKPbc pPKPbc 21 32 06.7 -2.4
PLCA pPKPab pPKPab 21 32 15.6 +0.4
SNAA Sanae 150.59 197 ePKPdf PKPbc 21 31 52.4 -0.4
SNAA e 21 32 00.4
SNAA Sanae 150.59 197⇑iPKIKP PKPbc 21 31 52.2 -0.6
SNAA Sanae 150.59 197 ePKPbc PKPbc 21 31 52.2 -0.6
CPUP Villa Florida 151.07 58 PKPbc PKPbc 21 31 54.9 -0.5
comp=Z,2.4nm,0.6s,baz=332,slow=3.3,SNR=8.5
CPUP PKPab PKPab 21 32 02.6 -0.6
comp=Z,1.3nm,0.7s,baz=49,slow=4.8,SNR=3.4
CPUP pPKPbc pPKPbc 21 32 10.0 -1.4
comp=Z,0.7nm,0.5s,baz=8.9,slow=5.7,SNR=2.0
CPUP Villa Florida 151.07 58 PKIKP PKPbc 21 31 54.9 -0.5
CPUP 21 32 02.6
CPUP 21 32 10.0
CPUP pmax pmax
comp=Z,2.0nm,0.6s
CPUP pmax pmax
comp=Z,1.0nm,0.7s
CPUP pmax pmax
comp=Z,1.0nm,0.5s
VNA2 Neumayer--Watz 152.09 196 ePKPdf PKPbc 21 31 56.4 +0.1
baz=92,slow=0.9
VNA2 e 21 32 06.9
VNA3 Neumayer Olymp 152.23 194 ePKPdf PKPbc 21 31 56.2 -0.4
VNA3 e 21 32 06.3
VNA1 Neumayer--Stat 152.48 196 ePKPdf PKPbc 21 31 57.4 +0.2
VNA1 e 21 32 08.7

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*IDC **11** 21:21:33.1±3.4, 23.45N×142.23E, h116km±28km, mb3.4/4, mb1 3.6/7, mb1mx3.4/22, mbtmp3.7/7, Error ellipse: s-maj=38.4km s-min=26.5km az=87.0*
*JMA **11** 21:21:34.9±0.2, 23.70N×142.08E, h185km, M5.4*
*ISCJB **11** 21:21:36.6±0.9, 23.89N±0.06×142.1E±0.1, h211km±8km, mb3.4/6, Error ellipse: s-maj=17.7km s-min=9.1km az=177.2*
*NEIC **11** 21:21:40.3±2.3, 24.00N×142.04E, h233km±24km, mb3.7/3, Error ellipse: s-maj=16.0km s-min=11.6km az=128.0*
ISC 11 21:21:37.8±1.0**, 23.91N**±0.07×**142.1E**±0.1**, h203**km±9km**, n34, σ0.96**/44**, mb3.4**/6**, Volcano Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JHHJ Haha-jima-NKT 2.71 2 P Pn 21 22 23.1 -1.0
JHHJ eS Sn 21 23 00.0 -0.5
CBIJ Chichi jima 3.17 1 P Pn 21 22 29.5 0.0
321nm,0.3s,baz=171,slow=5.3,SNR=459
CBIJ S Sn 21 23 09.7 -0.5
67nm,0.3s,baz=292,slow=24,SNR=11
CBIJ Chichi jima 3.17 1 P Pn 21 22 28.8 -0.7
CBIJ S Sn 21 23 10.7 +0.5
JHJ2 Mitsune 9.38 348 P Pn 21 23 49.1 +0.2
JHJ2 eS Sn 21 25 32.4 -1.5
JHJ Hachijo jima 2 9.39 348 P Pn 21 23 50.2 +1.2
16nm,0.3s,baz=93,slow=16,SNR=7.0
JHJ S Sn 21 25 29.0 -5.2
7.5nm,0.3s,baz=220,slow=19,SNR=2.5
BSO1 Boso 1 10.75 355 P Pn 21 24 07.5 +1.0
BSO1 eS Sn 21 26 06.8 +0.4
BSO3 Boso 3 10.94 353 P Pn 21 24 09.1 +0.2
BSO3 eS Sn 21 26 12.9 +1.9
BSO4 Boso 4 11.14 353 P Pn 21 24 13.0 +1.4
BSO4 eS Sn 21 26 14.0 -1.9
JOD2 Odawara 2 11.61 348 P Pn 21 24 17.2 -0.3
JNY Yasuok 11.98 343 P Pn 21 24 24.0 +1.8
JHU Hanno 12.14 349 P Pn 21 24 23.5 -0.8
JRY Ryogami san 12.37 348 P Pn 21 24 27.6 +0.4
JAG Ashikaga 12.68 350 P Pn 21 24 30.3 -0.7
JAG eS S 21 26 46.5 -5.8
JHO Hitachi 12.72 354 P Pn 21 24 31.6 0.0
JHO eS S 21 26 47.5 -6.0
MJAR Matsushiro Arr 13.02 346 P Pn 21 24 36.5 +1.2
0.9nm,0.3s,baz=152,slow=11,SNR=5.7
MJAR S S 21 27 07.2 +6.7
0.1nm,0.3s,baz=172,slow=24,SNR=3.1
MAJO Matsushiro 13.03 346 Pn Pn 21 24 35.1 -0.3
JHS Saijyo 13.53 327 P Pn 21 24 50.4 +8.8
JMK Ichinoseki 15.01 357 P Pn 21 25 03.7 +3.8
KSRS Korea Array 18.15 321 P P 21 25 42.6 +7.7
0.6nm,0.3s,baz=138,slow=12,SNR=10
YHNB Yeheng 18.90 277 P P 21 25 43.4 +0.2
ASAJ Asahikawa 20.16 1 P P 21 26 04.3 +7.9
5.4nm,1.0s,baz=283,slow=18,SNR=3.0
ENH Enshi 29.64 290 eP P 21 27 23.9 -0.4
0.8nm,0.6s,mb3.5
QIZ Qiongzhong 30.36 267 P P 21 27 29.6 -1.2
WRAB Tennant Creek 44.23 190 eP P 21 29 27.2 +0.2
2.7nm,0.5s,mb3.8
FITZ Fitzroy Crossi 44.74 203 eP P 21 29 31.4 +0.4
1.2nm,0.8s,mb3.3
MKAR Makanchi Array 52.47 312 P P 21 30 36.3 +6.6
0.4nm,0.7s,mb3.0,baz=85,slow=6.5,SNR=3.7
STKA Stephens Creek 55.48 181 P P 21 30 52.2 +0.7
0.9nm,0.5s,mb3.5,baz=0.0,slow=6.1,SNR=3.1
POHA Pohakuloa 57.65 81 eP P 21 31 06.6 -0.6
AAK Ala-Archa 58.04 306 P P 21 31 08.8 -0.7
MCK McKinley 59.53 29 P P 21 31 19.8 +0.4
PALK Pallekele 60.96 265 P P 21 31 25.6 -4.3
INK Inuvik 65.96 24 P P 21 31 59.9 -1.8
DIB Dawson Inlet, 68.54 40 T 22 47 00.6
SNR=6.5
YKA Yellowknife Ar 74.98 28 P P 21 33 03.3 +6.9
0.4nm,0.6s,mb3.3,baz=287,slow=5.7,SNR=7.1

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*NEIC **11** 21:48:42.1, 20.01N×70.06W, h60km, MD3.8(RSPR), After RSPR.*
RSPR 11 21:48:42.1, 20.01N×70.06W, h60km±18km**, MD3.8**/6**,** **MD3.8**/6**, 8C, Dominican Republic region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SDDR Presa de Saban 1.54 229⇑eP Pn 21 49 06.5 -0.8
LSP Las Mesas 3.35 122⇑eP Pn 21 49 31.6 -0.5
LSP eS Sn 21 50 10.2 -0.5
LRS Lares 3.49 119⇑eP Pn 21 49 33.3 -0.6
AOPR Arecibo Observ 3.54 117⇑eP Pn 21 49 34.0 -0.6
AOPR eS Sn 21 50 14.8 -0.4
CELP Cerrillos 3.81 120⇑eP Pn 21 49 38.3 -0.1
CELP eS Sn 21 50 22.3 +0.3
SJG San Juan 4.15 116⇑eP Pn 21 49 43.0 0.0
HUMP Col San Antoni 4.39 114⇑eP Pn 21 49 46.6 +0.2
MTP Monte Pirata 4.67 113⇑eP Pn 21 49 50.2 +0.1

IGQ 11 22:16:37.0, 0.40N×79.82W, h12km±3km**, Mb4.2, Ms4.0, 4C, Error ellipse: s-maj=4.7km s-min=1.3km az=65.6, Near coast of Ecuador**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JAMA Jama 0.76 210 P Pg 22 16 50.0 -1.7
JAMA S Sg 22 17 02.3 +0.6
PINO Pino 1.33 115 ⇑P Pn 22 17 02.6 +1.1
TERV Terraza Guagua 1.34 115 P Pn 22 17 02.8 +1.2
YANA Yana 1.35 112 P Pn 22 17 02.8 +1.1
YANA Yana 1.35 112 S Sb 22 17 26.1 +6.5
GGP Refugio Guagua 1.35 115 ⇑P Pn 22 17 02.8 +1.1
COTA Cotacachi 1.48 93 P Pn 22 17 04.6 +1.1
COTA Cotacachi 1.48 93 S Sn 22 17 30.0 +7.1
QIL2 Quilotoa 1.55 144 P Pn 22 17 05.2 +0.7
QIL2 Quilotoa 1.55 144 S Sn 22 17 31.5 +7.0
CAMI Rancho Maria 1.70 129 P Pn 22 17 09.2 +2.7
CAMI Rancho Maria 1.70 129 S Sn 22 17 38.2 +10
CHIS Cerro-Chispas- 1.70 212 P Pn 22 17 08.4 +1.9
VC1 Cotopaxi 1 1.76 126 P Pn 22 17 10.0 +2.8
TAMB Tambo 1.81 127 P Pn 22 17 10.9 +2.9
CAYA Cayambe 1.86 100 P Pn 22 17 11.8 +3.2
CAYA Cayambe 1.86 100 S Sn 22 17 42.0 +10
ANTI Antisana 1.86 117 ⇑P Pn 22 17 12.2 +3.5

PISA	Pisayambo	2.04	135	P	Pn	22 17 14.8	+3.6
IGUA	Igualata	2.22	148	P	Pn	22 17 18.4	+4.8
CONE	Cono NE Rev Vo	2.23	102	P	Pn	22 17 18.5	+4.8
LAV3	Lava3-Reventad	2.24	103	⇑P	Pn	22 17 18.8	+4.8
JUI6	Juive	2.26	143	P	Pn	22 17 18.8	+4.5
RUN5	Runtun	2.28	142	P	Pn	22 17 18.8	+4.3
ULBA	Ulba	2.32	142	P	Pn	22 17 18.7	+3.7
ARRY	Arrayan	2.33	144	P	Pn	22 17 18.8	+3.6
PATA	Patacocha	2.35	144	P	Pn	22 17 18.9	+3.5

*NIED **11** 23:13:00, 4540N×15000E, h59km, Mw3.9 Best double couple: M0 8.62000×10^14 NP1: φs 127.00000°, δ83.00000°, λ-29.00000°. NP2: φs 221.00000°, δ62.00000°, λ-172.00000°.*
*MOS **11** 23:13:58.3±1.3, 4553N×15000E, h54km, mb4.1/7, Error ellipse: s-maj=13.7km s-min=11.0km az=157.1*
*SKHL **11** 23:13:59.5±3.4, 4560N×14980E, h55km±24km, mb5.5/2*
*JMA **11** 23:13:59.2±0.8, 4538N×15000E, h30km, M4.5*
*ISCJB **11** 23:14:00.4±0.8, 45.14N±009×14994E±009, h88km±8km, mb3.7/13, Error ellipse: s-maj=16.0km s-min=7.4km az=150.6*
*IDC **11** 23:14:00.1±1.6, 4555N×14988E, h50km±7km, mb3.4/9, mb1 3.7/10, mb1mx3.6/18, mbtmp3.4/10, MS2.6/3, Ms1 2.6/3, ms1mx2.4/21, Error ellipse: s-maj=53.7km s-min=18.4km az=174.0*
*NEIC **11** 23:14:03.4±1.1, 4544N×14982E, h87km±9km, mb4.2/4, Error ellipse: s-maj=14.1km s-min=8.0km az=150.0*
ISC 11 23:14:01.8±0.8, 4508N±009×15000E±009, h89km±7km, h50km±4.4km: pP-P, n72, σ1§04/83, mb3.7/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.52	277	ePN	Pn	23 14 20.3	-7.3
KUR				eS	Sn	23 14 38.5	-8.7
KUR				pmax	pmax		
	comp=N,540nm,0.3s						
KUR				pmax	pmax		
	comp=E,360nm,0.3s						
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				smax			
	comp=N,3μm,0.4s						
KUR				smax			
	comp=E,2μm,0.4s						
KUR	Kuril'sk	1.52	277	eP	Pn	23 14 20.3	-7.3
KUR				AMB	AMB	23 14 20.6	
	comp=E,540nm,0.3s						
KUR				AMB	AMB	23 14 20.6	
	comp=E,360nm,0.3s						
KUR				AMB	AMB	23 14 20.6	
	comp=E,2μm,0.3s						
KUR				eS	Sn	23 14 38.5	-8.7
KUR				A		23 14 39.5	
	comp=E,3μm,0.4s						
KUR				A		23 14 39.5	
	comp=E,2μm,0.4s						
YUK	Yuzh-Kuril'sk	3.13	252	ePN	Pn	23 14 49.8	+0.7
YUK				eS	Sn	23 15 25.0	-0.5
YUK				pmax	pmax		
	comp=Z,350nm,0.3s						
YUK				smax			
	comp=N,580nm,0.5s						
YUK				smax			
	comp=E,610nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,1μm,1.0s						
YUK	Yuzh-Kuril'sk	3.13	252	eP	Pn	23 14 49.8	+0.7
YUK				AMB	AMB	23 14 50.1	
	comp=E,350nm,0.3s						
YUK				eS	Sn	23 15 25.0	-0.5
YUK				A		23 15 28.1	
	comp=E,580nm,0.5s						
YUK				A		23 15 28.1	
	comp=E,610nm,0.5s						
YUK				A		23 15 30.0	
	comp=E,2μm,1.0s						
YUK				A		23 15 30.0	
	comp=E,1μm,1.0s						
NEM2	Nemuro 2	3.50	242	P	Pn	23 14 52.3	-1.8
NEM2				eS	Sn	23 15 31.5	-3.0
JRA	Rausu	3.67	254	P	Pn	23 14 56.8	+0.5
JNK	Nakash	4.07	250	P	Pn	23 15 02.1	+0.4
JNK				eS	Sn	23 15 47.8	-0.4
JAK	Akkeshi	4.35	243	P	Pn	23 15 05.0	-0.6
JAK				eS	Sn	23 15 53.9	-1.1
JTKR	Abashiri--Toko	4.49	258	P	Pn	23 15 07.6	+0.1
JAR	Ashorobuto	4.82	251	P	Pn	23 15 12.7	+0.8
JAR				eS	Sn	23 16 08.5	+2.1
JMP	Maruseppu	4.86	260	P	Pn	23 15 13.2	+0.7
JOB	Onbets	4.95	246	P	Pn	23 15 14.0	+0.3
JOB				eS	Sn	23 16 10.2	+0.6
JKK2	Kamakawa 2	5.33	259	P	Pn	23 15 19.7	+0.9
ASAJ	Asahikawa	5.37	262	P	Pn	23 15 21.4	+2.0
	comp=E,2.5nm,0.3s,baz=90,slow=13,SNR=9.4						
ASAJ				S	Sn	23 16 20.5	+0.7
	baz=99,slow=30,SNR=2.1						
ASAJ				LR	LR	23 17 30.3	
	comp=E,60nm,18.6s,baz=170,slow=39						
ASAJ	Asahikawa	5.37	262	P	Pn	23 15 21.3	+1.9
ASAJ	Asahikawa	5.37	262	PN	Pn	23 15 21.4	+2.0
ASAJ				S	Sn	23 16 20.5	+0.6
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,60nm,18.7s						
YSS	Yuzh-Sakhalins	5.38	293	PN	Pn	23 15 17.6	-1.9
JCH	Churui	5.39	245	P	Pn	23 15 19.2	-0.5
JCH				eS	Sn	23 16 19.5	-0.9
JFR	Furan	5.66	253	P	Pn	23 15 24.1	+0.7
JWK2	Keihoku	5.73	275	P	Pn	23 15 26.1	+1.8
JEM	Erimo	5.84	241	P	Pn	23 15 26.9	+1.1
ERM	Erimo	5.84	241	PN	Pn	23 15 27.0	+1.2
ERM				pmax	pmax		
	comp=Z,80nm,0.4s						
ERM	Erimo	5.84	241	Pn	Pn	23 15 27.0	+1.2
	comp=Z,80nm,0.4s						
JNBK	Urakawa-nobuka	5.95	245	P	Pn	23 15 26.4	-0.9
JNB	Noboribetsu	6.99	251	P	Pn	23 15 41.3	-0.1
JNB				eS	Sn	23 16 59.5	+0.1
JKB	Kayabe	7.26	247	P	Pn	23 15 44.3	-0.8
JKB				eS	Sn	23 17 01.5	-4.4
JYM2	Yakumo 2	7.59	250	P	Pn	23 15 49.3	-0.3
JSH	Shimam	7.59	255	P	Pn	23 15 50.5	+0.8
JANG	Nango	7.81	236	P	Pn	23 15 50.1	-2.6
JANG				eS	Sx	23 17 12.1	
JTM	Tenmabayashi	7.83	240	P	Pn	23 15 52.3	-0.6
JTM				eS	Sx	23 17 15.2	
JSR	Shiriuchi	7.83	246	P	Pn	23 15 52.2	-0.8
JTH	Tanohata	7.90	232	eS	Sx	23 17 15.7	
JOSM	Okushiri--Mats	8.20	252	P	Pn	23 15 57.7	-0.3
JRG	Rokugo	8.97	234	P	Pn	23 16 07.6	-0.8
PETK	Petropavlovsk-	9.49	29	P	Pn	23 16 15.4	+0.1
	comp=Z,0.2nm,0.3s,baz=207,slow=11,SNR=4.4						
PETK				LR	LR	23 19 23.9	
	comp=Z,28nm,20.2s,baz=324,slow=36						
KSRS	Korea Array	18.22	253	P	Pn	23 18 10.1	+1.4
	comp=Z,0.3nm,0.3s,baz=70,slow=11,SNR=5.1						
KSRS				LR	LR	23 24 09.1	
	comp=Z,20nm,21.8s,baz=145,slow=33						
KSRS	Korea Array	18.22	253	eP	Pn	23 18 12.5	+3.8
INCN	Inchon	19.09	255	P	Pn	23 18 17.6	-1.4
SONM	Songino Array	29.87	291	P	P	23 20 02.3	+1.6
	comp=Z,0.6nm,1.0s,mb3.2,baz=86,slow=7.4,SNR=3.1						
SONM	Songino Array	29.87	291	P	P	23 20 02.3	+1.6
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TLY	Talaya	31.05	299	eP	P	23 20 10.5	-0.5
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
TLY	Talaya	31.05	299	eP	P	23 20 10.5	-0.5
	comp=Z,4.3nm,0.7s,mb4.3						
PMR	Palmer	38.31	42	P	P	23 21 12.6	-0.7
ZALV	Zalesovo Beam	41.84	306	PcP	PcP	23 23 38.4	+1.6
	comp=Z,0.9nm,0.6s,baz=64,slow=3.4,SNR=5.2						
INK	Inuvik	44.22	31	P	P	23 22 00.4	-1.2
MKAR	Makanchi Array	45.78	297	P	P	23 22 15.1	+0.8
	comp=Z,0.1nm,0.3s,mb3.0,baz=32,slow=4.7,SNR=5.5						
MKAR				pP	pP	23 22 25.9	-10
	comp=Z,0.3nm,0.6s,baz=63,slow=10,SNR=2.0						
MKAR				PcP	PcP	23 23 51.8	+1.5
	comp=Z,0.3nm,0.6s,baz=50,slow=2.3,SNR=2.9						
MKAR	Makanchi Array	45.78	297	P	P	23 22 15.1	+0.8
MKAR				*PP	pP	23 22 25.9	-10
MKAR						23 23 51.8	
KURK	Kurchatov	46.48	304	eP	P	23 22 19.1	-0.6
CHTO	Chiang Mai	49.60	255	eP	P	23 22 45.8	+1.7
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
CHTO	Chiang Mai	49.60	255	eP	P	23 22 45.8	+1.7
	comp=Z,1.2nm,0.4s,mb4.2						
BRVK	Borovoye	50.28	309	P	P	23 22 48.6	-0.3
YKA	Yellowknife Ar	53.55	35	P	P	23 23 12.9	-0.1
	comp=Z,0.6nm,0.5s,mb3.9,baz=298,slow=6.9,SNR=6.0						
YKA				pP	pP	23 23 27.1	-7.6
	comp=Z,0.8nm,0.7s,baz=297,slow=6.7,SNR=4.9						
YKA	Yellowknife Ar	53.55	35	P	P	23 23 12.9	-0.1
YKA				*PP	pP	23 23 27.1	-7.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	58.70	340	PcP	PcP	23 24 38.8	+0.3
	comp=Z,3.5nm,0.9s,baz=62,slow=4.5,SNR=3.3						
KBL	Kabul	60.64	291	eP	P	23 24 02.9	-0.5
KBL				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KBL	Kabul	60.64	291	eP	P	23 24 02.9	-0.6
	comp=Z,0.9nm,0.4s,mb4.2						
FCC	Fort Churchill	63.84	31	eP	P	23 24 23.4	-0.9
NVAR	Mina Array Bea	65.15	60	P	P	23 24 35.3	+2.1
	comp=Z,0.4nm,0.5s,mb3.5,baz=295,slow=6.9,SNR=3.2						
NVAR				pP	pP	23 24 49.4	-6.3
	comp=Z,0.3nm,0.5s,baz=291,slow=7.6,SNR=2.1						
OBN	Obninsk	65.44	325	eP	P	23 24 32.8	-2.0
WRAB	Tennant Creek	66.25	196	P	P	23 24 45.6	+5.3
ISA	Isabella	66.78	62	P	P	23 24 44.6	+0.8
NOA	NORSAR Array B	69.08	340	P	P	23 24 57.5	-0.2
	comp=Z,0.3nm,0.6s,mb3.3,baz=30,slow=6.0,SNR=3.1						
MBWA	Marble Bar	71.46	210	eP	P	23 25 17.2	+4.6
	comp=Z,2.6nm,0.9s,mb4.1						
AKASG	Malin Array Be	71.69	325	P	P	23 25 13.1	-0.7
	comp=Z,0.6nm,0.4s,mb3.8,baz=37,slow=5.4,SNR=3.4						
AKASG	Malin Array Be	71.69	325	P	P	23 25 13.1	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BUR08	Bucovina Ar. S	75.73	325	eP	P	23 25 37.0	-0.4
PSZ	Piszkesteto	77.58	328	P	P	23 25 47.9	+0.1
BRTR	Keskin Array B	78.08	315	P	P	23 25 51.2	+0.4
	comp=Z,0.7nm,0.8s,mb3.5,baz=46,slow=8.3,SNR=3.3						
BRTR	Keskin Array B	78.08	315	P	P	23 25 51.2	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	78.97	332	P	P	23 25 55.0	-0.4
	comp=Z,0.3nm,0.4s,mb3.4,baz=53,slow=6.9,SNR=4.1						
TXAR	Lajitas Array	80.22	58	P	P	23 26 04.0	+1.4
	comp=Z,0.9nm,0.7s,mb3.7,baz=301,slow=4.0,SNR=9.2						
TXAR				pP	pP	23 26 19.0	-6.8
	comp=Z,0.5nm,0.7s,baz=295,slow=3.6,SNR=4.2						
TXAR	Lajitas Array	80.22	58	P	P	23 26 04.0	+1.4
TXAR				*PP	pP	23 26 19.0	-6.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*CSEM **11** 23:14:25.7±1.0, 3794N×26.10W, h8km±7km, ML2.4, Error ellipse: s-maj=7.8km s-min=3.5km az=38.0, After PDA*
PDA 11 23:14:25.7±1.0, 3794N×2610W, h8km±7km, MD3.5, ML2.4, Error ellipse: s-maj=7.8km s-min=3.5km az=38.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDA	Ponta Delgada	0.39	120	eP	Pg	23 14 32.6	-0.8
PDA				eS	Sg	23 14 37.9	-0.7
CMLA	Cha da Macela	0.49	111	eP	Pg	23 14 33.6	-1.5
CMLA				eS	Sg	23 14 40.1	-1.4
CMLA				A		23 14 41.7	
	124nm,0.2s						
CMLA	Cha da Macela	0.49	111	eP	Pg	23 14 33.6	-1.5
CMLA				eS	Sg	23 14 40.1	-1.4
PSCM	Serra do Cume	1.10	314	eP	Pg	23 14 42.3	-4.6
PSCM				eS	Sg	23 14 55.5	-5.7
PSCM				A		23 14 56.6	
	33nm,0.2s						
PSCM	Serra do Cume	1.10	314	eP	Pg	23 14 42.3	-4.6
PSCM				eS	Sg	23 14 55.5	-5.7
PSMN	Pico do Norte,	1.25	139	eP	Pn	23 14 44.6	-4.8
PSMN				eS	Sb	23 14 58.5	-7.1
PMAN	Manadas	1.71	294	eP	Pn	23 14 51.1	-4.7
PMAN				eS	Sn	23 15 09.8	-8.1
PMAN				A		23 15 12.3	
	33nm,0.2s						
PMAN	Manadas	1.71	294	eP	Pn	23 14 51.1	-4.7
PMAN				eS	Sn	23 15 09.8	-8.1
ROSA	Rosais	1.86	295	eP	Pn	23 14 53.0	-4.8
ROSA				eS	Sn	23 15 13.7	-7.8
PICO	Pico	1.92	288	eP	Pn	23 14 54.5	-4.1
PICO				eS	Sn	23 15 15.3	-7.6
HOR	Horta	2.08	287	eP	Pn	23 14 56.0	-4.9
HOR				eS	Sn	23 15 19.4	-7.5
CALA	Caldeira	2.15	288	eP	Pn	23 14 57.4	-4.4
CALA				eS	Sn	23 15 20.8	-7.8

*ISCJB **12** 00:28:39.9±0.5, 4298N±003×41.15E±005, h10km, Error ellipse: s-maj=5.1km s-min=3.2km az=26.8*
*MOS **12** 00:28:41.2±1.7, 43.11N×41.13E, h13km, mb4.0/1, Error ellipse: s-maj=14.2km s-min=11.1km az=53.2*
*DDA **12** 00:28:41.4, 4264N×4080E, h7km±3km, Md3.3*
*CSEM **12** 00:28:41.8±0.7, 4275N×4093E, h5km, MD3.3, Error ellipse: s-maj=15.2km s-min=7.4km az=13.0*
*ISK **12** 00:28:43.3, 4266N×4093E, h5km, ML2.8*
ISC 12 00:28:39.7±0.8, 4296N±003×4116E±005, h1km±6km, n22, σ1§13/35, 1C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	Dombai	0.47	46	⇓iPG	Pg	00 28 48.7	-0.1
DOMR				i S	Sg	00 28 55.0	+0.1
SOC	Sochi	1.22	301	ePG	Pg	00 29 03.4	+0.2
SOC				e		00 29 20.0	
SOC				pmax	pmax		
	comp=Z,34nm,0.6s						
SOC				smax			
	comp=N,214nm,0.6s						
SHAR	Shatzhatmas	1.35	54	ePG	Pg	00 29 04.7	-0.9
SHAR				eS	Sg	00 29 22.8	-0.2
KIV	Kislovodsk	1.49	48	d iPG	Pg	00 29 06.8	-1.5
KIV				i S	Sb	00 29 26.1	-1.5
KIV				pmax	pmax		
	comp=Z,41nm,1.1s						
KIV				smax			
	comp=Z,68nm,1.5s						
BCA	Borcka	1.55	167	ePN	Pn	00 29 08.9	+0.4
BCA				eSN	Sn	00 29 27.4	-1.9
BEYR	Belyy Ugol+	1.60	48	⇑ePG	Pg	00 29 09.3	-1.0
BEYR				eS	Sn	00 29 30.1	-0.3
DBOC	Borcka	1.66	167	i P	Pn	00 29 09.2	-0.7
DBOC				i S	Sn	00 29 31.2	-0.6
ONI	Oni	1.73	102	P	Pn	00 29 12.5	+1.6
ONI				S	Sg	00 29 37.0	+1.8
PZAR	Pazar-Rize	1.79	186	ePN	Pn	00 29 11.7	-0.1
PZAR				eSN	Sn	00 29 31.8	-3.4
ARTV	Artvin	1.87	162	i P	Pn	00 29 12.6	-0.2
ARTV				i S	Sn	00 29 36.6	-0.4
DAGI	Agillar	1.96	163	i P	Pn	00 29 14.2	+0.1
DAGI				i S	Sn	00 29 38.5	-0.9
DDEM	Demirkent	2.12	168	i P	Pn	00 29 16.8	+0.6
DDEM				i S	Sn	00 29 44.2	+1.1
KTUT	Trabzon	2.23	208	ePN	Pn	00 29 17.1	-0.7
GOR	Gori	2.39	113	S	Sg	00 29 56.1	-0.3
ESPY	Espiye-Giresun	2.73	222	ePN	Pn	00 29 23.6	-1.1
KARS	Kars	2.76	148	ePN	Pn	00 29 27.2	+2.2
GUMT	Gumushane	2.80	207	ePN	Pn	00 29 24.9	-0.8
MTA	Mtatsminda	2.98	114	P	Pn	00 29 29.6	+1.5
MTA				S	Sn	00 30 08.7	+4.4
ANN	Anapa	3.26	306	ePN	Pn	00 29 34.1	+2.1
ANN				eS	Sn	00 30 14.5	+3.1
ANN				pmax	pmax		
	comp=Z,87nm,1.0s						
DGRG	David-gareji	3.47	114	ePN	Pb	00 29 43.7	+1.7
DGRG	David-gareji	3.47	114	P	Pb	00 29 43.7	+1.7
GNI	Garni	3.89	135	i PN	Pn	00 29 41.0	+0.4

NNC 12 01:12:03.0±7.0, 3743N×7073E, h0km, mb3.9, mpv3.6, 2C-4D, Error ellipse: s-maj=54.8km s-min=52.2km az=34.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.67	358	⇑Pn	Pn	01 13 31.9	+3.5
	3.8nm,0.2s,baz=180,slow=13						
KK31				⇓Sn	Sn	01 14 41.1	+6.8
	10nm,0.7s,baz=185,slow=23						
TKM2	Tokmak 2	6.63	33	⇓Pn	Pn	01 13 40.1	-1.6
	1.3nm,0.5s						
TKM2				⇓Sn	Sn	01 14 57.5	-0.4
	1.0nm,0.8s						
AB07	Akbulak array	14.15	330	⇓Pn	Pn	01 15 23.8	-0.7
	0.6nm,0.4s						
AB07				⇑Sn	Sn	01 18 03.9	+1.7
	0.9nm,0.8s						

KRSC 12 01:12:48.4±0.2, 5475N×16287E, h22km±22km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.69	254	i P	Pb	01 13 02.3	+0.6
MKZ				i S	Sb	01 13 11.5	+0.7
KBTR	Krutoberegovo	1.46	359	eP	Pn	01 13 13.2	-0.2
KBTR				i S	Sn	01 13 31.0	-0.9
TUMR	Tumrok	1.66	290	eP	Pn	01 13 17.5	+1.4
TUMR				i S	Sn	01 13 38.2	+1.5
BZGR	Bezymyannyi-Gr	1.72	315	eP	Pn	01 13 18.4	+1.4
BZGR				i S	Sn	01 13 40.1	+1.8
ZLN	Zelenaya	1.73	318	eP	Pn	01 13 18.8	+1.7
ZLN				i S	Sn	01 13 41.7	+3.2
KMNR	Kamenistaya	1.81	305	i P	Pn	01 13 19.5	+1.3
KMNR				i S	Sn	01 13 42.4	+1.9
KIRR	Kirishev	1.88	311	eP	Pn	01 13 21.2	+2.0
KIRR				i S	Sn	01 13 44.8	+2.6
KPT	Kopyto	1.94	310	eP	Pn	01 13 21.0	+1.0
KPT				eS	Sn	01 13 45.2	+1.5
KRSR	Krestovskiy	1.97	319	eP	Pn	01 13 20.8	+0.4
KRSR				i S	Sn	01 13 44.5	+0.1
KLY	Klyuchi	2.01	322	eP	Pn	01 13 21.7	+0.7
KLY				eS	Sn	01 13 46.6	+1.2
KII	Karymskiy	2.12	252	eP	Pn	01 13 24.0	+1.5
KII				i S	Sn	01 13 49.7	+1.5
KOZ	Kozyrevsk	2.15	309	eP	Pn	01 13 23.7	+0.8
KOZ				i S	Sn	01 13 49.9	+1.0
SPN	Mys Shipunski	2.36	227	eP	Pn	01 13 26.4	+0.6
SPN				i S	Sn	01 13 54.0	0.0
SRDR	Sredinnyy	2.38	313	eP	Pn	01 13 27.8	+1.7
SRDR				i S	Sn	01 13 56.9	+2.3
NLC	Nalytchevo	2.62	234	eP	Pn	01 13 30.0	+0.7
NLC				i S	Sn	01 14 01.3	+1.0
AVH	Avacha	2.86	240	eP	Pn	01 13 35.1	+2.5
AVH				i S	Sn	01 14 08.8	+2.6
PET	Petropavlovsk	3.04	237	eP	Pn	01 13 37.0	+2.0
PET				i S	Sn	01 14 12.4	+1.7
GNL	Ganaly	3.08	252	eP	Pn	01 13 38.3	+2.7
GNL				i S	Sn	01 14 16.0	+4.3
RUS	Russkaya	3.48	230	eP	Pn	01 13 42.7	+1.5
RUS				i S	Sn	01 14 22.4	+0.7

*ISCJB **12** 01:38:00.7±1.9, 5508N±009×16001W±008, h6km±10km, mb4.5/2, Error ellipse: s-maj=16.0km s-min=6.4km az=159.6*
*BJI **12** 01:38:00.4, 5520N×16020W, h8km, mB4.6, mb4.6, Ms3.7, Msz3.8*
*NEIC **12** 01:38:03.5, 55.19N×160.19W, h8km, ML3.8(AEIC), After AEIC.*
ISC 12 01:38:02.8±2.0, 5513N±010×16007W±009, h8km±10km, n13, σ0§66/17, mb4.5/2, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	Sand Point	0.32	313	P	Pg	01 38 09.1	0.0
SDPT				S	Sg	01 38 13.3	0.0
CHGN	Chignik	1.50	38	P	Pn	01 38 29.9	-0.2
CHGN				S	Sn	01 38 49.3	-0.5
FALS	False Pass	1.95	263	P	Pn	01 38 36.0	-0.1
FALS				S	Sn	01 39 00.9	+0.1
UNV	Unalaska Valle	3.97	254	P	Pn	01 39 03.5	-0.4
OHAK	Old Harbor	4.33	58	P	Pn	01 39 08.6	-0.3
KDAK	Kodiak Island	4.93	54	P	Pn	01 39 16.4	-0.6
SPIA	Saint Paul Isl	6.05	294	P	Pn	01 39 31.9	-0.5
SVW2	Sparrevohn	6.44	20	P	Pn	01 39 38.5	+0.8
SEW	Seward	7.57	44	P	Pn	01 39 54.5	+1.2
TT01	Tatalina	8.07	13	P	Pn	01 39 60.0	-0.2
CN2	Changchun	47.48	289	eP	P	01 46 39.3	+1.4
XAN	Xi'an	63.40	292	P	P	01 48 31.4	-1.2
XAN				PP	PP	01 50 51.0	-0.6
XAN				S	S	01 57 05.3	-0.1
XAN				SS	SS	02 01 12.3	+0.9
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.2						
GYA	Guiyang	70.52	288	eP	P	01 49 18.6	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						

*NIED **12** 01:44:00, 2250N×12190E, h5km, Mw3.6 Best double couple: M0 3.05000×10^14 NP1: φs 229.00000°, δ71.00000°, λ-118.00000°. NP2: φs 107.00000°, δ33.00000°, λ-36.00000°.*
*ISCJB **12** 01:44:19.5±0.4, 2239N±002×12186E±002, h19km, Error ellipse: s-maj=3.4km s-min=2.2km az=145.2*
*TAP **12** 01:44:21.1, 2241N×12175E, h19km, ML3.8, D*
*JMA **12** 01:44:22.6±0.3, 2246N×12194E, h54km, M3.7*
ISC 12 01:44:18.7±0.5, 2244N±002×12185E±002, h2km±3km, n52, σ1§18/98, 2C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.49	215	⇓iP	Pg	01 44 28.6	+0.5
	baz=206						
LAY				eS	Sg	01 44 34.0	-0.4
	baz=206						
TTN	Taitung	0.72	296	eP	Pg	01 44 33.5	+1.0
	baz=312						
TTN				eS	Sg	01 44 43.1	+1.2
	baz=312						
CHKT	Chengkung	0.79	326	⇓iP	Pg	01 44 34.9	+1.0
	baz=345						
CHKT				eS	Sg	01 44 45.0	+0.7
	baz=345						
TWG	Pinlang	0.81	298	P	Pg	01 44 35.0	+0.7
	baz=313						
TWG				eS	Sg	01 44 45.3	+0.5
	baz=313						
ECL	Taimali	0.84	281	⇑iP	Pg	01 44 35.4	+0.5
	baz=284						
ECL				eS	Sg	01 44 46.1	+0.3
	baz=284						
TAW	Tawu	0.89	265	eP	Pg	01 44 35.4	-0.3
	baz=266						
TAW				eS	Sg	01 44 46.5	-0.8
	baz=266						
EAST	Anshuo	0.93	267	eP	Pg	01 44 36.3	-0.3
	baz=268						
EAST				eS	Sg	01 44 47.8	-0.8
	baz=268						
TSEB	Hengchuen, Pin	1.03	239	eP	Pg	01 44 38.7	+0.2
	baz=246						
TSEB				eS	Sg	01 44 50.8	-1.2
	baz=246						
TWF1	Yuli	1.04	331	⇓iP	Pg	01 44 39.0	+0.3
	baz=336						
TWF1				eS	Sg	01 44 52.4	+0.3
	baz=336						
ELDTW	Lidau	1.07	314	P	Pg	01 44 39.1	-0.1
	baz=327						
ELDTW				eS	Sg	01 44 52.3	-0.8
	baz=327						
TWK1	Hengchun	1.09	243	P	Pg	01 44 38.6	-1.0
	baz=241						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TWK1				S	Sg	01 44 51.3	-2.5
	baz=241						
HEN	Hengchun	1.12	247	P	Pg	01 44 39.4	-0.8
	baz=240						
HEN				eS	Sg	01 44 52.3	-2.4
	baz=240						
SCZT	Fangliau	1.14	267	P	Pg	01 44 39.8	-0.8
	baz=267						
SCZT				eS	Sg	01 44 54.1	-1.3
	baz=267						
EHY	Hungye	1.17	335	⇓iP	Pg	01 44 40.9	-0.2
	baz=349						
EHY				eS	Sg	01 44 56.6	+0.4
	baz=349						
SSD	Sandimen	1.17	285	eP	Pg	01 44 40.6	-0.5
	baz=287						
STYT	Tauyuan	1.24	306	P	Pg	01 44 42.2	-0.3
	baz=308						
STYT				eS	Sg	01 44 57.2	-1.4
	baz=308						
TWM1	Shoushan	1.37	286	eP	Pn	01 44 46.8	+1.9
	baz=288						
TWM1				eS	Sg	01 45 01.4	-1.4
	baz=288						
TWP	Hsiaoliuchiu	1.38	266	eP	Pn	01 44 46.7	+1.7
	baz=266						
WTP	Ta-pu	1.39	305	eP	Pn	01 44 45.6	+0.4
	baz=317						
WTP				eS	Sb	01 45 03.1	-0.6
	baz=317						
ESL	Shilin	1.42	344	P	Pn	01 44 44.6	-1.0
	baz=359						
ESL				eS	Sb	01 45 02.4	-2.0
	baz=359						
CHN1	Nanshi	1.43	301	⇑iP	Pn	01 44 46.5	+0.8
	baz=314						
CHN1				eS	Sb	01 45 04.7	0.0
	baz=314						
ALS	Alishan	1.43	318	eP	Pn	01 44 46.1	+0.3
	baz=329						
ALS				eS	Sb	01 45 04.9	0.0
	baz=329						
CHN4	Tsaushan	1.47	308	P	Pn	01 44 47.2	+1.0
	baz=320						
CHN4				eS	Sb	01 45 05.3	-0.6
	baz=320						
TWK	Hsinying	1.50	303	eP	Pn	01 44 47.8	+1.1
	baz=318						
TWK				eS	Sn	01 45 05.7	-1.1
	baz=318						
CHN3	Shinhua	1.51	295	eP	Pn	01 44 49.0	+2.2
	baz=296						
CHN3				eS	Sn	01 45 10.8	+3.8
	baz=296						
CHN5	Tsauling	1.58	317	P	Pn	01 44 48.9	+1.2
	baz=319						
CHN5				eS	Sn	01 45 09.6	+0.9
	baz=319						
TWD	Chiawan	1.65	352	eP	Pn	01 44 48.0	-0.7
	baz=5.0						
TWD				eS	Sn	01 45 08.7	-1.8
	baz=5.0						
SMLT	Sun Moon Lake	1.68	329	eP	Pn	01 44 50.0	+0.8
	baz=340						
SMLT				eS	Sn	01 45 11.9	+0.7
	baz=340						
CHY	Chiayi	1.68	309	eP	Pn	01 44 51.8	+2.7
	baz=311						
CHY				eS	Sn	01 45 12.6	+1.3
	baz=311						
WGK	Gukeng	1.71	316	eS	Sn	01 45 14.5	+2.4
	baz=319						
TYC	Yuchr	1.72	328	P	Pn	01 44 51.2	+1.6
	baz=341						
TYC				eS	Sn	01 45 13.0	+0.8
	baz=341						
WHF	Hehuan Shan	1.78	343	P	Pn	01 44 50.5	0.0
	baz=345						
WHF				eS	Sn	01 45 11.8	-1.9
	baz=345						
WNT	Mingjian	1.79	323	eP	Pn	01 44 52.6	+1.9
	baz=325						
TWT	Tachien	1.91	341	eP	Pn	01 44 53.3	+1.1
	baz=354						
TWT				eS	Sn	01 45 14.9	-2.0
	baz=354						
ENA	Nanau	1.98	357	eP	Pn	01 44 53.0	-0.2
	baz=9.0						
ENA				eS	Sn	01 45 16.8	-1.9
	baz=9.0						
TCU	Taichung	2.01	328	P	Pn	01 44 56.9	+3.1
	baz=330						
TCU				eS	Sn	01 45 22.3	+2.8
	baz=330						
NNS	Nan Shan	2.04	348	eP	Pn	01 44 55.0	+1.0
	baz=350						
NNS				eS	Sn	01 45 19.7	-0.4
	baz=350						
TWQ1	Liyutan	2.14	333	P	Pn	01 44 58.0	+2.5
	baz=334						
TWC	Suao	2.16	360	eP	Pn	01 44 56.3	+0.6
	baz=11						
TWC				eS	Sn	01 45 22.2	-0.9
	baz=11						
ENTT	Nioudou	2.20	353	eP	Pn	01 44 56.8	+0.4
	baz=6.0						
ENTT				eS	Sn	01 45 23.4	-0.8
	baz=6.0						
NSK	Sanguang	2.27	349	P	Pn	01 44 58.0	+0.7
	baz=3.0						
NSK				eS	Sn	01 45 24.7	-1.2
	baz=3.0						
TWE	Neicheng	2.27	356	eP	Pn	01 44 57.9	+0.5
	baz=7.0						
TWE				eS	Sn	01 45 26.3	+0.4
	baz=7.0						
YOJ	Yonaguni jima	2.27	28	P	Pn	01 44 57.8	+0.5
YOJ				eS	Sn	01 45 24.7	-1.3
NSTT	Nanjuang	2.31	340	eP	Pn	01 44 58.1	+0.2
	baz=351						
NSTT				eS	Sn	01 45 27.4	+0.5
	baz=351						
PNG	Penghu	2.39	298	eP	Pn	01 44 59.2	+0.3
	baz=297						
PNG				eS	Sn	01 45 26.0	-2.9
	baz=297						
HATJ	Hateruma jima	2.41	48	P	Pn	01 44 59.5	+0.3
HATJ				eS	Sn	01 45 27.0	-2.3
IRIF	Iriomote-Funau	2.56	42	P	Pn	01 45 01.9	+0.7
IRIF				eS	Sn	01 45 31.2	-1.7
NWF	Wu-fen Shan	2.62	359	eP	Pn	01 45 04.1	+2.0
NWF				eS	Sn	01 45 34.3	-0.1
JKRS	Kuro-shima	2.67	48	P	Pn	01 45 03.6	+0.8
JKRS				eS	Sn	01 45 33.6	-2.1
JIJ	Ishigaki jima	2.84	47	P	Pn	01 45 05.7	+0.5
JIJ				eS	Sn	01 45 37.0	-3.0
JTJ	Tarama	3.41	50	P	Pn	01 45 14.0	+1.0
JTJ				eS	Sn	01 45 52.1	-1.9
JMJ	Miyako jima 2	3.94	53	P	Pn	01 45 20.5	+0.2

ISC 12 01:51:02.7±2.5**,231N**±01×**941E**±02**,h150km,n14,**
σ0s50/16**,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.65	354	eP	Pn	01 51 35.0	+1.2
IMP				iS	Sn	01 51 57.0	-0.7
SHL	Shillong	3.16	320	iPN	Pn	01 51 51.0	-1.1
SHL				eSN	Sn	01 52 31.0	+0.7
ODAN	Odare	7.14	303	eP	Pn	01 52 44.8	+0.2
	101nm,0.3s						
TAPN	Taplejung	7.16	307	eP	Pn	01 52 44.8	0.0
	86nm,0.3s						
RAMN	Ramite	7.80	301	eP	Pn	01 52 53.4	0.0
	120nm,0.3s						
JIRN	Jiri	8.46	304	eP	Pn	01 53 02.3	+0.1
	254nm,0.3s						
GUN	Gumba	8.83	304	eP	Pn	01 53 07.2	+0.1
	41nm,0.2s						
PKI	Pulchoki	9.03	301	eP	Pn	01 53 09.8	0.0
	67nm,0.3s						
PKIN	Phulchoki	9.04	301	eP	Pn	01 53 09.7	-0.2
	95nm,0.3s						
KKN	Kakani	9.23	302	eP	Pn	01 53 12.8	+0.3
	70nm,0.2s						
DMN	Daman	9.28	300	eP	Pn	01 53 13.1	-0.1
	34nm,0.2s						
GKN	Gorkha	9.83	301	eP	Pn	01 53 19.9	-0.6
	195nm,0.3s						
KOLN	Koldanda	10.56	298	eP	Pn	01 53 30.1	0.0
	90nm,0.2s						
DANN	Dangsing	10.68	301	eP	Pn	01 53 31.6	0.0
	34nm,0.2s						

CSEM 12 02:31:50.5±0.3,3458N×2253E,h10km,MD3.6,Error ellipse: s-maj=9.0km s-min=3.6km az=81.0
ISCJB 12 02:31:54.4±1.3,3477N±007×230E±01,h10km,Error ellipse: s-maj=15.1km s-min=9.6km az=13.6
ATH 12 02:31:58.2,3508N×23.18E,h21km±1km,MD3.6/6
NEIC 12 02:31:58.3,3509N×23.18E,h21km,MD3.6(ATH),After ATH.
HLW 12 02:32:02.0,3481N×2377E,h33km,Mb3.1
ISC 12 02:31:55.5±1.3**,3483N**±007×**230E**±01**,h10km,n12,**
σ1s33/15**,5D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.87	89	ePN	Pn	02 32 13.5	-0.2
VAM	Vamos	1.12	59	ePN	Pn	02 32 15.5	-1.6
KYTH	Kithira	1.45	0	ePN	Pn	02 32 21.0	-0.7
NPS	Neapolis	2.16	78	ePN	Pn	02 32 33.0	+1.5
NPS				eSN	Sn	02 32 57.8	-0.5
NPS	Neapolis	2.16	78	ePn	Pn	02 32 33.1	+1.6
NPS				eSn	Sn	02 32 57.8	-0.5
KARP	Karpathos	3.46	77	ePN	Pn	02 32 50.9	+1.6
SLUM		3.80	151	⇓P	Pn	02 32 54.8	+0.8
SLUM				S	Sn	02 33 32.5	-6.3
ARG	Arkhangelos	4.38	70	ePN	Pn	02 33 04.1	+2.1
HMAT	Matruh	5.06	136	⇓P	Pn	02 33 10.0	-1.3
SWA2		5.94	159	⇓P	Pn	02 33 24.6	+1.1
AWBH		8.20	141	⇓P	Pn	02 33 53.8	-0.7
AMAG	Maghara	9.53	113	⇓P	Pn	02 34 10.1	-2.7

TEH 12 02:51:45.5,3630N×5349E,h3km,ML3.5
CSEM 12 02:52:44.2±0.1,3623N×5356E,h2km,ML3.6,Error ellipse: s-maj=2.4km s-min=1.2km az=148.0
ISCJB 12 02:52:45.5±0.4,3623N±004×5357E±003,h10km,Error ellipse: s-maj=6.1km s-min=3.5km az=159.9
THR 12 02:52:45.3±0.8,3619N×5368E,h14km±8km,ML3.6
ISC 12 02:52:46.5±0.4**,3623N**±004×**5358E**±003**,h10km,n51,**
σ1s22/58**,1D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKIA	Kiasar	0.09	104	ePg	Pg	02 52 46.9	-2.0
IKIA	Kiasar	0.09	104	ePg	Pg	02 52 46.9	-2.0
IKIA				e		02 52 49.2	
IGLO	Ghaloghah	0.34	36	ePg	Pg	02 52 51.8	-1.5
IGLO				e		02 53 02.3	
ISHM	Shahmirzad	0.48	209	eSg	Sg	02 53 02.0	-0.2
ISHM	Shahmirzad	0.48	209	ePg	Pg	02 52 54.2	-1.7
ISHM				eSg	Sg	02 53 02.0	-0.2
ISHM				e		02 53 03.0	
IALA	Alasht	0.64	257	ePg	Pg	02 52 56.3	-2.6
IALA	Alasht	0.64	257	ePg	Pg	02 52 56.3	-2.6
IALA				e		02 53 08.9	
IANJ	Anjilo	0.81	160	ePg	Pg	02 53 00.2	-1.9
IANJ	Anjilo	0.81	160	ePg	Pg	02 53 00.2	-1.9
IANJ				e		02 53 17.2	
IFIR	Firoozkooh	0.89	229	ePg	Pg	02 53 01.8	-1.8
IFIR				eSg	Sg	02 53 14.4	-0.8
IFIR	Firoozkooh	0.89	229	ePg	Pg	02 53 01.8	-1.8
IFIR				eSg	Sg	02 53 14.4	-0.8
IFIR				e		02 53 16.0	
IPRN	Peran	1.00	271	ePg	Pg	02 53 03.9	-1.9
IPRN				e		02 53 25.3	
IDMV	Damavand	1.41	243	⇓ePn	Pn	02 53 11.3	-1.0
IDMV	Damavand	1.41	243	ePn	Pn	02 53 11.5	-0.8
IDMV				e		02 53 13.3	
IVRN	Varamin	1.95	231	ePn	Pn	02 53 19.6	0.0
IVRN	Varamin	1.95	231	ePn	Pn	02 53 19.4	-0.2
IVRN				e		02 53 51.3	
CHTH	Charan	2.01	262	ePn	Pn	02 53 21.8	+1.3
CHTH				eSg	Sg	02 53 51.1	-0.1
ISFB	Sefidab	2.17	211	ePn	Pn	02 53 23.0	+0.3
ISFB	Sefidab	2.17	211	ePn	Pn	02 53 22.9	+0.2
ISFB				e		02 53 59.4	
THKV	Tehran--Karaj	2.21	263	ePn	Pn	02 53 25.2	+2.0
THKV				eSg	Sg	02 53 57.1	-0.4
THKV				AML	AML	02 54 00.9	
	comp=E,486nm,0.5s						
THKV	Tehran--Karaj	2.21	263	ePn	Pn	02 53 25.2	+2.0
	SNR=52						
THKV				eSg	Sg	02 53 57.1	-0.4
	SNR=90						
IMHD	Mahdasht	2.42	258	ePn	Pn	02 53 28.0	+1.8
IMHD	Mahdasht	2.42	258	ePn	Pn	02 53 28.0	+1.8
IMHD				e		02 53 31.3	
MRVT	Maraveh tapeh	2.47	54	ePn	Pn	02 53 26.4	-0.4
GHVR	GHOM	2.56	228	ePn	Pn	02 53 29.6	+1.6
GHVR				AML	AML	02 54 16.9	
	comp=N,224nm,0.6s						
GHVR				AML	AML	02 54 19.2	
	comp=E,251nm,0.5s						
IRAZ	Razeghan	3.08	256	ePn	Pn	02 53 36.3	+1.1
IRAZ				e		02 54 28.7	
IKLH	Kolahrood	3.34	210	ePn	Pn	02 53 39.0	+0.3
IKLH	Kolahrood	3.34	210	ePn	Pn	02 53 39.0	+0.3
IKLH				e		02 54 48.6	
ASAO	Ashtian	3.35	241	ePn	Pn	02 53 39.9	+1.0
NASN	Na'in	3.48	191	ePn	Pn	02 53 41.1	+0.5
NASN				eSg	Sg	02 54 33.2	-5.1
IZEF	Zefreh	3.48	198	ePn	Pn	02 53 41.3	+0.6
IZEF	Zefreh	3.48	198	ePn	Pn	02 53 41.3	+0.6
IZEF				e		02 54 44.9	
ISHV	Shirvan	3.55	67	ePn	Pn	02 53 42.2	+0.5
ISHV	Shirvan	3.55	67	ePn	Pn	02 53 42.6	+0.9
ISHV				e		02 54 54.2	
IKRD	Kardeh	4.01	81	ePn	Pg	02 54 00.3	-3.1
IKRD				e		02 55 44.3	
ICHK	Chekchek	4.03	170	ePn	Pn	02 53 48.2	-0.1
ICHK	Chekchek	4.03	170	ePn	Pn	02 53 48.2	-0.1
ICHK				e		02 55 01.2	
IPIR	Pirpir	4.17	213	ePn	Pn	02 53 53.8	+3.6
IPIR	Pirpir	4.17	213	ePn	Pn	02 53 53.8	+3.6
IPIR				e		02 55 09.5	
IAKL	Akhelmad	4.19	83	ePn	Pn	02 53 50.7	+0.2
IAKL	Akhelmad	4.19	83	ePn	Pn	02 53 50.7	+0.2
IAKL				e		02 54 08.2	
ISAD	Sadrabad	4.30	179	ePn	Pn	02 53 52.9	+0.9
ISAD	Sadrabad	4.30	179	ePn	Pn	02 53 52.9	+0.9
IPAY	Payeh	4.38	86	ePn	Pn	02 53 54.2	+1.1
IPAY	Payeh	4.38	86	ePn	Pn	02 53 53.9	+0.8
IPAY				e		02 53 59.8	
IMEH	Mehriz	4.90	170	ePn	Pn	02 54 01.3	+1.1
IMEH	Mehriz	4.90	170	ePn	Pn	02 54 01.6	+1.4
IMEH				e		02 55 34.6	
IBAF	Bafgh	4.91	160	ePn	Pn	02 54 01.1	+0.7
IBAF	Bafgh	4.91	160	ePn	Pn	02 54 01.1	+0.7
IMYA	Miami	5.27	87	ePn	Pn	02 54 05.5	+0.2
IMYA	Miami	5.27	87	ePn	Pn	02 54 05.8	+0.5
IMYA				e		02 55 53.5	

CSEM 12 03:16:49.2±0.1,3976N×4212E,h20km,MD2.9,Error ellipse: s-maj=4.0km s-min=2.2km az=24.0
DDA 12 03:16:50.9,3987N×4219E,h7km±3km,Md2.9
ISCJB 12 03:16:51.5±0.7,3985N±006×4219E±005,h21km±15km, Error ellipse: s-maj=9.7km s-min=5.7km az=15.9
ISC 12 03:16:51.4±0.6**,3985N**±006×**4218E**±005**,h21km**±12km**,n8,**
σ0s97/13**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	Horasan	0.29	313	iP	Pb	03 16 56.7	-1.3
HOMI				iS	Sb	03 17 02.0	-0.4
ERZM	Erzurum	0.63	275	iP	Pb	03 17 03.2	-0.5
ERZM				iS	Sb	03 17 13.3	+1.2
EZM	Erzurum	0.63	275	ePG	Pb	03 17 03.2	-0.5
EZM				eSG	Sb	03 17 13.7	+1.5
TUTA	Tutak	0.66	132	iP	Pb	03 17 03.3	-0.9
TUTA				iS	Sb	03 17 13.9	+1.0
AGRB	Hanur-Agry	0.68	113	ePG	Pb	03 17 03.5	-1.0
KARS	Kars	1.03	42	ePN	Pn	03 17 10.5	-0.1
DIGO	Kars	1.07	58	iP	Pn	03 17 11.2	+0.1
DIGO				iS	Sb	03 17 26.7	+1.8
DDEM	Demirkent	1.09	343	iP	Pn	03 17 10.9	-0.6

MOS 12 03:21:58.6±1.1,4267N×4618E,h11km,mb3.9/1,Error ellipse: s-maj=17.3km s-min=7.6km az=17.6
ISCJB 12 03:21:59.1±0.4,4270N±003×4612E±002,h10km,Error ellipse: s-maj=4.6km s-min=2.6km az=7.2
TIF 12 03:21:59.4,4265N×4602E,h13km±3km
ISC 12 03:21:59.4±0.4**,4267N**±004×**4610E**±003**,h6km**±5km**,n18,**
σ0s88/32**,2C,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	Botlikh	0.09	93	iPG	Pg	03 22 00.2	-1.2
BTLR				pmax	pmax		
	comp=Z,212nm,0.2s						
XNZR	Khunzakh	0.46	106	ePG	Pg	03 22 10.0	+1.7
XNZR				iS	Sg	03 22 20.0	+5.7
UNCR	Uncukul	0.51	85	iPG	Pg	03 22 08.0	-1.2
UNCR				iS	Sg	03 22 16.0	+0.1
KRNR	Karanay	0.61	75	ePG	Pg	03 22 10.0	-1.2
KRNR				iS	Sg	03 22 19.3	+0.2
KRNR				pmax	pmax		
	comp=Z,29nm,0.2s						
DBC	Dubki	0.64	56	ePG	Pg	03 22 11.5	-0.2
DBC				eS	Sg	03 22 22.0	+2.0
KMKR	Kumukh	0.91	126	PG	Pg	03 22 16.0	-0.9
KMKR				eS	Sg	03 22 29.5	+0.8
KMKR				pmax	pmax		
	comp=Z,35nm,0.2s						
SNJR	Sundja	1.03	293	⇑iPG	Pg	03 22 18.9	-0.3
SNJR				eS	Sn	03 22 34.6	-0.4
DGRG	David-gareji	1.33	204	P	Pg	03 22 25.9	+1.0
DGRG				S	Sg	03 22 46.3	+4.1
LACR	Lac	1.34	277	⇑iPG	Pn	03 22 23.5	-1.1
LACR				eS	Sb	03 22 41.7	-0.6
BTKR	Batakoyurt	1.34	302	ePG	Pg	03 22 25.3	+0.1
BTKR				eS	Sg	03 22 44.1	+1.5
MTA	Mtatsminda	1.38	225	P	Pn	03 22 24.6	-0.5
MTA				S	Sg	03 22 43.5	-0.2
ARNR	Ardon	1.44	292	ePG	Pn	03 22 25.6	-0.3
ARNR				eS	Sb	03 22 45.6	+0.5
KORR	Kora	1.55	286	ePG	Pn	03 22 27.3	-0.2
KORR				eS	Sn	03 22 48.4	+0.5
ZEI	Tsey	1.63	274	ePN	Pn	03 22 28.0	-0.5
PRTR	Priterechnaya	1.72	310	ePN	Pg	03 22 31.1	-1.2
PRTR				eS	Sg	03 22 54.4	-0.1
LSNR	Lesken	1.79	291	ePN	Pn	03 22 31.1	+0.4
DIGR	Digorskoe uzhe	1.87	278	ePN	Pn	03 22 31.2	-0.7
ONI	Oni	1.96	268	P	Pn	03 22 34.4	+1.3
ONI				S	Sn	03 22 58.8	+0.8

BJI 12 03:43:54.9,508S×10099E,h30km,mB5.0,mb4.9,Ms5.2, Msz4.8
ISCJB 12 03:43:56.5±0.3,455S±004×10074E±004,h23km, mb5.0/105,MS4.6/36,Error ellipse: s-maj=6.0km s-min=4.2km az=137.1
NEIC 12 03:43:57.8±0.2,452S×10084E,mb5.1/49,Error ellipse: s-maj=9.8km s-min=5.2km az=50.0
GCMT 12 03:43:57.8±0.4,467S×10062E,h20km±1km,MW5.0/63, Moment Tensor Solution. s21,c21; s63,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04±.15; $M_{\theta\theta}$-2.59±.13; $M_{\phi\phi}$2.63±.15; $M_{r\theta}$1.40±.27; $M_{\theta\phi}$2.16±.12; $M_{\phi r}$0.62±.26; Best double couple: $M_0$3.71900×10^{16} NP1:ϕ_s335.00000°,δ66.00000°,λ-179.00000°. NP2: ϕ_s245.00000°,δ89.00000°,λ-24.00000°. Principal axes: T 3.7220, Plg16.0000°, Azm292.0000°; N -0.0040, Plg66.0000°, Azm63.0000°; P -3.7150, Plg17.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
IDC 12 03:43:57.1±0.6,466S×10060E,h20km±2km,mb4.2/16, mb1 4.3/17,mb1mx4.3/23,mbtmp4.2/17,ML4.7/1,MS4.4/19, Ms1 4.4/19,ms1mx4.3/25 Error ellipse: s-maj=19.4km s-min=11.2km az=59.0
MOS 12 03:44:00.2±1.1,446S×10108E,h33km,mb5.2/35,Error ellipse: s-maj=12.0km s-min=5.6km az=112.1
DJA 12 03:44:00,451S×10049E,h19km,Mw5.3/11
ISC 12 03:43:58.6±0.3**,455S**±004×**10075E**±004**,h24km,**
h24km±.6km**:pP-P,n271,**σ**1s18**/223**,mb5.0**/105**,MS4.6**/36**,**
16C-19D,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	2.04	64	P	Pn	03 44 30.5	-1.0
PDSI	Padang	3.63	355	P	Pn	03 44 50.4	-2.9
PPI	Padang Panjang	4.08	355	P	Pn	03 44 57.6	-2.0
KLI	Kotabumi	4.10	94	P	Pn	03 45 09.0	+9.1
RGRI	Rengat	4.46	21	P	Pn	03 45 10.2	+5.4
BLSI	Bandar Lampung	4.55	100	P	Pn	03 45 13.8	+7.8
SBJI	Serang	5.58	106	P	Pn	03 45 29.1	+9.0
	554nm,1.3s,6μm2.7nm						
PPBI	Pangkal Pinang	5.88	66	P	Px	03 45 36.6	
	137nm,1.3s,2μm0.8nm						
CBJI	Citeko	6.35	107	P	Pn	03 45 33.1	+2.4
	2μm,1.3s,5.4nm						
MYKOM	Kota Tinggi	7.02	26	P	Pn	03 45 47.8	+7.8
	65nm,1.4s,1μm0.6nm						
LEM	Lembang	7.20	109	P	Pn	03 45 43.2	+0.8
	596nm,1.5s,2.3nm						
PSI	Prapat	7.53	346	Pn	Pn	03 45 45.7	-1.3
	10nm,0.3s,baz=129,slow=15,SNR=10						
PSI				Sn	Sn	03 47 08.5	-3.2
	0.4nm,0.3s,baz=151,slow=19,SNR=1.4						
PSI				LR	LR	03 49 27.8	
	comp=Z,4μm,19.8s,baz=140,slow=44						
PSI	Prapat	7.53	346	P	Pn	03 45 45.7	-1.3
PSI						03 47 08.5	
PSI	Prapat	7.53	346	Pn	Pn	03 45 45.7	-1.3
PSI				Sn	Sn	03 47 08.4	-3.2
PSI				LR	LR	03 49 27.8	
COCO	West Island	8.52	207	P	Pn	03 46 05.1	+4.6
	141nm,0.9s,0.4nm						
IPM	Ipoh	8.98	2	P	Pn	03 46 07.5	+0.7
	176nm,1.2s,1μm0.5nm						
KULM	Kulim	9.78	359	⇑P	Pn	03 46 17.0	-0.8
KULM	Kulim	9.78	359	P	Pn	03 46 17.9	+0.1
	167nm,1.2s,1μm						
BSI	Banda Aceh	11.37	331	P	Pn	03 46 41.4	+1.7
	232nm,1.1s						
SJI	Sawahan	11.40	107	P	Pn	03 46 39.9	-0.1
	110nm,1.2s						
SNG	Songkhla	11.65	359	P	Pn	03 46 47.0	+3.5
	340nm,1.0s						
KMMI	Kalianget	13.38	101	P	Px	03 47 19.0	
	91nm,1.6s						
SBUM	Sibu	13.41	59	⇑P	Pn	03 47 11.2	+3.7
SBUM	Sibu	13.41	59	P	Pn	03 47 11.0	+3.5
	45nm,1.2s,493nm						
BBKI	Banjar Baru	14.10	86	P	Pn	03 47 26.1	+9.1
	66nm,0.9s						
KAPI	Kappang	18.94	92	P	Pn	03 48 24.5	+5.6
	0.5nm,0.3s,baz=262,slow=12,SNR=5.3						
KAPI				LR	LR	03 55 47.0	
	comp=Z,1μm,21.1s,baz=279,slow=37						
KAPI	Kappang	18.94	92	eP	Pn	03 48 17.4	-1.5
	28nm,1.0s						
KAPI				LR	LR	03 55 47.0	
KAPI	Kappang	18.94	92	P	Px	03 48 29.5	
	21nm,1.6s						
TSM	Tawau	19.23	63	⇑P	Pn	03 48 23.0	+0.7
SDKM	Sandakan	19.29	59	⇑P	Pn	03 48 22.8	-0.3
PCI	Palu	19.40	80	P	Pn	03 48 25.5	+1.1
	202nm,1.4s,2μm						
MYLDM	Lahad Datu	20.19	62	P	Px	03 48 42.5	
	98nm,1.1s						
KKTK	Khon Kaen	20.86	6	P	P	03 48 41.0	+2.1
	1μm,0.5s						
KDI	Kendari	21.82	89	P	P	03 48 50.9	+1.5
	61nm,1.4s,5μm,mb4.8						
CMAR	Chiang Mai Arr	22.93	356	P	P	03 49 00.5	-0.6
	5.7nm,0.4s,mb4.3,baz=185,slow=9.5,SNR=15						
CMAR				S	S	03 53 14.0	+4.0
	2.2nm,0.4s,baz=178,slow=27,SNR=4.2						
CMAR				LR	LR	03 59 39.2	
	comp=Z,2μm,18.3s,MS4.7,baz=177,slow=41						
CMAR	Chiang Mai Arr	22.93	356	⇑eP	P	03 49 00.5	-0.6
PALK	Pallekele	23.20	300	eP	P	03 49 04.5	+0.5
	15nm,0.9s,mb4.4						

CHG Chiang Mai 23.29 356 ⇑P **P 03 49 04.0 -0.9**
56nm,1.0s,mb5.0
CHTO Chiang Mai 23.29 356 *eP* **P 03 49 03.9 -1.0**
CHTO pmax pmax
comp=Z,40nm,0.9s,mb4.8
CHTO Chiang Mai 23.29 356 *eP* **P 03 49 03.9 -0.9**
comp=Z,40nm,0.9s,mb4.8
BATI Baumata 23.40 105 P **P 03 49 04.5 -1.7**
comp=Z,17nm,0.4s,mb4.8,baz=196,slow=5.3,SNR=3.9
BATI Baumata 23.40 105 P **P 03 49 11.5 +5.4**
comp=Z,65nm,1.2s,mb4.9
MBWA Marble Bar 24.74 134 *eP* **P 03 49 17.2 -1.2**
comp=Z,13nm,1.0s,mb4.4
QIZ Qiongzhong 25.09 21 P **P 03 49 23.0 +1.5**
QIZ AP pP 03 49 27.3 -1.3
QIZ S **S** **03 53 44.5 -0.4**
QIZ LR LR
comp=N,1μm,13.9s,MS5.0
QIZ LR LR
comp=E,3μm,13.6s,MS5.0
QIZ LR LR
comp=Z,2μm,14.6s,MS4.7
QIZ Qiongzhong 25.09 21 *eP* **P 03 49 17.8 -3.7**
comp=Z,15nm,0.8s,mb4.6
FITZ Fitzroy Crossi 27.82 121 *eP* **P 03 49 45.6 -0.6**
comp=Z,27nm,0.8s,mb4.9
FITZ Fitzroy Crossi 27.82 121 P **P 03 49 46.1 -0.1**
comp=Z,65nm,1.1s,mb5.2
VIS Vishakhapatnam 28.03 323 *eP* **P 03 49 47.0 -1.1**
VIS AMb AMB 03 50 00.3
comp=Z,30nm,1.9s,mb4.6
KMI Kunming 29.56 4 P **P 03 50 06.3 +4.7**
KMI AP pP 03 50 13.9 +5.1
KMI XP sP 03 50 19.4 +7.7
KMI PP PP 03 51 05.5 -3.2
KMI S **S** **03 55 03.6 +8.2**
KMI XS sS 03 55 19.2 +12
KMI AMB AMB
comp=Z,39nm,1.2s,mb5.0
KMI AMB AMB
comp=Z,87nm,3.1s
KMI LR LR
comp=N,2μm,13.3s,MS5.5
KMI LR LR
comp=E,6μm,12.0s,MS5.5
KMI LR LR
comp=Z,2μm,18.3s
HYB Hyderabad 30.93 315 *i* P **P 03 50 16.0 +2.1**
SHL Shillong 31.15 344 *eP* **P 03 50 16.0 +0.3**
SHL *ex* x 03 56 00.0
GYA Guiyang 31.36 10 P **P 03 50 17.6 +0.1**
GYA AP pP 03 50 24.9 +0.3
GYA PP PP 03 51 27.3 -1.3
GYA PCP PcP 03 53 11.4 +0.2
GYA S **S** **03 55 23.7 +0.2**
GYA SCP ScP 03 56 51.9 -1.1
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,120nm,4.8s
GYA LR LR
comp=N,560nm,16.2s,MS4.5
GYA LR LR
comp=E,740nm,17.8s,MS4.5
GYA LR LR
comp=Z,610nm,17.3s,MS4.3
BOK Bokaro 31.68 333 *eP* **P 03 50 20.2 -0.2**
BOK AMb AMB 03 50 29.0
comp=Z,84nm,1.2s,mb5.5
NWAO Narrogin (SRO) 32.15 153 P **P 03 50 27.9 +3.4**
comp=Z,13nm,0.9s,mb4.8,baz=335,slow=10,SNR=4.6
NWAO LR LR 04 00 58.4
comp=Z,534nm,20.5s,MS4.2,baz=89,slow=32
KAKA Kakadu 32.33 107 *eP* x 03 50 04.4
comp=Z,40nm,1.6s
NGP Nagpur 33.25 321 *ex* **P 03 50 28.4 -5.8**
NGP AMb AMB 03 50 40.2
comp=Z,21nm,0.0s
ODAN Odare 33.80 338 *eP* **P 03 50 40.0 +1.1**
comp=Z,142nm,0.9s,mb5.9
KAD Karad 34.06 310 *eP* **P 03 50 40.4 -0.9**
KAD AMb AMB 03 50 44.9
comp=Z,16nm,1.1s,mb4.9
TAPN Taplejung 34.13 339 *eP* **P 03 50 42.6 +0.9**
comp=Z,257nm,1.0s,mb6.1
RAMN Ramite 34.18 337 *eP* **P 03 50 42.9 +0.7**
comp=Z,118nm,0.8s,mb5.9
AKL Akola 34.24 318 *ex* x 03 50 45.6
AKL AMb AMB 03 50 55.4
comp=Z,174nm,3.4s
JIRN Jiri 34.97 337 *eP* **P 03 50 49.9 +0.8**
comp=Z,199nm,0.8s,mb6.1
POO Poona 35.06 312 *eP* **P 03 50 50.5 +0.6**
POO AMb AMB 03 50 57.5
comp=Z,20nm,1.6s,mb4.8
PKI Pulchoki 35.20 336 *eP* **P 03 50 52.4 +1.3**
comp=Z,62nm,1.1s,mb5.5
PKI Pulchoki 35.20 336 *eP* **P 03 50 52.5 +1.4**
PKI pmax pmax
comp=Z,27nm,0.7s,mb5.3
PKI Pulchoki 35.20 336 *eP* **P 03 50 52.5 +1.4**
comp=Z,27nm,0.7s,mb5.3
PKIN Phulchoki 35.21 336 *eP* **P 03 50 52.5 +1.4**
comp=Z,27nm,0.7s,mb5.3
LSA Lhasa 35.28 345 P **P 03 50 54.7 +3.0**
LSA S **S** **03 56 30.8 +6.5**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA AMB AMB
comp=Z,340nm,3.0s
LSA LR LR
comp=N,170nm,16.0s,MS4.2
LSA LR LR
comp=E,260nm,14.0s,MS4.2
LSA LR LR
comp=Z,560nm,14.0s,MS4.5
LSA Lhasa 35.28 345 *eP* **P 03 50 52.4 +0.7**
LSA pmax pmax
comp=Z,49nm,1.2s,mb5.3
LSA Lhasa 35.28 345 *eP* **P 03 50 52.4 +0.8**
comp=Z,49nm,1.2s,mb5.3
GUN Gumba 35.32 337 *eP* **P 03 50 52.6 +0.6**
comp=Z,158nm,0.7s,mb6.1
DMN Daman 35.36 336 *eP* **P 03 50 54.0 +1.6**
comp=Z,47nm,0.8s,mb5.5
CD2 Chengdu 35.38 4 P **P 03 50 51.4 -1.1**
CD2 XP sP 03 51 02.2 -0.5
CD2 PP PP 03 52 11.4 -1.8
CD2 PCP PcP 03 53 21.2 -1.2
CD2 S **S** **03 56 26.1 +0.3**
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,80nm,5.7s
CD2 LR LR
comp=N,3μm,13.7s
CD2 LR LR
comp=Z,2μm,16.1s,MS5.0
KKN Kakani 35.45 336 *eP* **P 03 50 53.8 +0.6**
comp=Z,116nm,0.9s,mb5.8
KKN Kakani 35.45 336 *eP* **P 03 50 53.8 +0.6**
KKN pmax pmax
comp=Z,116nm,0.9s,mb5.8
BHPL Bhopal 35.80 321 *eP* **P 03 50 54.2 -2.0**
BHPL AMb AMB 03 51 03.0
comp=Z,15nm,1.2s,mb4.8
GKN Gorkha 35.90 335 *eP* **P 03 50 57.0 -0.1**
comp=Z,134nm,1.0s,mb5.8
WRA Warramunga Arr 36.10 118 P **P 03 50 57.8 -1.1**
comp=Z,4.1nm,0.9s,mb4.4,baz=295,slow=8.5,SNR=18
WRAB Tennant Creek 36.11 118 ⇑*eP* **P 03 50 58.7 -0.3**
WRAB Tennant Creek 36.11 118 *eP* **P 03 50 58.1 -0.8**
comp=Z,14nm,0.7s,mb5.0
WRAB Tennant Creek 36.11 118 P **P 03 50 59.7 +0.7**
comp=Z,28nm,0.9s,mb5.2
WB2 Warramunga Arr 36.11 118 *eP* **P 03 50 57.8 -1.2**
KOLN Koldanda 36.15 334 *eP* **P 03 50 59.5 +0.4**
comp=Z,177nm,0.9s,mb6.0
DANN Dangsing 36.58 334 *eP* **P 03 51 03.7 +0.9**
comp=Z,149nm,0.9s,mb5.8
LGTI Lohaghat 39.12 331 *ex* x 03 51 30.2
XAN Xi'an 39.15 11 P **P 03 51 22.6 -1.9**
XAN AP pP 03 51 30.2 -1.5
XAN S **S** **03 57 20.9 -2.2**
XAN SS SS 04 00 16.2 -0.4
XAN AMB AMB
comp=Z,12nm,0.9s,mb4.6
XAN AMB AMB
comp=Z,38nm,7.8s
XAN LR LR
comp=N,547nm,16.5s,MS5.0
XAN LR LR
comp=E,2μm,11.9s,MS5.0
XAN LR LR
comp=Z,3μm,13.7s,MS5.3
AJM Ajmer 39.88 322 *ex* x 03 51 10.8
AJM AMb AMB 03 51 39.0
comp=Z,34nm,0.2s,mb5.7
NDI New Delhi 40.06 327 *ex* x 03 51 35.0
NJ2 Nanjing 40.27 24 *eP* **P 03 51 34.8 +0.9**
NJ2 AP pP 03 51 42.7 +1.6
NJ2 XP sP 03 51 45.0 +0.9
NJ2 PP PP 03 53 12.6 +5.8
NJ2 S **S** **03 57 39.0 -1.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NJ2 AMB AMB
comp=Z,90nm,6.7s
NJ2 LR LR
comp=N,710nm,16.2s,MS4.9
NJ2 LR LR
comp=E,1μm,16.2s,MS4.9
NJ2 LR LR
comp=Z,1μm,16.2s,MS4.8
SSE Sheshan 40.46 27 P **P 03 51 35.4 -0.1**
SSE XP sP 03 51 48.2 +2.6
SSE S **S** **03 57 42.9 0.0**
SSE XS sS 03 57 57.8 +2.9
SSE SS SS 04 00 44.9 +2.0
SSE AMB AMB
comp=Z,19nm,0.8s,mb4.9
SSE AMB AMB
comp=Z,68nm,3.8s
SSE LR LR
comp=N,505nm,13.5s,MS4.6
SSE LR LR
comp=E,339nm,13.5s,MS4.6
SSE LR LR
comp=Z,318nm,12.5s,MS4.4
LZH Lanzhou 40.53 4 *eP* **P 03 51 35.5 -0.4**
LZH AP pP 03 51 42.5 -0.7
LZH XP sP 03 51 46.1 0.0
LZH PP PP 03 53 14.2 +4.6
LZH S **S** **03 57 44.0 +0.3**
LZH AMB AMB
comp=Z,28nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,126nm,4.0s
LZH LR LR
comp=E,2μm,14.5s
LZH LR LR
comp=Z,2μm,16.8s,MS5.1
DDI Dehra Dun 40.92 329 *eP* **P 03 51 37.0 -2.2**
SMLA Simla 42.02 329 *eP* **P 03 51 47.1 -1.1**
SMLA AMb AMB 03 51 56.4
comp=Z,123nm,2.6s,mb5.1
SDNR Sundarnagar 42.42 329 *eP* **P 03 51 53.0 +1.5**
COEN Coen 42.83 106 *eP* **P 03 51 53.6 -1.6**
comp=Z,15nm,1.2s,mb4.6
GTA Gaotai 43.75 359 *eP* **P 03 52 03.0 +0.8**
GTA AP pP 03 52 10.0 +0.5
GTA XP sP 03 52 12.9 +0.5
GTA PP PP 03 53 47.7 +3.4
GTA S **S** **03 58 31.6 +0.4**
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.0
GTA AMB AMB
comp=Z,93nm,4.5s
GTA LR LR
comp=N,2μm,13.8s,MS5.2
GTA LR LR
comp=E,1μm,12.0s,MS5.2
GTA LR LR
comp=Z,1μm,14.1s,MS5.0
THN Thein Dam 43.80 329 *ex* **P 03 52 07.6 +4.9**
HHC Hu-ho-hao-te 46.26 11 *eP* **P 03 52 23.3 +1.3**
HHC AP pP 03 52 29.0 -0.4
HHC XP sP 03 52 34.1 +1.8
HHC PCP PcP 03 53 59.6 +2.2
HHC PP PP 03 54 11.5 +0.6
HHC PCS PcS 03 57 52.5 +0.7
HHC *eS* **S** **03 59 07.6 +0.2**
HHC SCS ScS 04 02 14.3 -1.8
HHC SS SS 04 02 23.8 -9.5
HHC AMB AMB
comp=Z,14nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,119nm,5.1s
HHC LR LR
comp=N,1μm,13.1s,MS5.2
HHC LR LR
comp=E,372nm,10.7s,MS5.2
HHC LR LR
comp=Z,1μm,11.9s,MS5.1
PMG Port Moresby 46.29 99 *i* P **P 03 52 21.5 -1.3**
PMG Port Moresby 46.29 99 *eP* **P 03 52 21.5 -1.3**
comp=Z,25nm,1.0s,mb5.1
BJT Baijiatuan 46.57 16 P **P 03 52 23.8 -0.7**
BJT pmax pmax
comp=Z,16nm,0.7s
BJT Baijiatuan 46.57 16 P **P 03 52 23.8 -0.7**
comp=Z,16nm,0.7s,mb5.0
BJI Beijing 46.59 16 P **P 03 52 25.0 +0.3**
BJI S **S** **03 59 13.9 +1.7**
BJI AMB AMB
comp=Z,6.0nm,0.6s,mb4.7
BJI AMB AMB
comp=Z,82nm,4.0s
BJI LR LR
comp=N,505nm,22.4s,MS5.0
BJI LR LR
comp=E,2μm,20.2s,MS5.0
BJI LR LR
comp=Z,551nm,18.8s,MS4.5
CTA Charters Tower 46.87 113 *eP* **P 03 52 27.3 0.0**
comp=Z,17nm,1.1s,mb4.9
CTA Charters Tower 46.87 113 P **P 03 52 27.0 -0.3**
comp=Z,8.7nm,0.9s,mb4.7,baz=280,slow=9.5,SNR=7.5
CTA pP pP 03 52 33.3 -1.4
comp=Z,24nm,1.0s,baz=286,slow=8.4,SNR=8.4
CTA Charters Tower 46.87 113 *eP* **P 03 52 27.3 0.0**
CTA pmax pmax
comp=Z,17nm,1.1s
CTAO Charters Tower 46.87 113 *eP* **P 03 52 27.3 0.0**
CTAO pmax pmax
comp=Z,41nm,1.2s,mb5.2
CTAO Charters Tower 46.87 113 *eP* **P 03 52 27.3 0.0**
comp=Z,40nm,1.2s,mb5.2
CTAO Charters Tower 46.87 113 P **P 03 52 30.9 +3.6**
comp=Z,41nm,1.3s,mb5.2
STKA Stephens Creek 46.92 130 *eP* **P 03 52 28.7 +1.2**
comp=Z,13nm,0.9s,mb4.9
STKA Stephens Creek 46.92 130 P **P 03 52 27.6 +0.1**
comp=Z,11nm,0.8s,mb4.9,baz=321,slow=9.7,SNR=11
STKA LR LR 04 13 02.2
comp=Z,590nm,21.2s,MS4.5,baz=112,slow=37
KSRS Korea Array 48.85 29 P **P 03 52 41.8 -0.5**
comp=Z,2.6nm,0.9s,mb4.3,baz=221,slow=9.7,SNR=5.4
KSRS pP pP 03 52 48.4 -1.3
comp=Z,8.9nm,0.9s,baz=216,slow=8.1,SNR=14
KSRS LR LR 04 16 46.8
comp=Z,120nm,18.2s,MS3.9,baz=227,slow=40
KBL Kabul 49.03 325 *eP* **P 03 52 42.3 -1.5**
KBL pmax pmax
comp=Z,15nm,1.1s,mb4.9
KBL Kabul 49.03 325 *eP* **P 03 52 42.3 -1.5**
comp=Z,15nm,1.1s,mb4.9
WMQ Urumqi 49.57 348 P **P 03 52 48.1 +0.4**
WMQ AP pP 03 52 55.3 +0.2
WMQ PCP PcP 03 54 11.1 +1.9
WMQ PP PP 03 54 42.8 +0.5
WMQ S **S** **03 59 53.5 -0.8**
WMQ SCS ScS 04 02 35.9 -2.1
WMQ AMB AMB
comp=Z,83nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,131nm,4.0s
WMQ LR LR
comp=N,673nm,16.0s,MS4.9
WMQ LR LR
comp=E,576nm,14.0s,MS4.9
WMQ LR LR
comp=Z,284nm,18.0s,MS4.3
ULHL Ulahol 51.63 337 P **P 03 53 10.5 +7.2**
SNR=6.0
KZA Kyzart 51.89 336 P **P 03 53 11.8 +6.6**
SNR=9.8
SONM Songino Array 52.40 5 P **P 03 53 09.1 +0.2**
comp=Z,3.5nm,0.8s,mb4.3,baz=183,slow=8.0,SNR=22
SONM pP pP 03 53 16.1 -0.2
comp=Z,36nm,1.0s,baz=188,slow=8.6,SNR=39
SONM LR LR 04 17 35.1
comp=Z,523nm,18.2s,MS4.6,baz=163,slow=38
SONM Songino Array 52.40 5 P **P 03 53 09.1 +0.2**
SONM *PP pP 03 53 16.1 -0.2
TKM2 Tokmak 2 52.46 337 *eP* **P 03 53 08.6 -0.8**
TKM2 *e*PP pP 03 53 15.9 -1.0
TKM2 pmax pmax
comp=Z,39nm,0.9s,mb5.3
TKM2 Tokmak 2 52.46 337 P **P 03 53 16.2 +6.8**
SNR=13
TKM2 Tokmak 2 52.46 337 *eP* **P 03 53 08.6 -0.8**
comp=Z,39nm,0.9s,mb5.3
TKM2 *ep*P pP 03 53 15.9 -1.0
EIDS Eidsvold 52.46 119 *eP* **P 03 53 09.3 -0.6**
comp=Z,21nm,1.3s,mb4.9
ULN Ulaanbaatar 52.49 5⇑*eP* **P 03 53 09.6 +0.1**
ULN Ulaanbaatar 52.49 5 *eP* **P 03 53 09.4 -0.1**
comp=Z,26nm,1.0s,mb5.1
ULN Ulaanbaatar 52.49 5 P **P 03 53 11.1 +1.6**
comp=Z,34nm,1.1s,comp=Z,235nm,mb5.2
KBK Karagaybulak 52.49 336 P pP 03 53 17.0 -0.1
SNR=9.7
AML Almayashu 52.58 335 P pP 03 53 17.5 -0.3
SNR=15
AAK Ala-Archa 52.66 336 P pP 03 53 17.8 -0.6
comp=Z,80nm,0.8s,SNR=5.8
AAK Ala-Archa 52.66 336 *eP* **P 03 53 09.5 -1.4**
AAK *e*PP pP 03 53 17.1 -1.3
AAK pmax pmax
comp=Z,13nm,0.9s,mb4.9
AAK Ala-Archa 52.66 336 P pP 03 53 17.6 -0.8
SNR=7.8
AAK Ala-Archa 52.66 336 *eP* **P 03 53 09.5 -1.4**
comp=Z,13nm,0.9s,mb4.8
AAK *ep*P pP 03 53 17.1 -1.3
AAK Ala-Archa 52.66 336 P pP 03 53 17.4 -1.0
FRU Bishkek 52.78 336 *eP* pP 03 53 18.0 -1.2
EKS2 Erkin-Say 52.98 335 P **P 03 53 13.8 +0.6**
SNR=6.0
EKS2 Erkin-Say 52.98 335 *eP* **P 03 53 12.9 -0.4**
comp=Z,45nm,0.8s,mb5.5
EKS2 *ep*P pP 03 53 20.2 -0.6
CN2 Changchun 53.03 22⇓P **P 03 53 18.8 +5.2**
CN2 *e*XP sP 03 53 30.1 +6.1
CN2 *e*S **S** **04 00 45.9 +3.8**
CN2 SS SS 04 04 25.3 +3.5
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,110nm,4.0s
CN2 LR LR
comp=N,700nm,18.0s,MS5.0
CN2 LR LR
comp=E,1μm,18.0s,MS5.0
CN2 LR LR
comp=Z,720nm,20.0s,MS4.7
USP Ospenovka 53.19 336 P pP 03 53 21.2 -1.1
SNR=17
MK31 Makanchi Array 53.67 344 *i* P **P 03 53 17.1 -1.2**
MK31 pmax pmax
comp=Z,52nm,0.9s,mb5.5
MK31 Makanchi Array 53.67 344 *eP* **P 03 53 17.8 -0.5**
MKAR Makanchi Array 53.67 344 P **P 03 53 17.4 -0.9**
comp=Z,6.9nm,0.9s,mb4.6,baz=151,slow=8.1,SNR=27
MKAR pP pP 03 53 24.8 -1.0
comp=Z,36nm,0.8s,baz=149,slow=8.3,SNR=63
MKAR S **S** **04 00 42.4 -8.3**
comp=Z,0.8nm,1.1s,baz=210,slow=13,SNR=2.8
MKAR LR LR 04 22 38.6
comp=Z,235nm,18.6s,MS4.3,baz=161,slow=43
MKAR Makanchi Array 53.67 344 P **P 03 53 17.4 -0.9**
MKAR *PP pP 03 53 24.8 -1.0
MAT Matsushiro 53.80 37 P **P 03 53 18.5 -1.0**
MJAR Matsushiro Arr 53.80 37 P **P 03 53 21.3 +1.8**
comp=Z,2.4nm,0.7s,mb4.2,baz=216,slow=7.7,SNR=7.0
MJAR LR LR 04 17 20.9
comp=Z,124nm,19.2s,MS4.0,baz=210,slow=37
KK31 Karatay Array 54.75 333 *i* P **P 03 53 31.4 +5.1**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ZAK Zakamensk 54.76 2 *eP* **P 03 53 20.9 -5.2**
ZAK *e* 03 53 31.9
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
ZAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
MDJ Mudanjiang 55.36 25 P **P 03 53 32.2 +1.6**
MDJ AP pP 03 53 38.7 +0.6
MDJ XP sP 03 53 41.2 +0.3
MDJ PCP PcP 03 54 31.3 +0.4
MDJ PP PP 03 55 33.2 -1.4
MDJ SCP ScP 03 58 29.3 +0.9
MDJ PCS PcS 03 58 31.8 +1.0
MDJ S **S** **04 01 17.1 +3.6**
MDJ XS sS 04 01 26.4 +0.6
MDJ AMB AMB
comp=Z,6.0nm,0.9s,mb4.6
MDJ AMB AMB
comp=Z,66nm,4.6s
MDJ LR LR
comp=N,737nm,11.3s,MS5.1
MDJ LR LR
comp=E,434nm,11.8s,MS5.1
MDJ LR LR
comp=Z,976nm,11.8s,MS5.1
HVS Khovu-Aksy 55.80 355 *i* P **P 03 53 37.2 +3.6**
HVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
HVS MLR MLR
comp=Z,2μm,16.0s,MS5.4
MOY Mondy 56.00 0 *eP* pP 03 53 41.6 -1.0
TLY Talaya 56.07 2 *eP* pP 03 53 42.6 -0.4
TLY *eS* **S** **04 01 21.3 -1.5**
TLY *e*SS SS 04 05 09.3 -0.1
TLY pmax pmax
comp=Z,13nm,0.8s,mb5.0
TLY MLR MLR
comp=Z,785nm,15.0s,MS4.9
ABKT Ailbek 57.88 321 P **P 03 53 55.6 +6.9**
comp=Z,187nm,1.1s,mb6.0,SNR=7.2
KURK Kurchatov 58.25 344 P **P 03 53 50.3 -0.7**
comp=Z,248nm,1.0s,mb6.2,SNR=8.1
KURK Kurchatov 58.25 344 *eP* **P 03 53 50.1 -0.9**
KURK *e*PP pP 03 53 56.9 -1.6
KURK pmax pmax
comp=Z,45nm,1.0s,mb5.5
KURK Kurchatov 58.25 344 *eP* **P 03 53 50.1 -0.9**
comp=Z,45nm,1.0s,mb5.5
KURK *ep*P pP 03 53 56.9 -1.7
ZAA0 Zalesovo Array 59.80 349 *eP* **P 03 54 00.3 -1.4**
ZAA0 *ep*P pP 03 54 07.4 -1.8
ZALV Zalesovo Beam 59.80 349 P **P 03 54 00.8 -0.9**
comp=Z,6.4nm,0.9s,mb4.7,baz=178,slow=4.5,SNR=16
ZALV pP pP 03 54 07.1 -2.1
comp=Z,66nm,0.9s,baz=164,slow=5.7,SNR=55
ZALV LR LR 04 21 32.8
comp=Z,218nm,18.0s,MS4.3,baz=307,slow=38
ZALV Zalesovo Beam 59.80 349 P **P 03 54 00.8 -0.9**
ZALV *PP pP 03 54 07.1 -2.1
ZALV Zalesovo Beam 59.80 349 P **P 03 54 00.8 -0.9**
ZALV pP pP 03 54 07.1 -2.1
ZALV LR LR 04 21 32.8
KLR Kul'dur 59.96 23 *eP* **P 03 54 04.1 +1.2**
NVS Novosibirsk 60.95 349 *eP* **P 03 54 12.6 +3.1**
NVS *eS* **S** **04 02 30.9 +4.7**
NVS pmax pmax
comp=Z,36nm,1.2s,mb5.4
NVS pmax pmax
comp=N,33nm,1.5s
NVS pmax pmax
comp=E,21nm,1.3s
NVS smax
comp=N,26nm,2.0s
UMR Umm Al-Rimmam 61.08 307 *eP* **P 03 54 15.9 +5.0**
baz=307
UMR AMb AMB 03 54 18.4
comp=Z,51nm,1.1s,mb5.6,baz=307

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NAY	**Al-Naaiem**	**61.33**	**307**	*e*P	**P**	**03 54 17.4**	**+4.7**
	baz=307						
NAY				AMb	AMB	03 54 19.7	
	comp=Z,35nm,1.1s,mb5.4,baz=307						
MIB	**Mutribah**	**61.48**	**307**	*e*P	**P**	**03 54 18.2**	**+4.6**
	baz=307						
MIB				AMb	AMB	03 54 21.6	
	comp=Z,80nm,1.2s,mb5.7,baz=307						
VOSK	**Vostochnaya**	**62.37**	**340**	P	**P**	**03 54 21.2**	**+2.0**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.7						
BRVK	**Borovoye**	**62.89**	**340**	*e*P	**P**	**03 54 22.4**	**-0.2**
BRVK				*e**PP	pP	03 54 27.7	-2.5
BRVK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
BRVK	**Borovoye**	**62.89**	**340**	*e*P	**P**	**03 54 22.4**	**-0.2**
	comp=Z,15nm,0.9s,mb5.1						
BRVK				*e*pP	pP	03 54 27.7	-2.5
BOD	**Bodaibo**	**63.08**	**8**	*e*P	**P**	**03 54 22.3**	**-1.5**
BOD				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.0						
YSS	**Yuzh-Sakhalins**	**63.26**	**31**	*e*P	**P**	**03 54 31.0**	**+5.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
AB31	**Akbulak array**	**64.23**	**332**	P	**P**	**03 54 29.9**	**-1.6**
AB31				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.7						
MSL	**Mosul**	**67.43**	**312**	*e*P	**P**	**03 54 58.0**	**+5.6**
DRV	**Dumont d'Urvil**	**67.68**	**164**	S	S	04 03 45.0	-4.2
DRV				SS	SS	04 08 17.0	+6.7
DRV				L		04 12 00.0	
DRV				R		04 16 00.0	
GNI	**Garni**	**67.88**	**317⇑**	*e*P	**P**	**03 54 56.4**	**+1.2**
GNI				pmax	pmax		
	comp=Z,27nm,1.5s						
GNI				MLR	MLR		
	comp=Z,100nm,17.0s						
MAW	**Mawson**	**68.02**	**195**	LR	LR	04 17 33.5	
	comp=Z,541nm,21.1s,MS4.8,baz=91,slow=30						
SVE	**Sverdlovsk**	**69.31**	**338⇑**	*e*P	**P**	**03 55 10.1**	**+6.3**
SVE				*e*		03 55 34.7	
SVE				*e*S	S	04 04 02.2	-6.7
SVE				*e*		04 05 07.4	
SVE				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
ARU	**Arti**	**69.83**	**337***c*	*i*P	**P**	**03 55 12.7**	**+5.7**
ARU				*e*		03 57 46.5	
ARU				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
ARU	**Arti**	**69.83**	**337**	*e*P	**P**	**03 55 06.3**	**-0.7**
	comp=Z,24nm,1.0s,mb5.1						
ARU				*e*pP	pP	03 55 12.5	-2.1
YAK	**Yakutsk**	**70.01**	**14**	*e*P	**P**	**03 55 11.9**	**+3.9**
YAK				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
KIV	**Kislovodsk**	**70.96**	**320**	*e*P	**P**	**03 55 15.1**	**+0.9**
KIV				*e*S	S	04 04 28.0	-0.6
KIV				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
KIV	**Kislovodsk**	**70.96**	**320**	*e*P	**P**	**03 55 14.8**	**+0.6**
	comp=Z,29nm,0.9s,mb5.2						
KIV				*e*pP	pP	03 55 20.8	-1.1
LSZ	**Lusaka**	**72.00**	**255**	*e*P	**P**	**03 55 21.7**	**+0.6**
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LSZ	**Lusaka**	**72.00**	**255**	*e*P	**P**	**03 55 21.7**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.2						
CSS	**Prodhromos**	**74.37**	**308**	*e*P	**P**	**03 55 34.3**	**-0.4**
	comp=Z,30nm,1.0s,mb5.2						
LBTB	**Lobatse**	**74.64**	**245**	*e*P	**P**	**03 55 37.0**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
LBTB	**Lobatse**	**74.64**	**245**	*e*P	**P**	**03 55 37.0**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.5						
PETK	**Petropavlovsk-**	**74.64**	**32**	LR	LR	04 34 42.4	
	comp=Z,166nm,18.3s,MS4.4,baz=255,slow=41						
VRHR	**Novokhopersk**	**74.85**	**326**	*e*P	**P**	**03 55 42.6**	**+5.5**
VRHR				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
VRHR				pmax	pmax		
	comp=N,30nm,0.5s						
VRHR				pmax	pmax		
	comp=E,60nm,0.9s						
BOSA	**Boshof**	**75.10**	**242**	P	**P**	**03 55 38.5**	**-0.6**
	comp=E,3.2nm,1.0s,mb4.2,baz=124,slow=9.4,SNR=4.5						
BOSA				LR	LR	04 23 42.4	
	comp=E,192nm,18.7s,MS4.4,baz=299,slow=32						
BOSA	**Boshof**	**75.10**	**242**	*e*P	**P**	**03 55 39.0**	**-0.1**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BOSA	**Boshof**	**75.10**	**242**	*e*P	**P**	**03 55 39.0**	**-0.1**
	comp=Z,5.3nm,0.9s,mb4.5						
BR131	**Keskin Array S**	**75.59**	**313**	*e*P	**P**	**03 55 40.2**	**-1.5**
	comp=Z,7.8nm,0.8s,mb4.7						
BR131				*e*pP	pP	03 55 47.1	-2.3
BRTR	**Keskin Array B**	**75.59**	**313**	P	**P**	**03 55 40.2**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.1,baz=145,slow=7.2,SNR=12						
BRTR				pP	pP	03 55 47.3	-2.1
	comp=Z,9.7nm,0.8s,baz=139,slow=7.5,SNR=41						
BRTR				LR	LR	04 30 41.5	
	comp=Z,164nm,18.4s,MS4.4,baz=314,slow=37						
BRTR	**Keskin Array B**	**75.59**	**313**	*i* P	**P**	**03 55 40.2**	**-1.4**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VORD	**Divnogorie**	**76.11**	**325**	*e*P	**P**	**03 55 50.4**	**+6.1**
VORD				pmax	pmax		
	comp=N,20nm,0.8s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
VORD				pmax	pmax		
	comp=E,20nm,1.2s						
VSR	**Storozhevoye**	**76.29**	**325**	*e*P	**P**	**03 55 50.4**	**+5.1**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
VSR				pmax	pmax		
	comp=N,7.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,20nm,0.9s						
SEY	**Seymchan**	**77.70**	**22**	*i* P	**P**	**03 55 53.1**	**0.0**
TIXI	**Tiksi**	**78.25**	**9⇓**	*e*P	**P**	**03 55 59.7**	**+3.8**
TIXI				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.9						
MOS	**Moscow**	**79.06**	**329**	*e*P	**P**	**03 56 05.5**	**+4.8**
MOS				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.5						
SUR	**Sutherland**	**79.08**	**238**	*e*P	**P**	**03 56 02.0**	**+0.5**
	comp=Z,19nm,1.0s,mb5.0						
OBN	**Obninsk**	**79.34**	**328**	*e*P	**P**	**03 56 05.8**	**+3.5**
OBN				pmax	pmax		
	comp=Z,63nm,1.6s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
OBN	**Obninsk**	**79.34**	**328**	P	**P**	**03 56 01.2**	**-1.0**
	comp=Z,12nm,0.5s,mb5.1						
OBN				*e*pP	pP	03 56 08.1	-2.0
VNDA	**Vanda**	**79.53**	**169**	P	**P**	**03 56 02.7**	**-0.2**
	comp=Z,1.9nm,0.9s,mb4.0,baz=342,slow=5.5,SNR=3.7						
VNDA				LR	LR	04 27 22.2	
	comp=Z,170nm,18.0s,MS4.4,baz=312,slow=33						
VNDA	**Vanda**	**79.53**	**169**	P	**P**	**03 56 02.7**	**-0.2**
VNDA				LR	LR	04 27 22.2	
TIRR	**Tirgusor**	**80.70**	**316⇓**	*i*P	pP	03 56 16.1	-1.5
TIRR	**Tirgusor**	**80.70**	**316**	⇓P	pP	03 56 16.1	-1.5
HARR	**Harsova**	**81.10**	**316⇑**	*i*P	pP	03 56 18.5	-1.2
HARR	**Harsova**	**81.10**	**316**	⇑P	pP	03 56 18.5	-1.2
AKASG	**Malin Array Be**	**81.95**	**322**	P	**P**	**03 56 15.2**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=84,slow=5.1,SNR=2.8						
AKASG				pP	pP	03 56 21.9	-2.2
	comp=Z,6.0nm,0.8s,baz=86,slow=5.1,SNR=7.0						
AKASG	**Malin Array Be**	**81.95**	**322**	P	**P**	**03 56 15.2**	**-1.2**
AKASG				pP	pP	03 56 21.9	-2.2
TSUM	**Tsumeb**	**82.08**	**251**	*e*P	**P**	**03 56 18.6**	**+0.9**
	comp=Z,4.1nm,1.1s,mb4.3						
TSUM				*e*pP	pP	03 56 25.2	-0.3
VRI	**Vrincioaia**	**82.22**	**317⇓**	*i*P	pP	03 56 24.8	-0.9
VRI	**Vrincioaia**	**82.22**	**317**	⇓P	pP	03 56 24.8	-0.8
PLOR	**Plostina**	**82.27**	**317⇓**	*i*P	pP	03 56 25.7	-0.2
VOIR		**83.26**	**317⇓**	*i*P	pP	03 56 28.2	-2.9
VOIR		**83.26**	**317**	⇓P	pP	03 56 28.2	-2.9
BUR08	**Bucovina Ar. S**	**83.68**	**319**	*e*P	**P**	**03 56 25.6**	**+0.2**
BUR08				*e*pP	pP	03 56 32.8	-0.3
VTS	**Vitosha**	**83.94**	**314⇓**	*i*P	pP	03 56 33.5	-1.1
VTS	**Vitosha**	**83.94**	**314**	⇓P	pP	03 56 33.5	-1.1
LVV	**L'vov**	**84.94**	**321**	*e*P	pP	03 56 37.7	-1.8
DRGR		**85.14**	**318⇓**	*i*P	pP	03 56 40.1	-0.5
DRGR		**85.14**	**318**	⇓P	pP	03 56 40.1	-0.6
BILL	**Bilibino**	**85.28**	**20**	*e*P	**P**	**03 56 32.5**	**-0.5**
BILL				pmax	pmax		
	comp=Z,25nm,1.9s,mb5.0						
BILL	**Bilibino**	**85.28**	**20**	*e*P	**P**	**03 56 29.1**	**-3.9**
	comp=Z,10.0nm,1.0s,mb4.9						
BILL				*e*pP	pP	03 56 38.7	-2.2
BZS	**Buzias**	**85.66**	**316⇑**	*i*P	pP	03 56 42.2	-1.0
BZS	**Buzias**	**85.66**	**316**	⇑P	pP	03 56 42.2	-1.1
KWP	**Kalwaria**	**85.73**	**320⇓**	*i*P	pP	03 56 42.8	-0.7
KWP	**Kalwaria**	**85.73**	**320**	⇓P	pP	03 56 42.8	-0.8
KOLS	**Kolonicke sedl**	**85.87**	**320**	*e*P	**P**	**03 56 37.0**	**+0.6**
KOLS				*e*	pP	03 56 43.7	-0.5
KOLS				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.4						
KOLS	**Kolonicke sedl**	**85.87**	**320**	*e*P	**P**	**03 56 37.0**	**+0.6**
KOLS				*e*pP	pP	03 56 43.7	-0.5
KOLS	**Kolonicke sedl**	**85.87**	**320**	*e*P	**P**	**03 56 37.0**	**+0.6**
	comp=Z,26nm,1.0s,mb5.4						
KOLS				*e*	pP	03 56 43.7	-0.5
CRVS	**Cervenica-Dubn**	**86.39**	**319**	*e*P	**P**	**03 56 38.1**	**-0.9**
CRVS				*e*	pP	03 56 46.1	-0.7
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.6						
CRVS	**Cervenica-Dubn**	**86.39**	**319**	*e*P	**P**	**03 56 38.1**	**-0.9**
	comp=Z,4.6nm,1.2s,mb4.6						
CRVS				*e*	pP	03 56 46.1	-0.7
STHS	**Stebnicka Huta**	**86.63**	**320**	*e*P	**P**	**03 56 42.3**	**+2.2**
STHS				*e*		03 56 47.4	
STHS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
STHS	**Stebnicka Huta**	**86.63**	**320**	*e*P	**P**	**03 56 42.3**	**+2.2**
	comp=Z,5.9nm,0.9s,mb4.8						
STHS				*e*		03 56 47.4	
PSZ	**Piszkesteto**	**87.24**	**318**	*e*P	**P**	**03 56 43.0**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
PSZ	**Piszkesteto**	**87.24**	**318⇓**	*i*P	pP	03 56 49.7	-1.3
PSZ	**Piszkesteto**	**87.24**	**318**	*e*P	**P**	**03 56 43.0**	**-0.2**
	comp=Z,6.9nm,1.0s,mb4.8						
PKSM	**Moragy**	**87.81**	**316⇓**	*i*P	pP	03 56 52.7	-1.1
PKSM	**Moragy**	**87.81**	**316**	⇓P	pP	03 56 52.7	-1.1
VYHS	**Vyhne**	**88.03**	**319**	*e*P	pP	03 56 53.9	-0.9
ARCES	**ARCESS Array B**	**89.11**	**340**	P	**P**	**03 56 50.3**	**-1.3**
	comp=Z,3.2nm,1.0s,mb4.6,baz=102,slow=4.4,SNR=2.3						
ARCES				pP	pP	03 56 58.2	-1.2
	comp=Z,7.1nm,0.8s,baz=81,slow=6.5,SNR=4.8						
ARCES				LR	LR	04 41 07.1	
	comp=Z,186nm,19.6s,MS4.5,baz=105,slow=38						
ARCES	**ARCESS Array B**	**89.11**	**340**	P	**P**	**03 56 50.3**	**-1.3**
ARCES				*PP	pP	03 56 58.2	-1.2
SNAA	**Sanae**	**89.96**	**198**	*e*P	**P**	**03 56 55.0**	**-0.6**
SNAA				pmax	pmax		
	comp=Z,11nm,1.3s						
SNAA	**Sanae**	**89.96**	**198**	*e*P	**P**	**03 56 55.0**	**-0.6**
	comp=Z,11nm,1.3s,mb5.0						
SOKA	**Soboth**	**90.34**	**317⇑**	*i*pP	pP	03 57 05.0	-0.6
	comp=Z,13nm,1.1s						
GERES	**GERESS Array B**	**91.45**	**319**	P	**P**	**03 57 00.8**	**-2.2**
	comp=Z,0.5nm,0.8s,mb3.9,baz=64,slow=4.5,SNR=2.2						
GERES				pP	pP	03 57 08.9	-1.8
	comp=Z,2.5nm,0.9s,baz=94,slow=4.4,SNR=10						
BRG	**Berggiesshubel**	**91.48**	**321**	*e*P	**P**	**03 57 09.6**	**+6.6**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.7						
BRG	**Berggiesshubel**	**91.48**	**321**	*e*P	pP	03 57 09.6	-1.3
	comp=Z,8.0nm,1.2s						
KHC	**Kasperske Hory**	**91.56**	**319⇓**	*e*P	pP	03 57 09.9	-1.4
CLL	**Collm**	**92.11**	**321**	*e*P	pP	03 57 12.0	-1.8
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
CLL	**Collm**	**92.11**	**321**	*e*pP	pP	03 57 12.0	-1.8
	comp=Z,7.0nm,1.1s						
CLL				*e*sP	sP	03 57 16.0	-0.6
CLL				LmV		04 41 00.0	
	comp=Z,100nm,20.5s						
NOA	**NORSAR Array B**	**93.72**	**331**	LR	LR	04 45 54.6	
	comp=Z,102nm,19.9s,MS4.3,baz=270,slow=40						
KEST	**Kesra**	**93.77**	**305**	LR	LR	04 42 24.8	
	comp=Z,86nm,18.5s,MS4.2,baz=214,slow=37						
TORD	**Torodi Ar. Bea**	**99.83**	**282**	LR	LR	04 37 42.2	
	comp=Z,175nm,20.1s,MS4.6,baz=150,slow=32						
PPT	**Papeete**	**107.25**	**110**	*e*LR	LR	04 33 32.8	
	comp=Z,172nm,27.2s						
YKA	**Yellowknife Ar**	**116.57**	**17**	PKP	PKPdf	04 02 39.3	-1.0
	comp=Z,0.1nm,0.3s,baz=275,slow=6.8,SNR=3.3						
RKT	**Rikitea**	**119.08**	**119**	*e*LR	LR	04 38 59.9	
	comp=Z,194nm,25.5s						
ANMO	**Albuquerque**	**140.65**	**36**	*e*PKIKP	PKPdf	04 03 25.1	-1.6
CCM	**Cathedral Cave**	**144.90**	**17**	*e*PKHKP		04 03 31.4	
WMOK	**Wichita Mounta**	**144.93**	**29**	*e*PKIKP	PKPdf	04 03 31.9	-2.4
OLIL	**Olney**	**145.04**	**12**	*e*PKPdf	PKPdf	04 03 32.1	-2.2
FVM	**French Village**	**145.20**	**16**	*e*PKHKP		04 03 31.8	
SIUC	**Southern Illin**	**145.76**	**14**	*e*PKPbc	PKPbc	04 03 35.5	-0.6
WCI	**Wyandotte Cave**	**145.87**	**10**	*e*PKIKP	PKPdf	04 03 35.6	-0.2
TXAR	**Lajitas Array**	**146.21**	**40**	PKPbc	PKPbc	04 03 38.0	+0.3
	comp=Z,1.5nm,0.7s,baz=252,slow=0.9,SNR=9.5						
MIAR	**Mount Ida**	**147.33**	**22**	*e*PKP2	PKPab	04 03 40.2	-2.3
WVT	**Waverly**	**147.60**	**13**	*e*PKIKP	PKPdf	04 03 38.4	-0.4
WVT				*e*		04 03 41.7	
WVT				*e*		04 03 47.0	
JCT	**Junction City**	**147.74**	**35**	*e*PKP2	PKPab	04 03 42.8	-1.5
TZTN	**Tazewell**	**147.92**	**7**	*e*PKPbc	PKPbc	04 03 41.1	-1.2
TKL	**Tuckaleechee C**	**148.77**	**7**	PKPbc	PKPbc	04 03 42.6	-2.0
	comp=Z,4.4nm,1.0s,baz=126,slow=5.4,SNR=4.7						
TKL				pPKPbc	pPKPbc	04 03 50.6	-2.0
	comp=Z,9.8nm,0.9s,baz=93,slow=2.5,SNR=7.8						
TKL	**Tuckaleechee C**	**148.77**	**7**	*e*PKPbc	PKPbc	04 03 42.9	-1.7
LVC	**Limon Verde**	**151.17**	**200**	*e*PKPbc	PKPbc	04 03 50.9	+0.1

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*NEIC **12** 03:50:22.2, 1654N×9435W, h106km, MD3.7(MEX), After MEX.*

MEX 12 03:50:22.1±0.9**, 1654N×9435W, h107**km±12km**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.75**	**317**	*i* P	Pn	03 50 39.6	-1.0
CMIG				*i* S	Sn	03 50 52.8	-1.6
TGIG		**1.20**	**79**	*i* P	Pn	03 50 43.3	-1.9
TGIG				*i* S	Sn	03 51 01.1	-1.6
PCIG		**1.37**	**127**	*i* P	Pn	03 50 46.6	-0.6
PCIG				*i* S	Sn	03 51 05.0	-1.1
HUIG	**Huatulco**	**1.86**	**246**	*i* P	Pn	03 50 51.1	-2.0
HUIG				*i* S	Sn	03 51 15.1	-1.6
CCIG	**Comitan**	**2.14**	**97**	*i* P	Pn	03 50 55.7	-1.0
CCIG				*i* S	Sn	03 51 22.1	-1.1
VHO	**Vista Hermosa**	**2.34**	**283**	*i* P	Pn	03 50 59.8	+0.5
VHO				*i* S	Sn	03 51 26.3	-1.6
UTMO	**Huajuapan**	**3.54**	**292**	*e*P	Pn	03 51 14.3	-0.9
UTMO				*i* S	Sn	03 51 54.0	-2.3
PNIG	**Pinotepa**	**3.63**	**268**	*e*P	Pn	03 51 14.8	-1.6
PNIG				*i* S	Sn	03 51 56.3	-2.1

NEIC 12 03:59:11.0, 3760S×17871E, h30km, ML4.0(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.32**	**276**	P	Pb	03 59 18.9	+0.2
MXZ				S	Sb	03 59 23.5	-0.5
PUZ	**Puketiti**	**0.59**	**217**	P	Pb	03 59 22.7	-0.3
PUZ				S	Sb	03 59 30.9	-0.2
MWZ	**Matawai**	**1.19**	**231**	P	Pn	03 59 30.8	-0.8
URZ	**Urewera**	**1.43**	**242**	P	Pn	03 59 34.6	-0.2
KNZ	**Kokohu**	**1.64**	**210**	P	Pn	03 59 36.1	-1.6
EDRZ	**Edgecumbe**	**1.64**	**251**	P	Pn	03 59 37.8	0.0
MARZ	**Manawahe**	**1.66**	**256**	P	Pn	03 59 37.7	-0.3
MARZ				S	Sn	03 59 53.4	-4.9
TAZ	**Tarawera**	**1.85**	**249**	P	Pn	03 59 41.1	+0.4
BKZ	**Black Stump Fm**	**2.34**	**227**	P	Pn	03 59 46.4	-1.0
KUZ	**Kuaotunu**	**2.54**	**289**	P	Pn	03 59 49.8	-0.3
MKAZ	**Moumakai**	**2.87**	**279**	P	Pn	03 59 54.9	+0.3
NGZ	**Ngauruhoe**	**2.91**	**236**	P	Pn	03 59 54.5	-0.7
TUVZ	**Tukino**	**2.92**	**234**	P	Pn	03 59 54.5	-0.9
MOVZ	**Moawhango**	**2.94**	**231**	P	Pn	03 59 54.2	-1.4
WNVZ	**Wahianoa**	**2.99**	**234**	P	Pn	03 59 55.3	-1.0
TSZ	**Takapari Road**	**3.26**	**220**	P	Pn	03 59 57.2	-2.9
WAZ	**Wanganui**	**3.62**	**232**	P	Pn	04 00 04.0	-1.0
BFZ	**Birch Farm**	**3.62**	**211**	P	Pn	04 00 01.5	-3.5
WCZ	**Waipu Caves**	**3.88**	**294**	P	Pn	04 00 09.8	+1.3
MRZ	**Mangatainoka R**	**3.91**	**218**	P	Pn	04 00 05.9	-3.0
PKE	**Pukeiti**	**4.04**	**245**	P	Pn	04 00 12.3	+1.6
MTW	**Mount Morrison**	**4.34**	**214**	P	Pn	04 00 10.3	-4.5
KIW	**Kapiti Island**	**4.39**	**221**	P	Pn	04 00 11.7	-3.9
CAW	**Cannon Point**	**4.50**	**218**	P	Pn	04 00 12.5	-4.6
TCW	**Tory Channel**	**4.98**	**222**	P	Pn	04 00 18.8	-4.9
NNZ	**Nelson**	**5.49**	**227**	P	Pn	04 00 26.5	-4.1
QRZ	**Quartz Range**	**5.78**	**234**	P	Pn	04 00 31.8	-2.9
KHZ	**Kahutara**	**6.24**	**218**	P	Pn	04 00 35.4	-5.5
LTZ	**Lake Taylor**	**7.15**	**222**	P	Pn	04 00 49.2	-4.2

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*CSEM **12** 04:00:37.9±0.1, 3961N×41.11E, h10km, MD2.8, Error ellipse: s-maj=2.6km s-min=2.0km az=5.0*
*ISK **12** 04:00:37.8, 3963N×41.12E, h8km, MD2.8*
*DDA **12** 04:00:38.9, 3966N×4120E, h7km±2km, Md2.8*
*ISCJB **12** 04:00:39.2±0.8, 3967N±003×41.14E±004, h11km±5km, Error ellipse: s-maj=5.8km s-min=4.9km az=174.9*
ISC 12 04:00:39.6±0.6**, 3968N**±003×**4115E**±004**, h14**km±4km**, n11, σ0.96/21, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.28**	**35**	*e*PG	**Pg**	**04 00 44.9**	**-0.6**
EZM				*e*SG	**Sg**	**04 00 49.7**	**+0.1**
ERZM	**Erzurum**	**0.28**	**36**	*i* P	**Pg**	**04 00 45.2**	**-0.4**
ERZM				*i* S	**Sg**	**04 00 49.6**	**0.0**
KOPT	**Kop Dagi**	**0.61**	**304**	*i* P	**Pg**	**04 00 51.6**	**+0.1**
KOPT				*i* S	**Sg**	**04 01 00.8**	**+1.2**
HOMI	**Horasan**	**0.69**	**57**	*i* P	**Pg**	**04 00 51.6**	**-1.5**
HOMI				*i* S	**Sg**	**04 01 03.2**	**+1.1**
BNGL	**BINGOL**	**0.72**	**180**	*i* P	**Pg**	**04 00 52.9**	**-0.8**
BNGL				*i* S	**Sg**	**04 01 04.0**	**+0.8**
DDEM	**Demirkent**	**1.30**	**20**	*i* P	**Pn**	**04 01 03.0**	**-0.3**
DDEM				*i* S	**Sb**	**04 01 22.0**	**+1.7**
TUTA	**Tutak**	**1.31**	**102**	*i* P	**Pn**	**04 01 03.3**	**-0.2**
TUTA				*i* S	**Sb**	**04 01 21.4**	**+0.7**
AGRB	**Hanur-Agry**	**1.43**	**93**	*e*PN	**Pn**	**04 01 05.1**	**+0.1**
AGRB				*e*SN	**Sn**	**04 01 24.7**	**+1.2**
GUMT	**Gumushane**	**1.50**	**302**	*e*PN	**Pn**	**04 01 06.3**	**+0.2**
GUMT				*e*SN	**Sn**	**04 01 26.3**	**+0.9**
DAGI	**Agillar**	**1.52**	**22**	*i* P	**Pn**	**04 01 04.9**	**-1.4**
DAGI				*i* S	**Sn**	**04 01 23.6**	**-2.1**
PTK	**Pertek**	**1.57**	**241**	*e*PN	**Pn**	**04 01 05.8**	**-1.2**

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*CNRM **12** 05:13:21.8, 3691N×968W, h31km, MD3.6*
*CSEM **12** 05:13:26.1±0.4, 3637N×938W, h10km, ML3.2/5, Error ellipse: s-maj=9.1km s-min=5.0km az=73.0*
*NEIC **12** 05:13:27.6, 3674N×963W, h0km, ML2.1(LIS), MN2.7(MDD), After MDD.*
*MDD **12** 05:13:28.4±1.3, 3658N×979W, h30km, mbLg2.5/12, Error ellipse: s-maj=11.3km s-min=8.1km az=59.0, PRXIMO*
INMG 12 05:13:29.3±1.1**, 3663N×970W, h19**km±4km**, ML2.1, 3C, Error ellipse: s-maj=4.7km s-min=2.8km az=56.0, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.86**	**54**	*i* P	Pb	05 13 45.0	-0.7
PFVI				*e*S	Sb	05 13 56.6	-0.2
PFVI				A		05 13 57.2	
	26nm,0.2s						
PFVI	**Vila Bisbo**	**0.86**	**54**	⇑P	Pb	05 13 45.0	-0.7
PFVI				S	Sb	05 13 56.6	-0.2
	13nm,0.2s						
MORF	**Marmelete**	**1.08**	**51**	*e*P	Pb	05 13 48.0	-1.4
MORF				*e*S	Sb	05 14 02.2	-0.9
MORF				A		05 14 02.7	
	50nm,0.3s						
MORF	**Marmelete**	**1.08**	**51**	P	Pb	05 13 48.0	-1.3
MORF				S	Sb	05 14 02.2	-0.9
	50nm,0.3s						
PTEO	**Sao Teotonio**	**1.20**	**40**	*e*P	Pn	05 13 49.7	-1.4
PTEO				*e*S	Sb	05 14 05.0	-1.7
PTEO				A		05 14 05.5	
	20nm,0.4s						
PTEO	**Sao Teotonio**	**1.20**	**40**	*e*P	Pn	05 13 49.7	-1.4
PTEO				*e*S	Sb	05 14 05.0	-1.7
	20nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.54**	**66**	*i* P	Pn	05 13 54.4	-1.4
PBDV				*e*S	Sn	05 14 12.8	-2.5
PBDV				A		05 14 17.3	
	9.9nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.54**	**66**	⇑P	Pn	05 13 54.4	-1.4
PBDV				S	Sn	05 14 12.8	-2.5
	9.9nm,0.3s						
PVAQ	**Vaqueiros**	**1.76**	**63**	*i* Pn	Pn	05 13 57.4	-1.4
PVAQ				*e*Sn	Sn	05 14 18.2	-2.6
PVAQ				A		05 14 20.2	
	18nm,0.1s						
PVAQ	**Vaqueiros**	**1.76**	**63**	⇑Pn	Pn	05 13 57.4	-1.4
PVAQ				Sn	Sn	05 14 18.2	-2.6
	18nm,0.1s						
EGRO	**El Granado**	**1.99**	**62**	P	Pn	05 14 00.4	-1.5
	1.2nm,0.0s,SNR=7.9						
EGRO				S	Sn	05 14 23.3	-3.0
	13nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.99**	**62**	P	Pn	05 14 00.4	-1.5
	1.2nm,0.0s,SNR=7.9						
EGRO				S	Sn	05 14 23.3	-3.0
	13nm,0.1s,SNR=7.9						
MOE	**Montemor**	**2.17**	**29**	*e*Sn	Sn	05 14 28.8	-2.1
EVO	**Evora**	**2.33**	**35**	*e*Pn	Pn	05 14 04.8	-1.8
EVO				*e*Sn	Sn	05 14 31.6	-3.0
EVO				A		05 14 33.3	
	12nm,0.2s						
EVO	**Evora**	**2.33**	**35**	*e*Pn	Pn	05 14 04.8	-1.8
EVO				*e*Sn	Sn	05 14 31.6	-3.0
	12nm,0.2s						
PMAFR	**Mafra**	**2.35**	**8**	*e*Pn	Pn	05 14 05.1	-1.8
PMAFR				*e*Sn	Sn	05 14 32.0	-3.2
PMAFR				A		05 14 34.4	
	31nm,0.1s						
PMAFR	**Mafra**	**2.35**	**8**	Pn	Pn	05 14 05.1	-1.8
PMAFR				Sn	Sn	05 14 32.0	-3.2
	31nm,0.1s						
PBAR	**Barrancos**	**2.62**	**53**	*e*Pn	Pn	05 14 09.0	-1.6
PBAR				*e*Sn	Sn	05 14 38.6	-3.3
PBAR				A		05 14 42.8	
	3.4nm,0.1s						
PBAR	**Barrancos**	**2.62**	**53**	Pn	Pn	05 14 09.0	-1.6
PBAR				Sn	Sn	05 14 38.6	-3.3
	3.4nm,0.1s						
EMIN	**Mina Concepcio**	**2.67**	**64**	P	Pn	05 14 09.4	-1.9
	0.6nm,0.1s,SNR=9.9						
EMIN				S	Sn	05 14 40.4	-2.7
	1.5nm,0.1s						
EMIN	**Mina Concepcio**	**2.67**	**64**	P	Pn	05 14 09.4	-1.9
	0.6nm,0.1s,SNR=9.9						
EMIN				S	Sn	05 14 40.4	-2.7
	1.5nm,0.1s						
PESTR	**Estremoz**	**2.79**	**36**	*e*Pn	Pn	05 14 11.0	-2.0
PESTR				*e*Sn	Sn	05 14 42.8	-3.3
EBAD	**Badajoz**	**3.01**	**44**	P	Pn	05 14 14.0	-1.9
	0.8nm,0.0s,SNR=71						
EBAD				S	Sn	05 14 48.3	-3.2
	3.4nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.01**	**44**	P	Pn	05 14 14.0	-1.9
	0.8nm,0.0s,SNR=71						
EBAD				S	Sn	05 14 48.3	-3.1
	3.4nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.09**	**84**	P	Pn	05 14 15.5	-1.6
	2.5nm,0.1s,SNR=7.9						
ESPR				S	Sn	05 14 50.2	-3.4
	32nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.09**	**84**	P	Pn	05 14 15.5	-1.6
	2.5nm,0.1s,SNR=7.9						
ESPR				S	Sn	05 14 50.2	-3.3
	32nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**3.34**	**32**	*e*Pn	Pn	05 14 18.7	-1.8
PMRV				*e*Sn	Sn	05 14 55.5	-4.1
PMRV				A		05 14 57.8	
	5.5nm,0.3s						
PMRV	**Marv??o**	**3.34**	**32**	*e*Pn	Pn	05 14 18.7	-1.8
PMRV				*e*Sn	Sn	05 14 55.5	-4.1
	5.5nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EJIF	Jimena Fronter	3.41	92	P	Pn	05 14 19.4	-2.0
	3.5nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	3.65	28	*e*Pn	Pn	05 14 23.4	-1.4
PCBR				*e*Sn	Sn	05 15 03.4	-4.0
PCBR				A		05 15 06.0	
	2.8nm,0.4s						
PCBR	Castelo Branco	3.65	28	*e*Pn	Pn	05 14 23.4	-1.4
PCBR				*e*Sn	Sn	05 15 03.4	-4.0
	2.8nm,0.4s						
EMIJ	Mijas	3.96	89	S	Sn	05 15 10.8	-4.2
	0.3nm,0.1s,SNR=7.9						
MTE	Manteigas	4.13	23	*e*Pn	Pn	05 14 29.8	-1.5
MTE				*e*Sn	Sn	05 15 15.2	-3.9
PVIS	Viseu	4.32	18	*e*Sn	Sn	05 15 19.8	-4.0
PVIS				A		05 15 21.8	
	5.0nm,0.3s						
PVIS	Viseu	4.32	18	*e*Sn	Sn	05 15 19.8	-4.0
	5.0nm,0.3s						
EADA	Adamuz	4.36	68	P	Pn	05 14 32.6	-1.9
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	05 15 19.2	-5.5
EADA	Adamuz	4.36	68	P	Pn	05 14 32.6	-1.8
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	05 15 19.3	-5.5
	1.8nm,0.1s,SNR=7.9						
EADA	Adamuz	4.36	68	P	Pn	05 14 32.6	-1.8
EADA				S	Sn	05 15 19.2	-5.5
EBAN	Banos Encina	4.95	70	S	Sn	05 15 33.8	-5.5
	1.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	4.99	24	*e*Pn	Pn	05 14 41.4	-1.7
MVO				*e*Sn	Sn	05 15 35.7	-4.5
MVO				A		05 15 38.1	
	2.4nm,0.2s						
MVO	Moncorvo	4.99	24	*e*Pn	Pn	05 14 41.4	-1.7
MVO				*e*Sn	Sn	05 15 35.7	-4.5
	2.4nm,0.2s						
KIB	El Ksiba	5.04	142	*i* P	Pn	05 14 38.0	-5.9
KIB				*i* S	Sn	05 15 34.0	-7.6
PCAB	Cabril	5.24	14	*e*Pn	Pn	05 14 44.6	-2.0
PCAB				*e*Sn	Sn	05 15 40.6	-5.9
PCAB				A		05 15 43.6	
	2.7nm,0.1s						
PCAB	Cabril	5.24	14	*e*Pn	Pn	05 14 44.6	-2.0
PCAB				*e*Sn	Sn	05 15 40.6	-5.9
	2.7nm,0.1s						
CZD	Col de Zad	5.24	132	*e*P	Pn	05 14 40.0	-6.7
CZD				*i* S	Sn	05 15 38.0	-8.6
ELOB	Lobios	5.39	13	P	Pn	05 14 46.0	-2.6
	3.6nm,0.9s,SNR=5.9						
ELOB				S	Sn	05 15 42.7	-7.3
	0.5nm,0.1s,SNR=7.9						
EQES	Quesada	5.42	75	P	Pn	05 14 47.5	-1.5
	SNR=12						
EQES				S	Sn	05 15 47.0	-3.8
	1.4nm,0.2s						
EQES	Quesada	5.42	75	P	Pn	05 14 47.5	-1.5
	0.3nm,0.1s,SNR=12						
EQES				S	Sn	05 15 47.0	-3.9
	1.4nm,0.2s						
ESDC	Sonseca Array	5.45	54	P	Pn	05 14 47.9	-1.6
	SNR=11						
ESDC	Sonseca Array	5.45	54	P	Pn	05 14 47.9	-1.6
	0.5nm,0.3s,baz=240,slow=13,SNR=11						
ESDC				S	Sn	05 15 47.1	-4.5
	baz=239,slow=24,SNR=7.9						
PBRG	Braganca	5.66	23	*e*Sn	Sn	05 15 50.8	-6.0
ECAL	Calabor	5.78	22	P	Pn	05 14 52.1	-2.0
	0.4nm,0.2s,SNR=7.9						
ECAL				S	Sn	05 15 53.7	-6.2
	3.1nm,0.5s,SNR=7.9						
EMAZ	Mazaricos	6.34	5	P	Pn	05 14 58.3	-3.4
	0.7nm,0.2s,SNR=7.9						
EMAZ				S	Sn	05 16 04.4	-9.1
	0.6nm,0.2s,SNR=7.9						
ZFT	Errachidia	6.36	134	*e*P	Pn	05 14 56.0	-6.1
ZFT				*e*S	Sn	05 16 06.0	-8.2

*CSEM **12** 05:32:44.9, 33.13N×35.76E, h3km, ML2.9, After GRAL*

GRAL 12 05:32:44.9±0.3**, 33.13N×35.76E, h4**km±2km**, MD2.9, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	Rachaya	0.35	8	*e*P	Pg	05 32 51.6	-0.1
RCY				*e*S	Sg	05 32 56.6	+0.2
MATL	Matirih	0.51	315	*e*P	Pg	05 32 54.1	-0.5
BHL	Bhannes	0.78	353	*e*P	Pg	05 32 58.8	-1.0
BHL				*e*S	Sg	05 33 09.1	-0.7
HWQ	Hawqa	1.15	8	*e*P	Pg	05 33 05.5	-1.5
HWQ				*e*S	Sg	05 33 20.7	-1.3

*SZGRF **12** 06:28:25.7, 50.02N×152.20E, h33km, mb5.2, Northwest of Kuril Islands, Russia*
*KRSC **12** 06:29:17.6±2.4, 50.57N×151.64E, h589km±28km, ML5.6*
*SKHL **12** 06:29:19.9±0.2, 51.20N×151.10E, h517km±21km, mb5.6/8, mbh5.6/2, mbv5.6/4, msh5.2/5, msha5.5/7*
*BGS **12** 06:29:20.4±1.9, 51.11N×152.72E, h500km, mb4.7*
*DJA **12** 06:29:20, 51.36N×151.01E, h490km, mb4.8/11*
*BJI **12** 06:29:22.8, 51.19N×150.73E, h518km, mB4.7, mb4.8*
*ISCJB **12** 06:29:22.6±0.2, 51.31N±0.03×150.64E±0.02, h500km±2km, mb4.7/205, Error ellipse: s-maj=4.4km s-min=2.0km az=168.4*
*NEIC **12** 06:29:23.6±0.3, 51.27N×150.60E, h502km±3km, mb4.6/104, Error ellipse: s-maj=3.7km s-min=2.3km az=164.0*
*MOS **12** 06:29:23.6±0.7, 51.26N×150.71E, h519km, mb4.7/88, Error ellipse: s-maj=8.1km s-min=4.4km az=103.0*
*IDC **12** 06:29:24.6±0.6, 51.27N×150.63E, h516km±6km, mb4.1/29, mb1 4.2/33, mb1mx4.2/35, mbtmp4.1/33, Error ellipse: s-maj=8.2km s-min=6.0km az=162.0*

ISC 12 06:29:23.4±0.2**, 51.31N**±0.03×**150.58E**±0.02**, h495**km±2km**, h509**km±3.8km**: pP-P, n870, σ0.73**/907**, mb4.7**/205**, 196C-179D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.55	98	*e*P	P	06 30 37.0	-0.8
SKR				*e*S	S	06 31 37.0	-1.6
SKR				pmax	pmax		
	comp=Z,920nm,0.5s						
SKR				pmax	pmax		
	comp=N,170nm,0.7s						
SKR				pmax	pmax		
	comp=E,280nm,0.7s						
SKR				pmax	pmax		
	comp=N,1μm,2.0s						
SKR				pmax	pmax		
	comp=E,1μm,2.0s						
SKR				pmax	pmax		
	comp=Z,3μm,2.0s						
SKR				smax			
	comp=N,2μm,2.0s						
SKR				smax			
	comp=E,3μm,4.0s						
SKR				smax			
	comp=N,470nm,0.7s						
SKR				smax			
	comp=E,370nm,0.7s						
SKR	Severo-Kuril's	3.55	98	*e*P	P	06 30 37.0	-0.8
SKR				AMB	AMB	06 30 38.0	
	comp=E,3μm,2.0s						
SKR				AMB	AMB	06 30 38.0	
	comp=E,170nm,0.7s						
SKR				AMB	AMB	06 30 38.0	
	comp=E,280nm,0.7s						
SKR				AMB	AMB	06 30 38.0	
	comp=E,920nm,0.5s						
SKR				AMB	AMB	06 30 38.0	
	comp=E,1μm,2.0s						
SKR				AMB	AMB	06 30 38.0	
	comp=E,1μm,2.0s						
SKR				*e*S	S	06 31 37.0	-1.6
SKR				A		06 31 39.0	
	comp=E,3μm,4.0s						
SKR				A		06 31 39.0	
	comp=E,1μm,4.0s						
SKR				A		06 31 39.0	
	comp=E,2μm,2.0s						
SKR				A		06 31 39.0	
	comp=E,3μm,4.0s						
SKR				A		06 31 43.5	
	comp=E,470nm,0.5s						
SKR				A		06 31 43.5	
	comp=E,370nm,0.5s						
SKR				A		06 31 43.5	
	comp=E,190nm,0.5s						
MIPR	Malaya Ipel'ka	3.96	73	*e*P	P	06 30 41.7	+0.8
MIPR				*e*S	S	06 31 43.7	-0.6
PEA0B	Petropavlovsk-	4.74	65	*e*P	P	06 30 47.5	0.0
PEA0B				*e*S	S	06 31 56.7	+0.4
PETK	Petropavlovsk-	4.74	65	P	P	06 30 48.0	+0.5
	comp=E,4.4nm,0.3s,baz=229,slow=4.3,SNR=63						
PETK				S	S	06 31 57.0	+0.7
	comp=E,1.7nm,0.3s,baz=182,slow=10,SNR=2.6						
GRL	Gorelyy	4.80	72	S	S	06 31 53.3	-4.1
TYV	Tymovskoe	5.01	268	⇓*i*P	P	06 30 52.0	+1.9
TYV				AMB	AMB	06 30 54.0	
	comp=E,264nm,1.0s						
TYV				AMB	AMB	06 30 54.0	
	comp=E,152nm,1.0s						
TYV				AMB	AMB	06 30 54.0	
	comp=E,132nm,0.8s						
TYV				*e*S	S	06 32 04.0	+3.0
TYV				A		06 32 07.0	
	comp=E,200nm,1.6s						
TYV				A		06 32 07.0	
	comp=E,280nm,1.6s						
RUS	Russkaya	5.04	74	*i* P	P	06 30 50.0	-0.3
RUS				*e*S	S	06 31 58.1	-3.3
GNL	Ganaly	5.09	59	*e*P	P	06 30 51.7	+1.0
OKH	Okha	5.19	299	⇑*i*P	P	06 30 54.4	+2.8
OKH				⇑*i*P		06 30 55.0	
OKH				AMB	AMB	06 30 55.2	
	comp=E,2μm,2.0s						
OKH				AMB	AMB	06 30 55.4	
	comp=E,2μm,0.5s						
OKH				⇓*i*S	S	06 32 09.8	+6.0
OKH				*e*S	S	06 32 09.9	+6.1
OKH				A		06 32 10.2	
	comp=E,2μm,4.0s						
OKH				A		06 32 10.2	
	comp=E,2μm,3.2s						
PET	Petropavlovsk	5.26	68	⇑*i*P	P	06 30 52.6	+0.4
PET				*e*S	S	06 32 03.3	-1.7
PET				pmax	pmax		
	comp=Z,200nm,0.9s						
PET				pmax	pmax		
	comp=Z,196nm,0.9s						
PET				smax			
	comp=E,800nm,4.1s						
PET				smax			
	comp=E,2μm,1.2s						
PET				smax			
	comp=N,2μm,0.7s						
PET				smax			
	comp=N,2μm,1.1s						
PET				smax			
	comp=E,2μm,0.7s						
PET				MLR	MLR		
	comp=Z,700nm,4.0s						
PET				MLR	MLR		
	comp=Z,300nm,5.0s						
PET	Petropavlovsk	5.26	68	*e*P	P	06 30 52.7	+0.5
PET				*e*S	S	06 32 01.7	-3.3
PET	Petropavlovsk	5.26	68	*e*P	P	06 30 52.6	+0.3
PET				*e*S	S	06 32 01.4	-3.6
NLC	Nalytchevo	5.70	67	*e*P	P	06 30 56.2	-0.2
NLC				*e*S	S	06 32 08.5	-4.1
UGL	Uglegorsk	5.91	251	⇑*i*P	P	06 31 01.8	+3.3
UGL				⇑*i*P		06 31 01.8	
UGL				AMB	AMB	06 31 02.5	
	comp=Z,2μm,1.2s						
UGL				AMB	AMB	06 31 03.0	
	comp=Z,636nm,0.6s						
UGL				AMB	AMB	06 31 03.0	
	comp=Z,747nm,0.6s						
UGL				AMB	AMB	06 31 03.0	
	comp=Z,1μm,0.8s						
UGL				*e*S	S	06 32 17.0	+0.7
UGL				A		06 32 19.0	
	comp=Z,196nm,0.4s						
UGL				A		06 32 22.0	
	comp=Z,700nm,5.0s						
KII	Karymskiy	6.05	60	*e*P	P	06 31 00.6	+0.9
KII				*e*S	S	06 32 16.0	-2.7
SPN	Mys Shipunski	6.08	69	*e*P	P	06 30 58.5	-1.5
SPN				*e*S	S	06 32 11.9	-7.3
KUR	Kuril'sk	6.34	198	*e*P	P	06 30 57.5	-5.3
KUR				AMB	AMB	06 30 59.1	
	comp=Z,80nm,0.4s						
KUR				AMB	AMB	06 30 59.1	
	comp=Z,240nm,0.4s						
KUR				*e*S	S	06 32 18.5	-5.7
KUR				A		06 32 26.5	
	comp=Z,720nm,1.0s						
KUR				A		06 32 26.5	
	comp=Z,380nm,1.0s						
NKL	Nikolayevsk	6.36	291	*i* P	P	06 31 02.8	0.0
NKL				AMB	AMB	06 31 03.3	
	comp=Z,440nm,0.4s						
NKL				AMB	AMB	06 31 03.3	
	comp=Z,90nm,0.5s						
NKL				AMB	AMB	06 31 03.3	
	comp=Z,130nm,0.5s						
NKL				AMB	AMB	06 31 03.5	
	comp=Z,500nm,2.0s						
NKL				AMB	AMB	06 31 03.5	
	comp=Z,800nm,2.0s						
NKL				*e*S	S	06 32 26.0	+1.8
NKL				A		06 32 27.0	
	comp=Z,170nm,1.1s						
NKL				A		06 32 27.0	
	comp=Z,130nm,1.5s						
NKL				A		06 32 28.0	
	comp=Z,800nm,2.5s						
NKL				A		06 32 28.0	
	comp=Z,1μm,4.0s						
YSS	Yuzh-Sakhalins	6.73	233	α *i*P	P	06 31 08.8	+2.1
YSS				*i* S	S	06 32 34.0	+2.8
YSS				pmax	pmax		
	comp=N,300nm,0.7s						
YSS				pmax	pmax		
	comp=Z,480nm,0.7s						
YSS				pmax	pmax		
	comp=E,320nm,0.8s						
YSS				smax			
	comp=N,90nm,1.0s						
YSS				smax			
	comp=E,90nm,1.0s						
YSS				smax			
	comp=E,1μm,3.0s						
YSS				smax			
	comp=Z,1μm,3.0s						
YSS	Yuzh-Sakhalins	6.73	233	⇑*i*P	P	06 31 08.8	+2.1
YSS				⇑*i*P		06 31 08.8	
YSS				AMB	AMB	06 31 09.4	
	comp=Z,300nm,0.7s						
YSS				AMB	AMB	06 31 09.4	
	comp=Z,320nm,0.8s						
YSS				AMB	AMB	06 31 09.4	
	comp=Z,480nm,0.7s						
YSS				*i* S	S	06 32 34.0	+2.8
YSS				A		06 32 35.5	
	comp=Z,90nm,1.0s						
YSS				A		06 32 36.0	
	comp=Z,1μm,3.0s						
YSS	Yuzh-Sakhalins	6.73	233	*e*P	P	06 31 08.6	+2.0
TUMR	Tumrok	6.98	51	*e*P	P	06 31 10.3	+1.4
TUMR				*e*S	S	06 32 33.5	-2.1
SRDR	Sredinnyy	7.38	44	*e*P	P	06 31 14.5	+1.6
SRDR				*e*S	S	06 32 40.5	-2.4
KPT	Kopyto	7.39	47	*e*P	P	06 31 13.4	+0.3
KIRR	Kirishev	7.44	47	*e*P	P	06 31 14.5	+0.9
KIRR				*e*S	S	06 32 41.6	-2.5
MKZ	Mys Kozlova	7.48	60	*e*P	P	06 31 12.4	-1.7
MKZ				*e*S	S	06 32 37.2	-7.8
BZGR	Bezymyannyi-Gr	7.59	48	*e*P	P	06 31 16.9	+1.7
BZGR				*e*S	S	06 32 44.3	-2.7
ZLN	Zelenaya	7.69	48	*e*P	P	06 31 17.5	+1.4
ZLN				*e*S	S	06 32 45.6	-3.2
KRSR	Krestovskiy	7.69	46	*e*P	P	06 31 16.5	+0.3
KRSR				*e*S	S	06 32 44.1	-4.8
YUK	Yuzh-Kuril'sk	7.94	205	*e*P	P	06 31 18.0	-1.1
YUK				*e*S	S	06 32 50.1	-3.8
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,120nm,0.5s						
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,460nm,0.5s						
YUK	Yuzh-Kuril'sk	7.94	205	*e*P	P	06 31 18.0	-1.1
YUK				AMB	AMB	06 31 19.0	
	comp=E,190nm,0.5s						
YUK				AMB	AMB	06 31 19.0	
	comp=E,120nm,0.5s						
YUK				AMB	AMB	06 31 19.0	
	comp=E,380nm,0.5s						
YUK				*e*S	S	06 32 50.1	-3.8
YUK				A		06 32 54.5	
	comp=E,380nm,0.5s						
YUK				A		06 32 54.5	
	comp=E,460nm,0.5s						
YUK				A		06 32 59.7	
	comp=E,2μm,1.0s						
YUK				A		06 32 59.7	
	comp=E,2μm,2.0s						
KBTR	Krutoberegovo	8.75	51	*i* P	P	06 31 25.3	-1.9
ASAJ	Asahikawa	8.98	220	P	P	06 31 29.9	+0.1
	comp=E,9.2nm,0.3s,baz=19,slow=4.6,SNR=62						
ASAJ				S	S	06 33 12.6	-1.2
	baz=343,slow=19,SNR=3.7						
ASAJ	Asahikawa	8.98	220	P	P	06 31 30.0	+0.1
ASAJ				S	S	06 33 12.6	-1.2
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
HABR	Khabarovsk	10.41	260	*c* *i*P	P	06 31 48.0	+3.0
HABR				*e*S	S	06 33 45.7	+4.2
HABR				pmax	pmax		
	comp=Z,227nm,1.2s						
HABR				MLR	MLR		
	comp=Z,149nm,14.0s						
ERM	Erimo	10.60	212	*c* *i*P	P	06 31 44.7	-2.3
ERM	Erimo	10.60	212	*e*P	P	06 31 45.4	-1.7
TEY	Ternei	11.24	241	*e*P	P	06 31 53.4	-0.4
TEY				*e*rx	rx	06 31 53.4	
SEY	Seymchan	11.70	4	⇑*e*P	P	06 31 59.1	+0.8
KLR	Kul'dur	12.23	268	*e*P	P	06 32 02.7	-1.5
KLR				*e*S	S	06 34 17.6	+0.8
KLR				pmax	pmax		
	comp=E,62nm,1.6s						
KLR				pmax	pmax		
	comp=Z,74nm,1.6s						
KLR				smax			
	comp=N,45nm,2.0s						
KLR				smax			
	comp=E,160nm,2.0s						
FX1	Attu Island--F	13.96	75	P	P	06 32 22.0	-0.5
	comp=E,21nm,0.3s,baz=274,slow=4.1,SNR=77						
FX1	Attu Island--F	13.96	75	P	P	06 32 22.0	-0.5
FX1				pmax	pmax		
	comp=Z,21nm,0.3s						
FX1	Attu Island--F	13.96	75	P	P	06 32 22.0	-0.5
ZEA	Zeya	14.39	289	*e*P	P	06 32 24.3	-2.7
ZEA				AMB	AMB	06 32 27.4	
	comp=Z,26nm,0.8s						
ZEA				*e*S	S	06 34 55.0	-3.5
ZEA				A		06 34 59.0	
	comp=Z,1μm,5.0s						
SMY	Shemya	14.54	75	*e*P	P	06 32 27.9	-0.7
MDJ	Mudanjiang	15.54	253	P	P	06 32 38.2	-1.0
MDJ				S	S	06 35 18.3	-2.4
MDJ				PCP	PcP	06 37 05.6	-1.6
MDJ				SCP	ScP	06 39 52.5	-1.6
MDJ				PCS	PcS	06 40 42.0	-0.7
MDJ				SCS	ScS	06 43 31.4	-1.3
MDJ				AMB	AMB		
	comp=Z,15nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,38nm,3.0s						
YAK	Yakutsk	15.64	321	*d* *i*P	P	06 32 40.1	+0.2
YAK				*e*S	S	06 35 21.5	-0.6
YAK				pmax	pmax		
	comp=Z,60nm,0.9s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				pmax	pmax		
	comp=N,20nm,1.4s						
YAK				smax			
	comp=N,229nm,1.6s						
YAK				smax			
	comp=E,168nm,1.5s						
YAK	Yakutsk	15.64	321	*e*P	P	06 32 40.3	+0.4
	comp=E,81nm,0.7s						
YAK				*e*S	S	06 35 22.4	+0.3
CLNS	Chul'man	16.00	300	*e*P	P	06 32 45.8	+2.0
CLNS				*e*S	S	06 35 34.0	+4.8
CLNS				pmax	pmax		
	comp=Z,63nm,1.1s						
CLNS				pmax	pmax		
	comp=E,40nm,1.1s						
CLNS				pmax	pmax		
	comp=N,27nm,1.2s						
CLNS				smax			
	comp=E,63nm,1.6s						
CLNS				smax			
	comp=N,128nm,1.4s						
MAJO	Matsushiro	17.20	216	*e*P	P	06 32 55.3	-1.3
MAJO				pmax	pmax		
	comp=Z,150nm,0.6s						
MAJO	Matsushiro	17.20	216	*e*P	P	06 32 55.3	-1.3
	comp=Z,150nm,0.6s						
MAT	Matsushiro	17.20	216	P	P	06 32 55.2	-1.4
MAT				*e*S	S	06 35 50.5	-0.5
MJAR	Matsushiro Arr	17.20	216	P	P	06 32 55.2	-1.3
	comp=Z,13nm,0.3s,baz=17,slow=11,SNR=120						
MJAR				ScP	ScP	06 39 54.0	-3.6
	comp=Z,0.3nm,0.3s,baz=315,slow=0.6,SNR=5.8						
BILL	Bilibino	18.45	19	*e*P	P	06 33 08.4	+0.8
BILL				*i* S	S	06 36 13.9	+3.4
BILL				pmax	pmax		
	comp=Z,38nm,1.3s						
BILL	Bilibino	18.45	19	*e*P	P	06 33 08.2	+0.6
	comp=Z,26nm,0.9s						
CN2	Changchun	18.49	256	*e*P	P	06 33 06.6	-1.7
KSRS	Korea Array	21.19	238	P	P	06 33 33.9	+0.9
	comp=Z,12nm,0.8s,mb4.5,baz=39,slow=9.6,SNR=25						
KSRS				PcP	PcP	06 37 16.6	-0.6
	comp=Z,5.7nm,0.7s,baz=352,slow=1.7,SNR=15						
KSRS				ScP	ScP	06 40 04.3	-2.4
	comp=Z,0.9nm,0.7s,baz=343,slow=1.7,SNR=4.6						
KSRS	Korea Array	21.19	238	P	P	06 33 33.9	+0.9
KSRS						06 37 16.6	
KSRS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
KSRS				pmax	pmax		
	comp=N,1.0nm,0.7s						
BOD	Bodaibo	21.97	302	⇑*i*P	P	06 33 39.3	-0.5
BOD				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
TIXI	Tiksi	22.62	342	⇑*e*P	P	06 33 45.1	-0.3
TIXI				pmax	pmax		
	comp=Z,35nm,1.9s,mb4.5						
TIXI	Tiksi	22.62	342	*e*P	P	06 33 45.5	+0.1
	comp=Z,27nm,1.2s,mb4.5						
BJI	Beijing	26.31	258	P	P	06 34 17.3	-1.3
BJI				S	S	06 38 14.2	-1.6
BJI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.3						
BJI				AMB	AMB		
	comp=Z,116nm,5.3s						
ULN	Ulaanbaatar	28.12	280	P	P	06 34 35.8	+1.4
	SNR=6.6						
ULN	Ulaanbaatar	28.12	280	*e*P	P	06 34 35.6	+1.3
ULN				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.6						
ULN	Ulaanbaatar	28.12	280	*e*P	P	06 34 35.6	+1.2
	comp=Z,16nm,0.7s,mb4.6						
ULN				*e*pP		06 35 60.0	
SONM	Songino Array	28.54	281	P	P	06 34 39.0	+1.0
	comp=Z,11nm,0.5s,mb4.6,baz=68,slow=8.0,SNR=130						
SONM				PcP	PcP	06 37 32.8	-0.9
	comp=Z,3.4nm,0.6s,baz=79,slow=1.6,SNR=9.1						
SONM				S	S	06 38 50.0	-0.4
	comp=Z,0.5nm,0.8s,baz=41,slow=13,SNR=2.3						
SONM				ScP	ScP	06 40 24.5	-3.0
	comp=Z,1.5nm,0.8s,baz=73,slow=1.6,SNR=5.0						
SONM	Songino Array	28.54	281	P	P	06 34 39.0	+1.0

SONM 06 37 32.8
SONM S **S** **06 38 50.0 -0.4**
SONM pmax pmax
comp=Z,11nm,0.5s
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM smax
comp=N,1.0nm,0.8s
SONM pmax pmax
comp=N,2.0nm,0.8s
HHC Hu-ho-hao-te 28.70 264 *e*P **P** **06 34 39.3 -0.2**
HHC XP sP 06 37 03.5 +2.6
HHC *e*S **S** **06 38 51.1 -1.9**
HHC PCS PcS 06 41 16.8 -0.6
HHC AMB AMB
comp=Z,9.0nm,0.7s,mb4.3
HHC AMB AMB
comp=Z,96nm,4.6s
TLY Talaya 28.83 289 P **P** **06 34 42.8 +2.2**
SNR=7.3
TLY Talaya 28.83 289 *e*P **P** **06 34 41.7 +1.2**
TLY pmax pmax
comp=Z,37nm,1.0s,mb4.8
TLY Talaya 28.83 289 *e*P **P** **06 34 41.5 +0.9**
comp=Z,30nm,0.9s,mb4.7
ZAK Zakamensk 29.48 287 *e*P **P** **06 34 47.0 +0.8**
ZAK pmax pmax
comp=Z,23nm,1.0s,mb4.6
JOW Kunigami 29.73 223 P **P** **06 34 48.0 -0.6**
comp=Z,9.3nm,0.5s,mb4.5,baz=38,slow=27,SNR=5.4
MOY Mondy 30.40 290 *e*P **P** **06 34 56.2 +2.0**
MOY pmax pmax
comp=Z,3.0nm,1.5s,mb3.5
SVW2 Sparrevohn 30.64 50 *e*P **P** **06 34 56.1 0.0**
CHUM Lake Minchumin 31.90 45 *e*P **P** **06 35 06.9 +0.1**
comp=Z,18nm,0.9s,mb4.5
PPLA Purkeypile 32.05 47 *e*P **P** **06 35 08.1 0.0**
comp=Z,18nm,1.0s,mb4.5
BPAW Bear Paw Mtn. 32.47 44 *e*P **P** **06 35 11.3 -0.4**
comp=Z,16nm,0.8s,mb4.5
OHAK Old Harbor 32.49 57 *e*P **P** **06 35 10.8 -1.2**
KTH Kantishna Hill 32.55 45 *e*P **P** **06 35 12.4 0.0**
comp=Z,48nm,1.2s,mb4.8
KDAK Kodiak Island 32.73 56 P **P** **06 35 11.9 -2.1**
comp=Z,26nm,0.6s,mb4.8,baz=292,slow=5.0,SNR=79
KDAK PcP PcP 06 37 42.8 -2.0
comp=Z,4.4nm,0.7s,baz=319,slow=9.3,SNR=3.2
KDAK S **S** **06 39 50.4 -4.2**
comp=Z,9.7nm,0.9s,baz=127,slow=22,SNR=6.4
KDAK ScP ScP 06 40 38.5 -2.8
comp=Z,8.8nm,1.0s,baz=138,slow=8.9,SNR=5.4
KDAK Kodiak Island 32.73 56 *e*P **P** **06 35 12.9 -1.1**
comp=Z,361nm,2.4s,mb5.4
MCK McKinley 33.41 45 *e*P **P** **06 35 19.5 -0.2**
MCK pmax pmax
comp=Z,21nm,0.7s,mb4.7
MCK McKinley 33.41 45 *e*P **P** **06 35 19.5 -0.2**
comp=Z,21nm,0.7s,mb4.7
COLA College 33.74 43*c i*P **P** **06 35 22.3 -0.2**
COLA College 33.74 43 *e*P **P** **06 35 22.3 -0.2**
comp=Z,37nm,0.8s,mb4.9
XAN Xi'an 34.60 256 P **P** **06 35 30.1 0.0**
XAN AP 06 36 55.9
XAN PP PP 06 37 09.2 +5.4
XAN S **S** **06 40 21.9 -1.7**
XAN SCP ScP 06 40 46.6 -1.8
XAN XS sS 06 43 03.8 +0.8
XAN SS SS 06 43 23.2 0.0
XAN AMB AMB
comp=Z,7.0nm,0.9s,mb4.1
XAN AMB AMB
comp=Z,37nm,19.2s
HVS Khovu-Aksy 34.85 293⇓ *e*P **P** **06 35 33.4 +1.4**
HVS pmax pmax
comp=Z,225nm,0.9s,mb5.6
PAX Paxson 35.08 46 *e*P **P** **06 35 32.6 -1.1**
PAX pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
PAX Paxson 35.08 46 *e*P **P** **06 35 32.6 -1.1**
comp=Z,3.7nm,0.7s,mb3.9
MENT Mentasta 35.87 45 *e*P **P** **06 35 39.6 -0.7**
LZH Lanzhou 36.39 264⇑ P **P** **06 35 46.3 +1.3**
LZH AP pP 06 37 13.0 +0.6
LZH PP PP 06 37 22.0 -0.8
LZH XP sP 06 38 16.5 +7.6
LZH *e*S **S** **06 40 50.5 0.0**
LZH XS sS 06 43 33.1 +2.0
LZH SS SS 06 43 50.0 -7.9
LZH AMB AMB
comp=Z,50nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,184nm,4.9s
EGAK Eagle 36.59 42 *e*P **P** **06 35 45.2 -0.9**
comp=Z,30nm,0.9s,mb4.7
GTA Gaotai 36.89 271 P **P** **06 35 50.5 +1.4**
GTA AP pP 06 37 21.8 +5.1
GTA PCP PcP 06 37 57.3 -0.2
GTA XP sP 06 38 20.4 +7.2
GTA SCP ScP 06 40 57.9 +1.1
GTA S **S** **06 41 01.1 +3.3**
GTA PCS PcS 06 41 47.2 +0.8
GTA SS SS 06 44 04.1 -3.2
GTA AMB AMB
comp=Z,18nm,0.9s,mb4.5
GTA AMB AMB
comp=Z,94nm,4.8s
DAWY Dawson 37.49 43 *e*P **P** **06 35 53.0 -0.7**
ZAA0 Zalesovo Array 38.72 300 *e*P **P** **06 36 04.0 +0.1**
ZAA0 *e*PcP PcP 06 38 01.7 -1.2
ZALV Zalesovo Beam 38.72 300 P **P** **06 36 03.9 +0.1**
comp=Z,31nm,0.5s,mb5.0,baz=62,slow=7.4,SNR=117
ZALV PcP PcP 06 38 01.8 -1.1
comp=Z,8.9nm,0.4s,baz=64,slow=3.4,SNR=17
ZALV Zalesovo Beam 38.72 300 P **P** **06 36 03.9 +0.1**
ZALV 06 38 01.8
ZALV pmax pmax
comp=Z,31nm,0.5s,mb5.0
ZALV pmax pmax
comp=Z,9.0nm,0.4s,mb4.5
ZALV Zalesovo Beam 38.72 300 P **P** **06 36 03.9 +0.1**
ZALV PcP PcP 06 38 01.8 -1.1
INK Inuvik 38.78 35 *e*P **P** **06 36 04.0 -0.2**
INK *e* 06 38 01.8
INK pmax pmax
comp=Z,11nm,0.4s
INK Inuvik 38.78 35 *e*P **P** **06 36 04.0 -0.2**
comp=Z,11nm,0.4s,mb4.6
INK *e*PcP PcP 06 38 01.8 -1.1
NVS Novosibirsk 39.21 302⇑ *i*P **P** **06 36 06.9 -0.9**
NVS *e* 06 38 02.1
NVS *e*S **S** **06 41 27.4 -4.2**
NVS pmax pmax
comp=Z,43nm,0.9s,mb4.9
NVS pmax pmax
comp=N,30nm,1.5s
NVS pmax pmax
comp=E,38nm,1.1s
NVS smax
comp=N,34nm,1.8s
NVS smax
comp=E,16nm,1.4s
HYT Haines Junctio 39.28 47 *e*P **P** **06 36 09.6 +1.3**
CD2 Chengdu 39.91 258 P **P** **06 36 18.9 +0.1**
CD2 AP pP 06 37 48.1 +3.1
CD2 PP PP 06 37 59.4 -0.4
CD2 PCP PcP 06 38 07.8 +0.6
CD2 XP sP 06 38 42.3 +3.3
CD2 S **S** **06 41 42.5 0.0**
CD2 XS sS 06 44 26.6 +1.0
CD2 SS SS 06 44 54.2 -10
CD2 AMB AMB
comp=Z,50nm,0.6s,mb5.1
CD2 AMB AMB
comp=Z,80nm,4.0s
GYA Guiyang 41.38 250 P **P** **06 36 23.7 -1.9**
GYA AP pP 06 37 56.8 +1.1
GYA PP PP 06 38 11.5 -3.0
GYA SCP ScP 06 41 12.6 -1.9
GYA S **S** **06 42 01.7 -2.3**
GYA SCS ScS 06 45 30.2 -2.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.3
WMQ Urumqi 41.91 285⇓ *i*P **P** **06 36 31.0 +1.5**
WMQ PCP PcP 06 38 12.6 -1.0
WMQ PP PP 06 38 20.6 +1.6
WMQ XP sP 06 38 58.3 +2.6
WMQ S **S** **06 42 13.6 +2.4**
WMQ XS sS 06 44 58.8 +3.1
WMQ SCS ScS 06 45 35.7 +0.1
WMQ AMB AMB
comp=Z,30nm,1.2s,mb4.6
WMQ AMB AMB
comp=Z,97nm,3.6s
MK31 Makanchi Array 43.52 292 *i* P **P** **06 36 42.6 +0.5**
MK31 pmax pmax
comp=Z,13nm,0.3s,mb4.8
MK31 Makanchi Array 43.52 292 *e*P **P** **06 36 42.9 +0.8**
MKAR Makanchi Array 43.52 292 P **P** **06 36 42.7 +0.6**
comp=Z,30nm,0.7s,mb4.9,baz=40,slow=5.4,SNR=328
MKAR PcP PcP 06 38 17.9 -1.1
comp=Z,3.0nm,0.5s,baz=77,slow=3.8,SNR=4.5
MKAR S **S** **06 42 33.1 -1.1**
comp=Z,0.9nm,0.9s,baz=25,slow=21,SNR=4.1
MKAR Makanchi Array 43.52 292 P **P** **06 36 42.7 +0.6**
MKAR pP 06 38 18.0 +4.6
MKAR S **S** **06 42 33.1 -1.1**
MKAR pmax pmax
comp=Z,30nm,0.7s
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR smax
comp=N,1.0nm,1.0s
KURK Kurchatov 43.57 299 P **P** **06 36 43.4 +1.0**
SNR=32
KURK Kurchatov 43.57 299 P **P** **06 36 43.7 +1.2**
comp=N,87nm,0.6s,mb5.4,baz=67,slow=8.7,SNR=142
KURK PcP PcP 06 38 18.3 -0.9
comp=N,16nm,0.6s,baz=62,slow=3.2,SNR=13
KURK S **S** **06 42 35.3 +0.4**
comp=N,1.4nm,1.0s,baz=67,slow=14,SNR=4.1
KURK Kurchatov 43.57 299 P **P** **06 36 43.7 +1.2**
KURK pP 06 38 18.3 +4.5
KURK S **S** **06 42 35.3 +0.4**
KURK pmax pmax
comp=Z,87nm,0.6s,mb5.4
KURK pmax pmax
comp=Z,16nm,0.6s,mb4.6
KURK smax
comp=N,1.0nm,1.0s
KURK Kurchatov 43.57 299 *e*P **P** **06 36 43.1 +0.7**
comp=N,78nm,0.5s,mb5.4
DLBC Dease Lake 43.71 48 P **P** **06 36 44.6 +1.2**
comp=N,7.5nm,0.8s,mb4.2,baz=283,slow=9.5,SNR=14
KMI Kunming 44.72 253 P **P** **06 36 52.1 +0.4**
KMI AMB AMB
comp=Z,27nm,0.9s,mb4.7
VOSK Vostochnaya 46.62 305 P **P** **06 37 06.2 +0.3**
VOSK pmax pmax
comp=Z,48nm,0.6s,mb5.1
BVA0 Borovoye Array 46.77 305 P **P** **06 37 07.4 +0.4**
BVA0 pmax pmax
comp=Z,11nm,0.6s,mb4.5
BVAR Borovoye Array 46.77 305 P **P** **06 37 07.5 +0.6**
comp=Z,45nm,0.5s,mb5.1,baz=59,slow=8.3,SNR=192
BVAR PcP PcP 06 38 29.3 -1.1
comp=Z,18nm,0.5s,baz=77,slow=2.3,SNR=17
BVAR ScP ScP 06 41 32.5 -3.8
comp=Z,0.9nm,0.5s,baz=77,slow=3.1,SNR=3.6
BVAR S **S** **06 43 18.6 -1.1**
comp=Z,1.3nm,0.6s,baz=51,slow=10,SNR=5.0
BVAR Borovoye Array 46.77 305 P **P** **06 37 07.5 +0.5**
BVAR 06 38 29.3
BVAR S **S** **06 43 18.6 -1.1**
BVAR pmax pmax
comp=Z,45nm,0.5s
BVAR pmax pmax
comp=Z,18nm,0.5s
BVAR pmax pmax
comp=N,1.0nm,0.5s
BVAR smax
comp=N,1.0nm,0.6s
BRVK Borovoye 46.80 305 P **P** **06 37 08.1 +0.9**
SNR=15
BRVK Borovoye 46.80 305 *e*P **P** **06 37 07.9 +0.7**
BRVK *e* 06 38 29.4
BRVK pmax pmax
comp=Z,50nm,0.6s,mb5.1
BRVK Borovoye 46.80 305 *e*P **P** **06 37 07.9 +0.7**
comp=Z,50nm,0.6s,mb5.1
BRVK *e*PcP PcP 06 38 29.4 -1.1
RES Resolute Bay 47.06 19 P **P** **06 37 08.2 -0.7**
comp=Z,2.7nm,0.4s,mb4.0,baz=332,slow=7.0,SNR=21
RES PcP PcP 06 38 30.0 -1.1
comp=Z,5.8nm,0.8s,baz=298,slow=4.8,SNR=7.3
RES Resolute Bay 47.06 19 P **P** **06 37 08.3 -0.6**
RES 06 38 30.0
RES pmax pmax
comp=Z,3.0nm,0.4s,mb4.1
RES pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
KBS Kingsbay 47.73 350⇓ *e*P **P** **06 37 13.7 -0.2**
KBS pmax pmax
comp=Z,40nm,0.9s,mb4.8
YKA Yellowknife Ar 48.32 38 P **P** **06 37 17.9 -0.5**
comp=Z,7.5nm,0.6s,mb4.2,baz=303,slow=7.1,SNR=111
YKA PcP PcP 06 38 34.8 -1.0
comp=Z,1.8nm,0.6s,baz=309,slow=3.6,SNR=14
YKA ScP ScP 06 41 40.7 -1.9
comp=Z,3.5nm,0.7s,baz=302,slow=4.1,SNR=26
YKA S **S** **06 43 39.8 -1.1**
comp=Z,1.0nm,1.0s,baz=305,slow=14,SNR=5.9
YKA Yellowknife Ar 48.32 38 P **P** **06 37 17.9 -0.6**
YKA 06 38 34.8
YKA S **S** **06 43 39.8 -1.1**
YKA pmax pmax
comp=Z,8.0nm,0.6s
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA pmax pmax
comp=N,4.0nm,0.7s
YKA smax
comp=N,1.0nm,1.0s
YKA Yellowknife Ar 48.32 38 P **P** **06 37 17.9 -0.6**
YKA PcP PcP 06 38 34.9 -1.0
YKA ScP ScP 06 41 40.7 -1.9
YKA S **S** **06 43 39.8 -1.1**
SVE Sverdlovsk 49.41 314 *e*P **P** **06 37 27.7 +1.0**
SVE pmax pmax
comp=Z,49nm,0.7s,mb5.0
SOKR Solikamsk 49.54 318 *e*P **P** **06 37 27.3 -0.3**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb4.4
TKM2 Tokmak 2 49.63 291 P **P** **06 37 29.7 +1.2**
SNR=23
ULHL Ulahol 49.66 290 P **P** **06 37 30.1 +1.2**
SNR=13
USP Ospenovka 50.06 292 P **P** **06 37 32.8 +1.1**
SNR=46
CHMS Chumysh 50.08 292 P **P** **06 37 33.1 +1.3**
SNR=11
KBK Karagaybulak 50.17 291 P **P** **06 37 33.7 +1.1**
SNR=6.0
KZA Kyzart 50.35 291 P **P** **06 37 35.8 +1.9**
SNR=13
AAK Ala-Archa 50.45 292 P **P** **06 37 35.9 +1.3**
SNR=12
AAK Ala-Archa 50.45 292⇑ *e*P **P** **06 37 34.9 +0.3**
AAK pmax pmax
comp=Z,24nm,1.2s,mb4.4
AAK Ala-Archa 50.45 292 P **P** **06 37 35.6 +1.0**
SNR=29
AAK Ala-Archa 50.45 292 *e*P **P** **06 37 35.5 +0.9**
comp=Z,30nm,0.7s,mb4.7
ARU Arti 50.58 314*d i*P **P** **06 37 35.5 +0.2**
ARU *e* 06 38 42.3
ARU *e* 06 39 36.9
ARU *e*S **S** **06 44 13.9 +2.0**
ARU *e*SS SS 06 47 51.7 -1.8
ARU pmax pmax
comp=Z,97nm,0.6s,mb5.3
ARU Arti 50.58 314 *e*P **P** **06 37 35.7 +0.4**
comp=Z,90nm,0.5s,mb5.4
EKS2 Erkin-Say 50.85 292 P **P** **06 37 38.7 +1.2**
SNR=32
SHL Shillong 51.05 263 *e*p **P** **06 37 40.0 +0.8**
AML Almayashu 51.23 292 P **P** **06 37 42.0 +1.7**
SNR=10
CHTO Chiang Mai 51.79 251 P **P** **06 37 45.3 +0.7**
SNR=8.9
CHTO Chiang Mai 51.79 251 *e*P **P** **06 37 45.0 +0.4**
CHTO pmax pmax
comp=Z,19nm,0.6s,mb4.6
CHTO Chiang Mai 51.79 251 *e*P **P** **06 37 45.0 +0.4**
comp=Z,19nm,0.6s,mb4.6
CMAR Chiang Mai Arr 52.06 251 P **P** **06 37 47.1 +0.5**
comp=Z,11nm,0.7s,mb4.3,baz=24,slow=6.9,SNR=39
CMAR PcP PcP 06 38 50.0 -0.5
comp=Z,5.3nm,0.6s,baz=7.6,slow=2.7,SNR=10
CMAR pP pP 06 39 25.9 +3.5
comp=Z,2.6nm,0.4s,baz=23,slow=7.8,SNR=1.3
CMAR Chiang Mai Arr 52.06 251 P **P** **06 37 47.1 +0.5**
CMAR 06 38 50.0
CMAR *PP pP 06 39 26.0 +3.5
CMAR pmax pmax
comp=Z,11nm,0.7s
CMAR pmax pmax
comp=Z,5.0nm,0.6s
CMAR pmax pmax
comp=Z,3.0nm,0.4s
TAPN Taplejung 52.38 268 *e*P **P** **06 37 49.6 +0.8**
comp=Z,80nm,0.8s,mb5.1
KK31 Karatay Array 52.46 295 *i* P **P** **06 37 49.2 +0.1**
KK31 pmax pmax
comp=Z,15nm,0.6s,mb4.5
KEV Kevo 52.49 339 *e*p **P** **06 37 48.1 -0.8**
comp=Z,11nm,0.5s,mb4.4
KEV Kevo 52.49 339 *e*P **P** **06 37 48.1 -0.8**
KEV pmax pmax
comp=Z,11nm,0.5s,mb4.4
B04A Port Angeles 52.61 57⇓ P **P** **06 37 50.0 -0.2**
baz=52
A05A Maple Falls 52.77 56⇑ P **P** **06 37 50.2 -1.0**
baz=53
ODAN Odare 52.93 268 *e*P **P** **06 37 53.7 +0.9**
comp=Z,35nm,0.4s,mb5.0
ARCES ARCESS Array B 53.00 339 P **P** **06 37 52.5 0.0**
comp=Z,11nm,0.6s,mb4.4,baz=30,slow=7.2,SNR=104
ARCES ARCESS Array B 53.00 339 P **P** **06 37 52.5 -0.1**
ARCES pmax pmax
comp=Z,11nm,0.6s
C04A Brinnon 53.10 57⇓ P **P** **06 37 52.9 -0.8**
baz=53
JIRN Jiri 53.12 269 *e*P **P** **06 37 55.1 +1.0**
comp=Z,116nm,0.7s,mb5.3
GUN Gumba 53.14 270 *e*P **P** **06 37 54.9 +0.7**
comp=Z,115nm,0.5s,mb5.5
B05A Bryant 53.22 56⇓ P **P** **06 37 54.6 +0.1**
baz=53
RAMN Ramite 53.36 268 *e*P **P** **06 37 56.5 +0.7**
comp=Z,306nm,0.6s,mb5.8
B06A Marblemount 53.38 56⇑ P **P** **06 37 54.8 -0.8**
baz=53
RPW Rockport 53.41 56 *e*P **P** **06 37 55.8 0.0**
E03A Lebam 53.52 59⇓ P **P** **06 37 56.6 0.0**
baz=53
KKN Kakani 53.60 270 *e*P **P** **06 37 58.3 +0.8**
comp=Z,140nm,0.5s,mb5.5
KKN Kakani 53.60 270 *e*P **P** **06 37 58.3 +0.8**
KKN pmax pmax
comp=Z,140nm,0.5s,mb5.5
A07A Ashnola River, 53.62 55⇓ P **P** **06 37 56.9 -0.4**
baz=53,SNR=5.2
PKI Pulchoki 53.67 270 *e*P **P** **06 37 58.7 +0.7**
comp=Z,170nm,1.0s,mb5.3
PKI Pulchoki 53.67 270 *e*P **P** **06 37 58.9 +0.9**
PKI pmax pmax
comp=Z,59nm,0.6s,mb5.1
PKI Pulchoki 53.67 270 *e*P **P** **06 37 58.9 +0.9**
comp=Z,59nm,0.6s,mb5.1
PKIN Phulchoki 53.68 270 *e*P **P** **06 37 58.9 +0.8**
comp=Z,59nm,0.6s,mb5.1
C05A Tolt Reservoir 53.79 57⇑ P **P** **06 37 58.1 -0.4**
baz=54
DMN Daman 53.84 270 *e*P **P** **06 38 00.2 +1.0**
comp=Z,190nm,0.8s,mb5.5
GKN Gorkha 53.85 271 *e*P **P** **06 38 00.0 +0.7**
comp=Z,224nm,0.8s,mb5.6
E04A Onalaska 53.94 58⇓ P **P** **06 38 00.1 +0.4**
baz=54
D05A Enumclaw 53.95 57⇑ P **P** **06 37 59.8 +0.1**
baz=54
B07A Winthrop 54.12 55⇓ P **P** **06 38 00.8 0.0**
baz=54
DANN Dangsing 54.16 272 *e*P **P** **06 38 02.6 +1.1**
comp=Z,195nm,0.6s,mb5.6
A08A Turner Farm, O 54.25 54⇓ P **P** **06 38 01.2 -0.5**
baz=54,SNR=8.5
AB31 Akbulak array 54.30 306 P **P** **06 38 02.1 0.0**
AB31 pmax pmax
comp=Z,51nm,0.5s,mb5.1
FL2 Flat Top 2 54.39 59 P **P** **06 38 03.0 +0.2**
EDM Edmonton 54.40 47 *e*P **P** **06 38 02.5 -0.3**
LVP Lakeview Peak 54.44 59 P **P** **06 38 03.5 +0.4**
E05A Randle 54.47 58⇓ P **P** **06 38 03.6 +0.2**
baz=54
AKTK Aktyubinsk 54.51 308 P **P** **06 38 03.5 -0.1**
AKTK PcP PcP 06 38 57.9 -1.5
AKTO Aktyubinsk 54.51 308 P **P** **06 38 03.5 -0.1**
comp=Z,11nm,0.5s,mb4.5,baz=67,slow=8.4,SNR=51
AKTO PcP PcP 06 38 57.9 -1.5
comp=Z,5.6nm,0.5s,baz=97,slow=6.5,SNR=6.9
AKTO Aktyubinsk 54.51 308 P **P** **06 38 03.5 -0.1**
AKTO 06 38 57.9
AKTO pmax pmax
comp=Z,11nm,0.5s,mb4.4
AKTO pmax pmax
comp=Z,6.0nm,0.5s,mb4.2
F04A Amboy 54.52 59⇓ P **P** **06 38 03.7 -0.1**
baz=54
GLK Glacier Lake 54.55 58 P **P** **06 38 04.1 +0.2**
D06A Cle Elum 54.55 57⇓ P **P** **06 38 03.9 -0.1**
baz=54
ETW Entiat 54.56 56 *e*P **P** **06 38 04.1 +0.1**
A09A Danville 54.58 54⇓ P **P** **06 38 03.7 -0.4**
baz=54,SNR=12
B08A Colville Reser 54.59 55⇓ P **P** **06 38 03.5 -0.7**
baz=54,SNR=5.9
C07A Waterville 54.64 56⇑ P **P** **06 38 04.1 -0.4**
baz=54
KOLN Koldanda 54.67 271 *e*P **P** **06 38 05.8 +0.7**
comp=Z,146nm,0.8s,mb5.4
TBM Table Mountain 54.70 57 P **P** **06 38 04.9 -0.1**
E06A Yakima 54.90 58⇑ P **P** **06 38 06.7 +0.3**
baz=55
I02A Mapleton 54.99 61⇓ P **P** **06 38 07.7 +0.7**
baz=55
D07A Quincy 55.01 56⇓ P **P** **06 38 07.0 -0.2**
baz=55
F05A White Salmon 55.07 58⇑ P **P** **06 38 07.6 +0.1**
baz=55
A10A Northport 55.10 53⇑ P **P** **06 38 07.5 -0.2**
baz=55
EPH Ephrata 55.10 56 P **P** **06 38 07.5 -0.3**
C08A Higginbotham F 55.11 55⇑ P **P** **06 38 07.3 -0.6**
baz=55
B09A Rice 55.16 54⇓ P **P** **06 38 07.7 -0.4**
baz=55,SNR=5.2
VLL Laurance Lake 55.22 59 P **P** **06 38 09.3 +0.7**
I03A Eugene 55.31 61⇑ P **P** **06 38 10.3 +0.9**
baz=55
HOOD Mount Hood Mea 55.33 59 *e*P **P** **06 38 09.8 +0.5**
comp=Z,24nm,0.8s,mb4.6
E07A Sunnyside 55.48 57⇓ P **P** **06 38 10.6 +0.2**
baz=55
C09A Chrisman Ranch 55.50 55⇑ P **P** **06 38 10.4 -0.2**
baz=55
F06A Goldendale 55.50 58⇑ P **P** **06 38 10.6 -0.1**
baz=55
OD2 Odessa Site #2 55.54 55 P **P** **06 38 10.5 -0.4**
G05A Wamic 55.56 59⇑ P **P** **06 38 11.1 +0.1**
baz=55
D08A Wollman Farm, 55.65 56⇓ P **P** **06 38 11.3 -0.3**
baz=55
A11A Hall Mountain, 55.71 53⇓ P **P** **06 38 12.3 +0.3**
baz=56
HAWA Hanford 55.76 57 *e*P **P** **06 38 12.2 -0.2**
NEW Newport 55.78 54 *e*P **P** **06 38 12.5 0.0**
F07A Phinny Hill Vi 55.87 58⇑ P **P** **06 38 13.2 +0.1**
baz=56,SNR=6.4
CROR Criterion Ridg 55.90 59 P **P** **06 38 13.9 +0.5**
G06A Carlson Farm, 55.93 59⇑ P **P** **06 38 13.5 -0.1**
baz=56
E08A Dider Farm, El 55.94 57⇓ P **P** **06 38 13.7 +0.1**
baz=56
D09A Jones Farm, Ri 55.96 56⇑ P **P** **06 38 13.5 -0.3**
baz=56
C10A Spilker Farm, 55.98 54⇓ P **P** **06 38 13.6 -0.3**

baz=56
H05A **Madras** 55.99 59 ⇓P P 06 38 14.2 +0.2
baz=56
B11A **Sandpoint** 56.05 53 ⇓P P 06 38 14.3 -0.1
baz=56
A12A **Yaak River Ran** 56.08 52 ⇑P P 06 38 14.8 +0.2
baz=56
I05A **Bend** 56.29 60 ⇑P P 06 38 16.3 +0.2
baz=56,SNR=9.1
SMLA **Simla** 56.35 279 *eP* P 06 38 16.5 -0.2
SMLA AMb AMB 06 38 17.0
comp=Z,149nm,1.6s,mb5.1
E09A **Wood Farm, Sta** 56.40 56 ⇑P P 06 38 16.4 -0.4
baz=56,SNR=7.3
H06A **Lindquist Farm** 56.42 59 ⇓P P 06 38 17.0 +0.1
baz=56
G07A **Ruggs Ranch, H** 56.42 58 ⇑P P 06 38 16.9 -0.1
baz=56
D10A **Wagner Farm, O** 56.50 55 ⇑P P 06 38 17.3 -0.2
baz=56,SNR=9.3
C11A **Tepee Creek (N** 56.50 54 ⇓P P 06 38 17.3 -0.2
baz=56
JOF **Joensuu** 56.52 331 *ep* P 06 38 16.3 -1.1
comp=Z,21nm,0.6s,mb4.6
JOF **Joensuu** 56.52 331 *eP* P 06 38 16.3 -1.1
JOF pmax pmax
comp=Z,21nm,0.6s,mb4.6
F08A **Pendleton** 56.55 57 ⇓P P 06 38 18.0 +0.2
baz=56
A13A **Flathead Natio** 56.70 52 ⇓P P 06 38 19.0 +0.2
baz=56
G08A **Pilot Rock** 56.78 58 ⇑P P 06 38 19.5 +0.1
baz=57
WALA **Waterton Lakes** 56.86 51 *eP* P 06 38 20.1 +0.1
H07A **Lands Inn, Kim** 56.92 59 ⇑P P 06 38 20.4 -0.1
baz=57,SNR=7.0
E10A **Myers Farm, Un** 56.96 55 ⇓P P 06 38 20.5 -0.2
baz=57,SNR=7.7
C12B **Naegeli Ranch,** 56.98 53 ⇑P P 06 38 20.9 +0.1
baz=57,SNR=7.3
D11A **Klaveano Farm,** 56.98 55 ⇓P P 06 38 19.7 -1.2
baz=57,SNR=5.2
I06A **Prineville** 57.01 59 ⇓P P 06 38 21.5 +0.4
baz=57,SNR=5.3
B13A **Whitefish** 57.04 52 ⇑P P 06 38 20.9 -0.3
baz=57
F09A **S2 Ranch, Elgi** 57.06 57 ⇑P P 06 38 21.7 +0.3
baz=57
KHMM **Horse Mountain** 57.10 64 *eP* P 06 38 23.2 +1.5
YBH **Yreka Blue Hor** 57.10 63 P P 06 38 22.7 +1.0
comp=Z,6.3nm,0.7s,mb4.1,baz=358,slow=4.2,SNR=28
YBH **Yreka Blue Hor** 57.10 63 *eP* P 06 38 22.2 +0.5
YBH pmax pmax
comp=Z,5.0nm,0.8s
YBH **Yreka Blue Hor** 57.10 63 *eP* P 06 38 22.2 +0.5
comp=Z,5.0nm,0.8s,mb3.9
A14A **Double T Ranch** 57.16 51 ⇓P P 06 38 21.7 -0.3
baz=57
BSMT **Bassoo Peak** 57.23 53 P P 06 38 23.0 +0.5
F10A **Beach Ranch, E** 57.24 56 ⇓P P 06 38 22.7 +0.1
baz=57
I07A **Izee** 57.29 59 ⇑P P 06 38 23.1 +0.1
baz=57,SNR=6.2
G09A **Cove** 57.41 57 ⇑P P 06 38 23.7 -0.1
baz=57,SNR=5.1
K05A **Summer Lake** 57.44 61 ⇑P P 06 38 25.0 +0.9
baz=57,SNR=9.0
H08A **Prairie City** 57.45 58 ⇑P P 06 38 24.1 +0.1
baz=57,SNR=12
C13A **Hot Springs** 57.45 53 ⇑P P 06 38 24.2 +0.2
baz=57
D12A **Red Ives Fores** 57.48 54 ⇑P P 06 38 23.8 -0.4
baz=57
J06A **Christmas Vall** 57.50 60 ⇑P P 06 38 24.8 +0.4
baz=57,SNR=9.7
E11A **Bogner Ranch,** 57.51 55 ⇑P P 06 38 24.0 -0.4
baz=57,SNR=5.5
JTMT **Jette** 57.55 53 *eP* P 06 38 25.3 +0.5
YBMT **Yellow Bay** 57.61 53 *eP* P 06 38 25.6 +0.5
B14A **Marquette Ranc** 57.64 52 ⇑P P 06 38 25.0 -0.3
baz=57
G10A **Bishop Farm, J** 57.75 57 ⇓P P 06 38 26.4 +0.3
baz=58
E12A **Beaver Dam Sad** 57.80 55 ⇓P P 06 38 26.2 -0.2
baz=58,SNR=23
C14A **Swan Lake** 57.81 52 ⇑P P 06 38 26.5 +0.1
baz=58
F11A **Grangeville** 57.85 55 ⇓P P 06 38 26.6 -0.2
baz=58
SWMT **Swartz Lake** 57.86 53 *eP* P 06 38 27.2 +0.4
J07A **Hines** 57.87 59 ⇑P P 06 38 27.5 +0.6
baz=58,SNR=6.4
H09A **Durkee** 57.88 57 ⇓P P 06 38 27.6 +0.6
baz=58
D13A **Huson** 57.91 53 ⇓P P 06 38 26.8 -0.3
baz=58
I08A **Drewsey** 57.91 59 ⇓P P 06 38 28.0 +0.8
baz=58,SNR=15
BMO **Blue Mountains** 57.95 57 *eP* P 06 38 27.5 0.0
BMO pmax pmax
comp=Z,3.0nm,0.9s,mb3.6
BMO **Blue Mountains** 57.95 57 *eP* P 06 38 27.5 +0.1
comp=Z,3.4nm,0.9s,mb3.7
WDC **Whiskeytown Da** 57.97 64 *eP* P 06 38 27.8 +0.2
WDC pmax pmax
comp=Z,2.0nm,0.8s,mb3.5
WDC **Whiskeytown Da** 57.97 64 *eP* P 06 38 27.8 +0.1
comp=Z,2.5nm,0.8s,mb3.6
B15A **Bradely Ranch,** 58.02 51 ⇑P P 06 38 27.1 -0.8
baz=58
A16A **West Butte Ran** 58.06 50 ⇑P P 06 38 27.7 -0.4
baz=58
G11A **Walters Elk Ra** 58.12 56 ⇑P P 06 38 28.7 +0.1
baz=58,SNR=17
SLMT **Seeley Lake** 58.29 53 *eP* P 06 38 29.8 +0.1
I09A **Lost Marbles R** 58.31 58 ⇑P P 06 38 30.1 +0.2
baz=58,SNR=6.6
MOD **Modoc** 58.32 61 *eP* P 06 38 30.2 +0.2
comp=Z,8.1nm,0.6s,mb4.2
J08A **Circle Bar Ran** 58.33 59 ⇑P P 06 38 30.7 +0.6
baz=58
MSO **Missoula** 58.35 53 *eP* P 06 38 30.0 -0.1
comp=Z,4.6nm,0.8s,mb3.9
K07A **Rock Creek Ran** 58.37 60 ⇓P P 06 38 30.9 +0.6
baz=58,SNR=13
C15A **Salmond Ranch,** 58.37 52 ⇑P P 06 38 30.2 -0.1
baz=58,SNR=5.3
FCC **Fort Churchill** 58.37 34 *eP* P 06 38 29.0 -1.1
D14A **Greenough** 58.39 53 ⇑P P 06 38 30.1 -0.3
baz=58,SNR=14
F12A **Elk City** 58.41 55 ⇑P P 06 38 30.7 +0.2
baz=58,SNR=7.8
H10A **Noah's Angus R** 58.42 57 ⇓P P 06 38 30.7 +0.1
baz=58,SNR=30
LBCM **Butte Creek Ri** 58.46 63 P P 06 38 31.4 +0.4
E13A **Victor** 58.48 54 ⇓P P 06 38 30.3 -0.8
baz=58,SNR=6.0
A17A **Triple J Farms** 58.50 50 ⇓P P 06 38 30.5 -0.6
baz=58,SNR=7.8
KAF **Kangasniemi** 58.61 333 *ep* P 06 38 30.2 -1.5
comp=Z,16nm,0.6s,mb4.5,baz=36,slow=6.3
KAF **Kangasniemi** 58.61 333 *eP* P 06 38 30.2 -1.5
KAF pmax pmax
comp=Z,16nm,0.6s,mb4.5
CHMT **Chamberlain Mo** 58.63 53 *eP* P 06 38 32.2 +0.2
H11A **Donnelly** 58.73 56 ⇑P P 06 38 32.5 -0.2
baz=58,SNR=14
J09A **Fry Pan Ranch,** 58.73 59 ⇑P P 06 38 33.1 +0.3
baz=58,SNR=8.9
I10A **Payette** 58.73 57 ⇓P P 06 38 33.1 +0.3
baz=58,SNR=8.2
K08A **Mann Creek Ran** 58.75 60 ⇑P P 06 38 33.4 +0.4
baz=58,SNR=8.9
L07A **Adell** 58.77 61 ⇓P P 06 38 34.0 +0.9
baz=59,SNR=12
C16A **Fuhringer Ranc** 58.77 51 ⇑P P 06 38 32.9 -0.1
baz=59
E14A **Clinton** 58.85 54 ⇓P P 06 38 33.5 -0.1
baz=59,SNR=9.1
F13A **Darby** 58.86 55 ⇑P P 06 38 33.3 -0.3
baz=59
WVOR **Wild Horse Val** 58.87 60 *eP* P 06 38 34.3 +0.6
WVOR pmax pmax
comp=Z,9.0nm,0.9s,mb4.1
WVOR **Wild Horse Val** 58.87 60 *eP* P 06 38 34.3 +0.6
comp=Z,9.2nm,0.9s,mb4.1
B17A **L&G Farms, Che** 58.90 50 ⇓P P 06 38 33.1 -0.7
baz=59
D15A **Lincoln** 58.91 52 ⇓P P 06 38 34.0 +0.1
baz=59
A18A **Metzger Ranch,** 58.92 49 ⇑P P 06 38 33.4 -0.6
baz=59
KBL **Kabul** 58.96 288 *eP* P 06 38 33.8 -0.7
KBL pmax pmax
comp=Z,48nm,1.1s,mb4.7
KBL **Kabul** 58.96 288 *eP* P 06 38 33.8 -0.7
comp=Z,48nm,1.1s,mb4.7
K09A **Rome** 59.18 59 ⇓P P 06 38 36.1 +0.3
baz=59
L08A **Fields** 59.20 60 ⇓P P 06 38 36.6 +0.7
baz=59,SNR=5.8
E15A **Deer Lodge** 59.28 53 ⇑P P 06 38 35.8 -0.6
baz=59
M07A **Soldier Meadow** 59.29 61 ⇓P P 06 38 37.4 +0.8
baz=59,SNR=38
I11A **Placerville** 59.30 57 ⇓P P 06 38 36.4 -0.2
baz=59,SNR=6.4
B18A **Beardsley Farm** 59.32 50 ⇑P P 06 38 36.6 -0.1
baz=59
N06A **Buffalo Meadow** 59.36 62 ⇑P P 06 38 37.4 +0.3
baz=59,SNR=13
C17A **Wharram Farm,** 59.37 51 ⇑P P 06 38 36.6 -0.4
baz=59,SNR=6.2
G13A **Cobalt** 59.38 55 ⇓P P 06 38 36.8 -0.3
baz=59
H12A **Diamond D Ranc** 59.44 56 ⇑P P 06 38 37.8 +0.3
baz=59,SNR=7.4
HRY **Holter Researc** 59.48 52 *eP* P 06 38 38.5 +0.7
EGMT **Eagleton** 59.59 50 ⇓P P 06 38 38.4 -0.1
baz=59
K10A **MacKenzie Ranc** 59.59 59 ⇓P P 06 38 39.0 +0.4
baz=59,SNR=11
BEKR **Beckwourth** 59.67 63 ⇓P P 06 38 39.3 +0.1
baz=60
L09A **Wilkinson Ranc** 59.68 60 ⇑P P 06 38 39.7 +0.6
baz=60,SNR=5.4
E16A **East Helena** 59.68 52 ⇓P P 06 38 39.3 +0.2
baz=60
M08A **Happy Creek Ra** 59.69 61 ⇑P P 06 38 39.7 +0.4
baz=60
MFID **Camas Ranch** 59.71 57 ⇓P P 06 38 39.9 +0.6
baz=60
H13A **Challis** 59.74 56 ⇓P P 06 38 39.4 -0.1
baz=60,SNR=7.2
D17A **Six Diamond Ra** 59.74 51 ⇓P P 06 38 39.6 +0.1
baz=60
F15A **Butte** 59.76 53 ⇑P P 06 38 39.9 +0.3
baz=60,SNR=6.1
MOS **Moscow** 59.77 323 *eP* P 06 38 38.5 -1.0
MOS pmax pmax
comp=Z,53nm,0.7s,mb5.1
O06A **Flanigan** 59.77 62 ⇓P P 06 38 40.2 +0.4
baz=60
LRM **Limekiln Ridge** 59.79 53 *eP* P 06 38 40.3 +0.4
I12A **Atlanta** 59.81 57 ⇓P P 06 38 40.4 +0.4
baz=60
N07B **Gerlach** 59.82 61 ⇑P P 06 38 40.6 +0.4
baz=60,SNR=6.5
DLMT **Dillon** 60.03 54 *eP* P 06 38 42.0 +0.6
comp=Z,5.7nm,0.8s,mb4.0
K11A **Parker Ranch,** 60.04 58 ⇑P P 06 38 41.9 +0.3
baz=60
P06A **Stead Airport,** 60.06 63 ⇑P P 06 38 42.2 +0.4
baz=60
E17A **Martinsdale** 60.14 52 ⇑P P 06 38 42.6 +0.4
baz=60,SNR=7.3
D18A **Linhart Farms,** 60.14 51 ⇑P P 06 38 42.7 +0.6
baz=60
H14A **Leadore** 60.16 55 ⇑P P 06 38 42.2 -0.1
baz=60
J12A **Stokes Ranch,** 60.20 57 ⇑P P 06 38 42.8 +0.2
baz=60,SNR=6.6
M09A **Marrel Ranch,** 60.21 60 ⇓P P 06 38 43.0 +0.3
baz=60
G15A **Dillon** 60.23 54 ⇓P P 06 38 42.9 +0.2
baz=60,SNR=18
F16A **Kennard Place,** 60.23 53 ⇑P P 06 38 42.8 +0.1
baz=60,SNR=5.8
I13A **Wildhorse Cree** 60.26 56 ⇑P P 06 38 43.5 +0.6
baz=60,SNR=23
N08A **GE Springer Mi** 60.28 61 ⇑P P 06 38 43.5 +0.3
baz=60,SNR=8.8
L10A **Juniper Basin** 60.29 59 ⇓P P 06 38 43.6 +0.4
baz=60,SNR=9.7
O07A **Toulon** 60.30 62 ⇓P P 06 38 43.8 +0.4
baz=60,SNR=6.2
BOZ **Bozeman (W)** 60.32 53 ⇓P P 06 38 43.8 +0.4
baz=60
HLID **Hailey** 60.35 56 ⇓P P 06 38 44.0 +0.4
baz=60
HLID **Hailey** 60.35 56 *eP* P 06 38 44.3 +0.7
WCN **Washoe City** 60.40 63 ⇓P P 06 38 43.8 -0.2
baz=60
G16A **Moss Hill, Enn** 60.53 54 ⇓P P 06 38 45.2 +0.4
baz=60
N09A **Rock Creek Ran** 60.56 61 ⇓P P 06 38 45.6 +0.6
baz=60
J13A **Cove Ranch, Pi** 60.59 56 ⇑P P 06 38 45.6 +0.4
baz=60
I14A **Mackay** 60.59 56 ⇓P P 06 38 45.5 +0.3
baz=60
O08A **Rochester Mine** 60.61 61 ⇑P P 06 38 45.9 +0.6
baz=60,SNR=11
L11A **Cat Creek Ranc** 60.61 58 ⇑P P 06 38 45.9 +0.6
baz=60,SNR=9.6
F17A **Fitzpatrick Pl** 60.63 52 ⇑P P 06 38 46.1 +0.7
baz=60
OBN **Obninsk** 60.63 323 ⇑ *eP* P 06 38 44.6 -0.7
OBN *e*PP pP 06 40 28.2 +3.1
OBN *i* 06 41 05.3
OBN pmax pmax
comp=Z,49nm,1.0s,mb4.9
M10A **I.L. Ranch, Tu** 60.63 59 ⇑P P 06 38 46.1 +0.6
baz=60,SNR=6.5
K12A **Draper Farm, C** 60.73 57 ⇓P P 06 38 46.6 +0.4
baz=60
CMB **Columbia Colle** 60.92 65 *eP* P 06 38 47.9 +0.4
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb4.1
CMB **Columbia Colle** 60.92 65 *eP* P 06 38 47.9 +0.4
comp=Z,8.1nm,1.0s,mb4.1
J14A **Carey** 60.98 56 ⇓P P 06 38 48.7 +0.9
baz=61,SNR=10
G17A **Pierce Place,** 61.00 53 ⇑P P 06 38 48.0 +0.2
baz=61
L12A **House Creek Ra** 61.02 58 ⇓P P 06 38 48.5 +0.4
baz=61,SNR=6.8
F18A **Big Timber** 61.09 52 ⇓P P 06 38 48.8 +0.3
baz=61,SNR=5.0
M11A **Holland Ranch,** 61.10 59 ⇓P P 06 38 49.7 +1.1
baz=61,SNR=7.9
R06C **Coleville** 61.11 64 ⇓P P 06 38 49.3 +0.6
baz=61,SNR=8.1
WAKR **Walker** 61.13 64 *eP* P 06 38 49.4 +0.5
H16A **Russell Place,** 61.18 54 ⇓P P 06 38 49.5 +0.4
baz=61,SNR=6.4
AJM **Ajmer** 61.19 277 *eP* P 06 38 48.7 -0.7
AJM AMb AMB 06 38 49.9
comp=Z,31nm,0.7s,mb4.8
N10A **Dunphy** 61.21 60 ⇓P P 06 38 49.8 +0.4
baz=61
O09A **Fish Creek Ran** 61.22 61 ⇓P P 06 38 50.1 +0.7
baz=61
VSU **Vasula** 61.41 330 *dP* P 06 38 50.1 -0.2
VSU pmax pmax
comp=Z,70nm,1.2s,mb5.0
J15A **Blackfoot** 61.49 55 ⇑P P 06 38 52.1 +0.9
baz=61
O10A **Cortez Mining,** 61.51 60 ⇑P P 06 38 52.3 +0.9
baz=61
M12A **Wells** 61.58 58 ⇓P P 06 38 52.2 +0.4
baz=61
G18A **Lazy EL Ranch,** 61.59 52 ⇑P P 06 38 51.8 +0.1
baz=61
VRHR **Novokhopersk** 61.60 317 *eP* P 06 38 51.0 -0.7
VRHR pmax pmax
comp=Z,20nm,0.7s,mb4.7
VRHR pmax pmax
comp=N,40nm,1.2s
VRHR pmax pmax
comp=E,10.0nm,0.5s
L13A **Double Diamond** 61.62 57 ⇑P P 06 38 52.5 +0.4
baz=61
I16A **Newdale** 61.64 54 ⇓P P 06 38 52.9 +0.8
baz=61,SNR=7.2
K14A **Jones Ranch, D** 61.71 57 ⇑P P 06 38 53.5 +0.9
baz=62,SNR=6.3
Q08A **Gabbs** 61.73 62 ⇓P P 06 38 53.0 +0.2
baz=62,SNR=11
BHPL **Bhopal** 61.79 273 *eP* P 06 38 53.0 -0.4
BHPL AMb AMB 06 38 53.8
comp=Z,42nm,0.7s,mb5.0
NVAR **Mina Array Bea** 61.82 63 P P 06 38 53.8 +0.4
comp=Z,7.9nm,0.7s,mb4.2,baz=300,slow=6.7,SNR=60
NVAR ScP ScP 06 42 39.7 -2.6
comp=Z,0.7nm,0.7s,baz=287,slow=5.4,SNR=4.7
NVAR **Mina Array Bea** 61.82 63 P P 06 38 53.8 +0.5
NVAR ScP ScP 06 42 39.7 -2.6
RLMT **Red Lodge** 61.87 52 ⇑P P 06 38 53.9 +0.3
baz=62
RLMT **Red Lodge** 61.87 52 *eP* P 06 38 53.6 0.0
comp=Z,4.4nm,0.8s,mb3.9
DGMT **Dagmar** 61.88 47 ⇓P P 06 38 53.6 0.0
baz=62
IMW **Indian Meadow** 61.91 54 *eP* P 06 38 55.1 +1.3
N12A **Clover Valley,** 61.91 59 ⇑P P 06 38 54.6 +0.7
baz=62,SNR=10
K15A **Arbon** 61.95 56 ⇓P P 06 38 54.9 +0.8
baz=62
R08A **Mina** 61.99 63 ⇑P P 06 38 55.2 +0.7
baz=62
J16A **Bone** 62.00 55 ⇓P P 06 38 55.2 +0.7
baz=62,SNR=7.3
P10A **Eureka** 62.00 61 ⇑P P 06 38 55.2 +0.7
baz=62
M13A **Montello** 62.02 58 ⇓P P 06 38 54.9 +0.3
baz=62,SNR=7.5
L14A **Malta** 62.03 57 ⇑P P 06 38 55.3 +0.6
baz=62,SNR=7.2
O11A **Cowboy Ranch,** 62.08 60 ⇑P P 06 38 55.6 +0.6
baz=62
RRI2 **Red Ridge** 62.10 55 *eP* P 06 38 56.2 +1.1
MOOW **Moose Ponds** 62.11 54 *eP* P 06 38 55.9 +0.8
VIS **Vishakhapatnam** 62.17 264 *eP* P 06 38 56.0 +0.1
VIS AMb AMB 06 38 58.3
comp=Z,27nm,1.1s,mb4.6
TPAW **Teton Pass** 62.19 54 *eP* P 06 38 57.2 +1.5
LOHW **Long Hollow** 62.28 54 *eP* P 06 38 57.0 +0.7
NGP **Nagpur** 62.30 270 *eP* P 06 38 54.9 -1.9
K16A **Soda Springs** 62.33 55 ⇓P P 06 38 57.7 +1.0
baz=62,SNR=5.3
M14A **Sheep Mountain** 62.35 57 ⇑P P 06 38 57.6 +0.8
baz=62
J17A **Brown Place, J** 62.40 54 ⇑P P 06 38 57.9 +0.8
baz=62
O12A **Currie** 62.48 59 ⇓P P 06 38 58.0 +0.3
baz=62,SNR=8.1
L15A **Malad City** 62.50 57 ⇓P P 06 38 58.3 +0.6
baz=62
VSR **Storozhevoye** 62.54 319 *eP* P 06 38 57.5 -0.3
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s,mb4.7
VSR pmax pmax
comp=E,20nm,0.7s
Q10A **Clear Creek Ra** 62.60 61 ⇑P P 06 38 58.6 +0.2
baz=62,SNR=9.1
I18A **Diamond G Ranc** 62.61 54 ⇑P P 06 38 59.0 +0.5
baz=62
R09A **Tonopah** 62.64 62 ⇑P P 06 38 58.5 -0.2
baz=62,SNR=9.3
VORD **Divnogorie** 62.68 318 *eP* P 06 38 58.9 +0.2
VORD pmax pmax
comp=Z,40nm,1.1s,mb4.9
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=E,40nm,0.8s
M15A **Larsen Ranch,** 62.86 57 ⇑P P 06 39 00.4 +0.3
baz=63
J18A **Kendall Valley** 62.86 54 ⇑P P 06 39 00.4 +0.3
baz=63
N14A **Grayback Hills** 62.90 58 ⇓P P 06 39 00.5 +0.2
baz=63
S09A **Goldfield** 62.92 63 ⇑P P 06 39 00.6 +0.1
baz=63,SNR=9.9
P12A **McGill** 62.96 60 ⇓P P 06 39 01.1 +0.3
baz=63
O13A **Hicks Ranch, I** 62.99 59 ⇑P P 06 39 01.4 +0.4
baz=63
Q11A **Duckwater** 63.00 61 ⇑P P 06 39 01.2 +0.2
baz=63
R10A **Warm Springs** 63.03 62 ⇓P P 06 39 01.5 +0.2
baz=63
S10A **Tonopah Range,** 63.13 62 ⇑P P 06 39 02.1 +0.2
baz=63
VES **Vestal, Richgr** 63.20 66 ⇓P P 06 39 02.0 -0.4
baz=63
L17A **Cokeville** 63.22 56 ⇓P P 06 39 02.7 +0.3
baz=63
K18A **Toltan Ranch,** 63.26 55 ⇓P P 06 39 03.2 +0.5
baz=63,SNR=5.4
Q12A **Willow Creek R** 63.31 60 ⇓P P 06 39 03.5 +0.4
baz=63,SNR=5.7
CWC **Cottonwood Cre** 63.35 64 ⇑P P 06 39 03.4 +0.1
baz=63
GRAC **Grapevine Rang** 63.35 64 ⇓P P 06 39 04.0 +0.6
baz=63
NOA **NORSAR Array B** 63.37 339 P P 06 39 03.0 0.0
comp=E,22nm,0.7s,mb4.8,baz=27,slow=6.5,SNR=80
NOA **NORSAR Array B** 63.37 339 P P 06 39 03.0 0.0
NOA pmax pmax
comp=Z,23nm,0.7s
NOA **NORSAR Array B** 63.37 339 P P 06 39 03.0 0.0
R11A **Troy Canyon, C** 63.39 61 ⇑P P 06 39 03.7 +0.2
baz=63
M16A **Huntsville** 63.39 57 ⇑P P 06 39 04.1 +0.6
baz=63
BW06 **Boulder Array** 63.42 54 ⇓P P 06 39 03.7 +0.1
baz=63
BW06 **Boulder Array** 63.42 54 *eP* P 06 39 03.7 +0.1
PDAR **Pinedale Array** 63.42 54 P P 06 39 03.6 0.0
comp=Z,6.0nm,0.5s,mb4.4,baz=352,slow=1.6,SNR=66
P13A **Bates Ranch, G** 63.45 59 ⇑P P 06 39 04.4 +0.4
baz=63
PKM **Peak Mountain** 63.45 67 ⇑P P 06 39 04.6 +0.5
baz=63
NAO01 **NORSAR Array S** 63.62 339 *eP* P 06 39 04.2 -0.4
comp=Z,28nm,1.0s,mb4.7
ISA **Isabella** 63.68 65 ⇓P P 06 39 04.6 -0.9
baz=64
K19A **Absolon Red Bu** 63.74 54 ⇓P P 06 39 05.2 -0.4
baz=64
L18A **Fontenelle, Gr** 63.78 55 ⇓P P 06 39 06.0 +0.1
baz=64
M17A **Scullys Gap (B** 63.78 56 ⇑P P 06 39 05.9 -0.1
baz=64
S11A **Rachel** 63.80 62 ⇑P P 06 39 06.9 +0.7
baz=64
N16A **Rees Ranch, Co** 63.80 57 ⇑P P 06 39 05.9 -0.2
baz=64
P14A **Drum Mountains** 63.87 59 ⇓P P 06 39 06.5 -0.1
baz=64
AKL **Akola** 63.91 271 *eP* P 06 39 07.0 -0.1
AKL AMb AMB 06 39 07.5
comp=Z,29nm,0.6s,mb5.0
R12A **Pony Springs,** 63.94 61 ⇑P P 06 39 06.9 -0.2
baz=64
MPMC **Manual Prospec** 63.96 64 ⇑P P 06 39 07.3 +0.1
baz=64
FURC **Furnace Creek,** 64.02 64 ⇑P P 06 39 08.2 +0.6
baz=64
TPNV **Topopah Spring** 64.02 63 ⇓P P 06 39 07.7 +0.1
baz=64
TPNV **Topopah Spring** 64.02 63 *eP* P 06 39 07.5 -0.1
TPNV pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
TPNV **Topopah Spring** 64.02 63 *eP* P 06 39 07.5 -0.1
comp=Z,6.6nm,0.8s,mb4.2
N17A **Moffit Pass** 64.08 56 ⇑P P 06 39 07.7 -0.2
baz=64
K20A **Yellowstone Ra** 64.11 54 ⇓P P 06 39 07.3 -0.8
baz=64
NLU **North Lily Min** 64.14 58 *eP* P 06 39 09.3 +1.0
LRMC **Laurel Mountai** 64.26 65 ⇓P P 06 39 08.8 -0.4
baz=64
P15A **Leamington** 64.31 58 ⇓P P 06 39 09.2 -0.2
baz=64
MPU **Maple Canyon** 64.33 58 *eP* P 06 39 10.2 +0.7
U10A **Ash Meadows, A** 64.35 63 ⇓P P 06 39 09.9 +0.2
baz=64
R13A **O'Grain Ranch,** 64.39 60 ⇑P P 06 39 10.8 +0.8

baz=64
EDW2 Edwards Air Fo 64.52 66 ⇑P **P 06 39 10.9 +0.1**
baz=64
L20A Wamsutter 64.59 54 ⇑P **P 06 39 11.2 +0.1**
baz=64
Q15A Fillmore 64.66 59 ⇑P **P 06 39 12.0 +0.3**
baz=64
S13A Holt Ranch, En 64.89 61 ⇓P **P 06 39 13.3 +0.2**
baz=65
GSC Goldstone 64.89 64 ⇑P **P 06 39 13.4 +0.2**
baz=65
N19A John Jarvie Ra 64.97 55 ⇑P **P 06 39 13.6 +0.1**
baz=65
KONO Kongsberg 64.98 339⇑*eP* **P 06 39 12.7 -0.6**
O18A Roosevelt 65.00 56 ⇓P **P 06 39 14.6 +0.8**
baz=65
T12A Moapa 65.03 62 ⇓P **P 06 39 14.2 +0.2**
baz=65
M20A Sweetwater, Wa 65.05 54 ⇓P **P 06 39 14.6 +0.5**
baz=65
L21A Rawlins 65.11 54 ⇓P **P 06 39 14.2 -0.2**
baz=65
MSU Marysvale 65.12 59 *eP* **P 06 39 14.3 -0.3**
S14A Cedar City 65.13 60 ⇑P **P 06 39 14.7 +0.1**
baz=65
BFSC Mount Baldy St 65.17 66 ⇓P **P 06 39 15.2 +0.2**
baz=65
T13A Saint George 65.27 61 ⇓P **P 06 39 15.8 +0.3**
baz=65,SNR=7.4
V11A Goodsprings 65.28 63 ⇑P **P 06 39 15.9 +0.3**
baz=65
TUQ Turquoise Moun 65.29 64 ⇑P **P 06 39 15.8 +0.1**
baz=65
P18A Preston Nutter 65.34 57 ⇑P **P 06 39 16.5 +0.6**
baz=65
Q16A Castle Valley 65.37 58 ⇑P **P 06 39 16.1 -0.1**
baz=65
M21A Separation Pea 65.38 54 ⇑P **P 06 39 15.4 -0.7**
baz=65
HYB Hyderabad 65.39 267 *i* P **P 06 39 16.0 -0.5**
comp=Z,35nm,0.8s,mb5.0
HYB *ePcP* PcP 06 39 43.0 -0.8
N20A Spence Gulch, 65.49 55 ⇑P **P 06 39 17.0 +0.2**
baz=65
HEC Hector,Ludlow 65.50 65 ⇓P **P 06 39 17.2 +0.2**
baz=65
L22A Ellis Ranch, M 65.53 53 ⇑P **P 06 39 17.0 -0.1**
baz=65
BBRC Big Bear Sol-O 65.57 65 ⇑P **P 06 39 17.3 -0.1**
baz=65
SRU San Rafael 65.57 58 ⇓P **P 06 39 17.6 +0.2**
baz=65
S15A Panguitch 65.63 60 ⇑P **P 06 39 18.2 +0.5**
baz=65
R16A Teasdale 65.67 59 ⇑P **P 06 39 18.7 +0.7**
baz=66,SNR=6.9
U13A Pakoon Wash 65.67 62 ⇑P **P 06 39 18.5 +0.5**
baz=66,SNR=6.1
V12A Nelson 65.68 63 ⇑P **P 06 39 18.0 -0.1**
baz=66
T14A Hurricane 65.69 61 ⇑P **P 06 39 18.3 +0.2**
baz=66
Q18A Rafter H Ranch 65.79 57 ⇓P **P 06 39 18.9 +0.2**
baz=66
MURC Murrieta 65.89 66 ⇑P **P 06 39 18.9 -0.6**
baz=66
GMRC Granite Mounta 65.91 64 ⇓P **P 06 39 19.2 -0.4**
baz=66
M22A Cedar Creek Ra 65.92 53 ⇑P **P 06 39 19.0 -0.4**
baz=66
N21A Black Mountain 65.92 54 ⇑P **P 06 39 19.1 -0.4**
baz=66
R17A Hanksville Air 65.98 58 ⇑P **P 06 39 19.6 -0.3**
baz=66,SNR=7.3
P19A Cripple Cowboy 66.00 56 ⇓P **P 06 39 19.5 -0.6**
baz=66
O20A White River Ci 66.02 55 ⇑P **P 06 39 19.8 -0.3**
baz=66
S16A Weppner Ranch, 66.02 59 ⇑P **P 06 39 20.4 +0.2**
baz=66,SNR=8.0
V13A Grand Canyon W 66.07 62 ⇑P **P 06 39 20.5 0.0**
baz=66,SNR=5.2
T15A Red Dirt Ranch 66.10 60 ⇓P **P 06 39 20.9 +0.2**
baz=66,SNR=6.7
U14A Mt Trumbull 66.10 61 ⇓P **P 06 39 21.0 +0.2**
baz=66,SNR=6.1
SUW Suwalki 66.21 329 *eP* **P 06 39 20.7 -0.4**
SUW Suwalki 66.21 329 *eP* **P 06 39 20.7 -0.4**
Q19A Hogan Spring (66.35 57 ⇑P **P 06 39 21.8 -0.4**
baz=66,SNR=14
O21A Pagoda 66.35 55 ⇑P **P 06 39 21.8 -0.4**
baz=66
N22A Wattenberg Ran 66.44 54 ⇓P **P 06 39 22.5 -0.2**
baz=66
R18A Canyonlands Na 66.44 58 ⇑P **P 06 39 22.0 -0.8**
baz=66,SNR=5.3
KIV Kislovodsk 66.47 311 P **P 06 39 24.3 +1.4**
SNR=7.1
KIV Kislovodsk 66.47 311 *eP* **P 06 39 23.6 +0.7**
KIV pmax pmax
comp=Z,50nm,0.9s,mb5.1
KIV Kislovodsk 66.47 311 *eP* **P 06 39 23.5 +0.5**
comp=Z,39nm,0.8s,mb5.1
S17A Black Ridge (B 66.51 59 ⇓P **P 06 39 22.9 -0.3**
baz=66,SNR=13
U15A North Rim 66.58 61 ⇓P **P 06 39 23.9 +0.2**
baz=66
IRM Iron Mountain 66.65 64 ⇓P **P 06 39 24.3 +0.1**
baz=66
W13A Hualapai Mount 66.68 63 ⇑P **P 06 39 24.3 0.0**
baz=66,SNR=6.3
V14A Boquillas Ranc 66.72 62 ⇑P **P 06 39 25.0 +0.5**
baz=66,SNR=9.2
AKASG Malin Array Be 66.85 324 P **P 06 39 24.0 -1.1**
comp=Z,24nm,0.5s,mb5.1,baz=33,slow=6.3,SNR=108
AKASG Malin Array Be 66.85 324 *i* P **P 06 39 24.2 -0.9**
AKASG pmax pmax
comp=Z,24nm,0.5s
AKBB Malin Array Si 66.85 324 *eP* **P 06 39 24.2 -0.9**
Q20A Ridgley Place, 66.86 56 ⇑P **P 06 39 25.2 -0.2**
baz=67
KIEV Kiev 66.87 324 *eP* **P 06 39 24.0 -1.2**
KIEV pmax pmax
comp=Z,36nm,0.7s,mb5.1
KIEV Kiev 66.87 324 *eP* **P 06 39 23.9 -1.3**
comp=Z,36nm,0.7s,mb5.1
S18A Hurst Farm, Bl 66.90 58 ⇓P **P 06 39 25.5 -0.2**
baz=67
T17A Navajo Res., N 66.97 59 ⇑P **P 06 39 25.6 -0.5**
baz=67
W14A Seligman 67.04 62 ⇓P **P 06 39 26.8 +0.2**
baz=67,SNR=9.5
X13A Yucca 67.08 63 ⇓P **P 06 39 26.7 -0.1**
baz=67,SNR=8.6
V15A Kaibab Nationa 67.10 61 ⇑P **P 06 39 27.5 +0.6**
baz=67,SNR=8.6
Y12C Blythe 67.31 64 ⇑P **P 06 39 27.6 -0.6**
baz=67
S19A Harvey Farm, M 67.31 58 ⇑P **P 06 39 27.4 -0.8**
baz=67
U17A Shonto 67.34 60 ⇑P **P 06 39 28.3 -0.2**
baz=67
U16A Tuba City 67.43 60 ⇓P **P 06 39 28.7 -0.3**
baz=67
W15A Williams 67.52 62 ⇓P **P 06 39 29.7 +0.2**
baz=67
GLA Glamis 67.65 65 ⇑P **P 06 39 30.3 0.0**
baz=68
Y13A Salome 67.65 64 ⇑P **P 06 39 30.3 0.0**
baz=68
R21A Cimarron 67.69 56 ⇓P **P 06 39 30.9 +0.4**
baz=68
X14A Yava 67.69 63 ⇑P **P 06 39 31.2 +0.6**
baz=68
WUAZ Wupatki 67.76 61 ⇑P **P 06 39 31.8 +0.8**
baz=68
U18A Rough Rock, Ch 67.91 59 ⇑P **P 06 39 32.0 +0.1**
baz=68
W16A Flagstaff 67.98 61 ⇓P **P 06 39 32.8 +0.5**
baz=68
Y14A Wickenburg 68.02 63 ⇓P **P 06 39 33.1 +0.5**
baz=68
MVCO Mesa Verde 68.05 58 ⇑P **P 06 39 32.9 +0.2**
baz=68
T19A Beclabito 68.05 58 ⇑P **P 06 39 33.0 +0.2**
baz=68
KAD Karad 68.21 271 *eP* **P 06 39 33.4 -0.6**
KAD AMb AMB 06 39 34.5
comp=Z,32nm,0.6s,mb5.2
GNI Garni 68.37 308 *eP* **P 06 39 35.5 +0.9**
GNI pmax pmax
comp=Z,35nm,0.9s
GNI Garni 68.37 308 *eP* **P 06 39 35.5 +0.9**
comp=Z,35nm,0.9s,mb5.0
Y15A Casa Rosa Ranc 68.38 63 ⇑P **P 06 39 34.9 +0.1**
baz=68
V18A Ganado 68.40 60 ⇑P **P 06 39 35.2 +0.3**
baz=68
113A Mohawk Valley, 68.46 64 ⇓P **P 06 39 34.5 -0.7**
baz=68
GKP Gorka Klasztor 68.68 332 *eP* **P 06 39 36.3 +0.1**
GKP Gorka Klasztor 68.68 332 *eP* **P 06 39 36.3 +0.1**
ECSD EROS,Sioux Fal 68.91 46 *eP* **P 06 39 36.6 -1.2**
comp=Z,5.1nm,0.6s,mb4.2
W19A Sanders 69.14 60 ⇓P **P 06 39 39.2 -0.2**
baz=69
MVH1 Achvaich 69.18 346 *eP* **P 06 39 38.8 -0.4**
X18A Snowflake 69.27 61 ⇑P **P 06 39 40.4 +0.2**
baz=69
MCD Coleburn Disti 69.37 345 *eP* **P 06 39 39.9 -0.4**
115A Sonoran Desert 69.37 63 ⇓P **P 06 39 40.7 -0.1**
baz=69
Y17A Roosevelt 69.40 62 ⇓P **P 06 39 40.5 -0.5**
baz=69
SIM Simferopol' 69.55 317*ceP* **P 06 39 35.7 -5.9**
SIM pmax pmax
comp=Z,28nm,0.8s,mb4.8
MME1 Meikle Cairn 69.58 345 *eP* **P 06 39 40.5 -1.0**
214A Organ Pipe Nat 69.60 64 ⇓P **P 06 39 41.6 -0.6**
baz=69
MDO Dochfour 69.67 346 *eP* **P 06 39 41.8 -0.4**
SCHQ Schefferville 69.73 22 P **P 06 39 41.2 -1.3**
comp=Z,5.5nm,0.5s,mb4.4,baz=333,slow=5.6,SNR=12
SCHQ Schefferville 69.73 22 P **P 06 39 41.2 -1.3**
116A Eloy 69.77 63 ⇓P **P 06 39 43.2 0.0**
baz=70
Y18A Canyon Day Jun 69.79 61 ⇑P **P 06 39 43.5 +0.2**
baz=70
BSEG Bad Segeberg 69.98 336 *eP* **P 06 39 43.9 -0.1**
BSEG pmax pmax
comp=Z,21nm,0.9s,mb4.7
BSEG Bad Segeberg 69.98 336 *eP* **P 06 39 43.9 -0.1**
comp=Z,21nm,0.9s,mb4.7
KWP Kalwaria 70.07 327 *eP* **P 06 39 45.0 +0.3**
KWP Kalwaria 70.07 327 ⇓*iP* **P 06 39 44.8 +0.1**
KWP Kalwaria 70.07 327 *eP* **P 06 39 45.0 +0.3**
117A Oracle 70.30 62 ⇑P **P 06 39 46.1 -0.2**
baz=70
RUE Ruedersdorf 70.37 334 *eP* **P 06 39 46.5 +0.1**
comp=Z,38nm,0.8s,mb5.0
OJC Ojcow 70.54 329 *eP* **P 06 39 47.4 0.0**
118A Homack Ranch, 70.68 62 ⇓P **P 06 39 49.0 +0.4**
baz=70,SNR=5.8
EBH Black Hill 70.69 345 *eP* **P 06 39 47.0 -1.2**
STHS Stebnicka Huta 70.75 328 *eP* **P 06 39 49.5 +0.8**
STHS pmax pmax
comp=Z,22nm,0.7s,mb4.8
STHS Stebnicka Huta 70.75 328 *eP* **P 06 39 49.5 +0.8**
comp=Z,22nm,0.7s,mb4.8
KOLS Kolonicke sedl 70.81 327 *eP* **P 06 39 48.8 -0.3**
KOLS pmax pmax
comp=Z,16nm,1.0s,mb4.5
KOLS Kolonicke sedl 70.81 327 *eP* **P 06 39 48.8 -0.3**
comp=Z,16nm,1.0s,mb4.5
ANMO Albuquerque 70.84 58⇑*eP* **P 06 39 49.8 +0.3**
217A Green Valley 70.86 63 ⇑P **P 06 39 49.9 +0.3**
baz=71
BUR08 Bucovina Ar. S 70.87 324 *eP* **P 06 39 49.1 -0.3**
EAB Aberfoyle 70.88 345 *eP* **P 06 39 47.9 -1.5**
BURAR Bucovina Array 70.89 324 ⇓*iP* **P 06 39 49.3 -0.3**
BURAR Bucovina Array 70.89 324 ⇓P **P 06 39 49.3 -0.2**
119A Ashpeak Ranch, 70.95 61 ⇓P **P 06 39 50.3 +0.1**
baz=71
NIE Niedzica 71.06 328 *eP* **P 06 39 51.0 +0.5**
KSP Ksiaz 71.09 331 *eP* **P 06 39 50.9 +0.2**
KSP Ksiaz 71.09 331 *eP* **P 06 39 50.6 -0.1**
CRVS Cervenica-Dubn 71.12 327 *eP* **P 06 39 50.8 -0.1**
CRVS pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
CRVS Cervenica-Dubn 71.12 327 *eP* **P 06 39 50.8 -0.1**
comp=Z,9.2nm,0.7s,mb4.4
CTA Charters Tower 71.19 184 *eP* **P 06 39 50.0 -1.5**
comp=Z,8.8nm,0.5s,mb4.3
CTA Charters Tower 71.19 184 P **P 06 39 50.6 -1.0**
comp=Z,7.6nm,0.6s,mb4.4,baz=353,slow=7.2,SNR=12
CTA Charters Tower 71.19 184 *eP* **P 06 39 50.0 -1.5**
CTA pmax pmax
comp=Z,5.0nm,0.5s
CTAO Charters Tower 71.19 184 *eP* **P 06 39 50.0 -1.5**
CTAO pmax pmax
comp=Z,18nm,1.2s,mb4.5
CTAO Charters Tower 71.19 184 *eP* **P 06 39 50.0 -1.5**
comp=Z,18nm,1.2s,mb4.5
PGBU Glenifferbraes 71.26 345 P **P 06 39 51.6 0.0**
PGBU AMb AMB 06 39 52.7
comp=Z,114nm,1.5s,mb5.2
PGBU Glenifferbraes 71.26 345 *eP* **P 06 39 51.6 0.0**
PGBU AMb AMB 06 39 52.7
comp=Z,114nm,1.5s,mb5.2
NRDL Niedersach Rie 71.34 336 *eP* **P 06 39 51.8 -0.3**
comp=Z,15nm,1.0s,mb4.5
OKC Ostrava-Krasne 71.40 330⇓*eP* **P 06 39 52.2 -0.3**
TRPA Tarpa 71.41 326⇓*iP* **P 06 39 52.7 +0.1**
UPC Upice 71.47 331⇓*iP* **P 06 39 52.9 0.0**
UPC *ex* x 06 40 00.1
DPC Dobruska-Polom 71.51 331⇓*iP* **P 06 39 53.5 +0.3**
ESK Eskdalemuir 71.53 345 *eP* **P 06 39 52.9 -0.3**
ESK AMb AMB 06 39 53.4
comp=Z,78nm,1.6s,mb5.0
219A White Tail Can 71.55 62 ⇑P **P 06 39 53.5 -0.2**
baz=71
318A Bisbee 71.57 63 ⇑P **P 06 39 53.6 -0.2**
baz=71
CLL Collm 71.63 334⇓*iP* **P 06 39 53.3 -0.6**
CLL pmax pmax
comp=Z,52nm,1.0s,mb5.0
CLL Collm 71.63 334 *eP* **P 06 39 53.3 -0.6**
comp=Z,52nm,1.0s,mb5.0
CLL Collm 71.63 334⇓*iP* **P 06 39 53.3 -0.6**
comp=Z,52nm,1.0s,mb5.0
CLL *ePcP* PcP 06 40 08.0 -1.7
CLL *epP* pP 06 41 38.0 0.0
BRG Berggiesshubel 71.75 333 *i* P **P 06 39 54.2 -0.4**
BRG pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
BRG Berggiesshubel 71.75 333 *eP* **P 06 39 54.1 -0.5**
comp=Z,14nm,0.8s,mb4.5
BRG Berggiesshubel 71.75 333 *i* P **P 06 39 54.2 -0.4**
comp=Z,14nm,0.8s,mb4.5
VRI Vrincioaia 71.79 322⇑*iP* **P 06 39 55.0 +0.1**
VRI Vrincioaia 71.79 322 ⇑P **P 06 39 55.0 +0.1**
XAL Allendale 71.80 344 *eP* **P 06 39 53.9 -0.8**
CLZ Clausthal 71.86 335 *eP* **P 06 39 55.4 +0.2**
CLZ pmax pmax
comp=Z,50nm,1.5s,mb4.8
CLZ Clausthal 71.86 335 *eP* **P 06 39 55.4 +0.2**
comp=Z,50nm,1.5s,mb4.8
FBE Freiberg 71.88 333 *eP* **P 06 39 55.1 -0.2**
comp=Z,30nm,0.9s,mb4.8
PVCC Panska Ves 71.88 332⇓*eP* **P 06 39 55.1 -0.2**
319A Douglas 72.01 62 ⇓P **P 06 39 56.5 0.0**
baz=72
GAL1 Galloway 72.21 345 *eP* **P 06 39 56.5 -0.7**
GAL1 AMb AMB 06 39 59.1
comp=Z,65nm,1.7s,mb4.9
HARR Harsova 72.30 321⇑*iP* **P 06 39 57.9 0.0**
HARR Harsova 72.30 321 P **P 06 39 58.2 +0.3**
TIRR Tirgusor 72.30 320⇓*iP* **P 06 39 57.7 -0.2**
TIRR Tirgusor 72.30 320 P **P 06 39 57.6 -0.3**
VYHS Vyhne 72.35 329 *eP* **P 06 39 58.2 +0.1**
VYHS pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
VYHS Vyhne 72.35 329 *eP* **P 06 39 58.2 +0.1**
comp=Z,9.2nm,0.6s,mb4.5
VRAC Vranov 72.35 330⇑*iP* **P 06 39 58.4 +0.3**
VRAC Vranov 72.35 330 P **P 06 39 58.5 +0.4**
WRAB Tennant Creek 72.35 196 *eP* **P 06 39 57.4 -0.9**
WRAB *e* 06 40 11.7
WRAB *e**PP pP 06 41 48.1 +5.1
WRAB pmax pmax
comp=Z,21nm,0.8s,mb4.7
WRAB Tennant Creek 72.35 196 *eP* **P 06 39 57.4 -0.9**
comp=Z,22nm,0.8s,mb4.7
WRAB *ePcP* PcP 06 40 11.7 -1.3
WRAB *epP* pP 06 41 48.1 +5.1
WB2 Warramunga Arr 72.36 196⇓*iP* **P 06 39 57.5 -0.9**
WB2 *ePCP* PcP 06 40 11.8 -1.2
WB2 *ePCP* pP 06 41 48.9 +5.9
WRA Warramunga Arr 72.36 196 P **P 06 39 57.4 -1.0**
comp=Z,22nm,0.7s,mb4.8,baz=17,slow=6.2,SNR=214
WRA pP pP 06 41 46.8 +3.7
comp=Z,2.8nm,0.9s,baz=18,slow=6.4,SNR=8.1
WRA Warramunga Arr 72.36 196 P **P 06 39 57.4 -1.0**
WRA *PP pP 06 41 46.8 +3.7
WRA pmax pmax
comp=Z,22nm,0.7s
WRA pmax pmax
comp=Z,3.0nm,0.9s
PRU Pruhonice 72.37 332⇓*iP* **P 06 39 58.2 0.0**
KOLL Kolacno 72.42 329 *eP* **P 06 39 58.9 +0.4**
FITZ Fitzroy Crossi 72.49 205 *eP* **P 06 39 58.5 -0.7**
comp=Z,20nm,0.7s,mb4.8
FITZ *e* 06 52 20.8
PSZ Piszkesteto 72.50 328⇓*iP* **P 06 39 59.2 +0.2**
PSZ Piszkesteto 72.50 328 *eP* **P 06 39 59.3 +0.3**
comp=Z,14nm,0.9s,mb4.5
HPK Haverah Park 72.55 343 P **P 06 39 59.2 0.0**
HPK AMb AMB 06 40 01.6
comp=Z,117nm,1.6s,mb5.2
HPK Haverah Park 72.55 343 *eP* **P 06 39 59.2 0.0**
HPK AMb AMB 06 40 01.6
comp=Z,117nm,1.6s,mb5.2
TANN Tannenbergstha 72.58 333 *eP* **P 06 39 59.3 -0.1**
comp=Z,6.0nm,0.7s,mb4.2
WERD Werda 72.60 334 *eP* **P 06 39 59.3 -0.2**
comp=Z,12nm,0.8s,mb4.5
MOX Moxa 72.61 334 *eP* **P 06 39 59.3 -0.3**
comp=Z,27nm,1.1s,mb4.7
MOX Moxa 72.61 334 *eP* **P 06 39 59.3 -0.3**
MOX pmax pmax
comp=Z,27nm,1.1s,mb4.7
MOX Moxa 72.61 334 *eP* **P 06 39 59.4 -0.2**
comp=Z,27nm,1.2s,mb4.7
WTSB Winterswijk 72.65 337 *eP* **P 06 39 59.4 -0.3**
comp=Z,25nm,0.6s,mb4.9
GUNZ Gunzen 72.67 333 *eP* **P 06 39 59.8 -0.1**
comp=Z,19nm,0.7s,mb4.7
TREC Trest 72.70 331⇓*iP* **P 06 40 00.0 -0.1**
WERN Wernitzgruen 72.72 333 *eP* **P 06 40 00.1 -0.1**
comp=Z,26nm,0.7s,mb4.9
NKC Novy Kostel 72.75 333⇓*eP* **P 06 40 00.0 -0.4**
VOIR 72.78 323⇓*iP* **P 06 40 01.0 +0.3**
VOIR 72.78 323 P **P 06 40 01.1 +0.4**
UBBA Unterbreizbach 72.89 335 *eP* **P 06 40 00.8 -0.4**
comp=Z,8.0nm,0.8s,mb4.3
LHO Holmfirth 72.99 343 *eP* **P 06 40 01.3 -0.4**
ZST Bratislava 73.17 330 *eP* **P 06 40 04.0 +1.2**
ZST pmax pmax
comp=Z,11nm,0.7s,mb4.5
ZST Bratislava 73.17 330 *eP* **P 06 40 04.0 +1.2**
comp=Z,10nm,0.7s,mb4.5
KBI1 Birley Grange 73.21 343 *eP* **P 06 40 02.8 -0.2**
ROTZ Rotzenmuhle 73.24 333 *eP* **P 06 40 03.3 +0.1**
comp=Z,24nm,1.1s,mb4.6
KHC Kasperske Hory 73.42 332⇓*iP* **P 06 40 04.5 +0.3**
KHC *ex* x 06 40 10.2
GRA1 Grafenberg Arr 73.58 334 *eP* **P 06 40 05.4 +0.2**
comp=Z,47nm,0.9s,mb5.0
GRF Grafenberg Arr 73.58 334 *eP* **P 06 40 05.4 +0.2**
GRF pmax pmax
comp=Z,47nm,0.9s,mb5.0
GRF Grafenberg Arr 73.58 334 *eP* **P 06 40 05.4 +0.2**
GRF pmax pmax
comp=Z,47nm,0.9s,mb5.0
GRF Grafenberg Arr 73.58 334 *eP* **P 06 40 05.4 +0.2**
comp=Z,47nm,0.9s,mb5.0
WET Wettzell 73.61 333 *eP* **P 06 40 05.5 +0.2**
WET pmax pmax
comp=Z,32nm,1.2s,mb4.7
WET Wettzell 73.61 333 *eP* **P 06 40 05.5 +0.2**
comp=Z,32nm,1.2s,mb4.7
GEC2 GERESS Array S 73.64 332 *eP* **P 06 40 05.3 -0.2**
GEC2 pmax pmax
comp=Z,11nm,0.7s,mb4.5
GEC2 GERESS Array S 73.64 332 *eP* **P 06 40 05.3 -0.2**
comp=Z,11nm,0.7s,mb4.5
GERES GERESS Array B 73.64 332 P **P 06 40 05.3 -0.2**
comp=Z,7.4nm,0.6s,mb4.4,baz=36,slow=5.7,SNR=58
GERES GERESS Array B 73.64 332 P **P 06 40 05.3 -0.2**
GERES pmax pmax
comp=Z,7.0nm,0.6s
CWF Charnwood Fore 73.66 343 *eP* **P 06 40 05.0 -0.5**
CWF AMb AMB 06 40 07.0
comp=Z,45nm,1.5s,mb4.8
GZR Gura Zlata 73.66 325⇑*iP* **P 06 40 05.6 -0.1**
GZR Gura Zlata 73.66 325 P **P 06 40 05.5 -0.2**
CONA Conrad Observa 73.80 330⇓*iP* **P 06 40 06.9 +0.5**
comp=Z,14nm,0.6s,mb4.7
CSNA Conrad Observa 73.80 330⇑*iP* **P 06 40 06.8 +0.4**
comp=Z,14nm,0.6s,mb4.7
SBD1 Bryn Du 73.85 344 *eP* **P 06 40 06.2 -0.4**
BZS Buzias 73.89 325⇑*iP* **P 06 40 06.5 -0.5**
BR131 Keskin Array S 73.97 314 *eP* **P 06 40 07.5 -0.1**
comp=Z,29nm,0.9s,mb4.8
BRTR Keskin Array B 73.97 314 P **P 06 40 07.8 +0.3**
comp=Z,20nm,0.8s,mb4.7,baz=59,slow=3.4,SNR=96
BRTR Keskin Array B 73.97 314 P **P 06 40 07.8 +0.3**
BRTR pmax pmax
comp=Z,20nm,0.8s
HGN Heimansgroeve 73.97 338 *eP* **P 06 40 06.9 -0.4**
comp=Z,16nm,1.1s,mb4.5
MEM Membach 74.09 337 P **P 06 40 07.9 -0.2**
comp=Z,21nm,1.1s,mb4.6
UCC Uccle 74.31 338 P **P 06 40 08.7 -0.5**
MOA Molln 74.36 331⇓*iP* **P 06 40 09.6 +0.1**
comp=Z,10nm,0.8s,mb4.4,SNR=7.3
PKSM Moragy 74.41 328⇑*iP* **P 06 40 08.9 -1.0**
PKSM Moragy 74.41 328 P **P 06 40 09.1 -0.8**
BCLA Clavier 74.44 338 P **P 06 40 09.7 -0.3**
comp=Z,12nm,1.1s,mb4.4
SNF Seneffe 74.59 338 P **P 06 40 10.4 -0.5**
MCH1 Michaelchurch 74.68 343 *eP* **P 06 40 10.8 -0.5**
MCH1 AMb AMB 06 40 17.5
comp=Z,81nm,1.8s,mb5.0
GIVF Givet 74.85 338 *eP* **P 06 40 11.5 -0.8**
comp=Z,34nm,0.8s,mb4.6
GIVF Givet 74.85 338 *eP* **P 06 40 11.5 -0.8**
GIVF pmax pmax
comp=Z,17nm,0.8s,mb4.6
GIVF Givet 74.85 338 *eP* **P 06 40 11.5 -0.8**
comp=Z,17nm,0.8s,mb4.6
RJOB Jochberg 74.90 332 *eP* **P 06 40 12.9 +0.3**
comp=Z,16nm,1.0s,mb4.5
DOU Dourbes 74.91 338 P **P 06 40 12.3 -0.3**
comp=Z,6.1nm,1.0s,mb4.1
UMR Umm Al-Rimmam 74.92 298 *eP* **P 06 40 12.6 -0.5**
baz=298
UMR AMb AMB 06 40 13.4
comp=Z,154nm,0.7s,mb5.6,baz=298
STU Stuttgart 74.97 335 *eP* **P 06 40 12.6 -0.4**
comp=Z,16nm,0.7s,mb4.7
HGH Gray Hill 74.98 343 *eP* **P 06 40 11.9 -1.1**
BAIF Baives 75.03 338 *eP* **P 06 40 12.7 -0.6**
comp=Z,27nm,0.8s,mb4.5
BAIF Baives 75.03 338 *eP* **P 06 40 12.7 -0.6**
BAIF pmax pmax
comp=Z,13nm,0.8s,mb4.5
BAIF Baives 75.03 338 *eP* **P 06 40 12.7 -0.6**
comp=Z,13nm,0.8s,mb4.5
SOKA Soboth 75.17 330⇑*iP* **P 06 40 14.1 -0.1**
comp=Z,22nm,1.0s,mb4.7
KBD Kabd 75.22 298 *eP* **P 06 40 14.4 -0.4**
baz=298
KBA Koelnbreinsper 75.33 331⇑*iP* **P 06 40 15.6 +0.6**
comp=Z,54nm,0.9s,mb5.1,SNR=11
NAY Al-Naaiem 75.41 299 *eP* **P 06 40 15.0 -0.8**
baz=299
NAY AMb AMB 06 40 16.4
comp=Z,50nm,0.9s,mb5.0,baz=299
QRN Al-Qurain 75.43 298 *eP* **P 06 40 15.5 -0.5**
baz=298
QRN AMb AMB 06 40 16.7
comp=Z,134nm,0.8s,mb5.5,baz=298
OBKA Obir 75.47 330⇓*iP* **P 06 40 15.8 -0.1**
comp=Z,12nm,0.6s,mb4.6
RDF Al-Radifah 75.49 298 *eP* **P 06 40 15.9 -0.4**
baz=298
RDF AMb AMB 06 40 17.1
comp=Z,164nm,0.5s,mb5.8,baz=298

BFO Black Forest 75.61 335 eP P 06 40 16.3 -0.3
BFO pmax pmax
comp=Z,14nm,0.8s,mb4.5
BFO Black Forest 75.61 335 eP P 06 40 16.3 -0.3
comp=Z,14nm,0.8s,mb4.5
WATA Walderalm 75.62 333 ⇓iP P 06 40 16.5 -0.2
comp=Z,14nm,0.5s,mb4.7
MYKA Terra Mystica 75.64 331 ⇓iP P 06 40 16.4 -0.4
comp=Z,8.9nm,0.6s,mb4.5
WTTA Wattenberg 75.66 333 ⇑iP P 06 40 17.3 +0.4
comp=Z,38nm,0.6s,mb5.1,SNR=16
RETA Reutte 75.71 333 ⇑iP P 06 40 17.7 +0.5
comp=Z,18nm,1.0s,mb4.6
MOTA Moosalm 75.74 333 ⇓iP P 06 40 17.5 +0.1
comp=Z,34nm,1.0s,mb4.8,SNR=9.6
CDF Champ du Feu 75.81 336 eP P 06 40 17.2 -0.5
comp=Z,29nm,0.8s,mb4.6
CDF Champ du Feu 75.81 336 eP P 06 40 17.2 -0.5
CDF pmax pmax
comp=Z,14nm,0.8s,mb4.5
CDF Champ du Feu 75.81 336 eP P 06 40 17.2 -0.5
comp=Z,14nm,0.8s,mb4.6
VTS Vitosha 75.90 323 ⇓iP P 06 40 18.0 -0.3
VTS Vitosha 75.90 323 ⇓P P 06 40 17.9 -0.4
PTCC Patocco-Chiusa 75.93 331 P P 06 40 17.5 -0.9
comp=Z,11nm,0.6s,mb4.6
DAVA Damuels 76.14 334 ⇓iP P 06 40 19.7 +0.1
comp=Z,25nm,0.8s,mb4.8
FETA Feichten 76.14 333 ⇓iP P 06 40 19.9 +0.3
comp=Z,15nm,0.8s,mb4.6,SNR=5.8
MEZF Maizieres J'vi 76.28 337 eP P 06 40 19.9 -0.4
HAU Haudompre 76.42 336 eP P 06 40 20.2 -0.9
comp=Z,20nm,0.8s,mb4.4
HAU Haudompre 76.42 336 eP P 06 40 20.2 -0.9
HAU pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
HAU Haudompre 76.42 336 eP P 06 40 20.2 -0.9
comp=Z,10nm,0.8s,mb4.4
HINF Hinteralfeld 76.47 336 eP P 06 40 20.3 -1.1
comp=Z,30nm,1.2s,mb4.4
HINF Hinteralfeld 76.47 336 eP P 06 40 20.3 -1.1
HINF pmax pmax
comp=Z,15nm,1.2s,mb4.4
HINF Hinteralfeld 76.47 336 eP P 06 40 20.3 -1.1
comp=Z,15nm,1.2s,mb4.4
TXAR Lajitas Array 76.67 60 P P 06 40 22.4 -0.4
comp=Z,1.5nm,0.5s,mb3.8,baz=295,slow=5.2,SNR=29
TXAR pP pP 06 42 11.0 +2.2
comp=Z,0.3nm,0.6s,baz=305,slow=5.2,SNR=4.1
TXAR Lajitas Array 76.67 60 P P 06 40 22.5 -0.3
TXAR *PP pP 06 42 11.0 +2.2
TXAR pmax pmax
comp=Z,2.0nm,0.5s
TXAR Lajitas Array 76.67 60 P P 06 40 22.4 -0.4
TXAR pP pP 06 42 11.0 +2.2
TUE Stuetta 77.03 334 eP P 06 40 23.8 -0.7
comp=Z,34nm,0.8s,mb4.9
MBWA Marble Bar 77.08 209 eP P 06 40 23.8 -1.1
comp=Z,7.8nm,0.6s,mb4.4
FLN La Foliniere 77.28 341 eP P 06 40 24.9 -0.9
comp=Z,21nm,0.7s,mb4.5
FLN La Foliniere 77.28 341 eP P 06 40 24.9 -0.9
FLN pmax pmax
comp=Z,11nm,0.7s,mb4.5
FLN La Foliniere 77.28 341 eP P 06 40 24.9 -0.9
comp=Z,11nm,0.7s,mb4.5
LDF La Druitiere 77.37 341 eP P 06 40 25.3 -1.0
GRR Gorron 77.71 341 eP P 06 40 27.6 -0.6
comp=Z,24nm,0.7s,mb4.4
GRR Gorron 77.71 341 eP P 06 40 27.6 -0.6
GRR pmax pmax
comp=Z,12nm,0.7s,mb4.4
GRR Gorron 77.71 341 eP P 06 40 27.6 -0.6
comp=Z,12nm,0.7s,mb4.4
LOR Lormes 77.72 338 eP P 06 40 27.4 -0.8
comp=Z,64nm,0.9s,mb4.7
LOR Lormes 77.72 338 eP P 06 40 27.4 -0.8
LOR pmax pmax
comp=Z,32nm,0.9s,mb4.8
LOR Lormes 77.72 338 eP P 06 40 27.4 -0.8
comp=Z,32nm,0.9s,mb4.8
CABF La Chapelle 77.78 336 eP P 06 40 28.1 -0.5
comp=Z,80nm,1.3s,mb4.7
CABF La Chapelle 77.78 336 eP P 06 40 28.1 -0.5
CABF pmax pmax
comp=Z,40nm,1.3s,mb4.7
CABF La Chapelle 77.78 336 eP P 06 40 28.1 -0.5
comp=Z,40nm,1.3s,mb4.7
SSF Saint Saulge 78.00 338 eP P 06 40 29.0 -0.7
comp=Z,28nm,0.8s,mb4.5
SSF Saint Saulge 78.00 338 eP P 06 40 29.0 -0.7
SSF pmax pmax
comp=Z,14nm,0.8s,mb4.4
SSF Saint Saulge 78.00 338 eP P 06 40 29.0 -0.7
comp=Z,14nm,0.8s,mb4.5
HYF Humbligny 78.01 338 eP P 06 40 29.5 -0.3
SGMF Saint Gilles 78.18 342 eP P 06 40 30.2 -0.5
comp=Z,30nm,0.6s,mb4.6
SGMF Saint Gilles 78.18 342 eP P 06 40 30.2 -0.5
SGMF pmax pmax
comp=Z,15nm,0.6s,mb4.6
SGMF Saint Gilles 78.18 342 eP P 06 40 30.2 -0.5
comp=Z,15nm,0.6s,mb4.6
ROSF Rostrenen 78.24 343 eP P 06 40 30.5 -0.5
comp=Z,59nm,0.9s,mb4.7
ROSF Rostrenen 78.24 343 eP P 06 40 30.5 -0.5
ROSF pmax pmax
comp=Z,30nm,0.9s,mb4.7
ROSF Rostrenen 78.24 343 eP P 06 40 30.5 -0.5
comp=Z,30nm,0.9s,mb4.7
AVF Avril sur Loir 78.29 338 eP P 06 40 30.7 -0.6
comp=Z,49nm,0.9s,mb4.6
AVF Avril sur Loir 78.29 338 eP P 06 40 30.7 -0.6
AVF pmax pmax
comp=Z,25nm,0.9s,mb4.6
AVF Avril sur Loir 78.29 338 eP P 06 40 30.7 -0.6
comp=Z,25nm,0.9s,mb4.6
SMF Signal de Mont 78.31 337 eP P 06 40 30.8 -0.6
comp=Z,122nm,1.2s,mb4.9
SMF Signal de Mont 78.31 337 eP P 06 40 30.8 -0.6
SMF pmax pmax
comp=Z,61nm,1.2s,mb4.9
SMF Signal de Mont 78.31 337 eP P 06 40 30.8 -0.6
comp=Z,61nm,1.2s,mb4.9
GSCL Gusciola 78.62 332 P P 06 40 33.7 +0.6
QUIF Quistinic 78.62 342 eP P 06 40 32.3 -0.7
LPL La Plagne 78.63 335 eP P 06 40 33.4 +0.3
comp=Z,74nm,0.9s,mb4.9
LPL La Plagne 78.63 335 eP P 06 40 33.4 +0.3
LPL pmax pmax
comp=Z,37nm,0.9s,mb4.9
LPL La Plagne 78.63 335 eP P 06 40 33.4 +0.3
comp=Z,37nm,0.9s,mb4.9
BGF Bois d'Agland 78.63 338 eP P 06 40 32.5 -0.6
comp=Z,26nm,0.8s,mb4.5
BGF Bois d'Agland 78.63 338 eP P 06 40 32.5 -0.6
BGF pmax pmax
comp=Z,13nm,0.8s,mb4.5
BGF Bois d'Agland 78.63 338 eP P 06 40 32.5 -0.6
comp=Z,13nm,0.8s,mb4.5
LPG La Plagne 78.64 335 eP P 06 40 33.6 +0.4
comp=Z,52nm,0.8s,mb4.8
LPG La Plagne 78.64 335 eP P 06 40 33.6 +0.4
LPG pmax pmax
comp=Z,26nm,0.8s,mb4.8
LPG La Plagne 78.64 335 eP P 06 40 33.6 +0.4
comp=Z,26nm,0.8s,mb4.8
VMG Vicchio 78.69 331 P P 06 40 34.6 +1.1
comp=Z,31nm,0.7s,mb5.0
TCF Toulx Ste Croi 79.03 338 eP P 06 40 34.9 -0.4
comp=Z,27nm,0.8s,mb4.5
TCF Toulx Ste Croi 79.03 338 eP P 06 40 34.9 -0.4
TCF pmax pmax
comp=Z,14nm,0.8s,mb4.5
TCF Toulx Ste Croi 79.03 338 eP P 06 40 34.9 -0.4
comp=Z,14nm,0.8s,mb4.5
BNI Bardonecchia 79.07 335 eP P 06 40 35.7 +0.2
BNI pmax pmax
comp=Z,11nm,0.7s,mb4.5
BNI Bardonecchia 79.07 335 eP P 06 40 35.7 +0.2
comp=Z,11nm,0.7s,mb4.5
NRCA Norcia 79.22 330 P P 06 40 36.6 +0.3
MFF Saint Martin d 79.26 340 eP P 06 40 36.1 -0.4
comp=Z,37nm,1.0s,mb4.6
MFF Saint Martin d 79.26 340 eP P 06 40 36.1 -0.4
MFF pmax pmax
comp=Z,19nm,1.0s,mb4.6
MFF Saint Martin d 79.26 340 eP P 06 40 36.1 -0.4
comp=Z,19nm,1.0s,mb4.6
MBDF Montbardon 79.35 335 eP P 06 40 36.5 -0.5
comp=Z,15nm,0.6s,mb4.4
MBDF Montbardon 79.35 335 eP P 06 40 36.5 -0.5
MBDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
MBDF Montbardon 79.35 335 eP P 06 40 36.5 -0.5
comp=Z,7.6nm,0.6s,mb4.4
ORIF Oris-en-Rattie 79.41 335 eP P 06 40 37.4 +0.1
comp=Z,40nm,0.8s,mb4.7
ORIF Oris-en-Rattie 79.41 335 eP P 06 40 37.4 +0.1
ORIF pmax pmax
comp=Z,20nm,0.8s,mb4.7
ORIF Oris-en-Rattie 79.41 335 eP P 06 40 37.4 +0.1
comp=Z,20nm,0.8s,mb4.7
VIVF Saint-Julien-l 79.78 336 eP P 06 40 39.1 -0.1
comp=Z,49nm,1.0s,mb4.7
VIVF Saint-Julien-l 79.78 336 eP P 06 40 39.1 -0.1
VIVF pmax pmax
comp=Z,24nm,1.0s,mb4.7
VIVF Saint-Julien-l 79.78 336 eP P 06 40 39.1 -0.1
comp=Z,24nm,1.0s,mb4.7
RJF Les Rejaudoux 80.12 338 eP P 06 40 40.6 -0.4
comp=Z,44nm,1.1s,mb4.6
RJF Les Rejaudoux 80.12 338 eP P 06 40 40.6 -0.4
RJF pmax pmax
comp=Z,22nm,1.1s,mb4.6
RJF Les Rejaudoux 80.12 338 eP P 06 40 40.6 -0.4
comp=Z,22nm,1.1s,mb4.6
CAF Calviac 80.35 338 eP P 06 40 42.4 +0.2
comp=Z,16nm,0.6s,mb4.4
CAF Calviac 80.35 338 eP P 06 40 42.4 +0.2
CAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
CAF Calviac 80.35 338 eP P 06 40 42.4 +0.2
comp=Z,8.3nm,0.6s,mb4.4
FRF La Foret Royal 80.46 334 eP P 06 40 41.8 -1.1
LFF La Frestale 80.64 339 eP P 06 40 43.7 -0.1
comp=Z,64nm,0.8s,mb4.9
LFF La Frestale 80.64 339 eP P 06 40 43.7 -0.1
LFF pmax pmax
comp=Z,32nm,0.8s,mb4.9
LFF La Frestale 80.64 339 eP P 06 40 43.7 -0.1
comp=Z,32nm,0.8s,mb4.9
LMR La Mourre 80.71 334 eP P 06 40 43.3 -0.8
comp=Z,45nm,1.0s,mb4.6
LMR La Mourre 80.71 334 eP P 06 40 43.3 -0.8
LMR pmax pmax
comp=Z,23nm,1.0s,mb4.7
LMR La Mourre 80.71 334 eP P 06 40 43.3 -0.8
comp=Z,22nm,1.0s,mb4.7
ARMA Armidale 81.37 179 eP P 06 40 48.0 +0.5
MTLF Montolieu 81.81 337 eP P 06 40 49.0 -0.8
comp=Z,45nm,1.3s,mb4.5
MTLF Montolieu 81.81 337 eP P 06 40 49.0 -0.8
MTLF pmax pmax
comp=Z,23nm,1.3s,mb4.5
MTLF Montolieu 81.81 337 eP P 06 40 49.0 -0.8
comp=Z,23nm,1.3s,mb4.5
EPF Esparros 82.55 338 eP P 06 40 52.6 -1.0
comp=Z,14nm,0.6s,mb4.3
EPF Esparros 82.55 338 eP P 06 40 52.6 -1.0
EPF pmax pmax
comp=Z,7.0nm,0.6s,mb4.4
EPF Esparros 82.55 338 eP P 06 40 52.6 -1.0
comp=Z,6.9nm,0.6s,mb4.4
SJPF Ste Jean 82.82 340 eP P 06 40 53.5 -1.4
comp=Z,7.0nm,0.6s,mb4.0
SJPF Ste Jean 82.82 340 eP P 06 40 53.5 -1.4
SJPF pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
SJPF Ste Jean 82.82 340 eP P 06 40 53.5 -1.4
comp=Z,3.5nm,0.6s,mb4.1
ETSF Etsaut 82.88 339 eP P 06 40 54.5 -0.7
comp=Z,12nm,0.6s,mb4.3
ETSF Etsaut 82.88 339 eP P 06 40 54.5 -0.7
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
ETSF Etsaut 82.88 339 eP P 06 40 54.5 -0.7
comp=Z,6.1nm,0.6s,mb4.3
STKA Stephens Creek 83.20 188 eP P 06 40 56.0 -0.8
comp=Z,6.8nm,0.8s,mb4.2
STKA Stephens Creek 83.20 188 P P 06 40 56.3 -0.4
comp=Z,7.3nm,0.6s,mb4.4,baz=352,slow=4.7,SNR=12
FORT Forrest 84.11 199 eP P 06 41 00.2 -1.1
comp=Z,18nm,0.7s,mb4.7
PBRG Braganca 85.18 343 eP P 06 41 03.0 -3.7
PVIS Viseu 86.45 344 eP P 06 41 10.8 -1.9
MTE Manteigas 86.69 343 eP P 06 41 12.3 -1.6
comp=Z,23nm,1.5s,mb4.7
ESDC Sonseca Array 86.70 341 P P 06 41 11.8 -2.1
comp=Z,2.1nm,0.8s,mb3.9,baz=356,slow=4.6,SNR=40
KEST Kesra 86.88 329 P P 06 41 12.9 -1.9
comp=Z,12nm,1.1s,mb4.5,baz=350,slow=2.0,SNR=8.3
PMRV Marv??o 87.61 343 eP P 06 41 16.1 -2.1
comp=Z,20nm,1.5s,mb4.6
TOO Toolangi 88.62 184 eP P 06 41 22.7 +0.1
PBAR Barrancos 88.76 343 eP P 06 41 21.8 -1.8
NWAO Narrogin (SRO) 88.86 208 P P 06 41 21.9 -2.0
comp=Z,12nm,1.0s,mb4.7,baz=204,slow=9.6,SNR=3.8
NWAO Narrogin (SRO) 88.86 208 P P 06 41 21.9 -2.0
NWAO pmax pmax
comp=Z,12nm,1.0s
TORD Torodi Ar. Bea 110.34 328 PKiKP PKiKP 06 46 56.7 -2.3
comp=Z,0.6nm,0.6s,baz=6.1,slow=2.3,SNR=4.5
TORD PP PP 06 47 38.9 -3.4
comp=Z,2.0nm,0.8s,baz=15,slow=8.8,SNR=4.1
DBIC Dimbokro 118.51 332 PKP PKPdf 06 47 12.3 -2.4
comp=Z,3.8nm,0.7s,baz=89,slow=4.9,SNR=5.3
DBIC Dimbokro 118.51 332 PKIKP PKPdf 06 47 12.3 -2.3
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 118.51 332 ePKPdf PKPdf 06 47 12.7 -2.0
TIC Toumodi 118.58 332 ePKP1 PKPdf 06 47 12.5 -2.3
comp=Z,39nm,1.1s
KIC Kosan Boka 118.77 332 ePKP1 PKPdf 06 47 13.1 -2.0
comp=Z,60nm,1.4s
LIC Lamto 118.98 332 ePKP1 PKPdf 06 47 13.4 -2.2
comp=Z,34nm,1.6s
VNDA Vanda 128.75 177 PKP PKPdf 06 47 30.0 -2.3
comp=Z,2.4nm,0.6s,baz=331,slow=3.7,SNR=17
VNDA Vanda 128.75 177 PKIKP PKPdf 06 47 30.0 -2.3
VNDA pmax pmax
comp=Z,2.0nm,0.6s
BOSA Boshof 133.63 278 PKhKP 06 47 36.0
comp=Z,2.9nm,0.8s,baz=264,slow=2.0,SNR=7.0
BOSA Boshof 133.63 278 PKIKP 06 47 36.0
BOSA pmax pmax
comp=Z,3.0nm,0.8s
MAW Mawson 135.19 213 PKP PKPdf 06 47 43.7 -0.9
comp=Z,6.3nm,0.8s,baz=340,slow=23,SNR=3.5
MAW Mawson 135.19 213 PKIKP PKPdf 06 47 43.7 -0.9
MAW pmax pmax
comp=Z,6.0nm,0.8s
QSPA South Pole Qui 141.05 180 PKhKP 06 47 47.9
comp=Z,5.9nm,0.6s,baz=299,slow=0.5,SNR=30
QSPA PKP PKPdf 06 47 55.4 +0.3
comp=Z,6.7nm,0.4s,baz=83,slow=0.3,SNR=20
QSPA SKPbc SKPbc 06 50 40.3 -4.3
comp=Z,5.9nm,0.9s,baz=319,slow=3.3,SNR=5.4
BDFB Brasilia 141.42 30 PKhKP 06 47 51.5
comp=Z,2.2nm,0.8s,baz=50,slow=5.7,SNR=6.9
BDFB PKP PKPdf 06 47 57.0 -0.6
comp=Z,2.6nm,0.9s,baz=41,slow=5.9,SNR=4.7
BDFB Brasilia 141.42 30 PKHKP 06 47 51.5
BDFB 06 47 57.0
BDFB pmax pmax
comp=Z,2.0nm,0.8s
BDFB pmax pmax
comp=Z,3.0nm,0.9s
CPUP Villa Florida 147.27 51 PKPbc PKPbc 06 48 09.1 -1.5
comp=Z,7.3nm,0.5s,baz=312,slow=2.4,SNR=31
CPUP Villa Florida 147.27 51 ePKPbc PKPbc 06 48 08.9 -1.6
CPUP ePKPab PKPab 06 48 12.6 -1.4
PLCA Paso Flores 149.92 86 PKP PKPdf 06 48 09.3 -1.9
comp=Z,3.1nm,0.9s,baz=252,slow=0.2,SNR=7.6
PLCA PKPbc PKPbc 06 48 15.8 -0.9
comp=Z,18nm,0.9s,baz=266,slow=2.5,SNR=35
PLCA Paso Flores 149.92 86 PKIKP PKPdf 06 48 09.3 -1.9
PLCA pmax pmax
comp=Z,3.0nm,0.9s
PLCA pmax pmax
comp=Z,18nm,0.9s
PLCA Paso Flores 149.92 86 ePKPbc PKPbc 06 48 15.5 -1.2
SNAA Sanae 156.36 201 ePKPdf PKPdf 06 48 27.3 +7.9
SNAA e 06 48 35.4
SNAA e 06 48 49.5
SNAA e 06 48 56.1
VNA2 Neumayer--Watz 157.89 199 ePKPdf PKPdf 06 48 20.5 -0.9
VNA2 e 06 48 31.6
VNA2 e 06 48 56.6
VNA2 e 06 49 03.5
VNA3 Neumayer Olymp 158.08 197 ePKPdf PKPdf 06 48 20.2 -1.4
VNA3 e 06 48 31.4
VNA3 e 06 48 55.4
VNA3 e 06 49 01.0
VNA1 Neumayer--Stat 158.29 199 ePKPdf PKPab 06 48 58.2 -1.3
VNA1 e 06 49 03.8

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*NDI **12** 07:16:41.9±5.0, 3470N×7246E, h16km, ML4.1, mb4.1(NEIC)*
*IDC **12** 07:16:42.6±0.8, 3469N×7309E, h0km, mb4.2/12, mb1 4.2/16, mb1mx4.1/27, mbtmp4.1/16, ML3.9/4, MS3.1/2, Ms1 3.1/2, ms1mx2.5/27, Error ellipse: s-maj=19.1km s-min=17.5km az=61.0*
*ISCJB **12** 07:16:43.3±1.3, 3476N±002×7327E±004, h14km±9km, mb4.1/19, Error ellipse: s-maj=5.4km s-min=3.6km az=156.5*
*BJI **12** 07:16:44.2, 3459N×7314E, h25km, mB4.5, mb4.3, ML3.6*
*NEIC **12** 07:16:45.2±3.1, 3464N×7322E, h16km±22km, mb4.1/2, Error ellipse: s-maj=10.8km s-min=4.9km az=56.0*
*MOS **12** 07:16:45.3±0.8, 3466N×7325E, h33km, mb4.3/14, Error ellipse: s-maj=12.1km s-min=7.2km az=82.9*
*NNC **12** 07:17:02.3±10.0, 3546N×7366E, h205km±84km, mb2.9, mpv4.0, Error ellipse: s-maj=95.3km s-min=71.7km az=26.0*
ISC 12 07:16:44.1±1.2, **3474N**±002×**7315E**±004, **h5**km±8km, **n99**, σ1§**41**/119, **mb4.1**/19, **14C-8D, Pakistan**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHCP Chirah Chowk 1.08 175 ⇑P Pg 07 17 04.7 -0.2
CEP Cherat 1.38 229 ⇓P Pn 07 17 09.1 -0.8
CEP S Sb 07 17 29.0 +0.8
JMU Jammu 2.49 144 eP Pn 07 17 27.5 +2.3
JMU eP 07 17 27.5
JMU eS Sn 07 18 00.0 +4.1
SARP Sargodha 2.84 188 ⇑P Pn 07 17 31.0 +1.0
SBDP Sheikh Budin 3.12 220 ⇑P Pn 07 17 35.4 +1.4
THN Thein Dam 3.14 136 eP Pn 07 17 35.7 +1.5
THN ex x 07 18 23.6
DLH Dalhousie 3.21 132 eP Pn 07 17 37.0 +1.8
DLH eS Sn 07 18 17.0 +3.2
KBL Kabul 3.40 268 ePn Pn 07 17 38.5 +0.8
KBL eSg Sn 07 18 25.0 +6.6
BHK Bhakra 4.30 140 ex Pn 07 17 57.2 +7.1
BHK ex x 07 18 53.8
SDNR Sundarnagar 4.55 134 eP Pn 07 17 55.4 +1.8
SDNR ex x 07 19 04.0
SMLA Simla 4.93 136 eP Pn 07 18 01.0 +2.1
SMLA eS Sn 07 18 56.9 +0.6
SMLA ex x 07 19 02.5
comp=N,2μm,0.3s
SMLA ex x 07 19 03.0
comp=E,2μm,0.4s
KSH Kashi 5.28 24 ePG Pg 07 18 21.8 -3.4
KSH Smax
comp=N,28nm,1.1s
KSH Smax
comp=E,20nm,1.0s
KLP Kalpa 5.34 125 eP Pn 07 18 06.7 +2.3
KLP eS Sn 07 19 08.8 +2.6
KLP AML AML 07 19 36.3
comp=E,729nm,0.9s
KLP AML AML 07 19 36.5
comp=N,717nm,0.9s
DDI Dehra Dun 6.04 135 eP Pn 07 18 16.0 +1.9
DDI ex x 07 19 03.6
JOSI Joshimath 6.82 126 eP Pn 07 18 27.1 +2.2
JOSI eS Sn 07 19 42.6 -0.2
JOSI AML AML 07 20 22.1
comp=N,332nm,0.8s
JOSI AML AML 07 20 25.6
comp=E,237nm,1.0s
BHGR Bahadurgarh 6.84 151 eP Pn 07 18 25.6 +0.6
NDI New Delhi 6.96 149 eP Pn 07 18 27.0 +0.3
NDI eS Sn 07 19 41.0 -5.2
KHET Khetri 7.02 160 eP Pn 07 18 25.1 -2.5
KHET eS Sn 07 19 43.3 -4.4
KHET AML AML 07 19 45.5
comp=E,73nm,0.7s
KHET AML AML 07 19 45.9
comp=N,68nm,0.3s
KALG Kalgarh 7.05 136 ex Pn 07 18 25.4 -2.6
KALG ex x 07 19 30.7
AYAN Aya Nagar 7.10 150 eP Pn 07 18 29.5 +0.9
AYAN eS Sn 07 19 45.0 -4.6
KUDL Kundal 7.16 156 eP Pn 07 18 28.9 -0.7
KUDL eS Sn 07 19 45.7 -5.6
KUDL AML AML 07 19 52.4
comp=E,77nm,0.3s
KUDL AML AML 07 19 56.0
comp=N,52nm,0.4s
SONA Sohna 7.29 152 eP Pn 07 18 31.2 0.0
SONA eS Sn 07 19 49.5 -4.8
SONA AML AML 07 20 50.5
comp=N,58nm,0.4s
SONA AML AML 07 20 54.2
comp=E,81nm,0.6s
AML Almayashu 7.39 3 ePn Pn 07 18 35.0 +2.3
comp=E,15nm,0.5s
AML eSn Sn 07 19 56.8 0.0
EKS2 Erkin-Say 7.93 3 ePn Pn 07 18 42.2 +2.3
comp=E,8.1nm,0.6s
EKS2 eSn Sn 07 20 11.2 +1.3
AAK Ala-Archa 7.95 7 eP Pn 07 18 41.7 +1.4
AAK e 07 20 11.8
AAK pmax pmax
comp=Z,4.0nm,0.5s
AAK Ala-Archa 7.95 7 ePn Pn 07 18 41.7 +1.4
comp=Z,3.9nm,0.5s
AAK eSn Sn 07 20 11.8 +1.2
LGTI Lohaghat 8.00 129 eP Pn 07 18 42.1 +1.1
LGTI ex x 07 20 10.5
JASL Jaisalmer 8.03 195 eP Pn 07 18 36.0 -5.4
AJM Ajmer 8.33 171 i P Pn 07 18 44.0 -1.5
AJM i x x 07 20 14.0
TKM2 Tokmak 2 8.39 12 ⇑P Pn 07 18 49.1 +2.8
comp=Z,6.2nm,0.9s
TKM2 ⇑S Sn 07 20 19.5 -1.8
comp=Z,4.9nm,0.6s
TKM2 Tokmak 2 8.39 12 eP Pn 07 18 48.3 +2.0
TKM2 pmax pmax
comp=Z,4.0nm,0.6s
TKM2 Tokmak 2 8.39 12 ePn Pn 07 18 48.3 +2.0
comp=Z,4.4nm,0.6s
KK31 Karatay Array 8.60 347 P Pn 07 18 50.9 +1.6
comp=Z,4.2nm,0.3s,baz=162,slow=12,SNR=141
KK31 ⇑S Sn 07 20 27.4 +0.9
comp=Z,6.2nm,0.5s,baz=153,slow=23
DANN Dangsing 11.06 122 eP Pn 07 19 22.8 -0.1
comp=Z,33nm,0.3s
KOLN Koldanda 11.31 125 eP Pn 07 19 26.0 -0.4
comp=Z,12nm,0.3s
GKN Gorkha 11.88 121 eP Pn 07 19 33.1 -1.1
comp=Z,22nm,0.4s
DMN Daman 12.45 122 eP Pn 07 19 40.9 -1.1
comp=Z,27nm,0.4s
KKN Kakani 12.47 120 eP Pn 07 19 40.4 -1.8
comp=Z,29nm,0.5s
KKN Kakani 12.47 120 eP Pn 07 19 40.4 -1.8
KKN pmax pmax
comp=Z,29nm,0.5s
PKIN Phulchoki 12.68 121 eP Pn 07 19 43.4 -1.7
comp=Z,16nm,0.3s
PKI Pulchoki 12.69 121 eP Pn 07 19 44.1 -1.1
comp=Z,15nm,0.3s
PKI Pulchoki 12.69 121 eP Pn 07 19 44.1 -1.1
PKI pmax pmax
comp=Z,15nm,0.3s
GUN Gumba 12.83 119 eP Pn 07 19 45.9 -1.2
comp=Z,21nm,0.4s
JIRN Jiri 13.20 119 eP Pn 07 19 50.5 -1.6
comp=Z,64nm,0.4s
MK31 Makanchi Array 13.88 27 ⇓P Pn 07 20 02.1 +0.8
comp=Z,2.0nm,0.8s,baz=206,slow=16,SNR=4.1
MK31 Makanchi Array 13.88 27 ePn Pn 07 20 02.0 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.88**	**27**	Pn	**Pn**	**07 20 02.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=206,slow=15,SNR=6.2						
MKAR	**Makanchi Array**	**13.88**	**27**	*i* P	**Pn**	**07 20 01.3**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
RAMN	**Ramite**	**13.91**	**120**	*e*P	**Pn**	**07 19 59.2**	**-2.7**
	comp=Z,11nm,0.3s						
TAPN	**Taplejung**	**14.48**	**117**	*e*P	**Pn**	**07 20 07.2**	**-2.5**
	comp=Z,20nm,0.4s						
ODAN	**Odare**	**14.53**	**119**	*e*P	**Pn**	**07 20 07.5**	**-2.8**
	comp=Z,22nm,0.6s						
KURBB	**Kurchatov Arra**	**16.35**	**12**	⇑P	**Pn**	**07 20 31.3**	**-3.0**
	comp=Z,0.9nm,1.0s						
KURK	**Kurchatov**	**16.46**	**12**	⇓P	**Pn**	**07 20 32.6**	**-3.0**
	comp=Z,5.4nm,1.0s						
KURK	**Kurchatov**	**16.46**	**12**	Pn	**Pn**	**07 20 30.7**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=201,slow=11,SNR=12						
KURK				LR	LR	07 26 58.1	
	comp=Z,48nm,18.4s,baz=195,slow=38						
KURK	**Kurchatov**	**16.46**	**12**	⇑*i*P	**Pn**	**07 20 31.4**	**-4.2**
AB09	**Akbulak array**	**17.49**	**330**	⇓P	**Pn**	**07 20 46.0**	**-2.6**
	comp=Z,2.1nm,0.6s						
AB09				⇑S	**Sn**	**07 23 52.1**	**-11**
	comp=Z,1.5nm,0.7s						
VOSK	**Vostochnaya**	**18.05**	**356**	⇓P	**Pn**	**07 20 53.5**	**-2.0**
	comp=Z,2.7nm,0.7s						
BVAR	**Borovoye Array**	**18.39**	**355**	P	**Pn**	**07 20 59.9**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=166,slow=10,SNR=18						
BVAR				LR	LR	07 28 18.9	
	comp=Z,87nm,18.6s,baz=50,slow=38						
BVAR	**Borovoye Array**	**18.39**	**355**	P	**Pn**	**07 20 59.9**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,87nm,18.6s						
BRVK	**Borovoye**	**18.43**	**355**	*e*P	**Pn**	**07 21 00.2**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**18.43**	**355**	*e*P	**Pn**	**07 21 00.2**	**0.0**
	comp=Z,6.6nm,0.8s						
AKTK	**Aktyubinsk**	**19.18**	**329**	P	**Pn**	**07 21 08.6**	**-0.7**
AKTK				S	**Sn**	**07 24 40.1**	**-4.4**
AKTO	**Aktyubinsk**	**19.18**	**329**	⇑P	**Pn**	**07 21 08.4**	**-0.9**
	comp=Z,1.3nm,0.7s						
AKTO	**Aktyubinsk**	**19.18**	**329**	P	**Pn**	**07 21 08.6**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=134,slow=11,SNR=24						
AKTO				S	**Sn**	**07 24 40.1**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=12,slow=20,SNR=3.9						
AKTO	**Aktyubinsk**	**19.18**	**329**	P	**Pn**	**07 21 08.6**	**-0.7**
AKTO				S	**Sn**	**07 24 40.1**	**-4.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**20.89**	**20**	P	**P**	**07 21 25.9**	**-1.0**
	comp=Z,10nm,0.6s,baz=208,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**20.89**	**20**	P	**P**	**07 21 26.0**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA	**Gaotai**	**21.74**	**70**	*e*P	**P**	**07 21 36.4**	**+0.1**
GTA				AP		07 21 45.8	
GTA				XP	sP	07 21 50.2	+12
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.0						
HVS	**Khovu-Aksy**	**22.13**	**36**	⇓*i*P	**P**	**07 21 38.5**	**-1.8**
ARU	**Arti**	**23.88**	**340**	⇓*i*P	**P**	**07 21 58.5**	**+0.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
ARU	**Arti**	**23.88**	**340**	*e*P	**P**	**07 21 58.1**	**-0.3**
	comp=Z,6.3nm,0.7s,mb4.2						
LZH	**Lanzhou**	**25.00**	**78**	*e*P	**P**	**07 22 11.0**	**+2.2**
LZH				AP	pP	07 22 17.5	+7.1
LZH				XP	sP	07 22 20.1	+9.0
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.5						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
KIV	**Kislovodsk**	**25.18**	**301**	⇑*i*P	sP	07 22 24.7	+12
KIV				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.3						
ZAK	**Zakamensk**	**26.90**	**45**	*e*P	**P**	**07 22 25.8**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
TLY	**Talaya**	**27.66**	**43**	⇑*i*P	**P**	**07 22 32.1**	**-0.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
SONM	**Songino Array**	**27.96**	**52**	P	**P**	**07 22 35.2**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.4,baz=248,slow=8.0,SNR=5.0						
SONM	**Songino Array**	**27.96**	**52**	P	**P**	**07 22 35.2**	**-0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.07**	**119**	P	**P**	**07 22 38.0**	**+1.4**
	comp=Z,1.4nm,0.4s,mb3.9,baz=302,slow=11,SNR=8.5						
CMAR	**Chiang Mai Arr**	**28.07**	**119**	P	**P**	**07 22 38.1**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ULN	**Ulaanbaatar**	**28.40**	**52**	⇑*i*P	**P**	**07 22 40.1**	**+0.8**
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**07 24 47.5**	**+0.1**
	comp=Z,3.5nm,0.7s,mb4.2,baz=113,slow=8.0,SNR=15						
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**07 24 47.5**	**0.0**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	**Yakutsk**	**44.41**	**34**	⇓*i*P	**P**	**07 24 54.9**	**-0.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
TIXI	**Tiksi**	**46.77**	**21**	⇑*i*P	**P**	**07 25 13.0**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.1						
NOA	**NORSAR Array B**	**46.84**	**324**	P	**P**	**07 25 15.6**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=95,slow=8.0,SNR=3.3						
NOA	**NORSAR Array B**	**46.84**	**324**	P	**P**	**07 25 15.6**	**+1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SPITS	**Spitsbergen Ar**	**49.60**	**347**	P	**P**	**07 25 36.3**	**+0.5**
	comp=Z,14nm,1.1s,mb4.9,baz=307,slow=3.0,SNR=3.0						
SPITS	**Spitsbergen Ar**	**49.60**	**347**	P	**P**	**07 25 36.3**	**+0.5**
SPITS				pmax	pmax		
	comp=Z,14nm,1.1s						
MJAR	**Matsushiro Arr**	**51.98**	**68**	P	**P**	**07 25 53.1**	**-1.2**
	comp=Z,3.8nm,0.9s,mb4.3,baz=285,slow=8.8,SNR=5.7						
MJAR	**Matsushiro Arr**	**51.98**	**68**	P	**P**	**07 25 53.1**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**67.46**	**271**	P	**P**	**07 27 39.6**	**-1.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=42,slow=5.8,SNR=6.2						
DBIC	**Dimbokro**	**76.39**	**269**	P	**P**	**07 28 32.7**	**-2.2**
	comp=Z,3.4nm,0.9s,mb4.3,baz=151,slow=4.4,SNR=3.9						
DBIC	**Dimbokro**	**76.39**	**269**	P	**P**	**07 28 32.7**	**-2.1**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**77.57**	**222**	P	**P**	**07 28 40.5**	**-0.6**
	comp=Z,1.4nm,0.5s,mb4.1,baz=206,slow=5.6,SNR=4.7						
BOSA	**Boshof**	**77.57**	**222**	P	**P**	**07 28 40.5**	**-0.6**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**79.57**	**123**	P	**P**	**07 28 51.7**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.8,baz=324,slow=5.2,SNR=11						
WRA	**Warramunga Arr**	**79.57**	**123**	P	**P**	**07 28 51.7**	**-0.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**82.91**	**4**	P	**P**	**07 29 08.7**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=349,slow=5.3,SNR=12						
YKA	**Yellowknife Ar**	**82.91**	**4**	P	**P**	**07 29 08.7**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 12 08:19:49.9±5.2**, 2400N**×**10906W, h0km, mb3.2**/1**, mb1 3.8**/4**, mb1mx3.7**/20**, mbtmp3.4**/4**, ML3.8**/2**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.8**/12**, Error ellipse: s-maj=75.6km s-min=12.7km az=162.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.15**	**275**	Pg	Pg	08 20 12.4	+0.5
	131nm,0.3s,baz=85,slow=1.0,SNR=103						
LPIG				Lg		08 20 26.4	
	175nm,0.3s,baz=246,slow=20,SNR=17						
TXAR	**Lajitas Array**	**7.17**	**41**	Pn	Pn	08 21 35.2	-0.8
	0.7nm,0.3s,baz=214,slow=14,SNR=39						
TXAR				Sn	Sn	08 22 52.1	-6.2
	0.6nm,0.3s,baz=226,slow=22,SNR=4.7						
TXAR				Lg		08 23 35.1	
	0.6nm,0.3s,baz=231,slow=34,SNR=4.1						
CMIG	**Matias Romero**	**14.95**	**115**	LR	LR	08 29 09.9	
	comp=Z,111nm,20.6s,baz=295,slow=38						
NVAR	**Mina Array Bea**	**16.40**	**333**	Pn	Pn	08 23 44.8	+3.4
	0.0nm,0.3s,baz=159,slow=13,SNR=7.5						
PDAR	**Pinedale Array**	**18.72**	**359**	P	Pn	08 24 11.4	+1.1
	0.0nm,0.3s,baz=170,slow=12,SNR=7.2						
TEIG	**Tepich**	**19.62**	**97**	LR	LR	08 33 52.2	
	comp=Z,64nm,19.5s,baz=116,slow=43						
TKL	**Tuckaleechee C**	**24.75**	**56**	LR	LR	08 35 48.4	
	comp=Z,96nm,18.3s,baz=259,slow=39						
YKA	**Yellowknife Ar**	**38.66**	**356**	P	P	08 27 15.3	+0.4
	0.3nm,0.8s,baz=172,slow=7.5,SNR=5.1						

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*AUST **12** 08:36:20.4, 4037S×14467E, h0km, ML3.5*
*ISCJB **12** 08:37:21.2±1.1, 40.16S±0.07×1447E±0.1, h10km, Error ellipse: s-maj=13.2km s-min=7.4km az=144.5*
ISC 12 08:37:23.3±4.0**, 4021S**±008×**1447E**±01**, h18km**±27km**, n4,** $\sigma 1^{s}$**79**/8**, Bass Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	**Toolangi**	**2.72**	**14**	*e*P	**Pn**	**08 38 06.5**	**+0.4**
TOO				*e*		08 38 14.4	
TOO				*e*S	**Sn**	**08 38 45.3**	**+6.8**
MOO	**Moorlands**	**2.93**	**140**	*e*P	**Pn**	**08 38 06.3**	**-2.6**
MOO				*e*S	**Sn**	**08 38 45.6**	**+2.0**
ARPS	**Mount Arapiles**	**4.09**	**326**	*e*P	**Pn**	**08 38 25.8**	**+0.8**
ARPS				*e*S	**Sn**	**08 39 11.8**	**-0.6**
	12nm,0.2s						
MILA	**Mila**	**4.72**	**50**	*e*P	**Pn**	**08 38 34.6**	**+1.0**
MILA				*e*S	**Sn**	**08 39 27.2**	**-0.8**
	6.6nm,0.3s						

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*GII **12** 08:46:35.0±0.6, 2986N×3623E, h0km, ML2.0/2, EXPLOSION*
*HLW **12** 08:46:43.8, 2978N×36.18E, h25km, Mb2.8*
ISC 12 08:46:37.2±1.4**, 2996N**±008×**3622E**±008**, h0km, n12,** $\sigma 1^{s}$**38**/15**, 1C-3D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.03**	**274**	Pg	**Pg**	**08 46 55.9**	**-1.1**
AQBJ	**Aqaba**	**1.04**	**257**	Pg	**Pg**	**08 46 55.4**	**-1.8**
ZFRI	**Zfri**	**1.08**	**303**	Pg	**Pg**	**08 46 57.4**	**-0.4**
PRNI	**Paran**	**1.12**	**290**	Pg	**Pg**	**08 46 57.6**	**-1.2**
PRNI				Sg	**Sg**	**08 47 15.3**	**+2.0**
EIL	**Elat**	**1.14**	**255**	Pg	**Pg**	**08 46 57.2**	**-1.9**
EIL				Sg	**Sg**	**08 47 13.9**	**+0.1**
MBRI	**Mt Berech**	**1.15**	**262**	Pg	**Pg**	**08 46 57.6**	**-1.6**
MBRI				Sg	**Sg**	**08 47 14.5**	**+0.5**
MZDA	**Masada**	**1.53**	**331**	Pn	**Pn**	**08 47 05.3**	**-0.6**
HNKL	**Nakhl**	**1.94**	**270**	⇓P	**Pn**	**08 47 13.8**	**+2.3**
AMAG	**Maghara**	**2.69**	**285**	⇓P	**Pn**	**08 47 25.3**	**+3.6**
TR2		**2.69**	**235**	⇑P	**Pn**	**08 47 22.5**	**+0.7**
TR1		**2.78**	**226**	P	**Pn**	**08 47 24.2**	**+1.1**
SUZ		**2.94**	**268**	⇓P	**Pn**	**08 47 26.9**	**+1.7**

CASC 12 09:22:55.9±1.5**, 1153N**×**8626W, h148km**±7km**, MD3.5, ML2.2, 6C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APON	**Apoyo**	**0.43**	**26**	*e*P	Pn	09 23 17.2	+0.4
SSN	**San Juan del S**	**0.46**	**119**	*e*P	Pn	09 23 17.4	+0.5
SSN				*e*S	Sn	09 23 34.3	+1.6
TISN	**Laguna Tiscapa**	**0.61**	**359**	*e*P	Pn	09 23 17.6	-0.1
MGAN	**Managua**	**0.62**	**1**	*e*P	Pn	09 23 17.6	-0.1
MGAN				*e*S	Sn	09 23 35.5	+1.1
MGAN				AML	AML	09 23 36.1	
	comp=N,28nm,0.5s						
XAVN	**Gruta Xavier**	**0.62**	**354**	⇑*e*P	Pn	09 23 17.8	0.0
CONN	**Concepcion**	**0.62**	**86**	*e*P	Pn	09 23 18.2	+0.5
WILN	**Americas 2**	**0.64**	**7**	⇑*e*P	Pn	09 23 17.6	-0.2
WILN				*e*S	Sn	09 23 34.8	+0.2
CSAN		**0.67**	**347**	⇓*e*P	Pn	09 23 18.1	+0.1
APYN	**Apoyeque**	**0.71**	**353**	*e*P	Pn	09 23 18.2	-0.1
COPN	**Copaltepe**	**0.73**	**334**	⇓*e*P	Pn	09 23 18.2	-0.2
HUEN		**0.81**	**6**	⇑*e*P	Pn	09 23 18.8	-0.3
MOMN	**Momotombo**	**0.92**	**343**	⇑*e*P	Pn	09 23 20.0	+0.1
MIRN	**Miramar**	**1.01**	**334**	⇑*e*P	Pn	09 23 20.7	+0.1
CNGN	**Cerro Negro**	**1.06**	**336**	*e*P	Pn	09 23 20.7	-0.3
TEL3	**Telica 3**	**1.19**	**331**	*e*P	Pn	09 23 22.3	+0.1
CRIN	**San Cristobal**	**1.40**	**327**	*e*P	Pn	09 23 24.3	0.0
VCR	**Vista de Mar**	**1.52**	**156**	*e*P	Pn	09 23 26.8	+1.2
VCR				*e*S	Sn	09 23 49.5	+1.2
JCR	**Jicaral**	**2.01**	**146**	*e*P	Pn	09 23 32.2	+1.1
JCR				*e*S	Sn	09 23 57.7	-0.5
CGA2	**Cerro Gallo 2**	**2.32**	**130**	*e*P	Pn	09 23 35.4	+0.7
CGA2				*e*S	Sn	09 24 05.0	+0.5
CNCH	**Conchagua**	**2.32**	**319**	*e*P	x	09 23 35.0	
URSC	**Urasca**	**2.96**	**124**	*e*P	Pn	09 23 45.0	+2.2
URSC				*e*S	Sn	09 24 20.5	+1.6
ACR	**Cerro Adams**	**4.17**	**133**	*e*P	Pn	09 23 59.6	+1.2
CHI2		**14.15**	**118**	⇑*e*P	x	09 23 24.1	
LAPE	**La Pedrera**	**15.01**	**104**	*i* P	x	09 23 21.7	
LAPE				*i* S	x	09 23 41.3	

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*NEIC **12** 10:15:58.5, 6764N×5442W, h18km, MN3.7(OTT), After OTT.*
OTT 12 10:15:58.5±0.4**, 6764N**×**5442W, h18km, ML3.7**/2**, 2C, West coast of Greenland., Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**1.61**	**112**	⇑*i*P	Pn	10 16 26.7	+0.8
SFJD				*i* S	Sn	10 16 45.8	-0.4
SFJD	**Kangerlussuaq**	**1.61**	**112**	PN	Pn	10 16 26.8	+0.8
SFJD				SN	Sn	10 16 45.7	-0.5
SFJD				Trac		10 16 48.6	
	comp=Z,80nm,0.1s						
SFJD	**Kangerlussuaq**	**1.61**	**112**	⇑*i*Pn	Pn	10 16 26.9	+0.9
SFJD				*e*Sn	Sn	10 16 45.8	-0.4
FRB	**Frobisher Bay**	**7.01**	**243**	PN	Pn	10 17 39.5	-0.6
FRB				SN	Sn	10 18 54.0	-5.2
FRB				Trac		10 18 57.0	
	comp=Z,9.5nm,0.7s						
FRB	**Frobisher Bay**	**7.01**	**243**	Pn	Pn	10 17 39.5	-0.6
FRB				Sn	Sn	10 18 54.0	-5.2
SUMG	**Summit**	**7.34**	**40**	*e*Pn	Pn	10 17 39.9	-4.6
SUMG				*e*Sn	Sn	10 18 59.5	-7.6
ILON	**Igloolik, Nuna**	**10.16**	**292**	PN	Pn	10 18 21.5	-1.6
ILON				SN	Sn	10 20 06.8	-9.5
ILON				Trac		10 20 12.7	
	comp=Z,2.4nm,0.5s						
ILON	**Igloolik, Nuna**	**10.16**	**292**	Pn	Pn	10 18 21.5	-1.6
ILON				Sn	Sn	10 20 06.8	-9.5
QILN	**Qililugaq Expl**	**12.38**	**280**	PN	Pn	10 18 53.3	-0.1
QILN				SN	Sn	10 20 59.0	-12
QILN	**Qililugaq Expl**	**12.38**	**280**	Pn	Pn	10 18 53.3	-0.1
QILN				Sn	Sn	10 20 59.0	-12
SCHQ	**Schefferville**	**14.13**	**211**	*e*Pn	Pn	10 19 30.2	+13
SCHQ				*e*Sn	Sn	10 22 08.8	+15

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*MOS **12** 10:25:24.9±1.8, 4040N×4825E, h13km, mb4.4/9, Error ellipse: s-maj=9.2km s-min=6.7km az=107.1*
*IDC **12** 10:25:24.1±0.8, 4052N×4829E, h0km, mb4.0/11, mb1 4.1/14, mb1mx3.9/24, mbtmp3.9/14, ML3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/37, Error ellipse: s-maj=22.0km s-min=10.9km az=161.0*
*THR **12** 10:25:29.1±0.4, 4051N×4821E, h14km±6km, ML4.3*
*CSEM **12** 10:25:30.3±0.1, 4066N×48.19E, h60km, ML4.3, Error ellipse: s-maj=2.2km s-min=1.5km az=51.0*
*ISCJB **12** 10:25:30.6±0.3, 4069N±003×4822E±004, h66km±3km, mb4.0/15, Error ellipse: s-maj=4.8km s-min=4.5km az=151.6*
*NEIC **12** 10:25:30.5±1.4, 4076N×48.15E, h42km±14km, mb4.1/3, Error ellipse: s-maj=15.3km s-min=9.3km az=167.0*
*NNC **12** 10:25:40.3±25.0, 4105N×4998E, h0km, mb4.0, Error ellipse: s-maj=204.5km s-min=170.3km az=94.0*
ISC 12 10:25:31.4±0.3**, 4071N**±003×**4825E**±003**, h56km**±4km**, n81,** $\sigma 1^{s}$**42**/97**, mb4.0**/14**, 11C-7D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PQL	**Pirkuli**	**0.28**	**72**	P	**Pn**	**10 25 41.1**	**+0.2**
	SNR=885						
PQL				S	**Sn**	**10 25 49.2**	**+1.5**
SIZA	**Siyzn**	**0.62**	**53**	P	**Pn**	**10 25 46.2**	**+1.8**
	SNR=677						
SIZA				S	**Sn**	**10 25 59.1**	**+5.3**
AKT	**Akhty**	**0.87**	**333**	*i* PG	**Pn**	**10 25 45.0**	**-2.5**
AKT				*i* S	**Sn**	**10 25 59.0**	**-0.4**
KSMR	**Kasumkent**	**0.90**	**354**	*i* PG	**Pn**	**10 25 52.5**	**+4.5**
KSMR				*i* S	**Sn**	**10 26 09.0**	**+8.8**
BRDA	**Brd**	**0.93**	**242**	P	**Pn**	**10 25 48.3**	**0.0**
	SNR=60						
BRDA				S	**Sn**	**10 26 01.0**	**+0.2**
SEKA	**Sheki**	**0.94**	**303**	P	**Pn**	**10 25 48.7**	**+0.2**
	SNR=230						
SEKA				S	**Sn**	**10 26 02.8**	**+1.7**
ALIB	**Ii-Bayraml**	**0.94**	**142**	P	**Pn**	**10 25 50.5**	**+2.0**
	SNR=44						
GOBA	**Gobu**	**1.17**	**105**	P	**Pn**	**10 25 54.1**	**+2.6**
	SNR=27						
GOBA				S	**Sn**	**10 26 10.4**	**+3.9**
DRN	**Derbent**	**1.32**	**3**	*i* PN	**Pn**	**10 25 53.7**	**+0.1**
NDR	**Nardaran**	**1.33**	**95**	P	**Pn**	**10 25 55.6**	**+2.0**
	SNR=13						
GANJ	**Ganja**	**1.47**	**268**	P	**Pn**	**10 25 55.0**	**-0.5**
	SNR=126						
GANJ				S	**Sn**	**10 26 12.7**	**-0.9**
GLBA	**Clilabad**	**1.47**	**176**	P	**Pn**	**10 25 55.2**	**-0.3**
	SNR=250						
GLBA				S	**Sn**	**10 26 13.5**	**-0.1**
URKR	**Urkarakh**	**1.53**	**343**	*i* PN	**Pn**	**10 25 56.0**	**-0.4**
URKR				pmax	pmax		
	comp=Z,334nm,0.2s						
GRMI	**Germi**	**1.91**	**188**	*e*Pg	**Pn**	**10 26 00.5**	**-1.0**
GRMI				*e*Sg	**Sn**	**10 26 23.5**	**-1.0**
GRMI				AML	AML	10 26 24.9	
	comp=N,3μm,0.3s						
DGRG	**David-gareji**	**2.30**	**290**	*e*PN	**Pn**	**10 26 08.5**	**+1.7**
MAK	**Makhachkala**	**2.32**	**346**	⇓*i*PN	**Pn**	**10 26 10.9**	**+3.8**
MAK				*i*		10 26 41.6	
MAK				pmax	pmax		
	comp=Z,850nm,0.8s						
MAK				smax			
	comp=E,2μm,0.8s						
MAK				smax			
	comp=N,2μm,0.5s						
NAX	**Nakhchivan**	**2.61**	**235**	P	**Pn**	**10 26 11.5**	**+0.4**
	SNR=47						
GNI	**Garni**	**2.73**	**259**	Pn	**Pn**	**10 26 13.8**	**+1.1**
GNI	**Garni**	**2.73**	**259**	*d i*PN	**Pn**	**10 26 13.9**	**+1.1**
MAKU	**Maku**	**3.05**	**245**	*e*Pn	**Pn**	**10 26 17.6**	**+0.5**
KRF	**Krasnovodsk**	**3.70**	**99**	⇑*i*PN	**Pn**	**10 26 23.0**	**-3.0**
KRF				S	**Sn**	**10 27 02.7**	**-5.6**
THKV	**Tehran--Karaj**	**5.21**	**156**	*e*Pn	**Pn**	**10 26 46.8**	**+0.1**
THKV				AML	AML	10 27 51.5	
	comp=E,260nm,0.7s						
THKV	**Tehran--Karaj**	**5.21**	**156**	*e*Pn	**Pn**	**10 26 46.5**	**-0.2**
	SNR=52						
KIV	**Kislovodsk**	**5.25**	**310**	⇓*i*P	**Pn**	**10 26 50.0**	**+2.8**
KIV	**Kislovodsk**	**5.25**	**310**	Pn	**Pn**	**10 26 45.4**	**-1.8**
KIV	**Kislovodsk**	**5.25**	**310**	Pn	**Pn**	**10 26 45.4**	**-1.8**
CHTH	**Charan**	**5.30**	**154**	*e*Pn	**Pn**	**10 26 47.8**	**-0.1**
DAMV	**Damavand**	**5.85**	**149**	*e*Pn	**Pn**	**10 26 55.8**	**+0.3**
DAMV				AML	AML	10 28 04.0	
	comp=N,116nm,0.3s						
DAMV				AML	AML	10 28 04.6	
	comp=E,95nm,0.4s						
ASAO	**Ashtian**	**6.31**	**167**	*e*Pn	**Pn**	**10 27 01.6**	**-0.1**
VAN	**Vannovskaya**	**8.12**	**107**	⇓*i*P	**Pn**	**10 27 24.7**	**-1.9**
VAN				*i* S	**Sn**	**10 28 54.5**	**-2.4**
BRTR	**Keskin Array B**	**11.22**	**270**	Pn	**Pn**	**10 28 05.8**	**-3.1**
	comp=E,0.1nm,0.3s,baz=155,slow=16,SNR=2.6						
AB09	**Akbulak array**	**11.88**	**40**	⇑Pn	**Pn**	**10 28 14.8**	**-3.1**
	comp=E,1.2nm,0.4s,baz=217,slow=13						
AB09				⇑Sn	**Sn**	**10 30 21.2**	**-7.5**
	comp=E,2.5nm,0.3s,baz=218,slow=22						
AKTK	**Aktyubinsk**	**11.88**	**32**	Pn	**Pn**	**10 28 15.6**	**-2.3**
AKTK				Sn	**Sn**	**10 30 21.1**	**-7.7**
AKTO	**Aktyubinsk**	**11.88**	**32**	Pn	**Pn**	**10 28 15.6**	**-2.3**
	comp=E,1.0nm,0.3s,baz=212,slow=9.8,SNR=19						
AKTO				Sn	**Sn**	**10 30 21.1**	**-7.7**
	comp=E,2.6nm,0.3s,baz=350,slow=20,SNR=8.5						
OBN	**Obninsk**	**16.37**	**336**	*d i*P	**Pn**	**10 29 19.2**	**+2.0**
OBN				pmax	pmax		
	comp=Z,17nm,0.5s						
AKASG	**Malin Array Be**	**16.58**	**313**	Pn	**Pn**	**10 29 18.3**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=107,slow=13,SNR=4.1						
AKASG	**Malin Array Be**	**16.58**	**313**	P	**Pn**	**10 29 18.3**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KK31	**Karatay Array**	**16.74**	**74**	⇑Pn	**Pn**	**10 29 20.4**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=305,slow=10,SNR=20						
KK31				⇓Sn	**Sn**	**10 32 14.4**	**-13**
	comp=Z,2.7nm,0.6s,baz=299,slow=24,SNR=4.3						
ARU	**Arti**	**17.12**	**20**	*c i*P	**Pn**	**10 29 23.4**	**-3.1**
ARU				*e*S	**S**	**10 32 31.7**	**-11**
ARU				pmax	pmax		
	comp=Z,18nm,2.5s						
ARU	**Arti**	**17.12**	**20**	*e*Pn	**Pn**	**10 29 24.4**	**-2.2**
	comp=Z,7.9nm,0.6s						
BUR08	**Bucovina Ar. S**	**17.89**	**300**	*e*Pn	**Pn**	**10 29 34.0**	**-2.1**
BUR08	**Bucovina Ar. S**	**17.89**	**300**	*e*Pn	**Pn**	**10 29 34.0**	**-2.0**
BVAR	**Borovoye Array**	**19.42**	**43**	P	**Pn**	**10 29 53.0**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=227,slow=15,SNR=4.7						
BVAR				S	**S**	**10 33 19.2**	**-10**
	comp=Z,0.3nm,0.3s,baz=234,slow=25,SNR=5.5						
VOSK	**Vostochnaya**	**19.59**	**45**	⇑Pn	**Pn**	**10 29 54.8**	**-1.6**
	comp=Z,6.2nm,0.8s						
VOSK				⇓Sn	**Sn**	**10 33 26.2**	**-9.1**
	comp=Z,2.0nm,0.8s						
SOKR	**Solikamsk**	**19.63**	**13**	*e*P	pP	10 30 07.5	+0.1
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s						
AAK	**Ala-Archa**	**19.68**	**76**	⇑*e*P	**Pn**	**10 29 58.0**	**+0.4**
NIL	**Nilore**	**21.09**	**102**	*e*P	**P**	**10 30 14.0**	**+3.0**
NIL				pmax	pmax		
	comp=Z,51nm,1.1s,mb4.8						
NIL	**Nilore**	**21.09**	**102**	*e*Pn	**P**	**10 30 14.0**	**+3.0**
	comp=Z,51nm,1.1s,mb4.8						
NIL	**Nilore**	**21.09**	**102**	*e*Pn	**P**	**10 30 14.0**	**+2.9**
	comp=Z,51nm,1.1s,mb4.8						
KURK	**Kurchatov**	**23.30**	**54**	P	**P**	**10 30 33.6**	**-0.6**
	comp=Z,2.2nm,0.6s,mb3.8,baz=262,slow=9.6,SNR=7.0						
KURK				LR	LR	10 41 44.7	
	comp=Z,21nm,19.0s,baz=275,slow=42						
KURK	**Kurchatov**	**23.30**	**54**	⇑*i*P	**P**	**10 30 35.0**	**+0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
KURK	**Kurchatov**	**23.30**	**54**	*e*P	**P**	**10 30 35.4**	**+1.2**
KURK	**Kurchatov**	**23.30**	**54**	*e*P	**P**	**10 30 35.4**	**+1.2**
KURK				LR	LR	10 41 44.7	
JOF	**Joensuu**	**24.43**	**341**	*e*p	**P**	**10 30 44.7**	**+0.3**
	comp=Z,3.0nm,0.3s,mb4.2						
JOF	**Joensuu**	**24.43**	**341**	*e*P	**P**	**10 30 44.7**	**+0.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.2						
KAF	**Kangasniemi**	**25.19**	**336**	*e*p	**P**	**10 30 52.9**	**+1.6**
	comp=Z,1.3nm,0.3s,mb3.9						
KAF	**Kangasniemi**	**25.19**	**336**	*e*P	**P**	**10 30 52.9**	**+1.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
MK31	**Makanchi Array**	**25.20**	**65**	*e*P	**P**	**10 30 53.2**	**+1.7**
MK31	**Makanchi Array**	**25.20**	**65**	*e*P	**P**	**10 30 53.2**	**+1.6**
MKAR	**Makanchi Array**	**25.20**	**65**	P	**P**	**10 30 52.7**	**+1.1**
	comp=Z,1.4nm,0.4s,mb3.8,baz=258,slow=8.5,SNR=12						
MKAR	**Makanchi Array**	**25.20**	**65**	⇑*e*P	**P**	**10 30 53.2**	**+1.7**
MKAR	**Makanchi Array**	**25.20**	**65**	P	**P**	**10 30 52.7**	**+1.1**
GERES	**GERESS Array B**	**25.66**	**300**	P	**P**	**10 30 56.2**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.2,baz=256,slow=40,SNR=4.4						
ZALV	**Zalesovo Beam**	**27.76**	**49**	P	**P**	**10 31 15.5**	**+1.0**
	comp=Z,0.6nm,0.3s,mb3.6,baz=249,slow=12,SNR=3.2						
ZALV				LR	LR	10 42 37.5	
	comp=Z,29nm,18.8s,baz=310,slow=37						
ZALV	**Zalesovo Beam**	**27.76**	**49**	P	**P**	**10 31 15.5**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,29nm,18.8s						
ARCES	**ARCESS Array B**	**31.27**	**345**	P	**P**	**10 31 46.9**	**+1.5**
	comp=Z,4.8nm,1.1s,mb4.2,baz=139,slow=11,SNR=5.8						
ARCES	**ARCESS Array B**	**31.27**	**345**	P	**P**	**10 31 46.9**	**+1.5**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HVS	**Khovu-Aksy**	**32.81**	**56**	⇑*i*P	**P**	**10 32 01.8**	**+2.7**
HVS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**41.80**	**60**	⇑*e*P	**P**	**10 33 17.7**	**+2.4**
CMAR	**Chiang Mai Arr**	**48.58**	**102**	P	**P**	**10 34 10.0**	**+0.6**
	comp=Z,1.7nm,0.4s,mb4.5,baz=20,slow=14,SNR=2.6						
CMAR	**Chiang Mai Arr**	**48.58**	**102**	P	**P**	**10 34 10.0**	**+0.7**
CMAR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**48.58**	**102**	P	**P**	**10 34 09.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**49.00**	**250**	P	**P**	**10 34 11.4**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=59,slow=6.3,SNR=9.8						
DBIC	**Dimbokro**	**58.11**	**249**	P	**P**	**10 35 18.7**	**-0.6**
	comp=Z,1.4nm,0.4s,mb4.3,baz=108,slow=6.4,SNR=5.1						
DBIC	**Dimbokro**	**58.11**	**249**	P	**P**	**10 35 18.7**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DBIC	**Dimbokro**	**58.11**	**249**	P	**P**	**10 35 18.7**	**-0.6**
KSRS	**Korea Array**	**59.88**	**65**	P	**P**	**10 35 31.6**	**+0.3**
	comp=Z,0.9nm,0.4s,mb4.1,baz=295,slow=6.4,SNR=5.5						
KSRS	**Korea Array**	**59.88**	**65**	P	**P**	**10 35 31.6**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
YKA	**Yellowknife Ar**	**76.23**	**352**	P	**P**	**10 37 13.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=8.7,slow=5.4,SNR=8.7						
WRA	**Warramunga Arr**	**99.88**	**108**	P	Pdif	10 39 09.4	-0.5
	comp=Z,0.5nm,0.5s,baz=317,slow=4.0,SNR=15						
WRA	**Warramunga Arr**	**99.88**	**108**	P	Pdif	10 39 09.4	-0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*ISCJB **12** 11:43:30.1±0.5, 20.2S±0.1 × 174.90W±0.09, h33km, mb4.4/13, Error ellipse: s-maj=16.5km s-min=10.1km az=144.3*
*IDC **12** 11:43:32.2±5.5, 20.06S × 174.92W, h33km±42km, mb4.2/11, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, ML4.9/2, Error ellipse: s-maj=27.5km s-min=15.1km az=139.0*
*NEIC **12** 11:43:32.3±1.4, 20.12S × 174.89W, h37km±14km, mb4.6/5, Error ellipse: s-maj=15.4km s-min=9.5km az=136.0*
ISC 12 11:43:31.4±4.0**, 20.2S**±0.1 × **174.9W**±0.1**, h31**km±30km**, n24, σ0.78**/24**, mb4.4**/13**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.92**	**26**	Pn	**Pn**	**11 45 11.4**	**+0.5**
	6.9nm,0.3s,baz=83,slow=16,SNR=27						
AFI				Sn	**Sn**	**11 46 19.1**	**-9.5**
	16nm,0.3s,baz=61,slow=22,SNR=7.2						
RAR	**Rarotonga**	**14.19**	**97**	Pn	**Pn**	**11 46 49.6**	**-0.7**
	3.9nm,0.3s,baz=261,slow=23,SNR=19						
RAR				Sn	**Sn**	**11 49 11.2**	**-16**
	1.6nm,0.3s,baz=112,slow=13,SNR=3.0						
DZM	**Mont Dzumac**	**17.51**	**261**	ePn	**Pn**	**11 47 40.4**	**+6.9**
	39nm,1.5s						
URZ	**Urewera**	**19.30**	**199**	P	**Pn**	**11 47 55.2**	**+0.2**
	4.4nm,0.3s,baz=26,slow=7.3,SNR=32						
URZ				S	**Sn**	**11 51 11.7**	**-19**
	0.7nm,0.3s,baz=186,slow=10.0,SNR=4.1						
RPZ	**Rata Peaks**	**26.24**	**203**	P	**P**	**11 49 06.7**	**+3.0**
	15nm,0.4s,mb4.8,baz=28,slow=3.1,SNR=20						
CTA	**Charters Tower**	**36.42**	**263**	⇑iP	**P**	**11 50 34.7**	**+1.1**
	9.0nm,0.4s,mb5.0						
CTA	**Charters Tower**	**36.42**	**263**	P	**P**	**11 50 34.5**	**+0.9**
	11nm,0.4s,mb5.1,baz=91,slow=11,SNR=20						
STKA	**Stephens Creek**	**40.55**	**244**	eP	**P**	**11 51 07.9**	**-0.2**
	2.9nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**40.55**	**244**	P	**P**	**11 51 08.1**	**0.0**
	3.5nm,0.5s,mb4.3,baz=94,slow=10,SNR=14						
WB2	**Warramunga Arr**	**47.52**	**261**	eP	**P**	**11 52 03.1**	**-1.1**
WRAB	**Tennant Creek**	**47.52**	**261**	eP	**P**	**11 52 03.4**	**-0.8**
	6.2nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**47.53**	**261**	P	**P**	**11 52 03.3**	**-1.0**
	2.0nm,0.2s,mb4.7,baz=93,slow=6.7,SNR=202						
WRA				PcP	PcP	11 53 34.2	0.0
	0.5nm,0.3s,baz=90,slow=3.9,SNR=4.8						
KAKA	**Kakadu**	**50.89**	**270**	eP	x	11 52 09.4	
	4.3nm,0.6s						
MJAR	**Matsushiro Arr**	**71.73**	**322**	P	**P**	**11 54 50.6**	**-0.1**
	1.3nm,0.6s,mb4.1,baz=165,slow=0.3,SNR=5.4						
PETK	**Petropavlovsk-**	**76.76**	**343**	P	**P**	**11 55 19.9**	**+0.3**
	4.3nm,1.1s,mb4.3,baz=282,slow=8.9,SNR=2.6						
NVAR	**Mina Array Bea**	**78.82**	**42**	P	**P**	**11 55 31.6**	**+0.2**
	1.9nm,0.8s,mb4.1,baz=227,slow=9.8,SNR=11						
TXAR	**Lajitas Array**	**84.45**	**56**	P	**P**	**11 56 01.7**	**+0.3**
	0.3nm,0.8s,mb3.5,baz=54,slow=49,SNR=3.8						
PDAR	**Pinedale Array**	**86.76**	**42**	P	**P**	**11 56 12.8**	**+0.2**
	0.5nm,0.8s,mb3.8,baz=196,slow=1.1,SNR=4.9						
BOZ	**Bozeman (W)**	**87.02**	**39**	eP	**P**	**11 56 13.6**	**-0.2**
	12nm,0.6s,mb5.3						
CMAR	**Chiang Mai Arr**	**92.77**	**289**	P	**P**	**11 56 42.1**	**+0.8**
	0.6nm,0.5s,mb4.3,baz=84,slow=3.5,SNR=5.0						
YKA	**Yellowknife Ar**	**95.03**	**24**	P	**P**	**11 56 50.0**	**-0.7**
	0.6nm,0.7s,mb4.2,baz=239,slow=4.5,SNR=13						
YKA	**Yellowknife Ar**	**95.03**	**24**	P	**P**	**11 56 50.0**	**-0.7**
ARCES	**ARCESS Array B**	**129.11**	**351**	PKP	PKPdf	12 02 35.3	-0.4
	4.1nm,1.0s,baz=288,slow=1.2,SNR=5.1						
BRTR	**Keskin Array B**	**148.74**	**315**	PKPbc	PKPbc	12 03 15.9	0.0
	0.4nm,0.5s,baz=165,slow=10,SNR=3.3						

*JMA **12** 12:39:47.4±0.7, 22.79N × 120.75E, h0km, M3.5*
TAP 12 12:39:49.0, 23.10N × 120.66E, h8km, ML3.7, 7C-12D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	**Jiashian**	**0.08**	**255**	eP	Pg	12 39 51.4	+0.4
	baz=254						
SGST				eS	Sg	12 39 53.0	+0.7
	baz=254						
STYT	**Tauyuan**	**0.11**	**55**	⇓iP	Pg	12 39 52.2	+0.8
	baz=56						
STYT				S	Sg	12 39 54.1	+1.1
	baz=56						
CHN1	**Nanshi**	**0.15**	**304**	⇑iP	Pg	12 39 53.2	+1.1
	baz=303						
CHN1				i S	Sg	12 39 56.3	+2.0
	baz=303						
WTP	**Ta-pu**	**0.15**	**343**	⇓iP	Pg	12 39 53.1	+1.0
	baz=351						
WTP				eS	Sg	12 39 56.2	+1.9
	baz=351						
TWK	**Hsinying**	**0.23**	**316**	⇑iP	Pg	12 39 54.7	+1.1
	baz=321						
TWK				S	Sg	12 39 59.2	+2.5
	baz=321						
CHN4	**Tsaushan**	**0.26**	**345**	⇓iP	Pg	12 39 55.6	+1.5
	baz=351						
CHN4				i S	Sg	12 40 00.2	+2.7
	baz=351						
CHN3	**Shinhua**	**0.28**	**265**	⇑P	Pg	12 39 56.9	+2.5
	baz=264						
CHN3				eS	Sg	12 40 02.9	+4.8
	baz=264						
ELDTW	**Lidau**	**0.34**	**75**	⇑iP	Pg	12 39 56.8	+1.2
	baz=76						
ELDTW				i S	Sg	12 40 01.9	+1.8
	baz=76						
SSD	**Sandimen**	**0.35**	**185**	⇓iP	Pg	12 39 56.9	+0.9
	baz=172						
SSD				eS	Sg	12 40 01.4	+0.8
	baz=172						
TWM1	**Shoushan**	**0.35**	**219**	⇓iP	Pg	12 39 58.2	+2.3
	baz=205						
TAI1	**Yung-k'ang**	**0.41**	**261**	eP	Pg	12 39 59.7	+2.9
	baz=276						
TAI1				eS	Sg	12 40 07.8	+5.6
	baz=276						
SGLT	**Jiouru**	**0.41**	**203**	eP	Pg	12 39 59.1	+2.2
	baz=191						
SCLT	**Jiali**	**0.44**	**280**	eP	Pg	12 39 59.9	+2.4
	baz=294						
SCLT				eS	Sg	12 40 08.8	+5.6
	baz=294						
CHY	**Chiayi**	**0.45**	**331**	P	Pg	12 39 59.6	+1.8
	baz=332						
CHY				eS	Sg	12 40 07.4	+3.7
	baz=332						
CHN2	**Minshiung**	**0.46**	**338**	P	Pg	12 39 59.8	+1.9
	baz=339						
CHN2				eS	Sg	12 40 08.2	+4.2
	baz=339						
TWG	**Pinlang**	**0.47**	**127**	⇑iP	Pg	12 39 59.3	+1.3
	baz=120						
TWG				S	Sg	12 40 06.1	+1.9
	baz=120						
CHN8	**Yiju**	**0.48**	**300**	eP	Pg	12 40 00.2	+1.9
	baz=315						
CHN8				eS	Sg	12 40 09.0	+4.4
	baz=315						
CHN5	**Tsauling**	**0.49**	**2**	⇓iP	Pg	12 39 59.8	+1.2
	baz=5.0						
CHN5				eS	Sg	12 40 08.5	+3.5
	baz=5.0						
TTN	**Taitung**	**0.56**	**128**	eP	Pg	12 40 01.4	+1.6
	baz=120						
TTN				eS	Sg	12 40 10.0	+2.8
	baz=120						
ECL	**Taimali**	**0.57**	**152**	P	Pg	12 40 00.6	+0.6
	baz=156						
ECL				eS	Sg	12 40 07.4	0.0
	baz=156						
WGK	**Gukeng**	**0.59**	**351**	eP	Pg	12 40 02.0	+1.6
	baz=352						
WGK				eS	Sg	12 40 12.1	+4.1
	baz=352						
KAU	**Kaohsiung**	**0.62**	**212**	eP	Pg	12 40 04.4	+3.3
	baz=226						
TWF1	**Yuli**	**0.63**	**67**	⇓iP	Pg	12 40 02.2	+0.9
	baz=68						
TWF1				S	Sg	12 40 10.4	+0.9
	baz=68						
CHKT	**Chengkung**	**0.65**	**90**	⇑iP	Pg	12 40 03.4	+2.0
	baz=84						
CHKT				S	Sg	12 40 13.6	+3.7
	baz=84						
WSF	**Szhu**	**0.67**	**323**	eP	Pg	12 40 03.3	+1.4
	baz=323						
WSF				eS	Sg	12 40 14.4	+3.8
	baz=323						
EHY	**Hungye**	**0.73**	**56**	i P	Pg	12 40 03.6	+0.7
	baz=66						
EHY				eS	Sg	12 40 13.5	+1.0
	baz=66						
SCZT	**Fangliau**	**0.73**	**183**	⇓iP	Pg	12 40 03.8	+0.8
	baz=173						
TAW	**Tawu**	**0.77**	**164**	eP	Pg	12 40 04.2	+0.4
	baz=168						
WNT	**Mingjian**	**0.77**	**1**	⇓iP	Pg	12 40 05.5	+1.6
	baz=4.0						
WNT				S	Sg	12 40 17.1	+3.1
	baz=4.0						
TWP	**Hsiaoliuchiu**	**0.80**	**200**	eP	Pg	12 40 08.1	+3.7
	baz=197						
TWP				eS	Sg	12 40 22.6	+7.7
	baz=197						
SMLT	**Sun Moon Lake**	**0.81**	**16**	⇓iP	Pg	12 40 05.8	+1.2
	baz=26						
SMLT				eS	Sg	12 40 18.1	+3.1
	baz=26						
TYC	**Yuchr**	**0.82**	**13**	⇓P	Pg	12 40 06.1	+1.3
	baz=16						
TYC				eS	Sg	12 40 18.9	+3.5
	baz=16						
ESL	**Shilin**	**1.00**	**45**	eP	Pg	12 40 08.7	+0.5
	baz=48						
ESL				eS	Sg	12 40 23.8	+2.5
	baz=48						
TCU	**Taichung**	**1.04**	**1**	eP	Pg	12 40 09.7	+0.7
	baz=347						
HEN	**Hengchun**	**1.09**	**176**	eP	Pg	12 40 11.2	+1.2
	baz=167						
PNG	**Penghu**	**1.12**	**295**	eP	Pg	12 40 09.8	-0.6
	baz=294						
TWK1	**Hengchun**	**1.16**	**173**	eP	Pg	12 40 12.7	+1.4
	baz=179						
TWK1				eS	Sg	12 40 30.1	+3.7
	baz=179						
WHF	**Hehuan Shan**	**1.18**	**28**	⇓iP	Pg	12 40 11.8	+0.2
	baz=19						
WHF				eS	Sg	12 40 29.8	+2.9
	baz=19						
TSEB	**Hengchuen, Pin**	**1.22**	**170**	eP	Pb	12 40 13.4	+1.2
	baz=163						
TSEB				eS	Sg	12 40 31.3	+3.2
	baz=163						
HWA	**Hwalien**	**1.23**	**45**	eP	Pb	12 40 13.2	+0.7
	baz=49						
TWT	**Tachien**	**1.24**	**22**	⇑P	Pn	12 40 12.8	+0.1
	baz=26						
TWT				eS	Sb	12 40 30.8	+1.9
	baz=26						
TWQ1	**Liyutan**	**1.24**	**5**	P	Pn	12 40 13.6	+0.8
	baz=9.0						
TWQ1				eS	Sb	12 40 31.4	+2.4
	baz=9.0						
TWD	**Chiawan**	**1.30**	**41**	P	Pn	12 40 14.2	+0.8
	baz=53						
TWD				eS	Sb	12 40 31.0	+0.6
	baz=53						
LAY	**Lan-yu**	**1.34**	**142**	eP	Pn	12 40 13.5	-0.6
	baz=140						
LAY				eS	Sb	12 40 33.5	+1.8
	baz=140						
NNS	**Nan Shan**	**1.48**	**26**	eP	Pn	12 40 16.6	+0.7
	baz=21						
NNS				eS	Sn	12 40 38.4	+2.8
	baz=21						
NSTT	**Nanjuang**	**1.55**	**11**	eP	Pn	12 40 17.8	+0.9
	baz=356						
ENA	**Nanau**	**1.65**	**37**	eP	Pn	12 40 19.9	+1.6
	baz=55						
NSK	**Sanguang**	**1.69**	**22**	eP	Pn	12 40 21.5	+2.6
	baz=15						
ENTT	**Nioudou**	**1.74**	**28**	P	Pn	12 40 21.9	+2.3
	baz=24						
ENTT				eS	Sn	12 40 46.3	+4.4
	baz=24						
TWC	**Suao**	**1.85**	**36**	eP	Pn	12 40 22.9	+1.8
	baz=54						
TWC				eS	Sn	12 40 48.7	+4.0
	baz=54						
TWE	**Neicheng**	**1.85**	**29**	eP	Pn	12 40 23.9	+2.7
	baz=35						
TWE				eS	Sn	12 40 49.2	+4.5
	baz=35						
TWA	**Mucha**	**2.05**	**24**	eP	Pn	12 40 27.5	+3.7
	baz=30						
TWS1	**Kuangyinshan**	**2.11**	**19**	eP	Pn	12 40 27.9	+3.3
	baz=4.0						
NWF	**Wu-fen Shan**	**2.21**	**27**	eP	Pn	12 40 29.0	+3.0
	baz=14						
TWB1	**Santiao Chiao**	**2.25**	**32**	eP	Pn	12 40 29.3	+2.7
	baz=52						
KNM	**Kinmen**	**2.43**	**303**	eP	Pn	12 40 31.6	+2.6
	baz=303						
YOJ	**Yonaguni jima**	**2.54**	**57**	P	Pn	12 40 32.6	+2.0
YOJ				S	Sn	12 41 05.7	+4.0
IRIF	**Iriomote-Funau**	**3.07**	**66**	P	Pn	12 40 39.7	+1.9
IRIF				S	Sn	12 41 19.0	+4.3
JKRS	**Kuro-shima**	**3.27**	**69**	P	Pn	12 40 41.9	+1.3
JIJ	**Ishigaki jima**	**3.43**	**68**	P	Pn	12 40 44.2	+1.5
JIJ				eS	Sn	12 41 25.4	+1.8

MOS 12 12:42:31.2±1.9**, 50.14N × 97.52E, h10km, mb4.2**/1**, 1D, Error ellipse: s-maj=39.9km s-min=29.8km az=47.2, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVS	**Khovu-Aksy**	**2.63**	**294**	⇓ePN	Pn	12 43 15.2	+1.6
HVS				i P		12 43 21.5	
HVS				eS	Sn	12 43 57.5	+12
ORL	**Orlik**	**2.80**	**30**	ePN	Pn	12 43 17.3	+1.3
ORL				e		12 43 59.1	
ORL				pmax	pmax		
	comp=Z,33nm,0.5s						
ORL				smax			
	comp=N,147nm,0.8s						
ARS	**Arshan**	**3.58**	**58**	ePN	Pn	12 43 26.4	-0.2
ARS				e		12 44 14.4	
ARS				pmax	pmax		
	comp=Z,42nm,0.7s						
ARS				smax			
	comp=N,159nm,0.4s						
IRK	**Irkutsk**	**4.74**	**61**	ePN	Pn	12 43 47.2	+4.5
IRK				e		12 44 47.0	
IRK				pmax	pmax		
	comp=Z,80nm,0.1s						
IRK				smax			
	comp=N,217nm,0.4s						
ULN	**Ulaanbaatar**	**6.67**	**106**	ePN	Pn	12 44 11.6	+2.4
ULN				eS	Sn	12 45 31.6	+6.4

IGQ 12 13:02:30.5, 0.66N × 80.18W, h12km±7km, Mb4.2, Ms4.0, 2C, Error ellipse: s-maj=8.7km s-min=4.4km az=115.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINO	**Pino**	**1.77**	**117**	P	Pn	13 03 02.5	+1.5
PINO	**Pino**	**1.77**	**117**	S	Sn	13 03 27.6	+4.2
CHIS	**Cerro-Chispas-**	**1.78**	**198**	P	Pn	13 03 07.2	+6.1
TERV	**Terraza Guagua**	**1.78**	**118**	P	Pn	13 03 03.7	+2.6
YANA	**Yana**	**1.79**	**115**	P	Pn	13 03 02.8	+1.6
YANA	**Yana**	**1.79**	**115**	S	Sn	13 03 27.8	+4.0
GGP	**Refugio Guagua**	**1.79**	**117**	P	Pn	13 03 02.8	+1.5
GGP	**Refugio Guagua**	**1.79**	**117**	S	Sn	13 03 28.6	+4.7
COTA	**Cotacachi**	**1.87**	**100**	P	Pn	13 03 04.6	+2.3
COTA	**Cotacachi**	**1.87**	**100**	S	Sn	13 03 31.4	+5.5
QIL2	**Quilotoa**	**1.98**	**140**	P	Pn	13 03 05.2	+1.5
QIL2	**Quilotoa**	**1.98**	**140**	S	Sn	13 03 31.9	+3.4
CAMI	**Rancho Maria**	**2.14**	**128**	P	Pn	13 03 09.1	+3.1
CAMI	**Rancho Maria**	**2.14**	**128**	S	Sn	13 03 42.8	+10
VC1	**Cotopaxi 1**	**2.20**	**126**	P	Pn	13 03 10.1	+3.2
TAMB	**Tambo**	**2.26**	**126**	P	Pn	13 03 11.0	+3.4
CAYA	**Cayambe**	**2.27**	**105**	⇑P	Pn	13 03 11.6	+3.7
CAYA	**Cayambe**	**2.27**	**105**	⇑S	Sn	13 03 42.9	+7.2
ANTI	**Antisana**	**2.30**	**118**	P	Pn	13 03 11.9	+3.6
PISA	**Pisayambo**	**2.48**	**133**	P	Pn	13 03 14.8	+4.1
CONE	**Cono NE Rev Vo**	**2.64**	**106**	P	Pn	13 03 18.4	+5.5

*ISCJB **12** 13:21:34.5±2.8, 3.50N±0.06 × 82.66W±0.08, h3km±18km, mb4.2/15, MS4.5/3, Error ellipse: s-maj=16.2km s-min=6.6km az=148.4*
*BJI **12** 13:21:34.6, 3.25N × 83.41W, h10km, mB5.1, Ms4.9, Msz4.5*
*IDC **12** 13:21:35.6±0.7, 3.46N × 82.70W, h0km, mb3.9/9, mb1 4.2/13, mb1mx4.1/23, mbtmp4.0/13, ML3.7/3, MS3.7/1, Ms1 3.7/1, ms1mx2.8/27, Error ellipse: s-maj=33.6km s-min=14.7km az=57.0*
*NEIC **12** 13:21:37.0±0.5, 3.35N × 82.84W, h10km, mb4.6/6, Error ellipse: s-maj=13.9km s-min=7.5km az=55.0*
ISC 12 13:21:36.6±3.0**, 3.48N**±0.06 × **82.70W**±0.08**, h4**km±19km**, n252, σ0.54**/240**, mb4.2**/15**, MS4.5**/3**, 106C-101D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**5.16**	**355**	eP	**Pn**	**13 22 54.1**	**-0.6**
OTAV	**Otavalo**	**5.33**	**127**	eP	**Pn**	**13 22 56.5**	**-0.6**
	11nm,0.6s						
BAR1		**5.76**	**354**	eP	**Pn**	**13 23 02.8**	**-0.1**
BCIP	**Isla Barro Col**	**6.33**	**27**	eP	**Pn**	**13 23 14.7**	**+3.9**
	46nm,0.7s						
URSC	**Urasca**	**6.40**	**350**	eP	**Pn**	**13 23 11.7**	**-0.1**
LAJ	**Bijagual**	**6.50**	**348**	eP	**Pn**	**13 23 11.5**	**-1.6**
PRS1	**Puriscal**	**6.66**	**346**	eP	**Pn**	**13 23 14.2**	**-1.1**
ROSC	**El Rosal**	**8.46**	**80**	Pn	**Pn**	**13 23 46.9**	**+6.8**
	4.0nm,0.3s,baz=119,slow=18,SNR=2.6						
ATAH	**Atahualpa**	**11.27**	**158**	Pn	**Pn**	**13 24 19.9**	**+1.4**
	0.8nm,0.3s,baz=14,slow=8.0,SNR=4.9						
SDV	**Santo Domingo**	**13.14**	**65**	Pn	**Pn**	**13 24 44.0**	**-0.3**
	0.1nm,0.3s,baz=260,slow=6.1,SNR=1.5						
SDV	**Santo Domingo**	**13.14**	**65**	eP	**Pn**	**13 24 47.0**	**+2.8**
NNA	**Nana**	**16.43**	**159**	Pn	**Pn**	**13 25 28.5**	**+0.2**
	0.7nm,0.3s,baz=326,slow=11,SNR=3.7						
CMIG	**Matias Romero**	**18.05**	**319**	P	**Pn**	**13 25 48.7**	**+0.1**
	baz=130,slow=6.0,SNR=4.9						
CMIG				LR	LR	13 31 24.2	
	comp=Z,240nm,19.6s,baz=285,slow=33						
CMIG	**Matias Romero**	**18.05**	**319**	P	**Pn**	**13 25 48.7**	**+0.1**
CMIG				LR	LR	13 31 24.2	
SIV	**San Ignacio**	**28.85**	**133**	P	**P**	**13 27 36.1**	**-0.3**
	0.8nm,0.8s,mb3.5,baz=303,slow=13,SNR=3.0						
CCM	**Cathedral Cave**	**35.29**	**348**	eP	**P**	**13 28 32.2**	**-0.5**
	4.4nm,0.8s,mb4.4						
CPUP	**Villa Florida**	**38.48**	**142**	P	**P**	**13 28 58.8**	**-1.3**
	1.4nm,0.7s,mb3.8,baz=263,slow=6.7,SNR=3.5						
217A	**Green Valley**	**38.61**	**320**	⇑P	**P**	**13 29 00.6**	**-0.5**
	baz=39						
118A	**Homack Ranch,**	**38.65**	**322**	⇓P	**P**	**13 29 01.4**	**0.0**
	baz=39						
116A	**Eloy**	**39.69**	**320**	⇑P	**P**	**13 29 10.0**	**-0.1**
	baz=40						
SDCO	**Great Sand Dun**	**39.98**	**331**	eP	**P**	**13 29 14.2**	**+1.7**
	18nm,1.7s,mb4.5						
X16A	**Lo Mia Camp, P**	**40.76**	**322**	⇓P	**P**	**13 29 19.1**	**+0.1**
	baz=41						
Y15A	**Casa Rosa Ranc**	**41.00**	**321**	⇓P	**P**	**13 29 21.0**	**+0.1**
	baz=41						
Z14A	**Wintersburg**	**41.00**	**320**	⇓P	**P**	**13 29 21.0**	**0.0**
	baz=41						
T19A	**Beclabito**	**41.08**	**327**	⇑P	**P**	**13 29 21.9**	**+0.3**
	baz=41						
MVCO	**Mesa Verde**	**41.08**	**328**	⇓P	**P**	**13 29 21.8**	**+0.3**
	baz=41						
113A	**Mohawk Valley,**	**41.16**	**319**	⇓P	**P**	**13 29 22.4**	**+0.1**
	baz=41						
X15A	**Humboldt**	**41.29**	**322**	⇑P	**P**	**13 29 23.7**	**+0.3**
	baz=42						
Y14A	**Wickenburg**	**41.41**	**321**	⇓P	**P**	**13 29 24.7**	**+0.4**
	baz=42						
WUAZ	**Wupatki**	**41.47**	**324**	⇑P	**P**	**13 29 25.6**	**+0.8**
	baz=42						
R21A	**Cimarron**	**41.47**	**330**	⇓P	**P**	**13 29 25.5**	**+0.8**
	baz=42						
X14A	**Yava**	**41.68**	**321**	⇓P	**P**	**13 29 26.7**	**+0.2**
	baz=42						
U16A	**Tuba City**	**41.76**	**325**	⇓P	**P**	**13 29 27.4**	**+0.3**
	baz=42						
T18A	**Mexican Hat**	**41.76**	**327**	⇑P	**P**	**13 29 27.8**	**+0.7**
	baz=42						
GLA	**Glamis**	**42.04**	**318**	⇓P	**P**	**13 29 29.3**	**-0.2**
	baz=42						
V15A	**Kaibab Nationa**	**42.15**	**323**	⇑P	**P**	**13 29 29.7**	**-0.7**
	baz=42,SNR=5.7						
T17A	**Navajo Res., N**	**42.18**	**326**	⇑P	**P**	**13 29 31.0**	**+0.5**
	baz=42						
S18A	**Hurst Farm, Bl**	**42.23**	**327**	⇑P	**P**	**13 29 31.9**	**+1.0**
	baz=42						
V14A	**Boquillas Ranc**	**42.58**	**322**	⇓P	**P**	**13 29 33.5**	**-0.4**
	baz=43,SNR=7.5						
S17A	**Black Ridge (B**	**42.63**	**326**	⇑P	**P**	**13 29 35.2**	**+0.9**
	baz=43						
U15A	**North Rim**	**42.63**	**324**	⇑P	**P**	**13 29 34.3**	**0.0**
	baz=43						
R18A	**Canyonlands Na**	**42.69**	**328**	⇓P	**P**	**13 29 35.6**	**+0.9**
	baz=43						
W13A	**Hualapai Mount**	**42.71**	**321**	⇓P	**P**	**13 29 35.3**	**+0.3**
	baz=43						
Q19A	**Hogan Spring (**	**42.78**	**329**	⇑P	**P**	**13 29 36.3**	**+0.8**
	baz=43						
N22A	**Wattenberg Ran**	**42.88**	**333**	⇓P	**P**	**13 29 37.9**	**+1.7**
	baz=43						
IRM	**Iron Mountain**	**42.93**	**319**	⇓P	**P**	**13 29 36.9**	**+0.2**
	baz=43						
MONP	**Monument Peak**	**43.02**	**317**	⇓P	**P**	**13 29 38.1**	**+0.6**
	baz=43						
T15A	**Red Dirt Ranch**	**43.09**	**325**	⇑P	**P**	**13 29 38.8**	**+0.8**
	baz=43						
S16A	**Weppner Ranch,**	**43.13**	**326**	⇓P	**P**	**13 29 39.1**	**+0.7**
	baz=43						
R17A	**Hanksville Air**	**43.15**	**327**	⇑P	**P**	**13 29 39.3**	**+0.8**
	baz=43						
U14A	**Mt Trumbull**	**43.15**	**323**	⇑P	**P**	**13 29 39.0**	**+0.5**
	baz=43						
V13A	**Grand Canyon W**	**43.26**	**322**	⇑P	**P**	**13 29 39.5**	**+0.1**
	baz=44						
N21A	**Black Mountain**	**43.33**	**332**	⇓P	**P**	**13 29 40.7**	**+0.9**
	baz=44						
Q18A	**Rafter H Ranch**	**43.34**	**329**	⇑P	**P**	**13 29 40.5**	**+0.5**
	baz=44						
BELC	**Belle Mtn.**	**43.39**	**318**	⇓P	**P**	**13 29 40.2**	**-0.3**
	baz=44						
R16A	**Teasdale**	**43.47**	**327**	⇑P	**P**	**13 29 41.3**	**+0.3**
	baz=44						
S15A	**Panguitch**	**43.53**	**325**	⇓P	**P**	**13 29 42.0**	**+0.4**
	baz=44						
SRU	**San Rafael**	**43.55**	**328**	⇑P	**P**	**13 29 42.2**	**+0.5**
	baz=44						
U13A	**Pakoon Wash**	**43.62**	**323**	⇑P	**P**	**13 29 42.4**	**+0.1**
	baz=44						
GMRC	**Granite Mounta**	**43.64**	**320**	⇑P	**P**	**13 29 42.3**	**-0.2**
	baz=44						
V12A	**Nelson**	**43.72**	**321**	⇑P	**P**	**13 29 43.1**	**0.0**
	baz=44						
N20A	**Spence Gulch,**	**43.73**	**332**	⇓P	**P**	**13 29 43.2**	**+0.1**
	baz=44						
L22A	**Ellis Ranch, M**	**43.86**	**334**	⇑P	**P**	**13 29 45.0**	**+0.9**
	baz=44						
S14A	**Cedar City**	**44.05**	**325**	⇑P	**P**	**13 29 45.8**	**0.0**
	baz=44						
M20A	**Sweetwater, Wa**	**44.21**	**332**	⇑P	**P**	**13 29 47.6**	**+0.6**
	baz=44						

TUQ	Turquoise Moun	44.22	320	⇑P	P	13 29 47.0	-0.1
	baz=44						
N19A	John Jarvie Ra	44.22	331	⇓P	P	13 29 47.3	+0.3
	baz=44						
L21A	Rawlins	44.22	333	⇓P	P	13 29 47.9	+1.0
	baz=44						
S13A	Holt Ranch, En	44.34	324	⇑P	P	13 29 47.6	-0.4
	baz=44,SNR=7.5						
O17A	Robinson Place	44.47	329	⇑P	P	13 29 49.9	+0.9
	baz=45						
Q15A	Fillmore	44.47	327	⇑P	P	13 29 49.3	+0.3
	baz=45						
N18A	Larsen Ranch,	44.52	331	⇓P	P	13 29 50.3	+0.9
	baz=45						
BFSC	Mount Baldy St	44.64	318	⇓P	P	13 29 50.5	0.0
	baz=45						
L20A	Wamsutter	44.69	333	⇓P	P	13 29 51.7	+0.9
	baz=45						
GSC	Goldstone	44.70	319	⇑P	P	13 29 50.9	-0.1
	baz=45						
GSC	Goldstone	44.70	319	eP	P	13 29 51.2	+0.2
	7.9nm,1.4s,mb4.3						
SHOC	Shoshone	44.73	320	⇑P	P	13 29 51.2	0.0
	baz=45						
R13A	O'Grain Ranch,	44.80	325	⇓P	P	13 29 51.5	-0.3
	baz=45,SNR=5.1						
T11A	Corn Creek, Al	44.92	323	⇑P	P	13 29 52.7	0.0
	baz=45						
Q14A	Sevier Lake (B	44.96	326	⇓P	P	13 29 53.1	+0.1
	baz=45,SNR=5.7						
M18A	Lyman	45.06	331	⇑P	P	13 29 54.9	+1.1
	baz=45						
U10A	Ash Meadows, A	45.09	321	⇓P	P	13 29 53.9	-0.2
	baz=45						
K20A	Yellowstone Ra	45.21	333	⇑P	P	13 29 55.4	+0.5
	baz=46						
EDW2	Edwards Air Fo	45.23	318	⇑P	P	13 29 55.3	0.0
	baz=45						
L19A	Farson	45.24	332	⇑P	P	13 29 55.7	+0.6
	baz=46						
P14A	Drum Mountains	45.27	327	⇓P	P	13 29 56.0	+0.6
	baz=46						
R12A	Pony Springs,	45.27	324	⇓P	P	13 29 55.7	+0.2
	baz=46,SNR=6.6						
Q13A	Wheeler Ranch,	45.36	325	⇓P	P	13 29 56.1	-0.1
	baz=46,SNR=9.0						
TPNV	Topopah Spring	45.37	322	⇑P	P	13 29 56.4	+0.1
	baz=46						
PLCA	Paso Flores	45.38	167	P	P	13 29 56.2	0.0
	1.0nm,0.8s,mb3.7,baz=276,slow=10,SNR=3.9						
LRMC	Laurel Mountai	45.39	319	⇑P	P	13 29 56.2	-0.2
	baz=46						
M17A	Scullys Gap (B	45.39	330	⇓P	P	13 29 56.6	+0.2
	baz=46						
FURC	Furnace Creek,	45.45	321	⇓P	P	13 29 56.1	-0.8
	baz=46						
S11A	Rachel	45.50	323	⇑P	P	13 29 57.4	+0.1
	baz=46						
DUG	Dugway	45.56	327	⇑P	P	13 29 58.5	+0.8
	baz=46						
MPMC	Manual Prospec	45.60	320	⇑P	P	13 29 57.9	-0.3
	baz=46						
P13A	Bates Ranch, G	45.70	326	⇑P	P	13 29 59.6	+0.8
	baz=46						
BW06	Boulder Array	45.85	332	⇑P	P	13 30 00.7	+0.7
	baz=46						
PDAR	Pinedale Array	45.85	332	P	P	13 30 00.1	+0.2
	0.8nm,0.9s,mb3.6,baz=104,slow=6.3,SNR=6.3						
PDAR				PcP	PcP	13 31 36.4	-0.9
	1.1nm,0.8s,baz=146,slow=3.4,SNR=6.9						
R11A	Troy Canyon, C	45.86	324	⇑P	P	13 30 00.3	+0.1
	baz=46						
Q12A	Willow Creek R	45.88	325	⇑P	P	13 30 00.5	+0.2
	baz=46						
K18A	Toltan Ranch,	45.97	332	⇓P	P	13 30 01.3	+0.3
	baz=46,SNR=6.1						
ISA	Isabella	46.01	319	⇓P	P	13 30 01.3	-0.1
	baz=46						
S10A	Tonopah Range,	46.20	322	⇑P	P	13 30 01.5	-1.3
	baz=46,SNR=6.5						
CWC	Cottonwood Cre	46.21	320	⇓P	P	13 30 02.7	-0.3
	baz=46						
P12A	McGill	46.22	325	⇓P	P	13 30 02.3	-0.6
	baz=46						
N14A	Grayback Hills	46.22	328	⇓P	P	13 30 03.1	+0.2
	baz=46						
Q11A	Duckwater	46.23	324	⇑P	P	13 30 02.6	-0.5
	baz=46,SNR=5.2						
M15A	Larsen Ranch,	46.28	329	⇓P	P	13 30 02.8	-0.6
	baz=46						
J18A	Kendall Valley	46.41	332	⇑P	P	13 30 04.3	0.0
	baz=47,SNR=5.7						
VES	Vestal, Richgr	46.52	318	⇑P	P	13 30 04.7	-0.7
	baz=47						
L15A	Malad City	46.64	329	⇓P	P	13 30 05.9	-0.3
	baz=47						
Q10A	Clear Creek Ra	46.66	323	⇑P	P	13 30 05.9	-0.5
	baz=47,SNR=5.9						
O12A	Currie	46.67	326	⇑P	P	13 30 06.4	-0.1
	baz=47						
R09A	Tonopah	46.69	322	⇑P	P	13 30 06.1	-0.6
	baz=47						
I18A	Diamond G Ranc	46.69	333	⇓P	P	13 30 07.1	+0.5
	baz=47						
P11A	Circle Ranch,	46.76	325	⇑P	P	13 30 07.5	+0.3
	baz=47						
J17A	Brown Place, J	46.84	332	⇑P	P	13 30 08.0	+0.2
	baz=47						
K16A	Soda Springs	46.86	331	⇑P	P	13 30 08.5	+0.6
	baz=47						
L14A	Malta	47.10	329	⇑P	P	13 30 09.9	+0.1
	baz=47						
M13A	Montello	47.11	328	⇓P	P	13 30 09.9	0.0
	baz=47						
J16A	Bone	47.20	331	⇑P	P	13 30 11.0	+0.4
	baz=48						
P10A	Eureka	47.21	324	⇓P	P	13 30 10.5	-0.2
	baz=47						
N12A	Clover Valley,	47.23	326	⇑P	P	13 30 11.0	+0.2
	baz=47						
K14A	Jones Ranch, D	47.44	329	⇑P	P	13 30 12.5	0.0
	baz=48						
M12A	Wells	47.55	327	⇑P	P	13 30 12.9	-0.4
	baz=48						
NVAR	Mina Array Bea	47.56	322	P	P	13 30 14.3	+0.8
	2.9nm,0.7s,mb4.4,baz=136,slow=7.6,SNR=28						
NVAR				PcP	PcP	13 31 43.2	-0.2
	1.3nm,0.8s,baz=127,slow=5.0,SNR=6.7						
NVAR	Mina Array Bea	47.56	322	P	P	13 30 14.3	+0.8
NVAR				PcP	PcP	13 31 43.2	-0.3
RLMT	Red Lodge	47.57	335	⇓P	P	13 30 14.3	+0.8
	baz=48						
N11A	Elko Archery C	47.59	326	⇑P	P	13 30 13.7	0.0
	baz=48						
I16A	Newdale	47.60	332	⇑P	P	13 30 14.1	+0.4
	baz=48						
Q08A	Gabbs	47.60	322	⇑P	P	13 30 13.7	-0.1
	baz=48						
J15A	Blackfoot	47.70	331	⇑P	P	13 30 14.6	+0.2
	baz=48						
G18A	Lazy EL Ranch,	47.85	335	⇓P	P	13 30 15.6	0.0
	baz=48						
ULM	Lac du Bonnet	47.92	349	P	P	13 30 14.8	-1.2
	3.6nm,0.6s,mb4.5,baz=161,slow=9.7,SNR=4.2						
ULM	Lac du Bonnet	47.92	349	P	P	13 30 14.8	-1.2
O09A	Fish Creek Ran	47.99	324	⇓P	P	13 30 16.8	0.0
	baz=48						
M11A	Holland Ranch,	48.04	326	⇑P	P	13 30 17.1	-0.1
	baz=48						
H16A	Russell Place,	48.12	333	⇓P	P	13 30 17.7	0.0
	baz=48						
I15A	Monteview	48.17	331	⇑P	P	13 30 18.6	+0.5
	baz=48						
J14A	Carey	48.17	330	⇑P	P	13 30 18.4	+0.3
	baz=48						
R06C	Coleville	48.33	321	⇓P	P	13 30 19.0	-0.4
	baz=48						
G17A	Pierce Place,	48.37	334	⇓P	P	13 30 19.9	+0.3
	baz=49						
F18A	Big Timber	48.38	335	⇑P	P	13 30 20.1	+0.3
	baz=49						
K12A	Draper Farm, C	48.39	328	⇓P	P	13 30 19.8	-0.1
	baz=49						
L11A	Cat Creek Ranc	48.52	327	⇓P	P	13 30 20.9	+0.1
	baz=49						
I14A	Mackay	48.58	330	⇓P	P	13 30 21.2	-0.1
	baz=49						
O08A	Rochester Mine	48.64	324	⇑P	P	13 30 21.4	-0.4
	baz=49						
H15A	Lima	48.70	332	⇓P	P	13 30 22.6	+0.4
	baz=49						
G16A	Moss Hill, Enn	48.78	333	⇑P	P	13 30 22.8	+0.1
	baz=49						
F17A	Fitzpatrick Pl	48.79	334	⇑P	P	13 30 22.3	-0.6
	baz=49						
HLID	Hailey	48.80	329	⇑P	P	13 30 22.6	-0.4
	baz=49						
L10A	Juniper Basin	48.85	327	⇑P	P	13 30 22.9	-0.4
	baz=49						
I13A	Wildhorse Cree	48.90	330	⇓P	P	13 30 23.3	-0.5
	baz=49						
J12A	Stokes Ranch,	48.93	329	⇓P	P	13 30 23.3	-0.7
	baz=49						
O07A	Toulon	48.99	323	⇓P	P	13 30 23.8	-0.7
	baz=49						
H14A	Leadore	49.05	331	⇑P	P	13 30 24.6	-0.3
	baz=49						
K11A	Parker Ranch,	49.09	328	⇑P	P	13 30 24.9	-0.2
	baz=49						
F16A	Kennard Place,	49.12	333	⇓P	P	13 30 25.5	+0.1
	baz=49						
E17A	Martinsdale	49.31	335	⇑P	P	13 30 27.1	+0.3
	baz=50						
I12A	Atlanta	49.33	329	⇓P	P	13 30 26.7	-0.3
	baz=50						
MFID	Camas Ranch	49.42	328	⇑P	P	13 30 27.8	0.0
	baz=50						
H13A	Challis	49.44	331	⇓P	P	13 30 27.8	-0.1
	baz=50						
D18A	Linhart Farms,	49.45	336	⇓P	P	13 30 28.1	+0.3
	baz=50						
L09A	Wilkinson Ranc	49.48	326	⇓P	P	13 30 27.4	-0.7
	baz=50						
M08A	Happy Creek Ra	49.51	325	⇓P	P	13 30 27.6	-0.8
	baz=50						
K10A	MacKenzie Ranc	49.54	327	⇑P	P	13 30 28.5	-0.2
	baz=50						
F15A	Butte	49.56	333	⇓P	P	13 30 29.0	+0.3
	baz=50						
O06A	Flanigan	49.56	323	⇑P	P	13 30 28.4	-0.5
	baz=50						
BEKR	Beckwourth	49.70	322	⇓P	P	13 30 29.7	-0.3
	baz=50						
H12A	Diamond D Ranc	49.73	330	⇓P	P	13 30 30.4	+0.4
	baz=50						
D17A	Six Diamond Ra	49.78	335	⇓P	P	13 30 30.9	+0.5
	baz=50						
G13A	Cobalt	49.82	331	⇑P	P	13 30 31.0	+0.3
	baz=50						
I11A	Placerville	49.84	329	⇓P	P	13 30 31.4	+0.6
	baz=50						
N06A	Buffalo Meadow	49.92	323	⇑P	P	13 30 30.9	-0.7
	baz=50,SNR=7.1						
K09A	Rome	49.96	326	⇑P	P	13 30 32.0	+0.2
	baz=50,SNR=18						
L08A	Fields	49.97	326	⇓P	P	13 30 31.4	-0.5
	baz=50						
D16A	Dana Ranch, Ca	50.05	335	⇑P	P	13 30 32.8	+0.3
	baz=50						
E15A	Deer Lodge	50.07	333	⇑P	P	13 30 32.7	+0.1
	baz=50						
EGMT	Eagleton	50.10	337	⇓P	P	13 30 32.8	0.0
	baz=50						
C17A	Wharram Farm,	50.19	336	⇓P	P	13 30 33.7	+0.2
	baz=50						
WVOR	Wild Horse Val	50.29	326	eP	P	13 30 33.4	-1.0
	12nm,1.3s,mb4.8						
K08A	Mann Creek Ran	50.40	326	⇑P	P	13 30 34.9	-0.3
	baz=51,SNR=6.7						
J09A	Fry Pan Ranch,	50.40	327	⇓P	P	13 30 34.8	-0.4
	baz=51						
H11A	Donnelly	50.42	329	⇓P	P	13 30 34.6	-0.6
	baz=51						
L07A	Adell	50.43	325	⇓P	P	13 30 34.6	-0.8
	baz=51						
E14A	Clinton	50.45	333	⇑P	P	13 30 35.6	+0.2
	baz=51						
H10A	Noah's Angus R	50.72	329	⇓P	P	13 30 37.0	-0.6
	baz=51						
C16A	Fuhringer Ranc	50.74	335	⇓P	P	13 30 37.7	+0.1
	baz=51						
E13A	Victor	50.79	332	⇑P	P	13 30 38.1	0.0
	baz=51						
F12A	Elk City	50.79	331	⇑P	P	13 30 37.4	-0.7
	baz=51,SNR=5.6						
K07A	Rock Creek Ran	50.80	325	⇓P	P	13 30 37.8	-0.4
	baz=51						
J08A	Circle Bar Ran	50.80	327	⇑P	P	13 30 37.6	-0.6
	baz=51						
I09A	Lost Marbles R	50.82	328	⇓P	P	13 30 37.7	-0.6
	baz=51						
G11A	Walters Elk Ra	51.04	330	⇓P	P	13 30 39.2	-0.8
	baz=51						
B16A	M & M Farms, S	51.20	336	⇓P	P	13 30 40.9	-0.2
	baz=52						
J07A	Hines	51.28	326	⇑P	P	13 30 41.0	-0.8
	baz=52						
F11A	Grangeville	51.33	330	⇓P	P	13 30 41.8	-0.4
	baz=52						
G10A	Bishop Farm, J	51.39	329	⇑P	P	13 30 41.8	-0.8
	baz=52						
D13A	Huson	51.40	333	⇑P	P	13 30 42.1	-0.5
	baz=52						
E12A	Beaver Dam Sad	51.42	331	⇑P	P	13 30 42.4	-0.4
	baz=52						
B15A	Bradely Ranch,	51.48	335	⇑P	P	13 30 43.1	-0.1
	baz=52						
J06A	Christmas Vall	51.67	326	⇑P	P	13 30 44.3	-0.4
	baz=52						
H08A	Prairie City	51.68	328	⇓P	P	13 30 44.4	-0.4
	baz=52						
E11A	Bogner Ranch,	51.69	331	⇓P	P	13 30 44.3	-0.5
	baz=52						
G09A	Cove	51.72	329	⇓P	P	13 30 44.5	-0.6
	baz=52						
K05A	Summer Lake	51.77	325	⇑P	P	13 30 44.6	-0.9
	baz=52						
D12A	Red Ives Fores	51.78	332	⇓P	P	13 30 45.3	-0.1
	baz=52						
I07A	Izee	51.84	327	⇓P	P	13 30 45.8	-0.2
	baz=52						
C13A	Hot Springs	51.88	333	⇓P	P	13 30 46.6	+0.4
	baz=52						
F10A	Beach Ranch, E	51.92	330	⇓P	P	13 30 46.3	-0.3
	baz=52						
A15A	Johnson Ranch,	52.07	335	⇑P	P	13 30 47.6	0.0
	baz=52						
I06A	Prineville	52.14	326	⇓P	P	13 30 47.7	-0.5
	baz=52						
H07A	Lands Inn, Kim	52.21	327	⇓P	P	13 30 48.3	-0.5
	baz=52						
E10A	Myers Farm, Un	52.22	330	⇑P	P	13 30 48.1	-0.6
	baz=52						
D11A	Klaveano Farm,	52.24	331	⇑P	P	13 30 48.9	-0.1
	baz=52						
C12B	Naegeli Ranch,	52.31	332	⇓P	P	13 30 49.6	+0.1
	baz=53						
G08A	Pilot Rock	52.34	328	⇑P	P	13 30 49.5	-0.3
	baz=53						
B13A	Whitefish	52.35	334	⇓P	P	13 30 49.8	+0.1
	baz=53						
F08A	Pendleton	52.59	329	⇓P	P	13 30 50.9	-0.6
	baz=53						
D10A	Wagner Farm, O	52.70	331	⇑P	P	13 30 51.6	-0.7
	baz=53						
E09A	Wood Farm, Sta	52.75	330	⇓P	P	13 30 52.4	-0.3
	baz=53,SNR=5.8						
C11A	Tepee Creek (N	52.77	332	⇓P	P	13 30 52.7	-0.2
	baz=53						
I05A	Bend	52.87	326	⇑P	P	13 30 53.1	-0.6
	baz=53						
B12A	Libby	52.92	333	⇑P	P	13 30 54.0	0.0
	baz=53						
B11A	Sandpoint	53.26	333	⇓P	P	13 30 56.6	+0.2
	baz=54						
D08A	Wollman Farm,	53.52	330	⇓P	P	13 30 58.6	+0.3
	baz=54						
A11A	Hall Mountain,	53.63	333	⇓P	P	13 30 59.5	+0.4
	baz=54						
E07A	Sunnyside	53.66	329	⇓P	P	13 30 59.6	+0.2
	baz=54						
B09A	Rice	54.08	332	⇑P	P	13 31 02.6	+0.2
	baz=54						
A10A	Northport	54.20	332	⇓P	P	13 31 03.1	-0.2
	baz=54						
A09A	Danville	54.67	332	⇑P	P	13 31 06.2	-0.6
	baz=55,SNR=6.2						
A07A	Ashnola River,	55.59	331	⇑P	P	13 31 13.6	+0.2
	baz=56						
YKA	Yellowknife Ar	63.46	344	P	P	13 32 06.9	-0.5
	1.4nm,0.8s,mb4.1,baz=137,slow=6.5,SNR=22						
YKA				PcP	PcP	13 32 43.5	-0.6
	0.6nm,0.8s,baz=145,slow=4.4,SNR=4.5						
YKA	Yellowknife Ar	63.46	344	P	P	13 32 07.0	-0.5
YKA				PcP	PcP	13 32 43.5	-0.7
TRF	Thorofare Moun	77.00	335	eP	P	13 33 30.0	-0.5
	66nm,2.0s,mb5.2						
BPAW	Bear Paw Mtn.	77.50	335	eP	P	13 33 32.6	-0.6
	18nm,1.5s,mb4.8						
ESDC	Sonseca Array	79.12	50	P	P	13 33 43.8	+1.1
	0.2nm,0.3s,mb3.5,baz=318,slow=1.7,SNR=4.6						
TORD	Torodi Ar. Bea	83.77	77	P	P	13 34 06.8	-1.0
	1.8nm,0.8s,mb4.2,baz=270,slow=4.2,SNR=10						
TORD	Torodi Ar. Bea	83.77	77	P	P	13 34 06.8	-1.0
CN2	Changchun	126.56	335	ePKP	PKPdf	13 40 41.2	-0.3
SONM	Songino Array	128.28	352	PKP	PKPdf	13 40 43.6	-1.1
	0.4nm,0.7s,baz=0.0,slow=3.3,SNR=3.6						
WMQ	Urumqi	132.13	9	ePKP	PKPdf	13 40 51.4	-0.7
BJI	Beijing	133.35	340	PKP	PKPdf	13 40 51.8	-2.7
BJI				LR	LR		
	comp=N,101nm,26.1s,MS4.6						
BJI				LR	LR		
	comp=E,118nm,24.7s,MS4.6						
BJI				LR	LR		
	comp=Z,45nm,24.5s,MS4.1						
HHC	Hu-ho-hao-te	133.99	345	ePKP	PKPdf	13 40 52.1	-3.6
HHC				PP	PP	13 43 27.0	+2.5
HHC				PKS		13 44 26.3	
HHC				PP	PP		
	comp=Z,51nm,7.2s						
HHC				LR	LR		
	comp=N,99nm,16.8s,MS4.7						
HHC				LR	LR		
	comp=E,72nm,15.9s,MS4.7						
LZH	Lanzhou	140.17	352	ePKP	PKPdf	13 40 59.0	-8.3
LZH				XPKP		13 41 07.0	
LZH				PP	PP		
	comp=Z,78nm,5.0s						
WRA	Warramunga Arr	140.35	243	PKhKP		13 40 59.1	
	comp=Z,0.5nm,0.8s,baz=112,slow=2.0,SNR=6.9						
WRA				PKP	PKPdf	13 41 04.8	-3.2
	comp=Z,1.2nm,0.8s,baz=103,slow=2.2,SNR=14						
CD2	Chengdu	145.25	350	ePKP	PKPdf	13 41 15.7	-0.7
GYA	Guiyang	148.89	344	ePKP	PKPdf	13 41 18.9	-3.7
GYA				PKP2	PKPab	13 41 28.7	-1.6
GYA				PKS		13 44 51.6	
GYA				PP	PP	13 44 56.3	+1.0
GYA				PP	PP		
	comp=Z,70nm,7.9s						
SHL	Shillong	150.65	10	ex	x	13 41 30.0	
SHL				ex	x	13 46 42.0	
KMI	Kunming	151.08	350	PKP	PKPdf	13 41 22.5	-3.6
KMI				APKP		13 41 26.7	
KMI				XPKP		13 41 28.8	
KMI				PP	PP	13 45 10.6	+2.8
KMI				PP	PP		
	comp=Z,88nm,6.3s						
KMI				LR	LR		
	comp=N,62nm,19.9s,MS4.6						
KMI				LR	LR		
	comp=E,54nm,15.6s,MS4.6						
KMI				LR	LR		
	comp=Z,75nm,20.6s,MS4.5						
CMAR	Chiang Mai Arr	158.14	356	PKPab	PKPab	13 42 08.6	-0.8
	comp=Z,0.6nm,0.5s,baz=331,slow=4.0,SNR=6.1						

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*ISCJB **12** 13:26:57.4±2.5, 364N±006×8264W±009, h2km±16km, mb4.2/13, MS4.4/3, Error ellipse: s-maj=16.6km s-min=6.8km az=149.2*

*IDC **12** 13:26:58.0±0.7, 366N×8268W, h0km, mb4.0/9, mb1 4.2/12, mb1mx4.1/22, mbtmp4.0/12, ML3.5/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/23, Error ellipse: s-maj=37.3km s-min=15.5km az=58.0*

*NEIC **12** 13:26:59.7±0.5, 366N×8260W, h10km, mb4.5/4, Error ellipse: s-maj=29.8km s-min=9.8km az=55.0*

*BJI **12** 13:26:59.6, 370N×8260W, h10km, mB5.4, Ms4.8, Msz4.4*

ISC 12 13:26:59.7±2.7**, 362N**±006×**8268W**±009**, h4**km±17km**, n309, σ0.55**/291**, mb4.2**/13**, MS4.4**/3**, 129C-127D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	5.02	355	eP	Pn	13 28 15.5	-0.3
OTAV	Otavalo	5.41	128	eP	Pn	13 28 18.9	-2.3
BAR1		5.62	354	eP	Pn	13 28 24.2	+0.1
BUS	Buena Vista	5.99	350	eP	Pn	13 28 29.3	+0.1
BCIP	Isla Barro Col	6.19	27	eP	Pn	13 28 36.7	+4.7
	77nm,0.7s						
URSC	Urasca	6.26	350	eP	Pn	13 28 33.4	+0.4
LAJ	Bijagual	6.36	347	eP	Pn	13 28 33.3	-1.1
PRS1	Puriscal	6.52	346	eP	Pn	13 28 35.7	-0.8
JCR	Jicaral	6.64	339	eP	Pn	13 28 38.3	+0.2
ROSC	El Rosal	8.42	81	Pn	Pn	13 29 07.6	+5.0
	2.3nm,0.3s,baz=269,slow=23,SNR=6.0						
ROSC	El Rosal	8.42	81	eP	Pn	13 29 08.9	+6.3
ATAH	Atahualpa	11.39	158	Pn	Pn	13 29 44.0	+0.6
	0.4nm,0.3s,baz=288,slow=20,SNR=2.5						
NNA	Nana	16.56	160	Pn	Pn	13 30 53.7	+0.7
	0.7nm,0.3s,baz=319,slow=7.6,SNR=2.7						
CMIG	Matias Romero	17.96	319	P	Pn	13 31 09.7	-0.8
	0.0nm,0.3s,baz=119,slow=9.3,SNR=4.1						
PCRV	Puerto La Cruz	19.05	69	LR	LR	13 38 40.5	
	comp=Z,274nm,18.4s,baz=226,slow=37						
SIV	San Ignacio	28.93	133	P	P	13 33 01.2	+1.0
	0.4nm,0.4s,mb3.5,baz=299,slow=12,SNR=3.9						
TXAR	Lajitas Array	32.41	324	P	P	13 33 30.7	-0.1
	0.2nm,0.6s,mb3.1,baz=138,slow=12,SNR=2.5						
TXAR				PcP	PcP	13 36 17.5	-1.0
	0.9nm,0.9s,baz=85,slow=2.8,SNR=5.9						
TXAR	Lajitas Array	32.41	324	P	P	13 33 30.7	-0.1
TXAR				PcP	PcP	13 36 17.5	-1.0
CCM	Cathedral Cave	35.15	348	eP	P	13 33 54.3	-0.3
	10nm,1.1s,mb4.7						
219A	White Tail Can	37.67	322	⇓P	P	13 34 16.6	+0.3
	baz=38						
318A	Bisbee	37.76	320	⇑P	P	13 34 16.7	-0.3
	baz=38						
218A	Dragoon	38.15	321	⇓P	P	13 34 20.0	-0.3
	baz=38						
ANMO	Albuquerque	38.18	328	eP	P	13 34 21.4	+0.9
	3.7nm,1.3s,mb4.0						
217A	Green Valley	38.51	320	⇑P	P	13 34 22.8	-0.5
	baz=39						
118A	Homack Ranch,	38.55	322	⇓P	P	13 34 22.9	-0.8
	baz=39						
117A	Oracle	38.98	321	⇑P	P	13 34 27.2	-0.1
	baz=39						
Y19A	Nutrioso	39.03	324	⇑P	P	13 34 28.3	+0.7
	baz=39						
Y18A	Canyon Day Jun	39.37	323	⇓P	P	13 34 31.1	+0.6
	baz=40						
X19A	St. Johns	39.38	324	⇓P	P	13 34 31.1	+0.5
	baz=40						
116A	Eloy	39.59	320	⇓P	P	13 34 32.2	-0.1
	baz=40						
Y17A	Roosevelt	39.80	322	⇑P	P	13 34 33.5	-0.6
	baz=40						
X18A	Snowflake	39.84	324	⇑P	P	13 34 34.3	-0.1
	baz=40						
SDCO	Great Sand Dun	39.87	331	eP	P	13 34 36.0	+1.5
	11nm,1.3s,mb4.4						
W19A	Sanders	39.92	325	⇓P	P	13 34 35.6	+0.6
	baz=40						
214A	Organ Pipe Nat	39.93	318	⇑P	P	13 34 34.5	-0.7
	baz=40						
Y16A	Circle Bar Ran	40.32	322	⇓P	P	13 34 37.9	-0.4
	baz=41						
X16A	Lo Mia Camp, P	40.66	322	⇓P	P	13 34 41.3	+0.1
	baz=41						
Y15A	Casa Rosa Ranc	40.90	321	⇑P	P	13 34 43.3	+0.1
	baz=41						
Z14A	Wintersburg	40.90	320	⇓P	P	13 34 42.8	-0.4
	baz=41						
MVCO	Mesa Verde	40.97	328	⇑P	P	13 34 44.1	+0.4
	baz=41						
T19A	Beclabito	40.97	327	⇓P	P	13 34 44.1	+0.4
	baz=41						
113A	Mohawk Valley,	41.07	319	⇓P	P	13 34 44.1	-0.5
	baz=41						
U18A	Rough Rock, Ch	41.13	326	⇓P	P	13 34 45.8	+0.8
	baz=42						

W16A	Flagstaff baz=42	41.17	323	⇓P	P	13 34 45.6	+0.2
X15A	Humboldt baz=42	41.19	322	⇓P	P	13 34 45.6	0.0
Y14A	Wickenburg baz=42	41.31	321	⇑P	P	13 34 46.1	-0.5
R21A	Cimarron baz=42	41.36	330	⇑P	P	13 34 47.5	+0.6
WUAZ	Wupatki baz=42	41.36	324	⇓P	P	13 34 47.0	0.0
X14A	Yava baz=42	41.58	321	⇓P	P	13 34 48.6	-0.3
T18A	Mexican Hat baz=42	41.65	327	⇑P	P	13 34 49.7	+0.3
U16A	Tuba City baz=42	41.65	325	⇓P	P	13 34 49.5	+0.1
W15A	Williams baz=42	41.67	323	⇓P	P	13 34 49.4	-0.1
S19A	Harvey Farm, M baz=42	41.70	328	⇓P	P	13 34 50.5	+0.7
U17A	Shonto baz=42	41.71	325	⇑P	P	13 34 50.4	+0.6
Y13A	Salome baz=42	41.76	320	⇓P	P	13 34 50.2	-0.1
V15A	Kaibab Nationa baz=42,SNR=7.4	42.04	323	⇓P	P	13 34 52.4	-0.2
T17A	Navajo Res., N baz=42	42.07	326	⇑P	P	13 34 53.0	+0.2
S18A	Hurst Farm, Bl baz=42	42.12	327	⇑P	P	13 34 53.9	+0.7
W14A	Seligman baz=42	42.19	322	⇓P	P	13 34 54.1	+0.3
X13A	Yucca baz=42	42.26	321	⇓P	P	13 34 54.0	-0.4
V14A	Boquillas Ranc baz=43,SNR=9.1	42.48	322	⇑P	P	13 34 56.7	+0.6
S17A	Black Ridge (B baz=43	42.52	326	⇑P	P	13 34 57.2	+0.8
U15A	North Rim baz=43,SNR=10	42.53	324	⇓P	P	13 34 57.1	+0.6
SWSC	Sam W. Stewart baz=43	42.53	317	⇑P	P	13 34 56.7	+0.1
DVTC	Desert V Tower baz=43	42.57	317	⇑P	P	13 34 57.0	0.0
R18A	Canyonlands Na baz=43	42.58	328	⇓P	P	13 34 57.5	+0.6
W13A	Hualapai Mount baz=43	42.61	321	⇓P	P	13 34 57.4	+0.2
Q19A	Hogan Spring (baz=43	42.67	329	⇑P	P	13 34 57.8	+0.2
BC3	Big Chuckw Mtn baz=43	42.73	318	⇓P	P	13 34 58.1	0.0
N22A	Wattenberg Ran baz=43	42.76	333	⇓P	P	13 34 59.7	+1.4
IRM	Iron Mountain baz=43	42.83	319	⇑P	P	13 34 58.4	-0.6
MONP	Monument Peak baz=43	42.92	317	⇑P	P	13 34 59.5	-0.3
T15A	Red Dirt Ranch baz=43	42.99	324	⇑P	P	13 35 00.7	+0.4
S16A	Weppner Ranch, baz=43	43.03	326	⇑P	P	13 35 01.3	+0.7
R17A	Hanksville Air baz=43	43.04	327	⇓P	P	13 35 01.1	+0.5
U14A	Mt Trumbull baz=43	43.05	323	⇑P	P	13 35 00.9	+0.2
O20A	White River Ci baz=43	43.06	331	⇑P	P	13 35 01.9	+1.1
V13A	Grand Canyon W baz=43	43.16	322	⇓P	P	13 35 01.9	+0.3
N21A	Black Mountain baz=44,SNR=5.7	43.21	332	⇓P	P	13 35 03.1	+1.1
Q18A	Rafter H Ranch baz=44,SNR=6.7	43.23	328	⇑P	P	13 35 02.4	+0.2
BELC	Belle Mtn. baz=44	43.30	318	⇓P	P	13 35 01.6	-1.1
M22A	Cedar Creek Ra baz=44	43.30	334	⇓P	P	13 35 03.7	+1.0
R16A	Teasdale baz=44	43.36	326	⇓P	P	13 35 04.1	+0.9
PFO	Pinyon Flat Ob baz=44	43.37	318	⇑P	P	13 35 03.3	-0.1
S15A	Panguitch baz=44	43.43	325	⇑P	P	13 35 03.8	0.0
SRU	San Rafael baz=44	43.44	328	⇑P	P	13 35 04.3	+0.4
U13A	Pakoon Wash baz=44,SNR=5.1	43.52	323	⇑P	P	13 35 04.5	0.0
GMRC	Granite Mounta baz=44	43.55	319	⇓P	P	13 35 04.3	-0.5
N20A	Spence Gulch, baz=44	43.62	332	⇑P	P	13 35 06.3	+1.1
V12A	Nelson baz=44	43.62	321	⇓P	P	13 35 05.2	-0.2
L22A	Ellis Ranch, M baz=44	43.74	334	⇑P	P	13 35 08.1	+1.8
R15A	Junction baz=44	43.75	326	⇑P	P	13 35 06.8	+0.4
M21A	Separation Pea baz=44	43.81	333	⇓P	P	13 35 08.3	+1.5
U12A	Valley of Fire baz=44	43.88	322	⇓P	P	13 35 08.1	+0.6
T13A	Saint George baz=44	43.88	323	⇑P	P	13 35 08.3	+0.8
S14A	Cedar City baz=44	43.95	325	⇓P	P	13 35 08.4	+0.4
HEC	Hector,Ludlow baz=44	44.01	319	⇓P	P	13 35 08.7	+0.2
V11A	Goodsprings baz=44	44.06	321	⇓P	P	13 35 09.0	+0.1
BBRC	Big Bear Sol-O baz=44	44.06	318	⇑P	P	13 35 08.4	-0.6
M20A	Sweetwater, Wa baz=44	44.09	332	⇑P	P	13 35 09.2	+0.1
L21A	Rawlins baz=44	44.10	333	⇓P	P	13 35 09.2	+0.1
N19A	John Jarvie Ra baz=44	44.10	331	⇓P	P	13 35 09.3	+0.1
TUQ	Turquoise Moun baz=44	44.12	320	⇓P	P	13 35 09.3	-0.1
S13A	Holt Ranch, En baz=44,SNR=8.6	44.23	324	⇓P	P	13 35 10.6	+0.3
Q15A	Fillmore baz=45	44.36	326	⇑P	P	13 35 11.7	+0.4
N18A	Larsen Ranch, baz=45	44.41	331	⇑P	P	13 35 12.7	+1.1
BFSC	Mount Baldy St baz=45	44.55	317	⇑P	P	13 35 12.4	-0.4
L20A	Wamsutter baz=45	44.57	333	⇓P	P	13 35 13.8	+0.9
GSC	Goldstone baz=45	44.61	319	⇓P	P	13 35 13.4	0.0
R13A	O'Grain Ranch, baz=45,SNR=10.0	44.70	324	⇑P	P	13 35 14.4	+0.4
P15A	Leamington baz=45	44.72	327	⇓P	P	13 35 14.4	+0.3
O16A	Springville baz=45	44.76	328	⇓P	P	13 35 14.8	+0.3
T11A	Corn Creek, Al baz=45	44.82	322	⇓P	P	13 35 15.0	0.0
Q14A	Sevier Lake (B baz=45,SNR=6.9	44.86	326	⇓P	P	13 35 15.6	+0.4
M18A	Lyman baz=45	44.94	331	⇑P	P	13 35 16.2	+0.3
N17A	Moffit Pass baz=45	44.96	330	⇑P	P	13 35 16.6	+0.6
U10A	Ash Meadows, A baz=45	44.99	321	⇑P	P	13 35 15.2	-1.1
K20A	Yellowstone Ra baz=46,SNR=5.2	45.09	333	⇑P	P	13 35 17.4	+0.4
L19A	Farson baz=46	45.12	332	⇓P	P	13 35 17.8	+0.5
EDW2	Edwards Air Fo baz=45	45.14	318	⇑P	P	13 35 16.9	-0.7
P14A	Drum Mountains baz=46	45.16	327	⇑P	P	13 35 18.0	+0.4
R12A	Pony Springs, baz=46,SNR=7.4	45.17	324	⇑P	P	13 35 18.0	+0.2
Q13A	Wheeler Ranch, baz=46,SNR=6.7	45.25	325	⇑P	P	13 35 18.7	+0.3
TPNV	Topopah Spring baz=46	45.27	321	⇓P	P	13 35 18.5	-0.1
M17A	Scullys Gap (B baz=46	45.27	330	⇓P	P	13 35 18.7	+0.3
LRMC	Laurel Mountai baz=46	45.29	319	⇓P	P	13 35 18.7	0.0
FURC	Furnace Creek, baz=46	45.35	320	⇓P	P	13 35 19.0	-0.2
S11A	Rachel baz=46	45.40	323	⇓P	P	13 35 19.8	+0.2
K19A	Absolon Red Bu baz=46,SNR=11	45.45	333	⇓P	P	13 35 20.1	+0.3
PLCA	Paso Flores 2.2nm,0.9s,mb4.1,baz=348,slow=10,SNR=4.1	45.52	167	P	P	13 35 21.2	+0.8
PLCA	Paso Flores	45.52	167	P	P	13 35 21.2	+0.8
P13A	Bates Ranch, G baz=46	45.59	326	⇓P	P	13 35 21.0	-0.1
PDAR	Pinedale Array 1.8nm,1.1s,mb3.9,baz=147,slow=6.2,SNR=10	45.73	332	P	P	13 35 21.8	-0.3
PDAR				PcP	PcP	13 36 58.1	-1.8
BW06	1.4nm,1.0s,baz=161,slow=4.4,SNR=6.9 Boulder Array baz=46	45.73	332	⇑P	P	13 35 22.4	+0.3
R11A	Troy Canyon, C baz=46,SNR=6.8	45.76	323	⇑P	P	13 35 22.3	-0.1
Q12A	Willow Creek R baz=46	45.77	325	⇓P	P	13 35 22.3	-0.2
ARVC	Arvin baz=46	45.85	318	P	P	13 35 22.8	-0.4
K18A	Toltan Ranch, baz=46,SNR=7.2	45.85	332	⇑P	P	13 35 23.7	+0.6
ISA	Isabella baz=46	45.92	318	⇑P	P	13 35 22.8	-0.9
S10A	Tonopah Range, baz=46,SNR=6.2	46.09	322	⇓P	P	13 35 25.3	+0.2
N14A	Grayback Hills baz=46,SNR=6.0	46.11	328	⇓P	P	13 35 25.4	+0.2
CWC	Cottonwood Cre baz=46	46.12	320	⇑P	P	13 35 24.6	-0.7
Q11A	Duckwater baz=46,SNR=8.3	46.13	324	⇓P	P	13 35 25.6	+0.3
R10A	Warm Springs baz=46	46.15	323	⇑P	P	13 35 25.1	-0.4
M15A	Larsen Ranch, baz=46	46.17	329	⇓P	P	13 35 25.9	+0.3
J18A	Kendall Valley baz=47,SNR=7.2	46.29	332	⇑P	P	13 35 26.6	+0.1
S09A	Goldfield baz=47	46.36	322	⇑P	P	13 35 26.9	-0.2
L15A	Malad City baz=47,SNR=6.0	46.53	329	⇓P	P	13 35 28.2	-0.2
Q10A	Clear Creek Ra baz=47,SNR=5.6	46.55	323	⇑P	P	13 35 28.5	-0.1
O12A	Currie baz=47	46.56	326	⇑P	P	13 35 28.6	-0.1
I18A	Diamond G Ranc baz=47	46.57	333	⇓P	P	13 35 29.0	+0.2
R09A	Tonopah baz=47,SNR=6.1	46.59	322	⇑P	P	13 35 28.8	-0.1
P11A	Circle Ranch, baz=47	46.65	325	⇓P	P	13 35 29.3	-0.1
M14A	Sheep Mountain baz=47	46.66	328	⇑P	P	13 35 29.6	+0.1
J17A	Brown Place, J baz=47	46.73	332	⇑P	P	13 35 30.3	+0.4
SMMC	Simmler baz=47	46.74	317	⇓P	P	13 35 29.8	-0.4
LOHW	Long Hollow	46.87	332	eP	P	13 35 31.1	+0.1
L14A	Malta baz=47	46.99	329	⇓P	P	13 35 31.4	-0.6
M13A	Montello baz=47	47.00	327	⇑P	P	13 35 31.4	-0.7
J16A	Bone baz=48,SNR=5.5	47.09	331	⇓P	P	13 35 32.8	+0.1
K15A	Arbon baz=48	47.10	330	⇑P	P	13 35 32.7	-0.2
N12A	Clover Valley, baz=47	47.12	326	⇑P	P	13 35 32.5	-0.6
R08A	Mina baz=48,SNR=6.1	47.29	322	⇑P	P	13 35 34.4	-0.1
K14A	Jones Ranch, D baz=48	47.32	329	⇑P	P	13 35 34.4	-0.3
M12A	Wells baz=48	47.44	327	⇑P	P	13 35 35.4	-0.1
NVAR	Mina Array Bea 2.3nm,0.7s,mb4.2,baz=137,slow=7.3,SNR=20	47.46	322	P	P	13 35 35.6	-0.1
NVAR				PcP	PcP	13 37 05.3	-0.9
Q08A	0.9nm,0.7s,baz=140,slow=4.2,SNR=4.6 Gabbs baz=48	47.50	322	⇑P	P	13 35 35.7	-0.4
O10A	Cortez Mining, baz=48	47.57	325	⇓P	P	13 35 36.8	+0.2
J15A	Blackfoot baz=48	47.58	331	⇓P	P	13 35 37.1	+0.5
G18A	Lazy EL Ranch, baz=48	47.73	334	⇓P	P	13 35 39.1	+1.4
ULM	Lac du Bonnet 4.6nm,0.7s,mb4.6,baz=148,slow=5.3,SNR=5.2	47.78	349	P	P	13 35 37.2	-0.8
ULM	Lac du Bonnet	47.78	349	P	P	13 35 37.2	-0.8
O09A	Fish Creek Ran baz=48	47.89	324	⇓P	P	13 35 39.1	0.0
M11A	Holland Ranch, baz=48	47.93	326	⇑P	P	13 35 39.6	+0.3
L12A	House Creek Ra baz=48	48.00	328	⇑P	P	13 35 40.1	+0.2
H16A	Russell Place, baz=48	48.00	333	⇑P	P	13 35 40.3	+0.4
I15A	Monteview baz=48	48.05	331	⇑P	P	13 35 40.9	+0.6
J14A	Carey baz=48	48.06	330	⇑P	P	13 35 41.0	+0.6
R06C	Coleville baz=48	48.23	321	⇓P	P	13 35 41.5	-0.3
G17A	Pierce Place, baz=49	48.25	334	⇓P	P	13 35 42.8	+1.0
F18A	Big Timber baz=49,SNR=8.5	48.26	335	⇑P	P	13 35 42.0	+0.1
K12A	Draper Farm, C baz=49	48.28	328	⇓P	P	13 35 42.3	+0.2
L11A	Cat Creek Ranc baz=49	48.41	327	⇑P	P	13 35 43.0	0.0
J13A	Cove Ranch, Pi baz=49	48.45	329	⇓P	P	13 35 43.4	+0.1
I14A	Mackay baz=49	48.47	330	⇑P	P	13 35 43.8	+0.3
O08A	Rochester Mine baz=49	48.53	324	⇓P	P	13 35 43.5	-0.5
H15A	Lima baz=49	48.59	332	⇑P	P	13 35 44.8	+0.4
G16A	Moss Hill, Enn baz=49	48.66	333	⇓P	P	13 35 45.7	+0.8
F17A	Fitzpatrick Pl baz=49	48.67	334	⇑P	P	13 35 45.8	+0.8
HLID	Hailey baz=49	48.69	329	⇓P	P	13 35 45.0	-0.2
L10A	Juniper Basin baz=49	48.74	327	⇑P	P	13 35 45.6	0.0
I13A	Wildhorse Cree baz=49	48.79	330	⇓P	P	13 35 45.8	-0.1
J12A	Stokes Ranch, baz=49,SNR=5.1	48.82	329	⇑P	P	13 35 46.0	-0.1
E18A	Harlowton baz=49	48.87	335	⇑P	P	13 35 46.9	+0.4
O07A	Toulon baz=49	48.88	323	⇑P	P	13 35 45.6	-1.1
WCN	Washoe City baz=49	48.89	322	⇑P	P	13 35 46.2	-0.6
H14A	Leadore baz=49	48.93	331	⇑P	P	13 35 46.8	-0.3
K11A	Parker Ranch, baz=49	48.98	328	⇓P	P	13 35 47.2	-0.2
F16A	Kennard Place, baz=49	49.00	333	⇓P	P	13 35 48.1	+0.6
E17A	Martinsdale baz=50	49.19	334	⇑P	P	13 35 49.2	+0.2
I12A	Atlanta baz=50	49.22	329	⇑P	P	13 35 49.0	-0.2
MFID	Camas Ranch baz=50	49.31	328	⇑P	P	13 35 50.4	+0.4
N07B	Gerlach baz=50	49.33	324	⇑P	P	13 35 49.3	-0.8
H13A	Challis baz=50	49.33	330	⇑P	P	13 35 50.6	+0.5
D18A	Linhart Farms, baz=50	49.33	336	⇓P	P	13 35 50.2	+0.2
L09A	Wilkinson Ranc baz=50	49.37	326	⇑P	P	13 35 50.6	+0.2
K10A	MacKenzie Ranc baz=50	49.43	327	⇑P	P	13 35 50.7	-0.2
F15A	Butte baz=50	49.44	333	⇓P	P	13 35 50.2	-0.7
E16A	East Helena baz=50	49.60	334	⇑P	P	13 35 52.1	0.0
BEKR	Beckwourth baz=50	49.60	322	⇓P	P	13 35 51.9	-0.4
H12A	Diamond D Ranc baz=50	49.61	330	⇓P	P	13 35 52.0	-0.3
D17A	Six Diamond Ra baz=50	49.66	335	⇑P	P	13 35 52.9	+0.4
G13A	Cobalt baz=50	49.70	331	⇑P	P	13 35 54.2	+1.3
N06A	Buffalo Meadow baz=50,SNR=9.4	49.82	323	⇑P	P	13 35 53.4	-0.5
K09A	Rome baz=50,SNR=25	49.85	326	⇓P	P	13 35 53.8	-0.3
L08A	Fields baz=50	49.86	325	⇑P	P	13 35 53.7	-0.5
D16A	Dana Ranch, Ca baz=50	49.93	334	⇓P	P	13 35 54.9	+0.3
E15A	Deer Lodge baz=50	49.95	333	⇓P	P	13 35 54.9	+0.2
EGMT	Eagleton baz=50	49.98	336	⇑P	P	13 35 55.8	+0.9
C17A	Wharram Farm, baz=50	50.07	335	⇑P	P	13 35 56.1	+0.4
WVOR	Wild Horse Val 22nm,1.4s,mb5.0	50.19	326	eP	P	13 35 56.1	-0.5
F13A	Darby baz=51	50.26	331	⇓P	P	13 35 57.1	0.0
B18A	Beardsley Farm baz=51	50.28	337	⇑P	P	13 35 57.9	+0.6
I10A	Payette baz=51	50.29	328	⇑P	P	13 35 57.4	0.0
K08A	Mann Creek Ran baz=51,SNR=8.5	50.29	326	⇑P	P	13 35 56.9	-0.6
J09A	Fry Pan Ranch, baz=51,SNR=7.1	50.30	327	⇓P	P	13 35 57.0	-0.5
H11A	Donnelly baz=51,SNR=7.4	50.31	329	⇑P	P	13 35 56.9	-0.6
L07A	Adell baz=51	50.32	325	⇓P	P	13 35 57.6	-0.1
E14A	Clinton baz=51	50.33	333	⇑P	P	13 35 58.0	+0.4
H10A	Noah's Angus R baz=51	50.60	329	⇓P	P	13 35 59.1	-0.7
B17A	L&G Farms, Che baz=51	50.61	336	⇑P	P	13 35 59.5	-0.2
C16A	Fuhringer Ranc baz=51	50.62	335	⇓P	P	13 36 00.2	+0.4
E13A	Victor baz=51	50.67	332	⇑P	P	13 35 59.8	-0.4
F12A	Elk City baz=51,SNR=6.7	50.68	331	⇑P	P	13 35 60.0	-0.3
K07A	Rock Creek Ran baz=51	50.70	325	⇓P	P	13 36 00.1	-0.4
J08A	Circle Bar Ran baz=51	50.70	327	⇑P	P	13 35 59.8	-0.6
I09A	Lost Marbles R baz=51,SNR=5.6	50.71	328	⇑P	P	13 36 00.1	-0.4
G11A	Walters Elk Ra baz=51	50.92	330	⇓P	P	13 36 01.7	-0.4
B16A	M & M Farms, S baz=52	51.08	335	⇓P	P	13 36 03.2	0.0
A17A	Triple J Farms baz=52	51.09	337	⇑P	P	13 36 03.4	+0.1
J07A	Hines baz=52	51.17	326	⇓P	P	13 36 03.2	-0.8
F11A	Grangeville baz=52	51.21	330	⇓P	P	13 36 03.9	-0.4
D13A	Huson baz=52	51.28	333	⇑P	P	13 36 04.4	-0.4
G10A	Bishop Farm, J baz=52	51.28	329	⇑P	P	13 36 04.3	-0.5
E12A	Beaver Dam Sad baz=52,SNR=6.7	51.30	331	⇓P	P	13 36 04.2	-0.8
B15A	Bradely Ranch, baz=52	51.36	335	⇓P	P	13 36 05.3	-0.1
A16A	West Butte Ran baz=52	51.45	336	⇓P	P	13 36 06.3	+0.3
E11A	Bogner Ranch, baz=52,SNR=5.8	51.57	331	⇑P	P	13 36 06.0	-1.0
G09A	Cove baz=52	51.61	329	⇓P	P	13 36 06.6	-0.7
K05A	Summer Lake baz=52	51.66	324	⇑P	P	13 36 06.5	-1.3
D12A	Red Ives Fores baz=52	51.66	332	⇓P	P	13 36 07.4	-0.2
I07A	Izee baz=52	51.73	327	⇑P	P	13 36 07.6	-0.7
F10A	Beach Ranch, E baz=52	51.81	330	⇑P	P	13 36 08.2	-0.6
A15A	Johnson Ranch, baz=52	51.94	335	⇓P	P	13 36 09.8	+0.1
I06A	Prineville baz=52	52.04	326	⇓P	P	13 36 09.4	-1.1
H07A	Lands Inn, Kim baz=52	52.10	327	⇓P	P	13 36 10.4	-0.6
E10A	Myers Farm, Un baz=52	52.10	330	⇓P	P	13 36 10.8	-0.2
D11A	Klaveano Farm, baz=52	52.12	331	⇓P	P	13 36 10.6	-0.6
C12B	Naegeli Ranch, baz=53,SNR=5.1	52.20	332	⇓P	P	13 36 11.1	-0.6
B13A	Whitefish baz=53	52.23	334	⇑P	P	13 36 12.1	+0.1
G08A	Pilot Rock baz=53,SNR=5.8	52.23	328	⇓P	P	13 36 11.5	-0.5
F08A	Pendleton baz=53	52.48	329	⇑P	P	13 36 13.3	-0.5
D10A	Wagner Farm, O baz=53,SNR=7.9	52.58	331	⇓P	P	13 36 13.8	-0.8
G07A	Ruggs Ranch, H baz=53	52.59	328	⇓P	P	13 36 14.2	-0.5
H06A	Lindquist Farm baz=53	52.61	327	⇓P	P	13 36 14.6	-0.2
A13A	Flathead Natio baz=53	52.63	334	⇑P	P	13 36 15.1	+0.3
E09A	Wood Farm, Sta baz=53,SNR=11	52.64	330	⇑P	P	13 36 14.4	-0.6
C11A	Tepee Creek (N baz=53	52.66	332	⇑P	P	13 36 14.8	-0.3
I05A	Bend baz=53	52.77	326	⇑P	P	13 36 15.8	-0.2
G06A	Carlson Farm, baz=53	53.09	327	⇑P	P	13 36 18.4	+0.1
D09A	Jones Farm, Ri baz=54	53.10	330	⇑P	P	13 36 18.6	+0.3
B11A	Sandpoint baz=54	53.14	333	⇓P	P	13 36 19.0	+0.4
D08A	Wollman Farm, baz=54	53.40	330	⇓P	P	13 36 19.9	-0.6
A11A	Hall Mountain, baz=54,SNR=5.5	53.51	333	⇑P	P	13 36 21.2	-0.2
F06A	Goldendale baz=54	53.51	328	⇑P	P	13 36 20.6	-0.9
E07A	Sunnyside baz=54	53.54	329	⇑P	P	13 36 21.1	-0.5
F05A	White Salmon baz=54	53.95	327	⇓P	P	13 36 24.0	-0.7
C08A	Higginbotham F baz=54	53.96	330	⇓P	P	13 36 24.9	+0.3
B09A	Rice baz=54,SNR=7.1	53.96	331	⇑P	P	13 36 24.4	-0.2
D07A	Quincy baz=54	54.02	329	⇑P	P	13 36 24.8	-0.3
E06A	Yakima baz=54	54.12	328	⇓P	P	13 36 25.8	-0.1
B08A	Colville Reser baz=55	54.49	331	⇓P	P	13 36 28.6	0.0
A09A	Danville baz=55,SNR=6.9	54.56	332	⇑P	P	13 36 28.5	-0.5
A08A	Turner Farm, O baz=55	54.87	331	⇓P	P	13 36 31.2	0.0
A07A	Ashnola River, baz=56	55.47	331	⇑P	P	13 36 35.7	+0.1
E03A	Lebam baz=56	55.51	327	⇓P	P	13 36 35.9	0.0
YKA	Yellowknife Ar 2.4nm,1.0s,mb4.3,baz=139,slow=6.6,SNR=20	63.33	344	P	P	13 37 28.1	-1.6
YKA				PcP	PcP	13 38 05.7	-1.0
YKA	Yellowknife Ar 0.9nm,0.9s,baz=143,slow=4.8,SNR=4.4	63.33	344	P	P	13 37 28.1	-1.6
YKA				PcP	PcP	13 38 05.7	-1.0
ESDC	Sonseca Array 0.6nm,0.5s,mb3.8,baz=266,slow=4.0,SNR=6.1	79.01	50	P	P	13 39 04.6	-0.6
TOA0	Torodi Ar. Sit	83.72	77	eP	P	13 39 30.1	-0.6
TORD	Torodi Ar. Bea 3.9nm,1.2s,mb4.4,baz=278,slow=4.0,SNR=11	83.72	77	P	P	13 39 29.4	-1.2
TORD	Torodi Ar. Bea	83.72	77	P	P	13 39 29.4	-1.2
ZALV	Zalesovo Beam 0.3nm,0.4s,baz=335,slow=2.5,SNR=4.9	121.69	9	PKP	PKPdf	13 45 52.5	-2.4
CN2	Changchun	126.44	335	ePKP	PKPdf	13 46 03.2	-1.1
MKAR	Makanchi Array 0.8nm,1.0s,baz=12,slow=6.2,SNR=3.7	128.07	13	PKP	PKPdf	13 46 04.8	-2.6

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
SONM	**Songino Array**	**128.14**	**352**	PKP	PKPdf	13 46 04.8	-2.7
	0.5nm,0.8s,baz=350,slow=4.5,SNR=3.5						
STKA	**Stephens Creek**	**129.86**	**231**	PKP	PKPdf	13 46 07.6	-3.6
	3.0nm,1.2s,baz=180,slow=4.6,SNR=3.4						
STKA	**Stephens Creek**	**129.86**	**231**	PKP	PKPdf	13 46 07.6	-3.6
WMQ	**Urumqi**	**131.98**	**9**	*e*PKP	PKPdf	13 46 13.4	-1.5
BJI	**Beijing**	**133.22**	**340**	PKP	PKPdf	13 46 13.8	-3.6
BJI				SS	SS	14 06 28.2	+1.8
BJI				LR	LR		
	comp=N,101nm,27.6s,MS4.7						
BJI				LR	LR		
	comp=E,141nm,24.9s,MS4.7						
BJI				LR	LR		
	comp=Z,45nm,29.4s,MS4.0						
HHC	**Hu-ho-hao-te**	**133.86**	**345**	*e*PKP	PKPdf	13 46 12.3	-6.2
HHC				XPKP		13 46 26.3	
HHC				PP	PP	13 48 46.0	-0.7
HHC				PKS		13 49 46.6	
HHC				PP	PP		
	comp=Z,86nm,5.1s						
HHC				LR	LR		
	comp=N,110nm,16.7s,MS4.7						
HHC				LR	LR		
	comp=E,76nm,19.0s,MS4.7						
HHC				LR	LR		
	comp=Z,91nm,16.7s,MS4.6						
GTA	**Gaotai**	**137.12**	**357**	*e*PKP	PKPdf	13 46 23.8	-0.8
LZH	**Lanzhou**	**140.03**	**352**	*e*PKP	PKPdf	13 46 26.5	-3.6
LZH				XPKP		13 46 32.0	
WRA	**Warramunga Arr**	**140.44**	**243**	PKhKP		13 46 20.1	
	comp=Z,0.5nm,0.9s,baz=136,slow=1.5,SNR=4.9						
WRA				PKP	PKPdf	13 46 27.4	-3.8
	comp=Z,1.1nm,0.8s,baz=108,slow=1.9,SNR=10						
XAN	**Xi'an**	**140.97**	**345**	PKP	PKPdf	13 46 25.2	-6.7
XAN				XPKP		13 46 38.2	
XAN				PP	PP	13 49 30.7	-0.4
XAN				LR	LR		
	comp=N,20nm,25.1s,MS4.0						
XAN				LR	LR		
	comp=E,25nm,21.3s,MS4.0						
XAN				LR	LR		
	comp=Z,49nm,19.4s,MS4.3						
CD2	**Chengdu**	**145.11**	**350**	*e*PKP	PKPdf	13 46 37.7	-1.6
GYA	**Guiyang**	**148.76**	**344**	*e*PKP	PKPdf	13 46 40.3	-5.2
GYA				PKS		13 50 14.8	
GYA				PP	PP	13 50 19.5	+1.9
GYA				PP	PP		
	comp=Z,70nm,7.9s						
KMI	**Kunming**	**150.94**	**350**	PKP	PKPdf	13 46 46.1	-2.9
CMAR	**Chiang Mai Arr**	**158.00**	**356**	PKP	PKPdf	13 46 55.4	-3.5
	comp=Z,0.2nm,0.4s,baz=349,slow=1.8,SNR=4.2						
CMAR				PKPab	PKPab	13 47 29.6	-2.2
	comp=Z,0.7nm,0.8s,baz=346,slow=4.6,SNR=6.0						

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*ISCJB **12** 13:44:38.9±0.8, 3425N±006×2527E±01, h33km, Error ellipse: s-maj=14.2km s-min=7.7km az=163.7*
*ATH **12** 13:44:38.2, 3430N×2562E, h28km±2km, MD3.6/4*
*NEIC **12** 13:44:38.2, 3430N×2562E, h28km, MD3.6(ATH), After ATH.*
*CSEM **12** 13:44:39.1±0.1, 3427N×2577E, h40km, MD3.6, Error ellipse: s-maj=7.5km s-min=3.5km az=66.0*
*HLW **12** 13:44:40.6, 3428N×2592E, h33km, Mb3.5*
ISC 12 13:44:40.2±0.8, **3429N**±006×**257E**±01, **h35**km, **n8**, σ0^{s}**68**/9, **1C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.97**	**356**	⇑*i*PN	**Pn**	**13 44 56.5**	**-0.8**
NPS				*e*SN	**Sn**	**13 45 09.9**	**+0.1**
GVD	**Gavdhos**	**1.43**	**293**	*e*PN	**Pn**	**13 45 03.5**	**-0.2**
VAM	**Vamos**	**1.66**	**313**	*e*PN	**Pn**	**13 45 06.8**	**+0.1**
KARP	**Karpathos**	**1.74**	**44**	*e*PN	**Pn**	**13 45 09.0**	**+1.2**
HMAT	**Matruh**	**3.40**	**159**	⇓P	**Pn**	**13 45 30.6**	**-0.1**
HMAT	**Matruh**	**3.40**	**159**	P	**Pn**	**13 45 30.6**	**-0.1**
SWA2		**5.04**	**182**	⇓P	**Pn**	**13 45 54.1**	**+0.8**
SUZ		**7.51**	**124**	P	**Pn**	**13 46 26.1**	**-1.0**

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*IDC **12** 13:57:40.1±0.9, 833N×12650E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, ML4.8/1, Error ellipse: s-maj=29.2km s-min=15.6km az=90.0*
*MAN **12** 13:57:42, 841N×126.13E, h11km, mb5.0, ML3.9, MS4.0*
*ISCJB **12** 13:57:43.2±0.8, 843N±003×12624E±004, h28km±5km, mb4.2/17, Error ellipse: s-maj=7.3km s-min=4.6km az=171.1*
*NEIC **12** 13:57:46.4±3.7, 832N×12627E, h44km±31km, mb4.8/9, Error ellipse: s-maj=38.2km s-min=9.5km az=55.0*
ISC 12 13:57:43.3±0.9, **840N**±003×**12619E**±004, **h14**km±5km, **n50**, σ1^{s}**28**/58, **mb4.2**/17, **3C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.28**	**142**	⇓*i*P	**Pg**	**13 57 50.9**	**+1.8**
BUTP	**Butuan**	**0.80**	**315**	*e*P	**Pg**	**13 57 57.4**	**-1.3**
BUTP				*e*S	**Sg**	**13 58 09.1**	**-0.1**
BUKP	**Musuan**	**1.23**	**245**	*e*P	**Pn**	**13 58 04.3**	**-1.8**
BUKP				*e*S	**Sb**	**13 58 22.8**	**+0.6**
MATI	**Mati**	**1.45**	**177**	*e*P	**Pn**	**13 58 08.3**	**-0.8**
DAV	**Davao City (W)**	**1.46**	**205**	Pn	**Pn**	**13 58 09.3**	**+0.1**
	299nm,0.3s,baz=6.3,slow=1.8,SNR=28						
DAV				Sn	**Sn**	**13 58 30.4**	**+2.3**
	204nm,0.3s,baz=291,slow=20,SNR=8.2						
DAV	**Davao City (W)**	**1.46**	**205**	*e*P	**Pn**	**13 58 09.2**	**0.0**
DAV				Sn	**Sn**	**13 58 30.4**	**+2.3**
SCPH	**Surigao**	**1.54**	**333**	⇑*e*P	**Pn**	**13 58 08.9**	**-1.4**
SCPH				*e*S	**Sn**	**13 58 30.3**	**+0.3**
KCP	**Kidapawan**	**1.76**	**218**	⇑*e*P	**Pn**	**13 58 12.9**	**-0.6**
KCP				*i* S	**Sn**	**13 58 37.3**	**+1.7**
MSLP	**Maasin**	**2.16**	**323**	*e*P	**Pn**	**13 58 17.7**	**-1.3**
CTBH	**Cotabato--PC H**	**2.25**	**239**	⇑*e*P	**Pn**	**13 58 19.1**	**-1.1**
CTBH				*e*S	**Sn**	**13 58 48.2**	**+0.3**
GSPH	**General Santos**	**2.61**	**208**	⇓*e*P	**Pn**	**13 58 28.8**	**+3.7**
TBP	**Tagbilaran**	**2.63**	**299**	*e*P	**Pn**	**13 58 24.4**	**-1.0**
TBP				*e*S	**Sn**	**13 58 54.3**	**-2.9**
PAGZ	**Pagadian**	**2.83**	**259**	*e*P	**Pn**	**13 58 31.1**	**+2.9**
LLP	**Lapu-Lapu**	**2.90**	**311**	*e*P	**Pn**	**13 58 28.9**	**-0.3**
LLP				*e*S	**Sn**	**13 59 00.8**	**-3.0**
PLP	**Palo**	**2.99**	**337**	⇓*e*P	**Pn**	**13 58 31.6**	**+1.2**
PLP				*e*S	**Sn**	**13 59 10.6**	**+4.5**
OCLP	**Ormoc**	**3.06**	**329**	*e*P	**Pn**	**13 58 31.0**	**-0.2**
SNPH	**Sibulan**	**3.06**	**288**	*e*P	**Pn**	**13 58 31.0**	**-0.3**
BESP	**Borongan**	**3.26**	**347**	*e*P	**Pn**	**13 58 36.4**	**+2.4**
IPIL	**Ipil**	**3.63**	**261**	*e*P	**Pn**	**13 58 42.9**	**+3.7**
GUIM	**Jordan**	**4.18**	**302**	*e*P	**Pn**	**13 58 46.4**	**-0.3**
GUIM				*e*S	**Sn**	**13 59 33.2**	**-2.2**
CNP	**Catarman**	**4.35**	**340**	*e*P	**Pn**	**13 58 51.4**	**+2.4**
RCP	**Roxas**	**4.62**	**313**	⇓*e*P	**Pn**	**13 58 53.2**	**+0.4**
PVCP	**Virac**	**5.53**	**339**	*e*P	**Pn**	**13 59 07.3**	**+2.0**
CAUP	**Cauayan**	**9.50**	**334**	*e*P	**Pn**	**14 00 00.5**	**+0.8**
BATI	**Baumata**	**18.66**	**188**	P	**Pn**	**14 01 59.1**	**-2.1**
	2.8nm,0.3s,baz=347,slow=3.9,SNR=5.1						
KAKA	**Kakadu**	**21.88**	**163**	*e*P	x	14 02 18.4	
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.34**	**181**	*e*P	**P**	**14 03 18.0**	**-1.0**
	9.2nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**28.28**	**293**	P	**P**	**14 03 39.1**	**+2.6**
	0.4nm,0.3s,mb3.5,baz=115,slow=7.5,SNR=4.7						
KSRS	**Korea Array**	**28.96**	**3**	P	**P**	**14 03 42.0**	**-0.3**
	0.8nm,0.6s,mb3.6,baz=182,slow=7.7,SNR=3.1						
WRAB	**Tennant Creek**	**29.28**	**164**	*e*P	**P**	**14 03 44.8**	**-0.5**
	1.3nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**29.29**	**164**	P	**P**	**14 03 44.0**	**-1.4**
	0.6nm,0.6s,mb3.5,baz=334,slow=11,SNR=10.0						
WB2	**Warramunga Arr**	**29.29**	**164**	*e*P	**P**	**14 03 45.0**	**-0.4**
TAPN	**Taplejung**	**40.95**	**302**	*e*P	**P**	**14 05 26.0**	**+0.2**
	14nm,0.8s,mb4.7						
ODAN	**Odare**	**41.05**	**302**	*e*P	**P**	**14 05 27.2**	**+0.6**
	14nm,0.8s,mb4.7						
RAMN	**Ramite**	**41.75**	**301**	*e*P	**P**	**14 05 33.0**	**+0.6**
	11nm,0.7s,mb4.6						
JIRN	**Jiri**	**42.33**	**302**	*e*P	**P**	**14 05 36.8**	**-0.2**
	10.0nm,0.6s,mb4.6						
GUN	**Gumba**	**42.67**	**302**	*e*P	**P**	**14 05 40.3**	**+0.5**
	19nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**42.67**	**161**	P	**P**	**14 05 36.6**	**-3.1**
	1.2nm,0.6s,mb3.8,baz=329,slow=8.8,SNR=3.2						
KOLN	**Koldanda**	**44.54**	**301**	*e*P	**P**	**14 05 54.9**	**0.0**
	14nm,0.7s,mb4.9						
DANN	**Dangsing**	**44.58**	**302**	*e*P	**P**	**14 05 55.1**	**-0.1**
	12nm,0.6s,mb4.9						
MK31	**Makanchi Array**	**53.47**	**324**	P	**P**	**14 07 02.2**	**-0.9**
MKAR	**Makanchi Array**	**53.47**	**324**	P	**P**	**14 07 02.2**	**-0.8**
	0.9nm,0.6s,mb3.9,baz=120,slow=8.7,SNR=5.1						
MKAR	**Makanchi Array**	**53.47**	**324**	P	**P**	**14 07 02.2**	**-0.8**
ZALV	**Zalesovo Beam**	**56.22**	**332**	P	**P**	**14 07 24.4**	**+1.5**
	0.9nm,0.7s,mb3.9,baz=130,slow=6.3,SNR=3.7						
AKTK	**Aktyubinsk**	**69.70**	**321**	P	**P**	**14 08 53.7**	**+1.0**
AKTO	**Aktyubinsk**	**69.70**	**321**	P	**P**	**14 08 53.7**	**+1.0**
	1.0nm,0.7s,mb3.8,baz=90,slow=6.1,SNR=5.0						
YKA	**Yellowknife Ar**	**95.48**	**24**	P	**P**	**14 11 06.6**	**-0.9**
	0.3nm,0.6s,mb3.9,baz=302,slow=4.7,SNR=5.6						
YKA	**Yellowknife Ar**	**95.48**	**24**	P	**P**	**14 11 06.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**120.87**	**291**	PKP	PKPdf	14 16 33.9	-2.3
	0.4nm,0.9s,baz=73,slow=2.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**120.87**	**291**	PKP	PKPdf	14 16 33.9	-2.3

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*ISCJB **12** 14:41:59.8±2.7, 183N±02×1454E±02, h201km±30km, mb3.3/7, Error ellipse: s-maj=38.9km s-min=28.3km az=162.2*
*IDC **12** 14:41:59.0±2.6, 1841N×14556E, h178km±26km, mb3.2/6, mb1 3.4/7, mb1mx3.3/20, mbtmp3.2/7, Error ellipse: s-maj=29.9km s-min=18.8km az=78.0*
*NEIC **12** 14:42:00.7±2.3, 1840N×14556E, h195km±25km, mb3.9/1, Error ellipse: s-maj=30.9km s-min=22.5km az=66.0*
ISC 12 14:42:00.2±2.6, **183N**±02×**1455E**±02, **h190**km±29km, **n9**, σ0^{s}**95**/10, **mb3.5**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.76**	**188**	P	**Pn**	**14 43 12.8**	**+1.4**
	3.5nm,0.3s,baz=220,slow=18,SNR=4.6						
GUMO				S	**Sn**	**14 44 06.1**	**-1.2**
	4.1nm,0.3s,baz=25,slow=19,SNR=3.9						
WRA	**Warramunga Arr**	**39.59**	**197**	P	**P**	**14 49 14.0**	**+0.8**
	0.3nm,0.4s,mb3.3,baz=16,slow=8.3,SNR=9.9						
WRA				PcP	PcP	14 51 16.8	+0.2
	0.3nm,1.0s,baz=18,slow=3.6,SNR=3.0						
SONM	**Songino Array**	**43.33**	**322**	P	**P**	**14 49 44.5**	**+1.1**
	0.4nm,0.5s,mb3.3,baz=125,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**58.21**	**323**	P	**P**	**14 51 32.5**	**-1.8**
	0.6nm,0.6s,mb3.6,baz=104,slow=6.1,SNR=2.9						
MKAR	**Makanchi Array**	**58.60**	**314**	P	**P**	**14 51 37.1**	**-0.1**
	0.2nm,0.3s,mb3.4,baz=94,slow=10,SNR=2.7						
BRVK	**Borovoye**	**66.72**	**321**	*e*P	**P**	**14 52 30.8**	**+0.1**
	0.9nm,0.6s,mb3.8						
YKA	**Yellowknife Ar**	**78.38**	**28**	P	**P**	**14 53 39.1**	**-0.2**
	0.5nm,0.7s,mb3.3,baz=290,slow=5.6,SNR=7.5						
NVAR	**Mina Array Bea**	**83.49**	**52**	P	**P**	**14 54 06.8**	**-0.1**
	0.5nm,0.5s,mb3.5,baz=268,slow=5.9,SNR=6.1						
NVAR				pP	pP	14 54 52.0	-1.4
	0.3nm,0.7s,baz=247,slow=5.3,SNR=3.7						
NVAR	**Mina Array Bea**	**83.49**	**52**	P	**P**	**14 54 06.8**	**-0.1**
NVAR				pP	pP	14 54 52.0	-1.4

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*ISCJB **12** 14:52:30.0±0.2, 5142N±001×644E±002, h0km, Error ellipse: s-maj=2.4km s-min=1.8km az=38.0*
*NEIC **12** 14:52:31.9±0.3, 5147N×650E, h5km, ML3.4(STR), ML3.7(LDG), Error ellipse: s-maj=3.7km s-min=2.1km az=158.0*
*BUG **12** 14:52:31.8, 5141N×657E, h1km, ML3.3*
BUG Felt in Moers-Repelen (I=V), Moers (I=IV), Duisburg (I=II-IV).
*CSEM **12** 14:52:32.9±0.1, 5149N×657E, h1km, ML3.9/37, Error ellipse: s-maj=1.3km s-min=0.8km az=151.0*
*BNS **12** 14:52:32.9±0.6, 5150N×658E, h2km±17km, ML3.2*
*PRU **12** 14:52:32.7, 5150N×662E, h0km*
*UCC **12** 14:52:32.5±0.6, 5154N×656E, h9km±2km, ML3.2*
*BGR **12** 14:52:33.1±0.3, 5144N×665E, h1km, ML3.4/15, Error ellipse: s-maj=4.4km s-min=3.3km az=128.0*
*LDG **12** 14:52:33.5±0.1, 5148N×654E, h1km, Md3.6/5, Ml3.7/34, Error ellipse: s-maj=2.0km s-min=1.3km az=154.0, Suspected Mining induced.*
*STR **12** 14:52:37.3±0.3, 5127N×670E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 12 14:52:31.6±0.2, **5146N**±001×**652E**±002, **h0**km, **n192**, σ1^{s}**24**/391, **10C-13D, Germany**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.29**	**111**	⇓*i*Pg	**Pg**	**14 52 37.9**	**+0.9**
LAUG				*e*Sg	**Sg**	**14 52 41.7**	**+1.0**
	1μm,0.6s						
BD09	**Hochneukirch**	**0.36**	**185**	*e*Pg	**Pg**	**14 52 40.8**	**+2.4**
BD09				*i* Sg	**Sg**	**14 52 47.3**	**+4.2**
BD11	**Borschemich**	**0.38**	**189**	*i* Sg	**Sg**	**14 52 47.8**	**+4.2**
RODG	**Roetgen-Dahlhe**	**0.38**	**215**	*e*Pg	**Pg**	**14 52 40.7**	**+1.9**
BD03	**Millendorf**	**0.46**	**177**	⇓*e*Pg	**Pg**	**14 52 42.6**	**+2.2**
BUG	**Bochum--Univer**	**0.47**	**91**	*e*Pg	**Pg**	**14 52 41.1**	**+0.6**
BUG				Sg	**Sg**	**14 52 47.8**	**+1.2**
BUG	**Bochum--Univer**	**0.47**	**91**	*e*Pg	**Pg**	**14 52 41.0**	**+0.5**
BUG				*e*Sg	**Sg**	**14 52 47.9**	**+1.3**
BD01	**Bergheim Laure**	**0.50**	**172**	*i* Sg	**Sg**	**14 52 51.7**	**+4.0**
BD07	**Roetschberg**	**0.52**	**169**	*e*Pg	**Pg**	**14 52 43.8**	**+2.3**
WTSB	**Winterswijk**	**0.54**	**19**	*e*Pg	**Pg**	**14 52 42.3**	**+0.4**
	92nm,0.2s						
WTSB				*e*Sg	**Sg**	**14 52 49.8**	**+0.9**
BNS	**Bensberg**	**0.64**	**140**	⇓*i*Pg	**Pg**	**14 52 45.5**	**+1.6**
BNS				*e*Sg	**Sg**	**14 52 54.4**	**+2.2**
	2μm,0.5s						
HOBG	**Hohbusch**	**0.70**	**132**	⇓*e*Pg	**Pg**	**14 52 46.3**	**+1.4**
HOBG				*e*Sg	**Sg**	**14 52 56.1**	**+2.2**
	1μm,0.5s						
HGN	**Heimansgroeve**	**0.79**	**208**	*e*Pg	**Pg**	**14 52 48.3**	**+1.8**
	SNR=243						
HGN				*e*Sg	**Sg**	**14 52 59.7**	**+3.0**
	SNR=15						
HGN	**Heimansgroeve**	**0.79**	**208**	*e*Pn	**Pn**	**14 52 48.4**	**-1.4**
	81nm,0.4s						
HGN	**Heimansgroeve**	**0.79**	**208**	*e*Pg	**Pg**	**14 52 49.9**	**+3.3**
	134nm,0.2s						
HGN				*e*Sn	**Sg**	**14 52 59.5**	**+2.8**
HGN				*e*Sg	**Sg**	**14 53 02.5**	**+5.8**
HGN	**Heimansgroeve**	**0.79**	**208**	*e*Pg	**Pg**	**14 52 49.9**	**+3.4**
	134nm,0.2s,baz=35						
DREG	**Dreilaegerbach**	**0.81**	**193**	⇓*e*Pg	**Pg**	**14 52 48.8**	**+1.6**
DREG				*e*Sg	**Sg**	**14 53 01.1**	**+3.5**
	805nm,0.2s						
KLL	**Kalltalsperre**	**0.82**	**189**	*e*Pg	**Pg**	**14 52 48.8**	**+1.5**
KLL				*e*Sg	**Sg**	**14 53 00.8**	**+2.9**
	654nm,0.2s						
BEBN	**Eben Emael**	**0.85**	**219**	P	**Pg**	**14 52 50.0**	**+2.3**
BEBN				S	**Sg**	**14 53 01.6**	**+2.9**
BEBN	**Eben Emael**	**0.85**	**219**	P	**Pg**	**14 52 50.0**	**+2.2**
BEBN				S	**Sg**	**14 53 01.5**	**+2.8**
STB	**Steinbach**	**0.89**	**167**	*e*Pg	**Pg**	**14 52 50.1**	**+1.6**
STB				*e*Sg	**Sg**	**14 53 02.3**	**+2.3**
	677nm,0.3s						
MEM	**Membach**	**0.91**	**201**	⇑P	**Pg**	**14 52 50.4**	**+1.5**
MEM				S	**Sg**	**14 53 05.3**	**+4.7**
IBBN	**Ibbenburen**	**1.15**	**41**	*e*Pg	**Pg**	**14 52 53.5**	**-0.1**
	SNR=18						
IBBN				*e*Sg	**Sg**	**14 53 08.9**	**+0.5**
	SNR=6.2						
IBBN	**Ibbenburen**	**1.15**	**41**	*e*Pg	**Pg**	**14 52 53.6**	**+0.1**
IBBN				*e*Sg	**Sg**	**14 53 08.9**	**+0.5**
HILG	**Hillesheim**	**1.17**	**175**	*e*Pg	**Pg**	**14 52 55.2**	**+1.3**
HILG				*e*Sg	**Sg**	**14 53 10.8**	**+1.8**
	761nm,0.4s						
KOE	**Koeppel**	**1.28**	**143**	*e*Pg	**Pg**	**14 52 56.6**	**+0.4**
KOE				*e*Sg	**Sg**	**14 53 14.1**	**+1.3**
	440nm,0.3s						
BCLA	**Clavier**	**1.29**	**217**	P	**Pg**	**14 52 56.9**	**+0.6**
BCLA				S	**Sg**	**14 53 15.6**	**+2.6**
BGG	**Burgeitz**	**1.35**	**157**	⇓*e*Pg	**Pg**	**14 52 57.6**	**+0.1**
BGG				*e*Sg	**Sg**	**14 53 16.4**	**+1.4**
	270nm,0.4s						
WIT	**Witteveen**	**1.36**	**4**	*e*Pg	**Pg**	**14 52 58.9**	**+1.2**
	SNR=2.5						
WIT				*e*Sg	**Sg**	**14 53 16.9**	**+1.5**
	SNR=3.6						
UCC	**Uccle**	**1.51**	**245**	P	**Pn**	**14 53 01.6**	**+1.7**
UCC				S	**Sg**	**14 53 20.6**	**+0.6**
UCC	**Uccle**	**1.51**	**245**	P	**Pn**	**14 53 01.5**	**+1.7**
UCC				S	**Sg**	**14 53 20.6**	**+0.5**
SNF	**Seneffe**	**1.70**	**237**	P	**Pn**	**14 53 02.8**	**+0.4**
ABH	**Alteburg**	**1.71**	**157**	⇓*e*Pn	**Pn**	**14 53 02.8**	**+0.3**
ABH				Pg	**Pg**	**14 53 05.0**	**+0.8**
ABH	**Alteburg**	**1.71**	**157**	Pg	**Pg**	**14 53 05.0**	**+0.8**
ABH				Sg	**Sg**	**14 53 26.3**	**0.0**
ABH	**Alteburg**	**1.71**	**157**	Pn	**Pn**	**14 53 03.0**	**+0.5**
ABH				Pg	**Pg**	**14 53 05.0**	**+0.8**
ABH				Sg	**Sg**	**14 53 26.3**	**0.0**
GIVF	**Givet**	**1.73**	**219**	*e*P	**Pn**	**14 53 05.3**	**+2.5**
GIVF				*e*Sn	**Sn**	**14 53 25.4**	**-0.2**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**14 53 29.2**	**+2.1**
	385nm,0.3s						
GIVF	**Givet**	**1.73**	**219**	*e*P	**Pn**	**14 53 05.3**	**+2.5**
GIVF				*e*Sn	**Sn**	**14 53 25.4**	**-0.2**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**14 53 29.2**	**+2.1**
	192nm,0.3s						
GIVF	**Givet**	**1.73**	**219**	*e*Pn	**Pn**	**14 53 03.0**	**+0.2**
GIVF				*e*P		14 53 05.3	
GIVF				*e*Sn	**Sn**	**14 53 25.4**	**-0.2**
GIVF				*e*Sg	**Sg**	**14 53 29.2**	**+2.1**
RUP	**Ruppelstein**	**1.79**	**169**	Pn	**Pn**	**14 53 06.0**	**+2.3**
RUP	**Ruppelstein**	**1.79**	**169**	Pn	**Pn**	**14 53 06.0**	**+2.4**
RUP				Sg	**Sg**	**14 53 28.7**	**-0.3**
RUP	**Ruppelstein**	**1.79**	**169**	Pn	**Pn**	**14 53 03.7**	**+0.1**
RUP				Sg	**Sg**	**14 53 28.7**	**-0.3**
WLF	**Walferdange**	**1.81**	**188**	*e*Pn	**Pn**	**14 53 04.4**	**+0.5**
WLF				*e*Pg	**Pg**	**14 53 06.8**	**+0.6**
	SNR=22						
WLF				*e*Sg	**Sg**	**14 53 29.9**	**+0.3**
	SNR=7.7						
WLF	**Walferdange**	**1.81**	**188**	P	**Pn**	**14 53 04.5**	**+0.6**
WLF				S	**Sn**	**14 53 30.0**	**+2.5**
WLF	**Walferdange**	**1.81**	**188**	Pg	**Pg**	**14 53 06.8**	**+0.6**
	SNR=22						
WLF				Sg	**Sg**	**14 53 29.9**	**+0.3**
	SNR=7.7						
WLF				S	**Sn**	**14 53 30.0**	**+2.5**
WLF	**Walferdange**	**1.81**	**188**	*e*P	**Pn**	**14 53 04.3**	**+0.4**
DOU	**Dourbes**	**1.83**	**223**	P	**Pn**	**14 53 04.5**	**+0.3**
DOU				S	**Sn**	**14 53 28.6**	**+0.6**
DOU	**Dourbes**	**1.83**	**223**	P	**Pn**	**14 53 04.5**	**+0.3**
DOU				S	**Sn**	**14 53 28.5**	**+0.5**
BAIF	**Baives**	**2.03**	**227**	*e*Pg	**Pg**	**14 53 12.2**	**+1.8**
BAIF				*e*Sn	**Sn**	**14 53 32.8**	**-0.1**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**14 53 38.7**	**+2.1**
	141nm,0.4s						
BAIF	**Baives**	**2.03**	**227**	*e*Pg	**Pg**	**14 53 12.2**	**+1.8**
BAIF				*e*Sn	**Sn**	**14 53 32.8**	**-0.1**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**14 53 38.7**	**+2.1**
	71nm,0.4s						
BAIF	**Baives**	**2.03**	**227**	*e*Pn	**Pn**	**14 53 07.4**	**+0.5**
BAIF				*e*Pg	**Pg**	**14 53 12.2**	**+1.8**
BAIF				*e*Sn	**Sn**	**14 53 32.8**	**-0.1**
BAIF				*e*Sg	**Sg**	**14 53 38.7**	**+2.1**
GTTG	**Gvttingen**	**2.15**	**86**	*e*Pg	**Pg**	**14 53 11.3**	**-1.5**
	SNR=5.4						
GTTG				*e*Sg	**Sg**	**14 53 39.3**	**-1.5**
	SNR=5.3						
UBBA	**Unterbreizbach**	**2.28**	**105**	*e*Pg	**Pg**	**14 53 13.9**	**-1.4**
	SNR=10						
TOD	**Tromm**	**2.36**	**141**	⇑*i*P	**Pn**	**14 53 12.0**	**+0.6**
TOD	**Tromm**	**2.36**	**141**	Pn	**Pn**	**14 53 11.4**	**0.0**
TOD	**Tromm**	**2.36**	**141**	P	**Pn**	**14 53 12.0**	**+0.6**
KTD	**Kalmit**	**2.36**	**154**	Pn	**Pn**	**14 53 12.1**	**+0.6**
KTD				Sg	**Sg**	**14 53 46.6**	**-0.7**
SWS	**Schriesheim-Wi**	**2.42**	**144**	P	**Pn**	**14 53 12.6**	**+0.4**
CLZ	**Clausthal**	**2.43**	**79**	*e*Pn	**Pn**	**14 53 11.0**	**-1.5**
	SNR=3.7						
CLZ				*e*Pg	**Pg**	**14 53 16.1**	**-2.1**
	SNR=13						
CLZ	**Clausthal**	**2.43**	**79**	*e*Pn	**Pn**	**14 53 10.9**	**-1.6**
CLZ	**Clausthal**	**2.43**	**79**	Pn	**Pn**	**14 53 11.0**	**-1.5**
	SNR=3.7						
NRDL	**Niedersach Rie**	**2.45**	**63**	*e*Pg	**Pg**	**14 53 17.1**	**-1.4**
	SNR=5.2						
HROE	**Hohe Rhon--Fla**	**2.48**	**110**	⇓*i*Pn	**Pn**	**14 53 12.6**	**-0.5**
LANF	**Langenberg**	**2.61**	**161**	Pg	**Pg**	**14 53 23.1**	**+1.5**
LANF				Sg	**Sg**	**14 53 56.7**	**+1.3**
LANF	**Langenberg**	**2.61**	**161**	⇑*e*P	**Pn**	**14 53 15.8**	**+0.8**
LANF	**Langenberg**	**2.61**	**161**	P	**Pn**	**14 53 15.8**	**+0.8**
LANF	**Langenberg**	**2.61**	**161**	Pg	**Pg**	**14 53 23.1**	**+1.5**
LANF				Sg	**Sg**	**14 53 56.7**	**+1.3**
LANF	**Langenberg**	**2.61**	**161**	Pn	**Pn**	**14 53 15.7**	**+0.8**
LANF				Pg	**Pg**	**14 53 23.1**	**+1.5**
LANF				Sg	**Sg**	**14 53 56.7**	**+1.3**
ASSE	**Asse, Remlinge**	**2.67**	**74**	*e*Pg	**Pg**	**14 53 22.0**	**-0.6**
	SNR=8.1						
SIND	**Sindeldorf**	**2.89**	**136**	P	**Pn**	**14 53 19.1**	**+0.3**
SIND				S	**Sn**	**14 53 53.8**	**-0.3**
RFYF	**Reffroy**	**2.91**	**194**	*e*Pn	**Pn**	**14 53 19.2**	**+0.2**
	baz=22						
RFYF	**Reffroy**	**2.91**	**194**	*e*Pg	**Pg**	**14 53 27.5**	**+0.2**
	baz=8.8						
RFYF				*e*Sg	**Sg**	**14 54 05.4**	**+0.5**
	151nm,0.4s,baz=17						
RFYF	**Reffroy**	**2.91**	**194**	*e*Pg	**Pg**	**14 53 27.5**	**+0.2**
	baz=8.8						
RFYF				*e*Sg	**Sg**	**14 54 05.4**	**+0.5**
	76nm,0.4s,baz=17						
RFYF	**Reffroy**	**2.91**	**194**	*e*Pn	**Pn**	**14 53 19.2**	**+0.2**
RFYF				*e*Pg	**Pg**	**14 53 27.5**	**+0.2**
RFYF				*e*Sg	**Sg**	**14 54 05.4**	**+0.5**
CDF	**Champ du Feu**	**3.08**	**171**	*e*Pg	**Pg**	**14 53 30.7**	**0.0**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**14 54 11.0**	**+0.4**
	27nm,0.3s						
CDF	**Champ du Feu**	**3.08**	**171**	*e*Pg	**Pg**	**14 53 30.7**	**0.0**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**14 54 11.0**	**+0.4**
	13nm,0.3s						
CDF	**Champ du Feu**	**3.08**	**171**	*e*Pn	**Pn**	**14 53 21.6**	**+0.1**
CDF				*e*Pg	**Pg**	**14 53 30.7**	**0.0**
CDF				*e*Sg	**Sg**	**14 54 11.0**	**+0.4**
MEZF	**Maizieres J'vi**	**3.10**	**198**	*e*Pn	**Pn**	**14 53 21.3**	**-0.4**
	baz=24						
MEZF	**Maizieres J'vi**	**3.10**	**198**	*e*Pg	**Pg**	**14 53 31.5**	**+0.5**
	baz=19						
MEZF				*e*Sn	**Sn**	**14 53 57.3**	**-2.2**
MEZF				*e*Sg	**Sg**	**14 54 11.4**	**+0.2**
	106nm,0.4s,baz=7.1,SNR=1.0						
MEZF	**Maizieres J'vi**	**3.10**	**198**	*e*Pg	**Pg**	**14 53 31.5**	**+0.5**
	baz=19						
MEZF				*e*Sn	**Sn**	**14 53 57.3**	**-2.2**
MEZF				*e*Sg	**Sg**	**14 54 11.4**	**+0.2**
	53nm,0.4s,baz=7.1,SNR=1.0						
MEZF	**Maizieres J'vi**	**3.10**	**198**	*e*Pn	**Pn**	**14 53 21.3**	**-0.4**
MEZF				*e*Pg	**Pg**	**14 53 31.5**	**+0.5**
MEZF				*e*Sn	**Sn**	**14 53 57.3**	**-2.2**
MEZF				*e*Sg	**Sg**	**14 54 11.4**	**+0.2**
ECH	**Echery**	**3.27**	**172**	Pn	**Pn**	**14 53 24.2**	**+0.2**
ECH	**Echery**	**3.27**	**172**	Pg	**Pg**	**14 53 35.4**	**+1.2**
ECH				Sg	**Sg**	**14 54 18.1**	**+1.6**
ECH	**Echery**	**3.27**	**172**	*e*P	**Pn**	**14 53 24.0**	**0.0**
MOX	**Moxa**	**3.32**	**102**	*e*Pn	**Pn**	**14 53 24.7**	**+0.1**
	SNR=5.9						
MOX				*e*Pg	**Pg**	**14 53 33.7**	**-1.4**
	SNR=2.3						
MOX				*e*Sg	**Sg**	**14 54 15.9**	**-2.2**
MOX	**Moxa**	**3.32**	**102**	*e*PN	**Pn**	**14 53 24.7**	**+0.1**
MOX				*e*PG	**Sg**	**14 54 16.2**	**-1.8**
BFO	**Black Forest**	**3.34**	**159**	*e*Pn	**Pn**	**14 53 25.3**	**+0.3**
	SNR=17						
BFO	**Black Forest**	**3.34**	**159**	*e*Pn	**Pn**	**14 53 25.3**	**+0.3**
SFTF	**Sexfontaines**	**3.39**	**197**	*e*Pg	**Pg**	**14 53 36.5**	**0.0**
	baz=16						
SFTF				*e*Sg	**Sg**	**14 54 21.6**	**+1.1**
	59nm,0.3s						
SFTF	**Sexfontaines**	**3.39**	**197**	*e*Pg	**Pg**	**14 53 36.5**	**0.0**
	baz=16						
SFTF				*e*Sg	**Sg**	**14 54 21.6**	**+1.1**
	29nm,0.3s						
HAU	**Haudompre**	**3.46**	**182**	*e*Pg	**Pg**	**14 53 37.7**	**0.0**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**14 54 05.3**	**-2.8**
HAU				*e*Sg	**Sg**	**14 54 22.0**	**-0.5**
	65nm,0.4s						
HAU	**Haudompre**	**3.46**	**182**	*e*Pg	**Pg**	**14 53 37.7**	**0.0**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**14 54 05.3**	**-2.8**
HAU				*e*Sg	**Sg**	**14 54 22.0**	**-0.5**
	32nm,0.4s						
HAU	**Haudompre**	**3.46**	**182**	*e*Pn	**Pn**	**14 53 26.8**	**+0.3**
HAU				*e*Pg	**Pg**	**14 53 37.7**	**0.0**
HAU				*e*Sn	**Sn**	**14 54 05.3**	**-2.8**
HAU				*e*Sg	**Sg**	**14 54 22.0**	**-0.5**
GRA1	**Grafenberg Arr**	**3.48**	**119**	Pn	**Pn**	**14 53 27.2**	**+0.3**

GRA1	Grafenberg Arr	3.48	119	ePn	Pn	14 53 27.2	+0.3
GRF	Grafenberg Arr	3.48	119	ePn	Pn	14 53 27.2	+0.3
BUCH	Bad Urach	3.52	148	P	Pn	14 53 28.0	+0.5
KIZ	Kirchzarten	3.62	165	P	Pn	14 53 28.8	0.0
MOF	Molkenrain	3.63	173	Pn	Pn	14 53 28.5	-0.4
MOF				Sg	Sg	14 54 29.6	+1.5
HINF	Hinteralfeld	3.65	176	ePg	Pg	14 53 41.0	-0.4
HINF				eSn	Sn	14 54 10.2	-2.7
HINF				eSg	Sg	14 54 27.6	-1.1
	71nm,0.6s						
HINF	Hinteralfeld	3.65	176	ePg	Pg	14 53 41.0	-0.4
HINF				eSn	Sn	14 54 10.2	-2.7
HINF				eSg	Sg	14 54 27.6	-1.1
	36nm,0.6s						
HINF	Hinteralfeld	3.65	176	ePn	Pn	14 53 28.8	-0.4
HINF				ePg	Pg	14 53 41.0	-0.4
HINF				eSn	Sn	14 54 10.2	-2.7
HINF				eSg	Sg	14 54 27.6	-1.1
SPAK	Spaichingen-Ko	3.66	155	P	Pn	14 53 30.0	+0.6
FELD	Feldberg im Sc	3.71	164	P	Pn	14 53 30.6	+0.5
FELD	Feldberg im Sc	3.71	164	Pn	Pn	14 53 30.5	+0.5
HDH	Heidenheim-Cha	3.73	139	P	Pn	14 53 30.6	+0.3
GUT	Gutenstein	3.78	153	P	Pn	14 53 31.6	+0.5
GUT				S	Sn	14 54 04.6	-12
GUT	Gutenstein	3.78	153	P	Pn	14 53 31.5	+0.5
GUT				S	Sn	14 54 04.6	-12
WERD	Werda	3.80	103	ePn	Pn	14 53 31.3	0.0
	SNR=6.4						
WERD				eSg	Sg	14 54 31.0	-2.4
	SNR=2.8						
GUNZ	Gunzen	3.84	104	ePn	Pn	14 53 31.9	+0.1
	SNR=4.6						
GUNZ				ePg	Pg	14 53 42.9	-2.2
	SNR=2.1						
MANZ	Manzenberg	3.84	110	ePn	Pn	14 53 32.4	+0.5
TANN	Tannenbergstha	3.90	103	ePn	Pn	14 53 32.8	+0.1
	SNR=7.2						
MGBB	Grossbuechelbe	3.91	110	⇑iPn	Pn	14 53 33.0	+0.2
NKC	Novy Kostel	3.95	106	ePN	Pn	14 53 33.2	-0.2
NKC				ePG	Pg	14 53 46.3	-0.9
NKC				eSG	Sg	14 54 36.4	-2.0
	comp=Z,54nm,0.9s						
ROTZ	Rotzenmuhle	4.00	113	ePn	Pn	14 53 34.0	0.0
CLL	Collm	4.06	90	ePn	Pn	14 53 34.6	-0.3
CLL				ePg	Pg	14 53 46.0	-3.5
	SNR=3.1						
CLL				eSg	Sg	14 54 39.2	-2.8
	SNR=3.8						
CLL	Collm	4.06	90	Pg	Pg	14 53 46.0	-3.4
	SNR=3.1						
CLL				Sg	Sg	14 54 39.2	-2.8
	SNR=3.8						
CLL	Collm	4.06	90	i Pn	Pn	14 53 34.8	-0.1
CLL				ePg	Pg	14 53 46.0	-3.4
CLL				eSg	Sg	14 54 41.0	-1.0
	comp=Z,27nm,0.6s						
SISB	Singen-Schiene	4.09	156	⇑eP	Pn	14 53 36.3	+1.0
LOMF	Lomont	4.11	177	Pn	Pn	14 53 35.4	-0.2
LOMF				Sn	Sn	14 54 21.5	-2.9
UBR	Ueberruh	4.44	147	P	Pn	14 53 40.9	+0.8
LOR	Lormes	4.54	204	ePn	Pn	14 53 41.2	-0.2
	baz=27,SNR=1.0						
LOR	Lormes	4.54	204	ePg	Pg	14 53 56.9	-1.6
	baz=25,SNR=1.0						
LOR				eSn	Sn	14 54 31.3	-3.5
	SNR=1.0						
LOR				eSg	Sg	14 54 56.5	-0.7
	comp=Z,41nm,0.4s,baz=21,SNR=1.0						
LOR	Lormes	4.54	204	ePg	Pg	14 53 56.9	-1.6
	baz=25,SNR=1.0						
LOR				eSn	Sn	14 54 31.3	-3.5
	SNR=1.0						
LOR				eSg	Sg	14 54 56.5	-0.7
	comp=Z,20nm,0.4s,baz=21,SNR=1.0						
LOR	Lormes	4.54	204	ePn	Pn	14 53 41.2	-0.2
LOR				ePg	Pg	14 53 56.9	-1.6
LOR				eSn	Sn	14 54 31.3	-3.5
LOR				eSg	Sg	14 54 56.5	-0.7
BRG	Berggiesshubel	4.71	94	PN	Pn	14 53 44.2	+0.4
BRG				PG	Pg	14 53 59.0	-2.7
BRG				SG	Sg	14 55 01.4	-1.3
	comp=Z,47nm,1.3s						
DAVA	Damuels	4.71	151	⇑iPn	Pn	14 53 45.6	+1.7
DAVA				⇑iSn	Sn	14 54 38.8	-0.3
DAVA	Damuels	4.71	151	Pn	Pn	14 53 45.6	+1.8
DAVA				Sn	Sn	14 54 38.8	-0.4
SSF	Saint Saulge	4.82	205	ePg	Pg	14 54 03.6	-0.3
SSF				eSn	Sn	14 54 39.4	-2.4
SSF				eSg	Sg	14 55 05.6	-0.7
	comp=Z,61nm,0.4s						
SSF	Saint Saulge	4.82	205	ePg	Pg	14 54 03.6	-0.3
SSF				eSn	Sn	14 54 39.4	-2.4
SSF				eSg	Sg	14 55 05.6	-0.7
	comp=Z,30nm,0.4s						
SSF	Saint Saulge	4.82	205	ePn	Pn	14 53 45.0	-0.3
SSF				ePg	Pg	14 54 03.6	-0.3
SSF				eSn	Sn	14 54 39.4	-2.4
SSF				eSg	Sg	14 55 05.6	-0.7
CABF	La Chapelle	4.86	184	ePg	Pg	14 54 04.4	-0.2
	SNR=1.0						
CABF				eSg	Sg	14 55 05.9	-1.6
	comp=Z,32nm,0.5s,SNR=1.0						
CABF	La Chapelle	4.86	184	ePg	Pg	14 54 04.4	-0.2
	SNR=1.0						
CABF				eSg	Sg	14 55 05.9	-1.6
	comp=Z,16nm,0.5s,SNR=1.0						
CABF	La Chapelle	4.86	184	ePn	Pn	14 53 46.1	+0.3
CABF				ePg	Pg	14 54 04.4	-0.2
CABF				eSg	Sg	14 55 05.9	-1.6
HYF	Humbligny	4.90	213	ePn	Pn	14 53 46.3	-0.1
HYF				eSn	Sn	14 54 40.6	-3.1
HYF				eSg	Sg	14 55 08.9	+0.1
KHC	Kasperske Hory	5.09	114	ePN	Pn	14 53 48.5	-0.5
KHC				ePG	Pg	14 54 08.7	-0.3
KHC				eSN	Sn	14 54 50.0	+1.6
KHC				eSG	Sg	14 55 12.8	-2.1
	comp=Z,16nm,0.9s						
KHC	Kasperske Hory	5.09	114	ePn	Pn	14 53 48.5	-0.5
	comp=Z,16nm,0.9s						
KHC				ePg	Pg	14 54 08.7	-0.3
KHC				e		14 54 50.0	
KHC				eSg	Sg	14 55 12.8	-2.1
MOTA	Moosalm	5.09	142	⇓iPn	Pn	14 53 49.7	+0.8
MOTA				⇑iSn	Sn	14 54 45.2	-3.2
MOTA	Moosalm	5.09	142	Pn	Pn	14 53 49.7	+0.7
MOTA				Sn	Sn	14 54 45.2	-3.2
AVF	Avril sur Loir	5.11	205	ePg	Pg	14 54 08.7	-0.7
	SNR=1.0						
AVF				eSn	Sn	14 54 44.5	-4.4
	SNR=1.0						
AVF				eSg	Sg	14 55 14.6	-1.0
	comp=Z,22nm,0.5s,SNR=1.0						
AVF	Avril sur Loir	5.11	205	ePg	Pg	14 54 08.7	-0.7
	SNR=1.0						
AVF				eSn	Sn	14 54 44.5	-4.4
	SNR=1.0						
AVF				eSg	Sg	14 55 14.6	-1.0
	comp=Z,11nm,0.5s,SNR=1.0						
AVF	Avril sur Loir	5.11	205	ePn	Pn	14 53 48.6	-0.7
AVF				ePg	Pg	14 54 08.7	-0.7
AVF				eSn	Sn	14 54 44.5	-4.4
AVF				eSg	Sg	14 55 14.6	-1.0
SMF	Signal de Mont	5.13	201	ePg	Pg	14 54 08.7	-1.0
SMF				eSn	Sn	14 54 44.5	-4.8
	SNR=1.0						
SMF				eSg	Sg	14 55 14.6	-1.5
	comp=Z,36nm,0.4s,SNR=1.0						
SMF	Signal de Mont	5.13	201	ePg	Pg	14 54 08.7	-1.0
SMF				eSn	Sn	14 54 44.5	-4.8
	SNR=1.0						
SMF				eSg	Sg	14 55 14.6	-1.5
	comp=Z,18nm,0.4s,SNR=1.0						
SMF	Signal de Mont	5.13	201	ePn	Pn	14 53 49.0	-0.5
SMF				ePg	Pg	14 54 08.7	-1.0
SMF				eSn	Sn	14 54 44.5	-4.8
SMF				eSg	Sg	14 55 14.6	-1.5
LDF	La Druitiere	5.15	239	ePn	Pn	14 53 50.4	+0.6
	SNR=1.0						
LDF				eSn	Sn	14 54 47.0	-2.9
	SNR=1.0						
LDF				eSg	Sg	14 55 15.3	-1.6
	comp=Z,19nm,0.4s,SNR=1.0						
LDF	La Druitiere	5.15	239	ePn	Pn	14 53 50.4	+0.6
	SNR=1.0						
LDF				eSn	Sn	14 54 47.0	-2.9
	SNR=1.0						
LDF				eSg	Sg	14 55 15.3	-1.6
	comp=Z,9.7nm,0.4s,SNR=1.0						
FETA	Feichten	5.22	147	⇑iPn	Pn	14 53 52.1	+1.2
FETA				⇓iSn	Sn	14 54 48.8	-2.9
FLN	La Foliniere	5.25	242	ePn	Pn	14 53 51.4	+0.2
	baz=62,SNR=1.0						
FLN				eSn	Sn	14 54 49.1	-3.3
	comp=Z,22nm,0.3s,SNR=1.0						
FLN	La Foliniere	5.25	242	ePn	Pn	14 53 51.4	+0.2
	baz=62,SNR=1.0						
FLN				eSn	Sn	14 54 49.1	-3.3
	comp=Z,11nm,0.3s,SNR=1.0						
WATA	Walderalm	5.28	139	⇓iPn	Pn	14 53 52.5	+0.9
PRU	Pruhonice	5.30	103	ePN	Pn	14 53 52.8	+0.9
PRU				eSG	Sg	14 55 20.8	-1.0
	comp=Z,42nm,1.2s						
PRU	Pruhonice	5.30	103	ePn	Pn	14 53 52.8	+0.9
	comp=Z,42nm,1.2s						
PRU				eSg	Sg	14 55 20.8	-1.0
GEC2	GERESS Array S	5.30	117	eP	Pn	14 53 51.5	-0.5
	comp=Z,2μm,0.6s						
GEC2	GERESS Array S	5.30	117	eP	Pn	14 53 51.5	-0.5
	comp=Z,2μm,0.6s						
TUE	Stuetta	5.32	158	eP	Pn	14 53 53.8	+1.6
	comp=Z,20nm,0.4s						
TUE	Stuetta	5.32	158	eP	Pn	14 53 53.8	+1.6
	comp=Z,20nm,0.4s						
WTTA	Wattenberg	5.36	139	⇑iPn	Pn	14 53 53.9	+1.2
BGF	Bois d'Agland	5.46	208	ePn	Pn	14 53 53.7	-0.5
	SNR=1.0						
BGF				eSn	Sn	14 54 53.6	-4.1
	SNR=1.0						
BGF				eSg	Sg	14 55 25.7	-1.3
	comp=Z,80nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	5.46	208	ePn	Pn	14 53 53.7	-0.5
	SNR=1.0						
BGF				eSn	Sn	14 54 53.6	-4.1
	SNR=1.0						
BGF				eSg	Sg	14 55 25.7	-1.3
	comp=Z,40nm,0.4s,SNR=1.0						
GRR	Gorron	5.67	240	ePn	Pn	14 53 56.8	-0.1
	SNR=1.0						
GRR				eSn	Sn	14 54 59.6	-3.1
	comp=Z,49nm,0.4s,SNR=1.0						
GRR	Gorron	5.67	240	ePn	Pn	14 53 56.8	-0.1
	SNR=1.0						
GRR				eSn	Sn	14 54 59.6	-3.1
	comp=Z,24nm,0.4s,SNR=1.0						
TCF	Toulx Ste Croi	5.90	210	ePn	Pn	14 53 59.7	-0.4
	SNR=1.0						
TCF				eSn	Sn	14 55 04.0	-4.4
TCF				eSg	Sg	14 55 38.5	-2.5
	comp=Z,19nm,0.4s,SNR=1.0						
TCF	Toulx Ste Croi	5.90	210	ePn	Pn	14 53 59.7	-0.4
	SNR=1.0						
TCF				eSn	Sn	14 55 04.0	-4.4
TCF				eSg	Sg	14 55 38.5	-2.5
	comp=Z,9.4nm,0.4s,SNR=1.0						
LPL	La Plagne	5.95	179	ePn	Pn	14 54 01.4	+0.6
	SNR=1.0						
LPL				eSg	Sg	14 55 41.3	-1.1
	comp=Z,8.2nm,0.6s						
LPL	La Plagne	5.95	179	ePn	Pn	14 54 01.4	+0.6
	SNR=1.0						
LPL				eSg	Sg	14 55 41.3	-1.1
	comp=Z,4.1nm,0.6s						
LPG	La Plagne	5.96	178	ePn	Pn	14 54 01.8	+0.8
LPG				eSg	Sg	14 55 41.3	-1.7
	comp=Z,5.8nm,0.5s						
LPG	La Plagne	5.96	178	ePn	Pn	14 54 01.8	+0.8
LPG				eSg	Sg	14 55 41.3	-1.7
	comp=Z,2.9nm,0.5s						
MOA	Molln	6.19	123	⇓iPn	Pn	14 54 04.3	+0.2
MOA				⇓iSn	Sn	14 55 11.4	-4.1
DPC	Dobruska-Polom	6.30	96	eSG	Sg	14 55 52.9	-0.9
	comp=Z,37nm,1.4s						
MFF	Saint Martin d	6.54	225	ePn	Pn	14 54 08.4	-0.5
	SNR=1.0						
MFF				eSn	Sn	14 55 19.9	-4.2
	SNR=1.0						
MFF				eSg	Sg	14 56 00.6	-0.9
	comp=Z,16nm,0.5s						
MFF	Saint Martin d	6.54	225	ePn	Pn	14 54 08.4	-0.5
	SNR=1.0						
MFF				eSn	Sn	14 55 19.9	-4.2
	SNR=1.0						
MFF				eSg	Sg	14 56 00.6	-0.9
	comp=Z,8.1nm,0.5s						
ORIF	Oris-en-Rattie	6.55	184	ePn	Pn	14 54 08.6	-0.5
ORIF				eSg	Sg	14 56 00.2	-1.8
	comp=Z,38nm,0.9s						
ORIF	Oris-en-Rattie	6.55	184	ePn	Pn	14 54 08.6	-0.5
ORIF				eSg	Sg	14 56 00.2	-1.8
	comp=Z,19nm,0.9s						
SGMF	Saint Gilles	6.69	245	ePn	Pn	14 54 10.7	-0.2
SGMF				eSn	Sn	14 55 22.7	-5.0
	comp=Z,7.2nm,0.4s,SNR=1.0						
SGMF	Saint Gilles	6.69	245	ePn	Pn	14 54 10.7	-0.2
SGMF				eSn	Sn	14 55 22.7	-5.0
	comp=Z,3.6nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	6.72	191	ePn	Pn	14 54 11.4	0.0
	SNR=1.0						
VIVF				eSg	Sg	14 56 05.5	-1.7
	comp=Z,17nm,0.6s						
VIVF	Saint-Julien-l	6.72	191	ePn	Pn	14 54 11.4	0.0
	SNR=1.0						
VIVF				eSg	Sg	14 56 05.5	-1.7
	comp=Z,8.6nm,0.6s						
MBDF	Montbardon	6.74	178	ePn	Pn	14 54 10.8	-0.8
MBDF				eSg	Sg	14 56 06.4	-1.3
	comp=Z,4.9nm,0.7s						
ESK	Eskdalemuir	6.98	307	eP	Pn	14 54 15.1	+0.1
RJF	Les Rejaudoux	7.00	210	ePn	Pn	14 54 14.5	-0.7
RJF				eSn	Sn	14 55 31.1	-4.3
RJF				eSg	Sg	14 56 14.2	-1.9
	comp=Z,17nm,0.5s						
RJF	Les Rejaudoux	7.00	210	ePn	Pn	14 54 14.5	-0.7
RJF				eSn	Sn	14 55 31.1	-4.3
RJF				eSg	Sg	14 56 14.2	-1.9
	comp=Z,8.6nm,0.5s						
ROSF	Rostrenen	7.05	248	eSg	Sg	14 56 16.1	-1.8
	comp=Z,9.3nm,0.4s						
ROSF	Rostrenen	7.05	248	eSg	Sg	14 56 16.1	-1.8
	comp=Z,4.7nm,0.4s						
CAF	Calviac	7.18	206	ePn	Pn	14 54 18.0	+0.3
	SNR=1.0						
CAF				eSg	Sg	14 56 19.9	-2.1
	comp=Z,14nm,0.5s,SNR=1.0						
CAF	Calviac	7.18	206	ePn	Pn	14 54 18.0	+0.3
	SNR=1.0						
CAF				eSg	Sg	14 56 19.9	-2.1
	comp=Z,6.8nm,0.5s,SNR=1.0						
QUIF	Quistinic	7.21	244	ePn	Pn	14 54 17.3	-0.8
QUIF				eSg	Sg	14 56 21.6	-1.4
	comp=Z,14nm,0.5s						
QUIF	Quistinic	7.21	244	ePn	Pn	14 54 17.3	-0.8
QUIF				eSg	Sg	14 56 21.6	-1.4
	comp=Z,7.2nm,0.5s						
LFF	La Frestale	7.58	213	ePn	Pn	14 54 22.3	-0.8
LFF				eSn	Sn	14 55 44.8	-4.8
	SNR=1.0						
LFF				eSg	Sg	14 56 33.0	-1.7
	comp=Z,54nm,0.8s						
LFF	La Frestale	7.58	213	ePn	Pn	14 54 22.3	-0.8
LFF				eSn	Sn	14 55 44.8	-4.8
	SNR=1.0						
LFF				eSg	Sg	14 56 33.0	-1.7
	comp=Z,27nm,0.8s						
LASF	Ste Croix	7.60	195	ePn	Pn	14 54 23.0	-0.4
EPF	Esparros	9.41	209	ePn	Pn	14 54 48.0	-0.3
EPF				eSg	Sn	14 57 30.1	+55
	comp=Z,6.1nm,0.4s						
SJPF	Ste Jean	9.86	215	ePn	Pn	14 54 53.6	-0.8
	SNR=1.0						
SJPF				eSg	Sn	14 57 43.3	+58
	comp=Z,26nm,1.1s						

*ISCJB **12** 15:11:32.4±2.3, 25.46S±0.10×177.4W±0.1, h48km±21km, mb4.5/14, Error ellipse: s-maj=20.8km s-min=13.4km az=34.9*

*NEIC **12** 15:11:35.5±1.6, 25.55S×177.15W, h78km±13km, mb4.7/7, Error ellipse: s-maj=20.1km s-min=10.9km az=133.0*

*IDC **12** 15:11:36.1±3.8, 25.44S×177.22W, h75km±32km, mb4.1/9, mb1 4.3/11, mb1mx4.1/18, mbtmp4.2/11, MS4.0/1, Ms1 4.1/1, ms1mx3.2/28, Error ellipse: s-maj=27.7km s-min=18.5km az=136.0*

ISC 12 15:11:34.7±1.5**, 25.49S**±0.10×**177.3W**±0.1**, h57**km±14km**, n43, σ0.79**/26**, mb4.5**/14**, 2C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	12.64	25	P	Pn	15 14 31.5	-0.3
	20nm,0.3s,baz=274,slow=4.9,SNR=25						
AFI				S	Sn	15 16 37.8	-13
	2.0nm,0.3s,baz=39,slow=19,SNR=3.7						
AFI	Afiamalu	12.64	25	ePn	Pn	15 14 31.7	-0.1
AFI				S	Sn	15 16 37.8	-13
URZ	Urewera	13.58	199	P	Pn	15 14 44.7	+0.1
	0.5nm,0.3s,baz=300,slow=24,SNR=3.8						
CTA	Charters Tower	33.94	272	eP	P	15 18 14.0	+1.3
	4.5nm,0.4s,mb4.8						
CTA	Charters Tower	33.94	272	P	P	15 18 14.3	+1.6
	11nm,0.8s,mb4.8,baz=106,slow=10,SNR=17						
CTAO	Charters Tower	33.94	272	eP	P	15 18 14.0	+1.3
	6.6nm,0.6s,mb4.7						
STKA	Stephens Creek	36.44	250	eP	P	15 18 35.6	+1.4
	3.6nm,0.6s,mb4.5						
STKA	Stephens Creek	36.44	250	P	P	15 18 35.8	+1.6
	4.1nm,0.5s,mb4.6,baz=99,slow=9.2,SNR=26						
WB2	Warramunga Arr	44.73	267	eP	P	15 19 42.7	0.0
WRAB	Tennant Creek	44.73	267	eP	P	15 19 42.8	0.0
	1.8nm,0.5s,mb4.2						
WRA	Warramunga Arr	44.74	267	P	P	15 19 41.6	-1.2
	2.1nm,0.5s,mb4.3,baz=104,slow=8.0,SNR=15						
FORT	Forrest	48.06	251	eP	P	15 20 07.4	-1.3
	18nm,0.5s,mb5.4						
VNDA	Vanda	53.03	186	LR	LR	15 39 09.5	
	comp=Z,143nm,18.2s,baz=131,slow=31						
FITZ	Fitzroy Crossi	53.14	266	eP	P	15 20 46.8	-0.3
	4.2nm,0.5s,mb4.6						
KLBR	Kellerberrin	56.63	248	eP	P	15 21 11.4	-0.8
	5.9nm,0.6s,mb4.8						
CAUP	Cauayan	72.70	299	eP	P	15 22 58.2	+1.2
MAW	Mawson	77.11	200	P	P	15 23 20.9	-0.8
	2.0nm,0.6s,mb4.3,baz=90,slow=6.1,SNR=3.6						
KSRS	Korea Array	81.03	319	P	P	15 23 42.7	-0.8
	1.5nm,1.0s,mb3.9,baz=139,slow=6.5,SNR=4.4						
PETK	Petropavlovsk-	81.22	345	P	P	15 23 43.5	-0.6
	12nm,0.6s,mb5.0,baz=142,slow=4.1,SNR=20						
VNA3	Neumayer Olymp	83.15	176	e	P	15 23 54.3	+0.1
VNA3				e		15 23 58.8	
VNA3				e		15 25 01.6	
VNA2	Neumayer--Watz	83.60	177	e	P	15 23 56.9	+0.4
	baz=192,slow=3.6						
VNA2				e		15 24 02.1	
VNA2				e		15 25 05.3	
NVAR	Mina Array Bea	84.23	43	P	P	15 24 01.1	+0.9
	0.5nm,0.7s,mb3.8,baz=223,slow=7.8,SNR=4.8						
PDAR	Pinedale Array	92.16	43	P	P	15 24 37.8	-0.2
	0.5nm,0.7s,mb4.0,baz=217,slow=3.0,SNR=5.7						
CMAR	Chiang Mai Arr	92.35	289	P	P	15 24 39.7	+0.2
	2.1nm,0.9s,mb4.5,baz=130,slow=2.7,SNR=15						
CHTO	Chiang Mai	92.51	290	eP	P	15 24 40.6	+0.5
	2.3nm,0.8s,mb4.7						
ZALV	Zalesovo Beam	114.72	320	PKP	PKiKP	15 30 06.5	-1.9
	0.6nm,0.5s,baz=124,slow=2.1,SNR=3.9						
MKAR	Makanchi Array	115.02	312	PKP	PKiKP	15 30 06.8	-2.3
	0.8nm,0.6s,baz=190,slow=1.2,SNR=6.1						
MKAR	Makanchi Array	115.02	312	PKP	PKiKP	15 30 06.8	-2.4
ARCES	ARCESS Array B	133.91	349	PKP	PKPdf	15 30 43.8	-0.9
	1.7nm,0.6s,baz=47,slow=0.7,SNR=11						
NB2	NORSAR Subarra	143.98	353	PKP	PKPdf	15 30 59.2	-4.0
	comp=Z,2.1nm,0.6s,baz=12,slow=3.4						
NOA	NORSAR Array B	143.98	353	PKP	PKPdf	15 30 59.5	-3.7
	comp=Z,3.4nm,0.6s,baz=7.4,slow=2.2,SNR=13						
HFS	Hagfors	144.54	351	PKP	PKPdf	15 31 01.1	-3.1
	comp=Z,11nm,0.4s,baz=48,slow=2.1,SNR=61						
AKASG	Malin Array Be	147.61	328	PKPbc	PKPdf	15 31 10.2	+0.5
	comp=Z,4.0nm,0.5s,baz=44,slow=3.7,SNR=36						
KIEV	Kiev	147.62	328	ePKPbc	PKPdf	15 31 10.1	+0.4
BR131	Keskin Array S	150.47	306	ePKPbc	PKPbc	15 31 18.1	-2.0
BRTR	Keskin Array B	150.47	306	PKPbc	PKPbc	15 31 18.6	-1.5
	comp=Z,2.2nm,0.5s,baz=134,slow=4.2,SNR=12						
BRTR				PKPab	PKPab	15 31 26.5	-0.3
	comp=Z,2.2nm,0.7s,baz=110,slow=5.4,SNR=7.7						
TLCR		151.21	320	⇑iP	PKPbc	15 31 20.5	-1.1
KWP	Kalwaria	151.31	332	⇓iP	PKPbc	15 31 20.8	-0.9
BUR08	Bucovina Ar. S	151.62	327	ePKPbc	PKPbc	15 31 22.5	0.0
BURAR	Bucovina Array	151.63	327	⇑iP	PKPbc	15 31 22.4	-0.1
CLL	Collm	153.03	346	i PKPbc	PKPbc	15 31 24.0	-1.5
	comp=Z,6.0nm,0.8s						
CLL				i PKPab	PKPab	15 31 35.6	-1.4
	comp=Z,4.0nm,0.7s						
KHC	Kasperske Hory	154.91	343	ePKPab	PKPab	15 31 45.0	-0.1
TORD	Torodi Ar. Bea	167.69	176	PKP	PKPdf	15 31 33.1	-2.2
	comp=Z,0.7nm,0.7s,baz=319,slow=1.3,SNR=4.8						
TORD				PKPab	PKPab	15 32 41.8	+0.3
	comp=Z,0.6nm,1.0s,baz=174,slow=2.6,SNR=2.6						

*IDC **12** 15:12:47.0±0.8, 30.14S×177.16W, h0km, mb4.3/9, mb1 4.5/11, mb1mx4.4/18, mbtmp4.3/11, ML4.2/1, MS4.3/11, Ms1 4.3/11, ms1mx3.9/29, Error ellipse: s-maj=24.4km s-min=17.8km az=74.0*

*NEIC **12** 15:12:48.1±0.5, 30.12S×177.06W, h10km, mb4.8/5, Error ellipse: s-maj=14.7km s-min=9.4km az=104.0*

*ISCJB **12** 15:12:49.0±4.1, 30.28S±0.06×177.3W±0.2, h20km±27km, mb4.4/11, MS4.4/10, Error ellipse: s-maj=24.6km s-min=9.7km az=169.4*

ISC 12 15:12:48.1±5.4**, 30.16S**±0.07×**177.2W**±0.1**, h4**km±32km**, n47, σ0.80**/31**, mb4.4**/11**, MS4.4**/10**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.10	325	Pn	Pn	15 13 10.0	-0.2
	901nm,0.3s,baz=135,slow=7.7,SNR=14						
RAO				Sn	Sn	15 13 26.0	+0.2
	2μm,0.3s,baz=299,slow=23,SNR=13						
RAO	Raoul Island	1.10	325	Pn	Pn	15 13 10.0	-0.2
RAO				Sn	Sn	15 13 26.0	+0.2
URZ	Urewera	9.35	209	Pn	Pn	15 15 03.1	-0.5
	2.2nm,0.3s,baz=265,slow=10,SNR=7.7						
URZ				Sn	Sn	15 16 42.1	-7.0
	5.9nm,0.3s,baz=152,slow=22,SNR=11						
SNZO	South Karori	12.91	208	eS	Sn	15 18 04.9	-12
RPZ	Rata Peaks	16.44	211	Pn	Pn	15 16 41.0	+1.4
	0.5nm,0.3s,baz=11,slow=17,SNR=2.1						
RPZ				Sn	Sn	15 19 22.6	-20
	0.6nm,0.3s,baz=9.2,slow=23,SNR=3.2						
DZM	Mont Dzumac	16.74	295	eP	Pn	15 16 48.6	+5.1
AFI	Afiamalu	16.93	18	ePn	Pn	15 16 42.5	-3.4
	56nm,0.6s						
RAR	Rarotonga	18.04	64	LR	LR	15 21 43.9	
	comp=Z,616nm,18.8s,baz=275,slow=30						
PPT	Papeete	28.12	70	eLR	LR	15 25 42.0	
	661nm,27.0s						
PPT	Papeete	28.12	70	LR	LR	15 26 56.1	
	comp=Z,411nm,18.4s,MS4.0,baz=248,slow=30						
HNR	Honiara	29.67	309	LR	LR	15 28 34.2	
	comp=Z,262nm,20.9s,MS3.8,baz=177,slow=32						
CTA	Charters Tower	34.44	278	eP	P	15 19 38.4	+1.5
	5.1nm,0.6s,mb4.6						
CTA	Charters Tower	34.44	278	P	P	15 19 38.2	+1.3
	8.0nm,0.7s,mb4.7,baz=101,slow=12,SNR=6.4						
CTA				LR	LR	15 32 19.7	
	comp=Z,850nm,18.5s,MS4.5,baz=62,slow=34						
CTAO	Charters Tower	34.44	278	eP	P	15 19 37.8	+0.9
	30nm,1.4s,mb5.0						
STKA	Stephens Creek	35.20	256	eP	P	15 19 43.9	+0.5
	7.2nm,1.1s,mb4.5						
STKA	Stephens Creek	35.20	256	P	P	15 19 44.0	+0.6
	6.0nm,0.6s,mb4.7,baz=90,slow=9.7,SNR=13						
RKT	Rikitea	38.23	90	eLR	LR	15 30 18.5	
	439nm,27.0s						
WB2	Warramunga Arr	44.77	271	eP	P	15 21 02.9	-0.1
WRAB	Tennant Creek	44.77	272	eP	P	15 21 02.5	-0.5
WRA	Warramunga Arr	44.78	271	P	P	15 21 01.7	-1.3
	4.3nm,0.5s,mb4.6,baz=112,slow=7.7,SNR=17						
VNDA	Vanda	48.40	186	P	P	15 21 30.8	0.0
	0.8nm,0.8s,mb3.8,baz=18,slow=3.2,SNR=3.0						
VNDA	Vanda	48.40	186	P	P	15 21 30.8	0.0
FITZ	Fitzroy Crossi	53.05	269	eP	P	15 22 07.1	+0.5
	7.3nm,1.0s,mb4.6						
CASY	Casey	55.67	208	eP	P	15 22 24.3	-0.7
BATI	Baumata	58.30	277	LR	LR	15 48 00.0	
	comp=Z,873nm,19.1s,MS4.9,baz=181,slow=36						
QSPA	South Pole Qui	59.95	180	P	P	15 22 54.4	-0.5

	17nm,1.0s,mb5.0						
OCLP	Ormoc	69.33	297	eP	P	15 23 55.8	-1.2
MJAR	Matsushiro Arr	78.44	325	P	P	15 24 49.6	-0.3
	1.4nm,0.8s,mb4.0,baz=142,slow=6.2,SNR=3.5						
ASAJ	Asahikawa	82.55	332	LR	LR	15 59 06.3	
	comp=Z,124nm,20.1s,MS4.3,baz=318,slow=34						
KSRS	Korea Array	84.61	319	P	P	15 25 23.1	+0.4
	1.5nm,0.9s,mb4.1,baz=140,slow=6.6,SNR=4.0						
PETK	Petropavlovsk-	85.75	345	P	P	15 25 28.3	+0.3
	6.0nm,1.1s,mb4.8,baz=129,slow=4.6,SNR=4.6						
NVAR	Mina Array Bea	87.60	42	P	P	15 25 38.4	+1.1
	1.2nm,0.9s,mb4.1,baz=216,slow=7.6,SNR=4.9						
NVAR	Mina Array Bea	87.60	42	P	P	15 25 38.4	+1.0
TXAR	Lajitas Array	91.68	57	LR	LR	16 03 43.6	
	comp=Z,86nm,18.1s,MS4.2,baz=340,slow=33						
CMIG	Matias Romero	92.03	72	LR	LR	15 59 33.2	
	comp=Z,72nm,19.6s,MS4.1,slow=30						
NNA	Nana	92.82	105	LR	LR	15 59 18.4	
	comp=Z,591nm,20.9s,MS5.0,slow=30						
ANMO	Albuquerque	92.89	51	LR	LR	15 59 19.0	
	comp=Z,147nm,18.8s,MS4.5,slow=30						
CMAR	Chiang Mai Arr	93.97	289	P	P	15 26 07.6	0.0
	0.8nm,1.0s,mb4.1,baz=157,slow=4.9,SNR=4.9						
PDAR	Pinedale Array	95.49	43	LR	LR	16 04 14.1	
	comp=Z,85nm,18.2s,MS4.3,baz=44,slow=32						
ARCES	ARCESS Array B	138.50	348	PKP	PKPdf	15 32 13.2	-0.8
	3.1nm,1.0s,baz=11,slow=0.9,SNR=3.3						
MSL	Mosul	145.91	291	eP	PKPdf	15 32 29.0	+0.8
NB2	NORSAR Subarra	148.62	352	PKP	PKPbc	15 32 34.7	-0.9
	comp=Z,1.1nm,0.7s,baz=16,slow=2.9						
NOA	NORSAR Array B	148.62	352	PKPbc	PKPbc	15 32 35.0	-0.6
	comp=Z,2.1nm,0.8s,baz=14,slow=4.3,SNR=4.5						
HFS	Hagfors	149.14	349	PKPbc	PKPbc	15 32 35.4	-1.6
	comp=Z,4.0nm,0.9s,baz=13,slow=1.9,SNR=3.3						
AKASG	Malin Array Be	151.52	324	PKPbc	PKPbc	15 32 41.5	-1.6
	comp=Z,1.3nm,0.5s,baz=48,slow=3.0,SNR=3.1						
BRTR	Keskin Array B	153.09	299	PKPbc	PKPbc	15 32 44.7	-2.2
	comp=Z,0.2nm,0.3s,baz=32,slow=5.7,SNR=2.8						
BRTR				PKPab	PKPab	15 32 55.8	-2.7
	comp=Z,0.7nm,0.4s,baz=155,slow=4.2,SNR=5.1						
TORD	Torodi Ar. Bea	163.04	176	PKPab	PKPab	15 33 40.9	-0.9
	comp=Z,0.6nm,0.5s,baz=181,slow=2.8,SNR=7.1						

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*MOS **12** 15:22:14.4±0.9, 1544N×11987E, h33km, mb5.1/30, Error ellipse: s-maj=12.7km s-min=6.1km az=121.9*
*MAN **12** 15:22:14, 1534N×11951E, h20km, mb5.5, ML4.5, MS4.8*
MAN INTENSITY II - CLARK, ANGELES, PAMPANGA.
*ISCJB **12** 15:22:17.4±0.3, 1536N±002×11984E±003, h60km±3km, mb4.8/84, MS3.9/21, Error ellipse: s-maj=5.0km s-min=3.4km az=178.0*
*BJI **12** 15:22:17.8, 1544N×11979E, h52km, mB4.8, mb4.6, Ms4.2, Msz4.0*
*NEIC **12** 15:22:18.8±0.7, 1534N×11989E, h63km±6km, mb5.0/43, Error ellipse: s-maj=6.3km s-min=4.9km az=82.0*
NEIC Felt [II PIVS] at Angeles and Clark Field.
*IDC **12** 15:22:18.8±3.7, 1536N×11987E, h60km±33km, mb4.2/19, mb1 4.3/20, mb1mx4.3/25, mbtmp4.2/20, ML3.7/1, MS3.8/14, Ms1 3.9/14, ms1mx3.7/28, Error ellipse: s-maj=21.0km s-min=13.4km az=68.0*
*DJA **12** 15:23:10, 1363N×11901E, h515km, mb4.6/11*
ISC 12 15:22:19.3±0.3**, 1535N**±002×**11986E**±003**, h63**km±3km**, h58**km±4.9km**: pP-P, n236,** σ1§**10**/237**, mb4.8**/84**, 25C-17D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.42	6	eP	Pn	15 22 26.2	-4.6
BOLP	Bolinao	1.02	3	eP	Pn	15 22 34.3	-3.5
BOLP				eS	Sn	15 22 48.9	-2.6
PCPH	Palayan	1.21	80	⇑eP	Pn	15 22 38.7	-1.5
PCPH				iS	Sn	15 22 55.8	+0.1
TGY	Tagaytay City	1.62	140	⇑eP	Pn	15 22 46.5	+0.8
TGY				eS	Sn	15 23 10.8	+5.2
LUBP	Lubang	1.65	167	eP	Pn	15 22 43.1	-3.0
BALP	Baler	1.69	77	eP	Pn	15 22 46.2	-0.4
BALP				eS	Sn	15 23 09.7	+2.3
POLP	Polilio Island	2.10	107	eP	Pn	15 22 53.5	+1.4
PGP	Puerto Galera	2.12	150	⇑iP	Pn	15 22 51.3	-1.2
ABRA	Dolores	2.42	20	eP	Pn	15 22 55.4	-1.2
ABRA				eS	Sn	15 23 27.6	+2.5
SIPP	Brgy, Tapao	2.62	12	⇑eP	Pn	15 22 57.7	-1.6
SIPP				iS	Sn	15 23 39.1	+9.2
GQP	Guinayangan	2.88	120	⇑iP	Pn	15 23 03.9	+1.0
PALP	Palanan	2.99	55	eP	Pn	15 23 06.0	+1.7
SJMP	San Jose	3.12	157	eP	Pn	15 23 06.1	0.0
BUSP	Coron	3.35	174	eP	Pn	15 23 07.5	-1.7
AUQP	San Andres	3.39	126	eP	Pn	15 23 15.0	+5.2
SGCP	Mt. Cagua	3.55	36	eP	Pn	15 23 13.8	+1.8
OTRP	Odiongan	3.64	145	eP	Pn	15 23 13.2	0.0
ENPP	El Nido	4.14	186	eP	Pn	15 23 16.9	-3.2
PVCP	Virac	4.51	112	eP	Pn	15 23 27.0	+2.0
CUYO	Cuyo Island	4.62	166	eP	Pn	15 23 23.7	-2.9
GUIM	Jordan	5.40	150	eP	Pn	15 23 39.7	+2.4
CNP	Catarman	5.45	121	eP	Pn	15 23 40.9	+2.9
MSLP	Maasin	7.12	136	eP	Pn	15 24 04.5	+3.7
TWG	Pinlang	7.51	9	ePn	Pn	15 24 04.5	-1.7
	70nm,0.6s						
TPUB	Ta-pu	7.94	5	eP	Pn	15 24 10.6	-1.4
	59nm,0.8s						
YULB	Yu-li	8.11	9	eP	Pn	15 24 14.6	+0.2
	74nm,0.6s						
SSLB	Suanglung	8.45	7	eP	Pn	15 24 18.2	-0.9
	85nm,0.8s						
KDM	Kudat	8.90	200	⇑P	Pn	15 24 23.0	-2.2
NACB	Ninganchiao	8.92	10	eP	Pn	15 24 25.8	+0.3
	80nm,0.9s						
YHNB	Yeheng	9.38	8	eP	Pn	15 24 31.5	-0.2
	63nm,0.8s						
QZH	Quanzhou	9.61	353	⇑iP	Pn	15 24 35.0	+0.1
QZH				AMB	AMB		
	comp=Z,90nm,0.6s						
QZH				LR	LR		
	comp=N,880nm,11.3s						
QZH				LR	LR		
	comp=E,880nm,16.6s						
QZH				LR	LR		
	comp=Z,930nm,17.5s						
TATO	Taipei	9.69	9	eP	Pn	15 24 37.2	+1.2
	comp=Z,157nm,1.3s						
GZH	Guangzhou	9.85	322	P	Pn	15 24 37.7	-0.5
GZH				S	Sn	15 26 24.1	-3.1
GZH				LR	LR		
	comp=N,886nm,23.0s						
GZH				LR	LR		
	comp=E,794nm,12.6s						
DAV	Davao City (W)	9.96	145	LR	LR	15 30 11.4	
	comp=E,450nm,18.6s,baz=53,slow=48						
SDKM	Sandakan	10.00	195	⇑P	Pn	15 24 40.6	+0.3
MYLDM	Lahad Datu	10.20	188	⇑P	Pn	15 24 42.5	-0.5
QIZ	Qiongzhong	10.25	292	P	Pn	15 24 38.7	-5.0
QIZ				S	Sn	15 26 39.2	+2.2
QIZ				LR	LR		
	comp=E,618nm,18.3s						
QIZ				LR	LR		
	comp=Z,926nm,21.8s						
QIZ	Qiongzhong	10.25	292	ePn	Pn	15 24 38.7	-4.9
	comp=Z,13nm,0.6s						
TSM	Tawau	11.16	190	⇑P	Pn	15 24 56.6	+0.4
BTM	Bintulu	13.80	210	⇓P	Pn	15 25 30.6	-1.4
JOW	Kunigami	13.85	33	P	Pn	15 25 31.5	-1.1
	comp=Z,0.7nm,0.3s,baz=177,slow=17,SNR=3.1						
JOW				LR	LR	15 30 39.7	
	comp=Z,599nm,21.9s,baz=119,slow=36						
SBUM	Sibu	14.87	211	⇓P	Pn	15 25 46.5	+0.5
SSE	Sheshan	15.72	4	P	Pn	15 25 53.9	-2.9
SSE				XP	sP	15 26 12.9	-8.0
SSE				S	S	15 28 47.3	-14
SSE				AMB	AMB		
	comp=Z,31nm,1.1s						
SSE				AMB	AMB		
	comp=Z,129nm,3.3s						
SSE				LR	LR		
	comp=N,65nm,14.6s						
SSE				LR	LR		
	comp=E,130nm,14.6s						
SSE				LR	LR		
	comp=Z,214nm,14.7s						
GYA	Guiyang	16.54	314	P	Pn	15 26 07.3	+0.1
GYA				AP	pP	15 26 18.0	-4.1
GYA				S	S	15 29 10.2	-8.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,190nm,3.1s						
GYA				LR	LR		
	comp=N,480nm,14.7s						
GYA				LR	LR		
	comp=E,460nm,13.6s						
GYA				LR	LR		
	comp=Z,540nm,11.1s						
NJ2	Nanjing	16.65	357	eP	Pn	15 26 10.4	+1.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
KSM	Kuching	16.71	215	eP	Pn	15 26 10.6	+1.2
	comp=Z,21nm,0.6s						
KSM	Kuching	16.71	215	⇓P	Pn	15 26 11.7	+2.3
KMI	Kunming	18.76	304	P	Pn	15 26 36.6	+2.2
KMI				AP	pP	15 26 46.2	-0.5
KMI				PP		15 26 53.9	
KMI				S	S	15 29 59.9	-3.6
KMI				AMB	AMB		
	comp=Z,36nm,1.0s						
KMI				AMB	AMB		
	comp=Z,88nm,3.1s						
KMI				LR	LR		
	comp=N,279nm,14.4s						
KMI				LR	LR		
	comp=E,367nm,18.1s						
KMI				LR	LR		
	comp=Z,425nm,15.1s						
KTGM	Kuala Trenggan	19.22	241	⇓P	Pn	15 26 40.7	+0.8
CHRT	Chiangrai	19.66	286	⇓P	Pn	15 26 45.0	-0.1
	comp=Z,105nm,1.0s						
KAPI	Kappang	20.24	180	eP	P	15 26 48.9	-0.6
	comp=Z,68nm,1.4s						
CMAR	Chiang Mai Arr	20.25	282	P	P	15 26 50.8	+1.2
	comp=Z,54nm,1.0s,baz=97,slow=9.2,SNR=132						
CMAR				PcP	PcP	15 31 02.6	+1.1
	comp=Z,1.7nm,0.7s,baz=93,slow=0.5,SNR=9.3						
CMAR				LR	LR	15 34 40.9	
	comp=Z,463nm,18.8s,baz=142,slow=37						
CMAR	Chiang Mai Arr	20.25	282	P	P	15 26 50.8	+1.2
CMAR						15 31 02.7	
CHG	Chiang Mai	20.29	283	⇑P	P	15 26 50.5	+0.5
	comp=Z,24nm,1.0s						
CHTO	Chiang Mai	20.29	283	eP	P	15 26 49.7	-0.3
CHTO				pmax	pmax		
	comp=Z,12nm,0.7s						
CHTO	Chiang Mai	20.29	283	eP	P	15 26 49.7	-0.4
	comp=Z,12nm,0.7s						
SNG	Songkhla	20.54	249	P	P	15 26 54.0	+1.3
	comp=Z,240nm,1.0s						
MYKOM	Kota Tinggi	20.77	231	⇑P	P	15 26 56.8	+1.6
KGM	Kluang	21.02	232	⇓P	P	15 26 59.3	+1.3
XAN	Xi'an	21.06	334	P	P	15 26 58.3	+0.1
XAN				AP		15 27 11.0	
XAN				PP		15 27 23.6	
XAN				S	S	15 30 48.4	-0.8
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb3.9						
XAN				AMB	AMB		
	comp=Z,51nm,6.6s						
XAN				LR	LR		
	comp=N,90nm,21.4s						
XAN				LR	LR		
	comp=E,321nm,17.2s						
XAN				LR	LR		
	comp=Z,621nm,16.5s						
KULM	Kulim	21.36	244	⇑P	P	15 27 03.1	+1.4
CD2	Chengdu	21.38	319	P	P	15 27 03.7	+2.0
CD2				AP		15 27 17.3	
CD2				XP	sP	15 27 24.9	+1.6
CD2				PP		15 27 29.7	
CD2				S	S	15 30 52.7	-2.8
CD2				PCP	PcP	15 31 05.9	+2.4
CD2				XS	sS	15 31 14.8	-3.2
CD2				SS		15 31 30.5	
CD2				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.2						
CD2				AMB	AMB		
	comp=Z,130nm,3.9s						
CD2				LR	LR		
	comp=N,600nm,14.3s						
CD2				LR	LR		
	comp=Z,770nm,16.0s						
IPM	Ipoh	21.45	242	⇓P	P	15 27 03.1	+0.5
FRIM	Kepong	21.63	238	⇑P	P	15 27 05.0	+0.6
KSRS	Korea Array	23.14	16	P	P	15 27 19.6	-0.6
	comp=Z,4.5nm,0.8s,mb4.0,baz=199,slow=11,SNR=17						
KSRS				LR	LR	15 38 18.1	
	comp=Z,192nm,18.1s,baz=42,slow=42						
CBIJ	Chichi jima	23.82	57	LR	LR	15 35 59.5	
	comp=Z,56nm,18.8s,baz=242,slow=34						
BJT	Baijiatuau	24.78	353	eP	P	15 27 35.8	+0.6
BJT				pmax	pmax		
	comp=Z,16nm,0.4s						
BJT	Baijiatuau	24.78	353	eP	P	15 27 35.8	+0.6
	comp=Z,16nm,0.4s,mb4.9						
BJI	Beijing	24.80	353	P	P	15 27 36.4	+1.0
BJI				S	S	15 31 56.8	+3.3
BJI				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.5						
BJI				AMB	AMB		
	comp=Z,87nm,4.3s						
BJI				LR	LR		
	comp=N,267nm,15.8s						
BJI				LR	LR		
	comp=E,154nm,16.1s						
BJI				LR	LR		
	comp=Z,180nm,26.8s						
LZH	Lanzhou	25.12	328	eP	P	15 27 39.0	+0.7
LZH				AP	pP	15 27 52.5	-1.1
LZH				PP		15 28 19.0	
LZH				eS	S	15 31 59.0	+0.4
LZH				XS	sS	15 32 21.1	-3.6
LZH				SS		15 33 00.4	
LZH				AMB	AMB		
	comp=Z,41nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,138nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,13.2s						
LZH				LR	LR		
	comp=Z,2μm,14.7s						
JHJ	Hachijo jima 2	25.27	42	LR	LR	15 36 08.3	
	comp=Z,180nm,19.3s,baz=276,slow=33						
BATI	Baumata	25.67	171	P	P	15 27 42.3	-1.2
	comp=Z,19nm,0.4s,mb5.0,baz=331,slow=0.9,SNR=9.9						
HHC	Hu-ho-hao-te	26.41	346	eP	P	15 27 51.6	+1.7
HHC				AP	pP	15 28 04.7	-0.5
HHC				XP	sP	15 28 13.4	+0.7
HHC				PP		15 28 35.7	
HHC				PCP	PcP	15 31 13.8	-0.2
HHC				eS	S	15 32 18.7	-0.1
HHC				XS	sS	15 32 43.6	-1.5
HHC				SS		15 33 31.2	
HHC				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.2						
HHC				AMB	AMB		
	comp=Z,93nm,4.8s						
HHC				LR	LR		
	comp=N,344nm,15.3s						
HHC				LR	LR		
	comp=E,179nm,13.1s						
HHC				LR	LR		
	comp=Z,342nm,17.4s						
MJAR	Matsushiro Arr	26.69	34	P	P	15 27 52.3	-0.2
	comp=Z,2.3nm,1.0s,mb3.7,baz=226,slow=10,SNR=6.0						
MJAR				LR	LR	15 37 27.1	
	comp=Z,115nm,21.3s,baz=205,slow=34						
SHL	Shillong	28.06	296	iP	P	15 28 05.0	+0.1
CN2	Changchun	28.75	8	eP	P	15 28 13.4	+2.6
GTA	Gaotai	29.72	328	eP	P	15 28 19.9	+0.5
GTA				AP	pP	15 28 37.6	+2.7
GTA				XP	sP	15 28 43.6	+1.3
GTA				PP	PP	15 29 19.9	-7.6
GTA				S	S	15 33 11.2	+0.2
GTA				XS	sS	15 33 36.7	-0.6
GTA				SS	SS	15 34 48.2	-31
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
GTA				AMB	AMB		
	comp=Z,73nm,4.5s						
GTA				LR	LR		
	comp=N,332nm,19.5s						
GTA				LR	LR		
	comp=E,303nm,19.2s						
GTA				LR	LR		
	comp=Z,545nm,18.9s						
LSA	Lhasa	30.02	303	eP	P	15 28 22.9	+0.7
LSA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
LSA	Lhasa	30.02	303	eP	P	15 28 22.9	+0.6
	comp=Z,12nm,1.1s,mb4.5						
TAPN	Taplejung	32.14	297	eP	P	15 28 40.4	-0.6
	comp=Z,29nm,0.9s,mb5.1						
ODAN	Odare	32.29	296	eP	P	15 28 42.1	-0.2
	comp=Z,55nm,0.9s,mb5.4						
RAMN	Ramite	33.00	296	eP	P	15 28 48.4	-0.1
	comp=Z,69nm,1.1s,mb5.5						
JIRN	Jiri	33.52	297	eP	P	15 28 53.3	+0.2
	comp=Z,38nm,0.7s,mb5.4						
FITZ	Fitzroy Crossi	33.73	170	eP	P	15 28 53.9	-0.9
	comp=Z,6.8nm,0.9s,mb4.6						
GUN	Gumba	33.85	297	eP	P	15 28 55.9	0.0
	comp=Z,41nm,0.6s,mb5.5						
ULN	Ulaanbaatar	34.11	345	⇑eP	P	15 28 57.7	-0.1
ULN	Ulaanbaatar	34.11	345	eP	P	15 28 57.5	-0.3
	comp=Z,4.4nm,0.9s,mb4.4						
PKI	Pulchoki	34.17	297	eP	P	15 28 58.2	-0.5
PKIN	Phulchoki	34.19	297	eP	P	15 28 58.1	-0.7
	comp=Z,17nm,0.9s,mb5.0						
SONM	Songino Array	34.25	344	P	P	15 28 59.1	0.0
	comp=Z,2.8nm,0.7s,mb4.3,baz=164,slow=9.7,SNR=18						
SONM				LR	LR	15 43 54.5	
	comp=Z,242nm,18.9s,baz=134,slow=38						
KKN	Kakani	34.34	297	eP	P	15 28 59.5	-0.6
	comp=Z,38nm,1.0s,mb5.3						
KKN	Kakani	34.34	297	eP	P	15 28 59.5	-0.6
KKN				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
DMN	Daman	34.45	297	eP	P	15 29 00.6	-0.4
	comp=Z,54nm,1.1s,mb5.4						
GKN	Gorkha	34.94	297	eP	P	15 29 04.4	-0.9
	comp=Z,49nm,1.0s,mb5.4						
KLR	Kul'dur	35.16	14	eP	P	15 29 02.2	-4.6
HABR	Khabarovsk	35.31	18	eP	P	15 29 04.9	-3.3
HABR				e		15 30 26.5	
HABR				eS	S	15 34 32.0	-5.7
HABR				MLR	MLR		
	comp=Z,37nm,13.0s						
DANN	Dangsing	35.77	297	eP	P	15 29 11.8	-0.7
	comp=Z,30nm,0.5s,mb5.5						
KOLN	Koldanda	35.78	296	eP	P	15 29 11.8	-0.7
	comp=Z,33nm,1.1s,mb5.2						
MBWA	Marble Bar	36.28	180	eP	P	15 29 15.3	-1.5
	comp=Z,14nm,1.4s,mb4.7						
YSS	Yuzh-Sakhalins	36.82	26	eP	P	15 29 21.0	-0.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
ZAK	Zakamensk	37.43	343	eP	P	15 29 24.8	-1.4
ZAK				e		15 31 40.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
WRAB	Tennant Creek	37.85	157	⇓iP	P	15 29 28.0	-2.1
WRAB	Tennant Creek	37.85	157	eP	P	15 29 28.0	-2.1
	comp=Z,14nm,1.0s,mb4.6						
PALK	Pallekele	39.18	263	eP	P	15 29 41.1	-0.3
MOY	Mondy	39.25	341	eP	P	15 29 42.1	+0.6
WMQ	Urumqi	39.41	323	P	P	15 29 43.8	+0.9
WMQ				AP	pP	15 30 00.3	+1.6
WMQ				PP	PP	15 31 20.0	+5.6
WMQ				S	S	15 35 41.2	+1.2
WMQ				XS	sS	15 36 07.0	+0.1
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
WMQ				AMB	AMB		
	comp=Z,201nm,4.0s						
WMQ				LR	LR		
	comp=N,367nm,23.0s						
WMQ				LR	LR		
	comp=E,140nm,22.0s						
WMQ				LR	LR		
	comp=Z,307nm,17.0s						
HYB	Hyderabad	39.63	279	iP	P	15 29 45.5	+0.3
DDI	Dehra Dun	41.06	299	ex	x	15 29 58.0	
HVS	Khovu-Aksy	41.42	335	⇓iP	P	15 30 00.2	+0.8
HVS				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.6						
CTA	Charters Tower	43.74	143	eP	P	15 30 19.7	+1.1
	comp=Z,3.1nm,0.8s,mb4.1						
CTA	Charters Tower	43.74	143	P	P	15 30 18.2	-0.5
	comp=Z,1.4nm,0.4s,mb4.1,baz=327,slow=12,SNR=3.4						
CTA	Charters Tower	43.74	143	eP	P	15 30 19.7	+1.1
CTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
POO	Poona	44.04	281	⇑ix	x	15 30 28.0	
	comp=Z,30nm,1.0s						
MK31	Makanchi Array	44.23	323	eP	P	15 30 22.3	+0.1
MKAR	Makanchi Array	44.23	323	P	P	15 30 22.5	+0.2
	comp=Z,5.6nm,0.7s,mb4.4,baz=123,slow=9.0,SNR=38						
MKAR				PcP	PcP	15 32 06.1	+0.2
	comp=Z,5.3nm,0.9s,baz=119,slow=4.3,SNR=7.1						
ULHL	Ulahol	45.99	315	P	P	15 30 37.3	+1.0
	SNR=8.5						
FORT	Forrest	46.54	170	eP	P	15 30 39.1	-1.5
	comp=Z,17nm,1.1s,mb4.9						
KZA	Kyzart	46.61	314	P	P	15 30 43.0	+1.8
	SNR=14						
TKM2	Tokmak 2	46.68	315	eP	P	15 30 42.4	+0.7
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
TKM2	Tokmak 2	46.68	315	P	P	15 30 42.6	+0.9
	SNR=8.3						
TKM2	Tokmak 2	46.68	315	eP	P	15 30 42.4	+0.7
	comp=Z,6.2nm,1.0s,mb4.5						
KLBR	Kellerberrin	46.72	182	eP	P	15 30 40.6	-1.4
	comp=Z,7.6nm,0.4s,mb5.0						
KBK	Karagaybulak	47.03	315	P	P	15 30 45.8	+1.4
	SNR=16						
YAK	Yakutsk	47.14	6	eP	P	15 30 44.0	-0.9
YAK				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,11nm,1.5s						
UCH	Uchtor	47.17	314	eP	P	15 30 47.3	+1.8
	comp=N,18nm,1.3s,mb4.8						
ZAA0	Zalesovo Array	47.22	332	eP	P	15 30 44.5	-1.2
ZALV	Zalesovo Beam	47.22	332	P	P	15 30 44.9	-0.9
	comp=N,2.7nm,0.6s,mb4.3,baz=116,slow=6.8,SNR=19						
ZALV				PcP	PcP	15 32 15.6	-0.6
	comp=N,2.6nm,0.9s,baz=180,slow=3.9,SNR=4.1						
ZALV				LR	LR	15 51 32.1	
	comp=N,106nm,19.6s,baz=251,slow=37						
ZALV	Zalesovo Beam	47.22	332	P	P	15 30 44.9	-0.8
ZALV						15 32 15.6	
ZALV	Zalesovo Beam	47.22	332	P	P	15 30 44.9	-0.9
ZALV				PcP	PcP	15 32 15.6	-0.6
ZALV				LR	LR	15 51 32.1	
CHMS	Chumysh	47.29	315	P	P	15 30 46.9	+0.5
	SNR=5.5						
AAK	Ala-Archa	47.33	314	⇑eP	P	15 30 47.5	+0.7
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
AAK	Ala-Archa	47.33	314	P	P	15 30 47.9	+1.1
	SNR=6.3						
AAK	Ala-Archa	47.33	314	eP	P	15 30 47.3	+0.5
	comp=Z,18nm,1.4s,mb4.8						
USP	Ospenovka	47.56	315	P	P	15 30 49.1	+0.5
	SNR=6.8						
AML	Almayashu	47.71	314	P	P	15 30 51.3	+1.5
	SNR=19						
AML	Almayashu	47.71	314	eP	P	15 30 51.1	+1.3
	comp=Z,29nm,1.1s,mb5.2						
EKS2	Erkin-Say	47.84	314	P	P	15 30 51.8	+1.1
	SNR=14						
EKS2	Erkin-Say	47.84	314	eP	P	15 30 51.0	+0.3
	comp=Z,13nm,1.0s,mb4.9						
PETK	Petropavlovsk-	47.99	30	P	P	15 30 51.7	+0.1
	comp=Z,14nm,0.6s,mb5.2,baz=216,slow=4.8,SNR=48						
PETK				LR	LR	15 50 16.5	
	comp=Z,83nm,20.3s,baz=326,slow=35						
PETK	Petropavlovsk-	47.99	30	P	P	15 30 51.7	+0.1
PETK				LR	LR	15 50 16.5	
KURK	Kurchatov	48.37	326	⇑eP	P	15 30 54.7	0.0
KURK				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
KURK	Kurchatov	48.37	326	eP	P	15 30 54.6	0.0
	comp=Z,30nm,0.8s,mb5.4						
PET	Petropavlovsk	48.40	30	eP	P	15 30 55.1	+0.3
PET				e		15 32 41.3	

PET pmax pmax
comp=Z,20nm,0.7s,mb5.3
PET pmax pmax
comp=Z,100nm,11.4s
NVS Novosibirsk 48.51 333 *e*P **P** 15 30 53.6 **-2.1**
NVS *e* 15 32 18.1
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
NVS pmax pmax
comp=E,6.0nm,1.2s
KBL Kabul 49.33 302 *e*P **P** **15 31 02.6 +0.3**
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KBL Kabul 49.33 302 *e*P **P** **15 31 02.6 +0.3**
comp=Z,9.5nm,0.8s,mb4.9
KK31 Karatay Array 50.25 314 *i* P **P** **15 31 08.7 -0.4**
KK31 pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
STKA Stephens Creek 51.38 156 P **P** **15 31 18.1 +0.4**
comp=Z,2.3nm,0.4s,mb4.5,baz=0.0,slow=10,SNR=4.0
STKA LR LR 15 56 46.6
comp=Z,78nm,18.4s,baz=208,slow=40
SEY Seymchan 52.69 18⇑ *i*P **P** **15 31 26.3 -0.7**
VOSK Vostochnaya 53.51 325 P **P** **15 31 32.5 -0.7**
VOSK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BVA0 Borovoye Array 53.96 325 *i* P **P** **15 31 36.3 -0.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRVK Borovoye 54.03 325 *e*P **P** **15 31 37.0 0.0**
BRVK pmax pmax
comp=Z,20nm,1.0s,mb5.0
BRVK Borovoye 54.03 325 *e*P **P** **15 31 37.0 -0.1**
comp=Z,20nm,1.0s,mb5.0
TIXI Tiksi 56.54 3⇑ *e*P **P** **15 31 54.0 -0.8**
TIXI pmax pmax
comp=Z,14nm,0.9s,mb5.0
TIXI Tiksi 56.54 3 *e*P **P** **15 31 53.6 -1.2**
comp=Z,18nm,1.0s,mb5.1
ABKT Ailbek 58.52 305 P **P** **15 32 10.8 +1.5**
comp=Z,214nm,1.0s,SNR=16
AB31 Akbulak array 58.96 319 P **P** **15 32 11.7 -0.5**
AB31 pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
BILL Bilibino 60.39 18⇓ *i*P **P** **15 32 20.3 -1.4**
BILL *e* 15 33 03.1
BILL *e* 15 34 36.1
BILL pmax pmax
comp=Z,12nm,1.6s,mb4.7
BILL Bilibino 60.39 18 *e*P **P** **15 32 20.9 -0.8**
comp=Z,12nm,1.0s,mb4.9
SVE Sverdlovsk 60.58 327⇑ *e*P **P** **15 32 23.6 +0.5**
SVE *e* 15 33 01.2
SVE pmax pmax
comp=Z,25nm,0.9s,mb5.3
ARU Arti 61.56 326 *d i*P **P** **15 32 29.0 -0.8**
ARU *e* 15 34 43.4
ARU *e*PPP 15 36 15.0
ARU *e*S **S** **15 40 44.1 -2.7**
ARU *e*SS SS 15 44 45.4 -3.2
ARU pmax pmax
comp=Z,17nm,1.0s,mb5.1
ARU Arti 61.56 326 *e*P **P** **15 32 29.0 -0.8**
comp=Z,5.8nm,0.7s,mb4.8
QRN Al-Qurain 67.14 295 *e*P **P** **15 33 06.1 -0.7**
baz=295
QRN AMb AMB 15 33 08.7
comp=Z,63nm,1.3s,mb5.5,baz=295
UMR Umm Al-Rimmam 67.24 296 *e*P **P** **15 33 06.8 -0.6**
baz=296
UMR AMb AMB 15 33 07.0
comp=Z,8.0nm,0.1s,mb5.7,baz=296
KBD Kabd 67.30 296 *e*P **P** **15 33 07.2 -0.6**
baz=296
KBD AMb AMB 15 33 08.0
comp=Z,20nm,0.3s,mb5.6,baz=296
RDF Al-Radifah 67.45 295 *e*P **P** **15 33 08.1 -0.6**
baz=295
RDF AMb AMB 15 33 08.9
comp=Z,96nm,1.0s,mb5.8,baz=295
NAY Al-Naaiem 67.68 296 *e*P **P** **15 33 09.4 -0.8**
baz=296
NAY AMb AMB 15 33 10.2
comp=Z,30nm,0.7s,mb5.4,baz=296
KIV Kislovodsk 70.33 312 *e*P **P** **15 33 26.5 +0.2**
KIV pmax pmax
comp=Z,27nm,0.8s,mb5.2
KIV MLR MLR
comp=Z,96nm,18.0s
KIV Kislovodsk 70.33 312 *e*P **P** **15 33 26.1 -0.3**
comp=Z,24nm,0.8s,mb5.2
OBN Obninsk 73.73 324⇓ *i*P **P** **15 33 45.9 -0.6**
OBN *i* pP 15 34 00.5 -3.2
OBN pmax pmax
comp=Z,17nm,1.2s,mb4.8
SIM Simferopol' 76.35 313 *de*P **P** **15 34 03.6 +1.9**
SIM pmax pmax
comp=Z,15nm,0.6s,mb5.1
RC01 Rabbit Creek A 76.90 30 *e*P **P** **15 34 03.9 -0.6**
MCK McKinley 76.90 27 *e*P **P** **15 34 05.2 +0.7**
MCK pmax pmax
comp=Z,13nm,1.1s,mb4.8
MCK McKinley 76.90 27 *e*P **P** **15 34 05.2 +0.7**
comp=Z,13nm,1.1s,mb4.8
ARCES ARCESS Array B 77.26 339 P **P** **15 34 06.7 +0.3**
comp=Z,5.3nm,0.9s,mb4.5,baz=85,slow=7.0,SNR=9.7
ARCES LR LR 16 12 17.1
comp=Z,122nm,19.0s,baz=210,slow=39
BRTR Keskin Array B 77.50 308 P **P** **15 34 07.6 -0.7**
comp=Z,1.3nm,0.9s,mb3.9,baz=70,slow=4.7,SNR=3.4
AKASG Malin Array Be 78.68 320 P **P** **15 34 13.6 -1.0**
comp=Z,2.5nm,0.7s,mb4.3,baz=66,slow=5.6,SNR=5.9
AKASG Malin Array Be 78.68 320 *i* P **P** **15 34 13.6 -1.0**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
VSU Vasula 78.69 328⇓ *i*P **P** **15 34 13.7 -0.8**
VSU pmax pmax
comp=Z,36nm,1.3s,mb5.1
VRI Vrincioaia 81.30 315⇓ *i*P **P** **15 34 29.2 +0.4**
BURAR Bucovina Array 81.90 317⇓ *i*P **P** **15 34 32.2 +0.2**
BUR08 Bucovina Ar. S 81.91 317 *e*P **P** **15 34 32.3 +0.3**
KWP Kalwaria 83.01 319⇑ *i*P **P** **15 34 38.1 +0.4**
KOLS Kolonicke sedl 83.47 319 *e*P **P** **15 34 40.9 +0.8**
KOLS *e*pP pP 15 34 52.6 -5.1
STHS Stebnicka Huta 83.98 320 *e*P **P** **15 34 41.9 -0.8**
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
STHS Stebnicka Huta 83.98 320 *e*P **P** **15 34 41.9 -0.8**
comp=Z,2.0nm,0.8s,mb4.3
CRVS Cervenica-Dubn 83.99 319 *e*P **P** **15 34 43.1 +0.3**
CRVS pmax pmax
comp=Z,38nm,1.9s,mb5.2
CRVS Cervenica-Dubn 83.99 319 *e*P **P** **15 34 43.1 +0.3**
comp=Z,38nm,1.9s,mb5.2
HFS Hagfors 84.64 331 P **P** **15 34 45.3 -0.6**
comp=Z,4.5nm,0.6s,mb4.8,baz=126,slow=2.0,SNR=12
HFS Hagfors 84.64 331 P **P** **15 34 45.3 -0.6**
NB2 NORSAR Subarra 85.43 332 P **P** **15 34 49.0 -0.8**
comp=Z,4.3nm,0.7s,mb4.7,baz=66,slow=4.8
NOA NORSAR Array B 85.43 332 P **P** **15 34 49.1 -0.7**
comp=Z,4.5nm,0.7s,mb4.7,baz=66,slow=4.7,SNR=12
NOA LR LR 16 15 11.2
comp=Z,99nm,19.2s,baz=65,slow=37
VYHS Vyhne 85.77 319 *e*P **P** **15 34 49.3 -2.4**
VYHS *e* 15 35 01.4
VYHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
VYHS Vyhne 85.77 319 *e*P **P** **15 34 49.3 -2.4**
comp=Z,5.2nm,1.4s,mb4.6
VYHS *e* 15 35 01.4
DPC Dobruska-Polom 86.71 321 *e*P **P** **15 34 56.7 +0.4**
UPC Upice 86.85 322 *e*P **P** **15 34 57.1 +0.1**
VRAC Vranov 86.91 320 P **P** **15 34 57.8 +0.5**
comp=Z,6.1nm,0.8s,mb4.9,baz=107,slow=2.6,SNR=6.2
PRU Pruhonice 87.91 321 *e*P **P** **15 35 02.8 +0.7**
CLL Collm 88.33 323 *e*P **P** **15 35 06.0 +2.0**
KHC Kasperske Hory 88.81 321⇑ *i*P **P** **15 35 06.5 +0.1**
KHC Kasperske Hory 88.81 321 *e*P **P** **15 35 06.7 +0.3**
GERES GERESS Array B 88.85 321 P **P** **15 35 06.3 -0.3**
comp=Z,1.1nm,0.8s,mb4.2,baz=20,slow=4.3,SNR=5.9
MOA Molln 88.87 320⇓ *i*PcP PcP 15 35 07.0 -1.1
comp=Z,11nm,1.2s
WTTA Wattenberg 90.74 320⇑ *i*PcP PcP 15 35 15.2 -1.3
comp=Z,10nm,0.6s
FETA Feichten 91.40 320⇑ *i*PcP PcP 15 35 18.5 -0.9
comp=Z,14nm,1.0s
YKA Yellowknife Ar 91.56 22 P **P** **15 35 19.3 +0.4**
comp=Z,0.8nm,0.6s,mb4.2,baz=314,slow=4.4,SNR=14
YKA Yellowknife Ar 91.56 22 *i* P **P** **15 35 19.2 +0.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 91.56 22 P **P** **15 35 19.3 +0.4**
DAVOX Davos/Dischmat 92.03 320 P **P** **15 35 21.3 -0.1**
comp=Z,9.5nm,0.8s,mb5.2,baz=90,slow=2.0,SNR=8.8
DAVOS Davos 92.06 320 P **P** **15 35 21.3 -0.3**
CDF Champ du Feu 92.91 322 *e*P **P** **15 35 24.5 -0.9**
comp=Z,15nm,1.0s,mb5.1
CDF Champ du Feu 92.91 322 *e*P **P** **15 35 24.5 -0.9**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
CDF Champ du Feu 92.91 322 *e*P **P** **15 35 24.5 -0.9**
comp=Z,7.3nm,1.0s,mb5.1
CABF La Chapelle 94.45 321 *e*P **P** **15 35 31.6 -1.0**
LPG La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
comp=Z,15nm,1.0s,mb5.1
LPG La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
LPG La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
comp=Z,7.4nm,1.0s,mb5.1
LPL La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
comp=Z,18nm,1.0s,mb5.2
LPL La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
LPL pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
LPL La Plagne 94.55 320 *e*P **P** **15 35 33.4 +0.3**
comp=Z,8.8nm,1.0s,mb5.1
PPT Papeete 95.05 107 LR LR 16 14 17.0
comp=Z,76nm,20.0s,baz=315,slow=33
LOR Lormes 95.47 322 *e*P **P** **15 35 36.8 -0.4**
comp=Z,5.3nm,0.7s,mb4.8
LOR Lormes 95.47 322 *e*P **P** **15 35 36.8 -0.4**
LOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
LOR Lormes 95.47 322 *e*P **P** **15 35 36.8 -0.4**
comp=Z,2.7nm,0.7s,mb4.8
LSZ Lusaka 95.52 256 *e*P **P** **15 35 38.2 +0.2**
LSZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
LSZ Lusaka 95.52 256 *e*P **P** **15 35 38.2 +0.2**
comp=Z,5.7nm,1.1s,mb4.9
RLMT Red Lodge 105.14 34 *e*Pdif Pdif 15 36 20.5 +0.2
TORD Torodi Ar. Bea 112.59 292 PKiKP PKiKP 15 40 48.6 -0.8
comp=Z,0.4nm,0.4s,baz=56,slow=2.5,SNR=3.9
TORD PP PP 15 41 29.4 -7.4
comp=Z,1.0nm,0.8s,baz=56,slow=7.1,SNR=5.8
VNA2 Neumayer--Watz 116.14 197 *e*PKPdf PKPdf 15 40 55.1 +0.5
baz=85,slow=1.1
VNA2 *e* 15 41 08.3
VNA2 *e* 15 41 12.7
VNA3 Neumayer Olymp 116.59 196 *e*PKPdf PKPdf 15 40 56.0 +0.5
VNA3 *e* 15 41 09.7
VNA3 *e* 15 41 13.6
TXAR Lajitas Array 118.85 43 PKP PKPdf 15 40 59.0 -2.2
comp=Z,0.8nm,0.8s,baz=68,slow=0.7,SNR=6.1
DBIC Dimbokro 121.03 288 PKP PKPdf 15 41 04.1 -1.6
comp=Z,1.8nm,0.9s,baz=0.0,slow=1.0,SNR=4.3
KIC Kosan Boka 121.04 287 *e*PKIKP PKPdf 15 41 05.3 -0.5
comp=Z,43nm,1.0s
TIC Toumodi 121.19 288 *e*PKIKP PKPdf 15 41 05.2 -0.8
comp=Z,7.9nm,0.2s
LIC Lamto 121.35 287 *e*PKIKP PKPdf 15 41 05.6 -0.8
comp=Z,16nm,0.9s
PLCA Paso Flores 153.14 162 PKPbc PKPbc 15 42 11.4 +1.3
comp=Z,4.2nm,0.8s,baz=204,slow=3.5,SNR=17

ISCJB ***12*** *15:57:58.3±0.6, 37.12N±004×13935E±004, h10km±7km, Error ellipse: s-maj=7.1km s-min=4.8km az=155.5*
JMA ***12*** *15:57:58.6, 37.12N×13935E, h7km±1km, M2.9*
JMA Felt II J1.
ISC 12 15:57:58.3±0.6, 3713N±004×13934E±004, h15km±6km, n6, σ0s20/12, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHK	**Hiroka**	**0.29**	**295**	P	**Pg**	**15 58 04.5**	**+0.1**
JHK				S	**Sg**	**15 58 08.5**	**0.0**
JKT	**Katashina**	**0.36**	**192**	P	**Pg**	**15 58 05.7**	**-0.1**
JKT				S	**Sg**	**15 58 10.5**	**-0.3**
JFY	**Yanaizu**	**0.40**	**46**	P	**Pg**	**15 58 06.6**	**+0.1**
JFY				S	**Sg**	**15 58 11.8**	**-0.2**
JSB	**Shiboa**	**0.49**	**109**	P	**Pg**	**15 58 08.3**	**+0.3**
JSB				S	**Sg**	**15 58 14.8**	**+0.2**
JFT	**Otama**	**0.89**	**63**	P	**Pb**	**15 58 15.5**	**+0.1**
JFT				S	**Sb**	**15 58 26.7**	**-0.3**
MAT	**Matsushiro**	**1.08**	**238**	P	**Pb**	**15 58 19.0**	**+0.3**
MAT				S	**Sb**	**15 58 32.5**	**-0.1**

BJI ***12*** *16:16:58.8, 248N×12666E, h21km, mB5.0, mb4.7, Ms4.3, Msz4.2*
MOS ***12*** *16:17:04.7±1.1, 301N×12639E, h33km, mb5.0/19, Error ellipse: s-maj=15.1km s-min=7.0km az=108.9*
IDC ***12*** *16:17:08.9±2.2, 293N×12641E, h55km±18km, mb4.3/20, mb1 4.3/21, mb1mx4.3/24, mbtmp4.4/21, ML4.8/1, MS3.8/14, Ms1 3.8/14, ms1mx3.7/29, Error ellipse: s-maj=19.8km s-min=11.4km az=77.0*
GCMT ***12*** *16:17:08.9±0.3, 3.12N×12670E, h36km±1km, MW4.9/60, Moment Tensor Solution. s30,c38; s60,c86; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr1.79±.16; Mθθ-1.65±.10; Mφφ-0.14±.12; Mrθ1.57±.10; Mθφ-1.66±.07; Mφr-0.76±.11; Best double couple: Mo2.96100×10^16 NP1:φs207.00000°, δ44.00000°, λ37.00000°. NP2: φs88.00000°, δ65.00000°, λ127.00000°. Principal axes: T 3.0030, Plg54.0000°, Azm45.0000°; N -0.0900, Plg34.0000°, Azm250.0000°; P -2.9190, Plg12.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***12*** *16:17:08.9±1.1, 302N×12650E, h56km±10km, mb4.9/40 Error ellipse: s-maj=8.9km s-min=5.4km az=78.0*
ISCJB ***12*** *16:17:09.0±0.5, 298N±003×12652E±005, h73km±4km, mb4.7/85, Error ellipse: s-maj=8.1km s-min=4.0km az=169.8*
DJA ***12*** *16:17:13, 277N×12668E, h38km, Mw5.2/7*
ISC 12 16:17:10.4±0.4, 297N±003×12653E±005, h69km±3km, h9km±4.5km: pP-P, n185, σ1s10/195, mb4.7/86, 17C-5D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**2.27**	**228**	P	**Pn**	**16 17 46.8**	**+1.1**
TNTI	**Ternate**	**2.33**	**159**	P	**Pn**	**16 17 46.1**	**-0.5**
GSPH	**General Santos**	**3.48**	**333**⇑	*e*P	**Pn**	**16 18 01.2**	**-0.9**
GSPH				*e*S	**Sn**	**16 18 39.8**	**-2.3**
LBMI	**Labuha**	**3.71**	**165**	P	**Pn**	**16 18 04.9**	**-0.4**
LBMI	**Labuha**	**3.71**	**165**	P	**Pn**	**16 18 05.1**	**-0.2**
MATI	**Mati**	**3.96**	**356**	*e*P	**Pn**	**16 18 07.5**	**-1.3**
DAV	**Davao City (W)**	**4.18**	**347**	P	**Pn**	**16 18 10.9**	**-0.9**
	60nm,0.3s,baz=156,slow=5.8,SNR=7.2						
DAV				S	**Sn**	**16 18 59.7**	**+0.2**
	60nm,0.3s,baz=280,slow=19,SNR=5.2						
DAV				LR	LR	16 19 56.1	
	comp=Z,1μm,21.6s,baz=154,slow=40						
KCP	**Kidapawan**	**4.26**	**340**⇑	*i*P	**Pn**	**16 18 13.3**	**+0.4**
KCP				*i* S	**Sn**	**16 19 05.7**	**+4.3**
CTBH	**Cotabato--PC H**	**4.80**	**332**	*e*P	**Pn**	**16 18 20.2**	**0.0**
CTBH				*i* S	**Sn**	**16 19 16.4**	**+1.9**
BUKP	**Musuan**	**5.09**	**343**	*e*P	**Pn**	**16 18 24.4**	**+0.1**
BUKP				*e*S	**Sn**	**16 19 24.9**	**+3.1**
BIPH	**Bislig**	**5.18**	**358**⇑	*e*P	**Pn**	**16 18 23.9**	**-1.6**
PAGZ	**Pagadian**	**5.77**	**327**	*e*P	**Pn**	**16 18 33.5**	**-0.1**
BUTP	**Butuan**	**6.03**	**351**	*e*P	**Pn**	**16 18 37.9**	**+0.8**
IPIL	**Ipil**	**6.20**	**321**	*e*P	**Pn**	**16 18 39.0**	**-0.4**
AAI	**Ambon**	**6.81**	**166**	P	**Pn**	**16 18 50.2**	**+2.4**
	83nm,0.9s,1μm0.4nm						
AAI	**Ambon**	**6.81**	**166**	P	**Pn**	**16 18 48.7**	**+0.9**
	70nm,0.8s,1μm0.4nm						
SCPH	**Surigao**	**6.85**	**351**⇑	*e*P	**Pn**	**16 18 51.0**	**+2.8**
MSLP	**Maasin**	**7.31**	**347**	*e*P	**Pn**	**16 18 54.8**	**+0.2**
PCI	**Palu**	**7.72**	**240**	P	**Pn**	**16 19 05.8**	**+5.6**
	134nm,1.0s,820nm0.4nm						
PCI	**Palu**	**7.72**	**240**	P	**Pn**	**16 19 01.9**	**+1.7**
	64nm,0.9s,823nm0.4nm						
KDI	**Kendari**	**7.91**	**210**	P	**Pn**	**16 19 06.4**	**+3.6**
	85nm,0.8s,0.3nm						
KDI	**Kendari**	**7.91**	**210**	P	**Pn**	**16 19 02.1**	**-0.7**
	69nm,0.8s,9μm0.3nm						
OCLP	**Ormoc**	**8.26**	**347**	*e*P	**Pn**	**16 19 07.9**	**+0.4**
GUIM	**Jordan**	**8.56**	**333**	*e*P	**Pn**	**16 19 14.2**	**+2.6**
OTRP	**Odiongan**	**10.35**	**335**	*e*P	**Pn**	**16 19 33.6**	**-2.5**
KAPI	**Kappang**	**10.43**	**221**	P	**Pn**	**16 19 36.9**	**-0.3**
	37nm,1.1s						
BATP	**Bataraza**	**10.44**	**304**	*e*P	**Pn**	**16 19 41.4**	**+4.1**
BATI	**Baumata**	**13.39**	**192**	P	**Pn**	**16 20 19.6**	**+2.0**
	3.6nm,0.3s,baz=267,slow=2.9,SNR=10						
BATI	**Baumata**	**13.39**	**192**	P	**Pn**	**16 20 24.3**	**+6.7**
	27nm,0.9s,316nm						
BATI	**Baumata**	**13.39**	**192**	P	**Pn**	**16 20 20.3**	**+2.7**
	23nm,0.8s,319nm						
STKI	**Sintang**	**15.32**	**259**	P	**Pn**	**16 20 52.0**	**+9.3**
	41nm,1.2s,3μm						
STKI	**Sintang**	**15.32**	**259**	P	**Pn**	**16 20 49.6**	**+6.9**
	41nm,1.2s,3μm						
KHKI	**Kahang-Kahang**	**15.66**	**224**	P	**Pn**	**16 20 54.1**	**+7.0**
	44nm,0.8s						
KSM	**Kuching**	**16.28**	**265**	P	**Pn**	**16 20 54.6**	**-0.3**
	37nm,1.0s						
SJI	**Sawahan**	**18.16**	**234**	P	**Pn**	**16 21 23.1**	**+5.0**
	30nm,1.1s						
TWG	**Pinlang**	**20.43**	**345**	*e*P	**P**	**16 21 38.3**	**-3.9**
	27nm,0.6s						
YULB	**Yu-li**	**20.93**	**346**	*e*P	**P**	**16 21 42.8**	**-4.7**
	24nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.95**	**182**⇑	*i*P	**P**	**16 21 47.1**	**-0.7**
	33nm,0.8s						
GUMO	**Guam**	**20.97**	**59**	LR	LR	16 28 56.4	
	comp=Z,175nm,20.1s,baz=224,slow=34						
TPUB	**Ta-pu**	**21.00**	**345**	*e*P	**P**	**16 21 45.2**	**-3.2**
	49nm,0.8s,mb4.9						
LEM	**Lembang**	**21.24**	**243**	P	**P**	**16 21 57.3**	**+6.3**
	48nm,0.8s,3μm,mb4.9						
LEM	**Lembang**	**21.24**	**243**	P	**P**	**16 21 56.0**	**+5.0**
	48nm,0.8s,3μm,mb4.9						
SSLB	**Suanglang**	**21.39**	**346**	*e*P	**P**	**16 21 49.5**	**-3.0**
	13nm,0.6s,mb4.4						
CBJI	**Citeko**	**21.75**	**245**	P	**P**	**16 22 02.8**	**+6.3**
	190nm,1.0s,mb5.4						
CBJI	**Citeko**	**21.75**	**245**	P	**P**	**16 22 01.9**	**+5.5**
	190nm,1.0s,mb5.4						
DBJI	**Dramaga**	**21.90**	**244**	P	**P**	**16 22 02.1**	**+4.1**
DBJI	**Dramaga**	**21.90**	**244**	P	**P**	**16 22 02.4**	**+4.4**
YHNB	**Yeheng**	**22.14**	**347**	*e*P	**P**	**16 21 58.2**	**-2.3**
	17nm,0.6s,mb4.5						
QIZ	**Qiongzhong**	**22.83**	**316**	P	**P**	**16 22 07.2**	**-0.6**
QIZ				S	**S**	**16 26 12.4**	**+0.3**
QIZ				AMB	AMB		
	comp=Z,15nm,1.6s,mb4.1						
QIZ				LR	LR		
	comp=N,305nm,21.1s						
QIZ				LR	LR		
	comp=E,282nm,20.3s						
QIZ				LR	LR		
	comp=Z,336nm,23.0s						
JOW	**Kunigami**	**23.79**	**4**	P	**P**	**16 22 18.5**	**+1.7**
	comp=Z,31nm,0.7s,mb4.8,baz=199,slow=11,SNR=9.2						
JOW				LR	LR	16 31 45.2	
	comp=Z,340nm,20.8s,baz=136,slow=37						
WRAB	**Tennant Creek**	**24.02**	**162**	*e*P	**P**	**16 22 17.6**	**-1.4**
WRAB				*e*S	**S**	**16 26 31.6**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,66nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**24.02**	**162**	*e*P	**P**	**16 22 17.6**	**-1.4**
	comp=Z,66nm,1.0s,mb4.9						
WRAB				*e*S	**S**	**16 26 31.6**	**+0.2**
MBWA	**Marble Bar**	**24.89**	**195**	*e*P	**P**	**16 22 27.5**	**+0.6**
	comp=Z,14nm,0.8s,mb4.4						
CBIJ	**Chichi jima**	**28.29**	**31**	P	**P**	**16 22 56.2**	**-1.2**
	comp=Z,48nm,0.7s,mb5.1,baz=284,slow=13,SNR=4.0						
CBIJ				LR	LR	16 33 27.6	
	comp=Z,77nm,21.6s,baz=141,slow=34						
SSE	**Sheshan**	**28.43**	**350**	P	**P**	**16 23 00.0**	**+1.3**
SSE				AP	pP	16 23 06.1	-9.1
SSE				XP	sP	16 23 09.2	-14
SSE				S	**S**	**16 27 45.8**	**+4.8**
SSE				XS	sS	16 27 56.6	-13
SSE				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.5						
SSE				AMB	AMB		
	comp=Z,68nm,3.6s						
SSE				LR	LR		
	comp=N,166nm,18.1s						
SSE				LR	LR		
	comp=E,49nm,18.2s						
SSE				LR	LR		
	comp=Z,248nm,17.0s						
WHN	**Wuhan**	**29.75**	**338**	*e*P	**P**	**16 23 15.5**	**+5.1**
NJ2	**Nanjing**	**29.82**	**347**	*e*P	**P**	**16 23 10.2**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
CTA	**Charters Tower**	**30.00**	**141**	P	**P**	**16 23 13.3**	**+0.6**
	comp=Z,1.8nm,0.7s,mb3.8,baz=322,slow=15,SNR=2.4						
GYA	**Guiyang**	**30.14**	**323**	P	**P**	**16 23 13.6**	**-0.3**
GYA				AP	pP	16 23 17.4	-13
GYA				PP	PP	16 24 12.7	-10
GYA				PCP	PcP	16 26 15.2	+1.2
GYA				S	**S**	**16 28 11.9**	**+3.8**
GYA				SS	SS	16 29 50.2	-29
GYA				SCP	ScP	16 29 55.8	+5.4
GYA				SCS	ScS	16 33 49.8	+3.6
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,580nm,17.7s						
GYA				LR	LR		
	comp=E,660nm,18.6s						
GYA				LR	LR		
	comp=Z,540nm,17.1s						
CHRT	**Chiangrai**	**31.05**	**305**	P	**P**	**16 23 22.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**31.09**	**302**	P	**P**	**16 23 22.2**	**-0.2**
	comp=Z,2.1nm,1.0s,mb3.8,baz=121,slow=8.2,SNR=16						
CMAR	**Chiang Mai Arr**	**31.09**	**302**⇑	*e*P	**P**	**16 23 22.7**	**+0.3**
CHG	**Chiang Mai**	**31.25**	**302**	⇓P	pP	16 23 43.9	+3.5
	comp=Z,53nm,0.9s						
CHTO	**Chiang Mai**	**31.25**	**302**	*e*P	**P**	**16 23 23.7**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
CHTO	**Chiang Mai**	**31.25**	**302**	*e*P	**P**	**16 23 23.7**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.3						
KMI	**Kunming**	**31.78**	**316**	P	**P**	**16 23 29.2**	**+0.8**
KMI				AP	pP	16 23 32.7	-12
KMI				XP	sP	16 23 35.0	-18
KMI				PP	PP	16 24 35.4	-6.0
KMI				S	**S**	**16 28 38.3**	**+4.6**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,67nm,4.7s						
KMI				LR	LR		
	comp=N,95nm,20.7s						
KMI				LR	LR		
	comp=E,126nm,18.8s						
KMI				LR	LR		
	comp=Z,198nm,22.6s						
JHJ	**Hachijo jima 2**	**32.46**	**21**	LR	LR	16 34 35.2	
	comp=Z,103nm,19.0s,baz=260,slow=32						
FORT	**Forrest**	**33.59**	**178**	*e*P	**P**	**16 23 43.8**	**-0.3**
	comp=Z,33nm,0.6s,mb5.3						
KSRS	**Korea Array**	**34.34**	**2**	P	**P**	**16 23 51.8**	**+1.3**
	comp=Z,4.3nm,0.7s,mb4.4,baz=177,slow=9.8,SNR=17						
KSRS				PcP	PcP	16 26 26.8	+1.5
	comp=Z,2.0nm,0.7s,baz=184,slow=3.0,SNR=6.1						
KSRS				LR	LR	16 38 10.9	
	comp=Z,138nm,21.3s,baz=175,slow=37						
XAN	**Xi'an**	**35.01**	**334**	P	**P**	**16 23 54.9**	**-1.4**
XAN				PP	PP	16 25 13.5	-3.5
XAN				S	**S**	**16 29 29.3**	**+5.8**
XAN				PCS	PcS	16 30 14.5	+0.4
XAN				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
XAN				LR	LR		
	comp=N,52nm,26.7s						
XAN				LR	LR		
	comp=E,143nm,33.7s						
XAN				LR	LR		
	comp=Z,363nm,29.5s						
MAJO	**Matsushiro**	**35.10**	**16**	*e*P	**P**	**16 23 56.0**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
MAJO	**Matsushiro**	**35.10**	**16**	*e*P	**P**	**16 23 56.0**	**-1.1**
	comp=Z,12nm,0.9s,mb4.7						

MJAR Matsushiro Arr 35.10 16 P **P** **16 23 56.3 -0.8**
comp=Z,2.5nm,0.4s,mb4.3,baz=184,slow=9.3,SNR=12
MJAR LR LR 16 38 46.7
comp=Z,80nm,18.2s,baz=195,slow=37
CD2 Chengdu 35.14 325 P **P** **16 23 57.3 -0.2**
CD2 AP pP 16 24 02.0 -12
CD2 XP sP 16 24 04.6 -18
CD2 PCP PcP 16 26 28.7 +1.0
CD2 S **S** **16 29 39.3 +14**
CD2 SS SS 16 31 45.6 -15
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.3
CD2 AMB AMB
comp=Z,150nm,5.3s
CD2 LR LR
comp=N,280nm,18.0s
CD2 LR LR
comp=Z,440nm,18.0s
KLBR Kellerberrin 35.37 193 *e*P **P** **16 24 00.5 +1.1**
comp=Z,38nm,1.6s,mb5.0
NWAO Narrogin (SRO) 36.77 193 P **P** **16 24 10.2 -1.2**
comp=Z,6.9nm,1.1s,mb4.5,baz=158,slow=9.2,SNR=3.0
EIDS Eidsvold 36.88 141 *e*P **P** **16 24 11.7 -0.8**
comp=Z,10nm,1.0s,mb4.7
STKA Stephens Creek 37.49 159⇓ *i*P **P** **16 24 17.0 -0.5**
comp=Z,8.6nm,0.6s,mb4.9
STKA Stephens Creek 37.49 159 P **P** **16 24 17.1 -0.5**
comp=Z,9.6nm,0.8s,mb4.8,baz=334,slow=7.5,SNR=29
BJI Beijing 38.08 347 P **P** **16 24 22.2 -0.2**
BJI S **S** **16 30 14.6 +4.5**
BJI AMB AMB
comp=Z,8.0nm,0.8s,mb4.6
BJI AMB AMB
comp=Z,127nm,4.5s
BJI LR LR
comp=N,192nm,10.9s
BJI LR LR
comp=E,102nm,12.8s
BJI LR LR
comp=Z,184nm,24.2s
SNY Shenyang 38.78 356 ⇓P **P** **16 24 29.2 +1.0**
SNY S **S** **16 30 34.8 +14**
SNY AMB AMB
comp=Z,18nm,1.0s,mb4.9
SNY LR LR
comp=N,183nm,26.7s
SNY LR LR
comp=Z,262nm,30.0s
LZH Lanzhou 39.06 330 *e*P **P** **16 24 30.5 -0.2**
LZH AP pP 16 24 34.5 -13
LZH PP PP 16 26 04.1 +2.6
LZH S **S** **16 30 28.0 +2.9**
LZH SS SS 16 33 13.6 -6.3
LZH AMB AMB
comp=Z,36nm,1.1s,mb5.1
LZH AMB AMB
comp=Z,131nm,4.1s
LZH LR LR
comp=N,848nm,15.6s
LZH LR LR
comp=Z,1μm,16.2s
HHC Hu-ho-hao-te 40.06 342 *e*P **P** **16 24 39.3 +0.4**
HHC AP pP 16 24 43.5 -12
HHC XP sP 16 24 47.0 -17
HHC PP PP 16 26 15.4 +3.1
HHC PCP PcP 16 26 45.8 +3.2
HHC PCS PcS 16 30 32.8 0.0
HHC *e*S **S** **16 30 44.9 +5.0**
HHC SCS ScS 16 34 43.4 +4.3
HHC AMB AMB
comp=Z,7.0nm,0.8s,mb4.5
HHC AMB AMB
comp=Z,85nm,6.1s
HHC LR LR
comp=N,267nm,14.3s
HHC LR LR
comp=E,144nm,15.5s
HHC LR LR
comp=Z,393nm,20.2s
SHL Shillong 40.17 307 *e*P **P** **16 24 40.0 -0.1**
CN2 Changchun 40.67 359 *e*P **P** **16 24 45.5 +1.6**
ARMA Armidale 40.95 146 *e*P **P** **16 24 47.6 +1.2**
MDJ Mudanjiang 41.56 3 P **P** **16 24 52.1 +0.9**
MDJ AP pP 16 24 55.3 -13
MDJ PP PP 16 26 28.8 +0.3
MDJ S **S** **16 31 09.2 +7.1**
MDJ AMB AMB
comp=Z,30nm,1.2s,mb4.9
MDJ AMB AMB
comp=Z,91nm,5.9s
MDJ LR LR
comp=N,221nm,27.0s
MDJ LR LR
comp=Z,271nm,23.8s
GTA Gaotai 43.65 330 *e*P **P** **16 25 08.6 +0.4**
GTA AP pP 16 25 12.9 -13
GTA XP sP 16 25 15.0 -18
GTA PCP PcP 16 26 56.3 +1.8
GTA S **S** **16 31 38.6 +5.7**
GTA AMB AMB
comp=Z,6.0nm,1.3s,mb4.2
GTA AMB AMB
comp=Z,81nm,4.8s
GTA LR LR
comp=N,131nm,20.4s
GTA LR LR
comp=E,185nm,23.1s
GTA LR LR
comp=Z,298nm,21.6s
TAPN Taplejung 44.31 307 *e*P **P** **16 25 14.2 +0.5**
comp=Z,10nm,0.7s,mb4.7
ODAN Odare 44.35 306 *e*P **P** **16 25 14.0 -0.1**
comp=Z,17nm,0.6s,mb4.9
RAMN Ramite 45.03 306 *e*P **P** **16 25 19.4 -0.1**
comp=Z,18nm,0.7s,mb4.9
JIRN Jiri 45.66 307 *e*P **P** **16 25 24.9 +0.5**
comp=Z,15nm,0.5s,mb5.0
HABR Khabarovsk 45.92 8 *i* P **P** **16 25 25.3 -0.8**
HABR *e**PP pP 16 25 33.7 -10
HABR *e* 16 27 00.0
HABR *e*PPP 16 27 54.1
HABR *e*S **S** **16 32 08.4 +2.8**
HABR *e**SS sS 16 32 24.2 -11
HABR *e* 16 35 17.9
HABR *e*SSS 16 36 27.3
HABR pmax pmax
comp=E,12nm,1.1s
HABR pmax pmax
comp=Z,61nm,1.2s,mb5.2
HABR pmax pmax
comp=N,22nm,1.1s
HABR MLR MLR
comp=N,280nm,15.0s
HABR MLR MLR
comp=Z,117nm,15.0s
HABR MLR MLR
comp=E,229nm,15.0s
GUN Gumba 46.02 307 *e*P **P** **16 25 27.6 +0.4**
comp=E,27nm,0.5s,mb5.2
YSS Yuzh-Sakhalins 46.02 15 *e*P **P** **16 25 27.5 +0.5**
YSS Yuzh-Sakhalins 46.02 15 *e*P **P** **16 25 27.7 +0.7**
comp=E,13nm,0.6s,mb4.8
KLR Kul'dur 46.31 5 *e*P **P** **16 25 25.6 -3.5**
KLR pmax pmax
comp=Z,42nm,1.6s,mb4.9
KKN Kakani 46.45 306 *e*P **P** **16 25 30.2 -0.4**
comp=Z,11nm,0.5s,mb4.8
KKN Kakani 46.45 306 *e*P **P** **16 25 30.2 -0.4**
KKN pmax pmax
comp=Z,11nm,0.5s,mb4.8
DMN Daman 46.51 306 *e*P **P** **16 25 30.8 -0.3**
comp=Z,27nm,1.0s,mb4.9
GKN Gorkha 47.05 306 *e*P **P** **16 25 35.2 -0.2**
comp=Z,8.8nm,0.4s,mb4.8
ULN Ulaanbaatar 47.78 342⇑ *e*P **P** **16 25 40.7 +0.1**
ULN Ulaanbaatar 47.78 342 *e*P **P** **16 25 40.4 -0.3**
comp=Z,18nm,1.3s,mb4.7
KOLN Koldanda 47.80 305 *e*P **P** **16 25 41.1 -0.1**
comp=Z,27nm,0.5s,mb5.3
DANN Dangsing 47.90 306 *e*P **P** **16 25 41.8 -0.1**
comp=Z,32nm,0.4s,mb5.5
SONM Songino Array 47.95 342 P **P** **16 25 41.7 -0.3**
comp=Z,2.6nm,0.6s,mb4.2,baz=162,slow=7.9,SNR=14
SONM PcP PcP 16 27 09.1 -0.3
comp=Z,1.1nm,0.7s,baz=172,slow=2.4,SNR=3.0
SONM LR LR 16 47 12.8
comp=Z,160nm,18.2s,baz=158,slow=38
SONM Songino Array 47.95 342 P **P** **16 25 41.7 -0.3**
SONM 16 27 09.1
HYB Hyderabad 49.19 290 *i* P **P** **16 25 51.5 -0.5**
ZAK Zakamensk 51.17 341 *e*P **P** **16 26 04.7 -1.8**
ZAK *e* 16 27 22.4
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
TLY Talaya 52.19 342 *e*P **P** **16 26 16.3 +2.3**
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
MOY Mondy 53.03 340 *e*P **P** **16 26 21.3 +1.1**
WMQ Urumqi 53.23 325 *e*P **P** **16 26 22.1 +0.2**
WMQ PP PP 16 28 23.7 +1.1
WMQ S **S** **16 33 51.0 +3.1**
WMQ SCS ScS 16 36 03.9 -1.2
WMQ AMB AMB
comp=Z,11nm,1.1s,mb4.8
WMQ LR LR
comp=N,60nm,23.0s
WMQ LR LR
comp=E,125nm,24.0s
WMQ LR LR
comp=Z,98nm,20.0s
DDI Dehra Dun 53.25 306 *e*P **P** **16 26 20.0 -2.3**
HVS Khovu-Aksy 55.34 335 *c i*P **P** **16 26 37.4 +0.4**
HVS pmax pmax
comp=Z,72nm,1.3s,mb5.5
BOD Bodaibo 55.59 352 *e*P **P** **16 26 38.6 0.0**
BOD pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
PEA0B Petropavlovsk- 56.21 22 *e*P **P** **16 26 44.2 +1.0**
PETK Petropavlovsk- 56.21 22 P **P** **16 26 44.7 +1.5**
comp=Z,8.2nm,0.7s,mb4.9,baz=175,slow=3.6,SNR=44
PETK LR LR 16 50 16.3
comp=Z,48nm,19.1s,baz=109,slow=35
PETK Petropavlovsk- 56.21 22 P **P** **16 26 44.7 +1.5**
PETK LR LR 16 50 16.3
MK31 Makanchi Array 58.07 326 *e*P **P** **16 26 56.1 -0.3**
MKAR Makanchi Array 58.07 326 P **P** **16 26 56.1 -0.4**
comp=Z,6.7nm,0.5s,mb5.0,baz=120,slow=7.6,SNR=94
MKAR ScP ScP 16 31 44.1 +2.3
comp=Z,0.3nm,0.6s,baz=108,slow=4.7,SNR=2.7
MKAR LR LR 16 54 08.2
comp=Z,93nm,21.7s,baz=266,slow=38
YAK Yakutsk 58.97 2 *c i*P **P** **16 27 02.8 +0.4**
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.1
KZA Kyzart 60.04 318 P **P** **16 27 11.5 +1.3**
SNR=11
TKM2 Tokmak 2 60.18 319 *e*P **P** **16 27 10.8 -0.4**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TKM2 Tokmak 2 60.18 319 P **P** **16 27 11.7 +0.6**
SNR=5.0
TKM2 Tokmak 2 60.18 319 *e*P **P** **16 27 10.8 -0.4**
comp=Z,4.2nm,0.8s,mb4.5
AAK Ala-Archa 60.79 318 *e*P **P** **16 27 15.8 +0.5**
AAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
AAK Ala-Archa 60.79 318 *e*P **P** **16 27 15.8 +0.5**
comp=Z,3.5nm,0.9s,mb4.4
USP Ospenovka 61.06 319 P **P** **16 27 17.9 +0.8**
SNR=7.2
AML Almayashu 61.11 317 P **P** **16 27 18.5 +1.0**
SNR=11
AML Almayashu 61.11 317 *e*P **P** **16 27 18.4 +0.9**
comp=Z,19nm,1.1s,mb5.0
ZAA0 Zalesovo Array 61.17 333 *e*P **P** **16 27 15.7 -1.9**
ZALV Zalesovo Beam 61.17 333 P **P** **16 27 16.4 -1.3**
comp=Z,2.8nm,0.6s,mb4.5,baz=122,slow=7.5,SNR=11
ZALV LR LR 16 54 13.7
comp=Z,53nm,19.6s,baz=82,slow=36
EKS2 Erkin-Say 61.28 318 P **P** **16 27 19.6 +1.0**
SNR=8.2
EKS2 Erkin-Say 61.28 318 *e*P **P** **16 27 19.4 +0.8**
comp=Z,11nm,1.1s,mb4.8
KBL Kabul 61.83 308 *e*P **P** **16 27 22.2 -0.3**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KBL Kabul 61.83 308 *e*P **P** **16 27 22.2 -0.3**
comp=Z,4.7nm,0.6s,mb4.7
KURK Kurchatov 62.27 328 P **P** **16 27 24.1 -1.0**
comp=Z,5.0nm,0.6s,mb4.8,baz=130,slow=6.3,SNR=42
KURK Kurchatov 62.27 328⇑ *e*P **P** **16 27 24.3 -0.8**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KURK Kurchatov 62.27 328 *e*P **P** **16 27 24.0 -1.1**
comp=Z,12nm,0.8s,mb5.0
NVS Novosibirsk 62.46 333 *e*P **P** **16 27 23.8 -2.5**
NVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
NVS pmax pmax
comp=E,6.0nm,1.0s
SEY Seymchan 62.81 13⇑ *e*P **P** **16 27 30.3 +1.8**
BRVK Borovoye 67.92 327 *e*P **P** **16 28 00.8 -0.9**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
BRVK Borovoye 67.92 327 *e*P **P** **16 28 00.8 -0.9**
comp=Z,6.7nm,0.8s,mb4.5
TIXI Tiksi 68.60 1⇑ *e*P **P** **16 28 04.8 -0.8**
TIXI pmax pmax
comp=Z,23nm,1.6s,mb4.8
TIXI Tiksi 68.60 1 *e*P **P** **16 28 04.7 -0.9**
comp=Z,18nm,1.1s,mb4.8
BILL Bilibino 70.34 15⇓ *i*P **P** **16 28 16.3 0.0**
BILL pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
AKTO Aktyubinsk 74.13 322 LR LR 17 04 23.1
comp=Z,125nm,19.3s,baz=293,slow=38
SVE Sverdlovsk 74.50 329⇑ *e*P **P** **16 28 41.5 +0.1**
SVE *e* 16 31 25.9
SVE *e*PPP 16 33 12.9
SVE *e* 16 38 54.8
SVE *e*SS SS 16 42 58.5 -0.3
SVE pmax pmax
comp=Z,19nm,1.4s,mb4.6
ARU Arti 75.47 328 *c i*P **P** **16 28 46.2 -0.7**
ARU *e* 16 28 59.5
ARU *e*PPP 16 33 24.9
ARU *e*S S 16 38 25.9 +4.2
ARU SS SS 16 43 19.8 +6.3
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.5
ARU Arti 75.47 328 *e*P **P** **16 28 46.0 -0.9**
comp=Z,7.2nm,0.7s,mb4.5
OPO Ambohidratompo 80.86 251 P **P** **16 29 18.2 +0.7**
comp=Z,3.5nm,0.7s,mb4.3,baz=23,slow=2.3,SNR=9.6
SVW2 Sparrevohn 81.56 29 *e*P **P** **16 29 18.4 -2.0**
KDAK Kodiak Island 82.64 32 P **P** **16 29 26.7 +0.7**
comp=Z,14nm,0.6s,mb5.0,baz=264,slow=6.0,SNR=15
VNDA Vanda 82.70 173 P **P** **16 29 26.0 0.0**
comp=Z,1.9nm,0.9s,mb3.9,baz=326,slow=6.3,SNR=5.5
KIV Kislovodsk 83.52 314 *e*P **P** **16 29 29.2 -1.7**
KIV pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
KIV MLR MLR
comp=Z,60nm,18.0s
BPAW Bear Paw Mtn. 84.06 26 *e*P **P** **16 29 34.2 +1.0**
comp=Z,7.3nm,1.1s,mb4.4
VRHR Novokhopersk 84.50 321 *e*P **P** **16 29 36.2 +0.4**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VRHR pmax pmax
comp=E,20nm,0.9s
COLD Coldfoot 84.67 23 *e*P **P** **16 29 38.2 +1.9**
comp=E,9.6nm,1.1s,mb4.6
PMR Palmer 84.71 29 *e*P **P** **16 29 36.8 +0.2**
PMR pmax pmax
comp=Z,39nm,1.4s,mb5.1
PMR Palmer 84.71 29 *e*P **P** **16 29 36.8 +0.2**
comp=Z,39nm,1.4s,mb5.2
MCK McKinley 84.93 26 P **P** **16 29 38.1 +0.5**
MCK pmax pmax
comp=Z,27nm,1.7s,mb4.9
MCK McKinley 84.93 26 P **P** **16 29 38.1 +0.4**
comp=Z,28nm,1.7s,mb4.9
COLA College 85.47 25⇓ *i*P **P** **16 29 40.3 0.0**
VORD Divnogorie 85.97 321 *e*P **P** **16 29 43.1 0.0**
VORD pmax pmax
comp=N,6.0nm,1.2s
VORD pmax pmax
comp=Z,20nm,1.2s,mb4.9
VORD pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 86.05 321 *e*P **P** **16 29 43.4 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
VSR pmax pmax
comp=N,9.0nm,1.2s
VSR pmax pmax
comp=E,6.0nm,0.6s
MOS Moscow 86.95 326 *e*P **P** **16 29 46.1 -1.7**
ANN Anapa 87.29 315 *e*P **P** **16 29 52.0 +2.3**
ANN pmax pmax
comp=Z,65nm,1.6s,mb5.3
OBN Obninsk 87.57 325⇑ *i*P **P** **16 29 50.2 -0.6**
OBN pmax pmax
comp=Z,48nm,1.6s,mb5.3
BR131 Keskin Array S 90.35 310 P **P** **16 30 03.8 -0.5**
BRTR Keskin Array B 90.35 310 P **P** **16 30 02.5 -1.8**
comp=Z,1.6nm,1.0s,mb4.1,baz=134,slow=3.6,SNR=6.6
BRTR Keskin Array B 90.35 310⇑ *e*P **P** **16 30 03.2 -1.0**
ARCES ARCESS Array B 91.09 340 P **P** **16 30 06.4 -0.6**
comp=Z,2.7nm,0.7s,mb4.5,baz=83,slow=4.3,SNR=15
ARCES LR LR 17 17 12.0
comp=Z,103nm,19.7s,baz=272,slow=40
AKASG Malin Array Be 92.36 321 P **P** **16 30 12.6 -0.7**
comp=Z,2.7nm,0.6s,mb4.7,baz=69,slow=4.6,SNR=12
AKASG Malin Array Be 92.36 321 P **P** **16 30 12.6 -0.7**
BURAR Bucovina Array 95.43 318⇑ *i*P **P** **16 30 27.8 +0.3**
BUR08 Bucovina Ar. S 95.44 318 *e*P **P** **16 30 27.7 +0.2**
NB2 NORSAR Subarra 99.38 334 PKPdf **P** **16 30 42.3 -2.6**
comp=Z,0.9nm,0.7s,mb4.4,baz=44,slow=1.9
NOA NORSAR Array B 99.38 334 P **P** **16 30 43.8 -1.2**
comp=Z,1.0nm,0.6s,mb4.5,baz=66,slow=4.5,SNR=4.8
NOA LR LR 17 19 28.1
comp=Z,73nm,18.7s,baz=75,slow=38
YKA Yellowknife Ar 100.27 24 P Pdif 16 30 49.6 +0.6
comp=Z,0.3nm,0.6s,baz=296,slow=4.0,SNR=5.1
YKA Yellowknife Ar 100.27 24 *i* P Pdif 16 30 49.5 +0.4
TXAR Lajitas Array 122.22 52 PKP PKPdf 16 35 59.8 +1.6
comp=Z,0.7nm,0.7s,baz=249,slow=0.4,SNR=7.6
TORD Torodi Ar. Bea 122.96 288 PKHKP 16 35 55.4
comp=Z,0.3nm,0.5s,baz=92,slow=36,SNR=2.8
TORD PKP PKPdf 16 36 00.2 +0.4
comp=Z,1.8nm,0.6s,baz=52,slow=2.0,SNR=13
TORD Torodi Ar. Bea 122.96 288 PKP PKPdf 16 36 00.2 +0.3
JCT Junction City 124.70 49 *e*PKIKP PKPdf 16 36 04.4 +1.6
DBIC Dimbokro 130.54 281 PKP PKPdf 16 36 15.7 +1.3
comp=Z,3.0nm,0.9s,baz=79,slow=3.9,SNR=3.6

IGQ 12 16:31:47.4, 051N×8001W, h10km±3km, Mb4.0, Ms3.8, Error ellipse: s-maj=6.3km s-min=1.7km az=53.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAMA	**Jama**	**0.79**	**194**	P	Pg	16 32 01.4	-1.2
JAMA				S	Sg	16 32 13.5	+0.5
PINO	**Pino**	**1.55**	**115**	P	Pn	16 32 16.8	+1.7
TERV	**Terraza Guagua**	**1.56**	**116**	P	Pn	16 32 17.0	+1.8
YANA	**Yana**	**1.57**	**113**	P	Pn	16 32 17.2	+1.9
GGP	**Refugio Guagua**	**1.57**	**116**	P	Pn	16 32 16.9	+1.6
COTA	**Cotacachi**	**1.58**	**96**	P	Pn	16 32 18.7	+1.8
QIL2	**Quilotoa**	**1.75**	**141**	P	Pn	16 32 17.5	-0.3
CAMI	**Rancho Maria**	**1.91**	**128**	P	Pn	16 32 23.1	+3.0
VC1	**Cotopaxi 1**	**1.97**	**125**	P	Pn	16 32 24.2	+3.4
TAMB	**Tambo**	**2.03**	**126**	P	Pn	16 32 25.1	+3.4
CAYA	**Cayambe**	**2.06**	**102**	P	Pn	16 32 25.7	+3.5
ANTI	**Antisana**	**2.08**	**117**	P	Pn	16 32 25.8	+3.4
PISA	**Pisayambo**	**2.25**	**134**	P	Pn	16 32 29.2	+4.6

IDC ***12*** *17:01:54.7±0.6, 1444S×7607W, h0km, mb4.2/13, mb1 4.4/17, mb1mx4.4/22, mbtmp4.2/17, ML3.5/4, MS3.9/9, Ms1 3.9/9, ms1mx3.6/22, Error ellipse: s-maj=24.9km s-min=11.2km az=63.0*

ISCJB ***12*** *17:01:57.7±0.4, 1445S±006×7606W±0.10, h33km, mb4.3/18, MS4.0/7, Error ellipse: s-maj=14.9km s-min=5.9km az=150.7*

NEIC ***12*** *17:01:57.7±2.0, 1442S×7607W, h20km±14km, mb4.6/5, Error ellipse: s-maj=11.5km s-min=5.5km az=59.0*

ISC 12 17:01:60.0±0.4, 1441S±006×7602W±009, h35km, n47, σ0s87/40, mb4.3/18, MS4.0/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.53**	**342**	Pn	**Pn**	**17 02 36.8**	**-1.9**
	34nm,0.3s,baz=168,slow=12,SNR=36						
NNA				Sn	**Sn**	**17 03 08.8**	**+0.5**
	135nm,0.3s,baz=149,slow=14,SNR=8.8						
NNA				Lg		17 03 16.0	
	145nm,0.3s,baz=261,slow=20,SNR=10						
NNA				LR	LR	17 03 49.1	
	comp=Z,1μm,18.4s,baz=167,slow=45						
NNA	**Nana**	**2.53**	**342**	*e*Pn	**Pn**	**17 02 37.3**	**-1.4**
NNA				Sn	**Sn**	**17 03 08.8**	**+0.5**
NNA				Lg		17 03 16.0	
NNA				LR	LR	17 03 49.1	
ARE	**Arequipa**	**4.82**	**116**	*e*P	**Pn**	**17 03 11.0**	**+0.9**
ARE				*e*S	**Sn**	**17 04 18.0**	**+13**
ATAH	**Atahualpa**	**7.72**	**342**	Pn	**Pn**	**17 03 47.5**	**-2.5**
	0.6nm,0.3s,baz=336,slow=9.8,SNR=3.7						
ATAH				Lg		17 05 35.9	
	3.0nm,0.3s,baz=298,slow=21,SNR=4.6						
LVC	**Limon Verde**	**10.58**	**141**	Pn	**Pn**	**17 04 29.3**	**+0.1**
	1.4nm,0.3s,baz=302,slow=8.9,SNR=11						
LVC				Sn	**Sn**	**17 06 22.2**	**-4.4**
	0.6nm,0.3s,baz=96,slow=18,SNR=2.7						
LVC				Lg		17 07 21.3	
	0.3nm,0.3s,baz=116,slow=19,SNR=5.9						
LVC				LR	LR	17 08 44.5	
	comp=Z,285nm,22.0s,baz=107,slow=39						
LVC	**Limon Verde**	**10.58**	**141**	*e*Pn	**Pn**	**17 04 29.1**	**-0.1**
LVC				Sn	**Sn**	**17 06 22.2**	**-4.4**
LVC				Lg		17 07 21.3	
LVC				LR	LR	17 08 44.5	
SIV	**San Ignacio**	**14.52**	**98**	Pn	**Pn**	**17 05 21.4**	**-1.6**
	0.2nm,0.3s,baz=276,slow=15,SNR=14						
CFAA	**Coronel Fontan**	**18.54**	**159**	P	**Pn**	**17 06 12.6**	**-1.5**
	0.0nm,0.3s,baz=323,slow=12,SNR=8.1						
CFAA				LR	LR	17 11 12.8	
	comp=Z,10nm,20.4s,baz=336,slow=30						
CPUP	**Villa Florida**	**21.13**	**127**	P	**P**	**17 06 41.2**	**-0.7**
	7.3nm,0.9s,mb4.0,baz=293,slow=11,SNR=10						
CPUP				LR	LR	17 16 11.3	
	comp=Z,152nm,18.6s,MS3.4,baz=76,slow=40						
CPUP	**Villa Florida**	**21.13**	**127**	*e*P	**P**	**17 06 42.5**	**+0.6**
CPUP				LR	LR	17 16 11.3	
SDV	**Santo Domingo**	**23.75**	**13**	P	**P**	**17 07 10.4**	**+1.1**
	19nm,0.7s,mb4.7,baz=273,slow=12,SNR=6.7						
SDV	**Santo Domingo**	**23.75**	**13**	*e*P	**P**	**17 07 10.6**	**+1.3**
PLCA	**Paso Flores**	**26.66**	**171**	P	**P**	**17 07 34.8**	**-0.7**
	1.7nm,0.7s,mb3.7,baz=309,slow=6.5,SNR=4.3						
PLCA	**Paso Flores**	**26.66**	**171**	P	**P**	**17 07 35.0**	**-0.5**
PCRV	**Puerto La Cruz**	**26.91**	**25**	LR	LR	17 19 29.5	
	comp=Z,299nm,19.7s,MS3.9,baz=94,slow=39						
BDFB	**Brasilia**	**27.07**	**96**	P	**P**	**17 07 39.6**	**+0.1**
	3.5nm,1.0s,mb3.9,baz=181,slow=23,SNR=3.7						
BDFB				LR	LR	17 19 11.6	
	comp=Z,308nm,18.4s,MS3.9,baz=278,slow=38						
TXAR	**Lajitas Array**	**51.02**	**329**	P	**P**	**17 10 58.9**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=149,slow=8.9,SNR=16						
TXAR				LR	LR	17 30 46.5	
	comp=Z,78nm,18.4s,MS3.8,baz=185,slow=34						
ANMO	**Albuquerque**	**56.96**	**330**	*e*P	**P**	**17 11 42.3**	**+0.3**
	5.6nm,1.1s,mb4.5						
SDCO	**Great Sand Dun**	**58.80**	**333**	*e*P	**P**	**17 11 55.2**	**+0.4**
	5.0nm,1.1s,mb4.5						
DUG	**Dugway**	**64.19**	**329**	*e*P	**P**	**17 12 32.0**	**+0.8**
	6.2nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**64.69**	**333**	P	**P**	**17 12 34.6**	**+0.2**
	0.9nm,0.8s,mb3.9,baz=133,slow=8.1,SNR=7.0						
AGMN	**Agassiz Refuge**	**64.88**	**346**	*e*P	**P**	**17 12 34.5**	**-0.9**
	5.4nm,0.8s,mb4.6						
NVAR	**Mina Array Bea**	**65.80**	**325**	P	**P**	**17 12 42.6**	**+0.9**
	0.5nm,0.7s,mb3.7,baz=130,slow=6.5,SNR=4.3						
ULM	**Lac du Bonnet**	**66.70**	**346**	P	**P**	**17 12 46.4**	**-0.8**
	6.1nm,0.9s,mb4.6,baz=182,slow=5.5,SNR=5.9						
VNA3	**Neumayer Olymp**	**68.92**	**161**	*e*	**P**	**17 13 02.0**	**+1.0**
VNA3				*e*		17 13 03.8	
VNA2	**Neumayer--Watz**	**69.54**	**161**	*e*	**P**	**17 13 05.1**	**+0.3**
	baz=301,slow=8.4						
VNA2				*e*		17 13 06.9	
SNAA	**Sanae**	**71.14**	**161**	*e*	**P**	**17 13 14.7**	**+0.1**
SNAA				*e*		17 13 16.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	Sanae	71.14	161	eP	P	17 13 14.8	+0.2
	4.0nm,0.8s,mb4.4						
DBIC	Dimbokro	73.61	79	P	P	17 13 30.5	+0.1
	7.3nm,1.1s,mb4.5,baz=219,slow=6.5,SNR=4.8						
DBIC				LR	LR	17 44 06.2	
	comp=Z,175nm,18.6s,MS4.4,baz=234,slow=34						
DBIC	Dimbokro	73.61	79	eP	P	17 13 30.5	+0.1
DBIC				LR	LR	17 44 06.2	
TOA0	Torodi Ar. Sit	81.67	74	eP	P	17 14 15.6	+0.3
TORD	Torodi Ar. Bea	81.67	74	P	P	17 14 16.0	+0.7
	13nm,0.8s,mb4.9,baz=260,slow=4.7,SNR=41						
TORD				LR	LR	17 49 59.4	
	comp=Z,97nm,18.4s,MS4.2,baz=225,slow=35						
TORD	Torodi Ar. Bea	81.67	74	P	P	17 14 16.0	+0.7
TORD				LR	LR	17 49 59.4	
YKA	Yellowknife Ar	82.37	343	P	P	17 14 17.5	-0.4
	1.4nm,0.6s,mb4.1,baz=143,slow=5.9,SNR=29						
VNDA	Vanda	82.58	191	P	P	17 14 19.2	+0.2
	2.0nm,1.1s,mb4.0,baz=106,slow=7.4,SNR=3.2						
ESDC	Sonseca Array	85.81	47	P	P	17 14 36.7	+0.8
	0.7nm,0.5s,mb4.2,baz=246,slow=5.7,SNR=4.9						
BOSA	Boshof	92.80	120	LR	LR	17 58 41.2	
	comp=Z,86nm,18.1s,MS4.2,baz=189,slow=37						
GERES	GERESS Array B	100.52	42	P	Pdif	17 15 44.7	+0.9
	1.2nm,0.8s,baz=300,slow=8.9,SNR=5.8						
WRA	Warramunga Arr	134.65	222	PKP	PKPdf	17 21 15.4	-0.3
	1.2nm,0.7s,baz=144,slow=1.5,SNR=5.7						
ZAA0	Zalesovo Array	137.77	17	ePKPdf	PKPdf	17 21 19.2	-1.2
ZALV	Zalesovo Beam	137.77	17	PKP	PKPdf	17 21 20.6	+0.2
	2.6nm,0.9s,baz=315,slow=3.1,SNR=10						
MKAR	Makanchi Array	142.96	25	PKP	PKPdf	17 21 29.7	-0.4
	0.8nm,0.8s,baz=328,slow=4.4,SNR=4.8						
MKAR	Makanchi Array	142.96	25	PKP	PKPdf	17 21 29.7	-0.4
ULN	Ulaanbaatar	146.54	356	ePKPbc	PKPbc	17 21 38.5	+0.8
SONM	Songino Array	146.61	357	PKPbc	PKPbc	17 21 38.4	+0.6
	4.5nm,0.7s,baz=330,slow=1.8,SNR=37						
KSRS	Korea Array	148.70	322	PKPbc	PKPbc	17 21 44.5	+0.5
	1.3nm,0.8s,baz=38,slow=2.2,SNR=5.2						
CMAR	Chiang Mai Arr	173.71	50	PKP	PKPdf	17 22 06.7	0.0
	0.5nm,0.7s,baz=29,slow=2.1,SNR=5.2						

IDC 12 17:18:13.4±10.0**,243N**×**9672E,h0**^{km}**,mb3.6**/3**,mb1 3.7**/3**, mb1mx3.3**/21**,mbtmp3.6**/3**,Error ellipse: s-maj=513.0km s-min=31.8km az=55.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.10	123	P	P	17 26 15.6	0.0
	0.2nm,0.8s,baz=300,slow=9.6,SNR=3.1						
MKAR	Makanchi Array	45.94	346	P	P	17 26 37.8	-0.2
	0.3nm,0.4s,baz=163,slow=9.5,SNR=11						
ZALV	Zalesovo Beam	52.28	351	P	P	17 27 26.5	+0.1
	0.9nm,0.4s,baz=172,slow=6.2,SNR=6.9						

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*ATH **12** 17:34:00.2,3700N×1979E,h9^{km},MD3.8/5*
*NEIC **12** 17:34:00.9,3699N×1977E,h14^{km},MD3.8(ATH),After ATH.*
*THE **12** 17:34:07.5,3771N×1974E,h8^{km}±1^{km},ML3.9/3,Error ellipse: s-maj=1.9km s-min=1.3km az=70.0*
*CSEM **12** 17:34:07.4±0.5,3768N×1965E,h25^{km},ML3.9/3,Error ellipse: s-maj=9.2km s-min=5.4km az=65.0*
ISC 12 17:34:05.9±1.8**,3766N**±006×**1968E**±010**,h4**^{km}±7^{km}**,n18,** σ**0**§**83**/27**,Ionian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.98	63	P	Pg	17 34 24.8	0.0
KFL				S	Sg	17 34 38.3	+0.7
RLS	Riolos of Patr	1.47	74	ePN	Pn	17 34 32.5	-0.6
RLS	Riolos of Patr	1.47	74	ePg	Pg	17 34 33.0	-1.1
PYL	PYLOS	1.81	114	P	Pn	17 34 38.1	+0.3
PYL				S	Sn	17 35 01.7	+0.5
IGT	Igoumenitsa	1.94	15	P	Pn	17 34 38.8	-0.8
IGT				S	Sn	17 35 03.8	-0.6
KEK	Kerkira	2.05	3	ePN	Pn	17 34 46.3	+5.1
KEK	Kerkira	2.05	3	ePn	Pn	17 34 46.2	+5.0
EVR	Evrytania	2.09	53	ePN	Pn	17 34 43.1	+1.4
EVR				eSN	Sn	17 35 14.7	+6.5
EVR	Evrytania	2.09	53	ePb	Pb	17 34 43.0	-1.4
EVR				eSn	Sn	17 35 14.7	+6.5
JAN	Janina	2.19	24	ePN	Pn	17 34 47.5	+4.4
JAN	Janina	2.19	24	ePb	Pb	17 34 48.4	+2.3
AGG	Agios Georgios	2.49	56	P	Pn	17 34 47.6	+0.5
AGG				S	Sn	17 35 17.3	-0.6
LTK	Loutraki	2.63	81	P	Pn	17 34 48.6	-0.5
LTK				S	Sn	17 35 21.3	0.0
THL	Klokotos Trika	2.64	43	P	Pn	17 34 49.6	+0.4
THL				S	Sn	17 35 22.0	+0.4
THL	Klokotos Trika	2.64	43	ePN	Pn	17 34 49.0	-0.2
THL	Klokotos Trika	2.64	43	ePn	Pn	17 34 49.2	0.0
THL	Klokotos Trika	2.64	43	P	Pn	17 34 49.6	+0.4
THL				S	Sn	17 35 22.0	+0.4
LKR	Lokris	2.80	68	P	Pn	17 34 51.3	-0.1

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*ISCJB **12** 17:35:05.7±0.6,4320N±003×1770E±005,h10^{km},Error ellipse: s-maj=5.2km s-min=3.5km az=151.9*
*NEIC **12** 17:35:06.4,4313N×1767E,h11^{km},ML2.3(PDG), ML2.7(ZAG),After PDG.*
*CSEM **12** 17:35:06.5±0.3,4315N×1753E,h2^{km},ML2.5,Error ellipse: s-maj=7.0km s-min=3.7km az=43.0*
*BEO **12** 17:35:06.6±0.7,4319N×1768E,h5^{km}±9^{km},ML2.5/1*
*PDG **12** 17:35:06.4±0.3,4312N×1767E,h11^{km},ML2.3/10,Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
ISC 12 17:35:05.6±0.6**,4320N**±003×**1763E**±004**,h0**^{km}±5^{km}**,n19,** σ**1**§**17**/37**,6C-8D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.33	171	⇓iPg	Pg	17 35 11.8	-0.2
STON				Sg	Sg	17 35 17.5	+1.2
TREB	Trebinje	0.72	132	ePg	Pg	17 35 18.2	-1.1
TREB				eSg	Sg	17 35 29.2	+0.6
TREB	Trebinje	0.72	132	⇑iPg	Pg	17 35 18.2	-1.1
TREB				eSg	Sg	17 35 29.2	+0.6
BRY	Bratogost	0.73	114	⇑iPg	Pg	17 35 18.4	-1.2
BRY				eSg	Sg	17 35 30.1	+1.0
UPM	Unac-Piva	0.94	90	⇓iPg	Pg	17 35 22.9	-0.6
UPM				eSg	Sn	17 35 37.7	-2.2
HCY	Herceg Novi	0.99	140	⇓iPg	Pg	17 35 22.9	-1.6
HCY				eSg	Sg	17 35 38.2	+0.9
NKY	Niksic	1.07	111	⇑iPg	Pg	17 35 25.2	-1.0
NKY				eSg	Sn	17 35 41.9	-1.5
PLE	Pljevlja	1.29	84	⇓iPg	Pg	17 35 29.7	-0.7
PLE				eSg	Sn	17 35 50.1	+1.3
BUM	Brajici-Budva	1.30	134	⇓iPg	Pg	17 35 28.8	-1.6
BUM				eSg	Sg	17 35 48.6	+1.4
PDG	Podgorica	1.43	122	⇑iPg	Pg	17 35 31.4	-1.5
PDG				eSg	Sg	17 35 53.3	+1.9
TTG	Podgorica	1.43	122	⇑iPg	Pg	17 35 31.4	-1.5
TTG				eSg	Sg	17 35 53.3	+1.9
BBLS	Lazići	1.45	62	ePg	Pg	17 35 32.7	-0.7
BBLS				eSg	Sg	17 35 52.0	-0.2
BLY	Banja Luka	1.58	348	ePn	Pn	17 35 36.2	+1.4
BLY				eSg	Sg	17 35 58.5	+2.2
BEY	Berane	1.69	100	⇓iPn	Pn	17 35 36.8	+0.5
BEY				eSn	Sg	17 36 01.2	+1.2
IVA	Berane	1.69	100	⇓iPn	Pn	17 35 36.8	+0.5
IVA				eSn	Sg	17 36 01.2	+1.2
ULC	Ulcinj	1.72	135	⇑iPn	Pn	17 35 36.5	-0.2
ULC				eSn	Sg	17 36 00.9	+0.1
ULC	Ulcinj	1.72	135	eSn	Sg	17 36 00.9	+0.1
PVY	Plav	1.82	109	⇓iPn	Pn	17 35 38.4	+0.3
PVY				eSn	Sg	17 36 04.4	+0.2
NVLJ	Novalja	2.42	305	ePn	Pn	17 35 47.6	+1.3
NVLJ				Sn	Sg	17 36 21.7	-1.5

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*BJI **12** 17:35:02.7,5104N×17334E,h6^{km},mB5.2,mb5.1,Ms4.9, Msz4.7*
*ISCJB **12** 17:35:03.8±0.9,5066N±003×17338E±002,h10^{km}±5^{km}, mb5.1/232,MS4.5/59,Error ellipse: s-maj=5.8km s-min=2.3km az=1.5*
*NEIC **12** 17:35:07.9,5087N×17350E,h10^{km},mb5.2/139,MW5.2, ML5.0(AEIC),Moment Tensor Solution. s18 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.71; $M_{\theta\theta}$8.22; $M_{\phi\phi}$-2.51; $M_{r\theta}$-1.41; $M_{\theta\phi}$-3.45; $M_{\phi r}$-0.44; Best double couple: $M_0$8.20000×10^{16} NP1:ϕ_s90.00000°,δ52.00000°, λ-113.00000°. NP2:ϕ_s304.00000°,δ43.00000°, λ-64.00000°. Principal axes: T 9.3300, Plg4.0000°, Azm196.0000°; N -3.2600, Plg17.0000°, Azm104.0000°; P -6.0700, Plg71.0000°, Azm300.0000°; After AEIC.*
*GCMT **12** 17:35:07.9±0.1,5070N×17348E,h12^{km},MW5.2/97, Moment Tensor Solution. s75,c119; s97,c189; Duration: 1§0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.51±.01; $M_{\theta\theta}$0.49±.01; $M_{\phi\phi}$0.01±.01; $M_{r\theta}$-0.15±.04; $M_{\theta\phi}$-0.65±.01; $M_{\phi r}$-0.25±.04; Best double couple: $M_0$0.85500×10^{17} NP1:ϕ_s91.00000°,δ57.00000°, λ-142.00000°. NP2:ϕ_s338.00000°,δ59.00000°, λ-39.00000°. Principal axes: T 0.9480, Plg1.0000°, Azm35.0000°; N -0.1860, Plg42.0000°, Azm126.0000°; P -0.7620, Plg48.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **12** 17:35:07.6±0.9,5074N×17336E,h33^{km},mb5.3/105, MS4.5/35 Error ellipse: s-maj=7.6km s-min=4.2km az=96.5*
*IDC **12** 17:35:09.2±2.1,5073N×17341E,h35^{km}±15^{km},mb4.6/27, mb1 4.8/28,mb1mx4.7/31,mbtmp4.7/28,ML5.8/1,MS4.4/24, Ms1 4.4/24,ms1mx4.3/28,Error ellipse: s-maj=13.1km s-min=8.1km az=158.0*
*SZGRF **12** 17:35:13.5,5160N×17264E,h33^{km},mb5.2,MS4.6,Near Islands, Aleutian Islands, United States*
ISC 12 17:35:07.3±0.9**,5075N**±003×**17338E**±002**,h19**^{km}±5^{km}**, h13**^{km}±1.6^{km}**:pP-P,n820,**σ**0**§**70**/831**,mb5.1**/232**,MS4.5**/59**, 166C-176D,South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMY	Shemya	2.03	12	eP	Pn	17 35 38.3	-2.1
SMY				eS	Sn	17 35 58.6	-6.6
SMY	Shemya	2.03	12	P	Pn	17 35 38.8	-1.6
SMY				S	Sn	17 36 02.2	-3.0
FX1	Attu Island--F	2.14	357	Pn	Pn	17 35 40.5	-1.4
	558nm,0.3s,baz=180,slow=7.6,SNR=4021						
FX1				Sn	Sn	17 36 03.8	-4.0
	baz=104,slow=19						
FX1				LR	LR	17 36 39.2	
	comp=Z,9μm,19.4s,baz=157,slow=42						
FX1	Attu Island--F	2.14	357	P	Pn	17 35 40.1	-1.8
FX1				S	Sn	17 36 04.4	-3.4
ADK	Adak	6.33	76	P	Pn	17 36 37.7	-1.8
ADK				S	Sn	17 37 47.7	-3.5
ATKA	Atka Island	7.89	75	P	Pn	17 36 59.0	-2.0
ATKA				S	Sn	17 38 23.9	-5.7
PET	Petropavlovsk	9.39	290	eP	Pn	17 37 20.2	-1.2
PET				eS	Sn	17 38 59.9	-6.4
PET				pmax	pmax		
	comp=Z,400nm,2.1s						
PET				pmax	pmax		
	comp=Z,290nm,0.5s						
PET				smax			
	comp=N,900nm,0.8s						
PET				smax			
	comp=N,1μm,0.6s						
PET				smax			
	comp=E,886nm,0.6s						
PET				MLR	MLR		
	comp=Z,2μm,21.0s						
PET				MLR	MLR		
	comp=Z,2μm,20.0s						
PET	Petropavlovsk	9.39	290	eP	Pn	17 37 20.1	-1.3
	comp=Z,195nm,0.4s						
PEA0B	Petropavlovsk-	9.97	290	eP	Pn	17 37 29.1	-0.2
PETK	Petropavlovsk-	9.97	290	Pn	Pn	17 37 29.6	+0.3
	comp=Z,76nm,0.3s,baz=96,slow=16,SNR=898						
PETK				Sn	Sn	17 39 15.3	-5.2
	comp=Z,31nm,0.3s,baz=197,slow=4.5,SNR=16						
PETK				LR	LR	17 40 58.6	
	comp=Z,1μm,19.5s,baz=113,slow=35						
SKR	Severo-Kuril's	10.95	276	⇑iP	Pn	17 37 41.0	-1.8
SKR				pmax	pmax		
	comp=N,100nm,0.6s						
SKR				pmax	pmax		
	comp=E,100nm,0.6s						
SKR				pmax	pmax		
	comp=Z,400nm,0.6s						
SKR				pmax	pmax		
	comp=Z,1μm,2.0s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
SKR				MLR	MLR		
	comp=N,4μm,12.0s						
SKR				MLR	MLR		
	comp=E,3μm,12.0s						
UNV	Unalaska Valle	12.69	68	eP	Pn	17 38 05.8	-0.8
	comp=E,103nm,0.6s						
AKUT	Akutan	13.15	67	eP	Pn	17 38 14.1	+1.3
	comp=E,326nm,1.1s						
GAMB	Gambell	15.29	26	eP	Pn	17 38 43.6	+1.9
	comp=E,56nm,0.8s						
SDPT	Sand Point	16.33	64	eP	Pn	17 38 52.2	-3.1
	comp=E,26nm,0.3s						
SEY	Seymchan	16.65	325	⇑iP	Pn	17 39 00.7	+1.5
SEY	Seymchan	16.65	325	⇑iP	Pn	17 39 00.8	+1.6
CHGN	Chignik	17.59	61	eP	Pn	17 39 11.7	+0.7
BILL	Bilibino	17.69	351	⇑iP	Pn	17 39 11.7	-0.5
BILL				i S	Sn	17 42 25.4	-3.1
BILL				pmax	pmax		
	comp=Z,59nm,1.3s						
BILL				MLR	MLR		
	comp=Z,1μm,15.0s						
BILL	Bilibino	17.69	351	eP	Pn	17 39 12.2	0.0
	comp=Z,110nm,1.3s						
TNA	Tin City	17.70	26	eP	Pn	17 39 12.8	+0.5
	comp=Z,103nm,0.9s						
YUK	Yuzh-Kuril'sk	19.73	261	P	Pn	17 39 36.0	-1.1
YUK				S	Sn	17 43 19.0	+0.9
YUK				pmax	pmax		
	comp=N,170nm,0.5s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,3μm,3.0s						
YUK				pmax	pmax		
	comp=Z,2μm,3.0s						
YUK				smax			
	comp=N,4μm,3.0s						
YUK				smax			
	comp=E,2μm,4.0s						
SVW2	Sparrevohn	20.04	47	eP	P	17 39 39.2	+0.4
YSS	Yuzh-Sakhalins	20.43	271	κeP	P	17 39 44.0	+0.8
YSS				eS	S	17 43 32.0	+1.1
YSS				e		17 43 48.0	
YSS				pmax	pmax		
	comp=Z,400nm,3.0s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s,MS4.3						
YSS	Yuzh-Sakhalins	20.43	271	eP	P	17 39 44.8	+1.7
	comp=Z,104nm,0.6s						
OHAK	Old Harbor	20.49	59	eP	P	17 39 42.5	-1.2
	comp=Z,33nm,0.3s						
KDAK	Kodiak Island	20.91	57	P	P	17 39 47.0	-1.3
	comp=Z,996nm,1.3s,SNR=37						
KDAK	Kodiak Island	20.91	57	P	P	17 39 46.4	-1.9
	comp=Z,61nm,0.5s,baz=259,slow=4.9,SNR=50						
KDAK				S	S	17 43 31.7	-8.5
	comp=Z,9.0nm,1.0s,baz=124,slow=19,SNR=4.6						
KDAK	Kodiak Island	20.91	57	eP	P	17 39 46.6	-1.6
	comp=Z,192nm,1.1s						
ASAJ	Asahikawa	21.75	264	P	P	17 39 58.2	+0.9
	comp=Z,87nm,0.7s,mb5.3,baz=73,slow=8.9,SNR=96						
ASAJ				S	S	17 43 57.4	+0.4
	comp=Z,4.3nm,0.9s,baz=142,slow=18,SNR=2.1						
ASAJ				LR	LR	17 47 59.2	
	comp=Z,682nm,18.4s,MS4.1,baz=78,slow=35						
ASAJ	Asahikawa	21.75	264	P	P	17 39 58.3	+0.9
ASAJ				S	S	17 43 57.4	+0.5
ASAJ				pmax	pmax		
	comp=Z,87nm,0.7s						
ASAJ				smax			
	comp=N,4.0nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,682nm,18.4s						
PPLA	Purkeypile	22.10	44	eP	P	17 40 02.1	+1.1
	comp=Z,1μm,1.7s,mb6.1						
CHUM	Lake Minchumin	22.36	41	eP	P	17 40 03.7	-0.1
	comp=Z,157nm,1.5s,mb5.2						
ERM	Erimo	22.48	259	P	P	17 40 07.9	+2.7
	comp=Z,499nm,0.9s,mb5.9,SNR=10						
ERM	Erimo	22.48	259	c iP	P	17 40 05.1	-0.1
ERM	Erimo	22.48	259	eP	P	17 40 06.0	+0.9
	comp=Z,51nm,0.6s,mb5.1						
SEW	Seward	22.78	51	eP	P	17 40 07.0	-1.2
	comp=Z,202nm,1.0s,mb5.5						
RC01	Rabbit Creek A	22.79	49	eP	P	17 40 08.0	-0.4
	comp=Z,88nm,0.5s,mb5.5						
KTH	Kantishna Hill	22.84	42	eP	P	17 40 08.9	0.0
	comp=Z,663nm,1.5s,mb5.8						
BPAW	Bear Paw Mtn.	22.99	41	eP	P	17 40 10.3	0.0
	comp=Z,610nm,1.5s,mb5.8						
TRF	Thorofare Moun	23.09	43	eP	P	17 40 10.8	-0.6
	comp=Z,590nm,1.6s,mb5.8						
PMR	Palmer	23.17	48	eP	P	17 40 10.0	-2.4
PMR				pmax	pmax		
	comp=Z,27nm,0.6s,mb4.8						
PMR	Palmer	23.17	48	eP	P	17 40 11.7	-0.7
	comp=Z,23nm,0.5s,mb4.9						
MCK	McKinley	23.75	42	eP	P	17 40 17.5	-0.5
MCK				pmax	pmax		
	comp=Z,350nm,1.4s,mb5.6						
MCK	McKinley	23.75	42	eP	P	17 40 17.5	-0.6
	comp=Z,350nm,1.5s,mb5.6						
COLD	Coldfoot	24.44	34	eP	P	17 40 24.7	+0.4
	comp=Z,78nm,1.5s,mb4.9						
COLA	College	24.52	40	c iP	P	17 40 24.6	-0.4
COLA	College	24.52	40	eP	P	17 40 24.9	-0.2
	comp=Z,90nm,1.0s,mb5.3						
HABR	Khabarovsk	24.76	280	d iP	P	17 40 27.9	+0.5
HABR				ePPP		17 41 08.8	
HABR				eS	S	17 44 51.0	+2.6
HABR				eSS		17 45 39.2	
HABR				eSSS		17 45 53.7	
HABR				e		17 51 30.8	
HABR				pmax	pmax		
	comp=Z,157nm,1.5s,mb5.3						
HABR				pmax	pmax		
	comp=E,86nm,1.3s						
HABR				pmax	pmax		
	comp=N,29nm,1.4s						
HABR				MLR	MLR		
	comp=N,1μm,17.0s,MS4.7						
HABR				MLR	MLR		
	comp=Z,922nm,17.0s,MS4.3						
HABR				MLR	MLR		
	comp=E,1μm,15.0s,MS4.7						
PAX	Paxson	25.10	45	eP	P	17 40 29.7	-0.7
	comp=E,48nm,0.8s,mb5.1						
MENT	Mentasta	25.89	45	eP	P	17 40 38.0	+0.5
YAK	Yakutsk	26.15	312	d iP	P	17 40 39.0	-0.9
YAK				ePPP		17 41 25.6	
YAK				e		17 44 04.7	
YAK				eS	S	17 45 08.1	-2.2
YAK				eSSS		17 46 22.8	
YAK				pmax	pmax		
	comp=E,50nm,1.2s						
YAK				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.0						
YAK				pmax	pmax		
	comp=N,33nm,1.4s						
YAK				pmax	pmax		
	comp=E,177nm,1.6s						
YAK				smax			
	comp=N,217nm,2.7s						
YAK				smax			
	comp=E,105nm,2.5s						
YAK				MLR	MLR		
	comp=Z,529nm,21.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,429nm,18.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,403nm,19.0s,MS4.2						
KLR	Kul'dur	26.56	283	⇑iP	P	17 40 39.2	-4.5
KLR				eS	S	17 45 15.0	-2.0
KLR				pmax	pmax		
	comp=E,110nm,2.0s						
KLR				pmax	pmax		
	comp=Z,130nm,2.0s,mb5.1						
KLR				pmax	pmax		
	comp=Z,1μm,11.0s						
KLR				MLR	MLR		
	comp=E,900nm,13.0s						
KLR				MLR	MLR		
	comp=Z,4μm,13.0s,MS5.2						
EGAK	Eagle	27.29	42	eP	P	17 40 50.0	-0.1
	comp=Z,283nm,1.1s,mb5.7						
PNL	Peninsula	27.82	53	eP	P	17 40 55.2	+0.3
	comp=Z,43nm,0.7s,mb5.2						
DAWY	Dawson	27.95	44	eP	P	17 40 56.9	+0.8
CLNS	Chul'man	28.76	301	eP	P	17 41 03.0	-0.3
CLNS				ePPP		17 42 03.3	
CLNS				e		17 44 11.0	
CLNS				eS	S	17 45 52.0	+0.5
CLNS				eSS	SS	17 47 22.3	-31
CLNS				pmax	pmax		
	comp=Z,35nm,1.6s,mb4.8						
CLNS				pmax	pmax		
	comp=E,32nm,1.5s						
CLNS				pmax	pmax		
	comp=N,16nm,1.6s						
CLNS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
CLNS				pmax	pmax		
	comp=N,11nm,1.2s						
CLNS				pmax	pmax		
	comp=E,11nm,1.2s						
CLNS				smax			
	comp=N,341nm,17.8s						
CLNS				smax			
	comp=E,295nm,14.4s						
CLNS				MLR	MLR		
	comp=E,235nm,13.0s,MS4.4						
CLNS				MLR	MLR		
	comp=Z,404nm,17.0s,MS4.1						
CLNS				MLR	MLR		
	comp=N,559nm,15.0s,MS4.4						
TIXI	Tiksi	28.83	333	⇑eP	P	17 41 03.2	-0.6
TIXI				pmax	pmax		
	comp=Z,52nm,2.7s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.2						
TIXI	Tiksi	28.83	333	eP	P	17 41 03.5	-0.3
	comp=Z,55nm,1.6s,mb5.0						
MAJO	Matsushiro	28.83	254	eP	P	17 41 04.9	+0.7
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
MAJO	Matsushiro	28.83	254	eP	P	17 41 04.9	+0.8
	comp=Z,12nm,0.9s,mb4.6						
MAT	Matsushiro	28.83	254	P	P	17 41 04.2	0.0
MAT				S	S	17 45 48.0	-5.0
MJAR	Matsushiro Arr	28.83	254	P	P	17 41 04.7	+0.5
	comp=Z,4.2nm,0.7s,mb4.3,baz=49,slow=7.6,SNR=13						
MJAR				S	S	17 45 52.0	-1.0
	comp=Z,0.8nm,0.7s,baz=116,slow=20,SNR=3.1						
MJAR				LR	LR	17 50 39.7	
	comp=Z,486nm,20.2s,MS4.1,baz=60,slow=32						
MJAR	Matsushiro Arr	28.83	254	P	P	17 41 04.7	+0.5
MJAR				S	S	17 45 52.0	-1.0
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR				smax			
	comp=N,1.0nm,0.7s						
MJAR				MLR	MLR		
	comp=Z,486nm,20.3s						
NRGR	Nerungri	28.88	301	i P	P	17 41 04.5	+0.1
MDJ	Mudanjiang	29.76	275	P	P	17 41 11.7	-0.6
MDJ				PCP	PcP	17 44 15.0	-0.6
MDJ				S	S	17 46 06.2	-1.2
MDJ				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,151nm,7.9s						
MDJ				LR	LR		
	comp=N,816nm,13.3s,MS4.6						
MDJ				LR	LR		
	comp=E,793nm,16.4s,MS4.6						
MDJ				LR	LR		
	comp=Z,1μm,16.6s,MS4.5						
SKAG	Skagway	29.90	53	eP	P	17 41 12.0	-1.4
	comp=Z,36nm,1.1s,mb5.0						
JHJ	Hachijo jima 2	30.23	247	LR	LR	17 50 14.3	
	comp=Z,451nm,21.1s,MS4.1,baz=71,slow=30						

INK Inuvik 30.82 35 *e*P P **17 41 22.0 +0.6**
INK pmax pmax
comp=Z,49nm,0.7s
INK Inuvik 30.82 35 *e*P P **17 41 22.0 +0.6**
comp=Z,49nm,0.7s,mb5.4
CN2 Changchun 32.77 277 *e*P P **17 41 37.7 -1.1**
CN2 *e*XP sP 17 41 44.8 -2.3
CN2 *e*S **S** **17 46 52.3 -2.2**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CN2 AMB AMB
comp=Z,190nm,5.0s
CN2 LR LR
comp=N,1μm,19.0s,MS4.7
CN2 LR LR
comp=E,740nm,19.0s,MS4.7
CN2 LR LR
comp=Z,430nm,19.0s,MS4.2
DLBC Dease Lake 32.77 54 *e*P P **17 41 40.6 +1.9**
CBlJ Chichi jima 33.45 237 LR LR 17 56 14.9
comp=Z,205nm,18.5s,MS3.9,baz=332,slow=38
BOD Bodaibo 34.35 305 ⇑ *i*P P **17 41 51.1 -1.3**
BOD pmax pmax
comp=Z,49nm,1.4s,mb5.2
KSRS Korea Array 34.69 265 P P **17 41 57.0 +1.5**
comp=Z,7.1nm,0.6s,mb4.8,baz=55,slow=8.4,SNR=23
KSRS LR LR 17 57 41.6
comp=Z,415nm,18.5s,MS4.2,baz=63,slow=39
KSRS Korea Array 34.69 265 P P **17 41 57.1 +1.6**
KSRS pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KSRS MLR MLR
comp=Z,415nm,18.5s,MS4.2
CIT Chita 36.44 296 *e*P P **17 42 10.6 +0.2**
CIT pmax pmax
comp=Z,122nm,2.3s,mb5.4
DL2 Dalian 37.82 272 P P **17 42 19.7 -2.6**
DL2 PP PP 17 43 50.5 +1.8
DL2 *e*S **S** **17 48 09.2 -3.0**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
DL2 AMB AMB
comp=Z,140nm,5.4s
DL2 LR LR
comp=N,350nm,13.8s
DL2 LR LR
comp=Z,290nm,14.3s,MS4.2
YKA Yellowknife Ar 39.19 44 P P **17 42 34.0 +0.5**
comp=Z,14nm,0.5s,mb4.9,baz=286,slow=7.1,SNR=117
YKA PcP PcP 17 44 42.5 +0.2
comp=Z,1.2nm,0.6s,baz=288,slow=3.3,SNR=4.1
YKA S **S** **17 48 30.9 -1.4**
comp=Z,0.3nm,0.8s,baz=276,slow=13,SNR=3.7
YKA LR LR 18 00 15.8
comp=Z,372nm,18.5s,MS4.2,baz=150,slow=38
YKA Yellowknife Ar 39.19 44 P P **17 42 34.0 +0.5**
YKA 17 44 42.5
YKA S **S** **17 48 30.9 -1.3**
YKA pmax pmax
comp=Z,14nm,0.5s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,373nm,18.5s
YKA Yellowknife Ar 39.19 44 P P **17 42 34.0 +0.5**
YKA PcP PcP 17 44 42.5 +0.2
YKA S **S** **17 48 30.9 -1.3**
YKA LR LR 18 00 15.8
B04A Port Angeles 40.05 68 ⇑P P **17 42 41.6 +0.7**
baz=40
A04A Legoe Bay, Lum 40.21 67 ⇑P P **17 42 42.5 +0.3**
baz=40
A05A Maple Falls 40.44 66 ⇑P P **17 42 44.2 +0.1**
baz=40
C04A Brinnon 40.53 69 ⇓P P **17 42 45.2 +0.3**
baz=40
BJI Beijing 40.62 278 P P **17 42 44.3 -1.4**
BJI PP PP 17 44 17.4 -1.8
BJI S **S** **17 48 52.8 -1.4**
BJI SS SS 17 51 52.6 -1.6
BJI AMB AMB
comp=Z,4.0nm,0.6s,mb4.2
BJI AMB AMB
comp=Z,221nm,4.2s
BJI LR LR
comp=N,817nm,15.9s
BJI LR LR
comp=E,738nm,23.5s
BJI LR LR
comp=Z,645nm,24.6s
E03A Lebam 40.76 70 ⇓P P **17 42 47.6 +0.9**
baz=41
B05A Bryant 40.78 67 ⇓P P **17 42 47.6 +0.7**
baz=41
D04A Dobbs Creek Ra 40.93 69 ⇓P P **17 42 48.6 +0.5**
baz=41
B06A Marblemount 41.02 67 ⇑P P **17 42 49.3 +0.4**
baz=41
E04A Onalaska 41.23 70 ⇑P P **17 42 50.5 -0.1**
baz=41
C05A Tolt Reservoir 41.30 68 ⇓P P **17 42 51.1 -0.1**
baz=41,SNR=7.7
A07A Ashnola River, 41.41 66 ⇓P P **17 42 51.8 -0.2**
baz=41,SNR=20
IRK Irkutsk 41.55 300 *e*P P **17 42 50.4 -2.8**
IRK pmax pmax
comp=Z,37nm,2.9s,mb4.5
C06A Tall Timber Ra 41.66 67 ⇓P P **17 42 54.0 -0.1**
baz=42
FMW Mount Fremont 41.69 69 P P **17 42 56.4 +2.0**
LON Longmire 41.70 69 *e*P P **17 42 55.7 +1.2**
LON pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
LON Longmire 41.70 69 *e*P P **17 42 55.7 +1.2**
comp=Z,9.5nm,0.6s,mb4.6
F04A Amboy 41.75 71 ⇑P P **17 42 54.8 -0.1**
baz=42,SNR=8.3
B07A Winthrop 41.84 66 ⇑P P **17 42 55.5 -0.1**
baz=42,SNR=12
H03A Soap Creek Ran 41.88 73 ⇓P P **17 42 56.0 +0.1**
baz=42
WPW White Pass 41.88 69 P P **17 42 58.0 +2.0**
ULN Ulaanbaatar 42.03 293 P P **17 42 58.1 +0.9**
SNR=9.1
ULN Ulaanbaatar 42.03 293 P P **17 42 57.8 +0.6**
ULN pmax pmax
comp=Z,17nm,0.8s,mb4.7
ULN Ulaanbaatar 42.03 293 *e*P P **17 42 57.5 +0.4**
comp=Z,17nm,0.8s,mb4.7
D06A Cle Elum 42.05 68 ⇓P P **17 42 57.1 -0.2**
baz=42,SNR=8.8
G04A Mulino 42.09 72 ⇓P P **17 42 57.5 -0.2**
baz=42
A08A Turner Farm, O 42.09 65 ⇓P P **17 42 57.5 -0.1**
baz=42,SNR=11
TLY Talaya 42.15 300 P P **17 42 58.0 -0.1**
comp=Z,127nm,0.9s,mb5.5,SNR=6.3
TLY Talaya 42.15 300 P P **17 42 59.0 +0.9**
SNR=8.2
TLY Talaya 42.15 300 *e*P P **17 42 58.4 +0.3**
TLY pmax pmax
comp=Z,30nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,839nm,20.0s,MS4.6
TLY Talaya 42.15 300 *e*P P **17 42 58.8 +0.7**
comp=Z,23nm,0.9s,mb4.8
C07A Waterville 42.26 67 ⇑P P **17 42 58.7 -0.3**
baz=42,SNR=12
SSOR Sweet Springs 42.28 72 P P **17 43 00.8 +1.5**
E06A Yakima 42.30 69 ⇓P P **17 42 59.6 +0.2**
baz=42,SNR=13
RES Resolute Bay 42.31 23 *e*P P **17 42 59.7 +0.6**
RES pmax pmax
comp=Z,60nm,1.4s,mb5.0
RES Resolute Bay 42.31 23 *e*P P **17 42 59.7 +0.6**
comp=Z,60nm,1.4s,mb5.0
B08A Colville Reser 42.35 66 ⇑P P **17 42 59.7 -0.1**
baz=42,SNR=18
EBG Ellensburg 42.35 68 P P **17 43 00.9 +1.1**
SONM Songino Array 42.43 293 P P **17 43 01.5 +1.1**
comp=Z,10nm,0.5s,mb4.7,baz=60,slow=8.1,SNR=113
SONM PcP PcP 17 44 52.8 -0.4
comp=Z,1.7nm,0.7s,baz=70,slow=2.9,SNR=3.9
SONM LR LR 18 01 30.6
comp=Z,1μm,18.5s,MS4.8,baz=254,slow=37
SONM Songino Array 42.43 293 P P **17 43 01.5 +1.1**
SONM 17 44 52.8
SONM pmax pmax
comp=Z,10.0nm,0.5s
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,1μm,18.5s
A09A Danville 42.48 65 ⇑P P **17 43 00.8 0.0**
baz=42,SNR=15
HOOD Mount Hood Mea 42.53 71 *e*P P **17 43 02.2 +1.0**
comp=Z,20nm,0.7s,mb5.0
H04A Detroit Lake 42.54 72 ⇓P P **17 43 01.4 0.0**
baz=42
D07A Quincy 42.56 68 ⇑P P **17 43 01.4 -0.1**
baz=42,SNR=6.6
G05A Wamic 42.77 71 ⇓P P **17 43 03.5 +0.2**
baz=43
C08A Higginbotham F 42.80 67 ⇑P P **17 43 03.4 -0.1**
baz=43,SNR=10
F06A Goldendale 42.81 70 ⇑P P **17 43 03.8 +0.2**
baz=43
E07A Sunnyside 42.95 69 ⇓P P **17 43 04.5 -0.2**
baz=43,SNR=8.7
ZAK Zakamensk 42.97 298 *e*P P **17 43 05.0 +0.3**
ZAK *e* 17 44 43.4
ZAK pmax pmax
comp=Z,22nm,1.6s,mb4.6
B09A Rice 43.00 65 ⇑P P **17 43 04.6 -0.5**
baz=43,SNR=21
SSE Sheshan 43.03 263 P P **17 43 05.8 +0.3**
SSE XP sP 17 43 10.8 -3.1
SSE PP PP 17 44 44.1 -1.3
SSE S **S** **17 49 29.9 -0.2**
SSE XS sS 17 49 35.2 -4.8
SSE SS SS 17 52 41.5 -0.7
SSE AMB AMB
comp=Z,35nm,0.9s,mb5.1
SSE AMB AMB
comp=Z,144nm,4.0s
SSE LR LR
comp=N,414nm,23.1s,MS4.4
SSE LR LR
comp=E,388nm,23.1s,MS4.4
SSE LR LR
comp=Z,434nm,18.4s,MS4.4
HHC Hu-ho-hao-te 43.05 282 *e*P P **17 43 06.3 +0.8**
HHC AP pP 17 43 11.1 -0.4
HHC XP sP 17 43 13.6 -0.3
HHC PP PP 17 44 48.9 +3.5
HHC PCS PcS 17 48 48.0 +0.4
HHC *e*S **S** **17 49 29.5 -0.6**
HHC XS sS 17 49 36.7 -3.2
HHC SS SS 17 52 34.6 -7.5
HHC SCS ScS 17 53 04.1 -0.6
HHC AMB AMB
comp=Z,61nm,1.2s,mb5.2
HHC AMB AMB
comp=Z,268nm,3.9s
HHC LR LR
comp=N,1μm,15.5s,MS4.9
HHC LR LR
comp=E,659nm,15.5s,MS4.9
HHC LR LR
comp=Z,833nm,19.0s,MS4.7
A10A Northport 43.07 64 ⇓P P **17 43 05.2 -0.4**
baz=43,SNR=9.9
G06A Carlson Farm, 43.18 71 ⇑P P **17 43 06.0 -0.5**
baz=43
RSW Rattlesnake Hi 43.20 69 P P **17 43 07.0 +0.3**
HUMO Hull Mountain 43.20 75 *e*P P **17 43 06.8 +0.1**
comp=Z,21nm,1.4s,mb4.7
HAWA Hanford 43.23 69 *e*P P **17 43 06.7 -0.2**
comp=Z,41nm,0.8s,mb5.2
C09A Chrisman Ranch 43.24 66 ⇓P P **17 43 06.8 -0.2**
baz=43,SNR=14
D08A Wollman Farm, 43.25 67 ⇑P P **17 43 07.0 -0.1**
baz=43,SNR=10.0
F07A Phinny Hill Vi 43.26 69 ⇑P P **17 43 07.3 +0.2**
baz=43
EDM Edmonton 43.36 57 *e*P P **17 43 07.7 -0.2**
I05A Bend 43.38 72 ⇑P P **17 43 07.9 -0.2**
baz=43
E08A Dider Farm, El 43.46 68 ⇓P P **17 43 08.6 -0.2**
baz=43,SNR=6.2
B10A Chitwood Farm, 43.60 65 ⇑P P **17 43 09.5 -0.4**
baz=43
D09A Jones Farm, Ri 43.60 67 ⇑P P **17 43 09.7 -0.2**
baz=43,SNR=6.1
MOY Mondy 43.62 301 *e*P P **17 43 10.1 +0.1**
MOY pmax pmax
comp=Z,8.0nm,2.5s,mb4.0
H06A Lindquist Farm 43.63 71 ⇓P P **17 43 10.7 +0.5**
baz=44,SNR=5.5
NEW Newport 43.68 65 *e*P P **17 43 09.7 -0.8**
NEW pmax pmax
comp=Z,23nm,0.8s
NEW Newport 43.68 65 *e*P P **17 43 09.7 -0.8**
comp=Z,23nm,0.8s,mb5.0
GUMO Guam 43.69 222 LR LR 18 03 19.5
comp=Z,233nm,18.3s,MS4.1,baz=37,slow=39
G07A Ruggs Ranch, H 43.74 70 ⇑P P **17 43 11.2 +0.1**
baz=44,SNR=6.3
A11A Hall Mountain, 43.76 64 ⇑P P **17 43 11.2 +0.1**
baz=44,SNR=23
C10A Spilker Farm, 43.80 66 ⇑P P **17 43 11.5 0.0**
baz=44
YBH Yreka Blue Hor 43.84 76 *e*P P **17 43 12.5 +0.6**
YBH pmax pmax
comp=Z,24nm,1.3s
YBH Yreka Blue Hor 43.84 76 *e*P P **17 43 12.5 +0.6**
comp=Z,24nm,1.3s,mb4.8
NJ2 Nanjing 43.87 266 *e*P P **17 43 11.7 -0.5**
NJ2 AP pP 17 43 17.7 -0.6
NJ2 XP sP 17 43 21.1 +0.5
NJ2 PP PP 17 44 56.9 +2.6
NJ2 S **S** **17 49 41.5 -0.8**
NJ2 XS sS 17 49 50.5 -1.7
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
NJ2 AMB AMB
comp=Z,130nm,7.9s
NJ2 LR LR
comp=N,640nm,35.8s,MS4.6
NJ2 LR LR
comp=E,1μm,33.2s,MS4.6
NJ2 LR LR
comp=Z,940nm,39.5s
E09A Wood Farm, Sta 43.98 68 ⇓P P **17 43 12.7 -0.3**
baz=44,SNR=17
F08A Pendleton 43.99 69 ⇓P P **17 43 12.9 -0.2**
baz=44
B11A Sandpoint 44.02 64 ⇑P P **17 43 13.0 -0.3**
baz=44
ALE Alert 44.06 9 P P **17 43 14.0 +0.8**
comp=Z,140nm,0.5s,mb6.0,SNR=14
I06A Prineville 44.13 72 ⇓P P **17 43 14.2 0.0**
baz=44
BTO Baotou 44.14 282 *e*P P **17 43 15.2 +0.8**
G08A Pilot Rock 44.15 70 ⇓P P **17 43 14.4 +0.1**
baz=44,SNR=7.8
H07A Lands Inn, Kim 44.17 71 ⇓P P **17 43 14.2 -0.3**
baz=44
A12A Yaak River Ran 44.18 63 ⇓P P **17 43 14.6 +0.1**
baz=44
D10A Wagner Farm, O 44.21 67 ⇑P P **17 43 14.1 -0.7**
baz=44,SNR=25
C11A Tepee Creek (N 44.39 65 ⇓P P **17 43 15.7 -0.5**
baz=44
K05A Summer Lake 44.40 74 ⇑P P **17 43 16.9 +0.6**
baz=44,SNR=7.3
B12A Libby 44.45 64 ⇑P P **17 43 16.4 -0.3**
baz=44
I07A Izee 44.48 71 ⇑P P **17 43 17.3 +0.2**
baz=44,SNR=16
F09A S2 Ranch, Elgi 44.55 69 ⇓P P **17 43 17.8 +0.3**
baz=44,SNR=6.7
J06A Christmas Vall 44.55 73 ⇓P P **17 43 18.2 +0.6**
baz=44,SNR=10
WDC Whiskeytown Da 44.61 77 *e*P P **17 43 18.4 +0.3**
WDC pmax pmax
comp=Z,31nm,1.5s,mb4.9
WDC Whiskeytown Da 44.61 77 *e*P P **17 43 18.4 +0.4**
comp=Z,31nm,1.5s,mb4.9
E10A Myers Farm, Un 44.61 67 ⇓P P **17 43 18.0 0.0**
baz=44,SNR=14
H08A Prairie City 44.74 70 ⇑P P **17 43 18.7 -0.4**
baz=45
D11A Klaveano Farm, 44.76 66 ⇓P P **17 43 19.2 0.0**
baz=45,SNR=7.6
F10A Beach Ranch, E 44.81 68 ⇓P P **17 43 19.6 0.0**
baz=45,SNR=8.6
G09A Cove 44.86 69 ⇑P P **17 43 20.3 +0.3**
baz=45,SNR=11
A13A Flathead Natio 44.88 63 ⇑P P **17 43 19.9 -0.2**
baz=45
C12B Naegeli Ranch, 44.91 65 ⇑P P **17 43 20.1 -0.3**
baz=45,SNR=29
J07A Hines 44.99 72 ⇓P P **17 43 21.2 +0.1**
baz=45,SNR=7.2
WALA Waterton Lakes 45.10 62 *e*P P **17 43 21.5 -0.3**
comp=Z,1.0nm,0.8s,mb3.7
B13A Whitefish 45.14 64 ⇓P P **17 43 22.1 -0.1**
baz=45
E11A Bogner Ranch, 45.20 67 ⇓P P **17 43 21.9 -0.9**
baz=45
MOD Modoc 45.22 74 *e*P P **17 43 23.8 +0.9**
comp=Z,7.3nm,0.7s,mb4.6
G10A Bishop Farm, J 45.24 69 ⇑P P **17 43 23.1 0.0**
baz=45,SNR=23
H09A Durkee 45.27 70 ⇓P P **17 43 23.3 +0.1**
baz=45,SNR=6.3
D12A Red Ives Fores 45.33 66 ⇑P P **17 43 22.9 -0.8**
baz=45
BMO Blue Mountains 45.38 69 *e*P P **17 43 22.7 -1.4**
comp=Z,21nm,1.1s,mb4.9
K07A Rock Creek Ran 45.42 73 ⇓P P **17 43 24.6 +0.1**
baz=45,SNR=23
A14A Double T Ranch 45.42 62 ⇑P P **17 43 24.0 -0.3**
baz=45,SNR=11
C13A Hot Springs 45.44 64 ⇑P P **17 43 24.3 -0.3**
baz=45,SNR=13
F11A Grangeville 45.49 67 ⇑P P **17 43 25.0 0.0**
baz=45,SNR=6.9
J08A Circle Bar Ran 45.51 72 ⇓P P **17 43 24.5 -0.6**
baz=45
I09A Lost Marbles R 45.60 70 ⇓P P **17 43 25.1 -0.8**
baz=45
G11A Walters Elk Ra 45.69 68 ⇑P P **17 43 26.6 0.0**
baz=46,SNR=20
L07A Adell 45.74 74 ⇓P P **17 43 27.4 +0.3**
baz=46,SNR=10.0
D13A Huson 45.82 65 ⇓P P **17 43 27.4 -0.2**
baz=46,SNR=9.9
B14A Marquette Ranc 45.82 63 ⇓P P **17 43 27.4 -0.2**
baz=46
H10A Noah's Angus R 45.85 69 ⇑P P **17 43 27.7 -0.2**
baz=46,SNR=13
K08A Mann Creek Ran 45.86 72 ⇓P P **17 43 27.6 -0.4**
baz=46,SNR=8.2
C14A Swan Lake 45.87 64 ⇑P P **17 43 27.5 -0.4**
baz=46
WVOR Wild Horse Val 45.93 73 *e*P P **17 43 28.4 -0.2**
WVOR pmax pmax
comp=Z,21nm,1.4s,mb4.9
WVOR Wild Horse Val 45.93 73 *e*P P **17 43 28.4 -0.2**
comp=Z,21nm,1.4s,mb4.9
J09A Fry Pan Ranch, 45.95 71 ⇓P P **17 43 28.9 +0.2**
baz=46,SNR=6.4
F12A Elk City 46.09 67 ⇑P P **17 43 29.2 -0.5**
baz=46
I10A Payette 46.10 70 ⇑P P **17 43 29.8 -0.1**
baz=46
N06A Buffalo Meadow 46.18 75 ⇓P P **17 43 30.9 +0.3**
baz=46,SNR=8.0
M07A Soldier Meadow 46.21 74 ⇑P P **17 43 31.2 +0.4**
baz=46,SNR=18
H11A Donnelly 46.22 69 ⇓P P **17 43 30.5 -0.3**
baz=46
B15A Bradely Ranch, 46.25 63 ⇓P P **17 43 30.6 -0.3**
baz=46,SNR=18
L08A Fields 46.25 73 ⇓P P **17 43 31.2 +0.1**
baz=46
MSO Missoula 46.26 65 *e*P P **17 43 29.8 -1.3**
comp=Z,23nm,1.2s,mb5.0
E13A Victor 46.33 66 ⇑P P **17 43 31.5 -0.2**
baz=46
K09A Rome 46.33 72 ⇓P P **17 43 31.6 -0.1**
baz=46
D14A Greenough 46.38 65 ⇓P P **17 43 31.7 -0.3**
baz=46,SNR=17
BEKR Beckwourth 46.38 77 ⇓P P **17 43 31.7 -0.4**
baz=46
A16A West Butte Ran 46.45 61 ⇓P P **17 43 32.3 -0.3**
baz=46,SNR=6.8
C15A Salmond Ranch, 46.51 63 ⇓P P **17 43 33.1 0.0**
baz=46,SNR=6.3
F13A Darby 46.61 67 ⇓P P **17 43 33.8 0.0**
baz=46,SNR=15
M08A Happy Creek Ra 46.66 74 ⇓P P **17 43 34.2 -0.1**
baz=46
B16A M & M Farms, S 46.68 62 ⇓P P **17 43 33.6 -0.7**
baz=46
N07B Gerlach 46.69 75 ⇑P P **17 43 35.0 +0.4**
baz=46,SNR=8.2
I11A Placerville 46.70 70 ⇑P P **17 43 34.5 -0.1**
baz=46,SNR=6.9
E14A Clinton 46.75 65 ⇓P P **17 43 34.7 -0.2**
baz=47,SNR=22
K10A MacKenzie Ranc 46.80 71 ⇑P P **17 43 35.2 -0.1**
baz=47,SNR=22
A17A Triple J Farms 46.95 61 ⇓P P **17 43 36.1 -0.4**
baz=47
D15A Lincoln 46.96 64 ⇑P P **17 43 36.4 -0.2**
baz=47,SNR=8.8
C16A Fuhringer Ranc 46.99 63 ⇓P P **17 43 36.2 -0.6**
baz=47,SNR=9.6
H12A Diamond D Ranc 46.99 68 ⇓P P **17 43 36.5 -0.4**
baz=47,SNR=5.2
G13A Cobalt 47.05 67 ⇓P P **17 43 36.6 -0.7**
baz=47,SNR=30
MFID Camas Ranch 47.06 70 ⇓P P **17 43 37.3 -0.1**
baz=47,SNR=6.0
O07A Toulon 47.12 75 ⇓P P **17 43 38.2 +0.3**
baz=47,SNR=6.0
F14A Wisdom 47.16 66 ⇓P P **17 43 37.7 -0.4**
baz=47
N08A GE Springer Mi 47.20 74 ⇑P P **17 43 38.8 +0.3**
baz=47,SNR=5.5
E15A Deer Lodge 47.23 65 ⇑P P **17 43 38.0 -0.7**
baz=47,SNR=15
M09A Marrel Ranch, 47.24 73 ⇓P P **17 43 38.6 -0.2**
baz=47
B17A L&G Farms, Che 47.25 62 ⇓P P **17 43 38.1 -0.7**
baz=47
I12A Atlanta 47.26 69 ⇓P P **17 43 38.5 -0.5**
baz=47
K11A Parker Ranch, 47.31 71 ⇑P P **17 43 39.3 0.0**
baz=47
H13A Challis 47.34 68 ⇓P P **17 43 39.3 -0.2**
baz=47,SNR=9.9
A18A Metzger Ranch, 47.44 61 ⇑P P **17 43 39.6 -0.7**
baz=47
L10A Juniper Basin 47.45 72 ⇑P P **17 43 40.9 +0.5**
baz=47,SNR=14
CMB Columbia Colle 47.47 79 *e*P P **17 43 40.9 +0.3**
CMB pmax pmax
comp=Z,27nm,1.5s,mb5.0
CMB Columbia Colle 47.47 79 *e*P P **17 43 40.9 +0.2**
comp=Z,26nm,1.5s,mb5.0
J12A Stokes Ranch, 47.59 70 ⇓P P **17 43 41.6 +0.1**
baz=47,SNR=11
C17A Wharram Farm, 47.64 63 ⇓P P **17 43 41.3 -0.5**
baz=47,SNR=7.3
F15A Butte 47.65 65 ⇓P P **17 43 42.0 +0.1**
baz=48,SNR=8.1
E16A East Helena 47.73 64 ⇓P P **17 43 42.0 -0.6**
baz=48,SNR=9.6
M10A I.L. Ranch, Tu 47.74 73 ⇓P P **17 43 42.9 +0.3**
baz=48,SNR=7.3
WHN Wuhan 47.74 268 P P **17 43 42.3 -0.5**
WHN S **S** **17 50 31.9 -6.1**
WHN LR LR
comp=Z,939nm,21.3s,MS4.7
B18A Beardsley Farm 47.77 61 ⇑P P **17 43 42.2 -0.6**
baz=48
I13A Wildhorse Cree 47.79 69 ⇓P P **17 43 43.3 +0.3**
baz=48,SNR=33
HVS Khovu-Aksy 47.82 303 *c i*P P **17 43 42.8 -0.4**
HVS pmax pmax
comp=Z,199nm,1.7s,mb5.9
HLID Hailey 47.82 69 ⇑P P **17 43 43.0 -0.3**
baz=48
HLID Hailey 47.82 69 *e*P P **17 43 42.8 -0.5**
comp=Z,15nm,1.1s,mb4.9
L11A Cat Creek Ranc 47.83 71 ⇑P P **17 43 43.4 0.0**
baz=48,SNR=14

H14A	Leadore	47.83	67	⇑P	P	17 43 42.6	-0.8
	baz=48						
D17A	Six Diamond Ra	47.95	63	⇓P	P	17 43 44.1	-0.1
	baz=48,SNR=8.3						
EGMT	Eagleton	47.98	62	⇑P	P	17 43 44.1	-0.4
	baz=48						
G15A	Dillon	48.03	66	⇓P	P	17 43 45.0	+0.1
	baz=48,SNR=6.8						
K12A	Draper Farm, C	48.07	70	⇑P	P	17 43 45.7	+0.4
	baz=48,SNR=8.5						
O09A	Fish Creek Ran	48.15	74	⇓P	P	17 43 45.5	-0.3
	baz=48						
I14A	Mackay	48.18	68	⇑P	P	17 43 45.9	-0.1
	baz=48,SNR=18						
F16A	Kennard Place,	48.18	65	⇑P	P	17 43 45.1	-0.9
	baz=48						
E17A	Martinsdale	48.24	64	⇑P	P	17 43 46.2	-0.2
	baz=48,SNR=9.7						
M11A	Holland Ranch,	48.24	72	⇓P	P	17 43 46.8	+0.2
	baz=48,SNR=6.0						
H15A	Lima	48.26	67	⇓P	P	17 43 46.4	-0.3
	baz=48						
G16A	Moss Hill, Enn	48.39	66	⇓P	P	17 43 47.6	0.0
	baz=48,SNR=12						
YULB	Yu-li	48.43	256	eP	P	17 43 48.0	-0.2
	comp=Z,10nm,0.7s,mb5.0						
FFC	Flin Flon	48.43	51	eP	P	17 43 48.1	+0.2
FFC				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
FFC	Flin Flon	48.43	51	eP	P	17 43 48.0	+0.2
	comp=Z,21nm,1.4s,mb5.0						
NVAR	Mina Array Bea	48.52	77	P	P	17 43 48.6	-0.1
	comp=Z,2.4nm,0.6s,mb4.4,baz=291,slow=7.9,SNR=15						
NVAR				PcP	PcP	17 45 14.9	+0.5
	comp=Z,2.8nm,0.7s,baz=288,slow=3.7,SNR=4.0						
F17A	Fitzpatrick Pl	48.66	64	⇓P	P	17 43 49.9	+0.2
	baz=48,SNR=9.1						
E18A	Harlowton	48.71	63	⇑P	P	17 43 50.5	+0.4
	baz=48,SNR=10						
M12A	Wells	48.78	72	⇑P	P	17 43 51.5	+0.7
	baz=49,SNR=5.5						
XAN	Xi'an	48.87	276	P	P	17 43 51.2	-0.3
XAN				AP	pP	17 43 53.4	-4.2
XAN				PP	PP	17 45 43.3	-1.4
XAN				S	S	17 50 53.3	-0.7
XAN				AMB	AMB		
	comp=Z,18nm,1.1s,mb5.0						
XAN				AMB	AMB		
	comp=Z,76nm,21.2s						
XAN				LR	LR		
	comp=N,144nm,26.8s						
XAN				LR	LR		
	comp=E,252nm,21.1s						
XAN				LR	LR		
	comp=Z,578nm,22.8s,MS4.5						
TPUB	Ta-pu	48.91	256	eP	P	17 43 51.0	-0.9
	comp=Z,37nm,1.0s,mb5.4						
G17A	Pierce Place,	48.95	65	⇑P	P	17 43 52.2	+0.2
	baz=49,SNR=5.1						
L13A	Double Diamond	48.96	70	⇓P	P	17 43 51.9	-0.2
	baz=49						
QZH	Quanzhou	48.97	259	P	P	17 43 53.0	+0.6
QZH				S	S	17 50 57.3	+1.7
ELK	Elko	48.99	73	eP	P	17 43 53.5	+1.2
ELK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ELK	Elko	48.99	73	eP	P	17 43 53.5	+1.2
	comp=Z,5.1nm,0.7s,mb4.7						
H16A	Russell Place,	49.02	66	⇓P	P	17 43 52.3	-0.2
	baz=49,SNR=17						
O11A	Cowboy Ranch,	49.10	74	⇑P	P	17 43 53.8	+0.5
	baz=49,SNR=7.2						
F18A	Big Timber	49.20	64	⇑P	P	17 43 54.0	0.0
	baz=49						
M13A	Montello	49.27	71	⇓P	P	17 43 54.4	0.0
	baz=49,SNR=8.4						
I16A	Newdale	49.36	67	⇑P	P	17 43 54.8	-0.4
	baz=49						
R09A	Tonopah	49.40	76	⇓P	P	17 43 55.7	+0.2
	baz=49,SNR=15						
TPH	Tonopah	49.41	77	eP	P	17 43 56.1	+0.5
TPH				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
TPH	Tonopah	49.41	77	eP	P	17 43 56.1	+0.5
	comp=Z,14nm,1.1s,mb4.9						
L14A	Malta	49.42	70	⇑P	P	17 43 55.8	+0.2
	baz=49,SNR=7.3						
Q10A	Clear Creek Ra	49.45	75	⇓P	P	17 43 56.5	+0.6
	baz=49,SNR=8.6						
K15A	Arbon	49.45	69	⇓P	P	17 43 56.0	+0.2
	baz=49,SNR=7.2						
O12A	Currie	49.58	73	⇑P	P	17 43 56.5	-0.4
	baz=49						
H17A	Grant Village	49.59	66	⇓P	P	17 43 57.4	+0.6
	baz=49,SNR=8.7						
S09A	Goldfield	49.62	77	⇑P	P	17 43 57.1	-0.1
	baz=50						
G18A	Lazy EL Ranch,	49.63	64	⇓P	P	17 43 56.5	-0.7
	baz=49						
J16A	Bone	49.64	68	⇑P	P	17 43 57.7	+0.4
	baz=50,SNR=10.0						
IMW	Indian Meadow	49.67	67	eP	P	17 43 57.6	+0.2
	comp=Z,15nm,1.1s,mb4.9						
M14A	Sheep Mountain	49.67	71	⇓P	P	17 43 58.1	+0.6
	baz=50,SNR=6.6						
RRI2	Red Ridge	49.77	68	eP	P	17 43 59.2	+0.9
	comp=Z,6.4nm,0.6s,mb4.8						
I17A	Pilgram Creek	49.87	67	⇓P	P	17 43 59.6	+0.6
	baz=50,SNR=6.5						
FCC	Fort Churchill	49.87	43	eP	P	17 43 57.9	-0.9
FCC				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
FCC	Fort Churchill	49.87	43	eP	P	17 43 57.9	-0.9
	comp=Z,0.9nm,1.0s,mb3.8						
S10A	Tonopah Range,	49.89	76	⇑P	P	17 43 59.5	+0.2
	baz=50,SNR=6.8						
Q11A	Duckwater	49.89	75	⇓P	P	17 43 59.8	+0.6
	baz=50,SNR=7.3						
CWC	Cottonwood Cre	49.90	79	⇓P	P	17 43 59.4	+0.1
	baz=50						
RLMT	Red Lodge	49.92	65	⇑P	P	17 43 58.5	-0.8
	baz=50						
RLMT	Red Lodge	49.92	65	eP	P	17 43 59.5	+0.2
	comp=Z,23nm,0.8s,mb5.2						
K16A	Soda Springs	49.92	68	⇓P	P	17 44 00.4	+1.0
	baz=50,SNR=14						
L15A	Malad City	49.94	70	⇓P	P	17 43 59.0	-0.6
	baz=50						
P12A	McGill	49.96	74	⇑P	P	17 43 59.3	-0.5
	baz=50						
LOHW	Long Hollow	50.03	67	eP	P	17 44 01.0	+0.8
	comp=Z,8.9nm,1.2s,mb4.7						
ISA	Isabella	50.15	80	⇑P	P	17 44 00.7	-0.5
	baz=50						
M15A	Larsen Ranch,	50.23	70	⇑P	P	17 44 01.9	+0.1
	baz=50,SNR=7.2						
R11A	Troy Canyon, C	50.24	75	⇓P	P	17 44 02.0	+0.1
	baz=50,SNR=9.6						
Q12A	Willow Creek R	50.28	74	⇑P	P	17 44 02.4	+0.2
	baz=50,SNR=5.9						
I18A	Diamond G Ranc	50.44	66	⇓P	P	17 44 03.2	-0.2
	baz=50						
P13A	Bates Ranch, G	50.52	73	⇓P	P	17 44 04.1	+0.2
	baz=50						
J18A	Kendall Valley	50.62	67	⇑P	P	17 44 04.5	-0.1
	baz=50,SNR=9.0						
TPNV	Topopah Spring	50.71	77	⇑P	P	17 44 05.5	0.0
	baz=51						
TPNV	Topopah Spring	50.71	77	eP	P	17 44 05.3	-0.2
TPNV				pmax	pmax		
	comp=Z,63nm,1.6s,mb5.3						
TPNV	Topopah Spring	50.71	77	eP	P	17 44 05.3	-0.2
	comp=Z,63nm,1.6s,mb5.3						
LZH	Lanzhou	50.74	281	⇑P	P	17 44 06.5	+0.8
LZH				AP	pP	17 44 09.6	-2.2
LZH				XP	sP	17 44 12.5	-1.7
LZH				PP	PP	17 46 04.2	+2.6
LZH				S	S	17 51 22.1	+2.0
LZH				XS	sS	17 51 26.4	-3.7
LZH				SS	SS	17 54 46.3	-7.9
LZH				AMB	AMB		
	comp=Z,139nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,315nm,4.4s						
LZH				LR	LR		
	comp=N,1μm,16.8s						
LZH				LR	LR		
	comp=Z,2μm,17.2s,MS5.2						
LRMC	Laurel Mountai	50.76	80	⇑P	P	17 44 06.2	+0.4
	baz=51						
ZAA0	Zalesovo Array	50.77	310	eP	P	17 44 04.1	-1.6
ZALV	Zalesovo Beam	50.77	310	P	P	17 44 04.7	-1.0
	comp=Z,3.3nm,0.6s,mb4.4,baz=45,slow=7.7,SNR=20						
ZALV				PcP	PcP	17 45 22.4	0.0
	comp=Z,5.0nm,0.6s,baz=58,slow=2.7,SNR=10						
ZALV				LR	LR	18 06 59.8	
	comp=Z,541nm,19.8s,MS4.6,baz=58,slow=38						
ZALV	Zalesovo Beam	50.77	310	P	P	17 44 04.7	-1.0
ZALV						17 45 22.4	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ZALV				MLR	MLR		
	comp=Z,541nm,19.8s,MS4.6						
L17A	Cokeville	50.78	69	⇑P	P	17 44 05.7	-0.2
	baz=51						
DGMT	Dagmar	50.79	58	⇑P	P	17 44 05.6	-0.3
	baz=51						
DGMT	Dagmar	50.79	58	eP	P	17 44 07.3	+1.4
	comp=Z,97nm,1.5s,mb5.5						
DUG	Dugway	50.79	72	⇑P	P	17 44 06.1	+0.1
	baz=51						
K18A	Toltan Ranch,	50.95	68	⇓P	P	17 44 06.9	-0.2
	baz=51,SNR=9.6						
EDW2	Edwards Air Fo	50.95	80	⇓P	P	17 44 07.1	-0.3
	baz=51						
P14A	Drum Mountains	51.01	72	⇓P	P	17 44 07.8	+0.1
	baz=51,SNR=9.7						
NVS	Novosibirsk	51.02	312	⇓iP	P	17 44 05.5	-2.0
NVS				pmax	pmax		
	comp=Z,89nm,1.7s,mb5.4						
NVS				pmax	pmax		
	comp=N,53nm,1.9s						
NVS				pmax	pmax		
	comp=E,56nm,1.5s						
GTA	Gaotai	51.13	287	⇓P	P	17 44 09.1	+0.5
GTA				AP	pP	17 44 12.2	-2.5
GTA				XP	sP	17 44 15.1	-1.9
GTA				PP	PP	17 46 06.3	+1.2
GTA				S	S	17 51 26.0	+0.7
GTA				XS	sS	17 51 33.2	-2.1
GTA				SS	SS	17 54 58.8	-1.3
GTA				AMB	AMB		
	comp=Z,25nm,1.7s,mb4.9						
GTA				AMB	AMB		
	comp=Z,209nm,6.0s						
GTA				LR	LR		
	comp=N,899nm,15.6s,MS5.0						
GTA				LR	LR		
	comp=E,689nm,15.9s,MS5.0						
GTA				LR	LR		
	comp=Z,868nm,18.6s,MS4.8						
BW06	Boulder Array	51.15	67	⇓P	P	17 44 08.5	-0.3
	baz=51						
PDAR	Pinedale Array	51.15	67	P	P	17 44 08.4	-0.3
	comp=Z,11nm,0.6s,mb5.0,baz=306,slow=3.2,SNR=73						
PDAR				PcP	PcP	17 45 23.9	-0.1
	comp=Z,1.3nm,0.5s,baz=282,slow=4.5,SNR=1.7						
PDAR				LR	LR	18 04 13.1	
	comp=Z,310nm,19.1s,MS4.3,baz=308,slow=34						
S12A	Delamar Landin	51.16	76	⇓P	P	17 44 08.7	-0.1
	baz=51						
T11A	Corn Creek, Al	51.16	76	⇑P	P	17 44 09.1	+0.2
	baz=51,SNR=8.1						
Q14A	Sevier Lake (B	51.26	73	⇓P	P	17 44 09.6	0.0
	baz=51,SNR=12						
M17A	Scullys Gap (B	51.29	69	⇑P	P	17 44 09.3	-0.5
	baz=51						
MWC	Mount Wilson	51.34	81	eP	P	17 44 09.9	-0.3
MWC				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.3						
MWC	Mount Wilson	51.34	81	eP	P	17 44 09.9	-0.3
	comp=Z,47nm,1.2s,mb5.3						
R13A	O'Grain Ranch,	51.34	74	⇑P	P	17 44 10.8	+0.6
	baz=51,SNR=7.4						
L18A	Fontenelle, Gr	51.38	68	⇓P	P	17 44 10.2	-0.2
	baz=51,SNR=7.7						
GSC	Goldstone	51.42	79	⇑P	P	17 44 10.9	+0.1
	baz=51						
GSC	Goldstone	51.42	79	eP	P	17 44 10.5	-0.3
GSC				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
GSC	Goldstone	51.42	79	eP	P	17 44 10.5	-0.3
	comp=Z,7.6nm,0.6s,mb4.8						
N17A	Moffit Pass	51.52	70	⇓P	P	17 44 11.3	-0.2
	baz=51,SNR=6.0						
K19A	Absolon Red Bu	51.53	67	⇓P	P	17 44 10.8	-0.8
	baz=51						
O16A	Springville	51.57	71	⇑P	P	17 44 12.0	+0.1
	baz=51						
BFSC	Mount Baldy St	51.58	81	⇓P	P	17 44 11.7	-0.4
	baz=52						
M18A	Lyman	51.67	69	⇓P	P	17 44 12.4	-0.2
	baz=52						
S13A	Holt Ranch, En	51.79	75	⇓P	P	17 44 13.7	+0.2
	baz=52,SNR=5.7						
TUQ	Turquoise Moun	51.88	78	⇓P	P	17 44 14.1	-0.2
	baz=52						
K20A	Yellowstone Ra	51.93	67	⇑P	P	17 44 14.0	-0.5
	baz=52						
HEC	Hector,Ludlow	52.02	79	⇓P	P	17 44 15.5	+0.2
	baz=52						
O17A	Robinson Place	52.04	70	⇑P	P	17 44 15.1	-0.3
	baz=52						
N18A	Larsen Ranch,	52.18	69	⇓P	P	17 44 16.0	-0.5
	baz=52						
V12A	Nelson	52.36	77	⇓P	P	17 44 18.3	+0.4
	baz=52						
U13A	Pakoon Wash	52.47	76	⇑P	P	17 44 19.2	+0.6
	baz=52,SNR=6.1						
GMRC	Granite Mounta	52.47	79	⇑P	P	17 44 18.5	-0.2
	baz=52						
N19A	John Jarvie Ra	52.53	69	⇓P	P	17 44 18.9	-0.1
	baz=52						
Q16A	Castle Valley	52.58	72	⇓P	P	17 44 19.0	-0.4
	baz=52						
T14A	Hurricane	52.59	75	⇓P	P	17 44 19.6	+0.1
	baz=52						
P18A	Preston Nutter	52.69	71	⇓P	P	17 44 20.9	+0.7
	baz=52,SNR=7.3						
M20A	Sweetwater, Wa	52.74	68	⇑P	P	17 44 21.0	+0.4
	baz=53,SNR=5.2						
PFO	Pinyon Flat Ob	52.74	81	⇑P	P	17 44 20.3	-0.4
	baz=53						
BELC	Belle Mtn.	52.77	80	⇑P	P	17 44 21.2	+0.2
	baz=53						
R16A	Teasdale	52.79	73	⇑P	P	17 44 21.5	+0.5
	baz=53,SNR=6.4						
V13A	Grand Canyon W	52.82	77	⇑P	P	17 44 21.1	-0.1
	baz=53						
SRU	San Rafael	52.84	71	⇑P	P	17 44 21.4	0.0
	baz=53						
L21A	Rawlins	52.92	67	⇑P	P	17 44 22.0	+0.1
	baz=53,SNR=7.8						
U14A	Mt Trumbull	52.95	76	⇓P	P	17 44 22.4	+0.2
	baz=53						
T15A	Red Dirt Ranch	53.05	75	⇑P	P	17 44 23.4	+0.5
	baz=53						
S16A	Weppner Ranch,	53.08	73	⇑P	P	17 44 23.7	+0.5
	baz=53						
Q18A	Rafter H Ranch	53.09	71	⇑P	P	17 44 23.1	0.0
	baz=53,SNR=10						
N20A	Spence Gulch,	53.11	68	⇑P	P	17 44 22.8	-0.5
	baz=53,SNR=8.7						
M21A	Separation Pea	53.15	67	⇑P	P	17 44 23.7	+0.1
	baz=53						
R17A	Hanksville Air	53.17	72	⇑P	P	17 44 23.9	+0.1
	baz=53,SNR=6.0						
IRM	Iron Mountain	53.20	79	⇑P	P	17 44 24.0	0.0
	baz=53						
MONP	Monument Peak	53.24	81	⇓P	P	17 44 24.9	+0.5
	baz=53						
BC3	Big Chuckw Mtn	53.34	80	⇑P	P	17 44 25.1	0.0
	baz=53						
W13A	Hualapai Mount	53.37	77	⇓P	P	17 44 25.3	0.0
	baz=53						
L22A	Ellis Ranch, M	53.43	66	⇑P	P	17 44 23.7	-1.9
	baz=53						
P19A	Cripple Cowboy	53.44	70	⇓P	P	17 44 25.9	+0.2
	baz=53,SNR=11						
U15A	North Rim	53.49	75	⇓P	P	17 44 26.2	+0.1
	baz=53,SNR=8.7						
RSSD	Black Hills	53.50	63	eP	P	17 44 25.7	-0.4
RSSD				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
RSSD	Black Hills	53.50	63	eP	P	17 44 25.7	-0.4
	comp=Z,22nm,1.4s,mb4.9						
V14A	Boquillas Ranc	53.50	76	⇓P	P	17 44 26.5	+0.3
	baz=53,SNR=7.5						
O20A	White River Ci	53.56	69	⇑P	P	17 44 26.5	-0.1
	baz=53						
N21A	Black Mountain	53.59	68	⇑P	P	17 44 26.9	0.0
	baz=53,SNR=5.2						
S17A	Black Ridge (B	53.62	73	⇓P	P	17 44 27.7	+0.7
	baz=54,SNR=15						
R18A	Canyonlands Na	53.69	72	⇓P	P	17 44 27.8	+0.2
	baz=54,SNR=9.4						
Q19A	Hogan Spring (	53.70	71	⇓P	P	17 44 27.6	0.0
	baz=54,SNR=13						
M22A	Cedar Creek Ra	53.73	67	⇑P	P	17 44 28.1	+0.2
	baz=54,SNR=7.6						
X13A	Yucca	53.73	78	⇑P	P	17 44 27.5	-0.4
	baz=54						
W14A	Seligman	53.79	77	⇓P	P	17 44 28.3	-0.1
	baz=54						
V15A	Kaibab Nationa	53.96	76	⇓P	P	17 44 30.3	+0.7
	baz=54,SNR=7.4						
O21A	Pagoda	53.97	68	⇑P	P	17 44 29.7	+0.2
	baz=54						
T17A	Navajo Res., N	54.03	74	⇓P	P	17 44 30.1	+0.1
	baz=54,SNR=6.3						
ULM	Lac du Bonnet	54.07	52	P	P	17 44 30.1	0.0
	comp=Z,6.5nm,0.5s,mb4.8,baz=303,slow=8.1,SNR=8.2						
ULM				PcP	PcP	17 45 34.2	-0.7
	comp=Z,4.7nm,0.7s,baz=303,slow=7.0,SNR=3.2						
ULM				LR	LR	18 07 57.0	
	comp=Z,559nm,19.1s,MS4.6,baz=286,slow=36						
ULM	Lac du Bonnet	54.07	52	eP	P	17 44 29.7	-0.5
	comp=Z,5.5nm,0.6s,mb4.7						
S18A	Hurst Farm, Bl	54.07	72	⇓P	P	17 44 30.4	0.0
	baz=54,SNR=12						
R19A	Curley Farm, L	54.13	71	⇓P	P	17 44 30.7	-0.1
	baz=54						
N22A	Wattenberg Ran	54.19	67	⇑P	P	17 44 31.6	+0.4
	baz=54,SNR=8.4						
CD2	Chengdu	54.20	277	P	P	17 44 31.3	-0.1
CD2				AP	pP	17 44 35.7	-1.9
CD2				XP	sP	17 44 37.6	-2.3
CD2				PCP	PcP	17 45 36.6	+0.9
CD2				PP	PP	17 46 34.5	+1.5
CD2				PCS	PcS	17 49 34.5	-0.7
CD2				S	S	17 52 06.5	-1.0
CD2				XS	sS	17 52 13.1	-4.5
CD2				SS	SS	17 55 46.2	-2.8
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
CD2				AMB	AMB		
	comp=Z,310nm,6.2s						
CD2				LR	LR		
	comp=N,520nm,16.1s						
CD2				LR	LR		
	comp=Z,590nm,20.2s,MS4.6						
U16A	Tuba City	54.39	75	⇓P	P	17 44 32.4	-0.3
	baz=54						
X14A	Yava	54.40	77	⇑P	P	17 44 32.7	-0.1
	baz=54						
T18A	Mexican Hat	54.50	73	⇓P	P	17 44 33.5	-0.1
	baz=54,SNR=6.2						
S19A	Harvey Farm, M	54.55	72	⇓P	P	17 44 34.3	+0.4
	baz=54,SNR=11						
WUAZ	Wupatki	54.65	75	eP	P	17 44 35.1	+0.5
	comp=Z,25nm,1.3s,mb5.1						
W16A	Flagstaff	54.83	76	⇑P	P	17 44 35.8	-0.1
	baz=55						
Y15A	Casa Rosa Ranc	55.09	77	⇑P	P	17 44 38.0	+0.2
	baz=55						
R21A	Cimarron	55.10	70	⇓P	P	17 44 36.7	-1.2
	baz=55						
T19A	Beclabito	55.22	73	⇑P	P	17 44 39.0	+0.3
	baz=55,SNR=9.0						
MVCO	Mesa Verde	55.29	72	⇑P	P	17 44 39.1	-0.1
	baz=55						
MVCO	Mesa Verde	55.29	72	eP	P	17 44 39.9	+0.6
	comp=Z,33nm,1.4s,mb5.2						
AGMN	Agassiz Refuge	55.30	54	eP	P	17 44 38.5	-0.6
	comp=Z,60nm,1.5s,mb5.4						
ISCO	Idaho Springs	55.33	68	eP	P	17 44 40.6	+1.1
ISCO				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
ISCO	Idaho Springs	55.33	68	eP	P	17 44 40.6	+1.1
	comp=Z,13nm,1.1s,mb4.9						
X16A	Lo Mia Camp, P	55.33	76	⇓P	P	17 44 39.8	+0.3
	baz=55						
V18A	Ganado	55.40	74	⇓P	P	17 44 40.5	+0.5
	baz=55						
WMQ	Urumqi	55.42	299	⇓iP	P	17 44 40.7	+0.6
WMQ				XP	sP	17 44 47.1	-1.5
WMQ				PCP	PcP	17 45 37.8	-2.4
WMQ				PP	PP	17 46 45.7	+2.1
WMQ				S	S	17 52 22.8	-0.8
WMQ				XS	sS	17 52 29.6	-4.1
WMQ				SCS	ScS	17 54 26.0	-2.0
WMQ				SS	SS	17 56 07.1	-0.6
WMQ				AMB	AMB		
	comp=Z,36nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,240nm,4.5s						
WMQ				LR	LR		
	comp=N,567nm,23.0s,MS4.7						
WMQ				LR	LR		
	comp=E,420nm,23.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,691nm,21.0s,MS4.7						
GYA	Guiyang	55.43	271	⇓iP	P	17 44 40.0	-0.4
GYA				PCP	PcP	17 45 41.2	+0.7
GYA				PP	PP	17 46 45.9	+1.8
GYA				S	S	17 52 22.5	-1.6
GYA				SS	SS	17 56 06.4	-2.2
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,140nm,5.7s						
GYA				LR	LR		
	comp=N,880nm,19.7s,MS5.0						
GYA				LR	LR		
	comp=E,960nm,18.6s,MS5.0						
GYA				LR	LR		
	comp=Z,840nm,18.1s,MS4.9						
Y16A	Circle Bar Ran	55.66	77	⇑P	P	17 44 42.3	+0.3
	baz=56						
KURK	Kurchatov	55.76	310	P	P	17 44 42.6	+0.2
	comp=Z,343nm,0.8s,mb6.4,SNR=8.1						
KURK	Kurchatov	55.76	310	P	P	17 44 42.3	-0.1
	SNR=25						
KURK	Kurchatov	55.76	310	P	P	17 44 42.5	+0.1
	comp=Z,28nm,0.6s,mb5.5,baz=50,slow=6.8,SNR=56						
KURK				PcP	PcP	17 45 41.4	+0.1
	comp=Z,4.7nm,0.6s,baz=49,slow=3.4,SNR=3.9						
KURK	Kurchatov	55.76	310	P	P	17 44 42.5	+0.1
KURK						17 45 41.4	
KURK				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.5						
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KURK	Kurchatov	55.76	310	eP	P	17 44 42.0	-0.4
	comp=Z,53nm,0.9s,mb5.6						
115A	Sonoran Desert	55.99	78	⇓P	P	17 44 44.7	+0.4
	baz=56						
214A	Organ Pipe Nat	56.13	79	⇓P	P	17 44 45.0	-0.4
	baz=56						
Y17A	Roosevelt	56.18	77	⇑P	P	17 44 46.0	+0.3
	baz=56,SNR=5.4						
MK31	Makanchi Array	56.44	304	P	P	17 44 46.4	-0.9
MK31	Makanchi Array	56.44	304	eP	P	17 44 46.0	-1.3
MKAR	Makanchi Array	56.44	304	P	P	17 44 46.3	-1.0
	comp=Z,13nm,0.6s,mb5.1,baz=52,slow=7.0,SNR=115						
MKAR				PcP	PcP	17 45 43.7	-0.4
	comp=Z,2.5nm,0.6s,baz=30,slow=6.6,SNR=2.1						
MKAR				LR	LR	18 10 41.0	
	comp=Z,256nm,18.3s,MS4.3,baz=303,slow=38						
MKAR	Makanchi Array	56.44	304	P	P	17 44 46.3	-1.0
MKAR						17 45 43.7	
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,256nm,18.3s						
Y18A	Canyon Day Jun	56.62	76	⇓P	P	17 44 49.1	+0.3
	baz=56						
X19A	St. Johns	56.65	75	⇑P	P	17 44 49.1	+0.1

baz=56
OGNE Ogallala 56.66 65 *e*P **P 17 44 49.7 +0.7**
comp=Z,103nm,1.4s,mb5.7
SDCO Great Sand Dun 56.73 70 *e*P **P 17 44 50.1 +0.6**
comp=Z,30nm,1.5s,mb5.1
Y19A Nutrioso 56.98 75 ⇓P **P 17 44 52.0 +0.6**
baz=57
117A Oracle 57.00 78 ⇓P **P 17 44 51.7 +0.2**
baz=57
TUC Tucson 57.15 78 *e*P **P 17 44 53.3 +0.7**
TUC pmax pmax
comp=Z,36nm,1.8s,mb5.1
TUC Tucson 57.15 78 *e*P **P 17 44 53.3 +0.7**
comp=Z,36nm,1.8s,mb5.1
Z19A T-Link Ranch, 57.42 76 ⇓P **P 17 44 54.7 +0.2**
baz=57
118A Homack Ranch, 57.43 77 ⇑P **P 17 44 54.9 +0.3**
baz=57,SNR=7.5
217A Green Valley 57.49 78 ⇑P **P 17 44 54.8 -0.3**
baz=57
ARCES ARCESS Array B 57.74 347 P **P 17 44 56.0 -0.2**
comp=Z,9.6nm,0.7s,mb5.0,baz=31,slow=7.3,SNR=29
ARCES PcP PcP 17 45 48.5 -0.3
comp=Z,5.7nm,0.7s,baz=15,slow=5.3,SNR=3.8
ARCES LR LR 18 10 40.5
comp=Z,426nm,19.1s,MS4.6,baz=15,slow=37
ARCES ARCESS Array B 57.74 347 P **P 17 44 56.0 -0.2**
ARCES 17 45 48.5
ARCES pmax pmax
comp=Z,10.0nm,0.7s
ARCES pmax pmax
comp=Z,6.0nm,0.7s
ARCES MLR MLR
comp=Z,426nm,19.1s
ARE0 ARCESS Array S 57.74 347 *e*P **P 17 44 56.3 +0.1**
EYMN Ely 57.75 52 *e*P **P 17 44 55.1 -1.5**
comp=Z,11nm,0.7s,mb5.0
119A Ashpeak Ranch, 57.76 76 ⇑P **P 17 44 56.9 +0.1**
baz=58
218A Dragoon 57.84 78 ⇑P **P 17 44 57.2 -0.3**
baz=58
ANMO Albuquerque 58.02 73 P **P 17 44 59.8 +1.1**
ANMO pmax pmax
comp=Z,18nm,1.6s
ANMO Albuquerque 58.02 73 *e*P **P 17 44 59.1 +0.5**
comp=Z,18nm,1.6s,mb4.8
BVA0 Borovoye Array 58.05 316 *i*P **P 17 44 58.2 -0.4**
BVA0 pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BVAR Borovoye Array 58.05 316 P **P 17 44 58.6 0.0**
comp=Z,40nm,0.6s,mb5.6,baz=56,slow=7.1,SNR=235
BVAR Borovoye Array 58.05 316 P **P 17 44 58.6 0.0**
BVAR pmax pmax
comp=Z,40nm,0.6s
BRVK Borovoye 58.07 316 P **P 17 44 58.5 -0.2**
comp=Z,590nm,0.5s,SNR=38
BRVK Borovoye 58.07 316 P **P 17 44 59.1 +0.4**
SNR=20
BRVK Borovoye 58.07 316 *e*P **P 17 44 58.7 0.0**
BRVK pmax pmax
comp=Z,53nm,0.6s,mb5.8
BRVK Borovoye 58.07 316 *e*P **P 17 44 58.7 0.0**
comp=Z,53nm,0.6s,mb5.8
318A Bisbee 58.24 78 ⇑P **P 17 44 60.0 -0.3**
baz=58
219A White Tail Can 58.31 77 ⇑P **P 17 45 00.1 -0.7**
baz=58
319A Douglas 58.72 78 ⇓P **P 17 45 03.0 -0.6**
baz=59
QIZ Qiongzhong 58.80 262 P **P 17 45 04.6 +0.4**
QIZ AP pP 17 45 07.0 -3.4
QIZ S **S 17 53 09.6 +1.1**
QIZ XS sS 17 53 15.3 -3.4
QIZ SS SS 17 57 03.9 +2.2
QIZ AMB AMB
comp=Z,15nm,1.2s,mb4.9
QIZ LR LR
comp=N,212nm,17.2s,MS4.5
QIZ LR LR
comp=E,216nm,17.6s,MS4.5
QIZ LR LR
comp=Z,214nm,21.9s,MS4.2
KMI Kunming 58.87 272 P **P 17 45 03.8 -0.9**
KMI AP pP 17 45 08.2 -2.7
KMI XP sP 17 45 09.9 -3.3
KMI PP PP 17 47 16.0 +1.3
KMI S **S 17 53 06.2 -3.2**
KMI XS sS 17 53 14.1 -5.5
KMI SS SS 17 57 03.2 +0.6
KMI AMB AMB
comp=Z,17nm,1.1s,mb5.0
KMI AMB AMB
comp=Z,101nm,3.5s
KMI LR LR
comp=N,370nm,15.2s,MS4.8
KMI LR LR
comp=E,504nm,16.6s,MS4.8
KMI LR LR
comp=Z,356nm,16.6s,MS4.6
SVE Sverdlovsk 59.33 324 ⇓*e*P **P 17 45 08.4 +1.0**
SVE *e* 17 54 49.5
SVE *e*SS SS 17 57 04.7 -3.7
SVE pmax pmax
comp=Z,44nm,1.8s,mb5.2
SVE MLR MLR
comp=Z,742nm,19.0s,MS4.8
CBKS Cedar Bluff 59.40 65 *e*P **P 17 45 08.2 0.0**
CBKS pmax pmax
comp=Z,69nm,1.3s,mb5.5
CBKS Cedar Bluff 59.40 65 *e*P **P 17 45 08.2 0.0**
comp=Z,69nm,1.3s,mb5.5
ARU Arti 60.39 325 P **P 17 45 14.6 -0.1**
comp=Z,152nm,0.6s,mb6.2,SNR=8.6
ARU Arti 60.39 325 *c i*P **P 17 45 14.5 -0.2**
ARU *e* 17 47 25.4
ARU *e*S **S 17 53 29.9 +1.7**
ARU SS SS 17 57 32.2 +7.1
ARU pmax pmax
comp=Z,52nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,567nm,21.0s,MS4.7
ARU Arti 60.39 325 *e*P **P 17 45 14.4 -0.4**
comp=Z,18nm,0.8s,mb5.2
AMTX Amarillo 60.94 70 *e*P **P 17 45 19.8 +1.0**
comp=Z,136nm,2.1s,mb5.7
SCIA State Center 60.94 58 *e*P **P 17 45 19.3 +0.6**
comp=Z,18nm,0.5s,mb5.5
JFWS Jewell Farm 61.82 56 P **P 17 45 26.5 +1.8**
JFWS pmax pmax
comp=Z,8.0nm,0.5s,mb5.1
JFWS Jewell Farm 61.82 56 *e*P **P 17 45 23.7 -1.0**
comp=Z,8.3nm,0.5s,mb5.1
MOR8 Moi Rana 62.30 351 *e*S **P 17 45 27.2 -0.3**
TKM2 Tokmak 2 62.56 305 P **P 17 45 29.6 0.0**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
TKM2 Tokmak 2 62.56 305 *e*P **P 17 45 29.4 -0.2**
comp=Z,9.7nm,0.8s,mb5.0
WMOK Wichita Mounta 62.76 68 P **P 17 45 31.0 0.0**
WMOK pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
WMOK Wichita Mounta 62.76 68 *e*P **P 17 45 30.7 -0.3**
comp=Z,8.3nm,0.7s,mb5.0
USP Ospenovka 62.88 306 P **P 17 45 31.9 +0.2**
SNR=19
LSA Lhasa 62.91 284 P **P 17 45 33.4 +1.3**
LSA XS sS 17 54 12.0 +0.9
LSA AMB AMB
comp=Z,40nm,1.0s,mb5.5
LSA AMB AMB
comp=Z,310nm,5.0s
LSA LR LR
comp=N,260nm,18.0s,MS4.6
LSA LR LR
comp=E,290nm,18.0s,MS4.6
LSA LR LR
comp=Z,520nm,19.0s,MS4.7
CHMS Chumysh 62.94 305 P **P 17 45 32.6 +0.5**
SNR=5.2
KBK Karagaybulak 63.08 305 P **P 17 45 33.8 +0.7**
SNR=8.8
FRU Bishkek 63.13 305 *e*P **P 17 45 33.0 -0.4**
FRU pmax pmax
comp=Z,90nm,2.1s,mb5.5
AAK Ala-Archa 63.33 305 P **P 17 45 34.9 +0.1**
comp=Z,69nm,1.0s,mb5.7,SNR=11
AAK Ala-Archa 63.33 305 P **P 17 45 35.1 +0.4**
SNR=11
AAK Ala-Archa 63.33 305 P **P 17 45 35.0 +0.2**
SNR=11
AAK Ala-Archa 63.33 305⇑*e*P **P 17 45 34.9 +0.1**
KZA Kyzart 63.34 304 P **P 17 45 35.5 +0.7**
SNR=5.8
SCHQ Schefferville 63.43 34 P **P 17 45 34.7 -0.5**
comp=Z,6.8nm,0.5s,mb5.0,baz=358,slow=7.4,SNR=14
SCHQ LR LR 18 15 54.3
comp=Z,711nm,19.6s,MS4.8,baz=315,slow=38
SCHQ Schefferville 63.43 34 *e*P **P 17 45 34.9 -0.3**
comp=Z,52nm,1.3s,mb5.5
TXAR Lajitas Array 63.61 75 P **P 17 45 36.6 -0.2**
comp=Z,9.2nm,0.9s,mb4.8,baz=302,slow=4.0,SNR=52
TXAR Lajitas Array 63.61 75 P **P 17 45 36.6 -0.2**
TXAR pmax pmax
comp=Z,9.0nm,0.9s
EKS2 Erkin-Say 63.68 306 P **P 17 45 37.3 +0.3**
SNR=17
EKS2 Erkin-Say 63.68 306 *e*P **P 17 45 37.1 0.0**
comp=Z,13nm,0.8s,mb5.0
HDIL Hopedale 63.99 57 *e*P **P 17 45 39.3 +0.1**
comp=Z,37nm,0.4s,mb5.8
AML Almayashu 64.11 305 P **P 17 45 40.8 +0.9**
SNR=11
CCM Cathedral Cave 64.72 60 *e*P **P 17 45 42.4 -1.5**
CCM pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
CCM Cathedral Cave 64.72 60 *e*P **P 17 45 42.4 -1.6**
comp=Z,5.4nm,0.4s,mb4.9
KK31 Karatay Array 65.02 308 *i*P **P 17 45 44.9 -0.9**
KK31 pmax pmax
comp=Z,12nm,0.7s,mb5.0
KK31 Karatay Array 65.02 308 *i*P **P 17 45 44.0 -1.8**
JCT Junction City 65.15 72 P **P 17 45 47.0 +0.1**
JCT pmax pmax
comp=Z,25nm,1.2s,mb5.1
JCT Junction City 65.15 72 *e*P **P 17 45 46.5 -0.3**
comp=Z,25nm,1.3s,mb5.1
AKTK Aktyubinsk 65.18 320 P **P 17 45 46.8 +0.1**
AKTO Aktyubinsk 65.18 320 P **P 17 45 46.8 +0.1**
comp=Z,15nm,0.6s,mb5.2,baz=55,slow=6.1,SNR=50
AKTO Aktyubinsk 65.18 320 P **P 17 45 46.8 +0.1**
AKTO pmax pmax
comp=Z,15nm,0.6s,mb5.2
AB31 Akbulak array 65.30 319 P **P 17 45 47.4 -0.1**
AB31 pmax pmax
comp=Z,17nm,0.6s,mb5.2
SHL Shillong 65.40 281 *i*P **P 17 45 49.5 +1.0**
CHTO Chiang Mai 65.86 270 P **P 17 45 51.3 -0.2**
SNR=7.6
CHTO Chiang Mai 65.86 270 P **P 17 45 50.7 -0.8**
CHTO pmax pmax
comp=Z,12nm,0.9s,mb4.9
CHTO Chiang Mai 65.86 270 *e*P **P 17 45 50.7 -0.9**
comp=Z,12nm,0.8s,mb5.0
MIAR Mount Ida 65.92 65 *e*P **P 17 45 51.1 -0.6**
MIAR pmax pmax
comp=Z,25nm,1.2s,mb5.1
MIAR Mount Ida 65.92 65 *e*P **P 17 45 51.1 -0.7**
comp=Z,25nm,1.2s,mb5.1
CMAR Chiang Mai Arr 66.12 270 P **P 17 45 52.8 -0.5**
comp=Z,6.4nm,0.6s,mb4.8,baz=28,slow=7.1,SNR=70
CMAR LR LR 18 18 43.6
comp=Z,230nm,19.1s,MS4.4,baz=145,slow=40
CMAR Chiang Mai Arr 66.12 270 P **P 17 45 52.8 -0.4**
CMAR pmax pmax
comp=Z,6.0nm,0.6s
CMAR MLR MLR
comp=Z,230nm,19.1s
CMAR Chiang Mai Arr 66.12 270 P **P 17 45 52.8 -0.5**
CMAR LR LR 18 18 43.6
TAPN Taplejung 66.69 285 *e*P **P 17 45 56.8 0.0**
comp=Z,181nm,1.6s,mb5.8
ODAN Odare 67.25 285 *e*P **P 17 46 00.0 -0.3**
comp=Z,51nm,1.2s,mb5.4
JIRN Jiri 67.40 286 *e*P **P 17 46 01.7 +0.4**
comp=Z,61nm,0.8s,mb5.7
GUN Gumba 67.41 287 *e*P **P 17 46 01.5 +0.1**
comp=Z,36nm,0.6s,mb5.5
NB2 NORSAR Subarra 67.64 351 P **P 17 46 02.0 -0.3**
comp=Z,23nm,1.0s,mb5.2,baz=11,slow=6.5
NOA NORSAR Array B 67.64 351 P **P 17 46 02.3 0.0**
comp=Z,4.3nm,0.5s,mb4.7,baz=12,slow=6.3,SNR=26
NOA LR LR 18 14 32.5
comp=Z,193nm,20.4s,MS4.3,baz=270,slow=35
NOA NORSAR Array B 67.64 351 P **P 17 46 02.3 0.0**
NOA pmax pmax
comp=Z,4.0nm,0.5s
NOA MLR MLR
comp=Z,193nm,20.4s
RAMN Ramite 67.67 286 *e*P **P 17 46 02.8 -0.2**
comp=Z,68nm,0.7s,mb5.8
MOS Moscow 67.69 335 *e*P **P 17 45 59.7 -3.0**
MOS pmax pmax
comp=Z,60nm,0.8s,mb5.7
MOS MLR MLR
comp=Z,800nm,19.0s,MS5.0
VSU Vasula 67.78 342⇑*i*P **P 17 46 03.9 +0.7**
VSU pmax pmax
comp=Z,49nm,1.3s,mb5.4
KKN Kakani 67.86 287 *e*P **P 17 46 04.3 +0.1**
comp=Z,42nm,0.5s,mb5.7
KKN Kakani 67.86 287 *e*P **P 17 46 04.3 +0.1**
KKN pmax pmax
comp=Z,42nm,0.5s,mb5.7
PKI Pulchoki 67.94 287 *e*P **P 17 46 04.7 0.0**
comp=Z,72nm,1.0s,mb5.7
PKI Pulchoki 67.94 287 *e*P **P 17 46 04.8 +0.1**
PKI pmax pmax
comp=Z,42nm,0.7s,mb5.6
PKI Pulchoki 67.94 287 *e*P **P 17 46 04.8 +0.1**
comp=Z,42nm,0.7s,mb5.6
PKIN Phulchoki 67.94 287 *e*P **P 17 46 04.8 +0.1**
comp=Z,42nm,0.7s,mb5.6
GKN Gorkha 68.10 288 *e*P **P 17 46 05.5 -0.2**
comp=Z,68nm,1.1s,mb5.6
DMN Daman 68.10 287 *e*P **P 17 46 05.9 +0.2**
comp=Z,28nm,0.6s,mb5.5
OXF Oxford 68.30 62 *e*P **P 17 46 06.5 -0.4**
OXF pmax pmax
comp=Z,18nm,0.4s,mb5.5
OXF Oxford 68.30 62 *e*P **P 17 46 06.5 -0.4**
comp=Z,18nm,0.4s,mb5.5
DANN Dangsing 68.37 289 *e*P **P 17 46 07.5 +0.1**
comp=Z,33nm,0.7s,mb5.5
OBN Obninsk 68.53 335⇑*i*P **P 17 46 08.0 0.0**
OBN *i* 17 46 32.9
OBN pmax pmax
comp=Z,55nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,500nm,17.0s,MS4.8
OBN Obninsk 68.53 335⇑*i*P **P 17 46 08.1 +0.1**
KOLN Koldanda 68.89 288 *e*P **P 17 46 10.4 -0.3**
comp=Z,15nm,0.6s,mb5.1
KONO Kongsberg 69.17 351⇑*e*P **P 17 46 12.2 +0.3**
SSPA Standing Stone 69.77 50 *e*P **P 17 46 15.4 -0.6**
comp=Z,9.3nm,0.6s,mb4.9
SMLA Simla 70.22 295 *e*P **P 17 46 17.9 -1.0**
SMLA AMb AMB 17 46 20.1
comp=Z,47nm,2.2s,mb5.0
DDI Dehra Dun 70.31 294 *ex* x 17 46 11.7
BOK Bokaro 70.41 284 *e*P **P 17 46 20.1 0.0**
BOK AMb AMB 17 46 23.1
comp=Z,36nm,1.1s,mb5.2
MNK Minsk 71.23 340⇑*e*P **P 17 46 23.0 -1.6**
MNK pmax pmax
comp=Z,140nm,1.0s,mb5.8
TAOE Nuku Hiva Isla 71.69 131 *e*LR LR 18 08 16.5
comp=Z,2µm,22.8s
KBL Kabul 72.18 303 *e*P **P 17 46 29.3 -1.3**
KBL pmax pmax
comp=Z,17nm,0.7s,mb5.1
KBL Kabul 72.18 303 *e*P **P 17 46 29.3 -1.3**
comp=Z,17nm,0.7s,mb5.1
SUW Suwalki 72.65 342 *e*P **P 17 46 33.7 +0.6**
SUW Suwalki 72.65 342 *e*P **P 17 46 33.7 +0.6**
AKASG Malin Array Be 74.42 337 P **P 17 46 43.2 -0.4**
comp=Z,5.3nm,0.5s,mb4.8,baz=25,slow=5.8,SNR=18
AKASG LR LR 18 23 14.4
comp=Z,355nm,19.1s,MS4.7,baz=20,slow=39
AKASG Malin Array Be 74.42 337 P **P 17 46 43.2 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG MLR MLR
comp=Z,355nm,19.1s
AKBB Malin Array Si 74.42 337 *e*P **P 17 46 43.3 -0.3**
KIEV Kiev 74.43 337 *e*P **P 17 46 43.5 -0.1**
KIEV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIEV Kiev 74.43 337 *e*P **P 17 46 43.5 -0.1**
comp=Z,19nm,1.0s,mb5.0
BATI Baumata 74.43 231 P **P 17 46 43.4 -0.6**
comp=Z,12nm,0.6s,mb5.0,baz=98,slow=3.1,SNR=12
CTA Charters Tower 74.47 206 *e*P **P 17 46 43.4 -0.7**
comp=Z,6.9nm,0.6s,mb4.8
CTA Charters Tower 74.47 206 *e*P **P 17 46 43.4 -0.7**
CTA pmax pmax
comp=Z,7.0nm,0.6s
BSEG Bad Segeberg 74.72 350 *e*P **P 17 46 45.3 +0.1**
BSEG pmax pmax
comp=Z,47nm,1.5s,mb5.2
BSEG Bad Segeberg 74.72 350 *e*P **P 17 46 45.3 +0.1**
comp=Z,47nm,1.5s,mb5.2
ABKT Ailbek 75.02 312 P **P 17 46 47.3 0.0**
comp=Z,120nm,0.7s,mb5.9,SNR=12
AJM Ajmer 75.17 294 *e*P **P 17 46 47.9 -0.4**
AJM AMb AMB 17 46 50.9
comp=Z,30nm,1.5s,mb5.0
PPT Papeete 75.41 144 *e*LR LR 18 09 50.6
comp=Z,507nm,22.2s,baz=343
PPT Papeete 75.41 144 LR LR 18 16 58.3
comp=Z,388nm,18.1s,MS4.8,baz=326,slow=33
MAK Makhachkala 75.45 322 *e*P **P 17 46 56.4 +6.7**
MAK *e* 17 47 06.7
MAK *e*PPP 17 51 29.0
MAK *e*S S 17 56 30.3 +1.7
MAK pmax pmax
comp=Z,369nm,1.0s,mb6.3
MAK MLR MLR
comp=Z,692nm,20.0s,MS5.0
RUE Ruedersdorf 75.71 347 *e*P **P 17 46 51.4 +0.5**
comp=Z,97nm,1.8s,mb5.4
BHPL Bhopal 75.97 289 *e*P **P 17 46 52.1 -0.9**
BHPL AMb AMB 17 46 55.0
comp=Z,49nm,1.4s,mb5.2
NRDL Niedersach Rie 76.16 350 *e*P **P 17 46 53.7 +0.2**
comp=Z,27nm,1.6s,mb4.9
KIV Kislovodsk 76.40 326 *e*P **P 17 46 55.5 +0.4**
KIV *e* 17 47 07.1
KIV *e*S S 17 56 45.4 +6.3
KIV pmax pmax
comp=Z,16nm,0.9s,mb5.0
KIV MLR MLR
comp=Z,239nm,20.0s,MS4.5
KIV Kislovodsk 76.40 326 *e*P **P 17 46 55.9 +0.8**
comp=Z,12nm,0.7s,mb4.9
LVV L'vov 76.44 340 *e*P **P 17 46 55.0 -0.2**
VIS Vishakhapatnam 76.52 281 *e*P **P 17 46 55.7 -0.4**
VIS AMb AMB 17 46 57.7
comp=Z,30nm,1.0s,mb5.2
NGP Nagpur 76.57 287 *e*P **P 17 46 54.1 -2.2**
NGP AMb AMB 17 46 56.4
comp=Z,30nm,1.9s,mb4.9
IBBN Ibbenburen 76.60 351 *e*P **P 17 46 56.0 0.0**
comp=Z,120nm,1.8s,mb5.5
CLZ Clausthal 76.77 349 *e*P **P 17 46 57.2 +0.2**
CLZ pmax pmax
comp=Z,36nm,1.5s,mb5.1
CLZ Clausthal 76.77 349 *e*P **P 17 46 57.2 +0.2**
comp=Z,36nm,1.5s,mb5.1
KWP Kalwaria 76.90 341 *e*P **P 17 46 59.1 +1.3**
KWP Kalwaria 76.90 341⇑*i*P **P 17 46 58.8 +1.0**
KWP Kalwaria 76.90 341 *e*P **P 17 46 59.1 +1.3**
OJC Ojcow 76.91 343 *e*P **P 17 46 58.4 +0.6**
KSP Ksiaz 76.92 345 *e*P **P 17 46 59.0 +1.1**
KSP Ksiaz 76.92 345 *e*P **P 17 46 58.2 +0.3**
CLL Collm 76.96 348⇑*i*P **P 17 46 58.7 +0.6**
CLL pmax pmax
comp=Z,31nm,1.5s,mb5.0
CLL MLR MLR
comp=Z,500nm,21.7s,MS4.8
CLL Collm 76.96 348 *e*P **P 17 46 57.6 -0.5**
comp=Z,26nm,1.3s,mb5.0
CLL Collm 76.96 348⇑*i*P **P 17 46 58.7 +0.6**
comp=Z,31nm,1.5s,mb5.0
CLL LmV 17 18 00.0
comp=Z,500nm,21.7s
CLL *es*P sP 17 47 04.0 -2.7
CLL LmV 17 58 00.0
comp=Z,300nm,19.7s
BRG Berggiesshubel 77.25 347 *e*P **P 17 46 59.8 +0.1**
BRG pmax pmax
comp=Z,11nm,1.1s,mb4.7
BRG Berggiesshubel 77.25 347 *e*P **P 17 46 59.4 -0.3**
comp=Z,19nm,1.1s,mb4.9
BRG Berggiesshubel 77.25 347 *e*P **P 17 46 59.8 +0.1**
comp=Z,19nm,1.1s,mb4.9
FBE Freiberg 77.29 347 *e*P **P 17 46 59.9 0.0**
comp=Z,51nm,1.5s,mb5.2
UPC Upice 77.29 345⇓*e*P **P 17 47 00.3 +0.3**
DPC Dobruska-Polom 77.39 345⇓*i*P **P 17 47 01.3 +0.8**
DPC *e*PCP PcP 17 47 12.9 +1.9
STHS Stebnicka Huta 77.40 342 *e*P **P 17 47 01.5 +0.9**
STHS pmax pmax
comp=Z,12nm,0.8s,mb4.9
STHS Stebnicka Huta 77.40 342 *e*P **P 17 47 01.5 +0.9**
comp=Z,12nm,0.8s,mb4.9
ANN Anapa 77.45 330 *e*P **P 17 46 57.1 -3.8**
ANN pmax pmax
comp=Z,46nm,1.4s,mb5.2
PVCC Panska Ves 77.49 346⇓*e*P **P 17 47 01.2 +0.1**
OKC Ostrava-Krasne 77.58 344⇓*e*P **P 17 47 02.4 +0.8**
KOLS Kolonicke sedl 77.65 341 *e*P **P 17 47 02.8 +0.8**
KOLS pmax pmax
comp=Z,14nm,1.0s,mb4.8
KOLS Kolonicke sedl 77.65 341 *e*P **P 17 47 02.8 +0.8**
comp=Z,14nm,1.0s,mb4.8
MOX Moxa 77.79 348 *e*P **P 17 47 03.5 +0.7**
comp=Z,21nm,1.5s,mb4.8
MOX Moxa 77.79 348 *e*P **P 17 47 03.5 +0.7**
MOX pmax pmax
comp=Z,21nm,1.5s,mb4.8
MOX Moxa 77.79 348 *e*P **P 17 47 02.6 -0.2**
comp=Z,16nm,1.5s,mb4.7
UBBA Unterbreizbach 77.82 349 *e*P **P 17 47 02.7 -0.2**
comp=Z,30nm,1.7s,mb5.0
CRVS Cervenica-Dubn 77.85 341 *e*P **P 17 47 04.4 +1.3**
CRVS pmax pmax
comp=Z,25nm,1.4s,mb5.0
CRVS Cervenica-Dubn 77.85 341 *e*P **P 17 47 04.4 +1.3**
comp=Z,25nm,1.4s,mb5.0
WERD Werda 77.89 348 *e*P **P 17 47 03.3 0.0**
comp=Z,44nm,1.7s,mb5.1
TANN Tannenbergstha 77.91 348 *e*P **P 17 47 03.5 +0.1**
comp=Z,47nm,1.7s,mb5.1
UZH Uzhgorod 77.94 341 *c i*P **P 17 47 04.0 +0.4**
UZH *i* 17 47 12.0
UZH *e* 17 50 08.6
KIS Kishinev 77.95 336 *e*P **P 17 47 03.0 -0.7**
KIS MLR MLR
comp=N,400nm,19.0s
KIS MLR MLR
comp=Z,400nm,19.0s,MS4.8
KIS MLR MLR
comp=Z,400nm,19.0s
KIS Kishinev 77.95 336 *e*P **P 17 47 03.0 -0.7**
KIS *e*L 18 19 40.0
KIS LRM 18 24 32.0
comp=Z,400nm,19.0s
GUNZ Gunzen 77.97 348 *e*P **P 17 47 03.9 +0.1**
comp=Z,62nm,1.8s,mb5.2
PSI Prapat 78.02 260 P **P 17 47 04.1 -0.5**
comp=Z,13nm,0.6s,mb5.0,baz=22,slow=7.3,SNR=20
PSI Prapat 78.02 260 P **P 17 47 04.1 -0.5**
PSI pmax pmax
comp=Z,13nm,0.6s,mb5.0
PRU Pruhonice 78.02 346⇓*i*P **P 17 47 04.5 +0.5**
PRU AMS AMS 18 19 30.0
comp=Z,400nm,27.1s
WERN Wernitzgruen 78.04 348 *e*P **P 17 47 04.3 +0.2**
comp=Z,78nm,1.9s,mb5.3
NKC Novy Kostel 78.08 348⇓*e*P **P 17 47 04.9 +0.5**
AKL Akola 78.14 288 *ex* x 17 46 16.3
AKL AMb AMB 17 47 07.3
comp=Z,25nm,1.8s,mb4.8
BUR08 Bucovina Ar. S 78.23 339 *e*P **P 17 47 05.7 +0.5**
BURAR Bucovina Array 78.25 339⇑*i*P **P 17 47 05.8 +0.4**
BURAR Bucovina Array 78.25 339⇑P **P 17 47 05.8 +0.4**
BEBN Eben Emael 78.29 352 P **P 17 47 06.1 +0.6**
HGN Heimansgroeve 78.30 352 *e*P **P 17 47 05.2 -0.4**
comp=Z,42nm,2.0s,mb5.0

WRAB Tennant Creek 78.32 217 P **P** 17 47 05.9 0.0
comp=Z,80nm,0.8s,mb5.7,SNR=5.4
WRAB Tennant Creek 78.32 217 P **P** 17 47 04.7 -1.2
WRAB pmax pmax
comp=Z,19nm,1.1s,mb4.9
WRAB Tennant Creek 78.32 217 *e*P **P** 17 47 04.1 -1.8
comp=Z,19nm,1.1s,mb4.9
WB2 Warramunga Arr 78.32 217 *e*P **P** 17 47 04.5 -1.5
WRA Warramunga Arr 78.33 217 P **P** 17 47 04.6 -1.4
comp=Z,4.2nm,0.6s,mb4.6
WRA Warramunga Arr 78.33 217 P **P** 17 47 04.6 -1.4
WRA pmax pmax
comp=Z,4.0nm,0.6s
VRAC Vranov 78.36 345⇑ *i*P **P** 17 47 06.8 +0.9
VRAC Vranov 78.36 345 ⇑P **P** 17 47 06.8 +0.9
TRPA Tarpa 78.36 341⇑ *i*P **P** 17 47 06.9 +1.0
MANZ Manzenberg 78.37 348 *e*P **P** 17 47 05.9 -0.1
comp=Z,31nm,1.8s,mb4.9
MEM Membach 78.44 352 P **P** 17 47 07.1 +0.7
comp=Z,17nm,1.5s,mb4.8
TREC Trest 78.55 345⇓ *e*P **P** 17 47 07.4 +0.4
ROTZ Rotzenmuhle 78.57 348 *e*P **P** 17 47 07.5 +0.4
comp=Z,41nm,1.7s,mb5.1
KOLL Kolacno 78.74 343 *e*P **P** 17 47 08.3 +0.2
VYHS Vyhne 78.75 343 *e*P **P** 17 47 08.8 +0.7
VYHS *e* 17 50 02.0
VYHS pmax pmax
comp=Z,30nm,1.8s,mb4.9
VYHS Vyhne 78.75 343 *e*P **P** 17 47 08.8 +0.7
VYHS *e* 17 47 31.1
VYHS *e*PP PP 17 50 02.0 -3.5
VYHS Vyhne 78.75 343 *e*P **P** 17 47 08.8 +0.7
comp=Z,30nm,1.8s,mb4.9
VYHS *e* 17 47 31.2
VYHS *e*PP PP 17 50 02.0 -3.5
GRA1 Grafenberg Arr 78.78 348 *e*P **P** 17 47 08.6 +0.4
comp=Z,54nm,1.6s,mb5.2
GRA1 LR LR
comp=Z,300nm,20.8s,MS4.6
GRF Grafenberg Arr 78.78 348 *e*P **P** 17 47 08.6 +0.4
GRF pmax pmax
comp=Z,54nm,1.6s,mb5.2
GRF MLR MLR
comp=Z,300nm,20.8s,MS4.6
GRF Grafenberg Arr 78.78 348 *e*P **P** 17 47 08.6 +0.4
GRF pmax pmax
comp=Z,54nm,1.6s,mb5.2
GRF MLR MLR
comp=Z,300nm,20.8s,MS4.6
GRF Grafenberg Arr 78.78 348 *e*P **P** 17 47 08.6 +0.4
comp=Z,54nm,1.6s,mb5.2
GRF *e*L 18 18 40.4
comp=Z,333nm,20.8s
GNI Garni 78.93 322*d i*P **P** 17 47 10.0 +0.8
GNI pmax pmax
comp=Z,43nm,1.7s
GNI Garni 78.93 322 *i*P **P** 17 47 10.1 +0.9
SMOL Smolenice 78.98 344 *e*P **P** 17 47 10.8 +1.4
KHC Kasperske Hory 79.00 347⇓ *i*P **P** 17 47 10.2 +0.7
KHC *e*PCP PcP 17 47 21.7 +3.7
GIVF Givet 79.05 353 *e*P **P** 17 47 08.3 -1.4
comp=Z,16nm,0.8s,mb4.7
GIVF Givet 79.05 353 *e*P **P** 17 47 08.3 -1.4
GIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GIVF Givet 79.05 353 *e*P **P** 17 47 08.3 -1.4
comp=Z,8.2nm,0.8s,mb4.7
DOU Dourbes 79.08 353 P **P** 17 47 10.3 +0.5
comp=Z,6.3nm,1.6s,mb4.3
WET Wettzell 79.09 347 *e*P **P** 17 47 10.3 +0.4
WET pmax pmax
comp=Z,31nm,1.5s,mb5.0
WET Wettzell 79.09 347 *e*P **P** 17 47 10.3 +0.4
comp=Z,31nm,1.5s,mb5.0
PSZ Piszkesteto 79.10 342⇓ *e*P **P** 17 47 11.2 +1.2
PSZ Piszkesteto 79.10 342⇓ *i*P **P** 17 47 10.6 +0.6
PSZ Piszkesteto 79.10 342 *e*P **P** 17 47 11.6 +1.6
comp=Z,80nm,1.6s,mb5.4
BAIF Baives 79.14 353 *e*P **P** 17 47 10.0 -0.2
TOD Tromm 79.15 350 *e*P **P** 17 47 10.9 +0.6
GEC2 GERESS Array S 79.26 346 *e*P **P** 17 47 11.1 +0.2
GEC2 pmax pmax
comp=Z,24nm,1.4s,mb4.9
GEC2 GERESS Array S 79.26 346 *e*P **P** 17 47 11.1 +0.2
comp=Z,24nm,1.4s,mb4.9
GERES GERESS Array B 79.26 346 P **P** 17 47 11.7 +0.8
comp=Z,2.8nm,0.8s,mb4.3,baz=23,slow=5.9,SNR=16
GERES PP PP 17 50 16.1 +6.4
comp=Z,0.2nm,0.2s,baz=24,slow=9.7,SNR=4.3
GERES LR LR 18 25 01.9
comp=Z,332nm,18.5s,MS4.7,baz=175,slow=38
GERES GERESS Array B 79.26 346 P **P** 17 47 11.7 +0.8
GERES 17 50 16.1
GERES pmax pmax
comp=Z,3.0nm,0.8s
GERES MLR MLR
comp=Z,332nm,18.5s
ZST Bratislava 79.34 344 *e*P **P** 17 47 13.3 +1.9
ZST pmax pmax
comp=Z,63nm,1.7s,mb5.3
ZST Bratislava 79.34 344 *e*P **P** 17 47 13.3 +1.9
comp=Z,63nm,1.7s,mb5.3
WLF Walferdange 79.37 352 P **P** 17 47 12.2 +0.7
comp=Z,13nm,1.8s,mb4.5
WLF Walferdange 79.37 352 *e*P **P** 17 47 11.6 +0.1
comp=Z,34nm,1.6s,mb5.3
BUD Budapest 79.68 343⇓ *e*P **P** 17 47 14.8 +1.6
HYB Hyderabad 79.70 285 *i*P **P** 17 47 13.0 -0.8
CONA Conrad Observa 79.81 345⇓ *i*P **P** 17 47 15.3 +1.4
comp=Z,45nm,1.5s,mb5.2,SNR=13
CSNA Conrad Observa 79.81 345⇓ *i*P **P** 17 47 15.3 +1.4
comp=Z,40nm,1.5s,mb5.1
LANF Langenberg 79.88 350 *e*P **P** 17 47 13.3 -0.9
STU Stuttgart 79.93 349 *e*P **P** 17 47 15.0 +0.5
comp=Z,11nm,0.7s,mb4.9
SOP Sopron 79.94 344⇓ *e*P **P** 17 47 16.0 +1.4
FUR Furstenfeldbru 80.27 348 *e*P **P** 17 47 17.2 +0.8
FUR pmax pmax
comp=Z,45nm,1.3s,mb5.2
FUR Furstenfeldbru 80.27 348 *e*P **P** 17 47 17.2 +0.8
comp=Z,45nm,1.3s,mb5.2
VOIR 80.34 338⇑ *i*P **P** 17 47 17.2 +0.4
VOIR 80.34 338 ⇑P **P** 17 47 17.2 +0.4
FITZ Fitzroy Crossi 80.34 226 *e*P **P** 17 47 16.4 -0.6
comp=Z,16nm,0.6s,mb5.1
TIRR Tirgusor 80.41 335⇑ *i*P **P** 17 47 16.6 -0.6
TIRR Tirgusor 80.41 335 ⇑P **P** 17 47 16.6 -0.6
BFO Black Forest 80.47 350 *e*P **P** 17 47 17.5 +0.1
BFO pmax pmax
comp=Z,13nm,1.1s,mb4.8
BFO Black Forest 80.47 350 *e*P **P** 17 47 17.5 +0.1
comp=Z,13nm,1.1s,mb4.8
RJOB Jochberg 80.48 347 *e*P **P** 17 47 17.2 -0.3
comp=Z,11nm,1.0s,mb4.7
CDF Champ du Feu 80.50 351 *e*P **P** 17 47 17.3 -0.3
BHJ Bhuj 80.53 295 *e*P **P** 17 47 19.8 +1.6
BHJ AMb AMB 17 47 33.1
comp=Z,87nm,1.8s,mb5.4
ARSA Arzberg 80.53 345⇓ *i*P **P** 17 47 19.2 +1.4
comp=Z,27nm,1.6s,mb4.9
MEZF Maizieres J'vi 80.62 352 *e*P **P** 17 47 18.2 0.0
SPAK Spaichingen-Ko 80.64 350 *e*P **P** 17 47 19.1 +0.7
ECH Echery 80.70 351 *e*P **P** 17 47 19.3 +0.6
FLN La Foliniere 80.72 356 *e*P **P** 17 47 18.0 -0.8
comp=Z,17nm,0.7s,mb4.8
FLN *e*MLR MLR
comp=Z,360nm,21.2s,MS4.4
FLN La Foliniere 80.72 356 *e*P **P** 17 47 18.0 -0.8
FLN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
FLN MLR MLR
comp=Z,360nm,21.3s,MS4.7
FLN La Foliniere 80.72 356 *e*P **P** 17 47 18.0 -0.8
comp=Z,8.3nm,0.7s,mb4.8
FLN LR LR
comp=Z,360nm,21.3s,MS4.7
THEF They Montfort 80.81 351 *e*P **P** 17 47 18.2 -1.1
LDF La Druitiere 80.88 356 *e*P **P** 17 47 18.7 -0.9
comp=Z,11nm,0.6s,mb4.7
LDF La Druitiere 80.88 356 *e*P **P** 17 47 18.7 -0.9
LDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LDF La Druitiere 80.88 356 *e*P **P** 17 47 18.7 -0.9
comp=Z,5.3nm,0.6s,mb4.7
GZR Gura Zlata 80.91 339⇑ *i*P **P** 17 47 20.4 +0.6
GZR Gura Zlata 80.91 339 ⇑P **P** 17 47 20.4 +0.6
BZS Buzias 80.95 340⇑ *i*P **P** 17 47 20.1 +0.1
BZS Buzias 80.95 340 ⇑P **P** 17 47 20.1 0.0
FELD Feldberg im Sc 80.95 350 *e*P **P** 17 47 18.5 -1.5
PKSM Moragy 80.98 343⇓ *i*P **P** 17 47 20.2 0.0
PKSM Moragy 80.98 343 ⇓P **P** 17 47 20.2 0.0
HAU Haudompre 80.99 351 *e*P **P** 17 47 19.9 -0.3
HAU *e*MLR MLR
comp=Z,340nm,22.0s,MS4.4
HAU Haudompre 80.99 351 *e*P **P** 17 47 19.9 -0.3
HAU LR LR
comp=Z,340nm,22.0s,MS4.7
KBA Koelnbreinsper 81.04 346⇓ *i*P **P** 17 47 22.0 +1.4
comp=Z,52nm,1.1s,mb5.4,SNR=7.5
MOF Molkenrain 81.07 351 *e*P **P** 17 47 21.3 +0.7
MOTA Moosalm 81.10 348⇓ *i*P **P** 17 47 21.9 +1.1
comp=Z,47nm,1.5s,mb5.2,SNR=11
WTTA Wattenberg 81.10 348⇓ *i*P **P** 17 47 21.9 +1.1
comp=Z,39nm,1.7s,mb5.1,SNR=7.8
GRR Gorron 81.11 356 *e*P **P** 17 47 20.2 -0.7
comp=Z,21nm,0.6s,mb5.0
GRR Gorron 81.11 356 *e*P **P** 17 47 20.2 -0.7
GRR pmax pmax
comp=Z,11nm,0.6s,mb5.0
GRR Gorron 81.11 356 *e*P **P** 17 47 20.2 -0.7
comp=Z,11nm,0.6s,mb5.0
HINF Hinteralfeld 81.13 351 *e*P **P** 17 47 20.4 -0.6
SOKA Soboth 81.17 345⇓ *i*P **P** 17 47 22.3 +1.1
comp=Z,81nm,1.4s,mb5.5
PERS Pernice 81.19 345 *i*P **P** 17 47 22.4 +1.1
ROSF Rostrenen 81.25 358 *e*P **P** 17 47 21.8 +0.2
comp=Z,32nm,1.0s,mb4.9
ROSF Rostrenen 81.25 358 *e*P **P** 17 47 21.8 +0.2
ROSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ROSF Rostrenen 81.25 358 *e*P **P** 17 47 21.8 +0.2
comp=Z,16nm,1.0s,mb4.9
SGMF Saint Gilles 81.31 357 *e*P **P** 17 47 21.3 -0.6
comp=Z,22nm,0.8s,mb4.8
SGMF Saint Gilles 81.31 357 *e*P **P** 17 47 21.3 -0.6
SGMF pmax pmax
comp=Z,11nm,0.8s,mb4.8
SGMF Saint Gilles 81.31 357 *e*P **P** 17 47 21.3 -0.6
comp=Z,11nm,0.8s,mb4.8
OBKA Obir 81.41 345⇓ *i*P **P** 17 47 23.2 +0.8
comp=Z,52nm,1.8s,mb5.2,SNR=6.9
FETA Feichten 81.46 348 *i*P **P** 17 47 23.7 +0.9
comp=Z,20nm,1.6s,mb4.8,SNR=5.5
LOMF Lomont 81.59 351 *e*P **P** 17 47 24.5 +1.1
LOR Lormes 81.94 353 *e*P **P** 17 47 24.9 -0.4
comp=Z,74nm,1.5s,mb5.1
LOR *e*MLR MLR
comp=Z,511nm,22.0s,MS4.5
LOR Lormes 81.94 353 *e*P **P** 17 47 24.9 -0.4
LOR pmax pmax
comp=Z,37nm,1.5s,mb5.1
LOR MLR MLR
comp=Z,510nm,22.0s,MS4.8
LOR Lormes 81.94 353 *e*P **P** 17 47 24.9 -0.4
comp=Z,37nm,1.5s,mb5.1
LOR LR LR
comp=Z,510nm,22.0s,MS4.8
JAVS Javornik 82.08 346 *i*P **P** 17 47 25.8 -0.2
SSF Saint Saulge 82.18 353 *e*P **P** 17 47 26.2 -0.3
comp=Z,36nm,1.2s,mb4.9
SSF Saint Saulge 82.18 353 *e*P **P** 17 47 26.2 -0.3
SSF pmax pmax
comp=Z,18nm,1.2s,mb4.9
SSF Saint Saulge 82.18 353 *e*P **P** 17 47 26.2 -0.3
comp=Z,18nm,1.2s,mb4.9
TUE Stuetta 82.18 349 *e*P **P** 17 47 27.7 +1.1
comp=Z,12nm,0.9s,mb4.8
BOJS Bojanci 82.27 345 *i*P **P** 17 47 27.6 +0.6
CABF La Chapelle 82.40 351 *e*P **P** 17 47 27.8 +0.1
comp=Z,141nm,1.7s,mb5.3
CABF La Chapelle 82.40 351 *e*P **P** 17 47 27.8 +0.1
CABF pmax pmax
comp=Z,71nm,1.7s,mb5.3
CABF La Chapelle 82.40 351 *e*P **P** 17 47 27.8 +0.1
comp=Z,70nm,1.7s,mb5.3
KAD Karad 82.45 288 *e*P **P** 17 47 27.9 -0.5
KAD AMb AMB 17 47 30.5
comp=Z,36nm,1.6s,mb5.0
AVF Avril sur Loir 82.46 353 *e*P **P** 17 47 27.5 -0.5
SMF Signal de Mont 82.56 353 *e*P **P** 17 47 28.2 -0.4
comp=Z,86nm,1.4s,mb5.3
SMF Signal de Mont 82.56 353 *e*P **P** 17 47 28.2 -0.4
SMF pmax pmax
comp=Z,43nm,1.4s,mb5.3
SMF Signal de Mont 82.56 353 *e*P **P** 17 47 28.2 -0.4
comp=Z,43nm,1.4s,mb5.3
BGF Bois d'Agland 82.73 353 *e*P **P** 17 47 29.1 -0.3
MFF Saint Martin d 82.86 356 *e*P **P** 17 47 29.8 -0.3
TCF Toulx Ste Croi 83.04 354 *e*P **P** 17 47 30.7 -0.3
comp=Z,28nm,1.3s,mb4.8
TCF Toulx Ste Croi 83.04 354 *e*P **P** 17 47 30.7 -0.3
TCF pmax pmax
comp=Z,14nm,1.3s,mb4.8
TCF Toulx Ste Croi 83.04 354 *e*P **P** 17 47 30.7 -0.3
comp=Z,14nm,1.3s,mb4.8
BR131 Keskin Array S 83.24 330 *e*P **P** 17 47 32.8 +0.6
comp=Z,5.4nm,0.9s,mb4.6
BRTR Keskin Array B 83.24 330 P **P** 17 47 32.5 +0.3
comp=Z,3.9nm,0.7s,mb4.5,baz=44,slow=3.8,SNR=19
BRTR LR LR 18 30 12.3
comp=Z,143nm,19.7s,MS4.3,baz=140,slow=40
BRTR Keskin Array B 83.24 330 P **P** 17 47 32.5 +0.3
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR MLR MLR
comp=Z,143nm,19.7s
LPL La Plagne 83.42 351 *e*P **P** 17 47 34.0 +1.0
LPG La Plagne 83.43 351 *e*P **P** 17 47 34.2 +1.1
RJF Les Rejaudoux 84.06 354 *e*P **P** 17 47 36.2 -0.1
comp=Z,87nm,1.6s,mb5.3
RJF *e*MLR MLR
comp=Z,228nm,19.8s,MS4.3
RJF Les Rejaudoux 84.06 354 *e*P **P** 17 47 36.2 -0.1
RJF pmax pmax
comp=Z,44nm,1.6s,mb5.3
RJF MLR MLR
comp=Z,230nm,19.8s,MS4.6
RJF Les Rejaudoux 84.06 354 *e*P **P** 17 47 36.2 -0.1
comp=Z,44nm,1.6s,mb5.3
RJF LR LR
comp=Z,230nm,19.8s,MS4.6
ORIF Oris-en-Rattie 84.09 351 *e*P **P** 17 47 37.3 +0.8
ORIF *e*MLR MLR
comp=Z,328nm,22.0s,MS4.4
MBDF Montbardon 84.19 350 *e*P **P** 17 47 37.7 +0.7
CAF Calviac 84.41 354 *e*P **P** 17 47 38.3 +0.2
comp=Z,102nm,1.5s,mb5.4
CAF Calviac 84.41 354 *e*P **P** 17 47 38.3 +0.2
CAF pmax pmax
comp=Z,51nm,1.5s,mb5.4
CAF Calviac 84.41 354 *e*P **P** 17 47 38.3 +0.2
comp=Z,51nm,1.5s,mb5.4
LFF La Frestale 84.48 355 *e*P **P** 17 47 38.4 0.0
TOUF Mont Tournerai 84.85 350 *e*P **P** 17 47 40.3 0.0
MVIF Mont Vial 84.97 350 *e*P **P** 17 47 39.2 -1.7
SBF Sospel 84.97 350 *e*P **P** 17 47 40.6 -0.3
comp=Z,222nm,1.4s,mb5.8
SBF Sospel 84.97 350 *e*P **P** 17 47 40.6 -0.3
SBF pmax pmax
comp=Z,111nm,1.4s,mb5.8
SBF Sospel 84.97 350 *e*P **P** 17 47 40.6 -0.3
comp=Z,111nm,1.4s,mb5.8
TGUH Tegucigalpa,Un 85.05 74 *e*P **P** 17 47 42.7 +0.9
SMRF Simiane la Rot 85.06 351 *e*P **P** 17 47 42.2 +0.8
comp=Z,211nm,1.7s,mb5.7
SMRF Simiane la Rot 85.06 351 *e*P **P** 17 47 42.2 +0.8
comp=Z,211nm,1.7s,mb6.0
FRF La Foret Royal 85.36 350 *e*P **P** 17 47 42.8 -0.1
comp=Z,100nm,1.4s,mb5.5
FRF La Foret Royal 85.36 350 *e*P **P** 17 47 42.8 -0.1
FRF pmax pmax
comp=Z,50nm,1.4s,mb5.5
FRF La Foret Royal 85.36 350 *e*P **P** 17 47 42.8 -0.1
comp=Z,50nm,1.4s,mb5.5
LMR La Mourre 85.60 350 *e*P **P** 17 47 43.8 -0.3
PGF Pioggiola 86.08 348 *e*P **P** 17 47 46.0 -0.5
comp=Z,82nm,1.1s,mb5.6
PGF Pioggiola 86.08 348 *e*P **P** 17 47 46.0 -0.5
PGF pmax pmax
comp=Z,41nm,1.1s,mb5.6
PGF Pioggiola 86.08 348 *e*P **P** 17 47 46.0 -0.5
comp=Z,41nm,1.1s,mb5.6
SJPF Ste Jean 86.40 356 *e*P **P** 17 47 47.9 -0.1
comp=Z,9.2nm,0.6s,mb4.9
SJPF Ste Jean 86.40 356 *e*P **P** 17 47 47.9 -0.1
SJPF pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
SJPF Ste Jean 86.40 356 *e*P **P** 17 47 47.9 -0.1
comp=Z,4.6nm,0.6s,mb4.9
EPF Esparros 86.40 355 *e*P **P** 17 47 47.3 -0.7
RKT Rikitea 86.48 134 *e*LR LR 18 14 56.7
comp=Z,391nm,40.8s
ETSF Etsaut 86.58 356 *e*P **P** 17 47 49.2 +0.3
comp=Z,20nm,0.9s,mb5.1
ETSF Etsaut 86.58 356 *e*P **P** 17 47 49.2 +0.3
ETSF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ETSF Etsaut 86.58 356 *e*P **P** 17 47 49.2 +0.3
comp=Z,10nm,0.9s,mb5.0
STKA Stephens Creek 86.93 207 *e*P **P** 17 47 50.0 -0.5
comp=Z,4.0nm,1.3s,mb4.5
STKA Stephens Creek 86.93 207 P **P** 17 47 48.9 -1.6
comp=Z,2.0nm,0.6s,mb4.5,baz=6.6,slow=12,SNR=4.7
STKA LR LR 18 28 43.3
comp=Z,146nm,18.1s,MS4.4,baz=24,slow=37
TRD Trivandrum 87.52 280 *e*P **P** 17 47 54.1 +0.2
TRD AMb AMB 17 48 00.2
comp=Z,37nm,1.5s,mb5.4
ARQ Araqi 87.68 305⇑ P **P** 17 47 53.9 -0.7
SNR=5.3
ESDC Sonseca Array 89.92 358 P **P** 17 48 03.9 -1.0
comp=Z,0.8nm,0.5s,mb4.3,baz=8.1,slow=6.3,SNR=4.3
CMLA Cha da Macela 90.30 15 *e*LQ 18 11 55.2
CMLA *e*LR LR 18 18 17.7
KEST Kesra 92.74 347 LR LR 18 38 20.1
comp=Z,77nm,18.1s,MS4.2,baz=312,slow=41
TORD Torodi Ar. Bea 115.96 351 PKP PKPdf 17 53 47.5 -1.4
comp=Z,0.8nm,0.6s,baz=353,slow=2.6,SNR=6.8
TORD PP PP 17 54 53.3 +1.5
comp=Z,1.8nm,1.2s,baz=8.3,slow=6.4,SNR=4.8
DBIC Dimbokro 122.79 358 PKP PKPdf 17 54 01.1 -1.0
comp=Z,3.1nm,0.5s,baz=341,slow=2.2,SNR=13
DBIC Dimbokro 122.79 358 PKIKP PKPdf 17 54 01.1 -1.0
DBIC pmax pmax
comp=Z,3.0nm,0.5s
TIC Toumodi 122.82 358 *e*P PKPdf 17 54 00.2 -2.0
comp=Z,12nm,0.2s
KIC Kosan Boka 123.09 358 *e*P PKPdf 17 54 01.4 -1.3
comp=Z,12nm,0.6s
LIC Lamto 123.24 358 *e*P PKPdf 17 53 59.6 -3.4
comp=Z,27nm,1.1s
VNDA Vanda 128.20 183 PKP PKPdf 17 54 09.7 -0.8
comp=Z,1.3nm,0.7s,baz=329,slow=4.8,SNR=6.3
VNDA Vanda 128.20 183 PKIKP PKPdf 17 54 09.7 -0.8
VNDA pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 134.56 77 PKP PKPdf 17 54 23.4 -0.6
comp=Z,0.8nm,0.5s,baz=225,slow=1.4,SNR=4.1
CPUP Villa Florida 134.56 77 PKIKP PKPdf 17 54 23.4 -0.6
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP Villa Florida 134.56 77 PKP PKPdf 17 54 23.4 -0.6
PLCA Paso Flores 135.57 103 PKP PKPdf 17 54 25.7 +0.3
comp=Z,2.9nm,0.7s,baz=264,slow=3.2,SNR=13
PLCA Paso Flores 135.57 103 PKIKP PKPdf 17 54 25.7 +0.3
PLCA pmax pmax
comp=Z,3.0nm,0.7s
BOSA Boshof 147.38 301 PKPbc PKPbc 17 54 49.0 -0.4
comp=Z,6.8nm,0.8s,baz=42,slow=1.0,SNR=15
BOSA Boshof 147.38 301 PKP2 PKPbc 17 54 49.0 -0.4
BOSA pmax pmax
comp=Z,7.0nm,0.8s
SYO Syowa Base 151.50 213⇑ *e*X 17 54 56.7
SNAA Sanae 158.94 183 *e*PKPdf PKPdf 17 55 02.9 +0.7
SNAA *e* 17 55 36.6
SNAA *e* 17 55 43.0
VNA3 Neumayer Olymp 159.39 177 *e*PKPdf PKPdf 17 55 02.0 -0.8
VNA3 *e* 17 55 38.7
VNA3 *e* 17 55 45.2
VNA2 Neumayer--Watz 159.76 179 *e*PKPdf PKPdf 17 55 02.4 -0.8
baz=221,slow=0.8
VNA2 *e* 17 55 40.5
VNA2 *e* 17 55 47.1
VNA1 Neumayer--Stat 160.02 178 *e*PKPdf PKPdf 17 55 02.4 -1.1

TEH **12** *17:38:08.6,3056N×5039E,h8km,ML3.6*
THR **12** *17:38:59.8±0.3,3036N×5024E,h14km±5km,ML3.5*
ISCJB **12** *17:39:02.9±0.3,3059N±003×5039E±003,h10km,Error ellipse: s-maj=4.7km s-min=3.2km az=138.5*
CSEM **12** *17:39:02.2±0.1,3058N×5044E,h10km,ML3.5,Error ellipse: s-maj=2.0km s-min=1.7km az=143.0*
KISR **12** *17:39:03.3,3061N×5029E,h33km,ML3.3*

ISC 12 17:39:04.2±0.3,3058N±003×5039E±003,h10km,n62,
σ0°71/79,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**2.04**	**319**	*e*Pg	**Pn**	**17 39 38.4**	**-0.1**
SHGR				*e*Sg	**Sg**	**17 40 06.8**	**-3.0**
SHGR				AML	AML	17 40 14.4	
	comp=N,435nm,0.5s						
SHGR				AML	AML	17 40 27.9	
	comp=E,439nm,0.5s						
SHGR	**Shooshtar-Gavs**	**2.04**	**319**	*e*Pg	**Pn**	**17 39 38.4**	**-0.1**
	SNR=90						
SHGR				*e*Sg	**Sg**	**17 40 06.8**	**-2.9**
	SNR=90						
IPIR	**Pirpir**	**2.14**	**11**	*e*Pn	**Pn**	**17 39 41.8**	**+1.9**
IPIR				*e*Sn	**Sn**	**17 40 07.1**	**+0.6**
IPIR	**Pirpir**	**2.14**	**11**	*e*Pn	**Pn**	**17 39 41.8**	**+1.9**
IPIR				*e*Sn	**Sn**	**17 40 07.1**	**+0.6**
IPIR				*e*		17 40 14.3	
IGAR	**Gharneh**	**2.30**	**37**	*e*Pn	**Pn**	**17 39 42.9**	**+0.8**
IGAR				*e*Sn	**Sn**	**17 40 10.7**	**+0.2**
IGAR	**Gharneh**	**2.30**	**37**	*e*Pn	**Pn**	**17 39 42.9**	**+0.8**
IGAR				*e*Sn	**Sn**	**17 40 10.7**	**+0.2**
IGAR				*e*		17 40 18.4	
UMR	**Umm Al-Rimmam**	**2.53**	**247**	*e*P	**Pn**	**17 39 45.4**	**+0.1**
	baz=245						
IMOK	**Mouk**	**2.54**	**127**	*e*Pn	**Pn**	**17 39 45.5**	**+0.1**
IMOK				*e*Sn	**Sn**	**17 40 16.5**	**+0.2**
IMOK	**Mouk**	**2.54**	**127**	*e*Pn	**Pn**	**17 39 45.5**	**+0.1**
IMOK				*e*Sn	**Sn**	**17 40 16.5**	**+0.2**
IMOK				*e*		17 40 39.8	
ISRV	**Sarvestan**	**2.65**	**116**	*e*Pn	**Pn**	**17 39 46.3**	**-0.6**
ISRV	**Sarvestan**	**2.65**	**116**	*e*Pn	**Pn**	**17 39 46.3**	**-0.6**
ISRV				*e*		17 40 33.3	
KBD	**Kabd**	**2.73**	**240**	*e*S	**Sn**	**17 40 21.5**	**+0.5**
	comp=E,69nm,0.3s						
KBD	**Kabd**	**2.73**	**240**	*e*P	**Pn**	**17 39 48.2**	**+0.2**
	baz=238						
KBD				*e*S	**Sn**	**17 40 21.5**	**+0.5**
	baz=238						
KBD				AML	AML	17 40 23.4	
	comp=Z,69nm,0.3s,baz=238						
QRN	**Al-Qurain**	**2.82**	**230**	*e*P	**Pn**	**17 39 49.2**	**-0.1**
	baz=229						
QRN				AML	AML	17 40 24.9	
	comp=Z,195nm,0.3s,baz=229						
IZEF	**Zefreh**	**2.84**	**35**	*e*Pn	**Pn**	**17 39 50.3**	**+0.8**
IZEF				*e*Sn	**Sn**	**17 40 23.2**	**-0.6**
IZEF	**Zefreh**	**2.84**	**35**	*e*Pn	**Pn**	**17 39 50.3**	**+0.8**
IZEF				*e*		17 39 59.8	
IZEF				*e*Sn	**Sn**	**17 40 23.2**	**-0.6**
IKLH	**Kolahrood**	**2.91**	**20**	*e*Pn	**Pn**	**17 39 51.4**	**+0.9**
IKLH				*e*Sn	**Sn**	**17 40 25.7**	**+0.1**
IKLH	**Kolahrood**	**2.91**	**20**	*e*Pn	**Pn**	**17 39 51.4**	**+0.9**
IKLH				*e*Sn	**Sn**	**17 40 25.7**	**+0.1**
IKLH				*e*		17 40 39.2	
RDF	**Al-Radifah**	**2.97**	**237**	*e*P	**Pn**	**17 39 51.3**	**0.0**
RDF				*e*S	**Sn**	**17 40 27.7**	**+0.7**
	comp=Z,107nm,0.4s						
RDF	**Al-Radifah**	**2.97**	**237**	*e*P	**Pn**	**17 39 51.3**	**0.0**
	baz=236						
RDF				*e*S	**Sn**	**17 40 27.7**	**+0.8**
	baz=236						
RDF				AML	AML	17 40 34.2	
	comp=Z,107nm,0.4s,baz=236						
NASN	**Na'in**	**3.02**	**42**	*e*Pn	**Pn**	**17 39 53.0**	**+0.9**
NAY	**Al-Naaiem**	**3.04**	**245**	*e*P	**Pn**	**17 39 52.3**	**+0.1**
NAY				*e*S	**Sn**	**17 40 28.6**	**0.0**
	comp=Z,46nm,0.6s						
NAY	**Al-Naaiem**	**3.04**	**245**	*e*P	**Pn**	**17 39 52.3**	**+0.1**
	baz=244						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NAY				eS	Sn	17 40 28.6	-0.1
	baz=244						
NAY				AML	AML	17 40 29.9	
	comp=Z,46nm,0.6s,baz=244						
ISAD	Sadrabad	3.12	64	ePn	Pn	17 39 53.8	+0.4
ISAD	Sadrabad	3.12	64	ePn	Pn	17 39 53.8	+0.4
ISAD				e		17 40 41.9	
GHIR	Ghir-Karzin	3.22	135	ePn	Pn	17 39 51.4	-3.4
GHIR				AML	AML	17 40 53.1	
	comp=N,99nm,0.5s						
GHIR				AML	AML	17 41 01.9	
	comp=E,96nm,0.6s						
IMEH	Mehriz	3.72	76	ePn	Pn	17 40 01.6	0.0
IMEH	Mehriz	3.72	76	ePn	Pn	17 40 01.6	0.0
IMEH				e		17 40 14.3	
ICHK	Chekchek	3.82	63	ePn	Pn	17 40 02.3	-0.7
ICHK	Chekchek	3.82	63	ePn	Pn	17 40 02.3	-0.7
ICHK				e		17 40 49.0	
GHVR	GHOM	3.96	11	ePn	Pn	17 40 05.6	+0.6
ASAO	Ashtian	3.97	356	ePn	Pn	17 40 05.6	+0.5
ISFB	Sefidab	4.07	22	ePn	Pn	17 40 06.3	-0.2
ISFB	Sefidab	4.07	22	ePn	Pn	17 40 06.3	-0.2
ISFB				e		17 40 57.2	
IKOM	Komasi	4.33	327	ePn	Pn	17 40 10.3	+0.3
IKOM	Komasi	4.33	327	ePn	Pn	17 40 10.3	+0.3
IKOM				e		17 40 28.2	
IVRN	Varamin	4.54	14	ePn	Pn	17 40 12.8	-0.2
IVRN	Varamin	4.54	14	ePn	Pn	17 40 12.8	-0.2
IVRN				e		17 40 21.5	
IBAF	Bafgh	4.56	76	ePn	Pn	17 40 12.4	-0.7
IBAF	Bafgh	4.56	76	ePn	Pn	17 40 12.4	-0.7
IBAF				e		17 40 28.1	
IRAZ	Razeghan	4.83	356	ePn	Pn	17 40 17.7	+0.9
IRAZ	Razeghan	4.83	356	ePn	Pn	17 40 17.7	+0.9
IRAZ				e		17 40 36.6	
IGHG	Ghaleghazi	4.94	320	ePn	Pn	17 40 17.2	-1.2
IGHG	Ghaleghazi	4.94	320	ePn	Pn	17 40 17.2	-1.2
IGHG				e		17 41 54.0	
IVIS	Veis	4.94	324	ePn	Pn	17 40 18.1	-0.3
IVIS	Veis	4.94	324	ePn	Pn	17 40 18.1	-0.3
IVIS				e		17 40 40.3	
IDMV	Damavand	5.17	15	ePn	Pn	17 40 21.5	-0.1
IDMV	Damavand	5.17	15	ePn	Pn	17 40 21.5	-0.1
IDMV				e		17 40 29.4	
SNGE	Sanandaj	5.17	331	ePn	Pn	17 40 20.9	-0.7
SNGE				AML	AML	17 41 22.8	
	comp=N,18nm,0.5s						
ILIN	Lien	5.20	327	ePn	Pn	17 40 22.3	+0.3
ILIN	Lien	5.20	327	ePn	Pn	17 40 22.3	+0.3
ILAS	Lasjerd	5.25	24	ePn	Pn	17 40 22.6	-0.1
ILAS	Lasjerd	5.25	24	ePn	Pn	17 40 22.6	-0.1
ILAS				e		17 41 26.9	
IDHR	Dehrash	5.31	322	ePn	Pn	17 40 22.6	-1.0
IDHR	Dehrash	5.31	322	ePn	Pn	17 40 22.6	-1.0
IDHR				e		17 41 27.6	
IFIR	Firoozkooh	5.42	21	ePn	Pn	17 40 24.9	-0.1
IFIR	Firoozkooh	5.42	21	ePn	Pn	17 40 24.9	-0.1
IFIR				e		17 41 30.6	
KRBR	Kerman	5.54	95	ePn	Pn	17 40 25.9	-0.9
KRBR				AML	AML	17 41 33.6	
	comp=N,17nm,0.6s						
IANJ	Anjilo	5.70	30	ePn	Pn	17 40 28.0	-0.9
IANJ	Anjilo	5.70	30	ePn	Pn	17 40 28.0	-0.9
ISHM	Shahmirzad	5.75	24	ePn	Pn	17 40 29.2	-0.4
ISHM	Shahmirzad	5.75	24	ePn	Pn	17 40 29.2	-0.4
ISHM				e		17 41 39.3	

*ISK **12** 18:23:08.1, 38.64N×26.55E, h5^{km}, MD2.9*
*NEIC **12** 18:23:08.0, 38.64N×26.56E, h6^{km}, MD3.0(ISK), MD3.1(ATH), After ISK.*
*CSEM **12** 18:23:08.5±0.1, 38.62N×26.56E, h10^{km}, MD2.9, Error ellipse: s-maj=2.4km s-min=2.0km az=83.0*
*ISCJB **12** 18:23:10.0±0.4, 38.62N±0.02×26.54E±0.04, h20^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.7km az=178.7*
*THE **12** 18:23:09.8, 38.64N×26.60E, h11^{km}±1^{km}, ML3.4/2, Error ellipse: s-maj=1.5km s-min=0.7km az=54.0*
*DDA **12** 18:23:09.8, 38.64N×26.65E, h6^{km}±4^{km}, Md2.9*
*ATH **12** 18:23:09.0, 38.59N×26.33E, h38^{km}±7^{km}, MD3.2/4*
ISC 12 18:23:10.0±0.4**, 38.63N**±0.02×**26.57E**±0.03**, h16**^{km}±3^{km}**, n25, σ0^{s}94**/43**, 2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.27	175	iP	Pg	18 23 15.5	-0.3
URLA				iS	Sg	18 23 21.1	+1.4
BLCB	Balcova	0.45	123	ePG	Pg	18 23 17.5	-1.4
BLCB				eSG	Sg	18 23 24.4	-0.5
BLCB	Balcova	0.45	123	P	Pg	18 23 18.1	-0.8
BLCB				eSg	Sg	18 23 24.4	-0.5
BLCB				S	Sg	18 23 24.7	-0.2
CHOS	Chios island	0.47	239	P	Pg	18 23 19.8	+0.5
CHOS				S	Sg	18 23 26.7	+1.1
PRK	Paraskevi	0.66	340	P	Pg	18 23 22.2	-0.6
PRK				S	Sg	18 23 32.0	+0.4
PRK	Paraskevi	0.66	340	⇓iPN	Pn	18 23 22.9	-1.7
PRK				eSN	Sg	18 23 32.3	+0.7
PRK	Paraskevi	0.66	340	P	Pg	18 23 22.2	-0.6
PRK				eS	Sg	18 23 32.0	+0.4
PRK	Paraskevi	0.66	340	⇓iP	Pg	18 23 23.5	+0.7
PRK				eS	Sg	18 23 32.0	+0.4
AYVA	Ayvalik	0.68	8	iP	Pg	18 23 22.5	-0.9
AYVA				iS	Sg	18 23 32.9	+0.4
AYVA	Ayvalik	0.68	8	iP	Pg	18 23 22.5	-0.9
AYVA				iS	Sg	18 23 32.8	+0.4
SMG	Samos	0.94	167	ePN	Pn	18 23 27.3	-1.3
SMG				eSN	Sn	18 23 41.2	-0.5
AKHS	Akhisar	1.01	75	iP	Pb	18 23 28.9	-0.1
AKHS				iS	Sb	18 23 41.6	-0.5
AKS	Akhisar	1.01	75	ePG	Pg	18 23 28.6	-0.8
AKS				eSG	Sg	18 23 42.4	-0.2
EZN	Ezine	1.21	351	ePN	Pn	18 23 31.9	-0.3
EZN				eSN	Sn	18 23 47.9	-0.4
BALY	Balya	1.38	36	iP	Pn	18 23 34.1	-0.5
BALY				iS	Sn	18 23 53.9	+1.4
BALB	Balikesir	1.44	45	ePN	Pn	18 23 35.5	+0.2
MANT	Manisa	1.57	94	iP	Pn	18 23 39.3	+2.2
MANT				iS	Sn	18 23 58.8	+1.7
MLSB	Milas	1.64	144	ePN	Pn	18 23 38.6	+0.5
KULA	Kula-Manisa	1.65	93	ePN	Pn	18 23 39.2	+1.0
LIA	Limnos Island	1.66	320	P	Pn	18 23 38.5	+0.1
APE	Apeiranthos	1.76	208	P	Pn	18 23 39.2	-0.6
APE				S	Sn	18 24 02.3	+0.4
APE	Apeiranthos	1.76	208	ePN	Pn	18 23 37.3	-2.5
ALN	Alexandroupoli	2.30	350	P	Pn	18 23 47.9	+0.7
KARP	Karpathos	3.11	171	ePN	Pn	18 23 57.6	-0.8
KARP	Karpathos	3.11	171	eP	Pn	18 23 56.6	-1.8

*ISCJB **12** 18:53:22.3±0.3, 12.73N±0.03×124.39E±0.05, h114^{km}±3^{km}, mb4.0/13, Error ellipse: s-maj=7.9km s-min=4.2km az=156.5*
*IDC **12** 18:53:22.7±1.0, 12.59N×124.40E, h102^{km}±8^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/23, mbtmp3.8/13, Error ellipse: s-maj=30.8km s-min=12.7km az=78.0*
*NEIC **12** 18:53:22.6±0.4, 12.64N×124.55E, mb4.3/5, Error ellipse: s-maj=14.0km s-min=6.9km az=80.0*
*MAN **12** 18:53:22, 12.79N×124.38E, h98^{km}, mb4.7, ML3.6, MS3.6*
ISC 12 18:53:23.4±0.3**, 12.73N**±0.03×**124.40E**±0.05**, h107**^{km}±3^{km}**, h102**^{km}±.9^{km}**:pP-P, n51, σ1^{s}07**/59**, mb4.0**/13**, 2C-4D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Catarman	0.34	130	eP	Pn	18 53 38.6	-0.4
CNP				eS	Sn	18 53 50.5	-0.2
MMPH	Masbate	0.84	244	⇓eP	Pn	18 53 44.9	+2.1
MMPH				eS	Sn	18 53 58.5	+1.1
PVCP	Virac	0.89	345	eP	Pn	18 53 42.8	-0.5
PVCP				eS	Sn	18 53 58.0	-0.2
BESP	Borongan	1.52	138	eP	Pn	18 53 50.8	+0.5
PLP	Palo	1.66	160	⇓eP	Pn	18 53 51.7	-0.3
PLP				eS	Sn	18 54 11.7	-2.0
OCLP	Ormoc	1.68	173	eP	Pn	18 53 52.1	-0.2
OCLP				eS	Sn	18 54 14.9	+0.6
AUQP	San Andres	1.78	290	eP	Pn	18 53 54.0	+0.6
RCP	Roxas	1.99	234	⇓eP	Pn	18 53 55.7	-0.4
GQP	Guinayangan	2.23	302	⇑iP	Pn	18 53 58.3	-0.9
OTRP	Odiongan	2.35	261	eP	Pn	18 53 60.0	-0.8
LLP	Lapu-Lapu	2.44	190	⇓iP	Pn	18 54 01.1	-0.9
LLP				iS	Sn	18 54 30.2	-1.2
MSLP	Maasin	2.62	170	eP	Pn	18 54 04.7	+0.3
MSLP				eS	Sn	18 54 37.8	+2.0
GUIM	Jordan	2.74	220	eP	Pn	18 54 05.8	-0.1
POLP	Polilio Island	3.10	310	eP	Pn	18 54 10.0	-0.7
POLP				eS	Sn	18 54 45.7	-1.5
SCPH	Surigao	3.12	160	⇑eP	Pn	18 54 11.0	+0.1
SJMP	San Jose	3.21	266	eP	Pn	18 54 12.9	+0.8
CUYO	Cuyo Island	3.80	241	eP	Pn	18 54 19.7	-0.3
BUTP	Butuan	3.93	162	eP	Pn	18 54 23.4	+1.6
BUTP				eS	Sn	18 55 11.0	+4.0
BALP	Baler	4.05	318	eP	Pn	18 54 21.5	-1.9
LUBP	Lubang	4.16	284	eP	Pn	18 54 25.2	+0.3
PALP	Palanan	4.71	336	eP	Pn	18 54 31.6	-0.6
BUKP	Musuan	4.87	172	eP	Pn	18 54 36.5	+2.1
PAGZ	Pagadian	4.95	192	eP	Pn	18 54 36.7	+1.1
ENPP	El Nido	5.09	253	eP	Pn	18 54 37.8	+0.3
ABRA	Dolores	6.05	324	eP	Pn	18 54 50.1	-0.3
JOW	Kunigami	14.49	14	P	Pn	18 56 44.2	+0.8
	0.4nm,0.3s,baz=191,slow=10,SNR=2.7						
JOW				S	Sn	18 59 16.6	-6.6
	0.5nm,0.3s,baz=180,slow=20,SNR=3.1						
KSM	Kuching	17.89	232	eP	Pn	18 57 26.5	+1.0
KAPI	Kappang	18.22	195	P	P	18 57 28.2	-0.2
	0.8nm,0.3s,baz=39,slow=10,SNR=8.6						
KAPI	Kappang	18.22	195	eP	P	18 57 28.1	-0.2
	25nm,0.9s						
BATI	Baumata	22.80	182	P	P	18 58 13.9	-3.5
	9.9nm,0.4s,mb4.5,baz=351,slow=18,SNR=6.8						
KSRS	Korea Array	24.82	7	P	P	18 58 37.0	+1.4
	4.2nm,0.6s,mb4.1,baz=184,slow=9.8,SNR=18						
CMAR	Chiang Mai Arr	25.15	286	pP	pP	18 59 01.6	-0.6
	1.0nm,0.8s,baz=108,slow=8.0,SNR=7.3						
KAKA	Kakadu	26.51	162	eP	x	18 58 30.7	
	7.5nm,0.6s						
FITZ	Fitzroy Crossi	30.66	178	eP	P	18 59 25.3	-2.6
	1.4nm,0.4s,mb4.0						
COEN	Coen	32.39	144	eP	P	18 59 40.9	-2.2
WRAB	Tennant Creek	33.91	163	eP	P	18 59 54.6	-1.6
	2.4nm,0.5s,mb4.3						
WB2	Warramunga Arr	33.91	163	eP	P	18 59 54.7	-1.6
ULN	Ulaanbaatar	37.91	341	eP	P	19 00 31.0	+0.9
SONM	Songino Array	38.09	340	P	P	19 00 32.8	+1.2
	0.6nm,0.5s,mb3.7,baz=156,slow=7.6,SNR=7.8						
SONM				pP	pP	19 00 55.7	-0.3
	0.9nm,0.7s,baz=165,slow=9.3,SNR=4.3						
CTA	Charters Tower	39.07	146	P	P	19 00 39.3	-0.8
	1.3nm,0.6s,mb3.9,baz=321,slow=13,SNR=3.5						
STKA	Stephens Creek	47.32	160	eP	P	19 01 45.5	-0.8
	1.7nm,0.6s,mb4.0						
STKA	Stephens Creek	47.32	160	P	P	19 01 45.4	-1.0
	2.6nm,0.5s,mb4.2,baz=345,slow=9.4,SNR=20						
PETK	Petropavlovsk-	48.21	26	P	P	19 01 53.4	+0.4
	3.9nm,0.8s,mb4.3,baz=190,slow=5.5,SNR=7.0						
MKAR	Makanchi Array	48.97	322	P	P	19 01 60.0	+1.1
	0.4nm,0.7s,mb3.5,baz=122,slow=7.6,SNR=5.6						
MKAR				pP	pP	19 02 24.0	-0.3
	0.3nm,0.6s,baz=118,slow=7.2,SNR=2.1						
MKAR	Makanchi Array	48.97	322	P	P	19 01 60.0	+1.1
MKAR				pP	pP	19 02 24.0	-0.3
ZALV	Zalesovo Beam	51.60	331	P	P	19 02 18.4	-0.1
	0.9nm,0.5s,mb4.0,baz=122,slow=7.0,SNR=6.2						
KURK	Kurchatov	53.01	325	P	P	19 02 30.1	+1.0
	2.0nm,0.6s,mb4.3,baz=127,slow=7.2,SNR=19						
KURK				pP	pP	19 02 54.5	-0.3
	0.9nm,0.7s,baz=122,slow=7.8,SNR=4.3						
KURK	Kurchatov	53.01	325	eP	P	19 02 30.0	+0.9
	8.8nm,1.3s,mb4.6						
KURK				pP	pP	19 02 54.5	-0.3
DZM	Mont Dzumac	53.82	130	eP	P	19 02 35.5	+0.1
	66nm,1.1s						
ARCES	ARCESS Array B	81.26	339	P	P	19 05 28.0	+0.7
	2.5nm,0.9s,mb4.0,baz=88,slow=7.5,SNR=3.3						
YKA	Yellowknife Ar	92.26	23	P	P	19 06 21.8	+0.7
	0.2nm,0.6s,mb3.5,baz=302,slow=4.2,SNR=4.6						

*ISCJB **12** 18:57:51.9±1.0, 49.6S±0.1×164.4E±0.1, h33^{km}, mb4.0/4, MS3.8/5, Error ellipse: s-maj=17.6km s-min=8.3km az=144.3*
*IDC **12** 18:57:52.6±1.4, 49.21S×164.07E, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.9/13, mbtmp3.9/5, ML3.9/2, MS3.8/5, Ms1 3.8/5, ms1mx3.5/16, Error ellipse: s-maj=52.1km s-min=31.6km az=169.0*
*NEIC **12** 18:57:52.7±0.7, 49.43S×164.21E, h10^{km}, mb4.5/1, Error ellipse: s-maj=15.4km s-min=11.3km az=145.0*
ISC 12 18:57:54.8±1.0**, 49.5S**±0.1×**164.3E**±0.1**, h35**^{km}**, n21, σ0^{s}94**/12**, mb3.9**/4**, MS3.8**/5**, Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	5.97	211	ePn	Pn	18 59 20.3	-0.2
RPZ	Rata Peaks	7.45	41	Pn	Pn	18 59 40.0	-0.8
	1.2nm,0.3s,baz=261,slow=4.8,SNR=4.6						
RPZ				Sn	Sn	19 01 04.9	+0.9
	1.8nm,0.3s,baz=166,slow=18,SNR=2.4						
URZ	Urewera	14.55	44	Pn	Pn	19 01 17.0	-0.9
	0.9nm,0.3s,baz=247,slow=3.6,SNR=2.8						
TOO	Toolangi	18.07	304	eP	Pn	19 02 02.1	-0.7
CAN	Canberra	18.09	316	P	Pn	19 02 02.8	-0.4
STKA	Stephens Creek	24.48	308	P	P	19 03 11.6	+1.2
	2.1nm,0.8s,mb3.6,baz=143,slow=13,SNR=2.9						
STKA				LR	LR	19 11 16.3	
	comp=Z,190nm,20.9s,MS3.6,baz=206,slow=33						
CTA	Charters Tower	32.72	327	LR	LR	19 15 20.0	
	comp=Z,94nm,18.7s,MS3.5,baz=13,slow=32						
WB2	Warramunga Arr	37.97	310	eP	P	19 05 08.7	-0.3
WRA	Warramunga Arr	37.97	310	P	P	19 05 08.4	-0.7
	1.3nm,0.8s,mb3.7,baz=146,slow=8.4						
WRA				PcP	PcP	19 07 26.5	+2.2
	baz=152,slow=2.3						
WRA				LR	LR	19 21 19.8	
	comp=Z,91nm,19.3s,MS3.6,baz=125,slow=37						
WRA	Warramunga Arr	37.97	310	P	P	19 05 08.4	-0.7
WRA				PcP	PcP	19 07 26.5	+2.2
WRA				LR	LR	19 21 19.8	
FITZ	Fitzroy Crossi	44.09	301	eP	P	19 05 59.9	+0.5
	5.2nm,0.6s,mb4.4						
MAW	Mawson	49.37	210	LR	LR	19 24 50.7	
	comp=Z,110nm,21.0s,MS3.8,baz=86,slow=33						
PLCA	Paso Flores	78.00	141	LR	LR	19 36 05.5	
	comp=Z,237nm,19.8s,MS4.5,baz=187,slow=29						
CMAR	Chiang Mai Arr	88.90	300	P	P	19 10 48.1	+2.8
	0.7nm,1.0s,mb4.0,baz=143,slow=3.2,SNR=4.9						
YKA	Yellowknife Ar	128.69	36	PKP	PKPdf	19 17 00.3	+3.5
	0.1nm,0.4s,baz=250,slow=1.8,SNR=2.8						
YKA	Yellowknife Ar	128.69	36	PKP	PKPdf	19 17 00.3	+3.5
TORD	Torodi Ar. Bea	141.00	208	PKhKP		19 17 19.9	
	0.5nm,0.9s,baz=172,slow=3.9,SNR=2.2						
BRTR	Keskin Array B	144.12	273	PKP	PKPdf	19 17 28.4	+2.4
	0.7nm,0.9s,baz=134,slow=4.2,SNR=2.7						
AKASG	Malin Array Be	151.50	290	PKPbc	PKPbc	19 17 46.0	+2.0
	1.0nm,0.6s,baz=66,slow=3.5,SNR=3.2						
AKASG				PKPab	PKPab	19 17 53.6	+1.0
	2.9nm,0.7s,baz=89,slow=2.3,SNR=7.8						
AKASG	Malin Array Be	151.50	290	PKPbc	PKPbc	19 17 46.0	+2.0
AKASG				PKPab	PKPab	19 17 53.6	+1.0
ARCES	ARCESS Array B	151.95	330	PKPbc	PKPbc	19 17 47.5	+3.0
	3.6nm,0.8s,baz=46,slow=3.9,SNR=3.4						
ARCES				PKPab	PKPab	19 17 56.4	+2.4
	5.8nm,0.9s,baz=66,slow=3.1,SNR=6.3						

IGQ 12 19:08:50.6, 0.85N×80.10W, h10^{km}±9^{km}, Mb4.0, Ms3.8, 5C-2D, Error ellipse: s-maj=8.6km s-min=3.0km az=92.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINO	Pino	1.79	124	⇑P	Pn	19 09 23.5	+1.9
PINO	Pino	1.79	124	⇑S	Sn	19 09 49.1	+4.7
YANA	Yana	1.80	122	⇑P	Pn	19 09 23.9	+2.2
YANA	Yana	1.80	122	⇑S	Sn	19 09 49.2	+4.5
TERV	Terraza Guagua	1.80	124	P	Pn	19 09 24.6	+2.9
GGP	Refugio Guagua	1.81	124	⇓P	Pn	19 09 23.9	+2.0
COTA	Cotacachi	1.83	106	⇓P	Pn	19 09 25.7	+3.6
CHIS	Cerro-Chispas-	1.99	199	P	Pn	19 09 26.6	+2.3
QIL2	Quilotoa	2.07	145	⇑P	Pn	19 09 26.3	+0.8
CAMI	Rancho Maria	2.20	134	P	Pn	19 09 29.9	+2.8
CAYA	Cayambe	2.24	110	P	Pn	19 09 32.5	+4.8
VC1	Cotopaxi 1	2.25	131	P	Pn	19 09 30.9	+3.0
TAMB	Tambo	2.31	132	P	Pn	19 09 31.9	+3.2
ANTI	Antisana	2.32	124	P	Pn	19 09 33.0	+4.1
PISA	Pisayambo	2.55	138	P	Pn	19 09 35.4	+3.3

*IDC **12** 19:47:08.5±0.6, 2.32S×139.16E, h0^{km}, mb4.6/15, mb1 4.6/16, mb1mx4.6/18, mbtmp4.6/16, ML5.0/2, MS4.5/15, Ms1 4.5/15, ms1mx4.4/23, Error ellipse: s-maj=25.3km s-min=13.3km az=82.0*
*MOS **12** 19:47:11.9±0.9, 2.34S×139.07E, h33^{km}, mb5.0/28, MS4.2/8, Error ellipse: s-maj=13.9km s-min=6.4km az=110.7*
*ISCJB **12** 19:47:11.7±1.3, 2.39S±0.03×139.14E±0.04, h31^{km}±9^{km}, mb5.0/79, MS4.5/31, Error ellipse: s-maj=6.3km s-min=5.6km az=151.0*
*DJA **12** 19:47:13, 2.56S×139.20E, h20^{km}, Mw5.4/8*
*BJI **12** 19:47:14.3, 2.30S×139.10E, h38^{km}, mB5.1, mb4.8, Ms4.7, Msz4.5*
*NEIC **12** 19:47:14.5±1.2, 2.35S×139.10E, h38^{km}±11^{km}, mb5.1/40, Error ellipse: s-maj=7.6km s-min=5.6km az=62.0*
*GCMT **12** 19:47:14.5±0.2, 2.25S×139.21E, h26^{km}, MW5.2/84, Moment Tensor Solution. s50,c73; s84,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.05±.19; $M_{\theta\theta}$-0.72±.12; $M_{\phi\phi}$-3.33±.16; $M_{r\theta}$-3.53±.28; $M_{\theta\phi}$5.11±.10; $M_{\phi r}$-0.15±.27; Best double couple: $M_0$7.20500×10^{16} NP1:ϕ_s176.00000°, δ48.00000°, λ146.00000°. NP2: ϕ_s290.00000°, δ66.00000°, λ47.00000°. Principal axes: T 6.7300, Plg50.0000°, Azm152.0000°; N 0.9530, Plg38.0000°, Azm311.0000°; P -7.6810, Plg11.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 12 19:47:14.3±0.7**, 2.38S**±0.04×**139.16E**±0.04**, h37**^{km}±6^{km}**, h34**^{km}±3.0^{km}**:pP-P, n194, σ1^{s}07**/186**, mb5.0**/78**, MS4.5**/31**, 6C-5D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.55	95	P	Pn	19 47 39.0	-0.4
BAKI	Biak	3.27	291	P	Pn	19 48 02.1	-1.1
MMPI	Merauke	6.17	169	P	Pn	19 48 41.7	-1.3
	1µm,0.6s,4.7nm						
PMG	Port Moresby	10.58	132c	iP	Pn	19 49 45.2	+1.7
PMG	Port Moresby	10.58	132	eP	Pn	19 49 45.0	+1.5
	269nm,1.1s						
AAI	Ambon	11.03	263	P	Pn	19 49 50.1	+0.4
	132nm,0.9s,1µm						
LBMI	Labuha	11.79	278	P	Pn	19 50 03.1	+3.1
	158nm,1.3s,1µm						
COEN	Coen	12.17	161	eP	Pn	19 50 04.7	-0.5
	28nm,0.6s						
TNTI	Ternate	12.20	285	P	Pn	19 50 08.7	+3.0
	109nm,1.7s,2µm						
KAKA	Kakadu	12.24	213	eP	x	19 49 44.3	
	77nm,0.5s						
KAKA				eS	x	19 51 53.5	
KAKA	Kakadu	12.24	213	eP	x	20 03 51.1	
	7.8nm,0.6s						
DAV	Davao City (W)	16.49	305	Pn	Pn	19 51 04.6	+1.6
	18nm,0.3s,baz=106,slow=15,SNR=4.0						
KDI	Kendari	16.59	264	P	Pn	19 51 04.3	-0.1
	58nm,1.4s,2µm						
KDI	Kendari	16.59	264	P	Pn	19 51 03.9	-0.5
	50nm,1.2s,2µm						
GUMO	Guam	16.84	19	LR	LR	19 56 20.4	
	comp=Z,732nm,20.8s,baz=3.9,slow=33						
BATI	Baumata	17.25	243	P	Pn	19 51 11.6	-1.0
	14nm,0.3s,baz=66,slow=1.4,SNR=13						
BATI				S	S	19 54 20.1	-11
	0.5nm,0.3s,baz=346,slow=19,SNR=2.4						
BATI	Baumata	17.25	243	P	Pn	19 51 12.4	-0.1
	174nm,1.0s,2µm						
BATI	Baumata	17.25	243	P	Pn	19 51 10.1	-2.4
	146nm,0.9s,2µm						
WRAB	Tennant Creek	18.07	195	eP	Pn	19 51 20.4	-2.2
WRAB				pmax	pmax		
	comp=Z,33nm,0.5s						
WRAB	Tennant Creek	18.07	195	eP	Pn	19 51 20.4	-2.2
	comp=Z,33nm,0.5s						
WB2	Warramunga Arr	18.08	195	eP	Pn	19 51 20.4	-2.3
WB2				eS	S	19 54 30.0	-18
CTA	Charters Tower	18.92	159	eP	Pn	19 51 34.2	+1.3
	comp=Z,24nm,1.1s						
CTA	Charters Tower	18.92	159	P	Pn	19 51 32.5	-0.4
	comp=Z,1.7nm,0.3s,baz=338,slow=10,SNR=22						
CTA	Charters Tower	18.92	159	P	Pn	19 51 32.5	-0.4
CTA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CTAO	Charters Tower	18.92	159	eP	Pn	19 51 33.6	+0.7
CTAO				pmax	pmax		
	comp=Z,38nm,1.1s						
CTAO	Charters Tower	18.92	159	eP	Pn	19 51 33.6	+0.7
	comp=Z,38nm,1.1s						
PCI	Palu	19.37	274	P	Pn	19 51 39.8	+1.3
	comp=Z,198nm,1.0s,comp=Z,2µm						
PCI	Palu	19.37	274	P	Pn	19 51 39.8	+1.3
	comp=Z,198nm,1.0s,comp=Z,2µm						
KAPI	Kappang	19.55	262	eP	Pn	19 51 40.5	0.0
	comp=Z,31nm,1.0s						
FITZ	Fitzroy Crossi	20.50	219	eP	P	19 51 48.3	-1.0
	comp=Z,32nm,0.8s						
FITZ				eS	S	19 55 28.2	-8.7
HNR	Honiara	21.82	110	P	P	19 52 10.3	+6.7
	comp=Z,54nm,0.5s,mb5.3,baz=0.0,slow=8.1,SNR=4.8						
HNR	Honiara	21.82	110	P	P	19 52 10.3	+6.7
HNR				pmax	pmax		
	comp=Z,54nm,0.5s,mb5.2						
KHKI	Kahang-Kahang	24.18	255	P	P	19 52 26.0	-1.5
	comp=Z,74nm,2.0s,mb4.8						
KHKI	Kahang-Kahang	24.18	255	P	P	19 52 25.8	-1.7
	comp=Z,64nm,1.2s,mb4.9						
BBKI	Banjar Baru	24.31	267	P	P	19 52 31.3	+2.6
	comp=Z,283nm,1.8s,comp=Z,4µm,mb5.4						
BBKI	Banjar Baru	24.31	267	P	P	19 52 30.8	+2.1
	comp=Z,236nm,1.2s,comp=Z,4µm,mb5.5						
KMMI	Kalianget	25.53	259	P	P	19 52 41.2	+1.4
KMMI	Kalianget	25.53	259	P	P	19 52 40.8	+1.0
EIDS	Eidsvold	25.58	154	eP	P	19 52 41.7	+1.6
	comp=Z,144nm,1.3s,mb5.3						
MBWA	Marble Bar	26.59	224	eP	P	19 52 48.6	-0.6
	comp=Z,29nm,0.7s,mb4.9						
STKA	Stephens Creek	29.43	176	eP	P	19 53 14.7	+0.2
	comp=Z,8.7nm,0.8s,mb4.5						
STKA	Stephens Creek	29.43	176	P	P	19 53 14.4	-0.1
	comp=Z,9.6nm,0.7s,mb4.7,baz=341,slow=8.1,SNR=18						
STKA				LR	LR	20 06 17.1	
	comp=Z,3µm,18.2s,MS5.0,baz=348,slow=39						
FORT	Forrest	30.14	199	eP	P	19 53 21.6	+0.8
	comp=Z,28nm,0.5s,mb5.2						
ARMA	Armidale	30.29	158	eP	P	19 53 23.4	+1.3
JOW	Kunigami	30.88	341	LR	LR	20 06 16.7	
	comp=Z,629nm,18.2s,MS4.3,baz=165,slow=37						
CNB	Canberra Magne	34.11	165	eP	P	19 53 56.9	+1.3
JHJ	Hachijo jima 2	35.31	1	LR	LR	20 05 29.6	
	comp=Z,648nm,19.7s,MS4.4,baz=296,slow=31						
KLBR	Kellerberrin	35.38	213	eP	P	19 54 06.1	-0.6
	comp=Z,46nm,1.4s,mb5.2						
TOO	Toolangi	35.50	171	eP	P	19 54 09.6	+2.0
QIZ	Qiongzhong	35.83	308	P	P	19 54 13.9	+3.3
QIZ				PP	PP	19 55 36.3	+3.8
QIZ				S	S	19 59 52.6	+6.6
QIZ				AMB	AMB		
	comp=Z,23nm,1.2s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,116nm,7.8s						
QIZ				LR	LR		
	comp=E,520nm,18.0s						
QIZ				LR	LR		
	comp=Z,963nm,16.3s,MS4.7						
MUN	Mundaring	36.52	214	eP	P	19 54 17.0	+0.6
NWAO	Narrogin (SRO)	36.70	212	P	P	19 54 18.6	+0.7
	comp=Z,7.9nm,0.6s,mb4.7,baz=37,slow=11,SNR=11						
NWAO	Narrogin (SRO)	36.70	212	eP	P	19 54 19.0	+1.1
MJAR	Matsushiro Arr	38.73	359	P	P	19 54 33.7	-1.3
	comp=Z,2.9nm,0.7s,mb4.1,baz=181,slow=8.7,SNR=7.4						
MJAR	Matsushiro Arr	38.73	359	P	P	19 54 33.7	-1.3
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAT	Matsushiro	38.73	359	P	P	19 54 33.9	-1.1
MAT				S	S	20 00 37.0	+7.3
MOO	Moorlands	40.53	171	eP	P	19 54 52.5	+2.6
KSRS	Korea Array	40.98	346	P	P	19 54 52.1	-1.6
	comp=Z,2.5nm,0.9s,baz=157,slow=9.4,SNR=4.6						
KSRS				LR	LR	20 10 28.5	
	comp=Z,433nm,19.1s,MS4.3,baz=162,slow=34						

KSRS Korea Array 40.98 346 P **P** **19 54 52.1 -1.6**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,433nm,19.1s,MS4.3
GYA Guiyang 42.51 315 *e*P **P** **19 55 11.9 +5.5**
GYA AP pP 19 55 20.4 +3.3
GYA XP sP 19 55 27.8 +6.4
GYA PCP PcP 19 57 01.6 +2.9
GYA SCP ScP 20 00 48.3 +1.4
GYA S **S** **20 01 33.6 +7.2**
GYA XS sS 20 01 47.2 +3.2
GYA SS SS 20 04 33.8 -3.2
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,480nm,18.7s,MS4.6
GYA LR LR
comp=E,460nm,17.6s,MS4.6
GYA LR LR
comp=Z,440nm,18.1s,MS4.4
NST Nakhon Sawan 42.56 296 P **P** **19 55 07.0 +0.1**
CHRT Chiangrai 44.52 302 ⇓P **P** **19 55 20.2 -2.5**
comp=Z,184nm,1.1s,mb5.8
KMI Kunming 44.65 310 P **P** **19 55 24.6 +0.9**
KMI AP pP 19 55 38.0 +3.6
KMI XP sP 19 55 41.3 +2.5
KMI PP PP 19 57 14.2 +5.8
KMI S **S** **20 02 02.0 +4.3**
KMI XS sS 20 02 20.3 +4.9
KMI AMB AMB
comp=Z,10.0nm,1.4s,mb4.5
KMI AMB AMB
comp=Z,175nm,5.0s
KMI LR LR
comp=N,589nm,18.7s,MS4.6
KMI LR LR
comp=E,383nm,21.4s,MS4.6
KMI LR LR
comp=Z,423nm,25.6s,MS4.2
CMAR Chiang Mai Arr 44.67 299 P **P** **19 55 23.4 -0.5**
comp=Z,5.3nm,0.7s,mb4.5,baz=120,slow=5.8,SNR=42
CMAR LR LR 20 12 29.7
comp=Z,365nm,21.3s,MS4.3,baz=113,slow=34
CMAR Chiang Mai Arr 44.67 299 P **P** **19 55 23.4 -0.5**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CMAR MLR MLR
comp=Z,365nm,21.3s
CHG Chiang Mai 44.81 300 ⇓P **P** **19 55 24.7 -0.3**
comp=Z,18nm,1.1s,mb4.8
CHTO Chiang Mai 44.81 300 *e*P **P** **19 55 24.3 -0.7**
CHTO pmax pmax
comp=Z,18nm,1.0s,mb4.9
CHTO Chiang Mai 44.81 300 *e*P **P** **19 55 24.3 -0.7**
comp=Z,18nm,1.0s,mb4.9
XAN Xi'an 46.07 324 P **P** **19 55 35.7 +1.0**
XAN AP pP 19 55 47.7 +2.2
XAN PP PP 19 57 27.4 +4.1
XAN S **S** **20 02 24.3 +6.4**
XAN AMB AMB
comp=Z,12nm,1.6s,mb4.6
XAN LR LR
comp=E,123nm,27.7s
XAN LR LR
comp=Z,341nm,26.8s,MS4.2
ASAJ Asahikawa 46.39 3 P **P** **19 55 36.4 -0.7**
comp=Z,12nm,1.1s,mb4.8,baz=180,slow=6.1,SNR=3.1
ASAJ Asahikawa 46.39 3 P **P** **19 55 36.4 -0.7**
ASAJ pmax pmax
comp=Z,13nm,1.1s
BJI Beijing 47.18 336 P **P** **19 55 47.8 +4.5**
BJI S **S** **20 02 34.4 +0.8**
BJI AMB AMB
comp=Z,12nm,0.4s,mb5.2
BJI AMB AMB
comp=Z,113nm,4.6s
BJI LR LR
comp=N,386nm,18.9s,MS4.5
BJI LR LR
comp=E,406nm,18.9s,MS4.5
BJI LR LR
comp=Z,291nm,17.9s,MS4.3
CD2 Chengdu 47.24 317 P **P** **19 55 49.9 +5.9**
CD2 AP pP 19 55 58.9 +4.1
CD2 XP sP 19 56 02.8 +3.7
CD2 PCS PcS 20 01 13.6 +3.4
CD2 S **S** **20 02 38.9 +4.1**
CD2 XS sS 20 02 56.4 +3.8
CD2 AMB AMB
comp=Z,50nm,1.1s,mb5.4
CD2 AMB AMB
comp=Z,140nm,7.5s
CD2 LR LR
comp=N,1μm,17.8s
CD2 LR LR
comp=Z,480nm,14.3s,MS4.6
MDJ Mudanjiang 47.56 351 P **P** **19 55 51.2 +5.0**
MDJ AP pP 19 56 00.0 +3.0
MDJ XP sP 19 56 03.7 +2.3
MDJ S **S** **20 02 47.0 +8.1**
MDJ AMB AMB
comp=Z,13nm,1.0s,mb4.9
MDJ AMB AMB
comp=Z,96nm,4.5s
MDJ LR LR
comp=N,358nm,16.9s
MDJ LR LR
comp=Z,406nm,18.1s,MS4.4
CN2 Changchun 47.59 347 *e*P **P** **19 55 51.8 +5.3**
CN2 *e*XP sP 19 56 05.7 +4.1
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CN2 AMB AMB
comp=Z,110nm,4.0s
CN2 LR LR
comp=N,410nm,22.0s,MS4.5
CN2 LR LR
comp=E,320nm,22.0s,MS4.5
CN2 LR LR
comp=Z,480nm,22.0s,MS4.4
YSS Yuzh-Sakhalins 49.22 3 *e*P **P** **19 56 03.0 +4.0**
YSS *e* 19 56 20.2
YSS pmax pmax
comp=Z,20nm,1.0s,mb5.1
HHC Hu-ho-hao-te 49.84 333 *e*P **P** **19 56 08.9 +5.0**
HHC AP pP 19 56 18.7 +4.0
HHC XP sP 19 56 22.8 +3.8
HHC PP PP 19 58 05.1 +6.2
HHC PCS PcS 20 01 23.0 +2.1
HHC *e*S **S** **20 03 14.8 +3.6**
HHC XS sS 20 03 32.0 +2.9
HHC SCS ScS 20 05 54.5 +2.0
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,197nm,5.5s
HHC LR LR
comp=N,344nm,14.3s,MS4.6
HHC LR LR
comp=E,303nm,15.5s,MS4.6
HHC LR LR
comp=Z,371nm,17.8s,MS4.4
LZH Lanzhou 50.49 323 *e*P **P** **19 56 09.8 +0.9**
LZH AP pP 19 56 17.0 -2.7
LZH XP sP 19 56 22.0 -2.0
LZH PP PP 19 58 05.0 +0.1
LZH *e*S **S** **20 03 19.1 -1.3**
LZH XS sS 20 03 35.0 -3.3
LZH AMB AMB
comp=Z,41nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,114nm,4.0s
LZH LR LR
comp=N,591nm,15.6s
LZH LR LR
comp=Z,934nm,16.5s,MS4.9
HABR Khabarovsk 50.77 356 *e*P **P** **19 56 10.6 -0.1**
HABR *e**PP pP 19 56 19.1 -2.5
HABR *e* 19 57 26.6
HABR *e* 19 58 06.6
HABR *e*PPP 19 59 04.7
HABR *e*S **S** **20 03 25.0 +1.2**
HABR *e**SS sS 20 03 41.1 -0.6
HABR *e* 20 05 57.9
HABR *e*SS SS 20 07 00.3 +1.5
HABR *e*SSS 20 08 31.3
HABR MLR MLR
comp=Z,147nm,13.0s,MS4.2
HABR MLR MLR
comp=Z,232nm,18.0s
KLR Kul'dur 51.80 354 *e*P **P** **19 56 17.7 -0.7**
KLR MLR MLR
comp=Z,700nm,13.0s,MS4.9
SHL Shillong 53.52 304 *e*P **P** **19 56 32.0 +0.4**
GTA Gaotai 55.07 323 *e*P **P** **19 56 44.5 +1.8**
GTA AP pP 19 56 55.0 +1.4
GTA XP sP 19 56 59.0 +1.1
GTA PP PP 19 58 48.1 +1.8
GTA S **S** **20 04 23.8 +1.0**
GTA XS sS 20 04 40.3 -0.6
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,157nm,8.4s
GTA LR LR
comp=N,238nm,14.1s,MS4.5
GTA LR LR
comp=E,202nm,13.5s,MS4.5
GTA LR LR
comp=Z,329nm,14.4s,MS4.5
LSA Lhasa 55.86 309 *e*P **P** **19 56 49.2 +0.7**
LSA pmax pmax
comp=Z,11nm,0.9s,mb4.9
LSA Lhasa 55.86 309 *e*P **P** **19 56 49.1 +0.6**
comp=Z,11nm,0.9s,mb4.9
ULN Ulaanbaatar 57.36 335 ⇑*i*P **P** **19 56 59.9 +1.1**
ULN Ulaanbaatar 57.36 335 P **P** **19 56 59.6 +0.9**
PETK Petropavlovsk- 57.43 13 P **P** **19 56 59.4 +0.2**
comp=Z,3.4nm,0.8s,mb4.4,baz=231,slow=9.1,SNR=3.2
PETK PcP PcP 19 57 52.2 -0.5
comp=Z,6.1nm,1.0s,baz=173,slow=3.8,SNR=3.6
PETK LR LR 20 17 59.2
comp=Z,247nm,22.0s,MS4.3,baz=68,slow=32
PETK Petropavlovsk- 57.43 13 P **P** **19 56 59.4 +0.2**
PETK PcP PcP 19 57 52.2 -0.5
PETK LR LR 20 17 59.2
PET Petropavlovsk 57.58 14 *e*P **P** **19 57 05.1 +4.9**
PET *e*S **S** **20 05 01.1 +5.6**
PET *e*SS SS 20 08 52.8 +6.7
PET *e*SSS 20 11 09.0
PET MLR MLR
comp=Z,100nm,19.0s,MS3.9
SONM Songino Array 57.62 334 P **P** **19 57 00.7 +0.1**
comp=Z,1.1nm,0.6s,mb4.1,baz=156,slow=7.6,SNR=14
SONM LR LR 20 22 28.5
comp=Z,432nm,18.6s,MS4.6,baz=104,slow=37
SONM Songino Array 57.62 334 P **P** **19 57 00.7 +0.1**
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,432nm,18.6s
TAPN Taplejung 57.66 305 *e*P **P** **19 57 01.3 0.0**
comp=Z,36nm,0.9s,mb5.4
ODAN Odare 57.74 304 *e*P **P** **19 57 01.6 -0.3**
comp=Z,45nm,0.8s,mb5.6
RAMN Ramite 58.43 304 *e*P **P** **19 57 06.8 +0.1**
comp=Z,62nm,0.9s,mb5.6
GUN Gumba 59.37 304 *e*P **P** **19 57 13.4 +0.1**
comp=Z,72nm,1.0s,mb5.7
PKI Pulchoki 59.64 304 *e*P **P** **19 57 14.9 -0.2**
comp=Z,26nm,0.9s,mb5.3
PKI Pulchoki 59.64 304 *e*P **P** **19 57 14.9 -0.2**
PKI pmax pmax
comp=Z,26nm,0.9s,mb5.3
KKN Kakani 59.82 304 *e*P **P** **19 57 16.3 -0.1**
comp=Z,55nm,0.8s,mb5.6
KKN Kakani 59.82 304 *e*P **P** **19 57 16.3 -0.1**
KKN pmax pmax
comp=Z,55nm,0.8s,mb5.6
DMN Daman 59.90 304 *e*P **P** **19 57 16.9 0.0**
comp=Z,96nm,1.1s,mb5.7
GKN Gorkha 60.43 304 *e*P **P** **19 57 20.3 -0.2**
comp=Z,78nm,0.8s,mb5.8
ZAK Zakamensk 60.88 335 *e*P **P** **19 57 23.7 +0.6**
ZAK pmax pmax
comp=Z,16nm,1.4s,mb5.0
KOLN Koldanda 61.21 304 *e*P **P** **19 57 25.6 -0.3**
comp=Z,40nm,0.9s,mb5.5
DANN Dangsing 61.28 304 *e*P **P** **19 57 26.1 -0.2**
comp=Z,35nm,0.7s,mb5.6
TLY Talaya 61.70 336 *e*P **P** **19 57 34.0 +5.3**
TLY *e*S **S** **20 05 53.6 +4.9**
TLY pmax pmax
comp=Z,21nm,2.1s,mb4.9
TLY MLR MLR
comp=Z,225nm,19.0s,MS4.3
MOY Mondy 62.81 334 *e*P **P** **19 57 36.8 +0.7**
BOD Bodaibo 63.31 345 *e*P **P** **19 57 37.2 -2.1**
BOD pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
DRV Dumont d'Urvil 64.17 180 PP PP 20 00 04.0 -2.2
DRV S **S** **20 06 17.0 -2.1**
DRV R 20 20 00.0
YAK Yakutsk 64.64 355 *e*P **P** **19 57 48.4 +0.5**
YAK *e* 19 58 21.2
YAK *e* 20 00 08.8
YAK *e*PPP 20 01 43.7
YAK *e*S **S** **20 06 28.2 +3.1**
YAK *e*SS SS 20 10 41.6 +5.1
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
YAK pmax pmax
comp=Z,108nm,4.8s
YAK pmax pmax
comp=N,84nm,4.9s
YAK pmax pmax
comp=E,22nm,3.0s
YAK smax
comp=N,63nm,10.6s
YAK smax
comp=E,56nm,10.6s
YAK Yakutsk 64.64 355 *e*P **P** **19 57 47.4 -0.6**
comp=E,16nm,0.8s,mb5.1
WMQ Urumqi 65.03 321 P **P** **19 57 55.4 +4.5**
WMQ PCP PcP 19 58 28.1 +4.5
WMQ PP PP 20 00 21.2 +6.9
WMQ S S 20 06 33.9 +3.3
WMQ XS sS 20 06 51.8 +2.8
WMQ SCS ScS 20 07 44.1 +1.0
WMQ SS SS 20 10 48.5 +5.2
WMQ AMB AMB
comp=Z,24nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,145nm,6.0s
WMQ LR LR
comp=N,184nm,19.0s,MS4.5
WMQ LR LR
comp=E,271nm,20.0s,MS4.5
WMQ LR LR
comp=Z,240nm,19.0s,MS4.4
HVS Khovu-Aksy 65.82 331 *d i*P **P** **19 57 55.7 -0.1**
HVS pmax pmax
comp=Z,112nm,1.7s,mb5.6
MK31 Makanchi Array 69.80 322 *e*P **P** **19 58 20.9 -0.1**
MKAR Makanchi Array 69.80 322 P **P** **19 58 20.8 -0.2**
comp=Z,6.5nm,0.6s,mb4.7,baz=97,slow=7.9,SNR=47
MKAR LR LR 20 33 39.0
comp=Z,134nm,18.2s,MS4.2,baz=338,slow=40
MKAR Makanchi Array 69.80 322 ⇑*e*P **P** **19 58 21.0 0.0**
PPT Papeete 71.42 108 *e*LR LR 20 20 33.1
comp=Z,546nm,23.8s
PPT Papeete 71.42 108 LR LR 20 25 41.5
comp=Z,391nm,18.2s,MS4.7,baz=290,slow=32
ZAA0 Zalesovo Array 71.88 330 *e*P **P** **19 58 31.8 -1.6**
ZALV Zalesovo Beam 71.88 330 P **P** **19 58 32.2 -1.3**
comp=Z,2.4nm,0.5s,mb4.4,baz=116,slow=6.0,SNR=15
ZALV LR LR 20 33 24.5
comp=Z,119nm,19.1s,MS4.2,baz=267,slow=39
ZALV Zalesovo Beam 71.88 330 P **P** **19 58 32.2 -1.3**
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ZALV MLR MLR
comp=Z,119nm,19.1s,MS4.2
TKM2 Tokmak 2 72.62 316 *e*P **P** **19 58 38.4 +0.3**
TKM2 pmax pmax
comp=Z,17nm,1.0s,mb4.9
TKM2 Tokmak 2 72.62 316 *e*P **P** **19 58 38.4 +0.3**
comp=Z,17nm,1.0s,mb4.9
BILL Bilibino 72.76 10 ⇓*i*P **P** **19 58 38.7 +0.3**
BILL *i* 19 58 54.2
BILL pmax pmax
comp=Z,12nm,2.1s,mb4.5
BILL MLR MLR
comp=Z,100nm,18.0s,MS4.1
NVS Novosibirsk 73.13 330 *e*P **P** **19 58 38.9 -2.0**
NVS *e*S S 20 07 57.0 -8.9
NVS pmax pmax
comp=Z,45nm,1.6s,mb5.2
NVS pmax pmax
comp=N,31nm,1.7s
NVS pmax pmax
comp=E,28nm,1.5s
NVS smax
comp=E,12nm,1.4s
NVS smax
comp=N,9.0nm,1.7s
UCH Uchtor 73.13 315 *e*P **P** **19 58 43.5 +2.3**
comp=N,16nm,1.3s,mb4.8
FRU Bishkek 73.26 316 *e*P **P** **19 58 42.0 0.0**
AAK Ala-Archa 73.28 316 ⇑*e*P **P** **19 58 42.6 +0.5**
AAK pmax pmax
comp=Z,8.0nm,1.8s,mb4.3
AAK Ala-Archa 73.28 316 *e*P **P** **19 58 41.6 -0.4**
comp=Z,23nm,1.3s,mb5.0
AML Almayashu 73.68 315 *e*P **P** **19 58 45.4 +1.0**
comp=Z,8.8nm,0.5s,mb5.0
KURK Kurchatov 73.71 325 P **P** **19 58 43.8 -0.6**
comp=Z,6.4nm,0.7s,mb4.6,baz=120,slow=5.2,SNR=3.2
KURK Kurchatov 73.71 325 P **P** **19 58 44.0 -0.4**
KURK pmax pmax
comp=Z,29nm,1.3s,mb5.0
KURK Kurchatov 73.71 325 *e*P **P** **19 58 43.6 -0.8**
EKS2 Erkin-Say 73.79 316 *e*P **P** **19 58 45.3 +0.2**
comp=Z,10nm,0.8s,mb4.8
TIXI Tiksi 74.20 357 ⇑*e*P **P** **19 58 46.3 -0.5**
TIXI pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TIXI Tiksi 74.20 357 *e*P **P** **19 58 47.0 +0.1**
comp=Z,2.9nm,0.6s,mb4.4
KBL Kabul 75.09 307 *e*P **P** **19 58 52.1 -0.7**
KBL pmax pmax
comp=Z,12nm,0.8s,mb4.9
KBL Kabul 75.09 307 *e*P **P** **19 58 52.1 -0.8**
comp=Z,12nm,0.8s,mb4.9
VNDA Vanda 76.07 175 P **P** **19 58 56.9 -0.7**
comp=Z,4.7nm,0.9s,mb4.4,baz=323,slow=4.5,SNR=16
VNDA LR LR 20 35 04.2
comp=Z,730nm,18.3s,MS5.0,baz=349,slow=38
VNDA Vanda 76.07 175 P **P** **19 58 56.9 -0.7**
VNDA pmax pmax
comp=Z,5.0nm,0.9s
VNDA MLR MLR
comp=Z,730nm,18.3s
SBA Scott Base 76.83 174 P **P** **19 59 03.3 +1.4**
VOSK Vostochnaya 78.86 325 P **P** **19 59 12.6 -1.0**
VOSK pmax pmax
comp=Z,26nm,1.2s,mb5.0
BVA0 Borovoye Array 79.30 325 *i* P **P** **19 59 15.4 -0.6**
BVA0 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BVAR Borovoye Array 79.30 325 P **P** **19 59 15.7 -0.3**
comp=Z,18nm,0.6s,mb5.2,baz=111,slow=7.9,SNR=5.9
BVAR Borovoye Array 79.30 325 P **P** **19 59 15.7 -0.3**
BVAR pmax pmax
comp=Z,18nm,0.6s
BRVK Borovoye 79.37 325 *e*P **P** **19 59 16.0 -0.4**
DHAK Old Harbor 80.04 31 *e*P **P** **19 59 20.2 +0.3**
SVW2 Sparrevohn 80.38 27 *e*P **P** **19 59 23.3 +1.6**
MAW Mawson 82.60 202 LR LR 20 34 29.9
comp=Z,738nm,18.8s,MS5.1,baz=73,slow=34
CHUM Lake Minchumin 82.82 25 *e*P **P** **19 59 35.0 +0.5**
comp=Z,28nm,0.8s,mb5.3
RC01 Rabbit Creek A 83.03 28 *e*P **P** **19 59 35.1 -0.6**
comp=Z,15nm,0.8s,mb5.1
KTH Kantishna Hill 83.29 25 *e*P **P** **19 59 36.2 -0.8**
comp=Z,19nm,1.1s,mb5.0
PMR Palmer 83.47 27 *e*P **P** **19 59 38.1 +0.2**
PMR pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
PMR Palmer 83.47 27 *e*P **P** **19 59 38.1 +0.2**
comp=Z,9.0nm,0.7s,mb4.9
TRF Thorofare Moun 83.53 25 *e*P **P** **19 59 37.2 -0.9**
comp=Z,15nm,1.1s,mb5.0
MCK McKinley 84.19 25 *e*P **P** **19 59 40.8 -0.8**
ABKT Ailbek 84.39 308 P **P** **19 59 43.5 +0.3**
comp=Z,111nm,1.5s,mb5.8,SNR=5.0
AB31 Akbulak array 84.76 320 P **P** **19 59 44.1 -0.7**
AB31 pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
COLD Coldfoot 84.78 22 *e*P **P** **19 59 45.5 +1.1**
comp=Z,8.3nm,0.9s,mb4.9
COLA College 84.98 24 ⇑*i*P **P** **19 59 45.1 -0.4**
COLA College 84.98 24 *e*P **P** **19 59 43.9 -1.6**
PAX Paxson 85.49 26 *e*P **P** **19 59 49.0 +0.9**
PAX pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
PAX Paxson 85.49 26 *e*P **P** **19 59 49.0 +0.9**
comp=Z,7.9nm,1.0s,mb4.8
SVE Sverdlovsk 85.71 327 *e*P **P** **19 59 46.6 -2.7**
SVE pmax pmax
comp=Z,12nm,0.8s,mb5.2
AKTK Aktyubinsk 86.18 321 P **P** **19 59 51.0 -0.7**
AKTO Aktyubinsk 86.18 321 P **P** **19 59 51.0 -0.7**
comp=Z,1.9nm,0.7s,mb4.5,baz=104,slow=7.9,SNR=5.5
AKTO Aktyubinsk 86.18 321 P **P** **19 59 51.1 -0.7**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
MENT Mentasta 86.26 27 *e*P **P** **19 59 52.1 +0.2**
ARU Arti 86.77 327 *d i*P **P** **19 59 53.0 -1.5**
ARU S S 20 10 16.4 -13
ARU SS SS 20 16 09.9 -1.7
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.8
ARU Arti 86.77 327 *e*P **P** **19 59 52.6 -2.0**
QSPA South Pole Qui 87.57 180 *e*P **P** **19 59 57.3 -0.7**
EGAK Eagle 87.74 25 *e*P **P** **19 59 59.2 +0.1**
comp=Z,18nm,1.1s,mb5.2
DAWY Dawson 88.38 26 *e*P **P** **20 00 02.7 +0.6**
SKAG Skagway 89.74 31 *e*P **P** **20 00 09.1 +0.5**
comp=Z,16nm,1.2s,mb5.2
INK Inuvik 91.19 22 *e*P **P** **20 00 15.3 +0.1**
INK pmax pmax
comp=Z,23nm,1.8s
INK Inuvik 91.19 22 *e*P **P** **20 00 15.3 +0.1**
comp=Z,23nm,1.8s,mb5.2
SPITS Spitsbergen Ar 98.74 350 LR LR 20 44 33.2
comp=Z,248nm,19.1s,MS4.7,baz=355,slow=35
OBN Obninsk 99.14 325 *e*P **P** **20 00 56.3 +4.6**
OBN pmax pmax
comp=Z,5.0nm,1.1s,mb5.0
YKA Yellowknife Ar 99.56 27 P Pdif 20 00 53.6 0.0
comp=Z,1.4nm,1.0s,baz=267,slow=4.6,SNR=10
YKA LR LR 20 42 33.1
comp=Z,57nm,20.9s,MS4.1,baz=145,slow=33
YKA Yellowknife Ar 99.56 27 *i* P Pdif 20 00 53.7 +0.1
YKA pmax pmax
comp=Z,1.0nm,1.0s
ARCES ARCESS Array B 100.34 341 P Pdif 20 00 55.3 -1.8
comp=Z,2.5nm,0.8s,baz=71,slow=7.8,SNR=13
ARCES ARCESS Array B 100.34 341 P Pdif 20 00 55.3 -1.8
ARCES pmax pmax
comp=Z,3.0nm,0.8s
RES Resolute Bay 101.28 13 *e*P Pdif 20 01 02.0 +0.7
NVAR Mina Array Bea 101.29 51 P Pdif 20 01 02.9 +1.5
comp=Z,0.6nm,0.8s,baz=302,slow=5.2,SNR=2.7
SCHQ Schefferville 123.59 18 PKP PKPdf 20 06 07.4 -0.4
comp=Z,2.7nm,0.8s,baz=252,slow=3.2,SNR=3.8
TORD Torodi Ar. Bea 136.60 287 PKP PKPdf 20 06 33.8 +0.2
comp=Z,1.9nm,0.7s,baz=59,slow=2.0,SNR=9.4
KIC Kosan Boka 143.80 277 *e*PKP1 PKPdf 20 06 42.9 -3.9
comp=Z,45nm,0.9s
DBIC Dimbokro 143.89 278 PKhKP 20 06 43.1
comp=Z,7.9nm,0.7s,baz=70,slow=4.8,SNR=18
DBIC Dimbokro 143.89 278 PKIKP PKPdf 20 06 43.1 -3.8
DBIC pmax pmax
comp=Z,8.0nm,0.7s
TIC Toumodi 144.05 278 *e*PKP1 PKPdf 20 06 43.6 -3.6
comp=Z,39nm,0.7s
LIC Lamto 144.10 277 *e*PKP1 PKPdf 20 06 43.8 -3.5
comp=Z,62nm,1.2s
ROSC El Rosal 146.49 85 PKPbc PKPbc 20 06 51.6 -1.3
comp=Z,7.8nm,0.5s,baz=248,slow=19,SNR=2.8
CPUP Villa Florida 147.31 152 PKPbc PKPbc 20 06 55.0 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.3nm,0.6s,baz=252,slow=3.2,SNR=6.9						
CPUP	Villa Florida	147.31	152	ePKPbc	PKPbc	20 06 55.3	+0.5
SDV	Santo Domingo	149.67	76	ePKPdf	PKPdf	20 06 57.9	+1.3

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*ISCJB **12** 19:58:38.5±1.1, 1261N±002×12576E±005, h20km±8km, mb4.5/32, MS4.2/13, Error ellipse: s-maj=7.5km s-min=3.8km az=0.4*
*MAN **12** 19:58:39, 1266N×12575E, h30km, mb5.6, ML4.6, MS5.0*
*MOS **12** 19:58:39.1±1.2, 1236N×12570E, h33km, mb4.9/11, Error ellipse: s-maj=17.9km s-min=9.2km az=115.7*
*BJI **12** 19:58:40.3, 1235N×12567E, h45km, mB4.8, mb4.4, Ms4.3, Msz4.3*
*NEIC **12** 19:58:42.5±1.2, 1243N×12553E, h38km±12km, mb4.8/8, Error ellipse: s-maj=14.0km s-min=7.0km az=87.0*
*IDC **12** 19:58:44.0±3.5, 1246N×12550E, h49km±34km, mb4.0/12, mb1 4.0/14, mb1mx3.9/23, mbtmp4.0/14, ML4.0/2, MS4.2/10, Ms1 4.2/10, ms1mx3.9/32, Error ellipse: s-maj=27.6km s-min=12.2km az=84.0*
*DJA **12** 19:59:37, 1028N×12153E, h10km, mb4.7/8*
ISC 12 19:58:41.1±1.4, **1253N**±003×**12576E**±005, **h27**km±10km, **h28**km±1.0km**:pP-P, n90,** σ1ˢ**31**/93, **mb4.5**/32, **MS4.2**/13, **13C-4D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.97	199	eP	Pn	19 58 59.1	+0.1
PLP	Palo	1.56	209	⇓eP	Pn	19 59 05.5	-1.5
PLP				eS	Sn	19 59 26.1	-0.2
OCLP	Ormoc	1.85	218	eP	Pn	19 59 11.5	+0.4
OCLP				eS	Sn	19 59 36.2	+2.6
PVCP	Virac	1.89	304	eP	Pn	19 59 09.1	-2.5
PVCP				eS	Sn	19 59 41.5	+7.0
MMPH	Masbate	2.09	266	⇓eP	Pn	19 59 17.1	+2.7
MMPH				eS	Sn	19 59 42.8	+3.3
MSLP	Maasin	2.54	200	eP	Pn	19 59 21.4	+0.8
MSLP				eS	Sn	19 59 54.0	+3.4
SCPH	Surigao	2.74	186	⇑eP	Pn	19 59 22.6	-0.7
LLP	Lapu-Lapu	2.81	219	eP	Pn	19 59 23.9	-0.5
LLP				eS	Sn	19 59 59.9	+2.5
RCP	Roxas	3.10	252	⇑eP	Pn	19 59 27.5	-0.8
AUQP	San Andres	3.11	285	eP	Pn	19 59 31.4	+3.0
TBP	Tagbilaran	3.38	214	eP	Pn	19 59 30.3	-1.8
KALP	Kalibo	3.45	256	⇑eP	Pn	19 59 31.1	-2.0
GQP	Guinayangan	3.50	293	eP	Pn	19 59 31.8	-2.0
BUTP	Butuan	3.54	182	eP	Pn	19 59 35.7	+1.3
GUIM	Jordan	3.63	239	eP	Pn	19 59 35.7	+0.1
GUIM				eS	Sn	20 00 18.1	+0.5
OTRP	Odiongan	3.65	268	eP	Pn	19 59 36.0	+0.1
POLP	Polilio Island	4.31	301	eP	Pn	19 59 46.3	+1.4
BIPH	Bislig	4.36	172	⇑eP	Pn	19 59 44.7	-0.9
BIPH				eS	Sn	20 00 39.3	+3.7
BUKP	Musuan	4.67	188	eP	Pn	19 59 52.4	+2.4
BUKP				eS	Sn	20 00 46.8	+3.6
CUYO	Cuyo Island	4.93	251	eP	Pn	19 59 55.5	+2.0
BALP	Baler	5.16	309	eP	Pn	19 59 56.2	-0.4
DAV	Davao City (W)	5.43	182	P	Pn	19 59 58.8	-1.5
BUSP	Coron	5.46	265	eP	Pn	20 00 01.2	+0.4
PALP	Palanan	5.54	325	eP	Pn	20 00 01.1	-0.7
MATI	Mati	5.57	175	eP	Pn	20 00 12.9	+11
CAUP	Cauayan	5.81	320	eP	Pn	20 00 04.9	-0.6
ENPP	El Nido	6.34	259	eP	Pn	20 00 13.8	+1.0
ABRA	Dolores	7.04	317	eP	Pn	20 00 21.3	-1.3
JOW	Kunigami	14.42	9	P	Pn	20 02 06.0	+2.5
	0.8nm,0.3s,baz=161,slow=18,SNR=7.6						
KAPI	Kappang	18.42	199	P	Pn	20 02 54.0	-0.7
	1.1nm,0.3s,baz=67,slow=8.9,SNR=4.4						
KAPI	Kappang	18.42	199	eP	Pn	20 02 53.2	-1.5
GUMO	Guam	18.65	85	LR	LR	20 09 08.8	
	comp=Z,231nm,19.8s,baz=292,slow=33						
KSM	Kuching	18.84	236	P	Pn	20 02 57.4	-2.4
WHN	Wuhan	20.80	331	P	P	20 03 21.5	+1.1
WHN				S	S	20 07 04.9	-6.3
WHN				LR	LR		
	comp=Z,975nm,16.8s,MS4.2						
BATI	Baumata	22.68	185	P	P	20 03 41.0	+0.4
	comp=Z,18nm,0.3s,mb4.9,baz=350,slow=3.2,SNR=11						
BATI				S	S	20 07 45.6	-2.2
	comp=Z,2.9nm,0.4s,baz=300,slow=20,SNR=3.6						
KSRS	Korea Array	24.89	4	P	P	20 04 01.6	-0.1
	comp=Z,3.0nm,0.9s,mb3.8,baz=180,slow=9.8,SNR=7.2						
KMI	Kunming	25.08	303	P	P	20 04 02.9	-0.7
KMI				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.0						
XAN	Xi'an	26.33	327	P	P	20 04 14.4	-0.4
XAN				AP	pP	20 04 22.6	-0.2
XAN				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.3						
XAN				AMB	AMB		
	comp=Z,85nm,7.6s						
MJAR	Matsushiro Arr	26.40	23	LR	LR	20 12 23.7	
	comp=Z,307nm,20.7s,MS3.8,baz=170,slow=31						
CMAR	Chiang Mai Arr	26.48	286	P	P	20 04 14.1	-2.3
	comp=Z,2.0nm,0.8s,mb3.7,baz=94,slow=7.2,SNR=17						
CMAR	Chiang Mai Arr	26.48	286	⇑eP	P	20 04 14.6	-1.8
CHTO	Chiang Mai	26.54	287	eP	P	20 04 14.7	-2.2
PSI	Prapat	28.26	252	LR	LR	20 16 09.0	
	comp=Z,465nm,20.8s,MS4.1,baz=231,slow=37						
FITZ	Fitzroy Crossi	30.44	180	eP	P	20 04 50.8	-0.7
	comp=Z,28nm,0.9s,mb5.0						
LZH	Lanzhou	30.66	324	eP	P	20 04 54.0	+0.6
LZH				AP	pP	20 05 02.5	+1.1
LZH				XP	sP	20 05 07.4	+2.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
WRAB	Tennant Creek	33.35	165	⇑iP	P	20 05 14.8	-2.3
WB2	Warramunga Arr	33.36	165	eP	P	20 05 22.1	+4.9
GTA	Gaotai	35.26	324	eP	P	20 05 34.6	+1.1
GTA				AP	pP	20 05 42.3	+0.7
GTA				XP	sP	20 05 45.6	+0.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.5s,mb4.2						
GTA				LR	LR		
	comp=N,238nm,14.4s,MS4.2						
GTA				LR	LR		
	comp=E,239nm,15.9s,MS4.2						
GTA				LR	LR		
	comp=Z,329nm,14.1s,MS4.2						
LSA	Lhasa	36.34	303	eP	P	20 05 43.8	+0.9
LSA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
LSA	Lhasa	36.34	303	eP	P	20 05 43.8	+0.9
	comp=Z,8.9nm,1.3s,mb4.5						
HABR	Khabarovsk	36.66	10	eP	P	20 05 43.5	-1.9
HABR				e		20 07 08.0	
HABR				e		20 08 05.3	
HABR				eS	S	20 11 25.8	-1.0
HABR				e*SS	sS	20 11 44.0	+3.8
HABR				eSS	SS	20 14 00.5	-7.2
HABR				e		20 15 56.0	
HABR				MLR	MLR		
	comp=Z,116nm,15.0s,MS3.8						
YSS	Yuzh-Sakhalins	37.18	19	⇑eP	P	20 05 47.8	-2.0
YSS				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.5						
ULN	Ulaanbaatar	38.54	340	⇑eP	P	20 06 02.5	+1.2
ULN	Ulaanbaatar	38.54	340	eP	P	20 06 01.8	+0.5
	comp=Z,3.5nm,1.0s,mb4.0						
SONM	Songino Array	38.74	339	P	P	20 06 03.4	+0.4
	comp=Z,4.0nm,1.1s,mb4.1,baz=156,slow=8.9,SNR=16						
FORT	Forrest	43.11	177	eP	P	20 06 39.7	+0.5
	comp=Z,12nm,0.7s,mb4.7						
KLBR	Kellerberrin	44.53	190	eP	P	20 06 49.4	-1.2
	comp=Z,36nm,1.4s,mb5.0						
HVS	Khovu-Aksy	46.46	333	⇓iP	P	20 07 06.7	+1.1
HVS				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
STKA	Stephens Creek	46.69	161	eP	P	20 07 08.8	+1.2
	comp=Z,8.2nm,1.4s,mb4.5						
STKA	Stephens Creek	46.69	161	P	P	20 07 08.5	+0.9
	comp=Z,3.6nm,0.7s,mb4.4,baz=320,slow=9.8,SNR=5.1						
STKA				LR	LR	20 26 46.8	
	comp=Z,111nm,20.7s,MS3.8,baz=24,slow=36						
PETK	Petropavlovsk-	47.81	25	P	P	20 07 18.4	+2.2
	comp=Z,3.8nm,1.1s,mb4.3,baz=204,slow=6.3,SNR=2.8						
PET	Petropavlovsk	48.16	26	⇑iP	P	20 07 18.8	0.0
PET				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.2						
MK31	Makanchi Array	49.94	322	eP	P	20 07 32.9	+0.3
MKAR	Makanchi Array	49.94	322	P	P	20 07 32.8	+0.2
	comp=Z,3.7nm,0.9s,mb4.4,baz=116,slow=8.5,SNR=15						
ZALV	Zalesovo Beam	52.42	331	P	P	20 07 50.6	-0.4
	comp=Z,1.5nm,0.6s,mb4.1,baz=121,slow=7.5,SNR=7.5						
AAK	Ala-Archa	53.39	314	⇑eP	P	20 07 58.5	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
KURK	Kurchatov	53.94	325	P	P	20 08 02.5	+0.2
	comp=Z,7.3nm,1.0s,mb4.6,baz=121,slow=7.4,SNR=30						
KURK	Kurchatov	53.94	325	⇑eP	P	20 08 02.6	+0.3
KURK				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
KURK	Kurchatov	53.94	325	eP	P	20 08 02.2	-0.1
TIXI	Tiksi	59.12	1	⇑eP	P	20 08 38.8	0.0
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.6						
TIXI	Tiksi	59.12	1	eP	P	20 08 38.5	-0.3
	comp=Z,8.6nm,1.1s,mb4.7						
BVAR	Borovoye Array	59.54	325	P	P	20 08 42.0	0.0
	comp=Z,3.7nm,0.9s,mb4.4,baz=111,slow=8.3,SNR=13						
BRVK	Borovoye	59.61	325	eP	P	20 08 42.7	+0.2
BRVK				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
BRVK	Borovoye	59.61	325	eP	P	20 08 42.6	+0.1
	comp=Z,15nm,1.2s,mb4.9						
BILL	Bilibino	61.38	16	eP	P	20 08 56.1	+1.7
BILL				e		20 09 41.9	
BILL				e		20 11 11.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
SVE	Sverdlovsk	66.05	327	⇑eP	P	20 09 25.8	+0.5
SVE				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
ARU	Arti	67.08	326	eP	P	20 09 32.1	+0.2
ARU				e		20 11 59.8	
ARU				eS	S	20 18 25.3	+1.3
KIV	Kislovodsk	76.46	312	eP	P	20 10 29.3	+0.7
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,106nm,18.0s,MS4.2						
OBN	Obninsk	79.38	324	⇓iP	P	20 10 44.2	-0.3
OBN				e	pP	20 10 52.0	-1.3
OBN				pmax	pmax		
	comp=Z,18nm,1.6s,mb4.8						
ANN	Anapa	80.11	314	eP	P	20 10 46.8	-2.0
ANN				pmax	pmax		
	comp=Z,354nm,9.6s						
ARCES	ARCESS Array B	81.91	340	P	P	20 10 58.2	+0.3
	comp=Z,3.8nm,1.0s,mb4.3,baz=93,slow=5.6,SNR=3.3						
AKASG	Malin Array Be	84.51	321	P	P	20 11 08.6	-3.0
	comp=Z,3.5nm,0.9s,mb4.5,baz=67,slow=4.3,SNR=10						
AKASG				LR	LR	20 55 10.2	
	comp=Z,137nm,18.1s,MS4.4,baz=55,slow=40						
AKASG	Malin Array Be	84.51	321	iP	P	20 11 14.1	+2.5
HFS	Hagfors	89.83	332	LR	LR	20 52 26.2	
	comp=Z,332nm,18.6s,MS4.8,baz=68,slow=36						
NOA	NORSAR Array B	90.52	334	LR	LR	20 52 55.7	
	comp=Z,231nm,18.7s,MS4.6,baz=265,slow=36						
IDI	Anoyia	91.53	307	LR	LR	21 01 38.2	
	comp=Z,76nm,20.0s,MS4.1,baz=76,slow=41						
YKA	Yellowknife Ar	91.91	24	P	P	20 11 47.8	+1.0
	comp=Z,0.1nm,0.3s,mb3.6,baz=302,slow=4.9,SNR=4.6						
VRAC	Vranov	92.68	322	LR	LR	20 54 15.6	
	comp=Z,118nm,21.7s,MS4.3,baz=244,slow=36						
GERES	GERESS Array B	94.61	322	LR	LR	20 59 48.3	
	comp=Z,206nm,18.8s,MS4.6,baz=72,slow=39						
PLCA	Paso Flores	148.47	156	PKPbc	PKPbc	20 18 23.9	-1.7
	comp=Z,3.1nm,0.9s,baz=231,slow=4.0,SNR=4.4						

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*IDC **12** 20:00:53.8±6.1, 36.18N×7129E, h180km±53km, mb3.4/8, mb1 3.4/12, mb1mx3.3/26, mbtmp3.3/12, Error ellipse: s-maj=45.8km s-min=24.2km az=148.0*
*MOS **12** 20:00:56.7±0.8, 3643N×7101E, h201km, mb4.0/1, Error ellipse: s-maj=14.8km s-min=8.8km az=94.4*
*ISCJB **12** 20:00:58.5±0.3, 3647N±003×7125E±005, h223km±5km, mb3.7/9, Error ellipse: s-maj=6.9km s-min=4.0km az=151.0*
*NEIC **12** 20:00:59.4±0.7, 3649N×71.18E, h215km±8km, mb4.6/10, Error ellipse: s-maj=9.3km s-min=5.7km az=58.0*
*NNC **12** 20:01:06.5±7.5, 37.15N×7158E, h202km±75km, mb2.7, mpv4.0, Error ellipse: s-maj=67.0km s-min=38.7km az=14.0*
ISC 12 20:00:59.4±0.3, **3647N**±003×**7123E**±005, **h217**km±5km, **n74,** σ1ˢ**10**/88, **mb3.7**/9, **4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.62	223	ePN	Pn	20 01 47.0	+1.3
KBL				eS	S	20 02 22.3	+0.3
CEP	Cherat	2.70	168	⇑P	Pn	20 01 48.6	+2.1
CEP				S	S	20 02 22.0	-1.5
CHCP	Chirah Chowk	3.26	149	⇑P	Pn	20 01 55.0	+2.0
SBDP	Sheikh Budin	4.17	185	P	Pn	20 02 04.9	+0.9
SARP	Sargodha	4.69	165	P	Pn	20 02 11.3	+0.9
JMU	Jammu	4.81	140	eS	S	20 03 07.5	-1.7
THN	Thein Dam	5.47	136	eP	Pn	20 02 20.5	+0.3
THN				eS	S	20 03 23.1	-1.1
DLH	Dalhousie	5.54	134	eP	Pn	20 02 20.0	-1.0
DLH				eS	S	20 03 23.0	-2.7
AML	Almayashu	5.97	18	P	Pn	20 02 26.4	0.0
	SNR=134						
AML	Almayashu	5.97	18	eP	Pn	20 02 26.3	-0.1
UCH	Uchtor	6.29	23	P	Pn	20 02 30.7	+0.3
	SNR=8.8						
UCH	Uchtor	6.29	23	eP	Pn	20 02 30.6	+0.1
	16nm,0.6s						
KZA	Kyzart	6.41	28	P	Pn	20 02 31.6	-0.4
	SNR=8.7						
EKS2	Erkin-Say	6.49	17	P	Pn	20 02 33.5	+0.5
	SNR=26						
EKS2	Erkin-Say	6.49	17	eP	Pn	20 02 33.4	+0.4
	13nm,0.5s						
KK31	Karatay Array	6.65	355	P	Pn	20 02 34.2	-0.8
	2.1nm,0.3s,baz=179,slow=8.5,SNR=28						
KK31				⇓S	S	20 03 44.3	-7.0
	29nm,0.5s,baz=183,slow=22,SNR=14						
AAK	Ala-Archa	6.65	21	ePN	Pn	20 02 35.0	-0.1
AAK				pmax	pmax		
	comp=Z,257nm,1.3s						
AAK	Ala-Archa	6.65	21	P	Pn	20 02 35.3	+0.2
	SNR=27						
AAK	Ala-Archa	6.65	21	eP	Pn	20 02 35.0	-0.1
	comp=Z,257nm,1.3s						
KBK	Karagaybulak	6.81	24	P	Pn	20 02 37.6	+0.5
	SNR=22						
SDNR	Sundarnagar	6.88	134	eP	Pn	20 02 39.0	+0.9
SDNR				eS	S	20 03 53.0	-3.8
ULHL	Ulahol	6.95	32	P	Pn	20 02 38.9	0.0
	SNR=16						
CHMS	Chumysh	7.06	21	P	Pn	20 02 40.7	+0.4
	SNR=8.2						
SMLA	Simla	7.26	135	iP	Pn	20 02 43.0	-0.1
SMLA				iS	S	20 04 03.0	-2.9
SMLA				iS	S	20 04 03.3	-2.6
SMLA				ex	x	20 04 07.4	
	comp=E,742nm,0.4s						
SMLA				ex	x	20 04 08.2	
	comp=N,713nm,0.3s						
TKM2	Tokmak 2	7.27	26	⇑P	Pn	20 02 42.4	-0.7
	comp=N,9.6nm,0.4s						
TKM2				S	S	20 03 53.9	-12
	comp=N,8.9nm,0.8s						
TKM2	Tokmak 2	7.27	26	ePN	Pn	20 02 42.7	-0.3
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.1s						
TKM2	Tokmak 2	7.27	26	P	Pn	20 02 43.1	+0.1
	SNR=12						
TKM2	Tokmak 2	7.27	26	eP	Pn	20 02 42.7	-0.3
	comp=Z,3.6nm,0.1s						
KLP	Kalpa	7.63	128	eP	Pn	20 02 49.3	+1.5
KLP				eS	S	20 04 10.3	-4.1
KLP				AML	AML	20 04 16.8	
	comp=E,286nm,0.5s						
KLP				AML	AML	20 04 19.0	
	comp=N,284nm,0.6s						
DDI	Dehra Dun	8.37	135	ex	x	20 04 19.0	
JOSI	Joshimath	9.11	128	eP	Pn	20 03 08.0	+1.0
JOSI				ex	x	20 04 41.3	
KHET	Khetri	9.22	154	eP	Pn	20 03 06.7	-1.7
KHET				eS	S	20 04 44.9	-7.2
SONA	Sohna	9.57	147	eS	S	20 04 52.6	-7.8
LGTI	Lohaghat	10.31	130	eP	Pn	20 03 21.4	-0.9
LGTI				eS	S	20 05 10.5	-7.3
MK31	Makanchi Array	13.21	35	P	Pn	20 03 58.2	-0.5
	comp=N,1.1nm,0.6s,baz=214,slow=14,SNR=24						
MK31	Makanchi Array	13.21	35	eP	Pn	20 03 59.0	+0.3
MKAR	Makanchi Array	13.21	35	P	Pn	20 03 57.5	-1.1
	comp=N,0.1nm,0.3s,baz=215,slow=16,SNR=8.3						
DANN	Dangsing	13.32	124	eP	Pn	20 04 00.0	-0.2
KOLN	Koldanda	13.60	126	eP	Pn	20 04 03.7	0.0
GKN	Gorkha	14.13	123	eP	Pn	20 04 10.7	+0.4
DMN	Daman	14.70	123	eP	Pn	20 04 17.3	+0.1
KKN	Kakani	14.70	122	eP	Pn	20 04 17.3	0.0
	comp=N,47nm,0.6s						
KKN	Kakani	14.70	122	eP	Pn	20 04 17.3	0.0
KKN				pmax	pmax		
	comp=Z,47nm,0.6s						
PKI	Pulchoki	14.93	122	eP	Pn	20 04 20.3	+0.3
GUN	Gumba	15.04	120	eP	Pn	20 04 21.6	+0.2
	comp=Z,34nm,0.4s						
KURK	Kurchatov	15.20	18	P	Pn	20 04 19.1	-4.0
	comp=Z,0.0nm,0.3s,baz=209,slow=11,SNR=3.2						
AB09	Akbulak array	15.21	331	⇓P	Pn	20 04 21.8	-1.5
	comp=Z,2.0nm,0.5s,baz=146,slow=11						
AB09				⇑S	S	20 07 11.6	0.0
	comp=Z,1.8nm,0.7s,baz=144,slow=27						
JIRN	Jiri	15.41	121	eP	Pn	20 04 26.9	+1.0
	comp=Z,58nm,0.4s						
RAMN	Ramite	16.14	122	eP	P	20 04 34.8	+1.0
	comp=Z,24nm,0.5s						
VOSK	Vostochnaya	16.25	359	⇓P	P	20 04 36.2	+1.5
	comp=Z,0.6nm,0.5s						
BVA0	Borovoye Array	16.57	358	P	P	20 04 38.9	+0.8
	comp=Z,0.4nm,1.2s,baz=125,slow=44,SNR=9.0						
BVAR	Borovoye Array	16.57	358	P	P	20 04 38.1	0.0
	comp=Z,0.4nm,0.3s,baz=155,slow=8.9,SNR=10						
BRVK	Borovoye	16.60	358	eP	P	20 04 40.2	+1.7
TAPN	Taplejung	16.67	118	eP	P	20 04 42.3	+2.8
	comp=Z,21nm,0.6s						
ODAN	Odare	16.74	120	eP	P	20 04 43.2	+2.8
	comp=Z,24nm,0.6s						
AKTK	Aktyubinsk	16.90	330	P	P	20 04 41.7	-0.1
AKTK				S	S	20 07 44.5	-2.2
AKTO	Aktyubinsk	16.90	330	P	P	20 04 41.7	-0.1
	comp=Z,0.8nm,0.3s,baz=128,slow=12,SNR=8.2						
AKTO				S	S	20 07 44.5	-2.2
	comp=Z,0.1nm,0.3s,baz=342,slow=20,SNR=2.6						
LSA	Lhasa	17.99	106	eP	P	20 04 57.7	+3.8
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	17.99	106	eP	P	20 04 57.7	+3.8
	comp=Z,4.6nm,0.8s						
ZALV	Zalesovo Beam	19.87	24	P	P	20 05 14.0	+0.1
	comp=Z,0.7nm,0.3s,baz=218,slow=9.4,SNR=6.5						
ARU	Arti	21.72	341	eP	P	20 05 33.8	+0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
ARU	Arti	21.72	341	eP	P	20 05 33.8	+0.6
	comp=Z,3.3nm,0.8s,mb3.9						
BRTR	Keskin Array B	29.62	288	P	P	20 06 44.8	+0.4
	comp=Z,0.5nm,0.5s,mb3.4,baz=102,slow=9.0,SNR=3.7						
AKASG	Malin Array Be	33.11	309	P	P	20 07 13.9	-0.8
	comp=Z,0.6nm,0.3s,mb3.6,baz=80,slow=7.9,SNR=3.2						
JOF	Joensuu	35.99	330	ep	P	20 07 39.6	+0.4
	comp=Z,2.0nm,0.3s,mb4.1						
ARCES	ARCESS Array B	41.24	338	P	P	20 08 22.9	+0.2
	comp=Z,2.6nm,0.7s,mb3.8,baz=110,slow=6.6,SNR=12						
ARCES	ARCESS Array B	41.24	338	P	P	20 08 22.9	+0.2
NB2	NORSAR Subarra	44.52	323	P	P	20 08 48.5	-0.5
	comp=Z,1.0nm,0.6s,mb3.3,baz=93,slow=7.9						
NOA	NORSAR Array B	44.52	323	P	P	20 08 48.9	-0.2
	comp=Z,1.4nm,0.6s,mb3.5,baz=96,slow=7.7,SNR=6.0						
TORD	Torodi Ar. Bea	65.90	269	P	P	20 11 20.5	-1.8
	comp=Z,0.9nm,0.4s,mb3.7,baz=48,slow=5.2,SNR=15						
DBIC	Dimbokro	74.88	267	P	P	20 12 15.8	-0.8
	comp=Z,2.6nm,0.9s,mb3.9,baz=7.1,slow=8.1,SNR=3.4						
DBIC	Dimbokro	74.88	267	P	P	20 12 15.8	-0.8
YKA	Yellowknife Ar	81.27	3	P	P	20 12 51.0	+0.2
	comp=Z,0.4nm,0.4s,mb3.4,baz=351,slow=5.4,SNR=7.8						
YKA	Yellowknife Ar	81.27	3	P	P	20 12 51.0	+0.2

CASC 12 20:13:54.7±2.1, **1307N**×**8908W**, **h18**km±13km, **MD3.8, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBRS	Las Brisas	0.67	3	eP	x	20 14 08.2	
VSM	San Miguel	0.86	65	eP	x	20 14 10.6	
RTR	El Retiro	0.99	326	eP	x	20 14 12.9	
CAHU	Cacacuatique	1.10	50	eP	x	20 14 13.6	
RBDL	Robledal	1.19	330	eP	x	20 14 15.6	
RBDL				eS	x	20 14 32.6	
IXG	Ixpaco	1.73	310	⇓eP	Pn	20 14 23.4	-0.5
IXG				eS	Sn	20 14 44.6	-0.8
NBG	Las Nubes	1.95	321	eP	Pn	20 14 28.4	+1.5
MRL	Marmol	2.07	343	eP	Pn	20 14 28.9	+0.3
FUG	Fuego 3	2.19	309	eP	Pn	20 14 31.7	+1.5
FUG				eS	Sn	20 14 58.6	+1.7

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*CSEM **12** 20:30:59.8±0.1, 3860N×2667E, h10km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.2km az=99.0*
*ISCJB **12** 20:31:00.1±0.9, 3862N±004×2650E±008, h20km±9km, Error ellipse: s-maj=10.8km s-min=7.1km az=5.2*
*DDA **12** 20:31:00.2, 3865N×2661E, h7km±3km, Md3.2*
*ATH **12** 20:31:00.1, 3863N×2651E, h30km, MD3.0/3*
ISC 12 20:31:00.3±0.9, **3862N**±004×**2654E**±008, **h19**km±7km, **n8,** σ0ˢ**68**/12, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.26	170	iP	Pg	20 31 06.2	+0.1
PRK	Paraskevi	0.66	342	ePN	Pn	20 31 13.4	-1.3
PRK				eSN	Sg	20 31 22.9	+0.6
AYVA	Ayvalik	0.70	10	iP	Pb	20 31 13.2	-0.8
AYVA				iS	Sg	20 31 23.6	+0.1
SMG	Samos	0.94	165	ePN	Pn	20 31 18.5	+0.1
AKHS	Akhisar	1.03	75	iP	Pb	20 31 19.0	-0.6
AKHS				iS	Sb	20 31 32.8	+0.2
BALY	Balya	1.40	36	iP	Pn	20 31 24.7	-0.2
BALY				iS	Sn	20 31 44.1	+1.3
MANT	Manisa	1.59	94	iP	Pn	20 31 27.1	-0.3
APE	Apeiranthos	1.74	208	ePN	Pn	20 31 30.4	+0.9

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*MOS **12** 20:31:22.5±0.9, 1087N×6263W, h39km, mb4.8/22, Error ellipse: s-maj=10.7km s-min=6.8km az=59.7*
*BJI **12** 20:31:27.1, 1070N×6240W, h75km, mB5.2, Ms4.7, Msz4.2*
*ISCJB **12** 20:31:28.6±0.2, 1080N±002×6256W±002, h97km±1km, mb4.5/74, Error ellipse: s-maj=3.4km s-min=2.2km az=143.5*
*IDC **12** 20:31:29.9±0.4, 1088N×6260W, h91km±3km, mb4.2/35, mb1 4.3/38, mb1mx4.3/40, mbtmp4.2/38, MS3.8/9, Ms1 3.7/9, ms1mx3.4/33, Error ellipse: s-maj=8.9km s-min=5.2km az=142.0*
*TRN **12** 20:31:29.2, 1068N×6245W, h95km, MD4.1*
TRN Felt in Trinidad IV.
*LDG **12** 20:31:29.5±0.3, 1101N×6292W, h110km, Mb4.4/12, Error ellipse: s-maj=17.7km s-min=10.2km az=109.0*
*FUNV **12** 20:31:30.9, 1071N×6242W, h78km, MW4.8*
*NEIC **12** 20:31:31.1, 1066N×6240W, h76km, mb4.6/39, MD4.1(TRN), MW4.8(CAR), After CAR.*
NEIC Felt at Ciudad Guayana, Guiria and Maturin. Felt [IV] on Trinidad.
*GCMT **12** 20:31:31.1±0.4, 1084N×6248W, h76km±4km, MW4.9/61, Moment Tensor Solution. s17,c25; s61,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.40±.16; $M_{\theta\theta}$-2.87±.14; $M_{\phi\phi}$1.46±.16; $M_{r\theta}$-0.96±.08; $M_{\theta\phi}$-0.31±.16; $M_{\phi r}$1.17±.08; Best double couple: $M_0$2.91100×10^{16} NP1:ϕ_s49.00000°, δ50.00000°, λ28.00000°. NP2: ϕ_s301.00000°, δ69.00000°, λ136.00000°. Principal axes: T 2.7450, Plg45.0000°, Azm257.0000°; N 0.3220, Plg42.0000°, Azm100.0000°; P -3.0760, Plg12.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **12** 20:31:50.2, 1248N×5930W, h88km, mb4.9, Windward Islands*
ISC 12 20:31:29.7±0.2, **1079N**±002×**6254W**±002, **h89**km±1km, **h88**km±1.1km**:pP-P, n359,** σ0ˢ**94**/394, **mb4.5**/74, **86C-63D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.34	114	⇑iP	Pn	20 31 42.2	-1.1
GUIV				eS	Sn	20 31 50.6	-2.7
CRUV	Carupano	0.69	261	⇓iP	Pn	20 31 46.6	+0.5
CRUV				eS	Sn	20 31 58.6	+0.3
GUNV	Guanoco	0.73	213	⇓iP	Pn	20 31 47.2	+0.7
GUNV				eS	Sn	20 31 58.8	-0.3
TCE	Chacachacare	0.78	96	⇓iP	Pn	20 31 45.8	-1.1
ALNG	Atlantic LNG	1.03	126	eP	Pn	20 31 48.4	-1.3
ALNG	Atlantic LNG	1.03	126	eP	Pn	20 31 50.1	+0.4
BUAY	Buenos Aires	1.08	129	⇑eP	Pn	20 31 48.5	-1.8
BUAY	Buenos Aires	1.08	129	⇑iP	Pn	20 31 51.0	+0.8
TRN	Trinidad (W)	1.13	97	⇑iP	Pn	20 31 49.8	-1.0
TRN				eS	Sn	20 32 03.8	-2.9
TRN	Trinidad (W)	1.13	97	⇑iP	Pn	20 31 49.8	-1.0
TRN				eS	Sn	20 32 03.4	-3.3
TPP	Pointe-a-Pierr	1.17	113	⇑iP	Pn	20 31 50.7	-0.6
TPP				eS	Sn	20 32 06.0	-1.5
TPP	Pointe-a-Pierr	1.17	113	⇑iP	Pn	20 31 50.7	-0.6
TPP				eS	Sn	20 32 09.2	+1.6
TBH	Brigand Hill	1.48	102	⇑iP	Pn	20 31 54.3	-0.9
TBH				eS	Sn	20 32 12.8	-1.6
TBH	Brigand Hill	1.48	102	⇑iP	Pn	20 31 54.3	-0.9
TBH				eS	Sn	20 32 14.7	+0.3
GRGR	Grenville	1.60	33	eP	Pn	20 31 56.1	-0.6
GRW	Mount Saint Ca	1.62	32	eP	Pn	20 31 56.6	-0.3
GRW	Mount Saint Ca	1.62	32	eP	Pn	20 31 56.5	-0.5
GRHS	Sauteurs	1.68	32	⇑iP	Pn	20 31 58.1	+0.4
GRHS				eS	Sn	20 32 18.7	-0.3
GRSS	Sisters	1.76	31	⇑iP	Pn	20 31 59.6	+0.9
GRSS				i S	Sn	20 32 21.4	+0.6
GRIC	Isle de Caille	1.76	32	⇑eP	Pn	20 31 59.7	+0.9
GRIC				eS	Sn	20 32 21.6	+0.8
TPR	Prospect	1.78	77	⇑iP	Pn	20 31 58.2	-0.8
TPR				eS	Sn	20 32 19.2	-2.0
TPR	Prospect	1.78	77	⇑iP	Pn	20 31 58.2	-0.8
TPR				eS	Sn	20 32 18.1	-3.2
ORIV	Oritupano	1.91	207	eP	Pn	20 32 01.3	+0.6
TOSP	Speyside	2.03	75	eP	Pn	20 32 01.0	-1.3
TOSP				eS	Sn	20 32 24.6	-2.6
PCRV	Puerto La Cruz	2.15	254	P	Pn	20 32 04.8	+1.0
	232nm,0.3s,baz=73,slow=5.7,SNR=664						
PCRV				S	Sn	20 32 30.1	+0.1
	868nm,0.3s,baz=210,slow=18,SNR=15						
PCRV				LR	LR	20 32 48.6	
	comp=Z,2µm,20.2s,baz=48,slow=38						
PCRV	Puerto La Cruz	2.15	254	eP	Pn	20 32 05.2	+1.4
PCRV				eS	Sn	20 32 30.0	0.0
IBAV	Isla La Blanqu	2.25	298	eP	Pn	20 32 06.2	+1.1
IBAV				eS	Sn	20 32 33.2	+0.9
SVB	Belmont	2.77	27	eP	Pn	20 32 12.1	-0.1
SVB				eS	Sn	20 32 46.0	+1.1
RIOV	Rio Grande	2.79	165	eP	Pn	20 32 11.6	-0.9
PRGV	PARIAGUAN	2.89	226	⇓eP	Pn	20 32 14.4	+0.6
PRGV				eS	Sn	20 32 47.5	-0.2
PRGV	PARIAGUAN	2.89	226	⇓eP	Pn	20 32 14.1	+0.4
PRGV				eS	Sn	20 32 47.5	-0.2
GURV	El Guri	3.05	190	⇓iP	Pn	20 32 15.2	-0.8
GURV				eS	Sn	20 32 47.3	-4.3
CUPV	Cœpira	3.28	258	⇑iP	Pn	20 32 20.7	+1.7
CUPV				eS	Sn	20 32 57.4	+0.4
MCLT	Moule a Chique	3.30	28	eP	Pn	20 32 19.2	-0.1
MCLT				eS	Sn	20 32 56.2	-1.4
SLDE	Delcer	3.33	26	eP	Pn	20 32 20.9	+1.2
SLDE				eS	Sn	20 32 58.2	-0.1
SLPE	Piton Saint Es	3.39	26	eP	Pn	20 32 20.7	+0.1
SLPE				eS	Sn	20 32 58.7	-1.1
SLW	Petit Monier	3.58	26	eP	Pn	20 32 24.6	+1.6
SLW				eS	Sn	20 33 03.0	-1.2
SLW				eS	Sn	20 33 03.7	-0.6
SLW	Petit Monier	3.58	26	eP	Pn	20 32 24.3	+1.2
SLW				eS	Sn	20 33 04.8	+0.5
BIRV	Birongo	3.68	266	⇑eP	Pn	20 32 26.4	+2.0
BIRV				eS	Sn	20 33 07.6	+0.9
ORCV	Isla La Orchil	3.73	286	eP	Pn	20 32 25.8	+0.7
BBGH	Gun Hill	3.74	51	eP	Pn	20 32 26.3	+1.1
BIM	Bigot	3.98	21	eP	Pn	20 32 28.8	+0.3
BIM				eS	Sn	20 33 12.0	-2.0
MERV	Las Mercedes	4.00	248	⇑eP	Pn	20 32 29.1	+0.3
MERV				eS	Sn	20 33 13.8	-0.9
MVM	Montagne Vaucl	4.08	23	eP	Pn	20 32 31.0	+1.2
FDF	Fort de France	4.15	19	⇑eP	Pn	20 32 31.2	+0.4
FDF				⇑eS	Sn	20 33 14.0	-4.2
FDF	Fort de France	4.15	19	eP	Pn	20 32 31.0	+0.2
FUNV	FUNVISIS	4.21	266	⇑eP	Pn	20 32 33.5	+1.9
FUNV				eS	Sn	20 33 20.5	+0.9
DSHT	Scott's Head	4.55	14	eP	Pn	20 32 37.6	+1.4
DSHT				eS	Sn	20 33 26.3	-1.5
DSHT	Scott's Head	4.55	14	eP	Pn	20 32 37.6	+1.4
DSHT				eS	Sn	20 33 25.6	-2.2
DFBT	Forest Bistro	4.58	14	eP	Pn	20 32 38.0	+1.5
DFBT				eS	Sn	20 33 27.9	-0.7
DSTT	Stowe	4.60	15	eP	Pn	20 32 37.7	+0.9
DSTT				eS	Sn	20 33 27.0	-2.1
DSTT	Stowe	4.60	15	eP	Pn	20 32 38.8	+1.9
DSTT				eS	Sn	20 33 27.0	-2.1
MDN	Morne-Daniel	4.64	14	eP	Pn	20 32 38.9	+1.4
MDN	Morne-Daniel	4.64	14	eP	Pn	20 32 39.3	+1.8
MDN	Morne-Daniel	4.64	14	eP	Pn	20 32 39.3	+1.8
DLPL	La Plaine	4.69	15	eP	Pn	20 32 38.1	-0.1
LUEV	Luepa	5.03	168	⇓eP	Pn	20 32 40.4	-2.3
CAOV	Caicara del Or	5.08	228	eP	Pn	20 32 42.7	-0.7
CAOV				eS	Sn	20 33 36.5	-4.3
TBG	Guadaloupe-3	5.11	10	eP	Pn	20 32 45.6	+1.7
TURV	Turiamo	5.22	267	eP	Pn	20 32 46.3	+0.9
HMG	Houelmont	5.23	9	eP	Pn	20 32 46.3	+0.8
HMG				eS	Sn	20 33 45.0	+0.5
MGG	Marie-Galante	5.24	13	eP	Pn	20 32 47.8	+2.2
SCG	Saint Claude	5.28	9	eP	Pn	20 32 47.7	+1.5
SCG				eS	Sn	20 33 45.0	-0.7
DOG	Dongo Capester	5.29	10	eP	Pn	20 32 47.8	+1.5
LZG	Guadaloupe-1	5.38	8	eP	Pn	20 32 48.4	+0.9
BAUV	El Baul	5.72	252	⇑eP	Pn	20 32 51.7	-0.5
BAUV				eS	Sn	20 33 52.9	-3.6
JACV	Jacura	6.18	273	⇑eP	Pn	20 33 00.0	+1.5
SKI	Saint Kitts	6.51	358	eP	Pn	20 33 04.2	+1.3
SKI				eS	Sn	20 34 13.0	-2.8
TEPV	Terepaima	6.59	263	⇑eP	Pn	20 33 04.2	+0.1
ANWB	Willy Bob	6.88	6	eP	Pn	20 33 08.9	+0.9
	103nm,0.6s						
SANV	Sanarito	7.00	260	⇑eP	Pn	20 33 09.6	-0.1
SIQV	Siquisique	7.14	270	⇑eP	Pn	20 33 12.3	+0.8
CURV	Curarigua	7.34	265	⇑eP	Pn	20 33 14.5	+0.2
PAYV	Puerto Ayacuch	7.35	224	eP	Pn	20 33 14.0	-0.4
PAYV				eS	Sn	20 34 29.8	-6.6
ELOV	Elorza	7.82	242	⇑eP	Pn	20 33 20.3	-0.5
ELOV				eS	Sn	20 34 42.5	-5.4
ICM	Isla Caja Muer	8.05	332	eP	Pn	20 33 23.3	-0.7
SDV	Santo Domingo	8.20	257	P	Pn	20 33 25.0	-0.9
	20nm,0.3s,baz=102,slow=7.6,SNR=123						
SDV				S	Sn	20 34 53.4	-3.6
	88nm,0.3s,baz=62,slow=14,SNR=12						
SDV	Santo Domingo	8.20	257	eP	Pn	20 33 24.3	-1.6
	84nm,0.7s						
CRPR	Cabo Rojo, PR	8.43	329	eP	Pn	20 33 31.0	+1.9
	27nm,0.5s						
SOCV	Socops	8.57	254	eP	Pn	20 33 29.9	-1.1
SOCV				eS	Sn	20 34 59.6	-6.5
VIGV	El Vigia	8.91	258	eP	Pn	20 33 35.4	-0.2
VIGV				eS	Sn	20 35 08.1	-6.3
VIGV	El Vigia	8.91	258	eP	Pn	20 33 35.5	-0.2
VIGV				eS	Sn	20 35 08.0	-6.4
VIRV	Villa del Rosa	9.70	269	⇑eP	Pn	20 33 45.7	-0.8
CAPV	Capacho	10.07	254	⇑eP	Pn	20 33 50.6	-0.9
SDDR	Presa de Saban	11.74	315	eP	Pn	20 34 16.9	+2.8
	118nm,0.6s						
ROSC	El Rosal	13.08	244	P	Pn	20 34 32.5	+0.4
	6.1nm,0.3s,baz=98,slow=18,SNR=6.7						
ROSC	El Rosal	13.08	244	eP	Pn	20 34 33.6	+1.5
OTAV	Otavalo	18.97	237	eP	Pn	20 35 46.2	+0.4
	17nm,0.8s						
ATAH	Atahualpa	23.69	222	P	P	20 36 34.4	+0.8
	106nm,1.3s,mb5.0,baz=56,slow=5.2,SNR=34						
ATAH				LR	LR	20 47 11.4	
	comp=Z,158nm,20.2s,baz=297,slow=40						
TGUH	Tegucigalpa,Un	24.37	280	eP	P	20 36 41.5	+1.8
NNA	Nana	26.71	213	P	P	20 37 00.9	0.0
	26nm,0.9s,mb4.8,baz=25,slow=11,SNR=10.0						
NNA				pP	pP	20 37 22.5	+1.4
	22nm,0.7s,baz=6.2,slow=9.9,SNR=4.7						
NNA				LR	LR	20 49 02.8	
	comp=Z,126nm,20.1s,baz=343,slow=39						
NNA	Nana	26.71	213	eP	P	20 37 01.8	+0.8
	34nm,1.2s,mb4.8						
BDFB	Brasilia	29.94	151	P	P	20 37 30.6	+1.1
	0.9nm,0.4s,mb3.7,baz=345,slow=20,SNR=2.9						
BDFB				LR	LR	20 50 10.4	
	comp=Z,110nm,18.0s,baz=320,slow=37						
TKL	Tuckaleechee C	31.38	325	P	P	20 37 40.8	-1.4
	2.3nm,0.6s,mb4.1,baz=168,slow=12,SNR=3.6						
LRAL	Lakeview Retre	31.55	318	eP	P	20 37 44.7	+1.0
	10nm,0.8s,mb4.6						
CMIG	Matias Romero	31.98	285	P	P	20 37 44.9	-2.7
	1.4nm,0.5s,mb4.0,baz=63,slow=9.0,SNR=3.3						
LVC	Limon Verde	33.77	191	P	P	20 38 03.5	+0.4
	4.9nm,0.5s,mb4.6,baz=10,slow=4.4,SNR=8.5						
LVC				LR	LR	20 53 13.1	
	comp=Z,144nm,20.2s,baz=38,slow=38						
OLIL	Olney	35.99	325	eP	P	20 38 23.1	+1.1
	34nm,0.8s,mb5.3						
CPUP	Villa Florida	37.24	172	P	P	20 38 32.7	-0.1
	3.0nm,0.5s,mb4.5,baz=339,slow=6.5,SNR=9.0						
CPUP				PcP	PcP	20 40 50.2	-0.7
	1.5nm,0.6s,baz=21,slow=2.8,SNR=4.8						
CPUP	Villa Florida	37.24	172	eP	P	20 38 31.9	-0.9
CPUP				pmax	pmax		
	comp=Z,85nm,1.3s						
CPUP	Villa Florida	37.24	172	eP	P	20 38 31.9	-0.9
	comp=Z,85nm,1.3s,mb5.5						
JCT	Junction City	39.74	305	eP	P	20 38 53.3	-0.5
JCT				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
JCT	Junction City	39.74	305	eP	P	20 38 53.3	-0.5
	comp=Z,16nm,0.6s,mb5.0						
WMOK	Wichita Mounta	40.70	312	eP	P	20 39 00.1	-1.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
WMOK	Wichita Mounta	40.70	312	eP	P	20 39 00.1	-1.5
	comp=Z,6.3nm,0.7s,mb4.5						
KSU1	Kansas State U	41.40	319	eP	P	20 39 05.6	-1.7
	comp=Z,20nm,0.7s,mb5.1						
CFAA	Coronel Fontan	42.50	187	P	P	20 39 15.7	-0.6
	comp=Z,1.3nm,1.0s,mb3.6,baz=349,slow=8.7,SNR=10						
TXAR	Lajitas Array	42.53	302	P	P	20 39 16.9	+0.1
	comp=Z,1.8nm,0.5s,mb4.0,baz=120,slow=8.4,SNR=24						
TXAR				PcP	PcP	20 41 07.0	-0.9
	comp=Z,1.2nm,0.6s,baz=129,slow=5.9,SNR=5.3						
TXAR				ScP	ScP	20 44 48.2	-2.6
	comp=Z,0.9nm,1.0s,baz=134,slow=5.4,SNR=3.9						
TXAR	Lajitas Array	42.53	302	P	P	20 39 16.9	+0.2
TXAR						20 41 07.0	
TXAR	Lajitas Array	42.53	302	P	P	20 39 16.9	+0.1
TXAR				PcP	PcP	20 41 07.0	-0.8
TXAR				ScP	ScP	20 44 48.2	-2.6
SCHQ	Schefferville	44.07	356	P	P	20 39 28.6	-0.1
	comp=Z,4.4nm,0.4s,mb4.5,baz=147,slow=8.4,SNR=19						
ECSD	EROS,Sioux Fal	44.11	324	eP	P	20 39 28.3	-0.8
	comp=Z,5.4nm,0.8s,mb4.3						
ANMO	Albuquerque	46.58	308	⇓iP	P	20 39 49.4	+0.6
ANMO				i *PP	pP	20 40 08.4	-1.8
ANMO	Albuquerque	46.58	308	eP	P	20 39 49.1	+0.3
	comp=Z,4.0nm,0.8s,mb4.2						
AGMN	Agassiz Refuge	46.64	330	eP	P	20 39 47.8	-1.2
	comp=Z,5.5nm,0.7s,mb4.4						
SDCO	Great Sand Dun	46.90	312	eP	P	20 39 50.9	-0.4
	comp=Z,4.4nm,0.9s,mb4.2						
ISCO	Idaho Springs	47.82	315	eP	P	20 39 57.8	-0.6
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
ISCO	Idaho Springs	47.82	315	eP	P	20 39 57.8	-0.6
	comp=Z,8.0nm,1.0s,mb4.5						
ULM	Lac du Bonnet	47.97	332	P	P	20 39 57.1	-2.3
	comp=Z,3.3nm,0.3s,mb4.6,baz=138,slow=6.0,SNR=6.2						
ULM	Lac du Bonnet	47.97	332	eP	P	20 39 57.1	-2.2
	comp=Z,6.1nm,0.9s,mb4.4						
Y19A	Nutrioso	48.45	306	⇑P	P	20 40 03.7	+0.4
	baz=48,SNR=5.3						
R21A	Cimarron	48.63	312	⇑P	P	20 40 04.8	+0.2
	baz=49						
118A	Homack Ranch,	48.65	304	⇓P	P	20 40 05.1	+0.1
	baz=49						
N22A	Wattenberg Ran	48.83	316	⇓P	P	20 40 06.6	+0.5
	baz=49						
S19A	Harvey Farm, M	49.57	311	⇓P	P	20 40 12.3	+0.4
	baz=50						
Y17A	Roosevelt	49.64	305	⇑P	P	20 40 12.6	+0.2
	baz=50						
T18A	Mexican Hat	49.92	310	⇑P	P	20 40 14.6	+0.1
	baz=50						
N20A	Spence Gulch,	50.09	315	⇑P	P	20 40 15.5	-0.2
	baz=50						
M20A	Sweetwater, Wa	50.30	316	⇓P	P	20 40 17.2	-0.1
	baz=50						
U16A	Tuba City	50.56	308	⇓P	P	20 40 19.5	+0.1
	baz=51						
WUAZ	Wupatki	50.57	307	⇑P	P	20 40 19.6	+0.2
	baz=51						
N19A	John Jarvie Ra	50.75	315	⇑P	P	20 40 19.9	-0.8
	baz=51						
S17A	Black Ridge (B	50.78	310	⇓P	P	20 40 21.0	0.0
	baz=51						
K20A	Yellowstone Ra	50.89	317	⇑P	P	20 40 20.6	-1.2
	baz=51,SNR=7.0						
P18A	Preston Nutter	51.04	313	⇑P	P	20 40 22.5	-0.4
	baz=51,SNR=7.4						
DGMT	Dagmar	51.15	325	⇑P	P	20 40 23.8	+0.3
	baz=51						
DGMT	Dagmar	51.15	325	eP	P	20 40 23.6	+0.1
	comp=Z,119nm,1.0s						
K19A	Absolon Red Bu	51.30	317	⇑P	P	20 40 23.5	-1.2
	baz=51,SNR=5.3						
P17A	Butcher Ranch,	51.34	312	⇑P	P	20 40 23.8	-1.4
	baz=51						
U15A	North Rim	51.54	308	⇓P	P	20 40 27.1	+0.3
	baz=52						
O17A	Robinson Place	51.60	313	⇑P	P	20 40 27.0	0.0
	baz=52,SNR=5.7						
BW06	Boulder Array	51.75	317	⇓P	P	20 40 27.5	-0.7
	baz=52						
PDAR	Pinedale Array	51.75	317	P	P	20 40 27.4	-0.8
	comp=Z,7.3nm,0.8s,mb4.8,baz=118,slow=9.2,SNR=33						
PDAR				pP	pP	20 40 50.8	+0.8
	comp=Z,1.4nm,0.7s,baz=114,slow=9.9,SNR=3.4						
PDAR				ScP	ScP	20 45 25.6	-3.7
	comp=Z,1.2nm,1.1s,baz=123,slow=5.5,SNR=3.8						
T15A	Red Dirt Ranch	51.78	309	⇓P	P	20 40 29.1	+0.6
	baz=52						
PLCA	Paso Flores	51.79	188	P	P	20 40 28.9	+0.6
	comp=Z,8.5nm,0.9s,mb4.8,baz=16,slow=7.5,SNR=12						
PLCA	Paso Flores	51.79	188	P	P	20 40 28.9	+0.6
N17A	Moffit Pass	51.93	314	⇓P	P	20 40 29.2	-0.3
	baz=52						
K18A	Toltan Ranch,	52.03	316	⇑P	P	20 40 30.2	0.0
	baz=52						
O16A	Springville	52.15	313	⇓P	P	20 40 31.1	-0.1
	baz=52						
I18A	Diamond G Ranc	52.30	318	⇓P	P	20 40 31.6	-0.6
	baz=52						
RLMT	Red Lodge	52.55	320	⇓P	P	20 40 33.5	-0.5
	baz=53						
RLMT	Red Lodge	52.55	320	eP	P	20 40 33.1	-0.9
	comp=Z,6.1nm,0.8s,mb4.7						
M16A	Huntsville	52.63	314	⇑P	P	20 40 33.9	-0.8
	baz=53						
V13A	Grand Canyon W	52.70	307	⇓P	P	20 40 35.1	-0.2
	baz=53						
L16A	Fish Haven	52.74	315	⇓P	P	20 40 35.1	-0.5
	baz=53						
J17A	Brown Place, J	52.76	317	⇑P	P	20 40 35.6	-0.1
	baz=53						
I17A	Pilgram Creek	52.89	318	⇓P	P	20 40 36.4	-0.2
	baz=53						
Q14A	Sevier Lake (B	53.05	311	⇓P	P	20 40 38.0	+0.2
	baz=53,SNR=5.1						
FRB	Frobisher Bay	53.05	357	P	P	20 40 36.2	-1.2
	comp=Z,3.4nm,0.5s,mb4.7,baz=189,slow=8.8,SNR=7.1						
FRB				LR	LR	20 59 19.2	
	comp=Z,149nm,21.2s,baz=262,slow=32						
FRB	Frobisher Bay	53.05	357	P	P	20 40 36.2	-1.2
FRB				LR	LR	20 59 19.2	
P14A	Drum Mountains	53.08	312	⇑P	P	20 40 37.9	-0.2
	baz=53						
DUG	Dugway	53.09	313	⇑P	P	20 40 38.2	0.0
	baz=53						
K16A	Soda Springs	53.15	316	⇑P	P	20 40 37.9	-0.6
	baz=53						
F18A	Big Timber	53.17	320	⇑P	P	20 40 37.9	-0.6
	baz=53,SNR=5.4						
IRM	Iron Mountain	53.23	305	⇑P	P	20 40 38.5	-0.7
	baz=53						
M15A	Larsen Ranch,	53.26	314	⇓P	P	20 40 38.6	-0.7
	baz=53						
J16A	Bone	53.34	317	⇓P	P	20 40 39.3	-0.5
	baz=53						
BC3	Big Chuckw Mtn	53.36	304	⇑P	P	20 40 39.6	-0.6
	baz=53						
L15A	Malad City	53.40	315	⇑P	P	20 40 39.8	-0.6
	baz=54						
I16A	Newdale	53.48	317	⇑P	P	20 40 40.3	-0.6
	baz=54,SNR=11						
E18A	Harlowton	53.58	321	⇑P	P	20 40 41.6	0.0
	baz=54						
Q13A	Wheeler Ranch,	53.59	311	⇓P	P	20 40 41.6	-0.2
	baz=54						
H16A	Russell Place,	53.65	318	⇓P	P	20 40 42.0	-0.1
	baz=54						
FFC	Flin Flon	53.73	333	eP	P	20 40 40.6	-1.9
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
FFC	Flin Flon	53.73	333	eP	P	20 40 40.6	-1.9
	comp=Z,1.8nm,0.8s,mb4.2						
P13A	Bates Ranch, G	53.74	311	⇓P	P	20 40 42.4	-0.5
	baz=54						
F17A	Fitzpatrick Pl	53.77	320	⇓P	P	20 40 42.1	-0.8
	baz=54,SNR=6.2						
GMRC	Granite Mounta	53.77	305	⇓P	P	20 40 42.1	-1.1
	baz=54						
D18A	Linhart Farms,	53.79	322	⇓P	P	20 40 42.6	-0.5
	baz=54						
I15A	Monteview	54.20	317	⇓P	P	20 40 46.3	+0.1
	baz=54						
H15A	Lima	54.53	318	⇓P	P	20 40 48.6	0.0
	baz=55,SNR=9.8						
A18A	Metzger Ranch,	54.60	324	⇓P	P	20 40 48.5	-0.5
	baz=55						
G15A	Dillon	54.64	318	⇑P	P	20 40 48.7	-0.6
	baz=55						
Q11A	Duckwater	54.78	310	⇑P	P	20 40 50.1	-0.3
	baz=55						
F15A	Butte	54.91	319	⇑P	P	20 40 51.3	0.0
	baz=55						
N12A	Clover Valley,	54.91	313	⇓P	P	20 40 51.1	-0.3
	baz=55						
M12A	Wells	54.99	313	⇓P	P	20 40 51.7	-0.3
	baz=55						
H14A	Leadore	55.01	317	⇑P	P	20 40 51.7	-0.4
	baz=55,SNR=7.8						
ELK	Elko	55.02	312	eP	P	20 40 51.2	-0.9
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	Elko	55.02	312	eP	P	20 40 51.2	-1.0
	comp=Z,1.1nm,0.6s,mb4.1						
O11A	Cowboy Ranch,	55.15	312	⇑P	P	20 40 52.9	-0.2
	baz=55,SNR=5.2						
S10A	Tonopah Range,	55.26	309	⇓P	P	20 40 53.8	-0.1
	baz=55						
I13A	Wildhorse Cree	55.26	316	⇓P	P	20 40 53.7	-0.1
	baz=55,SNR=16						
Q10A	Clear Creek Ra	55.34	310	⇑P	P	20 40 54.2	-0.3
	baz=55						
HLID	Hailey	55.34	316	⇓P	P	20 40 54.3	-0.1
	baz=55						
HLID	Hailey	55.34	316	eP	P	20 40 53.6	-0.8
	comp=Z,7.0nm,1.0s,mb4.7						
K12A	Draper Farm, C	55.37	315	⇑P	P	20 40 54.3	-0.4
	baz=55						
D15A	Lincoln	55.41	320	⇑P	P	20 40 54.5	-0.3
	baz=56						
H13A	Challis	55.59	317	⇓P	P	20 40 55.7	-0.5
	baz=56						
M11A	Holland Ranch,	55.62	313	⇓P	P	20 40 56.4	-0.1
	baz=56						
S09A	Goldfield	55.69	308	⇓P	P	20 40 56.7	-0.3
	baz=56						
R09A	Tonopah	55.70	309	⇓P	P	20 40 56.8	-0.2
	baz=56						
C15A	Salmond Ranch,	55.76	321	⇑P	P	20 40 57.4	+0.1
	baz=56						
L10A	Juniper Basin	56.30	314	⇑P	P	20 41 01.3	0.0
	baz=56						
F12A	Elk City	56.67	318	⇑P	P	20 41 03.3	-0.5
	baz=57						
NVAR	Mina Array Bea	56.69	309	P	P	20 41 04.1	0.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=103,slow=6.5,SNR=6.1						
NVAR				pP	pP	20 41 27.5	+1.3
	comp=Z,0.8nm,0.7s,baz=117,slow=7.0,SNR=3.9						
K10A	MacKenzie Ranc	56.80	314	⇑P	P	20 41 04.5	-0.3
	baz=57						
DBIC	Dimbokro	57.10	89	P	P	20 41 07.4	0.0
	comp=Z,2.9nm,0.8s,mb4.4,baz=152,slow=12,SNR=5.0						
H10A	Noah's Angus R	57.27	316	⇓P	P	20 41 06.9	-1.2
	baz=57						
F11A	Grangeville	57.30	318	⇓P	P	20 41 07.5	-0.8
	baz=57						
MDT	Midelt	57.34	58	P	P	20 41 09.6	+0.8
	comp=Z,3.6nm,0.8s,mb4.5,baz=277,slow=5.1,SNR=11						
MDT				pP	pP	20 41 32.6	+1.6
	comp=Z,4.4nm,1.0s,baz=282,slow=9.4,SNR=5.6						
K09A	Rome	57.37	314	⇓P	P	20 41 07.8	-1.0
	baz=57						
M08A	Happy Creek Ra	57.50	312	⇑P	P	20 41 08.9	-0.9
	baz=58						
E11A	Bogner Ranch,	57.50	319	⇓P	P	20 41 08.9	-0.8
	baz=58						
L08A	Fields	57.67	313	⇑P	P	20 41 10.5	-0.4
	baz=58,SNR=6.5						
BMO	Blue Mountains	57.73	317	eP	P	20 41 10.4	-0.9
BMO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BMO	Blue Mountains	57.73	317	eP	P	20 41 10.4	-0.9
	comp=Z,3.9nm,1.0s,mb4.4						
H09A	Durkee	57.92	316	⇓P	P	20 41 11.9	-0.7
	baz=58						
M07A	Soldier Meadow	58.05	312	⇑P	P	20 41 13.2	-0.5
	baz=58,SNR=8.5						
B11A	Sandpoint	58.34	321	⇓P	P	20 41 14.8	-0.7
	baz=58						
H08A	Prairie City	58.56	316	⇑P	P	20 41 16.5	-0.6
	baz=59						
I07A	Izee	59.01	315	⇓P	P	20 41 19.7	-0.5
	baz=59						
ESDC	Sonseca Array	59.10	50	P	P	20 41 21.4	+0.4
	comp=Z,4.6nm,0.8s,mb4.5,baz=259,slow=6.8,SNR=11						
ESDC				pP	pP	20 41 44.4	+1.2
	comp=Z,5.3nm,0.9s,baz=259,slow=7.4,SNR=8.4						
ESDC	Sonseca Array	59.10	50	P	P	20 41 21.4	+0.4
ESDC				pP	pP	20 41 44.4	+1.2
I06A	Prineville	59.46	315	⇓P	P	20 41 23.6	+0.3
	baz=60						
K05A	Summer Lake	59.63	313	⇓P	P	20 41 24.6	0.0
	baz=60						
SJPF	Ste Jean	61.84	47	eP	P	20 41 40.1	+0.6
	comp=Z,20nm,1.0s,mb4.8						
SJPF	Ste Jean	61.84	47	eP	P	20 41 40.1	+0.6
SJPF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
SJPF	Ste Jean	61.84	47	eP	P	20 41 40.1	+0.6
	comp=Z,9.8nm,1.0s,mb4.8						
ETSF	Etsaut	62.27	47	eP	P	20 41 43.4	+1.0
EFI	East Falkland	62.32	177	⇑iP	P	20 41 43.9	+1.5
TOA0	Torodi Ar. Sit	62.74	81	eP	P	20 41 45.3	-0.7
TORD	Torodi Ar. Bea	62.74	81	P	P	20 41 45.6	-0.4
	comp=Z,1.9nm,0.6s,mb4.2,baz=286,slow=6.2,SNR=16						
TORD				pP	pP	20 42 07.9	-0.6
	comp=Z,1.8nm,0.7s,baz=288,slow=5.6,SNR=4.7						
EPF	Esparros	62.95	47	eP	P	20 41 48.0	+1.1
	comp=Z,10nm,0.5s,mb4.7						
EPF	Esparros	62.95	47	eP	P	20 41 48.0	+1.1
EPF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
EPF	Esparros	62.95	47	eP	P	20 41 48.0	+1.1
	comp=Z,5.2nm,0.5s,mb4.7						
GRR	Gorron	63.30	41	eP	P	20 41 49.4	+0.2
SUMG	Summit	63.41	8	eP	P	20 41 49.9	+0.5
	comp=Z,33nm,1.1s,mb5.2						
YKA	Yellowknife Ar	63.57	336	P	P	20 41 48.3	-2.4
	comp=Z,1.3nm,0.5s,mb4.0,baz=109,slow=7.5,SNR=27						
YKA				pP	pP	20 42 11.4	-1.8
	comp=Z,1.5nm,0.4s,baz=107,slow=7.1,SNR=8.2						
YKA				LR	LR	21 06 59.1	
	comp=Z,32nm,21.1s,baz=115,slow=34						
YKA	Yellowknife Ar	63.57	336	P	P	20 41 48.3	-2.4
YKA				pP	pP	20 42 11.4	-1.8
YKA				LR	LR	21 06 59.1	
LFF	La Frestale	63.60	45	eP	P	20 41 52.3	+1.1
	comp=Z,5.2nm,0.5s,mb4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LFF	La Frestale	63.60	45	eP	P	20 41 52.3	+1.1
LFF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
LFF	La Frestale	63.60	45	eP	P	20 41 52.3	+1.1
	comp=Z,2.6nm,0.5s,mb4.3						
FLN	La Foliniere	63.64	41	eP	P	20 41 51.7	+0.3
	comp=Z,13nm,0.5s,mb4.7						
FLN	La Foliniere	63.64	41	eP	P	20 41 51.7	+0.3
FLN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
FLN	La Foliniere	63.64	41	eP	P	20 41 51.7	+0.3
	comp=Z,6.7nm,0.5s,mb4.7						
EKA	Eskdalemuir Ar	63.99	33	P	P	20 41 53.2	-0.3
	comp=Z,1.5nm,0.8s,mb3.9,baz=251,slow=7.1,SNR=7.7						
MTLF	Montolieu	64.35	47	eP	P	20 41 56.3	+0.1
CAF	Calviac	64.52	45	eP	P	20 41 57.4	+0.2
	comp=Z,6.5nm,0.5s,mb4.5						
CAF	Calviac	64.52	45	eP	P	20 41 57.4	+0.2
CAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
CAF	Calviac	64.52	45	eP	P	20 41 57.4	+0.2
	comp=Z,3.3nm,0.5s,mb4.4						
TCF	Toulx Ste Croi	64.88	44	eP	P	20 41 59.5	0.0
	comp=Z,3.2nm,0.5s,mb4.1						
TCF	Toulx Ste Croi	64.88	44	eP	P	20 41 59.5	0.0
TCF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
TCF	Toulx Ste Croi	64.88	44	eP	P	20 41 59.5	0.0
	comp=Z,1.6nm,0.5s,mb4.1						
AVF	Avril sur Loir	65.74	43	eP	P	20 42 04.7	-0.4
	comp=Z,2.3nm,0.5s,mb4.0						
AVF	Avril sur Loir	65.74	43	eP	P	20 42 04.7	-0.4
AVF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
AVF	Avril sur Loir	65.74	43	eP	P	20 42 04.7	-0.4
	comp=Z,1.1nm,0.5s,mb3.9						
LOR	Lormes	66.17	43	eP	P	20 42 07.4	-0.4
	comp=Z,4.3nm,0.5s,mb4.2						
LOR	Lormes	66.17	43	eP	P	20 42 07.4	-0.4
LOR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
LOR	Lormes	66.17	43	eP	P	20 42 07.4	-0.4
	comp=Z,2.2nm,0.5s,mb4.2						
SMRF	Simiane la Rot	66.86	47	eP	P	20 42 12.3	0.0
MEZF	Maizieres J'vi	67.17	42	eP	P	20 42 14.1	-0.1
	comp=Z,11nm,0.6s,mb4.6						
MEZF	Maizieres J'vi	67.17	42	eP	P	20 42 14.1	-0.1
	comp=Z,11nm,0.6s,mb4.9						
LPL	La Plagne	67.87	45	eP	P	20 42 19.7	+1.0
	comp=Z,16nm,1.0s,mb4.5						
LPL	La Plagne	67.87	45	eP	P	20 42 19.7	+1.0
LPL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
LPL	La Plagne	67.87	45	eP	P	20 42 19.7	+1.0
	comp=Z,7.8nm,1.0s,mb4.5						
LPG	La Plagne	67.88	45	eP	P	20 42 19.9	+1.2
HINF	Hinteralfeld	68.26	43	eP	P	20 42 20.3	-0.7
CDF	Champ du Feu	68.62	42	eP	P	20 42 22.9	-0.4
KEST	Kesra	69.11	56	P	P	20 42 27.1	+0.6
	comp=Z,1.1nm,0.6s,mb3.9,baz=204,slow=21,SNR=5.3						
DLBC	Dease Lake	69.14	329	P	P	20 42 27.6	+1.3
	comp=Z,4.5nm,0.9s,mb4.3,baz=248,slow=4.8,SNR=4.0						
DAVOS	Davos	70.13	44	P	P	20 42 34.1	+1.5
DAVOX	Davos/Dischmat	70.18	44	P	P	20 42 34.1	+1.1
	comp=Z,2.9nm,0.8s,mb4.2,baz=48,slow=8.7,SNR=5.6						
NRDL	Niedersach Rie	70.96	38	eP	P	20 42 38.0	+0.5
	comp=Z,10.0nm,1.1s,mb4.6						
GRA1	Grafenberg Arr	71.35	41	eP	P	20 42 40.1	+0.1
	comp=Z,29nm,1.8s,mb4.8						
GRA1				epP	pP	20 43 01.8	-1.1
GRF	Grafenberg Arr	71.35	41	eP	P	20 42 40.1	+0.1
GRF				e*PP	pP	20 43 01.8	-1.1
GRF				pmax	pmax		
	comp=Z,29nm,1.8s,mb4.8						
GRF	Grafenberg Arr	71.35	41	eP	P	20 42 40.1	+0.1
GRF				e*PP	pP	20 43 01.8	-1.1
GRF				pmax	pmax		
	comp=Z,29nm,1.8s,mb4.8						
GRF	Grafenberg Arr	71.35	41	eP	P	20 42 40.1	+0.1
	comp=Z,29nm,1.8s,mb4.8						
GRF				epP	pP	20 43 01.8	-1.1
MANZ	Manzenberg	71.95	41	eP	P	20 42 43.9	+0.4
	comp=Z,5.0nm,0.9s,mb4.3						
ROTZ	Rotzenmuhle	71.99	41	epP	pP	20 43 06.9	+0.1
GUNZ	Gunzen	72.12	41	eP	P	20 42 45.1	+0.5
	comp=Z,7.0nm,1.1s,mb4.4						
NKC	Novy Kostel	72.19	41	eP	P	20 42 45.6	+0.6
TANN	Tannenbergstha	72.21	40	eP	P	20 42 45.8	+0.7
	comp=Z,79nm,3.2s						
TANN				epP	pP	20 43 07.8	-0.3
WET	Wettzell	72.38	42	eP	P	20 42 46.2	0.0
WET				e*PP	pP	20 43 09.1	-0.1
WET				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
WET	Wettzell	72.38	42	eP	P	20 42 46.2	0.0
	comp=Z,12nm,1.7s,mb4.5						
WET				epP	pP	20 43 09.1	-0.1
CLL	Collm	72.62	40	⇑iP	P	20 42 48.0	+0.5
CLL				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
CLL	Collm	72.62	40	eP	P	20 42 47.8	+0.3
	comp=Z,12nm,1.3s,mb4.6						
CLL	Collm	72.62	40	⇑iP	P	20 42 48.0	+0.5
	comp=Z,12nm,1.3s,mb4.6						
CLL	Collm	72.62	40	⇑iP	P	20 42 48.0	+0.5
	comp=Z,12nm,1.3s,mb4.6						
NB2	NORSAR Subarra	72.77	29	P	P	20 42 48.8	+0.6
	comp=Z,18nm,1.0s,mb4.9,baz=262,slow=6.2						
NOA	NORSAR Array B	72.77	29	P	P	20 42 49.0	+0.8
	comp=Z,16nm,1.1s,mb4.8,baz=262,slow=5.9,SNR=16						
NOA				pP	pP	20 43 11.8	+0.6
	comp=Z,10nm,1.0s,baz=261,slow=5.9,SNR=7.4						
NOA				LR	LR	21 08 17.8	
	comp=Z,81nm,18.8s,baz=270,slow=30						
NOA	NORSAR Array B	72.77	29	P	P	20 42 49.0	+0.8
NOA				*PP	pP	20 43 11.8	+0.6
FBE	Freiberg	72.81	40	epP	pP	20 43 11.6	-0.1
KHC	Kasperske Hory	72.84	42	eP	P	20 42 50.0	+1.1
KHC				epP	pP	20 43 12.4	+0.5
GEC2	GERESS Array S	72.91	42	eP	P	20 42 49.4	+0.1
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
GEC2	GERESS Array S	72.91	42	eP	P	20 42 49.4	+0.1
	comp=Z,10.0nm,1.2s,mb4.5						
GERES	GERESS Array B	72.91	42	P	P	20 42 49.7	+0.5
	comp=Z,3.1nm,0.8s,mb4.2,baz=254,slow=3.9,SNR=14						
GERES				pP	pP	20 43 11.8	-0.5
	comp=Z,4.5nm,1.1s,baz=235,slow=4.7,SNR=4.6						
BRG	Berggiesshubel	73.18	40	eP	P	20 42 51.4	+0.6
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
BRG	Berggiesshubel	73.18	40	eP	P	20 42 51.5	+0.7
	comp=Z,5.0nm,1.1s,mb4.3						
BRG	Berggiesshubel	73.18	40	eP	P	20 42 51.4	+0.6
	comp=Z,4.7nm,1.1s,mb4.2						
PRU	Pruhonice	73.51	41	eP	P	20 42 53.7	+0.9
PRU				epP	pP	20 43 15.6	-0.3
HFS	Hagfors	73.86	30	P	P	20 42 54.8	+0.2
	comp=Z,6.8nm,0.7s,mb4.5,baz=226,slow=3.9,SNR=13						
HFS				pP	pP	20 43 18.0	+0.3
	comp=Z,6.4nm,0.9s,baz=270,slow=4.4,SNR=3.6						
TREC	Trest	74.10	42	eP	P	20 42 56.8	+0.5
UPC	Upice	74.48	41	eP	P	20 42 58.8	+0.4
UPC				epP	pP	20 43 21.1	-0.4
DPC	Dobruska-Polom	74.67	41	eP	P	20 43 00.5	+0.9
DPC				epP	pP	20 43 22.7	0.0
VRAC	Vranov	74.82	42	P	P	20 43 00.8	+0.4
	comp=Z,4.7nm,0.7s,mb4.3,baz=269,slow=14,SNR=6.9						
VRAC				pP	pP	20 43 22.5	-1.1
	comp=Z,3.5nm,0.7s,baz=229,slow=5.7,SNR=3.2						
VRAC	Vranov	74.82	42	⇑iP	P	20 43 01.1	+0.6
VRAC	Vranov	74.82	42	⇑P	P	20 43 01.1	+0.6
PKSM	Moragy	76.21	45	⇑iP	P	20 43 09.2	+0.8
PKSM	Moragy	76.21	45	⇑P	P	20 43 09.2	+0.7
VYHS	Vyhne	76.30	43	eP	P	20 43 09.1	+0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
VYHS	Vyhne	76.30	43	eP	P	20 43 09.1	+0.2
	comp=Z,2.9nm,1.1s,mb3.9						
SPITS	Spitsbergen Ar	77.24	12	P	P	20 43 12.7	-1.0
	comp=Z,2.4nm,0.3s,mb4.3,baz=272,slow=3.0,SNR=38						
BZS	Buzias	78.31	45	⇓iP	P	20 43 21.1	+0.9
BZS	Buzias	78.31	45	⇓P	P	20 43 21.1	+0.9
COLA	College	78.32	334	⇓iP	P	20 43 19.4	-0.5
KWP	Kalwaria	78.80	41	⇑iP	P	20 43 24.5	+1.7
KWP	Kalwaria	78.80	41	⇑P	P	20 43 24.4	+1.6
DRGR		78.99	44	⇓iP	P	20 43 24.7	+0.8
DRGR		78.99	44	⇓P	P	20 43 24.7	+0.7
GZR	Gura Zlata	79.14	46	⇑iP	P	20 43 25.6	+0.8
GZR	Gura Zlata	79.14	46	⇑P	P	20 43 25.6	+0.8
ARCES	ARCESS Array B	79.29	21	P	P	20 43 24.4	-0.6
	comp=Z,3.2nm,0.8s,mb4.2,baz=267,slow=5.0,SNR=9.2						
TRF	Thorofare Moun	79.43	333	eP	P	20 43 25.0	-1.0
	comp=Z,12nm,1.2s,mb4.6						
PPLA	Purkeypile	80.33	332	eP	P	20 43 30.0	-0.8
BUR08	Bucovina Ar. S	80.61	43	eP	P	20 43 34.4	+1.8
BUR08				epP	pP	20 43 56.6	+0.6
BURAR	Bucovina Array	80.62	43	⇓iP	P	20 43 34.2	+1.5
BURAR	Bucovina Array	80.62	43	⇓P	P	20 43 34.2	+1.5
VOIR		80.73	45	⇓iP	P	20 43 34.5	+1.2
VOIR		80.73	45	⇓P	P	20 43 34.5	+1.1
MLR	Muntele Rosu	81.35	45	P	P	20 43 37.8	+1.2
	comp=Z,7.9nm,0.7s,mb4.6,baz=218,slow=1.7,SNR=16						
IDI	Anoyia	81.78	56	P	P	20 43 40.4	+1.3
	comp=Z,4.9nm,0.7s,mb4.4,baz=259,slow=10,SNR=4.2						
SVW2	Sparrevohn	82.12	331	eP	P	20 43 39.4	-0.9
LVZ	Lovozero	82.79	22	⇑iP	P	20 43 41.6	-2.1
LVZ				pmax	pmax		
	comp=Z,113nm,2.5s,mb5.3						
AKASG	Malin Array Be	82.86	40	P	P	20 43 43.5	-1.0
	comp=Z,1.3nm,0.5s,mb4.0,baz=263,slow=4.5,SNR=11						
AKASG				pP	pP	20 44 07.2	-0.7
	comp=Z,1.7nm,0.8s,baz=267,slow=4.4,SNR=2.8						
AKASG	Malin Array Be	82.86	40	P	P	20 43 43.5	-1.0
AKASG				pP	pP	20 44 07.2	-0.7
OBN	Obninsk	86.40	35	⇑iP	P	20 44 02.0	-0.1
OBN				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
BR131	Keskin Array S	87.89	50	eP	P	20 44 10.3	+0.6
	comp=Z,3.6nm,0.7s,mb4.5						
BR131				epP	pP	20 44 33.0	-0.4
BRTR	Keskin Array B	87.89	50	P	P	20 44 10.2	+0.6
	comp=Z,4.0nm,0.8s,mb4.5,baz=264,slow=4.1,SNR=21						
BRTR				pP	pP	20 44 33.7	+0.3
	comp=Z,3.4nm,1.0s,baz=298,slow=2.7,SNR=4.7						
VNA1	Neumayer--Stat	89.09	164	eP	P	20 44 16.8	+2.3
VNA3	Neumayer Olymp	89.09	165	eP	P	20 44 16.5	+2.0
VNA3				e		20 44 19.4	
VNA3				e		20 44 46.8	
VNA2	Neumayer--Watz	89.48	164	eP	P	20 44 18.5	+2.1
	baz=312,slow=8.5						
VNA2				e		20 44 22.0	
VNA2				e		20 44 49.3	
PPT	Papeete	90.42	252	LR	LR	21 16 57.4	
	comp=Z,95nm,19.6s,baz=99,slow=30						
SNAA	Sanae	91.12	164	eP	P	20 44 24.9	+0.9
SNAA				e		20 44 27.9	
SNAA				e		20 44 57.3	
BOSA	Boshof	93.17	118	P	P	20 44 35.9	+1.4
	comp=Z,3.3nm,0.8s,mb4.7,baz=185,slow=2.2,SNR=4.8						
BILL	Bilibino	94.08	344	⇑iP	P	20 44 38.5	+0.7
BILL				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.9						
TIXI	Tiksi	97.40	356	⇑iP	P	20 44 50.1	-2.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb4.7						
WMQ	Urumqi	119.28	24	ePKP	PKPdf	20 50 07.3	-1.6
SONM	Songino Array	120.82	9	PKP	PKPdf	20 50 09.9	-1.8
	comp=Z,0.3nm,0.4s,baz=331,slow=2.6,SNR=3.8						
BJI	Beijing	129.42	1	PKP	PKPdf	20 50 27.0	-1.4
BJI				SS	SS	21 09 50.8	-0.3
BJI				LR	LR		
	comp=Z,57nm,27.3s						
LZH	Lanzhou	131.64	15	ePKP	PKPdf	20 50 32.4	-0.3
LZH				LR	LR		
	comp=E,139nm,15.9s						
LZH				LR	LR		
	comp=Z,223nm,17.0s						
XAN	Xi'an	134.69	10	PKP	PKPdf	20 50 37.9	-0.6
XAN				XPKP		20 51 12.3	
XAN				PP	PP	20 53 15.6	+4.5
XAN				SKS	SKSdf	20 57 37.6	-4.4
XAN				SKKS	SKKSac	20 59 55.5	-4.3
XAN				SS	SS	21 10 54.3	-1.1
XAN				LR	LR		
	comp=N,29nm,22.0s						
XAN				LR	LR		
	comp=E,19nm,20.6s						
XAN				LR	LR		
	comp=Z,56nm,18.9s						
CD2	Chengdu	136.51	17	ePKP	PKPdf	20 50 40.4	-1.6
GYA	Guiyang	141.52	16	ePKP	PKPdf	20 50 47.8	-3.5
GYA				PP	PP	20 53 55.4	+1.8
GYA				PKS		20 54 21.8	
GYA				PP	PP		
	comp=Z,120nm,8.9s						
KMI	Kunming	141.53	22	PKP	PKPdf	20 50 50.5	-0.8
KMI				APKP		20 51 18.4	
KMI				PP	PP	20 53 56.6	+2.8
KMI				SS	SS	21 12 17.6	+0.9
KMI				PP	PP		
	comp=Z,100nm,5.8s						
KMI				LR	LR		
	comp=Z,38nm,30.0s						
CHTO	Chiang Mai	145.38	32	ePKP2	PKPab	20 50 56.6	-1.8
CMAR	Chiang Mai Arr	145.68	32	PKPbc	PKPbc	20 50 58.5	-0.7
	comp=Z,3.2nm,0.6s,baz=309,slow=4.5,SNR=21						
CMAR				pPKPbc	pPKPbc	20 51 22.7	-0.9
	comp=Z,6.1nm,1.1s,baz=318,slow=4.6,SNR=4.0						
STKA	Stephens Creek	149.38	223	PKP	PKPdf	20 51 02.9	-1.6
	comp=Z,1.8nm,0.6s,baz=11,slow=5.2,SNR=3.0						
STKA				PKPbc	PKPbc	20 51 07.1	-1.9
	comp=Z,2.0nm,0.6s,baz=106,slow=7.2,SNR=5.6						
STKA	Stephens Creek	149.38	223	PKP	PKPdf	20 51 02.9	-1.6
STKA				PKPbc	PKPbc	20 51 07.1	-1.9

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*ISCJB **12** 20:46:37.0±0.8, 3864N±003×2647E±007, h21km±8km, Error ellipse: s-maj=9.3km s-min=5.7km az=173.9*
*CSEM **12** 20:46:36.7±0.2, 3860N×2658E, h12km, MD3.2, Error ellipse: s-maj=6.7km s-min=4.4km az=82.0*
*ATH **12** 20:46:36.9, 3861N×2641E, h31km, MD3.1/3*
*DDA **12** 20:46:37.4, 3863N×2667E, h7km±5km, Md3.2*
ISC 12 20:46:37.3±0.7**, 3863N**±003×**2650E**±008**, h18**km±6km**, n9, σ0^{s}66**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.28	165	iP	Pg	20 46 43.0	-0.5
URLA				iS	Sg	20 46 47.4	-0.2
PRK	Paraskevi	0.64	344	ePN	Pn	20 46 50.4	-1.0
PRK				eSN	Sg	20 46 59.7	+1.2
AYVA	Ayvalik	0.69	12	iP	Pb	20 46 50.9	+0.1
AYVA				iS	Sb	20 46 59.9	-0.1
SMG	Samos	0.96	164	ePN	Pn	20 46 55.3	-0.5
AKHS	Akhisar	1.05	76	iP	Pb	20 46 56.6	-0.4
AKHS				iS	Sb	20 47 09.5	-1.0
GCAM	G?zelcaml?	1.09	148	iP	Pb	20 46 57.8	+0.1
GCAM				iS	Sb	20 47 12.9	+1.4
BALY	Balya	1.41	38	iP	Pn	20 47 01.8	-0.1
MANT	Manisa	1.62	94	iP	Pn	20 47 05.4	+0.5
MANT				iS	Sn	20 47 25.9	+0.7
APE	Apeiranthos	1.74	207	ePN	Pn	20 47 06.3	-0.2

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*ISCJB **12** 21:20:02.6±3.7, 478N±05×1536E±07, h45km±21km, mb3.9/8, Error ellipse: s-maj=119.8km s-min=15.4km az=138.8*
*MOS **12** 21:20:02.1±0.9, 4763N×15379E, h60km, mb4.3/6, Error ellipse: s-maj=26.0km s-min=19.5km az=100.0*
*IDC **12** 21:20:05.2±5.8, 4794N×15354E, h45km±30km, mb3.6/8, mb1 3.6/10, mb1mx3.4/26, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=133.6km s-min=26.9km az=144.0*
ISC 12 21:20:05.6±3.7**, 480N**±06×**1535E**±07**, h46**km±21km**, n19, σ0^{s}51**/19**, mb3.9**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.21	32	ePN	Pn	21 20 53.9	+0.4
SKR				e		21 21 31.0	
PETK	Petropavlovsk-	5.80	26	P	Pn	21 21 28.5	-0.5
	0.4nm,0.3s,baz=183,slow=12,SNR=8.5						
ASAJ	Asahikawa	8.50	247	P	Pn	21 22 05.9	-0.1
	0.5nm,0.3s,baz=87,slow=17,SNR=5.0						
ASAJ	Asahikawa	8.50	247	PN	Pn	21 22 05.9	-0.1
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	31.18	288	P	P	21 26 20.5	+0.5
	comp=Z,0.2nm,0.6s,mb3.1,baz=59,slow=8.6,SNR=2.9						
ZALV	Zalesovo Beam	42.10	305	P	P	21 27 52.1	-0.7
	comp=Z,0.6nm,0.5s,mb3.5,baz=76,slow=6.3,SNR=3.9						
ZALV	Zalesovo Beam	42.10	305	P	P	21 27 52.2	-0.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
MKAR	Makanchi Array	46.61	296	P	P	21 28 28.2	-0.7
	comp=Z,0.4nm,0.6s,mb3.5,baz=73,slow=6.1,SNR=7.8						
KURK	Kurchatov	46.90	303	P	P	21 28 31.8	+0.7
	comp=Z,1.7nm,0.5s,mb4.2,baz=69,slow=8.2,SNR=18						
KURK	Kurchatov	46.90	303	P	P	21 28 31.8	+0.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
BVAR	Borovoye Array	50.28	309	P	P	21 28 57.5	+0.5
	comp=Z,0.9nm,0.5s,mb4.0,baz=60,slow=7.7,SNR=11						
BVAR	Borovoye Array	50.28	309	P	P	21 28 57.5	+0.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	NORSAR Subarra	67.15	341	P	P	21 30 54.3	+0.2
	comp=Z,0.7nm,0.5s,mb4.0,baz=25,slow=6.2						
NOA	NORSAR Array B	67.15	341	P	P	21 30 54.4	+0.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=26,slow=6.2,SNR=4.8						
NOA	NORSAR Array B	67.15	341	P	P	21 30 54.4	+0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	67.39	340	P	P	21 30 55.7	+0.1
	comp=Z,2.3nm,0.4s,mb4.5,baz=49,slow=4.5,SNR=18						
HFS	Hagfors	67.39	340	P	P	21 30 55.7	+0.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	70.67	326	P	P	21 31 15.4	-0.7
	comp=Z,0.6nm,0.4s,mb3.9,baz=31,slow=6.1,SNR=2.8						
AKASG	Malin Array Be	70.67	326	P	P	21 31 15.4	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						

IDC 12 21:26:24.8±8.8**, 1214N**×**9211E, h0**km**, mb3.4**/4**, mb1 3.4**/5**, mb1mx3.3**/23**, mbtmp3.3**/5**, ML3.4**/1**, Error ellipse: s-maj=152.0km s-min=52.9km az=2.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.10	46	Pn	Pn	21 28 37.9	+0.3
	0.1nm,0.3s,baz=236,slow=15,SNR=4.0						
MKAR	Makanchi Array	35.52	348	P	P	21 33 23.9	+0.4
	0.2nm,0.5s,baz=162,slow=8.4,SNR=5.3						
SONM	Songino Array	37.54	16	P	P	21 33 40.6	-0.1
	0.3nm,0.6s,baz=214,slow=6.7,SNR=3.3						
KURK	Kurchatov	40.02	347	P	P	21 34 00.9	-0.5
	0.6nm,0.8s,baz=161,slow=8.2,SNR=3.5						
ZALV	Zalesovo Beam	42.11	354	P	P	21 34 17.9	-0.6
	0.5nm,0.5s,baz=193,slow=5.6,SNR=3.8						

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*ISCJB **12** 21:37:35.0±0.3, 45.19N±0.02×106.75W±0.03, h0km, Error ellipse: s-maj=3.6km s-min=3.1km az=165.1*
*IDC **12** 21:37:36.2±1.1, 4498N×10696W, h0km, mb1 3.8/3, mb1mx3.4/24, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=35.0km s-min=8.8km az=131.0*
*NEIC **12** 21:37:37.6±0.6, 4514N×10687W, h0km, ML2.8, Error ellipse: s-maj=8.9km s-min=6.5km az=146.0, Suspected Mining explosion.*
NEIC 40 km [25 miles] N of Sheridan.
ISC 12 21:37:37.1±0.3**, 4517N**±002×**10684W**±003**, h0**km**, n70, σ1^{s}07**/120**, 15C-24D, Montana**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLMT	Red Lodge	1.72	269	eP	Pn	21 38 07.6	-0.6
RLMT				eS	Sn	21 38 28.0	-2.9
RLMT	Red Lodge	1.72	269	⇓P	Pn	21 38 07.7	-0.6
	baz=1.7						
RLMT				⇑S	Sn	21 38 29.9	-1.0
	baz=1.7						
G18A	Lazy EL Ranch,	1.93	275	⇑P	Pn	21 38 10.6	-0.6
	baz=1.9,SNR=177						
G18A				⇑S	Sn	21 38 36.0	-0.1
	baz=1.9						
F18A	Big Timber	2.15	291	⇓P	Pn	21 38 14.0	-0.2
	baz=2.1,SNR=46						
F18A				⇑Sb	Sb	21 38 45.5	+1.4
	baz=2.1						
RSSD	Black Hills	2.26	117	eP	Pn	21 38 16.2	+0.6
RSSD				eS	Sn	21 38 45.5	+1.4
E18A	Harlowton	2.56	304	⇓P	Pn	21 38 20.3	+0.5
	baz=2.5,SNR=18						
E18A				⇓Sb	Sb	21 38 57.1	+1.2
	baz=2.5						
I18A	Diamond G Ranc	2.59	237	⇓P	Pn	21 38 19.2	-1.0
	baz=2.5						
I18A				⇓S	Sn	21 38 51.1	-1.3
	baz=2.5						
LKWY	Lake	2.61	258	ePn	Pn	21 38 20.2	-0.2
LKWY				eSn	Sn	21 38 41.9	-11
K20A	Yellowstone Ra	2.74	204	⇓P	Pn	21 38 21.4	-0.8
	baz=2.7						
K20A				⇓S	Sn	21 38 56.9	+0.9
	baz=2.7						
K19A	Absolon Red Bu	2.76	212	⇑P	Pn	21 38 22.2	-0.3
	baz=2.7						
K19A				⇓S	Sn	21 38 56.5	0.0
	baz=2.7						
G17A	Pierce Place,	2.76	274	⇓P	Pn	21 38 22.2	-0.3
	baz=2.7,SNR=28						
G17A				⇓Sb	Sb	21 39 03.0	+1.4
	baz=2.7						
YNR	Norris Junctio	2.77	262	ePn	Pn	21 38 22.0	-0.6
H17A	Grant Village	2.77	255	⇓P	Pn	21 38 23.1	+0.4
	baz=2.7,SNR=9.2						
F17A	Fitzpatrick Pl	2.79	287	⇓P	Pn	21 38 22.9	+0.1
	baz=2.7,SNR=69						
YFT	Old Faithful	2.94	257	ePn	Pn	21 38 24.4	-0.5
I17A	Pilgram Creek	2.95	246	⇓P	Pn	21 38 25.0	-0.1
	baz=2.9,SNR=8.8						
J18A	Kendall Valley	3.02	231	⇑P	Pn	21 38 26.3	+0.3
	baz=3.0						
E17A	Martinsdale	3.09	296	⇑P	Pn	21 38 27.5	+0.4
	baz=3.1,SNR=12						
PDAR	Pinedale Array	3.10	220	Pn	Pn	21 38 26.6	-0.7
	15nm,0.3s,baz=50,slow=16,SNR=139						
PDAR				Lg		21 39 06.8	
	30nm,0.3s,baz=45,slow=31,SNR=20						
BW06	Boulder Array	3.11	220	ePn	Pn	21 38 27.0	-0.3
BW06				eSn	Sn	21 39 06.5	+1.4
BW06	Boulder Array	3.11	220	⇓P	Pn	21 38 27.3	+0.1
	baz=3.0						
BW06				⇓S	Sn	21 39 05.4	+0.4
	baz=3.0						
LOHW	Long Hollow	3.12	241	ePn	Pn	21 38 27.8	+0.4
LOHW				ePg	Pg	21 38 36.4	-0.4
LOHW				Sn	Sn	21 39 07.7	+2.3
MOOW	Moose Ponds	3.14	244	ePn	Pn	21 38 26.9	-0.8
MOOW				Pg	Pg	21 38 37.1	-0.2
MOOW				eS	Sn	21 39 10.4	+4.5
H16A	Russell Place,	3.17	263	⇓P	Pn	21 38 28.6	+0.5
	baz=3.1						
IMW	Indian Meadow	3.20	248	ePn	Pn	21 38 29.9	+1.3
IMW				eSn	Sn	21 39 06.4	-1.0
L21A	Rawlins	3.23	187	⇓P	Pn	21 38 29.1	+0.2
	baz=3.2						
QLMT	Earthquake Lak	3.28	266	ePn	Pn	21 38 29.9	+0.3
SNOW	Snow King Moun	3.29	240	ePn	Pn	21 38 31.3	+1.5
SNOW				Pg	Pg	21 38 38.5	-1.6
D17A	Six Diamond Ra	3.33	308	⇓P	Pn	21 38 30.4	+0.1
	baz=3.3						
TPAW	Teton Pass	3.40	242	ePn	Pn	21 38 33.1	+1.8
TPAW				ePg	Pg	21 38 39.6	-2.5
TPAW				S	Sn	21 39 19.1	+6.8
REDW	Red Top Meadow	3.41	239	ePn	Pn	21 38 33.0	+1.6
REDW				ePg	Pg	21 38 39.0	-3.3
REDW				eS	Sn	21 39 19.3	+6.8
BOZ	Bozeman (W)	3.41	280	ePn	Pn	21 38 31.0	-0.4
BOZ				ePg	Pg	21 38 38.1	-4.3
BOZ				eS	Sn	21 39 22.0	+9.4
BOZ	Bozeman (W)	3.41	280	⇑P	Pn	21 38 31.0	-0.5
	baz=3.4						
F16A	Kennard Place,	3.42	282	⇑P	Pn	21 38 31.4	-0.3
	baz=3.4						
K18A	Toltan Ranch,	3.43	224	⇑P	Pn	21 38 32.4	+0.7
	baz=3.4						
EGMT	Eagleton	3.49	326	ePn	Pn	21 38 34.6	+2.1
EGMT				ePg	Pg	21 38 43.7	-0.2
EGMT				eS	Sn	21 39 25.2	+11

DCID1	Drake Creek	3.49	245	ePn	Pn	21 38 31.8	-0.8
DCID1				ePg	Pg	21 38 43.1	-0.9
DCID1				eS	Sn	21 39 20.0	+5.3
G16A	Moss Hill, Enn	3.51	273	⇑P	Pn	21 38 32.4	-0.4
	baz=3.5,SNR=19						
E16A	East Helena	3.65	294	P	Pn	21 38 34.6	0.0
	baz=3.6,SNR=13						
RRI2	Red Ridge	3.70	242	ePn	Pn	21 38 37.5	+2.0
RRI2				ePg	Pg	21 38 48.1	+0.1
RRI2				eS	Sn	21 39 14.0	-5.8
DGMT	Dagmar	3.76	28	ePn	Pn	21 38 38.5	+2.2
DGMT				ePg	Pg	21 38 48.0	-1.2
DGMT				Sn	Sn	21 39 22.2	+0.9
D16A	Dana Ranch, Ca	3.77	301	⇓P	Pn	21 38 36.5	+0.2
	baz=3.7						
M22A	Cedar Creek Ra	3.77	177	⇓P	Pn	21 38 35.8	-0.6
	baz=3.7						
M20A	Sweetwater, Wa	3.81	195	⇑P	Pn	21 38 36.4	-0.5
	baz=3.8						
HRY	Holter Researc	3.81	296	ePn	Pn	21 38 37.5	+0.6
AHID	Auburn Hatcher	3.91	233	ePn	Pn	21 38 37.6	-0.7
AHID				ePg	Pg	21 38 49.8	-2.1
AHID				eS	Sn	21 39 34.8	+10
LRM	Limekiln Ridge	4.00	281	ePn	Pn	21 38 40.1	+0.5
F15A	Butte	4.03	282	⇓P	Pn	21 38 39.6	-0.4
	baz=4.0						
DLMT	Dillon	4.07	275	ePn	Pn	21 38 39.6	-0.9
DLMT				ePg	Pg	21 38 49.6	-5.4
DLMT				eS	Sn	21 39 31.7	+2.8
K16A	Soda Springs	4.15	237	⇑P	Pn	21 38 40.7	-0.9
	baz=4.1						
E15A	Deer Lodge	4.25	289	⇑P	Pn	21 38 42.5	-0.5
	baz=4.2,SNR=20						
N22A	Wattenberg Ran	4.38	176	⇓P	Pn	21 38 44.3	-0.4
	baz=4.3						
N21A	Black Mountain	4.44	187	⇓P	Pn	21 38 45.4	-0.2
	baz=4.4						
N20A	Spence Gulch,	4.46	194	⇑P	Pn	21 38 46.3	+0.4
	baz=4.4						
CHMT	Chamberlain Mo	4.79	294	ePn	Pn	21 38 49.7	-0.8
SLMT	Seeley Lake	5.06	296	ePn	Pn	21 38 55.7	+1.5
ISCO	Idaho Springs	5.44	170	ePn	Pn	21 38 58.9	-0.5
ISCO				ePg	Pg	21 39 11.5	-10
ISCO				eS	Sg	21 40 20.0	-12
SWMT	Swartz Lake	5.48	298	ePn	Pn	21 39 00.7	+0.7
OGNE	Ogallala	5.50	139	ePn	Pn	21 38 58.7	-1.4
OGNE				ePg	Pg	21 39 18.0	-4.3
HLID	Hailey	5.67	256	ePn	Pn	21 39 01.7	-0.8
HLID				ePg	Pg	21 39 18.7	-6.9
HLID				eS	Sg	21 40 40.6	+1.6
JTMT	Jette	5.75	299	ePn	Pn	21 39 04.5	+0.9
JTMT				ePg	Pg	21 39 24.4	-2.9
SMCO	Snowmass	5.99	181	Pn	Pn	21 39 09.2	+2.3
SMCO				eS	Sn	21 40 18.7	+2.5
BSMT	Bassoo Peak	6.11	299	ePn	Pn	21 39 08.2	-0.2
BSMT				ePg	Pg	21 39 31.1	-2.9
WALA	Waterton Lakes	6.20	311	ePn	Pn	21 39 08.6	-1.1
WALA				ePg	Pg	21 39 31.4	-4.4
WALA				eSn	Sn	21 40 20.6	-0.7
SRU	San Rafael	6.65	206	ePn	Pn	21 39 16.5	+0.6
TMUT	Trail Mountain	6.71	210	ePb	Pb	21 39 41.6	+7.2
ECSD	EROS,Sioux Fal	7.46	98	ePn	Pn	21 39 26.1	-0.9
	4.4nm,0.3s						
ECSD				Pg	Pg	21 39 48.2	-12
ECSD				S	Sg	21 41 25.9	-10
ULM	Lac du Bonnet	8.96	52	Pn	Pn	21 39 47.5	-0.2
	1.7nm,0.3s,baz=233,slow=12,SNR=8.4						
ULM				Lg		21 42 12.9	
	0.6nm,0.3s,baz=194,slow=11,SNR=3.7						
FFC	Flin Flon	10.06	16	ePn	Pn	21 40 02.3	-0.3
	2.4nm,0.4s						
FFC				S	Sn	21 41 50.8	-5.3
YKA	Yellowknife Ar	17.93	348	Pn	Pn	21 41 44.2	-3.3
	0.1nm,0.3s,baz=160,slow=14,SNR=6.7						

*ISCJB **12** 21:40:34.6±0.5, 4934N±002×673E±004, h0^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=146.3*
*NEIC **12** 21:40:35.9, 4939N×682E, h1^{km}, ML2.6(LDG), After LDG.*
*CSEM **12** 21:40:35.3±0.1, 4940N×686E, h1^{km}, ML2.6/11, Error ellipse: s-maj=2.2km s-min=1.2km az=62.0*
*LDG **12** 21:40:35.9±0.1, 4939N×682E, h1^{km}, Md2.5/1, Ml2.6/12, Error ellipse: s-maj=2.2km s-min=2.1km az=49.0, Suspected Mining induced.*
*BGR **12** 21:40:36.4±0.5, 4930N×670E, h1^{km}, ML1.8/2, Error ellipse: s-maj=33.4km s-min=4.4km az=42.0*
ISC 12 21:40:35.2±0.5**, 4937N**±002×**679E**±004**, h0**^{km}**, n42,** σ**0**^{s}**90**/78**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	Walferdange	0.51	305	ePg	Pg	21 40 46.4	+1.5
	SNR=3.6						
WLF				eSg	Sg	21 40 52.3	+0.8
WLF	Walferdange	0.51	305	P	Pg	21 40 46.3	+1.4
WLF	Walferdange	0.51	305	eP	Pg	21 40 45.5	+0.6
WLF	Walferdange	0.51	305	Pg	Pg	21 40 46.4	+1.5
	SNR=3.6						
WLF				Sg	Sg	21 40 52.3	+0.8
WLF	Walferdange	0.51	305	eP	Pg	21 40 45.5	+0.6
WLF				eS	Sg	21 40 51.9	+0.4
CDF	Champ du Feu	1.01	161	ePn	Pn	21 40 55.2	-1.4
CDF				eSg	Sg	21 41 08.8	+1.0
	14nm,0.2s						
CDF	Champ du Feu	1.01	161	ePn	Pn	21 40 55.2	-1.4
CDF				eSg	Sg	21 41 08.8	+1.0
	6.8nm,0.2s						
CDF	Champ du Feu	1.01	161	ePg	Pg	21 40 54.4	-0.2
CDF				ePn	Pn	21 40 55.2	-1.4
CDF				eSg	Sg	21 41 08.8	+1.0
RFYF	Reffroy	1.14	230	ePg	Pg	21 40 58.3	+1.2
	baz=47						
RFYF				eSg	Sg	21 41 13.7	+1.8
	16nm,0.2s						
RFYF	Reffroy	1.14	230	ePg	Pg	21 40 58.3	+1.2
RFYF				eSg	Sg	21 41 13.7	+1.8
	7.9nm,0.2s						
ECH	Echery	1.19	168	eP	Pg	21 40 58.2	+0.3
ECH				eS	Sg	21 41 14.0	+0.8
ECH	Echery	1.19	168	eP	Pg	21 40 58.2	+0.3
ECH				eS	Sg	21 41 14.0	+0.8
MEM	Membach	1.34	338	P	Pg	21 41 01.4	+0.6
MEM	Membach	1.34	338	P	Pg	21 41 01.3	+0.5
HAU	Haudompre	1.40	192	ePg	Pg	21 41 02.0	0.0
HAU				eSg	Sg	21 41 21.2	+1.0
	15nm,0.3s						
HAU	Haudompre	1.40	192	ePg	Pg	21 41 02.0	0.0
HAU				eSg	Sg	21 41 21.2	+1.0
	7.7nm,0.3s						
BCLA	Clavier	1.42	318	P	Pn	21 41 03.5	+1.3
MEZF	Maizieres J'vi	1.44	233	ePg	Pg	21 41 02.9	+0.1
	baz=57						
MEZF				eSg	Sg	21 41 22.3	+0.9
	9.8nm,0.3s						
MEZF	Maizieres J'vi	1.44	233	ePg	Pg	21 41 02.9	+0.1
MEZF				eSg	Sg	21 41 22.3	+0.9
	4.9nm,0.3s						
BFO	Black Forest	1.46	135	ePn	Pn	21 41 03.4	+0.6
BFO				ePg	Pg	21 41 03.9	+0.8
	SNR=2.6						
BFO				eSg	Sg	21 41 21.8	-0.2
BFO	Black Forest	1.46	135	Pg	Pg	21 41 03.9	+0.8
	SNR=2.6						
BFO				Sg	Sg	21 41 21.8	-0.2
GIVF	Givet	1.47	300	ePg	Pg	21 41 03.1	-0.2
GIVF				eSg	Sg	21 41 22.8	+0.4
	10.0nm,0.3s						
GIVF	Givet	1.47	300	ePg	Pg	21 41 03.1	-0.2
GIVF				eSg	Sg	21 41 22.8	+0.4
	5.0nm,0.3s						
HINF	Hinteralfeld	1.56	178	ePg	Pg	21 41 04.8	-0.3
HINF				eSg	Sg	21 41 25.6	+0.3
	27nm,0.3s						
HINF	Hinteralfeld	1.56	178	ePg	Pg	21 41 04.8	-0.3
HINF				eSg	Sg	21 41 25.6	+0.3
	14nm,0.3s						
DOU	Dourbes	1.60	298	P	Pn	21 41 04.7	0.0
DOU	Dourbes	1.60	298	P	Pn	21 41 04.6	-0.1
SFTF	Sexfontaines	1.65	225	ePn	Pn	21 41 04.7	-0.6
	baz=47						
SFTF				eSg	Sg	21 41 28.7	+0.6
	6.5nm,0.3s						
SFTF	Sexfontaines	1.65	225	ePn	Pn	21 41 04.7	-0.6
SFTF				eSg	Sg	21 41 28.7	+0.6
	3.2nm,0.3s						
BAIF	Baives	1.81	293	ePg	Pg	21 41 10.1	+0.2
BAIF				eSg	Sg	21 41 33.0	-0.3
	4.9nm,0.3s						
BAIF	Baives	1.81	293	ePg	Pg	21 41 10.1	+0.2
BAIF				eSg	Sg	21 41 33.0	-0.3
	2.5nm,0.3s						
BAIF	Baives	1.81	293	ePn	Pn	21 41 06.5	-1.1
BAIF				ePg	Pg	21 41 10.1	+0.2
BAIF				eSg	Sg	21 41 33.0	-0.3
CABF	La Chapelle	2.81	190	ePg	Pg	21 41 27.9	-1.0
CABF				eSg	Sg	21 42 05.3	0.0
	2.8nm,0.4s						
CABF	La Chapelle	2.81	190	ePg	Pg	21 41 27.9	-1.0
CABF				eSg	Sg	21 42 05.3	0.0
	1.4nm,0.4s						
LOR	Lormes	2.88	224	ePn	Pn	21 41 21.0	-1.2
	baz=45						
LOR				eSn	Sn	21 41 54.8	-2.7
LOR				eSg	Sg	21 42 06.6	-0.9
	3.8nm,0.4s						
LOR	Lormes	2.88	224	ePn	Pn	21 41 21.0	-1.2
LOR				eSn	Sn	21 41 54.8	-2.7
LOR				eSg	Sg	21 42 06.6	-0.9
	1.9nm,0.4s						
SSF	Saint Saulge	3.19	225	ePn	Pn	21 41 25.3	-1.2
SSF				eSg	Sg	21 42 17.6	0.0
	5.0nm,0.5s						
SSF	Saint Saulge	3.19	225	ePn	Pn	21 41 25.3	-1.2
SSF				eSg	Sg	21 42 17.6	0.0
	2.5nm,0.5s						
SMF	Signal de Mont	3.37	217	ePn	Pn	21 41 27.4	-1.7
AVF	Avril sur Loir	3.46	223	ePn	Pn	21 41 28.9	-1.4
GEC2	GERESS Array S	4.57	94	ePn	Pn	21 41 45.8	+0.3
FLN	La Foliniere	4.82	265	ePn	Pn	21 41 48.4	-0.5
	baz=82						

*IDC **12** 21:49:25.3±4.3, 535N×9454E, h54^{km}±37^{km}, mb3.9/11, mb1 3.9/13, mb1mx3.7/26, mbtmp3.9/13, ML4.1/2, MS3.1/1, Ms1 3.1/1, ms1mx2.8/36, Error ellipse: s-maj=49.1km s-min=14.2km az=57.0*
*ISCJB **12** 21:49:26.8±1.2, 531N±005×9463E±006, h87^{km}±11^{km}, mb4.2/26, Error ellipse: s-maj=12.3km s-min=6.1km az=145.3*
*NEIC **12** 21:49:27.3±0.8, 533N×9458E, h76^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=8.3km s-min=4.3km az=58.0*
ISC 12 21:49:27.8±1.1**, 533N**±005×**9460E**±006**, h79**^{km}±10^{km}**, n61,** σ**0**^{s}**78**/58**, mb4.2**/26**, 2C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	4.99	120	P	Pn	21 50 40.7	+0.5
	2.4nm,0.3s,baz=337,slow=16,SNR=9.0						
PSI				S	Sn	21 51 36.6	+0.1
	4.5nm,0.3s,baz=214,slow=22,SNR=5.5						
CM31	Chiang Mai Arr	13.72	18	Pn	Pn	21 52 41.1	+2.3
CMAR	Chiang Mai Arr	13.72	18	P	Pn	21 52 39.1	+0.3
	0.7nm,0.3s,baz=210,slow=14,SNR=19						
CMAR	Chiang Mai Arr	13.72	18	P	Pn	21 52 39.1	+0.3
PALK	Pallekele	13.95	279	ePn	Pn	21 52 43.3	+1.4
CHTO	Chiang Mai	14.05	17	ePn	Pn	21 52 42.3	-0.9
	5.2nm,0.6s						
KSM	Kuching	16.14	103	ePn	Pn	21 53 08.5	-1.4
COCO	West Island	17.55	173	Pn	Pn	21 53 25.5	-1.8
QIZ	Qiongzhong	20.15	46	P	P	21 53 55.9	+0.1
ODAN	Odare	22.49	343	eP	P	21 54 20.6	-0.1
	7.1nm,0.5s,mb4.3						
RAMN	Ramite	22.81	341	eP	P	21 54 23.9	-0.2
TAPN	Taplejung	22.86	344	eP	P	21 54 23.7	-0.9
	4.8nm,0.4s,mb4.2						
JIRN	Jiri	23.61	341	eP	P	21 54 31.2	-0.4
DMN	Daman	23.93	339	eP	P	21 54 34.8	+0.3
	3.2nm,0.3s,mb4.2						
GUN	Gumba	23.94	341	eP	P	21 54 34.3	-0.3
GKN	Gorkha	24.46	338	eP	P	21 54 38.6	-0.8
	5.4nm,0.2s,mb4.5						
LSA	Lhasa	24.46	353	eP	P	21 54 40.2	+0.8
	4.5nm,0.6s,mb4.0						
KOLN	Koldanda	24.65	336	eP	P	21 54 41.0	-0.1
	6.9nm,0.3s,mb4.5						
DANN	Dangsing	25.10	337	eP	P	21 54 45.1	-0.1
	9.7nm,0.3s,mb4.7						
KAPI	Kappang	27.14	112	LR	LR	22 06 45.1	
	comp=Z,36nm,19.5s,baz=92,slow=38						
MBWA	Marble Bar	36.07	138	eP	P	21 56 22.2	+0.3
	5.3nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	38.47	128	eP	P	21 56 42.1	-0.2
	2.7nm,0.6s,mb4.2						
BJT	Baijiatuau	39.62	26	P	P	21 56 51.4	-0.2
UCH	Uchtor	40.86	337	eP	P	21 57 01.4	-0.5
	2.9nm,0.7s,mb4.2						
AML	Almayashu	41.10	336	eP	P	21 57 04.2	+0.3
	5.2nm,0.5s,mb4.6						
AAK	Ala-Archa	41.21	337	eP	P	21 57 05.7	+1.0
	2.4nm,0.8s,mb4.1						
EKS2	Erkin-Say	41.51	337	eP	P	21 57 07.8	+0.6
	2.0nm,0.4s,mb4.2						
MK31	Makanchi Array	42.65	348	eP	P	21 57 16.1	-0.3
MKAR	Makanchi Array	42.65	348	P	P	21 57 16.1	-0.4
	1.4nm,0.4s,mb4.1,baz=159,slow=8.1,SNR=46						
MKAR				PcP	PcP	21 59 07.8	+0.7
	0.3nm,0.6s,baz=148,slow=2.3,SNR=2.7						
SONM	Songino Array	43.54	12	P	P	21 57 23.0	-0.6
	1.7nm,0.7s,mb3.9,baz=190,slow=8.3,SNR=11						
SONM				PcP	PcP	21 59 11.2	+1.1
	0.4nm,0.4s,baz=211,slow=3.1,SNR=4.9						
NWAO	Narrogin (SRO)	43.69	152	P	P	21 57 23.6	-1.4
WRAB	Tennant Creek	46.45	124	eP	P	21 57 47.6	+0.5
	1.9nm,0.4s,mb4.2						
WRAB				e		21 58 00.8	
WB2	Warramunga Arr	46.45	124	eP	P	21 57 47.6	+0.5
WB2				e		21 59 30.7	
TLY	Talaya	46.80	8	P	P	21 57 49.4	0.0
KURK	Kurchatov	47.17	346	P	P	21 57 52.0	-0.2
	8.0nm,0.6s,mb4.6,baz=172,slow=6.9,SNR=56						
ASAR	Alice Springs	47.96	129	P	P	21 57 59.4	+0.6
	1.4nm,0.7s,mb3.9,baz=300,slow=7.6,SNR=23						
ZAA0	Zalesovo Array	49.12	352	eP	P	21 58 06.8	-0.3
ZAA0				e	pP	21 58 21.3	-5.4
ZALV	Zalesovo Beam	49.12	352	P	P	21 58 06.9	-0.3
	2.4nm,0.3s,mb4.6,baz=177,slow=7.2,SNR=17						
GUMO	Guam	50.17	77	eP	P	21 58 16.9	+1.1
MAJO	Matsushiro	50.55	46	P	P	21 58 17.8	-0.6
BVAR	Borovoye Array	51.53	342	P	P	21 58 25.4	0.0
	1.2nm,0.4s,mb4.3,baz=140,slow=9.6,SNR=17						
BRVK	Borovoye	51.59	342	eP	P	21 58 25.4	-0.5
	1.9nm,0.6s,mb4.3						
AKTK	Aktyubinsk	54.39	332	P	P	21 58 45.5	-1.0
AKTO	Aktyubinsk	54.39	332	P	P	21 58 45.5	-1.0
	1.0nm,0.4s,mb4.2,baz=83,slow=9.8,SNR=5.6						
CTAO	Charters Tower	56.69	118	P	P	21 59 02.1	-1.4
STKA	Stephens Creek	58.04	133	eP	P	21 59 14.1	+1.3
	1.6nm,1.0s,mb4.0						
STKA	Stephens Creek	58.04	133	P	P	21 59 13.8	+1.0
	0.5nm,0.3s,mb4.0,baz=288,slow=5.7,SNR=3.6						
ARU	Arti	58.40	337	eP	P	21 59 14.7	-0.2
BRTR	Keskin Array B	64.44	312	P	P	21 59 55.2	-0.7
	0.3nm,0.6s,mb3.3,baz=131,slow=5.6,SNR=3.8						
TAU	Tasmania Unive	67.63	141	P	P	22 00 16.7	+0.4
LSZ	Lusaka	68.88	251	P	P	22 00 24.5	-0.2
VRI	Vrincioaia	70.85	317	⇑iP	P	22 00 37.2	+1.0
VOIR		71.91	316	⇑iP	P	22 00 42.8	+0.2
BURAR	Bucovina Array	72.23	318	⇓iP	P	22 00 45.4	+0.9
ARCES	ARCESS Array B	77.80	340	P	P	22 01 16.0	-0.1
	0.9nm,0.4s,mb3.8,baz=103,slow=6.2,SNR=13						
GERES	GERESS Array B	80.02	319	P	P	22 01 29.3	+0.7
	1.0nm,0.6s,mb3.8,baz=99,slow=4.5,SNR=7.7						
RAO	Raoul Island	90.38	119	P	P	22 02 22.7	+1.9
PMR	Palmer	97.45	26	P	P	22 02 53.3	+0.8
PDAR	Pinedale Array	127.34	22	PKP	PKPdf	22 08 24.4	+0.7
	0.2nm,0.5s,baz=19,slow=1.5,SNR=4.0						
TXAR	Lajitas Array	141.32	26	PKP	PKPdf	22 08 51.5	+1.3
	0.2nm,0.4s,baz=321,slow=0.8,SNR=5.3						
TXAR	Lajitas Array	141.32	26	PKP	PKPdf	22 08 51.5	+1.3

*ISCJB **12** 21:57:21.4±0.8, 3699N±007×2916E±004, h3^{km}±11^{km}, Error ellipse: s-maj=11.0km s-min=5.9km az=5.7*
*CSEM **12** 21:57:21.1±0.3, 3705N×2924E, h15^{km}, MD3.0, Error ellipse: s-maj=9.4km s-min=5.7km az=4.0*
*ISK **12** 21:57:21.1, 3702N×2919E, h5^{km}, MD2.9*
*DDA **12** 21:57:24.4, 3720N×2914E, h7^{km}±2^{km}, Md3.0*
ISC 12 21:57:22.2±0.7**, 3701N**±006×**2918E**±005**, h12**^{km}±7^{km}**, n9,** σ**0**^{s}**87**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.38	53	iP	Pg	21 57 29.3	-0.5
GOLH				iS	Sg	21 57 36.4	+1.5
TURN	Turunc	0.48	254	iP	Pg	21 57 35.1	+3.5
TURN				iS	Sg	21 57 46.5	+8.5
ELL	Elmali	0.64	114	ePG	Pg	21 57 33.5	-1.2
ELL				eSG	Sg	21 57 43.4	+0.3
YER	Yerkesik	0.73	280	ePG	Pg	21 57 36.2	-0.1
YER				eSG	Sg	21 57 45.6	-0.2
DENT	Denizli	0.75	351	ePG	Pg	21 57 35.8	-1.0
MLSB	Milas	1.16	285	ePN	Pn	21 57 43.8	-0.4
DAT	Datca	1.31	258	ePN	Pn	21 57 46.9	+0.5
BDRM	Kayabasi	1.39	273	iP	Pn	21 57 46.3	-1.1
BDRM				iS	Sn	21 58 06.6	+0.9
KULA	Kula-Manisa	1.56	345	ePN	Pn	21 57 50.0	+0.2

*CSEM **12** 22:04:35.9±0.1, 3886N×3282E, h5^{km}, MD2.9, Error ellipse: s-maj=3.3km s-min=1.7km az=131.0*
*ISCJB **12** 22:04:36.1±0.5, 3891N±004×3279E±004, h7^{km}±12^{km}, Error ellipse: s-maj=7.8km s-min=4.0km az=148.1*
*ISK **12** 22:04:36.0, 3886N×3282E, h6^{km}, MD2.9*
*DDA **12** 22:04:38.4, 3896N×3280E, h7^{km}±2^{km}, Md2.8*
ISC 12 22:04:37.0±0.5**, 3890N**±004×**3277E**±004**, h14**^{km}±10^{km}**, n11,** σ**0**^{s}**95**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIZT	Kizilcal	0.69	269	ePG	Pg	22 04 50.6	+0.1
KIZT				eSG	Sg	22 05 00.8	+1.2
LADK	Ladik-KONYA	0.77	204	ePG	Pg	22 04 51.0	-1.0
LADK				eSG	Sg	22 05 01.5	-0.5
KAMT	Kaman	0.87	57	ePG	Pg	22 04 53.0	-0.8
KAMT				eSG	Sg	22 05 04.8	-0.6
LOD	Lodumlu	0.99	360	ePG	Pg	22 04 56.5	+0.4
KONT	Konya--Tatoy	1.01	199	ePG	Pg	22 04 55.5	-0.9
BOLV	Bolvadin	1.43	263	iP	Pg	22 05 05.9	+1.4
CDAG	Cicekdag	1.44	59	iP	Pg	22 05 04.9	+0.2
CDAG				iS	Sg	22 05 24.1	+0.6
AVNT	Avonos	1.64	94	eP	Pg	22 05 09.1	+0.6
AVNT				iS	Sg	22 05 31.4	+1.8
ELDT	Eldivan	1.67	18	eP	Pn	22 05 05.0	-0.8
ELDT				iS	Pg	22 05 07.3	-1.7
CORM	Corum	1.92	48	ePN	Pn	22 05 10.3	+1.0
CTKT	Corum	2.32	42	iP	Pg	22 05 20.3	-1.3
CTKT				iS	Sg	22 05 51.9	+0.3

*BJI **12** 22:09:56.8, 55.10S×3360W, h10^{km}, mB5.4, Ms5.2, Msz4.8*
*MOS **12** 22:09:57.5±1.4, 55.10S×3356W, h10^{km}, mb4.8/12, Error ellipse: s-maj=23.6km s-min=14.1km az=103.2*
*IDC **12** 22:09:57.6±0.5, 5505S×3351W, h0^{km}, mb4.8/13, mb1 4.8/14, mb1mx4.7/19, mbtmp4.8/14, ML5.0/1, MS4.2/18, Ms1 4.2/18, ms1mx4.1/22, Error ellipse: s-maj=20.3km s-min=14.2km az=33.0*
*ISCJB **12** 22:09:57.6±0.3, 5500S±006×336W±0.1, h10^{km}, mb5.0/25, MS4.3/17, Error ellipse: s-maj=9.3km s-min=7.0km az=141.2*
*GCMT **12** 22:09:58.8±0.3, 5499S×3349W, h20^{km}±1^{km}, MW5.0/62, Moment Tensor Solution. s30,c40; s62,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.66±.20; $M_{\theta\theta}$-1.71±.15; $M_{\phi\phi}$-0.95±.13; $M_{r\theta}$-0.52±.25; $M_{\theta\phi}$1.99±.08; $M_{\phi r}$2.48±.31; Best double couple: $M_0$3.98000×10^{16} NP1:ϕ_s105.00000°, δ33.00000°, λ47.00000°. NP2: ϕ_s334.00000°, δ66.00000°, λ114.00000°. Principal axes: T 3.9600, Plg61.0000°, Azm280.0000°; N 0.0380, Plg22.0000°, Azm143.0000°; P -3.9990, Plg18.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 22:09:58.8±0.2, 5508S×3358W, h10^{km}, mb5.0/12 Error ellipse: s-maj=8.0km s-min=6.3km az=28.0*
ISC 12 22:09:58.8±4.1**, 5501S**±006×**336W**±01**, h5**^{km}±26^{km}**, n114,** σ**0**^{s}**89**/57**, mb5.0**/25**, MS4.3**/17**, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFI	East Falkland	14.98	273	eP	Pn	22 13 30.0	-1.0
PMSA	Palmer Station	17.96	225	P	Pn	22 14 08.8	-0.1
	0.5nm,0.3s,baz=45,slow=2.9,SNR=3.2						
PMSA				LR	LR	22 19 35.0	
	comp=Z,804nm,18.6s,baz=67,slow=32						
PMSA	Palmer Station	17.96	225	ePn	Pn	22 14 07.2	-1.7
	161nm,1.4s						
PMSA				LR	LR	22 19 35.0	
VNA1	Neumayer--Stat	19.22	154	eP	Pn	22 14 25.6	+1.4
VNA1				e		22 14 29.6	
VNA1				e		22 14 42.8	
VNA1				e		22 14 54.5	
VNA3	Neumayer Olymp	19.30	157	eP	Pn	22 14 26.5	+1.4
VNA3				e		22 14 30.3	
VNA3				e		22 14 43.5	
VNA3				e		22 14 57.1	
VNA2	Neumayer--Watz	19.62	154	eP	Pn	22 14 29.8	+0.8
	baz=311,slow=11						
VNA2				e		22 14 33.7	
VNA2				e		22 14 46.7	
VNA2				e		22 15 00.5	
USHA	Ushuaia	19.92	256	LR	LR	22 19 58.3	
	comp=Z,1µm,21.0s,baz=72,slow=30						
SNAA	Sanae	21.24	153	eP	P	22 14 45.5	+0.3
SNAA				e		22 14 49.1	
SNAA				e		22 15 01.0	
SNAA				e		22 15 13.8	
SNAA	Sanae	21.24	153	eP	P	22 14 45.8	+0.6
SNAA				eS	S	22 18 41.8	+0.5
SNAA				pmax	pmax		
	comp=Z,34nm,1.1s						
SNAA	Sanae	21.24	153	eP	P	22 14 45.8	+0.5
	comp=Z,34nm,1.1s,mb4.6						
SNAA				eS	S	22 18 41.8	+0.5
PLCA	Paso Flores	28.24	285	P	P	22 15 52.3	-0.1
	comp=Z,23nm,0.9s,mb4.8,baz=136,slow=7.9,SNR=33						
PLCA				LR	LR	22 26 37.1	
	comp=Z,844nm,21.3s,MS4.3,baz=132,slow=35						
PLCA	Paso Flores	28.24	285	P	P	22 15 52.3	-0.1
PLCA				pmax	pmax		
	comp=Z,23nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,844nm,21.3s						
PLCA	Paso Flores	28.24	285	eP	P	22 15 52.3	-0.2
	comp=Z,22nm,0.8s,mb4.8						
PLCA				LR	LR	22 26 37.1	
CPUP	Villa Florida	33.51	319	P	P	22 16 38.8	-0.3
	comp=Z,20nm,0.9s,mb5.1,baz=143,slow=8.3,SNR=36						
CPUP				PcP	PcP	22 19 18.9	-0.9
	comp=Z,4.3nm,0.8s,baz=118,slow=2.8,SNR=3.6						
CPUP				LR	LR	22 29 30.5	
	comp=Z,411nm,19.9s,MS4.2,baz=144,slow=35						
CPUP	Villa Florida	33.51	319	eP	P	22 16 38.7	-0.4
CPUP				e		22 19 18.7	
CPUP				pmax	pmax		
	comp=Z,67nm,0.8s						
CPUP	Villa Florida	33.51	319	eP	P	22 16 38.7	-0.4
	comp=Z,67nm,0.8s,mb5.6						
CPUP				e		22 16 49.9	
CPUP				ePcP	PcP	22 19 18.7	-1.1
LCO	Las Campanas	37.19	299	eP	P	22 17 10.7	0.0
	comp=Z,25nm,0.9s,mb5.0						
LCO				e		22 17 20.8	
LCO				ePP	PP	22 18 35.9	+0.6
BDFB	Brasilia	40.85	338	P	P	22 17 41.5	+0.2
	comp=Z,2.7nm,0.7s,mb4.0,baz=148,slow=18,SNR=4.7						
BDFB				LR	LR	22 33 33.0	
	comp=Z,87nm,19.3s,MS3.6,baz=326,slow=35						
BDFB	Brasilia	40.85	338	P	P	22 17 41.5	+0.1
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BDFB				MLR	MLR		
	comp=Z,87nm,19.3s						
LVC	Limon Verde	41.70	307	eP	P	22 17 49.2	+0.8
	comp=Z,29nm,0.8s,mb5.0						
LVC				epP	pP	22 17 57.9	+8.0
LVC				ePcP	PcP	22 19 44.7	-0.2
MAW	Mawson	43.09	146	P	P	22 17 58.0	-1.3

comp=Z,4.4nm,0.8s,mb4.3,baz=262,slow=7.4,SNR=3.5
MAW LR LR 22 34 53.7
comp=Z,184nm,18.1s,MS4.0,baz=247,slow=35
MAW Mawson 43.09 146 P **P** **22 17 58.0 -1.2**
MAW pmax pmax
comp=Z,4.0nm,0.8s
MAW MLR MLR
comp=Z,184nm,18.1s
SIV San Ignacio 44.34 321 P **P** **22 18 08.8 -0.9**
comp=Z,16nm,0.8s,mb4.8,baz=161,slow=8.0,SNR=69
SIV PcP PcP 22 19 53.6 -0.2
comp=Z,6.7nm,0.8s,baz=158,slow=4.3,SNR=5.2
SBA Scott Base 46.81 186 *e*P **P** **22 18 26.5 -2.2**
SBA pmax pmax
comp=Z,11nm,1.1s,mb4.7
SBA Scott Base 46.81 186 *e*P **P** **22 18 26.5 -2.2**
comp=Z,11nm,1.1s,mb4.7
VNDA Vanda 47.39 185 P **P** **22 18 33.0 -0.2**
comp=Z,3.0nm,0.9s,mb4.2,baz=191,slow=5.8,SNR=7.3
VNDA LR LR 22 38 47.6
comp=Z,121nm,19.7s,MS3.9,baz=166,slow=36
VNDA Vanda 47.39 185 P **P** **22 18 33.0 -0.2**
VNDA pmax pmax
comp=Z,3.0nm,1.0s
VNDA MLR MLR
comp=Z,121nm,19.7s
VNDA Vanda 47.39 185 P **P** **22 18 33.0 -0.2**
VNDA LR LR 22 38 47.6
ARE Arequipa 48.22 308 *e*P **P** **22 18 42.0 +1.7**
RCBR Riachuelo 49.07 357 P **P** **22 18 46.4 -0.4**
BOSA Boshof 49.34 83 P **P** **22 18 48.5 -0.4**
comp=Z,10.0nm,0.9s,mb4.8,baz=220,slow=7.7,SNR=11
BOSA LR LR 22 36 02.4
comp=Z,187nm,18.2s,MS4.1,baz=234,slow=32
BOSA Boshof 49.34 83 *e*P **P** **22 18 48.2 -0.6**
BOSA *e* 22 20 10.0
BOSA *e* 22 20 41.4
BOSA Boshof 49.34 83 *e*P **P** **22 18 48.2 -0.6**
BOSA *e* 22 18 58.7
BOSA *e*PcP PcP 22 20 10.0 -1.4
BOSA *e*PP PP 22 20 41.4 -1.2
BOSA LR LR 22 36 02.4
LBTB Lobatse 52.29 80 P **P** **22 19 11.3 +0.2**
comp=Z,13nm,0.9s,mb4.9,baz=232,slow=9.1,SNR=18
LBTB Lobatse 52.29 80 *e*P **P** **22 19 10.8 -0.4**
LBTB *e* 22 19 20.9
LBTB *e*PcP PcP 22 20 20.9 -1.5
TSUM Tsumeb 52.50 68 *e*P **P** **22 19 13.0 +0.3**
comp=Z,8.8nm,1.0s,mb4.6
TSUM *e* 22 19 23.7
TSUM *e*PcP PcP 22 20 23.6 +0.4
TSUM *e*PP PP 22 21 12.1 +0.6
NNA Nana 54.62 305 *e*P **P** **22 19 28.4 +0.1**
comp=Z,44nm,1.3s,mb5.3
CASY Casey 56.03 163 *e*P **P** **22 19 37.0 -0.8**
ATAH Atahualpa 59.70 306 P **P** **22 20 05.8 +1.5**
comp=Z,26nm,1.1s,mb5.2,baz=159,slow=5.3,SNR=18
RPN Rapa Nui 60.20 265 LR LR 22 39 50.3
comp=Z,233nm,21.6s,MS4.3,baz=120,slow=30
LSZ Lusaka 61.50 75 *e*P **P** **22 20 15.9 -0.6**
LSZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
LSZ Lusaka 61.50 75 *e*P **P** **22 20 15.9 -0.7**
comp=Z,8.9nm,0.9s,mb4.9
LSZ *e* 22 20 31.0
LIC Lamto 65.47 31 *e*P **P** **22 20 42.4 -0.3**
comp=Z,114nm,0.8s,mb6.0
KIC Kosan Boka 65.69 32 *e*P **P** **22 20 43.1 -1.0**
comp=Z,304nm,1.5s,mb6.1
TIC Toumodi 65.88 31 *e*P **P** **22 20 45.3 0.0**
comp=Z,119nm,0.9s,mb5.9
DBIC Dimbokro 65.95 32 P **P** **22 20 45.4 -0.4**
comp=Z,11nm,0.8s,mb4.9,baz=167,slow=7.0,SNR=4.8
DBIC LR LR 22 43 11.2
comp=Z,115nm,18.3s,MS4.1,baz=182,slow=30
DBIC Dimbokro 65.95 32 P **P** **22 20 45.4 -0.4**
DBIC pmax pmax
comp=Z,11nm,0.8s
DBIC MLR MLR
comp=Z,115nm,18.3s
DBIC Dimbokro 65.95 32 P **P** **22 20 45.4 -0.4**
DBIC LR LR 22 43 11.2
OTAV Otavalo 66.12 309 *e*P **P** **22 20 48.1 +1.1**
comp=Z,26nm,1.2s,mb5.1
OTAV *e* 22 21 02.0
ROSC El Rosal 68.53 316 P **P** **22 21 02.6 +0.4**
comp=Z,4.4nm,0.3s,mb4.8,baz=259,slow=15,SNR=5.5
ROSC LR LR 22 52 02.4
comp=Z,123nm,20.9s,MS4.1,baz=188,slow=37
ABPO Ambohimpanom 69.39 94 P **P** **22 21 06.4 -1.2**
SDV Santo Domingo 70.80 321 P **P** **22 21 16.0 -0.1**
comp=Z,14nm,0.8s,mb4.9,baz=196,slow=4.9,SNR=23
SDV LR LR 22 51 52.8
comp=Z,214nm,18.5s,MS4.4,baz=167,slow=36
SDV Santo Domingo 70.80 321 *e*P **P** **22 21 16.0 -0.2**
SDV *e* 22 21 26.5
SDV LR LR 22 51 52.8
TOA0 Torodi Ar. Sit 74.13 36 *e*P **P** **22 21 36.3 +0.3**
TOA0 *e* 22 21 41.5
TORD Torodi Ar. Bea 74.13 36 P **P** **22 21 36.1 +0.2**
comp=Z,8.8nm,0.8s,mb4.7,baz=200,slow=6.5,SNR=54
TORD LR LR 22 49 41.3
comp=Z,230nm,18.1s,MS4.5,baz=190,slow=32
RKT Rikitea 77.63 248 *e*LR LR 22 46 07.3
comp=Z,365nm,26.8s
TAM Tamanrasset 84.39 36 *e*P **P** **22 22 33.6 +1.8**
TAM *e* 22 22 39.4
TAM pmax pmax
comp=Z,19nm,1.6s,mb5.0
TAM Tamanrasset 84.39 36 *e*P **P** **22 22 33.6 +1.8**
comp=Z,19nm,1.6s,mb5.0
TAM *e* 22 22 39.4
PPT Papeete 89.76 239 *e*LR LR 22 51 34.5
comp=Z,201nm,23.5s
PPT Papeete 89.76 239 LR LR 22 53 29.5
comp=Z,154nm,21.1s,MS4.4,baz=172,slow=29
MDT Midelt 90.94 24 LR LR 22 58 55.2
comp=Z,173nm,18.0s,MS4.5,baz=184,slow=32
STKA Stephens Creek 93.37 176 LR LR 23 04 05.8
comp=Z,178nm,18.6s,MS4.5,baz=204,slow=35
KEST Kesra 97.58 34 LR LR 23 01 54.8
comp=Z,98nm,19.8s,MS4.3,baz=182,slow=32
ESDC Sonseca Array 97.65 23 LR LR 23 03 12.4
comp=Z,171nm,18.2s,MS4.6,baz=310,slow=33
ASAR Alice Springs 100.92 168 P Pdif 22 23 47.1 -2.0
comp=Z,1.6nm,1.0s,baz=180,slow=4.3,SNR=8.2
ASAR Alice Springs 100.92 168 P Pdif 22 23 47.1 -2.0
ASAR pmax pmax
comp=Z,2.0nm,1.0s
NOA NORSAR Array B 121.00 24 PKP PKPdf 22 28 50.0 -0.8
comp=Z,1.0nm,0.7s,baz=238,slow=1.9,SNR=3.1
NOA NORSAR Array B 121.00 24 PKIKP PKPdf 22 28 50.0 -0.8
NOA pmax pmax
comp=Z,1.0nm,0.7s
BMO Blue Mountains 122.00 304 *e*PKIKP PKPdf 22 28 52.0 -1.3
SUMG Summit 127.34 358 *e*PKPdf PKPdf 22 29 02.6 -0.1
CMAR Chiang Mai Arr 128.81 116 PKP PKPdf 22 29 06.2 -1.0
comp=Z,0.7nm,0.3s,baz=204,slow=3.1,SNR=4.1
CMAR Chiang Mai Arr 128.81 116 PKIKP PKPdf 22 29 06.2 -1.0
CMAR pmax pmax
comp=Z,1.0nm,0.3s
AKTK Aktyubinsk 129.69 56 PKP PKPdf 22 29 07.0 -0.8
AKTO Aktyubinsk 129.69 56 PKP PKPdf 22 29 07.0 -0.8
comp=Z,4.5nm,1.1s,baz=185,slow=4.9,SNR=7.4
AKTO Aktyubinsk 129.69 56 PKIKP PKPdf 22 29 07.0 -0.8
AKTO pmax pmax
comp=Z,5.0nm,1.1s
ARCES ARCESS Array B 131.38 24 PKP PKPdf 22 29 10.1 -0.4
comp=Z,13nm,1.0s,baz=226,slow=3.6,SNR=7.8
ARCES ARCESS Array B 131.38 24 PKIKP PKPdf 22 29 10.1 -0.4
ARCES pmax pmax
comp=Z,13nm,1.0s
EKS2 Erkin-Say 132.73 73 *e*PKPdf PKPdf 22 29 14.5 +0.7
EKS2 *e* 22 29 24.0
YKA Yellowknife Ar 133.02 321 PKP PKPdf 22 29 12.6 -1.1
comp=Z,1.1nm,0.6s,baz=127,slow=2.3,SNR=20
YKA PP PP 22 31 34.2 -6.6
comp=Z,0.7nm,0.8s,baz=126,slow=6.2,SNR=6.3
YKA Yellowknife Ar 133.02 321 PKIKP PKPdf 22 29 12.6 -1.1
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA pmax pmax
comp=Z,1.0nm,0.8s
TKM2 Tokmak 2 133.91 74 *e*PKIKP PKPdf 22 29 15.3 -0.8
MK31 Makanchi Array 140.04 74 PKIKP PKPdf 22 29 26.8 -0.5
MKAR Makanchi Array 140.04 74 PKhKP 22 29 22.6
comp=Z,0.9nm,0.9s,baz=237,slow=4.2,SNR=4.7
MKAR PKP PKPdf 22 29 28.4 +1.1
comp=Z,1.0nm,0.8s,baz=197,slow=2.4,SNR=5.7
MKAR Makanchi Array 140.04 74 PKIKP 22 29 22.7
MKAR 22 29 28.4
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 140.29 67 *e*PKIKP PKPdf 22 29 25.1 -2.5
INK Inuvik 142.73 323 *e*PKIKP PKPdf 22 29 27.0 -4.4
DAWY Dawson 143.44 315 *e*PKIKP PKPdf 22 29 28.6 -4.2
EGAK Eagle 144.41 315 *e*PKPdf PKPdf 22 29 31.4 -3.0
NVS Novosibirsk 144.79 64 *e*PKIKP PKPdf 22 29 33.1 -2.3
NVS pmax pmax
comp=Z,71nm,1.1s
NVS pmax pmax
comp=N,26nm,1.3s
MENT Mentasta 144.85 312 PKPdf PKPdf 22 29 33.8 -1.5
ZAA0 Zalesovo Array 145.20 66 *e*PKPdf PKPdf 22 29 35.3 -0.9
ZALV Zalesovo Beam 145.20 66 PKPbc PKPbc 22 29 35.0 -0.9
comp=N,4.3nm,0.7s,baz=246,slow=3.7,SNR=12
ZALV Zalesovo Beam 145.20 66 PKIKP PKPdf 22 29 35.0 -1.2
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 145.20 66 PKPbc PKPbc 22 29 35.0 -0.9
LZH Lanzhou 145.37 105 *e*PKP PKPdf 22 29 36.5 -0.6
LZH APKP 22 29 43.5
LZH PP PP
comp=Z,194nm,4.2s
GTA Gaotai 145.43 97 *e*PKP PKPdf 22 29 37.2 +0.1
GTA APKP 22 29 43.6
GTA PP PP
comp=Z,120nm,4.2s
PAX Paxson 145.62 311 *e*PKP2 PKPab 22 29 35.8 -1.4
XAN Xi'an 146.60 113 PKP PKPdf 22 29 39.8 +0.5
XAN PP PP
comp=Z,69nm,7.9s
PMR Palmer 146.80 308 *e*PKP2 PKPdf 22 29 39.3 +0.7
COLA College 147.17 314 *e*PKP2 PKPdf 22 29 40.4 +1.2
MCK McKinley 147.34 312 *e*PKP2 PKPdf 22 29 41.2 +1.7
TRF Thorofare Moun 147.84 311 *e*PKPbc PKPbc 22 29 42.5 -0.9
KTH Kantishna Hill 148.15 311 *e*PKPbc PKPbc 22 29 43.1 -1.1
BPAW Bear Paw Mtn. 148.30 312 *e*PKPbc PKPbc 22 29 43.5 -1.0
PPLA Purkeypile 148.54 310 *e*PKPbc PKPbc 22 29 44.2 -1.0
COLD Coldfoot 148.59 318 *e*PKPbc PKPbc 22 29 44.7 -0.4
CHUM Lake Minchumin 148.83 311 *e*PKPdf PKPdf 22 29 44.8 +2.9
HHC Hu-ho-hao-te 153.01 107 *e*PKP PKPdf 22 29 43.2 -6.0
HHC PP PP
comp=Z,88nm,4.3s
HHC LR LR
comp=N,153nm,16.6s,MS5.0
HHC LR LR
comp=E,113nm,13.1s,MS5.0
HHC LR LR
comp=Z,96nm,15.5s,MS4.7
ZAK Zakamensk 153.76 82 *e*PKIKP PKPdf 22 29 54.0 +4.1
ZAK pmax pmax
comp=Z,4.0nm,1.5s
SONM Songino Array 154.31 89 PKPbc PKPbc 22 29 56.6 -2.5
comp=Z,1.2nm,0.7s,baz=220,slow=4.3,SNR=9.7
SONM PKPab PKPab 22 30 13.2 -0.1
comp=Z,1.7nm,0.8s,baz=244,slow=3.5,SNR=4.6
SONM Songino Array 154.31 89 PKIKP PKPbc 22 29 56.6 -2.4
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM pmax pmax
comp=Z,2.0nm,0.8s
MJAR Matsushiro Arr 160.69 160 PKPab PKPab 22 30 40.0 -1.0
comp=Z,1.1nm,0.6s,baz=151,slow=5.9,SNR=4.4
MJAR Matsushiro Arr 160.69 160 PKP2 PKPab 22 30 40.0 -1.0
MJAR pmax pmax
comp=Z,1.0nm,0.6s
BOD Bodaibo 161.94 68 *e*PKIKP PKPdf 22 29 54.5 -5.2
BOD *e* 22 30 42.2
BOD pmax pmax
comp=Z,6.0nm,1.9s

ISCJB ***12*** *22:14:49.5±0.2, 46.16N±001×652E±002, h5km±2km, Error ellipse: s-maj=1.8km s-min=1.6km az=142.0*
ZUR ***12*** *22:14:51.5, 46.15N×661E, h12km, ML2.2/18*
CSEM ***12*** *22:14:51.5±0.0, 46.14N×661E, h12km, ML2.8/36, Error ellipse: s-maj=0.8km s-min=0.6km az=77.0*
STR ***12*** *22:14:51.0±0.2, 46.14N×672E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
LDG ***12*** *22:14:51.8±0.0, 46.14N×662E, h3km, Md3.0/3, Ml2.8/29, Error ellipse: s-maj=0.8km s-min=0.7km az=98.0*
NEIC ***12*** *22:14:51.8, 46.14N×662E, h3km, ML2.0(ROM), ML2.2(ZUR), ML2.8(STR), ML2.8(LDG), After LDG.*
GEN ***12*** *22:14:52.7, 46.12N×671E, h2km, ML2.0*
ROM ***12*** *22:14:52.3±0.4, 4607N×665E, h6km±3km, Md2.3/8, Ml2.0/3, Error ellipse: s-maj=5.5km s-min=4.0km az=5.0*
VIE ***12*** *22:14:53.4±0.5, 4603N×687E, h12km±2km, ML2.3/2, Error ellipse: s-maj=5.4km s-min=1.6km az=130.0*

ISC 12 22:14:50.9±0.2, **46144N**±0010×**655E**±001, **h9**km±2km,
n153,σ**89**/295, **9C-16D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OG01	**Vacheresse**	**0.21**	**26**	Pg	**Pg**	**22 14 55.7**	**+0.6**
OG01				Sg	**Sg**	**22 14 59.0**	**+1.0**
EMV	**Vieux Emosson**	**0.25**	**108**	⇓*i* Pg	**Pg**	**22 14 56.1**	**+0.2**
	656nm,0.2s						
EMV				Sg	**Sg**	**22 14 59.4**	**0.0**
EMV	**Vieux Emosson**	**0.25**	**108**	Pg	**Pg**	**22 14 56.1**	**+0.2**
EMV				Sg	**Sg**	**22 14 59.4**	**0.0**
SALAN	**Lac Salanfe**	**0.29**	**90**	⇓*i* Pg	**Pg**	**22 14 56.7**	**0.0**
	232nm,0.2s						
SALAN				*e*Sg	**Sg**	**22 15 00.6**	**0.0**
	232nm,0.2s						
AIGLE	**Aigle**	**0.34**	**54**	*i* Pg	**Pg**	**22 14 57.8**	**+0.2**
	370nm,0.4s						
GRYON	**Gryon**	**0.40**	**74**	⇓*e*Pg	**Pg**	**22 14 58.8**	**+0.1**
	85nm,0.5s						
GIMEL	**St. Georges /**	**0.44**	**333**	⇓*i* Pg	**Pg**	**22 15 00.6**	**+1.2**
	509nm,0.6s						
RSL	**Roselend**	**0.46**	**174**	Pg	**Pg**	**22 15 00.4**	**+0.6**
RSL				Sg	**Sg**	**22 15 06.1**	**+0.3**
MRGE	**Morge**	**0.52**	**136**	Pg	**Pg**	**22 15 01.3**	**+0.5**
MRGE				Sg	**Sg**	**22 15 08.1**	**+0.5**
MRGE	**Morge**	**0.52**	**136**	Pg	**Pg**	**22 15 01.3**	**+0.5**
MRGE				Sg	**Sg**	**22 15 08.1**	**+0.5**
SENIN	**Lac Senin/Sane**	**0.56**	**67**	⇓*i* Pg	**Pg**	**22 15 01.8**	**0.0**
	192nm,0.2s						
SENIN				*i* Sg	**Sg**	**22 15 09.3**	**+0.2**
	192nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.56**	**67**	⇓*i* Pg	**Pg**	**22 15 01.3**	**-0.5**
	192nm,0.2s						
SENIN				*i* Sg	**Sg**	**22 15 08.8**	**-0.3**
	192nm,0.2s						
CABF	**La Chapelle**	**0.57**	**326**	*e*Pg	**Pg**	**22 15 02.9**	**+1.0**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**22 15 10.2**	**+0.9**
	44nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**0.57**	**326**	*e*Pg	**Pg**	**22 15 02.9**	**+1.0**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**22 15 10.2**	**+0.9**
	22nm,0.2s,SNR=1.0						
DIX	**Grande Dixence**	**0.60**	**96**	⇓*i* Pg	**Pg**	**22 15 02.7**	**+0.3**
	129nm,0.3s						
DIX				*e*Sg	**Sg**	**22 15 10.1**	**-0.1**
	129nm,0.3s						
DIX	**Grande Dixence**	**0.60**	**96**	⇓*i* Pg	**Pg**	**22 15 01.8**	**-0.6**
	129nm,0.3s						
DIX				*e*Sg	**Sg**	**22 15 09.3**	**-0.9**
	129nm,0.3s						
LPL	**La Plagne**	**0.64**	**169**	*e*Pg	**Pg**	**22 15 03.8**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**22 15 11.9**	**+0.3**
	38nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**0.64**	**169**	*e*Pg	**Pg**	**22 15 03.8**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**22 15 11.9**	**+0.3**
	19nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**0.66**	**168**	*e*Pg	**Pg**	**22 15 04.3**	**+0.7**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**22 15 13.1**	**+0.9**
	27nm,0.2s						
LPG	**La Plagne**	**0.66**	**168**	*e*Pg	**Pg**	**22 15 04.3**	**+0.7**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**22 15 13.1**	**+0.9**
	13nm,0.2s						

TORNY Torny/Romont 0.69 24 ⇓*i* Pg **Pg** **22 15 05.1 +0.9**
321nm,0.4s
TORNY Torny/Romont 0.69 24 ⇓*i* Pg **Pg** **22 15 02.7 -1.5**
321nm,0.4s
OG05 Jujurieux 0.77 263 Pg **Pg** **22 15 07.0 +1.3**
OG05 Sg **Sg** **22 15 20.6 +4.9**
LKBD Leukerbad 0.78 72 ⇑*e*Pg **Pg** **22 15 05.9 -0.1**
67nm,0.5s
LKBD Leukerbad 0.78 72 ⇑*e*Pg **Pn** **22 15 10.6 +2.5**
67nm,0.5s
LKBD2 Leukerbad 2 0.79 73 ⇑*e*Pg **Pg** **22 15 05.1 -1.0**
48nm,0.1s
BRANT Les Verrieres 0.80 356 *e*P **Pg** **22 15 07.0 +0.8**
341nm,0.7s
BRANT Les Verrieres 0.80 356 *e*P **Pg** **22 15 05.9 -0.3**
341nm,0.7s
LSD Lago del Serru 0.80 149 Pg **Pg** **22 15 06.4 +0.2**
LSD Sg **Sg** **22 15 16.4 -0.1**
48nm,0.3s
LSD Lago del Serru 0.80 149 Pg **Pg** **22 15 06.4 +0.2**
LSD Sg **Sg** **22 15 16.4 -0.1**
48nm,0.3s
MMK Mattmark 0.99 95 *e*P **Pg** **22 15 09.3 -0.5**
49nm,0.7s
MMK Mattmark 0.99 95 *e*P **Pg** **22 15 06.2 -3.6**
49nm,0.7s
MMK Mattmark 0.99 95 Pg **Pg** **22 15 09.4 -0.4**
MMK Mattmark 0.99 95 Pg **Pg** **22 15 09.4 -0.4**
TRAV Traversella 1.05 127 Pg **Pg** **22 15 10.6 -0.4**
TRAV S **Sg** **22 15 22.6 -1.9**
TRAV Sg **Sg** **22 15 24.3 -0.2**
40nm,0.2s
TRAV Traversella 1.05 127 Pg **Pg** **22 15 10.6 -0.4**
TRAV Sg **Sg** **22 15 24.3 -0.2**
40nm,0.2s
BNI Bardonecchia 1.09 175 *e*P **Pg** **22 15 13.3 +1.4**
BNI Bardonecchia 1.09 175 *e*P **Pg** **22 15 13.3 +1.4**
RSP Reno Superiore 1.11 153 Pg **Pg** **22 15 12.6 +0.3**
31nm,0.5s
RSP S **Sg** **22 15 25.6 -1.1**
RSP Reno Superiore 1.11 153 Pg **Pg** **22 15 12.6 +0.3**
31nm,0.5s
ORO Oropa 1.12 117 Pg **Pg** **22 15 12.2 -0.2**
ORO Sg **Sg** **22 15 26.4 -0.6**
20nm,0.2s
ORO Oropa 1.12 117 Pg **Pg** **22 15 12.2 -0.2**
ORO Sg **Sg** **22 15 26.4 -0.6**
20nm,0.2s
HASLI Hasliberg/Brie 1.26 60 ⇑*i* P **Pn** **22 15 15.5 +0.8**
134nm,0.3s
HASLI Hasliberg/Brie 1.26 60 ⇑*i* P **Pn** **22 15 06.3 -8.4**
ORIF Oris-en-Rattie 1.31 201 *e*Pg **Pg** **22 15 17.1 +1.0**
ORIF *e*Sg **Sg** **22 15 34.2 +1.1**
28nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 1.31 201 *e*Pg **Pg** **22 15 17.1 +1.0**
ORIF *e*Sg **Sg** **22 15 34.2 +1.1**
14nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 1.31 201 *e*Pn **Pn** **22 15 16.1 +0.7**
ORIF *e*Pg **Pg** **22 15 17.1 +1.0**
ORIF *e*Sg **Sg** **22 15 34.2 +1.1**
MBDF Montbardon 1.43 174 *e*Pg **Pg** **22 15 18.6 +0.4**
SNR=1.0
MBDF *e*Sg **Sg** **22 15 36.7 0.0**
9.3nm,0.4s,SNR=1.0
MBDF Montbardon 1.43 174 *e*Pg **Pg** **22 15 18.6 +0.4**
SNR=1.0
MBDF *e*Sg **Sg** **22 15 36.7 0.0**
4.7nm,0.4s,SNR=1.0
FUSIO Fusio 1.50 77 ⇑*i* P **Pn** **22 15 18.9 +1.0**
58nm,0.4s
VAI Varese 1.57 99 Pg **Pg** **22 15 20.8 -0.1**
7.0nm,0.2s
VAI Varese 1.57 99 Pg **Pg** **22 15 20.8 -0.1**
7.0nm,0.2s
SSB Saint Sauveur 1.65 239 Pn **Pn** **22 15 21.0 +0.9**
SSB Saint Sauveur 1.65 239 Pg **Pg** **22 15 23.3 +0.7**
SSB Saint Sauveur 1.65 239 *e*P **Pn** **22 15 22.2 +2.1**
SSB Saint Sauveur 1.65 239 Pg **Pg** **22 15 23.3 +0.7**
SSB *e*S **Sn** **22 15 44.1 +2.6**
SSB Saint Sauveur 1.65 239 *e*P **Pn** **22 15 22.2 +2.1**
SSB *e*S **Sn** **22 15 44.1 +2.7**
MUO Muotathal 1.66 59 *e*P **Pn** **22 15 21.0 +0.9**
112nm,0.7s
MUO Muotathal 1.66 59 *e*P **Pn** **22 15 15.5 -4.6**
PZZ Stroppo 1.69 166 P **Pn** **22 15 21.8 +1.3**
PZZ S **Sn** **22 15 41.0 -1.2**
HINF Hinteralfeld 1.69 7 *e*Pg **Pg** **22 15 23.1 -0.1**
HINF *e*Sn **Sn** **22 15 41.1 -1.2**
SNR=1.0
HINF *e*Sg **Sg** **22 15 44.7 -0.4**
36nm,0.2s
HINF Hinteralfeld 1.69 7 *e*Pg **Pg** **22 15 23.1 -0.1**
HINF *e*Sn **Sn** **22 15 41.1 -1.2**
SNR=1.0
HINF *e*Sg **Sg** **22 15 44.7 -0.4**
18nm,0.2s
HINF Hinteralfeld 1.69 7 *e*Pn **Pn** **22 15 20.2 -0.3**
HINF *e*Pg **Pg** **22 15 23.1 -0.1**
HINF *e*Sn **Sn** **22 15 41.1 -1.2**
HINF *e*Sg **Sg** **22 15 44.7 -0.4**
MOF Molkenrain 1.75 13 Pg **Pg** **22 15 24.2 -0.3**
MOF Sg **Sg** **22 15 47.1 -0.1**
LLS Linth-Limmern 1.84 67 *i* Pn **Pn** **22 15 23.9 +1.3**
18nm,1.7s
LLS Linth-Limmern 1.84 67 *i* Pn **Pn** **22 15 18.9 -3.7**
VIVF Saint-Julien-I 1.85 226 *e*Pg **Pg** **22 15 26.7 +0.4**
VIVF *e*Sn **Sn** **22 15 44.6 -1.6**
SNR=1.0
VIVF *e*Sg **Sg** **22 15 50.3 +0.1**
20nm,0.2s
VIVF Saint-Julien-I 1.85 226 *e*Pg **Pg** **22 15 26.7 +0.4**
VIVF *e*Sn **Sn** **22 15 44.6 -1.6**
SNR=1.0
VIVF *e*Sg **Sg** **22 15 50.3 +0.1**
10nm,0.2s
VIVF Saint-Julien-I 1.85 226 *e*Pn **Pn** **22 15 23.5 +0.8**
VIVF *e*Pg **Pg** **22 15 26.7 +0.4**
VIVF *e*Sn **Sn** **22 15 44.6 -1.6**
VIVF *e*Sg **Sg** **22 15 50.3 +0.1**
HAU Haudompre 1.87 356 *e*Pg **Pg** **22 15 26.4 -0.3**
HAU *e*Sg **Sg** **22 15 50.6 -0.3**
26nm,0.2s,SNR=1.0
HAU Haudompre 1.87 356 *e*Pg **Pg** **22 15 26.4 -0.3**
HAU *e*Sg **Sg** **22 15 50.6 -0.3**
13nm,0.2s,SNR=1.0
HAU Haudompre 1.87 356 *e*Pn **Pn** **22 15 23.0 0.0**
HAU *e*Pg **Pg** **22 15 26.4 -0.3**
HAU *e*Sg **Sg** **22 15 50.6 -0.3**
SMF Signal de Mont 1.94 286 *e*Pg **Pg** **22 15 28.4 +0.3**
SNR=1.0
SMF *e*Sn **Sn** **22 15 48.3 -0.3**
SNR=1.0
SMF *e*Sg **Sg** **22 15 54.2 +0.9**
18nm,0.2s,SNR=1.0
SMF Signal de Mont 1.94 286 *e*Pg **Pg** **22 15 28.4 +0.3**
SNR=1.0
SMF *e*Sn **Sn** **22 15 48.3 -0.3**
SNR=1.0
SMF *e*Sg **Sg** **22 15 54.2 +0.9**
9.2nm,0.2s,SNR=1.0
SMF Signal de Mont 1.94 286 *e*Pn **Pn** **22 15 24.5 +0.4**
SMF *e*Pg **Pg** **22 15 28.4 +0.3**
SMF *e*Sn **Sn** **22 15 48.3 -0.3**
SMF *e*Sg **Sg** **22 15 54.2 +0.9**
TUE Stuetta 1.96 79 *e*P **Pn** **22 15 27.6 +3.2**
TUE *e*S **Sn** **22 15 49.7 +0.6**
TUE Stuetta 1.96 79 *e*P **Pn** **22 15 27.6 +3.3**
TUE *e*S **Sn** **22 15 49.7 +0.6**
FELD Feldberg im Sc 2.00 29 Pn **Pn** **22 15 23.3 -1.5**
PLDF La Plantade 2.05 266 Pn **Pn** **22 15 25.8 +0.3**
COLF Collangettes 2.10 254 Pn **Pn** **22 15 26.8 +0.6**
ECH Echery 2.11 11 Pn **Pn** **22 15 25.5 -0.9**
ECH Sg **Sg** **22 15 58.8 0.0**
PCP Piancastagn 2.13 138 P **Pn** **22 15 27.6 +0.9**
PCP S **Sn** **22 15 50.5 -2.7**
PLONS Plons/SG 2.15 64 *e*Pn **Pn** **22 15 27.7 +0.8**
54nm,0.6s
PLONS Plons/SG 2.15 64 *e*Pn **Pn** **22 15 21.0 -5.9**
LOR Lormes 2.17 302 *e*Pn **Pn** **22 15 27.8 +0.6**
baz=120,SNR=1.0
LOR Lormes 2.17 302 *e*Pg **Pg** **22 15 32.6 +0.2**
baz=119
LOR *e*Sg **Sg** **22 16 00.7 +0.2**
17nm,0.2s,SNR=1.0
LOR Lormes 2.17 302 *e*Pg **Pg** **22 15 32.6 +0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LOR				eSg	Sg	22 16 00.7	+0.2
	8.4nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.17**	**302**	ePn	**Pn**	**22 15 27.8**	**+0.6**
LOR				ePg	**Pg**	**22 15 32.6**	**+0.2**
LOR				eSg	**Sg**	**22 16 00.7**	**+0.2**
SMRF	**Simiane la Rot**	**2.28**	**198**	ePg	**Pg**	**22 15 34.1**	**-0.4**
SMRF				eSg	**Sg**	**22 16 04.0**	**0.0**
	3.2nm,0.3s						
SMRF	**Simiane la Rot**	**2.28**	**198**	ePg	**Pg**	**22 15 34.1**	**-0.4**
SMRF				eSg	**Sg**	**22 16 04.0**	**0.0**
	1.6nm,0.3s						
SMRF	**Simiane la Rot**	**2.28**	**198**	ePn	**Pn**	**22 15 29.1**	**+0.5**
SMRF				ePg	**Pg**	**22 15 34.1**	**-0.4**
SMRF				eSg	**Sg**	**22 16 04.0**	**0.0**
SSF	**Saint Saulge**	**2.29**	**295**	ePg	**Pg**	**22 15 35.0**	**+0.2**
SSF				eSg	**Sg**	**22 16 04.5**	**0.0**
	9.6nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**2.29**	**295**	ePg	**Pg**	**22 15 35.0**	**+0.2**
SSF				eSg	**Sg**	**22 16 04.5**	**0.0**
	4.8nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**2.29**	**295**	ePn	**Pn**	**22 15 29.5**	**+0.6**
SSF				eP		22 15 31.5	
SSF				ePg	**Pg**	**22 15 35.0**	**+0.2**
SSF				eSg	**Sg**	**22 16 04.5**	**0.0**
AVF	**Avril sur Loir**	**2.31**	**287**	ePg	**Pg**	**22 15 35.1**	**+0.1**
AVF				eSg	**Sg**	**22 16 05.3**	**+0.4**
	6.8nm,0.2s						
AVF	**Avril sur Loir**	**2.31**	**287**	ePg	**Pg**	**22 15 35.1**	**+0.1**
AVF				eSg	**Sg**	**22 16 05.3**	**+0.4**
	3.4nm,0.2s						
AVF	**Avril sur Loir**	**2.31**	**287**	ePn	**Pn**	**22 15 29.7**	**+0.7**
AVF				ePg	**Pg**	**22 15 35.1**	**+0.1**
AVF				eSg	**Sg**	**22 16 05.3**	**+0.4**
SFTF	**Sexfontaines**	**2.31**	**334**	ePn	**Pn**	**22 15 29.8**	**+0.7**
	baz=149						
SFTF	**Sexfontaines**	**2.31**	**334**	ePg	**Pg**	**22 15 35.0**	**-0.1**
	baz=149						
SFTF				eSn	**Sn**	**22 15 56.0**	**-1.6**
	baz=147						
SFTF				eSg	**Sg**	**22 16 04.7**	**-0.3**
	21nm,0.3s						
SFTF	**Sexfontaines**	**2.31**	**334**	ePg	**Pg**	**22 15 35.0**	**-0.1**
SFTF				eSn	**Sn**	**22 15 56.0**	**-1.6**
SFTF				eSg	**Sg**	**22 16 04.7**	**-0.3**
	11nm,0.3s						
SFTF	**Sexfontaines**	**2.31**	**334**	ePn	**Pn**	**22 15 29.8**	**+0.7**
SFTF				ePg	**Pg**	**22 15 35.0**	**-0.1**
SFTF				eSn	**Sn**	**22 15 56.0**	**-1.6**
SFTF				eSg	**Sg**	**22 16 04.7**	**-0.3**
CDF	**Champ du Feu**	**2.32**	**12**	ePn	**Pn**	**22 15 28.5**	**-0.8**
	SNR=1.0						
CDF				eSg	**Sg**	**22 16 04.6**	**-0.9**
	10nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**2.32**	**12**	ePn	**Pn**	**22 15 28.5**	**-0.8**
	SNR=1.0						
CDF				eSg	**Sg**	**22 16 04.6**	**-0.9**
	5.1nm,0.4s,SNR=1.0						
LIENZ	**Kamor/St.Gall**	**2.33**	**59**	⇓iPn	**Pn**	**22 15 29.8**	**+0.5**
	28nm,0.4s						
LIENZ	**Kamor/St.Gall**	**2.33**	**59**	⇓iPn	**Pn**	**22 15 21.8**	**-7.5**
SBF	**Sospel**	**2.37**	**164**	ePg	**Pg**	**22 15 35.0**	**-1.2**
	SNR=1.0						
SBF				eSg	**Sg**	**22 16 05.7**	**-1.1**
	5.0nm,0.3s						
SBF	**Sospel**	**2.37**	**164**	ePg	**Pg**	**22 15 35.0**	**-1.2**
	SNR=1.0						
SBF				eSg	**Sg**	**22 16 05.7**	**-1.1**
	2.5nm,0.3s						
AGO	**Saint Agoulin**	**2.38**	**269**	Pn	**Pn**	**22 15 31.2**	**+1.1**
LBL	**Lubilhac**	**2.49**	**250**	Pn	**Pn**	**22 15 33.2**	**+1.6**
LBL				Pg	**Pg**	**22 15 39.3**	**+0.7**
DAVA	**Damuels**	**2.56**	**62**	⇓iPn	**Pn**	**22 15 33.2**	**+0.7**
DAVA				⇑iPg	**Pg**	**22 15 39.9**	**0.0**
DAVA				⇓iSn	**Sn**	**22 16 03.1**	**-0.7**
DAVA				⇑iSg	**Sg**	**22 16 13.7**	**+0.6**
	5.9nm,0.3s						
MEZF	**Maizieres J'vi**	**2.57**	**337**	ePg	**Pg**	**22 15 39.9**	**-0.2**
	baz=154,SNR=1.0						
MEZF				eSn	**Sn**	**22 16 02.0**	**-2.1**
	baz=158						
MEZF				eSg	**Sg**	**22 16 12.9**	**-0.5**
	12nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.57**	**337**	ePg	**Pg**	**22 15 39.9**	**-0.2**
	SNR=1.0						
MEZF				eSn	**Sn**	**22 16 02.0**	**-2.1**
MEZF				eSg	**Sg**	**22 16 12.9**	**-0.5**
	6.2nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**2.58**	**178**	ePg	**Pg**	**22 15 39.5**	**-0.9**
FRF				eSg	**Sg**	**22 16 13.1**	**-0.7**
	2.7nm,0.2s						
FRF	**La Foret Royal**	**2.58**	**178**	ePg	**Pg**	**22 15 39.5**	**-0.9**
FRF				eSg	**Sg**	**22 16 13.1**	**-0.7**
	1.4nm,0.2s						
FRF	**La Foret Royal**	**2.58**	**178**	ePn	**Pn**	**22 15 32.9**	**0.0**
FRF				ePg	**Pg**	**22 15 39.5**	**-0.9**
FRF				eSg	**Sg**	**22 16 13.1**	**-0.7**
RFYF	**Reffroy**	**2.59**	**344**	ePg	**Pg**	**22 15 39.9**	**-0.6**
RFYF				eSn	**Sn**	**22 16 03.1**	**-1.5**
RFYF				eSg	**Sg**	**22 16 13.5**	**-0.6**
	13nm,0.2s,baz=165						
RFYF	**Reffroy**	**2.59**	**344**	ePg	**Pg**	**22 15 39.9**	**-0.6**
RFYF				eSn	**Sn**	**22 16 03.1**	**-1.5**
RFYF				eSg	**Sg**	**22 16 13.5**	**-0.6**
	6.6nm,0.2s						
BGF	**Bois d'Agland**	**2.60**	**280**	ePg	**Pg**	**22 15 40.4**	**-0.3**
	SNR=1.0						
BGF				eSn	**Sn**	**22 16 03.5**	**-1.3**
	SNR=1.0						
BGF				eSg	**Sg**	**22 16 13.9**	**-0.5**
	18nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**2.60**	**280**	ePg	**Pg**	**22 15 40.4**	**-0.3**
	SNR=1.0						
BGF				eSn	**Sn**	**22 16 03.5**	**-1.3**
	SNR=1.0						
BGF				eSg	**Sg**	**22 16 13.9**	**-0.5**
	9.1nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**2.60**	**280**	ePn	**Pn**	**22 15 33.3**	**+0.2**
BGF				ePg	**Pg**	**22 15 40.4**	**-0.3**
BGF				eSn	**Sn**	**22 16 03.5**	**-1.3**
BGF				eSg	**Sg**	**22 16 13.9**	**-0.5**
LMR	**La Mourre**	**2.81**	**181**	ePg	**Pg**	**22 15 43.6**	**-1.1**
LMR				eSn	**Sn**	**22 16 08.0**	**-2.0**
	SNR=1.0						
LMR				eSg	**Sg**	**22 16 19.7**	**-1.4**
	14nm,0.9s,SNR=1.0						
LMR	**La Mourre**	**2.81**	**181**	ePg	**Pg**	**22 15 43.6**	**-1.1**
LMR				eSn	**Sn**	**22 16 08.0**	**-2.0**
	SNR=1.0						
LMR				eSg	**Sg**	**22 16 19.7**	**-1.4**
	7.1nm,0.9s,SNR=1.0						
LMR	**La Mourre**	**2.81**	**181**	ePn	**Pn**	**22 15 36.2**	**+0.2**
LMR				ePg	**Pg**	**22 15 43.6**	**-1.1**
LMR				eSn	**Sn**	**22 16 08.0**	**-2.0**
LMR				eSg	**Sg**	**22 16 19.7**	**-1.4**
LASF	**Ste Croix**	**2.81**	**224**	ePg	**Pg**	**22 15 44.6**	**-0.2**
LASF				eSg	**Sg**	**22 16 20.0**	**-1.2**
	8.4nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**2.81**	**224**	ePg	**Pg**	**22 15 44.6**	**-0.2**
LASF				eSg	**Sg**	**22 16 20.0**	**-1.2**
	4.2nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**2.81**	**224**	ePn	**Pn**	**22 15 36.8**	**+0.8**
LASF				ePg	**Pg**	**22 15 44.6**	**-0.2**
LASF				eSg	**Sg**	**22 16 20.0**	**-1.2**
HYF	**Humbligny**	**2.92**	**294**	eP	**Pn**	**22 15 40.1**	**+2.6**
HYF	**Humbligny**	**2.92**	**294**	ePg	**Pg**	**22 15 47.0**	**+0.2**
HYF				eSg	**Sg**	**22 16 24.4**	**-0.2**
HYF	**Humbligny**	**2.92**	**294**	eP	**Pn**	**22 15 40.1**	**+2.6**
HYF	**Humbligny**	**2.92**	**294**	ePg	**Pg**	**22 15 47.0**	**+0.2**
HYF				eSg	**Sg**	**22 16 24.4**	**-0.2**
HYF	**Humbligny**	**2.92**	**294**	ePn	**Pn**	**22 15 38.6**	**+1.1**
HYF				eP		22 15 40.1	
HYF				ePg	**Pg**	**22 15 47.0**	**+0.2**
HYF				eSg	**Sg**	**22 16 24.4**	**-0.2**
FETA	**Feichten**	**3.01**	**72**	⇓iPn	**Pn**	**22 15 39.3**	**+0.5**
FETA				⇑iPg	**Pg**	**22 15 48.2**	**-0.4**
FETA				⇓iSg	**Sg**	**22 16 26.7**	**-0.9**
	2.1nm,0.4s						
TCF	**Toulx Ste Croi**	**3.02**	**274**	ePg	**Pg**	**22 15 48.5**	**-0.2**
	SNR=1.0						
TCF				eSg	**Sg**	**22 16 27.3**	**-0.5**
	6.8nm,0.5s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.02**	**274**	ePg	**Pg**	**22 15 48.5**	**-0.2**
	SNR=1.0						
TCF				eSg	**Sg**	**22 16 27.3**	**-0.5**
	3.4nm,0.5s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.02**	**274**	ePn	**Pn**	**22 15 39.0**	**+0.1**
TCF				ePg	**Pg**	**22 15 48.5**	**-0.2**
TCF				eSg	**Sg**	**22 16 27.3**	**-0.5**
CAF	**Calviac**	**3.38**	**250**	ePg	**Pg**	**22 15 54.5**	**-1.1**
	SNR=1.0						
CAF				eSg	**Sg**	**22 16 37.5**	**-1.9**
	3.2nm,0.2s,SNR=1.0						
CAF	**Calviac**	**3.38**	**250**	ePg	**Pg**	**22 15 54.5**	**-1.1**
	SNR=1.0						
CAF				eSg	**Sg**	**22 16 37.5**	**-1.9**
	1.6nm,0.2s,SNR=1.0						
CAF	**Calviac**	**3.38**	**250**	ePn	**Pn**	**22 15 44.5**	**+0.7**
CAF				ePg	**Pg**	**22 15 54.5**	**-1.1**
CAF				eSg	**Sg**	**22 16 37.5**	**-1.9**
RJF	**Les Rejaudoux**	**3.63**	**258**	ePn	**Pn**	**22 15 47.6**	**+0.4**
RJF				eSg	**Sg**	**22 16 47.4**	**+0.1**
	3.3nm,0.3s						
RJF	**Les Rejaudoux**	**3.63**	**258**	ePn	**Pn**	**22 15 47.6**	**+0.4**
RJF				eSg	**Sg**	**22 16 47.4**	**+0.1**
	1.6nm,0.3s						
MTLF	**Montolieu**	**4.17**	**229**	eSg	**Sg**	**22 17 02.5**	**-2.3**
	2.8nm,0.4s						
MTLF	**Montolieu**	**4.17**	**229**	eSg	**Sg**	**22 17 02.5**	**-2.3**
	1.4nm,0.4s						
BAIF	**Baives**	**4.22**	**339**	ePn	**Pn**	**22 15 56.2**	**+0.8**
	SNR=1.0						
LFF	**La Frestale**	**4.26**	**256**	eSg	**Sg**	**22 17 06.8**	**-0.8**
	4.1nm,0.4s						
LFF	**La Frestale**	**4.26**	**256**	eSg	**Sg**	**22 17 06.8**	**-0.8**
	2.0nm,0.4s						
MFF	**Saint Martin d**	**4.66**	**278**	ePn	**Pn**	**22 16 01.8**	**+0.4**
	SNR=1.0						
LDF	**La Druitiere**	**5.16**	**301**	eSg	**Sg**	**22 17 33.7**	**-2.6**
	2.5nm,0.4s						
LDF	**La Druitiere**	**5.16**	**301**	eSg	**Sg**	**22 17 33.7**	**-2.6**
	1.2nm,0.4s						
EPF	**Esparros**	**5.42**	**237**	eSg	**Sg**	**22 17 42.5**	**-2.3**
	1.8nm,0.4s						
EPF	**Esparros**	**5.42**	**237**	eSg	**Sg**	**22 17 42.5**	**-2.3**
	0.9nm,0.4s						
GRR	**Gorron**	**5.52**	**297**	ePn	**Pn**	**22 16 14.2**	**+1.0**
	SNR=1.0						
SGMF	**Saint Gilles**	**6.56**	**292**	ePn	**Pn**	**22 16 27.5**	**+0.1**
QUIF	**Quistinic**	**6.88**	**288**	ePn	**Pn**	**22 16 32.0**	**+0.2**
	SNR=1.0						

ISCJB ***12*** *22:28:10.9±1.1, 24.6N±0.1×122.64E±0.03, h88^{km}±10^{km}, Error ellipse: s-maj=20.3km s-min=4.2km az=4.6*
JMA ***12*** *22:28:10.5±0.2, 24.79N×122.67E, h88^{km}, M1.8*
TAP ***12*** *22:28:11.1, 24.53N×122.64E, h81^{km}±1^{km}, ML3.0, D*
ISC 12 22:28:11.4±1.1**, 24.6N**±0.1×**122.64E**±0.03**, h87**^{km}±9^{km}**, n16,** σ**0^{s}53**/27**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**113**	P	**Pn**	**22 28 24.6**	**-0.2**
YOJ				eS	**Sn**	**22 28 35.3**	**+0.5**
TWC	**Suao**	**0.72**	**270**	P	**Pn**	**22 28 27.6**	**-0.2**
	baz=275						
TWC				S	**Sn**	**22 28 39.7**	**-0.4**
	baz=275						
ENA	**Nanau**	**0.84**	**258**	eP	**Pn**	**22 28 29.2**	**+0.2**
	baz=262						
ENA				eS	**Sn**	**22 28 42.6**	**+0.4**
	baz=262						
TWE	**Neicheng**	**0.89**	**278**	eP	**Pn**	**22 28 29.7**	**+0.1**
	baz=281						
TWE				eS	**Sn**	**22 28 43.1**	**-0.1**
	baz=281						
ENTT	**Nioudou**	**0.98**	**272**	eP	**Pn**	**22 28 31.3**	**+0.7**
	baz=276						
ENTT				eS	**Sn**	**22 28 45.1**	**+0.1**
	baz=276						
IRIF	**Iriomote-Funau**	**1.03**	**105**	P	**Pn**	**22 28 30.7**	**-0.5**
IRIF				eS	**Sn**	**22 28 45.9**	**-0.1**
TWD	**Chiawan**	**1.09**	**241**	eP	**Pn**	**22 28 31.5**	**-0.4**
	baz=244						
TWD				eS	**Sn**	**22 28 46.3**	**-1.0**
	baz=244						
NNS	**Nan Shan**	**1.17**	**262**	eS	**Sn**	**22 28 49.0**	**+0.1**
	baz=265						
NSK	**Sanguang**	**1.17**	**274**	eP	**Pn**	**22 28 33.0**	**+0.2**
	baz=276						
NSK				S	**Sn**	**22 28 49.1**	**+0.1**
	baz=276						
HATJ	**Hateruma jima**	**1.20**	**117**	eS	**Sn**	**22 28 50.7**	**+1.2**
JKRS	**Kuro-shima**	**1.30**	**106**	P	**Pn**	**22 28 34.5**	**+0.1**
JKRS				eS	**Sn**	**22 28 52.3**	**+0.4**
WHF	**Hehuan Shan**	**1.33**	**250**	eP	**Pn**	**22 28 34.4**	**-0.5**
	baz=252						
WHF				S	**Sn**	**22 28 52.2**	**-0.4**
	baz=252						
TWT	**Tachien**	**1.38**	**256**	eP	**Pn**	**22 28 36.0**	**+0.5**
	baz=258						
JIJ	**Ishigaki jima**	**1.39**	**100**	P	**Pn**	**22 28 35.1**	**-0.5**
JIJ				eS	**Sn**	**22 28 52.6**	**-1.3**
TYC	**Yuchr**	**1.77**	**247**	eP	**Pn**	**22 28 40.3**	**-0.1**
	baz=248						
CHN5	**Tsauling**	**2.06**	**241**	eP	**Pn**	**22 28 45.2**	**+1.0**
	baz=242						

ISCJB ***12*** *23:01:41.9±0.5, 45.06N±0.02×12.13E±0.04, h4^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=2.9km az=39.0*
CSEM ***12*** *23:01:42.4±0.1, 45.07N×12.04E, h15^{km}, ML3.1/7, Error ellipse: s-maj=2.2km s-min=1.3km az=129.0*
ROM ***12*** *23:01:43.0±0.2, 45.06N×12.00E, h3^{km}, Md2.4/7, Ml2.4/4, Error ellipse: s-maj=3.3km s-min=1.7km az=128.0*
VIE ***12*** *23:01:45.9±0.3, 45.25N×12.21E, h8^{km}±1^{km}, mb2.1/6, ML2.9/9, Error ellipse: s-maj=2.1km s-min=0.9km az=17.0*
ISC 12 23:01:43.1±0.5**, 45.07N**±0.02×**12.08E**±0.04**, h12**^{km}±5^{km}**, n38,** σ**0^{s}98**/72**, 6C-9D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEOL	**Teolo**	**0.41**	**315**	⇓iPg	**Pg**	**23 01 50.6**	**-0.7**
TEOL				i Sg	**Sg**	**23 01 57.1**	**+0.2**
CMPO	**Campotto Po**	**0.52**	**202**	Pg	**Pg**	**23 01 52.7**	**-0.7**
CMPO				Sg	**Sg**	**23 02 01.4**	**+1.1**
CMPO	**Campotto Po**	**0.52**	**202**	Pg	**Pg**	**23 01 52.7**	**-0.7**
CMPO				Sg	**Sg**	**23 02 01.4**	**+1.1**
IESO	**Jesolo**	**0.56**	**36**	ePg	**Pg**	**23 01 55.6**	**+1.6**
IESO	**Jesolo**	**0.56**	**36**		**Pg**	**23 01 56.1**	**+2.0**
MTLO	**Montello**	**0.75**	**1**	⇑ePg	**Pg**	**23 01 58.0**	**+0.4**
MTLO				eSg	**Sg**	**23 02 08.9**	**+1.6**
MTLO	**Montello**	**0.75**	**1**	ePg	**Pg**	**23 01 58.0**	**+0.4**
MTLO				eSg	**Sg**	**23 02 08.9**	**+1.5**
MTLO	**Montello**	**0.75**	**1**		**Pg**	**23 01 58.1**	**+0.5**
RAVA	**Ravarino**	**0.75**	**246**	Pg	**Pg**	**23 01 57.9**	**+0.2**
RAVA				Sg	**Sg**	**23 02 08.5**	**+1.0**
	188nm,0.3s						
RAVA	**Ravarino**	**0.75**	**246**	Pg	**Pg**	**23 01 57.9**	**+0.2**
RAVA				Sg	**Sg**	**23 02 08.5**	**+1.0**
	188nm,0.3s						
SBPO	**S.Benedetto Po**	**0.82**	**269**	Pg	**Pg**	**23 01 58.3**	**-0.7**
SBPO				Sg	**Sg**	**23 02 10.4**	**+0.6**
	1μm,1.9s						
SBPO	**S.Benedetto Po**	**0.82**	**269**	Pg	**Pg**	**23 01 58.3**	**-0.7**
SBPO				Sg	**Sg**	**23 02 10.4**	**+0.6**
	1μm,1.9s						
CGRP	**Cima Grappa**	**0.84**	**346**	⇑iPg	**Pg**	**23 01 59.1**	**-0.2**
CGRP				i Sg	**Sg**	**23 02 10.6**	**+0.3**
CGRP	**Cima Grappa**	**0.84**	**346**		**Pg**	**23 01 59.1**	**-0.2**
VARN	**Col Varnada, M**	**0.93**	**1**	⇓ePg	**Pg**	**23 02 01.0**	**0.0**
VARN				eSg	**Sg**	**23 02 13.9**	**+0.8**
VARN	**Col Varnada, M**	**0.93**	**1**	ePg	**Pg**	**23 02 01.0**	**0.0**
VARN				eSg	**Sg**	**23 02 13.9**	**+0.8**
CAE	**Caneva**	**0.97**	**15**	ePg	**Pg**	**23 02 02.0**	**+0.1**
CAE				eSg	**Sg**	**23 02 16.5**	**+1.9**
CAE	**Caneva**	**0.97**	**15**		**Pb**	**23 02 03.0**	**+1.2**
NOVE	**Novellara**	**1.01**	**255**	Pg	**Pg**	**23 02 01.5**	**-1.0**
NOVE				Sg	**Sg**	**23 02 16.4**	**+0.8**
NOVE	**Novellara**	**1.01**	**255**	Pg	**Pg**	**23 02 01.5**	**-1.0**
NOVE				Sg	**Sg**	**23 02 16.4**	**+0.8**
CTI	**Castel Tesino**	**1.03**	**343**	Pg	**Pg**	**23 02 02.3**	**-0.6**
CTI				Sg	**Sg**	**23 02 16.8**	**+0.5**
	75nm,0.1s						
CTI	**Castel Tesino**	**1.03**	**343**	Pg	**Pg**	**23 02 02.3**	**-0.6**
CTI				Sg	**Sg**	**23 02 16.8**	**+0.5**
	75nm,0.1s						
MLNI	**Malnisio**	**1.15**	**19**	ePg	**Pg**	**23 02 04.6**	**-0.6**
MLNI				eSg	**Sg**	**23 02 20.5**	**+0.5**
MAGA	**Magasa**	**1.25**	**305**	Pg	**Pg**	**23 02 05.1**	**-1.9**
MAGA				Sg	**Sg**	**23 02 22.0**	**-1.2**
MAGA	**Magasa**	**1.25**	**305**	Pg	**Pg**	**23 02 05.1**	**-1.9**
MAGA				Sg	**Sg**	**23 02 22.0**	**-1.2**
VOY	**Vojsko**	**1.60**	**52**	ePn	**Pn**	**23 02 12.7**	**+1.6**
VOY				eSn	**Sn**	**23 02 31.7**	**+0.1**
VOY				e		23 02 35.4	
VOY	**Vojsko**	**1.60**	**52**	ePn	**Pn**	**23 02 12.7**	**+1.6**
VOY				eSn	**Sn**	**23 02 31.7**	**+0.1**
FVI	**Forni Avoltri**	**1.61**	**17**	Pg	**Pg**	**23 02 13.9**	**0.0**
FVI				Sg	**Sg**	**23 02 36.1**	**+1.3**
	28nm,0.5s						
FVI	**Forni Avoltri**	**1.61**	**17**	Pg	**Pg**	**23 02 13.9**	**0.0**
FVI				Sg	**Sg**	**23 02 36.1**	**+1.3**
	28nm,0.5s						
PTCC	**Patocco-Chiusa**	**1.61**	**33**	Pg	**Pg**	**23 02 13.2**	**-0.8**
PTCC				Sg	**Sg**	**23 02 36.5**	**+1.7**
	5.0nm,0.2s						
PTCC	**Patocco-Chiusa**	**1.61**	**33**	Pg	**Pg**	**23 02 13.2**	**-0.8**
PTCC				Sg	**Sg**	**23 02 36.5**	**+1.7**
	5.0nm,0.2s						
ABTA	**Abfaltersbach**	**1.71**	**10**	⇑iPg	**Pg**	**23 02 15.1**	**-0.8**
ABTA				⇑iSg	**Sg**	**23 02 36.5**	**-1.5**
	2.8nm,0.2s						
MYKA	**Terra Mystica**	**1.91**	**34**	⇓iPg	**Pg**	**23 02 18.7**	**-1.0**
MYKA				⇓iSg	**Sg**	**23 02 42.6**	**-1.8**
	2.3nm,0.3s						
SCE	**Schlegeis**	**1.99**	**353**	⇓iPn	**Pn**	**23 02 20.5**	**+4.0**
NVLJ	**Novalja**	**2.05**	**103**	ePn	**Pn**	**23 02 17.2**	**-0.1**
NVLJ				Sn	**Sn**	**23 02 42.1**	**-0.6**
NVLJ	**Novalja**	**2.05**	**103**	ePn	**Pn**	**23 02 17.1**	**-0.2**
NVLJ				Sn	**Sn**	**23 02 42.0**	**-0.7**
WTTA	**Wattenberg**	**2.22**	**352**	⇓iPg	**Pg**	**23 02 24.9**	**-0.8**
WTTA				⇑iSg	**Sg**	**23 02 53.3**	**-1.1**
	9.2nm,0.2s						
OBKA	**Obir**	**2.25**	**49**	⇓iPn	**Pn**	**23 02 20.9**	**+0.8**
OBKA				⇓iPg	**Pg**	**23 02 25.3**	**-0.9**
OBKA				⇓iSn	**Sn**	**23 02 47.4**	**-0.3**
OBKA				⇑iSg	**Sg**	**23 02 54.3**	**-1.1**
	7.3nm,0.3s						

BJI ***12*** *23:05:19.6, 7.86S×119.44E, h283^{km}, mB4.6, mb4.2*
ISCJB ***12*** *23:05:21.0±0.4, 7.46S±0.04×119.46E±0.05, h281^{km}±4^{km}, mb4.3/34, Error ellipse: s-maj=9.5km s-min=5.1km az=142.3*
NEIC ***12*** *23:05:22.4±0.6, 7.40S×119.58E, h284^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=10.1km s-min=5.1km az=62.0*
IDC ***12*** *23:05:22.1±1.3, 7.43S×119.58E, h279^{km}±11^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/23, mbtmp3.8/12, Error ellipse: s-maj=36.4km s-min=8.1km az=54.0*
DJA ***12*** *23:05:26, 7.65S×119.29E, h203^{km}, MLv4.9/8*
ISC 12 23:05:21.7±0.4**, 7.48S**±0.04×**119.50E**±0.05**, h273**^{km}±4^{km}**, n73,** σ**1^{s}00**/79**, mb4.3**/34**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.31**	**160**	P	**Pn**	**23 06 07.5**	**-1.3**
KAPI	**Kappang**	**2.46**	**6**	P	**Pn**	**23 06 11.0**	**+0.7**
	7.7nm,0.3s,baz=171,slow=7.0,SNR=30						
KAPI				S	**S**	**23 06 50.0**	**+1.0**
	baz=105,slow=20,SNR=2.3						
KHKI	**Kahang-Kahang**	**3.96**	**257**	P	**Pn**	**23 06 23.7**	**-2.4**
DNP	**Denpasar**	**4.41**	**254**	P	**Pn**	**23 06 31.3**	**0.0**
IGBI	**Denpasar**	**4.51**	**253**	P	**Pn**	**23 06 30.5**	**-2.0**
KDI	**Kendari**	**4.68**	**42**	P	**Pn**	**23 06 38.7**	**+4.2**
BATI	**Baumata**	**4.92**	**124**	P	**Pn**	**23 06 38.3**	**+1.0**
	55nm,0.3s,baz=336,slow=1.6,SNR=46						
BATI				S	**S**	**23 07 35.6**	**-2.2**
	39nm,0.3s,baz=129,slow=22,SNR=6.1						
BATI	**Baumata**	**4.92**	**124**	P	**Pn**	**23 06 38.5**	**+1.2**
	184nm,0.9s,3μm0.9nm						
BBKI	**Banjar Baru**	**6.12**	**310**	P	**Pn**	**23 06 52.5**	**+0.6**
	136nm,1.1s,1μm0.4nm						
SJI	**Sawahan**	**7.67**	**268**	P	**Pn**	**23 07 10.3**	**-0.8**
	51nm,0.6s,0.5nm						
LBMI	**Labuha**	**10.48**	**50**	P	**Pn**	**23 07 55.5**	**+9.4**
FITZ	**Fitzroy Crossi**	**12.13**	**151**	eP	**Pn**	**23 08 09.7**	**+3.3**
	14nm,0.4s						
FITZ				eS	**S**	**23 10 21.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**12.13**	**151**	ePn	**Pn**	**23 08 06.4**	**0.0**
	7.1nm,0.4s						
FITZ				eS	**S**	**23 10 21.9**	**+0.4**
KSM	**Kuching**	**12.78**	**314**	ePn	**Pn**	**23 08 14.6**	**+0.2**
	18nm,0.9s						
KSM				eS	**S**	**23 10 36.9**	**+0.5**
MBWA	**Marble Bar**	**13.60**	**179**	ePn	**Pn**	**23 08 25.0**	**+0.7**
MBWA				eS	**S**	**23 10 55.6**	**+0.8**
KAKA	**Kakadu**	**13.75**	**113**	eP	x	23 08 06.4	
	15nm,0.5s						
KAKA				eS	x	23 10 29.7	
KKM	**Kota Kinabalu**	**13.83**	**346**	ePn	**Pn**	**23 08 27.8**	**+0.6**
DAV	**Davao City (W)**	**15.68**	**23**	ePn	**Pn**	**23 08 45.9**	**-3.2**
WRAB	**Tennant Creek**	**18.98**	**132**	eP	**P**	**23 09 24.4**	**+0.9**
	6.9nm,0.6s						
WRAB				eS	**S**	**23 12 40.0**	**-4.4**
WB2	**Warramunga Arr**	**18.99**	**132**	eP	**P**	**23 09 24.4**	**+0.8**
WB2				eS	**S**	**23 12 42.6**	**-1.9**
ASAR	**Alice Springs**	**21.21**	**141**	P	**P**	**23 09 47.4**	**+0.7**
	1.2nm,0.4s,mb3.6,baz=313,slow=8.4,SNR=31						
ASAR				S	**S**	**23 13 24.9**	**+1.1**
	2.9nm,0.9s,baz=326,slow=24,SNR=7.0						
COCO	**West Island**	**22.81**	**256**	P	**P**	**23 10 03.1**	**+1.7**
PSI	**Prapat**	**22.93**	**296**	P	**P**	**23 10 03.2**	**+0.7**
	4.0nm,0.4s,mb4.1,baz=144,slow=14,SNR=5.4						
CTAO	**Charters Tower**	**28.79**	**119**	P	**P**	**23 10 54.2**	**-0.6**
STKA	**Stephens Creek**	**31.82**	**143**	eP	**P**	**23 11 22.8**	**+1.5**
	0.6nm,0.6s,mb3.3						
STKA	**Stephens Creek**	**31.82**	**143**	P	**P**	**23 11 22.3**	**+1.0**
	0.8nm,0.3s,mb3.7,baz=300,slow=11,SNR=4.8						
YHNB	**Yeheng**	**32.01**	**3**	eP	**P**	**23 11 24.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**32.80**	**322**	P	**P**	**23 11 30.9**	**+1.0**
	1.0nm,0.3s,mb3.8,baz=144,slow=6.2,SNR=9.2						
CHTO	**Chiang Mai**	**33.07**	**322**	eP	**P**	**23 11 33.3**	**+1.0**
	3.8nm,1.0s,mb3.9						
KMI	**Kunming**	**36.29**	**334**	P	**P**	**23 12 01.9**	**+2.3**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.1						
ENH	**Enshi**	**38.75**	**346**	P	**P**	**23 12 19.7**	**-0.4**
LSA	**Lhasa**	**45.94**	**325**	P	**P**	**23 13 19.0**	**+1.2**
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.4						
LSA	**Lhasa**	**45.94**	**325**	eP	**P**	**23 13 18.7**	**+0.9**
	comp=Z,14nm,1.0s,mb4.2						
ODAN	**Odare**	**46.20**	**319**	eP	**P**	**23 13 19.9**	**0.0**
	comp=Z,12nm,0.5s,mb4.5						
TAPN	**Taplejung**	**46.33**	**320**	eP	**P**	**23 13 21.1**	**+0.2**
	comp=Z,11nm,0.5s,mb4.5						
RAMN	**Ramite**	**46.78**	**318**	eP	**P**	**23 13 24.7**	**+0.3**
	comp=Z,21nm,0.5s,mb4.7						
BJT	**Baijiatuau**	**47.36**	**357**	eP	**P**	**23 13 27.6**	**-1.0**
	comp=Z,6.4nm,0.4s,mb4.3						
JIRN	**Jiri**	**47.52**	**319**	eP	**P**	**23 13 30.2**	**+0.1**
	comp=Z,13nm,0.3s,mb4.7						
GUN	**Gumba**	**47.90**	**319**	eP	**P**	**23 13 32.9**	**0.0**
	comp=Z,21nm,0.6s,mb4.6						
PKI	**Pulchoki**	**47.98**	**318**	eP	**P**	**23 13 33.1**	**-0.5**
	comp=Z,13nm,0.4s,mb4.7						
DMN	**Daman**	**48.21**	**318**	eP	**P**	**23 13 34.9**	**-0.4**
	comp=Z,12nm,0.4s,mb4.6						
KKN	**Kakani**	**48.21**	**318**	eP	**P**	**23 13 34.9**	**-0.4**
	comp=Z,6.5nm,0.4s,mb4.3						
GKN	**Gorkha**	**48.78**	**318**	eP	**P**	**23 13 39.1**	**-0.5**
	comp=Z,27nm,0.3s,mb5.1						
KOLN	**Koldanda**	**49.33**	**317**	eP	**P**	**23 13 43.1**	**-0.7**
	comp=Z,11nm,0.3s,mb4.7						
DANN	**Dangsing**	**49.59**	**317**	eP	**P**	**23 13 45.4**	**-0.3**
	comp=Z,36nm,0.3s,mb5.2						
GTA	**Gaotai**	**50.10**	**340**	eP	**P**	**23 13 51.2**	**+1.9**
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**56.20**	**350**	P	**P**	**23 14 33.3**	**-0.1**
SONM	**Songino Array**	**56.28**	**349**	P	**P**	**23 14 35.0**	**+1.0**
	comp=Z,1.8nm,0.8s,mb3.6,baz=164,slow=8.6,SNR=18						
YSS	**Yuzh-Sakhalins**	**58.00**	**19**	P	**P**	**23 14 44.9**	**-1.2**
CASY	**Casey**	**59.03**	**184**	eP	**P**	**23 14 54.6**	**+1.7**
TLY	**Talaya**	**60.49**	**349**	eP	**P**	**23 15 03.4**	**+0.5**
	comp=Z,7.1nm,0.7s,mb4.3						
MK31	**Makanchi Array**	**63.35**	**332**	eP	**P**	**23 15 21.9**	**-0.1**
MKAR	**Makanchi Array**	**63.35**	**332**	P	**P**	**23 15 22.0**	**+0.1**
	comp=Z,5.1nm,0.4s,mb4.5,baz=157,slow=6.1,SNR=119						
MKAR	**Makanchi Array**	**63.35**	**332**	P	**P**	**23 15 22.0**	**0.0**
KBL	**Kabul**	**63.38**	**315**	eP	**P**	**23 15 21.0**	**-1.5**
	comp=Z,11nm,0.7s,mb4.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	64.09	326	eP	P	23 15 26.6	-0.2
	comp=Z,3.5nm,0.5s,mb4.2						
AAK	Ala-Archa	64.53	325	eP	P	23 15 29.7	-0.1
	comp=Z,4.2nm,0.6s,mb4.2						
AML	Almayashu	64.68	324	eP	P	23 15 31.1	+0.4
	comp=Z,10nm,0.7s,mb4.6						
EKS2	Erkin-Say	64.96	324	eP	P	23 15 32.5	0.0
	comp=Z,3.4nm,0.7s,mb4.1						
ZAA0	Zalesovo Array	67.81	339	eP	P	23 15 49.5	-0.8
ZALV	Zalesovo Beam	67.81	339	P	P	23 15 49.3	-1.0
	comp=Z,5.0nm,0.5s,mb4.5,baz=142,slow=4.9,SNR=23						
KURK	Kurchatov	67.87	333	P	P	23 15 50.2	-0.5
	comp=Z,4.8nm,0.6s,mb4.4,baz=145,slow=5.5,SNR=14						
KURK	Kurchatov	67.87	333	eP	P	23 15 50.5	-0.2
	comp=Z,2.6nm,0.5s,mb4.2						
BVAR	Borovoye Array	73.20	332	P	P	23 16 22.2	-0.5
	comp=Z,2.2nm,0.6s,mb3.9,baz=140,slow=8.0,SNR=11						
BRVK	Borovoye	73.28	331	P	P	23 16 17.6	-5.6
	comp=Z,2.8nm,0.6s,mb4.1						
AKTK	Aktyubinsk	78.27	325	P	P	23 16 50.6	-0.8
AKTO	Aktyubinsk	78.27	325	P	P	23 16 50.6	-0.8
	comp=Z,3.1nm,0.7s,mb4.2,baz=80,slow=5.2,SNR=13						
ARU	Arti	80.79	331	P	P	23 17 03.4	-1.5
BILL	Bilibino	82.21	16	P	P	23 17 10.5	-1.4
LSZ	Lusaka	89.32	255	eP	P	23 17 46.5	-1.4
	comp=Z,1.1nm,0.5s,mb3.9						
LBTB	Lobatse	90.39	245	eP	P	23 17 53.2	+0.5
TOA0	Torodi Ar. Sit	118.68	281	ePKPdf	PKPdf	23 23 36.7	-1.6
TORD	Torodi Ar. Bea	118.68	281	PKP	PKPdf	23 23 36.6	-1.7
	comp=Z,0.8nm,0.5s,baz=36,slow=1.6,SNR=10						

KRSC 12 23:37:03.6±0.8, 5508N×16544E, h41km±40km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.87	308	eP	Pn	23 37 34.3	+1.3
KBTR				eS	Sn	23 37 56.6	+1.3
MKZ	Mys Kozlova	2.21	258	eP	Pn	23 37 40.5	+2.8
MKZ				eS	Sn	23 38 06.9	+3.1
BZGR	Bezymyannyi-Gr	2.83	290	eS	Sn	23 38 22.7	+3.6
KIRR	Kirishev	3.03	289	eS	Sn	23 38 27.4	+3.5
KMNR	Kamenistaya	3.04	285	eP	Pn	23 37 51.3	+2.2
KMNR				eS	Sn	23 38 26.7	+2.5
KII	Karymskiy	3.64	256	eS	Sn	23 38 43.2	+4.2
SPN	Mys Shipunski	3.76	240	S	Sn	23 38 43.7	+1.8
NLC	Nalytchevo	4.06	244	eP	Pn	23 38 06.3	+3.2
NLC				eS	Sn	23 38 51.6	+2.2
AVH	Avacha	4.34	248	P	Pn	23 38 11.5	+4.6
GNL	Ganaly	4.60	256	eP	Pn	23 38 14.4	+3.9
GNL				eS	Sn	23 39 06.4	+3.9
RUS	Russkaya	4.89	240	eP	Pn	23 38 17.4	+2.9
RUS				S	Sn	23 39 12.8	+3.0

*IDC **12** 23:39:57.9±0.5, 52.18N×131.40W, h0km, mb4.9/24, mb1 5.1/32, mb1mx5.0/34, mbtmp5.0/32, ML4.6/6, MS5.2/30, Ms1 5.2/30, ms1mx5.1/34, Error ellipse: s-maj=10.3km s-min=5.2km az=23.0*

*MOS **12** 23:39:57.8±1.2, 52.04N×131.66W, h10km, mb5.5/113, MS5.3/46, Error ellipse: s-maj=6.7km s-min=3.4km az=100.1*

*ISCJB **12** 23:39:58.3±0.1, 52.12N±0.01×131.44W±0.02, h10km, mb5.3/256, MS5.3/199, Error ellipse: s-maj=2.7km s-min=1.0km az=138.9*

*PGC **12** 23:39:58.5±5.1, 52.05N×131.99W, h20km, ML5.7/5, Mw5.6*

PGC 134km south of Sandspit, Bc Queen Charlotte Islands Region Felt (II-IV) throughout the Queen Charlotte Islands, Northern Vancou Island, Central Coast, Prince George and Vanderhoof.

*GCMT **12** 23:39:59.8±0.1, 51.99N×131.63W, h26km, MW5.8/103, Moment Tensor Solution. s87,c176; s103,c305; Duration: 1s9 Moment tensor: Scale 10^{17}Nm; M_{rr}1.09±.05; $M_{\theta\theta}$-1.33±.06; $M_{\phi\phi}$0.23±.06; $M_{r\theta}$2.47±.14; $M_{\theta\phi}$5.45±.05; $M_{\phi r}$-0.84±.13; Best double couple: $M_0$6.01300×10^{17} NP1:ϕ_s357.00000°, δ67.00000°, λ-178.00000°. NP2:ϕ_s267.00000°, δ89.00000°, λ-23.00000°. Principal axes: T 5.2220, Plg15.0000°, Azm314.0000°; N 1.5730, Plg67.0000°, Azm83.0000°; P -6.8040, Plg17.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **12** 23:39:59.8±0.2, 52.10N×131.55W, h10km, mb5.4/203, MS5.4/141, MW5.6, MW5.6(PGC) Error ellipse: s-maj=5.1km s-min=1.9km az=47.0, Moment Tensor Solution. s47 Moment tensor: Scale 10^{17}Nm; M_{rr}1.16; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$0.21; $M_{r\theta}$0.60; $M_{\theta\phi}$2.75; $M_{\phi r}$-0.11; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s83.00000°, δ85.00000°, λ14.00000°. NP2:ϕ_s352.00000°, δ76.00000°, λ175.00000°. Principal axes: T 2.3400, Plg13.0000°, Azm308.0000°; N 1.1600, Plg74.0000°, Azm100.0000°; P -3.5100, Plg6.0000°, Azm216.0000°;*

NEIC Felt [IV] at Prince Rupert and [II] at Kitimat. Felt throughout the Queen Charlotte Islands and at Port Hardy, Port MacNeill, Smithers, Vancouver and Williams Lake.

*IGIL **12** 23:40:00.5, 52.28N×131.35W, h10km, MS5.5*

*BJI **12** 23:40:00.9, 53.00N×132.05W, h10km, mB5.4, mb5.2, Ms5.7, Msz5.3*

*SZGRF **12** 23:40:04.6, 52.26N×131.63W, h12km, mb5.5, MS5.4, Queen Charlotte Islands, Canada, region*

ISC 12 23:39:60.0±0.1, 52.14N±0.01×131.49W±0.02, h10km, (h12km±.8km:pP-P), n1232, σ1s05/1296, mb5.3/256, MS5.3/199, 261C-158D, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	Barry Inlet	0.47	340	⇓P	Pg	23 40 08.9	-0.1
BNB				⇓S	Sg	23 40 16.4	+1.2
MOBC	Moresby Island	1.05	344	⇑P	Pg	23 40 17.9	-2.3
MOBC				⇑S	Sg	23 40 33.2	-0.6
DIB	Dawson Inlet,	1.22	331	Pg	Pg	23 40 20.2	-3.2
DIB				Lg		23 40 35.8	
DIB	Dawson Inlet,	1.22	331	⇓P	Pn	23 40 19.9	-3.1
DIB				S	Sb	23 40 36.3	-2.6
VIB	Van Inlet	1.28	331	Pg	Pg	23 40 21.3	-3.3
VIB				Lg		23 40 36.9	
VIB	Van Inlet	1.28	331	⇑P	Pn	23 40 20.8	-3.1
VIB				⇓S	Sb	23 40 37.5	-3.3
VIB	Van Inlet	1.28	331	⇑P	Pn	23 40 20.8	-3.1
VIB				S	Sb	23 40 37.5	-3.3
NDB	Naden	2.02	335	⇑P	Pn	23 40 31.1	-2.9
BBB	Bella Bella	2.08	87	Pn	Pn	23 40 31.4	-3.5
	302nm,0.3s,baz=268,slow=14,SNR=165						
BBB				Pg	Pg	23 40 34.6	-5.3
	1µm,0.3s,baz=274,slow=18,SNR=204						
BBB				Lg		23 41 00.7	
	13µm,0.3s,baz=172,slow=18,SNR=32						
BBB				LR	LR	23 41 06.9	
	comp=Z,11µm,20.0s,baz=277,slow=34						
BBB	Bella Bella	2.08	87	P	Pn	23 40 30.9	-4.0
BBB				S	Sn	23 41 00.5	-0.3
CRAG	Craig	3.47	344	⇑iPn	Pn	23 40 51.9	-2.1
CRAG				ePg	Pg	23 41 04.4	-2.0
CRAG				eSn	Sn	23 41 33.5	-1.6
CRAG				Sg	Sg	23 41 48.4	-3.0
WRAK	Wrangell Islan	4.32	354	⇑ePn	Pn	23 41 04.5	-1.1
WRAK				Sn	Sn	23 41 54.8	-1.1
WRAK				S	Sn	23 41 57.6	+1.6
SIT	Sitka	5.41	337	P	Pn	23 41 16.9	-3.6
SIT				S	Sn	23 42 21.0	-1.8
PGC	Sidney	6.21	121	ePn	Pn	23 41 30.6	-1.0
PGC				eSn	Sn	23 42 40.9	-1.7
DLBC	Dease Lake	6.37	7	Pn	Pn	23 41 34.6	+0.9
	11nm,0.3s,baz=203,slow=13,SNR=72						
DLBC				Sn	Sn	23 42 55.8	+9.5
	56nm,0.3s,baz=166,slow=17,SNR=4.1						
DLBC				Lg		23 43 15.9	
	71nm,0.3s,baz=281,slow=25,SNR=12						
DLBC	Dease Lake	6.37	7	⇑ePn	Pn	23 41 34.5	+0.7
DLBC				eSn	Sn	23 42 42.6	-3.7
B04A	Port Angeles	6.56	125	⇓P	Pn	23 41 34.4	-2.0
	baz=6.5,SNR=7.0						
A04A	Legoe Bay, Lum	6.57	118	⇓P	Pn	23 41 35.3	-1.3
	baz=6.5,SNR=23						
BESE	Bessie Mountai	6.73	345	P	Pn	23 41 36.5	-2.3
A05A	Maple Falls	6.76	114	⇑P	Pn	23 41 38.5	-0.7
	baz=6.7,SNR=67						
C04A	Brinnon	7.06	125	P	Pn	23 41 42.4	-0.8
	baz=7.0,SNR=53						
D03A	Wishkah Elem.	7.10	132	⇓P	Pn	23 41 42.9	-0.8
	baz=7.1,SNR=9.3						
B05A	Bryant	7.17	119	⇓P	Pn	23 41 43.4	-1.3
	baz=7.1,SNR=94						
JCW	Jim Creek	7.30	119	ePn	Pn	23 41 45.3	-1.3
B06A	Marblemount	7.36	116	P	Pn	23 41 46.6	-0.7
	baz=7.3,SNR=31						
RPW	Rockport	7.38	116	ePn	Pn	23 41 46.3	-1.4
D04A	Dobbs Creek Ra	7.56	128	⇓P	Pn	23 41 49.3	-0.8
	baz=7.5,SNR=11						
E03A	Lebam	7.62	134	⇓P	Pn	23 41 50.5	-0.5
	baz=7.6,SNR=14						
SKAG	Skagway	7.65	345	ePn	Pn	23 41 51.6	+0.3
SKAG				eSn	Sn	23 43 27.1	+9.2
A07A	Ashnola River,	7.72	109	P	Pn	23 41 50.7	-1.5
	baz=7.7,SNR=190						
C05A	Tolt Reservoir	7.73	121	P	Pn	23 41 51.5	-1.0
	baz=7.7,SNR=58						
E04A	Onalaska	7.97	131	⇓P	Pn	23 41 55.4	-0.4
	baz=8.0,SNR=17						
C06A	Tall Timber Ra	8.02	118	⇑P	Pn	23 41 55.8	-0.6
	baz=8.0,SNR=10						
F03A	Seaside	8.11	137	⇓P	Pn	23 41 57.4	-0.2
	baz=8.1,SNR=8.2						
B07A	Winthrop	8.16	112	⇑P	Pn	23 41 57.3	-1.0
	baz=8.1,SNR=97						
LON	Longmire	8.30	127	⇑eP	Pn	23 41 59.2	-1.0
LON				e		23 43 39.9	
LON				pmax	pmax		
	comp=Z,384nm,0.9s						
LON	Longmire	8.30	127	⇑ePn	Pn	23 41 59.2	-1.0
	comp=Z,384nm,0.9s						
LON				eSn	Sn	23 43 39.9	+6.0
A08A	Turner Farm, O	8.41	107	⇑P	Pn	23 42 00.9	-0.8
	baz=8.4,SNR=54						
E05A	Randle	8.45	128	⇓P	Pn	23 42 02.2	-0.2
	baz=8.4,SNR=324						
D06A	Cle Elum	8.49	121	⇓P	Pn	23 42 02.3	-0.6
	baz=8.5,SNR=60						
ETW	Entiat	8.52	118	ePn	Pn	23 42 03.1	-0.1
F04A	Amboy	8.60	133	⇓P	Pn	23 42 04.4	0.0
	baz=8.6,SNR=69						
HEBO	Mount Hebo	8.61	141	ePn	Pn	23 42 06.7	+2.2
HEBO				eSn	Sn	23 43 43.8	+2.2
C07A	Waterville	8.61	117	P	Pn	23 42 03.6	-0.9
	baz=8.6,SNR=75						
B08A	Colville Reser	8.66	111	P	Pn	23 42 05.0	-0.1
	baz=8.6,SNR=52						
G03A	Yamhill	8.72	138	⇑P	Pn	23 42 05.9	-0.1
	baz=8.7,SNR=27						
WHY	Whitehorse	8.74	349	P	Pn	23 42 03.8	-2.5
PNL	Peninsula	8.75	333	ePn	Pn	23 42 08.2	+1.8
	comp=Z,120nm,0.9s						
PNL				eSn	Sn	23 43 57.0	+12
A09A	Danville	8.81	106	P	Pn	23 42 06.8	-0.4
	baz=8.8,SNR=25						
E06A	Yakima	8.85	125	⇑P	Pn	23 42 07.7	-0.2
	baz=8.8,SNR=46						
D07A	Quincy	8.96	119	⇑P	Pn	23 42 08.8	-0.5
	baz=8.9,SNR=81						
F05A	White Salmon	9.09	130	⇓P	Pn	23 42 10.5	-0.5
	baz=9.1,SNR=40						
C08A	Higginbotham F	9.13	114	⇑P	Pn	23 42 11.2	-0.4
	baz=9.1,SNR=85						
G04A	Mulino	9.14	136	⇑P	Pn	23 42 11.8	0.0
	baz=9.1,SNR=43						
H03A	Soap Creek Ran	9.24	141	⇑P	Pn	23 42 13.2	+0.1
	baz=9.2						
COR	Corvallis	9.31	141	ePn	Pn	23 42 14.9	+0.7
COR				eSn	Sn	23 44 11.9	+13
B09A	Rice	9.32	108	P	Pn	23 42 13.8	-0.3
	baz=9.3,SNR=94						
HYT	Haines Junctio	9.32	342	ePn	Pn	23 42 14.3	+0.2
A10A	Northport	9.41	104	⇑P	Pn	23 42 15.3	-0.3
	baz=9.4,SNR=14						
HOOD	Mount Hood Mea	9.42	133	ePn	Pn	23 42 16.6	+1.1
HOOD				eSn	Sn	23 44 05.8	+4.3
E07A	Sunnyside	9.42	122	P	Pn	23 42 14.5	-1.1
	baz=9.4,SNR=70						
F06A	Goldendale	9.50	128	⇓P	Pn	23 42 16.5	-0.2
	baz=9.5,SNR=31						
OD2	Odessa Site #2	9.53	115	ePn	Pn	23 42 15.7	-1.4
C09A	Chrisman Ranch	9.56	112	P	Pn	23 42 16.5	-0.9
	baz=9.5,SNR=60						
D08A	Wollman Farm,	9.61	117	P	Pn	23 42 16.6	-1.6
	baz=9.6,SNR=48						
I02A	Mapleton	9.62	145	⇑P	Pn	23 42 18.8	+0.5
	baz=9.6,SNR=18						
G05A	Wamic	9.63	132	⇑P	Pn	23 42 18.5	0.0
	baz=9.6,SNR=23						
RSW	Rattlesnake Hi	9.67	122	ePn	Pn	23 42 17.8	-1.2
H04A	Detroit Lake	9.69	137	⇓P	Pn	23 42 19.9	+0.7
	baz=9.7,SNR=23						
HAWA	Hanford	9.70	122	ePn	Pn	23 42 17.9	-1.6
HAWA				eSn	Sn	23 44 18.4	+10
F07A	Phinny Hill Vi	9.83	125	⇓P	Pn	23 42 22.2	+1.0
	baz=9.8,SNR=22						
I03A	Eugene	9.84	143	⇓P	Pn	23 42 21.8	+0.4
	baz=9.8,SNR=27						
E08A	Dider Farm, El	9.89	120	⇓P	Pn	23 42 21.2	-0.8
	baz=9.9						
B10A	Chitwood Farm,	9.92	107	⇑P	Pn	23 42 22.0	-0.4
	baz=9.9						
D09A	Jones Farm, Ri	9.95	116	P	Pn	23 42 21.2	-1.6
	baz=9.9,SNR=50						
G06A	Carlson Farm,	9.96	130	⇑P	Pn	23 42 22.8	-0.2
	baz=9.9,SNR=35						
NEW	Newport	9.99	107	ePn	Pn	23 42 23.1	-0.3
NEW				Sn	Sn	23 44 17.4	+1.8
C10A	Spilker Farm,	10.10	110	⇑P	Pn	23 42 24.9	-0.1
	baz=10,SNR=17						
H05A	Madras	10.13	134	⇓P	Pn	23 42 25.3	0.0
	baz=10,SNR=13						
A11A	Hall Mountain,	10.14	102	⇑P	Pn	23 42 26.0	+0.6
	baz=10,SNR=42						
B11A	Sandpoint	10.36	105	⇓P	Pn	23 42 27.7	-0.8
	baz=10,SNR=38						
E09A	Wood Farm, Sta	10.37	118	P	Pn	23 42 26.9	-1.6
	baz=10,SNR=83						
G07A	Ruggs Ranch, H	10.40	127	⇓P	Pn	23 42 28.8	-0.2
	baz=10,SNR=78						
KEBM	Edson Butte	10.45	150	ePn	Pn	23 42 33.7	+3.9
H06A	Lindquist Farm	10.47	131	⇑P	Pn	23 42 29.5	-0.5
	baz=10,SNR=35						
F08A	Pendleton	10.49	122	⇑P	Pn	23 42 30.2	0.0
	baz=10,SNR=65						
I05A	Bend	10.50	135	⇑P	Pn	23 42 30.5	+0.1
	baz=10,SNR=9.3						
D10A	Wagner Farm, O	10.53	113	⇑P	Pn	23 42 29.6	-1.2
	baz=10,SNR=57						
A12A	Yaak River Ran	10.58	101	⇑P	Pn	23 42 32.6	+1.2
	baz=10,SNR=34						
LNOR	Lincton Mounta	10.70	121	eP	Pn	23 42 31.7	-1.4
C11A	Tepee Creek (N	10.71	108	P	Pn	23 42 33.3	+0.1
	baz=11,SNR=50						
G08A	Pilot Rock	10.74	125	⇓P	Pn	23 42 33.2	-0.5
	baz=11,SNR=283						
B12A	Libby	10.81	104	⇑P	Pn	23 42 34.7	+0.1
	baz=11,SNR=19						
H07A	Lands Inn, Kim	10.94	129	⇓P	Pn	23 42 36.2	-0.3
	baz=11,SNR=244						
E10A	Myers Farm, Un	10.95	115	P	Pn	23 42 34.9	-1.7
	baz=11,SNR=52						
F09A	S2 Ranch, Elgi	11.00	120	⇓P	Pn	23 42 36.4	-0.9
	baz=11,SNR=34						
EDM	Edmonton	11.07	77	ePn	Pn	23 42 36.9	-1.2
EDM				eSn	Sn	23 44 41.4	-0.4
D11A	Klaveano Farm,	11.07	111	⇑P	Pn	23 42 36.0	-2.2
	baz=11,SNR=27						
I06A	Prineville	11.14	133	⇑P	Pn	23 42 39.0	-0.1
	baz=11,SNR=23						
HUMO	Hull Mountain	11.14	145	ePn	Pn	23 42 40.8	+1.6
HUMO				eSn	Sn	23 44 51.4	+7.6
F10A	Beach Ranch, E	11.20	118	⇓P	Pn	23 42 39.7	-0.3
	baz=11,SNR=52						
C12B	Naegeli Ranch,	11.23	107	⇓P	Pn	23 42 40.2	-0.2
	baz=11						
A13A	Flathead Natio	11.33	100	⇓P	Pn	23 42 41.9	+0.1
	baz=11						
I07A	Izee	11.35	131	P	Pn	23 42 42.2	+0.2
	baz=11,SNR=115						
G09A	Cove	11.36	122	⇓P	Pn	23 42 42.3	+0.2
	baz=11,SNR=178						
H08A	Prairie City	11.43	127	P	Pn	23 42 42.4	-0.7
	baz=11,SNR=233						
B13A	Whitefish	11.53	102	⇓P	Pn	23 42 44.8	+0.4
	baz=12,SNR=76						
E11A	Bogner Ranch,	11.53	114	⇓P	Pn	23 42 43.2	-1.3
	baz=12						
BSMT	Bassoo Peak	11.57	105	ePn	Pn	23 42 45.0	0.0
WALA	Waterton Lakes	11.59	98	ePn	Pn	23 42 46.8	+1.5
WALA				eSn	Sn	23 44 51.6	-2.9
D12A	Red Ives Fores	11.64	110	⇑P	Pn	23 42 45.0	-0.9
	baz=12						
G10A	Bishop Farm, J	11.69	120	P	Pn	23 42 45.9	-0.8
	baz=12,SNR=82						
J06A	Christmas Vall	11.71	135	⇓P	Pn	23 42 47.6	+0.6
	baz=12,SNR=47						
C13A	Hot Springs	11.78	106	⇑P	Pn	23 42 48.0	+0.2
	baz=12,SNR=44						
K05A	Summer Lake	11.83	139	⇑P	Pn	23 42 49.3	+0.8
	baz=12,SNR=49						
H09A	Durkee	11.83	124	P	Pn	23 42 48.9	+0.3
	baz=12,SNR=39						
F11A	Grangeville	11.84	116	⇓P	Pn	23 42 47.8	-1.0
	baz=12,SNR=35						
BMO	Blue Mountains	11.89	122	ePn	Pn	23 42 48.1	-1.3
BMO				eSn	Sn	23 44 58.1	-3.9
A14A	Double T Ranch	11.92	98	⇓P	Pn	23 42 49.8	0.0
	baz=12,SNR=56						
JTMT	Jette	11.92	105	ePn	Pn	23 42 50.3	+0.5
I08A	Drewsey	11.93	129	⇓P	Pn	23 42 49.8	-0.1
	baz=12,SNR=19						
J07A	Hines	11.99	132	⇓P	Pn	23 42 50.4	-0.4
	baz=12,SNR=32						
YBH	Yreka Blue Hor	12.01	147	Pn	Pn	23 42 53.1	+2.1
	comp=Z,0.3nm,0.3s,baz=339,slow=12,SNR=37						
YBH				LR	LR	23 46 42.5	
	comp=Z,18µm,20.0s,baz=324,slow=34						
YBH	Yreka Blue Hor	12.01	147	ePn	Pn	23 42 53.3	+2.3
YBH				eSn	Sn	23 45 06.2	+1.4
YBMT	Yellow Bay	12.03	104	ePn	Pn	23 42 51.8	+0.6
G11A	Walters Elk Ra	12.08	118	P	Pn	23 42 50.5	-1.5
	baz=12,SNR=94						
D13A	Huson	12.14	108	P	Pn	23 42 51.9	-0.8
	baz=12,SNR=79						
SWMT	Swartz Lake	12.20	105	ePn	Pn	23 42 53.4	-0.3
C14A	Swan Lake	12.23	104	⇓P	Pn	23 42 53.4	-0.6
	baz=12						
B14A	Marquette Ranc	12.25	101	⇑P	Pn	23 42 54.5	+0.1
	baz=12,SNR=77						
I09A	Lost Marbles R	12.29	126	P	Pn	23 42 54.8	-0.1
	baz=12,SNR=17						
A15A	Johnson Ranch,	12.34	97	⇓P	Pn	23 42 54.8	-0.7
	baz=12,SNR=31						
H10A	Noah's Angus R	12.36	122	P	Pn	23 42 55.9	0.0
	baz=12,SNR=124						
J08A	Circle Bar Ran	12.39	130	⇓P	Pn	23 42 55.9	-0.3
	baz=12,SNR=93						
F12A	Elk City	12.42	115	⇑P	Pn	23 42 55.8	-0.9
	baz=12						
KHMM	Horse Mountain	12.46	152	ePn	Pn	23 43 00.4	+3.1
K07A	Rock Creek Ran	12.56	134	⇓P	Pn	23 42 59.1	+0.6
	baz=12,SNR=139						
MSO	Missoula	12.58	108	ePn	Pn	23 42 57.9	-0.9
MSO				eSn	Sn	23 45 20.8	+2.0
MENT	Mentasta	12.63	334	Pn	Pn	23 43 00.8	+1.4
E13A	Victor	12.64	110	P	Pn	23 42 58.6	-1.1
	baz=13,SNR=61						
DAWY	Dawson	12.65	344	ePn	Pn	23 42 59.4	-0.3
DAWY				eSn	Sn	23 45 25.9	+5.5
H11A	Donnelly	12.67	120	P	Pn	23 42 58.3	-1.8
	baz=13,SNR=26						
I10A	Payette	12.68	124	⇑P	Pn	23 42 59.4	-0.8
	baz=13,SNR=29						
D14A	Greenough	12.70	106	P	Pn	23 42 59.7	-0.8
	baz=13,SNR=31						
B15A	Bradely Ranch,	12.71	100	⇑P	Pn	23 42 60.0	-0.5
	baz=13,SNR=51						
J09A	Fry Pan Ranch,	12.74	128	⇓P	Pn	23 43 00.7	-0.3
	baz=13,SNR=158						
MOD	Modoc	12.76	139	⇓ePn	Pn	23 43 02.0	+0.8
MOD				Sn	Sn	23 45 27.3	+4.1
SEW	Seward	12.77	316	⇑ePn	Pn	23 42 59.8	-1.6
	comp=Z,307nm,1.6s						
SEW				Sn	Sn	23 45 29.4	+6.1
K08A	Mann Creek Ran	12.87	132	⇓P	Pn	23 43 02.7	0.0
	baz=13,SNR=126						
C15A	Salmond Ranch,	12.91	102	⇑P	Pn	23 43 03.4	+0.1
	baz=13,SNR=54						
F13A	Darby	12.93	113	⇑P	Pn	23 43 02.8	-0.8
	baz=13,SNR=202						
CHMT	Chamberlain Mo	12.94	107	ePn	Pn	23 43 03.2	-0.5
WVOR	Wild Horse Val	13.03	133	⇑eP	Pn	23 43 05.2	+0.2
WVOR						23 45 41.6	
WVOR				pmax	pmax		
	comp=Z,12nm,0.4s						
WVOR	Wild Horse Val	13.03	133	⇑ePn	Pn	23 43 05.2	+0.2
	comp=Z,12nm,0.4s						
WVOR				Sn	Sn	23 45 41.6	+12
A16A	West Butte Ran	13.04	96	P	Pn	23 43 04.2	-0.9
	baz=13,SNR=29						
E14A	Clinton	13.06	109	⇑P	Pn	23 43 04.7	-0.7
	baz=13,SNR=50						
L07A	Adell	13.06	136	⇓P	Pn	23 43 05.3	-0.1
	baz=13,SNR=44						
WDC	Whiskeytown Da	13.10	148	⇑iPn	Pn	23 43 07.4	+1.5
WDC				eSn	Sn	23 45 40.7	+9.1
PAX	Paxson	13.16	331	⇑eP	Pn	23 43 05.3	-1.3
PAX						23 45 32.3	
PAX				pmax	pmax		
	comp=Z,58nm,1.2s						
PAX	Paxson	13.16	331	⇑ePn	Pn	23 43 05.3	-1.3
	comp=Z,58nm,1.2s						
PAX				Sn	Sn	23 45 32.3	-0.5
J10A	Berg Farm, Mel	13.17	126	⇓P	Pn	23 43 06.5	-0.4
	baz=13						
B16A	M & M Farms, S	13.18	99	⇓P	Pn	23 43 05.7	-1.3
	baz=13						
I11A	Placerville	13.24	122	P	Pn	23 43 07.7	-0.1
	baz=13,SNR=138						
K09A	Rome	13.25	130	P	Pn	23 43 08.0	0.0
	baz=13,SNR=53						
D15A	Lincoln	13.31	105	P	Pn	23 43 08.6	-0.2
	baz=13,SNR=55						
D15A				⇓S	Sn	23 45 40.5	+3.8
	baz=13						
KDAK	Kodiak Island	13.34	303	Pn	Pn	23 43 10.0	+0.8
	comp=Z,2µm,1.3s,SNR=18						
KDAK	Kodiak Island	13.34	303	Pn	Pn	23 43 08.2	-0.9
	comp=Z,2.0nm,0.3s,baz=114,slow=6.7,SNR=29						
KDAK				Sn	Sn	23 45 34.2	-3.1
	comp=Z,0.4nm,0.3s,baz=114,slow=18,SNR=2.7						
KDAK				LR	LR	23 47 18.8	
	comp=Z,8µm,20.0s,baz=98,slow=33						
KDAK	Kodiak Island	13.34	303	ePn	Pn	23 43 10.0	+0.8
KDAK				Sn	Sn	23 45 42.2	+4.8
L08A	Fields	13.36	133	P	Pn	23 43 09.8	+0.3
	baz=13,SNR=49						
G13A	Cobalt	13.40	115	P	Pn	23 43 08.7	-1.3
	baz=13,SNR=105						
H12A	Diamond D Ranc	13.40	118	⇓P	Pn	23 43 08.8	-1.2
	baz=13,SNR=64						
RC01	Rabbit Creek A	13.42	319	⇑ePn	Pn	23 43 08.5	-1.6
	comp=Z,107nm,0.9s						
RC01				eSn	Sn	23 45 42.7	+3.5
C16A	Fuhringer Ranc	13.42	101	⇓P	Pn	23 43 09.7	-0.5
	baz=13,SNR=81						
C16A				⇓S	Sn	23 45 41.0	+1.7
	baz=13						
F14A	Wisdom	13.46	111	⇓P	Pn	23 43 09.9	-0.9
	baz=13,SNR=22						
PMR	Palmer	13.47	322	⇑ePn	Pn	23 43 10.0	-0.9
PMR				eSn	Sn	23 45 34.4	-6.1
E15A	Deer Lodge	13.55	107	P	Pn	23 43 11.4	-0.7
	baz=14,SNR=42						
OHAK	Old Harbor	13.57	301	⇑ePn	Pn	23 43 11.6	-0.7
OHAK				Sn	Sn	23 45 51.0	+8.1
A17A	Triple J Farms	13.60	95	P	Pn	23 43 11.5	-1.2
	baz=14,SNR=23						
K10A	MacKenzie Ranc	13.60	128	⇓P	Pn	23 43 12.5	-0.2
	baz=14,SNR=276						
EGAK	Eagle	13.62	342	ePn	Pn	23 43 13.4	+0.5
EGAK				eSn	Sn	23 46 03.9	+20
M07A	Soldier Meadow	13.65	137	⇑P	Pn	23 43 13.6	+0.2
	baz=14,SNR=51						
MFID	Camas Ranch	13.65	124	P	Pn	23 43 13.1	-0.4
	baz=14,SNR=47						
MFID				⇓S	Sn	23 45 47.2	+2.1
	baz=14						
H13A	Challis	13.72	117	⇓P	Pn	23 43 13.7	-0.6

baz=14,SNR=114
I12A Atlanta 13.75 121 ⇑P Pn 23 43 14.1 -0.7
baz=14
YKA Yellowknife Ar 13.76 35 Pn Pn 23 43 12.0 -2.9
comp=Z,1.5nm,0.3s,baz=236,slow=12,SNR=97
YKA Lg 23 47 11.7
comp=Z,3.1nm,0.3s,baz=215,slow=28,SNR=9.1
YKA Yellowknife Ar 13.76 35 Pn Pn 23 43 11.9 -2.9
YKA Lg 23 47 11.7
B17A L&G Farms, Che 13.79 98 ⇑P Pn 23 43 13.7 -1.6
baz=14,SNR=50
L09A Wilkinson Ranc 13.80 132 ⇓P Pn 23 43 15.4 -0.2
baz=14,SNR=12
HRY Holter Researc 13.88 105 *e*Pn Pn 23 43 16.4 -0.2
D16A Dana Ranch, Ca 13.89 104 ⇓P Pn 23 43 16.3 -0.4
baz=14,SNR=33
N06A Buffalo Meadow 13.92 140 ⇓P Pn 23 43 17.6 +0.4
baz=14,SNR=116
N06A ⇓S Sn 23 45 55.5 +3.9
baz=14
M08A Happy Creek Ra 13.94 135 ⇓P Pn 23 43 17.8 +0.4
baz=14
F15A Butte 13.96 109 P Pn 23 43 16.7 -0.9
baz=14,SNR=52
LRM Limekiln Ridge 13.99 109 *e*Pn Pn 23 43 17.7 -0.3
K11A Parker Ranch, 14.02 126 P Pn 23 43 18.8 +0.3
baz=14,SNR=179
E16A East Helena 14.07 106 P Pn 23 43 18.4 -0.7
baz=14,SNR=32
C17A Wharram Farm, 14.09 100 ⇓P Pn 23 43 18.6 -0.8
baz=14,SNR=30
A18A Metzger Ranch, 14.13 95 P Pn 23 43 18.5 -1.5
baz=14,SNR=14
J12A Stokes Ranch, 14.15 122 P Pn 23 43 19.8 -0.4
baz=14,SNR=139
DLMT Dillon 14.17 111 *e*Pn Pn 23 43 19.6 -0.9
DLMT *e*Sn Sn 23 46 08.4 +11
H14A Leadore 14.18 115 P Pn 23 43 19.9 -0.8
baz=14,SNR=46
I13A Wildhorse Cree 14.22 119 P Pn 23 43 20.8 -0.3
baz=14,SNR=96
N07B Gerlach 14.24 138 ⇓P Pn 23 43 21.4 -0.1
baz=14,SNR=24
HLID Hailey 14.29 120 ⇑P Pn 23 43 21.9 -0.3
baz=14
HLID Hailey 14.29 120⇑*e*Pn Pn 23 43 21.8 -0.4
HLID Sn Sn 23 46 01.2 +0.5
L10A Juniper Basin 14.32 129 ⇑P Pn 23 43 22.5 -0.1
baz=14,SNR=56
G15A Dillon 14.34 112 ⇑P Pn 23 43 22.7 -0.2
baz=14,SNR=65
G15A ⇑S Sn 23 46 05.3 +3.4
baz=14
D17A Six Diamond Ra 14.35 102 ⇓P Pn 23 43 22.3 -0.7
baz=14,SNR=180
D17A ⇓S Sn 23 46 05.3 +3.2
baz=14
B18A Beardsley Farm 14.37 97 P Pn 23 43 21.6 -1.6
baz=14,SNR=39
M09A Marrel Ranch, 14.37 133 P Pn 23 43 23.8 +0.4
baz=14,SNR=27
HOPS Hopland 14.39 153⇑*e*Pn Pn 23 43 24.1 +0.5
HOPS *e*Sn Sn 23 46 06.8 +3.7
O06A Flanigan 14.42 142 ⇑P Pn 23 43 24.8 +0.8
baz=14,SNR=49
BEKR Beckwourth 14.48 144 ⇑P Pn 23 43 25.2 +0.4
baz=14
F16A Kennard Place, 14.49 108 ⇑P Pn 23 43 24.3 -0.6
baz=14,SNR=20
J13A Cove Ranch, Pi 14.53 120 P Pn 23 43 25.3 -0.1
baz=14,SNR=123
EGMT Eagleton 14.53 98 ⇑P Pn 23 43 24.7 -0.7
baz=14
EGMT Eagleton 14.53 98⇓*e*Pn Pn 23 43 25.7 +0.2
comp=Z,24nm,0.5s
EGMT Sn Sn 23 46 14.4 +7.9
BOZ Bozeman (W) 14.57 109 ⇑P Pn 23 43 25.0 -0.9
baz=14
BOZ Bozeman (W) 14.57 109⇑*e*P Pn 23 43 24.5 -1.4
BOZ pmax pmax
comp=Z,159nm,0.8s
BOZ Bozeman (W) 14.57 109⇑*e*Pn Pn 23 43 24.5 -1.4
comp=Z,159nm,0.8s
BOZ Sn Sn 23 46 21.1 +14
OHCM Honcut 14.57 148 *e*Pn Pn 23 43 26.5 +0.6
I14A Mackay 14.57 117 ⇓P Pn 23 43 25.1 -0.9
baz=14,SNR=91
H15A Lima 14.58 114 ⇓P Pn 23 43 26.2 +0.1
baz=14,SNR=170
E17A Martinsdale 14.59 105 ⇓P Pn 23 43 26.1 -0.2
baz=14,SNR=77
N08A GE Springer Mi 14.59 136 P Pn 23 43 26.7 +0.4
baz=15,SNR=26
L11A Cat Creek Ranc 14.60 127 P Pn 23 43 26.9 +0.4
baz=15,SNR=124
K12A Draper Farm, C 14.69 124 ⇓P Pn 23 43 26.8 -0.8
baz=15,SNR=25
G16A Moss Hill, Enn 14.70 110 P Pn 23 43 26.9 -0.9
baz=15,SNR=96
M10A I.L. Ranch, Tu 14.72 130 ⇓P Pn 23 43 28.2 +0.2
baz=15,SNR=54
MCK McKinley 14.79 328 *e*Pn Pn 23 43 30.0 +1.2
MCK *e*S Sn 23 46 29.5 +17
N09A Rock Creek Ran 14.80 134 P Pn 23 43 29.6 +0.5
baz=15,SNR=8.7
O07A Toulon 14.80 139 ⇓P Pn 23 43 29.2 +0.1
baz=15,SNR=83
P06A Stead Airport, 14.82 143 ⇑P Pn 23 43 29.8 +0.4
baz=15
D18A Linhart Farms, 14.87 101 ⇓P Pn 23 43 29.7 -0.3
baz=15,SNR=38
J14A Carey 14.93 119 P Pn 23 43 30.8 -0.1
baz=15,SNR=183
L12A House Creek Ra 14.98 125 ⇓P Pn 23 43 31.2 -0.4
baz=15,SNR=108
O08A Rochester Mine 14.99 137 ⇑P Pn 23 43 31.4 -0.3
baz=15,SNR=29
F17A Fitzpatrick Pl 15.00 106 ⇓P Pn 23 43 30.7 -1.0
baz=15,SNR=29
TRF Thorofare Moun 15.05 326⇑*e*Pn Pn 23 43 31.0 -1.4
comp=Z,19nm,0.7s
TRF *e*Sn Sn 23 46 10.8 -8.1
I15A Monteview 15.06 115 ⇑P Pn 23 43 32.2 -0.4
baz=15,SNR=14
K13A Stover Farm, H 15.10 122 ⇑P Pn 23 43 33.0 -0.2
baz=15,SNR=7.5
E18A Harlowton 15.10 103 ⇓P Pn 23 43 32.6 -0.5
baz=15,SNR=55
M11A Holland Ranch, 15.14 129 P Pn 23 43 34.0 +0.3
baz=15,SNR=24
QLMT Earthquake Lak 15.15 111 *e*Pn Pn 23 43 33.5 -0.3
WCN Washoe City 15.20 143 ⇓P Pn 23 43 35.2 +0.6
baz=15
MCCM Marconi Confer 15.24 153⇑*e*Pn Pn 23 43 34.5 -0.5
comp=Z,406nm,1.4s
MCCM *e*Sn Sn 23 46 28.7 +5.0
G17A Pierce Place, 15.27 108 ⇑P Pn 23 43 34.6 -0.7
baz=15,SNR=70
BMN Battle Mountai 15.28 134⇑*e*P Pn 23 43 35.0 -0.5
BMN 23 46 31.8
BMN pmax pmax
comp=Z,176nm,1.2s
BMN Battle Mountai 15.28 134⇑*e*Pn Pn 23 43 35.0 -0.5
comp=Z,176nm,1.2s
BMN Sn Sn 23 46 31.8 +7.1
COLA College 15.29 333⇑*e*P Pn 23 43 33.3 -2.2
COLA *e* 23 46 27.4
COLA pmax pmax
comp=Z,98nm,1.0s
COLA College 15.29 333⇑*e*Pn Pn 23 43 33.2 -2.3
comp=Z,98nm,1.0s
COLA *e*Sn Sn 23 46 27.4 +2.6
H16A Russell Place, 15.33 111 P Pn 23 43 36.5 +0.3
baz=15,SNR=111
P07A Fallon 15.33 140 ⇓P Pn 23 43 36.7 +0.5
baz=15
KTH Kantishna Hill 15.34 326⇑*e*Pn Pn 23 43 35.3 -0.8
comp=Z,453nm,2.2s
KTH *e*Sn Sn 23 46 25.0 -0.8
N10A Dunphy 15.36 132 ⇓P Pn 23 43 36.3 -0.4
baz=15
PPLA Purkeypile 15.40 322⇑*i*Pn Pn 23 43 35.2 -1.8
comp=Z,302nm,1.8s
PPLA Sn Sn 23 46 26.1 -1.3
J15A Blackfoot 15.47 117 ⇓P Pn 23 43 37.7 -0.4
baz=15,SNR=69
O09A Fish Creek Ran 15.50 135 P Pn 23 43 39.0 +0.5
baz=16,SNR=77
P08A Dixie Valley 15.52 138 ⇓P Pn 23 43 38.8 +0.1
baz=16,SNR=12
F18A Big Timber 15.56 105 P Pn 23 43 38.5 -0.6
baz=16,SNR=145
L13A Double Diamond 15.57 123 ⇑P Pn 23 43 39.2 -0.1
baz=16,SNR=29
M12A Wells 15.58 127 P Pn 23 43 39.6 +0.1
baz=16,SNR=105
N11A Elko Archery C 15.64 130 ⇓P Pn 23 43 40.7 +0.3
baz=16
YNR Norris Junctio 15.65 110 *e*Pn Pn 23 43 41.4 +1.1
K14A Jones Ranch, D 15.65 121 P Pn 23 43 40.5 +0.1
baz=16,SNR=47
I16A Newdale 15.70 114 P Pn 23 43 41.2 +0.2
baz=16,SNR=173
BPAW Bear Paw Mtn. 15.71 327⇑*e*Pn Pn 23 43 39.5 -1.5
comp=Z,72nm,1.0s
BPAW *e*Sn Sn 23 46 31.4 -3.5
O10A Cortez Mining, 15.71 133 P Pn 23 43 41.5 +0.3
baz=16,SNR=14
YFT Old Faithful 15.71 111 *e*P Pn 23 43 43.5 +2.3
Q07A Schurz 15.88 141 ⇓P Pn 23 43 43.5 +0.1
baz=16
SAC San Andreas 15.89 153 *e*P Pn 23 43 50.2 +6.6
H17A Grant Village 15.90 111 ⇑P Pn 23 43 44.7 +1.2
baz=16,SNR=115
LKWY Lake 15.90 110⇑*e*P Pn 23 43 43.9 +0.3
LKWY 23 46 40.9
LKWY pmax pmax
comp=Z,428nm,1.2s
LKWY Lake 15.90 110⇑*e*Pn Pn 23 43 43.9 +0.3
comp=Z,428nm,1.2s
LKWY Sn Sn 23 46 40.9 +1.2
K15A Arbon 15.90 119 P Pn 23 43 44.5 +0.9
baz=16,SNR=47
SVW2 Sparrevohn 15.92 314 *e*Pn Pn 23 43 41.9 -1.8
ELK Elko 15.94 129 Pn Pn 23 43 43.5 -0.6
comp=Z,0.2nm,0.3s,baz=313,slow=11,SNR=28
ELK Sn Sn 23 46 48.6 +7.9
comp=Z,0.0nm,0.3s,baz=217,slow=19,SNR=2.0
ELK Lg 23 48 20.1
comp=Z,0.0nm,0.3s,baz=209,slow=19,SNR=2.7
ELK LR LR 23 49 53.3
comp=Z,15μm,19.9s,baz=321,slow=37
ELK Elko 15.94 129⇑*e*P Pn 23 43 43.3 -0.8
ELK *e* 23 46 41.1
ELK pmax pmax
comp=Z,137nm,1.1s
ELK Elko 15.94 129⇑*e*Pn Pn 23 43 43.3 -0.8
comp=Z,137nm,1.1s
ELK Sn Sn 23 46 41.1 +0.4
N12A Clover Valley, 15.95 129 P Pn 23 43 44.2 -0.1
baz=16,SNR=27
G18A Lazy EL Ranch, 15.96 107 P Pn 23 43 44.0 -0.4
baz=16,SNR=40
L14A Malta 15.98 122 ⇑P Pn 23 43 45.2 +0.6
baz=16,SNR=12
IMW Indian Meadow 15.99 113⇑*i*Pn Pn 23 43 45.4 +0.6
comp=Z,464nm,1.0s
IMW Sn Sn 23 46 49.5 +7.5
M13A Montello 15.99 126 P Pn 23 43 44.8 0.0
baz=16,SNR=76
R06C Coleville 16.00 144 P Pn 23 43 46.1 +1.2
baz=16,SNR=105
J16A Bone 16.01 116 P Pn 23 43 45.4 +0.4
baz=16,SNR=94
WAKR Walker 16.02 144 *e*Pn Pn 23 43 45.8 +0.5
CHUM Lake Minchumin 16.03 325⇑*e*Pn Pn 23 43 43.9 -1.3
comp=Z,3μm,2.2s
CHUM Sn Sn 23 46 42.4 -0.2
DCID1 Drake Creek 16.04 114⇑*e*Pn Pn 23 43 45.8 +0.3
comp=Z,735nm,1.0s
DCID1 Sn Sn 23 46 45.5 +2.2
CMB Columbia Colle 16.11 147⇑*e*P Pn 23 43 45.3 -1.0
CMB *e* 23 46 43.3
CMB pmax pmax
comp=Z,246nm,1.1s
CMB Columbia Colle 16.11 147⇑*e*Pn Pn 23 43 45.3 -1.0
comp=Z,246nm,1.1s
CMB Sn Sn 23 46 43.3 -1.6
RRI2 Red Ridge 16.12 115⇑*e*Pn Pn 23 43 46.7 +0.2
comp=Z,54nm,0.8s
RRI2 *e*Sn Sn 23 46 44.9 -0.3
I17A Pilgram Creek 16.18 112 ⇓P Pn 23 43 47.8 +0.6
baz=16,SNR=203
MOOW Moose Ponds 16.19 113⇑*e*Pn Pn 23 43 47.6 +0.2
comp=Z,250nm,0.9s
MOOW *e*Sn Sn 23 46 50.4 +3.5
O11A Cowboy Ranch, 16.22 132 P Pn 23 43 47.5 -0.4
baz=16,SNR=12
CHGN Chignik 16.24 295 *e*Pn Pn 23 43 47.2 -0.7
TPAW Teton Pass 16.24 114⇑*e*Pn Pn 23 43 48.6 +0.6
comp=Z,813nm,1.3s
TPAW *e*Sn Sn 23 46 50.7 +2.7
RLMT Red Lodge 16.24 107 ⇑P Pn 23 43 47.9 -0.1
baz=16
RLMT Red Lodge 16.24 107⇑*i*Pn Pn 23 43 47.0 -1.0
comp=Z,466nm,1.1s
RLMT *e*Sn Sn 23 46 45.5 -2.6
INK Inuvik 16.25 357⇑*e*Pn Pn 23 43 46.5 -1.5
INK Sn Sn 23 46 51.6 +3.6
P10A Eureka 16.27 134 ⇑P Pn 23 43 48.6 +0.1
baz=16
Q08A Gabbs 16.29 139 ⇑P Pn 23 43 49.3 +0.6
baz=16
M14A Sheep Mountain 16.30 124 P Pn 23 43 48.9 +0.1
baz=16,SNR=73
K16A Soda Springs 16.31 117 ⇑P Pn 23 43 49.7 +0.7
baz=16,SNR=84
LOHW Long Hollow 16.36 113⇑*e*Pn Pn 23 43 49.9 +0.4
comp=Z,450nm,1.4s
LOHW *e*Sn Sn 23 46 57.1 +6.2
SNOW Snow King Moun 16.37 114⇑*e*Pn Pn 23 43 49.7 +0.1
comp=Z,668nm,1.4s
SNOW *e*S Sn 23 47 04.2 +13
REDW Red Top Meadow 16.38 114⇑*e*Pn Pn 23 43 50.1 +0.3
comp=Z,827nm,1.4s
REDW *e*S Sn 23 47 02.0 +11
HVU Hansel Valley 16.40 122 *e*P Pn 23 43 50.9 +0.8
HVU pmax pmax
comp=Z,750nm,1.7s
HVU Hansel Valley 16.40 122 *e*Pn Pn 23 43 50.9 +0.8
comp=Z,754nm,1.8s
L15A Malad City 16.45 121 P Pn 23 43 51.2 +0.5
baz=16,SNR=261
J17A Brown Place, J 16.46 114 ⇑P Pn 23 43 51.6 +0.8
baz=16,SNR=83
NVAR Mina Array Bea 16.52 141 Pn Pn 23 43 52.2 +0.7
comp=Z,0.7nm,0.3s,baz=317,slow=11,SNR=116
O12A Currie 16.54 129 ⇑P Pn 23 43 52.4 +0.6
baz=16,SNR=44
Q09A Carvers 16.62 138 ⇓P Pn 23 43 54.1 +1.2
baz=17,SNR=20
AHID Auburn Hatcher 16.63 116⇑*i*Pn Pn 23 43 53.1 +0.2
comp=Z,269nm,0.9s
AHID *e*Sn Sn 23 47 10.2 +13
P11A Circle Ranch, 16.64 133 ⇓P Pn 23 43 53.3 +0.1
baz=17
R08A Mina 16.66 141 ⇑P Pn 23 43 53.9 +0.5
baz=17
K17A Gardner Place, 16.74 116 ⇓P Pn 23 43 55.2 +0.9
baz=17,SNR=50
I18A Diamond G Ranc 16.75 112 P Pn 23 43 55.6 +1.1
baz=17,SNR=141
M15A Larsen Ranch, 16.80 122 P Pn 23 43 55.1 0.0
baz=17,SNR=104
N14A Grayback Hills 16.87 125 P Pn 23 43 55.6 -0.4
baz=17,SNR=144
SPUT South Promonto 16.91 122 *e*Pn Pn 23 43 56.8 +0.3
SAO San Andreas Ge 16.93 151 *e*P Pn 23 44 00.8 +4.0
SAO pmax pmax
comp=Z,293nm,1.3s
SAO San Andreas Ge 16.93 151 *e*Pn Pn 23 44 00.8 +3.9
comp=Z,293nm,1.3s
J18A Kendall Valley 16.94 113 P Pn 23 43 57.5 +0.6
baz=17,SNR=96
L16A Fish Haven 16.95 119 P Pn 23 43 57.7 +0.7
baz=17,SNR=62
Q10A Clear Creek Ra 16.96 136 P Pn 23 43 57.5 +0.4
baz=17,SNR=68
MLAC Mammoth Lakes 17.02 144 ⇑P Pn 23 43 58.1 +0.3
baz=17
O13A Hicks Ranch, I 17.02 128 ⇓P Pn 23 43 57.3 -0.6
baz=17,SNR=26
P12A McGill 17.10 131 P Pn 23 43 58.4 -0.5
baz=17,SNR=34
R09A Tonopah 17.17 138 P Pn 23 44 00.3 +0.6
baz=17,SNR=87
L17A Cokeville 17.20 118 ⇓P Pn 23 44 00.7 +0.6
baz=17,SNR=69
TPH Tonopah 17.25 139⇑*e*P Pn 23 44 00.8 0.0
TPH 23 47 18.8
TPH pmax pmax
comp=Z,1μm,2.1s
TPH Tonopah 17.25 139⇑*e*Pn Pn 23 44 00.8 0.0
comp=Z,1μm,2.1s
TPH Sn Sn 23 47 18.8 +6.2
Q11A Duckwater 17.27 134 P Pn 23 44 01.0 0.0
baz=17,SNR=30
K18A Toltan Ranch, 17.30 115 ⇑P Pn 23 44 01.7 +0.3
baz=17,SNR=51
M16A Huntsville 17.34 121 P Pn 23 44 01.9 +0.1
baz=17,SNR=41
MTUM Tungsten Hills 17.36 143 *e*Pn Pn 23 44 03.1 +1.0
SDPT Sand Point 17.38 292 *e*Pn Pn 23 44 02.7 +0.4
comp=Z,516nm,1.2s
SDPT Sn Sn 23 47 17.3 +1.7
R10A Warm Springs 17.45 137 P Pn 23 44 03.9 +0.6
baz=17,SNR=16
Q12A Willow Creek R 17.48 132 ⇓P Pn 23 44 03.1 -0.5
baz=18,SNR=34
BW06 Boulder Array 17.49 114 ⇓P Pn 23 44 04.2 +0.4
baz=17
BW06 Boulder Array 17.49 114⇑*e*Pn Pn 23 44 04.3 +0.6
comp=Z,314nm,1.1s
BW06 Sn Sn 23 47 18.7 +0.4
PDAR Pinedale Array 17.49 114 P Pn 23 44 04.2 +0.5
comp=Z,1.0nm,0.3s,baz=319,slow=11,SNR=95
PDAR S Sn 23 47 29.6 +11
baz=70,slow=23,SNR=2.0
PDAR Lg 23 49 11.0
comp=Z,0.1nm,0.3s,baz=311,slow=29,SNR=5.1
PDAR LR LR 23 50 18.3
comp=Z,7μm,20.0s,baz=314,slow=36
PDAR Pinedale Array 17.49 114 P Pn 23 44 04.2 +0.5
PDAR S Sn 23 47 29.6 +11
PDAR Lg 23 49 10.9
PDAR LR LR 23 50 18.3
P13A Bates Ranch, G 17.53 129 P Pn 23 44 03.5 -0.8
baz=18,SNR=56
DUG Dugway 17.55 126 ⇑P Pn 23 44 04.0 -0.5
baz=18
DUG Dugway 17.55 126⇑*e*P Pn 23 44 03.7 -0.8
DUG pmax pmax
comp=Z,276nm,1.2s
DUG Dugway 17.55 126⇑*e*Pn Pn 23 44 03.7 -0.7
comp=Z,276nm,1.2s
DUG *e*S Sn 23 47 29.0 +9.3
DUG *e*PcP PcP 23 48 45.7 +1.7
S09A Goldfield 17.55 140 ⇓P Pn 23 44 04.5 0.0
baz=18,SNR=13
NOQ North Oquirrh 17.56 123 *e*Pn Pn 23 44 04.9 +0.3
comp=Z,386nm,1.3s
S10A Tonopah Range, 17.64 138 P Pn 23 44 05.7 +0.1
baz=18,SNR=45
O15A The Old Anders 17.66 125 ⇑P Pn 23 44 04.9 -0.9
baz=18,SNR=26
COLD Coldfoot 17.71 336⇑*i*Pn Pn 23 44 05.9 -0.4
comp=Z,755nm,1.3s
COLD *e*S Sn 23 47 33.3 +10
COLD PcP PcP 23 48 38.6 -5.2
R11A Troy Canyon, C 17.71 135 P Pn 23 44 06.0 -0.5
baz=18,SNR=45
FFC Flin Flon 17.71 70 Pn Pn 23 44 04.8 -1.6
comp=Z,1μm,1.0s,SNR=28
FFC Flin Flon 17.71 70 *e*P Pn 23 44 03.8 -2.6
FFC pmax pmax
comp=Z,280nm,1.1s
FFC Flin Flon 17.71 70 *e*Pn Pn 23 44 03.8 -2.7
comp=Z,280nm,1.1s
FFC *e*Sn Sn 23 47 24.0 +0.4
M17A Scullys Gap (B 17.74 119 ⇑P Pn 23 44 06.5 -0.3
baz=18,SNR=119
N16A Rees Ranch, Co 17.74 121 ⇑P Pn 23 44 07.0 +0.1
baz=18
TIN Tinemaha 17.75 143 ⇑P Pn 23 44 08.2 +1.2
baz=18
DGMT Dagmar 17.77 91 ⇓P Pn 23 44 06.0 -1.2
baz=18
DGMT Dagmar 17.77 91⇑*e*Pn Pn 23 44 05.7 -1.5
comp=Z,3μm,2.3s
DGMT Sn Sn 23 47 20.7 -4.4
L18A Fontenelle, Gr 17.77 117 ⇑P Pn 23 44 07.4 +0.1
baz=18,SNR=28
K19A Absolon Red Bu 17.85 112 ⇓P Pn 23 44 07.7 -0.6
baz=18,SNR=96
P14A Drum Mountains 17.88 127 P Pn 23 44 07.8 -0.8
baz=18,SNR=52
Q13A Wheeler Ranch, 17.92 130 P Pn 23 44 09.7 +0.6
baz=18,SNR=46
JLU Jordanelle 17.94 122 *e*Pn Pn 23 44 09.4 +0.1
N17A Moffit Pass 18.02 120 ⇓P Pn 23 44 10.0 -0.3
baz=18,SNR=34
RCTC Rector, Farmer 18.05 146 ⇑P Pn 23 44 10.8 0.0
baz=18
M18A Lyman 18.10 118 P Pn 23 44 11.4 +0.2
baz=18,SNR=45
GRAC Grapevine Rang 18.12 141 ⇓P Pn 23 44 12.0 +0.5
baz=18
R12A Pony Springs, 18.16 133 P Pn 23 44 11.9 -0.2
baz=18,SNR=48
DAU Daniels Canyon 18.18 122 *e*P Pn 23 44 12.2 -0.1
O16A Springville 18.20 123 ⇓P Pn 23 44 12.3 -0.3
baz=18
S11A Rachel 18.23 136 ⇓P Pn 23 44 13.2 +0.3
baz=18,SNR=57
K20A Yellowstone Ra 18.25 112 ⇓P Pn 23 44 12.9 -0.2
baz=18,SNR=117
Q14A Sevier Lake (B 18.25 129 P Pn 23 44 12.7 -0.5
baz=18,SNR=70
MPU Maple Canyon 18.28 124 *e*Pn Pn 23 44 13.4 -0.1
comp=Z,652nm,2.2s
P15A Leamington 18.29 126 ⇑P Pn 23 44 13.4 -0.2
baz=18,SNR=14
CWC Cottonwood Cre 18.35 144 ⇓P Pn 23 44 14.7 +0.3
baz=18
VES Vestal, Richgr 18.53 147 ⇑P Pn 23 44 17.1 +0.4
baz=18
M19A Rock Springs 18.54 116 P Pn 23 44 16.4 -0.3
baz=18,SNR=25
P16A Fountain Green 18.57 125 P Pn 23 44 17.1 0.0
baz=18,SNR=10
R13A O'Grain Ranch, 18.57 132 P Pn 23 44 17.1 0.0
baz=18,SNR=75
O17A Robinson Place 18.61 122 ⇑P Pn 23 44 17.0 -0.5
baz=19,SNR=42
TPNV Topopah Spring 18.61 139 ⇓P Pn 23 44 17.3 -0.3
baz=19
TPNV Topopah Spring 18.61 139 *e*P Pn 23 44 18.0 +0.4
TPNV pmax pmax
comp=Z,270nm,1.1s
TPNV Topopah Spring 18.61 139⇑*i*Pn Pn 23 44 18.0 +0.4
comp=Z,273nm,1.1s
TPNV Sn Sn 23 47 51.5 +5.9
N18A Larsen Ranch, 18.62 118 P Pn 23 44 16.9 -0.7
baz=19,SNR=119
S12A Delamar Landin 18.65 135 P Pn 23 44 18.4 +0.4
baz=19,SNR=68
L20A Wamsutter 18.67 114 P Pn 23 44 17.4 -0.8
baz=19,SNR=40
Q15A Fillmore 18.68 127 P Pn 23 44 18.0 -0.3
baz=19,SNR=29
SMMC Simmler 18.72 149 ⇑P Pn 23 44 19.4 +0.5
baz=19
FURC Furnace Creek, 18.78 141 ⇓P Pn 23 44 20.4 +0.7
baz=19
T11A Corn Creek, Al 18.79 136 P Pn 23 44 19.7 0.0
baz=19,SNR=110
ISA Isabella 18.90 146 ⇑P Pn 23 44 21.5 +0.4
baz=19
ISA Isabella 18.90 146⇑*i*P Pn 23 44 21.5 +0.4
ISA pmax pmax
comp=Z,859nm,1.8s
ISA Isabella 18.90 146⇑*i*Pn Pn 23 44 21.5 +0.4
comp=Z,859nm,1.8s
ISA *e*S Sn 23 48 03.0 +10
MPMC Manual Prospec 18.90 143 ⇑P Pn 23 44 21.4 +0.2
baz=19
R14A James Farms, M 18.92 130 ⇑P Pn 23 44 20.4 -0.9
baz=19,SNR=7.7
O18A Roosevelt 18.95 120 ⇑P Pn 23 44 21.2 -0.4
baz=19,SNR=15
N19A John Jarvie Ra 18.95 118 P Pn 23 44 20.6 -1.1

baz=19,SNR=31
TMUT Trail Mountain 19.04 124 *e*Pn **Pn** 23 44 22.9 +0.2
U10A Ash Meadows, A 19.04 140 ⇓P **Pn** 23 44 22.5 -0.2
baz=19,SNR=14
M20A Sweetwater, Wa 19.09 115 ⇓P **Pn** 23 44 22.6 -0.8
baz=19,SNR=64
FALS False Pass 19.10 291 *e*Pn **Pn** 23 44 23.9 +0.6
comp=Z,260nm,1.1s
S13A Holt Ranch, En 19.11 133 ⇓P **Pn** 23 44 23.1 -0.5
baz=19,SNR=38
P17A Butcher Ranch, 19.14 123 ⇑P **Pn** 23 44 22.9 -1.1
baz=19,SNR=27
MSU Marysvale 19.16 128 *e*P **Pn** 23 44 23.8 -0.3
PKM Peak Mountain 19.16 150 ⇓P **Pn** 23 44 24.8 +0.6
baz=19
L21A Rawlins 19.24 112 ⇑P **Pn** 23 44 24.2 -1.0
baz=19,SNR=71
P18A Preston Nutter 19.28 122 ⇑P **Pn** 23 44 24.8 -0.9
baz=19,SNR=69
Q16A Castle Valley 19.34 125 ⇑P **Pn** 23 44 25.2 -1.1
baz=19,SNR=18
R15A Junction 19.34 128 ⇑P **Pn** 23 44 25.8 -0.6
baz=19,SNR=14
LRMC Laurel Mountai 19.35 144 ⇓P **Pn** 23 44 26.0 -0.5
baz=19
SHPR Sheep Range 19.44 137 *e*P **Pn** 23 44 26.1 -1.5
T12A Moapa 19.44 136 ⇓P **Pn** 23 44 26.4 -1.2
baz=19
N20A Spence Gulch, 19.49 116 P **Pn** 23 44 27.3 -0.9
baz=19,SNR=78
SHOC Shoshone 19.51 140 ⇑P **Pn** 23 44 27.5 -0.9
baz=20
RWWY Rawlins 19.51 113 *e*Pn **Pn** 23 44 27.8 -0.6
comp=Z,420nm,1.2s
RWWY *e*Sn **Sn** 23 48 19.2 +12
SRU San Rafael 19.52 124 ⇓P **Pn** 23 44 27.7 -0.9
baz=20
SRU San Rafael 19.52 124 *e*P **Pn** 23 44 28.4 -0.2
SRU pmax pmax
comp=Z,130nm,1.0s
SRU San Rafael 19.52 124 *e*Pn **Pn** 23 44 28.4 -0.2
comp=Z,134nm,1.0s
T13A Saint George 19.55 134 P **Pn** 23 44 28.1 -0.8
baz=20,SNR=26
SBC Santa Barbara 19.61 150 ⇓P **Pn** 23 44 29.2 -0.4
baz=20
R16A Teasdale 19.67 127 P **Pn** 23 44 29.8 -0.5
baz=20,SNR=118
S15A Panguitch 19.73 130 ⇓P **Pn** 23 44 29.6 -1.3
baz=20,SNR=18
Q18A Rafter H Ranch 19.73 123 P **Pn** 23 44 29.8 -1.2
baz=20,SNR=18
L22A Ellis Ranch, M 19.74 111 ⇑P **Pn** 23 44 29.8 -1.3
baz=20
U12A Valley of Fire 19.77 136 P **Pn** 23 44 30.6 -0.9
baz=20,SNR=24
OSI Osito Adit 19.77 147 ⇑P **Pn** 23 44 30.4 -1.1
baz=20
OSI Osito Adit 19.77 147 *e*P **Pn** 23 44 30.4 -1.1
comp=Z,1μm,2.0s
OSI *e*S **Sn** 23 48 22.0 +8.5
EDW2 Edwards Air Fo 19.78 145 ⇓P **Pn** 23 44 31.1 -0.6
baz=20
GSC Goldstone 19.83 142 ⇓P **Pn** 23 44 31.4 -0.9
baz=20
GSC Goldstone 19.83 142⇓ *e*P **Pn** 23 44 31.7 -0.5
GSC pmax pmax
comp=Z,907nm,1.8s
GSC Goldstone 19.83 142⇓ *e*P **Pn** 23 44 31.7 -0.6
comp=Z,907nm,1.8s
GSC *e*S **Sn** 23 48 22.1 +7.1
T14A Hurricane 19.89 132 P **Pn** 23 44 32.4 -0.5
baz=20,SNR=34
V11A Goodsprings 19.90 139 P **Pn** 23 44 31.8 -1.3
baz=20,SNR=27
RSSD Black Hills 19.91 103⇑ *i*P **Pn** 23 44 31.2 -1.9
RSSD *e*S **Sn** 23 48 16.2 -0.6
RSSD pmax pmax
comp=Z,1μm,2.6s
RSSD Black Hills 19.91 103⇑ *i*P **Pn** 23 44 31.2 -1.9
comp=Z,1μm,2.6s
RSSD *e*S **Sn** 23 48 16.2 -0.6
P19A Cripple Cowboy 19.95 120 ⇑P **Pn** 23 44 32.3 -1.3
baz=20,SNR=33
R17A Hanksville Air 19.95 125 ⇓P **Pn** 23 44 32.5 -1.1
baz=20,SNR=47
N21A Black Mountain 19.96 115 ⇑P **Pn** 23 44 32.1 -1.5
baz=20,SNR=7.8
O20A White River Ci 19.99 118 P **Pn** 23 44 32.6 -1.4
baz=20,SNR=51
U13A Pakoon Wash 20.03 135 P **P** 23 44 33.2 +0.3
baz=20,SNR=65
M22A Cedar Creek Ra 20.05 113 ⇑P **P** 23 44 33.1 +0.1
baz=20,SNR=78
BSC Santa Cruz Isl 20.05 150 ⇓P **P** 23 44 34.4 +1.3
baz=20
TUQ Turquoise Moun 20.05 140 ⇑P **P** 23 44 33.9 +0.8
baz=20
S16A Weppner Ranch, 20.06 128 P **P** 23 44 34.2 +1.0
baz=20,SNR=39
BLG Laguna Peak 20.12 149 ⇑P **P** 23 44 35.1 +1.3
baz=20
RRX Edison Barstow 20.14 143 ⇓P **P** 23 44 35.0 +1.0
baz=20
DECC Green Verdugo 20.23 147 ⇓P **P** 23 44 35.4 +0.3
baz=20
V12A Nelson 20.24 138 P **P** 23 44 35.5 +0.4
baz=20,SNR=85
T15A Red Dirt Ranch 20.25 131 ⇑P **P** 23 44 35.7 +0.5
baz=20,SNR=88
Q19A Hogan Spring (20.29 122 ⇑P **P** 23 44 35.6 -0.1
baz=20,SNR=21
MWC Mount Wilson 20.35 146⇑ *e*P **P** 23 44 36.8 +0.5
MWC pmax pmax
comp=Z,424nm,1.2s
MWC Mount Wilson 20.35 146⇑ *e*P **P** 23 44 36.8 +0.5
comp=Z,424nm,1.2s
MWC *e*S **S** 23 48 32.8 +8.5
PASC Pasadena Art C 20.36 147⇑ *e*P **P** 23 44 37.2 +0.8
comp=Z,3μm,1.7s
PASC *e*S **S** 23 48 28.5 +4.2
PASC *e*PcP PcP 23 48 45.8 -3.3
O21A Pagoda 20.36 116 P **P** 23 44 36.4 +0.1
baz=20,SNR=42
U14A Mt Trumbull 20.38 133 P **P** 23 44 37.4 +0.8
baz=20,SNR=64
R18A Canyonlands Na 20.39 124 P **P** 23 44 36.5 -0.3
baz=20,SNR=41
HEC Hector,Ludlow 20.43 142 ⇓P **P** 23 44 37.9 +0.7
baz=20
BFSC Mount Baldy St 20.48 146 ⇑P **P** 23 44 38.3 +0.6
baz=20
V13A Grand Canyon W 20.50 136 P **P** 23 44 37.8 -0.1
baz=20,SNR=48
S17A Black Ridge (B 20.52 127 P **P** 23 44 38.5 +0.4
baz=20,SNR=61
N22A Wattenberg Ran 20.53 114 ⇓P **P** 23 44 38.2 0.0
baz=20,SNR=33
AKUT Akutan 20.55 289 *e*P **P** 23 44 39.0 +0.6
W12A Cal Nev Ari 20.59 138 ⇑P **P** 23 44 39.5 +0.5
baz=21,SNR=33
T16A Glen Canyon Da 20.69 129 ⇓P **P** 23 44 40.2 +0.2
baz=21,SNR=31
LDFC Landfair 20.69 139⇑ *e*P **P** 23 44 39.9 -0.2
LDFC *e*S **S** 23 48 32.8 +1.8
BBRC Big Bear Sol-O 20.72 144 ⇑P **P** 23 44 41.3 +1.0
baz=21
GMRC Granite Mounta 20.73 141 ⇓P **P** 23 44 41.0 +0.5
baz=21
FMP Fort Macarthur 20.74 147 ⇓P **P** 23 44 40.4 -0.1
baz=21
PHWY Pilot Hill 20.77 111⇑ *e*P **P** 23 44 40.0 -0.8
comp=Z,509nm,1.2s
PHWY *e*S **S** 23 48 28.2 -4.2
U15A North Rim 20.77 132 P **P** 23 44 41.5 +0.7
baz=21,SNR=188
SNCC San Nicolas Is 20.78 151 ⇑P **P** 23 44 41.3 +0.3
baz=21
SNCC San Nicolas Is 20.78 151⇑ *e*P **P** 23 44 41.0 +0.1
comp=Z,696nm,1.4s
R19A Curley Farm, L 20.79 123 ⇓P **P** 23 44 40.5 -0.6
baz=21
Q20A Ridgley Place, 20.81 120 P **P** 23 44 40.6 -0.6
baz=21,SNR=49
S18A Hurst Farm, Bl 20.87 125 ⇑P **P** 23 44 42.2 +0.2
baz=21,SNR=37
PV04 Paradox Valley 20.90 122 *e*P **P** 23 44 42.5 +0.3

T17A Navajo Res., N 21.02 128 P **P** 23 44 43.5 0.0
baz=21,SNR=95
UNV Unalaska Valle 21.02 289 *e*P **P** 23 44 43.6 +0.2
comp=Z,193nm,1.3s,mb5.3
V14A Boquillas Ranc 21.06 134 P **P** 23 44 44.6 +0.6
baz=21,SNR=82
W13A Hualapai Mount 21.18 137 P **P** 23 44 45.8 +0.5
baz=21,SNR=57
MURC Murrieta 21.21 145 ⇓P **P** 23 44 45.8 +0.2
baz=21
S19A Harvey Farm, M 21.27 124 P **P** 23 44 45.5 -0.7
baz=21,SNR=36
BELC Belle Mtn. 21.29 142 ⇓P **P** 23 44 47.1 +0.6
baz=21
V15A Kaibab Nationa 21.33 132 P **P** 23 44 47.5 +0.7
baz=21,SNR=105
SCI San Clemente I 21.33 149 ⇑P **P** 23 44 47.2 +0.3
baz=21
T18A Mexican Hat 21.36 126 P **P** 23 44 46.7 -0.6
baz=21,SNR=70
U17A Shonto 21.40 128 P **P** 23 44 47.7 0.0
baz=21,SNR=31
W14A Seligman 21.43 135 P **P** 23 44 47.9 0.0
baz=21,SNR=25
PFO Pinyon Flat Ob 21.47 144 P **P** 23 44 48.5 +0.1
comp=Z,747nm,1.2s,mb5.9,SNR=21
PFO Pinyon Flat Ob 21.47 144⇑ P **P** 23 44 48.2 -0.3
baz=22
PFO Pinyon Flat Ob 21.47 144⇑ *e*P **P** 23 44 48.3 -0.2
comp=Z,195nm,1.2s,mb5.3
PFO *e*S **S** 23 48 51.0 +4.6
PFO LR LR
comp=Z,10μm,20.0s,MS5.2
IRM Iron Mountain 21.48 140 ⇑P **P** 23 44 49.1 +0.6
baz=22
U16A Tuba City 21.55 130 P **P** 23 44 49.0 -0.2
baz=22,SNR=40
R21A Cimarron 21.63 120 P **P** 23 44 50.5 +0.3
baz=22,SNR=82
X13A Yucca 21.64 137 P **P** 23 44 50.5 +0.3
baz=22,SNR=141
ISCO Idaho Springs 21.68 114⇑ *e*P **P** 23 44 50.4 -0.2
ISCO *e*S **S** 23 48 54.2 +3.8
ISCO pmax pmax
comp=Z,228nm,1.2s,mb5.5
ISCO MLR MLR
comp=Z,11μm,21.0s,MS5.2
ISCO Idaho Springs 21.68 114⇑ *e*P **P** 23 44 50.4 -0.2
comp=Z,228nm,1.2s,mb5.5
ISCO *e*S **S** 23 48 54.2 +3.9
ISCO LR LR
comp=Z,11μm,21.0s,MS5.2
BC3 Big Chuckw Mtn 21.80 142 ⇑P **P** 23 44 51.7 -0.3
baz=22
W15A Williams 21.82 133 ⇑P **P** 23 44 52.6 +0.5
baz=22,SNR=48
109C Camp Elliot, M 21.89 146 ⇑P **P** 23 44 53.2 +0.3
baz=22,SNR=9.4
U18A Rough Rock, Ch 21.93 127 P **P** 23 44 52.8 -0.5
baz=22,SNR=29
WUAZ Wupatki 21.94 131 ⇑P **P** 23 44 53.3 -0.2
baz=22
WUAZ Wupatki 21.94 131 *e*P **P** 23 44 53.5 0.0
comp=Z,467nm,1.1s,mb5.8
WUAZ *e*S **S** 23 49 00.3 +4.7
WUAZ LR LR
comp=Z,13μm,19.0s,MS5.4
FCC Fort Churchill 21.99 58 *e*P **P** 23 44 53.3 -0.5
FCC pmax pmax
comp=Z,7.0nm,1.0s,mb4.0
FCC Fort Churchill 21.99 58 *e*P **P** 23 44 53.3 -0.5
comp=Z,7.3nm,1.0s,mb4.1
FCC *e*S **S** 23 48 55.3 -0.9
MVCO Mesa Verde 22.00 124 ⇓P **P** 23 44 53.5 -0.6
baz=22
MVCO Mesa Verde 22.00 124⇑ *i*P **P** 23 44 53.3 -0.8
comp=Z,498nm,1.3s,mb5.8
MVCO S **S** 23 49 05.0 +8.2
MVCO LR LR
comp=Z,8μm,22.0s,MS5.1
T19A Beclabito 22.03 125 ⇓P **P** 23 44 53.6 -0.8
baz=22
Y12C Blythe 22.08 140 ⇓P **P** 23 44 55.3 +0.3
baz=22,SNR=28
MONP Monument Peak 22.13 144 ⇑P **P** 23 44 56.1 +0.6
baz=22
X14A Yava 22.14 136 P **P** 23 44 55.8 +0.2
baz=22,SNR=85
W16A Flagstaff 22.22 132 P **P** 23 44 56.8 +0.4
baz=22,SNR=35
ULM Lac du Bonnet 22.27 81 P **P** 23 44 55.5 -1.3
comp=Z,83nm,1.0s,mb5.1,baz=290,slow=9.4,SNR=17
ULM S **S** 23 49 03.4 +1.7
comp=Z,16nm,0.9s,baz=260,slow=17,SNR=1.6
ULM Lg 23 51 31.4
comp=Z,79nm,1.1s,baz=12,slow=14,SNR=4.5
ULM LR LR 23 54 11.2
comp=Z,5μm,21.2s,MS4.9,baz=108,slow=38
ULM Lac du Bonnet 22.27 81 P **P** 23 44 55.5 -1.3
ULM S **S** 23 49 03.4 +1.7
ULM Lg 23 51 31.4
ULM LR LR 23 54 11.2
Y13A Salome 22.31 138 ⇓P **P** 23 44 57.9 +0.5
baz=22,SNR=51
SWSC Sam W. Stewart 22.31 143 ⇑P **P** 23 44 57.1 -0.4
baz=22
X15A Humboldt 22.41 134 P **P** 23 44 58.6 +0.1
baz=22,SNR=110
DVTC Desert V Tower 22.45 144 ⇓P **P** 23 44 59.0 0.0
baz=22
V18A Ganado 22.46 129 ⇓P **P** 23 44 58.7 -0.4
baz=22,SNR=12
Y14A Wickenburg 22.55 137 P **P** 23 44 60.0 0.0
baz=22,SNR=155
GLA Glamis 22.58 141 ⇓P **P** 23 45 00.1 -0.1
baz=23
GLA Glamis 22.58 141⇑ *e*P **P** 23 45 00.3 0.0
GLA 23 48 54.0
GLA pmax pmax
comp=Z,369nm,1.2s,mb5.7
GLA Glamis 22.58 141⇑ *e*P **P** 23 45 00.2 0.0
comp=Z,369nm,1.2s,mb5.7
GLA PcP PcP 23 48 54.0 +0.6
GLA *e*S **S** 23 49 21.5 +14
W17A Winslow 22.61 131 P **P** 23 45 01.2 +0.7
baz=23,SNR=28
TNA Tin City 22.72 320⇑ *e*P **P** 23 45 01.3 -0.3
comp=Z,203nm,1.0s,mb5.5
TNA PcP PcP 23 48 53.6 +0.6
TNA *e*S **S** 23 49 16.7 +6.6
Y15A Casa Rosa Ranc 22.82 135 P **P** 23 45 03.0 +0.1
baz=23,SNR=116
X16A Lo Mia Camp, P 22.82 133 P **P** 23 45 03.0 +0.1
baz=23,SNR=49
V19A Window Rock 22.89 127 ⇓P **P** 23 45 03.6 0.0
baz=23,SNR=8.4
AGMN Agassiz Refuge 22.97 85 *e*P **P** 23 45 03.5 -0.8
comp=Z,293nm,1.4s,mb5.5
AGMN *e*S **S** 23 49 15.0 +0.6
AGMN LR LR
comp=Z,1μm,21.0s,MS4.3
OGNE Ogallala 22.99 107⇑ *e*P **P** 23 45 04.1 -0.4
comp=Z,450nm,1.1s,mb5.8
OGNE *e*S **S** 23 49 17.7 +2.9
OGNE LR LR
comp=Z,14μm,22.0s,MS5.4
W18A Petrified Fore 23.04 129 P **P** 23 45 05.5 +0.3
baz=23,SNR=39
Z14A Wintersburg 23.07 137 ⇑P **P** 23 45 05.6 +0.2
baz=23
112A Yuma 23.13 141 ⇓P **P** 23 45 06.1 0.0
baz=23,SNR=7.6
SDCO Great Sand Dun 23.19 118⇑ *e*P **P** 23 45 06.4 -0.3
comp=Z,194nm,1.4s,mb5.3
SDCO *e*PcP PcP 23 48 57.1 +2.5
SDCO *e*S **S** 23 49 22.9 +4.8
SDCO LR LR
comp=Z,14μm,19.0s,MS5.4
W19A Sanders 23.21 128 ⇓P **P** 23 45 06.6 -0.4
baz=23,SNR=52
113A Mohawk Valley, 23.25 139 ⇑P **P** 23 45 07.3 0.0
baz=23,SNR=11
Y16A Circle Bar Ran 23.26 134 P **P** 23 45 07.5 +0.1
baz=23,SNR=50
X18A Snowflake 23.42 130 P **P** 23 45 09.1 -0.1
baz=23,SNR=90
Z15A Gila River Ind 23.46 136 ⇓P **P** 23 45 09.1 -0.5
baz=23
Y17A Roosevelt 23.70 133 P **P** 23 45 11.6 -0.3
baz=24,SNR=19
Z16A Peralta Trail, 23.74 134 P **P** 23 45 12.4 +0.2
baz=24,SNR=23
X19A St. Johns 23.81 129 P **P** 23 45 13.3 +0.4
baz=24,SNR=35
GAMB Gambell 23.85 315⇑ *e*P **P** 23 45 13.0 0.0
comp=Z,139nm,1.1s,mb5.3
115A Sonoran Desert 23.94 137 P **P** 23 45 14.5 +0.5
baz=24,SNR=16
Y18A Canyon Day Jun 24.00 131 P **P** 23 45 15.3 +0.7
baz=24,SNR=114
Y19A Nutrioso 24.21 130 P **P** 23 45 17.1 +0.5
baz=24,SNR=98
116A Eloy 24.28 136 ⇓P **P** 23 45 17.5 +0.3
baz=24,SNR=24
214A Organ Pipe Nat 24.34 139 ⇑P **P** 23 45 18.0 +0.2
baz=24,SNR=23
Z18A Geronimo 24.57 132 ⇑P **P** 23 45 20.2 +0.4
baz=25,SNR=13
ECSD EROS,Sioux Fal 24.63 96 *e*P **P** 23 45 19.2 -1.1
comp=Z,660nm,1.8s,mb5.9
ECSD *e*S **S** 23 49 41.2 -0.2
ECSD LR LR
comp=Z,9μm,19.0s,MS5.3
117A Oracle 24.69 134 ⇓P **P** 23 45 21.5 +0.5
baz=25,SNR=35
Z19A T-Link Ranch, 24.76 131 ⇑P **P** 23 45 21.6 +0.1
baz=25,SNR=17
ANMO Albuquerque 24.80 124 P **P** 23 45 22.5 +0.6
comp=Z,60nm,0.9s,mb5.1,baz=322,slow=10,SNR=82
ANMO LR LR 23 54 45.5
comp=Z,6μm,19.1s,MS5.1,baz=137,slow=36
ANMO Albuquerque 24.80 124⇑ *e*P **P** 23 45 21.8 -0.1
ANMO *e* 23 48 53.3
ANMO pmax pmax
comp=Z,106nm,1.1s
ANMO MLR MLR
comp=Z,7μm,19.0s
ANMO Albuquerque 24.80 124⇑ *e*P **P** 23 45 21.8 -0.1
comp=Z,106nm,1.1s,mb5.3
ANMO *e*PcP PcP 23 48 53.3 -4.7
ANMO *e*S **S** 23 49 53.8 +10
ANMO LR LR
comp=Z,7μm,19.0s,MS5.2
216A Three Points, 24.87 136 P **P** 23 45 22.9 +0.4
baz=25,SNR=32
TUC Tucson 24.90 135⇑ *e*P **P** 23 45 22.9 +0.1
TUC pmax pmax
comp=Z,82nm,1.2s,mb5.1
TUC MLR MLR
comp=Z,8μm,20.0s,MS5.2
TUC Tucson 24.90 135⇑ *e*P **P** 23 45 22.9 +0.1
comp=Z,82nm,1.2s,mb5.1
TUC *e*S **S** 23 49 54.8 +9.0
TUC LR LR
comp=Z,8μm,20.0s,MS5.2
118A Homack Ranch, 24.98 133 ⇓P **P** 23 45 23.9 +0.4
baz=25,SNR=80
LENM Lemitar 25.15 126 *e*P **P** 23 45 25.5 +0.4
119A Ashpeak Ranch, 25.18 132 ⇑P **P** 23 45 26.2 +0.9
baz=25,SNR=46
LPM Los Pinos Moun 25.21 125 *e*P **P** 23 45 25.9 +0.3
Y22D IRIS PASSCAL I 25.25 126 ⇓P **P** 23 45 26.7 +0.7
baz=25
217A Green Valley 25.34 135 ⇑P **P** 23 45 28.4 +1.5
baz=25,SNR=52
218A Dragoon 25.51 134 ⇑P **P** 23 45 29.5 +1.1
baz=26,SNR=22
CBKS Cedar Bluff 25.71 109⇑ *e*P **P** 23 45 29.3 -0.8
CBKS pmax pmax
comp=Z,148nm,1.1s,mb5.4
CBKS MLR MLR
comp=Z,12μm,20.0s,MS5.4
CBKS Cedar Bluff 25.71 109⇑ *e*P **P** 23 45 29.3 -0.9
comp=Z,148nm,1.1s,mb5.4
CBKS *e*S **S** 23 50 07.6 +8.9
CBKS LR LR
comp=Z,12μm,20.0s,MS5.4
EYMN Ely 25.79 83 *e*P **P** 23 45 29.7 -1.1
comp=Z,164nm,1.0s,mb5.5
EYMN *e*S **S** 23 50 08.2 +8.4
EYMN LR LR
comp=Z,2μm,19.0s,MS4.6
219A White Tail Can 25.84 132 ⇓P **P** 23 45 32.9 +1.5
baz=26,SNR=59
318A Bisbee 25.99 134 ⇓P **P** 23 45 34.1 +1.4
baz=26,SNR=71
319A Douglas 26.36 133 ⇓P **P** 23 45 37.6 +1.5
baz=26,SNR=57
RES Resolute Bay 27.04 20 P **P** 23 45 41.7 -0.1
comp=Z,31nm,0.8s,mb4.9,baz=236,slow=9.6,SNR=15
RES S **S** 23 50 23.9 +4.8
comp=Z,10.0nm,1.1s,baz=294,slow=20,SNR=1.8
RES Lg 23 54 02.0
comp=Z,50nm,1.2s,baz=335,slow=19,SNR=4.1
RES LR LR 23 56 27.2
comp=Z,9μm,20.5s,MS5.3,baz=231,slow=37
RES Resolute Bay 27.04 20 *e*P **P** 23 45 42.5 +0.7
RES pmax pmax
comp=Z,62nm,1.1s,mb5.0
RES Resolute Bay 27.04 20 *e*P **P** 23 45 42.5 +0.7
comp=Z,62nm,1.1s,mb5.0
RES *e*S **S** 23 50 26.8 +7.7
KSU1 Kansas State U 27.37 105⇑ *e*P **P** 23 45 44.0 -1.1
comp=Z,84nm,0.9s,mb5.3
KSU1 *e*S **S** 23 50 42.1 +17
KSU1 LR LR
comp=Z,1μm,21.0s,MS4.4
AMTX Amarillo 27.38 117⇑ *e*P **P** 23 45 44.5 -0.7
comp=Z,201nm,1.0s,mb5.6
AMTX *e*PcP PcP 23 49 11.7 +7.6
AMTX *e*S **S** 23 50 35.5 +10
AMTX LR LR
comp=Z,10μm,22.0s,MS5.3
ADK Adak 27.48 288 *e*P **P** 23 45 46.5 +0.5
ADK pmax pmax
comp=Z,138nm,1.2s,mb5.4
ADK Adak 27.48 288 *e*P **P** 23 45 46.5 +0.5
comp=Z,138nm,1.2s,mb5.4
SCIA State Center 27.73 96 *e*P **P** 23 45 52.5 +4.2
comp=Z,286nm,1.3s,mb5.7
SCIA *e*PcP PcP 23 49 04.6 -0.1
SCIA *e*S **S** 23 50 37.0 +6.6
SCIA LR LR
comp=Z,8μm,20.0s,MS5.3
GDL2 Guadalupe Moun 28.04 125 *e*P **P** 23 45 51.2 +0.1
COWI Conover 28.05 85 *e*P **P** 23 45 51.9 +0.7
COWI *e*S **S** 23 50 49.9 +14
COWI LR LR
comp=Z,2μm,20.0s,MS4.6
JFWS Jewell Farm 28.99 92 *e*P **P** 23 45 59.9 +0.4
JFWS S **S** 23 51 00.4 +10
JFWS LR LR
comp=Z,1μm,19.0s,MS4.5
WMOK Wichita Mounta 29.10 114⇑ *e*P **P** 23 46 00.1 -0.5
comp=Z,95nm,1.0s,mb5.5
WMOK PP PP 23 47 03.8 -2.4
WMOK *e*S **S** 23 50 38.9 -13
WMOK LR LR
comp=Z,6μm,19.0s,MS5.2
TXAR Lajitas Array 30.71 127 P **P** 23 46 14.7 -0.1
comp=Z,13nm,0.8s,mb4.8,baz=328,slow=7.4,SNR=42
TXAR S **S** 23 51 27.7 +10
comp=Z,1.6nm,1.0s,baz=19,slow=12,SNR=2.8
TXAR LR LR 23 58 37.7
comp=Z,4μm,19.6s,MS5.0,baz=5.0,slow=36
HDIL Hopedale 30.92 95⇑ *e*P **P** 23 46 15.1 -1.5
comp=Z,114nm,1.0s,mb5.7
HDIL PP PP 23 47 22.9 -3.3
HDIL *e*PcP PcP 23 49 13.9 +1.0
HDIL *e*S **S** 23 51 19.6 -0.9
HDIL *e*ScP ScP 23 52 57.6 +2.2
HDIL LR LR
comp=Z,11μm,20.0s,MS5.5
CCM Cathedral Cave 31.27 101 *e*P **P** 23 46 17.6 -2.1
CCM *e* 23 47 31.8
CCM *e*S **S** 23 51 29.1 +3.0
CCM pmax pmax
comp=Z,73nm,1.2s,mb5.4
CCM MLR MLR
comp=Z,9μm,19.0s,MS5.5
CCM Cathedral Cave 31.27 101 *e*P **P** 23 46 17.6 -2.1
comp=Z,73nm,1.2s,mb5.4
CCM *e*PP PP 23 47 31.8 +1.6

CCM eS **S** **23 51 29.1 +3.0**
CCM LR LR
comp=Z,9µm,19.0s,MS5.5
GLMI Grayling 31.45 85 PFAKE 23 46 30.0 +8.7
GLMI LR LR
comp=Z,2µm,19.0s,MS4.8
SLM Saint Louis 31.51 99 eP **P** **23 46 20.5 -1.4**
JCT Junction City 31.77 121 eP **P** **23 46 23.4 -0.8**
JCT ePP PP 23 47 33.6 -2.3
JCT eS **S** **23 51 37.6 +3.6**
JCT LR LR
comp=Z,9µm,20.0s,MS5.4
FVM French Village 31.81 100 eP **P** **23 46 22.4 -2.1**
FVM e 23 47 30.8
FVM e 23 49 10.7
FVM eS **S** **23 51 37.8 +3.2**
FVM pmax pmax
comp=Z,40nm,1.0s,mb5.2
FVM French Village 31.81 100 eP **P** **23 46 22.4 -2.1**
comp=Z,40nm,1.0s,mb5.2
FVM ePP PP 23 47 30.8 -5.4
FVM ePcP PcP 23 49 10.7 -4.5
FVM eS **S** **23 51 37.8 +3.2**
MIAR Mount Ida 32.24 108 eP **P** **23 46 27.4 -0.8**
comp=Z,69nm,1.0s,mb5.4
MIAR ePP PP 23 47 40.5 -0.5
MIAR ePcP PcP 23 49 17.2 +0.7
MIAR eS **S** **23 51 36.9 -4.4**
MIAR LR LR
comp=Z,7µm,20.0s,MS5.4
LPIG La Paz 32.33 142 LR LR 23 58 26.0
comp=Z,3µm,18.2s,MS5.0,baz=329,slow=34
SIUC Southern Illin 32.72 99 eP **P** **23 46 34.0 +1.6**
comp=Z,43nm,0.9s,mb5.4
SIUC PcP PcP 23 49 13.8 -3.9
OLIL Olney 32.76 97 eP **P** **23 46 31.8 -1.0**
comp=Z,99nm,1.1s,mb5.7
OLIL PP PP 23 47 45.3 -1.3
OLIL ePcP PcP 23 49 17.4 -0.4
UALR University of 32.80 106 eP **P** **23 46 36.6 +3.4**
UALR ePP PP 23 47 44.0 -3.2
FX1 Attu Island--F 32.99 294 P **P** **23 46 34.4 -0.2**
comp=Z,27nm,0.7s,mb5.3,baz=80,slow=6.1,SNR=12
FX1 Attu Island--F 32.99 294 P **P** **23 46 34.4 -0.2**
BILL Bilibino 33.11 322*c i*P **P** **23 46 35.3 -0.2**
BILL e 23 49 17.8
BILL eS **S** **23 52 02.5 +8.3**
BILL *i* SS SS 23 53 53.3 -23
BILL pmax pmax
comp=Z,27nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,3µm,16.0s,MS5.1
BILL Bilibino 33.11 322⇑ eP **P** **23 46 35.0 -0.6**
comp=Z,26nm,1.1s,mb5.1
BILL ePP PP 23 47 42.6 -7.5
BILL eS **S** **23 52 00.4 +6.2**
BILL LR LR
comp=Z,5µm,21.0s,MS5.2
AAM Ann Arbor 33.39 88 eP **P** **23 46 41.2 +2.9**
AAM pmax pmax
comp=Z,35nm,0.9s,mb5.3
AAM MLR MLR
comp=Z,5µm,20.0s,MS5.2
AAM Ann Arbor 33.39 88 eP **P** **23 46 41.2 +2.9**
comp=Z,35nm,0.9s,mb5.3
AAM eS **S** **23 52 09.9 +11**
AAM LR LR
comp=Z,5µm,20.0s,MS5.2
BLO Bloomington 33.45 95 eP **P** **23 46 37.8 -1.1**
BLO pmax pmax
comp=Z,100nm,0.9s,mb5.8
BLO Bloomington 33.45 95 eP **P** **23 46 37.8 -1.1**
comp=Z,101nm,0.9s,mb5.8
BLO ePP PP 23 47 54.7 +0.3
USIN University of 33.50 97 eP **P** **23 46 38.0 -1.3**
comp=Z,61nm,1.0s,mb5.5
NATX Nacogdoches 33.62 113 eP **P** **23 46 40.4 0.0**
comp=Z,67nm,1.1s,mb5.5
NATX ePP PP 23 48 00.3 +3.9
NATX eS **S** **23 52 05.4 +2.5**
NATX LR LR
comp=Z,5µm,20.0s,MS5.2
UTMT University of 33.82 101 eP **P** **23 46 42.6 +0.5**
FRB Frobisher Bay 33.90 45 P **P** **23 46 43.3 +0.8**
comp=Z,35nm,1.1s,mb5.2,baz=274,slow=7.5,SNR=10
WCI Wyandotte Cave 34.18 96 eP **P** **23 46 43.8 -1.4**
WCI ePP PP 23 47 56.7 -5.7
WCI eS **S** **23 52 25.1 +14**
WCI LR LR
comp=Z,5µm,19.0s,MS5.3
HKT Hockley 34.33 116⇑ eP **P** **23 46 46.4 -0.2**
HKT e 23 48 03.1
HKT e 23 49 20.5
HKT eS **S** **23 52 07.0 -6.9**
HKT pmax pmax
comp=Z,176nm,1.8s,mb5.7
HKT MLR MLR
comp=Z,10µm,20.0s,MS5.5
HKT Hockley 34.33 116⇑ eP **P** **23 46 46.4 -0.2**
comp=Z,176nm,1.8s,mb5.7
HKT ePP PP 23 48 03.1 -1.2
HKT ePcP PcP 23 49 20.5 -1.9
HKT eS **S** **23 52 07.0 -6.9**
HKT LR LR
comp=Z,10µm,20.0s,MS5.5
WVT Waverly 34.59 100 eP pP 23 46 59.6 +7.8
WVT eS **S** **23 52 35.2 +17**
OXF Oxford 34.73 104⇑ eP **P** **23 46 48.2 -1.8**
OXF e 23 48 09.1
OXF eS **S** **23 52 12.0 -7.9**
OXF pmax pmax
comp=Z,183nm,1.0s,mb6.0
OXF MLR MLR
comp=Z,7µm,20.0s,MS5.4
OXF Oxford 34.73 104⇑ eP **P** **23 46 48.2 -1.7**
comp=Z,183nm,1.0s,mb6.0
OXF ePP PP 23 48 09.1 +0.5
OXF eS **S** **23 52 12.0 -7.9**
OXF eScP ScP 23 53 04.6 -4.0
OXF LR LR
comp=Z,7µm,20.0s,MS5.4
ACSO Alum Creek Sta 34.99 90 eP **P** **23 46 54.1 +1.9**
comp=Z,60nm,1.1s,mb5.4
ACSO ePP PP 23 48 10.7 -0.7
ACSO eS S 23 52 45.3 +21
ACSO LR LR
comp=Z,434nm,22.0s,MS4.2
KVTX Kingsville 35.11 121 PFAKE 23 47 10.0 +17
KVTX LR LR
comp=Z,3µm,22.0s,MS5.0
VBMS Vicksburg 35.68 108 P **P** **23 46 58.0 -0.3**
comp=Z,58nm,0.7s,mb5.6
VBMS PP PP 23 48 18.2 -0.9
VBMS eS **S** **23 52 45.9 +11**
VBMS LR LR
comp=Z,4µm,21.0s,MS5.1
ERPA Erie 35.75 85 PFAKE 23 47 10.0 +11
ERPA LR LR
comp=Z,745nm,20.0s,MS4.5
SWET Sewanee 36.35 99 eP **P** **23 47 07.5 +3.6**
ZAIG Zacatecas 36.78 132 eP **P** **23 47 05.5 -2.2**
KIP Kipapa 36.89 224 PFAKE 23 47 20.0 +11
KIP LR LR
comp=Z,4µm,19.0s,MS5.2
TZTN Tazewell 36.93 96 eP **P** **23 47 07.8 -1.0**
TZTN ePP PP 23 48 32.5 -0.3
TZTN PcP PcP 23 49 30.0 0.0
TZTN eS **S** **23 52 55.8 +2.2**
CPCT Cooper Cave 37.05 98 eP **P** **23 47 08.0 -1.9**
LRAL Lakeview Retre 37.20 103⇑ eP **P** **23 47 08.6 -2.6**
comp=Z,24nm,0.9s,mb5.0
LRAL ePP PP 23 48 35.8 0.0
LRAL eS **S** **23 52 58.3 +0.5**
LRAL LR LR
comp=Z,8µm,22.0s,MS5.5
MCWV Mont Chateau 37.27 89 eP **P** **23 47 11.3 -0.4**
comp=Z,46nm,1.0s,mb5.3
MCWV PP PP 23 48 39.0 +2.6
MCWV LR LR
comp=Z,14µm,19.0s,MS5.8
SCHQ Schefferville 37.35 60 P **P** **23 47 12.7 +0.5**
comp=Z,34nm,1.2s,mb5.0,baz=314,slow=9.0,SNR=6.5
SCHQ LR LR 00 01 42.8
comp=Z,7µm,19.5s,MS5.4,baz=296,slow=35

TKL Tuckaleechee C 37.37 97 eP **P** **23 47 11.1 -1.5**
TKL e 23 48 38.5
SSPA Standing Stone 37.89 86 eP **P** **23 47 18.5 +1.5**
comp=Z,30nm,1.3s,mb4.9
SSPA ePP PP 23 48 44.6 +1.3
SSPA PcP PcP 23 49 34.1 +1.3
SSPA LR LR
comp=Z,5µm,20.0s,MS5.3
BINY Binghamton 38.15 82 PFAKE 23 47 30.0 +11
BINY LR LR
comp=Z,4µm,19.0s,MS5.3
NCB Newcomb 38.24 79 PFAKE 23 47 30.0 +10
NCB LR LR
comp=Z,9µm,19.0s,MS5.6
BLA Blacksburg 38.43 92 eP **P** **23 47 21.2 -0.3**
BLA e 23 48 49.3
BLA 23 49 34.9
BLA eS **S** **23 53 11.7 -4.6**
BLA pmax pmax
comp=Z,165nm,1.1s,mb5.7
BLA MLR MLR
comp=Z,6µm,19.0s,MS5.5
BLA Blacksburg 38.43 92 eP **P** **23 47 21.2 -0.3**
comp=Z,166nm,1.1s,mb5.7
BLA ePP PP 23 48 49.3 +0.1
BLA PcP PcP 23 49 34.9 +0.3
BLA eS **S** **23 53 11.7 -4.6**
BLA LR LR
comp=Z,6µm,19.0s,MS5.5
BRAL Brewton 38.59 106 PFAKE 23 47 30.0 +7.0
BRAL LR LR
comp=Z,7µm,20.0s,MS5.5
GOGA Godfrey 39.07 99 eP **P** **23 47 25.4 -1.5**
GOGA e 23 48 56.1
GOGA e 23 49 35.0
GOGA pmax pmax
comp=Z,50nm,1.0s,mb5.2
GOGA MLR MLR
comp=Z,9µm,19.0s,MS5.6
GOGA Godfrey 39.07 99 eP **P** **23 47 25.4 -1.6**
comp=Z,50nm,1.0s,mb5.2
GOGA ePP PP 23 48 56.1 -0.2
GOGA ePcP PcP 23 49 35.0 -1.7
GOGA LR LR
comp=Z,9µm,19.0s,MS5.6
LBNH Lisbon 39.48 77 PFAKE 23 47 40.0 +10
LBNH LR LR
comp=Z,6µm,19.0s,MS5.5
CBN Corbin 39.68 89 PFAKE 23 47 40.0 +8.0
CBN LR LR
comp=Z,6µm,19.0s,MS5.5
SEY Seymchan 39.84 316⇑ eP **P** **23 47 32.7 -0.3**
SEY Seymchan 39.84 316⇑ eP **P** **23 47 32.8 -0.2**
LHS Liberty Hill 39.98 96 eP **P** **23 47 37.2 +2.7**
SFJD Kangerlussuaq 40.31 37 P **P** **23 47 36.9 +0.1**
comp=Z,41nm,1.1s,mb5.0,baz=270,slow=14,SNR=4.5
SFJD Kangerlussuaq 40.31 37 eP **P** **23 47 36.7 -0.1**
SFJD e 23 49 39.1
SFJD pmax pmax
comp=Z,59nm,1.3s,mb5.2
SFJD Kangerlussuaq 40.31 37 *i* P **P** **23 47 37.0 +0.2**
comp=Z,22nm,1.1s,mb4.8
SFJD *i* S **S** **23 53 48.8 +4.8**
SFJD Kangerlussuaq 40.31 37 eP **P** **23 47 36.7 -0.1**
comp=Z,59nm,1.3s,mb5.2
SFJD ePcP PcP 23 49 39.1 -0.9
PKME Peaks-Kenny Pk 40.49 74 PFAKE 23 47 50.0 +11
PKME LR LR
comp=Z,1µm,19.0s,MS4.7
PET Petropavlovsk 40.91 300*c* eP **P** **23 47 42.5 +0.6**
PET e 23 49 18.7
PET eS **S** **23 53 50.2 -2.9**
PET ePS 23 53 58.6
PET pmax pmax
comp=Z,800nm,4.0s
PET pmax pmax
comp=Z,120nm,1.2s,mb5.4
PET pmax pmax
comp=Z,600nm,7.0s
PET pmax pmax
comp=Z,600nm,16.6s
PET pmax pmax
comp=Z,1µm,15.2s
PET Petropavlovsk 40.91 300⇑ eP **P** **23 47 43.4 +1.5**
CNNC Cliffs of the 41.26 92 PFAKE 23 48 00.0 +15
CNNC LR LR
comp=Z,12µm,21.0s,MS5.7
NHSC New Hope 41.28 97 eP **P** **23 47 44.5 -0.8**
comp=Z,186nm,1.1s,mb5.6
NHSC ePP PP 23 49 20.1 -0.3
NHSC ePcP PcP 23 49 40.8 -3.0
NHSC LR LR
comp=Z,7µm,21.0s,MS5.5
PEA0B Petropavlovsk- 41.37 301 eP **P** **23 47 45.1 -0.6**
PEA0B ePP PP 23 49 22.3 +1.2
PEA0B ePcP PcP 23 49 44.9 +1.2
PETK Petropavlovsk- 41.37 301 P **P** **23 47 45.9 +0.1**
comp=Z,48nm,1.0s,mb5.1,baz=72,slow=11,SNR=23
PETK LR LR 00 03 16.8
comp=Z,2µm,20.8s,MS4.8,baz=250,slow=34
ZIIG Zihuatanejo 41.78 134 *i* P **P** **23 47 46.4 -3.1**
SUMG Summit 42.18 27 eP **P** **23 47 53.8 +1.6**
comp=Z,120nm,1.3s,mb5.4
SUMG ePP PP 23 49 30.6 +1.1
CAIG El Cayaco 42.81 133 *i* P **P** **23 47 56.8 -1.0**
SKR Severo-Kuril's 43.43 298 P **P** **23 48 01.2 -1.4**
SKR e 23 48 06.5
SKR e 23 49 44.0
SKR e 23 49 55.0
SKR eS **S** **23 54 34.0 +3.5**
SKR eSS SS 23 57 54.0 +10
SKR pmax pmax
comp=Z,170nm,1.0s,mb5.7
SKR pmax pmax
comp=Z,1µm,5.0s
SKR smax
comp=N,1µm,16.0s
SKR smax
comp=E,1µm,16.0s
SKR MLR MLR
comp=N,2µm,20.0s,MS5.2
SKR MLR MLR
comp=Z,2µm,20.0s,MS5.0
SKR MLR MLR
comp=E,2µm,16.0s,MS5.2
DWPF Disney 44.06 103 PFAKE 23 48 20.0 +12
DWPF LR LR
comp=Z,6µm,21.0s,MS5.5
TIXI Tiksi 44.42 334⇑ eP **P** **23 48 09.1 -1.1**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
TIXI MLR MLR
comp=Z,5µm,19.0s,MS5.4
TIXI Tiksi 44.42 334 P **P** **23 48 08.9 -1.4**
comp=Z,2.4nm,0.7s,mb4.0
TIXI ePP PP 23 49 54.2 +0.7
TIXI LR LR
comp=Z,5µm,19.0s,MS5.4
SOR Soroa 47.13 109 eP **P** **23 48 28.8 -3.4**
KBS Kingsbay 47.40 9 e **P** **23 48 34.2 +0.5**
KBS Kingsbay 47.40 9 ePP PP 23 50 25.7 +1.2
KBS eSS SS 23 59 09.3 +15
KBS AMS AMS 00 07 20.0
comp=Z,4µm,13.4s,MS5.6
KBS Kingsbay 47.40 9⇑ *i*P **P** **23 48 33.8 +0.2**
KBS Kingsbay 47.40 9⇑ *i*P **P** **23 48 33.9 +0.3**
KBS LR LR
comp=Z,3µm,21.0s,MS5.2
YAK Yakutsk 49.47 322 eP **P** **23 48 48.8 -1.0**
YAK e 23 50 08.8
YAK e 23 50 42.0
YAK eS **S** **23 55 56.8 +0.2**
YAK pmax pmax
comp=Z,78nm,1.2s,mb5.6
YAK pmax pmax
comp=N,15nm,1.3s
YAK pmax pmax
comp=E,28nm,1.1s
YAK pmax pmax
comp=Z,82nm,1.8s,mb5.5
YAK pmax pmax
comp=N,65nm,1.6s
YAK pmax pmax
comp=E,58nm,1.8s
YAK smax
comp=N,145nm,4.4s
YAK smax
comp=E,308nm,5.3s
YAK MLR MLR
comp=N,3µm,16.0s,MS5.5
YAK MLR MLR
comp=Z,3µm,21.0s,MS5.3
YAK MLR MLR
comp=E,3µm,16.0s,MS5.5
YAK Yakutsk 49.47 322⇑ eP **P** **23 48 48.0 -1.8**
BBSR BB Station 51.31 85 PFAKE 23 49 20.0 +16
BBSR LR LR
comp=Z,5µm,19.0s,MS5.5
TGUH Tegucigalpa,Un 51.78 121 eP **P** **23 49 06.8 -1.0**
comp=Z,59nm,0.8s,mb5.6
TGUH LR LR
comp=Z,2µm,20.0s,MS5.2
BJO Bjornoya 52.12 10 AMS AMS 00 12 40.5
comp=Z,4µm,19.5s,MS5.5
YSS Yuzh-Sakhalins 52.77 301⇑ eP **P** **23 49 14.1 -0.7**
YSS e*SP sP 23 49 20.0 +0.8
YSS e 23 50 23.0
YSS eS **S** **23 56 37.0 -5.7**
YSS ePS 23 56 46.0
YSS *i* 23 59 03.0
YSS pmax pmax
comp=N,40nm,1.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 52.77 301⇑ eP **P** **23 49 14.8 0.0**
YUK Yuzh-Kuril'sk 52.96 296 eP **P** **23 49 13.2 -3.0**
YUK S **S** **23 56 39.0 -6.4**
YUK pmax pmax
comp=N,2µm,3.0s
YUK pmax pmax
comp=E,1µm,3.0s
YUK pmax pmax
comp=Z,2µm,3.0s
YUK smax
comp=N,2µm,5.0s
YUK smax
comp=E,1µm,4.0s
CLNS Chul'man 54.68 319 eP **P** **23 49 28.1 -0.5**
CLNS eS **S** **23 57 10.2 +1.9**
CLNS pmax pmax
comp=Z,56nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,37nm,1.0s
CLNS pmax pmax
comp=N,26nm,1.0s
CLNS pmax pmax
comp=Z,20nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,18nm,0.9s
CLNS pmax pmax
comp=N,17nm,1.0s
CLNS smax
comp=E,487nm,14.9s
CLNS smax
comp=N,462nm,18.4s
CLNS MLR MLR
comp=Z,1µm,17.0s,MS5.1
CLNS MLR MLR
comp=N,402nm,11.0s
CLNS MLR MLR
comp=E,1µm,18.0s
ASAJ Asahikawa 54.70 298 P **P** **23 49 29.2 +0.3**
comp=E,30nm,1.0s,mb5.3,baz=24,slow=7.5,SNR=7.5
NRGR Nerungri 54.87 319 eP **P** **23 49 31.2 +1.2**
NRGR S **S** **23 57 13.6 +2.8**
NRGR smax
comp=N,26nm,0.6s
HABR Khabarovsk 55.73 307 eP **P** **23 49 35.5 -0.8**
HABR e*PP pP 23 49 37.9 -1.6
HABR e 23 51 39.7
HABR ePPP 23 52 52.0
HABR eS **S** **23 57 23.1 +0.5**
HABR e*SS sS 23 57 28.3 +0.5
HABR e 23 59 23.9
HABR eSS SS 00 01 08.7 +1.5
HABR pmax pmax
comp=N,13nm,0.6s
HABR pmax pmax
comp=E,32nm,1.1s
HABR pmax pmax
comp=Z,68nm,1.1s,mb5.6
HABR MLR MLR
comp=Z,2µm,21.0s,MS5.2
ERM Erimo 55.78 296*c i*P **P** **23 49 37.6 +0.8**
ERM Erimo 55.78 296⇑ *i*P **P** **23 49 37.6 +0.8**
ERM LR LR
comp=Z,1µm,19.0s,MS5.0
TRO Tromso 56.63 12 AMS AMS 00 12 43.2
comp=Z,3µm,19.0s,MS5.3
KLR Kul'dur 56.83 309 eP **P** **23 49 39.2 -5.0**
KLR eS **S** **23 57 27.5 -10**
KLR e 23 59 30.0
KLR pmax pmax
comp=Z,56nm,1.8s,mb5.3
KLR smax
comp=N,1µm,11.0s
KLR smax
comp=E,900nm,11.0s
KLR MLR MLR
comp=N,2µm,13.0s
KLR MLR MLR
comp=Z,6µm,13.0s,MS5.9
SDDR Presa de Saban 57.01 102 eP **P** **23 49 44.6 -1.2**
comp=Z,36nm,1.0s,mb5.3
SDDR ePcP PcP 23 50 39.8 -1.1
SDDR ePP PP 23 51 52.9 +0.5
SDDR LR LR
comp=Z,4µm,22.0s,MS5.5
KEV Kevo 57.41 9 PFAKE 23 50 00.0 +12
KEV LR LR
comp=Z,4µm,20.0s,MS5.5
ARCES ARCESS Array B 57.48 9 P **P** **23 49 48.6 +0.2**
comp=Z,8.4nm,0.8s,mb4.8,baz=345,slow=8.8,SNR=5.0
ARCES LR LR 00 17 03.5
comp=Z,2µm,18.5s,MS5.2,baz=346,slow=39
BOD Bodaibo 58.10 325⇑ *i*P **P** **23 49 51.2 -1.8**
BOD pmax pmax
comp=Z,27nm,1.3s,mb5.1
LVZ Lovozero 59.84 6⇑ eP **P** **23 50 03.2 -1.7**
LVZ pmax pmax
comp=Z,63nm,1.3s,mb5.5
LVZ Lovozero 59.84 6⇑ eP **P** **23 50 03.3 -1.6**
LVZ LR LR
comp=Z,4µm,19.0s,MS5.5
BCIP Isla Barro Col 59.85 116 PFAKE 23 50 20.0 +14
BCIP LR LR
comp=Z,1µm,19.0s,MS5.1
APA Apatity 60.08 7⇑ *i*P **P** **23 50 09.0 +2.5**
APA eS **S** **23 58 16.0 -2.9**
APA pmax pmax
comp=Z,39nm,1.3s,mb5.3
APA MLR MLR
comp=Z,3µm,18.0s,MS5.5
NSS Namsos 60.27 17 AMS AMS 00 14 60.0
comp=Z,4µm,4.5s
SJG San Juan 60.80 98 PFAKE 23 50 20.0 +7.9
SJG LR LR
comp=Z,4µm,20.0s,MS5.6
MDJ Mudanjiang 61.12 306 P **P** **23 50 12.4 -1.6**
MDJ AP pP 23 50 15.8 -1.4
MDJ XP sP 23 50 16.7 -1.7
MDJ PP PP 23 52 26.1 -2.0
MDJ S **S** **23 58 29.4 -3.5**
MDJ AMB AMB
comp=Z,12nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,366nm,8.9s
MDJ LR LR
comp=N,3µm,22.6s,MS5.5
MDJ LR LR
comp=E,2µm,23.3s,MS5.5
MDJ LR LR
comp=Z,2µm,20.7s,MS5.3
MDJ Mudanjiang 61.12 306 PFAKE 23 50 30.0 +16
MDJ LR LR
comp=Z,3µm,22.0s,MS5.3
TAOE Nuku Hiva Isla 61.20 190 eS **S** **23 58 28.4 -6.0**
comp=Z,11µm,29.7s
TAOE eLQ 00 05 36.7

TAOE eLR LR 00 08 20.0
comp=Z,9μm,26.5s
HIA Hailar 62.28 316⇑ *i*P **P 23 50 20.4 -1.3**
MJAR Matsushiro Arr 62.34 295 P **P 23 50 21.5 -0.8**
comp=Z,2.7nm,0.6s,mb4.5,baz=32,slow=5.6,SNR=9.4
MJAR LR LR 00 14 03.8
comp=Z,613nm,19.7s,MS4.8,baz=50,slow=33
MAJO Matsushiro 62.34 295 *e*P **P 23 50 22.1 -0.2**
MAJO *e* 23 50 58.6
MAJO *e* 23 52 39.1
MAJO pmax pmax
comp=Z,19nm,1.0s,mb5.2
MAJO MLR MLR
comp=Z,922nm,21.0s,MS4.9
MAJO Matsushiro 62.34 295 *e*P **P 23 50 22.1 -0.2**
comp=Z,19nm,1.0s,mb5.2
MAJO *e*PcP PcP 23 50 58.6 -3.4
MAJO *e*PP PP 23 52 39.1 0.0
MAJO LR LR
comp=Z,922nm,21.0s,MS4.9
MAT Matsushiro 62.34 295 P **P 23 50 22.1 -0.2**
MAT S **S 23 58 50.0 +1.4**
PAYG Puerto Ayora 62.97 132 PFAKE 23 50 40.0 +13
PAYG LR LR
comp=Z,1μm,21.0s,MS5.1
NB2 NORSAR Subarra 63.30 19 P **P 23 50 27.8 -0.5**
comp=Z,110nm,1.2s,mb5.9,baz=337,slow=6.9
NOA NORSAR Array B 63.30 19 P **P 23 50 27.8 -0.6**
comp=Z,51nm,1.1s,mb5.5,baz=335,slow=6.6,SNR=20
NOA LR LR 00 18 32.2
comp=Z,2μm,19.3s,MS5.4,baz=340,slow=37
NOA NORSAR Array B 63.30 19 P **P 23 50 27.8 -0.6**
NOA LR LR 00 18 32.2
NAO01 NORSAR Array S 63.41 20 *e*P **P 23 50 29.9 +0.9**
comp=Z,97nm,1.2s,mb5.8
NAO01 *e*PcP PcP 23 51 01.3 -4.6
CN2 Changchun 63.75 308 *e*P **P 23 50 29.7 -1.9**
CN2 *e*XP sP 23 50 37.0 +1.0
CN2 PP PP 23 52 51.1 -0.2
CN2 *e*S **S 23 59 00.3 -5.7**
CN2 AMB AMB
comp=Z,40nm,0.6s,mb5.6
CN2 AMB AMB
comp=Z,400nm,7.0s
CN2 LR LR
comp=N,1μm,18.0s,MS5.3
CN2 LR LR
comp=E,1μm,18.0s,MS5.3
CN2 LR LR
comp=Z,1μm,19.0s,MS5.2
KONO Kongsberg 64.22 21 *e*P **P 23 50 36.9 +2.5**
KONO AMS AMS 00 19 27.8
comp=Z,2μm,5.7s
KONO Kongsberg 64.22 21⇑ *e*P **P 23 50 36.0 +1.6**
KONO Kongsberg 64.22 21⇑ *e*P **P 23 50 36.1 +1.7**
KONO LR LR
comp=Z,2μm,20.0s,MS5.4
ESK Eskdalemuir 64.67 30 PFAKE 23 50 50.0 +13
ESK LR LR
comp=Z,3μm,19.0s,MS5.5
SDV Santo Domingo 65.33 108 *e*P **P 23 50 42.0 -0.2**
comp=Z,27nm,1.0s,mb5.2
SDV *e*PcP PcP 23 51 14.0 -0.5
SDV PP PP 23 53 05.2 -0.7
SDV LR LR
comp=Z,1μm,20.0s,MS5.1
IRK Irkutsk 65.93 326⇓ *i*P **P 23 50 45.0 -0.7**
IRK pmax pmax
comp=Z,90nm,0.7s,mb5.9
ROSC El Rosal 66.47 114 P **P 23 50 50.1 +0.5**
comp=Z,6.2nm,0.6s,mb4.8,baz=276,slow=9.4,SNR=3.1
ROSC LR LR 00 21 12.2
comp=Z,1μm,18.3s,MS5.2,baz=2.5,slow=37
ROSC El Rosal 66.47 114 *e*P **P 23 50 50.0 +0.4**
ROSC *e*PcP PcP 23 51 19.7 +0.6
ROSC LR LR 00 21 12.2
TLY Talaya 66.62 326 P **P 23 50 50.3 +0.2**
comp=Z,184nm,1.0s,mb6.1,SNR=7.9
TLY Talaya 66.62 326 *c i*P **P 23 50 49.7 -0.4**
TLY *e*S S 23 59 46.7 +5.8
TLY *e* 00 00 49.4
TLY pmax pmax
comp=Z,35nm,1.0s,mb5.3
TLY MLR MLR
comp=Z,3μm,19.0s,MS5.5
TLY Talaya 66.62 326⇑ *i*P **P 23 50 50.4 +0.3**
KSRS Korea Array 67.25 302 P **P 23 50 53.5 -0.8**
comp=Z,15nm,1.2s,mb4.9,baz=55,slow=6.1,SNR=10
KSRS LR LR 00 21 51.2
comp=Z,848nm,19.2s,MS5.0,baz=50,slow=37
PUL Pulkovo 67.49 10⇑ *i*P **P 23 50 53.9 -1.6**
MOY Mondy 67.52 328 *e*P **P 23 50 56.0 +0.2**
MOY pmax pmax
comp=Z,8.0nm,2.8s,mb4.3
ZAK Zakamensk 67.83 326⇑ *i*P **P 23 50 57.4 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
PCRV Puerto La Cruz 67.87 102 LR LR 00 25 41.4
comp=Z,1μm,18.7s,MS5.2,baz=182,slow=40
OTAV Otavalo 68.05 121 *e*P **P 23 51 00.8 +1.2**
comp=Z,55nm,1.3s,mb5.4
OTAV *e*PcP PcP 23 51 25.4 -0.3
OTAV LR LR
comp=Z,1μm,19.0s,MS5.1
GRGR Grenville 68.15 98 PFAKE 23 51 10.0 +10
GRGR LR LR
comp=Z,3μm,19.0s,MS5.5
VSU Vasula 68.34 12⇑ *i*P **P 23 51 00.9 +0.1**
VSU pmax pmax
comp=Z,91nm,1.3s,mb5.7
SOKR Solikamsk 68.45 355 *d i*P **P 23 51 01.1 -0.4**
SOKR pmax pmax
comp=Z,40nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,2μm,20.0s,MS5.3
TARA Tarawa 68.49 242 PFAKE 23 51 10.0 +7.6
TARA LR LR
comp=Z,1μm,22.0s,MS5.1
ULN Ulaanbaatar 68.55 322⇑ *e*P **P 23 51 01.7 -0.7**
ULN Ulaanbaatar 68.55 322⇑ *e*P **P 23 51 01.8 -0.6**
BBGH Gun Hill 68.65 96 PFAKE 23 51 20.0 +17
BBGH LR LR
comp=Z,4μm,20.0s,MS5.7
SONM Songino Array 68.83 322 P **P 23 51 03.5 -0.6**
comp=Z,5.8nm,1.0s,mb4.5,baz=29,slow=3.8,SNR=27
SONM LR LR 00 20 55.6
comp=Z,3μm,21.6s,MS5.5,baz=20,slow=36
DL2 Dalian 69.33 307 ⇑P **P 23 51 07.9 +0.5**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
DL2 AMB AMB
comp=Z,170nm,5.0s
DL2 LR LR
comp=N,920nm,20.1s
DL2 LR LR
comp=Z,1μm,20.3s,MS5.1
NVS Novosibirsk 69.55 339⇑ *i*P **P 23 51 05.3 -3.1**
NVS *e*S S 00 00 09.1 -6.8
NVS pmax pmax
comp=Z,159nm,2.7s,mb5.5
NVS pmax pmax
comp=N,135nm,2.9s
NVS smax
comp=N,31nm,2.5s
BSEG Bad Segeberg 69.59 23 *e*P **P 23 51 08.4 -0.3**
BSEG pmax pmax
comp=Z,101nm,1.7s,mb5.5
BSEG Bad Segeberg 69.59 23 *e*P **P 23 51 08.4 -0.3**
comp=Z,101nm,1.7s,mb5.5
WIT Witteveen 69.69 26 *e*P **P 23 51 13.9 +4.6**
RGN Rugen 69.72 21 *e*P **P 23 51 09.4 -0.1**
comp=Z,160nm,1.4s,mb5.8
ZAA0 Zalesovo Array 70.03 338 *e*P **P 23 51 09.8 -1.6**
ZAA0 *e*PcP PcP 23 51 31.8 -1.7
ZALV Zalesovo Beam 70.03 338 P **P 23 51 10.0 -1.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=17,slow=5.4,SNR=30
ZALV LR LR 00 24 12.7
comp=Z,1μm,21.5s,MS5.2,baz=13,slow=38
HVS Khovu-Aksy 70.25 332 *d i*P **P 23 51 12.0 -0.8**
HVS pmax pmax
comp=Z,130nm,1.0s,mb5.8
IBBN Ibbenburen 70.43 25 *e*P **P 23 51 13.5 -0.4**
comp=Z,142nm,1.8s,mb5.6
WTSB Winterswijk 70.49 26 *e*P **P 23 51 14.7 +0.5**
comp=Z,40nm,1.1s,mb5.2

ROSF Rostrenen 70.60 34 *e*P **P 23 51 14.7 -0.3**
comp=Z,143nm,1.5s,mb5.4
ROSF Rostrenen 70.60 34 *e*P **P 23 51 14.7 -0.3**
ROSF pmax pmax
comp=Z,71nm,1.5s,mb5.4
ROSF Rostrenen 70.60 34 *e*P **P 23 51 14.7 -0.3**
comp=Z,71nm,1.5s,mb5.4
UCC Uccle 70.86 28 P **P 23 51 19.7 +3.2**
NRDL Niedersach Rie 70.86 24 *e*P **P 23 51 15.8 -0.7**
comp=Z,39nm,1.2s,mb5.2
NRDL *e*pP pP 23 51 19.3 -0.5
SGMF Saint Gilles 70.92 33 *e*P **P 23 51 16.9 0.0**
comp=Z,305nm,1.6s,mb5.7
SGMF Saint Gilles 70.92 33 *e*P **P 23 51 16.9 0.0**
SGMF pmax pmax
comp=Z,153nm,1.6s,mb5.7
SGMF Saint Gilles 70.92 33 *e*P **P 23 51 16.9 0.0**
comp=Z,153nm,1.6s,mb5.7
SVE Sverdlovsk 70.94 353⇑ *e*P **P 23 51 15.7 -1.2**
SVE *e* 23 53 59.5
SVE pmax pmax
comp=Z,41nm,1.3s,mb5.2
SVE MLR MLR
comp=Z,2μm,16.0s,MS5.5
QUIF Quistinic 71.00 34 *e*P **P 23 51 17.2 -0.2**
comp=Z,183nm,1.6s,mb5.5
QUIF Quistinic 71.00 34 *e*P **P 23 51 17.2 -0.2**
QUIF pmax pmax
comp=Z,91nm,1.6s,mb5.5
QUIF Quistinic 71.00 34 *e*P **P 23 51 17.2 -0.2**
comp=Z,91nm,1.6s,mb5.5
BJI Beijing 71.05 311 P **P 23 51 16.3 -1.5**
BJI AMB AMB
comp=Z,9.0nm,1.6s,mb4.5
BJI AMB AMB
comp=Z,383nm,4.4s
BJI LR LR
comp=N,769nm,12.3s,MS5.1
BJI LR LR
comp=E,311nm,16.6s,MS5.1
BJI LR LR
comp=Z,181nm,21.1s,MS4.3
BJT Baijiatuan 71.07 311 PFAKE 23 51 30.0 +12
BJT LR LR
comp=Z,2μm,22.0s,MS5.3
ISAL Salakas 71.07 13 *e*P **P 23 51 19.2 +1.5**
BUG Bochum--Univer 71.09 26 *e*P **P 23 51 17.1 -0.8**
comp=Z,87nm,1.5s,mb5.5
SNF Seneffe 71.09 28 P **P 23 51 21.4 +3.5**
FLN La Foliniere 71.17 32 *e*P **P 23 51 18.0 -0.4**
comp=Z,58nm,1.1s,mb5.1
FLN *e*MLR MLR
comp=Z,3μm,18.8s,MS5.3
FLN La Foliniere 71.17 32 *e*P **P 23 51 18.0 -0.4**
FLN pmax pmax
comp=Z,29nm,1.1s,mb5.1
FLN MLR MLR
comp=Z,3μm,18.8s,MS5.6
FLN La Foliniere 71.17 32 *e*P **P 23 51 18.0 -0.4**
comp=Z,29nm,1.1s,mb5.1
FLN LR LR
comp=Z,3μm,18.8s,MS5.6
PPT Papeete 71.18 198 *e*S S 00 00 31.9 -3.6
comp=Z,5μm,28.2s
PPT *e*SS SS 00 05 04.9 -4.9
comp=Z,629nm,30.2s
PPT *e*LQ 00 09 22.7
comp=Z,3μm,28.2s
PPT *e*LR LR 00 12 51.2
comp=Z,3μm,28.8s,baz=10
PPT Papeete 71.18 198 LR LR 00 14 55.0
comp=Z,919nm,18.1s,MS5.1,baz=357,slow=29
BEBN Eben Emael 71.23 27 P **P 23 51 21.2 +2.5**
comp=Z,15nm,1.7s,mb4.6
HGN Heimansgroeve 71.33 27 *e*P **P 23 51 20.5 +1.2**
comp=Z,62nm,1.6s,mb5.3
GRR Gorron 71.37 32 *e*P **P 23 51 20.0 +0.4**
comp=Z,130nm,1.3s,mb5.4
GRR Gorron 71.37 32 *e*P **P 23 51 20.0 +0.4**
GRR pmax pmax
comp=Z,65nm,1.3s,mb5.4
GRR Gorron 71.37 32 *e*P **P 23 51 20.0 +0.4**
comp=Z,65nm,1.3s,mb5.4
LDF La Druitiere 71.43 32 *e*P **P 23 51 19.7 -0.3**
comp=Z,136nm,1.3s,mb5.4
LDF La Druitiere 71.43 32 *e*P **P 23 51 19.7 -0.3**
LDF pmax pmax
comp=Z,68nm,1.3s,mb5.4
LDF La Druitiere 71.43 32 *e*P **P 23 51 19.7 -0.3**
comp=Z,68nm,1.3s,mb5.4
BCLA Clavier 71.46 28 P **P 23 51 22.5 +2.3**
comp=Z,35nm,1.6s,mb5.0
BAIF Baives 71.47 28 *e*P **P 23 51 20.5 +0.3**
comp=Z,199nm,1.7s,mb5.5
BAIF Baives 71.47 28 *e*P **P 23 51 20.5 +0.3**
BAIF pmax pmax
comp=Z,100nm,1.7s,mb5.5
BAIF Baives 71.47 28 *e*P **P 23 51 20.5 +0.3**
comp=Z,100nm,1.7s,mb5.5
ARU Arti 71.48 354 P **P 23 51 20.5 +0.3**
comp=Z,163nm,1.4s,mb5.8,SNR=7.0
ARU Arti 71.48 354 *c i*P **P 23 51 18.5 -1.7**
ARU S S 00 00 37.4 -0.9
ARU pmax pmax
comp=Z,33nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,2μm,18.0s,MS5.4
MEM Membach 71.49 27 P **P 23 51 23.0 +2.6**
comp=Z,35nm,1.9s,mb5.0
CLZ Clausthal 71.53 24 *e*P **P 23 51 20.4 -0.1**
CLZ pmax pmax
comp=Z,67nm,1.3s,mb5.4
CLZ Clausthal 71.53 24 *e*P **P 23 51 20.4 -0.1**
comp=Z,67nm,1.3s,mb5.4
DOU Dourbes 71.55 28 P **P 23 51 23.1 +2.4**
comp=Z,21nm,1.7s,mb4.8
GIVF Givet 71.61 28 *e*P **P 23 51 21.3 +0.2**
comp=Z,209nm,1.7s,mb5.5
GIVF Givet 71.61 28 *e*P **P 23 51 21.3 +0.2**
GIVF pmax pmax
comp=Z,105nm,1.7s,mb5.5
GIVF Givet 71.61 28 *e*P **P 23 51 21.3 +0.2**
comp=Z,104nm,1.7s,mb5.5
GKP Gorka Klasztor 71.75 19 *e*P **P 23 51 22.9 +1.1**
GKP Gorka Klasztor 71.75 19 *e*P **P 23 51 22.9 +1.1**
RUE Ruedersdorf 71.75 22 *e*P **P 23 51 21.2 -0.6**
comp=Z,125nm,1.6s,mb5.6
RUE Ruedersdorf 71.75 22 *e*P **P 23 51 21.6 -0.2**
RUE PcP PcP 23 51 40.7 -0.1
MOS Moscow 72.11 6 *e*P **P 23 51 27.1 +3.1**
MOS *e*S S 00 00 45.3 -0.3
MOS pmax pmax
comp=Z,46nm,1.1s,mb5.3
MOS MLR MLR
comp=N,1μm,17.0s
MOS MLR MLR
comp=Z,2μm,17.0s,MS5.4
SUW Suwalki 72.13 15 *e*P **P 23 51 26.2 +2.1**
SUW Suwalki 72.13 15 *e*P **P 23 51 26.2 +2.1**
MNK Minsk 72.34 12⇓ *e*P **P 23 51 26.0 +0.6**
MNK pmax pmax
comp=Z,190nm,1.0s,mb6.0
UBBA Unterbreizbach 72.37 24 *e*P **P 23 51 25.0 -0.6**
comp=Z,76nm,1.8s,mb5.3
WLF Walferdange 72.38 27 P **P 23 51 28.4 +2.7**
WLF Walferdange 72.38 27 *e*P **P 23 51 25.3 -0.4**
comp=Z,63nm,1.7s,mb5.3
WLF Walferdange 72.38 27 PFAKE 23 51 40.0 +14
WLF LR LR
comp=Z,3μm,19.0s,MS5.6
HHC Hu-ho-hao-te 72.47 315 *e*P **P 23 51 25.7 -0.7**
HHC AP pP 23 51 36.2 +6.5
HHC XP sP 23 51 40.0 +9.1
HHC PCP PcP 23 51 44.4 +0.3
HHC PP PP 23 54 07.9 +1.0
HHC AMB AMB
comp=Z,30nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,398nm,6.9s
HHC LR LR
comp=N,1μm,14.3s,MS5.6
HHC LR LR
comp=E,2μm,14.3s,MS5.6
HHC LR LR
comp=Z,3μm,15.5s,MS5.6
ABH Alteburg 72.58 26 *e*P **P 23 51 29.6 +2.7**

RUP Ruppelstein 72.61 27 *e*P **P 23 51 28.7 +1.7**
CLL Collm 72.66 22 *e*P **P 23 51 30.0 +2.7**
CLL *e*S S 00 00 51.0 -1.0
CLL pmax pmax
comp=Z,59nm,1.7s,mb5.2
CLL MLR MLR
comp=Z,2μm,19.6s,MS5.4
CLL Collm 72.66 22 *e*P **P 23 51 26.4 -0.9**
comp=Z,59nm,1.7s,mb5.2
CLL Collm 72.66 22 *e*P **P 23 51 30.0 +2.7**
comp=Z,59nm,1.7s,mb5.2
CLL *e*PP PP 23 54 07.0 -1.2
CLL *e*S S 00 00 51.0 -1.0
CLL *e*PS 00 01 22.0
CLL *e*SS SS 00 05 37.0 +7.0
CLL *ex* x 00 06 34.0
CLL *e*(SSS) 00 09 30.0
CLL Collm 72.66 22 *e*P **P 23 51 30.0 +2.7**
comp=Z,59nm,1.7s,mb5.2
CLL *e*S S 00 00 51.0 -1.0
CLL LR LR
comp=Z,2μm,19.6s,MS5.4
OBN Obninsk 72.66 7 *c i*P **P 23 51 27.5 +0.3**
OBN *i* 23 51 51.3
OBN *i* S S 00 00 53.3 +1.4
OBN pmax pmax
comp=Z,60nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,2μm,18.0s,MS5.5
MOX Moxa 72.94 24 *e*P **P 23 51 30.3 +1.3**
comp=Z,37nm,1.5s,mb5.1
MOX
comp=Z,1μm,21.0s
MOX Moxa 72.94 24 *e*P **P 23 51 30.3 +1.3**
MOX pmax pmax
comp=Z,37nm,1.5s,mb5.1
MOX MLR MLR
comp=Z,1μm,21.0s,MS5.1
MOX Moxa 72.94 24 *e*P **P 23 51 28.1 -0.9**
comp=Z,29nm,1.4s,mb5.0
EMAZ Mazaricos 73.06 40 P **P 23 51 30.4 +0.5**
comp=Z,68nm,1.3s,mb5.4
FBE Freiberg 73.10 22 *e*P **P 23 51 29.3 -0.6**
comp=Z,124nm,2.0s,mb5.5
FBE *e*pP pP 23 51 32.2 -1.0
MEZF Maizieres J'vi 73.11 29 *e*P **P 23 51 30.2 +0.1**
MFF Saint Martin d 73.16 33 *e*P **P 23 51 30.7 +0.3**
comp=Z,158nm,1.5s,mb5.4
MFF Saint Martin d 73.16 33 *e*P **P 23 51 30.7 +0.3**
MFF pmax pmax
comp=Z,79nm,1.5s,mb5.4
MFF Saint Martin d 73.16 33 *e*P **P 23 51 30.7 +0.3**
comp=Z,79nm,1.5s,mb5.4
TOD Tromm 73.17 26 *e*P **P 23 51 31.5 +1.1**
BRG Berggiesshubel 73.28 22 *i*P **P 23 51 33.7 +2.7**
BRG *e* 23 51 50.6
BRG S S 00 01 04.0 +4.9
BRG *i* 00 05 48.0
BRG pmax pmax
comp=Z,75nm,1.9s,mb5.3
BRG pmax pmax
comp=Z,14nm,1.2s,mb4.8
BRG MLR MLR
comp=N,982nm,17.8s,MS5.2
BRG MLR MLR
comp=E,498nm,20.0s,MS5.2
BRG MLR MLR
comp=Z,2μm,21.7s,MS5.2
BRG Berggiesshubel 73.28 22 *e*P **P 23 51 30.4 -0.6**
comp=Z,126nm,1.9s,mb5.5
BRG *e*pP pP 23 51 34.0 -0.3
BRG Berggiesshubel 73.28 22 *i*P **P 23 51 33.7 +2.6**
comp=Z,126nm,1.9s,mb5.5
BRG *e* 23 51 50.6
BRG S S 00 01 04.0 +4.9
BRG *i* 00 05 48.0
BRG
comp=N,2μm,17.8s
BRG
comp=E,832nm,20.0s
BRG
comp=Z,3μm,21.7s
BRG Berggiesshubel 73.28 22 *i*P **P 23 51 33.7 +2.6**
comp=Z,75nm,1.9s,mb5.3
BRG *e* 23 51 50.6
BRG S S 00 01 04.0 +4.9
BRG *i* 00 05 48.0
BRG LR LR
comp=Z,2μm,21.7s,MS5.2
STS Santiago 73.28 40 P **P 23 51 34.2 +3.0**
STS pmax pmax
comp=Z,31nm,1.1s,mb5.2
STS Santiago 73.28 40 P **P 23 51 34.2 +3.0**
comp=Z,30nm,1.1s,mb5.1
WERD Werda 73.29 23 *e*P **P 23 51 30.1 -1.0**
comp=Z,41nm,1.9s,mb5.0
BTO Baotou 73.34 316 *e*P **P 23 51 30.0 -1.5**
TANN Tannenbergstha 73.36 23 *e*P **P 23 51 30.7 -0.8**
comp=Z,104nm,2.4s,mb5.3
GUNZ Gunzen 73.37 23 *e*P **P 23 51 30.8 -0.8**
comp=Z,99nm,2.4s,mb5.3
WERN Wernitzgruen 73.45 23 *e*P **P 23 51 31.4 -0.6**
comp=Z,66nm,2.0s,mb5.2
LANF Langenberg 73.47 27 *e*P **P 23 51 35.0 +2.9**
HYF Humbligny 73.48 31 *e*P **P 23 51 32.6 +0.4**
NKC Novy Kostel 73.52 23 *e*P **P 23 51 32.7 +0.3**
NKC AMS AMS 00 27 40.0
comp=Z,2μm,17.3s
BRVK Borovoye 73.60 347 P **P 23 51 31.2 -1.6**
comp=Z,94nm,1.2s,mb5.6,SNR=6.6
BRVK Borovoye 73.60 347⇑ *e*P **P 23 51 31.4 -1.4**
THEF They Montfort 73.63 28 *e*P **P 23 51 36.9 +3.8**
MANZ Manzenberg 73.67 24 *e*P **P 23 51 32.5 -0.8**
comp=Z,64nm,2.2s,mb5.2
GRA1 Grafenberg Arr 73.72 24 *e*P **P 23 51 33.2 -0.4**
comp=Z,157nm,2.0s,mb5.6
GRA1 *e*PP PP 23 54 19.3 +2.1
GRF Grafenberg Arr 73.72 24 *e*P **P 23 51 33.2 -0.4**
GRF *e* 23 54 19.3
GRF *e*S S 00 01 10.9 +6.8
GRF *e*SS SS 00 05 49.3 +3.1
GRF pmax pmax
comp=Z,157nm,2.0s,mb5.6
GRF MLR MLR
comp=Z,2μm,18.3s,MS5.4
GRF Grafenberg Arr 73.72 24 *e*P **P 23 51 33.2 -0.4**
GRF *e* 23 54 19.3
GRF pmax pmax
comp=Z,157nm,2.0s,mb5.6
GRF Grafenberg Arr 73.72 24 *e*P **P 23 51 33.2 -0.4**
comp=Z,157nm,2.0s,mb5.6
GRF *e*PP PP 23 54 19.3 +2.1
GRF Grafenberg Arr 73.72 24 *e*S S 00 01 10.9 +6.8
GRF *e*L 00 27 20.5
comp=Z,2μm,18.3s
GRF Grafenberg Arr 73.72 24 *e*P **P 23 51 33.2 -0.4**
comp=Z,157nm,2.0s,mb5.6
GRF *e*PP PP 23 54 19.3 +2.1
GRF *e*S S 00 01 10.9 +6.8
GRF *e*SS SS 00 05 49.3 +3.1
GRF LR LR
comp=Z,2μm,18.3s,MS5.4
PVCC Panska Ves 73.75 22 *e*P **P 23 51 34.9 +1.1**
PVCC AMS AMS 00 25 00.0
comp=Z,2μm,18.1s
CDF Champ du Feu 73.83 27 *e*P **P 23 51 34.7 +0.4**
comp=Z,47nm,1.0s,mb5.1
CDF Champ du Feu 73.83 27 *e*P **P 23 51 34.7 +0.4**
CDF pmax pmax
comp=Z,24nm,1.0s,mb5.1
CDF Champ du Feu 73.83 27 *e*P **P 23 51 34.7 +0.4**
comp=Z,24nm,1.0s,mb5.1
KSP Ksiaz 73.84 21 *e*P **P 23 51 37.5 +3.2**
KSP Ksiaz 73.84 21 *e*P **P 23 51 33.7 -0.6**
KSP *e**PP pP 23 51 36.4 -1.2
KSP Ksiaz 73.84 21 *e*P **P 23 51 33.7 -0.6**
KSP *e*pP pP 23 51 36.4 -1.2
KSP *e*S S 00 01 02.0 -3.4
KSP LR LR
comp=Z,5μm,22.9s,MS5.7
LOR Lormes 73.86 30 *e*P **P 23 51 34.7 +0.2**
comp=Z,140nm,1.4s,mb5.4
LOR *e*MLR MLR
comp=Z,4μm,21.0s,MS5.4

LOR	Lormes	73.86	30	eP	P	23 51 34.7	+0.2
LOR				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.4						
LOR				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.7						
LOR	Lormes	73.86	30	eP	P	23 51 34.7	+0.2
	comp=Z,70nm,1.4s,mb5.4						
LOR				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
ROTZ	Rotzenmuhle	73.89	24	eP	P	23 51 34.1	-0.5
	comp=Z,33nm,1.6s,mb5.0						
SSF	Saint Saulge	73.93	30	eP	P	23 51 35.1	+0.2
	comp=Z,58nm,1.0s,mb5.2						
SSF	Saint Saulge	73.93	30	eP	P	23 51 35.1	+0.2
SSF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
SSF	Saint Saulge	73.93	30	eP	P	23 51 35.1	+0.2
	comp=Z,29nm,1.0s,mb5.2						
HAU	Haudompre	73.94	28	eP	P	23 51 35.0	+0.1
	comp=Z,48nm,1.2s,mb5.0						
HAU				eMLR	MLR		
	comp=Z,2µm,20.2s,MS5.1						
HAU	Haudompre	73.94	28	eP	P	23 51 35.0	+0.1
HAU				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
HAU				MLR	MLR		
	comp=Z,2µm,20.3s,MS5.4						
HAU	Haudompre	73.94	28	eP	P	23 51 35.0	+0.1
	comp=Z,24nm,1.2s,mb5.0						
HAU				LR	LR		
	comp=Z,2µm,20.3s,MS5.4						
ECH	Echery	73.98	27	eP	P	23 51 36.5	+1.3
ECH	Echery	73.98	27	eP	P	23 51 35.8	+0.6
ECH				e		23 51 48.0	
ECH				e		23 54 18.3	
ECH				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.2						
ECH	Echery	73.98	27	eP	P	23 51 35.8	+0.7
	comp=Z,54nm,1.6s,mb5.2						
ECH				ePcP	PcP	23 51 48.0	-2.4
ECH				ePP	PP	23 54 18.3	-1.2
STU	Stuttgart	74.03	26	eP	P	23 51 34.7	-0.8
	comp=Z,45nm,1.8s,mb5.1						
UPC	Upice	74.09	21	eP	P	23 51 35.6	-0.2
AVF	Avril sur Loir	74.13	30	eP	P	23 51 35.9	-0.2
	comp=Z,66nm,1.0s,mb5.2						
AVF	Avril sur Loir	74.13	30	eP	P	23 51 35.9	-0.2
AVF				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
AVF	Avril sur Loir	74.13	30	eP	P	23 51 35.9	-0.2
	comp=Z,33nm,1.0s,mb5.2						
BGF	Bois d'Agland	74.17	31	eP	P	23 51 36.2	-0.1
	comp=Z,47nm,0.9s,mb5.1						
BGF	Bois d'Agland	74.17	31	eP	P	23 51 36.2	-0.1
BGF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
BGF	Bois d'Agland	74.17	31	eP	P	23 51 36.2	-0.1
	comp=Z,23nm,0.9s,mb5.1						
BFO	Black Forest	74.20	27	P	P	23 51 39.7	+3.2
	comp=Z,135nm,1.2s,mb5.8,SNR=7.8						
BFO	Black Forest	74.20	27	eP	P	23 51 35.7	-0.8
BFO				e*PP	pP	23 51 39.2	-0.5
BFO				pmax	pmax		
	comp=Z,71nm,1.6s,mb5.3						
BFO	Black Forest	74.20	27	eP	P	23 51 35.7	-0.8
	comp=Z,71nm,1.6s,mb5.3						
BFO				epP	pP	23 51 39.2	-0.5
BFO	Black Forest	74.20	27	eP	P	23 51 37.3	+0.8
	comp=Z,32nm,1.2s,mb5.1						
BFO				epP	pP	23 51 39.2	-0.5
BFO				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
TCF	Toulx Ste Croi	74.21	31	eP	P	23 51 36.6	0.0
	comp=Z,59nm,1.0s,mb5.2						
TCF	Toulx Ste Croi	74.21	31	eP	P	23 51 36.6	0.0
TCF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
TCF	Toulx Ste Croi	74.21	31	eP	P	23 51 36.6	0.0
	comp=Z,30nm,1.0s,mb5.2						
ATAH	Atahualpa	74.22	124	LR	LR	00 25 05.2	
	comp=Z,2µm,19.2s,MS5.4,baz=357,slow=36						
EARI	Arriondas	74.22	38	P	P	23 51 39.9	+3.2
	comp=Z,177nm,1.6s,mb5.7						
PRU	Pruhonice	74.25	22	eP	P	23 51 37.1	+0.4
PRU				AMS	AMS	00 23 20.0	
	comp=Z,2µm,19.0s						
HINF	Hinteralfeld	74.25	28	eP	P	23 51 36.9	+0.1
	comp=Z,124nm,1.7s,mb5.3						
HINF	Hinteralfeld	74.25	28	eP	P	23 51 36.9	+0.1
HINF				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.3						
HINF	Hinteralfeld	74.25	28	eP	P	23 51 36.9	+0.1
	comp=Z,62nm,1.7s,mb5.3						
ERUA	La Rua	74.25	39	P	P	23 51 39.4	+2.5
ERUA				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
ERUA	La Rua	74.25	39	P	P	23 51 39.4	+2.5
	comp=Z,18nm,0.7s,mb5.1						
MOF	Molkenrain	74.30	28	eP	P	23 51 38.9	+1.8
DPC	Dobruska-Polom	74.31	21	eP	P	23 51 37.4	+0.4
DPC				AMS	AMS	00 23 50.0	
	comp=Z,2µm,18.3s						
ELOB	Lobios	74.34	40	P	P	23 51 38.8	+1.4
	comp=Z,168nm,1.8s,mb5.7						
KURK	Kurchatov	74.40	341	P	P	23 51 36.1	-1.5
	comp=Z,81nm,0.9s,mb5.7,SNR=6.8						
KURK	Kurchatov	74.40	341	⇑eP	P	23 51 36.1	-1.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KURK	Kurchatov	74.40	341	⇑eP	P	23 51 36.2	-1.4
SMF	Signal de Mont	74.41	30	eP	P	23 51 37.4	-0.3
	comp=Z,81nm,1.3s,mb5.2						
SMF	Signal de Mont	74.41	30	eP	P	23 51 37.4	-0.3
SMF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
SMF	Signal de Mont	74.41	30	eP	P	23 51 37.4	-0.3
	comp=Z,40nm,1.3s,mb5.2						
FELD	Feldberg im Sc	74.53	27	eP	P	23 51 40.8	+2.4
SPAK	Spaichingen-Ko	74.53	26	eP	P	23 51 41.2	+2.8
WET	Wettzell	74.64	23	eP	P	23 51 38.3	-0.7
WET				pmax	pmax		
	comp=Z,76nm,2.1s,mb5.3						
WET	Wettzell	74.64	23	eP	P	23 51 38.3	-0.7
	comp=Z,76nm,2.1s,mb5.3						
LOMF	Lomont	74.67	28	eP	P	23 51 42.8	+3.6
AGO	Saint Agoulin	74.71	31	eP	P	23 51 42.0	+2.5
BBS	Basel-Blauen	74.76	27	eP	P	23 51 42.1	+2.4
ECAL	Calabor	74.80	39	P	P	23 51 42.6	+2.6
	comp=Z,95nm,1.4s,mb5.5						
KHC	Kasperske Hory	74.82	23	eP	P	23 51 40.1	+0.1
KHC				e	pP	23 51 44.5	+1.2
KHC				e		23 51 59.0	
KHC	Kasperske Hory	74.82	23	eP	P	23 51 40.1	+0.1
KHC				epP	pP	23 51 44.5	+1.2
KHC				ex	x	23 51 59.0	
KHC				AMS	AMS	00 23 50.0	
	comp=Z,1µm,18.3s						
RJF	Les Rejaudoux	74.86	32	eP	P	23 51 40.2	-0.1
	comp=Z,89nm,1.2s,mb5.3						
RJF				eMLR	MLR		
	comp=Z,4µm,20.2s,MS5.4						
RJF	Les Rejaudoux	74.86	32	eP	P	23 51 40.2	-0.1
RJF				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.3						
RJF				MLR	MLR		
	comp=Z,4µm,20.3s,MS5.7						
RJF	Les Rejaudoux	74.86	32	eP	P	23 51 40.2	-0.1
	comp=Z,44nm,1.2s,mb5.3						
RJF				LR	LR		
	comp=Z,4µm,20.3s,MS5.7						
PBRG	Braganca	74.91	40	eP	P	23 51 42.9	+2.2
	comp=Z,39nm,1.8s,mb5.0						
LFF	La Frestale	74.92	33	eP	P	23 51 41.0	+0.3
	comp=Z,202nm,1.6s,mb5.5						
LFF	La Frestale	74.92	33	eP	P	23 51 41.0	+0.3
LFF				pmax	pmax		
	comp=Z,101nm,1.6s,mb5.5						
LFF	La Frestale	74.92	33	eP	P	23 51 41.0	+0.3
	comp=Z,101nm,1.6s,mb5.5						
ELAN	Lanestosa	74.94	37	P	P	23 51 41.5	+0.6
	comp=Z,408nm,3.5s						
PLDF	La Plantade	74.94	31	eP	P	23 51 44.6	+3.8
RKT	Rikitea	74.99	183	eS	S	00 01 14.9	-3.8
	comp=Z,624nm,29.8s						
RKT				eSS	SS	00 06 03.4	-4.7
	comp=Z,605nm,30.2s						
RKT				eLQ		00 11 34.8	
	comp=Z,1µm,27.2s						
RKT				eLR	LR	00 14 44.5	
	comp=Z,2µm,27.0s,baz=3.2						
TREC	Trest	75.11	22	eP	P	23 51 43.9	+2.2
TREC				AMS	AMS	00 23 50.0	
	comp=Z,2µm,18.4s						
GEC2	GERESS Array S	75.11	23	eP	P	23 51 41.1	-0.6
GEC2				pmax	pmax		
	comp=Z,76nm,2.0s,mb5.3						
GEC2	GERESS Array S	75.11	23	eP	P	23 51 41.1	-0.6
	comp=Z,76nm,2.0s,mb5.3						
GERES	GERESS Array B	75.11	23	P	P	23 51 41.3	-0.4
	comp=Z,4.9nm,0.8s,mb4.5,baz=343,slow=4.2,SNR=24						
GERES				LR	LR	00 24 25.4	
	comp=Z,2µm,19.6s,MS5.3,baz=336,slow=36						
CABF	La Chapelle	75.12	29	eP	P	23 51 42.3	+0.5
	comp=Z,162nm,1.6s,mb5.4						
CABF	La Chapelle	75.12	29	eP	P	23 51 42.3	+0.5
CABF				pmax	pmax		
	comp=Z,81nm,1.6s,mb5.4						
CABF	La Chapelle	75.12	29	eP	P	23 51 42.3	+0.5
	comp=Z,81nm,1.6s,mb5.4						
FUR	Furstenfeldbru	75.14	25	eP	P	23 51 41.5	-0.4
FUR				pmax	pmax		
	comp=Z,140nm,1.9s,mb5.6						
FUR	Furstenfeldbru	75.14	25	eP	P	23 51 41.5	-0.4
	comp=Z,140nm,1.9s,mb5.6						
OJC	Ojcow	75.15	19	eP	P	23 51 42.7	+0.8
OJC				epP	pP	23 51 46.1	+0.9
OKC	Ostrava-Krasne	75.18	20	eP	P	23 51 42.0	-0.1
OKC				AMS	AMS	00 25 50.0	
	comp=Z,2µm,18.2s						
MVO	Moncorvo	75.34	40	eP	P	23 51 45.0	+1.8
	comp=Z,58nm,1.8s,mb5.2						
MVO				eS	S	00 01 34.4	+12
MVO				eLR	LR	00 15 46.5	
	comp=Z,2µm,17.4s						
VRAC	Vranov	75.35	21	⇓iP	P	23 51 43.7	+0.6
VRAC	Vranov	75.35	21	⇓P	P	23 51 43.7	+0.6
CAF	Calviac	75.37	32	eP	P	23 51 43.4	+0.1
	comp=Z,119nm,1.6s,mb5.3						
CAF	Calviac	75.37	32	eP	P	23 51 43.4	+0.1
CAF				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.3						
CAF	Calviac	75.37	32	eP	P	23 51 43.4	+0.1
	comp=Z,59nm,1.6s,mb5.3						
PVIS	Viseu	75.38	41	eP	P	23 51 45.4	+2.0
	comp=Z,54nm,1.3s,mb5.3						
GUMO	Guam	75.51	273	PFAKE		23 52 00.0	+16
GUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
EALK	Alkurruntz	75.65	35	P	P	23 51 46.5	+1.5
	comp=Z,110nm,1.7s,mb5.5						
ELIZ	Elizondo	75.69	35	P	P	23 51 47.1	+1.9
ELIZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
ELIZ	Elizondo	75.69	35	P	P	23 51 47.1	+1.9
	comp=Z,5.7nm,0.6s,mb4.7						
MTE	Manteigas	75.79	41	eP	P	23 51 47.1	+1.3
	comp=Z,49nm,1.6s,mb5.2						
MTE				eS	S	00 01 33.1	+5.6
MTE				eLR	LR	00 15 39.4	
	comp=Z,1µm,18.4s						
MTE	Manteigas	75.79	41	eP	P	23 51 46.6	+0.9
	comp=Z,19nm,1.0s,mb5.0						
MTE				ePcP	PcP	23 51 58.6	+0.2
MTE				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
SJPF	Ste Jean	75.84	35	eP	P	23 51 45.7	-0.3
	comp=Z,49nm,1.3s,mb5.0						
SJPF	Ste Jean	75.84	35	eP	P	23 51 45.7	-0.3
SJPF				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
SJPF	Ste Jean	75.84	35	eP	P	23 51 45.7	-0.3
	comp=Z,24nm,1.3s,mb5.0						
SSB	Saint Sauveur	75.85	30	eP	P	23 51 48.3	+2.3
SSB						23 51 59.6	
SSB				e		23 54 36.3	
MOTA	Moosalm	75.85	25	⇑ipP	pP	23 51 48.5	-0.8
	comp=Z,19nm,1.1s,SNR=9.1						
RJOB	Jochberg	75.92	24	eP	P	23 51 45.6	-0.8
	comp=Z,16nm,0.9s,mb5.0						
WATA	Walderalm	75.98	25	⇑ipP	pP	23 51 49.5	-0.6
	comp=Z,31nm,1.2s,SNR=9.5						
FETA	Feichten	76.05	26	⇑ipP	pP	23 51 49.0	-1.5
	comp=Z,22nm,1.1s,SNR=8.2						
WTTA	Wattenberg	76.07	25	⇑ipP	pP	23 51 50.2	-0.3
	comp=Z,47nm,1.2s,SNR=8.7						
NJ2	Nanjing	76.12	305	eP	P	23 51 50.6	+2.8
NJ2				AP	pP	23 51 54.6	+3.5
NJ2				XP	sP	23 51 57.6	+5.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,70nm,4.3s						
NJ2				LR	LR		
	comp=N,840nm,37.0s,MS5.2						
NJ2				LR	LR		
	comp=E,2µm,34.8s,MS5.2						
NJ2				LR	LR		
	comp=Z,2µm,36.1s,MS5.0						
TUE	Stuetta	76.18	27	eP	P	23 51 48.7	+0.8
	comp=Z,27nm,1.1s,mb5.1						
TUE				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
STHS	Stebnicka Huta	76.20	18	eP	P	23 51 49.7	+1.8
STHS				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
STHS	Stebnicka Huta	76.20	18	eP	P	23 51 49.7	+1.8
	comp=Z,15nm,1.1s,mb4.8						
AKASG	Malin Array Be	76.24	12	P	P	23 51 47.7	-0.4
	comp=Z,17nm,1.0s,mb4.9,baz=348,slow=5.4,SNR=23						
AKASG				LR	LR	00 24 46.5	
	comp=Z,2µm,20.0s,MS5.5,baz=340,slow=35						
AKASG	Malin Array Be	76.24	12	P	P	23 51 47.7	-0.5
AKASG				LR	LR	00 24 46.5	
AKBB	Malin Array Si	76.24	12	eP	P	23 51 47.6	-0.6
AKBB				e		23 51 58.3	
KWP	Kalwaria	76.26	17	eP	P	23 51 50.2	+1.9
KWP				e		23 54 36.9	
KWP				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
KWP				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
KWP	Kalwaria	76.26	17	eP	P	23 51 50.2	+1.9
	comp=Z,30nm,1.1s,mb5.1						
KWP				ePP	PP	23 54 36.9	-1.8
KWP				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
ETSF	Etsaut	76.27	35	eP	P	23 51 49.0	+0.5
	comp=Z,67nm,1.0s,mb5.2						
ETSF	Etsaut	76.27	35	eP	P	23 51 49.0	+0.5
ETSF				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
ETSF	Etsaut	76.27	35	eP	P	23 51 49.0	+0.5
	comp=Z,34nm,1.0s,mb5.2						
VIVF	Saint-Julien-l	76.27	30	eP	P	23 51 48.6	+0.2
	comp=Z,39nm,1.3s,mb4.9						
VIVF	Saint-Julien-l	76.27	30	eP	P	23 51 48.6	+0.2
VIVF				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
VIVF	Saint-Julien-l	76.27	30	eP	P	23 51 48.6	+0.2
	comp=Z,20nm,1.3s,mb4.9						
SMOL	Smolenice	76.28	21	eP	P	23 51 51.5	+3.1
PCBR	Castelo Branco	76.29	41	eP	P	23 51 50.1	+1.5
	comp=Z,29nm,2.1s,mb4.8						
PMAFR	Mafra	76.29	43	eS	S	00 01 35.5	+2.4
PMAFR				eLR	LR	00 16 03.7	
	comp=Z,3µm,17.8s						
LPL	La Plagne	76.30	29	eP	P	23 51 49.7	+1.1
	comp=Z,49nm,1.2s,mb5.0						
LPL	La Plagne	76.30	29	eP	P	23 51 49.7	+1.1
LPL				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
LPL	La Plagne	76.30	29	eP	P	23 51 49.7	+1.1
	comp=Z,24nm,1.2s,mb5.0						
LVV	L'vov	76.31	16	eP	P	23 51 52.0	+3.4
LPG	La Plagne	76.32	29	eP	P	23 51 50.0	+1.3
	comp=Z,113nm,1.6s,mb5.2						
LPG	La Plagne	76.32	29	eP	P	23 51 50.0	+1.3
LPG				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.2						
LPG	La Plagne	76.32	29	eP	P	23 51 50.0	+1.3
	comp=Z,56nm,1.6s,mb5.2						
KOLL	Kolacno	76.43	20	eP	P	23 51 50.5	+1.2
EPF	Esparros	76.47	34	eP	P	23 51 49.5	-0.1
	comp=Z,83nm,1.4s,mb5.2						
EPF	Esparros	76.47	34	eP	P	23 51 49.5	-0.1
EPF				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.2						
EPF	Esparros	76.47	34	eP	P	23 51 49.5	-0.1
	comp=Z,41nm,1.4s,mb5.2						
CSNA	Conrad Observa	76.48	22	⇑ipP	pP	23 51 50.9	-2.0
	comp=Z,20nm,1.1s						
CONA	Conrad Observa	76.48	22	⇑ipP	pP	23 51 50.9	-2.0
	comp=Z,24nm,1.1s,SNR=6.5						
VIEF	Viey	76.48	34	eP	P	23 51 53.0	+3.3
ZST	Bratislava	76.51	21	eP	P	23 51 50.6	+0.9
	comp=Z,79nm,1.8s,mb5.3						
ZST				LR	LR		
	comp=Z,2µm,20.5s,MS5.4						
LIS	Lisbon	76.55	43	eP	P	23 51 50.2	+0.1
LIS				eS	S	00 01 35.4	-0.5
LIS				AMS	AMS	00 23 14.5	
	comp=Z,3µm,19.4s,MS5.6						
ORIF	Oris-en-Rattie	76.59	30	eP	P	23 51 50.6	+0.4
	comp=Z,36nm,1.2s,mb4.9						
ORIF				eMLR	MLR		
	comp=Z,4µm,20.8s,MS5.4						
ORIF	Oris-en-Rattie	76.59	30	eP	P	23 51 50.6	+0.4
ORIF				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
ORIF	Oris-en-Rattie	76.59	30	eP	P	23 51 50.6	+0.4
	comp=Z,18nm,1.2s,mb4.9						
VYHS	Vyhne	76.60	20	eP	P	23 51 51.3	+1.1
	comp=Z,95nm,2.9s,mb5.2						
VYHS				LR	LR		
	comp=Z,1µm,27.1s,MS5.0						
RESF	Ens	76.66	34	eP	P	23 51 52.7	+2.0
KBA	Koelnbreinsper	76.67	24	⇑ipP	pP	23 51 52.3	-1.7
	comp=Z,37nm,1.2s						
PMRV	Marv??o	76.67	41	eP	P	23 51 52.1	+1.3
	comp=Z,35nm,1.8s,mb5.0						
PMRV				eS	S	00 01 47.1	+10
PMRV				eLR	LR	00 16 10.9	
	comp=Z,1µm,18.7s						
EBIE	Bielsa	76.70	34	P	P	23 51 52.7	+1.8
	comp=Z,128nm,1.7s,mb5.6						
BNI	Bardonecchia	76.71	29	eP	P	23 51 52.5	+1.6
BNI				e		23 52 02.7	
BNI				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
BNI				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.7						
BNI	Bardonecchia	76.71	29	eP	P	23 51 52.5	+1.6
	comp=Z,23nm,1.4s,mb4.9						
BNI				ePcP	PcP	23 52 02.6	+0.4
BNI				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
LASF	Ste Croix	76.71	31	eP	P	23 51 51.2	+0.3
	comp=Z,219nm,1.9s,mb5.5						
VSR	Storozhevoye	76.72	6	eP	P	23 51 50.4	-0.5
VSR				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
VSR				pmax	pmax		
	comp=N,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=E,9.0nm,1.1s						
CRVS	Cervenica-Dubn	76.73	18	eP	P	23 51 52.9	+1.9
CRVS				e		23 51 58.7	
CRVS				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.1						
CRVS				MLR	MLR		
	comp=Z,2µm,21.9s,MS5.3						
CRVS	Cervenica-Dubn	76.73	18	eP	P	23 51 52.9	+1.9
CRVS				e		23 51 58.7	
CRVS	Cervenica-Dubn	76.73	18	eP	P	23 51 52.9	+1.9
	comp=Z,35nm,1.5s,mb5.1						
CRVS				e		23 51 58.7	
CRVS				LR	LR		
	comp=Z,2µm,21.9s,MS5.3						
MTLF	Montolieu	76.83	33	eP	P	23 51 52.0	+0.4
	comp=Z,106nm,1.7s,mb5.2						
MTLF	Montolieu	76.83	33	eP	P	23 51 52.0	+0.4
MTLF				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.2						
MTLF	Montolieu	76.83	33	eP	P	23 51 52.0	+0.4
	comp=Z,53nm,1.7s,mb5.2						
KOLS	Kolonicke sedl	76.85	17	eP	P	23 51 54.7	+3.0
	comp=Z,97nm,2.4s,mb5.3						
KOLS				LR	LR		
	comp=Z,1µm,22.7s,MS5.2						
GUD	Guadarrama	76.91	38	P	P	23 51 53.9	+1.8
GUD				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
GUD	Guadarrama	76.91	38	P	P	23 51 53.9	+1.8
	comp=Z,12nm,0.9s,mb4.8						
VRHR	Novokhopersk	76.98	4	eP	P	23 51 52.6	+0.3
VRHR				pmax	pmax		
	comp=Z,30nm,1.7s,mb5.0						
VRHR				pmax	pmax		
	comp=N,30nm,1.4s						
VRHR				pmax	pmax		
	comp=E,20nm,0.8s						
MBDF	Montbardon	77.03	29	eP	P	23 51 52.6	-0.1
	comp=E,65nm,1.1s,mb5.2						
MBDF	Montbardon	77.03	29	eP	P	23 51 52.6	-0.1
MBDF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
MBDF	Montbardon	77.03	29	eP	P	23 51 52.6	-0.1
	comp=Z,32nm,1.1s,mb5.2						
PESTR	Estremoz	77.07	42	eP	P	23 51 55.2	+2.1
	comp=Z,43nm,2.0s,mb5.0						
PESTR				eS	S	00 01 50.5	+8.9
PESTR				eLQ		00 12 25.4	
PESTR				eLR	LR	00 16 22.8	
	comp=Z,2µm,18.0s						
UZH	Uzhgorod	77.15	17	eP	P	23 51 54.4	+1.1
UZH				i	pP	23 51 56.6	0.0
UZH				i		23 52 10.6	
UZH				eS	S	00 01 42.0	-0.1
UZH				e		00 02 00.0	
UZH				ePS		00 02 22.0	
UZH				MLR	MLR		
	comp=N,2µm,17.0s,MS5.6						
UZH				MLR	MLR		
	comp=E,2µm,17.0s,MS5.6						
UZH				MLR	MLR		
	comp=Z,900nm,17.0s,MS5.2						
EVO	Evora	77.18	42	eP	P	23 51 54.0	+0.3
	comp=Z,58nm,1.2s,mb5.1						
EVO				eMLR	MLR		
	comp=Z,4µm,21.0s,MS5.4						
EVO	Evora	77.18	42	eP	P	23 51 55.8	+2.1
	comp=Z,55nm,1.6s,mb5.2						
MK31	Makanchi Array	77.28	337	eP	P	23 51 52.9	-1.2
MK31				e		23 52 04.4	
MK31				e		23 54 48.6	
MKAR	Makanchi Array	77.28	337	P	P	23 51 52.6	-1.4
	comp=Z,4.7nm,0.8s,mb4.5,baz=36,slow=4.6,SNR=26						
MKAR				LR	LR	00 31 31.3	
	comp=Z,2µm,18.9s,MS5.4,baz=10.0,slow=40						
MKAR	Makanchi Array	77.28	337	⇑eP	P	23 51 52.7	-1.4
ESAC	San Caprasio	77.33	35	P	P	23 51 56.1	+1.7
	comp=Z,152nm,1.2s,mb5.8						
SMRF	Simiane la Rot	77.34	30	eP	P	23 51 54.4	-0.1
	comp=Z,95nm,1.4s,mb5.2						
SMRF	Simiane la Rot	77.34	30	eP	P	23 51 54.4	-0.1
	comp=Z,95nm,1.4s,mb5.5						
PSZ	Piszkesteto	77.36	19	⇓iP	P	23 51 55.5	+0.9
PSZ	Piszkesteto	77.36	19	P	P	23 51 56.7	+2.2
PRAF	Pradon	77.37	31	eP	P	23 51 56.3	+1.6
EBAD	Badajoz	77.40	41	P	P	23 51 55.2	+0.3
	comp=Z,71nm,1.5s,mb5.4						
SOKA	Soboth	77.46	23	⇑ipP	pP	23 51 55.9	-2.5
	comp=Z,47nm,1.2s						
VILF	Villemus	77.50	30	eP	P	23 51 57.2	+1.8
PERS	Pernice	77.52	23	i P	P	23 51 58.2	+2.7
ETOR	Torete	77.55	37	P	P	23 51 57.5	+1.8
ETOR				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
ETOR	Torete	77.55	37	P	P	23 51 57.5	+1.8
	comp=Z,11nm,0.8s,mb4.8						
PAB	San Pablo	77.78	39	eP	P	23 51 56.9	-0.1
PAB				e		23 52 06.7	
PAB				e		23 54 49.7	
PAB				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
PAB				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.6						
PAB	San Pablo	77.78	39	eP	P	23 51 56.9	-0.2

PAB *e*PcP PcP 23 52 06.7 -0.3
PAB *e*PP PP 23 54 49.7 -2.1
PAB LR LR
comp=Z,3µm,20.0s,MS5.6
ESDC Sonseca Array 77.82 39 P **P 23 51 57.2 0.0**
comp=Z,9.2nm,0.9s,mb4.7,baz=321,slow=4.8,SNR=28
ESDC Sonseca Array 77.82 39 P **P 23 51 57.7 +0.4**
comp=Z,13nm,1.0s,mb4.8
ESLA Sonseca Array 77.82 39 *e*P **P 23 51 56.7 -0.6**
comp=Z,7.1nm,1.2s,mb4.5
ESLA *e*PP PP 23 54 52.0 -0.1
ESLA LR LR
comp=Z,11µm,20.0s,MS6.2
TOUF Mont Tournerai 77.82 29 *e*P **P 23 52 00.3 +3.1**
EJON La Jonquera 77.85 33 P **P 23 51 59.9 +2.5**
comp=Z,70nm,1.3s,mb5.4
PBAR Barrancos 77.88 42 *e*P **P 23 51 59.0 +1.4**
comp=Z,27nm,1.5s,mb5.0
PBAR *e*S S 00 01 54.9 +4.4
PBAR *e*LR LR 00 16 46.5
comp=Z,1µm,20.4s
AUTN L'Aution 77.89 29 *e*P **P 23 52 00.5 +2.9**
SAOF Saorge 77.94 29 *e*P **P 23 52 00.9 +3.1**
CALN Calern 77.95 29 *e*P **P 23 52 00.5 +2.6**
MORF Marmelete 77.95 43 *e*P **P 23 51 59.3 +1.3**
MORF *e*S S 00 01 59.2 +8.0
MORF *e*LR LR 00 17 16.2
comp=Z,2µm,19.4s
JAVS Javornik 77.96 24 *i* P **P 23 52 00.4 +2.5**
BERF Bertagne 77.98 30 *e*P **P 23 51 58.9 +0.8**
SBF Sospel 78.01 29 *e*P **P 23 51 58.1 -0.1**
comp=Z,57nm,1.0s,mb5.2
SBF Sospel 78.01 29 *e*P **P 23 51 58.1 -0.1**
SBF pmax pmax
comp=Z,28nm,1.0s,mb5.2
SBF Sospel 78.01 29 *e*P **P 23 51 58.1 -0.1**
comp=Z,28nm,1.0s,mb5.2
PMAR Madeira 78.02 52 *e*P **P 23 52 02.4 +3.9**
PFVI Vila Bisbo 78.02 43 *e*S S 00 01 59.9 +7.9
PFVI *e*LR LR 00 16 42.1
comp=Z,1µm,20.0s
FRF La Foret Royal 78.05 30 *e*P **P 23 51 58.6 +0.1**
comp=Z,89nm,1.1s,mb5.3
FRF La Foret Royal 78.05 30 *e*P **P 23 51 58.6 +0.1**
FRF pmax pmax
comp=Z,45nm,1.1s,mb5.3
FRF La Foret Royal 78.05 30 *e*P **P 23 51 58.6 +0.1**
comp=Z,44nm,1.1s,mb5.3
TRI Trieste 78.06 24 PFAKE 23 52 10.0 +12
TRI LR LR
comp=Z,1µm,19.0s,MS5.3
EPOB Poblet 78.20 34 P **P 23 52 01.0 +1.7**
comp=Z,144nm,1.8s,mb5.6
LMR La Mourre 78.21 30 *e*P **P 23 51 58.6 -0.8**
comp=Z,82nm,1.2s,mb5.2
LMR La Mourre 78.21 30 *e*P **P 23 51 58.6 -0.8**
LMR pmax pmax
comp=Z,41nm,1.2s,mb5.2
LMR La Mourre 78.21 30 *e*P **P 23 51 58.6 -0.8**
comp=Z,41nm,1.2s,mb5.2
EGRO El Granado 78.25 42 P **P 23 52 01.2 +1.5**
comp=Z,94nm,1.4s,mb5.5
PVAQ Vaqueiros 78.26 43 *e*P **P 23 52 02.4 +2.7**
comp=Z,44nm,1.5s,mb5.2
PVAQ *e*S S 00 01 58.2 +3.7
PVAQ *e*LR LR 00 16 42.5
comp=Z,2µm,18.4s
ERTA Horta de San J 78.29 35 P **P 23 52 01.3 +1.5**
comp=Z,201nm,1.9s,mb5.7
PBDV Barranco-do-Ve 78.31 43 *e*P **P 23 52 01.5 +1.5**
PBDV *e*LR LR 00 17 05.6
comp=Z,1µm,18.4s
EMIN Mina Concepcio 78.38 42 P **P 23 52 02.0 +1.6**
comp=Z,153nm,1.8s,mb5.6
GTA Gaotai 78.50 322 *e*P **P 23 52 00.0 -1.0**
GTA AP pP 23 52 04.1 -0.2
GTA XP sP 23 52 06.1 +0.6
GTA PP PP 23 54 59.1 +1.3
GTA AMB AMB
comp=Z,8.0nm,2.2s,mb4.3
GTA AMB AMB
comp=Z,234nm,6.9s
GTA LR LR
comp=N,887nm,16.5s,MS5.5
GTA LR LR
comp=E,2µm,16.2s,MS5.5
GTA LR LR
comp=Z,2µm,27.9s
EMOS Mosqueruela 78.53 36 P **P 23 52 04.1 +3.0**
comp=Z,134nm,1.6s,mb5.6
VLC Villacollemand 78.60 27 PFAKE 23 52 10.0 +8.5
VLC LR LR
comp=Z,3µm,19.0s,MS5.7
WMQ Urumqi 78.61 332 *e*P **P 23 52 00.6 -0.9**
WMQ XP sP 23 52 07.3 +1.3
WMQ PP PP 23 55 00.2 +1.7
WMQ AMB AMB
comp=Z,15nm,1.4s,mb4.7
WMQ AMB AMB
comp=Z,487nm,6.0s
WMQ LR LR
comp=N,2µm,16.0s,MS5.7
WMQ LR LR
comp=E,1µm,15.5s,MS5.7
WMQ LR LR
comp=Z,2µm,18.0s,MS5.5
BOJS Bojanci 78.61 23 *i* P **P 23 52 02.3 +0.8**
BUR08 Bucovina Ar. S 78.61 16 *e*P **P 23 52 01.9 +0.4**
BUR08 *e*PcP PcP 23 52 10.4 -0.1
BURAR Bucovina Array 78.65 16⇓ *i*P **P 23 52 02.1 +0.4**
BURAR Bucovina Array 78.65 16⇓ P **P 23 52 02.1 +0.5**
PKSM Moragy 78.72 21⇑ *i*P **P 23 52 02.4 +0.3**
PKSM Moragy 78.72 21 P **P 23 52 02.4 +0.3**
EADA Adamuz 78.88 40 P **P 23 52 04.4 +1.2**
comp=Z,46nm,1.1s,mb5.3
DRGR 79.00 18⇑ *i*P **P 23 52 04.6 +1.0**
DRGR 79.00 18 P **P 23 52 04.7 +1.1**
ECHE Chera 79.02 37 P **P 23 52 06.2 +2.3**
ECHE pmax pmax
comp=Z,12nm,0.8s,mb4.9
ECHE Chera 79.02 37 P **P 23 52 06.2 +2.3**
comp=Z,12nm,0.8s,mb4.9
EBAN Banos Encina 79.20 39 P **P 23 52 07.5 +2.6**
EBAN pmax pmax
comp=Z,20nm,1.1s,mb5.0
EBAN Banos Encina 79.20 39 P **P 23 52 07.5 +2.6**
comp=Z,20nm,1.1s,mb5.0
NNA Nana 79.26 126 *e*P **P 23 52 05.8 +0.5**
comp=Z,45nm,1.1s,mb5.3
NNA *e*PcP PcP 23 52 13.5 -0.1
NNA *e*PP PP 23 55 04.4 -0.9
NNA LR LR
comp=Z,1µm,20.0s,MS5.2
XAN Xi'an 79.28 313 P **P 23 52 03.6 -1.8**
XAN AP pP 23 52 07.4 -1.3
XAN PP PP 23 55 02.7 -1.8
XAN AMB AMB
comp=Z,24nm,1.2s,mb5.0
XAN LR LR
comp=N,407nm,25.6s,MS5.0
XAN LR LR
comp=E,708nm,26.6s,MS5.0
XAN LR LR
comp=Z,2µm,20.7s
EVIA Vianos 79.28 38 P **P 23 52 06.6 +1.3**
EVIA pmax pmax
comp=Z,31nm,1.0s,mb5.2
EVIA Vianos 79.28 38 P **P 23 52 06.6 +1.3**
comp=Z,31nm,1.0s,mb5.2
IAS Iasi 79.43 14 P **P 23 52 06.7 +0.7**
ESPR Espera 79.49 42 P **P 23 52 07.8 +1.3**
comp=Z,23nm,1.3s,mb5.0
WHN Wuhan 79.60 307 P **P 23 52 06.7 -0.5**
ETOB Tobarra 79.64 38 P **P 23 52 07.5 +0.3**
comp=Z,58nm,1.3s,mb5.3
PGF Pioggiola 79.68 29 *e*P **P 23 52 07.8 +0.4**
comp=Z,110nm,1.4s,mb5.3
PGF Pioggiola 79.68 29 *e*P **P 23 52 07.8 +0.4**
PGF pmax pmax
comp=Z,55nm,1.4s,mb5.3
PGF Pioggiola 79.68 29 *e*P **P 23 52 07.8 +0.4**
comp=Z,55nm,1.4s,mb5.3
SFS San Fernando 79.69 42 PFAKE 23 52 20.0 +12
SFS LR LR
comp=Z,3µm,20.0s,MS5.7

LZH Lanzhou 79.76 317 *e*P **P 23 52 08.0 0.0**
LZH AP pP 23 52 13.5 +2.2
LZH XP sP 23 52 17.7 +5.2
LZH PP PP 23 55 11.0 +2.6
LZH AMB AMB
comp=Z,38nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,344nm,7.8s
LZH LR LR
comp=E,2µm,15.8s
LZH LR LR
comp=Z,3µm,17.9s,MS5.7
EQES Quesada 79.79 39 P **P 23 52 09.1 +1.0**
comp=Z,42nm,1.4s,mb5.2
KIS Kishinev 79.81 14 *e*P **P 23 52 08.0 0.0**
KIS *i* pP 23 52 12.0 +0.7
KIS *e* 23 55 10.0
KIS *e*PPP 23 56 58.0
KIS *e*S S 00 02 10.0 -0.7
KIS *e*PS 00 02 54.0
KIS MLR MLR
comp=N,1µm,18.0s,MS5.3
KIS MLR MLR
comp=E,800nm,18.0s,MS5.3
KIS MLR MLR
comp=Z,1µm,18.0s,MS5.3
KIS MLR MLR
comp=Z,1µm,18.0s
KIS Kishinev 79.81 14 *e*PP PP 23 55 10.0 +1.6
BZS Buzias 79.91 19⇑ *i*P **P 23 52 09.3 +0.7**
BZS Buzias 79.91 19 P **P 23 52 09.6 +1.0**
ELOJ Sierra Loja 79.93 40 P **P 23 52 10.0 +1.1**
ELOJ pmax pmax
comp=Z,14nm,1.3s,mb4.7
ELOJ Sierra Loja 79.93 40 P **P 23 52 10.0 +1.1**
comp=Z,14nm,1.3s,mb4.7
EJIF Jimena Fronter 80.00 41 P **P 23 52 11.4 +2.1**
EJIF pmax pmax
comp=Z,14nm,1.0s,mb4.8
EJIF Jimena Fronter 80.00 41 P **P 23 52 11.4 +2.2**
comp=Z,14nm,1.0s,mb4.9
ECOG Cogollos-Vega 80.05 40 P **P 23 52 11.8 +2.3**
ECOG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ECOG Cogollos-Vega 80.05 40 P **P 23 52 11.8 +2.3**
comp=Z,10nm,0.9s,mb4.8
ERON Agron 80.18 40 P **P 23 52 12.4 +2.1**
comp=Z,12nm,0.8s,mb4.9
EMIJ Mijas 80.19 41 P **P 23 52 12.8 +2.5**
comp=Z,104nm,1.7s,mb5.5
ETOS Mallorca 80.22 34 P **P 23 52 12.2 +1.8**
comp=Z,399nm,2.1s,mb6.0
GZR Gura Zlata 80.35 18⇑ *i*P **P 23 52 11.3 +0.3**
GZR Gura Zlata 80.35 18 P **P 23 52 12.0 +1.0**
TATO Taipei 80.39 298 PFAKE 23 52 20.0 +8.4
TATO LR LR
comp=Z,1µm,19.0s,MS5.3
EMUR La Murta 80.46 38 P **P 23 52 12.9 +1.2**
comp=Z,97nm,1.5s,mb5.5
VRI Vrincioaia 80.59 15⇑ *i*P **P 23 52 13.8 +1.5**
VRI Vrincioaia 80.59 15 P **P 23 52 13.7 +1.4**
PLOR Plostina 80.60 15⇑ *i*P **P 23 52 12.8 +0.5**
YHNB Yeheng 80.70 298 PFAKE 23 52 20.0 +6.8
YHNB LR LR
comp=Z,1µm,19.0s,MS5.2
VOIR 80.73 16⇓ *i*P **P 23 52 13.8 +0.8**
VOIR 80.73 16⇓ P **P 23 52 13.8 +0.8**
AQU L'Aquila 81.09 26 PFAKE 23 52 30.0 +15
AQU LR LR
comp=Z,2µm,20.0s,MS5.5
RTC Rabat Centre 81.54 44 PFAKE 23 52 30.0 +12
RTC LR LR
comp=Z,1µm,21.0s,MS5.2
TLCR 81.58 14⇑ *i*P **P 23 52 18.3 +0.7**
TLCR 81.58 14⇑ P **P 23 52 18.3 +0.7**
QZH Quanzhou 81.97 300 P **P 23 52 18.1 -1.9**
QZH LR LR
comp=N,5µm,24.9s
QZH LR LR
comp=E,2µm,12.6s
QZH LR LR
comp=Z,2µm,18.0s
TIRR Tirgusor 82.23 14⇓ *i*P **P 23 52 21.6 +0.6**
TIRR Tirgusor 82.23 14⇓ P **P 23 52 21.6 +0.6**
TKM2 Tokmak 2 82.46 340 *e*P **P 23 52 21.8 -0.4**
TKM2 *e* 23 52 27.4
TKM2 pmax pmax
comp=Z,23nm,1.0s,mb5.1
TKM2 MLR MLR
comp=Z,2µm,20.0s,MS5.4
TKM2 Tokmak 2 82.46 340 *e*P **P 23 52 21.8 -0.4**
comp=Z,23nm,1.0s,mb5.1
TKM2 *e*PcP PcP 23 52 27.4 +0.1
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.4
FRU Bishkek 82.74 341 *e*P **P 23 52 23.0 -0.7**
FRU pmax pmax
comp=Z,210nm,2.8s,mb5.7
AAK Ala-Archa 82.96 341 P **P 23 52 25.2 +0.4**
comp=Z,64nm,0.9s,mb5.7,SNR=5.4
AAK Ala-Archa 82.96 341⇑ *i*P **P 23 52 23.8 -1.0**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
ANN Anapa 82.97 8 *e*P **P 23 52 23.7 -1.1**
ANN *e*S S 00 02 42.5 -1.1
ANN pmax pmax
comp=Z,411nm,8.8s
ANN MLR MLR
comp=Z,1µm,15.0s,MS5.3
EKS2 Erkin-Say 83.08 342 *e*P **P 23 52 25.2 -0.3**
comp=Z,24nm,1.2s,mb5.1
EKS2 *e*PcP PcP 23 52 30.0 -0.1
EKS2 LR LR
comp=Z,2µm,19.0s,MS5.4
VTS Vitosha 83.14 19 P **P 23 52 25.8 +0.1**
UCH Uchtor 83.35 341 PFAKE 23 52 40.0 +13
UCH LR LR
comp=Z,724nm,21.0s,MS5.0
PGB Panagyurishte 83.36 18 P **P 23 52 25.2 -1.7**
SKO Skopje 83.37 20 *e*P **P 23 52 31.5 +4.5**
AML Almayashu 83.60 341 *e*P **P 23 52 28.2 +0.1**
comp=Z,19nm,1.0s,mb5.2
AML *e*PcP PcP 23 52 32.4 0.0
AML LR LR
comp=Z,2µm,19.0s,MS5.5
TIR Tirane 83.63 21 PFAKE 23 52 40.0 +12
TIR LR LR
comp=Z,2µm,21.0s,MS5.6
STIP Stip 83.79 20 *e*P **P 23 52 30.9 +1.7**
JMB Yambol 83.88 16 P **P 23 52 30.7 +1.1**
KRUS Krusevo 83.91 20 *e*P **P 23 52 32.0 +2.3**
CUC Castrocucco 83.94 25 PFAKE 23 52 40.0 +10
CUC LR LR
comp=Z,2µm,22.0s,MS5.5
KIV Kislovodsk 84.15 4 *e*P **P 23 52 30.6 -0.3**
KIV *e* 00 02 53.8
KIV *e*SS SS 00 08 24.4 +1.7
KIV pmax pmax
comp=Z,28nm,1.1s,mb5.3
KIV Kislovodsk 84.15 4⇑ *i*P **P 23 52 30.6 -0.3**
MMB Musomiste 84.20 18 P **P 23 52 31.5 +0.3**
CD2 Chengdu 84.23 315 P **P 23 52 30.6 -1.0**
CD2 AP pP 23 52 34.4 -0.5
CD2 XP sP 23 52 36.6 +0.5
CD2 PP PP 23 55 45.2 -0.1
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.2
CD2 AMB AMB
comp=Z,290nm,8.7s
CD2 LR LR
comp=N,2µm,20.2s
CD2 LR LR
comp=Z,2µm,16.6s,MS5.5
VAY Valandovo 84.23 19 *e*P **P 23 52 33.4 +2.0**
VAY Valandovo 84.23 19 P **P 23 52 32.5 +1.1**
BIA Bitola 84.26 20 *e*P **P 23 52 32.0 +0.5**
RZN Rozhen 84.30 18 P **P 23 52 30.2 -1.5**
SOC Sochi 84.36 6 *e*P **P 23 52 30.2 -1.8**
SOC *e**SP sP 23 52 34.9 -1.6
SOC *e*S S 00 02 53.2 -4.4
SOC *e*SS SS 00 08 31.8 +6.1
SOC *e*SSS 00 12 02.4
SOC pmax pmax
comp=Z,23nm,0.8s,mb5.4

SOC MLR MLR
comp=Z,1µm,20.0s,MS5.2
KDZ Kurdzhali 84.46 17 P **P 23 52 32.7 +0.1**
HNR Honiara 84.60 247 PFAKE 23 52 40.0 +6.5
HNR LR LR
comp=Z,949nm,22.0s,MS5.1
TIP Timpagrande 84.94 24 PFAKE 23 52 50.0 +15
TIP LR LR
comp=Z,2µm,22.0s,MS5.4
MAK Makhachkala 85.28 1 *e*P **P 23 52 33.1 -3.5**
MAK *e*S S 00 02 56.7 -10
MAK pmax pmax
comp=Z,386nm,1.5s,mb6.3
MAK MLR MLR
comp=Z,2µm,23.0s,MS5.4
CEL Celeste 85.59 25 PFAKE 23 52 50.0 +12
CEL LR LR
comp=Z,955nm,20.0s,MS5.2
ARE Arequipa 85.76 124 *e*P **P 23 52 43.0 +3.8**
BALT Daday 85.79 11 *i* P **P 23 52 44.5 +5.4**
KEST Kesra 86.04 31 P **P 23 52 39.9 -0.7**
comp=Z,5.7nm,1.0s,mb4.8,baz=278,slow=10,SNR=2.6
KEST LR LR 00 34 24.5
comp=Z,699nm,18.9s,MS5.1,baz=100,slow=38
GYA Guiyang 86.71 310 P **P 23 52 43.1 -0.9**
GYA PP PP 23 56 05.6 +0.1
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,470nm,7.7s
GYA LR LR
comp=N,1µm,22.7s,MS5.5
GYA LR LR
comp=E,2µm,20.6s,MS5.5
GYA LR LR
comp=Z,2µm,19.1s,MS5.4
CTKT Corum 86.85 10 *i* P **P 23 52 48.9 +4.5**
DAGI Agillar 86.98 5 *i* P **P 23 52 52.2 +7.1**
BORA Eskisehir 87.02 14 *i* P **P 23 52 50.0 +4.7**
DDEM Demirkent 87.16 5 *i* P **P 23 52 55.9 +10**
ESKT Eskisehir 87.43 14 *i* P **P 23 52 55.3 +8.0**
WDD Wield Dalam 87.46 27 PFAKE 23 53 00.0 +12
WDD LR LR
comp=Z,2µm,20.0s,MS5.5
BR131 Keskin Array S 87.60 11 *e*P **P 23 52 48.4 +0.3**
comp=Z,11nm,1.0s,mb5.0
BR131 LR LR
comp=Z,764nm,21.0s,MS5.1
BRTR Keskin Array B 87.60 11 P **P 23 52 48.2 +0.1**
comp=Z,3.8nm,0.9s,mb4.6,baz=356,slow=1.7,SNR=13
BRTR LR LR 00 38 01.2
comp=Z,831nm,19.0s,MS5.2,baz=348,slow=40
GDZ Gediz 87.65 15 *i* P **P 23 52 51.8 +3.4**
CDAG Cicekdag 87.79 11 *i* P **P 23 52 52.1 +3.1**
HOMI Horasan 88.01 5 *i* P **P 23 53 03.5 +13**
GNI Garni 88.03 3⇑ *i*P **P 23 52 51.4 +1.3**
GNI pmax pmax
comp=Z,34nm,2.0s
ERZM Erzurum 88.12 5 *i* P **P 23 53 02.1 +11**
KHAL Karahalli 88.35 15 *i* P **P 23 52 54.0 +2.3**
KEMA Kemaliye 88.55 8 *i* P **P 23 52 56.4 +3.8**
KDHN Kadinhani 88.59 13 *i* P **P 23 52 53.4 +0.6**
ISP Isparta 89.02 14⇑ *i*P **P 23 52 52.7 -2.2**
ISP Isparta 89.02 14 *e*P **P 23 52 54.3 -0.5**
ISP LR LR
comp=Z,1µm,21.0s,MS5.3
KMI Kunming 89.66 313 P **P 23 52 57.9 -0.2**
KMI XP sP 23 53 02.4 -0.2
KMI PP PP 23 56 30.0 +0.8
KMI AMB AMB
comp=Z,9.0nm,0.5s,mb5.4
KMI AMB AMB
comp=Z,150nm,8.2s
KMI LR LR
comp=N,1µm,19.6s,MS5.5
KMI LR LR
comp=E,1µm,20.4s,MS5.5
KMI LR LR
comp=Z,807nm,18.8s,MS5.2
ANDN Andirin 90.03 10 *i* P **P 23 53 03.8 +4.2**
BEST Besiri 90.12 6 *i* P **P 23 53 13.9 +14**
ATAB Bozova 90.32 8 *i* P **P 23 53 06.2 +5.2**
LSA Lhasa 90.36 324 *e*P **P 23 53 02.1 +0.8**
LSA pmax pmax
comp=Z,20nm,1.4s,mb5.2
LSA MLR MLR
comp=Z,2µm,22.0s,MS5.5
LSA Lhasa 90.36 324 *e*P **P 23 53 02.1 +0.9**
comp=Z,20nm,1.4s,mb5.3
LSA LR LR
comp=Z,2µm,22.0s,MS5.5
HAKT HAKKARI 90.58 4 *i* P **P 23 53 17.7 +16**
RAO Raoul Island 90.66 219 PFAKE 23 53 10.0 +7.6
RAO LR LR
comp=Z,1µm,22.0s,MS5.3
QIZ Qiongzhong 91.40 304 P **P 23 53 04.3 -1.9**
QIZ XP sP 23 53 09.9 -0.9
QIZ PP PP 23 56 45.4 +2.2
QIZ AMB AMB
comp=Z,182nm,9.9s
QIZ LR LR
comp=E,1µm,21.7s
QIZ LR LR
comp=Z,1µm,19.7s,MS5.3
QIZ Qiongzhong 91.40 304 PFAKE 23 53 20.0 +14
QIZ LR LR
comp=Z,1µm,20.0s,MS5.3
KBL Kabul 91.83 343 *e*P **P 23 53 08.2 +0.2**
KBL *e* 23 56 45.7
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
KBL Kabul 91.83 343 *e*P **P 23 53 08.2 +0.2**
comp=Z,9.7nm,1.0s,mb5.1
KBL *e*PP PP 23 56 45.7 -0.2
NIL Nilore 91.87 340 PFAKE 23 53 20.0 +12
NIL LR LR
comp=Z,256nm,19.0s,MS4.7
PMG Port Moresby 92.09 257 PFAKE 23 53 20.0 +11
PMG LR LR
comp=Z,574nm,21.0s,MS5.0
LVC Limon Verde 92.22 125 LR LR 00 35 15.1
comp=Z,686nm,18.4s,MS5.1,baz=325,slow=36
LVC Limon Verde 92.22 125 PFAKE 23 53 20.0 +10
LVC LR LR
comp=Z,1µm,19.0s,MS5.3
DAV Davao City (W) 92.33 285 PFAKE 23 53 20.0 +9.4
DAV LR LR
comp=Z,589nm,20.0s,MS5.0
TAPN Taplejung 93.72 326 *e*P **P 23 53 16.0 -0.9**
comp=Z,37nm,1.0s,mb5.8
SHL Shillong 93.82 322 *e*P **P 23 53 18.0 +0.7**
GUN Gumba 93.83 327 *e*P **P 23 53 16.5 -0.8**
comp=Z,68nm,0.9s,mb6.1
JIRN Jiri 93.96 327 *e*P **P 23 53 17.3 -0.6**
comp=Z,54nm,1.0s,mb5.9
DANN Dangsing 94.11 329 *e*P **P 23 53 17.8 -0.8**
comp=Z,62nm,1.0s,mb6.0
KKN Kakani 94.14 328 *e*P **P 23 53 17.8 -1.0**
GKN Gorkha 94.15 328 *e*P **P 23 53 17.7 -1.1**
comp=Z,37nm,1.0s,mb5.8
ODAN Odare 94.28 326 *e*P **P 23 53 18.1 -1.3**
comp=Z,39nm,1.1s,mb5.8
PKI Pulchoki 94.30 328 *e*P **P 23 53 18.4 -1.1**
DMN Daman 94.36 328 *e*P **P 23 53 19.1 -0.7**
RAMN Ramite 94.47 326 *e*P **P 23 53 19.0 -1.3**
comp=Z,27nm,0.9s,mb5.7
KOLN Koldanda 94.70 329 *e*P **P 23 53 19.1 -2.2**
comp=Z,29nm,1.1s,mb5.6
LCO Las Campanas 96.69 130 *e*P **P 23 53 30.9 +0.8**
LCO LR LR
comp=Z,1µm,21.0s,MS5.3
CHTO Chiang Mai 96.86 313 *e*P **P 23 53 30.9 -0.4**
CHTO pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
CHTO MLR MLR
comp=Z,921nm,19.0s,MS5.3
CHTO Chiang Mai 96.86 313 *e*P **P 23 53 30.9 -0.4**
comp=Z,5.9nm,1.1s,mb4.9
CHTO LR LR
comp=Z,921nm,19.0s,MS5.3
CM31 Chiang Mai Arr 97.17 312 PFAKE 23 53 40.0 +7.3
CM31 LR LR
comp=Z,840nm,20.0s,MS5.2
CMAR Chiang Mai Arr 97.17 312 P **P 23 53 31.5 -1.2**
comp=Z,3.7nm,0.8s,mb4.9,baz=9.9,slow=4.4,SNR=21

CMAR				LR	LR	00 40 45.9	
	comp=Z,900nm,18.9s,MS5.3,baz=205,slow=38						
RCBR	**Riachuelo**	**98.00**	**89**	PFAKE		23 53 50.0	+14
RCBR				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
BDFB	**Brasilia**	**98.25**	**105**	LR	LR	00 39 19.3	
	comp=Z,731nm,19.4s,MS5.2,baz=142,slow=36						
BDFB	**Brasilia**	**98.25**	**105**	PFAKE		23 53 50.0	+13
BDFB				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
KKM	**Kota Kinabalu**	**98.64**	**291**	PFAKE		23 53 50.0	+11
KKM				LR	LR		
	comp=Z,373nm,22.0s,MS4.8						
CTAO	**Charters Tower**	**101.00**	**252**	PFAKE		23 54 00.0	+10
CTAO				LR	LR		
	comp=Z,638nm,20.0s,MS5.1						
CPUP	**Villa Florida**	**101.33**	**118**	PFAKE		23 54 00.0	+8.8
CPUP				LR	LR		
	comp=Z,208nm,19.0s,MS4.7						
TORD	**Torodi Ar. Bea**	**103.47**	**47**	PP	PP	23 58 19.7	+3.7
	comp=Z,2.2nm,1.1s,baz=318,slow=6.2,SNR=4.5						
TORD				PKKPbc	PKKPbc	00 09 53.0	+1.3
	comp=Z,0.6nm,1.1s,baz=139,slow=3.1,SNR=4.4						
SNZO	**South Karori**	**104.10**	**219**	PFAKE		23 54 10.0	+6.4
SNZO				LR	LR		
	comp=Z,2μm,22.0s,MS5.5						
KAPI	**Kappang**	**105.42**	**282**	PFAKE		23 58 30.0	+6.8
KAPI				LR	LR		
	comp=Z,315nm,20.0s,MS4.9						
DBIC	**Dimbokro**	**105.93**	**56**	PFAKE		23 58 40.0	+16
DBIC				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
PLCA	**Paso Flores**	**106.52**	**136**	PFAKE		23 58 40.0	+16
PLCA				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
WRAB	**Tennant Creek**	**108.00**	**261**	PFAKE		23 58 40.0	+12
WRAB				LR	LR		
	comp=Z,869nm,20.0s,MS5.3						
TAU	**Tasmania Unive**	**117.70**	**235**	PFAKE		23 59 00.0	+15
TAU				LR	LR		
	comp=Z,710nm,21.0s,MS5.3						
MBWA	**Marble Bar**	**117.89**	**271**	PFAKE		23 59 00.0	+13
MBWA				LR	LR		
	comp=Z,438nm,19.0s,MS5.1						
EFI	**East Falkland**	**120.45**	**136**	PFAKE		23 59 00.0	+10
EFI				LR	LR		
	comp=Z,901nm,20.0s,MS5.4						
COCO	**West Island**	**124.46**	**298**	PFAKE		23 59 10.0	+11
COCO				LR	LR		
	comp=Z,392nm,20.0s,MS5.1						
NWAO	**Narrogin (SRO)**	**127.89**	**263**	PFAKE		23 59 20.0	+15
NWAO				LR	LR		
	comp=Z,544nm,20.0s,MS5.2						
MSEY	**Mahe Island**	**132.34**	**351**	PFAKE		23 59 30.0	+16
MSEY				LR	LR		
	comp=Z,708nm,21.0s,MS5.3						
SBA	**Scott Base**	**135.06**	**195**	PFAKE		23 59 30.0	+12
SBA				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
TSUM	**Tsumeb**	**139.21**	**48**	*e*PKPdf	PKPdf	23 59 25.4	-1.6
TSUM				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
LSZ	**Lusaka**	**139.82**	**31**	*e*PKIKP	PKPdf	23 59 27.7	-0.5
LSZ				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.7						
CASY	**Casey**	**146.84**	**221**	PFAKE		23 59 50.0	+11
CASY				LR	LR		
	comp=Z,623nm,22.0s,MS5.3						
LBTB	**Lobatse**	**147.80**	**42**	PFAKE		23 59 50.0	+8.1
LBTB				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
BOSA	**Boshof**	**150.81**	**45**	PKPbc	PKPbc	23 59 51.8	-0.4
	comp=Z,32nm,0.8s,baz=322,slow=3.0,SNR=18						
BOSA	**Boshof**	**150.81**	**45**	PKPbc	PKPbc	23 59 51.8	-0.4
BOSA				LR	LR		
	comp=Z,1μm,22.0s,MS5.7						
SUR	**Sutherland**	**151.82**	**56**	PFAKE		00 00 00.0	+12
SUR				LR	LR		
	comp=Z,1μm,20.0s,MS5.8						

MAN 13 00:02:31, 1350N×12040E, h27^{km}, mb3.6, ML2.3, MS1.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.27**	**328**	*e*P	Pb	00 02 40.2	+2.4
LUBP				*e*S	Sb	00 02 46.8	+4.3
PGP	**Puerto Galera**	**0.54**	**90**	*e*P	Pb	00 02 36.4	-5.6
PGP				*e*S	Sb	00 02 40.4	-9.1
SJMP	**San Jose**	**1.25**	**146**	*e*P	Pn	00 02 53.2	+0.5
SJMP				*e*S	Sn	00 03 10.3	+1.6
BUSP	**Coron**	**1.50**	**187**	*e*P	Pn	00 02 56.4	+0.2
OTRP	**Odiongan**	**1.95**	**125**	*e*P	Pn	00 03 02.5	+0.2

ISCJB ***13*** *00:18:28.1±0.2, 14.11N±0.02×61.02W±0.04, h138^{km}±1^{km}, mb4.4/56, Error ellipse: s-maj=6.9km s-min=2.5km az=174.3*
TRN ***13*** *00:18:28.9, 14.11N×61.19W, h127^{km}, MD4.1, M4.2(FDF)*
TRN Felt Martinique II, St. Lucia.
NEIC ***13*** *00:18:28.9, 14.10N×61.05W, h126^{km}, mb4.6/44, MD4.2(TRN), After TRN.*
NEIC Felt [II] on Martinique and Saint Lucia. Also felt at Layou, Saint Vincent and the Grenadines.
IDC ***13*** *00:18:28.3±0.4, 14.11N×61.22W, h119^{km}±4^{km}, mb4.0/17, mb1 4.1/18, mb1mx4.0/27, mbtmp3.9/18, Error ellipse: s-maj=15.0km s-min=7.6km az=81.0*
BJI ***13*** *00:18:29.8, 14.10N×61.00W, h126^{km}, mB4.9*
ISC 13 00:18:29.4±0.2**, 14.11N**±0.02×**61.02W**±0.04**, h131**^{km}±1^{km}**, n414,** σ0.60/435**, mb4.4**/56**, 144C-140D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLW	**Petit Monier**	**0.12**	**136**	⇓*i*P	**Pn**	**00 18 47.2**	**0.0**
SLW	**Petit Monier**	**0.12**	**136**	⇓*i*P	**Pn**	**00 18 48.2**	**+1.0**
SLW				⇓*i*S	**Sn**	**00 19 00.0**	**-0.6**
SLW				*e*S	**Sn**	**00 19 01.3**	**+0.7**
SLW	**Petit Monier**	**0.12**	**136**	⇓*i*P	**Pn**	**00 18 48.2**	**+1.0**
SLW				*e*S	**Sn**	**00 19 01.3**	**+0.7**
SLB	**Belfond**	**0.28**	**184**	⇑*i*P	**Pn**	**00 18 48.7**	**+1.1**
SLDE	**Delcer**	**0.30**	**187**	⇓*i*P	**Pn**	**00 18 48.8**	**+1.1**
SLDE	**Delcer**	**0.30**	**187**	⇓*i*P	**Pn**	**00 18 48.8**	**+1.1**
MCLT	**Moule a Chique**	**0.40**	**169**	⇓*i*P	**Pn**	**00 18 48.0**	**-0.1**
MCLT				*e*S	**Sn**	**00 19 01.6**	**-0.6**
BIM	**Bigot**	**0.41**	**353**	⇓*i*P	**Pn**	**00 18 48.1**	**0.0**
BIM				⇓*i*S	**Sn**	**00 19 02.0**	**-0.3**
MVM	**Montagne Vaucl**	**0.46**	**15**	⇑*i*P	**Pn**	**00 18 48.6**	**+0.3**
FDF	**Fort de France**	**0.64**	**349**	⇑*i*P	**Pn**	**00 18 49.5**	**0.0**
FDF				⇑*i*S	**Sn**	**00 19 03.0**	**-1.7**
FDF	**Fort de France**	**0.64**	**349**	*e*P	**Pn**	**00 18 49.3**	**-0.1**
FDF				*e*S	**Sn**	**00 19 04.5**	**-0.2**
SSV	**Crater Summit**	**0.79**	**192**	⇑*i*P	**Pn**	**00 18 51.6**	**+1.0**
SVV	**Soufriere Volc**	**0.81**	**194**	⇓*i*P	**Pn**	**00 18 51.8**	**+1.1**
SVV				*e*S	**Sn**	**00 19 01.3**	**-5.6**
BHS	**Barnard House**	**0.81**	**187**	⇑*i*P	**Pn**	**00 18 51.8**	**+1.0**
SVB	**Belmont**	**0.86**	**195**	⇑*i*P	**Pn**	**00 18 51.2**	**+0.1**
SVB				*e*S	**Sn**	**00 19 07.3**	**-0.3**
FCV	**Fort Charlotte**	**0.97**	**193**	⇑*i*P	**Pn**	**00 18 52.8**	**+0.7**
FCV				*e*S	**Sn**	**00 19 08.7**	**-0.7**
DSHT	**Scott's Head**	**1.15**	**343**	⇑*i*P	**Pn**	**00 18 53.9**	**0.0**
DSHT				*e*S	**Sn**	**00 19 12.2**	**-0.4**
DSTT	**Stowe**	**1.17**	**347**	*e*P	**Pn**	**00 18 54.6**	**+0.6**
DSTT				*e*S	**Sn**	**00 19 12.4**	**-0.4**
DFBT	**Forest Bistro**	**1.17**	**344**	⇑*i*P	**Pn**	**00 18 53.8**	**-0.2**
DFBT				*e*S	**Sn**	**00 19 12.5**	**-0.4**
DPMT	**Pointe Michel**	**1.20**	**343**	⇑*i*P	**Pn**	**00 18 54.2**	**-0.1**
DBCT	**Belle View Cho**	**1.20**	**345**	*e*P	**Pn**	**00 18 54.1**	**-0.3**
DLPL	**La Plaine**	**1.24**	**350**	⇑*i*P	**Pn**	**00 18 54.8**	**0.0**
DLPL				*e*S	**Sn**	**00 19 13.5**	**-0.6**
MDN	**Morne-Daniel**	**1.26**	**343**	⇑*i*P	**Pn**	**00 18 55.0**	**0.0**
MDN				*e*S	**Sn**	**00 19 13.9**	**-0.5**
BBL	**Barber's Block**	**1.48**	**343**	⇑*i*P	**Pn**	**00 18 57.2**	**-0.1**
DWS	**Wesley**	**1.48**	**349**	⇑*i*P	**Pn**	**00 18 57.8**	**+0.4**
DWS				*e*S	**Sn**	**00 19 18.6**	**-0.1**
BBGH	**Gun Hill**	**1.71**	**124**	*e*Pn	**Pn**	**00 19 02.1**	**+2.1**
BBGH				*e*Sn	**Sn**	**00 19 19.9**	**-3.5**
BBSP	**Saint Philip**	**1.82**	**123**	*e*P	**Pn**	**00 19 04.0**	**+2.8**
MGG	**Marie-Galante**	**1.82**	**351**	⇑*i*P	**Pn**	**00 19 01.0**	**-0.3**
MGG				⇑*i*S	**Sn**	**00 19 25.0**	**-0.8**
TBG	**Guadaloupe-3**	**1.84**	**341**	⇑*i*P	**Pn**	**00 19 01.3**	**-0.2**
GRSS	**Sisters**	**1.89**	**198**	⇓*i*P	**Pn**	**00 19 01.7**	**-0.4**
GRSS				*e*S	**Sn**	**00 19 25.7**	**-1.4**
GRIC	**Isle de Caille**	**1.89**	**197**	⇑*i*P	**Pn**	**00 19 02.0**	**-0.2**
GRHS	**Sauteurs**	**1.96**	**198**	⇓*i*P	**Pn**	**00 19 02.8**	**-0.2**
GRHS				*e*S	**Sn**	**00 19 27.6**	**-1.2**
HMG	**Houelmont**	**1.98**	**341**	⇑*i*P	**Pn**	**00 19 03.4**	**+0.3**
DOG	**Dongo Capester**	**2.00**	**343**	⇑*i*P	**Pn**	**00 19 03.8**	**+0.4**
SCG	**Saint Claude**	**2.02**	**342**	⇑*i*P	**Pn**	**00 19 04.0**	**+0.4**
GRW	**Mount Saint Ca**	**2.03**	**198**	⇑*i*P	**Pn**	**00 19 03.7**	**-0.1**
GRW				*e*S	**Sn**	**00 19 29.9**	**-0.3**
BCG	**Bois Riant Cap**	**2.05**	**344**	⇑*e*P	**Pn**	**00 19 04.2**	**+0.1**
GRGR	**Grenville**	**2.06**	**198**	*e*Pn	**Pn**	**00 19 06.2**	**+2.1**
GRGR				*e*Sn	**Sn**	**00 19 29.6**	**-1.1**
LZG	**Guadaloupe-1**	**2.15**	**340**	⇑*i*P	**Pn**	**00 19 05.5**	**+0.3**
TOSP	**Speyside**	**2.83**	**170**	⇑*i*P	**Pn**	**00 19 14.4**	**+0.6**
TOSP				*e*S	**Sn**	**00 19 46.6**	**-1.6**
TPR	**Prospect**	**2.91**	**175**	⇑*e*P	**Pn**	**00 19 14.7**	**-0.2**
TPR				*e*S	**Sn**	**00 19 43.0**	**-7.0**
BPA	**Boggy Peak**	**3.03**	**345**	*e*P	**Pn**	**00 19 16.1**	**-0.3**
BPA				*e*S	**Sn**	**00 19 52.0**	**-0.8**
BPA	**Boggy Peak**	**3.03**	**345**	*e*P	**Pn**	**00 19 16.1**	**-0.3**
BPA				*e*P		00 19 16.9	
BPA				*e*S	**Sn**	**00 19 53.0**	**+0.2**
TRN	**Trinidad (W)**	**3.46**	**186**	*e*P	**Pn**	**00 19 22.7**	**+0.6**
TRN				*e*S	**Sn**	**00 20 01.7**	**-1.1**
TCE	**Chacachacare**	**3.46**	**192**	*e*P	**Pn**	**00 19 22.6**	**+0.5**
TCE				*e*S	**Sn**	**00 20 03.6**	**+0.8**
TBH	**Brigand Hill**	**3.60**	**181**	*e*P	**Pn**	**00 19 23.9**	**0.0**
TBH				*e*S	**Sn**	**00 20 04.6**	**-1.5**
SKI	**Saint Kitts**	**3.61**	**333**	⇑*i*P	**Pn**	**00 19 24.4**	**+0.4**
ANWB	**Willy Bob**	**3.62**	**348**	*e*Pn	**Pn**	**00 19 23.1**	**-1.0**
TPP	**Pointe-a-Pierr**	**3.79**	**186**	*e*P	**Pn**	**00 19 27.3**	**+0.9**
TPP				*e*S	**Sn**	**00 20 09.9**	**-0.7**
CDVI	**St. Croix**	**5.11**	**316**	*e*Pn	**Pn**	**00 19 43.8**	**-0.2**
PCRV	**Puerto La Cruz**	**5.27**	**223**	P	**Pn**	**00 19 46.3**	**+0.2**
	2.9nm,0.3s,baz=18,slow=2.1,SNR=8.3						
PCRV				S	**Sn**	**00 20 50.2**	**+4.3**
	24nm,0.3s,baz=6.3,slow=18,SNR=12						
STVI	**Saint Thomas**	**5.67**	**319**	*e*Pn	**Pn**	**00 19 51.9**	**+0.4**
HUMP	**Col San Antoni**	**6.13**	**312**	*e*Pn	**Pn**	**00 19 58.0**	**+0.3**
SJG	**San Juan**	**6.34**	**310**	*e*Pn	**Pn**	**00 20 00.0**	**-0.4**
CELP	**Cerrillos**	**6.64**	**307**	*e*Pn	**Pn**	**00 20 04.8**	**+0.3**
OBIP	**Obispado Ponce**	**6.64**	**307**	*e*Pn	**Pn**	**00 20 04.8**	**+0.2**
AOPR	**Arecibo Observ**	**6.94**	**308**	*e*Pn	**Pn**	**00 20 09.4**	**+0.8**
LRS	**Lares**	**6.97**	**307**	*e*Pn	**Pn**	**00 20 10.0**	**+1.0**
CRPR	**Cabo Rojo, PR**	**7.02**	**304**	*e*Pn	**Pn**	**00 20 10.2**	**+0.5**
LSP	**Las Mesas**	**7.09**	**306**	*e*Pn	**Pn**	**00 20 11.5**	**+0.9**
MPR	**Mayaguez**	**7.16**	**306**	*e*Pn	**Pn**	**00 20 12.0**	**+0.5**
SDV	**Santo Domingo**	**10.75**	**242**	P	**Pn**	**00 20 58.0**	**-1.8**
	0.8nm,0.3s,baz=64,slow=8.9,SNR=10.0						
SDV	**Santo Domingo**	**10.75**	**242**	*e*Pn	**Pn**	**00 21 00.1**	**+0.3**
SDDR	**Presa de Saban**	**10.97**	**298**	*e*Pn	**Pn**	**00 21 04.2**	**+1.5**
ROSC	**El Rosal**	**16.01**	**236**	P	**Pn**	**00 22 09.1**	**+1.7**
	8.9nm,0.3s,baz=80,slow=6.1,SNR=17						
ROSC				S	**S**	**00 25 08.8**	**+2.7**
	2.6nm,0.3s,baz=97,slow=19,SNR=3.9						
ROSC	**El Rosal**	**16.01**	**236**	*e*Pn	**Pn**	**00 22 09.4**	**+2.1**
BBSR	**BB Station**	**18.49**	**350**	*e*Pn	**Pn**	**00 22 38.0**	**+1.0**
	42nm,1.0s						
BCIP	**Isla Barro Col**	**19.07**	**257**	*e*P	**P**	**00 22 42.1**	**+0.3**
	110nm,0.9s						
OTAV	**Otavalo**	**22.08**	**233**	*e*P	**P**	**00 23 12.8**	**-1.3**
	24nm,0.8s,mb4.7						
DWPF	**Disney**	**23.54**	**310**	*e*P	**P**	**00 23 26.9**	**-0.9**
TGUH	**Tegucigalpa,Un**	**25.46**	**273**	P	**P**	**00 23 44.4**	**-1.0**
ATAH	**Atahualpa**	**27.15**	**221**	P	**P**	**00 24 00.9**	**+0.4**
	3.0nm,0.4s,mb4.3,baz=32,slow=8.1,SNR=3.0						
ATAH				S	**S**	**00 28 40.5**	**+11**
	2.2nm,0.5s,baz=30,slow=20,SNR=3.6						
TKL	**Tuckaleechee C**	**29.64**	**320**	P	**P**	**00 24 21.6**	**-0.8**
	2.1nm,0.7s,mb4.0,baz=121,slow=5.9,SNR=3.5						
SIV	**San Ignacio**	**29.90**	**180**	P	**P**	**00 24 26.2**	**+1.2**
	5.8nm,0.6s,mb4.5,baz=12,slow=8.7,SNR=38						
LRAL	**Lakeview Retre**	**30.22**	**313**	*e*P	**P**	**00 24 27.9**	**+0.2**
	5.4nm,0.6s,mb4.5						
NNA	**Nana**	**30.30**	**212**	*e*P	**P**	**00 24 25.6**	**-2.9**
BDFB	**Brasilia**	**32.23**	**156**	P	**P**	**00 24 47.3**	**+1.9**
	3.2nm,0.6s,mb4.2,baz=322,slow=17,SNR=11						
BDFB	**Brasilia**	**32.23**	**156**	*e*P	**P**	**00 24 47.7**	**+2.3**
	3.7nm,0.4s,mb4.5						
ACSO	**Alum Creek Sta**	**32.36**	**328**	P	**P**	**00 24 46.2**	**-0.1**
PAYG	**Puerto Ayora**	**32.49**	**246**	*e*P	**P**	**00 24 48.0**	**+0.3**
	53nm,1.0s,mb5.2						
WVT	**Waverly**	**32.52**	**317**	*e*P	**P**	**00 24 47.4**	**-0.4**
	2.5nm,0.5s,mb4.2						
OXF	**Oxford**	**32.71**	**313**	*e*P	**P**	**00 24 49.0**	**-0.5**
	36nm,1.1s,mb5.0						
OXF				PcP	PcP	00 27 32.2	0.0
SIUC	**Southern Illin**	**34.34**	**318**	*e*P	**P**	**00 25 02.8**	**-0.8**
	12nm,0.8s,mb4.7						
FVM	**French Village**	**35.28**	**318**	*e*P	**P**	**00 25 11.6**	**-0.1**
	6.6nm,0.6s,mb4.4						
MIAR	**Mount Ida**	**35.73**	**310**	*e*P	**P**	**00 25 14.8**	**-0.7**
	5.6nm,0.7s,mb4.3						
CCM	**Cathedral Cave**	**35.86**	**317**	*e*P	**P**	**00 25 16.2**	**-0.3**
	9.3nm,0.8s,mb4.5						
CCM				*e*PcP	PcP	00 27 42.0	+0.9
LVC	**Limon Verde**	**37.30**	**192**	P	**P**	**00 25 28.4**	**-0.5**
	3.4nm,0.5s,mb4.2,baz=21,slow=7.4,SNR=4.2						
LVC	**Limon Verde**	**37.30**	**192**	*e*P	**P**	**00 25 28.6**	**-0.3**
	3.4nm,0.5s,mb4.2						
WMOK	**Wichita Mounta**	**39.73**	**308**	*e*P	**P**	**00 25 47.3**	**-1.8**
	8.0nm,0.6s,mb4.5						
KSU1	**Kansas State U**	**40.00**	**315**	*e*P	**P**	**00 25 48.8**	**-2.5**
	16nm,0.5s,mb4.9						
CPUP	**Villa Florida**	**40.35**	**175**	P	**P**	**00 25 53.9**	**-0.4**
	1.9nm,0.4s,mb4.1,baz=336,slow=7.3,SNR=12						
CPUP				PcP	PcP	00 27 55.8	+0.7
	0.6nm,0.4s,baz=9.9,slow=4.2,SNR=3.0						
SCHQ	**Schefferville**	**40.89**	**355**	P	**P**	**00 25 58.5**	**+0.1**
	3.5nm,0.8s,mb4.0,baz=143,slow=5.1,SNR=2.4						
SCHQ	**Schefferville**	**40.89**	**355**	P	**P**	**00 25 58.5**	**+0.1**
TXAR	**Lajitas Array**	**42.17**	**298**	P	**P**	**00 26 07.9**	**-1.3**
	2.5nm,0.7s,mb3.9,baz=123,slow=7.9,SNR=24						
TXAR				PcP	PcP	00 28 02.2	+1.0
	2.3nm,0.6s,baz=122,slow=6.0,SNR=14						
TXAR				ScP	ScP	00 31 39.2	-0.6
	0.1nm,0.3s,baz=90,slow=4.5,SNR=2.8						
TXAR	**Lajitas Array**	**42.17**	**298**	P	**P**	**00 26 07.9**	**-1.3**
TXAR				PcP	PcP	00 28 02.2	+1.0
TXAR				ScP	ScP	00 31 39.2	-0.6
ECSD	**EROS,Sioux Fal**	**42.38**	**321**	*e*P	**P**	**00 26 10.1**	**-0.6**
	4.4nm,0.8s,mb4.1						
LCO	**Las Campanas**	**43.87**	**192**	*e*P	**P**	**00 26 23.5**	**+0.7**
AGMN	**Agassiz Refuge**	**44.60**	**327**	*e*P	**P**	**00 26 26.9**	**-1.5**
	92nm,2.5s,mb5.0						
LPM	**Los Pinos Moun**	**45.76**	**304**	*e*P	**P**	**00 26 38.3**	**+0.5**
ANMO	**Albuquerque**	**45.79**	**305**	*e*P	**P**	**00 26 37.9**	**-0.2**
	4.0nm,0.9s,mb4.0						
ANMO				*e*PcP	PcP	00 28 13.0	-0.5
ULM	**Lac du Bonnet**	**45.83**	**329**	P	**P**	**00 26 36.9**	**-1.2**
	7.8nm,0.4s,mb4.7,baz=130,slow=7.5,SNR=12						
SDCO	**Great Sand Dun**	**45.86**	**309**	*e*P	**P**	**00 26 38.0**	**-0.6**
	5.1nm,0.6s,mb4.3						
CFAA	**Coronel Fontan**	**45.97**	**189**	P	**P**	**00 26 38.9**	**-0.5**
	0.7nm,0.7s,mb3.4,baz=357,slow=7.5,SNR=9.4						
RSSD	**Black Hills**	**47.24**	**318**	*e*P	**P**	**00 26 49.5**	**+0.3**
	2.4nm,0.6s,mb4.0						
RSSD				*e*PcP	PcP	00 28 20.0	+1.6
319A	**Douglas**	**47.32**	**300**	⇓P	**P**	**00 26 50.4**	**+0.4**
	baz=47,SNR=7.9						
219A	**White Tail Can**	**47.41**	**301**	⇑P	**P**	**00 26 50.9**	**+0.1**
	baz=47,SNR=6.8						
N22A	**Wattenberg Ran**	**47.59**	**313**	⇓P	**P**	**00 26 51.7**	**-0.2**
	baz=47						
119A	**Ashpeak Ranch,**	**47.59**	**302**	⇓P	**P**	**00 26 52.6**	**+0.5**
	baz=47,SNR=6.2						
R21A	**Cimarron**	**47.59**	**309**	⇓P	**P**	**00 26 52.0**	**0.0**
	baz=47,SNR=5.8						
Z19A	**T-Link Ranch,**	**47.66**	**302**	⇓P	**P**	**00 26 52.8**	**+0.2**
	baz=48						
Y19A	**Nutrioso**	**47.79**	**303**	⇓P	**P**	**00 26 54.3**	**+0.7**
	baz=48,SNR=6.5						
M22A	**Cedar Creek Ra**	**47.90**	**314**	⇓P	**P**	**00 26 54.5**	**+0.2**
	baz=48,SNR=7.6						
X19A	**St. Johns**	**47.92**	**304**	⇓P	**P**	**00 26 55.2**	**+0.6**
	baz=48,SNR=5.7						
318A	**Bisbee**	**47.92**	**300**	⇑P	**P**	**00 26 54.8**	**+0.1**
	baz=48,SNR=17						
MVCO	**Mesa Verde**	**47.98**	**308**	⇑P	**P**	**00 26 55.5**	**+0.4**
	baz=48						
L22A	**Ellis Ranch, M**	**48.01**	**314**	⇓P	**P**	**00 26 55.6**	**+0.4**
	baz=48						
218A	**Dragoon**	**48.06**	**300**	⇓P	**P**	**00 26 56.0**	**+0.3**
	baz=48,SNR=8.2						
118A	**Homack Ranch,**	**48.12**	**301**	⇓P	**P**	**00 26 56.6**	**+0.4**
	baz=48,SNR=7.6						
W19A	**Sanders**	**48.16**	**305**	⇓P	**P**	**00 26 56.8**	**+0.3**
	baz=48						
T19A	**Beclabito**	**48.29**	**307**	⇓P	**P**	**00 26 57.1**	**-0.3**
	baz=48						
PV01	**Paradox Valley**	**48.29**	**309**	*e*P	**P**	**00 26 58.2**	**+0.8**
	690nm,1.1s						
PV01				*e*PcP	PcP	00 28 23.8	+1.5
Q20A	**Ridgley Place,**	**48.33**	**310**	⇓P	**P**	**00 26 57.6**	**0.0**
	baz=48						
N21A	**Black Mountain**	**48.33**	**312**	⇓P	**P**	**00 26 58.0**	**+0.3**
	baz=48						
X18A	**Snowflake**	**48.48**	**304**	⇓P	**P**	**00 26 59.2**	**+0.3**
	baz=48,SNR=5.3						
S19A	**Harvey Farm, M**	**48.62**	**308**	⇑P	**P**	**00 26 59.5**	**-0.4**
	baz=48,SNR=5.8						
L21A	**Rawlins**	**48.64**	**314**	⇑P	**P**	**00 26 59.8**	**-0.1**
	baz=48						
O20A	**White River Ci**	**48.65**	**311**	⇑P	**P**	**00 27 00.2**	**+0.1**
	baz=48						
Z17A	**San Carlos Hig**	**48.66**	**302**	⇑P	**P**	**00 26 59.9**	**-0.3**
	baz=48						
217A	**Green Valley**	**48.67**	**300**	⇓P	**P**	**00 27 00.1**	**-0.4**
	baz=48,SNR=6.2						
PV10	**Paradox Valley**	**48.72**	**309**	*e*P	**P**	**00 27 01.1**	**+0.5**
TUC	**Tucson**	**48.74**	**301**	*e*P	**P**	**00 27 01.2**	**+0.3**
	6.9nm,0.9s,mb4.3						
117A	**Oracle**	**48.74**	**301**	⇑P	**P**	**00 27 00.9**	**-0.1**
	baz=48,SNR=11						
U18A	**Rough Rock, Ch**	**48.84**	**306**	⇓P	**P**	**00 27 01.9**	**+0.3**
	baz=49						
R19A	**Curley Farm, L**	**48.86**	**309**	⇑P	**P**	**00 27 02.1**	**+0.3**
	baz=49						
N20A	**Spence Gulch,**	**48.89**	**312**	⇑P	**P**	**00 27 02.1**	**+0.2**
	baz=49						
T18A	**Mexican Hat**	**49.02**	**307**	⇓P	**P**	**00 27 02.8**	**-0.2**
	baz=49,SNR=18						
Y17A	**Roosevelt**	**49.04**	**302**	⇓P	**P**	**00 27 03.2**	**+0.1**
	baz=49						
Q19A	**Hogan Spring (**	**49.05**	**310**	⇓P	**P**	**00 27 03.4**	**+0.2**
	baz=49						
M20A	**Sweetwater, Wa**	**49.05**	**313**	⇓P	**P**	**00 27 03.5**	**+0.3**
	baz=49						
216A	**Three Points,**	**49.25**	**300**	⇑P	**P**	**00 27 04.8**	**0.0**
	baz=49						
S18A	**Hurst Farm, Bl**	**49.26**	**308**	⇓P	**P**	**00 27 04.7**	**-0.1**
	baz=49,SNR=7.0						
L20A	**Wamsutter**	**49.33**	**314**	⇑P	**P**	**00 27 05.2**	**0.0**
	baz=49,SNR=5.6						
R18A	**Canyonlands Na**	**49.36**	**309**	⇑P	**P**	**00 27 05.2**	**-0.4**
	baz=49,SNR=11						
Z16A	**Peralta Trail,**	**49.45**	**302**	⇑P	**P**	**00 27 06.5**	**+0.2**
	baz=49						
K20A	**Yellowstone Ra**	**49.56**	**315**	⇓P	**P**	**00 27 06.7**	**-0.3**
	baz=49,SNR=10.0						
N19A	**John Jarvie Ra**	**49.56**	**312**	⇑P	**P**	**00 27 07.1**	**0.0**
	baz=49,SNR=8.3						
Y16A	**Circle Bar Ran**	**49.59**	**303**	⇓P	**P**	**00 27 07.3**	**-0.1**
	baz=49						
X16A	**Lo Mia Camp, P**	**49.66**	**303**	⇓P	**P**	**00 27 08.1**	**+0.2**
	baz=50						
T17A	**Navajo Res., N**	**49.71**	**307**	⇓P	**P**	**00 27 08.6**	**+0.4**
	baz=50						
Q18A	**Rafter H Ranch**	**49.74**	**310**	⇑P	**P**	**00 27 08.0**	**-0.4**
	baz=50						
M19A	**Rock Springs**	**49.74**	**313**	⇓P	**P**	**00 27 08.0**	**-0.4**
	baz=50						
U16A	**Tuba City**	**49.77**	**306**	⇑P	**P**	**00 27 08.8**	**+0.1**
	baz=50						
WUAZ	**Wupatki**	**49.83**	**305**	⇑P	**P**	**00 27 09.5**	**+0.3**
	baz=50						
WUAZ	**Wupatki**	**49.83**	**305**	*e*P	**P**	**00 27 10.1**	**+1.0**
	13nm,1.0s,mb4.5						
S17A	**Black Ridge (B**	**49.86**	**308**	⇓P	**P**	**00 27 09.9**	**+0.5**
	baz=50,SNR=13						
W16A	**Flagstaff**	**49.87**	**304**	⇓P	**P**	**00 27 10.0**	**+0.6**
	baz=50						
N18A	**Larsen Ranch,**	**49.95**	**312**	⇑P	**P**	**00 27 09.5**	**-0.5**
	baz=50						
K19A	**Absolon Red Bu**	**49.96**	**315**	⇓P	**P**	**00 27 09.7**	**-0.4**
	baz=50,SNR=14						
P18A	**Preston Nutter**	**49.97**	**310**	⇑P	**P**	**00 27 10.4**	**+0.2**
	baz=50						
R17A	**Hanksville Air**	**49.99**	**309**	⇑P	**P**	**00 27 10.3**	**-0.1**
	baz=50						
115A	**Sonoran Desert**	**50.01**	**301**	⇑P	**P**	**00 27 10.7**	**+0.1**
	baz=50						
SRU	**San Rafael**	**50.03**	**309**	⇑P	**P**	**00 27 10.7**	**+0.1**
	baz=50						
SRU	**San Rafael**	**50.03**	**309**	*e*P	**P**	**00 27 11.1**	**+0.5**
	5.2nm,0.6s,mb4.3						
T16A	**Glen Canyon Da**	**50.25**	**307**	⇓P	**P**	**00 27 12.3**	**0.0**
	baz=50						
P17A	**Butcher Ranch,**	**50.29**	**310**	⇑P	**P**	**00 27 12.3**	**-0.3**
	baz=50						
Y15A	**Casa Rosa Ranc**	**50.30**	**303**	⇓P	**P**	**00 27 12.8**	**0.0**
	baz=50						
X15A	**Humboldt**	**50.32**	**303**	⇓P	**P**	**00 27 13.6**	**+0.7**
	baz=50						
M18A	**Lyman**	**50.37**	**312**	⇑P	**P**	**00 27 13.0**	**-0.1**
	baz=50						
PDAR	**Pinedale Array**	**50.44**	**314**	P	**P**	**00 27 13.3**	**-0.3**
	9.8nm,0.6s,mb4.6,baz=121,slow=9.7,SNR=121						
PDAR				PcP	PcP	00 28 30.5	+0.4
	1.2nm,0.6s,baz=110,slow=7.8,SNR=2.4						
BW06	**Boulder Array**	**50.44**	**314**	⇓P	**P**	**00 27 13.7**	**+0.1**
	baz=50						
BW06	**Boulder Array**	**50.44**	**314**	*e*P	**P**	**00 27 13.5**	**-0.1**
	11nm,0.7s,mb4.6						
Q16A	**Castle Valley**	**50.47**	**309**	⇑P	**P**	**00 27 13.9**	**-0.1**
	baz=50						
W15A	**Williams**	**50.48**	**304**	⇓P	**P**	**00 27 14.4**	**+0.3**
	baz=50						
O17A	**Robinson Place**	**50.49**	**311**	⇑P	**P**	**00 27 14.3**	**+0.2**
	baz=50,SNR=16						
S16A	**Weppner Ranch,**	**50.49**	**307**	⇑P	**P**	**00 27 14.2**	**0.0**
	baz=50						
L18A	**Fontenelle, Gr**	**50.50**	**313**	⇓P	**P**	**00 27 14.2**	**+0.1**
	baz=50,SNR=6.3						
V15A	**Kaibab Nationa**	**50.53**	**305**	⇑P	**P**	**00 27 14.8**	**+0.3**
	baz=50						
R16A	**Teasdale**	**50.54**	**308**	⇓P	**P**	**00 27 15.2**	**+0.7**
	baz=50						
TMUT	**Trail Mountain**	**50.59**	**310**	*e*P	**P**	**00 27 15.6**	**+0.7**
Z14A	**Wintersburg**	**50.71**	**302**	⇑P	**P**	**00 27 16.0**	**+0.2**
	baz=50						
K18A	**Toltan Ranch,**	**50.73**	**314**	⇑P	**P**	**00 27 15.9**	**+0.1**
	baz=50,SNR=7.4						
U15A	**North Rim**	**50.75**	**306**	⇓P	**P**	**00 27 16.2**	**+0.1**
	baz=50						
N17A	**Moffit Pass**	**50.77**	**312**	⇓P	**P**	**00 27 16.2**	**0.0**
	baz=51,SNR=7.0						
M17A	**Scullys Gap (B**	**50.81**	**312**	⇑P	**P**	**00 27 16.0**	**-0.5**
	baz=51						
X14A	**Yava**	**50.85**	**303**	⇓P	**P**	**00 27 17.3**	**+0.4**
	baz=51,SNR=5.6						
Y14A	**Wickenburg**	**50.85**	**302**	⇑P	**P**	**00 27 16.9**	**0.0**
	baz=51						
J18A	**Kendall Valley**	**50.91**	**315**	⇑P	**P**	**00 27 17.0**	**-0.1**
	baz=51,SNR=6.9						
FCC	**Fort Churchill**	**50.92**	**339**	*e*P	**P**	**00 27 16.9**	**0.0**
	0.3nm,0.6s						
I18A	**Diamond G Ranc**	**50.93**	**315**	⇓P	**P**	**00 27 17.3**	**0.0**
	baz=51,SNR=8.0						
DAU	**Daniels Canyon**	**50.93**	**311**	*e*P	**P**	**00 27 17.9**	**+0.5**
T15A	**Red Dirt Ranch**	**50.95**	**306**	⇓P	**P**	**00 27 17.8**	**+0.3**
	baz=51,SNR=6.1						
O16A	**Springville**	**51.06**	**311**	⇑P	**P**	**00 27 18.2**	**-0.1**
	baz=51						
RLMT	**Red Lodge**	**51.06**	**317**	⇑P	**P**	**00 27 18.6**	**+0.3**
	baz=51						
RLMT	**Red Lodge**	**51.06**	**317**	*e*P	**P**	**00 27 18.5**	**+0.3**
	13nm,1.1s,mb4.5						
JLU	**Jordanelle**	**51.13**	**311**	*e*P	**P**	**00 27 19.2**	**+0.3**
N16A	**Rees Ranch, Co**	**51.20**	**311**	⇓P	**P**	**00 27 19.7**	**+0.4**
	baz=51						
113A	**Mohawk Valley,**	**51.30**	**301**	⇓P	**P**	**00 27 19.2**	**-1.0**
	baz=51						
K17A	**Gardner Place,**	**51.38**	**314**	⇑P	**P**	**00 27 20.3**	**-0.4**
	baz=51,SNR=5.4						
J17A	**Brown Place, J**	**51.43**	**315**	⇓P	**P**	**00 27 21.0**	**0.0**
	baz=51,SNR=12						
LOHW	**Long Hollow**	**51.44**	**315**	*e*P	**P**	**00 27 21.1**	**0.0**
	19nm,1.6s,mb4.5						
U14A	**Mt Trumbull**	**51.45**	**305**	⇓P	**P**	**00 27 21.8**	**+0.5**
	baz=51,SNR=5.8						
M16A	**Huntsville**	**51.46**	**312**	⇓P	**P**	**00 27 20.9**	**-0.3**

	baz=51,SNR=13						
P15A	**Leamington**	**51.47**	**310**	⇑P	**P**	**00 27 21.3**	**0.0**
	baz=51						
Y13A	**Salome**	**51.51**	**302**	⇑P	**P**	**00 27 21.6**	**-0.2**
	baz=51						
AHID	**Auburn Hatcher**	**51.51**	**314**	*e*P	**P**	**00 27 21.4**	**-0.2**
	15nm,0.7s,mb4.7						
FFC	**Flin Flon**	**51.52**	**331**	*e*P	**P**	**00 27 21.0**	**-0.4**
	97nm,2.7s,mb5.0						
L16A	**Fish Haven**	**51.52**	**313**	⇑P	**P**	**00 27 21.3**	**-0.4**
	baz=51,SNR=9.8						
REDW	**Red Top Meadow**	**51.53**	**315**	*e*P	**P**	**00 27 21.6**	**-0.2**
	36nm,1.9s,mb4.7						
X13A	**Yucca**	**51.63**	**303**	⇑P	**P**	**00 27 22.6**	**-0.1**
	baz=51						
TPAW	**Teton Pass**	**51.64**	**315**	*e*P	**P**	**00 27 23.0**	**+0.5**
	5.5nm,0.8s,mb4.2						
F18A	**Big Timber**	**51.65**	**318**	⇑P	**P**	**00 27 22.7**	**+0.1**
	baz=52,SNR=6.4						
IMW	**Indian Meadow**	**51.76**	**315**	*e*P	**P**	**00 27 23.6**	**+0.1**
	3.4nm,0.6s,mb4.2						
W13A	**Hualapai Mount**	**51.76**	**304**	⇓P	**P**	**00 27 24.1**	**+0.4**
	baz=52,SNR=7.9						
K16A	**Soda Springs**	**51.88**	**314**	⇓P	**P**	**00 27 24.4**	**+0.1**
	baz=52,SNR=7.7						
V13A	**Grand Canyon W**	**51.98**	**305**	⇓P	**P**	**00 27 25.7**	**+0.5**
	baz=52,SNR=8.2						
E18A	**Harlowton**	**52.02**	**319**	⇑P	**P**	**00 27 25.7**	**+0.3**
	baz=52						
DUG	**Dugway**	**52.02**	**310**	⇑P	**P**	**00 27 25.6**	**+0.1**
	baz=52						
DUG	**Dugway**	**52.02**	**310**	*e*P	**P**	**00 27 25.2**	**-0.3**
	14nm,1.2s,mb4.5						
DUG				*e*PcP	PcP	00 28 36.2	+0.2
J16A	**Bone**	**52.03**	**314**	⇑P	**P**	**00 27 25.7**	**+0.2**
	baz=52,SNR=7.2						
P14A	**Drum Mountains**	**52.06**	**309**	⇓P	**P**	**00 27 25.8**	**0.0**
	baz=52,SNR=5.6						
U13A	**Pakoon Wash**	**52.07**	**305**	⇑P	**P**	**00 27 26.2**	**+0.3**
	baz=52						
Q14A	**Sevier Lake (B**	**52.08**	**309**	⇓P	**P**	**00 27 26.3**	**+0.4**
	baz=52,SNR=7.0						
M15A	**Larsen Ranch,**	**52.09**	**312**	⇑P	**P**	**00 27 25.4**	**-0.6**
	baz=52,SNR=10						
G17A	**Pierce Place,**	**52.11**	**317**	⇓P	**P**	**00 27 26.6**	**+0.5**
	baz=52						
I16A	**Newdale**	**52.13**	**315**	⇑P	**P**	**00 27 26.2**	**0.0**
	baz=52,SNR=6.9						
T13A	**Saint George**	**52.14**	**306**	⇓P	**P**	**00 27 26.8**	**+0.4**
	baz=52						
D18A	**Linhart Farms,**	**52.19**	**320**	⇑P	**P**	**00 27 27.4**	**+0.9**
	baz=52						
L15A	**Malad City**	**52.20**	**313**	⇑P	**P**	**00 27 25.8**	**-1.0**
	baz=52,SNR=19						
S13A	**Holt Ranch, En**	**52.22**	**307**	⇑P	**P**	**00 27 27.6**	**+0.6**
	baz=52						
GLA	**Glamis**	**52.22**	**301**	⇑P	**P**	**00 27 27.5**	**+0.4**
	baz=52						
H16A	**Russell Place,**	**52.24**	**316**	⇑P	**P**	**00 27 27.6**	**+0.6**
	baz=52						
F17A	**Fitzpatrick Pl**	**52.26**	**318**	⇓P	**P**	**00 27 27.8**	**+0.7**
	baz=52						
QLMT	**Earthquake Lak**	**52.40**	**316**	*e*P	**P**	**00 27 29.7**	**+1.5**
HVU	**Hansel Valley**	**52.41**	**312**	*e*P	**P**	**00 27 28.4**	**+0.1**
	8.3nm,0.6s,mb4.5						
R13A	**O'Grain Ranch,**	**52.43**	**307**	⇑P	**P**	**00 27 28.9**	**+0.4**
	baz=52						
N14A	**Grayback Hills**	**52.47**	**311**	⇑P	**P**	**00 27 28.5**	**-0.3**
	baz=52,SNR=12						
EGMT	**Eagleton**	**52.48**	**320**	⇓P	**P**	**00 27 28.7**	**0.0**
	baz=52						
K15A	**Arbon**	**52.49**	**313**	⇓P	**P**	**00 27 29.4**	**+0.4**
	baz=52						
E17A	**Martinsdale**	**52.59**	**318**	⇑P	**P**	**00 27 30.0**	**+0.5**
	baz=52						
Q13A	**Wheeler Ranch,**	**52.63**	**308**	⇑P	**P**	**00 27 30.7**	**+0.7**
	baz=52						
B18A	**Beardsley Farm**	**52.64**	**321**	⇑P	**P**	**00 27 30.3**	**+0.4**
	baz=52,SNR=10						
IRM	**Iron Mountain**	**52.64**	**302**	⇑P	**P**	**00 27 30.7**	**+0.5**
	baz=52						
V12A	**Nelson**	**52.65**	**304**	⇑P	**P**	**00 27 30.9**	**+0.7**
	baz=52						
D17A	**Six Diamond Ra**	**52.73**	**319**	⇑P	**P**	**00 27 30.4**	**-0.1**
	baz=52						
P13A	**Bates Ranch, G**	**52.74**	**309**	⇓P	**P**	**00 27 31.0**	**+0.2**
	baz=52,SNR=9.0						
M14A	**Sheep Mountain**	**52.75**	**312**	⇑P	**P**	**00 27 30.4**	**-0.5**
	baz=52,SNR=8.3						
G16A	**Moss Hill, Enn**	**52.78**	**317**	⇓P	**P**	**00 27 31.3**	**+0.3**
	baz=53						
L14A	**Malta**	**52.82**	**312**	⇓P	**P**	**00 27 31.3**	**0.0**
	baz=53,SNR=6.0						
BC3	**Big Chuckw Mtn**	**52.82**	**302**	⇓P	**P**	**00 27 31.5**	**0.0**
	baz=53						
F16A	**Kennard Place,**	**52.85**	**317**	⇑P	**P**	**00 27 31.3**	**-0.2**
	baz=53						
A18A	**Metzger Ranch,**	**52.89**	**321**	⇓P	**P**	**00 27 31.8**	**+0.1**
	baz=53,SNR=6.7						
K14A	**Jones Ranch, D**	**52.91**	**313**	⇑P	**P**	**00 27 32.0**	**0.0**
	baz=53,SNR=14						
R12A	**Pony Springs,**	**52.95**	**308**	⇑P	**P**	**00 27 32.4**	**0.0**
	baz=53						
C17A	**Wharram Farm,**	**52.95**	**320**	⇓P	**P**	**00 27 32.2**	**0.0**
	baz=53,SNR=6.3						
GMRC	**Granite Mounta**	**53.15**	**303**	⇓P	**P**	**00 27 34.0**	**+0.1**
	baz=53						
H15A	**Lima**	**53.15**	**316**	⇑P	**P**	**00 27 34.3**	**+0.6**
	baz=53						
T11A	**Corn Creek, Al**	**53.21**	**306**	⇑P	**P**	**00 27 34.4**	**+0.1**
	baz=53						
G15A	**Dillon**	**53.22**	**316**	⇑P	**P**	**00 27 34.8**	**+0.6**
	baz=53						
B17A	**L&G Farms, Che**	**53.23**	**320**	⇑P	**P**	**00 27 34.5**	**+0.3**
	baz=53						
D16A	**Dana Ranch, Ca**	**53.23**	**319**	⇑P	**P**	**00 27 34.7**	**+0.5**
	baz=53						
M13A	**Montello**	**53.31**	**311**	⇓P	**P**	**00 27 34.9**	**0.0**
	baz=53,SNR=7.8						
BELC	**Belle Mtn.**	**53.32**	**302**	⇓P	**P**	**00 27 35.2**	**0.0**
	baz=53						
L13A	**Double Diamond**	**53.34**	**312**	⇓P	**P**	**00 27 34.8**	**-0.4**
	baz=53,SNR=8.4						
J14A	**Carey**	**53.37**	**314**	⇓P	**P**	**00 27 36.0**	**+0.7**
	baz=53,SNR=11						
A17A	**Triple J Farms**	**53.42**	**321**	⇓P	**P**	**00 27 35.7**	**+0.2**
	baz=53						
F15A	**Butte**	**53.44**	**317**	⇑P	**P**	**00 27 35.9**	**0.0**
	baz=53,SNR=5.2						
TUQ	**Turquoise Moun**	**53.47**	**304**	⇑P	**P**	**00 27 36.0**	**-0.2**
	baz=53						
O12A	**Currie**	**53.48**	**310**	⇑P	**P**	**00 27 37.0**	**+0.8**
	baz=53						
I14A	**Mackay**	**53.50**	**315**	⇓P	**P**	**00 27 36.6**	**+0.3**
	baz=53						
MONP	**Monument Peak**	**53.53**	**301**	⇓P	**P**	**00 27 36.7**	**0.0**
	baz=53						
K13A	**Stover Farm, H**	**53.59**	**313**	⇓P	**P**	**00 27 36.6**	**-0.3**
	baz=53,SNR=7.1						
H14A	**Leadore**	**53.64**	**315**	⇓P	**P**	**00 27 37.7**	**+0.4**
	baz=53						
HEC	**Hector,Ludlow**	**53.70**	**303**	⇑P	**P**	**00 27 38.6**	**+0.7**
	baz=54						
R11A	**Troy Canyon, C**	**53.71**	**307**	⇓P	**P**	**00 27 38.3**	**+0.4**
	baz=54						
E15A	**Deer Lodge**	**53.73**	**318**	⇓P	**P**	**00 27 38.0**	**+0.1**
	baz=54						
N12A	**Clover Valley,**	**53.83**	**310**	⇑P	**P**	**00 27 38.7**	**0.0**
	baz=54						
B16A	**M & M Farms, S**	**53.83**	**320**	⇑P	**P**	**00 27 38.4**	**-0.2**
	baz=54						
J13A	**Cove Ranch, Pi**	**53.85**	**314**	⇓P	**P**	**00 27 38.5**	**-0.3**
	baz=54,SNR=6.3						
Q11A	**Duckwater**	**53.86**	**308**	⇑P	**P**	**00 27 39.0**	**0.0**
	baz=54						
D15A	**Lincoln**	**53.86**	**318**	⇑P	**P**	**00 27 38.8**	**0.0**
	baz=54						
M12A	**Wells**	**53.87**	**311**	⇓P	**P**	**00 27 38.9**	**-0.1**
	baz=54,SNR=6.2						
ELK	**Elko**	**53.95**	**310**	*e*P	**P**	**00 27 39.8**	**+0.1**
	12nm,1.6s,mb4.4						
I13A	**Wildhorse Cree**	**53.95**	**314**	⇑P	**P**	**00 27 39.8**	**+0.2**
	baz=54,SNR=8.3						
A16A	**West Butte Ran**	**53.96**	**321**	⇓P	**P**	**00 27 39.2**	**-0.3**
	baz=54,SNR=9.2						
TPNV	**Topopah Spring**	**53.97**	**306**	⇓P	**P**	**00 27 40.1**	**+0.2**
	baz=54						
TPNV	**Topopah Spring**	**53.97**	**306**	*e*P	**P**	**00 27 40.7**	**+0.8**
	9.5nm,1.1s,mb4.4						
HLID	**Hailey**	**54.06**	**314**	⇓P	**P**	**00 27 40.6**	**+0.2**
	baz=54						
HLID	**Hailey**	**54.06**	**314**	*e*P	**P**	**00 27 40.7**	**+0.3**
	13nm,1.4s,mb4.5						
O11A	**Cowboy Ranch,**	**54.13**	**310**	⇓P	**P**	**00 27 41.1**	**+0.2**
	baz=54,SNR=9.3						
GSC	**Goldstone**	**54.16**	**303**	⇑P	**P**	**00 27 41.2**	**-0.1**
	baz=54						
K12A	**Draper Farm, C**	**54.16**	**313**	⇓P	**P**	**00 27 41.2**	**0.0**
	baz=54,SNR=6.8						
C15A	**Salmond Ranch,**	**54.17**	**319**	⇓P	**P**	**00 27 41.2**	**+0.1**
	baz=54,SNR=8.9						
H13A	**Challis**	**54.23**	**315**	⇓P	**P**	**00 27 41.2**	**-0.4**
	baz=54						
B15A	**Bradely Ranch,**	**54.33**	**320**	⇓P	**P**	**00 27 41.8**	**-0.4**
	baz=54,SNR=5.3						
S10A	**Tonopah Range,**	**54.41**	**307**	⇓P	**P**	**00 27 43.2**	**+0.2**
	baz=54,SNR=8.1						
Q10A	**Clear Creek Ra**	**54.42**	**308**	⇑P	**P**	**00 27 43.2**	**+0.1**
	baz=54						
J12A	**Stokes Ranch,**	**54.46**	**313**	⇓P	**P**	**00 27 43.2**	**-0.1**
	baz=54,SNR=5.9						
D14A	**Greenough**	**54.51**	**318**	⇑P	**P**	**00 27 43.4**	**-0.2**
	baz=54						
M11A	**Holland Ranch,**	**54.51**	**311**	⇑P	**P**	**00 27 43.9**	**+0.2**
	baz=54,SNR=5.8						
I12A	**Atlanta**	**54.63**	**314**	⇑P	**P**	**00 27 44.3**	**-0.2**
	baz=54						
H12A	**Diamond D Ranc**	**54.64**	**315**	⇓P	**P**	**00 27 44.6**	**+0.1**
	baz=54						
F13A	**Darby**	**54.65**	**317**	⇓P	**P**	**00 27 44.5**	**-0.1**
	baz=54						
L11A	**Cat Creek Ranc**	**54.66**	**312**	⇑P	**P**	**00 27 44.6**	**-0.1**
	baz=54,SNR=8.4						
A15A	**Johnson Ranch,**	**54.67**	**321**	⇓P	**P**	**00 27 44.9**	**+0.3**
	baz=54,SNR=10						
E13A	**Victor**	**54.75**	**317**	⇓P	**P**	**00 27 45.0**	**-0.3**
	baz=55,SNR=5.1						
B14A	**Marquette Ranc**	**54.79**	**320**	⇓P	**P**	**00 27 44.9**	**-0.6**
	baz=55						
MPMC	**Manual Prospec**	**54.82**	**304**	⇓P	**P**	**00 27 45.8**	**-0.2**
	baz=55						
R09A	**Tonopah**	**54.84**	**307**	⇓P	**P**	**00 27 46.1**	**0.0**
	baz=55						
GRAC	**Grapevine Rang**	**54.86**	**305**	⇑P	**P**	**00 27 46.5**	**+0.2**
	baz=55						
S09A	**Goldfield**	**54.87**	**306**	⇓P	**P**	**00 27 45.8**	**-0.5**
	baz=55,SNR=5.2						
C14A	**Swan Lake**	**54.89**	**319**	⇑P	**P**	**00 27 46.5**	**+0.2**
	baz=55						
LRMC	**Laurel Mountai**	**54.90**	**304**	⇓P	**P**	**00 27 46.7**	**+0.1**
	baz=55						
DAC	**Darwin (Calif)**	**54.93**	**305**	*e*P	**P**	**00 27 46.7**	**-0.1**
	6.2nm,0.9s,mb4.3						
DAC				*e*PcP	PcP	00 28 46.9	-0.3
K11A	**Parker Ranch,**	**55.00**	**313**	⇑P	**P**	**00 27 47.2**	**0.0**
	baz=55						
MFID	**Camas Ranch**	**55.02**	**313**	⇓P	**P**	**00 27 47.1**	**-0.2**
	baz=55						
EDW2	**Edwards Air Fo**	**55.06**	**303**	⇑P	**P**	**00 27 47.6**	**-0.2**
	baz=55						
A14A	**Double T Ranch**	**55.09**	**320**	⇑P	**P**	**00 27 47.4**	**-0.4**
	baz=55,SNR=7.0						
D13A	**Huson**	**55.13**	**318**	⇓P	**P**	**00 27 47.7**	**-0.3**
	baz=55						
L10A	**Juniper Basin**	**55.16**	**312**	⇑P	**P**	**00 27 48.1**	**-0.3**
	baz=55,SNR=10.0						
I11A	**Placerville**	**55.24**	**314**	⇓P	**P**	**00 27 48.6**	**-0.2**
	baz=55,SNR=5.0						
F12A	**Elk City**	**55.25**	**316**	⇑P	**P**	**00 27 48.7**	**-0.2**
	baz=55						
PLCA	**Paso Flores**	**55.27**	**189**	P	**P**	**00 27 48.9**	**-0.1**
	2.6nm,0.7s,mb4.1,baz=16,slow=7.7,SNR=8.4						
PLCA	**Paso Flores**	**55.27**	**189**	*e*P	**P**	**00 27 49.3**	**+0.3**
	1.5nm,0.4s,mb4.1						
O09A	**Fish Creek Ran**	**55.28**	**309**	⇓P	**P**	**00 27 49.3**	**+0.1**
	baz=55						
WALA	**Waterton Lakes**	**55.43**	**320**	*e*P	**P**	**00 27 49.9**	**-0.2**
	0.1nm,0.4s						
B13A	**Whitefish**	**55.55**	**319**	⇑P	**P**	**00 27 50.7**	**-0.3**
	baz=55						
ISA	**Isabella**	**55.55**	**304**	P	**P**	**00 27 51.4**	**+0.1**
K10A	**MacKenzie Ranc**	**55.61**	**312**	⇓P	**P**	**00 27 51.4**	**-0.1**
	baz=55,SNR=6.8						
A13A	**Flathead Natio**	**55.70**	**320**	⇑P	**P**	**00 27 52.0**	**0.0**
	baz=56						
NVAR	**Mina Array Bea**	**55.82**	**307**	P	**P**	**00 27 53.0**	**-0.2**
	2.3nm,0.7s,mb4.1,baz=106,slow=6.4,SNR=18						
NVAR				PcP	PcP	00 28 51.9	+1.3
	1.2nm,0.8s,baz=156,slow=4.7,SNR=4.6						
G11A	**Walters Elk Ra**	**55.84**	**316**	⇑P	**P**	**00 27 52.9**	**-0.3**
	baz=56						
BLG	**Laguna Peak**	**55.86**	**302**	⇑P	**P**	**00 27 53.2**	**-0.2**
	baz=56						
ESDC	**Sonseca Array**	**55.86**	**51**	P	**P**	**00 27 56.2**	**+2.8**
	0.4nm,0.6s,mb3.4,baz=261,slow=6.4,SNR=3.3						
ESDC	**Sonseca Array**	**55.86**	**51**	P	**P**	**00 27 56.2**	**+2.8**
ESLA	**Sonseca Array**	**55.86**	**51**	*e*P	**P**	**00 27 52.2**	**-1.2**
F11A	**Grangeville**	**55.90**	**316**	⇓P	**P**	**00 27 52.5**	**-1.0**
	baz=56,SNR=5.4						
H10A	**Noah's Angus R**	**55.96**	**315**	⇓P	**P**	**00 27 52.8**	**-1.2**
	baz=56,SNR=5.7						
L09A	**Wilkinson Ranc**	**56.01**	**311**	⇑P	**P**	**00 27 54.0**	**-0.4**
	baz=56						
O08A	**Rochester Mine**	**56.03**	**309**	⇓P	**P**	**00 27 54.4**	**-0.2**
	baz=56						
E11A	**Bogner Ranch,**	**56.06**	**317**	⇑P	**P**	**00 27 54.6**	**-0.1**
	baz=56						
N08A	**GE Springer Mi**	**56.11**	**310**	⇑P	**P**	**00 27 54.7**	**-0.4**
	baz=56,SNR=7.5						
K09A	**Rome**	**56.20**	**312**	⇓P	**P**	**00 27 55.1**	**-0.6**
	baz=56,SNR=5.3						
BSC	**Santa Cruz Isl**	**56.32**	**302**	⇓P	**P**	**00 27 56.1**	**-0.6**
	baz=56						
D11A	**Klaveano Farm,**	**56.34**	**318**	⇓P	**P**	**00 27 56.7**	**0.0**
	baz=56						
BMO	**Blue Mountains**	**56.41**	**315**	*e*P	**P**	**00 27 56.4**	**-0.7**
	6.1nm,1.4s,mb4.2						
M08A	**Happy Creek Ra**	**56.42**	**311**	⇑P	**P**	**00 27 57.4**	**+0.1**
	baz=56						
A12A	**Yaak River Ran**	**56.47**	**320**	⇓P	**P**	**00 27 57.6**	**+0.1**
	baz=56,SNR=5.8						
C11A	**Tepee Creek (N**	**56.52**	**318**	⇓P	**P**	**00 27 57.6**	**-0.3**
	baz=56						
L08A	**Fields**	**56.54**	**311**	⇓P	**P**	**00 27 57.8**	**-0.4**
	baz=56,SNR=8.4						
O07A	**Toulon**	**56.55**	**309**	⇑P	**P**	**00 27 58.5**	**+0.2**
	baz=56						
H09A	**Durkee**	**56.61**	**314**	⇓P	**P**	**00 27 58.3**	**-0.3**
	baz=56						
EDM	**Edmonton**	**56.63**	**325**	*e*P	**P**	**00 27 58.0**	**-0.6**
F10A	**Beach Ranch, E**	**56.64**	**316**	⇓P	**P**	**00 27 58.3**	**-0.5**
	baz=56						
R06C	**Coleville**	**56.73**	**307**	⇑P	**P**	**00 27 59.9**	**+0.4**
	baz=56						
N07B	**Gerlach**	**56.73**	**310**	⇑P	**P**	**00 27 59.4**	**-0.2**
	baz=56						
K08A	**Mann Creek Ran**	**56.76**	**312**	⇓P	**P**	**00 27 59.6**	**-0.1**
	baz=56						
B11A	**Sandpoint**	**56.77**	**319**	⇑P	**P**	**00 27 59.7**	**+0.1**
	baz=57						
G09A	**Cove**	**56.84**	**315**	⇓P	**P**	**00 27 59.8**	**-0.4**
	baz=57						
J08A	**Circle Bar Ran**	**56.88**	**313**	⇑P	**P**	**00 28 00.6**	**0.0**
	baz=57						
A11A	**Hall Mountain,**	**56.92**	**320**	⇑P	**P**	**00 28 01.3**	**+0.6**
	baz=57						
D10A	**Wagner Farm, O**	**56.96**	**317**	⇑P	**P**	**00 28 00.2**	**-0.8**
	baz=57						
M07A	**Soldier Meadow**	**56.99**	**310**	⇑P	**P**	**00 28 01.0**	**-0.4**
	baz=57,SNR=8.5						
NEW	**Newport**	**57.20**	**319**	*e*P	**P**	**00 28 01.9**	**-0.7**
	9.6nm,1.1s,mb4.5						
L07A	**Adell**	**57.23**	**311**	⇓P	**P**	**00 28 03.0**	**0.0**
	baz=57						
H08A	**Prairie City**	**57.27**	**314**	⇓P	**P**	**00 28 03.1**	**-0.2**
	baz=57,SNR=6.5						
K07A	**Rock Creek Ran**	**57.30**	**312**	⇓P	**P**	**00 28 03.1**	**-0.4**
	baz=57						
N06A	**Buffalo Meadow**	**57.37**	**309**	⇓P	**P**	**00 28 03.1**	**-0.9**
	baz=57,SNR=6.3						
CMB	**Columbia Colle**	**57.39**	**306**	*e*P	**P**	**00 28 03.0**	**-1.2**
BEKR	**Beckwourth**	**57.63**	**308**	⇓P	**P**	**00 28 05.4**	**-0.5**
	baz=57						
F08A	**Pendleton**	**57.64**	**316**	⇑P	**P**	**00 28 05.3**	**-0.5**
	baz=57						
G08A	**Pilot Rock**	**57.65**	**315**	⇓P	**P**	**00 28 05.6**	**-0.3**
	baz=57						
I07A	**Izee**	**57.76**	**313**	⇓P	**P**	**00 28 06.5**	**-0.2**
	baz=58,SNR=5.6						
B09A	**Rice**	**57.90**	**319**	⇑P	**P**	**00 28 07.0**	**-0.6**
	baz=58						
H07A	**Lands Inn, Kim**	**57.91**	**314**	⇑P	**P**	**00 28 07.2**	**-0.6**
	baz=58						
OD2	**Odessa Site #2**	**57.99**	**317**	*e*P	**P**	**00 28 08.2**	**-0.1**
D08A	**Wollman Farm,**	**58.05**	**317**	⇓P	**P**	**00 28 08.5**	**-0.1**
	baz=58						
J06A	**Christmas Vall**	**58.06**	**312**	⇓P	**P**	**00 28 08.2**	**-0.6**
	baz=58						
G07A	**Ruggs Ranch, H**	**58.13**	**315**	⇓P	**P**	**00 28 08.9**	**-0.4**
	baz=58						
C08A	**Higginbotham F**	**58.31**	**318**	⇓P	**P**	**00 28 10.1**	**-0.3**
	baz=58						
A09A	**Danville**	**58.33**	**319**	⇑P	**P**	**00 28 10.0**	**-0.5**
	baz=58						
OHCM	**Honcut**	**58.41**	**308**	*e*P	**P**	**00 28 11.8**	**+0.5**
K05A	**Summer Lake**	**58.50**	**312**	⇓P	**P**	**00 28 12.3**	**+0.5**
	baz=58,SNR=8.0						
A08A	**Turner Farm, O**	**58.76**	**319**	⇑P	**P**	**00 28 13.0**	**-0.6**
	baz=59						
D07A	**Quincy**	**58.78**	**317**	⇑P	**P**	**00 28 13.5**	**-0.2**
	baz=59						
H05A	**Madras**	**59.09**	**314**	⇑P	**P**	**00 28 16.2**	**+0.3**
	baz=59						
B07A	**Winthrop**	**59.18**	**318**	⇑P	**P**	**00 28 15.9**	**-0.6**
	baz=59,SNR=5.5						
A07A	**Ashnola River,**	**59.49**	**319**	⇓P	**P**	**00 28 19.0**	**+0.4**
	baz=59						
YBH	**Yreka Blue Hor**	**59.67**	**310**	*e*P	**P**	**00 28 19.0**	**-1.0**
	17nm,1.5s,mb4.7						
ESK	**Eskdalemuir**	**60.39**	**34**	*e*P	**P**	**00 28 25.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**60.79**	**83**	P	**P**	**00 28 29.1**	**+1.1**
	0.7nm,0.8s,mb3.5,baz=285,slow=6.6,SNR=16						
YKA	**Yellowknife Ar**	**61.19**	**335**	P	**P**	**00 28 29.3**	**-0.6**
	9.8nm,0.6s,mb4.8,baz=108,slow=7.3,SNR=99						
DLBC	**Dease Lake**	**67.12**	**328**	*e*P	**P**	**00 29 09.8**	**+1.1**
INK	**Inuvik**	**70.53**	**338**	*e*P	**P**	**00 29 29.3**	**-0.4**
PNL	**Peninsula**	**72.07**	**328**	P	**P**	**00 29 38.2**	**-0.8**
DAWY	**Dawson**	**72.33**	**333**	*e*P	**P**	**00 29 41.3**	**+0.8**
EGAK	**Eagle**	**73.14**	**334**	*e*P	**P**	**00 29 45.8**	**+0.5**
	12nm,0.8s,mb4.7						
MENT	**Mentasta**	**74.23**	**332**	*e*P	**P**	**00 29 52.4**	**+0.7**
ARCES	**ARCESS Array B**	**75.68**	**21**	P	**P**	**00 30 00.9**	**+1.0**
	4.7nm,0.9s,mb4.1,baz=267,slow=5.4,SNR=4.6						
TRF	**Thorofare Moun**	**77.18**	**333**	*e*P	**P**	**00 30 09.0**	**+0.6**
	22nm,0.7s,mb4.9						
BPAW	**Bear Paw Mtn.**	**77.42**	**333**	*e*P	**P**	**00 30 09.2**	**-0.5**
	7.3nm,0.7s,mb4.4						
PMSA	**Palmer Station**	**78.67**	**181**	P	**P**	**00 30 15.4**	**-1.0**
SNAA	**Sanae**	**93.89**	**164**	*e*P	**P**	**00 31 30.3**	**-1.2**
WMQ	**Urumqi**	**115.66**	**25**	*e*PKP	PKPdf	00 36 57.1	+0.8
SONM	**Songino Array**	**117.33**	**10**	PKP	PKPdf	00 36 59.3	-0.1
	0.2nm,0.3s,baz=278,slow=0.1,SNR=4.8						
MJAR	**Matsushiro Arr**	**126.46**	**341**	PKP	PKPdf	00 37 15.6	-1.7
	1.4nm,0.6s,baz=55,slow=1.4,SNR=3.9						
LZH	**Lanzhou**	**128.07**	**16**	*e*PKP	PKPdf	00 37 20.0	-0.4
LZH				PP	PP		
	comp=Z,89nm,5.0s						
CD2	**Chengdu**	**132.91**	**18**	*e*PKP	PKPdf	00 37 27.7	-2.0
KMI	**Kunming**	**137.92**	**22**	PKP	PKPdf	00 37 39.1	-0.1
GYA	**Guiyang**	**137.94**	**17**	PKP	PKPdf	00 37 37.5	-1.7
GYA				XPKP		00 38 31.0	
GYA				PP	PP	00 40 29.7	+3.1
GYA				PP	PP		
	comp=Z,70nm,8.7s						
ARMA	**Armidale**	**145.86**	**236**	*e*P	PKPdf	00 37 54.2	+1.1
STKA	**Stephens Creek**	**152.78**	**226**	*e*P	PKPbc	00 38 11.5	+0.2
	comp=Z,3.4nm,0.6s						
STKA	**Stephens Creek**	**152.78**	**226**	PKPbc	PKPbc	00 38 11.4	0.0
	comp=Z,4.4nm,0.6s,baz=156,slow=3.8,SNR=8.5						
CTA	**Charters Tower**	**153.28**	**253**	PKPbc	PKPbc	00 38 11.8	-1.0
	comp=Z,3.0nm,0.5s,baz=102,slow=0.7,SNR=3.6						
CTA				PKPab	PKPab	00 38 23.6	-1.6
	comp=Z,2.9nm,0.5s,baz=146,slow=3.6,SNR=3.6						
ASAR	**Alice Springs**	**162.99**	**234**	PKP	PKPdf	00 38 16.3	-0.5
	comp=Z,0.9nm,0.8s,baz=91,slow=1.5,SNR=10						
ASAR				PKPab	PKPab	00 39 04.3	-2.8
	comp=Z,0.4nm,0.4s,baz=118,slow=4.0,SNR=7.8						

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*BJI **13** 00:36:51.7, 2190S×17970W, h565km, mB5.0, mb4.7*
*SZGRF **13** 00:36:52.8, 2177S×17981E, h33km, South of Fiji Islands*
*ISCJB **13** 00:36:52.5±1.1, 2194S±006×17963W±005, h574km±14km, mb4.5/55, Error ellipse: s-maj=10.1km s-min=5.8km az=155.7*
*MOS **13** 00:36:53.2±2.9, 2180S×17967W, h554km, mb4.6/11, Error ellipse: s-maj=11.6km s-min=9.7km az=146.6*
*IDC **13** 00:36:55.4±0.7, 2193S×17954W, h602km±7km, mb3.9/16, mb1 4.0/16, mb1mx4.0/18, mbtmp3.9/16, Error ellipse: s-maj=13.9km s-min=11.6km az=119.0*
*NEIC **13** 00:36:55.8±0.9, 2189S×17968W, h603km±11km, mb4.7/35, Error ellipse: s-maj=8.7km s-min=6.0km az=155.0*
ISC 13 00:36:54.0±1.1**, 2193S**±006×**17961W**±005**, h578**km±13km**, h555**km±8.9km**: pP-P, n437, σ0.58**/323**, mb4.5**/55**, 135C-108D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.91**	**44**	P	**P**	**00 39 18.2**	**-3.5**
	8.4nm,0.3s,baz=209,slow=10,SNR=8.9						
AFI				S	**S**	**00 41 15.3**	**-7.7**
	2.7nm,0.3s,baz=254,slow=20,SNR=4.0						
AFI	**Afiamalu**	**10.91**	**44**	*e*P	**P**	**00 39 18.2**	**-3.5**
AFI				*e*S	**S**	**00 41 15.6**	**-7.4**
AFI				pmax	pmax		
	comp=Z,79nm,0.7s						
AFI	**Afiamalu**	**10.91**	**44**	*e*P	**P**	**00 39 18.2**	**-3.5**
	comp=Z,79nm,0.7s						
AFI				*e*S	**S**	**00 41 15.6**	**-7.3**
DZM	**Mont Dzumac**	**12.94**	**267**	*e*P	**P**	**00 39 42.6**	**+0.4**
DZM	**Mont Dzumac**	**12.94**	**267**	*e*P	**P**	**00 39 42.9**	**+0.7**
	comp=Z,17nm,0.6s						
DZM				*e*S	**S**	**00 42 01.3**	**+0.7**
URZ	**Urewera**	**16.52**	**189**	S	**S**	**00 42 53.2**	**-9.0**
	comp=Z,1.1nm,0.3s,baz=66,slow=20,SNR=6.6						
RAR	**Rarotonga**	**18.46**	**91**	P	**P**	**00 40 34.1**	**-0.8**
SNZO	**South Karori**	**19.91**	**193**	P	**P**	**00 40 48.7**	**+1.0**
HNR	**Honiara**	**23.24**	**299**	*e*P	**P**	**00 41 16.1**	**-1.8**
EIDS	**Eidsvold**	**27.04**	**257**	*e*P	**P**	**00 41 52.0**	**+0.7**
	comp=Z,18nm,0.6s,mb4.9						
CTA	**Charters Tower**	**31.88**	**267**	⇓*i*P	**P**	**00 42 33.7**	**+0.6**
	comp=Z,21nm,0.3s,mb5.2						
CTA	**Charters Tower**	**31.88**	**267**	P	**P**	**00 42 33.6**	**+0.5**
	comp=Z,25nm,0.3s,mb5.3,baz=91,slow=11,SNR=43						
CTA				PcP	PcP	00 45 05.2	-0.7
	comp=Z,4.7nm,0.6s,baz=36,slow=2.9,SNR=4.8						
CTA				ScP	ScP	00 47 56.0	+1.0
	comp=Z,1.3nm,0.3s,baz=114,slow=0.9,SNR=4.2						
CTA	**Charters Tower**	**31.88**	**267**	⇓*i*P	**P**	**00 42 33.7**	**+0.6**
CTA				pmax	pmax		
	comp=Z,21nm,0.3s						
CTAO	**Charters Tower**	**31.88**	**267**	*e*P	**P**	**00 42 33.8**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
CTAO	**Charters Tower**	**31.88**	**267**	*e*P	**P**	**00 42 33.8**	**+0.7**
	comp=Z,32nm,0.9s,mb5.0						
TOO	**Toolangi**	**33.85**	**235**	⇓*i*P	**P**	**00 42 50.2**	**+0.8**
PMG	**Port Moresby**	**34.24**	**286**	*d i*P	**P**	**00 42 53.2**	**+0.1**
PMG	**Port Moresby**	**34.24**	**286**	*e*P	**P**	**00 42 53.3**	**+0.2**
	comp=Z,49nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**35.83**	**246**	*e*P	**P**	**00 43 06.5**	**+0.5**
	comp=Z,18nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**35.83**	**246**	P	**P**	**00 43 06.3**	**+0.4**
	comp=Z,12nm,0.3s,mb4.8,baz=93,slow=9.9,SNR=48						
STKA				S	**S**	**00 48 02.0**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=90,slow=17,SNR=3.2						
STKA				ScP	ScP	00 48 08.7	-0.4
	comp=Z,4.5nm,0.9s,baz=4.9,slow=6.5,SNR=5.3						
ASAR	**Alice Springs**	**42.75**	**258**	P	**P**	**00 44 01.6**	**0.0**
	comp=Z,28nm,0.7s,mb4.9,baz=92,slow=8.3,SNR=260						
ASAR				ScP	ScP	00 48 36.0	-0.2
	comp=Z,2.6nm,1.0s,baz=115,slow=4.9,SNR=7.0						
ASAR				S	**S**	**00 49 41.2**	**-3.3**
	comp=Z,4.1nm,0.9s,baz=97,slow=15,SNR=20						
ASAR	**Alice Springs**	**42.75**	**258**	P	**P**	**00 44 01.6**	**0.0**
ASAR				ScP	ScP	00 48 36.0	-0.2
ASAR				S	**S**	**00 49 41.2**	**-3.3**
WB2	**Warramunga Arr**	**42.92**	**264**	⇓*i*P	**P**	**00 44 02.4**	**-0.7**
WRAB	**Tennant Creek**	**42.93**	**264**	⇓*i*P	**P**	**00 44 02.3**	**-0.8**
WRAB				*i* *PP	pP	00 45 39.6	-5.2
WRAB	**Tennant Creek**	**42.93**	**264**	*e*P	**P**	**00 44 02.4**	**-0.6**

comp=Z,49nm,1.0s,mb5.0
KAKA **Kakadu** 46.53 273 ⇓*i*P x 00 44 10.4
comp=Z,28nm,0.3s
FORT **Forrest** 47.36 248 *e*P P 00 44 36.5 -0.3
comp=Z,46nm,0.7s,mb5.1
FITZ **Fitzroy Crossi** 51.37 264 ⇓*i*P P 00 45 06.2 -0.2
comp=Z,16nm,0.3s,mb4.9
MBWA **Marble Bar** 56.09 259 *e*P P 00 45 39.2 -0.4
comp=Z,42nm,0.9s,mb4.7
KLBR **Kellerberrin** 56.10 246 ⇓*i*P P 00 45 38.8 -0.7
comp=Z,26nm,0.8s,mb4.5
SBA **Scott Base** 56.36 183 P P 00 45 41.6 +1.1
VNDA **Vanda** 56.37 185 P P 00 45 41.1 +0.6
comp=Z,1.9nm,0.7s,mb3.5,baz=5.5,slow=7.3,SNR=4.5
NWAO **Narrogin (SRO)** 56.40 244 P P 00 45 41.2 -0.3
comp=Z,10nm,0.8s,mb4.1,baz=98,slow=8.9,SNR=7.7
MUN **Mundaring** 57.36 245 *e*P P 00 45 47.8 -0.4
QSPA **South Pole Qui** 68.15 180 P P 00 46 56.5 0.0
comp=Z,8.8nm,0.7s,mb4.3,baz=50,slow=1.5,SNR=23
QSPA **South Pole Qui** 68.15 180 P P 00 46 56.5 0.0
MJAR **Matsushiro Arr** 70.49 325 P P 00 47 10.7 -0.4
comp=Z,5.3nm,0.6s,mb4.1,baz=156,slow=5.9,SNR=12
MAJO **Matsushiro** 70.49 325 *e*P P 00 47 10.9 -0.3
MAJO pmax pmax
comp=Z,9.0nm,0.6s,mb4.4
MAJO **Matsushiro** 70.49 325 *e*P P 00 47 10.9 -0.3
comp=Z,8.5nm,0.6s,mb4.3
MAT **Matsushiro** 70.49 325 P P 00 47 11.0 -0.2
KSM **Kuching** 72.14 279 *e*P P 00 47 21.2 -0.1
comp=Z,30nm,0.8s,mb4.9
SSLB **Suanglung** 73.52 305 *e*P P 00 47 27.4 -1.6
comp=Z,26nm,0.9s,mb4.8
KSRS **Korea Array** 76.98 320 P P 00 47 46.8 -1.1
comp=Z,1.9nm,0.6s,mb3.7,baz=140,slow=6.0,SNR=4.9
PETK **Petropavlovsk-** 77.27 346 P P 00 47 48.9 -0.3
comp=Z,9.9nm,0.6s,mb4.4,baz=123,slow=5.9,SNR=17
COCO **West Island** 79.64 261 P P 00 48 02.0 -0.7
NJ2 **Nanjing** 79.65 311 *e*P P 00 48 04.5 +2.2
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.4
MAW **Mawson** 79.72 200 P P 00 48 00.5 -1.5
comp=Z,3.8nm,0.6s,mb3.9,baz=127,slow=4.1,SNR=7.8
MAW **Mawson** 79.72 200 *e*P P 00 48 01.6 -0.5
MAW pmax pmax
comp=Z,1.0nm,0.7s
MAW **Mawson** 79.72 200 *e*P P 00 48 01.6 -0.5
comp=Z,1.0nm,0.7s
PMSA **Palmer Station** 80.58 157 P P 00 48 06.2 -0.4
comp=Z,9.9nm,0.4s,mb4.5,baz=176,slow=19,SNR=9.2
MDJ **Mudanjiang** 80.83 326 P P 00 48 08.9 +0.7
MDJ AMB AMB
comp=Z,11nm,1.1s,mb4.2
MDJ AMB AMB
comp=Z,154nm,7.5s
MDJ **Mudanjiang** 80.83 326 *e*P P 00 48 08.3 +0.2
KHMM **Horse Mountain** 81.20 39 *e*P P 00 48 11.3 +1.1
MONP **Monument Peak** 81.27 49 ⇑P P 00 48 11.2 +0.5
baz=81
ISA **Isabella** 81.40 46 ⇓P P 00 48 11.6 +0.3
baz=82
ISA **Isabella** 81.40 46 *e*P P 00 48 11.1 -0.2
CMB **Columbia Colle** 81.52 43 *e*P P 00 48 11.8 -0.1
CMB pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
CMB **Columbia Colle** 81.52 43 *e*P P 00 48 11.8 -0.1
comp=Z,9.9nm,1.0s,mb4.3
GSC **Goldstone** 82.33 47 ⇓P P 00 48 15.9 -0.1
baz=82
DAC **Darwin (Calif)** 82.34 46 *e*P P 00 48 17.4 +1.4
DAC pmax pmax
comp=Z,18nm,1.0s,mb4.6
DAC **Darwin (Calif)** 82.34 46 *e*P P 00 48 17.4 +1.4
comp=Z,18nm,1.0s,mb4.6
YBH **Yreka Blue Hor** 82.34 39 *e*P P 00 48 16.7 +0.8
YBH pmax pmax
comp=Z,75nm,2.3s
YBH **Yreka Blue Hor** 82.34 39 *e*P P 00 48 16.7 +0.8
comp=Z,75nm,2.3s,mb4.8
WAKR **Walker** 82.40 43 *e*P P 00 48 16.4 +0.1
R06C **Coleville** 82.41 43 ⇓P P 00 48 16.3 0.0
baz=82,SNR=6.9
GLA **Glamis** 82.49 50 ⇑P P 00 48 17.1 +0.2
baz=83
GLA **Glamis** 82.49 50 *e*P P 00 48 17.6 +0.7
comp=Z,16nm,1.1s,mb4.5
CN2 **Changchun** 82.52 323 *e*P P 00 48 17.1 +0.3
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
BEKR **Beckwourth** 82.62 42 ⇑P P 00 48 17.7 +0.3
baz=83
WCN **Washoe City** 82.67 43 ⇑P P 00 48 17.9 +0.3
baz=83
Y12C **Blythe** 83.07 50 ⇑P P 00 48 20.2 +0.4
baz=83
NVAR **Mina Array Bea** 83.09 44 P P 00 48 19.2 -0.6
comp=Z,6.2nm,1.0s,mb4.1,baz=225,slow=8.8,SNR=22
NVAR pP pP 00 50 26.8 +3.8
comp=Z,1.0nm,0.9s,baz=222,slow=8.6,SNR=3.9
NVAR PP PP 00 51 41.0 -1.0
comp=Z,0.2nm,0.4s,baz=234,slow=9.9,SNR=3.6
NVAR **Mina Array Bea** 83.09 44 P P 00 48 19.2 -0.6
NVAR pP pP 00 50 26.8 +3.8
NVAR PP PP 00 51 41.0 -1.0
113A **Mohawk Valley,** 83.10 51 ⇓P P 00 48 20.5 +0.5
baz=83
O06A **Flanigan** 83.13 42 ⇑P P 00 48 19.7 -0.2
baz=83,SNR=8.4
N06A **Buffalo Meadow** 83.47 41 ⇑P P 00 48 21.4 -0.2
baz=84,SNR=5.3
Q08A **Gabbs** 83.57 44 ⇓P P 00 48 22.1 0.0
baz=84
TPH **Tonopah** 83.59 45 *e*P P 00 48 22.5 +0.3
TPH pmax pmax
comp=Z,15nm,1.1s,mb4.4
TPH **Tonopah** 83.59 45 *e*P P 00 48 22.5 +0.2
comp=Z,15nm,1.1s,mb4.4
Y13A **Salome** 83.60 50 ⇑P P 00 48 22.6 +0.2
baz=84
O07A **Toulon** 83.72 42 ⇓P P 00 48 22.4 -0.5
baz=84,SNR=6.8
R09A **Tonopah** 83.78 45 ⇓P P 00 48 23.1 0.0
baz=84
MOD **Modoc** 83.87 40 *e*P P 00 48 23.7 +0.2
comp=Z,10nm,1.1s,mb4.3
S10A **Tonopah Range,** 83.92 45 ⇑P P 00 48 23.8 -0.1
baz=84
P08A **Dixie Valley** 83.95 43 ⇑P P 00 48 24.5 +0.5
baz=84
Z14A **Wintersburg** 83.99 51 ⇑P P 00 48 24.7 +0.3
baz=84
K05A **Summer Lake** 84.01 39 ⇑P P 00 48 24.6 +0.3
baz=84,SNR=5.9
N07B **Gerlach** 84.02 42 ⇓P P 00 48 25.0 +0.7
baz=84
SHPR **Sheep Range** 84.10 47 *e*P P 00 48 17.3 -7.5
W13A **Hualapai Mount** 84.23 49 ⇑P P 00 48 25.7 +0.2
baz=84
M07A **Soldier Meadow** 84.25 41 ⇑P P 00 48 25.7 +0.3
baz=84
216A **Three Points,** 84.39 52 ⇓P P 00 48 26.3 0.0
baz=84
T11A **Corn Creek, Al** 84.46 46 ⇓P P 00 48 26.6 0.0
baz=85
L07A **Adell** 84.52 41 ⇑P P 00 48 27.2 +0.4
baz=85
N08A **GE Springer Mi** 84.54 42 ⇑P P 00 48 27.1 +0.3
baz=85
Q10A **Clear Creek Ra** 84.54 44 ⇑P P 00 48 27.4 +0.5
baz=85
V13A **Grand Canyon W** 84.56 48 ⇓P P 00 48 27.3 +0.2
baz=85
X14A **Yava** 84.60 50 ⇓P P 00 48 27.6 +0.3
baz=85
Y15A **Casa Rosa Ranc** 84.73 50 ⇑P P 00 48 28.0 0.0
baz=85
217A **Green Valley** 84.75 53 ⇑P P 00 48 28.4 +0.3
baz=85,SNR=7.5
J06A **Christmas Vall** 84.76 39 ⇓P P 00 48 27.6 -0.3
baz=85,SNR=5.3
M08A **Happy Creek Ra** 84.77 41 ⇓P P 00 48 28.3 +0.3
baz=85
W14A **Seligman** 84.85 49 ⇓P P 00 48 29.1 +0.6
baz=85
U13A **Pakoon Wash** 84.87 48 ⇑P P 00 48 29.3 +0.7
baz=85
K07A **Rock Creek Ran** 84.97 40 ⇑P P 00 48 29.3 +0.5
baz=85
TUC **Tucson** 85.03 52 *e*P P 00 48 29.3 -0.2
comp=Z,7.0nm,1.0s,mb4.2
V14A **Boquillas Ranc** 85.05 49 ⇑P P 00 48 29.4 0.0
baz=85
X15A **Humboldt** 85.08 50 ⇑P P 00 48 29.8 +0.2
baz=85
I06A **Prineville** 85.14 39 ⇓P P 00 48 29.8 +0.1
baz=85,SNR=8.0
117A **Oracle** 85.20 52 ⇑P P 00 48 30.6 +0.3
baz=85,SNR=5.8
318A **Bisbee** 85.20 54 ⇑P P 00 48 30.5 +0.2
baz=85,SNR=10.0
L08A **Fields** 85.22 41 ⇓P P 00 48 30.6 +0.5
baz=85,SNR=5.9
T13A **Saint George** 85.22 47 ⇑P P 00 48 30.8 +0.5
baz=85
Y16A **Circle Bar Ran** 85.31 51 ⇑P P 00 48 31.4 +0.6
baz=85,SNR=6.4
J07A **Hines** 85.33 39 ⇓P P 00 48 31.2 +0.6
baz=85
U14A **Mt Trumbull** 85.41 48 ⇑P P 00 48 31.4 +0.2
baz=86
218A **Dragoon** 85.42 53 ⇓P P 00 48 31.4 +0.1
baz=86,SNR=11
K08A **Mann Creek Ran** 85.44 40 ⇓P P 00 48 31.0 -0.2
baz=86,SNR=5.3
H06A **Lindquist Farm** 85.54 38 ⇑P P 00 48 31.3 -0.3
baz=86,SNR=8.0
X16A **Lo Mia Camp, P** 85.61 50 ⇓P P 00 48 32.1 -0.1
baz=86,SNR=5.3
I07A **Izee** 85.63 39 ⇑P P 00 48 32.0 0.0
baz=86,SNR=8.1
G06A **Carlson Farm,** 85.67 37 ⇑P P 00 48 32.3 +0.1
baz=86
Q12A **Willow Creek R** 85.69 45 ⇓P P 00 48 32.4 -0.1
baz=86
319A **Douglas** 85.70 54 ⇑P P 00 48 33.1 +0.4
baz=86,SNR=8.8
O11A **Cowboy Ranch,** 85.74 44 ⇓P P 00 48 32.5 -0.2
baz=86
118A **Homack Ranch,** 85.80 52 ⇑P P 00 48 33.1 0.0
baz=86,SNR=5.6
V15A **Kaibab Nationa** 85.80 49 ⇓P P 00 48 33.5 +0.4
baz=86
T14A **Hurricane** 85.81 47 ⇑P P 00 48 33.2 +0.1
baz=86
J08A **Circle Bar Ran** 85.81 40 ⇓P P 00 48 33.1 +0.2
baz=86
E05A **Randle** 85.86 36 ⇑P P 00 48 33.1 0.0
baz=86
BJI **Beijing** 85.86 316 P P 00 48 33.5 +0.3
BJI AMB AMB
comp=Z,15nm,0.6s,mb4.8
BJI AMB AMB
comp=Z,130nm,4.3s
P12A **McGill** 85.87 45 ⇑P P 00 48 33.6 +0.3
baz=86
K09A **Rome** 85.89 41 ⇓P P 00 48 32.9 -0.3
baz=86,SNR=9.8
H07A **Lands Inn, Kim** 85.90 38 ⇓P P 00 48 33.0 -0.3
baz=86,SNR=8.0
M10A **I.L. Ranch, Tu** 85.95 42 ⇓P P 00 48 34.2 +0.6
baz=86
219A **White Tail Can** 86.01 53 ⇑P P 00 48 34.5 +0.3
baz=86,SNR=7.7
U15A **North Rim** 86.03 48 ⇓P P 00 48 34.2 +0.1
baz=86,SNR=7.2
GYA **Guiyang** 86.06 300 P P 00 48 33.7 -0.8
GYA AP pP 00 50 36.4 -2.5
GYA XP sP 00 51 33.2 -3.8
GYA PP PP 00 52 06.9 +0.9
GYA SKS 00 58 04.0
GYA S S 00 58 20.2 -1.1
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
I08A **Drewsey** 86.08 39 ⇓P P 00 48 34.5 +0.3
baz=86
Q13A **Wheeler Ranch,** 86.17 45 ⇑P P 00 48 34.8 0.0
baz=86
WUAZ **Wupatki** 86.21 49 ⇑P P 00 48 35.3 +0.3
baz=86
G07A **Ruggs Ranch, H** 86.24 38 ⇓P P 00 48 34.7 -0.1
baz=86,SNR=5.7
J09A **Fry Pan Ranch,** 86.24 40 ⇓P P 00 48 34.8 -0.1
baz=86,SNR=8.7
T15A **Red Dirt Ranch** 86.27 48 ⇓P P 00 48 35.6 +0.3
baz=86
E06A **Yakima** 86.27 36 ⇓P P 00 48 35.0 0.0
baz=86
L10A **Juniper Basin** 86.30 42 ⇑P P 00 48 34.9 -0.4
baz=86,SNR=6.7
Y18A **Canyon Day Jun** 86.30 51 ⇑P P 00 48 36.0 +0.5
baz=86
ELK **Elko** 86.34 43 *e*P P 00 48 35.6 +0.1
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK **Elko** 86.34 43 *e*P P 00 48 35.6 +0.1
comp=Z,4.5nm,1.0s,mb4.0
119A **Ashpeak Ranch,** 86.35 53 ⇑P P 00 48 35.8 +0.1
baz=86
M11A **Holland Ranch,** 86.37 43 ⇓P P 00 48 35.8 +0.2
baz=86
H08A **Prairie City** 86.37 39 ⇓P P 00 48 35.8 +0.2
baz=86
O12A **Currie** 86.40 44 ⇑P P 00 48 35.7 0.0
baz=86
P13A **Bates Ranch, G** 86.44 45 ⇓P P 00 48 35.9 -0.1
baz=86
K10A **MacKenzie Ranc** 86.45 41 ⇓P P 00 48 35.7 -0.2
baz=86,SNR=6.8
F07A **Phinny Hill Vi** 86.47 37 ⇑P P 00 48 36.1 +0.1
baz=87
N12A **Clover Valley,** 86.53 43 ⇑P P 00 48 36.3 0.0
baz=87
C05A **Tolt Reservoir** 86.59 35 ⇑P P 00 48 36.3 -0.2
baz=87
I09A **Lost Marbles R** 86.61 40 ⇑P P 00 48 36.6 -0.1
baz=87
SNAA **Sanae** 86.63 179 *e*P P 00 48 34.3 -2.1
SNAA *e* 00 48 35.6
G08A **Pilot Rock** 86.66 38 ⇓P P 00 48 36.4 -0.4
baz=87,SNR=14
Q14A **Sevier Lake (B** 86.68 46 ⇓P P 00 48 37.0 -0.1
baz=87,SNR=5.2
U16A **Tuba City** 86.69 49 ⇓P P 00 48 37.1 -0.2
baz=87
B05A **Bryant** 86.73 34 ⇓P P 00 48 37.2 +0.1
baz=87
X18A **Snowflake** 86.73 51 ⇑P P 00 48 38.0 +0.5
baz=87
D06A **Cle Elum** 86.74 36 ⇑P P 00 48 37.4 +0.2
baz=87
PMR **Palmer** 86.75 14 *e*P P 00 48 35.7 -1.2
VNA3 **Neumayer Olymp** 86.82 177 *e*P P 00 48 34.8 -2.5
VNA3 *e* 00 48 36.3
T16A **Glen Canyon Da** 86.85 48 ⇓P P 00 48 38.2 +0.2
baz=87
J10A **Berg Farm, Mel** 86.88 40 ⇑P P 00 48 38.1 +0.2
baz=87
E07A **Sunnyside** 86.90 37 ⇑P P 00 48 38.6 +0.6
baz=87
M12A **Wells** 86.91 43 ⇓P P 00 48 38.4 +0.2
baz=87
RSW **Rattlesnake Hi** 86.95 37 *e*P P 00 48 38.6 +0.4
K11A **Parker Ranch,** 86.96 41 ⇑P P 00 48 38.3 0.0
baz=87,SNR=5.6
Y19A **Nutrioso** 86.96 52 ⇓P P 00 48 38.7 +0.1
baz=87,SNR=5.4
HAWA **Hanford** 86.98 37 *e*P P 00 48 38.6 +0.2
comp=Z,20nm,1.1s,mb4.8
H09A **Durkee** 87.05 39 ⇓P P 00 48 38.4 -0.3
baz=87,SNR=8.5
F08A **Pendleton** 87.06 38 ⇑P P 00 48 38.6 -0.1
baz=87
P14A **Drum Mountains** 87.14 45 ⇑P P 00 48 39.4 +0.2
baz=87
X19A **St. Johns** 87.16 51 ⇓P P 00 48 39.7 +0.2
baz=87
S16A **Weppner Ranch,** 87.16 47 ⇓P P 00 48 39.3 -0.1
baz=87
MSU **Marysvale** 87.17 46 *e*P P 00 48 40.3 +0.9
D07A **Quincy** 87.22 36 ⇑P P 00 48 39.5 0.0
baz=87
I10A **Payette** 87.23 40 ⇑P P 00 48 39.4 -0.2
baz=87
VNA2 **Neumayer--Watz** 87.24 177 *e*P P 00 48 37.9 -1.4
baz=196,slow=3.1
VNA2 *e* 00 48 39.3
ETW **Entiat** 87.27 36 *e*P P 00 48 39.7 +0.1
E08A **Dider Farm, El** 87.31 37 ⇑P P 00 48 39.9 0.0
baz=87
G09A **Cove** 87.33 39 ⇓P P 00 48 40.2 +0.2
baz=87
M13A **Montello** 87.36 43 ⇑P P 00 48 40.1 -0.2
baz=88,SNR=10.0
BMO **Blue Mountains** 87.36 39 *e*P P 00 48 39.7 -0.5
BMO pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
BMO **Blue Mountains** 87.36 39 *e*P P 00 48 39.7 -0.5
comp=Z,8.7nm,1.3s,mb4.3
SEY **Seymchan** 87.43 348 ⇑*i*P P 00 48 40.3 +0.3
MFID **Camas Ranch** 87.44 41 ⇓P P 00 48 40.3 -0.2
baz=88,SNR=7.7
C07A **Waterville** 87.46 36 ⇓P P 00 48 40.2 -0.3
baz=88
F09A **S2 Ranch, Elgi** 87.50 38 ⇑P P 00 48 41.0 +0.2
baz=88
H10A **Noah's Angus R** 87.54 40 ⇑P P 00 48 40.1 -0.9
baz=88,SNR=9.1
K12A **Draper Farm, C** 87.58 42 ⇓P P 00 48 41.1 -0.1
baz=88
I11A **Placerville** 87.64 40 ⇓P P 00 48 41.0 -0.5
baz=88,SNR=8.1
S17A **Black Ridge (B** 87.67 48 ⇓P P 00 48 41.0 -0.8
baz=88
U18A **Rough Rock, Ch** 87.71 49 ⇑P P 00 48 41.7 -0.3
baz=88
D08A **Wollman Farm,** 87.71 37 ⇓P P 00 48 41.5 -0.3
baz=88,SNR=6.2
N14A **Grayback Hills** 87.72 44 ⇑P P 00 48 41.5 -0.4
baz=88
XAN **Xi'an** 87.81 308 P P 00 48 43.3 +0.7
XAN AP pP 00 50 44.9 -2.8
XAN PP PP 00 52 19.3 -0.4
XAN S S 00 58 39.3 +1.9
XAN XS sS 01 02 17.3 -3.0
XAN SS SS 01 04 44.5 +1.7
XAN AMB AMB
comp=Z,13nm,0.9s,mb4.7
L13A **Double Diamond** 87.89 43 ⇓P P 00 48 42.5 -0.1
baz=88
B07A **Winthrop** 87.89 35 ⇓P P 00 48 42.5 -0.1
baz=88
M14A **Sheep Mountain** 87.95 43 ⇓P P 00 48 42.9 -0.2
baz=88,SNR=5.8
OD2 **Odessa Site #2** 88.03 36 *e*P P 00 48 42.9 -0.3
H11A **Donnelly** 88.04 40 ⇑P P 00 48 43.0 -0.3
baz=88,SNR=12
F10A **Beach Ranch, E** 88.04 38 ⇓P P 00 48 42.7 -0.7
baz=88,SNR=6.2
D09A **Jones Farm, Ri** 88.06 37 ⇓P P 00 48 43.1 -0.2
baz=88
T18A **Mexican Hat** 88.06 49 ⇓P P 00 48 43.4 -0.2
baz=88,SNR=8.4
I12A **Atlanta** 88.07 41 ⇓P P 00 48 43.8 +0.3
baz=88
C08A **Higginbotham F** 88.07 36 ⇓P P 00 48 43.4 0.0
baz=88
K13A **Stover Farm, H** 88.10 42 ⇑P P 00 48 43.8 +0.1
baz=88
A07A **Ashnola River,** 88.11 34 ⇓P P 00 48 43.2 -0.3
baz=88
R17A **Hanksville Air** 88.12 47 ⇑P P 00 48 43.5 -0.4
baz=88
TRF **Thorofare Moun** 88.16 13 *e*P P 00 48 42.0 -1.4
comp=Z,5.2nm,0.7s,mb4.4
TMUT **Trail Mountain** 88.22 46 *e*P P 00 48 45.1 +0.8
B08A **Colville Reser** 88.25 35 ⇑P P 00 48 43.9 -0.3
baz=88
G11A **Walters Elk Ra** 88.28 39 ⇑P P 00 48 44.0 -0.4
baz=88,SNR=14
L14A **Malta** 88.30 43 ⇑P P 00 48 44.5 -0.2
baz=88
HLID **Hailey** 88.38 41 ⇑P P 00 48 45.1 +0.1
baz=88
HLID **Hailey** 88.38 41 *e*P P 00 48 45.0 0.0
comp=Z,6.9nm,1.1s,mb4.3
E10A **Myers Farm, Un** 88.40 38 ⇓P P 00 48 44.8 -0.1
baz=88
SPUT **South Promonto** 88.43 44 *e*P P 00 48 45.5 +0.2
J13A **Cove Ranch, Pi** 88.44 42 ⇑P P 00 48 45.4 +0.1
baz=88
O16A **Springville** 88.48 45 ⇑P P 00 48 45.8 +0.3
baz=89
C09A **Chrisman Ranch** 88.50 36 ⇑P P 00 48 45.4 0.0
baz=89
M15A **Larsen Ranch,** 88.51 44 ⇓P P 00 48 45.2 -0.4
baz=89,SNR=7.6
SRU **San Rafael** 88.59 47 ⇓P P 00 48 45.9 -0.1
baz=89
SRU **San Rafael** 88.59 47 *e*P P 00 48 46.1 +0.1
SRU pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SRU **San Rafael** 88.59 47 *e*P P 00 48 46.1 +0.1
comp=Z,7.3nm,0.8s,mb4.6
K14A **Jones Ranch, D** 88.61 43 ⇓P P 00 48 46.2 +0.1
baz=89
D10A **Wagner Farm, O** 88.63 37 ⇓P P 00 48 45.7 -0.4
baz=89
A08A **Turner Farm, O** 88.64 35 ⇑P P 00 48 45.9 -0.1
baz=89,SNR=5.5
H12A **Diamond D Ranc** 88.65 40 ⇑P P 00 48 46.1 -0.1
baz=89,SNR=12
R18A **Canyonlands Na** 88.66 48 ⇓P P 00 48 46.2 -0.2
baz=89,SNR=7.0
KMI **Kunming** 88.67 298 P P 00 48 47.9 +1.1
KMI AMB AMB
comp=Z,12nm,0.7s,mb4.8
MCK **McKinley** 88.69 13 *e*P P 00 48 44.3 -1.6
DAU **Daniels Canyon** 88.75 45 *e*P P 00 48 47.8 +1.0
I13A **Wildhorse Cree** 88.75 41 ⇑P P 00 48 46.8 +0.1
baz=89
J14A **Carey** 88.81 42 ⇑P P 00 48 47.4 +0.5
baz=89,SNR=9.6
L15A **Malad City** 88.83 43 ⇓P P 00 48 47.0 -0.1
baz=89,SNR=6.0
Q18A **Rafter H Ranch** 88.85 47 ⇑P P 00 48 46.7 -0.5
baz=89,SNR=5.3
S19A **Harvey Farm, M** 88.87 48 ⇑P P 00 48 47.1 -0.3
baz=89
N16A **Rees Ranch, Co** 88.87 45 ⇑P P 00 48 47.4 0.0
baz=89
B09A **Rice** 88.93 36 ⇓P P 00 48 47.3 -0.1
baz=89
M16A **Huntsville** 88.96 44 ⇑P P 00 48 47.9 +0.2
baz=89
O17A **Robinson Place** 88.98 46 ⇑P P 00 48 48.0 +0.1
baz=89,SNR=25
HIA **Hailar** 88.99 325 *d*⇑*i*P P 00 48 48.0 +0.4
CHRT **Chiangrai** 89.02 292 ⇑P P 00 48 50.5 +2.0
comp=Z,132nm,0.9s
H13A **Challis** 89.02 41 ⇑P P 00 48 47.8 -0.1
baz=89,SNR=6.7
A09A **Danville** 89.02 35 ⇑P P 00 48 47.6 -0.2
baz=89
F12A **Elk City** 89.07 39 ⇑P P 00 48 47.7 -0.4
baz=89
TXAR **Lajitas Array** 89.08 58 P P 00 48 48.5 -0.1
comp=Z,5.1nm,0.9s,mb4.3,baz=224,slow=5.2,SNR=33
TXAR pP pP 00 50 57.6 +3.6
comp=Z,0.9nm,0.9s,baz=232,slow=6.2,SNR=5.3
K15A **Arbon** 89.09 43 ⇑P P 00 48 48.0 -0.3
baz=89
D11A **Klaveano Farm,** 89.16 38 ⇓P P 00 48 48.5 0.0
baz=89
I14A **Mackay** 89.17 41 ⇑P P 00 48 48.7 +0.1
baz=89,SNR=9.3
CM31 **Chiang Mai Arr** 89.18 290 *e*P P 00 48 42.2 -7.1
CMAR **Chiang Mai Arr** 89.18 290 P P 00 48 50.4 +1.1
comp=Z,14nm,0.9s,mb4.8,baz=134,slow=3.4,SNR=61
CMAR **Chiang Mai Arr** 89.18 290 ⇓*e*P P 00 48 50.9 +1.6
HHC **Hu-ho-hao-te** 89.28 315 *e*P P 00 48 52.8 +3.6
HHC AP pP 00 50 52.5 -2.3
HHC XP sP 00 51 44.7 -7.8
HHC PP PP 00 52 34.6 +3.5
HHC *e*S S 00 58 55.1 +4.6
HHC SS SS 01 05 08.6 +5.0
HHC AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,325nm,6.9s
N17A **Moffit Pass** 89.30 45 ⇑P P 00 48 49.3 0.0
baz=89
G13A **Cobalt** 89.31 40 ⇓P P 00 48 49.2 -0.1
baz=89

CHG	**Chiang Mai**	**89.32**	**290**	⇓P	**P**	**00 48 51.0**	**+1.1**
	comp=Z,22nm,0.7s,mb5.1						
CHTO	**Chiang Mai**	**89.32**	**290**	*e*P	**P**	**00 48 51.0**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
CHTO	**Chiang Mai**	**89.32**	**290**	*e*P	**P**	**00 48 51.0**	**+1.1**
	comp=Z,18nm,0.9s,mb4.9						
Q19A	**Hogan Spring (**	**89.37**	**47**	⇑P	**P**	**00 48 49.4**	**-0.3**
	baz=90						
L16A	**Fish Haven**	**89.45**	**44**	⇓P	**P**	**00 48 49.4**	**-0.6**
	baz=90,SNR=9.5						
ANMO	**Albuquerque**	**89.46**	**52**	*e*P	**P**	**00 48 50.1**	**-0.1**
	comp=Z,6.5nm,1.1s,mb4.4						
H14A	**Leadore**	**89.58**	**41**	⇑P	**P**	**00 48 50.6**	**+0.1**
	baz=90						
F13A	**Darby**	**89.63**	**39**	⇓P	**P**	**00 48 50.0**	**-0.7**
	baz=90						
C11A	**Tepee Creek (N**	**89.64**	**37**	⇑P	**P**	**00 48 50.3**	**-0.4**
	baz=90						
M17A	**Scullys Gap (B**	**89.67**	**45**	⇑P	**P**	**00 48 50.7**	**-0.3**
	baz=90						
D12A	**Red Ives Fores**	**89.72**	**38**	⇓P	**P**	**00 48 50.8**	**-0.3**
	baz=90						
K16A	**Soda Springs**	**89.76**	**43**	⇓P	**P**	**00 48 51.5**	**+0.1**
	baz=90,SNR=7.2						
GDL2	**Guadalupe Moun**	**89.79**	**55**	*e*P	**P**	**00 48 52.2**	**+0.3**
P19A	**Cripple Cowboy**	**89.89**	**47**	⇑P	**P**	**00 48 51.9**	**-0.1**
	baz=90						
J16A	**Bone**	**89.97**	**43**	⇑P	**P**	**00 48 52.3**	**-0.1**
	baz=90,SNR=8.2						
H15A	**Lima**	**90.02**	**41**	⇑P	**P**	**00 48 53.3**	**+0.7**
	baz=90						
Q20A	**Ridgley Place,**	**90.03**	**48**	⇑P	**P**	**00 48 52.8**	**+0.1**
	baz=90						
M18A	**Lyman**	**90.04**	**45**	⇓P	**P**	**00 48 53.1**	**+0.4**
	baz=90						
N18A	**Larsen Ranch,**	**90.08**	**45**	⇓P	**P**	**00 48 52.9**	**0.0**
	baz=90						
K17A	**Gardner Place,**	**90.14**	**43**	⇑P	**P**	**00 48 53.4**	**+0.2**
	baz=90						
R21A	**Cimarron**	**90.27**	**48**	⇑P	**P**	**00 48 54.0**	**+0.2**
	baz=90						
CD2	**Chengdu**	**90.30**	**303**	P	**P**	**00 48 57.1**	**+2.9**
BILL	**Bilibino**	**90.30**	**355**	*d i*P	**P**	**00 48 53.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.5						
BILL	**Bilibino**	**90.30**	**355**	*e*P	**P**	**00 48 52.7**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.4						
I16A	**Newdale**	**90.36**	**42**	⇓P	**P**	**00 48 54.2**	**+0.1**
	baz=90						
N19A	**John Jarvie Ra**	**90.36**	**46**	⇑P	**P**	**00 48 54.0**	**-0.2**
	baz=90						
G15A	**Dillon**	**90.40**	**41**	⇓P	**P**	**00 48 54.4**	**+0.1**
	baz=90						
REDW	**Red Top Meadow**	**90.49**	**43**	*e*P	**P**	**00 48 54.9**	**+0.1**
	comp=Z,10nm,1.1s,mb4.6						
J17A	**Brown Place, J**	**90.58**	**43**	⇑P	**P**	**00 48 55.1**	**-0.1**
	baz=91						
K18A	**Toltan Ranch,**	**90.65**	**44**	⇑P	**P**	**00 48 55.4**	**-0.1**
	baz=91,SNR=6.6						
EFI	**East Falkland**	**90.69**	**148**	P	**P**	**00 48 56.4**	**+0.8**
IMW	**Indian Meadow**	**90.71**	**42**	*e*P	**P**	**00 48 56.6**	**+0.9**
	comp=Z,9.2nm,0.4s,mb5.1						
F15A	**Butte**	**90.75**	**40**	⇓P	**P**	**00 48 55.8**	**-0.1**
	baz=91						
LOHW	**Long Hollow**	**90.78**	**43**	P	**P**	**00 48 57.0**	**+0.9**
	comp=Z,4.4nm,0.4s,mb4.7						
N20A	**Spence Gulch,**	**90.94**	**46**	⇑P	**P**	**00 48 56.8**	**-0.1**
	baz=91						
J18A	**Kendall Valley**	**90.95**	**43**	⇑P	**P**	**00 48 56.8**	**-0.1**
	baz=91						
BW06	**Boulder Array**	**91.02**	**44**	⇑P	**P**	**00 48 57.1**	**-0.1**
	baz=91						
BW06	**Boulder Array**	**91.02**	**44**	*e*P	**P**	**00 48 57.1**	**-0.2**
	comp=Z,7.9nm,1.3s,mb4.5						
PDAR	**Pinedale Array**	**91.02**	**44**	P	**P**	**00 48 56.1**	**-1.1**
	comp=Z,3.6nm,1.1s,mb4.2,baz=220,slow=3.9,SNR=14						
PDAR				PP	PP	00 52 42.1	-2.5
	comp=Z,0.6nm,0.9s,baz=255,slow=4.5,SNR=4.7						
M20A	**Sweetwater, Wa**	**91.31**	**45**	⇓P	**P**	**00 48 58.5**	**0.0**
	baz=91						
N21A	**Black Mountain**	**91.41**	**46**	⇑P	**P**	**00 48 59.3**	**+0.2**
	baz=92						
SDCO	**Great Sand Dun**	**91.42**	**50**	P	**P**	**00 48 58.1**	**-1.1**
L20A	**Wamsutter**	**91.45**	**45**	⇓P	**P**	**00 48 59.2**	**0.0**
	baz=92						
COLD	**Coldfoot**	**91.55**	**11**	*e*P	**P**	**00 48 58.7**	**-0.4**
N22A	**Wattenberg Ran**	**92.14**	**47**	⇓P	**P**	**00 49 02.5**	**+0.1**
	baz=92						
C17A	**Wharram Farm,**	**92.68**	**39**	⇑P	**P**	**00 49 04.4**	**-0.4**
	baz=93						
L22A	**Ellis Ranch, M**	**92.72**	**46**	⇑P	**P**	**00 49 04.0**	**-1.0**
	baz=93						
A16A	**West Butte Ran**	**92.86**	**38**	⇑P	**P**	**00 49 04.9**	**-0.6**
	baz=93						
YAK	**Yakutsk**	**92.88**	**339**	⇑*i*P	**P**	**00 49 04.1**	**-1.2**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
RSSD	**Black Hills**	**95.22**	**44**	P	**P**	**00 49 16.1**	**-0.3**
ULN	**Ulaanbaatar**	**95.46**	**320**	⇑*i*P	**P**	**00 49 18.7**	**+1.3**
SONM	**Songino Array**	**95.85**	**319**	P	**P**	**00 49 17.4**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.7,baz=121,slow=5.6,SNR=2.2						
SONM				PP	PP	00 53 27.2	+5.7
	comp=Z,0.7nm,0.8s,baz=103,slow=4.3,SNR=4.5						
INK	**Inuvik**	**96.04**	**16**	*e*P	**P**	**00 49 18.4**	**-1.1**
YKA	**Yellowknife Ar**	**98.43**	**25**	PP	PP	00 53 36.2	-4.5
	comp=Z,0.1nm,0.3s,baz=239,slow=7.7,SNR=3.9						
YKA				PKKPbc	PKKPbc	01 05 55.8	-4.1
	comp=Z,0.1nm,0.5s,baz=43,slow=2.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**110.66**	**321**	PKiKP	PKiKP	00 54 18.9	-2.4
	comp=Z,1.1nm,0.6s,baz=61,slow=0.4,SNR=7.9						
MK31	**Makanchi Array**	**111.08**	**313**	*e*PKIKP	PKiKP	00 54 20.5	-1.8
MKAR	**Makanchi Array**	**111.08**	**313**	PKiKP	PKiKP	00 54 20.1	-2.2
	comp=Z,0.7nm,0.5s,baz=82,slow=2.4,SNR=16						
AML	**Almayashu**	**116.52**	**307**	*e*PKPdf	PKPdf	00 54 31.9	-1.0
KBL	**Kabul**	**119.25**	**298**	*e*PKIKP	PKPdf	00 54 37.0	-1.4
KBL				*e*		00 56 10.2	
BRVK	**Borovoye**	**119.25**	**319**	*e*PKIKP	PKPdf	00 54 35.3	-2.5
BOSA	**Boshof**	**124.32**	**207**	PKP	PKPdf	00 54 47.1	-1.3
	comp=Z,2.3nm,0.8s,baz=180,slow=4.0,SNR=3.9						
ARU	**Arti**	**125.50**	**325**	*i* PKIKP	PKPdf	00 54 48.4	-1.3
ARU						00 56 47.6	
ARU	**Arti**	**125.50**	**325**	*e*PKPdf	PKPdf	00 54 48.7	-0.9
AKTK	**Aktyubinsk**	**127.11**	**317**	PKP	PKPdf	00 54 52.3	-0.6
AKTO	**Aktyubinsk**	**127.11**	**317**	PKP	PKPdf	00 54 52.3	-0.6
	comp=Z,2.1nm,0.6s,baz=52,slow=2.1,SNR=6.7						
ARCES	**ARCESS Array B**	**130.03**	**349**	PKP	PKPdf	00 54 55.8	-2.1
	comp=Z,4.4nm,0.7s,baz=18,slow=1.4,SNR=18						
NB2	**NORSAR Subarra**	**140.19**	**352**	PKP		00 55 08.8	
	comp=Z,1.1nm,0.6s,baz=8.2,slow=2.9						
NOA	**NORSAR Array B**	**140.19**	**352**	PKhKP		00 55 08.9	
	comp=Z,1.7nm,0.8s,baz=16,slow=4.6,SNR=5.6						
NOA				PKP	PKPdf	00 55 17.3	+0.2
	comp=Z,1.0nm,0.6s,baz=352,slow=4.9,SNR=3.3						
NOA	**NORSAR Array B**	**140.19**	**352**	PKP		00 55 08.9	
NOA				PKP	PKPdf	00 55 17.3	+0.2
AKASG	**Malin Array Be**	**143.49**	**329**	PKP	PKPdf	00 55 19.9	-3.3
	comp=Z,7.5nm,0.4s,baz=42,slow=4.3,SNR=94						
AKASG				SKPbc	SKPbc	00 58 06.2	-1.5
	comp=Z,1.1nm,0.6s,baz=40,slow=2.0,SNR=6.1						
AKASG	**Malin Array Be**	**143.49**	**329**	PKP	PKPdf	00 55 19.9	-3.3
AKASG				SKPbc	SKPbc	00 58 06.2	-1.5
SUW	**Suwalki**	**143.60**	**337**	*e*PKP	PKPdf	00 55 21.0	-2.3
SUW	**Suwalki**	**143.60**	**337**	*e*PKP	PKPdf	00 55 21.0	-2.3
GKP	**Gorka Klasztor**	**146.16**	**342**	*e*PKP	PKPdf	00 55 29.1	+1.4
GKP	**Gorka Klasztor**	**146.16**	**342**	*e*PKP	PKPdf	00 55 29.1	+1.4
BEL	**Belsk**	**146.22**	**337**	*e*PKP	PKPdf	00 55 29.8	+2.0
BR131	**Keskin Array S**	**146.64**	**310**	*e*PKPdf	PKPdf	00 55 26.6	-2.3
BR131				*e*PKPab	PKPab	00 55 30.4	-4.2
BRTR	**Keskin Array B**	**146.64**	**310**	PKPbc	PKPbc	00 55 30.2	-1.4
	comp=Z,6.2nm,0.7s,baz=138,slow=3.9,SNR=36						
BRTR				pPKPbc	pPKPbc	00 57 47.9	+4.3
	comp=Z,0.7nm,0.8s,baz=120,slow=5.7,SNR=3.5						
TLCR		**147.14**	**322**	⇑*i*P	PKPbc	00 55 32.2	-0.6
TLCR		**147.14**	**322**	⇑P	PKPbc	00 55 32.2	-0.6
BSEG	**Bad Segeberg**	**147.16**	**349**	*e*PKPbc	PKPbc	00 55 31.4	-1.1
KWP	**Kalwaria**	**147.20**	**333**	*e*PKP	PKPbc	00 55 32.2	-0.6
KWP	**Kalwaria**	**147.20**	**333**	⇑*i*P	PKPdf	00 55 31.3	+1.8
KWP	**Kalwaria**	**147.20**	**333**	*e*PKPdf	PKPdf	00 55 30.4	+0.9
KWP				*e*PKP	PKPbc	00 55 32.2	-0.6
BUR08	**Bucovina Ar. S**	**147.50**	**328**	*e*PKPbc	PKPbc	00 55 33.6	-0.1
BURAR	**Bucovina Array**	**147.52**	**328**	⇑*i*P	PKPbc	00 55 33.4	-0.3
BURAR	**Bucovina Array**	**147.52**	**328**	⇑P	PKPbc	00 55 33.4	-0.3
VRI	**Vrincioaia**	**147.89**	**324**	⇓*i*P	PKPbc	00 55 34.2	-0.5
VRI	**Vrincioaia**	**147.89**	**324**	⇓P	PKPbc	00 55 34.2	-0.5
OJC	**Ojcow**	**147.90**	**336**	*e*PKP	PKPbc	00 55 33.5	-1.1
KOLS	**Kolonicke sedl**	**147.92**	**332**	*e*PKHKP	PKPbc	00 55 34.5	-0.2
KOLS	**Kolonicke sedl**	**147.92**	**332**	*e*PKP	PKPbc	00 55 34.5	-0.2
KOLS	**Kolonicke sedl**	**147.92**	**332**	*e*PKP	PKPbc	00 55 34.5	-0.2
STHS	**Stebnicka Huta**	**147.98**	**334**	*e*PKP	PKPbc	00 55 34.5	-0.3
UZH	**Uzhgorod**	**148.14**	**332**	*d i*PKHKP	PKPbc	00 55 35.0	-0.2
UZH				*e*		00 55 42.2	
CRVS	**Cervenica-Dubn**	**148.29**	**333**	*i* PKP	PKPbc	00 55 35.1	-0.5
NIE	**Niedzica**	**148.35**	**335**	*e*PKP	PKPbc	00 55 35.7	0.0
CSS	**Prodhromos**	**148.41**	**302**	*e*PKPdf	PKPdf	00 55 33.5	+1.5
KSP	**Ksiaz**	**148.57**	**341**	*e*PKP	PKPbc	00 55 35.7	-0.5
KSP	**Ksiaz**	**148.57**	**341**	*e*PKP	PKPbc	00 55 35.5	-0.7
OKC	**Ostrava-Krasne**	**148.81**	**338**	⇑*e*PKP	PKPbc	00 55 36.1	-0.7
UPC	**Upice**	**148.95**	**341**	⇑*e*PKP	PKPbc	00 55 36.5	-0.6
UPC				*e*PKPAB	PKPab	00 55 42.8	-0.8
DPC	**Dobruska-Polom**	**148.99**	**340**	⇑*i*PKP	PKPbc	00 55 36.9	-0.3
DPC				*e*PKPAB	PKPab	00 55 43.9	+0.1
CLL	**Collm**	**149.07**	**345**	*e*PKPbc	PKPbc	00 55 36.4	-1.0
CLL				*e*PKPab	PKPab	00 55 43.2	-0.9
CLL	**Collm**	**149.07**	**345**	*i* PKPbc	PKPbc	00 55 36.4	-1.0
	comp=Z,21nm,0.8s						
CLL				*e*PKPab	PKPab	00 55 43.0	-1.1
	comp=Z,9.0nm,0.7s						
CLL				*e*pPKPbc	pPKPbc	00 57 55.0	+4.6
VOIR		**149.07**	**325**	⇑*i*P	PKPbc	00 55 37.0	-0.6
CLZ	**Clausthal**	**149.15**	**348**	*e*PKPbc	PKPbc	00 55 36.9	-0.7
BRG	**Berggiesshubel**	**149.22**	**343**	*i* PKHKP	PKPbc	00 55 37.0	-0.8
BRG				*i*		00 55 44.3	
BRG	**Berggiesshubel**	**149.22**	**343**	*e*PKPbc	PKPbc	00 55 36.6	-1.2
BRG				*e*PKPab	PKPab	00 55 44.3	-0.4
BRG	**Berggiesshubel**	**149.22**	**343**	*i* PKP	PKPbc	00 55 37.0	-0.8
	comp=Z,18nm,0.7s						
BRG				*i*		00 55 44.3	
BRG				*e*pPKP	pPKPdf	00 57 37.4	-10
	comp=Z,7.2nm,1.5s						
BRG				*i*		00 58 07.4	
	comp=Z,3.5nm,1.1s						
BRG				*e*		01 14 58.4	
	comp=Z,5.2nm,1.0s						
DRGR		**149.31**	**329**	⇑*i*P	PKPbc	00 55 37.3	-0.8
DRGR		**149.31**	**329**	⇑P	PKPbc	00 55 37.3	-0.8
FBE	**Freiberg**	**149.33**	**344**	*e*PKPbc	PKPbc	00 55 37.5	-0.6
PVCC	**Panska Ves**	**149.36**	**342**	⇑*i*PKP	PKPbc	00 55 37.6	-0.5
NEUB	**Neuenburg**	**149.45**	**346**	*e*PKPbc	PKPbc	00 55 37.5	-0.8
VYHS	**Vyhne**	**149.67**	**335**	*e*PKP	PKPbc	00 55 38.1	-0.8
VYHS				*e*		00 55 46.2	
VYHS	**Vyhne**	**149.67**	**335**	*e*PKP	PKPbc	00 55 38.1	-0.8
VYHS				*e*		00 55 46.3	
KOLL	**Kolacno**	**149.77**	**336**	*e*PKP	PKPbc	00 55 38.7	-0.5
KOLL				*e*		00 55 45.8	
VRAC	**Vranov**	**149.80**	**339**	⇓*i*P	PKPbc	00 55 38.6	-0.6
VRAC	**Vranov**	**149.80**	**339**	⇓P	PKPbc	00 55 38.6	-0.6
PRU	**Pruhonice**	**149.85**	**342**	⇑*e*PKP	PKPbc	00 55 38.5	-0.8
PRU				*e*PKPAB	PKPab	00 55 46.3	-1.1
MOX	**Moxa**	**150.01**	**346**	*e*PKPbc	PKPbc	00 55 38.7	-1.0
MOX				*e*PKPab	PKPab	00 55 47.3	-0.7
TANN	**Tannenbergstha**	**150.03**	**344**	*e*PKPbc	PKPbc	00 55 38.9	-0.8
ZIMR		**150.03**	**322**	⇓*i*P	PKPbc	00 55 38.7	-1.2
ZIMR		**150.03**	**322**	⇓P	PKPbc	00 55 38.7	-1.2
WERD	**Werda**	**150.03**	**345**	*e*PKPbc	PKPbc	00 55 38.8	-0.9
GUNZ	**Gunzen**	**150.10**	**345**	*e*PKPbc	PKPbc	00 55 39.2	-0.7
WERN	**Wernitzgruen**	**150.16**	**344**	*e*PKPbc	PKPbc	00 55 40.0	0.0
TREC	**Trest**	**150.18**	**340**	*e*PKIKP	PKPbc	00 55 39.1	-1.0
TREC	**Trest**	**150.18**	**340**	⇑*e*PKP	PKPbc	00 55 39.1	-1.0
NKC	**Novy Kostel**	**150.20**	**344**	*e*PKPbc	PKPbc	00 55 39.4	-0.7
NKC	**Novy Kostel**	**150.20**	**344**	⇑*i*PKP	PKPbc	00 55 39.4	-0.7
NKC				*e*PKPAB	PKPab	00 55 47.6	-1.2
GZR	**Gura Zlata**	**150.27**	**327**	⇓*i*P	PKPbc	00 55 39.2	-1.2
GZR	**Gura Zlata**	**150.27**	**327**	⇓P	PKPbc	00 55 39.2	-1.3
MANZ	**Manzenberg**	**150.51**	**345**	*e*PKPbc	PKPbc	00 55 40.0	-0.8
ZST	**Bratislava**	**150.57**	**337**	*e*PKP	PKPab	00 55 46.0	-4.4
ZST	**Bratislava**	**150.57**	**337**	*e*P	PKPab	00 55 46.1	-4.3
BZS	**Buzias**	**150.68**	**329**	⇑*i*P	PKPbc	00 55 40.1	-1.3
BZS	**Buzias**	**150.68**	**329**	⇑P	PKPbc	00 55 40.1	-1.3
ROTZ	**Rotzenmuhle**	**150.69**	**344**	*e*PKPbc	PKPbc	00 55 40.3	-1.0
KHC	**Kasperske Hory**	**150.90**	**342**	*i* PKIKP	PKPbc	00 55 40.9	-0.9
KHC				*e*		00 55 51.6	
KHC	**Kasperske Hory**	**150.90**	**342**	⇑*i*PKP	PKPbc	00 55 40.9	-0.9
KHC				*e*PKPAB	PKPab	00 55 51.6	-0.2
GRA1	**Grafenberg Arr**	**151.00**	**345**	*e*PKPbc	PKPbc	00 55 41.3	-0.7
GRF	**Grafenberg Arr**	**151.00**	**345**	*e*PKPbc	PKPbc	00 55 41.3	-0.7
MEM	**Membach**	**151.03**	**353**	PKPbc	PKPbc	00 55 41.0	-1.0
WET	**Wettzell**	**151.08**	**343**	*e*PKPbc	PKPbc	00 55 41.7	-0.5
WET				*e*PKPab	PKPab	00 55 52.7	+0.1
GEC2	**GERESS Array S**	**151.12**	**342**	*e*PKPbc	PKPbc	00 55 41.2	-1.1
GERES	**GERESS Array B**	**151.12**	**342**	PKPbc	PKPbc	00 55 40.9	-1.4
	comp=Z,2.2nm,0.4s,baz=19,slow=2.0,SNR=15						
GERES				PKPab	PKPab	00 55 51.9	-0.9
	comp=Z,1.4nm,0.6s,baz=66,slow=3.6,SNR=4.8						
CONA	**Conrad Observa**	**151.24**	**338**	⇑*i*PKPbc	PKPbc	00 55 41.7	-0.9
	comp=Z,5.1nm,0.6s						
CSNA	**Conrad Observa**	**151.24**	**338**	⇑*i*PKPbc	PKPbc	00 55 41.8	-0.8
	comp=Z,5.2nm,0.6s						
PKSM	**Moragy**	**151.58**	**333**	⇑*i*P	PKPbc	00 55 41.9	-1.5
PKSM	**Moragy**	**151.58**	**333**	⇑P	PKPbc	00 55 41.9	-1.5
GIVF	**Givet**	**151.66**	**354**	*e*PKIKP	PKPbc	00 55 42.4	-1.0
	comp=Z,14nm,0.7s						
DOU	**Dourbes**	**151.69**	**354**	PKPbc	PKPbc	00 55 42.5	-1.0
BAIF	**Baives**	**151.76**	**355**	*e*PKIKP	PKPbc	00 55 42.7	-1.0
RJOB	**Jochberg**	**152.38**	**342**	*e*PKPab	PKPab	00 55 58.1	0.0
FUR	**Furstenfeldbru**	**152.40**	**344**	*e*PKPab	PKPab	00 55 58.3	+0.1
CDF	**Champ du Feu**	**153.00**	**350**	*e*PKIKP	PKPbc	00 55 45.2	-1.2
WTTA	**Wattenberg**	**153.14**	**343**	⇑*i*PKPbc	PKPbc	00 55 45.6	-1.1
	comp=Z,4.3nm,0.4s						
FLN	**La Foliniere**	**153.21**	**1**	*e*PKIKP	PKPbc	00 55 45.4	-1.5
	comp=Z,9.1nm,0.6s						
MEZF	**Maizieres J'vi**	**153.22**	**353**	*e*PKIKP	PKPbc	00 55 46.0	-0.9
	comp=Z,13nm,0.8s						
ABTA	**Abfaltersbach**	**153.36**	**341**	⇓*i*PKPbc	PKPbc	00 55 45.6	-1.7
	comp=Z,3.1nm,0.6s						
LDF	**La Druitiere**	**153.39**	**1**	*e*PKIKP	PKPbc	00 55 45.6	-1.6
ROSF	**Rostrenen**	**153.49**	**5**	*e*PKIKP	PKPbc	00 55 45.8	-1.7
GRR	**Gorron**	**153.58**	**2**	*e*PKIKP	PKPbc	00 55 46.3	-1.4
SGMF	**Saint Gilles**	**153.62**	**4**	*e*PKIKP	PKPbc	00 55 46.6	-1.2
QUIF	**Quistinic**	**153.91**	**5**	*e*PKIKP	PKPbc	00 55 47.4	-1.0
SMF	**Signal de Mont**	**155.18**	**354**	*e*PKIKP	PKPdf	00 55 47.7	+6.1
BGF	**Bois d'Agland**	**155.35**	**356**	*e*PKIKP	PKPdf	00 55 48.0	+6.2
BNI	**Bardonecchia**	**156.36**	**349**	*e*PKIKP	PKPdf	00 55 39.0	-4.2
DBIC	**Dimbokro**	**164.01**	**161**	PKP	PKPdf	00 55 50.2	-2.3
	comp=Z,2.4nm,0.7s,baz=180,slow=1.0,SNR=3.2						
DBIC	**Dimbokro**	**164.01**	**161**	PKP	PKPdf	00 55 50.2	-2.3
TORD	**Torodi Ar. Bea**	**171.18**	**188**	PKP	PKPdf	00 55 54.5	-2.9
	comp=Z,1.2nm,0.8s,baz=336,slow=0.6,SNR=9.5						
TORD				PKPab	PKPab	00 57 19.0	-2.1
	comp=Z,1.1nm,0.7s,baz=180,slow=3.6,SNR=7.5						

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*KRSC **13** 00:38:34.4±2.7, 5181N×17167E, h5^{km}±5^{km}, ML4.4*
*MOS **13** 00:38:35.8±1.5, 5254N×17234E, h12^{km}, mb4.6/8, Error ellipse: s-maj=13.1km s-min=10.2km az=44.5*
*ISCJB **13** 00:38:38.3±0.5, 5253N±007×17239E±004, h33^{km}, mb4.0/16, Error ellipse: s-maj=9.9km s-min=3.2km az=5.7*
*IDC **13** 00:38:39.6±3.7, 5264N×17248E, h27^{km}±27^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.8/26, mbtmp3.7/13, ML3.5/1, Error ellipse: s-maj=47.7km s-min=9.2km az=168.0*
*NEIC **13** 00:38:40.6±2.1, 5262N×17251E, h34^{km}±17^{km}, mb4.4/5, Error ellipse: s-maj=15.2km s-min=5.8km az=176.0*
ISC 13 00:38:40.2±1.1**, 5254N**±007×**17254E**±004**, h33**^{km}±8^{km}**, n58,** σ1§**12**/72**, mb4.0**/16**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.51**	**48**	Pn	**Pn**	**00 38 49.9**	**-1.2**
	250nm,0.3s,baz=212,slow=6.8,SNR=1812						
FX1				Sn	**Sn**	**00 38 57.6**	**-1.1**
	2μm,0.3s,baz=307,slow=20,SNR=164						
FX1	**Attu Island--F**	**0.51**	**48**	P	**Pb**	**00 38 49.9**	**-1.0**
FX1						00 38 57.6	
FX1				pmax	pmax		
	comp=Z,250nm,0.3s						
SMY	**Shemya**	**0.97**	**78**	*e*P	**Pn**	**00 38 57.2**	**-0.2**
SMY				*e*S	**Sn**	**00 39 10.3**	**+0.2**
ADK	**Adak**	**6.66**	**91**	*e*P	**Pn**	**00 40 18.3**	**+2.7**
MKZ	**Mys Kozlova**	**6.75**	**292**	P	**Pn**	**00 40 16.5**	**-0.3**
MKZ				*e*S	**Sn**	**00 41 29.8**	**-2.5**
KBTR	**Krutoberegovo**	**6.76**	**307**	*e*P	**Pn**	**00 40 18.3**	**+1.4**
KBTR				*e*S	**Sn**	**00 41 35.2**	**+2.6**
SPN	**Mys Shipunski**	**7.60**	**279**	*e*S	**Sn**	**00 41 45.2**	**-8.2**
ZLN	**Zelenaya**	**7.70**	**302**	*e*P	**Pn**	**00 40 31.6**	**+1.8**
ZLN				*e*S	**Sn**	**00 41 56.7**	**+1.0**
TUMR	**Tumrok**	**7.81**	**295**	*e*P	**Pn**	**00 40 32.2**	**+0.8**
TUMR				*e*S	**Sn**	**00 41 57.0**	**-1.5**
KLY	**Klyuchi**	**7.89**	**303**	*e*P	**Pn**	**00 40 33.2**	**+0.8**
KLY				*e*S	**Sn**	**00 42 00.3**	**-0.1**
KMNR	**Kamenistaya**	**7.90**	**299**	*e*P	**Pn**	**00 40 33.8**	**+1.2**
KMNR				*e*S	**Sn**	**00 42 01.0**	**+0.2**
KPT	**Kopyto**	**7.98**	**300**	*e*P	**Pn**	**00 40 35.1**	**+1.4**
KPT				*e*S	**Sn**	**00 42 02.6**	**-0.1**
KII	**Karymskiy**	**7.99**	**286**	*e*P	**Pn**	**00 40 31.7**	**-2.0**
KII				S	**Sn**	**00 41 58.0**	**-4.8**
NLC	**Nalytchevo**	**8.01**	**280**	S	**Sn**	**00 41 56.5**	**-6.9**
SRDR	**Sredinnyy**	**8.37**	**302**	*e*P	**Pn**	**00 40 40.9**	**+1.9**
PET	**Petropavlovsk**	**8.43**	**279**	P	**Pn**	**00 40 39.0**	**-0.9**
GNL	**Ganaly**	**8.86**	**283**	*e*P	**Pn**	**00 40 43.3**	**-2.3**
GNL				*e*S	**Sn**	**00 42 18.7**	**-5.4**
PEA0B	**Petropavlovsk-**	**9.01**	**279**	*e*Pn	**Pn**	**00 40 48.3**	**+0.6**
PEA0B				*e*Sn	**Sn**	**00 42 26.6**	**-1.2**
PETK	**Petropavlovsk-**	**9.01**	**279**	Pn	**Pn**	**00 40 47.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=88,slow=18,SNR=6.4						
PETK				Sn	**Sn**	**00 42 24.6**	**-3.3**
	comp=Z,1.0nm,0.3s,baz=79,slow=25,SNR=5.5						
PETK	**Petropavlovsk-**	**9.01**	**279**	Pn	**Pn**	**00 40 47.9**	**+0.2**
PETK				Sn	**Sn**	**00 42 24.6**	**-3.3**
KDAK	**Kodiak Island**	**20.44**	**61**	*e*P	**P**	**00 43 12.9**	**-1.5**
	comp=Z,16nm,0.8s						
KTH	**Kantishna Hill**	**21.92**	**46**	P	**P**	**00 43 32.0**	**+1.8**
RC01	**Rabbit Creek A**	**22.06**	**52**	P	**P**	**00 43 30.8**	**-1.0**
COLA	**College**	**23.52**	**43**	*e*P	**P**	**00 43 46.6**	**-0.4**
PAX	**Paxson**	**24.25**	**48**	P	**P**	**00 43 53.5**	**-0.2**
MIDW	**Midway**	**25.44**	**159**	P	**P**	**00 44 04.6**	**-0.2**
TIXI	**Tiksi**	**27.00**	**331**	*e*P	**P**	**00 44 18.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.4						
TIXI	**Tiksi**	**27.00**	**331**	*e*P	**P**	**00 44 18.0**	**-0.5**
	comp=Z,3.8nm,0.3s,mb4.4						
YKA	**Yellowknife Ar**	**38.29**	**46**	P	**P**	**00 45 57.3**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=290,slow=7.9,SNR=12						
BJT	**Baijiatuau**	**39.92**	**275**	*e*P	**P**	**00 46 12.2**	**+1.4**
BJT				pmax	pmax		
	comp=Z,17nm,0.4s						
BJT	**Baijiatuau**	**39.92**	**275**	*e*P	**P**	**00 46 12.2**	**+1.4**
	comp=Z,17nm,0.4s,mb5.1						
SONM	**Songino Array**	**41.27**	**291**	P	**P**	**00 46 22.3**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.5,baz=59,slow=8.6,SNR=6.7						
SONM	**Songino Array**	**41.27**	**291**	P	**P**	**00 46 22.3**	**+0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**49.23**	**309**	P	**P**	**00 47 23.7**	**-1.2**
	comp=Z,0.3nm,0.3s,mb3.8,baz=91,slow=7.4,SNR=2.8						
PDAR	**Pinedale Array**	**50.95**	**68**	P	**P**	**00 47 39.0**	**+0.9**
	comp=Z,0.9nm,0.8s,mb3.8,baz=320,slow=4.2,SNR=7.7						
KURK	**Kurchatov**	**54.22**	**309**	P	**P**	**00 48 02.2**	**+0.1**
	comp=Z,3.5nm,0.7s,mb4.4,baz=52,slow=7.2,SNR=29						
KURK	**Kurchatov**	**54.22**	**309**	P	**P**	**00 48 02.3**	**+0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**55.00**	**303**	P	**P**	**00 48 06.4**	**-1.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=50,slow=7.2,SNR=10						
MKAR	**Makanchi Array**	**55.00**	**303**	P	**P**	**00 48 06.4**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**56.40**	**315**	P	**P**	**00 48 17.4**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.2,baz=56,slow=6.9,SNR=11						
BVAR	**Borovoye Array**	**56.40**	**315**	P	**P**	**00 48 17.4**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**56.42**	**315**	*e*P	**P**	**00 48 17.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
BRVK	**Borovoye**	**56.42**	**315**	*e*P	**P**	**00 48 17.8**	**-0.1**
	comp=Z,1.9nm,0.4s,mb4.5						
AAK	**Ala-Archa**	**61.88**	**304**	*e*P	**P**	**00 48 55.7**	**-0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**61.88**	**304**	*e*P	**P**	**00 48 55.7**	**-0.3**
	comp=Z,2.8nm,0.9s,mb4.4						
AKTK	**Aktyubinsk**	**63.47**	**319**	P	**P**	**00 49 06.6**	**+0.2**
AKTO	**Aktyubinsk**	**63.47**	**319**	P	**P**	**00 49 06.6**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.4,baz=58,slow=7.9,SNR=6.7						
AKTO	**Aktyubinsk**	**63.47**	**319**	P	**P**	**00 49 06.6**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
TXAR	**Lajitas Array**	**63.67**	**76**	P	**P**	**00 49 07.7**	**-0.3**
	comp=Z,0.6nm,0.9s,mb3.6,baz=307,slow=3.2,SNR=3.5						
TXAR	**Lajitas Array**	**63.67**	**76**	P	**P**	**00 49 07.7**	**-0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	**NORSAR Subarra**	**65.79**	**350**	P	**P**	**00 49 21.3**	**0.0**
	comp=Z,1.0nm,0.6s,mb4.0,baz=12,slow=6.9						
NOA	**NORSAR Array B**	**65.79**	**350**	P	**P**	**00 49 20.6**	**-0.8**
	comp=Z,1.4nm,0.7s,mb4.1,baz=14,slow=6.6,SNR=5.0						
NOA	**NORSAR Array B**	**65.79**	**350**	P	**P**	**00 49 20.6**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	**Kislovodsk**	**74.63**	**325**	*e*P	**P**	**00 50 17.2**	**+1.5**
KIV	**Kislovodsk**	**74.63**	**325**	*e*P	**P**	**00 50 17.1**	**+1.4**
GERES	**GERESS Array B**	**77.40**	**346**	P	**P**	**00 50 32.1**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=52,slow=6.4,SNR=2.7						
GERES	**GERESS Array B**	**77.40**	**346**	P	**P**	**00 50 32.1**	**+0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**81.42**	**329**	P	**P**	**00 50 53.7**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=61,slow=2.3,SNR=4.2						

IDC 13 00:45:58.7±1.5**, 2850N**×**14085E, h448**^{km}±52^{km}**, mb2.8**/4**, mb1 2.9**/4**, mb1mx2.7**/19**, mbtmp2.8**/4**, Error ellipse: s-maj=195.7km s-min=66.8km az=22.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.83**	**139**	P	P	00 46 59.0	+0.8
	13nm,0.3s,baz=287,slow=19,SNR=5.9						
CBIJ				S	S	00 47 46.5	+0.1
	12nm,0.3s,baz=288,slow=19,SNR=4.4						
SONM	**Songino Array**	**32.89**	**315**	P	P	00 51 54.3	+0.4
	0.3nm,0.5s,baz=133,slow=7.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**47.66**	**318**	P	P	00 53 52.1	-0.5
	0.4nm,0.3s,baz=125,slow=9.0,SNR=3.1						
MKAR	**Makanchi Array**	**48.67**	**309**	P	P	00 54 00.3	-0.1
	0.4nm,0.4s,baz=89,slow=9.7,SNR=19						
NOA	**NORSAR Array B**	**81.87**	**338**	P	P	00 57 29.8	+0.1
	0.3nm,0.5s,baz=39,slow=5.0,SNR=2.5						

KRSC 13 00:46:53.7±0.8**, 5645N**×**16164E, h70**^{km}±40^{km}**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.16**	**324**	*e*P	Pn	00 47 04.6	+0.5
SMKR				*e*S	Sn	00 47 12.4	+0.7
BDR	**Baidarnaya**	**0.27**	**296**	*e*P	Pn	00 47 05.3	+0.7
BDR				*e*S	Sn	00 47 13.7	+1.1
SRKR	**Sorokina**	**0.33**	**308**	*i* P	Pn	00 47 05.8	+0.8
SRKR				*i* S	Sn	00 47 14.3	+0.9
KLY	**Klyuchi**	**0.57**	**256**	*e*P	Pn	00 47 06.3	-0.8
KLY				*e*S	Sn	00 47 15.8	-1.2
ZLN	**Zelenaya**	**0.64**	**227**	*i* P	Pn	00 47 09.0	+1.1
ZLN				*i* S	Sn	00 47 19.9	+1.6
KRSR	**Krestovskiy**	**0.64**	**249**	*e*P	Pn	00 47 08.5	+0.6
KRSR				*e*S	Sn	00 47 19.7	+1.3
LGNR	**Loginova**	**0.65**	**236**	*e*P	Pn	00 47 09.2	+1.3
LGNR				*e*S	Sn	00 47 20.7	+2.3
KBTR	**Krutoberegovo**	**0.70**	**110**	*e*P	Pn	00 47 09.0	+0.5
KBTR				*e*S	Sn	00 47 20.8	+1.3
BZMR	**Bezymyannaya**	**0.82**	**232**	*e*P	Pn	00 47 11.4	+1.4
BZMR				*e*S	Sn	00 47 24.3	+2.3
KIRR	**Kirishev**	**0.88**	**236**	*i* P	Pn	00 47 11.8	+1.1
KIRR				*e*S	Sn	00 47 24.3	+1.1
KPT	**Kopyto**	**0.93**	**239**	*e*P	Pn	00 47 12.4	+1.2
KPT				*e*S	Sn	00 47 27.1	+2.8
KMNR	**Kamenistaya**	**1.05**	**229**	*i* P	Pn	00 47 14.5	+1.7
KMNR				*e*S	Sn	00 47 29.9	+3.0
KOZ	**Kozyrevsk**	**1.06**	**249**	*e*P	Pn	00 47 13.5	+0.6
KOZ				S	Sn	00 47 28.5	+1.3
SRDR	**Sredinnyy**	**1.08**	**264**	*i* P	Pn	00 47 14.2	+1.1
SRDR				*i* S	Sn	00 47 29.3	+1.7
TUMR	**Tumrok**	**1.44**	**216**	*i* P	Pn	00 47 20.1	+2.3
TUMR				*i* S	Sn	00 47 39.1	+3.1
MKZ	**Mys Kozlova**	**1.90**	**178**	*i* P	Pn	00 47 25.2	+1.3
MKZ				*e*S	Sn	00 47 48.5	+1.6
GNL	**Ganaly**	**3.48**	**219**	*e*P	Pn	00 47 47.1	+1.7
SPN	**Mys Shipunski**	**3.49**	**196**	*e*P	Pn	00 47 46.1	+0.6
NLC	**Nalytchevo**	**3.54**	**203**	S	Sn	00 48 29.5	+2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AVH	Avacha	3.61	209	P	Pn	00 47 48.8	+1.7

PGC 13 00:59:58.6±0.1, 5200N×13185W, h20km, ML3.6/5, 5D, 139km south of Sandspit, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	0.58	6	⇓P	Pb	01 00 09.9	-0.1
BNB				⇑S	Sb	01 00 17.5	-0.4
MOBC	Moresby Island	1.15	356	⇑P	Pn	01 00 19.4	-0.1
MOBC				⇓S	Sb	01 00 34.4	+0.1
DIB	Dawson Inlet,	1.27	343	⇓P	Pn	01 00 21.1	0.0
DIB				⇓S	Sn	01 00 38.0	+0.6
VIB	Van Inlet	1.33	342	⇑P	Pn	01 00 22.1	+0.2
VIB				⇑S	Sn	01 00 39.3	+0.4
NDB	Naden	2.07	342	⇑Pn	Pn	01 00 32.8	+0.7
NDB				⇑Sn	Sn	01 00 57.1	-0.1
NDB				⇓Sg	Sn	01 01 03.6	+6.4

MAN 13 01:02:12, 1025N×12629E, h1km, mb4.0, ML2.8, MS2.5, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.91	239	⇓eP	Pg	01 02 30.3	+0.8
MSLP	Maasin	1.41	265	eP	Pn	01 02 39.3	+0.4
MSLP				eS	Sg	01 02 59.2	+1.8
BUTP	Butuan	1.43	207	eP	Pn	01 02 38.0	-1.1
BUTP				eS	Sg	01 02 59.8	+1.7
PLP	Palo	1.57	305	⇑eP	Pn	01 02 41.7	+0.6
PLP				eS	Sn	01 03 04.0	+1.9
BESP	Borongan	1.58	328	eP	Pn	01 02 44.3	+3.2
BUKP	Musuan	2.65	207	eP	Pn	01 02 58.2	+2.3
CNP	Catarman	2.75	325	eP	Pn	01 02 58.7	+1.4
CNP				eS	Sn	01 03 30.7	-0.5

ISCJB 13 01:08:30.7±1.6, 3031S±004×17752W±006, h22km±10km, mb4.9/41, MS4.6/5, Error ellipse: s-maj=9.5km s-min=5.7km az=34.6
BJI 13 01:08:30.0, 2988S×17729W, h18km, mB5.6, mb5.3, Ms5.2, Msz4.7
MOS 13 01:08:32.9±1.1, 3018S×17736W, h37km, mb5.0/10, Error ellipse: s-maj=14.4km s-min=12.6km az=91.5
IDC 13 01:08:35.0±1.8, 3010S×17729W, h45km±14km, mb4.3/13, mb1 4.5/13, mb1mx4.5/16, mbtmp4.3/13, Error ellipse: s-maj=21.2km s-min=13.8km az=81.0
NEIC 13 01:08:34.5±1.6, 3015S×17749W, h40km±13km, mb4.9/21, Error ellipse: s-maj=12.2km s-min=7.3km az=138.0
ISC 13 01:08:30.2±1.8, 3027S±004×17749W±006, h9km±10km, h34km±1.6km: pP-P, n318, σ0.61/251, mb4.9/41, MS4.6/5, 74C-69D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.08	340	P	Pg	01 08 51.0	0.0
	2µm,0.3s,baz=104,slow=4.2,SNR=59						
RAO				S	Sg	01 09 06.3	+1.3
	3µm,0.3s,baz=180,slow=20,SNR=16						
RAO	Raoul Island	1.08	340	ePn	Pn	01 08 50.7	-0.9
RAO				eSn	Sn	01 09 03.8	-2.9
URZ	Urewera	9.13	208	P	Pn	01 10 39.8	-2.4
	4.1nm,0.3s,baz=79,slow=12,SNR=9.2						
URZ				S	Sn	01 12 25.1	0.0
	20nm,0.3s,baz=269,slow=20,SNR=12						
SNZO	South Karori	12.70	208	ePn	Pn	01 11 28.6	-2.4
SNZO				eSn	Sn	01 13 45.4	-7.0
RPZ	Rata Peaks	16.22	211	P	Pn	01 12 14.6	-3.7
	1.2nm,0.3s,baz=18,slow=20,SNR=4.6						
RPZ				S	Sn	01 15 04.6	-14
	0.6nm,0.3s,baz=307,slow=20,SNR=5.6						
RPZ	Rata Peaks	16.22	211	P	Pn	01 12 14.6	-3.7
RPZ				S	Sn	01 15 04.6	-14
DZM	Mont Dzumac	16.56	296	eP	Pn	01 12 30.1	+7.3
DZM	Mont Dzumac	16.56	296	ePn	Pn	01 12 27.7	+4.9
NOUC	Port Laguerre	16.66	295	eP	Pn	01 12 31.6	+7.7
ARMA	Armidale	26.61	262	eP	P	01 14 13.2	+4.2
EIDS	Eidsvold	28.17	272	eP	P	01 14 27.9	+4.9
	154nm,1.8s,mb5.3						
CNB	Canberra Magne	28.24	251	eP	P	01 14 28.1	+4.5
PPT	Papeete	28.39	70	eLR	LR	01 21 41.3	
	302nm,25.2s						
MCQ	Macquarie Isla	29.54	208	eP	P	01 14 34.9	0.0
MCQ				pmax	pmax		
	comp=Z,4µm,1.8s						
MCQ	Macquarie Isla	29.54	208	eP	P	01 14 34.9	-0.1
	comp=Z,4µm,1.8s						
TOO	Toolangi	31.42	247	eP	P	01 14 55.0	+3.3
CTA	Charters Tower	34.22	279	eP	P	01 15 20.0	+3.6
	comp=Z,19nm,0.9s,mb5.0						
CTA	Charters Tower	34.22	279	eP	P	01 15 20.0	+3.6
CTA				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	Charters Tower	34.22	279	eP	P	01 15 19.4	+3.1
	comp=Z,23nm,0.8s,mb5.2						
STKA	Stephens Creek	34.94	257	eP	P	01 15 24.7	+2.2
	comp=Z,11nm,0.6s,mb5.0						
STKA	Stephens Creek	34.94	257	P	P	01 15 24.9	+2.4
	comp=Z,13nm,0.5s,mb5.1,baz=98,slow=11,SNR=47						
ASAR	Alice Springs	43.56	267	P	P	01 16 35.0	+0.4
	comp=Z,8.6nm,0.7s,mb4.6,baz=103,slow=7.8,SNR=69						
ASAR				ScP	ScP	01 22 12.0	-2.1
	comp=Z,0.4nm,0.8s,baz=95,slow=4.6,SNR=3.3						
WB2	Warramunga Arr	44.52	272	eP	P	01 16 42.4	0.0
WRAB	Tennant Creek	44.53	272	P	P	01 16 42.0	-0.5
	comp=Z,226nm,0.8s,mb6.0,SNR=30						
WRAB	Tennant Creek	44.53	272	eP	P	01 16 42.2	-0.3
WRAB				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
WRAB	Tennant Creek	44.53	272	eP	P	01 16 42.2	-0.2
	comp=Z,25nm,0.8s,mb5.1						
FORT	Forrest	46.51	255	eP	P	01 16 58.3	+0.3
	comp=Z,10nm,0.5s,mb5.0						
VNDA	Vanda	48.27	186	P	P	01 17 13.7	+2.6
	comp=Z,1.7nm,0.7s,mb4.2,baz=26,slow=6.9,SNR=8.0						
KAKA	Kakadu	49.35	279	eP	x	01 17 00.0	
	comp=Z,5.3nm,0.6s						
FITZ	Fitzroy Crossi	52.80	270	eP	P	01 17 46.0	-0.2
	comp=Z,11nm,0.8s,mb4.8						
KLBR	Kellerberrin	54.81	251	eP	P	01 18 00.0	-0.7
	comp=Z,15nm,1.0s,mb5.0						
CASY	Casey	55.46	208	eP	P	01 18 05.5	+0.7
MBWA	Marble Bar	56.68	263	eP	P	01 18 13.3	-0.9
	comp=Z,5.6nm,0.6s,mb4.8						
QSPA	South Pole Qui	59.84	180	P	P	01 18 37.4	+1.9
	comp=Z,16nm,0.8s,mb5.1,baz=43,slow=2.1,SNR=40						
QSPA				pP	pP	01 18 47.8	+9.4
	comp=Z,17nm,0.6s,baz=134,slow=0.5,SNR=12						
MAW	Mawson	72.58	200	eP	P	01 19 58.9	+1.5
	comp=Z,8.1nm,0.9s,mb4.7						
MAW	Mawson	72.58	200	P	P	01 19 58.2	+0.8
	comp=Z,11nm,1.0s,mb4.8,baz=124,slow=9.3,SNR=8.8						
MAW	Mawson	72.58	200	eP	P	01 19 58.9	+1.5
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SYO	Syowa Base	77.34	193	⇓eP	P	01 20 18.2	-6.7
SYO	Syowa Base	77.34	193	⇑eP	P	01 20 21.2	-3.7
SNAA	Sanae	78.27	178	eP	P	01 20 29.9	-0.1
SNAA				e		01 20 40.4	
SNAA				e		01 20 44.9	
SNAA	Sanae	78.27	178	⇑eP	P	01 20 29.7	-0.3
SNAA	Sanae	78.27	178	eP	P	01 20 29.8	-0.2
	comp=Z,5.5nm,0.8s,mb4.5						
MJAR	Matsushiro Arr	78.39	325	P	P	01 20 30.8	-0.2
	comp=Z,3.4nm,0.8s,mb4.3,baz=159,slow=4.9,SNR=6.9						
MAT	Matsushiro	78.39	325	P	P	01 20 31.7	+0.7
VNA3	Neumayer Olymp	78.40	176	eP	P	01 20 30.5	-0.2
VNA3				e		01 20 41.5	
VNA3				e		01 20 45.8	
VNA2	Neumayer--Watz	78.84	177	eP	P	01 20 33.5	+0.3
	baz=174,slow=4.5						
VNA2				e		01 20 44.4	
VNA2				e		01 20 48.3	
VNA1	Neumayer--Stat	79.07	176	eP	P	01 20 34.7	+0.3
VNA1				e		01 20 45.8	
VNA1				e		01 20 50.1	
PLCA	Paso Flores	82.27	133	P	P	01 20 52.1	-0.1
	comp=Z,2.1nm,0.9s,mb4.1,baz=241,slow=9.3,SNR=3.7						
KSRS	Korea Array	84.54	319	P	P	01 21 03.7	+0.1
	comp=Z,2.6nm,0.9s,mb4.4,baz=151,slow=8.0,SNR=4.1						
YSS	Yuzh-Sakhalins	84.82	334	⇑eP	P	01 21 04.4	-0.4
YSS				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.6						
YSS	Yuzh-Sakhalins	84.82	334	eP	P	01 21 06.0	+1.2
	comp=Z,67nm,0.9s,mb5.8						
MONP	Monument Peak	85.35	48	⇑P	P	01 21 07.5	-0.3
	baz=86						
BFSC	Mount Baldy St	85.45	46	⇑P	P	01 21 08.3	0.0
	baz=86						
VES	Vestal, Richgr	85.65	44	⇑P	P	01 21 08.7	-0.5
	baz=86						
EDW2	Edwards Air Fo	85.67	45	⇑P	P	01 21 09.2	-0.2
	baz=86						
SWSC	Sam W. Stewart	85.78	48	⇓P	P	01 21 09.7	-0.3
	baz=86						
PFO	Pinyon Flat Ob	85.80	47	⇓P	P	01 21 10.4	+0.4
	baz=86						
PEA0B	Petropavlovsk-	85.80	345	eP	P	01 21 08.9	-0.6
PETK	Petropavlovsk-	85.80	345	P	P	01 21 09.1	-0.4
	comp=Z,14nm,0.9s,mb5.2,baz=123,slow=7.2,SNR=11						
PETK	Petropavlovsk-	85.80	345	P	P	01 21 09.1	-0.4
ISA	Isabella	85.90	44	⇓P	P	01 21 10.2	-0.3
	baz=86						
ISA	Isabella	85.90	44	eP	P	01 21 09.7	-0.8
ISA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
ISA	Isabella	85.90	44	eP	P	01 21 09.7	-0.8
	comp=Z,8.3nm,1.0s,mb4.9						
LRMC	Laurel Mountai	86.25	45	⇓P	P	01 21 12.0	-0.2
	baz=86						
112A	Yuma	86.31	49	⇑P	P	01 21 12.7	+0.2
	baz=86						
BELC	Belle Mtn.	86.34	47	⇑P	P	01 21 12.7	0.0
	baz=86						
CMB	Columbia Colle	86.37	42	eP	P	01 21 11.3	-1.4
CMB				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
CMB	Columbia Colle	86.37	42	eP	P	01 21 11.3	-1.5
	comp=Z,6.7nm,0.9s,mb4.9						
BC3	Big Chuckw Mtn	86.46	48	⇓P	P	01 21 13.3	0.0
	baz=87						
GLA	Glamis	86.48	48	⇑P	P	01 21 13.4	+0.1
	baz=87						
NJ2	Nanjing	86.50	310	eP	P	01 21 13.2	-0.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.5						
CWC	Cottonwood Cre	86.65	44	⇓P	P	01 21 14.0	-0.2
	baz=87						
HEC	Hector,Ludlow	86.67	46	⇑P	P	01 21 14.3	0.0
	baz=87						
GSC	Goldstone	86.68	46	⇓P	P	01 21 14.2	-0.1
	baz=87						
GSC	Goldstone	86.68	46	eP	P	01 21 13.8	-0.5
GSC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
GSC	Goldstone	86.68	46	eP	P	01 21 13.8	-0.5
	comp=Z,5.6nm,0.8s,mb4.8						
MPMC	Manual Prospec	86.76	45	⇓P	P	01 21 14.9	+0.2
	baz=87						
WDC	Whiskeytown Da	86.94	39	eP	P	01 21 15.8	+0.4
IRM	Iron Mountain	86.98	47	⇑P	P	01 21 16.3	+0.5
	baz=87						
GMRC	Granite Mounta	87.05	47	⇓P	P	01 21 16.5	+0.4
	baz=87						
WAKR	Walker	87.24	42	eP	P	01 21 16.6	-0.3
R06C	Coleville	87.24	42	⇑P	P	01 21 17.2	+0.3
	baz=88						
TUQ	Turquoise Moun	87.31	46	⇑P	P	01 21 17.4	0.0
	baz=88						
SHOC	Shoshone	87.39	45	⇑P	P	01 21 17.8	0.0
	baz=88						
FURC	Furnace Creek,	87.41	45	⇓P	P	01 21 17.6	-0.2
	baz=88						
GRAC	Grapevine Rang	87.45	44	⇑P	P	01 21 18.0	-0.1
	baz=88						
LDFC	Landfair	87.59	47	eP	P	01 21 18.9	+0.2
	comp=Z,13nm,0.8s,mb5.2						
WCN	Washoe City	87.59	41	⇑P	P	01 21 18.6	-0.1
	baz=88						
Y13A	Salome	87.61	48	⇓P	P	01 21 18.9	0.0
	baz=88						
NVAR	Mina Array Bea	87.84	42	P	P	01 21 19.2	-0.7
	comp=Z,5.4nm,0.9s,mb4.8,baz=220,slow=8.6,SNR=38						
NVAR	Mina Array Bea	87.84	42	P	P	01 21 19.2	-0.7
Z14A	Wintersburg	87.90	49	⇓P	P	01 21 20.2	0.0
	baz=88						
TPNV	Topopah Spring	88.09	45	⇑P	P	01 21 21.5	+0.4
	baz=88						
TPNV	Topopah Spring	88.09	45	eP	P	01 21 20.6	-0.5
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
TPNV	Topopah Spring	88.09	45	eP	P	01 21 20.6	-0.5
	comp=Z,5.8nm,0.8s,mb4.9						
X13A	Yucca	88.10	48	P	P	01 21 21.2	0.0
	baz=88,SNR=5.4						
O06A	Flanigan	88.14	40	⇑P	P	01 21 21.2	-0.1
	baz=88						
V12A	Nelson	88.17	46	⇓P	P	01 21 21.4	0.0
	baz=88						
Y14A	Wickenburg	88.22	49	⇑P	P	01 21 21.6	-0.1
	baz=88						
217A	Green Valley	88.34	51	⇓P	P	01 21 22.8	+0.4
	baz=88						
W13A	Hualapai Mount	88.38	47	P	P	01 21 22.8	+0.3
	baz=89,SNR=6.3						
R09A	Tonopah	88.44	43	⇓P	P	01 21 22.8	+0.1
	baz=89						
SHPR	Sheep Range	88.47	46	eP	P	01 21 23.5	+0.6
S10A	Tonopah Range,	88.52	44	⇑P	P	01 21 23.1	0.0
	baz=89						
N06A	Buffalo Meadow	88.54	40	⇑P	P	01 21 22.5	-0.6
	baz=89						
X14A	Yava	88.62	48	⇓P	P	01 21 23.7	0.0
	baz=89						
Y15A	Casa Rosa Ranc	88.66	49	P	P	01 21 24.4	+0.5
	baz=89,SNR=6.1						
O07A	Toulon	88.68	41	⇑P	P	01 21 24.0	+0.3
	baz=89						
TUC	Tucson	88.69	51	eP	P	01 21 23.5	-0.5
TUC				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.7						
TUC	Tucson	88.69	51	eP	P	01 21 23.5	-0.5
	comp=Z,4.2nm,1.1s,mb4.7						
318A	Bisbee	88.70	52	⇓P	P	01 21 23.9	-0.3
	baz=89						
MDJ	Mudanjiang	88.77	325	P	P	01 21 24.8	+0.7
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,69nm,4.5s						
V13A	Grand Canyon W	88.79	47	P	P	01 21 24.8	+0.4
	baz=89,SNR=5.2						
U12A	Valley of Fire	88.81	46	P	P	01 21 24.9	+0.4
	baz=89,SNR=5.5						
117A	Oracle	88.88	51	⇑P	P	01 21 25.6	+0.7
	baz=89						
T11A	Corn Creek, Al	88.91	45	⇓P	P	01 21 25.6	+0.6
	baz=89						
W14A	Seligman	88.96	48	P	P	01 21 25.9	+0.7
	baz=89,SNR=7.8						
218A	Dragoon	88.98	52	⇓P	P	01 21 25.8	+0.4
	baz=89						
X15A	Humboldt	89.06	49	⇑P	P	01 21 26.0	+0.2
	baz=89						
319A	Douglas	89.15	53	⇓P	P	01 21 26.6	+0.3
	baz=89						
HABR	Khabarovsk	89.15	331	eP	P	01 21 25.4	-0.4
HABR				e		01 24 55.5	
HABR				ePPP		01 26 52.3	
HABR				eS	SKSac	01 31 44.0	-11
HABR				e		01 32 09.1	
HABR				eSS	SS	01 38 02.3	-6.9
HABR				eSSS		01 41 37.8	
U13A	Pakoon Wash	89.16	46	P	P	01 21 26.9	+0.7
	baz=89,SNR=5.7						
O08A	Rochester Mine	89.17	41	⇑P	P	01 21 26.1	0.0
	baz=89						
Y16A	Circle Bar Ran	89.18	49	P	P	01 21 26.8	+0.5
	baz=89,SNR=8.0						
V14A	Boquillas Ranc	89.21	47	P	P	01 21 26.8	+0.4
	baz=89,SNR=8.1						
K05A	Summer Lake	89.32	38	⇓P	P	01 21 27.3	+0.6
	baz=90						
118A	Homack Ranch,	89.43	51	⇓P	P	01 21 28.0	+0.5
	baz=90						
Y17A	Roosevelt	89.48	50	⇓P	P	01 21 27.9	+0.2
	baz=90						
N08A	GE Springer Mi	89.51	41	⇓P	P	01 21 27.4	-0.2
	baz=90						
X16A	Lo Mia Camp, P	89.53	49	P	P	01 21 28.5	+0.5
	baz=90,SNR=6.5						
219A	White Tail Can	89.53	52	⇓P	P	01 21 27.9	-0.1
	baz=90						
U14A	Mt Trumbull	89.65	47	P	P	01 21 28.9	+0.4
	baz=90,SNR=8.1						
L07A	Adell	89.67	39	⇓P	P	01 21 28.2	-0.2
	baz=90						
W16A	Flagstaff	89.89	48	⇓P	P	01 21 30.2	+0.6
	baz=90						
V15A	Kaibab Nationa	89.92	48	⇓P	P	01 21 30.3	+0.6
	baz=90,SNR=8.1						
119A	Ashpeak Ranch,	89.96	51	⇓P	P	01 21 30.4	+0.4
	baz=90						
S13A	Holt Ranch, En	89.96	45	⇑P	P	01 21 30.5	+0.6
	baz=90						
Y18A	Canyon Day Jun	90.07	50	⇑P	P	01 21 31.2	+0.7
	baz=90						
J06A	Christmas Vall	90.07	38	⇑P	P	01 21 30.4	+0.1
	baz=90						
K07A	Rock Creek Ran	90.18	39	⇑P	P	01 21 30.7	0.0
	baz=90						
U15A	North Rim	90.22	47	P	P	01 21 32.1	+1.0
	baz=90,SNR=10						
WUAZ	Wupatki	90.25	48	⇓P	P	01 21 31.8	+0.5
	baz=90						
WUAZ	Wupatki	90.25	48	eP	P	01 21 32.0	+0.7
CN2	Changchun	90.31	323	eP	P	01 21 31.4	+0.1
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
CN2				AMB	AMB		
	comp=Z,290nm,8.0s						
M09A	Marrel Ranch,	90.32	41	⇓P	P	01 21 32.0	+0.5
	baz=90						
L08A	Fields	90.33	40	⇑P	P	01 21 31.7	+0.2
	baz=91						
WVOR	Wild Horse Val	90.34	39	eP	P	01 21 30.6	-0.9
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.7						
WVOR	Wild Horse Val	90.34	39	eP	P	01 21 30.6	-0.9
	comp=Z,4.1nm,1.1s,mb4.7						
H05A	Madras	90.47	36	⇓P	P	01 21 31.7	-0.3
	baz=91						
O11A	Cowboy Ranch,	90.51	43	⇓P	P	01 21 32.3	-0.1
	baz=91						
I06A	Prineville	90.52	37	P	P	01 21 32.5	+0.3
	baz=91,SNR=5.0						
X18A	Snowflake	90.58	50	⇑P	P	01 21 32.9	+0.1
	baz=91						
K08A	Mann Creek Ran	90.62	39	P	P	01 21 32.9	0.0
	baz=91,SNR=5.1						
Y19A	Nutrioso	90.70	51	⇓P	P	01 21 34.2	+0.8
	baz=91						
Q13A	Wheeler Ranch,	90.73	44	⇑P	P	01 21 33.6	+0.1
	baz=91						
U16A	Tuba City	90.79	48	⇑P	P	01 21 34.4	+0.6
	baz=91						
M10A	I.L. Ranch, Tu	90.90	41	⇑P	P	01 21 34.5	+0.4
	baz=91						
S15A	Panguitch	90.95	46	⇑P	P	01 21 35.0	+0.6
	baz=91						
X19A	St. Johns	90.95	50	⇓P	P	01 21 35.0	+0.4
	baz=91						
I07A	Izee	90.98	38	⇓P	P	01 21 34.6	+0.1
	baz=91						
H06A	Lindquist Farm	91.00	37	P	P	01 21 34.3	-0.2
	baz=91,SNR=5.8						
K09A	Rome	91.02	40	P	P	01 21 34.5	-0.1
	baz=91,SNR=5.6						
P13A	Bates Ranch, G	91.05	44	⇓P	P	01 21 35.0	+0.1
	baz=91						
O12A	Currie	91.13	43	⇑P	P	01 21 34.8	-0.4
	baz=91						
KLR	Kul'dur	91.15	329	eP	P	01 21 32.0	-3.1
G06A	Carlson Farm,	91.19	36	P	P	01 21 35.2	-0.1
	baz=91,SNR=5.1						
Q14A	Sevier Lake (B	91.20	45	⇑P	P	01 21 35.7	+0.1
	baz=91						
M11A	Holland Ranch,	91.27	41	⇓P	P	01 21 36.4	+0.5
	baz=92						
W19A	Sanders	91.30	50	⇓P	P	01 21 36.5	+0.3
	baz=92						
H07A	Lands Inn, Kim	91.30	37	P	P	01 21 35.8	-0.1
	baz=92,SNR=8.1						
L10A	Juniper Basin	91.31	41	P	P	01 21 35.9	-0.1
	baz=92,SNR=6.3						
N12A	Clover Valley,	91.33	42	⇑P	P	01 21 36.1	0.0
	baz=92						
U17A	Shonto	91.36	48	⇓P	P	01 21 37.1	+0.6
	baz=92						
J09A	Fry Pan Ranch,	91.43	39	⇑P	P	01 21 36.5	-0.1
	baz=92						
S16A	Weppner Ranch,	91.45	46	⇓P	P	01 21 36.4	-0.4
	baz=92						
F06A	Goldendale	91.48	36	⇓P	P	01 21 36.5	-0.2
	baz=92						
T17A	Navajo Res., N	91.51	47	⇑P	P	01 21 37.1	0.0
	baz=92						
E05A	Randle	91.54	35	⇑P	P	01 21 36.5	-0.4
	baz=92						
K10A	MacKenzie Ranc	91.54	40	P	P	01 21 37.1	0.0
	baz=92,SNR=5.1						
G07A	Ruggs Ranch, H	91.70	37	⇑P	P	01 21 37.3	-0.5
	baz=92						
H08A	Prairie City	91.72	38	⇓P	P	01 21 37.5	-0.4
	baz=92						
M12A	Wells	91.77	42	⇓P	P	01 21 38.1	0.0
	baz=92						
L11A	Cat Creek Ranc	91.77	41	⇓P	P	01 21 38.3	+0.1
	baz=92						
GYA	Guiyang	91.87	300	eP	P	01 21 38.7	-0.3
GYA				AP	pP	01 21 50.8	+8.8
GYA				XP	sP	01 21 54.7	+12
GYA				PP	PP	01 25 20.4	+1.8
GYA				SKS		01 32 07.5	
GYA				S	S	01 32 35.2	-5.5
GYA				SS	SS	01 38 47.3	-2.1
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,120nm,6.4s						
GYA				LR	LR		
	comp=N,560nm,20.8s,MS5.1						
GYA				LR	LR		
	comp=E,460nm,21.4s,MS5.1						
GYA				LR	LR		
	comp=Z,540nm,20.6s,MS5.0						
E06A	Yakima	91.92	35	⇓P	P	01 21 38.9	+0.2
	baz=92						
TXAR	Lajitas Array	91.95	57	P	P	01 21 38.3	-1.0
	comp=Z,0.9nm,0.9s,mb4.1,baz=218,slow=7.9,SNR=5.3						
TXAR				pP	pP	01 21 47.9	+5.6
	comp=Z,0.7nm,0.9s,baz=190,slow=6.4,SNR=3.0						
TXAR				PKKPbc	PKKPbc	01 39 05.4	+8.7
	comp=Z,0.2nm,0.6s,baz=69,slow=4.9,SNR=3.1						
TXAR	Lajitas Array	91.95	57	P	P	01 21 38.3	-1.0
TXAR				*PP	pP	01 21 47.9	+5.6
K11A	Parker Ranch,	92.00	40	⇑P	P	01 21 39.2	0.0
	baz=92						
G08A	Pilot Rock	92.09	37	P	P	01 21 39.0	-0.6
	baz=92,SNR=9.4						
M13A	Montello	92.17	42	P	P	01 21 40.0	0.0
	baz=92,SNR=7.1						
P15A	Leamington	92.17	45	⇓P	P	01 21 40.1	0.0
	baz=92						
L12A	House Creek Ra	92.17	41	⇓P	P	01 21 40.4	+0.3
	baz=92						
H09A	Durkee	92.35	38	⇑P	P	01 21 40.8	0.0
	baz=93						
E07A	Sunnyside	92.49	36	⇑P	P	01 21 41.5	+0.2
	baz=93						
F08A	Pendleton	92.52	37	⇓P	P	01 21 41.1	-0.5
	baz=93						
MFID	Camas Ranch	92.53	40	⇑P	P	01 21 41.4	-0.2
	baz=93						
HAWA	Hanford	92.54	36	eP	P	01 21 41.9	+0.3
K12A	Draper Farm, C	92.55	41	⇑P	P	01 21 41.9	+0.1
	baz=93						
G09A	Cove	92.70	38	⇓P	P	01 21 42.3	0.0
	baz=93						
M14A	Sheep Mountain	92.73	43	P	P	01 21 42.1	-0.5
	baz=93,SNR=6.4						
H10A	Noah's Angus R	92.80	39	⇑P	P	01 21 41.9	-0.9
	baz=93						
J12A	Stokes Ranch,	92.84	40	P	P	01 21 43.1	+0.1
	baz=93,SNR=6.0						

K13A	Stover Farm, H	93.03	41	⇓P	P	01 21 43.8	-0.2
	baz=93						
G10A	Bishop Farm, J	93.06	38	⇓P	P	01 21 43.6	-0.4
	baz=93						
BJI	Beijing	93.14	315	P	P	01 21 44.8	+0.2
BJI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.5						
BJI				AMB	AMB		
	comp=Z,92nm,3.0s						
ANMO	Albuquerque	93.15	51	⇑eP	P	01 21 42.4	-2.4
ANMO	Albuquerque	93.15	51	eP	P	01 21 44.6	-0.2
I12A	Atlanta	93.17	40	⇓P	P	01 21 44.5	-0.1
	baz=93						
M15A	Larsen Ranch,	93.24	43	P	P	01 21 44.3	-0.6
	baz=93,SNR=6.3						
H11A	Donnelly	93.27	39	P	P	01 21 44.6	-0.4
	baz=94,SNR=7.9						
D08A	Wollman Farm,	93.30	36	⇓P	P	01 21 44.6	-0.5
	baz=94						
E09A	Wood Farm, Sta	93.33	37	⇑P	P	01 21 44.6	-0.6
	baz=94						
HLID	Hailey	93.42	40	⇓P	P	01 21 45.9	+0.1
	baz=94						
HLID	Hailey	93.42	40	eP	P	01 21 45.5	-0.2
	comp=Z,3.4nm,0.9s,mb4.8						
F10A	Beach Ranch, E	93.45	37	⇑P	P	01 21 44.8	-1.0
	baz=94						
J13A	Cove Ranch, Pi	93.45	41	P	P	01 21 45.7	-0.2
	baz=94,SNR=6.0						
O17A	Robinson Place	93.49	45	⇓P	P	01 21 45.9	-0.3
	baz=94						
G11A	Walters Elk Ra	93.58	38	⇓P	P	01 21 45.8	-0.7
	baz=94						
L15A	Malad City	93.61	43	⇓P	P	01 21 46.4	-0.2
	baz=94						
M16A	Huntsville	93.63	44	⇑P	P	01 21 46.5	-0.2
	baz=94						
J14A	Carey	93.78	41	⇑P	P	01 21 46.7	-0.7
	baz=94,SNR=10						
CMAR	Chiang Mai Arr	93.78	289	P	P	01 21 48.2	+0.2
	comp=Z,1.0nm,0.3s,mb4.7,baz=150,slow=3.1,SNR=4.8						
CMAR	Chiang Mai Arr	93.78	289	⇑eP	P	01 21 48.7	+0.7
H12A	Diamond D Ranc	93.80	40	⇑P	P	01 21 47.1	-0.4
	baz=94						
I13A	Wildhorse Cree	93.81	40	⇓P	P	01 21 47.1	-0.4
	baz=94						
KMI	Kunming	94.16	297	P	P	01 21 50.4	+0.8
KMI				AMB	AMB		
	comp=Z,11nm,0.7s,mb5.4						
I14A	Mackay	94.19	41	⇓P	P	01 21 49.1	-0.2
	baz=94						
F12A	Elk City	94.36	38	⇓P	P	01 21 49.9	-0.1
	baz=95						
XAN	Xi'an	94.39	307	P	P	01 21 50.0	-0.5
XAN				AP	pP	01 22 00.1	+6.7
XAN				PP	PP	01 25 38.2	0.0
XAN				S	S	01 33 00.8	-1.9
XAN				SS	SS	01 39 25.2	-0.1
XAN				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.7						
XAN				LR	LR		
	comp=Z,64nm,25.1s,MS4.0						
J15A	Blackfoot	94.44	42	⇑P	P	01 21 50.3	-0.2
	baz=95						
G13A	Cobalt	94.49	39	⇑P	P	01 21 50.0	-0.6
	baz=95						
K16A	Soda Springs	94.58	42	⇑P	P	01 21 51.0	-0.1
	baz=95						
H14A	Leadore	94.67	40	⇑P	P	01 21 52.1	+0.6
	baz=95						
J16A	Bone	94.84	42	⇑P	P	01 21 52.6	+0.3
	baz=95						
I16A	Newdale	95.28	42	⇓P	P	01 21 54.4	+0.2
	baz=96						
REDW	Red Top Meadow	95.33	42	eP	P	01 21 54.4	-0.2
K18A	Toltan Ranch,	95.37	43	⇑P	P	01 21 55.0	+0.2
	baz=96						
SNOW	Snow King Moun	95.45	42	eP	P	01 21 55.1	0.0
	comp=Z,4.0nm,0.6s,mb5.0						
G15A	Dillon	95.50	40	⇓P	P	01 21 55.2	-0.1
	baz=96						
B11A	Sandpoint	95.50	36	⇓P	P	01 21 55.6	+0.4
	baz=96						
E14A	Clinton	95.72	39	⇑P	P	01 21 56.1	-0.1
	baz=96						
J18A	Kendall Valley	95.73	43	⇑P	P	01 21 56.2	-0.1
	baz=96						
PDAR	Pinedale Array	95.74	43	P	P	01 21 54.8	-1.6
	comp=Z,0.7nm,0.9s,mb4.1,baz=188,slow=3.0,SNR=4.0						
CD2	Chengdu	96.39	302	P	P	01 22 00.2	+0.5
CD2				AP	pP	01 22 10.8	+8.1
CD2				XP	sP	01 22 14.7	+11
CD2				PP	PP	01 25 56.7	+2.9
CD2				SKS		01 32 33.0	
CD2				S	S	01 33 15.1	-5.1
CD2				XS	sS	01 33 32.7	+7.5
CD2				SS	SS	01 39 52.1	-1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.5						
CD2				AMB	AMB		
	comp=Z,140nm,6.5s						
CD2				LR	LR		
	comp=N,170nm,5.1s						
CD2				LR	LR		
	comp=Z,180nm,15.6s,MS4.7						
HHC	Hu-ho-hao-te	96.46	314	eP	P	01 21 59.6	-0.2
HHC				AP	pP	01 22 10.1	+7.4
HHC				XP	sP	01 22 14.1	+10
HHC				PP	PP	01 25 56.0	+1.8
HHC				SKS		01 32 32.1	
HHC				eS	S	01 33 14.9	-5.5
HHC				XS	sS	01 33 32.7	+7.4
HHC				SS	SS	01 39 53.3	-1.2
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb5.2						
HHC				AMB	AMB		
	comp=Z,265nm,9.7s						
HHC				LR	LR		
	comp=N,142nm,15.5s,MS4.7						
HHC				LR	LR		
	comp=E,90nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=Z,141nm,16.6s,MS4.5						
EGMT	Eagleton	98.72	39	⇑P	P	01 22 09.9	+0.1
	baz=99						
LZH	Lanzhou	99.00	306	eP	P	01 22 11.5	+0.2
LZH				AP	pP	01 22 19.5	+5.2
LZH				XP	sP	01 22 24.5	+9.2
LZH				PP	PP	01 26 16.1	+2.3
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,75nm,4.1s						
LZH				LR	LR		
	comp=E,222nm,17.0s						
LZH				LR	LR		
	comp=Z,302nm,19.4s,MS4.8						
YKA	Yellowknife Ar	105.14	25	PKKPbc	PKKPbc	01 38 17.9	-2.8
	comp=Z,0.2nm,0.7s,baz=36,slow=3.1,SNR=3.7						
WMQ	Urumqi	113.49	308	ePKP	PKiKP	01 27 07.8	-0.7
MKAR	Makanchi Array	118.03	310	PKP	PKPdf	01 27 15.2	-2.0
	comp=Z,0.5nm,0.6s,baz=107,slow=1.5,SNR=5.5						
MKAR	Makanchi Array	118.03	310	⇑iPKIKP	PKPdf	01 27 15.1	-2.0
ZALV	Zalesovo Beam	118.23	318	PKP	PKPdf	01 27 15.1	-2.2
	comp=Z,0.5nm,0.3s,baz=62,slow=3.4,SNR=2.5						
KURK	Kurchatov	121.28	314	PKP	PKPdf	01 27 21.1	-2.1
	comp=Z,1.9nm,0.7s,baz=106,slow=1.7,SNR=6.7						
KURK	Kurchatov	121.28	314	⇑iPKIKP	PKPdf	01 27 21.3	-2.0
AAK	Ala-Archa	122.41	304	iPKIKP	PKPdf	01 27 24.8	-0.9
KBL	Kabul	124.58	293	ePKIKP	PKPdf	01 27 30.1	0.0
BVAR	Borovoye Array	126.62	316	PKP	PKPdf	01 27 31.8	-1.6
	comp=Z,1.5nm,0.5s,baz=129,slow=2.0,SNR=7.7						
ARU	Arti	133.27	321	iPKHKP		01 27 21.1	
ARCES	ARCESS Array B	138.56	348	PKhKP		01 27 46.0	
	comp=Z,5.4nm,1.0s,baz=41,slow=4.8,SNR=4.2						
ARCES				PKP	PKPdf	01 27 53.5	-1.9
	comp=Z,3.5nm,0.8s,baz=46,slow=2.6,SNR=4.0						
JOF	Joensuu	142.46	339	epkp	PKPdf	01 27 55.0	-7.7
	comp=Z,2.6nm,0.8s						
GNI	Garni	144.40	298	PKP	PKPdf	01 28 05.4	-1.4
	comp=Z,4.4nm,0.6s,baz=14,slow=5.0,SNR=5.7						
GNI	Garni	144.40	298	ePKPdf	PKPdf	01 28 05.3	-1.5
MOS	Moscow	144.48	326	ePKIKP	PKPdf	01 28 03.8	-2.6
MOS				pmax	pmax		
	comp=Z,58nm,1.3s						
KAF	Kangasniemi	144.57	341	epkp	PKPdf	01 28 02.4	-4.0
	comp=Z,9.3nm,0.6s,baz=35,slow=3.2						
DYDN	Diyadin	145.24	297	iP	PKPbc	01 28 09.0	+1.0
HAKT	HAKKARI	145.26	293	iP	PKPbc	01 28 14.2	+6.0
OBN	Obninsk	145.32	326	⇓iPKIKP	PKPdf	01 28 07.0	-0.9
OBN				e		01 31 26.5	
OBN				pmax	pmax		
	comp=Z,73nm,1.3s						
OBN	Obninsk	145.32	326	ePKPbc	PKPbc	01 28 06.3	-1.4
DIGO	Kars	145.43	298	iP	PKPdf	01 28 08.4	-0.2
TVAN	Van	145.49	295	iP	PKPdf	01 28 05.6	-3.1
KIV	Kislovodsk	145.52	305	ePKP2	PKPab	01 28 08.6	-0.4
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	145.52	305	ePKPbc	PKPbc	01 28 08.1	-0.7
VSR	Storozhevoye	145.74	318	ePKP2	PKPab	01 28 08.3	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=N,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
VORD	Divnogorie	145.76	318	ePKP2	PKPab	01 28 08.2	-1.4
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.8s						
DDEM	Demirkent	146.62	299	iP	PKPdf	01 28 11.7	+1.1
DBOC	Borcka	146.63	300	iP	PKPdf	01 28 11.1	+0.5
ERZM	Erzurum	147.01	298	iP	PKPab	01 28 14.2	-0.6
BNGL	BINGOL	147.24	296	iP	PKPbc	01 28 13.7	-0.3
NB2	NORSAR Subarra	148.69	352	PKP	PKPbc	01 28 15.7	-1.4
	comp=Z,18nm,1.1s,baz=13,slow=2.8						
NOA	NORSAR Array B	148.69	352	PKPbc	PKPbc	01 28 15.4	-1.8
	comp=Z,8.4nm,0.9s,baz=14,slow=4.3,SNR=15						
KEMA	Kemaliye	149.27	297	iP	PKPbc	01 28 19.3	0.0
GZT	Gaziantep	150.16	293	iP	PKPdf	01 28 18.6	+2.1
AKASG	Malin Array Be	151.46	323	PKPbc	PKPbc	01 28 22.7	-1.5
	comp=Z,8.4nm,0.7s,baz=48,slow=2.9,SNR=28						
AKASG	Malin Array Be	151.46	323	PKPbc	PKPbc	01 28 22.7	-1.5
AKBB	Malin Array Si	151.46	323	ePKIKP	PKPbc	01 28 23.0	-1.2
AKBB				e		01 28 31.3	
BR131	Keskin Array S	152.93	299	ePKPbc	PKPbc	01 28 26.6	-1.2
BRTR	Keskin Array B	152.93	299	PKPbc	PKPbc	01 28 26.2	-1.6
	comp=Z,1.2nm,0.5s,baz=128,slow=6.2,SNR=8.6						
KWP	Kalwaria	155.37	327	ePKP	PKPab	01 28 49.1	0.0
KWP	Kalwaria	155.37	327	⇓iP	PKPab	01 28 49.0	-0.1
KWP	Kalwaria	155.37	327	ePKP	PKPab	01 28 49.1	0.0
BUR08	Bucovina Ar. S	155.40	321	ePKPbc	PKPdf	01 28 31.9	+8.0
BUR08				ePKPab	PKPab	01 28 48.8	-0.5
BURAR	Bucovina Array	155.41	321	⇑iP	PKPab	01 28 48.7	-0.6
BURAR	Bucovina Array	155.41	321	⇑P	PKPab	01 28 48.7	-0.6
KOLS	Kolonicke sedl	156.06	327	ePKP	PKPab	01 28 49.1	-2.9
STHS	Stebnicka Huta	156.19	329	ePKP	PKPab	01 28 53.3	+0.7
UZH	Uzhgorod	156.26	326	ePKIKP	PKPdf	01 28 37.4	+12
UZH				i		01 28 52.4	
CRVS	Cervenica-Dubn	156.46	328	ePKP	PKPab	01 28 53.0	-0.8
DRGR		157.26	322	⇓iP	PKPab	01 28 57.3	0.0
DRGR		157.26	322	⇓P	PKPab	01 28 57.4	0.0
CLL	Collm	157.58	343	ePKPdf	PKPdf	01 28 27.0	+0.5
CLL				ePKPdif		01 28 41.0	
CLL				ePKPab	PKPab	01 28 57.0	-1.5
	comp=Z,9.0nm,1.3s						
BRG	Berggiesshubel	157.72	341	eP	PKPab	01 28 58.2	-0.8
	comp=Z,3.3nm,0.9s						
PSZ	Piszkesteto	157.90	328	⇑iP	PKPab	01 28 59.7	-0.3
PSZ	Piszkesteto	157.90	328	⇑P	PKPab	01 28 59.7	-0.2
VYHS	Vyhne	157.94	330	ePKP	PKPab	01 28 59.8	-0.3
ZST	Bratislava	158.90	332	ePKP	PKPab	01 29 03.7	-0.6
KHC	Kasperske Hory	159.37	339	ePKPab	PKPab	01 29 06.0	-0.3
GERES	GERESS Array B	159.58	338	PKPab	PKPab	01 29 07.3	0.0
	comp=Z,1.0nm,0.7s,baz=48,slow=4.3,SNR=4.2						
CONA	Conrad Observa	159.60	334	⇑iPKPab	PKPab	01 29 07.9	+0.6
	comp=Z,6.8nm,1.2s						
CSNA	Conrad Observa	159.60	334	⇑iPKPab	PKPab	01 29 08.0	+0.7
	comp=Z,6.8nm,1.2s						
BCLA	Clavier	159.76	355	PKPab	PKPab	01 29 06.6	-1.3
SOKA	Soboth	160.95	333	⇑iPKPab	PKPab	01 29 11.0	-2.3
	comp=Z,12nm,1.3s						
TORD	Torodi Ar. Bea	162.94	177	PKP	PKPdf	01 28 33.0	-0.7
	comp=Z,2.1nm,1.1s,baz=206,slow=0.2,SNR=6.7						
TORD				PKPab	PKPab	01 29 22.1	-0.5
	comp=Z,1.4nm,0.7s,baz=177,slow=4.0,SNR=14						
LOR	Lormes	163.00	357	ePKP2	PKPab	01 29 20.6	-1.5
	comp=Z,13nm,1.0s						
SSF	Saint Saulge	163.22	358	ePKP2	PKPab	01 29 21.8	-1.3
	comp=Z,9.5nm,0.9s						
AVF	Avril sur Loir	163.49	358	ePKP2	PKPab	01 29 23.6	-0.7
SMF	Signal de Mont	163.62	357	ePKP2	PKPab	01 29 23.5	-1.4
	comp=Z,20nm,1.0s						
ESDC	Sonseca Array	169.22	28	PKP	PKPdf	01 28 38.6	+0.7
	comp=Z,0.2nm,0.5s,baz=305,slow=4.5,SNR=2.9						
ESDC				PKPab	PKPab	01 29 48.2	-1.7
	comp=Z,0.2nm,0.6s,baz=336,slow=3.3,SNR=4.4						
ESDC	Sonseca Array	169.22	28	PKP	PKPdf	01 28 38.6	+0.7
ESDC				PKPab	PKPab	01 29 48.2	-1.7

MAN 13 01:16:46, 1231N×12529E, h1km, mb4.5, ML3.4, MS3.3, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.65	288	eP	Pg	01 16 59.6	+1.2
CNP				eS	Sg	01 17 13.7	+6.8
BESP	Borongan	0.72	169	eP	Pg	01 17 01.2	+1.4
BESP				eS	Sg	01 17 15.1	+6.0
PLP	Palo	1.18	195	⇓eP	Pg	01 17 08.6	-0.1
PLP				iS	Sg	01 17 27.2	+3.3
PVCP	Virac	1.69	319	eP	Pn	01 17 11.3	-5.5
PVCP				eS	Sn	01 17 46.7	+7.6
MSLP	Maasin	2.20	191	eP	Pn	01 17 25.8	+2.0
RCP	Roxas	2.60	254	⇑eP	Pn	01 17 30.8	+1.5
GUIM	Jordan	3.13	238	eP	Pn	01 17 33.3	-3.3

*IDC **13** 01:16:41.3±1.7, 4092N×7955E, h0km, mb3.5/5, mb1 3.6/10, mb1mx3.5/29, mbtmp3.6/10, ML3.5/5, Error ellipse: s-maj=32.5km s-min=21.4km az=136.0*
*ISCJB **13** 01:16:44.1±0.6, 4133N±005×7953E±005, h10km, mb3.8/5, Error ellipse: s-maj=7.4km s-min=4.1km az=145.4*
*BJI **13** 01:16:46.0, 4142N×7937E, h14km, ML3.8*
*MOS **13** 01:16:47.6±1.2, 4125N×7948E, h47km, mb4.0/4, Error ellipse: s-maj=13.4km s-min=7.6km az=97.8*
*NEIC **13** 01:16:48.8±1.3, 4126N×7940E, h45km±9km, mb3.8/2, Error ellipse: s-maj=16.7km s-min=5.4km az=156.0*
*NNC **13** 01:16:50.0±2.7, 4186N×7945E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=27.0km s-min=10.9km az=155.0*
ISC 13 01:16:46.8±0.6**, 4135N**±004×**7947E**±005**, h10km, n56, σ1š40**/74**, mb3.8**/5**, 12C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	2.57	291	P	Pn	01 17 29.6	+1.2
	SNR=22						
KNDC	Almaty	2.63	316	⇓Pn	Pn	01 17 30.6	+1.4
	190nm,0.6s						
KNDC				⇑Lg		01 18 04.4	
	1μm,0.9s						
AAA	Alma-Ata	2.68	317	iPN	Pn	01 17 32.7	+2.8
AAA				pmax	pmax		
	comp=Z,388nm,0.4s						
KSH	Kashi	3.24	237	PG	Pb	01 17 43.4	-0.9
KSH				SG	Sg	01 18 31.3	+0.6
KSH				Smax			
	comp=N,500nm,0.6s						
KSH				Smax			
	comp=E,853nm,0.8s						
KZA	Kyzart	3.24	284	P	Pn	01 17 39.0	+1.4
	SNR=14						
TKM2	Tokmak 2	3.28	300	⇓Pn	Pn	01 17 38.6	+0.5
	comp=E,27nm,0.3s						
TKM2				⇓Lg		01 18 22.9	
	comp=E,198nm,0.6s						
TKM2	Tokmak 2	3.28	300	P	Pn	01 17 38.8	+0.6
	SNR=63						
TKM2	Tokmak 2	3.28	300	ePn	Pn	01 17 38.1	0.0
TKM2				eSn	Sn	01 18 20.4	+3.2
KBK	Karagaybulak	3.61	293	P	Pn	01 17 43.9	+1.2
	SNR=53						
UCH	Uchtor	3.81	285	P	Pb	01 17 54.1	+0.1
	SNR=12						
UCH	Uchtor	3.81	285	ePn	Pn	01 17 44.5	-0.9
UCH				ePg	Pg	01 17 53.8	-5.9
UCH				eSn	Sn	01 18 30.1	-0.1
AAK	Ala-Archa	3.92	291	P	Pn	01 17 52.1	+5.1
	SNR=28						
AAK	Ala-Archa	3.92	291	ePn	Pn	01 17 46.8	-0.2
AAK				ePg	Pg	01 17 58.4	-3.5
AAK				eSn	Sn	01 18 32.0	-1.0
USP	Ospenovka	4.15	299	P	Pb	01 18 00.4	+0.6
	SNR=8.7						
AML	Almayashu	4.39	282	P	Pn	01 18 03.2	+10
	SNR=6.7						
AML	Almayashu	4.39	282	ePn	Pn	01 17 53.3	-0.2
AML				ePg	Pg	01 18 02.5	-8.3
AML				eSg	Sg	01 19 00.7	-7.0
EKS2	Erkin-Say	4.44	289	P	Pn	01 18 03.7	+10
	SNR=17						
EKS2	Erkin-Say	4.44	289	ePn	Pn	01 17 53.4	-0.7
EKS2				ePg	Pg	01 18 03.8	-7.9
EKS2				eSg	Sg	01 19 02.3	-7.0
MK31	Makanchi Array	5.81	20	⇓Pn	Pn	01 18 13.4	+0.6
	comp=E,11nm,0.8s,baz=202,slow=14,SNR=167						
MK31				⇑Sn	Sn	01 19 19.0	-0.5
	comp=E,21nm,0.7s,baz=156,slow=42,SNR=6.2						
MK31				⇑Lg		01 19 38.6	
	comp=E,21nm,0.5s						
MK31	Makanchi Array	5.81	20	ePn	Pn	01 18 13.0	+0.2
MKAR	Makanchi Array	5.81	20	Pn	Pn	01 18 13.7	+0.8
	comp=E,0.8nm,0.3s,baz=206,slow=15,SNR=52						
MKAR				Sn	Sn	01 19 19.0	-0.5
	comp=E,4.5nm,0.3s,baz=198,slow=21,SNR=6.5						
MKAR				Lg		01 19 51.7	
	comp=E,2.9nm,0.3s,baz=206,slow=26,SNR=5.2						
KK31	Karatay Array	6.88	288	⇓Pg	Pb	01 18 48.1	+1.9
	comp=E,6.2nm,0.6s,baz=86,slow=16						
KK31				⇑Lg		01 20 15.0	
	comp=E,14nm,0.8s,baz=87,slow=25,SNR=5.0						
KURBB	Kurchatov Arra	9.29	356	⇑Pn	Pn	01 18 59.1	-1.6
	comp=E,0.5nm,0.5s						
KURBB				⇓Lg		01 21 27.6	
	comp=E,14nm,0.8s						
KURK	Kurchatov	9.38	357	⇑Pn	Pn	01 19 01.4	-0.5
	comp=E,4.5nm,0.9s						
KURK				⇑Lg		01 21 30.0	
	comp=E,49nm,0.9s						
KURK	Kurchatov	9.38	357	Pn	Pn	01 19 02.8	+0.9
	comp=E,0.0nm,0.3s,baz=182,slow=12,SNR=7.4						
KURK				Lg		01 21 40.5	
	comp=E,0.4nm,0.3s,baz=184,slow=28,SNR=9.0						
KURK	Kurchatov	9.38	357	⇑iP	Pn	01 19 05.0	+3.1
SMLA	Simla	10.37	191	iP	Pn	01 19 16.2	+0.7
SMLA				iS	Sn	01 21 05.4	-6.4
SMLA				iS	Sn	01 21 05.7	-6.1
SMLA				ex	x	01 21 10.8	
	comp=N,111nm,0.4s						
SMLA				ex	x	01 21 12.9	
	comp=E,94nm,0.5s						
VOSK	Vostochnaya	12.75	336	⇓Pn	Pn	01 19 46.8	-1.2
	comp=E,1.6nm,0.6s						
VOSK				⇓Lg		01 23 23.4	
	comp=E,28nm,1.2s						
ZAA0	Zalesovo Array	13.10	14	ePn	Pn	01 19 54.4	+1.7
ZALV	Zalesovo Beam	13.10	14	Pn	Pn	01 19 53.1	+0.4
	comp=E,0.9nm,0.3s,baz=200,slow=14,SNR=12						
ZALV				Sn	Sn	01 22 13.8	-4.7
	comp=E,0.7nm,0.3s,baz=193,slow=20,SNR=7.4						
ZALV	Zalesovo Beam	13.10	14	P	Pn	01 19 53.2	+0.5
ZALV						01 22 13.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
BVA0	Borovoye Array	13.20	335	⇓Pn	Pn	01 19 56.4	+2.4
	comp=N,1.0nm,1.3s						
BVA0				⇓Lg		01 23 36.8	
	comp=N,2.4nm,1.0s,baz=164,slow=25,SNR=5.5						
BVAR	Borovoye Array	13.20	335	Pn	Pn	01 19 54.0	0.0
	comp=N,0.2nm,0.3s,baz=151,slow=14,SNR=3.0						
BVAR				Sn	Sn	01 22 18.3	-2.4
	baz=137,slow=17,SNR=2.7						
BVAR				Lg		01 23 42.0	
	comp=N,0.3nm,0.3s,baz=143,slow=29,SNR=5.7						
BVAR	Borovoye Array	13.20	335	P	Pn	01 19 54.0	0.0
BVAR						01 22 18.3	
BVAR	Borovoye Array	13.20	335	Pn	Pn	01 19 54.0	0.0
BVAR				Sn	Sn	01 22 18.3	-2.4
BVAR				Lg		01 23 42.0	
BRVK	Borovoye	13.26	335	eP	Pn	01 19 55.7	+0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	13.26	335	ePn	Pn	01 19 55.7	+0.9
	comp=Z,2.8nm,0.8s						
NVS	Novosibirsk	13.73	9	eP	Pn	01 20 03.9	+2.6
NVS				e		01 22 28.8	
HVS	Khovu-Aksy	13.86	40	⇓iP	Pn	01 20 05.7	+2.6
HVS				pmax	pmax		
	comp=Z,11nm,0.9s						
AB09	Akbulak array	15.84	307	⇑Pn	Pn	01 20 26.6	-3.0
	comp=Z,1.6nm,0.6s						
AKTK	Aktyubinsk	17.43	309	P	Pn	01 20 48.4	-1.4
AKTO	Aktyubinsk	17.43	309	P	Pn	01 20 48.4	-1.4
	comp=Z,0.2nm,0.3s,baz=100,slow=11,SNR=5.8						
SONM	Songino Array	20.18	62	P	P	01 21 21.0	-0.2
	comp=Z,0.8nm,0.5s,baz=267,slow=11,SNR=9.4						
SONM	Songino Array	20.18	62	P	P	01 21 21.0	-0.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	Arti	20.29	325c	iP	P	01 21 23.9	+1.6
ARU				e		01 21 41.6	
ARU				S	S	01 25 12.9	+3.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ARU	Arti	20.29	325	eP	P	01 21 20.9	-1.4
	comp=Z,2.3nm,0.5s						
ULN	Ulaanbaatar	20.62	62	⇑iP	P	01 21 24.6	-1.5
OBN	Obninsk	31.18	311	eP	P	01 23 06.7	+1.0
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
BR131	Keskin Array S	34.56	283	eP	P	01 23 32.5	-2.9
	comp=Z,1.0nm,0.7s,mb3.9						
BRTR	Keskin Array B	34.56	283	P	P	01 23 33.8	-1.6
	comp=Z,0.3nm,0.5s,mb3.5,baz=96,slow=12,SNR=2.7						
YAK	Yakutsk	36.14	38	⇑iP	P	01 23 48.3	-0.4
NOA	NORSAR Array B	44.71	320	P	P	01 24 57.7	-1.9
	comp=Z,0.5nm,0.6s,mb3.5,baz=79,slow=10.0,SNR=2.9						
NOA	NORSAR Array B	44.71	320	P	P	01 24 57.7	-1.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	72.30	272	P	P	01 28 09.4	-3.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=45,slow=4.4,SNR=11						
YKA	Yellowknife Ar	75.89	7	P	P	01 28 30.7	-2.3
	comp=Z,0.7nm,0.6s,mb3.8,baz=344,slow=5.9,SNR=5.0						
YKA	Yellowknife Ar	75.89	7	P	P	01 28 30.7	-2.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 13 01:43:19.6±2.4**, 5480S×3372W, h0km, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/14**, mbtmp3.9**/3**, Error ellipse: s-maj=85.8km s-min=34.5km az=1.0, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	28.10	285	P	P	01 49 13.5	+0.7
	1.7nm,0.9s,baz=126,slow=8.9,SNR=5.5						
CPUP	Villa Florida	33.30	319	P	P	01 49 58.4	-0.4
	0.8nm,0.6s,baz=144,slow=8.6,SNR=4.2						
TORD	Torodi Ar. Bea	74.02	36	P	P	01 54 57.3	+0.4
	0.7nm,0.7s,baz=198,slow=5.6,SNR=6.5						
YKA	Yellowknife Ar	132.81	321	PKP	PKPdf	02 02 33.7	-1.3
	0.2nm,0.5s,baz=128,slow=2.3,SNR=7.7						
ZALV	Zalesovo Beam	145.20	65	PKPbc	PKPbc	02 02 56.8	-0.8
	0.2nm,0.3s,baz=196,slow=2.7,SNR=2.5						

*IDC **13** 02:36:34.2±5.2, 1507N×9825W, h0km, mb3.5/4, mb1 3.8/7, mb1mx3.7/22, mbtmp3.6/7, ML3.7/3, Error ellipse: s-maj=84.9km s-min=22.2km az=173.0*
*ISCJB **13** 02:36:43.3±0.9, 1604N±004×9829W±002, h30km±5km, mb3.7/7, Error ellipse: s-maj=7.6km s-min=3.7km az=12.6*
*NEIC **13** 02:36:44.1, 1601N×9829W, h6km, mb4.1/4, MD4.7(MEX), After MEX.*

MEX 13 02:36:45.4±0.8, 1605N×9827W, h15km±9km, MD4.6
ISC 13 02:36:43.4±1.1, 1601N±004×9826W±003, h22km±7km, n43, σ1§34/74, mb3.7/7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.40	19	i P	Pb	02 36 51.2	-0.7
PNIG				i S	Sb	02 36 57.9	+0.3
ACX	Acapulco	1.80	298	i P	Pn	02 37 12.7	-0.5
ACX				i S	Sn	02 37 33.1	-2.3
VHO	Vista Hermosa	1.81	54	i P	Pn	02 37 13.3	0.0
VHO				i S	Sn	02 37 34.2	-1.3
VHO	Vista Hermosa	1.81	54	i P	Pn	02 37 13.3	0.0
VHO				i S	Sn	02 37 35.9	+0.4
OXX	Oaxaca	1.82	54	i P	Pn	02 37 13.1	-0.4
OXX				i S	Sn	02 37 34.4	-1.5
OXX	Oaxaca	1.82	54	i P	Pn	02 37 13.9	+0.4
OXX				i S	Sn	02 37 34.9	-0.9
UTMO	Huajuapan	1.86	14	i P	Pn	02 37 13.1	-0.9
UTMO				i S	Sn	02 37 34.1	-2.8
HUIG	Huatulco	2.09	96	i P	Pn	02 37 16.5	-0.7
HUIG				i S	Sn	02 37 41.1	-1.4
CAIG	El Cayaco	2.18	298	eP	Pn	02 37 17.9	-0.5
CAIG				i S	Sn	02 37 42.3	-2.5
CAIG	El Cayaco	2.18	298	eP	Pn	02 37 17.9	-0.5
CAIG				i S	Sn	02 37 44.5	-0.3
MEIG	Mezcala	2.30	326	eP	Pn	02 37 19.8	-0.4
MEIG				i S	Sn	02 37 45.2	-2.7
PLIG	Platanillo	2.65	334	eP	Pn	02 37 25.4	+0.6
PLIG				i S	Sn	02 37 53.8	-2.5
PLIG	Platanillo	2.65	334	i P	Pn	02 37 28.2	+3.4
PLIG				i S	Sn	02 37 52.3	-4.0
PPM	Popocatepetl	3.06	354	i P	Pn	02 37 30.5	0.0
PPM				eP		02 37 30.8	
PPM				i S	Sn	02 38 05.1	-1.3
PPM				i S	Sn	02 38 08.4	+2.0
PPM	Popocatepetl	3.06	354	i P	Pn	02 37 31.5	+1.0
PPM				i S	Sn	02 38 08.4	+2.0
UNM	Universidad Na	3.41	345	eP	Pn	02 37 35.3	-0.1
UNM				i S	Sn	02 38 16.2	+1.0
CMIG	Matias Romero	3.41	71	Pn	Pn	02 37 34.9	-0.5
	2.5nm,0.3s,baz=258,slow=11,SNR=40						
CMIG				Sn	Sn	02 38 16.1	+0.9
	7.4nm,0.3s,baz=263,slow=16,SNR=4.2						
CMIG				Lg		02 38 35.2	
	59nm,0.3s,baz=354,slow=12,SNR=27						
CMIG	Matias Romero	3.41	71	i P	Pn	02 37 35.4	0.0
CMIG				i S	Sn	02 38 15.6	+0.4
ZIIG	Zihuatanejo	3.45	298	i P	Pn	02 37 34.8	-1.1
ZIIG				i S	Sn	02 38 13.3	-2.9
LVIG	Laguna Verde	4.09	25	eP	Pn	02 37 46.0	+1.3
LVIG				i S	Sn	02 38 32.2	+0.4
LVIG	Laguna Verde	4.09	25	eP	Pn	02 37 46.7	+2.0
LVIG				i S	Sn	02 38 32.2	+0.4
DEIG	Demacu	4.33	350	eP	Pn	02 37 50.1	+2.1
DEIG				i S	Sn	02 38 36.0	-1.9
MOIG	Morelia	4.59	323	eP	Pn	02 37 51.3	-0.3
MOIG				i S	Sn	02 38 43.6	-0.6
MOIG	Morelia	4.59	323	eP	Pn	02 37 51.3	-0.3
MOIG				i S	Sn	02 38 45.1	+0.9
PCIG		4.86	93	eP	Pn	02 37 53.5	-1.9
PCIG				i S	Sn	02 38 51.0	-0.1
TGIG		4.99	81	eP	Pn	02 38 02.0	+4.9
TGIG				i S	Sn	02 38 58.5	+4.3
MMIG	Aquila	5.36	296	eP	Pn	02 38 02.7	+0.5
MMIG				i S	Sn	02 39 09.8	+6.6
CCIG	Comitan	5.89	87	eP	Pn	02 38 14.6	+5.1
SFJM	Santa Fe	6.36	315	i P	Pn	02 38 16.9	+1.0
SFJM				i S	Sn	02 39 27.4	-0.4
SFJM	Santa Fe	6.36	315	i P	Pn	02 38 16.9	+1.0
SFJM				i S	Sn	02 39 28.4	+0.6
TEIG	Tepich	10.38	65	Pn	Pn	02 39 10.1	-1.0
	0.9nm,0.3s,baz=50,slow=21,SNR=9.6						
TEIG				Sn	Sn	02 41 02.3	-4.4
	0.9nm,0.3s,baz=68,slow=19,SNR=3.8						
TXAR	Lajitas Array	14.16	340	Pn	Pn	02 40 11.9	+9.2
	0.1nm,0.3s,baz=164,slow=13,SNR=5.4						
WMOK	Wichita Mounta	18.65	359	eP	Pn	02 41 03.3	+3.0
	8.7nm,1.4s						
ANMO	Albuquerque	20.24	340	P	P	02 41 18.9	+1.7
	2.0nm,0.6s,baz=157,slow=11,SNR=8.4						
ANMO	Albuquerque	20.24	340	eP	P	02 41 18.2	+1.0
	8.4nm,1.3s						
WVT	Waverly	22.09	23	eP	P	02 41 38.4	+1.3
	5.8nm,0.8s,mb4.1						
SDCO	Great Sand Dun	22.57	345	eP	P	02 41 44.0	+1.7
	10nm,1.5s,mb4.0						
ISCO	Idaho Springs	24.55	346	eP	P	02 42 03.6	+2.0
	2.4nm,0.7s,mb3.8						
PDAR	Pinedale Array	28.36	342	P	P	02 42 39.6	+3.7
	0.5nm,0.9s,mb3.2,baz=163,slow=12,SNR=3.9						
NVAR	Mina Array Bea	28.45	326	P	P	02 42 39.1	+2.4
	0.4nm,0.7s,mb3.2,baz=153,slow=10,SNR=3.9						
MOOW	Moose Ponds	29.62	342	eP	P	02 42 48.9	+1.9
	17nm,2.2s,mb4.4						
YKA	Yellowknife Ar	47.84	350	P	P	02 45 19.2	0.0
	0.4nm,0.7s,mb3.5,baz=157,slow=7.0,SNR=5.7						
YKA	Yellowknife Ar	47.84	350	P	P	02 45 19.2	0.0

BJI 13 02:44:30.3, 8.10S×11860E, h11km, mB5.0, mb4.8, Ms4.4, Msz4.2
NEIC 13 02:44:31.3±2.8, 8.12S×11862E, h11km±18km, mb4.9/23, Error ellipse: s-maj=8.5km s-min=4.1km az=61.0
NEIC Felt [III] at Raba.
IDC 13 02:44:31.7±3.5, 8.10S×11846E, h11km±21km, mb4.4/12, mb1 4.5/14, mb1mx4.4/22, mbtmp4.5/14, ML4.4/2, MS3.8/5, Ms1 3.9/5, ms1mx3.5/28, Error ellipse: s-maj=24.0km s-min=10.9km az=59.0
ISCJB 13 02:44:32.1±1.1, 8.12S±004×11860E±004, h27km±8km, mb4.8/34, MS3.8/4, Error ellipse: s-maj=6.7km s-min=5.1km az=41.9
DJA 13 02:44:34, 822S×11842E, h8km, MLv4.9/11
ISC 13 02:44:33.0±1.3, 815S±003×11865E±004, h21km±9km, h30km±3.1km: pP-P, n70, σ0§97/79, mb4.8/34, MS3.8/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BMNI	Bima	0.39	173	P	Pb	02 44 41.4	+0.2
WSI	Waingapu	2.22	133	P	Pn	02 45 13.3	+4.6
KHKI	Kahang-Kahang	3.01	266	P	Pn	02 45 17.9	-1.7
KAPI	Kappang	3.31	19	Pn	Pn	02 45 22.6	-1.0
	54nm,0.3s,baz=195,slow=7.3,SNR=162						
KAPI				Sn	Sn	02 46 01.0	-1.4
	51nm,0.3s,baz=118,slow=20,SNR=5.8						
KAPI				LR	LR	02 46 56.3	
	comp=Z,2μm,20.2s,baz=198,slow=44						
IGBI	Denpasar	3.52	259	P	Pn	02 45 27.4	+0.7
IGBI				S	Sn	02 46 07.6	-0.2
NBBI	Negara	3.99	267	P	Pn	02 45 38.0	+4.9
NBBI				S	Sn	02 46 16.1	-3.2
KMMI	Kalianget	4.77	283	P	Pn	02 45 44.7	+1.0
BATI	Baumata	5.36	113	Pn	Pn	02 45 56.0	+4.1
	7.5nm,0.3s,baz=104,slow=16,SNR=4.9						
BATI				Sn	Sn	02 47 01.6	+8.6
	13nm,0.3s,baz=65,slow=19,SNR=2.1						
BATI				LR	LR	02 48 21.4	
	comp=Z,1μm,19.1s,baz=354,slow=41						
BATI	Baumata	5.36	113	P	Pn	02 45 56.9	+5.0
	88nm,0.9s,1μm0.3nm						
KDI	Kendari	5.74	44	P	Pn	02 46 04.6	+7.4
	27nm,1.1s,0.1nm						
BBKI	Banjar Baru	6.00	321	P	Pn	02 46 00.8	0.0
	164nm,1.0s,3μm1.4nm						
KRKI	Karangkates	6.13	270	P	Pn	02 46 10.7	+8.2
SJI	Sawahan	6.83	273	P	Pn	02 46 12.7	+0.6
	117nm,1.0s,2μm0.5nm						
PCI	Palu	7.30	9	P	Pn	02 46 20.6	+2.1
FITZ	Fitzroy Crossi	12.00	146	eP	Pn	02 47 22.6	-0.4
	42nm,0.8s						
FITZ				e		02 47 31.9	
FITZ				eS	Sn	02 49 34.0	-2.4
FITZ	Fitzroy Crossi	12.00	146	ePn	Pn	02 47 22.8	-0.2
	34nm,0.7s						
FITZ				eSn	Sn	02 49 35.9	-0.5
MBWA	Marble Bar	12.97	175	ePn	Pn	02 47 35.7	-0.6
	37nm,1.0s						
MBWA				eSn	Sn	02 49 53.0	-7.1
KAKA	Kakadu	14.30	110	eP	x	02 47 33.3	
	8.7nm,0.9s						
KAKA				e		02 47 36.8	
KAKA				eS	x	02 50 07.2	
WRAB	Tennant Creek	19.19	129	eP	Pn	02 48 55.4	-1.3
	15nm,0.9s						
WRAB				eSn	Sn	02 52 28.9	-2.4
WB2	Warramunga Arr	19.20	129	eP	Pn	02 48 55.7	-1.0
WB2				eS	Sn	02 52 23.8	-7.7
ASAR	Alice Springs	21.25	138	P	P	02 49 18.3	+0.2
	13nm,0.8s,mb4.3,baz=314,slow=8.7,SNR=46						
ASAR				S	S	02 53 20.2	+6.8
	2.6nm,0.7s,baz=309,slow=22,SNR=6.8						
ASAR				ScP	ScP	02 56 57.8	-1.0
	1.6nm,0.7s,baz=326,slow=2.3,SNR=8.7						
PSI	Prapat	22.48	298	P	P	02 49 30.1	-1.2
	1.9nm,0.4s,mb3.9,baz=222,slow=9.4,SNR=4.1						
KLBR	Kellerberrin	23.34	182	eP	P	02 49 39.8	-0.3
	47nm,1.1s,mb4.8						
KLBR				eS	S	02 53 52.2	+0.6
MUN	Mundaring	23.81	185	eP	Px	02 50 01.1	
MUN				eS	S	02 54 03.9	+4.6
FORT	Forrest	24.17	160	eP	P	02 49 52.5	+4.5
	16nm,0.6s,mb4.6						
FORT				eS	S	02 54 24.9	+20
FORT	Forrest	24.17	160	eP	P	02 49 48.5	+0.6
	20nm,0.6s,mb4.7						
FORT				eS	S	02 54 24.9	+20
NWAO	Narrogin (SRO)	24.69	183	P	P	02 49 52.7	0.0
	18nm,0.7s,mb4.7,baz=350,slow=7.6,SNR=11						
NWAO				LR	LR	02 59 31.1	
	comp=Z,168nm,19.4s,MS3.5,baz=199,slow=36						
NWAO	Narrogin (SRO)	24.69	183	P	P	02 49 52.7	0.0
NWAO				LR	LR	02 59 31.1	
COEN	Coen	24.74	106	eP	P	02 49 53.6	+0.2
	17nm,0.6s,mb4.7						
CTA	Charters Tower	29.23	117	eP	P	02 50 34.0	+0.3
	5.0nm,1.0s,mb4.2						
CTA	Charters Tower	29.23	117	P	P	02 50 34.5	+0.8
	4.9nm,0.9s,mb4.2,baz=287,slow=8.2,SNR=4.7						
CTA				LR	LR	03 04 29.8	
	comp=Z,281nm,18.0s,MS3.9,baz=56,slow=41						
CTAO	Charters Tower	29.23	117	eP	P	02 50 34.1	+0.4
	12nm,1.3s,mb4.5						
STKA	Stephens Creek	31.82	141	eP	P	02 50 57.1	+0.6
	7.7nm,0.6s,mb4.7						
STKA	Stephens Creek	31.82	141	P	P	02 50 57.2	+0.8
	14nm,0.7s,mb4.9,baz=315,slow=9.5,SNR=32						
CMAR	Chiang Mai Arr	32.82	324	P	P	02 51 05.3	0.0
	2.2nm,0.3s,mb4.5,baz=150,slow=7.0,SNR=11						
CMAR				LR	LR	03 05 43.8	
	comp=Z,112nm,18.6s,MS3.6,baz=270,slow=39						
ARMA	Armidale	37.97	130	eP	P	02 51 51.9	+2.3
TOO	Toolangi	38.05	144	eP	P	02 51 52.4	+2.2
CNB	Canberra Magne	39.00	138	eP	P	02 52 00.0	+1.8
CD2	Chengdu	41.38	340	P	P	02 52 18.3	+0.4
CD2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.2						
XAN	Xi'an	42.96	348	P	P	02 52 30.6	-0.1
XAN				AP	pP	02 52 39.9	+2.8
XAN				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.6						
XAN				AMB	AMB		
	comp=Z,47nm,4.2s						
ODAN	Odare	46.15	320	eP	P	02 52 56.7	+0.3
	comp=Z,32nm,0.9s,mb5.2						
LZH	Lanzhou	46.16	343	eP	P	02 52 57.5	+1.3
LZH				AP	pP	02 53 04.0	+1.3
LZH				XP	sP	02 53 09.0	+3.8
LZH				AMB	AMB		
	comp=Z,35nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,142nm,5.3s						
KSRS	Korea Array	46.19	10	P	P	02 52 57.1	+0.6
	comp=Z,8.2nm,0.9s,mb4.7,baz=193,slow=8.7,SNR=14						
TAPN	Taplejung	46.30	321	eP	P	02 52 58.2	+0.7
	comp=Z,75nm,1.3s,mb5.5						
RAMN	Ramite	46.72	319	eP	P	02 53 01.5	+0.7
	comp=Z,23nm,0.8s,mb5.2						
JIRN	Jiri	47.47	320	eP	P	02 53 07.2	+0.5
	comp=Z,36nm,0.8s,mb5.3						
GUN	Gumba	47.84	320	eP	P	02 53 09.9	+0.3
	comp=Z,35nm,0.8s,mb5.5						
PKI	Pulchoki	47.92	319	eP	P	02 53 10.0	-0.1
	comp=Z,15nm,0.6s,mb5.2						
DMN	Daman	48.14	319	eP	P	02 53 12.2	+0.3
	comp=Z,31nm,1.0s,mb5.3						
GKN	Gorkha	48.71	319	eP	P	02 53 16.0	-0.3
KOLN	Koldanda	49.24	318	eP	P	02 53 19.9	-0.4
	comp=Z,17nm,0.8s,mb5.1						
DANN	Dangsing	49.52	318	eP	P	02 53 22.1	-0.3
	comp=Z,34nm,0.6s,mb5.5						
GTA	Gaotai	50.44	341	eP	P	02 53 30.7	+1.4
GTA				AMB	AMB		
	comp=Z,12nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,35nm,3.9s						
GTA				LR	LR		
	comp=N,155nm,13.5s,MS4.2						
GTA				LR	LR		
	comp=E,108nm,15.3s,MS4.2						
GTA				LR	LR		
	comp=Z,193nm,15.6s,MS4.2						
ULN	Ulaanbaatar	56.71	351	eP	P	02 54 15.2	+0.1
	comp=Z,16nm,1.5s,mb4.8						
ULN				epP	pP	02 54 25.1	+3.4
SONM	Songino Array	56.79	350	P	P	02 54 15.7	0.0
	comp=Z,2.5nm,0.6s,mb4.4,baz=168,slow=7.7,SNR=22						
KBL	Kabul	63.25	315	eP	P	02 54 59.0	-1.3
	comp=Z,3.9nm,0.7s,mb4.7						
MK31	Makanchi Array	63.55	333	eP	P	02 55 01.9	-0.1
MKAR	Makanchi Array	63.55	333	P	P	02 55 01.7	-0.3
	comp=Z,2.1nm,0.7s,mb4.3,baz=152,slow=6.9,SNR=28						
AAK	Ala-Archa	64.59	325	eP	P	02 55 08.7	-0.2
	comp=Z,3.4nm,0.9s,mb4.4						
KURK	Kurchatov	68.09	334	eP	P	02 55 30.2	-0.9
	comp=Z,1.6nm,0.7s,mb4.2						
ZAA0	Zalesovo Array	68.13	339	eP	P	02 55 30.3	-1.0
ZALV	Zalesovo Beam	68.13	339	P	P	02 55 30.3	-1.1
	comp=Z,3.5nm,0.7s,mb4.5,baz=144,slow=5.5,SNR=14						
PETK	Petropavlovsk-	69.44	24	P	P	02 55 39.4	-0.2
	comp=Z,3.3nm,0.7s,mb4.4,baz=193,slow=5.8,SNR=4.2						
VNDA	Vanda	72.87	171	P	P	02 56 00.8	+0.7
	comp=Z,1.0nm,0.4s,mb4.1,baz=321,slow=5.9,SNR=14						
VNDA	Vanda	72.87	171	eP	P	02 56 01.0	+0.9
	comp=Z,1.7nm,0.7s,mb4.1						
BRVK	Borovoye	73.46	332	eP	P	02 56 02.7	-1.1
	comp=Z,3.0nm,1.0s,mb4.2						
SNAA	Sanae	91.72	196	eP	P	02 57 39.3	+0.6
	comp=Z,2.2nm,0.8s,mb4.5						
TORD	Torodi Ar. Bea	117.97	281	PKP	PKPdf	03 03 17.1	-2.2
	comp=Z,0.3nm,0.6s,baz=81,slow=1.5,SNR=3.5						
CPUP	Villa Florida	145.50	186	PKPbc	PKPbc	03 04 11.1	+0.5
	comp=Z,1.9nm,0.5s,baz=114,slow=1.3,SNR=11						
ATAH	Atahualpa	157.30	131	PKPab	PKPab	03 04 60.0	+0.3
	comp=Z,3.0nm,0.5s,baz=79,slow=9.9,SNR=3.7						

NEIC 13 02:44:37.7, 1607N×9824W, h21km, MD3.8(MEX), After MEX.
MEX 13 02:44:37.6±0.8, 1606N×9825W, h20km±28km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.35	19	i P	Pb	02 44 43.2	-1.9
PNIG				i S	Sb	02 44 49.5	-0.8
VHO	Vista Hermosa	1.77	55	i P	Pn	02 45 04.9	-2.2
VHO				i S	Sn	02 45 25.0	-4.0
ACX	Acapulco	1.79	297	eP	Pn	02 45 04.7	-2.7
ACX				i S	Sn	02 45 25.4	-4.2
UTMO	Huajuapan	1.81	13	eP	Pn	02 45 05.7	-2.0
UTMO				i S	Sn	02 45 26.5	-3.5
HUIG	Huatulco	2.08	98	eP	Pn	02 45 08.8	-2.5
HUIG				i S	Sn	02 45 33.7	-2.9
CAIG	El Cayaco	2.17	297	i P	Pn	02 45 10.8	-1.8
CAIG				i S	Sn	02 45 35.0	-4.0
MEIG	Mezcala	2.27	325	eP	Pn	02 45 11.0	-3.1
MEIG				i S	Sn	02 45 37.6	-3.9
PLIG	Platanillo	2.61	333	eP	Pn	02 45 16.1	-2.6
PLIG				i S	Sn	02 45 46.9	-2.9
PPM	Popocatepetl	3.01	353	i P	Pn	02 45 20.9	-3.3
PPM				i S	Sn	02 45 57.0	-2.7
CMIG	Matias Romero	3.38	72	eP	Pn	02 45 29.6	+0.3
CMIG				i S	Sn	02 46 06.8	-2.0
ZIIG	Zihuatanejo	3.44	297	eP	Pn	02 45 28.8	-1.3
ZIIG				i S	Sn	02 46 11.4	+1.0

MEX 13 02:44:44.9±0.9, 1369N×9284W, h26km±84km, MD3.9, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.33	25	i P	Pn	02 45 04.5	-3.3
THIG				i S	Sn	02 45 21.9	-2.8
PCIG		2.03	350	i P	Pn	02 45 15.6	-2.0
PCIG				i S	Sn	02 45 39.3	-2.8
CCIG	Comitan	2.66	15	i P	Pn	02 45 26.2	0.0
CCIG				i S	Sn	02 45 54.7	-3.0
SCX	San Cristobal	3.03	4	eP	Pn	02 45 31.0	-0.3
TGIG		3.08	355	i P	Pn	02 45 31.2	-0.7
TGIG				i S	Sn	02 46 04.0	-4.0

NEIC 13 02:48:49.6, 16.12N×9842W, h4km, MD3.7(MEX), After MEX.
MEX 13 02:48:51.0±0.8, 1616N×9837W, h9km±9km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	44	i P	Pg	02 48 56.6	-0.9
PNIG				i S	Sg	02 49 02.4	+0.5
PNIG	Pinotepa	0.33	44	i P	Pg	02 48 56.6	-0.9
PNIG				i S	Sg	02 49 02.8	+0.9
UTMO	Huajuapan	1.75	18	eP	Pn	02 49 18.7	-2.7
UTMO				i S	Sn	02 49 39.6	-4.3
VHO	Vista Hermosa	1.81	60	eP	Pn	02 49 19.9	-2.4
VHO				i S	Sn	02 49 42.2	-3.2
PPM	Popocatepetl	2.90	355	eP	Pn	02 49 34.7	-2.6
PPM				i S	Sn	02 50 09.1	-3.3
CMIG	Matias Romero	3.46	74	eP	Pn	02 49 42.9	-2.2
CMIG				i S	Sn	02 50 20.9	-5.3

IDC 13 02:59:36.5±0.5, 2668S×17629W, h0km, mb4.5/14, mb1 4.7/17, mb1mx4.7/18, mbtmp4.5/17, ML4.7/3, MS4.6/13, Ms1 4.6/13, ms1mx4.4/23, Error ellipse: s-maj=20.2km s-min=14.8km az=113.0
MOS 13 02:59:41.3±0.9, 2677S×17649W, h38km, mb5.1/24, Error ellipse: s-maj=14.1km s-min=10.6km az=60.9
ISCJB 13 02:59:42.6±1.9, 2691S±007×17646W±007, h50km±16km, mb4.9/55, MS4.7/16, Error ellipse: s-maj=11.3km s-min=9.8km az=170.2
GCMT 13 02:59:43.2±0.2, 2672S×17585W, h17km, MW5.3/84, Moment Tensor Solution. s68,c109; s84,c146; Duration: 1§1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$-0.78±.02; $M_{r\theta}$0.19±.05; $M_{\theta\phi}$-0.13±.01; $M_{\phi r}$0.69±.04; Best double couple: $M_0$1.03100×10^{17} NP1:ϕ_s181.00000°,δ23.00000°, λ78.00000°. NP2:ϕ_s14.00000°,δ67.00000°,λ95.00000°. Principal axes: T 0.9710, Plg68.0000°, Azm293.0000°; N 0.1200, Plg5.0000°, Azm192.0000°; P -1.0920, Plg22.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 13 02:59:43.2±1.5, 2679S×17650W, h44km±13km, mb4.9/38 Error ellipse: s-maj=10.9km s-min=7.2km az=156.0
BJI 13 02:59:43.1, 2673S×17661W, h40km, mB5.4, mb5.0, Ms5.1, Msz4.7
ISC 13 02:59:43.7±1.6, 2689S±007×17641W±006, h46km±14km, h39km±2.8km: pP-P, n154, σ1§03/118, mb4.9/55, MS4.7/16, 5C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.70	209	Pn	Pn	03 00 24.8	+0.2
	426nm,0.3s,baz=86,slow=23,SNR=6.0						
RAO				LR	LR	03 00 55.1	
	comp=Z,6μm,19.9s,baz=27,slow=27						
RAO				Sn	Sn	03 01 01.6	+5.6
	586nm,0.3s,baz=80,slow=22,SNR=7.7						
RAO	Raoul Island	2.70	209	ePn	Pn	03 00 24.6	0.0
URZ	Urewera	12.58	204	Pn	Pn	03 02 40.0	+0.1
	1.5nm,0.3s,baz=18,slow=15,SNR=3.7						
URZ				Sn	Sn	03 04 53.3	-5.2
	3.8nm,0.3s,baz=169,slow=23,SNR=9.3						
AFI	Afiamalu	13.63	19	Pn	Pn	03 02 43.5	-11
	7.2nm,0.3s,baz=300,slow=20,SNR=3.1						
AFI				Sn	Sn	03 04 55.6	-29
	0.4nm,0.3s,baz=48,slow=20,SNR=2.3						
RAR	Rarotonga	16.21	73	Pn	Pn	03 03 16.0	-12
	4.3nm,0.3s,baz=259,slow=10.0,SNR=4.7						
RAR				Sn	Sn	03 05 57.5	-30
	6.5nm,0.3s,baz=14,slow=22,SNR=6.1						
RAR				LR	LR	03 08 29.7	
	comp=Z,1μm,19.7s,baz=251,slow=33						
DZM	Mont Dzumac	16.32	283	ePn	Pn	03 03 31.8	+2.1
RPZ	Rata Peaks	19.62	208	P	Pn	03 04 08.5	-1.3
	1.2nm,0.3s,baz=335,slow=10,SNR=2.9						
PPT	Papeete	26.47	75	eLQ		03 10 17.1	
	3μm,24.2s						
PPT				eLR	LR	03 11 34.5	
	3μm,28.5s,baz=250						
PPT	Papeete	26.47	75	LR	LR	03 13 04.1	
	comp=Z,825nm,19.2s,MS4.3,baz=249,slow=31						
EIDS	Eidsvold	29.18	266	eP	P	03 05 40.5	-0.3
	81nm,2.1s,mb5.1						
CTA	Charters Tower	34.81	273	eP	P	03 06 30.7	+0.5
	2.8nm,0.3s,mb4.7						
CTA	Charters Tower	34.81	273	P	P	03 06 31.0	+0.8
	4.5nm,0.3s,mb4.8,baz=99,slow=10,SNR=11						
CTA				LR	LR	03 19 34.4	
	comp=Z,3μm,18.6s,MS5.1,baz=82,slow=34						
CTA	Charters Tower	34.81	273	eP	P	03 06 30.7	+0.5
CTA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CTAO	Charters Tower	34.81	273	eP	P	03 06 29.9	-0.3
CTAO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
CTAO	Charters Tower	34.81	273	eP	P	03 06 29.9	-0.3
	comp=Z,11nm,1.0s,mb4.8						
STKA	Stephens Creek	36.76	252	P	P	03 06 47.4	+0.6
	comp=Z,3.0nm,0.9s,mb4.1,baz=90,slow=11,SNR=4.1						
STKA				LR	LR	03 20 57.5	
	comp=Z,3μm,18.1s,MS5.1,baz=87,slow=35						
STKA	Stephens Creek	36.76	252	eP	P	03 06 46.2	-0.6
RKT	Rikitea	37.63	94	eS	S	03 12 35.3	-5.6
	comp=Z,275nm,28.5s						
RKT				eLR	LR	03 16 48.6	
	comp=Z,2μm,30.2s,baz=259						
PMG	Port Moresby	38.55	290⇑	eP	P	03 07 00.8	-1.3
PMG				pmax	pmax		
	comp=Z,17nm,1.2s						
TAOE	Nuku Hiva Isla	38.70	69	eS	S	03 12 56.5	-0.8
	comp=Z,712nm,25.3s						
TAOE				eLR	LR	03 17 12.7	
	comp=Z,4μm,28.2s,baz=245						
COEN	Coen	39.82	281	eP	P	03 07 12.7	-0.1
	comp=Z,16nm,1.1s,mb4.7						
ASAR	Alice Springs	44.81	263	P	P	03 07 51.7	-1.6
	comp=Z,4.3nm,0.8s,mb4.3,baz=104,slow=7.3,SNR=30						
WB2	Warramunga Arr	45.48	268	eP	P	03 07 56.6	-2.0
WRAB	Tennant Creek	45.48	268⇑	iP	P	03 07 57.1	-1.5
WRAB	Tennant Creek	45.48	268	eP	P	03 07 56.3	-2.3
	comp=Z,9.2nm,0.7s,mb4.7						
FORT	Forrest	48.38	252	eP	P	03 08 18.7	-2.5
	comp=Z,11nm,0.6s,mb5.1						
KAKA	Kakadu	49.83	276	eP	x	03 08 10.0	
	comp=Z,5.8nm,0.4s						
VNDA	Vanda	51.71	186	P	P	03 08 47.5	+1.8
	comp=Z,2.8nm,1.0s,mb4.1,baz=22,slow=5.5,SNR=5.6						
VNDA	Vanda	51.71	186	eP	P	03 08 47.5	+1.8
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VNDA	Vanda	51.71	186	eP	P	03 08 47.5	+1.8
	comp=Z,8.7nm,1.1s,mb4.6						
FITZ	Fitzroy Crossi	53.86	267	eP	P	03 09 01.5	-0.9
	comp=Z,10nm,0.9s,mb4.8						
NWAO	Narrogin (SRO)	57.00	247	LR	LR	03 30 59.8	
	comp=Z,357nm,18.9s,MS4.5,baz=243,slow=33						
MBWA	Marble Bar	58.08	261	eP	P	03 09 32.7	+0.1
	comp=Z,5.2nm,0.8s,mb4.6						
BATI	Baumata	58.68	274	LR	LR	03 33 50.7	
	comp=Z,996nm,20.1s,MS4.9,baz=124,slow=35						
CASY	Casey	58.88	207	eP	P	03 09 38.0	+0.5
	comp=Z,16nm,0.6s,mb5.2						
QSPA	South Pole Qui	63.21	180	P	P	03 10 08.1	+1.6
	baz=44,slow=2.6						
MAW	Mawson	76.07	200	P	P	03 11 27.7	+1.8
	comp=Z,3.9nm,0.6s,mb4.5,baz=90,slow=7.1,SNR=4.8						

MAW LR LR 03 45 20.8
comp=Z,672nm,18.2s,MS5.0,baz=118,slow=36
MJAR Matsushiro Arr 76.20 324 P **P** **03 11 25.9 -1.1**
comp=Z,7.0nm,1.1s,mb4.5,baz=163,slow=6.1,SNR=9.3
MJAR LR LR 03 39 45.0
comp=Z,188nm,19.8s,MS4.4,baz=145,slow=32
MAJO Matsushiro 76.20 324 *e*P **P** **03 11 26.4 -0.6**
MAJO pmax pmax
comp=Z,12nm,0.9s,mb4.8
MAJO Matsushiro 76.20 324 *e*P **P** **03 11 26.4 -0.6**
comp=Z,12nm,0.9s,mb4.8
MAT Matsushiro 76.20 324 P **P** **03 11 25.6 -1.4**
MAT S S 03 21 06.0 -1.8
SYO Syowa Base 80.83 192‖ *e*P **P** **03 11 50.4 -1.7**
SNAA Sanae 81.61 178 *e*P **P** **03 11 55.7 -0.5**
SNAA *e* 03 12 01.3
SNAA *e* pP 03 12 07.6 -2.2
SNAA *e* pP 03 12 13.4 +3.6
SNAA Sanae 81.61 178 *c* *i*P **P** **03 11 55.6 -0.6**
SNAA pmax pmax
comp=Z,8.0nm,1.0s
SNAA Sanae 81.61 178 *e*P **P** **03 11 55.9 -0.3**
VNA3 Neumayer Olymp 81.69 176 *e*P **P** **03 11 56.0 -0.7**
VNA3 *e* 03 12 01.0
VNA3 *e* pP 03 12 08.6 -1.7
VNA3 *e* 03 12 14.3
VNA2 Neumayer--Watz 82.15 176 *e*P **P** **03 11 59.2 +0.1**
baz=175,slow=3.5
VNA2 *e* 03 12 04.2
VNA2 *e* pP 03 12 11.2 -1.5
VNA2 *e* pP 03 12 16.4 +3.7
VNA1 Neumayer--Stat 82.37 176 *e*P **P** **03 12 00.7 +0.5**
VNA1 *e* 03 12 05.6
VNA1 *e* pP 03 12 12.4 -1.5
VNA1 *e* pP 03 12 18.5 +4.6
PET Petropavlovsk 82.49 345 *e*P **P** **03 12 02.0 +1.1**
PET *e*S S 03 22 16.0 +2.3
PET pmax pmax
comp=Z,200nm,4.3s
PET pmax pmax
comp=Z,200nm,12.2s
KSRS Korea Array 82.62 318 P **P** **03 12 02.2 +0.3**
comp=Z,3.7nm,1.0s,mb4.4,baz=132,slow=5.2,SNR=5.3
KSRS LR LR 03 47 51.4
comp=Z,246nm,18.3s,MS4.6,baz=131,slow=35
PETK Petropavlovsk- 82.79 345 P **P** **03 12 03.0 +0.6**
comp=Z,9.0nm,0.9s,mb4.8,baz=125,slow=7.4,SNR=6.7
ISA Isabella 82.83 44 *e*P **P** **03 12 03.5 +0.4**
ISA pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ISA Isabella 82.83 44 *e*P **P** **03 12 03.5 +0.5**
comp=Z,8.7nm,1.0s,mb4.7
CMB Columbia Colle 83.22 41 *e*P **P** **03 12 04.5 -0.5**
CMB *e**PP pP 03 12 15.5 -3.2
CMB pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
CMB Columbia Colle 83.22 41 *e*P **P** **03 12 04.5 -0.5**
comp=Z,8.0nm,1.1s,mb4.7
CMB *e*pP pP 03 12 15.5 -3.2
GSC Goldstone 83.64 45 *e*P **P** **03 12 06.9 -0.4**
GSC *e**PP pP 03 12 17.9 -3.0
GSC pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
GSC Goldstone 83.64 45 *e*P **P** **03 12 06.9 -0.4**
comp=Z,10nm,1.2s,mb4.8
GSC *e*pP pP 03 12 17.9 -3.1
WDC Whiskeytown Da 83.71 38 *e*P **P** **03 12 08.1 +0.6**
WDC pmax pmax
comp=Z,11nm,1.0s,mb4.9
WDC Whiskeytown Da 83.71 38 *e*P **P** **03 12 08.1 +0.6**
comp=Z,11nm,1.0s,mb4.9
PLCA Paso Flores 83.86 133 P **P** **03 12 08.7 +0.2**
comp=Z,4.8nm,1.0s,mb4.6,baz=223,slow=7.6,SNR=6.2
PLCA LR LR 03 44 26.7
comp=Z,321nm,19.2s,MS4.7,baz=238,slow=32
PLCA Paso Flores 83.86 133 *e*P **P** **03 12 09.1 +0.6**
PLCA pmax pmax
comp=Z,44nm,2.0s
PLCA Paso Flores 83.86 133 *e*P **P** **03 12 09.1 +0.6**
comp=Z,44nm,2.0s,mb5.2
WAKR Walker 84.09 41 *e*P **P** **03 12 09.2 -0.3**
YBH Yreka Blue Hor 84.41 37 P **P** **03 12 10.3 -0.7**
comp=Z,5.4nm,0.9s,mb4.7,baz=179,slow=9.3,SNR=5.7
YBH Yreka Blue Hor 84.41 37 *e*P **P** **03 12 11.9 +0.9**
YBH *e**PP pP 03 12 22.0 -2.7
YBH pmax pmax
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 84.41 37 *e*P **P** **03 12 11.8 +0.8**
comp=Z,11nm,1.1s,mb4.9
YBH *e*pP pP 03 12 22.0 -2.7
LDFC Landfair 84.59 46 *e*P **P** **03 12 12.5 +0.4**
NVAR Mina Array Bea 84.72 42 P **P** **03 12 10.5 -2.2**
comp=Z,2.3nm,0.9s,mb4.3,baz=218,slow=8.4,SNR=14
TPNV Topopah Spring 85.03 44 *e*P **P** **03 12 13.6 -0.7**
TPNV pmax pmax
comp=Z,11nm,1.2s,mb4.9
TPNV Topopah Spring 85.03 44 *e*P **P** **03 12 13.6 -0.7**
comp=Z,11nm,1.2s,mb4.9
NJ2 Nanjing 85.06 310 *e*P **P** **03 12 15.8 +1.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.1
TPH Tonopah 85.14 43 *e*P **P** **03 12 15.6 +0.8**
TPH pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
TPH Tonopah 85.14 43 *e*P **P** **03 12 15.6 +0.8**
comp=Z,10nm,1.1s,mb4.9
SHPR Sheep Range 85.44 45 *e*P **P** **03 12 16.8 +0.5**
TUC Tucson 85.83 51 *e*P **P** **03 12 18.3 -0.1**
TUC pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
TUC Tucson 85.83 51 *e*P **P** **03 12 18.3 -0.1**
comp=Z,9.0nm,1.2s,mb4.9
MOD Modoc 85.85 38 *e*P **P** **03 12 17.7 -0.5**
comp=Z,7.8nm,1.0s,mb4.9
WVOR Wild Horse Val 87.13 39 *e*P **P** **03 12 24.5 0.0**
WVOR pmax pmax
comp=Z,68nm,2.5s,mb5.4
WVOR Wild Horse Val 87.13 39 *e*P **P** **03 12 24.4 0.0**
comp=Z,68nm,2.5s,mb5.4
WHN Wuhan 87.38 306 P **P** **03 12 26.5 +0.5**
ELK Elko 88.01 42 *e*P **P** **03 12 29.0 +0.2**
ELK pmax pmax
comp=Z,3.0nm,1.0s
ELK Elko 88.01 42 *e*P **P** **03 12 29.0 +0.2**
comp=Z,2.5nm,1.0s,mb4.4
CN2 Changchun 88.22 322 *e*P **P** **03 12 32.8 +3.1**
KLR Kul'dur 88.74 329 *e*P **P** **03 12 33.4 +1.4**
HAWA Hanford 89.25 35 *e*P **P** **03 12 35.5 +1.0**
comp=Z,52nm,2.3s,mb5.5
JCW Jim Creek 89.27 33 *e*P **P** **03 12 34.2 -0.3**
TXAR Lajitas Array 89.31 57 P **P** **03 12 34.5 -0.6**
comp=Z,2.2nm,1.0s,mb4.4,baz=212,slow=4.4,SNR=8.3
TXAR LR LR 03 44 43.4
comp=Z,206nm,19.5s,MS4.6,baz=0.0,slow=30
BMO Blue Mountains 89.43 38 *e*P **P** **03 12 35.8 +0.5**
BMO pmax pmax
comp=Z,48nm,2.5s,mb5.4
BMO Blue Mountains 89.43 38 *e*P **P** **03 12 35.8 +0.4**
comp=Z,48nm,2.5s,mb5.4
ETW Entiat 89.66 34 *e*P **P** **03 12 37.3 +1.0**
SRU San Rafael 89.93 45 *e*P **P** **03 12 38.2 +0.4**
SRU pmax pmax
comp=Z,32nm,2.4s,mb5.2
SRU San Rafael 89.93 45 *e*P **P** **03 12 38.2 +0.4**
comp=Z,32nm,2.4s,mb5.2
HLID Hailey 90.24 40 *e*P **P** **03 12 40.3 +1.1**
comp=Z,57nm,2.8s,mb5.4
ANMO Albuquerque 90.29 51 *e*P **P** **03 12 39.1 -0.5**
ANMO pmax pmax
comp=Z,34nm,2.3s
ANMO Albuquerque 90.29 51 *e*P **P** **03 12 39.1 -0.6**
comp=Z,34nm,2.3s,mb5.3
GYA Guiyang 91.04 299 *e*P **P** **03 12 43.2 -0.1**
GYA AP pP 03 12 55.8 -1.3
GYA XP sP 03 13 01.4 -0.9
GYA PP PP 03 16 22.8 +2.2
GYA SKS 03 23 10.8
GYA S S 03 23 36.5 -1.2
GYA SS SS 03 29 43.3 +0.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,120nm,6.6s
GYA LR LR
comp=N,460nm,19.8s,MS5.1
GYA LR LR
comp=E,480nm,20.4s,MS5.1
GYA LR LR
comp=Z,470nm,18.6s,MS5.0
BJI Beijing 91.43 315 P **P** **03 12 46.5 +1.7**
BJI S S 03 23 42.8 +2.2
BJI AMB AMB
comp=Z,11nm,1.0s,mb5.1
BJI AMB AMB
comp=Z,98nm,3.9s
BJI LR LR
comp=N,229nm,22.3s
BJI LR LR
comp=E,197nm,14.8s
BJI LR LR
comp=Z,127nm,23.9s,MS4.3
NEW Newport 91.72 35 *e*P **P** **03 12 45.3 -0.6**
NEW pmax pmax
comp=Z,2.0nm,0.9s
NEW Newport 91.72 35 *e*P **P** **03 12 45.3 -0.6**
comp=Z,2.4nm,0.9s,mb4.5
REDW Red Top Meadow 92.20 42 *e*P **P** **03 12 49.1 +0.9**
comp=Z,11nm,1.3s,mb5.0
REDW *e*pP pP 03 13 05.6 +3.6
SMCO Snowmass 92.25 47 *e*P **P** **03 12 44.1 -4.5**
comp=Z,5.3nm,1.1s,mb4.8
IMW Indian Meadow 92.46 41 *e*P **P** **03 12 50.4 +1.0**
comp=Z,78nm,2.9s,mb5.5
MOOW Moose Ponds 92.48 41 *e*P **P** **03 12 49.5 0.0**
comp=Z,6.1nm,1.6s,mb4.7
LOHW Long Hollow 92.49 42 *e*P **P** **03 12 47.5 -2.0**
comp=Z,6.1nm,1.5s,mb4.7
BW06 Boulder Array 92.63 43 *e*P **P** **03 12 50.0 -0.3**
comp=Z,3.2nm,1.1s,mb4.7
PDAR Pinedale Array 92.63 43 P **P** **03 12 49.3 -0.9**
comp=Z,2.0nm,1.1s,mb4.5,baz=180,slow=1.5,SNR=6.7
PDAR LR LR 03 49 09.1
comp=Z,205nm,18.7s,MS4.6,baz=255,slow=32
MCK McKinley 92.89 12 *e*P **P** **03 12 49.9 -1.0**
MCK pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
MCK McKinley 92.89 12 *e*P **P** **03 12 49.9 -1.1**
comp=Z,4.7nm,0.9s,mb4.9
SEY Seymchan 92.90 346⇑ *i*P **P** **03 12 51.0 0.0**
BOZ Bozeman (W) 93.08 39 *e*P **P** **03 12 51.7 -0.6**
BOZ pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
BOZ Bozeman (W) 93.08 39 *e*P **P** **03 12 51.7 -0.5**
comp=Z,5.4nm,1.1s,mb4.9
XAN Xi'an 93.13 307 P **P** **03 12 54.3 +1.5**
XAN AP pP 03 13 03.9 -2.7
XAN PP PP 03 16 37.8 +0.9
XAN S S 03 23 59.3 +3.3
XAN SS SS 03 30 16.3 +3.8
XAN AMB AMB
comp=Z,3.0nm,0.7s,mb4.8
XAN LR LR
comp=N,21nm,27.2s,MS4.4
XAN LR LR
comp=E,160nm,23.2s,MS4.4
XAN LR LR
comp=Z,385nm,22.2s,MS4.8
KMI Kunming 93.51 296 P **P** **03 12 56.4 +1.6**
KMI AMB AMB
comp=Z,16nm,0.9s,mb5.5
CMAR Chiang Mai Arr 93.58 289 P **P** **03 12 54.9 -0.4**
comp=Z,1.7nm,0.4s,mb4.9,baz=142,slow=4.6,SNR=9.7
CHTO Chiang Mai 93.74 289 *e*P **P** **03 12 57.1 +1.1**
COLA College 94.12 12 *e*P **P** **03 12 55.1 -1.5**
CDU Chengdu 95.42 302 P **P** **03 13 04.7 +1.3**
CD2 AP pP 03 13 15.3 -1.9
CD2 XP sP 03 13 19.2 -3.1
CD2 PP PP 03 16 57.8 +3.0
CD2 SKS 03 23 34.8
CD2 XS sS 03 24 33.0 -6.5
CD2 SS SS 03 30 46.8 +1.5
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,110nm,4.3s
CD2 LR LR
comp=N,220nm,13.1s
CD2 LR LR
comp=Z,270nm,20.2s
BILL Bilibino 95.52 354 *e*P **P** **03 13 01.8 -1.1**
BILL pmax pmax
comp=Z,15nm,2.5s,mb5.0
RSSD Black Hills 96.74 44 *e*P **P** **03 13 08.0 -1.1**
RSSD pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
RSSD Black Hills 96.74 44 *e*P **P** **03 13 08.0 -1.1**
comp=Z,5.3nm,1.0s,mb4.9
LZH Lanzhou 97.76 306 *e*P **P** **03 13 14.6 +0.7**
LZH AP pP 03 13 24.5 -3.2
LZH XP sP 03 13 29.0 -3.8
LZH PP PP 03 17 16.3 +3.5
LZH AMB AMB
comp=Z,21nm,1.6s,mb5.4
LZH AMB AMB
comp=Z,88nm,4.0s
LZH LR LR
comp=E,310nm,17.5s
LZH LR LR
comp=Z,393nm,18.7s,MS4.9
ULN Ulaanbaatar 101.10 318⇑ *i*P Pdif 03 13 27.0 -1.7
WMQ Urumqi 112.13 309 *e*PKP PKiKP 03 18 14.3 +0.4
WMQ LR LR
comp=N,105nm,20.0s,MS4.5
WMQ LR LR
comp=E,59nm,20.0s,MS4.5
WMQ LR LR
comp=Z,100nm,25.0s,MS4.3
ZALV Zalesovo Beam 116.32 319 PKP PKPdf 03 18 20.1 -1.4
comp=Z,0.7nm,0.7s,baz=152,slow=4.4,SNR=3.7
KURK Kurchatov 119.60 315‖ *i*PKIKP PKPdf 03 18 26.5 -1.5
TKM2 Tokmak 2 120.52 306 *e*PKIKP PKPdf 03 18 29.2 -0.8
EKS2 Erkin-Say 121.80 305 *e*PKPdf PKPdf 03 18 33.2 +0.7
KBL Kabul 124.07 295 *e*PKIKP PKPdf 03 18 38.2 +1.1
BRVK Borovoye 124.89 317 *e*PKIKP PKPdf 03 18 37.3 -0.8
ARCES ARCESS Array B 135.44 349 PKP PKPdf 03 18 56.2 -1.4
comp=Z,3.8nm,0.8s,baz=358,slow=7.3,SNR=3.9
OBN Obninsk 143.00 329 *i* PKIKP PKPdf 03 19 13.4 +1.6
OBN pmax pmax
comp=Z,10.0nm,1.2s
KIV Kislovodsk 144.26 309 *i* PKIKP PKPdf 03 19 15.1 +0.7
KIV *e* 03 26 18.4
KIV *e*SS SS 03 41 10.4 -2.0
KIV pmax pmax
comp=Z,7.0nm,1.0s
HAKT HAKKARI 144.67 298 *i* P PKPdf 03 19 20.4 +5.0
ARTV Artvin 145.47 304 *i* P PKPdf 03 19 17.1 +0.5
NB2 NORSAR Subarra1 145.47 353 PKP PKPdf 03 19 14.3 -1.6
comp=Z,17nm,1.0s,baz=11,slow=3.5
NOA NORSAR Array B 145.47 353 PKPbc PKPbc 03 19 14.4 -1.6
comp=Z,10nm,0.9s,baz=9.9,slow=2.4,SNR=17
DAGI Agillar 145.50 304 *i* P PKPdf 03 19 17.6 +1.0
DBOC Borcka 145.63 305 *i* P PKPdf 03 19 17.2 +0.4
DDEM Demirkent 145.66 304 *i* P PKPdf 03 19 18.1 +1.2
NAO01 NORSAR Array S 145.69 354 *e*PKPbc PKPbc 03 19 16.1 -0.6
KOPT Kop Dagi 146.78 303 *i* P PKPbc 03 19 22.4 +0.5
KEMA Kemaliye 148.45 302 *i* P PKPbc 03 19 26.0 +0.8
AKASG Malin Array Be 149.23 327 PKPbc PKPbc 03 19 25.2 -1.6
comp=Z,2.0nm,0.7s,baz=39,slow=3.6,SNR=11
GZT Gaziantep 149.54 299 *i* P PKPbc 03 19 29.2 +1.2
ANDN Andirin 150.45 299 *i* P PKPbc 03 19 31.1 +0.9
BR131 Keskin Array S 151.95 305 *e*PKPbc PKPbc 03 19 33.2 -0.5
BRTR Keskin Array B 151.95 305 PKPbc PKPbc 03 19 31.8 -1.9
comp=Z,2.0nm,0.9s,baz=90,slow=2.4,SNR=9.6
BRTR PKPab PKPab 03 19 44.2 +1.1
comp=Z,3.3nm,0.8s,baz=107,slow=2.9,SNR=9.7
OJC Ojcow 153.60 336 *e*PKP PKPdf 03 19 30.7 +1.5
CLL Collm 154.59 346 *e*PKPbc PKPbc 03 19 39.0 0.0
CLL *e*PKPab PKPab 03 19 53.0 -0.7
CLL Collm 154.59 346 *e*PKP PKPdf 03 19 34.0 +3.5
BRG Berggiesshubel 154.78 344 *e*PKP PKPdf 03 19 29.8 -1.0
comp=Z,8.3nm,1.4s
KHC Kasperske Hory 156.48 343 *e*PKPab PKPab 03 20 00.0 -1.9
TOA0 Torodi Ar. Sit 166.21 172 *e*PKPab PKPab 03 20 44.9 -0.3
TORD Torodi Ar. Bea 166.21 172 PKP PKPdf 03 19 43.6 -0.8
comp=Z,1.1nm,0.9s,baz=292,slow=0.8,SNR=5.0
TORD PKPab PKPab 03 20 44.8 -0.4
comp=Z,3.7nm,0.8s,baz=189,slow=3.9,SNR=11

NEIC ***13*** *03:18:41.7, 3666N×2558E, h31km, MD3.2(ATH), After ATH.*
CSEM ***13*** *03:18:41.8±0.1, 3666N×2562E, h12km, MD3.2, Error ellipse: s-maj=3.2km s-min=1.9km az=106.0*
ATH ***13*** *03:18:41.7, 3666N×2558E, h31km±1km, MD3.2/5*
ISCJB ***13*** *03:18:42.5±0.7, 3665N±003×2565E±007, h18km±9km, Error ellipse: s-maj=9.6km s-min=4.1km az=8.0*
THE ***13*** *03:18:42.6, 3665N×2567E, h8km±1km, Error ellipse: s-maj=2.3km s-min=0.5km az=278.0*

ISC 13 03:18:42.6±0.7, 3664N±003×2569E±008, h14km±6km, n19, σ0s49/31, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THR1	**Thera Island**	**0.33**	**214**	P			**Pg**	**03 18 49.2**	**-0.1**
THR1				S			**Sg**	**03 18 54.0**	**+0.2**
THR3	**Thira Island,**	**0.33**	**225**	P			**Pg**	**03 18 49.4**	**+0.1**
THR3				S			**Sg**	**03 18 53.8**	**0.0**
THR5	**Thira Island,**	**0.35**	**231**	P			**Pg**	**03 18 49.5**	**-0.2**
THR5				S			**Sg**	**03 18 55.1**	**+0.5**
APE	**Apeiranthos**	**0.45**	**344**	P			**Pg**	**03 18 50.5**	**-0.9**
APE				S			**Sg**	**03 18 57.3**	**-0.1**
APE	**Apeiranthos**	**0.45**	**344**	⇑*i*PB			**Pg**	**03 18 51.1**	**-0.3**
APE				*e*SB			**Sg**	**03 18 58.0**	**+0.6**
APE	**Apeiranthos**	**0.45**	**344**	⇑*i*Pb			**Pg**	**03 18 51.1**	**-0.3**
APE				*e*Sb			**Sg**	**03 18 58.0**	**+0.6**
NPS	**Neapolis**	**1.38**	**183**	*e*PN			**Pn**	**03 19 06.9**	**-0.4**
NPS				*e*SN			**Sn**	**03 19 24.7**	**-0.6**
NPS	**Neapolis**	**1.38**	**183**	*e*Pn			**Pn**	**03 19 07.1**	**-0.2**
NPS				*e*Sn			**Sn**	**03 19 24.7**	**-0.6**
SMG	**Samos**	**1.41**	**40**	*e*PN			**Pn**	**03 19 08.1**	**+0.4**
SMG				*e*SN			**Sn**	**03 19 26.8**	**+0.8**
BDRM	**Kayabasi**	**1.47**	**73**	*i* P			**Pn**	**03 19 09.3**	**+0.7**
LAST	**Lasithi**	**1.49**	**187**	P			**Pn**	**03 19 08.0**	**-0.8**
LAST				S			**Sn**	**03 19 28.6**	**+0.6**
ZKR	**Zakros**	**1.58**	**164**	P			**Pn**	**03 19 10.4**	**+0.3**
ZKR				S			**Sn**	**03 19 30.9**	**+0.5**
KARP	**Karpathos**	**1.62**	**132**	*e*PB			**Pb**	**03 19 11.1**	**-1.1**
CHOS	**Chios island**	**1.77**	**9**	P			**Pn**	**03 19 12.3**	**-0.4**
CHOS				S			**Sn**	**03 19 34.8**	**-0.1**
URLA	**Izmir**	**1.86**	**23**	*i* P			**Pn**	**03 19 19.2**	**+5.2**
BLCB	**Balcova**	**2.05**	**31**	P			**Pn**	**03 19 16.6**	**+0.1**
DID	**Didima**	**2.14**	**295**	P			**Pn**	**03 19 17.7**	**-0.1**
PRK	**Paraskevi**	**2.64**	**10**	P			**Pn**	**03 19 24.3**	**-0.4**
PRK	**Paraskevi**	**2.64**	**10**	*e*PN			**Pn**	**03 19 24.2**	**-0.5**

BEO ***13*** *03:23:34.3±0.8, 44.10N×2329E, ML2.5/7*
SKO ***13*** *03:23:39.7, 4378N×2371E, h0km*

CSEM 13 03:23:32.2±0.1, 4407N×2337E, h2km, ML2.5, 5C-1D, Error ellipse: s-maj=2.8km s-min=2.3km az=156.0, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DJES	**Djerdap**	**0.86**	**315**	*e*Pg			Pg	03 23 48.1	-0.5
DJES				*e*Sg			Sg	03 23 59.5	-0.2
BOLS	**Boljevac**	**1.05**	**258**	*e*Pg			Pg	03 23 51.9	-0.4
BOLS				*e*Sg			Sg	03 24 06.9	+1.0
GZR	**Gura Zlata**	**1.39**	**343**	⇑*i*P			Pn	03 23 57.5	-1.1
GZR				S			Sg	03 24 15.4	-1.6
ZIMR		**1.50**	**105**	S			Sb	03 24 21.0	+0.8
ZIMR		**1.50**	**105**	⇓*i*P			Pn	03 24 00.2	+0.1
SVIS	**Svilajnac**	**1.56**	**278**	*e*Pg			Pg	03 24 00.4	-1.8
SVIS				*e*Sg			Sg	03 24 21.4	-1.0
BARS	**Barje**	**1.69**	**223**	*e*Pn			Pn	03 24 04.5	+1.9
BARS				*e*Sg			Sg	03 24 26.4	+0.1
VOIR		**1.82**	**40**	⇑*i*P			Pn	03 24 06.3	+1.8
VOIR				S			Sn	03 24 29.5	+1.4
DEV	**Deva**	**1.85**	**350**	S			Sn	03 24 28.2	-0.6
GRUS	**Gruza**	**1.93**	**266**	*e*Pn			Pn	03 24 07.7	+1.8
GRUS				*e*Sg			Sg	03 24 33.5	-0.5
BZS	**Buzias**	**1.99**	**322**	*e*Pn			Pn	03 24 08.6	+1.7
BZS				*e*Sg			Sg	03 24 34.1	-2.1
BZS	**Buzias**	**1.99**	**322**	⇑*i*P			Pn	03 24 08.9	+2.0
BZS				S			Sn	03 24 33.8	+1.5
STIP	**Stip**	**2.52**	**201**	*e*Pn			Pn	03 24 18.8	+4.6
STIP				*e*Sn			Sn	03 24 49.6	+4.1
STIP	**Stip**	**2.52**	**201**	*e*Pn			Pn	03 24 18.9	+4.7
STIP				*e*Sn			Sn	03 24 49.7	+4.2
DRGR		**2.77**	**351**	⇑*i*P			Pn	03 24 22.7	+5.2
DRGR				S			Sn	03 24 57.7	+6.2
VAY	**Valandovo**	**2.81**	**192**	*e*Pn			Pn	03 24 23.0	+5.0
VAY				*e*Sn			Sn	03 24 55.5	+3.4
PLOR	**Plostina**	**2.93**	**51**	S			Sn	03 24 57.5	+1.9
VRI	**Vrincioaia**	**2.99**	**52**	S			Sn	03 24 58.4	+1.5
BURAR	**Bucovina Array**	**3.78**	**19**	⇑*i*P			Pn	03 24 32.5	+1.1

NEIC ***13*** *03:25:34.3, 1651N×10058W, h10km, MD4.0(MEX), After MEX.*

MEX 13 03:25:34.5±0.5, 1651N×10059W, h13km±11km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.62**	**30**	*i* P			Pg	03 25 44.9	-1.7
CAIG				*i* S			Sg	03 25 53.0	-1.8
ACX	**Acapulco**	**0.74**	**61**	*i* P			Pg	03 25 46.8	-2.1
ACX				*i* S			Sg	03 25 56.5	-2.1
ZIIG	**Zihuatanejo**	**1.37**	**323**	*e*P			Pn	03 25 56.3	-3.1
ZIIG				*i* S			Sn	03 26 12.6	-4.9
MEIG	**Mezcala**	**1.69**	**33**	*i* P			Pn	03 26 01.0	-2.7
MEIG				*i* S			Sn	03 26 21.8	-3.5
PLIG	**Platanillo**	**2.14**	**29**	*e*P			Pn	03 26 06.2	-3.9
PLIG				*i* S			Sn	03 26 31.9	-4.6
PNIG	**Pinotepa**	**2.37**	**92**	*e*P			Pn	03 26 09.0	-4.1
PNIG				*i* S			Sn	03 26 38.6	-3.5
UTMO	**Huajuapan**	**2.97**	**63**	*e*P			Pn	03 26 18.4	-3.0
UTMO				*i* S			Sn	03 26 53.6	-3.4
PPM	**Popocatepetl**	**3.16**	**36**	*e*P			Pn	03 26 22.1	-1.9
PPM				*i* S			Sn	03 26 57.8	-3.8
PPM	**Popocatepetl**	**3.16**	**36**	*e*P			Pn	03 26 22.6	-1.4
PPM				*i* S			Sn	03 27 01.3	-0.3
PBVM	**Pinon**	**3.25**	**26**	*e*P			Pn	03 26 21.9	-3.4
PBVM				*i* S			Sn	03 26 59.5	-4.4
VHO	**Vista Hermosa**	**3.74**	**81**	*e*P			Pn	03 26 29.6	-2.4
VHO				*i* S			Sn	03 27 12.2	-3.8
EZ5V		**4.11**	**316**	*e*P			Pn	03 26 36.3	-0.8
EZ5V				*i* S			Sn	03 27 26.7	+1.6
R15V		**4.17**	**310**	*e*P			Pn	03 26 40.0	+2.0
R15V				*i* S			Sn	03 27 24.4	-2.2
HUIG	**Huatulco**	**4.37**	**99**	*e*P			Pn	03 26 37.6	-3.1
HUIG				*i* S			Sn	03 27 27.7	-3.8

ISCJB ***13*** *04:02:47.9±0.9, 5360N±004×16081E±009, h28km±7km, Error ellipse: s-maj=10.0km s-min=3.7km az=32.1*
KRSC ***13*** *04:02:48.7±0.6, 5362N×16072E, h27km±17km, ML3.9*

ISC 13 04:02:48.2±1.0, 5359N±004×16079E±009, h23km±7km, n22, σ0s82/38, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.68**	**223**	*i* P			**Pb**	**04 03 01.7**	**+0.4**
SPN				*i* S			**Sb**	**04 03 10.6**	**+0.4**
KII	**Karymskiy**	**0.91**	**300**	*e*P			**Pb**	**04 03 04.6**	**-0.8**
KII				*i* S			**Sb**	**04 03 16.5**	**-0.6**
NLC	**Nalytchevo**	**0.96**	**245**	*e*P			**Pn**	**04 03 05.5**	**-0.8**
NLC				*i* S			**Sb**	**04 03 17.4**	**-1.1**
MKZ	**Mys Kozlova**	**1.11**	**29**	*i* P			**Pn**	**04 03 07.0**	**-1.4**
MKZ				*i* S			**Sn**	**04 03 20.9**	**-2.1**
AVH	**Avacha**	**1.27**	**256**	*i* P			**Pn**	**04 03 10.5**	**0.0**
AVH				*i* S			**Sn**	**04 03 27.0**	**+0.2**
PET	**Petropavlovsk**	**1.40**	**247**	*i* P			**Pn**	**04 03 12.2**	**-0.1**
PET				*i* S			**Sn**	**04 03 29.4**	**-0.7**
GNL	**Ganaly**	**1.70**	**275**	*i* P			**Pn**	**04 03 16.6**	**+0.2**
TUMR	**Tumrok**	**1.74**	**348**	*e*P			**Pn**	**04 03 17.0**	**+0.1**
TUMR				*i* S			**Sn**	**04 03 38.1**	**-0.3**
RUS	**Russkaya**	**1.80**	**231**	*i* P			**Pn**	**04 03 17.3**	**-0.5**
RUS				*i* S			**Sn**	**04 03 37.8**	**-2.0**
GRL	**Gorelyy**	**1.94**	**239**	*e*P			**Pn**	**04 03 21.0**	**+1.3**
GRL				*i* S			**Sn**	**04 03 44.4**	**+1.0**
KMNR	**Kamenistaya**	**2.19**	**352**	*i* P			**Pn**	**04 03 24.3**	**+1.1**
KMNR				*i* S			**Sn**	**04 03 49.9**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.36**	**359**	*e*P			**Pn**	**04 03 25.8**	**+0.4**
BZGR				*i* S			**Sn**	**04 03 53.1**	**-0.5**
KIRR	**Kirishev**	**2.38**	**354**	P			**Pn**	**04 03 26.3**	**+0.5**
KIRR				*i* S			**Sn**	**04 03 54.3**	**+0.1**
KPT	**Kopyto**	**2.41**	**352**	*e*P			**Pn**	**04 03 26.4**	**+0.3**
ZLN	**Zelenaya**	**2.43**	**0**	*e*P			**Pn**	**04 03 27.5**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZLN				*i* S	**Sn**	**04 03 56.3**	**+0.8**
KOZ	**Kozyrevsk**	**2.53**	**348**	P	**Pn**	**04 03 28.0**	**+0.2**
KRSR	**Krestovskiy**	**2.64**	**357**	*e*P	**Pn**	**04 03 30.0**	**+0.7**
KRSR				*i* S	**Sn**	**04 04 00.9**	**+0.4**
KLY	**Klyuchi**	**2.73**	**358**	P	**Pn**	**04 03 31.4**	**+0.8**
KLY				*i* S	**Sn**	**04 04 02.6**	**-0.2**
MIPR	**Malaya Ipel'ka**	**2.77**	**243**	*e*P	**Pn**	**04 03 32.6**	**+1.4**
SRDR	**Sredinnyy**	**2.80**	**348**	*e*P	**Pn**	**04 03 31.4**	**-0.2**
KBTR	**Krutoberegovo**	**2.87**	**23**	*e*P	**Pn**	**04 03 32.8**	**+0.3**
KBTR				*i* S	**Sn**	**04 04 04.7**	**-1.6**
SRKR	**Sorokina**	**3.08**	**4**	*e*P	**Pn**	**04 03 35.5**	**+0.2**

*IDC **13** 04:15:55.2±0.9, 3.83S×101.23E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.1/22, mbtmp4.2/11, ML3.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.8/28, Error ellipse: s-maj=37.9km s-min=15.2km az=57.0*
*NEIC **13** 04:15:58.2±4.4, 3.91S×101.28E, h20^{km}±30^{km}, mb4.6/12, Error ellipse: s-maj=23.9km s-min=6.1km az=49.0*
*ISCJB **13** 04:16:01.8±1.7, 3.8S±0.1×101.4E±0.1, h63^{km}±13^{km}, mb4.5/19, Error ellipse: s-maj=24.9km s-min=6.3km az=44.3*
*DJA **13** 04:16:02, 3.72S×101.39E, h20^{km}, MLv4.8/6*
ISC 13 04:16:02.9±1.7**, 3.8S**±0.1×**101.4E**±0.1**, h54**^{km}±13^{km}**, n41, σ0^{s}75**/39**, mb4.5**/19**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.20**	**82**	P	**Pn**	**04 16 22.2**	**-1.3**
KSI				S	**Sn**	**04 16 39.5**	**+0.7**
KRJI	**Kerinci**	**1.72**	**2**	P	**Pn**	**04 16 30.2**	**-0.4**
KRJI				S	**Sn**	**04 16 50.4**	**-1.1**
PDSI	**Padang**	**3.04**	**342**	P	**Pn**	**04 16 48.6**	**0.0**
PDSI				S	**Sn**	**04 17 23.9**	**0.0**
PPI	**Padang Panjang**	**3.49**	**343**	P	**Pn**	**04 16 53.8**	**-1.0**
RGRI	**Rengat**	**3.58**	**15**	P	**Pn**	**04 16 57.9**	**+1.9**
KLI	**Kotabumi**	**3.60**	**107**	P	Px	04 17 10.3	
PPBI	**Pangkal Pinang**	**5.01**	**71**	P	**Pn**	**04 17 16.8**	**+1.2**
PSI	**Prapat**	**7.03**	**339**	Pn	**Pn**	**04 17 36.9**	**-6.4**
	0.3nm,0.3s,baz=300,slow=12,SNR=2.5						
PSI				LR	LR	04 20 49.7	
	comp=Z,191nm,20.1s,baz=57,slow=43						
PSI	**Prapat**	**7.03**	**339**	Pn	**Pn**	**04 17 36.9**	**-6.4**
PSI				LR	LR	04 20 49.6	
KAPI	**Kappang**	**18.33**	**94**	P	**Pn**	**04 20 13.6**	**+0.1**
	0.3nm,0.3s,baz=267,slow=8.8,SNR=7.0						
CMAR	**Chiang Mai Arr**	**22.27**	**354**	P	**P**	**04 20 54.7**	**-0.9**
	2.2nm,0.4s,mb4.0,baz=184,slow=8.4,SNR=5.9						
FITZ	**Fitzroy Crossi**	**27.64**	**123**	*e*P	**P**	**04 21 45.4**	**-0.4**
	6.2nm,0.9s,mb4.2						
TAPN	**Taplejung**	**33.69**	**338**	*e*P	**P**	**04 22 39.8**	**+0.8**
	8.0nm,0.7s,mb4.8						
RAMN	**Ramite**	**33.77**	**336**	*e*P	**P**	**04 22 40.2**	**+0.5**
	3.2nm,0.4s,mb4.6						
JIRN	**Jiri**	**34.57**	**336**	*e*P	**P**	**04 22 47.5**	**+0.9**
	10nm,0.5s,mb5.0						
GUN	**Gumba**	**34.92**	**336**	*e*P	**P**	**04 22 50.2**	**+0.6**
	15nm,0.5s,mb5.2						
DMN	**Daman**	**34.98**	**334**	*e*P	**P**	**04 22 51.1**	**+1.0**
KKN	**Kakani**	**35.06**	**335**	*e*P	**P**	**04 22 51.1**	**+0.3**
KOLN	**Koldanda**	**35.79**	**332**	*e*P	**P**	**04 22 57.7**	**+0.6**
	21nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**35.88**	**119**	*e*P	**P**	**04 22 57.5**	**-0.5**
	3.0nm,0.8s,mb4.3						
WB2	**Warramunga Arr**	**35.89**	**119**	*e*P	**P**	**04 22 57.3**	**-0.8**
DANN	**Dangsing**	**36.22**	**333**	*e*P	**P**	**04 23 01.1**	**+0.4**
	18nm,0.5s,mb5.3						
ASAR	**Alice Springs**	**37.06**	**125**	P	**P**	**04 23 08.4**	**+0.4**
	2.2nm,0.7s,mb4.1,baz=303,slow=8.1,SNR=27						
ASAR				S	**S**	**04 28 49.3**	**-1.0**
	0.4nm,0.8s,baz=284,slow=15,SNR=5.3						
CTA	**Charters Tower**	**46.57**	**114**	P	**P**	**04 24 25.9**	**+0.1**
	1.1nm,0.3s,mb4.2,baz=298,slow=13,SNR=3.4						
STKA	**Stephens Creek**	**46.90**	**131**	P	**P**	**04 24 28.1**	**0.0**
	2.8nm,0.9s,mb4.2,baz=301,slow=11,SNR=5.8						
SONM	**Songino Array**	**51.63**	**4**	P	**P**	**04 25 04.1**	**+0.2**
	1.8nm,0.6s,mb4.2,baz=188,slow=8.8,SNR=15						
TKM2	**Tokmak 2**	**52.05**	**336**	*e*P	**P**	**04 25 07.5**	**+0.3**
	3.6nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**52.60**	**334**	*e*P	**P**	**04 25 11.5**	**+0.3**
	4.3nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**53.16**	**344**	P	**P**	**04 25 14.7**	**-0.6**
	4.5nm,0.7s,mb4.5,baz=152,slow=7.7,SNR=29						
MK31	**Makanchi Array**	**53.16**	**344**	*e*P	**P**	**04 25 14.7**	**-0.6**
MK31				*e*pP	pP	04 25 27.7	-2.2
ZAA0	**Zalesovo Array**	**59.21**	**349**	*e*P	**P**	**04 25 57.3**	**-1.0**
ZAA0				*e*pP	pP	04 26 10.1	-3.1
ZALV	**Zalesovo Beam**	**59.21**	**349**	P	**P**	**04 25 57.4**	**-0.9**
	2.5nm,0.4s,mb4.6,baz=160,slow=4.7,SNR=23						
BR131	**Keskin Array S**	**75.58**	**313**	*e*P	**P**	**04 27 41.4**	**-0.7**
	1.5nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**75.58**	**313**	P	**P**	**04 27 41.6**	**-0.5**
	1.7nm,0.7s,mb4.1,baz=131,slow=7.0,SNR=11						
VNDA	**Vanda**	**80.11**	**169**	P	**P**	**04 28 07.9**	**+1.3**
	1.4nm,0.9s,mb3.9,baz=334,slow=8.6,SNR=4.9						
VNDA	**Vanda**	**80.11**	**169**	*e*P	**P**	**04 28 06.4**	**-0.2**
	2.2nm,1.0s,mb4.0						
CPUP	**Villa Florida**	**143.63**	**213**	PKP	PKPdf	04 35 31.1	-1.5
	0.2nm,0.3s,baz=166,slow=4.3,SNR=3.2						
BDFB	**Brasilia**	**144.08**	**237**	PKP	PKPdf	04 35 32.8	-0.7
	0.6nm,0.5s,baz=360,slow=26,SNR=3.8						
WCI	**Wyandotte Cave**	**145.04**	**11**	*e*PKPbc	PKPbc	04 35 33.4	-0.7
TXAR	**Lajitas Array**	**145.24**	**40**	PKPbc	PKPbc	04 35 35.4	+0.4
	2.9nm,0.8s,baz=288,slow=0.7,SNR=28						
TKL	**Tuckaleechee C**	**147.97**	**8**	PKPbc	PKPbc	04 35 41.9	-0.9
	1.9nm,0.5s,baz=166,slow=3.7,SNR=4.7						

*IDC **13** 04:17:11.8±1.1, 7.81N×82.59W, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.7/21, mbtmp3.7/8, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/30, Error ellipse: s-maj=43.5km s-min=20.7km az=55.0*
*ISCJB **13** 04:17:13.5±1.4, 7.64N±0.06×82.93W±0.06, h22^{km}±11^{km}, mb3.6/6, MS3.4/2, Error ellipse: s-maj=12.8km s-min=5.6km az=44.0*
*NEIC **13** 04:17:14.1, 7.76N×83.08W, h0^{km}, MD4.4(CASC), After CASC.*
*CASC **13** 04:17:16.6±2.2, 7.93N×83.04W, h0^{km}±20^{km}, MD4.3, ML3.1*
ISC 13 04:17:16.4±1.7**, 7.73N**±0.06×**82.86W**±0.06**, h31**^{km}±15^{km}**, n48, σ1^{s}12**/45**, mb3.6**/6**, MS3.4**/2**, 7C-6D, South of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.97**	**342**	⇑*e*P	**Pn**	**04 17 31.3**	**-2.5**
BRU2	**Volcan**	**1.07**	**9**	*e*P	**Pn**	**04 17 34.5**	**-0.8**
BRU2				*e*S	**Sn**	**04 17 49.6**	**+0.4**
BAR1		**1.57**	**344**	⇓*e*P	**Pn**	**04 17 41.2**	**-0.9**
BUS	**Buena Vista**	**2.02**	**334**	⇑*i*P	**Pn**	**04 17 48.1**	**-0.2**
QCR	**Quepos**	**2.12**	**323**	⇑*i*P	**Pn**	**04 17 48.2**	**-1.5**
QCR				*e*S	**Sn**	**04 18 14.2**	**-0.9**
URSC	**Urasca**	**2.28**	**337**	⇑*e*P	**Pn**	**04 17 51.7**	**-0.2**
LAJ	**Bijagual**	**2.46**	**330**	⇓*e*P	**Pn**	**04 17 54.7**	**+0.3**
SJS	**Escuela Geolog**	**2.49**	**332**	*e*P	**Pn**	**04 17 55.0**	**+0.2**
PRS1	**Puriscal**	**2.66**	**327**	⇑*e*P	**Pn**	**04 17 55.6**	**-1.6**
CGA2	**Cerro Gallo 2**	**2.77**	**325**	⇑*e*P	**Pn**	**04 17 57.8**	**-0.9**
CGA2				*e*S	**Sn**	**04 18 33.2**	**+2.1**
JCR	**Jicaral**	**3.06**	**314**	*e*P	**Pn**	**04 18 00.8**	**-1.9**
FORC	**Fortuna**	**3.25**	**327**	*e*P	**Pn**	**04 18 05.5**	**+0.1**
FORC				*e*S	**Sn**	**04 18 44.2**	**+1.2**
BCIP	**Isla Barro Col**	**3.31**	**64**	*e*Pn	**Pn**	**04 18 06.3**	**+0.1**
BCIP				*e*Sn	**Sn**	**04 18 53.3**	**+8.7**
VCR	**Vista de Mar**	**3.63**	**311**	*e*P	**Pn**	**04 18 09.7**	**-0.8**
CUI	**Cuipilapa**	**3.69**	**322**	*i* P	**Pn**	**04 18 10.3**	**-1.1**
LIM1	**Limonal**	**3.78**	**322**	*i* P	**Pn**	**04 18 13.0**	**+0.4**
SSN	**San Juan del S**	**4.62**	**320**	*e*P	**Pn**	**04 18 24.3**	**+0.2**
CONN	**Concepcion**	**4.68**	**325**	*e*P	**Pn**	**04 18 27.0**	**+1.9**
HUEN		**5.62**	**325**	*e*P	**Pn**	**04 18 38.3**	**+0.4**
CSAN		**5.65**	**322**	*e*P	**Pn**	**04 18 38.7**	**+0.4**
COPN	**Copaltepe**	**5.75**	**321**	⇑*e*P	**Pn**	**04 18 40.4**	**+0.7**
COPN				*e*S	**Sn**	**04 19 43.5**	**-1.1**
MIRN	**Miramar**	**6.02**	**321**	*e*P	**Pn**	**04 18 44.9**	**+1.5**
CNGN	**Cerro Negro**	**6.06**	**322**	*e*P	**Pn**	**04 18 45.2**	**+1.3**
CNGN				*e*P		04 18 46.7	
CNCH	**Conchagua**	**7.37**	**319**	⇓*e*P	x	04 19 03.6	
CNCH				*e*S	x	04 20 23.8	
TGUH	**Tegucigalpa,Un**	**7.63**	**326**	*e*P	**Pn**	**04 19 06.8**	**+1.2**
TGUH	**Tegucigalpa,Un**	**7.63**	**326**	*e*Pn	**Pn**	**04 19 06.7**	**+1.1**
	31nm,0.7s						
BLLM	**Bellamira**	**7.75**	**317**	⇓*e*P	x	04 19 08.9	
CAHU	**Cacacuatique**	**7.98**	**319**	⇓*e*P	x	04 19 12.6	
LBRS	**Las Brisas**	**8.52**	**315**	*e*P	x	04 19 20.4	
OTAV	**Otavalo**	**8.64**	**149**	*e*Pn	**Pn**	**04 19 19.7**	**+0.3**
	2.9nm,0.6s						
BOQS	**Boqueron**	**8.68**	**314**	⇓*e*P	x	04 19 22.4	
ROSC	**El Rosal**	**8.95**	**108**	Pn	**Pn**	**04 19 26.4**	**+2.8**
	2.4nm,0.3s,baz=115,slow=22,SNR=9.8						
ROSC				Sn	**Sn**	**04 21 09.4**	**+6.0**
	1.7nm,0.3s,baz=91,slow=23,SNR=5.3						
ROSC				LR	LR	04 22 23.4	
	comp=Z,111nm,21.4s,baz=341,slow=36						
ROSC	**El Rosal**	**8.95**	**108**	*e*Pn	**Pn**	**04 19 26.1**	**+2.5**
ROSC				*e*Sn	**Sn**	**04 21 11.1**	**+7.7**
SBLS	**San Blas**	**9.00**	**313**	*e*P	x	04 19 27.4	
SNJE	**San Jose**	**9.00**	**313**	*e*P	x	04 19 26.6	
RTR	**El Retiro**	**9.05**	**313**	*e*P	x	04 19 27.8	
CHI2		**9.57**	**108**	*e*P	x	04 18 49.6	
LAPE	**La Pedrera**	**11.19**	**90**	*i* P	x	04 18 14.8	
SDV	**Santo Domingo**	**12.15**	**84**	Pn	**Pn**	**04 20 02.8**	**-4.8**
	0.3nm,0.3s,baz=260,slow=18,SNR=2.7						
SDV				Sn	**Sn**	**04 22 12.2**	**-10**
	0.2nm,0.3s,baz=288,slow=11,SNR=2.2						
CMIG	**Matias Romero**	**14.97**	**310**	Pn	**Pn**	**04 20 47.0**	**+1.0**
	0.4nm,0.3s,baz=138,slow=6.9,SNR=8.0						
TXAR	**Lajitas Array**	**29.07**	**320**	LR	LR	04 35 08.5	
	comp=Z,79nm,19.5s,MS3.3,baz=0.0,slow=37						
SIV	**San Ignacio**	**31.95**	**138**	P	**P**	**04 23 39.0**	**-0.7**
	1.0nm,0.9s,mb3.6,baz=304,slow=15,SNR=3.7						
BDFB	**Brasilia**	**41.60**	**124**	LR	LR	04 43 05.2	
	comp=Z,52nm,18.2s,MS3.4,baz=0.4,slow=38						
ULM	**Lac du Bonnet**	**43.75**	**348**	P	**P**	**04 25 17.4**	**-1.5**
	2.1nm,0.8s,mb3.9,baz=153,slow=7.3,SNR=3.0						
NVAR	**Mina Array Bea**	**44.21**	**319**	P	**P**	**04 25 25.4**	**+2.6**
	0.5nm,0.8s,mb3.3,baz=130,slow=8.2,SNR=4.2						
PLCA	**Paso Flores**	**49.54**	**168**	P	**P**	**04 26 03.9**	**-0.4**
	1.1nm,0.6s,mb4.0,baz=343,slow=5.3,SNR=4.9						
YKA	**Yellowknife Ar**	**59.36**	**344**	P	**P**	**04 27 15.0**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=138,slow=6.8,SNR=7.4						
TORD	**Torodi Ar. Bea**	**83.00**	**78**	P	**P**	**04 29 39.1**	**-0.3**
	0.3nm,0.7s,mb3.5,baz=282,slow=4.4,SNR=3.1						

*CSEM **13** 04:49:12.9±0.2, 38.27N×26.53E, h10^{km}, MD2.7, Error ellipse: s-maj=6.1km s-min=3.9km az=89.0*
*ISCJB **13** 04:49:12.8±0.6, 38.20N±0.03×26.60E±0.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=4.2km az=145.8*
*ATH **13** 04:49:13.5, 38.25N×26.65E, h29^{km}±2^{km}, MD3.4/4*
*THE **13** 04:49:13.3, 38.27N×26.62E, h14^{km}±1^{km}, ML3.4/1, Error ellipse: s-maj=1.7km s-min=0.8km az=33.0*
*DDA **13** 04:49:13.8, 38.25N×26.64E, h2^{km}±2^{km}, Md2.7*
*NEIC **13** 04:49:13.8, 38.25N×26.64E, h31^{km}, MD3.4(ATH), After ATH.*
ISC 13 04:49:13.9±0.5**, 38.27N**±0.03×**26.57E**±0.03**, h11**^{km}±3^{km}**, n17, σ1^{s}04**/35**, 2C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.10**	**12**	*i* P	**Pg**	**04 49 16.5**	**-0.1**
URLA				*i* S	**Sg**	**04 49 18.8**	**+0.3**
BLCB	**Balcova**	**0.39**	**72**	P	**Pg**	**04 49 20.6**	**-1.0**
BLCB				S	**Sg**	**04 49 25.7**	**-1.2**
CHOS	**Chios island**	**0.42**	**287**	P	**Pg**	**04 49 22.7**	**+0.5**
CHOS				S	**Sg**	**04 49 28.9**	**+1.1**
SMG	**Samos**	**0.59**	**159**	⇑*i*PN	**Pg**	**04 49 24.9**	**-0.5**
SMG				*e*SN	**Sg**	**04 49 34.0**	**+0.8**
SMG	**Samos**	**0.59**	**159**	⇑*i*Pn	**Pg**	**04 49 24.9**	**-0.5**
SMG				*e*Sn	**Sg**	**04 49 35.0**	**+1.8**
PRK	**Paraskevi**	**1.01**	**347**	P	**Pg**	**04 49 32.0**	**-1.3**
PRK				S	**Sg**	**04 49 46.1**	**-0.3**
PRK	**Paraskevi**	**1.01**	**347**	⇓*i*Pn	**Pn**	**04 49 33.2**	**-0.8**
PRK				S	**Sg**	**04 49 46.1**	**-0.3**
PRK				*e*Sn	**Sn**	**04 49 48.2**	**0.0**
AYVA	**Ayvalik**	**1.05**	**5**	*i* P	**Pb**	**04 49 34.2**	**+0.1**
AYVA				*i* S	**Sg**	**04 49 50.2**	**+2.5**
AKHS	**Akhisar**	**1.15**	**57**	*i* P	**Pb**	**04 49 35.1**	**-0.7**
AKHS				*i* S	**Sb**	**04 49 51.2**	**+0.4**
BDRM	**Kayabasi**	**1.38**	**150**	*i* P	**Pn**	**04 49 38.3**	**-0.9**
BDRM				*i* S	**Sn**	**04 49 59.4**	**+2.0**
APE	**Apeiranthos**	**1.45**	**215**	P	**Pn**	**04 49 38.7**	**-1.4**
APE				S	**Sn**	**04 49 57.3**	**-1.8**
APE	**Apeiranthos**	**1.45**	**215**	*e*PN	**Pn**	**04 49 37.8**	**-2.3**
APE				*e*SN	**Sn**	**04 49 59.9**	**+0.8**
APE	**Apeiranthos**	**1.45**	**215**	P	**Pn**	**04 49 38.7**	**-1.4**
APE				S	**Sn**	**04 49 57.3**	**-1.8**
APE				*e*Sn	**Sn**	**04 49 59.9**	**+0.8**
APE	**Apeiranthos**	**1.45**	**215**	*e*Pn	**Pn**	**04 49 38.3**	**-1.8**
APE				*e*Sn	**Sn**	**04 49 59.9**	**+0.8**
MANT	**Manisa**	**1.58**	**81**	*i* P	**Pn**	**04 49 43.2**	**+1.4**
MANT				*i* S	**Sn**	**04 50 02.6**	**+0.4**
ARG	**Arkhangelos**	**2.39**	**148**	*e*PN	**Pn**	**04 49 52.5**	**-0.5**
GDZ	**Gediz**	**2.42**	**69**	*i* P	**Pg**	**04 49 59.3**	**-1.1**
GDZ				*i* S	**Sg**	**04 50 32.9**	**+1.2**

*NEIC **13** 04:54:06.4, 14.21N×93.94W, h16^{km}, MD4.1(MEX), After MEX.*
MEX 13 04:54:06.4±1.0**, 14.22N**×**93.94W, h16**^{km}±15^{km}**, MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		**1.63**	**25**	*i* P	Pn	04 54 31.0	-3.5
PCIG				*i* S	Sn	04 54 49.5	-5.7
THIG		**1.76**	**67**	*i* P	Pn	04 54 32.3	-3.9
THIG				*i* S	Sn	04 54 52.9	-5.4
HUIG	**Huatulco**	**2.60**	**307**	*e*P	Pn	04 54 44.2	-3.6
HUIG				*i* S	Sn	04 55 13.8	-5.3
TGIG		**2.66**	**17**	*i* P	Pn	04 54 47.0	-1.6
TGIG				*i* S	Sn	04 55 17.1	-3.5
CCIG	**Comitan**	**2.69**	**40**	*i* P	Pn	04 54 47.7	-1.3
CCIG				*i* S	Sn	04 55 17.3	-3.9
SCX	**San Cristobal**	**2.80**	**27**	*e*P	Pn	04 54 48.4	-2.2
SCX				*i* S	Sn	04 55 19.7	-4.3
CMIG	**Matias Romero**	**3.00**	**342**	*i* P	Pn	04 54 52.2	-1.1
CMIG				*i* S	Sn	04 55 24.8	-4.1
VHO	**Vista Hermosa**	**3.91**	**317**	*e*P	Pn	04 55 04.8	-1.0
VHO				*i* S	Sn	04 55 47.6	-3.8
VHO	**Vista Hermosa**	**3.91**	**317**	*e*P	Pn	04 55 04.8	-1.0
VHO				*i* S	Sn	04 55 50.4	-1.0
PNIG	**Pinotepa**	**4.58**	**299**	*e*P	Pn	04 55 13.6	-1.4
PNIG				*i* S	Sn	04 56 02.8	-5.2
UTMO	**Huajuapan**	**5.17**	**315**	*e*P	Pn	04 55 20.8	-2.3
UTMO				*i* S	Sn	04 56 20.0	-2.4
PPM	**Popocatepetl**	**6.59**	**318**	*e*P	Pn	04 55 41.7	-1.0
PPM				*i* S	Sn	04 56 55.9	-1.6

*ROM **13** 04:58:06.8±1.0, 45.44N×15.14E, h10^{km}, Md2.9/4, Ml2.5/1, Error ellipse: s-maj=17.6km s-min=9.5km az=10.0*
*NEIC **13** 04:58:06.4±0.4, 45.63N×15.17E, h10^{km}, ML2.4(ZAG), ML2.4(LJU), ML2.5(ROM), Error ellipse: s-maj=4.4km s-min=3.2km az=148.0*
NEIC Felt at Semic.
*VIE **13** 04:58:06.8±0.3, 45.69N×15.14E, h9^{km}±1^{km}, mb2.1/5, ML2.5/5, Error ellipse: s-maj=2.2km s-min=1.1km az=158.0*
*LJU **13** 04:58:06.2, 45.65N×15.14E, h13^{km}, ML2.3*
*ISCJB **13** 04:58:06.5±0.3, 45.66N±0.02×15.14E±0.02, h4^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.8km az=162.0*
*CSEM **13** 04:58:06.5±0.1, 45.65N×15.19E, h2^{km}, ML3.2/7, Error ellipse: s-maj=1.7km s-min=1.5km az=93.0*
*PRU **13** 04:58:09.4, 45.76N×15.27E, h0^{km}*
ISC 13 04:58:07.1±0.4**, 45.65N**±0.02×**15.15E**±0.02**, h3**^{km}±3^{km}**, n53, σ0^{s}91**/96**, 15C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.17**	**154**	⇓*i*Pg	**Pg**	**04 58 09.3**	**-1.0**
BOJS				*i* Sg	**Sg**	**04 58 12.0**	**-0.5**
BOJS							
	comp=Z,2µm,0.2s						
BOJS	**Bojanci**	**0.17**	**154**	⇓*i*Pg	**Pg**	**04 58 09.3**	**-1.0**
BOJS				*i* Sg	**Sg**	**04 58 12.0**	**-0.5**
	comp=Z,2µm,0.2s						
BOJS	**Bojanci**	**0.17**	**154**	⇓*i*Pg	**Pg**	**04 58 09.3**	**-1.0**
BOJS				*i* Sg	**Sg**	**04 58 12.0**	**-0.5**
VISS	**Visnje**	**0.26**	**305**	*i* Pg	**Pg**	**04 58 11.8**	**-0.4**
VISS				*i* Sg	**Sg**	**04 58 16.3**	**+0.7**
VISS							
	comp=Z,1µm,0.6s						
VISS	**Visnje**	**0.26**	**305**	*i* Pg	**Pg**	**04 58 11.8**	**-0.4**
VISS				*i* Sg	**Sg**	**04 58 16.3**	**+0.7**
	comp=Z,1µm,0.6s						
VISS	**Visnje**	**0.26**	**305**	*i* Pg	**Pg**	**04 58 11.8**	**-0.4**
VISS				*i* Sg	**Sg**	**04 58 16.3**	**+0.7**
CRES	**Cresnjev**	**0.28**	**51**	⇑*i*Pg	**Pg**	**04 58 11.5**	**-1.0**
CRES				*i* Sg	**Sg**	**04 58 17.1**	**+1.0**
CRES							
	comp=Z,306nm,0.2s						
CRES	**Cresnjev**	**0.28**	**51**	⇑*i*Pg	**Pg**	**04 58 11.5**	**-1.0**
CRES				*i* Sg	**Sg**	**04 58 17.1**	**+1.0**
	comp=Z,306nm,0.2s						
LEGS	**Legarje**	**0.32**	**22**	*i* Pg	**Pg**	**04 58 12.5**	**-0.7**
LEGS				*e*Sg	**Sg**	**04 58 18.5**	**+1.0**
CESS	**Cesta pri Krsk**	**0.39**	**34**	*i* Pg	**Pg**	**04 58 14.3**	**-0.3**
CESS				*e*Sg	**Sg**	**04 58 20.5**	**+0.8**
CESS							
	comp=Z,122nm,0.2s						
CESS	**Cesta pri Krsk**	**0.39**	**34**	*i* Pg	**Pg**	**04 58 14.3**	**-0.3**
CESS				*e*Sg	**Sg**	**04 58 20.5**	**+0.8**
	comp=Z,122nm,0.2s						
CESS	**Cesta pri Krsk**	**0.39**	**34**	*i* Pg	**Pg**	**04 58 14.3**	**-0.3**
CESS				*e*Sg	**Sg**	**04 58 20.5**	**+0.8**
GCIS	**Gornji Cirnik**	**0.40**	**57**	*i* Pg	**Pg**	**04 58 14.3**	**-0.5**
GCIS				*e*Sg	**Sg**	**04 58 20.9**	**+0.9**
PDKS	**Podkum**	**0.42**	**346**	⇓*i*Pg	**Pg**	**04 58 14.8**	**-0.4**
PDKS							
	comp=Z,229nm,0.2s						
GOLS	**Golise**	**0.49**	**43**	*e*Pg	**Pg**	**04 58 16.5**	**0.0**
GOLS				*i* Sg	**Sg**	**04 58 23.8**	**+0.9**
GOLS							
	comp=Z,176nm,0.3s						
GOLS	**Golise**	**0.49**	**43**	*e*Pg	**Pg**	**04 58 16.5**	**0.0**
GOLS				*i* Sg	**Sg**	**04 58 23.8**	**+0.9**
CEY	**Cerknica**	**0.51**	**280**	*i* Pg	**Pg**	**04 58 16.7**	**-0.3**
CEY				*i* Sg	**Sg**	**04 58 24.6**	**+1.0**
DOBS	**Dobrina**	**0.55**	**24**	*i* Pg	**Pg**	**04 58 17.4**	**-0.2**
DOBS							
	comp=Z,53nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.55**	**325**	*i* Pg	**Pg**	**04 58 17.4**	**-0.2**
VNDS				*e*Sg	**Sg**	**04 58 25.4**	**+0.7**
KNDS	**Knezji Dol**	**0.55**	**257**	*i* Pg	**Pg**	**04 58 17.6**	**-0.1**
KNDS				*e*Sg	**Sg**	**04 58 25.4**	**+0.6**
LJU	**Ljubljana**	**0.58**	**312**	⇑*i*Pg	**Pg**	**04 58 18.6**	**+0.2**
LJU				*e*Sg	**Sg**	**04 58 26.5**	**+0.6**
LJU	**Ljubljana**	**0.58**	**312**	⇑*i*Pg	**Pg**	**04 58 18.5**	**+0.2**
ZAVS	**Zavodnje**	**0.79**	**354**	⇑*i*Pg	**Pg**	**04 58 21.9**	**-0.3**
ZAVS				*e*Sg	**Sg**	**04 58 32.7**	**+0.3**
SKDS	**Skadanscina**	**0.80**	**263**	⇑*i*Pg	**Pg**	**04 58 21.4**	**-1.1**
MOZS	**Mozjanca**	**0.81**	**323**	*i* Pg	**Pg**	**04 58 22.7**	**+0.1**
GROS	**Grobnik**	**0.84**	**17**	*i* Pg	**Pg**	**04 58 22.9**	**-0.4**
GROS							
	comp=Z,87nm,0.3s						
SISC	**Sisak**	**0.88**	**101**	Sg	**Sg**	**04 58 37.1**	**+1.8**
OBKA	**Obir**	**0.95**	**334**	⇑*e*Pg	**Pg**	**04 58 25.2**	**-0.2**
	SNR=7.3						
OBKA				⇑*i*Sg	**Sg**	**04 58 37.6**	**-0.2**
	comp=Z,161nm,0.5s						
VOJS	**Vojsko**	**0.96**	**294**	*i* Pg	**Pg**	**04 58 24.9**	**-0.7**
VOJS				*e*Sg	**Sg**	**04 58 38.7**	**+0.7**
TRI	**Trieste**	**0.97**	**274**	Pn	**Pn**	**04 58 24.4**	**-3.2**
TRI				Sn	**Sn**	**04 58 39.1**	**-2.8**
PERS	**Pernice**	**0.98**	**359**	*i* Pg	**Pg**	**04 58 25.4**	**-0.6**
BISS	**Bistriski jare**	**1.00**	**359**	⇑*i*Pg	**Pg**	**04 58 25.6**	**-0.7**
BISS							
	comp=Z,28nm,0.1s						
SOKA	**Soboth**	**1.03**	**356**	⇓*i*Pg	**Pg**	**04 58 26.0**	**-0.9**
SOKA				⇓*i*Sg	**Sg**	**04 58 39.6**	**-0.6**
	comp=Z,50nm,0.6s						
KOGS	**Kog**	**1.11**	**44**	*i* Pg	**Pg**	**04 58 28.1**	**-0.2**
NVLJ	**Novalja**	**1.11**	**190**	*e*Pg	**Pg**	**04 58 27.5**	**-0.8**
NVLJ				Sg	**Sg**	**04 58 44.0**	**+1.3**
NVLJ	**Novalja**	**1.11**	**190**	*e*Pg	**Pg**	**04 58 27.5**	**-0.8**
NVLJ				Sg	**Sg**	**04 58 43.9**	**+1.3**
ROBS	**Robic**	**1.29**	**298**	*i* Pg	**Pg**	**04 58 30.9**	**-0.9**
MYKA	**Terra Mystica**	**1.43**	**314**	⇑*i*Pg	**Pg**	**04 58 33.8**	**-0.7**
MYKA				⇑*i*Sg	**Sg**	**04 58 54.1**	**+1.0**
	comp=Z,16nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.46**	**302**	Pn	**Pn**	**04 58 34.7**	**+0.4**
PTCC				Sn	**Sn**	**04 58 55.3**	**+1.4**
	comp=Z,24nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.46**	**302**	Pn	**Pn**	**04 58 34.7**	**+0.4**
PTCC				Sn	**Sn**	**04 58 55.3**	**+1.4**
	comp=Z,24nm,0.3s						
GMNA	**Gemona**	**1.47**	**296**	Pn	**Pn**	**04 58 36.1**	**+1.6**
GMNA				Sn	**Sn**	**04 58 58.8**	**+4.6**
	comp=Z,259nm,0.7s						
GMNA	**Gemona**	**1.47**	**296**	Pn	**Pn**	**04 58 36.1**	**+1.6**
GMNA				Sn	**Sn**	**04 58 58.8**	**+4.6**
	comp=Z,259nm,0.7s						
ARSA	**Arzberg**	**1.62**	**9**	⇓*e*Pn	**Pn**	**04 58 35.7**	**-0.8**
	SNR=8.0						
ARSA				⇑*i*Pg	**Pg**	**04 58 37.9**	**-0.2**
ARSA				⇑*i*Sn	**Sn**	**04 58 56.7**	**-1.1**
ARSA				⇓*i*Sg	**Sg**	**04 58 58.8**	**-0.3**
	comp=Z,16nm,0.5s						
KBA	**Koelnbreinsper**	**1.90**	**319**	⇑*i*Pn	**Pn**	**04 58 39.2**	**-1.1**
KBA				⇓*i*Pg	**Pg**	**04 58 42.7**	**-0.7**
KBA				⇓*i*Sn	**Sn**	**04 59 03.6**	**-1.1**
KBA				⇑*i*Sg	**Sg**	**04 59 08.0**	**0.0**
	comp=Z,15nm,0.5s						
KBA	**Koelnbreinsper**	**1.90**	**319**	Pg	**Pg**	**04 58 42.7**	**-0.7**
KBA				Sn	**Sn**	**04 59 03.6**	**-1.1**
KBA				Sg	**Sg**	**04 59 08.0**	**0.0**
	comp=Z,15nm,0.5s						
FVI	**Forni Avoltri**	**1.90**	**301**	Pn	**Pn**	**04 58 42.2**	**+1.9**
FVI				Sn	**Sn**	**04 59 08.2**	**+3.5**
	comp=Z,37nm,0.6s						
FVI	**Forni Avoltri**	**1.90**	**301**	Pn	**Pn**	**04 58 42.2**	**+1.9**
FVI				Sn	**Sn**	**04 59 08.2**	**+3.5**
	comp=Z,37nm,0.6s						
CTI	**Castel Tesino**	**2.48**	**280**	Pn	**Pn**	**04 58 48.9**	**+0.6**
	comp=Z,30nm,0.5s						
CTI	**Castel Tesino**	**2.48**	**280**	Pn	**Pn**	**04 58 48.9**	**+0.6**
	comp=Z,30nm,0.5s						
MAGA	**Magasa**	**3.17**	**274**	Pn	**Pn**	**04 58 59.1**	**+1.3**
MAGA	**Magasa**	**3.17**	**274**	Pn	**Pn**	**04 58 59.1**	**+1.3**
KHC	**Kasperske Hory**	**3.64**	**344**	Pn	**Pn**	**04 59 06.2**	**+1.9**
KHC				Sn	**Sn**	**04 59 47.2**	**-0.5**
KHC	**Kasperske Hory**	**3.64**	**344**	*e*PN	**Pn**	**04 59 06.2**	**+1.9**
KHC				*e*SN	**Sn**	**04 59 47.2**	**-0.5**
KHC				*e*x	x	05 00 03.0	

*IDC **13** 05:06:18.8±6.5, 11.41N×87.10W, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.9/21, mbtmp3.8/7, ML3.1/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/38, Error ellipse: s-maj=120.1km s-min=42.2km az=1.0*
*NEIC **13** 05:06:23.2±0.8, 11.25N×87.29W, h35^{km}, mb3.9/3, Error ellipse: s-maj=21.2km s-min=9.3km az=225.0*
*ISCJB **13** 05:06:32.8±1.0, 12.09N±0.07×87.76W±0.08, h61^{km}±11^{km}, mb3.8/8, Error ellipse: s-maj=15.1km s-min=9.4km az=138.2*
*CASC **13** 05:06:33.4±1.6, 12.12N×87.75W, h31^{km}±7^{km}, MD4.1, ML4.2, mb3.9(NEIC)*
ISC 13 05:06:34.2±0.9**, 12.12N**±0.08×**87.70W**±0.08**, h63**^{km}±11^{km}**, n43, σ0^{s}87**/38**, mb3.8**/8**, 17C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.86**	**47**	⇑*e*P	**Pn**	**05 06 50.0**	**-0.6**
TEL3	**Telica 3**	**0.95**	**61**	⇑*e*P	**Pn**	**05 06 50.6**	**-1.1**
MIRN	**Miramar**	**1.02**	**71**	⇓*e*P	**Pn**	**05 06 51.6**	**-0.9**
CNGN	**Cerro Negro**	**1.05**	**69**	⇑*e*P	**Pn**	**05 06 52.2**	**-0.8**
COPN	**Copaltepe**	**1.08**	**87**	⇑*e*P	**Pn**	**05 06 52.6**	**-0.8**
COPN				*e*S	**Sn**	**05 07 08.1**	**+0.3**
CNCH	**Conchagua**	**1.16**	**353**	⇑*e*P	x	05 06 52.8	
MOMN	**Momotombo**	**1.17**	**75**	⇑*e*P	**Pn**	**05 06 54.1**	**-0.5**
CSAN		**1.25**	**87**	⇑*e*P	**Pn**	**05 06 55.2**	**-0.4**
APYN	**Apoyeque**	**1.32**	**85**	⇑*e*P	**Pn**	**05 06 56.1**	**-0.5**
XAVN	**Gruta Xavier**	**1.34**	**88**	⇑*e*P	**Pn**	**05 06 56.4**	**-0.4**
CRUN	**El Crucero**	**1.37**	**95**	⇓*e*P	**Pn**	**05 06 57.8**	**+0.5**
TISN	**Laguna Tiscapa**	**1.40**	**89**	⇑*e*P	**Pn**	**05 06 57.5**	**-0.1**
BLLM	**Bellamira**	**1.42**	**338**	*e*P	x	05 06 55.9	
MGAN	**Managua**	**1.42**	**89**	*e*P	**Pn**	**05 06 57.8**	**-0.1**
MGAN				⇑*e*P		05 06 58.0	
MGAN				*e*P		05 06 58.5	
MGAN				*e*S	**Sn**	**05 07 16.1**	**+0.5**
MGAN				AML	AML	05 07 21.4	
	comp=E,4µm,0.5s						
VSM	**San Miguel**	**1.42**	**337**	⇓*e*P	x	05 06 56.8	
TICN	**Ticuantepe**	**1.44**	**93**	⇑*e*P	**Pn**	**05 06 58.4**	**+0.3**
WILN	**Americas 2**	**1.48**	**88**	⇑*e*P	**Pn**	**05 06 58.0**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WILN				eS	Sn	**05 07 17.8**	**+0.7**
HUEN		**1.51**	**81**	⇓eP	**Pn**	**05 06 58.8**	**-0.2**
HUEN				eS	**Sn**	**05 07 19.6**	**+1.8**
APON	**Apoyo**	**1.61**	**97**	⇑eP	**Pn**	**05 07 00.7**	**+0.3**
CAHU	**Cacacuatique**	**1.72**	**343**	⇑eP	x	05 07 01.3	
SNVI	**San Vicente**	**1.86**	**323**	eP	x	05 07 03.2	
SNVI				eS	x	05 07 26.7	
TGUH	**Tegucigalpa,Un**	**1.97**	**12**	⇓eP	**Pn**	**05 07 05.0**	**-0.4**
TGUH				eS	**Sn**	**05 07 29.8**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.97**	**12**	ePn	**Pn**	**05 07 05.0**	**-0.3**
SSN	**San Juan del S**	**1.98**	**114**	⇓eP	**Pn**	**05 07 06.9**	**+1.5**
LBRS	**Las Brisas**	**2.08**	**321**	eP	x	05 07 05.2	
LBRS				eS	x	05 07 31.9	
CONN	**Concepcion**	**2.10**	**105**	⇑eP	**Pn**	**05 07 06.9**	**-0.2**
BOQS	**Boqueron**	**2.23**	**316**	eP	x	05 07 07.9	
BOQS				eS	x	05 07 35.6	
TEIG	**Tepich**	**8.08**	**356**	LR	LR	05 12 42.7	
	comp=E,112nm,20.5s,baz=36,slow=43						
CMIG	**Matias Romero**	**8.53**	**306**	Pn	**Pn**	**05 08 36.1**	**+1.1**
	comp=E,0.2nm,0.3s,baz=275,slow=22,SNR=3.9						
CMIG				Sn	**Sn**	**05 10 25.1**	**+15**
	comp=E,0.1nm,0.3s,baz=205,slow=9.1,SNR=2.4						
CMIG				LR	LR	05 12 26.6	
	comp=E,228nm,21.2s,baz=125,slow=39						
CHI2		**15.67**	**117**	⇑eP	x	05 06 49.0	
LAPE	**La Pedrera**	**16.52**	**104**	i P	x	05 07 13.7	
SDV	**Santo Domingo**	**17.08**	**99**	LR	LR	05 17 06.7	
	comp=E,41nm,19.0s,baz=262,slow=40						
GOGA	**Godfrey**	**21.55**	**10**	eP	**P**	**05 11 21.8**	**+3.5**
	comp=E,3.9nm,0.7s,mb4.0						
TXAR	**Lajitas Array**	**22.68**	**321**	P	**P**	**05 11 31.2**	**+0.9**
	comp=E,4.4nm,0.8s,mb3.9,baz=139,slow=9.5,SNR=37						
MIAR	**Mount Ida**	**22.96**	**347**	eP	**P**	**05 11 34.5**	**+1.2**
	comp=E,4.7nm,0.8s,mb4.0						
TKL	**Tuckaleechee C**	**23.71**	**8**	P	**P**	**05 11 39.7**	**-0.6**
	comp=E,10nm,1.0s,mb4.2,baz=185,slow=12,SNR=8.8						
TKL	**Tuckaleechee C**	**23.71**	**8**	P	**P**	**05 11 39.7**	**-0.6**
PDAR	**Pinedale Array**	**35.95**	**332**	P	**P**	**05 13 27.6**	**-1.0**
	comp=E,0.7nm,0.7s,mb3.7,baz=122,slow=7.2,SNR=7.9						
NVAR	**Mina Array Bea**	**37.79**	**319**	P	**P**	**05 13 45.9**	**+1.6**
	comp=E,0.2nm,0.5s,mb3.1,baz=129,slow=13,SNR=3.3						
NVAR	**Mina Array Bea**	**37.79**	**319**	P	**P**	**05 13 45.9**	**+1.6**
ULM	**Lac du Bonnet**	**38.61**	**352**	P	**P**	**05 13 49.8**	**-1.3**
	comp=E,1.4nm,0.4s,mb4.0,baz=154,slow=7.5,SNR=3.2						
YKA	**Yellowknife Ar**	**53.87**	**345**	P	**P**	**05 15 49.2**	**-1.3**
	comp=E,0.6nm,0.7s,mb3.6,baz=137,slow=7.9,SNR=13						
YKA	**Yellowknife Ar**	**53.87**	**345**	P	**P**	**05 15 49.2**	**-1.3**

IDC 13 05:18:10.7±6.0**,1823S**×**17779W,h515**km±69km**,mb3.1**/8**, mb1 3.3**/8**,mb1mx3.2**/18**,mbtmp3.1**/8**,Error ellipse: s-maj=27.3km s-min=23.1km az=55.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.45**	**192**	P	P	05 22 11.3	-1.2
	4.3nm,0.3s,baz=7.1,slow=8.1,SNR=8.2						
STKA	**Stephens Creek**	**38.99**	**242**	P	P	05 24 52.2	-0.4
	0.8nm,0.5s,baz=34,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**45.27**	**255**	P	P	05 25 43.1	+1.0
	1.0nm,0.6s,baz=92,slow=7.9,SNR=13						
VNDA	**Vanda**	**60.18**	**185**	P	P	05 27 28.4	+0.5
	0.9nm,0.9s,baz=22,slow=7.5,SNR=4.0						
MJAR	**Matsushiro Arr**	**68.51**	**323**	P	P	05 28 21.0	-0.4
	1.4nm,0.5s,baz=161,slow=5.8,SNR=3.6						
PETK	**Petropavlovsk-**	**74.13**	**345**	P	P	05 28 53.5	-0.5
	2.4nm,0.6s,baz=109,slow=7.5,SNR=6.0						
NVAR	**Mina Array Bea**	**79.25**	**44**	P	P	05 29 23.2	+0.9
	0.4nm,0.7s,baz=219,slow=9.3,SNR=5.6						
TXAR	**Lajitas Array**	**85.67**	**57**	P	P	05 29 56.6	+1.5
	0.6nm,0.7s,baz=227,slow=5.9,SNR=5.6						
ARCES	**ARCESS Array B**	**126.73**	**350**	PKP	PKPdf	05 36 13.4	-1.3
	6.6nm,1.1s,baz=22,slow=2.9,SNR=5.0						
BRTR	**Keskin Array B**	**145.42**	**315**	PKPbc	PKPbc	05 36 50.7	-0.5
	0.5nm,0.4s,baz=15,slow=5.4,SNR=3.7						
GERES	**GERESS Array B**	**148.06**	**346**	PKPbc	PKPbc	05 36 56.6	-1.4
	0.8nm,0.6s,baz=354,slow=1.3,SNR=4.0						

*NEIC **13** 05:20:21.9±0.2,23.16S×70.48W,h15km,mb5.6/149, ME5.7,MS5.6/160,MW5.9,ML5.4(GUC),Error ellipse: s-maj=6.1km s-min=4.3km az=61.0,Moment Tensor Solution. s93 Moment tensor: Scale 10^{17}Nm; M_{rr}5.58; $M_{\theta\theta}$-2.41; $M_{\phi\phi}$-3.17; $M_{r\theta}$-0.46; $M_{\theta\phi}$0.35; $M_{\phi r}$-7.23; Best double couple: $M_0$8.70000×10^{17} NP1:ϕ_s181.00000°, δ74.00000°,λ93.00000°. NP2:ϕ_s350.00000°,δ16.00000°, λ79.00000°. Principal axes: T 9.6800, Plg60.0000°, Azm95.0000°; N -2.4400, Plg2.0000°, Azm0.0000°; P -7.2500, Plg29.0000°, Azm268.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s355.00000°,δ15.00000°, λ90.00000°. NP2:ϕ_s175.00000°,δ75.00000°,λ90.00000°. Principal axes: T Plg60.0000°, Azm85.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm265.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at Mejillones and [III] at Antofagasta, Maria Elena and Tocopilla.

*GUC **13** 05:20:21.7±1.1,23.24S×70.79W,h37km±4km,ML5.4*

*GCMT **13** 05:20:23.0±0.1,23.21S×70.98W,h17km,MW6.0/103, Moment Tensor Solution. s99,c205; s103,c300; Duration: 2.3s Moment tensor: Scale 10^{18}Nm; M_{rr}0.45±.01; $M_{\theta\theta}$0.03±.00; $M_{\phi\phi}$-0.47±.01; $M_{r\theta}$0.15±.01; $M_{\theta\phi}$0.03±.00; $M_{\phi r}$-1.01±.03; Best double couple: $M_0$1.12000×10^{18} NP1:ϕ_s2.00000°,δ12.00000°, λ99.00000°. NP2:ϕ_s172.00000°,δ78.00000°,λ88.00000°. Principal axes: T 1.1060, Plg57.0000°, Azm80.0000°; N 0.0270, Plg2.0000°, Azm173.0000°; P -1.1330, Plg33.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **13** 05:20:23.5±2.8,23.15S×70.49W,h25km±18km,mb4.7/22, mb1 4.8/28,mb1mx4.8/29,mbtmp4.7/28,ML4.4/4,MS5.5/29, Ms1 5.5/29,ms1mx5.4/33 Error ellipse: s-maj=15.7km s-min=10.5km az=68.0*

*ISCJB **13** 05:20:24.2±0.1,23.14S±0.02×70.48W±0.03,h40km, mb5.5/181,MS5.6/190,Error ellipse: s-maj=4.7km s-min=2.8km az=147.1*

*MOS **13** 05:20:24.3±1.3,22.85S×70.43W,h33km,mb5.6/73, MS5.4/33,Error ellipse: s-maj=10.2km s-min=6.4km az=104.6*

*IGIL **13** 05:20:26.1,23.16S×70.54W,h41km,MS5.5*

*BJI **13** 05:20:27.9,23.10S×70.50W,h40km,mB5.8,Ms5.9,Msz5.9*

ISC 13 05:20:26.0±0.1**,23.19S**±0.02×**70.42W**±0.03**,h42**km**, h42**km±1.1km**:pP-P,n952,**σ0.79/759**,mb5.5**/181**,MS5.6**/190**, 216C-216D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.09**	**342**	⇓iP	**Pn**	**05 20 29.7**	**-3.0**
MECH				i S	**Sn**	**05 20 36.3**	**-1.1**
MECH				AML	AML	05 20 45.6	
	comp=N,396µm,0.8s						
CEN1	**Los Morros**	**0.28**	**135**	⇑iP	**Pn**	**05 20 32.8**	**-1.4**
CEN1				i S	**Sn**	**05 20 40.6**	**+0.7**
CEN1				AML	AML	05 20 42.2	
	comp=E,146µm,0.6s						
ANCH	**Antofagasta**	**0.49**	**179**	⇓iP	**Pn**	**05 20 36.2**	**-0.4**
ANCH				i S	**Sn**	**05 20 44.7**	**+0.5**
TOCH	**Tocopilla**	**1.11**	**10**	⇑iP	**Pn**	**05 20 43.4**	**-1.6**
TOCH				i S	**Sn**	**05 21 00.1**	**+1.0**
TOCH				AML	AML	05 21 06.0	
	comp=E,89µm,0.4s						
MACH	**Maria Elena**	**1.16**	**32**	⇑iP	**Pn**	**05 20 46.1**	**+0.4**
MACH				i S	**Sn**	**05 21 05.5**	**+5.2**
PB04	**Plate Boundary**	**1.26**	**43**	⇑iP	**Pn**	**05 20 41.1**	**-5.9**
PB04				i S	**Sn**	**05 20 55.4**	**-7.3**
PB04				AML	AML	05 21 01.4	
	comp=E,224µm,0.6s						
CPN1	**Cerro Paranal**	**1.43**	**180**	⇑iP	**Pn**	**05 20 46.4**	**-3.0**
CPN1				i S	**Sn**	**05 21 05.1**	**-1.9**
CPN1				AML	AML	05 21 12.2	
	comp=E,191µm,0.7s						
LVC	**Limon Verde**	**1.50**	**68**	Pg	**Pn**	**05 20 52.9**	**+2.5**
	comp=E,4µm,0.3s,baz=250,slow=12,SNR=4137						
LVC				Lg		05 21 17.9	
	comp=E,12µm,0.3s,baz=15,slow=15,SNR=49						
LVC	**Limon Verde**	**1.50**	**68**	⇑iPn	**Pn**	**05 20 53.6**	**+3.2**
LVC				eSn	**Sn**	**05 21 18.0**	**+9.2**
LVC	**Limon Verde**	**1.50**	**68**	⇑iP	**Pn**	**05 20 53.7**	**+3.3**
LVC				i S	**Sn**	**05 21 16.7**	**+7.9**
PB01	**Plate Boundary**	**2.30**	**22**	AML	AML	05 21 42.1	
	comp=E,53µm,0.5s						
LCO	**Las Campanas**	**5.80**	**182**	ePn	**Pn**	**05 21 45.7**	**-3.8**
	comp=E,944nm,0.8s						
ARE	**Arequipa**	**6.77**	**351**	⇓iP	**Pn**	**05 21 59.2**	**-3.6**
ARE				eS	**Sn**	**05 23 13.0**	**-5.6**
CFAA	**Coronel Fontan**	**8.60**	**167**	Pn	**Pn**	**05 22 25.3**	**-2.6**
	comp=E,0.5nm,0.3s,baz=344,slow=11,SNR=25						
CFAA				Sn	**Sn**	**05 24 13.2**	**+10**
	comp=E,2.2nm,0.3s,baz=336,slow=23,SNR=2.9						
CFAA				LR	LR	05 25 55.0	
	comp=E,7µm,20.2s,baz=330,slow=38						
SIV	**San Ignacio**	**11.35**	**53**	Pn	**Pn**	**05 23 03.0**	**-2.6**
	comp=E,4.9nm,0.3s,baz=245,slow=12,SNR=117						
SIV				Sn	**Sn**	**05 25 18.3**	**+7.3**
	comp=E,1.8nm,0.3s,baz=104,slow=23,SNR=2.9						
CPUP	**Villa Florida**	**12.30**	**107**	Pn	**Pn**	**05 23 18.4**	**-0.1**
	comp=E,0.4nm,0.3s,baz=271,slow=12,SNR=28						
CPUP				LR	LR	05 28 36.7	
	comp=E,66µm,20.4s,baz=268,slow=40						
CPUP	**Villa Florida**	**12.30**	**107**	eP	**Pn**	**05 23 20.1**	**+1.6**
CPUP				pmax	pmax		
	comp=Z,130nm,1.7s						
CPUP	**Villa Florida**	**12.30**	**107**	ePn	**Pn**	**05 23 19.9**	**+1.4**
NNA	**Nana**	**12.71**	**330**	Pn	**Pn**	**05 23 21.0**	**-3.2**
	comp=Z,3.0nm,0.3s,baz=128,slow=11,SNR=14						
NNA				Sn	**Sn**	**05 25 33.6**	**-11**
	comp=Z,5.2nm,0.3s,baz=230,slow=16,SNR=4.8						
NNA				LR	LR	05 27 22.5	
	comp=Z,18µm,21.7s,baz=158,slow=33						
NNA	**Nana**	**12.71**	**330**	ePn	**Pn**	**05 23 23.4**	**-0.7**
LPA	**La Plata**	**15.97**	**140**	ceP	**Pn**	**05 24 04.0**	**-3.6**
LPA	**La Plata**	**15.97**	**140**	eP	**Pn**	**05 24 10.0**	**+2.4**
LPA	**La Plata**	**15.97**	**140**	eP	**Pn**	**05 24 11.0**	**+3.4**
LPA				eS	**S**	**05 27 06.0**	**-10**
PLCA	**Paso Flores**	**17.49**	**180**	P	**Pn**	**05 24 25.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=358,slow=13,SNR=17						
PLCA				S	**S**	**05 27 38.0**	**-9.0**
	baz=341,slow=17,SNR=1.5						
PLCA	**Paso Flores**	**17.49**	**180**	eP	**Pn**	**05 24 25.0**	**-1.7**
PLCA				pmax	pmax		
	comp=Z,220nm,1.6s						
PLCA	**Paso Flores**	**17.49**	**180**	ePn	**Pn**	**05 24 23.7**	**-3.0**
	comp=Z,223nm,1.7s						
ATAH	**Atahualpa**	**17.83**	**333**	P	**Pn**	**05 24 27.2**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=168,slow=9.9,SNR=9.7						
ATAH				S	**S**	**05 27 42.9**	**-11**
	comp=Z,0.2nm,0.3s,baz=75,slow=16,SNR=1.5						
ATAH				LR	LR	05 32 08.8	
	comp=Z,9µm,19.1s,baz=309,slow=40						
BDFB	**Brasilia**	**22.41**	**74**	P	**P**	**05 25 20.2**	**-0.8**
	comp=Z,62nm,0.9s,mb5.0,baz=247,slow=17,SNR=40						
BDFB				S	**S**	**05 29 26.8**	**+1.7**
	comp=Z,7.2nm,0.9s,baz=118,slow=27,SNR=1.8						
BDFB				LR	LR	05 35 29.6	
	comp=Z,15µm,18.2s,MS5.5,baz=57,slow=40						
BDFB	**Brasilia**	**22.41**	**74**	P	**P**	**05 25 20.2**	**-0.8**
BDFB				S	**S**	**05 29 26.8**	**+1.7**
OTAV	**Otavalo**	**24.56**	**340**	eP	**P**	**05 25 42.5**	**+0.5**
	comp=Z,204nm,1.5s,mb5.4						
OTAV				LR	LR		
	comp=Z,9µm,22.0s,MS5.2						
CAM4	**Nova Friburgo**	**25.68**	**94**	⇓iP	**P**	**05 25 52.2**	**0.0**
CAM4				i		05 25 56.9	
CAM4				i	pP	05 26 02.6	-0.8
CAM4				i		05 26 16.5	
CAM4				i		05 26 25.5	
CAM3	**Guarapari**	**27.81**	**91**	⇓iP	**P**	**05 26 19.6**	**+8.2**
CAM3				i		05 26 22.6	
CAM3				i		05 26 33.5	
CAM3				i		05 26 38.0	
CAM3				i		05 26 50.8	
ROSC	**El Rosal**	**28.13**	**352**	P	**P**	**05 26 12.8**	**-1.4**
	comp=Z,13nm,0.8s,mb4.6,baz=230,slow=7.9,SNR=12						
ROSC				S	**S**	**05 30 59.3**	**+2.6**
	comp=Z,6.7nm,1.0s,baz=269,slow=20,SNR=1.5						
ROSC				LR	LR	05 36 36.5	
	comp=Z,6µm,19.5s,MS5.2,baz=186,slow=35						
ROSC	**El Rosal**	**28.13**	**352**	eP	**P**	**05 26 14.9**	**+0.7**
PAYG	**Puerto Ayora**	**29.55**	**316**	PFAKE		05 26 40.0	+13
PAYG				LR	LR		
	comp=Z,12µm,22.0s,MS5.5						
EFI	**East Falkland**	**30.00**	**165**	⇑iP	**P**	**05 26 31.0**	**+0.6**
EFI	**East Falkland**	**30.00**	**165**	eP	**P**	**05 26 28.5**	**-1.9**
	comp=Z,42nm,0.8s,mb5.2						
EFI				LR	LR		
	comp=Z,20µm,20.0s,MS5.8						
USHA	**Ushuaia**	**31.64**	**178**	P	**P**	**05 26 44.1**	**-0.8**
	comp=Z,20nm,0.8s,mb5.0,baz=318,slow=9.3,SNR=5.4						
USHA				LR	LR	05 40 45.4	
	comp=Z,25µm,18.9s,MS5.9,baz=347,slow=39						
SDV	**Santo Domingo**	**31.88**	**360**	P	**P**	**05 26 46.2**	**-1.1**
	comp=Z,4.3nm,0.8s,mb4.3,baz=183,slow=6.9,SNR=4.8						
SDV				S	**S**	**05 31 53.1**	**-2.3**
	comp=Z,3.4nm,0.8s,baz=320,slow=18,SNR=1.5						
SDV	**Santo Domingo**	**31.88**	**360**	eP	**P**	**05 26 45.2**	**-2.1**
	comp=Z,20nm,0.9s,mb4.9						
SDV				S	**S**	**05 31 53.1**	**-2.4**
BCIP	**Isla Barro Col**	**33.45**	**343**	PFAKE		05 27 10.0	+8.9
BCIP				LR	LR		
	comp=Z,4µm,19.0s,MS5.1						
PCRV	**Puerto La Cruz**	**33.64**	**10**	P	**P**	**05 27 02.5**	**-0.3**
	comp=Z,15nm,0.7s,mb5.0,baz=246,slow=4.2,SNR=5.4						
PCRV				LR	LR	05 42 50.9	
	comp=Z,32µm,18.2s,MS6.1,baz=8.5,slow=40						
RPN	**Rapa Nui**	**35.35**	**255**	P	**P**	**05 27 16.6**	**-0.9**
	comp=Z,67nm,0.8s,mb5.6,baz=121,slow=5.1,SNR=4.8						
RPN				S	**S**	**05 32 54.7**	**+5.5**
	comp=Z,28nm,0.7s,baz=130,slow=1.6,SNR=2.0						
RPN				LR	LR	05 37 46.8	
	comp=Z,12µm,19.4s,MS5.7,baz=101,slow=30						
RPN	**Rapa Nui**	**35.35**	**255**	P	**P**	**05 27 16.6**	**-0.9**
RPN				S	**S**	**05 32 54.7**	**+5.5**
RPN				LR	LR	05 37 46.8	
GRGR	**Grenville**	**36.14**	**15**	PFAKE		05 27 30.0	+5.7
GRGR				LR	LR		
	comp=Z,7µm,20.0s,MS5.4						
RCBR	**Riachuelo**	**37.46**	**68**	eP	**P**	**05 27 36.6**	**+0.9**
	comp=Z,402nm,1.2s,mb6.1						
RCBR				epP	pP	05 27 44.6	-2.6
BBGH	**Gun Hill**	**37.64**	**17**	PFAKE		05 27 50.0	+13
BBGH				LR	LR		
	comp=Z,24µm,21.0s,MS6.0						
FDF	**Fort de France**	**38.76**	**14**	PFAKE		05 28 00.0	+13
FDF				LR	LR		
	comp=Z,10µm,19.0s,MS5.6						
TGUH	**Tegucigalpa,Un**	**40.53**	**334**	eP	**P**	**05 28 01.0**	**-0.2**
	comp=Z,183nm,1.1s,mb5.6						
CRPR	**Cabo Rojo, PR**	**41.07**	**5**	eP	**P**	**05 28 04.7**	**-0.9**
OBIP	**Obispado Ponce**	**41.15**	**6**	eP	**P**	**05 28 05.8**	**-0.4**
SJG	**San Juan**	**41.26**	**6**	eP	**P**	**05 28 09.5**	**+2.3**
SJG				pmax	pmax		
	comp=Z,240nm,1.2s						
SJG	**San Juan**	**41.26**	**6**	eP	**P**	**05 28 04.0**	**-3.2**
	comp=Z,238nm,1.2s,mb5.7						
MPR	**Mayaguez**	**41.27**	**5**	eP	**P**	**05 28 05.7**	**-1.6**
HUMP	**Col San Antoni**	**41.32**	**7**	eP	**P**	**05 28 05.7**	**-1.9**
	comp=Z,348nm,2.0s,mb5.6						
AOPR	**Arecibo Observ**	**41.44**	**5**	eP	**P**	**05 28 09.1**	**+0.4**
	comp=Z,73nm,1.0s,mb5.3						
ANWB	**Willy Bob**	**41.47**	**12**	PFAKE		05 28 20.0	+11
ANWB				LR	LR		
	comp=Z,6µm,20.0s,MS5.4						
MTDJ	**Mount Denham**	**41.74**	**350**	eP	**P**	**05 28 11.1**	**0.0**
	comp=Z,176nm,1.1s,mb5.6						
PMSA	**Palmer Station**	**41.79**	**176**	P	**P**	**05 28 11.4**	**+0.4**
	comp=Z,24nm,0.9s,mb4.8,baz=347,slow=9.7,SNR=3.2						
PMSA				S	**S**	**05 34 34.0**	**+8.8**
	comp=Z,40nm,1.1s,baz=209,slow=6.3,SNR=3.0						
PMSA				LR	LR	05 46 07.0	
	comp=Z,14µm,18.1s,MS5.9,baz=346,slow=37						
TEIG	**Tepich**	**46.53**	**337**	P	**P**	**05 28 48.8**	**-0.7**
	comp=Z,9.8nm,0.7s,mb4.9,baz=259,slow=5.2,SNR=5.6						
TEIG				LR	LR	05 49 44.1	
	comp=Z,2µm,20.1s,MS5.0,baz=325,slow=38						
CMIG	**Matias Romero**	**46.63**	**327**	P	**P**	**05 28 51.0**	**+0.7**
	comp=Z,9.6nm,1.1s,mb4.6,baz=102,slow=2.6,SNR=4.6						
CMIG				S	**S**	**05 35 37.1**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=149,slow=22,SNR=1.8						
CMIG				LR	LR	05 44 37.7	
	comp=Z,3µm,21.6s,MS5.2,baz=352,slow=31						
SOR	**Soroa**	**47.32**	**344**	eP	**P**	**05 28 53.9**	**-1.7**
DWPF	**Disney**	**52.09**	**348**	PFAKE		05 29 40.0	+8.1
DWPF				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
BBSR	**BB Station**	**55.52**	**6**	eP	**P**	**05 29 56.2**	**-0.6**
	comp=Z,105nm,1.1s,mb5.8						
BBSR				e	pP	05 30 08.2	-0.7
BBSR				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
BRAL	**Brewton**	**56.20**	**343**	eP	**P**	**05 30 01.4**	**-0.4**
	comp=Z,288nm,1.1s,mb6.2						
BRAL				esP	sP	05 30 13.5	-5.1
BRAL				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
NHSC	**New Hope**	**56.75**	**350**	eP	**P**	**05 30 05.0**	**-0.6**
	comp=Z,128nm,1.2s,mb5.8						
NHSC				e	pP	05 30 17.4	-0.3
NHSC				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
KVTX	**Kingsville**	**56.99**	**331**	PFAKE		05 30 20.0	+13
KVTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
GOGA	**Godfrey**	**57.64**	**347**	eP	**P**	**05 30 10.3**	**-1.6**
GOGA				e*SP	sP	05 30 21.9	-6.9
GOGA				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
GOGA				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
GOGA	**Godfrey**	**57.64**	**347**	eP	**P**	**05 30 10.3**	**-1.6**
	comp=Z,42nm,1.3s,mb5.3						
GOGA				esP	sP	05 30 21.9	-6.9
GOGA				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
LRAL	**Lakeview Retre**	**58.10**	**344**	eP	**P**	**05 30 13.7**	**-1.4**
	comp=Z,70nm,1.2s,mb5.6						
LRAL				esP	sP	05 30 25.2	-6.9
LRAL				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
HKT	**Hockley**	**58.21**	**334**	eP	**P**	**05 30 16.0**	**+0.1**
HKT				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
HKT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
HKT	**Hockley**	**58.21**	**334**	eP	**P**	**05 30 16.0**	**0.0**
	comp=Z,11nm,1.1s,mb4.8						
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
VBMS	**Vicksburg**	**58.35**	**340**	eP	**P**	**05 30 15.9**	**-1.0**
	comp=Z,156nm,1.3s,mb5.9						
VBMS				epP	pP	05 30 28.1	-0.9
VBMS				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
CNNC	**Cliffs of the**	**58.54**	**353**	eP	**P**	**05 30 15.6**	**-2.5**
	comp=Z,41nm,0.3s,mb5.9						
CNNC				epP	pP	05 30 30.0	-0.2
CNNC				LR	LR		
	comp=Z,3µm,22.0s,MS5.3						
RKT	**Rikitea**	**58.88**	**256**	eP	**P**	**05 30 26.6**	**+5.7**
	comp=Z,670nm,26.6s						
RKT				eS	**S**	**05 38 23.9**	**-0.2**
	comp=Z,11µm,26.5s						
RKT				eLQ		05 45 03.1	
	comp=Z,1µm,33.2s						
RKT				eLR	LR	05 47 44.0	
	comp=Z,21µm,26.2s,baz=108						
RKT	**Rikitea**	**58.88**	**256**	eP	**P**	**05 30 26.6**	**+5.7**
RKT				eS	**S**	**05 38 23.9**	**-0.2**
RKT	**Rikitea**	**58.88**	**256**	eP	**P**	**05 30 26.6**	**+5.7**
RKT				eS	**S**	**05 38 23.9**	**-0.2**
RKT				eLQ		05 45 03.1	
VNA3	**Neumayer Olymp**	**58.94**	**161**	eP	**P**	**05 30 20.5**	**-0.1**
VNA3				e	pP	05 30 33.8	+1.1
VNA3				e		05 30 41.5	
VNA1	**Neumayer--Stat**	**59.18**	**160**	eP	**P**	**05 30 22.5**	**+0.3**
VNA1				e	pP	05 30 33.7	-0.6
VNA1				e		05 30 41.6	
NATX	**Nacogdoches**	**59.36**	**336**	eP	**P**	**05 30 23.1**	**-0.8**
	comp=Z,73nm,1.1s,mb5.6						
NATX				epP	pP	05 30 35.9	-0.2
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
VNA2	**Neumayer--Watz**	**59.54**	**160**	eP	**P**	**05 30 24.5**	**-0.2**
VNA2				e	pP	05 30 35.1	-1.7
VNA2				e		05 30 40.4	
VNA2				e		05 30 46.0	
TKL	**Tuckaleechee C**	**59.88**	**347**	P	**P**	**05 30 26.2**	**-1.2**
	comp=Z,33nm,0.9s,mb5.4,baz=180,slow=6.2,SNR=15						
TKL	**Tuckaleechee C**	**59.88**	**347**	eP	**P**	**05 30 25.9**	**-1.5**
TKL				epP	pP	05 30 37.8	-1.7
OXF	**Oxford**	**60.15**	**342**	P	**P**	**05 30 26.5**	**-2.8**
OXF				pmax	pmax		
	comp=Z,286nm,1.1s,mb6.2						
OXF				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
OXF	**Oxford**	**60.15**	**342**	P	**P**	**05 30 26.5**	**-2.8**
	comp=Z,286nm,1.1s,mb6.2						
OXF				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
JCT	**Junction City**	**60.36**	**331**	eP	**P**	**05 30 30.7**	**-0.1**
JCT				e*PP	pP	05 30 42.7	-0.2
JCT				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.6						
JCT				MLR	MLR		
	comp=Z,941nm,20.0s,MS4.9						
JCT	**Junction City**	**60.36**	**331**	eP	**P**	**05 30 30.7**	**-0.1**
	comp=Z,53nm,0.9s,mb5.6						
JCT				epP	pP	05 30 42.7	-0.2
JCT				LR	LR		
	comp=Z,941nm,20.0s,MS4.9						
TZTN	**Tazewell**	**60.69**	**348**	eP	**P**	**05 30 31.5**	**-1.4**
	comp=Z,59nm,1.3s,mb5.6						
TZTN				epP	pP	05 30 43.4	-1.7
BLA	**Blacksburg**	**60.81**	**351**	eP	**P**	**05 30 33.7**	**0.0**
BLA				e*PP	pP	05 30 45.3	-0.6
BLA				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.6						
BLA				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.3						
BLA	**Blacksburg**	**60.81**	**351**	eP	**P**	**05 30 33.7**	**0.0**
	comp=Z,56nm,1.2s,mb5.6						
BLA				epP	pP	05 30 45.3	-0.6
BLA				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
LPIG	**La Paz**	**60.91**	**318**	LR	LR	05 50 57.1	
	comp=Z,2µm,19.9s,MS5.2,baz=135,slow=30						
SHEL	**Horse Pasture**	**60.95**	**96**	PFAKE		05 30 50.0	+15
SHEL				LR	LR		
	comp=Z,8µm,20.0s,MS5.8						
SNAA	**Sanae**	**61.16**	**160**	eP	**P**	**05 30 35.5**	**-0.2**
SNAA				e	pP	05 30 47.9	0.0
SNAA				e		05 30 57.5	
SNAA	**Sanae**	**61.16**	**160**	P	**P**	**05 30 35.6**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,58nm,1.0s						
SNAA	**Sanae**	**61.16**	**160**	eP	**P**	**05 30 35.6**	**-0.2**
	comp=Z,58nm,0.9s,mb5.7						
TXAR	**Lajitas Array**	**61.24**	**327**	P	**P**	**05 30 35.9**	**-1.0**
	comp=Z,3.1nm,0.8s,mb4.5,baz=148,slow=8.1,SNR=21						
TXAR				S	**S**	**05 38 52.8**	**-1.1**
	comp=Z,0.2nm,0.9s,baz=248,slow=20,SNR=2.7						
TXAR				LR	LR	05 53 29.7	
	comp=Z,3µm,20.3s,MS5.4,baz=5.0,slow=32						
TXAR				PKPPKP		05 59 58.1	
	comp=Z,0.4nm,0.9s,baz=267,slow=5.0,SNR=3.1						
TXAR	**Lajitas Array**	**61.24**	**327**	P	**P**	**05 30 35.9**	**-0.9**
TXAR				S	**S**	**05 38 52.8**	**-1.1**
WVT	**Waverly**	**61.25**	**344**	P	**P**	**05 30 34.4**	**-2.4**
WVT				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.9						
WVT	**Waverly**	**61.25**	**344**	eP	**P**	**05 30 34.4**	**-2.4**
	comp=Z,123nm,1.1s,mb6.0						
WVT				epP	pP	05 30 47.0	-1.9
UALR	**University of**	**61.29**	**339**	eP	**P**	**05 30 37.2**	**+0.1**
	comp=Z,106nm,1.3s,mb5.8						
UALR				esP	sP	05 30 47.6	-6.4
CBN	**Corbin**	**61.41**	**354**	eP	**P**	**05 30 37.9**	**+0.1**
	comp=Z,99nm,1.2s,mb5.8						
CBN				esP	sP	05 30 49.1	-5.6
CBN				LR	LR		
	comp=Z,4µm,22.0s,MS5.5						
MIAR	**Mount Ida**	**61.49**	**338**	eP	**P**	**05 30 37.0**	**-1.4**
MIAR				e	pP	05 30 49.2	-1.3
MIAR				pmax	pmax		
	comp=Z,101nm,1.1s,mb5.9						
MIAR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
MIAR	**Mount Ida**	**61.49**	**338**	eP	**P**	**05 30 37.0**	**-1.4**
	comp=Z,101nm,1.1s,mb5.9						
MIAR				e	pP	05 30 49.2	-1.3

MIAR LR LR
comp=Z,2µm,20.0s,MS5.2
UTMT University of 61.72 343 *e*P **P 05 30 38.9 -1.0**
comp=Z,271nm,1.0s,mb6.3
UTMT *e* pP 05 30 50.0 -2.1
WCI Wyandotte Cave 62.88 346 *e*P **P 05 30 45.5 -2.2**
WCI *e* pP 05 30 57.7 -2.2
WCI pmax pmax
comp=Z,43nm,0.8s,mb5.6
WCI Wyandotte Cave 62.88 346 *e*P **P 05 30 45.5 -2.2**
comp=Z,43nm,0.8s,mb5.6
WCI *e* pP 05 30 57.6 -2.2
USIN University of 62.95 345 *e*P **P 05 30 46.2 -1.9**
comp=Z,125nm,0.9s,mb6.0
USIN *e* pP 05 30 58.3 -2.0
SIUC Southern Illin 63.11 343 *e*P **P 05 30 47.9 -1.2**
comp=Z,178nm,1.1s,mb6.1
MCWV Mont Chateau 63.13 352 *e*P **P 05 30 47.1 -2.2**
comp=Z,37nm,1.0s,mb5.5
MCWV *e* pP 05 30 59.7 -1.8
MCWV LR LR
comp=Z,5µm,22.0s,MS5.6
WMOK Wichita Mounta 63.59 334 *e*P **P 05 30 51.0 -1.4**
WMOK *e* pP 05 31 02.5 -2.2
WMOK pmax pmax
comp=Z,21nm,1.3s,mb5.0
WMOK Wichita Mounta 63.59 334 *e*P **P 05 30 51.0 -1.4**
comp=Z,21nm,1.3s,mb5.0
WMOK *e* pP 05 31 02.5 -2.2
FVM French Village 63.69 342 *e*P **P 05 30 51.7 -1.3**
FVM *e**SP sP 05 31 03.3 -6.7
FVM pmax pmax
comp=Z,181nm,1.2s,mb6.0
FVM French Village 63.69 342 *e*P **P 05 30 51.7 -1.3**
comp=Z,181nm,1.2s,mb6.0
FVM *es*P sP 05 31 03.3 -6.7
OLIL Olney 63.79 345 *e*P **P 05 30 51.6 -2.1**
comp=Z,98nm,1.3s,mb5.7
OLIL *e* pP 05 31 03.3 -2.6
BLO Bloomington 63.84 346 *e*P **P 05 30 51.5 -2.5**
BLO *e* pP 05 31 03.9 -2.3
BLO pmax pmax
comp=Z,33nm,0.8s,mb5.4
BLO Bloomington 63.84 346 *e*P **P 05 30 51.5 -2.5**
comp=Z,33nm,0.8s,mb5.4
BLO *e* pP 05 31 03.9 -2.3
SSPA Standing Stone 63.87 354 *e*P **P 05 30 53.9 -0.3**
comp=Z,59nm,1.3s,mb5.5
SSPA *e* pP 05 31 05.9 -0.4
CCM Cathedral Cave 63.98 342 P **P 05 30 53.2 -1.8**
CCM pmax pmax
comp=Z,92nm,1.1s,mb5.7
CCM Cathedral Cave 63.98 342 *e*P **P 05 30 54.0 -1.0**
comp=Z,92nm,1.1s,mb5.7
CCM LR LR
comp=Z,1µm,20.0s,MS5.1
ACSO Alum Creek Sta 64.17 349 *e*P **P 05 30 54.3 -1.8**
comp=Z,95nm,1.0s,mb5.8
ACSO ⇓*ep*P pP 05 31 00.6 -7.7
ACSO *es*P sP 05 31 06.8 -6.3
ACSO *ep*P pP 05 31 06.9 -1.4
ACSO LR LR
comp=Z,2µm,21.0s,MS5.3
SLM Saint Louis 64.25 343 *e*P **P 05 30 55.5 -1.1**
SLM pmax pmax
comp=Z,30nm,0.8s,mb5.4
SLM Saint Louis 64.25 343 *e*P **P 05 30 55.5 -1.1**
comp=Z,30nm,0.8s,mb5.4
AMTX Amarillo 64.93 332 P **P 05 30 59.3 -1.9**
comp=Z,54nm,1.4s,mb5.4
AMTX *e* pP 05 31 12.3 -1.1
AMTX LR LR
comp=Z,1µm,22.0s,MS5.0
BINY Binghamton 65.26 355 PFAKE 05 31 10.0 +6.8
BINY LR LR
comp=Z,2µm,21.0s,MS5.4
ERPA Erie 65.58 352 *e*P **P 05 31 04.4 -0.8**
comp=Z,89nm,1.1s,mb5.7
ERPA *e* pP 05 31 16.3 -1.2
ERPA LR LR
comp=Z,3µm,21.0s,MS5.5
MAIT Maitri 65.73 159 *e*P **P 05 31 03.7 -2.3**
319A Douglas 65.80 324 ⇑P **P 05 31 06.5 -0.4**
baz=66,SNR=7.6
319A ⇑S S 05 39 53.9 +3.3
baz=66
HDIL Hopedale 65.81 344 *e*P **P 05 31 04.7 -2.1**
comp=Z,66nm,1.1s,mb5.6
HDIL *e* pP 05 31 16.6 -2.4
318A Bisbee 66.23 323 ⇓P **P 05 31 09.3 -0.4**
baz=66,SNR=16
318A ⇓S S 05 39 58.4 +2.5
baz=66
219A White Tail Can 66.27 324 ⇓P **P 05 31 09.9 0.0**
baz=66
219A ⇓S S 05 39 59.7 +3.4
baz=66
AAM Ann Arbor 66.30 349 PFAKE 05 31 20.0 +10
AAM LR LR
comp=Z,3µm,20.0s,MS5.4
KSU1 Kansas State U 66.64 338 PFAKE 05 31 20.0 +7.9
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.4
218A Dragoon 66.67 324 ⇑P **P 05 31 13.0 +0.5**
baz=67
218A ⇓S S 05 40 03.8 +2.6
baz=67
Y22D IRIS PASSCAL I 66.69 327 ⇓P **P 05 31 13.3 +0.7**
baz=67
Y22D ⇑S S 05 40 04.7 +3.3
baz=67
119A Ashpeak Ranch, 66.88 325 ⇓P **P 05 31 14.5 +0.6**
baz=67
119A ⇑S S 05 40 07.5 +3.8
baz=67
NCB Newcomb 66.92 357 PFAKE 05 31 20.0 +6.2
NCB LR LR
comp=Z,3µm,20.0s,MS5.4
217A Green Valley 66.94 323 ⇓P **P 05 31 14.3 +0.1**
baz=67,SNR=12
217A ⇑S S 05 40 07.5 +3.1
baz=67
QSPA South Pole Qui 67.01 180 S S 05 40 03.9 -0.2
comp=Z,0.5nm,0.4s,baz=135,slow=16,SNR=2.8
QSPA South Pole Qui 67.01 180 PFAKE 05 31 20.0 +6.0
QSPA LR LR
comp=Z,2µm,19.0s,MS5.4
LBNH Lisbon 67.11 359 PFAKE 05 31 20.0 +5.0
LBNH LR LR
comp=Z,3µm,20.0s,MS5.5
118A Homack Ranch, 67.14 324 ⇓P **P 05 31 15.7 +0.2**
baz=67
118A ⇓S S 05 40 09.6 +2.8
baz=67
ANMO Albuquerque 67.17 328 P **P 05 31 15.2 -0.4**
comp=Z,3.5nm,0.7s,mb4.5,baz=152,slow=7.8,SNR=12
ANMO Albuquerque 67.17 328 *c i*P **P 05 31 15.5 -0.1**
ANMO Albuquerque 67.17 328 *e*P **P 05 31 15.9 +0.3**
comp=Z,125nm,1.8s,mb5.6
ANMO LR LR
comp=Z,3µm,19.0s,MS5.5
Z19A T-Link Ranch, 67.27 325 ⇑P **P 05 31 16.6 +0.3**
baz=67
Z19A ⇓S S 05 40 11.7 +3.3
baz=67
TUC Tucson 67.33 324 *e*P **P 05 31 18.2 +1.5**
TUC *e* pP 05 31 29.3 +0.3
TUC pmax pmax
comp=Z,44nm,1.4s,mb5.3
TUC Tucson 67.33 324 *e*P **P 05 31 18.2 +1.5**
comp=Z,50nm,1.4s,mb5.3
TUC *e* pP 05 31 29.3 +0.4
216A Three Points, 67.47 323 ⇑P **P 05 31 17.6 +0.1**
baz=68
216A ⇓S S 05 40 14.1 +3.3
baz=68
117A Oracle 67.50 324 ⇓P **P 05 31 17.9 +0.1**
baz=68,SNR=17
117A ⇓S S 05 40 13.9 +2.7
baz=68
CBKS Cedar Bluff 67.52 336 *e*P **P 05 31 17.1 -0.6**
CBKS *e* pP 05 31 28.5 -1.5
CBKS *e* 05 31 43.2
CBKS pmax pmax
comp=Z,184nm,1.2s,mb6.0
CBKS MLR MLR
comp=Z,2µm,22.0s,MS5.2
CBKS Cedar Bluff 67.52 336 *e*P **P 05 31 17.1 -0.6**
comp=Z,184nm,1.2s,mb6.0
CBKS *e* pP 05 31 28.5 -1.5
CBKS *e*PcP PcP 05 31 43.2 -1.5
CBKS LR LR
comp=Z,2µm,22.0s,MS5.2
Z18A Geronimo 67.52 325 ⇑P **P 05 31 18.1 +0.3**
baz=68
Z18A ⇑S S 05 40 15.1 +3.7
baz=68
Y19A Nutrioso 67.78 326 ⇓P **P 05 31 20.1 +0.6**
baz=68,SNR=24
Y19A ⇑S S 05 40 19.3 +4.8
baz=68
Z17A San Carlos Hig 67.92 324 ⇑P **P 05 31 19.9 -0.5**
baz=68
TAOE Nuku Hiva Isla 67.98 270 *e*P **P 05 31 22.3 +1.0**
comp=Z,2µm,23.9s
TAOE *e*S S 05 40 16.7 -1.1
comp=Z,23µm,27.2s
TAOE Nuku Hiva Isla 67.98 270 *e*LR LR 05 51 47.8
comp=Z,30µm,25.1s,baz=117
116A Eloy 68.03 323 ⇓P **P 05 31 21.0 0.0**
baz=68
116A ⇓S S 05 40 20.9 +3.4
baz=68
Y18A Canyon Day Jun 68.05 325 ⇑P **P 05 31 21.5 +0.3**
baz=68
Y18A ⇑S S 05 40 21.6 +3.8
baz=68
Y18A ⇓S S 05 40 21.7 +4.0
baz=68
SCIA State Center 68.12 342 *e*P **P 05 31 20.4 -1.0**
comp=Z,106nm,1.1s,mb5.8
SCIA *es*P sP 05 31 32.1 -6.4
PKME Peaks-Kenny Pk 68.13 1 PFAKE 05 31 30.0 +8.6
PKME LR LR
comp=Z,2µm,20.0s,MS5.4
X19A St. Johns 68.17 326 ⇓P **P 05 31 22.1 +0.2**
baz=68
X19A ⇑S S 05 40 23.1 +4.0
baz=68
214A Organ Pipe Nat 68.19 322 ⇑P **P 05 31 22.2 0.0**
baz=68,SNR=8.3
214A ⇓S S 05 40 23.0 +3.5
baz=68
JFWS Jewell Farm 68.27 344 *e*P **P 05 31 20.4 -1.9**
JFWS *e**SP sP 05 31 32.9 -6.5
JFWS pmax pmax
comp=Z,111nm,1.3s,mb5.7
JFWS MLR MLR
comp=Z,2µm,19.0s,MS5.4
JFWS Jewell Farm 68.27 344 *e*P **P 05 31 20.4 -2.0**
comp=Z,111nm,1.3s,mb5.7
JFWS *es*P sP 05 31 32.9 -6.5
JFWS LR LR
comp=Z,2µm,19.0s,MS5.4
Y17A Roosevelt 68.42 324 ⇓P **P 05 31 24.0 +0.5**
baz=69,SNR=25
115A Sonoran Desert 68.42 323 ⇓P **P 05 31 23.9 +0.3**
baz=69
Z16A Peralta Trail, 68.46 324 ⇓P **P 05 31 24.2 +0.4**
baz=69,SNR=12
X18A Snowflake 68.59 326 ⇓P **P 05 31 25.4 +0.8**
baz=69,SNR=6.6
W19A Sanders 68.75 326 ⇑P **P 05 31 25.8 +0.2**
baz=69
Z15A Gila River Ind 68.83 323 ⇓P **P 05 31 26.0 0.0**
baz=69
Y16A Circle Bar Ran 68.90 324 ⇑P **P 05 31 27.1 +0.6**
baz=69,SNR=6.0
GLMI Grayling 68.91 349 *e*P **P 05 31 25.1 -1.2**
comp=Z,102nm,1.0s,mb5.7
GLMI *e* pP 05 31 36.8 -1.8
GLMI LR LR
comp=Z,3µm,19.0s,MS5.5
W18A Petrified Fore 68.94 326 ⇑P **P 05 31 26.8 +0.1**
baz=69
SDCO Great Sand Dun 69.01 331 *e*P **P 05 31 27.3 +0.3**
comp=Z,77nm,1.2s,mb5.5
SDCO *e* pP 05 31 39.4 0.0
SDCO LR LR
comp=Z,1µm,19.0s,MS5.1
V19A Window Rock 69.06 327 ⇑P **P 05 31 27.7 +0.2**
baz=69
X16A Lo Mia Camp, P 69.29 325 ⇑P **P 05 31 29.7 +0.8**
baz=70,SNR=16
Z14A Wintersburg 69.32 323 ⇑P **P 05 31 29.2 +0.1**
baz=70
113A Mohawk Valley, 69.34 322 ⇓P **P 05 31 29.3 0.0**
baz=70,SNR=7.6
W17A Winslow 69.41 325 ⇑P **P 05 31 29.8 +0.2**
baz=70
Y15A Casa Rosa Ranc 69.42 324 ⇓P **P 05 31 30.0 +0.2**
baz=70,SNR=9.9
V18A Ganado 69.50 326 ⇑P **P 05 31 30.0 -0.1**
baz=70
112A Yuma 69.63 321 ⇑P **P 05 31 30.7 -0.4**
baz=70
X15A Humboldt 69.77 324 ⇓P **P 05 31 32.1 +0.3**
baz=70,SNR=21
Y14A Wickenburg 69.78 323 ⇓P **P 05 31 32.1 +0.2**
baz=70,SNR=9.8
W16A Flagstaff 69.86 325 ⇓P **P 05 31 32.9 +0.5**
baz=70,SNR=13
T19A Beclabito 69.92 328 ⇓P **P 05 31 33.0 +0.3**
baz=70,SNR=12
MVCO Mesa Verde 69.97 328 ⇓P **P 05 31 33.1 +0.1**
baz=70
MVCO Mesa Verde 69.97 328 *e*P **P 05 31 32.7 -0.4**
comp=Z,83nm,1.3s,mb5.5
MVCO *ep*P pP 05 31 38.0 -7.4
MVCO *e* pP 05 31 45.4 0.0
MVCO LR LR
comp=Z,2µm,20.0s,MS5.5
U18A Rough Rock, Ch 70.02 327 ⇓P **P 05 31 33.4 0.0**
baz=70,SNR=9.8
WUAZ Wupatki 70.09 325 ⇓P **P 05 31 34.3 +0.4**
baz=70
WUAZ Wupatki 70.09 325 *e*P **P 05 31 33.9 +0.1**
comp=Z,110nm,1.2s,mb5.7
X14A Yan 70.11 324 ⇑P **P 05 31 34.6 +0.6**
baz=70
Y13A Salome 70.14 323 ⇑P **P 05 31 34.4 +0.2**
baz=70
GLA Glamis 70.15 321 ⇓P **P 05 31 34.1 -0.1**
baz=70
GLA Glamis 70.15 321 *e*P **P 05 31 34.4 +0.2**
GLA pmax pmax
comp=Z,18nm,1.1s,mb4.9
GLA Glamis 70.15 321 *e*P **P 05 31 34.4 +0.1**
comp=Z,18nm,1.1s,mb4.9
LIC Lamto 70.20 74 ⇑*i*P **P 05 31 35.2 +0.2**
comp=Z,146nm,1.3s,mb5.5
LIC Lamto 70.20 74 *e*P **P 05 31 35.2 +0.2**
comp=Z,145nm,1.3s,mb5.8
LIC Lamto 70.20 74 ⇑*i*P **P 05 31 35.2 +0.2**
comp=Z,73nm,1.3s,mb5.5
OGNE Ogallala 70.24 335 *e*P **P 05 31 34.8 +0.1**
comp=Z,94nm,1.2s,mb5.6
OGNE *es*P sP 05 31 46.3 -5.4
OGNE LR LR
comp=Z,2µm,20.0s,MS5.3
W15A Williams 70.31 325 ⇓P **P 05 31 35.6 +0.4**
baz=70,SNR=8.2
TIC Toumodi 70.39 73 *e*P **P 05 31 36.6 +0.4**
comp=Z,251nm,1.1s,mb6.1
U16A Tuba City 70.45 326 ⇑P **P 05 31 36.8 +0.8**
baz=71,SNR=13
R21A Cimarron 70.45 330 ⇑P **P 05 31 36.4 +0.5**
baz=71,SNR=16
Y12C Blythe 70.49 322 ⇑P **P 05 31 36.6 +0.3**
baz=71,SNR=6.1
KIC Kosan Boka 70.51 74 *e*P **P 05 31 37.3 +0.4**
comp=Z,304nm,0.9s,mb6.2
DBIC Dimbokro 70.55 74 P **P 05 31 37.1 -0.1**
comp=Z,78nm,0.9s,mb5.6,baz=212,slow=5.5,SNR=42
DBIC S S 05 40 53.4 +5.3
comp=Z,3.0nm,0.9s,baz=130,slow=23,SNR=1.8
DBIC LR LR 06 03 20.6
comp=Z,11µm,18.1s,MS6.2,baz=209,slow=36
DBIC Dimbokro 70.55 74 *e*P **P 05 31 37.2 +0.1**
DBIC *e**PP pP 05 31 45.6 -3.9
DBIC *e**SP sP 05 31 49.2 -5.1
DBIC pmax pmax
comp=Z,92nm,1.0s
DBIC MLR MLR
comp=Z,12µm,19.0s
DBIC Dimbokro 70.55 74 *e*P **P 05 31 37.2 0.0**
comp=Z,92nm,1.0s,mb5.7
DBIC *ep*P pP 05 31 45.6 -3.9
DBIC *es*P sP 05 31 49.2 -5.1
DBIC LR LR
comp=Z,12µm,19.0s,MS6.2
U17A Shonto 70.56 327 ⇓P **P 05 31 37.0 +0.4**
baz=71,SNR=11
T18A Mexican Hat 70.58 327 ⇑P **P 05 31 36.8 0.0**
baz=71,SNR=20
DVTC Desert V Tower 70.61 320 ⇓P **P 05 31 36.9 -0.1**
baz=71
SWSC Sam W. Stewart 70.63 321 ⇓P **P 05 31 36.9 -0.2**
baz=71
S19A Harvey Farm, M 70.70 328 ⇑P **P 05 31 37.8 +0.3**
baz=71
X13A Yucca 70.72 323 ⇑P **P 05 31 38.0 +0.4**
baz=71,SNR=13
V15A Kaibab Nationa 70.74 325 ⇑P **P 05 31 38.2 +0.4**
baz=71,SNR=23
ISCO Idaho Springs 70.75 332 *e*P **P 05 31 38.4 +0.7**
ISCO *e* pP 05 31 49.9 -0.2
ISCO pmax pmax
comp=Z,39nm,1.2s,mb5.2
ISCO MLR MLR
comp=Z,936nm,20.0s,MS5.0
ISCO Idaho Springs 70.75 332 *e*P **P 05 31 38.4 +0.6**
comp=Z,38nm,1.2s,mb5.2
ISCO *e* pP 05 31 49.9 -0.2
ISCO LR LR
comp=Z,936nm,20.0s,MS5.0
W14A Seligman 70.77 324 ⇓P **P 05 31 38.6 +0.6**
baz=71,SNR=9.3
ECSD EROS,Sioux Fal 70.80 340 *e*P **P 05 31 35.8 -2.2**
comp=Z,93nm,1.2s,mb5.6
ECSD LR LR
comp=Z,2µm,19.0s,MS5.3
T17A Navajo Res., N 70.94 327 ⇓P **P 05 31 40.0 +1.0**
baz=71,SNR=17
BC3 Big Chuckw Mtn 70.95 321 ⇓P **P 05 31 39.4 +0.3**
baz=71
MONP Monument Peak 70.96 320 ⇓P **P 05 31 39.3 +0.1**
baz=71
COWI Conover 71.02 346 *e*P **P 05 31 37.7 -1.5**
comp=Z,30nm,1.0s,mb5.2
COWI *e* pP 05 31 50.4 -1.2
COWI LR LR
comp=Z,2µm,19.0s,MS5.3
S18A Hurst Farm, Bl 71.08 328 ⇑P **P 05 31 40.6 +0.8**
baz=71,SNR=43
V14A Boquillas Ranc 71.10 324 ⇑P **P 05 31 40.7 +0.8**
baz=71,SNR=22
W13A Hualapai Mount 71.12 323 ⇓P **P 05 31 40.2 +0.1**
baz=71,SNR=14
IRM Iron Mountain 71.14 322 ⇓P **P 05 31 40.4 +0.2**
baz=71
R19A Curley Farm, L 71.19 329 ⇑P **P 05 31 40.9 +0.4**
baz=71,SNR=6.4
Q20A Ridgley Place, 71.27 330 ⇓P **P 05 31 41.0 +0.1**
baz=72
U15A North Rim 71.27 325 ⇑P **P 05 31 42.4 +1.4**
baz=71,SNR=20
T16A Glen Canyon Da 71.29 326 ⇑P **P 05 31 41.5 +0.5**
baz=72
109C Camp Elliot, M 71.37 320 ⇓P **P 05 31 41.9 +0.2**
baz=72
S17A Black Ridge (B 71.43 327 ⇓P **P 05 31 42.7 +0.8**
baz=72,SNR=6.0
PFO Pinyon Flat Ob 71.50 321 ⇑P **P 05 31 42.3 -0.1**
baz=72
PFO Pinyon Flat Ob 71.50 321 *e*P **P 05 31 43.9 +1.5**
PFO *e* pP 05 31 55.6 +0.8
PFO pmax pmax
comp=Z,27nm,1.1s,mb5.1
PFO MLR MLR
comp=Z,3µm,21.0s,MS5.5
PFO Pinyon Flat Ob 71.50 321 *e*P **P 05 31 43.9 +1.5**
comp=Z,27nm,1.1s,mb5.1
PFO *e* pP 05 31 55.5 +0.8
PFO LR LR
comp=Z,3µm,21.0s,MS5.5
BELC Belle Mtn. 71.51 321 ⇑P **P 05 31 42.6 +0.2**
baz=72
R18A Canyonlands Na 71.57 328 ⇑P **P 05 31 43.1 +0.3**
baz=72,SNR=10
TBI Tubuai 71.64 252 *e*P **P 05 31 49.2 +5.6**
comp=Z,565nm,25.9s
TBI *e*S S 05 41 01.6 +1.1
comp=Z,2µm,28.0s
TBI Tubuai 71.64 252 *e*LR LR 05 53 42.2
comp=Z,8µm,23.0s,baz=109
Q19A Hogan Spring (71.72 329 ⇓P **P 05 31 44.0 +0.3**
baz=72,SNR=11
U14A Mt Trumbull 71.73 325 ⇓P **P 05 31 44.7 +0.9**
baz=72,SNR=31
V13A Grand Canyon W 71.74 324 ⇑P **P 05 31 43.9 +0.1**
baz=72,SNR=14
T15A Red Dirt Ranch 71.77 326 ⇓P **P 05 31 44.4 +0.5**
baz=72,SNR=18
LDFC Landfair 71.79 323 *e*P **P 05 31 43.7 -0.4**
comp=Z,127nm,1.4s,mb5.7
W12A Cal Nev Ari 71.82 323 ⇓P **P 05 31 44.2 -0.1**
baz=72
GMRC Granite Mounta 71.88 322 ⇑P **P 05 31 45.4 +0.7**
baz=72
S16A Weppner Ranch, 71.90 327 ⇓P **P 05 31 44.9 +0.1**
baz=72,SNR=10
O21A Pagoda 71.91 331 ⇓P **P 05 31 45.2 +0.5**
baz=72
MURC Murrieta 71.92 320 ⇑P **P 05 31 45.8 +0.8**
baz=72
PHWY Pilot Hill 71.93 333 *e*P **P 05 31 44.9 +0.1**
comp=Z,62nm,1.3s,mb5.4
PHWY ⇓*ep*P pP 05 31 50.1 -7.1
PHWY *e* pP 05 31 56.9 -0.3
N22A Wattenberg Ran 71.94 332 ⇑P **P 05 31 45.6 +0.7**
baz=72,SNR=7.8
R17A Hanksville Air 72.00 328 ⇓P **P 05 31 45.6 +0.3**
baz=72,SNR=27
V12A Nelson 72.12 323 ⇓P **P 05 31 46.6 +0.5**
baz=72,SNR=17
P19A Cripple Cowboy 72.13 330 ⇓P **P 05 31 46.7 +0.6**
baz=72,SNR=25
U13A Pakoon Wash 72.15 324 ⇑P **P 05 31 46.6 +0.4**
baz=72,SNR=11
T14A Hurricane 72.16 325 ⇓P **P 05 31 47.0 +0.7**
baz=72,SNR=9.5
O20A White River Ci 72.19 330 ⇓P **P 05 31 46.3 -0.1**
baz=72,SNR=20
BBRC Big Bear Sol-O 72.23 321 ⇓P **P 05 31 46.9 +0.1**
baz=72
Q18A Rafter H Ranch 72.25 329 ⇑P **P 05 31 47.1 +0.3**
baz=72,SNR=7.8
S15A Panguitch 72.25 326 ⇑P **P 05 31 47.3 +0.5**
baz=72
R16A Teasdale 72.28 327 ⇓P **P 05 31 47.4 +0.4**
baz=72
SCI San Clemente I 72.30 319 ⇑P **P 05 31 47.2 -0.1**
baz=72
HEC Hector,Ludlow 72.30 322 ⇑P **P 05 31 47.4 +0.2**
baz=72
N21A Black Mountain 72.37 331 ⇓P **P 05 31 48.0 +0.5**
baz=73
SRU San Rafael 72.45 328 ⇑P **P 05 31 47.9 -0.1**
baz=73
U12A Valley of Fire 72.47 324 ⇓P **P 05 31 48.4 +0.3**
baz=73
M22A Cedar Creek Ra 72.49 332 ⇓P **P 05 31 48.3 +0.1**
baz=73
TUQ Turquoise Moun 72.50 322 ⇓P **P 05 31 48.5 +0.1**
baz=73
V11A Goodsprings 72.52 323 ⇓P **P 05 31 48.6 +0.1**
baz=73,SNR=9.5
T13A Saint George 72.57 325 ⇓P **P 05 31 49.2 +0.4**
baz=73,SNR=11
Q16A Castle Valley 72.61 328 ⇑P **P 05 31 49.1 +0.2**
baz=73,SNR=13
R15A Junction 72.62 327 ⇑P **P 05 31 49.8 +0.7**
baz=73,SNR=8.8
BFSC Mount Baldy St 72.64 320 ⇑P **P 05 31 49.3 0.0**
baz=73
FMP Fort Macarthur 72.65 320 ⇑P **P 05 31 49.2 -0.2**
baz=73
RRX Edison Barstow 72.72 321 ⇓P **P 05 31 49.6 -0.1**
baz=73
P18A Preston Nutter 72.72 329 ⇑P **P 05 31 50.3 +0.7**
baz=73,SNR=15

N20A Spence Gulch, 72.76 331 ⇑P P 05 31 50.4 +0.7
baz=73
T12A Moapa 72.78 324 ⇓P P 05 31 50.2 +0.1
baz=73
MVU Marysvale 72.81 327 PFAKE 05 32 00.0 +10
MVU LR LR
comp=Z,3μm,20.0s,MS5.5
P17A Butcher Ranch, 72.83 328 ⇑P P 05 31 50.6 +0.3
baz=73,SNR=9.3
MWC Mount Wilson 72.87 320 eP P 05 31 50.5 -0.1
MWC e pP 05 32 03.8 +0.8
MWC pmax pmax
comp=Z,56nm,1.3s,mb5.3
MWC Mount Wilson 72.87 320 eP P 05 31 50.5 -0.1
comp=Z,56nm,1.3s,mb5.3
MWC e pP 05 32 03.8 +0.8
GSC Goldstone 72.91 322 ⇓P P 05 31 50.7 -0.1
baz=73
GSC Goldstone 72.91 322 eP P 05 31 52.1 +1.3
GSC pmax pmax
comp=Z,39nm,1.4s,mb5.1
GSC Goldstone 72.91 322 eP P 05 31 52.1 +1.3
comp=Z,38nm,1.4s,mb5.1
PASC Pasadena Art C 72.91 320 P P 05 31 52.6 +1.7
comp=Z,282nm,1.3s,mb6.0
U11A Corn Creek 72.92 323 ⇑P P 05 31 51.1 +0.2
baz=73
L22A Ellis Ranch, M 72.94 333 ⇑P P 05 31 51.7 +0.8
baz=73
S13A Holt Ranch, En 72.96 325 ⇑P P 05 31 51.6 +0.6
baz=73,SNR=26
SHOC Shoshone 73.04 322 ⇑P P 05 31 51.6 +0.1
baz=73
DECC Green Verdugo 73.05 320 ⇓P P 05 31 52.2 +0.5
baz=73
R14A James Farms, M 73.07 326 ⇑P P 05 31 52.4 +0.7
baz=73
SNCC San Nicolas Is 73.07 319 ⇓P P 05 31 52.4 +0.5
baz=73
O18A Roosevelt 73.11 329 ⇑P P 05 31 52.3 +0.5
baz=73
N19A John Jarvie Ra 73.22 330 ⇓P P 05 31 52.5 0.0
baz=73,SNR=12
M20A Sweetwater, Wa 73.26 331 ⇓P P 05 31 52.6 -0.1
baz=74,SNR=7.6
Q15A Fillmore 73.28 327 ⇓P P 05 31 53.8 +0.9
baz=74,SNR=7.4
L21A Rawlins 73.28 332 ⇑P P 05 31 52.4 -0.4
baz=74,SNR=8.4
EDW2 Edwards Air Fo 73.29 321 ⇑P P 05 31 53.1 0.0
baz=73
EYMN Ely 73.30 345 eP P 05 31 51.7 -1.1
comp=Z,65nm,1.1s,mb5.5
EYMN epP pP 05 31 56.6 -8.6
EYMN e pP 05 32 03.3 -1.9
EYMN LR LR
comp=Z,2μm,19.0s,MS5.5
P16A Fountain Green 73.39 328 ⇓P P 05 31 54.1 +0.5
baz=74
BLG Laguna Peak 73.39 319 ⇓P P 05 31 53.8 +0.1
baz=74
O17A Robinson Place 73.40 329 ⇓P P 05 31 54.4 +0.8
baz=74,SNR=41
T11A Corn Creek, Al 73.43 324 ⇓P P 05 31 54.3 +0.4
baz=74,SNR=25
U10A Ash Meadows, A 73.44 323 ⇑P P 05 31 54.5 +0.6
baz=74,SNR=7.8
R13A O'Grain Ranch, 73.47 325 ⇑P P 05 31 54.5 +0.5
baz=74,SNR=12
S12A Delamar Landin 73.50 325 ⇑P P 05 31 54.9 +0.7
baz=74
N18A Larsen Ranch, 73.52 330 ⇓P P 05 31 54.4 +0.1
baz=74
OSI Osito Adit 73.53 320 ⇑P P 05 31 54.4 -0.1
baz=74
LRMC Laurel Mountai 73.54 321 ⇓P P 05 31 54.7 +0.2
baz=74
PPT Papeete 73.59 258 eP P 05 31 57.2 +1.9
comp=Z,635nm,24.3s
PPT eS S 05 41 23.9 +1.1
comp=Z,4μm,25.5s
PPT Papeete 73.59 258 eLR LR 05 54 28.2
comp=Z,13μm,25.5s,baz=107
PPT Papeete 73.59 258 LR LR 05 55 46.6
comp=Z,4μm,21.5s,MS5.7,baz=137,slow=29
BSC Santa Cruz Isl 73.65 319 ⇑P P 05 31 55.7 +0.5
baz=74
P15A Leamington 73.66 327 ⇓P P 05 31 55.3 +0.2
baz=74
M19A Rock Springs 73.70 331 ⇓P P 05 31 55.5 +0.1
baz=74
Q14A Sevier Lake (B 73.72 326 ⇓P P 05 31 56.5 +1.0
baz=74,SNR=13
RSSD Black Hills 73.72 335 eP P 05 31 54.9 -0.5
RSSD e pP 05 32 07.7 -0.1
RSSD pmax pmax
comp=Z,30nm,1.0s,mb5.2
RSSD Black Hills 73.72 335 eP P 05 31 54.9 -0.5
comp=Z,30nm,1.0s,mb5.2
RSSD e pP 05 32 07.7 -0.2
L20A Wamsutter 73.74 332 ⇑P P 05 31 55.7 +0.2
baz=74,SNR=8.4
O16A Springville 73.77 328 ⇓P P 05 31 56.0 +0.2
baz=74
FURC Furnace Creek, 73.78 323 ⇓P P 05 31 56.0 +0.1
baz=74
TPNV Topopah Spring 73.78 323 ⇑P P 05 31 56.4 +0.5
baz=74
TPNV Topopah Spring 73.78 323 eP P 05 31 57.0 +1.1
TPNV e pP 05 32 09.3 +1.0
TPNV pmax pmax
comp=Z,76nm,1.3s,mb5.5
TPNV MLR MLR
comp=Z,1μm,20.0s,MS5.2
TPNV Topopah Spring 73.78 323 eP P 05 31 57.0 +1.1
comp=Z,76nm,1.3s,mb5.5
TPNV e pP 05 32 09.3 +1.0
TPNV LR LR
comp=Z,1μm,20.0s,MS5.2
MPMC Manual Prospec 73.84 322 ⇑P P 05 31 56.3 +0.1
baz=74
CMLA Cha da Macela 73.87 36 PFAKE 05 32 10.0 +14
CMLA LR LR
comp=Z,4μm,20.0s,MS5.7
R12A Pony Springs, 73.91 325 ⇑P P 05 31 57.3 +0.7
baz=74,SNR=21
SBA Scott Base 73.92 191 eP P 05 31 57.3 +1.1
SBA pmax pmax
comp=Z,35nm,1.2s,mb5.2
SBA Scott Base 73.92 191 eP P 05 31 57.2 +1.0
comp=Z,35nm,1.2s,mb5.2
ARVC Arvin 73.95 320 ⇓P P 05 31 56.9 -0.1
baz=74
SBC Santa Barbara 74.01 319 ⇑P P 05 31 56.9 -0.4
baz=74
S11A Rachel 74.01 324 ⇑P P 05 31 58.0 +0.8
baz=74
N17A Moffit Pass 74.03 329 ⇑P P 05 31 57.5 +0.2
baz=74,SNR=27
DAC Darwin (Calif) 74.05 322 PFAKE 05 32 10.0 +12
DAC LR LR
comp=Z,2μm,22.0s,MS5.4
M18A Lyman 74.06 330 ⇓P P 05 31 57.4 0.0
baz=74
P14A Drum Mountains 74.07 327 ⇓P P 05 31 58.4 +0.9
baz=74,SNR=17
Q13A Wheeler Ranch, 74.07 326 ⇓P P 05 31 58.0 +0.5
baz=74,SNR=9.1
ISA Isabella 74.12 321 ⇑P P 05 31 58.1 +0.2
baz=74
ISA Isabella 74.12 321 eP P 05 31 57.6 -0.3
ISA e pP 05 32 11.0 +0.6
ISA pmax pmax
comp=Z,43nm,1.3s,mb5.2
ISA Isabella 74.12 321 eP P 05 31 57.6 -0.3
comp=Z,43nm,1.3s,mb5.2
ISA e pP 05 32 11.0 +0.6
K20A Yellowstone Ra 74.27 332 ⇑P P 05 31 59.1 +0.4
baz=74,SNR=9.8
N16A Rees Ranch, Co 74.27 329 ⇓P P 05 31 59.4 +0.7
baz=74
O15A The Old Anders 74.30 328 ⇓P P 05 31 59.4 +0.5
baz=74
M17A Scullys Gap (B 74.37 330 ⇑P P 05 31 59.3 +0.1
baz=75
PKM Peak Mountain 74.38 320 ⇓P P 05 31 59.8 +0.3
baz=74

DUG Dugway 74.40 328 ⇑P P 05 32 00.3 +0.8
baz=75
DUG Dugway 74.40 328 eP P 05 31 59.6 +0.1
DUG pmax pmax
comp=Z,55nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,1μm,19.0s,MS5.3
DUG Dugway 74.40 328 eP P 05 31 59.6 +0.2
comp=Z,55nm,1.1s,mb5.4
DUG LR LR
comp=Z,1μm,19.0s,MS5.3
L18A Fontenelle, Gr 74.43 330 ⇑P P 05 32 00.5 +0.9
baz=75,SNR=15
GRAC Grapevine Rang 74.44 323 ⇓P P 05 32 00.2 +0.4
baz=75
CWC Cottonwood Cre 74.44 322 ⇑P P 05 32 00.1 +0.3
baz=75
R11A Troy Canyon, C 74.44 325 ⇓P P 05 32 00.5 +0.8
baz=75,SNR=19
P13A Bates Ranch, G 74.45 326 ⇑P P 05 32 01.7 +2.0
baz=75,SNR=14
Q12A Willow Creek R 74.56 326 ⇓P P 05 32 00.6 +0.2
baz=75,SNR=6.2
VES Vestal, Richgr 74.60 321 ⇑P P 05 32 00.5 -0.2
baz=75
K19A Absolon Red Bu 74.62 332 ⇑P P 05 32 01.2 +0.6
baz=75,SNR=7.1
S10A Tonopah Range, 74.68 324 ⇓P P 05 32 01.4 +0.3
baz=75,SNR=16
M16A Huntsville 74.69 329 ⇓P P 05 32 01.3 +0.2
baz=75
AGMN Agassiz Refuge 74.73 343 eP P 05 31 59.6 -1.5
comp=Z,71nm,1.1s,mb5.5
AGMN LR LR
comp=Z,2μm,19.0s,MS5.4
SMMC Simmler 74.77 320 ⇓P P 05 32 01.7 0.0
baz=75
R10A Warm Springs 74.78 324 ⇓P P 05 32 02.9 +1.2
baz=75,SNR=9.3
Q11A Duckwater 74.84 325 ⇓P P 05 32 02.4 +0.3
baz=75,SNR=20
S09A Goldfield 74.88 323 ⇑P P 05 32 02.9 +0.6
baz=75,SNR=13
PDAR Pinedale Array 74.89 331 P P 05 32 02.1 -0.1
comp=Z,1.5nm,0.8s,baz=108,slow=8.0,SNR=10
PDAR LR LR 06 04 03.9
comp=Z,838nm,18.7s,MS5.1,baz=149,slow=35
BW06 Boulder Array 74.89 331 ⇑P P 05 32 02.0 -0.2
baz=75
BW06 Boulder Array 74.89 331 PFAKE 05 32 10.0 +7.8
BW06 LR LR
comp=Z,948nm,19.0s,MS5.1
P12A McGill 74.92 326 ⇑P P 05 32 02.9 +0.5
baz=75
O13A Hicks Ranch, I 74.94 327 ⇓P P 05 32 02.7 +0.1
baz=75
VNDA Vanda 74.95 190 P P 05 32 01.7 -0.5
comp=Z,6.9nm,0.9s,mb4.6,baz=149,slow=5.9,SNR=6.9
VNDA LR LR 06 04 02.1
comp=Z,3μm,18.8s,MS5.5,baz=136,slow=35
VNDA Vanda 74.95 190 eP P 05 32 02.6 +0.4
VNDA pmax pmax
comp=Z,21nm,1.1s
VNDA Vanda 74.95 190 eP P 05 32 02.6 +0.4
comp=Z,21nm,1.1s,mb5.0
L17A Cokeville 74.95 330 ⇑P P 05 32 02.2 -0.4
baz=75,SNR=9.5
TIN Tinemaha 74.96 322 ⇓P P 05 32 02.6 -0.2
baz=75
K18A Toltan Ranch, 75.00 331 ⇑P P 05 32 02.5 -0.3
baz=75,SNR=17
N14A Grayback Hills 75.09 328 ⇑P P 05 32 03.3 -0.1
baz=75,SNR=9.2
TPH Tonopah 75.13 323 eP P 05 32 04.3 +0.6
TPH pmax pmax
comp=Z,29nm,1.1s,mb5.1
TPH MLR MLR
comp=Z,1μm,19.0s,MS5.2
TPH Tonopah 75.13 323 eP P 05 32 04.3 +0.6
comp=Z,29nm,1.1s,mb5.1
TPH LR LR
comp=Z,1μm,19.0s,MS5.2
L16A Fish Haven 75.15 330 ⇓P P 05 32 03.6 -0.1
baz=75
R09A Tonopah 75.17 324 ⇓P P 05 32 03.9 0.0
baz=75,SNR=12
M15A Larsen Ranch, 75.20 329 ⇑P P 05 32 04.1 +0.1
baz=75,SNR=21
Q10A Clear Creek Ra 75.23 324 ⇑P P 05 32 04.9 +0.7
baz=75,SNR=8.9
P11A Circle Ranch, 75.42 325 ⇓P P 05 32 05.2 -0.2
baz=76
SYO Syowa Base 75.42 160⇑eP P 05 32 03.6 -1.4
O12A Currie 75.43 326 ⇑P P 05 32 05.5 +0.1
baz=76,SNR=15
J18A Kendall Valley 75.45 331 ⇓P P 05 32 05.3 -0.1
baz=76
K17A Gardner Place, 75.49 330 ⇓P P 05 32 05.8 +0.1
baz=76,SNR=26
AHID Auburn Hatcher 75.58 330 eP P 05 32 05.7 -0.5
comp=Z,86nm,1.1s,mb5.6
AHID LR LR
comp=Z,3μm,21.0s,MS5.5
L15A Malad City 75.59 329 ⇓P P 05 32 06.0 -0.3
baz=76,SNR=19
Q09A Carvers 75.65 324 ⇑P P 05 32 07.0 +0.3
baz=76
M14A Sheep Mountain 75.66 328 ⇓P P 05 32 06.6 -0.1
baz=76,SNR=13
MLAC Mammoth Lakes 75.71 322 ⇓P P 05 32 06.9 -0.2
baz=76
I18A Diamond G Ranc 75.75 332 ⇑P P 05 32 07.3 +0.2
baz=76,SNR=8.2
O11A Cowboy Ranch, 75.79 326 ⇓P P 05 32 07.9 +0.5
baz=76
R08A Mina 75.81 323 ⇑P P 05 32 08.0 +0.4
baz=76
P10A Eureka 75.84 325 ⇑P P 05 32 07.9 +0.2
baz=76
K16A Soda Springs 75.86 330 ⇑P P 05 32 07.9 +0.1
baz=76,SNR=30
J17A Brown Place, J 75.88 331 ⇓P P 05 32 08.4 +0.5
baz=76,SNR=14
REDW Red Top Meadow 75.94 331 eP P 05 32 08.8 +0.5
comp=Z,86nm,1.4s,mb5.5
M13A Montello 75.96 328 ⇑P P 05 32 08.0 -0.3
baz=76
SNOW Snow King Moun 75.97 331 eP P 05 32 08.4 0.0
comp=Z,41nm,1.0s,mb5.3
NVAR Mina Array Bea 75.98 323 P P 05 32 08.8 +0.2
comp=Z,4.2nm,0.8s,mb4.4,baz=150,slow=3.8,SNR=26
NVAR Mina Array Bea 75.98 323 P P 05 32 08.8 +0.2
N12A Clover Valley, 76.01 327 ⇓P P 05 32 08.6 -0.1
baz=76
L14A Malta 76.02 329 ⇓P P 05 32 08.4 -0.3
baz=76,SNR=16
LOHW Long Hollow 76.03 331 eP P 05 32 08.4 -0.3
comp=Z,43nm,1.1s,mb5.3
ELK Elko 76.03 327 eP P 05 32 08.9 +0.1
ELK pmax pmax
comp=Z,26nm,1.0s
ELK MLR MLR
comp=Z,3μm,20.0s
ELK Elko 76.03 327 eP P 05 32 08.9 +0.1
comp=Z,26nm,1.0s,mb5.1
ELK LR LR
comp=Z,3μm,20.0s,MS5.7
Q08A Gabbs 76.08 324 ⇓P P 05 32 09.3 +0.1
baz=76,SNR=12
TPAW Teton Pass 76.08 331 eP P 05 32 09.6 +0.5
comp=Z,57nm,1.1s,mb5.4
K15A Arbon 76.18 329 ⇑P P 05 32 09.7 +0.1
baz=76
MOOW Moose Ponds 76.20 331 eP P 05 32 09.5 -0.1
comp=Z,23nm,1.2s,mb5.0
J16A Bone 76.21 330 ⇓P P 05 32 09.8 0.0
baz=76
I17A Pilgram Creek 76.26 331 ⇑P P 05 32 10.2 +0.2
baz=76,SNR=10
DCID1 Drake Creek 76.27 331 eP P 05 32 10.5 +0.4
comp=Z,76nm,1.3s,mb5.5
DCID1 esP sP 05 32 22.7 -4.6
N11A Elko Archery C 76.34 326 ⇓P P 05 32 10.7 +0.1
baz=76
O10A Cortez Mining, 76.35 325 ⇓P P 05 32 10.8 +0.2
baz=76
M12A Wells 76.37 327 ⇓P P 05 32 10.9 +0.1
baz=76,SNR=7.0

K14A Jones Ranch, D 76.38 329 ⇑P P 05 32 10.3 -0.4
baz=77
IMW Indian Meadow 76.40 331 eP P 05 32 10.9 +0.1
comp=Z,55nm,1.4s,mb5.3
L13A Double Diamond 76.40 328 ⇓P P 05 32 10.7 -0.2
baz=77,SNR=15
ULM Lac du Bonnet 76.51 344 P P 05 32 10.3 -1.0
comp=Z,6.9nm,0.6s,mb4.8,baz=158,slow=6.5,SNR=9.7
ULM Lac du Bonnet 76.51 344 eP P 05 32 09.8 -1.6
comp=Z,59nm,1.3s,mb5.4
Q07A Schurz 76.61 323 ⇓P P 05 32 12.0 -0.1
baz=77
SAO San Andreas Ge 76.62 320 eP P 05 32 09.5 -2.8
SAO pmax pmax
comp=Z,15nm,1.1s,mb4.8
SAO MLR MLR
comp=Z,1μm,21.0s,MS5.3
SAO San Andreas Ge 76.62 320 eP P 05 32 09.5 -2.8
comp=Z,16nm,1.1s,mb4.8
SAO LR LR
comp=Z,1μm,21.0s,MS5.3
O09A Fish Creek Ran 76.62 325 ⇑P P 05 32 12.2 +0.1
baz=77,SNR=5.4
I16A Newdale 76.63 331 ⇓P P 05 32 12.5 +0.4
baz=77
H17A Grant Village 76.63 332 ⇑P P 05 32 12.8 +0.7
baz=77
RLMT Red Lodge 76.65 333 ⇓P P 05 32 12.6 +0.3
baz=77
RLMT Red Lodge 76.65 333 eP P 05 32 11.7 -0.6
comp=Z,56nm,1.2s,mb5.4
RLMT LR LR
comp=Z,2μm,21.0s,MS5.4
N10A Dunphy 76.67 326 ⇓P P 05 32 12.0 -0.4
baz=77
R06C Coleville 76.68 323 ⇑P P 05 32 13.0 +0.5
baz=77,SNR=9.7
J15A Blackfoot 76.69 330 ⇑P P 05 32 12.6 +0.1
baz=77
LKWY Lake 76.69 332 eP P 05 32 14.2 +1.7
LKWY pmax pmax
comp=Z,18nm,0.9s,mb5.0
LKWY MLR MLR
comp=Z,2μm,19.0s,MS5.4
LKWY Lake 76.69 332 eP P 05 32 14.2 +1.7
comp=Z,23nm,0.9s,mb5.1
LKWY LR LR
comp=Z,2μm,19.0s,MS5.5
P08A Dixie Valley 76.75 324 ⇑P P 05 32 12.7 -0.2
baz=77
M11A Holland Ranch, 76.82 327 ⇓P P 05 32 13.3 0.0
baz=77,SNR=13
BMN Battle Mountai 76.83 325 eP P 05 32 12.9 -0.4
BMN pmax pmax
comp=Z,13nm,1.0s,mb4.8
BMN MLR MLR
comp=Z,2μm,20.0s,MS5.4
BMN Battle Mountai 76.83 325 eP P 05 32 12.9 -0.4
comp=Z,13nm,1.0s,mb4.8
BMN LR LR
comp=Z,2μm,20.0s,MS5.4
CMB Columbia Colle 76.87 322 eP P 05 32 14.4 +0.8
CMB pmax pmax
comp=Z,18nm,1.0s,mb5.0
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.2
CMB Columbia Colle 76.87 322 eP P 05 32 14.4 +0.8
comp=Z,18nm,1.0s,mb4.9
CMB LR LR
comp=Z,1μm,19.0s,MS5.2
K13A Stover Farm, H 76.89 328 ⇑P P 05 32 13.5 -0.2
baz=77
G18A Lazy EL Ranch, 76.93 333 ⇓P P 05 32 13.8 0.0
baz=77,SNR=8.5
L12A House Creek Ra 76.97 328 ⇑P P 05 32 14.4 +0.3
baz=77,SNR=9.9
P07A Fallon 77.08 324 ⇓P P 05 32 14.8 0.0
baz=77
J14A Carey 77.13 329 ⇑P P 05 32 15.0 0.0
baz=77
H16A Russell Place, 77.17 331 ⇓P P 05 32 15.8 +0.7
baz=77,SNR=6.4
I15A Monteview 77.18 330 ⇑P P 05 32 15.5 +0.3
baz=77
O08A Rochester Mine 77.22 325 ⇓P P 05 32 15.0 -0.6
baz=77,SNR=7.1
M10A I.L. Ranch, Tu 77.27 326 ⇓P P 05 32 15.8 0.0
baz=77
K12A Draper Farm, C 77.28 328 ⇑P P 05 32 16.0 +0.2
baz=78,SNR=13
N09A Rock Creek Ran 77.29 325 ⇓P P 05 32 15.5 -0.4
baz=78
L11A Cat Creek Ranc 77.35 327 ⇑P P 05 32 16.5 +0.3
baz=78
WCN Washoe City 77.39 323 ⇓P P 05 32 16.4 -0.1
baz=78
G17A Pierce Place, 77.44 332 ⇑P P 05 32 16.8 +0.2
baz=78,SNR=5.9
F18A Big Timber 77.47 333 ⇓P P 05 32 17.1 +0.3
baz=78,SNR=18
DGMT Dagmar 77.48 338 ⇑P P 05 32 17.3 +0.5
baz=78
DGMT Dagmar 77.48 338 eP P 05 32 14.3 -2.5
comp=Z,158nm,1.1s,mb5.9
DGMT LR LR
comp=Z,1μm,19.0s,MS5.3
J13A Cove Ranch, Pi 77.50 329 ⇓P P 05 32 17.5 +0.5
baz=78,SNR=9.9
O07A Toulon 77.52 324 ⇑P P 05 32 17.5 +0.3
baz=78,SNR=7.4
N08A GE Springer Mi 77.56 325 ⇑P P 05 32 17.8 +0.3
baz=78
I14A Mackay 77.57 330 ⇓P P 05 32 18.4 +1.0
baz=78,SNR=14
L10A Juniper Basin 77.64 327 ⇑P P 05 32 18.0 +0.1
baz=78,SNR=20
M09A Marrel Ranch, 77.67 326 ⇑P P 05 32 18.0 0.0
baz=78,SNR=13
H15A Lima 77.73 331 ⇑P P 05 32 19.1 +0.9
baz=78
P06A Stead Airport, 77.74 323 ⇑P P 05 32 18.4 0.0
baz=78
HLID Hailey 77.74 329 ⇑P P 05 32 18.9 +0.6
baz=78
HLID Hailey 77.74 329 eP P 05 32 18.8 +0.4
comp=Z,57nm,1.1s,mb5.4
HLID LR LR
comp=Z,1μm,19.0s,MS5.2
SCHQ Schefferville 77.76 2 P P 05 32 18.0 -0.2
comp=Z,5.7nm,1.0s,mb4.5,baz=231,slow=8.7,SNR=3.6
SCHQ LR LR 06 06 01.7
comp=Z,2μm,21.6s,MS5.4,baz=190,slow=35
G16A Moss Hill, Enn 77.83 331 ⇑P P 05 32 19.2 +0.4
baz=78
J12A Stokes Ranch, 77.83 328 ⇓P P 05 32 19.4 +0.6
baz=78,SNR=12
F17A Fitzpatrick Pl 77.87 333 ⇓P P 05 32 19.3 +0.3
baz=78,SNR=14
I13A Wildhorse Cree 77.87 329 ⇓P P 05 32 19.9 +0.8
baz=78,SNR=14
K11A Parker Ranch, 77.93 327 ⇑P P 05 32 20.0 +0.5
baz=78,SNR=11
N07B Gerlach 78.01 324 ⇑P P 05 32 19.8 -0.1
baz=78,SNR=24
O06A Flanigan 78.04 323 ⇑P P 05 32 20.2 +0.1
baz=78
H14A Leadore 78.06 330 ⇓P P 05 32 20.6 +0.5
baz=78,SNR=6.2
BOZ Bozeman (W) 78.08 332 ⇑P P 05 32 20.9 +0.7
baz=78
BOZ Bozeman (W) 78.08 332 eP P 05 32 19.4 -0.8
BOZ pmax pmax
comp=Z,22nm,1.1s,mb5.0
BOZ MLR MLR
comp=Z,2μm,20.0s,MS5.4
BOZ Bozeman (W) 78.08 332 eP P 05 32 19.4 -0.8
comp=Z,22nm,1.1s,mb5.0
BOZ LR LR
comp=Z,2μm,20.0s,MS5.4
E18A Harlowton 78.08 333 ⇑P P 05 32 20.4 +0.2
baz=78,SNR=6.3
G15A Dillon 78.08 331 ⇑P P 05 32 20.9 +0.6
baz=78,SNR=14
BEKR Beckwourth 78.12 323 ⇓P P 05 32 20.7 +0.1
baz=78
M08A Happy Creek Ra 78.17 325 ⇑P P 05 32 20.9 +0.1
baz=78
F16A Kennard Place, 78.19 332 ⇑P P 05 32 20.7 -0.1

baz=78
L09A Wilkinson Ranc 78.21 326 ⇓P **P** 05 32 21.2 +0.2
baz=78
I12A Atlanta 78.26 329 ⇑P **P** 05 32 21.3 +0.1
baz=78
DLMT Dillon 78.28 331 *e*P **P** 05 32 20.8 -0.5
comp=Z,47nm,1.1s,mb5.3
MFID Camas Ranch 78.31 328 ⇓P **P** 05 32 22.1 +0.5
baz=78,SNR=5.2
K10A MacKenzie Ranc 78.36 327 ⇑P **P** 05 32 22.1 +0.3
baz=78,SNR=10
MCCM Marconi Confer 78.39 320 PFAKE 05 32 30.0 +7.9
MCCM LR LR
comp=Z,1μm,19.0s,MS5.2
E17A Martinsdale 78.39 333 ⇑P **P** 05 32 22.5 +0.6
baz=79,SNR=11
H13A Challis 78.42 330 ⇑P **P** 05 32 22.7 +0.6
baz=79,SNR=21
N06A Buffalo Meadow 78.45 324 ⇑P **P** 05 32 22.6 +0.3
baz=79,SNR=12
D18A Linhart Farms, 78.54 334 ⇓P **P** 05 32 23.0 +0.2
baz=79,SNR=8.1
M07A Soldier Meadow 78.54 325 ⇓P **P** 05 32 23.1 +0.2
baz=79,SNR=10
F15A Butte 78.61 331 ⇓P **P** 05 32 23.3 +0.2
baz=79,SNR=7.4
L08A Fields 78.68 326 ⇑P **P** 05 32 24.1 +0.5
baz=79,SNR=5.8
H12A Diamond D Ranc 78.69 329 ⇑P **P** 05 32 24.2 +0.6
baz=79,SNR=15
K09A Rome 78.73 326 ⇓P **P** 05 32 24.1 +0.2
baz=79
I11A Placerville 78.74 328 ⇑P **P** 05 32 23.8 -0.1
baz=79
J10A Berg Farm, Mel 78.78 327 ⇓P **P** 05 32 23.8 -0.4
baz=79
E16A East Helena 78.80 332 ⇓P **P** 05 32 24.7 +0.6
baz=79
G13A Cobalt 78.82 330 ⇓P **P** 05 32 24.8 +0.5
baz=79,SNR=74
D17A Six Diamond Ra 78.87 333 ⇓P **P** 05 32 24.9 +0.3
baz=79,SNR=25
SUR Sutherland 78.93 120 P **P** 05 32 27.9 +2.5
comp=Z,308nm,1.3s,mb6.1,SNR=6.2
SUR Sutherland 78.93 120 *e*P **P** 05 32 26.0 +0.6
comp=Z,199nm,1.6s,mb5.8
SUR LR LR
comp=Z,6μm,22.0s,MS5.9
F14A Wisdom 78.97 331 ⇓P **P** 05 32 25.5 +0.4
baz=79,SNR=18
WVOR Wild Horse Val 79.01 326 *e*P **P** 05 32 24.5 -0.9
WVOR pmax pmax
comp=Z,19nm,1.3s,mb4.9
WVOR Wild Horse Val 79.01 326 *e*P **P** 05 32 24.4 -1.0
comp=Z,19nm,1.3s,mb4.9
HOPS Hopland 79.07 321 PFAKE 05 32 40.0 +14
HOPS LR LR
comp=Z,1μm,21.0s,MS5.2
L07A Adell 79.08 325 ⇑P **P** 05 32 26.0 +0.2
baz=79
E15A Deer Lodge 79.13 332 ⇓P **P** 05 32 26.4 +0.4
baz=79,SNR=8.9
D16A Dana Ranch, Ca 79.13 333 ⇑P **P** 05 32 26.5 +0.6
baz=79,SNR=9.7
K08A Mann Creek Ran 79.14 326 ⇓P **P** 05 32 26.6 +0.5
baz=79
EGMT Eagleton 79.19 334 ⇑P **P** 05 32 26.1 -0.1
baz=79
EGMT Eagleton 79.19 334 *e*P **P** 05 32 26.2 0.0
comp=Z,55nm,1.1s,mb5.4
EGMT LR LR
comp=Z,1μm,20.0s,MS5.3
J09A Fry Pan Ranch, 79.21 327 ⇓P **P** 05 32 26.4 -0.1
baz=79
TOA0 Torodi Ar. Sit 79.23 71 *e*P **P** 05 32 27.4 +0.2
TOA0 *e*pP pP 05 32 36.0 -3.8
TOA0 *e*sP sP 05 32 39.7 -4.8
TORD Torodi Ar. Bea 79.23 71 P **P** 05 32 27.5 +0.2
comp=Z,111nm,1.0s,mb5.8,baz=252,slow=4.1,SNR=213
TORD LR LR 06 07 30.2
comp=Z,4μm,19.8s,MS5.7,baz=230,slow=36
I10A Payette 79.28 328 ⇑P **P** 05 32 27.0 +0.2
baz=80
C17A Wharram Farm, 79.28 334 ⇑P **P** 05 32 26.5 -0.3
baz=80,SNR=11
H11A Donnelly 79.36 329 ⇓P **P** 05 32 26.8 -0.4
baz=80
F13A Darby 79.39 330 ⇑P **P** 05 32 27.9 +0.5
baz=80,SNR=44
E14A Clinton 79.49 331 ⇑P **P** 05 32 28.2 +0.3
baz=80,SNR=7.6
B18A Beardsley Farm 79.50 335 ⇓P **P** 05 32 27.5 -0.4
baz=80,SNR=16
K07A Rock Creek Ran 79.51 326 ⇑P **P** 05 32 28.1 -0.1
baz=80,SNR=10
MOD Modoc 79.51 325 *e*P **P** 05 32 28.1 -0.1
comp=Z,38nm,1.1s,mb5.2
MOD LR LR
comp=Z,2μm,22.0s,MS5.3
D15A Lincoln 79.56 332 ⇑P **P** 05 32 28.3 0.0
baz=80,SNR=8.9
J08A Circle Bar Ran 79.59 327 ⇑P **P** 05 32 28.5 0.0
baz=80
H10A Noah's Angus R 79.62 328 ⇑P **P** 05 32 28.9 +0.2
baz=80,SNR=12
I09A Lost Marbles R 79.66 327 ⇓P **P** 05 32 28.6 -0.4
baz=80
F12A Elk City 79.79 330 ⇓P **P** 05 32 29.5 0.0
baz=80
B17A L&G Farms, Che 79.82 334 ⇑P **P** 05 32 28.9 -0.8
baz=80
C16A Fuhringer Ranc 79.82 333 ⇑P **P** 05 32 29.5 -0.2
baz=80,SNR=11
E13A Victor 79.82 331 ⇑P **P** 05 32 29.7 0.0
baz=80,SNR=26
WDC Whiskeytown Da 79.83 322 *e*P **P** 05 32 26.4 -3.5
WDC pmax pmax
comp=Z,16nm,0.9s,mb5.0
WDC MLR MLR
comp=Z,964nm,20.0s,MS5.1
WDC Whiskeytown Da 79.83 322 *e*P **P** 05 32 26.4 -3.5
comp=Z,16nm,0.9s,mb5.0
WDC LR LR
comp=Z,964nm,20.0s,MS5.1
A18A Metzger Ranch, 79.95 335 ⇑P **P** 05 32 29.2 -1.1
baz=80,SNR=14
G11A Walters Elk Ra 80.00 329 ⇓P **P** 05 32 30.6 -0.1
baz=80,SNR=31
MSO Missoula 80.01 331 *e*P **P** 05 32 30.5 -0.3
comp=Z,34nm,1.4s,mb5.1
MSO LR LR
comp=Z,1μm,20.0s,MS5.3
D14A Greenough 80.01 332 ⇓P **P** 05 32 30.9 +0.1
baz=80
J07A Hines 80.02 326 ⇑P **P** 05 32 31.0 +0.1
baz=80,SNR=12
I08A Drewsey 80.03 327 ⇑P **P** 05 32 31.2 +0.2
baz=80,SNR=17
BMO Blue Mountains 80.09 328 *e*P **P** 05 32 30.7 -0.5
BMO pmax pmax
comp=Z,68nm,1.3s,mb5.4
BMO MLR MLR
comp=Z,2μm,20.0s,MS5.3
BMO Blue Mountains 80.09 328 *e*P **P** 05 32 30.6 -0.6
comp=Z,68nm,1.3s,mb5.4
BMO LR LR
comp=Z,2μm,20.0s,MS5.3
H09A Durkee 80.13 328 ⇓P **P** 05 32 31.4 0.0
baz=80
C15A Salmond Ranch, 80.16 333 ⇓P **P** 05 32 32.0 +0.4
baz=80,SNR=23
B16A M & M Farms, S 80.29 334 ⇑P **P** 05 32 31.7 -0.5
baz=80
A17A Triple J Farms 80.30 334 ⇓P **P** 05 32 32.4 +0.1
baz=80,SNR=9.6
F11A Grangeville 80.31 330 ⇓P **P** 05 32 31.9 -0.4
baz=80,SNR=21
G10A Bishop Farm, J 80.32 329 ⇑P **P** 05 32 32.3 -0.2
baz=80,SNR=26
J06A Christmas Vall 80.37 326 ⇑P **P** 05 32 32.4 -0.4
baz=80,SNR=16
K05A Summer Lake 80.39 325 ⇑P **P** 05 32 33.1 +0.1
baz=81,SNR=6.4
D13A Huson 80.44 331 ⇓P **P** 05 32 33.3 +0.2
baz=81
H08A Prairie City 80.52 327 ⇑P **P** 05 32 33.9 +0.4
baz=81
B15A Bradely Ranch, 80.56 333 ⇓P **P** 05 32 33.0 -0.7
baz=81,SNR=24
I07A Izee 80.62 326 ⇓P **P** 05 32 34.3 +0.2
baz=81,SNR=14
G09A Cove 80.63 328 ⇓P **P** 05 32 34.0 -0.1
baz=81,SNR=41
C14A Swan Lake 80.65 332 ⇑P **P** 05 32 34.3 +0.1
baz=81
A16A West Butte Ran 80.67 334 ⇑P **P** 05 32 34.3 +0.1
baz=81,SNR=28
E11A Bogner Ranch, 80.68 330 ⇑P **P** 05 32 34.5 +0.2
baz=81,SNR=9.0
YBH Yreka Blue Hor 80.70 323 PFAKE 05 32 40.0 +5.4
YBH LR LR
comp=Z,1μm,20.0s,MS5.3
D12A Red Ives Fores 80.81 331 ⇓P **P** 05 32 34.9 -0.1
baz=81
F10A Beach Ranch, E 80.87 329 ⇓P **P** 05 32 35.7 +0.3
baz=81,SNR=14
I06A Prineville 80.89 326 ⇓P **P** 05 32 35.5 -0.1
baz=81,SNR=19
TSUM Tsumeb 80.89 107 LR LR 06 05 44.7
comp=Z,7μm,19.1s,MS6.0,baz=241,slow=34
TSUM Tsumeb 80.89 107 *e*P **P** 05 32 37.4 +1.1
comp=Z,124nm,1.4s,mb5.7
B14A Marquette Ranc 80.90 333 ⇑P **P** 05 32 35.5 0.0
baz=81,SNR=18
C13A Hot Springs 80.94 332 ⇑P **P** 05 32 35.8 +0.1
baz=81,SNR=10
F09A S2 Ranch, Elgi 81.00 328 ⇑P **P** 05 32 35.9 -0.2
baz=81,SNR=7.1
H07A Lands Inn, Kim 81.02 327 ⇓P **P** 05 32 35.9 -0.3
baz=81
A15A Johnson Ranch, 81.15 333 ⇓P **P** 05 32 36.2 -0.6
baz=81,SNR=8.2
E10A Myers Farm, Un 81.19 329 ⇓P **P** 05 32 36.6 -0.4
baz=81,SNR=13
G08A Pilot Rock 81.21 328 ⇓P **P** 05 32 37.2 0.0
baz=81
D11A Klaveano Farm, 81.25 330 ⇓P **P** 05 32 36.7 -0.7
baz=81
C12B Naegeli Ranch, 81.36 331 ⇑P **P** 05 32 38.2 +0.2
baz=82
B13A Whitefish 81.42 332 ⇓P **P** 05 32 38.3 0.0
baz=82,SNR=9.7
HUMO Hull Mountain 81.42 324 P **P** 05 32 38.8 +0.4
comp=Z,6.5nm,0.9s,mb4.6
HUMO LR LR
comp=Z,1μm,20.0s,MS5.3
A14A Double T Ranch 81.44 333 ⇑P **P** 05 32 38.7 +0.4
baz=82,SNR=9.4
F08A Pendleton 81.49 328 ⇑P **P** 05 32 38.8 +0.1
baz=82
H06A Lindquist Farm 81.51 327 ⇑P **P** 05 32 39.1 +0.3
baz=82,SNR=15
G07A Ruggs Ranch, H 81.55 327 ⇑P **P** 05 32 39.5 +0.5
baz=82,SNR=18
I05A Bend 81.59 326 ⇑P **P** 05 32 39.9 +0.7
baz=82,SNR=7.4
D10A Wagner Farm, O 81.69 330 ⇓P **P** 05 32 39.1 -0.6
baz=82,SNR=14
E09A Wood Farm, Sta 81.70 329 ⇑P **P** 05 32 39.4 -0.3
baz=82
WALA Waterton Lakes 81.71 333 *e*P **P** 05 32 39.2 -0.5
comp=Z,2.6nm,1.1s
WALA *e* pP 05 32 51.8 -0.5
C11A Tepee Creek (N 81.81 331 ⇓P **P** 05 32 39.9 -0.4
baz=82,SNR=27
A13A Flathead Natio 81.82 332 ⇑P **P** 05 32 40.4 0.0
baz=82
H05A Madras 81.90 326 ⇑P **P** 05 32 40.9 0.0
baz=82
B12A Libby 81.98 332 ⇓P **P** 05 32 41.2 0.0
baz=82,SNR=8.3
G06A Carlson Farm, 82.01 327 ⇓P **P** 05 32 41.4 -0.1
baz=82
F07A Phinny Hill Vi 82.12 328 ⇓P **P** 05 32 42.1 +0.1
baz=82
E08A Dider Farm, El 82.12 328 ⇓P **P** 05 32 41.9 -0.1
baz=82
D09A Jones Farm, Ri 82.18 329 ⇓P **P** 05 32 42.4 +0.2
baz=82,SNR=8.9
FFC Flin Flon 82.19 342 P **P** 05 32 41.4 -0.7
comp=Z,265nm,1.1s,mb6.1,SNR=5.3
FFC Flin Flon 82.19 342 *e*P **P** 05 32 41.3 -0.8
FFC *e* pP 05 32 53.6 -1.1
FFC pmax pmax
comp=Z,67nm,1.2s,mb5.5
FFC MLR MLR
comp=Z,2μm,19.0s,MS5.5
FFC Flin Flon 82.19 342 *e*P **P** 05 32 41.3 -0.8
comp=Z,68nm,1.2s,mb5.5
FFC *e* pP 05 32 53.6 -1.2
FFC LR LR
comp=Z,2μm,19.0s,MS5.5
C10A Spilker Farm, 82.27 330 ⇓P **P** 05 32 42.3 -0.4
baz=82
HAWA Hanford 82.28 328 *e*P **P** 05 32 42.2 -0.6
comp=Z,70nm,1.1s,mb5.5
HAWA *e* pP 05 32 54.9 -0.5
HAWA LR LR
comp=Z,1μm,19.0s,MS5.3
B11A Sandpoint 82.30 331 ⇓P **P** 05 32 42.8 0.0
baz=82
A12A Yaak River Ran 82.36 332 ⇓P **P** 05 32 43.4 +0.2
baz=82,SNR=12
G05A Wamic 82.36 326 ⇑P **P** 05 32 43.1 -0.2
baz=82
F06A Goldendale 82.46 327 ⇑P **P** 05 32 44.1 +0.3
baz=83
D08A Wollman Farm, 82.46 329 ⇑P **P** 05 32 43.9 +0.1
baz=83
NEW Newport 82.51 331 *e*P **P** 05 32 43.7 -0.3
NEW pmax pmax
comp=Z,23nm,1.2s
NEW MLR MLR
comp=Z,2μm,20.0s
NEW Newport 82.51 331 *e*P **P** 05 32 43.7 -0.3
comp=Z,23nm,1.2s,mb5.1
NEW LR LR
comp=Z,2μm,20.0s,MS5.4
I03A Eugene 82.52 325 ⇓P **P** 05 32 44.2 +0.1
baz=83
E07A Sunnyside 82.56 328 ⇓P **P** 05 32 44.6 +0.4
baz=83
B10A Chitwood Farm, 82.58 331 ⇓P **P** 05 32 44.2 -0.2
baz=83
HOOD Mount Hood Mea 82.59 326 *e*P **P** 05 32 44.9 +0.4
comp=Z,60nm,1.1s,mb5.5
A11A Hall Mountain, 82.69 331 ⇑P **P** 05 32 44.7 -0.2
baz=83,SNR=22
C09A Chrisman Ranch 82.70 330 ⇓P **P** 05 32 44.6 -0.3
baz=83,SNR=7.0
I02A Mapleton 82.83 324 ⇓P **P** 05 32 46.1 +0.3
baz=83
F05A White Salmon 82.88 327 ⇓P **P** 05 32 46.3 +0.3
baz=83,SNR=5.1
G04A Mulino 82.93 326 ⇓P **P** 05 32 46.4 +0.1
baz=83
COR Corvallis 82.94 325 *e*P **P** 05 32 42.0 -4.3
COR pmax pmax
comp=Z,80nm,1.2s,mb5.6
COR MLR MLR
comp=Z,1μm,20.0s,MS5.3
COR Corvallis 82.94 325 *e*P **P** 05 32 42.0 -4.4
comp=Z,80nm,1.2s,mb5.6
COR LR LR
comp=Z,1μm,20.0s,MS5.3
RTC Rabat Centre 82.96 49 *e*P **P** 05 32 47.0 +0.4
RTC LR LR
comp=Z,3μm,19.0s,MS5.7
H03A Soap Creek Ran 83.00 325 ⇑P **P** 05 32 46.4 -0.3
baz=83
C08A Higginbotham F 83.05 329 ⇑P **P** 05 32 46.0 -0.7
baz=83
D07A Quincy 83.06 328 ⇓P **P** 05 32 46.9 0.0
baz=83
B09A Rice 83.09 330 ⇑P **P** 05 32 46.8 -0.2
baz=83,SNR=9.0
E06A Yakima 83.10 328 ⇓P **P** 05 32 47.0 0.0
baz=83
MAW Mawson 83.12 164 P **P** 05 32 46.7 -0.3
comp=Z,31nm,0.8s,mb5.4,baz=249,slow=8.6,SNR=16
MAW LR LR 06 10 60.0
comp=Z,4μm,19.2s,MS5.8,baz=235,slow=36
MAW Mawson 83.12 164 *e*P **P** 05 32 46.6 -0.4
MAW *e*SP sP 05 32 57.7 -6.6
MAW pmax pmax
comp=Z,11nm,1.0s
MAW MLR MLR
comp=Z,7μm,19.0s
MAW Mawson 83.12 164 *e*P **P** 05 32 46.6 -0.4
comp=Z,11nm,1.0s,mb4.8
MAW *e*pP pP 05 32 53.1 -6.5
MAW *e*sP sP 05 32 57.6 -6.7
MAW LR LR
comp=Z,7μm,19.0s,MS6.1
A10A Northport 83.23 331 ⇓P **P** 05 32 47.0 -0.7
baz=83
F04A Amboy 83.40 326 ⇓P **P** 05 32 48.2 -0.5
baz=84
G03A Yamhill 83.42 326 ⇓P **P** 05 32 48.4 -0.4
baz=84
PFVI Vila Bisbo 83.42 45 *e*P **P** 05 32 50.7 +1.7
PFVI *e*S S 05 43 17.6 +10
PFVI *e*LQ 05 55 12.5
PFVI *e*LR LR 06 00 30.4
comp=Z,2μm,15.3s
C07A Waterville 83.46 329 ⇑P **P** 05 32 48.9 0.0
baz=84,SNR=10
D06A Cle Elum 83.49 328 ⇓P **P** 05 32 48.5 -0.5
baz=84
E05A Randle 83.50 327 ⇓P **P** 05 32 48.4 -0.7
baz=84
B08A Colville Reser 83.59 330 ⇓P **P** 05 32 48.6 -1.0
baz=84
MORF Marmelete 83.64 45 *e*P **P** 05 32 51.2 +1.1
comp=Z,124nm,1.6s,mb5.8
MORF *e*S S 05 43 23.4 +14
MORF *e*SS SS 05 48 51.5 +14
MORF *e*LQ 05 58 38.8
MORF *e*LR LR 06 01 34.0
comp=Z,3μm,18.6s
A09A Danville 83.69 330 ⇓P **P** 05 32 49.2 -0.8
baz=84,SNR=6.7
PTEO Sao Teotonio 83.73 45 *e*P **P** 05 32 52.8 +2.2
comp=Z,203nm,1.8s,mb6.0
BOSA Boshof 83.88 118 P **P** 05 32 52.0 +0.3
comp=Z,24nm,0.8s,mb5.4,baz=244,slow=4.9,SNR=23
BOSA LR LR 06 07 09.4
comp=Z,6μm,19.2s,MS6.0,baz=244,slow=33
BOSA Boshof 83.88 118 *e*P **P** 05 32 52.0 +0.3
BOSA *e**SP sP 05 33 03.9 -5.2
BOSA pmax pmax
comp=Z,223nm,1.7s,mb6.0
BOSA MLR MLR
comp=Z,6μm,20.0s,MS6.0
BOSA Boshof 83.88 118 *e*P **P** 05 32 52.0 +0.3
comp=Z,223nm,1.7s,mb6.0
BOSA *e*sP sP 05 33 03.9 -5.1
BOSA LR LR
comp=Z,6μm,20.0s,MS6.0
FCC Fort Churchill 83.97 348 *e*P **P** 05 32 49.8 -1.4
FCC *e* pP 05 33 02.6 -1.3
FCC pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
FCC Fort Churchill 83.97 348 *e*P **P** 05 32 49.8 -1.5
comp=Z,1.8nm,1.1s,mb4.1
FCC *e* pP 05 33 02.6 -1.2
A08A Turner Farm, O 83.99 330 ⇓P **P** 05 32 51.2 -0.4
baz=84,SNR=8.6
C06A Tall Timber Ra 84.02 329 ⇑P **P** 05 32 51.0 -0.8
baz=84
B07A Winthrop 84.03 329 ⇑P **P** 05 32 51.2 -0.6
baz=84,SNR=5.7
PBDV Barranco-do-Ve 84.07 45 *e*P **P** 05 32 54.3 +2.0
comp=Z,143nm,1.4s,mb5.9
PBDV *e*S S 05 43 23.5 +10
PBDV *e*LR LR 05 59 55.8
comp=Z,4μm,17.6s
LIS Lisbon 84.14 44 *e*P **P** 05 32 53.5 +0.8
LIS *e*S S 05 43 11.6 -2.8
LIS *e*S S 05 43 11.7 -2.7
LIS AMS AMS 06 10 26.7
comp=Z,3μm,23.4s,MS5.5
PMAFR Mafra 84.19 43 *e*P **P** 05 32 53.5 +0.6
comp=Z,103nm,1.5s,mb5.7
PMAFR *e*S S 05 43 22.6 +7.7
PMAFR *e*SS SS 05 49 04.2 +19
PMAFR *e*LQ 05 55 21.9
PMAFR *e*LR LR 06 00 38.2
comp=Z,6μm,16.4s
C05A Tolt Reservoir 84.25 328 ⇑P **P** 05 32 51.9 -1.0
baz=84
PVAQ Vaqueiros 84.30 45 *e*P **P** 05 32 55.0 +1.5
comp=Z,122nm,1.5s,mb5.8
PVAQ *e*S S 05 43 24.1 +8.0
PVAQ *e*SS SS 05 49 09.0 +22
PVAQ *e*LQ 05 55 26.9
PVAQ *e*LR LR 06 00 37.2
comp=Z,3μm,16.3s
D04A Dobbs Creek Ra 84.40 327 ⇓P **P** 05 32 52.6 -1.1
baz=85
EGRO El Granado 84.53 45 P **P** 05 32 55.7 +1.1
comp=Z,25nm,1.0s,mb5.3
A07A Ashnola River, 84.57 330 ⇑P **P** 05 32 53.5 -1.0
baz=85,SNR=9.2
EDM Edmonton 84.70 336 *e*P **P** 05 32 52.9 -2.2
EDM *e**PP pP 05 33 00.2 -7.5
EDM *e**SP sP 05 33 05.4 -7.0
B06A Marblemount 84.72 329 ⇓P **P** 05 32 54.4 -0.9
baz=85
EVO Evora 84.75 44 *e*P **P** 05 32 53.4 -2.3
comp=Z,191nm,1.4s,mb5.7
EVO Evora 84.75 44 *e*P **P** 05 32 56.9 +1.2
comp=Z,77nm,1.2s,mb5.7
SFS San Fernando 84.78 47 PFAKE 05 33 10.0 +14
SFS LR LR
comp=Z,4μm,22.0s,MS5.8
B05A Bryant 84.84 328 ⇓P **P** 05 32 54.6 -1.3
baz=85
PBAR Barrancos 85.18 45 *e*P **P** 05 32 59.2 +1.3
comp=Z,120nm,1.6s,mb5.8
PBAR *e*S S 05 43 36.0 +11
PBAR *e*LR LR 05 59 43.1
comp=Z,3μm,20.2s
EMIN Mina Concepcio 85.19 46 P **P** 05 32 57.8 -0.2
comp=Z,508nm,2.3s,mb6.2
PESTR Estremoz 85.22 44 *e*P **P** 05 32 59.0 +0.9
comp=Z,103nm,1.5s,mb5.7
PESTR *e*S S 05 43 30.4 +5.3
PESTR *e*SS SS 05 49 21.0 +20
PESTR *e*LQ 05 56 01.9
PESTR *e*LR LR 06 00 00.5
comp=Z,2μm,22.8s
ESPR Espera 85.23 47 P **P** 05 32 58.2 0.0
comp=Z,254nm,1.2s,mb6.2
EJIF Jimena Fronter 85.27 47 P **P** 05 32 59.5 +1.1
EJIF pmax pmax
comp=Z,128nm,1.2s,mb5.9
EJIF Jimena Fronter 85.27 47 P **P** 05 32 59.5 +1.1
comp=Z,128nm,1.2s,mb5.9
A05A Maple Falls 85.34 329 ⇑P **P** 05 32 57.5 -0.9
baz=86
B04A Port Angeles 85.39 327 ⇑P **P** 05 32 57.4 -1.2
baz=86
EBAD Badajoz 85.53 45 P **P** 05 32 59.2 -0.4
comp=Z,235nm,1.8s,mb6.1
LBTB Lobatse 85.58 115 LR LR 06 08 14.1
comp=Z,3μm,19.9s,MS5.7,baz=254,slow=34
LBTB Lobatse 85.58 115 *e*P **P** 05 33 00.7 +0.4
LBTB *e**SP sP 05 33 12.6 -5.1
LBTB pmax pmax
comp=Z,90nm,1.5s,mb5.8
LBTB MLR MLR
comp=Z,3μm,19.0s,MS5.7
LBTB Lobatse 85.58 115 *e*P **P** 05 33 00.7 +0.4
comp=Z,90nm,1.5s,mb5.8
LBTB *e*pP pP 05 33 07.8 -5.1
LBTB *e*sP sP 05 33 12.6 -5.1
LBTB LR LR
comp=Z,3μm,19.0s,MS5.7
PMRV Marv??o 85.66 44 *e*P **P** 05 33 00.9 +0.6
comp=Z,45nm,1.3s,mb5.5
PMRV *e*S S 05 43 33.3 +3.8
PMRV *e*LQ 05 56 02.3
PMRV *e*LR LR 06 01 15.2
comp=Z,4μm,17.8s
PGC Sidney 85.76 328 *e*P **P** 05 32 59.9 -0.6
comp=Z,3.0nm,1.2s,mb4.4
PGC *e*pP pP 05 33 05.9 -7.3
PGC *e* pP 05 33 11.7 -1.5
EMIJ Mijas 85.80 47 P **P** 05 33 00.7 -0.3
comp=Z,125nm,1.2s,mb6.0
PCBR Castelo Branco 85.84 43 *e*P **P** 05 33 01.9 +0.8

comp=Z,66nm,1.4s,mb5.7
PVIS Viseu 86.08 43 *e*P P **P** 05 33 03.7 +1.4
comp=Z,72nm,1.4s,mb5.7
MTE Manteigas 86.12 43 *e*P P **P** 05 33 03.3 +0.8
comp=Z,89nm,1.3s,mb5.8
MTE *e*S S 05 43 41.8 +7.9
MTE *e*SS SS 05 49 37.4 +24
MTE *e*LR LR 06 02 31.2
comp=Z,6µm,17.8s
MTE Manteigas 86.12 43 *e*P P **P** 05 33 02.9 +0.4
comp=Z,49nm,1.1s,mb5.7
MTE *e*SP sP 05 33 13.9 -5.9
MTE LR LR
comp=Z,5µm,19.0s,MS5.9
ELOJ Sierra Loja 86.53 47 P P **P** 05 33 05.9 +1.3
ELOJ pmax pmax
comp=Z,15nm,0.6s,mb5.4
ELOJ Sierra Loja 86.53 47 P P **P** 05 33 05.9 +1.3
comp=Z,15nm,0.6s,mb5.4
PCAB Cabril 86.57 42 *e*P P **P** 05 33 06.0 +1.3
comp=Z,70nm,1.4s,mb5.7
ELOB Lobios 86.64 42 P P **P** 05 33 04.1 -0.9
comp=Z,113nm,1.4s,mb5.9
ELUQ Luque 86.67 47 P P **P** 05 33 06.7 +1.4
ELUQ pmax pmax
comp=Z,106nm,1.2s,mb6.0
ELUQ Luque 86.67 47 P P **P** 05 33 06.7 +1.4
comp=Z,106nm,1.2s,mb6.0
ERON Agron 86.69 47 P P **P** 05 33 05.8 +0.4
EADA Adamuz 86.79 46 P P **P** 05 33 04.9 -1.0
comp=Z,40nm,1.1s,mb5.6
TAM Tamanrasset 86.82 64 *e*P P **P** 05 33 07.4 +1.1
TAM *e**PP pP 05 33 19.4 +0.4
TAM pmax pmax
comp=Z,63nm,1.4s,mb5.7
TAM MLR MLR
comp=Z,11µm,19.0s,MS6.3
TAM Tamanrasset 86.82 64 *e*P P **P** 05 33 07.4 +1.0
comp=Z,63nm,1.4s,mb5.7
TAM *e*pP pP 05 33 19.4 +0.4
TAM LR LR
comp=Z,11µm,19.0s,MS6.3
MVO Moncorvo 86.88 43 *e*P P **P** 05 33 06.9 +0.7
comp=Z,50nm,1.3s,mb5.6
MVO *e*S S 05 43 52.2 +11
MVO *e*LQ 05 56 22.8
MVO *e*LR LR 06 01 35.0
comp=Z,5µm,17.6s
ECOG Cogollos-Vega 87.00 47 P P **P** 05 33 07.4 +0.5
ECOG pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
ECOG Cogollos-Vega 87.00 47 P P **P** 05 33 07.4 +0.5
comp=Z,3.2nm,0.6s,mb4.7
EBAN Banos Encina 87.32 46 P P **P** 05 33 08.6 +0.2
EBAN pmax pmax
comp=Z,39nm,1.3s,mb5.5
EBAN Banos Encina 87.32 46 P P **P** 05 33 08.6 +0.2
comp=Z,39nm,1.3s,mb5.5
PBRG Braganca 87.42 42 *e*P P **P** 05 33 10.4 +1.6
comp=Z,43nm,1.4s,mb5.5
ECAL Calabor 87.50 42 P P **P** 05 33 09.3 +0.2
comp=Z,77nm,1.3s,mb5.8
DRV Dumont d'Urvil 87.53 192 P P **P** 05 33 13.0 +3.9
DRV Dumont d'Urvil 87.53 192 PP PP 05 36 40.0 +6.4
DRV S S 05 43 36.0 -11
DRV SS SS 05 49 42.0 +10
DRV L 05 56 00.0
DRV R 06 03 00.0
EQES Quesada 87.61 47 P P **P** 05 33 10.6 +0.8
comp=Z,18nm,1.0s,mb5.2
PAB San Pablo 87.69 45 *e*P P **P** 05 33 10.0 -0.2
PAB *e**PP pP 05 33 22.5 -0.3
PAB pmax pmax
comp=Z,44nm,1.3s,mb5.5
PAB MLR MLR
comp=Z,3µm,21.0s,MS5.6
PAB San Pablo 87.69 45 *e*P P **P** 05 33 10.0 -0.2
comp=Z,44nm,1.3s,mb5.5
PAB *e*pP pP 05 33 22.4 -0.4
PAB LR LR
comp=Z,3µm,21.0s,MS5.6
ENIJ Nijar 87.76 48 P P **P** 05 33 11.9 +1.3
ENIJ pmax pmax
comp=Z,23nm,1.4s,mb5.2
ENIJ Nijar 87.76 48 P P **P** 05 33 11.9 +1.4
comp=Z,23nm,1.4s,mb5.2
ESDC Sonseca Array 88.01 45 P P **P** 05 33 10.1 -1.6
comp=Z,2.0nm,1.0s,mb4.3,baz=282,slow=6.4,SNR=5.5
ESDC LR LR 06 09 07.6
comp=Z,2µm,21.8s,MS5.5,baz=265,slow=33
ESDC Sonseca Array 88.01 45 P P **P** 05 33 10.7 -1.0
comp=Z,4.0nm,1.1s,mb4.6
ESLA Sonseca Array 88.01 45 PFAKE 05 33 20.0 +8.3
ESLA LR LR
comp=Z,18µm,22.0s,MS6.4
EPON Pontenova 88.03 41 P P **P** 05 33 10.6 -1.1
comp=Z,575nm,2.7s,mb6.3
EVIA Vianos 88.42 47 P P **P** 05 33 15.0 +1.3
EVIA pmax pmax
comp=Z,12nm,0.9s,mb5.1
EVIA Vianos 88.42 47 P P **P** 05 33 15.0 +1.3
comp=Z,12nm,0.9s,mb5.1
ETOB Tobarra 89.07 47 P P **P** 05 33 17.4 +0.7
comp=Z,424nm,3.4s
ETOR Torete 89.85 45 P P **P** 05 33 21.1 +0.8
ETOR pmax pmax
comp=Z,11nm,0.8s,mb5.2
ETOR Torete 89.85 45 P P **P** 05 33 21.1 +0.8
comp=Z,11nm,0.8s,mb5.2
ECHE Chera 89.94 46 P P **P** 05 33 22.0 +1.2
ECHE pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
ECHE Chera 89.94 46 P P **P** 05 33 22.0 +1.2
comp=Z,8.3nm,0.8s,mb5.1
CASY Casey 90.81 180 *e*P P **P** 05 33 22.8 -1.7
comp=Z,43nm,0.9s,mb5.8
CASY ⇓*e*pP pP 05 33 30.4 -6.8
CASY *e*sP sP 05 33 35.6 -6.3
CASY LR LR
comp=Z,3µm,20.0s,MS5.7
ERTA Horta de San J 91.48 46 P P **P** 05 33 29.7 +1.8
comp=Z,160nm,1.9s,mb6.0
SJPF Ste Jean 91.56 43 *e*P P **P** 05 33 27.6 -0.6
comp=Z,50nm,1.3s,mb5.4
SJPF Ste Jean 91.56 43 *e*P P **P** 05 33 27.6 -0.6
SJPF pmax pmax
comp=Z,25nm,1.3s,mb5.4
SJPF Ste Jean 91.56 43 *e*P P **P** 05 33 27.6 -0.6
comp=Z,25nm,1.3s,mb5.4
LSZ Lusaka 91.74 107 *e*P P **P** 05 33 31.8 +2.0
LSZ *e**PP pP 05 33 39.0 -3.5
LSZ pmax pmax
comp=Z,14nm,1.0s,mb5.2
LSZ MLR MLR
comp=Z,4µm,19.0s,MS5.9
LSZ Lusaka 91.74 107 *e*P P **P** 05 33 31.8 +2.0
comp=Z,14nm,1.0s,mb5.3
LSZ *e*pP pP 05 33 39.0 -3.5
LSZ LR LR
comp=Z,4µm,19.0s,MS5.9
ETSF Etsaut 91.87 44 *e*P P **P** 05 33 29.2 -0.5
comp=Z,27nm,1.0s,mb5.2
ETSF Etsaut 91.87 44 *e*P P **P** 05 33 29.2 -0.5
ETSF pmax pmax
comp=Z,13nm,1.0s,mb5.2
ETSF Etsaut 91.87 44 *e*P P **P** 05 33 29.2 -0.5
comp=Z,13nm,1.0s,mb5.2
URZ Urewera 92.03 227 LR LR 06 06 06.4
comp=Z,6µm,19.6s,MS6.0,baz=100,slow=30
YKA Yellowknife Ar 92.31 341 P P **P** 05 33 29.3 -1.9
comp=Z,8.1nm,0.7s,mb5.2,baz=137,slow=4.3,SNR=30
YKA LR LR 06 17 15.7
comp=Z,770nm,21.3s,MS5.1,baz=170,slow=37
YKA Yellowknife Ar 92.31 341 P P **P** 05 33 29.3 -1.9
YKA LR LR 06 17 15.7
EPF Esparros 92.51 44 *e*P P **P** 05 33 31.1 -1.5
comp=Z,53nm,1.6s,mb5.4
EPF Esparros 92.51 44 *e*P P **P** 05 33 31.1 -1.5
EPF pmax pmax
comp=Z,26nm,1.6s,mb5.4
EPF Esparros 92.51 44 *e*P P **P** 05 33 31.1 -1.5
comp=Z,26nm,1.6s,mb5.4
RPZ Rata Peaks 92.81 220 LR LR 06 05 02.7
comp=Z,3µm,21.6s,MS5.6,baz=101,slow=29
RAO Raoul Island 92.95 237 PFAKE 05 33 40.0 +4.9
RAO LR LR

comp=Z,3µm,22.0s,MS5.7
LFF La Frestale 93.70 42 *e*P P **P** 05 33 37.1 -0.9
comp=Z,94nm,1.4s,mb5.7
LFF La Frestale 93.70 42 *e*P P **P** 05 33 37.1 -0.9
LFF pmax pmax
comp=Z,47nm,1.4s,mb5.7
LFF La Frestale 93.70 42 *e*P P **P** 05 33 37.1 -0.9
comp=Z,47nm,1.4s,mb5.7
RJF Les Rejaudoux 94.36 42 *e*P P **P** 05 33 39.7 -1.4
CAF Calviac 94.52 43 *e*P P **P** 05 33 40.8 -1.0
comp=Z,73nm,1.5s,mb5.6
CAF Calviac 94.52 43 *e*P P **P** 05 33 40.8 -1.0
CAF pmax pmax
comp=Z,37nm,1.5s,mb5.6
CAF Calviac 94.52 43 *e*P P **P** 05 33 40.8 -1.0
comp=Z,37nm,1.5s,mb5.6
AFI Afiamalu 94.73 253 PFAKE 05 33 50.0 +6.5
AFI LR LR
comp=Z,3µm,19.0s,MS5.8
DLBC Dease Lake 95.06 333 *e*P P **P** 05 33 44.2 +0.2
DLBC *es*P sP 05 33 55.7 -5.6
TCF Toulx Ste Croi 95.25 42 *e*P P **P** 05 33 43.8 -1.3
comp=Z,18nm,1.1s,mb5.1
TCF Toulx Ste Croi 95.25 42 *e*P P **P** 05 33 43.8 -1.3
TCF pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
TCF Toulx Ste Croi 95.25 42 *e*P P **P** 05 33 43.8 -1.3
comp=Z,8.9nm,1.1s,mb5.1
KEST Kesra 95.43 54 P P **P** 05 33 49.4 +3.1
comp=Z,2.6nm,0.8s,mb4.7,baz=263,slow=8.8,SNR=3.7
KEST LR LR 06 21 06.1
comp=Z,3µm,18.1s,MS5.9,baz=197,slow=38
BGF Bois d'Agland 95.77 42 *e*P P **P** 05 33 46.3 -1.2
comp=Z,26nm,1.1s,mb5.3
BGF Bois d'Agland 95.77 42 *e*P P **P** 05 33 46.3 -1.2
BGF pmax pmax
comp=Z,13nm,1.1s,mb5.3
BGF Bois d'Agland 95.77 42 *e*P P **P** 05 33 46.3 -1.2
comp=Z,13nm,1.1s,mb5.3
KIP Kipapa 96.10 291 PFAKE 05 34 00.0 +10
KIP LR LR
comp=Z,5µm,19.0s,MS6.0
AVF Avril sur Loir 96.19 42 *e*P P **P** 05 33 46.6 -2.8
comp=Z,26nm,1.3s,mb5.2
AVF Avril sur Loir 96.19 42 *e*P P **P** 05 33 46.6 -2.8
AVF pmax pmax
comp=Z,13nm,1.3s,mb5.2
AVF Avril sur Loir 96.19 42 *e*P P **P** 05 33 46.6 -2.8
comp=Z,13nm,1.3s,mb5.2
SSB Saint Sauveur 96.24 43 PFAKE 05 34 00.0 +10
SSB LR LR
comp=Z,4µm,19.0s,MS5.9
SSF Saint Saulge 96.40 41 *e*P P **P** 05 33 48.6 -1.7
comp=Z,22nm,1.1s,mb5.2
SSF Saint Saulge 96.40 41 *e*P P **P** 05 33 48.6 -1.7
SSF pmax pmax
comp=Z,11nm,1.1s,mb5.2
SSF Saint Saulge 96.40 41 *e*P P **P** 05 33 48.6 -1.7
comp=Z,11nm,1.1s,mb5.2
SMF Signal de Mont 96.42 42 *e*P P **P** 05 33 49.3 -1.1
comp=Z,42nm,1.2s,mb5.4
SMF Signal de Mont 96.42 42 *e*P P **P** 05 33 49.3 -1.1
SMF pmax pmax
comp=Z,21nm,1.2s,mb5.4
SMF Signal de Mont 96.42 42 *e*P P **P** 05 33 49.3 -1.1
comp=Z,21nm,1.2s,mb5.4
LOR Lormes 96.71 41 *e*P P **P** 05 33 50.1 -1.6
comp=Z,20nm,1.1s,mb5.1
LOR Lormes 96.71 41 *e*P P **P** 05 33 50.1 -1.6
LOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
LOR Lormes 96.71 41 *e*P P **P** 05 33 50.1 -1.6
comp=Z,10nm,1.1s,mb5.2
ESK Eskdalemuir 96.75 32 PFAKE 05 34 00.0 +8.3
ESK LR LR
comp=Z,2µm,22.0s,MS5.6
BNI Bardonecchia 97.50 44 PFAKE 05 34 10.0 +15
BNI LR LR
comp=Z,5µm,19.0s,MS6.0
CABF La Chapelle 97.79 43 *e*P P **P** 05 33 55.1 -1.5
MEZF Maizieres J'vi 97.98 41 *e*P P **P** 05 33 56.2 -1.2
GIVF Givet 98.54 39 *e*P P **P** 05 33 58.7 -1.2
comp=Z,39nm,1.1s,mb5.5
GIVF Givet 98.54 39 *e*P P **P** 05 33 58.7 -1.2
GIVF pmax pmax
comp=Z,19nm,1.1s,mb5.5
GIVF Givet 98.54 39 *e*P P **P** 05 33 58.7 -1.2
comp=Z,19nm,1.1s,mb5.5
ECH Echery 99.13 41 PFAKE 05 34 10.0 +7.4
ECH LR LR
comp=Z,3µm,19.0s,MS5.8
WLF Walferdange 99.13 40 PFAKE 05 34 10.0 +7.4
WLF LR LR
comp=Z,3µm,21.0s,MS5.8
WDD Wield Dalam 99.35 55 PFAKE 05 34 10.0 +6.1
WDD LR LR
comp=Z,5µm,21.0s,MS6.0
VLC Villacollemand 99.55 46 PFAKE 05 34 10.0 +5.4
VLC LR LR
comp=Z,2µm,19.0s,MS5.6
TUE Stuetta 99.78 44 PFAKE 05 34 20.0 +14
TUE LR LR
comp=Z,4µm,19.0s,MS5.9
BFO Black Forest 99.89 42 PFAKE 05 34 20.0 +14
BFO LR LR
comp=Z,2µm,19.0s,MS5.6
FETA Feichten 100.87 44⇑ *i*Pdiff Pdif 05 34 11.2 +0.7
comp=Z,4.0nm,1.0s
AQU L'Aquila 100.92 49 PFAKE 05 34 20.0 +9.3
AQU LR LR
comp=Z,2µm,21.0s,MS5.7
CEL Celeste 101.23 53 PFAKE 05 34 20.0 +7.9
CEL LR LR
comp=Z,4µm,22.0s,MS5.9
CUC Castrocucco 101.78 52 PFAKE 05 34 20.0 +5.5
CUC LR LR
comp=Z,3µm,20.0s,MS5.8
GRA1 Grafenberg Arr 102.17 41 *e*Pdif Pdif 05 34 16.8 +0.5
GRA1 *e*PP PP 05 38 24.2 -4.5
GRA1 *e*SKSac SKSac 05 44 57.8 +5.7
GRA1 *e*Sdif Sdif 05 46 04.3 +8.1
GRA1 *e*PS PS 05 47 38.0 +3.1
GRA1 *e*SS SS 05 53 09.1 +6.8
GRA1 LR LR
comp=Z,3µm,18.1s,MS5.8
GRF Grafenberg Arr 102.17 41 *e*P Pdif 05 34 16.8 +0.5
GRF *e* 05 38 24.2
GRF *e* 05 44 57.8
GRF *e*PS PS 05 47 38.0 +3.1
GRF *e*SS SS 05 53 09.1 +6.8
GRF MLR MLR
comp=Z,3µm,18.1s,MS5.8
GRF Grafenberg Arr 102.17 41 *e*P Pdif 05 34 16.8 +0.5
GRF *e* 05 38 24.2
GRF *e*PS PS 05 47 38.0 +3.1
GRF *e*SS SS 05 53 09.1 +6.8
GRF MLR MLR
comp=Z,3µm,18.1s,MS5.8
GRF Grafenberg Arr 102.17 41 *e*Pdiff Pdif 05 34 16.8 +0.5
GRF *e*PP PP 05 38 24.2 -4.5
GRF *e*SKSac SKSac 05 44 57.8 +5.7
GRF *e*Sdiff Sdif 05 46 04.3 +8.1
GRF *e*PS PS 05 47 38.0 +3.1
GRF *e*SS SS 05 53 09.1 +6.8
GRF *e*L 06 23 44.4
comp=Z,3µm,18.1s
TIP Timpagrande 102.19 53 PFAKE 05 34 30.0 +14
TIP LR LR
comp=Z,2µm,21.0s,MS5.7
TRI Trieste 102.36 46 PFAKE 05 34 30.0 +13
TRI LR LR
comp=Z,2µm,20.0s,MS5.7
EGAK Eagle 102.93 335 PFAKE 05 34 30.0 +10
EGAK LR LR
comp=Z,2µm,20.0s,MS5.7
GERES GERESS Array B 103.39 42 PP PP 05 38 38.0 +0.1
comp=Z,0.1nm,0.3s,baz=150,slow=43,SNR=2.2
CLL Collm 103.80 40 *e*Pdif Pdif 05 34 24.0 +0.5
comp=Z,200nm,18.8s
CLL LV 05 21 00.0
comp=Z,2µm,19.6s
CLL *e*PP PP 05 38 41.0 +0.1
CLL *e*PPlp 05 38 42.0
CLL *e*SKSac SKSac 05 45 08.0 +8.4
CLL *e*Sdif Sdif 05 46 18.0 +8.2

CLL *e*SP SP 05 47 50.0 +3.5
CLL *e*PS PS 05 47 56.0 +3.9
CLL *e*PPS 05 48 55.0
CLL *e*PKKPdf PKKPdf 05 50 25.0 +0.1
CLL *e*SS SS 05 53 26.0 +1.3
CLL *e*SSS 05 57 24.0
CLL Collm 103.80 40 *e*Pdif Pdif 05 34 24.0 +0.5
CLL *e*SKS 05 45 08.0
CLL *e*PS PS 05 47 56.0 +3.9
CLL LR LR
comp=Z,2µm,19.6s,MS5.6
KONO Kongsberg 104.85 31 PFAKE 05 34 40.0 +12
KONO LR LR
comp=Z,4µm,21.0s,MS5.9
TIR Tirane 105.13 51 PFAKE 05 38 50.0 +6.2
TIR LR LR
comp=Z,3µm,20.0s,MS5.8
KDAK Kodiak Island 105.27 327 PFAKE 05 38 50.0 +6.5
KDAK LR LR
comp=Z,1µm,19.0s,MS5.5
COLA College 105.58 334 PFAKE 05 38 50.0 +6.1
COLA LR LR
comp=Z,2µm,19.0s,MS5.6
TAU Tasmania Unive 105.61 208 PFAKE 05 38 50.0 +5.2
TAU LR LR
comp=Z,2µm,19.0s,MS5.7
PSZ Piszkesteto 107.04 45 PFAKE 05 39 00.0 +13
PSZ LR LR
comp=Z,2µm,21.0s,MS5.7
KWP Kalwaria 109.27 43 PFAKE 05 39 00.0 +8.8
KWP LR LR
comp=Z,2µm,20.0s,MS5.8
KBS Kingsbay 111.13 12 PFAKE 05 39 00.0 +6.0
KBS LR LR
comp=Z,1µm,20.0s,MS5.5
ISP Isparta 112.17 57 PFAKE 05 39 10.0 +13
ISP LR LR
comp=Z,4µm,21.0s,MS6.0
KIS Kishinev 112.74 47 *e*PP PP 05 39 54.0 +7.8
KIS *e*SKS SKSdf 05 45 53.0 -14
KIS Kishinev 112.74 47 *e*PS PS 05 49 24.0 +2.9
AKASG Malin Array Be 113.59 43 PKiKP PKiKP 05 38 58.4 -1.0
comp=Z,0.7nm,0.4s,baz=262,slow=3.1,SNR=5.3
AKASG Malin Array Be 113.59 43 PKPdf PKiKP 05 38 58.4 -1.0
CSS Prodhromos 113.76 61 PFAKE 05 39 10.0 +10
CSS LR LR
comp=Z,2µm,22.0s,MS5.7
KEV Kevo 114.11 22 PFAKE 05 39 10.0 +10
KEV LR LR
comp=Z,2µm,21.0s,MS5.7
MIDW Midway 114.89 291 PFAKE 05 39 10.0 +7.4
MIDW LR LR
comp=Z,4µm,20.0s,MS6.0
BR131 Keskin Array S 114.94 56 PFAKE 05 39 10.0 +7.7
BR131 LR LR
comp=Z,757nm,19.0s,MS5.3
BRTR Keskin Array B 114.94 56 PKP PKiKP 05 39 01.9 -0.4
comp=Z,1.8nm,0.8s,baz=194,slow=3.6,SNR=6.2
LVZ Lovozero 116.93 24 PFAKE 05 39 20.0 +15
LVZ LR LR
comp=Z,2µm,19.0s,MS5.8
ADK Adak 117.84 318 PFAKE 05 39 20.0 +12
ADK LR LR
comp=Z,1µm,20.0s,MS5.5
OBN Obninsk 118.35 39 *i* PKiKP PKPdf 05 39 07.6 -0.8
OBN *i* 05 39 20.4
OBN *e* 05 40 24.3
OBN *e*SS SS 05 56 52.2 +14
OBN pmax pmax
comp=Z,18nm,1.2s
OBN MLR MLR
comp=Z,2µm,20.0s,MS5.8
OBN Obninsk 118.35 39⇑ *e*PKP PKPdf 05 39 08.6 +0.2
OBN LR LR
comp=Z,2µm,20.0s,MS5.8
ANN Anapa 118.41 50 *i* PKiKP PKPdf 05 39 05.4 -3.5
ANN *e*SP SP 05 50 05.8 -1.6
ANN pmax pmax
comp=Z,48nm,1.2s
MSEY Mahe Island 120.40 111 PFAKE 05 39 20.0 +6.3
MSEY LR LR
comp=Z,4µm,20.0s,MS6.0
HNR Honiara 121.03 242 PFAKE 05 39 20.0 +5.1
HNR LR LR
comp=Z,2µm,21.0s,MS5.7
KIV Kislovodsk 122.11 52 *e*P Pdif 05 35 41.0 -3.9
KIV *i* 05 39 16.3
KIV *e* 05 40 50.6
KIV *e* 05 46 11.0
KIV *e*PS PS 05 50 49.2 +3.1
KIV pmax pmax
comp=Z,13nm,1.2s
KIV Kislovodsk 122.11 52⇑ *e*PKP PKPdf 05 39 16.2 +0.2
KIV LR LR
comp=Z,974nm,20.0s,MS5.5
GNI Garni 123.46 56 *i* PKP PKPdf 05 39 18.1 -0.6
GNI LR LR
comp=Z,2µm,20.0s,MS5.7
BILL Bilibino 123.56 338 *i* PKiKP PKPdf 05 39 20.0 +1.9
BILL *e* 05 40 58.5
BILL pmax pmax
comp=Z,10.0nm,1.3s
BILL MLR MLR
comp=Z,800nm,19.0s,MS5.4
BILL Bilibino 123.56 338 *i* PKP PKPdf 05 39 20.1 +2.0
BILL LR LR
comp=Z,1µm,20.0s,MS5.5
NWAO Narrogin (SRO) 123.72 188 PFAKE 05 39 30.0 +10
NWAO LR LR
comp=Z,1µm,22.0s,MS5.6
CTAO Charters Tower 124.06 223 PFAKE 05 39 30.0 +9.5
CTAO LR LR
comp=Z,2µm,22.0s,MS5.6
ASAR Alice Springs 127.77 209 PKP PKPdf 05 39 26.5 -1.1
comp=Z,8.4nm,0.8s,baz=141,slow=2.1,SNR=32
TIXI Tiksi 130.28 352⇑ *i* PKiKP PKPdf 05 39 30.5 -0.3
TIXI MLR MLR
comp=Z,1µm,22.0s,MS5.5
TIXI Tiksi 130.28 352 *e*PKPdf PKPdf 05 39 30.6 -0.3
ARU Arti 130.32 35 *i* PKiKP PKPdf 05 39 31.2 -0.1
ARU 05 41 44.7
ARU SS SS 05 59 06.3 -2.9
ARU Arti 130.32 35 *e*PKPdf PKPdf 05 39 31.6 +0.3
ARU LR LR
comp=Z,3µm,22.0s,MS5.9
COEN Coen 130.57 225 *e*PKPdf PKPdf 05 39 34.9 +1.9
WB2 Warramunga Arr 130.79 211 *e*P PKPdf 05 39 33.8 +0.4
WRAB Tennant Creek 130.80 211 *i* PKiKP PKPdf 05 39 33.2 -0.2
WRAB Tennant Creek 130.80 211 *e*PKPdf PKPdf 05 39 33.5 +0.1
WRAB LR LR
comp=Z,3µm,19.0s,MS6.0
PMG Port Moresby 131.00 233 PFAKE 05 39 40.0 +6.1
PMG LR LR
comp=Z,1µm,20.0s,MS5.6
SEY Seymchan 131.07 336 *i* PKiKP PKPdf 05 39 31.9 -0.6
SVE Sverdlovsk 131.25 33 *e*PKiKP PKPdf 05 39 33.1 +0.1
SVE pmax pmax
comp=Z,30nm,1.5s
PET Petropavlovsk 132.54 322 *e*PKiKP PKPdf 05 39 34.3 -1.3
PET *e* 05 42 08.5
PET Petropavlovsk 132.54 322 PFAKE 05 39 50.0 +14
PET LR LR
comp=Z,808nm,20.0s,MS5.4
PETK Petropavlovsk- 133.06 322 PKP PKPdf 05 39 35.9 -0.7
comp=Z,3.3nm,1.0s,baz=122,slow=1.9,SNR=2.7
AB31 Akbulak array 133.33 43 PKiKP PKPdf 05 39 37.6 +0.4
AB31 pmax pmax
comp=Z,38nm,1.3s
MBWA Marble Bar 134.83 193 PFAKE 05 39 50.0 +9.0
MBWA LR LR
comp=Z,2µm,20.0s,MS5.8
FITZ Fitzroy Crossi 136.07 202 *e*P PKPdf 05 39 45.5 +2.1
comp=Z,9.9nm,0.8s
KAKA Kakadu 137.88 214 *e*P x 05 39 24.0
comp=Z,26nm,1.2s
BRVK Borovoye 137.90 35 *e*PKiKP PKPdf 05 39 47.0 +1.4
BRVK *e* 05 39 59.0
BRVK MLR MLR
comp=Z,2µm,20.0s,MS5.9
BVA0 Borovoye Array 137.97 35 *i* PKiKP PKPdf 05 39 46.1 +0.4
BVA0 pmax pmax
comp=Z,4.0nm,1.1s
BVAR Borovoye Array 137.97 35 PKP PKPdf 05 39 46.4 +0.6
comp=Z,4.7nm,0.7s,baz=264,slow=2.7,SNR=15

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VOSK	**Vostochnaya**	**138.43**	**35**	PKIKP	PKPdf	05 39 47.3	+0.7
VOSK				pmax	pmax		
	comp=Z,22nm,1.2s						
YAK	**Yakutsk**	**138.82**	**346**	ePKIKP	PKPdf	05 39 54.4	+7.4
YAK				e		05 42 46.7	
YAK				eSS	SS	06 00 45.1	-5.3
YAK				pmax	pmax		
	comp=Z,33nm,1.1s						
YAK				pmax	pmax		
	comp=N,76nm,3.5s						
YAK				pmax	pmax		
	comp=Z,123nm,2.7s						
YAK				pmax	pmax		
	comp=E,67nm,3.2s						
COCO	**West Island**	**142.69**	**159**	PFAKE		05 40 10.0	+14
COCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
NVS	**Novosibirsk**	**142.78**	**25**	ePKIKP	PKPdf	05 39 51.2	-3.2
NVS				pmax	pmax		
	comp=Z,57nm,1.7s						
BHJ	**Bhuj**	**143.39**	**82**	eP	PKPdf	05 39 53.9	-2.5
BHJ				AMS	AMS	06 38 20.8	
	comp=Z,497nm,22.9s,MS5.2						
KURK	**Kurchatov**	**143.50**	**33**	PKP	PKPdf	05 39 53.8	-2.0
	comp=Z,8.2nm,0.9s,baz=304,slow=3.2,SNR=22						
KURK	**Kurchatov**	**143.50**	**33**	i PKIKP	PKPdf	05 39 53.6	-2.2
KURK	**Kurchatov**	**143.50**	**33**	ePKPdf	PKPdf	05 39 53.5	-2.3
KURK				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
YUK	**Yuzh-Kuril'sk**	**143.73**	**314**	PKIKP	PKPdf	05 39 53.2	-3.2
YUK						05 43 10.5	
YUK				pmax	pmax		
	comp=Z,2µm,6.0s						
YUK				pmax	pmax		
	comp=N,2µm,4.0s						
YUK				pmax	pmax		
	comp=E,1µm,5.5s						
BATI	**Baumata**	**144.06**	**204**	PKP	PKPdf	05 39 57.8	-0.2
	comp=E,17nm,0.4s,baz=108,slow=3.2,SNR=2.1						
ZAA0	**Zalesovo Array**	**144.07**	**25**	ePKPdf	PKPdf	05 39 55.0	-1.6
ZALV	**Zalesovo Beam**	**144.07**	**25**	PKP	PKPdf	05 39 55.1	-1.6
	comp=E,11nm,0.6s,baz=316,slow=4.1,SNR=31						
YSS	**Yuzh-Sakhalins**	**144.38**	**320**⇑	iPKIKP	PKPdf	05 39 59.3	+1.9
YSS	**Yuzh-Sakhalins**	**144.38**	**320**⇑	ePKP	PKPdf	05 39 59.4	+2.0
EKS2	**Erkin-Say**	**144.57**	**48**	P	PKPdf	05 39 57.8	-0.1
	SNR=17						
EKS2	**Erkin-Say**	**144.57**	**48**	ePKPdf	PKPdf	05 39 57.8	-0.1
EKS2				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
CLNS	**Chul'man**	**144.57**	**346**	ePKIKP	PKPdf	05 39 55.9	-1.6
CLNS				pmax	pmax		
	comp=Z,67nm,1.2s						
CLNS				pmax	pmax		
	comp=N,28nm,1.0s						
CLNS				pmax	pmax		
	comp=E,31nm,1.2s						
AML	**Almayashu**	**144.71**	**49**	P	PKPdf	05 39 58.9	+0.7
	SNR=55						
AML	**Almayashu**	**144.71**	**49**	PFAKE		05 40 10.0	+12
AML				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
USP	**Ospenovka**	**144.83**	**47**	P	PKPdf	05 39 59.0	+0.6
	SNR=25						
AAK	**Ala-Archa**	**145.07**	**48**⇑	iPKIKP	PKPdf	05 39 59.9	+1.1
AAK	**Ala-Archa**	**145.07**	**48**	P	PKPbc	05 40 00.1	+1.8
	SNR=64						
AAK	**Ala-Archa**	**145.07**	**48**	ePKPdf	PKPdf	05 39 60.0	+1.2
AAK				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
FRU	**Bishkek**	**145.08**	**47**⇑	iPKIKP	PKPdf	05 39 59.0	+0.2
FRU				i		05 40 11.0	
FRU				pmax	pmax		
	comp=Z,500nm,2.5s						
CHMS	**Chumysh**	**145.10**	**47**	P	PKPbc	05 39 59.3	+0.9
	SNR=22						
UCH	**Uchtor**	**145.24**	**48**	P	PKPbc	05 40 01.9	+3.0
	SNR=9.7						
UCH	**Uchtor**	**145.24**	**48**	i PKPdf	PKPdf	05 40 00.9	+1.8
UCH				LR	LR		
	comp=Z,936nm,20.0s,MS5.6						
BOD	**Bodaibo**	**145.26**	**356**	ePKIKP	PKPdf	05 39 57.2	-1.4
BOD				pmax	pmax		
	comp=Z,144nm,1.1s						
GUMO	**Guam**	**145.26**	**260**	PFAKE		05 40 10.0	+10
GUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
KBK	**Karagaybulak**	**145.37**	**48**	P	PKPbc	05 40 00.7	+1.4
	SNR=18						
GOA	**Goa**	**145.47**	**96**⇑	eP	PKPdf	05 40 00.8	+0.6
TRD	**Trivandrum**	**145.50**	**110**	eP	PKPdf	05 39 59.4	-1.0
TKM2	**Tokmak 2**	**145.70**	**47**	P	PKPdf	05 40 01.9	+2.1
	SNR=25						
TKM2	**Tokmak 2**	**145.70**	**47**	ePKPdf	PKPdf	05 40 00.3	+0.5
TKM2				ePKPbc	PKPbc	05 40 01.7	+1.4
TKM2				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
KZA	**Kyzart**	**145.80**	**48**	P	PKPdf	05 40 03.6	+3.6
	SNR=22						
KAD	**Karad**	**146.34**	**93**	i P	PKPdf	05 40 02.8	+1.1
POO	**Poona**	**146.34**	**91**	eP	PKPdf	05 40 01.3	-0.4
POO				AMS	AMS	06 39 44.0	
	comp=Z,1µm,19.1s,MS5.6						
ERM	**Erimo**	**146.34**	**312**	ePKIKP	PKPdf	05 40 00.2	-0.8
ERM				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.9						
ULHL	**Ulahol**	**146.41**	**48**	P	PKPdf	05 40 03.2	+2.1
	SNR=13						
AAA	**Alma-Ata**	**146.45**	**45**	i PKP2	PKPab	05 40 03.6	+0.1
AAA				pmax	pmax		
	comp=Z,4µm,7.4s						
AAA				MLR	MLR		
	comp=Z,2µm,28.0s,MS5.7						
NIL	**Nilore**	**146.54**	**64**	PFAKE		05 40 10.0	+8.4
NIL				LR	LR		
	comp=Z,131nm,21.0s,MS4.7						
KSH	**Kashi**	**147.24**	**52**	PKP	PKPdf	05 40 07.0	+4.4
KSH				APKP		05 40 17.5	
KSH				XPKP		05 40 21.8	
KSH				PKS		05 43 40.3	
KSH				SKS	SKSdf	05 47 09.3	+1.3
KSH				LR	LR		
	comp=N,2µm,11.2s,MS6.3						
KSH				LR	LR		
	comp=E,2µm,11.3s,MS6.3						
KSH				LR	LR		
	comp=Z,6µm,19.9s						
HABR	**Khabarovsk**	**147.68**	**328**	ePKIKP	PKPdf	05 40 02.5	-0.5
HABR				i		05 40 07.9	
HABR				e		05 40 15.2	
HABR				e		05 43 37.9	
HABR				e		05 47 07.7	
HABR				e		05 56 08.4	
HABR				eSS	SS	06 02 35.6	+2.3
HABR				eSSS		06 08 09.7	
HABR				MLR	MLR		
	comp=Z,913nm,21.0s,MS5.5						
MK31	**Makanchi Array**	**147.81**	**36**	ePKIKP	PKPdf	05 40 03.3	0.0
MK31				e		05 40 07.3	
MKAR	**Makanchi Array**	**147.81**	**36**	PKP	PKPdf	05 40 03.3	0.0
	comp=Z,17nm,0.8s,baz=315,slow=1.5,SNR=35						
MKAR				PKPbc	PKPbc	05 40 07.2	+0.9
	comp=Z,20nm,0.7s,baz=329,slow=2.7,SNR=53						
AJM	**Ajmer**	**148.18**	**77**	eP	PKPdf	05 40 03.7	-0.8
AJM				AMS	AMS	06 39 40.7	
	comp=Z,444nm,20.6s,MS5.2						
KLR	**Kul'dur**	**148.68**	**332**	ePKHKP		05 40 00.0	
KLR				pmax	pmax		
	comp=Z,80nm,2.0s						
THN	**Thein Dam**	**148.77**	**65**	ex	x	05 40 07.5	
LATR	**Latur**	**148.81**	**93**	ex	x	05 40 08.5	
KAPI	**Kappang**	**150.26**	**201**	PKP	PKPdf	05 40 09.0	+0.7
	comp=Z,32nm,1.0s,baz=210,slow=4.4,SNR=9.6						
KAPI				PKPbc	PKPbc	05 40 13.0	-0.4
	comp=Z,32nm,1.0s,baz=45,slow=1.4,SNR=22						
KAPI	**Kappang**	**150.26**	**201**	PKP	PKPdf	05 40 09.0	+0.7
KAPI				ePKPbc	PKPbc	05 40 12.9	-0.5
KAPI				PKPbc	PKPbc	05 40 13.0	-0.4
KAPI				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
HYB	**Hyderabad**	**150.37**	**95**	i PKP	PKPdf	05 40 08.0	-0.3
	comp=Z,70nm,1.0s						
HYB	**Hyderabad**	**150.37**	**95**	eP	PKPdf	05 40 08.0	-0.3
MDRS	**Chennai**	**150.41**	**105**	ex	x	05 39 40.2	
MDRS				ex	x	05 41 45.2	
NDI	**New Delhi**	**150.44**	**72**	eP	PKPdf	05 40 08.0	-0.1
BHPL	**Bhopal**	**150.48**	**83**	eP	PKPdf	05 40 07.4	-0.9
IRK	**Irkutsk**	**150.71**	**7**	ePKIKP	PKPbc	05 40 12.6	-0.7
IRK				pmax	pmax		
	comp=Z,131nm,3.2s						
MOY	**Mondy**	**150.81**	**11**	ePKIKP	PKPbc	05 40 14.5	+1.0
DDI	**Dehra Dun**	**151.03**	**69**	eP	PKPdf	05 40 07.0	-2.0
CIT	**Chita**	**151.05**	**355**	ePKIKP	PKPdf	05 40 09.9	+1.6
TLY	**Talaya**	**151.19**	**8**	ePKIKP	PKPdf	05 40 09.3	+0.8
TLY				i		05 40 14.8	
TLY				e		05 40 22.0	
TLY				e		05 43 50.0	
TLY				eSS	SS	06 03 11.9	+0.5
TLY				pmax	pmax		
	comp=Z,20nm,1.0s						
TLY	**Talaya**	**151.19**	**8**	ePKPbc	PKPbc	05 40 15.5	+1.1
TLY				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
NGP	**Nagpur**	**151.68**	**88**	eP	PKPdf	05 40 08.7	-1.5
NGP				AMP		06 46 06.7	
	comp=Z,2µm,23.6s						
MJAR	**Matsushiro Arr**	**151.95**	**305**	PKP	PKPdf	05 40 10.3	+0.1
	comp=Z,0.6nm,0.3s,baz=196,slow=30,SNR=3.0						
MJAR				PKPbc	PKPbc	05 40 14.9	-1.8
	comp=Z,10nm,0.8s,baz=107,slow=1.6,SNR=16						
MAJO	**Matsushiro**	**151.95**	**305**	ePKIKP	PKPbc	05 40 16.7	0.0
MAJO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.9						
MAT	**Matsushiro**	**151.95**	**305**	PKP	PKPbc	05 40 16.6	-0.1
ZAK	**Zakamensk**	**152.41**	**9**	ePKIKP	PKPdf	05 40 10.9	+0.5
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
WMQ	**Urumqi**	**152.65**	**36**	PKP	PKPbc	05 40 15.0	-3.0
WMQ				XPKP		05 40 30.9	
WMQ				PKP2	PKPab	05 40 34.8	+6.1
WMQ				PKS		05 43 48.1	
WMQ				PP	PP	05 44 08.9	+7.7
WMQ				SKS	SKSdf	05 47 16.0	+1.2
WMQ				SKKS	SKKSac	05 50 52.3	+3.8
WMQ				LR	LR		
	comp=N,703nm,17.0s,MS5.9						
WMQ				LR	LR		
	comp=E,2µm,20.0s,MS5.9						
WMQ				LR	LR		
	comp=Z,1µm,26.0s						
HIA	**Hailar**	**152.76**	**345**	ePKIKP	PKPbc	05 40 18.3	+0.2
HIA				MLR	MLR		
	comp=Z,2µm,20.0s						
PTH	**Pithoragarh**	**152.98**	**70**	ex	x	05 40 20.0	
MDJ	**Mudanjiang**	**153.07**	**327**	PFAKE		05 40 20.0	+8.4
MDJ				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
VIS	**Vishakhapatnam**	**154.83**	**98**	eP	PKPdf	05 40 12.2	-2.6
SONM	**Songino Array**	**155.28**	**5**	PKP	PKPdf	05 40 15.7	+1.2
	comp=Z,3.2nm,0.8s,baz=330,slow=0.3,SNR=12						
SONM				PKPbc	PKPdf	05 40 27.3	+13
	comp=Z,6.8nm,0.9s,baz=321,slow=1.3,SNR=13						
ULN	**Ulaanbaatar**	**155.29**	**4**	ePKIKP	PKPdf	05 40 14.2	-0.4
CN2	**Changchun**	**155.63**	**331**	ePKP	PKPdf	05 40 13.9	-1.3
CN2				PP	PP		
	comp=Z,560nm,10.0s						
CN2				LR	LR		
	comp=N,800nm,20.0s,MS5.8						
CN2				LR	LR		
	comp=E,1µm,20.0s,MS5.8						
CN2				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
PSI	**Prapat**	**157.25**	**151**	PKP	PKPdf	05 40 18.0	-0.3
	comp=Z,1.3nm,0.4s,baz=270,slow=6.7,SNR=4.4						
PSI				PKPab	PKPab	05 40 49.1	0.0
	comp=Z,9.3nm,0.8s,baz=203,slow=8.4,SNR=9.2						
DAV	**Davao City (W)**	**157.78**	**226**	PFAKE		05 40 30.0	+11
DAV				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
SNY	**Shenyang**	**158.04**	**331**	⇑PKP	PKPdf	05 40 16.4	-1.9
SNY				PP	PP	05 44 32.3	+1.3
SNY				SKKS	SKKSac	05 51 15.9	-1.4
SNY				SS	SS	06 04 27.4	+0.8
SNY				PP	PP		
	comp=Z,790nm,9.6s						
SNY				LR	LR		
	comp=N,902nm,21.0s,MS5.7						
SNY				LR	LR		
	comp=E,892nm,25.2s,MS5.7						
SNY				LR	LR		
	comp=Z,1µm,21.6s,MS5.7						
BOK	**Bokaro**	**158.26**	**84**	eP	PKPdf	05 40 16.8	-2.3
BOK				AMb	AMB	05 40 21.5	
	comp=Z,14nm,0.8s						
KSM	**Kuching**	**158.40**	**182**	PFAKE		05 40 30.0	+10
KSM				LR	LR		
	comp=Z,2µm,19.0s,MS6.0						
KSRS	**Korea Array**	**158.78**	**316**	PKP	PKPdf	05 40 19.8	+0.5
	comp=Z,3.7nm,0.7s,baz=87,slow=1.3,SNR=7.2						
CAL	**Calcutta**	**160.41**	**88**	eP	PKPdf	05 40 20.3	-1.4
CAL				ex	x	05 42 53.1	
DL2	**Dalian**	**161.27**	**330**	PKP	PKPdf	05 40 23.3	+1.2
DL2				APKP		05 40 35.3	
DL2				PKP2	PKPab	05 41 11.5	+5.6
DL2				PP	PP	05 44 54.6	+6.0
DL2				PP	PP		
	comp=Z,380nm,9.3s						
DL2				LR	LR		
	comp=N,560nm,18.9s						
DL2				LR	LR		
	comp=Z,650nm,18.5s						
KKM	**Kota Kinabalu**	**161.80**	**202**	PFAKE		05 40 30.0	+6.6
KKM				LR	LR		
	comp=Z,1µm,20.0s						
GTA	**Gaotai**	**161.82**	**25**	ePKP	PKPdf	05 40 23.3	+0.6
GTA				APKP		05 40 35.6	
GTA				XPKP		05 40 40.1	
GTA				SKS	SKSdf	05 47 23.4	-0.9
GTA				SKKS	SKKSac	05 51 33.4	-3.6
GTA				PP	PP		
	comp=Z,721nm,11.1s						
GTA				LR	LR		
	comp=N,847nm,19.2s						
GTA				LR	LR		
	comp=E,824nm,19.5s						
GTA				LR	LR		
	comp=Z,2µm,20.1s						
LSA	**Lhasa**	**162.28**	**65**	PKP	PKPdf	05 40 24.9	+1.5
LSA				APKP		05 40 32.4	
LSA				XPKP		05 40 38.4	
LSA				PP	PP		
	comp=Z,590nm,9.0s						
LSA				LR	LR		
	comp=N,760nm,19.0s						
LSA				LR	LR		
	comp=E,1µm,19.0s						
LSA				LR	LR		
	comp=Z,2µm,19.0s						
LSA	**Lhasa**	**162.28**	**65**	ePKPdf	PKPdf	05 40 25.2	+1.8
LSA				ePP	PP	05 44 56.6	+1.4
LSA				LR	LR		
	comp=Z,3µm,20.0s						
BJI	**Beijing**	**162.30**	**343**	PKP	PKPdf	05 40 22.5	-0.6
BJI				PP	PP	05 44 54.0	+0.3
BJI				PP	PP		
	comp=Z,254nm,5.7s						
BJI				LR	LR		
	comp=N,860nm,20.7s						
BJI				LR	LR		
	comp=E,754nm,21.7s						
BJI				LR	LR		
	comp=Z,1µm,28.2s						
HHC	**Hu-ho-hao-te**	**162.31**	**355**	ePKP	PKPdf	05 40 23.8	+0.7
HHC				APKP		05 40 34.9	
HHC				XPKP		05 40 38.5	
HHC				PKP2	PKPab	05 41 13.0	+2.7
HHC				PKS		05 43 56.0	
HHC				PP	PP		
	comp=Z,752nm,10.4s						
HHC				LR	LR		
	comp=N,935nm,20.6s						
HHC				LR	LR		
	comp=E,1µm,17.3s						
HHC				LR	LR		
	comp=Z,2µm,20.2s						
BJT	**Baijiatuau**	**162.32**	**343**	PFAKE		05 40 30.0	+6.9
BJT				LR	LR		
	comp=Z,2µm,21.0s						
LZH	**Lanzhou**	**166.22**	**20**	ePKP	PKPdf	05 40 26.5	-0.3
LZH				PP	PP		
	comp=Z,834nm,7.9s						
LZH				LR	LR		
	comp=E,2µm,19.6s						
LZH				LR	LR		
	comp=Z,2µm,20.5s						
SSE	**Sheshan**	**167.02**	**310**	PKP	PKPdf	05 40 27.8	+0.3
SSE				PP	PP	05 45 22.6	+3.1
SSE				SS	SS	06 06 00.1	-1.2
SSE				PP	PP		
	comp=Z,634nm,6.6s						
SSE				LR	LR		
	comp=N,391nm,23.5s						
SSE				LR	LR		
	comp=E,1µm,23.5s						
SSE				LR	LR		
	comp=Z,2µm,21.2s						
NJ2	**Nanjing**	**167.94**	**319**	ePKP	PKPdf	05 40 28.9	+0.7
NJ2				APKP		05 40 39.8	
NJ2				XPKP		05 40 43.3	
NJ2				PKP2	PKPab	05 41 37.8	+2.3
NJ2				PP	PP		
	comp=Z,240nm,10.3s						
NJ2				LR	LR		
	comp=N,3µm,22.7s						
NJ2				LR	LR		
	comp=E,3µm,25.8s						
NJ2				LR	LR		
	comp=Z,2µm,22.3s						
CM31	**Chiang Mai Arr**	**169.00**	**113**	ePKPdf	PKPdf	05 40 27.4	-1.8
CM31				ePKPab	PKPab	05 41 41.1	+0.5
CM31				LR	LR		
	comp=Z,1µm,20.0s						
CMAR	**Chiang Mai Arr**	**169.00**	**113**	PKP	PKPdf	05 40 28.1	-1.1
	comp=Z,2.7nm,0.9s,baz=307,slow=2.9,SNR=8.5						
CMAR				PKPab	PKPab	05 41 41.0	+0.4
	comp=Z,6.8nm,1.0s,baz=252,slow=4.2,SNR=10						
YHNB	**Yeheng**	**169.11**	**280**	PFAKE		05 40 40.0	+11
YHNB				LR	LR		
	comp=Z,3µm,21.0s						
CHTO	**Chiang Mai**	**169.15**	**112**	ePKIKP	PKPdf	05 40 28.9	-0.4
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
XAN	**Xi'an**	**169.17**	**3**	PKP	PKPdf	05 40 28.8	-0.1
XAN				PKP2	PKPab	05 41 43.4	+2.7
XAN				LR	LR		
	comp=N,392nm,21.2s						
XAN				LR	LR		
	comp=E,1µm,23.0s						
XAN				LR	LR		
	comp=Z,2µm,24.8s						
CHRT	**Chiangrai**	**170.30**	**108**	P	PKPdf	05 40 29.0	-1.0
CD2	**Chengdu**	**170.72**	**33**	PKP	PKPdf	05 40 31.0	+1.1
CD2				APKP		05 40 41.0	
CD2				XPKP		05 40 44.6	
CD2				PKP2	PKPab	05 41 51.0	+3.2
CD2				PKS		05 44 01.4	
CD2				PP	PP		
	comp=Z,1µm,7.1s						
CD2				LR	LR		
	comp=N,2µm,21.1s						
CD2				LR	LR		
	comp=Z,2µm,21.1s						
WHN	**Wuhan**	**171.53**	**331**	PKP	PKPdf	05 40 30.5	+0.2
WHN				PKP2	PKPab	05 41 56.0	+4.7
WHN				PP	PP	05 45 40.9	-0.6
WHN				LR	LR		
	comp=Z,5µm,22.2s						
QZH	**Quanzhou**	**171.58**	**284**	i PKP	PKPdf	05 40 30.6	+0.1
QZH				PP	PP	05 45 46.8	+3.4
QZH				PP	PP		
	comp=Z,1µm,10.1s						
QZH				LR	LR		
	comp=N,2µm,17.2s						
QZH				LR	LR		
	comp=E,7µm,23.1s						
QZH				LR	LR		
	comp=Z,9µm,20.6s						
KMI	**Kunming**	**173.46**	**71**	PKP	PKPdf	05 40 30.9	-0.4
KMI				APKP		05 40 44.3	
KMI				XPKP		05 40 48.6	
KMI				PKP2	PKPab	05 42 01.6	+1.3
KMI				PKS		05 44 01.8	
KMI				PP	PP	05 45 54.3	+1.8
KMI				LR	LR		
	comp=N,676nm,23.7s						
KMI				LR	LR		
	comp=E,2µm,22.6s						
KMI				LR	LR		
	comp=Z,3µm,23.7s						
GYA	**Guiyang**	**175.80**	**39**	PKP	PKPdf	05 40 31.8	-0.2
GYA				XPKP		05 40 51.8	
GYA				PKP2	PKPab	05 42 11.9	+1.4
GYA				PKS		05 44 02.9	
GYA				PP	PP		
	comp=Z,400nm,7.0s						
GYA				LR	LR		
	comp=N,350nm,18.8s						
GYA				LR	LR		
	comp=E,670nm,20.3s						
GYA				LR	LR		
	comp=Z,450nm,21.6s						
QIZ	**Qiongzhong**	**175.85**	**183**	PKP	PKPdf	05 40 32.3	+0.1
QIZ				PKP2	PKPab	05 42 09.8	-0.8
QIZ				PP	PP	05 46 03.1	+1.1
QIZ				PP	PP		
	comp=Z,730nm,9.3s						
QIZ				LR	LR		
	comp=E,1µm,18.8s						
QIZ				LR	LR		
	comp=Z,2µm,23.4s						
QIZ	**Qiongzhong**	**175.85**	**183**	PFAKE		05 40 40.0	+7.8
QIZ				LR	LR		
	comp=Z,2µm,20.0s						

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*IDC **13** 05:28:01.4±2.2, 1261S×12279E, h0km, mb3.5/2, mb1 4.1/5, mb1mx3.9/17, mbtmp4.0/5, ML4.0/2, Error ellipse: s-maj=59.2km s-min=38.3km az=68.0*

*NEIC **13** 05:28:02.8±0.8, 1254S×12287E, h10km, mb3.7/2, Error ellipse: s-maj=15.3km s-min=10.2km az=63.0*

*AUST **13** 05:29:06.9, 1254S×12282E, h15km, ML3.8*

ISC 13 05:28:05.4±0.6**, 1262S**±004×**12291E**±007**, h35km, n19, σ1§30**/34**, mb3.6**/2**, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.51**	**17**	Pn	**Pn**	**05 28 43.7**	**0.0**
	92nm,0.3s,baz=157,slow=1.6,SNR=31						
BATI				Sn	**Sn**	**05 29 12.9**	**-0.3**
	72nm,0.3s,baz=105,slow=23,SNR=9.4						
FITZ	**Fitzroy Crossi**	**6.05**	**155**	eP	**Pn**	**05 29 35.5**	**+3.1**
FITZ				eS	**Sn**	**05 30 41.7**	**+1.2**
	98nm,0.5s						
FITZ	**Fitzroy Crossi**	**6.05**	**155**	eP	**Pn**	**05 29 35.5**	**+3.1**
	98nm,0.5s						
FITZ				eS	**Sn**	**05 30 41.7**	**+1.2**
KNA	**Kununurra**	**6.47**	**119**	eP	**Pn**	**05 29 41.2**	**+2.9**
KNA				eS	**Sn**	**05 30 50.2**	**-0.7**
	28nm,0.2s						
KNA	**Kununurra**	**6.47**	**119**	eP	**Pn**	**05 29 41.2**	**+2.9**
	28nm,0.2s						
KNA				eS	**Sn**	**05 30 50.2**	**-0.7**
KAPI	**Kappang**	**8.18**	**337**	Pn	**Pn**	**05 29 59.6**	**-2.0**
	1.7nm,0.3s,baz=158,slow=11,SNR=16						
KAPI				Sn	**Sn**	**05 31 27.3**	**-5.7**
	1.1nm,0.3s,baz=234,slow=18,SNR=2.6						
MBWA	**Marble Bar**	**9.02**	**199**	eP	**Pn**	**05 30 13.9**	**+0.7**
MBWA				eS	**Sn**	**05 31 49.1**	**-4.4**
KAKA	**Kakadu**	**9.30**	**92**	eP	x	05 29 59.5	
KAKA				eS	x	05 31 39.0	
	7.3nm,0.3s						
WRAB	**Tennant Creek**	**13.16**	**125**	ePn	**Pn**	**05 31 09.8**	**-0.2**
	8.5nm,0.6s						
WRAB				eSn	**Sn**	**05 33 27.2**	**-8.0**
WB2	**Warramunga Arr**	**13.17**	**125**	eP	**Pn**	**05 31 09.2**	**-0.8**
WB2				eS	**Sn**	**05 33 27.1**	**-8.2**
MEEK	**Meekatharra**	**14.52**	**196**	eP	**Pn**	**05 31 28.5**	**+0.1**
MEEK				eS	**Sn**	**05 33 59.4**	**-8.7**
	4.0nm,0.2s						
MEEK	**Meekatharra**	**14.52**	**196**	eP	**Pn**	**05 31 28.5**	**+0.1**
	4.0nm,0.2s						
MEEK				eS	**Sn**	**05 33 59.4**	**-8.7**
ASAR	**Alice Springs**	**15.15**	**138**	Pn	**Pn**	**05 31 37.5**	**+0.6**
	0.8nm,0.3s,baz=315,slow=12,SNR=82						
ASAR				Sn	**Sn**	**05 34 19.2**	**-4.3**
	0.8nm,0.3s,baz=320,slow=25,SNR=9.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MORW	Morawa	17.57	200	eP	Pn	05 32 08.7	+1.1
MORW				eS	Sn	05 35 08.1	-14
	3.8nm,0.4s						
MORW	Morawa	17.57	200	eP	Pn	05 32 08.7	+1.1
	3.8nm,0.4s						
MORW				eS	Sn	05 35 08.1	-14
BLDU	Ballidu	18.80	197	eP	Pn	05 32 25.7	+3.1
BLDU				eS	Sn	05 35 38.4	-14
	1.7nm,0.4s						
BLDU	Ballidu	18.80	197	eP	Pn	05 32 25.7	+3.1
	1.7nm,0.4s						
BLDU				eS	Sn	05 35 38.4	-14
SONM	Songino Array	61.96	347	P	P	05 38 23.4	+1.8
	0.3nm,0.7s,mb3.5,baz=179,slow=8.4,SNR=2.6						
MKAR	Makanchi Array	69.43	331	P	P	05 39 10.7	+0.9
	0.6nm,0.6s,mb3.7,baz=142,slow=7.2,SNR=5.0						

*SZGRF **13** 05:33:00.2, 20.53S×175.55W, h33km, Tonga Islands*
*ISCJB **13** 05:33:01.4±1.6, 20.38S±0.06×175.70W±0.05, h40km±14km, mb5.0/53, MS5.0/5, Error ellipse: s-maj=11.1km s-min=5.5km az=147.0*
*MOS **13** 05:33:03.0±1.0, 20.28S×175.77W, h33km, mb5.5/14, Error ellipse: s-maj=12.0km s-min=9.3km az=152.1*
*BJI **13** 05:33:04.0, 20.30S×175.60W, h65km, mB5.6, mb5.2, Ms5.3, Msz4.9*
*NEIC **13** 05:33:05.1±1.2, 20.34S×175.60W, h66km±10km, mb5.2/28, Error ellipse: s-maj=10.6km s-min=5.9km az=133.0*
*IDC **13** 05:33:06.1±3.1, 20.36S×175.56W, h75km±28km, mb4.4/18, mb1 4.6/20, mb1mx4.6/23, mbtmp4.4/20, Error ellipse: s-maj=16.8km s-min=11.9km az=125.0*
ISC 13 05:33:04.7±1.3, 20.35S±0.06×175.70W±0.05, h54km±11km, h63km±1.5km: pP-P, n411, σ0.62/278, mb5.0/53, MS5.0/5, 119C-102D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.42	31	P	Pn	05 34 50.7	+0.3
	3.2nm,0.3s,baz=210,slow=21,SNR=5.1						
AFI				S	Sn	05 36 03.5	-10
	27nm,0.3s,baz=57,slow=23,SNR=7.4						
AFI	Afiamalu	7.42	31	ePn	Pn	05 34 50.5	0.0
AFI				eS	Sn	05 36 04.5	-8.8
FUNA	Funafuti	12.75	337	ePn	Pn	05 36 01.4	-1.9
RAR	Rarotonga	14.92	96	P	Pn	05 36 35.3	+2.9
	3.1nm,0.3s,baz=249,slow=12,SNR=3.7						
RAR				S	Sn	05 38 58.4	-18
	7.5nm,0.3s,baz=145,slow=22,SNR=6.0						
DZM	Mont Dzumac	16.74	261	ePn	Pn	05 37 04.4	+8.9
	156nm,0.7s						
URZ	Urewera	18.90	198	P	Pn	05 37 19.1	-2.7
	4.1nm,0.3s,baz=6.9,slow=5.4,SNR=12						
URZ				S	S	05 40 34.3	-18
	1.4nm,0.3s,baz=112,slow=22,SNR=8.4						
SNZO	South Karori	22.43	199	eP	P	05 38 00.1	+1.3
	70nm,1.0s,mb5.0						
PPT	Papeete	24.86	88	P	P	05 38 20.3	-2.0
	31nm,0.7s,mb4.9,baz=239,slow=7.5,SNR=3.3						
RPZ	Rata Peaks	25.79	202	P	P	05 38 31.3	+0.8
	101nm,0.5s,mb5.6,baz=334,slow=1.3,SNR=80						
HNR	Honiara	25.88	291	eP	P	05 38 34.8	+3.2
HNR				pmax	pmax		
	comp=Z,25nm,0.4s,mb5.1						
HNR	Honiara	25.88	291	eP	P	05 38 34.8	+3.2
	comp=Z,25nm,0.4s,mb5.1						
EIDS	Eidsvold	30.96	254	eP	P	05 39 17.7	+0.9
	comp=Z,18nm,0.6s,mb5.1						
ARMA	Armidale	31.07	245	eP	P	05 39 19.3	+1.5
CNB	Canberra Magne	34.10	237	eP	P	05 39 44.6	+0.4
CAN	Canberra	34.39	237	eP	P	05 39 46.5	-0.2
CTA	Charters Tower	35.65	264	eP	P	05 39 59.6	+1.9
	comp=Z,32nm,0.6s,mb5.4						
CTA	Charters Tower	35.65	264	P	P	05 39 58.9	+1.2
	comp=Z,41nm,0.7s,mb5.5,baz=97,slow=11,SNR=38						
CTA	Charters Tower	35.65	264	eP	P	05 39 59.6	+1.9
CTA				pmax	pmax		
	comp=Z,32nm,0.6s						
CTAO	Charters Tower	35.65	264	eP	P	05 39 59.7	+2.0
CTAO				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.5						
CTAO	Charters Tower	35.65	264	eP	P	05 39 59.7	+2.0
	comp=Z,44nm,0.7s,mb5.5						
PMG	Port Moresby	37.42	281	eP	P	05 40 14.7	+1.9
PMG				pmax	pmax		
	comp=Z,51nm,1.0s						
PMG	Port Moresby	37.42	281	eP	P	05 40 14.7	+1.8
	comp=Z,51nm,1.0s,mb5.3						
TOO	Toolangi	37.73	234	eP	P	05 40 14.8	-0.4
TAU	Tasmania Unive	38.25	226	eP	P	05 40 19.2	-0.4
COEN	Coen	39.73	273	eP	P	05 40 34.0	+1.8
	comp=Z,77nm,0.8s,mb5.5						
STKA	Stephens Creek	39.79	244	eP	P	05 40 32.6	0.0
	comp=Z,19nm,0.6s,mb5.0						
STKA	Stephens Creek	39.79	244	P	P	05 40 32.6	+0.1
	comp=Z,19nm,0.5s,mb5.1,baz=91,slow=9.4,SNR=51						
STKA	Stephens Creek	39.79	244	eP	P	05 40 32.6	0.0
	comp=Z,4.1nm,0.6s,mb4.3						
STKA				ePcP	PcP	05 42 38.0	0.0
ASAR	Alice Springs	46.65	256	P	P	05 41 27.6	-0.4
	comp=Z,31nm,1.0s,mb5.2,baz=94,slow=7.6,SNR=38						
ASAR				PcP	PcP	05 43 00.1	-1.0
	comp=Z,8.5nm,0.6s,baz=105,slow=4.0,SNR=18						
WB2	Warramunga Arr	46.74	261	eP	P	05 41 29.4	+0.6
WRAB	Tennant Creek	46.74	261	⇑iP	P	05 41 29.1	+0.3
WRAB	Tennant Creek	46.74	261	eP	P	05 41 29.3	+0.5
	comp=Z,29nm,0.9s,mb5.2						
KAKA	Kakadu	50.13	270	⇑iP	x	05 41 34.8	
	comp=Z,21nm,0.4s						
FORT	Forrest	51.33	246	eP	P	05 42 02.4	-1.4
	comp=Z,22nm,0.6s,mb5.3						
FITZ	Fitzroy Crossi	55.18	262	eP	P	05 42 31.7	-0.5
	comp=Z,11nm,0.6s,mb5.0						
VNDA	Vanda	58.26	186	P	P	05 42 53.0	-0.2
	comp=Z,3.6nm,0.7s,mb4.5,baz=349,slow=6.9,SNR=19						
VNDA	Vanda	58.26	186	P	P	05 42 53.0	-0.2
BATI	Baumata	59.08	270	P	P	05 43 01.1	+1.2
	comp=Z,44nm,0.6s,mb5.7,baz=244,slow=5.3,SNR=4.7						
MBWA	Marble Bar	59.99	257	eP	P	05 43 04.9	-1.1
	comp=Z,8.7nm,0.8s,mb4.8						
KLBR	Kellerberrin	60.07	245	eP	P	05 43 05.1	-1.3
	comp=Z,8.6nm,0.6s,mb5.0						
QSPA	South Pole Qui	69.72	180	P	P	05 44 07.4	-0.9
	comp=Z,11nm,0.6s,mb4.9,baz=358,slow=2.7,SNR=9.6						
QSPA	South Pole Qui	69.72	180	P	P	05 44 07.4	-0.9
MJAR	Matsushiro Arr	71.39	322	P	P	05 44 18.0	-1.1
	comp=Z,1.5nm,0.5s,mb4.2,baz=152,slow=5.9,SNR=5.8						
KSM	Kuching	75.53	277	eP	P	05 44 42.7	-1.3
	comp=Z,40nm,1.1s,mb5.3						
PEA0B	Petropavlovsk-	76.70	344	eP	P	05 44 50.3	+0.6
PETK	Petropavlovsk-	76.70	344	P	P	05 44 49.4	-0.3
	comp=Z,5.2nm,0.7s,mb4.6,baz=104,slow=8.0,SNR=11						
YSS	Yuzh-Sakhalins	76.75	332	⇑eP	P	05 44 50.9	+0.8
YSS				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.0						
VES	Vestal, Richgr	77.41	44	⇓P	P	05 44 54.1	0.0
	baz=78						
BFSC	Mount Baldy St	77.42	46	⇓P	P	05 44 54.1	-0.1
	baz=78						
MONP	Monument Peak	77.50	48	⇓P	P	05 44 54.7	+0.1
	baz=78						
EDW2	Edwards Air Fo	77.57	45	⇓P	P	05 44 55.1	+0.2
	baz=78						
ISA	Isabella	77.70	44	⇑P	P	05 44 55.9	+0.2
	baz=78						
ISA	Isabella	77.70	44	eP	P	05 44 55.5	-0.2
ISA				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
ISA	Isabella	77.70	44	eP	P	05 44 55.5	-0.2
	comp=Z,32nm,1.4s,mb5.1						
LRMC	Laurel Mountai	78.11	45	⇓P	P	05 44 58.1	+0.1
	baz=78						
KSRS	Korea Array	78.22	317	P	P	05 44 59.5	+0.9
	comp=Z,1.4nm,0.5s,mb4.2,baz=111,slow=6.8,SNR=4.1						
BELC	Belle Mtn.	78.42	47	⇑P	P	05 44 59.8	+0.1
	baz=78						
CWC	Cottonwood Cre	78.42	44	⇓P	P	05 44 59.9	+0.2
	baz=78						
MPMC	Manual Prospec	78.58	45	⇓P	P	05 45 01.0	+0.4
	baz=79						
GLA	Glamis	78.70	48	⇑P	P	05 45 01.4	0.0
	baz=79						
R06C	Coleville	78.79	42	⇓P	P	05 45 01.7	0.0
	baz=79						
BEKR	Beckwourth	79.05	40	⇑P	P	05 45 03.2	+0.1
	baz=79						
GMRC	Granite Mounta	79.08	47	⇓P	P	05 45 03.0	-0.4
	baz=79						
IRM	Iron Mountain	79.09	47	⇑P	P	05 45 03.2	-0.2
	baz=79						
TUQ	Turquoise Moun	79.27	46	⇓P	P	05 45 04.4	0.0
	baz=79						
NVAR	Mina Array Bea	79.45	42	P	P	05 45 05.4	+0.1
	comp=Z,3.5nm,0.9s,mb4.3,baz=226,slow=7.7,SNR=16						
U10A	Ash Meadows, A	79.56	45	⇓P	P	05 45 06.1	+0.2
	baz=80						
V11A	Goodsprings	79.83	46	⇑P	P	05 45 07.3	-0.1
	baz=80						
N06A	Buffalo Meadow	79.91	40	⇓P	P	05 45 07.4	-0.3
	baz=80						
TPNV	Topopah Spring	79.91	44	⇓P	P	05 45 07.9	0.0
	baz=80						
TPNV	Topopah Spring	79.91	44	eP	P	05 45 08.1	+0.3
TPNV				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.2						
TPNV	Topopah Spring	79.91	44	eP	P	05 45 08.1	+0.2
	comp=Z,38nm,1.2s,mb5.2						
O07A	Toulon	80.13	41	⇓P	P	05 45 09.2	+0.3
	baz=80						
KDAK	Kodiak Island	80.19	12	P	P	05 45 06.9	-1.9
	comp=Z,6.4nm,0.6s,mb4.7,baz=162,slow=2.9,SNR=6.8						
S10A	Tonopah Range,	80.25	44	⇑P	P	05 45 09.6	0.0
	baz=80						
N07B	Gerlach	80.45	40	⇓P	P	05 45 10.6	0.0
	baz=81						
W13A	Hualapai Mount	80.47	47	⇑P	P	05 45 11.1	+0.2
	baz=81						
K05A	Summer Lake	80.52	38	⇑P	P	05 45 11.2	+0.3
	baz=81						
R10A	Warm Springs	80.64	43	⇑P	P	05 45 12.4	+0.7
	baz=81						
O08A	Rochester Mine	80.65	41	⇑P	P	05 45 12.1	+0.4
	baz=81						
M07A	Soldier Meadow	80.70	39	⇑P	P	05 45 12.5	+0.6
	baz=81						
T11A	Corn Creek, Al	80.76	45	⇑P	P	05 45 13.0	+0.7
	baz=81						
V13A	Grand Canyon W	80.82	46	⇓P	P	05 45 12.9	+0.2
	baz=81						
Y15A	Casa Rosa Ranc	80.94	49	⇓P	P	05 45 13.7	+0.2
	baz=81						
N08A	GE Springer Mi	80.96	40	⇓P	P	05 45 13.8	+0.4
	baz=81						
L07A	Adell	80.98	39	⇑P	P	05 45 13.7	+0.2
	baz=81						
W14A	Seligman	81.09	47	⇓P	P	05 45 14.6	+0.4
	baz=81						
U13A	Pakoon Wash	81.14	46	⇑P	P	05 45 14.9	+0.5
	baz=81						
M08A	Happy Creek Ra	81.21	40	⇑P	P	05 45 15.5	+0.8
	baz=81						
S12A	Delamar Landin	81.21	45	⇑P	P	05 45 15.1	+0.4
	baz=81						
Z16A	Peralta Trail,	81.27	50	⇓P	P	05 45 15.4	+0.2
	baz=81						
J06A	Christmas Vall	81.27	38	⇑P	P	05 45 15.2	+0.3
	baz=81						
X15A	Humboldt	81.29	48	⇓P	P	05 45 15.7	+0.4
	baz=81						
V14A	Boquillas Ranc	81.30	47	⇓P	P	05 45 15.7	+0.4
	baz=81						
Q11A	Duckwater	81.38	43	⇑P	P	05 45 15.8	+0.2
	baz=82						
HABR	Khabarovsk	81.40	329	eP	P	05 45 14.5	-1.0
HABR				e		05 45 19.8	
HABR				ePPP		05 50 10.6	
HABR				eS	S	05 55 21.4	-0.9
HABR				e		05 55 36.9	
HABR				eSS	SS	06 00 38.5	-1.6
HABR				eSSS		06 04 06.4	
HABR				MLR	MLR		
	comp=Z,181nm,21.0s,MS4.4						
K07A	Rock Creek Ran	81.45	38	⇑P	P	05 45 16.2	+0.4
	baz=82						
NJ2	Nanjing	81.46	309	eP	P	05 45 16.8	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
T13A	Saint George	81.51	45	⇓P	P	05 45 16.7	+0.4
	baz=82						
MDJ	Mudanjiang	81.65	324	P	P	05 45 17.5	+0.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,188nm,6.9s						
I06A	Prineville	81.67	37	⇑P	P	05 45 17.5	+0.5
	baz=82						
U14A	Mt Trumbull	81.67	46	⇑P	P	05 45 17.8	+0.6
	baz=82						
L08A	Fields	81.67	39	⇓P	P	05 45 17.2	+0.1
	baz=82						
M09A	Marrel Ranch,	81.75	40	⇑P	P	05 45 18.1	+0.5
	baz=82						
X16A	Lo Mia Camp, P	81.81	49	⇓P	P	05 45 18.5	+0.5
	baz=82						
J07A	Hines	81.83	38	⇑P	P	05 45 18.3	+0.4
	baz=82						
S13A	Holt Ranch, En	81.84	45	⇑P	P	05 45 18.2	+0.1
	baz=82						
Y17A	Roosevelt	81.87	50	⇑P	P	05 45 18.7	+0.3
	baz=82						
K08A	Mann Creek Ran	81.92	39	⇑P	P	05 45 18.5	+0.1
	baz=82						
V15A	Kaibab Nationa	82.04	47	⇑P	P	05 45 19.7	+0.5
	baz=82						
H06A	Lindquist Farm	82.09	36	⇑P	P	05 45 19.5	+0.3
	baz=82						
R13A	O'Grain Ranch,	82.10	44	⇑P	P	05 45 19.8	+0.4
	baz=82						
O11A	Cowboy Ranch,	82.11	42	⇓P	P	05 45 19.7	+0.2
	baz=82						
I07A	Izee	82.15	37	⇓P	P	05 45 20.0	+0.4
	baz=82						
U15A	North Rim	82.28	47	⇑P	P	05 45 20.4	-0.1
	baz=82,SNR=7.1						
J08A	Circle Bar Ran	82.30	38	⇓P	P	05 45 20.6	+0.2
	baz=82						
K09A	Rome	82.34	39	⇑P	P	05 45 20.6	0.0
	baz=82						
MAW	Mawson	82.42	199	P	P	05 45 19.6	-1.1
	comp=Z,7.6nm,0.7s,mb4.8,baz=142,slow=6.7,SNR=12						
H07A	Lands Inn, Kim	82.43	37	⇓P	P	05 45 21.2	+0.2
	baz=83						
E05A	Randle	82.48	34	⇓P	P	05 45 21.4	+0.2
	baz=83						
F06A	Goldendale	82.50	35	⇑P	P	05 45 21.6	+0.3
	baz=83						
Q13A	Wheeler Ranch,	82.50	44	⇑P	P	05 45 21.6	+0.2
	baz=83						
T15A	Red Dirt Ranch	82.53	46	⇑P	P	05 45 22.3	+0.6
	baz=83						
J09A	Fry Pan Ranch,	82.72	39	⇑P	P	05 45 22.6	+0.1
	baz=83						
L10A	Juniper Basin	82.73	40	⇓P	P	05 45 23.0	+0.4
	baz=83						
M11A	Holland Ranch,	82.77	41	⇓P	P	05 45 23.2	+0.4
	baz=83						
P13A	Bates Ranch, G	82.78	43	⇓P	P	05 45 23.2	+0.3
	baz=83						
G07A	Ruggs Ranch, H	82.79	36	⇓P	P	05 45 23.0	+0.2
	baz=83						
E06A	Yakima	82.88	35	⇓P	P	05 45 23.4	+0.1
	baz=83						
K10A	MacKenzie Ranc	82.90	39	⇑P	P	05 45 23.7	+0.2
	baz=83						
N12A	Clover Valley,	82.91	42	⇑P	P	05 45 23.7	+0.1
	baz=83						
U16A	Tuba City	82.93	47	⇑P	P	05 45 24.1	+0.3
	baz=83,SNR=5.7						
X18A	Snowflake	82.93	49	⇑P	P	05 45 23.9	+0.1
	baz=83						
Q14A	Sevier Lake (B	83.00	44	⇑P	P	05 45 24.4	+0.3
	baz=83,SNR=6.9						
G08A	Pilot Rock	83.20	36	⇓P	P	05 45 25.1	+0.1
	baz=83,SNR=8.7						
L11A	Cat Creek Ranc	83.22	40	⇑P	P	05 45 25.3	+0.1
	baz=83,SNR=5.7						
R15A	Junction	83.24	45	⇑P	P	05 45 25.3	0.0
	baz=83						
C05A	Tolt Reservoir	83.25	33	⇑P	P	05 45 24.9	-0.2
	baz=83						
M12A	Wells	83.30	41	⇓P	P	05 45 26.0	+0.4
	baz=83						
X19A	St. Johns	83.35	50	⇑P	P	05 45 26.8	+0.8
	baz=84						
K11A	Parker Ranch,	83.40	40	⇑P	P	05 45 26.3	+0.3
	baz=84						
A04A	Legoe Bay, Lum	83.40	32	⇑P	P	05 45 26.7	+0.8
	baz=84						
B05A	Bryant	83.41	33	⇑P	P	05 45 25.9	-0.1
	baz=84						
S16A	Weppner Ranch,	83.44	46	⇑P	P	05 45 26.8	+0.4
	baz=84						
P14A	Drum Mountains	83.46	44	⇑P	P	05 45 26.6	+0.1
	baz=84						
MSU	Marysvale	83.47	45	eP	P	05 45 26.9	+0.4
U17A	Shonto	83.49	47	⇓P	P	05 45 26.7	0.0
	baz=84						
E07A	Sunnyside	83.50	35	⇓P	P	05 45 26.9	+0.4
	baz=84						
CN2	Changchun	83.51	321	eP	P	05 45 28.6	+2.0
V18A	Ganado	83.54	48	⇓P	P	05 45 26.9	0.0
	baz=84,SNR=5.0						
HAWA	Hanford	83.57	35	eP	P	05 45 26.3	-0.6
	comp=Z,31nm,1.1s,mb5.3						
T17A	Navajo Res., N	83.59	47	⇓P	P	05 45 27.5	+0.3
	baz=84						
F08A	Pendleton	83.61	36	⇓P	P	05 45 27.7	+0.6
	baz=84						
W19A	Sanders	83.62	49	⇑P	P	05 45 27.4	-0.1
	baz=84						
L12A	House Creek Ra	83.65	41	⇓P	P	05 45 27.6	+0.2
	baz=84						
M13A	Montello	83.74	42	⇓P	P	05 45 28.2	+0.3
	baz=84						
R16A	Teasdale	83.81	45	⇑P	P	05 45 28.7	+0.4
	baz=84						
G09A	Cove	83.86	37	⇓P	P	05 45 28.5	+0.1
	baz=84						
BMO	Blue Mountains	83.87	38	eP	P	05 45 27.3	-1.1
BMO				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
BMO	Blue Mountains	83.87	38	eP	P	05 45 27.3	-1.1
	comp=Z,20nm,1.1s,mb5.2						
E08A	Dider Farm, El	83.88	35	⇓P	P	05 45 28.9	+0.4
	baz=84						
MFID	Camas Ranch	83.89	39	⇓P	P	05 45 28.6	0.0
	baz=84						
S17A	Black Ridge (B	83.93	46	⇓P	P	05 45 29.1	+0.2
	baz=84						
U18A	Rough Rock, Ch	83.94	48	⇑P	P	05 45 29.4	+0.4
	baz=84						
DUG	Dugway	83.95	43	⇑P	P	05 45 28.6	-0.3
	baz=84						
K12A	Draper Farm, C	84.00	40	⇓P	P	05 45 29.4	+0.2
	baz=84						
H10A	Noah's Angus R	84.04	38	⇓P	P	05 45 28.9	-0.4
	baz=84,SNR=6.2						
C07A	Waterville	84.09	34	⇑P	P	05 45 29.4	0.0
	baz=84						
J12A	Stokes Ranch,	84.23	40	⇓P	P	05 45 30.6	+0.3
	baz=84						
G10A	Bishop Farm, J	84.24	37	⇓P	P	05 45 30.1	-0.2
	baz=84						
L13A	Double Diamond	84.28	41	⇑P	P	05 45 30.6	0.0
	baz=84						
T18A	Mexican Hat	84.31	47	⇑P	P	05 45 31.0	+0.1
	baz=84,SNR=12						
D08A	Wollman Farm,	84.31	35	⇑P	P	05 45 30.6	0.0
	baz=84						
M14A	Sheep Mountain	84.33	42	⇑P	P	05 45 31.0	+0.2
	baz=84						
R17A	Hanksville Air	84.39	46	⇑P	P	05 45 31.2	-0.1
	baz=84,SNR=5.8						
E09A	Wood Farm, Sta	84.40	36	⇓P	P	05 45 30.8	-0.2
	baz=84						
K13A	Stover Farm, H	84.51	41	⇓P	P	05 45 31.6	-0.1
	baz=85,SNR=5.5						
I12A	Atlanta	84.52	39	⇑P	P	05 45 31.8	0.0
	baz=85						
TMUT	Trail Mountain	84.52	45	eP	P	05 45 32.7	+0.8
H11A	Donnelly	84.53	38	⇓P	P	05 45 31.3	-0.4
	baz=85,SNR=5.9						
B07A	Winthrop	84.55	33	⇑P	P	05 45 31.6	-0.2
	baz=85						
F10A	Beach Ranch, E	84.58	37	⇑P	P	05 45 31.5	-0.5
	baz=85,SNR=7.5						
D09A	Jones Farm, Ri	84.64	35	⇓P	P	05 45 32.3	0.0
	baz=85						
C08A	Higginbotham F	84.69	34	⇓P	P	05 45 32.1	-0.4
	baz=85						
A07A	Ashnola River,	84.78	33	⇓P	P	05 45 32.9	0.0
	baz=85						
G11A	Walters Elk Ra	84.79	38	⇓P	P	05 45 32.9	-0.2
	baz=85						
HLID	Hailey	84.82	40	⇓P	P	05 45 33.4	+0.1
	baz=85						
HLID	Hailey	84.82	40	eP	P	05 45 33.3	+0.1
	comp=Z,20nm,1.0s,mb5.2						
HLID				epP	sP	05 46 03.2	+8.5
J13A	Cove Ranch, Pi	84.87	40	⇓P	P	05 45 33.4	-0.1
	baz=85,SNR=8.1						
M15A	Larsen Ranch,	84.88	42	⇓P	P	05 45 33.4	-0.2
	baz=85						
SRU	San Rafael	84.88	45	⇑P	P	05 45 33.5	-0.2
	baz=85						
SRU	San Rafael	84.88	45	eP	P	05 45 33.4	-0.3
SRU				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
SRU	San Rafael	84.88	45	eP	P	05 45 33.4	-0.3
	comp=Z,23nm,1.0s,mb5.3						
B08A	Colville Reser	84.89	34	⇓P	P	05 45 32.8	-0.7
	baz=85						
R18A	Canyonlands Na	84.93	46	⇓P	P	05 45 33.6	-0.3
	baz=85						
E10A	Myers Farm, Un	84.95	36	⇓P	P	05 45 33.8	0.0
	baz=85						
K14A	Jones Ranch, D	85.01	41	⇓P	P	05 45 34.4	+0.2
	baz=85						
C09A	Chrisman Ranch	85.11	35	⇑P	P	05 45 34.4	-0.2
	baz=85						
H12A	Diamond D Ranc	85.12	39	⇓P	P	05 45 34.5	-0.2
	baz=85,SNR=5.2						
TXAR	Lajitas Array	85.17	56	P	P	05 45 34.5	-0.9
	comp=Z,3.8nm,1.1s,mb4.5,baz=224,slow=7.6,SNR=15						
TXAR	Lajitas Array	85.17	56	P	P	05 45 34.5	-0.9
I13A	Wildhorse Cree	85.20	40	⇑P	P	05 45 35.0	-0.1
	baz=85						
D10A	Wagner Farm, O	85.20	36	⇑P	P	05 45 34.6	-0.5
	baz=85						
L15A	Malad City	85.21	42	⇓P	P	05 45 35.3	0.0
	baz=85						
A08A	Turner Farm, O	85.29	33	⇑P	P	05 45 35.6	+0.1
	baz=85						
O17A	Robinson Place	85.30	44	⇓P	P	05 45 35.6	-0.2
	baz=85,SNR=8.0						
H13A	Challis	85.48	39	⇑P	P	05 45 36.6	0.0
	baz=86						
B09A	Rice	85.56	34	⇑P	P	05 45 37.1	+0.3
	baz=86						
F12A	Elk City	85.57	38	⇓P	P	05 45 36.5	-0.4
	baz=86						
I14A	Mackay	85.60	40	⇑P	P	05 45 37.5	+0.4
	baz=86						
N17A	Moffit Pass	85.63	43	⇓P	P	05 45 37.5	+0.1
	baz=86						
ANMO	Albuquerque	85.64	50	⇓iP	P	05 45 37.5	-0.1
Q19A	Hogan Spring (	85.64	46	⇓P	P	05 45 37.4	-0.1
	baz=86						
A09A	Danville	85.66	34	⇑P	P	05 45 37.4	+0.1
	baz=86						
KTH	Kantishna Hill	85.85	11	eP	P	05 45 36.0	-2.0
	comp=Z,9.5nm,0.9s,mb5.0						
TRF	Thorofare Moun	85.87	11	eP	P	05 45 36.8	-1.2
	comp=Z,25nm,0.7s,mb5.5						
F13A	Darby	86.12	38	⇓P	P	05 45 39.9	+0.2
	baz=86						
K16A	Soda Springs	86.15	42	⇓P	P	05 45 39.7	-0.2
	baz=86						
P19A	Cripple Cowboy	86.17	45	⇑P	P	05 45 39.9	-0.2
	baz=86						
A10A	Northport	86.20	34	⇑P	P	05 45 39.9	-0.1
	baz=86						
C11A	Tepee Creek (N	86.22	36	⇓P	P	05 45 40.0	-0.1
	baz=86						
J16A	Bone	86.37	41	⇑P	P	05 45 40.5	-0.4
	baz=86						
MCK	McKinley	86.38	12	eP	P	05 45 39.9	-0.6
MCK				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.3						
MCK	McKinley	86.38	12	eP	P	05 45 39.9	-0.6
	comp=Z,18nm,0.8s,mb5.4						
H15A	Lima	86.47	40	⇑P	P	05 45 41.8	+0.3

baz=87
C12B Naegeli Ranch, 86.58 36 ⇓P **P** 05 45 41.7 -0.2
baz=87
SEY Seymchan 86.73 346⇑*e*P **P** 05 45 41.4 -0.9
MENT Mentasta 86.75 14 *e*P **P** 05 45 42.2 -0.2
I16A Newdale 86.77 41 ⇑P **P** 05 45 42.8 -0.1
baz=87
A11A Hall Mountain, 86.82 35 ⇓P **P** 05 45 43.4 +0.4
baz=87
O20A White River Ci 86.92 45 ⇓P **P** 05 45 43.6 -0.1
baz=87
E14A Clinton 86.96 38 ⇓P **P** 05 45 43.4 -0.4
baz=87
A12A Yaak River Ran 87.19 35 ⇑P **P** 05 45 44.4 -0.4
baz=87
F15A Butte 87.22 39 ⇓P **P** 05 45 44.6 -0.5
baz=87
N20A Spence Gulch, 87.25 45 ⇑P **P** 05 45 44.9 -0.5
baz=87
BJI Beijing 87.31 315 P **P** 05 45 45.5 -0.2
BJI AMB AMB
comp=Z,17nm,0.7s,mb5.4
BJI AMB AMB
comp=Z,148nm,3.8s
J18A Kendall Valley 87.33 42 ⇑P **P** 05 45 45.1 -0.5
baz=87
H16A Russell Place, 87.35 40 ⇓P **P** 05 45 46.0 +0.3
baz=88
PDAR Pinedale Array 87.39 42 P **P** 05 45 44.5 -1.4
comp=Z,0.6nm,0.6s,mb4.0,baz=209,slow=1.0,SNR=6.6
COLA College 87.61 12*c i*P **P** 05 45 45.8 -0.7
N21A Black Mountain 87.70 45 ⇓P **P** 05 45 47.3 -0.2
baz=88
D15A Lincoln 87.86 38 ⇑P **P** 05 45 48.2 +0.1
baz=88
B14A Marquette Ranc 88.16 36 ⇑P **P** 05 45 49.3 -0.2
baz=88
F17A Fitzpatrick Pl 88.34 39 ⇑P **P** 05 45 50.0 -0.4
baz=88
D16A Dana Ranch, Ca 88.42 38 ⇑P **P** 05 45 50.9 +0.2
baz=88
A14A Double T Ranch 88.42 36 ⇑P **P** 05 45 50.6 -0.1
baz=89
GYA Guiyang 88.46 299 P **P** 05 45 50.4 -1.0
GYA AP pP 05 46 07.6 +0.6
GYA XP sP 05 46 15.3 +2.3
GYA PP PP 05 49 21.8 +1.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,150nm,7.8s
GYA LR LR
comp=N,750nm,18.9s,MS5.2
GYA LR LR
comp=E,640nm,20.0s,MS5.2
GYA LR LR
comp=Z,560nm,21.4s,MS5.0
B15A Bradely Ranch, 88.53 37 ⇑P **P** 05 45 51.3 0.0
baz=89
C16A Fuhringer Ranc 88.72 37 ⇓P **P** 05 45 52.1 0.0
baz=89
DAWY Dawson 88.74 15 *e*P **P** 05 45 51.0 -0.9
A15A Johnson Ranch, 88.80 36 ⇑P **P** 05 45 52.2 -0.3
baz=89
F18A Big Timber 88.90 40 ⇓P **P** 05 45 52.8 -0.2
baz=89
EGAK Eagle 88.92 14 *e*P **P** 05 45 51.9 -0.8
comp=Z,9.3nm,1.0s,mb5.1
D17A Six Diamond Ra 88.98 38 ⇑P **P** 05 45 53.1 -0.3
baz=89
E18A Harlowton 89.13 39 ⇑P **P** 05 45 54.4 +0.3
baz=89
C17A Wharram Farm, 89.19 38 ⇓P **P** 05 45 53.8 -0.5
baz=89
PHWY Pilot Hill 89.33 45 *e*P **P** 05 45 49.3 -5.9
comp=Z,25nm,1.2s,mb5.4
A16A West Butte Ran 89.42 36 ⇑P **P** 05 45 55.0 -0.4
baz=90
XAN Xi'an 89.77 307 P **P** 05 45 57.3 -0.1
XAN AP pP 05 46 14.3 +1.3
XAN PP PP 05 49 30.3 -0.3
XAN AMB AMB
comp=Z,13nm,0.8s,mb5.3
XAN LR LR
comp=N,131nm,26.8s
XAN LR LR
comp=E,418nm,33.9s
XAN LR LR
comp=Z,357nm,21.4s
A17A Triple J Farms 89.92 37 ⇓P **P** 05 45 57.6 -0.1
baz=90
B18A Beardsley Farm 90.15 37 ⇓P **P** 05 45 58.5 -0.3
baz=90
A18A Metzger Ranch, 90.38 37 ⇑P **P** 05 45 59.6 -0.3
baz=90
HHC Hu-ho-hao-te 90.80 314 *e*P **P** 05 46 02.4 +0.3
HHC AP pP 05 46 19.4 +1.7
HHC XP sP 05 46 25.9 +2.3
HHC PP PP 05 49 40.9 +2.3
HHC AMB AMB
comp=Z,9.0nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,607nm,7.4s
HHC LR LR
comp=N,336nm,16.7s,MS5.0
HHC LR LR
comp=E,241nm,14.7s,MS5.0
HHC LR LR
comp=Z,291nm,16.6s,MS4.8
KMI Kunming 91.21 296 P **P** 05 46 03.9 -0.4
KMI AMB AMB
comp=Z,16nm,1.0s,mb5.3
RSSD Black Hills 91.56 43 *e*P **P** 05 46 04.7 -0.8
RSSD pmax pmax
comp=Z,21nm,1.2s,mb5.3
RSSD Black Hills 91.56 43 *e*P **P** 05 46 04.7 -0.8
comp=Z,21nm,1.2s,mb5.3
CMAR Chiang Mai Arr 92.10 289 P **P** 05 46 08.8 +0.2
comp=Z,6.4nm,0.9s,mb5.0,baz=118,slow=2.7,SNR=11
CMAR PP PP 05 49 52.6 +3.3
comp=Z,0.8nm,0.3s,baz=148,slow=6.2,SNR=4.4
CMAR Chiang Mai Arr 92.10 289⇑*e*P **P** 05 46 08.8 +0.2
CHTO Chiang Mai 92.22 289 *e*P **P** 05 46 07.8 -1.4
CHTO pmax pmax
comp=Z,19nm,1.5s,mb5.2
CHTO Chiang Mai 92.22 289 *e*P **P** 05 46 07.8 -1.4
comp=Z,20nm,1.5s,mb5.2
CD2 Chengdu 92.53 302 P **P** 05 46 11.5 +1.2
CD2 AP pP 05 46 28.3 +2.3
CD2 XP sP 05 46 35.1 +3.2
CD2 PP PP 05 49 55.8 +3.3
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.8
CD2 AMB AMB
comp=Z,440nm,14.9s
CD2 LR LR
comp=N,950nm,25.0s
CD2 LR LR
comp=Z,2μm,28.5s,MS5.3
INK Inuvik 93.58 14 *e*P **P** 05 46 13.5 -0.8
LZH Lanzhou 94.40 307 *e*P **P** 05 46 17.0 -1.8
LZH AP pP 05 46 36.0 +1.6
LZH PP PP 05 50 09.0 +2.0
LZH AMB AMB
comp=Z,29nm,1.6s,mb5.5
LZH AMB AMB
comp=Z,189nm,6.2s
LZH LR LR
comp=N,569nm,19.3s
LZH LR LR
comp=Z,748nm,20.6s,MS5.1
YKA Yellowknife Ar 95.49 24 P **P** 05 46 21.7 -1.4
comp=Z,1.0nm,0.8s,mb4.3,baz=242,slow=4.5,SNR=14
SONM Songino Array 97.06 318 P **P** 05 46 30.6 -0.1
comp=Z,1.2nm,0.8s,mb4.4,baz=90,slow=0.7,SNR=3.0
ZALV Zalesovo Beam 111.73 321 PKiKP PKiKP 05 51 30.3 -2.7
comp=Z,1.5nm,0.6s,baz=63,slow=0.3,SNR=6.2
ZALV Zalesovo Beam 111.73 321 PKPdf PKiKP 05 51 30.3 -2.7
MK31 Makanchi Array 112.66 313 *e*PKiKP PKiKP 05 51 31.2 -3.8
MKAR Makanchi Array 112.66 313 PKiKP PKiKP 05 51 32.8 -2.2
comp=Z,1.7nm,0.5s,baz=183,slow=0.9,SNR=34
KURK Kurchatov 115.34 317 *i* PKiKP PKPdf 05 51 38.2 -1.8
BRVK Borovoye 120.41 320⇑*e*PKiKP PKPdf 05 51 47.3 -2.4
OPO Ambohidratompo 122.87 230 PKP PKPdf 05 51 53.3 -2.2
comp=Z,1.7nm,0.6s,baz=127,slow=10,SNR=4.0
ARU Arti 126.29 326 *i* PKiKP PKPdf 05 51 59.1 -1.8
ARU 05 58 58.3
ARU Arti 126.29 326⇑*e*PKP PKPdf 05 51 59.3 -1.6
KEV Kevo 128.71 350 *e*pkp PKPdf 05 52 03.0 -2.1
ARCES ARCESS Array B 129.15 351 PKP PKPdf 05 52 04.0 -2.0
comp=Z,2.1nm,0.5s,baz=17,slow=1.6,SNR=16
JOF Joensuu 133.63 343 *e*pkp PKPdf 05 52 12.2 -2.4
comp=Z,4.6nm,0.5s
JOF Joensuu 133.63 343 *e*PKIKP PKPdf 05 52 12.2 -2.4
JOF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 135.57 345 *e*pkp PKPdf 05 52 15.1 -3.2
comp=Z,2.3nm,0.5s
KAF Kangasniemi 135.57 345 *e*PKIKP PKPdf 05 52 15.1 -3.2
KAF pmax pmax
comp=Z,2.0nm,0.5s
NB2 NORSAR Subarra 139.06 355 PKP 05 52 13.4
comp=Z,2.3nm,0.8s,baz=7.5,slow=2.9
NOA NORSAR Array B 139.06 355 PKhKP 05 52 12.8
comp=Z,1.4nm,0.8s,baz=6.5,slow=2.6,SNR=3.9
NOA PKP PKPdf 05 52 25.1 +0.4
comp=Z,1.1nm,0.9s,baz=6.4,slow=4.0,SNR=5.0
NOA NORSAR Array B 139.06 355 PKIKP PKPdf 05 52 25.1 +0.3
AKASG Malin Array Be 143.89 333 PKhKP 05 52 29.6
comp=Z,4.3nm,0.5s,baz=42,slow=4.4,SNR=23
SIM Simferopol' 145.24 322 *e*PKP2 PKPab 05 52 36.0 -0.1
SIM pmax pmax
comp=Z,43nm,0.9s
BSEG Bad Segeberg 146.16 354 *e*PKPbc PKPbc 05 52 37.5 -1.1
NRDL Niedersach Rie 147.60 353 *e*PKPbc PKPbc 05 52 41.0 -1.7
BUR08 Bucovina Ar. S 147.94 333 *e*PKPbc PKPbc 05 52 43.6 -0.1
BURAR Bucovina Array 147.95 333 ⇓*i*P PKPbc 05 52 43.6 -0.2
BURAR Bucovina Array 147.95 333 ⇓P PKPbc 05 52 43.6 -0.3
IBBN Ibbenburen 147.99 356 *e*PKPbc PKPbc 05 52 43.1 -0.7
IBBN *e*PKPab PKPab 05 52 46.0 -0.5
STHS Stebnicka Huta 148.00 339 *e*PKP PKPdf 05 52 42.6 +1.8
STHS *e* 05 51 28.3
STHS *e* 05 52 47.1
TLCR 148.01 326⇑*i*P PKPab 05 52 47.3 +0.4
TLCR 148.01 326 ⇑P PKPab 05 52 47.4 +0.5
KOLS Kolonicke sedl 148.05 337 *e*PKP PKPab 05 52 46.5 -0.4
KOLS Kolonicke sedl 148.05 337 *e*PKP PKPab 05 52 46.5 -0.4
KSP Ksiaz 148.13 346 *e*PKP PKPbc 05 52 43.6 -0.6
CLZ Clausthal 148.21 353 *e*PKPbc PKPbc 05 52 43.4 -1.0
CLZ *e*PKPab PKPab 05 52 47.1 -0.3
CLZ Clausthal 148.21 353 *e*PKPbc PKPbc 05 52 43.4 -1.0
CLZ *e*PKPab PKPab 05 52 47.1 -0.3
UZH Uzhgorod 148.29 337*d i*PKIKP PKPbc 05 52 44.2 -0.5
UZH *i* 05 52 51.6
UZH *i* 05 52 58.8
UZH Uzhgorod 148.29 337*d i*PKIKP PKPbc 05 52 44.2 -0.5
UZH *i* 05 52 51.6
UZH *i* 05 52 58.8
BRTR Keskin Array B 148.31 314 PKPbc PKPbc 05 52 43.4 -1.7
comp=Z,4.1nm,0.7s,baz=140,slow=4.9,SNR=18
BRTR Keskin Array B 148.31 314 PKPbc PKPbc 05 52 43.4 -1.7
CLL Collm 148.36 350 *e*PKPbc PKPbc 05 52 42.8 -2.0
CLL *e*PKPab PKPab 05 52 47.1 -0.9
CLL Collm 148.36 350 ⇓*i*PKPbc PKPbc 05 52 43.5 -1.3
comp=Z,21nm,0.6s
CLL *i* PKPab PKPab 05 52 47.0 -1.0
comp=Z,18nm,1.0s
CLL Collm 148.36 350 ⇓*i*PKP PKPbc 05 52 43.5 -1.3
CLL Collm 148.36 350 *i* PKP PKPab 05 52 47.0 -1.0
CRVS Cervenica-Dubn 148.36 338 *e*PKP PKPbc 05 52 44.4 -0.5
CRVS *e* 05 51 30.3
UPC Upice 148.51 346 *e*PKPbc PKPbc 05 52 44.6 -0.6
UPC *e*PKPab PKPab 05 52 48.9 +0.2
UPC Upice 148.51 346 *e*PKP PKPbc 05 52 44.6 -0.6
UPC *e* 05 52 48.9
VRI Vrincioaia 148.58 329 ⇓*i*P PKPbc 05 52 45.0 -0.5
VRI Vrincioaia 148.58 329 ⇓P PKPbc 05 52 45.0 -0.6
DPC Dobruska-Polom 148.58 345 *e*PKPbc PKPbc 05 52 44.9 -0.5
DPC *e*PKPab PKPab 05 52 49.3 +0.3
DPC Dobruska-Polom 148.58 345 *e*PKP PKPbc 05 52 44.9 -0.5
DPC *e* 05 52 49.3
BRG Berggiesshubel 148.60 348 *e*PKPbc PKPbc 05 52 44.5 -0.9
BRG *e*PKPab PKPab 05 52 48.3 -0.7
BRG Berggiesshubel 148.60 348 *e*PKP PKPdf 05 52 40.6 -1.1
comp=Z,5.5nm,1.1s
BRG *i* 05 52 44.7
comp=Z,12nm,0.7s
BRG *i* 05 52 48.4
comp=Z,10.0nm,1.0s
BRG Berggiesshubel 148.60 348 *e*PKP PKPdf 05 52 40.6 -1.1
BRG *i* 05 52 44.7
BRG *i* 05 52 48.4
TRPA Tarpa 148.62 336⇑*i*P PKPbc 05 52 44.7 -0.9
TIRR Tirgusor 148.72 326 ⇓*i*P PKPbc 05 52 46.7 +0.8
TIRR Tirgusor 148.72 326 ⇓P PKPbc 05 52 46.7 +0.8
PVCC Panska Ves 148.81 347 *e*PKPbc PKPbc 05 52 45.4 -0.6
PVCC Panska Ves 148.81 347 *e*PKP PKPbc 05 52 45.4 -0.6
MOX Moxa 149.22 351 *e*PKPbc PKPbc 05 52 45.9 -1.1
MOX Moxa 149.22 351 *e*PKPbc PKPbc 05 52 45.8 -1.2
MOX Moxa 149.22 351 *e*PKP PKPbc 05 52 45.9 -1.1
UBBA Unterbreizbach 149.26 353 *e*PKPbc PKPbc 05 52 45.9 -1.2
UBBA *e*PKPab PKPab 05 52 49.4 -2.3
TANN Tannenbergstha 149.31 350 *e*PKPbc PKPbc 05 52 46.2 -1.0
PRU Pruhonice 149.32 347 *e*PKPbc PKPbc 05 52 46.5 -0.8
PRU Pruhonice 149.32 347 *e*PKP PKPbc 05 52 46.5 -0.8
VRAC Vranov 149.48 344 ⇓*i*P PKPbc 05 52 47.1 -0.6
VRAC Vranov 149.48 344 ⇓P PKPbc 05 52 47.1 -0.6
NKC Novy Kostel 149.49 350 *e*PKPbc PKPbc 05 52 46.9 -0.8
NKC *e*PKPab PKPab 05 52 52.1 -0.5
NKC Novy Kostel 149.49 350 *e*PKP PKPbc 05 52 46.9 -0.8
NKC *e* 05 52 52.1
VYHS Vyhne 149.58 341 *e*PKP PKPbc 05 52 47.1 -0.9
VYHS *e* 05 51 31.9
VYHS *e* 05 52 53.3
VYHS Vyhne 149.58 341 *e*PKP PKPbc 05 52 47.2 -0.8
VYHS *e* 05 52 53.3
KOLL Kolacno 149.64 341 *e*PKP PKPbc 05 52 47.7 -0.4
KOLL Kolacno 149.64 341 *e*PKP PKPbc 05 52 47.7 -0.4
DRGR 149.65 335⇑*i*P PKPbc 05 52 46.9 -1.3
DRGR 149.65 335 ⇑P PKPbc 05 52 46.9 -1.2
VOIR 149.69 330⇑*i*P PKPbc 05 52 47.7 -0.6
VOIR 149.69 330 ⇑P PKPbc 05 52 47.7 -0.6
PSZ Piszkesteto 149.74 339⇑*i*P PKPbc 05 52 47.8 -0.6
PSZ Piszkesteto 149.74 339 ⇑P PKPbc 05 52 47.8 -0.6
TREC Trest 149.76 345 *e*PKPbc PKPbc 05 52 47.6 -0.8
MANZ Manzenberg 149.78 350 *e*PKPbc PKPbc 05 52 47.5 -0.9
ROTZ Rotzenmuhle 149.98 350 *e*PKPbc PKPbc 05 52 48.1 -0.8
GRA1 Grafenberg Arr 150.21 351 *e*PKPbc PKPbc 05 52 48.1 -1.3
GRF Grafenberg Arr 150.21 351 *e*PKPbc PKPbc 05 52 48.1 -1.3
GRF Grafenberg Arr 150.21 351 *e*PKP PKPbc 05 52 48.1 -1.3
GIVF Givet 150.31 359 *e*PKP1 PKPbc 05 52 48.3 -1.4
comp=Z,53nm,0.9s
GIVF Givet 150.31 359 *e*PKP PKPbc 05 52 48.3 -1.4
KHC Kasperske Hory 150.34 348 *e*PKPbc PKPbc 05 52 48.8 -1.0
KHC *e*PKPab PKPab 05 52 56.0 -0.1
BAIF Baives 150.36 0 *e*PKP1 PKPbc 05 52 48.6 -1.2
WET Wettzell 150.46 349 *e*PKPbc PKPbc 05 52 49.2 -0.9
WET Wettzell 150.46 349 *e*PKPbc PKPbc 05 52 49.2 -0.9
GEC2 GERESS Array S 150.59 347 *e*PKPbc PKPbc 05 52 49.2 -1.2
GEC2 GERESS Array S 150.59 347 *e*PKPbc PKPbc 05 52 49.2 -1.2
GERES GERESS Array B 150.59 347 PKPbc PKPbc 05 52 49.1 -1.3
comp=Z,11nm,0.8s,baz=36,slow=2.5,SNR=46
GERES GERESS Array B 150.59 347 PKPbc PKPbc 05 52 49.1 -1.3
WLF Walferdange 150.71 358 PKPbc PKPbc 05 52 50.4 -0.3
WLF Walferdange 150.71 358 *e*PKPbc PKPbc 05 52 50.1 -0.5
WLF Walferdange 150.71 358 *e*PKPbc PKPbc 05 52 50.3 -0.4
GZR Gura Zlata 150.74 333⇑*i*P PKPbc 05 52 49.7 -1.2
GZR Gura Zlata 150.74 333 ⇑P PKPbc 05 52 49.7 -1.2
CONA Conrad Observa 150.94 344⇑*i*PKiKP PKiKP 05 52 50.8 -1.0
comp=Z,11nm,0.8s
CSNA Conrad Observa 150.94 344⇑*i*PKiKP PKiKP 05 52 50.8 -1.0
comp=Z,9.9nm,0.7s
BZS Buzias 151.04 334 ⇓*i*P PKPbc 05 52 50.1 -1.5
BZS Buzias 151.04 334 ⇓P PKPbc 05 52 50.1 -1.5
ISP Isparta 151.37 313⇑*i*P PKPbc 05 52 53.3 +0.7
ISP Isparta 151.37 313 ⇑P PKPbc 05 52 53.3 +0.7
FLN La Foliniere 151.40 7 *e*PKP1 PKPbc 05 52 50.4 -1.9
comp=Z,82nm,1.0s
ROSF Rostrenen 151.42 11 *e*PKP1 PKPbc 05 52 50.2 -2.1
LDF La Druitiere 151.60 6 *e*PKP1 PKPbc 05 52 50.8 -1.9
comp=Z,21nm,0.8s
SGMF Saint Gilles 151.62 10 *e*PKP1 PKPbc 05 52 50.8 -2.0
comp=Z,38nm,1.0s
FUR Furstenfeldbru 151.69 350 *e*PKPbc PKPbc 05 52 51.8 -1.2
FUR Furstenfeldbru 151.69 350 *e*PKPbc PKPbc 05 52 51.8 -1.2
GRR Gorron 151.72 7 *e*PKP1 PKPbc 05 52 51.3 -1.7
comp=Z,36nm,0.7s
RJOB Jochberg 151.82 348 *e*PKPbc PKPbc 05 52 51.8 -1.5
QUIF Quistinic 151.84 11 *e*PKP1 PKPbc 05 52 51.2 -2.1
comp=Z,16nm,0.9s
BFO Black Forest 151.90 354 *e*PKPbc PKPbc 05 52 52.0 -1.4
BFO *e*PKPab PKPab 05 53 01.5 -1.1
BFO Black Forest 151.90 354 *e*PKPbc PKPbc 05 52 52.0 -1.4
BFO *e*PKPab PKPab 05 53 01.5 -1.1
CDF Champ du Feu 151.90 356 *e*PKP1 PKPbc 05 52 52.0 -1.4
comp=Z,25nm,0.8s
MEZF Maizieres J'vi 151.91 359 *e*PKP1 PKPbc 05 52 52.1 -1.4
comp=Z,61nm,0.9s
HAU Haudompre 152.36 357 *e*PKP1 PKPbc 05 52 52.9 -1.6
comp=Z,29nm,0.7s
WTTA Wattenberg 152.50 349⇑*i*PKPbc PKPbc 05 52 53.5 -1.4
comp=Z,14nm,0.6s
MOTA Moosalm 152.51 350⇑*i*PKPbc PKPbc 05 52 53.7 -1.1
comp=Z,9.2nm,0.9s
HINF Hinteralfeld 152.52 356 *e*PKP1 PKPbc 05 52 53.1 -1.8
comp=Z,14nm,0.6s
DAVA Damuels 152.75 352⇑*i*PKiKP PKiKP 05 52 54.9 -0.7
comp=Z,15nm,0.8s
ABTA Abfaltersbach 152.83 348⇑*i*PKPbc PKPbc 05 52 54.0 -1.5
comp=Z,8.4nm,0.6s
FETA Feichten 152.88 350⇑*i*PKiKP PKiKP 05 52 55.0 -0.9
comp=Z,10.0nm,0.8s
LOR Lormes 153.15 1 *e*PKP1 PKPbc 05 52 54.7 -1.6
comp=Z,17nm,0.8s
SSF Saint Saulge 153.35 1 *e*PKP1 PKPbc 05 52 55.2 -1.5
comp=Z,20nm,0.9s
MFF Saint Martin d 153.56 7 *e*PKP1 PKPbc 05 52 55.2 -2.0
comp=Z,30nm,1.1s
AVF Avril sur Loir 153.62 1 *e*PKP1 PKPbc 05 52 56.3 -1.0
comp=Z,2.5nm,0.5s
SMF Signal de Mont 153.77 1 *e*PKP1 PKPbc 05 52 56.7 -0.9
comp=Z,15nm,0.9s
BGF Bois d'Agland 153.83 2 *e*PKP1 PKPbc 05 52 56.1 -1.7
comp=Z,15nm,0.8s
TCF Toulx Ste Croi 154.07 3 *e*PKP1 PKPbc 05 52 56.4 -1.9
comp=Z,23nm,0.9s
LPL La Plagne 154.82 356 *e*PKP1 PKPbc 05 52 58.6 -1.3
comp=Z,5.1nm,0.8s
LFF La Frestale 155.30 6 *e*PKP1 PKPdf 05 52 58.0 +6.1
comp=Z,19nm,0.9s
ESDC Sonseca Array 159.48 18 PKPab PKPab 05 53 34.7 -0.6
comp=Z,0.3nm,0.5s,baz=344,slow=5.6,SNR=4.8
TORD Torodi Ar. Bea 172.42 160 PKPab PKPab 05 54 32.6 -0.2
comp=Z,1.1nm,0.8s,baz=200,slow=4.2,SNR=3.9

NEIC ***13*** *05:34:02.8, 4067S×7223W, h9km, mb5.0/5, ML4.5(GUC), After GUC.*
NEIC Felt [IV] at Poblacion Lago Ranco and [III] at Fresia, Los Muermos and Osorno.
GUC ***13*** *05:34:02.8±1.2, 4067S×7223W, h9km±9km, ML4.5*
ISCJB ***13*** *05:34:06.4±0.9, 4055S±005×719W±0.1, h40km±8km, mb5.0/14, Error ellipse: s-maj=13.4km s-min=6.9km az=160.0*
IDC ***13*** *05:34:07.9±3.3, 4056S×7174W, h33km±22km, mb4.6/7, mb1 4.6/9, mb1mx4.5/15, mbtmp4.5/9, ML3.8/1, MS4.7/1, Ms1 4.7/1, ms1mx3.7/21, Error ellipse: s-maj=29.3km s-min=18.6km az=97.0*
MOS ***13*** *05:34:08.0±1.7, 4005S×7003W, h33km, mb5.5/10, Error ellipse: s-maj=23.6km s-min=11.3km az=96.3*
ISC 13 05:34:07.5±2.1, 4055S±004×7188W±010, h32km±16km, n53, σ0°94/38, mb5.0/14, 5C, Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
PLCA	**Paso Flores**	**1.03**	**100**	Pg	**Pn**	**05 34 24.4**	**-1.2**
	928nm,0.3s,baz=274,slow=12,SNR=5553						
PLCA				Lg		05 34 40.5	
	724nm,0.3s,baz=26,slow=22,SNR=12						
PLCA	**Paso Flores**	**1.03**	**100**⇑*i*Pn		**Pn**	**05 34 24.5**	**-1.2**
PLCA				*e*Sn	**Sn**	**05 34 40.8**	**+1.8**
TMU	**Temuco**	**1.90**	**343**⇑*i*P		**Pn**	**05 34 36.5**	**-1.1**
TMU				*i* S	**Sn**	**05 35 01.1**	**+0.7**
COCH	**Cobquecura**	**4.47**	**351** *e*P		**Pn**	**05 35 12.7**	**-0.3**
COYC	**Coyhaique**	**5.02**	**182** P		**Pn**	**05 35 21.9**	**+1.4**
COYC	**Coyhaique**	**5.02**	**182**⇑*e*P		**Pn**	**05 35 21.7**	**+1.2**
CFAA	**Coronel Fontan**	**9.40**	**19** Pn		**Pn**	**05 36 21.0**	**+0.3**
	1.0nm,0.3s,baz=199,slow=11,SNR=49						
LCO	**Las Campanas**	**11.55**	**5** *e*Pn		**Pn**	**05 36 51.3**	**+1.1**
USHA	**Ushuaia**	**14.47**	**172** Pn		**Pn**	**05 37 30.5**	**+0.7**
	0.4nm,0.3s,baz=331,slow=13,SNR=2.7						
EFI	**East Falkland**	**14.65**	**144** P		**Pn**	**05 37 31.1**	**-1.2**
EFI				pmax	pmax		
	comp=Z,213nm,1.3s						
EFI	**East Falkland**	**14.65**	**144** Pn		**Pn**	**05 37 31.1**	**-1.2**
	comp=Z,213nm,1.3s						
LVC	**Limon Verde**	**18.06**	**9** LR		LR	05 46 15.4	
	comp=Z,μm,19.1s,baz=318,slow=40						
VNA3	**Neumayer Olymp**	**43.31**	**155** *e*		**P**	**05 42 05.2**	**-0.5**
VNA3				*e*		05 42 07.2	
VNA3				*e*		05 42 08.8	
VNA3				*e*	pP	05 42 15.3	+0.1
VNA1	**Neumayer--Stat**	**43.66**	**154** *e*		**P**	**05 42 08.1**	**-0.5**
VNA1				*e*		05 42 10.6	
VNA1				*e*		05 42 12.5	
VNA1				*e*		05 42 19.5	
VNA2	**Neumayer--Watz**	**43.99**	**155** *e*		**P**	**05 42 11.1**	**-0.1**
	baz=292,slow=10						
VNA2				*e*		05 42 13.1	
VNA2				*e*		05 42 14.9	
VNA2				*e*	pP	05 42 21.0	+0.3
SNAA	**Sanae**	**45.53**	**156** *e*		**P**	**05 42 22.6**	**-0.9**
SNAA				*e*		05 42 24.8	
SNAA				*e*		05 42 27.1	
SNAA				*e*		05 42 34.1	
SNAA	**Sanae**	**45.53**	**156** *e*P		**P**	**05 42 23.2**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,145nm,1.3s						
SNAA	**Sanae**	**45.53**	**156** *e*P		**P**	**05 42 23.2**	**-0.3**
	comp=Z,145nm,1.3s,mb5.8						
QSPA	**South Pole Qui**	**49.70**	**180** P		**P**	**05 42 55.2**	**-0.5**
	comp=Z,33nm,0.9s,mb5.4,baz=148,slow=2.8,SNR=34						
VNDA	**Vanda**	**57.72**	**192** P		**P**	**05 43 55.6**	**+1.2**
	comp=Z,14nm,1.1s,mb4.9,baz=135,slow=5.5,SNR=8.5						
VNDA	**Vanda**	**57.72**	**192** *e*P		**P**	**05 43 57.7**	**+3.2**
VNDA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**57.72**	**192** *e*P		**P**	**05 43 57.7**	**+3.2**
	comp=Z,14nm,1.1s,mb4.9						
MAW	**Mawson**	**66.88**	**163** P		**P**	**05 44 56.7**	**+0.8**
	comp=Z,12nm,1.0s,mb4.9,baz=194,slow=11,SNR=8.4						
SUR	**Sutherland**	**71.65**	**117** *e*P		**P**	**05 45 26.8**	**+0.8**
	comp=Z,26nm,1.2s,mb5.0						
GOGA	**Godfrey**	**74.37**	**350** *e*P		**P**	**05 45 40.8**	**-0.9**
GOGA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GOGA	**Godfrey**	**74.37**	**350** *e*P		**P**	**05 45 40.8**	**-0.9**
	comp=Z,13nm,1.0s,mb4.8						
TXAR	**Lajitas Array**	**75.53**	**332** P		**P**	**05 45 49.8**	**+1.3**
	comp=Z,8.5nm,1.1s,mb4.6,baz=128,slow=8.1,SNR=9.3						
LIC	**Lamto**	**76.82**	**70** *e*PKP2		**P**	**05 45 56.7**	**+0.4**
	comp=Z,48nm,0.9s,mb5.4						
BOSA	**Boshof**	**76.98**	**116** P		**P**	**05 45 55.8**	**-1.3**
	comp=Z,4.0nm,0.7s,mb4.4,baz=262,slow=7.3,SNR=4.9						
TIC	**Toumodi**	**77.12**	**70** *e*PKP2		**P**	**05 45 58.5**	**+0.6**
	comp=Z,88nm,1.0s,mb5.6						
KIC	**Kosan Boka**	**77.12**	**70** *e*PKP2		**P**	**05 45 57.3**	**-0.7**
	comp=Z,68nm,0.9s,mb5.6						
DBIC	**Dimbokro**	**77.25**	**70** P		**P**	**05 45 58.2**	**-0.5**
	comp=Z,11nm,0.7s,mb4.9,baz=178,slow=6.2,SNR=11						
DBIC	**Dimbokro**	**77.25**	**70** P		**P**	**05 45 58.2**	**-0.5**
TSUM	**Tsumeb**	**77.38**	**104** *e*P		**P**	**05 46 00.2**	**+0.8**
	comp=Z,13nm,1.2s,mb4.7						
TOA0	**Torodi Ar. Sit**	**86.36**	**69** *e*P		**P**	**05 46 45.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**86.36**	**69** P		**P**	**05 46 45.2**	**-1.4**
	comp=Z,3.1nm,0.9s,mb4.5,baz=231,slow=4.4,SNR=10						
TORD	**Torodi Ar. Bea**	**86.36**	**69** P		**P**	**05 46 45.2**	**-1.4**
PKSM	**Moragy**	**118.09**	**52**⇑*i*P		PKPdf	05 52 51.7	+1.2
PKSM	**Moragy**	**118.09**	**52** ⇑P		PKPdf	05 52 51.7	+1.2
NOA	**NORSAR Array B**	**121.41**	**34** PKP		PKPdf	05 52 57.8	+1.4
	comp=Z,1.2nm,0.8s,baz=241,slow=2.1,SNR=3.3						
PETK	**Petropavlovsk-**	**144.54**	**308** PKP		PKPdf	05 53 40.0	+0.2
	comp=Z,7.3nm,1.0s,baz=69,slow=8.1,SNR=5.1						
HYB	**Hyderabad**	**145.63**	**123** *i* PKP		PKPdf	05 53 42.5	-0.3
HYB	**Hyderabad**	**145.63**	**123** *e*P		PKPdf	05 53 42.5	-0.3
TIXI	**Tiksi**	**147.14**	**348** *e*PKiKP		PKPdf	05 53 44.9	+1.2
AML	**Almayashu**	**154.21**	**75** *e*PKPab		PKPab	05 54 19.9	+2.1
CMAR	**Chiang Mai Arr**	**156.61**	**158** PKP		PKPdf	05 53 59.0	-0.5
	comp=Z,0.6nm,0.3s,baz=239,slow=2.7,SNR=5.6						
CMAR				PKPab	PKPab	05 54 28.3	-0.1
	comp=Z,0.6nm,0.3s,baz=216,slow=4.4,SNR=8.7						
KURK	**Kurchatov**	**157.15**	**54** *e*PKiKP		PKPdf	05 53 57.6	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NVS	Novosibirsk	158.14	41	ePKIKP	PKPdf	05 53 59.0	-1.3
NVS				e		05 58 18.1	
NVS				pmax	pmax		
	comp=Z,11nm,1.5s						
ZAA0	Zalesovo Array	159.40	42	ePKPdf	PKPdf	05 54 01.8	0.0
ZALV	Zalesovo Beam	159.40	42	PKP	PKPdf	05 54 02.4	+0.6
	comp=Z,2.3nm,0.9s,baz=248,slow=1.6,SNR=7.9						
MKAR	Makanchi Array	160.35	63	PKP	PKPdf	05 54 04.6	+1.5
	comp=Z,2.2nm,1.1s,baz=331,slow=4.6,SNR=4.2						
MKAR				PKPab	PKPab	05 54 43.5	-0.6
	comp=Z,0.7nm,0.7s,baz=265,slow=4.9,SNR=3.7						
MKAR	Makanchi Array	160.35	63	PKP	PKPdf	05 54 04.6	+1.5
MKAR				PKPab	PKPab	05 54 43.5	-0.6
SONM	Songino Array	172.62	9	PKP	PKPdf	05 54 11.9	-0.6
	comp=Z,2.2nm,1.2s,baz=207,slow=1.7,SNR=6.1						

*GUC **13** 05:35:23.2±0.8, 23.25S×70.65W, h46^{km}±2^{km}, ML4.9*

*ISCJB **13** 05:35:25.4±0.2, 23.05S±0.04×70.46W±0.04, h36^{km}, mb5.2/133, MS5.2/7, Error ellipse: s-maj=6.4km s-min=3.8km az=35.9*

*MOS **13** 05:35:25.4±1.2, 22.91S×70.55W, h33^{km}, mb5.4/48, Error ellipse: s-maj=11.8km s-min=7.6km az=102.3*

*IDC **13** 05:35:25.6±2.8, 23.15S×70.54W, h33^{km}±20^{km}, mb4.7/17, mb1 4.8/20, mb1mx4.7/22, mbtmp4.7/20, ML4.0/2, MS4.8/7, Ms1 4.8/7, ms1mx4.6/24, Error ellipse: s-maj=18.3km s-min=12.9km az=67.0*

*GCMT **13** 05:35:26.9±0.3, 23.13S×70.93W, h25^{km}, MW5.4/67, Moment Tensor Solution. s12,c17; s67,c98; Duration: 1.2s Moment tensor: Scale 10^{17}Nm; M_{rr}0.88±.04; $M_{\theta\theta}$-0.01±.03; $M_{\phi\phi}$-0.87±.03; $M_{r\theta}$0.08±.07; $M_{\theta\phi}$0.07±.02; $M_{\phi r}$-1.28±.06; Best double couple: $M_0$1.55500×10^{17} NP1:ϕ_s354.00000°, δ17.00000°, λ88.00000°. NP2: ϕ_s176.00000°, δ73.00000°, λ91.00000°. Principal axes: T 1.5570, Plg62.0000°, Azm87.0000°; N -0.0050, Plg0.0000°, Azm356.0000°; P -1.5520, Plg28.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 05:35:26.9±0.2, 23.05S×70.52W, mb5.3/113 Error ellipse: s-maj=7.4km s-min=4.9km az=49.0*

NEIC Felt [III] at Tocopilla and [II] at Antofagasta and Mejillones.

*BJI **13** 05:35:28.9, 23.00S×70.50W, h36^{km}, mB5.5, Ms5.8, Msz5.7*

ISC 13 05:35:27.1±0.2**, 23.13S**±0.04×**70.43W**±0.04**, h38^{km}, h38^{km}**±1.0^{km}**:pP-P, n604, σ0.78**/535**, mb5.2**/133**, MS5.2**/7**, 126C-132D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.03	329	⇓iP	Pn	05 35 31.0	-2.2
MECH				iS	Sn	05 35 37.2	-0.2
MECH				AML	AML	05 35 44.7	
	comp=N,229μm,0.6s						
CEN1	Los Morros	0.33	141	eP	Pn	05 35 34.0	-1.6
CEN1				iS	Sn	05 35 41.7	+0.2
CEN1				AML	AML	05 35 43.6	
	comp=E,42μm,0.5s						
ANCH	Antofagasta	0.55	178	⇓iP	Pn	05 35 45.8	+7.4
ANCH				iS	Sn	05 35 53.8	+7.3
TOCH	Tocopilla	1.05	12	eP	Pn	05 35 44.4	-1.0
TOCH				iS	Sn	05 36 01.0	+2.1
TOCH				AML	AML	05 36 04.0	
	comp=E,38μm,0.5s						
MACH	Maria Elena	1.12	34	eP	Pn	05 35 46.5	+0.2
MACH				iS	Sn	05 36 04.8	+4.3
PB04	Plate Boundary	1.23	46	⇑iP	Pn	05 35 42.4	-5.4
PB04				iS	Sn	05 35 56.3	-6.8
PB04				AML	AML	05 36 02.0	
	comp=N,112μm,0.7s						
LVC	Limon Verde	1.49	70	Pg	Pn	05 35 54.9	+3.5
	comp=N,907nm,0.3s,baz=251,slow=12,SNR=150						
LVC				Lg		05 36 18.0	
	comp=N,7μm,0.3s,baz=218,slow=15,SNR=55						
LVC	Limon Verde	1.49	70	ePn	Pn	05 35 54.8	+3.4
LVC				eSn	Sn	05 36 18.7	+9.0
LVC	Limon Verde	1.49	70	⇑iP	Pn	05 35 54.8	+3.4
LVC				eS	Sn	05 36 16.7	+7.0
LVC				AML	AML	05 36 20.3	
	comp=N,33μm,0.6s						
CFAA	Coronel Fontan	8.66	167	Pn	Pn	05 37 28.3	-1.6
	comp=N,0.2nm,0.3s,baz=345,slow=12,SNR=4.7						
CFAA				Sn	Sn	05 39 15.9	+10
	comp=N,1.3nm,0.3s,baz=10,slow=16,SNR=2.4						
CFAA				LR	LR	05 40 55.5	
	comp=N,946nm,18.1s,baz=171,slow=38						
CFAA	Coronel Fontan	8.66	167	Pn	Pn	05 37 28.3	-1.6
CFAA				Sn	Sn	05 39 15.9	+10
CFAA				LR	LR	05 40 55.5	
SIV	San Ignacio	11.32	53	Pn	Pn	05 38 05.4	-1.0
	comp=N,3.2nm,0.3s,baz=248,slow=13,SNR=39						
SIV				Sn	Sn	05 40 18.2	+6.6
	baz=218,slow=19,SNR=3.1						
CPUP	Villa Florida	12.33	108	Pn	Pn	05 38 21.7	+1.6
	comp=N,0.6nm,0.3s,baz=276,slow=13,SNR=10						
CPUP				LR	LR	05 43 36.8	
	comp=N,8μm,20.8s,baz=265,slow=40						
CPUP	Villa Florida	12.33	108	eP	Pn	05 38 21.2	+1.1
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CPUP	Villa Florida	12.33	108	ePn	Pn	05 38 21.2	+1.1
	comp=Z,1.4nm,0.5s						
NNA	Nana	12.65	330	Pn	Pn	05 38 23.5	-1.1
	comp=Z,0.9nm,0.3s,baz=100,slow=11,SNR=6.6						
NNA				Sn	Sn	05 40 34.5	-10
	comp=Z,1.8nm,0.3s,baz=200,slow=21,SNR=4.3						
NNA	Nana	12.65	330	ePn	Pn	05 38 23.5	-1.1
NNA				eSn	Sn	05 40 37.0	-7.3
ATAH	Atahualpa	17.77	333	P	Pn	05 39 31.7	0.0
	comp=Z,0.3nm,0.3s,baz=275,slow=3.8,SNR=5.2						
BDFB	Brasilia	22.40	75	P	P	05 40 21.4	-1.1
	comp=Z,38nm,1.0s,mb4.8,baz=250,slow=19,SNR=22						
BDFB				LR	LR	05 50 28.8	
	comp=Z,2μm,18.4s,MS4.6,baz=213,slow=40						
BDFB	Brasilia	22.40	75	P	P	05 40 21.4	-1.1
BDFB				LR	LR	05 50 28.8	
OTAV	Otavalo	24.50	340	eP	P	05 40 43.5	+0.5
	comp=Z,67nm,1.2s,mb5.0						
OTAV				ePcP	PcP	05 44 22.6	+1.6
CAM4	Nova Friburgo	25.70	94	⇓iP	P	05 40 53.2	-0.7
CAM4				i	pP	05 41 01.3	-3.1
CAM4				i	pP	05 41 04.1	-0.3
CAM4				i		05 41 18.5	
CAM4				i		05 41 41.9	
CAM3	Guarapari	27.83	91	⇓iP	P	05 41 12.4	-0.6
CAM3				i		05 41 17.8	
CAM3				i		05 41 27.5	
CAM3				i		05 41 38.8	
ROSC	El Rosal	28.07	352	P	P	05 41 15.1	-0.2
	comp=Z,20nm,1.0s,mb4.7,baz=95,slow=12,SNR=8.3						
USHA	Ushuaia	31.69	178	LR	LR	05 53 13.0	
	comp=Z,2μm,18.2s,MS4.9,baz=31,slow=34						
SDV	Santo Domingo	31.82	360	eP	P	05 41 46.4	-2.0
	comp=Z,23nm,1.2s,mb4.9						
PCRV	Puerto La Cruz	33.58	10	P	P	05 42 04.6	+0.8
	comp=Z,25nm,1.0s,mb5.1,baz=103,slow=6.0,SNR=3.7						
RPN	Rapa Nui	35.35	255	LR	LR	05 52 24.8	
	comp=Z,2μm,20.7s,MS4.8,baz=108,slow=29						
RCBR	Riachuelo	37.45	68	eP	P	05 42 38.5	+1.3
	comp=Z,274nm,1.0s,mb6.0						
RCBR				eS	S	05 48 21.3	-2.0
TGUH	Tegucigalpa,Un	40.47	334	eP	P	05 43 02.5	+0.2
	comp=Z,69nm,1.0s,mb5.3						
TGUH				epP	pP	05 43 13.5	+0.4
CRPR	Cabo Rojo, PR	41.01	5	eP	P	05 43 05.7	-1.1
OBIP	Obispado Ponce	41.09	6	eP	P	05 43 06.2	-1.1
SJG	San Juan	41.20	6	eP	P	05 43 06.5	-1.8
SJG				e*PP	pP	05 43 17.3	-1.8
SJG				pmax	pmax		
	comp=Z,154nm,0.9s						
SJG	San Juan	41.20	6	eP	P	05 43 06.5	-1.8
	comp=Z,154nm,0.9s,mb5.6						
SJG				epP	pP	05 43 17.3	-1.8
MPR	Mayaguez	41.21	5	eP	P	05 42 59.4	-9.0
MPR				epP	pP	05 43 15.1	-4.1
AOPR	Arecibo Observ	41.38	5	eP	P	05 43 07.4	-2.3
	comp=Z,80nm,1.3s,mb5.2						
AOPR				epP	pP	05 43 18.5	-2.0
PMSA	Palmer Station	41.84	176	LR	LR	06 00 22.7	
	comp=Z,1μm,19.0s,MS4.8,baz=250,slow=36						
TEIG	Tepich	46.48	337	P	P	05 43 48.1	-2.6
	comp=Z,7.6nm,0.8s,mb4.7,baz=78,slow=9.3,SNR=3.4						
CMIG	Matias Romero	46.58	327	P	P	05 43 50.6	-0.9
	comp=Z,3.1nm,1.0s,mb4.2,baz=108,slow=9.6,SNR=2.7						
BBSR	BB Station	55.46	6	eP	P	05 44 58.0	-0.1
	comp=Z,110nm,1.3s,mb5.7						
BBSR				epP	pP	05 45 07.2	-1.9
NHSC	New Hope	56.69	350	eP	P	05 45 06.7	-0.1
	comp=Z,72nm,1.1s,mb5.6						
NHSC				epP	pP	05 45 17.1	-0.8
GOGA	Godfrey	57.58	347	eP	P	05 45 11.8	-1.3
GOGA				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
GOGA	Godfrey	57.58	347	eP	P	05 45 11.8	-1.3
	comp=Z,20nm,1.1s,mb5.1						
LRAL	Lakeview Retre	58.04	344	eP	P	05 45 14.9	-1.4
	comp=Z,37nm,1.3s,mb5.2						
HKT	Hockley	58.15	334	eP	P	05 45 16.8	-0.3
HKT				e*PP	pP	05 45 28.0	-0.3
HKT				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.0						
HKT	Hockley	58.15	334	eP	P	05 45 16.8	-0.3
	comp=Z,24nm,1.4s,mb5.0						
HKT				epP	pP	05 45 27.9	-0.4
VBMS	Vicksburg	58.29	340	eP	P	05 45 17.4	-0.7
	comp=Z,76nm,1.3s,mb5.6						
VBMS				epP	pP	05 45 29.5	+0.2
CNNC	Cliffs of the	58.48	353	eP	P	05 45 19.4	+0.1
	comp=Z,39nm,1.1s,mb5.3						
RKT	Rikitea	58.88	256	eS	S	05 53 27.2	+1.1
	comp=Z,2μm,25.0s						
RKT				eLR	LR	06 02 47.3	
	comp=Z,2μm,26.2s,baz=109						
VNA3	Neumayer Olymp	59.00	161	eP	P	05 45 22.2	-0.4
VNA3				e	pP	05 45 33.6	-0.2
VNA3				e		05 45 40.3	
VNA1	Neumayer--Stat	59.23	160	eP	P	05 45 24.2	0.0
VNA1				e	pP	05 45 35.6	+0.2
VNA1				e		05 45 41.9	
NATX	Nacogdoches	59.30	336	eP	P	05 45 25.2	+0.1
VNA2	Neumayer--Watz	59.59	160	eP	P	05 45 26.6	-0.1
	baz=281,slow=6.5						
VNA2				e	pP	05 45 38.0	+0.1
VNA2				e		05 45 45.6	
CPCT	Cooper Cave	59.77	347	eP	P	05 45 26.9	-1.4
TKL	Tuckaleechee C	59.82	347	eP	P	05 45 27.3	-1.3
SWET	Sewanee	59.86	345	eP	P	05 45 27.8	-1.1
OXF	Oxford	60.09	342	eP	P	05 45 28.7	-1.8
OXF				pmax	pmax		
	comp=Z,113nm,1.1s,mb5.8						
OXF	Oxford	60.09	342	eP	P	05 45 28.7	-1.8
	comp=Z,113nm,1.1s,mb5.8						
JCT	Junction City	60.30	331	eP	P	05 45 31.5	-0.5
JCT				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
JCT	Junction City	60.30	331	eP	P	05 45 31.5	-0.6
	comp=Z,32nm,0.9s,mb5.4						
TZTN	Tazewell	60.63	348	eP	P	05 45 33.1	-1.1
	comp=Z,31nm,1.3s,mb5.3						
TZTN				epP	pP	05 45 43.2	-2.2
BLA	Blacksburg	60.75	351	eP	P	05 45 34.4	-0.5
BLA				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.5						
BLA	Blacksburg	60.75	351	eP	P	05 45 34.4	-0.5
	comp=Z,45nm,1.2s,mb5.5						
JSRW	J. Sargeant Re	60.90	353	eP	P	05 45 36.4	+0.4
WVT	Waverly	61.19	344	eP	P	05 45 35.3	-2.7
WVT				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.6						
WVT	Waverly	61.19	344	eP	P	05 45 35.3	-2.7
	comp=Z,51nm,1.1s,mb5.6						
SNAA	Sanae	61.21	161	eP	P	05 45 36.9	-0.8
SNAA				e	pP	05 45 48.8	-0.2
SNAA				e		05 45 55.1	
SNAA	Sanae	61.21	161	eP	P	05 45 37.1	-0.6
	comp=Z,36nm,1.0s,mb5.5						
SNAA				epP	pP	05 45 49.1	+0.1
UALR	University of	61.23	339	eP	P	05 45 37.2	-1.0
	comp=Z,57nm,1.4s,mb5.5						
UALR				epP	pP	05 45 48.8	-0.8
CBN	Corbin	61.36	354	eP	P	05 45 39.1	+0.1
MIAR	Mount Ida	61.43	338	eP	P	05 45 38.9	-0.7
MIAR				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.4						
MIAR	Mount Ida	61.43	338	eP	P	05 45 38.9	-0.7
	comp=Z,33nm,1.0s,mb5.4						
GNAR	Gosnell	61.63	342	eP	P	05 45 40.7	-0.2
	comp=Z,1μm,1.0s						
GNAR				epP	pP	05 45 50.2	-2.0
UTMT	University of	61.66	343	eP	P	05 45 40.4	-0.7
	comp=Z,75nm,0.9s,mb5.8						
WCI	Wyandotte Cave	62.83	346	eP	P	05 45 47.0	-1.9
WCI				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.4						
WCI	Wyandotte Cave	62.83	346	eP	P	05 45 47.0	-1.9
	comp=Z,31nm,0.9s,mb5.4						
USIN	University of	62.89	345	eP	P	05 45 47.7	-1.7
	comp=Z,46nm,1.0s,mb5.6						
MVL	Millersville	63.04	355	eP	P	05 45 50.6	+0.4
	comp=Z,400nm,3.0s						
SIUC	Southern Illin	63.05	343	eP	P	05 45 49.2	-1.1
	comp=Z,87nm,1.3s,mb5.7						
MCWV	Mont Chateau	63.08	352	eP	P	05 45 50.6	+0.1
	comp=Z,246nm,2.3s,mb5.9						
FVM	French Village	63.63	342	eP	P	05 45 52.7	-1.5
FVM				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
FVM	French Village	63.63	342	eP	P	05 45 52.7	-1.5
	comp=Z,34nm,0.9s,mb5.4						
OLIL	Olney	63.73	345	eP	P	05 45 53.2	-1.7
	comp=Z,25nm,1.0s,mb5.2						
BLO	Bloomington	63.78	346	eP	P	05 45 53.3	-1.9
BLO				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
BLO	Bloomington	63.78	346	eP	P	05 45 53.3	-1.9
	comp=Z,19nm,0.9s,mb5.1						
SSPA	Standing Stone	63.81	354	eP	P	05 45 55.1	-0.3
	comp=Z,25nm,1.1s,mb5.2						
GDL2	Guadalupe Moun	63.87	328	eP	P	05 45 56.8	+0.9
CCM	Cathedral Cave	63.93	342	eP	P	05 45 54.4	-1.8
CCM				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CCM	Cathedral Cave	63.93	342	eP	P	05 45 54.4	-1.8
	comp=Z,28nm,1.0s,mb5.2						
ACSO	Alum Creek Sta	64.11	349	eP	P	05 45 56.3	-1.0
	comp=Z,52nm,1.0s,mb5.5						
SLM	Saint Louis	64.19	343	eP	P	05 45 55.9	-2.0
SLM				pmax	pmax		
	comp=Z,15nm,0.4s,mb5.4						
SLM	Saint Louis	64.19	343	eP	P	05 45 55.9	-2.0
	comp=Z,15nm,0.4s,mb5.4						
ALLY	Alegheny Colle	65.08	352	eP	P	05 46 03.2	-0.4
	comp=Z,30nm,0.9s,mb5.3						
TRY	Troy	65.60	357	eP	P	05 46 07.8	+0.8
TRY				epP	pP	05 46 18.3	0.0
319A	Douglas	65.74	324	⇑P	P	05 46 08.4	+0.2
	baz=66,SNR=7.6						
HDIL	Hopedale	65.75	344	eP	P	05 46 05.8	-2.2
	comp=Z,22nm,0.8s,mb5.2						
MAIT	Maitri	65.79	159	eP	P	05 46 04.7	-3.3
318A	Bisbee	66.18	323	⇑P	P	05 46 11.0	+0.1
	baz=66,SNR=7.7						
219A	White Tail Can	66.21	324	⇓P	P	05 46 11.8	+0.7
	baz=66						
KSU1	Kansas State U	66.58	338	eP	P	05 46 11.8	-1.5
	comp=Z,30nm,1.1s,mb5.2						
218A	Dragoon	66.62	324	⇑P	P	05 46 14.0	+0.3
	baz=67						
LPM	Los Pinos Moun	66.69	328	eP	P	05 46 15.1	+1.0
119A	Ashpeak Ranch,	66.83	325	⇑P	P	05 46 15.3	+0.2
	baz=67						
217A	Green Valley	66.89	323	⇑P	P	05 46 15.8	+0.4
	baz=67						
QSPA	South Pole Qui	67.07	180	P	P	05 46 15.8	-0.2
	comp=Z,26nm,0.9s,mb5.2,baz=145,slow=2.5,SNR=18						
118A	Homack Ranch,	67.09	324	⇑P	P	05 46 17.2	+0.4
	baz=67						
ANMO	Albuquerque	67.12	328	eP	P	05 46 07.7	-9.2
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
Z19A	T-Link Ranch,	67.22	325	⇑P	P	05 46 17.3	-0.3
	baz=67						
TUC	Tucson	67.28	324	eP	P	05 46 18.4	+0.5
	comp=Z,30nm,1.4s,mb5.1						
216A	Three Points,	67.42	323	⇓P	P	05 46 19.0	+0.1
	baz=68,SNR=5.2						
117A	Oracle	67.45	324	⇑P	P	05 46 19.5	+0.4
	baz=68,SNR=7.6						
CBKS	Cedar Bluff	67.46	336	eP	P	05 46 18.9	0.0
	comp=Z,114nm,1.2s,mb5.8						
CBKS				epP	pP	05 46 28.8	-1.5
Y19A	Nutrioso	67.73	326	⇓P	P	05 46 21.1	+0.4
	baz=68,SNR=15						
Z17A	San Carlos Hig	67.86	324	⇑P	P	05 46 22.4	+0.8
	baz=68						
TAOE	Nuku Hiva Isla	67.97	270	eLR	LR	06 06 49.6	
	comp=Z,4μm,24.6s,baz=114						
116A	Eloy	67.97	323	⇑P	P	05 46 22.8	+0.5
	baz=68						
Y18A	Canyon Day Jun	68.00	325	⇑P	P	05 46 23.3	+0.8
	baz=68						
SCIA	State Center	68.06	342	eP	P	05 46 20.3	-2.4
	comp=Z,36nm,0.9s,mb5.4						
X19A	St. Johns	68.12	326	⇓P	P	05 46 23.9	+0.7
	baz=68						
214A	Organ Pipe Nat	68.14	322	⇑P	P	05 46 23.7	+0.3
	baz=68						
JFWS	Jewell Farm	68.21	344	eP	P	05 46 22.6	-1.0
JFWS				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
JFWS	Jewell Farm	68.21	344	eP	P	05 46 22.6	-1.0
	comp=Z,29nm,0.9s,mb5.3						
Y17A	Roosevelt	68.37	324	⇑P	P	05 46 25.3	+0.5
	baz=68,SNR=15						
115A	Sonoran Desert	68.37	323	⇓P	P	05 46 25.3	+0.5
	baz=68						
Z16A	Peralta Trail,	68.41	324	⇓P	P	05 46 25.2	+0.2
	baz=69						
X18A	Snowflake	68.54	326	⇑P	P	05 46 26.4	+0.6
	baz=69						
W19A	Sanders	68.70	326	⇓P	P	05 46 27.1	+0.3
	baz=69						
Y16A	Circle Bar Ran	68.85	324	⇓P	P	05 46 28.5	+0.7
	baz=69						
GLMI	Grayling	68.86	349	eP	P	05 46 27.0	-0.6
	comp=Z,44nm,0.9s,mb5.4						
SDCO	Great Sand Dun	68.95	331	eP	P	05 46 28.6	+0.3
	comp=Z,44nm,1.1s,mb5.3						
V19A	Window Rock	69.00	327	⇓P	P	05 46 30.0	+1.3
	baz=69						
X16A	Lo Mia Camp, P	69.24	325	⇓P	P	05 46 30.7	+0.5
	baz=69,SNR=7.0						
113A	Mohawk Valley,	69.28	322	⇑P	P	05 46 31.0	+0.4
	baz=69						
Y15A	Casa Rosa Ranc	69.37	324	⇓P	P	05 46 31.5	+0.5
	baz=70						
V18A	Ganado	69.45	326	⇑P	P	05 46 32.1	+0.7
	baz=70						
X15A	Humboldt	69.72	324	⇑P	P	05 46 33.6	+0.5
	baz=70,SNR=8.2						
W16A	Flagstaff	69.80	325	⇓P	P	05 46 34.1	+0.4
	baz=70,SNR=16						
T19A	Beclabito	69.87	328	⇓P	P	05 46 34.9	+0.8
	baz=70						
MVCO	Mesa Verde	69.91	328	⇑P	P	05 46 35.2	+0.9
	baz=70						
MVCO	Mesa Verde	69.91	328	eP	P	05 46 35.0	+0.7
	comp=Z,31nm,1.0s,mb5.2						
MVCO				epP	pP	05 46 46.8	+1.1
U18A	Rough Rock, Ch	69.97	327	⇓P	P	05 46 35.1	+0.4
	baz=70,SNR=7.3						
WUAZ	Wupatki	70.04	325	⇓P	P	05 46 35.7	+0.6
	baz=70						
WUAZ	Wupatki	70.04	325	eP	P	05 46 36.3	+1.1
	comp=Z,54nm,1.1s,mb5.4						
X14A	Yava	70.06	324	⇑P	P	05 46 35.0	-0.2
	baz=70						
Y13A	Salome	70.09	323	⇓P	P	05 46 35.6	+0.1
	baz=70						
GLA	Glamis	70.10	321	⇑P	P	05 46 35.6	+0.1
	baz=70						
LIC	Lamto	70.19	74	⇑iP	P	05 46 36.5	-0.1
	comp=Z,72nm,1.0s,mb5.3						
LIC	Lamto	70.19	74	⇑iP	P	05 46 36.5	-0.1
	comp=Z,36nm,1.0s,mb5.2						
W15A	Williams	70.25	325	⇑P	P	05 46 37.0	+0.6
	baz=70						
R21A	Cimarron	70.39	330	⇑P	P	05 46 37.9	+0.6
	baz=71,SNR=5.9						
U16A	Tuba City	70.39	326	⇑P	P	05 46 37.9	+0.6
	baz=71,SNR=7.4						
Y12C	Blythe	70.44	322	⇑P	P	05 46 37.7	+0.1
	baz=71						
U17A	Shonto	70.51	327	⇓P	P	05 46 38.6	+0.7
	baz=71,SNR=5.8						
T18A	Mexican Hat	70.53	327	⇓P	P	05 46 38.3	+0.2
	baz=71						
DBIC	Dimbokro	70.55	74	P	P	05 46 38.6	-0.1
	comp=Z,72nm,0.9s,mb5.6,baz=213,slow=6.0,SNR=36						
DBIC	Dimbokro	70.55	74	eP	P	05 46 38.9	+0.2
DBIC				pmax	pmax		
	comp=Z,90nm,1.0s						
DBIC	Dimbokro	70.55	74	eP	P	05 46 38.9	+0.1
	comp=Z,90nm,1.0s,mb5.7						
SWSC	Sam W. Stewart	70.58	321	⇑P	P	05 46 38.6	+0.1
	baz=71						
S19A	Harvey Farm, M	70.65	328	⇓P	P	05 46 38.8	0.0
	baz=71,SNR=12						
X13A	Yucca	70.67	323	⇑P	P	05 46 38.2	-0.7
	baz=71,SNR=8.4						
V15A	Kaibab Nationa	70.69	325	⇓P	P	05 46 39.9	+0.8
	baz=71,SNR=9.5						
ISCO	Idaho Springs	70.69	332	eP	P	05 46 39.4	+0.4
ISCO				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
ISCO	Idaho Springs	70.69	332	eP	P	05 46 39.4	+0.4
	comp=Z,22nm,1.1s,mb5.0						
W14A	Seligman	70.72	324	⇑P	P	05 46 39.5	+0.2
	baz=71						
ECSD	EROS,Sioux Fal	70.75	340	eP	P	05 46 38.1	-1.1
	comp=Z,33nm,1.1s,mb5.2						
SMCO	Snowmass	70.78	331	eP	P	05 46 32.9	-6.7
	comp=Z,40nm,1.1s,mb5.3						
SMCO				epP	pP	05 46 44.6	-6.4
T17A	Navajo Res., N	70.89	327	⇑P	P	05 46 41.0	+0.8
	baz=71,SNR=8.4						
BC3	Big Chuckw Mtn	70.90	321	⇑P	P	05 46 40.1	-0.3
	baz=71						
COWI	Conover	70.96	346	eP	P	05 46 39.8	-0.7
S18A	Hurst Farm, Bl	71.02	328	⇑P	P	05 46 41.8	+0.7
	baz=71,SNR=30						
V14A	Boquillas Ranc	71.05	324	⇓P	P	05 46 41.9	+0.6
	baz=71,SNR=12						
PV04	Paradox Valley	71.05	329	eP	P	05 46 42.5	+1.3
W13A	Hualapai Mount	71.07	323	⇓P	P	05 46 41.3	-0.1
	baz=71						
IRM	Iron Mountain	71.09	322	⇓P	P	05 46 41.9	+0.3
	baz=71						
R19A	Curley Farm, L	71.14	329	⇓P	P	05 46 42.1	+0.3
	baz=71,SNR=5.2						
Q20A	Ridgley Place,	71.21	330	⇑P	P	05 46 42.6	+0.4
	baz=71						
U15A	North Rim	71.22	325	⇓P	P	05 46 42.6	+0.3
	baz=71,SNR=11						
BELC	Belle Mtn.	71.46	321	⇑P	P	05 46 43.5	-0.3
	baz=72						
R18A	Canyonlands Na	71.52	328	⇓P	P	05 46 44.3	+0.3
	baz=72						
TBI	Tubuai	71.64	252	eLR	LR	06 08 43.8	
	comp=Z,1μm,22.2s,baz=108						
Q19A	Hogan Spring (	71.67	329	⇑P	P	05 46 45.9	+0.9
	baz=72,SNR=5.1						
U14A	Mt Trumbull	71.68	325	⇓P	P	05 46 45.3	+0.3
	baz=72,SNR=17						
V13A	Grand Canyon W	71.68	324	⇓P	P	05 46 44.5	-0.6
	baz=72,SNR=8.7						
T15A	Red Dirt Ranch	71.71	326	⇓P	P	05 46 45.4	+0.1
	baz=72						
GMRC	Granite Mounta	71.83	322	⇑P	P	05 46 46.1	+0.1
	baz=72						
S16A	Weppner Ranch,	71.85	327	⇑P	P	05 46 47.0	+0.9
	baz=72						
O21A	Pagoda	71.85	331	⇓P	P	05 46 47.0	+1.0
	baz=72						
N22A	Wattenberg Ran	71.88	332	⇑P	P	05 46 47.0	+0.8
	baz=72						
R17A	Hanksville Air	71.94	328	⇓P	P	05 46 47.2	+0.6
	baz=72,SNR=9.2						
V12A	Nelson	72.07	323	⇓P	P	05 46 47.2	-0.2
	baz=72						
P19A	Cripple Cowboy	72.07	330	⇓P	P	05 46 47.7	+0.4
	baz=72,SNR=21						
U13A	Pakoon Wash	72.09	324	⇑P	P	05 46 47.4	-0.2
	baz=72						
T14A	Hurricane	72.11	325	⇓P	P	05 46 47.7	0.0
	baz=72,SNR=9.5						
O20A	White River Ci	72.13	330	⇑P	P	05 46 48.5	+0.8

baz=72,SNR=12
BBRC Big Bear Sol-O 72.18 321 ⇑P P 05 46 48.2 0.0
baz=72
Q18A Rafter H Ranch 72.20 329 ⇓P P 05 46 48.5 +0.4
baz=72
R16A Teasdale 72.22 327 ⇓P P 05 46 48.2 0.0
baz=72
N21A Black Mountain 72.31 331 ⇑P P 05 46 48.9 +0.1
baz=72
EGOM La Gomera 72.34 48 P P 05 46 48.9 -0.4
comp=Z,105nm,0.7s,mb5.9
SRU San Rafael 72.39 328 ⇓P P 05 46 49.3 0.0
baz=73
SRU San Rafael 72.39 328 *e*P P 05 46 49.9 +0.7
comp=Z,23nm,1.0s,mb5.1
U12A Valley of Fire 72.42 324 ⇓P P 05 46 49.4 -0.1
baz=73,SNR=5.2
M22A Cedar Creek Ra 72.44 332 ⇑P P 05 46 49.4 -0.1
baz=73
TUQ Turquoise Moun 72.45 322 ⇓P P 05 46 48.8 -0.9
baz=73
V11A Goodsprings 72.47 323 ⇑P P 05 46 48.8 -1.0
baz=73
T13A Saint George 72.51 325 ⇑P P 05 46 49.5 -0.5
baz=73
Q16A Castle Valley 72.56 328 ⇑P P 05 46 50.4 +0.1
baz=73
P18A Preston Nutter 72.66 329 ⇑P P 05 46 51.5 +0.7
baz=73,SNR=12
N20A Spence Gulch, 72.70 331 ⇑P P 05 46 51.3 +0.2
baz=73
P17A Butcher Ranch, 72.78 328 ⇓P P 05 46 52.2 +0.6
baz=73,SNR=6.7
SHPR Sheep Range 72.81 324 *e*P P 05 46 49.6 -2.2
GSC Goldstone 72.85 322 ⇓P P 05 46 51.2 -0.9
baz=73
GSC Goldstone 72.85 322 *e*P P 05 46 52.2 +0.1
comp=Z,35nm,1.5s,mb5.1
L22A Ellis Ranch, M 72.89 333 ⇓P P 05 46 52.4 +0.3
baz=73
S13A Holt Ranch, En 72.91 325 ⇓P P 05 46 51.6 -0.7
baz=73,SNR=16
R14A James Farms, M 73.01 326 ⇑P P 05 46 53.3 +0.3
baz=73
O18A Roosevelt 73.05 329 ⇓P P 05 46 53.5 +0.3
baz=73,SNR=8.0
N19A John Jarvie Ra 73.17 330 ⇓P P 05 46 54.2 +0.4
baz=73,SNR=12
Q15A Fillmore 73.22 327 ⇑P P 05 46 54.3 +0.1
baz=73
L21A Rawlins 73.23 332 ⇑P P 05 46 54.4 +0.3
baz=73,SNR=12
EDW2 Edwards Air Fo 73.24 321 ⇑P P 05 46 54.2 -0.2
baz=73
BLG Laguna Peak 73.34 319 ⇓P P 05 46 54.2 -0.8
baz=74
O17A Robinson Place 73.34 329 ⇑P P 05 46 55.2 +0.3
baz=74,SNR=14
T11A Corn Creek, Al 73.38 324 ⇓P P 05 46 54.5 -0.7
baz=74,SNR=6.1
U10A Ash Meadows, A 73.39 323 ⇑P P 05 46 55.4 +0.1
baz=74
R13A O'Grain Ranch, 73.41 325 ⇑P P 05 46 55.6 +0.3
baz=74
S12A Delamar Landin 73.45 325 ⇓P P 05 46 54.9 -0.6
baz=74
N18A Larsen Ranch, 73.46 330 ⇑P P 05 46 55.8 +0.3
baz=74,SNR=7.2
PPT Papeete 73.59 258 *e*LR LR 06 09 43.1
comp=Z,µm,26.0s,baz=105
PPT Papeete 73.59 258 LR LR 06 11 18.4
comp=Z,866nm,18.9s,MS5.1,baz=282,slow=29
Q14A Sevier Lake (B 73.66 326 ⇑P P 05 46 56.7 -0.1
baz=74,SNR=7.7
RSSD Black Hills 73.67 335 *e*P P 05 46 57.1 +0.4
RSSD pmax pmax
comp=Z,21nm,1.2s,mb4.9
RSSD Black Hills 73.67 335 *e*P P 05 46 57.1 +0.4
comp=Z,21nm,1.2s,mb4.9
L20A Wamsutter 73.69 332 ⇑P P 05 46 57.0 +0.2
baz=74,SNR=6.8
TPNV Topopah Spring 73.73 323 ⇑P P 05 46 57.1 -0.1
baz=74
TPNV Topopah Spring 73.73 323 *e*P P 05 46 54.3 -2.9
comp=Z,38nm,1.2s,mb5.2
MPMC Manual Prospec 73.78 322 ⇑P P 05 46 56.9 -0.7
baz=74
R12A Pony Springs, 73.86 325 ⇓P P 05 46 57.0 -1.0
baz=74,SNR=9.1
N17A Moffit Pass 73.97 329 ⇓P P 05 46 58.5 -0.1
baz=74,SNR=19
SBA Scott Base 73.97 191 *e*P P 05 46 57.3 -0.9
SBA pmax pmax
comp=Z,23nm,1.1s,mb5.0
SBA Scott Base 73.97 191 *e*P P 05 46 57.3 -0.9
comp=Z,23nm,1.1s,mb5.0
M18A Lyman 74.00 330 ⇑P P 05 46 58.7 0.0
baz=74
P14A Drum Mountains 74.02 327 ⇑P P 05 46 58.5 -0.3
baz=74,SNR=8.3
ISA Isabella 74.07 321 *e*P P 05 46 54.1 -5.2
ISA pmax pmax
comp=Z,32nm,1.4s,mb5.1
ISA Isabella 74.07 321 *e*P P 05 46 54.1 -5.2
comp=Z,32nm,1.4s,mb5.1
K20A Yellowstone Ra 74.21 332 ⇑P P 05 47 00.0 +0.1
baz=74,SNR=7.1
N16A Rees Ranch, Co 74.22 329 ⇑P P 05 46 59.9 -0.1
baz=74
M17A Scullys Gap (B 74.31 330 ⇑P P 05 47 00.7 +0.2
baz=74,SNR=7.8
DUG Dugway 74.35 328 ⇓P P 05 47 00.4 -0.4
baz=74
DUG Dugway 74.35 328 *e*P P 05 47 00.1 -0.6
comp=Z,31nm,1.1s,mb5.1
L18A Fontenelle, Gr 74.38 330 ⇓P P 05 47 01.0 +0.1
baz=75,SNR=14
P13A Bates Ranch, G 74.39 326 ⇓P P 05 47 01.0 0.0
baz=75,SNR=5.4
Q12A Willow Creek R 74.50 326 ⇑P P 05 47 01.6 -0.1
baz=75
VES Vestal, Richgr 74.55 321 ⇓P P 05 47 01.8 -0.2
baz=75
K19A Absolon Red Bu 74.57 332 ⇑P P 05 47 02.0 0.0
baz=75,SNR=8.9
S10A Tonopah Range, 74.62 324 ⇓P P 05 47 02.2 -0.2
baz=75
M16A Huntsville 74.64 329 ⇓P P 05 47 02.4 -0.1
baz=75
AGMN Agassiz Refuge 74.67 343 *e*P P 05 47 01.4 -1.0
comp=Z,30nm,1.0s,mb5.2
R10A Warm Springs 74.73 324 ⇓P P 05 47 04.1 +1.1
baz=75,SNR=8.1
Q11A Duckwater 74.79 325 ⇓P P 05 47 04.0 +0.6
baz=75,SNR=6.6
S09A Goldfield 74.83 323 ⇓P P 05 47 03.3 -0.3
baz=75
BW06 Boulder Array 74.83 331 ⇓P P 05 47 03.8 +0.3
baz=75
BW06 Boulder Array 74.83 331 *e*P P 05 47 03.6 +0.1
comp=Z,26nm,1.5s,mb4.9
PDAR Pinedale Array 74.83 331 P P 05 47 02.7 -0.8
comp=Z,6.4nm,1.2s,mb4.4,baz=134,slow=6.4,SNR=14
P12A McGill 74.86 326 ⇓P P 05 47 03.8 0.0
baz=75
O13A Hicks Ranch, I 74.88 327 ⇓P P 05 47 03.8 0.0
baz=75
L17A Cokeville 74.90 330 ⇓P P 05 47 03.9 0.0
baz=75
K18A Toltan Ranch, 74.95 331 ⇓P P 05 47 04.7 +0.5
baz=75,SNR=16
VNDA Vanda 75.00 190 P P 05 47 03.9 -0.2
comp=Z,1.9nm,0.8s,mb4.1,baz=127,slow=6.7,SNR=4.1
VNDA Vanda 75.00 190 *e*P P 05 47 04.5 +0.4
VNDA *e**PP pP 05 47 14.1 -1.6
VNDA pmax pmax
comp=Z,19nm,1.3s
VNDA Vanda 75.00 190 *e*P P 05 47 04.5 +0.3
comp=Z,19nm,1.3s,mb4.9
VNDA *ep*P pP 05 47 14.1 -1.6
N14A Grayback Hills 75.03 328 ⇑P P 05 47 04.2 -0.5
baz=75
TPH Tonopah 75.08 323 *e*P P 05 47 07.1 +2.1
TPH pmax pmax
comp=Z,16nm,1.0s,mb4.9
TPH Tonopah 75.08 323 *e*P P 05 47 07.1 +2.1
comp=Z,16nm,1.0s,mb4.9
L16A Fish Haven 75.09 330 ⇑P P 05 47 04.5 -0.5
baz=75,SNR=7.5
R09A Tonopah 75.11 324 ⇑P P 05 47 04.9 -0.3
baz=75
M15A Larsen Ranch, 75.14 329 ⇓P P 05 47 04.5 -0.9
baz=75,SNR=12
MTUM Tungsten Hills 75.31 322 *e*P P 05 47 07.8 +1.4
K17A Gardner Place, 75.43 330 ⇓P P 05 47 06.8 -0.1
baz=76,SNR=12
SYO Syowa Base 75.48 160⇑ *e*P P 05 47 05.0 -2.0
SYO Syowa Base 75.48 160⇓ *e*PcP PcP 05 47 16.0 -3.9
AHID Auburn Hatcher 75.53 330 *e*P P 05 47 07.2 -0.3
comp=Z,39nm,1.0s,mb5.3
AHID *ep*P pP 05 47 19.5 +0.4
L15A Malad City 75.53 329 ⇓P P 05 47 07.2 -0.3
baz=76,SNR=18
M14A Sheep Mountain 75.61 328 ⇓P P 05 47 06.1 -1.9
baz=76,SNR=7.0
I18A Diamond G Ranc 75.69 332 ⇓P P 05 47 08.5 +0.1
baz=76,SNR=6.3
K16A Soda Springs 75.80 330 ⇓P P 05 47 08.6 -0.5
baz=76,SNR=11
REDW Red Top Meadow 75.88 331 *e*P P 05 47 08.8 -0.8
comp=Z,20nm,1.1s,mb5.0
SNOW Snow King Moun 75.92 331 *e*P P 05 47 09.0 -0.7
comp=Z,20nm,1.0s,mb5.0
LOHW Long Hollow 75.97 331 *e*P P 05 47 09.4 -0.6
comp=Z,14nm,1.2s,mb4.8
ELK Elko 75.98 327 *e*P P 05 47 06.7 -3.4
TPAW Teton Pass 76.03 331 *e*P P 05 47 09.8 -0.6
comp=Z,18nm,1.2s,mb4.9
MOOW Moose Ponds 76.14 331 *e*P P 05 47 09.3 -1.6
comp=Z,16nm,1.4s,mb4.8
J16A Bone 76.16 330 ⇓P P 05 47 10.6 -0.5
baz=76,SNR=5.7
I17A Pilgram Creek 76.20 331 ⇑P P 05 47 12.0 +0.6
baz=76,SNR=11
DCID1 Drake Creek 76.22 331 *e*P P 05 47 11.0 -0.4
comp=Z,30nm,1.1s,mb5.1
IMW Indian Meadow 76.34 331 *e*P P 05 47 09.7 -2.5
comp=Z,28nm,1.4s,mb5.0
ULM Lac du Bonnet 76.46 344 P P 05 47 10.9 -1.7
comp=Z,12nm,1.0s,mb4.8,baz=146,slow=6.7,SNR=9.8
ULM Lac du Bonnet 76.46 344 *e*P P 05 47 11.3 -1.3
comp=Z,17nm,1.2s,mb4.9
I16A Newdale 76.57 331 ⇓P P 05 47 13.6 +0.1
baz=77,SNR=5.9
RLMT Red Lodge 76.60 333 ⇑P P 05 47 13.9 +0.3
baz=77
RLMT Red Lodge 76.60 333 *e*P P 05 47 13.5 0.0
comp=Z,15nm,1.0s,mb4.9
CMB Columbia Colle 76.82 322 *e*P P 05 47 20.1 +5.1
CMB pmax pmax
comp=Z,11nm,1.2s,mb4.7
CMB Columbia Colle 76.82 322 *e*P P 05 47 20.1 +5.1
comp=Z,11nm,1.2s,mb4.7
G18A Lazy EL Ranch, 76.88 333 ⇓P P 05 47 15.5 +0.4
baz=77,SNR=9.7
H16A Russell Place, 77.11 331 ⇓P P 05 47 16.6 +0.2
baz=77,SNR=7.8
O08A Rochester Mine 77.17 325 ⇑P P 05 47 17.1 +0.2
baz=77
WCN Washoe City 77.34 323 ⇓P P 05 47 18.3 +0.4
baz=78
F18A Big Timber 77.41 333 ⇑P P 05 47 18.5 +0.4
baz=78,SNR=14
DGMT Dagmar 77.42 338 ⇓P P 05 47 18.2 +0.1
baz=78
DGMT Dagmar 77.42 338 *e*P P 05 47 18.7 +0.6
comp=Z,50nm,1.0s,mb5.4
DGMT *ep*P pP 05 47 29.2 -0.4
I14A Mackay 77.51 330 ⇓P P 05 47 19.5 +0.8
baz=78,SNR=6.4
L10A Juniper Basin 77.59 327 ⇑P P 05 47 19.8 +0.6
baz=78,SNR=5.8
M09A Marrel Ranch, 77.61 326 ⇓P P 05 47 19.6 +0.3
baz=78,SNR=6.4
HLID Hailey 77.68 329 *e*P P 05 47 16.3 -3.4
comp=Z,20nm,1.0s,mb5.0
SCHQ Schefferville 77.70 2 P P 05 47 18.7 -0.8
comp=Z,6.1nm,0.9s,mb4.5,baz=140,slow=7.9,SNR=3.5
F17A Fitzpatrick Pl 77.81 333 ⇓P P 05 47 20.7 +0.3
baz=78,SNR=10
N07B Gerlach 77.95 324 ⇓P P 05 47 21.2 -0.1
baz=78,SNR=9.4
H14A Leadore 78.00 330 ⇑P P 05 47 22.1 +0.7
baz=78,SNR=5.8
BOZ Bozeman (W) 78.02 332 *e*P P 05 47 21.8 +0.2
comp=Z,10nm,1.1s,mb4.7
E18A Harlowton 78.03 333 ⇑P P 05 47 21.8 +0.3
baz=78,SNR=10
DLMT Dillon 78.23 331 *e*P P 05 47 20.6 -2.0
comp=Z,20nm,1.1s,mb5.0
K10A MacKenzie Ranc 78.30 327 ⇓P P 05 47 22.7 -0.4
baz=78,SNR=6.8
E17A Martinsdale 78.33 333 ⇑P P 05 47 23.1 -0.1
baz=78,SNR=7.2
H13A Challis 78.37 330 ⇓P P 05 47 23.8 +0.3
baz=79,SNR=15
N06A Buffalo Meadow 78.40 324 ⇓P P 05 47 23.3 -0.4
baz=79,SNR=5.1
D18A Linhart Farms, 78.48 334 ⇑P P 05 47 24.2 +0.2
baz=79,SNR=6.3
M07A Soldier Meadow 78.49 325 ⇑P P 05 47 24.1 -0.1
baz=79
LRM Limekiln Ridge 78.52 331 *e*P P 05 47 25.1 +0.8
F15A Butte 78.55 331 ⇑P P 05 47 24.8 +0.4
baz=79,SNR=7.8
E16A East Helena 78.74 332 ⇑P P 05 47 25.9 +0.4
baz=79,SNR=5.3
G13A Cobalt 78.76 330 ⇓P P 05 47 25.6 0.0
baz=79,SNR=14
D17A Six Diamond Ra 78.81 333 ⇑P P 05 47 26.1 +0.2
baz=79,SNR=23
F14A Wisdom 78.92 331 ⇓P P 05 47 26.7 +0.2
baz=79,SNR=9.6
HRY Holter Researc 78.94 332 *e*P P 05 47 27.4 +0.8
HRY *ep*P pP 05 47 39.0 +0.8
WVOR Wild Horse Val 78.95 326 *e*P P 05 47 26.0 -0.7
WVOR pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
WVOR Wild Horse Val 78.95 326 *e*P P 05 47 26.0 -0.7
comp=Z,8.4nm,1.2s,mb4.5
E15A Deer Lodge 79.07 332 ⇓P P 05 47 27.4 +0.1
baz=79,SNR=12
D16A Dana Ranch, Ca 79.08 333 ⇑P P 05 47 28.2 +0.9
baz=79,SNR=19
EGMT Eagleton 79.13 334 *e*P P 05 47 27.0 -0.5
comp=Z,21nm,1.0s,mb5.0
TOA0 Torodi Ar. Sit 79.22 71 *e*P P 05 47 28.9 0.0
TORD Torodi Ar. Bea 79.22 71 P P 05 47 28.9 +0.1
comp=Z,95nm,0.9s,mb5.7,baz=254,slow=4.9,SNR=168
C17A Wharram Farm, 79.23 334 ⇓P P 05 47 28.1 0.0
baz=79,SNR=13
LBCM Butte Creek Ri 79.29 323 P P 05 47 28.5 -0.1
F13A Darby 79.33 330 ⇓P P 05 47 29.3 +0.6
baz=80,SNR=22
E14A Clinton 79.44 331 ⇓P P 05 47 29.9 +0.6
baz=80,SNR=7.4
B18A Beardsley Farm 79.44 335 ⇓P P 05 47 29.5 +0.3
baz=80,SNR=15
MOD Modoc 79.45 325 *e*P P 05 47 29.6 +0.2
comp=Z,20nm,1.1s,mb5.0
D15A Lincoln 79.50 332 ⇓P P 05 47 30.1 +0.5
baz=80,SNR=5.8
CHMT Chamberlain Mo 79.72 332 *e*P P 05 47 31.5 +0.7
B17A L&G Farms, Che 79.77 334 ⇑P P 05 47 30.7 -0.3
baz=80,SNR=9.0
C16A Fuhringer Ranc 79.77 333 ⇓P P 05 47 31.2 +0.2
baz=80,SNR=11
WDC Whiskeytown Da 79.78 322 *e*P P 05 47 30.1 -1.2
A18A Metzger Ranch, 79.89 335 ⇓P P 05 47 31.4 -0.3
baz=80,SNR=8.0
G11A Walters Elk Ra 79.94 329 ⇑P P 05 47 32.3 +0.3
baz=80,SNR=7.3
MSO Missoula 79.95 331 *e*P P 05 47 33.5 +1.4
comp=Z,15nm,1.4s,mb4.7
D14A Greenough 79.96 332 ⇓P P 05 47 32.7 +0.6
baz=80
J07A Hines 79.97 326 ⇑P P 05 47 31.9 -0.4
baz=80,SNR=5.5
I08A Drewsey 79.98 327 ⇓P P 05 47 32.5 +0.3
baz=80,SNR=8.4
BMO Blue Mountains 80.03 328 *e*P P 05 47 32.8 +0.2
BMO pmax pmax
comp=Z,20nm,1.1s,mb5.0
BMO Blue Mountains 80.03 328 *e*P P 05 47 32.8 +0.3
comp=Z,20nm,1.1s,mb5.0
SLMT Seeley Lake 80.07 332 *e*P P 05 47 33.4 +0.7
C15A Salmond Ranch, 80.11 333 ⇓P P 05 47 33.4 +0.5
baz=80,SNR=21
B16A M & M Farms, S 80.23 334 ⇑P P 05 47 33.6 +0.1
baz=80
A17A Triple J Farms 80.25 334 ⇓P P 05 47 33.7 +0.1
baz=80,SNR=17
F11A Grangeville 80.25 330 ⇑P P 05 47 33.9 +0.2
baz=80,SNR=14
G10A Bishop Farm, J 80.27 329 ⇑P P 05 47 34.2 +0.4
baz=80,SNR=14
J06A Christmas Vall 80.32 326 ⇓P P 05 47 34.4 +0.3
baz=80,SNR=9.7
K05A Summer Lake 80.34 325 ⇑P P 05 47 34.7 +0.5
baz=80
D13A Huson 80.39 331 ⇑P P 05 47 34.3 -0.1
baz=81,SNR=12
H08A Prairie City 80.46 327 ⇑P P 05 47 35.1 +0.2
baz=81
SWMT Swartz Lake 80.50 332 *e*P P 05 47 35.2 +0.2
B15A Bradely Ranch, 80.51 333 ⇑P P 05 47 34.9 -0.1
baz=81,SNR=18
I07A Izee 80.57 326 ⇓P P 05 47 36.1 +0.6
baz=81,SNR=6.0
G09A Cove 80.57 328 ⇓P P 05 47 36.3 +0.9
baz=81,SNR=21
C14A Swan Lake 80.59 332 ⇑P P 05 47 35.9 +0.4
baz=81
A16A West Butte Ran 80.61 334 ⇓P P 05 47 35.8 +0.2
baz=81,SNR=25
E11A Bogner Ranch, 80.62 330 ⇑P P 05 47 35.6 -0.1
baz=81
D12A Red Ives Fores 80.75 331 ⇑P P 05 47 36.6 +0.2
baz=81
JTMT Jette 80.81 332 *e*P P 05 47 37.4 +0.7
F10A Beach Ranch, E 80.82 329 ⇑P P 05 47 36.8 0.0
baz=81,SNR=14
I06A Prineville 80.83 326 ⇓P P 05 47 37.6 +0.7
baz=81,SNR=7.7
B14A Marquette Ranc 80.84 333 ⇑P P 05 47 37.3 +0.5
baz=81,SNR=12
C13A Hot Springs 80.88 332 ⇓P P 05 47 37.8 +0.8
baz=81,SNR=9.6
TSUM Tsumeb 80.92 107 *e*P P 05 47 39.1 +1.1
comp=Z,59nm,1.0s,mb5.5
F09A S2 Ranch, Elgi 80.95 328 ⇑P P 05 47 37.6 +0.1
baz=81,SNR=8.3
A15A Johnson Ranch, 81.10 333 ⇓P P 05 47 38.1 -0.1
baz=81,SNR=6.7
BSMT Bassoo Peak 81.11 332 P P 05 47 38.8 +0.6
E10A Myers Farm, Un 81.14 329 ⇑P P 05 47 38.8 +0.4
baz=81,SNR=12
G08A Pilot Rock 81.16 328 ⇑P P 05 47 38.8 +0.2
baz=81
D11A Klaveano Farm, 81.19 330 ⇓P P 05 47 38.5 -0.2
baz=81
LNOR Lincton Mounta 81.25 328 *e*P P 05 47 39.2 +0.2
LNOR *e**PP pP 05 47 47.1 -3.6
C12B Naegeli Ranch, 81.30 331 ⇑P P 05 47 39.5 +0.2
baz=82,SNR=6.2
B13A Whitefish 81.36 332 ⇑P P 05 47 39.9 +0.3
baz=82,SNR=11
A14A Double T Ranch 81.38 333 ⇓P P 05 47 39.5 -0.1
baz=82,SNR=9.7
F08A Pendleton 81.43 328 ⇓P P 05 47 39.9 -0.2
baz=82
H06A Lindquist Farm 81.45 327 ⇑P P 05 47 40.7 +0.6
baz=82,SNR=6.7
G07A Ruggs Ranch, H 81.49 327 ⇑P P 05 47 40.9 +0.5
baz=82,SNR=8.2
I05A Bend 81.53 326 ⇑P P 05 47 40.5 -0.1
baz=82,SNR=5.4
D10A Wagner Farm, O 81.63 330 ⇑P P 05 47 41.2 +0.2
baz=82,SNR=11
E09A Wood Farm, Sta 81.65 329 ⇑P P 05 47 41.0 -0.1
baz=82
WALA Waterton Lakes 81.65 333 *e*P P 05 47 36.2 -4.9
comp=Z,0.8nm,1.0s
C11A Tepee Creek (N 81.75 331 ⇓P P 05 47 42.4 +0.7
baz=82,SNR=14
A13A Flathead Natio 81.77 332 ⇑P P 05 47 42.3 +0.6
baz=82
B12A Libby 81.92 332 ⇑P P 05 47 42.9 +0.4
baz=82,SNR=5.8
G06A Carlson Farm, 81.96 327 ⇓P P 05 47 43.2 +0.4
baz=82
CROR Criterion Ridg 81.96 326 P P 05 47 43.7 +0.9
E08A Dider Farm, El 82.07 328 ⇑P P 05 47 43.7 +0.3
baz=82
D09A Jones Farm, Ri 82.12 329 ⇑P P 05 47 43.9 +0.3
baz=82
FFC Flin Flon 82.13 342 P P 05 47 42.8 -0.7
comp=Z,103nm,1.3s,mb5.6,SNR=8.4
FFC Flin Flon 82.13 342 *e*P P 05 47 42.4 -1.1
C10A Spilker Farm, 82.21 330 ⇓P P 05 47 44.1 +0.1
baz=82,SNR=6.3
HAWA Hanford 82.23 328 *e*P P 05 47 44.3 +0.1
B11A Sandpoint 82.24 331 ⇓P P 05 47 44.5 +0.3
baz=82
RSW Rattlesnake Hi 82.26 328 P P 05 47 44.8 +0.5
A12A Yaak River Ran 82.30 332 ⇓P P 05 47 44.8 +0.3
baz=82,SNR=16
G05A Wamic 82.31 326 ⇓P P 05 47 44.9 +0.3
baz=82
GBL Gable Mountain 82.34 328 P P 05 47 45.1 +0.3
H04A Detroit Lake 82.37 326 ⇑P P 05 47 44.8 -0.1
baz=82
F06A Goldendale 82.40 327 ⇓P P 05 47 45.6 +0.5
baz=83
D08A Wollman Farm, 82.41 329 ⇓P P 05 47 45.3 +0.2
baz=83
NEW Newport 82.45 331 *e*P P 05 47 45.5 +0.2
HOOD Mount Hood Mea 82.53 326 *e*P P 05 47 47.5 +1.7
comp=Z,22nm,1.0s,mb5.1
OD2 Odessa Site #2 82.55 329 P P 05 47 46.1 +0.3
A11A Hall Mountain, 82.63 331 ⇓P P 05 47 46.1 -0.1
baz=83,SNR=14
C09A Chrisman Ranch 82.64 330 ⇓P P 05 47 46.3 0.0
baz=83,SNR=6.7
G04A Mulino 82.88 326 ⇓P P 05 47 47.8 +0.2
baz=83
H03A Soap Creek Ran 82.94 325 ⇓P P 05 47 48.5 +0.6
baz=83
C08A Higginbotham F 82.99 329 ⇓P P 05 47 48.6 +0.5
baz=83
D07A Quincy 83.01 328 ⇓P P 05 47 49.2 +1.0
baz=83
B09A Rice 83.04 330 ⇑P P 05 47 47.9 -0.5
baz=83,SNR=7.4
EBG Ellensburg 83.10 328 P P 05 47 45.8 -2.9
MAW Mawson 83.17 164 *e*P P 05 47 48.5 -0.4
comp=Z,24nm,0.9s,mb5.2
MAW Mawson 83.17 164 P P 05 47 47.1 -1.9
comp=Z,30nm,0.9s,mb5.3,baz=231,slow=5.5,SNR=19
MAW Mawson 83.17 164 *e*P P 05 47 48.5 -0.4
MAW pmax pmax
comp=Z,24nm,0.9s
F04A Amboy 83.34 326 ⇓P P 05 47 49.5 -0.5
baz=84
WTV Waterville 83.36 329 P P 05 47 50.0 0.0
C07A Waterville 83.40 329 ⇑P P 05 47 49.8 -0.4
baz=84,SNR=9.7
D06A Cle Elum 83.43 328 ⇓P P 05 47 50.2 -0.2
baz=84
E05A Bandle 83.44 327 ⇑P P 05 47 50.4 -0.1
baz=84
ETW Entiat 83.47 329 *e*P P 05 47 50.9 +0.3
B08A Colville Reser 83.54 330 ⇑P P 05 47 50.9 0.0
baz=84
A09A Danville 83.64 330 ⇓P P 05 47 51.1 -0.3
baz=84,SNR=7.8
PTEO Sao Teotonio 83.70 45 *e*P P 05 47 53.9 +1.9
comp=Z,95nm,1.8s,mb5.6
PTEO *ep*P pP 05 48 04.2 +0.5
FCC Fort Churchill 83.91 348 *e*P P 05 47 52.3 -0.2
comp=Z,0.9nm,1.1s
BOSA Boshof 83.92 118 P P 05 47 53.1 -0.5
comp=Z,30nm,0.9s,mb5.4,baz=255,slow=4.1,SNR=22
BOSA Boshof 83.92 118 *e*P P 05 47 53.4 -0.2
BOSA *e**PP pP 05 48 04.0 -1.2
BOSA pmax pmax
comp=Z,55nm,1.2s,mb5.6
BOSA Boshof 83.92 118 *e*P P 05 47 53.4 -0.2
comp=Z,55nm,1.2s,mb5.6
BOSA *ep*P pP 05 48 04.0 -1.2
A08A Turner Farm, O 83.94 330 ⇓P P 05 47 52.4 -0.5
baz=84,SNR=14
B07A Winthrop 83.98 329 ⇑P P 05 47 52.6 -0.6

baz=84,SNR=7.0
PBDV Barranco-do-Ve 84.04 45 *e*P P 05 47 55.4 +1.6
comp=Z,116nm,1.5s,mb5.8
C05A Tolt Reservoir 84.19 328 ⇓P P 05 47 53.7 -0.6
baz=84
PVAQ Vaqueiros 84.27 45 *e*P P
EGRO El Granado 84.50 45 P P 05 47 57.1 +1.0
comp=Z,148nm,1.2s,mb6.0
A07A Ashnola River, 84.52 330 ⇑P P 05 47 55.8 -0.1
baz=85,SNR=10
EDM Edmonton 84.65 336 *e*P P 05 47 54.8 -1.6
EVO Evora 84.72 44⇑*i*P P 05 47 55.6 -1.6
comp=Z,94nm,1.1s,mb5.5
EVO Evora 84.72 44 *e*P P 05 47 58.5 +1.3
comp=Z,43nm,1.9s,mb5.3
EVO *e*pP pP 05 48 10.2 +1.3
B05A Bryant 84.78 328 ⇑P P 05 47 57.3 0.0
baz=85
PBAR Barrancos 85.15 45 *e*P P 05 48 00.6 +1.2
comp=Z,64nm,1.2s,mb5.6
EMIN Mina Concepcio 85.16 46 P P 05 47 59.4 -0.1
comp=Z,149nm,1.2s,mb6.0
PESTR Estremoz 85.19 44 *e*P P 05 48 00.5 +1.0
comp=Z,76nm,1.5s,mb5.6
ESPR Espera 85.20 47 P P 05 48 00.0 +0.3
comp=Z,153nm,1.0s,mb6.1
EJIF Jimena Fronter 85.23 47 P P 05 48 01.4 +1.6
EJIF pmax pmax
comp=Z,38nm,0.8s,mb5.6
EJIF Jimena Fronter 85.23 47 P P 05 48 01.4 +1.5
comp=Z,38nm,0.8s,mb5.6
EBAD Badajoz 85.49 45 P P 05 48 00.9 -0.2
comp=Z,79nm,1.1s,mb5.8
PMRV Marv??o 85.63 44 *e*P P 05 48 02.3 +0.6
comp=Z,29nm,1.3s,mb5.3
EMIJ Mijas 85.77 47 P P 05 48 01.9 -0.5
comp=Z,97nm,1.1s,mb6.0
PCBR Castelo Branco 85.81 43 *e*P P 05 48 03.4 +0.8
comp=Z,42nm,1.8s,mb5.4
PCBR *e*pP pP 05 48 14.8 +0.5
MTE Manteigas 86.09 43 *e*P P 05 48 04.7 +0.7
comp=Z,43nm,1.2s,mb5.5
MTE *e*pP pP 05 48 15.1 -0.6
ELOJ Sierra Loja 86.50 47 P P 05 48 07.1 +1.0
ELOJ pmax pmax
comp=Z,28nm,0.9s,mb5.5
ELOJ Sierra Loja 86.50 47 P P 05 48 07.1 +1.0
comp=Z,28nm,0.9s,mb5.5
ELUQ Luque 86.64 47 P P 05 48 08.6 +1.8
ELUQ pmax pmax
comp=Z,54nm,0.8s,mb5.8
ELUQ Luque 86.64 47 P P 05 48 08.6 +1.8
comp=Z,54nm,0.8s,mb5.8
ERON Agron 86.67 47 P P 05 48 08.7 +1.8
EADA Adamuz 86.76 46 P P 05 48 07.2 -0.2
comp=Z,16nm,0.9s,mb5.2
TAM Tamanrasset 86.81 64 *e*P P 05 48 08.9 +1.0
TAM *e**PP pP 05 48 18.7 -0.9
TAM pmax pmax
comp=Z,13nm,1.1s,mb5.1
TAM Tamanrasset 86.81 64 *e*P P 05 48 08.9 +1.0
comp=Z,13nm,1.1s,mb5.1
TAM *e*pP pP 05 48 18.7 -0.9
MVO Moncorvo 86.84 43 *e*P P 05 48 08.5 +0.8
comp=Z,49nm,1.5s,mb5.5
ECOG Cogollos-Vega 86.96 47 P P 05 48 08.5 +0.1
ECOG pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
ECOG Cogollos-Vega 86.96 47 P P 05 48 08.5 +0.1
comp=Z,7.8nm,1.0s,mb4.9
EBAN Banos Encina 87.29 46 P P 05 48 10.4 +0.5
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
EBAN Banos Encina 87.29 46 P P 05 48 10.4 +0.5
comp=Z,10nm,0.8s,mb5.1
PBRG Braganca 87.38 42 *e*P P 05 48 11.4 +1.1
ECAL Calabor 87.46 42 P P 05 48 09.7 -0.9
comp=Z,32nm,1.2s,mb5.4
EQES Quesada 87.58 47 P P 05 48 12.2 +0.9
comp=Z,3.3nm,0.8s,mb4.6
ESDC Sonseca Array 87.98 45 P P 05 48 12.7 -0.5
comp=Z,1.4nm,0.7s,mb4.3,baz=236,slow=5.6,SNR=6.5
ESDC Sonseca Array 87.98 45 P P 05 48 13.1 0.0
comp=Z,2.3nm,0.5s,mb4.7
GUD Guadarrama 88.37 44 P P 05 48 15.4 +0.4
GUD pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
GUD Guadarrama 88.37 44 P P 05 48 15.4 +0.4
comp=Z,2.8nm,0.8s,mb4.5
ETOB Tobarra 89.04 47 P P 05 48 17.8 -0.4
comp=Z,5.5nm,0.6s,mb5.1
ETOR Torete 89.82 45 P P 05 48 22.1 +0.3
ETOR pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
ETOR Torete 89.82 45 P P 05 48 22.1 +0.3
comp=Z,6.9nm,0.8s,mb5.0
SJPF Ste Jean 91.53 43 *e*P P 05 48 30.5 +0.8
comp=Z,26nm,1.2s,mb5.1
SJPF Ste Jean 91.53 43 *e*P P 05 48 30.5 +0.8
SJPF pmax pmax
comp=Z,13nm,1.3s,mb5.1
SJPF Ste Jean 91.53 43 *e*P P 05 48 30.5 +0.8
comp=Z,13nm,1.3s,mb5.1
LSZ Lusaka 91.77 107 *e*P P 05 48 34.5 +3.0
LSZ pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LSZ Lusaka 91.77 107 *e*P P 05 48 34.5 +2.9
comp=Z,6.1nm,0.8s,mb5.0
ETSF Etsaut 91.84 44 *e*P P 05 48 31.4 +0.2
comp=Z,15nm,1.0s,mb5.0
ETSF Etsaut 91.84 44 *e*P P 05 48 31.4 +0.2
ETSF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
ETSF Etsaut 91.84 44 *e*P P 05 48 31.4 +0.2
comp=Z,7.4nm,1.0s,mb5.0
YKA Yellowknife Ar 92.26 341 P P 05 48 31.3 -1.2
comp=Z,6.8nm,0.8s,mb5.0,baz=137,slow=4.6,SNR=64
YKA Yellowknife Ar 92.26 341 P P 05 48 31.3 -1.2
LFF La Frestale 93.67 42 *e*P P 05 48 39.8 +0.3
comp=Z,36nm,1.1s,mb5.4
LFF La Frestale 93.67 42 *e*P P 05 48 39.8 +0.3
LFF pmax pmax
comp=Z,18nm,1.1s,mb5.4
LFF La Frestale 93.67 42 *e*P P 05 48 39.8 +0.3
comp=Z,18nm,1.1s,mb5.4
MFF Saint Martin d 93.94 41 *e*P P 05 48 40.8 0.0
comp=Z,26nm,1.0s,mb5.3
MFF Saint Martin d 93.94 41 *e*P P 05 48 40.8 0.0
MFF pmax pmax
comp=Z,13nm,1.0s,mb5.3
MFF Saint Martin d 93.94 41 *e*P P 05 48 40.8 0.0
comp=Z,13nm,1.0s,mb5.3
RJF Les Rejaudoux 94.32 42 *e*P P 05 48 42.6 +0.1
CAF Calviac 94.48 43 *e*P P 05 48 43.4 +0.1
DLBC Dease Lake 95.00 333 *e*P P 05 48 45.2 -0.1
TCF Toulx Ste Croi 95.22 42 *e*P P 05 48 46.3 -0.3
KEST Kesra 95.40 54 P P 05 48 47.0 -0.8
comp=Z,2.3nm,0.8s,mb4.6,baz=225,slow=11,SNR=3.4
BGF Bois d'Agland 95.73 42 *e*P P 05 48 49.0 0.0
comp=Z,14nm,0.9s,mb5.1
BGF Bois d'Agland 95.73 42 *e*P P 05 48 49.0 0.0
BGF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
BGF Bois d'Agland 95.73 42 *e*P P 05 48 49.0 0.0
comp=Z,6.8nm,0.9s,mb5.1
AVF Avril sur Loir 96.15 42 *e*P P 05 48 49.8 -1.1
comp=Z,11nm,1.0s,mb4.9
AVF Avril sur Loir 96.15 42 *e*P P 05 48 49.8 -1.1
AVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
AVF Avril sur Loir 96.15 42 *e*P P 05 48 49.8 -1.1
comp=Z,5.3nm,1.0s,mb4.9
SSF Saint Saulge 96.37 41 *e*P P 05 48 51.4 -0.4
SMF Signal de Mont 96.38 42 *e*P P 05 48 52.1 +0.2
comp=Z,12nm,0.9s,mb5.0
SMF Signal de Mont 96.38 42 *e*P P 05 48 52.1 +0.2
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
SMF Signal de Mont 96.38 42 *e*P P 05 48 52.1 +0.2
comp=Z,6.3nm,0.9s,mb5.0
LOR Lormes 96.68 41 *e*P P 05 48 52.7 -0.5
comp=Z,11nm,1.0s,mb5.0
LOR Lormes 96.68 41 *e*P P 05 48 52.7 -0.5
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
LOR Lormes 96.68 41 *e*P P 05 48 52.7 -0.5
comp=Z,5.6nm,1.0s,mb5.0
MEZF Maizieres J'vi 97.94 41 *e*P P 05 48 59.0 +0.1
GIVF Givet 98.51 39 *e*P P 05 49 01.4 0.0
HAU Haudompre 98.51 41 *e*P P 05 49 01.4 -0.1
NKC Novy Kostel 103.07 41 AMS AMS 06 19 00.0
comp=Z,2µm,19.6s
KHC Kasperske Hory 103.38 42 AMS AMS 06 25 00.0
comp=Z,2µm,17.0s
PRU Pruhonice 104.26 42 AMS AMS 06 24 40.0
comp=Z,2µm,19.8s
PVCC Panska Ves 104.45 41 AMS AMS 06 24 10.0
comp=Z,2µm,18.0s
TREC Trest 104.62 42 AMS AMS 06 25 50.0
comp=Z,2µm,16.9s
DPC Dobruska-Polom 105.46 42 AMS AMS 06 20 10.0
comp=Z,2µm,17.9s
OKC Ostrava-Krasne 106.43 42 AMS AMS 06 25 00.0
comp=Z,2µm,18.7s
STKA Stephens Creek 117.31 211 PKP PKPdf 05 54 07.6 -1.4
comp=Z,2.4nm,1.0s,baz=128,slow=5.9,SNR=3.2
KIV Kislovodsk 122.09 52 *e*PKIKP PKPdf 05 54 16.7 -0.9
KIV pmax pmax
comp=Z,15nm,1.1s
ASAR Alice Springs 127.82 209 PKP PKPdf 05 54 28.4 -1.0
comp=Z,5.4nm,0.9s,baz=147,slow=2.1,SNR=28
TIXI Tiksi 130.22 352 *i* PKIKP PKPdf 05 54 30.3 -2.1
ARU Arti 130.28 34 *i* PKIKP PKPdf 05 54 32.8 -0.1
ARU 05 56 46.8
ARU SS SS 06 14 09.6 -1.1
WB2 Warramunga Arr 130.83 211 *e*P PKPdf 05 54 34.6 -0.6
WRAB Tennant Creek 130.84 211 *e*PKIKP PKPdf 05 54 34.3 -0.9
SEY Seymchan 131.01 336 *i* PKIKP PKPdf 05 54 31.4 -2.7
PETK Petropavlovsk- 133.00 322 PKP PKPdf 05 54 38.3 +0.2
comp=Z,4.9nm,1.0s,baz=120,slow=8.8,SNR=3.1
FITZ Fitzroy Crossi 136.12 202 *e*P PKPdf 05 54 44.7 -0.4
comp=Z,6.2nm,0.9s
YAK Yakutsk 138.76 346 *e*PKIKP PKPdf 05 54 47.2 -1.4
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.1s
KURK Kurchatov 143.46 33 *e*PKIKP PKPdf 05 54 55.0 -2.4
ZAA0 Zalesovo Array 144.02 25 *e*PKPdf PKPdf 05 54 56.4 -1.8
ZALV Zalesovo Beam 144.02 25 PKP PKPdf 05 54 56.5 -1.8
comp=N,25nm,0.9s,baz=316,slow=4.1,SNR=32
YSS Yuzh-Sakhalins 144.32 320 *i* PKIKP PKPdf 05 54 56.9 -2.1
CLNS Chul'man 144.52 346 *e*PKHKP 05 54 54.3
CLNS pmax pmax
comp=Z,36nm,1.4s
CLNS pmax pmax
comp=N,10.0nm,0.7s
CLNS pmax pmax
comp=E,14nm,1.2s
EKS2 Erkin-Say 144.54 48 P PKPdf 05 54 59.6 +0.1
SNR=15
EKS2 Erkin-Say 144.54 48 *e*PKPdf PKPdf 05 54 59.4 -0.2
EKS2 *ep*PKPdf pPKPdf 05 55 10.9 -0.8
AML Almayashu 144.68 49 P PKPdf 05 55 00.2 +0.4
SNR=38
USP Ospenovka 144.80 47 P PKPdf 05 55 00.0 0.0
SNR=22
AAK Ala-Archa 145.04 48 P PKPbc 05 55 01.6 +1.7
SNR=50
AAK Ala-Archa 145.04 48 *e*PKPbc PKPbc 05 55 01.6 +1.7
AAK *ep*PKPdf pPKPdf 05 55 13.6 +1.0
FRU Bishkek 145.05 47 *e*PKIKP PKPdf 05 55 00.0 -0.4
FRU *i* 05 55 11.0
FRU pmax pmax
comp=Z,230nm,2.0s
CHMS Chumysh 145.07 47 P PKPbc 05 55 01.2 +1.2
SNR=26
BOD Bodaibo 145.20 356 *e*PKHKP 05 54 51.2
BOD *e* 05 54 58.7
BOD *e* 05 55 07.5
BOD pmax pmax
comp=Z,5.0nm,1.3s
BOD pmax pmax
comp=Z,82nm,1.0s
BOD pmax pmax
comp=Z,95nm,1.2s
UCH Uchtor 145.21 48 P PKPbc 05 55 02.8 +2.3
SNR=12
UCH Uchtor 145.21 48 *e*PKPbc PKPbc 05 55 02.6 +2.2
KBK Karagaybulak 145.34 47 P PKPbc 05 55 02.4 +1.6
SNR=19
TKM2 Tokmak 2 145.67 47 P PKPdf 05 55 03.0 +1.5
SNR=18
TKM2 Tokmak 2 145.67 47 *e*PKPbc PKPbc 05 55 02.7 +0.8
KZA Kyzart 145.77 48 P PKPbc 05 55 04.0 +1.8
SNR=19
ERM Erimo 146.30 312 *e*PKPbc PKPbc 05 55 04.2 +0.4
ERM *ep*PKPdf pPKPdf 05 55 13.9 -0.8
ULHL Ulahol 146.38 47 P PKPdf 05 55 04.8 +2.1
SNR=6.0
KSH Kashi 147.21 52 PKP PKPab 05 55 07.6 -0.7
KSH APKP 05 55 18.5
KSH XPKP 05 55 22.3
KSH PKS 05 58 41.3
KSH SKS SKSdf 06 02 10.9 +0.9
KSH comp=N,9µm,20.2s
KSH comp=E,1µm,7.8s LR LR
KSH LR LR
comp=Z,6µm,19.9s,MS6.3
MK31 Makanchi Array 147.78 36 *e*PKIKP PKPdf 05 55 05.2 +0.3
MK31 *e* 05 55 08.2
MKAR Makanchi Array 147.78 36 PKPbc PKPdf 05 55 04.9 0.0
comp=Z,22nm,0.8s,baz=298,slow=2.6,SNR=28
PALK Pallekele 148.09 115 *e*PKPbc PKPab 05 55 11.8 -0.7
THN Thein Dam 148.76 65 *e*P PKPbc 05 55 09.9 -0.9
KAPI Kappang 150.31 201 PKPbc PKPbc 05 55 12.8 -2.4
comp=Z,18nm,0.9s,baz=210,slow=6.4,SNR=14
KAPI Kappang 150.31 201 *e*PKPbc PKPbc 05 55 13.7 -1.5
KAPI *e*PKPab PKPab 05 55 20.5 -0.8
HYB Hyderabad 150.39 95 *i* PKP PKPdf 05 55 11.5 +1.5
HYB *e* 05 55 15.5
MOY Mondy 150.75 11 *e*PKIKP PKPbc 05 55 15.8 +0.7
DDI Dehra Dun 151.02 69 *e*P PKPbc 05 55 14.6 -1.8
TLY Talaya 151.13 8 *e*PKIKP PKPdf 05 55 10.4 +0.3
TLY *e* 05 55 15.8
TLY *e* 05 55 23.9
TLY pmax pmax
comp=Z,17nm,1.2s
TLY Talaya 151.13 8 *e*PKPdf PKPdf 05 55 10.9 +0.8
TLY *e*PKPbc PKPbc 05 55 16.3 +0.4
TLY *e*PKPab PKPab 05 55 24.3 +0.6
MJAR Matsushiro Arr 151.91 305 PKPbc PKPbc 05 55 17.4 -0.9
comp=Z,11nm,0.9s,baz=70,slow=1.1,SNR=16
MAJO Matsushiro 151.91 305 *e*PKIKP PKPdf 05 55 11.7 -0.1
MAT Matsushiro 151.91 305 PKP PKPbc 05 55 16.8 -1.5
ZAK Zakamensk 152.36 9 ⇑*i*PKIKP PKPdf 05 55 12.8 +0.8
ZAK *e* 05 59 02.6
ZAK pmax pmax
comp=Z,14nm,1.2s
WMQ Urumqi 152.61 36 *e*PKP PKPdf 05 55 10.6 -2.0
WMQ XPKP 05 55 25.6
WMQ PKP2 PKPab 05 55 30.8 +0.6
WMQ PKS 05 58 43.6
WMQ PP PP 05 59 04.4 +1.8
WMQ SKS SKSdf 06 02 12.3 -4.5
WMQ SKKS SKKSac 06 05 47.1 -3.2
WMQ PP PP
comp=Z,468nm,8.0s
WMQ LR LR
comp=N,2µm,19.0s,MS5.9
WMQ LR LR
comp=E,1µm,21.0s,MS5.9
WMQ LR LR
comp=Z,1µm,25.0s,MS5.7
SONM Songino Array 155.22 5 PKP PKPdf 05 55 16.3 +0.2
comp=Z,3.4nm,0.9s,baz=286,slow=1.6,SNR=15
SONM PKPbc PKPdf 05 55 25.3 +9.2
comp=Z,6.4nm,1.1s,baz=345,slow=1.4,SNR=9.3
SONM PP PP 05 59 13.6 -3.0
comp=Z,1.6nm,1.0s,baz=354,slow=4.5,SNR=3.5
ULN Ulaanbaatar 155.24 4 *e*PKIKP PKPdf 05 55 16.6 +0.4
ULN *e* 05 55 25.4
ULN *e* 05 55 40.9
CN2 Changchun 155.58 331 *e*PKP PKPdf 05 55 14.8 -2.0
PSI Prapat 157.31 151 PKP PKPdf 05 55 19.3 -0.7
comp=Z,1.3nm,0.3s,baz=140,slow=19,SNR=3.9
PSI PKPab PKPab 05 55 50.2 -0.7
comp=Z,5.1nm,0.7s,baz=175,slow=11,SNR=5.1
KSRS Korea Array 158.72 316 PKP PKPdf 05 55 20.5 -0.5
comp=Z,3.2nm,0.8s,baz=214,slow=0.3,SNR=7.9
GTA Gaotai 161.78 25 PKP PKPdf 05 55 24.8 +0.5
GTA APKP 05 55 35.6
GTA XPKP 05 55 39.8
GTA PP PP 06 00 02.0 +9.3
GTA SKS SKSdf 06 02 24.5 -1.8
GTA SKKS SKKSac 06 06 43.3 +4.5
GTA LR LR
GTA comp=N,1µm,17.7s LR LR
GTA comp=E,971nm,17.4s LR LR
GTA comp=Z,1µm,18.0s
BJI Beijing 162.24 343 PKP PKPdf 05 55 23.8 -0.9
HHC Hu-ho-hao-te 162.25 355 *e*PKP PKPdf 05 55 25.1 +0.4
HHC APKP 05 55 35.9
HHC XPKP 05 55 39.8
HHC PKP2 PKPab 05 56 14.5 +2.8
HHC PKS 05 58 57.3
HHC PP PP 05 59 59.6 +4.7
HHC SKS SKSdf 06 02 25.0 -1.6
HHC SKKS SKKSac 06 06 42.5 +1.4
HHC PP PP
comp=Z,308nm,8.1s
HHC LR LR
comp=N,1µm,18.0s
HHC LR LR
comp=E,449nm,17.4s
HHC LR LR
comp=Z,781nm,16.7s
LZH Lanzhou 166.17 20 *e*PKP PKPdf 05 55 28.6 +0.2
LZH APKP 05 55 41.0
LZH XPKP 05 55 45.5
LZH PP PP 06 00 19.0 +3.3
LZH SKKS SKKSac 06 07 01.3 +0.2
LZH PP PP
comp=Z,267nm,6.3s
LZH LR LR
comp=E,1µm,19.1s
LZH LR LR
comp=Z,1µm,20.6s
CMAR Chiang Mai Arr 169.03 113 PKP PKPdf 05 55 30.2 -0.7
comp=Z,1.5nm,0.4s,baz=258,slow=2.0,SNR=6.5
CMAR PKPab PKPab 05 56 41.5 -0.9
comp=Z,5.8nm,0.9s,baz=256,slow=4.5,SNR=10
CMAR PP PP 06 00 29.9 -2.1
comp=Z,1.1nm,0.3s,baz=252,slow=7.2,SNR=6.0
XAN Xi'an 169.12 3 PKP PKPdf 05 55 30.3 -0.2
XAN APKP 05 55 39.0
XAN PKP2 PKPab 05 56 43.8 +1.7
XAN PP PP 06 00 34.0 +3.5
XAN SKS SKSdf 06 02 28.8 -2.6
XAN SKKS SKKSac 06 07 15.9 +0.2
XAN LR LR
comp=N,352nm,22.9s
XAN LR LR
comp=E,830nm,33.1s
XAN LR LR
comp=Z,2µm,25.5s
CHG Chiang Mai 169.19 111 ⇓P PKPab 05 56 42.4 -0.7
comp=Z,14nm,1.0s
CHTO Chiang Mai 169.19 111 *e*PKIKP PKPdf 05 55 30.5 -0.5
CHRT Chiangrai 170.33 108 P PKPdf 05 55 31.0 -0.7
CD2 Chengdu 170.68 33 PKP PKPdf 05 55 30.3 -1.3
CD2 APKP 05 55 41.0
CD2 XPKP 05 55 44.6
CD2 PKP2 PKPab 05 56 49.8 +0.6
CD2 PKS 05 59 01.4
CD2 PP PP 06 00 40.5 +1.5
CD2 SKS SKSdf 06 02 28.6 -3.6
CD2 SKKS SKKSac 06 07 22.9 -0.8
CD2 LR LR
CD2 comp=N,1µm,17.6s LR LR
CD2 comp=Z,1µm,22.5s LR LR
WHN Wuhan 171.47 331 PKP PKPdf 05 55 32.0 0.0
KMI Kunming 173.45 71 PKP PKPdf 05 55 34.5 +1.5
GYA Guiyang 175.76 38 PKP PKPdf 05 55 31.0 -2.7
GYA APKP 05 55 42.6
GYA XPKP 05 55 49.4
GYA PKP2 PKPab 05 57 11.9 0.0
GYA PKS 05 59 01.8
GYA PP PP 06 01 04.8 +0.7
GYA SKS SKSdf 06 02 31.3 -2.7
GYA SKKS SKKSac 06 07 47.0 -1.2
GYA PP PP
comp=Z,140nm,8.9s
GYA LR LR
comp=N,230nm,21.9s
GYA LR LR
comp=E,190nm,20.8s
GYA LR LR
comp=Z,260nm,21.0s

CSEM ***13*** *05:36:08.2±0.2, 3656N×931W, h10km, ML3.7/6, Error ellipse: s-maj=5.0km s-min=2.4km az=88.0*
NEIC ***13*** *05:36:08.7, 3689N×957W, h0km, ML2.8(LIS), MN3.2(MDD), After MDD.*
MDD ***13*** *05:36:08.7±0.9, 3670N×977W, h30km, mbLg3.2/20, Error ellipse: s-maj=8.5km s-min=5.5km az=76.0, PRXIMO*
LDG ***13*** *05:36:09.3±0.3, 3675N×976W, h20km, Md3.5/1, Ml3.3/4, Error ellipse: s-maj=6.1km s-min=3.3km az=39.0*
CNRM ***13*** *05:36:09.8, 3666N×962W, h30km, MD3.5*
INMG 13 05:36:10.2±0.9, 3676N×967W, h22km±3km, MD2.8, ML2.7, 6C-1D, Error ellipse: s-maj=3.7km s-min=2.3km az=48.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.77**	**61**	*i* P	Pb	05 36 24.3	-0.6
PFVI				*e*S	Sb	05 36 34.8	-0.1
PFVI				A		05 36 35.4	
	264nm,0.2s						
PFVI	**Vila Bisbo**	**0.77**	**61**	⇑P	Pb	05 36 24.3	-0.6
PFVI				S	Sb	05 36 34.8	-0.1
	132nm,0.2s						
MORF	**Marmelete**	**0.98**	**56**	*e*P	Pb	05 36 27.2	-1.2
MORF				*e*S	Sb	05 36 40.1	-0.8
MORF				A		05 36 41.1	
	244nm,0.1s						
MORF	**Marmelete**	**0.98**	**56**	⇑P	Pb	05 36 27.2	-1.2
MORF				S	Sb	05 36 39.3	-1.7
PTEO	**Sao Teotonio**	**1.09**	**44**	*i* P	Pn	05 36 28.7	-1.4
PTEO				*e*S	Sb	05 36 42.9	-1.1
PTEO				A		05 36 44.1	
	84nm,0.2s						
PTEO	**Sao Teotonio**	**1.09**	**44**	⇑P	Pn	05 36 28.7	-1.4
PTEO				S	Sb	05 36 42.9	-1.1
	42nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.47**	**70**	*e*P	Pn	05 36 34.0	-1.4
PBDV				*e*S	Sn	05 36 51.5	-2.4
PBDV				A		05 36 52.6	
	61nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.47**	**70**	*e*P	Pn	05 36 34.0	-1.4
PBDV				*e*S	Sn	05 36 51.5	-2.4
	61nm,0.1s						
PVAQ	**Vaqueiros**	**1.69**	**67**	*e*P	Pn	05 36 36.9	-1.4
PVAQ				*e*S	Sn	05 36 56.9	-2.4
PVAQ				A		05 36 58.3	
	120nm,0.1s						
PVAQ	**Vaqueiros**	**1.69**	**67**	⇑P	Pn	05 36 36.9	-1.4
PVAQ				S	Sn	05 36 56.9	-2.4
	120nm,0.1s						
EGRO	**El Granado**	**1.91**	**66**	P	Pn	05 36 39.8	-1.6
	4.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	05 37 02.1	-2.6
	72nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.91**	**66**	P	Pn	05 36 39.8	-1.6
	4.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	05 37 02.1	-2.6
	72nm,0.1s,SNR=7.9						
ERIP	**Rio Piedras**	**2.02**	**72**	P	Pn	05 36 41.5	-1.5
	8.3nm,0.1s,SNR=7.9						
ERIP				S	Sn	05 37 04.3	-3.3
	85nm,0.2s,SNR=7.9						
MOE	**Montemor**	**2.04**	**30**	*e*Pn	Pn	05 36 42.2	-1.1
MOE				*e*Sn	Sn	05 37 05.8	-2.3
EVOP	**Sao Brissos**	**2.15**	**34**	*e*Pn	Pn	05 36 42.7	-2.0
EVOP				*e*Sn	Sn	05 37 07.2	-3.4
	16nm,0.2s						
EVO	**Evora**	**2.20**	**36**	*e*Pn	Pn	05 36 42.7	-2.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EVO				*e*Sn	Sn	05 37 07.2	-4.8
	33nm,0.2s						
EVO	**Evora**	**2.20**	**36**	*e*Pn	Pn	05 36 43.7	-1.7
EVO				*e*Sn	Sn	05 37 08.9	-3.1
EVO				A		05 37 09.7	
	84nm,0.1s						
EVO	**Evora**	**2.20**	**36**	*e*Pn	Pn	05 36 43.7	-1.7
EVO				*e*Sn	Sn	05 37 08.9	-3.1
	84nm,0.1s						
PMAFR	**Mafra**	**2.21**	**8**	*e*Pn	Pn	05 36 43.6	-2.0
PMAFR				*e*Sn	Sn	05 37 09.3	-2.9
PMAFR				A		05 37 11.0	
	86nm,0.2s						
PMAFR	**Mafra**	**2.21**	**8**	Pn	Pn	05 36 43.6	-2.0
PMAFR				Sn	Sn	05 37 09.3	-2.9
	86nm,0.2s						
PBAR	**Barrancos**	**2.52**	**55**	*e*Pn	Pn	05 36 48.2	-1.6
PBAR				*e*Sn	Sn	05 37 17.0	-2.9
PBAR				A		05 37 19.3	
	22nm,0.1s						
PBAR	**Barrancos**	**2.52**	**55**	Pn	Pn	05 36 48.2	-1.6
PBAR				Sn	Sn	05 37 17.0	-2.9
	22nm,0.1s						
EMIN	**Mina Concepcio**	**2.59**	**66**	P	Pn	05 36 48.8	-2.0
	3.0nm,0.1s,SNR=42						
EMIN				S	Sn	05 37 18.4	-3.2
	24nm,0.1s,SNR=20						
EMIN	**Mina Concepcio**	**2.59**	**66**	P	Pn	05 36 48.8	-1.9
	3.0nm,0.1s,SNR=42						
EMIN				S	Sn	05 37 18.4	-3.2
	24nm,0.1s,SNR=20						
PESTR	**Estremoz**	**2.67**	**37**	*e*Pn	Pn	05 36 49.8	-2.1
PESTR				*e*Sn	Sn	05 37 19.8	-3.7
PESTR				A		05 37 22.9	
	14nm,0.2s						
PESTR	**Estremoz**	**2.67**	**37**	⇑Pn	Pn	05 36 49.8	-2.1
PESTR				Sn	Sn	05 37 19.8	-3.7
	14nm,0.2s						
EBAD	**Badajoz**	**2.90**	**46**	P	Pn	05 36 52.8	-2.2
	18nm,0.1s,SNR=18						
EBAD				S	Sn	05 37 25.6	-3.5
	56nm,0.1s,SNR=16						
EBAD	**Badajoz**	**2.90**	**46**	⇑P	Pn	05 36 52.8	-2.1
	18nm,0.1s,SNR=18						
EBAD				S	Sn	05 37 25.6	-3.5
	56nm,0.1s,SNR=16						
ESPR	**Espera**	**3.06**	**87**	P	Pn	05 36 55.4	-1.8
	41nm,0.1s,SNR=18						
ESPR				S	Sn	05 37 29.7	-3.5
	45nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.06**	**87**	⇓P	Pn	05 36 55.4	-1.8
	41nm,0.1s,SNR=18						
ESPR				S	Sn	05 37 29.7	-3.5
	45nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**3.21**	**33**	*e*Pn	Pn	05 36 57.5	-1.8
PMRV				*e*Sn	Sn	05 37 32.8	-4.1
PMRV				A		05 37 35.3	
	14nm,0.1s						
PMRV	**Marv??o**	**3.21**	**33**	*e*Pn	Pn	05 36 57.5	-1.8
PMRV				*e*Sn	Sn	05 37 32.8	-4.1
	14nm,0.1s						
EJIF	**Jimena Fronter**	**3.39**	**94**	P	Pn	05 37 00.9	-0.9
	2.4nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**3.52**	**29**	*e*Pn	Pn	05 37 02.0	-1.6
PCBR				*e*Sn	Sn	05 37 40.5	-4.1
PCBR				A		05 37 43.4	
	5.3nm,0.2s						
PCBR	**Castelo Branco**	**3.52**	**29**	*e*Pn	Pn	05 37 02.0	-1.6
PCBR				*e*Sn	Sn	05 37 40.5	-4.1
	5.3nm,0.2s						
EMIJ	**Mijas**	**3.94**	**91**	P	Pn	05 37 07.4	-1.9
	0.8nm,0.1s,SNR=39						
EMIJ				S	Sn	05 37 51.9	-3.0
	13nm,0.4s,SNR=7.9						
MTE	**Manteigas**	**4.00**	**24**	*e*Pn	Pn	05 37 08.2	-1.9
MTE				*e*Sn	Sn	05 37 53.9	-2.3
MTE				A		05 37 55.0	
	10nm,0.3s						
MTE	**Manteigas**	**4.00**	**24**	*e*Pn	Pn	05 37 08.2	-1.9
MTE				*e*Sn	Sn	05 37 53.9	-2.3
	10nm,0.3s						
MTE	**Manteigas**	**4.00**	**24**	*e*Pn	Pn	05 37 08.1	-2.0
EADA	**Adamuz**	**4.29**	**69**	P	Pn	05 37 12.5	-1.6
	5.4nm,0.1s,SNR=42						
EADA				S	Sn	05 37 58.2	-5.2
	8.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.29**	**69**	P	Pn	05 37 12.5	-1.6
	5.4nm,0.1s,SNR=42						
EADA				S	Sn	05 37 58.2	-5.2
	8.4nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**4.39**	**78**	S	Sn	05 38 01.9	-4.0
	12nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**4.43**	**83**	S	Sn	05 38 04.0	-3.0
	1.2nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**4.88**	**72**	P	Pn	05 37 20.9	-1.4
	3.2nm,0.1s,SNR=7.9						
EBAN				S	Sn	05 38 12.1	-6.0
	6.3nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**4.91**	**82**	P	Pn	05 37 23.2	+0.6
	0.6nm,0.1s,SNR=7.9						
ECOG				S	Sn	05 38 16.2	-2.6
	2.1nm,0.2s,SNR=7.9						
MIF	**Mishlifen**	**4.94**	**131**	*e*P	Pn	05 37 21.0	-2.1
MIF				*i* S	Sn	05 38 13.0	-6.6
KIB	**El Ksiba**	**5.13**	**143**	*e*P	Pn	05 37 23.0	-2.8
KIB				*i* S	Sn	05 38 17.0	-7.4
TZK	**Tazeka**	**5.21**	**119**	*i* P	Pn	05 37 23.5	-3.3
TZK				*i* S	Sn	05 38 19.0	-7.2
ELOB	**Lobios**	**5.25**	**13**	P	Pn	05 37 24.9	-2.4
	4.8nm,0.1s,SNR=45						
ELOB	**Lobios**	**5.25**	**13**	P	Pn	05 37 24.9	-2.4
	4.8nm,0.1s,SNR=45						
ELOB				S	Sn	05 38 21.6	-5.5
	3.9nm,0.1s,SNR=7.9						
TZC	**Tazercounte**	**5.30**	**149**	*e*P	Pn	05 37 25.0	-3.0
TZC				*i* S	Sn	05 38 20.0	-8.4
CZD	**Col de Zad**	**5.32**	**133**	*i* P	Pn	05 37 25.0	-3.3
CZD				*i* S	Sn	05 38 21.0	-7.9
ESDC	**Sonseca Array**	**5.35**	**55**	P	Pn	05 37 27.0	-1.7
	SNR=7.9						
ESDC	**Sonseca Array**	**5.35**	**55**	P	Pn	05 37 27.0	-1.7
	baz=241,slow=14,SNR=7.9						
EQES	**Quesada**	**5.36**	**77**	P	Pn	05 37 27.0	-1.9
	0.8nm,0.1s,SNR=7.9						
EQES				S	Sn	05 38 25.1	-4.8
	10nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.36**	**77**	P	Pn	05 37 27.0	-1.9
	0.8nm,0.1s,SNR=7.9						
EQES				S	Sn	05 38 25.1	-4.8
	10nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**5.43**	**8**	P	Pn	05 37 27.6	-2.2
	2.6nm,0.1s,SNR=7.9						
EZAM				S	Sn	05 38 25.6	-6.0
	2.1nm,0.2s,SNR=7.9						
EBER	**Berja**	**5.44**	**87**	P	Pn	05 37 28.9	-1.0
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	05 38 29.7	-2.1
	3.4nm,0.3s,SNR=7.9						
EBER	**Berja**	**5.44**	**87**	P	Pn	05 37 28.9	-1.1
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	05 38 29.7	-2.1
	3.4nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**5.65**	**23**	P	Pn	05 37 30.7	-2.1
	8.5nm,0.2s,SNR=48						
ECAL				S	Sn	05 38 32.2	-4.8
	3.5nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**5.80**	**46**	P	Pn	05 37 32.6	-2.2
	6.6nm,0.2s,SNR=7.9						
GUD				S	Sn	05 38 36.1	-4.5
	4.9nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**5.95**	**18**	P	Pn	05 37 35.0	-2.0
	19nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**5.98**	**70**	P	Pn	05 37 35.3	-2.1
	1.0nm,0.1s,SNR=7.9						
EVIA				S	Sn	05 38 38.7	-6.5
	4.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.20**	**5**	P	Pn	05 37 37.1	-3.2
	4.1nm,0.1s,SNR=24						
EMAZ				S	Sn	05 38 42.8	-7.8
	7.2nm,0.2s,SNR=7.9						
ZFT	**Errachidia**	**6.44**	**135**	*i* P	Pn	05 37 41.0	-2.8
ZFT				*i* S	Sn	05 38 48.0	-8.6
ETOB	**Tobarra**	**6.71**	**71**	P	Pn	05 37 45.4	-1.9
	1.1nm,0.2s,SNR=7.9						
ETOB				S	Sn	05 38 57.7	-5.3
	1.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**6.71**	**71**	P	Pn	05 37 45.4	-2.0
	1.1nm,0.2s,SNR=7.9						
ETOB				S	Sn	05 38 57.7	-5.3
	1.6nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**6.83**	**16**	P	Pn	05 37 46.6	-2.5
	1.7nm,0.1s,SNR=7.9						
EPON				S	Sn	05 38 59.6	-6.6
	0.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**7.19**	**53**	P	Pn	05 37 52.4	-1.6
	24nm,0.2s,SNR=7.9						
ETOR				S	Sn	05 39 07.9	-7.1
	7.3nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.37**	**26**	P	Pn	05 37 55.2	-1.2
	2.0nm,0.2s,SNR=12						
EARI	**Arriondas**	**7.37**	**26**	P	Pn	05 37 55.2	-1.2
	2.0nm,0.2s,SNR=12						
ECRI	**Cripan**	**8.03**	**41**	P	Pn	05 38 03.9	-1.6
	0.7nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**8.04**	**35**	P	Pn	05 38 03.3	-2.2
	0.3nm,0.1s,SNR=4.0						
EMOS	**Mosqueruela**	**8.05**	**61**	P	Pn	05 38 05.4	-0.4
	1.3nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**8.05**	**61**	P	Pn	05 38 05.4	-0.4
	1.3nm,0.3s,SNR=7.9						
EMOS				S	Sn	05 39 28.4	-7.6
	3.2nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**8.77**	**44**	P	Pn	05 38 14.4	-1.3
	0.3nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**8.77**	**44**	P	Pn	05 38 14.4	-1.3
	0.3nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**9.07**	**43**	*e*Pn	Pn	05 38 17.9	-1.8
SJPF				*e*Sn	Sn	05 39 53.3	-7.7
	1.6nm,0.3s						
SJPF	**Ste Jean**	**9.07**	**43**	*e*Pn	Pn	05 38 17.9	-1.8
SJPF				*e*Sn	Sn	05 39 53.3	-7.7
	0.8nm,0.3s						
ETSF	**Etsaut**	**9.30**	**46**	*e*Pn	Pn	05 38 20.7	-2.2
ETSF				*e*Sn	Sn	05 39 58.9	-8.0
	1.2nm,0.3s						
ETSF	**Etsaut**	**9.30**	**46**	*e*Pn	Pn	05 38 20.7	-2.2
ETSF				*e*Sn	Sn	05 39 58.9	-8.0
	0.6nm,0.3s						
EBIE	**Bielsa**	**9.59**	**49**	P	Pn	05 38 25.0	-1.9
	4.1nm,1.0s,SNR=16						
EBIE	**Bielsa**	**9.59**	**49**	P	Pn	05 38 25.0	-1.9
	4.1nm,1.0s,SNR=16						
EBIE				S	Sn	05 40 06.9	-7.1
	1.5nm,0.3s,SNR=7.9						
EPF	**Esparros**	**9.91**	**48**	*e*Pn	Pn	05 38 30.0	-1.3
EPF				*e*Sn	Sn	05 40 13.8	-8.0
	0.8nm,0.2s						
EPF	**Esparros**	**9.91**	**48**	*e*Pn	Pn	05 38 30.0	-1.3
EPF				*e*Sn	Sn	05 40 13.8	-8.0
	0.4nm,0.2s						
RJF	**Les Rejaudoux**	**11.99**	**41**	*e*Pn	Pn	05 38 56.5	-3.3
CAF	**Calviac**	**12.05**	**44**	*e*Pn	Pn	05 38 57.6	-2.9

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*ISCJB **13** 05:37:06.2±1.0, 105N±0.1×6203W±004, h52km±12km, Error ellipse: s-maj=24.2km s-min=6.4km az=5.9*
*FUNV **13** 05:37:07.5, 1066N×6195W, h40km, MW2.8*
*TRN **13** 05:37:09.0, 1054N×6191W, h36km, MD2.5*
ISC 13 05:37:06.9±1.1, **107N**±01×**6200W**±004, **h49**km±10km, **n9, σ0s82**/18, **Trinidad**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.22**	**269**	*e*P	**Pn**	**05 37 15.2**	**-0.1**
GUIV				*e*S	**Sn**	**05 37 21.1**	**-0.2**
TCE	**Chacachacare**	**0.24**	**79**	*e*P	**Pn**	**05 37 16.4**	**+0.9**
TCE				*e*S	**Sn**	**05 37 21.4**	**-0.2**
TRN	**Trinidad (W)**	**0.58**	**90**	*e*P	**Pn**	**05 37 20.1**	**+1.0**
TRN				*e*S	**Sn**	**05 37 27.7**	**-0.2**
TPP	**Pointe-a-Pierr**	**0.63**	**122**	*e*P	**Pn**	**05 37 19.4**	**-0.3**
TPP				*e*S	**Sn**	**05 37 27.9**	**-1.1**
GUNV	**Guanoco**	**1.05**	**242**	*e*P	**Pn**	**05 37 26.7**	**+1.4**
GUNV				*e*S	**Sn**	**05 37 40.4**	**+1.5**
CRUV	**Carupano**	**1.22**	**271**	*e*P	**Pn**	**05 37 27.3**	**-0.3**
CRUV				*e*S	**Sn**	**05 37 42.3**	**-0.6**
CUPV	**Cœpira**	**3.78**	**261**	*e*P	**Pn**	**05 38 03.2**	**+0.6**
CUPV				*e*S	**Sn**	**05 38 44.6**	**-1.2**
CAOV	**Caicara del Or**	**5.40**	**233**	*e*P	**Pn**	**05 38 24.5**	**-0.4**
CAOV				*e*S	**Sn**	**05 39 20.8**	**-5.0**
BAUV	**El Baul**	**6.20**	**255**	*e*P	**Pn**	**05 38 35.0**	**-0.8**
BAUV				*e*S	**Sn**	**05 39 39.8**	**-5.6**

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*ISCJB **13** 05:40:15.3±3.6, 166S±02×1686E±02, h87km±31km, mb4.4/10, Error ellipse: s-maj=34.7km s-min=20.9km az=150.5*
*NEIC **13** 05:40:15.3±3.0, 1661S×16876E, h77km±24km, mb4.4/4, Error ellipse: s-maj=21.8km s-min=18.2km az=88.0*
*IDC **13** 05:40:33.4±3.8, 1697S×16856E, h247km±31km, mb3.9/8, mb1 4.0/8, mb1mx3.7/21, mbtmp3.9/8, Error ellipse: s-maj=31.1km s-min=18.6km az=43.0*
ISC 13 05:40:15.4±2.6, **166S**±01×**1688E**±02, **h83**km±22km, **n32, σ0s93**/15, **mb4.4**/10, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**11.15**	**308**	*e*Pn	**Pn**	**05 42 51.5**	**-0.5**
CTA	**Charters Tower**	**21.67**	**257**	P	**P**	**05 45 01.9**	**+2.4**
	5.9nm,0.6s,mb4.1,baz=79,slow=11,SNR=6.4						
CTAO	**Charters Tower**	**21.67**	**257**	P	**P**	**05 44 59.6**	**+0.1**
	2.6nm,0.5s,mb3.8						
URZ	**Urewera**	**22.82**	**163**	P	**P**	**05 45 12.4**	**+0.9**
	11nm,0.7s,mb4.3,baz=75,slow=3.0,SNR=8.0						
STKA	**Stephens Creek**	**29.00**	**233**	*e*P	**P**	**05 46 07.7**	**+0.3**
	3.3nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**29.00**	**233**	P	**P**	**05 46 07.4**	**0.0**
	1.5nm,0.5s,mb3.9,baz=54,slow=9.3,SNR=6.2						
WB2	**Warramunga Arr**	**32.84**	**259**	*e*P	**P**	**05 46 41.7**	**+0.3**
ASAR	**Alice Springs**	**33.45**	**252**	P	**P**	**05 46 46.4**	**-0.2**
	14nm,0.6s,mb5.0,baz=78,slow=9.1,SNR=99						
ASAR				PcP	PcP	05 49 22.9	-3.4
	0.3nm,0.6s,baz=55,slow=2.9,SNR=3.5						
ASAR				ScP	ScP	05 52 44.2	-19
	0.8nm,0.9s,baz=76,slow=4.4,SNR=5.7						
FORT	**Forrest**	**39.67**	**242**	*e*P	**P**	**05 47 38.6**	**-0.9**
	8.4nm,0.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**41.15**	**261**	*e*P	**P**	**05 47 52.2**	**+0.4**
	22nm,0.6s,mb5.2						
KAPI	**Kappang**	**49.38**	**278**	P	**P**	**05 48 56.3**	**-0.8**
	3.0nm,0.5s,mb4.5,baz=74,slow=8.5,SNR=4.7						
QSPA	**South Pole Qui**	**73.48**	**180**	P	**P**	**05 51 36.1**	**-2.3**
	2.6nm,0.5s,mb4.3,baz=337,slow=1.3,SNR=5.4						
QSPA	**South Pole Qui**	**73.48**	**180**	P	**P**	**05 51 36.1**	**-2.3**
CMAR	**Chiang Mai Arr**	**77.02**	**294**	P	**P**	**05 52 00.8**	**+1.0**
	3.9nm,0.9s,mb4.2,baz=130,slow=6.0,SNR=12						
SONM	**Songino Array**	**84.83**	**323**	P	**P**	**05 52 41.1**	**+0.5**
	1.0nm,0.8s,mb3.8,baz=147,slow=8.0,SNR=5.0						
ARCES	**ARCESS Array B**	**122.38**	**346**	PKP	PKPdf	05 58 58.3	-2.0
	3.9nm,1.0s,baz=56,slow=2.1,SNR=10.0						
CDF	**Champ du Feu**	**144.81**	**338**	*e*PKP1	PKPdf	05 59 41.5	-1.2
	17nm,0.8s						
HINF	**Hinteralfeld**	**145.46**	**338**	*e*PKP1	PKPbc	05 59 43.1	-0.9
MEZF	**Maizieres J'vi**	**145.47**	**341**	*e*PKP1	PKPbc	05 59 43.5	-0.5
HAU	**Haudompre**	**145.48**	**339**	*e*PKP1	PKPbc	05 59 43.3	-0.7
FLN	**La Foliniere**	**146.71**	**347**	*e*PKP1	PKPbc	05 59 46.6	-1.0
LDF	**La Druitiere**	**146.79**	**347**	*e*PKP1	PKPbc	05 59 46.7	-1.2
LOR	**Lormes**	**146.94**	**341**	*e*PKP1	PKPbc	05 59 47.5	-0.9
	7.4nm,0.6s						
GRR	**Gorron**	**147.14**	**347**	*e*PKP1	PKPbc	05 59 48.0	-0.9
	5.3nm,0.5s						
SSF	**Saint Saulge**	**147.23**	**341**	*e*PKP1	PKPbc	05 59 48.4	-0.8
	9.1nm,0.6s						
LPL	**La Plagne**	**147.45**	**336**	*e*PKP1	PKPbc	05 59 48.9	-0.9
LPG	**La Plagne**	**147.46**	**336**	*e*PKP1	PKPbc	05 59 49.5	-0.4
BGF	**Bois d'Agland**	**147.88**	**342**	*e*PKP1	PKPbc	05 59 50.1	-0.9
	9.5nm,0.6s						
TCF	**Toulx Ste Croi**	**148.32**	**342**	*e*PKP1	PKPbc	05 59 51.1	-1.0
	2.3nm,0.4s						
MFF	**Saint Martin d**	**148.66**	**345**	*e*PKP1	PKPbc	05 59 51.9	-1.1
	4.7nm,0.5s						
CAF	**Calviac**	**149.59**	**341**	*e*PKP1	PKPbc	05 59 54.4	-1.0
TORD	**Torodi Ar. Bea**	**167.07**	**257**	PKPab	PKPab	06 01 14.1	-2.9
	0.5nm,0.7s,baz=112,slow=3.0,SNR=3.1						

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*ISCJB **13** 05:50:56.7±0.8, 2321S±004×7080W±006, h29km±5km, mb4.5/21, Error ellipse: s-maj=8.9km s-min=6.1km az=4.5*
*GUC **13** 05:50:57.2±0.9, 2323S×7077W, h34km±3km, ML4.4*
*MOS **13** 05:50:58.1±1.1, 2305S×7058W, h33km, mb4.6/4, Error ellipse: s-maj=18.9km s-min=11.5km az=112.2*
*NEIC **13** 05:50:59.4±0.3, 23.17S×7069W, mb4.3/9, ML4.4(GUC), Error ellipse: s-maj=10.3km s-min=7.0km az=69.0*
*IDC **13** 05:50:59.9±3.5, 2306S×7057W, h33km±24km, mb4.2/11, mb1 4.3/14, mb1mx4.2/20, mbtmp4.1/14, ML4.4/2, Error ellipse: s-maj=24.0km s-min=18.5km az=40.0*
*BJI **13** 05:51:01.3, 2320S×7070W, h37km, mB5.0, Ms5.6, Msz5.2*
ISC 13 05:50:58.0±0.9, **2319S**±003×**7074W**±006, **h24**km±6km, **n83, σ1s01**/70, **mb4.5**/21, **4C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.28**	**72**	⇓*i*P	**Pb**	**05 51 05.0**	**+0.4**
MECH				*i* S	**Sb**	**05 51 10.4**	**+1.3**
MECH				AML	AML	05 51 16.9	
	comp=N,84μm,0.4s						
CEN1	**Los Morros**	**0.53**	**112**	⇓*i*P	**Pb**	**05 51 08.1**	**-0.6**
CEN1				*i* S	**Sb**	**05 51 15.5**	**-0.5**
CEN1				AML	AML	05 51 16.8	
	comp=E,18μm,0.6s						
ANCH	**Antofagasta**	**0.57**	**149**	⇓*i*P	**Pb**	**05 51 09.2**	**-0.2**
ANCH				*i* S	**Sb**	**05 51 17.1**	**-0.1**
TOCH	**Tocopilla**	**1.20**	**24**	⇑*e*P	**Pn**	**05 51 18.4**	**-0.8**
TOCH				*i* S	**Sn**	**05 51 35.6**	**+0.9**
TOCH				AML	AML	05 51 36.8	
	comp=E,16μm,0.4s						
PB04	**Plate Boundary**	**1.48**	**52**	⇓*i*P	**Pn**	**05 51 15.9**	**-7.1**
PB04				*i* S	**Sn**	**05 51 30.7**	**-11**
PB04				AML	AML	05 51 34.9	
	comp=N,27μm,0.5s						
LVC	**Limon Verde**	**1.78**	**71**	Pg	**Pn**	**05 51 28.9**	**+1.7**
	comp=N,902nm,0.3s,baz=253,slow=12,SNR=1351						
LVC				Lg		05 51 52.6	
	comp=N,4μm,0.3s,baz=356,slow=5.6,SNR=42						
LVC	**Limon Verde**	**1.78**	**71**	*e*Pn	**Pn**	**05 51 28.7**	**+1.5**
LVC				*e*Sn	**Sn**	**05 51 52.7**	**+3.6**
LVC	**Limon Verde**	**1.78**	**71**	⇑*i*P	**Pn**	**05 51 28.7**	**+1.5**
LVC				*i* S	**Sn**	**05 51 52.5**	**+3.5**
LVC				AML	AML	05 51 54.3	
	comp=N,7μm,0.3s						
PB01	**Plate Boundary**	**2.43**	**29**	⇑*e*P	**Pn**	**05 51 36.3**	**+0.1**
LCO	**Las Campanas**	**5.80**	**180**	*e*Pn	**Pn**	**05 52 22.2**	**-0.2**
	comp=N,5.6nm,0.6s						
LCO				*e*Sn	**Sn**	**05 53 24.8**	**-3.3**
ARE	**Arequipa**	**6.73**	**354**	*e*P	**Pn**	**05 52 34.0**	**-1.3**
ARE				*e*S	**Sn**	**05 53 46.0**	**-5.3**
CFAA	**Coronel Fontan**	**8.67**	**166**	Pn	**Pn**	**05 53 00.4**	**-1.5**
	comp=N,0.1nm,0.3s,baz=338,slow=11,SNR=12						
CFAA				Sn	**Sn**	**05 54 47.5**	**+8.6**
	comp=N,0.2nm,0.3s,baz=252,slow=5.6,SNR=3.3						
SIV	**San Ignacio**	**11.58**	**54**	Pn	**Pn**	**05 53 40.0**	**-1.8**
	comp=N,2.9nm,0.3s,baz=247,slow=13,SNR=33						
SIV				Sn	**Sn**	**05 55 54.8**	**+4.3**
	baz=325,slow=23,SNR=2.3						
NNA	**Nana**	**12.57**	**331**	Sn	**Sn**	**05 56 04.1**	**-11**
	comp=N,0.3nm,0.3s,baz=187,slow=18,SNR=2.5						
NNA	**Nana**	**12.57**	**331**	Pn	**Pn**	**05 53 54.9**	**-0.5**
NNA				*e*Sn	**Sn**	**05 56 07.3**	**-7.3**
CPUP	**Villa Florida**	**12.58**	**107**	Pn	**Pn**	**05 53 55.5**	**+0.1**
	comp=N,0.3nm,0.3s,baz=259,slow=11,SNR=5.3						
CPUP	**Villa Florida**	**12.58**	**107**	*e*P	**Pn**	**05 53 56.0**	**+0.6**
CPUP				pmax	pmax		
	comp=Z,27nm,0.7s						
CPUP	**Villa Florida**	**12.58**	**107**	*e*Pn	**Pn**	**05 53 56.0**	**+0.5**
	comp=Z,27nm,0.7s						
PLCA	**Paso Flores**	**17.49**	**180**	P	**Pn**	**05 55 03.5**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=352,slow=9.4,SNR=4.7						
PLCA	**Paso Flores**	**17.49**	**180**	*e*P	**Pn**	**05 55 00.7**	**+0.5**
PLCA				pmax	pmax		
	comp=Z,14nm,1.3s						
PLCA	**Paso Flores**	**17.49**	**180**	*e*Pn	**Pn**	**05 55 00.7**	**+0.5**
	comp=Z,14nm,1.3s						
BDFB	**Brasilia**	**22.69**	**75**	P	**P**	**05 55 55.8**	**-2.1**
	comp=Z,6.3nm,0.8s,mb4.1,baz=224,slow=14,SNR=12						
OTAV	**Otavalo**	**24.47**	**341**	P	**P**	**05 56 14.8**	**-0.5**
	comp=Z,5.5nm,1.0s,mb3.9						
RCBR	**Riachuelo**	**37.73**	**68**	*e*P	**P**	**05 58 11.9**	**-0.1**
	comp=Z,26nm,0.8s,mb5.0						
VNA3	**Neumayer Olymp**	**59.04**	**161**	*e*P	**P**	**06 00 56.1**	**+0.6**
VNA3				*e*		06 01 08.0	
VNA3				*e*		06 01 11.9	
VNA1	**Neumayer--Stat**	**59.28**	**160**	*e*P	**P**	**06 00 59.1**	**+1.9**
VNA1				*e*		06 01 10.1	
VNA1				*e*		06 01 13.6	
VNA2	**Neumayer--Watz**	**59.63**	**160**	*e*P	**P**	**06 01 00.2**	**+0.6**
VNA2				*e*		06 01 11.7	
VNA2				*e*		06 01 15.8	
JCT	**Junction City**	**60.22**	**331**	*e*P	**P**	**06 01 03.8**	**-0.3**
JCT				pmax	pmax		
	comp=Z,5.0nm,0.2s,mb5.2						
JCT	**Junction City**	**60.22**	**331**	*e*P	**P**	**06 01 03.8**	**-0.4**
	comp=Z,5.0nm,0.2s,mb5.2						
TXAR	**Lajitas Array**	**61.08**	**327**	P	**P**	**06 01 10.8**	**+0.8**
	comp=Z,0.4nm,0.6s,mb3.7,baz=147,slow=7.7,SNR=6.4						
TXAR	**Lajitas Array**	**61.08**	**327**	*e*P	**P**	**06 01 11.4**	**+1.3**
TXAR	**Lajitas Array**	**61.08**	**327**	P	**P**	**06 01 10.8**	**+0.8**
SNAA	**Sanae**	**61.25**	**160**	*e*P	**P**	**06 01 11.1**	**+0.4**
SNAA				*e*		06 01 22.6	
SNAA				*e*		06 01 27.4	
SNAA	**Sanae**	**61.25**	**160c**	*i*P	**P**	**06 01 11.0**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,12nm,1.3s						
SNAA	**Sanae**	**61.25**	**160**	*e*P	**P**	**06 01 10.8**	**+0.1**
	comp=Z,6.0nm,0.9s,mb4.7						
ANMO	**Albuquerque**	**67.02**	**329**	*e*P	**P**	**06 01 50.3**	**+1.3**
LIC	**Lamto**	**70.48**	**74**	*e*P	**P**	**06 02 10.3**	**-0.7**
	comp=Z,65nm,1.8s,mb5.3						
ISCO	**Idaho Springs**	**70.61**	**332**	*e*P	**P**	**06 02 11.2**	**0.0**
ISCO				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
ISCO	**Idaho Springs**	**70.61**	**332**	*e*P	**P**	**06 02 11.2**	**0.0**
	comp=Z,1.3nm,0.9s,mb3.9						
TIC	**Toumodi**	**70.68**	**74**	*e*P	**P**	**06 02 11.2**	**-1.0**
	comp=Z,14nm,0.2s,mb5.5						
KIC	**Kosan Boka**	**70.79**	**74**	*e*P	**P**	**06 02 12.6**	**-0.4**
	comp=Z,49nm,0.8s,mb5.5						
DBIC	**Dimbokro**	**70.83**	**74**	P	**P**	**06 02 12.4**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8,baz=215,slow=6.9,SNR=12						
RSSD	**Black Hills**	**73.61**	**336**	*e*P	**P**	**06 02 28.4**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
RSSD	**Black Hills**	**73.61**	**336**	*e*P	**P**	**06 02 28.4**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.1						
PDAR	**Pinedale Array**	**74.75**	**331**	P	**P**	**06 02 37.0**	**+1.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=122,slow=4.4,SNR=4.0						
NVAR	**Mina Array Bea**	**75.80**	**323**	P	**P**	**06 02 43.9**	**+1.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=152,slow=6.7,SNR=6.7						
ULM	**Lac du Bonnet**	**76.43**	**344**	P	**P**	**06 02 44.9**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.4,baz=135,slow=4.6,SNR=4.3						
HLID	**Hailey**	**77.59**	**329**	*e*P	**P**	**06 02 50.1**	**-1.8**
	comp=Z,2.2nm,0.9s,mb4.1						
TOA0	**Torodi Ar. Sit**	**79.51**	**71**	*e*P	**P**	**06 03 02.8**	**-0.4**
TOA0				*e*pP	pP	06 03 14.3	+3.3
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P	**P**	**06 03 02.6**	**-0.5**
	comp=Z,14nm,0.8s,mb5.0,baz=253,slow=5.1,SNR=66						
TSUM	**Tsumeb**	**81.17**	**107**	P	**P**	**06 03 13.5**	**+1.4**
	comp=Z,7.3nm,0.8s,mb4.6,baz=251,slow=4.5,SNR=8.5						
TSUM	**Tsumeb**	**81.17**	**107**	*e*P	**P**	**06 03 13.1**	**+1.0**
	comp=Z,5.8nm,1.0s,mb4.5						
MAW	**Mawson**	**83.20**	**164**	P	**P**	**06 03 22.6**	**+0.8**
	comp=Z,3.6nm,0.8s,mb4.5,baz=243,slow=6.6,SNR=3.6						
BOSA	**Boshof**	**84.14**	**118**	P	**P**	**06 03 27.7**	**+0.3**
	comp=Z,4.2nm,0.6s,mb4.8,baz=262,slow=7.3,SNR=10						
EDM	**Edmonton**	**84.59**	**336**	*e*P	**P**	**06 03 28.5**	**-0.4**
EDM				*e**PP	pP	06 03 39.9	+3.1
YKA	**Yellowknife Ar**	**92.22**	**341**	P	**P**	**06 04 04.5**	**-0.7**
	comp=Z,1.7nm,0.8s,mb4.4,baz=137,slow=4.5,SNR=30						
YKA	**Yellowknife Ar**	**92.22**	**341**	*e*P	**P**	**06 04 05.4**	**+0.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIP	**Kipapa**	**95.82**	**291**	*e*P	**P**	**06 04 24.1**	**+1.3**
ASAR	**Alice Springs**	**127.63**	**209**	PKP	PKPdf	06 10 02.1	+0.3
	comp=Z,1.4nm,0.8s,baz=142,slow=1.8,SNR=15						
TIXI	**Tiksi**	**130.24**	**352**	*i* PKIKP	PKPdf	06 10 04.9	-0.4
WRA	**Warramunga Arr**	**130.64**	**212**	PKP	PKPdf	06 10 08.1	+0.5
	comp=Z,1.7nm,0.9s,baz=153,slow=1.6						
KURK	**Kurchatov**	**143.66**	**33**	PKhKP		06 10 27.8	
	comp=Z,0.8nm,0.2s,baz=308,slow=3.0,SNR=4.2						
KURK	**Kurchatov**	**143.66**	**33**	PKP	PKPdf	06 10 27.8	-2.8
ZAA0	**Zalesovo Array**	**144.19**	**25**	*e*PKPdf	PKPdf	06 10 30.7	-0.7
ZALV	**Zalesovo Beam**	**144.19**	**25**	PKP	PKPdf	06 10 29.1	-2.3
	comp=Z,4.1nm,0.8s,baz=282,slow=2.9,SNR=18						
EKS2	**Erkin-Say**	**144.79**	**48**	*e*PKPbc	PKPdf	06 10 33.2	+0.4
AML	**Almayashu**	**144.93**	**49**	*e*PKPbc	PKPdf	06 10 34.4	+1.3
BOD	**Bodaibo**	**145.24**	**356**	*e*PKIKP	PKPdf	06 10 32.4	-0.7

BOD				pmax	pmax		
	comp=Z,16nm,0.9s						
AAK	Ala-Archa	145.29	48	i PKIKP	PKPdf	06 10 34.4	+0.7
AAK	Ala-Archa	145.29	48	ePKPbc	PKPbc	06 10 35.3	+1.8
TKM2	Tokmak 2	145.92	47	ePKP2	PKPab	06 10 35.1	-0.8
MK31	Makanchi Array	147.99	36	ePKIKP	PKPdf	06 10 38.5	+0.4
MK31				e		06 10 41.8	
MKAR	Makanchi Array	147.99	36	PKP	PKPdf	06 10 38.0	-0.1
	comp=Z,4.7nm,0.8s,baz=315,slow=0.2,SNR=20						
MKAR				PKPbc	PKPbc	06 10 41.6	+0.5
	comp=Z,5.2nm,0.8s,baz=315,slow=3.1,SNR=24						
KAPI	Kappang	150.15	201	PKPbc	PKPbc	06 10 48.3	+0.6
	comp=Z,10nm,0.3s,baz=128,slow=6.0,SNR=4.2						
KAPI	Kappang	150.15	201	ePKPbc	PKPbc	06 10 48.4	+0.7
MJAR	Matsushiro Arr	151.71	305	PKPbc	PKPbc	06 10 50.8	+0.1
	comp=Z,2.4nm,0.7s,baz=73,slow=0.6,SNR=6.6						
WMQ	Urumqi	152.82	36	ePKP	PKPdf	06 10 45.8	+0.1
GTA	Gaotai	161.95	24	ePKP	PKPdf	06 10 59.3	+2.0
GTA				APKP		06 11 11.9	
HHC	Hu-ho-hao-te	162.29	354	ePKP	PKPdf	06 10 57.1	-0.5
HHC				APKP		06 11 07.9	
HHC				XPKP		06 11 11.8	
HHC				PKP2	PKPab	06 11 46.4	+1.8
HHC				PKS		06 14 29.3	
HHC				PP	PP	06 15 31.8	+4.0
HHC				SKS	SKSdf	06 17 57.3	-3.6
HHC				SKKS	SKKSac	06 22 14.9	-0.6
HHC				SS	SS	06 35 46.8	+0.3
HHC				PP	PP		
	comp=Z,149nm,10.8s						
HHC				LR	LR		
	comp=N,306nm,16.7s						
HHC				LR	LR		
	comp=E,326nm,15.5s						
HHC				LR	LR		
	comp=Z,244nm,14.3s						
LZH	Lanzhou	166.32	19	ePKP	PKPdf	06 11 02.0	+0.6
LZH				APKP		06 11 11.5	
LZH				XPKP		06 11 14.5	
LZH				PP	PP		
	comp=Z,58nm,4.3s						
XAN	Xi'an	169.19	2	PKP	PKPdf	06 11 02.6	-0.9
XAN				APKP		06 11 13.4	
XAN				PKP2	PKPab	06 12 16.1	+0.9
XAN				PP	PP	06 16 06.4	+2.8
XAN				SKS	SKSdf	06 18 01.3	-4.4
XAN				SKKS	SKKSac	06 22 48.5	-1.8
XAN				SS	SS	06 36 55.4	-1.3
XAN				LR	LR		
	comp=E,2μm,20.3s						
XAN				LR	LR		
	comp=Z,3μm,20.3s						
CD2	Chengdu	170.88	31	ePKP	PKPdf	06 11 03.3	-1.2
GYA	Guiyang	175.98	35	ePKP	PKPdf	06 11 02.3	-4.3
GYA				APKP		06 11 14.3	
GYA				XPKP		06 11 19.8	
GYA				PKP2	PKPab	06 12 44.9	-0.8
GYA				PKS		06 14 33.8	
GYA				PP	PP	06 16 37.3	-0.5
GYA				PP	PP		
	comp=Z,70nm,8.7s						

GUC 13 06:14:32.6±0.7, 2224S×7009W, h45km±1km, ML3.5, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOCH	Tocopilla	0.18	324	eP	Pn	06 14 40.1	-0.1
TOCH				iS	Sn	06 14 45.4	-0.1
TOCH				AML	AML	06 14 46.0	
	comp=E,18μm,0.1s						
MACH	Maria Elena	0.31	82	⇑iP	Pn	06 14 42.1	+0.7
MACH				iS	Sn	06 14 48.5	+1.1
PB04	Plate Boundary	0.56	93	⇓iP	Pn	06 14 40.3	-4.0
PB04				iS	Sn	06 14 45.6	-7.0
PB04				AML	AML	06 14 46.1	
	comp=N,6μm,0.4s						
CEN1	Los Morros	1.15	185	⇑iP	Pn	06 14 56.0	+3.8
CEN1				iS	Sn	06 15 13.6	+6.8
LVC	Limon Verde	1.15	109	eP	Pn	06 14 54.0	+1.7
LVC				iS	Sn	06 15 09.5	+2.7
PB01	Plate Boundary	1.32	25	iP	Pn	06 14 55.6	+1.1
PB01				iS	Sn	06 15 12.7	+1.8
PB01				AML	AML	06 15 14.6	
	comp=E,820nm,0.2s						

GUC 13 06:16:55.3±0.9, 2321S×7075W, h29km±7km, ML4.3
ISCJB 13 06:16:56.1±0.6, 2322S±004×705W±0.1, h41km±4km, mb4.2/8, Error ellipse: s-maj=15.5km s-min=5.9km az=3.6
NEIC 13 06:16:56.7±0.6, 2323S×7056W, h35km, Error ellipse: s-maj=15.5km s-min=11.1km az=92.0
IDC 13 06:16:57.2±3.3, 2326S×7045W, h35km±23km, mb4.0/8, mb1 4.1/12, mb1mx4.0/20, mbtmp3.9/12, ML3.4/3, Error ellipse: s-maj=25.4km s-min=19.5km az=107.0
ISC 13 06:16:56.8±0.6, 2319S±003×7052W±008, h33km±3km, n35, σ1^{s}14/39, mb4.2/8, 4C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.11	38	⇓iP	Pb	06 17 02.1	-0.5
MECH				iS	Sb	06 17 06.9	+0.4
MECH				AML	AML	06 17 12.9	
	comp=N,44μm,0.5s						
CEN1	Los Morros	0.36	124	⇑iP	Pb	06 17 05.7	+0.4
CEN1				iS	Sb	06 17 13.2	+2.2
CEN1				AML	AML	06 17 16.2	
	comp=E,13μm,0.6s						
ANCH	Antofagasta	0.50	168	⇓iP	Pb	06 17 06.1	-1.3
ANCH				iS	Sb	06 17 14.0	-0.6
TOCH	Tocopilla	1.13	15	⇑iP	Pn	06 17 15.6	-0.8
TOCH				iS	Sn	06 17 31.1	+0.4
TOCH				AML	AML	06 17 34.1	
	comp=E,12μm,0.3s						
MACH	Maria Elena	1.22	36	⇑iP	Pn	06 17 18.4	+0.9
MACH				iS	Sn	06 17 36.9	+4.1
PB04	Plate Boundary	1.33	46	⇓iP	Pn	06 17 13.2	-5.8
PB04				iS	Sn	06 17 27.4	-8.2
PB04				AML	AML	06 17 33.6	
	comp=N,18μm,0.5s						
LVC	Limon Verde	1.59	69	Pg	Pn	06 17 26.0	+3.4
	comp=N,730nm,0.3s,baz=252,slow=12,SNR=228						
LVC				Lg		06 17 49.4	
	comp=N,3μm,0.3s,baz=356,slow=6.1,SNR=57						
LVC	Limon Verde	1.59	69	⇑iP	Pn	06 17 25.9	+3.3
LVC				iS	Sn	06 17 50.1	+8.0
LVC				AML	AML	06 17 56.3	
	comp=N,6μm,0.5s						
LCO	Las Campanas	5.80	182	ePn	Pn	06 18 18.2	-2.2
	comp=N,45nm,0.5s						
LCO				eSn	Sn	06 19 26.6	+0.8
ARE	Arequipa	6.76	352	eP	Pn	06 18 31.0	-2.7
ARE				eS	Sn	06 19 43.0	-6.5
CFAA	Coronel Fontan	8.62	167	Pn	Pn	06 18 57.5	-1.7
	comp=N,0.1nm,0.3s,baz=350,slow=17,SNR=9.1						
CFAA				Sn	Sn	06 20 48.8	+13
	comp=N,0.2nm,0.3s,baz=177,slow=16,SNR=2.9						
SIV	San Ignacio	11.43	53	Pn	Pn	06 19 37.9	+0.2
	comp=N,2.2nm,0.3s,baz=247,slow=13,SNR=40						
SIV				Sn	Sn	06 21 42.8	-1.5
	baz=169,slow=17,SNR=1.2						
CPUP	Villa Florida	12.39	107	Pn	Pn	06 19 50.0	-0.8
	comp=N,0.1nm,0.3s,baz=265,slow=9.9,SNR=4.9						
NNA	Nana	12.66	331	Pn	Pn	06 20 01.7	+7.1
	comp=N,0.7nm,0.3s,baz=184,slow=14,SNR=2.3						
PLCA	Paso Flores	17.49	180	P	Pn	06 20 58.8	+0.7
	comp=N,0.1nm,0.3s,baz=15,slow=17,SNR=3.6						
BDFB	Brasilia	22.50	75	P	P	06 21 52.3	-1.3
	comp=N,2.3nm,0.5s,mb3.8,baz=230,slow=13,SNR=7.5						
CNNC	Cliffs of the	58.53	353	eP	P	06 26 50.1	+0.3
VNA3	Neumayer Olymp	58.97	161	e	P	06 26 53.5	+0.9
VNA3				e	pP	06 27 01.9	-0.7
VNA2	Neumayer--Watz	59.57	160	e	P	06 26 57.5	+0.8
	baz=293,slow=3.2						
SNAA	Sanae	61.18	160	e	P	06 27 07.9	+0.1
SNAA				e		06 27 14.8	
DBIC	Dimbokro	70.64	74	P	P	06 28 09.5	-0.1
	comp=N,8.1nm,0.8s,mb4.7,baz=234,slow=4.1,SNR=6.7						
PDAR	Pinedale Array	74.84	331	P	P	06 28 35.4	+1.6
	comp=N,0.2nm,0.5s,mb3.3,baz=143,slow=9.1,SNR=2.8						
NVAR	Mina Array Bea	75.92	323	P	P	06 28 42.4	+2.3
	comp=N,0.4nm,0.6s,mb3.5,baz=155,slow=7.4,SNR=3.9						
NVAR	Mina Array Bea	75.92	323	P	P	06 28 42.4	+2.3
TORD	Torodi Ar. Bea	79.33	71	P	P	06 28 59.6	0.0
	comp=N,9.6nm,0.9s,mb4.7,baz=254,slow=5.1,SNR=38						
MAW	Mawson	83.14	164	P	P	06 29 19.4	+0.4
	comp=N,2.0nm,0.3s,mb4.6,baz=270,slow=11,SNR=9.9						
BOSA	Boshof	83.97	118	P	P	06 29 24.2	+0.2
	comp=N,2.4nm,0.6s,mb4.5,baz=205,slow=8.9,SNR=5.8						
YKA	Yellowknife Ar	92.29	341	P	P	06 30 02.0	-0.9
	comp=N,0.8nm,0.8s,mb4.1,baz=138,slow=4.5,SNR=16						
ASAR	Alice Springs	127.72	209	PKP	PKPdf	06 35 59.1	-0.3
	comp=N,0.8nm,0.8s,baz=139,slow=1.7,SNR=10						
ZALV	Zalesovo Beam	144.11	25	PKP	PKPdf	06 36 27.4	-1.3
	comp=N,2.6nm,0.8s,baz=294,slow=4.7,SNR=9.3						
AML	Almayashu	144.78	49	ePKPdf	PKPdf	06 36 30.2	-0.1
AAK	Ala-Archa	145.15	48	ePKPbc	PKPbc	06 36 32.3	+1.8
MKAR	Makanchi Array	147.87	36	PKPbc	PKPbc	06 36 38.2	-0.1
	comp=N,2.3nm,0.8s,baz=309,slow=3.9,SNR=14						
MKAR	Makanchi Array	147.87	36	PKPbc	PKPbc	06 36 38.2	-0.1
SONM	Songino Array	155.29	5	PKPab	PKPab	06 37 11.9	+0.3
	comp=N,0.7nm,0.9s,baz=224,slow=3.5,SNR=4.1						

CSEM 13 06:31:18.4±0.1, 4104N×3348E, h2km, MD3.2, Error ellipse: s-maj=1.7km s-min=1.1km az=6.0
ISCJB 13 06:31:19.6±0.5, 4104N±003×3346E±003, h5km±5km, Error ellipse: s-maj=4.4km s-min=4.1km az=31.1
DDA 13 06:31:19.4, 4102N×3348E, h3km±2km, Md3.0
ISK 13 06:31:19.0, 4105N×3346E, h5km, MD3.2
ISC 13 06:31:20.1±0.5, 4104N±003×3347E±003, h7km±5km, n27, σ0^{s}76/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOS	Tosya	0.42	90	PG	Pg	06 31 27.7	-0.6
TOS				eSG	Sg	06 31 34.0	+0.2
CANT	Cankiri	0.45	165	ePG	Pg	06 31 28.3	-0.4
CANT				eSG	Sg	06 31 35.3	+0.7
BALT	Daday	0.50	353	iP	Pg	06 31 30.1	+0.3
BALT				iS	Sg	06 31 37.6	+1.2
ELDT	Eldivan	0.55	183	iP	Pg	06 31 30.1	-0.5
ELDT				iS	Sg	06 31 38.3	+0.5
SAFT	Safranbolu	0.62	289	ePG	Pg	06 31 31.4	-0.7
SAFT				eSG	Sg	06 31 39.9	-0.4
BZK	Bozkurt	1.01	23	ePG	Pg	06 31 39.1	-0.4
CTKT	Corum	1.08	112	iP	Pg	06 31 40.3	-0.7
CTKT				iS	Sg	06 31 54.9	-0.1
BOYT	Boyabat	1.15	70	eP	Pg	06 31 41.3	-0.9
BOYT				iS	Sg	06 31 58.5	+1.4
BOYT	Boyabat	1.15	70	eP	Pg	06 31 41.3	-0.9
BOYT				iS	Sg	06 31 58.5	+1.4
LOD	Lodumlu	1.27	205	ePN	Pn	06 31 42.9	-1.3
DIKM	Dikmen	1.48	65	ePN	Pn	06 31 46.2	-1.0
KDZE	Karadeniz Ereo	1.55	281	ePN	Pn	06 31 48.0	-0.2
CDAG	Cicekdag	1.57	154	iP	Pn	06 31 47.8	-0.7
CDAG				iS	Sn	06 32 09.0	0.0
KAMT	Kaman	1.68	173	ePN	Pn	06 31 49.9	0.0
MDU	Mudurnu	1.80	252	ePN	Pn	06 31 52.3	+0.6
KVT	Kavak	1.95	88	ePN	Pn	06 31 52.8	-0.9
YOZ	Yozgat	1.99	134	ePN	Pn	06 31 54.6	+0.4
GULT	Gulveren	2.32	256	ePN	Pn	06 31 59.1	+0.3
KIZT	Kizilcal	2.48	210	ePN	Pn	06 32 01.3	+0.4
AVNT	Avonos	2.49	154	iP	Pn	06 32 04.6	+3.5
AVNT				iS	Sn	06 32 37.0	+5.2
ESKT	Eskisehir	2.51	234	ePN	Pn	06 32 01.9	+0.5
ESKT	Eskisehir	2.51	234	iP	Pn	06 32 00.2	-1.1
SEYT	Eskypehyr	2.51	234	iP	Pn	06 32 00.2	-1.2
GPA	Golpazari	2.52	254	ePN	Pn	06 32 02.1	+0.6
BNN	Bunyan	2.85	139	ePN	Pn	06 32 06.6	+0.6
SVSK	Karacayir	2.92	111	ePN	Pn	06 32 07.1	+0.1
LADK	Ladik-KONYA	2.96	197	ePN	Pn	06 32 08.9	+1.4

IDC 13 06:33:40.2±0.6, 2662S×17638W, h0km, mb4.4/12, mb1 4.6/14, mb1mx4.5/18, mbtmp4.5/14, ML5.0/1, Error ellipse: s-maj=19.1km s-min=15.1km az=134.0
NEIC 13 06:33:41.6±4.3, 2653S×17641W, h9km±27km, mb4.8/5, Error ellipse: s-maj=16.8km s-min=10.1km az=122.0
BJI 13 06:33:41.6, 2650S×17640W, h9km, mb5.3
ISCJB 13 06:33:44.1±0.5, 2663S±007×1765W±0.1, h33km, mb4.4/15, Error ellipse: s-maj=14.9km s-min=8.3km az=22.0
ISC 13 06:33:45.9±0.5, 2664S±007×1764W±01, h35km, n38, σ1^{s}07/32, mb4.4/15, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.92	207	Pn	Pn	06 34 29.0	-0.9
	186nm,0.3s,baz=153,slow=23,SNR=6.2						
RAO				Sn	Sn	06 35 04.8	+1.0
	162nm,0.3s,baz=86,slow=21,SNR=4.5						
RAO	Raoul Island	2.92	207	Pn	Pn	06 34 29.0	-0.9
RAO				Sn	Sn	06 35 04.8	+1.0
URZ	Urewera	12.81	204	Pn	Pn	06 36 41.1	-4.4
	0.3nm,0.3s,baz=235,slow=22,SNR=2.4						
AFI	Afiamalu	13.39	20	Pn	Pn	06 36 49.5	-4.0
	2.3nm,0.3s,baz=345,slow=20,SNR=2.7						
DZM	Mont Dzumac	16.27	283	eP	Pn	06 37 37.4	+5.6
DZM	Mont Dzumac	16.27	283	ePn	Pn	06 37 38.2	+6.4
	43nm,1.1s						
SNZO	South Karori	16.37	204	eP	Pn	06 37 34.3	+1.4
	81nm,1.2s						
CTA	Charters Tower	34.80	273	P	P	06 40 34.6	+1.1
	1.9nm,0.5s,mb4.3,baz=92,slow=12,SNR=5.5						
STKA	Stephens Creek	36.84	252	P	P	06 40 50.0	-0.9
	2.1nm,0.9s,mb4.0,baz=79,slow=10,SNR=3.7						
ASAR	Alice Springs	44.85	262	P	P	06 41 56.5	-0.5
	2.8nm,0.9s,mb4.1,baz=108,slow=8.0,SNR=22						
ASAR				S	S	06 48 36.1	+3.8
	0.4nm,0.8s,baz=97,slow=14,SNR=3.2						
WB2	Warramunga Arr	45.49	268	eP	P	06 42 01.1	-1.0
WRAB	Tennant Creek	45.50	268	eP	P	06 42 01.1	-1.1
	8.7nm,0.8s,mb4.6						
KAKA	Kakadu	49.80	276	eP	x	06 42 14.1	
	5.1nm,0.7s						
VNDA	Vanda	51.97	186	P	P	06 42 52.4	+1.4
	1.3nm,0.8s,mb3.9,baz=22,slow=12,SNR=3.3						
FITZ	Fitzroy Crossi	53.88	266	eP	P	06 43 05.2	-0.8
	9.6nm,0.9s,mb4.7						
QSPA	South Pole Qui	63.46	180	P	P	06 44 11.3	-0.4
	8.5nm,0.9s,mb4.8,baz=40,slow=3.5,SNR=18						
QSPA	South Pole Qui	63.46	180	P	P	06 44 11.3	-0.4
MJAR	Matsushiro Arr	76.00	324	P	P	06 45 29.1	-0.3
	6.5nm,0.8s,mb4.6,baz=158,slow=5.7,SNR=9.8						
SNAA	Sanae	81.86	178	eP	P	06 45 59.9	-1.2
SNAA				e		06 46 04.7	
VNA3	Neumayer Olymp	81.94	176	eP	P	06 46 00.4	-1.2
VNA3				e		06 46 05.4	
VNA2	Neumayer--Watz	82.40	176	eP	P	06 46 02.9	-1.0
	baz=152,slow=3.4						
VNA2				e		06 46 08.1	
KSRS	Korea Array	82.43	318	P	P	06 46 03.5	-1.1
	5.7nm,0.9s,mb4.5,baz=150,slow=5.8,SNR=7.7						
PETK	Petropavlovsk-	82.55	345	P	P	06 46 06.5	+1.7
	3.4nm,0.7s,mb4.5,baz=98,slow=1.3,SNR=6.9						
PETK	Petropavlovsk-	82.55	345	P	P	06 46 06.5	+1.7
NVAR	Mina Array Bea	84.53	42	P	P	06 46 15.9	+0.7
	1.1nm,0.8s,mb4.0,baz=217,slow=8.5,SNR=9.2						
WHN	Wuhan	87.23	306	⇓P	P	06 46 31.0	+2.1
TXAR	Lajitas Array	89.17	57	P	P	06 46 38.8	+0.7
	0.6nm,1.0s,mb3.9,baz=201,slow=4.8,SNR=3.2						
PDAR	Pinedale Array	92.44	43	P	P	06 46 52.4	-0.6
	0.6nm,1.1s,mb3.9,baz=207,slow=3.0,SNR=5.4						
BOZ	Bozeman (W)	92.88	39	eP	P	06 46 55.3	+0.4
	9.3nm,1.8s,mb4.9						
CMAR	Chiang Mai Arr	93.50	289	P	P	06 46 59.5	+1.0
	1.5nm,0.3s,mb4.9,baz=134,slow=3.7,SNR=10.0						
MKAR	Makanchi Array	116.39	311	PKP	PKPdf	06 52 24.9	-0.7
	0.6nm,0.8s,baz=57,slow=4.5,SNR=3.9						
KURK	Kurchatov	119.42	315	PKP	PKPdf	06 52 30.5	-0.8
	0.2nm,0.3s,baz=114,slow=2.2,SNR=4.9						
BVAR	Borovoye Array	124.64	318	PKP	PKPdf	06 52 40.2	-1.1
	0.8nm,0.6s,baz=129,slow=4.0,SNR=4.8						
NB2	NORSAR Subarra	145.22	353	PKP	PKPdf	06 53 18.5	-0.7
	comp=Z,0.6nm,0.8s,baz=17,slow=3.8						
NOA	NORSAR Array B	145.22	353	PKPbc	PKPbc	06 53 17.7	-1.2
	comp=Z,9.0nm,1.0s,baz=15,slow=2.5,SNR=11						
AKASG	Malin Array Be	149.02	328	PKPbc	PKPbc	06 53 28.2	-1.7
	comp=Z,1.8nm,0.7s,baz=40,slow=3.3,SNR=5.9						
BRTR	Keskin Array B	151.81	305	PKPbc	PKPbc	06 53 36.2	-0.7
	comp=Z,1.3nm,1.0s,baz=147,slow=2.0,SNR=4.8						
BRTR				PKPab	PKPab	06 53 46.7	+0.6
	comp=Z,2.1nm,0.7s,baz=106,slow=3.2,SNR=8.9						
TORD	Torodi Ar. Bea	166.46	172	PKP	PKPdf	06 53 47.6	-0.7
	comp=Z,1.4nm,1.1s,baz=313,slow=1.5,SNR=5.5						
TORD				PKPab	PKPab	06 54 48.8	-1.1
	comp=Z,2.7nm,0.9s,baz=187,slow=4.2,SNR=11						

IDC 13 06:35:33.4±0.5, 2723S×17569W, h0km, mb4.6/11, mb1 4.8/13, mb1mx4.7/18, mbtmp4.6/13, ML4.4/2, MS4.0/2, Ms1 4.0/2, ms1mx3.4/28, Error ellipse: s-maj=21.0km s-min=16.3km az=128.0
ISCJB 13 06:35:37.7±0.2, 2727S±006×17591W±005, h35km, mb4.8/38, MS4.8/4, Error ellipse: s-maj=9.6km s-min=5.1km az=146.0
MOS 13 06:35:37.5±1.0, 2721S×17588W, h33km, mb5.0/15, Error ellipse: s-maj=17.9km s-min=12.0km az=54.7
BJI 13 06:35:37.5, 2752S×17615W, h36km, mB5.4, mb5.3, Ms5.2, Msz5.0
NEIC 13 06:35:39.4±0.2, 2719S×17588W, mb4.8/25, Error ellipse: s-maj=10.1km s-min=5.9km az=142.0
ISC 13 06:35:39.6±0.2, 2723S±006×17588W±005, h37km, h37km±.9km:pP-P, n319, σ0^{s}53/309, mb4.8/38, MS4.8/4, 114C-100D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.70	221	Pn	Pn	06 36 20.5	-0.1
	164nm,0.3s,baz=84,slow=19,SNR=3.7						
RAO				Sn	Sn	06 36 54.7	+2.7
	814nm,0.3s,baz=242,slow=23,SNR=9.4						
RAO	Raoul Island	2.70	221	Pn	Pn	06 36 20.8	+0.3
RAO				eSn	Sn	06 36 56.2	+4.3
URZ	Urewera	12.47	206	Pn	Pn	06 38 33.8	-0.8
	0.6nm,0.3s,baz=167,slow=4.2,SNR=3.5						
URZ				Sn	Sn	06 40 43.1	-9.2
	1.5nm,0.3s,baz=94,slow=23,SNR=6.3						
AFI	Afiamalu	13.80	17	Pn	Pn	06 38 46.0	-6.8
	3.6nm,0.3s,baz=250,slow=20,SNR=3.4						
AFI				Sn	Sn	06 41 10.0	-15
	2.3nm,0.3s,baz=262,slow=18,SNR=3.1						
AFI	Afiamalu	13.80	17	ePn	Pn	06 38 48.3	-4.5
RAR	Rarotonga	15.86	71	Pn	Pn	06 39 08.4	-12
	4.0nm,0.3s,baz=312,slow=8.8,SNR=4.3						
RAR				LR	LR	06 43 39.0	
	comp=Z,530nm,21.6s,baz=239,slow=31						
SNZO	South Karori	16.04	206	eP	Pn	06 39 25.2	+2.9
	24nm,0.7s						
SNZO				eSn	Sn	06 42 01.3	-18
DZM	Mont Dzumac	16.86	284	ePn	Pn	06 39 33.7	+0.8
	15nm,0.8s						
DZM	Mont Dzumac	16.86	284	eS	Pn	06 39 33.6	+0.7
PPT	Papeete	26.11	74	LR	LR	06 48 59.0	
	comp=Z,394nm,21.2s,MS3.9,baz=184,slow=31						
HNR	Honiara	28.88	303	eP	P	06 41 28.4	-6.6
EIDS	Eidsvold	29.63	266	eP	P	06 41 40.8	-0.8
CTA	Charters Tower	35.30	273	eP	P	06 42 32.9	+1.6
	17nm,0.4s,mb5.3						
CTA	Charters Tower	35.30	273	P	P	06 42 32.2	+0.9
	20nm,0.5s,mb5.3,baz=100,slow=10,SNR=41						
CTA	Charters Tower	35.30	273	eP	P	06 42 32.9	+1.6
CTA				pmax	pmax		
	comp=Z,17nm,0.4s						
CTAO	Charters Tower	35.30	273	P	P	06 42 31.0	-0.3
CTAO				e*PP	pP	06 42 43.6	+1.8
CTAO				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
CTAO	Charters Tower	35.30	273	P	P	06 42 31.0	-0.3
	comp=Z,23nm,0.8s,mb5.2						
CTAO				epP	pP	06 42 43.6	+1.8
STKA	Stephens Creek	37.11	252	eP	P	06 42 46.7	+0.1
	comp=Z,4.6nm,1.0s,mb4.3						
STKA	Stephens Creek	37.11	252	P	P	06 42 46.7	+0.1
	comp=Z,4.3nm,0.7s,mb4.4,baz=92,slow=11,SNR=7.3						
PMG	Port Moresby	39.11	290	eP	P	06 43 00.3	-3.3
PMG				pmax	pmax		
	comp=Z,16nm,1.3s						
PMG	Port Moresby	39.11	290	eP	P	06 42 60.0	-3.7
	comp=Z,8.3nm,0.9s,mb4.5						
COEN	Coen	40.35	281	eP	P	06 43 14.4	+0.4
	comp=Z,11nm,1.0s,mb4.5						
ASAR	Alice Springs	45.24	263	P	P	06 43 52.3	-1.3
	comp=Z,5.7nm,1.1s,mb4.3,baz=116,slow=8.9,SNR=9.1						
WB2	Warramunga Arr	45.94	268	eP	P	06 43 57.7	-1.4
WRAB	Tennant Creek	45.95	268	eP	P	06 43 58.0	-1.2
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
WRAB	Tennant Creek	45.95	268	eP	P	06 43 58.0	-1.1
	comp=Z,8.3nm,1.3s,mb4.5						
FORT	Forrest	48.73	252	eP	P	06 44 20.1	-0.6
	comp=Z,16nm,0.6s,mb5.2						
FORT				epP	pP	06 44 30.5	-1.1
KAKA	Kakadu	50.34	276	eP	x	06 44 13.1	
	comp=Z,7.6nm,0.5s						
SBA	Scott Base	51.33	185	eP	P	06 44 41.8	+2.0
SBA				e*PP	pP	06 44 53.5	+2.8
SBA				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
SBA	Scott Base	51.33	185	eP	P	06 44 41.8	+2.1
	comp=Z,13nm,1.1s,mb4.8						
SBA				epP	pP	06 44 53.5	+2.8
KIP	Kipapa	51.36	21	eP	P	06 44 40.5	-0.1
VNDA	Vanda	51.43	186	P	P	06 44 41.5	+1.0
	comp=Z,3.7nm,0.9s,mb4.3,baz=360,slow=7.3,SNR=7.4						
VNDA	Vanda	51.43	186	eP	P	06 44 42.0	+1.5
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	Vanda	51.43	186	eP	P	06 44 42.0	+1.5
	comp=Z,4.3nm,1.0s,mb4.3						
FITZ	Fitzroy Crossi	54.31	267	eP	P	06 45 02.3	-0.3
	comp=Z,3.0nm,0.6s,mb4.4						
CASY	Casey	58.80	207	P	P	06 45 35.2	+1.4
	comp=Z,30nm,1.2s,mb5.2						
QSPA	South Pole Qui	62.87	180	P	P	06 46 00.9	-0.4
	comp=Z,9.1nm,0.9s,mb4.9,baz=36,slow=4.3,SNR=15						
QSPA	South Pole Qui	62.87	180	P	P	06 46 00.9	-0.4
KKM	Kota Kinabalu	73.41	286	P	P	06 47 08.8	+0.4
	comp=Z,25nm,1.3s,mb5.0						
MJAR	Matsushiro Arr	76.75	324	P	P	06 47 28.8	+1.7
	comp=Z,4.9nm,0.9s,mb4.5,baz=156,slow=5.7,SNR=5.6						
SNAA	Sanae	81.25	178	eP	P	06 47 50.2	-1.1
SNAA				e		06 47 51.6	
SNAA				e	pP	06 48 00.9	-2.0
SNAA				e		06 48 07.0	
SNAA	Sanae	81.25	178	eP	P	06 47 50.0	-1.3
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SNAA	Sanae	81.25	178	eP	P	06 47 50.0	-1.3
	comp=Z,9.2nm,1.3s,mb4.5						
VNA3	Neumayer Olymp	81.32	176	eP	P	06 47 50.4	-1.3
VNA3				e		06 47 51.8	
VNA3				e	pP	06 48 01.2	-2.0
VNA3				e		06 48 05.3	
VNA2	Neumayer--Watz	81.78	176	eP	P	06 47 53.4	-0.8
	baz=175,slow=3.8						
VNA2				e		06 47 55.1	
VNA2				e	pP	06 48 04.2	-1.5
VNA2				e		06 48 09.0	
VNA1	Neumayer--Stat	82.00	176	eP	P	06 47 54.7	-0.6
VNA1				e		06 47 56.5	
VNA1				e	pP	06 48 05.7	-1.1
VNA1				e		06 48 11.0	
ARVC	Arvin	82.17	44	⇓P	P	06 47 56.1	-0.5
	baz=82						
MURC	Murrieta	82.21	46	⇓P	P	06 47 56.4	-0.5
	baz=82						
MONP	Monument Peak	82.26	47	⇓P	P	06 47 56.6	-0.5
	baz=82						
BFSC	Mount Baldy St	82.32	45	⇑P	P	06 47 56.8	-0.6
	baz=82						
VES	Vestal, Richgr	82.48	43	⇑P	P	06 47 58.1	-0.1
	baz=83						
EDW2	Edwards Air Fo	82.53	45	⇑P	P	06 47 58.0	-0.5
	baz=83						
PFO	Pinyon Flat Ob	82.69	46	⇑P	P	06 47 58.8	-0.7
	baz=83						
SWSC	Sam W. Stewart	82.70	47	⇑P	P	06 47 58.6	-0.9
	baz=83						
ISA	Isabella	82.74	44	⇓P	P	06 47 59.2	-0.4
	baz=83						
ISA	Isabella	82.74	44	eP	P	06 47 59.9	+0.3
ISA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
ISA	Isabella	82.74	44	eP	P	06 47 59.9	+0.3
	comp=Z,14nm,1.1s,mb4.9						
YSS	Yuzh-Sakhalins	82.75	333	⇑eP	P	06 48 00.7	+1.3
YSS				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						

LRMC	Laurel Mountai	83.10	44	⇓P	P	06 48 00.8	-0.7
	baz=83						
CMB	Columbia Colle	83.16	41	eP	P	06 48 01.4	-0.3
CMB				e*PP	pP	06 48 12.6	-0.7
CMB				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
CMB	Columbia Colle	83.16	41	eP	P	06 48 01.4	-0.4
	comp=Z,12nm,1.1s,mb4.8						
CMB				epP	pP	06 48 12.6	-0.7
BELC	Belle Mtn.	83.23	46	⇑P	P	06 48 01.8	-0.4
	baz=83						
PETK	Petropavlovsk-	83.24	344	P	P	06 48 02.4	+0.7
	comp=Z,5.3nm,0.8s,mb4.6,baz=112,slow=7.9,SNR=7.1						
PETK	Petropavlovsk-	83.24	344	P	P	06 48 02.4	+0.7
PLCA	Paso Flores	83.29	132	P	P	06 48 00.7	-1.9
	comp=Z,3.9nm,0.8s,mb4.5,baz=227,slow=6.7,SNR=8.7						
BC3	Big Chuckw Mtn	83.37	47	⇑P	P	06 48 03.0	+0.1
	baz=84						
OHCM	Honcut	83.42	39	eP	P	06 48 02.7	-0.3
OHCM				epP	pP	06 48 13.6	-0.9
CWC	Cottonwood Cre	83.49	43	⇓P	P	06 48 03.3	-0.1
	baz=84						
GSC	Goldstone	83.54	45	⇓P	P	06 48 03.5	-0.3
	baz=84						
GSC	Goldstone	83.54	45	eP	P	06 48 03.9	+0.1
GSC				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
GSC	Goldstone	83.54	45	eP	P	06 48 03.9	+0.1
	comp=Z,19nm,1.4s,mb5.0						
HEC	Hector,Ludlow	83.54	46	⇓P	P	06 48 03.6	-0.2
	baz=84						
MPMC	Manual Prospec	83.60	44	⇑P	P	06 48 04.0	0.0
	baz=84						
WDC	Whiskeytown Da	83.68	38	eP	P	06 48 04.7	+0.3
WDC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
WDC	Whiskeytown Da	83.68	38	eP	P	06 48 04.7	+0.3
	comp=Z,6.6nm,0.9s,mb4.8						
MTUM	Tungsten Hills	83.79	42	eP	P	06 48 05.5	+0.6
MTUM				epP	pP	06 48 16.4	-0.2
IRM	Iron Mountain	83.88	47	⇑P	P	06 48 05.5	0.0
	baz=84						
113A	Mohawk Valley,	83.93	48	⇑P	P	06 48 05.6	-0.2
	baz=84						
GMRC	Granite Mounta	83.94	46	⇑P	P	06 48 05.7	-0.1
	baz=84						
WAKR	Walker	84.03	41	eP	P	06 48 06.6	+0.4
WAKR				epP	pP	06 48 17.4	-0.3
R06C	Coleville	84.04	41	⇑P	P	06 48 06.7	+0.5
	baz=84						
TUQ	Turquoise Moun	84.19	45	⇓P	P	06 48 06.9	-0.2
	baz=84						
SHOC	Shoshone	84.25	45	⇓P	P	06 48 07.4	0.0
	baz=84						
FURC	Furnace Creek,	84.26	44	⇓P	P	06 48 07.1	-0.3
	baz=84						
WCN	Washoe City	84.38	40	⇓P	P	06 48 07.6	-0.4
	baz=84						
BEKR	Beckwourth	84.41	40	⇓P	P	06 48 07.7	-0.4
	baz=85						
LDFC	Landfair	84.48	46	eP	P	06 48 09.5	+0.9
	comp=Z,6.7nm,0.5s,mb5.0						
LDFC				epP	pP	06 48 20.4	+0.3
Y13A	Salome	84.53	48	⇓P	P	06 48 08.9	+0.1
	baz=85						
U10A	Ash Meadows, A	84.55	44	⇓P	P	06 48 09.1	+0.2
	baz=85,SNR=6.1						
NVAR	Mina Array Bea	84.65	42	P	P	06 48 08.9	-0.4
	comp=Z,3.7nm,0.8s,mb4.6,baz=222,slow=9.2,SNR=19						
S09A	Goldfield	84.84	43	⇑P	P	06 48 09.5	-0.8
	baz=85						
Z14A	Wintersburg	84.84	48	⇓P	P	06 48 10.5	+0.1
	baz=85,SNR=5.9						
O06A	Flanigan	84.92	40	⇑P	P	06 48 10.1	-0.5
	baz=85						
TPNV	Topopah Spring	84.94	44	⇑P	P	06 48 10.4	-0.4
	baz=85						
TPNV	Topopah Spring	84.94	44	eP	P	06 48 11.0	+0.2
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
TPNV	Topopah Spring	84.94	44	eP	P	06 48 11.0	+0.1
	comp=Z,5.3nm,0.9s,mb4.7						
X13A	Yucca	85.01	47	⇑P	P	06 48 11.2	0.0
	baz=85,SNR=7.8						
216A	Three Points,	85.03	50	⇓P	P	06 48 11.3	-0.1
	baz=85						
V12A	Nelson	85.05	46	⇓P	P	06 48 11.4	-0.1
	baz=85						
Y14A	Wickenburg	85.15	48	⇓P	P	06 48 11.8	-0.1
	baz=85,SNR=7.8						
Q08A	Gabbs	85.15	42	⇑P	P	06 48 11.3	-0.5
	baz=85						
116A	Eloy	85.20	50	⇑P	P	06 48 12.0	-0.2
	baz=85						
R09A	Tonopah	85.26	43	⇓P	P	06 48 12.2	-0.2
	baz=85,SNR=5.3						
W13A	Hualapai Mount	85.28	47	⇑P	P	06 48 12.6	+0.1
	baz=85						
N06A	Buffalo Meadow	85.30	39	⇑P	P	06 48 12.5	0.0
	baz=85						
SHPR	Sheep Range	85.34	45	eP	P	06 48 13.1	+0.3
217A	Green Valley	85.34	51	⇓P	P	06 48 13.0	0.0
	baz=86,SNR=7.6						
S10A	Tonopah Range,	85.35	43	⇓P	P	06 48 12.8	-0.1
	baz=86,SNR=7.9						
O07A	Toulon	85.45	40	⇑P	P	06 48 13.2	-0.1
	baz=86						
X14A	Yava	85.55	48	⇑P	P	06 48 14.0	0.0
	baz=86,SNR=9.0						
Y15A	Casa Rosa Ranc	85.60	48	⇓P	P	06 48 14.3	+0.1
	baz=86,SNR=8.1						
NJ2	Nanjing	85.64	309	eP	P	06 48 14.3	-0.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.5						
TUC	Tucson	85.68	50	eP	P	06 48 14.7	+0.1
TUC				e*PP	pP	06 48 25.5	-0.7
TUC				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.3						
TUC	Tucson	85.68	50	eP	P	06 48 14.7	0.0
	comp=Z,28nm,1.5s,mb5.3						
TUC				epP	pP	06 48 25.5	-0.7
V13A	Grand Canyon W	85.68	46	⇑P	P	06 48 14.7	+0.1
	baz=86,SNR=5.8						
318A	Bisbee	85.72	51	⇓P	P	06 48 15.1	+0.2
	baz=86,SNR=9.5						
R10A	Warm Springs	85.76	43	⇓P	P	06 48 15.1	+0.2
	baz=86						
T11A	Corn Creek, Al	85.76	44	⇓P	P	06 48 15.3	+0.3
	baz=86,SNR=12						
Z16A	Peralta Trail,	85.84	49	⇑P	P	06 48 15.7	+0.2
	baz=86,SNR=7.7						
117A	Oracle	85.86	50	⇑P	P	06 48 15.8	+0.3
	baz=86,SNR=7.8						
W14A	Seligman	85.87	47	⇑P	P	06 48 16.0	+0.5
	baz=86,SNR=8.3						
O08A	Rochester Mine	85.96	40	⇓P	P	06 48 15.9	+0.1
	baz=86,SNR=6.1						
X15A	Humboldt	85.99	48	⇑P	P	06 48 16.4	+0.3
	baz=86,SNR=6.6						
218A	Dragoon	85.99	51	⇑P	P	06 48 16.4	+0.3
	baz=86,SNR=8.0						
U13A	Pakoon Wash	86.04	46	⇑P	P	06 48 16.9	+0.5
	baz=86,SNR=7.2						
Q10A	Clear Creek Ra	86.04	42	⇑P	P	06 48 16.5	+0.2
	baz=86						
K05A	Summer Lake	86.06	37	⇓P	P	06 48 16.3	0.0
	baz=86						
V14A	Boquillas Ranc	86.11	47	⇑P	P	06 48 17.2	+0.5
	baz=86,SNR=7.8						
Y16A	Circle Bar Ran	86.13	49	⇓P	P	06 48 17.2	+0.4
	baz=86,SNR=18						
H03A	Soap Creek Ran	86.16	35	⇑P	P	06 48 17.1	+0.4
	baz=86						
319A	Douglas	86.18	52	⇑P	P	06 48 17.1	0.0
	baz=86						
S12A	Delamar Landin	86.22	44	⇑P	P	06 48 17.8	+0.6
	baz=86,SNR=9.0						
R11A	Troy Canyon, C	86.23	43	⇑P	P	06 48 17.3	+0.1
	baz=86						
N08A	GE Springer Mi	86.29	40	⇓P	P	06 48 17.3	-0.1
	baz=86						
118A	Homack Ranch,	86.43	51	⇓P	P	06 48 18.7	+0.4
	baz=87,SNR=8.9						
L07A	Adell	86.43	39	⇓P	P	06 48 18.2	+0.1
	baz=87						
T13A	Saint George	86.44	45	⇑P	P	06 48 18.5	+0.2
	baz=87						
Y17A	Roosevelt	86.45	49	⇓P	P	06 48 18.5	+0.1
	baz=87,SNR=7.9						
Z17A	San Carlos Hig	86.47	50	⇓P	P	06 48 18.9	+0.4
	baz=87						
X16A	Lo Mia Camp, P	86.47	48	⇑P	P	06 48 19.0	+0.5
	baz=87,SNR=14						
Q11A	Duckwater	86.50	43	⇑P	P	06 48 18.8	+0.2
	baz=87						
U14A	Mt Trumbull	86.54	46	⇓P	P	06 48 19.2	+0.4
	baz=87,SNR=7.8						
219A	White Tail Can	86.55	51	⇑P	P	06 48 19.0	0.0
	baz=87,SNR=5.1						
M08A	Happy Creek Ra	86.59	39	⇑P	P	06 48 19.0	+0.1
	baz=87						
W16A	Flagstaff	86.81	48	⇓P	P	06 48 20.4	+0.3
	baz=87						
R12A	Pony Springs,	86.82	44	⇑P	P	06 48 20.2	+0.1
	baz=87,SNR=5.6						
S13A	Holt Ranch, En	86.82	45	⇑P	P	06 48 20.5	+0.3
	baz=87,SNR=6.7						
V15A	Kaibab Nationa	86.83	47	⇑P	P	06 48 20.8	+0.6
	baz=87,SNR=7.2						
119A	Ashpeak Ranch,	86.96	51	⇑P	P	06 48 21.3	+0.3
	baz=87,SNR=5.8						
Y18A	Canyon Day Jun	87.04	50	⇑P	P	06 48 21.9	+0.6
	baz=87,SNR=15						
L08A	Fields	87.10	39	⇓P	P	06 48 21.3	0.0
	baz=87						
M09A	Marrel Ranch,	87.10	40	⇑P	P	06 48 21.4	0.0
	baz=87						
U15A	North Rim	87.11	46	⇑P	P	06 48 22.1	+0.6
	baz=87,SNR=6.8						
R13A	O'Grain Ranch,	87.12	44	⇑P	P	06 48 21.9	+0.3
	baz=87						
Q12A	Willow Creek R	87.13	43	⇑P	P	06 48 21.9	+0.3
	baz=87						
WUAZ	Wupatki	87.17	48	⇓P	P	06 48 22.3	+0.4
	baz=87						
I06A	Prineville	87.25	37	⇓P	P	06 48 21.8	-0.2
	baz=87						
O11A	Cowboy Ranch,	87.32	42	⇑P	P	06 48 22.7	+0.2
	baz=88						
J07A	Hines	87.35	38	⇓P	P	06 48 22.7	+0.1
	baz=88						
P12A	McGill	87.35	43	⇑P	P	06 48 22.6	-0.1
	baz=88						
L09A	Wilkinson Ranc	87.36	39	⇑P	P	06 48 23.0	+0.3
	baz=88						
K08A	Mann Creek Ran	87.37	38	⇑P	P	06 48 22.9	+0.2
	baz=88						
T15A	Red Dirt Ranch	87.41	46	⇓P	P	06 48 23.3	+0.3
	baz=88						
X18A	Snowflake	87.53	49	⇑P	P	06 48 23.9	+0.2
	baz=88						
Q13A	Wheeler Ranch,	87.57	43	⇑P	P	06 48 23.8	+0.1
	baz=88						
Y19A	Nutrioso	87.68	50	⇓P	P	06 48 25.0	+0.6
	baz=88,SNR=5.5						
U16A	Tuba City	87.70	47	⇑P	P	06 48 24.8	+0.4
	baz=88						
H06A	Lindquist Farm	87.72	36	⇓P	P	06 48 24.1	-0.1
	baz=88						
I07A	Izee	87.72	37	⇑P	P	06 48 24.7	+0.4
	baz=88						
K09A	Rome	87.78	39	⇓P	P	06 48 24.8	+0.2
	baz=88						
J08A	Circle Bar Ran	87.80	38	⇑P	P	06 48 24.8	+0.1
	baz=88						
S15A	Panguitch	87.82	45	⇓P	P	06 48 25.2	+0.3
	baz=88						
P13A	Bates Ranch, G	87.88	43	⇑P	P	06 48 25.1	0.0
	baz=88,SNR=5.5						
G06A	Carlson Farm,	87.90	36	⇓P	P	06 48 25.1	0.0
	baz=88						
O12A	Currie	87.94	42	⇑P	P	06 48 25.8	+0.3
	baz=88						
H07A	Lands Inn, Kim	88.03	37	⇓P	P	06 48 25.6	-0.1
	baz=88						
Q14A	Sevier Lake (B	88.05	44	⇓P	P	06 48 26.0	0.0
	baz=88,SNR=5.5						
L10A	Juniper Basin	88.08	40	⇓P	P	06 48 26.2	+0.1
	baz=88						
I08A	Drewsey	88.11	37	⇑P	P	06 48 25.9	-0.3
	baz=88						
N12A	Clover Valley,	88.14	42	⇑P	P	06 48 25.9	-0.4
	baz=88						
J09A	Fry Pan Ranch,	88.18	38	⇓P	P	06 48 26.7	+0.2
	baz=88						
F06A	Goldendale	88.19	35	⇓P	P	06 48 26.4	-0.1
	baz=88						
R15A	Junction	88.20	45	⇓P	P	06 48 27.1	+0.4
	baz=88						
V18A	Ganado	88.23	48	⇑P	P	06 48 27.1	+0.1
	baz=88						
E05A	Randle	88.24	34	⇓P	P	06 48 27.0	+0.2
	baz=88						
U17A	Shonto	88.27	47	⇓P	P	06 48 27.5	+0.4
	baz=88						
K10A	MacKenzie Ranc	88.31	39	⇑P	P	06 48 27.3	+0.2
	baz=88						
O13A	Hicks Ranch, I	88.32	43	⇓P	P	06 48 27.2	-0.1
	baz=88						
S16A	Weppner Ranch,	88.33	46	⇑P	P	06 48 27.2	-0.2
	baz=88						
T17A	Navajo Res., N	88.41	47	⇓P	P	06 48 27.5	-0.2
	baz=89						
G07A	Ruggs Ranch, H	88.43	36	⇓P	P	06 48 27.2	-0.4
	baz=88						
MSU	Marysvale	88.44	45	eP	P	06 48 28.8	+0.9
L11A	Cat Creek Ranc	88.55	40	⇓P	P	06 48 28.0	-0.3
	baz=89						
E06A	Yakima	88.62	34	⇑P	P	06 48 28.1	-0.4
	baz=89						
U18A	Rough Rock, Ch	88.69	47	⇑P	P	06 48 29.3	+0.2
	baz=89						
K11A	Parker Ranch,	88.78	40	⇑P	P	06 48 29.4	+0.1
	baz=89						
CN2	Changchun	88.78	322	eP	P	06 48 30.8	+1.5
G08A	Pilot Rock	88.81	36	⇓P	P	06 48 29.6	+0.1
	baz=89						
L12A	House Creek Ra	88.96	41	⇓P	P	06 48 30.8	+0.6
	baz=89						
C05A	Tolt Reservoir	89.06	33	⇑P	P	06 48 31.0	+0.5
	baz=89						
T18A	Mexican Hat	89.10	47	⇓P	P	06 48 31.4	+0.4
	baz=89						
TXAR	Lajitas Array	89.10	56	P	P	06 48 30.4	-0.8
	comp=Z,3.0nm,0.9s,mb4.6,baz=209,slow=7.7,SNR=19						
TXAR	Lajitas Array	89.10	56	P	P	06 48 30.4	-0.8
D06A	Cle Elum	89.13	34	⇓P	P	06 48 31.0	+0.1
	baz=89						
E07A	Sunnyside	89.20	35	⇓P	P	06 48 31.6	+0.4
	baz=89						
F08A	Pendleton	89.25	36	⇑P	P	06 48 31.7	+0.2
	baz=89						
B05A	Bryant	89.26	33	⇑P	P	06 48 31.1	-0.4
	baz=89						
KLR	Kul'dur	89.27	329	eP	P	06 48 30.0	-1.5
MFID	Camas Ranch	89.30	39	⇑P	P	06 48 31.9	+0.1
	baz=89						
R17A	Hanksville Air	89.31	45	⇓P	P	06 48 32.1	+0.1
	baz=90						
G09A	Cove	89.43	37	⇑P	P	06 48 32.5	+0.1
	baz=90						
M14A	Sheep Mountain	89.54	42	⇑P	P	06 48 32.8	-0.2
	baz=90						
H10A	Noah's Angus R	89.54	38	⇓P	P	06 48 32.6	-0.3
	baz=90						
I11A	Placerville	89.54	39	⇑P	P	06 48 32.9	0.0
	baz=90						
J12A	Stokes Ranch,	89.61	40	⇑P	P	06 48 33.1	-0.2
	baz=90						
G10A	Bishop Farm, J	89.80	37	⇓P	P	06 48 33.9	-0.2
	baz=90						
R18A	Canyonlands Na	89.81	46	⇑P	P	06 48 34.2	-0.1
	baz=90						
SRU	San Rafael	89.83	45	⇑P	P	06 48 34.2	-0.2
	baz=90						
C07A	Waterville	89.86	34	⇑P	P	06 48 33.9	-0.4
	baz=90						
L14A	Malta	89.93	41	⇓P	P	06 48 34.7	-0.1
	baz=90						
S19A	Harvey Farm, M	89.93	47	⇓P	P	06 48 34.8	-0.1
	baz=90						
I12A	Atlanta	89.93	39	⇑P	P	06 48 34.4	-0.3
	baz=90						
D08A	Wollman Farm,	90.01	35	⇑P	P	06 48 35.0	0.0
	baz=90						
H11A	Donnelly	90.02	38	⇓P	P	06 48 34.7	-0.4
	baz=90						
E09A	Wood Farm, Sta	90.05	36	⇓P	P	06 48 34.8	-0.4
	baz=90						
M15A	Larsen Ranch,	90.05	42	⇑P	P	06 48 35.2	-0.2
	baz=90						
Q18A	Rafter H Ranch	90.08	45	⇓P	P	06 48 35.3	-0.2
	baz=90						
ANMO	Albuquerque	90.14	50	⇑iP	P	06 48 35.4	-0.5
ANMO				i *PP	pP	06 48 45.8	-1.8
ANMO	Albuquerque	90.14	50	eP	P	06 48 36.2	+0.2
	comp=Z,5.3nm,1.0s,mb4.8						
ANMO				epP	pP	06 48 46.6	-1.0
R19A	Curley Farm, L	90.16	46	⇑P	P	06 48 35.6	-0.4
	baz=90						
F10A	Beach Ranch, E	90.18	37	⇑P	P	06 48 35.4	-0.4
	baz=90						
HLID	Hailey	90.19	40	⇓P	P	06 48 35.7	-0.3
	baz=90						
HLID	Hailey	90.19	40	eP	P	06 48 36.2	+0.2
J13A	Cove Ranch, Pi	90.23	40	⇑P	P	06 48 36.2	+0.1
	baz=90						
G11A	Walters Elk Ra	90.32	37	⇓P	P	06 48 36.1	-0.4
	baz=90						
D09A	Jones Farm, Ri	90.33	35	⇑P	P	06 48 36.1	-0.4
	baz=90						
O17A	Robinson Place	90.34	44	⇓P	P	06 48 36.8	0.0
	baz=90						
OD2	Odessa Site #2	90.34	35	eP	P	06 48 36.7	+0.1
B07A	Winthrop	90.35	33	⇑P	P	06 48 36.2	-0.4
	baz=90						
L15A	Malad City	90.42	42	⇓P	P	06 48 36.8	-0.2
	baz=91						
C08A	Higginbotham F	90.43	34	⇓P	P	06 48 37.1	+0.1
	baz=90						
M16A	Huntsville	90.45	43	⇓P	P	06 48 37.0	-0.2
	baz=91						
Q19A	Hogan Spring (	90.54	46	⇓P	P	06 48 37.5	-0.2
	baz=91						
J14A	Carey	90.56	40	⇓P	P	06 48 37.7	+0.1
	baz=91						
H12A	Diamond D Ranc	90.56	39	⇑P	P	06 48 37.3	-0.3
	baz=91						
A07A	Ashnola River,	90.62	33	⇑P	P	06 48 37.7	-0.1
	baz=91						
B08A	Colville Reser	90.67	34	⇓P	P	06 48 37.3	-0.8
	baz=91						
N17A	Moffit Pass	90.72	43	⇓P	P	06 48 38.8	+0.3
	baz=91						
K15A	Arbon	90.74	41	⇑P	P	06 48 38.3	-0.2
	baz=91						
C09A	Chrisman Ranch	90.83	35	⇑P	P	06 48 38.4	-0.4
	baz=91						
D10A	Wagner Farm, O	90.86	36	⇑P	P	06 48 38.6	-0.4
	baz=91						
H13A	Challis	90.91	39	⇑P	P	06 48 39.2	-0.1
	baz=91						
I14A	Mackay	90.97	40	⇑P	P	06 48 39.9	+0.3
	baz=91						
F12A	Elk City	91.10	38	⇑P	P	06 48 40.0	-0.2
	baz=91						
A08A	Turner Farm, O	91.10	33	⇓P	P	06 48 39.8	-0.3
	baz=91						
P19A	Cripple Cowboy	91.11	45	⇓P	P	06 48 40.0	-0.4
	baz=91						
Q20A	Ridgley Place,	91.16	46	⇑P	P	06 48 40.2	-0.4
	baz=91						
J15A	Blackfoot	91.23	41	⇑P	P	06 48 41.0	+0.2
	baz=91						
G13A	Cobalt	91.25	39	⇓P	P	06 48 40.6	-0.2
	baz=91						
B09A	Rice	91.31	34	⇓P	P	06 48 41.0	0.0
	baz=91						
R21A	Cimarron	91.31	47	⇑P	P	06 48 41.7	+0.4
	baz=92						
D11A	Klaveano Farm,	91.34	36	⇑P	P	06 48 40.4	-0.8
	baz=92						
K16A	Soda Springs	91.39	42	⇓P	P	06 48 41.9	+0.4
	baz=92						
A09A	Danville	91.45	34	⇓P	P	06 48 40.9	-0.8
	baz=92						
GYA	Guiyang	91.62	299	eP	P	06 48 41.8	-1.2
GYA				AP	pP	06 48 53.4	-1.3
GYA				XP	sP	06 48 57.3	-1.6
GYA				PP	PP	06 52 21.8	-0.2
GYA				SKS		06 59 10.3	
GYA				S	S	06 59 35.0	-5.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
F13A	Darby	91.62	38	⇓P	P	06 48 42.1	-0.4
	baz=92						
J16A	Bone	91.64	41	⇓P	P	06 48 42.7	0.0
	baz=92						
K17A	Gardner Place,	91.73	42	⇑P	P	06 48 42.9	-0.2
	baz=92						
H15A	Lima	91.85	40	⇓P	P	06 48 43.9	+0.3
	baz=92						
O20A	White River Ci	91.86	45	⇓P	P	06 48 43.8	0.0
	baz=92						
D12A	Red Ives Fores	91.87	37	⇑P	P	06 48 43.5	-0.2
	baz=92						
C11A	Tepee Creek (N	91.89	36	⇓P	P	06 48 43.8	+0.1
	baz=92						
BJI	Beijing	92.00	315	P	P	06 48 44.8	+0.3
BJI				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.5						
DCID1	Drake Creek	92.08	41	eP	P	06 48 44.9	+0.2
E13A	Victor	92.11	38	⇓P	P	06 48 45.0	+0.2
	baz=92						
REDW	Red Top Meadow	92.13	41	eP	P	06 48 45.0	0.0
SMCO	Snowmass	92.14	47	eP	P	06 48 47.6	+2.5
F14A	Wisdom	92.17	38	⇑P	P	06 48 45.1	+0.1
	baz=92						
K18A	Toltan Ranch,	92.19	42	⇑P	P	06 48 45.4	+0.2
	baz=92						
J17A	Brown Place, J	92.22	41	⇓P	P	06 48 45.5	+0.2
	baz=92						
N20A	Spence Gulch,	92.25	45	⇓P	P	06 48 45.2	-0.4
	baz=92						
SNOW	Snow King Moun	92.25	41	eP	P	06 48 45.6	+0.1
G15A	Dillon	92.27	39	⇓P	P	06 48 45.7	+0.2
	baz=92						
IMW	Indian Meadow	92.40	41	eP	P	06 48 46.7	+0.5
LOHW	Long Hollow	92.43	41	eP	P	06 48 46.1	-0.2
	comp=Z,4.0nm,1.4s,mb4.6						
LOHW				epP	pP	06 48 57.6	-0.3
J18A	Kendall Valley	92.54	42	⇑P	P	06 48 46.9	0.0
	baz=93						
PDAR	Pinedale Array	92.56	42	P	P	06 48 45.4	-1.6
	comp=Z,0.6nm,0.8s,mb4.1,baz=194,slow=3.1,SNR=5.0						
I17A	Pilgram Creek	92.62	41	⇑P	P	06 48 47.9	+0.7
	baz=93						
N21A	Black Mountain	92.67	45	⇑P	P	06 48 47.7	+0.1
	baz=93						
F15A	Butte	92.67	39	⇓P	P	06 48 47.3	-0.1
	baz=93						
G16A	Moss Hill, Enn	92.69	40	⇓P	P	06 48 47.3	-0.2
	baz=93						
H16A	Russell Place,	92.70	40	⇓P	P	06 48 47.8	+0.3
	baz=93						
L20A	Wamsutter	92.86	44	⇑P	P	06 48 48.5	+0.1
	baz=93						
D14A	Greenough	92.87	37	⇑P	P	06 48 47.8	-0.4
	baz=93						
BOZ	Bozeman (W)	93.04	39	eP	P	06 48 48.9	-0.2
BOZ				e*PP	pP	06 48 59.9	-0.8
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.7						
BOZ	Bozeman (W)	93.04	39	eP	P	06 48 48.9	-0.2
	comp=Z,3.4nm,0.9s,mb4.8						
BOZ				epP	pP	06 48 59.9	-0.9
XAN	Xi'an	93.71	306	P	P	06 48 51.8	-0.7
XAN				AP	pP	06 49 02.1	-2.0
XAN				PP	PP	06 52 36.6	-1.7
XAN				S	S	06 59 58.3	-0.7
XAN				SS	SS	07 06 16.6	-1.8
XAN				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.7						
XAN				LR	LR		
	comp=N,133nm,16.7s,MS4.8						
XAN				LR	LR		
	comp=E,298nm,19.6s,MS4.8						
XAN				LR	LR		
	comp=Z,934nm,17.7s,MS5.3						
D16A	Dana Ranch, Ca	93.91	38	⇓P	P	06 48 52.8	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=94						
L22A	**Ellis Ranch, M**	**94.06**	**44**	⇑P	**P**	**06 48 54.2**	**+0.3**
	baz=94						
A14A	**Double T Ranch**	**94.08**	**36**	⇑P	**P**	**06 48 53.7**	**-0.1**
	baz=94						
KMI	**Kunming**	**94.08**	**296**	P	**P**	**06 48 55.3**	**+0.9**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.5						
COLA	**College**	**94.36**	**12**	eP	**P**	**06 48 55.1**	**+0.4**
D17A	**Six Diamond Ra**	**94.45**	**38**	⇑P	**P**	**06 48 56.0**	**+0.4**
	baz=95						
C17A	**Wharram Farm,**	**94.69**	**38**	⇑P	**P**	**06 48 56.8**	**+0.1**
	baz=95						
HHC	**Hu-ho-hao-te**	**95.39**	**313**	eP	**P**	**06 49 00.4**	**+0.4**
HHC				AP	pP	06 49 11.0	-0.7
HHC				XP	sP	06 49 15.5	-0.4
HHC				PP	PP	06 52 52.9	+1.6
HHC				SKS		06 59 31.8	
HHC				eS	S	07 00 09.6	-3.8
HHC				XS	sS	07 00 27.6	-5.3
HHC				SS	SS	07 06 41.4	-0.8
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb5.5						
HHC				AMB	AMB		
	comp=Z,351nm,11.8s						
HHC				LR	LR		
	comp=N,269nm,15.5s,MS5.0						
HHC				LR	LR		
	comp=E,326nm,15.5s,MS5.0						
HHC				LR	LR		
	comp=Z,214nm,16.6s,MS4.7						
CD2	**Chengdu**	**96.00**	**302**	P	**P**	**06 49 02.8**	**-0.3**
CD2				AP	pP	06 49 13.3	-1.4
CD2				XP	sP	06 49 17.1	-1.8
CD2				PP	PP	06 52 57.0	+0.8
CD2				SKS		06 59 35.6	
CD2				S	S	07 00 14.3	-4.8
CD2				XS	sS	07 00 31.8	-6.8
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.8						
CD2				AMB	AMB		
	comp=Z,330nm,13.2s						
CD2				LR	LR		
	comp=N,770nm,17.8s						
CD2				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
WMQ	**Urumqi**	**112.71**	**309**	ePKP	PKiKP	06 54 11.6	-0.5
MKAR	**Makanchi Array**	**117.13**	**311**	PKP	PKPdf	06 54 19.8	-0.7
	comp=Z,0.7nm,0.7s,baz=248,slow=1.5,SNR=5.9						
KURK	**Kurchatov**	**120.17**	**315**	PKP	PKPdf	06 54 25.4	-0.7
	comp=Z,0.8nm,0.9s,baz=92,slow=2.3,SNR=3.7						
KURK	**Kurchatov**	**120.17**	**315**	i PKIKP	PKPdf	06 54 24.3	-1.9
AAK	**Ala-Archa**	**121.86**	**305**	i PKIKP	PKPdf	06 54 27.6	-2.1
BVAR	**Borovoye Array**	**125.39**	**317**	PKP	PKPdf	06 54 36.2	+0.1
	comp=Z,0.6nm,0.5s,baz=132,slow=2.1,SNR=3.6						
ARCES	**ARCESS Array B**	**135.86**	**349**	PKP	PKPdf	06 54 55.4	-0.1
	comp=Z,5.8nm,1.0s,baz=335,slow=4.0,SNR=3.6						
NB2	**NORSAR Subarra**	**145.86**	**354**	PKP	PKPdf	06 55 13.8	+0.1
	comp=Z,1.5nm,0.6s,baz=21,slow=3.4						
NOA	**NORSAR Array B**	**145.86**	**354**	PKPbc	PKPdf	06 55 13.4	-0.3
	comp=Z,3.8nm,0.9s,baz=15,slow=4.6,SNR=6.3						
AKASG	**Malin Array Be**	**149.77**	**328**	PKPbc	PKPbc	06 55 24.1	-1.1
	comp=Z,2.7nm,0.7s,baz=41,slow=2.3,SNR=10						
EKA	**Eskdalemuir Ar**	**151.43**	**9**	PKPbc	PKPbc	06 55 27.6	-1.3
	comp=Z,1.7nm,0.7s,baz=352,slow=1.9,SNR=4.4						
BRTR	**Keskin Array B**	**152.53**	**305**	PKPbc	PKPbc	06 55 31.9	-0.2
	comp=Z,2.8nm,1.0s,baz=151,slow=2.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**165.81**	**170**	PKPab	PKPab	06 56 39.7	-0.7
	comp=Z,4.0nm,0.9s,baz=183,slow=4.0,SNR=10						

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*CSEM **13** 07:06:34.0, 36.18N×6.52E, h0^{km}, ML3.5, After ALG*

CRAAG 13 07:06:34.0, 36.18N×6.52E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASM	**Ain Smara**	**0.09**	**344**	P	Pg	07 06 37.0	+1.3
DFRA	**Djebel Bou Aff**	**0.64**	**306**	P	Pg	07 06 48.0	+1.8
SET	**Setif**	**0.91**	**272**	P	Pg	07 06 52.0	+0.6

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*ISCJB **13** 07:07:18.6±0.4, 49.87N±0.03×18.40E±0.03, h0^{km}, Error ellipse: s-maj=4.4km s-min=2.5km az=16.2*
*NEIC **13** 07:07:20.2, 49.85N×18.53E, h2^{km}, MG2.7(WAR), After CSEM.*
*IPEC **13** 07:07:20.2±0.1, 49.80N×18.56E, h0^{km}, ML2.0/3, Error ellipse: s-maj=2.0km s-min=0.8km az=163.0*
*CSEM **13** 07:07:20.0±0.1, 49.89N×18.52E, h1^{km}, ML3.2/7, Error ellipse: s-maj=2.7km s-min=1.6km az=8.0*

ISC 13 07:07:20.1±0.4**, 49.81N**±0.03×**18.45E**±0.03**, h0**^{km}**, n27, σ1.29**/49**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.20**	**279**	ePg	**Pg**	**07 07 25.3**	**+1.5**
OKC				eSg	**Sg**	**07 07 29.4**	**+3.0**
OKC	**Ostrava-Krasne**	**0.20**	**279**	ePG	**Pg**	**07 07 25.6**	**+1.8**
OKC				eSG	**Sg**	**07 07 28.9**	**+2.5**
	comp=Z,273nm,0.8s						
RAC	**Raciborz**	**0.32**	**329**	ePg	**Pg**	**07 07 28.0**	**+1.8**
RAC				eSg	**Sg**	**07 07 33.6**	**+3.2**
OJC	**Ojcow**	**0.96**	**64**	ePg	**Pg**	**07 07 36.9**	**-1.7**
OJC				eSg	**Sg**	**07 07 49.0**	**-2.1**
JAVC	**Velka Javorina**	**1.08**	**208**	eSg	**Sg**	**07 07 59.2**	**+4.5**
	comp=Z,13nm,0.3s						
KOLL	**Kolacno**	**1.23**	**181**	ePN	**Pn**	**07 07 44.0**	**-0.5**
KOLL				eSN	**Sn**	**07 08 01.3**	**-0.5**
NIE	**Niedzica**	**1.27**	**107**	ePg	**Pg**	**07 07 43.5**	**-1.0**
NIE				eSg	**Sg**	**07 08 02.3**	**+1.3**
VRAC	**Vranov**	**1.31**	**248**	ePg	**Pg**	**07 07 45.8**	**+0.7**
VRAC				eSg	**Sg**	**07 08 03.1**	**+1.1**
	comp=Z,18nm,0.2s						
VYHS	**Vyhne**	**1.34**	**169**	i PN	**Pn**	**07 07 45.1**	**-0.9**
VYHS				eSN	**Sn**	**07 08 04.3**	**-0.2**
VYHS	**Vyhne**	**1.34**	**169**	i Pn	**Pn**	**07 07 45.1**	**-0.9**
VYHS				eSn	**Sn**	**07 08 04.3**	**-0.2**
DPC	**Dobruska-Polom**	**1.47**	**292**	ePG	**Pg**	**07 07 47.7**	**-0.6**
DPC				eSG	**Sg**	**07 08 07.1**	**-0.3**
	comp=Z,40nm,0.6s						
KRUC	**Moravsky**	**1.53**	**242**	ePn	**Pn**	**07 07 49.3**	**+0.6**
KRUC				eSg	**Sg**	**07 08 10.1**	**+0.8**
	comp=Z,14nm,0.1s						
UPC	**Upice**	**1.71**	**295**	ePG	**Pg**	**07 07 51.9**	**-1.1**
UPC				eSG	**Sg**	**07 08 14.9**	**-0.3**
KSP	**Ksiaz**	**1.73**	**308**	ePn	**Pn**	**07 07 52.8**	**+1.4**
KSP				ePg	**Pg**	**07 07 56.4**	**+3.2**
KSP				eSg	**Sg**	**07 08 15.6**	**0.0**
KSP	**Ksiaz**	**1.73**	**308**	ePg	**Pg**	**07 07 56.1**	**+2.9**
KSP				eSg	**Sg**	**07 08 15.5**	**0.0**
ZST	**Bratislava**	**1.84**	**209**	eSN	**Sn**	**07 08 16.3**	**-0.5**
STHS	**Stebnicka Huta**	**1.86**	**101**	ePN	**Pn**	**07 07 54.7**	**+1.5**
STHS				eSN	**Sn**	**07 08 20.4**	**+3.0**
PSZ	**Piszkesteto**	**2.12**	**153**	ePn	**Pn**	**07 07 55.8**	**-0.9**
PSZ	**Piszkesteto**	**2.12**	**153**	ePn	**Pn**	**07 07 55.9**	**-0.9**
CRVS	**Cervenica-Dubn**	**2.17**	**114**	ePN	**Pn**	**07 07 59.4**	**+2.0**
CRVS				eSN	**Sn**	**07 08 29.5**	**+4.5**
CRVS	**Cervenica-Dubn**	**2.17**	**114**	ePn	**Pn**	**07 07 59.4**	**+2.0**
CRVS				eSn	**Sn**	**07 08 29.5**	**+4.5**
PRU	**Pruhonice**	**2.53**	**276**	ePG	**Pg**	**07 08 06.5**	**-2.1**
PRU				eSG	**Sg**	**07 08 39.9**	**-1.5**
	comp=Z,19nm,0.8s						
PVCC	**Panska Ves**	**2.59**	**288**	eSG	**Sg**	**07 08 42.6**	**-0.8**
	comp=Z,42nm,0.8s						
BRG	**Berggiesshubel**	**3.08**	**292**	Pg	**Pg**	**07 08 14.5**	**-4.5**
BRG				Sg	**Sg**	**07 08 57.3**	**-1.6**
BRG				SG	**Sg**	**07 08 57.3**	**-1.6**
	comp=Z,15nm,0.7s						
BRG	**Berggiesshubel**	**3.08**	**292**	PG	**Pg**	**07 08 14.5**	**-4.5**
KHC	**Kasperske Hory**	**3.25**	**260**	ePG	**Pg**	**07 08 21.3**	**-1.0**
KHC				eSG	**Sg**	**07 09 04.1**	**-0.3**
	comp=Z,14nm,0.6s						
CLL	**Collm**	**3.78**	**295**	eSg	**Sg**	**07 09 22.0**	**+0.5**
	comp=Z,28nm,1.6s						

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*IDC **13** 07:09:41.3±0.5, 23.96S×69.58E, h0^{km}, mb4.4/23, mb1 4.4/23, mb1mx4.4/31, mbtmp4.4/23, Error ellipse: s-maj=17.2km s-min=15.0km az=64.0*
*ISCJB **13** 07:09:41.7±0.3, 23.96S±0.06×69.59E±0.06, h10^{km}, mb5.0/71, MS5.2/10, Error ellipse: s-maj=9.0km s-min=7.4km az=36.8*
*MOS **13** 07:09:41.5±0.9, 23.93S×69.60E, h10^{km}, mb5.3/21, MS5.8/4, Error ellipse: s-maj=14.5km s-min=7.8km az=101.6*
*BJI **13** 07:09:42.6, 23.77S×68.61E, h24^{km}, mB5.2, mb4.9, Ms5.1, Msz4.9*
*NEIC **13** 07:09:43.0±0.3, 23.98S×69.57E, h10^{km}, mb5.4/29, Error ellipse: s-maj=8.0km s-min=7.0km az=133.0*
*GCMT **13** 07:09:43.0±0.4, 23.68S×69.42E, h14^{km}±1^{km}, MW5.1/52, Moment Tensor Solution. s22,c25; s52,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.28±.36; $M_{\theta\theta}$0.97±.21; $M_{\phi\phi}$3.31±.26; $M_{r\theta}$-1.67±.54; $M_{\theta\phi}$-1.47±.17; $M_{\phi r}$3.58±.60; Best double couple: $M_0$5.72900×10^{16} NP1:ϕ_s334.00000°,δ23.00000°,λ-91.00000°. NP2: ϕ_s155.00000°,δ67.00000°,λ-90.00000°. Principal axes: T 5.5980, Plg22.0000°, Azm244.0000°; N 0.2620, Plg0.0000°, Azm335.0000°; P -5.8600, Plg68.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **13** 07:09:51.4, 23.69S×66.69E, h21^{km}, mb5.2, Mauritius - Reunion region*

ISC 13 07:09:42.5±2.9**, 23.95S**±0.06×**69.51E**±0.07**, h4**^{km}±17^{km}**, h19**^{km}±.7^{km}**:pP-P, n172, σ0.82**/163**, mb5.0**/71**, MS5.2**/10**, 8C-2D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**21.47**	**280**	P	**P**	**07 14 34.0**	**+1.7**
	1.6nm,0.8s,baz=72,slow=9.1,SNR=5.4						
MSEY	**Mahe Island**	**23.46**	**323**	eP	**P**	**07 14 53.3**	**-0.1**
	141nm,1.7s,mb5.1						
PSI	**Prapat**	**39.06**	**51**	P	**P**	**07 17 10.9**	**0.0**
	3.3nm,0.5s,mb4.3,baz=189,slow=10,SNR=4.5						
LSZ	**Lusaka**	**39.75**	**275**	eP	**P**	**07 17 16.7**	**0.0**
LSZ				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
LSZ	**Lusaka**	**39.75**	**275**	eP	**P**	**07 17 16.7**	**0.0**
	comp=Z,20nm,1.3s,mb4.7						
BOSA	**Boshof**	**39.78**	**254**	P	**P**	**07 17 16.9**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.0,baz=103,slow=11,SNR=3.8						
HYB	**Hyderabad**	**42.05**	**13**	eP	**P**	**07 17 32.0**	**-3.5**
MAW	**Mawson**	**43.85**	**184**	P	**P**	**07 17 49.7**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.2,baz=17,slow=11,SNR=3.3						
CMAR	**Chiang Mai Arr**	**51.00**	**37**	P	**P**	**07 18 46.2**	**+0.4**
	comp=Z,1.3nm,0.3s,mb4.3,baz=228,slow=7.3,SNR=8.4						
CMAR	**Chiang Mai Arr**	**51.00**	**37**	i P	**P**	**07 18 47.5**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KOLN	**Koldanda**	**53.19**	**16**	eP	**P**	**07 19 01.9**	**0.0**
	comp=Z,69nm,1.0s,mb5.6						
RAMN	**Ramite**	**53.23**	**19**	eP	**P**	**07 19 02.5**	**+0.3**
	comp=Z,80nm,1.2s,mb5.5						
ODAN	**Odare**	**53.38**	**20**	eP	**P**	**07 19 04.4**	**+1.0**
DMN	**Daman**	**53.42**	**17**	eP	**P**	**07 19 04.0**	**+0.3**
	comp=Z,79nm,1.1s,mb5.6						
PKI	**Pulchoki**	**53.47**	**18**	eP	**P**	**07 19 03.6**	**-0.4**
	comp=Z,32nm,1.0s,mb5.2						
PKI	**Pulchoki**	**53.47**	**18**	eP	**P**	**07 19 03.6**	**-0.4**
PKI				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
KKN	**Kakani**	**53.64**	**17**	eP	**P**	**07 19 06.1**	**+0.8**
	comp=Z,68nm,1.0s,mb5.5						
KKN	**Kakani**	**53.64**	**17**	eP	**P**	**07 19 06.1**	**+0.8**
KKN				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.5						
GKN	**Gorkha**	**53.67**	**17**	eP	**P**	**07 19 05.0**	**-0.5**
	comp=Z,64nm,1.0s,mb5.5						
JIRN	**Jiri**	**53.77**	**18**	eP	**P**	**07 19 06.1**	**-0.2**
DANN	**Dangsing**	**53.78**	**16**	eP	**P**	**07 19 06.0**	**-0.3**
	comp=Z,81nm,1.0s,mb5.6						
SHL	**Shillong**	**53.78**	**25**	ex	**P**	**07 19 07.0**	**+0.7**
GUN	**Gumba**	**53.92**	**18**	eP	**P**	**07 19 07.3**	**0.0**
	comp=Z,68nm,1.0s,mb5.5						
TAPN	**Taplejung**	**53.94**	**20**	eP	**P**	**07 19 08.2**	**+0.7**
	comp=Z,80nm,1.2s,mb5.5						
KBL	**Kabul**	**58.17**	**360**	eP	**P**	**07 19 37.5**	**-0.1**
KBL				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
KBL	**Kabul**	**58.17**	**360**	eP	**P**	**07 19 37.5**	**-0.1**
	comp=Z,14nm,1.2s,mb4.9						
ASAR	**Alice Springs**	**58.42**	**104**	P	**P**	**07 19 38.9**	**-0.9**
	comp=Z,3.4nm,0.7s,mb4.5,baz=262,slow=7.0,SNR=3.2						
KMI	**Kunming**	**58.45**	**36**	P	**P**	**07 19 44.0**	**+4.2**
KMI				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.9						
GYA	**Guiyang**	**61.65**	**38**	P	**P**	**07 20 03.8**	**+2.0**
GYA				PCP	PcP	07 20 45.3	+2.0
GYA				PP	PP	07 22 21.8	+4.1
GYA				SCP	ScP	07 24 44.6	-1.4
GYA				S	**S**	**07 28 25.0**	**0.0**
GYA				SS	SS	07 32 29.8	+3.0
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,140nm,5.2s						
GYA				LR	LR		
	comp=N,630nm,19.9s,MS4.9						
GYA				LR	LR		
	comp=E,690nm,20.8s,MS4.9						
GYA				LR	LR		
	comp=Z,860nm,20.0s,MS4.9						
SNAA	**Sanae**	**61.92**	**200**	eP	**P**	**07 20 02.9**	**-0.1**
SNAA				e		07 20 09.1	
SNAA	**Sanae**	**61.92**	**200**	eP	**P**	**07 20 03.1**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,10.0nm,2.1s						
EIL	**Elat**	**62.81**	**326**	P	**P**	**07 20 10.9**	**+1.4**
	comp=Z,3.9nm,0.8s,mb4.6,baz=64,slow=10,SNR=4.5						
VNA2	**Neumayer--Watz**	**63.30**	**201**	eP	**P**	**07 20 12.8**	**+0.6**
VNA2				e		07 20 18.2	
VNA1	**Neumayer--Stat**	**63.57**	**201**	eP	**P**	**07 20 15.0**	**+1.0**
VNA1				e		07 20 20.8	
CD2	**Chengdu**	**63.66**	**33**	P	**P**	**07 20 17.6**	**+2.5**
CD2				AP	pP	07 20 21.5	+5.3
CD2				XP	sP	07 20 23.6	+6.9
CD2				PCP	PcP	07 20 53.1	+1.8
CD2				PP	PP	07 22 39.9	+4.6
CD2				PCS		07 24 55.4	
CD2				S	**S**	**07 28 51.3**	**+1.2**
CD2				SS	SS	07 33 01.0	+2.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				AMB	AMB		
	comp=Z,30nm,8.2s						
CD2				LR	LR		
	comp=N,370nm,15.5s						
CD2				LR	LR		
	comp=Z,460nm,12.3s,MS4.9						
ASF	**Jabal al Asfar**	**63.92**	**329**	P	**P**	**07 20 17.5**	**+0.7**
	comp=Z,2.7nm,0.9s,mb4.3,baz=298,slow=1.7,SNR=6.8						
VNA3	**Neumayer Olymp**	**64.05**	**201**	eP	**P**	**07 20 17.7**	**+0.5**
VNA3				e		07 20 23.3	
MMAI	**Mount Meron Ar**	**65.32**	**329**	P	**P**	**07 20 26.1**	**+0.3**
	comp=Z,0.6nm,0.3s,mb4.1,baz=223,slow=17,SNR=5.1						
AML	**Almayashu**	**65.86**	**3**	eP	**P**	**07 20 28.9**	**-0.2**
	comp=Z,42nm,1.7s,mb5.2						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**07 20 30.2**	**-0.6**
	comp=Z,8.8nm,1.1s,mb4.7,baz=275,slow=2.4,SNR=14						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**07 20 30.2**	**-0.6**
AAK	**Ala-Archa**	**66.41**	**4**	eP	**P**	**07 20 32.4**	**-0.3**
AAK				pmax	pmax		
	comp=Z,1μm,2.3s						
AAK	**Ala-Archa**	**66.41**	**4**	eP	**P**	**07 20 32.4**	**-0.3**
	comp=Z,1μm,2.3s						
FRU	**Bishkek**	**66.62**	**4**	eP	**P**	**07 20 33.0**	**-1.0**
TKM2	**Tokmak 2**	**66.77**	**5**	eP	**P**	**07 20 34.9**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
TKM2	**Tokmak 2**	**66.77**	**5**	eP	**P**	**07 20 34.9**	**-0.1**
	comp=Z,20nm,1.1s,mb5.1						
VNDA	**Vanda**	**67.30**	**166**	P	**P**	**07 20 37.6**	**-0.5**
	comp=Z,3.7nm,1.1s,mb4.3,baz=270,slow=8.7,SNR=4.8						
VNDA	**Vanda**	**67.30**	**166**	eP	**P**	**07 20 38.0**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,11nm,1.2s						
VNDA	**Vanda**	**67.30**	**166**	eP	**P**	**07 20 38.0**	**-0.1**
	comp=Z,11nm,1.2s,mb4.8						
GNI	**Garni**	**67.82**	**340**	P	**P**	**07 20 42.3**	**+0.6**
	comp=Z,2.8nm,0.4s,mb4.6,baz=301,slow=22,SNR=3.2						
GNI	**Garni**	**67.82**	**340**	⇑eP	**P**	**07 20 40.9**	**-0.8**
GNI				pmax	pmax		
	comp=Z,26nm,1.5s						
GNI	**Garni**	**67.82**	**340**	P	**P**	**07 20 42.3**	**+0.6**
LZH	**Lanzhou**	**67.96**	**30**	eP	**P**	**07 20 46.5**	**+3.8**
LZH				AP	pP	07 20 50.0	+6.1
LZH				XP	sP	07 20 52.4	+8.1
LZH				S	S	07 29 46.0	+3.6
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,153nm,7.7s						
LZH				LR	LR		
	comp=N,692nm,15.3s						
LZH				LR	LR		
	comp=Z,740nm,17.2s,MS5.0						
XAN	**Xi'an**	**68.77**	**34**	P	**P**	**07 20 48.9**	**+1.1**
XAN				AP	pP	07 20 52.8	+3.8
XAN				PP	PP	07 23 21.6	+1.6
XAN				S	S	07 29 54.8	+2.7
XAN				SS	SS	07 34 21.4	+3.9
XAN				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.3						
XAN				LR	LR		
	comp=E,105nm,20.3s						
XAN				LR	LR		
	comp=Z,173nm,21.1s,MS4.3						
WHN	**Wuhan**	**69.17**	**41**	P	**P**	**07 20 51.0**	**+0.6**
WMQ	**Urumqi**	**69.47**	**14**	eP	**P**	**07 20 52.6**	**+0.6**
WMQ				PCP	PcP	07 21 15.9	+0.7
WMQ				AMB	AMB		
	comp=Z,17nm,1.7s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,268nm,4.5s						
WMQ				LR	LR		
	comp=N,891nm,8.0s						
WMQ				LR	LR		
	comp=E,423nm,11.0s						
WMQ				LR	LR		
	comp=Z,1μm,25.0s						
CTA	**Charters Tower**	**70.42**	**104**	P	**P**	**07 20 57.4**	**-1.1**
	comp=Z,7.0nm,1.0s,mb4.5,baz=307,slow=7.1,SNR=3.0						
MK31	**Makanchi Array**	**71.35**	**9**	eP	**P**	**07 21 02.2**	**-1.2**
MKAR	**Makanchi Array**	**71.35**	**9**	P	**P**	**07 21 02.4**	**-1.0**
	comp=Z,4.7nm,0.8s,mb4.5,baz=194,slow=5.6,SNR=23						
MKAR	**Makanchi Array**	**71.35**	**9**	i P	**P**	**07 21 02.4**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**71.65**	**332**	P	**P**	**07 21 04.3**	**-1.0**
	comp=Z,3.0nm,0.8s,mb4.3,baz=155,slow=9.1,SNR=14						
KIV	**Kislovodsk**	**71.91**	**340**	eP	**P**	**07 21 07.3**	**+0.5**
KIV				eS	S	07 30 28.7	+0.2
KIV				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
KIV				MLR	MLR		
	comp=Z,655nm,19.0s,MS4.9						
NJ2	**Nanjing**	**72.96**	**42**	eP	**P**	**07 21 14.4**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
AKTK	**Aktyubinsk**	**74.75**	**352**	P	**P**	**07 21 22.4**	**-1.0**
AKTO	**Aktyubinsk**	**74.75**	**352**	P	**P**	**07 21 22.4**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.3,baz=144,slow=2.6,SNR=10						
KURK	**Kurchatov**	**74.77**	**6**	⇑iP	**P**	**07 21 23.7**	**+0.2**
KURK				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
KURK	**Kurchatov**	**74.77**	**6**	eP	**P**	**07 21 23.1**	**-0.4**
	comp=Z,26nm,1.2s,mb5.0						
PMG	**Port Moresby**	**75.01**	**94**	eP	**P**	**07 21 25.4**	**-0.4**
PMG				pmax	pmax		
	comp=Z,23nm,1.7s						
HHC	**Hu-ho-hao-te**	**75.38**	**32**	eP	**P**	**07 21 29.4**	**+2.1**
HHC				AP	pP	07 21 34.4	+5.9
HHC				PP	PP	07 24 21.0	+4.5
HHC				eS	S	07 31 08.9	+1.1
HHC				XS	sS	07 31 17.1	+7.3
HHC				SKS		07 31 33.6	
HHC				SS	SS	07 36 01.5	+2.9
HHC				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,192nm,4.4s						
HHC				LR	LR		
	comp=N,259nm,13.1s,MS4.9						
HHC				LR	LR		
	comp=E,352nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=Z,461nm,13.1s,MS5.0						
TOA0	**Torodi Ar. Sit**	**75.80**	**291**	eP	**P**	**07 21 29.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**75.80**	**291**	P	**P**	**07 21 29.3**	**-1.0**
	comp=Z,2.9nm,1.1s,mb4.1,baz=116,slow=3.8,SNR=16						
TORD	**Torodi Ar. Bea**	**75.80**	**291**	P	**P**	**07 21 29.3**	**-1.0**
BRVK	**Borovoye**	**76.68**	**0**	eP	**P**	**07 21 33.9**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
BRVK	**Borovoye**	**76.68**	**0**	eP	**P**	**07 21 33.9**	**-0.5**
	comp=Z,9.4nm,0.9s,mb4.7						
BJI	**Beijing**	**77.09**	**35**	P	**P**	**07 21 34.3**	**-2.8**
BJI				AMB	AMB		
	comp=Z,17nm,0.6s,mb5.2						
ZAA0	**Zalesovo Array**	**78.70**	**9**	eP	**P**	**07 21 44.4**	**-1.2**
ZALV	**Zalesovo Beam**	**78.70**	**9**	P	**P**	**07 21 43.9**	**-1.7**
	comp=Z,3.1nm,0.7s,mb4.4,baz=198,slow=4.2,SNR=15						
ZALV	**Zalesovo Beam**	**78.70**	**9**	P	**P**	**07 21 43.9**	**-1.7**
NVS	**Novosibirsk**	**79.35**	**8**	eP	**P**	**07 21 47.5**	**-1.7**
NVS				eS	S	07 32 00.1	+10
NVS				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.1						
NVS				pmax	pmax		
	comp=N,43nm,2.1s						
NVS				pmax	pmax		
	comp=E,27nm,1.8s						
NVS				smax			
	comp=N,26nm,2.3s						
NVS				smax			
	comp=E,33nm,2.9s						
KIS	**Kishinev**	**79.60**	**333**	eP	**P**	**07 21 50.0**	**-0.8**
KIS				e		07 21 56.0	
KIS	**Kishinev**	**79.60**	**333**	eUNK	**P**	**07 21 50.0**	**-0.8**
ARU	**Arti**	**80.60**	**354**	d iP	**P**	**07 21 55.8**	**-0.1**
ARU				S	S	07 32 03.9	+0.5
ARU				SS	SS	07 37 15.3	-1.3
ARU				pmax	pmax		
	comp=Z,27nm,1.7s,mb4.9						
ARU	**Arti**	**80.60**	**354**	eP	**P**	**07 21 55.2**	**-0.7**
	comp=Z,7.9nm,0.2s,mb5.3						
BUR08	**Bucovina Ar. S**	**81.64**	**331**	eP	**P**	**07 22 02.8**	**+1.0**
KSRS	**Korea Array**	**82.13**	**43**	P	**P**	**07 22 03.5**	**-1.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=205,slow=5.4,SNR=3.0						
AKASG	**Malin Array Be**	**82.40**	**335**	P	**P**	**07 22 04.8**	**-0.9**
	comp=Z,4.7nm,0.8s,mb4.5,baz=143,slow=4.6,SNR=16						
AKBB	**Malin Array Si**	**82.40**	**335**	eP	**P**	**07 22 04.2**	**-1.4**
AKBB				e		07 22 10.8	
OBN	**Obninsk**	**83.64**	**342**	eP	**P**	**07 22 12.3**	**+0.4**
OBN				i		07 22 18.0	
OBN				pmax	pmax		
	comp=Z,28nm,1.6s,mb5.1						
UZH	**Uzhgorod**	**83.67**	**331**	d iP	**P**	**07 22 12.4**	**+0.1**
UZH				i		07 22 18.4	
LVV	**L'vov**	**83.80**	**332**	eP	**P**	**07 22 12.3**	**-0.6**
KOLS	**Kolonicke sedl**	**83.91**	**331**	eP	**P**	**07 22 14.1**	**+0.7**
KOLS				esP	sP	07 22 20.4	+5.4
KOLS	**Kolonicke sedl**	**83.91**	**331**	eP	**P**	**07 22 14.1**	**+0.7**
KOLS				e		07 22 20.4	
KWP	**Kalwaria**	**84.23**	**332**	eP	**P**	**07 22 15.1**	**0.0**
KWP				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.4						
KWP	**Kalwaria**	**84.23**	**332**	eP	**P**	**07 22 15.1**	**0.0**
	comp=Z,40nm,1.3s,mb5.4						
CRVS	**Cervenica-Dubn**	**84.25**	**330**	eP	**P**	**07 22 15.5**	**+0.3**
CRVS				esP	sP	07 22 22.2	+5.4
CRVS				e		07 22 22.2	
CRVS	**Cervenica-Dubn**	**84.25**	**330**	e	**P**	**07 22 15.5**	**+0.3**
CN2	**Changchun**	**84.69**	**37**	eP	**P**	**07 22 19.6**	**+2.1**
VYHS	**Vyhne**	**85.17**	**329**	eP	**P**	**07 22 19.8**	**0.0**
VYHS				esP	sP	07 22 25.7	+4.3
VYHS				e		07 22 25.7	
VYHS	**Vyhne**	**85.17**	**329**	e	**P**	**07 22 19.8**	**0.0**
HIA	**Hailar**	**85.50**	**30**	eP	**P**	**07 22 20.7**	**-0.8**
CONA	**Conrad Observa**	**86.22**	**327**	⇑iP	**P**	**07 22 25.1**	**0.0**
	comp=Z,15nm,1.4s,mb5.0						
CSNA	**Conrad Observa**	**86.22**	**327**	⇑iP	**P**	**07 22 25.1**	**0.0**
	comp=Z,14nm,1.4s,mb5.0						
OKC	**Ostrava-Krasne**	**86.43**	**330**	eP	**P**	**07 22 26.5**	**+0.4**
OKC				e		07 22 32.4	
OKC				MLR	MLR		
	comp=Z,3μm,19.2s,MS5.7						
OKC	**Ostrava-Krasne**	**86.43**	**330**	eP	**P**	**07 22 26.5**	**+0.4**
OKC				ex	x	07 22 32.4	
OKC	**Ostrava-Krasne**	**86.43**	**330**	eP	**P**	**07 22 26.5**	**+0.4**
OKC				e		07 22 32.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MOA	Molln	86.97	326	⇑iP	P	07 22 28.8	0.0
	comp=Z,22nm,1.1s,mb5.3						
TREC	Trest	87.32	328	eP	P	07 22 30.3	-0.1
TREC				e		07 22 36.6	
TREC				MLR	MLR		
	comp=Z,4μm,17.9s,MS5.9						
TREC	Trest	87.32	328	eP	P	07 22 30.3	-0.1
TREC				epP	pP	07 22 36.6	+5.0
DPC	Dobruska-Polom	87.64	329	eP	P	07 22 32.4	+0.5
DPC				e		07 22 38.7	
DPC				MLR	MLR		
	comp=Z,3μm,19.1s,MS5.8						
DPC	Dobruska-Polom	87.64	329	eP	P	07 22 32.4	+0.5
DPC				epP	pP	07 22 38.7	+5.6
DPC	Dobruska-Polom	87.64	329	eP	P	07 22 32.4	+0.5
DPC				e		07 22 38.7	
UPC	Upice	87.89	329	eP	P	07 22 33.2	+0.1
UPC				epP	pP	07 22 39.2	+4.9
GEC2	GERESS Array S	87.90	327	eP	P	07 22 32.2	-1.1
GEC2				e*PP	pP	07 22 38.6	+4.2
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
GEC2	GERESS Array S	87.90	327	eP	P	07 22 32.2	-1.1
	comp=Z,9.0nm,1.0s,mb5.0						
GEC2				epP	pP	07 22 38.6	+4.2
	comp=Z,9.0nm,1.0s						
GERES	GERESS Array B	87.90	327	P	P	07 22 31.8	-1.5
	comp=Z,1.6nm,0.9s,mb4.3,baz=160,slow=4.3,SNR=8.3						
KHC	Kasperske Hory	88.15	327	eP	P	07 22 33.6	-0.8
KHC				epP	pP	07 22 39.7	+4.1
PRU	Pruhonice	88.24	328	eP	P	07 22 34.8	0.0
PRU				epP	pP	07 22 41.3	+5.3
FETA	Feichten	88.28	324	⇑iP	P	07 22 35.4	+0.3
	comp=Z,26nm,1.1s,mb5.4						
MOTA	Moosalm	88.28	325	⇑iP	P	07 22 35.1	0.0
	comp=Z,18nm,1.0s,mb5.2						
FRF	La Foret Royal	88.50	320	eP	P	07 22 36.1	-0.1
WET	Wettzell	88.51	327	eP	P	07 22 35.6	-0.5
WET				e*PP	pP	07 22 41.3	+4.0
WET				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
WET				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
WET	Wettzell	88.51	327	eP	P	07 22 35.6	-0.5
	comp=Z,11nm,1.0s,mb5.1						
WET				epP	pP	07 22 41.3	+4.0
	comp=Z,11nm,1.0s						
PVCC	Panska Ves	88.59	328	eP	P	07 22 36.5	+0.1
PVCC				e		07 22 43.3	
PVCC				MLR	MLR		
	comp=Z,5μm,19.4s,MS5.9						
PVCC	Panska Ves	88.59	328	eP	P	07 22 36.5	+0.1
PVCC				epP	pP	07 22 43.3	+5.7
PVCC	Panska Ves	88.59	328	eP	P	07 22 36.5	+0.1
PVCC				e		07 22 43.3	
FUR	Furstenfeldbru	88.71	325	eP	P	07 22 37.5	+0.4
FUR				e*PP	pP	07 22 43.7	+5.4
FUR				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.9						
FUR				pmax	pmax		
	comp=Z,74nm,1.1s,mb5.9						
FUR	Furstenfeldbru	88.71	325	eP	P	07 22 37.5	+0.4
	comp=Z,74nm,1.1s,mb5.9						
FUR				epP	pP	07 22 43.7	+5.4
	comp=Z,74nm,1.1s						
DAVA	Damuels	88.90	324	⇑iP	P	07 22 38.2	+0.2
	comp=Z,28nm,0.9s,mb5.6						
MBDF	Montbardon	89.11	321	eP	P	07 22 39.5	+0.5
	comp=Z,58nm,1.3s,mb5.5						
MBDF	Montbardon	89.11	321	eP	P	07 22 39.5	+0.5
MBDF				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.5						
MBDF	Montbardon	89.11	321	eP	P	07 22 39.5	+0.5
	comp=Z,29nm,1.3s,mb5.5						
BRG	Berggiesshubel	89.11	328	eP	P	07 22 40.0	+1.1
BRG				e		07 22 45.4	
BRG				pmax	pmax		
	comp=Z,23nm,1.9s,mb5.2						
BRG				pmax	pmax		
	comp=Z,11nm,1.3s,mb5.0						
BRG	Berggiesshubel	89.11	328	eP	P	07 22 39.3	+0.4
	comp=Z,18nm,1.3s,mb5.2						
BRG				epP	pP	07 22 45.3	+5.2
	comp=Z,18nm,1.3s						
BRG	Berggiesshubel	89.11	328	eP	P	07 22 40.0	+1.0
	comp=Z,38nm,1.9s,mb5.4						
BRG				e		07 22 45.4	
	comp=Z,18nm,1.3s						
ROTZ	Rotzenmuhle	89.25	327	eP	P	07 22 39.6	0.0
	comp=Z,21nm,1.9s,mb5.1						
SMRF	Simiane la Rot	89.38	320	eP	P	07 22 41.0	+0.7
	comp=Z,84nm,1.4s,mb5.6						
SMRF	Simiane la Rot	89.38	320	eP	P	07 22 41.0	+0.7
	comp=Z,84nm,1.4s,mb5.9						
NKC	Novy Kostel	89.42	327	eP	P	07 22 41.1	+0.7
NKC				epP	pP	07 22 46.8	+5.2
FBE	Freiberg	89.43	328	eP	P	07 22 40.4	0.0
MANZ	Manzenberg	89.44	327	eP	P	07 22 40.2	-0.2
	comp=Z,11nm,1.1s,mb5.1						
MANZ				epP	pP	07 22 46.3	+4.7
	comp=Z,11nm,1.1s						
WERN	Wernitzgruen	89.50	327	eP	P	07 22 41.1	+0.4
TANN	Tannenbergstha	89.53	328	eP	P	07 22 41.2	+0.3
	comp=Z,27nm,1.8s,mb5.3						
GUNZ	Gunzen	89.57	327	eP	P	07 22 41.7	+0.7
LPG	La Plagne	89.57	321	eP	P	07 22 39.5	-1.7
WERD	Werda	89.63	327	eP	P	07 22 41.6	+0.2
GRA1	Grafenberg Arr	89.69	326	eP	P	07 22 41.5	-0.2
	comp=Z,41nm,1.2s,mb5.6						
GRA1				epP	pP	07 22 48.0	+5.1
GRF	Grafenberg Arr	89.69	326	eP	P	07 22 41.5	-0.2
GRF				e*PP	pP	07 22 48.0	+5.1
GRF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.6						
GRF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.6						
GRF	Grafenberg Arr	89.69	326	eP	P	07 22 41.5	-0.2
GRF				e*PP	pP	07 22 48.0	+5.1
GRF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.6						
GRF	Grafenberg Arr	89.69	326	eP	P	07 22 41.5	-0.2
	comp=Z,41nm,1.2s,mb5.6						
GRF				epP	pP	07 22 48.0	+5.1
	comp=Z,41nm,1.2s						
GRFO	Grafenberg	89.69	326	eP	P	07 22 41.7	0.0
CLL	Collm	89.85	328	eP	P	07 22 42.9	+0.6
	comp=Z,32nm,1.7s,mb5.4						
CLL				epP	pP	07 22 48.9	+5.4
	comp=Z,10.0nm,0.8s						
CLL	Collm	89.85	328	eP	P	07 22 42.0	-0.3
CLL				esP	sP	07 22 49.0	+5.0
CLL				ePP	PP	07 26 15.0	-0.2
MOX	Moxa	90.10	327	eP	P	07 22 43.8	+0.3
	comp=Z,17nm,1.4s,mb5.2						
MOX				epP	pP	07 22 50.2	+5.5
BFO	Black Forest	90.36	324	eP	P	07 22 44.6	-0.2
BFO				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.4						
BFO	Black Forest	90.36	324	eP	P	07 22 44.6	-0.2
	comp=Z,34nm,1.7s,mb5.4						
MDT	Midelt	90.40	306	P	P	07 22 45.9	+0.5
	comp=Z,5.0nm,1.0s,mb4.8,baz=112,slow=5.0,SNR=8.7						
CABF	La Chapelle	90.59	322	eP	P	07 22 44.8	-1.1
	comp=Z,54nm,1.4s,mb5.4						
CABF	La Chapelle	90.59	322	eP	P	07 22 44.8	-1.1
CABF				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.4						
CABF	La Chapelle	90.59	322	eP	P	07 22 44.8	-1.1
	comp=Z,27nm,1.4s,mb5.4						
WLF	Walferdange	92.31	324	eP	P	07 22 53.1	-0.7
ESDC	Sonseca Array	93.20	312	P	P	07 22 58.7	+0.5
	comp=Z,0.3nm,0.4s,mb4.1,baz=116,slow=5.9,SNR=4.0						
YKA	Yellowknife Ar	141.37	3	PKhKP		07 29 07.2	
	comp=Z,0.5nm,0.9s,baz=341,slow=3.3,SNR=4.5						
YKA				PP	PP	07 32 16.2	-0.2
	comp=Z,0.4nm,0.9s,baz=352,slow=7.2,SNR=4.3						
YKA	Yellowknife Ar	141.37	3	PKP		07 29 07.2	
YKA				PP	PP	07 32 16.2	-0.2
FFC	Flin Flon	148.62	351	ePKP2	PKPbc	07 29 29.7	-0.9
EDM	Edmonton	150.69	4	ePKIKP	PKPdf	07 29 30.2	0.0
EDM				e		07 29 35.6	
EDM				e		07 29 41.6	
ULM	Lac du Bonnet	151.39	340	PKPbc	PKPbc	07 29 34.8	-2.6
	comp=Z,4.3nm,0.6s,baz=31,slow=2.6,SNR=6.0						
ACSO	Alum Creek Sta	151.76	312	ePKPbc	PKPbc	07 29 38.6	-0.1
ACSO				ePKPab	PKPab	07 29 46.5	-1.0
NEW	Newport	155.17	11	ePKIKP	PKPdf	07 29 46.3	+9.4
WVOR	Wild Horse Val	160.37	18	ePKIKP	PKPdf	07 29 39.7	-3.8
PDAR	Pinedale Array	161.22	358	PKP	PKPdf	07 29 42.8	-1.7
	comp=Z,0.6nm,0.9s,baz=228,slow=1.8,SNR=4.6						
PDAR				PKPab	PKPab	07 30 27.0	-0.8
	comp=Z,0.8nm,1.0s,baz=191,slow=0.8,SNR=2.8						
NVAR	Mina Array Bea	164.10	23	PKP	PKPdf	07 29 47.4	-0.1
	comp=Z,0.6nm,0.9s,baz=226,slow=3.9,SNR=4.2						
NVAR				PKPab	PKPab	07 30 40.3	-0.4
	comp=Z,1.1nm,0.8s,baz=302,slow=3.8,SNR=6.6						
TXAR	Lajitas Array	171.88	313	PKP	PKPdf	07 29 51.5	-1.5
	comp=Z,0.5nm,1.0s,baz=116,slow=2.9,SNR=3.7						
TXAR				PKPab	PKPab	07 31 15.4	0.0
	comp=Z,0.7nm,0.8s,baz=52,slow=2.1,SNR=6.6						

ISCJB ***13*** *07:11:56.7±0.7, 3.02S±0.03×129.89E±0.03, h41km±6km, mb4.9/63, MS4.3/6, Error ellipse: s-maj=5.9km s-min=5.0km az=165.4*
MOS ***13*** *07:11:56.2±1.0, 3.00S×129.71E, h33km, mb5.1/29, Error ellipse: s-maj=13.7km s-min=6.6km az=113.8*
DJA ***13*** *07:11:58, 2.93S×129.90E, h24km, Mw5.3/18*
BJI ***13*** *07:11:58.0, 3.10S×129.70E, h35km, mB5.2, mb4.9, Ms4.9, Msz4.5*
IDC ***13*** *07:12:00.4±2.7, 3.02S×129.86E, h57km±24km, mb4.5/17, mb1 4.6/19, mb1mx4.5/23, mbtmp4.6/19, ML5.1/2, MS4.5/2, Ms1 4.5/2, ms1mx3.9/24, Error ellipse: s-maj=20.4km s-min=8.8km az=78.0*
NEIC ***13*** *07:12:00.1±1.0, 3.09S×129.75E, h54km±9km, mb5.0/25, Error ellipse: s-maj=8.2km s-min=4.7km az=61.0*
ISC 13 07:11:58.7±0.6, **3.04S**±0.03×**129.87E**±0.04, **h40**km±5km, **h54**km±4.2km**: pP-P, n162,** σ1.**09**/158, **mb4.9**/63, **MS4.3**/6, **3C-4D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.98	252	P	Pn	07 12 15.7	-0.3
AAI	Ambon	1.79	249	P	Pn	07 12 28.0	+0.9
SWI	Sorong	2.57	33	P	Pn	07 12 36.0	-1.9
LBMI	Labuha	3.36	315	P	Pn	07 12 47.8	-0.9
TNTI	Ternate	4.53	327	P	Pn	07 13 03.3	-1.6
BAKI	Biak	6.50	74	P	Pn	07 13 31.9	0.0
	2μm,0.8s,6.0nm						
KDI	Kendari	7.29	263	P	Pn	07 13 43.1	+0.4
	121nm,1.0s,4μm0.4nm						
BATI	Baumata	9.41	221	P	Pn	07 14 15.5	+3.6
	9.8nm,0.3s,baz=123,slow=2.6,SNR=16						
BATI				LR	LR	07 17 56.9	
	comp=Z,7μm,20.9s,baz=50,slow=38						
BATI	Baumata	9.41	221	P	Pn	07 14 15.2	+3.4
	106nm,0.9s,1μm						
KAKA	Kakadu	9.94	165	eP	x	07 13 57.0	
	68nm,0.6s						
KAKA				eS	x	07 15 44.9	
PCI	Palu	10.24	282	P	Pn	07 14 23.4	+0.2
	256nm,1.1s,2μm						
KAPI	Kappang	10.28	259	ePn	Pn	07 14 24.5	+0.8
KAPI	Kappang	10.28	259	P	Pn	07 14 24.8	+1.1
	61nm,0.9s,698nm						
JAY	Jayapura	10.84	88	P	Pn	07 14 31.4	0.0
	128nm,0.7s,4μm						
DAV	Davao City (W)	10.91	337	P	Pn	07 14 35.0	+2.6
	23nm,0.3s,baz=294,slow=13,SNR=2.3						
BBKI	Banjar Baru	15.01	268	P	Pn	07 15 28.8	+0.7
	124nm,1.3s,3μm						
KHKI	Kahang-Kahang	15.14	249	P	Pn	07 15 29.2	-0.6
	89nm,1.2s,2μm						
FITZ	Fitzroy Crossi	15.53	195	eP	Pn	07 15 32.9	-2.0
	46nm,0.6s						
FITZ				eS	S	07 18 27.6	-13
KMMI	Kalianget	16.33	255	P	Pn	07 15 46.6	+1.4
	108nm,1.2s						
COEN	Coen	17.04	130	ePn	Pn	07 15 55.2	+1.0
	351nm,1.6s						
COEN				eSn	Sn	07 18 45.0	-18
COEN	Coen	17.04	130	P	Pn	07 15 55.5	+1.4
	52nm,1.5s,618nm						
WRAB	Tennant Creek	17.35	166	eP	Pn	07 15 54.7	-3.3
WRAB				e		07 19 01.2	
WRAB				pmax	pmax		
	comp=Z,60nm,0.6s						
WRAB	Tennant Creek	17.35	166	ePn	Pn	07 15 54.7	-3.2
	comp=Z,60nm,0.6s						
WRAB				eSn	Sn	07 19 01.2	-9.0
WRAB	Tennant Creek	17.35	166	P	Pn	07 15 54.6	-3.4
	comp=Z,88nm,0.9s,comp=Z,759nm						
WB2	Warramunga Arr	17.36	166	eP	Pn	07 15 54.2	-3.9
WB2				eS	S	07 19 01.4	-16
KRKI	Karangkates	18.05	253	P	Pn	07 16 10.5	+3.8
	comp=Z,314nm,0.9s,comp=Z,8μm						
PMG	Port Moresby	18.31	111	eP	Pn	07 16 11.2	+1.4
PMG				pmax	pmax		
	comp=Z,50nm,1.0s						
PMG	Port Moresby	18.31	111	eP	Pn	07 16 11.2	+1.4
	comp=Z,50nm,1.0s						
SBUM	Sibu	18.46	287	P	Pn	07 16 12.8	+1.2
	comp=Z,44nm,1.4s,comp=Z,830nm						
SJI	Sawahan	18.61	255	P	Pn	07 16 13.2	-0.2
	comp=Z,124nm,1.2s,comp=Z,3μm						
KSM	Kuching	20.06	283	eP	P	07 16 29.0	+0.3
	comp=Z,61nm,0.8s						
MBWA	Marble Bar	20.54	208	eP	P	07 16 31.6	-2.2
	comp=Z,207nm,1.6s						
MBWA	Marble Bar	20.54	208	P	P	07 16 34.0	+0.2
	comp=Z,76nm,1.5s,comp=Z,1μm						
ASAR	Alice Springs	20.88	170	P	P	07 16 37.8	+0.3
	comp=Z,223nm,0.7s,baz=352,slow=10,SNR=2175						
ASAR				S	S	07 20 28.2	+0.1
	comp=Z,39nm,1.0s,baz=354,slow=22,SNR=10						
ASAR	Alice Springs	20.88	170	P	P	07 16 37.8	+0.3
ASAR				S	S	07 20 28.3	+0.1
ASAR				pmax	pmax		
	comp=Z,223nm,0.7s						
ASAR				smax			
	comp=N,39nm,1.0s						
TPI	Tanjungpandan	22.18	270	P	P	07 16 51.0	-0.6
	comp=N,30nm,1.4s,comp=N,530nm,mb4.5						
GUMO	Guam	22.24	42	LR	LR	07 23 46.6	
	comp=N,531nm,20.7s,MS4.0,baz=222,slow=32						
LEM	Lembang	22.48	260	P	P	07 16 53.4	-1.4
	comp=N,70nm,1.1s,comp=N,7μm,mb5.0						
CTA	Charters Tower	23.30	138	eP	P	07 17 04.9	+1.5
	comp=N,56nm,1.0s,mb5.0						
CTA				eS	S	07 21 06.1	-6.8
CTA	Charters Tower	23.30	138	P	P	07 17 04.3	+1.0
	comp=N,29nm,0.8s,mb4.8,baz=322,slow=11,SNR=34						
CTA	Charters Tower	23.30	138	eP	P	07 17 04.9	+1.5
CTA				eS	S	07 21 06.1	-6.8
CTA				pmax	pmax		
	comp=Z,56nm,1.0s						
CTAO	Charters Tower	23.30	138	eP	P	07 17 04.3	+0.9
CTAO				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.2						
CTAO	Charters Tower	23.30	138	eP	P	07 17 04.3	+1.0
	comp=Z,114nm,1.1s,mb5.2						
CTAO	Charters Tower	23.30	138	P	P	07 17 05.0	+1.6
	comp=Z,96nm,1.0s,comp=Z,785nm,mb5.2						
PPBI	Pangkal Pinang	23.72	272	P	P	07 17 08.2	+0.8
	comp=Z,53nm,1.2s,comp=Z,1μm,mb4.8						
KSI	Kapahiang	27.23	268	P	P	07 17 43.2	+4.0
FORT	Forrest	27.64	183	eP	P	07 17 41.2	-1.5
	comp=Z,22nm,0.6s,mb5.0						
PDSI	Padang	29.46	274	P	P	07 17 58.2	-0.9
	comp=Z,69nm,0.7s,mb5.5						
PPI	Padang Panjang	29.56	274	P	P	07 18 00.3	+0.3
	comp=Z,61nm,0.8s,mb5.4						
KLBR	Kellerberrin	30.61	201	eP	P	07 18 07.0	-2.0
	comp=Z,15nm,0.7s,mb4.9						
STKA	Stephens Creek	30.74	160	eP	P	07 18 10.2	+0.1
	comp=Z,6.8nm,0.3s,mb5.0						
STKA	Stephens Creek	30.74	160	P	P	07 18 10.7	+0.5
	comp=Z,11nm,0.5s,mb5.0,baz=335,slow=8.6,SNR=45						
PSI	Prapat	31.47	280	P	P	07 18 15.3	-1.5
	comp=Z,15nm,0.9s,mb4.8,baz=86,slow=7.9,SNR=8.8						
PSI	Prapat	31.47	280	P	P	07 18 15.3	-1.5
PSI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
MUN	Mundaring	31.52	203	eP	P	07 18 16.5	-0.6
NWAO	Narrogin (SRO)	32.00	200	P	P	07 18 20.1	-1.2
	comp=Z,4.0nm,0.4s,mb4.6,baz=21,slow=9.4,SNR=8.9						
NWAO	Narrogin (SRO)	32.00	200	P	P	07 18 20.1	-1.2
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CBIJ	Chichi jima	32.23	21	P	P	07 18 19.9	-3.5
	comp=Z,66nm,0.7s,mb5.6,baz=275,slow=21,SNR=2.3						
ADE	Adelaide	32.81	167	eP	P	07 18 30.0	+1.7
ARMA	Armidale	34.14	145	eP	P	07 18 41.4	+1.4
NJ2	Nanjing	36.43	344	eP	P	07 19 01.3	+1.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
BDT	Bhumibol Dam	36.52	305	P	P	07 19 00.0	-0.6
CAN	Canberra	36.70	153	eP	P	07 19 01.7	-0.2
GYA	Guiyang	36.92	324	eP	P	07 19 05.3	+1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,430nm,18.9s,MS4.5						
GYA				LR	LR		
	comp=E,490nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=Z,460nm,18.0s,MS4.3						
CMAR	Chiang Mai Arr	37.19	306	P	P	07 19 06.8	+0.5
	comp=Z,4.0nm,0.4s,mb4.6,baz=133,slow=7.3,SNR=13						
CMAR	Chiang Mai Arr	37.19	306	P	P	07 19 06.8	+0.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TOO	Toolangi	37.24	159	eP	P	07 19 07.6	+1.1
CHRT	Chiangrai	37.30	309	⇓P	P	07 19 07.5	+0.3
	comp=Z,184nm,0.9s,mb5.9						
CHG	Chiang Mai	37.38	307	⇑P	P	07 19 08.4	+0.5
	comp=Z,40nm,0.8s,mb5.3						
CHTO	Chiang Mai	37.38	307	eP	P	07 19 08.4	+0.5
CHTO				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.2						
CHTO	Chiang Mai	37.38	307	eP	P	07 19 08.4	+0.5
	comp=Z,32nm,0.9s,mb5.2						
CHTO	Chiang Mai	37.38	307	P	P	07 19 08.5	+0.6
KMI	Kunming	38.42	318	P	P	07 19 19.1	+2.5
KMI				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.7						
MAJO	Matsushiro	40.14	10	eP	P	07 19 29.4	-1.4
MAJO				pmax	pmax		
	comp=Z,235nm,2.5s,mb5.5						
MAJO	Matsushiro	40.14	10	eP	P	07 19 29.4	-1.4
	comp=Z,235nm,2.5s,mb5.5						
MAT	Matsushiro	40.14	10	P	P	07 19 28.0	-2.8
MJAR	Matsushiro Arr	40.14	10	P	P	07 19 29.0	-1.8
	comp=Z,4.8nm,0.7s,mb4.4,baz=182,slow=8.8,SNR=14						
MJAR	Matsushiro Arr	40.14	10	P	P	07 19 29.0	-1.8
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS	Korea Array	40.33	358	P	P	07 19 32.3	0.0
	comp=Z,1.1nm,0.5s,mb3.9,baz=179,slow=10,SNR=3.3						
KSRS	Korea Array	40.33	358	P	P	07 19 32.3	0.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
XAN	Xi'an	41.83	334	P	P	07 19 45.8	+1.1
XAN				AP	pP	07 19 59.9	+3.8
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.3						
XAN				LR	LR		
	comp=E,105nm,18.9s						
XAN				LR	LR		
	comp=Z,173nm,21.1s,MS3.9						
CD2	Chengdu	41.94	326	P	P	07 19 46.8	+1.1
CD2				AP	pP	07 20 02.1	+5.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
CD2				LR	LR		
	comp=N,350nm,12.3s						
CD2				LR	LR		
	comp=Z,410nm,9.9s						
BJI	Beijing	44.67	345	P	P	07 20 06.3	-1.3
BJI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.9						
LZH	Lanzhou	45.89	330	eP	P	07 20 17.0	-0.3
LZH				AP	pP	07 20 31.5	+2.7
LZH				XP	sP	07 20 36.0	+2.5
LZH				AMB	AMB		
	comp=Z,30nm,1.6s,mb5.0						
LZH				AMB	AMB		
	comp=Z,91nm,4.1s						
LZH				LR	LR		
	comp=N,1μm,15.7s						
LZH				LR	LR		
	comp=Z,1μm,16.8s,MS4.9						
HHC	Hu-ho-hao-te	46.77	341	eP	P	07 20 27.0	+2.9
HHC				AP	pP	07 20 37.6	+2.0
HHC				XP	sP	07 20 41.3	+1.0
HHC				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,356nm,5.7s						
HHC				LR	LR		
	comp=N,112nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=E,239nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=Z,396nm,16.6s,MS4.5						
MDJ	Mudanjiang	47.44	360	P	P	07 20 31.8	+2.5
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,170nm,5.2s						
GTA	Gaotai	50.48	330	eP	P	07 20 50.3	-2.4
GTA				AP	pP	07 20 54.4	-10
GTA				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.6						
GTA				AMB	AMB		
	comp=Z,115nm,4.5s						
GTA				LR	LR		
	comp=N,512nm,14.4s,MS4.8						
GTA				LR	LR		
	comp=E,480nm,17.7s,MS4.8						
GTA				LR	LR		
	comp=Z,653nm,17.7s,MS4.7						
GTA	Gaotai	50.48	330	eP	P	07 20 54.8	+2.1
GTA				AP	pP	07 21 09.9	+5.6
GTA				S	S	07 28 05.3	+1.5
GTA				SS	SS	07 31 38.8	+0.4
GTA				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
GTA				LR	LR		
	comp=N,218nm,18.9s,MS4.4						
GTA				LR	LR		
	comp=E,228nm,15.0s,MS4.4						
GTA				LR	LR		
	comp=Z,139nm,17.4s,MS4.0						
TAPN	Taplejung	50.62	309	eP	P	07 20 53.3	-0.7
	comp=Z,25nm,0.8s,mb5.2						
ODAN	Odare	50.63	309	eP	P	07 20 53.7	-0.4
YSS	Yuzh-Sakhalins	51.06	11	eP	P	07 20 57.1	+0.2
YSS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
RAMN	Ramite	51.29	308	eP	P	07 20 59.0	0.0
	comp=Z,71nm,0.8s,mb5.6						
JIRN	Jiri	51.95	309	eP	P	07 21 03.8	-0.2
KLR	Kul'dur	52.08	2	eP	P	07 21 03.0	-1.5
GUN	Gumba	52.31	309	eP	P	07 21 05.9	-0.7
	comp=Z,56nm,0.8s,mb5.5						
KKN	Kakani	52.72	309	eP	P	07 21 09.4	-0.3
GKN	Gorkha	53.32	308	eP	P	07 21 13.4	-0.7
KOLN	Koldanda	54.03	308	eP	P	07 21 19.1	-0.2
	comp=Z,42nm,0.8s,mb5.5						
ULN	Ulaanbaatar	54.49	341	eP	P	07 21 23.1	+0.9
ULN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
ULN	Ulaanbaatar	54.49	341	eP	P	07 21 23.1	+0.9
	comp=Z,15nm,1.0s,mb4.9						
HYB	Hyderabad	54.53	294	iP	P	07 21 23.5	+0.4
HYB	Hyderabad	54.53	294	eP	P	07 21 21.0	-2.1
SONM	Songino Array	54.67	341	P	P	07 21 23.8	+0.2
	comp=Z,5.9nm,1.0s,mb4.6,baz=158,slow=7.6,SNR=19						
SONM	Songino Array	54.67	341	P	P	07 21 23.8	+0.2
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZAK	Zakamensk	57.91	340	eP	P	07 21 46.0	-0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
TLY	Talaya	58.90	341	eP	P	07 21 55.8	+2.3
TLY				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.0						
POO	Poona	59.14	294	ex	x	07 22 02.0	
WMQ	Urumqi	60.04	326	P	P	07 22 03.8	+2.3
WMQ				AMB	AMB		

	comp=Z,22nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,128nm,5.4s						
PETK	**Petropavlovsk-**	**60.63**	**19**	P	**P**	**07 22 04.9**	**-0.5**
	comp=Z,4.7nm,0.6s,mb4.8,baz=187,slow=5.2,SNR=7.8						
BOD	**Bodaibo**	**61.99**	**350**	*e*P	**P**	**07 22 14.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
HVS	**Khovu-Aksy**	**62.16**	**335**	*d i*P	**P**	**07 22 16.2**	**+0.5**
HVS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.8						
MK31	**Makanchi Array**	**64.87**	**326**	*e*P	**P**	**07 22 33.6**	**-0.2**
MKAR	**Makanchi Array**	**64.87**	**326**	P	**P**	**07 22 33.6**	**-0.1**
	comp=Z,4.6nm,0.5s,mb4.7,baz=117,slow=8.0,SNR=49						
MKAR	**Makanchi Array**	**64.87**	**326**	P	**P**	**07 22 33.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YAK	**Yakutsk**	**64.89**	**360**	*e*P	**P**	**07 22 33.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
TKM2	**Tokmak 2**	**66.88**	**320**	*e*P	**P**	**07 22 46.8**	**0.0**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TKM2	**Tokmak 2**	**66.88**	**320**	*e*P	**P**	**07 22 46.8**	**+0.1**
	comp=Z,6.1nm,0.6s,mb4.8						
AAK	**Ala-Archa**	**67.46**	**319**	*e*P	**P**	**07 22 50.3**	**-0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.9						
AML	**Almayashu**	**67.77**	**318**	*e*P	**P**	**07 22 52.9**	**+0.5**
	comp=Z,13nm,1.0s,mb4.9						
SEY	**Seymchan**	**67.96**	**11**	*e*P	**P**	**07 22 54.2**	**+1.0**
ZAA0	**Zalesovo Array**	**68.00**	**333**	*e*P	**P**	**07 22 52.2**	**-1.4**
ZALV	**Zalesovo Beam**	**68.00**	**333**	P	**P**	**07 22 52.6**	**-1.0**
	comp=Z,11nm,0.8s,mb4.9,baz=114,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**68.00**	**333**	P	**P**	**07 22 52.7**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KURK	**Kurchatov**	**69.10**	**328**	⇑*i*P	**P**	**07 23 00.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
KURK	**Kurchatov**	**69.10**	**328**	*e*P	**P**	**07 23 00.4**	**-0.2**
	comp=Z,38nm,0.9s,mb5.3						
NVS	**Novosibirsk**	**69.28**	**333**	*i* P	**P**	**07 22 59.6**	**-2.0**
VOSK	**Vostochnaya**	**74.21**	**327**	P	**P**	**07 23 30.5**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
TIXI	**Tiksi**	**74.55**	**360**	*d i*P	**P**	**07 23 32.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TIXI	**Tiksi**	**74.55**	**360**	*e*P	**P**	**07 23 33.0**	**+0.1**
	comp=Z,17nm,1.4s,mb4.8						
BVA0	**Borovoye Array**	**74.67**	**327**	P	**P**	**07 23 33.5**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
BRVK	**Borovoye**	**74.74**	**327**	*e*P	**P**	**07 23 34.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
BRVK	**Borovoye**	**74.74**	**327**	*e*P	**P**	**07 23 34.1**	**-0.2**
	comp=Z,11nm,0.8s,mb4.8						
VNDA	**Vanda**	**76.37**	**173**	P	**P**	**07 23 43.1**	**-0.2**
	comp=Z,6.2nm,0.8s,mb4.6,baz=310,slow=6.5,SNR=21						
VNDA	**Vanda**	**76.37**	**173**	*e*P	**P**	**07 23 43.6**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VNDA	**Vanda**	**76.37**	**173**	*e*P	**P**	**07 23 43.6**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.5						
MAW	**Mawson**	**78.57**	**201**	P	**P**	**07 23 55.9**	**+0.2**
	comp=Z,2.6nm,0.5s,mb4.4,baz=114,slow=6.9,SNR=6.8						
MAW	**Mawson**	**78.57**	**201**	P	**P**	**07 23 55.9**	**+0.2**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AB31	**Akbulak array**	**79.35**	**321**	P	**P**	**07 23 59.9**	**-0.4**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
AKTK	**Aktyubinsk**	**80.88**	**322**	P	**P**	**07 24 08.3**	**-0.3**
AKTO	**Aktyubinsk**	**80.88**	**322**	P	**P**	**07 24 08.3**	**-0.3**
	comp=Z,5.0nm,0.5s,mb4.7,baz=97,slow=10,SNR=14						
AKTO	**Aktyubinsk**	**80.88**	**322**	P	**P**	**07 24 08.3**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
OPO	**Ambohidratompo**	**82.10**	**252**	P	**P**	**07 24 16.7**	**+1.0**
	comp=Z,11nm,0.6s,mb4.9,baz=76,slow=2.9,SNR=40						
ARU	**Arti**	**82.30**	**328**	*d i*P	**P**	**07 24 15.9**	**0.0**
ARU				S	S	07 34 31.8	+3.3
ARU				SS	SS	07 39 57.0	+7.5
ARU				pmax	pmax		
	comp=Z,22nm,2.5s,mb4.6						
ARU	**Arti**	**82.30**	**328**	*e*P	**P**	**07 24 15.4**	**-0.5**
	comp=Z,20nm,1.0s,mb5.0						
QSPA	**South Pole Qui**	**86.91**	**180**	P	**P**	**07 24 38.9**	**+0.1**
	comp=Z,5.4nm,0.8s,mb4.8,baz=342,slow=2.2,SNR=14						
QSPA	**South Pole Qui**	**86.91**	**180**	P	**P**	**07 24 38.9**	**+0.1**
SYO	**Syowa Base**	**87.28**	**201**	⇑*e*X		07 24 49.6	
OBN	**Obninsk**	**94.36**	**325**	*e*P	**P**	**07 25 13.9**	**-0.2**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb5.0						
LVZ	**Lovozero**	**94.77**	**338**	*e*P	**P**	**07 25 16.6**	**+1.0**
LVZ				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.2						
SPITS	**Spitsbergen Ar**	**97.68**	**349**	P	**P**	**07 25 28.9**	**+0.2**
	comp=Z,29nm,1.1s,mb5.7,baz=108,slow=40,SNR=3.1						
ARCES	**ARCESS Array B**	**97.84**	**340**	P	**P**	**07 25 29.5**	**0.0**
	comp=Z,6.4nm,1.0s,mb5.1,baz=61,slow=5.7,SNR=7.1						
ARCES	**ARCESS Array B**	**97.84**	**340**	P	**P**	**07 25 29.5**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	**97.84**	**340**	P	**P**	**07 25 29.5**	**0.0**
BOSA	**Boshof**	**101.32**	**240**	P	Pdif	07 25 46.2	+0.8
	comp=Z,2.4nm,0.8s,baz=124,slow=9.0,SNR=3.5						
BOSA	**Boshof**	**101.32**	**240**	P	Pdif	07 25 46.2	+0.8
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	**Albuquerque**	**119.00**	**51**	*i* PKIKP	PKPdf	07 30 42.4	-1.2
TXAR	**Lajitas Array**	**122.95**	**57**	PKP	PKPdf	07 30 52.6	+1.3
	comp=Z,0.8nm,0.7s,baz=214,slow=1.4,SNR=8.5						
TXAR	**Lajitas Array**	**122.95**	**57**	PKIKP	PKPdf	07 30 52.6	+1.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JCT	**Junction City**	**125.77**	**54**	*e*PKIKP	PKPdf	07 30 58.2	+1.5
TORD	**Torodi Ar. Bea**	**127.81**	**284**	PKP	PKPdf	07 31 01.1	+0.1
	comp=Z,1.1nm,0.6s,baz=82,slow=1.8,SNR=8.1						
LRAL	**Lakeview Retre**	**134.40**	**45**	*e*PKPdf	PKPdf	07 31 13.8	+0.8
MGV	**Manicaragua**	**145.38**	**54**	*e*	PKPbc	07 31 34.3	+1.2

GUC ***13*** *07:23:38.3±1.2, 23.29S×70.74W, h43km±3km, ML5.6, MS5.6*

NEIC ***13*** *07:23:39.9±0.2, 23.20S×70.55W, h16km, mb5.5/155, ME5.8, MS5.9/194, MW6.1, ML5.6(GUC), Error ellipse: s-maj=6.0km s-min=4.0km az=57.0, Moment Tensor Solution. s43 Moment tensor: Scale 10^{18}Nm; M_{rr}0.94; $M_{\theta\theta}$0.30; $M_{\phi\phi}$-1.24; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.03; $M_{\phi r}$-1.02; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s186.00000°, δ67.00000°, λ95.00000°. NP2:ϕ_s354.00000°, δ24.00000°, λ79.00000°. Principal axes: T 1.3500, Plg67.0000°, Azm104.0000°; N 0.3000, Plg4.0000°, Azm3.0000°; P -1.6500, Plg21.0000°, Azm272.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s355.00000°, δ15.00000°, λ90.00000°. NP2:ϕ_s175.00000°, δ75.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm85.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm265.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at Mejillones; [IV] at Antofagasta, Maria Elena and Tocopilla; [III] at San Pedro de Atacama; [II] at Loa. Also felt at Calama.

LDG ***13*** *07:23:39.5±0.3, 21.87S×70.50W, h10km, Mb5.5/13, Ms5.9/10 Error ellipse: s-maj=31.2km s-min=11.2km az=169.0*

GCMT ***13*** *07:23:40.4±0.1, 23.18S×70.94W, h20km, MW6.2/106, Moment Tensor Solution. s106,c234; s105,c361; Duration: 3.0s Moment tensor: Scale 10^{18}Nm; M_{rr}1.12±.01; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-1.22±.01; $M_{r\theta}$0.30±.02; $M_{\theta\phi}$-0.00±.01; $M_{\phi r}$-2.05±.05; Best double couple: $M_0$2.38000×10^{18} NP1:ϕ_s9.00000°, δ15.00000°, λ106.00000°. NP2:ϕ_s173.00000°, δ75.00000°, λ86.00000°. Principal axes: T 2.3410, Plg59.0000°, Azm77.0000°; N 0.0800, Plg4.0000°, Azm174.0000°; P -2.4190, Plg30.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISCJB ***13*** *07:23:40.5±0.1, 23.16S±0.02×70.55W±0.03, h29km, mb5.4/186, MS5.9/221 Error ellipse: s-maj=4.1km s-min=2.8km az=137.9*

IDC ***13*** *07:23:41.9±2.4, 23.20S×70.54W, h30km±16km, mb5.0/24, mb1 5.0/29, mb1mx5.0/30, mbtmp4.9/29, ML4.5/6, MS5.9/25, Ms1 5.9/25, ms1mx5.7/28, Error ellipse: s-maj=13.5km s-min=10.7km az=67.0*

MOS ***13*** *07:23:42.0±1.6, 22.89S×70.37W, h33km, mb5.6/52, MS6.0/25, Error ellipse: s-maj=9.8km s-min=6.5km az=103.4*

DJA ***13*** *07:23:44, 23.36S×70.18W, h30km, Mw6.2/5*

BJI ***13*** *07:23:45.6, 23.14S×70.74W, h58km, mB6.0, Ms6.2, Msz6.2*

IGIL ***13*** *07:23:47.5, 23.01S×70.34W, h59km, MS5.8*

ISC 13 07:23:42.3±0.1**, 23.23S**±0.02×**70.53W**±0.03**, h31**km±.9km**:pP-P, n1073,** σ**0.81**/809**, mb5.4**/186**, MS5.9**/221**, 247C-189D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.15**	**30**	⇓*i*P	**Pb**	**07 23 46.9**	**-1.2**
MECH				*i* S	**Sb**	**07 23 53.3**	**+1.3**
MECH				AML	AML	07 24 00.8	
	comp=E,891µm,0.8s						
CEN1	**Los Morros**	**0.34**	**117**	⇑*i*P	**Pb**	**07 23 50.1**	**-0.2**
CEN1				*i* S	**Sb**	**07 23 57.7**	**+1.8**
CEN1				AML	AML	07 24 00.2	
	comp=E,292µm,0.6s						
ANCH	**Antofagasta**	**0.46**	**166**	⇓*i*P	**Pb**	**07 23 50.7**	**-1.5**
ANCH				*i* S	**Sb**	**07 23 58.6**	**-0.2**
TOCH	**Tocopilla**	**1.17**	**15**	⇑*i*P	**Pn**	**07 24 00.8**	**-1.9**
TOCH				*i* S	**Sn**	**07 24 18.4**	**+0.8**
TOCH				AML	AML	07 24 22.9	
	comp=E,196µm,0.6s						
MACH	**Maria Elena**	**1.25**	**35**	*e*P	**Pn**	**07 24 03.4**	**-0.4**
MACH				*i* S	**Sn**	**07 24 21.8**	**+2.2**
PB04	**Plate Boundary**	**1.36**	**45**	⇑*i*P	**Pn**	**07 23 58.5**	**-6.7**
PB04				*i* S	**Sn**	**07 24 13.9**	**-8.3**
PB04				AML	AML	07 24 16.6	
	comp=E,331µm,0.6s						
CPN1	**Cerro Paranal**	**1.39**	**175**	⇑*e*P	**Pn**	**07 24 04.2**	**-1.4**
CPN1				*i* S	**Sn**	**07 24 23.2**	**+0.2**
CPN1				AML	AML	07 24 27.5	
	comp=E,443µm,0.5s						
LVC	**Limon Verde**	**1.61**	**68**	Pg	**Pn**	**07 24 11.4**	**+2.7**
	comp=E,4µm,0.3s,baz=249,slow=13						
LVC				Lg		07 24 35.0	
	comp=E,14µm,0.3s,baz=245,slow=9.6,SNR=19						
LVC	**Limon Verde**	**1.61**	**68**	*e*Pn	**Pn**	**07 24 11.0**	**+2.3**
LVC				*e*Sn	**Sn**	**07 24 34.1**	**+5.7**
LVC	**Limon Verde**	**1.61**	**68**	⇑*i*P	**Pn**	**07 24 10.1**	**+1.4**
LVC				*i* S	**Sn**	**07 24 33.9**	**+5.5**
LVC				AML	AML	07 24 40.0	
	comp=N,90µm,0.4s						
ARE	**Arequipa**	**6.80**	**352**	*e*P	**Pn**	**07 25 16.0**	**-4.0**
ARE				*e*S	**Sn**	**07 26 31.0**	**-5.4**
TLL	**Tololo Astrono**	**6.91**	**182**	AMS	AMS	07 28 12.4	
	comp=E,113µm,19.3s						
CFAA	**Coronel Fontan**	**8.58**	**167**	Pn	**Pn**	**07 25 43.2**	**-1.2**
	comp=E,0.8nm,0.3s,baz=342,slow=13,SNR=100						
CFAA				Sn	**Sn**	**07 27 30.6**	**+10**
	comp=E,1.3nm,0.3s,baz=264,slow=15,SNR=2.7						
CFAA				LR	LR	07 29 14.0	
	comp=E,18µm,19.6s,baz=332,slow=39						
PEL	**Peldehue**	**9.87**	**181**	AMS	AMS	07 29 59.4	
	comp=Z,122µm,17.4s						
FCH	**Farellones**	**10.06**	**179**	AMS	AMS	07 30 21.3	
	comp=Z,98µm,18.8s						
CLCH	**Cerro Calan**	**10.12**	**180**	*e*P	**Pn**	**07 26 03.7**	**-1.9**
CLCH				AMS	AMS	07 30 19.2	
	comp=Z,46µm,19.5s						
LMEL	**Las Melosas**	**10.58**	**179**	AMS	AMS	07 30 28.3	
	comp=E,103µm,18.6s						
SIV	**San Ignacio**	**11.45**	**53**	Pn	**Pn**	**07 26 22.3**	**-1.6**
	comp=E,6.5nm,0.3s,baz=246,slow=13,SNR=110						
SIV				Sn	**Sn**	**07 28 31.8**	**+1.0**
	baz=244,slow=21,SNR=2.3						
CPUP	**Villa Florida**	**12.38**	**107**	Pn	**Pn**	**07 26 36.5**	**0.0**
	comp=E,1.2nm,0.3s,baz=280,slow=12,SNR=32						
CPUP				LR	LR	07 31 53.1	
	comp=E,151µm,20.6s,baz=268,slow=40						
CPUP	**Villa Florida**	**12.38**	**107**	*e*P	**Pn**	**07 26 37.4**	**+0.9**
CPUP				pmax	pmax		
	comp=Z,1.0nm,1.1s						
CPUP	**Villa Florida**	**12.38**	**107**	*e*Pn	**Pn**	**07 26 37.4**	**+0.9**
	comp=Z,1.2nm,1.1s						
NNA	**Nana**	**12.70**	**331**	Pn	**Pn**	**07 26 40.7**	**-0.2**
	comp=Z,5.6nm,0.3s,baz=143,slow=15,SNR=5.8						
NNA				Sn	**Sn**	**07 28 52.2**	**-9.0**
	comp=Z,9.5nm,0.3s,baz=209,slow=17,SNR=5.2						
NNA				LR	LR	07 30 53.1	
	comp=Z,38µm,22.0s,baz=159,slow=34						
NNA	**Nana**	**12.70**	**331**	*e*Pn	**Pn**	**07 26 39.4**	**-1.5**
NNA				*e*Sn	**Sn**	**07 28 47.5**	**-14**
LPA	**La Plata**	**16.00**	**139**	*ce*P	**Pn**	**07 27 23.0**	**-2.1**
LPA	**La Plata**	**16.00**	**139**	*e*P	**Pn**	**07 27 28.0**	**+2.9**
LPA				*e*S	**Sn**	**07 30 21.0**	**-0.6**
LPA				*e*S	**Sn**	**07 30 36.0**	**+14**
LPA	**La Plata**	**16.00**	**139**	⇑*e*P	**Pn**	**07 27 23.0**	**-2.1**
LPA				*e*P		07 27 28.0	
LPA				*e*S	**Sn**	**07 30 21.0**	**-0.6**
LPA				*e*S	**Sn**	**07 30 36.0**	**+14**
PLCA	**Paso Flores**	**17.45**	**180**	P	**Pn**	**07 27 41.7**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=4.3,slow=11,SNR=28						
PLCA				S	**Sn**	**07 31 01.2**	**+4.6**
	comp=Z,0.3nm,0.3s,baz=352,slow=20,SNR=2.5						
PLCA	**Paso Flores**	**17.45**	**180**	P	**Pn**	**07 27 42.0**	**-1.3**
PLCA				pmax	pmax		
	comp=Z,70nm,1.0s						
PLCA	**Paso Flores**	**17.45**	**180**	*e*Pn	**Pn**	**07 27 42.0**	**-1.3**
	comp=Z,70nm,1.0s						
PLCA				*e*Sn	**Sn**	**07 31 01.2**	**+4.5**
ATAH	**Atahualpa**	**17.82**	**334**	P	**Pn**	**07 27 46.4**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=132,slow=14,SNR=6.0						
ATAH				S	**Sn**	**07 31 06.7**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=92,slow=16,SNR=2.1						
ATAH				LR	LR	07 33 31.9	
	comp=Z,21µm,21.6s,baz=344,slow=33						
BDFB	**Brasilia**	**22.51**	**74**	P	**P**	**07 28 38.4**	**-1.2**
	comp=Z,54nm,1.0s,mb4.9,baz=236,slow=18,SNR=47						
BDFB				S	**S**	**07 32 41.3**	**-4.1**
	comp=Z,9.0nm,0.8s,baz=154,slow=25,SNR=1.4						
BDFB				LR	LR	07 38 45.7	
	comp=Z,37µm,18.1s,MS5.8,baz=58,slow=40						
BDFB	**Brasilia**	**22.51**	**74**	P	**P**	**07 28 38.4**	**-1.2**
BDFB				S	**S**	**07 32 41.3**	**-4.1**
OTAV	**Otavalo**	**24.57**	**341**	*e*P	**P**	**07 29 00.1**	**+0.4**
	comp=Z,150nm,1.1s,mb5.4						
OTAV				LR	LR		
	comp=Z,13µm,21.0s,MS5.4						
CAM4	**Nova Friburgo**	**25.78**	**94**	⇑*i*P	**P**	**07 29 10.0**	**-0.7**
CAM4				*i*	pP	07 29 16.4	-3.1
CAM4				*i*	pP	07 29 18.9	-0.6
CAM4				*i*		07 29 22.4	
CAM4				*i*		07 29 51.4	
CAM3	**Guarapari**	**27.91**	**91**	⇑*i*P	**P**	**07 29 29.4**	**-0.5**
CAM3				*i*		07 29 30.4	
CAM3				*i*		07 29 43.4	
CAM3				*i*		07 29 50.9	
CAM3				*i*		07 30 13.1	
ROSC	**El Rosal**	**28.16**	**352**	P	**P**	**07 29 33.2**	**+1.1**
	comp=Z,52nm,1.1s,mb5.1,baz=111,slow=5.8,SNR=14						
ROSC				LR	LR	07 41 16.4	
	comp=Z,18µm,19.9s,MS5.7,baz=187,slow=38						
ROSC	**El Rosal**	**28.16**	**352**	*e*P	**P**	**07 29 32.5**	**+0.5**
PAYG	**Puerto Ayora**	**29.51**	**317**	PFAKE		07 29 50.0	+5.9
PAYG				LR	LR		
	comp=Z,25µm,20.0s,MS5.8						
EFI	**East Falkland**	**29.98**	**164**	PFAKE		07 30 00.0	+12
EFI				LR	LR		
	comp=Z,38µm,20.0s,MS6.0						
USHA	**Ushuaia**	**31.59**	**178**	P	**P**	**07 30 01.0**	**-1.1**
	comp=Z,43nm,1.2s,mb5.2,baz=278,slow=2.4,SNR=4.4						
USHA				LR	LR	07 43 55.5	
	comp=Z,58µm,18.4s,MS6.3,baz=348,slow=38						
SDV	**Santo Domingo**	**31.92**	**360**	P	**P**	**07 30 03.4**	**-1.9**
	comp=Z,12nm,0.8s,mb4.8,baz=204,slow=3.7,SNR=15						
SDV				S	**S**	**07 35 13.0**	**-1.6**
	comp=Z,9.3nm,0.9s,baz=99,slow=23,SNR=1.6						
SDV	**Santo Domingo**	**31.92**	**360**	*e*P	**P**	**07 30 03.8**	**-1.5**
	comp=Z,35nm,0.9s,mb5.2						
SDV				LR	LR		
	comp=Z,12µm,21.0s,MS5.6						
BCIP	**Isla Barro Col**	**33.46**	**343**	PFAKE		07 30 30.0	+11
BCIP				LR	LR		
	comp=Z,8µm,22.0s,MS5.4						
PCRV	**Puerto La Cruz**	**33.70**	**10**	P	**P**	**07 30 20.1**	**-0.8**
	comp=Z,25nm,0.7s,mb5.3,baz=292,slow=0.7,SNR=13						
RPN	**Rapa Nui**	**35.24**	**255**	P	**P**	**07 30 34.1**	**-0.1**
	comp=Z,68nm,0.8s,mb5.6,baz=89,slow=0.6,SNR=4.2						
RPN	**Rapa Nui**	**35.24**	**255**	P	**P**	**07 30 34.1**	**-0.1**
RPN				LR	LR		
	comp=Z,27µm,20.0s,MS6.0						
GRGR	**Grenville**	**36.20**	**15**	PFAKE		07 30 50.0	+7.5
GRGR				LR	LR		
	comp=Z,17µm,19.0s,MS5.8						
RCBR	**Riachuelo**	**37.57**	**68**	*e*P	**P**	**07 30 54.6**	**+0.4**
	comp=Z,426nm,1.0s,mb6.1						
RCBR				*e*pP	pP	07 31 04.3	+1.1
RCBR				*e*S	**S**	**07 36 32.2**	**-10**
RCBR				LR	LR		
	comp=Z,43µm,21.0s,MS6.2						
BBGH	**Gun Hill**	**37.71**	**18**	PFAKE		07 31 00.0	+4.7
BBGH				LR	LR		
	comp=Z,50µm,20.0s,MS6.3						
BIM	**Bigot**	**38.64**	**15**	*e*P	**P**	**07 31 03.2**	**+0.1**
FDF	**Fort de France**	**38.83**	**15**	P	pP	07 31 20.0	+6.2
FDF				MLR	MLR		
	comp=Z,20µm,20.0s,MS5.9						
FDF	**Fort de France**	**38.83**	**15**	*e*P	**P**	**07 31 05.3**	**+0.6**
FDF	**Fort de France**	**38.83**	**15**	PFAKE		07 31 10.0	+5.3
FDF				LR	LR		
	comp=Z,20µm,20.0s,MS5.9						
TGUH	**Tegucigalpa,Un**	**40.52**	**335**	*e*P	**P**	**07 31 18.6**	**-0.2**
	comp=Z,111nm,1.1s,mb5.4						
TGUH				LR	LR		
	comp=Z,8µm,22.0s,MS5.5						
ICM	**Isla Caja Muer**	**41.06**	**6**	*e*P	**P**	**07 31 20.5**	**-2.7**
CRPR	**Cabo Rojo, PR**	**41.12**	**5**	*e*P	**P**	**07 31 23.4**	**-0.4**
	comp=Z,130nm,1.1s,mb5.5						
CRPR				*e*pP	pP	07 31 33.4	+0.6
OBIP	**Obispado Ponce**	**41.20**	**6**	*e*P	**P**	**07 31 23.4**	**-1.0**
SJG	**San Juan**	**41.31**	**6**	*e*P	**P**	**07 31 24.5**	**-0.7**
	comp=Z,261nm,0.8s,mb5.9						
SJG				*e*pP	pP	07 31 34.1	-0.3
SJG				LR	LR		
	comp=Z,19µm,19.0s,MS6.0						
MPR	**Mayaguez**	**41.32**	**5**	*e*P	**P**	**07 31 24.3**	**-1.0**
HUMP	**Col San Antoni**	**41.38**	**7**	*e*P	**P**	**07 31 23.6**	**-2.2**
	comp=Z,92nm,0.9s,mb5.4						
AOPR	**Arecibo Observ**	**41.49**	**5**	*e*P	**P**	**07 31 25.7**	**-1.0**
	comp=Z,64nm,1.0s,mb5.2						
ANWB	**Willy Bob**	**41.54**	**13**	*e*P	**P**	**07 31 25.2**	**-2.0**
	comp=Z,186nm,0.7s,mb5.8						
ANWB				*e*pP	pP	07 31 33.8	-2.4
ANWB				LR	LR		
	comp=Z,13µm,20.0s,MS5.8						
PMSA	**Palmer Station**	**41.75**	**176**	P	**P**	**07 31 28.9**	**+0.6**
	comp=Z,28nm,1.0s,mb4.8,baz=350,slow=6.6,SNR=1.9						
PMSA				S	**S**	**07 37 45.4**	**+2.1**
	comp=Z,13nm,0.9s,baz=215,slow=3.4,SNR=1.9						
PMSA	**Palmer Station**	**41.75**	**176**	P	**P**	**07 31 28.9**	**+0.6**
PMSA				S	**S**	**07 37 45.4**	**+2.1**
PMSA				LR	LR		
	comp=Z,25µm,19.0s,MS6.1						
MTDJ	**Mount Denham**	**41.77**	**350**	*e*P	**P**	**07 31 29.2**	**+0.2**
	comp=Z,293nm,1.2s,mb5.8						
SDDR	**Presa de Saban**	**41.96**	**359**	P	**P**	**07 31 29.3**	**-1.3**
	comp=Z,41nm,1.1s,mb5.0						
SDDR				LR	LR		
	comp=Z,18µm,20.0s,MS6.0						
LMGC	**Las Mercedes**	**43.49**	**351**	*e*	**P**	**07 31 42.6**	**-0.4**
CMIG	**Matias Romero**	**46.62**	**327**	P	**P**	**07 32 07.5**	**-0.4**
	comp=Z,10nm,1.1s,mb4.7,baz=117,slow=4.4,SNR=5.5						
CMIG				S	**S**	**07 38 56.8**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=117,slow=17,SNR=2.6						
TRIS	**Tristan da Cun**	**51.47**	**120**	*e*P	**P**	**07 32 46.0**	**+1.0**
	comp=Z,334nm,1.1s,mb6.2						
TRIS				*e*pP	pP	07 32 54.3	+0.1
TRIS				LR	LR		
	comp=Z,7µm,19.0s,MS5.7						
DWPF	**Disney**	**52.12**	**348**	PFAKE		07 33 00.0	+10
DWPF				LR	LR		
	comp=Z,6µm,20.0s,MS5.7						
BBSR	**BB Station**	**55.57**	**6**	*e*P	**P**	**07 33 13.8**	**-1.1**
	comp=Z,64nm,0.9s,mb5.7						
BBSR				LR	LR		
	comp=Z,3µm,21.0s,MS5.4						
BRAL	**Brewton**	**56.22**	**343**	*e*P	**P**	**07 33 19.1**	**-0.5**
	comp=Z,173nm,1.0s,mb6.0						
BRAL				LR	LR		
	comp=Z,7µm,19.0s,MS5.8						
NHSC	**New Hope**	**56.77**	**350**	*e*P	**P**	**07 33 22.4**	**-1.1**
	comp=Z,137nm,1.1s,mb5.9						
NHSC				*e*pP	pP	07 33 31.8	-1.1
NHSC				LR	LR		
	comp=Z,8µm,20.0s,MS5.8						
KVTX	**Kingsville**	**56.98**	**331**	PFAKE		07 33 30.0	+4.9
KVTX				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
GOGA	**Godfrey**	**57.66**	**347**	*e*P	**P**	**07 33 27.5**	**-2.3**
GOGA				*e**PP	pP	07 33 36.8	-2.3
GOGA				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
GOGA				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.7						
GOGA	**Godfrey**	**57.66**	**347**	*e*P	**P**	**07 33 27.5**	**-2.3**
	comp=Z,24nm,1.0s,mb5.2						
GOGA				*e*pP	pP	07 33 36.8	-2.3
GOGA				LR	LR		
	comp=Z,6µm,20.0s,MS5.7						
LRAL	**Lakeview Retre**	**58.12**	**344**	*e*P	**P**	**07 33 31.0**	**-1.9**
	comp=Z,51nm,1.1s,mb5.5						
LRAL				*e*pP	pP	07 33 39.1	-3.2
LRAL				LR	LR		
	comp=Z,6µm,19.0s,MS5.7						
HKT	**Hockley**	**58.20**	**334**	PFAKE		07 33 40.0	+6.4
HKT				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
VBMS	**Vicksburg**	**58.36**	**340**	*e*P	**P**	**07 33 32.9**	**-1.7**
VBMS				*e*pP	pP	07 33 42.6	-1.5
VBMS				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
CNNC	**Cliffs of the**	**58.57**	**353**	*e*P	**P**	**07 33 35.3**	**-0.8**
	comp=Z,47nm,1.0s,mb5.5						
CNNC				LR	LR		
	comp=Z,6µm,22.0s,MS5.7						
RKT	**Rikitea**	**58.77**	**256**	*e*P	**P**	**07 33 43.9**	**+6.0**
	comp=Z,2µm,28.0s						
RKT				*e*S	**S**	**07 41 42.6**	**+1.2**
	comp=Z,25µm,26.8s						
RKT				*e*SS	SS	07 45 35.9	+1.1
	comp=Z,3µm,29.0s						
RKT				*e*LQ		07 48 22.3	
	comp=Z,4µm,32.5s						
RKT				*e*LR	LR	07 50 56.5	
	comp=Z,44µm,26.5s,baz=109						
VNA3	**Neumayer Olymp**	**58.93**	**161**	*e*P	**P**	**07 33 38.1**	**-0.1**
VNA3				*e*	pP	07 33 48.1	+0.5
VNA3				*e*		07 33 51.9	
VNA1	**Neumayer--Stat**	**59.17**	**160**	*e*P	**P**	**07 33 40.3**	**+0.4**
VNA1				*e*	pP	07 33 50.2	+0.9
VNA1				*e*		07 33 53.5	
NATX	**Nacogdoches**	**59.36**	**336**	*e*P	**P**	**07 33 40.8**	**-0.9**
NATX				*e*pP	pP	07 33 49.3	-1.7
NATX				*e*PcP	PcP	07 34 33.1	+3.7
NATX				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
VNA2	**Neumayer--Watz**	**59.53**	**160**	*e*P	**P**	**07 33 42.4**	**0.0**
	baz=286,slow=7.8						
VNA2				*e*	pP	07 33 51.6	-0.2
VNA2				*e*		07 33 55.1	
CPCT	**Cooper Cave**	**59.85**	**347**	*e*P	**P**	**07 33 43.1**	**-1.8**
TKL	**Tuckaleechee C**	**59.90**	**348**	*e*P	**P**	**07 33 43.2**	**-2.1**
SWET	**Sewanee**	**59.94**	**345**	*e*P	**P**	**07 33 43.7**	**-1.8**
OXF	**Oxford**	**60.16**	**342**	*e*P	**P**	**07 33 44.7**	**-2.4**
OXF				*e**PP	pP	07 33 53.7	-2.8
OXF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.0						
OXF				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.7						
OXF	**Oxford**	**60.16**	**342**	*e*P	**P**	**07 33 44.7**	**-2.4**
	comp=Z,157nm,1.0s,mb6.0						
OXF				*e*pP	pP	07 33 53.7	-2.9
OXF				LR	LR		
	comp=Z,5µm,19.0s,MS5.7						
JCT	**Junction City**	**60.35**	**331**	*e*P	**P**	**07 33 47.7**	**-0.8**

comp=Z,49nm,0.8s,mb5.6
JCT LR LR
comp=Z,2µm,22.0s,MS5.3
TZTN Tazewell 60.71 348 *e*P **P 07 33 48.4 -2.4**
comp=Z,28nm,0.9s,mb5.4
BLA Blacksburg 60.84 351 P **P**
BLA pmax pmax
comp=Z,37nm,0.8s,mb5.6
BLA Blacksburg 60.84 351 *e*P **P 07 33 50.7 -0.9**
comp=Z,37nm,0.8s,mb5.6
BLA LR LR
comp=Z,4µm,20.0s,MS5.6
JSRW J. Sargeant Re 60.99 353 *e*P **P 07 33 52.8 +0.1**
SHEL Horse Pasture 61.04 96 PFAKE 07 34 00.0 +6.4
SHEL LR LR
comp=Z,16µm,20.0s,MS6.2
SNAA Sanae 61.15 160 *e*P **P 07 33 52.9 -0.5**
SNAA *e* pP 07 34 02.3 -0.5
SNAA *e* 07 34 05.7
SNAA Sanae 61.15 160*c i*P **P 07 33 53.0 -0.4**
SNAA pmax pmax
comp=Z,142nm,1.8s
SNAA Sanae 61.15 160 *e*P **P 07 33 53.1 -0.3**
comp=Z,57nm,0.8s,mb5.8
SNAA *e*pP pP 07 34 02.6 -0.2
TXAR Lajitas Array 61.22 327 P **P 07 33 53.8 -0.7**
comp=Z,4.4nm,1.0s,mb4.6,baz=148,slow=8.6,SNR=17
TXAR LR LR 07 56 49.3
comp=Z,6µm,20.2s,MS5.8,baz=225,slow=32
WVT Waverly 61.27 344 *e*P **P 07 33 52.0 -2.5**
comp=Z,46nm,0.9s,mb5.6
WVT LR LR
comp=Z,5µm,22.0s,MS5.7
UALR University of 61.30 340 *e*P **P 07 33 53.7 -1.1**
comp=Z,33nm,0.9s,mb5.5
CBN Corbin 61.45 354 *e*P **P 07 33 55.1 -0.7**
CBN LR LR
comp=Z,11µm,22.0s,MS6.0
MIAR Mount Ida 61.49 338 *e*P **P 07 33 54.7 -1.5**
comp=Z,31nm,0.7s,mb5.5
MIAR *e*pP pP 07 34 03.2 -2.4
MIAR LR LR
comp=Z,5µm,19.0s,MS5.7
GNAR Gosnell 61.70 342 *e*P **P 07 33 57.7 +0.2**
comp=Z,2µm,1.3s
SDMD Soldier's Deli 62.59 354 *e*P **P 07 34 03.9 +0.4**
comp=Z,230nm,2.1s,mb5.9
WCI Wyandotte Cave 62.90 346 *e*P **P 07 34 02.6 -3.0**
comp=Z,31nm,0.6s,mb5.6
WCI LR LR
comp=Z,7µm,20.0s,MS5.8
USIN University of 62.97 345 *e*P **P 07 34 04.7 -1.2**
comp=Z,35nm,0.4s,mb5.8
SIUC Southern Illin 63.12 343 *e*P **P 07 34 05.0 -2.0**
comp=Z,106nm,1.1s,mb5.9
MVL Millersville 63.14 355 *e*P **P 07 34 06.8 -0.2**
comp=Z,34nm,1.0s,mb5.4
MCWV Mont Chateau 63.16 352 *e*P **P 07 34 06.5 -0.8**
comp=Z,24nm,0.8s,mb5.4
MCWV *e*ScP ScP 07 38 41.0 -3.7
MCWV LR LR
comp=Z,11µm,22.0s,MS6.0
WMOK Wichita Mounta 63.59 334 *e*P **P 07 34 10.3 +0.2**
comp=Z,5.6nm,0.8s,mb4.7
WMOK LR LR
comp=Z,3µm,21.0s,MS5.5
FVM French Village 63.70 343 P **P 07 34 09.0 -1.8**
FVM pmax pmax
comp=Z,42nm,0.6s,mb5.7
FVM French Village 63.70 343 *e*P **P 07 34 08.9 -1.9**
comp=Z,56nm,0.6s,mb5.8
OLIL Olney 63.80 345 *e*P **P 07 34 09.0 -2.5**
comp=Z,34nm,0.8s,mb5.4
SSPA Standing Stone 63.91 354 *e*P **P 07 34 11.4 -0.7**
comp=Z,18nm,0.9s,mb5.1
SSPA LR LR
comp=Z,10µm,22.0s,MS6.0
GDL2 Guadalupe Moun 63.91 328 *e*P **P 07 34 13.3 +0.9**
CCM Cathedral Cave 64.00 342 *e*P **P 07 34 10.8 -1.9**
comp=Z,41nm,0.9s,mb5.5
CCM LR LR
comp=Z,4µm,20.0s,MS5.5
ACSO Alum Creek Sta 64.19 349 *e*P **P 07 34 12.0 -2.0**
comp=Z,29nm,0.7s,mb5.4
ACSO LR LR
comp=Z,5µm,21.0s,MS5.7
YLE Yale 64.26 358 *e*P **P 07 34 17.9 +3.5**
SLM Saint Louis 64.26 343 P **P 07 34 15.0 +0.5**
SLM pmax pmax
comp=Z,51nm,0.9s,mb5.5
SLM Saint Louis 64.26 343 *e*P **P 07 34 12.7 -1.7**
comp=Z,51nm,0.9s,mb5.5
BRYW Bryant College 64.83 359 *e*P **P 07 34 20.0 +1.9**
BBTS Babate 64.87 60 P **P 07 34 19.5 +0.6**
comp=Z,73nm,1.0s,mb5.7,baz=246,slow=3.1,SNR=6.4
BBTS Babate 64.87 60 P **P 07 34 19.5 +0.6**
AMTX Amarillo 64.92 332 *e*P **P 07 34 17.9 -1.0**
comp=Z,18nm,0.8s,mb5.2
AMTX *e*PcP PcP 07 34 51.1 -0.7
AMTX LR LR
comp=Z,2µm,21.0s,MS5.3
ALLY Alegheny Colle 65.16 352 *e*P **P 07 34 21.3 +1.0**
BINY Binghamton 65.30 356 *e*P **P 07 34 20.5 -0.6**
comp=Z,46nm,1.0s,mb5.5
BINY LR LR
comp=Z,7µm,19.0s,MS5.8
ERPA Erie 65.61 352 *e*P **P 07 34 23.5 +0.4**
comp=Z,36nm,0.9s,mb5.4
ERPA LR LR
comp=Z,8µm,22.0s,MS5.9
TRY Troy 65.70 357 *e*P **P 07 34 23.9 +0.2**
MAIT Maitri 65.72 159 *e*P **P 07 34 21.6 -2.1**
319A Douglas 65.77 324 ⇑P **P 07 34 24.4 0.0**
baz=66,SNR=9.4
319A ⇑S S 07 43 11.0 +2.0
baz=66
318A Bisbee 66.21 324 ⇓P **P 07 34 27.4 +0.1**
baz=66,SNR=16
318A ⇓S S 07 43 16.5 +2.2
baz=66
219A White Tail Can 66.24 324 ⇓P **P 07 34 27.4 -0.1**
baz=66,SNR=7.8
219A ⇓S S 07 43 17.2 +2.4
baz=66
AAM Ann Arbor 66.32 349 PFAKE 07 34 40.0 +12
AAM LR LR
comp=Z,5µm,20.0s,MS5.7
HNH Hanover 66.63 359 *e*P **P 07 34 32.6 +2.9**
KSU1 Kansas State U 66.64 338 *e*P **P 07 34 27.8 -2.1**
comp=Z,22nm,0.7s,mb5.3
KSU1 LR LR
comp=Z,6µm,19.0s,MS5.8
218A Dragoon 66.65 324 ⇑P **P 07 34 30.1 0.0**
baz=67
218A ⇓S S 07 43 22.4 +2.7
baz=67
Y22D IRIS PASSCAL I 66.68 328 ⇓P **P 07 34 30.4 +0.1**
baz=67
Y22D ⇓S S 07 43 24.3 +4.3
baz=67
LPM Los Pinos Moun 66.73 328 *e*P **P 07 34 31.9 +1.4**
LENM Lemitar 66.78 328 *e*P **P 07 34 33.7 +2.9**
119A Ashpeak Ranch, 66.86 325 ⇑P **P 07 34 31.9 +0.5**
baz=67
119A ⇑S S 07 43 24.9 +2.6
baz=67
217A Green Valley 66.92 323 ⇑P **P 07 34 31.6 -0.2**
baz=67,SNR=10.0
217A ⇓S S 07 43 25.5 +2.6
baz=67
MDV Middlebury 66.94 358 *e*P **P 07 34 32.5 +0.8**
NCB Newcomb 66.96 357 *e*P **P 07 34 31.3 -0.5**
comp=Z,26nm,1.1s,mb5.2
NCB LR LR
comp=Z,8µm,20.0s,MS5.9
QSPA South Pole Qui 66.97 180 PFAKE 07 34 40.0 +8.5
QSPA LR LR
comp=Z,9µm,20.0s,MS6.0
118A Homack Ranch, 67.12 324 ⇓P **P 07 34 33.2 +0.1**
baz=67,SNR=11
118A ⇑S S 07 43 28.2 +2.9
baz=67
LBNH Lisbon 67.15 359 *e*P **P 07 34 35.2 +2.2**
LBNH LR LR
comp=Z,5µm,20.0s,MS5.7
ANMO Albuquerque 67.16 328 *e*P **P 07 34 33.3 0.0**
ANMO *e**PP pP 07 34 41.9 -0.9
ANMO pmax pmax
comp=Z,17nm,0.8s
ANMO MLR MLR
comp=Z,6µm,20.0s
ANMO Albuquerque 67.16 328 *e*P **P 07 34 33.3 +0.1**
comp=Z,17nm,0.8s,mb5.1
ANMO *e*pP pP 07 34 41.9 -1.0
ANMO LR LR
comp=Z,6µm,20.0s,MS5.8
Z19A T-Link Ranch, 67.25 325 ⇑P **P 07 34 34.4 +0.5**
baz=67
Z19A ⇓S S 07 43 29.8 +2.9
baz=67
TUC Tucson 67.31 324 *e*P **P 07 34 35.5 +1.2**
comp=Z,45nm,1.3s,mb5.3
TUC LR LR
comp=Z,5µm,22.0s,MS5.7
216A Three Points, 67.44 323 ⇑P **P 07 34 35.2 +0.1**
baz=68,SNR=9.9
216A ⇑S S 07 43 31.9 +2.6
baz=68
117A Oracle 67.48 324 ⇑P **P 07 34 35.5 +0.1**
baz=68,SNR=18
117A ⇑S S 07 43 32.1 +2.4
baz=68
Z18A Geronimo 67.50 325 ⇑P **P 07 34 35.0 -0.5**
baz=68
Z18A ⇑S S 07 43 32.2 +2.4
baz=68
CBKS Cedar Bluff 67.52 336 *e*P **P 07 34 36.3 +0.8**
CBKS Cedar Bluff 67.52 336 *e*P **P 07 34 34.9 -0.5**
comp=Z,98nm,1.0s,mb5.8
CBKS LR LR
comp=Z,3µm,21.0s,MS5.6
EMMW East Machias 67.67 2 *e*P **P 07 34 38.8 +2.6**
Y19A Nutrioso 67.77 326 ⇑P **P 07 34 38.0 +0.9**
baz=68,SNR=35
Y19A ⇑S S 07 43 36.9 +3.9
baz=68
TAOE Nuku Hiva Isla 67.88 270 *e*P **P 07 34 41.5 +3.1**
comp=Z,5µm,24.9s
TAOE *e*S S 07 43 35.3 0.0
comp=Z,25µm,26.3s
TAOE Nuku Hiva Isla 67.88 270 *e*LR LR 07 55 09.4
comp=Z,64µm,25.2s
Z17A San Carlos Hig 67.89 325 ⇑P **P 07 34 38.1 +0.1**
baz=68
116A Eloy 68.00 323 ⇑P **P 07 34 38.7 +0.1**
baz=68
116A ⇑S S 07 43 38.9 +2.9
baz=68
Y18A Canyon Day Jun 68.03 325 ⇑P **P 07 34 38.8 0.0**
baz=68,SNR=9.4
Y18A ⇑S S 07 43 39.3 +3.1
baz=68
SCIA State Center 68.13 342 *e*P **P 07 34 38.0 -1.2**
comp=Z,25nm,0.6s,mb5.4
SCIA LR LR
comp=Z,3µm,20.0s,MS5.6
X19A St. Johns 68.15 326 ⇑P **P 07 34 39.8 +0.3**
baz=68
X19A ⇑S S 07 43 41.6 +4.0
baz=68
214A Organ Pipe Nat 68.17 322 ⇓P **P 07 34 39.6 -0.1**
baz=68,SNR=12
214A ⇓S S 07 43 41.2 +3.3
baz=68
PKME Peaks-Kenny Pk 68.17 1 *e*P **P 07 34 39.4 -0.1**
comp=Z,54nm,0.9s,mb5.6
PKME *e*pP pP 07 34 49.5 +0.5
PKME LR LR
comp=Z,6µm,20.0s,MS5.8
JFWS Jewell Farm 68.28 345 *e*P **P 07 34 38.8 -1.3**
comp=Z,45nm,0.6s,mb5.7
JFWS LR LR
comp=Z,5µm,22.0s,MS5.7
115A Sonoran Desert 68.40 323 ⇓P **P 07 34 41.6 +0.4**
baz=69
115A ⇑S S 07 43 44.3 +3.7
baz=69
Y17A Roosevelt 68.40 325 ⇑P **P 07 34 41.1 0.0**
baz=69,SNR=29
Z16A Peralta Trail, 68.44 324 ⇑P **P 07 34 41.7 +0.4**
baz=69,SNR=13
X18A Snowflake 68.57 326 ⇑P **P 07 34 42.8 +0.7**
baz=69,SNR=6.7
W19A Sanders 68.74 326 ⇑P **P 07 34 43.1 -0.1**
baz=69
Z15A Gila River Ind 68.80 323 ⇑P **P 07 34 43.9 +0.2**
baz=69
Y16A Circle Bar Ran 68.88 324 ⇑P **P 07 34 44.4 +0.2**
baz=69
W18A Petrified Fore 68.92 326 ⇓P **P 07 34 44.8 +0.4**
baz=69
GLMI Grayling 68.94 349 *e*P **P 07 34 43.8 -0.4**
comp=Z,52nm,0.8s,mb5.5
GLMI LR LR
comp=Z,7µm,19.0s,MS5.9
SDCO Great Sand Dun 69.00 331 *e*P **P 07 34 44.7 -0.1**
comp=Z,62nm,1.2s,mb5.4
SDCO LR LR
comp=Z,3µm,19.0s,MS5.6
V19A Window Rock 69.04 327 ⇓P **P 07 34 45.5 +0.5**
baz=69,SNR=8.9
X16A Lo Mia Camp, P 69.27 325 ⇓P **P 07 34 46.7 +0.1**
baz=70,SNR=16
Z14A Wintersburg 69.29 323 ⇓P **P 07 34 47.0 +0.3**
baz=70
113A Mohawk Valley, 69.31 322 ⇓P **P 07 34 47.1 +0.3**
baz=70
W17A Winslow 69.39 326 ⇑P **P 07 34 47.4 +0.2**
baz=70
Y15A Casa Rosa Ranc 69.40 324 ⇓P **P 07 34 47.4 +0.1**
baz=70,SNR=11
V18A Ganado 69.48 327 ⇓P **P 07 34 48.3 +0.4**
baz=70
112A Yuma 69.61 321 ⇓P **P 07 34 48.4 -0.2**
baz=70
X15A Humboldt 69.75 324 ⇓P **P 07 34 50.2 +0.7**
baz=70,SNR=15
Y14A Wickenburg 69.75 323 ⇓P **P 07 34 49.5 0.0**
baz=70,SNR=6.8
W16A Flagstaff 69.83 325 ⇓P **P 07 34 50.8 +0.8**
baz=70,SNR=27
T19A Beclabito 69.91 328 ⇑P **P 07 34 50.5 +0.1**
baz=70,SNR=9.3
MVCO Mesa Verde 69.95 328 ⇑P **P 07 34 50.8 +0.1**
baz=70
MVCO Mesa Verde 69.95 328 *e*P **P 07 34 51.3 +0.6**
comp=Z,22nm,0.7s,mb5.2
MVCO LR LR
comp=Z,6µm,20.0s,MS5.8
U18A Rough Rock, Ch 70.00 327 ⇓P **P 07 34 51.2 +0.2**
baz=70,SNR=17
WUAZ Wupatki 70.07 325 ⇑P **P 07 34 51.2 -0.2**
baz=70
WUAZ Wupatki 70.07 325 *e*P **P 07 34 52.3 +0.8**
comp=Z,59nm,1.1s,mb5.4
WUAZ LR LR
comp=Z,7µm,21.0s,MS5.9
X14A Yava 70.09 324 ⇓P **P 07 34 51.8 +0.2**
baz=70,SNR=10
Y13A Salome 70.12 323 ⇓P **P 07 34 51.8 +0.1**
baz=70
GLA Glamis 70.12 321 ⇓P **P 07 34 52.0 +0.2**
baz=70
GLA Glamis 70.12 321 *e*P **P 07 34 53.9 +2.1**
GLA pmax pmax
comp=Z,51nm,1.3s,mb5.3
GLA Glamis 70.12 321 *e*P **P 07 34 53.9 +2.1**
comp=Z,51nm,1.3s,mb5.3
OGNE Ogallala 70.24 335 PFAKE 07 35 00.0 +7.6
OGNE LR LR
comp=Z,5µm,19.0s,MS5.8
W15A Williams 70.29 325 ⇑P **P 07 34 53.4 +0.6**
baz=70,SNR=8.4
LIC Lamto 70.31 74⇑*i*P **P 07 34 52.6 -0.8**
comp=Z,76nm,0.7s,mb5.4
LIC *e*MLR MLR
comp=Z,30µm,19.0s,MS6.3
LIC Lamto 70.31 74 *e*P **P 07 34 52.7 -0.7**
comp=Z,123nm,0.7s,mb5.9
LIC Lamto 70.31 74⇑*i*P **P 07 34 52.6 -0.8**
comp=Z,38nm,0.7s,mb5.4
LIC LR LR
comp=Z,15µm,19.0s,MS6.3
U16A Tuba City 70.43 326 ⇑P **P 07 34 54.0 +0.4**
baz=71,SNR=8.2
R21A Cimarron 70.44 330 ⇓P **P 07 34 53.9 +0.3**
baz=71
Y12C Blythe 70.46 322 ⇓P **P 07 34 54.4 +0.6**
baz=71,SNR=12
TIC Toumodi 70.50 74 *e*P **P 07 34 54.0 -0.6**
comp=Z,422nm,1.1s,mb6.3
U17A Shonto 70.54 327 ⇑P **P 07 34 54.5 +0.2**
baz=71,SNR=14
T18A Mexican Hat 70.57 328 ⇓P **P 07 34 54.5 +0.1**
baz=71,SNR=19
DVTC Desert V Tower 70.58 320 ⇓P **P 07 34 54.9 +0.3**
baz=71
SWSC Sam W. Stewart 70.60 321 ⇑P **P 07 34 54.8 0.0**
baz=71
KIC Kosan Boka 70.62 74 *e*P **P 07 34 54.7 -0.6**
comp=Z,458nm,1.0s,mb6.4
DBIC Dimbokro 70.66 74 P **P 07 34 55.1 -0.5**
comp=Z,111nm,0.9s,mb5.8,baz=218,slow=6.3,SNR=68
DBIC S S 07 44 07.2 -0.9
comp=Z,7.3nm,1.2s,baz=162,slow=8.8,SNR=3.4
DBIC LR LR 08 06 19.1
comp=Z,24µm,18.2s,MS6.5,baz=207,slow=36
DBIC Dimbokro 70.66 74 P **P 07 34 54.9 -0.7**
DBIC pmax pmax
comp=Z,140nm,1.0s
DBIC Dimbokro 70.66 74 *e*P **P 07 34 54.8 -0.8**
comp=Z,55nm,0.8s,mb5.5
DBIC LR LR
comp=Z,21µm,19.0s,MS6.4
S19A Harvey Farm, M 70.69 328 ⇑P **P 07 34 55.8 +0.6**
baz=71,SNR=19
X13A Yucca 70.69 323 ⇑P **P 07 34 55.6 +0.3**
baz=71,SNR=12
V15A Kaibab Nationa 70.72 325 ⇑P **P 07 34 56.3 +0.9**
baz=71,SNR=13
ISCO Idaho Springs 70.74 332 *e*P **P 07 34 55.9 +0.5**
ISCO Idaho Springs 70.74 332 *e*P **P 07 34 55.4 0.0**
comp=Z,27nm,1.2s,mb5.1
ISCO LR LR
comp=Z,3µm,21.0s,MS5.5
W14A Seligman 70.75 324 ⇓P **P 07 34 56.4 +0.7**
baz=71,SNR=8.4
ECSD EROS,Sioux Fal 70.81 340 *e*P **P 07 34 54.2 -1.5**
comp=Z,22nm,0.7s,mb5.2
ECSD *e*pP pP 07 35 02.8 -2.6
ECSD LR LR
comp=Z,4µm,19.0s,MS5.7
SMCO Snowmass 70.83 331 *e*P **P 07 34 48.8 -7.2**
comp=Z,36nm,1.0s,mb5.2
SMCO *e*pP pP 07 34 57.2 -8.4
BC3 Big Chuckw Mtn 70.92 321 ⇓P **P 07 34 57.0 +0.3**
baz=71
T17A Navajo Res., N 70.92 327 ⇑P **P 07 34 57.4 +0.8**
baz=71,SNR=17
MONP Monument Peak 70.93 320 ⇑P **P 07 34 57.2 +0.4**
baz=71
S18A Hurst Farm, Bl 71.06 328 ⇑P **P 07 34 57.9 +0.5**
baz=71,SNR=42
V14A Boquillas Ranc 71.08 324 ⇑P **P 07 34 58.5 +0.9**
baz=71,SNR=18
PV04 Paradox Valley 71.09 329 *e*P **P 07 34 59.8 +2.2**
W13A Hualapai Mount 71.10 323 ⇑P **P 07 34 58.1 +0.4**
baz=71
IRM Iron Mountain 71.11 322 ⇑P **P 07 34 57.8 -0.1**
baz=71
R19A Curley Farm, L 71.18 329 ⇓P **P 07 34 57.9 -0.2**
baz=71,SNR=8.0
U15A North Rim 71.25 325 ⇓P **P 07 34 59.6 +1.0**
baz=71,SNR=16
Q20A Ridgley Place, 71.25 330 ⇑P **P 07 34 58.9 +0.3**
baz=72
T16A Glen Canyon Da 71.27 326 ⇓P **P 07 34 58.9 +0.2**
baz=72
109C Camp Elliot, M 71.34 320 ⇑P **P 07 34 59.1 -0.1**
baz=72
S17A Black Ridge (B 71.42 327 ⇓P **P 07 34 59.9 +0.3**
baz=72
PFO Pinyon Flat Ob 71.47 321 ⇓P **P 07 35 00.0 +0.1**
baz=72
PFO Pinyon Flat Ob 71.47 321 *e*P **P 07 35 01.4 +1.4**
PFO Pinyon Flat Ob 71.47 321 *e*P **P 07 34 59.6 -0.4**
comp=Z,30nm,1.2s,mb5.1
PFO LR LR
comp=Z,6µm,21.0s,MS5.8
BELC Belle Mtn. 71.48 321 ⇑P **P 07 35 00.1 0.0**
baz=72
R18A Canyonlands Na 71.56 328 ⇑P **P 07 35 00.4 0.0**
baz=72,SNR=11
Q19A Hogan Spring (71.71 329 ⇑P **P 07 35 01.6 +0.3**
baz=72,SNR=15
U14A Mt Trumbull 71.71 325 ⇑P **P 07 35 01.7 +0.3**
baz=72,SNR=29
V13A Grand Canyon W 71.72 324 ⇑P **P 07 35 02.1 +0.6**
baz=72,SNR=15
T15A Red Dirt Ranch 71.75 326 ⇓P **P 07 35 02.8 +1.2**
baz=72,SNR=9.4
W12A Cal Nev Ari 71.79 323 ⇓P **P 07 35 02.4 +0.5**
baz=72
GMRC Granite Mounta 71.85 322 ⇑P **P 07 35 02.8 +0.5**
baz=72
S16A Weppner Ranch, 71.88 327 ⇓P **P 07 35 02.4 0.0**
baz=72,SNR=7.6
MURC Murrieta 71.89 320 ⇑P **P 07 35 02.8 +0.2**
baz=72
Q21A Pagoda 71.90 331 ⇓P **P 07 35 02.4 0.0**
baz=72
N22A Wattenberg Ran 71.93 332 ⇓P **P 07 35 02.3 -0.3**
baz=72,SNR=9.6
R17A Hanksville Air 71.98 328 ⇑P **P 07 35 03.3 +0.4**
baz=72,SNR=24
V12A Nelson 72.09 323 ⇑P **P 07 35 03.6 -0.1**
baz=72,SNR=10
P19A Cripple Cowboy 72.11 330 ⇑P **P 07 35 04.0 +0.3**
baz=72,SNR=43
U13A Pakoon Wash 72.12 324 ⇑P **P 07 35 04.0 +0.1**
baz=72,SNR=6.5
T14A Hurricane 72.14 325 ⇑P **P 07 35 04.5 +0.5**
baz=72,SNR=11
O20A White River Ci 72.18 330 ⇑P **P 07 35 04.8 +0.7**
baz=72,SNR=17
BBRC Big Bear Sol-O 72.20 321 ⇑P **P 07 35 04.7 +0.3**
baz=72
S15A Panguitch 72.24 326 ⇑P **P 07 35 05.2 +0.7**
baz=72
Q18A Rafter H Ranch 72.24 329 ⇑P **P 07 35 04.3 -0.2**
baz=72,SNR=7.8
R16A Teasdale 72.26 327 ⇑P **P 07 35 05.4 +0.7**
baz=72
SCI San Clemente I 72.26 319 ⇓P **P 07 35 04.9 +0.1**
baz=72
HEC Hector,Ludlow 72.27 322 ⇑P **P 07 35 05.1 +0.3**
baz=72
N21A Black Mountain 72.36 331 ⇑P **P 07 35 05.8 +0.6**
baz=73
SRU San Rafael 72.43 328 ⇓P **P 07 35 05.9 +0.3**
baz=73
SRU San Rafael 72.43 328 *e*P **P 07 35 06.0 +0.4**
U12A Valley of Fire 72.44 324 ⇑P **P 07 35 05.7 -0.1**
baz=73
TUQ Turquoise Moun 72.48 322 ⇑P **P 07 35 06.3 +0.3**
baz=73
EGOM La Gomera 72.48 48 P **P 07 35 07.4 +1.2**
comp=Z,26nm,0.5s,mb5.4
M22A Cedar Creek Ra 72.49 332 ⇑P **P 07 35 05.8 -0.1**
baz=73
V11A Goodsprings 72.50 323 ⇑P **P 07 35 06.3 +0.2**
baz=73,SNR=7.5
T13A Saint George 72.54 325 ⇑P **P 07 35 07.1 +0.8**
baz=73,SNR=6.6
Q16A Castle Valley 72.60 328 ⇑P **P 07 35 06.9 +0.2**
baz=73,SNR=7.0
R15A Junction 72.60 327 ⇓P **P 07 35 06.8 +0.1**
baz=73
BFSC Mount Baldy St 72.61 320 ⇓P **P 07 35 06.9 0.0**
baz=73
FMP Fort Macarthur 72.62 320 ⇑P **P 07 35 06.8 -0.1**
baz=73
RRX Edison Barstow 72.69 321 ⇑P **P 07 35 07.2 -0.1**
baz=73
P18A Preston Nutter 72.70 329 ⇑P **P 07 35 06.9 -0.3**
baz=73,SNR=12
N20A Spence Gulch, 72.75 331 ⇓P **P 07 35 07.8 +0.3**
baz=73
T12A Moapa 72.76 324 ⇓P **P 07 35 07.8 +0.1**
baz=73
MSU Marysvale 72.78 327 *e*P **P 07 35 08.5 +0.8**
MVU Marysvale 72.79 327 PFAKE 07 35 20.0 +12
MVU LR LR

comp=Z,6µm,19.0s,MS5.9
P17A Butcher Ranch, 72.82 328 ⇑P P 07 35 07.7 -0.2
baz=73,SNR=15
SHPR Sheep Range 72.84 324 eP P 07 35 09.4 +1.3
MWC Mount Wilson 72.84 320 eP P 07 35 10.0 +1.8
MWC Mount Wilson 72.84 320 eP P 07 35 08.4 +0.2
comp=Z,37nm,1.3s,mb5.2
PASC Pasadena Art C 72.88 320 eP P 07 35 12.8 +4.3
PASC epP pP 07 35 30.6 +13
GSC Goldstone 72.88 322 ⇑P P 07 35 08.6 +0.2
baz=73
GSC Goldstone 72.88 322 eP P 07 35 09.8 +1.4
comp=Z,31nm,1.3s,mb5.1
U11A Corn Creek 72.90 323 ⇑P P 07 35 08.6 +0.1
baz=73
TMUT Trail Mountain 72.91 328 eP P 07 35 09.9 +1.4
CCAN Las Canadas 72.93 48 P P 07 35 10.5 +1.6
comp=Z,27nm,0.9s,mb5.2
L22A Ellis Ranch, M 72.94 333 ⇑P P 07 35 08.8 +0.2
baz=73
S13A Holt Ranch, En 72.94 325 ⇑P P 07 35 09.1 +0.4
baz=73,SNR=15
RWWY Rawlins 72.98 332 eP P 07 35 08.5 -0.4
comp=Z,23nm,0.9s,mb5.1
SHOC Shoshone 73.01 323 ⇑P P 07 35 08.8 -0.4
baz=73
DECC Green Verdugo 73.02 320 ⇑P P 07 35 09.2 -0.1
baz=73
SNCC San Nicolas Is 73.04 319 ⇓P P 07 35 09.1 -0.3
baz=73
R14A James Farms, M 73.05 326 ⇓P P 07 35 10.1 +0.8
baz=73,SNR=6.5
O18A Roosevelt 73.10 329 ⇓P P 07 35 09.4 -0.2
baz=73,SNR=8.8
N19A John Jarvie Ra 73.21 330 ⇓P P 07 35 09.9 -0.3
baz=73,SNR=19
M20A Sweetwater, Wa 73.25 331 ⇓P P 07 35 10.4 0.0
baz=74,SNR=7.2
Q15A Fillmore 73.26 327 ⇑P P 07 35 10.8 +0.2
baz=74,SNR=7.2
EDW2 Edwards Air Fo 73.26 321 ⇓P P 07 35 10.7 +0.1
baz=74
L21A Rawlins 73.28 332 ⇑P P 07 35 10.3 -0.3
baz=74,SNR=22
EYMN Ely 73.31 345 eP P 07 35 09.5 -1.2
EYMN LR LR
comp=Z,5µm,19.0s,MS5.8
BLG Laguna Peak 73.36 320 ⇓P P 07 35 10.7 -0.5
baz=74
P16A Fountain Green 73.37 328 ⇓P P 07 35 11.8 +0.6
baz=74
O17A Robinson Place 73.38 329 ⇑P P 07 35 11.4 +0.1
baz=74,SNR=30
T11A Corn Creek, Al 73.41 324 ⇓P P 07 35 11.9 +0.4
baz=74,SNR=14
U10A Ash Meadows, A 73.42 323 ⇑P P 07 35 12.0 +0.5
baz=74
R13A O'Grain Ranch, 73.45 326 ⇓P P 07 35 12.4 +0.7
baz=74,SNR=5.9
PPT Papeete 73.48 258 eP P 07 35 16.0 +3.6
comp=Z,1µm,24.2s
PPT eS S 07 44 38.5 -1.9
comp=Z,10µm,28.8s
PPT Papeete 73.48 258 eLR LR 07 57 49.0
comp=Z,28µm,25.8s,baz=106
PPT Papeete 73.48 258 LR LR 07 59 17.1
comp=Z,7µm,19.2s,MS6.0,baz=121,slow=29
S12A Delamar Landin 73.48 325 ⇑P P 07 35 12.3 +0.4
baz=74
N18A Larsen Ranch, 73.50 330 ⇑P P 07 35 11.9 -0.1
baz=74,SNR=8.6
OSI Osito Adit 73.50 320 ⇑P P 07 35 12.4 +0.3
baz=74
OSI Osito Adit 73.50 320 eP P 07 35 14.6 +2.5
comp=Z,12nm,0.3s,mb5.3
LRMC Laurel Mountai 73.51 321 ⇑P P 07 35 12.3 +0.2
baz=74
BSC Santa Cruz Isl 73.62 319 ⇑P P 07 35 11.8 -1.0
baz=74
P15A Leamington 73.65 328 ⇓P P 07 35 13.1 +0.2
baz=74
MPU Maple Canyon 73.67 328 eP P 07 35 14.3 +1.4
M19A Rock Springs 73.69 331 ⇓P P 07 35 12.6 -0.4
baz=74
Q14A Sevier Lake (B 73.70 327 ⇓P P 07 35 14.1 +1.0
baz=74,SNR=12
RSSD Black Hills 73.72 336 eP P 07 35 12.7 -0.5
RSSD e*PP pP 07 35 19.2 -3.6
RSSD pmax pmax
comp=Z,16nm,0.7s,mb5.1
RSSD MLR MLR
comp=Z,5µm,19.0s,MS5.8
RSSD Black Hills 73.72 336 eP P 07 35 12.7 -0.4
comp=Z,16nm,0.7s,mb5.0
RSSD epP pP 07 35 19.2 -3.6
RSSD LR LR
comp=Z,5µm,19.0s,MS5.8
L20A Wamsutter 73.73 332 ⇑P P 07 35 13.0 -0.3
baz=74,SNR=8.4
FURC Furnace Creek, 73.75 323 ⇑P P 07 35 13.6 +0.1
baz=74
TPNV Topopah Spring 73.76 323 ⇑P P 07 35 14.3 +0.7
baz=74
TPNV Topopah Spring 73.76 323 eP P 07 35 14.2 +0.7
TPNV e*PP pP 07 35 22.9 -0.3
TPNV pmax pmax
comp=Z,33nm,1.1s,mb5.2
TPNV MLR MLR
comp=Z,3µm,20.0s,MS5.5
TPNV Topopah Spring 73.76 323 eP P 07 35 14.2 +0.7
comp=Z,33nm,1.1s,mb5.2
TPNV epP pP 07 35 22.9 -0.2
TPNV LR LR
comp=Z,3µm,20.0s,MS5.5
O16A Springville 73.76 328 ⇑P P 07 35 13.5 0.0
baz=74
DAU Daniels Canyon 73.80 329 eP P 07 35 15.0 +1.3
MPMC Manual Prospec 73.81 322 ⇑P P 07 35 13.8 -0.1
baz=74
NLU North Lily Min 73.84 328 eP P 07 35 15.4 +1.5
SBA Scott Base 73.86 191 eP P 07 35 16.3 +2.7
SBA Scott Base 73.86 191 eP P 07 35 15.5 +1.9
comp=Z,62nm,1.5s,mb5.3
SBA LR LR
comp=Z,4µm,19.0s,MS5.8
R12A Pony Springs, 73.89 325 ⇑P P 07 35 14.7 +0.4
baz=74,SNR=27
ARVC Arvin 73.92 320 ⇓P P 07 35 14.7 +0.1
baz=74
CMLA Cha da Macela 73.96 36 PFAKE 07 35 20.0 +5.3
CMLA LR LR
comp=Z,8µm,20.0s,MS6.0
SBC Santa Barbara 73.97 319 ⇓P P 07 35 15.0 +0.1
baz=74
S11A Rachel 73.99 324 ⇑P P 07 35 15.3 +0.4
baz=74
N17A Moffit Pass 74.02 329 ⇓P P 07 35 15.2 +0.3
baz=74,SNR=26
DAC Darwin (Calif) 74.02 322 PFAKE 07 35 20.0 +4.9
DAC LR LR
comp=Z,4µm,21.0s,MS5.7
JLU Jordanelle 74.04 329 eP P 07 35 15.8 +0.7
M18A Lyman 74.04 330 ⇓P P 07 35 15.5 +0.4
baz=74
P14A Drum Mountains 74.05 327 ⇓P P 07 35 15.9 +0.7
baz=74,SNR=15
Q13A Wheeler Ranch, 74.05 326 ⇑P P 07 35 15.9 +0.7
baz=74,SNR=14
ISA Isabella 74.09 321 ⇑P P 07 35 15.8 +0.3
baz=74
ISA Isabella 74.09 321 eP P 07 35 16.2 +0.7
ISA Isabella 74.09 321 eP P 07 35 15.8 +0.3
comp=Z,28nm,1.1s,mb5.1
N16A Rees Ranch, Co 74.26 329 ⇓P P 07 35 16.8 +0.4
baz=74,SNR=5.5
K20A Yellowstone Ra 74.26 332 ⇓P P 07 35 16.1 -0.3
baz=74,SNR=8.2
O15A The Old Anders 74.28 328 ⇓P P 07 35 17.0 +0.5
baz=74
PKM Peak Mountain 74.35 320 ⇓P P 07 35 17.4 +0.3
baz=74
M17A Scullys Gap (B 74.36 330 ⇓P P 07 35 16.8 -0.1
baz=75,SNR=7.5
DUG Dugway 74.39 328 ⇓P P 07 35 17.3 +0.1
baz=75
DUG Dugway 74.39 328 P P 07 35 17.3 +0.2
DUG pmax pmax
comp=Z,40nm,1.1s,mb5.3
DUG Dugway 74.39 328 eP P 07 35 17.1 -0.1
comp=Z,40nm,1.1s,mb5.3
DUG LR LR
comp=Z,3µm,20.0s,MS5.5
GRAC Grapevine Rang 74.41 323 ⇓P P 07 35 18.1 +0.7
baz=75
CWC Cottonwood Cre 74.42 322 ⇓P P 07 35 17.7 +0.3
baz=75
R11A Troy Canyon, C 74.42 325 ⇑P P 07 35 18.0 +0.7
baz=75,SNR=13
L18A Fontenelle, Gr 74.42 330 ⇓P P 07 35 16.8 -0.6
baz=75,SNR=22
P13A Bates Ranch, G 74.43 326 ⇓P P 07 35 18.3 +1.0
baz=75,SNR=11
Q12A Willow Creek R 74.54 326 ⇑P P 07 35 18.2 +0.2
baz=75
VES Vestal, Richgr 74.57 321 ⇑P P 07 35 18.4 0.0
baz=75
K19A Absolon Red Bu 74.61 332 ⇑P P 07 35 17.9 -0.5
baz=75,SNR=11
S10A Tonopah Range, 74.65 324 ⇑P P 07 35 18.6 -0.1
baz=75,SNR=17
M16A Huntsville 74.68 329 ⇑P P 07 35 18.9 0.0
baz=75
AGMN Agassiz Refuge 74.74 343 eP P 07 35 17.3 -1.7
comp=Z,26nm,0.8s,mb5.2
AGMN LR LR
comp=Z,5µm,22.0s,MS5.7
SMMC Simmler 74.74 320 ⇓P P 07 35 19.6 +0.3
baz=75
R10A Warm Springs 74.76 324 ⇓P P 07 35 20.6 +1.3
baz=75,SNR=23
CFTV Fuerteventura 74.80 50 P P 07 35 21.1 +1.2
comp=Z,30nm,0.9s,mb5.2
Q11A Duckwater 74.82 325 ⇓P P 07 35 20.2 +0.5
baz=75,SNR=15
S09A Goldfield 74.85 323 ⇑P P 07 35 20.4 +0.5
baz=75,SNR=8.4
BW06 Boulder Array 74.88 331 ⇑P P 07 35 19.8 -0.2
baz=75
BW06 Boulder Array 74.88 331 eP P 07 35 20.8 +0.9
BW06 LR LR
comp=Z,3µm,19.0s,MS5.7
PDAR Pinedale Array 74.88 331 P P 07 35 19.6 -0.3
comp=Z,2.2nm,0.9s,baz=142,slow=6.5,SNR=11
PDAR LR LR 08 10 41.9
comp=Z,3µm,19.9s,baz=48,slow=38
VNDA Vanda 74.89 190 P P 07 35 20.7 +1.1
comp=Z,5.9nm,0.9s,mb4.5,baz=122,slow=5.2,SNR=14
VNDA S S 07 44 58.9 +4.6
comp=Z,1.1nm,0.9s,baz=80,slow=15,SNR=3.4
VNDA LR LR 08 07 21.7
comp=Z,6µm,19.8s,MS5.9,baz=136,slow=35
VNDA Vanda 74.89 190 eP P 07 35 20.7 +1.1
VNDA e*PP pP 07 35 30.4 +1.1
VNDA pmax pmax
comp=Z,77nm,1.6s
VNDA Vanda 74.89 190 eP P 07 35 20.7 +1.1
comp=Z,77nm,1.6s,mb5.4
VNDA epP pP 07 35 30.4 +1.1
P12A McGill 74.90 326 ⇑P P 07 35 20.8 +0.7
baz=75
O13A Hicks Ranch, I 74.92 327 ⇓P P 07 35 20.2 0.0
baz=75
TIN Tinemaha 74.93 322 ⇓P P 07 35 20.6 +0.2
baz=75
L17A Cokeville 74.94 330 ⇑P P 07 35 19.9 -0.4
baz=75,SNR=8.5
RCTC Rector, Farmer 74.99 321 ⇑P P 07 35 20.0 -0.7
baz=75
K18A Toltan Ranch, 74.99 331 ⇓P P 07 35 20.7 +0.1
baz=75,SNR=19
SPUT South Promonto 75.07 329 eP P 07 35 21.4 +0.3
N14A Grayback Hills 75.07 328 ⇑P P 07 35 21.3 +0.2
baz=75,SNR=7.0
TPH Tonopah 75.11 324 eP P 07 35 24.2 +2.9
comp=Z,14nm,1.2s,mb4.8
TPH LR LR
comp=Z,3µm,20.0s,MS5.6
L16A Fish Haven 75.14 330 ⇑P P 07 35 21.3 -0.1
baz=75
R09A Tonopah 75.14 324 ⇓P P 07 35 21.6 0.0
baz=75,SNR=7.6
M15A Larsen Ranch, 75.19 329 ⇑P P 07 35 20.8 -1.0
baz=75,SNR=28
Q10A Clear Creek Ra 75.20 325 ⇑P P 07 35 22.4 +0.5
baz=75,SNR=8.1
MTUM Tungsten Hills 75.33 322 eP P 07 35 25.2 +2.5
P11A Circle Ranch, 75.40 325 ⇓P P 07 35 23.2 +0.2
baz=76
O12A Currie 75.41 327 ⇓P P 07 35 23.1 +0.1
baz=76
SYO Syowa Base 75.41 160⇑eP P 07 35 21.3 -1.4
J18A Kendall Valley 75.44 331 ⇑P P 07 35 22.9 -0.3
baz=76,SNR=5.5
K17A Gardner Place, 75.48 330 ⇓P P 07 35 22.6 -0.8
baz=76,SNR=16
AHID Auburn Hatcher 75.57 330 eP P 07 35 24.1 +0.2
comp=Z,29nm,0.8s,mb5.3
AHID epP pP 07 35 29.8 -3.8
AHID LR LR
comp=Z,7µm,21.0s,MS5.9
L15A Malad City 75.57 329 ⇓P P 07 35 23.4 -0.6
baz=76,SNR=24
HVU Hansel Valley 75.58 329 eP P 07 35 24.9 +0.9
EFAM Famara 75.62 49 P P 07 35 25.4 +0.9
comp=Z,9.7nm,1.0s,mb4.7
Q09A Carvers 75.63 324 ⇑P P 07 35 24.2 -0.1
baz=76
M14A Sheep Mountain 75.65 328 ⇑P P 07 35 24.0 -0.4
baz=76,SNR=15
MLAC Mammoth Lakes 75.68 322 ⇓P P 07 35 24.6 0.0
baz=76
I18A Diamond G Ranc 75.74 332 ⇑P P 07 35 24.7 -0.1
baz=76,SNR=14
O11A Cowboy Ranch, 75.77 326 ⇑P P 07 35 25.7 +0.6
baz=76
R08A Mina 75.79 323 ⇓P P 07 35 25.0 -0.3
baz=76
P10A Eureka 75.82 325 ⇑P P 07 35 25.8 +0.4
baz=76
K16A Soda Springs 75.85 330 ⇓P P 07 35 25.4 -0.1
baz=76,SNR=30
J17A Brown Place, J 75.87 331 ⇓P P 07 35 25.8 +0.2
baz=76,SNR=12
REDW Red Top Meadow 75.93 331 eP P 07 35 26.2 +0.3
comp=Z,18nm,0.8s,mb5.1
M13A Montello 75.94 328 ⇑P P 07 35 25.8 -0.3
baz=76
NVAR Mina Array Bea 75.95 323 P P 07 35 26.7 +0.5
comp=Z,6.7nm,1.0s,mb4.5,baz=152,slow=6.7,SNR=17
SNOW Snow King Moun 75.96 331 eP P 07 35 26.7 +0.5
comp=Z,18nm,0.7s,mb5.1
N12A Clover Valley, 75.99 327 ⇑P P 07 35 26.3 0.0
baz=76
L14A Malta 76.00 329 ⇓P P 07 35 25.9 -0.5
baz=76,SNR=16
ELK Elko 76.02 327 P P 07 35 26.8 +0.3
ELK pmax pmax
comp=Z,17nm,1.0s
ELK Elko 76.02 327 eP P 07 35 26.3 -0.2
comp=Z,17nm,1.0s,mb4.9
ELK LR LR
comp=Z,7µm,20.0s,MS6.0
Q08A Gabbs 76.06 324 ⇓P P 07 35 26.9 +0.1
baz=76,SNR=11
TPAW Teton Pass 76.07 331 eP P 07 35 26.7 -0.1
comp=Z,25nm,1.0s,mb5.1
K15A Arbon 76.17 329 ⇑P P 07 35 27.4 0.0
baz=76,SNR=8.2
MOOW Moose Ponds 76.19 331 eP P 07 35 27.1 -0.3
J16A Bone 76.20 330 ⇑P P 07 35 27.7 +0.2
baz=76,SNR=7.4
I17A Pilgram Creek 76.25 331 ⇓P P 07 35 28.0 +0.2
baz=76,SNR=19
N11A Elko Archery C 76.32 326 ⇑P P 07 35 28.1 -0.2
baz=76
O10A Cortez Mining, 76.33 326 ⇓P P 07 35 28.0 -0.3
baz=76
M12A Wells 76.35 327 ⇑P P 07 35 28.3 -0.1
baz=77,SNR=7.2
K14A Jones Ranch, D 76.36 329 ⇓P P 07 35 28.1 -0.3
baz=77,SNR=9.7
L13A Double Diamond 76.38 328 ⇓P P 07 35 28.8 +0.3
baz=77,SNR=15
IMW Indian Meadow 76.39 331 eP P 07 35 28.6 +0.1
ULM Lac du Bonnet 76.53 344 P P 07 35 27.8 -1.4
comp=Z,11nm,0.8s,mb4.9,baz=155,slow=7.0,SNR=11
ULM Lac du Bonnet 76.53 344 eP P 07 35 27.6 -1.5
comp=Z,24nm,1.0s,mb5.1
ULM LR LR
comp=Z,8µm,22.0s,MS6.0
SAO San Andreas Ge 76.59 320 P P 07 35 38.0 +8.1
SAO MLR MLR
comp=Z,3µm,19.0s,MS5.6
Q07A Schurz 76.59 323 ⇓P P 07 35 29.8 0.0
baz=77
O09A Fish Creek Ran 76.60 325 ⇑P P 07 35 29.6 -0.2
baz=77
I16A Newdale 76.62 331 ⇓P P 07 35 30.3 +0.4
baz=77,SNR=11
H17A Grant Village 76.62 332 ⇑P P 07 35 30.3 +0.5
baz=77
WAKR Walker 76.63 323 eP P 07 35 31.8 +1.7
N10A Dunphy 76.64 326 ⇑P P 07 35 30.1 +0.1
baz=77
RLMT Red Lodge 76.65 333 ⇓P P 07 35 30.2 +0.3
baz=77
RLMT Red Lodge 76.65 333 eP P 07 35 29.7 -0.2
comp=Z,17nm,0.7s,mb5.1
RLMT LR LR
comp=Z,4µm,21.0s,MS5.7
R06C Coleville 76.66 323 ⇑P P 07 35 30.7 +0.5
baz=77,SNR=5.8
J15A Blackfoot 76.68 330 ⇓P P 07 35 30.6 +0.4
baz=77,SNR=9.0
LKWY Lake 76.68 332 PFAKE 07 35 40.0 +10
LKWY LR LR
comp=Z,6µm,20.0s,MS5.9
P08A Dixie Valley 76.73 324 ⇑P P 07 35 31.1 +0.5
baz=77
YFT Old Faithful 76.78 332 eP P 07 35 33.9 +3.2
M11A Holland Ranch, 76.80 327 ⇑P P 07 35 31.0 +0.1
baz=77,SNR=14
BMN Battle Mountai 76.81 325 PFAKE 07 35 40.0 +9.0
BMN LR LR
comp=Z,4µm,21.0s,MS5.7
CMB Columbia Colle 76.84 322 eP P 07 35 33.3 +2.0
CMB Columbia Colle 76.84 322 eP P 07 35 31.3 +0.1
CMB LR LR
comp=Z,3µm,19.0s,MS5.6
K13A Stover Farm, H 76.88 329 ⇑P P 07 35 31.5 +0.1
baz=77
YNR Norris Junctio 76.92 332 eP P 07 35 38.2 +6.7
G18A Lazy EL Ranch, 76.93 333 ⇑P P 07 35 31.4 -0.1
baz=77,SNR=15
L12A House Creek Ra 76.95 328 ⇓P P 07 35 31.5 -0.3
baz=77,SNR=9.8
P07A Fallon 77.06 324 ⇑P P 07 35 32.5 0.0
baz=77
J14A Carey 77.12 329 ⇓P P 07 35 33.2 +0.5
baz=77,SNR=11
H16A Russell Place, 77.16 332 ⇑P P 07 35 33.4 +0.5
baz=77,SNR=8.1
I15A Monteview 77.17 330 ⇓P P 07 35 33.4 +0.4
baz=77,SNR=7.8
O08A Rochester Mine 77.20 325 ⇓P P 07 35 33.4 +0.2
baz=77,SNR=7.2
M10A I.L. Ranch, Tu 77.25 326 ⇑P P 07 35 33.5 +0.1
baz=77
K12A Draper Farm, C 77.26 328 ⇑P P 07 35 33.6 +0.1
baz=78,SNR=25
N09A Rock Creek Ran 77.27 325 ⇓P P 07 35 33.6 0.0
baz=78
L11A Cat Creek Ranc 77.33 327 ⇓P P 07 35 34.0 +0.1
baz=78,SNR=11
QLMT Earthquake Lak 77.34 331 eP P 07 35 35.8 +1.9
WCN Washoe City 77.37 323 ⇑P P 07 35 34.7 +0.5
baz=78
G17A Pierce Place, 77.43 332 ⇓P P 07 35 34.7 +0.4
baz=78
F18A Big Timber 77.46 333 ⇓P P 07 35 34.1 -0.5
baz=78,SNR=22
DGMT Dagmar 77.48 338 ⇑P P 07 35 34.6 0.0
baz=78
DGMT Dagmar 77.48 338 eP P 07 35 34.7 +0.1
comp=Z,104nm,1.0s,mb5.7
DGMT LR LR
comp=Z,3µm,19.0s,MS5.7
J13A Cove Ranch, Pi 77.49 329 ⇑P P 07 35 35.0 +0.3
baz=78,SNR=9.8
O07A Toulon 77.50 324 ⇓P P 07 35 34.9 0.0
baz=78,SNR=8.2
N08A GE Springer Mi 77.54 325 ⇓P P 07 35 34.8 -0.3
baz=78
I14A Mackay 77.55 330 ⇓P P 07 35 35.8 +0.7
baz=78,SNR=19
L10A Juniper Basin 77.62 327 ⇑P P 07 35 35.5 0.0
baz=78,SNR=17
M09A Marrel Ranch, 77.64 326 ⇓P P 07 35 35.6 -0.1
baz=78,SNR=11
P06A Stead Airport, 77.71 323 ⇓P P 07 35 36.2 +0.1
baz=78
H15A Lima 77.72 331 ⇓P P 07 35 36.4 +0.4
baz=78
HLID Hailey 77.73 329 ⇑P P 07 35 36.6 +0.5
baz=78
HLID Hailey 77.73 329 eP P 07 35 36.5 +0.5
comp=Z,18nm,0.8s,mb5.0
HLID LR LR
comp=Z,3µm,20.0s,MS5.6
SCHQ Schefferville 77.81 2 P P 07 35 35.0 -1.2
comp=Z,9.1nm,0.7s,mb4.8,baz=167,slow=4.6,SNR=8.3
SCHQ LR LR 08 09 09.1
comp=Z,5µm,21.0s,MS5.8,baz=185,slow=35
J12A Stokes Ranch, 77.82 328 ⇓P P 07 35 36.8 +0.3
baz=78,SNR=16
G16A Moss Hill, Enn 77.82 332 ⇑P P 07 35 36.6 +0.1
baz=78,SNR=9.6
I13A Wildhorse Cree 77.85 329 ⇑P P 07 35 36.7 -0.1
baz=78,SNR=20
F17A Fitzpatrick Pl 77.86 333 ⇓P P 07 35 36.5 -0.3
baz=78,SNR=14
K11A Parker Ranch, 77.92 328 ⇑P P 07 35 36.9 -0.3
baz=78,SNR=11
N07B Gerlach 77.98 324 ⇓P P 07 35 37.4 -0.2
baz=78
O06A Flanigan 78.01 324 ⇓P P 07 35 37.8 0.0
baz=78
H14A Leadore 78.04 330 ⇑P P 07 35 37.9 +0.1
baz=78,SNR=7.6
BOZ Bozeman (W) 78.07 332 ⇓P P 07 35 37.8 -0.2
baz=78
BOZ Bozeman (W) 78.07 332 eP P 07 35 37.4 -0.6
comp=Z,18nm,1.1s,mb4.9
BOZ LR LR
comp=Z,4µm,21.0s,MS5.7
G15A Dillon 78.07 331 ⇓P P 07 35 37.9 -0.1
baz=78,SNR=17
E18A Harlowton 78.08 333 ⇑P P 07 35 37.6 -0.4
baz=78,SNR=5.2
BEKR Beckwourth 78.10 323 ⇓P P 07 35 38.5 +0.2
baz=78
M08A Happy Creek Ra 78.15 325 ⇓P P 07 35 38.3 -0.2
baz=78
F16A Kennard Place, 78.18 332 ⇑P P 07 35 38.4 -0.2
baz=78
L09A Wilkinson Ranc 78.19 326 ⇑P P 07 35 37.8 -0.9
baz=78
I12A Atlanta 78.24 329 ⇓P P 07 35 39.1 +0.1
baz=78
DLMT Dillon 78.27 331 eP P 07 35 39.1 0.0
comp=Z,30nm,1.2s,mb5.1
MFID Camas Ranch 78.30 328 ⇑P P 07 35 39.5 +0.2
baz=78,SNR=8.2
K10A MacKenzie Ranc 78.34 327 ⇑P P 07 35 39.1 -0.4
baz=78,SNR=12
MCCM Marconi Confer 78.36 320 PFAKE 07 35 50.0 +10
MCCM LR LR
comp=Z,2µm,20.0s,MS5.5
E17A Martinsdale 78.39 333 ⇓P P 07 35 39.6 0.0
baz=79,SNR=14
H13A Challis 78.41 330 ⇓P P 07 35 40.3 +0.4
baz=79,SNR=29
N06A Buffalo Meadow 78.43 324 ⇓P P 07 35 40.2 +0.1
baz=79,SNR=8.5
M07A Soldier Meadow 78.52 325 ⇑P P 07 35 40.8 +0.3
baz=79,SNR=10
D18A Linhart Farms, 78.54 334 ⇑P P 07 35 40.0 -0.5
baz=79,SNR=11
LRM Limekiln Ridge 78.57 332 eP P 07 35 41.2 +0.6
G14A Jackson 78.57 331 P P 07 35 40.8 +0.1
baz=79
F15A Butte 78.60 332 ⇑P P 07 35 41.3 +0.5
baz=79,SNR=15

L08A Fields 78.66 326 ⇑P P 07 35 41.1 -0.2
baz=79,SNR=9.5
H12A Diamond D Ranc 78.68 329 ⇑P P 07 35 41.7 +0.4
baz=79,SNR=14
K09A Rome 78.71 327 ⇓P P 07 35 41.5 -0.1
baz=79,SNR=5.4
I11A Placerville 78.73 328 ⇑P P 07 35 41.4 -0.3
baz=79,SNR=6.5
J10A Berg Farm, Mel 78.76 328 ⇓P P 07 35 41.3 -0.5
baz=79
E16A East Helena 78.79 332 ⇓P P 07 35 42.1 +0.2
baz=79
G13A Cobalt 78.80 330 ⇓P P 07 35 42.7 +0.7
baz=79,SNR=73
D17A Six Diamond Ra 78.86 333 ⇓P P 07 35 42.2 -0.1
baz=79,SNR=23
F14A Wisdom 78.97 331 ⇓P P 07 35 43.4 +0.6
baz=79,SNR=9.1
WVOR Wild Horse Val 78.99 326 P P 07 35 43.8 +0.7
WVOR pmax pmax
comp=Z,15nm,1.1s,mb4.8
WVOR Wild Horse Val 78.99 326 *e*P P 07 35 43.6 +0.5
comp=Z,15nm,1.1s,mb4.8
WVOR LR LR
comp=Z,4μm,21.0s,MS5.8
HRY Holter Researc 78.99 332 *e*P P 07 35 43.7 +0.7
SUR Sutherland 79.00 120 *e*P P 07 35 44.1 +0.6
comp=Z,74nm,0.9s,mb5.6
SUR LR LR
comp=Z,13μm,22.0s,MS6.2
HOPS Hopland 79.04 321 PFAKE 07 35 50.0 +6.5
HOPS LR LR
comp=Z,3μm,19.0s,MS5.7
L07A Adell 79.06 325 ⇑P P 07 35 44.0 +0.5
baz=79,SNR=8.4
E15A Deer Lodge 79.12 332 ⇑P P 07 35 43.8 +0.1
baz=79,SNR=16
K08A Mann Creek Ran 79.12 326 ⇓P P 07 35 43.7 -0.1
baz=79
D16A Dana Ranch, Ca 79.13 333 ⇓P P 07 35 44.1 +0.4
baz=79,SNR=25
EGMT Eagleton 79.19 334 ⇓P P 07 35 43.8 -0.2
baz=79
EGMT Eagleton 79.19 334 *e*P P 07 35 43.7 -0.3
comp=Z,61nm,1.4s,mb5.3
EGMT LR LR
comp=Z,3μm,20.0s,MS5.7
J09A Fry Pan Ranch, 79.20 327 ⇑P P 07 35 44.3 +0.1
baz=79,SNR=6.7
I10A Payette 79.27 328 ⇓P P 07 35 44.3 -0.3
baz=80
C17A Wharram Farm, 79.28 334 ⇓P P 07 35 44.3 -0.3
baz=80,SNR=14
TOA0 Torodi Ar. Sit 79.34 71 *e*P P 07 35 45.0 -0.6
TORD Torodi Ar. Bea 79.34 71 P P 07 35 44.9 -0.7
comp=Z,168nm,1.0s,mb5.9,baz=252,slow=4.8,SNR=233
TORD LR LR 08 10 47.2
comp=Z,9μm,19.5s,MS6.1,baz=240,slow=36
TORD Torodi Ar. Bea 79.34 71 P P 07 35 44.9 -0.7
TORD LR LR 08 10 47.2
H11A Donnelly 79.34 329 ⇑P P 07 35 44.7 -0.2
baz=80
F13A Darby 79.38 330 ⇑P P 07 35 45.2 0.0
baz=80,SNR=44
E14A Clinton 79.48 331 ⇓P P 07 35 45.8 +0.1
baz=80,SNR=13
MOD Modoc 79.49 325 *e*P P 07 35 45.4 -0.4
comp=Z,24nm,1.0s,mb5.1
MOD LR LR
comp=Z,3μm,22.0s,MS5.6
K07A Rock Creek Ran 79.49 326 ⇓P P 07 35 46.0 +0.2
baz=80
B18A Beardsley Farm 79.49 335 ⇓P P 07 35 45.1 -0.6
baz=80,SNR=16
D15A Lincoln 79.55 332 ⇓P P 07 35 45.9 -0.2
baz=80,SNR=9.3
J08A Circle Bar Ran 79.57 327 ⇓P P 07 35 46.0 -0.2
baz=80
H10A Noah's Angus R 79.61 328 ⇑P P 07 35 46.0 -0.4
baz=80,SNR=12
I09A Lost Marbles R 79.64 327 ⇓P P 07 35 46.5 -0.2
baz=80,SNR=6.9
CHMT Chamberlain Mo 79.76 332 *e*P P 07 35 48.5 +1.3
F12A Elk City 79.78 330 ⇑P P 07 35 47.1 -0.2
baz=80
WDC Whiskeytown Da 79.80 322 P P 07 35 46.5 -1.1
WDC pmax pmax
comp=Z,18nm,0.9s,mb5.0
WDC Whiskeytown Da 79.80 322 *e*P P 07 35 46.3 -1.2
comp=Z,18nm,0.9s,mb5.0
WDC LR LR
comp=Z,2μm,19.0s,MS5.5
E13A Victor 79.81 331 ⇑P P 07 35 47.7 +0.2
baz=80,SNR=25
C16A Fuhringer Ranc 79.82 333 ⇓P P 07 35 47.6 +0.1
baz=80,SNR=14
B17A L&G Farms, Che 79.82 334 ⇑P P 07 35 47.0 -0.5
baz=80
A18A Metzger Ranch, 79.94 335 ⇓P P 07 35 47.8 -0.4
baz=80,SNR=6.2
G11A Walters Elk Ra 79.98 329 ⇑P P 07 35 48.5 +0.1
baz=80,SNR=38
MSO Missoula 80.00 331 *e*P P 07 35 49.5 +1.1
comp=Z,30nm,1.3s,mb5.1
MSO LR LR
comp=Z,4μm,21.0s,MS5.7
D14A Greenough 80.00 332 ⇑P P 07 35 48.4 -0.1
baz=80
J07A Hines 80.00 326 ⇑P P 07 35 48.6 0.0
baz=80,SNR=11
I08A Drewsey 80.01 327 ⇑P P 07 35 48.7 +0.1
baz=80,SNR=9.5
BMO Blue Mountains 80.07 328 P P 07 35 49.0 +0.1
BMO pmax pmax
comp=Z,29nm,1.1s,mb5.1
BMO Blue Mountains 80.07 328 *e*P P 07 35 48.6 -0.3
comp=Z,29nm,1.1s,mb5.1
BMO LR LR
comp=Z,3μm,20.0s,MS5.6
H09A Durkee 80.11 328 ⇑P P 07 35 48.9 -0.3
baz=80
SLMT Seeley Lake 80.12 332 *e*P P 07 35 49.5 +0.4
C15A Salmond Ranch, 80.16 333 ⇓P P 07 35 49.3 0.0
baz=80,SNR=26
B16A M & M Farms, S 80.28 334 ⇑P P 07 35 49.6 -0.4
baz=80
F11A Grangeville 80.29 330 ⇑P P 07 35 49.6 -0.5
baz=80,SNR=23
A17A Triple J Farms 80.30 334 ⇑P P 07 35 49.3 -0.7
baz=80,SNR=13
G10A Bishop Farm, J 80.31 329 ⇓P P 07 35 50.0 -0.1
baz=80,SNR=26
J06A Christmas Vall 80.35 326 ⇓P P 07 35 50.1 -0.3
baz=80,SNR=14
K05A Summer Lake 80.37 325 ⇑P P 07 35 51.0 +0.4
baz=81
D13A Huson 80.43 331 ⇑P P 07 35 50.8 0.0
baz=81,SNR=24
HOG Hogback Mounta 80.47 324 P P 07 35 51.8 +0.6
H08A Prairie City 80.50 327 ⇑P P 07 35 51.3 +0.1
baz=81
SWMT Swartz Lake 80.55 332 *e*P P 07 35 52.3 +0.9
B15A Bradely Ranch, 80.56 333 ⇑P P 07 35 50.8 -0.7
baz=81,SNR=19
I07A Izee 80.61 327 ⇓P P 07 35 52.1 +0.3
baz=81,SNR=9.9
G09A Cove 80.61 328 ⇑P P 07 35 51.8 0.0
baz=81,SNR=51
C14A Swan Lake 80.64 332 ⇑P P 07 35 52.0 +0.1
baz=81
A16A West Butte Ran 80.66 334 ⇓P P 07 35 51.6 -0.4
baz=81,SNR=46
E11A Bogner Ranch, 80.67 330 ⇓P P 07 35 51.7 -0.4
baz=81,SNR=7.0
YBH Yreka Blue Hor 80.67 323 LR LR 08 09 18.1
comp=Z,4μm,21.4s,MS5.7,baz=140,slow=34
YBH Yreka Blue Hor 80.67 323 P P 07 35 56.6 +4.4
YBH pmax pmax
comp=Z,10.0nm,1.0s
YBH Yreka Blue Hor 80.67 323 *e*P P 07 35 50.7 -1.5
comp=Z,10nm,0.9s,mb4.8
YBH LR LR
comp=Z,3μm,21.0s,MS5.7
D12A Red Ives Fores 80.80 331 ⇑P P 07 35 52.7 -0.1
baz=81
YBMT Yellow Bay 80.83 332 *e*P P 07 35 45.6 -7.3
JTMT Jette 80.85 332 *e*P P 07 35 53.6 +0.5
F10A Beach Ranch, E 80.86 329 ⇑P P 07 35 53.2 +0.1
baz=81,SNR=22
I06A Prineville 80.87 326 ⇑P P 07 35 53.3 0.0
baz=81,SNR=11
B14A Marquette Ranc 80.89 333 ⇑P P 07 35 52.1 -1.2
baz=81,SNR=9.6
C13A Hot Springs 80.93 332 ⇓P P 07 35 53.0 -0.4
baz=81,SNR=16
TSUM Tsumeb 80.97 107 P P 07 35 54.2 -0.3
comp=Z,84nm,1.0s,mb5.6,baz=231,slow=4.8,SNR=54
TSUM Tsumeb 80.97 107 *e*P P 07 35 55.0 +0.5
comp=Z,77nm,0.9s,mb5.6
TSUM LR LR
comp=Z,17μm,20.0s,MS6.4
F09A S2 Ranch, Elgi 80.99 329 ⇓P P 07 35 53.3 -0.5
baz=81,SNR=7.2
H07A Lands Inn, Kim 81.00 327 ⇑P P 07 35 53.7 -0.2
baz=81
A15A Johnson Ranch, 81.15 333 ⇑P P 07 35 54.0 -0.5
baz=81,SNR=8.9
BSMT Bassoo Peak 81.15 332 P P 07 35 54.6 0.0
E10A Myers Farm, Un 81.18 329 ⇓P P 07 35 54.6 -0.3
baz=81,SNR=20
G08A Pilot Rock 81.20 328 ⇑P P 07 35 55.0 +0.1
baz=81,SNR=11
RAR Rarotonga 81.23 251 LR LR 08 03 39.5
comp=Z,5μm,18.6s,MS5.9,baz=190,slow=30
RAR Rarotonga 81.23 251 PFAKE 07 36 10.0 +14
RAR LR LR
comp=Z,7μm,21.0s,MS6.0
D11A Klaveano Farm, 81.24 330 ⇓P P 07 35 54.6 -0.5
baz=81,SNR=9.5
LNOR Lincton Mounta 81.29 328 *e*P P 07 35 57.9 +2.5
C12B Naegeli Ranch, 81.35 331 ⇑P P 07 35 55.6 -0.1
baz=82
HUMO Hull Mountain 81.40 324 *e*P P 07 35 55.5 -0.6
comp=Z,14nm,1.1s,mb4.8
HUMO LR LR
comp=Z,2μm,20.0s,MS5.6
B13A Whitefish 81.41 332 ⇓P P 07 35 56.1 +0.1
baz=82
A14A Double T Ranch 81.43 333 ⇓P P 07 35 55.4 -0.7
baz=82,SNR=12
F08A Pendleton 81.47 328 ⇑P P 07 35 56.2 -0.2
baz=82
H06A Lindquist Farm 81.49 327 ⇑P P 07 35 56.5 0.0
baz=82,SNR=9.0
G07A Ruggs Ranch, H 81.53 327 ⇑P P 07 35 56.9 +0.2
baz=82,SNR=15
I05A Bend 81.57 326 ⇓P P 07 35 57.6 +0.6
baz=82,SNR=6.5
D10A Wagner Farm, O 81.68 330 ⇑P P 07 35 57.3 -0.1
baz=82,SNR=20
E09A Wood Farm, Sta 81.69 329 ⇓P P 07 35 56.9 -0.6
baz=82
WALA Waterton Lakes 81.70 333 *e*P P 07 35 57.1 -0.4
comp=Z,1.0nm,0.8s
C11A Tepee Creek (N 81.79 331 ⇑P P 07 35 57.9 -0.1
baz=82,SNR=32
A13A Flathead Natio 81.82 332 ⇑P P 07 35 58.3 +0.2
baz=82,SNR=71
H05A Madras 81.88 326 ⇓P P 07 35 59.0 +0.4
baz=82
B12A Libby 81.97 332 ⇑P P 07 35 58.6 -0.3
baz=82,SNR=16
G06A Carlson Farm, 81.99 327 ⇑P P 07 35 58.9 -0.2
baz=82
F07A Phinny Hill Vi 82.11 328 ⇑P P 07 35 59.5 -0.2
baz=82
E08A Dider Farm, El 82.11 328 ⇓P P 07 35 59.3 -0.4
baz=82
D09A Jones Farm, Ri 82.16 329 ⇑P P 07 35 59.7 -0.3
baz=82,SNR=11
FFC Flin Flon 82.20 342 P P 07 35 58.5 -1.5
FFC pmax pmax
comp=Z,39nm,1.1s,mb5.2
FFC Flin Flon 82.20 342 *e*P P 07 35 58.4 -1.6
comp=Z,39nm,1.1s,mb5.2
FFC LR LR
comp=Z,5μm,19.0s,MS5.9
C10A Spilker Farm, 82.25 330 ⇓P P 07 36 00.1 -0.4
baz=82
HAWA Hanford 82.27 328 *e*P P 07 36 00.3 -0.2
comp=Z,54nm,1.0s,mb5.4
HAWA LR LR
comp=Z,3μm,21.0s,MS5.7
B11A Sandpoint 82.29 331 ⇑P P 07 36 00.6 0.0
baz=82
RSW Rattlesnake Hi 82.30 328 *e*P P 07 36 00.9 +0.2
G05A Wamic 82.34 326 ⇓P P 07 36 01.1 +0.1
baz=82
A12A Yaak River Ran 82.35 332 ⇑P P 07 36 00.6 -0.3
baz=82,SNR=18
H04A Deoit Lake 82.40 326 ⇑P P 07 36 00.8 -0.5
baz=83
F06A Goldendale 82.44 327 ⇓P P 07 36 01.6 +0.2
baz=83
D08A Wollman Farm, 82.45 329 ⇑P P 07 36 01.2 -0.3
baz=83
I03A Eugene 82.49 325 ⇓P P 07 36 01.9 +0.1
baz=83
NEW Newport 82.50 331 P P 07 36 02.4 +0.7
NEW pmax pmax
comp=Z,31nm,1.4s
NEW Newport 82.50 331 *e*P P 07 36 00.6 -1.1
comp=Z,31nm,1.4s,mb5.0
NEW LR LR
comp=Z,3μm,19.0s,MS5.7
E07A Sunnyside 82.54 328 ⇑P P 07 36 02.0 +0.1
baz=83
HOOD Mount Hood Mea 82.57 326 P P 07 36 01.8 -0.3
comp=Z,35nm,0.9s,mb5.4
B10A Chitwood Farm, 82.57 331 ⇑P P 07 36 01.5 -0.6
baz=83
OD2 Odessa Site #2 82.59 329 P P 07 36 02.1 -0.1
A11A Hall Mountain, 82.68 332 ⇑P P 07 36 01.9 -0.7
baz=83,SNR=29
C09A Chrisman Ranch 82.69 330 ⇑P P 07 36 01.6 -1.1
baz=83,SNR=11
I02A Mapleton 82.81 324 ⇑P P 07 36 02.8 -0.7
baz=83
F05A White Salmon 82.86 327 ⇓P P 07 36 03.6 -0.1
baz=83
G04A Mulino 82.91 326 ⇑P P 07 36 03.6 -0.4
baz=83
COR Corvallis 82.92 325 PFAKE 07 36 10.0 +6.0
COR LR LR
comp=Z,3μm,20.0s,MS5.7
H03A Soap Creek Ran 82.98 325 ⇑P P 07 36 04.1 -0.2
baz=83
C08A Higginbotham F 83.03 329 ⇓P P 07 36 04.0 -0.5
baz=83
D07A Quincy 83.05 329 ⇓P P 07 36 04.5 -0.1
baz=83
RTC Rabat Centre 83.06 49 PFAKE 07 36 10.0 +5.0
RTC LR LR
comp=Z,9μm,19.0s,MS6.2
B09A Rice 83.08 330 ⇓P P 07 36 04.0 -0.8
baz=83,SNR=7.7
E06A Yakima 83.08 328 ⇑P P 07 36 04.1 -0.7
baz=83
MAW Mawson 83.10 164 *e*S S 07 46 20.8 -1.3
MAW Mawson 83.10 164 P P 07 36 04.7 0.0
comp=Z,58nm,0.7s,mb5.7,baz=232,slow=5.7,SNR=63
MAW LR LR 08 16 35.9
comp=Z,9μm,18.3s,MS6.2,baz=235,slow=38
MAW Mawson 83.10 164 *e*P P 07 36 04.4 -0.3
MAW *e*S S 07 46 20.8 -1.3
MAW pmax pmax
comp=Z,50nm,0.7s
MAW MLR MLR
comp=Z,13μm,19.0s
MAW Mawson 83.10 164 *e*P P 07 36 04.4 -0.3
comp=Z,50nm,0.7s,mb5.7
MAW *e*S S 07 46 20.8 -1.3
MAW LR LR
comp=Z,13μm,19.0s,MS6.3
EBG Ellensburg 83.14 328 P P 07 36 05.9 +0.8
A10A Northport 83.22 331 ⇓P P 07 36 05.0 -0.5
baz=83
H02A Toledo 83.35 325 ⇓P P 07 36 06.4 +0.2
baz=84
F04A Amboy 83.38 326 ⇑P P 07 36 05.6 -0.7
baz=84
WTV Waterville 83.40 329 P P 07 36 05.8 -0.6
G03A Yamhill 83.40 326 ⇓P P 07 36 06.1 -0.4
baz=84
C07A Waterville 83.44 329 ⇑P P 07 36 05.8 -0.8
baz=84,SNR=11
D06A Cle Elum 83.47 328 ⇓P P 07 36 06.6 -0.2
baz=84
E05A Randle 83.48 327 ⇓P P 07 36 06.4 -0.5
baz=84
ETW Entiat 83.51 329 *e*P P 07 36 07.1 +0.1
PFVI Vila Bisbo 83.53 45 *i* P P 07 36 07.9 +0.6
comp=Z,182nm,1.8s,mb5.9
PFVI *e*S S 07 46 29.5 +2.4
PFVI *e*SS SS 07 52 08.3 +14
PFVI *e*LQ 07 58 16.7
PFVI *e*LR LR 08 00 13.4
comp=Z,5μm,20.0s
B08A Colville Reser 83.58 330 ⇓P P 07 36 06.5 -0.8
baz=84
LON Longmire 83.64 327 P P 07 36 08.8 +1.2
LON pmax pmax
comp=Z,11nm,1.0s,mb4.9
LON Longmire 83.64 327 *e*P P 07 36 07.2 -0.4
comp=Z,11nm,1.1s,mb4.9
A09A Danville 83.68 330 ⇑P P 07 36 06.7 -1.1
baz=84,SNR=14
MORF Marmelete 83.74 45 *i* P P 07 36 09.3 +0.9
comp=Z,143nm,1.5s,mb5.9
MORF Marmelete 83.74 45 *e*PP PP 07 39 21.5 -0.5
MORF *e*S S 07 46 37.0 +7.7
MORF *e*SS SS 07 52 03.9 +6.5
MORF *e*LQ 07 58 20.7
MORF *e*LR LR 08 03 06.8
comp=Z,6μm,22.0s
PTEO Sao Teotonio 83.83 45 *e*P P 07 36 09.9 +1.0
comp=Z,196nm,1.3s,mb6.1
BOSA Boshof 83.95 118 P P 07 36 09.7 -0.2
comp=Z,41nm,0.9s,mb5.6,baz=249,slow=4.4,SNR=38
BOSA LR LR 08 10 25.6
comp=Z,13μm,19.0s,MS6.3,baz=245,slow=33
BOSA Boshof 83.95 118 P P 07 36 09.6 -0.3
BOSA pmax pmax
comp=Z,70nm,1.0s,mb5.8
BOSA Boshof 83.95 118 *e*P P 07 36 09.5 -0.3
comp=Z,70nm,1.0s,mb5.7
BOSA LR LR
comp=Z,13μm,20.0s,MS6.3
F03A Seaside 83.96 326 ⇓P P 07 36 08.7 -0.6
baz=84
A08A Turner Farm, O 83.98 330 ⇓P P 07 36 08.5 -0.8
baz=84,SNR=13
E04A Onalaska 83.98 327 ⇓P P 07 36 09.4 0.0
baz=84
FCC Fort Churchill 83.99 348 P P 07 36 08.5 -0.7
FCC pmax pmax
comp=Z,1.0nm,0.9s
FCC Fort Churchill 83.99 348 *e*P P 07 36 08.1 -1.1
comp=Z,0.9nm,0.9s
C06A Tall Timber Ra 84.01 329 ⇓P P 07 36 09.2 -0.3
baz=84
B07A Winthrop 84.02 329 ⇑P P 07 36 08.7 -0.8
baz=84,SNR=6.6
PBDV Barranco-do-Ve 84.17 45 *i* P P 07 36 11.3 +0.7
comp=Z,212nm,1.6s,mb6.0
PBDV Barranco-do-Ve 84.17 45 *e*PP PP 07 39 25.7 +0.1
PBDV *e*S S 07 46 38.3 +4.7
PBDV *e*LQ 07 58 29.7
PBDV *e*LR LR 08 02 54.1
comp=Z,6μm,18.0s
C05A Tolt Reservoir 84.23 328 ⇑P P 07 36 10.1 -0.6
baz=84
LIS Lisbon 84.24 44 *e*P P 07 36 11.3 +0.4
LIS *e*S S 07 46 28.0 -6.2
LIS *e*S S 07 46 28.1 -6.1
LIS AMS AMS 08 09 32.8
comp=Z,5μm,29.4s,MS5.8
PMAFR Mafra 84.29 43 *e*P P 07 36 11.6 +0.4
comp=Z,135nm,1.8s,mb5.8
PMAFR Mafra 84.29 43 *e*PP PP 07 39 24.1 -2.4
PMAFR *e*S S 07 46 36.7 +1.9
PMAFR *e*SS SS 07 52 21.6 +16
PMAFR *e*LQ 07 58 00.9
PMAFR *e*LR LR 08 01 37.4
comp=Z,11μm,18.0s
D04A Dobbs Creek Ra 84.38 327 ⇑P P 07 36 11.3 -0.1
baz=85
E03A Lebam 84.38 326 ⇑P P 07 36 11.4 0.0
baz=85
PVAQ Vaqueiros 84.41 45 *i* P P 07 36 12.6 +0.8
comp=Z,140nm,1.6s,mb5.8
PVAQ Vaqueiros 84.41 45 *e*PP PP 07 39 26.1 -1.3
PVAQ *e*S S 07 46 34.6 -1.4
PVAQ *e*SS SS 07 52 22.4 +15
PVAQ *e*LQ 07 58 34.3
PVAQ *e*LR LR 08 02 54.7
comp=Z,5μm,22.0s
A07A Ashnola River, 84.56 330 ⇑P P 07 36 11.8 -0.4
baz=85,SNR=13
EGRO El Granado 84.63 45 P P 07 36 13.6 +0.7
comp=Z,177nm,1.1s,mb6.1
EDM Edmonton 84.70 336 P P 07 36 11.1 -1.8
EDM Edmonton 84.70 336 *e*P P 07 36 11.0 -1.9
B06A Marblemount 84.71 329 ⇑P P 07 36 12.2 -0.8
baz=85
B05A Bryant 84.82 328 ⇑P P 07 36 13.0 -0.6
baz=85
EVO Evora 84.86 44 ⇑*i* P P 07 36 14.3 +0.2
comp=Z,388nm,1.6s,mb6.0
EVO *e*MLR MLR
comp=Z,11μm,23.0s,MS5.9
EVO Evora 84.86 44 *i* P P 07 36 14.5 +0.4
comp=Z,93nm,1.4s,mb5.7
D03A Wishkah Elem. 84.87 327 ⇓P P 07 36 14.1 +0.2
baz=85
C04A Brinnon 84.88 327 ⇓P P 07 36 13.4 -0.5
baz=85
SFS San Fernando 84.88 47 PFAKE 07 36 20.0 +5.8
SFS LR LR
comp=Z,9μm,21.0s,MS6.1
PBAR Barrancos 85.28 45 *i* P P 07 36 16.5 +0.3
comp=Z,105nm,1.3s,mb5.8
PBAR Barrancos 85.28 45 *e*PP PP 07 39 34.4 -0.2
PBAR *e*S S 07 46 46.6 +1.9
PBAR *e*LQ 07 59 28.6
PBAR *e*LR LR 08 01 14.9
comp=Z,6μm,22.0s
EMIN Mina Concepcio 85.30 46 P P 07 36 16.2 -0.1
comp=Z,31nm,1.0s,mb5.4
PESTR Estremoz 85.32 44 *i* P P 07 36 16.4 0.0
comp=Z,121nm,1.5s,mb5.8
PESTR Estremoz 85.32 44 *e*PP PP 07 39 32.7 -2.2
PESTR *e*S S 07 46 45.5 +0.5
PESTR *e*SS SS 07 52 36.6 +16
PESTR *e*LQ 07 59 14.8
PESTR *e*LR LR 08 01 13.1
comp=Z,6μm,22.0s
A05A Maple Falls 85.33 329 ⇓P P 07 36 15.8 -0.3
baz=86
ESPR Espera 85.34 47 P P 07 36 17.2 +0.6
comp=Z,114nm,0.9s,mb6.0
B04A Port Angeles 85.37 327 ⇑P P 07 36 15.7 -0.6
baz=86
EJIF Jimena Fronter 85.37 47 P P 07 36 18.0 +1.3
EJIF pmax pmax
comp=Z,103nm,1.0s,mb5.9
EJIF Jimena Fronter 85.37 47 P P 07 36 18.0 +1.3
comp=Z,103nm,1.0s,mb5.9
A04A Legoe Bay, Lum 85.43 328 ⇑P P 07 36 16.1 -0.6
baz=86
EBAD Badajoz 85.63 45 P P 07 36 18.6 +0.7
comp=Z,21nm,0.8s,mb5.4
LBTB Lobatse 85.65 115 P P 07 36 18.5 0.0
comp=Z,23nm,1.1s,mb5.3,baz=261,slow=7.3,SNR=14
LBTB Lobatse 85.65 115 P P 07 36 18.8 +0.3
LBTB pmax pmax
comp=Z,34nm,0.9s,mb5.6
LBTB Lobatse 85.65 115 *e*P P 07 36 18.3 -0.2
comp=Z,34nm,0.9s,mb5.6
LBTB LR LR
comp=Z,8μm,19.0s,MS6.1
PMRV Marv??o 85.77 44 *i* P P 07 36 18.0 -0.6
comp=Z,41nm,1.2s,mb5.5
PMRV Marv??o 85.77 44 *e*PP PP 07 39 39.2 +0.7
PMRV *e*S S 07 46 46.3 -3.0
PMRV *e*SS SS 07 52 47.3 +20
PMRV *e*LQ 07 58 48.6
PMRV *e*LR LR 08 01 21.1
comp=Z,7μm,16.0s
EMIJ Mijas 85.90 47 P P 07 36 19.7 +0.4
comp=Z,78nm,0.9s,mb5.9
PCBR Castelo Branco 85.95 43 *e*P P 07 36 19.2 -0.3

comp=Z,55nm,1.5s,mb5.6
PVIS Viseu 86.18 43 *e*P P **07 36 21.4 +0.8**
comp=Z,77nm,1.3s,mb5.8
MTE Manteigas 86.22 43 *e*P P **07 36 21.2 +0.4**
comp=Z,83nm,1.6s,mb5.7
MTE Manteigas 86.22 43 *e*PP PP 07 39 40.3 -1.8
MTE *e*S S 07 46 51.9 -1.9
MTE *e*SS SS 07 52 43.2 +9.4
MTE *e*LQ 07 59 10.4
MTE *e*LR LR 08 04 22.9
comp=Z,13µm,18.0s
MTE Manteigas 86.22 43 *e*P P **07 36 21.0 +0.2**
comp=Z,55nm,1.1s,mb5.7
MTE LR LR
comp=Z,10µm,20.0s,MS6.2
EZAM Zamans 86.52 41 P P **07 36 23.3 +1.1**
EZAM pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
EZAM Zamans 86.52 41 P P **07 36 23.3 +1.1**
comp=Z,3.6nm,0.6s,mb4.8
PCAB Cabril 86.67 42 *e*P P **07 36 22.9 -0.1**
comp=Z,83nm,1.4s,mb5.8
ELOB Lobios 86.74 42 P P **07 36 24.3 +1.0**
comp=Z,11nm,0.7s,mb5.2
ELUQ Luque 86.78 47 P P **07 36 24.4 +0.8**
ELUQ pmax pmax
comp=Z,162nm,1.3s,mb6.1
ELUQ Luque 86.78 47 P P **07 36 24.4 +0.8**
comp=Z,162nm,1.3s,mb6.1
ERON Agron 86.80 47 P P **07 36 24.5 +0.8**
comp=Z,11nm,0.8s,mb5.2
EGUA Guajares 86.86 48 P P **07 36 24.5 +0.4**
EGUA pmax pmax
comp=Z,23nm,0.7s,mb5.5
EGUA Guajares 86.86 48 P P **07 36 24.5 +0.5**
comp=Z,22nm,0.7s,mb5.5
EADA Adamuz 86.90 46 P P **07 36 24.2 0.0**
comp=Z,13nm,0.9s,mb5.2
TAM Tamanrasset 86.93 64 P P **07 36 25.0 +0.3**
TAM Tamanrasset 86.93 64 *e*P P **07 36 24.9 +0.2**
comp=Z,15nm,0.9s,mb5.2
TAM LR LR
comp=Z,26µm,19.0s,MS6.7
MVO Moncorvo 86.98 43 *e*P P **07 36 24.1 -0.4**
comp=Z,81nm,2.1s,mb5.6
MVO Moncorvo 86.98 43 *e*PP PP 07 39 45.1 -3.1
MVO *e*S S 07 47 04.3 +3.2
MVO *e*LQ 07 59 12.5
MVO *e*LR LR 08 04 43.8
comp=Z,12µm,18.0s
EBER Berja 87.36 48 P P **07 36 27.6 +1.1**
comp=Z,147nm,1.5s,mb6.0
EBAN Banos Encina 87.42 46 P P **07 36 27.6 +0.9**
EBAN pmax pmax
comp=Z,27nm,0.9s,mb5.5
EBAN Banos Encina 87.42 46 P P **07 36 27.6 +0.9**
comp=Z,27nm,0.9s,mb5.5
DRV Dumont d'Urvil 87.47 192 P P **07 36 25.0 -1.6**
DRV Dumont d'Urvil 87.47 192 PP PP 07 39 51.0 +0.3
DRV S SKSac 07 46 52.0 +0.1
DRV SS SS 07 52 59.0 +10
DRV L 08 00 00.0
DRV R 08 06 00.0
PBRG Braganca 87.52 42 *e*P P **07 36 27.7 +0.6**
comp=Z,50nm,2.3s,mb5.3
ECAL Calabor 87.60 42 P P **07 36 28.7 +1.2**
comp=Z,21nm,0.9s,mb5.4
ERUA La Rua 87.60 42 P P **07 36 28.7 +1.2**
ERUA pmax pmax
comp=Z,22nm,1.1s,mb5.3
ERUA La Rua 87.60 42 P P **07 36 28.7 +1.3**
comp=Z,22nm,1.1s,mb5.3
EQES Quesada 87.71 47 P P **07 36 29.3 +1.2**
comp=Z,23nm,1.0s,mb5.4
PAB San Pablo 87.79 45 P P **07 36 29.8 +1.3**
PAB pmax pmax
comp=Z,19nm,1.0s,mb5.3
PAB San Pablo 87.79 45 *e*P P **07 36 27.7 -0.7**
comp=Z,19nm,1.0s,mb5.3
PAB LR LR
comp=Z,7µm,21.0s,MS6.1
ENIJ Nijar 87.86 48 P P **07 36 30.1 +1.2**
ENIJ pmax pmax
comp=Z,8.0nm,0.6s,mb5.1
ENIJ Nijar 87.86 48 P P **07 36 30.1 +1.2**
comp=Z,8.4nm,0.6s,mb5.2
XMAS Kiritimati 87.96 273 PFAKE 07 36 40.0 +10
XMAS LR LR
comp=Z,9µm,19.0s,MS6.2
ESDC Sonseca Array 88.11 45 P P **07 36 30.6 +0.6**
comp=Z,6.9nm,0.8s,mb4.9,baz=244,slow=4.7,SNR=9.4
ESDC LR LR 08 12 24.4
comp=Z,6µm,21.6s,MS5.9,baz=230,slow=33
GUD Guadarrama 88.51 44 P P **07 36 32.5 +0.7**
GUD pmax pmax
comp=Z,13nm,1.0s,mb5.2
GUD Guadarrama 88.51 44 P P **07 36 32.5 +0.6**
comp=Z,13nm,1.0s,mb5.2
EVIA Vianos 88.53 47 P P **07 36 32.2 +0.2**
EVIA pmax pmax
comp=Z,8.0nm,0.6s,mb5.2
EVIA Vianos 88.53 47 P P **07 36 32.2 +0.2**
comp=Z,8.3nm,0.6s,mb5.2
ETOB Tobarra 89.17 47 P P **07 36 35.8 +0.8**
comp=Z,74nm,1.5s,mb5.8
EARI Arriondas 89.29 42 P P **07 36 36.5 +1.0**
comp=Z,52nm,1.3s,mb5.7
MIR Mirnyy 89.63 173*d* *i*P P **07 36 40.0 +3.2**
MIR *i* S S 07 47 24.0 -1.6
MIR *i* PS PS 07 48 30.0 -4.3
MIR *i* SS SS 07 53 30.0 +9.3
MIR *i* SSS 07 57 00.0
MIR pmax pmax
comp=Z,2µm,6.0s
MIR MLR MLR
comp=Z,9µm,20.0s,MS6.2
ETOR Torete 89.96 45 P P **07 36 39.5 +0.9**
ETOR pmax pmax
comp=Z,17nm,0.6s,mb5.5
ETOR Torete 89.96 45 P P **07 36 39.5 +0.9**
comp=Z,17nm,0.6s,mb5.6
ECHE Chera 90.04 46 P P **07 36 40.3 +1.2**
ECHE pmax pmax
comp=Z,19nm,1.0s,mb5.4
ECHE Chera 90.04 46 P P **07 36 40.3 +1.2**
comp=Z,19nm,1.0s,mb5.4
EBEN Beniarda 90.09 47 P P **07 36 40.4 +1.1**
comp=Z,11nm,0.9s,mb5.2
ELAN Lanestosa 90.34 42 P P **07 36 39.8 -0.6**
comp=Z,102nm,1.9s,mb5.8
EMOS Mosqueruela 90.76 46 P P **07 36 42.3 -0.1**
comp=Z,99nm,1.9s,mb5.8
CASY Casey 90.77 180 *e*P P **07 36 43.5 +1.4**
CASY *e*S SKSac 07 47 11.8 +0.4
CASY LR LR
comp=Z,7µm,20.0s,MS6.1
SFJD Kangerlussuaq 91.19 8 PFAKE 07 36 50.0 +6.3
SFJD LR LR
comp=Z,4µm,19.0s,MS5.9
EIBI Ibiza 91.32 48 P P **07 36 44.4 -0.6**
comp=Z,53nm,1.5s,mb5.7
EALK Alkurruntz 91.54 43 P P **07 36 42.7 -3.2**
comp=Z,39nm,1.3s,mb5.6
ERTA Horta de San J 91.59 46 P P **07 36 46.6 +0.4**
comp=Z,84nm,1.1s,mb6.0
SJPF Ste Jean 91.66 43 *e*P P **07 36 44.3 -2.2**
comp=Z,32nm,1.0s,mb5.3
SJPF Ste Jean 91.66 43 *e*P P **07 36 44.3 -2.2**
SJPF pmax pmax
comp=Z,16nm,1.0s,mb5.3
SJPF Ste Jean 91.66 43 *e*P P **07 36 44.3 -2.2**
comp=Z,16nm,1.0s,mb5.3
LSZ Lusaka 91.82 107 *e*P P **07 36 49.5 +1.5**
LSZ pmax pmax
comp=Z,12nm,0.9s,mb5.2
LSZ MLR MLR
comp=Z,8µm,22.0s,MS6.1
LSZ Lusaka 91.82 107 *e*P P **07 36 49.5 +1.5**
comp=Z,12nm,0.9s,mb5.2
LSZ LR LR
comp=Z,8µm,22.0s,MS6.1
SNZO South Karori 91.86 223 PFAKE 07 37 00.0 +12
SNZO LR LR
comp=Z,11µm,20.0s,MS6.3
URZ Urewera 91.93 227 LR LR 08 09 36.9
comp=Z,11µm,20.1s,MS6.3,baz=118,slow=30
ETSF Etsaut 91.98 44 *e*P P **07 36 45.9 -2.1**
comp=Z,31nm,1.0s,mb5.3
ETSF Etsaut 91.98 44 *e*P P **07 36 45.9 -2.1**
ETSF pmax pmax
comp=Z,16nm,1.0s,mb5.3
ETSF Etsaut 91.98 44 *e*P P **07 36 45.9 -2.1**
comp=Z,16nm,1.0s,mb5.3
EPOB Poblet 92.27 46 P P **07 36 49.2 -0.1**
comp=Z,37nm,1.3s,mb5.5
EBIE Bielsa 92.32 44 P P **07 36 49.3 -0.2**
comp=Z,32nm,1.2s,mb5.5
YKA Yellowknife Ar 92.33 341 P P **07 36 47.9 -1.1**
comp=Z,7.8nm,0.8s,mb5.1,baz=137,slow=4.4,SNR=122
YKA LR LR 08 20 44.3
comp=Z,2µm,21.5s,MS5.6,baz=140,slow=37
YKA Yellowknife Ar 92.33 341 P P **07 36 47.9 -1.1**
YKA LR LR 08 20 44.3
ETOS Mallorca 92.67 48 P P **07 36 52.6 +1.3**
comp=Z,24nm,0.8s,mb5.7
RPZ Rata Peaks 92.71 220 LR LR 08 08 12.0
comp=Z,5µm,21.1s,MS6.0,baz=110,slow=29
RAO Raoul Island 92.84 237 LR LR 08 09 52.0
comp=Z,4µm,21.4s,MS5.8,baz=114,slow=30
RAO Raoul Island 92.84 237 PFAKE 07 37 00.0 +7.5
RAO LR LR
comp=Z,5µm,21.0s,MS5.9
LFF La Frestale 93.80 42 *e*P P **07 36 53.5 -2.8**
comp=Z,40nm,0.9s,mb5.5
LFF La Frestale 93.80 42 *e*P P **07 36 53.5 -2.8**
LFF pmax pmax
comp=Z,20nm,0.9s,mb5.5
LFF La Frestale 93.80 42 *e*P P **07 36 53.5 -2.8**
comp=Z,20nm,0.9s,mb5.5
MFF Saint Martin d 94.08 41 *e*P P **07 36 54.3 -3.3**
comp=Z,127nm,1.6s,mb5.8
MFF Saint Martin d 94.08 41 *e*P P **07 36 54.3 -3.3**
MFF pmax pmax
comp=Z,64nm,1.6s,mb5.8
MFF Saint Martin d 94.08 41 *e*P P **07 36 54.3 -3.3**
comp=Z,64nm,1.6s,mb5.8
RJF Les Rejaudoux 94.46 42 *e*P P **07 36 56.4 -2.9**
comp=Z,48nm,1.2s,mb5.5
RJF *e*MLR MLR
comp=Z,8µm,21.0s,MS5.8
RJF Les Rejaudoux 94.46 42 *e*P P **07 36 56.4 -2.9**
RJF pmax pmax
comp=Z,24nm,1.2s,mb5.5
RJF MLR MLR
comp=Z,8µm,21.0s,MS6.1
RJF Les Rejaudoux 94.46 42 *e*P P **07 36 56.4 -2.9**
comp=Z,24nm,1.2s,mb5.5
RJF LR LR
comp=Z,8µm,21.0s,MS6.1
CAF Calviac 94.62 43 *e*P P **07 36 57.3 -2.8**
comp=Z,28nm,1.2s,mb5.3
CAF Calviac 94.62 43 *e*P P **07 36 57.3 -2.8**
CAF pmax pmax
comp=Z,14nm,1.2s,mb5.3
CAF Calviac 94.62 43 *e*P P **07 36 57.3 -2.8**
comp=Z,14nm,1.2s,mb5.3
AFI Afiamalu 94.62 253 LR LR 08 11 27.5
comp=Z,5µm,18.5s,MS6.0,baz=295,slow=30
AFI Afiamalu 94.62 253 PFAKE 07 37 10.0 +9.1
AFI LR LR
comp=Z,6µm,20.0s,MS6.0
WRAK Wrangell Islan 94.86 331 PFAKE 07 37 10.0 +9.1
WRAK LR LR
comp=Z,2µm,20.0s,MS5.7
DLBC Dease Lake 95.05 333 *e*P P **07 37 01.7 0.0**
DLBC *e*pP pP 07 37 11.4 -0.2
TCF Toulx Ste Croi 95.35 42 *e*P P **07 36 59.9 -3.5**
comp=Z,18nm,1.0s,mb5.1
TCF Toulx Ste Croi 95.35 42 *e*P P **07 36 59.9 -3.5**
TCF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
TCF Toulx Ste Croi 95.35 42 *e*P P **07 36 59.9 -3.5**
comp=Z,8.8nm,1.0s,mb5.1
KEST Kesra 95.53 54 P P **07 37 05.5 +0.9**
comp=Z,4.1nm,0.9s,mb4.9,baz=274,slow=14,SNR=3.1
KEST LR LR 08 24 22.5
comp=Z,8µm,18.0s,MS6.2,baz=202,slow=38
KIP Kipapa 96.02 291 PFAKE 07 37 20.0 +13
KIP LR LR
comp=Z,8µm,21.0s,MS6.2
AVF Avril sur Loir 96.29 42 *e*P P **07 37 04.4 -3.2**
SSB Saint Sauveur 96.34 43 PFAKE 07 37 20.0 +12
SSB LR LR
comp=Z,10µm,20.0s,MS6.3
SSF Saint Saulge 96.50 41 *e*P P **07 37 04.0 -4.6**
comp=Z,34nm,1.2s,mb5.3
SSF Saint Saulge 96.50 41 *e*P P **07 37 04.0 -4.6**
SSF pmax pmax
comp=Z,17nm,1.2s,mb5.3
SSF Saint Saulge 96.50 41 *e*P P **07 37 04.0 -4.6**
comp=Z,17nm,1.2s,mb5.3
SMF Signal de Mont 96.52 42 *e*P P **07 37 05.8 -2.9**
comp=Z,59nm,1.3s,mb5.6
SMF Signal de Mont 96.52 42 *e*P P **07 37 05.8 -2.9**
SMF pmax pmax
comp=Z,29nm,1.3s,mb5.5
SMF Signal de Mont 96.52 42 *e*P P **07 37 05.8 -2.9**
comp=Z,29nm,1.3s,mb5.5
LOR Lormes 96.81 41 *e*P P **07 37 06.5 -3.5**
comp=Z,13nm,0.8s,mb5.1
LOR *e*MLR MLR
comp=Z,6µm,19.5s,MS5.8
LOR Lormes 96.81 41 *e*P P **07 37 06.5 -3.5**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
LOR MLR MLR
comp=Z,6µm,19.5s,MS6.1
LOR Lormes 96.81 41 *e*P P **07 37 06.5 -3.5**
comp=Z,6.6nm,0.8s,mb5.1
LOR LR LR
comp=Z,6µm,19.5s,MS6.1
ESK Eskdalemuir 96.84 32 PFAKE 07 37 20.0 +10
ESK LR LR
comp=Z,4µm,22.0s,MS5.9
BNI Bardonecchia 97.60 44 PFAKE 07 37 20.0 +6.4
BNI LR LR
comp=Z,12µm,19.0s,MS6.4
BAIF Baives 98.27 39 *e*P P **07 37 13.1 -3.4**
DOU Dourbes 98.51 39 P P **07 37 17.9 +0.3**
GIVF Givet 98.64 39 *e*P P **07 37 15.3 -2.9**
ECH Echery 99.23 41 PFAKE 07 37 30.0 +9.1
ECH LR LR
comp=Z,5µm,19.0s,MS6.1
WLF Walferdange 99.23 40 *e*PP PP 07 41 22.4 -1.8
WLF Walferdange 99.23 40 PFAKE 07 37 30.0 +9.2
WLF LR LR
comp=Z,7µm,21.0s,MS6.2
WDD Wield Dalam 99.46 55 PFAKE 07 37 30.0 +7.8
WDD LR LR
comp=Z,10µm,21.0s,MS6.3
MEM Membach 99.55 39 P P **07 37 22.6 +0.4**
comp=Z,15nm,2.5s,mb5.0
VLC Villacollemand 99.66 46 PFAKE 07 37 30.0 +7.1
VLC LR LR
comp=Z,4µm,19.0s,MS5.9
PAF Port-aux-Franc 99.73 155 PFAKE 07 37 30.0 +6.7
PAF LR LR
comp=Z,8µm,19.0s,MS6.2
TUE Stuetta 99.89 44 PFAKE 07 37 30.0 +6.1
TUE LR LR
comp=Z,9µm,20.0s,MS6.3
BFO Black Forest 99.99 42 *e*PP PP 07 41 26.4 -3.6
BFO Black Forest 99.99 42 PFAKE 07 37 30.0 +5.6
BFO LR LR
comp=Z,3µm,20.0s,MS5.8
BUG Bochum--Univer 100.61 38 *e*PP PP 07 41 32.2 -2.4
STU Stuttgart 100.69 41 *e*PP PP 07 41 31.7 -3.6
FETA Feichten 100.98 44 *i*P/*e*Pdiff Pdif 07 37 29.1 +0.3
comp=Z,9.5nm,1.5s
AQU L'Aquila 101.02 49 PFAKE 07 37 40.0 +11
AQU LR LR
comp=Z,4µm,20.0s,MS6.0
IBBN Ibbenburen 101.24 38 *e*PP PP 07 41 36.1 -3.2
CEL Celeste 101.34 53 PFAKE 07 37 40.0 +10
CEL LR LR
comp=Z,10µm,21.0s,MS6.3
FUR Furstenfeldbru 101.75 43 *e*PP PP 07 41 39.2 -4.1
CUC Castrocucco 101.89 52 PFAKE 07 37 40.0 +7.2
CUC LR LR
comp=Z,7µm,20.0s,MS6.2
DAWY Dawson 101.91 335 *e*Pdif Pdif 07 37 31.1 -1.8
UBBA Unterbreizbach 101.96 40 *e*PP PP 07 41 40.9 -3.9
GRA1 Grafenberg Arr 102.27 41 *e*Pdif Pdif 07 37 35.3 +0.8
GRA1 *e*PP PP 07 41 43.5 -3.7
GRA1 *e*SKSac SKSac 07 48 08.5 -3.0
GRA1 *e*Sdif Sdif 07 49 14.1 -1.8
GRA1 *e*PS PS 07 50 54.1 +0.7
GRA1 *e*SS SS 07 56 19.8 -2.5
GRA1 LR LR
comp=Z,5µm,18.4s,MS6.1
GRF Grafenberg Arr 102.27 41 *e*P Pdif 07 37 35.3 +0.8
GRF *e* 07 41 43.5
GRF *e*S Sdif 07 49 14.1 -1.8
GRF *e*PS PS 07 50 54.1 +0.7
GRF *e*SS SS 07 56 19.8 -2.5
GRF Grafenberg Arr 102.27 41 *e*Pdiff Pdif 07 37 35.3 +0.8
GRF *e*PP PP 07 41 43.5 -3.7
GRF *e*SKSac SKSac 07 48 08.5 -3.0
GRF *e*Sdiff Sdif 07 49 14.1 -1.8
GRF *e*PS PS 07 50 54.1 +0.7
GRF *e*SS SS 07 56 19.8 -2.5
GRF *e*L 08 28 37.6
comp=Z,5µm,18.4s
TIP Timpagrande 102.29 53 PFAKE 07 37 40.0 +5.4
TIP LR LR
comp=Z,6µm,21.0s,MS6.1
TRI Trieste 102.46 46 PFAKE 07 37 50.0 +15
TRI LR LR
comp=Z,5µm,20.0s,MS6.1
RJOB Jochberg 102.55 43 *e*PP PP 07 41 45.0 -4.3
CLZ Clausthal 102.55 39 *e*PP PP 07 41 46.7 -2.5
MOX Moxa 102.85 40 *e*PP PP 07 41 47.6 -3.9
ROTZ Rotzenmuhle 102.89 41 *e*PP PP 07 41 48.4 -3.5
MANZ Manzenberg 102.91 41 *e*PP PP 07 41 47.6 -4.4
EGAK Eagle 102.92 335 PFAKE 07 37 50.0 +13
EGAK LR LR
comp=Z,5µm,19.0s,MS6.1
WET Wettzell 103.09 42 *e*PP PP 07 41 50.0 -3.3
NKC Novy Kostel 103.20 41 *i* P Pdif 07 37 41.2 +2.5
NKC *e* 07 41 49.1
NKC *e* 07 48 19.8
NKC *e* 07 51 06.6
NKC *e* 07 56 32.9
NKC MLR MLR
comp=Z,4µm,20.0s,MS6.0
NKC Novy Kostel 103.20 41 *e*PDIF Pdif 07 37 41.2 +2.5
NKC *e*PP PP 07 41 49.1 -5.0
NKC *e*SKS 07 48 19.8
NKC *e*PS PS 07 51 06.6 +3.3
NKC *e*SS SS 07 56 32.9 -2.3
NKC AMS AMS 08 22 00.0
comp=Z,4µm,20.0s
NKC Novy Kostel 103.20 41 *e*Pdif Pdif 07 37 41.2 +2.5
NKC *e*PP PP 07 41 49.1 -5.0
NKC *e* 07 48 19.8
NKC *e* 07 51 06.6
NKC *e* 07 56 32.9
NKC MLR MLR
comp=Z,3µm,19.1s,MS5.8
KHC Kasperske Hory 103.52 42 *e*PDIF Pdif 07 37 39.2 -0.9
KHC *e*PP PP 07 41 50.2 -6.3
KHC *e*SKS 07 48 21.1
KHC *e*PS PS 07 51 05.7 -0.9
KHC *e*SS SS 07 56 42.0 +2.5
KHC AMS AMS 08 26 40.0
comp=Z,3µm,19.1s
MUD Monsted U'grnd 103.59 34 *i* P PKiKP 07 41 57.7 -0.7
MUD *i* S Sdif 07 49 36.5 +10
MUD *i* 07 51 57.4
MUD
comp=Z,6µm,22.0s
CLL Collm 103.90 40 *e*P Pdif 07 37 44.0 +2.2
CLL *e*S Sdif 07 49 29.0 -0.5
CLL *e*PS PS 07 51 12.0 +1.4
CLL MLR MLR
comp=Z,5µm,20.0s,MS6.0
CLL Collm 103.90 40 *e*PP PP 07 41 55.2 -4.1
CLL Collm 103.90 40 *e*Pdif Pdif 07 37 44.0 +2.2
CLL *e*PP PP 07 41 56.0 -3.3
CLL *e*PPlp 07 42 06.0
comp=Z,800nm,16.0s
CLL *e*SKSac SKSac 07 48 22.0 +2.9
CLL *e*Sdif Sdif 07 49 29.0 -0.5
CLL *e*PS PS 07 51 12.0 +1.4
CLL *e*PPS 07 52 07.0
CLL *e*SS SS 07 56 44.0 -0.7
CLL *e*SSS 08 00 45.0
CLL LV 08 24 00.0
comp=Z,5µm,20.0s
BRG Berggiesshubel 104.32 41 P Pdif 07 37 41.0 -2.6
BRG S Sdif 07 49 35.0 +2.0
BRG PS PS 07 51 07.0 -8.0
BRG SS SS 07 56 41.0 -9.4
BRG pmax pmax
comp=Z,8.0nm,1.8s
BRG MLR MLR
comp=N,1µm,18.7s,MS5.8
BRG MLR MLR
comp=E,2µm,20.1s,MS5.8
BRG MLR MLR
comp=Z,4µm,19.9s,MS5.9
BRG Berggiesshubel 104.32 41 *e*PP PP 07 41 58.7 -3.7
BRG Berggiesshubel 104.32 41 PDIF Pdif 07 37 41.0 -2.6
BRG PP PP 07 41 53.0 -9.4
BRG SKS 07 48 30.0
BRG S Sdif 07 49 35.0 +2.0
BRG PS PS 07 51 07.0 -8.0
BRG *e* 07 54 11.1
comp=Z,13nm,1.8s
BRG SS SS 07 56 41.0 -9.4
BRG
comp=N,2µm,18.7s
BRG
comp=E,4µm,20.1s
BRG
comp=Z,6µm,19.9s
BRG Berggiesshubel 104.32 41 Pdif Pdif 07 37 41.0 -2.6
comp=Z,7.9nm,1.8s
BRG PP PP 07 41 53.0 -9.4
BRG SKS 07 48 30.0
BRG S Sdif 07 49 35.0 +2.0
BRG PS PS 07 51 07.0 -8.0
BRG *e* 07 54 11.1
BRG SS SS 07 56 41.0 -9.4
BRG LR LR
comp=Z,4µm,19.9s,MS5.9
PRU Pruhonice 104.39 42 *i* P Pdif 07 37 35.0 -9.0
PRU *e* 07 51 18.5
PRU *e* 07 56 46.1
PRU MLR MLR
comp=Z,4µm,18.8s,MS6.0
PRU Pruhonice 104.39 42 *e*PDIF Pdif 07 37 35.0 -9.0
PRU *ex* x 07 41 51.3
PRU *ex* x 07 48 27.4
PRU *e*PS PS 07 51 18.5 +2.7
PRU *e*SS SS 07 56 46.1 -5.4
PRU AMS AMS 08 27 40.0
comp=Z,4µm,18.8s
PVCC Panska Ves 104.58 41 *e*PP PP 07 41 59.4 -5.0
PVCC AMS AMS 08 27 30.0
comp=Z,5µm,19.4s
TREC Trest 104.75 42 *e*PP PP 07 41 54.2 -12
TREC AMS AMS 08 28 20.0
comp=Z,4µm,17.9s
KONO Kongsberg 104.94 31 PFAKE 07 38 00.0 +14
KONO LR LR
comp=Z,8µm,20.0s,MS6.2
TIR Tirane 105.24 51 PFAKE 07 42 10.0 +8.1
TIR LR LR
comp=Z,7µm,20.0s,MS6.2
KDAK Kodiak Island 105.25 327 PFAKE 07 42 10.0 +8.6
KDAK LR LR
comp=Z,3µm,19.0s,MS5.8
TAU Tasmania Unive 105.52 208 PFAKE 07 42 10.0 +7.5
TAU LR LR

comp=Z,4µm,19.0s,MS6.0
COLA College 105.58 334 PFAKE 07 42 10.0 +8.2
COLA LR LR
comp=Z,4µm,19.0s,MS6.0
DPC Dobruska-Polom 105.59 42 *e*PP PP 07 42 05.3 -6.6
DPC *e*PS PS 07 51 30.4 +2.1
DPC *e*PKKS 07 57 18.2
DPC AMS AMS 08 23 20.0
comp=Z,3µm,19.1s
KSP Ksiaz 105.72 41 *e*P Pdif 07 37 40.0 -10
KSP *e* 07 42 12.0
KSP *e* 07 48 23.0
KSP *e*S Sdif 07 49 48.0 +3.3
KSP *e*SP SP 07 51 25.0 -0.3
KSP *e*SS SS 07 57 06.0 -3.7
KSP MLR MLR
comp=Z,12µm,18.8s,MS6.5
NAO01 NORSAR Array S 105.95 30 PFAKE 07 42 10.0 +7.4
NAO01 LR LR
comp=Z,8µm,19.0s,MS6.3
NOA NORSAR Array B 106.16 30 PP PP 07 42 14.9 -0.9
comp=Z,1.1nm,0.8s,baz=269,slow=6.5,SNR=3.8
OKC Ostrava-Krasne 106.57 42 *e*PP PKiKP 07 41 49.8 -14
OKC AMS AMS 08 28 20.0
comp=Z,3µm,19.2s
PSZ Piszkesteto 107.14 45 PFAKE 07 42 20.0 +15
PSZ LR LR
comp=Z,5µm,21.0s,MS6.0
UZH Uzhgorod 108.88 44 *e*P Pdif 07 38 00.0 -3.9
UZH *i* 07 42 30.0
UZH *i* PS PS 07 52 03.0 +1.0
UZH *i* PPS 07 52 58.0
UZH MLR MLR
comp=N,1µm,19.0s,MS5.9
UZH MLR MLR
comp=E,3µm,19.0s,MS5.9
UZH MLR MLR
comp=Z,2µm,19.0s,MS5.7
KWP Kalwaria 109.38 43 PFAKE 07 42 20.0 +11
KWP LR LR
comp=Z,5µm,21.0s,MS6.1
KBS Kingsbay 111.19 12 PFAKE 07 42 20.0 +8.0
KBS LR LR
comp=Z,3µm,21.0s,MS5.8
ISP Isparta 112.27 57 PFAKE 07 42 30.0 +15
ISP LR LR
comp=Z,9µm,21.0s,MS6.3
KIS Kishinev 112.84 47 *e*PP PP 07 43 00.0 -4.6
KIS Kishinev 112.84 47 *e*PS SP 07 52 28.0 -7.4
AKASG Malin Array Be 113.69 43 PKiKP PKiKP 07 42 15.8 -1.7
comp=Z,1.3nm,0.5s,baz=267,slow=2.9,SNR=8.3
CSS Prodhromos 113.87 61 PFAKE 07 42 30.0 +12
CSS LR LR
comp=Z,5µm,22.0s,MS6.1
KEV Kevo 114.19 22 PFAKE 07 42 30.0 +12
KEV LR LR
comp=Z,4µm,20.0s,MS6.0
MIDW Midway 114.81 291 PFAKE 07 42 30.0 +10
MIDW LR LR
comp=Z,7µm,19.0s,MS6.3
TARA Tarawa 114.85 260 PFAKE 07 42 30.0 +9.1
TARA LR LR
comp=Z,9µm,19.0s,MS6.4
BRTR Keskin Array B 115.04 56 PKP PKiKP 07 42 19.1 -1.3
comp=Z,1.7nm,0.7s,baz=174,slow=1.2,SNR=5.5
BR131 Keskin Array S 115.04 56 PFAKE 07 42 30.0 +10
BR131 LR LR
comp=Z,6µm,22.0s,MS6.2
BHL Bhannes 115.53 62 *e*P PP 07 43 21.8 -2.3
HWQ Hawqa 115.84 62 *e*P PP 07 43 23.6 -2.7
APA Apatity 116.56 25⇑ *i*PKIKP PKPdf 07 42 17.5 -5.0
APA *e*PS PS 07 53 17.0 +4.1
APA *e*PPS 07 54 27.0
APA *e*SS SS 07 59 40.0 +6.6
LVZ Lovozero 117.01 24 PFAKE 07 42 30.0 +6.6
LVZ LR LR
comp=Z,4µm,20.0s,MS6.1
STKA Stephens Creek 117.17 211 *e*P PKPdf 07 42 24.4 -0.5
comp=Z,2.0nm,0.9s
STKA Stephens Creek 117.17 211 PKP PKPdf 07 42 23.6 -1.3
comp=Z,1.7nm,0.8s,baz=138,slow=6.0,SNR=5.6
ADK Adak 117.80 318 PFAKE 07 42 40.0 +15
ADK LR LR
comp=Z,2µm,20.0s,MS5.8
OBN Obninsk 118.45 39 *i* PKIKP PKPdf 07 42 24.4 -2.1
OBN *e* 07 43 46.3
OBN pmax pmax
comp=Z,11nm,0.6s
OBN MLR MLR
comp=Z,4µm,20.0s,MS6.0
OBN Obninsk 118.45 39 *e*PKP PKPdf 07 42 24.5 -2.0
OBN LR LR
comp=Z,5µm,21.0s,MS6.1
ANN Anapa 118.52 50 *i* PKIKP PKPdf 07 42 27.1 +0.2
ANN *e* 07 43 38.4
ANN *e*SP SP 07 53 33.0 +5.8
ANN pmax pmax
comp=Z,68nm,1.7s
MOS Moscow 119.05 38 *e*PKIKP PKPdf 07 42 36.3 +8.7
MOS *e* 07 43 54.6
MOS *e*PS PS 07 53 30.4 -5.4
MOS MLR MLR
comp=E,4µm,18.0s
MOS MLR MLR
comp=Z,4µm,18.0s,MS6.1
SOC Sochi 120.05 52 *i* PKIKP PKPdf 07 42 28.8 -1.1
SOC *e* 07 43 55.2
SOC *e* 07 49 32.0
SOC *e*PS PS 07 53 38.9 -6.4
SOC *e*SS SS 08 00 19.6 -0.3
SOC pmax pmax
comp=Z,262nm,0.6s
SOC MLR MLR
comp=Z,56µm,20.0s
HNR Honiara 120.91 243 PFAKE 07 42 40.0 +7.5
HNR LR LR
comp=Z,5µm,22.0s,MS6.1
KIV Kislovodsk 122.22 52 *i* PKIKP PKPdf 07 42 31.7 -2.4
KIV *e* 07 44 08.0
KIV *e*PPP 07 46 47.1
KIV *e* 07 49 25.0
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,3µm,22.0s,MS5.8
KIV Kislovodsk 122.22 52 *e*PKP PKPdf 07 42 31.7 -2.4
KIV LR LR
comp=Z,3µm,22.0s,MS5.8
FORT Forrest 123.41 199 *e*P PKPdf 07 42 36.4 -0.6
comp=Z,11nm,0.7s
GNI Garni 123.56 56 PFAKE 07 42 50.0 +13
GNI LR LR
comp=Z,4µm,22.0s,MS6.0
BILL Bilibino 123.57 338 *i* PKIKP PKPdf 07 42 30.1 -5.9
BILL *e* 07 44 14.5
BILL *i* PS PS 07 54 12.4 -3.2
BILL pmax pmax
comp=Z,8.0nm,1.4s
BILL Bilibino 123.57 338 PFAKE 07 42 50.0 +14
BILL LR LR
comp=Z,3µm,22.0s,MS5.8
NWAO Narrogin (SRO) 123.67 188 PFAKE 07 42 50.0 +13
NWAO LR LR
comp=Z,3µm,20.0s,MS5.9
CTAO Charters Tower 123.96 223 PFAKE 07 42 50.0 +12
CTAO LR LR
comp=Z,3µm,22.0s,MS5.8
KLBR Kellerberrin 124.91 189 *e*P PKPdf 07 42 39.1 -0.7
comp=Z,8.1nm,0.6s
MAK Makhachkala 125.71 53 *e*PKIKP PKPdf 07 42 39.3 -1.5
ASAR Alice Springs 127.69 209 PKP PKPdf 07 42 44.0 -1.3
comp=Z,10nm,0.8s,baz=142,slow=2.0,SNR=48
TIXI Tiksi 130.31 352 *i* PKIKP PKPdf 07 42 48.1 -0.7
TIXI Tiksi 130.31 352 *e*PKPdf PKPdf 07 42 48.2 -0.6
TIXI LR LR
comp=Z,1µm,20.0s,MS5.7
ARU Arti 130.42 34 *i* PKIKP PKPdf 07 42 47.3 -2.1
ARU 07 45 01.4
ARU SS SS 08 02 23.6 -5.5
ARU Arti 130.42 34 *e*PKPdf PKPdf 07 42 49.8 +0.4
ARU LR LR
comp=Z,5µm,21.0s,MS6.2
COEN Coen 130.46 225 *e*PKPdf PKPdf 07 42 50.9 +0.1
WRAB Tennant Creek 130.71 211 *e*PKPdf PKPdf 07 42 50.6 -0.6
WRAB *e*SKPbc SKPbc 07 46 12.9 0.0
WRAB *e*SKPdf SKPdf 07 46 25.9 +1.5
WRAB LR LR
comp=Z,6µm,19.0s,MS6.3
PMG Port Moresby 130.89 233 PFAKE 07 43 00.0 +8.4
PMG LR LR
comp=Z,2µm,21.0s,MS5.8
SEY Seymchan 131.07 336 *i* PKIKP PKPdf 07 42 49.8 -0.6
SEY Seymchan 131.07 336 *e*PKP PKPdf 07 42 49.9 -0.5
PET Petropavlovsk 132.52 322 PFAKE 07 43 00.0 +6.6
PET LR LR
comp=Z,2µm,19.0s,MS5.8
DGAR Diego Garcia 132.70 126 PFAKE 07 43 00.0 +5.0
DGAR LR LR
comp=Z,4µm,19.0s,MS6.2
PETK Petropavlovsk- 133.03 322 PKP PKPdf 07 42 54.0 -0.5
comp=Z,3.3nm,0.8s,baz=93,slow=1.8,SNR=5.8
AB31 Akbulak array 133.43 43 PKIKP PKPdf 07 42 54.9 -0.4
AB31 pmax pmax
comp=Z,49nm,1.5s
MBWA Marble Bar 134.76 194 PFAKE 07 43 10.0 +11
MBWA LR LR
comp=Z,4µm,22.0s,MS6.1
FITZ Fitzroy Crossi 135.99 202 *e*PKPdf PKPdf 07 43 01.6 +0.5
FITZ *e*SKPbc SKPbc 07 46 31.9 +1.1
KAKA Kakadu 137.79 215 *e*P x 07 42 33.4
comp=Z,3.4nm,0.5s
BRVK Borovoye 137.99 35 *e*PKIKP PKPdf 07 43 03.9 +0.2
BRVK MLR MLR
comp=Z,5µm,20.0s,MS6.3
BVA0 Borovoye Array 138.06 35 *i* PKIKP PKPdf 07 43 03.9 +0.1
BVA0 pmax pmax
comp=Z,7.0nm,2.1s
VOSK Vostochnaya 138.53 35 PKIKP PKPdf 07 43 04.2 -0.5
VOSK pmax pmax
comp=Z,15nm,0.8s
YAK Yakutsk 138.84 346 *e*PKIKP PKPdf 07 43 02.3 -2.6
YAK *e* 07 45 52.7
YAK pmax pmax
comp=Z,11nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=E,83nm,3.2s
YAK pmax pmax
comp=Z,342nm,5.4s
YAK pmax pmax
comp=N,191nm,5.0s
YAK MLR MLR
comp=Z,3µm,24.0s,MS5.9
YAK MLR MLR
comp=N,1µm,27.0s
YAK MLR MLR
comp=E,792nm,21.0s
YAK Yakutsk 138.84 346 PFAKE 07 43 10.0 +5.1
YAK LR LR
comp=Z,2µm,20.0s,MS5.9
COCO West Island 142.69 159 PFAKE 07 43 20.0 +6.6
COCO LR LR
comp=Z,3µm,21.0s,MS6.0
NVS Novosibirsk 142.87 25 *e*PKIKP PKPdf 07 43 08.6 -3.8
NVS pmax pmax
comp=Z,122nm,2.0s
BHJ Bhuj 143.49 82 *e*P PKPdf 07 43 13.6 -1.0
BHJ AMS AMS 07 44 08.3
comp=Z,143nm,15.9s,MS4.8
KURK Kurchatov 143.59 33 *e*PKIKP PKPdf 07 43 11.0 -2.8
KURK MLR MLR
comp=Z,4µm,19.0s,MS6.2
YUK Yuzh-Kuril'sk 143.69 314 *e*PKHKP PKPdf 07 43 10.3 -3.9
YUK *e* 07 46 29.0
YUK pmax pmax
comp=N,1µm,5.0s
YUK pmax pmax
comp=E,2µm,5.0s
YUK pmax pmax
comp=Z,3µm,5.0s
YUK pmax pmax
comp=E,2µm,4.0s
YUK pmax pmax
comp=Z,2µm,4.0s
ZAA0 Zalesovo Array 144.15 25 *e*PKPdf PKPdf 07 43 12.6 -2.1
ZALV Zalesovo Beam 144.15 25 PKP PKPdf 07 43 12.1 -2.6
comp=Z,20nm,0.8s,baz=307,slow=3.5,SNR=45
YSS Yuzh-Sakhalins 144.34 320*c* *i*PKIKP PKPdf 07 43 14.4 -0.9
YSS Yuzh-Sakhalins 144.34 320 *e*PKPdf PKPdf 07 43 13.7 -1.6
YSS LR LR
comp=Z,1µm,21.0s,MS5.6
CLNS Chul'man 144.59 345 *e*PKIKP PKPdf 07 43 13.2 -2.2
CLNS pmax pmax
comp=Z,29nm,0.9s
CLNS pmax pmax
comp=N,19nm,0.8s
CLNS pmax pmax
comp=E,14nm,0.8s
EKS2 Erkin-Say 144.68 48 P PKPdf 07 43 15.5 -0.5
SNR=41
EKS2 Erkin-Say 144.68 48 *e*PKPdf PKPdf 07 43 15.6 -0.4
EKS2 LR LR
comp=Z,4µm,19.0s,MS6.2
AML Almayashu 144.81 49 P PKPdf 07 43 16.5 +0.2
SNR=99
AML Almayashu 144.81 49 *e*PKPdf PKPdf 07 43 16.5 +0.2
AML LR LR
comp=Z,4µm,22.0s,MS6.2
USP Ospenovka 144.93 47 P PKPdf 07 43 16.0 -0.4
SNR=40
GUMO Guam 145.15 260 PFAKE 07 43 30.0 +13
GUMO LR LR
comp=Z,4µm,19.0s,MS6.2
AAK Ala-Archa 145.18 48⇑ *i*PKIKP PKPdf 07 43 17.5 +0.6
AAK Ala-Archa 145.18 48 P PKPbc 07 43 17.5 +1.0
SNR=91
AAK Ala-Archa 145.18 48 *e*PKPbc PKPbc 07 43 17.5 +1.0
AAK LR LR
comp=Z,5µm,19.0s,MS6.3
FRU Bishkek 145.18 47⇑ *i*PKIKP PKPdf 07 43 16.0 -0.9
FRU pmax pmax
comp=Z,2µm,3.0s
FRU pmax pmax
comp=Z,5µm,6.0s
CHMS Chumysh 145.21 47 P PKPbc 07 43 17.1 +0.5
SNR=35
BOD Bodaibo 145.29 356 *e*PKIKP PKPdf 07 43 14.4 -2.2
BOD *e* 07 43 23.6
BOD pmax pmax
comp=Z,88nm,0.8s
BOD pmax pmax
comp=Z,143nm,0.9s
UCH Uchtor 145.34 48 P PKPbc 07 43 18.9 +1.9
SNR=17
UCH Uchtor 145.34 48 *e*PKPbc PKPbc 07 43 18.8 +1.8
UCH LR LR
comp=Z,2µm,20.0s,MS5.9
KBK Karagaybulak 145.48 48 P PKPdf 07 43 18.6 +1.2
SNR=26
GOA Goa 145.57 96⇓ *i*P PKPdf 07 43 17.2 -1.1
TRD Trivandrum 145.58 110 *e*P PKPdf 07 43 16.9 -1.5
TKM2 Tokmak 2 145.81 47 P PKPdf 07 43 18.8 +0.8
SNR=44
TKM2 Tokmak 2 145.81 47 *e*PKPbc PKPbc 07 43 19.1 +0.6
TKM2 LR LR
comp=Z,3µm,19.0s,MS6.1
KZA Kyzart 145.91 48 P PKPdf 07 43 20.5 +2.3
SNR=33
ERM Erimo 146.30 312 *e*PKP2 PKPab 07 43 21.9 +1.1
ERM MLR MLR
comp=Z,5µm,21.0s,MS6.3
KAD Karad 146.43 94 *e*P PKPdf 07 43 20.9 +1.2
POO Poona 146.44 91 *e*P PKPdf 07 43 18.4 -1.3
POO AMS AMS 08 08 05.2
comp=Z,572nm,18.1s,MS5.4
POO AMS AMS 08 08 05.2
comp=Z,572nm,18.1s
ULHL Ulahol 146.52 48 P PKPdf 07 43 20.9 +1.7
SNR=23
NIL Nilore 146.65 64 PFAKE 07 43 30.0 +10
NIL LR LR
comp=Z,114nm,22.0s,MS4.6
KSH Kashi 147.34 52 PKP PKPdf 07 43 24.0 +3.4
KSH PKP2 PKPab 07 43 30.3 +5.3
KSH APKP 07 43 35.0
KSH XPKP 07 43 38.8
KSH PP PP 07 46 56.8 +7.8
KSH PKS 07 46 58.3
KSH SS SS 08 05 52.5 +2.9
KSH LR LR
comp=N,13µm,19.4s,MS6.8
KSH LR LR
comp=E,7µm,16.5s,MS6.8
KSH LR LR
comp=Z,8µm,21.0s,MS6.5
HABR Khabarovsk 147.66 328*c* PKIKP PKPdf 07 43 20.8 -0.1
HABR *i* 07 43 23.6
HABR *e* 07 43 36.1
HABR *e* 07 46 53.3
HABR *e* 07 50 21.3
HABR *e*SS SS 08 05 49.1 -2.8
HABR *e*SSS 08 11 23.2
MK31 Makanchi Array 147.91 36 *e*PKIKP PKPdf 07 43 21.3 0.0
MK31 *e* 07 43 24.3
MK31 *e* 07 43 26.2
MKAR Makanchi Array 147.91 36 PKP PKPdf 07 43 20.6 -0.7
comp=Z,14nm,0.6s,baz=297,slow=1.2,SNR=33
MKAR PKPbc PKPbc 07 43 24.0 -0.4
comp=Z,28nm,0.7s,baz=301,slow=3.4,SNR=82
AJM Ajmer 148.29 77 *e*P PKPdf 07 43 19.3 -3.3
KLR Kul'dur 148.67 331 *e*PKHKP 07 43 16.8
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,100nm,2.0s
KLR pmax pmax
comp=Z,4µm,12.5s
THN Thein Dam 148.88 65 *ex* PKPbc 07 43 26.6 -0.8
LATR Latur 148.91 93 *ex* PKPbc 07 43 26.5 -1.3
DLH Dalhousie 149.07 65 *e*P PKPdf 07 43 25.0 +1.3
SDNR Sundarnagar 150.07 67 *ex* PKPbc 07 43 31.0 +0.7
KAPI Kappang 150.18 201 *e*PKPbc PKPbc 07 43 31.1 0.0
KAPI LR LR
comp=Z,4µm,22.0s,MS6.2
SMLA Simla 150.28 68 *i* P PKPdf 07 43 25.1 -0.6
SMLA *i* x x 07 50 16.4
HYB Hyderabad 150.47 96 *i* PKP PKPdf 07 43 27.5 +1.2
comp=Z,75nm,1.0s
HYB *e* 07 43 30.5
HYB Hyderabad 150.47 96 *e*P PKPdf 07 43 30.5 +4.2
MDRS Chennai 150.50 105 *ex* x 07 43 17.2
MDRS *ex* x 07 44 14.2
NDI New Delhi 150.55 73 *e*P PKPdf 07 43 25.0 -1.2
BHPL Bhopal 150.58 84 *e*P PKPdf 07 43 23.5 -2.9
IRK Irkutsk 150.76 7⇑ *i*PKIKP PKPdf 07 43 27.3 +1.6
IRK pmax pmax
comp=Z,189nm,2.1s
MOY Mondy 150.87 11 *e*PKIKP PKPdf 07 43 28.0 +2.1
MOY pmax pmax
comp=Z,25nm,3.1s
CIT Chita 151.09 355 *e*PKIKP PKPbc 07 43 31.1 -1.0
DDI Dehra Dun 151.14 69 *e*P PKPdf 07 43 25.4 -1.6
TLY Talaya 151.25 8 *e*PKIKP PKPdf 07 43 25.3 -1.2
TLY *i* 07 43 32.2
TLY *e* 07 47 05.4
TLY *e*SS SS 08 06 27.0 -3.8
TLY pmax pmax
comp=Z,32nm,1.3s
TLY Talaya 151.25 8 *e*PKPbc PKPbc 07 43 32.8 +0.3
TLY LR LR
comp=Z,3µm,20.0s,MS6.0
NGP Nagpur 151.78 88 *ex* PP 07 47 11.7 -3.7
NGP AMP 08 49 22.9
comp=Z,5µm,19.9s
MJAR Matsushiro Arr 151.90 305 PKP PKPdf 07 43 25.8 -2.2
comp=Z,0.5nm,0.3s,baz=211,slow=17,SNR=3.1
MJAR PKPbc PKPbc 07 43 33.6 -0.8
comp=Z,8.9nm,0.8s,baz=105,slow=1.4,SNR=17
MAJO Matsushiro 151.90 305 *e*PKIKP PKPbc 07 43 34.1 -0.3
MAJO MLR MLR
comp=Z,4µm,21.0s,MS6.2
MAT Matsushiro 151.90 305 PKP PKPbc 07 43 33.6 -0.8
ZAK Zakamensk 152.47 9 *e*PKIKP PKPdf 07 43 28.7 +0.3
ZAK pmax pmax
comp=Z,19nm,1.3s
HIA Hailar 152.78 345 PFAKE 07 43 40.0 +11
HIA LR LR
comp=Z,3µm,21.0s,MS6.1
MDJ Mudanjiang 153.05 327 PFAKE 07 43 40.0 +11
MDJ LR LR
comp=Z,3µm,21.0s,MS6.0
PTH Pithoragarh 153.09 70 *ex* x 07 43 39.0
PTH *ex* x 07 45 45.5
LGTI Lohaghat 153.13 70 *ex* x 07 43 35.2
VIS Vishakhapatnam 154.92 98 *e*P PKPdf 07 43 29.5 -3.4
SONM Songino Array 155.33 5 PKP PKPdf 07 43 32.2 -0.3
comp=Z,3.7nm,0.9s,baz=317,slow=1.1,SNR=12
SONM PKPbc PKPdf 07 43 42.2 +10
comp=Z,6.0nm,0.8s,baz=357,slow=0.6,SNR=8.8
ULN Ulaanbaatar 155.34 4 *e*PKIKP PKPdf 07 43 33.7 +1.2
ULN MLR MLR
comp=Z,5µm,21.0s,MS6.3
CN2 Changchun 155.62 331 *e*PKP PKPdf 07 43 35.4 +2.4
CN2 PP PP 07 47 41.9 +6.4
CN2 PP PP
comp=Z,430nm,9.0s
CN2 LR LR
comp=N,1µm,20.0s,MS6.1
CN2 LR LR
comp=E,2µm,20.0s,MS6.1
CN2 LR LR
comp=Z,2µm,20.0s,MS5.9
KOLN Koldanda 156.23 74 *e*P PKPdf 07 43 34.2 -0.2
comp=Z,39nm,1.0s
DANN Dangsing 156.31 72 *e*P PKPdf 07 43 34.3 -0.1
comp=Z,87nm,0.8s
GKN Gorkha 157.12 73 *e*P PKPdf 07 43 35.6 +0.1
comp=Z,44nm,1.1s
DMN Daman 157.58 74 *e*P PKPdf 07 43 35.7 -0.4
DAV Davao City (W) 157.68 226 PFAKE 07 43 50.0 +13
DAV LR LR
comp=Z,2µm,20.0s,MS6.0
KKN Kakani 157.71 73 *e*P PKPdf 07 43 36.4 +0.2
PKI Pulchoki 157.85 74 *e*P PKPdf 07 43 35.9 -0.5
SNY Shenyang 158.03 331⇑ PKP PKPdf 07 43 34.8 -1.4
SNY PP PP 07 47 50.8 +2.0
SNY SS SS 08 07 41.1 -4.2
SNY LR LR
comp=N,2µm,20.4s,MS6.1
SNY LR LR
comp=E,2µm,24.6s,MS6.1
SNY LR LR
comp=Z,3µm,21.6s,MS6.0
GUN Gumba 158.23 73 *e*P PKPdf 07 43 36.6 -0.3
KSM Kuching 158.35 182 PFAKE 07 43 50.0 +13
KSM LR LR
comp=Z,4µm,20.0s,MS6.2
BOK Bokaro 158.37 84 AMS AMS 08 06 53.9
comp=Z,481nm,17.7s,MS5.4
JIRN Jiri 158.53 73 *e*P PKPdf 07 43 36.7 -0.5
KSRS Korea Array 158.74 316 PKP PKPdf 07 43 35.5 -1.7
comp=Z,4.4nm,0.9s,baz=69,slow=0.8,SNR=8.2
KSRS PKPab PKPab 07 44 11.7 -1.2
comp=Z,7.1nm,0.9s,baz=46,slow=1.8,SNR=5.1
RAMN Ramite 158.96 75 *e*P PKPdf 07 43 37.4 -0.4
ODAN Odare 159.68 75 *e*P PKPdf 07 43 38.2 -0.4
TAPN Taplejung 159.91 74 *e*P PKPdf 07 43 38.5 -0.4
DL2 Dalian 161.25 329⇑ PKP PKPdf 07 43 38.8 -1.2
DL2 XPKP 07 44 02.1
DL2 PKP2 PKPab 07 44 24.6 +0.9
DL2 PP PP 07 48 06.5 +0.2
DL2 SS SS 08 08 15.8 -3.7
DL2 PP PP
comp=Z,840nm,9.2s
DL2 LR LR
comp=N,920nm,21.0s
DL2 LR LR
comp=Z,2µm,20.1s
KKM Kota Kinabalu 161.72 202 PFAKE 07 43 50.0 +8.8
KKM LR LR
comp=Z,3µm,20.0s
GTA Gaotai 161.91 25 PKP PKPdf 07 43 41.1 +0.5
GTA APKP 07 43 58.3
GTA XPKP 07 44 05.3
GTA PKS 07 47 13.8
GTA PP PP
comp=Z,2µm,11.7s
GTA LR LR
comp=N,3µm,18.0s
GTA LR LR
comp=E,3µm,18.6s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA				LR	LR		
	comp=Z,4µm,21.0s						
BJI	Beijing	162.31	343	PKP	PKPdf	07 43 40.3	-0.7
BJI				PP	PP	07 48 09.0	-2.5
BJI				SS	SS	08 08 24.6	-5.2
BJI				PP	PP		
	comp=Z,930nm,9.2s						
BJI				LR	LR		
	comp=N,2µm,20.3s						
BJI				LR	LR		
	comp=E,2µm,24.6s						
BJI				LR	LR		
	comp=Z,2µm,28.8s						
BJT	Baijiatuau	162.33	343	PFAKE		07 43 50.0	+9.0
BJT				LR	LR		
	comp=Z,5µm,22.0s						
HHC	Hu-ho-hao-te	162.35	355	*e*PKP	PKPdf	07 43 41.8	+0.8
HHC				APKP		07 43 53.0	
HHC				PKP2	PKPab	07 44 27.8	-0.5
HHC				PKS		07 47 14.8	
HHC				PP	PP	07 48 11.3	-0.3
HHC				SKKS	SKKSac	07 54 54.5	-4.0
HHC				PP	PP		
	comp=Z,2µm,6.0s						
HHC				LR	LR		
	comp=N,3µm,19.0s						
HHC				LR	LR		
	comp=E,2µm,19.0s						
HHC				LR	LR		
	comp=Z,4µm,17.8s						
LSA	Lhasa	162.38	65	PFAKE		07 43 50.0	+8.6
LSA				LR	LR		
	comp=Z,6µm,19.0s						
SHL	Shillong	163.81	78	*e*PKP	PKPdf	07 43 41.0	-1.9
SHL				*e*x	x	07 44 36.0	
IMP	Imphal	165.71	81	*e*P	PKPdf	07 43 45.0	+0.4
IMP				*e*x	x	07 48 37.0	
LZH	Lanzhou	166.29	20	*e*PKP	PKPdf	07 43 45.0	+0.3
LZH				APKP		07 43 57.5	
LZH				XPKP		07 44 04.0	
LZH				PP	PP	07 48 33.3	+0.8
LZH				SKKS	SKKSac	07 55 19.1	+0.4
LZH				SS	SS	08 09 06.3	-4.5
LZH				PP	PP		
	comp=Z,2µm,7.9s						
LZH				LR	LR		
	comp=N,4µm,19.2s						
LZH				LR	LR		
	comp=Z,5µm,20.6s						
SSE	Sheshan	166.97	309	PKP	PKPdf	07 43 48.8	+3.4
SSE				PP	PP	07 48 43.4	+6.3
SSE				PP	PP		
	comp=Z,932nm,7.0s						
SSE				LR	LR		
	comp=N,930nm,23.8s						
SSE				LR	LR		
	comp=E,3µm,23.8s						
SSE				LR	LR		
	comp=Z,4µm,22.0s						
NJ2	Nanjing	167.91	319	*e*PKP	PKPdf	07 43 48.0	+2.0
NJ2				APKP		07 43 58.8	
NJ2				PKP2	PKPab	07 44 56.9	+3.7
NJ2				PP	PP	07 48 41.0	-0.5
NJ2				PP	PP		
	comp=Z,720nm,10.1s						
NJ2				LR	LR		
	comp=N,3µm,23.6s						
NJ2				LR	LR		
	comp=E,2µm,22.6s						
NJ2				LR	LR		
	comp=Z,550nm,23.0s						
TATO	Taipei	168.89	281	PFAKE		07 44 00.0	+13
TATO				LR	LR		
	comp=Z,4µm,22.0s						
YHNB	Yeheng	169.02	280	PFAKE		07 44 00.0	+13
YHNB				LR	LR		
	comp=Z,6µm,22.0s						
CM31	Chiang Mai Arr	169.07	114	PFAKE		07 44 00.0	+13
CM31				LR	LR		
	comp=Z,3µm,20.0s						
CMAR	Chiang Mai Arr	169.07	114	PKP	PKPdf	07 43 46.9	-0.3
	comp=Z,1.6nm,0.4s,baz=270,slow=2.8,SNR=7.4						
CMAR				PKPab	PKPab	07 44 58.1	-0.7
	comp=Z,5.1nm,0.7s,baz=254,slow=4.7,SNR=9.2						
CMAR				PP	PP	07 48 48.5	+0.2
	comp=Z,1.7nm,0.3s,baz=259,slow=5.2,SNR=6.1						
XAN	Xi'an	169.22	2	PKP	PKPdf	07 43 47.4	+0.6
XAN				APKP		07 43 58.6	
XAN				PP	PP	07 48 50.6	+3.4
XAN				SKS	SKSdf	07 50 45.9	-2.5
XAN				SS	SS	08 09 39.6	-0.2
XAN				LR	LR		
	comp=N,708nm,24.8s						
XAN				LR	LR		
	comp=E,2µm,24.8s						
XAN				LR	LR		
	comp=Z,5µm,22.8s						
CHTO	Chiang Mai	169.23	112	PFAKE		07 44 00.0	+13
CHTO				LR	LR		
	comp=Z,3µm,20.0s						
SSLB	Suanglung	169.45	275	*e*PKPdf	PKPdf	07 43 48.0	+0.8
CD2	Chengdu	170.82	32	PKP	PKPdf	07 43 49.1	+1.3
CD2				APKP		07 44 00.1	
CD2				PKS		07 47 20.3	
CD2				PP	PP	07 48 54.3	-1.5
CD2				SKKS	SKKSac	07 55 43.1	+1.8
CD2				SS	SS	08 09 56.3	-0.5
CD2				PP	PP		
	comp=Z,3µm,8.9s						
CD2				LR	LR		
	comp=N,3µm,26.2s						
CD2				LR	LR		
	comp=Z,4µm,28.5s						
QZH	Quanzhou	171.50	283	*i* PKP	PKPdf	07 43 48.1	-0.3
QZH				PP	PP	07 49 02.1	+1.4
QZH				PP	PP		
	comp=Z,1µm,5.2s						
QZH				LR	LR		
	comp=N,2µm,14.3s						
QZH				LR	LR		
	comp=E,4µm,18.6s						
QZH				LR	LR		
	comp=Z,5µm,21.5s						
ENH	Enshi	172.99	360	PFAKE		07 44 00.0	+11
ENH				LR	LR		
	comp=Z,12nm,21.0s						
KMI	Kunming	173.57	72	PKP	PKPdf	07 43 48.5	-0.8
KMI				APKP		07 44 06.1	
KMI				XPKP		07 44 12.3	
KMI				PKP2	PKPab	07 45 19.6	+0.9
KMI				PP	PP	07 49 12.3	+1.4
KMI				SKS	SKSdf	07 50 43.8	-6.7
KMI				SKKS	SKKSac	07 55 51.5	-3.7
KMI				SS	SS	08 10 20.8	-5.5
KMI				LR	LR		
	comp=N,3µm,21.7s						
KMI				LR	LR		
	comp=E,3µm,20.8s						
KMI				LR	LR		
	comp=Z,5µm,24.3s						
QIZ	Qiongzhong	175.80	185	PKP	PKPdf	07 43 50.8	+0.7
QIZ				PP	PP	07 49 20.0	+0.4
QIZ				SKKS	SKKSac	07 55 58.5	-6.7
QIZ				PP	PP		
	comp=Z,2µm,9.9s						
QIZ				LR	LR		
	comp=E,3µm,19.2s						
QIZ				LR	LR		
	comp=Z,4µm,24.0s						
QIZ	Qiongzhong	175.80	185	PFAKE		07 44 00.0	+10
QIZ				LR	LR		
	comp=Z,4µm,20.0s						
GYA	Guiyang	175.90	38	PKP	PKPdf	07 43 48.9	-1.0
GYA				APKP		07 44 05.3	
GYA				XPKP		07 44 12.4	
GYA				PKP2	PKPab	07 45 27.6	-1.1
GYA				PKS		07 47 18.9	
GYA				PP	PP	07 49 20.4	-0.5
GYA				SKS	SKSdf	07 50 43.3	-7.7
GYA				SKKS	SKKSac	07 56 00.4	-5.4
GYA				SS	SS	08 10 38.8	-7.7
GYA				PP	PP		
	comp=Z,2µm,8.4s						
GYA				LR	LR		
	comp=N,8µm,21.9s						
GYA				LR	LR		
	comp=E,5µm,22.8s						
GYA				LR	LR		
	comp=Z,8µm,20.0s						

*IDC **13** 07:44:51.6±5.0, 6268N×15150W, h42^{km}±56^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.5/25, mbtmp3.5/9, ML2.8/2, MS4.1/1, Ms1 4.1/1, ms1mx3.1/34, Error ellipse: s-maj=32.8km s-min=25.4km az=18.0*

*ISCJB **13** 07:44:55.6±0.3, 6255N±003×15135W±008, h107^{km}±3^{km}, mb3.8/7, Error ellipse: s-maj=6.3km s-min=4.8km az=163.8*

*NEIC **13** 07:44:57.0, 6253N×15133W, h96^{km}, MG3.4(AEIC), After AEIC.*

ISC 13 07:44:56.8±0.3**, 6253N**±003×**15137W**±008**, h99**^{km}±4^{km}**, n46, σ0^{s}88**/51**, mb3.8**/7**, Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPLA	Purkeypile	0.53	314	P	Pn	07 45 12.7	0.0
PPLA				S	Sn	07 45 24.5	0.0
SKT	Skwentna	0.56	188	P	Pn	07 45 12.8	-0.2
SKT				S	Sn	07 45 24.4	-0.6
KTH	Kantishna Hill	1.04	11	P	Pn	07 45 17.5	0.0
KTH				S	Sn	07 45 32.2	-1.0
TRF	Thorofare Moun	1.04	28	P	Pn	07 45 17.7	+0.1
TRF				S	Sn	07 45 33.8	+0.6
GHO	Glory Hole Cre	1.38	123	P	Pn	07 45 22.0	+0.5
PMR	Palmer	1.41	131	P	Pn	07 45 21.7	-0.2
PMR				S	Sn	07 45 42.4	+1.5
CHUM	Lake Minchumin	1.42	343	P	Pn	07 45 22.0	0.0
FIB	Fire Island	1.48	157	P	Pn	07 45 24.0	+1.3
BPAW	Bear Paw Mtn.	1.58	6	P	Pn	07 45 23.7	-0.3
SML	Sawmill	1.60	116	P	Pn	07 45 22.6	-1.6
MCK	McKinley	1.63	41	P	Pn	07 45 24.9	+0.3
RC01	Rabbit Creek A	1.64	151	P	Pn	07 45 24.4	-0.3
KNK	Knik Glacier	1.78	128	P	Pn	07 45 26.5	+0.1
SLKM	Skilak Lake	2.11	164	P	Pn	07 45 31.8	+1.1
TT01	Tatalina	2.18	282	P	Pn	07 45 31.4	-0.2
SVW2	Sparrevohn	2.47	236	P	Pn	07 45 35.5	+0.1
SEW	Seward	2.61	158	P	Pn	07 45 38.0	+0.8
COLA	College	2.82	32	P	Pn	07 45 40.3	+0.3
IL1	Eielson Array	3.01	40	P	Pn	07 45 42.6	+0.2
AUL	Augustine Lava	3.32	199	P	Pn	07 45 48.5	+1.8
EYAK	Cordova Ski Ar	3.35	124	P	Pn	07 45 46.3	-0.7
DOT	Dot Lake	3.50	68	P	Pn	07 45 49.3	+0.2
MENT	Mentasta	3.54	80	*e*P	Pn	07 45 50.6	+0.9
IM3	Indian Mountai	3.62	344	P	Pn	07 45 51.0	+0.3
RAGM	Ragged Mountai	3.87	121	P	Pn	07 45 53.4	-0.6
MID	Middleton Isla	3.96	140	P	Pn	07 45 56.1	+0.7
COLD	Coldfoot	4.74	5	P	Pn	07 46 06.2	+0.4
KDAK	Kodiak Island	4.81	188	P	Pn	07 46 04.7	-2.1
	0.4nm,0.3s,baz=154,slow=13,SNR=7.1						
KDAK				S	Sn	07 46 58.3	-2.9
	2.8nm,0.3s,baz=323,slow=22,SNR=8.5						
KDAK	Kodiak Island	4.81	188	P	Pn	07 46 06.8	+0.1
EGAK	Eagle	5.07	59	*e*Pn	Pn	07 46 10.2	-0.1
	28nm,0.7s						
OHAK	Old Harbor	5.42	191	P	Pn	07 46 13.8	-1.2
DAWY	Dawson	5.61	69	P	Pn	07 46 17.6	-0.1
BM3	Burnt Mountain	5.68	27	P	Pn	07 46 18.7	+0.1
PNL	Peninsula	6.47	111	P	Pn	07 46 29.4	+0.1
TNA	Tin City	7.87	300	P	Pn	07 46 48.4	+0.1
WHY	Whitehorse	8.08	96	P	Pn	07 46 50.0	-1.1
SKAG	Skagway	8.38	104	P	Pn	07 46 54.4	-0.8
YKA	Yellowknife Ar	16.83	74	P	Pn	07 48 44.1	-1.8
	0.1nm,0.3s,baz=286,slow=10,SNR=5.8						
FX1	Attu Island--F	21.00	259	LR	LR	07 57 38.1	
	comp=Z,439nm,18.6s,baz=46,slow=37						
TXAR	Lajitas Array	45.23	115	P	P	07 53 06.0	+2.2
	0.3nm,0.7s,mb3.2,baz=334,slow=5.8,SNR=5.4						
SONM	Songino Array	53.95	305	P	P	07 54 11.6	+1.9
	0.8nm,0.8s,mb3.8,baz=34,slow=8.7,SNR=3.5						
ZALV	Zalesovo Beam	55.80	324	P	P	07 54 21.6	-1.4
	0.9nm,0.4s,mb4.1,baz=46,slow=6.4,SNR=3.7						
BVAR	Borovoye Array	60.19	332	P	P	07 54 53.7	+0.1
	0.7nm,0.5s,mb4.0,baz=64,slow=6.6,SNR=2.9						
KURK	Kurchatov	60.37	326	P	P	07 54 55.5	+0.6
	0.6nm,0.4s,mb3.9,baz=29,slow=7.0,SNR=3.5						
MKAR	Makanchi Array	62.94	322	P	P	07 55 11.6	-0.6
	0.5nm,0.4s,mb3.8,baz=35,slow=6.6,SNR=9.8						
AKASG	Malin Array Be	67.11	360	P	P	07 55 38.3	-0.8
	0.5nm,0.4s,mb3.7,baz=7.9,slow=7.1,SNR=3.7						

NEIC 13 07:54:45.0, 3763N×11411W, h0^{km}**, ML3.5**(SLC)**, After SLC., Southern Nevada**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSC	Goldstone	3.18	224	*e*Pn	Pn	07 55 34.1	-2.1
ISA	Isabella	4.02	242	*e*Pn	Pn	07 55 46.6	-1.1
ISA				*e*Sg	Sg	07 56 52.6	-1.6
PFO	Pinyon Flat Ob	4.44	206	*e*Pn	Pn	07 55 50.5	-3.0
PFO				*e*Sg	Sg	07 56 57.3	-10
MWC	Mount Wilson	4.67	224	*e*Pn	Pn	07 55 55.9	-0.7
TUC	Tucson	5.97	152	*e*Pn	Pn	07 56 12.8	-1.7
	3.7nm,0.6s						
TUC				*e*Sg	Sg	07 57 45.9	-11

*NEIC **13** 08:10:40.9, 1733N×10132W, h10^{km}, MD3.9(MEX), After MEX.*

MEX 13 08:10:40.9±0.5**, 1733N**×**10132W, h10**^{km}±7^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.31	334	*i* P	Pg	08 10 46.8	-0.3
ZIIG				*i* S	Sg	08 10 50.8	-0.4
CAIG	El Cayaco	1.05	105	*e*P	Pg	08 10 57.6	-3.5
CAIG				*i* S	Sg	08 11 10.2	-4.5
ACX	Acapulco	1.42	109	*i* P	Pn	08 11 02.8	-4.0
ACX				*i* S	Sn	08 11 20.3	-5.3
MEIG	Mezcala	1.73	70	*i* P	Pn	08 11 08.3	-2.7
MEIG				*i* S	Sn	08 11 28.3	-4.9
PLIG	Platanillo	2.03	58	*e*P	Pn	08 11 12.3	-3.0
PLIG				*i* S	Sn	08 11 35.9	-4.8
MOIG	Morelia	2.34	3	*i* P	Pn	08 11 16.6	-2.9
MOIG				*i* S	Sn	08 11 44.4	-3.9
PPM	Popocatepetl	3.09	56	*e*P	Pn	08 11 28.0	-1.8
PPM				*i* S	Sn	08 12 04.1	-2.8
PNIG	Pinotepa	3.20	106	*e*P	Pn	08 11 28.9	-2.3
PNIG				*i* S	Sn	08 12 05.5	-4.0
UTMO	Huajuapan	3.40	81	*e*P	Pn	08 11 31.4	-2.6
UTMO				*i* S	Sn	08 12 10.9	-3.5
VHO	Vista Hermosa	4.39	93	*e*P	Pn	08 11 46.1	-1.6
VHO				*i* S	Sn	08 12 40.5	+1.4

GUC 13 08:51:07.0±0.8**, 2322S**×**7072W, h28**^{km}±4^{km}**, ML3.5, 3C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.27	65	⇓*i*P	Pb	08 51 13.6	-0.3
MECH				*i* S	Sb	08 51 18.2	-0.4
MECH				AML	AML	08 51 27.2	
	comp=E,7µm,0.5s						
CEN1	Los Morros	0.51	110	⇑*i*P	Pb	08 51 16.7	-0.7
CEN1				*i* S	Sb	08 51 23.9	-0.7
ANCH	Antofagasta	0.54	149	⇓*i*P	Pb	08 51 17.1	-0.9
ANCH				*i* S	Sb	08 51 25.0	-0.5
ANCH				AML	AML	08 51 28.1	
	comp=N,3µm,0.4s						
TOCH	Tocopilla	1.22	23	*e*P	Pn	08 51 28.3	+0.2
TOCH				*i* S	Sn	08 51 44.0	+0.4
TOCH				AML	AML	08 51 49.6	
	comp=E,2µm,0.5s						
MACH	Maria Elena	1.35	41	⇓*i*P	Pn	08 51 30.8	+0.8
MACH				*i* S	Sn	08 51 48.3	+1.4
PB04	Plate Boundary	1.48	50	⇑*i*P	Pn	08 51 25.0	-6.7
PB04				*i* S	Sn	08 51 38.7	-11
PB04				AML	AML	08 51 45.4	
	comp=N,3µm,0.5s						
LVC	Limon Verde	1.77	70	⇑*i*P	Pn	08 51 37.6	+1.9
LVC				*i* S	Sn	08 52 01.2	+3.9
LVC				AML	AML	08 52 04.6	
	comp=N,1µm,0.6s						
PB01	Plate Boundary	2.45	28	*e*P	Pn	08 51 47.4	+2.3
PB01				AML	AML	08 52 24.1	
	comp=E,689nm,0.6s						

SKHL 13 08:55:04.8±0.6**, 5109N**×**13701E, h10**^{km}**, mb3.6**/3**, 1D, Primorye**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRNR	Gornyy	0.49	229	⇓*i*Pg	Pg	08 55 13.1	-1.3
GRNR				AMB	AMB	08 55 13.6	
	76nm,0.5s						
GRNR				*e*Sg	Sg	08 55 19.6	-1.2
GRNR				A		08 55 21.0	
	390nm,0.5s						
HABR	Khabarovsk	2.91	207	*e*Sg	Sg	08 56 37.0	-1.2
NKL	Nikolayevsk	3.06	46	*e*Pg	Pg	08 56 00.5	-2.9
NKL				AMB	AMB	08 56 04.6	
	14nm,0.6s						
NKL				*e*Sg	Sg	08 56 40.0	-3.1
NKL				A		08 56 45.0	
	79nm,0.9s						
EKMR	Ekimchan	3.19	310	*e*Pg	Pg	08 56 02.5	-3.5
EKMR				AMB	AMB	08 56 08.4	
	5.0nm,0.5s						
EKMR				*e*Sg	Sg	08 56 44.2	-3.1
EKMR				A		08 56 49.1	
	15nm,0.5s						
EKMR				A		08 56 49.1	
	6.0nm,0.5s						
KLR	Kul'dur	3.86	243	*e*rx	rx	08 56 21.0	
KLR				*e*Sg	Sg	08 57 06.7	-2.0
YASR	Yasnyy	5.97	295	*e*Sg	Sg	08 58 09.5	-6.9
YASR				A		08 58 15.4	
	7.0nm,0.7s						
BMKR	Bomnak	6.13	309	*e*Sg	Sg	08 58 17.4	-4.0
BMKR				A		08 58 25.0	
	5.0nm,0.5s						
KROS	Kirovskiy	6.95	303	*e*Sg	Sg	08 58 42.5	-5.2
KROS				A		08 58 52.1	
	4.0nm,0.7s						

*ISCJB **13** 09:00:15.2±1.8, 254S±0.1×1776W±02, h105^{km}±20^{km}, mb4.0/9, Error ellipse: s-maj=25.9km s-min=13.0km az=29.5*

*NEIC **13** 09:00:16.5±2.0, 2551S×17732W, h116^{km}±19^{km}, mb4.1/2, Error ellipse: s-maj=24.1km s-min=12.8km az=132.0*

*IDC **13** 09:00:21.2±7.0, 2561S×17751W, h152^{km}±62^{km}, mb3.7/8, mb1 3.9/9, mb1mx3.7/17, mbtmp3.7/9, MS3.3/1, Ms1 3.3/1, ms1mx3.0/22, Error ellipse: s-maj=33.2km s-min=25.7km az=165.0*

ISC 13 09:00:16.3±1.7**, 2538S**±010×**1775W**±02**, h102**^{km}±19^{km}**, n19, σ0^{s}90**/15**, mb4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.87	185	S	Sn	09 01 59.3	+0.9
	350nm,0.3s,baz=84,slow=22,SNR=6.6						
RAO				LR	LR	09 02 09.0	
	comp=Z,381nm,18.3s,baz=244,slow=30						
AFI	Afiamalu	12.63	26	P	Pn	09 03 11.8	-0.6
	2.6nm,0.3s,baz=242,slow=22,SNR=4.9						
AFI				S	Sn	09 05 19.5	-12
	0.7nm,0.3s,baz=206,slow=13,SNR=2.8						
URZ	Urewera	13.62	198	P	Pn	09 03 24.0	-1.1
	0.7nm,0.3s,baz=340,slow=23,SNR=5.6						
URZ				S	Sn	09 05 37.7	-17
	1.2nm,0.3s,baz=118,slow=23,SNR=10						
CTA	Charters Tower	33.73	271	P	P	09 06 50.1	+1.8
	3.7nm,0.7s,mb4.3,baz=90,slow=5.3,SNR=4.3						
CTAO	Charters Tower	33.73	271	*e*P	P	09 06 50.7	+2.5
	3.7nm,0.8s,mb4.3						
STKA	Stephens Creek	36.29	250	P	P	09 07 09.3	-0.7
	1.3nm,0.8s,mb3.9,baz=117,slow=11,SNR=4.7						
ASAR	Alice Springs	44.02	262	P	P	09 08 13.7	-0.3
	1.9nm,0.7s,mb3.9,baz=89,slow=7.1,SNR=33						
WRAB	Tennant Creek	44.54	267	*e*P	P	09 08 18.5	+0.3
	1.5nm,0.7s,mb3.8						
WRA	Warramunga Arr	44.55	267	P	P	09 08 17.6	-0.7
	1.9nm,0.6s,mb4.0,baz=104,slow=8.0						
MAW	Mawson	77.14	200	P	P	09 11 57.3	-1.0
	1.7nm,0.6s,mb3.9,baz=130,slow=3.6,SNR=5.8						
PETK	Petropavlovsk-	81.07	345	P	P	09 12 20.6	+0.9
	2.9nm,0.7s,mb4.2,baz=139,slow=5.8,SNR=5.4						
NVAR	Mina Array Bea	84.29	43	P	P	09 12 37.3	+0.6
	1.1nm,0.7s,mb3.8,baz=230,slow=9.3,SNR=6.9						
PDAR	Pinedale Array	92.22	43	P	P	09 13 14.7	+0.2
	0.4nm,0.7s,mb3.8,baz=223,slow=2.1,SNR=3.9						
MKAR	Makanchi Array	114.80	312	PKP	PKiKP	09 18 43.0	-1.7
	0.5nm,0.8s,baz=42,slow=2.3,SNR=2.7						
NB2	NORSAR Subarra	143.85	353	PKP	PKPdf	09 19 35.8	-3.2
	comp=Z,0.3nm,0.7s,baz=20,slow=3.7						
NOA	NORSAR Array B	143.85	353	PKP	PKPdf	09 19 35.9	-3.1
	comp=Z,2.5nm,0.8s,baz=16,slow=5.0,SNR=6.6						
HFS	Hagfors	144.40	350	PKP	PKPdf	09 19 37.7	-2.3
	comp=Z,6.0nm,0.7s,baz=93,slow=5.8,SNR=11						
AKASG	Malin Array Be	147.41	328	PKPbc	PKPbc	09 19 46.0	-2.0
	comp=Z,1.0nm,0.5s,baz=54,slow=3.5,SNR=5.7						
BRTR	Keskin Array B	150.25	306	PKPbc	PKPbc	09 19 54.2	-1.3
	comp=Z,0.6nm,0.6s,baz=48,slow=4.1,SNR=3.0						

*NNC **13** 09:00:33.0±1.5, 4508N×7380E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=23.2km s-min=11.1km az=144.0*

*ISCJB **13** 09:00:37.9±1.0, 4510N±006×737E±01, h33^{km}, Error ellipse: s-maj=14.3km s-min=6.4km az=30.3*

ISC 13 09:00:40.0±1.0**, 4501N**±007×**737E**±01**, h35**^{km}**, n12, σ0^{s}53**/15**, 7C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USP	Ospenovka	1.84	161	P	Pn	09 01 07.7	-1.4
	SNR=29						
CHMS	Chumysh	2.16	159	P	Pn	09 01 13.3	-0.2
	SNR=13						
EKS2	Erkin-Say	2.35	178	P	Pn	09 01 16.0	-0.1
	SNR=12						
AAK	Ala-Archa	2.45	166	P	Pn	09 01 17.4	0.0
	SNR=7.2						
TKM2	Tokmak 2	2.51	146	⇓Pn	Pn	09 01 18.7	+0.4
	3.8nm,0.5s						
TKM2				⇓Lg		09 01 51.0	
	7.5nm,0.3s						
TKM2	Tokmak 2	2.51	146	P	Pn	09 01 19.0	+0.7
	SNR=10						
KBK	Karagaybulak	2.53	158	P	Pn	09 01 18.8	+0.2
	SNR=6.8						
AML	Almayashu	2.88	180	P	Pn	09 01 24.0	+0.6
	SNR=5.0						
KK31	Karatay Array	2.97	231	Pn	Pn	09 01 24.9	+0.2
	1.2nm,0.4s,baz=54,slow=12,SNR=31						
KK31				⇑Sn	Sn	09 02 06.5	+7.5
	1.1nm,0.3s,baz=51,slow=27,SNR=5.4						
MK31	Makanchi Array	6.27	70	Pn	Pn	09 02 09.8	-0.1
	0.4nm,0.2s,baz=248,slow=13,SNR=34						
MK31				⇑Sn	Sn	09 03 20.6	+0.3
	0.6nm,0.6s,baz=248,slow=28,SNR=2.5						
MK31				⇑Lg		09 03 48.7	
	0.9nm,0.5s,baz=246,slow=28,SNR=4.9						
KURBB	Kurchatov Arra	6.50	28	⇑Pn	Pn	09 02 07.8	-5.2
	0.3nm,0.8s						
KURBB				⇓Lg		09 03 57.5	
	1.0nm,0.6s						
KURK	Kurchatov	6.60	28	⇑Pn	Pn	09 02 07.5	-7.0
	1.1nm,0.8s						
KURK				⇑Sn	Sn	09 03 28.3	-0.2
	1.4nm,0.5s						
KURK				⇑Lg		09 04 02.0	
	2.1nm,0.6s						

MAN 13 09:17:08, 683N×12469E, h20^{km}**, mb4.0, ML2.8, MS2.5, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.44	66	⇑*i*P	Pb	09 17 17.8	+0.7
KCP				*i* S	Sb	09 17 22.8	-0.4
CTBH	Cotabato--PC H	0.59	312	⇓*i*P	Pb	09 17 21.3	+1.7
CTBH				*i* S	Sb	09 17 29.5	+1.9
BUKP	Musuan	1.11	20	*e*P	Pn	09 17 28.5	0.0
BUKP				*e*S	Sb	09 17 43.6	+1.0

MAN 13 09:39:58, 1732N×12265E, h21^{km}**, mb4.0, ML2.7, MS2.4,**

Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.33**	**220**	*e*P	Pb	09 40 07.5	+2.3
PALP				*e*S	Sb	09 40 15.6	+5.5
CAUP	**Cauayan**	**0.87**	**245**	*e*P	Pb	09 40 15.5	+1.1
CAUP				*e*S	Sb	09 40 29.2	+3.6
SGCP	**Mt. Cagua**	**1.08**	**328**	*e*P	Pn	09 40 17.9	-0.1
APYP	**Conner**	**1.45**	**292**	*e*P	Sn	09 40 38.4	-2.8
BALP	**Baler**	**1.87**	**213**	*e*P	Pn	09 40 29.9	+1.1
BALP				*e*S	Sn	09 40 54.2	+2.4

IDC 13 09:49:24.7±3.0**, 529S**×**10228E, h36**km±6km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, Error ellipse: s-maj=129.1km s-min=22.7km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.82**	**352**	P	P	09 54 35.7	+1.2
	1.8nm,0.3s,baz=198,slow=8.5,SNR=3.0						
ASAR	**Alice Springs**	**35.51**	**124**	P	P	09 56 17.6	-0.7
	0.4nm,0.3s,baz=297,slow=7.6,SNR=12						
SONM	**Songino Array**	**53.02**	**3**	P	P	09 58 37.2	-0.6
	0.4nm,0.7s,baz=186,slow=9.6,SNR=3.5						
SONM				pP	pP	09 58 48.2	-0.5
	1.5nm,0.6s,baz=183,slow=9.5,SNR=10						
MKAR	**Makanchi Array**	**54.80**	**343**	P	P	09 58 50.4	-0.5
	0.6nm,0.8s,baz=141,slow=9.5,SNR=4.6						
MKAR				pP	pP	09 59 01.1	-0.6
	2.5nm,0.7s,baz=147,slow=7.7,SNR=20						
ZALV	**Zalesovo Beam**	**60.81**	**348**	pP	pP	09 59 43.2	-0.8
	3.8nm,0.5s,baz=163,slow=5.6,SNR=13						
TXAR	**Lajitas Array**	**145.74**	**43**	PKPbc	PKPbc	10 09 00.7	+0.2
	0.3nm,0.8s,baz=316,slow=2.5,SNR=3.1						
TXAR				pPKPbc	pPKPbc	10 09 12.5	+0.3
	0.7nm,0.6s,baz=305,slow=0.8,SNR=7.2						

*SGS **13** 10:01:32.5, 3046N×3550E, h2km*
*ISCJB **13** 10:01:33.0±0.6, 3024N±002×3582E±004, h0km, Error ellipse: s-maj=5.0km s-min=3.4km az=173.9*
*GII **13** 10:01:33.7±0.9, 3029N×3569E, h0km, ML2.4/3, EXPLOSION*
*CSEM **13** 10:01:33.7±0.3, 3010N×3577E, h2km, ML2.8, Error ellipse: s-maj=7.2km s-min=2.0km az=70.0*
*HLW **13** 10:01:33.6, 3016N×3612E, h20km, Mb2.8*
ISC 13 10:01:33.3±0.6**, 3023N**±002×**3584E**±004**, h0**km**, n24, σ0ˢ85**/36**, 1C, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.66**	**299**	Pg	**Pg**	**10 01 45.7**	**-0.2**
ZFRI				Sg	**Sg**	**10 01 54.7**	**+0.2**
HRFI	**Mount Harif**	**0.72**	**255**	Pg	**Pg**	**10 01 47.0**	**-0.2**
HRFI				Sg	**Sg**	**10 01 57.7**	**+1.1**
PRNI	**Paran**	**0.73**	**280**	Pg	**Pg**	**10 01 46.7**	**-0.7**
PRNI				Sg	**Sg**	**10 01 57.7**	**+0.8**
MBRI	**Mt Berech**	**0.92**	**242**	Pg	**Pg**	**10 01 51.7**	**+0.8**
EIL	**Elat**	**0.95**	**234**	Pg	**Pg**	**10 01 52.0**	**+0.4**
KRMI	**Paran Flat**	**0.97**	**264**	Pg	**Pg**	**10 01 52.4**	**+0.4**
KRMI				Sg	**Sg**	**10 02 05.7**	**+1.1**
HQLS		**1.15**	**216**	P	**Pg**	**10 01 54.8**	**-0.6**
MZDA	**Masada**	**1.15**	**339**	Pg	**Pg**	**10 01 55.0**	**-0.4**
MZDA				Sg	**Sg**	**10 02 11.1**	**+0.8**
RTMI	**Retamim**	**1.29**	**310**	Pg	**Pg**	**10 01 56.8**	**-1.2**
RTMI				Sg	**Sg**	**10 02 13.7**	**-1.0**
YTIR	**Yattir**	**1.29**	**331**	Pg	**Pg**	**10 01 57.1**	**-0.9**
DSI	**Dead Sea**	**1.39**	**344**	Pn	**Pn**	**10 01 60.0**	**0.0**
DSI				Sn	**Sn**	**10 02 19.6**	**+0.5**
HBST	**Basata**	**1.40**	**224**	P	**Pn**	**10 01 58.3**	**-1.7**
KZIT	**Kziot**	**1.42**	**299**	Pg	**Pg**	**10 01 59.3**	**-1.1**
KZIT				Sg	**Sg**	**10 02 18.4**	**-0.4**
JLOS		**1.52**	**192**	P	**Pn**	**10 02 01.3**	**-0.5**
JLOS		**1.52**	**192**	P	**Pn**	**10 02 01.3**	**-0.5**
JLOS				S	**Sg**	**10 02 23.5**	**+1.3**
HNKL	**Nakhl**	**1.64**	**260**	P	**Pn**	**10 02 02.9**	**-0.5**
HNKL				S	**Sn**	**10 02 24.8**	**-0.5**
BDAS	**Al Bad'**	**1.91**	**200**	P	**Pn**	**10 02 06.2**	**-0.9**
RSH		**1.97**	**292**	P	**Pn**	**10 02 08.4**	**+0.5**
HMDT	**Nahal Hemdat**	**2.03**	**352**	Pn	**Pn**	**10 02 09.9**	**+1.1**
HMDT				Sn	**Sn**	**10 02 36.3**	**+1.4**
TBKS	**Tabuk**	**2.10**	**163**	P	**Pn**	**10 02 11.2**	**+1.6**
AMAG	**Maghara**	**2.31**	**281**	P	**Pn**	**10 02 13.0**	**+0.3**
AMAG				S	**Sn**	**10 02 42.0**	**+0.2**
HKAT	**Jabal Katrina**	**2.35**	**224**	P	**Pn**	**10 02 12.0**	**-1.1**
HRSH	**Kfar Ka'horesh**	**2.51**	**349**	⇑P	**Pn**	**10 02 08.4**	**-7.0**
TR2		**2.61**	**226**	P	**Pn**	**10 02 15.8**	**-0.9**

*ISCJB **13** 10:07:24.6±0.9, 1741N±005×10168W±003, h24km±5km, mb3.8/4, Error ellipse: s-maj=8.1km s-min=4.0km az=19.0*
*NEIC **13** 10:07:26.7, 1743N×10166W, h6km, mb4.1/1, MD4.5(MEX), After MEX.*
NEIC Felt at Zihuatanejo.
*MEX **13** 10:07:26.7±0.9, 1743N×10166W, h6km±6km, MD4.4*
*IDC **13** 10:07:28.0±8.0, 1755N×10126W, h35km±55km, mb3.8/4, mb1 3.9/7, mb1mx3.7/23, mbtmp3.5/7, ML3.0/3, Error ellipse: s-maj=86.0km s-min=28.5km az=25.0*
ISC 13 10:07:25.9±0.9**, 1743N**±005×**10167W**±003**, h19**km±4km**, n32, σ1ˢ34**/57**, mb3.8**/4**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.27**	**47**	*i* P	**Pg**	**10 07 30.6**	**-1.3**
ZIIG				*i* S	**Sg**	**10 07 35.9**	**-0.2**
ACX	**Acapulco**	**1.77**	**108**	*i* P	**Pn**	**10 07 54.4**	**-1.0**
ACX				*i* S	**Sn**	**10 08 16.0**	**-1.3**
PLIG	**Platanillo**	**2.28**	**65**	*e*P	**Pn**	**10 08 02.0**	**-0.4**
PLIG				*i* S	**Sn**	**10 08 28.6**	**-1.4**
MOIG	**Morelia**	**2.29**	**11**	*i* P	**Pn**	**10 08 02.8**	**+0.2**
MOIG				*i* S	**Sn**	**10 08 29.6**	**-0.7**
R15V		**2.80**	**309**	*e*P	**Pn**	**10 08 09.4**	**-0.2**
R15V				*i* S	**Sn**	**10 08 41.9**	**-1.0**
UNM	**Universidad Na**	**3.03**	**51**	*e*P	**Pn**	**10 08 12.4**	**-0.4**
UNM				*i* S	**Sn**	**10 08 46.5**	**-2.0**
PBVM	**Pinon**	**3.17**	**50**	*i* P	**Pn**	**10 08 14.3**	**-0.4**
PBVM				*i* S	**Sn**	**10 08 51.1**	**-0.9**
SFJM	**Santa Fe**	**3.31**	**337**	*i* P	**Pn**	**10 08 17.7**	**+1.0**
SFJM				*i* S	**Sn**	**10 08 53.1**	**-2.4**
PPM	**Popocatepetl**	**3.32**	**60**	*e*P	**Pn**	**10 08 17.3**	**+0.5**
PPM				*e*P		10 08 19.1	
PPM				*i* S	**Sn**	**10 08 56.3**	**+0.6**
PPM				*i* S	**Sn**	**10 08 56.4**	**+0.7**
PPM	**Popocatepetl**	**3.32**	**60**	*e*P	**Pn**	**10 08 19.1**	**+2.3**
PPM				*i* S	**Sn**	**10 08 56.3**	**+0.6**
PPM				*i* S	**Sn**	**10 08 56.4**	**+0.7**
UTMO	**Huajuapan**	**3.71**	**83**	*i* P	**Pn**	**10 08 20.1**	**-2.0**
UTMO				*i* S	**Sn**	**10 09 06.6**	**+1.2**
DEIG	**Demacu**	**3.79**	**41**	*e*P	**Pn**	**10 08 25.7**	**+2.3**
DEIG				*i* S	**Sn**	**10 09 09.7**	**+2.2**
CJM	**Chamela**	**3.81**	**303**	*e*P	**Pn**	**10 08 23.4**	**-0.1**
CJM				*i* S	**Sn**	**10 09 07.1**	**-0.7**
OXX	**Oaxaca**	**4.74**	**93**	*e*P	**Pn**	**10 08 36.6**	**+0.3**
OXX				*i* S	**Sn**	**10 09 30.2**	**-0.5**
LVIG	**Laguna Verde**	**5.48**	**65**	*e*P	**Pn**	**10 08 46.9**	**+0.4**
LVIG				*i* S	**Sn**	**10 09 51.4**	**+2.4**
HUIG	**Huatulco**	**5.58**	**106**	*e*P	**Pn**	**10 08 55.6**	**+7.7**
HUIG				*i* S	**Sn**	**10 09 59.3**	**+7.8**
CMIG	**Matias Romero**	**6.49**	**92**	Pn	**Pn**	**10 08 57.5**	**-2.9**
	0.4nm,0.3s,baz=268,slow=8.8,SNR=9.0						
CMIG				Sn	**Sn**	**10 10 01.8**	**-12**
	1.0nm,0.3s,baz=296,slow=22,SNR=3.8						
CMIG				Lg		10 10 42.3	
	3.4nm,0.3s,baz=86,slow=18,SNR=7.5						
CMIG	**Matias Romero**	**6.49**	**92**	*e*P	**Pn**	**10 09 00.5**	**+0.1**
CMIG				*i* S	**Sn**	**10 10 11.5**	**-2.5**
CMIG	**Matias Romero**	**6.49**	**92**	Pn	**Pn**	**10 08 57.5**	**-2.9**
CMIG				Sn	**Sn**	**10 10 01.8**	**-12**
CMIG				*i* S	**Sn**	**10 10 11.5**	**-2.5**
CMIG				Lg		10 10 42.3	
TGIG		**8.20**	**93**	*e*P	**Pn**	**10 09 24.4**	**+0.6**
TGIG				*i* S	**Sn**	**10 10 59.2**	**+3.1**
PCIG		**8.28**	**101**	*e*P	**Pn**	**10 09 26.0**	**+1.0**
PCIG				*i* S	**Sn**	**10 10 55.3**	**-2.8**
CCIG	**Comitan**	**9.20**	**96**	*e*P	**Pn**	**10 09 39.2**	**+1.6**
CCIG				*i* S	**Sn**	**10 11 24.7**	**+4.1**
TXAR	**Lajitas Array**	**11.99**	**352**	Pn	**Pn**	**10 10 18.2**	**+2.4**
	0.0nm,0.3s,baz=177,slow=17,SNR=3.6						
TXAR				Lg		10 13 52.7	
	0.0nm,0.3s,baz=174,slow=29,SNR=6.6						
TXAR	**Lajitas Array**	**11.99**	**352**	Pn	**Pn**	**10 10 18.2**	**+2.4**
TXAR				Lg		10 13 52.7	
ANMO	**Albuquerque**	**17.97**	**347**	P	**Pn**	**10 11 36.6**	**+2.0**
	0.1nm,0.3s,baz=173,slow=12,SNR=5.4						
MVCO	**Mesa Verde**	**20.61**	**344**	*e*P	**P**	**10 12 04.4**	**+0.4**
	9.8nm,1.0s						
MVCO				*e*pP		10 12 14.9	
TKL	**Tuckaleechee C**	**24.14**	**38**	P	**P**	**10 12 36.9**	**-3.7**
	3.5nm,0.7s,mb3.9,baz=196,slow=11,SNR=7.2						
TKL	**Tuckaleechee C**	**24.14**	**38**	P	**P**	**10 12 36.9**	**-3.7**
NVAR	**Mina Array Bea**	**25.49**	**329**	P	**P**	**10 12 54.2**	**+1.3**
	2.8nm,0.8s,mb3.8,baz=147,slow=10,SNR=17						
NVAR	**Mina Array Bea**	**25.49**	**329**	P	**P**	**10 12 54.2**	**+1.3**
PDAR	**Pinedale Array**	**26.14**	**347**	P	**P**	**10 12 58.9**	**+0.2**
	2.2nm,0.8s,mb3.7,baz=158,slow=9.7,SNR=12						
YKA	**Yellowknife Ar**	**45.92**	**352**	P	**P**	**10 15 46.1**	**-1.0**
	1.0nm,0.8s,mb3.8,baz=160,slow=7.2,SNR=12						

*IDC **13** 10:51:01.3±1.1, 10.18N×14576E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/18, mbtmp3.9/7, MS4.3/1, Ms1 4.3/1, ms1mx2.9/35, Error ellipse: s-maj=41.1km s-min=24.9km az=80.0*
*NEIC **13** 10:51:03.1±0.9, 1029N×14572E, h10km, mb4.5/1, Error ellipse: s-maj=32.8km s-min=17.9km az=83.0*
*ISCJB **13** 10:51:06.5±1.0, 105N±0.1×1457E±02, h33km, mb4.0/8, Error ellipse: s-maj=35.2km s-min=14.0km az=164.4*
ISC 13 10:51:08.6±1.0**, 106N**±01×**1458E**±02**, h35**km**, n12, σ0ˢ66**/12**, mb4.0**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.14**	**343**	Pn	**Pn**	**10 51 54.2**	**-1.4**
	22nm,0.3s,baz=145,slow=14,SNR=9.2						
GUMO				Sn	**Sn**	**10 52 32.3**	**+0.5**
	160nm,0.3s,baz=38,slow=23,SNR=14						
KSRS	**Korea Array**	**31.24**	**332**	P	**P**	**10 57 25.1**	**+0.3**
	3.6nm,0.8s,mb4.3,baz=143,slow=9.9,SNR=7.6						
ASAR	**Alice Springs**	**35.96**	**199**	P	**P**	**10 58 00.6**	**-5.5**
	0.3nm,0.7s,mb3.4,baz=28,slow=7.8,SNR=6.1						
ASAR				PcP	PcP	11 00 29.2	-3.2
	0.3nm,0.8s,baz=40,slow=2.1,SNR=4.4						
SONM	**Songino Array**	**49.72**	**326**	P	**P**	**10 59 58.2**	**+0.9**
	1.0nm,0.6s,mb4.0,baz=140,slow=8.2,SNR=9.6						
SONM				PcP	PcP	11 01 18.1	+0.1
	0.7nm,0.8s,baz=147,slow=3.6,SNR=2.9						
RAO	**Raoul Island**	**52.83**	**140**	LR	LR	11 19 15.2	
	comp=Z,307nm,18.9s,baz=95,slow=32						
MK31	**Makanchi Array**	**64.30**	**317**	*e*P	**P**	**11 01 40.0**	**-0.5**
MKAR	**Makanchi Array**	**64.30**	**317**	P	**P**	**11 01 40.8**	**+0.2**
	1.6nm,0.6s,mb4.2,baz=94,slow=8.6,SNR=15						
ZALV	**Zalesovo Beam**	**64.61**	**325**	P	**P**	**11 01 41.6**	**-0.8**
	1.0nm,0.6s,mb4.0,baz=100,slow=7.3,SNR=7.2						
BRVK	**Borovoye**	**72.92**	**322**	*e*P	**P**	**11 02 34.6**	**+0.4**
	2.8nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**85.10**	**27**	P	**P**	**11 03 40.4**	**-0.2**
	0.5nm,0.7s,mb3.7,baz=285,slow=5.5,SNR=7.2						
YKA	**Yellowknife Ar**	**85.10**	**27**	P	**P**	**11 03 40.4**	**-0.2**
NVAR	**Mina Array Bea**	**88.08**	**51**	P	**P**	**11 03 56.1**	**+0.4**
	0.5nm,0.6s,mb3.9,baz=271,slow=4.5,SNR=4.3						

*ISCJB **13** 10:51:26.8±0.3, 4441N±001×11526W±001, h21km±3km, Error ellipse: s-maj=2.0km s-min=1.7km az=175.8*
*NEIC **13** 10:51:26.5, 4438N×11525W, h18km, ML3.8(BUT), After BUT.*
NEIC Felt at Boise.
*IDC **13** 10:51:27.0±1.5, 44.18N×11485W, h0km, mb1 2.9/4, mb1mx2.9/25, mbtmp2.5/4, ML2.4/4, Error ellipse: s-maj=17.4km s-min=9.2km az=134.0*
ISC 13 10:51:25.7±0.3**, 4441N**±001×**11526W**±001**, h2**km±2km**, n169, σ0ˢ73**/238**, 75C-80D, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H12A	**Diamond D Ranc**	**0.32**	**63**	⇓P	**Pg**	**10 51 33.0**	**+1.1**
	baz=0.3,SNR=1000						
H12A				⇓S	**Sg**	**10 51 37.8**	**+1.8**
	baz=0.3						
I12A	**Atlanta**	**0.62**	**172**	⇓P	**Pg**	**10 51 37.8**	**+0.3**
	baz=0.6						
I12A				⇑S	**Sg**	**10 51 46.0**	**+0.5**
	baz=0.6						
H11A	**Donnelly**	**0.62**	**299**	⇓P	**Pg**	**10 51 38.7**	**+1.2**
	baz=0.6,SNR=1000						
H11A				⇓S	**Sg**	**10 51 47.5**	**+2.0**
	baz=0.6						
I11A	**Placerville**	**0.71**	**226**	P	**Pg**	**10 51 39.6**	**+0.4**
	baz=0.7,SNR=1000						
I11A				⇑S	**Sg**	**10 51 49.3**	**+1.0**
	baz=0.7						
H13A	**Challis**	**0.73**	**77**	⇓P	**Pg**	**10 51 40.3**	**+0.5**
	baz=0.7,SNR=1000						
H13A				⇑S	**Sg**	**10 51 50.2**	**+0.9**
	baz=0.7						
I13A	**Wildhorse Cree**	**0.95**	**120**	⇑P	**Pg**	**10 51 43.7**	**-0.3**
	baz=0.9,SNR=1000						
I13A				⇑S	**Sg**	**10 51 56.2**	**-0.2**
	baz=0.9						
G13A	**Cobalt**	**1.00**	**46**	⇓P	**Pg**	**10 51 45.6**	**+0.7**
	baz=1.0,SNR=1000						
G13A				⇓S	**Sg**	**10 51 58.8**	**+0.9**
	baz=1.0						
HLID	**Hailey**	**1.04**	**144**	⇓P	**Pg**	**10 51 45.2**	**-0.4**
	baz=1.0						
HLID	**Hailey**	**1.04**	**144**	*e*Pg	**Pg**	**10 51 45.1**	**-0.6**
HLID				*e*S	**Sg**	**10 51 58.6**	**-0.4**
MFID	**Camas Ranch**	**1.07**	**203**	⇓P	**Pg**	**10 51 45.9**	**-0.3**
	baz=1.1,SNR=1000						
MFID				⇓S	**Sg**	**10 52 00.2**	**+0.1**
	baz=1.1						
H10A	**Noah's Angus R**	**1.08**	**280**	⇓P	**Pg**	**10 51 46.7**	**+0.2**
	baz=1.1,SNR=1000						
H10A				⇑S	**Sg**	**10 52 01.3**	**+0.8**
	baz=1.1						
I10A	**Payette**	**1.16**	**255**	⇓P	**Pg**	**10 51 48.1**	**+0.2**
	baz=1.2,SNR=592						
I10A				⇓Sb	**Sb**	**10 52 05.1**	**+1.3**
	baz=1.2						
J12A	**Stokes Ranch,**	**1.16**	**174**	⇑P	**Pg**	**10 51 47.7**	**-0.3**
	baz=1.1,SNR=1000						
J12A				⇓S	**Sg**	**10 52 02.9**	**-0.1**
	baz=1.1						
G11A	**Walters Elk Ra**	**1.23**	**324**	⇓P	**Pg**	**10 51 49.4**	**+0.1**
	baz=1.2,SNR=1000						
G11A				⇓S	**Sg**	**10 52 06.1**	**+1.0**
	baz=1.2						
J13A	**Cove Ranch, Pi**	**1.27**	**142**	P	**Pg**	**10 51 49.5**	**-0.7**
	baz=1.3,SNR=1000						
J13A				⇑S	**Sg**	**10 52 06.4**	**-0.3**
	baz=1.3						
F12A	**Elk City**	**1.35**	**0**	⇓P	**Pn**	**10 51 51.9**	**+0.4**
	baz=1.4						
F12A				⇓S	**Sg**	**10 52 10.1**	**+1.0**
	baz=1.4						
H14A	**Leadore**	**1.37**	**80**	⇓P	**Pn**	**10 51 51.5**	**-0.2**
	baz=1.4,SNR=933						
H14A				⇑S	**Sg**	**10 52 09.1**	**-0.5**
	baz=1.4						
CNCI	**Crows Nest Can**	**1.38**	**110**	⇓*e*P	**Pn**	**10 51 51.4**	**-0.6**
I14A	**Mackay**	**1.38**	**110**	⇑P	**Pn**	**10 51 51.3**	**-0.7**
	baz=1.4						
I14A				⇓S	**Sg**	**10 52 09.8**	**-0.3**
	baz=1.4						
J10A	**Berg Farm, Mel**	**1.47**	**229**	⇓P	**Pn**	**10 51 51.8**	**-1.3**
	baz=1.4,SNR=232						
J10A				⇑S	**Sb**	**10 52 11.8**	**-0.8**
	baz=1.4						
BMO	**Blue Mountains**	**1.53**	**288**	*e*Pn	**Pn**	**10 51 53.2**	**-0.7**
BMO				*e*Sn	**Sn**	**10 52 14.5**	**0.0**
F13A	**Darby**	**1.53**	**25**	⇑P	**Pn**	**10 51 53.9**	**-0.1**
	baz=1.6,SNR=1000						
F13A				⇓S	**Sn**	**10 52 14.7**	**+0.3**
	baz=1.6						
G10A	**Bishop Farm, J**	**1.60**	**304**	⇑P	**Pn**	**10 51 54.4**	**-0.5**
	baz=1.6,SNR=1000						
G10A				⇑S	**Sn**	**10 52 16.1**	**0.0**
	baz=1.6						
F11A	**Grangeville**	**1.61**	**337**	⇓P	**Pn**	**10 51 55.5**	**+0.3**
	baz=1.6,SNR=502						
F11A				⇑S	**Sn**	**10 52 17.1**	**+0.6**
	baz=1.6						
J14A	**Carey**	**1.66**	**130**	⇓P	**Pn**	**10 51 55.7**	**-0.1**
	baz=1.6,SNR=1000						
J14A				⇑Sb	**Sb**	**10 52 18.6**	**+0.4**
	baz=1.6						
K11A	**Parker Ranch,**	**1.73**	**199**	⇓P	**Pn**	**10 51 55.7**	**-1.0**
	baz=1.7,SNR=1000						
H09A	**Durkee**	**1.74**	**279**	⇑P	**Pn**	**10 51 56.3**	**-0.6**
	baz=1.7,SNR=114						
H09A				⇓S	**Sn**	**10 52 19.4**	**-0.2**
	baz=1.7						
MCMT	**McKenzie Canyo**	**1.77**	**75**	*e*Pn	**Pn**	**10 51 57.4**	**+0.1**
MCMT				*e*Sn	**Sn**	**10 52 21.6**	**+1.2**
K12A	**Draper Farm, C**	**1.79**	**172**	⇑P	**Pn**	**10 51 56.8**	**-0.7**
	baz=1.8,SNR=142						
K12A				⇓S	**Sn**	**10 52 19.8**	**-0.9**
	baz=1.8						
I09A	**Lost Marbles R**	**1.84**	**257**	⇓P	**Pn**	**10 51 57.8**	**-0.5**
	baz=1.8,SNR=202						
I09A				⇑Sb	**Sb**	**10 52 24.4**	**+1.0**
	baz=1.8						
JGI	**Juniper Gulch**	**1.88**	**99**	⇓*e*P	**Pn**	**10 51 58.7**	**-0.1**
H15A	**Lima**	**1.88**	**83**	⇓P	**Pn**	**10 51 58.5**	**-0.4**
	baz=1.9,SNR=109						
H15A				⇓S	**Sn**	**10 52 22.4**	**-0.6**
	baz=1.9						
F14A	**Wisdom**	**1.94**	**43**	⇑P	**Pn**	**10 51 59.5**	**-0.1**
	baz=2.0,SNR=370						
F14A				⇓Sb	**Sb**	**10 52 28.2**	**+1.8**
	baz=2.0						
K13A	**Stover Farm, H**	**1.95**	**154**	⇑P	**Pn**	**10 51 59.3**	**-0.5**
	baz=1.9						
K13A				⇓Sb	**Sb**	**10 52 26.6**	**-0.1**
	baz=1.9						
G09A	**Cove**	**2.00**	**297**	P	**Pn**	**10 52 00.1**	**-0.3**
	baz=2.0,SNR=277						
G09A				⇓S	**Sn**	**10 52 26.1**	**+0.2**
	baz=2.0						
K10A	**MacKenzie Ranc**	**2.00**	**216**	⇓P	**Pn**	**10 51 59.8**	**-0.7**
	baz=2.0,SNR=491						
K10A				⇑S	**Sn**	**10 52 26.0**	**-0.2**
	baz=2.0						
I15A	**Monteview**	**2.03**	**101**	⇓P	**Pn**	**10 52 00.5**	**-0.4**
	baz=2.0						
I15A				⇓Sb	**Sb**	**10 52 29.5**	**+0.4**
	baz=2.0						
E11A	**Bogner Ranch,**	**2.06**	**341**	⇑P	**Pn**	**10 52 01.4**	**+0.1**
	baz=2.1,SNR=112						
J09A	**Fry Pan Ranch,**	**2.09**	**241**	⇑P	**Pn**	**10 52 01.1**	**-0.6**
	baz=2.1,SNR=125						
J09A				⇑Sb	**Sb**	**10 52 31.6**	**+0.9**
	baz=2.1						
F10A	**Beach Ranch, E**	**2.10**	**319**	⇓P	**Pn**	**10 52 02.2**	**+0.4**
	baz=2.1,SNR=193						
G15A	**Dillon**	**2.11**	**68**	P	**Pn**	**10 52 01.9**	**-0.1**
	baz=2.1,SNR=86						
DLMT	**Dillon**	**2.12**	**62**	*e*Pn	**Pn**	**10 52 02.1**	**0.0**
DLMT				*e*Pg	**Pg**	**10 52 06.0**	**-0.4**
DLMT				*e*Sn	**Sn**	**10 52 30.9**	**+1.9**
E13A	**Victor**	**2.17**	**20**	⇓P	**Pn**	**10 52 02.8**	**0.0**
	baz=2.2,SNR=158						
L12A	**House Creek Ra**	**2.27**	**175**	⇑P	**Pn**	**10 52 04.0**	**0.0**
	baz=2.2						
L11A	**Cat Creek Ranc**	**2.27**	**189**	⇓P	**Pn**	**10 52 04.2**	**+0.1**
	baz=2.2						
J15A	**Blackfoot**	**2.27**	**115**	⇑P	**Pn**	**10 52 04.5**	**+0.3**
	baz=2.3						
F09A	**S2 Ranch, Elgi**	**2.29**	**306**	P	**Pn**	**10 52 04.5**	**0.0**
	baz=2.3,SNR=163						
HBMT	**Mount Humbug**	**2.33**	**53**	*e*P	**Pn**	**10 52 04.9**	**-0.1**
E14A	**Clinton**	**2.36**	**31**	⇑P	**Pn**	**10 52 05.2**	**-0.2**
	baz=2.4,SNR=62						
K14A	**Jones Ranch, D**	**2.40**	**140**	⇑P	**Pn**	**10 52 06.1**	**+0.2**
	baz=2.4						
F15A	**Butte**	**2.43**	**53**	P	**Pn**	**10 52 06.1**	**-0.2**
	baz=2.4,SNR=43						
F15A				⇑S	**Sn**	**10 52 36.8**	**+0.2**
	baz=2.4						
I08A	**Drewsey**	**2.44**	**259**	⇓P	**Pn**	**10 52 06.0**	**-0.4**
	baz=2.4,SNR=13						
H08A	**Prairie City**	**2.45**	**274**	P	**Pn**	**10 52 06.3**	**-0.3**
	baz=2.4,SNR=223						
H08A				⇓S	**Sn**	**10 52 36.8**	**-0.3**
	baz=2.4						
E10A	**Myers Farm, Un**	**2.46**	**329**	⇓P	**Pn**	**10 52 07.9**	**+1.2**
	baz=2.5,SNR=56						
K09A	**Rome**	**2.48**	**227**	⇑P	**Pn**	**10 52 06.7**	**-0.3**
	baz=2.5,SNR=209						
K09A				⇑S	**Sn**	**10 52 37.6**	**-0.1**
	baz=2.5						
L10A	**Juniper Basin**	**2.49**	**201**	⇑P	**Pn**	**10 52 06.9**	**-0.2**
	baz=2.5						
L13A	**Double Diamond**	**2.51**	**157**	⇓P	**Pn**	**10 52 07.3**	**-0.1**
	baz=2.5						
J08A	**Circle Bar Ran**	**2.55**	**247**	P	**Pn**	**10 52 07.7**	**-0.4**
	baz=2.5,SNR=66						
J08A				⇑S	**Sn**	**10 52 38.7**	**-0.9**
	baz=2.5						
G16A	**Moss Hill, Enn**	**2.59**	**70**	⇓P	**Pn**	**10 52 08.3**	**-0.3**
	baz=2.6,SNR=37						
G16A				⇓Sb	**Sb**	**10 52 46.8**	**+1.7**
	baz=2.6						
MSO	**Missoula**	**2.59**	**20**	*e*Pn	**Pn**	**10 52 08.6**	**0.0**
MSO				*e*Pg	**Pg**	**10 52 15.1**	**-0.3**
MSO				*e*Sg	**Sg**	**10 52 49.0**	**-0.1**
LNOR	**Lincton Mounta**	**2.60**	**305**	⇓P	**Pn**	**10 52 09.1**	**+0.5**
K15A	**Arbon**	**2.62**	**130**	⇑Sb	**Sb**	**10 52 47.0**	**+1.0**
	baz=2.6						
D12A	**Red Ives Fores**	**2.65**	**359**	⇑P	**Pn**	**10 52 10.4**	**+1.0**
	baz=2.7						
E15A	**Deer Lodge**	**2.73**	**41**	P	**Pn**	**10 52 10.0**	**-0.5**
	baz=2.7,SNR=83						
D13A	**Huson**	**2.75**	**11**	⇓P	**Pn**	**10 52 10.5**	**-0.2**
	baz=2.8,SNR=18						
D11A	**Klaveano Farm,**	**2.75**	**344**	P	**Pn**	**10 52 11.2**	**+0.4**
	baz=2.8,SNR=50						
G08A	**Pilot Rock**	**2.78**	**290**	P	**Pn**	**10 52 10.8**	**-0.4**
	baz=2.8,SNR=232						
G08A				⇓S	**Sn**	**10 52 45.4**	**+0.1**
	baz=2.8						
BOZ	**Bozeman (W)**	**2.85**	**63**	⇑P	**Pn**	**10 52 11.7**	**-0.5**
	baz=2.9						
BOZ	**Bozeman (W)**	**2.85**	**63**	*e*Pn	**Pn**	**10 52 11.9**	**-0.3**
BOZ				*e*S	**Sn**	**10 52 53.8**	**+6.6**
F08A	**Pendleton**	**2.86**	**300**	⇑P	**Pn**	**10 52 12.3**	**+0.1**
	baz=2.9,SNR=42						
F08A				⇓S	**Sn**	**10 52 47.5**	**+0.4**
	baz=2.9						
CHMT	**Chamberlain Mo**	**2.88**	**29**	⇑P	**Pn**	**10 52 12.3**	**-0.2**
H16A	**Russell Place,**	**2.88**	**83**	⇑P	**Pn**	**10 52 13.2**	**+0.6**
	baz=2.9						
K08A	**Mann Creek Ran**	**2.88**	**236**	⇓P	**Pn**	**10 52 12.3**	**-0.3**
	baz=2.9,SNR=74						
F16A	**Kennard Place,**	**2.92**	**61**	P	**Pn**	**10 52 12.8**	**-0.3**
	baz=2.9,SNR=45						
E09A	**Wood Farm, Sta**	**2.93**	**317**	⇑P	**Pn**	**10 52 13.7**	**+0.5**
	baz=2.9,SNR=30						
D14A	**Greenough**	**2.94**	**24**	P	**Pn**	**10 52 12.9**	**-0.5**
	baz=3.0,SNR=42						
M11A	**Holland Ranch,**	**3.00**	**188**	⇓Sb	**Sb**	**10 52 57.8**	**+1.0**
	baz=3.0						
M12A	**Wells**	**3.00**	**175**	⇑Sb	**Sb**	**10 52 57.6**	**+0.8**
	baz=3.0						
D10A	**Wagner Farm, O**	**3.00**	**333**	P	**Pn**	**10 52 14.3**	**0.0**
	baz=3.0,SNR=22						
D10A				⇑S	**Sn**	**10 52 51.3**	**+0.5**
	baz=3.0						
DCID1	**Drake Creek**	**3.05**	**104**	Pn	**Pn**	**10 52 15.7**	**+0.9**
DCID1				*e*Sn	**Sn**	**10 52 56.8**	**+4.9**
I07A	**Izee**	**3.07**	**265**	P	**Pn**	**10 52 15.2**	**0.0**
	baz=3.1,SNR=64						
I07A				⇓S	**Sn**	**10 52 52.5**	**+0.1**
	baz=3.1						
H07A	**Lands Inn, Kim**	**3.09**	**275**	P	**Pn**	**10 52 15.2**	**-0.2**
	baz=3.1,SNR=91						
YPT	**Yellepit**	**3.09**	**303**	⇓P	**Pn**	**10 52 16.4**	**+0.9**
J07A	**Hines**	**3.11**	**252**	⇑P	**Pn**	**10 52 15.3**	**-0.4**
	baz=3.1,SNR=7.9						
IMW	**Indian Meadow**	**3.15**	**98**	Pn	**Pn**	**10 52 17.0**	**+0.8**
IMW				*e*Pg	**Pg**	**10 52 26.6**	**+0.5**
IMW				*e*Sg	**Sg**	**10 53 03.1**	**-3.8**
WVOR	**Wild Horse Val**	**3.15**	**233**	*e*Pn	**Pn**	**10 52 15.8**	**-0.5**
L08A	**Fields**	**3.16**	**227**	⇑P	**Pn**	**10 52 16.8**	**+0.4**
	baz=3.1						
L15A	**Malad City**	**3.19**	**138**	⇑P	**Pn**	**10 52 17.1**	**+0.3**
	baz=3.2						
M14A	**Sheep Mountain**	**3.22**	**154**	⇓P	**Pn**	**10 52 17.5**	**+0.3**
	baz=3.2						
TPAW	**Teton Pass**	**3.24**	**105**	*e*Pn	**Pn**	**10 52 21.0**	**+3.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
G07A	**Ruggs Ranch, H**	**3.26**	**287**	P	**Pn**	**10 52 18.1**	**+0.4**
	baz=3.3,SNR=64						
D15A	**Lincoln**	**3.26**	**35**	⇓P	**Pn**	**10 52 17.3**	**-0.4**
	baz=3.3,SNR=48						
E16A	**East Helena**	**3.30**	**49**	⇓P	**Pn**	**10 52 17.7**	**-0.5**
	baz=3.3,SNR=28						
C12B	**Naegeli Ranch,**	**3.31**	**357**	⇑P	**Pn**	**10 52 18.6**	**+0.2**
	baz=3.3						
C13A	**Hot Springs**	**3.31**	**8**	⇓P	**Pn**	**10 52 18.1**	**-0.4**
	baz=3.3,SNR=5.4						
MOOW	**Moose Ponds**	**3.32**	**100**	Pn	**Pn**	**10 52 19.2**	**+0.7**
MOOW				*e*Sg	**Sg**	**10 53 07.3**	**-4.9**
REDW	**Red Top Meadow**	**3.35**	**107**	Pn	**Pn**	**10 52 20.7**	**+1.7**
REDW				*e*Sg	**Sg**	**10 53 07.6**	**-5.7**
K07A	**Rock Creek Ran**	**3.37**	**241**	⇑P	**Pn**	**10 52 18.9**	**-0.4**
	baz=3.4,SNR=46						
SNOW	**Snow King Moun**	**3.38**	**105**	*e*Pn	**Pn**	**10 52 23.6**	**+4.1**
SNOW				*e*Sg	**Sg**	**10 53 11.1**	**-3.3**
D09A	**Jones Farm, Ri**	**3.41**	**322**	⇑P	**Pn**	**10 52 19.4**	**-0.4**
	baz=3.4						
AHID	**Auburn Hatcher**	**3.44**	**117**	*e*Pn	**Pn**	**10 52 23.6**	**+3.5**
LOHW	**Long Hollow**	**3.45**	**102**	Pn	**Pn**	**10 52 20.2**	**-0.1**
WIW	**Wooded Island**	**3.49**	**307**	⇑P	**Pn**	**10 52 21.0**	**+0.2**
C11A	**Tepee Creek (N**	**3.50**	**349**	⇑P	**Pn**	**10 52 21.4**	**+0.3**
	baz=3.5,SNR=9.7						
C14A	**Swan Lake**	**3.52**	**17**	⇑P	**Pn**	**10 52 21.6**	**+0.2**
	baz=3.5						
H2OWA	**Water**	**3.55**	**306**	⇑P	**Pn**	**10 52 21.8**	**+0.1**
F17A	**Fitzpatrick Pl**	**3.58**	**64**	⇑P	**Pn**	**10 52 22.1**	**-0.1**
	baz=3.6,SNR=5.4						
I06A	**Prineville**	**3.59**	**264**	⇑P	**Pn**	**10 52 22.1**	**-0.2**
	baz=3.6,SNR=10						
OT3	**Othello 3**	**3.60**	**310**	P	**Pn**	**10 52 22.6**	**+0.2**
HAWA	**Hanford**	**3.61**	**305**	*e*Pn	**Pn**	**10 52 22.2**	**-0.3**
F07A	**Phinny Hill Vi**	**3.63**	**296**	⇑P	**Pn**	**10 52 22.2**	**-0.6**
	baz=3.6,SNR=9.3						
H06A	**Lindquist Farm**	**3.64**	**277**	⇓P	**Pn**	**10 52 22.7**	**-0.3**
	baz=3.6,SNR=60						
ELK	**Elko**	**3.66**	**180**	Pn	**Pn**	**10 52 22.1**	**-1.2**
	0.2nm,0.3s,baz=0.0,slow=15,SNR=4.6						
ELK				Pg	**Pg**	**10 52 28.2**	**-7.6**
	4.8nm,0.3s,baz=350,slow=16,SNR=80						
ELK				Lg		10 53 15.1	
	13nm,0.3s,baz=247,slow=19,SNR=20						
D08A	**Wollman Farm,**	**3.69**	**317**	⇓P	**Pn**	**10 52 23.5**	**-0.2**
	baz=3.7						
D16A	**Dana Ranch, Ca**	**3.69**	**43**	P	**Pn**	**10 52 23.1**	**-0.7**
	baz=3.7,SNR=96						
C10A	**Spilker Farm,**	**3.70**	**338**	⇓P	**Pn**	**10 52 23.6**	**-0.2**
	baz=3.7,SNR=6.5						
E17A	**Martinsdale**	**3.72**	**55**	⇑P	**Pn**	**10 52 23.5**	**-0.5**
	baz=3.7,SNR=84						
J06A	**Christmas Vall**	**3.73**	**254**	⇑P	**Pn**	**10 52 24.0**	**-0.1**
	baz=3.7,SNR=56						
L07A	**Adell**	**3.82**	**233**	⇑P	**Pn**	**10 52 25.0**	**-0.5**
	baz=3.8						
C15A	**Salmond Ranch,**	**3.84**	**28**	⇓P	**Pn**	**10 52 25.2**	**-0.6**
	baz=3.9,SNR=46						
E07A	**Sunnyside**	**3.89**	**305**	⇓P	**Pn**	**10 52 26.5**	**+0.1**
	baz=3.9,SNR=23						
G06A	**Carlson Farm,**	**3.92**	**284**	⇑P	**Pn**	**10 52 26.8**	**0.0**
	baz=3.9,SNR=16						
C09A	**Chrisman Ranch**	**3.99**	**329**	⇓P	**Pn**	**10 52 28.0**	**+0.1**
	baz=4.0						
B13A	**Whitefish**	**4.01**	**8**	⇑P	**Pn**	**10 52 28.0**	**0.0**
	baz=4.0						
NEW	**Newport**	**4.07**	**342**	*e*Pn	**Pn**	**10 52 28.6**	**-0.3**
NEW				*e*Pg	**Pg**	**10 52 40.4**	**-3.3**
NEW				*e*Sg	**Sg**	**10 53 33.3**	**-3.1**
B11A	**Sandpoint**	**4.11**	**350**	⇑P	**Pn**	**10 52 29.8**	**+0.4**
	baz=4.1						
C16A	**Fuhringer Ranc**	**4.18**	**34**	P	**Pn**	**10 52 29.6**	**-0.8**
	baz=4.2,SNR=90						
B14A	**Marquette Ranc**	**4.19**	**18**	⇑P	**Pn**	**10 52 30.6**	**0.0**
	baz=4.2,SNR=13						
D17A	**Six Diamond Ra**	**4.21**	**48**	⇓P	**Pn**	**10 52 30.0**	**-0.9**
	baz=4.2,SNR=51						
BMN	**Battle Mountai**	**4.23**	**201**	Pn	**Pn**	**10 52 30.6**	**-0.5**
C08A	**Higginbotham F**	**4.29**	**323**	P	**Pn**	**10 52 31.5**	**-0.3**
	baz=4.3,SNR=61						
D07A	**Quincy**	**4.32**	**312**	⇓P	**Pn**	**10 52 32.1**	**-0.2**
	baz=4.3,SNR=9.2						
RLMT	**Red Lodge**	**4.33**	**78**	*e*Pn	**Pn**	**10 52 35.0**	**+2.6**
RLMT				*e*Sg	**Sg**	**10 53 42.4**	**-2.2**
B15A	**Bradely Ranch,**	**4.33**	**25**	⇑P	**Pn**	**10 52 32.5**	**0.0**
	baz=4.3,SNR=36						
E18A	**Harlowton**	**4.33**	**58**	⇓P	**Pn**	**10 52 32.5**	**0.0**
	baz=4.3,SNR=11						
G05A	**Wamic**	**4.39**	**283**	⇑P	**Pn**	**10 52 33.5**	**+0.2**
	baz=4.4,SNR=7.0						
PDAR	**Pinedale Array**	**4.45**	**110**	Pn	**Pn**	**10 52 32.5**	**-1.6**
	0.0nm,0.3s,baz=296,slow=13,SNR=2.0						
PDAR				Pg	**Pg**	**10 52 41.5**	**-10**
	0.4nm,0.3s,baz=301,slow=14,SNR=14						
PDAR				Lg		10 53 42.3	
	0.5nm,0.3s,baz=340,slow=35,SNR=3.3						
MOD	**Modoc**	**4.46**	**238**	*e*Pn	**Pn**	**10 52 34.5**	**+0.2**
MOD				*e*Pg	**Pg**	**10 52 45.9**	**-5.3**
B09A	**Rice**	**4.49**	**335**	⇑P	**Pn**	**10 52 34.6**	**0.0**
	baz=4.5,SNR=21						
C17A	**Wharram Farm,**	**4.50**	**43**	⇓P	**Pn**	**10 52 34.2**	**-0.6**
	baz=4.5,SNR=41						
E06A	**Yakima**	**4.56**	**300**	⇓P	**Pn**	**10 52 35.6**	**0.0**
	baz=4.6,SNR=40						
A13A	**Flathead Natio**	**4.57**	**7**	⇑P	**Pn**	**10 52 35.8**	**0.0**
	baz=4.6						
DUG	**Dugway**	**4.58**	**156**	*e*Pn	**Pn**	**10 52 37.8**	**+1.9**
DUG				*e*Sg	**Sg**	**10 53 54.5**	**+1.7**
A11A	**Hall Mountain,**	**4.62**	**351**	⇓P	**Pn**	**10 52 36.8**	**+0.4**
	baz=4.6,SNR=6.1						
HOOD	**Mount Hood Mea**	**4.64**	**284**	*e*Pn	**Pn**	**10 52 34.6**	**-2.1**
HOOD				*e*Sg	**Sg**	**10 53 49.5**	**-5.1**
C07A	**Waterville**	**4.69**	**316**	⇓P	**Pn**	**10 52 36.8**	**-0.6**
	baz=4.7,SNR=12						
B16A	**M & M Farms, S**	**4.70**	**30**	⇑P	**Pn**	**10 52 37.4**	**-0.2**
	baz=4.7,SNR=26						
D18A	**Linhart Farms,**	**4.72**	**52**	⇑P	**Pn**	**10 52 37.6**	**-0.3**
	baz=4.7,SNR=6.4						
WALA	**Waterton Lakes**	**4.75**	**11**	*e*Pn	**Pn**	**10 52 38.9**	**+0.7**
WALA				*e*Pg	**Pg**	**10 52 55.1**	**-1.5**
WALA				*e*Sg	**Sg**	**10 53 56.4**	**-1.7**
D06A	**Cle Elum**	**4.80**	**307**	⇓P	**Pn**	**10 52 39.1**	**+0.2**
	baz=4.8,SNR=12						
A10A	**Northport**	**4.84**	**342**	⇑P	**Pn**	**10 52 39.6**	**+0.1**
	baz=4.9,SNR=12						
B08A	**Colville Reser**	**4.86**	**326**	P	**Pn**	**10 52 39.4**	**-0.3**
	baz=4.9,SNR=26						
B17A	**L&G Farms, Che**	**4.96**	**37**	⇑P	**Pn**	**10 52 40.5**	**-0.6**
	baz=5.0,SNR=11						
E05A	**Randle**	**5.06**	**298**	⇓P	**Pn**	**10 52 42.3**	**-0.2**
	baz=5.1,SNR=32						
A09A	**Danville**	**5.11**	**335**	⇓P	**Pn**	**10 52 43.4**	**+0.2**
	baz=5.1,SNR=29						
LON	**Longmire**	**5.16**	**299**	*e*Pn	**Pn**	**10 52 44.3**	**+0.3**
	6.0nm,0.7s						
A16A	**West Butte Ran**	**5.20**	**28**	⇓P	**Pn**	**10 52 44.0**	**-0.3**
	baz=5.2,SNR=7.1						
EGMT	**Eagleton**	**5.26**	**45**	*e*Pn	**Pn**	**10 52 45.2**	**0.0**
	19nm,0.5s						
EGMT				*e*Pg	**Pg**	**10 53 04.8**	**-1.6**
EGMT				*e*Sg	**Sg**	**10 54 13.5**	**-1.1**
C06A	**Tall Timber Ra**	**5.26**	**314**	⇑P	**Pn**	**10 52 45.0**	**-0.3**
	baz=5.3						
A08A	**Turner Farm, O**	**5.32**	**330**	⇑P	**Pn**	**10 52 46.2**	**+0.1**
	baz=5.3,SNR=26						
N18A	**Larsen Ranch,**	**5.35**	**128**	⇑P	**Pn**	**10 52 46.2**	**-0.4**
	baz=5.3,SNR=6.9						
C05A	**Tolt Reservoir**	**5.56**	**309**	⇓P	**Pn**	**10 52 49.2**	**-0.1**
	baz=5.6						
A07A	**Ashnola River,**	**5.83**	**325**	⇑P	**Pn**	**10 52 53.1**	**+0.1**
	baz=5.8,SNR=26						
A18A	**Metzger Ranch,**	**5.85**	**38**	⇓P	**Pn**	**10 52 53.0**	**-0.4**
	baz=5.9,SNR=5.5						
B05A	**Bryant**	**6.11**	**312**	⇓P	**Pn**	**10 52 56.9**	**0.0**
	baz=6.1,SNR=5.5						
NVAR	**Mina Array Bea**	**6.39**	**202**	Pn	**Pn**	**10 53 04.6**	**+3.7**
	0.3nm,0.3s,baz=21,slow=13,SNR=7.4						
NVAR				Pg	**Pg**	**10 53 18.0**	**-10**
	1.3nm,0.3s,baz=12,slow=13,SNR=17						
NVAR				Lg		10 54 44.8	
	0.7nm,0.3s,baz=95,slow=28,SNR=3.2						
NVAR	**Mina Array Bea**	**6.39**	**202**	Pn	**Pn**	**10 53 04.6**	**+3.7**
NVAR				Pg	**Pg**	**10 53 18.0**	**-10**
NVAR				Lg		10 54 44.8	
TPNV	**Topopah Spring**	**7.49**	**186**	*e*Pn	**Pn**	**10 53 17.8**	**+1.9**
	1.6nm,0.7s						
TPNV				*e*Pg	**Pg**	**10 53 48.5**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**18.13**	**1**	Pn	**Pn**	**10 55 38.1**	**-0.2**
	0.0nm,0.3s,baz=180,slow=12,SNR=3.8						
YKA				Lg		11 00 52.1	
	0.0nm,0.3s,baz=171,slow=22,SNR=4.3						

ISCJB ***13*** *10:56:35.7±1.0, 23.4N±0.1×94.5E±0.2, h33^{km}, mb3.8/2, Error ellipse: s-maj=31.3km s-min=8.3km az=142.9*
IDC ***13*** *10:56:37.1±7.2, 23.18N×94.07E, h34^{km}±56^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.2/23, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=87.6km s-min=23.2km az=60.0*
ISC 13 10:56:38.0±1.0**, 23.5N**±0.1×**94.5E**±0.2**, h35^{km}, n5,** σ**0^{s}88**/7**,**
mb3.8/2**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.36**	**336**	*e*P	**Pn**	**10 57 02.0**	**+1.5**
IMP				*e*S	**Sn**	**10 57 16.0**	**-1.4**
SHL	**Shillong**	**3.15**	**311**	*e*P	**Pn**	**10 57 25.0**	**-0.2**
SHL				*e*x	**Sn**	**10 58 01.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**6.51**	**140**	Pn	**Pn**	**10 58 11.0**	**-0.3**
	0.6nm,0.3s,baz=313,slow=14,SNR=6.9						
CMAR				Lg		11 00 05.0	
	0.8nm,0.3s,baz=314,slow=31,SNR=4.5						
MKAR	**Makanchi Array**	**25.22**	**340**	P	**P**	**11 02 01.4**	**+1.0**
	1.7nm,0.5s,mb3.8,baz=145,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**60.52**	**138**	P	**P**	**11 06 44.2**	**-0.5**
	0.5nm,0.6s,mb3.8,baz=323,slow=7.0,SNR=15						

IDC ***13*** *11:03:38.3±1.8, 3.43S×145.66E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx4.0/15, mbtmp4.0/9, MS3.7/6, Ms1 3.7/6, ms1mx3.2/24, Error ellipse: s-maj=45.5km s-min=24.2km az=115.0*
ISCJB ***13*** *11:03:43.4±4.1, 3.5S±0.2×145.5E±0.2, h48^{km}±43^{km}, mb4.1/9, MS3.8/4, Error ellipse: s-maj=32.9km s-min=20.0km az=36.7*
NEIC ***13*** *11:03:47.5±3.5, 3.61S×145.58E, h74^{km}±46^{km}, mb4.5/2, Error ellipse: s-maj=44.0km s-min=16.8km az=118.0*
ISC 13 11:03:46.9±3.4**, 3.6S**±0.2×**145.5E**±0.2**, h69^{km}**±40^{km}**, n21,**
σ**0^{s}91**/15**, mb4.0**/9**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.97**	**164**	*e*Pn	**Pn**	**11 05 13.2**	**+0.5**
HNR	**Honiara**	**15.43**	**113**	LR	LR	11 12 30.6	
	comp=Z,142nm,19.0s,baz=265,slow=35						
KAKA	**Kakadu**	**15.79**	**234**	*e*P	x	11 07 06.7	
	5.3nm,0.5s						
WRAB	**Tennant Creek**	**19.54**	**213**	*e*P	**Pn**	**11 08 09.7**	**-1.3**
	24nm,0.8s						
WB2	**Warramunga Arr**	**19.55**	**213**	*e*P	**Pn**	**11 08 09.6**	**-1.4**
WRA	**Warramunga Arr**	**19.55**	**213**	LR	LR	11 16 50.3	
	comp=Z,285nm,18.6s,baz=55,slow=40						
BATI	**Baumata**	**22.66**	**252**	P	**P**	**11 08 43.5**	**+0.8**
	23nm,0.8s,mb4.6,baz=190,slow=6.3,SNR=6.3						
ASAR	**Alice Springs**	**22.88**	**208**	P	**P**	**11 08 46.3**	**+1.5**
	3.9nm,0.9s,mb3.7,baz=38,slow=9.5,SNR=32						
FITZ	**Fitzroy Crossi**	**24.22**	**232**	*e*P	**P**	**11 08 56.9**	**-0.5**
	15nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**24.22**	**232**	*e*P	**P**	**11 08 57.1**	**-0.3**
	30nm,1.3s,mb4.5						
KAPI	**Kappang**	**25.75**	**266**	P	**P**	**11 09 11.6**	**+0.2**
	9.3nm,0.9s,mb4.2,baz=76,slow=1.0,SNR=7.0						
STKA	**Stephens Creek**	**28.35**	**187**	P	pP	11 09 46.5	-4.3
	2.0nm,0.4s,baz=346,slow=10,SNR=5.4						
STKA				LR	LR	11 22 12.4	
	comp=Z,106nm,18.5s,baz=24,slow=39						
STKA	**Stephens Creek**	**28.35**	**187**	*e*P	**P**	**11 09 43.0**	**+8.6**
STKA				LR	LR	11 22 12.4	
KSRS	**Korea Array**	**44.03**	**340**	P	**P**	**11 11 46.5**	**-1.3**
	1.1nm,0.6s,mb3.7,baz=158,slow=8.6,SNR=3.3						
CMAR	**Chiang Mai Arr**	**50.86**	**297**	P	**P**	**11 12 42.2**	**+1.1**
	2.3nm,0.9s,mb4.2,baz=117,slow=5.3,SNR=11						
SONM	**Songino Array**	**61.63**	**331**	P	**P**	**11 13 57.9**	**+0.6**
	0.4nm,0.3s,mb3.9,baz=96,slow=8.9,SNR=3.6						
SONM				LR	LR	11 38 59.9	
	comp=Z,67nm,18.1s,baz=103,slow=34						
MKAR	**Makanchi Array**	**74.75**	**321**	P	**P**	**11 15 19.8**	**+0.3**
	0.2nm,0.7s,baz=92,slow=8.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**76.23**	**328**	P	**P**	**11 15 27.1**	**-0.8**
	0.3nm,0.3s,mb3.5,baz=95,slow=10,SNR=2.6						
ZALV				LR	LR	11 48 14.5	
	comp=Z,60nm,18.6s,baz=263,slow=35						
MAW	**Mawson**	**83.87**	**202**	LR	LR	11 52 16.4	
	comp=Z,74nm,19.2s,baz=310,slow=35						
YKA	**Yellowknife Ar**	**97.76**	**27**	P	**P**	**11 17 14.2**	**+0.1**
	0.2nm,0.7s,mb3.7,baz=277,slow=4.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**143.05**	**287**	PKP	PKPdf	11 23 14.0	+0.1
	1.0nm,1.1s,baz=63,slow=4.0,SNR=2.6						

CASC 13 11:38:41.9±1.3**, 11.24N**×**85.66W, h164^{km}**±4^{km}**, MD4.1,**
ML2.3, 8C-3D, Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.20**	**288**	*e*P	Pn	11 39 03.9	0.0
CONN	**Concepcion**	**0.32**	**6**	*e*P	Pn	11 39 04.9	+0.7
LIM1	**Limonal**	**0.67**	**143**	⇑*i*P	Pn	11 39 06.1	+0.3
LIM1				*i* S	Sn	11 39 24.4	+0.4
CUI	**Cuipilapa**	**0.74**	**140**	⇑*i*P	Pn	11 39 06.9	+0.6
CUI				*i* S	Sn	11 39 26.0	+1.2
APON	**Apoyo**	**0.78**	**329**	*e*P	Pn	11 39 07.3	+0.9
2RIO	**Dos Rios de Up**	**0.82**	**149**	⇑*i*P	Pn	11 39 06.0	-0.8
TICN	**Ticuantepe**	**0.97**	**325**	*e*P	Pn	11 39 08.6	+0.8
MGAN	**Managua**	**1.07**	**328**	*e*P	Pn	11 39 08.5	-0.1
TISN	**Laguna Tiscapa**	**1.08**	**326**	*e*P	Pn	11 39 08.8	+0.1
VCR	**Vista de Mar**	**1.11**	**178**	⇑*i*P	Pn	11 39 09.3	+0.3
VCR				*e*S	Sn	11 39 30.9	+1.2
XAVN	**Gruta Xavier**	**1.11**	**324**	*e*P	Pn	11 39 09.3	+0.4
APYN	**Apoyeque**	**1.20**	**326**	*e*P	Pn	11 39 10.2	+0.5
CSAN		**1.20**	**322**	*e*P	Pn	11 39 09.8	+0.1
FORC	**Fortuna**	**1.24**	**128**	⇑*e*P	Pn	11 39 10.9	+0.8
FORC				*e*S	Sn	11 39 33.6	+1.9
COPN	**Copaltepe**	**1.30**	**316**	*e*P	Pn	11 39 11.1	+0.4
MOMN	**Momotombo**	**1.45**	**324**	*e*P	Pn	11 39 12.5	+0.5
JCR	**Jicaral**	**1.48**	**159**	⇑*e*P	Pn	11 39 12.7	+0.3
JCR				*e*S	Sn	11 39 35.6	-0.3
CNGN	**Cerro Negro**	**1.61**	**321**	*e*P	Pn	11 39 14.0	+0.3
CNGN				*e*S	Sn	11 39 39.3	+1.1
CGA2	**Cerro Gallo 2**	**1.69**	**136**	⇓*e*P	Pn	11 39 15.2	+0.7
CGA2				*e*S	Sn	11 39 40.4	+0.8
TEL3	**Telica 3**	**1.76**	**319**	*e*P	Pn	11 39 15.6	+0.3
PRS1	**Puriscal**	**1.82**	**133**	⇓*e*P	Pn	11 39 17.2	+1.2
CRIN	**San Cristobal**	**1.99**	**317**	*e*P	Pn	11 39 17.9	+0.2
CRIN				*e*S	Sn	11 39 46.6	+1.1
URSC	**Urasca**	**2.32**	**127**	⇑*e*P	Pn	11 39 23.7	+2.1
URSC				*e*S	Sn	11 39 54.8	+2.5
BAR1		**3.05**	**130**	⇓*e*P	Pn	11 39 31.8	+1.4
BAR1				*e*S	Sn	11 40 07.5	-0.6
ACR	**Cerro Adams**	**3.56**	**136**	*e*P	Pn	11 39 37.0	+0.1
ACR				*e*S	Sn	11 40 20.9	+1.3
CHI2		**13.50**	**118**	*e*P	x	11 39 18.0	
LAPE	**La Pedrera**	**14.37**	**104**	⇑*i*P	x	11 39 04.8	
LAPE				*i* S	x	11 39 22.8	

GUC 13 11:48:09.2±0.8**, 23.21S**×**70.61W, h38^{km}**±3^{km}**, ML3.9,**
7C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.18**	**55**	⇓*i*P	Pn	11 48 15.8	-0.3
MECH				*i* S	Sn	11 48 20.4	-0.5
MECH				AML	AML	11 48 27.6	
	comp=N,18μm,0.3s						
CEN1	**Los Morros**	**0.42**	**116**	⇑*i*P	Pn	11 48 19.1	+0.3
CEN1				*i* S	Sn	11 48 26.2	+0.8
ANCH	**Antofagasta**	**0.51**	**159**	⇑*i*P	Pn	11 48 19.4	-0.5
ANCH				*i* S	Sn	11 48 27.3	-0.3
ANCH				AML	AML	11 48 30.0	
	comp=N,7μm,0.6s						
MACH	**Maria Elena**	**1.27**	**38**	⇑*i*P	Pn	11 48 32.1	+1.6
MACH				*i* S	Sn	11 48 49.6	+3.2
PB04	**Plate Boundary**	**1.39**	**48**	⇑*i*P	Pn	11 48 27.1	-5.0
PB04				*i* S	Sn	11 48 40.8	-8.5
PB04				AML	AML	11 48 44.2	
	comp=N,5μm,0.3s						
CPN1	**Cerro Paranal**	**1.43**	**173**	⇑*i*P	Pn	11 48 33.0	+0.4
CPN1				*i* S	Sn	11 48 51.8	+1.6
CPN1				AML	AML	11 48 57.8	
	comp=E,7μm,0.4s						
LVC	**Limon Verde**	**1.67**	**70**	⇑*i*P	Pn	11 48 39.6	+3.6
LVC				*i* S	Sn	11 49 01.4	+5.2
LVC				AML	AML	11 49 05.1	
	comp=N,2μm,0.5s						
PB01	**Plate Boundary**	**2.39**	**26**	⇑*i*P	Pn	11 48 47.4	+1.5
PB01				AML	AML	11 49 26.1	
	comp=E,1μm,0.3s						

CASC 13 11:48:47.2±1.7**, 12.81N**×**88.95W, h35^{km}**±999^{km}**, MD3.7,**
ML3.6, 7C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.80**	**7**	⇓*e*P	x	11 49 02.1	
SNVI				*e*S	x	11 49 12.9	
VSM	**San Miguel**	**0.90**	**47**	⇑*e*P	x	11 49 03.6	
SNET	**Serv Nac Est T**	**0.91**	**342**	⇑*e*P	x	11 49 03.6	
SNET				*e*S	x	11 49 15.7	
LBRS	**Las Brisas**	**0.93**	**354**	*e*P	x	11 49 03.5	
BLLM	**Bellamira**	**0.93**	**48**	⇑*e*P	x	11 49 03.8	
BLLM				*e*S	x	11 49 16.8	
BOQS	**Boqueron**	**0.97**	**340**	⇑*i*P	x	11 49 05.0	
BOQS				*e*S	x	11 49 18.4	
CNCH	**Conchagua**	**1.18**	**67**	*e*P	x	11 49 07.3	
CNCH				*e*S	x	11 49 23.0	
CAHU	**Cacacuatique**	**1.19**	**37**	⇑*e*P	x	11 49 08.3	
CAHU				*e*S	x	11 49 24.7	
SBLS	**San Blas**	**1.22**	**327**	⇓*e*P	x	11 49 08.3	
SBLS				*e*P	x	11 49 08.4	
SBLS				*e*S	x	11 49 24.1	
SNJE	**San Jose**	**1.23**	**329**	*e*P	x	11 49 08.7	
SNJE				*e*S	x	11 49 24.0	
RTR	**El Retiro**	**1.28**	**328**	⇓*e*P	x	11 49 09.4	
RTR				*e*S	x	11 49 25.4	
RBDL	**Robledal**	**1.48**	**331**	*e*P	x	11 49 12.6	
RBDL				*e*S	x	11 49 31.2	
MTO2	**Montecristo 2**	**1.63**	**346**	*e*P	x	11 49 14.4	
CRIN	**San Cristobal**	**1.85**	**93**	⇓*e*P	Pn	11 49 16.6	+0.2
CRIN				*e*S	Sn	11 49 38.7	0.0
TGUH	**Tegucigalpa,Un**	**2.04**	**53**	⇓*e*P	Pn	11 49 19.8	+0.7
TGUH				*e*S	Sn	11 49 44.9	+1.5
TGUH				AML	AML	11 49 50.1	
	comp=N,642nm,0.4s						
TEL3	**Telica 3**	**2.06**	**96**	*e*P	Pn	11 49 18.8	-0.6
MIRN	**Miramar**	**2.21**	**99**	*e*P	Pn	11 49 22.1	+0.7
CNGN	**Cerro Negro**	**2.21**	**98**	⇑*e*P	Pn	11 49 21.9	+0.5
CNGN				*e*S	Sn	11 49 48.1	+0.5
MOMN	**Momotombo**	**2.38**	**99**	*e*P	Pn	11 49 23.6	-0.2
COPN	**Copaltepe**	**2.38**	**105**	*e*P	Pn	11 49 22.3	-1.5
CSAN		**2.54**	**104**	*e*P	Pn	11 49 25.3	-0.6
APYN	**Apoyeque**	**2.60**	**102**	⇑*e*P	Pn	11 49 26.2	-0.5
CHI2		**17.07**	**117**	*e*P	x	11 49 17.2	

GUC 13 11:55:17.5±0.7**, 19.99S**×**69.29W, h107^{km}**±8^{km}**, ML3.7,**
2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.63**	**242**	⇓*i*P	Pn	11 55 35.2	+0.1
HMBC				*i* S	Sn	11 55 48.9	+0.7
PSGC	**Pisagua**	**0.87**	**296**	⇑*i*P	Pn	11 55 37.4	+0.2
PSGC				*i* S	Sn	11 55 52.2	+0.2
MNMC	**Miæe Miæ**	**0.90**	**341**	⇑*i*P	Pn	11 55 37.7	+0.2
MNMC				*i* S	Sn	11 55 52.9	+0.4
PB01	**Plate Boundary**	**1.07**	**190**	⇓*i*P	Pn	11 55 39.6	+0.3
PB01				*i* S	Sn	11 55 56.3	+0.7
PB01				AML	AML	11 55 57.6	
	comp=N,3μm,0.5s						
PB04	**Plate Boundary**	**2.28**	**185**	AML	AML	11 56 42.8	
	comp=N,346nm,0.3s						
LVC	**Limon Verde**	**2.64**	**172**	⇓*e*P	Pn	11 56 00.8	+2.2
LVC				*i* S	Sn	11 56 32.5	+2.2
LVC				AML	AML	11 56 40.6	
	comp=E,225nm,0.4s						

IDC 13 12:07:39.1±5.0**, 1.39N**×**96.90E, h0^{km}, mb4.2**/5**, mb1 4.1**/6**,**
mb1mx3.8/22**, mbtmp4.1**/6**, ML3.6**/2**, Error ellipse:**
s-maj=99.5km s-min=40.9km az=174.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.46**	**55**	Pn	Pn	12 08 19.9	-0.6
	1.7nm,0.3s,baz=236,slow=15,SNR=9.4						
CMAR	**Chiang Mai Arr**	**17.08**	**7**	P	Pn	12 11 39.2	-0.1
	0.3nm,0.3s,baz=207,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**46.98**	**346**	P	P	12 16 12.1	+0.3
	2.1nm,0.7s,baz=163,slow=8.8,SNR=26						
SONM	**Songino Array**	**46.99**	**9**	P	P	12 16 11.5	-0.4
	0.8nm,0.4s,baz=192,slow=9.6,SNR=9.8						
KURK	**Kurchatov**	**51.53**	**345**	P	P	12 16 46.2	-0.4
	1.0nm,0.5s,baz=160,slow=7.1,SNR=10						
ZALV	**Zalesovo Beam**	**53.32**	**351**	P	P	12 16 59.9	+0.1
	4.1nm,0.6s,baz=174,slow=7.3,SNR=20						
ARCES	**ARCESS Array B**	**82.25**	**340**	P	P	12 20 01.9	-0.1
	6.2nm,1.1s,baz=126,slow=2.1,SNR=5.0						

GII ***13*** *12:16:00.0±0.6, 29.95N×36.05E, h0^{km}, ML2.7/5, EXPLOSION*
SGS ***13*** *12:16:16.4, 30.24N×36.30E, h0^{km}*
CSEM ***13*** *12:16:17.3±0.6, 29.88N×36.52E, h10^{km}, ML3.1, Error ellipse: s-maj=13.3km s-min=5.9km az=69.0*
HLW ***13*** *12:16:17.3, 29.91N×36.81E, h21^{km}, Mb3.1*
ISCJB ***13*** *12:16:20.3±0.7, 29.88N±0.03×36.20E±0.05, h0^{km}, Error ellipse: s-maj=5.8km s-min=3.8km az=172.4*
ISC 13 12:16:20.4±0.7**, 29.87N**±0.03×**36.24E**±0.05**, h0^{km}, n26,**
σ**0^{s}87**/34**, 2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.04**	**263**	Pg	**Pg**	**12 16 40.2**	**-0.2**
HRFI	**Mount Harif**	**1.06**	**280**	Pg	**Pg**	**12 16 40.5**	**-0.2**
EIL	**Elat**	**1.14**	**260**	Pg	**Pg**	**12 16 42.4**	**+0.2**
EIL				Sg	**Sg**	**12 16 57.7**	**+0.7**
ZFRI	**Zfri**	**1.15**	**307**	Pg	**Pg**	**12 16 41.4**	**-1.0**
ZFRI				Sg	**Sg**	**12 16 56.4**	**-0.9**
MBRI	**Mt Berech**	**1.15**	**267**	Pg	**Pg**	**12 16 42.3**	**-0.2**
MBRI				Sg	**Sg**	**12 16 58.0**	**+0.5**
HQLS		**1.17**	**242**	P	**Pg**	**12 16 42.3**	**-0.5**
PRNI	**Paran**	**1.17**	**295**	Pg	**Pg**	**12 16 42.3**	**-0.6**
PRNI				Sg	**Sg**	**12 16 58.1**	**-0.1**
JLOS		**1.30**	**210**	P	**Pg**	**12 16 44.4**	**-1.0**
HBST	**Basata**	**1.46**	**244**	P	**Pn**	**12 16 47.6**	**-0.4**
RMNI	**Mount Ramon**	**1.47**	**300**	Pg	**Pg**	**12 16 47.7**	**-1.0**
MZDA	**Masada**	**1.63**	**333**	Pn	**Pn**	**12 16 50.2**	**-0.1**
MZDA				Sn	**Sn**	**12 17 12.6**	**+0.6**
TBKS	**Tabuk**	**1.66**	**171**	S	**Sn**	**12 17 15.7**	**+2.9**
TBKS	**Tabuk**	**1.66**	**171**	P	**Pn**	**12 16 50.3**	**-0.5**
BDAS	**Al Bad'**	**1.74**	**215**	S	**Sn**	**12 17 17.0**	**+2.2**
BDAS	**Al Bad'**	**1.74**	**215**	P	**Pn**	**12 16 51.3**	**-0.6**
YTIR	**Yattir**	**1.78**	**327**	Pn	**Pn**	**12 16 52.5**	**+0.1**
DSI	**Dead Sea**	**1.85**	**337**	Pn	**Pn**	**12 16 54.0**	**+0.6**
DSI				Sn	**Sn**	**12 17 18.4**	**+0.8**
HNKL	**Nakhl**	**1.96**	**272**	P	**Pn**	**12 16 55.4**	**+0.5**
HNKL				S	**Sn**	**12 17 22.7**	**+2.5**
RSHS		**2.00**	**219**	P	**Pn**	**12 16 54.4**	**-1.2**
RSHS		**2.00**	**219**	P	**Pn**	**12 16 54.3**	**-1.2**
HKAT	**Jabal Katrina**	**2.38**	**236**	P	**Pn**	**12 17 00.3**	**-0.3**
RSH		**2.43**	**297**	P	**Pn**	**12 17 01.0**	**-0.4**
HMDT	**Nahal Hemdat**	**2.46**	**346**	Pn	**Pn**	**12 17 02.7**	**+0.9**
HMDT				Sn	**Sn**	**12 17 33.1**	**+0.5**
TR2		**2.65**	**237**	⇓*e*P	**Pn**	**12 17 03.9**	**-0.5**
AMAG	**Maghara**	**2.73**	**287**	⇓*i*P	**Pn**	**12 17 04.9**	**-0.7**
HRSH	**Kfar Ka'horesh**	**2.94**	**344**	P	**Pn**	**12 17 01.0**	**-7.5**

IDC 13 12:43:05.5±1.5**, 0.78S**×**25.32W, h0^{km}, mb3.5**/2**, mb1 3.8**/2**,**
mb1mx3.5/22**, mbtmp3.5**/2**, Error ellipse: s-maj=59.4km**
s-min=46.8km az=143.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**30.15**	**62**	P	P	12 49 17.6	+0.1
	0.4nm,0.7s,baz=251,slow=10,SNR=2.9						
YKA	**Yellowknife Ar**	**90.36**	**332**	P	P	12 56 08.4	0.0
	0.3nm,0.8s,baz=94,slow=5.2,SNR=4.4						
STKA	**Stephens Creek**	**145.23**	**160**	PKPbc	PKPbc	13 02 44.9	-0.6
	1.9nm,0.7s,baz=198,slow=2.6,SNR=5.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**148.40**	**142**	PKPbc	PKPbc	13 02 54.1	-0.8
	0.7nm,0.7s,baz=214,slow=2.2,SNR=7.6						

IDC 13 12:47:30.7±1.1**, 049S**×**2475W, h0^{km}, mb3.9**/7**, mb1 4.1**/7**, mb1mx3.9**/22**, mbtmp3.9**/7**, MS3.8**/17**, Ms1 3.8**/17**, ms1mx3.6**/37**, Error ellipse: s-maj=41.2km s-min=26.6km az=170.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**17.11**	**28**	LR	LR	12 56 37.8	
	comp=Z,341nm,20.9s,baz=89,slow=32						
DBIC	**Dimbokro**	**21.09**	**70**	P	P	12 52 16.2	-0.8
	16nm,1.0s,baz=223,slow=10,SNR=7.3						
DBIC				LR	LR	12 58 54.2	
	comp=Z,236nm,18.2s,baz=231,slow=32						
BDFB	**Brasilia**	**27.45**	**236**	LR	LR	13 03 17.0	
	comp=Z,213nm,19.3s,baz=239,slow=34						
TORD	**Torodi Ar. Bea**	**29.52**	**62**	P	P	12 53 36.6	-0.5
	2.1nm,1.1s,baz=248,slow=8.1,SNR=5.9						
TORD				LR	LR	13 03 55.5	
	comp=Z,286nm,19.5s,baz=240,slow=33						
CPUP	**Villa Florida**	**40.54**	**228**	LR	LR	13 11 34.8	
	comp=Z,168nm,19.5s,baz=44,slow=36						
PCRV	**Puerto La Cruz**	**41.07**	**286**	LR	LR	13 09 54.5	
	comp=Z,49nm,18.2s,baz=91,slow=33						
KEST	**Kesra**	**48.03**	**38**	LR	LR	13 17 20.4	
	comp=Z,124nm,19.3s,baz=217,slow=37						
ROSC	**El Rosal**	**49.80**	**277**	LR	LR	13 14 56.2	
	comp=Z,76nm,20.0s,baz=2.6,slow=33						
DAVOX	**Davos/Dischmat**	**55.99**	**28**	LR	LR	13 23 19.9	
	comp=Z,81nm,18.2s,baz=259,slow=38						
PLCA	**Paso Flores**	**57.63**	**220**	LR	LR	13 22 29.3	
	comp=Z,88nm,19.7s,baz=3.5,slow=36						
IDI	**Anoyia**	**58.34**	**47**	LR	LR	13 25 12.8	
	comp=Z,78nm,19.5s,baz=259,slow=39						
GERES	**GERESS Array B**	**59.28**	**29**	LR	LR	13 23 58.2	
	comp=Z,96nm,18.9s,baz=271,slow=37						
VRAC	**Vranov**	**60.99**	**30**	LR	LR	13 22 28.1	
	comp=Z,69nm,18.1s,baz=74,slow=34						
MLR	**Muntele Rosu**	**63.93**	**37**	LR	LR	13 26 45.4	
	comp=Z,164nm,20.0s,baz=45,slow=37						
EIL	**Elat**	**64.23**	**57**	LR	LR	13 28 11.3	
	comp=Z,76nm,18.8s,baz=252,slow=38						
BRTR	**Keskin Array B**	**66.50**	**46**	P	P	12 58 24.1	+1.7
	1.7nm,1.0s,baz=304,slow=7.3,SNR=3.7						
ASF	**Jabal al Asfar**	**66.54**	**54**	LR	LR	13 27 36.6	
	comp=Z,53nm,19.8s,baz=324,slow=36						
HFS	**Hagfors**	**67.38**	**20**	LR	LR	13 30 15.7	
	comp=Z,110nm,19.1s,baz=247,slow=38						
AKASG	**Malin Array Be**	**68.44**	**34**	P	P	12 58 34.4	-0.1
	0.3nm,0.3s,baz=238,slow=5.3,SNR=3.7						
TXAR	**Lajitas Array**	**80.58**	**300**	P	P	12 59 45.8	+0.2
	0.6nm,0.8s,baz=119,slow=8.5,SNR=5.7						
PDAR	**Pinedale Array**	**86.51**	**313**	P	P	13 00 15.9	+0.1
	0.6nm,0.9s,baz=82,slow=11,SNR=3.6						
YKA	**Yellowknife Ar**	**90.36**	**332**	P	P	13 00 33.3	-0.4
	0.3nm,0.7s,baz=96,slow=5.0,SNR=4.7						
STKA	**Stephens Creek**	**145.31**	**159**	eP	PKPbc	13 07 10.2	-0.7
	6.1nm,0.9s						
STKA	**Stephens Creek**	**145.31**	**159**	PKPbc	PKPbc	13 07 09.7	-1.3
	6.3nm,0.9s,baz=162,slow=3.6,SNR=11						
FITZ	**Fitzroy Crossi**	**145.51**	**124**	eP	PKPdf	13 07 10.8	-1.1
	5.5nm,1.0s						
ASAR	**Alice Springs**	**148.28**	**141**	PKPbc	PKPbc	13 07 19.8	0.0
	1.9nm,0.9s,baz=204,slow=1.9,SNR=17						

*IDC **13** 12:49:25.8±3.1, 1395N×9252W, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.6/21, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=117.9km s-min=43.9km az=48.0*
*ISCJB **13** 12:49:36.4±1.3, 1440N±008×9323W±005, h38^{km}±16^{km}, mb3.8/2, Error ellipse: s-maj=13.2km s-min=7.8km az=173.7*
*MEX **13** 12:49:37.8±0.9, 1437N×9330W, h22^{km}±20^{km}, MD4.0*
*NEIC **13** 12:49:38.3, 1439N×9327W, h20^{km}, MD4.0(MEX), After MEX.*
ISC 13 12:49:36.8±2.6**, 1441N**±009×**9317W**±005**, h28**^{km}±26^{km}**, n16,** σ**1^{s}16**/26**, mb3.8**/2**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.01**	**60**	i P	**Pn**	**12 49 55.4**	**+0.3**
THIG				i S	**Sn**	**12 50 09.1**	**+0.7**
PCIG		**1.29**	**358**	i P	**Pn**	**12 49 57.5**	**-1.5**
PCIG				i S	**Sn**	**12 50 14.3**	**-1.0**
CCIG	**Comitan**	**2.11**	**28**	i P	**Pn**	**12 50 09.9**	**-0.4**
CCIG				i S	**Sn**	**12 50 35.4**	**-0.3**
TGIG		**2.35**	**1**	i P	**Pn**	**12 50 14.1**	**+0.4**
TGIG				i S	**Sn**	**12 50 42.1**	**+0.4**
SCX	**San Cristobal**	**2.37**	**13**	i P	**Pn**	**12 50 13.2**	**-0.7**
SCX				i S	**Sn**	**12 50 42.9**	**+0.9**
CMIG	**Matias Romero**	**3.13**	**328**	Pn	**Pn**	**12 50 24.8**	**+0.4**
	1.1nm,0.3s,baz=141,slow=12,SNR=10.0						
CMIG				Sn	**Sn**	**12 51 12.8**	**+12**
	1.7nm,0.3s,baz=18,slow=20,SNR=3.2						
CMIG	**Matias Romero**	**3.13**	**328**	i P	**Pn**	**12 50 24.6**	**+0.2**
CMIG				i S	**Sn**	**12 50 57.6**	**-3.3**
CMIG	**Matias Romero**	**3.13**	**328**	i P	**Pn**	**12 50 24.7**	**+0.4**
CMIG				i S	**Sn**	**12 50 58.7**	**-2.2**
CMIG				Sn	**Sn**	**12 51 12.8**	**+12**
HUIG	**Huatulco**	**3.14**	**296**	eP	**Pn**	**12 50 22.2**	**-2.3**
HUIG				i S	**Sn**	**12 50 56.8**	**-4.3**
HUIG	**Huatulco**	**3.14**	**296**	eP	**Pn**	**12 50 25.1**	**+0.6**
HUIG				i S	**Sn**	**12 50 59.1**	**-2.0**
UTMO	**Huajuapan**	**5.60**	**308**	eP	**Pn**	**12 50 59.0**	**+0.7**
UTMO				i S	**Sn**	**12 52 03.6**	**+1.8**
TXAR	**Lajitas Array**	**17.74**	**329**	P	**Pn**	**12 53 44.1**	**+2.3**
	0.0nm,0.3s,baz=159,slow=13,SNR=4.7						
NVAR	**Mina Array Bea**	**32.64**	**322**	P	**P**	**12 56 06.9**	**+0.5**
	0.5nm,0.7s,mb3.6,baz=131,slow=8.7,SNR=5.5						
YKA	**Yellowknife Ar**	**50.37**	**347**	P	**P**	**12 58 28.9**	**-2.3**
	1.4nm,0.8s,mb4.1,baz=150,slow=7.4,SNR=25						
DZM	**Mont Dzumac**	**104.74**	**251**	eP	PKiKP	13 08 00.6	+3.9
CMAR	**Chiang Mai Arr**	**145.23**	**340**	PKPbc	PKPbc	13 09 06.7	-5.7
	1.0nm,0.8s,baz=336,slow=3.2,SNR=6.7						

CSEM 13 13:18:00.4±0.5**, 4293N**×**637W, h0^{km}, ML3.6**/4**, Error ellipse: s-maj=5.0km s-min=4.0km az=156.0, After MDD, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.70**	**305**	Pg	Pg	13 18 11.2	-2.5
	SNR=7.9						
EPON				Lg		13 18 24.3	
	SNR=7.9						
ERUA	**La Rua**	**0.79**	**227**	Pg	Pg	13 18 14.3	-1.1
	SNR=7.9						
ERUA				Lg		13 18 25.4	
	SNR=7.9						
EARI	**Arriondas**	**0.92**	**66**	P	Pg	13 18 16.7	-1.4
	9.6nm,0.6s,SNR=30						
EARI				Lg		13 18 32.5	
	23nm,0.9s,SNR=5.0						
ECAL	**Calabor**	**1.03**	**196**	P	Pg	13 18 19.1	-1.0
	20nm,0.3s,SNR=45						
ECAL				Lg		13 18 33.9	
	36nm,0.4s,SNR=15						
ELOB	**Lobios**	**1.65**	**230**	P	Pn	13 18 30.2	-0.3
	3.1nm,0.3s,SNR=15						
ELOB				Lg		13 18 52.3	
	5.9nm,0.5s,SNR=5.0						
EMAZ	**Mazaricos**	**1.92**	**271**	Lg		13 19 02.7	
	SNR=7.9						
ELAN	**Lanestosa**	**2.17**	**81**	Pn	Pn	13 18 37.2	-0.5
	SNR=7.9						
ELAN				Lg		13 19 06.7	
	SNR=7.9						
EMUR	**La Murta**	**6.42**	**141**	P	Pn	13 19 36.7	+0.6
	370nm,0.4s,SNR=109						

*ISCJB **13** 13:58:35.7±2.0, 2321S±005×7066W±009, h9^{km}±12^{km}, mb4.4/17, MS3.2/2, Error ellipse: s-maj=13.8km s-min=8.5km az=176.6*
*IDC **13** 13:58:39.8±3.7, 2320S×7059W, h23^{km}±22^{km}, mb4.2/8, mb1 4.2/11, mb1mx4.1/19, mbtmp4.1/11, ML3.8/4, MS3.4/5, Ms1 3.4/5, ms1mx3.2/25, Error ellipse: s-maj=24.8km s-min=19.1km az=116.0*
*NEIC **13** 13:58:40.1±2.0, 2323S×7065W, h27^{km}±14^{km}, mb4.5/12, Error ellipse: s-maj=10.1km s-min=6.8km az=89.0*
ISC 13 13:58:38.0±1.8**, 2318S**±004×**7066W**±006**, h11**^{km}±11^{km}**, n48,** σ**0^{s}96**/42**, mb4.4**/17**, MS3.2**/2**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.71**	**71**	Pg	**Pg**	**13 59 10.5**	**-0.3**
	869nm,0.3s,baz=248,slow=10,SNR=2012						
LVC				Lg		13 59 33.2	
	1μm,0.3s,baz=356,slow=14,SNR=61						
LVC	**Limon Verde**	**1.71**	**71**	Pg	**Pg**	**13 59 10.5**	**-0.3**
LVC				eSn	**Sn**	**13 59 32.5**	**+3.0**
LVC				Lg		13 59 33.2	
LCO	**Las Campanas**	**5.81**	**180**	ePn	**Pn**	**14 00 03.7**	**-0.3**
	48nm,0.3s						
LCO				eSg	**Sg**	**14 01 32.1**	**-13**
ARE	**Arequipa**	**6.72**	**353**	eP	**Pn**	**14 00 18.0**	**+1.3**
ARE				eS	**Sn**	**14 01 31.0**	**-2.3**
CFAA	**Coronel Fontan**	**8.67**	**166**	Pn	**Pn**	**14 00 42.5**	**-0.9**
	0.1nm,0.3s,baz=356,slow=14,SNR=7.2						
CFAA				Sn	**Sn**	**14 02 31.2**	**+10**
	0.5nm,0.3s,baz=147,slow=17,SNR=6.8						
CFAA				LR	LR	14 04 11.2	
	comp=Z,60nm,20.6s,baz=331,slow=38						
SIV	**San Ignacio**	**11.52**	**53**	Pn	**Pn**	**14 01 23.2**	**+0.8**
	2.2nm,0.3s,baz=248,slow=13,SNR=18						
SIV				Sn	**Sn**	**14 03 29.9**	**-1.3**
	baz=255,slow=17,SNR=1.6						
CPUP	**Villa Florida**	**12.52**	**107**	Pn	**Pn**	**14 01 37.1**	**+1.0**
	0.2nm,0.3s,baz=277,slow=12,SNR=4.5						
CPUP				LR	LR	14 06 49.2	
	comp=Z,508nm,19.8s,baz=269,slow=39						
CPUP	**Villa Florida**	**12.52**	**107**	ePn	**Pn**	**14 01 35.8**	**-0.3**
CPUP				LR	LR	14 06 49.1	
PLCA	**Paso Flores**	**17.51**	**180**	P	**Pn**	**14 02 42.0**	**0.0**
	0.1nm,0.3s,baz=338,slow=18,SNR=3.0						
PLCA				LR	LR	14 09 09.7	
	comp=Z,248nm,20.9s,baz=109,slow=36						
BDFB	**Brasilia**	**22.62**	**75**	P	**P**	**14 03 38.1**	**-0.8**
	4.0nm,0.9s,mb3.9,baz=227,slow=16,SNR=6.8						
BDFB				LR	LR	14 13 42.4	
	comp=Z,96nm,19.0s,MS3.2,baz=54,slow=40						
BDFB	**Brasilia**	**22.62**	**75**	eP	**P**	**14 03 37.9**	**-1.0**
	10nm,1.0s,mb4.2						
BDFB				LR	LR	14 13 42.4	
ROSC	**El Rosal**	**28.09**	**352**	LR	LR	14 15 29.0	
	comp=Z,59nm,20.1s,MS3.2,baz=197,slow=36						
RCBR	**Riachuelo**	**37.66**	**68**	eP	**P**	**14 05 54.0**	**+0.5**
	17nm,0.8s,mb4.8						
VNA3	**Neumayer Olymp**	**59.03**	**161**	e	**P**	**14 08 37.3**	**-0.1**
VNA3				e		14 08 44.5	
VNA2	**Neumayer--Watz**	**59.63**	**160**	e	**P**	**14 08 41.4**	**-0.2**
	baz=297,slow=7.6						
VNA2				e		14 08 48.8	
SWET	**Sewanee**	**59.85**	**346**	eP	**P**	**14 08 43.2**	**-0.3**
OXF	**Oxford**	**60.07**	**342**	P	**P**	**14 08 43.4**	**-1.6**
	16nm,1.0s,mb5.0						
TXAR	**Lajitas Array**	**61.11**	**327**	P	**P**	**14 08 52.3**	**+0.1**
	0.3nm,0.8s,mb3.5,baz=141,slow=6.4,SNR=4.3						
WVT	**Waverly**	**61.18**	**344**	eP	**P**	**14 08 51.2**	**-1.4**
	6.3nm,0.8s,mb4.8						
SNAA	**Sanae**	**61.24**	**160**	e	**P**	**14 08 52.2**	**-0.4**
SNAA				e		14 08 59.7	
SNAA	**Sanae**	**61.24**	**160**	eP	**P**	**14 08 52.1**	**-0.5**
	13nm,1.4s,mb4.9						
MIAR	**Mount Ida**	**61.39**	**339**	eP	**P**	**14 08 55.0**	**+0.9**
	4.4nm,0.9s,mb4.6						
SIUC	**Southern Illin**	**63.03**	**344**	P	**P**	**14 09 04.4**	**-0.6**
QSPA	**South Pole Qui**	**67.02**	**180**	eP	**P**	**14 09 30.9**	**+0.5**
	2.4nm,0.6s,mb4.4						
SDCO	**Great Sand Dun**	**68.89**	**331**	eP	**P**	**14 09 44.7**	**+2.1**
	2.3nm,0.9s,mb4.1						
DBIC	**Dimbokro**	**70.76**	**74**	P	**P**	**14 09 54.5**	**-0.2**
	8.2nm,0.8s,mb4.7,baz=221,slow=5.5,SNR=8.9						
VNDA	**Vanda**	**74.92**	**190**	P	**P**	**14 10 18.5**	**0.0**
	0.8nm,0.8s,mb3.7,baz=98,slow=8.8,SNR=3.5						
HLID	**Hailey**	**77.61**	**329**	eP	**P**	**14 10 36.2**	**+2.1**
	2.4nm,0.9s,mb4.1						
TOA0	**Torodi Ar. Sit**	**79.44**	**71**	eP	**P**	**14 10 44.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.44**	**71**	P	**P**	**14 10 44.5**	**-0.3**
	11nm,0.8s,mb4.8,baz=252,slow=5.1,SNR=52						
TORD	**Torodi Ar. Bea**	**79.44**	**71**	P	**P**	**14 10 44.5**	**-0.4**
TSUM	**Tsumeb**	**81.11**	**107**	eP	**P**	**14 10 53.8**	**0.0**
	8.1nm,0.9s,mb4.7						
WALA	**Waterton Lakes**	**81.59**	**333**	eP	**P**	**14 10 57.0**	**+1.4**
	0.1nm,0.8s						
MAW	**Mawson**	**83.19**	**164**	P	**P**	**14 11 03.9**	**0.0**
	6.0nm,0.8s,mb4.7,baz=242,slow=5.7,SNR=7.9						
MAW	**Mawson**	**83.19**	**164**	eP	**P**	**14 11 03.5**	**-0.4**
	1.9nm,0.9s,mb4.1						
FCC	**Fort Churchill**	**83.91**	**348**	eP	**P**	**14 11 07.4**	**0.0**
BOSA	**Boshof**	**84.09**	**118**	P	**P**	**14 11 09.0**	**-0.2**
	5.2nm,0.8s,mb4.7,baz=244,slow=2.2,SNR=6.8						
YKA	**Yellowknife Ar**	**92.23**	**341**	P	**P**	**14 11 47.6**	**+0.3**
	1.3nm,0.8s,mb4.3,baz=136,slow=4.4,SNR=25						
ASAR	**Alice Springs**	**127.68**	**209**	PKP	PKPdf	14 17 43.8	-0.3
	0.6nm,0.6s,baz=122,slow=1.4,SNR=9.3						
KURK	**Kurchatov**	**143.61**	**33**	PKP	PKPdf	14 18 09.9	-2.8
	0.7nm,0.4s,baz=305,slow=3.3,SNR=4.1						
ZAA0	**Zalesovo Array**	**144.15**	**25**	ePKPdf	PKPdf	14 18 12.3	-1.1
ZALV	**Zalesovo Beam**	**144.15**	**25**	PKP	PKPdf	14 18 12.3	-1.1
	3.9nm,0.8s,baz=355,slow=3.6,SNR=18						
AML	**Almayashu**	**144.87**	**49**	ePKPdf	PKPdf	14 18 15.9	+0.7
AAK	**Ala-Archa**	**145.23**	**48**	ePKPbc	PKPbc	14 18 16.8	+1.3
TKM2	**Tokmak 2**	**145.86**	**47**	ePKPdf	PKPdf	14 18 16.9	+0.1
MK31	**Makanchi Array**	**147.94**	**36**	ePKPbc	PKPbc	14 18 23.1	0.0
MKAR	**Makanchi Array**	**147.94**	**36**	PKP	PKPdf	14 18 20.8	+0.7
	3.9nm,0.7s,baz=336,slow=2.7,SNR=29						
MKAR				PKPbc	PKPbc	14 18 23.1	-0.1
	3.9nm,0.7s,baz=324,slow=2.8,SNR=30						
CMAR	**Chiang Mai Arr**	**169.21**	**114**	PKPab	PKPab	14 19 56.8	-1.3
	0.5nm,0.4s,baz=248,slow=4.8,SNR=5.8						

*CSEM **13** 14:01:16.1±0.2, 4033N×42.13E, h10^{km}, MD2.9, Error ellipse: s-maj=5.6km s-min=4.7km az=34.0*
*ISK **13** 14:01:16.4, 4036N×42.17E, h5^{km}, MD2.9*
*ISCJB **13** 14:01:17.2±0.6, 4032N±004×42.16E±004, h12^{km}±8^{km}, Error ellipse: s-maj=6.1km s-min=5.6km az=154.6*
*DDA **13** 14:01:18.0, 4033N×4203E, h7^{km}±6^{km}, Md2.9*
ISC 13 14:01:17.5±0.5**, 4033N**±002×**4215E**±005**, h11**^{km}±6^{km}**, n16,** σ**0^{s}97**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.34**	**213**	i P	**Pg**	**14 01 24.0**	**-0.4**
HOMI				i S	**Sg**	**14 01 29.5**	**+0.5**
DDEM	**Demirkent**	**0.64**	**331**	i P	**Pg**	**14 01 30.5**	**+0.6**
DDEM				i S	**Sg**	**14 01 40.3**	**+2.0**
ERZM	**Erzurum**	**0.74**	**235**	i P	**Pg**	**14 01 31.7**	**-0.1**
ERZM				i S	**Sg**	**14 01 39.5**	**-2.0**
EZM	**Erzurum**	**0.74**	**235**	ePG	**Pg**	**14 01 31.8**	**-0.1**
EZM				eSG	**Sg**	**14 01 42.6**	**+1.1**
DAGI	**Agillar**	**0.77**	**346**	i P	**Pg**	**14 01 32.2**	**-0.1**
DAGI				i S	**Sg**	**14 01 43.0**	**+0.7**
KARS	**Kars**	**0.77**	**68**	ePG	**Pg**	**14 01 31.3**	**-1.1**
ARTV	**Artvin**	**0.87**	**349**	i P	**Pg**	**14 01 34.5**	**+0.3**
ARTV				i S	**Sg**	**14 01 42.8**	**-2.8**
AGRB	**Hanur-Agry**	**0.99**	**139**	ePG	**Pg**	**14 01 36.6**	**0.0**
AGRB				eSG	**Sg**	**14 01 49.9**	**+0.3**
DBOC	**Borcka**	**1.08**	**340**	i P	**Pb**	**14 01 37.2**	**-1.0**
DBOC				i S	**Sb**	**14 01 52.4**	**+0.2**
BCA	**Borcka**	**1.18**	**340**	ePN	**Pn**	**14 01 38.9**	**-1.1**
BNGL	**BINGOL**	**1.58**	**210**	i P	**Pn**	**14 01 41.4**	**-4.1**
CLDR	**Caldiran**	**1.81**	**131**	ePN	**Pn**	**14 01 49.5**	**+0.9**
GNI	**Garni**	**1.99**	**94**	ePN	**Pn**	**14 01 51.8**	**+0.7**
GUMT	**Gumushane**	**2.05**	**274**	ePN	**Pn**	**14 01 52.2**	**+0.4**
MIB	**Mutribah**	**11.33**	**156**	eP	PKiKP	14 17 51.8	-0.1
	baz=93						
MIB				AMb	AMB	14 17 52.6	
	comp=Z,20nm,0.6s,baz=93						
NAY	**Al-Naaiem**	**11.82**	**158**	eP	PKiKP	14 17 52.5	+0.5
	baz=95						
NAY				AMb	AMB	14 17 55.0	
	comp=Z,15nm,1.6s,baz=95						

*BJI **13** 14:09:52.1, 4036S×7859E, h32^{km}, mB5.0, mb4.6, Ms5.0, Msz4.6*
*ISCJB **13** 14:09:53.7±0.3, 3935S±005×7820E±008, h10^{km}, mb4.8/43, MS4.5/28, Error ellipse: s-maj=8.5km s-min=7.1km az=14.3*
*MOS **13** 14:09:53.8±1.0, 3934S×78.12E, h10^{km}, mb5.1/11, Error ellipse: s-maj=18.5km s-min=12.0km az=78.8*
*IDC **13** 14:09:54.1±0.5, 3936S×78.18E, h0^{km}, mb4.5/18, mb1 4.5/18, mb1mx4.4/25, mbtmp4.5/18, MS4.4/26, Ms1 4.4/26, ms1mx4.3/34, Error ellipse: s-maj=16.1km s-min=14.1km az=66.0*
*GCMT **13** 14:09:55.3±0.2, 3937S×7806E, h13^{km}±1^{km}, MW5.2/91, Moment Tensor Solution. s61,c88; s91,c160; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.17±.02; $M_{\theta\theta}$-0.48±.01; $M_{\phi\phi}$0.64±.02; $M_{r\theta}$-0.06±.03; $M_{\theta\phi}$-0.55±.01; $M_{\phi r}$0.26±.04; Best double couple: $M_0$0.82000×10^{17} NP1:ϕ_s292.00000°, δ77.00000°, λ174.00000°. NP2: ϕ_s23.00000°, δ84.00000°, λ13.00000°. Principal axes: T 0.9350, Plg14.0000°, Azm248.0000°; N -0.2290, Plg75.0000°, Azm47.0000°; P -0.7050, Plg5.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **13** 14:09:55.4±0.2, 3936S×78.15E, h10^{km}, mb5.1/27 Error ellipse: s-maj=7.9km s-min=7.1km az=144.0*
*DJA **13** 14:10:23, 3945S×7837E, h243^{km}, mb4.6/15*
ISC 13 14:09:55.8±0.3**, 3934S**±005×**7817E**±007**, h10**^{km}**, (h20**^{km}±2.4^{km}**:pP-P), n109,** σ**0^{s}91**/104**, mb4.8**/43**, MS4.5**/28**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**29.56**	**192**	P	**P**	**14 16 01.4**	**+1.1**
	11nm,1.0s,mb4.5,baz=18,slow=13,SNR=5.2						
MAW				S	**S**	**14 20 58.1**	**+3.3**
	2.4nm,0.9s,baz=42,slow=13,SNR=1.8						
MAW				LR	LR	14 25 22.5	
	comp=Z,434nm,18.9s,MS4.1,baz=17,slow=31						
MAW	**Mawson**	**29.56**	**192**	eP	**P**	**14 16 00.4**	**+0.1**
MAW				S	**S**	**14 20 58.1**	**+3.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MAW	**Mawson**	**29.56**	**192**	eP	**P**	**14 16 00.4**	**+0.2**
	comp=Z,4.4nm,1.2s,mb4.1						
MAW				S	**S**	**14 20 58.1**	**+3.3**
MAW				LR	LR	14 25 22.4	
MUN	**Mundaring**	**31.59**	**88**	eP	**P**	**14 16 20.3**	**+1.7**
MUN				eS	**S**	**14 21 38.5**	**+11**
NWAO	**Narrogin (SRO)**	**32.01**	**91**	S	**S**	**14 21 41.3**	**+7.5**
	comp=Z,10.0nm,0.9s,baz=91,slow=7.4,SNR=2.2						
NWAO				LR	LR	14 26 15.7	
	comp=Z,2μm,20.4s,MS4.9,baz=243,slow=31						
OPO	**Ambohidratompo**	**33.85**	**299**	P	**P**	**14 16 39.1**	**+0.7**
	comp=Z,3.9nm,0.8s,mb4.4,baz=115,slow=9.8,SNR=5.4						
MBWA	**Marble Bar**	**39.81**	**75**	eP	**P**	**14 17 24.6**	**-4.5**
	comp=Z,30nm,1.4s,mb4.8						
DRV	**Dumont d'Urvil**	**43.54**	**149**	P	**P**	**14 17 56.0**	**-3.1**
DRV				S	**S**	**14 24 26.0**	**-1.7**
DRV				L		14 28 00.0	
DRV				R		14 30 00.0	
BOSA	**Boshof**	**44.61**	**267**	P	**P**	**14 18 08.2**	**-0.1**
	comp=Z,6.1nm,0.6s,mb4.6,baz=135,slow=7.0,SNR=8.2						
BOSA				S	**S**	**14 24 49.3**	**+5.0**
	comp=Z,2.6nm,1.0s,baz=152,slow=21,SNR=2.1						
BOSA				LR	LR	14 32 52.2	
	comp=Z,1μm,20.1s,MS4.8,baz=125,slow=31						
BOSA	**Boshof**	**44.61**	**267**	eP	**P**	**14 18 07.7**	**-0.5**
BOSA				S	**S**	**14 24 49.3**	**+5.1**
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
BOSA	**Boshof**	**44.61**	**267**	eP	**P**	**14 18 07.7**	**-0.5**
	comp=Z,7.3nm,0.7s,mb4.6						
BOSA				S	**S**	**14 24 49.2**	**+5.0**
BOSA				LR	LR	14 32 52.2	
PSI	**Prapat**	**46.08**	**29**	P	**P**	**14 18 21.0**	**+1.0**
	comp=Z,1.6nm,0.4s,mb4.3,baz=296,slow=4.5,SNR=3.6						
PSI				LR	LR	14 34 29.4	
	comp=Z,1μm,18.3s,MS4.8,baz=200,slow=32						
FITZ	**Fitzroy Crossi**	**46.09**	**77**	eP	**P**	**14 18 19.8**	**-0.3**
	comp=Z,14nm,1.1s,mb4.8						
FITZ				eS	**S**	**14 25 07.8**	**+2.1**
FITZ	**Fitzroy Crossi**	**46.09**	**77**	eP	**P**	**14 18 19.6**	**-0.4**
	comp=Z,14nm,1.2s,mb4.8						
LBTB	**Lobatse**	**46.12**	**272**	P	**P**	**14 18 20.1**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9,baz=144,slow=8.3,SNR=7.5						
LBTB				S	**S**	**14 25 08.8**	**+2.6**
	comp=Z,2.0nm,0.9s,baz=264,slow=20,SNR=2.2						
LBTB	**Lobatse**	**46.12**	**272**	eP	**P**	**14 18 19.3**	**-1.0**
LBTB				S	**S**	**14 25 08.8**	**+2.6**
LBTB				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
LBTB	**Lobatse**	**46.12**	**272**	eP	**P**	**14 18 19.3**	**-1.1**
	comp=Z,26nm,1.1s,mb5.1						
LBTB				S	**S**	**14 25 08.8**	**+2.6**
SUR	**Sutherland**	**46.34**	**260**	eP	**P**	**14 18 22.6**	**+0.6**
	comp=Z,12nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**49.28**	**89**	P	**P**	**14 18 44.4**	**-0.4**
	comp=Z,4.3nm,0.9s,mb4.5,baz=232,slow=6.9,SNR=33						
LSZ	**Lusaka**	**49.72**	**284**	P	**P**	**14 18 48.0**	**-0.2**
	comp=Z,24nm,0.8s,mb5.3,baz=132,slow=8.2,SNR=42						
LSZ				S	**S**	**14 26 00.9**	**+3.6**
	comp=Z,0.6nm,0.5s,baz=84,slow=9.6,SNR=1.7						
LSZ	**Lusaka**	**49.72**	**284**	P	**P**	**14 18 48.0**	**-0.2**
LSZ				eP		14 18 48.2	
LSZ				S	**S**	**14 26 00.9**	**+3.6**
BATI	**Baumata**	**49.74**	**67**	LR	LR	14 37 02.5	
	comp=Z,887nm,20.1s,MS4.8,baz=293,slow=33						
SNAA	**Sanae**	**50.41**	**204**	e	**P**	**14 18 51.9**	**-0.9**
SNAA				e	pP	14 18 56.7	+0.8
SNAA				e		14 19 00.0	
SNAA				e		14 19 22.5	
SNAA	**Sanae**	**50.41**	**204**	eP	**P**	**14 18 51.6**	**-1.2**
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SNAA	**Sanae**	**50.41**	**204**	eP	**P**	**14 18 51.6**	**-1.2**
	comp=Z,8.1nm,1.0s,mb4.7						
VNDA	**Vanda**	**50.59**	**164**	P	**P**	**14 18 54.1**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.4,baz=260,slow=8.0,SNR=11						
VNDA				S	**S**	**14 26 08.7**	**+0.5**
	comp=Z,1.0nm,1.0s,baz=129,slow=4.8,SNR=1.6						
KAPI	**Kappang**	**50.75**	**59**	S	**S**	**14 26 16.1**	**+4.4**
	comp=Z,1.5nm,0.3s,baz=345,slow=20,SNR=1.6						
KAPI				LR	LR	14 36 09.5	
	comp=Z,819nm,21.5s,MS4.7,baz=173,slow=31						
QSPA	**South Pole Qui**	**50.82**	**180**	P	**P**	**14 18 56.0**	**+0.2**
	comp=Z,9.3nm,0.8s,mb4.8,baz=288,slow=3.2,SNR=16						
QSPA				S	**S**	**14 26 13.8**	**+2.6**
	comp=Z,1.2nm,0.2s,baz=85,slow=5.4,SNR=2.3						
QSPA	**South Pole Qui**	**50.82**	**180**	eP	**P**	**14 18 55.1**	**-0.6**
	comp=Z,27nm,1.0s,mb5.1						
QSPA				S	**S**	**14 26 13.8**	**+2.6**
STKA	**Stephens Creek**	**51.17**	**102**	eP	**P**	**14 18 58.8**	**-0.3**
	comp=Z,5.7nm,0.9s,mb4.5						
STKA				eS	**S**	**14 26 29.2**	**+12**
STKA	**Stephens Creek**	**51.17**	**102**	P	**P**	**14 18 58.9**	**-0.1**
	comp=Z,7.9nm,0.9s,mb4.6,baz=251,slow=7.0,SNR=7.6						
STKA				S	**S**	**14 26 22.0**	**+4.7**
	comp=Z,0.6nm,0.8s,baz=2.9,slow=24,SNR=1.4						
STKA				LR	LR	14 36 28.6	
	comp=Z,783nm,20.2s,MS4.7,baz=228,slow=31						
STKA	**Stephens Creek**	**51.17**	**102**	eP	**P**	**14 18 57.9**	**-1.2**
	comp=Z,1.4nm,0.8s,mb3.9						
STKA				S	**S**	**14 26 22.0**	**+4.7**
STKA				LR	LR	14 36 28.6	
WB2	**Warramunga Arr**	**51.67**	**85**	eP	**P**	**14 19 03.0**	**0.0**
WB2				eS	**S**	**14 26 27.7**	**+3.3**
WRAB	**Tennant Creek**	**51.68**	**85**	eP	**P**	**14 19 02.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.3						
WRAB	**Tennant Creek**	**51.68**	**85**	eP	**P**	**14 19 02.5**	**-0.5**
	comp=Z,44nm,1.2s,mb5.3						
VNA2	**Neumayer--Watz**	**51.98**	**205**	e	**P**	**14 19 04.3**	**-0.2**
	baz=98,slow=7.8						
VNA2				e	pP	14 19 08.6	+0.9
VNA2				e		14 19 12.1	
VNA2				e		14 19 40.2	
VNA1	**Neumayer--Stat**	**52.31**	**205**	e	**P**	**14 19 07.7**	**+0.7**
VNA1				e		14 19 12.6	
VNA1				e		14 19 16.1	
VNA3	**Neumayer Olymp**	**52.63**	**204**	e	**P**	**14 19 09.0**	**-0.4**
VNA3				e	pP	14 19 13.4	+0.8
VNA3				e		14 19 16.9	
VNA3				e		14 19 44.8	
KAKA	**Kakadu**	**54.55**	**76**	eP	x	14 19 03.5	
	comp=Z,14nm,0.9s						
TSUM	**Tsumeb**	**55.51**	**273**	eP	**P**	**14 19 32.1**	**+1.0**
	comp=Z,9.9nm,0.9s,mb4.8						
CM31	**Chiang Mai Arr**	**60.69**	**23**	eP	**P**	**14 20 07.9**	**+0.7**
	comp=Z,28nm,1.4s,mb5.2						
CMAR	**Chiang Mai Arr**	**60.69**	**23**	P	**P**	**14 20 07.6**	**+0.4**
	comp=Z,3.2nm,0.8s,mb4.5,baz=212,slow=6.8,SNR=26						

CMAR				S	S	14 28 25.2	+1.4
	comp=Z,0.7nm,0.4s,baz=84,slow=29,SNR=4.4						
CMAR				LR	LR	14 41 53.9	
	comp=Z,320nm,20.4s,MS4.5,baz=203,slow=32						
CMAR	**Chiang Mai Arr**	**60.69**	**23**	P	**P**	**14 20 07.6**	**+0.4**
CMAR				S	**S**	**14 28 25.3**	**+1.4**
CHTO	**Chiang Mai**	**61.03**	**23**	*e*P	**P**	**14 20 08.9**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**61.03**	**23**	*e*P	**P**	**14 20 08.9**	**-0.6**
	comp=Z,5.6nm,1.0s,mb4.7						
RAMN	**Ramite**	**66.42**	**8**	*e*P	**P**	**14 20 45.2**	**+0.3**
ODAN	**Odare**	**66.42**	**9**	*e*P	**P**	**14 20 44.7**	**-0.2**
	comp=Z,24nm,0.8s,mb5.3						
PKI	**Pulchoki**	**66.91**	**7**	*e*P	**P**	**14 20 48.5**	**+0.5**
DMN	**Daman**	**66.92**	**7**	*e*P	**P**	**14 20 48.0**	**-0.1**
	comp=Z,62nm,1.3s,mb5.5						
TAPN	**Taplejung**	**66.94**	**9**	*e*P	**P**	**14 20 49.0**	**+0.7**
	comp=Z,44nm,0.9s,mb5.5						
KOLN	**Koldanda**	**66.95**	**5**	*e*P	**P**	**14 20 48.2**	**-0.1**
	comp=Z,39nm,1.3s,mb5.3						
JIRN	**Jiri**	**67.07**	**8**	*e*P	**P**	**14 20 48.9**	**-0.2**
KKN	**Kakani**	**67.11**	**7**	*e*P	**P**	**14 20 50.1**	**+0.8**
	comp=Z,32nm,1.0s,mb5.3						
KKN	**Kakani**	**67.11**	**7**	*e*P	**P**	**14 20 50.1**	**+0.8**
KKN				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
GKN	**Gorkha**	**67.27**	**6**	*e*P	**P**	**14 20 49.7**	**-0.6**
	comp=Z,26nm,0.9s,mb5.2						
GUN	**Gumba**	**67.29**	**7**	*e*P	**P**	**14 20 51.4**	**+0.9**
	comp=Z,150nm,1.4s						
DANN	**Dangsing**	**67.54**	**5**	*e*P	**P**	**14 20 50.9**	**-1.2**
	comp=Z,37nm,0.8s,mb5.5						
PMG	**Port Moresby**	**67.86**	**84**	*e*P	**P**	**14 20 54.9**	**+0.4**
PMG				pmax	pmax		
	comp=Z,31nm,0.9s						
PMG	**Port Moresby**	**67.86**	**84**	*e*P	**P**	**14 20 54.9**	**+0.4**
	comp=Z,31nm,0.9s,mb5.3						
LSA	**Lhasa**	**69.74**	**12**	*e*P	**P**	**14 21 06.1**	**+0.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LSA	**Lhasa**	**69.74**	**12**	*e*P	**P**	**14 21 06.1**	**+0.3**
	comp=Z,5.9nm,0.8s,mb4.6						
KBL	**Kabul**	**74.00**	**352**	*e*P	**P**	**14 21 31.7**	**+0.5**
KBL				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
KBL	**Kabul**	**74.00**	**352**	*e*P	**P**	**14 21 31.7**	**+0.5**
	comp=Z,16nm,1.2s,mb4.8						
HNR	**Honiara**	**77.75**	**92**	LR	LR	14 53 01.6	
	comp=Z,529nm,21.0s,MS4.8,baz=135,slow=33						
XAN	**Xi'an**	**78.37**	**26**	P	**P**	**14 21 54.9**	**-1.2**
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
XAN				LR	LR		
	comp=E,228nm,25.9s						
XAN				LR	LR		
	comp=Z,244nm,24.9s,MS4.4						
LZH	**Lanzhou**	**78.70**	**21**	*e*P	**P**	**14 22 02.3**	**+4.4**
LZH				AP	pP	14 22 09.3	+8.1
LZH				XP	sP	14 22 11.5	+9.1
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,107nm,5.6s						
ASF	**Jabal al Asfar**	**80.81**	**325**	LR	LR	14 53 32.5	
	comp=Z,77nm,18.4s,MS4.1,baz=252,slow=32						
GTA	**Gaotai**	**80.84**	**17**	*e*P	**P**	**14 22 10.1**	**+0.7**
GTA				AP	pP	14 22 18.4	+5.7
GTA				XP	sP	14 22 22.8	+8.9
GTA				PP	PP	14 25 20.8	+6.5
GTA				S	S	14 32 22.9	+5.4
GTA				XS	sS	14 32 36.4	+13
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
GTA				AMB	AMB		
	comp=Z,32nm,5.1s						
GTA				LR	LR		
	comp=N,328nm,16.5s,MS4.8						
GTA				LR	LR		
	comp=E,173nm,17.7s,MS4.8						
GTA				LR	LR		
	comp=Z,284nm,19.8s,MS4.6						
AML	**Almayashu**	**81.19**	**357**	*e*P	**P**	**14 22 11.6**	**+0.4**
	comp=Z,10nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**81.66**	**357**	*e*P	**P**	**14 22 12.2**	**-1.5**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**81.66**	**357**	*e*P	**P**	**14 22 12.2**	**-1.5**
	comp=Z,7.1nm,1.0s,mb4.5						
EKS2	**Erkin-Say**	**81.72**	**357**	*e*P	**P**	**14 22 13.8**	**-0.2**
	comp=Z,14nm,0.9s,mb4.9						
TKM2	**Tokmak 2**	**81.91**	**358**	*e*P	**P**	**14 22 15.0**	**0.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
TKM2	**Tokmak 2**	**81.91**	**358**	*e*P	**P**	**14 22 15.0**	**0.0**
	comp=Z,4.3nm,0.9s,mb4.4						
MMAI	**Mount Meron Ar**	**82.19**	**325**	LR	LR	14 53 49.9	
	comp=Z,159nm,19.4s,MS4.4,baz=140,slow=32						
GNI	**Garni**	**84.80**	**335**	LR	LR	14 56 41.4	
	comp=Z,239nm,20.2s,MS4.6,baz=95,slow=33						
MK31	**Makanchi Array**	**85.83**	**3**	*e*P	**P**	**14 22 32.9**	**-2.0**
MKAR	**Makanchi Array**	**85.83**	**3**	P	**P**	**14 22 34.5**	**-0.4**
	comp=Z,2.7nm,0.9s,mb4.5,baz=175,slow=6.0,SNR=11						
MKAR				LR	LR	14 57 17.9	
	comp=Z,412nm,21.9s,MS4.8,baz=188,slow=33						
TOA0	**Torodi Ar. Sit**	**88.06**	**289**	P	**P**	**14 22 46.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**88.06**	**289**	P	**P**	**14 22 46.4**	**-0.2**
	comp=Z,0.8nm,0.8s,mb4.0,baz=118,slow=3.7,SNR=5.6						
TORD				PP	PP	14 26 10.3	-3.2
	comp=Z,0.4nm,0.8s,baz=114,slow=6.6,SNR=2.9						
TORD				LR	LR	15 00 07.2	
	comp=Z,245nm,18.8s,MS4.6,baz=165,slow=34						
BRTR	**Keskin Array B**	**88.60**	**327**	LR	LR	14 58 53.6	
	comp=Z,91nm,19.2s,MS4.2,baz=347,slow=33						
DBIC	**Dimbokro**	**88.82**	**280**	P	**P**	**14 22 51.4**	**+1.2**
	comp=Z,4.9nm,0.9s,mb4.8,baz=143,slow=6.6,SNR=4.6						
DBIC				LR	LR	14 59 37.3	
	comp=Z,319nm,18.2s,MS4.8,baz=112,slow=34						
DBIC	**Dimbokro**	**88.82**	**280**	P	**P**	**14 22 51.4**	**+1.2**
DBIC				LR	LR	14 59 37.3	
KSRS	**Korea Array**	**89.06**	**37**	LR	LR	15 05 31.5	
	comp=Z,139nm,18.9s,MS4.4,baz=340,slow=38						
IDI	**Anoyia**	**89.07**	**319**	LR	LR	14 59 22.0	
	comp=Z,64nm,19.7s,MS4.0,baz=93,slow=33						
KURK	**Kurchatov**	**89.68**	**0**	P	**P**	**14 22 51.8**	**-1.5**
	comp=Z,0.7nm,0.3s,mb4.4,baz=192,slow=4.6,SNR=5.4						
SONM	**Songino Array**	**90.36**	**19**	P	**P**	**14 22 56.4**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.7,baz=8.4,slow=40,SNR=3.1						
SONM				LR	LR	15 01 14.5	
	comp=Z,225nm,18.6s,MS4.6,baz=202,slow=34						
AKTK	**Aktyubinsk**	**91.14**	**347**	P	**P**	**14 22 59.1**	**-1.0**
AKTO	**Aktyubinsk**	**91.14**	**347**	P	**P**	**14 22 59.1**	**-1.0**
	comp=Z,0.8nm,0.6s,mb4.2,baz=329,slow=15,SNR=3.1						
ZALV	**Zalesovo Beam**	**93.09**	**4**	P	**P**	**14 23 09.8**	**+0.7**
	comp=Z,0.2nm,0.3s,mb4.0,baz=253,slow=7.6,SNR=2.1						
ZALV				LR	LR	15 02 44.2	
	comp=Z,230nm,19.4s,MS4.6,baz=181,slow=34						
MJAR	**Matsushiro Arr**	**93.58**	**44**	LR	LR	15 00 59.2	
	comp=Z,119nm,19.0s,MS4.4,baz=250,slow=33						
PLCA	**Paso Flores**	**95.35**	**203**	LR	LR	15 05 59.4	
	comp=Z,137nm,18.1s,MS4.5,baz=161,slow=35						
VAE	**Valguarnera**	**96.30**	**314**	LR	LR	15 06 46.7	
	comp=Z,175nm,20.2s,MS4.5,baz=314,slow=35						
MLR	**Muntele Rosu**	**96.58**	**326**	LR	LR	15 02 41.7	
	comp=Z,162nm,19.4s,MS4.5,baz=300,slow=33						
RAR	**Rarotonga**	**99.03**	**127**	LR	LR	14 59 02.1	
	comp=Z,29nm,20.5s,MS3.8,baz=249,slow=30						
AKASG	**Malin Array Be**	**99.40**	**331**	LR	LR	15 04 40.1	
	comp=Z,92nm,21.0s,MS4.3,baz=35,slow=33						
PPT	**Papeete**	**107.94**	**132**	*e*LR	LR	14 59 58.9	
	comp=Z,447nm,28.5s						
RKT	**Rikitea**	**110.56**	**147**	*e*LR	LR	15 01 04.8	
	comp=Z,310nm,27.0s						
CRPR	**Cabo Rojo, PR**	**143.18**	**245**	*e*PKPdf	PKPdf	14 29 28.5	-1.9
RES	**Resolute Bay**	**144.42**	**357**	*e*PKIKP	PKPdf	14 29 29.6	-1.3
MENT	**Mentasta**	**145.64**	**33**	*e*PKPdf	PKPdf	14 29 32.6	-0.7
INK	**Inuvik**	**146.25**	**21**	*e*PKP2	PKPdf	14 29 33.0	-1.2
FRB	**Frobisher Bay**	**148.63**	**332**	PKPbc	PKPbc	14 29 43.0	+1.0
	comp=Z,6.8nm,0.8s,baz=75,slow=4.3,SNR=5.8						
SKAG	**Skagway**	**150.82**	**35**	*e*PKPbc	PKPbc	14 29 45.5	-1.9
YKA	**Yellowknife Ar**	**155.55**	**14**	PKP	PKPdf	14 29 47.5	-1.1
	comp=Z,0.4nm,1.0s,baz=80,slow=9.3,SNR=3.3						
YKA				PKPbc	PKPdf	14 29 56.5	+7.9
	comp=Z,0.5nm,0.9s,baz=344,slow=2.3,SNR=8.0						
YKA				PKPab	PKPab	14 30 13.1	-1.4
	comp=Z,0.9nm,1.0s,baz=334,slow=3.8,SNR=5.9						
YKA	**Yellowknife Ar**	**155.55**	**14**	PKP	PKPdf	14 29 47.5	-1.1
YKA				PKPbc	PKPdf	14 29 56.5	+7.9
YKA				PKPab	PKPab	14 30 13.1	-1.4
NVAR	**Mina Array Bea**	**167.13**	**89**	PKPab	PKPab	14 31 06.5	+0.5
	comp=Z,3.7nm,1.0s,baz=244,slow=8.1,SNR=7.1						
TXAR	**Lajitas Array**	**169.90**	**171**	PKP	PKPdf	14 30 03.7	0.0
	comp=Z,0.4nm,0.9s,baz=96,slow=5.5,SNR=3.1						
TXAR				PKPab	PKPab	14 31 16.4	-1.7
	comp=Z,0.7nm,1.1s,baz=198,slow=3.7,SNR=2.9						
PDAR	**Pinedale Array**	**173.23**	**57**	PKP	PKPdf	14 30 05.8	+0.9
	comp=Z,1.0nm,0.9s,baz=17,slow=1.5,SNR=5.6						

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*ISCJB **13** 14:13:08.3±0.9, 34.8N±0.1×23.05E±0.07, h33km, mb4.2/6, Error ellipse: s-maj=16.2km s-min=8.3km az=5.0*
*CSEM **13** 14:13:09.0±0.2, 34.78N×23.03E, h10km, MD3.7, Error ellipse: s-maj=6.2km s-min=2.2km az=11.0*
*ATH **13** 14:13:10.8, 34.76N×23.20E, h12km±3km, MD3.7/6*
*NEIC **13** 14:13:11.8±1.4, 34.83N×23.03E, h53km±13km, mb4.0/1, Error ellipse: s-maj=24.2km s-min=14.4km az=178.0*
*IDC **13** 14:13:14.2±4.8, 35.06N×22.89E, h72km±47km, mb3.8/5, mb1 3.8/6, mb1mx3.4/25, mbtmp3.7/6, ML3.0/1, Error ellipse: s-maj=52.3km s-min=21.1km az=137.0*
ISC 13 14:13:06.8±0.9**, 34.9N**±0.1×**22.95E**±0.07**, h10**km**, n19, σ1.25**/22**, mb4.2**/6**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.94**	**95**	*e*PB	**Pb**	**14 13 25.0**	**-0.1**
GVD				*e*SB	**Sb**	**14 13 35.0**	**-2.6**
VAM	**Vamos**	**1.13**	**64**	*e*PN	**Pn**	**14 13 31.0**	**+2.3**
VLI	**Veliai**	**1.79**	**360**	*e*PN	**Pn**	**14 13 46.0**	**+8.2**
NPS	**Neapolis**	**2.21**	**80**	*e*PN	**Pn**	**14 13 47.0**	**+3.5**
APE	**Apeiranthos**	**2.99**	**44**	*e*PB	**Pb**	**14 14 01.0**	**+0.8**
KARP	**Karpathos**	**3.50**	**79**	*e*PN	**Pn**	**14 14 05.5**	**+4.2**
TIP	**Timpagrande**	**6.52**	**312**	*e*Pn	**Pn**	**14 14 46.7**	**+3.9**
TIP				*e*Sn	**Sn**	**14 15 56.3**	**-1.0**
TIP	**Timpagrande**	**6.52**	**312**	*e*Pn	**Pn**	**14 14 46.7**	**+3.8**
TIP				*e*Sn	**Sn**	**14 15 56.3**	**-1.0**
BR131	**Keskin Array S**	**9.76**	**57**	Pn	**Pn**	**14 15 30.7**	**+3.4**
BRTR	**Keskin Array B**	**9.76**	**57**	P	**Pn**	**14 15 31.5**	**+4.3**
	0.1nm,0.3s,baz=243,slow=16,SNR=3.7						
UMR	**Umm Al-Rimmam**	**21.60**	**97**	*e*P	**P**	**14 17 56.3**	**-0.6**
	baz=93						
UMR				AMb	AMB	14 17 57.2	
	comp=Z,53nm,0.7s,mb5.1,baz=93						
TORD	**Torodi Ar. Bea**	**28.98**	**227**	P	**P**	**14 19 07.6**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.1,baz=34,slow=9.5,SNR=3.1						
ARCES	**ARCESS Array B**	**34.69**	**2**	P	**P**	**14 19 55.5**	**-0.8**
	comp=Z,5.4nm,1.1s,mb4.4,baz=178,slow=8.1,SNR=6.1						
ARCES	**ARCESS Array B**	**34.69**	**2**	P	**P**	**14 19 55.5**	**-0.8**
KURK	**Kurchatov**	**42.73**	**51**	P	**P**	**14 21 03.1**	**-0.8**
	comp=Z,2.0nm,0.5s,mb4.2,baz=277,slow=8.6,SNR=5.3						
KURK	**Kurchatov**	**42.73**	**51**	*e*P	**P**	**14 21 02.9**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.0						
MK31	**Makanchi Array**	**45.41**	**56**	*e*P	**P**	**14 21 25.0**	**-0.5**
MKAR	**Makanchi Array**	**45.41**	**56**	P	**P**	**14 21 25.5**	**0.0**
	comp=Z,1.3nm,0.4s,mb4.2,baz=271,slow=7.7,SNR=28						
ZALV	**Zalesovo Beam**	**46.47**	**46**	P	**P**	**14 21 33.1**	**-0.7**
	comp=Z,2.5nm,0.4s,mb4.5,baz=270,slow=9.1,SNR=9.8						

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*ISCJB **13** 14:50:01.8±1.6, 20.2S±0.2×178.0W±0.2, h463km±30km, mb4.1/14, Error ellipse: s-maj=38.0km s-min=15.0km az=31.8*
*NEIC **13** 14:50:06.1±5.7, 20.34S×177.69W, h526km±61km, mb4.3/7, Error ellipse: s-maj=39.0km s-min=27.5km az=56.0*
*IDC **13** 14:50:10.7±2.9, 20.48S×177.87W, h563km±34km, mb3.5/7, mb1 3.6/8, mb1mx3.3/18, mbtmp3.5/8, Error ellipse: s-maj=32.1km s-min=19.0km az=136.0*
ISC 13 14:50:01.6±1.8**, 20.2S**±0.2×**177.8W**±0.2**, h452**km±31km**, n27, σ0.80**/22**, mb4.1**/14**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.54**	**44**	S	**S**	**14 53 42.7**	**+0.1**
	1.1nm,0.3s,baz=198,slow=20,SNR=3.2						
URZ	**Urewera**	**18.50**	**193**	P	**P**	**14 53 48.6**	**-0.4**
	0.6nm,0.3s,baz=0.0,slow=4.0,SNR=5.3						
CTA	**Charters Tower**	**33.67**	**264**	*e*P	**P**	**14 56 05.3**	**+1.7**
	6.4nm,0.6s,mb4.2						
CTA	**Charters Tower**	**33.67**	**264**	P	**P**	**14 56 05.4**	**+1.8**
	9.7nm,0.6s,mb4.4,baz=99,slow=8.8,SNR=12						
CTAO	**Charters Tower**	**33.67**	**264**	*e*P	**P**	**14 56 05.0**	**+1.5**
	10nm,0.7s,mb4.4						
PMG	**Port Moresby**	**35.43**	**282**	P	**P**	**14 56 16.9**	**-1.6**
	14nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**38.05**	**244**	*e*P	**P**	**14 56 41.2**	**+1.3**
	1.7nm,0.5s,mb3.7						
STKA	**Stephens Creek**	**38.05**	**244**	P	**P**	**14 56 41.2**	**+1.3**
	2.0nm,0.4s,mb3.9,baz=105,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**44.73**	**256**	P	**P**	**14 57 33.9**	**+0.5**
	7.4nm,0.6s,mb4.3,baz=91,slow=7.6,SNR=221						
ASAR				PcP	PcP	14 59 04.2	-2.2
	0.6nm,0.5s,baz=105,slow=3.8,SNR=5.7						
ASAR				S	**S**	**15 03 28.9**	**-7.4**
	0.3nm,0.6s,baz=94,slow=16,SNR=4.8						
WB2	**Warramunga Arr**	**44.78**	**262**	*e*P	**P**	**14 57 33.7**	**-0.1**
WRAB	**Tennant Creek**	**44.78**	**262**	*e*P	**P**	**14 57 33.2**	**-0.6**
	8.8nm,1.0s,mb4.1						
KAKA	**Kakadu**	**48.12**	**271**	*e*P	x	14 57 39.3	
	5.1nm,0.4s						
FORT	**Forrest**	**49.54**	**246**	*e*P	**P**	**14 58 09.3**	**-0.5**
	9.8nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.22**	**262**	*e*P	**P**	**14 58 36.7**	**0.0**
	3.8nm,0.4s,mb4.1						
MBWA	**Marble Bar**	**58.06**	**257**	*e*P	**P**	**14 59 09.6**	**-1.0**
	4.4nm,0.5s,mb4.0						
NWAO	**Narrogin (SRO)**	**58.63**	**243**	P	**P**	**14 59 09.6**	**-4.7**
	14nm,1.0s,mb4.2						
MJAR	**Matsushiro Arr**	**70.08**	**324**	P	**P**	**15 00 26.8**	**-0.3**
	1.9nm,0.5s,mb3.9,baz=154,slow=6.0,SNR=7.2						
MJAR	**Matsushiro Arr**	**70.08**	**324**	P	**P**	**15 00 26.8**	**-0.3**
KSM	**Kuching**	**73.53**	**278**	*e*P	**P**	**15 00 47.6**	**-0.2**
	6.3nm,0.6s,mb4.3						
PETK	**Petropavlovsk-**	**76.05**	**345**	P	**P**	**15 01 00.8**	**-0.3**
	4.7nm,1.1s,mb3.9,baz=124,slow=4.6,SNR=4.7						
KSRS	**Korea Array**	**76.78**	**318**	P	**P**	**15 01 06.3**	**+0.8**
	0.7nm,0.5s,mb3.5,baz=123,slow=5.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**90.17**	**290**	P	**P**	**15 02 13.8**	**+0.7**
	1.7nm,0.9s,mb3.9,baz=114,slow=3.1,SNR=10						
AKASG	**Malin Array Be**	**142.85**	**331**	PKhKP		15 08 37.5	
	1.6nm,0.4s,baz=43,slow=4.6,SNR=15						
BRTR	**Keskin Array B**	**146.77**	**313**	PKPbc	PKPbc	15 08 50.2	-1.9
	0.8nm,0.6s,baz=124,slow=6.1,SNR=3.9						
MMAI	**Mount Meron Ar**	**147.81**	**300**	PKPbc	PKPbc	15 08 54.2	-0.9
	0.6nm,0.3s,baz=48,slow=4.3,SNR=2.6						
CLL	**Collm**	**147.83**	**347**	⇓*i*PKPbc	PKPbc	15 08 52.9	-1.6
	comp=Z,6.0nm,0.9s						
GERES	**GERESS Array B**	**149.98**	**345**	PKPbc	PKPbc	15 08 58.0	-1.8
	comp=Z,0.7nm,0.7s,baz=25,slow=3.5,SNR=3.7						

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*BJI **13** 14:52:14.8, 51.60N×16.10E, h5km, mB5.2, mb4.7, Ms4.5, Msz4.3*
*NEIC **13** 14:52:16.9±0.2, 51.60N×16.07E, h5km, mb4.5/14, ML4.1(BRA), ML4.7(SZGRF), Error ellipse: s-maj=3.9km s-min=3.1km az=156.0*
*LDG **13** 14:52:16.7±0.1, 51.53N×16.22E, h1km, Ml4.8/38, Error ellipse: s-maj=4.1km s-min=2.5km az=154.0, Suspected Mining induced.*
*CSEM **13** 14:52:16.5±0.1, 51.59N×16.22E, h1km, mb4.5/5, ML4.8/43, Ms4.3, Error ellipse: s-maj=1.1km s-min=0.9km az=168.0*
*ISCJB **13** 14:52:16.9±0.1, 51.413N±0.009×16.11E±0.02, h0km, mb4.5/42, MS4.0/2, Error ellipse: s-maj=1.4km s-min=1.2km az=6.8*
*IPEC **13** 14:52:17.1±0.4, 51.57N×16.33E, h1km, ML3.9/3, Error ellipse: s-maj=20.6km s-min=2.3km az=88.0*
*MOS **13** 14:52:17.5±1.4, 51.53N×15.93E, h16km, mb4.6/21, Error ellipse: s-maj=5.6km s-min=3.4km az=71.0*
*PRU **13** 14:52:18.7, 51.50N×16.13E, h0km, M4.5, Felt In Harrachov*
*WAR **13** 14:52:18.8, 51.51N×16.13E, Mw3.7*
*IDC **13** 14:52:18.1±0.4, 51.52N×16.06E, h0km, mb4.1/15, mb1 4.2/24, mb1mx4.1/32, mbtmp4.0/24, ML4.1/8, Error ellipse: s-maj=8.3km s-min=5.9km az=97.0*
*BGR **13** 14:52:18.8±0.4, 51.47N×16.15E, h1km, ML4.3, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0*
*VIE **13** 14:52:20.2±0.4, 51.33N×15.95E, h0km, mb3.8/13, ML3.7/13, Ms4.3/2, Error ellipse: s-maj=2.8km s-min=2.2km az=9.0, Suspected Mining induced.*
*UPP **13** 14:52:24.7, 51.97N×15.97E, h0km, ML3.3, Suspected Mining explosion.*
*STR **13** 14:52:59.2±0.5, 50.23N×11.72E, h2km±4km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=58.0*
ISC 13 14:52:18.5±0.1**, 51.471N**±0.008×**16.12E**±0.01**, h0**km**, n561, σ1.02**/694**, mb4.5**/42**, MS4.0**/2**, 123C-121D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**14 52 31.2**	**+0.5**
KSP				*e*Sg	**Sg**	**14 52 41.0**	**+2.1**
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**14 52 31.1**	**+0.4**
KSP				*e*Sg	**Sg**	**14 52 41.3**	**+2.4**
KSP	**Ksiaz**	**0.64**	**170**	⇓*i*P	**Pg**	**14 52 31.2**	**+0.5**
KSP				*i*		14 52 40.6	
KSP	**Ksiaz**	**0.64**	**170**	⇓*i*Pg	**Pg**	**14 52 31.2**	**+0.5**
KSP				*e*		14 52 39.0	
KSP				*i* Sg	**Sg**	**14 52 40.6**	**+1.7**
KSP				*e*		14 52 44.0	
UPC	**Upice**	**0.97**	**184**	*e*PG	**Pg**	**14 52 37.2**	**+0.2**
UPC				*e*SG	**Sg**	**14 52 51.1**	**+1.6**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*Pg	**Pg**	**14 52 40.1**	**0.0**
DPC				*e*Sg	**Sg**	**14 52 56.0**	**+1.2**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*P	**Pg**	**14 52 40.0**	**-0.1**
DPC				*e*		14 52 55.3	
DPC				smax			
	comp=N,831nm,0.6s						
DPC				MLR	MLR		
	comp=Z,8μm,2.7s						
DPC	**Dobruska-Polom**	**1.13**	**173**	Pg	**Pg**	**14 52 40.1**	**0.0**
DPC				Sg	**Sg**	**14 52 55.3**	**+0.6**
	comp=Z,831nm,0.6s						
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**14 52 40.0**	**-0.1**
DPC				*e*SG	**Sg**	**14 52 55.3**	**+0.6**
	comp=Z,831nm,0.6s						
DPC				AMS	AMS	14 53 10.0	
	comp=Z,8μm,2.7s						
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*Pg	**Pg**	**14 52 40.0**	**-0.1**
DPC				*e*Sg	**Sg**	**14 52 55.3**	**+0.6**
PVCC	**Panska Ves**	**1.36**	**227**	*e*P	**Pg**	**14 52 44.1**	**-0.4**
PVCC				*e*		14 53 03.5	
PVCC				smax			
	comp=N,4μm,0.6s						
PVCC	**Panska Ves**	**1.36**	**227**	*e*PG	**Pg**	**14 52 44.1**	**-0.4**
PVCC				*e*SG	**Sg**	**14 53 03.5**	**+1.4**
	comp=Z,4μm,0.6s						
BRG	**Berggiesshubel**	**1.49**	**247**	*e*Pn	**Pn**	**14 52 45.6**	**-1.0**
BRG				*e*Sg	**Sg**	**14 53 07.5**	**+1.1**
BRG	**Berggiesshubel**	**1.49**	**247**	P	**Pn**	**14 52 45.8**	**-0.7**
BRG						14 53 07.5	
BRG				smax			
	comp=N,759nm,0.6s						
BRG	**Berggiesshubel**	**1.49**	**247**	PN	**Pn**	**14 52 45.8**	**-0.7**
BRG				PG	**Pg**	**14 52 47.5**	**+0.4**
BRG				SG	**Sg**	**14 53 07.5**	**+1.1**
	comp=N,1μm,0.6s						
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**14 52 47.6**	**-2.6**
RUE				*e*Sn	**Sn**	**14 53 14.5**	**+1.1**
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**14 52 47.6**	**-2.6**
RUE				*e*Sn	**Sn**	**14 53 14.5**	**+1.2**
PRU	**Pruhonice**	**1.79**	**215**	*e*P	**Pn**	**14 52 50.0**	**-0.6**
PRU				*e*		14 53 16.5	
PRU				smax			
	comp=N,1μm,0.4s						
PRU				MLR	MLR		
	comp=Z,4μm,4.8s						
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**14 52 50.0**	**-0.6**
PRU				*e*PG	**Pg**	**14 52 51.9**	**-0.9**
PRU				*e*SG	**Sg**	**14 53 16.5**	**+0.6**
	comp=Z,1μm,0.4s						
PRU				AMS	AMS	14 53 30.0	
	comp=Z,4μm,4.8s						
PRU	**Pruhonice**	**1.79**	**215**	*e*Pn	**Pn**	**14 52 50.0**	**-0.6**
PRU				*e*Pg	**Pg**	**14 52 51.9**	**-0.9**
PRU				*e*Sg	**Sg**	**14 53 16.5**	**+0.6**
FBE	**Freiberg**	**1.82**	**254**	*e*Pn	**Pn**	**14 52 50.1**	**-1.0**
FBE				*e*Sg	**Sg**	**14 53 17.4**	**+0.3**
RAC	**Raciborz**	**1.92**	**136**	*e*Pn	**Pn**	**14 52 50.8**	**-1.5**
RAC				*e*Pg	**Pg**	**14 52 55.1**	**-0.1**
RAC				*e*Sn	**Sn**	**14 53 14.8**	**-2.3**
RAC				*e*Sg	**Sg**	**14 53 20.6**	**+0.6**
RAC	**Raciborz**	**1.92**	**136**	*e*Pg	**Pg**	**14 52 55.1**	**-0.1**
RAC				*e*Sg	**Sg**	**14 53 20.6**	**+0.6**
GKP	**Gorka Klasztor**	**1.93**	**20**	*e*Pn	**Pn**	**14 52 52.3**	**-0.2**
GKP				*e*Sn	**Sn**	**14 53 21.7**	**+4.3**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**14 52 51.3**	**-1.6**
CLL				*e*Pg	**Pg**	**14 52 55.0**	**-1.0**
CLL				*e*Sg	**Sg**	**14 53 21.3**	**0.0**
CLL	**Collm**	**1.96**	**266**	*e*P	**Pn**	**14 52 51.0**	**-1.9**
CLL				*i*		14 53 21.6	
CLL				pmax	pmax		
	comp=Z,115nm,0.6s						
CLL				MLR	MLR		
	comp=Z,3μm,2.2s						
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**14 52 51.0**	**-1.9**
	comp=Z,115nm,0.6s						
CLL				*e*Pg	**Pg**	**14 52 55.0**	**-1.0**
CLL				*e*x	x	14 52 59.0	
CLL				*i* Sg	**Sg**	**14 53 21.6**	**+0.3**
	comp=Z,1μm,0.7s						
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**14 52 51.0**	**-1.9**
CLL				*e*Pg	**Pg**	**14 52 55.0**	**-1.0**
CLL				*i* Sg	**Sg**	**14 53 21.6**	**+0.3**
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*Pn	**Pn**	**14 52 53.0**	**-1.6**
OKC				*e*Sg	**Sg**	**14 53 24.8**	**-0.6**
OKC	**Ostrava-Krasne**	**2.08**	**141**	Pn	**Pn**	**14 52 53.0**	**-1.6**
OKC				Sg	**Sg**	**14 53 24.8**	**-0.6**
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*PN	**Pn**	**14 52 53.0**	**-1.6**
OKC				*e*SG	**Sg**	**14 53 23.5**	**-1.9**
OKC				AMS	AMS	14 54 00.0	
	comp=Z,3μm,2.9s						
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*Pn	**Pn**	**14 52 53.0**	**-1.6**
OKC				*e*Sg	**Sg**	**14 53 23.5**	**-1.9**
VRAC	**Vranov**	**2.19**	**172**	Pn	**Pn**	**14 52 56.0**	**0.0**
	comp=Z,14nm,0.3s,baz=331,slow=14,SNR=44						
VRAC				Lg		14 53 28.6	
	comp=Z,43nm,0.3s,baz=250,slow=18,SNR=6.6						
VRAC	**Vranov**	**2.19**	**172**	P	**Pn**	**14 52 56.0**	**0.0**
VRAC						14 53 28.6	
VRAC				pmax	pmax		
	comp=Z,15nm,0.3s						
VRAC	**Vranov**	**2.19**	**172**	*e*Pn	**Pn**	**14 52 55.8**	**-0.2**
VRAC				*e*Sg	**Sg**	**14 53 28.2**	**-0.5**
	comp=Z,365nm,0.4s						
VRAC	**Vranov**	**2.19**	**172**	⇓*i*P	**Pn**	**14 52 55.7**	**-0.3**
VRAC	**Vranov**	**2.19**	**172**	⇓P	**Pn**	**14 52 55.6**	**-0.4**
TREC	**Trest**	**2.21**	**191**	*e*PN	**Pn**	**14 52 56.5**	**+0.1**
TREC				*e*PG	**Pg**	**14 53 00.6**	**-0.3**
TREC				*e*SG	**Sg**	**14 53 30.0**	**+0.4**
TREC				AMS	AMS	14 53 40.0	
	comp=Z,3μm,4.6s						
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**14 52 59.0**	**-0.2**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pg	**Pg**	**14 53 03.6**	**-1.2**
KRUC				*e*Sg	**Sg**	**14 53 35.4**	**-0.7**
	comp=Z,402nm,0.6s						
TANN	**Tannenbergstha**	**2.54**	**247**	*e*Pn	**Pn**	**14 53 00.6**	**-0.3**
TANN				*e*Sg	**Sg**	**14 53 41.5**	**+1.4**
WERD	**Werda**	**2.62**	**248**	*e*Pn	**Pn**	**14 53 01.5**	**-0.5**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**14 53 01.8**	**-0.4**
NKC				*e*PG	**Pg**	**14 53 07.9**	**-1.0**
NKC				*e*SG	**Sg**	**14 53 43.8**	**+0.7**
	comp=Z,1μm,0.8s						
NKC				AMS	AMS	14 54 00.0	
	comp=Z,3μm,4.8s						
NKC	**Novy Kostel**	**2.63**	**243**	*e*Pn	**Pn**	**14 53 01.8**	**-0.4**
NKC				*e*Pg	**Pg**	**14 53 07.9**	**-1.0**
NKC				*e*Sg	**Sg**	**14 53 43.8**	**+0.7**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**14 52 59.8**	**-2.6**
OJC				*e*Pg	**Pg**	**14 53 07.7**	**-1.5**
OJC				*e*Sg	**Sg**	**14 53 42.8**	**-0.7**
OJC	**Ojcow**	**2.65**	**117**	*e*Pn	**Pn**	**14 52 59.8**	**-2.6**
OJC				*e*Sg	**Sg**	**14 53 44.0**	**+0.4**
JAVC	**Velka Javorina**	**2.80**	**158**	*e*Sg	**Sg**	**14 53 48.4**	**+0.1**
	comp=Z,1μm,1.4s						
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**14 53 04.8**	**-0.4**
KHC				*e*PG	**Pg**	**14 53 11.1**	**-2.0**
KHC				*e*SG	**Sg**	**14 53 49.2**	**-0.9**
	comp=Z,437nm,0.9s						
KHC				AMS	AMS	14 54 00.0	
	comp=Z,2μm,5.4s						
MGBB	**Grossbuechelbe**	**2.90**	**240**	⇓*i*Pn	**Pn**	**14 53 05.8**	**0.0**
BEL	**Belsk**	**2.93**	**81**	*e*Sn	**Sg**	**14 53 53.5**	**+0.8**

MANZ	Manzenberg	2.95	241	*e*Pn	Pn	14 53 06.7	+0.2
MANZ				*e*Sg	Sg	14 53 54.6	+1.4
MOX	Moxa	2.96	256	*e*Pn	Pn	14 53 05.9	-0.7
MOX				*e*Pg	Pg	14 53 14.6	-0.5
MOX				*e*Sg	Sg	14 53 54.9	+1.5
MOX	Moxa	2.96	256	*e*PN	Pn	14 53 05.9	-0.7
MOX				*e*PG	Pg	14 53 14.6	-0.5
MOX				*i* SG	Sg	14 53 54.7	+1.2
ROTZ	Rotzenmuhle	3.02	237	*e*Pn	Pn	14 53 07.5	+0.1
ROTZ				*e*Sg	Sg	14 53 55.1	-0.3
GEC2	GERESS Array S	3.05	212	*e*Pn	Pn	14 53 08.0	+0.1
GEC2				*e*Sg	Sg	14 53 55.7	-0.7
GEC2	GERESS Array S	3.05	212	Pn	Pn	14 53 08.0	+0.1
GEC2				Sg	Sg	14 53 55.7	-0.8
GERES	GERESS Array B	3.05	212	Pn	Pn	14 53 07.8	-0.2
	comp=Z,14nm,0.3s,baz=33,slow=12,SNR=211						
GERES				Pg	Pg	14 53 17.0	0.0
	comp=Z,34nm,0.3s,baz=31,slow=16,SNR=93						
GERES				Sn	Sn	14 53 45.6	+0.5
	comp=Z,23nm,0.3s,baz=40,slow=23,SNR=6.1						
GERES				Lg		14 53 55.5	
	comp=Z,62nm,0.3s,baz=43,slow=28,SNR=11						
GERES	GERESS Array B	3.05	212	P	Pn	14 53 07.8	-0.1
GERES						14 53 45.6	
GERES				pmax	pmax		
	comp=Z,14nm,0.3s						
GERES				pmax	pmax		
	comp=Z,34nm,0.3s						
GERES				smax			
	comp=N,23nm,0.3s						
GERES	GERESS Array B	3.05	212	Pg	Pg	14 53 17.0	0.0
SMOL	Smolenice	3.08	164	*e*PG	Pg	14 53 16.7	-0.8
SMOL				*e*SG	Sg	14 53 59.1	+1.8
WET	Wettzell	3.12	223	*e*Pn	Pn	14 53 08.7	-0.1
WET				*e*Sg	Sg	14 53 58.8	+0.1
WET	Wettzell	3.12	223	*e*Pn	Pn	14 53 08.7	-0.2
WET				*e*Sg	Sg	14 53 58.8	+0.1
KOLL	Kolacno	3.25	152	*e*PN	Pn	14 53 10.2	-0.4
KOLL				*e*PG	Pg	14 53 21.3	+0.6
KOLL				*e*SG	Sg	14 54 02.5	-0.3
ZST	Bratislava	3.34	169	*e*PN	Pn	14 53 12.3	+0.4
ZST				*e*PG	Pg	14 53 21.4	-1.1
ZST				*e*SG	Sg	14 54 04.9	-0.8
NIE	Niedzica	3.38	126	*e*P	Pg	14 53 22.0	-1.2
NIE				*e*S	Sg	14 54 06.8	-0.2
VYHS	Vyhne	3.46	148	*e*PN	Pn	14 53 12.8	-0.7
VYHS				*e*PG	Pg	14 53 23.6	-1.1
VYHS				*e*SG	Sg	14 54 12.4	+2.9
VYHS	Vyhne	3.46	148	*e*Pn	Pn	14 53 12.9	-0.6
VYHS				*e*Pg	Pg	14 53 23.6	-1.1
VYHS				*e*Sg	Sg	14 54 12.4	+2.9
RGN	Rugen	3.52	332	*e*Pn	Pn	14 53 13.2	-1.1
RGN	Rugen	3.52	332	*e*Pg	Pg	14 53 28.1	+2.3
RGN	Rugen	3.52	332	*e*Pn	Pn	14 53 13.2	-1.1
RGN				*e*Pg	Pg	14 53 28.1	+2.3
CONA	Conrad Observa	3.55	183	*i* Pn	Pn	14 53 15.4	+0.6
	SNR=44						
CONA				⇓*i*Sg	Sg	14 54 13.7	+1.2
	comp=N,285nm,0.5s						
CSNA	Conrad Observa	3.55	183	⇑*i*Pn	Pn	14 53 15.4	+0.7
CSNA				⇑*i*Sg	Sg	14 54 13.7	+1.2
	comp=N,440nm,0.8s						
CSNA	Conrad Observa	3.55	183	Pn	Pn	14 53 15.4	+0.6
CSNA				Sg	Sg	14 54 13.7	+1.2
	comp=N,440nm,0.8s						
GRA1	Grafenberg Arr	3.59	242	Pn	Pn	14 53 15.1	-0.3
GRA1				Sg	Sg	14 54 14.5	+0.7
GRA1	Grafenberg Arr	3.59	242	*e*Pn	Pn	14 53 15.1	-0.3
GRA1				*e*Sg	Sg	14 54 14.5	+0.7
GRF	Grafenberg Arr	3.59	242	*e*Pn	Pn	14 53 15.1	-0.2
GRF				*e*Sg	Sg	14 54 14.5	+0.7
CLZ	Clausthal	3.60	278	*e*Pn	Pn	14 53 15.3	-0.1
CLZ				*e*Sg	Sg	14 54 13.9	-0.1
CLZ	Clausthal	3.60	278	*e*Pn	Pn	14 53 15.3	-0.1
CLZ				*e*Sg	Sg	14 54 13.9	-0.1
BSD	Bornholm Skovb	3.72	349	*i* P	Pn	14 53 14.2	-2.9
BSD				*i* S	Sn	14 53 55.4	-6.2
SOP	Sopron	3.80	175	*e*Pn	Pn	14 53 18.0	-0.2
SOP				*e*SB	Sg	14 54 23.1	+2.5
MOA	Molln	3.82	199	⇑*i*Pn	Pn	14 53 18.6	+0.1
	SNR=50						
MOA				⇑*i*Sg	Sg	14 54 21.6	+0.5
	comp=N,430nm,0.8s						
STHS	Stebnicka Huta	3.87	120	*e*PN	Pn	14 53 18.5	-0.7
STHS				*e*PG	Pg	14 53 32.6	0.0
STHS				*e*SG	Sg	14 54 23.2	+0.5
STHS	Stebnicka Huta	3.87	120	*e*Pn	Pn	14 53 18.5	-0.7
STHS				*e*Pg	Pg	14 53 32.6	0.0
STHS				*e*Sg	Sg	14 54 23.3	+0.6
HROE	Hohe Rhon--Fla	3.88	258	⇓*i*Pn	Pn	14 53 18.9	-0.4
ARSA	Arzberg	4.24	185	⇑*i*Pn	Pn	14 53 25.3	+1.0
	SNR=12						
ARSA				⇑*i*Sg	Sg	14 54 33.9	-0.8
	comp=N,363nm,0.7s						
CRVS	Cervenica-Dubn	4.29	125	*e*PN	Pn	14 53 25.3	+0.4
CRVS				*e*PG	Pg	14 53 39.1	-1.5
CRVS				*e*SG	Sg	14 54 36.6	+0.4
PSZ	Piszkesteto	4.32	144	*e*Pn	Pn	14 53 25.1	-0.2
PSZ	Piszkesteto	4.32	144	⇑*e*Pn	Pn	14 53 25.7	+0.4
PSZ				*e*Sg	Sg	14 54 40.4	+3.3
PSZ	Piszkesteto	4.32	144	⇑*i*P	Pn	14 53 25.7	+0.4
PSZ	Piszkesteto	4.32	144	*e*Pn	Pn	14 53 25.1	-0.2
PKSG		4.34	159	⇑*i*P	Pn	14 53 25.4	-0.3
BUD	Budapest	4.42	153	*e*P	Pn	14 53 27.0	+0.3
KWP	Kalwaria	4.59	111	*e*Pn	Pg	14 53 42.7	-3.6
KWP				*e*Sn	Sg	14 54 48.6	+2.8
KWP	Kalwaria	4.59	111	⇑*i*P	Pn	14 53 22.1	-6.9
KWP	Kalwaria	4.59	111	*e*Pg	Pg	14 53 42.5	-3.9
KWP	Kalwaria	4.59	111	*e*Pn	Pn	14 53 21.5	-7.6
KWP				*e*Pg	Pg	14 53 42.5	-3.8
KWP				*e*Sn	Sg	14 54 48.6	+2.8
KBA	Koelnbreinsper	4.76	203	⇑*i*Pn	Pn	14 53 32.0	+0.6
	SNR=14						
KBA				⇓*i*Sg	Sg	14 54 51.2	0.0
	comp=N,486nm,0.9s						
UZH	Uzhgorod	4.89	123	*e*P	Pn	14 53 33.6	+0.4
UZH				*e*S	Sn	14 54 32.4	+2.0
UZH				smax			
	comp=N,220nm,1.0s						
UZH				smax			
	comp=E,300nm,1.0s						
SUW	Suwalki	4.99	57	*e*Pn	Pg	14 53 52.4	-1.7
SUW	Suwalki	4.99	57	Pn	Pn	14 53 33.8	-0.7
SUW	Suwalki	4.99	57	*e*Pg	Pg	14 53 51.5	-2.5
SUW	Suwalki	4.99	57	Pn	Pn	14 53 33.8	-0.8
SUW				*e*Pg	Pg	14 53 51.5	-2.5
SUW				*e*Sg	Sg	14 55 05.0	+6.3
TOD	Tromm	5.02	251	P	Pn	14 53 33.7	-1.3
TOD				S	Pg	14 54 00.7	+6.0
OBKA	Obir	5.07	192	⇑*i*Pn	Pn	14 53 34.9	-0.8
	SNR=7.9						
OBKA				⇑*i*Sg	Sg	14 55 03.5	+2.2
	comp=E,205nm,0.7s						
WATA	Walderalm	5.09	217	⇑*i*Pn	Pn	14 53 36.9	+1.0
	SNR=24						
WATA				⇑*i*Sg	Sg	14 55 01.8	-0.1
	comp=E,110nm,0.7s						
WTTA	Wattenberg	5.13	217	⇑*i*Pn	Pn	14 53 36.2	-0.2
	SNR=18						
WTTA				⇑*i*Sg	Sg	14 55 04.5	+1.4
	comp=E,203nm,0.6s						
STU	Stuttgart	5.21	241	*e*P	Pn	14 53 35.9	-1.6
STU				*e*		14 54 34.2	
STU				pmax	pmax		
	comp=Z,71nm,0.6s						
STU	Stuttgart	5.21	241	*e*Pn	Pn	14 53 35.9	-1.6
	comp=Z,71nm,0.6s						
STU	Stuttgart	5.21	241	*e*Pg	Pg	14 53 57.1	-1.1
STU	Stuttgart	5.21	241	*e*Pn	Pn	14 53 35.9	-1.6
	comp=Z,71nm,0.6s						
STU				*e*Pg	Pg	14 53 57.1	-1.1
STU				*e*Sn	Sn	14 54 34.2	-4.0
STU				*e*Sg	Sg	14 55 06.7	+1.1
MOTA	Moosalm	5.27	220	⇓*i*Pn	Pn	14 53 37.9	-0.5
	SNR=15						
MOTA				⇓*i*Sn	Sn	14 54 37.7	-2.0
MOTA				⇑*i*Sg	Sg	14 55 07.8	+0.2
	comp=Z,164nm,0.7s						
ABTA	Abfaltersbach	5.29	208	⇓*i*Pn	Pn	14 53 39.1	+0.5
	SNR=20						
RETA	Reutte	5.30	223	⇑*i*Pn	Pn	14 53 37.7	-1.1
	SNR=10						
RETA				⇓*i*Sn	Sn	14 54 39.1	-1.4

LVV	L'vov	5.30	105	*i* P	Pn	14 53 45.7	+6.9
LVV				*e*S	Sn	14 54 52.3	+12
TRPA	Tarpa	5.33	126	⇓*i*P	Pn	14 53 39.4	+0.1
FVI	Forni Avoltri	5.35	206	Pn	Pn	14 53 40.5	+1.0
FVI				Sn	Sg	14 55 11.8	+1.6
PTCC	Patocco-Chiusa	5.39	201	Pn	Pn	14 53 40.9	+0.9
PTCC				Sn	Sg	14 55 14.3	+2.9
PKSM	Moragy	5.52	161	⇑*i*P	Pn	14 53 42.1	+0.3
PKSM	Moragy	5.52	161	⇑P	Pn	14 53 42.1	+0.3
KTD	Kalmit	5.57	250	P	Pn	14 53 41.3	-1.2
VOY	Vojsko	5.64	196	*e*Pn	Pn	14 53 43.3	-0.2
VOY				*e*		14 53 50.6	
VOY				*e*		14 54 00.7	
VOY				*e*		14 54 08.5	
VOY				*e*Sn	Sg	14 55 21.4	+1.9
ABH	Alteburg	5.68	257	P	Pn	14 53 43.6	-0.4
FETA	Feichten	5.68	220	⇑*i*Pn	Pn	14 53 44.3	+0.3
	SNR=20						
RHK3	Tenkes	5.76	165	⇓*i*P	Pn	14 53 46.0	+0.8
WTSB	Winterswijk	5.81	279	*e*Pn	Pn	14 53 45.7	-0.2
WTSB	Winterswijk	5.81	279	*e*Sn	Sx	14 55 14.2	
SPAK	Spaichingen-Ko	5.82	237	P	Pn	14 53 45.9	-0.1
DAVA	Damuels	5.84	227	⇑*i*Pn	Pn	14 53 45.8	-0.5
DAVA				⇓*i*Sg	Sg	14 55 27.1	+1.1
	comp=Z,147nm,0.7s						
BYXU	Byxelkrok	5.86	5	P	Pn	14 53 44.6	-1.8
BFO	Black Forest	5.93	241	*e*P	Pn	14 53 45.4	-2.1
BFO				pmax	pmax		
	comp=Z,65nm,0.8s						
BFO	Black Forest	5.93	241	*e*Pn	Pn	14 53 45.4	-2.1
	comp=Z,65nm,0.8s						
BFO	Black Forest	5.93	241	*e*Pg	Pg	14 54 12.5	+0.4
BFO	Black Forest	5.93	241	*e*Pn	Pn	14 53 45.4	-2.1
	comp=Z,65nm,0.8s						
BFO				*e*Pg	Pg	14 54 12.5	+0.4
BFO				*e*Sg	Sg	14 55 24.7	-4.2
ASPU	Aespoe	5.97	3	P	Pn	14 53 46.0	-2.0
CTI	Castel Tesino	6.18	210	P	Pn	14 53 52.2	+1.3
CTI				pmax	pmax		
	comp=Z,157nm,0.9s						
CTI	Castel Tesino	6.18	210	Pn	Pn	14 53 52.2	+1.3
	comp=Z,157nm,0.9s						
VSTU	Vaestervik	6.21	2	P	Pn	14 53 49.1	-2.1
DAVOS	Davos	6.22	224	P	Pn	14 53 51.1	-0.3
DAVOS						14 55 04.6	
DAVOX	Davos/Dischmat	6.23	224	Pn	Pn	14 53 51.1	-0.4
	comp=Z,2.0nm,0.3s,baz=29,slow=11,SNR=20						
DAVOX				Sn	Sn	14 55 04.6	+1.2
	comp=Z,1.8nm,0.3s,baz=350,slow=22,SNR=2.2						
DAVOX				Lg		14 55 36.7	
	comp=Z,4.2nm,0.3s,baz=229,slow=21,SNR=4.4						
MEM	Membach	6.44	266	PN	Pn	14 53 53.5	-0.9
MEM				PG	Pg	14 54 17.6	-4.1
MEM				SG	Sg	14 55 43.5	-1.5
MEM	Membach	6.44	266	Pn	Pn	14 53 53.4	-1.0
HGN	Heimansgroeve	6.45	268	*e*Pn	Pn	14 53 54.0	-0.6
	comp=Z,30nm,1.6s						
HGN	Heimansgroeve	6.45	268	*e*Sn	Sn	14 55 25.4	+17
CDF	Champ du Feu	6.47	245	*e*Pg	Pg	14 54 18.1	-4.4
	SNR=1.0						
CDF				*e*Sg	Sg	14 55 43.5	-2.8
	comp=Z,141nm,0.8s,SNR=1.0						
CDF	Champ du Feu	6.47	245	*e*Pg	Pg	14 54 18.1	-4.4
	SNR=1.0						
CDF				*e*Sg	Sg	14 55 43.5	-2.8
	comp=Z,71nm,0.8s,SNR=1.0						
CDF	Champ du Feu	6.47	245	*e*Pn	Pn	14 53 53.6	-1.3
CDF				*e*Pg	Pg	14 54 18.1	-4.4
CDF				*e*Sg	Sg	14 55 43.5	-2.8
MABI	Malga Bissina	6.56	217	Pn	Pn	14 53 57.4	+1.2
MABI				Sn	Sg	14 55 47.4	-1.7
WLF	Walferdange	6.60	258	PN	Pn	14 53 52.4	-4.3
WLF				SN	Sn	14 55 02.3	-10
	comp=E,75nm,0.0s						
WLF				SG	Sg	14 55 48.8	-1.5
WLF	Walferdange	6.60	258	*e*P	Pn	14 53 54.2	-2.5
WLF				pmax	pmax		
	comp=Z,36nm,0.9s						
WLF	Walferdange	6.60	258	*e*Pn	Pn	14 53 54.2	-2.5
	comp=Z,36nm,0.9s						
WLF				*e*Sg	Sg	14 55 49.9	-0.4
WLF	Walferdange	6.60	258	*e*Pn	Pn	14 53 54.2	-2.4
	comp=Z,36nm,0.9s						
WLF				*e*Sg	Sg	14 55 49.9	-0.5
ECH	Echery	6.65	244	P	Pn	14 53 55.2	-2.1
ECH	Echery	6.65	244	*e*P	Pn	14 53 53.5	-3.8
ECH				pmax	pmax		
	comp=Z,30nm,0.9s						
ECH	Echery	6.65	244	*e*Pn	Pn	14 53 53.5	-3.8
	comp=Z,30nm,0.9s						
ECH	Echery	6.65	244	*e*Pn	Pn	14 53 53.5	-3.8
	comp=Z,30nm,0.9s						
ECH				*e*Pg	Pg	14 54 24.6	-1.1
ECH				*e*Sg	Sg	14 55 51.0	-0.8
TUE	Stuetta	6.70	224	*e*Pn	Pn	14 53 57.1	-0.9
	comp=Z,18nm,0.6s						
TUE				*e*Sg	Sg	14 55 51.5	-1.9
FRGS	Fruska Gora	6.78	157	*e*P	Pn	14 54 00.7	+1.6
MOF	Molkenrain	6.86	242	P	Pn	14 53 59.5	-0.8
BCLA	Clavier	6.92	265	PN	Pn	14 54 00.6	-0.4
BCLA	Clavier	6.92	265	Pn	Pn	14 54 00.5	-0.5
HINF	Hinteralfeld	7.04	242	*e*Pg	Pg	14 54 28.7	-4.5
	SNR=1.0						
HINF				*e*Sg	Sg	14 56 00.7	-3.7
	comp=Z,154nm,0.8s,SNR=1.0						
HINF	Hinteralfeld	7.04	242	*e*Pg	Pg	14 54 28.7	-4.5
	SNR=1.0						
HINF				*e*Sg	Sg	14 56 00.7	-3.7
	comp=Z,77nm,0.8s,SNR=1.0						
HINF	Hinteralfeld	7.04	242	*e*Pn	Pn	14 54 00.4	-2.3
HINF				*e*Pg	Pg	14 54 28.7	-4.5
HINF				*e*Sg	Sg	14 56 00.7	-3.7
BUR08	Bucovina Ar. S	7.04	119	*e*Pn	Pn	14 54 01.6	-1.1
BUR08	Bucovina Ar. S	7.04	119	*e*Pn	Pn	14 54 01.6	-1.1
BURAR	Bucovina Array	7.07	120	⇓*i*P	Pn	14 54 02.0	-1.1
BURAR	Bucovina Array	7.07	120	⇓P	Pn	14 54 02.0	-1.1
HAU	Haudompre	7.22	245	*e*Pn	Pn	14 54 03.2	-1.9
	SNR=1.0						
HAU				*e*Sg	Sg	14 56 05.6	-4.5
	comp=Z,201nm,0.8s						
HAU	Haudompre	7.22	245	*e*Pn	Pn	14 54 03.2	-1.9
	SNR=1.0						
HAU				*e*Sg	Sg	14 56 05.6	-4.5
	comp=Z,100nm,0.8s						
ISAL	Salakas	7.24	52	*e*P	Pg	14 54 32.8	-4.3
ISAL				*e*S	Sg	14 56 13.5	+2.6
GIVF	Givet	7.29	264	*e*Pn	Pn	14 54 02.9	-3.2
GIVF				*e*Sg	Sg	14 56 07.0	-5.5
	comp=Z,339nm,1.0s						
GIVF	Givet	7.29	264	*e*Pn	Pn	14 54 02.9	-3.2
GIVF				*e*Sg	Sg	14 56 07.0	-5.5
	comp=Z,169nm,1.0s						
THEF	They Montfort	7.31	248	P	Pn	14 54 04.4	-2.0
IZAR	Zarasai	7.39	51	*e*S	Sg	14 56 12.1	-3.5
RFYF	Reffroy	7.42	252	*e*Pn	Pn	14 54 04.7	-3.2
	baz=75						
RFYF				*e*Sg	Sg	14 56 12.1	-4.5
	comp=Z,893nm,1.4s						
RFYF	Reffroy	7.42	252	*e*Pn	Pn	14 54 04.7	-3.2
RFYF				*e*Sg	Sg	14 56 12.1	-4.5
	comp=Z,447nm,1.4s						
IDID	Didziasalis	7.43	55	*e*P	Pg	14 54 33.5	-7.1
IDID				*e*S	Sg	14 56 07.8	-8.9
BAIF	Baives	7.69	264	*e*Pn	Pn	14 54 07.8	-3.7
BAIF				*e*Sg	Sg	14 56 20.2	-4.9
	comp=Z,295nm,1.1s						
BAIF	Baives	7.69	264	*e*Pn	Pn	14 54 07.8	-3.7
BAIF				*e*Sg	Sg	14 56 20.2	-4.9
	comp=Z,147nm,1.1s						
MEZF	Maizieres J'vi	7.73	252	*e*Pn	Pn	14 54 09.0	-3.1
	baz=71						
MEZF				*e*Sg	Sg	14 56 20.6	-5.8
	comp=Z,440nm,1.3s						
MEZF	Maizieres J'vi	7.73	252	*e*Pn	Pn	14 54 09.0	-3.1
MEZF				*e*Sg	Sg	14 56 20.6	-5.8
	comp=Z,220nm,1.3s						
SFTF	Sexfontaines	7.87	250	*e*Sg	Sg	14 56 26.0	-5.1
	comp=Z,892nm,1.4s						
SFTF	Sexfontaines	7.87	250	*e*Sg	Sg	14 56 26.0	-5.1
	comp=Z,446nm,1.4s						
BBLS	Lazići	7.92	162	*e*P	Pn	14 54 17.4	+2.6
NRAU	Nora	8.14	356	P	Pn	14 54 16.4	-1.4
CABF	La Chapelle	8.19	237	*e*Sg	Sg	14 56 36.1	-5.1
	comp=Z,614nm,1.3s						

CABF	La Chapelle	8.19	237	*e*Sg	Sg	14 56 36.1	-5.1
	comp=Z,307nm,1.3s						
AKASG	Malin Array Be	8.29	90	Pn	Pn	14 54 17.1	-2.7
	comp=Z,6.7nm,0.3s,baz=282,slow=12,SNR=21						
AKASG				Sn	Sn	14 55 45.8	-8.3
	comp=Z,4.5nm,0.3s,baz=275,slow=23,SNR=5.8						
AKASG				Lg		14 56 43.0	
	baz=279,slow=28,SNR=2.5						
AKASG	Malin Array Be	8.29	90	P	Pn	14 54 17.1	-2.8
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.3s						
AKBB	Malin Array Si	8.29	90	*e*Pn	Pn	14 54 16.9	-3.0
AKBB	Malin Array Si	8.29	90	*e*Pg	Pg	14 54 52.8	-4.4
AKBB	Malin Array Si	8.29	90	*e*Pn	Pn	14 54 16.9	-2.9
AKBB				*e*Pg	Pg	14 54 52.8	-4.4
AKBB				*e*Sg	Sg	14 56 42.1	-2.5
BOLS	Boljevac	8.60	151	*e*P	Pn	14 54 26.4	+2.3
LPL	La Plagne	8.62	230	*e*Pn	Pn	14 54 22.3	-2.0
LPL				*e*Sg	Sg	14 56 48.4	-6.6
	comp=Z,248nm,1.5s						
LPG	La Plagne	8.62	230	*e*Pn	Pn	14 54 23.3	-1.1
	SNR=1.0						
LPG				*e*Sg	Sg	14 56 47.9	-7.2
	comp=Z,412nm,1.5s						
HFS	Hagfors	8.79	352	Pn	Pn	14 54 24.0	-2.7
	comp=Z,0.7nm,0.3s,baz=168,slow=14,SNR=14						
HFS				Sn	Sn	14 55 58.6	-7.7
	comp=Z,0.7nm,0.3s,baz=170,slow=28,SNR=3.2						
HFS				Lg		14 56 59.3	
	comp=Z,1.0nm,0.3s,baz=183,slow=25,SNR=2.4						
HFS	Hagfors	8.79	352	P	Pn	14 54 24.0	-2.6
HFS						14 55 58.6	
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS				smax			
	comp=N,1.0nm,0.3s						
KONO	Kongsberg	8.99	338	*e*P	Pn	14 54 29.3	0.0
BNI	Bardonecchia	8.99	228	*e*P	Pn	14 54 28.0	-1.4
BNI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNI	Bardonecchia	8.99	228	*e*Pn	Pn	14 54 28.0	-1.4
	comp=Z,8.8nm,0.8s						
BNI	Bardonecchia	8.99	228	*e*Pn	Pn	14 54 28.0	-1.4
	comp=Z,8.8nm,0.8s						
BNI				*e*Sg	Sg	14 56 57.9	-9.0
LOR	Lormes	9.03	247	*e*Pn	Pn	14 54 27.7	-2.3
	baz=62						
LOR				*e*Sg	Sg	14 57 02.2	-6.1
	comp=Z,146nm,1.1s						
LOR	Lormes	9.03	247	*e*Pn	Pn	14 54 27.7	-2.3
LOR				*e*Sg	Sg	14 57 02.2	-6.1
	comp=Z,73nm,1.1s						
MBDF	Montbardon	9.19	226	*e*P	Pn	14 54 34.5	+2.3
MBDF				*e*Sg	Sn	14 57 06.9	+51
	comp=Z,142nm,1.3s						
MBDF	Montbardon	9.19	226	*e*P	Pn	14 54 34.5	+2.3
MBDF				*e*Sg	Sn	14 57 06.9	+51
	comp=Z,71nm,1.3s						
MBDF	Montbardon	9.19	226	*e*Pn	Pn	14 54 29.7	-2.5
MBDF				*e*P		14 54 34.5	
MBDF				*e*Sg	Sn	14 57 06.9	+51
VSU	Vasula	9.28	37	*e*P	Pn	14 54 32.2	-1.2
VSU				pmax	pmax		
	comp=Z,86nm,1.6s						
SSF	Saint Saulge	9.35	247	*e*Pn	Pn	14 54 32.3	-2.0
SSF				*e*Sg	Sn	14 57 12.0	+52
	comp=Z,111nm,1.0s						
SSF	Saint Saulge	9.35	247	*e*Pn	Pn	14 54 32.3	-2.0
SSF				*e*Sg	Sn	14 57 12.0	+52
	comp=Z,55nm,1.0s						
SMF	Signal de Mont	9.39	244	*e*Sg	Sx	14 57 12.2	
	comp=Z,355nm,1.3s						
SMF	Signal de Mont	9.39	244	*e*Sg	Sx	14 57 12.2	
	comp=Z,178nm,1.3s						
ORIF	Oris-en-Rattie	9.46	230	*e*Pn	Pn	14 54 34.0	-2.0
ORIF				*e*Sg	Sn	14 57 17.3	+54
	comp=Z,396nm,1.6s						
ORIF	Oris-en-Rattie	9.46	230	*e*Pn	Pn	14 54 34.0	-2.0
ORIF				*e*Sg	Sn	14 57 17.3	+54
	comp=Z,198nm,1.6s						
AVF	Avril sur Loir	9.59	246	*e*Pn	Pn	14 54 34.8	-2.8
AVF				*e*Sn	Sn	14 56 13.8	-12
	comp=Z,4.7nm,0.5s,SNR=1.0						
AVF				*e*Sg	Sn	14 57 20.6	+55
	comp=Z,277nm,1.4s						
AVF	Avril sur Loir	9.59	246	*e*Pn	Pn	14 54 34.8	-2.8
AVF				*e*Sg	Sn	14 57 20.6	+55
	comp=Z,138nm,1.4s						
SBF	Sospel	9.60	221	*e*P	Pn	14 54 38.0	+0.2
SBF				*e*Sg	Sn	14 57 19.2	+53
	comp=Z,64nm,1.1s						
SBF	Sospel	9.60	221	*e*P	Pn	14 54 38.0	+0.2
SBF				*e*Sg	Sn	14 57 19.2	+53
	comp=Z,32nm,1.1s						
NAO01	NORSAR Array S	9.84	345	*e*Pn	Pn	14 54 35.2	-5.8
NAO01				*e*Sn	Sn	14 56 27.2	-4.7
NOA	NORSAR Array B	9.97	346	Pn	Pn	14 54 38.5	-4.3
	comp=Z,0.5nm,0.3s,baz=163,slow=12,SNR=9.3						
NOA				Sn	Sn	14 56 25.8	-9.4
	comp=Z,0.5nm,0.3s,baz=101,slow=16,SNR=2.9						
NOA				Lg		14 57 31.2	
	comp=Z,0.9nm,0.3s,baz=243,slow=20,SNR=5.0						
NOA	NORSAR Array B	9.97	346	P	Pn	14 54 38.5	-4.3
NOA						14 56 25.8	
NOA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA				smax			
	comp=N,1.0nm,0.3s						
BGF	Bois d'Agland	10.00	246	*e*Pn	Pn	14 54 40.2	-3.1
BGF				*e*Sg	Sn	14 57 32.8	+57
	comp=N,307nm,1.3s						
BGF	Bois d'Agland	10.00	246	*e*Pn	Pn	14 54 40.2	-3.1
BGF				*e*Sg	Sn	14 57 32.8	+57
	comp=N,154nm,1.3s						
VIVF	Saint-Julien-l	10.10	234	*e*Sg	Sx	14 57 37.8	
	comp=N,186nm,1.5s						
VIVF	Saint-Julien-l	10.10	234	*e*Sg	Sx	14 57 37.8	
	comp=N,93nm,1.5s						
FRF	La Foret Royal	10.17	223	*e*Pn	Pn	14 54 42.8	-2.9
SMRF	Simiane la Rot	10.32	228	*e*Sg	Sx	14 57 41.1	
	comp=N,136nm,1.4s						
SMRF	Simiane la Rot	10.32	228	*e*Sg	Sx	14 57 41.1	
	comp=N,68nm,1.4s						
LMR	La Mourre	10.42	222	*e*Pn	Pn	14 54 45.6	-3.4
TCF	Toulx Ste Croi	10.52	246	*e*Sg	Sx	14 57 48.8	
	comp=N,189nm,1.2s						
TCF	Toulx Ste Croi	10.52	246	*e*Sg	Sx	14 57 48.8	
	comp=N,94nm,1.2s						
TIRR	Tirgusor	10.82	126	*e*P	Pn	14 54 51.1	-3.3
LDF	La Druitiere	10.84	261	*e*Sg	Sx	14 57 59.0	
	comp=N,91nm,1.0s						
LDF	La Druitiere	10.84	261	*e*Sg	Sx	14 57 59.0	
	comp=N,46nm,1.0s						
FLN	La Foliniere	11.00	262	*e*Sg	Sx	14 58 03.7	
	comp=N,173nm,1.4s						
FLN	La Foliniere	11.00	262	*e*Sg	Sx	14 58 03.7	
	comp=N,87nm,1.4s						
LASF	Ste Croix	11.07	233	*e*Pn	Pn	14 54 55.0	-2.9
	SNR=1.0						
LASF				*e*Sg	Sn	14 58 05.4	+63
	comp=N,159nm,1.5s						
LASF	Ste Croix	11.07	233	*e*Pn	Pn	14 54 55.0	-2.9
	SNR=1.0						
LASF				*e*Sg	Sn	14 58 05.4	+63
	comp=N,80nm,1.5s						
GRR	Gorron	11.37	261	*e*Pn	Pn	14 54 58.3	-3.7
	SNR=1.0						
GRR				*e*Sg	Sn	14 58 14.8	+65
	comp=N,214nm,1.7s						
GRR	Gorron	11.37	261	*e*Pn	Pn	14 54 58.3	-3.7
	SNR=1.0						
GRR				*e*Sg	Sn	14 58 14.8	+65
	comp=N,107nm,1.7s						
CAF	Calviac	11.43	241	*e*Sg	Sx	14 58 15.8	
	comp=N,110nm,1.4s						
CAF	Calviac	11.43	241	*e*Sg	Sx	14 58 15.8	
	comp=N,55nm,1.4s						
RJF	Les Rejaudoux	11.49	243	*e*Pn	Pn	14 55 00.5	-3.2
RJF				*e*Sg	Sn	14 58 19.3	+67
	comp=N,135nm,1.4s						
RJF	Les Rejaudoux	11.49	243	*e*Pn	Pn	14 55 00.5	-3.2
RJF				*e*Sg	Sn	14 58 19.3	+67
	comp=N,67nm,1.4s						
MFF	Saint Martin d	11.73	252	*e*Sg	Sx	14 58 24.0	
	comp=N,174nm,1.4s						
MFF	Saint Martin d	11.73	252	*e*Sg	Sx	14 58 24.0	

comp=N,87nm,1.4s
KAF Kangasniemi 12.02 24 *ep* **Pn** **14 55 05.2 -5.6**
comp=N,3.4nm,0.5s
KAF Kangasniemi 12.02 24 *eP* **Pn** **14 55 05.2 -5.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s
EKA Eskdalemuir Ar 12.13 296 Pn **Pn** **14 55 07.7 -4.7**
comp=Z,0.6nm,0.3s,baz=104,slow=14,SNR=12
EKA Sn **Sn** **14 57 20.1 -8.0**
comp=Z,0.4nm,0.3s,baz=102,slow=25,SNR=3.7
EKA Eskdalemuir Ar 12.13 296 P **Pn** **14 55 07.7 -4.6**
EKA 14 57 20.1
EKA pmax pmax
comp=Z,1.0nm,0.3s
EKA Eskdalemuir Ar 12.13 296 Sn **Sn** **14 57 20.1 -8.0**
LFF La Frestale 12.15 243 *eSg* Sx 14 58 38.6
comp=Z,87nm,0.9s
LFF La Frestale 12.15 243 *eSg* Sx 14 58 38.6
comp=Z,43nm,0.9s
TIP Timpagrande 12.30 178 Pn **Pn** **14 55 07.8 -7.0**
MTLF Montolieu 12.43 235 *eSg* Sx 14 58 48.7
comp=Z,84nm,1.3s
MTLF Montolieu 12.43 235 *eSg* Sx 14 58 48.7
comp=Z,42nm,1.3s
OBN Obninsk 12.76 65*c iP* **Pn** **14 55 16.8 -4.1**
OBN pmax pmax
comp=Z,32nm,1.2s
MOS Moscow 13.45 63 *eP* **Pn** **14 55 23.6 -6.7**
MOS pmax pmax
comp=Z,56nm,0.9s
EPF Esparros 13.62 238 *eSg* Sx 14 59 25.1
comp=Z,154nm,1.6s
VAE Valguarnera 14.04 186 Sn **Sn** **14 58 06.6 -8.4**
comp=Z,6.1nm,0.3s,baz=6.4,slow=6.7,SNR=4.6
JOF Joensuu 14.07 30 *ep* **Pn** **14 55 33.3 -5.5**
ETSF Etsaut 14.19 239 *eSg* Sx 14 59 44.1
comp=Z,79nm,1.5s
SJPF Ste Jean 14.41 241 *eSg* Sx 14 59 50.5
comp=Z,114nm,1.5s
ANN Anapa 15.69 107 *eP* **Pn** **14 55 55.0 -5.6**
ANN pmax pmax
comp=Z,81nm,1.5s
KEST Kesra 16.47 200 Sn **Sn** **14 59 09.5 -4.5**
comp=Z,0.1nm,0.3s,baz=91,slow=13,SNR=2.2
BRTR Keskin Array B 16.93 127 Pn **Pn** **14 56 18.3 +1.7**
comp=Z,0.1nm,0.3s,baz=93,slow=2.5,SNR=4.0
ESDC Sonseca Array 18.28 238 P **Pn** **14 56 34.5 +1.2**
comp=Z,0.7nm,0.3s,baz=51,slow=11,SNR=4.6
ARCES ARCESS Array B 18.66 10 Pn **Pn** **14 56 32.4 -5.4**
comp=Z,1.4nm,0.3s,baz=191,slow=13,SNR=26
ARCES Sn **Sn** **14 59 49.5 -17**
comp=Z,0.2nm,0.3s,baz=192,slow=21,SNR=4.3
ARE0 ARCESS Array S 18.66 10 P **Pn** **14 56 31.1 -6.7**
LVZ Lovozero 18.80 22 *eP* **Pn** **14 56 39.0 -0.5**
LVZ pmax pmax
comp=Z,53nm,1.3s
KEV Kevo 19.05 12 *ep* **Pn** **14 56 38.2 -4.3**
comp=Z,9.5nm,0.7s
KEV Kevo 19.05 12 *eP* **Pn** **14 56 38.2 -4.3**
KEV pmax pmax
comp=Z,10.0nm,0.7s
KIV Kislovodsk 19.32 102 *eP* **Pn** **14 56 43.8 -2.1**
KIV pmax pmax
comp=Z,8.0nm,1.1s
GNI Garni 22.79 109 P **P** **14 57 24.5 +2.1**
comp=Z,1.9nm,0.3s,mb4.1,baz=171,slow=19,SNR=2.7
GNI Garni 22.79 109 *eP* **P** **14 57 21.4 -1.0**
GNI pmax pmax
comp=Z,21nm,1.3s
MDT Midelt 24.02 227 P **P** **14 57 34.1 -0.7**
comp=Z,0.9nm,0.6s,mb3.5,baz=26,slow=10.0,SNR=3.6
ASF Jabal al Asfar 24.58 134 P **P** **14 57 40.9 +1.0**
comp=Z,0.8nm,0.3s,mb3.9,baz=152,slow=8.6,SNR=3.9
ASF Jabal al Asfar 24.58 134 P **P** **14 57 40.9 +0.9**
ASF pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 25.15 62*c iP* **P** **14 57 43.4 -1.6**
ARU *e* 14 58 15.2
ARU *eS* **S** **15 02 09.7 -0.9**
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.6
ARU Arti 25.15 62 *eP* **P** **14 57 41.8 -3.2**
comp=Z,13nm,0.9s,mb4.7
ARU Arti 25.15 62 *eP* **P** **14 57 41.9 -3.1**
comp=Z,13nm,0.9s,mb4.7
AKTK Aktyubinsk 26.16 76 P **P** **14 57 53.3 -0.9**
AKTK Aktyubinsk 26.16 76 P **P** **14 57 53.3 -0.9**
AKTO Aktyubinsk 26.16 76 P **P** **14 57 53.3 -0.9**
comp=Z,3.2nm,0.6s,mb4.1,baz=286,slow=10,SNR=18
AKTO Aktyubinsk 26.16 76 P **P** **14 57 53.3 -0.9**
AKTO pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
SVE Sverdlovsk 26.24 61⇓ *eP* **P** **14 57 54.0 -0.8**
SVE pmax pmax
comp=Z,27nm,1.5s,mb4.7
BRVK Borovoye 32.53 66 *eP* **P** **14 58 46.3 -4.4**
BRVK pmax pmax
comp=Z,15nm,1.3s,mb4.8
BRVK Borovoye 32.53 66 *eP* **P** **14 58 46.3 -4.4**
comp=Z,15nm,1.3s,mb4.8
KURK Kurchatov 38.20 66 *eP* **P** **14 59 36.4 -3.1**
KURK pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
KURK Kurchatov 38.20 66 *eP* **P** **14 59 36.4 -3.1**
comp=Z,7.8nm,1.3s,mb4.3
KURK Kurchatov 38.20 66 *eP*P PP 15 01 01.8 -4.7
KURK Kurchatov 38.20 66 *eP* **P** **14 59 36.4 -3.1**
comp=Z,7.8nm,1.3s,mb4.3
KURK *eP*P PP 15 01 01.8 -4.6
NVS Novosibirsk 39.00 58 *i P* **P** **14 59 44.8 -1.4**
NVS pmax pmax
comp=Z,17nm,1.3s,mb4.5
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=E,8.0nm,1.2s
EKS2 Erkin-Say 39.32 80 *eP* **P** **14 59 49.2 +0.2**
comp=E,11nm,1.3s,mb4.3
EKS2 Erkin-Say 39.32 80 *eP* **P** **14 59 49.2 +0.2**
comp=E,11nm,1.3s,mb4.3
AAK Ala-Archa 39.78 79⇓ *iP* **P** **14 59 52.2 -0.6**
AAK pmax pmax
comp=Z,8.0nm,1.5s,mb4.1
AAK Ala-Archa 39.78 79 *eP* **P** **14 59 52.7 -0.1**
comp=Z,11nm,1.2s,mb4.4
TOA0 Torodi Ar. Sit 39.96 202 *eP* **P** **14 59 53.7 -0.9**
TOA0 Torodi Ar. Sit 39.96 202 *eP* **P** **14 59 53.6 -0.9**
TORD Torodi Ar. Bea 39.96 202 P **P** **14 59 54.3 -0.3**
comp=Z,3.3nm,0.9s,mb4.0,baz=9.8,slow=7.5,SNR=16
ZAA0 Zalesovo Array 40.22 59 *eP* **P** **14 59 55.1 -1.2**
ZAA0 Zalesovo Array 40.22 59 *eP* **P** **14 59 55.1 -1.2**
ZALV Zalesovo Beam 40.22 59 P **P** **14 59 55.5 -0.8**
comp=Z,2.3nm,0.9s,mb3.8,baz=316,slow=8.3,SNR=10
ZALV Zalesovo Beam 40.22 59 P **P** **14 59 55.5 -0.8**
ZALV pmax pmax
comp=Z,2.0nm,0.9s,mb3.8
MK31 Makanchi Array 42.23 69 *eP* **P** **15 00 12.0 -0.9**
MK31 Makanchi Array 42.23 69 *eP* **P** **15 00 12.0 -0.9**
MKAR Makanchi Array 42.23 69 P **P** **15 00 12.7 -0.3**
comp=Z,1.7nm,0.9s,mb3.8,baz=297,slow=8.0,SNR=7.5
MKAR Makanchi Array 42.23 69 *i P* **P** **15 00 12.6 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
HVS Khovu-Aksy 46.32 58⇓ *iP* **P** **15 00 45.7 0.0**
HVS pmax pmax
comp=Z,67nm,1.5s,mb5.5
WMQ Urumqi 47.05 70 *eP* **P** **15 00 51.5 +0.1**
SCHQ Schefferville 47.09 308 P **P** **15 00 50.1 -1.5**
comp=Z,3.7nm,0.8s,mb4.6,baz=121,slow=2.9,SNR=3.0
TLY Talaya 51.15 53 *eP* **P** **15 01 23.5 +0.8**
TLY pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
TLY Talaya 51.15 53 *eP* **P** **15 01 24.2 +1.5**
comp=Z,14nm,1.2s,mb4.8
TLY Talaya 51.15 53 *eP* **P** **15 01 24.2 +1.5**
comp=Z,14nm,1.2s,mb4.8
ZAK Zakamensk 51.74 55 *eP* **P** **15 01 25.7 -1.5**
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
BOD Bodaibo 52.18 42 *eP* **P** **15 01 27.8 -2.6**
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
SONM Songino Array 54.94 55 P **P** **15 01 50.9 +0.1**
comp=Z,2.4nm,0.9s,mb4.2,baz=292,slow=6.9,SNR=15
SONM Songino Array 54.94 55 P **P** **15 01 50.9 +0.2**
SONM pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 55.25 55 *i* P **P** **15 01 53.3 +0.3**
ULN Ulaanbaatar 55.25 55 P **P** **15 01 51.3 -1.7**
comp=Z,2.3nm,0.8s,mb4.3
ULN Ulaanbaatar 55.25 55 P **P** **15 01 51.4 -1.7**
comp=Z,2.3nm,0.8s,mb4.3
GTA Gaotai 56.87 67 *eP* **P** **15 02 02.3 -2.4**
GTA AP 15 02 05.5
GTA PCP PcP 15 02 58.9 -1.4
GTA AMB AMB
comp=Z,2.0nm,0.6s,mb4.3
BILL Bilibino 58.74 13 *eP* **P** **15 02 18.7 +1.2**
BILL pmax pmax
comp=Z,11nm,1.5s,mb4.7
YKA Yellowknife Ar 59.90 336 P **P** **15 02 24.6 -0.9**
comp=Z,1.9nm,0.6s,mb4.3,baz=29,slow=6.7,SNR=38
YKA Yellowknife Ar 59.90 336 P **P** **15 02 24.6 -0.9**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 59.90 336 P **P** **15 02 24.6 -0.9**
LZH Lanzhou 61.47 67 *eP* **P** **15 02 35.3 -1.3**
LZH AP 15 02 40.0
LZH XP 15 02 42.5
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,56nm,4.3s
HHC Hu-ho-hao-te 62.40 58 *eP* **P** **15 02 39.0 -3.8**
HHC AP 15 02 43.8
HHC PP PP 15 04 59.0 -0.6
HHC *eS* **S** **15 11 02.8 -7.6**
HHC SCS ScS 15 12 27.0 -9.1
HHC SS SS 15 15 09.1 -4.1
HHC AMB AMB
comp=Z,15nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,165nm,5.5s
HHC LR LR
comp=N,75nm,16.7s,MS4.2
HHC LR LR
comp=E,108nm,16.6s,MS4.2
HHC LR LR
comp=Z,103nm,16.6s,MS4.1
HHC AMB AMB
comp=Z,2.0nm,0.5s,mb4.6
XAN AMB AMB
comp=Z,106nm,20.1s
XAN LR LR
comp=E,22nm,19.5s
XAN LR LR
comp=Z,57nm,17.2s,MS3.8
KMI Kunming 68.73 76 P **P** **15 03 22.5 -1.4**
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb5.0
A18A Metzger Ranch, 69.87 325⇓ P **P** **15 03 30.7 0.0**
baz=70
GYA Guiyang 70.10 72 P **P** **15 03 28.8 -3.6**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
A17A Triple J Farms 70.15 326⇓ P **P** **15 03 32.8 +0.4**
baz=70
B18A Beardsley Farm 70.29 325⇓ P **P** **15 03 33.8 +0.5**
baz=70
A16A West Butte Ran 70.46 326⇓ P **P** **15 03 34.1 -0.2**
baz=70
EGMT Eagleton 70.59 325⇓ P **P** **15 03 35.2 +0.1**
baz=70
B17A L&G Farms, Che 70.74 326⇑ P **P** **15 03 35.8 -0.2**
baz=71
A15A Johnson Ranch, 70.83 327⇑ P **P** **15 03 36.4 -0.1**
baz=71
A14A Double T Ranch 71.06 328⇓ P **P** **15 03 38.1 +0.2**
baz=71
CHTO Chiang Mai 71.09 83 *eP* **P** **15 03 37.2 -1.4**
CHTO pmax pmax
comp=Z,20nm,1.6s,mb5.0
CHTO Chiang Mai 71.09 83 *eP* **P** **15 03 37.2 -1.4**
comp=Z,20nm,1.6s,mb5.0
CHTO Chiang Mai 71.09 83 *eP* **P** **15 03 37.2 -1.3**
comp=Z,20nm,1.6s,mb5.0
C17A Wharram Farm, 71.29 325⇑ P **P** **15 03 39.6 +0.3**
baz=71
D18A Linhart Farms, 71.31 324⇑ P **P** **15 03 40.1 +0.6**
baz=71
B15A Bradely Ranch, 71.34 327⇓ P **P** **15 03 39.3 -0.3**
baz=71
CM31 Chiang Mai Arr 71.36 84 *eP* **P** **15 03 42.6 +2.4**
CMAR Chiang Mai Arr 71.36 84 P **P** **15 03 39.2 -1.0**
comp=Z,0.7nm,0.3s,mb4.2,baz=306,slow=8.3,SNR=12
CMAR Chiang Mai Arr 71.36 84 P **P** **15 03 39.2 -1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
A13A Flathead Natio 71.43 328⇑ P **P** **15 03 40.2 +0.1**
baz=71
C16A Fuhringer Ranc 71.49 326⇑ P **P** **15 03 40.5 -0.1**
baz=71
B14A Marquette Ranc 71.54 327⇑ P **P** **15 03 40.3 -0.6**
baz=71
D17A Six Diamond Ra 71.67 325⇓ P **P** **15 03 41.8 +0.1**
baz=72
C15A Salmond Ranch, 71.82 326⇓ P **P** **15 03 42.5 0.0**
baz=72
E18A Harlowton 71.89 324⇓ P **P** **15 03 43.3 +0.4**
baz=72
B13A Whitefish 71.93 328⇑ P **P** **15 03 43.1 -0.1**
baz=72
A11A Hall Mountain, 72.04 329⇓ P **P** **15 03 44.8 +1.0**
baz=72
C14A Swan Lake 72.21 327⇑ P **P** **15 03 45.1 +0.2**
baz=72
E17A Martinsdale 72.32 325⇑ P **P** **15 03 46.2 +0.6**
baz=72
F18A Big Timber 72.37 324⇓ P **P** **15 03 46.5 +0.6**
baz=72
A10A Northport 72.40 330⇓ P **P** **15 03 46.2 +0.2**
baz=72
E16A East Helena 72.55 325⇑ P **P** **15 03 47.2 +0.2**
baz=72
C13A Hot Springs 72.57 328⇑ P **P** **15 03 47.2 +0.2**
baz=72
F17A Fitzpatrick Pl 72.72 324⇓ P **P** **15 03 47.7 -0.3**
baz=72
NJ2 Nanjing 72.85 60 *eP* **P** **15 03 47.3 -1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
RLMT Red Lodge 72.87 323⇓ P **P** **15 03 49.7 +0.8**
baz=73
RLMT Red Lodge 72.87 323 *eP* **P** **15 03 49.4 +0.6**
comp=Z,13nm,1.5s,mb4.8
RLMT Red Lodge 72.87 323 *eP* **P** **15 03 49.4 +0.5**
comp=Z,13nm,1.5s,mb4.8
A08A Turner Farm, O 72.95 331⇑ P **P** **15 03 49.8 +0.5**
baz=73
E15A Deer Lodge 72.99 326⇑ P **P** **15 03 49.5 0.0**
baz=73
D13A Huson 73.04 327⇑ P **P** **15 03 50.0 +0.2**
baz=73
MSO Missoula 73.09 327 *eP* **P** **15 03 49.8 -0.3**
comp=Z,1.0nm,0.4s,mb4.3
MSO Missoula 73.09 327 *eP* **P** **15 03 49.8 -0.4**
comp=Z,1.0nm,0.4s,mb4.3
F16A Kennard Place, 73.17 325⇓ P **P** **15 03 50.6 0.0**
baz=73
BOZ Bozeman (W) 73.29 325⇓ P **P** **15 03 51.6 +0.2**
baz=73
BOZ Bozeman (W) 73.29 325 *eP* **P** **15 03 52.0 +0.6**
BOZ pmax pmax
comp=Z,14nm,1.5s,mb4.9
BOZ Bozeman (W) 73.29 325 *eP* **P** **15 03 52.0 +0.6**
comp=Z,14nm,1.5s,mb4.9
BOZ Bozeman (W) 73.29 325 *eP* **P** **15 03 52.0 +0.6**
comp=Z,14nm,1.5s,mb4.9
D12A Red Ives Fores 73.38 328⇑ P **P** **15 03 51.6 -0.2**
baz=73
F15A Butte 73.44 325⇓ P **P** **15 03 52.5 +0.2**
baz=73
E13A Victor 73.51 327⇑ P **P** **15 03 52.9 +0.3**
baz=73
G16A Moss Hill, Enn 73.72 324⇓ P **P** **15 03 54.3 +0.5**
baz=74
H16A Russell Place, 73.96 324⇓ P **P** **15 03 56.3 +1.0**
baz=74
G15A Dillon 74.02 325⇑ P **P** **15 03 56.1 +0.5**
baz=74
F13A Darby 74.13 326⇓ P **P** **15 03 56.6 +0.4**
baz=74
E11A Bogner Ranch, 74.27 328⇑ P **P** **15 03 56.4 -0.7**
baz=74
I18A Diamond G Ranc 74.28 322⇓ P **P** **15 03 57.9 +0.7**
baz=74
L22A Ellis Ranch, M 74.35 319⇓ P **P** **15 03 57.6 0.0**
baz=74
I17A Pilgram Creek 74.38 323⇑ P **P** **15 03 58.7 +0.9**
baz=74
F12A Elk City 74.47 327⇑ P **P** **15 03 58.2 -0.1**
baz=74
D08A Wollman Farm, 74.53 330⇓ P **P** **15 03 58.6 +0.1**
baz=74
K20A Yellowstone Ra 74.59 321⇓ P **P** **15 03 58.8 -0.2**
baz=74
K19A Absolon Red Bu 74.65 321⇑ P **P** **15 03 58.8 -0.6**
baz=74
F11A Grangeville 74.66 328⇓ P **P** **15 03 59.2 -0.2**
baz=74
G13A Cobalt 74.70 326⇑ P **P** **15 03 59.5 -0.1**
baz=74
D07A Quincy 74.73 331⇓ P **P** **15 03 60.0 +0.2**
baz=75
I16A Newdale 74.76 324⇓ P **P** **15 04 00.2 +0.2**
baz=75
E09A Wood Farm, Sta 74.76 329⇓ P **P** **15 03 59.9 -0.1**
baz=75,SNR=6.0
J18A Kendall Valley 74.78 322⇑ P **P** **15 04 00.1 +0.1**
baz=75
L21A Rawlins 74.79 320⇑ P **P** **15 04 00.4 +0.3**
baz=75
H14A Leadore 74.81 325⇓ P **P** **15 04 00.6 +0.4**
baz=75
BW06 Boulder Array 74.97 322⇓ P **P** **15 04 01.0 -0.2**
baz=75
PDAR Pinedale Array 74.97 322 P **P** **15 04 01.1 -0.2**
comp=Z,1.2nm,0.7s,mb4.1,baz=49,slow=4.5,SNR=8.6
PDAR Pinedale Array 74.97 322 P **P** **15 04 01.0 -0.2**
E08A Dider Farm, El 75.08 330⇑ P **P** **15 04 01.4 -0.3**
baz=75
G11A Walters Elk Ra 75.13 327⇓ P **P** **15 04 01.5 -0.6**
baz=75
L20A Wamsutter 75.14 321⇑ P **P** **15 04 02.0 -0.2**
baz=75
H13A Challis 75.17 326⇑ P **P** **15 04 02.2 -0.1**
baz=75
K18A Toltan Ranch, 75.27 322⇓ P **P** **15 04 02.9 -0.1**
baz=75
HAWA Hanford 75.31 330 *eP* **P** **15 04 03.2 +0.1**
comp=Z,1.7nm,0.7s,mb4.2
HAWA Hanford 75.31 330 *eP* **P** **15 04 03.2 +0.1**
comp=Z,1.7nm,0.7s,mb4.2
J16A Bone 75.32 323⇑ P **P** **15 04 04.2 +0.9**
baz=75
H12A Diamond D Ranc 75.39 326⇑ P **P** **15 04 03.3 -0.2**
baz=75
I14A Mackay 75.43 325⇓ P **P** **15 04 03.7 -0.1**
baz=75
G10A Bishop Farm, J 75.51 328⇓ P **P** **15 04 03.9 -0.3**
baz=75
M20A Sweetwater, Wa 75.52 320⇓ P **P** **15 04 04.9 +0.5**
baz=75
F08A Pendleton 75.60 329⇓ P **P** **15 04 04.4 -0.4**
baz=75
E06A Yakima 75.62 331⇓ P **P** **15 04 04.9 0.0**
baz=76
I13A Wildhorse Cree 75.68 325⇓ P **P** **15 04 06.0 +0.7**
baz=76
K16A Soda Springs 75.69 323⇑ P **P** **15 04 06.6 +1.2**
baz=76
E05A Randle 75.84 331⇓ P **P** **15 04 06.5 +0.3**
baz=76
N21A Black Mountain 75.86 319⇑ P **P** **15 04 07.1 +0.7**
baz=76
L18A Fontenelle, Gr 75.88 322⇑ P **P** **15 04 07.3 +0.9**
baz=76
F07A Phinny Hill Vi 75.88 330⇓ P **P** **15 04 07.3 +0.9**
baz=76
J14A Carey 75.98 325⇑ P **P** **15 04 06.6 -0.4**
baz=76
H10A Noah's Angus R 76.00 327⇑ P **P** **15 04 06.9 -0.2**
baz=76
HLID Hailey 76.09 325⇓ P **P** **15 04 07.9 +0.2**
baz=76
N20A Spence Gulch, 76.10 320⇑ P **P** **15 04 07.6 -0.1**
baz=76
G08A Pilot Rock 76.11 329⇓ P **P** **15 04 07.6 -0.1**
baz=76
I12A Atlanta 76.15 326⇑ P **P** **15 04 07.9 0.0**
baz=76
K15A Arbon 76.17 324⇓ P **P** **15 04 08.2 +0.1**
baz=76
H09A Durkee 76.25 328⇑ P **P** **15 04 08.4 -0.1**
baz=76
M18A Lyman 76.31 321⇓ P **P** **15 04 08.7 -0.2**
baz=76
G07A Ruggs Ranch, H 76.36 330⇓ P **P** **15 04 09.3 +0.2**
baz=76
N19A John Jarvie Ra 76.42 320⇑ P **P** **15 04 09.9 +0.4**
baz=76
I10A Payette 76.47 327⇓ P **P** **15 04 10.1 +0.4**
baz=76
M17A Scullys Gap (B 76.51 322⇓ P **P** **15 04 10.7 +0.7**
baz=76
K14A Jones Ranch, D 76.53 324⇑ P **P** **15 04 10.8 +0.7**
baz=76
N18A Larsen Ranch, 76.54 321⇓ P **P** **15 04 10.3 0.0**
baz=76
LBTB Lobatse 76.61 171 P **P** **15 04 10.4 -0.1**
LBTB Lobatse 76.61 171 P **P** **15 04 10.4 -0.1**
J12A Stokes Ranch, 76.61 326⇓ P **P** **15 04 10.9 +0.4**
baz=76
O20A White River Ci 76.69 319⇑ P **P** **15 04 11.8 +0.8**
baz=76
G06A Carlson Farm, 76.69 330⇑ P **P** **15 04 11.9 +0.9**
baz=76
MFID Camas Ranch 76.72 326⇓ P **P** **15 04 11.5 +0.2**
baz=77
H07A Lands Inn, Kim 76.93 329⇑ P **P** **15 04 12.8 +0.4**
baz=77,SNR=6.4
L14A Malta 77.00 324⇓ P **P** **15 04 13.6 +0.8**
baz=77
M16A Huntsville 77.02 322⇑ P **P** **15 04 13.4 +0.6**
baz=77,SNR=6.5
N17A Moffit Pass 77.03 322⇓ P **P** **15 04 13.5 +0.5**
baz=77
H06A Lindquist Farm 77.05 330⇑ P **P** **15 04 13.9 +0.9**
baz=77
M15A Larsen Ranch, 77.20 323⇓ P **P** **15 04 14.5 +0.6**
baz=77
L13A Double Diamond 77.21 324⇑ P **P** **15 04 14.8 +0.8**
baz=77
K11A Parker Ranch, 77.36 326⇓ P **P** **15 04 15.8 +1.0**
baz=77,SNR=11
I07A Izee 77.37 329⇑ P **P** **15 04 15.6 +0.8**
baz=77
P19A Cripple Cowboy 77.41 320⇑ P **P** **15 04 15.8 +0.6**
baz=77
J09A Fry Pan Ranch, 77.44 327⇑ P **P** **15 04 15.6 +0.4**
baz=77
M14A Sheep Mountain 77.50 324⇑ P **P** **15 04 16.5 +0.9**
baz=77,SNR=7.7
O17A Robinson Place 77.63 321⇑ P **P** **15 04 17.0 +0.7**
baz=78
K10A MacKenzie Ranc 77.64 327⇓ P **P** **15 04 17.0 +0.6**
baz=78
Q20A Ridgley Place, 77.71 319⇑ P **P** **15 04 17.2 +0.4**
baz=78
I06A Prineville 77.72 329⇑ P **P** **15 04 18.2 +1.4**
baz=78,SNR=7.0
L11A Cat Creek Ranc 77.79 326⇓ P **P** **15 04 18.1 +0.8**
baz=78,SNR=11
R21A Cimarron 77.89 318⇓ P **P** **15 04 18.2 +0.4**
baz=78
P18A Preston Nutter 77.92 321⇑ P **P** **15 04 18.5 +0.5**
baz=78,SNR=6.2
M13A Montello 77.93 324⇓ P **P** **15 04 18.6 +0.6**
baz=78
N14A Grayback Hills 78.00 323⇓ P **P** **15 04 18.9 +0.4**
baz=78
K09A Rome 78.01 327⇓ P **P** **15 04 18.9 +0.5**
baz=78,SNR=9.9

L10A	Juniper Basin	78.12	326	⇓P	P	15 04 19.3	+0.2
	baz=78						
M12A	Wells	78.15	325	⇑P	P	15 04 19.8	+0.6
	baz=78,SNR=6.0						
K08A	Mann Creek Ran	78.24	328	⇓P	P	15 04 19.7	0.0
	baz=78						
P17A	Butcher Ranch,	78.25	321	⇓P	P	15 04 20.0	+0.1
	baz=78						
J06A	Christmas Vall	78.32	329	⇓P	P	15 04 20.5	+0.4
	baz=78						
Q18A	Rafter H Ranch	78.33	320	⇑P	P	15 04 20.4	+0.1
	baz=78,SNR=7.5						
DUG	Dugway	78.43	323	⇑P	P	15 04 21.4	+0.5
	baz=78						
DUG	Dugway	78.43	323	*e*P	P	15 04 21.2	+0.4
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
DUG	Dugway	78.43	323	*e*P	P	15 04 21.2	+0.4
	comp=Z,8.2nm,1.0s,mb4.8						
M11A	Holland Ranch,	78.45	325	⇑P	P	15 04 21.1	+0.2
	baz=78						
SRU	San Rafael	78.48	320	⇑P	P	15 04 21.5	+0.4
	baz=78						
K07A	Rock Creek Ran	78.53	328	⇓P	P	15 04 21.4	+0.1
	baz=78						
R19A	Curley Farm, L	78.67	319	⇑P	P	15 04 22.8	+0.6
	baz=78						
L08A	Fields	78.67	327	⇓P	P	15 04 22.6	+0.5
	baz=78						
N12A	Clover Valley,	78.69	324	⇑P	P	15 04 22.8	+0.6
	baz=78						
P15A	Leamington	78.77	322	⇓P	P	15 04 23.2	+0.5
	baz=79						
R18A	Canyonlands Na	78.84	320	⇓P	P	15 04 23.2	+0.1
	baz=79						
O13A	Hicks Ranch, I	78.93	323	⇑P	P	15 04 24.1	+0.6
	baz=79						
K05A	Summer Lake	79.03	329	⇓P	P	15 04 24.5	+0.4
	baz=79						
M09A	Marrel Ranch,	79.04	326	⇑P	P	15 04 25.0	+0.9
	baz=79						
P14A	Drum Mountains	79.06	322	⇓P	P	15 04 25.0	+0.8
	baz=79,SNR=5.5						
S19A	Harvey Farm, M	79.08	319	⇑P	P	15 04 24.9	+0.5
	baz=79,SNR=6.5						
R17A	Hanksville Air	79.14	320	⇓P	P	15 04 24.8	0.0
	baz=79						
L07A	Adell	79.16	328	⇑P	P	15 04 25.5	+0.8
	baz=79						
MVCO	Mesa Verde	79.27	318	⇑P	P	15 04 25.8	+0.3
	baz=79						
M08A	Happy Creek Ra	79.34	327	⇓P	P	15 04 26.7	+0.9
	baz=79						
P13A	Bates Ranch, G	79.53	323	⇑P	P	15 04 28.0	+1.2
	baz=79,SNR=12						
O11A	Cowboy Ranch,	79.55	324	⇑P	P	15 04 27.5	+0.6
	baz=79						
N09A	Rock Creek Ran	79.58	326	⇑P	P	15 04 27.7	+0.6
	baz=79						
Q14A	Sevier Lake (B	79.66	322	⇑P	P	15 04 28.7	+1.2
	baz=80,SNR=8.6						
M07A	Soldier Meadow	79.66	327	⇓P	P	15 04 28.4	+0.9
	baz=80						
O10A	Cortez Mining,	79.71	325	⇑P	P	15 04 28.6	+0.8
	baz=80						
T19A	Beclabito	79.82	318	⇑P	P	15 04 28.9	+0.5
	baz=80						
P12A	McGill	79.85	324	⇑P	P	15 04 29.0	+0.4
	baz=80						
N08A	GE Springer Mi	79.85	326	⇑P	P	15 04 29.4	+0.8
	baz=80						
S17A	Black Ridge (B	79.86	320	⇑P	P	15 04 29.3	+0.6
	baz=80						
T18A	Mexican Hat	79.91	319	⇓P	P	15 04 29.2	+0.2
	baz=80,SNR=9.0						
Q13A	Wheeler Ranch,	79.97	323	⇓P	P	15 04 30.7	+1.4
	baz=80,SNR=5.5						
O09A	Fish Creek Ran	80.06	326	⇓P	P	15 04 30.3	+0.6
	baz=80						
S16A	Weppner Ranch,	80.10	320	⇓P	P	15 04 30.2	+0.3
	baz=80						
N07B	Gerlach	80.14	327	⇑P	P	15 04 30.9	+0.7
	baz=80						
BOSA	Boshof	80.14	172	P	P	15 04 30.9	+0.9
	comp=Z,3.2nm,0.9s,mb4.2,baz=326,slow=7.3,SNR=3.1						
BOSA	Boshof	80.14	172	P	P	15 04 30.9	+0.9
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
Q12A	Willow Creek R	80.20	323	⇑P	P	15 04 31.0	+0.5
	baz=80						
ANMO	Albuquerque	80.31	315	⇓*i*P	P	15 04 32.8	+1.6
T17A	Navajo Res., N	80.41	320	⇓P	P	15 04 31.6	0.0
	baz=80						
S15A	Panguitch	80.44	321	⇑P	P	15 04 32.5	+0.6
	baz=80						
N06A	Buffalo Meadow	80.46	328	⇑P	P	15 04 32.3	+0.5
	baz=80						
U18A	Rough Rock, Ch	80.52	319	⇑P	P	15 04 32.6	+0.3
	baz=80						
R13A	O'Grain Ranch,	80.63	322	⇓P	P	15 04 33.7	+0.9
	baz=80						
O07A	Toulon	80.66	327	⇑P	P	15 04 33.7	+0.7
	baz=80						
Q11A	Duckwater	80.68	324	⇑P	P	15 04 33.2	+0.2
	baz=80						
R11A	Troy Canyon, C	81.09	324	⇓P	P	15 04 35.6	+0.3
	baz=81						
S13A	Holt Ranch, En	81.11	322	⇓P	P	15 04 36.0	+0.6
	baz=81						
U16A	Tuba City	81.27	319	⇑P	P	15 04 36.8	+0.5
	baz=81						
R10A	Warm Springs	81.41	324	⇑P	P	15 04 37.6	+0.7
	baz=81						
U15A	North Rim	81.50	320	⇓P	P	15 04 37.8	+0.4
	baz=81,SNR=5.5						
WCN	Washoe City	81.73	327	⇑P	P	15 04 38.4	-0.3
	baz=82						
R09A	Tonopah	81.73	325	⇓P	P	15 04 38.2	-0.4
	baz=82						
U14A	Mt Trumbull	81.86	321	⇑P	P	15 04 39.5	+0.1
	baz=82						
T11A	Corn Creek, Al	81.93	323	⇑P	P	15 04 39.9	+0.2
	baz=82						
V15A	Kaibab Nationa	81.98	320	⇓P	P	15 04 39.9	-0.1
	baz=82						
NVAR	Mina Array Bea	82.00	325	P	P	15 04 41.5	+1.4
	comp=Z,0.6nm,0.9s,mb3.7,baz=35,slow=5.4,SNR=5.4						
U13A	Pakoon Wash	82.17	321	⇓P	P	15 04 41.3	+0.3
	baz=82						
S09A	Goldfield	82.24	324	⇓P	P	15 04 41.9	+0.6
	baz=82						
Y19A	Nutrioso	82.37	317	⇑P	P	15 04 43.3	+1.2
	baz=82						
V14A	Boquillas Ranc	82.51	320	⇓P	P	15 04 43.9	+1.1
	baz=82						
TPNV	Topopah Spring	82.57	323	⇓P	P	15 04 43.8	+0.7
	baz=82						
V13A	Grand Canyon W	82.67	321	⇓P	P	15 04 44.4	+0.8
	baz=82						
W14A	Seligman	82.87	320	⇓P	P	15 04 45.4	+0.7
	baz=83						
X16A	Lo Mia Camp, P	82.89	319	⇑P	P	15 04 45.4	+0.6
	baz=83						
V12A	Nelson	83.11	322	⇓P	P	15 04 47.0	+1.0
	baz=83						
X15A	Humboldt	83.16	319	⇑P	P	15 04 47.2	+1.0
	baz=83						
Y17A	Roosevelt	83.27	318	⇓P	P	15 04 47.5	+0.7
	baz=83						
W13A	Hualapai Mount	83.29	321	⇓P	P	15 04 48.1	+1.2
	baz=83						
Y16A	Circle Bar Ran	83.37	318	⇑P	P	15 04 48.4	+1.1
	baz=83						
X14A	Yava	83.44	320	⇓P	P	15 04 48.7	+1.1
	baz=83						
Y15A	Casa Rosa Ranc	83.66	319	⇑P	P	15 04 49.3	+0.5
	baz=84						
CWC	Cottonwood Cre	83.70	324	⇓P	P	15 04 49.4	+0.4
	baz=84						
X13A	Yucca	83.71	320	⇑P	P	15 04 49.8	+0.7
	baz=84						
TXAR	Lajitas Array	83.74	310	P	P	15 04 49.7	+0.4
	comp=Z,0.9nm,0.9s,mb4.0,baz=57,slow=4.6,SNR=8.5						
TXAR	Lajitas Array	83.74	310	P	P	15 04 49.7	+0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
118A	Homack Ranch,	83.80	317	⇓P	P	15 04 49.9	+0.3
	baz=84						
MPMC	Manual Prospec	83.82	324	⇓P	P	15 04 50.1	+0.5
	baz=84						
219A	White Tail Can	84.04	316	⇑P	P	15 04 51.1	+0.3
	baz=84						
GMRC	Granite Mounta	84.26	322	⇑P	P	15 04 52.7	+0.9
	baz=84						
ISA	Isabella	84.53	324	⇑P	P	15 04 53.9	+0.7
	baz=84						
319A	Douglas	84.59	316	⇓P	P	15 04 54.0	+0.4
	baz=84						
IRM	Iron Mountain	84.61	321	⇑P	P	15 04 54.6	+1.0
	baz=84						
115A	Sonoran Desert	84.70	318	⇑P	P	15 04 55.2	+1.1
	baz=84						
EDW2	Edwards Air Fo	85.05	324	⇓P	P	15 04 56.7	+0.9
	baz=85						
PMG	Port Moresby	122.14	62	*e*PKIKP	PKPdf	15 11 13.1	-2.1
PMG	Port Moresby	122.14	62	*e*PKPdf	PKPdf	15 11 13.2	-2.0
ASAR	Alice Springs	125.36	84	PKP	PKPdf	15 11 19.4	-1.7
	comp=Z,0.4nm,0.7s,baz=319,slow=2.4,SNR=5.7						

*ISCJB **13** 15:10:36.6±1.2, 4137N±005×4373E±005, h2km±11km, Error ellipse: s-maj=9.3km s-min=5.4km az=164.1*
*DDA **13** 15:10:37.4, 4154N×4360E, h7km±3km, Md2.6*
*CSEM **13** 15:10:37.4, 4154N×4360E, h7km, MD2.6, After ERD*
*TIF **13** 15:10:39.0, 4138N×4395E, h19km±1km*
ISC 13 15:10:37.6±1.3**, 4139N**±006×**4374E**±006**, h11**km±10km**, n9, σ0^{s}69**/18**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOR	Gori	0.66	25	P	Pg	15 10 50.3	0.0
GOR				S	Sg	15 11 00.5	+1.6
MTA	Mtatsminda	0.84	69	P	Pg	15 10 53.2	-0.6
MTA				S	Sg	15 11 04.2	-0.7
ONI	Oni	1.21	350	P	Pn	15 11 00.3	-0.1
ONI				S	Sb	15 11 15.0	-1.0
DGRG	David-gareji	1.23	87	P	Pn	15 10 59.9	-0.7
DGRG				S	Sb	15 11 17.6	+1.1
ARTV	Artvin	1.38	262	*i* P	Pn	15 11 02.4	-0.3
ARTV				*i* S	Sn	15 11 20.3	-0.7
DAGI	Agillar	1.42	258	*i* P	Pn	15 11 02.8	-0.4
DAGI				*i* S	Sn	15 11 22.4	+0.6
DBOC	Borcka	1.56	269	*i* P	Pn	15 11 05.7	+0.5
DBOC				*i* S	Sn	15 11 26.1	+0.6
DBOC	Borcka	1.56	269	*i* P	Pn	15 11 05.7	+0.5
DBOC				*i* S	Sn	15 11 26.0	+0.5
DDEM	Demirkent	1.59	252	*i* P	Pn	15 11 05.6	+0.1
DDEM				*i* S	Sn	15 11 26.2	+0.3

*IDC **13** 15:26:09.8±1.5, 498N×12486E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/20, mbtmp3.5/5, MS3.4/1, Ms1 3.4/1, ms1mx2.8/29, Error ellipse: s-maj=178.0km s-min=20.2km az=66.0*
*ISCJB **13** 15:26:13.2±0.9, 467N±009×124.1E±02, h33km, mb3.5/5, Error ellipse: s-maj=22.6km s-min=11.0km az=16.8*
ISC 13 15:26:15.6±0.9**, 469N**±008×**1243E**±02**, h35**km**, n7, σ0^{s}91**/7**, mb3.5**/5**, 1D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.55	27	⇓*e*P	Pn	15 26 42.2	+1.5
GSPH				*e*S	Sn	15 26 58.9	-0.8
WRA	Warramunga Arr	26.42	158	P	P	15 31 49.5	+0.3
	0.6nm,0.4s,mb3.5,baz=338,slow=10,SNR=6.7						
ASAR	Alice Springs	29.72	162	P	P	15 32 18.1	-0.6
	0.2nm,0.5s,mb3.1,baz=340,slow=7.8,SNR=11						
KSRS	Korea Array	32.78	5	LR	LR	15 45 42.9	
	comp=Z,72nm,20.2s,baz=344,slow=36						
MKAR	Makanchi Array	55.37	326	P	P	15 35 46.7	+0.6
	0.3nm,0.3s,mb3.7,baz=115,slow=8.4,SNR=4.1						
ZALV	Zalesovo Beam	58.62	334	P	P	15 36 07.6	-1.5
	0.4nm,0.5s,mb3.7,baz=113,slow=6.9,SNR=3.1						
KURK	Kurchatov	59.61	328	P	P	15 36 16.4	+0.5
	0.3nm,0.4s,mb3.6,baz=127,slow=6.1,SNR=8.2						

*ISCJB **13** 15:37:13.5±0.5, 2388N±002×12254E±002, h6km±3km, mb3.7/11, Error ellipse: s-maj=2.9km s-min=2.4km az=155.8*
*NEIC **13** 15:37:14.9±2.4, 2399N×12255E, h22km±16km, mb4.2/3, Error ellipse: s-maj=15.5km s-min=7.8km az=79.0*
*TAP **13** 15:37:15.3, 2398N×12255E, h27km, ML4.1, D*
*JMA **13** 15:37:16.2±0.3, 2399N×12256E, h22km, M3.3*
*IDC **13** 15:37:25.3±7.0, 2401N×12236E, h116km±68km, mb3.3/8, mb1 3.5/9, mb1mx3.3/24, mbtmp3.3/9, MS3.1/1, Ms1 3.1/1, ms1mx2.6/18, Error ellipse: s-maj=41.3km s-min=14.7km az=67.0*
ISC 13 15:37:14.1±0.4**, 2391N**±002×**12255E**±002**, h9**km±2km**, n80, σ1^{s}05**/136**, mb3.7**/11**, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.69	37	P	Pg	15 37 28.4	+0.9
YOJ				S	Sg	15 37 36.7	+0.2
HWA	Hwalien	0.87	275	*e*P	Pg	15 37 31.7	+1.0
	baz=257						
HWA				*e*S	Sg	15 37 44.9	+2.9
	baz=257						
TWD	Chiawan	0.89	281	P	Pg	15 37 31.4	+0.2
	baz=276						
TWD				*e*S	Sg	15 37 42.6	-0.1
	baz=276						
ENA	Nanau	0.90	305	⇑*i*P	Pg	15 37 31.6	+0.2
	baz=308						
ENA				*e*S	Sg	15 37 44.3	+1.2
	baz=308						
NACB	Ninganchiao	0.91	287	*e*Pg	Pg	15 37 31.3	-0.3
TWC	Suao	0.95	318	*i* P	Pg	15 37 31.9	-0.4
	baz=315						
TWC				S	Sg	15 37 43.2	-1.4
	baz=315						
ESL	Shilin	1.03	265	P	Pg	15 37 33.2	-0.6
	baz=250						
ESL				*e*S	Sg	15 37 46.9	-0.3
	baz=250						
ILA	Ilan	1.12	320	*e*P	Pg	15 37 35.9	+0.3
	baz=305						
ILA				S	Sg	15 37 50.6	+0.3
	baz=305						
TWE	Neicheng	1.14	315	*i* P	Pb	15 37 35.7	-0.2
	baz=300						
TWE				S	Sg	15 37 50.8	-0.1
	baz=300						
ENTT	Nioudou	1.16	309	⇓*i*P	Pb	15 37 36.0	-0.2
	baz=306						
ENTT				*i* S	Sg	15 37 51.4	+0.1
	baz=306						
HATJ	Hateruma jima	1.16	82	P	Pb	15 37 36.7	+0.5
HATJ				*e*S	Sg	15 37 50.9	-0.5
IRIF	Iriomote-Funau	1.16	68	P	Pb	15 37 36.7	+0.4
IRIF				*e*S	Sg	15 37 52.0	+0.6
EHY	Hungye	1.19	251	⇓*i*P	Pb	15 37 36.3	-0.6
	baz=247						
EHY				S	Sb	15 37 51.4	-1.0
	baz=247						
NNS	Nan Shan	1.20	296	*i* P	Pb	15 37 36.4	-0.5
	baz=280						
NNS				*i* S	Sb	15 37 52.9	+0.4
	baz=280						
WHF	Hehuan Shan	1.20	282	*i* P	Pb	15 37 36.4	-0.5
	baz=265						
WHF				*e*S	Sb	15 37 52.3	-0.2
	baz=265						
TWB1	Santiao Chiao	1.21	335	P	Pb	15 37 36.3	-0.8
	baz=349						
TWB1				*e*S	Sb	15 37 52.8	0.0
	baz=349						
YULB	Yu-li	1.26	246	*e*Pg	Pg	15 37 37.1	-1.1
YULB				*e*Sg	Sg	15 37 53.1	-1.5
TWF1	Yuli	1.27	244	P	Pn	15 37 37.6	-0.5
	baz=241						
TWF1				*i* S	Sb	15 37 54.1	-0.6
	baz=241						
TWT	Tachien	1.30	286	*i* P	Pn	15 37 38.6	+0.2
	baz=271						
YHNB	Yeheng	1.31	306	*e*Pg	Pg	15 37 38.0	-1.3
NSK	Sanguang	1.33	305	⇓*i*P	Pn	15 37 38.4	-0.4
	baz=287						
NSK				S	Sb	15 37 56.8	+0.6
	baz=287						
NWF	Wu-fen Shan	1.35	329	P	Pn	15 37 38.5	-0.6
	baz=327						
NWF				*e*S	Sb	15 37 56.7	-0.3
	baz=327						
CHKT	Chengkung	1.35	234	*e*P	Pn	15 37 38.1	-1.0
	baz=220						
CHKT				*e*S	Sb	15 37 53.9	-3.1
	baz=220						
JKRS	Kuro-shima	1.37	76	P	Pn	15 37 40.1	+0.7
JKRS				*e*S	Sb	15 37 58.7	+1.1
TWA	Mucha	1.38	321	*e*P	Pn	15 37 39.8	+0.3
	baz=337						
TWA				*e*S	Sb	15 37 57.9	+0.1
	baz=337						
TATO	Taipei	1.44	318	*e*Pg	Pg	15 37 40.2	-1.4
TAP1	Taipei	1.46	320	*e*P	Pn	15 37 40.2	-0.4
	baz=318						
TAP1				*e*S	Sn	15 37 59.8	-0.2
	baz=318						
SSLB	Suanglung	1.47	266	*e*Pg	Pg	15 37 40.3	-1.9
SSLB				*e*Sg	Sg	15 37 53.5	-7.7
SMLT	Sun Moon Lake	1.51	269	P	Pn	15 37 41.3	0.0
	baz=266						
SMLT				*e*S	Sn	15 37 59.5	-1.5
	baz=266						
JIJ	Ishigaki jima	1.52	72	P	Pn	15 37 41.6	+0.1
JIJ				*e*S	Sn	15 38 00.9	-0.5
TYC	Yuchr	1.55	270	*e*P	Pn	15 37 41.5	-0.4
	baz=267						
TYC				*e*S	Sn	15 38 02.5	+0.4
	baz=267						
TWS1	Kuangyinshan	1.57	319	*e*P	Pn	15 37 42.0	-0.1
	baz=335						
TWS1				*e*S	Sn	15 38 02.7	+0.1
	baz=335						
NSTT	Nanjuang	1.58	297	P	Pn	15 37 43.0	+0.7
	baz=294						
NSTT				*e*S	Sn	15 38 02.5	-0.5
	baz=294						
TWY	Chenhua	1.61	328	*e*P	Pn	15 37 42.8	+0.1
	baz=326						
TWY				*e*S	Sn	15 38 03.1	-0.5
	baz=326						
NCU	National Centr	1.63	311	*e*P	Pn	15 37 43.2	+0.3
	baz=308						
TWQ1	Liyutan	1.68	285	*i* P	Pn	15 37 44.7	+1.1
	baz=282						
TWQ1				*e*S	Sn	15 38 05.8	+0.5
	baz=282						
HSN	Hsinchu	1.69	302	*e*P	Pn	15 37 44.9	+1.1
	baz=300						
HSN				*e*S	Sn	15 38 05.4	-0.2
	baz=300						
WNT	Mingjian	1.71	269	P	Pn	15 37 45.1	+1.1
	baz=267						
WNT				*e*S	Sn	15 38 05.5	-0.4
	baz=267						
TTN	Taitung	1.73	229	P	Pn	15 37 43.1	-1.2
	baz=227						
TTN				*e*S	Sn	15 38 05.2	-1.2
	baz=227						
TCU	Taichung	1.73	278	P	Pn	15 37 45.8	+1.5
	baz=275						
TCU				*e*S	Sn	15 38 07.6	+1.1
	baz=275						
TWG	Pinlang	1.74	232	*e*Pn	Pn	15 37 43.5	-0.9
TWG	Pinlang	1.74	232	*e*P	Pn	15 37 44.2	-0.2
	baz=242						
TWG				*e*S	Sn	15 38 05.2	-1.5
	baz=242						
CHN5	Tsauling	1.74	260	P	Pn	15 37 45.6	+1.1
	baz=258						
CHN5				*e*S	Sn	15 38 06.0	-0.7
	baz=258						
PCYT	Pengchaiyu	1.77	346	*e*P	Pn	15 37 44.1	-0.7
	baz=345						
STYT	Tauyuan	1.80	246	*e*P	Pn	15 37 45.9	+0.6
	baz=244						
STYT				*e*S	Sn	15 38 07.9	-0.4
	baz=244						
WGK	Gukeng	1.83	263	*e*P	Pn	15 37 46.7	+1.0
	baz=261						
WGK				*e*S	Sn	15 38 09.0	-0.1
	baz=261						
TPUB	Ta-pu	1.86	251	*e*Pn	Pn	15 37 46.8	+0.7
CHN4	Tsaushan	1.88	253	*e*P	Pn	15 37 47.6	+1.2
	baz=251						
CHN4				*e*S	Sn	15 38 10.6	+0.4
	baz=251						
WTP	Ta-pu	1.89	250	P	Pn	15 37 47.8	+1.2
	baz=240						
WTP				*e*S	Sn	15 38 10.8	+0.2
	baz=240						
CHN2	Minshiung	1.94	259	*e*P	Pn	15 37 49.2	+2.1
	baz=257						
CHN2				*e*S	Sn	15 38 13.3	+1.7
	baz=257						
ECL	Taimali	1.96	229	P	Pn	15 37 47.4	-0.1
	baz=228						
ECL				*e*S	Sn	15 38 10.5	-1.8
	baz=228						
CHN1	Nanshi	1.99	249	P	Pn	15 37 49.6	+1.7
	baz=247						
CHN1				*e*S	Sn	15 38 13.9	+1.0
	baz=247						
CHY	Chiayi	1.99	259	*e*P	Pn	15 37 47.6	-0.3
	baz=256						
CHY				*e*S	Sn	15 38 13.0	+0.1
	baz=256						
TWK	Hsinying	2.00	252	P	Pn	15 37 49.3	+1.3
	baz=250						
TWK				*e*S	Sn	15 38 13.1	+0.1
	baz=250						
LAY	Lan-yu	2.08	206	*e*P	Pn	15 37 48.2	-0.9
	baz=205						
LAY				*e*S	Sn	15 38 12.1	-2.9
	baz=205						
WTCT	Ta-ch'eng	2.08	269	*e*P	Pn	15 37 50.9	+1.9
	baz=280						
WTCT				*e*S	Sn	15 38 15.3	+0.2
	baz=280						
JTJ	Tarama	2.10	69	P	Pn	15 37 49.9	+0.6
SSD	Sandimen	2.11	237	*e*P	Pn	15 37 51.0	+1.5
	baz=229						
SSD				*e*S	Sn	15 38 15.1	-0.8
	baz=229						
WSF	Szhu	2.15	263	*e*P	Pn	15 37 51.5	+1.5
	baz=261						
WSF				*e*S	Sn	15 38 19.0	+2.2
	baz=261						
CHN3	Shinhua	2.17	248	*e*P	Pn	15 37 53.2	+2.9
	baz=247						
CHN3				*e*S	Sn	15 38 20.7	+3.4
	baz=247						
CHN8	Yiju	2.22	256	*e*P	Pn	15 37 52.6	+1.6
	baz=254						
CHN8				*e*S	Sn	15 38 19.5	+1.0
	baz=254						
TWM1	Shoushan	2.23	241	*e*P	Pn	15 37 54.6	+3.4
	baz=231						
TWM1				*e*S	Sn	15 38 23.3	+4.4
	baz=231						
SCLT	Jiali	2.28	252	*e*S	Sn	15 38 21.7	+1.6
	baz=251						
SCZT	Fangliau	2.34	230	*e*P	Pn	15 37 55.9	+3.2
	baz=221						
SCZT				*e*S	Sn	15 38 23.8	+2.2
	baz=221						
TWK1	Hengchun	2.53	220	*e*P	Pn	15 37 55.0	-0.3
	baz=219						
TWK1				*e*S	Sn	15 38 25.2	-1.1
	baz=219						
PNG	Penghu	2.77	264	*e*P	Pn	15 37 59.2	+0.6
	baz=261						
PNG				*e*S	Sn	15 38 30.4	-1.7
	baz=261						
KNM	Kinmen	3.79	278	*e*P	Pn	15 38 13.2	+0.6
	baz=275						
KNM				*e*S	Sn	15 38 56.8	-0.6
	baz=275						
KSRS	Korea Array	14.27	18	P	Pn	15 40 41.5	+5.3
	0.5nm,0.3s,baz=198,slow=11,SNR=12						
CBIJ	Chichi jima	18.01	76	LR	LR	15 46 39.1	
	comp=Z,65nm,20.2s,baz=108,slow=30						
SONM	Songino Array	27.12	336	P	P	15 42 55.4	-1.8
	0.3nm,0.5s,mb3.1,baz=149,slow=9.2,SNR=3.3						
MKAR	Makanchi Array	39.40	316	P	P	15 44 42.3	-1.8
	0.5nm,0.4s,mb3.6,baz=97,slow=9.9,SNR=6.5						

ZALV Zalesovo Beam 41.16 327 P P 15 44 56.2 -2.3
0.4nm,0.3s,mb3.6,baz=128,slow=9.3,SNR=3.5
TKM2 Tokmak 2 42.92 308 *e*P P 15 45 12.0 -1.0
2.1nm,0.8s,mb3.9
KURK Kurchatov 43.10 320 P P 15 45 12.3 -2.1
0.3nm,0.4s,mb3.4,baz=111,slow=10,SNR=5.5
AML Almayashu 44.17 306 P P 15 45 22.8 -0.4
4.1nm,1.1s,mb4.1
WRAB Tennant Creek 45.07 164 *e*P P 15 45 30.0 -0.5
5.7nm,1.1s,mb4.3
WRA Warramunga Arr 45.08 164 P P 15 45 30.5 -0.1
1.2nm,0.6s,mb3.9,baz=345,slow=8.8,SNR=21
ASAR Alice Springs 48.56 166 P P 15 45 58.2 +0.5
0.7nm,0.5s,mb3.9,baz=355,slow=13,SNR=22
BVAR Borovoye Array 48.68 321 P P 15 45 56.1 -2.3
0.5nm,0.5s,mb3.8,baz=107,slow=8.8,SNR=5.6
YKA Yellowknife Ar 82.73 23 P P 15 49 35.8 -2.2
0.4nm,0.7s,mb3.6,baz=312,slow=5.1,SNR=8.7

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*IDC **13** 15:51:25.1±0.3, 15.25S×172.33W, h0km, mb5.7/27, mb1 5.7/27, mb1mx5.7/28, mbtmp5.7/27, MS5.6/27, Ms1 5.6/27, ms1mx5.5/34, Error ellipse: s-maj=12.3km s-min=12.0km az=44.0*

*GCMT **13** 15:51:26.0±0.1, 15.24S×171.97W, h21km, MW6.2/109, Moment Tensor Solution. s109,c236; s99,c365; Duration: 2.9s Moment tensor: Scale 10^{18}Nm; M_{rr}-1.81±.02; $M_{\theta\theta}$0.44±.01; $M_{\phi\phi}$1.37±.01; $M_{r\theta}$0.40±.03; $M_{\theta\phi}$-1.37±.01; $M_{\phi r}$0.17±.03; Best double couple: $M_0$2.14600×10^{18} NP1:ϕ_s161.00000°,δ46.00000°, λ-67.00000°. NP2:ϕ_s308.00000°,δ49.00000°, λ-112.00000°. Principal axes: T 2.3540, Plg1.0000°, Azm54.0000°; N -0.4160, Plg17.0000°, Azm324.0000°; P -1.9380, Plg73.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **13** 15:51:27.2±0.1, 15.21S×172.37W, h17km, mb6.0/158, ME5.8, MS6.0/140, MW6.0 Error ellipse: s-maj=5.3km s-min=3.6km az=151.0, Moment Tensor Solution. s101 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^{18} NP1:ϕ_s308.00000°,δ48.00000°, λ-117.00000°. NP2:ϕ_s166.00000°,δ49.00000°, λ-63.00000°. Principal axes: T 1.1700, Plg0.0000°, Azm237.0000°; N -0.1700, Plg19.0000°, Azm327.0000°; P -1.0100, Plg70.0000°, Azm145.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s345.00000°, δ20.00000°, λ-90.00000°. NP2:ϕ_s165.00000°,δ70.00000°, λ-90.00000°. Principal axes: T Plg25.0000°, Azm255.0000°; N Plg0.0000°, Azm0.0000°; P Plg65.0000°, Azm75.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Apia. Also felt at Pago Pago and Tafuna, American Samoa.

*BJI **13** 15:51:27.0, 15.19S×172.42W, h17km, mB6.0, mb5.7, Ms5.7, Msz5.5*

*ISCJB **13** 15:51:28.1±0.1, 15.25S±0.03×172.31W±0.02, h31km, mb5.9/210, MS5.8/195, Error ellipse: s-maj=5.0km s-min=2.9km az=153.3*

*DJA **13** 15:51:28, 15.43S×172.28W, h10km, Mw6.1/29*

*MOS **13** 15:51:29.6±1.3, 15.06S×172.21W, h33km, mb6.1/87, MS5.9/70, Error ellipse: s-maj=8.5km s-min=6.7km az=73.8*

*SZGRF **13** 15:51:29.3, 15.75S×171.16W, h33km, mb6.0, Samoa Islands region*

*IGIL **13** 15:51:29.5, 15.18S×172.40W, h33km, MS6.1*

ISC 13 15:51:30.0±0.1**, 15.28S**±0.03×**172.32W**±0.02**, h33**km**, h33**km±1.0km**:pP-P, n1440,** σ0.78/810**, mb5.9**/210**, MS5.8**/195**, 266C-412D, Samoa Islands region**

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

AFI Afiamalu 1.46 21 Pn Pn 15 51 46.7 -7.3
6µm,0.3s,baz=198,slow=2.6,SNR=7654
AFI Sn Sn 15 52 00.5 -11
12µm,0.3s,baz=37,slow=21,SNR=15
AFI Afiamalu 1.46 21 P Pn 15 51 46.7 -7.3
AFI 16 52 00.5
AFI Afiamalu 1.46 21 *e*Pn Pn 15 51 46.5 -7.5
FUNA Funafuti 10.67 308 *e*Pn Pn 15 53 56.4 -4.2
353nm,1.1s
FUNA *e*Sn Sn 15 55 38.8 -20
RAR Rarotonga 13.30 118 Pn Pn 15 54 30.8 -5.7
27nm,0.3s,baz=264,slow=8.2,SNR=36
RAR Sn Sn 15 56 47.6 -16
21nm,0.3s,baz=132,slow=20,SNR=5.8
RAR LR LR 15 58 09.2
comp=Z,31µm,20.2s,baz=296,slow=30
RAR T 16 08 22.8
114nm,0.3s,baz=166,slow=9.9,SNR=3.5
RAR Rarotonga 13.30 118 *e*Pn Pn 15 54 29.8 -6.7
517nm,0.8s
RAR *e*Sn Sn 15 56 44.3 -19
RAO Raoul Island 14.84 199 Sn Sn 15 57 30.6 -10
413nm,0.3s,baz=90,slow=23,SNR=5.1
RAO Raoul Island 14.84 199 *e*Pn Pn 15 54 50.0 -7.5
RAO *e*Sn Sn 15 57 30.0 -11
DZM Mont Dzumac 21.21 248 *e*P P 15 56 10.0 -3.0
NOUC Port Laguerre 21.34 248 *e*P P 15 56 11.3 -3.2
PPT Papeete 21.93 99 *e*P P 15 56 20.5 -0.3
327nm,1.3s,mb5.6
PPT *e*LR LR 16 01 26.3
23µm,22.8s,baz=251
PPT Papeete 21.93 99 P P 15 56 20.8 0.0
163nm,1.0s,mb5.4,baz=325,slow=3.6,SNR=7.8
PPT S S 16 00 13.5 -7.9
19nm,0.5s,baz=16,slow=19,SNR=3.0
PPT LR LR 16 03 20.6
comp=Z,18µm,19.0s,MS5.5,baz=276,slow=33
PPT T 16 18 59.9
58nm,0.4s,baz=4.6,slow=17,SNR=4.9
PPT Papeete 21.93 99 P P 15 56 20.8 0.0
PPT S S 16 00 13.5 -7.9
PPT pmax pmax
comp=Z,163nm,1.0s
PPT smax
comp=N,19nm,0.5s
PPT MLR MLR
comp=Z,18µm,19.0s
PPT Papeete 21.93 99 P P 15 56 20.9 0.0
PPT S S 16 00 13.5 -7.9
PPT LR LR 16 03 20.6
TARA Tarawa 22.05 317 *e*P P 15 56 22.1 0.0
comp=Z,685nm,1.4s,mb5.9
TARA LR LR
comp=Z,16µm,20.0s,MS5.4
TIAR Tiarei 22.15 99 *e*P P 15 56 22.6 -0.6
comp=Z,4µm,1.3s,mb6.7
TVO Taravao 22.25 100 *e*P P 15 56 23.6 -0.6
comp=Z,4µm,1.4s,mb6.7
TVO Taravao 22.25 100 *e*P P 15 56 23.6 -0.6
TVO pmax pmax
comp=Z,4µm,1.4s,mb6.7
XMAS Kiritimati 22.64 42 *e*P P 15 56 28.5 +0.1
comp=Z,957nm,1.0s,mb6.2
XMAS LR LR
comp=Z,31µm,19.0s,MS5.8
TBI Tubuai 23.00 114 *e*P P 15 56 31.2 -0.9
comp=Z,1µm,1.2s,mb6.3
MEH Mehetia 23.39 100 *e*P P 15 56 34.3 -1.9
comp=Z,2µm,1.3s,mb6.4
PMOR Pomariorio Ree 23.58 93 *e*P P 15 56 36.7 -1.3
comp=Z,818nm,1.1s,mb6.1
VAH Vaihoa 23.82 93 *e*P P 15 56 38.6 -1.6
comp=Z,339nm,0.9s,mb5.8
URZ Urewera 24.73 200 P P 15 56 47.9 -0.4
comp=Z,283nm,0.7s,mb5.9,baz=27,slow=3.2,SNR=75
URZ S S 16 01 14.2 +6.1
comp=Z,33nm,0.7s,baz=105,slow=22,SNR=12
URZ LR LR 16 05 17.3
comp=Z,13µm,20.3s,MS5.4,baz=210,slow=34
HNR Honiara 27.69 279 P P 15 57 15.7 +0.4
comp=Z,66nm,0.7s,mb5.4,baz=253,slow=6.2,SNR=3.7
HNR S S 16 02 02.4 +6.9
comp=Z,74nm,0.9s,baz=106,slow=6.1,SNR=2.6
HNR LR LR 16 06 44.9
comp=Z,15µm,18.6s,MS5.6,baz=297,slow=33
HNR Honiara 27.69 279 P P 15 57 15.7 +0.4
HNR S S 16 02 02.4 +6.9
HNR pmax pmax
comp=Z,66nm,0.7s,mb5.4
HNR smax
comp=N,74nm,0.9s
HNR MLR MLR
comp=Z,15µm,18.6s,MS5.6
HNR Honiara 27.69 279 *e*P P 15 57 14.6 -0.7
comp=Z,108nm,0.9s,mb5.5
HNR LR LR
comp=Z,13µm,19.0s,MS5.5
SNZO South Karori 28.28 201 *e*P P 15 57 21.7 +1.5
comp=Z,145nm,0.8s,mb5.7
SNZO LR LR
comp=Z,12µm,20.0s,MS5.5
RPZ Rata Peaks 31.70 203 P P 15 57 49.9 -0.6
comp=Z,53nm,0.7s,mb5.5,baz=334,slow=3.0,SNR=17
RPZ S S 16 03 04.1 +6.3
comp=Z,12nm,0.9s,baz=141,slow=6.7,SNR=2.4
RPZ LR LR 16 09 48.7
comp=Z,20µm,20.7s,MS5.8,baz=275,slow=35
TAOE Nuku Hiva Isla 32.08 82 *e*LR LR 16 06 16.6
comp=Z,79µm,23.1s,baz=259
EIDS Eidsvold 35.66 248 *e*P P 15 58 22.5 -2.7
comp=Z,17nm,0.8s,mb5.0
RKT Rikitea 36.04 108 *e*P P 15 58 27.3 -1.2
comp=Z,274nm,1.3s,mb6.0
RKT *e*S S 16 04 02.7 -2.9
comp=Z,3µm,28.5s
RKT *e*LQ 16 06 38.5
comp=Z,11µm,32.0s
RKT *e*LR LR 16 08 02.2
comp=Z,16µm,23.2s,baz=282
RKT Rikitea 36.04 108 *e*P P 15 58 27.3 -1.2
RKT *e*S S 16 04 02.7 -2.9
RKT pmax pmax
comp=Z,274nm,1.3s,mb6.0
RKT Rikitea 36.04 108 *e*P P 15 58 27.3 -1.2
comp=Z,274nm,1.3s,mb6.0
RKT *e*S S 16 04 02.7 -2.9
RKT *e*LQ 16 06 38.5
ARMA Armidale 36.30 239 *e*P P 15 58 28.5 -2.1
ARMA *e*S S 16 04 13.3 +3.9
ARMA *e*SS SS 16 06 45.0 -3.6
STCH Steam Cracks 38.38 27 *e*P P 15 58 48.4 +0.1
KIP Kipapa 39.08 21 *e*P P 15 58 53.4 -0.7
KIP Kipapa 39.08 21 *e*P P 15 58 53.6 -0.5
comp=Z,511nm,1.4s,mb6.1
KIP LR LR
comp=Z,9µm,20.0s,MS5.6
CNB Canberra Magne 39.65 233 *e*P P 15 58 57.4 -1.5
CNB *e*PCP PcP 16 01 07.7 +2.3
CNB *e*S S 16 04 59.6 -0.4
CNB *e*SS SS 16 08 07.8 +12
CTA Charters Tower 39.69 257 *e*P P 15 58 56.4 -2.9
comp=Z,12nm,0.6s,mb4.8
CTA *e*PCP PcP 16 01 06.6 +0.8
CTA *e*S S 16 05 06.9 +6.0
CTA *e*SS SS 16 08 07.7 +11
CTA Charters Tower 39.69 257 *e*P P 15 58 56.4 -2.9
CTA *e* 16 01 06.6
CTA *e*S S 16 05 06.9 +6.0
CTA pmax pmax
comp=Z,12nm,0.6s
CTAO Charters Tower 39.69 257 *e*P P 15 58 56.3 -3.0
comp=Z,40nm,1.1s,mb5.1
CTAO *e*PcP PcP 16 01 06.5 +0.7
CTAO LR LR
comp=Z,9µm,19.0s,MS5.6
CAN Canberra 39.93 233 *e*P P 15 58 59.1 -2.0
comp=Z,108nm,1.2s,mb5.5
CAN *e* pP 15 59 07.4 -3.5
PMG Port Moresby 39.97 274 *e*P P 15 59 01.3 -0.4
comp=Z,61nm,1.0s,mb5.3
PMG *e* 16 01 07.8
PMG LR LR
comp=Z,6µm,20.0s,MS5.4
COEN Coen 43.03 266⇑*i*P P 15 59 25.5 -1.4
comp=Z,104nm,0.8s,mb5.6
COEN *e*PcP PcP 16 01 18.0 +1.2
TOO Toolangi 43.35 231 *e*P P 15 59 27.6 -1.6
TOO *e*S S 16 05 51.0 -3.8
MIDW Midway 43.51 354 PFAKE 15 59 40.0 +10
MIDW LR LR
comp=Z,8µm,20.0s,MS5.6
MOO Moorlands 44.00 224 *e*P P 15 59 35.0 +0.7
MOO *e*PCP PcP 16 01 21.9 +2.3
MOO *e*S S 16 06 05.7 +1.6
TAU Tasmania Unive 44.12 223 *e*P P 15 59 34.0 -1.2
TAU pmax pmax
comp=Z,178nm,1.6s,mb5.5
TAU MLR MLR
comp=Z,24µm,20.0s,MS6.1
TAU Tasmania Unive 44.12 223 *e*P P 15 59 34.0 -1.2
comp=Z,178nm,1.6s,mb5.5
TAU LR LR
comp=Z,24µm,20.0s,MS6.1
STKA Stephens Creek 45.00 240 *e*P P 15 59 40.9 -1.6
comp=Z,78nm,1.3s,mb5.4
STKA *e*PCP PcP 16 01 11.4 -12
STKA *e*S PcS 16 05 22.4 +5.4
STKA Stephens Creek 45.00 240 P P 15 59 41.2 -1.3
comp=Z,92nm,0.8s,mb5.7,baz=82,slow=7.9,SNR=180
STKA PcP PcP 16 01 24.7 +1.5
comp=Z,20nm,0.9s,baz=40,slow=4.7,SNR=2.1
STKA S S 16 06 15.8 -3.3
comp=Z,6.0nm,1.0s,baz=256,slow=13,SNR=3.9
MCQ Macquarie Isla 45.06 203 *e*P P 15 59 43.1 +0.5
MCQ pmax pmax
comp=Z,8µm,1.5s,mb7.3
MCQ Macquarie Isla 45.06 203 *e*P P 15 59 43.1 +0.6
comp=Z,8µm,1.5s,mb7.3
ADE Adelaide 47.96 237 *e*P P 16 00 04.9 -0.7
WB2 Warramunga Arr 50.87 257 *e*P P 16 00 25.7 -2.4
WB2 *e*PCP PcP 16 01 41.8 -2.7
WB2 *e* 16 01 54.6
WB2 *e*S S 16 07 38.5 -4.0
WB2 *e*SS SS 16 11 34.0 +16
WRAB Tennant Creek 50.88 257 P P 16 00 26.6 -1.5
comp=Z,421nm,0.9s,mb6.4,SNR=22
WRAB Tennant Creek 50.88 257⇑*i*P P 16 00 25.6 -2.5
WRAB *e* 16 01 45.0
WRAB *e*S S 16 07 38.8 -3.8
WRAB pmax pmax
comp=Z,57nm,0.9s,mb5.5
WRAB MLR MLR
comp=Z,6µm,19.0s,MS5.6
WRAB Tennant Creek 50.88 257⇑*i*P P 16 00 25.6 -2.6
comp=Z,57nm,0.9s,mb5.5
WRAB *e*PcP PcP 16 01 45.0 +0.5
WRAB *e*S S 16 07 38.8 -3.7
WRAB LR LR
comp=Z,6µm,19.0s,MS5.6
WRA Warramunga Arr 50.89 257 P P 16 00 26.8 -1.4
comp=Z,22nm,0.7s,mb5.2,baz=90,slow=7.1,SNR=188
WRA PcP PcP 16 01 44.8 +0.3
comp=Z,38nm,1.0s,baz=89,slow=4.7,SNR=5.8
WRA S S 16 07 42.9 +0.2
comp=Z,4.3nm,1.0s,baz=86,slow=15,SNR=7.6
WRA LR LR 16 19 10.4
comp=Z,5µm,20.5s,MS5.5,baz=105,slow=33
WRA PKPPKP 16 31 05.1
comp=Z,1.1nm,0.9s,baz=307,slow=2.7,SNR=4.6
WRA Warramunga Arr 50.89 257 P P 16 00 26.8 -1.4
WRA 16 01 44.8
WRA S S 16 07 42.9 +0.2
WRA pmax pmax
comp=Z,22nm,0.7s
WRA pmax pmax
comp=Z,38nm,1.0s
WRA smax
comp=N,4.0nm,1.0s
WRA pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 51.14 252 P P 16 00 28.2 -1.9
comp=Z,121nm,0.5s,mb6.1,baz=86,slow=7.9,SNR=1316
ASAR S S 16 07 43.8 -2.3
comp=Z,4.5nm,1.0s,baz=86,slow=14,SNR=7.4
ASAR P3KPbc 16 28 14.9
comp=Z,1.6nm,0.8s,baz=341,slow=2.0,SNR=6.6
ASAR PKPPKP 16 30 48.2
comp=Z,0.8nm,0.9s,baz=328,slow=3.4,SNR=4.4
ASAR Alice Springs 51.14 252 P P 16 00 28.2 -1.9
ASAR S S 16 07 43.8 -2.3
ASAR pmax pmax
comp=Z,121nm,0.5s
ASAR smax
comp=N,5.0nm,1.0s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 51.14 252 P P 16 00 28.2 -1.9
ASAR S S 16 07 43.8 -2.3
ASAR *e* 16 28 14.9
ASAR P'P' 16 30 48.2
GUMO Guam 51.15 302 P P 16 00 30.5 +0.4
comp=Z,94nm,0.8s,mb5.8
GUMO PcP PcP 16 01 46.5 +1.0
comp=Z,136nm,1.0s,baz=223,slow=3.3,SNR=2.9
GUMO Guam 51.15 302 P P 16 00 30.5 +0.4
GUMO 16 01 46.5
GUMO pmax pmax
comp=Z,94nm,0.8s,mb5.8
GUMO pmax pmax
comp=Z,136nm,1.0s,mb5.8
GUMO Guam 51.15 302 P P 16 00 30.5 +0.4
GUMO PcP PcP 16 01 46.5 +1.0
GUMO LR LR
comp=Z,3µm,20.0s,MS5.3
KAKA Kakadu 53.55 265 *e*P x 16 00 29.6
comp=Z,58nm,0.6s
KAKA *e*PCP x 16 01 35.4
FORT Forrest 56.40 243 *e*P P 16 01 06.9 -1.6
comp=Z,104nm,0.8s,mb5.9
FITZ Fitzroy Crossi 59.25 258 *e*P P 16 01 28.1 -0.6
comp=Z,30nm,0.8s,mb5.4
FITZ *e* 16 03 32.8
FITZ *e*S S 16 09 33.0 -1.9
FITZ *e*SS SS 16 13 43.6 +14
RPN Rapa Nui 59.38 113 P P 16 01 31.0 +1.6
comp=Z,2µm,1.1s,mb6.9,SNR=5.8
RPN Rapa Nui 59.38 113 P P 16 01 30.6 +1.2
comp=Z,207nm,1.2s,mb6.0,baz=323,slow=5.1,SNR=13
RPN Rapa Nui 59.38 113⇓*i*P P 16 01 30.4 +0.9
comp=Z,498nm,1.3s,mb6.4
RPN LR LR
comp=Z,5µm,21.0s,MS5.6
DRV Dumont d'Urvil 60.06 200 P P 16 01 36.0 +2.6
DRV S S 16 09 55.0 +11
DRV SS SS 16 13 53.0 +12
DRV L 16 16 00.0
DRV R 16 20 00.0
BATI Baumata 62.46 266 LR LR 16 25 19.4
comp=Z,3µm,22.0s,MS5.4,baz=122,slow=33
SBA Scott Base 63.46 185⇓*i*P P 16 01 57.8 +1.6
SBA pmax pmax
comp=Z,168nm,1.1s,mb6.1
SBA MLR MLR
comp=Z,4µm,22.0s,MS5.5
SBA Scott Base 63.46 185⇓*i*P P 16 01 57.8 +1.7
comp=Z,168nm,1.1s,mb6.1
SBA LR LR
comp=Z,4µm,22.0s,MS5.5
VNDA Vanda 63.61 186 P P 16 01 58.6 +1.5
comp=Z,42nm,1.0s,mb5.4,baz=8.3,slow=6.8,SNR=58
VNDA PcP PcP 16 02 33.8 +0.5
comp=Z,37nm,0.9s,baz=347,slow=6.8,SNR=6.5
VNDA S S 16 10 34.2 +5.8
comp=Z,0.5nm,1.0s,baz=69,slow=13,SNR=1.7
VNDA LR LR 16 26 29.9
comp=Z,3µm,19.0s,MS5.5,baz=120,slow=33
VNDA PKPPKP 16 30 59.7
comp=Z,3.3nm,1.0s,baz=258,slow=4.5,SNR=6.2
VNDA Vanda 63.61 186 P P 16 01 58.6 +1.5
VNDA 16 02 33.8
VNDA S S 16 10 34.2 +5.8
VNDA pmax pmax
comp=Z,42nm,1.0s
VNDA pmax pmax
comp=Z,37nm,0.9s
VNDA smax
comp=N,1.0nm,1.0s
VNDA MLR MLR
comp=Z,3µm,19.0s
VNDA pmax pmax
comp=Z,3.0nm,1.0s
VNDA Vanda 63.61 186⇓*i*P P 16 01 58.0 +0.9
comp=Z,169nm,1.5s,mb5.8
VNDA *e*PcP PcP 16 02 33.8 +0.5
VNDA LR LR
comp=Z,3µm,21.0s,MS5.4
MBWA Marble Bar 64.39 254⇑*i*P P 16 02 02.2 -1.1
comp=Z,182nm,1.5s,mb5.9
MBWA LR LR
comp=Z,6µm,19.0s,MS5.8
KLBR Kellerberrin 65.22 242 *e*P P 16 02 07.5 -1.0
comp=Z,254nm,1.2s,mb6.1
DAV Davao City (W) 65.40 285 LR LR 16 29 59.5
comp=Z,3µm,18.2s,MS5.5,baz=268,slow=35
DAV Davao City (W) 65.40 285⇑*i*P P 16 02 12.6 +2.7
DAV Davao City (W) 65.40 285 PFAKE 16 02 20.0 +10
DAV LR LR
comp=Z,3µm,19.0s,MS5.5
NWAO Narrogin (SRO) 65.59 240 LR LR 16 30 03.2
comp=Z,4µm,18.9s,MS5.7,baz=84,slow=35
NWAO Narrogin (SRO) 65.59 240⇑*i*P P 16 02 10.3 -0.5
NWAO pmax pmax
comp=Z,103nm,1.2s
NWAO MLR MLR
comp=Z,3µm,19.0s
NWAO Narrogin (SRO) 65.59 240⇑*i*P P 16 02 10.3 -0.5
comp=Z,103nm,1.2s,mb5.7
NWAO LR LR
comp=Z,3µm,19.0s,MS5.6
JHJ Hachijo jima 2 66.38 317 P P 16 02 16.9 +1.1
comp=Z,430nm,0.8s,mb6.5,baz=165,slow=6.4,SNR=5.8
JHJ S S 16 11 07.8 +4.2
comp=Z,191nm,0.9s,baz=67,slow=16,SNR=2.2
JHJ LR LR 16 28 51.5
comp=Z,1µm,20.2s,MS5.2,baz=112,slow=34
MUN Mundaring 66.51 241 *e*P P 16 02 17.3 +0.5
MUN *e*S S 16 11 08.8 +3.3
MUN *e*SS SS 16 15 46.6 +24
MUN Mundaring 66.51 241 *e*P P 16 02 17.3 +0.5
MUN *e*S S 16 11 08.8 +3.3
KAPI Kappang 67.42 271 P P 16 02 22.7 -0.1
comp=Z,288nm,0.9s,mb6.3,SNR=9.2
KAPI Kappang 67.42 271⇑*e*P P 16 02 21.6 -1.2
comp=Z,63nm,1.0s,mb5.6
KAPI LR LR
comp=Z,2µm,21.0s,MS5.3
SMY Shemya 68.73 351 *e*P P 16 02 29.7 -0.5
SMY pmax pmax
comp=Z,318nm,1.4s,mb6.1
SMY Shemya 68.73 351 *e*P P 16 02 29.7 -0.5
comp=Z,318nm,1.4s,mb6.1
UNV Unalaska Valle 69.02 4 *e*P P 16 02 30.4 -1.6
comp=Z,239nm,1.4s,mb5.9
MJAR Matsushiro Arr 69.52 319 P P 16 02 35.2 -0.3
comp=Z,51nm,1.0s,mb5.4,baz=157,slow=5.6,SNR=48
MJAR S S 16 11 48.7 +7.6
comp=Z,1.6nm,1.0s,baz=288,slow=40,SNR=2.6
MJAR LR LR 16 27 37.0
comp=Z,4µm,21.8s,MS5.6,baz=135,slow=31
MJAR Matsushiro Arr 69.52 319 P P 16 02 35.2 -0.3
MJAR S S 16 11 48.7 +7.6
MJAR pmax pmax
comp=Z,51nm,1.0s
MJAR smax
comp=N,2.0nm,1.0s
MJAR MLR MLR
comp=Z,4µm,21.8s
MAJO Matsushiro 69.52 319⇓*e*P P 16 02 35.4 -0.1
MAJO pmax pmax
comp=Z,84nm,0.9s,mb5.7
MAJO MLR MLR
comp=Z,6µm,22.0s,MS5.8
MAJO Matsushiro 69.52 319⇓*e*P P 16 02 35.4 -0.1
comp=Z,84nm,0.9s,mb5.7
MAJO LR LR
comp=Z,6µm,22.0s,MS5.8
MAT Matsushiro 69.52 319 P P 16 02 34.9 -0.6
MAT S S 16 11 46.0 +4.9
SNCC San Nicolas Is 69.75 45 ⇑P P 16 02 37.2 +0.3
baz=70
BSC Santa Cruz Isl 70.10 45 ⇓P P 16 02 39.4 +0.3
baz=70
ERM Erimo 70.23 326 PFAKE 16 02 50.0 +10
ERM LR LR
comp=Z,5µm,20.0s,MS5.7
SCI San Clemente I 70.27 46 ⇑P P 16 02 40.2 0.0

baz=70
YUK Yuzh-Kuril'sk 70.28 329 *e*P **P 16 02 39.0 -1.0**
YUK pmax pmax
comp=Z,3μm,4.0s
SBC Santa Barbara 70.30 44 ⇑P **P 16 02 40.7 +0.4**
baz=70
PKM Peak Mountain 70.50 44 ⇑P **P 16 02 42.2 +0.7**
baz=71
MCCM Marconi Confer 70.50 39⇓*i*P **P 16 02 41.0 -0.5**
comp=Z,93nm,0.8s,mb5.8
MCCM LR LR
comp=Z,12μm,20.0s,MS6.1
SAO San Andreas Ge 70.55 41⇓*i*P **P 16 02 41.7 -0.1**
SAO pmax pmax
comp=Z,240nm,1.1s,mb6.0
SAO MLR MLR
comp=Z,12μm,20.0s,MS6.1
SAO San Andreas Ge 70.55 41⇓*i*P **P 16 02 41.7 -0.1**
comp=Z,240nm,1.1s,mb6.0
SAO LR LR
comp=Z,12μm,20.0s,MS6.1
BLG Laguna Peak 70.55 45 ⇑P **P 16 02 41.7 -0.1**
baz=71
SMMC Simmler 70.62 43 ⇑P **P 16 02 42.8 +0.5**
baz=71
FMP Fort Macarthur 70.86 46 ⇑P **P 16 02 43.6 -0.1**
baz=71
HOPS Hopland 70.92 39⇓*i*P **P 16 02 44.0 0.0**
comp=Z,334nm,1.3s,mb6.1
HOPS LR LR
comp=Z,16μm,19.0s,MS6.3
CASY Casey 70.96 205 *e*P **P 16 02 45.0 +1.2**
CASY *e*S S 16 12 02.0 +5.0
CASY *e*SS SS 16 16 42.8 +13
SDPT Sand Point 71.06 7 *e*P **P 16 02 43.2 -1.2**
comp=Z,260nm,1.0s,mb6.1
OSI Osito Adit 71.07 45 ⇓P **P 16 02 45.2 +0.2**
baz=71
DECC Green Verdugo 71.13 45 ⇑P **P 16 02 45.1 -0.3**
baz=71
109C Camp Elliot, M 71.23 47 ⇓P **P 16 02 45.6 -0.4**
baz=71,SNR=5.3
JOW Kunigami 71.25 306 P **P 16 02 47.5 +1.2**
comp=Z,77nm,1.2s,mb5.5,baz=154,slow=12,SNR=4.1
JOW S S 16 12 08.9 +7.2
comp=Z,7.3nm,0.5s,baz=126,slow=29,SNR=2.3
JOW LR LR 16 27 19.9
comp=Z,3μm,21.9s,MS5.4,baz=102,slow=30
SKR Severo-Kuril's 71.27 339 *e*P **P 16 02 42.0 -3.8**
SKR *e* pP 16 02 50.7 -5.5
SKR *e* 16 03 04.0
SKR *e*S S 16 11 56.0 -4.9
SKR *e*PS 16 12 23.0
SKR *e* 16 12 47.0
SKR pmax pmax
comp=N,100nm,1.0s
SKR pmax pmax
comp=E,90nm,1.0s
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.1
SKR pmax pmax
comp=N,1μm,10.0s
SKR pmax pmax
comp=Z,2μm,10.0s
SKR smax
comp=N,2μm,14.0s
SKR smax
comp=E,2μm,14.0s
SKR MLR MLR
comp=N,2μm,18.0s,MS5.5
SKR MLR MLR
comp=E,1μm,18.0s,MS5.5
SKR MLR MLR
comp=Z,2μm,18.0s,MS5.5
ARVC Arvin 71.30 44 ⇓P **P 16 02 46.4 0.0**
baz=72
MYLDM Lahad Datu 71.45 281 ⇓P **P 16 02 53.7 +6.0**
VES Vestal, Richgr 71.53 43 ⇓P **P 16 02 47.7 -0.1**
baz=72
MURC Murrieta 71.55 46 ⇓P **P 16 02 47.9 -0.1**
baz=72
BFSC Mount Baldy St 71.59 45 ⇑P **P 16 02 47.8 -0.3**
baz=72
RCTC Rector, Farmer 71.70 43 ⇑P **P 16 02 48.5 -0.3**
baz=72
MONP Monument Peak 71.71 47 ⇑P **P 16 02 48.9 0.0**
baz=72
MONP ⇑S S 16 12 09.7 +2.9
baz=72
EDW2 Edwards Air Fo 71.72 45 ⇑P **P 16 02 49.0 +0.1**
baz=72
EDW2 ⇓S S 16 12 10.1 +3.3
baz=72
TSM Tawau 71.77 280 ⇑P **P 16 02 55.5 +5.8**
DVTC Desert V Tower 71.82 48 ⇓P **P 16 02 49.6 0.0**
baz=72
ISA Isabella 71.84 44 ⇑P **P 16 02 49.9 +0.3**
baz=72
ISA ⇑S S 16 12 12.0 +3.9
baz=72
CMB Columbia Colle 71.98 41⇓*i*P **P 16 02 50.0 -0.4**
CMB pmax pmax
comp=Z,154nm,1.0s,mb5.9
CMB MLR MLR
comp=Z,11μm,20.0s,MS6.1
CMB Columbia Colle 71.98 41⇓*i*P **P 16 02 50.0 -0.5**
comp=Z,154nm,1.0s,mb5.9
CMB LR LR
comp=Z,11μm,20.0s,MS6.1
ASAJ Asahikawa 71.99 328 P **P 16 02 51.5 +1.1**
comp=Z,92nm,0.9s,mb5.7,baz=199,slow=6.9,SNR=43
ASAJ S S 16 12 15.5 +6.1
comp=Z,3.0nm,0.8s,baz=142,slow=21,SNR=2.1
ASAJ LR LR 16 30 56.0
comp=Z,3μm,20.1s,MS5.6,baz=142,slow=33
ASAJ Asahikawa 71.99 328 P **P 16 02 51.5 +1.2**
ASAJ S S 16 12 15.5 +6.0
ASAJ pmax pmax
comp=Z,92nm,0.9s
ASAJ smax
comp=N,3.0nm,0.8s
ASAJ MLR MLR
comp=Z,3μm,20.1s
PFO Pinyon Flat Ob 72.08 47 P **P 16 02 51.5 +0.4**
comp=Z,426nm,1.0s,mb6.3,SNR=22
PFO Pinyon Flat Ob 72.08 47 ⇓P **P 16 02 51.0 -0.1**
baz=72
PFO Pinyon Flat Ob 72.08 47⇓*i*P **P 16 02 50.5 -0.6**
PFO pmax pmax
comp=Z,152nm,1.3s,mb5.8
PFO MLR MLR
comp=Z,8μm,20.0s,MS6.0
PFO Pinyon Flat Ob 72.08 47⇓*i*P **P 16 02 50.5 -0.6**
comp=Z,152nm,1.3s,mb5.8
PFO LR LR
comp=Z,8μm,20.0s,MS6.0
BBRC Big Bear Sol-O 72.11 46 ⇑P **P 16 02 51.2 -0.1**
baz=72
BBRC ⇑S S 16 12 15.0 +3.7
baz=72
SWSC Sam W. Stewart 72.18 47 ⇑P **P 16 02 51.4 -0.3**
baz=72
WDC Whiskeytown Da 72.24 38⇓*i*P **P 16 02 51.6 -0.3**
WDC pmax pmax
comp=Z,213nm,1.4s,mb5.9
WDC MLR MLR
comp=Z,13μm,19.0s,MS6.2
WDC Whiskeytown Da 72.24 38⇓*i*P **P 16 02 51.6 -0.3**
comp=Z,213nm,1.4s,mb5.9
WDC LR LR
comp=Z,13μm,19.0s,MS6.2
CHGN Chignik 72.25 8 *e*P **P 16 02 50.3 -1.3**
LRMC Laurel Mountai 72.26 44 ⇑P **P 16 02 52.3 +0.2**
baz=72
RRX Edison Barstow 72.40 45 ⇓P **P 16 02 52.6 -0.4**
baz=73
PET Petropavlovsk 72.47 342k *i*P **P 16 02 52.3 -0.7**
PET *e* 16 03 09.9
PET *e*S S 16 12 15.0 +0.4
PET *e*PS 16 12 46.7
PET *e*PPS 16 13 01.0
PET pmax pmax
comp=Z,115nm,1.6s,mb5.6
PET pmax pmax
comp=Z,2μm,11.1s
PET pmax pmax
comp=Z,1μm,14.2s
PET MLR MLR
comp=Z,4μm,18.0s,MS5.7
PET MLR MLR
comp=Z,4μm,19.0s
PET Petropavlovsk 72.47 342⇓*i*P **P 16 02 52.0 -1.1**
comp=Z,806nm,2.2s,mb6.3
PET LR LR
comp=Z,5μm,20.0s,MS5.8
CWC Cottonwood Cre 72.54 43 ⇑P **P 16 02 53.9 +0.1**
baz=73
BELC Belle Mtn. 72.61 46 ⇓P **P 16 02 54.2 -0.1**
baz=73
MPMC Manual Prospec 72.72 44 ⇑P **P 16 02 55.2 +0.3**
baz=73
MLAC Mammoth Lakes 72.73 42 ⇓P **P 16 02 55.6 +0.6**
baz=73
GSC Goldstone 72.76 45 ⇑P **P 16 02 55.1 0.0**
baz=73
GSC ⇓S S 16 12 21.3 +2.6
baz=73
DAC Darwin (Calif) 72.77 44 PFAKE 16 03 10.0 +15
DAC LR LR
comp=Z,15μm,20.0s,MS6.2
TIN Tinemaha 72.80 43 ⇑P **P 16 02 55.7 +0.4**
baz=73
BC3 Big Chuckw Mtn 72.81 47 ⇑P **P 16 02 55.6 +0.1**
baz=73
BC3 ⇓S S 16 12 22.3 +3.0
baz=73
SDKM Sandakan 72.82 281 ⇓P **P 16 02 58.3 +2.4**
HEC Hector,Ludlow 72.83 46 ⇑P **P 16 02 55.2 -0.3**
baz=73
HEC ⇑S S 16 12 22.5 +3.0
baz=73
PEA0B Petropavlovsk- 72.83 342⇓*i*P **P 16 02 55.0 -0.2**
PETK Petropavlovsk- 72.83 342 P **P 16 02 55.1 0.0**
comp=Z,89nm,0.8s,mb5.7,baz=121,slow=8.7,SNR=104
PETK S S 16 12 23.8 +5.1
comp=Z,4.3nm,1.1s,baz=188,slow=9.0,SNR=3.1
PETK LR LR 16 36 59.4
comp=Z,2μm,18.0s,MS5.4,baz=144,slow=38
112A Yuma 72.84 48 ⇓P **P 16 02 55.8 +0.2**
baz=73
R06C Coleville 72.87 41 ⇑P **P 16 02 56.1 +0.4**
baz=73,SNR=84
R06C ⇑S S 16 12 23.2 +3.4
baz=73
YBH Yreka Blue Hor 72.87 37⇓*i*P **P 16 02 55.9 +0.2**
YBH pmax pmax
comp=Z,161nm,0.9s
YBH MLR MLR
comp=Z,10μm,20.0s
YBH Yreka Blue Hor 72.87 37⇓*i*P **P 16 02 55.9 +0.2**
comp=Z,161nm,0.9s,mb6.0
YBH LR LR
comp=Z,10μm,20.0s,MS6.1
GLA Glamis 72.93 48 ⇓P **P 16 02 56.3 +0.1**
baz=73
LBCM Butte Creek Ri 73.11 38 P **P 16 02 57.0 -0.1**
BEKR Beckwourth 73.11 39 ⇓P **P 16 02 57.3 +0.2**
baz=73
BEKR ⇑S S 16 12 25.6 +3.1
baz=73
WCN Washoe City 73.14 40 ⇓P **P 16 02 57.7 +0.4**
baz=73
WCN ⇑S S 16 12 26.6 +3.7
baz=73
GMRC Granite Mounta 73.26 46 ⇑P **P 16 02 58.0 -0.1**
baz=73
GMRC ⇓S S 16 12 27.8 +3.4
baz=73
P06A Stead Airport, 73.28 40 ⇑P **P 16 02 58.6 +0.5**
baz=73,SNR=14
IRM Iron Mountain 73.29 47 ⇓P **P 16 02 58.3 +0.1**
baz=73
HUMO Hull Mountain 73.29 36⇓*i*P **P 16 02 58.4 +0.3**
comp=Z,182nm,1.2s,mb5.9
HUMO LR LR
comp=Z,10μm,20.0s,MS6.1
GRAC Grapevine Rang 73.33 43 ⇑P **P 16 02 59.0 +0.5**
baz=74
FURC Furnace Creek, 73.37 44 ⇓P **P 16 02 58.6 -0.1**
baz=74
TUQ Tuquoise Moun 73.44 45 ⇓P **P 16 02 59.1 0.0**
baz=74
SHOC Shoshone 73.45 45 ⇑P **P 16 02 59.0 -0.2**
baz=74
Y12C Blythe 73.52 47 ⇓P **P 16 02 59.4 -0.2**
baz=74,SNR=26
Q07A Schurz 73.52 41 ⇑P **P 16 02 59.9 +0.4**
baz=74
NVAR Mina Array Bea 73.54 42 P **P 16 02 59.7 0.0**
comp=Z,124nm,0.8s,mb5.9,baz=227,slow=10.0,SNR=577
NVAR PKP2ab 16 30 30.7
comp=Z,1.5nm,0.9s,baz=92,slow=4.5,SNR=6.1
NVAR Mina Array Bea 73.54 42 P **P 16 02 59.7 0.0**
NVAR P'P'ab 16 30 30.7
113A Mohawk Valley, 73.55 49 ⇑P **P 16 02 59.6 -0.3**
baz=74,SNR=43
O06A Flanigan 73.61 39 ⇑P **P 16 03 00.2 +0.2**
baz=74,SNR=66
R08A Mina 73.62 42 ⇑P **P 16 03 00.3 +0.1**
baz=74
U10A Ash Meadows, A 73.70 44 ⇓P **P 16 03 00.9 +0.2**
baz=74,SNR=22
I02A Mapleton 73.72 34 ⇑P **P 16 03 01.2 +0.6**
baz=74,SNR=23
HOG Hogback Mounta 73.78 37 P **P 16 03 01.6 +0.6**
P07A Fallon 73.82 40 ⇑P **P 16 03 01.7 +0.4**
baz=74
214A Organ Pipe Nat 73.84 50 ⇑P **P 16 03 01.6 0.0**
baz=74,SNR=27
S09A Goldfield 73.84 43 ⇑P **P 16 03 01.4 0.0**
baz=74,SNR=149
YSS Yuzh-Sakhalins 73.89 330⇓*i*P **P 16 03 01.8 +0.2**
comp=Z,189nm,1.1s,mb5.9
YSS LR LR
comp=Z,923nm,19.0s,MS5.1
OHAK Old Harbor 73.94 11 *e*P **P 16 03 01.2 -0.4**
comp=Z,155nm,1.4s,mb5.8
N06A Buffalo Meadow 73.96 39 ⇑P **P 16 03 02.4 +0.3**
baz=74,SNR=186
V11A Goodsprings 73.99 45 ⇑P **P 16 03 02.4 0.0**
baz=74,SNR=27
I03A Eugene 74.00 35 ⇑P **P 16 03 02.5 +0.3**
baz=74,SNR=12
Q08A Gabbs 74.03 41 ⇓P **P 16 03 02.5 0.0**
baz=74,SNR=33
TPH Tonopah 74.03 42⇓*i*P **P 16 03 02.5 -0.1**
TPH pmax pmax
comp=Z,501nm,1.2s,mb6.3
TPH MLR MLR
comp=Z,11μm,20.0s,MS6.1
TPH Tonopah 74.03 42⇓*i*P **P 16 03 02.5 0.0**
comp=Z,501nm,1.2s,mb6.3
TPH LR LR
comp=Z,11μm,20.0s,MS6.1
Y13A Salome 74.04 48 ⇑P **P 16 03 02.7 -0.1**
baz=74,SNR=22
TPNV Topopah Spring 74.05 44 ⇓P **P 16 03 02.9 +0.2**
baz=74
TPNV Topopah Spring 74.05 44⇓*i*P **P 16 03 02.5 -0.2**
TPNV pmax pmax
comp=Z,171nm,0.9s,mb6.0
TPNV MLR MLR
comp=Z,15μm,20.0s,MS6.3
TPNV Topopah Spring 74.05 44⇓*i*P **P 16 03 02.5 -0.1**
comp=Z,171nm,0.9s,mb6.0
TPNV LR LR
comp=Z,15μm,20.0s,MS6.3
H02A Toledo 74.07 34 ⇑P **P 16 03 03.4 +0.7**
baz=74
W12A Cal Nev Ari 74.09 46 ⇓P **P 16 03 03.3 +0.3**
baz=74,SNR=11
O07A Toulon 74.19 40 ⇑P **P 16 03 03.6 +0.2**
baz=74,SNR=182
MPOR Mary's Peak 74.20 34 P **P 16 03 04.1 +0.7**
R09A Tonopah 74.23 42 ⇑P **P 16 03 03.8 +0.1**
baz=74,SNR=168
V12A Nelson 74.33 45 ⇑P **P 16 03 04.4 +0.1**
baz=74,SNR=60
U11A Corn Creek 74.34 45 ⇑P **P 16 03 04.6 +0.2**
baz=74,SNR=29
S10A Tonopah Range, 74.36 43 ⇑P **P 16 03 04.6 +0.1**
baz=74,SNR=169
MOD Modoc 74.38 38⇓*i*P **P 16 03 04.3 -0.2**
comp=Z,266nm,1.1s,mb6.1
MOD *e*PP PP 16 05 46.0 -5.2
MOD LR LR
comp=Z,11μm,20.0s,MS6.1
COR Corvallis 74.39 34⇓*i*P **P 16 03 04.0 -0.5**
COR pmax pmax
comp=Z,188nm,1.4s,mb5.8
COR MLR MLR
comp=Z,3μm,20.0s,MS5.6
COR Corvallis 74.39 34⇓*i*P **P 16 03 04.0 -0.4**
comp=Z,188nm,1.4s,mb5.8
COR LR LR
comp=Z,3μm,20.0s,MS5.6
P08A Dixie Valley 74.42 41 ⇓P **P 16 03 05.4 +0.7**
baz=75,SNR=43
X13A Yucca 74.44 47 ⇑P **P 16 03 05.2 +0.1**
baz=75,SNR=116
Z14A Wintersburg 74.44 48 ⇑P **P 16 03 05.1 0.0**
baz=75,SNR=19
H03A Soap Creek Ran 74.45 34 ⇑P **P 16 03 05.2 +0.4**
baz=75,SNR=22
Q09A Carvers 74.49 42 ⇑P **P 16 03 05.4 +0.2**
baz=75,SNR=44
N07B Gerlach 74.50 39 ⇓P **P 16 03 05.5 +0.3**
baz=75,SNR=119
K05A Summer Lake 74.55 37 ⇑P **P 16 03 06.2 +0.7**
baz=75,SNR=138
HEBO Mount Hebo 74.56 33 *e*P **P 16 03 05.8 +0.4**
comp=Z,191nm,1.1s,mb5.9
KDAK Kodiak Island 74.60 11 P **P 16 03 05.0 -0.4**
comp=Z,846nm,1.3s,mb6.5,SNR=12
KDAK Kodiak Island 74.60 11⇓*e*P **P 16 03 04.8 -0.5**
comp=Z,528nm,1.8s,mb6.2
KDAK LR LR
comp=Z,9μm,20.0s,MS6.1
115A Sonoran Desert 74.64 49 ⇓P **P 16 03 06.0 -0.2**
baz=75,SNR=10.0
W13A Hualapai Mount 74.67 46 ⇓P **P 16 03 06.5 +0.2**
baz=75,SNR=82
Y14A Wickenburg 74.69 48 ⇑P **P 16 03 06.4 -0.1**
baz=75,SNR=67
O08A Rochester Mine 74.72 40 ⇑P **P 16 03 06.9 +0.4**
baz=75,SNR=5.3
M07A Soldier Meadow 74.75 39 ⇑P **P 16 03 07.2 +0.5**
baz=75,SNR=130
R10A Warm Springs 74.75 43 ⇓P **P 16 03 07.2 +0.5**
baz=75,SNR=60
S11A Rachel 74.76 43 ⇓P **P 16 03 07.1 +0.3**
baz=75
QSPA South Pole Qui 74.77 180 P **P 16 03 07.4 +1.2**
comp=Z,311nm,1.0s,mb6.2,baz=38,slow=1.6,SNR=424
QSPA S S 16 12 45.9 +5.9
comp=Z,0.3nm,0.3s,baz=293,slow=23,SNR=3.3
QSPA LR LR 16 34 28.6
comp=Z,5μm,18.3s,MS5.8,baz=235,slow=34
QSPA South Pole Qui 74.77 180⇓*i*P **P 16 03 07.1 +0.8**
comp=Z,416nm,1.1s,mb6.3
QSPA LR LR
comp=Z,5μm,21.0s,MS5.8
216A Three Points, 74.86 50 ⇓P **P 16 03 07.6 +0.1**
baz=75,SNR=54
G03A Yamhill 74.88 34 ⇑P **P 16 03 07.7 +0.4**
baz=75,SNR=25
T11A Corn Creek, Al 74.89 44 ⇑P **P 16 03 08.0 +0.4**
baz=75,SNR=327
U12A Valley of Fire 74.92 45 ⇓P **P 16 03 08.0 +0.2**
baz=75,SNR=65
116A Eloy 74.95 50 ⇑P **P 16 03 07.8 -0.2**
baz=75,SNR=20
T12A Moapa 74.96 45 ⇑P **P 16 03 08.2 +0.2**
baz=75
Z15A Gila River Ind 74.98 49 ⇑P **P 16 03 08.0 -0.1**
baz=75
Q10A Clear Creek Ra 74.99 42 ⇑P **P 16 03 08.3 +0.2**
baz=75,SNR=74
V13A Grand Canyon W 74.99 46 ⇑P **P 16 03 08.3 +0.1**
baz=75,SNR=54
N08A GE Springer Mi 75.02 40 ⇓P **P 16 03 08.4 +0.2**
baz=75,SNR=70
L07A Adell 75.02 38 ⇑P **P 16 03 08.8 +0.6**
baz=75,SNR=216
X14A Yava 75.05 47 ⇑P **P 16 03 08.8 +0.2**
baz=75,SNR=101
H04A Detroit Lake 75.06 35 ⇓P **P 16 03 08.1 -0.2**
baz=75,SNR=35
F03A Seaside 75.14 33 ⇓P **P 16 03 09.1 +0.3**
baz=75,SNR=6.1
Y15A Casa Rosa Ranc 75.18 48 ⇓P **P 16 03 09.6 +0.2**
baz=75,SNR=147
217A Green Valley 75.23 51 ⇑P **P 16 03 09.6 0.0**
baz=75,SNR=39
I05A Bend 75.23 35 ⇑P **P 16 03 09.7 +0.3**
baz=75,SNR=20
G04A Mulino 75.24 34 ⇑P **P 16 03 09.4 0.0**
baz=75,SNR=22
O09A Fish Creek Ran 75.25 41 ⇑P **P 16 03 09.8 +0.3**
baz=75,SNR=53
R11A Troy Canyon, C 75.26 43 ⇓P **P 16 03 09.7 0.0**
baz=75,SNR=192
M08A Happy Creek Ra 75.26 39 ⇑P **P 16 03 10.1 +0.5**
baz=75
W14A Seligman 75.29 47 ⇑P **P 16 03 10.4 +0.5**
baz=75,SNR=189
J06A Christmas Vall 75.30 37 ⇓P **P 16 03 09.7 0.0**
baz=76,SNR=141
U13A Pakoon Wash 75.30 45 ⇓P **P 16 03 10.5 +0.6**
baz=76,SNR=283
S12A Delamar Landin 75.34 44 ⇑P **P 16 03 10.4 +0.7**
baz=76,SNR=143
TWG Pinlang 75.37 299 *e*P **P 16 03 09.8 -0.9**
comp=Z,59nm,0.8s,mb5.6
BMN Battle Mountai 75.38 40⇓*i*P **P 16 03 10.0 -0.3**
BMN pmax pmax
comp=Z,227nm,1.0s,mb6.1
BMN MLR MLR
comp=Z,10μm,20.0s,MS6.1
BMN Battle Mountai 75.38 40⇓*i*P **P 16 03 10.0 -0.3**
comp=Z,227nm,1.0s,mb6.1
BMN LR LR
comp=Z,10μm,20.0s,MS6.1
P10A Eureka 75.40 41 ⇑P **P 16 03 10.6 +0.1**
baz=76,SNR=35
YULB Yu-li 75.41 300 *e*P **P 16 03 10.7 -0.2**
comp=Z,74nm,0.9s,mb5.6
N09A Rock Creek Ran 75.44 40 ⇓P **P 16 03 11.0 +0.4**
baz=76,SNR=64
NACB Ninganchiao 75.48 300⇓*i*P **P 16 03 11.3 +0.1**
comp=Z,262nm,1.1s,mb6.1
K07A Rock Creek Ran 75.48 38 ⇓P **P 16 03 11.2 +0.4**
baz=76,SNR=130
Q11A Duckwater 75.49 42 ⇓P **P 16 03 11.2 +0.2**
baz=76,SNR=196
V14A Boquillas Ranc 75.49 46 ⇓P **P 16 03 11.6 +0.5**
baz=76,SNR=170
TUC Tucson 75.51 50⇓*i*P **P 16 03 11.0 -0.2**
TUC pmax pmax
comp=Z,82nm,0.9s,mb5.7
TUC MLR MLR
comp=Z,6μm,20.0s,MS5.9
TUC Tucson 75.51 50⇓*i*P **P 16 03 10.9 -0.3**
comp=Z,94nm,0.9s,mb5.7
TUC LR LR
comp=Z,7μm,20.0s,MS6.0
X15A Humboldt 75.52 48 ⇓P **P 16 03 11.6 +0.4**
baz=76,SNR=93
Z16A Peralta Trail, 75.53 49 ⇓P **P 16 03 11.4 0.0**
baz=76,SNR=15
E03A Lebam 75.54 32 ⇓P **P 16 03 11.4 +0.3**
baz=76,SNR=17
H05A Madras 75.56 35 ⇑P **P 16 03 11.3 +0.1**
baz=76,SNR=42
T13A Saint George 75.66 45 ⇓P **P 16 03 12.5 +0.4**
baz=76,SNR=66
117A Oracle 75.67 50 ⇑P **P 16 03 12.5 +0.3**
baz=76,SNR=56
318A Bisbee 75.69 51 ⇑P **P 16 03 12.4 +0.1**
baz=76,SNR=40
WVOR Wild Horse Val 75.69 38⇓*i*P **P 16 03 11.8 -0.2**
WVOR pmax pmax
comp=Z,234nm,1.1s,mb6.0
WVOR MLR MLR
comp=Z,15μm,19.0s,MS6.3
WVOR Wild Horse Val 75.69 38⇓*i*P **P 16 03 11.8 -0.2**
comp=Z,234nm,1.1s,mb6.0
WVOR LR LR
comp=Z,15μm,19.0s,MS6.3
I06A Prineville 75.69 36 ⇑P **P 16 03 12.6 +0.5**
baz=76,SNR=128
L08A Fields 75.72 38 ⇑P **P 16 03 12.5 +0.2**
baz=76,SNR=271

F04A **Amboy** 75.74 33 ⇑P P 16 03 12.1 -0.1
baz=76,SNR=16
O10A **Cortez Mining,** 75.75 41 ⇓P P 16 03 12.7 +0.2
baz=76,SNR=52
HOOD **Mount Hood Mea** 75.76 34⇓*i*P P 16 03 12.0 -0.4
comp=Z,245nm,1.1s,mb6.0
Y16A **Circle Bar Ran** 75.76 49 ⇑P P 16 03 12.9 +0.3
baz=76,SNR=66
D03A **Wishkah Elem.** 75.81 32 ⇑P P 16 03 13.2 +0.6
baz=76
M09A **Marrel Ranch,** 75.81 39 ⇓P P 16 03 13.2 +0.5
baz=76,SNR=101
P11A **Circle Ranch,** 75.81 42 ⇓P P 16 03 13.0 +0.1
baz=76,SNR=20
LVP **Lakeview Peak** 75.83 33 P P 16 03 13.1 +0.3
U14A **Mt Trumbull** 75.84 46 ⇓P P 16 03 13.7 +0.7
baz=76,SNR=318
W15A **Williams** 75.85 47 ⇑P P 16 03 13.7 +0.6
baz=76,SNR=27
SSLB **Suanglung** 75.86 300 *e*P P 16 03 12.6 -0.8
comp=Z,102nm,0.9s,mb5.8
J07A **Hines** 75.86 37 ⇓P P 16 03 13.2 +0.2
baz=76,SNR=92
YHNB **Yeheng** 75.86 301⇓*e*P P 16 03 13.8 +0.4
comp=Z,242nm,1.2s,mb6.0
YHNB LR LR
comp=Z,3μm,20.0s,MS5.6
G05A **Wamic** 75.89 34 ⇓P P 16 03 13.2 +0.1
baz=76,SNR=9.9
R12A **Pony Springs,** 75.89 43 ⇓P P 16 03 13.8 +0.5
baz=76,SNR=34
TATO **Taipei** 75.90 301 *e*P P 16 03 13.1 -0.5
comp=Z,104nm,0.8s,mb5.8
TATO *e* pP 16 03 22.1 -2.0
TATO LR LR
comp=Z,3μm,21.0s,MS5.5
218A **Dragoon** 75.90 51 ⇑P P 16 03 13.9 +0.4
baz=76,SNR=24
TPUB **Ta-pu** 75.93 299⇓*i*P P 16 03 13.2 -0.7
comp=Z,277nm,0.9s,mb6.2
K08A **Mann Creek Ran** 75.96 38 ⇑P P 16 03 14.0 +0.4
baz=76,SNR=198
C03A **Quillayute Air** 75.97 31 ⇓P P 16 03 14.4 +0.9
baz=76
S13A **Holt Ranch, En** 75.99 44 ⇓P P 16 03 14.4 +0.5
baz=76,SNR=86
N10A **Dunphy** 75.99 40 ⇑P P 16 03 14.2 +0.4
baz=76,SNR=10.0
E04A **Onalaska** 76.01 33 ⇓P P 16 03 14.5 +0.8
baz=76,SNR=8.9
L09A **Wilkinson Ranc** 76.03 39 ⇑P P 16 03 14.1 +0.1
baz=76,SNR=17
BTM **Bintulu** 76.03 277 ⇑P P 16 03 15.6 +0.9
X16A **Lo Mia Camp, P** 76.06 48 ⇑P P 16 03 15.0 +0.6
baz=76,SNR=123
H06A **Lindquist Farm** 76.11 35 ⇑P P 16 03 14.5 +0.1
baz=76,SNR=98
Q12A **Willow Creek R** 76.13 43 ⇑P P 16 03 14.9 +0.2
baz=76,SNR=124
Y17A **Roosevelt** 76.13 49 ⇓P P 16 03 15.1 +0.3
baz=76,SNR=62
I07A **Izee** 76.18 36 ⇓P P 16 03 15.1 +0.3
baz=76,SNR=168
319A **Douglas** 76.19 52 ⇓P P 16 03 15.5 +0.3
baz=76,SNR=46
O11A **Cowboy Ranch,** 76.20 41 ⇓P P 16 03 15.3 +0.3
baz=76,SNR=188
F05A **White Salmon** 76.22 34 ⇓P P 16 03 15.1 +0.1
baz=76,SNR=34
R13A **O'Grain Ranch,** 76.23 44 ⇓P P 16 03 15.9 +0.6
baz=76,SNR=80
V15A **Kaibab Nationa** 76.24 47 ⇑P P 16 03 16.1 +0.7
baz=76,SNR=160
T14A **Hurricane** 76.24 45 ⇑P P 16 03 15.7 +0.4
baz=76,SNR=51
G06A **Carlson Farm,** 76.26 35 ⇑P P 16 03 15.1 -0.1
baz=76,SNR=40
118A **Homack Ranch,** 76.27 50 ⇑P P 16 03 16.0 +0.4
baz=76,SNR=63
D04A **Dobbs Creek Ra** 76.30 32 ⇑P P 16 03 16.4 +1.0
baz=76
P12A **McGill** 76.32 42 ⇑P P 16 03 16.0 +0.3
baz=76
W16A **Flagstaff** 76.33 47 ⇓P P 16 03 16.4 +0.5
baz=76,SNR=56
J08A **Circle Bar Ran** 76.34 37 ⇑P P 16 03 15.9 +0.2
baz=76,SNR=104
K09A **Rome** 76.39 38 ⇑P P 16 03 16.2 +0.1
baz=77,SNR=268
M10A **I.L. Ranch, Tu** 76.43 40 ⇑P P 16 03 16.7 +0.4
baz=77,SNR=167
Z18A **Geronimo** 76.43 50 ⇓P P 16 03 16.8 +0.3
baz=77
H07A **Lands Inn, Kim** 76.46 36 ⇓P P 16 03 16.3 0.0
baz=77,SNR=139
U15A **North Rim** 76.46 46 ⇓P P 16 03 17.3 +0.7
baz=77,SNR=214
E05A **Randle** 76.49 33 ⇓P P 16 03 16.4 -0.1
baz=77,SNR=65
219A **White Tail Can** 76.50 51 ⇓P P 16 03 17.1 +0.2
baz=77,SNR=54
F06A **Goldendale** 76.51 34 ⇑P P 16 03 16.6 0.0
baz=77,SNR=32
N11A **Elko Archery C** 76.53 41 ⇑P P 16 03 17.1 +0.3
baz=77,SNR=26
B04A **Port Angeles** 76.57 31 ⇑P P 16 03 17.3 +0.4
baz=77,SNR=13
LON **Longmire** 76.59 33⇓*i*P P 16 03 16.6 -0.4
LON pmax pmax
comp=Z,55nm,0.8s,mb5.5
LON **Longmire** 76.59 33⇓*i*P P 16 03 16.6 -0.5
comp=Z,55nm,0.8s,mb5.5
I08A **Drewsey** 76.61 37 ⇓P P 16 03 17.4 +0.1
baz=77,SNR=38
Q13A **Wheeler Ranch,** 76.61 43 ⇑P P 16 03 17.5 +0.1
baz=77,SNR=73
C04A **Brinnon** 76.62 32 ⇑P P 16 03 17.6 +0.4
baz=77,SNR=37
SBUM **Sibu** 76.64 276 ⇓P P 16 03 20.2 +2.0
WUAZ **Wupatki** 76.65 47 ⇓P P 16 03 18.0 +0.3
baz=77
WUAZ **Wupatki** 76.65 47⇓*i*P P 16 03 17.7 0.0
WUAZ LR LR
comp=Z,175nm,1.2s,mb5.9
comp=Z,5μm,21.0s,MS5.8
T15A **Red Dirt Ranch** 76.70 45 ⇓P P 16 03 18.6 +0.6
baz=77,SNR=200
J09A **Fry Pan Ranch,** 76.75 38 ⇓P P 16 03 18.1 0.0
baz=77,SNR=144
SFJM **Santa Fe** 76.76 64 *i*P P 16 03 19.1 +0.5
Y18A **Canyon Day Jun** 76.76 49 ⇓P P 16 03 18.9 +0.6
baz=77,SNR=49
L10A **Juniper Basin** 76.79 39 ⇓P P 16 03 18.5 +0.2
baz=77
KSRS **Korea Array** 76.80 315 P P 16 03 20.0 +1.5
comp=Z,75nm,1.0s,mb5.6,baz=126,slow=6.7,SNR=100
KSRS S S 16 13 08.1 +4.4
comp=Z,2.1nm,0.9s,baz=74,slow=29,SNR=2.7
KSRS LR LR 16 35 09.5
comp=Z,2μm,19.5s,MS5.4,baz=107,slow=34
KSRS **Korea Array** 76.80 315 P P 16 03 20.0 +1.5
KSRS S S 16 13 08.1 +4.4
KSRS pmax pmax
comp=Z,75nm,1.0s,mb5.6
KSRS smax
comp=N,2.0nm,1.0s
KSRS MLR MLR
comp=Z,2μm,19.5s,MS5.4
ELK **Elko** 76.80 41⇓*i*P P 16 03 18.1 -0.3
ELK pmax pmax
comp=Z,185nm,1.1s
ELK MLR MLR
comp=Z,13μm,20.0s
ELK **Elko** 76.80 41⇓*i*P P 16 03 18.1 -0.3
comp=Z,185nm,1.1s,mb5.9
ELK LR LR
comp=Z,13μm,20.0s,MS6.3
G07A **Ruggs Ranch, H** 76.81 35 ⇑P P 16 03 18.3 0.0
baz=77,SNR=79
119A **Ashpeak Ranch,** 76.83 50 ⇑P P 16 03 19.1 +0.3
baz=77,SNR=27
M11A **Holland Ranch,** 76.84 40 ⇑P P 16 03 19.0 +0.4
baz=77,SNR=80
O12A **Currie** 76.86 42 ⇓P P 16 03 19.0 +0.2
baz=77,SNR=160
P13A **Bates Ranch, G** 76.89 43 ⇓P P 16 03 19.2 +0.3
baz=77,SNR=182
E06A **Yakima** 76.90 34 ⇑P P 16 03 19.0 +0.2
baz=77,SNR=47
W17A **Winslow** 76.90 48 ⇑P P 16 03 19.7 +0.5
baz=77,SNR=14
H08A **Prairie City** 76.92 36 ⇓P P 16 03 18.9 -0.1
baz=77,SNR=29
R14A **James Farms, M** 76.93 44 ⇑P P 16 03 19.6 +0.4
baz=77,SNR=8.0
K10A **MacKenzie Ranc** 76.95 38 ⇓P P 16 03 19.4 +0.3
baz=77,SNR=246
N12A **Clover Valley,** 76.99 41 ⇓P P 16 03 19.7 +0.3
baz=77,SNR=73
PGC **Sidney** 76.99 31⇓*i*P P 16 03 19.1 -0.2
comp=Z,8.2nm,0.8s,mb4.7
S15A **Panguitch** 77.05 45 ⇓P P 16 03 21.4 +1.5
baz=77,SNR=35
F07A **Phinny Hill Vi** 77.06 35 ⇑P P 16 03 19.8 +0.1
baz=77,SNR=18
Z19A **T-Link Ranch,** 77.10 50 ⇑P P 16 03 20.7 +0.4
baz=77,SNR=13
ZIIG **Zihuatanejo** 77.11 68 *e*P P 16 03 16.7 -3.9
Q14A **Sevier Lake (B** 77.12 43 ⇓P P 16 03 20.7 +0.5
baz=77,SNR=366
U16A **Tuba City** 77.13 47 ⇑P P 16 03 21.0 +0.7
baz=77,SNR=95
I09A **Lost Marbles R** 77.13 37 ⇑P P 16 03 19.9 -0.3
baz=77,SNR=29
X18A **Snowflake** 77.19 49 ⇓P P 16 03 21.1 +0.4
baz=77,SNR=34
G08A **Pilot Rock** 77.22 36 ⇑P P 16 03 20.7 0.0
baz=77,SNR=183
C05A **Tolt Reservoir** 77.26 32 ⇑P P 16 03 20.8 0.0
baz=77,SNR=75
O13A **Hicks Ranch, I** 77.27 42 ⇓P P 16 03 21.5 +0.4
baz=77,SNR=47
L11A **Cat Creek Ranc** 77.28 39 ⇑P P 16 03 21.3 +0.3
baz=77,SNR=239
SVW2 **Sparrevohn** 77.28 8 *e*P P 16 03 18.9 -1.7
T16A **Glen Canyon Da** 77.29 46 ⇓P P 16 03 22.1 +0.8
baz=77,SNR=50
SEW **Seward** 77.36 12⇓*i*P P 16 03 20.0 -1.1
comp=Z,125nm,1.1s,mb5.8
M12A **Wells** 77.38 40 ⇑P P 16 03 21.9 +0.2
baz=78,SNR=212
D06A **Cle Elum** 77.38 33 ⇓P P 16 03 21.6 +0.1
baz=78,SNR=34
J10A **Berg Farm, Mel** 77.39 38 ⇑P P 16 03 21.4 -0.2
baz=78,SNR=11
R15A **Junction** 77.39 44 ⇑P P 16 03 22.8 +1.0
baz=78,SNR=61
A04A **Legoe Bay, Lum** 77.41 31 ⇓P P 16 03 22.0 +0.4
baz=78,SNR=8.0
B05A **Bryant** 77.42 32 ⇑P P 16 03 21.8 +0.1
baz=78,SNR=32
Y19A **Nutrioso** 77.42 49 ⇓P P 16 03 23.0 +0.9
baz=78,SNR=118
K11A **Parker Ranch,** 77.45 39 ⇑P P 16 03 22.1 +0.1
baz=78,SNR=157
E07A **Sunnyside** 77.51 34 ⇑P P 16 03 22.4 +0.1
baz=78,SNR=50
P14A **Drum Mountains** 77.58 43 ⇑P P 16 03 23.3 +0.5
baz=78,SNR=295
MVU **Marysvale** 77.58 44 PFAKE 16 03 30.0 +7.2
MVU LR LR
comp=Z,11μm,19.0s,MS6.2
HAWA **Hanford** 77.58 34⇓*i*P P 16 03 22.4 -0.3
comp=Z,179nm,1.1s,mb5.9
HAWA LR LR
comp=Z,13μm,19.0s,MS6.3
H09A **Durkee** 77.58 37 ⇑P P 16 03 22.6 -0.1
baz=78,SNR=20
S16A **Weppner Ranch,** 77.60 45 ⇓P P 16 03 23.4 +0.4
baz=78
X19A **St. Johns** 77.61 49 ⇑P P 16 03 23.8 +0.7
baz=78,SNR=70
W18A **Petrified Fore** 77.62 48 ⇓P P 16 03 23.4 +0.3
baz=78,SNR=14
F08A **Pendleton** 77.63 35 ⇓P P 16 03 23.0 0.0
baz=78,SNR=71
U17A **Shonto** 77.68 46 ⇓P P 16 03 24.2 +0.7
baz=78,SNR=91
L12A **House Creek Ra** 77.72 40 ⇓P P 16 03 23.8 +0.3
baz=78,SNR=51
Q15A **Fillmore** 77.72 44 ⇑P P 16 03 24.0 +0.4
baz=78,SNR=25
I10A **Payette** 77.75 37 ⇓P P 16 03 23.9 +0.3
baz=78,SNR=13
V18A **Ganado** 77.77 48 ⇑P P 16 03 24.6 +0.6
baz=78,SNR=104
T17A **Navajo Res., N** 77.78 46 ⇓P P 16 03 24.9 +0.9
baz=78,SNR=103
C06A **Tall Timber Ra** 77.82 33 ⇓P P 16 03 23.6 -0.4
baz=78,SNR=6.1
M13A **Montello** 77.82 41 ⇑P P 16 03 24.3 +0.2
baz=78,SNR=79
CRAG **Craig** 77.84 22 *e*P P 16 03 24.0 +0.2
comp=Z,244nm,1.6s,mb5.9
D07A **Quincy** 77.84 34 ⇓P P 16 03 24.0 -0.1
baz=78,SNR=25
W19A **Sanders** 77.87 48 ⇓P P 16 03 24.9 +0.4
baz=78,SNR=39
G09A **Cove** 77.88 36 ⇓P P 16 03 24.1 -0.2
baz=78,SNR=100
B06A **Marblemount** 77.89 32 ⇑P P 16 03 23.8 -0.5
baz=78,SNR=8.3
BMO **Blue Mountains** 77.90 37⇓*i*P P 16 03 23.9 -0.6
BMO pmax pmax
comp=Z,171nm,1.3s,mb5.8
BMO MLR MLR
comp=Z,10μm,20.0s,MS6.1
BMO **Blue Mountains** 77.90 37⇓*i*P P 16 03 23.9 -0.6
comp=Z,170nm,1.3s,mb5.8
BMO LR LR
comp=Z,10μm,20.0s,MS6.1
E08A **Dider Farm, El** 77.90 34 ⇓P P 16 03 24.3 -0.1
baz=78,SNR=10.0
A05A **Maple Falls** 77.90 31 ⇓P P 16 03 24.1 -0.3
baz=78
MFID **Camas Ranch** 77.94 38 ⇑P P 16 03 24.6 -0.1
baz=78,SNR=108
R16A **Teasdale** 77.96 45 ⇑P P 16 03 26.0 +1.0
baz=78,SNR=227
MIR **Mirnyy** 77.96 204*ce*P P 16 03 26.0 +1.5
MIR *i* S S 16 13 20.0 +4.5
MIR *i* PS 16 14 00.0
MIR *i* SS SS 16 18 22.0 +5.7
MIR pmax pmax
comp=Z,300nm,1.8s,mb5.9
MIR pmax pmax
comp=Z,2μm,16.0s
CAIG **El Cayaco** 77.98 69 *i*P P 16 03 23.6 -1.9
ZAIG **Zacatecas** 78.02 62 *i*P P 16 03 26.2 +0.5
K12A **Draper Farm, C** 78.06 39 ⇑P P 16 03 25.4 0.0
baz=78,SNR=75
DUG **Dugway** 78.06 42 ⇑P P 16 03 25.6 +0.1
baz=78
DUG **Dugway** 78.06 42⇓*i*P P 16 03 25.1 -0.4
DUG pmax pmax
comp=Z,178nm,1.0s,mb6.0
DUG **Dugway** 78.06 42⇓*i*P P 16 03 25.1 -0.4
comp=Z,178nm,1.0s,mb6.0
F09A **S2 Ranch, Elgi** 78.07 36 ⇓P P 16 03 25.3 -0.1
baz=78,SNR=74
H10A **Noah's Angus R** 78.07 37 ⇓P P 16 03 25.1 -0.3
baz=78,SNR=175
P15A **Leamington** 78.09 43 ⇓P P 16 03 26.0 +0.3
baz=78,SNR=80
S17A **Black Ridge (B** 78.10 45 ⇑P P 16 03 25.7 0.0
baz=78,SNR=191
C07A **Waterville** 78.11 33 ⇓P P 16 03 25.1 -0.4
baz=78,SNR=42
I11A **Placille** 78.14 38 ⇑P P 16 03 25.6 -0.2
baz=78,SNR=52
U18A **Rough Rock, Ch** 78.15 47 ⇑P P 16 03 26.5 +0.4
baz=78,SNR=94
N14A **Grayback Hills** 78.17 42 ⇓P P 16 03 26.0 -0.1
baz=78,SNR=33
KSM **Kuching** 78.21 275⇓*e*P P 16 03 27.9 +0.9
comp=Z,119nm,1.0s,mb5.8
KSM **Kuching** 78.21 275 ⇓P P 16 03 28.9 +1.9
RC01 **Rabbit Creek A** 78.22 11⇓*i*P P 16 03 24.8 -1.0
comp=Z,210nm,1.2s,mb5.9
G10A **Bishop Farm, J** 78.27 36 ⇓P P 16 03 26.3 -0.1
baz=78,SNR=121
J12A **Stokes Ranch,** 78.29 39 ⇑P P 16 03 26.9 +0.2
baz=78,SNR=102
QZH **Quanzhou** 78.29 300⇑*i*P P 16 03 27.5 +0.4
QZH S S 16 13 19.0 -1.3
QZH AMB AMB
comp=Z,600nm,1.6s,mb6.3
QZH LR LR
comp=N,4μm,17.1s,MS6.0
QZH LR LR
comp=E,2μm,12.3s,MS6.0
QZH LR LR
comp=Z,3μm,25.3s
D08A **Wollman Farm,** 78.32 34 ⇓P P 16 03 26.7 -0.1
baz=78,SNR=58
O15A **The Old Anders** 78.33 42 ⇓P P 16 03 27.3 +0.3
baz=78,SNR=28
SIT **Sitka** 78.35 20 *e*P P 16 03 26.5 -0.2
SIT pmax pmax
comp=Z,96nm,1.2s,mb5.6
SIT **Sitka** 78.35 20 *e*P P 16 03 26.5 -0.2
comp=Z,96nm,1.2s,mb5.6
L13A **Double Diamond** 78.36 40 ⇓P P 16 03 27.2 +0.1
baz=78,SNR=40
V19A **Window Rock** 78.40 48 ⇑P P 16 03 27.9 +0.5
baz=78,SNR=24
M14A **Sheep Mountain** 78.42 41 ⇑P P 16 03 27.6 +0.2
baz=79,SNR=434
E09A **Wood Farm, Sta** 78.42 35 ⇓P P 16 03 26.9 -0.4
baz=79,SNR=68
Q16A **Castle Valley** 78.49 44 ⇑P P 16 03 28.8 +0.9
baz=79,SNR=62
T18A **Mexican Hat** 78.50 46 ⇑P P 16 03 28.6 +0.6
baz=79,SNR=865
P16A **Fountain Green** 78.52 43 ⇑P P 16 03 28.9 +0.9
baz=79,SNR=24
R17A **Hanksville Air** 78.55 45 ⇑P P 16 03 28.5 +0.3
baz=79,SNR=369
B07A **Winthrop** 78.56 32 ⇓P P 16 03 27.7 -0.3
baz=79,SNR=46
H11A **Donnelly** 78.56 37 ⇑P P 16 03 28.0 -0.1
baz=79,SNR=46
I12A **Atlanta** 78.57 38 ⇑P P 16 03 28.5 +0.3
baz=79
K13A **Stover Farm, H** 78.57 40 ⇑P P 16 03 28.5 +0.3
baz=79,SNR=64
F10A **Beach Ranch, E** 78.61 36 ⇓P P 16 03 27.8 -0.5
baz=79,SNR=106
D09A **Jones Farm, Ri** 78.66 34 ⇓P P 16 03 28.4 -0.2
baz=79,SNR=31
S18A **Hurst Farm, Bl** 78.69 46 ⇑P P 16 03 29.2 +0.2
baz=79,SNR=84
C08A **Higginbotham F** 78.70 33 ⇓P P 16 03 28.6 -0.2
baz=79,SNR=48
SSE **Sheshan** 78.72 307 P P 16 03 28.4 -0.9
SSE S S 16 13 24.3 -0.3
SSE XS sS 16 13 40.3 -1.7
SSE AMB AMB
comp=Z,54nm,1.0s,mb5.4
SSE AMB AMB
comp=Z,1μm,12.0s
SSE LR LR
comp=N,586nm,24.8s,MS5.2
SSE LR LR
comp=E,1μm,24.8s,MS5.2
SSE LR LR
comp=Z,2μm,21.3s,MS5.4
L14A **Malta** 78.77 41 ⇑P P 16 03 29.4 +0.1
baz=79,SNR=103
HABR **Khabarovsk** 78.79 327 *i*P P 16 03 30.1 +0.8
HABR *e* 16 03 36.9
HABR *e*PP pP 16 03 42.2 +2.4
HABR *i* 16 06 24.6
HABR *e*S S 16 13 23.1 -1.6
HABR *e* 16 13 44.3
HABR *e*SS SS 16 18 25.9 -4.3
HABR *e*SSS 16 21 50.5
HABR pmax pmax
comp=N,30nm,1.1s
HABR pmax pmax
comp=Z,388nm,1.6s,mb6.1
HABR pmax pmax
comp=E,68nm,1.1s
HABR pmax pmax
comp=Z,1126μm,2.2s
HABR MLR MLR
comp=Z,1μm,19.0s,MS5.3
HABR MLR MLR
comp=E,1μm,19.0s,MS5.4
HABR MLR MLR
comp=N,1μm,19.0s,MS5.4
A07A **Ashnola River,** 78.79 32 ⇑P P 16 03 29.3 0.0
baz=79,SNR=47
PMR **Palmer** 78.79 11 *e*P P 16 03 27.9 -1.1
PMR pmax pmax
comp=Z,248nm,1.3s,mb6.0
PMR **Palmer** 78.79 11 *e*P P 16 03 27.9 -1.1
comp=Z,248nm,1.3s,mb6.0
PMR *e*P 16 03 28.2
GAMB **Gambell** 78.80 0⇓*e*P P 16 03 29.1 +0.1
comp=Z,218nm,1.5s,mb5.9
G11A **Walters Elk Ra** 78.82 37 ⇓P P 16 03 29.1 -0.4
baz=79,SNR=184
WRAK **Wrangell Islan** 78.85 21⇓*e*P P 16 03 29.4 -0.1
comp=Z,79nm,1.3s,mb5.5
WRAK LR LR
comp=Z,7μm,19.0s,MS6.0
HLID **Hailey** 78.87 39 ⇓P P 16 03 30.3 +0.4
baz=79
HLID **Hailey** 78.87 39⇓*i*P P 16 03 29.9 0.0
comp=Z,196nm,1.0s,mb6.0
HLID LR LR
comp=Z,6μm,21.0s,MS5.9
B08A **Colville Reser** 78.91 33 ⇑P P 16 03 29.2 -0.7
baz=79,SNR=34
O16A **Springville** 78.93 43 ⇑P P 16 03 30.5 +0.3
baz=79
J13A **Cove Ranch, Pi** 78.93 39 ⇓P P 16 03 30.6 +0.4
baz=79,SNR=211
T19A **Beclabito** 78.95 47 ⇓P P 16 03 30.9 +0.4
baz=79,SNR=98
M15A **Larsen Ranch,** 78.97 41 ⇓P P 16 03 30.3 -0.1
baz=79,SNR=177
E10A **Myers Farm, Un** 78.97 35 ⇓P P 16 03 29.8 -0.6
baz=79,SNR=22
SRU **San Rafael** 79.03 44 ⇓P P 16 03 31.2 +0.3
baz=79
P17A **Butcher Ranch,** 79.06 44 ⇓P P 16 03 31.5 +0.5
baz=79,SNR=104
K14A **Jones Ranch, D** 79.08 40 ⇑P P 16 03 31.2 +0.2
baz=79,SNR=80
R18A **Canyonlands Na** 79.09 45 ⇓P P 16 03 31.4 +0.2
baz=79,SNR=204
C09A **Chrisman Ranch** 79.12 34 ⇓P P 16 03 30.8 -0.3
baz=79,SNR=46
PLIG **Platanillo** 79.13 67 *i*P P 16 03 32.3 +0.5
H12A **Diamond D Ranc** 79.16 38 ⇓P P 16 03 31.2 -0.2
baz=79,SNR=106
F11A **Grangeville** 79.17 36 ⇑P P 16 03 30.0 -1.4
baz=79,SNR=47
Y22D **IRIS PASSCAL I** 79.19 50 ⇓P P 16 03 32.6 +0.7
baz=79
D10A **Wagner Farm, O** 79.22 35 ⇓P P 16 03 31.0 -0.7
baz=79,SNR=32
I13A **Wildhorse Cree** 79.25 39 ⇑P P 16 03 32.2 +0.3
baz=79,SNR=96
Q18A **Rafter H Ranch** 79.28 44 ⇑P P 16 03 32.3 +0.1
baz=79,SNR=163
J14A **Carey** 79.29 39 ⇓P P 16 03 32.9 +0.8
baz=79,SNR=262
L15A **Malad City** 79.29 41 ⇑P P 16 03 32.0 -0.2
baz=79,SNR=100
PNL **Peninsula** 79.30 16⇓*i*P P 16 03 31.3 -0.5
comp=Z,126nm,0.9s,mb5.8
A08A **Turner Farm, O** 79.31 32 ⇑P P 16 03 31.9 -0.2
baz=80,SNR=63
S19A **Harvey Farm, M** 79.31 46 ⇑P P 16 03 32.9 +0.5
baz=80,SNR=166
N16A **Rees Ranch, Co** 79.32 42 ⇓P P 16 03 32.8 +0.4
baz=80,SNR=71
E11A **Bogner Ranch,** 79.40 36 ⇑P P 16 03 31.4 -1.3
baz=80,SNR=31
M16A **Huntsville** 79.41 42 ⇑P P 16 03 32.8 0.0
baz=80,SNR=82
O17A **Robinson Place** 79.42 43 ⇓P P 16 03 33.7 +0.7
baz=80,SNR=114
P18A **Preston Nutter** 79.47 44 ⇓P P 16 03 33.7 +0.5
baz=80,SNR=81
R19A **Curley Farm, L** 79.48 46 ⇑P P 16 03 33.7 +0.3
baz=80,SNR=123
PPLA **Purkeypile** 79.50 9 *e*P P 16 03 30.7 -2.1
comp=Z,71nm,1.3s,mb5.4
MVCO **Mesa Verde** 79.50 47 ⇓P P 16 03 33.8 +0.3
baz=80

MVCO	Mesa Verde	79.50	47⇓iP		P	16 03 33.3	-0.1
	comp=Z,162nm,1.4s,mb5.8						
MVCO				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
H13A	Challis	79.52	38 ⇑P		P	16 03 33.5	+0.1
	baz=80,SNR=126						
K15A	Arbon	79.56	40 ⇑P		P	16 03 33.6	0.0
	baz=80,SNR=104						
MDJ	Mudanjiang	79.56	322	P	P	16 03 33.4	-0.2
MDJ				AP	pP	16 03 42.9	-1.2
MDJ				XP	sP	16 03 46.8	-1.2
MDJ				S	S	16 13 31.1	-2.0
MDJ				XS	sS	16 13 49.9	-0.5
MDJ				SS	SS	16 18 40.1	-1.9
MDJ				AMB	AMB		
	comp=Z,58nm,1.8s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,1µm,9.6s						
MDJ				LR	LR		
	comp=N,2µm,23.1s,MS5.6						
MDJ				LR	LR		
	comp=E,3µm,22.6s,MS5.6						
MDJ				LR	LR		
	comp=Z,4µm,21.7s,MS5.7						
B09A	Rice	79.57	33 ⇓P		P	16 03 32.9	-0.6
	baz=80,SNR=31						
F12A	Elk City	79.61	37 ⇓P		P	16 03 33.7	-0.1
	baz=80						
C10A	Spilker Farm,	79.66	34 ⇓P		P	16 03 33.6	-0.5
	baz=80						
I14A	Mackay	79.66	39 ⇑P		P	16 03 34.5	+0.4
	baz=80,SNR=82						
A09A	Danville	79.68	33 ⇑P		P	16 03 33.8	-0.3
	baz=80,SNR=47						
TXAR	Lajitas Array	79.68	56	P	P	16 03 34.8	+0.2
	comp=Z,71nm,1.1s,mb5.5,baz=217,slow=6.0,SNR=262						
TXAR				S	S	16 13 39.5	+4.5
	comp=Z,0.2nm,0.7s,baz=112,slow=36,SNR=2.8						
TXAR				PKKP	PKKPbc	16 22 16.9	-5.9
	comp=Z,0.6nm,0.9s,baz=112,slow=8.2,SNR=4.2						
TXAR				PKKPbc	PKKPbc	16 22 23.7	+0.9
	comp=Z,1.8nm,0.8s,baz=93,slow=3.1,SNR=12						
TXAR				PKP2ab		16 30 17.6	
	comp=Z,0.6nm,0.9s,baz=99,slow=1.6,SNR=4.1						
TXAR				LR	LR	16 32 41.2	
	comp=Z,7µm,18.8s,MS6.1,baz=85,slow=31						
TXAR	Lajitas Array	79.68	56	P	P	16 03 34.8	+0.2
TXAR				S	S	16 13 39.5	+4.5
TXAR				pmax	pmax		
	comp=Z,71nm,1.1s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR				MLR	MLR		
	comp=Z,7µm,18.8s						
PNIG	Pinotepa	79.69	70 eP		P	16 03 30.3	-4.6
D11A	Klaveano Farm,	79.74	35 ⇓P		P	16 03 33.6	-0.9
	baz=80,SNR=29						
N17A	Moffit Pass	79.74	43 ⇑P		P	16 03 35.0	+0.4
	baz=80,SNR=113						
Q19A	Hogan Spring (	79.80	45 ⇑P		P	16 03 35.4	+0.3
	baz=80,SNR=227						
G13A	Cobalt	79.83	38 ⇓P		P	16 03 34.8	-0.2
	baz=80,SNR=145						
L16A	Fish Haven	79.90	41 ⇓P		P	16 03 35.4	-0.2
	baz=80,SNR=57						
ANMO	Albuquerque	79.93	50d iP		P	16 03 35.5	-0.3
ANMO	Albuquerque	79.93	50⇓iP		P	16 03 35.8	0.0
	comp=Z,197nm,1.4s,mb5.8						
ANMO				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
O18A	Roosevelt	79.94	43 ⇑P		P	16 03 36.0	+0.2
	baz=80,SNR=17						
B10A	Chitwood Farm,	79.99	34 ⇑P		P	16 03 35.2	-0.6
	baz=80						
J15A	Blackfoot	80.00	40 ⇓P		P	16 03 36.9	+0.9
	baz=80,SNR=112						
NEW	Newport	80.02	34⇓iP		P	16 03 34.9	-1.1
NEW				pmax	pmax		
	comp=Z,29nm,0.8s						
NEW				MLR	MLR		
	comp=Z,10µm,20.0s						
NEW	Newport	80.02	34⇓iP		P	16 03 34.9	-1.1
	comp=Z,29nm,0.8s,mb5.2						
NEW				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
H14A	Leadore	80.08	38 ⇑P		P	16 03 36.9	+0.4
	baz=80,SNR=108						
M17A	Scullys Gap (B	80.12	42 ⇓P		P	16 03 36.4	-0.3
	baz=80,SNR=46						
F13A	Darby	80.16	37 ⇑P		P	16 03 36.4	-0.4
	baz=80,SNR=84						
A10A	Northport	80.22	33 ⇓P		P	16 03 36.6	-0.4
	baz=80						
K16A	Soda Springs	80.23	41 ⇑P		P	16 03 37.5	+0.3
	baz=80,SNR=148						
C11A	Tepee Creek (N	80.24	35 ⇓P		P	16 03 37.0	-0.2
	baz=80						
I15A	Monteview	80.28	39 ⇓P		P	16 03 38.0	+0.5
	baz=80,SNR=18						
D12A	Red Ives Fores	80.29	36 ⇓P		P	16 03 36.7	-0.8
	baz=80						
SKAG	Skagway	80.30	18 eP		P	16 03 36.7	-0.5
	comp=Z,494nm,2.2s,mb6.0						
L17A	Cokeville	80.30	42 ⇑P		P	16 03 37.1	-0.6
	baz=80,SNR=6.2						
KTH	Kantishna Hill	80.31	10⇓iP		P	16 03 35.6	-1.6
	comp=Z,396nm,1.7s,mb6.1						
TRF	Thorofare Moun	80.32	10⇓iP		P	16 03 36.0	-1.3
	comp=Z,194nm,1.2s,mb5.9						
P19A	Cripple Cowboy	80.32	44 ⇓P		P	16 03 37.9	+0.1
	baz=80,SNR=120						
G14A	Jackson	80.37	38	P	P	16 03 38.1	+0.2
	baz=80						
CHUM	Lake Minchumin	80.41	9 eP		P	16 03 34.8	-2.9
	comp=Z,177nm,1.2s,mb5.9						
J16A	Bone	80.44	40 ⇑P		P	16 03 38.8	+0.4
	baz=81,SNR=152						
Q20A	Ridgley Place,	80.46	45 ⇓P		P	16 03 38.8	+0.2
	baz=81,SNR=52						
M18A	Lyman	80.48	42 ⇓P		P	16 03 38.6	-0.1
	baz=81,SNR=57						
AHID	Auburn Hatcher	80.50	41⇓iP		P	16 03 38.3	-0.4
	comp=Z,152nm,1.1s,mb5.8						
AHID				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
H15A	Lima	80.52	39 ⇑P		P	16 03 39.4	+0.6
	baz=81,SNR=207						
N18A	Larsen Ranch,	80.52	43 ⇑P		P	16 03 38.6	-0.3
	baz=81,SNR=47						
B11A	Sandpoint	80.53	34 ⇑P		P	16 03 38.4	-0.3
	baz=81,SNR=52						
C12B	Naegeli Ranch,	80.59	35 ⇑P		P	16 03 38.8	-0.3
	baz=81,SNR=34						
E13A	Victor	80.61	37 ⇓P		P	16 03 38.6	-0.6
	baz=81,SNR=78						
K17A	Gardner Place,	80.61	41 ⇓P		P	16 03 39.4	+0.1
	baz=81,SNR=24						
TNA	Tin City	80.66	2⇓iP		P	16 03 39.0	0.0
	comp=Z,821nm,2.2s,mb6.3						
R21A	Cimarron	80.70	46 ⇑P		P	16 03 40.7	+0.8
	baz=81,SNR=140						
F14A	Wisdom	80.73	37 ⇑P		P	16 03 39.8	-0.1
	baz=81,SNR=65						
L18A	Fontenelle, Gr	80.75	42 ⇑P		P	16 03 39.8	-0.3
	baz=81,SNR=25						
N19A	John Jarvie Ra	80.80	43 ⇓P		P	16 03 39.9	-0.5
	baz=81						
MCK	McKinley	80.81	10⇓iP		P	16 03 38.8	-1.1
MCK				pmax	pmax		
	comp=Z,293nm,1.1s,mb6.1						
MCK	McKinley	80.81	10⇓iP		P	16 03 38.8	-1.1
	comp=Z,293nm,1.1s,mb6.1						
BPAW	Bear Paw Mtn.	80.81	9⇓iP		P	16 03 37.7	-2.2
	comp=Z,100nm,1.4s,mb5.5						
D13A	Huson	80.81	36 ⇓P		P	16 03 39.4	-0.9
	baz=81,SNR=119						
I16A	Newdale	80.83	40 ⇓P		P	16 03 41.3	+0.8
	baz=81,SNR=43						
A11A	Hall Mountain,	80.84	34 ⇑P		P	16 03 40.5	+0.1
	baz=81,SNR=44						
DCID1	Drake Creek	80.87	40⇓iP		P	16 03 40.6	-0.1
	comp=Z,342nm,1.2s,mb6.2						
G15A	Dillon	80.90	38 ⇓P		P	16 03 41.0	+0.2
	baz=81,SNR=62						
NJ2	Nanjing	80.92	307 eP		P	16 03 42.3	+1.1
NJ2				AP	pP	16 03 52.6	+0.8
NJ2				XP	sP	16 03 56.5	+0.9
NJ2				PP	PP	16 06 48.0	+1.7
NJ2				S	S	16 13 53.0	+5.1
NJ2				XS	sS	16 14 02.0	-3.3
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,1µm,7.9s						
NJ2				LR	LR		
	comp=N,2µm,22.2s						
NJ2				LR	LR		
	comp=E,1µm,30.2s						
NJ2				LR	LR		
	comp=Z,1µm,22.4s,MS5.2						
DLMT	Dillon	80.94	38⇓iP		P	16 03 40.7	-0.4
	comp=Z,138nm,1.1s,mb5.8						
MSO	Missoula	80.96	36⇓iP		P	16 03 39.7	-1.3
	comp=Z,113nm,1.2s,mb5.7						
MSO				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
REDW	Red Top Meadow	80.96	40⇓iP		P	16 03 41.1	-0.1
	comp=Z,185nm,1.2s,mb5.9						
TPAW	Teton Pass	80.97	40⇓iP		P	16 03 41.1	-0.1
	comp=Z,196nm,0.9s,mb6.0						
B12A	Libby	80.97	34 ⇓P		P	16 03 40.9	-0.2
	baz=81,SNR=7.0						
KLR	Kul'dur	80.98	327⇑iP		P	16 03 37.0	-4.1
KLR				eS	S	16 13 46.0	-1.8
KLR				pmax	pmax		
	comp=E,170nm,2.2s						
KLR				pmax	pmax		
	comp=Z,370nm,2.2s,mb5.9						
KLR				pmax	pmax		
	comp=Z,2µm,12.0s						
KLR				smax			
	comp=N,2µm,11.5s						
KLR				smax			
	comp=E,2µm,11.5s						
E14A	Clinton	80.99	37 ⇓P		P	16 03 41.1	-0.2
	baz=81,SNR=122						
J17A	Brown Place, J	81.05	41 ⇑P		P	16 03 41.8	+0.2
	baz=81,SNR=79						
O20A	White River Ci	81.06	44 ⇓P		P	16 03 41.9	+0.1
	baz=81,SNR=32						
SNOW	Snow King Moun	81.07	40⇓iP		P	16 03 41.8	0.0
	comp=E,178nm,0.9s,mb6.0						
C13A	Hot Springs	81.08	35 ⇑P		P	16 03 40.9	-0.8
	baz=81,SNR=64						
MENT	Mentasta	81.10	13 eP		P	16 03 41.0	-0.4
MENT				eP		16 03 41.1	
K18A	Toltan Ranch,	81.11	41 ⇑P		P	16 03 42.2	+0.3
	baz=81,SNR=126						
M19A	Rock Springs	81.12	43 ⇓P		P	16 03 41.8	-0.2
	baz=81,SNR=42						
VHO	Vista Hermosa	81.18	70 iP		P	16 03 39.2	-3.7
IMW	Indian Meadow	81.18	40⇓iP		P	16 03 42.4	0.0
	comp=E,157nm,0.9s,mb5.9						
A12A	Yaak River Ran	81.20	34 ⇓P		P	16 03 42.2	-0.1
	baz=81,SNR=27						
DLBC	Dease Lake	81.21	21⇓eP		P	16 03 41.4	-0.7
MOOW	Moose Ponds	81.23	40⇓iP		P	16 03 42.2	-0.4
	comp=E,107nm,1.3s,mb5.6						
LOHW	Long Hollow	81.25	40⇓iP		P	16 03 42.5	-0.2
	comp=E,122nm,1.1s,mb5.8						
F15A	Butte	81.26	38 ⇓P		P	16 03 42.6	-0.2
	baz=81,SNR=50						
G16A	Moss Hill, Enn	81.35	38 ⇑P		P	16 03 43.3	+0.1
	baz=82,SNR=41						
D14A	Greenough	81.35	36 ⇑P		P	16 03 42.3	-0.8
	baz=82,SNR=93						
N20A	Spence Gulch,	81.38	44 ⇑P		P	16 03 43.8	+0.4
	baz=82						
J18A	Kendall Valley	81.41	41 ⇓P		P	16 03 43.6	+0.1
	baz=82,SNR=252						
H16A	Russell Place,	81.41	39 ⇑P		P	16 03 44.5	+0.9
	baz=82,SNR=317						
I17A	Pilgram Creek	81.42	40 ⇑P		P	16 03 44.4	+0.8
	baz=82,SNR=89						
SMCO	Snowmass	81.48	46⇓iP		P	16 03 36.3	-7.8
	comp=E,291nm,1.3s,mb6.0						
BW06	Boulder Array	81.48	41 ⇓P		P	16 03 43.6	-0.4
	baz=82						
BW06	Boulder Array	81.48	41⇓iP		P	16 03 43.1	-0.8
	comp=E,104nm,1.0s,mb5.7						
BW06				e		16 03 56.8	
BW06				LR	LR		
	comp=Z,13µm,20.0s,MS6.3						
PDAR	Pinedale Array	81.48	41	P	P	16 03 43.5	-0.4
	comp=Z,52nm,0.8s,mb5.5,baz=211,slow=3.6,SNR=365						
PDAR				S	S	16 13 56.6	+3.4
	comp=Z,0.6nm,0.9s,baz=191,slow=0.8,SNR=2.5						
PDAR				PKKPbc	PKKPbc	16 22 17.2	-2.2
	comp=Z,3.9nm,0.9s,baz=95,slow=3.6,SNR=21						
PDAR				PKPPKP		16 30 18.2	
	comp=Z,1.1nm,1.0s,baz=84,slow=6.1,SNR=4.3						
PDAR				LR	LR	16 34 52.4	
	comp=Z,11µm,18.8s,MS6.2,baz=258,slow=32						
E15A	Deer Lodge	81.49	37 ⇓P		P	16 03 43.5	-0.4
	baz=82,SNR=39						
B13A	Whitefish	81.53	35 ⇓P		P	16 03 43.2	-0.9
	baz=82						
C14A	Swan Lake	81.59	36 ⇑P		P	16 03 43.5	-0.9
	baz=82						
O21A	Pagoda	81.62	44 ⇓P		P	16 03 44.8	0.0
	baz=82,SNR=31						
CN2	Changchun	81.66	320 ⇓P		P	16 03 44.8	-0.1
CN2				eXP	sP	16 03 59.3	+0.1
CN2				PP	PP	16 06 54.9	+2.8
CN2				eS	S	16 14 02.5	+7.4
CN2				SS	SS	16 19 15.3	+1.9
CN2				AMB	AMB		
	comp=Z,130nm,1.1s,mb5.8						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,1µm,20.0s,MS5.5						
CN2				LR	LR		
	comp=E,2µm,20.0s,MS5.5						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
H17A	Grant Village	81.66	40 ⇓P		P	16 03 46.3	+1.4
	baz=82,SNR=54						
BOZ	Bozeman (W)	81.67	38 ⇓P		P	16 03 45.0	+0.1
	baz=82						
BOZ	Bozeman (W)	81.67	38⇓iP		P	16 03 44.4	-0.5
BOZ				pmax	pmax		
	comp=Z,173nm,1.4s,mb5.8						
BOZ				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
BOZ	Bozeman (W)	81.67	38⇓iP		P	16 03 44.4	-0.5
	comp=Z,173nm,1.4s,mb5.8						
BOZ				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
F16A	Kennard Place,	81.75	38 ⇑P		P	16 03 45.5	+0.2
	baz=82,SNR=35						
M20A	Sweetwater, Wa	81.75	43 ⇑P		P	16 03 45.6	+0.2
	baz=82,SNR=58						
I18A	Diamond G Ranc	81.78	41 ⇑P		P	16 03 45.5	0.0
	baz=82,SNR=56						
DL2	Dalian	81.84	314 iP		P	16 03 46.9	+1.0
DL2				S	S	16 14 01.5	+4.4
DL2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.5						
DL2				AMB	AMB		
	comp=Z,810nm,7.2s						
DL2				LR	LR		
	comp=N,540nm,20.6s						
DL2				LR	LR		
	comp=Z,1µm,22.5s,MS5.1						
N21A	Black Mountain	81.84	44 ⇓P		P	16 03 46.3	+0.4
	baz=82,SNR=63						
LKWY	Lake	81.86	40⇓iP		P	16 03 47.1	+1.2
LKWY				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.7						
LKWY				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
LKWY	Lake	81.86	40⇓iP		P	16 03 47.1	+1.2
	comp=Z,126nm,1.0s,mb5.8						
LKWY				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
SDCO	Great Sand Dun	81.86	47⇓iP		P	16 03 46.0	0.0
	comp=Z,114nm,1.4s,mb5.6						
SDCO				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
A13A	Flathead Natio	81.88	34 ⇓P		P	16 03 45.6	-0.3
	baz=82						
SNY	Shenyang	81.89	317 ⇓P		P	16 03 47.0	+0.9
SNY				S	S	16 14 04.4	+6.9
SNY				AMB	AMB		
	comp=Z,146nm,2.1s,mb5.5						
SNY				LR	LR		
	comp=N,1µm,18.0s,MS5.5						
SNY				LR	LR		
	comp=E,1µm,18.0s,MS5.5						
SNY				LR	LR		
	comp=Z,1µm,20.1s,MS5.2						
D15A	Lincoln	81.89	37 ⇓P		P	16 03 45.9	-0.1
	baz=82,SNR=120						
L20A	Wamsutter	81.89	43 ⇓P		P	16 03 46.5	+0.3
	baz=82,SNR=81						
K19A	Absolon Red Bu	81.96	42 ⇑P		P	16 03 45.8	-0.7
	baz=82,SNR=32						
G17A	Pierce Place,	82.04	39 ⇓P		P	16 03 47.4	+0.6
	baz=82,SNR=31						
COLA	College	82.05	10⇓iP		P	16 03 45.3	-1.1
	comp=Z,312nm,1.0s,mb6.2						
COLA				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
GZH	Guangzhou	82.07	296	P	P	16 03 47.6	+0.1
GZH				S	S	16 14 01.8	+1.6
GZH				LR	LR		
	comp=N,621nm,16.5s,MS5.5						
GZH				LR	LR		
	comp=E,2µm,20.8s,MS5.5						
GZH				LR	LR		
	comp=Z,2µm,24.2s,MS5.5						
E16A	East Helena	82.11	37 ⇑P		P	16 03 47.0	-0.2
	baz=82,SNR=108						
PAYG	Puerto Ayora	82.14	89⇓iP		P	16 03 48.6	+0.5
	comp=Z,30nm,1.3s,mb5.1						
PAYG				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
B14A	Marquette Ranc	82.18	35 ⇑P		P	16 03 46.7	-0.8
	baz=82,SNR=56						
K20A	Yellowstone Ra	82.21	42 ⇑P		P	16 03 47.1	-0.7
	baz=82,SNR=35						
WALA	Waterton Lakes	82.22	34⇓eP		P	16 03 46.9	-0.8
	comp=Z,6.1nm,1.4s						
C15A	Salmond Ranch,	82.24	36 ⇑P		P	16 03 47.3	-0.5
	baz=82,SNR=153						
LVIG	Laguna Verde	82.32	67 iP		P	16 03 47.1	-1.8
F17A	Fitzpatrick Pl	82.39	38 ⇓P		P	16 03 49.1	+0.4
	baz=82,SNR=75						
A14A	Double T Ranch	82.44	35 ⇓P		P	16 03 48.4	-0.4
	baz=83,SNR=97						
D16A	Dana Ranch, Ca	82.45	37 ⇑P		P	16 03 48.7	-0.2
	baz=83,SNR=91						
RWWY	Rawlins	82.49	43⇓iP		P	16 03 48.6	-0.7
	comp=Z,330nm,1.4s,mb6.1						
L21A	Rawlins	82.51	43 ⇓P		P	16 03 49.1	-0.3
	baz=83,SNR=45						
B15A	Bradely Ranch,	82.56	36 ⇑P		P	16 03 48.3	-1.1
	baz=83,SNR=68						
E17A	Martinsdale	82.56	38 ⇓P		P	16 03 49.6	0.0
	baz=83,SNR=38						
N22A	Wattenberg Ran	82.58	44 ⇓P		P	16 03 50.3	+0.5
	baz=83,SNR=139						
SEY	Seymchan	82.67	345⇓iP		P	16 03 49.5	-0.2
SEY	Seymchan	82.67	345 iP		P	16 03 49.6	-0.1
ISCO	Idaho Springs	82.70	46⇓iP		P	16 03 50.4	0.0
ISCO				pmax	pmax		
	comp=Z,136nm,1.4s,mb5.8						
ISCO				MLR	MLR		
	comp=Z,6µm,19.0s,MS6.0						
ISCO	Idaho Springs	82.70	46⇓iP		P	16 03 50.4	0.0
	comp=Z,136nm,1.4s,mb5.8						
ISCO				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
C16A	Fuhringer Ranc	82.74	36 ⇓P		P	16 03 49.8	-0.6
	baz=83,SNR=135						
G18A	Lazy EL Ranch,	82.75	39 ⇓P		P	16 03 50.6	0.0
	baz=83,SNR=45						
M22A	Cedar Creek Ra	82.76	44 ⇓P		P	16 03 50.5	-0.2
	baz=83,SNR=17						
A15A	Johnson Ranch,	82.82	35 ⇑P		P	16 03 50.1	-0.7
	baz=83,SNR=91						
RLMT	Red Lodge	82.83	40 ⇑P		P	16 03 51.5	+0.5
	baz=83						
RLMT	Red Lodge	82.83	40⇓iP		P	16 03 50.9	-0.1
	comp=Z,166nm,1.2s,mb5.9						
RLMT				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
F18A	Big Timber	82.95	39 ⇓P		P	16 03 52.1	+0.5
	baz=83,SNR=59						
D17A	Six Diamond Ra	83.02	37 ⇓P		P	16 03 52.0	+0.1
	baz=83,SNR=154						
DAWY	Dawson	83.05	14⇓iP		P	16 03 51.3	-0.3
B16A	M & M Farms, S	83.09	36 ⇓P		P	16 03 51.3	-0.9
	baz=83,SNR=10.0						
L22A	Ellis Ranch, M	83.16	43 ⇓P		P	16 03 53.3	+0.6
	baz=83						
E18A	Harlowton	83.17	38 ⇓P		P	16 03 53.1	+0.5
	baz=83,SNR=113						
JCT	Junction City	83.21	56⇓iP		P	16 03 52.0	-1.3
JCT				pmax	pmax		
	comp=Z,108nm,1.1s,mb5.8						
JCT				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
JCT	Junction City	83.21	56⇓iP		P	16 03 52.0	-1.3
	comp=Z,108nm,1.1s,mb5.8						
JCT				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
C17A	Wharram Farm,	83.22	37 ⇑P		P	16 03 52.7	-0.2
	baz=83,SNR=272						
EGAK	Eagle	83.26	13⇓eP		P	16 03 51.8	-0.9
	comp=Z,133nm,1.1s,mb5.9						
EGAK				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
A16A	West Butte Ran	83.44	35 ⇑P		P	16 03 53.6	-0.4
	baz=84,SNR=169						
AMTX	Amarillo	83.45	51⇓iP		P	16 03 53.5	-1.0
	comp=Z,320nm,1.4s,mb6.2						
AMTX				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
PHWY	Pilot Hill	83.48	44⇓iP		P	16 03 54.0	-0.4
	comp=Z,259nm,1.4s,mb6.1						
B17A	L&G Farms, Che	83.54	36 ⇑P		P	16 03 54.1	-0.5
	baz=84,SNR=98						
D18A	Linhart Farms,	83.56	38 ⇑P		P	16 03 55.0	+0.4
	baz=84,SNR=36						
KVTX	Kingsville	83.71	59 eP		P	16 03 56.4	+0.5
	comp=Z,213nm,0.8s,mb6.3						
KVTX				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
QIZ	Qiongzhong	83.83	292	P	P	16 03 56.8	+0.1
QIZ				XP	sP	16 04 08.5	-2.6
QIZ				PP	PP	16 07 09.8	-0.6
QIZ				S	S	16 14 19.0	+0.9
QIZ				SS	SS	16 19 42.4	-4.0
QIZ				AMB	AMB		
	comp=Z,39nm,2.0s,mb5.2						
QIZ				LR	LR		
	comp=E,1µm,22.2s						
QIZ				LR	LR		
	comp=Z,2µm,26.5s,MS5.3						
QIZ	Qiongzhong	83.83	292 eP		P	16 03 56.9	+0.2
	comp=Z,224nm,2.1s,mb5.9						
COLD	Coldfoot	83.86	8⇓iP		P	16 03 55.8	0.0
	comp=Z,183nm,1.3s,mb6.0						
PMSA	Palmer Station	83.86	156 eP		P	16 03 56.2	+0.1
PMSA				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
WHN	Wuhan	83.89	304	P	P	16 03 58.0	+1.2
WHN				S	S	16 14 19.3	+1.0
WHN				SS	SS	16 19 49.8	+2.8
WHN				AMB	AMB		
	comp=Z,2µm,2.9s,mb6.8						
WHN				LR	LR		
	comp=Z,4µm,24.0s,MS5.7						
TIA	Tai'an	83.92	310	P	P	16 03 57.8	+1.0
TIA				AMB	AMB		
	comp=Z,67nm,1.0s,mb5.7						
A17A	Triple J Farms	83.94	36 ⇑P		P	16 03 56.4	-0.1
	baz=84,SNR=80						
EGMT	Eagleton	84.00	37 ⇓P		P	16 03 56.8	-0.2
	baz=84						
EGMT	Eagleton	84.00	37⇓iP		P	16 03 56.2	-0.7
	comp=Z,190nm,1.1s,mb6.1						
EGMT				LR	LR		
	comp=Z,12µm,20.0s,MS6.3						
B18A	Beardsley Farm	84.18	36 ⇓P		P	16 03 57.5	-0.3
	baz=84,SNR=69						

A18A Metzger Ranch, 84.41 36 ⇓P P 16 03 58.4 -0.5
baz=85,SNR=99
MYKOM Kota Tinggi 84.52 273 ⇑P P 16 04 02.3 +1.9
BILL Bilibino 84.53 352 d iP P 16 03 58.3 -0.8
BILL e 16 07 08.9
BILL iS S 16 14 14.7 -8.4
BILL iSS SS 16 20 01.3 +6.5
BILL pmax pmax
comp=Z,166nm,1.7s,mb5.9
BILL MLR MLR
comp=Z,2µm,17.0s,MS5.5
BILL Bilibino 84.53 352⇓iP P 16 03 58.4 -0.7
comp=Z,148nm,1.4s,mb5.9
BILL LR LR
comp=Z,9µm,22.0s,MS6.1
EDM Edmonton 84.84 31⇓eP P 16 03 59.6 -1.4
KGM Kluang 85.09 273 ⇑P P 16 04 05.3 +2.1
CCIG Comitan 85.12 72 eP P 16 04 02.7 -0.6
WMOK Wichita Mounta 85.60 52⇓iP P 16 04 03.8 -1.5
WMOK pmax pmax
comp=Z,104nm,1.4s,mb5.9
WMOK MLR MLR
comp=Z,7µm,19.0s,MS6.1
WMOK Wichita Mounta 85.60 52⇓iP P 16 04 03.8 -1.5
comp=Z,104nm,1.4s,mb5.9
WMOK LR LR
comp=Z,7µm,19.0s,MS6.1
OGNE Ogallala 85.66 46⇓iP P 16 04 04.3 -1.2
comp=Z,90nm,1.2s,mb5.9
OGNE LR LR
comp=Z,5µm,19.0s,MS6.0
RSSD Black Hills 85.67 42 PFAKE 16 04 20.0 +15
RSSD LR LR
comp=Z,1µm,20.0s,MS5.4
BJT Baijiatuau 86.14 313 eP P 16 04 09.2 +1.4
BJT pmax pmax
comp=Z,174nm,1.3s
BJT Baijiatuau 86.14 313 eP P 16 04 09.2 +1.3
comp=Z,174nm,1.3s,mb6.1
BJI Beijing 86.14 313 P P 16 04 08.6 +0.7
BJI S S 16 14 35.6 -4.7
BJI SS SS 16 20 18.3 -1.5
BJI AMB AMB
comp=Z,124nm,1.6s,mb5.9
BJI AMB AMB
comp=Z,2µm,5.6s
BJI LR LR
comp=N,1µm,22.4s,MS5.4
BJI LR LR
comp=E,1µm,23.5s,MS5.4
BJI LR LR
comp=Z,1µm,25.8s,MS5.2
KTGM Kuala Trenggan 86.15 277 ⇓P P 16 04 10.7 +2.2
HKT Hockley 86.23 58⇓iP P 16 04 08.3 -0.3
HKT pmax pmax
comp=Z,326nm,1.7s,mb6.3
HKT MLR MLR
comp=Z,1µm,20.0s,MS5.3
HKT Hockley 86.23 58⇓iP P 16 04 08.2 -0.3
comp=Z,326nm,1.7s,mb6.3
HKT LR LR
comp=Z,1µm,20.0s,MS5.3
CBKS Cedar Bluff 86.43 48⇓iP P 16 04 08.3 -1.0
CBKS e 16 04 22.2
CBKS pmax pmax
comp=Z,121nm,1.0s,mb6.1
CBKS Cedar Bluff 86.43 48⇓iP P 16 04 08.3 -1.0
comp=Z,121nm,1.0s,mb6.1
CBKS e 16 04 22.2
FRIM Kepong 87.04 274 ⇓P P 16 04 14.7 +1.8
UBT Ubonrachathani 87.10 287 ⇓P P 16 04 15.4 +2.3
DGMT Dagmar 87.48 38 ⇑P P 16 04 13.9 -0.3
baz=88
DGMT Dagmar 87.48 38⇓iP P 16 04 13.4 -0.7
comp=Z,744nm,1.9s,mb6.6
DGMT LR LR
comp=Z,13µm,20.0s,MS6.3
COCO West Island 87.65 258 PFAKE 16 04 30.0 +14
COCO LR LR
comp=Z,3µm,19.0s,MS5.7
NATX Nacogdoches 87.79 56⇓iP P 16 04 15.6 -0.4
comp=Z,1µm,2.0s,mb6.9
NATX LR LR
comp=Z,8µm,19.0s,MS6.1
INK Inuvik 87.90 13⇓iP P 16 04 14.5 -1.2
INK e 16 07 42.4
INK pmax pmax
comp=Z,178nm,1.3s
INK Inuvik 87.90 13⇓iP P 16 04 14.5 -1.2
comp=Z,178nm,1.3s,mb6.1
INK ePP PP 16 07 42.4 0.0
IPM Ipoh 87.94 275 ⇑P P 16 04 19.6 +2.4
MAW Mawson 88.24 198 eS SKSac 16 14 47.3 +3.7
MAW eSS SS 16 21 18.9 +31
MAW Mawson 88.24 198 P P 16 04 18.7 +1.1
comp=Z,91nm,1.1s,mb5.9,baz=118,slow=5.7,SNR=42
MAW S SKSac 16 14 47.5 +3.8
comp=Z,0.9nm,0.4s,baz=267,slow=22,SNR=1.9
MAW LR LR 16 43 05.9
comp=Z,6µm,18.5s,MS6.1,baz=122,slow=35
MAW Mawson 88.24 198 eP P 16 04 18.5 +0.9
MAW eS SKSac 16 14 47.3 +3.7
MAW pmax pmax
comp=Z,32nm,0.6s
MAW Mawson 88.24 198 eP P 16 04 18.5 +0.9
comp=Z,32nm,0.6s,mb5.7
MAW eS SKSac 16 14 47.3 +3.7
MAW eSS SS 16 21 18.9 +31
KULM Kulim 88.52 276 ⇓P P 16 04 22.6 +2.6
NRGR Nerungri 88.62 331 iP P 16 04 19.9 +0.5
NRGR S S 16 15 01.3 -2.0
NRGR smax
comp=N,56nm,0.8s
CLNS Chul'man 88.63 331 d iP P 16 04 19.4 0.0
CLNS e*PP pP 16 04 30.0 -0.1
CLNS eS SKSac 16 14 48.8 +2.9
CLNS eSS SS 16 20 48.1 -7.3
CLNS pmax pmax
comp=Z,77nm,1.9s,mb5.7
CLNS pmax pmax
comp=E,28nm,1.0s
CLNS pmax pmax
comp=N,36nm,1.7s
CLNS pmax pmax
comp=Z,12nm,1.6s,mb5.0
CLNS pmax pmax
comp=N,9.0nm,1.3s
CLNS pmax pmax
comp=E,9.0nm,1.3s
CLNS smax
comp=E,377nm,12.9s
CLNS smax
comp=N,331nm,14.4s
KSU1 Kansas State U 88.80 49⇓eP P 16 04 19.7 -1.0
comp=N,38nm,0.9s,mb5.7
KSU1 LR LR
comp=Z,6µm,21.0s,MS6.0
PLCA Paso Flores 88.82 132 P P 16 04 22.0 +1.1
comp=Z,61nm,1.0s,mb5.9,baz=245,slow=5.1,SNR=46
PLCA S SKSac 16 14 54.2 +6.1
comp=Z,3.6nm,1.0s,baz=190,slow=9.9,SNR=2.8
PLCA LR LR 16 37 36.8
comp=Z,3µm,18.1s,MS5.8,baz=238,slow=31
PLCA Paso Flores 88.82 132 P P 16 04 22.0 +1.1
PLCA S SKSac 16 14 54.2 +6.1
PLCA LR LR 16 37 36.8
GYA Guiyang 88.91 298⇓iP P 16 04 23.3 +1.8
GYA AP pP 16 04 33.9 +1.8
GYA XP sP 16 04 37.8 +1.9
GYA PP PP 16 07 50.1 -1.3
GYA SKS 16 14 46.6
GYA S S 16 15 04.4 -3.0
GYA SS SS 16 21 02.4 +1.6
GYA AMB AMB
comp=Z,150nm,1.0s,mb6.3
GYA AMB AMB
comp=Z,810nm,3.5s
GYA LR LR
comp=N,2µm,19.0s,MS5.6
GYA LR LR
comp=E,1µm,18.0s,MS5.6
GYA LR LR
comp=Z,2µm,20.0s,MS5.6
TGUH Tegucigalpa,Un 88.99 75⇓iP P 16 04 22.3 +0.2
comp=Z,679nm,1.8s,mb6.7
TGUH LR LR

comp=Z,5µm,19.0s,MS6.0
SNG Songkhla 89.05 278 P P 16 04 21.0 -1.4
comp=Z,300nm,1.1s,mb6.5
XAN Xi'an 89.41 305 P P 16 04 24.5 +0.9
XAN AP pP 16 04 32.3 -2.0
XAN PP PP 16 07 53.8 -1.4
XAN SKS 16 14 50.3
XAN SS SS 16 21 07.4 -0.3
XAN AMB AMB
comp=Z,139nm,1.7s,mb6.0
XAN LR LR
comp=N,449nm,24.4s,MS5.2
XAN LR LR
comp=E,1µm,21.5s,MS5.2
XAN LR LR
comp=Z,2µm,24.4s,MS5.4
YAK Yakutsk 89.41 336 d iP P 16 04 21.3 -1.7
YAK e*PP pP 16 04 32.8 -0.8
YAK eS SKSac 16 14 47.6 -2.7
YAK e 16 15 09.9
YAK eSS SS 16 21 06.5 0.0
YAK pmax pmax
comp=Z,66nm,1.0s,mb5.9
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=E,18nm,1.1s
YAK pmax pmax
comp=Z,186nm,3.2s
YAK pmax pmax
comp=E,179nm,3.2s
YAK pmax pmax
comp=N,52nm,2.0s
YAK smax
comp=N,85nm,4.2s
YAK smax
comp=E,90nm,4.1s
YAK MLR MLR
comp=Z,628nm,18.0s,MS5.1
YAK MLR MLR
comp=N,632nm,16.0s
YAK MLR MLR
comp=E,475nm,23.0s
YAK Yakutsk 89.41 336 PFAKE 16 04 30.0 +7.0
YAK LR LR
comp=Z,1µm,19.0s,MS5.3
MIAR Mount Ida 89.56 54⇓eP P 16 04 23.4 -1.0
MIAR pmax pmax
comp=Z,381nm,2.1s,mb6.4
MIAR MLR MLR
comp=Z,7µm,20.0s,MS6.1
MIAR Mount Ida 89.56 54⇓eP P 16 04 23.4 -0.9
comp=Z,381nm,2.1s,mb6.4
MIAR LR LR
comp=Z,7µm,20.0s,MS6.1
YKA Yellowknife Ar 89.57 23 P P 16 04 23.2 -0.5
comp=Z,39nm,0.9s,mb5.8,baz=236,slow=4.4,SNR=372
YKA S SKSac 16 14 54.5 +3.2
comp=Z,0.2nm,0.7s,baz=160,slow=4.3,SNR=3.1
YKA PKKP PKKPbc 16 21 58.6 -2.2
comp=Z,0.5nm,0.6s,baz=41,slow=2.3,SNR=6.8
YKA PKPPKP 16 30 00.3
comp=Z,1.1nm,1.0s,baz=47,slow=2.7,SNR=7.3
YKA LR LR 16 37 52.9
comp=Z,2µm,20.2s,MS5.5,baz=170,slow=31
YKA Yellowknife Ar 89.57 23 P P 16 04 23.2 -0.5
YKA S SKSac 16 14 54.5 +3.2
YKA pmax pmax
comp=Z,39nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA MLR MLR
comp=Z,2µm,20.2s
YKA Yellowknife Ar 89.57 23 P P 16 04 23.2 -0.5
YKA S SKSac 16 14 54.5 +3.2
YKA PKKP PKKPbc 16 21 58.6 -2.2
YKA P'P' 16 30 00.3
YKA LR LR 16 37 53.0
HHC Hu-ho-hao-te 89.71 313 eP P 16 04 26.4 +1.5
HHC AP pP 16 04 36.9 +1.4
HHC XP sP 16 04 41.1 +1.8
HHC PP PP 16 07 59.4 +1.9
HHC SKS 16 14 52.3
HHC S S 16 15 13.1 -1.1
HHC XS sS 16 15 31.1 -0.8
HHC SS SS 16 21 12.8 +1.0
HHC AMB AMB
comp=Z,103nm,1.2s,mb6.0
HHC AMB AMB
comp=Z,1µm,6.4s
HHC LR LR
comp=N,907nm,19.0s,MS5.3
HHC LR LR
comp=E,498nm,20.2s,MS5.3
HHC LR LR
comp=Z,1µm,20.2s,MS5.4
ECSD EROS,Sioux Fal 90.44 45⇓eP P 16 04 26.3 -1.9
comp=Z,47nm,1.2s,mb5.7
ECSD LR LR
comp=Z,4µm,22.0s,MS5.8
UALR University of 90.59 54⇓iP P 16 04 29.3 +0.1
comp=Z,82nm,1.2s,mb5.9
BTO Baotou 90.73 312 eP P 16 04 30.6 +0.9
VBMS Vicksburg 91.28 57⇓eP P 16 04 32.9 +0.4
comp=Z,125nm,1.0s,mb6.2
VBMS LR LR
comp=Z,4µm,20.0s,MS5.8
FFC Flin Flon 91.43 33 P P 16 04 31.6 -0.9
comp=Z,234nm,1.6s,mb6.3,SNR=14
FFC Flin Flon 91.43 33⇓eP P 16 04 30.9 -1.6
FFC pmax pmax
comp=Z,255nm,1.9s,mb6.2
FFC MLR MLR
comp=Z,7µm,20.0s,MS6.1
FFC Flin Flon 91.43 33⇓eP P 16 04 30.9 -1.7
comp=Z,255nm,1.9s,mb6.2
FFC LR LR
comp=Z,7µm,20.0s,MS6.1
NST Nakhon Sawan 91.75 286 ⇑P P 16 04 36.5 +1.6
comp=Z,127nm,1.0s,mb6.2
KMI Kunming 91.91 295 P P 16 04 37.4 +1.9
KMI AP pP 16 04 48.1 +1.9
KMI PP PP 16 08 20.4 +5.1
KMI SKS 16 15 06.5
KMI S S 16 15 35.5 +0.4
KMI SS SS 16 21 45.9 +1.6
KMI AMB AMB
comp=Z,51nm,1.3s,mb5.7
KMI AMB AMB
comp=Z,760nm,11.3s
KMI LR LR
comp=N,746nm,20.2s,MS5.5
KMI LR LR
comp=E,1µm,20.2s,MS5.5
KMI LR LR
comp=Z,2µm,20.2s,MS5.5
ATAH Atahualpa 91.94 98 P P 16 04 37.7 +1.8
comp=Z,16nm,1.0s,mb5.3,baz=306,slow=10,SNR=16
NNA Nana 92.07 103⇓iP P 16 04 36.9 +0.4
comp=Z,118nm,1.6s,mb6.0
NNA LR LR
comp=Z,2µm,20.0s,MS5.5
SCIA State Center 92.18 47⇓iP P 16 04 35.0 -1.3
comp=Z,326nm,1.9s,mb6.3
SCIA LR LR
comp=Z,6µm,20.0s,MS6.0
EFI East Falkland 92.41 145 PFAKE 16 04 50.0 +13
EFI LR LR
comp=Z,6µm,22.0s,MS6.0
CCM Cathedral Cave 92.44 51⇓eP P 16 04 35.3 -2.4
CCM pmax pmax
comp=Z,16nm,0.9s,mb5.3
CCM MLR MLR
comp=Z,2µm,20.0s,MS5.5
CCM Cathedral Cave 92.44 51⇓eP P 16 04 35.3 -2.4
comp=Z,16nm,0.9s,mb5.3
CCM LR LR
comp=Z,2µm,20.0s,MS5.5
CIT Chita 92.45 323 eP P 16 04 38.3 +1.0
CIT e 16 04 44.0
CIT pmax pmax
comp=Z,405nm,2.0s,mb6.4
LCO Las Campanas 92.52 121⇓iP P 16 04 39.3 +0.9
comp=Z,190nm,1.0s,mb6.5

AGMN Agassiz Refuge 92.52 41 eP P 16 04 34.8 -3.0
AGMN LR LR
comp=Z,9µm,20.0s,MS6.2
CD2 Chengdu 92.64 301 P P 16 04 39.6 +0.9
CD2 PP PP 16 08 20.3 -0.6
CD2 S S 16 15 36.3 -5.0
CD2 SS SS 16 21 52.3 -2.2
CD2 AMB AMB
comp=Z,50nm,1.3s,mb5.8
CD2 AMB AMB
comp=Z,890nm,13.1s
CD2 LR LR
comp=N,1µm,19.0s
CD2 LR LR
comp=Z,1µm,19.0s,MS5.4
OXF Oxford 92.83 55⇓iP P 16 04 38.7 -0.8
OXF pmax pmax
comp=Z,164nm,1.1s,mb6.4
OXF MLR MLR
comp=Z,8µm,19.0s,MS6.2
OXF Oxford 92.83 55⇓iP P 16 04 38.7 -0.8
comp=Z,164nm,1.1s,mb6.4
OXF LR LR
comp=Z,8µm,19.0s,MS6.2
VNA3 Neumayer Olymp 92.88 174 eP P 16 04 39.6 +0.5
VNA3 e 16 04 41.3
VNA3 e 16 04 53.9
VNA3 e 16 08 22.6
SYO Syowa Base 92.92 191⇑eP P 16 04 37.6 -1.8
SYO Syowa Base 92.92 191⇑eX sP 16 04 49.5 -4.3
SYO Syowa Base 92.92 191⇑esP sP 16 04 54.0 +0.2
SNAA Sanae 92.97 177 eP P 16 04 39.8 +0.2
SNAA e 16 04 42.0
SNAA e 16 04 54.2
SNAA Sanae 92.97 177 d iP P 16 04 39.8 +0.2
SNAA pmax pmax
comp=Z,273nm,1.7s
SNAA Sanae 92.97 177⇓iP P 16 04 39.7 +0.1
comp=Z,162nm,1.1s,mb6.4
FVM French Village 93.03 52⇓iP P 16 04 39.0 -1.4
FVM pmax pmax
comp=Z,449nm,2.0s,mb6.5
FVM French Village 93.03 52⇓iP P 16 04 39.0 -1.4
comp=Z,449nm,2.0s,mb6.5
CHRT Chiangrai 93.16 290 ⇓P P 16 04 43.5 +2.1
comp=Z,184nm,1.0s,mb6.5
ULM Lac du Bonnet 93.18 39 P P 16 04 39.4 -1.3
comp=Z,9.0nm,0.9s,mb5.2,baz=252,slow=4.2,SNR=12
ULM S SKSac 16 15 11.7 -0.6
comp=Z,1.3nm,0.6s,baz=325,slow=4.7,SNR=2.3
ULM LR LR 16 41 53.9
comp=Z,11µm,18.9s,MS6.3,baz=259,slow=32
ULM Lac du Bonnet 93.18 39⇓eP P 16 04 38.7 -2.1
comp=Z,215nm,2.0s,mb6.2
ULM LR LR
comp=Z,13µm,20.0s,MS6.4
BDT Bhumibol Dam 93.20 287 ⇑P P 16 04 43.5 +1.9
comp=Z,38nm,1.0s,mb5.8
SLM Saint Louis 93.36 51 eP P 16 04 40.8 -1.1
SLM pmax pmax
comp=Z,157nm,1.8s,mb6.1
SLM Saint Louis 93.36 51 eP P 16 04 40.8 -1.2
comp=Z,157nm,1.8s,mb6.1
VNA2 Neumayer--Watz 93.39 175 eP P 16 04 42.4 +0.9
baz=179,slow=2.8
VNA2 e 16 04 44.1
VNA2 e 16 04 56.7
VNA2 e 16 08 26.0
CM31 Chiang Mai Arr 93.56 288 PFAKE 16 04 50.0 +6.7
CM31 LR LR
comp=Z,1µm,20.0s,MS5.4
CMAR Chiang Mai Arr 93.56 288 P P 16 04 45.2 +1.9
comp=Z,34nm,1.1s,mb5.7,baz=92,slow=2.7,SNR=133
CMAR PKiKP PKiKP 16 09 30.3 +1.2
comp=Z,3.4nm,0.9s,baz=1.2,slow=0.6,SNR=11
CMAR S SKSac 16 15 21.3 +5.5
comp=Z,0.3nm,0.8s,baz=253,slow=1.5,SNR=3.2
CMAR PKKP PKKPbc 16 21 49.5 +0.7
comp=Z,4.3nm,0.8s,baz=282,slow=4.8,SNR=23
CMAR LR LR 16 41 11.7
comp=Z,2µm,20.7s,MS5.5,baz=260,slow=32
CMAR Chiang Mai Arr 93.56 288 P P 16 04 45.2 +1.9
CMAR S SKSac 16 15 21.3 +5.5
CMAR pmax pmax
comp=Z,34nm,1.1s
CMAR pmax pmax
comp=Z,3.0nm,0.9s
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR MLR MLR
comp=Z,2µm,20.7s
VNA1 Neumayer--Stat 93.58 175 eP P 16 04 43.4 +1.0
VNA1 e 16 04 45.0
VNA1 e 16 04 57.4
CHG Chiang Mai 93.65 288 ⇓P P 16 04 45.3 +1.6
comp=Z,34nm,1.0s,mb5.7
CHTO Chiang Mai 93.65 288⇓iP P 16 04 44.8 +1.1
CHTO pmax pmax
comp=Z,47nm,1.3s,mb5.8
CHTO MLR MLR
comp=Z,2µm,22.0s,MS5.4
CHTO Chiang Mai 93.65 288⇓iP P 16 04 44.8 +1.1
comp=Z,47nm,1.3s,mb5.8
CHTO ePKPdf PKiKP 16 09 29.4 +0.1
CHTO LR LR
comp=Z,2µm,22.0s,MS5.4
UTMT University of 93.77 54 eP P 16 04 43.9 +0.1
comp=Z,96nm,0.4s,mb6.6
BRAL Brewton 93.77 59 eP P 16 04 45.1 +1.1
comp=Z,134nm,0.8s,mb6.4
BRAL LR LR
comp=Z,3µm,21.0s,MS5.7
OTAV Otavalo 93.80 91 eP P 16 04 45.5 +1.0
comp=Z,24nm,1.4s,mb5.4
OTAV LR LR
comp=Z,2µm,20.0s,MS5.5
SIUC Southern Illin 93.87 52 eP P 16 04 43.6 -0.7
comp=Z,42nm,0.9s,mb5.9
LZH Lanzhou 93.99 306 ⇑P P 16 04 46.5 +1.6
LZH AP pP 16 04 56.0 +0.5
LZH XP sP 16 04 59.3 0.0
LZH ePP PP 16 08 34.0 +2.6
LZH SKS 16 15 17.0
LZH S S 16 15 51.3 -1.8
LZH XS sS 16 16 10.0 -0.8
LZH SS SS 16 22 17.0 +3.3
LZH AMB AMB
comp=Z,140nm,1.0s,mb6.3
LZH AMB AMB
comp=Z,414nm,4.0s
LZH LR LR
comp=N,2µm,18.2s
LZH LR LR
comp=Z,3µm,19.8s,MS5.7
MAIT Maitri 94.12 181 eP P 16 04 42.3 -2.6
LRAL Lakeview Retre 94.36 57 eP P 16 04 45.6 -1.1
comp=Z,19nm,1.0s,mb5.5
LRAL LR LR
comp=Z,3µm,20.0s,MS5.8
BOD Bodaibo 94.36 329 eP P 16 04 44.8 -1.2
BOD pmax pmax
comp=Z,22nm,1.2s,mb5.5
WVT Waverly 94.51 54 eP P 16 04 46.1 -1.2
WVT e 16 08 31.1
WVT pmax pmax
comp=Z,190nm,2.1s,mb6.2
WVT MLR MLR
comp=Z,8µm,20.0s,MS6.2
WVT Waverly 94.51 54 eP P 16 04 46.1 -1.2
comp=Z,190nm,2.1s,mb6.2
WVT ePP PP 16 08 31.1 -4.4
WVT LR LR
comp=Z,8µm,20.0s,MS6.2
JFWS Jewell Farm 94.58 47 eP P 16 04 46.1 -1.3
JFWS e 16 08 31.7
JFWS pmax pmax
comp=Z,18nm,0.6s,mb5.7
JFWS MLR MLR
comp=Z,7µm,19.0s,MS6.1
JFWS Jewell Farm 94.58 47 eP P 16 04 46.1 -1.3
comp=Z,18nm,0.6s,mb5.7
JFWS ePP PP 16 08 31.7 -4.1
JFWS LR LR
comp=Z,7µm,19.0s,MS6.1
BCIP Isla Barro Col 94.75 82 PFAKE 16 05 00.0 +11
BCIP LR LR

comp=Z,2µm,22.0s,MS5.6
OLIL Olney 95.00 51 *e*P **P 16 04 47.8 -1.6**
comp=Z,30nm,0.8s,mb5.8
ULN Ulaanbaatar 95.03 318 *e*P **P 16 04 49.5 +0.2**
ULN pmax pmax
comp=Z,22nm,1.2s,mb5.5
ULN MLR MLR
comp=Z,2µm,22.0s,MS5.6
ULN Ulaanbaatar 95.03 318 *e*P **P 16 04 49.5 +0.2**
comp=Z,22nm,1.2s,mb5.5
ULN *e*PP PP 16 08 32.9 -6.3
ULN LR LR
comp=Z,2µm,22.0s,MS5.6
USIN University of 95.12 52 *e*P **P 16 04 49.3 -0.7**
TIXI Tiksi 95.16 344 *e*P **P 16 04 48.2 -1.2**
TIXI pmax pmax
comp=Z,110nm,1.7s,mb6.0
TIXI Tiksi 95.16 344 *e*P **P 16 04 48.5 -0.9**
comp=Z,106nm,1.8s,mb6.0
TIXI LR LR
comp=Z,3µm,22.0s,MS5.7
EYMN Ely 95.18 42 PFAKE 16 05 00.0 +10
EYMN LR LR
comp=Z,8µm,20.0s,MS6.2
SONM Songino Array 95.45 318 P **P 16 04 51.9 +0.6**
comp=Z,4.3nm,0.9s,mb4.9,baz=105,slow=4.4,SNR=23
SONM PP PP 16 08 42.0 -0.4
comp=Z,1.7nm,0.8s,baz=129,slow=5.0,SNR=3.6
SONM PKPPKP 16 29 54.8
comp=Z,0.4nm,0.6s,baz=156,slow=7.6,SNR=3.6
SONM LR LR 16 42 19.9
comp=Z,3µm,21.9s,MS5.7,baz=120,slow=32
SONM Songino Array 95.45 318 P **P 16 04 51.9 +0.7**
SONM 16 08 42.0
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM MLR MLR
comp=Z,3µm,21.9s
ARE Arequipa 95.75 109 *e*P **P 16 04 55.0 +1.6**
LVC Limon Verde 96.13 115 *e*P **P 16 04 56.7 +1.7**
comp=Z,20nm,0.6s,mb5.7
LVC LR LR
comp=Z,3µm,20.0s,MS5.8
COWI Conover 96.22 44 *e*P **P 16 04 53.8 -1.0**
comp=Z,71nm,1.3s,mb5.9
COWI LR LR
comp=Z,11µm,21.0s,MS6.3
WCI Wyandotte Cave 96.24 52 PFAKE 16 05 00.0 +4.9
WCI LR LR
comp=Z,1µm,20.0s,MS5.5
FCC Fort Churchill 96.94 31 *e*P **P 16 04 56.4 -1.4**
FCC pmax pmax
comp=Z,1.0nm,1.1s
FCC Fort Churchill 96.94 31 *e*P **P 16 04 56.4 -1.3**
comp=Z,0.7nm,1.1s
GOGA Godfrey 97.32 57 *e*P **P 16 04 58.4 -1.7**
GOGA pmax pmax
comp=Z,39nm,1.4s,mb5.6
GOGA MLR MLR
comp=Z,3µm,19.0s,MS5.8
GOGA Godfrey 97.32 57 *e*P **P 16 04 58.4 -1.7**
comp=Z,39nm,1.4s,mb5.7
GOGA LR LR
comp=Z,3µm,19.0s,MS5.8
TKL Tuckaleechee C 97.58 55 LR LR 16 43 46.6
comp=Z,6µm,19.0s,MS6.1,baz=273,slow=32
TKL Tuckaleechee C 97.58 55 *e*P **P 16 04 59.2 -2.1**
DWPF Disney 97.81 63 PFAKE 16 05 10.0 +7.5
DWPF LR LR
comp=Z,451nm,19.0s,MS5.0
GTA Gaotai 97.91 309 ⇓P **P 16 05 03.5 +0.9**
GTA AP pP 16 05 14.1 +0.8
GTA XP sP 16 05 18.0 +0.9
GTA PP PP 16 09 03.6 +1.9
GTA SKS 16 15 38.3
GTA S S 16 16 24.1 -2.7
GTA XS sS 16 16 41.5 -3.1
GTA SS SS 16 23 11.9 +2.8
GTA AMB AMB
comp=Z,31nm,1.3s,mb5.7
GTA AMB AMB
comp=Z,342nm,6.0s
GTA LR LR
comp=N,772nm,18.6s,MS5.6
GTA LR LR
comp=E,2µm,20.1s,MS5.6
GTA LR LR
comp=Z,2µm,22.2s,MS5.5
IRK Irkutsk 97.95 322 ⇑*i*P **P 16 05 02.2 -0.3**
IRK pmax pmax
comp=Z,61nm,2.7s,mb5.7
TLY Talaya 98.19 321 P **P 16 05 03.9 +0.3**
SNR=5.2
TLY Talaya 98.19 321 *e*P **P 16 05 03.3 -0.2**
TLY *e* 16 15 43.1
TLY *e*S S 16 16 32.9 +4.3
TLY *e*SSS 16 27 02.5
TLY pmax pmax
comp=Z,16nm,1.4s,mb5.4
TLY MLR MLR
comp=Z,1µm,20.0s,MS5.5
TLY Talaya 98.19 321 *i* P **P 16 05 03.4 -0.1**
TLY LR LR
comp=Z,2µm,20.0s,MS5.5
ROSC El Rosal 98.96 87 LR LR 16 41 52.3
comp=Z,2µm,18.4s,MS5.7,baz=230,slow=31
GLMI Grayling 99.00 46 PFAKE 16 05 20.0 +13
GLMI LR LR
comp=Z,7µm,19.0s,MS6.2
AAM Ann Arbor 99.14 49 P **P 16 05 04.6 -3.5**
AAM MLR MLR
comp=Z,6µm,19.0s,MS6.2
ACSO Alum Creek Sta 99.20 51 PFAKE 16 05 20.0 +12
ACSO LR LR
comp=Z,8µm,19.0s,MS6.3
NHSC New Hope 99.94 58 PFAKE 16 05 20.0 +8.5
NHSC LR LR
comp=Z,3µm,19.0s,MS5.8
BLA Blacksburg 100.56 54 PFAKE 16 05 20.0 +5.8
BLA LR LR
comp=Z,8µm,19.0s,MS6.2
RES Resolute Bay 101.33 15 *e*P Pdif 16 05 16.3 -1.3
comp=Z,45nm,1.5s
MCWV Mont Chateau 101.45 52 PFAKE 16 05 30.0 +12
MCWV LR LR
comp=Z,7µm,19.0s,MS6.2
SHL Shillong 101.56 293 *e*P Pdif 16 05 22.0 +3.3
SHL *ex* x 16 09 08.0
SHL *e*S Sdif 16 16 04.0 -53
ERPA Erie 101.78 49 PFAKE 16 05 30.0 +10
ERPA LR LR
comp=Z,9µm,19.0s,MS6.3
SSPA Standing Stone 103.10 51 PFAKE 16 05 40.0 +15
SSPA LR LR
comp=Z,1µm,20.0s,MS5.5
CBN Corbin 103.11 54 PFAKE 16 05 40.0 +14
CBN LR LR
comp=Z,8µm,20.0s,MS6.2
CPUP Villa Florida 104.50 123 Pdiff Pdif 16 05 33.5 +1.7
comp=Z,2.5nm,0.8s,baz=251,slow=8.4,SNR=5.8
CPUP Villa Florida 104.50 123 *e*P Pdif 16 05 33.0 +1.3
CPUP pmax pmax
comp=Z,21nm,1.3s
CPUP MLR MLR
comp=Z,634nm,19.0s
CPUP Villa Florida 104.50 123 *e*Pdif Pdif 16 05 33.0 +1.2
comp=Z,21nm,1.3s
CPUP LR LR
comp=Z,634nm,19.0s,MS5.2
BINY Binghamton 104.73 50 PFAKE 16 05 40.0 +7.2
BINY LR LR
comp=Z,9µm,19.0s,MS6.3
SDDR Presa de Saban 105.04 74 PFAKE 16 10 00.0 +10
SDDR LR LR
comp=Z,8µm,20.0s,MS6.2
NCB Newcomb 106.22 48 PFAKE 16 10 00.0 +8.9
NCB LR LR
comp=Z,6µm,21.0s,MS6.1
WMQ Urumqi 107.56 312 PDIF Pdif 16 05 45.8 +0.5
WMQ PP PP 16 10 16.8 +2.9
WMQ S Sdif 16 17 45.0 -2.1
WMQ SS SS 16 25 19.3 -2.8
WMQ PP PP
comp=Z,346nm,5.5s
WMQ LR LR
comp=N,698nm,14.0s,MS5.5
WMQ LR LR
comp=E,901nm,19.0s,MS5.5
WMQ LR LR
comp=Z,966nm,21.0s,MS5.3
LBNH Lisbon 107.89 48 PFAKE 16 10 00.0 +5.8
LBNH LR LR
comp=Z,8µm,21.0s,MS6.3
ZAA0 Zalesovo Array 109.76 322 *e*PKPdf PKiKP 16 09 56.6 -0.8
ZALV Zalesovo Beam 109.76 322 Pdiff Pdif 16 05 54.8 -0.3
comp=Z,1.0nm,0.8s,baz=95,slow=4.9,SNR=6.8
ZALV PKiKP PKiKP 16 09 56.7 -0.7
comp=Z,4.1nm,0.7s,baz=162,slow=0.9,SNR=16
ZALV PKKPbc PKKPbc 16 21 12.9 +10
comp=Z,1.4nm,0.7s,baz=272,slow=5.3,SNR=5.0
ZALV Zalesovo Beam 109.76 322 P Pdif 16 05 54.8 -0.3
ZALV pmax pmax
comp=Z,1.0nm,0.8s
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV pmax pmax
comp=Z,1.0nm,0.7s
PKME Peaks-Kenny Pk 109.82 47 PFAKE 16 10 10.0 +12
PKME LR LR
comp=Z,7µm,19.0s,MS6.3
SCHQ Schefferville 111.26 37 PKiKP PKiKP 16 09 58.8 -1.4
comp=Z,3.5nm,0.9s,baz=195,slow=1.7,SNR=3.9
SCHQ Schefferville 111.26 37 PKPdf PKiKP 16 09 58.8 -1.4
SCHQ LR LR
comp=Z,8µm,20.0s,MS6.3
MK31 Makanchi Array 111.48 315 *e*PKiKP PKiKP 16 09 59.8 -1.0
MKAR Makanchi Array 111.48 315 Pdiff Pdif 16 06 02.8 0.0
comp=Z,0.6nm,0.8s,baz=192,slow=41,SNR=3.7
MKAR PKiKP PKiKP 16 10 00.3 -0.6
comp=Z,8.1nm,0.9s,baz=68,slow=3.3,SNR=27
MKAR PKKPbc PKKPbc 16 20 56.2 -0.7
comp=Z,2.4nm,0.8s,baz=289,slow=3.7,SNR=12
MKAR Makanchi Array 111.48 315 P Pdif 16 06 02.8 0.0
MKAR *i* 16 10 00.3
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=Z,8.0nm,0.9s
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 111.48 315 Pdif Pdif 16 06 02.8 0.0
MKAR PKPdf PKiKP 16 10 00.3 -0.6
MKAR PKKPbc PKKPbc 16 20 56.2 -0.7
HYB Hyderabad 112.32 283 *i* Pdif Pdif 16 06 12.0 +5.5
HYB *e*PKP PKiKP 16 10 02.5 -0.8
HYB *e*PP PP 16 10 54.0 +5.0
HYB *e*SKS SKSac 16 16 48.0 +4.0
HYB *e*SKKS SKKSac 16 17 50.0 +0.9
HYB *e* 16 18 36.0
HYB *e*PS PS 16 20 20.0 -3.4
HYB ⇑*e*PKKPB 16 20 54.0
HYB *e*PKKPAB 16 21 02.5
HYB Hyderabad 112.32 283 *e*P Pdif 16 06 12.0 +5.5
HYB *e*P 16 10 02.5
GRGR Grenville 112.82 83 PFAKE 16 10 10.0 +5.7
GRGR LR LR
comp=Z,2µm,19.0s,MS5.7
KURK Kurchatov 113.73 319 Pdiff Pdif 16 06 12.3 -0.5
comp=Z,0.1nm,0.4s,baz=97,slow=40,SNR=3.3
KURK PKiKP PKiKP 16 10 04.4 -0.6
comp=Z,20nm,1.0s,baz=90,slow=1.7,SNR=13
KURK PP PP 16 10 54.6 -3.5
comp=Z,3.5nm,1.0s,baz=82,slow=2.3,SNR=6.4
KURK PKKPbc PKKPbc 16 20 48.9 -0.6
comp=Z,5.6nm,0.9s,baz=260,slow=4.3,SNR=15
KURK Kurchatov 113.73 319 P Pdif 16 06 12.3 -0.5
KURK *i* 16 10 04.4
KURK 16 10 54.6
KURK pmax pmax
comp=Z,20nm,1.0s
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK pmax pmax
comp=Z,6.0nm,0.9s
KURK Kurchatov 113.73 319 PKIKP PKiKP 16 10 03.8 -1.2
KURK pmax pmax
comp=Z,39nm,1.1s
KURK Kurchatov 113.73 319 Pdif Pdif 16 06 12.3 -0.5
KURK *e*PKPdf PKiKP 16 10 03.9 -1.1
KURK *e*PP PP 16 10 54.3 -3.7
BBGH Gun Hill 115.02 82 PFAKE 16 10 20.0 +11
BBGH LR LR
comp=Z,6µm,20.0s,MS6.2
ULHL Ulahol 115.93 310 P PKPdf 16 10 10.0 +0.5
SNR=5.5
KSH Kashi 116.23 307 PKP PKPdf 16 10 11.5 +1.3
KSH PKS 16 13 47.0
KSH SKS SKSdf 16 17 18.3 -1.6
KSH LR LR
comp=N,800nm,6.3s
KSH LR LR
comp=E,1µm,6.2s
KSH LR LR
comp=Z,2µm,13.9s,MS5.8
KBS Kingsbay 116.29 359 PFAKE 16 10 20.0 +11
KBS LR LR
comp=Z,2µm,19.0s,MS5.8
TKM2 Tokmak 2 116.37 311 P PKPdf 16 10 09.9 -0.4
SNR=12
TKM2 Tokmak 2 116.37 311 *e*PKPdf PKPdf 16 10 09.8 -0.5
KZA Kyzart 116.67 310 P PKPdf 16 10 11.7 +0.7
SNR=7.7
SUMG Summit 116.82 14 *e*PKPdf PKPdf 16 10 10.6 +0.2
SUMG *e*PKPbc PKKPbc 16 20 37.3 -2.0
KBK Karagaybulak 116.86 310 P PKPdf 16 10 11.0 -0.3
SNR=12
CHMS Chumysh 116.98 311 P PKPdf 16 10 11.1 -0.5
SNR=6.8
BDFB Brasilia 117.00 117 PKP PKPdf 16 10 12.3 -0.1
comp=Z,3.0nm,0.9s,baz=197,slow=5.4,SNR=7.8
BDFB Brasilia 117.00 117 PKIKP PKPdf 16 10 12.3 0.0
BDFB pmax pmax
comp=Z,3.0nm,0.9s
FRU Bishkek 117.09 311 *e*PKIKP PKPdf 16 10 10.0 -1.7
USP Ospenovka 117.15 311 ⇑P PKPdf 16 10 11.7 -0.1
SNR=10
AAK Ala-Archa 117.20 310 ⇑*i*PKIKP PKPdf 16 10 11.3 -0.6
AAK Ala-Archa 117.20 310 P PKPdf 16 10 12.1 +0.2
SNR=5.6
AAK Ala-Archa 117.20 310 *e*PKPdf PKPdf 16 10 11.8 -0.2
UCH Uchtor 117.21 310 *e*PKPdf PKPdf 16 10 12.6 +0.6
EKS2 Erkin-Say 117.72 310 P PKPdf 16 10 13.3 +0.3
SNR=7.7
EKS2 Erkin-Say 117.72 310 *e*PKPdf PKPdf 16 10 13.0 0.0
AML Almayashu 117.83 310 P PKPdf 16 10 13.6 +0.4
SNR=17
AML Almayashu 117.83 310 *e*PKPdf PKPdf 16 10 13.5 +0.4
AML *e*PP PP 16 11 25.3 -1.8
VOSK Vostochnaya 118.14 322 PKIKP PKPdf 16 10 12.0 -1.4
VOSK pmax pmax
comp=Z,61nm,1.5s
BVA0 Borovoye Array 118.42 322 *i* PKIKP PKPdf 16 10 13.0 -1.0
BVA0 pmax pmax
comp=Z,12nm,1.7s
BVAR Borovoye Array 118.42 322 PKP PKPdf 16 10 13.5 -0.5
comp=Z,13nm,0.8s,baz=101,slow=1.5,SNR=57
BVAR PP PP 16 11 27.8 -3.0
comp=Z,1.7nm,0.7s,baz=98,slow=6.3,SNR=2.2
BVAR PKKPbc PKKPbc 16 20 36.4 +3.3
comp=Z,0.6nm,0.7s,baz=146,slow=2.9,SNR=3.7
BVAR Borovoye Array 118.42 322 PKIKP PKPdf 16 10 13.5 -0.5
BVAR 16 11 27.8
BVAR pmax pmax
comp=Z,13nm,0.8s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BRVK Borovoye 118.47 322 *e*PKIKP PKPdf 16 10 13.7 -0.4
BRVK *e* 16 11 27.8
KK31 Karatay Array 120.07 311 *i* PKIKP PKPdf 16 10 16.5 -0.9
KK31 pmax pmax
comp=Z,38nm,1.3s
KBL Kabul 121.98 301 *e*PKIKP PKPdf 16 10 22.4 +1.0
KBL *e* 16 11 59.6
SVE Sverdlovsk 122.57 329 *i* PKIKP PKPdf 16 10 21.3 -0.5
SVE *e* 16 21 54.2
SVE *e* 16 28 58.7
SVE pmax pmax
comp=Z,59nm,1.3s
SOKR Solikamsk 123.16 333 *d i*PKIKP PKPdf 16 10 22.1 -0.8
SOKR pmax pmax
comp=Z,110nm,1.1s
ARU Arti 123.78 329 *i* PKIKP PKPdf 16 10 23.5 -0.6
ARU 16 12 04.2
ARU 16 17 20.8
ARU SP SP 16 21 57.9 -2.2
ARU SS SS 16 28 52.0 -1.2
ARU Arti 123.78 329 *e*PKPdf PKPdf 16 10 23.8 -0.3
ARU *e*PP PP 16 12 03.6 -3.5
KEV Kevo 124.22 352 *e*pkp PKPdf 16 10 23.0 -1.6
comp=Z,31nm,0.8s
KEV Kevo 124.22 352 *e*PKIKP PKPdf 16 10 23.0 -1.6
KEV pmax pmax
comp=Z,31nm,0.8s
ARCES ARCESS Array B 124.63 352 PKP PKPdf 16 10 25.2 -0.2
comp=Z,45nm,0.7s,baz=1.3,slow=1.1,SNR=47
ARCES PP PP 16 12 09.5 -2.7
comp=Z,4.7nm,1.0s,baz=3.4,slow=4.5,SNR=3.5
ARCES ARCESS Array B 124.63 352 PKIKP PKPdf 16 10 25.2 -0.2
ARCES 16 12 09.5
ARCES pmax pmax
comp=Z,45nm,0.7s
ARCES pmax pmax
comp=Z,5.0nm,1.0s
APA Apatity 125.13 348 ⇓*i*PKIKP PKPdf 16 10 26.6 +0.2
APA *e*PS PS 16 22 22.0 +5.3
APA *e*SS SS 16 29 30.0 +21
APA pmax pmax
comp=Z,24nm,0.8s
APA MLR MLR
comp=Z,4µm,19.0s,MS6.1
AB31 Akbulak array 125.79 320 PKIKP PKPdf 16 10 27.3 -0.9
AB31 pmax pmax
comp=Z,54nm,1.2s
ABPO Ambohimpanom 128.26 230 *e*PKPdf PKPdf 16 10 34.5 +0.6
JOF Joensuu 129.60 346 *e*pkp PKPdf 16 10 34.3 -0.8
KAF Kangasniemi 131.38 348 *e*pkp PKPdf 16 10 36.9 -1.6
comp=Z,13nm,0.7s
KAF Kangasniemi 131.38 348 *e*PKIKP PKPdf 16 10 36.9 -1.6
KAF pmax pmax
comp=Z,13nm,0.7s
BOSA Boshof 133.17 201 PKP PKPdf 16 10 43.6 +0.6
comp=Z,40nm,1.0s,baz=148,slow=3.4,SNR=17
BOSA Boshof 133.17 201 *e*PKPdf PKPdf 16 10 43.1 +0.1
MOS Moscow 133.54 337 *e*PKIKP PKPdf 16 10 40.3 -2.5
MOS *e* 16 16 12.9
MOS *e* 16 23 18.1
MOS pmax pmax
comp=Z,115nm,1.6s
NB2 NORSAR Subarra134.23 358 PKPdf 16 10 32.5
comp=Z,76nm,1.7s,baz=6.6,slow=1.8
NB2 NORSAR Subarra134.23 358 PKPdf 16 10 32.5
baz=6.6,slow=1.8
NOA NORSAR Array B 134.23 358 PKP PKPdf 16 10 43.9 0.0
comp=Z,18nm,1.0s,baz=14,slow=4.1,SNR=18
NOA NORSAR Array B 134.23 358 PKIKP PKPdf 16 10 43.9 0.0
NOA pmax pmax
comp=Z,18nm,1.0s
OBN Obninsk 134.41 337 *d i*PKIKP PKPdf 16 10 43.5 -0.9
OBN *e* 16 13 16.8
OBN *e*SS SS 16 31 02.2 -1.7
OBN pmax pmax
comp=Z,102nm,1.4s
OBN MLR MLR
comp=Z,2µm,19.0s,MS5.8
OBN Obninsk 134.41 337 *e*PKPdf PKPdf 16 10 42.8 -1.6
VSU Vasula 134.60 346 *i* PKIKP PKPdf 16 10 44.1 -0.6
VSU Vasula 134.60 346 *e*PKP PKPdf 16 10 44.1 -0.6
KONO Kongsberg 135.67 359 *i* PKIKP PKPdf 16 10 46.9 +0.3
KONO Kongsberg 135.67 359 *e*PKPdf PKPdf 16 10 45.0 -1.6
VOR Voronezh 135.78 332 *e*PKIKP PKPdf 16 10 46.0 -1.1
VOR pmax pmax
comp=Z,200nm,2.0s
MAK Makhachkala 136.21 317 *e* PKPdf 16 10 45.8 -2.4
MAK *e* 16 17 56.0
MAK *e*SS SS 16 31 19.9 -6.9
MAK pmax pmax
comp=Z,357nm,1.6s
LBTB Lobatse 136.31 204 *e*PKIKP PKPdf 16 10 48.0 -1.0
MNK Minsk 137.83 343 *e*PKHKP 16 10 41.0
MNK *e* 16 13 38.0
MNK MLR MLR
comp=Z,8µm,22.0s,MS6.4
MNK MLR MLR
comp=E,8µm,20.0s
GOF Gofitskoye 137.95 322 *e*PKHKP 16 10 37.1
GOF pmax pmax
comp=Z,25nm,0.7s
DGRG David-gareji 138.31 316 P PKPdf 16 10 47.6 -4.5
MTA Mtatsminda 138.58 317 P PKPdf 16 10 46.1 -6.5
EDI Edinburgh 138.58 9 P PKPdf 16 10 52.5 +0.4
EDI AMS AMS 17 12 02.0
comp=Z,4µm,18.5s
EDI Edinburgh 138.58 9 *e*P PKPdf 16 10 52.5 +0.4
EDI AMS AMS 17 12 02.0
comp=Z,4µm,18.5s,MS6.2
KIV Kislovodsk 138.76 321 *e*PKIKP 16 10 49.0
KIV *e* 16 17 57.8
KIV *e*SS SS 16 31 53.1 -3.7
KIV *e*SSS 16 37 01.7
KIV pmax pmax
comp=Z,26nm,1.1s
KIV MLR MLR
comp=Z,2µm,22.0s,MS5.8
KIV Kislovodsk 138.76 321 *e*PKPpre 16 10 48.0
KIV *e*PKP PKPdf 16 10 52.7 -0.1
GOR Gori 138.89 318 P PKPdf 16 10 51.0 -2.1
EKA Eskdalemuir Ar 139.16 9 PP PP 16 13 48.4 +2.7
comp=Z,3.7nm,0.9s,baz=55,slow=7.2,SNR=4.0
ESK Eskdalemuir 139.16 10 *e*P PKPdf 16 10 52.9 -0.3
ESK AMS AMS 17 10 17.6
comp=Z,4µm,19.4s,MS6.2
GNI Garni 139.33 315 *e*P PKPdf 16 10 51.5 -2.5
GNI Garni 139.33 315 *e*PKPdf PKPdf 16 10 51.5 -2.5
GNI *e*PKP PKPdf 16 10 55.1 +1.1
GAL1 Galloway 139.34 11 *e*P PKPdf 16 10 53.8 +0.3
GAL1 AMS AMS 17 13 17.0
comp=Z,3µm,19.2s,MS6.1
SUW Suwalki 139.49 346 *e*PKIKP PKPdf 16 10 50.0 -3.8
COP Copenhagen 139.50 356 *i* P PKPdf 16 10 55.2 +1.4
COP
comp=Z,680nm,21.0s
BSD Bornholm Skovb 139.85 354 *i* P PKPdf 16 10 54.1 -0.4
BSD
comp=Z,1µm,21.0s
KARS Kars 140.22 316 *e*P PKPdf 16 10 56.5 +0.9
CLDR Caldiran 140.35 314 *e*P PKPdf 16 10 55.4 -0.5
UMR Umm Al-Rimmam 140.56 298 *e*P PKPdf 16 10 49.2 -7.3
baz=298
UMR AMb AMB 16 11 00.5
comp=Z,181nm,1.4s,baz=298
AKASG Malin Array Be 140.62 338 PKhKP 16 10 48.9
comp=Z,6.4nm,0.7s,baz=35,slow=4.2,SNR=18
AKASG PKP PKPdf 16 10 57.6 +1.6
comp=Z,16nm,0.8s,baz=27,slow=2.4,SNR=20
AKASG Malin Array Be 140.62 338 PKHKP 16 10 48.9
AKASG 16 10 57.6
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 140.62 338 *e*PKHKP 16 10 47.5
HPK Haverah Park 140.72 9 AMS AMS 17 12 14.4
comp=Z,4µm,18.6s,MS6.2
SOC Sochi 140.75 322 *e*PKIKP PKPdf 16 10 55.1 -1.4
SOC *e* 16 13 52.9
SOC *e*PPP 16 16 59.6
SOC *e* 16 18 03.1
SOC pmax pmax
comp=Z,27nm,0.9s
SOC pmax pmax
comp=Z,31nm,1.1s
SOC MLR MLR
comp=Z,34µm,20.0s,MS7.1
AGRB Hanur-Agry 140.79 315 *e*P PKPdf 16 10 54.7 -2.0
MIB Mutriban 140.83 299 *e*P PKPdf 16 10 49.8 -7.3
baz=299
MIB AMb AMB 16 11 00.9
comp=Z,170nm,1.0s,baz=299
RDF Al-Radifah 140.83 297 *e*P PKPdf 16 10 49.8 -7.3
baz=297
RDF AMb AMB 16 11 01.1
comp=Z,261nm,1.3s,baz=297

VANB	Van	140.96	313	eP	PKPdf	16 10 51.7	-5.3
NAY	Al-Naaiem	141.03	298	eP	PKPdf	16 10 50.0	-7.5
	baz=298						
NAY				AMb	AMB	16 11 01.2	
	comp=Z,83nm,1.3s,baz=298						
ANN	Anapa	141.29	326	i PKIKP	PKPdf	16 10 54.1	-3.3
ANN				e		16 13 56.4	
ANN				pmax	pmax		
	comp=Z,58nm,1.3s						
GKP	Gorka Klasztor	141.35	351	ePKP	PKPdf	16 10 57.5	+0.3
GKP	Gorka Klasztor	141.35	351	ePKP	PKPdf	16 10 57.5	+0.3
BSEG	Bad Segeberg	141.37	358	ePKPbc	PKPdf	16 10 51.0	-6.2
CUKT	Cukurca	141.39	311	eP	PKPdf	16 10 51.3	-6.5
SBD1	Bryn Du	141.47	11	eP	PKPdf	16 10 55.9	-1.6
EZM	Erzurum	141.72	316	eP	PKPdf	16 10 56.6	-1.8
MSL	Mosul	142.10	310	ePKP	PKPdf	16 10 55.0	-4.1
BHD	Baghdad	142.30	305	ePKP	PKPdf	16 10 56.0	-3.6
MCH1	Michaelchurch	142.39	11	eP	PKPdf	16 10 54.1	-5.0
MCH1				AMS	AMS	17 14 55.5	
	comp=Z,2µm,19.7s,MS5.9						
WIT	Witteveen	142.54	1	ePKP	PKPdf	16 10 55.9	-3.4
GUMT	Gumushane	142.66	318	eP	PKPdf	16 10 56.5	-3.5
NRDL	Niedersach Rie	142.82	358	ePKPbc	PKPdf	16 10 55.8	-4.1
ESPY	Espiye-Giresun	142.88	320	eP	PKPdf	16 10 55.5	-4.9
SIM	Simferopol’	142.94	328	i PKIKP	PKPdf	16 10 57.0	-3.3
SIM				ePPP		16 18 02.0	
SIM				pmax	pmax		
	comp=Z,510nm,12.0s						
HTL	Hartland	143.05	13	AMS	AMS	17 12 43.4	
	comp=Z,3µm,20.3s,MS6.1						
IBBN	Ibbenburen	143.06	360	ePKPbc	PKPdf	16 10 56.2	-4.1
LVV	L’vov	143.06	342	ePKHKP	PKPdf	16 10 55.1	-5.3
LVV				MLR	MLR		
	comp=Z,3µm,24.0s,MS5.9						
LVV				MLR	MLR		
	comp=N,1µm,22.0s,MS5.7						
LVV				MLR	MLR		
	comp=E,1µm,22.0s,MS5.7						
WOL	Wolverton	143.35	9	eP	PKPdf	16 10 58.9	-2.0
MARD	Mardin	143.38	313	i P	PKPdf	16 10 58.8	-2.6
WTSB	Winterswijk	143.39	1	ePKP	PKPdf	16 10 57.6	-3.3
	comp=E,106nm,1.3s						
CLZ	Clausthal	143.46	357	ePKPbc	PKPdf	16 10 58.0	-3.0
LSZ	Lusaka	143.50	215	ePKIKP	PKPdf	16 10 59.9	-2.3
PTK	Pertek	143.55	316	eP	PKPdf	16 10 56.0	-5.6
KWP	Kalwaria	143.61	343	ePKP	PKPdf	16 10 58.7	-2.7
KWP	Kalwaria	143.61	343⇑	iP	PKPdf	16 10 56.8	-4.6
KWP	Kalwaria	143.61	343	ePKP	PKPdf	16 10 58.7	-2.7
OJC	Ojcow	143.78	347	ePKPdf	PKPdf	16 10 58.5	-3.1
OJC				epPKPdf	pPKPdf	16 11 12.5	-0.1
OJC				ePP	PP	16 14 09.2	-4.7
OJC	Ojcow	143.78	347	ePKIKP	PKPdf	16 10 58.5	-3.1
OJC				e		16 11 12.5	
CLL	Collm	143.80	354⇑	iPKIKP	PKPdf	16 10 58.9	-2.7
CLL				e		16 14 16.0	
CLL				pmax	pmax		
	comp=Z,120nm,1.0s						
CLL				pmax	pmax		
	comp=Z,213nm,2.6s						
CLL				MLR	MLR		
	comp=Z,4µm,18.4s,MS6.2						
CLL	Collm	143.80	354	ePKPbc	PKPdf	16 10 58.5	-3.1
CLL				ePP	PP	16 14 17.0	+3.1
CLL	Collm	143.80	354⇑	iPKPdf	PKPdf	16 10 58.9	-2.7
	comp=Z,120nm,1.0s						
CLL				epPKPdf	pPKPdf	16 11 07.0	-5.6
CLL				ex	x	16 11 16.0	
CLL				ePP	PP	16 14 16.0	+2.1
	comp=Z,213nm,2.6s						
CLL				ePPlp		16 14 21.0	
	comp=Z,1µm,17.4s						
CLL				ePPP		16 17 26.0	
CLL				eSKSac	SKSac	16 18 14.0	-2.2
CLL				eSKSP		16 24 25.0	
CLL				eSS	SS	16 32 54.0	+0.1
CLL				e(PSPS)		16 34 16.0	
CLL				eSSS		16 38 30.0	
CLL				eSSSS		16 42 04.0	
CLL	Collm	143.80	354⇑	iPKP	PKPdf	16 10 58.9	-2.7
CLL				ePP	PP	16 14 16.0	+2.1
CLL				eSKS	SKSdf	16 18 14.0	+5.3
CLL				LR	LR		
	comp=Z,4µm,18.4s,MS6.2						
KIS	Kishinev	143.81	335α	iPKHKP	PKPdf	16 10 57.0	-4.8
KIS				ePPP		16 17 24.0	
KIS				pmax	pmax		
	comp=Z,880nm,3.0s						
KIS				pmax	pmax		
	comp=Z,2µm,18.0s						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s,MS6.0						
KIS				MLR	MLR		
	comp=N,2µm,21.0s						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
KIS	Kishinev	143.81	335	i PKP	PKPdf	16 10 57.0	-4.8
	comp=Z,900nm,3.0s						
KIS	Kishinev	143.81	335	ePP	PP	16 14 08.0	-6.3
KSP	Ksiaz	143.85	351	ePKP	PKPdf	16 10 59.4	-2.4
KSP	Ksiaz	143.85	351⇓	ePKP	PKPdf	16 10 59.1	-2.6
KSP				LR	LR		
	comp=Z,5µm,19.1s,MS6.3						
SVRC	Sivrice-ELAZID	143.88	316	eP	PKPdf	16 11 00.5	-1.7
BUG	Bochum--Univer	143.92	0	ePKPbc	PKPdf	16 10 58.8	-3.1
KEMA	Kemaliye	143.95	317	i P	PKPdf	16 11 01.4	-0.9
BRG	Berggiesshubel	144.13	353	i PKIKP	PKPdf	16 10 59.9	-2.3
BRG				e		16 14 17.5	
BRG				SS	SS	16 33 01.0	+3.3
BRG				pmax	pmax		
	comp=Z,43nm,1.1s						
BRG				pmax	pmax		
	comp=Z,12nm,1.6s						
BRG				pmax	pmax		
	comp=Z,17nm,1.7s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BRG				MLR	MLR		
	comp=N,1µm,17.7s,MS5.8						
BRG				MLR	MLR		
	comp=E,458nm,18.1s,MS5.8						
BRG				MLR	MLR		
	comp=Z,2µm,18.3s,MS5.9						
BRG	Berggiesshubel	144.13	353	ePKPbc	PKPdf	16 11 00.3	-1.9
BRG	Berggiesshubel	144.13	353	i PKP	PKPdf	16 10 59.9	-2.4
	comp=Z,72nm,1.1s						
BRG				PP	PP	16 14 06.0	-10
BRG				e		16 14 17.5	
	comp=Z,20nm,1.6s						
BRG				e		16 14 37.8	
	comp=Z,29nm,1.7s						
BRG				e		16 22 08.3	
	comp=Z,14nm,1.5s						
BRG				SS	SS	16 33 01.0	+3.3
BRG							
	comp=N,2µm,17.7s						
BRG							
	comp=E,765nm,18.1s						
BRG							
	comp=Z,3µm,18.3s						
BRG	Berggiesshubel	144.13	353	i PKP	PKPdf	16 10 59.9	-2.4
BRG				PP	PP	16 14 06.0	-10
BRG				e		16 14 17.5	
BRG				e		16 14 37.8	
BRG				e		16 22 08.3	
BRG				SS	SS	16 33 01.0	+3.3
BRG				LR	LR		
	comp=Z,2µm,18.3s,MS5.9						
FBE	Freiberg	144.15	354	ePKPbc	PKPdf	16 11 00.3	-2.0
FBE				ePP	PP	16 14 19.5	+3.5
STHS	Stebnicka Huta	144.19	345	i PKP	PKPdf	16 11 01.3	-1.1
UPC	Upice	144.22	351	ePKP	PKPdf	16 11 00.5	-1.9
RAC	Raciborz	144.25	348	ePKIKP	PKPdf	16 11 01.0	-1.5
RAC				e		16 14 15.2	
DPC	Dobruska-Polom	144.32	350	ePKP	PKPdf	16 11 00.8	-1.8
DPC				AMS	AMS	17 18 20.0	
	comp=Z,2µm,18.1s						
TSUM	Tsumeb	144.38	196	ePKPdf	PKPdf	16 11 02.7	-1.0
TSUM				ePP	PP	16 14 19.2	+1.7
PVCC	Panska Ves	144.40	352	ePKP	PKPdf	16 11 01.2	-1.5
PVCC				AMS	AMS	17 21 20.0	
	comp=Z,3µm,18.0s						
NIE	Niedzica	144.42	346	ePKPdf	PKPdf	16 11 01.8	-1.0
KVT	Kavak	144.43	322	eP	PKPdf	16 11 01.6	-1.5
UCC	Uccle	144.47	4	PKP	PKPdf	16 11 01.4	-1.4

OKC	Ostrava-Krasne	144.49	348	ePKP	PKPdf	16 11 00.8	-2.1
OKC				AMS	AMS	17 25 20.0	
	comp=Z,2µm,18.3s						
MYA	Malataya	144.50	316	eP	PKPdf	16 11 03.3	0.0
UBBA	Unterbreizbach	144.50	357	ePKPbc	PKPdf	16 11 00.7	-2.2
UBBA				ePP	PP	16 14 20.6	+2.6
BEBN	Eben Emael	144.53	2	PKP	PKPdf	16 11 01.7	-1.2
SVSK	Karacayir	144.54	320	eP	PKPdf	16 11 02.3	-1.0
DHBB	Dhamar BB	144.55	274⇓	eP	PKPdf	16 11 04.8	+0.8
DARE	Darende-Malaty	144.57	318	eP	PKPdf	16 11 04.6	+1.2
HGN	Heimansgroeve	144.57	2	ePKP	PKPdf	16 11 01.0	-2.0
	comp=Z,284nm,2.1s						
MOX	Moxa	144.58	356	ePKP	PKPdf	16 11 01.7	-1.3
	comp=Z,381nm,1.6s						
MOX							
	comp=Z,3µm,19.0s						
MOX	Moxa	144.58	356	ePKIKP	PKPdf	16 11 01.7	-1.3
MOX				pmax	pmax		
	comp=Z,381nm,1.6s						
MOX				MLR	MLR		
	comp=Z,3µm,19.0s,MS6.1						
MOX	Moxa	144.58	356	ePKPbc	PKPdf	16 11 01.3	-1.7
TOKT	Tokat	144.58	320	eP	PKPdf	16 11 02.8	-0.6
BUR08	Bucovina Ar. S	144.61	339	ePKPdf	PKPdf	16 11 02.1	-1.0
CRVS	Cervenica-Dubn	144.61	344	i PKP	PKPdf	16 11 01.6	-1.5
CRVS				LR	LR		
	comp=Z,1µm,29.3s,MS5.5						
TOKA	Tokat	144.62	320	i P	PKPdf	16 11 03.5	+0.1
BURAR	Bucovina Array	144.63	339⇓	iP	PKPdf	16 11 00.9	-2.3
BURAR	Bucovina Array	144.63	339	P	PKPdf	16 11 02.2	-1.0
URFA	Urfa	144.68	315	eP	PKPdf	16 11 04.0	+0.3
WERD	Werda	144.72	355	ePKPbc	PKPdf	16 11 01.9	-1.4
WERD				ePP	PP	16 14 23.2	+3.8
MEM	Membach	144.73	2	PKP	PKPdf	16 11 02.3	-1.0
TANN	Tannenbergstha	144.74	355	ePKPbc	PKPdf	16 11 02.0	-1.3
SNF	Seneffe	144.75	4	PKP	PKPdf	16 11 02.6	-0.7
GUNZ	Gunzen	144.80	355	ePKPbc	PKPdf	16 11 02.3	-1.1
GUNZ				ePP	PP	16 14 23.3	+3.4
WERN	Wernitzgruen	144.87	355	ePKPbc	PKPdf	16 11 02.6	-0.9
WERN				ePP	PP	16 14 24.2	+3.9
BOYT	Boyabat	144.88	323	i P	PKPdf	16 11 05.0	+1.1
BCLA	Clavier	144.89	3	PKP	PKPdf	16 11 02.1	-1.4
NKC	Novy Kostel	144.92	355	ePKP	PKPdf	16 11 02.7	-0.9
NKC				AMS	AMS	17 18 40.0	
	comp=Z,3µm,18.3s						
PRU	Pruhonice	144.93	352	ePKP	PKPdf	16 11 02.6	-1.1
PRU				AMS	AMS	17 20 50.0	
	comp=Z,3µm,17.5s						
TRPA	Tarpa	145.01	343⇑	iP	PKPbc	16 11 02.7	-0.5
BZK	Bozkurt	145.04	325	eP	PKPbc	16 11 04.2	+0.7
DOU	Dourbes	145.18	3	PKP	PKPdf	16 11 03.4	-0.7
GIVF	Givet	145.19	3⇓	iPKIKP	PKPdf	16 11 03.3	-0.8
	comp=Z,1µm,1.5s						
BAIF	Baives	145.19	4⇓	iPKIKP	PKPdf	16 11 03.6	-0.5
	comp=Z,2µm,1.3s						
MANZ	Manzenberg	145.19	355	ePKPbc	PKPbc	16 11 03.8	+0.1
MANZ				ePP	PP	16 14 25.8	+3.6
JSA	Saint Aubin	145.23	11	eP	PKPbc	16 11 03.0	-0.8
TLCR		145.26	333⇑	iP	PKPbc	16 11 04.4	+0.3
TLCR		145.26	333	⇑P	PKPbc	16 11 04.4	+0.3
VRAC	Vranov	145.28	350	PKIKP	PKPdf	16 11 04.2	-0.1
VRAC	Vranov	145.28	350⇑	iP	PKPbc	16 11 03.0	-1.0
VRAC	Vranov	145.28	350	ePKP	PKPdf	16 11 03.9	-0.4
ROTZ	Rotzenmuhle	145.40	355	ePKPbc	PKPbc	16 11 04.7	+0.3
ROTZ				ePP	PP	16 14 27.6	+4.2
SARI	SarD1z-Kayseri	145.44	318	eP	PKPdf	16 11 05.0	+0.1
TREC	Trest	145.48	351	ePKP	PKPdf	16 11 04.3	-0.3
TREC				AMS	AMS	17 21 10.0	
	comp=Z,3µm,19.1s						
ABH	Alteburg	145.49	0	PKP	PKPdf	16 11 04.6	0.0
GRA1	Grafenberg Arr	145.55	356	ePKPbc	PKPbc	16 11 06.1	+1.2
GRA1				LR	LR		
	comp=Z,2µm,20.1s,MS6.0						
GRF	Grafenberg Arr	145.55	356	ePKPbc	PKPbc	16 11 06.1	+1.2
GRF				eL		17 15 09.5	
	comp=Z,2µm,20.1s						
VRI	Vrincioaia	145.56	336⇑	iP	PKPdf	16 11 04.1	-0.8
VRI	Vrincioaia	145.56	336	P	PKPdf	16 11 05.3	+0.4
GZT	Gaziantep	145.59	315	i P	PKPdf	16 11 06.1	+0.9
PLOR	Plostina	145.60	336⇑	iP	PKPdf	16 11 05.0	+0.1
VYHS	Vyhne	145.62	347	ePKP	PKPdf	16 11 05.5	+0.6
VYHS				LR	LR		
	comp=Z,2µm,23.2s,MS5.8						
KOLL	Kolacno	145.64	347	ePKP	PKPdf	16 11 05.6	+0.7
TOS	Tosya	145.64	324	eP	PKPdf	16 11 06.2	+1.1
BALT	Daday	145.67	325	i P	PKPdf	16 11 06.8	+1.6
WLF	Walferdange	145.68	2	PKP	PKPdf	16 11 06.0	+1.0
WLF	Walferdange	145.68	2	ePKPbc	PKPbc	16 11 05.7	+0.4
WLF	Walferdange	145.68	2	ePKPdf	PKPdf	16 11 05.3	+0.4
TOD	Tromm	145.75	359	PKP	PKPdf	16 11 04.8	-0.3
ROSF	Rostrenen	145.82	13⇓	iPKIKP	PKPdf	16 11 04.9	-0.3
	comp=Z,2µm,1.9s						
BNN	Bunyan	145.88	319	eP	PKPdf	16 11 05.8	+0.2
KHC	Kasperske Hory	145.89	353	ePKP	PKPdf	16 11 05.2	-0.1
KHC				ex	x	16 11 14.5	
KHC				AMS	AMS	17 22 30.0	
	comp=Z,3µm,19.5s						
SMOL	Smolenice	145.90	348	ePKP	PKPdf	16 11 07.1	+1.7
PSZ	Piszkesteto	145.92	345	ePKP2	PKPab	16 11 05.5	-1.0
PSZ	Piszkesteto	145.92	345⇓	ePKP	PKPdf	16 11 06.4	+1.0
PSZ	Piszkesteto	145.92	345⇑	iP	PKPdf	16 11 04.9	-0.5
GAZ	Gaziantep	145.92	315	eP	PKPdf	16 11 06.6	+0.8
FLN	La Foliniere	145.94	10⇓	iPKIKP	PKPdf	16 11 05.5	+0.1
	comp=Z,2µm,1.3s						
KMRS	Kahramanmaras	145.95	316	eP	PKPdf	16 11 03.8	-2.0
WET	Wettzell	145.96	354	ePKPbc	PKPbc	16 11 06.1	0.0
WET				ePP	PP	16 14 31.3	+4.6
TIRR	Tirgusor	146.01	333⇓	iP	PKPdf	16 11 06.1	+0.4
TIRR	Tirgusor	146.01	333	ePKPdf	PKPdf	16 11 06.3	+0.6
HARR	Harsova	146.03	334⇓	iP	PKPdf	16 11 07.3	+1.6
HARR	Harsova	146.03	334	P	PKPdf	16 11 07.5	+1.8
KTD	Kalmit	146.05	360	PKP	PKPdf	16 11 06.6	+1.0
SGMF	Saint Gilles	146.05	12⇓	iPKIKP	PKPdf	16 11 05.9	+0.3
	comp=Z,568nm,1.1s						
CANT	Cankiri	146.15	323	eP	PKPdf	16 11 06.3	+0.3
GEC2	GERESS Array S	146.16	353	ePKPbc	PKPbc	16 11 06.9	+0.1
GERES	GERESS Array B	146.16	353	PKPbc	PKPbc	16 11 06.1	-0.6
	comp=Z,146nm,1.1s,baz=25,slow=2.0,SNR=312						
GERES	GERESS Array B	146.16	353	PKP2	PKPab	16 11 06.1	-1.3
GERES				pmax	pmax		
	comp=Z,146nm,1.1s						
LDF	La Druitiere	146.16	9⇓	iPKIKP	PKPdf	16 11 06.0	+0.2
	comp=Z,3µm,1.8s						
KUZU	Kuzuini	146.22	315	i P	PKPab	16 11 08.6	+0.5
GRR	Gorron	146.24	10⇓	iPKIKP	PKPdf	16 11 06.7	+0.8
	comp=Z,1µm,1.5s						
QUIF	Quistinic	146.24	13⇓	iPKIKP	PKPdf	16 11 06.5	+0.5
	comp=Z,476nm,1.1s						
SAFT	Safranbolu	146.26	325	eP	PKPdf	16 11 06.0	-0.2
ZST	Bratislava	146.26	349	ePKP	PKPdf	16 11 06.4	+0.4
ZST				LR	LR		
	comp=Z,2µm,19.3s,MS6.0						
ANDN	Andirin	146.28	317	i P	PKPdf	16 11 06.8	+0.5
CVD	Cernavoda	146.29	333	PKP2	PKPab	16 11 08.4	+0.3
CDAG	Cicekdag	146.33	321	i P	PKPdf	16 11 07.8	+1.4
LANF	Langenberg	146.39	360	PKP	PKPdf	16 11 07.2	+1.0
BUD	Budapest	146.53	346	⇓PKP	PKPdf	16 11 08.1	+1.6
AVNT	Avonos	146.55	320	i P	PKPdf	16 11 07.2	+0.5
VOIR		146.56	338⇑	iP	PKPdf	16 11 07.2	+0.6
VOIR		146.56	338	P	PKPdf	16 11 07.4	+0.8
STU	Stuttgart	146.57	358	ePKPbc	PKPbc	16 11 08.2	+0.2
STU	Stuttgart	146.57	358	ePKPbc	PKPbc	16 11 08.0	0.0
KOZT	Kozan	146.68	317	eP	PKPdf	16 11 06.5	-0.5
BR131	Keskin Array S	146.71	322	ePKPdf	PKPdf	16 11 06.7	-0.4
BR131				ePKPbc	PKPbc	16 11 09.3	+0.6
BRTR	Keskin Array B	146.71	322	PKP	PKPdf	16 11 07.0	0.0
	comp=Z,75nm,0.9s,baz=352,slow=0.2,SNR=102						
BRTR				PKPbc	PKPbc	16 11 09.3	+0.6
	comp=Z,75nm,0.9s,baz=109,slow=2.2,SNR=133						
BRTR	Keskin Array B	146.71	322	PKIKP	PKPdf	16 11 07.0	0.0
BRTR						16 11 09.3	
BRTR				pmax	pmax		
	comp=Z,75nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,75nm,0.9s						
CONA	Conrad Observa	146.74	350	i PKPbc	PKPbc	16 11 06.9	-1.6
	comp=Z,285nm,1.0s,SNR=94						
CSNA	Conrad Observa	146.74	350⇑	iPKPbc	PKPbc	16 11 06.9	-1.6
	comp=Z,259nm,1.0s						
MEZF	Maizieres J’vi	146.80	3⇓	iPKIKP	PKPdf	16 11 07.0	+0.1
	comp=Z,104nm,1.2s						
SOP	Sopron	146.86	349⇓	ePKP	PKPdf	16 11 07.1	+0.1
KAMT	Kaman	146.89	321	eP	PKPdf	16 11 05.2	-2.1

CDF	Champ du Feu	146.96	0⇓	iPKIKP	PKPdf	16 11 06.8	-0.3
CEYT	Ceyhan	146.99	316	eP	PKPdf	16 11 08.8	+1.2
BFO	Black Forest	147.03	359	ePKPbc	PKPbc	16 11 09.0	-0.3
MOA	Molln	147.06	352⇓	iPKPdf	PKPdf	16 11 06.9	-0.4
	comp=Z,269nm,1.4s,SNR=46						
NIG	Nigde	147.10	319	eP	PKPdf	16 11 08.6	+0.9
THEF	They Montfort	147.11	2	PKP	PKPdf	16 11 08.3	+0.9
LOD	Lodumlu	147.12	323	eP	PKPdf	16 11 07.0	-0.7
ECH	Echery	147.15	1	PKP	PKPdf	16 11 08.1	+0.6
ECH	Echery	147.15	1	ePKPbc	PKPbc	16 11 09.2	-0.5
HTY	Hatay	147.21	315	eP	PKPab	16 11 10.9	-1.0
LIBD	Limburg	147.22	0	PKP	PKPbc	16 11 09.8	-0.1
SPAK	Spaichingen-Ko	147.25	359	PKP	PKPdf	16 11 09.6	+1.9
KARA	Karaisali	147.31	317	eP	PKPdf	16 11 06.5	-1.6
HAU	Haudompre	147.34	2⇓	iPKIKP	PKPdf	16 11 07.6	-0.2
HAU				eMLR	MLR		
	comp=Z,3µm,18.8s,MS5.8						
HAU	Haudompre	147.34	2⇓	iPKPdf	PKPdf	16 11 07.6	-0.2
HAU				LR	LR		
	comp=Z,3µm,18.8s,MS6.1						
PRD	Provadia	147.45	333	P	PKPdf	16 11 00.6	-7.6
ARSA	Arzberg	147.46	350⇓	iPKPdf	PKPdf	16 11 07.5	-0.6
	comp=Z,138nm,1.1s,SNR=41						
FELD	Feldberg im Sc	147.49	360	PKP	PKPdf	16 11 08.5	+0.4
MOF	Molkenrain	147.51	1	PKP	PKPdf	16 11 08.7	+0.6
HINF	Hinteralfeld	147.54	1⇓	iPKIKP	PKPdf	16 11 07.8	-0.4
	comp=Z,99nm,1.6s						
MDU	Mudurnu	147.60	325	eP	PKPdf	16 11 09.6	+1.1
RETA	Reutte	147.78	356⇑	iPKPdf	PKPdf	16 11 08.2	-0.3
	comp=Z,252nm,1.2s,SNR=20						
PKSM	Moragy	147.82	346⇑	iP	PKPdf	16 11 07.6	-1.1
PKSM	Moragy	147.82	346⇓	eP	PKPdf	16 11 08.3	-0.4
HYF	Humbligny	147.83	6	ePKIKP	PKPdf	16 11 08.9	+0.3
WATA	Walderalm	147.87	355⇑	iPKPbc	PKPdf	16 11 08.9	+0.2
	comp=Z,190nm,1.1s,SNR=14						
MERS	Mersin	147.88	317	eP	PKPdf	16 11 10.0	+1.0
MOTA	Moosalm	147.90	356⇓	iPKPdf	PKPdf	16 11 08.2	-0.5
	comp=Z,164nm,1.0s,SNR=55						
BBS	Basel-Blauen	147.91	0	PKP	PKPdf	16 11 10.7	+1.9
LCHF	La Chataignera	147.92	11	PKP	PKPab	16 11 15.8	+1.4
WTTA	Wattenberg	147.94	355⇓	iPKPdf	PKPdf	16 11 08.7	-0.1
	comp=Z,203nm,0.9s,SNR=72						
KBA	Koelnbreinsper	147.94	353⇓	iPKPdf	PKPdf	16 11 08.1	-0.7
	comp=Z,214nm,1.2s,SNR=17						
LOR	Lormes	147.94	5⇓	iPKIKP	PKPdf	16 11 09.0	+0.2
	comp=Z,141nm,1.3s						
LOR				eMLR	MLR		
	comp=Z,5µm,18.5s,MS6.0						
LOR	Lormes	147.94	5⇓	iPKPdf	PKPdf	16 11 09.0	+0.2
LOR				LR	LR		
	comp=Z,5µm,18.5s,MS6.3						
GULT	Gulveren	148.00	326	eP	PKPdf	16 11 08.2	-1.0
LOMF	Lomont	148.01	1	PKP	PKPdf	16 11 10.2	+1.3
SZH	Strazhica	148.03	334	P	PKPdf	16 11 05.9	-3.2
DAVA	Damuels	148.03	357⇓	iPKPdf	PKPdf	16 11 09.1	+0.1
	comp=Z,309nm,1.1s,SNR=70						
MFF	Saint Martin d	148.09	10⇓	iPKIKP	PKPdf	16 11 08.9	-0.2
	comp=Z,200nm,1.5s						
SOKA	Soboth	148.09	350⇓	iPKPdf	PKPdf	16 11 08.5	-0.6
	comp=Z,242nm,1.1s						
KOGS	Kog	148.10	349	ePKPdf	PKPdf	16 11 08.6	-0.5
KOGS				ePKPbc	PKPbc	16 11 11.9	-0.4
SSF	Saint Saulge	148.12	5⇓	iPKIKP	PKPdf	16 11 09.2	+0.1
	comp=Z,157nm,1.3s						
HRT	Hereke	148.17	327	eP	PKPbc	16 11 12.2	-0.5
KLYT	Kilyos	148.18	329	eP	PKPdf	16 11 08.0	-1.5
GROS	Grobnik	148.23	350	i PKPdf	PKPdf	16 11 08.8	-0.5
FETA	Feichten	148.25	356	i PKPdf	PKPdf	16 11 09.5	+0.1
	comp=Z,180nm,1.1s,SNR=88						
HWQ	Hawqa	148.28	312	eP	PKPbc	16 11 13.6	+0.4
KIZT	Kizilcal	148.29	322	eP	PKPbc	16 11 12.2	-0.9
ISK	Istanbul-Kandi	148.31	328	eP	PKPdf	16 11 10.5	+0.8
ABTA	Abfaltersbach	148.36	354⇓	iPKPdf	PKPdf	16 11 08.8	-0.8
	comp=Z,171nm,1.0s,SNR=52						
BGKT	Bogazkoy	148.37	329	eP	PKPbc	16 11 13.0	-0.2
AVF	Avril sur Loir	148.37	6⇓	iPKIKP	PKPdf	16 11 09.3	-0.3
	comp=Z,55nm,1.1s						
CTYL	Yal??k??y-??at	148.38	330	eP	PKPbc	16 11 12.0	-1.2
KDHN	Kadinhani	148.39	322	i P	PKPdf	16 11 07.2	-2.6
JMB	Yambol	148.40	333	P	PKPbc	16 11 11.8	-1.4
JMB	Yambol	148.40	333	P	PKPdf	16 11 09.8	+0.1
ADVT	Abdulvahap	148.42	327	eP	PKPbc	16 11 12.4	-1.0
LADK	Ladik-KONYA	148.44	321	eP	PKPdf	16 11 11.5	+1.5
ESKT	Eskisehir	148.46	324	eP	PKPbc	16 11 12.4	-1.0
ESKT	Eskisehir	148.46	324	i P	PKPbc	16 11 13.2	-0.2
YLV	Yalova	148.51	327	eP	PKPdf	16 11 10.0	0.0
CAVI	Cavuskoy	148.53	326	eP	PKPdf	16 11 11.7	+1.7
BGF	Bois d’Agland	148.55	6⇓	iPKIKP	PKPdf	16 11 09.8	-0.1
	comp=Z,94nm,1.3s						
SMF	Signal de Mont	148.56	5⇓	iPKIKP	PKPdf	16 11 09.7	-0.2
	comp=Z,112nm,1.5s						
PTCC	Patocco-Chiusa	148.60	352	PKP	PKPdf	16 11 09.6	-0.3
KONT	Konya--Tatoy	148.61	321	eP	PKPdf	16 11 11.5	+1.3
BHL	Bhannes	148.68	311	eP	PKPbc	16 11 14.6	+0.3
GEMT	Gemlik	148.71	327	eP	PKPdf	16 11 11.7	+1.4
CABF	La Chapelle	148.73	2⇓	iPKIKP	PKPdf	16 11 10.7	+0.6
	comp=Z,342nm,1.9s						
TCF	Toulx Ste Croi	148.74	7⇓	iPKIKP	PKPdf	16 11 09.9	-0.3
	comp=Z,167nm,1.5s						
GMNA	Gemona	148.75	353	PKP	PKPdf	16 11 10.1	-0.1
APPI	Appiano	148.75	355	PKP	PKPbc	16 11 13.3	-0.7
RCY	Rachaya	148.76	311	eP	PKPbc	16 11 15.1	+0.7
LJU	Ljubljana	148.79	351	ePKPdf	PKPdf	16 11 10.2	-0.1
LJU				ePKPbc	PKPbc	16 11 14.0	-0.1
IKL	Isikli	148.80	317	eP	PKPdf	16 11 11.2	+0.6
EDRB	Edirne	148.82	332	eP	PKPdf	16 11 11.1	+0.7
TUE	Stuetta	148.87	358	ePKPdf	PKPdf	16 11 10.8	+0.5
TUE				ePKPbc	PKPbc	16 11 15.0	+0.7
EREN	Erenkoy	148.87	315	eP	PKPbc	16 11 14.1	-0.5
VOY	Vojsko	148.90	352	ePKPdf	PKPdf	16 11 09.8	-0.6
VOY				ePKPbc	PKPbc	16 11 13.6	-0.8
VOY				e		16 11 40.0	
VOY				e		16 11 49.4	
EMAZ	Mazaricos	148.94	24	PKP	PKPdf	16 11 11.1	+0.5
ULDT	Uludag	148.95	327	i P	PKPdf	16 11 10.6	-0.1
SISC	Sisak	149.02	348	P	PKPbc	16 11 13.1	-1.6
SISC	Sisak	149.02	348	i P	PKPbc	16 11 13.1	-1.6
OG01	Vacheresse	149.03	1	PKP	PKPbc	16 11 15.6	+0.9
AGO	Saint Agoulin	149.08	6	PKP	PKPbc	16 11 15.8	+0.9
TKR	Tekirdag	149.12	330	eP	PKPdf	16 11 14.3	+3.3
CTI	Castel Tesino	149.14	355	PKIKP	PKPdf	16 11 11.0	+0.2
STS	Santiago	149.16	24	PKIKP	PKPdf	16 11 12.2	+1.2
ALT	Altintas	149.19	325	eP	PKPbc	16 11 15.0	-0.4
BOJS	Bojanci	149.20	350	ePKPdf	PKPdf	16 11 11.2	+0.3
BOJS				ePKPbc	PKPbc	16 11 15.5	+0.3
PLDF	La Plantade	149.21	6	PKP	PKPbc	16 11 16.1	+0.9
MABI	Malga Bissina	149.22	356	PKP	PKPdf	16 11 09.1	-1.9
TRI	Trieste	149.23	352	ePKHKP	PKPdf	16 11 10.2	-0.8
TRI				e		16 11 15.1	
SHUT	Suhut-Afyon	149.28	323	eP	PKPdf	16 11 10.9	-0.4
EPON	Pontenova	149.30	21	PKP	PKPbc	16 11 13.6	-1.9
PGB	Panagyurishte	149.34	336	P	PKPdf	16 11 10.6	-0.7
LFK	Lefkose	149.44	315	eP	PKPdf	16 11 11.1	-0.6
PLD	Plovdiv	149.50	335	P	PKPdf	16 11 12.3	+0.8
GDZ	Gediz	149.52	325	i P	PKPbc	16 11 16.3	+0.2
KDZ	Kurdzhali	149.57	333	P	PKPdf	16 11 10.7	-1.0
RJF	Les Rejaudoux	149.62	9⇓	iPKIKP	PKPdf	16 11 11.6	0.0
	comp=Z,96nm,1.2s						
RJF				eMLR	MLR		
	comp=Z,5µm,19.8s,MS6.0						
RJF	Les Rejaudoux	149.62	9⇓	iPKPdf	PKPdf	16 11 11.6	0.0
RJF				LR	LR		
	comp=Z,5µm,19.8s,MS6.3						
COLF	Collangettes	149.67	6	PKP	PKPbc	16 11 17.3	+1.0
RSL	Roselend	149.67	1	PKP	PKPdf	16 11 16.7	+5.0
VTS	Vitosha	149.68	337	P	PKPbc	16 11 17.1	+0.6
VTS	Vitosha	149.68	337	P	PKPdf	16 11 11.8	0.0
MAMC	Mammari	149.72	316	P	PKPbc	16 11 16.9	+0.1
EZAM	Zamans	149.73	25	PKHKP	PKPdf	16 11 12.9	+1.0
CSS	Prodhromos	149.76	315	P	PKPbc	16 11 17.0	+0.1
	comp=Z,2.7nm,1.0s						
ISP	Isparta	149.79	322	eP	PKPdf	16 11 07.2	-4.9
ISP	Isparta	149.79	322	PKP2	PKPbc	16 11 17.0	+0.1
ISP	Isparta	149.79	322	P	PKPdf	16 11 09.6	-2.5
ISP				ePKPbc	PKPbc	16 11 15.3	-1.6
ISP				P		16 11 17.0	
RZN	Rozhen	149.84	334	P	PKPdf	16 11 11.5	-0.6
LPL	La Plagne	149.84	1⇓	iPKIKP	PKPdf	16 11 12.8	+0.8
	comp=Z,141nm,1.7s						
LFF	La Frestale	149.85	10⇓	iPKIKP	PKPdf	16 11 12.0	0.0
	comp=Z,134nm,1.4s						
LPG	La Plagne	149.86	1⇓	iPKIKP	PKPdf	16 11 12.9	+0.9
	comp=Z,226nm,1.9s						

ALN	**Alexandroupoli**	**149.89 332**	P	PKPbc	16 11 14.6	-2.4
LBL	**Lubilhac**	**149.90 6**	PKP	PKPbc	16 11 18.2	+1.3
RDO	**Rodhopi**	**149.92 332**	*e*P	PKPdf	16 11 12.5	+0.3
LEF	**Lefka**	**149.97 316**	*e*P	PKPdf	16 11 15.4	+2.9
BALB	**Balikesir**	**149.97 328**	*e*P	PKPbc	16 11 17.1	-0.2
EARI	**Arriondas**	**149.97 19**	PKP	PKPbc	16 11 15.0	-2.1
LPK	**Lapseki**	**149.97 330**	*e*P	PKPbc	16 11 16.9	-0.3
SSB	**Saint Sauveur**	**149.97 4**	PKP	PKPbc	16 11 17.3	+0.2
SSB	**Saint Sauveur**	**149.97 4**	*e*PKPdf	PKPdf	16 11 12.8	+0.6
SSB			*e*PKPbc	PKPbc	16 11 17.8	+0.7
BCK	**Bucak**	**149.99 322**	*e*P	PKPdf	16 11 12.6	+0.1
KHL	**Karahalli**	**150.03 324**	*e*P	PKPbc	16 11 14.6	-2.9
CAF	**Calviac**	**150.06 8**⇓	*i*PKIKP	PKPdf	16 11 12.6	+0.3
	comp=Z,92nm,1.4s					
ERUA	**La Rua**	**150.12 22**	PKHKP	PKPdf	16 11 13.3	+0.8
GDM	**Grand'Maison**	**150.14 2**	PKP	PKPbc	16 11 18.4	+0.9
ALFC	**Alevga**	**150.14 316**	P	PKPbc	16 11 17.2	-0.6
	comp=Z,7.1nm,1.0s					
NVLJ	**Novalja**	**150.18 350**	P	PKPdf	16 11 14.3	+1.8
NVLJ	**Novalja**	**150.18 350**	*i* P	PKPdf	16 11 14.3	+1.8
SZAC	**Souni-Zanaja**	**150.18 315**	P	PKPbc	16 11 18.4	+0.5
ELOB	**Lobios**	**150.22 24**	PKP	PKPdf	16 11 13.8	+1.2
PLE	**Pljevlja**	**150.30 343**⇑	*i*PKP	PKPdf	16 11 12.8	+0.1
BNI	**Bardonecchia**	**150.31 1**	*e*PKIKP	PKPdf	16 11 14.0	+1.3
BNI			*e*		16 11 19.4	
MMB	**Musomiste**	**150.33 335**	P	PKPdf	16 11 12.0	-0.9
MMB			P		16 11 12.9	
KKB	**Krupnik**	**150.35 336**	P	PKPdf	16 11 12.6	-0.3
PCAB	**Cabril**	**150.36 24**	*e*PKPdf	PKPdf	16 11 13.5	+0.6
PCAB	**Cabril**	**150.36 24**	*e*PKPbc	PKPbc	16 11 18.2	+0.1
KULA	**Kula-Manisa**	**150.38 325**	*e*P	PKPdf	16 11 13.2	+0.2
VIVF	**Saint-Julien-l**	**150.40 4**⇓	*i*PKIKP	PKPdf	16 11 13.3	+0.4
	comp=Z,167nm,1.5s					
ORIF	**Oris-en-Rattie**	**150.41 3**⇓	*i*PKIKP	PKPdf	16 11 13.3	+0.4
	comp=Z,147nm,1.6s					
ORIF			*e*MLR	MLR		
	comp=Z,6μm,22.0s,MS6.0					
PPCY	**Paphos**	**150.47 316**	P	PKPbc	16 11 17.4	-1.2
UPM	**Unac-Piva**	**150.55 343**⇑	*i*PKP	PKPdf	16 11 12.0	-1.1
ELAN	**Lanestosa**	**150.56 17**	PKP	PKPdf	16 11 14.3	+1.1
IVA	**Berane**	**150.56 342**⇑	*i*PKP	PKPdf	16 11 12.3	-0.9
EZN	**Ezine**	**150.60 330**	*e*P	PKPbc	16 11 17.8	-1.0
MBDF	**Montbardon**	**150.63 1**⇓	*i*PKIKP	PKPdf	16 11 13.8	+0.6
	comp=Z,122nm,1.5s					
ECAL	**Calabor**	**150.66 22**	PKP	PKPdf	16 11 14.3	+0.9
OG26	**St.-Nazaire-De**	**150.72 3**	PKP	PKPbc	16 11 19.7	+0.8
GOLH	**Golhisar**	**150.75 322**	*i* P	PKPdf	16 11 13.8	+0.1
PBRG	**Braganca**	**150.77 22**	*e*PKPdf	PKPdf	16 11 14.3	+0.8
PBRG	**Braganca**	**150.77 22**	*e*PKPbc	PKPbc	16 11 19.0	-0.1
PVY	**Plav**	**150.79 341**⇑	*i*PKP	PKPdf	16 11 13.2	-0.3
STIP	**Stip**	**150.84 337**	P	PKPdf	16 11 13.0	-0.6
STIP	**Stip**	**150.84 337**	*e*PKP	PKPbc	16 11 18.7	-0.6
DOI	**San Damiano**	**150.86 1**	PKIKP	PKPbc	16 11 18.1	-1.1
SKO	**Skopje**	**150.87 339**	P	PKPdf	16 11 14.3	+0.6
SKO	**Skopje**	**150.87 339**	*e*PKP	PKPbc	16 11 19.7	+0.4
ELL	**Elmali**	**150.87 321**	*e*P	PKPbc	16 11 16.9	-2.6
SURF	**Saint Ours**	**150.88 1**	PKP	PKPbc	16 11 20.5	+1.2
NKY	**Niksic**	**150.89 343**⇑	*i*PKP	PKPdf	16 11 12.2	-1.5
BRY	**Bratogost**	**150.93 343**⇑	*i*PKP	PKPdf	16 11 12.7	-1.1
VAY	**Valandovo**	**151.01 336**	P	PKPbc	16 11 17.9	-1.8
VAY	**Valandovo**	**151.01 336**	*e*PKP	PKPbc	16 11 18.6	-1.1
VAY	**Valandovo**	**151.01 336**	P	PKPbc	16 11 18.2	-1.5
KNT	**Kendrikon**	**151.02 336**	P	PKPbc	16 11 18.3	-1.4
FNVD	**Fontana Vidola**	**151.05 355**	PKP	PKPdf	16 11 14.5	+0.6
EALK	**Alkurruntz**	**151.06 14**	PKP	PKPdf	16 11 15.0	+1.0
PRK	**Paraskevi**	**151.08 329**	P	PKPbc	16 11 18.5	-1.4
PRK	**Paraskevi**	**151.08 329**	*e*P	PKPbc	16 11 20.0	+0.1
OSSF	**Osses**	**151.08 14**	PKP	PKPbc	16 11 19.2	-0.6
LIA	**Limnos Island**	**151.09 331**	P	PKPbc	16 11 18.5	-1.4
LOS	**Limnos**	**151.10 332**	P	PKPbc	16 11 19.3	-0.7
ELIZ	**Elizondo**	**151.11 14**	PKIKP	PKPbc	16 11 17.1	-2.8
LASF	**Ste Croix**	**151.11 6**⇓	*i*PKIKP	PKPdf	16 11 14.5	+0.5
	comp=Z,198nm,1.5s					
VLC	**Villacollemand**	**151.12 356**	*e*PKPbc	PKPbc	16 11 18.7	-1.1
SOH	**Sokhos**	**151.13 335**	P	PKPbc	16 11 18.2	-1.8
TTG	**Podgorica**	**151.16 342**⇑	*i*PKP	PKPdf	16 11 12.9	-1.2
STON	**Ston**	**151.18 345**	P	PKPdf	16 11 12.4	-1.7
STON	**Ston**	**151.18 345**	*i* P	PKPdf	16 11 12.4	-1.7
ORDF	**Ordiarp**	**151.19 13**	PKP	PKPbc	16 11 19.4	-0.7
IZM	**Izmir**	**151.21 327**	*e*P	PKPbc	16 11 19.4	-0.9
MVO	**Moncorvo**	**151.22 23**	*e*PKPdf	PKPdf	16 11 14.9	+0.7
MVO	**Moncorvo**	**151.22 23**	*e*PKPbc	PKPbc	16 11 20.6	+0.4
MVO	**Moncorvo**	**151.22 23**	*e*PP	PP	16 14 59.4	+1.7
MVO			*e*P		16 40 13.1	
MVO			*e*LQ		16 54 12.5	
MVO			*e*LR	LR	17 02 47.5	
	comp=Z,3μm,22.0s					
SJPF	**Ste Jean**	**151.22 14**⇓	*i*PKIKP	PKPdf	16 11 14.7	+0.5
	comp=Z,212nm,1.8s					
PVIS	**Viseu**	**151.26 25**	*e*PKPdf	PKPdf	16 11 15.3	+1.0
PVIS	**Viseu**	**151.26 25**	*e*PKPbc	PKPbc	16 11 20.2	-0.1
OUR	**Ouranopolis**	**151.27 333**	P	PKPbc	16 11 19.8	-0.5
STOF	**St-Etienne Org**	**151.33 3**	PKP	PKPbc	16 11 21.3	+1.0
BLCB	**Balcova**	**151.34 327**	*e*P	PKPbc	16 11 18.2	-2.4
BLCB	**Balcova**	**151.34 327**	P	PKPbc	16 11 18.3	-2.2
SMRF	**Simiane la Rot**	**151.34 3**⇓	*i*PKIKP	PKPdf	16 11 15.1	+0.8
	comp=Z,210nm,1.5s					
LARF	**Larrau**	**151.35 13**	PKP	PKPbc	16 11 21.1	+0.7
TOUF	**Mont Tournerai**	**151.35 1**	PKP	PKPbc	16 11 20.4	0.0
HCY	**Herceg Novi**	**151.36 343**⇑	*i*PKP	PKPdf	16 11 13.9	-0.5
ATE	**Arette**	**151.37 13**	PKP	PKPbc	16 11 20.7	+0.2
AUTN	**L'Aution**	**151.37 0**	PKP	PKPbc	16 11 20.4	0.0
SAOF	**Saorge**	**151.38 0**	PKP	PKPbc	16 11 20.4	-0.1
BUM	**Brajici-Budva**	**151.39 342**⇑	*i*PKP	PKPdf	16 11 13.2	-1.3
ECRI	**Cripan**	**151.39 16**	PKIKP	PKPdf	16 11 15.8	+1.3
GRG	**Griva**	**151.39 336**	P	PKPdf	16 11 12.3	-2.2
HORT	**Hortiatis**	**151.42 335**	P	PKPdf	16 11 11.0	-3.6
THE	**Thessaloniki**	**151.44 335**	P	PKPbc	16 11 19.2	-1.5
KSL	**Kastellorizon**	**151.46 321**	*e*P	PKPbc	16 11 20.5	-0.4
KRUS	**Krusevo**	**151.46 338**	*e*PKP	PKPbc	16 11 20.3	-0.4
PLG	**Polygyros**	**151.46 334**	P	PKPbc	16 11 19.2	-1.6
PLG	**Polygyros**	**151.46 334**	*e*P	PKPbc	16 11 20.0	-0.8
VILF	**Villemus**	**151.47 3**	PKP	PKPbc	16 11 21.5	+0.8
MVIF	**Mont Vial**	**151.47 1**	PKP	PKPbc	16 11 20.1	-0.6
LUCF	**Luceram**	**151.48 1**	PKP	PKPbc	16 11 20.6	-0.1
PRAF	**Pradon**	**151.49 4**	PKP	PKPbc	16 11 21.5	+0.8
SBF	**Sospel**	**151.51 0**⇓	*i*PKIKP	PKPdf	16 11 14.2	-0.4
	comp=Z,202nm,1.5s					
ETSF	**Etsaut**	**151.58 13**⇓	*i*PKIKP	PKPdf	16 11 15.4	+0.7
	comp=Z,156nm,1.6s					
ULC	**Ulcinj**	**151.59 342**⇑	*i*PKP	PKPdf	16 11 13.5	-1.3
CALN	**Calern**	**151.61 1**	PKP	PKPbc	16 11 21.1	+0.1
REVF	**Revere**	**151.63 0**	PKP	PKPbc	16 11 20.4	-0.6
EPF	**Esparros**	**151.63 11**⇓	*i*PKIKP	PKPdf	16 11 15.1	+0.3
	comp=Z,146nm,1.6s					
MTLF	**Montolieu**	**151.64 8**⇓	*i*PKIKP	PKPdf	16 11 15.1	+0.3
	comp=Z,101nm,1.4s					
MTE	**Manteigas**	**151.67 25**	*e*PKPdf	PKPdf	16 11 15.4	+0.4
MTE	**Manteigas**	**151.67 25**	*e*PKPbc	PKPbc	16 11 21.3	+0.1
MTE			*e*P		16 40 18.1	
MTE			*e*LQ		16 54 07.4	
MTE			*e*LR	LR	17 09 10.9	
	comp=Z,5μm,22.0s					
MTE	**Manteigas**	**151.67 25**	*e*PKPdf	PKPdf	16 11 15.2	+0.3
MTE			*e*PKPbc	PKPbc	16 11 21.4	+0.2
TREF	**Trevaresse**	**151.68 4**	PKP	PKPbc	16 11 22.1	+0.9
VIEF	**Viey**	**151.71 12**	PKP	PKPbc	16 11 22.6	+1.3
TAVF	**Tavernes**	**151.72 2**	PKP	PKPbc	16 11 21.7	+0.5
CSNT	**Castellina Chi**	**151.73 354**	PKP	PKPbc	16 11 18.6	-2.7
MLSB	**Milas**	**151.73 325**	*e*P	PKPdf	16 11 09.6	-5.6
PAIG	**Paliouri**	**151.74 333**	P	PKPbc	16 11 18.4	-3.0
BIA	**Bitola**	**151.74 338**	P	PKPdf	16 11 13.4	-1.6
BIA	**Bitola**	**151.74 338**	*e*PKP	PKPbc	16 11 20.3	-1.1
FRF	**La Foret Royal**	**151.79 2**⇓	*i*PKIKP	PKPdf	16 11 14.8	-0.2
	comp=Z,160nm,1.7s					
MLS	**Moulis**	**151.84 10**	PKP	PKPbc	16 11 20.9	-0.6
MLS	**Moulis**	**151.84 10**	PKP	PKPbc	16 11 22.4	+0.9
CHOS	**Chios island**	**151.84 328**	P	PKPdf	16 11 12.1	-3.2
RESF	**Ens**	**151.85 11**	PKP	PKPbc	16 11 22.8	+1.2
GELF	**Grande-Etoile**	**151.92 3**	PKP	PKPbc	16 11 22.4	+0.7
EBIE	**Bielsa**	**151.93 12**	PKP	PKPdf	16 11 16.8	+1.5
FNA	**Florina**	**151.93 338**	P	PKPbc	16 11 18.6	-3.2
SMG	**Samos**	**151.95 326**	*e*P	PKPbc	16 11 22.0	0.0
TIR	**Tirane**	**151.96 340**	P	PKPdf	16 11 14.5	-0.9
BERF	**Bertagne**	**152.00 3**	PKP	PKPbc	16 11 21.7	-0.2
LMR	**La Mourre**	**152.02 2**⇓	*i*PKIKP	PKPdf	16 11 15.1	-0.3
	comp=Z,155nm,1.5s					
LRDF	**Laroque-de-Fa**	**152.08 8**	PKP	PKPbc	16 11 22.6	+0.5
BDRM	**Kayabasi**	**152.08 325**	*i* P	PKPdf	16 11 15.9	+0.2
LIT	**Litokhoron**	**152.09 335**	P	PKPbc	16 11 20.0	-2.2
PMAFR	**Mafra**	**152.09 29**	*e*PKPdf	PKPdf	16 11 16.2	+0.6
PMAFR	**Mafra**	**152.09 29**	*e*PKPbc	PKPbc	16 11 22.4	+0.1
PMAFR	**Mafra**	**152.09 29**	*e*PP	PP	16 15 06.0	+3.1
PMAFR			*e*P		16 39 58.0	
PMAFR			*e*LQ		16 54 10.5	
PMAFR			*e*LR	LR	17 02 07.1	
	comp=Z,4μm,18.0s					
PCBR	**Castelo Branco**	**152.17 26**	*e*PKPdf	PKPdf	16 11 16.1	+0.4
PCBR	**Castelo Branco**	**152.17 26**	*e*PKPbc	PKPbc	16 11 22.3	-0.1
CARF	**Carcanieres**	**152.24 9**	PKP	PKPbc	16 11 22.2	-0.3
DAT	**Datca**	**152.25 324**	*e*P	PKPdf	16 11 18.7	+2.8
ALMR	**Almeirim**	**152.26 28**	*e*P	PKPdf	16 11 14.1	-1.7
AOS	**Alonnisos**	**152.27 332**	P	PKPbc	16 11 21.9	-0.7
ARG	**Arkhangelos**	**152.29 323**	*e*P	PKPbc	16 11 19.5	-3.3
LIS	**Lisbon**	**152.34 29**	*e*P	PKPdf	16 11 14.4	-1.7
LIS			AMS	AMS	17 15 05.8	
	comp=Z,5μm,26.0s,MS6.2					
XOR	**Xorichti**	**152.41 333**	P	PKPbc	16 11 21.5	-1.5
FILF	**Fillols**	**152.45 8**	PKP	PKPbc	16 11 22.9	0.0
VALF	**Valcebollere**	**152.53 9**	PKP	PKPbc	16 11 23.7	+0.6
PMRV	**Marv??o**	**152.55 26**	*e*PKPdf	PKPdf	16 11 16.2	-0.1
PMRV	**Marv??o**	**152.55 26**	*e*PKPbc	PKPbc	16 11 23.2	-0.1
PMRV	**Marv??o**	**152.55 26**	*e*PP	PP	16 15 11.5	+6.1
PMRV			*e*P		16 40 32.2	
PMRV			*e*LQ		16 54 22.6	
PMRV			*e*LR	LR	17 03 15.7	
	comp=Z,4μm,20.0s					
AQU	**L'Aquila**	**152.57 351**	*e*PKIKP	PKPbc	16 11 23.0	-0.2
SJAF	**Saint Jean de**	**152.57 8**	PKP	PKPbc	16 11 22.4	-0.8
EJON	**La Jonquera**	**152.61 8**	PKP	PKPbc	16 11 19.9	-3.4
GUD	**Guadarrama**	**152.71 20**	PKIKP	PKPdf	16 11 17.6	+1.1
ESAC	**San Caprasio**	**152.72 13**	PKP	PKPdf	16 11 17.9	+1.4
THL	**Klokotos Trika**	**152.74 335**	P	PKPbc	16 11 20.7	-3.0
PGF	**Pioggiola**	**152.80 358**⇓	*i*PKIKP	PKPdf	16 11 16.2	-0.4
	comp=Z,141nm,1.5s					
MEV	**Metsovon**	**152.85 337**	P	PKPbc	16 11 22.9	-1.0
PTQR	**Pietraquaria**	**152.89 351**	PKP	PKPdf	16 11 17.2	+0.5
PESTR	**Estremoz**	**152.93 27**	*e*PKPdf	PKPdf	16 11 17.1	+0.2
PESTR	**Estremoz**	**152.93 27**	*e*PKPbc	PKPbc	16 11 23.8	-0.3
PESTR	**Estremoz**	**152.93 27**	*e*PP	PP	16 15 13.9	+6.3
PESTR			*e*P		16 40 27.2	
PESTR			*e*LQ		16 54 29.2	
PESTR			*e*LR	LR	17 05 40.9	
	comp=Z,4μm,20.0s					
EVO	**Evora**	**153.02 28**⇓	*i*PKIKP	PKPdf	16 11 17.5	+0.5
	comp=Z,118nm,1.2s					
EVO			*e*MLR	MLR		
	comp=Z,5μm,21.5s,MS6.0					
EVO	**Evora**	**153.02 28**	*e*PKPdf	PKPdf	16 11 17.8	+0.8
EVO	**Evora**	**153.02 28**	*e*PKPbc	PKPbc	16 11 23.8	-0.5
TOLF	**Tolfa**	**153.04 353**	PKP	PKPdf	16 11 16.5	-0.4
AGG	**Agios Georgios**	**153.06 334**	P	PKPbc	16 11 21.6	-2.8
LKR	**Lokris**	**153.09 333**	P	PKPbc	16 11 21.4	-3.1
ETOR	**Torete**	**153.18 17**	PKIKP	PKPdf	16 11 18.1	+0.9
CHIE	**El Hierro**	**153.18 58**	PKP	PKPdf	16 11 20.3	+2.7
EBAD	**Badajoz**	**153.27 26**	PKP	PKPdf	16 11 18.4	+1.0
KARP	**Karpathos**	**153.32 323**	*e*P	PKPbc	16 11 25.0	-0.1
EVR	**Evrytania**	**153.37 335**	*e*P	PKPdf	16 11 17.0	-0.5
EPOB	**Poblet**	**153.39 11**	PKP	PKPdf	16 11 18.1	+0.6
IGT	**Igoumenitsa**	**153.41 338**	P	PKPbc	16 11 24.3	-0.9
PTEO	**Sao Teotonio**	**153.48 30**	*e*PKPdf	PKPdf	16 11 18.7	+1.0
PTEO	**Sao Teotonio**	**153.48 30**	*e*PKPbc	PKPbc	16 11 25.7	+0.3
PAB	**San Pablo**	**153.62 21**	*e*PKIKP	PKPdf	16 11 18.6	+0.7
PAB			*e*		16 11 25.2	
EGOM	**La Gomera**	**153.63 57**	PKP	PKPdf	16 11 19.1	+0.8
ERTA	**Horta de San J**	**153.63 13**	PKP	PKPdf	16 11 18.9	+1.0
ESDC	**Sonseca Array**	**153.64 21**	PKP	PKPdf	16 11 18.2	+0.4
	comp=Z,4.9nm,0.8s,baz=341,slow=3.0,SNR=17					
ESDC			PKPbc	PKPbc	16 11 25.4	-0.3
	comp=Z,38nm,0.8s,baz=332,slow=2.6,SNR=65					
ESDC			PKPab	PKPab	16 11 38.6	+0.4
	comp=Z,20nm,0.9s,baz=323,slow=4.3,SNR=12					
ESDC	**Sonseca Array**	**153.64 21**	PKP	PKPdf	16 11 18.4	+0.5
ESLA	**Sonseca Array**	**153.64 21**	*e*PKPdf	PKPdf	16 11 18.6	+0.8
ESLA			*e*PKPbc	PKPbc	16 11 25.7	+0.1
MORF	**Marmelete**	**153.70 30**	*e*PKPdf	PKPdf	16 11 19.0	+1.0
MORF	**Marmelete**	**153.70 30**	*e*PKPbc	PKPbc	16 11 26.2	+0.3
MORF	**Marmelete**	**153.70 30**	*e*PP	PP	16 15 22.8	+11
MORF			*e*P		16 40 52.0	
MORF			*e*LR	LR	17 08 12.8	
	comp=Z,3μm,20.0s					
PBAR	**Barrancos**	**153.75 27**	*e*PKPdf	PKPdf	16 11 18.4	+0.3
PBAR	**Barrancos**	**153.75 27**	*e*PKPbc	PKPbc	16 11 25.9	0.0
PBAR	**Barrancos**	**153.75 27**	*e*PP	PP	16 15 20.1	+7.9
PBAR			*e*LR	LR	17 07 31.2	
	comp=Z,5μm,18.0s					
PFVI	**Vila Bisbo**	**153.75 31**	*e*PKPdf	PKPdf	16 11 18.8	+0.7
PFVI	**Vila Bisbo**	**153.75 31**	*e*PKPbc	PKPbc	16 11 26.4	+0.4
PFVI			*e*P		16 40 59.0	
PFVI			*e*LR	LR	17 08 31.8	
	comp=Z,4μm,18.0s					
EMOS	**Mosqueruela**	**154.01 14**	PKP	PKPdf	16 11 20.3	+1.9
PVAQ	**Vaqueiros**	**154.07 29**	*e*PKPdf	PKPdf	16 11 19.1	+0.5
PVAQ	**Vaqueiros**	**154.07 29**	*e*PKPbc	PKPbc	16 11 26.6	-0.1
PVAQ	**Vaqueiros**	**154.07 29**	*e*PP	PP	16 15 20.5	+6.4
PVAQ			*e*P		16 40 57.5	
PVAQ			*e*LQ		16 54 47.1	
PVAQ			*e*LR	LR	17 07 31.1	
	comp=Z,4μm,18.0s					
EGRO	**El Granado**	**154.07 28**	PKP	PKPdf	16 11 18.2	-0.3
CCAN	**Las Canadas**	**154.09 56**	PKP	PKPdf	16 11 20.4	+1.5
PBDV	**Barranco-do-Ve**	**154.10 29**	*e*PKPdf	PKPdf	16 11 19.6	+1.0
PBDV	**Barranco-do-Ve**	**154.10 29**	*e*PKPbc	PKPbc	16 11 26.8	+0.1
PBDV	**Barranco-do-Ve**	**154.10 29**	*e*PP	PP	16 15 19.9	+5.6
PBDV			*e*P		16 40 58.5	
PBDV			*e*LR	LR	17 07 36.4	
	comp=Z,3μm,18.0s					
EMIN	**Mina Concepcio**	**154.24 27**	PKP	PKPdf	16 11 19.5	+0.7
CUC	**Castrocucco**	**154.37 345**	*e*PKPdf	PKPdf	16 11 17.4	-1.5
CUC			*e*PKPbc	PKPbc	16 11 25.7	-1.5
CUC			*e*PKPab	PKPab	16 11 39.4	-1.9
KFL	**Anninata**	**154.47 335**	P	PKPdf	16 11 16.7	-2.4
ECHE	**Chera**	**154.62 16**	PKIKP	PKPdf	16 11 20.7	+1.4
EADA	**Adamuz**	**154.76 23**	PKP	PKPdf	16 11 20.7	+1.2
TIP	**Timpagrande**	**154.89 343**	*e*PKPdf	PKPdf	16 11 19.4	-0.3
TIP			*e*PKPbc	PKPbc	16 11 28.8	+0.5
EBAN	**Banos Encina**	**155.05 22**	PKIKP	PKPdf	16 11 21.0	+1.1
EVIA	**Vianos**	**155.06 19**	PKIKP	PKPdf	16 11 20.5	+0.6
ETOS	**Mallorca**	**155.23 9**	PKP	PKPdf	16 11 23.5	+3.4
ETOB	**Tobarra**	**155.34 18**	PKP	PKPdf	16 11 21.3	+1.0
ESPR	**Espera**	**155.35 27**	PKP	PKPdf	16 11 21.4	+1.1
ELUQ	**Luque**	**155.41 23**	PKIKP	PKPdf	16 11 22.1	+1.7
EQES	**Quesada**	**155.63 21**	PKP	PKPdf	16 11 21.6	+0.9
EBEN	**Beniarda**	**155.65 15**	PKP	PKPdf	16 11 21.9	+1.2
ELOJ	**Sierra Loja**	**155.81 24**	PKIKP	PKPdf	16 11 21.6	+0.6
EJIF	**Jimena Fronter**	**155.87 27**	PKIKP	PKPdf	16 11 22.0	+0.9
ECOG	**Cogollos-Vega**	**155.92 22**	PKIKP	PKPdf	16 11 20.9	-0.2
CFTV	**Fuerteventura**	**155.99 53**	PKP	PKPdf	16 11 23.0	+1.5
ERON	**Agron**	**156.06 23**	PKP	PKPdf	16 11 20.3	-1.0
EMIJ	**Mijas**	**156.07 25**	PKP	PKPdf	16 11 25.2	+3.9
EMUR	**La Murta**	**156.18 18**	PKP	PKPdf	16 11 22.2	+0.8
EGUA	**Guajares**	**156.31 23**	PKIKP	PKPdf	16 11 22.5	+0.9
BBTS	**Babate**	**156.60 88**	PKP	PKPdf	16 11 22.5	-0.1
	comp=Z,8.3nm,0.3s,baz=349,slow=1.6,SNR=3.0					
RTC	**Rabat Centre**	**157.21 33**	*e*PKPdf	PKPdf	16 11 22.6	-0.2
EBNR	**Beni Rached**	**158.36 14**	P	PKPdf	16 11 25.8	+1.6
EANR	**'Ain N'Sour**	**158.59 15**	P	PKPdf	16 11 25.5	+1.0
EMHD	**Djebel Mahouad**	**158.74 11**	P	PKPdf	16 11 26.0	+1.3
ETRT	**Tiaret**	**159.17 15**	P	PKPdf	16 11 26.7	+1.5
MDT	**Midelt**	**159.27 30**	PKP	PKPdf	16 11 26.6	+1.2
	comp=Z,26nm,0.9s,baz=340,slow=1.1,SNR=54					
MDT			PKPab	PKPab	16 12 03.5	+0.9
	comp=Z,39nm,1.1s,baz=312,slow=4.2,SNR=14					
KEST	**Kesra**	**159.57 356**	PKP	PKPdf	16 11 26.2	+0.5
	comp=Z,8.7nm,1.0s,baz=304,slow=2.7,SNR=8.5					
KEST			PKPab	PKPab	16 12 04.1	+0.4
	comp=Z,15nm,1.0s,baz=339,slow=4.9,SNR=8.6					
LIC	**Lamto**	**164.62 124**	*e*PKIKP	PKPdf	16 11 29.6	-1.8
	comp=Z,257nm,1.5s					
LIC			*e*MLR	MLR		
	comp=Z,6μm,20.5s					
LIC	**Lamto**	**164.62 124**	*e*PKIKP	PKPdf	16 11 29.6	-1.8
	comp=Z,256nm,1.4s					
LIC	**Lamto**	**164.62 124**	*e*PKPdf	PKPdf	16 11 29.6	-1.8
LIC			LR	LR		
	comp=Z,3μm,20.5s					
TIC	**Toumodi**	**164.88 123**	*e*PKIKP	PKPdf	16 11 30.1	-1.6
	comp=Z,456nm,1.3s					
KIC	**Kosan Boka**	**164.93 125**	*e*PKIKP	PKPdf	16 11 30.1	-1.6
	comp=Z,457nm,1.1s					
DBIC	**Dimbokro**	**165.02 123**	PKP	PKPdf	16 11 30.6	-1.2
	comp=Z,27nm,1.0s,baz=159,slow=1.6,SNR=18					
DBIC			PKPab	PKPab	16 12 28.2	-0.2
	comp=Z,35nm,0.9s,baz=203,slow=4.8,SNR=12					
DBIC			PP	PP	16 16 13.3	-1.4
	comp=Z,18nm,1.2s,baz=204,slow=6.0,SNR=8.8					
DBIC	**Dimbokro**	**165.02 123**	PKIKP	PKPdf	16 11 30.6	-1.2
DBIC					16 12 28.2	
DBIC					16 16 13.3	
DBIC			pmax	pmax		
	comp=Z,27nm,1.0s					
DBIC			pmax	pmax		
	comp=Z,35nm,1.0s					
DBIC			pmax	pmax		
	comp=Z,18nm,1.2s					
DBIC	**Dimbokro**	**165.02 123**	*e*PKPdf	PKPdf	16 11 30.4	-1.4
DBIC			*e*PKPab	PKPab	16 12 28.0	-0.4
TAM	**Tamanrasset**	**172.25 15**	*e*PKIKP	PKPdf	16 11 36.6	+0.4
TAM			*e*		16 16 49.1	
TOA0	**Torodi Ar. Sit**	**173.82 109**	*e*PKPdf	PKPdf	16 11 35.5	-1.6
TOA0			*e*PKPab	PKPab	16 13 06.1	-1.3
TOA0			*e*PP	PP	16 16 56.0	-3.6
TORD	**Torodi Ar. Bea**	**173.82 109**	PKP	PKPdf	16 11 35.1	-1.9
	comp=Z,35nm,1.0s,baz=316,slow=1.2,SNR=109					
TORD			PKPab	PKPab	16 13 06.3	-1.1
	comp=Z,38nm,1.0s,baz=262,slow=4.1,SNR=26					
TORD			PP	PP	16 16 56.4	-3.2
	comp=Z,14nm,1.1s,baz=266,slow=4.2,SNR=11					
TORD	**Torodi Ar. Bea**	**173.82 109**	PKP	PKPdf	16 11 35.1	-1.9
TORD			PKPab	PKPab	16 13 06.3	-1.1
TORD			PP	PP	16 16 56.4	-3.2

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*ISCJB **13** 15:52:54.3±3.0, 8.04S±0.06×30.61E±0.10, h18km±22km, mb3.9/7, Error ellipse: s-maj=17.6km s-min=7.5km az=21.3*

*IDC **13** 15:52:54.2±1.3, 7.89S×30.57E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/21, mbtmp3.8/5, Error ellipse: s-maj=40.7km s-min=28.4km az=110.0*

*NEIC **13** 15:52:55.4±0.7, 7.98S×30.46E, h10km, mb4.1/5, Error ellipse: s-maj=23.0km s-min=10.9km az=101.0*

ISC 13 15:52:53.8±4.1, **8.02S**±0.06×**30.56E**±0.10, **h0**km±27km, **n23**, σ**0.95**/31, **mb4.0**/7, **Lake Tanganyika region**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**7.58 198**	*e*Pn	**Pn**	**15 54 47.3**	**+1.7**
	23nm,0.6s					
LSZ			*e*Sn	**Sn**	**15 56 11.6**	**-0.6**
KMBO	**Kilima Mbogo**	**9.55 45**	Pn	**Pn**	**15 55 23.1**	**+10**
	1.2nm,0.3s,baz=228,slow=20,SNR=11					
KMBO			Sn	**Sn**	**15 57 00.8**	**-0.2**
	1.3nm,0.3s,baz=53,slow=20,SNR=2.2					
KMBO			Lg		15 57 60.0	
	4.0nm,0.3s,baz=115,slow=22,SNR=6.6					
KMBO	**Kilima Mbogo**	**9.55 45**	Pn	**Pn**	**15 55 23.1**	**+10**
KMBO			Sn	**Sn**	**15 57 00.8**	**-0.2**
KMBO			Lg		15 57 60.0	
MSNA	**Messina**	**14.25 182**	*e*P	**Pn**	**15 56 16.6**	**-0.4**
MSNA			AMb	AMB	15 56 33.9	
	comp=Z,18nm,1.3s					
MOPA	**Mopani**	**15.43 177**	*e*P	**Pn**	**15 56 32.7**	**-0.3**
MOPA			AMb	AMB	15 56 45.2	
	comp=Z,13nm,1.0s					
TSUM	**Tsumeb**	**16.80 227**	*e*Pn	**Pn**	**15 56 48.3**	**-2.3**
	comp=Z,6.4nm,0.6s					
TSUM			*e*Sn	**Sn**	**15 59 43.2**	**-15**
LBTB	**Lobatse**	**17.55 195**	*e*Pn	**Pn**	**15 56 59.4**	**-0.6**
	comp=Z,8.5nm,0.4s					
LBTB			*e*Sn	**Sn**	**16 00 05.5**	**-11**
LBTB			*e*Lg		16 02 06.9	
SLR	**Silverton**	**17.75 187**	*e*P	**Pn**	**15 57 02.7**	**+0.2**
SLR			AMb	AMB	15 57 23.9	
	comp=Z,31nm,2.0s					
KSR	**Koster**	**18.07 191**	*e*P	**Pn**	**15 57 07.5**	**+1.1**
KSR			AMb	AMB	15 57 10.8	
	comp=Z,21nm,1.0s					
ERPM	**east rand prop**	**18.36 187**	*i* P	**Pn**	**15 57 07.9**	**-2.1**
ERPM			*e*P		15 57 07.9	
ERPM			AMb	AMB	15 57 16.2	
	comp=Z,16nm,2.0s					
PRYS	**Parys**	**19.05 189**	*e*P	**Pn**	**15 57 18.1**	**-0.2**
PRYS			AMb	AMB	15 58 01.9	
	comp=Z,22nm,1.9s					
POGA	**Pongola**	**19.27 177**	*e*P	**Pn**	**15 57 20.7**	**-0.4**
POGA			AMb	AMB	15 58 20.2	
	comp=Z,30nm,1.7s					
SWZ	**Schweizer**	**19.70 194**	*e*P	**Pn**	**15 57 25.8**	**-0.3**
SWZ			AMb	AMB	15 57 56.6	
	comp=Z,25nm,2.0s					
SEK	**Senekal**	**20.39 187**	*e*P	**P**	**15 57 32.7**	**+0.4**
BOSA	**Boshof**	**21.09 193**	P	**P**	**15 57 41.9**	**+2.1**
	comp=Z,5.3nm,0.5s,mb4.1,baz=15,slow=13,SNR=9.5					
BOSA			S	**S**	**16 01 28.0**	**-7.5**
	comp=Z,3.1nm,0.8s,baz=126,slow=16,SNR=3.1					
BOSA			Lg		16 03 55.7	
	comp=Z,10.0nm,1.0s,baz=62,slow=8.3,SNR=2.2					
BOSA	**Boshof**	**21.09 193**	*e*P	**P**	**15 57 41.6**	**+1.7**
	comp=Z,14nm,1.1s,mb4.2					
BOSA			S	**S**	**16 01 28.0**	**-7.5**
BOSA			*e*S	**S**	**16 01 28.4**	**-7.1**
BOSA			Lg		16 03 55.7	
SUR	**Sutherland**	**25.88 199**	P	**P**	**15 58 28.2**	**+0.9**
	comp=Z,33nm,1.2s,mb4.8					
TOA0	**Torodi Ar. Sit**	**35.56 306**	*e*P	**P**	**15 59 54.1**	**+1.1**
TORD	**Torodi Ar. Bea**	**35.56 306**	P	**P**	**15 59 52.8**	**-0.2**
	comp=Z,1.1nm,0.9s,mb3.7,baz=113,slow=7.1,SNR=7.9					
TORD			pP		15 59 58.5	
	comp=Z,4.7nm,0.9s,baz=111,slow=6.9,SNR=19					
BRTR	**Keskin Array B**	**47.59 3**	P	**P**	**16 01 30.9**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.1,baz=177,slow=12,SNR=4.3					
MAW	**Mawson**	**63.34 167**	P	**P**	**16 03 25.4**	**+1.0**
	comp=Z,0.7nm,0.8s,mb3.8					
MKAR	**Makanchi Array**	**71.29 35**	P	**P**	**16 04 14.7**	**-0.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=217,slow=6.9,SNR=3.1					
KURK	**Kurchatov**	**71.71 30**	P	**P**	**16 04 17.1**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.7,baz=237,slow=6.7,SNR=2.7					

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*IDC **13** 16:15:46.1±0.5, 8.09S×118.26E, h0km, mb4.3/17, mb1 4.4/19, mb1mx4.3/27, mbtmp4.3/19, ML4.4/1, Error ellipse: s-maj=26.5km s-min=11.3km az=61.0*

*BJI **13** 16:15:46.7, 8.42S×118.59E, h27km, mB5.2, mb4.7, Ms4.9, Msz4.7*

*NEIC **13** 16:15:47.6±0.3, 8.11S×118.33E, h10km, mb4.9/25, Error ellipse: s-maj=11.3km s-min=4.9km az=56.0*

*DJA **13** 16:15:49, 8.12S×118.23E, h10km, MLv5.1/9*

*ISCJB **13** 16:15:49.3±0.2, 8.15S±0.03×118.37E±0.04, h33km, mb4.7/51, MS4.8/7, Error ellipse: s-maj=6.1km s-min=4.0km az=141.6*

*MOS **13** 16:15:49.1±1.2, 8.04S×118.42E, h33km, mb5.0/10, Error ellipse: s-maj=18.3km s-min=7.9km az=121.5*

ISC 13 16:15:51.7±0.2, **8.20S**±0.04×**118.31E**±0.04, **h35**km, **(h25**km±3.3km**:pP-P)**, **n115**, σ**1.24**/119, **mb4.7**/51, **MS4.8**/7, **Sumbawa region**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**2.67 266**	P	**Pn**	**16 16 30.2**	**-2.0**
DNP	**Denpasar**	**3.10 261**	P	**Pn**	**16 16 37.9**	**-0.2**
IGBI	**Denpasar**	**3.19 259**	P	**Pn**	**16 16 38.2**	**-1.1**
KAPI	**Kappang**	**3.48 25**	*e*Pn	**Pn**	**16 16 39.4**	**-3.8**
KAPI	**Kappang**	**3.48 25**	P	**Pn**	**16 16 39.3**	**-4.0**
NBBI	**Negara**	**3.65 267**	P	**Pn**	**16 16 44.5**	**-1.2**
KMMI	**Kalianget**	**4.45 285**	P	**Pn**	**16 16 56.6**	**-0.1**
BATI	**Baumata**	**5.65 111**	Pn	**Pn**	**16 17 13.9**	**+0.7**
	9.9nm,0.3s,baz=294,slow=3.0,SNR=17					
BATI			Sn	**Sn**	**16 18 28.2**	**+11**
	baz=36,slow=23,SNR=1.6					
BATI	**Baumata**	**5.65 111**	P	**Pn**	**16 17 16.2**	**+3.0**
	94nm,0.8s,0.4nm					
KRKI	**Karangkates**	**5.79 270**	P	**Pn**	**16 17 17.1**	**+1.9**
	427nm,0.6s,3.4nm					
BBKI	**Banjar Baru**	**5.83 324**	P	**Pn**	**16 17 14.2**	**-1.5**
	617nm,1.3s,5μm2.3nm					
SJI	**Sawahan**	**6.49 274**	P	**Pn**	**16 17 25.0**	**+0.2**
	105nm,0.6s,3μm0.5nm					
LBMI	**Labuha**	**11.85 51**	P	**Pn**	**16 18 41.5**	**+3.3**
FITZ	**Fitzroy Crossi**	**12.16 145**	*e*P	**Pn**	**16 18 41.1**	**-1.3**
	42nm,0.8s					
FITZ			*e*S	**Sn**	**16 20 56.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**12.16 145**	P	**Pn**	**16 18 41.7**	**-0.7**
	82nm,0.8s					
KSM	**Kuching**	**12.49 320**	Pn	**Pn**	**16 18 42.9**	**-4.1**
	24nm,1.1s					

MBWA	Marble Bar	12.96	174	ePn	Pn	16 18 52.3	-1.1
	11nm,0.4s						
MBWA				eSn	Sn	16 21 07.1	-9.2
MBWA	Marble Bar	12.96	174	P	Pn	16 18 54.1	+0.7
MYLDM	Lahad Datu	13.29	1	P	Pn	16 19 03.1	+5.1
KAKA	Kakadu	14.60	109	eP	x	16 18 52.3	
	28nm,0.6s						
KAKA				eS	x	16 21 47.8	
WRA	Warramunga Arr	19.42	129	P	Pn	16 20 14.1	-2.3
	baz=302,slow=13						
WRAB	Tennant Creek	19.43	129	eP	Pn	16 20 13.7	-2.8
WRAB				e		16 23 37.7	
WRAB				pmax	pmax		
	comp=Z,8.0nm,2.3s						
WRAB	Tennant Creek	19.43	129	eP	Pn	16 20 13.7	-2.8
	comp=Z,8.4nm,2.3s						
WRAB				eSn	Sn	16 23 37.7	-16
WB2	Warramunga Arr	19.43	129	eP	Pn	16 20 14.0	-2.6
WB2				eS	S	16 23 44.0	-9.2
ASAR	Alice Springs	21.45	138	P	P	16 20 37.0	-0.1
	comp=Z,35nm,0.6s,mb4.9,baz=315,slow=9.8,SNR=140						
ASAR				PcP	PcP	16 24 38.6	-1.0
	comp=Z,2.4nm,0.5s,baz=313,slow=1.7,SNR=13						
PSI	Prapat	22.20	299	P	P	16 20 41.7	-3.5
	comp=Z,1.3nm,0.4s,mb3.8,baz=117,slow=22,SNR=2.0						
KLBR	Kellerberrin	23.28	181	eP	P	16 20 55.9	-0.5
	comp=Z,46nm,1.4s,mb4.7						
KLBR				eS	S	16 25 09.4	+3.2
MUN	Mundaring	23.74	184	eP	pP	16 21 09.3	-1.4
MUN				eS	S	16 25 26.4	+13
FORT	Forrest	24.25	159	eP	P	16 21 05.5	+0.1
	comp=Z,33nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	24.63	182	P	P	16 21 08.7	-0.2
	comp=Z,15nm,0.9s,mb4.5,baz=13,slow=11,SNR=10						
NWAO	Narrogin (SRO)	24.63	182	eP	P	16 21 08.7	-0.1
NWAO				pmax	pmax		
	comp=Z,40nm,1.1s						
NWAO	Narrogin (SRO)	24.63	182	eP	P	16 21 08.7	-0.2
	comp=Z,40nm,1.1s,mb4.9						
COEN	Coen	25.06	105	eP	P	16 21 11.7	-1.3
	comp=Z,43nm,0.9s,mb5.0						
QIZ	Qiongzhong	28.31	343	P	P	16 21 42.8	+0.6
QIZ				LR	LR		
	comp=E,1μm,23.0s						
QIZ				LR	LR		
	comp=Z,2μm,26.1s,MS4.5						
CTA	Charters Tower	29.51	117	P	P	16 21 53.4	+0.5
	comp=Z,3.2nm,0.7s,mb4.2,baz=304,slow=11,SNR=4.1						
CTAO	Charters Tower	29.51	117	eP	P	16 21 52.8	-0.1
CTAO				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
CTAO	Charters Tower	29.51	117	eP	P	16 21 52.8	-0.1
	comp=Z,22nm,1.4s,mb4.7						
STKA	Stephens Creek	32.00	141	eP	P	16 22 15.3	+0.5
	comp=Z,13nm,0.7s,mb4.9						
STKA	Stephens Creek	32.00	141	P	P	16 22 15.3	+0.5
	comp=Z,14nm,0.6s,mb5.0,baz=310,slow=9.1,SNR=35						
CM31	Chiang Mai Arr	32.66	324	eP	P	16 22 22.1	+1.5
	comp=Z,10nm,1.1s,mb4.7						
CMAR	Chiang Mai Arr	32.66	324	P	P	16 22 20.8	+0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=153,slow=7.2,SNR=10						
CHTO	Chiang Mai	32.94	325	eP	P	16 22 24.7	+1.6
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
CHTO	Chiang Mai	32.94	325	eP	P	16 22 24.7	+1.6
	comp=Z,7.2nm,1.3s,mb4.4						
GYA	Guiyang	36.26	342	P	P	16 22 51.0	-0.7
GYA				AP	pP	16 23 02.8	+1.0
GYA				PP	PP	16 24 14.0	-0.6
GYA				SCP	ScP	16 29 00.3	-0.1
GYA				SS	SS	16 30 54.3	-15
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,60nm,5.2s						
GYA				LR	LR		
	comp=N,650nm,13.0s,MS4.7						
GYA				LR	LR		
	comp=E,530nm,12.8s,MS4.7						
GYA				LR	LR		
	comp=Z,800nm,12.5s,MS4.7						
KMI	Kunming	36.43	336	P	P	16 22 55.8	+2.7
KMI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
ARMA	Armidale	38.20	130	eP	P	16 23 09.9	+1.7
TOO	Toolangi	38.22	144	eP	P	16 23 10.0	+1.8
WHN	Wuhan	38.71	355	P	P	16 23 12.5	+0.1
CD2	Chengdu	41.31	341	P	P	16 23 34.1	+0.1
CD2				AP	pP	16 23 42.4	-1.9
CD2				XP	sP	16 23 45.8	-2.7
CD2				PP	PP	16 25 16.5	+6.6
CD2				PCP	PcP	16 25 28.6	-3.6
CD2				PCS	PcS	16 29 19.3	-4.1
CD2				S	S	16 29 54.8	+8.8
CD2				XS	sS	16 30 07.1	+4.1
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,730nm,13.7s						
CD2				LR	LR		
	comp=N,910nm,16.1s						
CD2				LR	LR		
	comp=Z,920nm,19.0s,MS4.7						
XAN	Xi'an	42.94	349	P	P	16 23 50.3	+3.1
XAN				AP	pP	16 23 53.5	-4.0
XAN				S	S	16 30 12.8	+2.8
XAN				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.1						
XAN				LR	LR		
	comp=N,225nm,21.7s,MS4.4						
XAN				LR	LR		
	comp=E,480nm,20.8s,MS4.4						
XAN				LR	LR		
	comp=Z,999nm,25.0s,MS4.6						
LSA	Lhasa	45.85	326	P	P	16 24 11.3	+0.7
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LSA	Lhasa	45.85	326	eP	P	16 24 10.3	-0.3
LSA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
LSA	Lhasa	45.85	326	eP	P	16 24 10.3	-0.3
	comp=Z,7.8nm,1.1s,mb4.5						
LZH	Lanzhou	46.10	344	eP	P	16 24 17.5	+5.0
LZH				AP	pP	16 24 26.0	+3.2
LZH				PP	PP	16 26 02.0	+0.9
LZH				eS	S	16 30 59.0	+3.1
LZH				XS	sS	16 31 16.0	+3.0
LZH				SS	SS	16 34 15.4	-6.2
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,96nm,5.3s						
LZH				LR	LR		
	comp=E,732nm,14.8s						
LZH				LR	LR		
	comp=Z,2μm,15.7s,MS5.1						
TAPN	Taplejung	46.12	321	eP	P	16 24 13.0	+0.3
	comp=Z,24nm,0.9s,mb5.1						
KSRS	Korea Array	46.30	11	P	P	16 24 13.1	-0.9
	comp=Z,4.9nm,1.0s,mb4.4,baz=191,slow=9.0,SNR=6.8						
RAMN	Ramite	46.54	320	eP	P	16 24 17.8	+1.8
	comp=Z,40nm,1.2s,mb5.2						
JIRN	Jiri	47.29	320	eP	P	16 24 22.4	+0.5
	comp=Z,20nm,0.8s,mb5.1						
GUN	Gumba	47.66	320	eP	P	16 24 25.1	+0.3
	comp=Z,19nm,0.7s,mb5.2						
DMN	Daman	47.95	319	eP	P	16 24 27.9	+0.9
	comp=Z,34nm,1.0s,mb5.3						
KKN	Kakani	47.96	319	eP	P	16 24 28.3	+1.2
BJI	Beijing	48.03	358	P	P	16 24 26.0	-1.5
BJI				AMB	AMB		
	comp=Z,13nm,0.8s,mb5.0						
GKN	Gorkha	48.52	319	eP	P	16 24 31.6	+0.1
	comp=Z,36nm,1.0s,mb5.4						
KOLN	Koldanda	49.05	318	eP	P	16 24 34.9	-0.6
	comp=Z,17nm,1.0s,mb5.0						
HHC	Hu-ho-hao-te	49.20	353	eP	P	16 24 37.3	+0.9
HHC				AP	pP	16 24 45.1	-1.7
HHC				PP	PP	16 26 32.0	+1.5
HHC				eS	S	16 31 40.8	+1.1
HHC				XS	sS	16 31 52.6	-4.3
HHC				SCS	ScS	16 34 24.3	-1.4
HHC				SS	SS	16 35 08.3	-3.3
HHC				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,316nm,7.6s						
HHC				LR	LR		
	comp=N,491nm,14.3s,MS4.8						
HHC				LR	LR		
	comp=E,498nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=Z,624nm,16.6s,MS4.7						
DANN	Dangsing	49.33	319	eP	P	16 24 37.5	-0.1
	comp=Z,59nm,1.1s,mb5.5						
GTA	Gaotai	50.38	341	eP	P	16 24 47.3	+1.9
GTA				AP	pP	16 24 54.8	-1.1
GTA				XP	sP	16 24 58.1	-1.9
GTA				PP	PP	16 26 44.5	+3.2
GTA				S	S	16 32 01.0	+4.8
GTA				XS	sS	16 32 12.1	-1.4
GTA				SS	SS	16 35 33.0	+2.4
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
GTA				AMB	AMB		
	comp=Z,117nm,5.1s						
GTA				LR	LR		
	comp=N,772nm,19.2s,MS5.1						
GTA				LR	LR		
	comp=E,2μm,20.4s,MS5.1						
GTA				LR	LR		
	comp=Z,2μm,20.4s,MS5.1						
MDJ	Mudanjiang	53.55	10	P	P	16 25 09.1	+0.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
ULN	Ulaanbaatar	56.70	351	eP	P	16 25 30.5	-1.1
ULN	Ulaanbaatar	56.70	351	eP	P	16 25 32.0	+0.5
	comp=Z,12nm,1.5s,mb4.7						
SONM	Songino Array	56.78	350	P	P	16 25 31.7	-0.4
	comp=Z,1.2nm,0.6s,mb4.1,baz=166,slow=8.0,SNR=10						
HIA	Hailar	57.23	1	eP	P	16 25 34.6	-0.7
RPZ	Rata Peaks	57.86	137	P	P	16 25 41.0	+1.1
	comp=Z,14nm,0.8s,mb5.0,baz=93,slow=4.7,SNR=4.2						
WMQ	Urumqi	58.74	334	eP	P	16 25 47.0	+1.0
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,111nm,3.0s						
ZAK	Zakamensk	59.78	349	eP	P	16 25 50.5	-2.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
HVS	Khovu-Aksy	62.80	343	eP	P	16 26 12.3	-1.2
HVS				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.1						
MK31	Makanchi Array	63.44	333	eP	P	16 26 16.3	-1.5
MKAR	Makanchi Array	63.44	333	P	P	16 26 17.1	-0.7
	comp=Z,2.1nm,0.8s,mb4.3,baz=155,slow=7.1,SNR=19						
AAK	Ala-Archa	64.43	326	eP	P	16 26 23.8	-0.7
AAK	Ala-Archa	64.43	326	P	P	16 26 29.4	+4.9
	comp=Z,3.0nm,0.9s,mb4.3						
BOD	Bodaibo	65.88	357	eP	P	16 26 33.1	-0.4
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
KURK	Kurchatov	67.98	334	P	P	16 26 45.7	-1.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=144,slow=5.6,SNR=4.1						
KURK	Kurchatov	67.98	334	eP	P	16 26 45.5	-1.5
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
KURK	Kurchatov	67.98	334	eP	P	16 26 46.5	-0.6
ZAA0	Zalesovo Array	68.05	339	eP	P	16 26 44.9	-2.6
ZALV	Zalesovo Beam	68.05	339	P	P	16 26 45.8	-1.7
	comp=Z,4.1nm,0.6s,mb4.6,baz=143,slow=5.1,SNR=17						
NVS	Novosibirsk	69.32	339	iP	P	16 26 51.0	-4.3
MAW	Mawson	69.75	200	P	P	16 26 59.4	+1.6
	comp=Z,6.1nm,1.0s,mb4.5,baz=60,slow=2.9,SNR=3.5						
YAK	Yakutsk	70.57	6	eP	P	16 27 02.7	-0.2
YAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
VNDA	Vanda	72.88	171	P	P	16 27 17.7	+1.0
	comp=N,0.7nm,0.5s,mb3.8,baz=304,slow=6.6,SNR=8.8						
VNDA	Vanda	72.88	171	eP	P	16 27 17.1	+0.5
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNDA	Vanda	72.88	171	eP	P	16 27 17.1	+0.5
	comp=Z,1.3nm,0.7s,mb4.0						
BVAR	Borovoye Array	73.27	332	P	P	16 27 17.8	-1.4
	comp=Z,1.0nm,0.7s,mb3.9,baz=143,slow=11,SNR=5.5						
AKTK	Aktyubinsk	78.18	325	P	P	16 27 47.8	+0.4
AKTO	Aktyubinsk	78.18	325	P	P	16 27 47.8	+0.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=34,slow=7.3,SNR=2.2						
TIXI	Tiksi	79.99	3	eP	P	16 27 54.6	-2.2
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TIXI	Tiksi	79.99	3	eP	P	16 27 54.6	-2.3
	comp=Z,8.0nm,0.9s,mb4.7						
QSPA	South Pole Qui	81.79	180	P	P	16 28 07.4	+0.9
	comp=Z,4.3nm,1.1s,mb4.3,baz=21,slow=3.1,SNR=5.4						
QSPA	South Pole Qui	81.79	180	eP	P	16 28 07.1	+0.7
	comp=Z,9.3nm,1.3s,mb4.5						
LSZ	Lusaka	87.99	255	eP	P	16 28 37.9	-0.9
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
LSZ	Lusaka	87.99	255	eP	P	16 28 37.9	-0.9
	comp=Z,3.2nm,0.7s,mb4.7						
LBTB	Lobatse	89.02	245	eP	P	16 28 42.7	-0.9
LBTB				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.0						
LBTB	Lobatse	89.02	245	eP	P	16 28 42.7	-0.9
	comp=Z,12nm,1.4s,mb5.0						
SNAA	Sanae	91.58	196	eP	P	16 28 55.8	+1.3
SNAA				e		16 29 00.6	
SNAA	Sanae	91.58	196	eP	P	16 28 55.1	+0.6
SNAA	Sanae	91.58	196	eP	P	16 28 55.5	+0.9
	comp=Z,2.4nm,0.7s,mb4.6						
VNA2	Neumayer--Watz	93.22	196	eP	P	16 29 03.5	+1.4
	baz=118,slow=3.4						
VNA2				e		16 29 08.8	
VNA2				e	pP	16 29 11.2	-2.1
VNA3	Neumayer Olymp	93.61	195	eP	P	16 29 04.6	+0.7
VNA3				e		16 29 09.8	
VNA1	Neumayer--Stat	93.61	196	eP	P	16 29 05.4	+1.5
VNA1				e	pP	16 29 13.1	-2.0
CLL	Collm	105.92	321	eP	Pdif	16 30 05.0	+5.6
CLL				pmax	pmax		
	comp=Z,142nm,3.1s						
CLL	Collm	105.92	321	ePdif	Pdif	16 30 05.0	+5.6
	comp=Z,142nm,3.1s						
YKA	Yellowknife Ar	113.75	24	PKiKP	PKiKP	16 34 24.4	-1.8
	comp=Z,0.1nm,0.4s,baz=303,slow=1.8,SNR=3.8						
TORD	Torodi Ar. Bea	117.64	281	PKP	PKPdf	16 34 32.1	-2.9
	comp=Z,0.3nm,0.5s,baz=87,slow=1.6,SNR=2.7						
CPUP	Villa Florida	145.42	187	PKPbc	PKPbc	16 35 26.9	+0.3
	comp=Z,2.9nm,0.5s,baz=151,slow=3.3,SNR=13						
CPUP	Villa Florida	145.42	187	ePKPdf	PKPdf	16 35 26.8	0.0

NEIC 13 16:20:12.2, 3921S×17525E, h142^{km}, MG4.2(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.20	47	P	Pn	16 20 31.3	-0.2
TWVZ				S	Sn	16 20 45.0	-1.0
WPVZ	Whakapapa	0.23	89	P	Pn	16 20 31.5	0.0
FWVZ	Far West T-bar	0.24	101	P	Pn	16 20 31.7	+0.2
NGZ	Ngauruhoe	0.28	83	P	Pn	16 20 31.7	+0.1
WTVZ	West Tongariro	0.28	71	P	Pn	16 20 31.5	-0.2
WNVZ	Wahianoa	0.29	114	P	Pn	16 20 31.8	+0.1
TUVZ	Tukino	0.32	101	P	Pn	16 20 32.0	+0.2
VRZ	Vera Road	0.39	282	P	Pn	16 20 31.4	-0.7
KATZ	Kakaramea	0.42	56	P	Pn	16 20 31.9	-0.3
MOVZ	Moawhango	0.44	117	P	Pn	16 20 32.0	-0.3
RITZ	Rihia Road	0.53	64	P	Pn	16 20 32.7	0.0
RATZ	Rangitukua	0.53	50	P	Pn	16 20 32.3	-0.5
WAZ	Wanganui	0.58	200	P	Pn	16 20 33.3	+0.3
WATZ	Wairara	0.63	37	P	Pn	16 20 33.2	-0.1
RAEZ	Rainy Point	0.67	263	P	Pn	16 20 33.7	+0.1
HATZ	Hinemaiaia	0.73	64	P	Pn	16 20 33.4	-0.6
HIZ	Hauiti	0.76	336	P	Pn	16 20 33.7	-0.6
WHTZ	Whakaora	0.77	46	P	Pn	16 20 34.2	-0.1
DFE	Dawson Falls	0.90	262	P	Pn	16 20 33.6	-1.7
NEZ	North Egmont	0.90	266	P	Pn	16 20 35.5	+0.2
BKZ	Black Stump Fm	0.97	88	P	Pn	16 20 35.2	-0.7
PKE	Pukeiti	0.98	270	P	Pn	16 20 35.8	-0.2
TSZ	Takapari Road	1.01	147	P	Pn	16 20 36.5	+0.2
NWEZ	Newall Road	1.08	266	P	Pn	16 20 36.6	-0.2
TAZ	Tarawera	1.39	46	P	Pn	16 20 39.7	-0.2
MRZ	Mangatainoka R	1.47	170	P	Pn	16 20 40.5	-0.3
BFZ	Birch Farm	1.66	153	P	Pn	16 20 42.5	-0.3
KIW	Kapiti Island	1.67	189	P	Pn	16 20 42.4	-0.6
URZ	Urewera	1.74	57	P	Pn	16 20 42.5	-1.2
KNZ	Kokohu	1.90	85	P	Pn	16 20 45.0	-0.6
CAW	Cannon Point	1.90	184	P	Pn	16 20 45.1	-0.5
MTW	Mount Morrison	1.96	174	P	Pn	16 20 45.6	-0.7
MWZ	Matawai	1.98	65	P	Pn	16 20 45.7	-0.9
MRW	Makara Radio	2.06	192	P	Pn	16 20 46.8	-0.7
WEL	Wellington	2.11	190	P	Pn	16 20 47.2	-0.8
TCW	Tory Channel	2.13	200	P	Pn	16 20 47.6	-0.8
SNZO	South Karori	2.14	191	P	Pn	16 20 47.5	-0.9
PAWZ	Paruwai Farm	2.17	177	P	Pn	16 20 47.9	-1.0
MSWZ	Moikau Station	2.20	180	P	Pn	16 20 48.3	-0.9
BHW	Baring Head	2.22	187	P	Pn	16 20 48.4	-1.0
NNZ	Nelson	2.46	215	P	Pn	16 20 51.1	-1.3
QRZ	Quartz Range	2.64	231	P	Pn	16 20 52.8	-1.8
BSWZ	Blackbirch Sta	2.71	202	P	Pn	16 20 54.4	-1.1
MXZ	Matakaoa Point	2.91	57	P	Pn	16 20 57.1	-1.0
THZ	Tophouse	3.12	214	P	Pn	16 20 58.9	-1.8
KHZ	Kahutara	3.46	201	P	Pn	16 21 03.5	-1.6
DSZ	Denniston Nort	3.65	225	P	Pn	16 21 05.1	-2.5
LTZ	Lake Taylor	4.22	211	P	Pn	16 21 12.3	-2.8
MQZ	McQueen's Vall	4.90	203	P	Pn	16 21 20.4	-3.6
RPZ	Rata Peaks	5.50	214	P	Pn	16 21 28.5	-3.5
FOZ	Fox Glacier	6.03	222	P	Pn	16 21 34.2	-5.0
LBZ	Lake Benmore	6.41	215	P	Pn	16 21 40.1	-4.1
ODZ	Otahua Downs	6.76	209	P	Pn	16 21 45.5	-3.4
WKZ	Wanaka	7.28	218	P	Pn	16 21 51.9	-4.0
EAZ	Earnscleugh	7.46	214	P	Pn	16 21 54.5	-3.7
TUZ	Tuapeka	7.91	210	P	Pn	16 22 01.9	-2.4

BJI 13 16:40:45.6, 700S×15600E, h54^{km}, mB5.3, mb4.7

ISCJB 13 16:40:46.4±0.3, 704S±005×15591E±005, h52^{km}, mb4.8/46, MS5.7/7, Error ellipse: s-maj=8.0km s-min=6.1km az=137.1

NEIC 13 16:40:47.7±0.3, 700S×15603E, mb4.9/32, Error ellipse: s-maj=8.9km s-min=7.5km az=79.0

IDC 13 16:40:48.3±0.4, 708S×15589E, h54^{km}±3^{km}, mb4.2/14, mb1 4.2/15, mb1mx4.2/18, mbtmp4.2/15, MS3.8/2, Ms1 3.8/2, ms1mx3.4/26, Error ellipse: s-maj=14.4km s-min=9.9km az=63.0

ISC 13 16:40:48.3±0.3**, 704S**±005×**15592E**±005**, h54^{km}, h54^{km}**±1.2^{km}**: pP-P, n96,** σ**0^{s}88**/74**, mb4.8**/46**, MS5.7**/7**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.64	121	P	Pn	16 41 57.2	+1.3
	17nm,0.3s,baz=174,slow=10.0,SNR=11						
HNR				S	Sn	16 42 49.4	+0.8
	28nm,0.3s,baz=266,slow=24,SNR=4.1						
HNR				LR	LR	16 42 56.4	
	comp=Z,370nm,18.1s,baz=72,slow=28						
HNR	Honiara	4.64	121	ePn	Pn	16 41 55.8	-0.1
HNR				P		16 41 57.2	
HNR				S	Sn	16 42 49.4	+0.8
HNR				LR	LR	16 42 56.4	
PMG	Port Moresby	8.98	254	ePn	Pn	16 43 01.4	+5.9
	142nm,0.8s						
PMG				eSn	Sn	16 44 43.1	+7.8
COEN	Coen	14.29	240	ePn	Pn	16 44 10.4	+2.6
	19nm,0.9s						
COEN	Coen	14.29	240	P	Px	16 44 28.7	
	14nm,1.4s,0.0nm						
CTA	Charters Tower	16.00	215	eP	Pn	16 44 34.8	+4.8
	11nm,0.6s						
CTA	Charters Tower	16.00	215	P	Pn	16 44 34.3	+4.3
	1.0nm,0.3s,baz=34,slow=14,SNR=13						
CTAO	Charters Tower	16.00	215	ePn	Pn	16 44 34.6	+4.6
	30nm,1.0s						
DZM	Mont Dzumac	18.07	147	eP	Pn	16 44 56.8	+1.3
DZM	Mont Dzumac	18.07	147	eP	Pn	16 44 56.2	+0.6
	20nm,0.9s						
KWAJ	Kwajalein Atol	19.58	37	P	Pn	16 45 13.2	-0.7
KWAJ				e		16 45 22.7	
GUMO	Guam	23.25	332	LR	LR	16 54 04.0	
	comp=Z,567nm,19.1s,MS4.0,baz=207,slow=34						
ARMA	Armidale	23.60	189	eP	P	16 45 54.7	+0.3
KAKA	Kakadu	23.80	254	eP	x	16 45 36.6	
	16nm,0.4s						
WRAB	Tennant Creek	24.54	236	eP	P	16 46 03.1	+0.1
	15nm,0.6s,mb4.7						
WRAB				e		16 46 16.2	
WRAB	Tennant Creek	24.54	236	P	P	16 46 03.7	+0.6
	34nm,0.8s,mb4.9						
WB2	Warramunga Arr	24.54	236	eP	P	16 46 03.5	+0.4
ASAR	Alice Springs	26.84	230	P	P	16 46 22.5	-1.4
	2.5nm,0.5s,mb4.0,baz=58,slow=10,SNR=80						
ASAR				PcP	PcP	16 49 44.9	-0.7
	0.9nm,0.5s,baz=66,slow=2.6,SNR=4.7						
ASAR				pPcP		16 49 58.8	
	0.8nm,0.5s,baz=50,slow=2.8,SNR=4.2						
ASAR				ScP	ScP	16 53 21.7	+0.4
	0.5nm,0.8s,baz=64,slow=2.8,SNR=4.4						
STKA	Stephens Creek	28.09	207	eP	P	16 46 34.3	-0.7
	2.8nm,0.4s,mb4.2						
STKA	Stephens Creek	28.09	207	P	P	16 46 35.4	+0.3
	1.6nm,0.5s,mb3.9,baz=41,slow=14,SNR=8.1						
STKA				pP	pP	16 46 48.5	-0.3
	3.4nm,0.6s,baz=9.3,slow=11,SNR=5.4						
STKA	Stephens Creek	28.09	207	P	P	16 46 35.4	+0.3
STKA				eP		16 46 35.6	
STKA				e	pP	16 46 48.0	-0.8
STKA				pP	pP	16 46 48.5	-0.3
LBMI	Labuha	29.04	281	P	P	16 46 46.2	+2.5
	65nm,1.3s,mb5.2						
FITZ	Fitzroy Crossi	31.48	247	eP	P	16 47 04.6	-0.6
	15nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	31.48	247	P	P	16 47 04.9	-0.3
	35nm,1.1s,mb5.1						
DAV	Davao City (W)	33.35	294	P	Px	16 48 09.8	
	516nm,0.5s,6μm						
FORT	Forrest	35.19	224	eP	P	16 47 36.0	-1.4
	9.6nm,0.5s,mb5.0						
MBWA	Marble Bar	37.68	244	eP	P	16 47 57.9	-0.8
	9.1nm,0.7s,mb4.6						
RPZ	Rata Peaks	38.87	162	P	P	16 48 07.9	-0.5
	13nm,0.7s,mb4.8,baz=282,slow=1.2,SNR=8.4						
BBKI	Banjar Baru	41.05	273	P	pP	16 48 44.4	+3.4
	56nm,0.4s,3μm						
KKM	Kota Kinabalu	41.70	287	eP	P	16 48 32.1	-0.1
	24nm,0.8s,mb4.9						
KKM				e	pP	16 48 44.0	-2.3
KLBR	Kellerberrin	43.16	230	eP	P	16 48 42.9	-1.0
	15nm,0.4s,mb5.1						
SJI	Sawahan	43.78	266	P	pP	16 49 11.9	+8.6
NWAO	Narrogin (SRO)	44.15	229	P	P	16 48 51.2	-0.6
	23nm,1.1s,mb4.8,baz=50,slow=9.1,SNR=7.1						
NWAO				pP	pP	16 49 06.0	-0.1
	14nm,1.0s,baz=61,slow=8.9,SNR=3.0						
MUN	Mundaring	44.52	231	eP	P	16 48 54.5	-0.3
YHNB	Yeheng	46.11	314	P	P	16 49 09.5	+2.0
	79nm,1.4s,mb5.5						
KSM	Kuching	46.29	279	eP	P	16 49 08.6	-0.5
	32nm,1.2s,mb5.1						
MJAR	Matsushiro Arr	46.43	340	P	P	16 49 10.3	+0.6
	1.2nm,0.6s,mb4.0,baz=25,slow=17,SNR=4.7						
KSRS	Korea Array	51.41	331	P	P	16 49 48.4	+0.5
	2.7nm,0.6s,mb4.3,baz=146,slow=7.2,SNR=12						
PETK	Petropavlovsk-	59.94	1	P	P	16 50 48.8	+0.1
	2.6nm,0.9s,mb4.2,baz=156,slow=7.3,SNR=3.8						
PETK				pP	pP	16 51 04.2	+0.7
	4.5nm,0.9s,baz=154,slow=7.9,SNR=4.3						
PETK				sP	sP	16 51 10.0	+0.3
	4.6nm,0.7s,baz=158,slow=7.2,SNR=4.8						
PETK	Petropavlovsk-	59.94	1	P	P	16 50 48.8	+0.1
PETK				pP	pP	16 51 04.2	+0.7
PETK				sP	sP	16 51 10.0	+0.3
CM31	Chiang Mai Arr	61.63	295	eP	P	16 51 01.3	+0.4
	6.1nm,0.7s,mb4.8						
CM31				e	pP	16 51 14.4	-1.4
CMAR	Chiang Mai Arr	61.63	295	P	P	16 51 01.8	+0.8
	5.0nm,1.0s,mb4.6,baz=111,slow=4.7,SNR=33						
CMAR				pP	pP	16 51 15.8	-0.1
	6.6nm,0.9s,baz=111,slow=4.8,SNR=16						
CHTO	Chiang Mai	61.75	296	eP	P	16 51 02.0	+0.3
	15nm,1.1s,mb5.0						
CHTO				e	pP	16 51 15.9	-0.7
HHC	Hu-ho-hao-te	62.67	323	eP	P	16 51 10.8	+3.3
HHC				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.9						
ULN	Ulaanbaatar	69.53	327	eP	P	16 51 52.4	+1.0
	comp=Z,3.8nm,0.6s,mb4.5						

SONM	Songino Array	69.87	327	P	P	16 51 54.3	+0.9
	comp=Z,5.4nm,0.6s,mb4.7,baz=142,slow=7.2,SNR=44						
SONM				pP	pP	16 52 09.6	+1.1
	comp=Z,2.6nm,0.8s,baz=126,slow=5.9,SNR=5.2						
VNDA	Vanda	70.51	179	P	P	16 51 58.1	+1.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=30,slow=3.0,SNR=7.1						
VNDA				pP	pP	16 52 12.2	+0.1
	comp=Z,4.7nm,0.9s,baz=341,slow=6.3,SNR=11						
VNDA	Vanda	70.51	179	eP	P	16 51 56.3	-0.6
	comp=Z,7.1nm,0.9s,mb4.6						
VNDA				pP	pP	16 52 12.2	+0.1
VNDA				e	pP	16 52 13.0	+0.9
LSA	Lhasa	72.06	304	eP	P	16 52 08.0	+0.9
	comp=Z,5.9nm,1.1s,mb4.4						
TLY	Talaya	73.57	329	eP	P	16 52 15.3	-0.2
	comp=Z,4.6nm,1.0s,mb4.4						
TAPN	Taplejung	74.21	301	eP	P	16 52 20.3	+0.4
	comp=Z,23nm,0.9s,mb5.1						
ODAN	Odare	74.35	300	eP	P	16 52 21.0	+0.3
	comp=Z,33nm,0.6s,mb5.5						
RAMN	Ramite	75.05	300	eP	P	16 52 24.9	+0.2
	comp=Z,16nm,0.6s,mb5.1						
BILL	Bilibino	75.26	4	P	P	16 52 24.1	-1.0
	comp=Z,13nm,1.2s,mb4.7						
BILL				e	pP	16 52 38.8	-1.5
JIRN	Jiri	75.59	301	eP	P	16 52 28.2	+0.4
	comp=Z,18nm,0.5s,mb5.2						
GUN	Gumba	75.93	301	eP	P	16 52 30.2	+0.5
	comp=Z,22nm,0.6s,mb5.2						
PKI	Pulchoki	76.24	301	eP	P	16 52 31.6	+0.1
KKN	Kakani	76.41	301	eP	P	16 52 32.5	0.0
	comp=Z,12nm,0.5s,mb5.1						
DMN	Daman	76.51	300	eP	P	16 52 33.5	+0.5
	comp=Z,20nm,0.6s,mb5.2						
GKN	Gorkha	77.01	301	eP	P	16 52 35.8	-0.1
	comp=Z,20nm,0.6s,mb5.2						
KOLN	Koldanda	77.84	300	eP	P	16 52 40.3	-0.2
	comp=Z,15nm,0.6s,mb5.1						
DANN	Dangsing	77.85	301	eP	P	16 52 40.3	-0.2
	comp=Z,19nm,0.5s,mb5.3						
MCK	McKinley	81.76	22	eP	P	16 53 00.1	-0.8
	comp=Z,5.6nm,0.9s,mb4.5						
MCK				e	pP	16 53 15.3	-1.1
QSPA	South Pole Qui	82.94	180	eP	P	16 53 06.5	-0.3
	comp=Z,20nm,1.0s,mb5.1						
QSPA				e	pP	16 53 23.3	+0.9
MK31	Makanchi Array	84.05	318	eP	P	16 53 12.8	-0.3
MK31				e	pP	16 53 28.5	-0.2
MKAR	Makanchi Array	84.05	318	P	P	16 53 13.1	-0.1
	comp=Z,6.1nm,0.6s,mb4.9,baz=97,slow=5.8,SNR=82						
MKAR				pP	pP	16 53 28.6	0.0
	comp=Z,4.8nm,0.6s,baz=102,slow=5.9,SNR=8.5						
MKAR	Makanchi Array	84.05	318	P	P	16 53 13.1	-0.1
MKAR				pP	pP	16 53 28.6	0.0
MAW	Mawson	84.71	203	P	P	16 53 15.6	-0.5
	comp=Z,5.6nm,0.5s,mb4.9,baz=94,slow=7.4,SNR=12						
MAW				pP	pP	16 53 30.6	-1.1
	comp=Z,6.1nm,0.7s,baz=119,slow=5.1,SNR=4.8						
MAW	Mawson	84.71	203	eP	P	16 53 15.2	-0.9
MAW				pP	pP	16 53 30.6	-1.1
MAW				e	pP	16 53 31.6	-0.1
ZAA0	Zalesovo Array	84.73	326	eP	P	16 53 14.8	-1.6
ZAA0				e	pP	16 53 28.6	-3.4
ZALV	Zalesovo Beam	84.73	326	P	P	16 53 15.2	-1.3
	comp=Z,5.2nm,0.5s,mb4.9,baz=120,slow=5.6,SNR=31						
KURK	Kurchatov	87.44	322	eP	P	16 53 28.5	-1.3
	comp=Z,1.3nm,0.3s,mb4.6						
KURK				e	pP	16 53 43.5	-1.9
TKM2	Tokmak 2	87.71	314	eP	P	16 53 31.0	-0.4
	comp=Z,2.6nm,0.5s,mb4.7						
AAK	Ala-Archa	88.45	313	eP	P	16 53 34.2	-0.6
EKS2	Erkin-Say	88.97	313	eP	P	16 53 37.0	-0.4
	comp=Z,2.6nm,0.8s,mb4.6						
BRVK	Borovoye	92.95	323	eP	P	16 53 52.4	-3.2
	comp=Z,7.9nm,1.4s,mb5.0						
YKA	Yellowknife Ar	95.95	28	P	P	16 54 09.6	+0.5
	comp=Z,0.1nm,0.4s,mb3.6,baz=260,slow=4.7,SNR=3.8						
YKA				pP	pP	16 54 24.4	-0.4
	comp=Z,0.3nm,0.6s,baz=266,slow=4.5,SNR=3.6						
VNA3	Neumayer Olymp	101.29	185	e	PKiKP	16 58 56.0	-1.2
VNA3				e		16 58 58.0	
VNA2	Neumayer--Watz	101.40	186	e	PKiKP	16 58 56.4	-1.0
VNA2				e		16 58 58.4	
VNA1	Neumayer--Stat	101.74	185	e	PKiKP	16 58 55.3	-2.7
OBN	Obninsk	112.28	327	PFAKE		16 59 30.0	+12
OBN				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
AKASG	Malin Array Be	118.11	325	PKP	PKPdf	16 59 27.8	-1.5
	comp=Z,0.8nm,0.5s,baz=49,slow=2.6,SNR=6.6						
AKASG				pPKP	pPKPdf	16 59 42.7	-2.8
	comp=Z,0.7nm,0.4s,baz=55,slow=3.0,SNR=3.1						
BOSA	Boshof	120.71	231	PKP	PKPdf	16 59 35.0	0.0
	comp=Z,2.0nm,1.0s,baz=128,slow=7.7,SNR=3.9						
BOSA				pPKP	pPKPdf	16 59 50.2	-1.0
	comp=Z,2.2nm,0.9s,baz=77,slow=9.6,SNR=2.5						
BOSA				sPKP		16 59 58.4	
	comp=Z,4.9nm,0.9s,baz=56,slow=6.5,SNR=3.7						
BOSA	Boshof	120.71	231	PKP	PKPdf	16 59 35.0	0.0
BOSA				pPKP	pPKPdf	16 59 50.2	-1.0
BOSA				sPKP		16 59 58.4	
KONO	Kongsberg	121.62	341	PFAKE		16 59 50.0	+14
KONO				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
LBTB	Lobatse	122.11	235	PFAKE		16 59 50.0	+12
LBTB				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
KWP	Kalwaria	122.30	326	PFAKE		16 59 50.0	+13
KWP				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
LSZ	Lusaka	123.67	247	PFAKE		16 59 50.0	+9.1
LSZ				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
GERES	GERESS Array B	127.56	329	PKP	PKPdf	16 59 46.9	-0.5
	comp=Z,1.1nm,0.6s,baz=108,slow=0.4,SNR=9.2						
GERES				pPKP	pPKPdf	17 00 02.3	-1.3
	comp=Z,0.9nm,0.5s,baz=110,slow=1.6,SNR=5.8						
TSUM	Tsumeb	131.37	237	PFAKE		17 00 10.0	+14
TSUM				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
CPUP	Villa Florida	133.73	137	PKP	PKPdf	16 59 59.3	-0.6
	comp=Z,0.4nm,0.4s,baz=358,slow=6.5,SNR=3.1						
BDFB	Brasilia	147.29	134	PKPbc	PKPbc	17 00 25.9	-1.0
	comp=Z,6.9nm,0.6s,baz=208,slow=5.4,SNR=18						
BDFB				pPKPbc	pPKPbc	17 00 42.3	-0.7
	comp=Z,5.3nm,0.9s,baz=180,slow=24,SNR=4.8						
TAM	Tamanrasset	147.49	302	eP	PKPdf	17 00 26.6	+2.0
TOA0	Torodi Ar. Sit	153.92	286	ePKPdf	PKPdf	17 00 33.7	-1.1
TOA0				ePKPbc	PKPbc	17 00 41.0	-1.8
TOA0				ePKPab	PKPab	17 00 55.1	-1.1
TORD	Torodi Ar. Bea	153.92	286	PKPbc	PKPbc	17 00 41.3	-1.5
	comp=Z,1.7nm,0.6s,baz=49,slow=2.3,SNR=11						
TORD				PKPab	PKPab	17 00 55.3	-0.9
	comp=Z,2.2nm,0.6s,baz=75,slow=3.2,SNR=12						
DBIC	Dimbokro	160.91	270	PKPab	PKPab	17 01 25.9	-0.5
	comp=Z,2.3nm,0.6s,baz=37,slow=7.6,SNR=4.8						
DBIC				pPKPab	pPKPab	17 01 42.0	-0.1
	comp=Z,3.9nm,0.9s,baz=329,slow=2.9,SNR=2.4						

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*IDC **13** 16:51:46.6±0.6, 170N×126.18E, h0^{km}, mb4.1/15, mb1 4.2/15, mb1mx4.1/22, mbtmp4.1/15, MS3.9/1, Ms1 3.9/1, ms1mx3.4/34, Error ellipse: s-maj=32.4km s-min=11.1km az=72.0*

*NEIC **13** 16:51:47.3±0.4, 175N×12620E, h10^{km}, mb4.4/13, Error ellipse: s-maj=15.1km s-min=6.4km az=70.0*

*ISCJB **13** 16:51:53.7±0.8, 178N±005×12644E±006, h77^{km}±8^{km}, mb4.2/24, Error ellipse: s-maj=12.0km s-min=6.7km az=145.5*

*DJA **13** 16:51:56, 169N×12642E, h50^{km}, MLv4.4/6*

ISC 13 16:51:55.1±0.7**, 173N**±005×**12643E**±006**, h74**^{km}±7^{km}**, n49,** σ1^{s}**18**/51**, mb4.2**/24**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.33	135	P	Pn	16 52 16.6	-1.4
MNI	Manado	1.62	260	P	Pn	16 52 20.6	-1.2
MNI				S	Sn	16 52 42.3	+0.3
LBMI	Labuha	2.58	156	P	Pn	16 52 35.1	+0.4
GSPH	General Santos	4.58	341	⇓iP	Pn	16 52 59.7	-2.3
DAV	Davao City (W)	5.38	351	Pn	Pn	16 53 04.1	-8.7
DAV				eSg	Sn	16 54 22.8	+9.4
AAI	Ambon	5.66	162	P	Pn	16 53 19.5	+2.8
	43nm,0.9s,722nm0.2nm						
KDI	Kendari	6.81	214	P	Pn	16 53 32.2	-0.3
	29nm,0.6s,0.1nm						
MYLDM	Lahad Datu	8.63	294	P	Pn	16 53 58.4	+1.1
	118nm,1.1s,0.3nm						
KKM	Kota Kinabalu	11.06	293	ePn	Pn	16 54 31.9	+1.4
	35nm,0.9s						
SBUM	Sibu	14.22	273	P	Pn	16 55 14.6	+1.6
KAKA	Kakadu	15.53	158	eP	x	16 55 13.7	
	17nm,0.6s						
KSM	Kuching	16.12	269	Pn	Pn	16 55 29.8	-7.6
FITZ	Fitzroy Crossi	19.72	182	eP	Pn	16 56 18.9	-2.0
	4.6nm,0.5s						
FITZ	Fitzroy Crossi	19.72	182	eP	Pn	16 56 16.7	-4.2
	2.5nm,0.6s						
WRAB	Tennant Creek	22.88	161	eP	P	16 56 52.2	-0.5
	12nm,0.5s,mb4.5						
WRAB				eS	S	17 00 56.5	-0.3
WB2	Warramunga Arr	22.89	161	eP	P	16 56 52.0	-0.7
WB2				eS	S	17 00 55.8	-1.1
YHNB	Yeheng	23.33	348	P	P	16 56 56.7	-0.1
	67nm,1.2s,mb4.8						
MBWA	Marble Bar	23.67	196	eP	P	16 56 58.6	-1.5
	17nm,1.2s,mb4.2						
ASAR	Alice Springs	26.26	164	P	P	16 57 24.4	+0.9
	2.5nm,0.4s,mb4.0,baz=342,slow=7.3,SNR=97						
ASAR				PcP	PcP	17 00 49.8	+1.3
	0.8nm,0.6s,baz=345,slow=2.6,SNR=5.7						
ASAR				S	S	17 01 59.5	+8.7
	0.8nm,0.9s,baz=355,slow=20,SNR=4.4						
CTA	Charters Tower	29.12	139	P	P	16 57 50.4	+1.2
	2.6nm,0.9s,mb3.9,baz=342,slow=17,SNR=2.3						
CTAO	Charters Tower	29.12	139	P	P	16 57 48.6	-0.5
	8.1nm,1.1s,mb4.3						
CMAR	Chiang Mai Arr	31.67	303	P	P	16 58 11.9	+0.2
	0.3nm,0.4s,mb3.3,baz=111,slow=7.6,SNR=4.6						
CHTO	Chiang Mai	31.84	304	eP	P	16 58 11.1	-2.2
	1.8nm,0.7s,mb3.9						
NWAO	Narrogin (SRO)	35.55	193	P	P	16 58 46.3	+1.1
	12nm,1.1s,mb4.8,baz=42,slow=8.0,SNR=5.6						
KSRS	Korea Array	35.58	2	P	P	16 58 47.8	+2.4
	1.1nm,0.7s,mb3.9,baz=174,slow=9.8,SNR=4.7						
KSRS				LR	LR	17 12 02.0	
	comp=Z,186nm,18.9s,baz=300,slow=34						
MJAR	Matsushiro Arr	36.32	16	P	P	16 58 54.5	+2.8
	5.1nm,1.2s,mb4.3,baz=202,slow=12,SNR=3.4						
STKA	Stephens Creek	36.38	158	eP	P	16 58 53.0	+0.7
	2.0nm,0.8s,mb4.1						
STKA	Stephens Creek	36.38	158	P	P	16 58 53.2	+0.9
	2.6nm,0.5s,mb4.5,baz=342,slow=8.9,SNR=12						
STKA	Stephens Creek	36.38	158	eP	P	16 58 52.6	+0.2
	0.9nm,0.8s,mb3.8						
LSA	Lhasa	43.56	313	P	P	16 59 51.9	+0.1
	2.8nm,0.6s,mb4.2						
ULN	Ulaanbaatar	48.93	343	eP	P	17 00 34.1	+0.5
	1.3nm,0.7s,mb4.0						
SONM	Songino Array	49.10	342	P	P	17 00 35.7	+0.8
	1.2nm,0.7s,mb3.9,baz=159,slow=9.6,SNR=8.2						
TLY	Talaya	53.33	343	eP	P	17 01 05.6	-1.0
	7.7nm,1.0s,mb4.7						
PETK	Petropavlovsk-	57.39	22	P	P	17 01 36.8	+1.1
	3.0nm,0.9s,mb4.3,baz=179,slow=2.1,SNR=5.1						
MK31	Makanchi Array	59.03	326	eP	P	17 01 46.2	-1.1
MKAR	Makanchi Array	59.03	326	P	P	17 01 46.9	-0.4
	1.4nm,0.4s,mb4.4,baz=119,slow=8.3,SNR=14						
MKAR	Makanchi Array	59.03	326	P	P	17 01 46.9	-0.4
EKS2	Erkin-Say	62.13	318	P	P	17 02 06.8	-1.7
	3.2nm,0.6s,mb4.5						
ZALV	Zalesovo Beam	62.23	334	P	P	17 02 08.4	-0.5
	0.4nm,0.3s,mb3.9,baz=149,slow=6.6,SNR=3.3						
KURK	Kurchatov	63.27	328	P	P	17 02 15.7	-0.2
	1.7nm,0.3s,mb4.4,baz=129,slow=6.2,SNR=7.6						
KURK	Kurchatov	63.27	328	eP	P	17 02 15.1	-0.8
	8.1nm,0.7s,mb4.8						
BVAR	Borovoye Array	68.83	328	P	P	17 02 51.8	+0.2
	0.9nm,0.6s,mb3.8,baz=112,slow=5.6,SNR=5.3						
BRVK	Borovoye	68.91	328	eP	P	17 02 50.3	-1.7
	2.6nm,0.9s,mb4.1						
AKTK	Aktyubinsk	75.04	322	P	P	17 03 29.2	+0.4
AKTO	Aktyubinsk	75.04	322	P	P	17 03 29.2	+0.4
	0.6nm,0.4s,mb3.7,baz=78,slow=5.3,SNR=4.4						
VNDA	Vanda	81.49	173	P	P	17 04 05.3	+1.5
	1.1nm,0.6s,mb3.9,baz=193,slow=14,SNR=9.1						
VNDA	Vanda	81.49	173	P	P	17 04 05.3	+1.5
TORD	Torodi Ar. Bea	123.24	287	PKP	PKPdf	17 10 45.0	+0.5
	0.3nm,0.6s,baz=31,slow=1.8,SNR=3.8						
TORD	Torodi Ar. Bea	123.24	287	PKP	PKPdf	17 10 45.0	+0.5

BJI 13 16:57:14.3, 3654N×8297E, h15^{km}, ML3.6, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	6.27	300	ePG	Pg	16 59 09.3	-5.0
KSH				eS	Sn	17 00 03.6	+6.0
KSH				Smax			
	comp=N,224nm,0.6s						
KSH				Smax			
	comp=E,313nm,1.0s						

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*ISCJB **13** 17:08:53.2±0.3, 1727N±003×9670W±002, h77^{km}±3^{km}, mb3.9/14, Error ellipse: s-maj=6.1km s-min=2.9km az=27.0*

*NEIC **13** 17:08:54.7±0.4, 1729N×9669W, mb4.0/7, MD4.5(MEX), Error ellipse: s-maj=7.9km s-min=5.9km az=221.0*

*IDC **13** 17:08:55.1±1.0, 1738N×9652W, h67^{km}±8^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.8/27, mbtmp3.7/13, MS2.4/1, Ms1 2.4/1, ms1mx2.4/31, Error ellipse: s-maj=27.4km s-min=11.7km az=61.0*

*MEX **13** 17:08:55.6±0.9, 1722N×9673W, h78^{km}±5^{km}, MD4.5*

ISC 13 17:08:54.5±0.3**, 1727N**±003×**9670W**±002**, h70**^{km}±4^{km}**, h74**^{km}±2.1^{km}**: pP-P, n55,** σ1^{s}**14**/77**, mb3.9**/14**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXX	Oaxaca	0.19	188	iP	Pn	17 09 05.9	+0.8
OXX				iS	Sn	17 09 14.2	+1.4
VHO	Vista Hermosa	0.20	191	iP	Pn	17 09 05.7	+0.5
VHO				iS	Sn	17 09 13.7	+0.8
UTMO	Huajuapan	1.20	298	iP	Pn	17 09 16.2	+0.6
UTMO				iS	Sn	17 09 31.3	+0.1
HUIG	Huatulco	1.59	159	eP	Pn	17 09 20.5	-0.2
HUIG				iS	Sn	17 09 39.9	-0.7
PNIG	Pinotepa	1.62	238	eP	Pn	17 09 20.1	-1.1
PNIG				iS	Sn	17 09 40.0	-1.3
LVIG	Laguna Verde	2.46	6	iP	Pn	17 09 29.7	-2.6
PPM	Popocatepetl	2.56	315	iP	Pn	17 09 35.1	+1.3
PPM				iS	Sn	17 10 05.7	+1.7
PPM	Popocatepetl	2.56	315	iP	Pn	17 09 32.4	-1.5
PPM				iS	Sn	17 10 01.2	-2.7
MEIG	Mezcala	2.87	284	eP	Pn	17 09 39.0	+1.0
MEIG				iS	Sn	17 10 10.1	-1.2
PLIG	Platanillo	2.90	293	iP	Pn	17 09 39.6	+1.2
PLIG				iS	Sn	17 10 11.0	-1.1
IIO	Organos	3.01	321	iP	Pn	17 09 40.7	+0.9
IIO				iS	Sn	17 10 13.9	-0.8
MZVM		3.07	309	iP	Pn	17 09 40.1	-0.7
MZVM				iS	Sn	17 10 15.1	-1.3
ACX	Acapulco	3.11	263	iP	Pn	17 09 39.5	-1.7
ACX				iS	Sn	17 10 17.0	-0.2
ACX	Acapulco	3.11	263	iP	Pn	17 09 39.5	-1.7
ACX				iS	Sn	17 10 17.8	+0.6
UNM	Universidad Na	3.12	311	iP	Pn	17 09 43.3	+1.8
UNM				iS	Sn	17 10 16.7	-1.0
PBVM	Pinon	3.13	314	iP	Pn	17 09 41.3	-0.2
PBVM				iS	Sn	17 10 19.0	+1.2
PTVM	Pico Tres Padr	3.26	316	iP	Pn	17 09 42.4	-0.9
PTVM				iS	Sn	17 10 21.8	+0.9
CAIG	El Cayaco	3.42	267	iP	Pn	17 09 44.6	-0.9
CAIG				iS	Sn	17 10 24.2	-0.7
TGIG		3.45	98	iP	Pn	17 09 45.5	-0.4
TGIG				iS	Sn	17 10 24.7	-1.0
PCIG		3.68	114	eP	Pn	17 09 49.0	-0.1
PCIG				iS	Sn	17 10 30.6	-0.6
DEIG	Demacu	3.74	324	eP	Pn	17 09 50.9	+1.0
SCX	San Cristobal	3.92	97	iP	Pn	17 09 54.0	+1.7
CCIG	Comitan	4.47	102	eP	Pn	17 09 59.9	0.0
CCIG				iS	Sn	17 10 51.7	+1.0
CCIG	Comitan	4.47	102	eP	Pn	17 09 59.9	0.0
CCIG				iS	Sn	17 10 48.8	-1.9
ZIIG	Zihuatanejo	4.57	275	eP	Pn	17 10 01.2	+0.1
ZIIG				iS	Sn	17 10 51.3	-1.6
THIG		4.86	118	iP	Pn	17 10 07.2	+2.0
THIG				iS	Sn	17 10 59.4	-0.8
MOIG	Morelia	4.89	300	iP	Pn	17 10 08.1	+2.5
MOIG				iS	Sn	17 11 02.4	+1.5
SCIG	Sabancuy	5.50	71	iP	Pn	17 10 11.8	-2.2
SCIG				iS	Sn	17 11 09.7	-6.2
MMIG	Aquila	6.42	280	iP	Pn	17 10 26.8	+0.4
MMIG				iS	Sn	17 11 38.4	+0.1
TXAR	Lajitas Array	13.61	333	P	Pn	17 12 03.6	-0.7
	0.0nm,0.3s,baz=137,slow=14,SNR=3.8						
MIAR	Mount Ida	17.43	9	eP	Pn	17 12 52.1	-0.9
	20nm,0.8s						
WMOK	Wichita Mounta	17.50	354	eP	Pn	17 12 53.9	+0.1
	3.8nm,0.6s						
AMTX	Amarillo	18.10	347	eP	Pn	17 13 00.4	-0.8
	11nm,0.5s						
ANMO	Albuquerque	19.65	336	P	Pn	17 13 18.9	-0.8
	0.1nm,0.3s,baz=149,slow=12,SNR=3.0						
WVT	Waverly	20.37	21	P	P	17 13 18.2	-7.2
	6.0nm,0.6s						
CCM	Cathedral Cave	21.25	12	eP	P	17 13 33.9	-1.0
	3.8nm,0.6s,mb3.9						
TKL	Tuckaleechee C	21.62	30	P	P	17 13 38.8	-0.1
	2.2nm,0.5s,mb3.8,baz=280,slow=5.4,SNR=4.2						
SDCO	Great Sand Dun	21.82	341	eP	P	17 13 41.5	+0.5
	5.6nm,1.2s,mb3.8						
WUAZ	Wupatki	22.38	327	eP	P	17 13 48.9	+2.0
	4.1nm,0.8s,mb3.8						
WUAZ				epP		17 14 04.2	
WUAZ				esP	sP	17 14 13.9	+3.3
SDV	Santo Domingo	26.69	105	P	P	17 14 27.2	-0.1
	12nm,0.7s,mb4.5,baz=326,slow=4.6,SNR=19						
PDAR	Pinedale Array	27.68	339	P	P	17 14 35.8	-0.1
	0.3nm,0.5s,mb3.1,baz=131,slow=10,SNR=3.8						
PDAR				pP	pP	17 14 52.5	0.0
	0.9nm,0.8s,baz=140,slow=7.7,SNR=5.6						
NVAR	Mina Array Bea	28.32	322	P	P	17 14 44.3	+2.7
	1.8nm,0.7s,mb3.7,baz=142,slow=9.6,SNR=11						
NVAR				LR	LR	17 27 20.2	
	comp=Z,6.5nm,19.0s,baz=310,slow=39						
ELK	Elko	28.35	329	P	P	17 14 43.8	+1.9
	0.4nm,0.4s,mb3.3,baz=134,slow=7.5,SNR=4.6						
SCHQ	Schefferville	43.94	25	P	P	17 16 53.0	-1.4
	5.1nm,0.9s,mb4.3,baz=233,slow=9.4,SNR=7.2						
SCHQ	Schefferville	43.94	25	P	P	17 16 53.0	-1.4
YKA	Yellowknife Ar	46.89	349	P	P	17 17 16.6	-0.9
	1.2nm,0.7s,mb3.8,baz=153,slow=7.4,SNR=21						
YKA				pP	pP	17 17 34.0	-1.1
	0.3nm,0.4s,baz=155,slow=7.4,SNR=4.8						
YKA				PcP	PcP	17 18 49.0	-0.2
	0.3nm,0.7s,baz=158,slow=3.1,SNR=4.9						
YKA				pPcP		17 19 09.8	
	0.5nm,0.7s,baz=154,slow=3.4,SNR=6.2						
YKA	Yellowknife Ar	46.89	349	P	P	17 17 16.6	-0.9
YKA				pP	pP	17 17 34.0	-1.1
YKA				PcP	PcP	17 18 49.0	-0.2
YKA				pPcP		17 19 09.8	
SIV	San Ignacio	48.22	131	P	P	17 17 28.1	-0.4
	3.0nm,0.7s,mb4.2,baz=308,slow=7.1,SNR=16						
SIV				pP	pP	17 17 46.9	+0.8
	0.9nm,0.6s,baz=302,slow=13,SNR=2.9						
CFAA	Coronel Fontan	55.74	151	P	P	17 18 25.5	+1.4
	0.7nm,0.8s,mb3.8,baz=330,slow=7.1,SNR=13						
PLCA	Paso Flores	62.61	158	P	P	17 19 12.7	+1.3
	9.7nm,0.9s,mb4.7,baz=338,slow=10.0,SNR=12						
EKA	Eskdalemuir Ar	77.97	36	P	P	17 20 46.6	+1.6
	1.4nm,0.6s,mb3.8,baz=287,slow=5.7,SNR=4.2						
STKA	Stephens Creek	125.61	243	PKP	PKPdf	17 27 48.5	+0.1
	0.6nm,0.6s,baz=201,slow=7.3,SNR=3.2						
STKA	Stephens Creek	125.61	243	PKP	PKPdf	17 27 48.5	+0.1
ASAR	Alice Springs	132.36	254	PKP	PKPdf	17 28 02.7	+1.2
	0.5nm,0.9s,baz=64,slow=2.2,SNR=4.1						
ASAR	Alice Springs	132.36	254	PKP	PKPdf	17 28 02.6	+1.2

MAN 13 17:31:16, 1255N×12580E, h5^{km}, mb4.6, ML3.5, MS3.5, 3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.00	201	eP	Pg	17 31 36.4	+1.1
BESP				eS	Sg	17 31 52.5	+4.2
CNP	Catarman	1.11	268	eP	Pg	17 31 38.2	+0.9
CNP				eS	Sg	17 31 54.5	+2.9
OCLP	Ormoc	1.89	218	eP	Pn	17 31 49.4	+0.5
PVCP	Virac	1.91	303	eP	Pn	17 31 50.1	+0.9
MMPH	Masbate	2.13	265	eP	Pn	17 31 57.1	+4.9
MSLP	Maasin	2.57	201	eP	Pn	17 31 59.8	+1.6
MSLP				eS	Sn	17 32 39.0	+9.1
SCPH	Surigao	2.76	186	⇓eP	Pn	17 32 02.1	+1.1
RCP	Roxas	3.14	252	⇓eP	Pn	17 32 07.9	+1.7
KALP	Kalibo	3.49	256	⇓eP	Sn	17 32 56.3	+3.5
BUTP	Butuan	3.56	183	eP	Pg	17 32 24.1	-0.2
GUIM	Jordan	3.68	239	eP	Pn	17 32 15.0	+1.4
OTRP	Odiongan	3.69	268	eP	Pn	17 32 15.9	+2.2

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*SZGRF **13** 18:06:11.3, 38.19N×3424E, h10^{km}, mb4.7, MS3.8, Turkey*

*NEIC **13** 18:06:18.0, 3883N×3305E, h5^{km}, mb4.8/78, MS4.2/2, ML4.9(ISK), After ISK.*

*GCMT **13** 18:06:18.0±0.5, 3891N×3306E, h12^{km}, MW4.9/63, Moment Tensor Solution. s7,c8; s63,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.43±.15; $M_{\theta\theta}$-2.28±.12; $M_{\phi\phi}$2.72±.10; $M_{r\theta}$0.81±.39; $M_{\theta\phi}$-0.36±.13; $M_{\phi r}$-1.70±.35; Best double couple: $M_0$3.06800×10^{16} NP1:ϕ_s224.00000°, δ55.00000°, λ1.00000°. NP2: ϕ_s133.00000°, δ89.00000°, λ145.00000°. Principal axes: T 3.5360, Plg24.0000°, Azm83.0000°; N -0.9300, Plg55.0000°, Azm312.0000°; P -2.6000, Plg23.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DDA **13** 18:06:19.2, 3885N×3304E, h17^{km}±2^{km}, Md4.3, Ml4.4*

*CSEM **13** 18:06:20.5±0.1, 3880N×3303E, h15^{km}, mb4.8/58, Ms4.1, Error ellipse: s-maj=2.2km s-min=1.2km az=13.0*

*THE **13** 18:06:20.1, 3882N×3349E, h26^{km}±35^{km}, Error ellipse: s-maj=36.8km s-min=2.9km az=92.0*

*ISCJB **13** 18:06:20.6±0.6, 3884N±002×3305E±002, h12^{km}±4^{km}, mb4.6/103, MS4.3/28, Error ellipse: s-maj=2.8km s-min=2.1km az=3.8*

*IDC **13** 18:06:20.3±0.4, 3886N×3305E, h0^{km}, mb4.4/25, mb1 4.5/34, mb1mx4.5/37, mbtmp4.4/34, ML3.9/9, MS4.3/22, Ms1 4.3/22, ms1mx4.1/35, Error ellipse: s-maj=8.8km s-min=7.8km az=125.0*

*MOS **13** 18:06:20.2±0.8, 3884N×3308E, h11^{km}, mb4.8/61, MS4.2/37, Error ellipse: s-maj=4.8km s-min=2.6km az=122.0*

*BJI **13** 18:06:20.9, 3959N×3280E, h6^{km}, mB5.1, mb4.5, Ms4.8, Msz4.6*

ISC 13 18:06:21.8±0.7**, 3881N**±002×**3307E**±002**, h8**^{km}±5^{km}**, h15**^{km}±1.6^{km}**: pP-P, n569,** σ1^{s}**09**/594**, mb4.6**/104**, MS4.3**/28**, 34C-16D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDHN	Kadinhani	0.80	249	⇑iP	Pg	18 06 34.3	-2.9
KDHN				iS	Sg	18 06 46.5	-1.1
KDHN	Kadinhani	0.80	249	P	Pg	18 06 34.3	-2.9
KDHN				S	Sg	18 06 46.5	-1.1
BR131	Keskin Array S	1.01	26	eP	Pg	18 06 38.0	-3.2
BR131	Keskin Array S	1.01	26	eP	Pg	18 06 38.0	-3.2
BRTR	Keskin Array B	1.01	26	Pg	Pg	18 06 38.4	-2.9
	500nm,0.3s,baz=202,slow=17,SNR=1183						
BRTR				Lg		18 06 53.7	
	1μm,0.3s,baz=197,slow=29,SNR=30						
BRTR	Keskin Array B	1.01	26	P	Pg	18 06 38.4	-2.8
BRTR						18 06 53.7	
BRTR				pmax	pmax		
	comp=Z,500nm,0.3s						
BRTR				smax			
	comp=N,1.0nm,0.3s						
BRTR	Keskin Array B	1.01	26	Pg	Pg	18 06 38.3	-2.9
BRTR	Keskin Array B	1.01	26	Pg	Pg	18 06 38.4	-2.9
BRTR				Lg		18 06 53.7	
BSTP	Nigde	1.19	136	⇑iP	Pb	18 06 43.2	-1.3
CDAG	Cicekdag	1.29	51	⇑iP	Pn	18 06 43.1	-3.1
CDAG				iS	Sb	18 07 03.0	-0.1
CDAG	Cicekdag	1.29	51	P	Pn	18 06 43.5	-2.7
CDAG				iS	Sb	18 07 03.0	-0.1
AVNT	Avonos	1.39	91	⇑iP	Pn	18 06 44.4	-3.2
AVNT				iS	Sn	18 07 07.8	+1.7
ELDT	Eldivan	1.70	9	eP	Pn	18 06 50.3	-1.4
ELDT				⇓iP		18 06 50.3	

ELDT *i* S Sn 18 07 17.7 +4.1
ESKT Eskisehir 1.87 293 ⇓*i*P Pn 18 06 52.0 -2.0
ESKT Eskisehir 1.87 293 P Pn 18 06 51.9 -2.1
SEYT Eskypehyr 1.87 293 *i* P Pn 18 06 52.0 -2.0
ISP Isparta 2.23 245 P Pn 18 06 57.8 -1.3
ISP S Sn 18 07 27.6 +0.7
ISP Isparta 2.23 245 *c* *i*P Pn 18 06 58.3 -0.8
ISP Isparta 2.23 245 *e*P Pn 18 06 58.5 -0.6
CTKT Corum 2.24 36 *i* P Pn 18 06 59.0 -0.2
BALT Daday 2.73 5 ⇑*i*P Pn 18 07 04.7 -1.1
GDZ Gediz 2.81 277 *i* P Pn 18 07 06.7 -0.4
ANDN Andirin 2.86 114 ⇑*i*P Pn 18 07 07.6 -0.1
ANDN *i* S Sg 18 07 58.6 +5.1
GOLH Golhisar 3.19 242 *i* P Pn 18 07 12.3 +0.2
ULDT Uludag 3.32 295 *i* P Pn 18 07 12.7 -1.3
COBT Iskenderun 3.41 131 *e*P Pn 18 07 14.9 -0.3
MAMC Mammari 3.64 178 P Pn 18 07 20.0 +1.6
ALFC Alevga 3.67 186 P Pn 18 07 21.6 +2.8
comp=N,19nm,0.9s
GZT Gaziantep 3.83 111 ⇓*i*P Pn 18 07 21.3 +0.3
KSL Kastellorizon 3.84 227 *e*P Pn 18 07 23.0 +1.8
CSS Prodhromos 3.85 177 P Pn 18 07 26.1 +4.8
comp=N,18nm,1.1s
CSS Prodhromos 3.85 177 *e*P Pn 18 07 20.6 -0.7
CSS Prodhromos 3.85 177 *e*P Pn 18 07 20.6 -0.7
CSS P 18 07 26.1
PPCY Paphos 3.96 189 P Pn 18 07 25.5 +2.6
SZAC Souni-Zanaja 4.05 182 P Pn 18 07 25.9 +1.8
comp=N,27nm,0.9s
KEMA Kemaliye 4.25 82 *i* P Pn 18 07 26.9 +0.1
KEMA *i* S Sg 18 08 42.7 +4.6
ARG Arkhangelos 4.71 238 *e*P Pn 18 07 34.0 +0.9
BLCB Balcova 4.74 267 P Pn 18 07 33.5 -0.1
BDRM Kayabasi 4.78 250 ⇓*i*P Pn 18 07 34.0 -0.1
SMG Samos 5.03 259 *e*P Pn 18 07 37.5 0.0
HWQ Hawqa 5.08 152 *e*Pn Pn 18 07 41.4 +3.1
PRK Paraskevi 5.31 277 *e*P Pn 18 07 41.5 +0.1
PRK Paraskevi 5.31 277 P Pn 18 07 41.4 0.0
BHL Bhannes 5.32 156 *e*Pn Pn 18 07 42.6 +1.1
CHOS Chios island 5.51 268 P Pn 18 07 43.6 -0.5
YAL Yalta 5.73 8 *e*P Pn 18 07 48.5 +1.4
YAL *e*S Sn 18 08 53.4 +0.4
KARP Karpathos 5.74 237 *e*P Pn 18 07 47.5 +0.3
ALN Alexandroupoli 5.79 293 P Pn 18 07 46.8 -1.2
ALU Alushta 5.95 9 *e*P Pn 18 07 51.2 +1.1
ALU *e*S Sn 18 08 56.5 -1.9
MMAI Mount Meron Ar 6.09 161 Pn Pn 18 07 51.3 -0.7
comp=N,2.5nm,0.3s,baz=342,slow=13,SNR=14
JMB Yambol 6.14 309 P Pn 18 07 54.8 +2.1
SIM Simferopol' 6.18 7 *d* *i*P Pn 18 07 54.0 +0.7
SIM pmax pmax
comp=Z,177nm,0.9s
SIM MLR MLR
comp=Z,2μm,15.0s
APE Apeiranthos 6.21 256 *e*P Pn 18 07 53.5 -0.2
APE Apeiranthos 6.21 256 *e*P Pn 18 07 53.7 0.0
APE Apeiranthos 6.21 256 P Pn 18 07 55.6 +1.9
LIA Limnos Island 6.21 283 P Pn 18 07 53.6 -0.1
RDO Rodhopi 6.24 294 *e*P Pn 18 07 54.0 -0.1
RDO Rodhopi 6.24 294 P Pn 18 07 53.5 -0.6
SUDU Sudak 6.24 13 *e*P Pn 18 07 53.8 -0.3
SUDU *e*S Sn 18 09 04.9 -0.7
FEO Feodosiya 6.44 15 *e*P Pn 18 07 56.4 -0.4
TIRR Tirgusor 6.63 330 *e*P Pn 18 07 58.0 -1.5
comp=Z,108nm,1.0s
TIRR Tirgusor 6.63 330 ⇑*i*P Pn 18 07 59.0 -0.5
TIRR Tirgusor 6.63 330 *e*P Pn 18 07 58.0 -1.5
comp=Z,108nm,1.0s
CVD Cernavoda 6.67 327 P Pn 18 08 00.9 +0.9
CVD Cernavoda 6.67 327 ⇑*i*P Pn 18 08 00.5 +0.5
CVD Cernavoda 6.67 327 P Pn 18 08 00.9 +0.9
ANN Anapa 6.81 27 *e*P Pn 18 08 02.7 +0.8
ANN *e*S Sn 18 09 22.6 +3.0
ANN pmax pmax
comp=Z,94nm,1.9s
ANN MLR MLR
comp=N,2μm,9.0s
ANN MLR MLR
comp=E,3μm,9.0s
ANN MLR MLR
comp=Z,1μm,9.0s
SOC Sochi 6.91 44 *e*P Pn 18 07 59.6 -3.8
SOC *e* 18 09 19.9
SOC pmax pmax
comp=Z,322nm,0.7s
SOC MLR MLR
comp=Z,21μm,8.0s
NPS Neapolis 6.94 242 *e*P Pn 18 08 03.0 -0.7
HARR Harsova 7.02 328 P Pn 18 08 05.0 +0.2
HARR Harsova 7.02 328 ⇑*i*P Pn 18 08 04.8 0.0
HARR Harsova 7.02 328 P Pn 18 08 05.0 +0.2
TLCR 7.11 335 ⇑*i*P Pn 18 08 07.1 +1.0
TLCR 7.11 335 ⇑P Pn 18 08 07.0 +1.0
PLD Plovdiv 7.18 300 P Pn 18 08 06.0 -1.0
PLD Plovdiv 7.18 300 P Pn 18 08 05.8 -1.2
OUR Ouranopolis 7.18 285 P Pn 18 08 06.3 -0.8
ASF Jabal al Asfar 7.32 154 Pn Pn 18 08 10.9 +1.9
comp=Z,0.3nm,0.3s,baz=347,slow=18,SNR=4.5
ASF Lg 18 10 11.3
comp=Z,0.6nm,0.3s,baz=25,slow=19,SNR=2.5
ASF LR LR 18 11 35.3
comp=Z,5μm,18.6s,baz=334,slow=43
PAIG Paliouri 7.36 282 P Pn 18 08 08.5 -1.0
IDI Anoyia 7.43 244 Pn Pn 18 08 10.4 0.0
comp=Z,2.3nm,0.3s,baz=58,slow=12,SNR=14
PLG Polygyros 7.59 285 P Pn 18 08 12.4 -0.3
SOH Sokhos 7.74 288 P Pn 18 08 16.2 +1.4
KZIT Kziot 7.96 172 P Pn 18 08 17.7 -0.1
KNT Kendrikon 8.15 290 P Pn 18 08 20.2 -0.2
ODB Odobesti 8.26 329 ⇓*i*P Pn 18 08 21.1 -0.7
ODB Odobesti 8.26 329 ⇓P Pn 18 08 21.1 -0.7
LIT Litokhoron 8.29 282 P Pn 18 08 27.1 +4.9
VLI Veliai 8.29 259 *e*P Pn 18 08 23.0 +0.7
VTS Vitosha 8.39 300 P Pn 18 08 27.3 +3.7
VAY Valandovo 8.43 291 *e*Pn Pn 18 08 22.4 -1.8
VAY Valandovo 8.43 291 *e*Pn Pn 18 08 22.5 -1.8
VAY *e*Sn Sn 18 09 49.9 -10
VRI Vrincioaia 8.47 328 ⇑*i*P Pn 18 08 24.8 +0.1
VRI Vrincioaia 8.47 328 P Pn 18 08 24.8 +0.1
GRG Griva 8.48 288 P Pn 18 08 25.8 +1.0
PLOR Plostina 8.49 328 ⇑*i*P Pn 18 08 25.2 +0.3
MLR Muntele Rosu 8.51 324 Pn Pn 18 08 25.5 +0.2
comp=Z,1.3nm,0.3s,baz=148,slow=3.2,SNR=13
MLR LR LR 18 12 09.0
comp=Z,2μm,20.9s,baz=68,slow=41
MLR Muntele Rosu 8.51 324 P Pn 18 08 25.5 +0.2
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR MLR MLR
comp=Z,2μm,20.9s
ONI Oni 8.73 61 P Pn 18 08 34.1 +5.8
KIS Kishinev 8.75 341 *e*P Pn 18 08 26.0 -2.6
KIS *e*S Sn 18 10 01.0 -6.4
KIS pmax pmax
comp=Z,175nm,1.4s
KIS MLR MLR
comp=Z,3μm,17.0s
KIS MLR MLR
comp=N,3μm,14.0s
KIS MLR MLR
comp=E,3μm,10.0s
KIS MLR MLR
comp=Z,3μm,16.0s
KIS Kishinev 8.75 341 ⇑*i*P Pn 18 08 26.0 -2.6
comp=Z,100nm,1.4s
KIS *e*S Sn 18 10 01.0 -6.4
KIS LRM 18 12 40.0
comp=Z,3μm,10.0s
EVR Evrytania 8.79 274 *e*P Pn 18 08 32.0 +2.9
KIV Kislovodsk 8.86 52 *e*P Pn 18 08 32.0 +1.9
KIV *e*S Sn 18 10 13.5 +3.4
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,418nm,12.0s
KIV Kislovodsk 8.86 52 *e*P Pn 18 08 30.1 0.0
comp=Z,36nm,1.1s
KIV Kislovodsk 8.86 52 *e*P Pn 18 08 30.1 0.0
comp=Z,36nm,1.1s
HRFI Mount Harif 8.90 169 P Pn 18 08 30.7 0.0
VOIR 8.90 321 ⇑*i*P Pn 18 08 31.2 +0.6
VOIR 8.90 321 ⇑P Pn 18 08 31.2 +0.5
GNI Garni 9.12 78 Pn Pn 18 08 38.3 +4.7
comp=Z,0.3nm,0.3s,baz=93,slow=2.6,SNR=16
GNI Garni 9.12 78 *d* *i*P Pn 18 08 37.8 +4.1
GNI Garni 9.12 78 P Pn 18 08 36.8 +3.1
comp=Z,95nm,1.3s
GNI Garni 9.12 78 P Pn 18 08 36.8 +3.2
comp=Z,95nm,1.3s
FNA Florina 9.21 286 P Pn 18 08 35.4 +0.5
EIL Elat 9.25 170 LR LR 18 12 56.8
comp=Z,478nm,19.1s,baz=182,slow=43
BIA Bitola 9.29 287 P Pn 18 08 37.5 +1.5
MTA Mtatsminda 9.41 68 P Pn 18 08 40.5 +2.9
KRUS Krusevo 9.41 289 *e*Pn Pn 18 08 38.3 +0.6
KRUS *e*Sn Sn 18 10 18.9 -4.8
KRUS Krusevo 9.41 289 *e*Pn Pn 18 08 38.3 +0.7
KRUS *e*Sn Sn 18 10 19.0 -4.7
SKO Skopje 9.42 293 *e*Pn Pn 18 08 42.3 +4.6
BARS Barje 9.42 299 *e*Pn Pn 18 08 37.4 -0.4
BARS Barje 9.42 299 P Pn 18 08 37.6 -0.2
NAX Nakhchivan 9.68 84 P Pn 18 08 47.4 +6.1
SNR=14
GOF Gofitskoye 9.69 47 *e*P Pn 18 08 37.3 -4.2
GOF pmax pmax
comp=Z,76nm,1.3s
BOLS Boljevac 9.75 304 *e*Pn Pn 18 08 42.6 +0.4
DGRG David-gareji 9.78 70 P Pn 18 08 46.9 +4.2
GANJ Ganja 10.37 76 P Pn 18 08 54.8 +4.0
SNR=11
BURAR Bucovina Array 10.49 329 ⇑*i*P Pn 18 08 53.0 +0.6
BUR08 Bucovina Ar. S 10.52 330 *e*P Pn 18 08 52.2 -0.6
BUR08 Bucovina Ar. S 10.52 330 *e*P Pn 18 08 52.1 -0.7
GRUS Gruza 10.58 303 *e*Pn Pn 18 08 51.8 -1.8
GRUS Gruza 10.58 303 P Pn 18 08 53.1 -0.5
BRDA Brd 10.99 78 P Pn 18 09 06.5 +7.2
SNR=7.6
SEKA Sheki 11.10 73 P Pn 18 09 05.0 +4.3
SNR=4.7
MAK Makhachkala 11.68 65 *e*P Pn 18 09 08.1 -0.6
MAK *e*S Sn 18 11 21.8 +2.5
MAK pmax pmax
comp=Z,360nm,1.5s
MAK MLR MLR
comp=Z,1μm,11.0s
TREB Trebinje 11.82 294 *e*Pn Pn 18 09 13.5 +2.9
GLBA Clilabad 11.93 83 P Pn 18 09 17.2 +5.1
SNR=5.2
TRPA Tarpa 12.04 324 ⇑*i*P Pn 18 09 13.4 -0.2
AKASG Malin Array Be 12.20 348 Pn Pn 18 09 11.9 -3.8
comp=Z,0.9nm,0.3s,baz=162,slow=13,SNR=14
AKASG LR LR 18 15 09.0
comp=Z,2μm,18.5s,baz=160,slow=44
AKASG Malin Array Be 12.20 348 *i* P Pn 18 09 13.5 -2.2
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKBB Malin Array Si 12.20 348 *e*P Pn 18 09 12.6 -3.1
UZH Uzhgorod 12.52 325 *e*P Pn 18 09 20.0 -0.1
UZH *e*S Sn 18 11 41.0 +1.3
UZH MLR MLR
comp=N,2μm,9.0s
UZH MLR MLR
comp=E,1μm,9.0s
UZH MLR MLR
comp=Z,2μm,9.0s
TIP Timpagrande 12.70 277 *e*P Pn 18 09 22.7 +0.1
comp=Z,39nm,1.3s
TIP Timpagrande 12.70 277 *e*P Pn 18 09 22.7 0.0
comp=Z,39nm,1.3s
LVV L'vov 12.75 333 *e*P Pn 18 09 18.5 -4.8
LVV *e*S Sn 18 11 37.9 -7.5
LVV MLR MLR
comp=N,1μm,14.4s
LVV MLR MLR
comp=Z,900nm,14.4s
LVV MLR MLR
comp=E,600nm,15.0s
VORD Divnogorie 12.92 18 *e*P Pn 18 09 27.1 +1.5
VORD pmax pmax
comp=Z,40nm,0.9s
VORD pmax pmax
comp=N,130nm,1.0s
VORD pmax pmax
comp=E,70nm,1.1s
PKSM Moragy 12.95 309 *e*Pn Pn 18 09 27.5 +1.5
PKSM Moragy 12.95 309 ⇑*i*P Pn 18 09 28.0 +2.0
PKSM Moragy 12.95 309 ⇑P Pn 18 09 28.1 +2.0
CRVS Cervenica-Dubn 13.10 324 *e*P Pn 18 09 28.3 +0.3
CRVS MLR MLR
comp=Z,700nm,16.2s
CRVS Cervenica-Dubn 13.10 324 *e*PN Pn 18 09 28.3 +0.3
CRVS *e* 18 09 35.0
KWP Kalwaria 13.11 329 *e*P Pn 18 09 28.2 +0.1
KWP Kalwaria 13.11 329 P Pn 18 09 32.4 +4.3
VSR Storozhevoye 13.12 17 *e*P Pn 18 09 29.1 +0.8
VSR pmax pmax
comp=N,80nm,1.2s
VSR pmax pmax
comp=Z,30nm,1.2s
VSR pmax pmax
comp=E,40nm,1.4s
PSZ Piszkesteto 13.20 318 *e*P Pn 18 09 28.4 -1.0
PSZ pmax pmax
comp=Z,29nm,1.4s
PSZ Piszkesteto 13.20 318 *e*P Pn 18 09 28.4 -1.0
comp=Z,29nm,1.4s
PSZ Piszkesteto 13.20 318 ⇓*e*P Pn 18 09 29.1 -0.3
PSZ Piszkesteto 13.20 318 *e*P Pn 18 09 28.4 -1.1
comp=Z,29nm,1.4s
CUC Castrocucco 13.40 280 *e*P Pn 18 09 34.1 +1.9
comp=Z,114nm,1.4s
CUC Castrocucco 13.40 280 *e*P Pn 18 09 34.1 +1.9
comp=Z,114nm,1.4s
BUD Budapest 13.41 315 ⇓*e*P Pn 18 09 35.0 +2.7
CEL Celeste 13.46 273 P Pn 18 09 37.5 +4.4
STHS Stebnicka Huta 13.57 325 *e*PN Pn 18 09 33.7 -0.7
STHS *e* 18 09 46.8
VOR Voronezh 13.61 16 P Pn 18 09 34.0 -1.0
VOR pmax pmax
comp=Z,100nm,1.2s
NIE Niedzica 13.99 323 *e*P Pn 18 09 42.0 +1.8
VYHS Vyhne 14.12 318 *e*P Pn 18 09 41.2 -0.7
VYHS MLR MLR
comp=Z,1μm,14.0s
VYHS Vyhne 14.12 318 *e*PN Pn 18 09 41.2 -0.7
KOLL Kolacno 14.39 317 *e*P Pn 18 09 55.6 +10
KOGS Kog 14.53 307 *e*P Pn 18 09 55.6 +8.0
BOJS Bojanci 14.80 303 *e*P Pn 18 09 57.0 +5.8
MIB Mutribah 14.81 123 *e*P Pn 18 09 50.0 -1.5
baz=123
MIB AMb AMb 18 09 57.8
comp=Z,48nm,1.8s,baz=123
SMOL Smolenice 14.88 316 *e*P Pn 18 09 59.8 +7.5
SMOL Smolenice 14.88 316 *e*P Pn 18 09 59.9 +7.6
ZST Bratislava 14.88 314 *e*P Pn 18 09 59.4 +7.1
ZST MLR MLR
comp=Z,2μm,14.1s
ZST Bratislava 14.88 314 *e*P Pn 18 09 59.4 +7.1
SOP Sopron 14.92 312 ⇓*e*P Pn 18 09 53.0 +0.1
JAVC Velka Javorina 14.95 317 P Pn 18 09 55.9 +2.6
NAY Al-Naaiem 15.12 125 *e*P Pn 18 09 54.0 -1.6
comp=Z,25nm,1.2s
NAY Al-Naaiem 15.12 125 *e*P Pn 18 09 54.0 -1.6
baz=125
NAY AMb AMb 18 10 05.0
comp=Z,25nm,1.2s,baz=125
UMR Umm Al-Rimmam 15.22 123 *e*P Pn 18 09 55.3 -1.7
comp=Z,70nm,1.5s
UMR Umm Al-Rimmam 15.22 123 *e*P Pn 18 09 55.3 -1.7
baz=123
UMR AMb AMb 18 10 03.2
comp=Z,70nm,1.5s,baz=123
OKC Ostrava-Krasne 15.31 321 *e*P Pn 18 09 58.7 +0.6
OKC *e*pP pP 18 10 04.1 -1.1
OKC AMS AMS 18 17 20.0
comp=Z,2μm,9.3s
OKC Ostrava-Krasne 15.31 321 *e*P Pn 18 09 58.7 +0.6
OKC *e* 18 10 04.1
ARSA Arzberg 15.33 309 ⇑*i*P Pn 18 10 03.5 +5.2
comp=Z,34nm,1.2s
ARSA Arzberg 15.33 309 P Pn 18 09 59.6 +1.3
CONA Conrad Observa 15.45 312 ⇑*i*P Pn 18 10 00.4 +0.5
comp=Z,9.4nm,1.0s
CSNA Conrad Observa 15.45 312 ⇑*i*P Pn 18 10 00.6 +0.6
comp=Z,10.0nm,1.0s
LJU Ljubljana 15.46 304 *e*P Pn 18 10 06.0 +5.9
RDF Al-Radifah 15.53 125 *e*P Pn 18 09 59.4 -1.7
KRUC Moravsky 15.75 316 P Pn 18 10 04.7 +0.9
VRAC Vranov 15.79 317 Pn Pn 18 10 05.0 +0.7
comp=Z,0.2nm,0.3s,baz=125,slow=13,SNR=18
VRAC Vranov 15.79 317 ⇑*i*P Pn 18 10 05.9 +1.6
VRAC Vranov 15.79 317 ⇑P Pn 18 10 06.0 +1.7
MNK Minsk 16.09 349 ⇓*e*P Pn 18 10 07.0 -1.2
MNK *e*S Sn 18 13 00.0 -6.6
MNK pmax pmax
comp=Z,670nm,1.0s
MNK pmax pmax
comp=E,270nm,1.2s
MNK pmax pmax
comp=N,620nm,1.0s
MNK MLR MLR
comp=Z,4μm,16.0s
MNK MLR MLR
comp=E,5μm,12.0s
PTCC Patocco-Chiusa 16.35 304 P Pn 18 10 16.0 +4.4
comp=E,27nm,0.9s
MOA Molln 16.36 310 ⇑*i*P Pn 18 10 15.4 +3.7
comp=E,24nm,0.8s,SNR=20
MOA Molln 16.36 310 P Pn 18 10 15.3 +3.6
TREC Trest 16.38 315 AMS AMS 18 17 50.0
comp=E,2μm,11.2s
GMNA Gemona 16.38 303 P Pn 18 10 16.7 +4.7
comp=E,242nm,1.1s
OBN Obninsk 16.48 7 ⇓*i*P Pn 18 10 11.0 -2.1
OBN pmax pmax
comp=Z,114nm,1.7s
OBN MLR MLR
comp=Z,1μm,22.0s
OBN Obninsk 16.48 7 *e*P Pn 18 10 10.3 -2.8
comp=Z,70nm,1.3s
DPC Dobruska-Polom 16.55 320 *e*P Pn 18 10 14.5 +0.4
DPC AMS AMS 18 17 50.0
comp=Z,3μm,11.1s
KBA Koelnbreinsper 16.61 306 ⇓*i*pP pP 18 10 17.0 -2.6
comp=Z,79nm,1.3s,SNR=9.2
SUW Suwalki 16.64 339 *e*P Pn 18 10 17.6 +2.4
SUW Suwalki 16.64 339 *e*P Pn 18 10 11.2 -3.9
SUW pmax pmax
comp=Z,285nm,0.9s
SUW Suwalki 16.64 339 *e*P Pn 18 10 11.2 -4.0
comp=Z,285nm,0.9s
SUW *e* 18 10 18.4
UPC Upice 16.80 320 *e*P Pn 18 10 18.0 +0.7
UPC *ex* x 18 10 28.2
KSP Ksiaz 16.87 321 *e*P Pn 18 10 19.1 +0.9
KSP Ksiaz 16.87 321 ⇑*e*P Pn 18 10 18.4 +0.3
KSP *e*pP pP 18 10 22.0 -0.4
VMG Vicchio 16.94 295 P Pn 18 10 23.0 +4.0
ABTA Abfaltersbach 17.02 304 ⇑*i*P Pn 18 10 23.3 +3.3
comp=Z,7.9nm,0.9s
IDID Didziasalis 17.05 348 *e*P Pn 18 10 20.2 -0.2
GEC2 GERESS Array S 17.16 312 *e*P Pn 18 10 22.8 +1.1
GEC2 pmax pmax
comp=Z,29nm,1.1s
GEC2 GERESS Array S 17.16 312 *e*P Pn 18 10 22.8 +1.1
comp=Z,29nm,1.1s
GERES GERESS Array B 17.16 312 P Pn 18 10 21.4 -0.3
comp=Z,0.3nm,0.3s,baz=119,slow=11,SNR=29
GERES LR LR 18 17 10.3
comp=Z,764nm,19.6s,baz=300,slow=38
MOS Moscow 17.21 9 *e*P Pn 18 10 18.8 -3.5
MOS *e*S Sn 18 13 26.9 -6.8
MOS pmax pmax
comp=Z,250nm,1.5s
MOS MLR MLR
comp=Z,900nm,17.0s
RJOB Jochberg 17.21 308 *e*P Pn 18 10 23.9 +1.5
comp=Z,24nm,1.2s
PRU Pruhonice 17.27 316 *e*P Pn 18 10 23.2 0.0
PRU *ex* x 18 10 31.8
PRU AMS AMS 18 18 10.0
comp=Z,1μm,10.4s
PRU Pruhonice 17.27 316 *e*P Pn 18 10 23.2 0.0
PRU *e* 18 10 31.8
CTI Castel Tesino 17.36 302 P Pn 18 10 27.2 +2.9
CTI pmax pmax
comp=Z,38nm,1.3s
CTI Castel Tesino 17.36 302 P Pn 18 10 27.2 +2.9
comp=Z,38nm,1.3s
KHC Kasperske Hory 17.36 313 *e*P Pn 18 10 23.1 -1.2
KHC *e*pP pP 18 10 27.0 -0.9
KHC AMS AMS 18 19 10.0
comp=Z,1μm,9.9s
KHC Kasperske Hory 17.36 313 *e*P Pn 18 10 23.1 -1.2
KHC *e* 18 10 27.0
ISAL Salakas 17.40 347 *e*P Pn 18 10 21.9 -2.9
PVCC Panska Ves 17.56 318 *e*P Pn 18 10 28.0 +1.2
PVCC *ex* x 18 10 36.9
PVCC AMS AMS 18 18 30.0
comp=Z,3μm,10.9s
PVCC Panska Ves 17.56 318 *e*P Pn 18 10 28.0 +1.2
PVCC *e* 18 10 36.9
WTTA Wattenberg 17.76 305 ⇑*i*P Pn 18 10 30.8 +1.6
comp=Z,10nm,0.8s
WET Wettzell 17.77 312 *e*P Pn 18 10 29.0 -0.4
WET pmax pmax
comp=Z,80nm,1.8s
WET Wettzell 17.77 312 *e*P Pn 18 10 29.0 -0.4
comp=Z,80nm,1.8s
BRG Berggiesshubel 18.09 318 *e*P Pn 18 10 33.8 +0.6
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG MLR MLR
comp=N,1μm,13.0s
BRG MLR MLR
comp=E,849nm,10.9s
BRG MLR MLR
comp=Z,2μm,11.1s
BRG Berggiesshubel 18.09 318 *e*P Pn 18 10 33.5 +0.3
comp=Z,16nm,1.1s
BRG Berggiesshubel 18.09 318 *e*P Pn 18 10 33.8 +0.6
comp=Z,16nm,1.1s
BRG
comp=N,2μm,13.0s
BRG
comp=E,1μm,10.9s
BRG
comp=Z,3μm,11.1s
GKP Gorka Klasztor 18.10 328 *e*P Pn 18 10 31.6 -1.8
MOTA Moosalm 18.13 305 ⇓*i*P Pn 18 10 35.4 +1.6
comp=Z,8.0nm,0.8s,SNR=12
MOTA Moosalm 18.13 305 P Pn 18 10 36.2 +2.4
FETA Feichten 18.26 304 *i* P Pn 18 10 37.1 +1.7
comp=Z,17nm,1.0s,SNR=22
FUR Furstenfeldbru 18.32 308 *e*P Pn 18 10 37.3 +1.2
FUR pmax pmax
comp=Z,120nm,1.5s
FUR Furstenfeldbru 18.32 308 *e*P Pn 18 10 37.3 +1.2
comp=Z,120nm,1.5s
FBE Freiberg 18.42 317 *e*P Pn 18 10 38.4 +1.1
comp=Z,35nm,1.1s
ROTZ Rotzenmuhle 18.46 313 *e*P Pn 18 10 37.5 -0.3
comp=Z,15nm,1.2s
NKC Novy Kostel 18.55 315 *e*P Pn 18 10 38.7 -0.2
NKC *e*pP pP 18 10 46.4 +5.4
NKC AMS AMS 18 18 40.0
comp=Z,1μm,11.3s
NKC Novy Kostel 18.55 315 *e*P Pn 18 10 38.7 -0.2
NKC *e* 18 10 46.4
PGF Pioggiola 18.62 289 *e*P Pn 18 10 39.5 -0.3
comp=Z,82nm,1.2s
PGF Pioggiola 18.62 289 *e*P Pn 18 10 39.5 -0.3
PGF pmax pmax
comp=Z,41nm,1.2s
PGF Pioggiola 18.62 289 *e*P Pn 18 10 39.5 -0.3
comp=Z,41nm,1.2s
TANN Tannenbergstha 18.63 315 *e*P Pn 18 10 40.2 +0.3
comp=Z,60nm,2.2s
GUNZ Gunzen 18.68 315 *e*P Pn 18 10 41.1 +0.6
comp=Z,28nm,1.1s
WERD Werda 18.74 315 *e*P Pn 18 10 41.1 -0.1
comp=Z,20nm,1.1s
DAVOX Davos/Dischmat 18.74 303 P Pn 18 10 42.2 +0.9
comp=Z,0.7nm,0.3s,baz=138,slow=5.9,SNR=13
DAVOX LR LR 18 17 43.7
comp=Z,834nm,20.3s,baz=102,slow=36
DAVOS Davos 18.82 303 P Pn 18 10 42.2 0.0
CLL Collm 18.82 318 *i* P Pn 18 10 42.1 -0.1
CLL pmax pmax
comp=Z,34nm,1.3s
CLL MLR MLR
comp=Z,3μm,14.3s
CLL Collm 18.82 318 *e*P Pn 18 10 41.9 -0.3
comp=Z,34nm,1.3s

CLL Collm 18.82 318 *i* sP sP 18 10 42.1 -2.9
comp=Z,34nm,1.3s
CLL *i* PP 18 10 52.9
comp=Z,37nm,1.3s
CLL *e*SS 18 14 24.0
UBR Ueberruh 18.88 305 P **Pn 18 10 44.2 +1.3**
DAVA Damuels 18.89 304 *i* P **Pn 18 10 43.7 +0.6**
comp=Z,25nm,0.7s,SNR=12
DAVA Damuels 18.89 304 P **Pn 18 10 43.6 +0.5**
GRA1 Grafenberg Arr 18.99 312 *e*P **Pn 18 10 43.3 -0.9**
comp=Z,34nm,1.4s
GRF Grafenberg Arr 18.99 312 *e*P **Pn 18 10 43.3 -0.9**
GRF pmax pmax
comp=Z,34nm,1.4s
GRF MLR MLR
comp=Z,500nm,21.9s
GRF Grafenberg Arr 18.99 312 *e*P **Pn 18 10 43.3 -0.9**
comp=Z,34nm,1.4s
GRF *e*L 18 18 05.7
comp=Z,506nm,21.9s
TUE Stuetta 19.01 301 *e*P **Pn 18 10 45.5 +1.0**
comp=Z,28nm,1.0s
TUE Stuetta 19.01 301 *e*P **Pn 18 10 45.5 +1.0**
comp=Z,28nm,1.0s
RUE Ruedersdorf 19.12 322 *e*P **Pn 18 10 44.7 -1.1**
comp=Z,404nm,2.3s
RUE Ruedersdorf 19.12 322 *e*P **Pn 18 10 45.2 -0.6**
comp=Z,166nm,1.5s
RUE Ruedersdorf 19.12 322 *e*P **Pn 18 10 45.2 -0.5**
comp=Z,166nm,1.5s
KEST Kesra 19.12 268 P **Pn 18 10 46.4 +0.5**
comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=6.5
KEST LR LR 18 19 08.2
comp=Z,339nm,18.3s,baz=240,slow=40
MOX Moxa 19.22 315 *e*P **Pn 18 10 45.9 -1.1**
comp=Z,69nm,1.9s
MOX
comp=Z,1μm,14.0s
MOX Moxa 19.22 315 *e*P **Pn 18 10 45.9 -1.1**
MOX pmax pmax
comp=Z,69nm,1.9s
MOX MLR MLR
comp=Z,1μm,14.0s
MOX Moxa 19.22 315 *e*P **Pn 18 10 46.7 -0.3**
comp=Z,102nm,2.1s
VAI Varese 19.25 299 P **Pn 18 10 47.6 +0.1**
FIN Finale Ligure 19.35 294 P **Pn 18 10 47.2 -1.5**
SISB Singen-Schiene 19.61 305 P **Pn 18 10 51.6 -0.1**
ORO Oropa 19.74 298 P **Pn 18 10 52.0 -1.3**
SAOF Saorge 19.79 293 *e*P **Pn 18 10 52.5 -1.4**
STU Stuttgart 19.83 308 *e*P **Pn 18 10 52.9 -1.4**
STU pmax pmax
comp=Z,53nm,0.9s
STU Stuttgart 19.83 308 *e*P **Pn 18 10 53.0 -1.3**
comp=Z,121nm,1.3s
STU Stuttgart 19.83 308 *e*P **Pn 18 10 52.9 -1.4**
comp=Z,53nm,0.9s
SPAK Spaichingen-Ko 19.86 306 *e*P **Pn 18 10 54.0 -0.6**
SBF Sospel 19.86 293 *e*P **Pn 18 10 53.4 -1.4**
comp=Z,120nm,1.0s
SBF Sospel 19.86 293 *e*P **Pn 18 10 53.4 -1.4**
SBF pmax pmax
comp=Z,60nm,1.0s
SBF Sospel 19.86 293 *e*P **Pn 18 10 53.4 -1.4**
comp=Z,60nm,1.0s
LUCF Luceram 19.93 293 *e*P **Pn 18 10 52.8 -2.8**
TOUF Mont Tournerai 20.02 293 *e*P **P 18 10 55.4 +0.6**
LBG Lerchenberg 20.04 307 P **P 18 10 56.1 +1.0**
MVIF Mont Vial 20.07 293 *e*P **P 18 10 55.9 +0.4**
VSU Vasula 20.09 350 *e*P **P 18 10 54.1 -1.4**
VSU pmax pmax
comp=Z,243nm,1.7s
UBBA Unterbreizbach 20.20 314 *e*P **P 18 10 57.6 +0.8**
comp=Z,97nm,1.5s
BFO Black Forest 20.22 306 *e*P **P 18 10 57.8 +0.8**
BFO pmax pmax
comp=Z,190nm,1.2s
BFO Black Forest 20.22 306 *e*P **P 18 10 57.8 +0.8**
comp=Z,190nm,1.2s
CALN Calern 20.25 292 *e*P **P 18 10 57.9 +0.5**
FELD Feldberg im Sc 20.28 305 *e*P **P 18 10 58.1 +0.4**
BSD Bornholm Skovb 20.38 329 *i* P **P 18 10 57.8 -0.9**
BSD pmax pmax
comp=Z,60nm,0.9s
BSD MLR MLR
comp=Z,1μm,17.0s,MS4.4
BSD Bornholm Skovb 20.38 329 *i* P **P 18 10 57.8 -0.9**
comp=Z,60nm,0.9s
BSD
comp=Z,1μm,17.0s
TOD Tromm 20.38 310 *e*P **P 18 11 01.0 +2.2**
FRF La Foret Royal 20.41 292 *e*P **P 18 10 59.2 +0.1**
comp=Z,43nm,1.0s
FRF La Foret Royal 20.41 292 *e*P **P 18 10 59.2 +0.1**
FRF pmax pmax
comp=Z,21nm,1.0s
FRF La Foret Royal 20.41 292 *e*P **P 18 10 59.2 +0.1**
comp=Z,21nm,1.0s
MBDF Montbardon 20.44 295 *e*P **P 18 10 59.2 -0.3**
comp=Z,106nm,1.0s
MBDF Montbardon 20.44 295 *e*P **P 18 10 59.2 -0.3**
MBDF pmax pmax
comp=Z,53nm,1.0s
MBDF Montbardon 20.44 295 *e*P **P 18 10 59.2 -0.3**
comp=Z,53nm,1.0s
BBS Basel-Blauen 20.49 303 *e*P **P 18 10 59.6 -0.4**
LMR La Mourre 20.49 291 *e*P **P 18 10 59.9 -0.1**
comp=Z,59nm,1.2s
LMR La Mourre 20.49 291 *e*P **P 18 10 59.9 -0.1**
LMR pmax pmax
comp=Z,30nm,1.2s
LMR La Mourre 20.49 291 *e*P **P 18 10 59.9 -0.1**
comp=Z,30nm,1.2s
CLZ Clausthal 20.49 317 *e*P **P 18 11 00.3 +0.3**
CLZ pmax pmax
comp=Z,96nm,1.2s
CLZ Clausthal 20.49 317 *e*P **P 18 11 00.3 +0.3**
comp=Z,96nm,1.2s
BNI Bardonecchia 20.55 296 *e*P **P 18 11 00.9 +0.2**
BNI pmax pmax
comp=Z,74nm,1.1s
BNI Bardonecchia 20.55 296 *e*P **P 18 11 00.9 +0.2**
comp=Z,74nm,1.1s
BNI Bardonecchia 20.55 296 *e*P **P 18 11 00.9 +0.2**
comp=Z,74nm,1.1s
LPG La Plagne 20.57 297 *e*P **P 18 11 01.6 +0.7**
comp=Z,110nm,1.0s
LPG La Plagne 20.57 297 *e*P **P 18 11 01.6 +0.7**
LPG pmax pmax
comp=Z,55nm,1.0s
LPG La Plagne 20.57 297 *e*P **P 18 11 01.6 +0.7**
comp=Z,55nm,1.0s
LPL La Plagne 20.59 297 *e*P **P 18 11 01.6 +0.6**
comp=Z,104nm,1.2s
LPL La Plagne 20.59 297 *e*P **P 18 11 01.6 +0.6**
LPL pmax pmax
comp=Z,52nm,1.2s
LPL La Plagne 20.59 297 *e*P **P 18 11 01.6 +0.6**
comp=Z,52nm,1.2s
RGN Rugen 20.66 326 *e*P **P 18 11 01.5 -0.2**
comp=Z,263nm,1.2s
RSL Roselend 20.69 298 *e*P **P 18 11 02.3 +0.1**
KTD Kalmit 20.71 309 *e*P **P 18 11 02.7 +0.4**
LANF Langenberg 20.76 308 *e*P **P 18 11 03.3 +0.4**
TNS Taunus Mts 20.84 311 *e*P **P 18 11 04.0 +0.3**
MOF Molkenrain 20.84 304 *e*P **P 18 11 04.0 +0.3**
LOMF Lomont 20.91 303 *e*P **P 18 11 04.9 +0.4**
LOMF 18 11 08.7
CDF Champ du Feu 20.91 306 *e*P **P 18 11 05.1 +0.6**
comp=Z,150nm,1.2s
CDF Champ du Feu 20.91 306 *e*P **P 18 11 05.1 +0.6**
CDF pmax pmax
comp=Z,75nm,1.2s
CDF Champ du Feu 20.91 306 *e*P **P 18 11 05.1 +0.6**
comp=Z,75nm,1.2s
ECH Echery 20.93 305 *e*P **P 18 11 05.5 +0.8**
ECH Echery 20.93 305 *e*P **P 18 11 05.1 +0.4**
ECH pmax pmax
comp=Z,85nm,1.2s
ECH Echery 20.93 305 *e*P **P 18 11 05.0 +0.4**
comp=Z,84nm,1.2s
NRDL Niedersach Rie 20.97 318 *e*P **P 18 11 05.1 0.0**
comp=Z,55nm,1.2s
HINF Hinteralfeld 21.01 304 *e*P **P 18 11 05.2 -0.4**
comp=Z,74nm,1.2s,mb4.6
HINF Hinteralfeld 21.01 304 *e*P **P 18 11 05.2 -0.4**
HINF pmax pmax
comp=Z,37nm,1.2s,mb4.6
HINF Hinteralfeld 21.01 304 *e*P **P 18 11 05.2 -0.4**
comp=Z,37nm,1.2s,mb4.6
ORIF Oris-en-Rattie 21.09 296 *e*P **P 18 11 07.1 +0.6**
comp=Z,44nm,1.0s,mb4.4
ORIF *e*MLR MLR
comp=Z,1μm,21.0s,MS4.0
ORIF Oris-en-Rattie 21.09 296 *e*P **P 18 11 07.1 +0.6**
ORIF pmax pmax
comp=Z,22nm,1.0s,mb4.4
ORIF Oris-en-Rattie 21.09 296 *e*P **P 18 11 07.1 +0.6**
comp=Z,22nm,1.0s,mb4.4
VILF Villemus 21.10 293 *e*P **P 18 11 07.0 +0.4**
AKTK Aktyubinsk 21.11 48 P **P 18 11 06.4 -0.2**
AKTK Aktyubinsk 21.11 48 P **P 18 11 06.4 -0.2**
AKTO Aktyubinsk 21.11 48 P **P 18 11 06.4 -0.2**
comp=Z,15nm,0.6s,mb4.5,baz=248,slow=11,SNR=45
AKTO Aktyubinsk 21.11 48 P **P 18 11 06.4 -0.2**
AKTO pmax pmax
comp=Z,15nm,0.6s,mb4.5
SMRF Simiane la Rot 21.21 293 *e*P **P 18 11 08.2 +0.4**
comp=Z,66nm,1.3s,mb4.5
SMRF Simiane la Rot 21.21 293 *e*P **P 18 11 08.2 +0.4**
comp=Z,33nm,1.3s,mb4.5
CABF La Chapelle 21.23 300 *e*P **P 18 11 07.9 -0.1**
comp=Z,175nm,1.2s,mb5.0
CABF La Chapelle 21.23 300 *e*P **P 18 11 07.9 -0.1**
CABF pmax pmax
comp=Z,88nm,1.2s,mb5.0
CABF La Chapelle 21.23 300 *e*P **P 18 11 07.9 -0.1**
comp=Z,88nm,1.2s,mb5.0
ABH Alteburg 21.24 310 *e*P **P 18 11 11.1 +3.1**
HAU Haudompre 21.39 304 *e*P **P 18 11 10.8 +1.1**
comp=Z,148nm,1.4s,mb4.8
HAU *e*MLR MLR
comp=Z,425nm,17.0s,MS3.6
HAU Haudompre 21.39 304 *e*P **P 18 11 10.8 +1.1**
HAU pmax pmax
comp=Z,74nm,1.4s,mb4.8
HAU MLR MLR
comp=Z,430nm,17.0s,MS3.9
HAU Haudompre 21.39 304 *e*P **P 18 11 10.8 +1.1**
comp=Z,74nm,1.4s,mb4.8
HAU LR LR
comp=Z,430nm,17.0s,MS3.9
BSEG Bad Segeberg 21.66 322 *e*P **P 18 11 11.8 -0.7**
BSEG pmax pmax
comp=Z,45nm,1.1s,mb4.8
BSEG Bad Segeberg 21.66 322 *e*P **P 18 11 11.8 -0.7**
comp=Z,45nm,1.1s,mb4.8
THEF They Montfort 21.68 305 *e*P **P 18 11 14.8 +2.0**
VIVF Saint-Julien-l 21.94 295 *e*P **P 18 11 15.8 +0.2**
comp=Z,67nm,1.2s,mb4.7
VIVF Saint-Julien-l 21.94 295 *e*P **P 18 11 15.8 +0.2**
VIVF pmax pmax
comp=Z,34nm,1.2s,mb4.7
VIVF Saint-Julien-l 21.94 295 *e*P **P 18 11 15.8 +0.2**
comp=Z,34nm,1.2s,mb4.7
WLF Walferdange 22.01 308 P **P 18 11 16.3 0.0**
WLF Walferdange 22.01 308 *e*P **P 18 11 15.5 -0.8**
comp=Z,71nm,1.8s,mb4.8
WLF Walferdange 22.01 308 P **P 18 11 16.2 -0.1**
IBBN Ibbenburen 22.13 316 *e*P **P 18 11 17.3 -0.3**
comp=Z,42nm,1.2s,mb4.7
MEZF Maizieres J'vi 22.36 305 *e*P **P 18 11 21.2 +1.2**
comp=Z,168nm,1.2s,mb5.0
MEZF Maizieres J'vi 22.36 305 *e*P **P 18 11 21.2 +1.2**
comp=Z,84nm,1.2s,mb5.0
MEM Membach 22.43 311 P **P 18 11 22.1 +1.4**
comp=Z,13nm,1.1s,mb4.3
MEM Membach 22.43 311 P **P 18 11 22.1 +1.3**
comp=Z,13nm,1.1s,mb4.3
LASF Ste Croix 22.46 293 *e*P **P 18 11 20.8 -0.4**
comp=Z,67nm,1.3s,mb4.6
LASF Ste Croix 22.46 293 *e*P **P 18 11 20.8 -0.4**
comp=Z,34nm,1.3s,mb4.6
WTSB Winterswijk 22.51 314 *e*P **P 18 11 21.6 0.0**
comp=Z,56nm,1.9s,mb4.7
HGN Heimansgroeve 22.53 311 *e*P **P 18 11 23.6 +1.8**
comp=Z,18nm,2.0s,mb4.2
SMF Signal de Mont 22.76 300 *e*P **P 18 11 23.5 -0.8**
comp=Z,152nm,1.1s,mb5.0
SMF Signal de Mont 22.76 300 *e*P **P 18 11 23.5 -0.8**
SMF pmax pmax
comp=Z,76nm,1.1s,mb5.0
SMF Signal de Mont 22.76 300 *e*P **P 18 11 23.5 -0.8**
comp=Z,76nm,1.1s,mb5.0
BCLA Clavier 22.78 310 P **P 18 11 25.6 +1.1**
BCLA Clavier 22.78 310 P **P 18 11 25.5 +1.0**
PLDF La Plantade 22.81 298 *e*P **P 18 11 24.3 -0.6**
LOR Lormes 22.86 301 *e*P **P 18 11 24.6 -0.8**
comp=Z,133nm,1.1s,mb5.0
LOR *e*MLR MLR
comp=Z,934nm,18.2s,MS4.0
LOR Lormes 22.86 301 *e*P **P 18 11 24.6 -0.8**
LOR pmax pmax
comp=Z,67nm,1.1s,mb5.0
LOR MLR MLR
comp=Z,930nm,18.3s,MS4.3
LOR Lormes 22.86 301 *e*P **P 18 11 24.6 -0.8**
comp=Z,67nm,1.1s,mb5.0
LOR LR LR
comp=Z,930nm,18.3s,MS4.3
WIT Witteveen 22.95 316 *e*P **P 18 11 26.9 +0.6**
GIVF Givet 22.97 309 *e*P **P 18 11 26.2 -0.3**
LBL Lubilhac 22.98 296 *e*P **P 18 11 25.2 -1.5**
SSF Saint Saulge 23.06 301 *e*P **P 18 11 26.4 -1.1**
comp=Z,62nm,1.1s,mb4.6
SSF Saint Saulge 23.06 301 *e*P **P 18 11 26.4 -1.1**
SSF pmax pmax
comp=Z,31nm,1.1s,mb4.7
SSF Saint Saulge 23.06 301 *e*P **P 18 11 26.4 -1.1**
comp=Z,31nm,1.1s,mb4.6
DOU Dourbes 23.10 309 P **P 18 11 27.2 -0.7**
comp=Z,12nm,1.6s,mb4.1
DOU Dourbes 23.10 309 P **P 18 11 27.2 -0.7**
comp=Z,12nm,1.6s,mb4.1
AVF Avril sur Loir 23.11 300 *e*P **P 18 11 26.6 -1.5**
comp=Z,93nm,0.9s,mb4.9
AVF Avril sur Loir 23.11 300 *e*P **P 18 11 26.6 -1.5**
AVF pmax pmax
comp=Z,47nm,0.9s,mb4.9
AVF Avril sur Loir 23.11 300 *e*P **P 18 11 26.6 -1.5**
comp=Z,46nm,0.9s,mb4.9
AGO Saint Agoulin 23.16 298 *e*P **P 18 11 27.1 -1.4**
BAIF Baives 23.33 308 *e*P **P 18 11 29.2 -1.1**
BGF Bois d'Agland 23.42 299 *e*P **P 18 11 30.3 -1.0**
comp=Z,38nm,0.9s,mb4.5
BGF Bois d'Agland 23.42 299 *e*P **P 18 11 30.3 -1.0**
BGF pmax pmax
comp=Z,19nm,0.9s,mb4.5
BGF Bois d'Agland 23.42 299 *e*P **P 18 11 30.3 -1.0**
comp=Z,19nm,0.9s,mb4.5
SNF Seneffe 23.42 309 P **P 18 11 31.6 +0.3**
UCC Uccle 23.47 310 P **P 18 11 31.9 +0.1**
UCC Uccle 23.47 310 P **P 18 11 31.9 +0.1**
MTLF Montolieu 23.62 291 *e*P **P 18 11 31.7 -1.6**
comp=Z,20nm,1.1s,mb4.2
MTLF Montolieu 23.62 291 *e*P **P 18 11 31.7 -1.6**
MTLF pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
MTLF Montolieu 23.62 291 *e*P **P 18 11 31.7 -1.6**
comp=Z,9.9nm,1.1s,mb4.2
HYF Humbligny 23.68 301 *e*P **P 18 11 33.6 -0.2**
KAF Kangasniemi 23.70 352 *e*p **P 18 11 33.4 -0.4**
comp=Z,77nm,1.0s,mb5.1
KAF Kangasniemi 23.70 352 *e*P **P 18 11 33.4 -0.4**
KAF pmax pmax
comp=Z,77nm,1.0s,mb5.1
CAF Calviac 23.79 295 *e*P **P 18 11 34.3 -0.6**
comp=Z,44nm,1.2s,mb4.5
CAF Calviac 23.79 295 *e*P **P 18 11 34.3 -0.6**
CAF pmax pmax
comp=Z,22nm,1.2s,mb4.5
CAF Calviac 23.79 295 *e*P **P 18 11 34.3 -0.6**
comp=Z,22nm,1.2s,mb4.5
TCF Toulx Ste Croi 23.82 298 *e*P **P 18 11 34.7 -0.5**
comp=Z,80nm,1.4s,mb4.7
TCF Toulx Ste Croi 23.82 298 *e*P **P 18 11 34.7 -0.5**
TCF pmax pmax
comp=Z,40nm,1.4s,mb4.7
TCF Toulx Ste Croi 23.82 298 *e*P **P 18 11 34.7 -0.5**
comp=Z,40nm,1.4s,mb4.7
JOF Joensuu 24.16 358 *e*p **P 18 11 36.9 -1.2**
comp=Z,17nm,0.8s,mb4.5
JOF Joensuu 24.16 358 *e*P **P 18 11 36.9 -1.2**
JOF pmax pmax
comp=Z,17nm,0.8s,mb4.5
RJF Les Rejaudoux 24.21 296 *e*P **P 18 11 38.9 +0.2**
comp=Z,51nm,1.3s,mb4.5
RJF *e*MLR MLR
comp=Z,773nm,19.2s,MS3.9
RJF Les Rejaudoux 24.21 296 *e*P **P 18 11 38.9 +0.2**
RJF pmax pmax
comp=Z,25nm,1.3s,mb4.5
RJF MLR MLR
comp=Z,770nm,19.3s,MS4.2
RJF Les Rejaudoux 24.21 296 *e*P **P 18 11 38.9 +0.2**
comp=Z,26nm,1.3s,mb4.5
RJF LR LR
comp=Z,770nm,19.3s,MS4.2
ARU Arti 24.39 35*c* *i*P **P 18 11 40.0 -0.2**
ARU *e* 18 12 12.7
ARU *e*S **S 18 16 01.2 +1.4**
ARU pmax pmax
comp=Z,62nm,1.7s,mb4.8
ARU Arti 24.39 35 *e*P **P 18 11 40.1 -0.1**
comp=Z,62nm,1.4s,mb4.8
ARU Arti 24.39 35 *e*P **P 18 11 40.1 -0.1**
comp=Z,62nm,1.4s,mb4.8
HFS Hagfors 24.59 336 P **P 18 11 42.5 +0.4**
comp=Z,29nm,0.9s,mb4.8,baz=138,slow=9.2,SNR=19
HFS LR LR 18 22 43.8
comp=Z,1μm,18.3s,MS4.4,baz=5.0,slow=40
HFS Hagfors 24.59 336 P **P 18 11 42.5 +0.4**
HFS pmax pmax
comp=Z,29nm,1.0s
HFS MLR MLR
comp=Z,1μm,18.3s
LFF La Frestale 24.73 295 *e*P **P 18 11 42.9 -0.6**
comp=Z,86nm,1.3s,mb4.8
LFF La Frestale 24.73 295 *e*P **P 18 11 42.9 -0.6**
LFF pmax pmax
comp=Z,43nm,1.3s,mb4.8
LFF La Frestale 24.73 295 *e*P **P 18 11 42.9 -0.6**
comp=Z,43nm,1.3s,mb4.8
EPF Esparros 25.00 290 *e*P **P 18 11 43.8 -2.1**
comp=Z,61nm,1.8s,mb4.5
EPF Esparros 25.00 290 *e*P **P 18 11 43.8 -2.1**
EPF pmax pmax
comp=Z,31nm,1.8s,mb4.5
EPF Esparros 25.00 290 *e*P **P 18 11 43.8 -2.1**
comp=Z,31nm,1.8s,mb4.5
MFF Saint Martin d 25.48 299 *e*P **P 18 11 49.1 -1.1**
comp=Z,102nm,1.1s,mb5.0
MFF Saint Martin d 25.48 299 *e*P **P 18 11 49.1 -1.1**
MFF pmax pmax
comp=Z,51nm,1.1s,mb5.0
MFF Saint Martin d 25.48 299 *e*P **P 18 11 49.1 -1.1**
comp=Z,51nm,1.1s,mb5.0
SVE Sverdlovsk 25.56 36⇓*e*P **P 18 11 51.8 +1.0**
SVE pmax pmax
comp=Z,62nm,1.2s,mb5.0
SVE MLR MLR
comp=Z,751nm,14.0s,MS4.4
KONO Kongsberg 25.62 332 *e*P **P 18 11 49.9 -1.5**
KONO Kongsberg 25.62 332 *e*P **P 18 11 53.0 +1.6**
comp=Z,75nm,1.2s,mb5.1
KONO Kongsberg 25.62 332 *e*P **P 18 11 53.0 +1.5**
comp=Z,75nm,1.2s,mb5.1
ETSF Etsaut 25.66 290 *e*P **P 18 11 52.1 +0.2**
comp=Z,33nm,1.3s,mb4.4
ETSF Etsaut 25.66 290 *e*P **P 18 11 52.1 +0.2**
ETSF pmax pmax
comp=Z,16nm,1.3s,mb4.4
ETSF Etsaut 25.66 290 *e*P **P 18 11 52.1 +0.2**
comp=Z,16nm,1.3s,mb4.4
LDF La Druitiere 25.73 303 *e*P **P 18 11 52.1 -0.4**
comp=Z,19nm,0.8s,mb4.4
LDF La Druitiere 25.73 303 *e*P **P 18 11 52.1 -0.4**
LDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
LDF La Druitiere 25.73 303 *e*P **P 18 11 52.1 -0.4**
comp=Z,9.6nm,0.8s,mb4.4
FLN La Foliniere 26.00 303 *e*P **P 18 11 55.0 +0.1**
comp=Z,16nm,0.7s,mb4.3
FLN La Foliniere 26.00 303 *e*P **P 18 11 55.0 +0.1**
FLN pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
FLN La Foliniere 26.00 303 *e*P **P 18 11 55.0 +0.1**
comp=Z,8.1nm,0.7s,mb4.3
NAO01 NORSAR Array S 26.04 335 *e*P **P 18 11 55.7 +0.5**
comp=Z,20nm,1.0s,mb4.6
NAO01 NORSAR Array S 26.04 335 *e*P **P 18 11 55.7 +0.6**
comp=Z,20nm,1.0s,mb4.6
NB2 NORSAR Subarra 26.08 336 P **P 18 11 55.4 -0.1**
comp=Z,23nm,1.1s,mb4.6,baz=139,slow=9.3
NOA NORSAR Array B 26.08 336 P **P 18 11 55.1 -0.4**
comp=Z,9.2nm,0.9s,mb4.3,baz=136,slow=9.3,SNR=12
NOA LR LR 18 23 29.2
comp=Z,710nm,19.9s,MS4.2,baz=150,slow=40
NOA NORSAR Array B 26.08 336 P **P 18 11 55.1 -0.4**
NOA pmax pmax
comp=Z,9.0nm,0.9s
NOA MLR MLR
comp=Z,710nm,19.9s
SJPF Ste Jean 26.14 291 *e*P **P 18 11 55.9 -0.4**
comp=Z,40nm,1.3s,mb4.5
SJPF Ste Jean 26.14 291 *e*P **P 18 11 55.9 -0.4**
SJPF pmax pmax
comp=Z,20nm,1.3s,mb4.5
SJPF Ste Jean 26.14 291 *e*P **P 18 11 55.9 -0.4**
comp=Z,20nm,1.3s,mb4.5
GRR Gorron 26.18 303 *e*P **P 18 11 55.5 -1.1**
comp=Z,64nm,0.8s,mb4.9
GRR Gorron 26.18 303 *e*P **P 18 11 55.5 -1.1**
GRR pmax pmax
comp=Z,32nm,0.8s,mb4.9
GRR Gorron 26.18 303 *e*P **P 18 11 55.5 -1.1**
comp=Z,32nm,0.8s,mb4.9
SGMF Saint Gilles 27.29 302 *e*P **P 18 12 05.2 -1.4**
comp=Z,275nm,1.6s,mb5.2
SGMF Saint Gilles 27.29 302 *e*P **P 18 12 05.2 -1.4**
SGMF pmax pmax
comp=Z,138nm,1.6s,mb5.2
SGMF Saint Gilles 27.29 302 *e*P **P 18 12 05.2 -1.4**
comp=Z,138nm,1.6s,mb5.2
QUIF Quistinic 27.66 301 *e*P **P 18 12 08.8 -1.1**
comp=Z,168nm,1.7s,mb5.1
QUIF Quistinic 27.66 301 *e*P **P 18 12 08.8 -1.1**
QUIF pmax pmax
comp=Z,84nm,1.7s,mb5.1
QUIF Quistinic 27.66 301 *e*P **P 18 12 08.8 -1.1**
comp=Z,84nm,1.7s,mb5.1
ROSF Rostrenen 27.77 302 *e*P **P 18 12 10.7 -0.2**
comp=Z,108nm,1.4s,mb5.0
ROSF Rostrenen 27.77 302 *e*P **P 18 12 10.7 -0.2**
ROSF pmax pmax
comp=Z,54nm,1.4s,mb5.0
ROSF Rostrenen 27.77 302 *e*P **P 18 12 10.7 -0.2**
comp=Z,54nm,1.4s,mb5.0
TAM Tamanrasset 28.40 244 *e*P **P 18 12 17.4 +0.7**
TAM pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
TAM Tamanrasset 28.40 244 *e*P **P 18 12 17.4 +0.7**
comp=Z,3.3nm,0.8s,mb4.0
TAM Tamanrasset 28.40 244 *e*P **P 18 12 17.4 +0.7**
comp=Z,3.4nm,0.8s,mb4.0
ESDC Sonseca Array 28.57 284 P **P 18 12 17.5 -0.6**
comp=Z,6.5nm,1.1s,mb4.3,baz=68,slow=9.1,SNR=9.9
ESDC LR LR 18 24 23.8
comp=Z,424nm,18.8s,MS4.1,baz=75,slow=38
ESDC Sonseca Array 28.57 284 P **P 18 12 17.5 -0.6**
ESDC LR LR 18 24 23.8
APA Apatity 28.81 0⇑*i*P **P 18 12 20.6 +0.7**
APA pmax pmax
comp=Z,34nm,1.3s,mb4.9
APA MLR MLR
comp=Z,2μm,14.0s,MS4.8
BVAR Borovoye Array 29.22 49 P **P 18 12 24.2 +0.5**
comp=Z,1.8nm,0.6s,mb4.0,baz=222,slow=38,SNR=4.7
BVAR LR LR 18 26 59.5
comp=Z,497nm,21.7s,MS4.1,baz=267,slow=42
BVAR Borovoye Array 29.22 49 P **P 18 12 24.2 +0.5**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR MLR MLR
comp=Z,497nm,21.7s
EKA Eskdalemuir Ar 29.27 316 P **P 18 12 23.4 -0.7**
comp=Z,2.8nm,0.8s,mb4.0,baz=116,slow=9.4,SNR=6.1
EKA Eskdalemuir Ar 29.27 316 P **P 18 12 23.5 -0.6**
EKA pmax pmax

comp=Z,3.0nm,0.8s
MDT Midelt 30.98 271 P **P** **18 12 40.2 +0.6**
comp=Z,1.2nm,0.7s,mb3.9,baz=71,slow=13,SNR=4.0
MDT LR LR 18 25 07.7
comp=Z,310nm,19.2s,MS4.0,baz=53,slow=36
ARCES ARCESS Array B 31.05 355 P **P** **18 12 38.9 -0.8**
comp=Z,15nm,0.8s,mb4.9,baz=160,slow=7.5,SNR=18
ARCES LR LR 18 26 46.5
comp=Z,778nm,18.4s,MS4.4,baz=177,slow=40
ARCES ARCESS Array B 31.05 355 P **P** **18 12 38.9 -0.8**
ARCES pmax pmax
comp=Z,15nm,0.8s
ARCES MLR MLR
comp=Z,778nm,18.4s
MTE Manteigas 31.14 286 *e*P **P** **18 12 40.6 -0.3**
comp=Z,28nm,1.5s,mb4.9
PCBR Castelo Branco 31.20 285 *e*P **P** **18 12 41.2 -0.2**
comp=Z,29nm,1.3s,mb5.0
PMRV Marv??o 31.22 284 *e*P **P** **18 12 40.3 -1.2**
PBAR Barrancos 31.23 282 *e*P **P** **18 12 40.4 -1.3**
comp=Z,27nm,1.5s,mb4.8
PCAB Cabril 31.29 289 *e*P **P** **18 12 41.6 -0.5**
AAK Ala-Archa 31.40 70 *e*P **P** **18 12 44.1 +1.0**
AAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.6
FRU Bishkek 31.46 69 *e*P **P** **18 12 50.0 +6.3**
PVAQ Vaqueiros 31.94 280 *e*P **P** **18 12 45.7 -2.2**
KURK Kurchatov 33.94 54 P **P** **18 13 04.4 -0.8**
comp=Z,8.2nm,0.8s,mb4.7,baz=275,slow=8.9,SNR=31
KURK PcP PcP 18 15 42.2 -1.1
comp=Z,1.8nm,0.9s,baz=272,slow=3.7,SNR=5.9
KURK Kurchatov 33.94 54 P **P** **18 13 04.4 -0.8**
KURK 18 15 42.3
KURK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KURK pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KURK Kurchatov 33.94 54 *e*P **P** **18 13 05.1 -0.1**
comp=Z,10.0nm,0.9s,mb4.8
KURK Kurchatov 33.94 54 *e*P **P** **18 13 05.1 -0.2**
comp=Z,10.0nm,0.9s,mb4.8
MK31 Makanchi Array 36.47 61 *e*P **P** **18 13 26.3 -0.8**
MKAR Makanchi Array 36.47 61 P **P** **18 13 26.2 -0.9**
comp=Z,1.6nm,0.6s,mb4.2,baz=275,slow=8.4,SNR=20
MKAR PcP PcP 18 15 50.4 -0.5
comp=Z,0.7nm,0.7s,baz=276,slow=2.2,SNR=3.7
MKAR ScP ScP 18 19 39.3 +1.6
comp=Z,0.8nm,0.9s,baz=243,slow=8.7,SNR=3.4
MKAR LR LR 18 30 18.2
comp=Z,426nm,19.3s,MS4.2,baz=275,slow=39
MKAR Makanchi Array 36.47 61 P **P** **18 13 26.3 -0.8**
MKAR 18 15 50.4
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR pmax pmax
comp=N,1.0nm,0.9s
MKAR MLR MLR
comp=Z,426nm,19.3s
MKAR Makanchi Array 36.47 61 P **P** **18 13 26.2 -0.9**
MKAR Makanchi Array 36.47 61 PcP PcP 18 15 50.4 -0.5
MKAR Makanchi Array 36.47 61 P **P** **18 13 26.2 -0.9**
MKAR PcP PcP 18 15 50.4 -0.5
MKAR ScP ScP 18 19 39.3 +1.6
MKAR LR LR 18 30 18.2
NVS Novosibirsk 37.00 48 *e*P **P** **18 13 31.1 -0.4**
NVS *e*S **S** **18 19 21.4 +4.5**
NVS pmax pmax
comp=N,11nm,1.5s
NVS pmax pmax
comp=Z,20nm,1.5s,mb4.7
NVS pmax pmax
comp=E,4.0nm,0.7s
NVS smax
comp=N,9.0nm,1.1s
NVS smax
comp=E,3.0nm,1.1s
TOA0 Torodi Ar. Sit 37.74 236 *e*P **P** **18 13 36.3 -1.9**
TOA0 Torodi Ar. Sit 37.74 236 *e*P **P** **18 13 36.3 -1.9**
TORD Torodi Ar. Bea 37.74 236 P **P** **18 13 36.8 -1.4**
comp=E,11nm,0.9s,mb4.6,baz=35,slow=9.1,SNR=45
TORD LR LR 18 32 59.8
comp=E,347nm,19.1s,MS4.2,baz=50,slow=42
ZAA0 Zalesovo Array 37.87 49 *e*P **P** **18 13 37.8 -1.1**
ZAA0 Zalesovo Array 37.87 49 *e*P **P** **18 13 37.8 -1.1**
ZALV Zalesovo Beam 37.87 49 P **P** **18 13 37.6 -1.3**
comp=E,5.0nm,0.6s,mb4.4,baz=262,slow=9.7,SNR=21
ZALV Zalesovo Beam 37.87 49 P **P** **18 13 37.6 -1.3**
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
KMBO Kilima Mbogo 39.93 173 P **P** **18 13 55.1 -1.4**
comp=Z,3.6nm,0.4s,mb4.4,baz=270,slow=2.2,SNR=2.6
KMBO Kilima Mbogo 39.93 173 P **P** **18 13 55.1 -1.4**
KMBO pmax pmax
comp=Z,4.0nm,0.4s
DANN Dangsing 43.02 88 *e*P **P** **18 14 21.7 -0.1**
comp=Z,72nm,0.9s,mb5.4
KOLN Koldanda 43.16 89 *e*P **P** **18 14 22.7 -0.3**
comp=Z,30nm,0.9s,mb5.0
HVS Khovu-Aksy 43.44 53 *e*P **P** **18 14 24.8 -0.1**
HVS pmax pmax
comp=Z,21nm,1.0s,mb4.8
GKN Gorkha 43.87 88 *e*P **P** **18 14 28.2 -0.5**
comp=Z,62nm,0.9s,mb5.3
DAG Danmarks Havn 44.04 345⇑ *i*P **P** **18 14 29.9 +0.5**
DAG pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
DAG Danmarks Havn 44.04 345⇑ *i*P **P** **18 14 29.9 +0.5**
comp=Z,4.8nm,0.7s,mb4.3
DMN Daman 44.42 88 *e*P **P** **18 14 32.4 -0.7**
comp=Z,56nm,0.8s,mb5.3
KKN Kakani 44.47 88 *e*P **P** **18 14 32.7 -0.8**
comp=Z,39nm,1.0s,mb5.1
KKN Kakani 44.47 88 *e*P **P** **18 14 32.7 -0.8**
KKN pmax pmax
comp=Z,39nm,1.0s,mb5.1
GUN Gumba 44.88 88 *e*P **P** **18 14 37.2 +0.4**
comp=Z,34nm,1.0s,mb5.1
JIRN Jiri 45.24 88 *e*P **P** **18 14 40.0 +0.3**
comp=Z,21nm,1.0s,mb4.9
RAMN Ramite 45.90 88 *e*P **P** **18 14 44.9 0.0**
comp=Z,32nm,0.8s,mb5.3
ODAN Odare 46.56 88 *e*P **P** **18 14 49.8 -0.3**
TAPN Taplejung 46.57 87 *e*P **P** **18 14 50.7 +0.5**
comp=Z,26nm,1.1s,mb5.1
DBIC Dimbokro 46.83 237 P **P** **18 14 53.2 +0.9**
comp=Z,8.0nm,1.1s,mb4.5,baz=4.2,slow=10,SNR=4.1
DBIC Dimbokro 46.83 237 P **P** **18 14 53.2 +0.9**
DBIC pmax pmax
comp=Z,8.0nm,1.1s
DBIC Dimbokro 46.83 237 P **P** **18 14 53.2 +0.9**
TIC Toumodi 46.96 237 *e*P **P** **18 14 50.4 -2.9**
comp=Z,50nm,0.9s,mb5.4
KIC Kosan Boka 46.99 236 *e*P **P** **18 14 52.3 -1.2**
comp=Z,32nm,0.8s,mb5.3
LIC Lamto 47.28 237 *e*P **P** **18 14 54.7 -1.1**
comp=Z,34nm,1.0s,mb4.9
LIC *e*MLR MLR
comp=Z,480nm,22.2s,MS4.1
LIC Lamto 47.28 237 *e*P **P** **18 14 54.6 -1.2**
comp=Z,45nm,1.0s,mb5.1
LIC Lamto 47.28 237 *e*P **P** **18 14 54.7 -1.1**
comp=Z,17nm,1.0s,mb4.9
LIC LR LR
comp=Z,240nm,22.3s,MS4.1
LSA Lhasa 48.16 82 *e*P **P** **18 15 05.7 +3.2**
LSA pmax pmax
comp=Z,12nm,1.3s,mb4.8
LSA Lhasa 48.16 82 *e*P **P** **18 15 05.7 +3.2**
comp=Z,12nm,1.3s,mb4.8
ZAK Zakamensk 49.54 52 *e*P **P** **18 15 13.5 +0.7**
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
GTA Gaotai 50.68 67 *e*P **P** **18 15 21.8 +0.2**
GTA AP pP 18 15 26.4 +2.3
GTA XP sP 18 15 29.3 +4.2
GTA S **S** **18 22 30.8 -6.0**
GTA AMB AMB
comp=Z,2.0nm,0.5s,mb4.3
GTA AMB AMB
comp=Z,209nm,5.4s
GTA LR LR
comp=N,220nm,17.7s,MS4.4
GTA LR LR
comp=E,184nm,14.7s,MS4.4
GTA LR LR
comp=Z,268nm,15.0s,MS4.4
SONM Songino Array 52.24 55 P **P** **18 15 33.5 +0.3**
comp=Z,1.1nm,0.7s,mb3.9,baz=294,slow=7.7,SNR=7.8
SONM PcP PcP 18 16 44.4 -0.1
comp=Z,0.7nm,0.7s,baz=290,slow=3.5,SNR=2.1
SONM LR LR 18 41 05.9
comp=Z,464nm,20.2s,MS4.5,baz=309,slow=40
SONM Songino Array 52.24 55 P **P** **18 15 33.5 +0.3**
SONM 18 16 44.4
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,464nm,20.2s
ULN Ulaanbaatar 52.65 55 *e*P **P** **18 15 37.5 +1.3**
comp=Z,6.2nm,1.3s,mb4.4
ULN Ulaanbaatar 52.65 55 *e*P **P** **18 15 37.5 +1.3**
comp=Z,6.2nm,1.3s,mb4.4
BOD Bodaibo 53.62 41 *e*P **P** **18 15 42.1 -1.1**
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
LSZ Lusaka 54.00 186 P **P** **18 15 47.5 +1.1**
comp=Z,1.8nm,0.8s,mb4.1,baz=357,slow=6.8,SNR=3.8
LSZ Lusaka 54.00 186 P **P** **18 15 47.5 +1.1**
LSZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
LZH Lanzhou 54.94 69 *e*P **P** **18 15 58.0 +4.8**
LZH AP pP 18 16 02.0 +6.3
LZH XP sP 18 16 04.0 +7.3
LZH PP PP 18 18 00.0 +4.0
LZH *e*S **S** **18 23 41.0 +5.9**
LZH XS sS 18 23 46.0 +6.8
LZH SS SS 18 27 20.3 +2.1
LZH AMB AMB
comp=Z,14nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,64nm,4.0s
LZH LR LR
comp=E,333nm,15.3s
LZH LR LR
comp=Z,498nm,16.5s,MS4.7
TIXI Tiksi 55.45 22 *e*P **P** **18 15 56.5 +0.2**
TIXI pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
TIXI Tiksi 55.45 22 *e*P **P** **18 15 56.0 -0.3**
comp=Z,5.8nm,1.1s,mb4.5
HHC Hu-ho-hao-te 58.34 61 *e*P **P** **18 16 19.5 +2.2**
HHC PP PP 18 18 29.3 +3.2
HHC *e*S **S** **18 24 17.8 -2.1**
HHC XS sS 18 24 25.3 +1.2
HHC SCS ScS 18 26 04.8 -2.5
HHC SS SS 18 28 09.6 -1.8
HHC AMB AMB
comp=Z,9.0nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,274nm,7.2s
HHC LR LR
comp=N,235nm,15.5s,MS4.7
HHC LR LR
comp=E,350nm,16.6s,MS4.7
HHC LR LR
comp=Z,353nm,15.5s,MS4.6
OPO Ambohidratompo 58.59 164 P **P** **18 16 19.9 +0.7**
comp=Z,3.9nm,1.0s,mb4.4,baz=308,slow=4.9,SNR=4.1
KMI Kunming 59.36 81 P **P** **18 16 29.8 +5.2**
KMI AMB AMB
comp=Z,5.0nm,0.7s,mb4.7
XAN Xi'an 59.58 69 P **P** **18 16 30.3 +4.3**
XAN AP pP 18 16 33.4 +4.9
XAN PP PP 18 18 40.3 +3.0
XAN S **S** **18 24 38.6 +2.4**
XAN SS SS 18 28 34.8 +3.6
XAN AMB AMB
comp=Z,6.0nm,0.8s,mb4.7
XAN LR LR
comp=E,89nm,19.0s
XAN LR LR
comp=Z,176nm,21.7s,MS4.2
HIA Hailar 59.91 49 *e*P **P** **18 16 28.6 +0.6**
CMAR Chiang Mai Arr 60.03 90 P **P** **18 16 27.9 -1.3**
comp=Z,0.8nm,0.8s,mb3.8,baz=304,slow=8.0,SNR=7.7
CMAR LR LR 18 46 16.4
comp=Z,95nm,19.8s,MS3.9,baz=325,slow=40
CMAR Chiang Mai Arr 60.03 90 P **P** **18 16 28.0 -1.3**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR MLR MLR
comp=Z,95nm,19.8s
GYA Guiyang 61.68 78 *e*P **P** **18 16 41.3 +0.9**
GYA AP pP 18 16 46.9 +3.9
GYA PCP PcP 18 17 23.4 +1.6
GYA PP PP 18 19 00.3 +4.3
GYA SCP ScP 18 21 22.8 -1.1
GYA S **S** **18 25 00.8 -2.5**
GYA SS SS 18 29 03.4 -1.0
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,350nm,19.0s,MS4.7
GYA LR LR
comp=E,430nm,18.8s,MS4.7
GYA LR LR
comp=Z,400nm,19.5s,MS4.6
BJI Beijing 61.84 60 P **P** **18 16 41.3 0.0**
BJI AMB AMB
comp=Z,12nm,0.6s,mb5.2
SCHQ Schefferville 64.45 321 P **P** **18 16 57.9 -0.4**
comp=Z,5.4nm,0.9s,mb4.6,baz=54,slow=5.2,SNR=4.4
SCHQ LR LR 18 42 49.8
comp=Z,155nm,18.1s,MS4.2,baz=2.6,slow=34
SCHQ Schefferville 64.45 321 P **P** **18 16 57.9 -0.4**
SCHQ LR LR 18 42 49.8
BOSA Boshof 67.47 187 P **P** **18 17 18.4 +0.4**
comp=Z,3.6nm,0.9s,mb4.4,baz=344,slow=15,SNR=3.5
BOSA Boshof 67.47 187 P **P** **18 17 18.4 +0.4**
BOSA pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SEY Seymchan 67.66 26 *e*P **P** **18 17 18.5 -0.4**
NJ2 Nanjing 67.76 66 *e*P **P** **18 17 23.8 +3.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
BILL Bilibino 67.84 17 *e*P **P** **18 17 20.5 +0.6**
BILL pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MDJ Mudanjiang 68.06 50 P **P** **18 17 22.3 +0.5**
MDJ AMB AMB
comp=Z,4.0nm,1.6s,mb4.2
MDJ AMB AMB
comp=Z,52nm,4.2s
KSRS Korea Array 71.01 57 P **P** **18 17 39.0 -1.1**
comp=Z,2.9nm,0.7s,mb4.3,baz=303,slow=5.5,SNR=9.1
KSRS LR LR 18 51 47.9
comp=Z,388nm,20.1s,MS4.7,baz=305,slow=38
KSRS Korea Array 71.01 57 P **P** **18 17 39.0 -1.1**
KSRS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KSRS MLR MLR
comp=Z,388nm,20.1s,MS4.7
COLD Coldfoot 74.26 1 *e*P **P** **18 17 58.9 0.0**
comp=Z,4.0nm,1.0s,mb4.3
COLD Coldfoot 74.26 1 *e*P **P** **18 17 58.9 0.0**
comp=Z,4.0nm,1.0s,mb4.3
YKA Yellowknife Ar 75.74 345 P **P** **18 18 07.2 -0.3**
comp=Z,4.9nm,1.0s,mb4.4,baz=23,slow=6.1,SNR=38
YKA LR LR 18 54 27.2
comp=Z,94nm,18.6s,MS4.1,baz=95,slow=38
YKA Yellowknife Ar 75.74 345 P **P** **18 18 07.2 -0.3**
YKA pmax pmax
comp=Z,5.0nm,1.0s
YKA MLR MLR
comp=Z,94nm,18.6s
MJAR Matsushiro Arr 78.13 53 P **P** **18 18 21.5 0.0**
comp=Z,2.0nm,0.9s,mb4.0,baz=211,slow=16,SNR=3.8
MJAR Matsushiro Arr 78.13 53 P **P** **18 18 21.5 +0.1**
MJAR pmax pmax
comp=Z,2.0nm,0.9s
FFC Flin Flon 79.18 335 *e*P **P** **18 18 26.6 -0.3**
FFC pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
FFC Flin Flon 79.18 335 *e*P **P** **18 18 26.6 -0.3**
comp=Z,7.6nm,1.1s,mb4.5
FFC Flin Flon 79.18 335 *e*P **P** **18 18 26.6 -0.3**
comp=Z,7.6nm,1.1s,mb4.5
ULM Lac du Bonnet 80.60 330 P **P** **18 18 33.7 -0.9**
comp=Z,4.1nm,0.7s,mb4.5,baz=47,slow=5.8,SNR=6.2
ULM LR LR 18 57 03.9
comp=Z,233nm,19.6s,MS4.5,baz=5.5,slow=38
ULM Lac du Bonnet 80.60 330 P **P** **18 18 33.7 -1.0**
ULM LR LR 18 57 03.9
EDM Edmonton 83.84 340 *e*P **P** **18 18 51.4 -0.2**
EDM Edmonton 83.84 340 *e*P **P** **18 18 51.4 -0.2**
TKL Tuckaleechee C 85.70 313 *e*P **P** **18 19 01.5 +0.2**
TKL Tuckaleechee C 85.70 313 *e*P **P** **18 19 01.5 +0.2**
PDAR Pinedale Array 92.00 333 P **P** **18 19 29.9 -1.1**
comp=Z,0.5nm,0.8s,mb3.9,baz=61,slow=7.3,SNR=3.1
PDAR LR LR 19 00 34.1
comp=Z,256nm,20.9s,MS4.7,baz=193,slow=35
URZ Urewera 151.97 100 PKPbc PKPbc 18 26 17.2 0.0
comp=Z,4.6nm,0.4s,baz=349,slow=5.2,SNR=3.8

IDC ***13*** *18:17:06.4±0.8, 1988S×17462W, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/20, mbtmp4.0/12, Error ellipse: s-maj=31.9km s-min=19.0km az=140.0*
NEIC ***13*** *18:17:08.0±0.6, 1989S×17466W, h10km, mb4.1/1, Error ellipse: s-maj=22.8km s-min=14.9km az=139.0*
ISCJB ***13*** *18:17:10.2±0.7, 198S±02×1748W±0.1, h33km, mb4.0/11, Error ellipse: s-maj=26.2km s-min=15.3km az=147.5*
ISC 13 18:17:11.9±0.7, 197S±01×1748W±0.1, h35km, n20, σ1s24/17, mb4.0/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.39**	**27**	Sn	**Sn**	**18 19 54.4**	**-1.0**
	3.1nm,0.3s,baz=347,slow=22,SNR=2.3						
URZ	**Urewera**	**19.84**	**199**	P	**Pn**	**18 21 35.7**	**-5.6**
	0.6nm,0.3s,baz=8.1,slow=7.1,SNR=2.8						
RPZ	**Rata Peaks**	**26.77**	**203**	P	**P**	**18 22 48.0**	**-0.4**
	10nm,1.0s,mb4.3,baz=0.0,slow=5.1,SNR=3.6						
CTA	**Charters Tower**	**36.61**	**263**	P	**P**	**18 24 16.6**	**+1.5**
	1.2nm,0.3s,mb4.2,baz=80,slow=12,SNR=2.6						
CTAO	**Charters Tower**	**36.61**	**263**	P	**P**	**18 24 15.8**	**+0.7**
	1.3nm,0.3s,mb4.2						
STKA	**Stephens Creek**	**40.89**	**244**	P	**P**	**18 24 49.4**	**-1.4**
	0.9nm,0.6s,mb3.6,baz=86,slow=8.0,SNR=3.0						
STKA	**Stephens Creek**	**40.89**	**244**	P	**P**	**18 24 49.4**	**-1.4**
ASAR	**Alice Springs**	**47.68**	**256**	P	**P**	**18 25 44.4**	**-0.8**
	0.5nm,0.5s,mb3.8,baz=96,slow=8.0,SNR=23						
WRAB	**Tennant Creek**	**47.73**	**261**	P	**P**	**18 25 43.8**	**-1.9**
WRA	**Warramunga Arr**	**47.74**	**261**	P	**P**	**18 25 45.7**	**0.0**
	0.5nm,0.5s,mb3.8,baz=100,slow=8.3						
WRA				PcP	PcP	18 27 14.7	+0.1
	baz=97,slow=3.4						
PETK	**Petropavlovsk-**	**76.29**	**343**	P	**P**	**18 28 59.5**	**+2.7**
	2.1nm,0.6s,mb4.2,baz=121,slow=9.2,SNR=6.0						
NVAR	**Mina Array Bea**	**78.34**	**42**	P	**P**	**18 29 08.7**	**+0.1**
	1.1nm,0.7s,mb3.9,baz=224,slow=8.8,SNR=7.1						
TXAR	**Lajitas Array**	**84.05**	**56**	P	**P**	**18 29 38.2**	**-1.0**
	0.4nm,1.0s,mb3.5,baz=193,slow=2.8,SNR=3.7						
TXAR	**Lajitas Array**	**84.05**	**56**	P	**P**	**18 29 38.2**	**-1.0**
PLCA	**Paso Flores**	**87.61**	**132**	P	**P**	**18 29 57.5**	**+0.7**
	3.6nm,1.0s,mb4.6,baz=304,slow=3.6,SNR=2.3						
CMAR	**Chiang Mai Arr**	**92.72**	**289**	P	**P**	**18 30 23.6**	**+2.7**
	0.6nm,1.0s,mb4.0,baz=48,slow=2.2,SNR=4.5						
YKA	**Yellowknife Ar**	**94.50**	**24**	P	**P**	**18 30 28.8**	**+0.7**
	0.1nm,0.3s,mb3.7,baz=237,slow=4.3,SNR=3.5						
AKASG	**Malin Array Be**	**143.68**	**334**	PKhKP	PKPdf	18 36 40.2	-2.7
	0.7nm,0.4s,baz=35,slow=4.0,SNR=4.1						
BRTR	**Keskin Array B**	**148.46**	**315**	PKPbc	PKPbc	18 36 55.8	+0.8
	0.7nm,0.6s,baz=87,slow=2.2,SNR=2.8						
GERES	**GERESS Array B**	**150.10**	**349**	PKPbc	PKPbc	18 36 58.7	-0.1
	0.8nm,0.7s,baz=20,slow=4.3,SNR=3.9						

CSEM ***13*** *18:22:01.4±0.2, 3889N×3294E, h5km, MD2.9, Error ellipse: s-maj=8.2km s-min=2.4km az=143.0*
ISK ***13*** *18:22:01.2, 3876N×3318E, h5km, MD2.9*
ISCJB ***13*** *18:22:02.4±0.6, 3881N±006×3306E±006, h10km, Error ellipse: s-maj=10.2km s-min=3.8km az=147.9*
DDA ***13*** *18:22:02.8, 3885N×3305E, h7km±1km, Md2.7*
ISC 13 18:22:02.7±0.7, 3884N±006×3303E±006, h5km±10km, n7, σ0s85/12, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.75**	**45**	*e*PG	**Pg**	**18 22 16.5**	**-0.6**
KAMT				*e*SG	**Sg**	**18 22 26.4**	**-0.6**
KDHN	**Kadinhani**	**0.78**	**246**	*e*P	**Pg**	**18 22 17.4**	**-0.3**
KDHN				*i* S	**Sb**	**18 22 30.0**	**+0.4**
LADK	**Ladik-KONYA**	**0.82**	**219**	*e*PG	**Pg**	**18 22 17.4**	**-1.1**
LADK				*e*SG	**Sg**	**18 22 30.3**	**+1.1**
KIZT	**Kizilcal**	**0.90**	**273**	*e*PG	**Pg**	**18 22 21.1**	**+1.2**
KONT	**Konya--Tatoy**	**1.03**	**211**	*e*PG	**Pg**	**18 22 21.1**	**-1.4**
CDAG	**Cicekdag**	**1.31**	**53**	*e*P	**Pn**	**18 22 27.0**	**-0.6**
CDAG				*i* S	**Sg**	**18 22 45.6**	**+0.9**
AVNT	**Avonos**	**1.43**	**92**	*i* P	**Pn**	**18 22 29.5**	**+0.2**
AVNT				*i* S	**Sg**	**18 22 49.4**	**+0.8**

IDC 13 18:31:25.3±1.5, 030S×12225E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/17, mbtmp3.4/3, Error ellipse: s-maj=202.5km s-min=27.1km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**25.84**	**155**	P	P	18 36 58.7	+0.1
	0.2nm,0.5s,baz=344,slow=15,SNR=7.4						
SONM	**Songino Array**	**49.89**	**346**	P	P	18 40 20.6	+0.2
	0.5nm,0.5s,baz=154,slow=9.3,SNR=4.1						
MKAR	**Makanchi Array**	**58.47**	**329**	P	P	18 41 23.1	0.0
	0.2nm,0.4s,baz=137,slow=7.1,SNR=5.2						

MOS ***13*** *18:35:12.4±0.5, 4970N×15408E, h207km, mb4.3/1, Error ellipse: s-maj=99.9km s-min=25.0km az=59.4*
KRSC 13 18:35:12.0±2.5, 4923N×15500E, h220km±99km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.62**	**26**	*e*PN	Pn	18 35 48.2	-0.2
SKR				pmax	pmax		
	comp=N,20nm,0.4s						
SKR				pmax	pmax		
	comp=Z,90nm,0.4s						
MIPR	**Malaya Ipel'ka**	**3.25**	**19**	*e*P	Pn	18 36 06.2	+0.8
RUS	**Russkaya**	**3.90**	**33**	*e*P	Pn	18 36 14.6	+1.4
RUS				*i* S	S	18 37 00.3	-1.3
AVH	**Avacha**	**4.67**	**29**	*e*P	Pn	18 36 23.6	+1.0
GNL	**Ganaly**	**4.83**	**21**	*e*P	Pn	18 36 26.0	+1.4
SPN	**Mys Shipunski**	**5.00**	**37**	*e*P	Pn	18 36 27.9	+1.2
SPN				*i* S	S	18 37 22.9	-3.1
MKZ	**Mys Kozlova**	**6.76**	**35**	*e*P	Pn	18 36 50.1	+1.0
MKZ				*i* S	S	18 38 00.7	-5.9
KBTR	**Krutoberegovo**	**8.44**	**31**	*e*P	Pn	18 37 11.3	+0.6

ISCJB ***13*** *18:40:38.9±0.4, 2370N±005×12291E±003, h33km, Error ellipse: s-maj=6.9km s-min=2.7km az=159.0*
JMA ***13*** *18:40:38.6±0.2, 2370N×12291E, h51km±5km, M1.9*
TAP ***13*** *18:40:39.7, 2377N×12274E, h92km±1km, ML2.9, C*
ISC 13 18:40:39.5±0.4, 2371N±005×12292E±003, h35km, n25, σ0s83/39, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.76**	**7**	P	**Pn**	**18 40 53.4**	**-0.3**
YOJ				S	**Sn**	**18 41 04.3**	**+0.4**
HATJ	**Hateruma jima**	**0.89**	**67**	P	**Pn**	**18 40 55.1**	**-0.3**
HATJ				S	**Sn**	**18 41 06.8**	**-0.3**
IRIF	**Iriomote-Funau**	**0.97**	**50**	P	**Pn**	**18 40 56.3**	**-0.3**
IRIF				S	**Sn**	**18 41 09.5**	**+0.3**
JKRS	**Kuro-shima**	**1.13**	**62**	P	**Pn**	**18 40 58.7**	**-0.1**
JKRS				S	**Sn**	**18 41 13.4**	**+0.3**
ENA	**Nanau**	**1.29**	**304**	*e*P	**Pn**	**18 41 01.1**	**+0.1**
	baz=310						
JIJ	**Ishigaki jima**	**1.30**	**59**	P	**Pn**	**18 41 00.6**	**-0.5**
JIJ				S	**Sn**	**18 41 16.6**	**-0.7**
ESL	**Shilin**	**1.36**	**275**	*e*P	**Pn**	**18 41 01.7**	**-0.2**
	baz=273						
EHY	**Hungye**	**1.47**	**263**	*e*P	**Pn**	**18 41 03.4**	**-0.1**
	baz=255						
EHY				*e*S	**Sn**	**18 41 19.9**	**-1.7**
	baz=255						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWE	Neicheng	1.52	312	eP	Pn	18 41 04.3	+0.1
	baz=317						
TWE				eS	Sn	18 41 22.5	-0.3
	baz=317						
TWF1	Yuli	1.53	257	P	Pn	18 41 04.0	-0.2
	baz=247						
TWF1				S	Sn	18 41 22.4	-0.5
	baz=247						
ENTT	Nioudou	1.54	307	eP	Pn	18 41 05.1	+0.7
	baz=303						
CHKT	Chengkung	1.55	247	eP	Pn	18 41 04.0	-0.5
	baz=240						
CHKT				eS	Sn	18 41 21.0	-2.3
	baz=240						
WHF	Hehuan Shan	1.57	287	eP	Pn	18 41 05.3	+0.5
	baz=286						
WHF				eS	Sn	18 41 23.1	-0.9
	baz=286						
NNS	Nan Shan	1.59	298	eS	Sn	18 41 23.8	-0.6
	baz=298						
NSK	Sanguang	1.72	305	eP	Pn	18 41 06.4	-0.5
	baz=301						
JTJ	Tarama	1.88	60	P	Pn	18 41 09.4	+0.3
JTJ				S	Sn	18 41 31.6	0.0
TYC	Yuchr	1.90	276	eP	Pn	18 41 10.9	+1.6
	baz=279						
TWG	Pinlang	1.91	243	eP	Pn	18 41 09.8	+0.3
	baz=237						
TWG				eS	Sn	18 41 31.5	-0.8
	baz=237						
NSTT	Nanjuang	1.98	298	eP	Pn	18 41 10.5	+0.1
	baz=298						
CHN5	Tsauling	2.05	267	eP	Pn	18 41 11.1	-0.4
	baz=265						
CHN5				eS	Sn	18 41 37.6	+1.7
	baz=265						
STYT	Tauyuan	2.05	255	eP	Pn	18 41 12.2	+0.8
	baz=252						
ECL	Taimali	2.12	239	eP	Pn	18 41 12.0	-0.4
	baz=241						
WTP	Ta-pu	2.16	258	eP	Pn	18 41 13.4	+0.4
	baz=255						
CHN1	Nanshi	2.25	257	eP	Pn	18 41 16.1	+1.9
	baz=254						
CHN1				eS	Sn	18 41 44.0	+3.2
	baz=254						
SSD	Sandimen	2.31	246	eP	Pn	18 41 16.5	+1.6
	baz=242						

*ISCJB **13** 18:51:57.8±0.3, 4095S±006×1667W±009, h10^{km}, mb4.9/35, MS4.3/15, Error ellipse: s-maj=10.1km s-min=7.7km az=24.8*

*IDC **13** 18:51:57.2±0.5, 4098S×1663W, h0^{km}, mb4.5/17, mb1 4.6/17, mb1mx4.5/20, mbtmp4.5/17, MS4.2/16, Ms1 4.2/16, ms1mx4.1/22, Error ellipse: s-maj=22.4km s-min=12.7km az=165.0*

*MOS **13** 18:51:57.8±0.8, 4100S×1663W, h10^{km}, mb5.3/12, Error ellipse: s-maj=21.0km s-min=12.8km az=74.9*

*NEIC **13** 18:51:59.0±0.3, 4098S×1667W, h10^{km}, mb5.1/19, Error ellipse: s-maj=10.1km s-min=7.7km az=143.0*

ISC 13 18:51:59.6±0.3, 4093S±006×1668W±009, h10^{km}, (h16^{km}±.3^{km}:pP-P), n105, σ0.78/78, mb4.9/35, MS4.3/15, 2C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHEL	Horse Pasture	26.62	24	P	P	18 57 38.5	+0.2
VNA1	Neumayer--Stat	30.11	174	e	P	18 58 10.2	+1.3
VNA1				e	pP	18 58 14.8	+2.8
VNA1				e		18 58 21.9	
VNA2	Neumayer--Watz	30.44	174	e	P	18 58 11.9	0.0
	baz=351,slow=11						
VNA2				e	pP	18 58 16.2	+1.3
VNA2				e		18 58 22.7	
VNA3	Neumayer Olymp	30.60	176	e	P	18 58 12.6	-0.6
VNA3				e	pP	18 58 17.2	+0.9
VNA3				e		18 58 23.6	
SNAA	Sanae	31.59	172	e	P	18 58 22.6	+0.6
SNAA				e		18 58 27.5	
SNAA				e		18 58 33.6	
SNAA	Sanae	31.59	172	eP	P	18 58 22.3	+0.3
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SNAA	Sanae	31.59	172	eP	P	18 58 22.3	+0.3
	comp=Z,6.1nm,1.1s,mb4.3						
PMSA	Palmer Station	35.95	212	P	P	18 58 58.6	-1.3
	comp=Z,68nm,1.2s,mb5.4,baz=60,slow=11,SNR=2.4						
BOSA	Boshof	36.24	84	P	P	18 59 01.7	-1.2
	comp=Z,12nm,1.1s,mb4.8,baz=212,slow=8.5,SNR=6.9						
BOSA				LR	LR	19 10 31.0	
	comp=Z,457nm,20.3s,MS4.2,baz=234,slow=31						
TSUM	Tsumeb	36.37	64	P	P	18 59 03.1	-0.9
	comp=Z,28nm,0.8s,mb5.2,baz=217,slow=8.5,SNR=30						
CPUP	Villa Florida	36.51	281	P	P	18 59 04.5	-0.6
	comp=Z,8.0nm,0.9s,mb4.6,baz=108,slow=7.6,SNR=20						
CPUP				PcP	PcP	19 01 26.0	-2.8
	comp=Z,0.7nm,0.5s,baz=190,slow=6.8,SNR=3.3						
CPUP				LR	LR	19 12 07.8	
	comp=Z,618nm,18.9s,MS4.4,baz=108,slow=33						
CPUP	Villa Florida	36.51	281	P	P	18 59 04.5	-0.6
CPUP						19 01 26.0	
BDFB	Brasilia	37.02	304	P	P	18 59 09.1	-0.5
	comp=Z,0.7nm,0.4s,baz=83,slow=20,SNR=3.1						
BDFB				LR	LR	19 11 46.6	
	comp=Z,144nm,18.5s,baz=179,slow=32						
LBTB	Lobatse	38.45	79	P	P	18 59 20.5	-1.1
	comp=Z,6.1nm,1.0s,mb4.3,baz=248,slow=10,SNR=6.8						
LBTB	Lobatse	38.45	79	P	P	18 59 20.5	-1.1
RCBR	Riachuelo	38.95	329	eP	P	18 59 25.2	-0.7
	comp=Z,29nm,1.3s,mb4.8						
PLCA	Paso Flores	40.21	252	P	P	18 59 36.8	+0.6
	comp=Z,6.3nm,1.1s,mb4.3,baz=126,slow=3.5,SNR=3.9						
PLCA				PcP	PcP	19 01 37.5	-2.6
	comp=Z,4.4nm,1.1s,baz=243,slow=4.5,SNR=2.5						
PLCA				LR	LR	19 13 54.0	
	comp=Z,639nm,18.8s,MS4.5,baz=103,slow=33						
PLCA	Paso Flores	40.21	252	P	P	18 59 36.8	+0.6
PLCA						19 01 37.5	
PLCA	Paso Flores	40.21	252	P	P	18 59 36.8	+0.6
PLCA				PcP	PcP	19 01 37.5	-2.6
PLCA				LR	LR	19 13 54.0	
CFAA	Coronel Fontan	42.08	266	P	P	18 59 50.6	-1.0
	comp=Z,1.3nm,0.8s,baz=103,slow=8.6,SNR=14						
CFAA				PcP	PcP	19 01 44.4	-1.9
	comp=Z,0.2nm,0.3s,baz=180,slow=2.0,SNR=3.7						
LCO	Las Campanas	45.19	268	eP	P	19 00 15.7	-1.0
	comp=Z,15nm,1.0s,mb4.8						
SIV	San Ignacio	45.62	290	P	P	19 00 20.4	+0.1
	comp=Z,8.6nm,1.1s,mb4.6,baz=144,slow=7.4,SNR=15						
SIV				PcP	PcP	19 01 57.0	-1.5
	comp=Z,1.2nm,0.7s,baz=202,slow=5.4,SNR=3.2						
LSZ	Lusaka	46.44	70	P	P	19 00 26.1	-0.5
	comp=Z,13nm,1.0s,mb4.8,baz=222,slow=7.5,SNR=22						
LSZ	Lusaka	46.44	70	eP	P	19 00 26.6	-0.1
LSZ				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
LSZ	Lusaka	46.44	70	eP	P	19 00 26.6	-0.1
	comp=Z,30nm,1.3s,mb5.1						
LIC	Lamto	48.12	16	⇑iP	P	19 00 39.4	-0.3
	comp=Z,43nm,1.1s,mb5.1						
LIC	Lamto	48.12	16	eP	P	19 00 39.1	-0.7
	comp=Z,52nm,1.1s,mb5.5						
LIC	Lamto	48.12	16	⇑iP	P	19 00 39.4	-0.3
	comp=Z,22nm,1.1s,mb5.1						
KIC	Kosan Boka	48.31	16	eP	P	19 00 40.4	-0.8
	comp=Z,194nm,1.5s,mb5.9						
TIC	Toumodi	48.53	16	eP	P	19 00 41.9	-1.0
	comp=Z,56nm,0.8s,mb5.6						
DBIC	Dimbokro	48.59	16	P	P	19 00 42.4	-1.0
	comp=Z,6.2nm,1.0s,mb4.6,baz=164,slow=4.7,SNR=3.7						
DBIC				LR	LR	19 16 28.7	
	comp=Z,73nm,19.6s,MS3.7,baz=331,slow=30						
DBIC	Dimbokro	48.59	16	eP	P	19 00 42.2	-1.1
DBIC				LR	LR	19 16 28.6	
MAW	Mawson	49.05	150	LR	LR	19 17 28.7	
	comp=Z,203nm,19.4s,MS4.1,baz=257,slow=31						
QSPA	South Pole Qui	49.34	180	eP	P	19 00 48.4	+0.1
	comp=Z,18nm,1.1s,mb5.0						
TOA0	Torodi Ar. Sit	56.42	22	eP	P	19 01 40.2	-1.2
TORD	Torodi Ar. Bea	56.42	22	P	P	19 01 40.3	-1.1
	comp=Z,4.1nm,0.9s,mb4.5,baz=204,slow=6.3,SNR=20						
TORD				LR	LR	19 20 33.1	
	comp=Z,179nm,21.0s,MS4.1,baz=200,slow=30						
VNDA	Vanda	61.83	180	P	P	19 02 18.2	+0.1
	comp=Z,3.6nm,0.9s,mb4.5,baz=195,slow=8.5,SNR=4.0						
TAM	Tamanrasset	66.67	22	eP	P	19 02 51.3	+0.9
TAM				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
TAM	Tamanrasset	66.67	22	eP	P	19 02 51.3	+0.9
	comp=Z,17nm,1.4s,mb4.9						
OTAV	Otavalo	69.16	289	eP	P	19 03 06.5	0.0
	comp=Z,22nm,1.5s,mb4.9						
ROSC	El Rosal	69.57	296	P	P	19 03 09.9	+1.0
	comp=Z,5.0nm,0.4s,mb4.8,baz=102,slow=11,SNR=3.6						
ROSC				LR	LR	19 32 19.5	
	comp=Z,600nm,18.9s,MS4.9,baz=191,slow=35						
KEST	Kesra	79.94	21	P	P	19 04 09.4	+0.9
	comp=Z,2.8nm,0.9s,mb4.2,baz=202,slow=5.4,SNR=3.1						
KEST				LR	LR	19 35 50.4	
	comp=Z,80nm,19.0s,MS4.1,baz=94,slow=33						
ESDC	Sonseca Array	81.05	10	P	P	19 04 14.5	+0.1
	comp=Z,4.2nm,0.9s,mb4.4,baz=186,slow=5.2,SNR=16						
ESLA	Sonseca Array	81.05	10	eP	P	19 04 14.7	+0.4
	comp=Z,3.2nm,1.1s,mb4.2						
IDI	Anoyia	84.92	33	LR	LR	19 38 29.6	
	comp=Z,20nm,21.2s,MS3.5,baz=279,slow=33						
EIL	Elat	84.95	43	LR	LR	19 38 11.1	
	comp=Z,120nm,19.3s,MS4.3,baz=23,slow=33						
LFF	La Frestale	86.90	12	eP	P	19 04 44.2	+0.1
CAF	Calviac	87.11	13	eP	P	19 04 45.1	0.0
	comp=Z,36nm,1.4s,mb5.1						
CAF	Calviac	87.11	13	eP	P	19 04 45.1	0.0
CAF				pmax	pmax		
	comp=Z,18nm,1.4s,mb5.1						
CAF	Calviac	87.11	13	eP	P	19 04 45.1	0.0
	comp=Z,18nm,1.4s,mb5.1						
RJF	Les Rejaudoux	87.38	13	eP	P	19 04 47.6	+1.2
	comp=Z,34nm,1.3s,mb5.1						
RJF	Les Rejaudoux	87.38	13	eP	P	19 04 47.6	+1.2
RJF				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
RJF	Les Rejaudoux	87.38	13	eP	P	19 04 47.6	+1.2
	comp=Z,17nm,1.3s,mb5.1						
VIVF	Saint-Julien-l	87.52	15	eP	P	19 04 47.2	+0.1
	comp=Z,34nm,1.3s,mb5.1						
VIVF	Saint-Julien-l	87.52	15	eP	P	19 04 47.2	+0.1
VIVF				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
VIVF	Saint-Julien-l	87.52	15	eP	P	19 04 47.2	+0.1
	comp=Z,17nm,1.3s,mb5.1						
ORIF	Oris-en-Rattie	87.82	16	eP	P	19 04 50.5	+2.0
	comp=Z,75nm,1.9s,mb5.3						
ORIF	Oris-en-Rattie	87.82	16	eP	P	19 04 50.5	+2.0
ORIF				pmax	pmax		
	comp=Z,38nm,1.9s,mb5.3						
ORIF	Oris-en-Rattie	87.82	16	eP	P	19 04 50.5	+2.0
	comp=Z,38nm,1.9s,mb5.3						
MBDF	Montbardon	87.83	16	eP	P	19 04 49.5	+0.9
MMAI	Mount Meron Ar	87.86	42	LR	LR	19 41 57.3	
	comp=Z,138nm,19.7s,MS4.4,baz=105,slow=34						
ASF	Jabal al Asfar	87.95	43	LR	LR	19 43 31.2	
	comp=Z,196nm,18.2s,MS4.6,baz=268,slow=35						
TCF	Toulx Ste Croi	88.45	13	eP	P	19 04 51.8	+0.3
LPG	La Plagne	88.56	16	eP	P	19 04 52.6	+0.6
LPL	La Plagne	88.57	16	eP	P	19 04 52.5	+0.4
	comp=Z,52nm,1.7s,mb5.3						
LPL	La Plagne	88.57	16	eP	P	19 04 52.5	+0.4
LPL				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.3						
LPL	La Plagne	88.57	16	eP	P	19 04 52.5	+0.4
	comp=Z,26nm,1.7s,mb5.3						
SMF	Signal de Mont	89.09	14	eP	P	19 04 54.5	0.0
	comp=Z,26nm,1.1s,mb5.2						
SMF	Signal de Mont	89.09	14	eP	P	19 04 54.5	0.0
SMF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
SMF	Signal de Mont	89.09	14	eP	P	19 04 54.5	0.0
	comp=Z,13nm,1.1s,mb5.2						
AVF	Avril sur Loir	89.14	14	eP	P	19 04 54.8	+0.1
	comp=Z,72nm,1.6s,mb5.4						
AVF	Avril sur Loir	89.14	14	eP	P	19 04 54.8	+0.1
AVF				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.5						
AVF	Avril sur Loir	89.14	14	eP	P	19 04 54.8	+0.1
	comp=Z,36nm,1.6s,mb5.5						
SSF	Saint Saulge	89.43	14	eP	P	19 04 57.3	+1.2
	comp=Z,38nm,1.4s,mb5.2						
SSF	Saint Saulge	89.43	14	eP	P	19 04 57.3	+1.2
SSF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.2						
SSF	Saint Saulge	89.43	14	eP	P	19 04 57.3	+1.2
	comp=Z,19nm,1.4s,mb5.2						
LOR	Lormes	89.69	14	eP	P	19 04 57.1	-0.2
	comp=Z,52nm,1.7s,mb5.3						
LOR	Lormes	89.69	14	eP	P	19 04 57.1	-0.2
LOR				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.3						
LOR	Lormes	89.69	14	eP	P	19 04 57.1	-0.2
	comp=Z,26nm,1.7s,mb5.3						
HAU	Haudompre	90.87	15	eP	P	19 05 03.6	+0.8
MEZF	Maizieres J'vi	91.10	14	eP	P	19 05 04.2	+0.4
	comp=Z,72nm,1.3s,mb5.5						
MEZF	Maizieres J'vi	91.10	14	eP	P	19 05 04.2	+0.4
	comp=Z,72nm,1.3s,mb5.8						
BRTR	Keskin Array B	92.42	36	P	P	19 05 11.1	+0.9
	comp=Z,1.0nm,0.9s,mb4.1,baz=153,slow=9.7,SNR=3.2						
BRTR				LR	LR	19 45 51.7	
	comp=Z,83nm,20.0s,MS4.2,baz=38,slow=35						
GERES	GERESS Array B	93.33	20	LR	LR	19 43 45.8	
	comp=Z,127nm,18.0s,MS4.4,baz=92,slow=33						
GNI	Garni	98.12	43	LR	LR	19 49 06.7	
	comp=Z,183nm,18.6s,MS4.6,baz=42,slow=35						
PDAR	Pinedale Array	118.00	304	PKP	PKPdf	19 10 44.4	-1.8
	comp=Z,0.4nm,0.7s,baz=88,slow=2.8,SNR=3.4						
CMAR	Chiang Mai Arr	121.09	92	PKP	PKPdf	19 10 51.8	-0.9
	comp=Z,0.4nm,0.4s,baz=227,slow=2.8,SNR=5.3						
NVAR	Mina Array Bea	121.59	295	PKP	PKPdf	19 10 51.9	-1.3
	comp=Z,0.1nm,0.3s,baz=149,slow=4.2,SNR=3.9						
MSO	Missoula	122.70	306	ePKPdf	PKPdf	19 10 53.5	-1.5
MKAR	Makanchi Array	123.73	55	PKP	PKPdf	19 10 54.9	-2.1
	comp=Z,0.4nm,0.8s,baz=72,slow=4.7,SNR=2.9						
MKAR				PKKPbc	PKKPbc	19 20 43.8	-0.3
	comp=Z,0.5nm,0.8s,baz=55,slow=5.0,SNR=4.6						
BMO	Blue Mountains	123.92	303	ePKIKP	PKPdf	19 10 56.0	-1.4
NVS	Novosibirsk	127.43	46	ePKIKP	PKPdf	19 11 01.8	-2.0
ZALV	Zalesovo Beam	128.00	47	PKP	PKPdf	19 11 03.5	-1.4
	comp=Z,0.3nm,0.3s,baz=308,slow=3.6,SNR=3.2						
YKA	Yellowknife Ar	128.79	324	PKP	PKPdf	19 11 04.5	-1.6
	comp=Z,2.4nm,0.9s,baz=105,slow=2.1,SNR=32						
ZAK	Zakamensk	138.03	56	ePKIKP	PKPdf	19 11 19.8	-4.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
SONM	Songino Array	139.53	60	PKP	PKPdf	19 11 25.6	-1.1
	comp=Z,1.1nm,0.9s,baz=262,slow=2.0,SNR=6.0						
SONM				PP	PP	19 14 23.2	+1.0
	comp=Z,0.5nm,0.8s,baz=188,slow=3.0,SNR=3.6						
BOD	Bodaibo	144.65	45	ePKIKP	PKPdf	19 11 32.7	-2.8
BOD				pmax	pmax		
	comp=Z,20nm,1.1s						
TIXI	Tiksi	144.77	18	ePKIKP	PKPdf	19 11 32.8	-2.6
RC01	Rabbit Creek A	145.26	321	ePKP	PKPdf	19 11 35.8	-0.7
SEW	Seward	145.34	320	ePKP	PKPdf	19 11 34.9	-1.8
PPLA	Purkeypile	145.86	325	ePKP	PKPdf	19 11 36.7	-0.7
KDAK	Kodiak Island	147.41	316	PKPbc	PKPbc	19 11 43.2	+0.4
	comp=Z,8.1nm,0.8s,baz=140,slow=3.7,SNR=4.4						
KDAK	Kodiak Island	147.41	316	PKPbc	PKPbc	19 11 43.2	+0.4
BILL	Bilibino	152.78	358	ePKIKP	PKPdf	19 11 46.7	-1.7
BILL				e		19 11 54.1	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL	Bilibino	152.78	358	ePKPbc	PKPbc	19 11 52.9	-2.6

SKHL 13 19:00:19.9±0.3, 5523N×12239E, h9^{km}±1^{km}, mb3.7/4, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUP	Tupik	1.62	241	ePg	Pg	19 00 49.2	-1.8
TUP				AMB	AMB	19 00 51.3	
	38nm,0.3s						
TUP				eSg	Sg	19 01 10.6	-1.4
TUP				A		19 01 12.2	
	152nm,0.3s						
CLNS	Chul'man	2.14	40	ePn	Pn	19 00 56.5	+0.8
CLNS				ePg	Pg	19 01 00.0	-0.8
CLNS				AMB	AMB	19 01 01.4	
	5.0nm,0.2s						
CLNS				eSg	Sg	19 01 27.9	-0.6
CLNS				A		19 01 28.5	
	89nm,0.4s						
KROS	Kirovskiy	2.77	105	ePn	Pn	19 01 03.1	-1.2
KROS				ePg	Pg	19 01 09.3	-3.6
KROS				AMB	AMB	19 01 11.6	
	7.0nm,0.3s						
KROS				AMB	AMB	19 01 11.6	
	16nm,0.3s						
KROS				pPg		19 01 14.1	
KROS				eSg	Sg	19 01 46.2	-2.5
KROS				A		19 01 49.7	
	74nm,0.5s						
KROS				A		19 01 49.7	
	60nm,0.5s						
KROS				A		19 01 49.7	
	63nm,0.5s						
CRS	Chara	2.85	308	ePn	Pn	19 01 05.1	-0.4
CRS				sPn		19 01 08.1	
CRS				eSn	Sn	19 01 42.0	+2.1
ZEA	Zeya	3.21	116	erx	rx	19 01 21.4	
ZEA				eSg	Sg	19 02 00.5	-2.2
ZEA				A		19 02 08.7	
	100nm,0.6s						
BMKR	Bomnak	3.75	95	ePn	Pn	19 01 16.9	-1.0
BMKR				ePg	Pg	19 01 27.4	-4.4
BMKR				AMB	AMB	19 01 28.7	
	6.0nm,0.4s						
BMKR				eSn	Sn	19 02 04.0	+1.8
BMKR				eSg	Sg	19 02 16.7	-3.7
BMKR				A		19 02 23.2	
	30nm,0.5s						
BMKR				A		19 02 23.2	
	45nm,0.5s						
YASR	Yasnyy	3.81	118	ePn	Pn	19 01 17.8	-0.9
YASR				ePg	Pg	19 01 28.7	-4.1
YASR				eSg	Sg	19 02 19.7	-2.5
YASR				A		19 02 26.2	
	16nm,0.7s						
EKMR	Ekimchan	6.57	105	eP	Pn	19 01 59.4	+2.8
EKMR				eSg	Sg	19 03 45.0	-5.6
EKMR				A		19 03 57.1	
	6.0nm,0.5s						
EKMR				A		19 03 57.1	
	5.0nm,0.5s						

IDC 13 19:12:55.5±7.4, 345N×9617E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=389.8km s-min=23.6km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.11	123	P	P	19 21 05.8	-0.1
	0.3nm,0.5s,baz=300,slow=9.2						
MKAR	Makanchi Array	44.83	346	P	P	19 21 11.2	-0.1
	0.3nm,0.4s,baz=153,slow=8.9,SNR=6.2						
ASAR	Alice Springs	45.58	128	P	P	19 21 17.7	+0.1
	0.2nm,0.7s,baz=302,slow=7.8,SNR=7.1						
KURK	Kurchatov	49.37	345	P	P	19 21 46.1	-0.5
	0.5nm,0.6s,baz=163,slow=6.9,SNR=4.4						

*IDC **13** 19:19:11.0±5.9, 3637N×7106E, h199^{km}±55^{km}, mb3.3/7, mb1 3.3/11, mb1mx3.1/27, mbtmp3.2/11, Error ellipse: s-maj=30.6km s-min=21.0km az=9.0*

*ISCJB **13** 19:19:13.6±0.9, 3658N±007×7117E±010, h235^{km}±8^{km}, mb3.4/6, Error ellipse: s-maj=13.4km s-min=10.5km az=35.1*

*MOS **13** 19:19:13.9±1.2, 3661N×7110E, h235^{km}, mb3.8/2, Error ellipse: s-maj=26.7km s-min=11.1km az=77.2*

*NEIC **13** 19:19:14.2±0.9, 3653N×7123E, h229^{km}±8^{km}, mb4.5/4, Error ellipse: s-maj=19.7km s-min=9.8km az=126.0*

*NNC **13** 19:19:17.3±4.6, 3730N×7063E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=39.5km s-min=35.2km az=81.0*

ISC 13 19:19:15.1±0.8, 3667N±007×7108E±010, h229^{km}±8^{km}, n38, σ0.97/42, mb3.4/6, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.70	219	ePn	Pn	19 20 02.6	-0.4
KBL				eSn	S	19 20 27.1	-14
AML	Almayashu	5.82	20	P	Pn	19 20 40.8	+0.4
	SNR=44						
AML	Almayashu	5.82	20	eP	Pn	19 20 40.3	-0.1
	62nm,0.8s						
UCH	Uchtor	6.15	24	P	Pn	19 20 45.4	+0.7
	SNR=6.2						
UCH	Uchtor	6.15	24	eP	Pn	19 20 45.3	+0.7
	7.1nm,0.5s						
KZA	Kyzart	6.29	30	P	Pn	19 20 46.6	+0.2
	SNR=14						
EKS2	Erkin-Say	6.33	18	P	Pn	19 20 47.3	+0.3
	SNR=11						
EKS2	Erkin-Say	6.33	18	eP	Pn	19 20 47.2	+0.2
	62nm,0.8s						
KK31	Karatay Array	6.44	356	Pn	Pn	19 20 48.1	-0.2
	2.6nm,0.7s,baz=180,slow=12,SNR=48						
KK31				⇓Sn	S	19 21 58.4	-4.3
	8.6nm,0.6s,baz=182,slow=19,SNR=14						
AAK	Ala-Archa	6.51	23	P	Pn	19 20 49.6	+0.4
	SNR=20						
KBK	Karagaybulak	6.68	25	P	Pn	19 20 51.8	+0.5
	SNR=9.5						
ULHL	Ulahol	6.85	34	P	Pn	19 20 53.7	+0.2
	SNR=17						
CHMS	Chumysh	6.92	23	P	Pn	19 20 54.9	+0.5
	SNR=8.9						
USP	Ospenovka	7.09	21	P	Pn	19 20 56.7	+0.1
	SNR=5.8						
TKM2	Tokmak 2	7.14	28	⇑Pn	Pn	19 20 57.5	+0.2
	8.8nm,0.5s						
TKM2				⇑Sn	S	19 22 16.8	-2.2
	3.6nm,0.7s						
TKM2	Tokmak 2	7.14	28	ePN	Pn	19 20 57.4	+0.1
TKM2				pmax	pmax		
	comp=Z,11nm,0.5s						
TKM2	Tokmak 2	7.14	28	P	Pn	19 20 57.7	+0.4
	SNR=14						
TKM2	Tokmak 2	7.14	28	eP	Pn	19 20 57.4	+0.2
	comp=Z,11nm,0.5s						
MK31	Makanchi Array	13.12	36	eP	Pn	19 22 12.4	-0.5
MKAR	Makanchi Array	13.12	36	P	Pn	19 22 12.7	-0.2
	comp=Z,0.3nm,0.3s,baz=221,slow=17,SNR=11						
AB09	Akbulak array	14.98	331	⇓Pn	Pn	19 22 35.3	-0.4
	comp=Z,1.4nm,1.1s						
AB09				⇓Sn	S	19 25 19.4	-1.8
	comp=Z,1.7nm,1.0s						
KURK	Kurchatov	15.05	19	P	Pn	19 22 34.5	-2.0
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=9.9						
KURK	Kurchatov	15.05	19	P	Pn	19 22 34.5	-2.0
BVAR	Borovoye Array	16.36	359	P	P	19 22 54.0	+3.2
	comp=Z,0.3nm,0.3s,baz=158,slow=10,SNR=6.2						
AKTK	Aktyubinsk	16.67	330	P	P	19 22 55.6	+1.4
AKTO	Aktyubinsk	16.67	330	P	P	19 22 55.6	+1.4
	comp=Z,0.5nm,0.3s,baz=139,slow=11,SNR=10						
AKTO	Aktyubinsk	16.67	330	P	P	19 22 55.7	+1.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	19.73	25	P	P	19 23 27.9	+0.6
	comp=Z,0.8nm,0.3s,baz=215,slow=11,SNR=5.6						
ZALV	Zalesovo Beam	19.73	25	P	P	19 23 28.0	+0.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	41.02	337	P	P	19 26 36.9	+1.5
	comp=Z,2.7nm,0.9s,mb3.7,baz=107,slow=7.8,SNR=5.5						
ARCES	ARCESS Array B	41.02	337	P	P	19 26 36.9	+1.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	NORSAR Array B	44.29	323	P	P	19 27 02.2	+0.5
	comp=Z,0.8nm,0.8s,mb3.1,baz=102,slow=8.0,SNR=2.9						
TORD	Torodi Ar. Bea	65.79	269	P	P	19 29 34.8	-1.2
	comp=Z,0.7nm,0.6s,mb3.5,baz=52,slow=5.9,SNR=17						
DBIC	Dimbokro	74.77	267	P	P	19 30 29.5	-0.9
	comp=Z,1.6nm,0.7s,mb3.8,baz=79,slow=10,SNR=2.3						
DBIC	Dimbokro	74.77	267	P	P	19 30 29.5	-0.9
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	81.08	3	P	P	19 31 04.3	+0.2
	comp=Z,0.2nm,0.4s,mb3.1,baz=352,slow=5.6,SNR=6.3						
YKA	Yellowknife Ar	81.08	3	P	P	19 31 04.3	+0.2
WRA	Warramunga Arr	82.02	122	P	P	19 31 08.8	-0.9
	comp=Z,0.2nm,0.4s,mb3.1,baz=326,slow=4.9,SNR=5.3						

SOF ***13*** *19:46:30.7,4066N×2576E,h5km,MD2.6*
ISCJB ***13*** *19:46:32.5±0.6,4074N±004×2571E±004,h5km±6km, Error ellipse: s-maj=6.7km s-min=4.8km az=38.5*
CSEM ***13*** *19:46:32.6±0.1,4073N×2576E,h5km,MD2.6,Error ellipse: s-maj=2.3km s-min=2.1km az=133.0*
DDA ***13*** *19:46:32.2,4074N×2555E,h14km,Md3.0*
ATH ***13*** *19:46:34.9,4080N×2576E,h10km,MD3.4/3*
ISC 13 19:46:33.5±0.6,**4074N**±004×**2573E**±004,**h10**km±4km,**n27**, σ**0^{s}76**/33,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENEZ	Enez	0.32	91	ePG	Pg	19 46 39.3	-0.6
ENEZ				eSG	Sg	19 46 44.5	+0.3
RDO	Rodhopi	0.43	341	ePB	Pg	19 46 42.5	+0.6
GADA	Gvkgeada	0.56	167	ePG	Pg	19 46 43.5	-0.9
KDZ	Kurdzhali	0.94	346	P	Pg	19 46 51.4	-0.1
EZN	Ezine	1.02	153	ePG	Pg	19 46 52.1	-0.9
RKY	Sarkoy-Tekirda	1.10	92	ePN	Pn	19 46 53.2	-1.8
SART	Tekirdag	1.10	92	iP	Pg	19 46 53.7	-1.0
SART				iS	Sg	19 47 10.2	+1.2
SART	Tekirdag	1.10	92	iP	Pg	19 46 53.7	-1.0
SART				iS	Sg	19 47 10.2	+1.1
RZN	Rozhen	1.22	321	P	Pn	19 46 55.3	-1.2
EDRB	Edirne	1.34	34	ePN	Pn	19 46 57.6	-0.7
TKR	Tekirdag	1.39	79	ePN	Pn	19 46 58.9	-0.1
PRK	Paraskevi	1.55	164	ePB	Pg	19 47 05.0	+1.8
CRLT	Corlu	1.57	75	ePN	Pn	19 47 01.7	+0.3
AYVA	Ayvalik	1.61	152	iP	Pn	19 47 00.7	-1.2
AYVA				iS	Sn	19 47 23.4	+0.6
EDC	Edincik	1.68	103	ePN	Pn	19 47 02.8	0.0
BNT	Bandirma	1.71	102	ePN	Pn	19 47 03.3	-0.1
PLG	Polygyros	1.78	259	ePN	Pg	19 47 08.0	+0.5
JMB	Yambol	1.84	20	P	Pn	19 47 05.9	+0.8
JMB				Pg	Pg	19 47 08.7	-0.1
SLVT	Silivri	1.94	75	ePN	Pn	19 47 06.8	+0.3
BALB	Balikesir	1.98	123	ePN	Pn	19 47 07.5	+0.5
KCT	Karacabey	2.06	102	ePN	Pn	19 47 08.4	+0.3
CTT	Catalca	2.09	78	ePN	Pn	19 47 08.9	+0.4
ELBA	Catalca	2.09	78	iP	Pn	19 47 08.0	-0.5
ELBA				iS	Sn	19 47 34.4	-0.2
CTKS	Kestanelik-??a	2.16	76	ePN	Pn	19 47 09.9	+0.4
KKB	Krupnik	2.29	300	P	Pn	19 47 12.3	+1.0
BGKT	Bogazkoy	2.35	78	ePN	Pn	19 47 12.8	+0.7
VTS	Vitosha	2.64	315	eP	Pg	19 47 23.8	-0.3

ISCJB ***13*** *19:47:24.8±0.4,4382N±004×105.18W±005,h0km,mb3.9/3, Error ellipse: s-maj=5.6km s-min=5.1km az=7.3*
NEIC ***13*** *19:47:26.4±0.3,4379N×10523W,h0km,ML3.1,Error ellipse: s-maj=5.0km s-min=4.4km az=173.0,Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
IDC ***13*** *19:47:27.1±0.9,4402N×10578W,h0km,mb3.8/3, mb1 3.6/9,mb1mx3.5/27,mbtmp3.4/9,ML3.2/6,Error ellipse: s-maj=21.4km s-min=8.1km az=144.0*
ISC 13 19:47:26.4±0.4,**4381N**±004×**10521W**±005,**h0**km,**n33**, σ**1^{s}16**/44,**mb3.9**/3,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.90	69	ePg	Pg	19 47 44.8	+1.1
RSSD				eS	Sg	19 47 59.7	+4.4
PHWY	Pilot Hill	2.51	184	ePn	Pn	19 48 07.6	-0.8
PHWY				eSn	Sn	19 48 40.3	+0.6
RWWY	Rawlins	2.58	216	ePn	Pn	19 48 09.6	+0.2
RWWY				eSn	Sn	19 48 42.3	+0.8
RLMT	Red Lodge	3.19	296	ePn	Pn	19 48 17.5	-0.2
RLMT				ePg	Pg	19 48 24.3	-3.2
PDAR	Pinedale Array	3.34	253	Pn	Pn	19 48 19.0	-0.9
	2.7nm,0.3s,baz=71,slow=16,SNR=43						
PDAR				Lg		19 49 02.7	
	7.8nm,0.3s,baz=74,slow=33,SNR=9.2						
OGNE	Ogallala	3.70	140	ePn	Pn	19 48 23.6	-1.2
OGNE				ePg	Pg	19 48 35.2	-2.1
LKWY	Lake	3.81	283	ePn	Pn	19 48 29.1	+2.8
LOHW	Long Hollow	3.92	269	ePn	Pn	19 48 27.6	-0.1
MOOW	Moose Ponds	4.01	271	ePn	Pn	19 48 29.4	+0.4
ISCO	Idaho Springs	4.02	185	ePn	Pn	19 48 25.6	-3.6
SNOW	Snow King Moun	4.04	267	ePn	Pn	19 48 29.4	-0.1
REDW	Red Top Meadow	4.13	266	ePn	Pn	19 48 36.9	+6.3
IMW	Indian Meadow	4.15	273	ePn	Pn	19 48 31.2	+0.3
DCID1	Drake Creek	4.34	269	ePn	Pn	19 48 34.6	+1.0
DGMT	Dagmar	4.72	8	ePn	Pn	19 48 40.0	+1.3
DGMT				ePg	Pg	19 48 51.9	-4.8
SMCO	Snowmass	4.81	197	ePn	Pn	19 48 41.7	+1.6
BOZ	Bozeman (W)	4.93	294	ePn	Pn	19 48 41.0	-0.7
BOZ				ePg	Pg	19 48 53.3	-7.6
BOZ				eS	Sn	19 49 52.8	+13
EGMT	Eagleton	5.28	325	ePn	Pn	19 48 46.1	-0.4
	21nm,0.6s						
EGMT				ePg	Pg	19 49 01.7	-5.7
DLMT	Dillon	5.50	289	ePn	Pn	19 48 51.5	+1.9
	12nm,1.0s						
SDCO	Great Sand Dun	6.06	182	ePn	Pn	19 48 56.8	-0.4
	2.3nm,0.6s						
ECSD	EROS,Sioux Fal	6.22	88	ePn	Pn	19 48 59.8	+0.4
	6.7nm,0.4s						
CBKS	Cedar Bluff	6.47	139	ePn	Pn	19 49 02.8	0.0
	15nm,0.4s						
MVCO	Mesa Verde	7.05	202	ePn	Pn	19 49 12.5	+1.7
	5.1nm,0.6s						
ELK	Elko	8.04	251	Pn	Pn	19 49 21.8	-2.6
	0.1nm,0.3s,baz=122,slow=9.5,SNR=3.0						
ULM	Lac du Bonnet	9.06	41	Pn	Pn	19 49 39.0	+0.7
	1.4nm,0.3s,baz=231,slow=12,SNR=8.2						
ULM				Pg	Pg	19 50 10.6	-9.2
	0.7nm,0.3s,baz=225,slow=17,SNR=4.1						
ULM				Lg		19 52 08.1	
	0.6nm,0.3s,baz=144,slow=19,SNR=2.4						
ULM	Lac du Bonnet	9.06	41	Pn	Pn	19 49 39.0	+0.7
ULM				Pg	Pg	19 50 10.6	-9.2
ULM				Lg		19 52 08.1	
NVAR	Mina Array Bea	11.24	246	Pn	Pn	19 50 07.9	-0.4
	0.1nm,0.3s,baz=64,slow=10,SNR=2.9						
TXAR	Lajitas Array	14.50	175	Pn	Pn	19 50 58.9	+6.1
	0.0nm,0.3s,baz=354,slow=10,SNR=3.6						
TXAR				Pg	Pn	19 51 55.3	+63
	0.1nm,0.3s,baz=4.6,slow=14,SNR=5.1						
TXAR				Lg		19 55 08.1	
	0.0nm,0.3s,baz=39,slow=11,SNR=3.3						
YKA	Yellowknife Ar	19.51	347	P	Pn	19 51 53.8	-2.2
	0.1nm,0.3s,baz=163,slow=13,SNR=4.5						
YKA	Yellowknife Ar	19.51	347	P	Pn	19 51 53.8	-2.2
ZALV	Zalesovo Beam	82.24	354	P	P	19 59 48.3	-0.8
	0.5nm,0.5s,mb4.0,baz=20,slow=4.6,SNR=3.1						
SONM	Songino Array	84.59	339	P	P	20 00 01.8	+0.5
	0.4nm,0.7s,mb3.7,baz=1.9,slow=8.7,SNR=2.7						
MKAR	Makanchi Array	89.54	355	P	P	20 00 25.1	-0.2
	0.7nm,0.9s,mb3.9,baz=0.0,slow=4.9,SNR=4.0						

ISCJB ***13*** *20:07:12.6±1.1,78S±0.1×119.1E±02,h39km,mb3.8/4, Error ellipse: s-maj=32.7km s-min=10.9km az=156.6*
NEIC ***13*** *20:07:13.6±4.4,776S×119.15E,h27km±32km,mb3.5/1, Error ellipse: s-maj=30.6km s-min=8.3km az=68.0*
IDC ***13*** *20:07:15.5±1.6,750S×11944E,h38km±8km,mb3.5/4, mb1 3.7/5,mb1mx3.4/18,mbtmp3.5/5,ML3.7/1,Error ellipse: s-maj=183.7km s-min=17.0km az=56.0*
ISC 13 20:07:13.3±6.2,**78S**±01×**1192E**±03,**h24**km±45km, **h39**km±4.4km**:pP-P**,**n11**,σ**0^{s}49**/11,**mb3.8**/4,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.78	12	eP	Pn	20 07 56.5	+0.2
FITZ	Fitzroy Crossi	12.05	149	eP	Pn	20 10 04.0	+0.3
WRA	Warramunga Arr	19.03	131	P	Pn	20 11 33.8	-0.8
	0.2nm,0.3s,baz=306,slow=13,SNR=5.6						
WRAB	Tennant Creek	19.03	131	eP	Pn	20 11 34.0	-0.6
	2.5nm,0.7s						
ASAR	Alice Springs	21.20	140	P	P	20 11 57.8	+0.5
	2.1nm,0.4s,mb3.8,baz=317,slow=9.1,SNR=35						
COEN	Coen	24.33	107	P	P	20 12 29.9	+0.5
STKA	Stephens Creek	31.80	142	P	P	20 13 36.7	+0.6
	1.2nm,0.6s,mb3.9,baz=330,slow=12,SNR=7.5						
STKA				pP	pP	20 13 49.3	+6.1
	0.9nm,0.5s,baz=293,slow=4.0,SNR=2.7						
STKA	Stephens Creek	31.80	142	eP	P	20 13 36.0	-0.1
STKA				pP	pP	20 13 49.3	+6.1
MKAR	Makanchi Array	63.44	333	P	P	20 17 41.3	+0.2
	0.4nm,0.6s,mb3.8,baz=139,slow=6.8,SNR=4.7						
MKAR				pP	pP	20 17 51.5	+2.9
	0.8nm,0.6s,baz=156,slow=7.2,SNR=5.6						
ZALV	Zalesovo Beam	67.95	339	P	P	20 18 09.4	-0.6
	0.3nm,0.4s,mb3.6,baz=35,slow=3.5,SNR=2.5						
ZALV				pP	pP	20 18 20.7	+3.1
	1.1nm,0.7s,baz=156,slow=7.6,SNR=3.1						
ZALV	Zalesovo Beam	67.95	339	P	P	20 18 09.4	-0.6
ZALV				pP	pP	20 18 20.7	+3.1

NIED ***13*** *20:33:00,3620N×14130E,h11km,Mw3.7 Best double couple: M0 3.41000×10[14] NP1:φs323.00000°,δ61.00000°, λ70.00000°. NP2:φs180.00000°,δ35.00000°,λ123.00000°.*
ISCJB ***13*** *20:33:46.4±1.3,36.19N±004×14135E±009,h27km±8km, Error ellipse: s-maj=12.1km s-min=7.2km az=4.0*
JMA ***13*** *20:33:46.3±0.1,36.15N×14134E,h48km±2km,M3.5*
ISC 13 20:33:46.2±1.3,**3619N**±004×**14137E**±009,**h22**km±8km,**n9**, σ**0^{s}82**/16,**1D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.64	220	⇓P	Pb	20 33 58.6	-0.1
CHOJ				S	Sb	20 34 07.8	+0.6
JHO	Hitachi	0.77	303	P	Pb	20 34 00.9	0.0
JYT	Yasato	0.95	273	P	Pb	20 34 03.2	-0.8
JYT				eS	Sb	20 34 15.2	-0.9
ONAJ	Iwakimizuishiy	1.02	333	P	Pb	20 34 05.1	-0.1
ONAJ				eS	Sb	20 34 18.9	+0.8
JFK	Kawauchi	1.24	341	P	Pn	20 34 07.5	-0.7
JFK				eS	Sn	20 34 23.4	-0.8
JFT	Otama	1.56	328	P	Pn	20 34 13.5	+0.8
JFT				eS	Sb	20 34 34.0	+0.3
JAG	Ashikaga	1.56	279	P	Pn	20 34 12.2	-0.5
JAG				eS	Sn	20 34 31.0	-1.3
BSO1	Boso 1	1.57	192	P	Pn	20 34 12.5	-0.2
MAT	Matsushiro	2.58	279	P	Pn	20 34 27.8	+1.2
MAT				S	Sn	20 34 59.0	+1.8

ISCJB ***13*** *20:47:59.8±0.8,7298N±009×1268E±04,h10km,mb3.6/6, Error ellipse: s-maj=17.6km s-min=10.5km az=151.7*
IDC ***13*** *20:47:59.9±1.2,7301N×12662E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.5/24,mbtmp3.6/6,MS3.1/1,Ms1 3.1/1, ms1mx2.5/26,Error ellipse: s-maj=63.8km s-min=21.2km az=140.0*
MOS ***13*** *20:47:59.9±1.3,7300N×12660E,h10km,mb3.9/2,Error ellipse: s-maj=99.9km s-min=27.4km az=86.9*
NEIC ***13*** *20:48:01.2±0.8,7294N×12687E,h10km,Error ellipse: s-maj=19.2km s-min=16.6km az=125.0*
ISC 13 20:48:01.5±0.8,**7292N**±009×**1269E**±04,**h10**km,**n10**, σ**0^{s}78**/11,**mb3.6**/6,**Northern and central Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	Tiksi	1.42	154	ePn	Pn	20 48 27.0	-0.2
TIXI				eSn	Sn	20 48 45.9	0.0
BOD	Bodaibo	16.02	206	eP	Pn	20 51 39.4	-7.0
BOD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	25.81	245	P	P	20 53 33.4	+1.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=31,slow=6.9,SNR=4.7						
ZALV	Zalesovo Beam	25.81	245	P	P	20 53 33.4	+1.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
SONM	Songino Array	26.82	212	P	P	20 53 41.9	+0.6
	comp=Z,1.7nm,0.7s,mb3.7,baz=2.5,slow=10,SNR=4.5						
SONM	Songino Array	26.82	212	P	P	20 53 41.9	+0.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	32.99	242	P	P	20 54 34.6	-1.4
	comp=Z,0.2nm,0.4s,mb3.4,baz=29,slow=12,SNR=2.8						
MKAR				LR	LR	21 10 21.2	
	comp=Z,31nm,18.1s,baz=211,slow=41						
PDAR	Pinedale Array	58.26	46	P	P	20 57 55.1	-0.5
	comp=Z,0.2nm,0.5s,mb3.4,baz=353,slow=5.4,SNR=3.2						
TXAR	Lajitas Array	72.44	45	P	P	20 59 28.4	+0.9
	comp=Z,0.4nm,0.5s,mb3.6,baz=9.4,slow=4.4,SNR=8.1						
TORD	Torodi Ar. Bea	87.13	307	P	P	21 00 46.8	-0.5
	comp=Z,0.3nm,0.5s,mb3.7,baz=11,slow=4.1,SNR=7.4						

TRN ***13*** *21:03:45.7,1908N×6439W,h68km*
NEIC ***13*** *21:03:47.6,19.12N×6440W,h71km,MD3.5(RSPR),After RSPR.*
RSPR ***13*** *21:03:47.6,19.12N×6440W,h71km±3km,MD3.5/11, MD3.5/11*
ISC 13 21:03:46.9±1.4,**192N**±02×**6441W**±009,**h67**km±24km,**n20**, σ**0^{s}48**/37,**16C-2D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.44	171	⇑eP	Pn	21 03 59.5	+0.6
ABV				eS	Sn	21 04 07.4	-0.1
TBVI	Tortola	0.77	195	⇑eP	Pn	21 04 02.1	-0.3
TBVI				eS	Sn	21 04 13.5	-0.3
STVI	Saint Thomas	0.96	213	⇑eP	Pn	21 04 04.2	-0.5
STVI				eS	Sn	21 04 18.1	+0.1
CBYP	Canovanas	1.64	237	⇑eP	Pn	21 04 12.9	-0.7
CBYP				eS	Sn	21 04 34.1	+0.3
CBYP	Canovanas	1.64	237	⇑eP	Pn	21 04 12.9	-0.7
CBYP				eS	Sn	21 04 34.0	+0.2
HUMP	Col San Antoni	1.71	234	⇑eP	Pn	21 04 14.5	0.0
HUMP				eS	Sn	21 04 35.2	-0.2
CPD	Cerro la Pandu	1.82	232	⇑eP	Pn	21 04 16.1	0.0
CPD	Cerro la Pandu	1.82	232	⇑eP	Pn	21 04 16.5	+0.5
CPD				eS	Sn	21 04 37.8	-0.4
CPD	Cerro la Pandu	1.82	232	⇑eP	Pn	21 04 16.1	0.0
CPD				eS	Sn	21 04 37.8	-0.4
SJG	San Juan	1.96	238	⇑eP	Pn	21 04 17.6	-0.3
SJG				eS	Sn	21 04 41.4	-0.1
SJG	San Juan	1.96	238	⇑eP	Pn	21 04 17.6	-0.3
SJG	San Juan	1.96	238	⇑eP	Pn	21 04 18.2	+0.3
SJG				eS	Sn	21 04 40.9	-0.6
SJG				eS	Sn	21 04 41.4	-0.1
SJG	San Juan	1.96	238	eS	Sn	21 04 40.9	-0.6
SJG				eSn	Sn	21 04 44.0	+2.5
CELP	Cerrillos	2.33	243	⇓eP	Pn	21 04 22.9	0.0
CELP				eS	Sn	21 04 51.2	+0.7
AOPR	Arecibo Observ	2.37	250	⇑eP	Pn	21 04 23.7	+0.2
LRS	Lares	2.47	250	⇑eP	Pn	21 04 24.9	+0.1
LRS				eS	Sn	21 04 54.0	0.0
GBPR	Guanica, Bosqu	2.63	244	⇑eP	Pn	21 04 27.9	+1.0
LSP	Las Mesas	2.73	249	⇓iP	Pn	21 04 28.6	+0.2
LSP				eS	Sn	21 05 01.0	+0.8
CRPR	Cabo Rojo, PR	2.81	246	⇑eP	Pn	21 04 29.5	0.0
CRPR				eS	Sn	21 05 01.5	-0.8
SDDR	Presa de Saban	6.51	270	eP	Pn	21 05 19.6	-0.5
	16nm,0.3s						
SDDR				eSn	Sn	21 06 32.5	-0.5

CASC 13 21:49:44.1±1.2,**1138N**×**8626W**,**h61**km±9km,**MD3.7**, **ML2.2**,**11C-10D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.40	102	⇓iP	Pn	21 49 55.2	0.0
APON	Apoyo	0.56	19	⇓eP	Pn	21 49 57.6	+0.7
CONN	Concepcion	0.64	74	⇑eP	Pn	21 49 58.1	+0.4
TICN	Ticuantepe	0.65	2	⇓eP	Pn	21 49 58.2	+0.4
TISN	Laguna Tiscapa	0.75	359	⇓eP	Pn	21 49 59.2	+0.1
MGAN	Managua	0.76	1	⇑eP	Pn	21 49 59.2	0.0
MGAN				eS	Sn	21 50 10.8	+0.6
MGAN				AML	AML	21 50 12.1	
	comp=N,53nm,0.2s						
XAVN	Gruta Xavier	0.76	355	⇑eP	Pn	21 49 59.5	+0.3
XAVN				eS	Sn	21 50 10.3	0.0
WILN	Americas 2	0.78	5	eP	Pn	21 49 59.1	-0.3
WILN				eS	Sn	21 50 11.3	+0.7
CSAN		0.81	349	⇑eP	Pn	21 49 59.8	0.0
APYN	Apoyeque	0.85	354	⇑eP	Pn	21 50 00.5	+0.2
COPN	Copaltepe	0.86	338	⇑eP	Pn	21 50 00.2	-0.2
HUEN		0.95	5	⇑eP	Pn	21 50 01.7	+0.1
MOMN	Momotombo	1.05	345	⇓eP	Pn	21 50 03.5	+0.5
MOMN				eS	Sn	21 50 17.0	+0.1
MIRN	Miramar	1.14	337	eP	Pn	21 50 04.0	0.0
CNGN	Cerro Negro	1.19	339	⇓eP	Pn	21 50 04.6	-0.1
LIM1	Limonal	1.20	125	⇓eP	Pn	21 50 04.9	+0.1
CUI	Cuipilapa	1.28	124	⇓iP	Pn	21 50 06.3	+0.5
CUI				iS	Sn	21 50 24.2	+2.0
TEL3	Telica 3	1.31	334	⇓eP	Pn	21 50 06.7	+0.4
2RIO	Dos Rios de Up	1.32	130	⇑eP	Pn	21 50 02.9	-3.5
VCR	Vista de Mar	1.39	154	⇑eP	Pn	21 50 07.1	-0.3
JCR	Jicaral	1.90	143	eP	Pn	21 50 13.9	-0.2
JCR				eS	Sn	21 50 37.4	+0.4
CGA2	Cerro Gallo 2	2.22	127	eP	Pn	21 50 18.1	-0.5
CGA2				eS	Sn	21 50 46.4	+1.4
PRS1	Puriscal	2.37	126	eP	Pn	21 50 21.9	+1.3
LAJ	Bijagual	2.59	126	eP	Pn	21 50 21.6	-2.0
URSC	Urasca	2.88	122	⇑eP	Pn	21 50 28.9	+1.3
BUS	Buena Vista	3.06	126	eP	Pn	21 50 30.7	+0.7
CHI2		14.08	117	⇓eP	x	21 50 08.9	
LAPE	La Pedrera	14.97	103	⇑eP	x	21 50 01.9	

IDC ***13*** *22:47:58.8±2.0,5195N×16488W,h0km,mb3.6/4, mb1 3.8/5,mb1mx3.5/26,mbtmp3.7/5,ML3.9/1,Error ellipse: s-maj=53.3km s-min=27.5km az=5.0*
ISCJB ***13*** *22:47:59.9±4.3,519N±0.1×1648W±0.1,h21km±31km, mb3.7/5,Error ellipse: s-maj=19.0km s-min=12.9km az=11.6*
NEIC ***13*** *22:47:59.9±1.5,5179N×16508W,h10km,mb4.0/1,Error ellipse: s-maj=27.0km s-min=15.8km az=180.0*
ISC 13 22:48:01.1±4.4,**518N**±01×**1650W**±01,**h16**km±29km,**n8**, σ**1^{s}02**/10,**mb3.7**/5,**South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	2.23	336	Pn	Pn	22 48 36.1	-1.2
UNV				eSn	Sn	22 49 05.2	+0.6
OHAK	Old Harbor	8.68	47	ePn	Pn	22 50 06.6	+0.8
KDAK	Kodiak Island	9.30	45	Pn	Pn	22 50 14.0	-0.4
	1.3nm,0.3s,baz=259,slow=4.5,SNR=12						
KDAK				Sn	Sn	22 51 57.8	-0.9
	0.1nm,0.3s,baz=142,slow=19,SNR=2.9						
INK	Inuvik	22.37	31	eP	P	22 53 00.0	+1.9
	6.4nm,1.2s,mb3.9						
TXAR	Lajitas Array	50.03	92	P	P	22 56 54.6	-0.1
	0.3nm,0.5s,mb3.5,baz=302,slow=6.4,SNR=5.6						
ZALV	Zalesovo Beam	59.63	320	P	P	22 58 02.3	-1.5
	0.3nm,0.4s,mb3.7,baz=30,slow=6.7,SNR=2.1						
BVAR	Borovoye Array	65.69	327	P	P	22 58 45.4	+1.1
	0.8nm,0.7s,mb3.9,baz=29,slow=6.6,SNR=3.8						
MKAR	Makanchi Array	66.12	316	P	P	22 58 47.1	-0.1
	0.4nm,0.8s,mb3.5,baz=46,slow=7.4,SNR=4.1						

BJI ***13*** *23:22:50.7,960S×12443E,h28km,mB5.0,mb4.8*
NEIC ***13*** *23:22:59.5±0.3,890S×12408E,h35km,mb4.6/2,Error ellipse: s-maj=13.3km s-min=6.3km az=59.0*
ISCJB ***13*** *23:23:04.6±0.9,928S±007×124.18E±007,h124km±8km, mb4.9/22,Error ellipse: s-maj=13.2km s-min=8.4km az=136.7*
IDC ***13*** *23:23:04.2±1.7,891S×12408E,h80km±16km,mb4.0/9, mb1 4.1/9,mb1mx3.9/17,mbtmp4.0/9,MS3.1/6,Ms1 3.1/6, ms1mx3.0/24,Error ellipse: s-maj=25.9km s-min=15.2km az=73.0*
DJA ***13*** *23:23:05,943S×12400E,h127km,Mw5.2/4*
ISC 13 23:23:06.0±0.9,**933S**±007×**12416E**±009,**h120**km±9km, **n53**,σ**0^{s}78**/52,**mb4.9**/22,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	1.00	209	P	Pn	23 23 27.9	-0.2
	140nm,0.3s,baz=30,slow=2.7,SNR=73						
BATI				S	Sn	23 23 45.1	+0.3
	1µm,0.3s,baz=240,slow=20,SNR=55						
KAKA	Kakadu	8.79	113	eP	x	23 24 50.3	
	50nm,0.3s						
KAKA				eS	x	23 26 26.4	
FITZ	Fitzroy Crossi	8.84	171	eP	Pn	23 25 10.3	-0.6
	146nm,0.4s						
FITZ				eS	Sn	23 26 44.9	-3.8
FITZ	Fitzroy Crossi	8.84	171	ePn	Pn	23 25 11.0	+0.1
FITZ				eSn	Sn	23 26 45.2	-3.5
MBWA	Marble Bar	12.51	199	ePn	Pn	23 26 01.3	+1.4
MBWA				eSn	Sn	23 28 16.2	-1.5
WRA	Warramunga Arr	14.42	138	LR	LR	23 32 57.9	
	comp=Z,46nm,21.0s,baz=325,slow=40						
WB2	Warramunga Arr	14.43	138	eP	Pn	23 26 24.0	-0.7
WB2				eS	Sn	23 28 55.5	-8.7
ASAR	Alice Springs	17.03	148	P	Pn	23 26 58.8	+1.9
	4.4nm,0.3s,baz=321,slow=12,SNR=126						
ASAR				S	S	23 29 58.0	-8.9
	2.8nm,0.3s,baz=324,slow=24,SNR=14						
XMIS	Christmas Isla	18.27	265	eP	P	23 27 10.8	+0.2
XMIS	Christmas Isla	18.27	265	eP	P	23 27 11.2	+0.6
COEN	Coen	19.18	106	eP	P	23 27 25.3	+4.9
	20nm,0.4s						
COEN				eS	S	23 30 45.8	-5.8
FORT	Forrest	21.65	171	eP	P	23 27 51.0	+4.2
	29nm,0.6s,mb4.8						
PMG	Port Moresby	22.69	92	LR	LR	23 36 17.0	
	comp=Z,45nm,18.9s,baz=200,slow=35						
CTA	Charters Tower	23.86	119	P	P	23 28 14.0	+5.5
	9.6nm,1.0s,mb4.1,baz=287,slow=14,SNR=4.9						
CTA				LR	LR	23 39 01.1	
	comp=Z,51nm,18.7s,baz=232,slow=40						
CTA	Charters Tower	23.86	119	P	P	23 28 14.0	+5.5
CTA				LR	LR	23 39 01.1	
STKA	Stephens Creek	27.66	147	eP	P	23 28 48.2	+5.6
	2.6nm,0.8s,mb3.8						
STKA	Stephens Creek	27.66	147	P	P	23 28 47.4	+4.8
	3.3nm,0.6s,mb4.1,baz=321,slow=11,SNR=7.4						
STKA				LR	LR	23 41 47.3	
	comp=Z,68nm,18.8s,baz=25,slow=40						
STKA	Stephens Creek	27.66	147	ePn	P	23 28 48.8	+6.2
	0.3nm,0.5s						
PSI	Prapat	27.89	294	LR	LR	23 40 08.1	
	comp=Z,39nm,21.2s,baz=202,slow=37						
CMAR	Chiang Mai Arr	37.17	318	P	P	23 30 05.9	+0.2
	4.9nm,0.7s,mb4.5,baz=141,slow=6.6,SNR=31						
CMAR				ScP	ScP	23 36 04.8	+5.2
	0.6nm,0.3s,baz=155,slow=3.2,SNR=5.1						
CMAR				LR	LR	23 46 41.2	
	comp=Z,25nm,19.0s,baz=141,slow=38						
CHTO	Chiang Mai	37.43	318	eP	P	23 30 08.2	+0.4
	4.5nm,0.6s,mb4.6						
MJAR	Matsushiro Arr	47.50	15	P	P	23 31 27.4	-1.7
	2.3nm,0.7s,mb4.1,baz=195,slow=9.2,SNR=4.5						
LSA	Lhasa	50.16	322	P	P	23 31 50.5	+1.0
LSA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
LSA	Lhasa	50.16	322	eP	P	23 31 50.9	+1.4
	comp=Z,18nm,0.6s,mb5.2						
ODAN	Odare	50.67	316	eP	P	23 31 53.2	-0.1
	comp=Z,44nm,0.6s,mb5.6						
TAPN	Taplejung	50.77	317	eP	P	23 31 54.0	-0.1
	comp=Z,38nm,0.5s,mb5.7						
RAMN	Ramite	51.27	316	eP	P	23 31 58.0	+0.2
	comp=Z,99nm,0.6s						
JIRN	Jiri	52.00	316	eP	P	23 32 03.2	-0.1
	comp=Z,63nm,0.7s,mb5.8						
GUN	Gumba	52.37	316	eP	P	23 32 05.9	-0.1
	comp=Z,81nm,0.6s,mb5.9						
PKI	Pulchoki	52.48	316	eP	P	23 32 06.5	-0.3
KKN	Kakani	52.70	316	eP	P	23 32 08.0	-0.5
	comp=Z,31nm,0.7s,mb5.5						
DMN	Daman	52.71	315	eP	P	23 32 08.4	-0.1
GKN	Gorkha	53.28	315	eP	P	23 32 12.3	-0.4
	comp=Z,67nm,0.7s,mb5.8						
KOLN	Koldanda	53.86	314	eP	P	23 32 16.6	-0.4
	comp=Z,27nm,0.5s,mb5.5						
DANN	Dangsing	54.10	315	eP	P	23 32 18.5	-0.2
	comp=Z,81nm,0.5s						
SONM	Songino Array	59.06	346	P	P	23 32 53.0	-0.4
	comp=Z,1.1nm,0.5s,mb4.1,baz=163,slow=8.0,SNR=12						
MK31	Makanchi Array	67.18	330	eP	P	23 33 47.1	0.0
MKAR	Makanchi Array	67.18	330	P	P	23 33 46.9	-0.1
	comp=Z,8.7nm,0.8s,mb4.6,baz=136,slow=7.9,SNR=52						
KBL	Kabul	67.98	313	eP	P	23 33 52.6	+0.2
	comp=Z,8.6nm,0.7s,mb4.7						
PETK	Petropavlovsk-	68.44	21	P	P	23 33 56.3	+1.4
	comp=Z,1.0nm,0.5s,mb3.9,baz=207,slow=3.1,SNR=3.3						
ZAA0	Zalesovo Array	71.26	337	eP	P	23 34 11.2	-0.9
ZALV	Zalesovo Beam	71.26	337	P	P	23 34 11.1	-1.0
	comp=Z,4.6nm,0.7s,mb4.4,baz=134,slow=4.3,SNR=22						
ZALV	Zalesovo Beam	71.26	337	P	P	23 34 11.1	-1.0
QSPA	South Pole Qui	80.66	180	P	P	23 35 10.3	+5.2
	comp=Z,1.0nm,0.8s,baz=280,slow=0.6,SNR=3.4						
QSPA	South Pole Qui	80.66	180	P	P	23 35 10.3	+5.2
RDF	Al-Radifah	82.95	301	eP	P	23 35 18.5	+0.5
	baz=301						
RDF				AMb	AMB	23 35 24.0	

	comp=Z,26nm,1.8s,mb4.8,baz=301						
UMR	Umm Al-Rimmam	82.96	301	eP	P	23 35 18.6	+0.5
	baz=301						
NAY	Al-Naaiem	83.29	301	eP	P	23 35 20.0	+0.2
	baz=301						
NAY				AMb	AMB	23 35 20.8	
	comp=Z,7.0nm,0.6s,mb4.7,baz=301						
MIB	Mutribah	83.34	302	eP	P	23 35 20.6	+0.5
	baz=302						
MIB				AMb	AMB	23 35 21.2	
	comp=Z,10.0nm,0.5s,mb4.9,baz=302						
TORD	Torodi Ar. Bea	123.54	280	PKP	PKPdf	23 41 52.9	+2.6
	comp=Z,1.3nm,0.6s,baz=57,slow=1.7,SNR=21						
DBIC	Dimbokro	129.48	271	PKP	PKPdf	23 42 04.8	+3.1
	comp=Z,3.7nm,1.1s,baz=99,slow=6.8,SNR=5.5						
TXAR	Lajitas Array	131.08	59	SKPbc	SKPbc	23 45 24.6	+6.6
	comp=Z,0.4nm,0.8s,baz=314,slow=1.2,SNR=3.8						
CPUP	Villa Florida	144.52	178	PKP	PKPdf	23 42 33.3	+4.2
	comp=Z,1.7nm,0.5s,baz=243,slow=2.3,SNR=7.6						

JMA 13 23:27:29.0±0.5, 3699N×13587E, h346km±4km, M3.9, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	Yasaka	1.49	205	P	Pn	23 28 16.5	-0.3
JWT	Wachi	1.75	193	P	Pn	23 28 18.2	-0.1
JWT				eS	S	23 28 55.6	-2.2
JNG	Nsakai	1.88	107	P	Pn	23 28 19.7	+0.6
MAT	Matsushiro	1.93	103	P	Pn	23 28 19.6	+0.2
MAT	Matsushiro	1.93	103	P	Pn	23 28 19.8	+0.4
JHU	Hanno	2.98	111	P	Pn	23 28 28.4	+0.6
JYT	Yasato	3.56	101	P	Pn	23 28 33.6	+0.3
JHO	Hitachi	3.79	94	P	Pn	23 28 34.9	-0.7
JFK	Kawauchi	4.01	83	P	Pn	23 28 37.5	-0.3
JMM	Marumori	4.01	76	P	Pn	23 28 38.1	+0.3
BSO4	Boso 4	4.14	118	P	Pn	23 28 39.0	-0.2
BSO3	Boso 3	4.35	119	P	Pn	23 28 40.8	-0.7

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*IDC **13** 23:36:25.4±1.9, 863S×11360E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.9/4, Error ellipse: s-maj=117.4km s-min=22.0km az=57.0*
*NEIC **13** 23:36:31.0±1.0, 848S×11370E, h35km, mb3.3/2, Error ellipse: s-maj=45.8km s-min=13.3km az=57.0*
*ISCJB **13** 23:36:39.5±0.6, 85S±01×114.13E±007, h121km±6km, mb3.7/4, Error ellipse: s-maj=19.6km s-min=9.5km az=25.7*
*DJA **13** 23:36:41, 864S×11409E, h83km, MLv4.2/6*
ISC 13 23:36:40.3±0.6, 85S±01×11412E±007, h116km±6km, n20, σ0^{s}87/21, mb3.7/4, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBBI	Negara	0.53	71	P	Pn	23 36 57.4	-0.6
NBBI				S	Sn	23 37 10.9	-0.4
IGBI	Denpasar	1.05	105	P	Pn	23 37 02.7	+0.2
DNP	Denpasar	1.09	97	P	Pn	23 37 03.4	+0.5
KHKI	Kahang-Kahang	1.49	83	P	Pn	23 37 07.0	-0.3
KHKI				S	Sn	23 37 27.2	-0.7
KMMI	Kalianget	1.49	354	P	Pn	23 37 08.1	+0.7
KRKI	Karangkates	1.69	283	P	Pn	23 37 09.8	0.0
SJI	Sawahan	2.46	289	P	Pn	23 37 19.3	-0.2
BBKI	Banjar Baru	5.10	8	P	Pn	23 37 57.6	+3.0
MBWA	Marble Bar	13.66	157	ePn	Pn	23 39 45.4	-3.9
FITZ	Fitzroy Crossi	14.69	131	eP	Pn	23 40 02.8	+0.3
	6.1nm,0.6s						
FITZ	Fitzroy Crossi	14.69	131	eP	Pn	23 40 02.9	+0.5
	1.2nm,0.4s						
WB2	Warramunga Arr	22.62	122	eP	P	23 41 31.4	-0.4
ASAR	Alice Springs	24.19	131	P	P	23 41 46.9	+0.8
	1.7nm,0.3s,mb3.8,baz=303,slow=9.3,SNR=29						
STKA	Stephens Creek	34.51	136	eP	P	23 43 18.7	+1.2
	1.1nm,0.5s,mb3.9						
STKA	Stephens Creek	34.51	136	P	P	23 43 18.1	+0.6
	2.5nm,0.8s,mb4.1,baz=316,slow=11,SNR=4.7						
STKA	Stephens Creek	34.51	136	eP	P	23 43 18.9	+1.5
	0.1nm,0.4s,mb3.0						
SONM	Songino Array	56.54	354	P	P	23 46 09.4	-1.1
	0.3nm,0.4s,mb3.7,baz=171,slow=8.4,SNR=8.6						
MKAR	Makanchi Array	61.95	336	P	P	23 46 46.4	-1.4
	0.3nm,0.5s,mb3.6,baz=149,slow=7.1,SNR=9.8						
MKAR	Makanchi Array	61.95	336	P	P	23 46 46.4	-1.4
CPUP	Villa Florida	144.36	193	PKP	PKPdf	23 56 03.6	0.0
	1.2nm,0.4s,baz=139,slow=2.5,SNR=6.5						

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*ISCJB **14** 00:18:48.4±1.2, 1940N±005×7061W±003, h17km±10km, mb3.8/14, Error ellipse: s-maj=8.2km s-min=3.8km az=13.7*
*BJI **14** 00:18:48.3, 1950N×7060W, h9km, Ms4.8, Msz4.6*
*NEIC **14** 00:18:49.4±1.8, 1951N×7056W, h9km±12km, mb4.0/7, Error ellipse: s-maj=11.0km s-min=4.7km az=198.0*
NEIC Felt at Moca, San Francisco de Macoris, Santiago, Santo Domingo and Villa Bisono.
*IDC **14** 00:18:57.7±2.8, 19.11N×7065W, h86km±27km, mb3.4/12, mb1 3.8/14, mb1mx3.7/25, mbtmp3.6/14, MS3.0/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=20.4km s-min=13.6km az=47.0*
ISC 14 00:18:50.8±1.6, 1934N±004×7061W±003, h21km±13km, n54, σ1^{s}38/60, mb3.8/14, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.73	241	eP	Pn	00 19 06.0	+0.1
SDDR				eS	Sn	00 19 14.4	-2.1
MASC	Masc	3.51	284	eP	Pn	00 19 44.0	-0.1
MASC				eS	Sb	00 20 31.0	-3.4
	comp=N,4.5nm,0.3s						
MASC				e			
	comp=E,5.1nm,0.3s						
LSP	Las Mesas	3.53	109	ePn	Pn	00 19 44.1	-0.4
LSP				eSn	Sn	00 20 26.5	+0.8
CRPR	Cabo Rojo, PR	3.57	111	ePn	Pn	00 19 46.5	+1.5
LRS	Lares	3.72	106	ePn	Pn	00 19 45.8	-1.1
LRS				eSn	Sn	00 20 25.6	-4.5
AOPR	Arecibo Observ	3.78	105	ePn	Pn	00 19 46.0	-1.8
AOPR				eSn	Sn	00 20 28.3	-3.5
OBIP	Obispado Ponce	4.01	108	ePn	Pn	00 19 52.6	+1.6
CELP	Cerrillos	4.02	108	ePn	Pn	00 19 52.2	+1.1
ICM	Isla Caja Muer	4.14	110	ePn	Pn	00 19 53.8	+1.1
MOAC	Moa	4.30	289	eP	Pn	00 19 53.0	-1.9
MOAC				eS	Sn	00 20 42.5	-1.9
	comp=N,4.6nm,0.8s						
MOAC				e			
	comp=E,5.5nm,0.7s						
SJG	San Juan	4.40	105	ePn	Pn	00 19 57.1	+0.8
SJG				eSn	Sn	00 20 39.7	-7.3
HUMP	Col San Antoni	4.67	104	ePn	Pn	00 19 58.3	-1.7
MTP	Monte Pirata	4.95	104	ePn	Pn	00 20 01.7	-2.2
MTP				Sn	Sn	00 20 55.9	-4.7
LMGC	Las Mercedes	6.07	278	eP	Pn	00 20 18.1	-1.2
LMGC				eS	Sn	00 21 29.7	+1.6
	comp=N,126nm,1.4s						
LMGC				e			
	comp=E,177nm,0.8s						
MTDJ	Mount Denham	6.65	262	ePn	Pn	00 20 29.6	+2.3
MTDJ				eSn	Sn	00 21 46.1	+3.6
CCCC	Cccc	6.97	287	eP	Pn	00 20 25.5	-6.2
CCCC				eS	Sn	00 21 41.0	-9.3
	comp=N,51nm,0.7s						
CCCC				e			
	comp=E,88nm,0.9s						
SDV	Santo Domingo	10.39	180	P	Pn	00 21 22.9	+4.2
	comp=E,3.6nm,0.3s,baz=8.0,slow=10,SNR=24						
SDV				S	Sn	00 23 14.4	-0.2
	comp=E,2.0nm,0.3s,baz=6.5,slow=20,SNR=6.6						
SDV				LR	LR	00 26 03.7	
	comp=E,73nm,18.8s,baz=336,slow=42						
SDV	Santo Domingo	10.39	180	P	Pn	00 21 20.5	+1.8
	comp=E,11nm,0.4s						
SDV				eS	Sn	00 23 15.4	+0.8
PCRV	Puerto La Cruz	10.79	147	P	Pn	00 21 27.4	+3.3
	comp=E,2.4nm,0.3s,baz=12,slow=8.5,SNR=11						
PCRV				S	Sn	00 23 22.5	-1.7
	comp=E,2.9nm,0.3s,baz=346,slow=17,SNR=5.2						
BBGH	Gun Hill	12.27	118	Pn	Pn	00 21 46.0	+1.7
BBSR	BB Station	14.02	21	ePn	Pn	00 22 00.5	-7.7
ROSC	El Rosal	14.85	195	Pn	Pn	00 22 18.5	-1.1
TKL	Tuckaleechee C	19.98	327	P	Pn	00 23 26.0	+2.4
	comp=E,2.8nm,0.9s,baz=135,slow=13,SNR=2.2						
OTAV	Otavalo	20.48	203	eP	P	00 23 30.1	+2.7
	comp=E,13nm,1.1s						
VBMS	Vicksburg	21.99	310	P	P	00 23 42.4	-1.1
WVT	Waverly	22.57	321	eP	P	00 23 48.5	-1.2
	comp=E,3.1nm,0.7s,mb3.9						
MIAR	Mount Ida	25.38	311	eP	P	00 24 16.5	-0.1
	comp=E,1.5nm,0.8s,mb3.6						
WMOK	Wichita Mounta	29.28	307	eP	P	00 24 51.0	-0.6
	comp=E,2.0nm,0.6s,mb4.0						
KSU1	Kansas State U	29.87	317	eP	P	00 24 56.8	0.0
	comp=E,4.5nm,0.3s,mb4.7						
TXAR	Lajitas Array	31.62	295	P	P	00 25 13.6	+1.2
	comp=E,0.0nm,43.4s,baz=109,slow=12,SNR=5.4						
TXAR				PcP	PcP	00 28 04.2	-0.3
	comp=E,0.6nm,0.7s,baz=124,slow=5.8,SNR=6.2						
ANMO	Albuquerque	35.27	304	P	P	00 25 45.6	+1.5
	comp=E,0.8nm,0.6s,mb3.8,baz=93,slow=7.2,SNR=3.5						
ANMO	Albuquerque	35.27	304	eP	P	00 25 44.2	+0.1
	comp=E,0.9nm,0.7s,mb3.8						
SDCO	Great Sand Dun	35.45	309	eP	P	00 25 45.8	+0.2
SIV	San Ignacio	36.34	164	P	P	00 25 51.4	-1.9
	comp=E,1.1nm,0.9s,mb3.8,baz=9.5,slow=12,SNR=4.3						
PDAR	Pinedale Array	40.23	314	P	P	00 26 25.5	-0.4
	comp=E,0.4nm,0.8s,mb3.2,baz=96,slow=8.3,SNR=3.4						
LVC	Limon Verde	41.73	178	eP	P	00 26 39.5	+1.1
	comp=E,3.8nm,0.8s,mb4.1						
NVAR	Mina Array Bea	45.34	305	P	P	00 27 08.1	+0.6
	comp=E,1.5nm,0.7s,mb3.9,baz=90,slow=7.6,SNR=12						
CPUP	Villa Florida	47.19	164	P	P	00 27 19.3	-2.7
	comp=E,0.5nm,0.3s,mb3.9,baz=328,slow=3.1,SNR=3.1						
YKA	Yellowknife Ar	52.63	336	P	P	00 28 02.4	-0.6
	comp=E,0.4nm,0.7s,mb3.5,baz=115,slow=6.8,SNR=4.5						
YKA	Yellowknife Ar	52.63	336	P	P	00 28 02.4	-0.6
ESDC	Sonseca Array	60.12	55	P	P	00 28 58.1	+1.3
	comp=E,1.8nm,0.8s,mb4.2,baz=278,slow=7.4,SNR=7.8						
ESLA	Sonseca Array	60.12	55	P	P	00 28 55.8	-1.0
DBIC	Dimbokro	64.97	92	P	P	00 29 30.1	+0.5
TORD	Torodi Ar. Bea	69.27	83	P	P	00 29 56.2	-0.7
	comp=E,0.2nm,0.5s,mb3.3,baz=283,slow=6.8,SNR=3.7						
GERES	GERESS Array B	72.00	44	P	P	00 30 13.6	+0.6
	comp=E,0.5nm,0.7s,mb3.5,baz=253,slow=3.6,SNR=4.2						
ARCES	ARCESS Array B	74.17	21	P	P	00 30 26.6	+1.2
	comp=E,0.0nm,1.6s,baz=359,slow=5.2,SNR=4.2						
CN2	Changchun	115.47	347	ePKP	PKPdf	00 37 32.0	+0.7
GTA	Gaotai	120.88	9	ePKP	PKPdf	00 37 43.6	+1.8
LZH	Lanzhou	124.63	5	ePKP	PKPdf	00 37 46.5	-2.6
LZH				XPKP		00 37 52.5	
XAN	Xi’an	126.92	0	PKP	PKPdf	00 37 54.1	+0.5
XAN				PP	PP	00 39 53.4	+3.7
XAN				SKS	SKSdf	00 45 04.6	+0.2
XAN				SKKS	SKKSac	00 46 45.6	-2.4
XAN				SS	SS	00 56 55.3	+0.5
XAN				LR	LR		
	comp=E,20nm,23.9s						
XAN				LR	LR		
	comp=Z,37nm,22.2s						
NJ2	Nanjing	128.10	350	ePKP	PKPdf	00 37 51.6	-4.3
CD2	Chengdu	129.75	6	ePKP	PKPdf	00 37 58.8	-0.2
STKA	Stephens Creek	148.51	240	PKPab	PKPbc	00 38 35.8	-0.7
	comp=Z,2.1nm,0.9s,baz=121,slow=12,SNR=2.9						
ASAR	Alice Springs	156.80	255	PKPab	PKPab	00 39 14.7	-0.2
	comp=Z,1.7nm,0.7s,baz=107,slow=4.5,SNR=15						

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*CSEM **14** 00:33:13.7±0.1, 3452N×2371E, h30km, ML3.5, Error ellipse: s-maj=4.5km s-min=1.9km az=73.0*
*ISCJB **14** 00:33:15.5±0.5, 3462N±003×24.14E±006, h42km±6km, mb4.0/9, Error ellipse: s-maj=8.6km s-min=3.9km az=149.2*
*ATH **14** 00:33:16.8, 3480N×2394E, h27km, MD3.8/13, ML3.5*
*HLW **14** 00:33:16.4, 3467N×2396E, h29km, Mb3.9*
*NEIC **14** 00:33:16.8, 3480N×2393E, h27km, ML3.5(ATH), After ATH.*
*IDC **14** 00:33:17.4±2.2, 3474N×2396E, h35km±15km, mb3.9/9, mb1 3.8/16, mb1mx3.7/32, mbtmp3.8/16, ML3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.3/37, Error ellipse: s-maj=19.4km s-min=18.1km az=177.0*
*GII **14** 00:33:24.6±0.0, 3451N×2485E, h15km±1km, mb4.2/1, ML3.9/2*
ISC 14 00:33:16.7±0.8, 3464N±003×2402E±005, h31km±7km, n78, σ1^{s}23/85, mb4.0/9, 8C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.20	16	ePB	Pb	00 33 22.0	-1.1
VAM	Vamos	0.78	11	ePN	Pn	00 33 30.0	-1.5
IDI	Anoyia	0.96	48	Pn	Pn	00 33 34.4	+0.3
	123nm,0.3s,baz=222,slow=16,SNR=294						
IDI				Pg	Pn	00 33 36.7	+2.6
	123nm,0.3s,baz=238,slow=16,SNR=286						
IDI				Lg		00 33 49.3	
	236nm,0.3s,baz=152,slow=23,SNR=22						
IDI	Anoyia	0.96	48	Pg	Pn	00 33 36.7	+2.6
NPS	Neapolis	1.45	64	ePN	Pn	00 33 43.1	+2.4
NPS				eSN	Sn	00 34 02.1	+3.4
NPS	Neapolis	1.45	64	ePn	Pn	00 33 43.5	+2.8
NPS				eSn	Sn	00 34 02.5	+3.8
VLI	Veliai	2.25	337	ePB	Pb	00 33 52.5	-4.2
APE	Apeiranthos	2.71	26	ePN	Pn	00 33 59.3	+1.1
APE	Apeiranthos	2.71	26	ePn	Pn	00 33 59.0	+0.8
KARP	Karpathos	2.73	70	ePN	Pn	00 34 01.0	+2.6
ITM	Ithomi	3.05	327	ePN	Pn	00 34 03.5	+0.7
NAIG	Nisos Aigina	3.14	352	ePN	Pn	00 34 04.5	+0.5
SLUM		3.30	162	⇑eP	Pn	00 34 05.6	-0.6
ATH	Athens Observa	3.33	356	ePN	Pn	00 34 07.0	+0.3
PTL	Penteli	3.40	358	ePN	Pn	00 34 08.0	+0.4
ARG	Arkhangelos	3.70	64	ePN	Pn	00 34 14.6	+2.9
ARG	Arkhangelos	3.70	64	ePn	Pn	00 34 14.5	+2.8
SMG	Samos	3.82	36	ePN	Pn	00 34 14.9	+1.6
SMG	Samos	3.82	36	ePn	Pn	00 34 14.6	+1.3
HMAT	Matruh	4.38	143	P	Pn	00 34 21.1	0.0
HMAT				S	Sn	00 35 08.5	-2.6
EVR	Evrytania	4.62	338	ePB	Pn	00 34 26.5	+2.1
PRK	Paraskevi	4.94	21	ePN	Pn	00 34 30.2	+1.5
PRK	Paraskevi	4.94	21	ePn	Pn	00 34 30.0	+1.3
SWA2		5.52	167	⇑P	Pn	00 34 37.0	+0.2
SWA2				S	Sn	00 35 34.9	-4.3
JAN	Janina	5.61	334	ePB	Pn	00 34 40.0	+2.1
KEK	Kerkira	6.08	328	ePN	Pn	00 34 46.0	+1.6
AWBH		7.55	145	P	Pn	00 35 04.9	+0.3
AYT	Al ‘Ayyat	7.79	127	⇑P	Pn	00 35 08.7	+0.7
HSAF	As Saff	8.12	126	⇑eP	Pn	00 35 13.1	+0.7
GLL	Jalalah	8.24	126	⇑eP	Pn	00 35 14.7	+0.5
HFRF	Wahat Farafira	8.33	153	P	Pn	00 35 15.8	+0.5
BARS	Barje	8.34	349	ePn	Pn	00 35 15.8	+0.4
SUZ		8.86	120	⇑eP	Pn	00 35 23.1	+0.5
BR131	Keskin Array S	9.20	54	Pn	Pn	00 35 25.7	-1.5
BRTR	Keskin Array B	9.20	54	Pn	Pn	00 35 28.1	+0.9
	0.2nm,0.3s,baz=235,slow=14,SNR=6.6						
TREB	Trebinje	9.20	333	ePn	Pn	00 35 24.5	-2.7
MMAI	Mount Meron Ar	9.61	97	Pn	Pn	00 35 31.9	-0.9
	2.2nm,0.3s,baz=293,slow=11,SNR=22						
RTMI	Retamim	9.66	109	Pn	Pn	00 35 33.1	-0.5
HMDT	Nahal Hemdat	9.90	101	Pn	Pn	00 35 36.9	0.0
HMDT				Sn	Sn	00 37 20.7	-6.3
DSI	Dead Sea	10.01	105	Pn	Pn	00 35 37.9	-0.4
MZDA	Masada	10.09	106	Pn	Pn	00 35 39.1	-0.3
KRMI	Paran Flat	10.11	114	Pn	Pn	00 35 38.4	-1.3
HDK1	Dakhla	10.19	151	⇑P	Pn	00 35 41.7	+0.8
PRNI	Paran	10.21	112	Pn	Pn	00 35 40.9	-0.2
PRNI				Sn	Sn	00 37 27.5	-7.0
ZFRI	Zfri	10.25	110	Pn	Pn	00 35 40.3	-1.4
MBRI	Mt Berech	10.41	115	Pn	Pn	00 35 43.7	-0.2
MBRI				Sn	Sn	00 37 32.9	-6.6
EIL	Elat	10.50	115	Pn	Pn	00 35 44.5	-0.7
	0.5nm,0.3s,baz=291,slow=18,SNR=24						
EIL	Elat	10.50	115	Pn	Pn	00 35 44.7	-0.4
AQBJ	Aqaba	10.55	115	Pn	Pn	00 35 45.1	-0.6
GTR	Jabal at Tayr	10.71	146	⇑eP	Pn	00 35 48.1	+0.1
ASF	Jabal al Asfar	11.04	99	Pn	Pn	00 35 51.9	-0.6
	0.3nm,0.3s,baz=176,slow=15,SNR=4.5						
HDK2	Wahat Dakhilah	11.14	156	P	Pn	00 35 55.2	+1.3
BLY	Banja Luka	11.38	335	ePn	Pn	00 35 54.1	-2.9
PKSM	Moragy	12.26	342	ePn	Pn	00 36 05.8	-3.2
GERES	GERESS Array B	16.12	335	Pn	Pn	00 36 59.7	-1.2
	0.1nm,0.3s,baz=142,slow=13,SNR=5.2						
DAVOX	Davos/Dischmat	16.16	323	Pn	Pn	00 37 00.5	-0.8
	0.1nm,0.3s,baz=166,slow=9.5,SNR=1.7						
KHC	Kasperske Hory	16.41	335	eP	Pn	00 37 08.0	+3.5
AKASG	Malin Array Be	16.49	12	Pn	Pn	00 37 04.8	-0.8
	1.8nm,0.3s,baz=209,slow=10,SNR=5.4						
AKASG	Malin Array Be	16.49	12	Pn	Pn	00 37 04.8	-0.8
GNI	Garni	17.35	65	LR	LR	00 45 19.4	
	comp=Z,67nm,18.9s,baz=6.4,slow=42						
CLL	Collm	18.47	338	eP	Pn	00 37 27.0	-3.1
HFS	Hagfors	26.38	348	P	P	00 38 48.7	-1.2
	2.7nm,0.5s,mb4.1,baz=148,slow=12,SNR=22						
NAO01	NORSAR Array S	27.56	346	eP	P	00 38 59.1	-1.4
NAO01	NORSAR Array S	27.56	346	eP	P	00 38 59.1	-1.4
NB2	NORSAR Subarra	27.67	347	P	P	00 39 00.2	-1.3
	comp=Z,1.1nm,0.5s,mb3.7,baz=159,slow=10						
NOA	NORSAR Array B	27.67	347	P	P	00 39 00.0	-1.5
	comp=Z,0.8nm,0.7s,mb3.5,baz=145,slow=9.3,SNR=10						
AKTK	Aktyubinsk	29.29	47	P	P	00 39 14.9	-1.1
AKTO	Aktyubinsk	29.29	47	P	P	00 39 14.9	-1.1
	comp=Z,2.2nm,0.6s,mb4.1,baz=249,slow=7.7,SNR=10						
TOA0	Torodi Ar. Sit	29.44	229	eP	P	00 39 18.9	+1.2
TORD	Torodi Ar. Bea	29.44	229	P	P	00 39 19.1	+1.4
	comp=Z,2.9nm,0.6s,mb4.2,baz=36,slow=8.8,SNR=27						
ARCES	ARCESS Array B	34.96	1	P	P	00 40 03.6	-1.9
	comp=Z,2.4nm,0.8s,mb4.2,baz=191,slow=10,SNR=10						
MK31	Makanchi Array	44.84	56	eP	P	00 41 28.3	+0.5
MK31	Makanchi Array	44.84	56	eP	P	00 41 28.3	+0.5
MKAR	Makanchi Array	44.84	56	P	P	00 41 28.4	+0.6
	comp=Z,2.1nm,0.5s,mb4.2,baz=280,slow=6.4,SNR=16						
ZAA0	Zalesovo Array	46.04	46	eP	P	00 41 36.7	-0.5
ZALV	Zalesovo Beam	46.04	46	P	P	00 41 36.6	-0.6
	comp=Z,2.3nm,0.4s,mb4.5,baz=266,slow=9.0,SNR=17						
SONM	Songino Array	60.54	50	P	P	00 43 24.7	+0.8
	comp=Z,0.8nm,0.3s,mb4.4,baz=283,slow=7.1,SNR=14						
YKA	Yellowknife Ar	77.65	342	P	P	00 45 10.5	+0.8
	comp=Z,0.1nm,0.5s,mb3.0,baz=34,slow=5.1,SNR=3.2						

IGQ 14 01:03:54.2, 101N×7841W, h12km±3km, Mb4.4, Ms4.2, 3C-4D, Error ellipse: s-maj=5.8km s-min=2.1km az=84.7, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COTA	Cotacachi	0.67	174	⇓P	Pg	01 04 08.2	+1.0
CAYA	Cayambe	1.02	156	P	Pb	01 04 14.0	+0.2
YANA	Yana	1.13	188	⇑P	Pb	01 04 16.1	+0.4
PINO	Pino	1.18	190	⇓P	Pb	01 04 17.1	+0.6
GGP	Refugio Guagua	1.19	189	⇓P	Pn	01 04 17.2	+0.6
TERV	Terraza Guagua	1.19	190	⇓P	Pn	01 04 17.3	+0.6
CONE	Cono NE Rev Vo	1.32	144	P	Pn	01 04 19.2	+0.8
LAV3	Lava3-Reventad	1.34	145	⇑P	Pn	01 04 19.6	+0.9
ANTI	Antisana	1.47	170	P	Pn	01 04 22.2	+1.7
VC1	Cotopaxi 1	1.64	180	P	Pn	01 04 24.8	+2.0
CAMI	Rancho Maria	1.68	183	P	Pn	01 04 26.2	+2.9
TAMB	Tambo	1.69	179	P	Pn	01 04 26.2	+2.6
QIL2	Quilotoa	1.93	195	P	Pn	01 04 29.7	+2.8
PISA	Pisayambo	2.05	179	P	Pn	01 04 33.0	+4.5
JAMA	Jama	2.20	235	P	Pn	01 04 31.7	+1.1
JAMA	Jama	2.20	235	S	Sn	01 05 00.7	+3.1
RUN5	Runtun	2.41	180	P	Pn	01 04 38.8	+5.4
JUI6	Juive	2.42	181	P	Pn	01 04 38.6	+5.0
IGUA	Igualata	2.49	185	P	Pn	01 04 40.2	+5.6
PATA	Patacocha	2.49	181	P	Pn	01 04 40.4	+5.8
ARRY	Arrayan	2.50	181	⇑P	Pn	01 04 40.0	+5.3

IDC 14 01:07:55.5±10.0, 682S×12565E, h550km±155km, mb3.0/3, mb1 3.0/5, mb1mx2.8/18, mbtmp2.9/5, Error ellipse: s-maj=136.3km s-min=48.2km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.54	148	P	P	01 11 09.5	-1.1
	baz=325,slow=10						
ASAR	Alice Springs	18.54	156	P	P	01 11 38.1	-0.2
	0.5nm,0.3s,baz=344,slow=14,SNR=28						
STKA	Stephens Creek	29.04	151	P	P	01 13 12.0	+0.3
	1.5nm,0.5s,baz=323,slow=10,SNR=6.0						
MKAR	Makanchi Array	65.77	329	P	P	01 17 46.4	0.0
	0.3nm,0.4s,baz=134,slow=7.6,SNR=7.2						
ZALV	Zalesovo Beam	69.57	336	P	P	01 18 09.5	+0.1
	0.7nm,0.4s,baz=132,slow=6.2,SNR=3.8						

DJA 14 01:24:27, 843S×11630E, h79km, MLv4.1/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	0.69	275	P	Pn	01 24 43.8	+1.3
KHKI				S	Sn	01 24 56.7	+2.8
DNP	Denpasar	1.10	257	P	Pn	01 24 49.6	+2.3
DNP				S	Sn	01 25 05.4	+2.9
IGBI	Denpasar	1.21	251	P	Pn	01 24 48.0	-0.5
IGBI				S	Sn	01 25 04.8	+0.1
NBBI	Negara	1.66	272	P	Pn	01 24 54.9	+0.5
NBBI				S	Sn	01 25 16.2	+1.0

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*ATH **14** 01:43:52.8, 4049N×2736E, h37km±13km, MD3.6/4*
*NEIC **14** 01:43:52.0, 4048N×27.11E, h9km, MD3.3(ISK), MD3.6(ATH), ML3.0(BUC), After ISK.*
*SOF **14** 01:43:52.8, 4053N×2704E, h3km, MD2.9*
*ISCJB **14** 01:43:53.2±0.4, 4047N±001×2709E±002, h9km±3km, Error ellipse: s-maj=2.7km s-min=2.5km az=17.8*
*CSEM **14** 01:43:53.0±0.0, 4048N×27.12E, h10km, MD3.4, Error ellipse: s-maj=0.8km s-min=0.7km az=130.0*
*DDA **14** 01:43:53.1, 4045N×27.12E, h26km±1km, Md3.4*
*ISK **14** 01:43:53.0, 4047N×27.11E, h10km, MD3.4*
*THE **14** 01:43:54.3, 4044N×2702E, h2km±1km, ML4.0/2, Error ellipse: s-maj=1.7km s-min=0.7km az=35.0*
ISC 14 01:43:53.7±0.4, 4045N±001×2711E±002, h5km±3km, n103, σ0^{s}77/127, 8C-7D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKY	Sarkoy-Tekirda	0.24	13	PG	Pg	01 43 58.1	-0.3
RKY				eSG	Sg	01 44 01.7	+0.1
SART	Tekirdag	0.24	13	i P	Pg	01 43 59.1	+0.7
SART				i S	Sg	01 44 03.0	+1.4
LPK	Lapseki	0.28	253	PG	Pg	01 43 59.3	+0.3
EDC	Edincik	0.59	100	ePG	Pg	01 44 05.1	+0.2
EDC				eSG	Sg	01 44 13.4	+0.8
BNT	Bandirma	0.63	99	ePG	Pg	01 44 05.7	-0.1
TKR	Tekirdag	0.63	31	ePG	Pg	01 44 05.7	-0.1
ENEZ	Enez	0.78	292	ePG	Pg	01 44 08.6	-0.1
CRLT	Corlu	0.83	35	ePG	Pg	01 44 09.2	-0.4
EZN	Ezine	0.87	224	ePG	Pg	01 44 10.0	-0.3
ALN	Alexandroupoli	0.92	299	P	Pg	01 44 10.8	-0.5
ALN				S	Sg	01 44 23.7	+0.4
GADA	Gvkgeada	0.96	255	ePG	Pg	01 44 11.9	-0.2
KCT	Karacabey	0.97	101	ePG	Pg	01 44 11.9	-0.4
BALB	Balikesir	1.00	144	ePG	Pg	01 44 12.8	-0.2
SLVT	Silivri	1.14	47	ePN	Pn	01 44 14.7	-1.5
AYVA	Ayvalik	1.19	196	i P	Pg	01 44 16.0	-0.4
AYVA				i S	Sg	01 44 32.7	+1.0
CTT	Catalca	1.22	55	ePN	Pn	01 44 16.1	-1.2
ELBA	Catalca	1.22	55	i P	Pg	01 44 16.1	-1.0
ELBA				i S	Sg	01 44 32.6	-0.3
CTKS	Kestanelik-??a	1.32	53	ePN	Pn	01 44 17.4	-1.3
CTYL	Yal??k??y-??at	1.36	41	ePN	Pn	01 44 18.2	-1.0
PRK	Paraskevi	1.36	208	P	Pn	01 44 18.9	-0.4
PRK				S	Sb	01 44 37.3	0.0
PRK	Paraskevi	1.36	208	ePN	Pn	01 44 19.0	-0.3
PRK				eSN	Sn	01 44 38.1	+0.4
RDO	Rodhopi	1.38	301	ePN	Pn	01 44 19.5	0.0
EDRB	Edirne	1.42	349	ePN	Pn	01 44 19.3	-0.8
BGKT	Bogazkoy	1.46	60	ePN	Pn	01 44 19.6	-1.0
LIA	Limnos Island	1.57	250	P	Pn	01 44 21.7	-0.5
LIA				S	Sn	01 44 42.3	-0.6
LIA	Limnos Island	1.57	250	P	Pn	01 44 22.4	+0.2
ULDT	Uludag	1.58	101	i P	Pn	01 44 22.3	0.0
GEMT	Gemlik	1.59	90	ePN	Pn	01 44 21.9	-0.5
ISK	Istanbul-Kandi	1.60	67	ePN	Pn	01 44 21.9	-0.7
LOS	Limnos	1.64	252	P	Pn	01 44 22.4	-0.6
AKHS	Akhisar	1.66	161	i P	Pn	01 44 23.0	-0.4
AKHS				i S	Sn	01 44 45.6	+0.5
AKS	Akhisar	1.66	161	ePN	Pn	01 44 23.5	+0.1
KLYT	Kilyos	1.67	61	ePN	Pn	01 44 22.8	-0.7
YLV	Yalova	1.73	85	ePN	Pn	01 44 24.7	+0.4
KDZ	Kurdzhali	1.75	314	P	Pn	01 44 24.6	0.0
HRT	Hereke	1.98	78	ePN	Pn	01 44 27.7	-0.1
ADVT	Abdulvahap	2.01	90	ePN	Pn	01 44 27.9	-0.2
SILT	Sile	2.05	69	ePN	Pn	01 44 28.2	-0.5
JMB	Yambol	2.05	349	P	Pn	01 44 29.0	+0.3
JMB				S	Sn	01 44 55.8	+1.1
JMB	Yambol	2.05	349	P	Pn	01 44 29.9	+1.2

IZM	Izmir	2.06	177	*e*PN	Pn	01 44 29.1	+0.3
BLCB	Balcova	2.06	181	*e*PN	Pn	01 44 29.3	+0.4
BLCB	Balcova	2.06	181	P	Pn	01 44 28.9	0.0
BLCB				S	Sn	01 44 56.1	+1.1
BLCB	Balcova	2.06	181	*e*Pn	Pn	01 44 29.3	+0.4
BLCB				S	Sn	01 44 56.1	+1.1
CAVI	Cavuskoy	2.11	96	*e*PN	Pn	01 44 29.5	+0.1
RZN	Rozhen	2.19	305	P	Pn	01 44 31.0	+0.4
CHOS	Chios island	2.22	202	P	Pn	01 44 30.4	-0.6
CHOS				S	Sn	01 44 59.6	+0.9
KULA	Kula-Manisa	2.28	148	*e*PN	Pn	01 44 32.2	+0.3
GDZ	Gediz	2.28	126	*i* P	Pn	01 44 32.3	+0.4
EYL	Eskiyayla	2.33	86	*e*PN	Pn	01 44 32.0	-0.5
OUR	Ouranopolis	2.39	268	P	Pn	01 44 32.3	-1.1
PLD	Plovdiv	2.45	313	P	Pn	01 44 34.4	+0.2
PLD				S	Sn	01 45 04.4	-0.1
GPA	Golpazari	2.45	93	*e*PN	Pn	01 44 34.2	-0.1
GULT	Gulveren	2.60	89	*e*PN	Pn	01 44 36.3	0.0
ALT	Altintas	2.70	120	*e*PN	Pn	01 44 37.8	+0.1
SMG	Samos	2.75	184	*e*PN	Pn	01 44 37.5	-0.8
PRD	Provadia	2.75	4	P	Pn	01 44 37.9	-0.5
MMB	Musomiste	2.80	295	P	Pn	01 44 38.6	-0.4
KHL	Karahalli	2.83	138	*e*PN	Pn	01 44 40.0	+0.6
SOH	Sokhos	2.88	279	P	Pn	01 44 38.9	-1.2
SZH	Strazhica	2.95	343	P	Pn	01 44 41.0	0.0
ESKT	Eskisehir	3.02	107	*e*PN	Pn	01 44 42.5	+0.4
MDU	Mudurnu	3.13	88	*e*PN	Pn	01 44 44.0	+0.4
MLSB	Milas	3.19	170	*e*PN	Pn	01 44 45.3	+0.8
SHUT	Suhut-Afyon	3.27	124	*e*PN	Pn	01 44 46.2	+0.7
KKB	Krupnik	3.35	296	P	Pn	01 44 51.6	+5.0
YER	Yerkesik	3.44	164	*e*PN	Pn	01 44 47.7	-0.1
LIT	Litokhoron	3.55	266	P	Pn	01 44 47.1	-2.2
APE	Apeiranthos	3.60	201	*e*PN	Pn	01 44 49.9	-0.1
APE	Apeiranthos	3.60	201	P	Pn	01 44 48.9	-1.1
APE	Apeiranthos	3.60	201	*e*Pn	Pn	01 44 49.5	-0.5
APE	Apeiranthos	3.60	201	⇓*i*P	Pn	01 44 49.2	-0.8
APE	Apeiranthos	3.60	201	*e*Pn	Pn	01 44 49.5	-0.5
VTS	Vitosha	3.62	307	P	Pn	01 44 52.4	+2.0
AGG	Agios Georgios	3.95	250	P	Pn	01 44 54.8	0.0
THL	Klokotos Trika	4.01	259	P	Pn	01 44 55.0	-0.7
LTK	Loutraki	4.03	234	P	Pn	01 44 55.5	-0.4
LTK				S	Sn	01 45 43.4	0.0
TIRR	Tirgusor	4.12	13	⇑P	Pn	01 44 56.8	-0.3
TIRR				S	Sn	01 45 41.6	-4.0
TIRR	Tirgusor	4.12	13	⇑*i*P	Pn	01 44 56.8	-0.3
TIRR	Tirgusor	4.12	13	⇑P	Pn	01 44 56.9	-0.3
DID	Didima	4.21	227	P	Pn	01 44 57.8	-0.6
DID				S	Sn	01 45 48.2	+0.2
HARR	Harsova	4.28	8	⇓*i*P	Pn	01 44 59.8	+0.5
ARG	Arkhangelos	4.30	169	P	Pn	01 45 03.0	+3.3
FNA	Florina	4.37	276	P	Pn	01 45 00.9	+0.2
FNA				S	Sn	01 45 50.5	-1.4
BARS	Barje	4.62	303	*e*Pn	Pn	01 45 04.7	+0.7
TLCR		4.89	14	⇓P	Pn	01 45 08.4	+0.6
TLCR				S	Sn	01 46 03.7	-1.1
TLCR		4.89	14	⇓*i*P	Pn	01 45 08.4	+0.6
TLCR		4.89	14	S	Sn	01 46 03.7	-1.1
TLCR		4.89	14	⇓P	Pn	01 45 08.4	+0.6
TLCR				S	Sn	01 46 03.7	-1.1
RLS	Riolos of Patr	4.99	243	P	Pn	01 45 14.0	+4.9
BOLS	Boljevac	5.11	313	*e*Pn	Pn	01 45 10.7	0.0
VOIR		5.21	344	⇑*i*P	Pn	01 45 12.4	+0.3
VOIR		5.21	344	⇑P	Pn	01 45 12.4	+0.3
PLOR	Plostina	5.41	357	⇑*i*P	Pn	01 45 16.3	+1.5
PLOR				S	Sn	01 46 18.5	+1.1
VRI	Vrincioaia	5.42	357	⇑*i*P	Pn	01 45 16.6	+1.6
VRI				S	Sn	01 46 19.0	+1.3
PYL	PYLOS	5.50	231	P	Pn	01 45 17.6	+1.5
GZR	Gura Zlata	5.87	329	⇑*i*P	Pn	01 45 21.3	+0.1
GZR	Gura Zlata	5.87	329	S	Sn	01 46 24.0	-4.8
BURAR	Bucovina Array	7.29	350	⇓*i*P	Pn	01 45 42.2	+1.5
BURAR	Bucovina Array	7.29	350	⇓P	Pn	01 45 42.2	+1.6
BUR08	Bucovina Ar. S	7.32	350	*e*Pn	Pn	01 45 42.0	+0.9
BUR08	Bucovina Ar. S	7.32	350	*e*Pn	Pn	01 45 42.0	+0.9
BUR08				*e*Sn	Sn	01 47 00.8	-3.6
PKSM	Moragy	8.44	316	*e*Pn	Pn	01 45 55.7	-0.7

*ISCJB **14** 02:00:46.8±0.3, 37.14N±0.01×5.56W±0.01, h4km±2km, Error ellipse: s-maj=2.5km s-min=1.9km az=18.9*
*MDD **14** 02:00:49.4±0.4, 37.11N×5.55W, h10km±3km, mbLg2.9/42, Error ellipse: s-maj=2.7km s-min=2.5km az=178.0, PRXIMO*
MDD EMS: III INTENSIDAD MXIMA.
*CNRM **14** 02:00:49.5, 37.09N×5.67W, h30km, MD3.6*
*IGIL **14** 02:00:49.1, 37.05N×5.55W, h4km, ML3.2*
*INMG **14** 02:00:49.3±1.5, 37.05N×5.57W, h8km±2km, MD3.3, ML3.0, Error ellipse: s-maj=1.8km s-min=1.2km az=20.0*
*LDG **14** 02:00:49.0±0.1, 36.99N×5.56W, h5km, Ml3.2/4, Error ellipse: s-maj=2.5km s-min=1.4km az=3.0*
*NEIC **14** 02:00:49.1, 37.05N×5.55W, h4km, MN2.9(MDD), After MDD.*
NEIC Felt [III] in the Montellano area.
*CSEM **14** 02:00:49.8±0.1, 36.94N×5.51W, h20km, ML3.6/19, Error ellipse: s-maj=1.4km s-min=1.0km az=5.0*
*SFS **14** 02:00:49.0, 37.06N×5.54W, h0km, ML3.0*
ISC 14 02:00:48.2±0.2, **37.08N**±0.01×**5.55W**±0.01, **h12**km±2km, **n135**, σ1.08/259, **3C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPR	Espera	0.32	230	Pg	Pg	02 00 54.8	+0.1
	350nm,0.4s,SNR=18						
ESPR				Lg		02 01 01.9	
	2μm,0.3s,SNR=7.9						
ESPR	Espera	0.32	230	⇓Pg	Pg	02 00 54.8	0.0
	350nm,0.4s,SNR=18						
ESPR				Lg		02 01 01.9	
	2μm,0.3s,SNR=7.9						
GIBL	Gibalbin	0.41	234	*i* P	Pg	02 00 57.0	+0.6
GIBL				*e*S	Sg	02 01 04.2	+2.2
GIBL	Gibalbin	0.41	234	⇑P	Pg	02 00 57.0	+0.6
GIBL				S	Sg	02 01 04.2	+2.2
EJIF	Jimena Fronter	0.63	174	Pg	Pg	02 00 59.5	-0.9
	137nm,0.4s,SNR=18						
EJIF				Lg		02 01 09.0	
	43nm,0.4s,SNR=7.9						
REAL	Reales	0.65	155	*i* P	Pg	02 01 00.0	-0.9
REAL				*e*S	Sg	02 01 10.0	+0.5
MOMI	Momias	0.76	190	*e*P	Pg	02 01 03.0	+0.1
EMIJ	Mijas	0.81	129	Pg	Pg	02 01 02.6	-1.2
	108nm,0.3s,SNR=18						
EMIJ				Lg		02 01 14.7	
	289nm,0.4s,SNR=12						
EMIJ	Mijas	0.81	129	⇑Pg	Pg	02 01 02.6	-1.2
	108nm,0.3s,SNR=18						
EMIJ				Lg		02 01 14.7	
	289nm,0.4s,SNR=12						
SFS	San Fernando	0.81	221	*e*P	Pg	02 01 04.8	+1.0
SFS				*e*S	Sg	02 01 19.2	+4.9
SFS	San Fernando	0.81	221	P	Pg	02 01 04.8	+0.9
SFS				S	Sg	02 01 19.2	+4.9
CNIL	Conil	0.81	210	*e*P	Pg	02 01 04.2	+0.2
CNIL				*e*S	Sg	02 01 17.0	+2.4
CNIL	Conil	0.81	210	P	Pg	02 01 04.2	+0.3
CNIL				S	Sg	02 01 17.0	+2.4
EMAL	Malaga-Limoner	0.95	109	*e*P	Pg	02 01 06.0	-0.6
EMAL				*e*S	Sg	02 01 20.7	+1.7
EMAL				Lg		02 01 26.9	
	24nm,0.3s,SNR=7.9						
EMAL	Malaga-Limoner	0.95	109	Pg	Pg	02 01 11.4	+4.8
	5.4nm,0.2s,SNR=7.9						
EMAL				Lg		02 01 26.9	
	24nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	1.12	86	Pg	Pg	02 01 09.8	0.0
	16nm,0.3s,SNR=71						
ELOJ				Lg		02 01 25.2	
	68nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	1.13	308	Pg	Pg	02 01 10.0	0.0
	68nm,0.2s,SNR=671						
EMIN				Lg		02 01 26.6	
	215nm,0.1s,SNR=49						
EMIN	Mina Concepcio	1.13	308	Pg	Pg	02 01 10.0	0.0
	68nm,0.2s,SNR=671						
EMIN				Lg		02 01 26.6	
	215nm,0.1s,SNR=49						
ELUQ	Luque	1.13	64	Pg	Pg	02 01 10.6	+0.6
	48nm,0.2s,SNR=7.9						
ELUQ				Lg		02 01 28.3	
	301nm,0.2s,SNR=7.9						
ECEU	Ceuta	1.19	173	Pg	Pg	02 01 10.1	-0.9
	55nm,0.2s,SNR=18						
ECEU	Ceuta	1.19	173	⇑Pg	Pg	02 01 10.1	-0.9
	55nm,0.2s,SNR=18						
EADA	Adamuz	1.33	35	Pg	Pg	02 01 13.4	-0.5
	31nm,0.2s,SNR=144						
EADA				Lg		02 01 33.6	
	144nm,0.2s,SNR=18						
EADA	Adamuz	1.33	35	Pg	Pg	02 01 13.4	-0.5
	31nm,0.2s,SNR=144						
EADA				Lg		02 01 33.6	
	144nm,0.2s,SNR=18						
ERON	Agron	1.40	92	Pg	Pg	02 01 14.6	-0.5
	19nm,0.2s,SNR=7.9						
ERON				Lg		02 01 34.3	
	47nm,0.3s,SNR=7.9						
ECOG	Cogollos-Vega	1.60	82	Pn	Pn	02 01 17.2	+0.9
	11nm,0.2s,SNR=32						
ECOG				Lg		02 01 41.0	
	40nm,0.4s,SNR=7.9						
ECOG	Cogollos-Vega	1.60	82	Pn	Pn	02 01 17.2	+0.9
	11nm,0.2s,SNR=32						
ECOG				Lg		02 01 41.0	
	40nm,0.4s,SNR=7.9						
EGRO	El Granado	1.61	287	Pn	Pn	02 01 16.8	+0.4
	2.3nm,0.0s,SNR=7.9						
EGRO	El Granado	1.61	287	Pg	Pg	02 01 18.4	-0.7
	16nm,0.1s,SNR=7.9						
EGRO				Lg		02 01 41.0	
	206nm,0.2s,SNR=7.9						
EGRO	El Granado	1.61	287	Pn	Pn	02 01 16.8	+0.4
	2.3nm,0.0s,SNR=7.9						
EGRO				Pg	Pg	02 01 18.4	-0.7
	16nm,0.1s,SNR=7.9						
EGRO				Lg		02 01 41.0	
	206nm,0.2s,SNR=7.9						
EGUA	Guajares	1.61	98	Pg	Pg	02 01 17.4	-1.7
	32nm,0.2s,SNR=7.9						
EGUA				Lg		02 01 41.4	
	105nm,0.4s,SNR=7.9						
PBAR	Barrancos	1.61	313	*e*Pn	Pn	02 01 16.7	+0.2
PBAR				*e*Sn	Sn	02 01 37.4	+0.2
PBAR				A		02 01 46.8	
	91nm,0.3s						
PBAR	Barrancos	1.61	313	*e*Pn	Pn	02 01 16.7	+0.2
PBAR				*e*Sn	Sn	02 01 37.4	+0.2
	91nm,0.3s						
EQUE	Quentar	1.69	85	Pn	Pn	02 01 18.9	+1.3
	3.3nm,0.1s,SNR=48						
EQUE				Pg	Pg	02 01 20.3	-0.4
	17nm,0.2s,SNR=7.9						
EQUE				Lg		02 01 43.2	
	40nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	1.76	281	*e*Pn	Pn	02 01 18.5	0.0
PVAQ	Vaqueiros	1.76	281	*e*Pg	Pg	02 01 21.2	-0.8
PVAQ				*e*Sn	Sn	02 01 40.8	-0.1
PVAQ				*e*Sg	Sg	02 01 45.2	+0.3
PVAQ				A		02 01 48.3	
	143nm,0.1s						
PVAQ	Vaqueiros	1.76	281	*e*Pg	Pg	02 01 21.2	-0.8
PVAQ				*e*Sn	Sn	02 01 40.8	-0.1
PVAQ				*e*Sg	Sg	02 01 45.2	+0.3
	143nm,0.1s						
PVAQ	Vaqueiros	1.76	281	Pn	Pn	02 01 18.5	0.0
PVAQ				Pg	Pg	02 01 21.2	-0.8
PVAQ				Sn	Sn	02 01 40.8	-0.1
PVAQ				Lg		02 01 45.2	
	143nm,0.1s						
EBAN	Banos Encina	1.77	52	Pn	Pn	02 01 19.2	+0.5
	2.4nm,0.2s,SNR=33						
EBAN				Pg	Pg	02 01 21.7	-0.5
	17nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	02 01 42.2	+1.1
	26nm,0.3s,SNR=7.9						
EBAN				Lg		02 01 45.4	
	77nm,0.2s,SNR=14						
PBDV	Barranco-do-Ve	1.91	276	*e*Pn	Pn	02 01 20.6	0.0
PBDV	Barranco-do-Ve	1.91	276	*e*Pg	Pg	02 01 24.0	-0.9
PBDV				*e*Sn	Sn	02 01 44.9	+0.4
PBDV				*e*Sg	Sg	02 01 49.9	+0.3
PBDV				A		02 01 54.7	
	102nm,0.4s						
PBDV	Barranco-do-Ve	1.91	276	*e*Pg	Pg	02 01 24.0	-0.9
PBDV				*e*Sn	Sn	02 01 44.9	+0.4
PBDV				*e*Sg	Sg	02 01 49.9	+0.3
	102nm,0.4s						
PBDV	Barranco-do-Ve	1.91	276	Pn	Pn	02 01 20.6	0.0
PBDV				Pg	Pg	02 01 24.0	-0.9
PBDV				Sn	Sn	02 01 44.9	+0.4
PBDV				Lg		02 01 49.9	
	102nm,0.4s						
EBAD	Badajoz	2.04	326	Pn	Pn	02 01 22.7	+0.4
	7.6nm,0.1s,SNR=18						
EBAD				Sn	Sn	02 01 48.0	+0.3
	12nm,0.3s,SNR=9.3						
EBAD	Badajoz	2.04	326	⇓Pn	Pn	02 01 22.7	+0.3
	7.6nm,0.1s,SNR=18						
EBAD				Sn	Sn	02 01 48.0	+0.3
	12nm,0.3s,SNR=9.3						
EBAD				Lg		02 01 54.8	
	142nm,0.2s,SNR=7.9						
PBEJ	Beja	2.07	298	*e*Pn	Pn	02 01 23.0	+0.2
PBEJ				*e*Sn	Sn	02 01 48.4	-0.1
PBEJ				*e*Sg	Sg	02 01 55.5	+0.7
PBEJ				A		02 01 57.4	
	60nm,0.3s						
PBEJ	Beja	2.07	298	*e*Pn	Pn	02 01 23.0	+0.2
PBEJ				*e*Sn	Sn	02 01 48.4	-0.1
PBEJ				*e*Sg	Sg	02 01 55.5	+0.7
	60nm,0.3s						
EQES	Quesada	2.10	69	Pn	Pn	02 01 23.6	+0.4
	1.1nm,0.1s,SNR=33						
EQES	Quesada	2.10	69	Pg	Pg	02 01 28.0	-0.5
	SNR=7.9						
EQES				Sn	Sn	02 01 50.6	+1.3
	SNR=7.9						
EQES	Quesada	2.10	69	Pn	Pn	02 01 23.6	+0.4
	1.1nm,0.1s,SNR=33						
EQES				Pg	Pg	02 01 28.0	-0.6
	SNR=7.9						
EQES				Sn	Sn	02 01 50.6	+1.3
	SNR=7.9						
EQES				Lg		02 01 56.8	
	47nm,0.2s,SNR=11						
EBER	Berja	2.14	94	Pg	Pg	02 01 28.6	-0.6
	SNR=7.9						
EBER	Berja	2.14	94	Pn	Pn	02 01 26.1	+2.3
	1.9nm,0.3s,SNR=27						
EBER				Pg	Pg	02 01 28.6	-0.6
	SNR=7.9						
EBER				Lg		02 01 58.2	
	47nm,0.3s,SNR=7.9						
RSA	Sarsar	2.21	186	*i* P	Pn	02 01 24.0	-0.7
RSA				*e*S	Sn	02 01 48.0	-3.9
PESTR	Estremoz	2.41	319	*e*Pn	Pn	02 01 28.1	+0.7
PESTR				*e*Sn	Sn	02 01 56.2	-0.6
PESTR				*e*Sg	Sg	02 02 06.2	+0.6
PESTR				A		02 02 11.3	
	70nm,0.4s						
PESTR	Estremoz	2.41	319	*e*Pn	Pn	02 01 28.1	+0.7
PESTR				*e*Sn	Sn	02 01 56.2	-0.6
PESTR				*e*Sg	Sg	02 02 06.2	+0.6
	70nm,0.4s						
EVO	Evora	2.43	307	*e*Pn	Pn	02 01 29.2	+1.4
EVO	Evora	2.43	307	*e*Pg	Pg	02 01 34.9	0.0
EVO				*e*Sn	Sn	02 02 00.6	+3.1
EVO				*e*Sg	Sg	02 02 09.3	+2.9
	94nm,0.3s						
EVO	Evora	2.43	307	*e*Pn	Pn	02 01 28.3	+0.5
EVO				*e*Sn	Sn	02 01 56.7	-0.8
EVO				*e*Sg	Sg	02 02 05.1	-1.3
EVO				A		02 02 11.6	
	111nm,0.3s						
EVO	Evora	2.43	307	*e*Pn	Pn	02 01 28.3	+0.5
EVO				*e*Sn	Sn	02 01 56.7	-0.8
EVO	Evora	2.43	307	Pn	Pn	02 01 28.3	+0.5
EVO				Sn	Sn	02 01 56.7	-0.8
EVO				Lg		02 02 05.1	
	111nm,0.3s						
MORF	Marmelete	2.49	276	*e*Pn	Pn	02 01 28.6	+0.1
MORF	Marmelete	2.49	276	*e*Pg	Pg	02 01 34.6	-1.3
MORF				*e*Sn	Sn	02 01 58.5	-0.3
MORF				*e*Sg	Sg	02 02 11.0	+2.9
MORF				A		02 02 12.7	
	64nm,0.4s						
MORF	Marmelete	2.49	276	*e*Pg	Pg	02 01 34.6	-1.3
MORF				*e*Sn	Sn	02 01 58.5	-0.3
MORF				*e*Sg	Sg	02 02 11.0	+2.9
	64nm,0.4s						
MORF	Marmelete	2.49	276	Pn	Pn	02 01 28.6	+0.1
MORF				Pg	Pg	02 01 34.6	-1.3
MORF				Sn	Sn	02 01 58.5	-0.3
MORF				Lg		02 02 11.0	
	64nm,0.4s						
EVOP	Sao Brissos	2.50	306	*e*Pn	Pn	02 01 29.2	+0.5
EVOP	Sao Brissos	2.50	306	*e*Pg	Pg	02 01 34.9	-1.3
EVOP				*e*Sn	Sn	02 02 00.6	+1.5
EVOP				*e*Sg	Sg	02 02 09.3	+0.7
	47nm,0.3s						
PTEO	Sao Teotonio	2.57	281	*e*Pn	Pn	02 01 29.8	+0.1
PTEO	Sao Teotonio	2.57	281	*e*Pg	Pg	02 01 36.0	-1.6
PTEO				*e*Sn	Sn	02 02 00.8	-0.1
PTEO				*e*Sg	Sg	02 02 10.7	-0.2
PTEO				A		02 02 19.1	
	68nm,0.5s						
PTEO	Sao Teotonio	2.57	281	*e*Pg	Pg	02 01 36.0	-1.6
PTEO				*e*Sn	Sn	02 02 00.8	-0.1
PTEO				*e*Sg	Sg	02 02 10.7	-0.2
	68nm,0.5s						
PTEO	Sao Teotonio	2.57	281	Pn	Pn	02 01 29.8	+0.1
PTEO				Pg	Pg	02 01 36.0	-1.6
PTEO				Sn	Sn	02 02 00.8	-0.1
PTEO				Lg		02 02 10.7	
	34nm,0.5s						
PFVI	Vila Bisbo	2.62	272	*e*Pn	Pn	02 01 29.8	-0.6
PFVI	Vila Bisbo	2.62	272	*e*Pg	Pg	02 01 37.1	-1.4
PFVI				*e*Sn	Sn	02 02 00.8	-1.3
PFVI				*e*Sg	Sg	02 02 12.3	-0.1
PFVI				A		02 02 20.0	
	58nm,0.4s						
PFVI	Vila Bisbo	2.62	272	*e*Pg	Pg	02 01 37.1	-1.4
PFVI				*e*Sn	Sn	02 02 00.8	-1.3
PFVI				*e*Sg	Sg	02 02 12.3	-0.1
	58nm,0.4s						
PFVI	Vila Bisbo	2.62	272	Pn	Pn	02 01 29.8	-0.6
PFVI				Pg	Pg	02 01 37.1	-1.4
PFVI				Sn	Sn	02 02 00.8	-1.3
PFVI				Lg		02 02 12.3	
	29nm,0.4s						
MOE	Montemor	2.65	304	*e*Pn	Pn	02 01 31.4	+0.7
MOE				*e*Sn	Sn	02 02 04.5	+1.8
MOE				*e*Sg	Sg	02 02 13.0	-0.3
PMRV	Marv??o	2.76	329	*e*Pn	Pn	02 01 32.6	+0.3
PMRV				*e*Sn	Sn	02 02 05.3	-0.2
PMRV				*e*Sg	Sg	02 02 16.0	-0.9
PMRV				A		02 02 19.9	
	44nm,0.3s						
PMRV	Marv??o	2.76	329	*e*Pn	Pn	02 01 32.6	+0.3
PMRV				*e*Sn	Sn	02 02 05.3	-0.2
EVIA	Vianos	2.87	56	Pn	Pn	02 01 34.2	+0.3
	2.3nm,0.2s,SNR=6.8						
EVIA				Pg	Pg	02 01 42.6	-0.7
	8.9nm,0.2s,SNR=7.9						
EVIA				Lg		02 02 18.6	
	43nm,0.5s,SNR=7.9						
ESLA	Sonseca Array	2.88	25	*e*Pn	Pn	02 01 36.1	+2.2
ESLA	Sonseca Array	2.88	25	*e*Pg	Pg	02 01 43.8	+0.4
ESLA	Sonseca Array	2.88	25	*e*Pn	Pn	02 01 36.1	+2.2
ESLA				*e*Pg	Pg	02 01 43.8	+0.4
ESLA				*e*Sg	Sg	02 02 19.8	-0.9
PCBR	Castelo Branco	3.15	332	*e*Pn	Pn	02 01 38.0	+0.4
PCBR				*e*Sn	Sn	02 02 14.1	-1.0
PCBR				*e*Sg	Sg	02 02 28.7	-0.6
PCBR				A		02 02 35.7	
	22nm,0.5s						
PCBR	Castelo Branco	3.15	332	*e*Pn	Pn	02 01 38.0	+0.4
PCBR				*e*Sn	Sn	02 02 14.1	-1.0
PCBR				*e*Sg	Sg	02 02 28.7	-0.6
	22nm,0.5s						
ALMR	Almeirim	3.16	312	*e*P	Pn	02 01 38.2	+0.4
ALMR				*e*S	Sn	02 02 13.8	-1.7
ALMR				*e*S	Sn	02 02 13.9	-1.6
ALMR				AML	AML	02 02 14.1	
	comp=N,40nm,0.8s						
ALMR	Almeirim	3.16	312	*e*P	Pn	02 01 38.2	+0.4
ALMR				*e*S	Sn	02 02 13.8	-1.7
ALMR	Almeirim	3.16	312	P	Pn	02 01 38.2	+0.4
ALMR				S	Sn	02 02 13.8	-1.7
TZK	Tazeka	3.18	159	*e*P	Pn	02 01 36.5	-1.6
TZK				*i* S	Sn	02 02 12.0	-3.9
PMAFR	Mafra	3.49	304	*e*Pn	Pn	02 01 42.9	+0.5
PMAFR				*e*Sn	Sn	02 02 23.5	-0.1
PMAFR				*e*Sg	Sg	02 02 41.6	+1.2
PMAFR				A		02 03 01.9	
	comp=N,41nm,0.4s						
PMAFR	Mafra	3.49	304	*e*Pn	Pn	02 01 42.9	+0.5
PMAFR				*e*Sn	Sn	02 02 23.5	-0.1
PMAFR				*e*Sg	Sg	02 02 41.6	+1.2
	comp=N,41nm,0.4s						
ETOB	Tobarra	3.53	62	Pn	Pn	02 01 42.9	0.0
	comp=N,0.9nm,0.1s,SNR=16						
ETOB	Tobarra	3.53	62	Pn	Pn	02 01 42.9	0.0
	comp=N,0.9nm,0.1s,SNR=16						
ETOB				Lg		02 02 42.9	
	comp=N,36nm,0.6s,SNR=7.9						
MTE	Manteigas	3.67	335	*e*Pn	Pn	02 01 45.2	+0.5
MTE				*e*Sn	Sn	02 02 28.3	+0.4
MTE				*e*Sg	Sg	02 02 47.7	+1.7
MTE				A		02 02 50.4	
	comp=N,49nm,0.5s						
MTE	Manteigas	3.67	335	*e*Pn	Pn	02 01 45.2	+0.5
MTE				*e*Sn	Sn	02 02 28.3	+0.4
MTE				*e*Sg	Sg	02 02 47.7	+1.7
	comp=N,49nm,0.5s						
MIF	Mishlifen	3.67	176	*i* P	Pn	02 01 44.0	-0.8
MIF				*i* S	Sn	02 02 24.0	-4.0
GUD	Guadarrama	3.72	17	Pn	Pn	02 01 47.3	+1.8
	comp=N,1.0nm,0.1s,SNR=7.9						
GUD				Lg		02 02 43.6	
	comp=N,9.9nm,0.3s,SNR=7.9						
CZD	Col de Zad	4.06	174	*i* P	Pn	02 01 49.5	-0.6
CZD				*i* S	Sn	02 02 34.0	-3.5
PVIS	Viseu	4.07	334	*e*Pn	Pn	02 01 51.3	+1.0
PVIS				*e*Sn	Sn	02 02 37.1	-0.7
PVIS				*e*Sg	Sg	02 02 57.3	-1.5
PVIS				A		02 03 10.9	
	comp=N,17nm,0.6s						
PVIS	Viseu	4.07	334	*e*Pn	Pn	02 01 51.3	+1.0
PVIS				*e*Sn	Sn	02 02 37.1	-0.7
PVIS				*e*Sg	Sg	02 02 57.3	-1.5
	comp=N,17nm,0.6s						
MVO	Moncorvo	4.24	345	*e*Pn	Pn	02 01 53.2	+0.6
MVO				*e*Sn	Sn	02 02 41.2	-0.8
MVO				*e*Sg	Sg	02 03 05.0	+0.6
MVO				A		02 03 11.6	
	comp=N,27nm,0.4s						
MVO	Moncorvo	4.24	345	*e*Pn	Pn	02 01 53.2	+0.6
MVO				*e*Sn	Sn	02 02 41.2	-0.8
MVO				*e*Sg	Sg	02 03 05.0	+0.6
	comp=N,27nm,0.4s						
ETOR	Torete	4.62	35	Pn	Pn	02 01 59.2	+1.3
	comp=N,11nm,0.3s,SNR=7.9						
ETOR				Lg		02 03 18.4	
	comp=N,19nm,0.4s,SNR=7.9						
PTO	Porto	4.70	331	*e*Pn	Pn	02 01 59.5	+0.6
PTO				*e*Sn	Sn	02 02 52.2	-1.2
PBRG	Braganca	4.81	349	*e*Pn	Pn	02 02 01.6	+1.1
PBRG				*e*Sn	Sn	02 02 55.0	-1.1
PBRG				*e*Sg	Sg	02 03 21.9	-0.8
PBRG				A		02 03 33.8	
	comp=N,14nm,0.8s						
PBRG	Braganca	4.81	349	*e*Pn	Pn	02 02 01.6	+1.1
PBRG				*e*Sn	Sn	02 02 55.0	-1.1
PBRG				*e*Sg	Sg	02 03 21.9	-0.8
	comp=N,14nm,0.8s						
ECAL	Calabor	4.94	350	Pn	Pn	02 02 03.5	+1.2
	SNR=7.9						
ECAL				Sn	Sn	02 02 58.6	-0.8
	SNR=7.9						
ECAL	Calabor	4.94	350	Pn	Pn	02 02 03.5	+1.2
	comp=N,0.0nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	02 02 58.6	-0.8
	SNR=7.9						
ECAL				Lg		02 03 27.2	
	SNR=7.9						
PCAB	Cabril	5.01	338	*e*Pn	Pn	02 02 03.9	+0.7
PCAB				*e*Sn	Sn	02 02 59.6	-1.4
ZFT	Errachidia	5.13	169	*e*P	Pn	02 02 03.0	-1.8
ZFT				*e*S	Sn	02 03 00.0	-3.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMOS	Mosqueruela	5.15	49	Pn	Pn	02 02 06.4	+1.3
	comp=N,0.8nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	5.15	49	Pn	Pn	02 02 06.5	+1.3
	comp=N,0.8nm,0.3s,SNR=7.9						
EMOS				Lg		02 03 33.9	
	comp=N,8.2nm,0.6s,SNR=7.9						
ELOB	Lobios	5.16	339	Pn	Pn	02 02 05.9	+0.6
	comp=N,2.0nm,0.2s,SNR=7.3						
ELOB	Lobios	5.16	339	Pn	Pn	02 02 05.9	+0.6
	comp=N,2.0nm,0.2s,SNR=7.3						
ELOB				Sn	Sn	02 03 02.2	-2.5
	comp=N,7.9nm,0.5s,SNR=7.9						
ELOB				Lg		02 03 35.3	
	comp=N,16nm,0.7s,SNR=5.4						
ELOB	Lobios	5.16	339	Pn	Pn	02 02 05.9	+0.6
ELOB				Sn	Sn	02 03 02.2	-2.5
ELOB				Lg		02 03 35.3	
ERTA	Horta de San J	6.00	48	Lg		02 04 00.0	
	comp=N,2.3nm,0.3s,SNR=7.9						
ESAC	San Caprasio	6.08	39	Lg		02 04 03.4	
	comp=N,32nm,0.4s,SNR=7.9						
OUK	Oukaimeden	6.16	199	P	Pn	02 02 17.5	-1.5
OUK				S	Sn	02 03 22.0	-7.4
EPON	Pontenova	6.36	349	Pn	Pn	02 02 23.8	+2.0
	SNR=7.9						
EPON	Pontenova	6.36	349	Pn	Pn	02 02 23.8	+2.0
	SNR=7.9						
EPON				Sn	Sn	02 03 31.5	-2.8
	comp=N,1.7nm,0.3s,SNR=7.9						
EPON				Lg		02 04 12.0	
	comp=N,17nm,1.1s,SNR=7.9						
EMAZ	Mazaricos	6.43	337	Pn	Pn	02 02 23.0	+0.3
	comp=N,1.0nm,0.2s,SNR=6.2						
EMAZ	Mazaricos	6.43	337	Pn	Pn	02 02 23.0	+0.3
	comp=N,1.0nm,0.2s,SNR=6.2						
EMAZ				Sn	Sn	02 03 32.7	-3.2
	comp=N,1.5nm,0.4s,SNR=7.9						
EMAZ				Lg		02 04 15.8	
	comp=N,3.1nm,0.4s,SNR=7.9						
EALK	Alkurruntz	6.87	26	Pn	Pn	02 02 32.9	+4.1
	SNR=7.9						
SJPF	Ste Jean	6.88	27	ePn	Pn	02 02 30.5	+1.6
SJPF				eSn	Sn	02 03 44.7	-2.3
SJPF				eSg	Sg	02 04 26.8	-2.2
	comp=N,1.5nm,0.4s						
SJPF	Ste Jean	6.88	27	ePn	Pn	02 02 30.5	+1.6
SJPF				eSn	Sn	02 03 44.7	-2.3
SJPF				eSg	Sg	02 04 26.8	-2.2
	comp=N,0.8nm,0.4s						
ETSF	Etsaut	6.96	32	ePn	Pn	02 02 31.4	+1.4
ETSF				eSn	Sn	02 03 45.6	-3.5
ETSF				eSg	Sg	02 04 29.0	-2.6
	comp=N,3.6nm,0.5s						
ETSF	Etsaut	6.96	32	ePn	Pn	02 02 31.4	+1.4
ETSF				eSg	Sg	02 04 29.0	-2.6
	comp=N,1.8nm,0.5s						
ETSF	Etsaut	6.96	32	Pn	Pn	02 02 31.4	+1.4
ETSF				Sn	Sn	02 03 45.6	-3.5
ETSF				Lg		02 04 29.0	
	comp=N,1.8nm,0.5s						
EBIE	Bielsa	7.11	36	Pn	Pn	02 02 33.7	+1.7
	comp=N,3.5nm,0.4s,SNR=18						
EBIE	Bielsa	7.11	36	Pn	Pn	02 02 33.7	+1.7
	comp=N,3.5nm,0.4s,SNR=18						
EPF	Esparros	7.47	35	ePn	Pn	02 02 37.9	+1.0
EPF				eSn	Sn	02 03 57.4	-4.1
EPF				eSg	Sn	02 04 44.1	+43
	comp=N,1.4nm,0.4s						
EPF	Esparros	7.47	35	ePn	Pn	02 02 37.9	+1.0
EPF				eSg	Sn	02 04 44.1	+43
	comp=N,0.7nm,0.4s						
EPF	Esparros	7.47	35	Pn	Pn	02 02 37.9	+1.0
EPF				Sn	Sn	02 03 57.4	-4.1
EPF				Lg		02 04 44.1	
	comp=N,0.7nm,0.4s						
MTLF	Montolieu	8.63	41	ePn	Pn	02 02 53.9	+1.1
LFF	La Frestale	9.18	29	ePn	Pn	02 03 00.3	-0.1
QUIF	Quistinic	10.97	8	ePn	Pn	02 03 24.5	-0.5
ROSF	Rostrenen	11.38	8	ePn	Pn	02 03 31.1	+0.6
SGMF	Saint Gilles	11.38	10	ePn	Pn	02 03 30.5	-0.1

*ISK **14** 02:08:14.4, 3873N×4307E, h5^{km}, MD3.0*
*CSEM **14** 02:08:14.5±0.1, 3872N×4306E, h2^{km}, MD3.0, Error ellipse: s-maj=2.5km s-min=1.4km az=54.0*
*ISCJB **14** 02:08:15.5±0.4, 3872N±003×4307E±003, h10^{km}, Error ellipse: s-maj=4.3km s-min=3.5km az=26.7*
*DDA **14** 02:08:15.9, 3872N×4310E, h7^{km}±3^{km}, Md3.1*
ISC 14 02:08:16.3±0.5**, 3872N**±003×**4308E**±003**, h3**^{km}±12^{km}**, n14, σ0^{s}86**/22**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VANB	Van	0.27	118	PG	Pg	02 08 21.4	-0.1
VANB				eSG	Sg	02 08 26.9	+1.8
TVAN	Van	0.32	127	iP	Pg	02 08 21.8	-0.7
TVAN				iS	Sg	02 08 27.4	+0.8
VANT	Van	0.37	139	PG	Pg	02 08 22.3	-1.0
VANT				eSG	Sg	02 08 28.1	0.0
TATV	Tatvan	0.67	252	iP	Pg	02 08 28.8	-0.4
TATV				iS	Sg	02 08 38.2	+0.3
TUTA	Tutak	0.71	343	iP	Pg	02 08 29.8	-0.1
TUTA				iS	Sg	02 08 39.9	+0.8
CLDR	Caldiran	0.78	57	ePG	Pg	02 08 30.2	-0.9
CLDR				eSG	Sg	02 08 42.3	+1.1
AGRB	Hanur-Agry	0.85	355	ePG	Pg	02 08 32.1	-0.5
HAKT	HAKKARI	1.26	157	iP	Pg	02 08 45.2	+4.7
HAKT				iS	Sg	02 09 04.9	+8.0
CUKT	Cukurca	1.53	164	ePN	Pg	02 08 44.0	-1.6
BEST	Besiri	1.65	240	iP	Pg	02 08 47.3	-0.6
BEST				⇓iS	Sg	02 09 10.8	+1.5
DIGO	Kars	1.70	8	iP	Pg	02 08 47.9	-1.1
ERZM	Erzurum	1.78	312	iP	Pg	02 08 50.8	+0.4
EZM	Erzurum	1.78	312	ePN	Pn	02 08 48.1	+0.2
BCA	Borcka	2.94	338	ePN	Pn	02 09 04.0	+0.1

*BJI **14** 02:35:11.2, 37.18N×7192E, h203^{km}, mb4.2*
*ISCJB **14** 02:35:12.1±0.4, 37.17N±003×7202E±006, h191^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=4.4km az=177.3*
*IDC **14** 02:35:12.1±12.0, 3694N×72.15E, h198^{km}±123^{km}, mb3.0/1, mb1 3.2/5, mb1mx2.9/25, mbtmp3.2/5, Error ellipse: s-maj=85.5km s-min=54.6km az=168.0*
*NEIC **14** 02:35:12.3±0.6, 37.14N×7200E, h180^{km}±10^{km}, mb4.7/13, Error ellipse: s-maj=9.6km s-min=5.2km az=72.0*
*NNC **14** 02:35:20.7±4.6, 3778N×72.13E, h182^{km}±47^{km}, mb2.8, mpv3.9, Error ellipse: s-maj=43.7km s-min=22.2km az=7.0*
ISC 14 02:35:13.0±0.3**, 3716N**±003×**7203E**±006**, h184**^{km}±7^{km}**, n52, σ0^{s}94**/63**, 3C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.33	182	P	Pn	02 36 06.5	+0.6
CEP				S	Sn	02 36 47.0	-0.2
KBL	Kabul	3.57	224	ePn	Pn	02 36 08.1	-0.8
KBL				eSn	Sn	02 36 51.1	-1.2
CHCP	Chirah Chowk	3.64	164	P	Pn	02 36 11.7	+2.0
KSH	Kashi	3.89	52	eP	Pn	02 36 13.8	+1.1
KSH				S	Sn	02 36 59.0	-0.5
KSH				Smax			
	comp=N,893nm,0.8s						
KSH				Smax			
	comp=E,534nm,0.5s						
SBDP	Sheikh Budin	4.96	192	⇓P	Pn	02 36 28.3	+1.8
AML	Almayashu	5.12	14	P	Pn	02 36 28.5	-0.1
	SNR=43						
AML	Almayashu	5.12	14	ePn	Pn	02 36 28.3	-0.3
	comp=E,144nm,0.6s						
AML				eSn	Sn	02 37 23.6	-4.3
UCH	Uchtor	5.41	20	P	Pn	02 36 32.6	+0.4
	SNR=5.5						
UCH	Uchtor	5.41	20	ePn	Pn	02 36 32.0	-0.2
	comp=E,7.7nm,0.6s						
UCH				eSn	Sn	02 37 31.6	-2.9
KZA	Kyzart	5.50	26	P	Pn	02 36 33.3	-0.1
	SNR=9.1						
THN	Thein Dam	5.61	146	eP	Pn	02 36 34.5	-0.4
THN				ex	x	02 37 37.8	
DLH	Dalhousie	5.63	144	eS	Sn	02 37 35.0	-4.9
EKS2	Erkin-Say	5.65	13	P	Pn	02 36 35.4	0.0
	SNR=21						
EKS2	Erkin-Say	5.65	13	ePn	Pn	02 36 35.3	-0.1
	comp=E,16nm,0.3s						
EKS2				eSn	Sn	02 37 36.1	-4.2
AAK	Ala-Archa	5.78	18	P	Pn	02 36 37.4	+0.3
	SNR=35						
KBK	Karagaybulak	5.92	21	P	Pn	02 36 40.1	+1.2
	SNR=6.3						
KK31	Karatay Array	6.05	349	P	Pn	02 36 39.6	-0.9
	comp=E,5.9nm,0.4s,baz=160,slow=11,SNR=126						
KK31				⇑S	Sn	02 37 44.6	-5.0
	comp=E,42nm,0.6s,baz=179,slow=17,SNR=34						
CHMS	Chumysh	6.19	19	P	Pn	02 36 42.2	-0.2
	SNR=10						
TKM2	Tokmak 2	6.37	24	⇓P	Pn	02 36 45.2	+0.5
	comp=E,20nm,1.3s						
TKM2				⇓S	Sn	02 37 50.7	-6.4
	comp=E,9.2nm,1.1s						
TKM2	Tokmak 2	6.37	24	P	Pn	02 36 44.8	+0.1
	SNR=14						
TKM2	Tokmak 2	6.37	24	ePn	Pn	02 36 44.8	+0.1
	comp=E,68nm,1.5s						
USP	Ospenovka	6.38	16	P	Pn	02 36 45.4	+0.5
	SNR=6.0						
SMLA	Simla	7.37	143	iP	Pn	02 36 57.7	-0.3
SMLA				iS	Sn	02 38 15.2	-5.9
SMLA				iS	Sn	02 38 15.2	-5.9
SMLA				ex	x	02 38 20.6	
	comp=N,334nm,0.4s						
SMLA				ex	x	02 38 22.4	
	comp=E,350nm,0.4s						
DDI	Dehra Dun	8.46	142	eS	Sn	02 38 38.5	-8.7
JOSI	Joshimath	9.08	134	eP	Pn	02 37 20.3	-0.2
JOSI				eS	Sn	02 38 56.8	-5.1
KHET	Khetri	9.60	160	eS	Sn	02 39 03.9	-11
SONA	Sohna	9.85	153	eS	Sn	02 39 09.8	-11
MK31	Makanchi Array	12.27	35	P	Pn	02 38 04.5	+3.0
	comp=E,0.9nm,0.6s,baz=217,slow=12,SNR=6.5						
MK31	Makanchi Array	12.27	35	ePn	Pn	02 38 01.4	-0.2
MKAR	Makanchi Array	12.27	35	P	Pn	02 38 01.9	+0.3
	comp=E,0.1nm,0.3s,baz=226,slow=16,SNR=2.6						
DANN	Dangsing	13.20	128	eP	Pn	02 38 12.4	-1.2
	comp=E,16nm,0.4s						
KOLN	Koldanda	13.52	131	eP	Pn	02 38 16.6	-1.0
	comp=E,11nm,0.4s						
GKN	Gorkha	14.00	127	eP	Pn	02 38 22.9	-0.7
	comp=E,13nm,0.4s						
KURBB	Kurchatov Arra	14.24	17	⇓P	Pn	02 38 27.5	+1.2
	comp=E,0.9nm,0.8s						
KURK	Kurchatov	14.35	17	P	Pn	02 38 27.4	-0.2
	comp=E,0.2nm,0.3s,baz=204,slow=11,SNR=15						
KURK	Kurchatov	14.35	17	P	Pn	02 38 27.4	-0.2
KKN	Kakani	14.56	126	eP	Pn	02 38 30.1	-0.4
	comp=E,24nm,0.5s						
DMN	Daman	14.57	127	eP	Pn	02 38 31.1	+0.4
	comp=E,17nm,0.4s						
PKI	Pulchoki	14.79	126	eP	Pn	02 38 33.7	+0.3
	comp=E,14nm,0.6s						
GUN	Gumba	14.87	124	eP	Pn	02 38 34.0	-0.3
	comp=E,18nm,0.4s						
AB01	Akbulak array	14.93	328	⇑P	Pn	02 38 36.7	+1.8
	comp=E,0.5nm,0.5s						
JIRN	Jiri	15.24	124	eP	Pn	02 38 39.5	+0.6
	comp=E,48nm,0.4s						
VOSK	Vostochnaya	15.58	358	⇓P	Pn	02 38 41.1	-1.6
	comp=E,3.0nm,1.4s						
BVA0	Borovoye Array	15.90	356	⇑P	Pn	02 38 46.0	-0.7
	comp=E,0.5nm,0.8s,baz=168,slow=14,SNR=13						
BVAR	Borovoye Array	15.90	356	P	Pn	02 38 46.2	-0.5
	comp=E,0.4nm,0.3s,baz=164,slow=12,SNR=12						
RAMN	Ramite	15.99	125	eP	Pn	02 38 47.3	-0.7
	comp=E,22nm,0.4s						
TAPN	Taplejung	16.46	122	eP	Pn	02 38 55.1	+1.5
	comp=E,8.9nm,0.4s						
AKTK	Aktyubinsk	16.64	327	P	Pn	02 38 56.6	+1.0
AKTO	Aktyubinsk	16.64	327	P	Pn	02 38 56.6	+1.0
	comp=E,0.3nm,0.3s,baz=133,slow=11,SNR=3.8						
ZAA0	Zalesovo Array	18.97	24	eP	P	02 39 19.9	-0.3
ZALV	Zalesovo Beam	18.97	24	P	P	02 39 20.3	+0.1
	comp=E,2.2nm,0.3s,baz=222,slow=12,SNR=37						
TORD	Torodi Ar. Bea	66.56	269	P	P	02 45 41.8	-1.8
	comp=E,0.4nm,0.7s,baz=57,slow=4.6,SNR=4.5						

*CASC **14** 02:38:27.4±2.0, 1520N×9152W, h272^{km}, MD4.4, mb4.5(NEIC)*
*ISCJB **14** 02:38:29.0±0.4, 15.19N±005×9143W±004, h264^{km}±3^{km}, mb4.0/16, Error ellipse: s-maj=7.8km s-min=5.6km az=21.1*
*IDC **14** 02:38:28.3±1.9, 1522N×9097W, h242^{km}±20^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.6/23, mbtmp3.6/11, Error ellipse: s-maj=21.7km s-min=11.5km az=52.0*
*NEIC **14** 02:38:30.4, 15.18N×9148W, h272^{km}, mb4.5/13, MD4.4(MEX), After MEX.*
*MEX **14** 02:38:30.6±0.8, 15.18N×9148W, h271^{km}±8^{km}, MD4.4*
ISC 14 02:38:29.8±0.4**, 1521N**±005×**9143W**±004**, h258**^{km}±3^{km}**, n48, σ1^{s}20**/63**, mb4.0**/16**, 2C-2D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.86	250	iP	Pn	02 39 05.0	0.0
THIG				iS	S	02 39 32.2	-0.5
JAT	Jato	0.91	193	⇑iP	Pn	02 39 05.7	+0.3
JAT				eS	S	02 39 32.1	-1.2
FUG	Fuego 3	0.95	143	⇑eP	Pn	02 39 05.6	+0.1
NBG	Las Nubes	1.22	120	eP	Pn	02 39 07.7	+0.8
NBG				eS	S	02 39 38.0	+1.8
CCIG	Comitan	1.27	327	iP	Pn	02 39 08.4	+1.1
CCIG				iS	S	02 39 37.8	+1.0
IXG	Ixpaco	1.40	137	⇓eP	Pn	02 39 08.3	+0.1
IXG				eS	S	02 39 42.0	+3.5
MRL	Marmol	1.68	95	⇓iP	Pn	02 39 10.4	+0.1
MRL				eS	S	02 39 40.7	-1.6
PCIG		1.80	286	iP	Pn	02 39 11.4	+0.2
PCIG				eS	S	02 39 43.2	-0.6
SCX	San Cristobal	1.91	323	iP	Pn	02 39 13.8	+1.6
SCX				iS	S	02 39 46.2	+0.6
TGIG		2.25	314	iP	Pn	02 39 16.2	+0.9
TGIG				iS	S	02 39 50.3	-0.9
SCIG	Sabancuy	3.74	4	iP	Pn	02 39 31.0	0.0
SCIG				iS	S	02 40 18.3	-1.4
CMIG	Matias Romero	3.81	300	P	Pn	02 39 32.4	+0.6
	52nm,0.3s,baz=107,slow=8.3,SNR=570						
CMIG				S	S	02 40 17.9	-3.2
	33nm,0.3s,baz=298,slow=22,SNR=18						
CMIG	Matias Romero	3.81	300	iP	Pn	02 39 32.3	+0.5
CMIG				eS	S	02 40 18.0	-3.1
TGUH	Tegucigalpa,Un	4.18	105	ePn	Pn	02 39 35.0	-1.2
HUIG	Huatulco	4.55	278	iP	Pn	02 39 40.5	0.0
HUIG				eS	S	02 40 32.5	-4.2
VHO	Vista Hermosa	5.42	291	iP	Pn	02 39 53.8	+2.7
VHO				iS	S	02 40 53.5	-2.4
VHO	Vista Hermosa	5.42	291	iP	Pn	02 39 53.9	+2.9
VHO				iS	S	02 40 53.5	-2.4
TEIG	Tepich	5.82	31	iP	Pn	02 39 54.2	-1.7
TEIG				iS	S	02 41 05.3	+0.4
PNIG	Pinotepa	6.55	281	iP	Pn	02 40 06.8	+1.7
PNIG				iS	S	02 41 19.5	-2.0
TXAR	Lajitas Array	18.03	323	P	P	02 42 26.4	+4.1
	0.3nm,0.3s,baz=148,slow=11,SNR=49						
TXAR				PcP	PcP	02 46 44.9	+0.6
	0.0nm,0.3s,baz=146,slow=0.8,SNR=3.8						
LRAL	Lakeview Retre	18.20	12	eP	P	02 42 25.5	+1.5
	122nm,2.5s						
MIAR	Mount Ida	19.35	355	eP	P	02 42 36.2	-0.2
	29nm,1.3s						
UALR	University of	19.50	358	eP	P	02 42 39.1	+1.2
	25nm,0.9s						
GOGA	Godfrey	19.50	20	eP	P	02 42 38.2	+0.2
	22nm,0.6s						
SWET	Sewanee	20.52	13	eP	P	02 42 49.0	+0.2
WVT	Waverly	21.08	8	eP	P	02 42 53.4	-1.3
	2.7nm,0.6s,mb3.8						
SDV	Santo Domingo	21.28	105	P	P	02 42 51.3	-5.4
	3.1nm,0.8s,mb3.7,baz=253,slow=23,SNR=3.6						
TKL	Tuckaleechee C	21.49	17	P	P	02 42 58.7	+0.3
	13nm,0.7s,mb4.4,baz=184,slow=11,SNR=19						
TKL	Tuckaleechee C	21.49	17	P	P	02 42 58.7	+0.3
TZTN	Tazewell	22.38	17	eP	P	02 43 06.7	+0.2
	15nm,0.6s,mb4.5						
CCM	Cathedral Cave	22.76	0	eP	P	02 43 08.7	-1.3
	111nm,2.5s,mb4.8						
WCI	Wyandotte Cave	23.37	10	eP	P	02 43 15.6	0.0
	12nm,0.7s,mb4.3						
PDAR	Pinedale Array	31.57	334	P	P	02 44 30.0	+1.6
	0.2nm,0.4s,mb3.0,baz=14,slow=41,SNR=3.4						
ELK	Elko	32.80	326	eP	P	02 44 41.7	+2.7
	1.8nm,0.8s,mb3.6						
NVAR	Mina Array Bea	33.10	319	P	P	02 44 45.1	+3.4
	1.8nm,0.7s,mb3.7,baz=134,slow=7.7,SNR=13						
NVAR				PcP	PcP	02 47 19.5	+0.9
	0.4nm,0.5s,baz=108,slow=2.9,SNR=4.3						
ULM	Lac du Bonnet	35.13	355	P	P	02 44 58.0	-1.0
	7.9nm,0.6s,mb4.4,baz=173,slow=9.6,SNR=9.9						
ULM	Lac du Bonnet	35.13	355	eP	P	02 44 57.7	-1.2
	5.7nm,0.6s,mb4.3						
PKME	Peaks-Kenny Pk	35.30	27	eP	P	02 44 59.9	-0.6
	6.3nm,0.4s,mb4.5						
WVOR	Wild Horse Val	35.82	325	eP	P	02 45 07.1	+2.2
	2.1nm,0.9s,mb3.7						
SIV	San Ignacio	43.13	135	P	P	02 46 03.5	-1.8
	0.9nm,0.3s,mb3.4,baz=305,slow=11						
SCHQ	Schefferville	43.90	20	P	P	02 46 09.8	-1.2
	9.5nm,0.6s,mb4.2,baz=214,slow=7.9,SNR=15						
SCHQ	Schefferville	43.90	20	eP	P	02 46 09.4	-1.6
	9.0nm,0.6s,mb4.2						
YKA	Yellowknife Ar	49.99	346	P	P	02 46 57.7	0.0
	2.0nm,0.7s,mb3.5,baz=147,slow=7.7,SNR=45						
YKA				pP	pP	02 47 53.5	+0.5
	0.6nm,0.7s,baz=149,slow=7.4,SNR=4.4						
YKA				PcP	PcP	02 48 12.6	-1.0
	0.3nm,0.8s,baz=148,slow=3.9,SNR=4.3						
YKA	Yellowknife Ar	49.99	346	P	P	02 46 57.7	0.0
YKA				pP	pP	02 47 53.5	+0.5
YKA				PcP	PcP	02 48 12.6	-1.0
CFAA	Coronel Fontan	51.59	155	P	P	02 47 09.7	-0.4
	0.1nm,0.4s,baz=259,slow=3.5,SNR=3.5						
ARCES	ARCESS Array B	84.82	18	P	P	02 50 34.2	-0.8
	1.9nm,0.7s,mb4.1,baz=300,slow=6.1,SNR=5.3						
WB2	Warramunga Arr	136.21	257	eP	PKPdf	02 57 22.0	+0.7
FITZ	Fitzroy Crossi	144.41	260	eP	PKPdf	02 57 36.2	+0.1
	4.2nm,0.9s						

MEX 14 02:46:43.1±1.0**, 1391N**×**9337W, h16**^{km}±69^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.46	47	eP	Pn	02 47 04.9	-4.0
THIG				iS	Sn	02 47 22.6	-5.1
PCIG		1.79	5	iP	Pn	02 47 09.4	-3.9
PCIG				iS	Sn	02 47 29.6	-6.2
CCIG	Comitan	2.64	27	iP	Pn	02 47 23.2	-1.9
CCIG				iS	Sn	02 47 53.9	-2.9
TGIG		2.86	5	iP	Pn	02 47 26.7	-1.4
TGIG				iS	Sn	02 47 58.9	-3.3
SCX	San Cristobal	2.90	14	eP	Pn	02 47 26.0	-2.6
CMIG	Matias Romero	3.48	335	eP	Pn	02 47 33.4	-3.3
CMIG				iS	Sn	02 48 13.3	-4.2

*ISCJB **14** 02:57:26.1±0.7, 4184N±003×2285E±004, h4^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=4.4km az=11.9*
*CSEM **14** 02:57:26.0±0.1, 4181N×2286E, h5^{km}, ML1.7, Error ellipse: s-maj=2.8km s-min=2.4km az=57.0*
*SKO **14** 02:57:27.8, 4175N×2277E, h15^{km}, M2.3, ML2.6*
*BEO **14** 02:57:28.8±1.2, 4204N×2304E, ML2.6/2*
*THE **14** 02:57:28.4, 4175N×2290E, h7^{km}±1^{km}, ML3.1/4, Error ellipse: s-maj=1.3km s-min=0.7km az=278.0*
ISC 14 02:57:26.5±0.6**, 4184N**±003×**2287E**±004**, h4**^{km}±5^{km}**, n27, σ0^{s}58**/47**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STIP	Stip	0.53	254	iPg	Pg	02 57 36.5	-0.2
STIP				eSg	Sg	02 57 43.9	+0.3
STIP	Stip	0.53	254	iPg	Pg	02 57 36.6	-0.1
STIP				eSg	Sg	02 57 43.9	+0.3
STIP				eLg		02 57 44.0	
	comp=N,51nm,0.2s						
STIP				eLg		02 57 44.2	
	comp=E,29nm,0.2s						
STIP	Stip	0.53	254	iPg	Pg	02 57 36.6	-0.1
STIP				eSg	Sg	02 57 43.9	+0.3
STIP				eLg		02 57 44.0	
	comp=N,51nm,0.2s						
STIP				eLg		02 57 44.2	
	comp=E,29nm,0.2s						
VAY	Valandovo	0.57	203	P	Pg	02 57 37.3	-0.1
VAY				S	Sg	02 57 45.0	+0.2
VAY	Valandovo	0.57	203	iPg	Pg	02 57 37.5	+0.1
VAY				eSg	Sg	02 57 45.0	+0.3
VAY				eLg		02 57 45.5	
	comp=N,281nm,0.3s						
VAY				eLg		02 57 45.7	
	comp=Z,182nm,0.2s						
VAY	Valandovo	0.57	203	iPg	Pg	02 57 37.5	+0.1
VAY				eSg	Sg	02 57 45.0	+0.3
VAY				eLg		02 57 45.5	
	comp=N,281nm,0.3s						
VAY				eLg		02 57 45.6	
	comp=E,481nm,0.6s						
KNT	Kendrikon	0.68	178	P	Pg	02 57 39.7	+0.2
KNT				S	Sg	02 57 48.3	-0.1
VTS	Vitosha	0.79	18	P	Pg	02 57 45.6	+4.0
VTS				S	Sg	02 57 56.9	+5.1
GRG	Griva	0.95	202	P	Pg	02 57 44.3	-0.5
GRG				S	Sg	02 57 57.3	+0.2
SOH	Sokhos	1.08	160	P	Pg	02 57 47.1	-0.2
SOH				S	Sg	02 58 01.9	+0.6
THE	Thessaloniki	1.21	177	P	Pg	02 57 48.8	-0.9
THE				S	Sg	02 58 05.1	-0.3
BARS	Barje	1.25	322	ePg	Pg	02 57 50.0	-0.4
BARS				eSg	Sg	02 58 06.3	-0.3
HORT	Hortiatis	1.26	172	P	Pg	02 57 50.8	+0.2
KRUS	Krusevo	1.31	249	ePg	Pg	02 57 51.6	+0.1
KRUS				eSg	Sg	02 58 09.0	+0.6
KRUS	Krusevo	1.31	249	ePg	Pg	02 57 51.6	+0.1
KRUS				eSg	Sg	02 58 09.1	+0.7
KRUS				eLg		02 58 11.3	
	comp=N,3.1nm,0.3s						
KRUS				eLg		02 58 11.7	
	comp=E,3.0nm,0.2s						
KRUS	Krusevo	1.31	249	ePg	Pg	02 57 51.6	+0.1
KRUS				eSg	Sg	02 58 09.1	+0.7
KRUS				eLg		02 58 11.3	
	comp=N,3.1nm,0.3s						
KRUS				eLg		02 58 11.7	
	comp=E,3.0nm,0.2s						
PLD	Plovdiv	1.39	79	P	Pn	02 57 52.9	+0.2
PLD				S	Sb	02 58 11.8	+0.7
BIA	Bitola	1.43	235	P	Pn	02 57 53.9	+0.8
PLG	Polygyros	1.53	163	P	Pn	02 57 54.4	-0.2
FNA	Florina	1.55	227	P	Pn	02 57 54.6	-0.2
FNA				S	Sn	02 58 16.1	+0.8
OUR	Ouranopolis	1.73	151	P	Pn	02 57 56.7	-0.6
OUR				S	Sn	02 58 19.2	-0.5
BOLS	Boljevac	2.10	342	ePn	Pn	02 58 02.2	-0.1
BOLS				eSg	Sg	02 58 30.4	-3.4
THL	Klokotos Trika	2.37	196	P	Pn	02 58 06.2	+0.1
THL				S	Sn	02 58 34.5	-1.1
ALN	Alexandroupoli	2.57	111	P	Pn	02 58 09.9	+1.0
LIA	Limnos Island	2.62	137	P	Pn	02 58 08.8	-0.7
AGG	Agios Georgios	2.85	189	P	Pn	02 58 12.5	-0.2
PRK	Paraskevi	3.67	134	P	Pn	02 58 24.3	+0.4

DJA 14 03:30:36, 259S×**13232E, h32**^{km}**, Mw5.3**/2**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWI	Sorong	2.02	328	P	Pn	03 31 12.4	+4.6
SWI				S	Sn	03 31 33.9	+2.0
SWI	Sorong	2.02	328	P	Pn	03 31 13.8	+6.0
SWI				S	Sn	03 31 33.9	+2.0
LBMI	Labuha	5.19	292	P	Pn	03 31 52.0	+0.5
	206nm,1.1s,2μm0.7nm						
LBMI	Labuha	5.19	292	P	Pn	03 31 53.0	+1.5
	206nm,1.1s,2μm0.7nm						
JAY	Jayapura	8.38	90	P	Pn	03 32 35.5	+0.2
JAY	Jayapura	8.38	90	P	Pn	03 32 35.5	+0.2

*IDC **14** 03:46:27.7±14.0, 1161N×8646W, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.4/20, mbtmp3.3/4, ML3.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/18, Error ellipse: s-maj=299.7km s-min=72.0km az=7.0*

*ISCJB **14** 03:46:35.5±1.6, 11.68N±0.06×87.17W±0.06, h27km±10km, mb3.2/3, Error ellipse: s-maj=12.1km s-min=6.7km az=136.7*
*CASC **14** 03:46:36.7±1.3, 11.68N×87.09W, h25km±5km, MD3.9, ML2.4*
ISC 14 03:46:36.2±1.3**, 11.70N**±0.06×**87.12W**±0.06**, h22**km±9km**, n30, σ0^{s}77**/28**, mb3.2**/3**, 4C-14D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSAN		0.84	55	⇑eP	Pb	03 46 51.9	-0.2
MIRN	Miramar	0.84	29	⇑eP	Pb	03 46 52.1	0.0
CNGN	Cerro Negro	0.90	28	eP	Pb	03 46 52.8	-0.3
XAVN	Gruta Xavier	0.90	60	⇓eP	Pb	03 46 53.0	-0.2
MOMN	Momotombo	0.91	39	⇓eP	Pb	03 46 53.3	+0.1
TEL3	Telica 3	0.91	17	⇓eP	Pb	03 46 53.1	-0.1
APYN	Apoyeque	0.92	55	⇓eP	Pb	03 46 53.4	-0.1
TICN	Ticuantepe	0.93	69	⇓eP	Pb	03 46 53.7	0.0
TISN	Laguna Tiscapa	0.94	62	⇓eP	Pb	03 46 53.6	-0.3
MGAN	Managua	0.97	63	⇓eP	Pb	03 46 53.8	-0.5
MGAN				eS	Sb	03 47 07.5	+0.9
MGAN				AML	AML	03 47 10.5	
	comp=E,73nm,0.5s						
CRIN	San Cristobal	1.00	4	⇓eP	Pb	03 46 54.5	-0.3
WILN	Americas 2	1.02	63	⇓eP	Pn	03 46 54.5	-0.7
WILN				eS	Sb	03 47 08.8	+0.5
APON	Apoyo	1.06	78	eP	Pn	03 46 55.7	0.0
APON				⇓iP		03 46 55.8	
HUEN		1.13	56	⇓eP	Pn	03 46 56.2	-0.5
SSN	San Juan del S	1.31	108	⇓eP	Pn	03 46 58.3	-0.9
SSN				eS	Sn	03 47 15.9	-0.1
CONN	Concepcion	1.47	95	⇑eP	Pn	03 47 00.9	-0.5
CNCH	Conchagua	1.71	336	⇑eP	x	03 47 04.9	
CNCH				eS	x	03 47 29.2	
BLLM	Bellamira	2.04	328	eP	x	03 47 09.7	
CAHU	Cacacuatique	2.31	333	eP	x	03 47 14.4	
TGUH	Tegucigalpa,Un	2.35	356	⇓eP	Pn	03 47 13.9	+0.5
TGUH				eS	Sn	03 47 42.8	+1.2
JCR	Jicaral	2.70	133	eP	Pn	03 47 18.7	+0.4
BOQS	Boqueron	2.92	314	eP	x	03 47 22.5	
BOQS				eS	x	03 47 59.2	
PRS1	Puriscal	3.25	121	eP	Pn	03 47 27.5	+1.6
BUS	Buena Vista	3.94	122	eP	Pn	03 47 36.1	+0.8
CMIG	Matias Romero	9.23	306	Pn	Pn	03 48 50.0	+1.9
	comp=E,0.1nm,0.3s,baz=142,slow=12,SNR=3.3						
CHI2		14.98	117	⇓eP	x	03 46 53.5	
ATAH	Atahualpa	20.51	155	LR	LR	03 57 37.5	
	comp=E,52nm,20.2s,baz=186,slow=33						
TXAR	Lajitas Array	23.35	321	P	P	03 51 42.6	-0.7
	comp=E,0.7nm,0.7s,mb3.2,baz=138,slow=10,SNR=8.3						
PDAR	Pinedale Array	36.58	332	P	P	03 53 39.4	-1.2
	comp=E,0.2nm,0.6s,mb3.1,baz=121,slow=14,SNR=2.8						
YKA	Yellowknife Ar	54.41	345	P	P	03 55 58.0	-3.3
	comp=E,0.2nm,0.6s,mb3.2,baz=140,slow=7.2,SNR=6.9						

GUC 14 03:58:53.1±0.3**, 21.63S**×**68.43W, h128**km±3km**, MD3.8, ML3.9, 3C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.08	204	eP	Pn	03 59 17.6	+1.0
LVC				iS	Sn	03 59 36.3	+1.8
PB01	Plate Boundary	1.14	300	⇑iP	Pn	03 59 17.6	+0.3
PB01				iS	Sn	03 59 36.5	+0.9
PB01				AML	AML	03 59 37.9	
	comp=E,4μm,0.2s						
PB04	Plate Boundary	1.17	237	eP	Pn	03 59 24.6	+7.1
PB04				iS	Sn	03 59 48.2	+12
PB04				AML	AML	03 59 50.3	
	comp=N,760nm,0.0s						
MACH	Maria Elena	1.35	245	⇓iP	Pn	03 59 20.6	+1.1
MACH				iS	Sn	03 59 41.3	+1.7
TOCH	Tocopilla	1.71	254	⇑iP	Pn	03 59 24.1	+0.7
TOCH				iS	Sn	03 59 47.5	+0.9
TOCH				AML	AML	03 59 48.6	
	comp=N,2μm,0.2s						
HMBC	Humberston	1.91	314	⇓iP	Pn	03 59 25.5	-0.4
HMBC				iS	Sn	03 59 51.0	0.0
CEN1	Los Morros	2.40	223	⇑iP	Pn	03 59 35.3	+3.3
CEN1				iS	Sn	04 00 08.0	+6.2
MNMC	Miæe Miæ	2.71	336	eP	Pn	03 59 35.9	-0.1
MNMC				iS	Sn	04 00 09.2	+0.3
CPN1	Cerro Paranal	3.49	211	AML	AML	04 00 28.1	
	comp=E,91nm,0.3s						

*CSEM **14** 04:04:00.6, 35.54N×26.77E, h30km, MD3.5/5, After ATH*
*NEIC **14** 04:04:00.6, 35.54N×26.77E, h30km, MD3.5(ATH), After ATH.*
ATH 14 04:04:00.6, 35.54N×**26.77E, h30**km±1km**, MD3.5**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.32	89	ePB	Pb	04 04 08.5	+0.2
NPS	Neapolis	0.98	254	ePN	Pn	04 04 19.5	+1.1
NPS				eSN	Sn	04 04 32.5	+1.2
ARG	Arkhangelos	1.29	58	ePN	Pn	04 04 24.5	+1.9
APE	Apeiranthos	1.82	327	ePB	Pb	04 04 32.0	-1.3
VLI	Veliai	3.32	292	ePN	Pn	04 04 53.0	+2.6

JMA 14 04:05:37.8±0.2**, 32.27N**×**140.47E, h105**km±4km**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.00	327	P	Pn	04 05 58.9	+0.3
BSO1	Boso 1	2.42	10	P	Pn	04 06 16.4	+0.5
BSO1				eS	Sn	04 06 46.9	+1.8
BSO3	Boso 3	2.52	1	P	Pn	04 06 18.4	+1.0
BSO3				S	Sn	04 06 49.3	+1.6
JIM2	Oshima 3	2.59	341	P	Pn	04 06 19.1	+0.9
JIM2				eS	Sn	04 06 51.7	+2.4
BSO4	Boso 4	2.71	358	eS	Sn	04 06 54.5	+2.3
JHO	Hitachi	4.33	1	P	Pn	04 06 41.6	+0.1
JHO				S	Sn	04 07 28.8	-2.1

*CSEM **14** 04:19:26.2±0.1, 39.21N×40.06E, h2km, MD3.5, Error ellipse: s-maj=2.5km s-min=1.6km az=134.0*
*ISCJB **14** 04:19:28.0±0.3, 39.24N±0.02×40.04E±0.03, h10km, Error ellipse: s-maj=3.4km s-min=3.1km az=152.0*
*ISK **14** 04:19:27.2, 39.24N×40.04E, h6km, MD3.5*
*DDA **14** 04:19:27.4, 39.22N×40.09E, h8km±4km, Md3.4*
ISC 14 04:19:27.8±0.5**, 39.24N**±0.02×**40.07E**±0.03**, h1**km±5km**, n32, σ0^{s}82**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	Pertek	0.63	237	ePG	Pg	04 19 39.2	-0.7
PTK				eSG	Sg	04 19 48.6	+0.6
KOPT	Kop Dagi	0.84	23	iP	Pg	04 19 44.1	+0.1
BNGL	BINGOL	0.89	109	iP	Pg	04 19 44.0	-0.9
BNGL				iS	Sg	04 19 57.6	+1.2
SVRC	Sivrice-ELAZID	1.05	215	ePG	Pg	04 19 47.2	-0.6
SVRC				eSG	Sg	04 20 02.1	+0.7
EZM	Erzurum	1.20	56	ePN	Pb	04 19 50.0	-1.3
ERZM	Erzurum	1.20	56	iP	Pg	04 19 50.1	-0.8
ERZM				iS	Sg	04 20 06.2	-0.3
KEMA	Kemaliye	1.22	272	iP	Pg	04 19 50.0	-1.3
KEMA				iS	Sn	04 20 08.6	-0.5
GUMT	Gumushane	1.30	340	ePN	Pn	04 19 52.5	-0.6
MYA	Malataya	1.57	235	ePN	Pn	04 19 55.5	-1.3
HOMI	Horasan	1.63	60	iP	Pn	04 19 57.3	-0.3
BEST	Besiri	1.65	145	iP	Pn	04 19 57.4	-0.4
BEST				iS	Sn	04 20 19.7	+0.2
MACK	Trabzon	1.72	352	iP	Pg	04 20 01.2	+0.5
MACK	Trabzon	1.72	352	iP	Pg	04 20 01.2	+0.5
KTUT	Trabzon	1.76	353	ePN	Pn	04 19 59.5	+0.1
DARE	Darende-Malaty	1.78	261	ePN	Pg	04 20 03.9	+1.9
ESPY	Espiye-Giresun	1.96	329	ePN	Pn	04 20 01.9	-0.3
MARD	Mardin	2.00	164	iP	Pn	04 20 02.7	0.0
MARD				iS	Sb	04 20 30.0	-0.4
PZAR	Pazar-Rize	2.04	18	ePN	Pn	04 20 03.2	0.0
URFA	Urfa	2.05	209	ePN	Pn	04 20 02.8	-0.5
GRSN	GIRESUNGRSN	2.18	321	iP	Pn	04 20 06.3	+1.2
GRSN				iS	Sg	04 20 37.5	-0.3
AGRB	Hanur-Agry	2.29	81	ePN	Pn	04 20 07.5	+0.9
DAGI	Agillar	2.32	37	iP	Pn	04 20 07.3	+0.3
DBOC	Borcka	2.43	30	iP	Pn	04 20 09.2	+0.6
SVSK	Karacayir	2.47	287	ePN	Pn	04 20 08.8	-0.3
BCA	Borcka	2.50	28	ePN	Pn	04 20 09.6	0.0
VANB	Van	2.67	103	ePN	Pn	04 20 12.1	+0.2
KARS	Kars	2.70	59	ePN	Pn	04 20 12.2	-0.1
GZT	Gaziantep	2.72	227	iP	Pg	04 20 20.4	+0.4
TOKA	Tokat	2.97	292	iP	Pn	04 20 17.6	+1.6
CLDR	Caldiran	2.99	91	ePN	Pn	04 20 17.2	+0.9
CUKT	Cukurca	3.42	124	ePN	Pn	04 20 23.7	+1.4
MSL	Mosul	3.72	139	eP	Pn	04 20 24.0	-2.3
MSL				eS	Sn	04 21 11.0	+0.2

*IDC **14** 04:20:08.6±2.3, 8.48S×117.97E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=192.8km s-min=22.3km az=57.0*
*NEIC **14** 04:20:10.8±0.8, 8.12S×118.52E, h10km, mb3.7/1, Error ellipse: s-maj=22.3km s-min=8.6km az=75.0*
*ISCJB **14** 04:20:11.6±1.0, 8.17S±0.09×118.5E±0.2, h33km, mb3.6/4, Error ellipse: s-maj=27.4km s-min=10.8km az=164.3*
ISC 14 04:20:14.3±1.0**, 8.14S**±0.10×**118.6E**±0.2**, h35**km**, n11, σ0^{s}90**/12**, mb3.6**/4**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	3.31	20	ePn	Pn	04 21 01.9	-1.7
FITZ	Fitzroy Crossi	12.03	146	eP	Pn	04 23 03.0	-0.3
	10nm,0.6s						
FITZ				e		04 23 11.0	
FITZ				eS	Sn	04 25 11.2	-5.1
MBWA	Marble Bar	12.98	175	ePn	Pn	04 23 15.2	-1.2
MBWA				eSn	Sn	04 25 32.8	-6.9
KAKA	Kakadu	14.33	110	eP	x	04 23 15.4	
	4.5nm,0.5s						
KAKA				eS	x	04 25 52.3	
WRAB	Tennant Creek	19.23	129	eP	Pn	04 24 36.5	-0.2
	2.6nm,0.6s						
WB2	Warramunga Arr	19.23	129	eP	Pn	04 24 36.9	+0.1
ASAR	Alice Springs	21.28	138	P	P	04 24 59.3	+1.4
	1.4nm,0.5s,mb3.5,baz=308,slow=9.6,SNR=22						
STKA	Stephens Creek	31.85	141	P	P	04 26 36.6	+0.5
	0.9nm,0.7s,mb3.7,baz=342,slow=13,SNR=2.3						
SONM	Songino Array	56.77	350	P	P	04 29 55.6	+0.9
	0.6nm,0.9s,mb3.6,baz=173,slow=6.3,SNR=3.5						
MKAR	Makanchi Array	63.52	333	P	P	04 30 41.2	+0.1
	0.2nm,0.4s,mb3.5,baz=157,slow=6.1,SNR=9.0						
MKAR	Makanchi Array	63.52	333	P	P	04 30 41.2	+0.1

NEIC 14 04:24:22.4, 37.78S×**176.82E, h5**km**, ML4.1**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.24	209	P	Pg	04 24 27.5	+0.5
EDRZ	Edgecumbe	0.33	191	P	Pg	04 24 29.4	+0.5
WIZ	White Island	0.39	49	P	Pg	04 24 30.5	+0.7
LIRZ	Lichensteins R	0.41	237	P	Pg	04 24 31.0	+0.7
TGRZ	Tauranga	0.45	276	P	Pg	04 24 31.5	+0.5
MKRZ	Makatiti	0.46	218	P	Pg	04 24 32.2	+1.0
TAZ	Tarawera	0.52	208	P	Pg	04 24 33.2	+0.9
KARZ	Kaharoa	0.52	242	P	Pg	04 24 32.9	+0.6
URZ	Urewera	0.53	155	P	Pg	04 24 32.8	+0.2
MKAZ	Moumakai	1.48	296	P	Pn	04 24 46.9	-2.7
MRZ	Mangatainoka R	3.04	198	P	Pn	04 25 09.8	-1.3

*CSEM **14** 04:29:41.2±0.1, 39.26N×40.00E, h2km, MD3.6, Error ellipse: s-maj=1.5km s-min=1.0km az=158.0*
*ISK **14** 04:29:41.5, 39.26N×40.02E, h4km, MD3.6*
*ISCJB **14** 04:29:42.4±0.9, 39.23N±0.03×40.03E±0.03, h7km±8km, Error ellipse: s-maj=4.4km s-min=4.2km az=136.1*
*DDA **14** 04:29:44.4, 39.20N×40.20E, h29km±5km, Md3.3*
ISC 14 04:29:42.7±0.6**, 39.25N**±0.03×**40.05E**±0.03**, h2**km±5km**, n39, σ1^{s}02**/48**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	Pertek	0.63	235	PG	Pg	04 29 53.8	-0.9
PTK				eSG	Sg	04 30 03.0	+0.1
BNGL	BINGOL	0.91	109	iP	Pg	04 30 00.3	+0.1
BNGL				iS	Sg	04 30 11.8	-0.1
SVRC	Sivrice-ELAZID	1.05	214	ePG	Pg	04 30 01.2	-1.7
SVRC				eSG	Sg	04 30 16.8	+0.3
EZM	Erzurum	1.21	57	ePN	Pn	04 30 04.6	-2.0
EZM				eSN	Sn	04 30 22.5	-0.9
ERZM	Erzurum	1.21	57	iP	Pg	04 30 04.4	-1.5
ERZM				iS	Sg	04 30 22.8	+1.3
KEMA	Kemaliye	1.21	271	iP	Pg	04 30 04.8	-1.1
GUMT	Gumushane	1.28	340	ePN	Pn	04 30 06.7	-0.9
MYA	Malataya	1.57	234	ePN	Pn	04 30 10.5	-1.1
BEST	Besiri	1.66	145	iP	Pn	04 30 11.6	-1.3
BEST				iS	Sn	04 30 34.0	-0.7
MACK	Trabzon	1.70	353	iP	Pb	04 30 16.3	+1.6
KTUT	Trabzon	1.74	353	ePN	Pn	04 30 13.3	-0.6
DARE	Darende-Malaty	1.77	261	ePN	Pb	04 30 18.6	+2.7
ESPY	Espiye-Giresun	1.95	329	ePN	Pn	04 30 15.7	-1.1
MARD	Mardin	2.02	163	iP	Pn	04 30 17.6	-0.2
MARD				iS	Sn	04 30 41.6	-2.0
PZAR	Pazar-Rize	2.03	18	ePN	Pn	04 30 18.2	+0.3
URFA	Urfa	2.05	208	ePN	Pn	04 30 17.8	-0.4
ATAB	Bozova	2.25	218	iP	Pb	04 30 26.2	+2.1
ATAB				iS	Sb	04 30 54.6	+2.2
AGRB	Hanur-Agry	2.30	81	ePN	Pn	04 30 22.4	+0.8
DAGI	Agillar	2.31	38	iP	Pn	04 30 22.2	+0.4
DBOC	Borcka	2.43	30	iP	Pn	04 30 23.7	+0.4
SVSK	Karacayir	2.45	287	ePN	Pn	04 30 23.2	-0.5
BCA	Borcka	2.50	28	ePN	Pn	04 30 24.1	-0.2
VANB	Van	2.69	103	ePN	Pn	04 30 27.7	+0.8
KARS	Kars	2.70	59	ePN	Pn	04 30 28.1	+1.0
GZT	Gaziantep	2.72	227	iP	Pb	04 30 35.5	+3.3
TOKT	Tokat	2.90	293	ePN	Pn	04 30 29.7	-0.2
CLDR	Caldiran	3.01	91	ePN	Pn	04 30 32.3	+1.0
KMRS	Kahramanmaras	3.03	236	ePN	Pn	04 30 31.6	0.0
GAZ	Gaziantep	3.05	228	ePN	Pn	04 30 31.9	0.0
BNN	Bunyan	3.30	264	ePN	Pn	04 30 35.3	0.0
HAKT	HAKKARI	3.33	119	iP	Pb	04 30 42.7	+0.2
HKR	Hakkari	3.35	119	ePN	Pn	04 30 36.9	+0.9
CUKT	Cukurca	3.44	124	ePN	Pn	04 30 38.5	+1.2
KVT	Kavak	3.57	302	ePN	Pn	04 30 39.4	+0.3
YOZ	Yozgat	3.68	277	ePN	Pn	04 30 40.8	+0.2
MSL	Mosul	3.74	139	eP	Pn	04 30 40.0	-1.4
MSL				eS	Sn	04 31 27.0	+1.0
KOZT	Kozan	3.76	243	ePN	Pn	04 30 41.9	+0.2
KARA	Karaisali	4.41	245	ePN	Pn	04 30 50.8	+0.3
NIG	Nigde	4.41	257	ePN	Pn	04 30 50.6	0.0

MEX 14 04:30:21.9±1.1**, 15.41N**×**94.02W, h64**km±25km**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.82	69	iP	Pn	04 30 37.2	-0.7
PCIG				iS	Sn	04 30 47.4	-2.3
TGIG		1.61	32	eP	Pn	04 30 45.9	-2.2
TGIG				iS	Sn	04 31 06.4	-1.6
THIG		1.77	106	iP	Pn	04 30 47.4	-2.8
THIG				iS	Sn	04 31 10.4	-1.4
CMIG	Matias Romero	1.86	334	iP	Pn	04 30 50.9	-0.7
CMIG				iS	Sn	04 31 12.2	-1.9
SCX	San Cristobal	1.87	45	iS	Sn	04 31 13.1	-1.2
CCIG	Comitan	2.01	64	iP	Pn	04 30 53.4	-0.1
CCIG				iS	Sn	04 31 14.0	-3.6
HUIG	Huatulco	2.04	280	eP	Pn	04 30 53.1	-0.9
HUIG				iS	Sn	04 31 15.2	-3.3

*NEIC **14** 04:32:06.0, 38.47N×26.40E, h8km, MD3.4(ATH), MD3.4(ISK), After ISK.*
*ISK **14** 04:32:08.6, 38.53N×26.54E, h20km, MD3.4*
*DDA **14** 04:32:09.6, 38.65N×26.63E, h6km±4km, Md3.1*
*ATH **14** 04:32:09.4, 38.55N×26.21E, h4km, MD3.4/4*
*ISCJB **14** 04:32:10.0±0.3, 38.59N±0.02×26.58E±0.03, h23km±4km, Error ellipse: s-maj=4.5km s-min=3.9km az=148.0*
*CSEM **14** 04:32:09.2±0.1, 38.55N×26.62E, h20km, MD3.1, Error ellipse: s-maj=1.7km s-min=1.5km az=47.0*
*THE **14** 04:32:10.0, 38.64N×26.59E, h11km±1km, ML3.7/2, Error ellipse: s-maj=2.1km s-min=0.8km az=174.0*
ISC 14 04:32:10.1±0.4**, 38.62N**±0.02×**26.59E**±0.03**, h15**km±3km**, n48, σ1^{s}05**/66**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.26	178	iP	Pg	04 32 15.7	-0.1
URLA				iS	Sg	04 32 20.6	+1.1
BLCB	Balcova	0.43	123	ePG	Pg	04 32 17.7	-1.0
BLCB				eSG	Sg	04 32 24.6	+0.1
BLCB	Balcova	0.43	123	P	Pg	04 32 18.4	-0.3
BLCB				S	Sg	04 32 24.9	+0.4
BLCB	Balcova	0.43	123	P	Pg	04 32 18.4	-0.3
BLCB				eSg	Sg	04 32 24.6	+0.1
BLCB				S	Sg	04 32 24.9	+0.4
CHOS	Chios island	0.48	241	P	Pg	04 32 20.1	+0.5
CHOS				S	Sg	04 32 26.6	+0.6
IZM	Izmir	0.57	112	ePG	Pg	04 32 20.7	-0.7
PRK	Paraskevi	0.67	339	P	Pg	04 32 22.8	-0.5
PRK				S	Sg	04 32 31.9	-0.3
PRK	Paraskevi	0.67	339	ePG	Pg	04 32 22.5	-0.8
PRK				eSG	Sb	04 32 32.5	-0.2
PRK	Paraskevi	0.67	339	P	Pg	04 32 22.8	-0.5
PRK				S	Sg	04 32 31.9	-0.3
PRK				eSb	Sb	04 32 32.5	-0.2
AYVA	Ayvalik	0.69	7	iP	Pg	04 32 22.2	-1.5
AYVA				iS	Sg	04 32 33.5	+0.6
SMG	Samos	0.93	168	ePG	Pg	04 32 27.5	-0.6
SMG				eSG	Sg	04 32 41.6	+1.3
SMG	Samos	0.93	168	ePg	Pg	04 32 27.5	-0.6
SMG				eSb	Sb	04 32 42.0	+2.0
AKHS	Akhisar	0.99	74	iP	Pb	04 32 28.6	-0.5
AKHS				iS	Sb	04 32 42.2	+0.3
AKHS	Akhisar	0.99	74	iP	Pb	04 32 28.5	-0.5
AKHS				iS	Sb	04 32 42.2	+0.3
AKS	Akhisar	0.99	74	ePG	Pg	04 32 28.6	-0.8
EZN	Ezine	1.22	351	ePN	Pn	04 32 31.8	-0.9
BALB	Balikesir	1.43	44	ePN	Pn	04 32 35.3	-0.2
MLSB	Milas	1.62	144	ePN	Pn	04 32 36.7	-1.5
KULA	Kula-Manisa	1.63	93	ePN	Pn	04 32 36.9	-1.3
GADA	Gvkgeada	1.66	341	ePN	Pn	04 32 38.8	+0.2
LIA	Limnos Island	1.68	320	P	Pn	04 32 38.7	-0.2
LIA				S	Sn	04 32 59.5	-0.6
LIA	Limnos Island	1.68	320	ePb	Pb	04 32 39.0	-1.7
LIA				S	Sn	04 32 59.5	-0.6
LPK	Lapseki	1.76	4	ePN	Pn	04 32 39.2	-0.8
APE	Apeiranthos	1.76	209	ePB	Pb	04 32 39.0	-3.1
APE	Apeiranthos	1.76	209	P	Pn	04 32 39.2	-0.8
EDC	Edincik	1.99	29	ePN	Pn	04 32 43.8	+0.6
YER	Yerkesik	2.00	137	ePN	Pn	04 32 41.7	-1.6
BNT	Bandirma	2.02	30	ePN	Pn	04 32 43.9	+0.3
DAT	Datca	2.04	157	ePN	Pn	04 32 42.7	-1.2
DENT	Denizli	2.11	113	ePN	Pn	04 32 43.1	-1.7
RKY	Sarkoy-Tekirda	2.12	12	ePN	Pn	04 32 45.9	+1.0
ENEZ	Enez	2.14	351	ePN	Pn	04 32 44.8	-0.5
KCT	Karacabey	2.14	39	ePN	Pn	04 32 45.7	+0.5
ALN	Alexandroupoli	2.31	350	P	Pn	04 32 47.2	-0.4
ALN				S	Sn	04 33 14.8	-1.0
KHL	Karahalli	2.32	96	ePN	Pn	04 32 47.5	-0.2
TKR	Tekirdag	2.48	17	ePN	Pn	04 32 50.5	+0.6
ALT	Altintas	2.79	80	ePN	Pn	04 32 53.6	-0.5
DID	Didima	2.87	248	P	Pn	04 32 56.9	+1.6
SLVT	Silivri	2.89	25	ePN	Pn	04 32 57.2	+1.6
CTT	Catalca	2.90	29	ePN	Pn	04 32 57.4	+1.8
CAVI	Cavuskoy	2.98	57	ePN	Pn	04 32 58.2	+1.4
CTKS	Kestanelik-??a	3.00	29	ePN	Pn	04 32 58.8	+1.7
ADVT	Abdulvahap	3.04	52	ePN	Pn	04 32 59.0	+1.5
BGKT	Bogazkoy	3.06	33	ePN	Pn	04 32 59.0	+1.1
ISK	Istanbul-Kandi	3.10	37	ePN	Pn	04 33 00.3	+1.9
SHUT	Suhut-Afyon	3.11	90	ePN	Pn	04 32 58.0	-0.5
ESKT	Eskisehir	3.44	74	ePN	Pn	04 33 03.0	-0.1
GRG	Griva	3.98	307	P	Pn	04 33 12.0	+1.5

*IDC **14** 04:39:44.4±2.3, 37.17N×74.41E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.3/24, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=62.7km s-min=31.0km az=155.0*
*NEIC **14** 04:39:49.2±1.5, 37.07N×74.45E, h35km, mb3.7/1, Error ellipse: s-maj=22.2km s-min=18.5km az=117.0*
*ISCJB **14** 04:39:52.3±2.8, 37.4N±0.1×74.4E±0.1, h65km±25km, mb3.2/2, Error ellipse: s-maj=24.1km s-min=17.6km az=178.2*
*NNC **14** 04:39:52.6±5.4, 37.64N×74.34E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=46.0km s-min=35.6km az=148.0*
ISC 14 04:39:53.1±2.7**, 37.3N**±0.2×**74.4E**±0.1**, h60**km±24km**, n14, σ1^{s}17**/17**, mb3.4**/2**, 2C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	4.89	1	ePn	Pn	04 41 04.6	+0.5
AAK	Ala-Archa	5.29	0	ePn	Pn	04 41 09.0	-0.6
	4.6nm,0.5s						
EKS2	Erkin-Say	5.35	355	ePn	Pn	04 41 11.3	+1.0
	4.9nm,0.7s						
TKM2	Tokmak 2	5.65	9	⇓P	Pn	04 41 13.1	-1.4
	8.4nm,0.6s						
TKM2				⇓S	Sn	04 42 18.3	+0.3
	4.1nm,0.7s						
TKM2	Tokmak 2	5.65	9	ePn	Pn	04 41 12.8	-1.7
	12nm,0.5s						
TKM2				eSn	Sn	04 42 18.7	+0.7
KK31	Karatay Array	6.50	334	P	Pn	04 41 26.0	-0.1
	2.3nm,0.5s,baz=136,slow=11,SNR=44						
KK31				⇑S	Sn	04 42 37.2	-1.5
	2.3nm,0.5s,baz=154,slow=23,SNR=6.9						
AB01	Akbulak array	15.88	323	⇑P	Pn	04 43 34.9	+2.2
	1.0nm,0.8s						
BVAR	Borovoye Array	15.95	351	Pn	Pn	04 43 34.9	+1.5
	0.5nm,0.3s,baz=157,slow=9.7,SNR=7.7						
BRVK	Borovoye	15.99	351	eP	Pn	04 43 35.5	+1.5
	2.2nm,0.5s						
AKTK	Aktyubinsk	17.60	323	P	Pn	04 43 53.6	-0.4
AKTO	Aktyubinsk	17.60	323	P	Pn	04 43 53.6	-0.4
	0.2nm,0.3s,baz=125,slow=12,SNR=4.1						
ZALV	Zalesovo Beam	18.10	20	P	Pn	04 43 57.6	-2.5
	0.2nm,0.3s,baz=196,slow=13,SNR=6.2						
SONM	Songino Array	25.60	56	P	P	04 45 16.8	+0.2
	0.4nm,0.6s,mb3.1,baz=262,slow=10,SNR=3.7						
TORD	Torodi Ar. Bea	68.48	270	P	P	04 50 48.4	-0.8
	0.6nm,0.9s,mb3.6,baz=43,slow=5.5,SNR=6.8						

*IDC **14** 04:49:56.9±1.6, 5.96N×126.25E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/18, mbtmp4.0/4, MS3.6/3, Ms1 3.6/3, ms1mx3.0/32, Error ellipse: s-maj=191.2km s-min=23.0km az=67.0*
*MAN **14** 04:50:06, 5.78N×126.71E, h101km, mb4.4, ML3.3, MS3.2*
*ISCJB **14** 04:50:09.7±1.7, 5.83N±0.10×126.3E±0.2, h121km±15km, mb3.9/7, Error ellipse: s-maj=39.5km s-min=13.7km az=165.5*
*NEIC **14** 04:50:09.1±6.7, 5.91N×126.46E, h102km±58km, mb4.0/5, Error ellipse: s-maj=61.0km s-min=11.5km az=60.0*
ISC 14 04:50:10.5±1.9**, 5.8N**±0.1×**126.3E**±0.2**, h111**km±17km**, n18, σ0^{s}65**/15**, mb3.9**/7**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.35	281	⇓iP	Pn	04 50 34.4	-1.2
GSPH				iS	Sn	04 50 54.4	-0.3
KCP	Kidapawan	1.66	315	⇑eP	Pn	04 50 40.2	+0.8
KCP				iS	Sn	04 51 05.3	+4.0
KAPI	Kappang	12.60	211	ePn	Pn	04 53 06.7	+0.8
	11nm,0.8s						
KAKA	Kakadu	19.42	162	eP	x	04 54 09.4	
	6.6nm,0.6s						
FITZ	Fitzroy Crossi	23.80	182	eP	P	04 55 13.8	+0.6
	2.1nm,0.4s,mb3.8						
WRAB	Tennant Creek	26.81	163	eP	P	04 55 40.7	+0.2
	1.9nm,0.5s,mb3.9						
WB2	Warramunga Arr	26.82	163	eP	P	04 55 39.8	-0.8
ASAR	Alice Springs	30.25	166	P	P	04 56 11.1	0.0
	1.3nm,0.5s,mb3.8,baz=344,slow=7.2,SNR=23						
STKA	Stephens Creek	40.25	160	eP	P	04 57 35.7	-0.8
	3.0nm,1.2s,mb4.0						
STKA	Stephens Creek	40.25	160	P	P	04 57 36.9	+0.3
	1.0nm,0.4s,mb4.0,baz=329,slow=9.9,SNR=6.0						
MKAR	Makanchi Array	55.59	325	P	P	04 59 34.5	-0.1
	0.3nm,0.4s,mb3.6,baz=113,slow=8.3,SNR=6.6						
MKAR	Makanchi Array	55.59	325	P	P	04 59 34.5	-0.1
KURK	Kurchatov	59.74	327	eP	P	05 00 03.4	-0.1
	0.8nm,0.4s,mb4.1						
ASF	Jabal al Asfar	86.41	302	LR	LR	05 39 50.7	
	comp=Z,25nm,21.9s,baz=338,slow=35						
MMAI	Mount Meron Ar	87.60	303	LR	LR	05 50 05.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,23nm,18.0s,baz=145,slow=41						
EIL	**Elat**	**88.30**	**299**	LR	LR	05 46 46.9	
	comp=Z,35nm,20.5s,baz=301,slow=39						
ARCES	**ARCESS Array B**	**88.33**	**340**	P	**P**	**05 02 49.2**	**-0.1**
	1.1nm,0.7s,mb4.0,baz=88,slow=6.7,SNR=6.9						
TORD	**Torodi Ar. Bea**	**121.83**	**289**	PKP	PKPdf	05 08 52.6	0.0
	0.4nm,0.5s,baz=59,slow=1.6,SNR=9.4						

*NEIC **14** 05:02:31.2, 18.10N×100.83W, h66km, MD4.0(MEX), After MEX.*

MEX 14 05:02:31.3±0.6**, 18.10N×100.83W, h65**km±15km**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.79**	**231**	*i* P	Pn	05 02 45.1	-1.8
ZIIG				*i* S	Sn	05 02 56.8	-1.5
CAIG	**El Cayaco**	**1.18**	**153**	*i* P	Pn	05 02 50.7	-1.2
CAIG				*i* S	Sn	05 03 04.8	-2.4
PLIG	**Platanillo**	**1.29**	**77**	*e*P	Pn	05 02 51.8	-1.5
PLIG				*i* S	Sn	05 03 08.4	-1.4
ACX	**Acapulco**	**1.50**	**145**	*e*P	Pn	05 02 55.7	-0.5
ACX				*i* S	Sn	05 03 10.5	-4.4
MOIG	**Morelia**	**1.60**	**348**	*i* P	Pn	05 02 56.1	-1.4
MOIG				*i* S	Sn	05 03 16.2	-1.0
MMIG	**Aquila**	**2.40**	**275**	*e*P	Pn	05 03 07.2	-1.1
MMIG				*i* S	Sn	05 03 35.0	-1.7
PNIG	**Pinotepa**	**3.09**	**123**	*i* P	Pn	05 03 18.1	+0.4
PNIG				*i* S	Sn	05 03 50.4	-3.0

*IDC **14** 05:04:45.6±1.1, 45.55N×154.36E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=32.8km s-min=26.9km az=148.0*
*ISCJB **14** 05:04:48.9±1.1, 45.5N±0.2×154.3E±0.3, h33km, mb3.6/5, Error ellipse: s-maj=32.1km s-min=25.4km az=165.7*
*MOS **14** 05:04:48.5±2.2, 45.49N×153.88E, h33km, mb4.0/2, Error ellipse: s-maj=46.5km s-min=37.6km az=178.0*

ISC 14 05:04:51.2±1.1**, 45.7N**±0.2×**154.4E**±0.3**, h35**km**, n9, σ1.03**/9**, mb3.6**/5**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.61**	**267**	*e*PN	**Pn**	**05 05 50.0**	**-8.3**
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
PETK	**Petropavlovsk-**	**7.74**	**15**	Pn	**Pn**	**05 06 39.8**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=208,slow=15,SNR=9.2						
MKAR	**Makanchi Array**	**48.22**	**299**	P	**P**	**05 13 27.8**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=71,slow=6.2,SNR=3.3						
KURK	**Kurchatov**	**48.70**	**305**	P	**P**	**05 13 32.9**	**+1.2**
	comp=Z,0.5nm,0.4s,mb3.9,baz=70,slow=8.2,SNR=2.5						
KURK	**Kurchatov**	**48.70**	**305**	P	**P**	**05 13 32.9**	**+1.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
YKA	**Yellowknife Ar**	**51.25**	**37**	P	**P**	**05 13 52.0**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=296,slow=7.4,SNR=4.5						
ASAR	**Alice Springs**	**71.49**	**200**	P	**P**	**05 16 07.0**	**-1.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=18,slow=6.3,SNR=5.0						
TXAR	**Lajitas Array**	**77.24**	**61**	P	**P**	**05 16 42.3**	**+0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=308,slow=3.7,SNR=9.0						
TXAR	**Lajitas Array**	**77.24**	**61**	P	**P**	**05 16 42.3**	**+0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

MEX 14 05:28:51.9±0.5**, 16.15N×97.13W, h8**km±6km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.98**	**285**	*i* P	Pg	05 29 07.8	-3.0
PNIG				*i* S	Sg	05 29 21.0	-2.6
VHO	**Vista Hermosa**	**1.00**	**23**	*e*P	Pg	05 29 08.6	-2.5
VHO				*i* S	Sg	05 29 21.4	-2.7
HUIG	**Huatulco**	**1.05**	**111**	*e*P	Pg	05 29 09.4	-2.8
HUIG				*i* S	Sg	05 29 22.4	-3.5
CMIG	**Matias Romero**	**2.35**	**66**	*i* P	Pn	05 29 27.0	-3.8
CMIG				*i* S	Sn	05 29 55.6	-4.3

*ISCJB **14** 05:30:58.8±0.4, 37.78N±0.03×21.12E±0.04, h18km, mb3.7/9, MS3.3/3, Error ellipse: s-maj=4.7km s-min=3.3km az=139.5*
*ATH **14** 05:30:59.1, 37.82N×21.17E, h18km, MD3.8/14, ML3.7*
*THE **14** 05:30:59.3, 37.81N×21.28E, h0km±3km, ML4.3/2, Error ellipse: s-maj=3.3km s-min=1.0km az=246.0*
*CSEM **14** 05:30:59.1±0.1, 37.80N×21.16E, h20km, ML3.7, Error ellipse: s-maj=3.3km s-min=1.7km az=54.0*
*NEIC **14** 05:30:59.1, 37.82N×21.17E, h18km, ML3.7(ATH), After ATH.*
*IDC **14** 05:31:03.9±2.7, 37.75N×21.42E, h68km±30km, mb3.5/9, mb1 3.6/11, mb1mx3.5/26, mbtmp3.5/11, ML3.3/2, MS3.4/4, Ms1 3.4/4, ms1mx2.8/32, Error ellipse: s-maj=21.0km s-min=15.7km az=95.0*

ISC 14 05:30:59.5±0.7**, 37.76N**±0.03×**21.19E**±0.04**, h14**km±4km**, n62, σ1.23**/78**, mb3.7**/9**, MS3.3**/3**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.37**	**37**	*e*PB	**Pg**	**05 31 06.2**	**-0.8**
RLS				*e*SB	**Sg**	**05 31 11.6**	**-0.5**
KFL	**Anninata**	**0.47**	**318**	P	**Pg**	**05 31 08.5**	**-0.3**
KFL				S	**Sg**	**05 31 16.5**	**+1.4**
ITM	**Ithomi**	**0.83**	**134**	*e*PB	**Pb**	**05 31 15.4**	**-0.1**
ITM				*e*SN	**Sn**	**05 31 28.5**	**-0.1**
ITM	**Ithomi**	**0.83**	**134**	*e*Pb	**Pb**	**05 31 15.5**	**0.0**
ITM				*e*Sn	**Sn**	**05 31 28.5**	**-0.1**
PYL	**PYLOS**	**0.97**	**153**	P	**Pb**	**05 31 17.2**	**-0.8**
PYL				S	**Sb**	**05 31 32.2**	**+1.6**
EVR	**Evrytania**	**1.25**	**23**	*e*PN	**Pn**	**05 31 21.6**	**-0.9**
LTK	**Loutraki**	**1.43**	**79**	P	**Pn**	**05 31 24.1**	**-0.9**
LTK				S	**Sn**	**05 31 44.9**	**+1.3**
AGG	**Agios Georgios**	**1.55**	**35**	P	**Pn**	**05 31 26.0**	**-0.5**
AGG				S	**Sn**	**05 31 46.8**	**+0.4**
DID	**Didima**	**1.65**	**98**	P	**Pn**	**05 31 28.7**	**+0.8**
DID				S	**Sn**	**05 31 49.4**	**+0.5**
LKR	**Lokris**	**1.68**	**58**	*e*PN	**Pn**	**05 31 29.2**	**+0.8**
VLI	**Veliai**	**1.74**	**126**	*e*PN	**Pn**	**05 31 31.6**	**+2.4**
VLI	**Veliai**	**1.74**	**126**	*e*Pn	**Pn**	**05 31 32.0**	**+2.8**
JAN	**Janina**	**1.91**	**352**	*e*PN	**Pn**	**05 31 31.9**	**+0.4**
THL	**Klokotos Trika**	**1.92**	**20**	P	**Pn**	**05 31 32.5**	**+0.9**
THL				S	**Sn**	**05 31 57.4**	**+1.9**
THL	**Klokotos Trika**	**1.92**	**20**	*e*Pn	**Pn**	**05 31 32.7**	**+1.1**
THL				S	**Sn**	**05 31 57.4**	**+1.9**
ATH	**Athens Observa**	**2.02**	**83**	*e*PN	**Pn**	**05 31 34.1**	**+1.2**
ATH				*e*SB	**Sb**	**05 31 59.9**	**-0.8**
PTL	**Penteli**	**2.14**	**81**	*e*PB	**Pb**	**05 31 35.8**	**-2.1**
PTL				*e*SB	**Sb**	**05 32 03.1**	**-1.2**
NEO	**Neokhori**	**2.22**	**45**	*e*PN	**Pn**	**05 31 36.8**	**+1.0**
KEK	**Kerkira**	**2.23**	**331**	*e*PN	**Pn**	**05 31 37.0**	**+1.1**
XOR	**Xorichti**	**2.25**	**44**	P	**Pn**	**05 31 37.1**	**+1.0**
LIT	**Litokhoron**	**2.55**	**23**	P	**Pn**	**05 31 40.5**	**+0.2**
KZN	**Kozani**	**2.58**	**10**	*e*PB	**Pb**	**05 31 42.1**	**-3.4**
PAIG	**Paliouri**	**2.91**	**41**	P	**Pn**	**05 31 45.1**	**-0.2**
FNA	**Florina**	**3.02**	**3**	P	**Pn**	**05 31 47.1**	**+0.3**
PLG	**Polygyros**	**3.15**	**33**	*e*PN	**Pn**	**05 31 49.7**	**+1.2**
PLG	**Polygyros**	**3.15**	**33**	P	**Pn**	**05 31 48.0**	**-0.5**
PLG	**Polygyros**	**3.15**	**33**	*e*Pn	**Pn**	**05 31 49.7**	**+1.2**
HORT	**Hortiatis**	**3.20**	**27**	P	**Pn**	**05 31 48.6**	**-0.7**
GRG	**Griva**	**3.33**	**16**	P	**Pn**	**05 31 51.0**	**0.0**
OUR	**Ouranopolis**	**3.37**	**39**	P	**Pn**	**05 31 51.4**	**-0.2**
APE	**Apeiranthos**	**3.53**	**100**	*e*PN	**Pn**	**05 31 55.8**	**+2.0**
APE	**Apeiranthos**	**3.53**	**100**	P	**Pn**	**05 31 54.8**	**+1.0**
APE	**Apeiranthos**	**3.53**	**100**	*e*Pn	**Pn**	**05 31 55.8**	**+2.0**
KRUS	**Krusevo**	**3.60**	**1**	*e*Pn	**Pn**	**05 31 56.3**	**+1.5**
KRUS				*e*Sn	**Sn**	**05 32 37.3**	**+0.2**
KRUS	**Krusevo**	**3.60**	**1**	*e*Pn	**Pn**	**05 31 56.4**	**+1.5**
KRUS				*e*Sn	**Sn**	**05 32 37.4**	**+0.3**
KNT	**Kendrikon**	**3.65**	**21**	P	**Pn**	**05 31 55.8**	**+0.4**
VAY	**Valandovo**	**3.71**	**16**	*e*Pn	**Pn**	**05 32 00.3**	**+4.0**
VAY				*e*Sn	**Sn**	**05 32 44.9**	**+5.1**
TIR	**Tirane**	**3.73**	**345**	*e*Pn	**Pn**	**05 31 57.7**	**+1.2**
LIA	**Limnos Island**	**3.78**	**54**	P	**Pn**	**05 31 55.5**	**-1.7**
IDI	**Anoyia**	**3.87**	**128**	P	**Pn**	**05 31 59.9**	**+1.4**
	0.5nm,0.3s,baz=270,slow=11,SNR=4.6						
IDI				S	**Sn**	**05 32 41.4**	**-2.3**
	3.0nm,0.3s,baz=311,slow=19,SNR=3.6						
CHOS	**Chios island**	**3.89**	**79**	P	**Pn**	**05 31 59.7**	**+0.9**
ALN	**Alexandroupoli**	**4.90**	**49**	P	**Pn**	**05 32 12.3**	**-0.3**
BARS	**Barje**	**5.07**	**5**	*e*Pn	**Pn**	**05 32 14.0**	**-1.0**
TREB	**Trebinje**	**5.41**	**337**	*e*Pn	**Pn**	**05 32 17.7**	**-1.8**
BBLS	**Lazići**	**6.25**	**348**	*e*Pn	**Pn**	**05 32 30.8**	**-0.3**
MLR	**Muntele Rosu**	**8.51**	**23**	P	**Pn**	**05 33 05.5**	**+3.4**
	0.2nm,0.3s,baz=238,slow=19,SNR=2.8						
BOJS	**Bojanci**	**8.92**	**332**	*i* Pn	**Pn**	**05 33 09.1**	**+1.4**
BOJS				*i* Sn	**Sn**	**05 34 43.1**	**-4.9**
JAVS	**Javornik**	**9.71**	**329**	*i* Pn	**Pn**	**05 33 18.1**	**-0.4**
JAVS				*i* Sn	**Sn**	**05 35 01.6**	**-5.6**
BRTR	**Keskin Array B**	**9.93**	**75**	P	**Pn**	**05 33 24.6**	**+3.1**
	0.2nm,0.3s,baz=248,slow=13,SNR=6.5						
BRTR	**Keskin Array B**	**9.93**	**75**	P	**Pn**	**05 33 24.6**	**+3.0**
GNI	**Garni**	**18.47**	**75**	LR	LR	05 43 14.4	
	comp=Z,83nm,18.4s,baz=120,slow=40						
HFS	**Hagfors**	**22.90**	**350**	P	**P**	**05 36 00.7**	**-1.6**
	4.8nm,1.0s,mb3.9,baz=153,slow=9.7,SNR=4.4						
EKA	**Eskdalemuir Ar**	**24.07**	**325**	P	**P**	**05 36 14.2**	**+0.1**
	1.4nm,0.8s,mb3.5,baz=124,slow=11,SNR=3.3						
NB2	**NORSAR Subarra**	**24.13**	**348**	P	**P**	**05 36 12.5**	**-2.0**
	comp=Z,7.4nm,1.2s,mb4.0,baz=160,slow=9.3						
NOA	**NORSAR Array B**	**24.13**	**348**	P	**P**	**05 36 13.1**	**-1.4**
	comp=Z,1.1nm,0.7s,mb3.4,baz=156,slow=8.8,SNR=4.2						
AKTO	**Aktyubinsk**	**29.02**	**52**	LR	LR	05 51 08.2	
	comp=Z,53nm,18.4s,MS3.2,baz=115,slow=42						
TORD	**Torodi Ar. Bea**	**30.04**	**220**	P	**P**	**05 37 07.1**	**-0.9**
	comp=Z,1.8nm,0.7s,mb3.9,baz=32,slow=8.6,SNR=14						
TORD				LR	LR	05 50 47.1	
	comp=Z,48nm,20.2s,MS3.1,baz=330,slow=39						
ARCES	**ARCESS Array B**	**31.92**	**3**	P	**P**	**05 37 21.9**	**-2.2**
	comp=Z,2.0nm,0.9s,mb4.0,baz=190,slow=9.9,SNR=3.7						
ARCES				LR	LR	05 51 21.1	
	comp=Z,114nm,19.0s,MS3.6,baz=87,slow=38						
DBIC	**Dimbokro**	**38.95**	**224**	P	**P**	**05 38 25.5**	**+0.4**
	comp=Z,3.1nm,1.1s,mb4.0,baz=50,slow=7.9,SNR=2.6						
MKAR	**Makanchi Array**	**45.08**	**58**	P	**P**	**05 39 12.2**	**-2.6**
	comp=Z,0.7nm,0.5s,mb3.8,baz=271,slow=7.3,SNR=20						
ZALV	**Zalesovo Beam**	**45.58**	**48**	P	**P**	**05 39 15.8**	**-2.9**
	comp=Z,0.6nm,0.3s,mb4.0,baz=284,slow=7.3,SNR=4.2						
YKA	**Yellowknife Ar**	**73.96**	**340**	P	**P**	**05 42 32.1**	**-1.8**
	comp=Z,0.1nm,0.6s,mb2.9,baz=33,slow=5.4,SNR=3.7						

IDC 14 05:37:40.1±5.2**, 36.24S×77.70E, h0**km**, mb3.7**/2**, mb1 3.8**/2**, mb1mx3.5**/19**, mbtmp3.7**/2**, Error ellipse: s-maj=209.1km s-min=57.1km az=29.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**49.67**	**92**	P	P	05 46 33.8	-0.1
	0.9nm,0.9s,baz=241,slow=5.2,SNR=7.2						
SONM	**Songino Array**	**87.54**	**19**	P	P	05 50 29.6	+0.1
	0.3nm,0.6s,baz=212,slow=5.3,SNR=3.5						
YKA	**Yellowknife Ar**	**152.63**	**12**	PKPbc	PKPbc	05 57 37.7	+0.1
	0.3nm,0.9s,baz=341,slow=2.4,SNR=4.2						

*ISK **14** 06:15:41.5, 38.58N×26.47E, h9km, MD2.8*
*CSEM **14** 06:15:42.9±0.1, 38.64N×26.59E, h15km, MD3.0, Error ellipse: s-maj=3.7km s-min=2.1km az=64.0*
*ISCJB **14** 06:15:44.0±1.0, 38.57N±0.05×26.57E±0.09, h27km±7km, Error ellipse: s-maj=11.9km s-min=8.4km az=157.6*
*DDA **14** 06:15:44.2, 38.65N×26.63E, h7km±3km, Md3.0*

ISC 14 06:15:44.3±0.9**, 38.60N**±0.09×**26.59E**±0.08**, h19**km±12km**, n9, σ0.74**/13**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**180**	*i* P	**Pg**	**06 15 50.0**	**0.0**
URLA				*i* S	**Sg**	**06 15 55.0**	**+1.2**
BLCB	**Balcova**	**0.41**	**122**	*e*PG	**Pg**	**06 15 52.1**	**-0.7**
BLCB				*e*SG	**Sg**	**06 15 58.8**	**+0.2**
IZM	**Izmir**	**0.56**	**111**	*e*PG	**Pg**	**06 15 54.3**	**-1.3**
AYVA	**Ayvalik**	**0.71**	**6**	*i* P	**Pb**	**06 15 57.3**	**-0.7**
AYVA				*i* S	**Sb**	**06 16 08.5**	**+1.1**
AKS	**Akhisar**	**0.99**	**73**	*e*PN	**Pn**	**06 16 02.7**	**-0.4**
AKHS	**Akhisar**	**0.99**	**73**	*i* P	**Pb**	**06 16 03.0**	**+0.1**
AKHS				*i* S	**Sb**	**06 16 16.3**	**+0.8**
EZN	**Ezine**	**1.24**	**350**	*e*PN	**Pn**	**06 16 05.7**	**-0.8**
BALB	**Balikesir**	**1.44**	**44**	*e*PN	**Pn**	**06 16 10.0**	**+0.7**
KULA	**Kula-Manisa**	**1.62**	**92**	*e*PN	**Pn**	**06 16 11.7**	**-0.1**

*IDC **14** 06:22:52.0±1.2, 37.90N×21.28E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML2.5/1, Error ellipse: s-maj=25.9km s-min=20.4km az=67.0*
*CSEM **14** 06:22:54.7±0.1, 37.78N×21.17E, h10km, ML3.4, Error ellipse: s-maj=3.1km s-min=1.8km az=66.0*
*NEIC **14** 06:22:54.7, 37.80N×21.12E, h15km, ML3.4(ATH), After ATH.*
*ISCJB **14** 06:22:54.6±0.7, 37.74N±0.03×21.09E±0.04, h17km±5km, mb3.7/7, Error ellipse: s-maj=6.3km s-min=4.1km az=153.1*
*ATH **14** 06:22:54.7, 37.79N×21.13E, h16km, MD3.6/13, ML3.4*
*THE **14** 06:22:55.8, 37.80N×21.28E, h0km±2km, ML4.0/4, Error ellipse: s-maj=2.5km s-min=0.9km az=234.0*

ISC 14 06:22:55.3±0.7**, 37.73N**±0.03×**21.12E**±0.04**, h13**km±4km**, n47, σ1.21**/65**, mb3.7**/7**, 1D, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.43**	**41**	⇓*i*PB	**Pg**	**06 23 02.5**	**-1.2**
RLS				*e*SB	**Sg**	**06 23 08.2**	**-1.3**
KFL	**Anninata**	**0.46**	**325**	P	**Pg**	**06 23 04.8**	**+0.5**
KFL				S	**Sg**	**06 23 12.9**	**+2.5**
ITM	**Ithomi**	**0.85**	**130**	*e*PN	**Pn**	**06 23 11.4**	**-1.5**
ITM				*e*SN	**Sn**	**06 23 24.1**	**-1.1**
PYL	**PYLOS**	**0.97**	**149**	P	**Pb**	**06 23 13.5**	**-0.5**
PYL				S	**Sg**	**06 23 28.7**	**+1.9**
EVR	**Evrytania**	**1.30**	**25**	*e*PN	**Pn**	**06 23 18.0**	**-1.1**
EVR	**Evrytania**	**1.30**	**25**	*e*Pn	**Pn**	**06 23 17.8**	**-1.3**
LTK	**Loutraki**	**1.49**	**78**	P	**Pn**	**06 23 21.1**	**-0.7**
LTK				S	**Sn**	**06 23 41.1**	**0.0**
AGG	**Agios Georgios**	**1.60**	**36**	P	**Pn**	**06 23 23.2**	**-0.1**
AGG				S	**Sn**	**06 23 44.0**	**+0.2**
LKR	**Lokris**	**1.74**	**58**	*e*PN	**Pn**	**06 23 25.7**	**+0.5**
LKR				*e*SN	**Sn**	**06 23 48.8**	**+1.5**
LKR	**Lokris**	**1.74**	**58**	*e*Pn	**Pn**	**06 23 25.4**	**+0.2**
LKR				*e*Sn	**Sn**	**06 23 48.8**	**+1.5**
VLI	**Veliai**	**1.77**	**124**	*e*PN	**Pn**	**06 23 27.5**	**+1.9**
NAIG	**Nisos Aigina**	**1.88**	**89**	*e*PN	**Pn**	**06 23 28.5**	**+1.4**
NAIG	**Nisos Aigina**	**1.88**	**89**	*e*Pn	**Pn**	**06 23 29.5**	**+2.4**
JAN	**Janina**	**1.93**	**354**	*e*PN	**Pn**	**06 23 28.5**	**+0.7**
THL	**Klokotos Trika**	**1.96**	**21**	P	**Pn**	**06 23 28.9**	**+0.7**
THL				S	**Sn**	**06 23 54.5**	**+1.9**
THL	**Klokotos Trika**	**1.96**	**21**	*e*Pn	**Pn**	**06 23 29.0**	**+0.8**
THL				S	**Sn**	**06 23 54.5**	**+1.9**
ATH	**Athens Observa**	**2.07**	**83**	*e*PN	**Pn**	**06 23 30.8**	**+1.1**
PTL	**Penteli**	**2.20**	**81**	*e*PB	**Pb**	**06 23 32.0**	**-2.8**
KEK	**Kerkira**	**2.23**	**333**	*e*PN	**Pn**	**06 23 32.5**	**+0.6**
NEO	**Neokhori**	**2.28**	**46**	*e*PB	**Pb**	**06 23 33.1**	**-3.2**
XOR	**Xorichti**	**2.30**	**44**	P	**Pn**	**06 23 33.1**	**+0.2**
LIT	**Litokhoron**	**2.60**	**24**	P	**Pn**	**06 23 37.1**	**+0.2**
KZN	**Kozani**	**2.62**	**11**	*e*PB	**Pb**	**06 23 38.5**	**-3.5**
PAIG	**Paliouri**	**2.97**	**42**	P	**Pn**	**06 23 41.8**	**-0.2**
PAIG				S	**Sn**	**06 24 16.9**	**-0.6**
FNA	**Florina**	**3.05**	**4**	P	**Pn**	**06 23 43.7**	**+0.5**
FNA				S	**Sn**	**06 24 21.5**	**+1.9**
PLG	**Polygyros**	**3.20**	**34**	P	**Pn**	**06 23 44.7**	**-0.5**
HORT	**Hortiatis**	**3.25**	**28**	P	**Pn**	**06 23 46.0**	**+0.1**
HORT				S	**Sn**	**06 24 24.3**	**-0.1**
OUR	**Ouranopolis**	**3.42**	**40**	P	**Pn**	**06 23 48.2**	**-0.1**
SOH	**Sokhos**	**3.54**	**29**	P	**Pn**	**06 23 50.1**	**+0.2**
SOH				S	**Sn**	**06 24 31.8**	**+0.2**
APE	**Apeiranthos**	**3.58**	**99**	P	**Pn**	**06 23 50.9**	**+0.5**
APE				S	**Sn**	**06 24 33.6**	**+1.1**
APE	**Apeiranthos**	**3.58**	**99**	P	**Pn**	**06 23 54.0**	**+3.6**
KRUS	**Krusevo**	**3.63**	**2**	*e*Pn	**Pn**	**06 23 52.2**	**+1.0**
KRUS				*e*Sn	**Sn**	**06 24 33.9**	**0.0**
KRUS	**Krusevo**	**3.63**	**2**	*e*Pn	**Pn**	**06 23 52.2**	**+1.1**
KRUS				*e*Sn	**Sn**	**06 24 34.0**	**+0.1**
KNT	**Kendrikon**	**3.69**	**21**	P	**Pn**	**06 23 51.9**	**-0.1**
TIR	**Tirane**	**3.74**	**345**	*e*Pn	**Pn**	**06 23 55.7**	**+3.1**
IDI	**Anoyia**	**3.90**	**128**	Pn	**Pn**	**06 23 55.2**	**+0.4**
	0.3nm,0.3s,baz=330,slow=14,SNR=3.6						
IDI				Sn	**Sn**	**06 24 40.5**	**0.0**
	1.4nm,0.3s,baz=311,slow=19,SNR=3.7						
CHOS	**Chios island**	**3.95**	**79**	P	**Pn**	**06 23 56.3**	**+0.7**
ALN	**Alexandroupoli**	**4.96**	**49**	P	**Pn**	**06 24 09.0**	**-0.4**
BARS	**Barje**	**5.11**	**6**	*e*Pn	**Pn**	**06 24 10.9**	**-0.5**
TREB	**Trebinje**	**5.41**	**338**	*e*Pn	**Pn**	**06 24 14.1**	**-1.5**
HFS	**Hagfors**	**22.91**	**350**	P	**P**	**06 27 56.0**	**-2.6**
	2.4nm,0.8s,mb3.7,baz=155,slow=14,SNR=4.1						
EKA	**Eskdalemuir Ar**	**24.06**	**325**	P	**P**	**06 28 08.6**	**-1.4**
	1.1nm,0.7s,mb3.4,baz=127,slow=11,SNR=3.5						
NOA	**NORSAR Array B**	**24.15**	**348**	P	**P**	**06 28 08.2**	**-2.5**
	1.6nm,1.0s,mb3.4,baz=158,slow=8.7,SNR=3.1						
TORD	**Torodi Ar. Bea**	**29.99**	**220**	P	**P**	**06 29 03.8**	**+0.2**
	0.7nm,0.6s,mb3.6,baz=32,slow=9.4,SNR=6.4						
ARCES	**ARCESS Array B**	**31.95**	**3**	P	**P**	**06 29 18.5**	**-1.8**
	4.3nm,0.9s,mb4.3,baz=184,slow=12,SNR=5.7						
MKAR	**Makanchi Array**	**45.13**	**58**	P	**P**	**06 31 08.4**	**-2.9**
	0.5nm,0.4s,mb3.7,baz=273,slow=6.9,SNR=16						
ZALV	**Zalesovo Beam**	**45.64**	**48**	P	**P**	**06 31 11.1**	**-4.1**
	0.9nm,0.4s,mb4.1,baz=278,slow=7.9,SNR=4.1						

TAP 14 06:48:57.2, 21.10N×122.66E, h78km±1km**, ML3.8, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.39**	**312**	P	Pn	06 49 21.2	+0.2
	baz=312						
LAY				*e*S	Sn	06 49 38.3	-0.8
	baz=312						
TAW	**Tawu**	**2.06**	**308**	*e*P	Pn	06 49 29.8	-0.1
	baz=308						
ECL	**Taimali**	**2.18**	**314**	*e*P	Pn	06 49 32.6	+1.2
	baz=306						
ECL				*e*S	Sn	06 49 58.2	+0.7
	baz=306						
SCZT	**Fangliau**	**2.28**	**304**	*e*P	Pn	06 49 35.5	+2.7
	baz=311						
CHKT	**Chengkung**	**2.33**	**329**	*e*P	Pn	06 49 32.6	-0.8
	baz=329						
CHKT				*e*S	Sn	06 49 58.7	-2.5
	baz=329						
SSD	**Sandimen**	**2.50**	**311**	*e*P	Pn	06 49 38.3	+2.6
	baz=311						
TWF1	**Yuli**	**2.58**	**331**	*e*P	Pn	06 49 37.2	+0.4
	baz=331						
TWF1				*e*S	Sn	06 50 06.9	-0.2
	baz=331						
ELDTW	**Lidau**	**2.58**	**324**	*e*P	Pn	06 49 38.2	+1.4
	baz=324						
ELDTW				*e*S	Sn	06 50 07.8	+0.5
	baz=324						
EHY	**Hungye**	**2.70**	**333**	*e*P	Pn	06 49 38.5	+0.1
	baz=339						
WTP	**Ta-pu**	**2.86**	**319**	*e*P	Pn	06 49 43.7	+3.2
	baz=319						
WTP				*e*S	Sn	06 50 17.4	+3.4
	baz=319						
CHN1	**Nanshi**	**2.87**	**317**	P	Pn	06 49 44.8	+4.1
	baz=317						
CHN1				*e*S	Sn	06 50 18.9	+4.7
	baz=317						
ESL	**Shilin**	**2.93**	**337**	*e*P	Pn	06 49 41.6	0.0
	baz=346						
ESL				*e*S	Sn	06 50 16.0	+0.2
	baz=346						
CHN4	**Tsaushan**	**2.95**	**320**	*e*P	Pn	06 49 45.7	+3.8
	baz=307						
TWK	**Hsinying**	**2.95**	**317**	*e*P	Pn	06 49 43.4	+1.6
	baz=317						
TWK				*e*S	Sn	06 50 19.7	+3.4
	baz=317						
ALS	**Alishan**	**2.95**	**325**	*e*P	Pn	06 49 44.7	+2.9
	baz=329						
CHN5	**Tsauling**	**3.09**	**324**	*e*P	Pn	06 49 46.1	+2.4
	baz=311						
CHN5				*e*S	Sn	06 50 22.3	+2.6
	baz=311						
SMLT	**Sun Moon Lake**	**3.21**	**330**	P	Pn	06 49 46.7	+1.3
	baz=334						
SMLT				*e*S	Sn	06 50 24.2	+1.6
	baz=334						
TYC	**Yuchr**	**3.25**	**329**	*e*P	Pn	06 49 48.3	+2.4
	baz=334						
TYC				*e*S	Sn	06 50 25.5	+2.0
	baz=334						
WHF	**Hehuan Shan**	**3.29**	**337**	*e*P	Pn	06 49 47.5	+1.0
	baz=345						
WHF				*e*S	Sn	06 50 24.1	-0.5
	baz=345						
NNS	**Nan Shan**	**3.53**	**341**	*e*P	Pn	06 49 51.1	+1.4
	baz=347						
NNS				*e*S	Sn	06 50 30.3	-0.1
	baz=347						
TWC	**Suao**	**3.57**	**348**	*e*P	Pn	06 49 51.0	+0.7
	baz=355						
TWC				*e*S	Sn	06 50 31.6	+0.2
	baz=355						
NSK	**Sanguang**	**3.76**	**342**	*e*P	Pn	06 49 54.4	+1.6
	baz=350						

*ISCJB **14** 06:57:57.6±0.9, 2.36S±0.08×100.3E±0.2, h48km, mb4.1/9, Error ellipse: s-maj=23.7km s-min=7.8km az=160.0*
*NEIC **14** 06:57:58.0±0.9, 2.44S×100.24E, h35km, mb4.3/2, Error ellipse: s-maj=32.8km s-min=7.7km az=55.0*
*IDC **14** 06:58:00.0±1.4, 2.29S×100.36E, h47km±8km, mb3.7/9, mb1 3.9/11, mb1mx3.7/23, mbtmp3.7/11, ML3.7/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/29, Error ellipse: s-maj=52.0km s-min=13.5km az=56.0*
*DJA **14** 06:58:01, 2.18S×100.21E, h34km, MLv4.4/2*

ISC 14 06:57:59.3±2.3**, 2.3S**±0.1×**100.4E**±0.2**, h42**km±18km**, h50**km±1.1km**: pP-P, n20, σ0.50**/21**, mb4.1**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.41**	**3**	P	**Pn**	**06 58 22.2**	**-0.3**
PDSI				S	**Sn**	**06 58 40.1**	**+0.3**
PPI	**Padang Panjang**	**1.86**	**360**	P	**Pn**	**06 58 29.5**	**+0.8**
KSI	**Kapahiang**	**2.56**	**121**	P	**Pn**	**06 58 44.7**	**+6.4**
KSI				S	**Sn**	**06 59 18.1**	**+10**
RGRI	**Rengat**	**2.76**	**45**	P	**Pn**	**06 58 50.6**	**+10**
PSI	**Prapat**	**5.30**	**344**	P	**Pn**	**06 59 15.3**	**-0.7**
	0.6nm,0.3s,baz=163,slow=11,SNR=2.6						
PSI				LR	LR	07 01 41.1	
	comp=Z,98nm,18.7s,baz=206,slow=43						
KAPI	**Kappang**	**19.50**	**98**	P	**Pn**	**07 02 24.2**	**-0.4**
	1.0nm,0.3s,baz=315,slow=16,SNR=4.3						
KAPI				LR	LR	07 10 40.4	
	comp=Z,38nm,20.0s,baz=107,slow=39						
CMAR	**Chiang Mai Arr**	**20.70**	**356**	P	**P**	**07 02 36.1**	**+0.1**
	1.1nm,0.4s,baz=191,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**37.48**	**120**	P	**P**	**07 05 08.8**	**-0.4**
	3.5nm,0.7s,mb4.3,baz=297,slow=9.4,SNR=32						
WRAB	**Tennant Creek**	**37.49**	**120**	*e*P	**P**	**07 05 08.7**	**-0.6**
	3.2nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	**37.50**	**120**	*e*P	**P**	**07 05 09.3**	**0.0**
ASAR	**Alice Springs**	**38.74**	**126**	P	**P**	**07 05 20.3**	**+0.5**
	1.9nm,0.6s,mb4.0,baz=300,slow=7.9,SNR=34						
ASAR				pP	pP	07 05 33.5	+2.2
	1.3nm,0.6s,baz=302,slow=8.3,SNR=5.4						
KSRS	**Korea Array**	**47.10**	**30**	P	**P**	**07 06 26.9**	**-0.3**
	0.9nm,0.5s,mb4.0,baz=226,slow=8.7,SNR=2.8						
STKA	**Stephens Creek**	**48.64**	**132**	*e*P	**P**	**07 06 40.2**	**+1.0**
	3.6nm,1.2s,mb4.3						
STKA	**Stephens Creek**	**48.64**	**132**	P	**P**	**07 06 40.4**	**+1.2**
	1.5nm,0.5s,mb4.2,baz=291,slow=12,SNR=4.2						
SONM	**Songino Array**	**50.23**	**5**	P	**P**	**07 06 51.4**	**+0.3**
	1.1nm,0.6s,mb4.0,baz=189,slow=9.3,SNR=10						
MKAR	**Makanchi Array**	**51.45**	**344**	P	**P**	**07 07 00.2**	**0.0**
	0.3nm,0.3s,mb3.7,baz=160,slow=8.8,SNR=11						
MKAR				pP	pP	07 07 12.8	+0.6
	0.9nm,0.5s,baz=155,slow=7.8,SNR=6.2						
ZALV	**Zalesovo Beam**	**57.56**	**349**	P	**P**	**07 07 44.0**	**-0.5**
	0.5nm,0.3s,mb4.0,baz=155,slow=7.4,SNR=4.1						
ZALV				pP	pP	07 07 57.4	+0.8
	2.6nm,0.7s,baz=160,slow=4.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**57.56**	**349**	P	**P**	**07 07 44.0**	**-0.5**
ZALV				pP	pP	07 07 57.4	+0.8
ARCES	**ARCESS Array B**	**86.91**	**340**	P	**P**	**07 10 39.5**	**+0.2**
	2.4nm,0.9s,mb4.4,baz=66,slow=2.9,SNR=4.8						
TXAR	**Lajitas Array**	**144.72**	**38**	PKP	PKPdf	07 17 31.8	-0.5
	1.6nm,0.7s,baz=300,slow=1.1,SNR=24						

*ATH **14** 06:58:26.5, 36.41N×27.66E, h28km±1km, MD3.4/7*
*NEIC **14** 06:58:26.5, 36.42N×27.66E, h28km, MD3.3(ISK), MD3.4(ATH), After ATH.*

ISCJB ***14*** *06:58:26.4±0.9, 3638N±003×2756E±004, h8km±6km, Error ellipse: s-maj=5.6km s-min=5.0km az=169.3*
CSEM ***14*** *06:58:26.8±0.1, 3642N×2755E, h15km, MD3.4, Error ellipse: s-maj=3.0km s-min=2.1km az=71.0*
ISK ***14*** *06:58:27.8, 3647N×2756E, h14km, MD3.4*
DDA ***14*** *06:58:28.8, 3665N×2756E, h26km±4km, Md3.4*
ISC 14 06:58:26.8±0.7, **3637N**±003×**2753E**±004, **h7km**±5km, **n32**, σ**0s86**/43, **1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	**Datca**	**0.36**	**7**	*e*PG	**Pg**	**06 58 34.1**	**+0.3**
DAT				*e*SG	**Sg**	**06 58 38.4**	**-0.2**
NISR	**Nisiros**	**0.40**	**307**	*e*PB	**Pg**	**06 58 36.9**	**+2.3**
NISR	**Nisiros**	**0.40**	**307**	*e*Pb	**Pg**	**06 58 37.0**	**+2.4**
ARG	**Arkhangelos**	**0.51**	**107**	⇑*i*PB	**Pg**	**06 58 35.9**	**-0.7**
ARG				*e*SB	**Sg**	**06 58 42.7**	**-0.6**
BDRM	**Kayabasi**	**0.70**	**355**	*i* P	**Pg**	**06 58 40.6**	**+0.4**
BDRM				*i* S	**Sg**	**06 58 50.7**	**+1.4**
KARP	**Karpathos**	**0.87**	**200**	*e*PN	**Pn**	**06 58 45.4**	**-0.1**
KARP				*e*SN	**Sn**	**06 58 58.3**	**-0.1**
KARP	**Karpathos**	**0.87**	**200**	*e*Pn	**Pn**	**06 58 45.6**	**+0.1**
KARP				*e*Sn	**Sn**	**06 58 58.3**	**-0.1**
MLSB	**Milas**	**0.94**	**12**	*e*PG	**Pg**	**06 58 44.4**	**-0.5**
MLSB				*e*SG	**Sg**	**06 58 56.9**	**-0.3**
YER	**Yerkesik**	**0.98**	**38**	*e*PG	**Pg**	**06 58 44.5**	**-1.0**
SMG	**Samos**	**1.45**	**338**	*e*PN	**Pn**	**06 58 52.5**	**-0.9**
SMG				*e*SN	**Sn**	**06 59 11.9**	**-0.7**
SMG	**Samos**	**1.45**	**338**	*e*Pn	**Pn**	**06 58 52.4**	**-1.0**
SMG				*e*Sn	**Sn**	**06 59 11.9**	**-0.7**
KSL	**Kastellorizon**	**1.68**	**97**	*e*PN	**Pn**	**06 58 54.9**	**-1.6**
KSL	**Kastellorizon**	**1.68**	**97**	*e*Pn	**Pn**	**06 58 55.0**	**-1.5**
APE	**Apeiranthos**	**1.75**	**294**	*e*PB	**Pb**	**06 58 58.1**	**-1.1**
DENT	**Denizli**	**1.83**	**41**	*e*PN	**Pn**	**06 58 58.4**	**-0.3**
GOLH	**Golhisar**	**1.85**	**61**	*i* P	**Pn**	**06 58 59.3**	**+0.4**
GOLH				*i* S	**Sn**	**06 59 22.2**	**-0.3**
NPS	**Neapolis**	**1.91**	**235**	*e*PB	**Pb**	**06 59 01.1**	**-0.8**
NPS				*e*SN	**Sn**	**06 59 25.0**	**+1.1**
ELL	**Elmali**	**1.96**	**78**	*e*PN	**Pn**	**06 59 01.6**	**+1.2**
IZM	**Izmir**	**2.04**	**354**	*e*PN	**Pn**	**06 59 00.9**	**-0.5**
BLCB	**Balcova**	**2.05**	**349**	*e*PN	**Pn**	**06 59 01.0**	**-0.6**
URLA	**Izmir**	**2.12**	**340**	*i* P	**Pn**	**06 59 01.8**	**-0.8**
URLA				*i* S	**Sn**	**06 59 37.2**	**+8.0**
MANT	**Manisa**	**2.27**	**21**	*i* P	**Pn**	**06 59 03.9**	**-0.8**
KULA	**Kula-Manisa**	**2.32**	**23**	*e*PN	**Pn**	**06 59 06.0**	**+0.5**
AKS	**Akhisar**	**2.52**	**5**	*e*PN	**Pn**	**06 59 07.7**	**-0.3**
KHL	**Karahalli**	**2.52**	**39**	*e*PN	**Pn**	**06 59 07.2**	**-0.8**
ANTB	**Antalya**	**2.57**	**77**	*e*PN	**Pn**	**06 59 10.3**	**+1.4**
BCK	**Bucak**	**2.69**	**65**	*e*PN	**Pn**	**06 59 10.8**	**+0.4**
ISP	**Isparta**	**2.80**	**57**	*e*PN	**Pn**	**06 59 12.9**	**+0.9**
SHUT	**Suhut-Afyon**	**3.25**	**47**	*e*PN	**Pn**	**06 59 18.6**	**+0.5**
ALT	**Altintas**	**3.37**	**37**	*e*PN	**Pn**	**06 59 20.2**	**+0.4**
KONT	**Konya--Tatoy**	**4.17**	**66**	*e*PN	**Pn**	**06 59 32.1**	**+1.3**
KIZT	**Kizilcal**	**4.27**	**53**	*e*PN	**Pn**	**06 59 33.4**	**+1.2**

IDC ***14*** *07:10:05.0±3.5, 3321N×8586E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, ML4.0/2, Error ellipse: s-maj=79.6km s-min=26.5km az=65.0*
ISCJB ***14*** *07:10:08.2±0.6, 3337N±005×8600E±02, h33km, Error ellipse: s-maj=20.5km s-min=7.1km az=0.9*
ISC 14 07:10:10.6±0.6, **3337N**±005×**860E**±02, **h35km**, **n13**, σ**0s79**/13, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	**Dangsing**	**5.36**	**202**	*e*P	**Pn**	**07 11 28.2**	**+0.2**
	20nm,0.5s						
GUN	**Gumba**	**5.44**	**181**	*e*P	**Pn**	**07 11 29.5**	**+0.3**
	12nm,0.3s						
GKN	**Gorkha**	**5.47**	**193**	*e*P	**Pn**	**07 11 29.4**	**-0.2**
	15nm,0.5s						
JIRN	**Jiri**	**5.69**	**178**	*e*P	**Pn**	**07 11 33.2**	**+0.5**
	11nm,0.3s						
PKI	**Pulchoki**	**5.80**	**185**	*e*P	**Pn**	**07 11 34.8**	**+0.7**
KOLN	**Koldanda**	**5.95**	**201**	*e*P	**Pn**	**07 11 35.5**	**-0.7**
TAPN	**Taplejung**	**6.18**	**166**	*e*P	**Pn**	**07 11 39.2**	**-0.1**
	7.6nm,0.5s						
RAMN	**Ramite**	**6.42**	**175**	*e*P	**Pn**	**07 11 43.1**	**+0.5**
MKAR	**Makanchi Array**	**13.70**	**349**	Pn	**Pn**	**07 13 21.2**	**-1.1**
	baz=221,slow=24,SNR=3.3						
MKAR				Lg		07 17 25.2	
	0.1nm,0.3s,baz=323,slow=24,SNR=4.1						
KURK	**Kurchatov**	**18.16**	**345**	P	**Pn**	**07 14 19.6**	**-0.3**
	0.1nm,0.3s,baz=169,slow=9.6,SNR=6.6						
CMAR	**Chiang Mai Arr**	**18.84**	**139**	P	**Pn**	**07 14 26.4**	**-1.9**
	0.3nm,0.3s,baz=306,slow=13,SNR=4.0						
ZALV	**Zalesovo Beam**	**20.59**	**358**	P	**P**	**07 14 47.3**	**+1.0**
	0.7nm,0.5s,baz=182,slow=8.5,SNR=3.3						
SONM	**Songino Array**	**21.10**	**41**	P	**P**	**07 14 52.9**	**+1.0**
	2.9nm,1.1s,baz=229,slow=11,SNR=8.2						

MOS ***14*** *07:15:29.2±1.1, 51.18N×17931E, h33km, mb4.5/31, Error ellipse: s-maj=10.4km s-min=8.4km az=114.2*
BJI ***14*** *07:15:29.2, 5120N×17930E, h48km, mB5.0, mb4.7, Ms4.5, Msz4.3*
IDC ***14*** *07:15:31.8±2.3, 51.16N×17944E, h42km±19km, mb4.1/21, mb1 4.3/23, mb1mx4.1/31, mbtmp4.1/23, ML4.2/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/34, Error ellipse: s-maj=20.4km s-min=10.9km az=177.0*
ISCJB ***14*** *07:15:32.1±0.8, 5128N±007×17933E±003, h54km±6km, mb4.4/61, MS4.0/13, Error ellipse: s-maj=11.6km s-min=3.0km az=3.6*
NEIC ***14*** *07:15:32.7±0.4, 51.18N×17931E, mb4.4/33, ML4.1(AEIC), Error ellipse: s-maj=10.6km s-min=4.3km az=180.0*
ISC 14 07:15:33.9±0.7, **5126N**±007×**17935E**±003, **h54km**±5km, **h55km**±2.8km**:pP-P**, **n296**, σ**0s70**/299, **mb4.4**/61, **MS4.0**/13, **72C-86D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	**Adak**	**2.55**	**74**	P	**Pn**	**07 16 11.5**	**-1.3**
ADK				S	**Sn**	**07 16 41.9**	**-0.7**
ADK	**Adak**	**2.55**	**74**	P	**Pn**	**07 16 11.6**	**-1.2**
ADK				S	**Sn**	**07 16 41.9**	**-0.7**
SMY	**Shemya**	**3.56**	**296**	*e*P	**Pn**	**07 16 26.5**	**0.0**
SMY				S	**Sn**	**07 17 08.6**	**+1.3**
ATKA	**Atka Island**	**4.12**	**74**	P	**Pn**	**07 16 33.1**	**-1.2**
ATKA				S	**Sn**	**07 17 20.8**	**-0.4**
FX1	**Attu Island--F**	**4.14**	**295**	P	**Pn**	**07 16 33.6**	**-0.9**
	38nm,0.3s,baz=202,slow=3.8,SNR=74						
FX1				S	**Sn**	**07 17 23.8**	**+2.1**
	42nm,0.3s,baz=232,slow=22,SNR=1.9						
FX1				LR	LR	07 18 14.3	
	comp=Z,1μm,18.4s,baz=160,slow=38						
FX1	**Attu Island--F**	**4.14**	**295**	P	**Pn**	**07 16 33.7**	**-0.8**
FX1				S	**Sn**	**07 17 23.8**	**+2.2**
FX1				pmax	pmax		
	comp=Z,38nm,0.3s						
FX1				smax			
	comp=N,42nm,0.3s						
FX1				MLR	MLR		
	comp=Z,1μm,18.4s						
FX1	**Attu Island--F**	**4.14**	**295**	P	**Pn**	**07 16 32.3**	**-2.3**
SPIA	**Saint Paul Isl**	**8.50**	**42**	P	**Pn**	**07 17 35.9**	**+1.8**
UNV	**Unalaska Valle**	**9.00**	**68**	P	**Pn**	**07 17 40.7**	**-0.4**
PET	**Petropavlovsk**	**12.83**	**286**	*e*P	**Pn**	**07 18 30.9**	**-2.3**
PET				*e*		07 20 54.3	
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
PEA0B	**Petropavlovsk-**	**13.40**	**286**	*e*Pn	**Pn**	**07 18 44.0**	**+2.9**
PETK	**Petropavlovsk-**	**13.40**	**286**	P	**Pn**	**07 18 40.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=90,slow=16,SNR=7.6						
PETK				S	**Sn**	**07 21 07.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=64,slow=44,SNR=2.9						
PETK				LR	LR	07 23 33.2	
	comp=Z,137nm,20.7s,baz=96,slow=36						
SVW2	**Sparrevohn**	**16.97**	**45**	*e*P	**Pn**	**07 19 30.1**	**+2.9**
OHAK	**Old Harbor**	**17.00**	**59**	*e*P	**Pn**	**07 19 25.4**	**-2.1**
	comp=Z,15nm,0.3s						
KDAK	**Kodiak Island**	**17.46**	**57**	P	**Pn**	**07 19 30.0**	**-3.3**
	comp=Z,4.5nm,0.3s,baz=259,slow=6.3,SNR=51						
KDAK	**Kodiak Island**	**17.46**	**57**	*e*P	**Pn**	**07 19 30.7**	**-2.6**
	comp=Z,10nm,0.5s						
BILL	**Bilibino**	**18.00**	**344**	⇓*e*P	**Pn**	**07 19 42.3**	**+2.5**
BILL				pmax	pmax		
	comp=Z,34nm,2.3s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**18.00**	**344**	*e*P	**Pn**	**07 19 40.5**	**+0.7**
	comp=Z,14nm,0.9s						
PPLA	**Purkeypile**	**19.17**	**42**	*e*P	**Pn**	**07 19 54.1**	**+0.2**
	comp=Z,39nm,1.2s						
PMR	**Palmer**	**20.05**	**47**	*e*P	**P**	**07 20 02.8**	**+0.6**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PMR	**Palmer**	**20.05**	**47**	*e*P	**P**	**07 20 02.8**	**+0.6**
	comp=Z,1.6nm,0.3s						
MCK	**McKinley**	**20.85**	**41**	*e*P	**P**	**07 20 12.5**	**+1.7**
MCK				*e*		07 20 24.2	
MCK				pmax	pmax		
	comp=Z,14nm,1.1s						
MCK	**McKinley**	**20.85**	**41**	*e*P	**P**	**07 20 12.5**	**+1.7**
	comp=Z,14nm,1.1s						
MCK				*e*		07 20 24.2	
COLA	**College**	**21.73**	**39**	*e*P	**P**	**07 20 20.6**	**+0.5**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
COLA	**College**	**21.73**	**39**	*e*P	**P**	**07 20 20.6**	**+0.4**
	comp=Z,7.4nm,0.8s,mb4.2						
COLD	**Coldfoot**	**21.96**	**32**	*e*P	**P**	**07 20 23.1**	**+0.5**
	comp=Z,6.1nm,0.9s,mb4.0						
PAX	**Paxson**	**22.09**	**44**	*e*P	**P**	**07 20 24.5**	**+0.5**
MENT	**Mentasta**	**22.85**	**45**	*e*P	**P**	**07 20 31.4**	**-0.7**
EGAK	**Eagle**	**24.40**	**41**	*e*P	**P**	**07 20 46.2**	**-0.5**
	comp=Z,17nm,0.9s,mb4.5						
DAWY	**Dawson**	**24.99**	**43**	*e*P	**P**	**07 20 50.9**	**-1.2**
ASAJ	**Asahikawa**	**25.54**	**268**	P	**P**	**07 20 57.4**	**+0.2**
	comp=Z,21nm,0.8s,mb4.7,baz=90,slow=5.8,SNR=8.2						
ASAJ	**Asahikawa**	**25.54**	**268**	P	**P**	**07 20 57.4**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,21nm,0.8s						
INK	**Inuvik**	**28.22**	**35**	*e*P	**P**	**07 21 19.3**	**-1.8**
INK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
INK	**Inuvik**	**28.22**	**35**	*e*P	**P**	**07 21 19.3**	**-1.8**
	comp=Z,5.2nm,0.7s,mb4.3						
KLR	**Kul'dur**	**30.09**	**285**	*e*P	**P**	**07 21 33.8**	**-4.0**
MJAR	**Matsushiro Arr**	**32.62**	**259**	LR	LR	07 32 49.2	
	comp=Z,63nm,21.5s,MS3.3,baz=60,slow=32						
MDJ	**Mudanjiang**	**33.44**	**278**	P	**P**	**07 22 06.3**	**-1.0**
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,96nm,5.2s						
YKA	**Yellowknife Ar**	**36.15**	**46**	P	**P**	**07 22 29.5**	**-0.9**
	comp=Z,2.6nm,0.8s,mb4.2,baz=282,slow=8.3,SNR=15						
YKA				PcP	PcP	07 24 54.3	-0.6
	comp=Z,0.6nm,0.7s,baz=295,slow=3.5,SNR=6.4						
YKA				ScP	ScP	07 28 38.8	+2.4
	comp=Z,0.4nm,0.7s,baz=296,slow=3.2,SNR=7.7						
YKA	**Yellowknife Ar**	**36.15**	**46**	P	**P**	**07 22 29.5**	**-0.9**
YKA						07 24 54.3	
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CN2	**Changchun**	**36.42**	**280**	*e*P	**P**	**07 22 33.8**	**+0.8**
BOD	**Bodaibo**	**37.11**	**306**	*e*P	**P**	**07 22 37.2**	**-1.4**
BOD				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
HIA	**Hailar**	**37.24**	**291**	⇓*i*P	**P**	**07 22 39.4**	**-0.5**
KSRS	**Korea Array**	**38.48**	**269**	P	**P**	**07 22 51.0**	**+0.6**
	comp=Z,1.7nm,0.7s,mb3.9,baz=56,slow=8.3,SNR=6.6						
KSRS				LR	LR	07 40 02.4	
	comp=Z,53nm,18.1s,MS3.4,baz=122,slow=38						
KSRS	**Korea Array**	**38.48**	**269**	P	**P**	**07 22 51.0**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,53nm,18.1s,MS3.4						
D07A	**Quincy**	**38.85**	**71**	⇑P	**P**	**07 22 53.1**	**-0.3**
	baz=39						
HAWA	**Hanford**	**39.51**	**72**	*e*P	**P**	**07 22 58.9**	**0.0**
	comp=Z,5.6nm,0.8s,mb4.3						
F07A	**Phinny Hill Vi**	**39.52**	**73**	⇓P	**P**	**07 22 59.5**	**+0.4**
	baz=39						
D08A	**Wollman Farm,**	**39.54**	**71**	⇑P	**P**	**07 22 59.1**	**-0.1**
	baz=39						
D09A	**Jones Farm, Ri**	**39.90**	**71**	⇑P	**P**	**07 23 02.1**	**-0.1**
	baz=40						
F08A	**Pendleton**	**40.27**	**73**	⇓P	**P**	**07 23 05.2**	**0.0**
	baz=40						
E09A	**Wood Farm, Sta**	**40.28**	**71**	⇓P	**P**	**07 23 05.3**	**0.0**
	baz=40						
RES	**Resolute Bay**	**40.33**	**24**	*e*P	**P**	**07 23 05.7**	**+0.3**
RES				*e**PP	pP	07 23 18.7	-0.7
RES				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
RES	**Resolute Bay**	**40.33**	**24**	*e*P	**P**	**07 23 05.7**	**+0.3**
	comp=Z,1.5nm,0.4s,mb4.1						
RES				*e*pP	pP	07 23 18.7	-0.7
D10A	**Wagner Farm, O**	**40.52**	**70**	⇑P	**P**	**07 23 07.0**	**-0.3**
	baz=40						
C11A	**Tepee Creek (N**	**40.73**	**69**	⇑P	**P**	**07 23 09.1**	**+0.1**
	baz=40						
I07A	**Izee**	**40.73**	**75**	⇑P	**P**	**07 23 09.5**	**+0.4**
	baz=40						
F09A	**S2 Ranch, Elgi**	**40.83**	**72**	⇑P	**P**	**07 23 10.4**	**+0.5**
	baz=41						
E10A	**Myers Farm, Un**	**40.91**	**71**	⇑P	**P**	**07 23 10.7**	**+0.2**
	baz=41						
D11A	**Klaveano Farm,**	**41.08**	**70**	⇓P	**P**	**07 23 11.6**	**-0.3**
	baz=41						
F10A	**Beach Ranch, E**	**41.10**	**72**	⇓P	**P**	**07 23 12.2**	**+0.1**
	baz=41						
G09A	**Cove**	**41.13**	**73**	⇑P	**P**	**07 23 12.6**	**+0.3**
	baz=41						
C12B	**Naegeli Ranch,**	**41.25**	**68**	⇓P	**P**	**07 23 13.5**	**+0.2**
	baz=41						
A13A	**Flathead Natio**	**41.26**	**66**	⇓P	**P**	**07 23 13.7**	**+0.3**
	baz=41						
WALA	**Waterton Lakes**	**41.48**	**66**	*e*P	**P**	**07 23 15.2**	**0.0**
	comp=Z,0.1nm,0.8s						
B13A	**Whitefish**	**41.50**	**67**	⇓P	**P**	**07 23 14.4**	**-0.9**
	baz=41						
E11A	**Bogner Ranch,**	**41.51**	**71**	⇓P	**P**	**07 23 14.5**	**-0.9**
	baz=41						
G10A	**Bishop Farm, J**	**41.52**	**72**	⇓P	**P**	**07 23 15.3**	**-0.3**
	baz=41,SNR=7.7						
BMO	**Blue Mountains**	**41.64**	**73**	*e*P	**P**	**07 23 16.3**	**-0.2**
	comp=Z,1.8nm,0.8s,mb3.8						
BMO				*e*pP	pP	07 23 30.0	-0.6
K07A	**Rock Creek Ran**	**41.65**	**77**	⇓P	**P**	**07 23 17.1**	**+0.5**
	baz=42						
D12A	**Red Ives Fores**	**41.65**	**69**	⇓P	**P**	**07 23 16.3**	**-0.3**
	baz=42						
A14A	**Double T Ranch**	**41.81**	**66**	⇑P	**P**	**07 23 17.0**	**-0.8**
	baz=42,SNR=5.5						
L07A	**Adell**	**41.97**	**78**	⇑P	**P**	**07 23 19.6**	**+0.4**
	baz=42						
G11A	**Walters Elk Ra**	**41.97**	**72**	⇑P	**P**	**07 23 18.3**	**-0.9**
	baz=42,SNR=5.2						
H10A	**Noah's Angus R**	**42.12**	**73**	⇑P	**P**	**07 23 19.7**	**-0.8**
	baz=42,SNR=5.7						
A15A	**Johnson Ranch,**	**42.20**	**65**	⇑P	**P**	**07 23 20.4**	**-0.6**
	baz=42						
B14A	**Marquette Ranc**	**42.20**	**66**	⇑P	**P**	**07 23 21.1**	**+0.1**
	baz=42						
C14A	**Swan Lake**	**42.23**	**67**	⇓P	**P**	**07 23 21.2**	**-0.1**
	baz=42						
I10A	**Payette**	**42.36**	**74**	⇑P	**P**	**07 23 22.5**	**+0.1**
	baz=42						
F12A	**Elk City**	**42.39**	**71**	⇑P	**P**	**07 23 22.7**	**+0.1**
	baz=42						
M07A	**Soldier Meadow**	**42.43**	**79**	⇓P	**P**	**07 23 23.7**	**+0.7**
	baz=42						
L08A	**Fields**	**42.48**	**77**	⇑P	**P**	**07 23 24.0**	**+0.7**
	baz=42						
B15A	**Bradely Ranch,**	**42.63**	**66**	⇑P	**P**	**07 23 24.2**	**-0.3**
	baz=42						
E13A	**Victor**	**42.66**	**69**	⇓P	**P**	**07 23 25.2**	**+0.4**
	baz=42						
G12A	**Big Creek, Yel**	**42.68**	**72**	⇑P	**P**	**07 23 25.2**	**+0.2**
	baz=42						
D14A	**Greenough**	**42.72**	**68**	⇑P	**P**	**07 23 25.2**	**-0.1**
	baz=42						
A16A	**West Butte Ran**	**42.86**	**65**	⇓P	**P**	**07 23 25.5**	**-0.8**
	baz=43						
C15A	**Salmond Ranch,**	**42.88**	**67**	⇓P	**P**	**07 23 26.7**	**+0.2**
	baz=43						
M08A	**Happy Creek Ra**	**42.88**	**78**	⇓P	**P**	**07 23 27.4**	**+0.8**
	baz=43						
F13A	**Darby**	**42.92**	**70**	⇓P	**P**	**07 23 27.1**	**+0.2**
	baz=43						
I11A	**Placerville**	**42.97**	**73**	⇑P	**P**	**07 23 27.3**	**0.0**
	baz=43						
K10A	**MacKenzie Ranc**	**43.05**	**75**	⇓P	**P**	**07 23 28.1**	**+0.1**
	baz=43						
B16A	**M & M Farms, S**	**43.07**	**66**	⇑P	**P**	**07 23 27.4**	**-0.7**
	baz=43						
E14A	**Clinton**	**43.08**	**69**	⇑P	**P**	**07 23 27.7**	**-0.4**
	baz=43						
H12A	**Diamond D Ranc**	**43.28**	**72**	⇓P	**P**	**07 23 29.5**	**-0.3**
	baz=43						
D15A	**Lincoln**	**43.31**	**68**	⇓P	**P**	**07 23 29.4**	**-0.7**
	baz=43						
G13A	**Cobalt**	**43.35**	**71**	⇑P	**P**	**07 23 30.0**	**-0.4**
	baz=43,SNR=8.7						
C16A	**Fuhringer Ranc**	**43.36**	**66**	⇓P	**P**	**07 23 29.9**	**-0.6**
	baz=43						
N08A	**GE Springer Mi**	**43.42**	**79**	⇑P	**P**	**07 23 31.5**	**+0.5**
	baz=43						
M09A	**Marrel Ranch,**	**43.47**	**77**	⇓P	**P**	**07 23 32.3**	**+0.9**
	baz=43						
I12A	**Atlanta**	**43.53**	**73**	⇓P	**P**	**07 23 32.2**	**+0.3**
	baz=43						
K11A	**Parker Ranch,**	**43.56**	**75**	⇓P	**P**	**07 23 32.2**	**+0.1**
	baz=43						
H13A	**Challis**	**43.63**	**72**	⇑P	**P**	**07 23 32.5**	**-0.2**
	baz=43						
B17A	**L&G Farms, Che**	**43.65**	**65**	⇑P	**P**	**07 23 32.7**	**-0.1**
	baz=43						
L10A	**Juniper Basin**	**43.69**	**76**	⇑P	**P**	**07 23 33.4**	**+0.3**
	baz=44						
R06C	**Coleville**	**43.95**	**82**	⇑P	**P**	**07 23 34.5**	**-0.8**
	baz=44						
I13A	**Wildhorse Cree**	**44.07**	**72**	⇓P	**P**	**07 23 35.7**	**-0.5**
	baz=44,SNR=10						
L11A	**Cat Creek Ranc**	**44.07**	**75**	⇓P	**P**	**07 23 36.6**	**+0.4**
	baz=44						
HLID	**Hailey**	**44.09**	**73**	⇓P	**P**	**07 23 36.4**	**+0.1**
	baz=44						
HLID	**Hailey**	**44.09**	**73**	*e*P	**P**	**07 23 36.8**	**+0.5**
	comp=Z,4.8nm,0.9s,mb4.2						
H14A	**Leadore**	**44.13**	**71**	⇓P	**P**	**07 23 36.3**	**-0.3**
	baz=44,SNR=7.1						
D17A	**Six Diamond Ra**	**44.32**	**67**	⇑P	**P**	**07 23 38.4**	**+0.3**
	baz=44						
K12A	**Draper Farm, C**	**44.32**	**74**	⇓P	**P**	**07 23 38.2**	**0.0**
	baz=44						
J13A	**Cove Ranch, Pi**	**44.33**	**73**	⇓P	**P**	**07 23 38.1**	**-0.2**
	baz=44,SNR=11						
G15A	**Dillon**	**44.34**	**70**	⇑P	**P**	**07 23 37.8**	**-0.6**
	baz=44						
EGMT	**Eagleton**	**44.39**	**65**	⇓P	**P**	**07 23 38.4**	**-0.2**
	baz=44						
I14A	**Mackay**	**44.46**	**72**	⇑P	**P**	**07 23 39.5**	**+0.2**
	baz=44,SNR=6.5						
F16A	**Kennard Place,**	**44.51**	**69**	⇓P	**P**	**07 23 39.7**	**0.0**
	baz=44						
BOZ	**Bozeman (W)**	**44.59**	**69**	⇑P	**P**	**07 23 40.2**	**-0.1**
	baz=44						
BOZ	**Bozeman (W)**	**44.59**	**69**	*e*P	**P**	**07 23 39.7**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
BOZ	**Bozeman (W)**	**44.59**	**69**	*e*P	**P**	**07 23 39.7**	**-0.6**
	comp=Z,4.3nm,1.1s,mb4.2						
E17A	**Martinsdale**	**44.59**	**68**	⇓P	**P**	**07 23 40.1**	**-0.2**
	baz=44						
G16A	**Moss Hill, Enn**	**44.71**	**70**	⇑P	**P**	**07 23 40.6**	**-0.7**
	baz=44,SNR=7.3						
NVAR	**Mina Array Bea**	**44.72**	**81**	P	**P**	**07 23 42.1**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.5,baz=289,slow=7.7,SNR=4.7						
J14A	**Carey**	**44.76**	**73**	⇑P	**P**	**07 23 41.8**	**+0.1**
	baz=45						
F17A	**Fitzpatrick Pl**	**45.01**	**68**	⇓P	**P**	**07 23 44.2**	**+0.5**
	baz=45						
M12A	**Wells**	**45.02**	**76**	⇑P	**P**	**07 23 44.5**	**+0.7**
	baz=45						
TLY	**Talaya**	**45.14**	**302**	*e*P	**P**	**07 23 44.6**	**0.0**
TLY				*e*S	**S**	**07 30 13.6**	**-6.2**
TLY				*e*SS	SS	07 33 37.8	-5.2
TLY				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,150nm,20.0s,MS3.9						
L13A	**Double Diamond**	**45.22**	**74**	⇓P	**P**	**07 23 46.3**	**+1.0**
	baz=45						
ELK	**Elko**	**45.22**	**77**	*e*P	**P**	**07 23 45.5**	**+0.1**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ELK	**Elko**	**45.22**	**77**	*e*P	**P**	**07 23 45.5**	**+0.2**
	comp=Z,1.6nm,0.7s,mb4.0						
ULN	**Ulaanbaatar**	**45.27**	**295**	⇓*i*P	**P**	**07 23 45.4**	**-0.2**
ULN	**Ulaanbaatar**	**45.27**	**295**	*e*P	**P**	**07 23 45.7**	**+0.1**
	comp=Z,3.9nm,0.7s,mb4.3						
N12A	**Clover Valley,**	**45.28**	**77**	⇓P	**P**	**07 23 46.3**	**+0.5**
	baz=45						
G17A	**Pierce Place,**	**45.29**	**69**	⇓P	**P**	**07 23 45.9**	**0.0**
	baz=45						
O11A	**Cowboy Ranch,**	**45.33**	**78**	⇑P	**P**	**07 23 46.5**	**+0.3**
	baz=45						
H16A	**Russell Place,**	**45.33**	**70**	⇓P	**P**	**07 23 45.8**	**-0.5**
	baz=45,SNR=6.8						
M13A	**Montello**	**45.51**	**75**	⇓P	**P**	**07 23 47.9**	**+0.2**
	baz=45						
F18A	**Big Timber**	**45.56**	**68**	⇑P	**P**	**07 23 48.1**	**+0.1**
	baz=45						
R09A	**Tonopah**	**45.60**	**81**	⇓P	**P**	**07 23 48.6**	**+0.2**
	baz=45						
SONM	**Songino Array**	**45.65**	**296**	P	**P**	**07 23 49.1**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.3,baz=60,slow=8.8,SNR=23						
SONM				LR	LR	07 44 35.2	
	comp=Z,155nm,19.1s,MS4.0,baz=52,slow=38						
SONM	**Songino Array**	**45.65**	**296**	P	**P**	**07 23 49.1**	**+0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,155nm,19.1s						
SONM	**Songino Array**	**45.65**	**296**	P	**P**	**07 23 49.1**	**+0.3**
SONM				LR	LR	07 44 35.2	
Q10A	**Clear Creek Ra**	**45.66**	**80**	⇓P	**P**	**07 23 49.4**	**+0.5**
	baz=46						
I16A	**Newdale**	**45.66**	**71**	⇓P	**P**	**07 23 48.8**	**-0.1**
	baz=46						
L14A	**Malta**	**45.67**	**74**	⇓P	**P**	**07 23 48.9**	**0.0**
	baz=46						
YFT	**Old Faithful**	**45.72**	**70**	*e*P	**P**	**07 23 50.8**	**+1.5**
YFT				*e*pP	pP	07 24 04.0	+0.5
K15A	**Arbon**	**45.72**	**73**	⇑P	**P**	**07 23 49.8**	**+0.4**
	baz=46,SNR=6.5						
O12A	**Currie**	**45.80**	**77**	⇓P	**P**	**07 23 50.0**	**0.0**
	baz=46,SNR=5.9						
H17A	**Grant Village**	**45.90**	**70**	⇑P	**P**	**07 23 51.4**	**+0.7**
	baz=46,SNR=5.9						
M14A	**Sheep Mountain**	**45.92**	**75**	⇓P	**P**	**07 23 51.6**	**+0.7**
	baz=46						
J16A	**Bone**	**45.93**	**72**	⇑P	**P**	**07 23 51.5**	**+0.6**
	baz=46						
IMW	**Indian Meadow**	**45.97**	**71**	*e*P	**P**	**07 23 51.6**	**+0.3**
	comp=Z,3.1nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**46.01**	**300**	*e*P	**P**	**07 23 51.6**	**+0.1**
ZAK				*e*		07 25 26.0	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
I17A	**Pilgram Creek**	**46.18**	**70**	⇓P	**P**	**07 23 52.9**	**0.0**
	baz=46						
P12A	**McGill**	**46.18**	**78**	⇓P	**P**	**07 23 53.1**	**+0.1**
	baz=46						
K16A	**Soda Springs**	**46.20**	**72**	⇑P	**P**	**07 23 53.9**	**+0.8**
	baz=46,SNR=8.7						
L15A	**Malad City**	**46.21**	**74**	⇓P	**P**	**07 23 53.2**	**+0.1**
	baz=46						
RLMT	**Red Lodge**	**46.26**	**68**	⇑P	**P**	**07 23 54.0**	**+0.5**
	baz=46						
RLMT	**Red Lodge**	**46.26**	**68**	*e*P	**P**	**07 23 54.3**	**+0.7**
	comp=Z,9.6nm,1.2s,mb4.6						
N14A	**Grayback Hills**	**46.41**	**75**	⇓P	**P**	**07 23 55.1**	**+0.3**
	baz=46						
J17A	**Brown Place, J**	**46.42**	**71**	⇓P	**P**	**07 23 54.4**	**-0.3**
	baz=46						
R11A	**Troy Canyon, C**	**46.45**	**80**	⇑P	**P**	**07 23 55.2**	**0.0**
	baz=46						
M15A	**Larsen Ranch,**	**46.49**	**74**	⇓P	**P**	**07 23 55.6**	**+0.2**
	baz=46						
HHC	**Hu-ho-hao-te**	**46.60**	**285**	*e*P	**P**	**07 23 56.3**	**+0.1**
HHC				AP	pP	07 24 11.4	+0.9
HHC				PCP	PcP	07 25 30.4	+1.0
HHC				PP	PP	07 25 45.8	-0.4
HHC				PCS	PcS	07 29 23.8	-0.4
HHC				*e*S	**S**	**07 30 38.4**	**-2.7**
HHC				XS	sS	07 31 05.3	+0.3
HHC				SS	SS	07 33 57.3	-10

HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,92nm,5.0s						
HHC				LR	LR		
	comp=N,230nm,17.8s,MS4.4						
HHC				LR	LR		
	comp=E,229nm,15.5s,MS4.4						
HHC				LR	LR		
	comp=Z,127nm,16.6s,MS4.0						
K17A	**Gardner Place,**	**46.65**	**72**	⇑P	**P**	**07 23 56.8**	**+0.2**
	baz=46						
P13A	**Bates Ranch, G**	**46.74**	**77**	⇑P	**P**	**07 23 56.9**	**-0.5**
	baz=47						
L16A	**Fish Haven**	**46.77**	**73**	⇑P	**P**	**07 23 57.7**	**+0.1**
	baz=47						
FURC	**Furnace Creek,**	**46.84**	**83**	⇓P	**P**	**07 23 58.3**	**+0.1**
	baz=47						
J18A	**Kendall Valley**	**46.91**	**71**	⇑P	**P**	**07 23 58.6**	**-0.1**
	baz=47,SNR=5.8						
TPNV	**Topopah Spring**	**46.92**	**82**	⇓P	**P**	**07 23 58.8**	**+0.1**
	baz=47						
TPNV	**Topopah Spring**	**46.92**	**82**	*e*P	**P**	**07 23 58.6**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TPNV	**Topopah Spring**	**46.92**	**82**	*e*P	**P**	**07 23 58.6**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.4						
DUG	**Dugway**	**47.03**	**76**	⇑P	**P**	**07 23 59.8**	**+0.2**
	baz=47						
DUG	**Dugway**	**47.03**	**76**	*e*P	**P**	**07 23 59.7**	**+0.1**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
DUG	**Dugway**	**47.03**	**76**	*e*P	**P**	**07 23 59.7**	**+0.1**
	comp=Z,5.6nm,1.1s,mb4.4						
Q13A	**Wheeler Ranch,**	**47.05**	**78**	⇑P	**P**	**07 23 59.9**	**+0.1**
	baz=47,SNR=5.2						
R12A	**Pony Springs,**	**47.07**	**79**	⇑P	**P**	**07 23 59.7**	**-0.2**
	baz=47						
M16A	**Huntsville**	**47.07**	**74**	⇓P	**P**	**07 24 00.1**	**+0.2**
	baz=47,SNR=6.4						
K18A	**Toltan Ranch,**	**47.24**	**71**	⇓P	**P**	**07 24 01.3**	**0.0**
	baz=47,SNR=7.3						
P14A	**Drum Mountains**	**47.24**	**77**	⇑P	**P**	**07 24 01.4**	**+0.1**
	baz=47						
S12A	**Delamar Landin**	**47.37**	**80**	⇑P	**P**	**07 24 02.7**	**+0.4**
	baz=47						
T11A	**Corn Creek, Al**	**47.37**	**81**	⇓P	**P**	**07 24 02.7**	**+0.4**
	baz=47						
BW06	**Boulder Array**	**47.45**	**71**	⇓P	**P**	**07 24 03.1**	**+0.3**
	baz=47						
BW06	**Boulder Array**	**47.45**	**71**	*e*P	**P**	**07 24 02.7**	**-0.1**
	comp=Z,8.0nm,0.9s,mb4.7						
PDAR	**Pinedale Array**	**47.45**	**71**	P	**P**	**07 24 02.9**	**0.0**
	comp=Z,6.9nm,0.8s,mb4.6,baz=305,slow=3.8,SNR=48						
Q14A	**Sevier Lake (B**	**47.48**	**77**	⇓P	**P**	**07 24 03.8**	**+0.6**
	baz=47						
R13A	**O'Grain Ranch,**	**47.56**	**79**	⇑P	**P**	**07 24 04.1**	**+0.4**
	baz=47						
M17A	**Scullys Gap (B**	**47.56**	**73**	⇓P	**P**	**07 24 03.6**	**-0.1**
	baz=47						
NJ2	**Nanjing**	**47.65**	**270**	*e*P	**P**	**07 24 06.9**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
L18A	**Fontenelle, Gr**	**47.67**	**72**	⇓P	**P**	**07 24 04.2**	**-0.3**
	baz=48,SNR=6.1						
N17A	**Moffit Pass**	**47.78**	**74**	⇓P	**P**	**07 24 05.7**	**+0.3**
	baz=48						
K19A	**Absolon Red Bu**	**47.84**	**71**	⇑P	**P**	**07 24 05.0**	**-0.8**
	baz=48,SNR=8.3						
M18A	**Lyman**	**47.95**	**73**	⇓P	**P**	**07 24 06.6**	**-0.1**
	baz=48						
S13A	**Holt Ranch, En**	**48.00**	**79**	⇓P	**P**	**07 24 07.6**	**+0.4**
	baz=48						
Q15A	**Fillmore**	**48.02**	**77**	⇓P	**P**	**07 24 07.7**	**+0.4**
	baz=48						
K20A	**Yellowstone Ra**	**48.24**	**70**	⇑P	**P**	**07 24 08.5**	**-0.5**
	baz=48						
N18A	**Larsen Ranch,**	**48.45**	**73**	⇑P	**P**	**07 24 10.2**	**-0.4**
	baz=48						
L20A	**Wamsutter**	**48.63**	**71**	⇑P	**P**	**07 24 12.5**	**+0.5**
	baz=48						
O18A	**Roosevelt**	**48.69**	**74**	⇓P	**P**	**07 24 13.2**	**+0.8**
	baz=48						
N19A	**John Jarvie Ra**	**48.80**	**73**	⇓P	**P**	**07 24 13.2**	**-0.1**
	baz=49						
T14A	**Hurricane**	**48.81**	**79**	⇓P	**P**	**07 24 14.2**	**+0.8**
	baz=49						
P18A	**Preston Nutter**	**48.94**	**75**	⇑P	**P**	**07 24 14.8**	**+0.5**
	baz=49						
R16A	**Teasdale**	**49.02**	**77**	⇑P	**P**	**07 24 15.9**	**+0.9**
	baz=49						
M20A	**Sweetwater, Wa**	**49.03**	**72**	⇓P	**P**	**07 24 15.2**	**+0.2**
	baz=49						
SRU	**San Rafael**	**49.09**	**76**	⇓P	**P**	**07 24 15.6**	**+0.1**
	baz=49						
SRU	**San Rafael**	**49.09**	**76**	*e*P	**P**	**07 24 16.7**	**+1.2**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SRU	**San Rafael**	**49.09**	**76**	*e*P	**P**	**07 24 16.7**	**+1.2**
	comp=Z,4.0nm,0.8s,mb4.5						
U14A	**Mt Trumbull**	**49.16**	**80**	⇓P	**P**	**07 24 16.5**	**+0.4**
	baz=49						
L21A	**Rawlins**	**49.23**	**71**	⇑P	**P**	**07 24 15.8**	**-0.7**
	baz=49,SNR=5.9						
S16A	**Weppner Ranch,**	**49.30**	**78**	⇑P	**P**	**07 24 17.3**	**+0.1**
	baz=49						
Q18A	**Rafter H Ranch**	**49.33**	**75**	⇓P	**P**	**07 24 17.3**	**0.0**
	baz=49						
N20A	**Spence Gulch,**	**49.39**	**72**	⇓P	**P**	**07 24 17.7**	**-0.1**
	baz=49						
R17A	**Hanksville Air**	**49.41**	**76**	⇑P	**P**	**07 24 17.8**	**-0.1**
	baz=49						
P19A	**Cripple Cowboy**	**49.70**	**74**	⇓P	**P**	**07 24 19.9**	**-0.3**
	baz=50,SNR=5.3						
U15A	**North Rim**	**49.70**	**79**	⇑P	**P**	**07 24 20.5**	**+0.3**
	baz=50						
L22A	**Ellis Ranch, M**	**49.74**	**70**	⇓P	**P**	**07 24 20.3**	**-0.1**
	baz=50						
O20A	**White River Ci**	**49.83**	**73**	⇓P	**P**	**07 24 21.1**	**-0.1**
	baz=50						
S17A	**Black Ridge (B**	**49.85**	**77**	⇑P	**P**	**07 24 21.4**	**+0.1**
	baz=50						
M22A	**Cedar Creek Ra**	**50.03**	**71**	⇑P	**P**	**07 24 22.9**	**+0.3**
	baz=50						
V15A	**Kaibab Nationa**	**50.16**	**80**	⇑P	**P**	**07 24 24.0**	**+0.3**
	baz=50						
O21A	**Pagoda**	**50.24**	**72**	⇑P	**P**	**07 24 24.5**	**+0.2**
	baz=50						
S18A	**Hurst Farm, Bl**	**50.30**	**77**	⇓P	**P**	**07 24 25.0**	**+0.2**
	baz=50						
SPITS	**Spitsbergen Ar**	**50.41**	**356**	P	**P**	**07 24 24.6**	**-0.4**
	comp=Z,5.9nm,0.5s,mb4.8,baz=45,slow=6.1,SNR=38						
N22A	**Wattenberg Ran**	**50.49**	**71**	⇓P	**P**	**07 24 26.3**	**+0.2**
	baz=50						
HVS	**Khovu-Aksy**	**50.64**	**306**	⇑*i*P	**P**	**07 24 27.6**	**+0.5**
T18A	**Mexican Hat**	**50.73**	**77**	⇑P	**P**	**07 24 27.8**	**-0.2**
	baz=50						
S19A	**Harvey Farm, M**	**50.79**	**76**	⇑P	**P**	**07 24 28.1**	**-0.4**
	baz=51						
PV01	**Paradox Valley**	**50.89**	**75**	*e*P	**P**	**07 24 29.4**	**+0.2**
T19A	**Beclabito**	**51.45**	**77**	⇓P	**P**	**07 24 33.0**	**-0.4**
	baz=51,SNR=6.2						
WHN	**Wuhan**	**51.50**	**272**	P	**P**	**07 24 35.8**	**+1.9**
ISCO	**Idaho Springs**	**51.62**	**72**	*e*P	**P**	**07 24 35.1**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
ISCO	**Idaho Springs**	**51.62**	**72**	*e*P	**P**	**07 24 35.0**	**+0.5**
	comp=Z,3.8nm,1.4s,mb4.1						
XAN	**Xi'an**	**52.54**	**280**	P	**P**	**07 24 40.3**	**-1.2**
XAN				AP	pP	07 24 56.8	+0.8
XAN				PP	PP	07 26 40.4	-0.2
XAN				S	**S**	**07 32 03.3**	**-0.9**
XAN				SCS	ScS	07 34 25.3	-1.0
XAN				SS	SS	07 35 43.3	+0.9
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
XAN				AMB	AMB		
	comp=Z,9.0nm,13.3s						
SDCO	**Great Sand Dun**	**53.00**	**74**	*e*P	**P**	**07 24 45.3**	**+0.5**
	comp=Z,8.3nm,1.5s,mb4.4						
SDCO				*e*pP	pP	07 24 59.7	+0.3
ZAA0	**Zalesovo Array**	**53.26**	**313**	*e*P	**P**	**07 24 45.2**	**-1.3**
ZALV	**Zalesovo Beam**	**53.26**	**313**	P	**P**	**07 24 45.5**	**-1.0**
	comp=Z,0.8nm,0.3s,mb4.1,baz=20,slow=4.7,SNR=6.2						
ZALV				PcP	PcP	07 25 53.7	+0.1
	comp=Z,1.5nm,0.7s,baz=28,slow=3.5,SNR=4.1						
ZALV				LR	LR	07 47 57.8	
	comp=Z,61nm,19.9s,MS3.6,baz=80,slow=36						
ZALV	**Zalesovo Beam**	**53.26**	**313**	P	**P**	**07 24 45.5**	**-1.0**
ZALV						07 25 53.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,61nm,20.0s,MS3.6						
NVS	**Novosibirsk**	**53.42**	**314**	*i* P	**P**	**07 24 47.0**	**-0.7**
LZH	**Lanzhou**	**54.30**	**285**	*e*P	**P**	**07 24 54.5**	**+0.1**
LZH				AP	pP	07 25 11.3	+2.4
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.5s						
LZH				LR	LR		
	comp=N,251nm,14.4s						
LZH				LR	LR		
	comp=Z,380nm,15.4s,MS4.6						
GTA	**Gaotai**	**54.52**	**291**	⇓P	**P**	**07 24 56.6**	**+0.6**
GTA				AP	pP	07 25 12.4	+1.9
GTA				S	**S**	**07 32 26.4**	**-4.6**
GTA				XS	sS	07 32 53.4	-2.0
GTA				SS	SS	07 36 07.8	-5.7
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,77nm,6.0s						
GTA				LR	LR		
	comp=N,127nm,18.9s,MS4.2						
GTA				LR	LR		
	comp=E,108nm,17.1s,MS4.2						
GTA				LR	LR		
	comp=Z,193nm,18.3s,MS4.2						
CD2	**Chengdu**	**57.85**	**281**	*e*P	**P**	**07 25 20.8**	**+0.9**
ARCES	**ARCESS Array B**	**58.00**	**349**	P	**P**	**07 25 19.1**	**-1.2**
	comp=Z,6.6nm,1.0s,mb4.6,baz=7.5,slow=10,SNR=3.5						
ARCES	**ARCESS Array B**	**58.00**	**349**	P	**P**	**07 25 19.2**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	**Kurchatov**	**58.25**	**313**	P	**P**	**07 25 22.9**	**+0.6**
	comp=Z,8.0nm,0.6s,mb4.9,baz=40,slow=6.7,SNR=13						
KURK	**Kurchatov**	**58.25**	**313**	⇓*i*P	**P**	**07 25 21.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
KURK	**Kurchatov**	**58.25**	**313**	*e*P	**P**	**07 25 22.3**	**0.0**
	comp=Z,9.3nm,0.8s,mb4.9						
WMQ	**Urumqi**	**58.42**	**302**	*e*P	**P**	**07 25 25.9**	**+2.3**
WMQ				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,114nm,19.5s,MS4.1						
WMQ				LR	LR		
	comp=E,92nm,19.5s,MS4.1						
WMQ				LR	LR		
	comp=Z,136nm,19.5s,MS4.1						
WMOK	**Wichita Mounta**	**59.04**	**72**	*e*P	**P**	**07 25 27.4**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMOK	**Wichita Mounta**	**59.04**	**72**	*e*P	**P**	**07 25 27.4**	**-0.6**
	comp=Z,2.9nm,0.8s,mb4.4						
GYA	**Guiyang**	**59.17**	**275**	P	**P**	**07 25 29.8**	**+0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**59.19**	**307**	*e*P	**P**	**07 25 28.1**	**-0.8**
MKAR	**Makanchi Array**	**59.19**	**307**	P	**P**	**07 25 28.0**	**-0.9**
	comp=Z,1.9nm,0.3s,mb4.6,baz=50,slow=6.4,SNR=37						
MKAR				LR	LR	07 51 45.5	
	comp=Z,75nm,18.2s,MS3.9,baz=236,slow=37						
MKAR	**Makanchi Array**	**59.19**	**307**	P	**P**	**07 25 28.0**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,75nm,18.2s						
TXAR	**Lajitas Array**	**59.82**	**80**	P	**P**	**07 25 33.1**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.8,baz=306,slow=6.4,SNR=16						
VOSK	**Vostochnaya**	**60.19**	**318**	P	**P**	**07 25 35.3**	**-0.4**
VOSK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
BVA0	**Borovoye Array**	**60.22**	**319**	P	**P**	**07 25 35.4**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**60.22**	**319**	P	**P**	**07 25 36.0**	**+0.2**
	comp=Z,11nm,0.6s,mb5.1,baz=51,slow=7.4,SNR=62						
BVAR	**Borovoye Array**	**60.22**	**319**	P	**P**	**07 25 36.0**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,11nm,0.6s						
BRVK	**Borovoye**	**60.24**	**319**	*e*P	**P**	**07 25 36.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
BRVK	**Borovoye**	**60.24**	**319**	*e*P	**P**	**07 25 36.2**	**+0.2**
	comp=Z,14nm,0.8s,mb5.0						
SCHQ	**Schefferville**	**60.81**	**37**	P	**P**	**07 25 38.6**	**-1.2**
	comp=Z,2.9nm,0.3s,mb4.9,baz=38,slow=8.6,SNR=16						
SCHQ	**Schefferville**	**60.81**	**37**	*e*P	**P**	**07 25 38.6**	**-1.2**
	comp=Z,5.0nm,0.4s,mb5.0						
SCHQ				*e*pP	pP	07 25 51.4	-3.2
TKM2	**Tokmak 2**	**65.28**	**308**	*e*P	**P**	**07 26 08.8**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TKM2	**Tokmak 2**	**65.28**	**308**	*e*P	**P**	**07 26 08.8**	**-0.9**
	comp=Z,5.2nm,0.9s,mb4.6						
AAK	**Ala-Archa**	**66.04**	**309**	⇓*i*P	**P**	**07 26 14.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**66.04**	**309**	*e*P	**P**	**07 26 15.2**	**+0.6**
	comp=Z,5.4nm,0.9s,mb4.6						
AML	**Almayashu**	**66.81**	**309**	*e*P	**P**	**07 26 20.4**	**+0.9**
	comp=Z,8.3nm,1.0s,mb4.7						
AKTK	**Aktyubinsk**	**67.10**	**324**	P	**P**	**07 26 21.7**	**+0.5**
AKTO	**Aktyubinsk**	**67.10**	**324**	P	**P**	**07 26 21.7**	**+0.5**
	comp=Z,9.9nm,0.8s,mb4.9,baz=46,slow=6.0,SNR=42						
AKTO	**Aktyubinsk**	**67.10**	**324**	P	**P**	**07 26 21.7**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
AB31	**Akbulak array**	**67.32**	**322**	P	**P**	**07 26 23.0**	**+0.4**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KK31	**Karatay Array**	**67.60**	**311**	*i* P	**P**	**07 26 24.4**	**-0.1**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
NOA	**NORSAR Array B**	**67.65**	**354**	P	**P**	**07 26 23.9**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.3,baz=9.1,slow=6.4,SNR=5.5						
NOA	**NORSAR Array B**	**67.65**	**354**	P	**P**	**07 26 23.9**	**-0.6**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.86**	**275**	P	**P**	**07 26 38.4**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.2,baz=25,slow=7.1,SNR=6.7						
CMAR	**Chiang Mai Arr**	**69.86**	**275**	P	**P**	**07 26 38.4**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PPT	**Papeete**	**73.74**	**149**	*e*LR	LR	07 49 42.5	
	comp=Z,101nm,26.0s						
PPT	**Papeete**	**73.74**	**149**	LR	LR	07 56 11.1	
	comp=Z,184nm,18.5s,MS4.4,baz=12,slow=33						
KBL	**Kabul**	**74.98**	**307**	*e*P	**P**	**07 27 08.9**	**-0.3**
KBL				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
KBL	**Kabul**	**74.98**	**307**	*e*P	**P**	**07 27 08.9**	**-0.4**
	comp=Z,11nm,0.9s,mb4.8						
AKASG	**Malin Array Be**	**75.29**	**341**	P	**P**	**07 27 09.3**	**-1.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=23,slow=6.4,SNR=4.0						
AKASG				LR	LR	08 04 54.3	
	comp=Z,52nm,18.3s,MS3.9,baz=310,slow=39						
AKASG	**Malin Array Be**	**75.29**	**341**	P	**P**	**07 27 09.3**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				MLR	MLR		
	comp=Z,52nm,18.3s						
AKASG	**Malin Array Be**	**75.29**	**341**	P	**P**	**07 27 09.3**	**-1.4**
AKASG				LR	LR	08 04 54.3	
TBI	**Tubuai**	**79.20**	**151**	*e*LR	LR	07 52 15.8	
	comp=Z,148nm,26.5s						
GERES	**GERESS Array B**	**79.52**	**350**	LR	LR	08 05 57.9	
	comp=Z,63nm,19.1s,MS4.0,baz=45,slow=38						
RAO	**Raoul Island**	**80.20**	**178**	*e*P	**P**	**07 27 37.5**	**-0.5**
RAO				*e**PP	pP	07 27 50.1	-3.3
RAO				pmax	pmax		
	comp=Z,497nm,0.4s						
RAO	**Raoul Island**	**80.20**	**178**	*e*P	**P**	**07 27 37.5**	**-0.5**
	comp=Z,497nm,0.4s						
RAO				*e*pP	pP	07 27 50.1	-3.3
WRA	**Warramunga Arr**	**81.13**	**222**	P	**P**	**07 27 40.7**	**-2.6**
	comp=Z,1.0nm,0.8s,mb3.8,baz=33,slow=6.1,SNR=7.5						
WRA	**Warramunga Arr**	**81.13**	**222**	P	**P**	**07 27 40.7**	**-2.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**84.56**	**334**	P	**P**	**07 28 01.2**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.2,baz=58,slow=4.5,SNR=5.8						
BRTR	**Keskin Array B**	**84.56**	**334**	*i* P	**P**	**07 28 01.2**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**84.62**	**221**	P	**P**	**07 28 00.1**	**-1.1**
	comp=Z,0.6nm,0.8s,mb3.8,baz=22,slow=5.3,SNR=5.5						
ASAR	**Alice Springs**	**84.62**	**221**	P	**P**	**07 28 00.1**	**-1.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**115.83**	**357**	PKiKP	PKiKP	07 34 09.0	-1.5
	comp=Z,0.7nm,1.1s,baz=332,slow=2.6,SNR=2.5						
BOSA	**Boshof**	**150.17**	**309**	PKPbc	PKPbc	07 35 18.3	0.0
	comp=Z,1.8nm,0.3s,baz=108,slow=3.8,SNR=7.3						
BOSA	**Boshof**	**150.17**	**309**	PKIKP	PKPbc	07 35 18.3	0.0
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.3s						

ISK ***14*** *07:25:33.8, 3937N×4093E, h3km, MD2.9*
NEIC ***14*** *07:25:33.7, 3938N×4094E, h5km, MD3.0(ISK), After ISK.*
ISCJB ***14*** *07:25:35.1±0.8, 3937N±003×4095E±004, h1km±6km,*
Error ellipse: s-maj=5.5km s-min=4.5km az=172.7
DDA ***14*** *07:25:35.6, 3940N×4099E, h8km±3km, Md3.0*
ISC 14 07:25:35.5±0.6, **3935N**±003×**4097E**±004, **h5**km±6km, **n16,**
σ**0.98**/28, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.42**	**160**	*i* P	**Pg**	**07 25 44.0**	**+0.4**
BNGL				*i* S	**Sg**	**07 25 52.8**	**+3.8**
EZM	**Erzurum**	**0.63**	**28**	*e*PG	**Pg**	**07 25 46.8**	**-1.0**
EZM				*e*SG	**Sg**	**07 25 55.6**	**-0.4**
ERZM	**Erzurum**	**0.64**	**29**	*i* P	**Pg**	**07 25 47.3**	**-0.4**
ERZM				*i* S	**Sg**	**07 25 56.7**	**+0.7**
KOPT	**Kop Dagi**	**0.76**	**332**	*i* P	**Pg**	**07 25 48.9**	**-1.2**
KOPT				*i* S	**Sg**	**07 26 01.4**	**+1.4**
PTK	**Pertek**	**1.31**	**250**	*e*PN	**Pn**	**07 25 58.3**	**-2.2**
PTK				*e*SN	**Sn**	**07 26 17.6**	**-0.7**
PTK	**Pertek**	**1.31**	**250**	Pn	**Pn**	**07 25 59.0**	**-1.4**
PTK				S	**Sg**	**07 26 18.0**	**+0.5**
TATV	**Tatvan**	**1.31**	**129**	*i* P	**Pn**	**07 25 59.4**	**-1.1**
TATV				*i* S	**Sg**	**07 26 17.4**	**-0.3**
AGRB	**Hanur-Agry**	**1.58**	**81**	*e*PN	**Pn**	**07 26 04.0**	**-0.2**
GUMT	**Gumushane**	**1.60**	**315**	*e*PN	**Pn**	**07 26 03.8**	**-0.5**
GUMT				*e*SN	**Sn**	**07 26 25.2**	**-0.2**
GUMT	**Gumushane**	**1.60**	**315**	Pn	**Pn**	**07 26 03.8**	**-0.5**
GUMT				Sn	**Sn**	**07 26 25.8**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.62**	**234**	*e*PN	**Pn**	**07 26 04.7**	**0.0**
PZAR	**Pazar-Rize**	**1.83**	**358**	*e*PN	**Pn**	**07 26 06.9**	**-0.7**
DAGI	**Agillar**	**1.87**	**22**	*i* P	**Pn**	**07 26 09.6**	**+1.4**
DAGI				*i* S	**Sn**	**07 26 35.3**	**+3.1**
KEMA	**Kemaliye**	**1.92**	**268**	*i* P	**Pn**	**07 26 09.5**	**+0.6**
KEMA				*i* S	**Sn**	**07 26 39.1**	**+5.7**
MARD	**Mardin**	**2.04**	**184**	*i* P	**Pn**	**07 26 12.0**	**+1.6**
MARD				*i* S	**Sn**	**07 26 40.4**	**+4.2**
BCA	**Borcka**	**2.15**	**13**	*e*PN	**Pn**	**07 26 11.8**	**-0.3**

ISCJB ***14*** *07:29:49.9±0.3, 2372N±002×12157E±002, h40km±5km,*
Error ellipse: s-maj=3.3km s-min=2.2km az=41.9
TAP ***14*** *07:29:49.5, 2373N×12150E, h46km, ML3.9, B*
JMA ***14*** *07:29:50.0±0.3, 2376N×12158E, h79km, M3.1*
ISC 14 07:29:50.4±0.2, **2372N**±002×**12156E**±002, **h37**km±4km,
n60, σ**0.79**/102, **4C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.02**	**240**	P	**Pn**	**07 29 57.0**	**+0.7**
	baz=113						
TEGC				*e*S	**Sn**	**07 30 03.5**	**+3.0**
	baz=113						
ESL	**Shilin**	**0.15**	**309**	⇑*i*P	**Pn**	**07 29 56.8**	**-0.2**
	baz=326						
ESL				S	**Sn**	**07 30 01.4**	**0.0**
	baz=326						
ESF	**Shoufeng Towns**	**0.16**	**342**	*e*P	**Pn**	**07 29 56.7**	**-0.3**
	baz=352						
ESF				*e*S	**Sn**	**07 30 02.2**	**+0.6**
	baz=352						
HWA	**Hwalien**	**0.26**	**9**	*e*P	**Pn**	**07 29 58.3**	**+0.3**
	baz=13						
EHY	**Hungye**	**0.30**	**226**	⇓*i*P	**Pn**	**07 29 57.7**	**-0.8**
	baz=211						
EHY				*e*S	**Sn**	**07 30 02.5**	**-1.6**
	baz=211						
TWD	**Chiawan**	**0.36**	**5**	⇓*i*P	**Pn**	**07 29 58.8**	**-0.4**
	baz=4.0						
TWD				S	**Sn**	**07 30 05.3**	**0.0**
	baz=4.0						
TWF1	**Yuli**	**0.44**	**213**	⇓*i*P	**Pn**	**07 29 59.1**	**-1.1**
	baz=213						
TWF1				S	**Sn**	**07 30 05.7**	**-1.3**
	baz=213						
WHF	**Hehuan Shan**	**0.50**	**328**	⇓*i*P	**Pn**	**07 30 00.9**	**-0.2**
	baz=333						
WHF				S	**Sn**	**07 30 08.3**	**-0.2**
	baz=333						
SMLT	**Sun Moon Lake**	**0.63**	**285**	⇓*i*P	**Pn**	**07 30 02.5**	**-0.3**
	baz=286						
SMLT				S	**Sn**	**07 30 11.1**	**-0.4**
	baz=286						
TWT	**Tachien**	**0.64**	**327**	⇓*i*P	**Pn**	**07 30 02.9**	**0.0**
	baz=331						
TWT				S	**Sn**	**07 30 11.5**	**-0.4**
	baz=331						
CHKT	**Chengkung**	**0.64**	**196**	P	**Pn**	**07 30 02.2**	**-0.8**
	baz=180						
CHKT				*e*S	**Sn**	**07 30 11.9**	**-0.1**
	baz=180						
TYC	**Yuchr**	**0.67**	**286**	⇓*i*P	**Pn**	**07 30 02.9**	**-0.4**
	baz=287						
TYC				S	**Sn**	**07 30 12.2**	**-0.5**
	baz=287						
ALS	**Alishan**	**0.72**	**253**	*e*P	**Pn**	**07 30 04.2**	**+0.1**
	baz=252						
ALS				*e*S	**Sn**	**07 30 14.0**	**0.0**
	baz=252						
ENA	**Nanau**	**0.72**	**13**	P	**Pn**	**07 30 03.2**	**-0.9**
	baz=9.0						
ENA				S	**Sn**	**07 30 12.8**	**-1.2**
	baz=9.0						
ELDTW	**Lidau**	**0.73**	**223**	⇓P	**Pn**	**07 30 02.9**	**-1.3**
	baz=220						
ELDTW				*e*S	**Sn**	**07 30 12.7**	**-1.4**
	baz=220						
NNS	**Nan Shan**	**0.74**	**347**	P	**Pn**	**07 30 03.9**	**-0.5**
	baz=356						
NNS				S	**Sn**	**07 30 13.6**	**-0.7**
	baz=356						
CHN5	**Tsauling**	**0.82**	**262**	P	**Pn**	**07 30 05.2**	**-0.2**
	baz=261						
CHN5				S	**Sn**	**07 30 16.8**	**+0.5**
	baz=261						
WNT	**Mingjian**	**0.82**	**281**	P	**Pn**	**07 30 05.6**	**+0.2**
	baz=282						
WNT				S	**Sn**	**07 30 17.1**	**+0.8**
	baz=282						
TCU	**Taichung**	**0.91**	**298**	*e*P	**Pn**	**07 30 07.2**	**+0.4**
	baz=299						
TCU				*e*S	**Sn**	**07 30 19.5**	**+0.8**
	baz=299						
WGK	**Gukeng**	**0.92**	**268**	*e*P	**Pn**	**07 30 07.4**	**+0.7**
	baz=267						
ENTT	**Nioudou**	**0.92**	**0**	⇓*i*P	**Pn**	**07 30 06.2**	**-0.6**
	baz=9.0						
ENTT				S	**Sn**	**07 30 18.0**	**-0.8**
	baz=9.0						
STYT	**Tauyuan**	**0.92**	**233**	*e*S	**Sn**	**07 30 19.6**	**+0.8**
	baz=239						
TWC	**Suao**	**0.92**	**17**	*e*P	**Pn**	**07 30 06.3**	**-0.6**
	baz=10.0						
TWC				*e*S	**Sn**	**07 30 18.8**	**-0.1**
	baz=10.0						
TWQ1	**Liyutan**	**0.95**	**311**	⇓*i*P	**Pn**	**07 30 07.5**	**+0.2**
	baz=313						
TWQ1				S	**Sn**	**07 30 20.1**	**+0.5**
	baz=313						
CHN4	**Tsaushan**	**0.96**	**248**	P	**Pn**	**07 30 07.5**	**+0.1**
	baz=246						
CHN4				S	**Sn**	**07 30 20.9**	**+1.1**
	baz=246						
NSK	**Sanguang**	**0.97**	**349**	⇓*i*P	**Pn**	**07 30 07.4**	**-0.1**
	baz=360						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NSK				*i* S	Sn	07 30 19.2	-0.8
	baz=360						
WTP	Ta-pu	0.99	242	⇑P	Pn	07 30 07.8	0.0
	baz=240						
WTP				*e*S	Sn	07 30 21.6	+1.1
	baz=240						
TWG	Pinlang	1.00	207	*e*P	Pn	07 30 05.7	-2.2
	baz=194						
TWG				*e*S	Sn	07 30 17.6	-3.2
	baz=194						
TWE	Neicheng	1.00	6	P	Pn	07 30 07.0	-1.0
	baz=17						
CHN2	Minshiung	1.01	260	*e*P	Pn	07 30 07.9	-0.2
	baz=259						
CHN2				*e*S	Sn	07 30 22.4	+1.3
	baz=259						
TTN	Taitung	1.03	202	*e*P	Pn	07 30 07.5	-0.9
	baz=189						
NSTT	Nanjuang	1.04	331	⇓*i*P	Pn	07 30 08.7	+0.2
	baz=322						
NSTT				S	Sn	07 30 22.7	+0.9
	baz=322						
CHY	Chiayi	1.06	258	*e*P	Pn	07 30 08.7	-0.1
	baz=256						
TWK	Hsinying	1.08	246	P	Pn	07 30 09.2	+0.2
	baz=244						
TWK				*e*S	Sn	07 30 23.0	+0.2
	baz=244						
CHN1	Nanshi	1.09	241	⇑P	Pn	07 30 09.1	0.0
	baz=240						
CHN1				*e*S	Sn	07 30 23.5	+0.5
	baz=240						
SGST	Jiashian	1.10	235	*e*P	Pn	07 30 09.6	+0.3
	baz=231						
WTCT	Ta-ch'eng	1.18	277	*e*P	Pn	07 30 10.1	-0.3
	baz=277						
WTCT				*e*S	Sn	07 30 26.8	+1.6
	baz=277						
TWA	Mucha	1.25	1	P	Pn	07 30 11.3	-0.2
	baz=2.0						
TWA				S	Sn	07 30 26.6	-0.5
	baz=2.0						
NCU	National Centr	1.29	345	*e*P	Pn	07 30 12.3	+0.3
	baz=349						
SSD	Sandimen	1.29	222	*e*P	Pn	07 30 12.0	+0.1
	baz=220						
SSD				*e*S	Sn	07 30 29.2	+1.2
	baz=220						
CHN8	Yiju	1.29	254	*e*P	Pn	07 30 11.2	-0.7
	baz=253						
CHN8				*e*S	Sn	07 30 28.5	+0.5
	baz=253						
TWB1	Santiao Chiao	1.34	17	*e*P	Pn	07 30 12.7	+0.1
	baz=9.0						
TWB1				*e*S	Sn	07 30 30.6	+1.4
	baz=9.0						
NWF	Wu-fen Shan	1.36	8	*i* P	Pn	07 30 12.9	0.0
	baz=9.0						
NWF				*e*S	Sn	07 30 30.1	+0.4
	baz=9.0						
TWM1	Shoushan	1.37	230	*e*P	Pn	07 30 14.6	+1.5
	baz=226						
TWS1	Kuangyinshan	1.38	355	*e*P	Pn	07 30 12.9	-0.2
	baz=8.0						
TWS1				*e*S	Sn	07 30 30.4	+0.2
	baz=8.0						
TAW	Tawu	1.49	204	*e*P	Pn	07 30 15.8	+1.1
	baz=195						
YOJ	Yonaguni jima	1.52	61	P	Pn	07 30 15.4	+0.3
YOJ				*e*S	Sn	07 30 34.3	+0.7
YOJ	Yonaguni jima	1.52	61	*e*P	Pn	07 30 15.1	0.0
	baz=61						
TWY	Chenhua	1.55	1	*e*P	Pn	07 30 14.6	-1.0
	baz=6.0						
SCZT	Fangliau	1.60	213	*e*P	Pn	07 30 16.7	+0.6
	baz=202						
SCZT				*e*S	Sn	07 30 36.5	+1.0
	baz=202						
LAY	Lan-yu	1.67	180	*e*P	Pn	07 30 15.4	-1.8
	baz=171						
PNG	Penghu	1.84	266	⇑P	Pn	07 30 18.4	-1.1
	baz=276						
TWK1	Hengchun	1.90	202	*e*P	Pn	07 30 20.2	-0.1
	baz=189						
TSEB	Hengchuen, Pin	1.91	199	*e*P	Pn	07 30 20.8	+0.3
	baz=188						
IRIF	Iriomote-Funau	2.08	72	P	Pn	07 30 23.2	+0.5
IRIF				*e*S	Sn	07 30 48.3	+0.9
HATJ	Hateruma jima	2.08	80	P	Pn	07 30 23.0	+0.2
HATJ				*e*S	Sn	07 30 48.0	+0.5
JKRS	Kuro-shima	2.30	77	P	Pn	07 30 26.5	+0.7
JKRS				*e*S	Sn	07 30 54.3	+1.4
JIJ	Ishigaki jima	2.45	74	P	Pn	07 30 27.7	-0.1
JIJ				*e*S	Sn	07 30 56.0	-0.5
KNM	Kinmen	2.94	284	*e*P	Pn	07 30 34.1	-0.5
	baz=284						
JTJ	Tarama	3.01	72	*e*S	Sn	07 31 11.7	+1.2

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*IDC **14** 08:20:16.1±1.0, 3629N×2303E, h0^{km}, mb3.9/8, mb1 3.9/10, mb1mx3.8/28, mbtmp3.8/10, ML3.6/2, Error ellipse: s-maj=24.2km s-min=11.4km az=41.0*

*CSEM **14** 08:20:17.8±0.1, 3620N×2295E, h20^{km}, ML3.4, Error ellipse: s-maj=3.1km s-min=1.7km az=54.0*

*THE **14** 08:20:18.3, 3637N×2302E, h0^{km}±3^{km}, ML4.0/1, Error ellipse: s-maj=4.6km s-min=1.3km az=200.0*

*ISCJB **14** 08:20:19.3±0.5, 3621N±003×2297E±005, h40^{km}±7^{km}, mb3.8/8, Error ellipse: s-maj=7.2km s-min=4.5km az=145.3*

*HLW **14** 08:20:21.0, 3587N×2233E, h26^{km}, Mb3.8*

*ATH **14** 08:20:25.7, 3672N×2265E, h41^{km}±4^{km}, MD3.7/12, ML3.4*

*NEIC **14** 08:20:25.7, 3672N×2266E, h40^{km}, MG3.4(ATH), After ATH.*

ISC 14 08:20:18.2±0.9, **3626N**±003×**2301E**±004, **h11**^{km}±7^{km}, **n50**, σ1^{s}17/58, **mb3.8**/8, **2C-2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PYL	PYLOS	1.20	302	P	Pb	08 20 38.8	-2.1
PYL				S	Sg	08 20 57.3	+0.5
ITM	Ithomi	1.26	317	*e*P	Pn	08 20 40.9	-0.9
ITM				*e*S	Sb	08 20 51.4	-6.9
VAM	Vamos	1.29	131	*e*P	Sg	08 20 56.1	-3.5
NAIG	Nisos Aigina	1.54	14	*e*P	Pn	08 20 48.0	+2.3
LTK	Loutraki	1.76	359	P	Pn	08 20 48.5	-0.1
LTK				S	Sn	08 21 10.9	-0.1
ATH	Athens Observa	1.80	18	*e*P	Pn	08 20 51.9	+2.7
IDI	Anoyia	1.81	122	Pg	Pn	08 20 50.1	+0.8
	3.9nm,0.3s,baz=276,slow=14,SNR=28						
IDI				Lg		08 21 13.8	
	84nm,0.3s,baz=129,slow=22,SNR=16						
THR5	Thira Island,	1.90	85	P	Pn	08 20 51.3	+0.8
PTL	Penteli	1.91	21	*e*P	Pn	08 20 53.2	+2.5
PTL				*e*S	Sn	08 21 13.1	-1.7
PTL	Penteli	1.91	21	*e*P	Pn	08 20 53.2	+2.5
PTL				*e*S	Sn	08 21 13.0	-1.8
THR6	Thira Island,	1.93	86	P	Pn	08 20 51.0	0.0
THR3	Thira Island,	1.94	85	P	Pn	08 20 52.4	+1.3
APE	Apeiranthos	2.18	68	P	Pn	08 20 54.6	+0.2
APE				S	Sn	08 21 22.4	+0.9
APE	Apeiranthos	2.18	68	*e*P	Pg	08 21 03.6	+3.6
NPS	Neapolis	2.34	114	*e*P	Pg	08 21 10.0	+7.0
LKR	Lokris	2.39	360	*e*P	Pn	08 20 57.7	+0.5
KFL	Anninata	2.56	317	P	Pn	08 21 02.3	+2.7
AGG	Agios Georgios	2.81	349	P	Pn	08 21 03.5	+0.5
AGG				S	Sn	08 21 36.6	-0.3
EVR	Evrytania	2.82	341	*e*P	Pn	08 21 03.7	+0.5
CHOS	Chios island	3.23	48	P	Pn	08 21 08.2	-0.6
SMG	Samos	3.39	64	*e*P	Pg	08 21 19.9	-3.2
SMG	Samos	3.39	64	*e*P	Pg	08 21 20.3	-2.8
THL	Klokotos Trika	3.39	347	P	Pn	08 21 11.2	+0.2
KARP	Karpathos	3.45	101	*e*P	Pg	08 21 25.0	+0.8
KARP	Karpathos	3.45	101	*e*P	Pg	08 21 25.3	+1.1
PAIG	Paliouri	3.70	8	P	Pn	08 21 14.6	-0.7
LIT	Litokhoron	3.86	354	P	Pn	08 21 16.1	-1.3
LIA	Limnos Island	4.02	25	P	Pn	08 21 19.3	-0.3
PLG	Polygyros	4.12	5	P	Pn	08 21 21.0	-0.1
ARG	Arkhangelos	4.14	89	*e*P	Pg	08 21 33.5	-3.9
ARG	Arkhangelos	4.14	89	*e*P	Pg	08 21 33.7	-3.7
OUR	Ouranopolis	4.14	10	P	Pn	08 21 21.0	-0.3
HORT	Hortiatis	4.33	1	P	Pn	08 21 24.3	+0.3
SLUM		5.10	158	⇑*e*P	Pn	08 21 34.1	-0.4
HMAT	Matruh	6.18	145	⇓P	Pn	08 21 50.3	+1.0
HMAT				S	Sn	08 22 55.9	-4.1
CUC	Castrocucco	6.78	305	*e*Pn	Pn	08 21 58.5	+0.8
	40nm,0.6s						
SWA2		7.29	163	P	Pn	08 22 02.7	-1.9
BRTR	Keskin Array B	9.08	64	Pn	Pn	08 22 33.7	+4.6
	0.1nm,0.3s,baz=239,slow=14,SNR=4.8						
HFRF	Wahat Farafira	10.14	152	⇑*i*P	Pn	08 22 44.2	+0.5
MMAI	Mount Meron Ar	10.71	104	Pn	Pn	08 22 50.2	-1.4
	0.7nm,0.3s,baz=303,slow=13,SNR=3.0						
HDK1	Dakhla	12.01	151	⇓*e*P	Pn	08 23 10.4	+1.1
GERES	GERESS Array B	14.31	334	Pn	Pn	08 23 42.3	+1.7
	0.1nm,0.3s,baz=164,slow=11,SNR=2.5						
HFS	Hagfors	24.64	349	P	P	08 25 37.3	-1.1
	3.4nm,0.6s,mb4.1,baz=156,slow=11,SNR=13						
NOA	NORSAR Array B	25.91	347	P	P	08 25 48.2	-1.8
	0.8nm,0.6s,mb3.4,baz=152,slow=9.5,SNR=5.2						
EKA	Eskdalemuir Ar	26.14	325	P	P	08 25 53.0	+0.9
	1.6nm,0.7s,mb3.7,baz=122,slow=9.4,SNR=4.5						
AKTO	Aktyubinsk	28.83	50	P	P	08 26 15.2	-1.1
	0.5nm,0.4s,mb3.6,baz=91,slow=5.9,SNR=4.1						
TORD	Torodi Ar. Bea	29.94	225	P	P	08 26 26.0	-0.4
	0.2nm,0.6s,mb3.0,baz=34,slow=9.1,SNR=2.5						
ARCES	ARCESS Array B	33.36	2	P	P	08 26 55.6	-0.4
	6.9nm,1.0s,mb4.5,baz=289,slow=3.7,SNR=2.9						
MKAR	Makanchi Array	44.64	57	P	P	08 28 30.2	-0.4
	2.4nm,0.4s,mb4.4,baz=269,slow=7.8,SNR=38						
YKA	Yellowknife Ar	75.86	341	P	P	08 32 03.5	-0.6
	0.3nm,0.6s,mb3.4,baz=32,slow=5.4,SNR=12						

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*ISCJB **14** 08:28:46.2±3.0, 563S±0.1×272W±02, h101^{km}±29^{km}, mb4.3/14, Error ellipse: s-maj=18.2km s-min=13.2km az=36.2*

*NEIC **14** 08:28:48.5±2.8, 5630S×2720W, h109^{km}±25^{km}, mb4.5/7, Error ellipse: s-maj=13.4km s-min=9.7km az=219.0*

*IDC **14** 08:28:49.3±2.4, 5626S×2728W, h115^{km}±21^{km}, mb4.0/12, mb1 4.1/13, mb1mx4.0/19, mbtmp4.0/13, MS3.9/3, Ms1 3.8/3, ms1mx3.2/24, Error ellipse: s-maj=15.3km s-min=13.5km az=66.0*

ISC 14 08:28:48.5±3.1, **563S**±01×**272W**±02, **h107**^{km}±30^{km}, **n39**, σ0^{s}96/26, **mb4.3**/14, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.57	158	*e*P	Pn	08 32 34.7	+0.7
VNA1				*e*		08 32 37.6	
VNA1				*e*		08 32 41.3	
VNA1				*e*		08 32 49.2	
VNA3	Neumayer Olymp	16.76	160	*e*P	Pn	08 32 35.7	-0.6
VNA3				*e*		08 32 37.9	
VNA3				*e*		08 32 41.4	
VNA3				*e*		08 32 50.8	
VNA2	Neumayer--Watz	16.97	158	*e*P	Pn	08 32 39.2	+0.4
	baz=316,slow=12						
VNA2				*e*		08 32 41.3	
VNA2				*e*		08 32 43.8	
VNA2				*e*		08 32 52.6	
SNAA	Sanae	18.52	156	*e*P	P	08 32 54.5	-1.6
SNAA				*e*		08 32 56.3	
SNAA				*e*		08 32 59.4	
SNAA				*e*		08 33 05.2	
SNAA	Sanae	18.52	156	*e*P	P	08 32 54.5	-1.6
	34nm,0.8s						
PMSA	Palmer Station	19.74	230	P	P	08 33 11.1	+1.7
	3.4nm,0.3s,baz=176,slow=19,SNR=8.8						
PLCA	Paso Flores	32.05	280	P	P	08 35 03.1	-1.6
	2.0nm,0.8s,mb3.9,baz=208,slow=11,SNR=3.0						
PLCA				PcP	PcP	08 37 51.2	-0.4
	1.0nm,1.0s,baz=32,slow=19,SNR=3.1						
PLCA				LR	LR	08 46 08.1	
	comp=Z,139nm,18.6s,baz=337,slow=32						
QSPA	South Pole Qui	33.96	180	P	P	08 35 21.5	+0.6
	5.9nm,0.4s,mb4.8,baz=221,slow=1.0,SNR=25						
QSPA				PcP	PcP	08 37 56.3	0.0
	3.2nm,0.4s,baz=22,slow=0.4,SNR=5.2						
QSPA				ScP	ScP	08 41 30.1	-0.9
	2.1nm,0.7s,baz=268,slow=1.5,SNR=6.7						
QSPA	South Pole Qui	33.96	180	P	P	08 35 21.5	+0.6
QSPA				PcP	PcP	08 37 56.3	0.0
QSPA				ScP	ScP	08 41 30.1	-0.9
CPUP	Villa Florida	36.97	311	P	P	08 35 47.3	+0.1
	2.1nm,0.5s,mb4.3,baz=115,slow=6.3,SNR=11						
CPUP				PcP	PcP	08 38 06.3	+0.3
	1.6nm,0.5s,baz=63,slow=2.0,SNR=5.4						
CPUP				ScP	ScP	08 41 40.7	-2.1
	0.2nm,0.3s,baz=39,slow=9.1,SNR=2.8						
CPUP	Villa Florida	36.97	311	*e*P	P	08 35 47.0	-0.2
	13nm,0.6s,mb5.0						
CPUP				*e*PcP	PcP	08 38 05.8	-0.3
CFAA	Coronel Fontan	37.66	293	P	P	08 35 51.2	-1.7
	0.3nm,0.3s,mb3.6,baz=137,slow=8.3,SNR=8.5						
CFAA				PcP	PcP	08 38 07.6	-0.5
	0.4nm,0.5s,baz=160,slow=3.0,SNR=6.9						
CFAA	Coronel Fontan	37.66	293	P	P	08 35 51.2	-1.7
CFAA				PcP	PcP	08 38 07.6	-0.5
MAW	Mawson	39.96	143	P	P	08 36 11.8	+0.1
	2.1nm,0.3s,mb4.5,baz=210,slow=8.2,SNR=19						
LVC	Limon Verde	45.42	300	*e*P	P	08 36 56.7	+0.4
	13nm,0.6s,mb4.8						
BOSA	Boshof	46.03	76	P	P	08 37 00.9	-0.1
	1.4nm,0.8s,mb3.8,baz=223,slow=17,SNR=5.1						
BOSA				LR	LR	08 52 41.7	
	comp=Z,43nm,19.3s,baz=101,slow=31						
VNDA	Vanda	46.33	183	P	P	08 37 03.4	+0.5
	4.3nm,0.6s,mb4.4,baz=181,slow=6.3,SNR=43						
VNDA	Vanda	46.33	183	*e*P	P	08 37 02.7	-0.2
	3.9nm,0.6s,mb4.3						
LSZ	Lusaka	58.46	69	P	P	08 38 33.1	+0.1
	0.9nm,0.3s,mb4.2,baz=181,slow=5.3,SNR=5.0						
LSZ				pP	pP	08 39 01.4	+2.4
	2.0nm,0.8s,baz=176,slow=8.0,SNR=2.0						
LSZ	Lusaka	58.46	69	*e*P	P	08 38 33.8	+0.7
	1.2nm,0.8s,mb4.0						
DBIC	Dimbokro	65.38	25	P	P	08 39 18.9	-0.5
	3.6nm,0.9s,mb4.2,baz=146,slow=11,SNR=3.5						
OTAV	Otavalo	69.79	304	*e*P	P	08 39 49.0	+1.8
	3.9nm,0.8s,mb4.3						
TORD	Torodi Ar. Bea	73.26	29	P	P	08 40 09.0	+1.2
	2.0nm,0.4s,mb4.3,baz=200,slow=6.3,SNR=40						
TORD				pP	pP	08 40 36.5	+1.6
	2.4nm,0.6s,baz=199,slow=6.8,SNR=5.8						
NWAO	Narrogin (SRO)	86.12	151	LR	LR	09 12 41.3	
	comp=Z,202nm,20.5s,baz=115,slow=30						
STKA	Stephens Creek	91.67	170	P	P	08 41 43.2	-0.2
	1.9nm,0.7s,mb4.5,baz=191,slow=4.2,SNR=8.4						
STKA	Stephens Creek	91.67	170	*e*P	P	08 41 42.9	-0.6
	0.3nm,0.5s,mb3.8						
ASAR	Alice Springs	98.76	163	P	P	08 42 15.2	-0.7
	1.2nm,0.9s,mb4.4,baz=177,slow=4.0,SNR=13						
PDAR	Pinedale Array	120.47	302	PKP	PKPdf	08 47 25.5	-0.9
	0.3nm,0.5s,baz=132,slow=5.9,SNR=4.3						
NVAR	Mina Array Bea	121.49	293	PKP	PKPdf	08 47 29.5	+1.0
	0.7nm,0.5s,baz=116,slow=3.2,SNR=7.3						
ARCES	ARCESS Array B	131.16	22	PKP	PKPdf	08 47 45.5	-0.4
	13nm,1.2s,baz=321,slow=3.1,SNR=6.8						
YKA	Yellowknife Ar	136.35	318	PKhKP		08 47 41.9	
	0.1nm,0.5s,baz=122,slow=3.1,SNR=5.7						
YKA				PKP	PKPdf	08 47 55.7	-0.2
	0.7nm,0.5s,baz=133,slow=2.1,SNR=28						
YKA	Yellowknife Ar	136.35	318	PKP	PKPdf	08 47 55.7	-0.2
ZALV	Zalesovo Beam	142.47	64	PKP	PKPdf	08 48 07.6	+0.3
	0.6nm,0.3s,baz=218,slow=1.6,SNR=3.9						
COLA	College	150.70	311	*e*PKPbc	PKPbc	08 48 25.3	-1.1
SONM	Songino Array	150.74	87	PKPbc	PKPbc	08 48 26.9	-0.1
	0.9nm,0.4s,baz=222,slow=3.4,SNR=11						
MCK	McKinley	150.92	309	*e*PKPbc	PKPbc	08 48 27.2	+0.3
KDAK	Kodiak Island	150.92	296	PKPbc	PKPbc	08 48 26.3	-0.8
	14nm,0.4s,baz=156,slow=1.0,SNR=35						
KDAK	Kodiak Island	150.92	296	PKPbc	PKPbc	08 48 26.3	-0.8
PPLA	Purkeypile	152.18	306	*e*PKPbc	PKPbc	08 48 29.7	-0.1

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*ISCJB **14** 08:45:12.0±0.4, 460N±004×12582E±009, h174^{km}±5^{km}, mb4.5/20, Error ellipse: s-maj=14.5km s-min=5.7km az=163.8*

*IDC **14** 08:45:12.8±0.9, 461N×12581E, h165^{km}±8^{km}, mb4.1/12, mb1 4.3/15, mb1mx4.1/24, mbtmp4.2/15, MS4.9/1, Ms1 4.9/1, ms1mx2.9/38, Error ellipse: s-maj=24.2km s-min=8.2km az=76.0*

*NEIC **14** 08:45:13.4±0.8, 460N×12577E, h172^{km}±8^{km}, mb4.8/9, Error ellipse: s-maj=13.7km s-min=5.7km az=75.0*

*DJA **14** 08:45:20, 403N×12606E, h180^{km}, Mw5.1/6*

ISC 14 08:45:13.0±0.4, **457N**±004×**12579E**±009, **h166**^{km}±5^{km}, **n56**, σ0^{s}88/57, **mb4.5**/20, **7C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GSPH	General Santos	1.72	331	⇑*i*P	Pn	08 45 46.0	-0.1
GSPH				*i* S	Sn	08 46 10.5	+5.5
DAV	Davao City (W)	2.49	355	P	Pn	08 45 54.5	-0.4
	115nm,0.3s,baz=66,slow=4.8,SNR=6.6						
DAV				S	Sn	08 46 26.6	+3.1
	168nm,0.3s,baz=58,slow=19,SNR=5.7						
DAV	Davao City (W)	2.49	355	*e*Pn	Pn	08 45 55.2	+0.4
DAV				*e*Sn	Sn	08 46 28.1	+4.7
DAV	Davao City (W)	2.49	355	P	Pn	08 46 09.3	+14
KCP	Kidapawan	2.52	344	⇑*i*P	Pn	08 45 55.9	+0.8
KCP				*i* S	Sn	08 46 30.4	+6.2
CTBH	Cotabato--PC H	3.05	330	⇑*i*P	Pn	08 46 02.1	+0.5
CTBH				*i* S	Sn	08 46 38.6	+1.8
TNTI	Ternate	4.09	157	P	Pn	08 46 14.1	-0.8
LBMI	Labuha	5.45	162	P	Pn	08 46 31.9	-0.7
MYLDM	Lahad Datu	7.29	275	P	Pn	08 47 07.9	+11
	52nm,1.4s,0.3nm						
SWI	Sorong	7.68	135	P	Pn	08 47 01.9	-0.3
	83nm,0.8s,1μm0.3nm						
KDI	Kendari	9.04	201	P	Pn	08 47 19.9	-0.3
SMKI	Samarinda	9.91	240	P	Pn	08 47 39.7	+8.0
	194nm,0.5s						
KAPI	Kappang	11.27	212	P	Pn	08 47 50.0	+0.6
	2.3nm,0.3s,baz=30,slow=9.7,SNR=38						
KAPI	Kappang	11.27	212	P	Pn	08 47 49.4	0.0
	37nm,0.9s,315nm						
SBUM	Sibu	13.71	262	P	Pn	08 48 26.8	+6.1
	15nm,1.1s						
BATI	Baumata	14.83	188	P	Pn	08 48 35.5	+0.8
	6.9nm,0.3s,baz=350,slow=1.5,SNR=16						
BATI	Baumata	14.83	188	P	Pn	08 48 35.7	+1.0
	70nm,0.7s,549nm						
KSM	Kuching	15.76	259	P	Pn	08 49 00.8	+15
KRKI	Karangkates	18.35	226	P	P	08 49 21.2	+6.1
	220nm,0.7s						
KAKA	Kakadu	18.40	159	*e*P	x	08 48 55.4	
	22nm,0.5s						
SJI	Sawahan	18.58	229	P	P	08 49 21.6	+4.0
	31nm,0.3s,8μm						
FITZ	Fitzroy Crossi	22.53	180	*e*P	P	08 49 58.2	-0.9
	26nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	22.53	180	P	P	08 49 59.5	+0.4
	52nm,0.6s,mb5.1						
WRAB	Tennant Creek	25.76	161	P	P	08 50 27.9	-0.6
	14nm,1.3s,mb4.5						
WRA	Warramunga Arr	25.77	161	P	P	08 50 27.1	-1.4
	4.4nm,0.3s,mb4.5,baz=332,slow=11,SNR=124						
WB2	Warramunga Arr	25.77	161	⇑*i*P	P	08 50 27.8	-0.8
MBWA	Marble Bar	26.25	193	*e*P	P	08 50 32.6	-0.2
	21nm,1.1s,mb4.7						
MBWA	Marble Bar	26.25	193	P	P	08 50 33.4	+0.5
ASAR	Alice Springs	29.16	165	P	P	08 50 58.6	-0.1
	7.1nm,0.5s,mb4.7,baz=344,slow=7.5,SNR=200						
ASAR				PcP	PcP	08 54 02.0	-0.2
	1.2nm,0.6s,baz=332,slow=2.7,SNR=6.5						
CMAR	Chiang Mai Arr	29.64	300	P	P	08 51 04.1	+1.0
	1.4nm,0.3s,mb4.1,baz=120,slow=7.5,SNR=6.7						
CMAR				ScP	ScP	08 57 30.3	+0.1
	0.6nm,0.3s,baz=134,slow=2.6,SNR=6.7						
CTA	Charters Tower	31.70	141	P	P	08 51 21.8	+0.6
	4.2nm,0.7s,mb4.2,baz=303,slow=12,SNR=4.1						
CTA				LR	LR	09 03 09.8	
	comp=Z,2μm,21.3s,baz=35,slow=34						
CTA	Charters Tower	31.70	141	P	P	08 51 21.8	+0.6
CTA				LR	LR	09 03 09.8	
KSRS	Korea Array	32.79	3	P	P	08 51 31.1	+0.7
	2.8nm,0.5s,mb4.2,baz=181,slow=9.8,SNR=9.3						
FORT	Forrest	35.22	177	⇑*i*P	P	08 51 51.7	+0.3
	43nm,0.4s,mb5.4						
KLBR	Kellerberrin	36.77	191	*e*P	P	08 52 04.6	0.0
	14nm,0.5s,mb4.8						
MUN	Mundaring	37.47	193	⇑*i*P	P	08 52 10.7	+0.1
NWAO	Narrogin (SRO)	38.16	192	P	P	08 52 16.9	+0.6
	16nm,0.4s,mb5.0,baz=30,slow=8.6,SNR=36						
NWAO	Narrogin (SRO)	38.16	192	*e*P	P	08 52 16.5	+0.2
	13nm,0.5s,mb4.8						
EIDS	Eidsvold	38.59	142	*e*P	P	08 52 19.1	-0.9
	5.9nm,0.8s,mb4.3						
STKA	Stephens Creek	39.25	159	⇑*i*P	P	08 52 25.8	+0.4
	19nm,0.8s,mb4.8						
STKA	Stephens Creek	39.25	159	P	P	08 52 25.8	+0.4
	21nm,0.6s,mb4.9,baz=333,slow=8.1,SNR=60						
ARMA	Armidale	42.68	146	*e*P	P	08 52 54.4	+0.9
HIA	Hailar	44.83	354	*e*P	P	08 53 11.0	+0.6
	16nm,1.1s,mb4.6						
CNB	Canberra Magne	45.44	153	*e*P	P	08 53 16.7	+1.3
TOO	Toolangi	45.76	158	*e*P	P	08 53 19.5	+1.7
SONM	Songino Array	46.21	342	P	P	08 53 20.8	-0.4
	1.3nm,0.6s,mb3.7,baz=156,slow=8.4,SNR=11						
SONM				PcP	PcP	08 54 53.7	-0.4
	0.5nm,0.6s,baz=163,slow=5.6,SNR=4.0						
MK31	Makanchi Array	56.33	325	*e*P	P	08 54 36.0	-0.6
MKAR	Makanchi Array	56.33	325	P	P	08 54 36.0	-0.6
	2.6nm,0.4s,mb4.4,baz=122,slow=8.2,SNR=20						
MKAR				PcP	PcP	08 55 31.5	-0.4
	1.3nm,0.6s,baz=109,slow=4.7,SNR=5.3						
MKAR				ScP	ScP	08 59 15.3	-0.4
	2.2nm,0.7s,baz=123,slow=4.6,SNR=15						
MKAR	Makanchi Array	56.33	325	P	P	08 54 36.0	-0.6
MKAR				PcP	PcP	08 55 31.5	-0.4
MKAR				ScP	ScP	08 59 15.3	-0.4
ZALV	Zalesovo Beam	59.42	333	P	P	08 54 56.2	-1.7
	1.2nm,0.4s,mb4.1,baz=127,slow=6.9,SNR=3.2						
KURK	Kurchatov	60.53	328	*e*P	P	08 55 04.6	-1.0
	3.8nm,0.5s,mb4.5						
VNDA	Vanda	84.37	173	P	P	08 57 26.2	+0.2
	1.7nm,0.6s,mb4.0,baz=311,slow=6.7,SNR=10						
ARCES	ARCESS Array B	89.34	340	P	P	08 57 49.4	-0.8
	6.7nm,1.0s,mb4.5,baz=87,slow=6.6,SNR=8.6						
TORD	Torodi Ar. Bea	121.77	288	PKP	PKPdf	09 03 47.8	-0.5
	0.7nm,0.6s,baz=85,slow=1.2,SNR=6.7						
TXAR	Lajitas Array	121.82	51	PKP	PKPdf	09 03 48.6	+0.6
	0.4nm,0.7s,baz=279,slow=0.2,SNR=6.1						
CFAA	Coronel Fontan	150.05	156	PKPbc	PKPbc	09 04 44.1	-0.5
	0.8nm,0.7s,baz=234,slow=3.7,SNR=17						

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*MOS **14** 08:54:05.6±1.1, 708S×15602E, h33^{km}, mb5.3/24, Error ellipse: s-maj=8.8km s-min=7.9km az=88.4*

*BJI **14** 08:54:06.3, 741S×15609E, h55^{km}, mB5.1, mb4.9, Ms4.8, Msz4.4*

*ISCJB **14** 08:54:06.3±0.2, 723S±004×15603E±004, h44^{km}, mb5.1/72, MS4.3/29, Error ellipse: s-maj=5.7km s-min=4.9km az=150.6*

*GCMT **14** 08:54:07.5±0.2, 735S×156.10E, h44^{km}, MW5.2/81, Moment Tensor Solution. s63,c87; s81,c130; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.17±.18; $M_{\theta\theta}$0.73±.15; $M_{\phi\phi}$-5.90±.15; $M_{r\theta}$-2.62±.15; $M_{\theta\phi}$4.37±.14; $M_{\phi r}$-0.60±.15; Best double couple: $M_0$7.50200×10^{16} NP1:ϕ_s183.00000°, δ51.00000°, λ134.00000°. NP2: ϕ_s305.00000°, δ56.00000°, λ49.00000°. Principal axes: T 6.9020, Plg57.0000°, Azm157.0000°; N 1.2010, Plg33.0000°, Azm331.0000°; P -8.1010, Plg3.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **14** 08:54:07.8±0.3, 724S×15598E, h45^{km}±2^{km}, mb4.7/20, mb1 4.8/22, mb1mx4.8/23, mbtmp4.7/22, MS4.3/19, Ms1 4.3/19, ms1mx4.2/24 Error ellipse: s-maj=11.4km s-min=8.9km az=49.0*

*NEIC **14** 08:54:07.5±0.2, 715S×15609E, mb5.3/40, Error ellipse: s-maj=7.7km s-min=5.9km az=116.0*

*DJA **14** 08:54:36, 781S×15454E, h188^{km}, Mw5.1/7*

ISC 14 08:54:08.3±0.2, **726S**±003×**15601E**±004, **h46**^{km}, **h46**^{km}±1.3^{km}**:pP-P, n252**, σ1^{s}04/171, **mb5.1**/72, **MS4.3**/29, **5C-7D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
HNR	Honiara	4.46	119	P	Pn	08 55 14.2	+0.9
	70nm,0.3s,baz=265,slow=3.2,SNR=67						
HNR				S	Sn	08 56 06.1	+2.1
	182nm,0.3s,baz=70,slow=3.9,SNR=2.4						
HNR				LR	LR	08 56 56.2	
	comp=Z,6μm,19.2s,baz=297,slow=38						
HNR	Honiara	4.46	119	*e*Pn	Pn	08 55 13.9	+0.5
HNR				*e*Sn	Sn	08 56 05.5	+1.5
PMG	Port Moresby	9.01	256	P	Pn	08 56 16.9	+1.0
	2.6nm,0.3s,baz=71,slow=7.0,SNR=7.7						
PMG				LR	LR	08 59 38.0	

comp=Z,4µm,20.6s,baz=233,slow=37
PMG Port Moresby 9.01 256 *d* iP **Pn 08 56 19.3 +3.4**
PMG Port Moresby 9.01 256 *e* Pn **Pn 08 56 19.3 +3.4**
COEN Coen 14.26 241 *e* Pn **Pn 08 57 31.4 +3.8**
39nm,1.0s
CTA Charters Tower 15.88 216 *e* P **Pn 08 57 52.2 +3.5**
40nm,0.9s
CTA *e* S **S 09 00 54.1 -2.1**
CTA Charters Tower 15.88 216 P **Pn 08 57 51.5 +2.7**
1.4nm,0.3s,baz=42,slow=13,SNR=21
CTA Charters Tower 15.88 216 *e* P **Pn 08 57 52.2 +3.5**
CTA *e* S **S 09 00 54.1 -2.1**
CTA pmax pmax
comp=Z,40nm,0.9s
CTAO Charters Tower 15.88 216 *e* P **Pn 08 57 52.5 +3.8**
CTAO pmax pmax
comp=Z,76nm,1.0s
CTAO Charters Tower 15.88 216 *e* P **Pn 08 57 52.5 +3.8**
comp=Z,76nm,1.0s
EIDS Eidsvold 18.61 194 *e* P **Pn 08 58 23.2 +0.6**
comp=Z,89nm,1.4s
ARMA Armidale 23.40 190 *e* P **P 08 59 13.8 +0.5**
ARMA *e* 08 59 28.1
ARMA *e* 08 59 38.1
ARMA *e* S **S 09 03 27.9 +4.9**
GUMO Guam 23.48 332 LR LR 09 07 42.9
comp=Z,270nm,19.4s,MS3.7,baz=144,slow=35
KAKA Kakadu 23.82 255⇑ *i* P x 08 58 56.9
comp=Z,92nm,0.6s
WRAB Tennant Creek 24.49 237 P **P 08 59 24.0 +0.6**
comp=Z,940nm,0.6s
WRAB Tennant Creek 24.49 237⇑ *i* P **P 08 59 23.5 +0.1**
WRAB Tennant Creek 24.49 237 *e* P **P 08 59 24.2 +0.8**
comp=Z,90nm,0.7s,mb5.3
WB2 Warramunga Arr 24.49 237⇑ *i* P **P 08 59 24.1 +0.7**
WB2 *e* 08 59 37.5
WB2 *e* PCP PcP 09 03 01.1 -0.2
WB2 *e* 09 03 15.6
WB2 *e* S **S 09 03 38.6 -2.3**
WRA Warramunga Arr 24.50 237 P **P 08 59 24.0 +0.5**
comp=Z,80nm,0.6s,mb5.4,baz=60,slow=9.7,SNR=252
WRA PcP PcP 09 03 01.1 -0.2
comp=Z,1.7nm,0.3s,baz=64,slow=2.9,SNR=8.1
WRA pPcP 09 03 14.0
comp=Z,11nm,1.0s,baz=58,slow=2.3,SNR=10
WRA ScP ScP 09 06 38.0 +1.5
comp=Z,3.0nm,1.0s,baz=70,slow=3.3,SNR=6.3
WRA LR LR 09 08 54.9
comp=Z,2µm,18.6s,MS4.5,baz=60,slow=36
WRA PKiKP PKiKP 09 10 41.5 -2.1
comp=Z,0.8nm,0.6s,baz=334,slow=0.8,SNR=13
WRA Warramunga Arr 24.50 237 P **P 08 59 24.0 +0.5**
WRA 09 03 01.1
WRA Warramunga Arr 24.50 237 P **P 08 59 24.0 +0.5**
WRA PcP PcP 09 03 01.1 -0.2
WRA pPcP 09 03 14.0
WRA ScP ScP 09 06 38.0 +1.5
WRA LR LR 09 08 55.0
ASAR Alice Springs 26.76 230 P **P 08 59 43.9 -0.1**
comp=Z,9.9nm,0.6s,mb4.5,baz=60,slow=9.3,SNR=173
ASAR pP pP 08 59 54.6 -1.4
comp=Z,4.2nm,0.3s,baz=65,slow=9.3,SNR=7.5
ASAR PcP PcP 09 03 06.2 -0.2
comp=Z,2.8nm,0.4s,baz=67,slow=2.6,SNR=7.6
ASAR pPcP 09 03 21.0
comp=Z,8.8nm,1.1s,baz=67,slow=3.6,SNR=8.4
ASAR PKiKP PKiKP 09 10 42.8 -2.1
comp=Z,0.2nm,0.6s,baz=103,slow=1.0,SNR=5.0
ASAR Alice Springs 26.76 230 P **P 08 59 43.9 -0.1**
ASAR pP pP 08 59 54.6 -1.4
ASAR PcP PcP 09 03 06.2 -0.2
ASAR pPcP 09 03 21.0
STKA Stephens Creek 27.94 207 *e* P **P 08 59 54.0 -0.4**
comp=Z,12nm,0.8s,mb4.6
STKA *e* PCP PcP 09 03 08.1 -0.9
STKA *e* S **S 09 04 50.6 +15**
STKA Stephens Creek 27.94 207 P **P 08 59 54.2 -0.2**
comp=Z,23nm,1.0s,mb4.8,baz=14,slow=9.8,SNR=19
STKA PcP PcP 09 03 07.7 -1.3
comp=Z,3.9nm,0.6s,baz=74,slow=1.6,SNR=4.3
STKA LR LR 09 10 48.6
comp=Z,2µm,19.9s,MS4.7,baz=27,slow=36
FITZ Fitzroy Crossi 31.47 247⇑ *i* P **P 09 00 25.8 -0.1**
comp=Z,71nm,0.6s,mb5.7
FITZ *e* pP 09 00 38.7 +0.7
FITZ *e* PCP PcP 09 03 18.5 +0.1
FITZ *e* 09 03 32.9
FITZ *e* S **S 09 05 31.4 +0.4**
TOO Toolangi 31.65 196 *e* P **P 09 00 27.7 +0.5**
TOO *e* 09 01 17.5
TOO *e* 09 03 32.7
FORT Forrest 35.10 225 *e* P **P 09 00 57.0 -0.3**
comp=Z,33nm,0.7s,mb5.4
KAPI Kappang 36.11 271 P **P 09 01 05.0 -1.2**
comp=Z,16nm,0.5s,mb5.2,baz=72,slow=3.3,SNR=9.6
KAPI Kappang 36.11 271 *e* P **P 09 01 04.8 -1.5**
comp=Z,37nm,1.1s,mb5.2
URZ Urewera 36.29 151 P **P 09 01 06.9 -0.5**
comp=Z,26nm,1.1s,mb5.1,baz=353,slow=5.1,SNR=5.3
TAU Tasmania Unive 36.32 191 *e* P **P 09 01 08.4 +0.8**
TAU pmax pmax
comp=Z,76nm,0.9s,mb5.6
TAU Tasmania Unive 36.32 191 *e* P **P 09 01 08.4 +0.8**
comp=Z,76nm,0.9s,mb5.6
MBWA Marble Bar 37.67 245 *e* P **P 09 01 19.2 -0.2**
comp=Z,96nm,1.5s,mb5.3
MBWA *e* pP pP 09 01 31.6 -0.1
RPZ Rata Peaks 38.63 162 P **P 09 01 26.8 -0.4**
comp=Z,67nm,0.9s,mb5.4,baz=220,slow=0.9,SNR=17
KLBR Kellerberrin 43.09 231 *e* P **P 09 02 03.6 -0.5**
comp=Z,36nm,0.5s,mb5.4
KLBR *e* pP 09 02 15.9 -0.7
NWAO Narrogin (SRO) 44.08 229 P **P 09 02 12.2 +0.2**
comp=Z,15nm,0.6s,mb4.9,baz=51,slow=8.5,SNR=7.3
NWAO pP pP 09 02 24.4 -0.2
comp=Z,16nm,0.7s,baz=46,slow=7.1,SNR=3.8
NWAO Narrogin (SRO) 44.08 229 *e* P **P 09 02 12.0 0.0**
NWAO pmax pmax
comp=Z,18nm,0.7s
NWAO Narrogin (SRO) 44.08 229 *e* P **P 09 02 12.0 0.0**
comp=Z,18nm,0.7s,mb4.9
MUN Mundaring 44.44 231 *e* P **P 09 02 15.0 0.0**
MUN *e* pP 09 02 28.5 +0.9
RAR Rarotonga 44.88 113 P **P 09 02 19.8 +1.2**
comp=Z,51nm,0.7s,mb5.4,baz=216,slow=8.7,SNR=4.9
KSM Kuching 46.41 279 *e* P **P 09 02 30.4 -0.5**
comp=Z,8.6nm,0.3s,mb5.2
MJAR Matsushiro Arr 46.66 340 P **P 09 02 32.2 -0.2**
comp=Z,3.3nm,0.8s,mb4.3,baz=168,slow=9.0,SNR=7.4
MJAR pP pP 09 02 45.7 +0.7
comp=Z,5.6nm,0.9s,baz=166,slow=8.1,SNR=5.8
MJAR LR LR 09 20 34.3
comp=Z,121nm,21.3s,MS3.8,baz=180,slow=34
MJAR Matsushiro Arr 46.66 340 P **P 09 02 32.2 -0.2**
MJAR *PP pP 09 02 45.7 +0.7
MJAR Matsushiro Arr 46.66 340 P **P 09 02 32.2 -0.2**
MJAR pP pP 09 02 45.7 +0.7
MJAR LR LR 09 20 34.3
SSE Sheshan 50.64 321 P **P 09 03 03.5 +0.4**
SSE XP sP 09 03 21.9 +0.7
SSE S **S 09 10 16.6 +1.8**
SSE XS sS 09 10 40.1 +3.9
SSE AMB AMB
comp=Z,50nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,97nm,5.4s
SSE LR LR
comp=N,149nm,25.5s,MS4.1
SSE LR LR
comp=E,183nm,25.5s,MS4.1
SSE LR LR
comp=Z,326nm,18.0s
KSRS Korea Array 51.64 331 P **P 09 03 10.6 +0.1**
comp=Z,5.0nm,0.6s,mb4.6,baz=148,slow=7.6,SNR=17
KSRS pP pP 09 03 23.9 +0.6
comp=Z,8.2nm,0.8s,baz=147,slow=8.3,SNR=8.7
KSRS LR LR 09 25 45.6
comp=Z,174nm,18.1s,MS4.1,baz=146,slow=37
QIZ Qiongzhong 52.46 301 P **P 09 03 18.4 +1.6**
QIZ S **S 09 10 42.0 +1.8**
QIZ LR LR
comp=E,232nm,29.2s
QIZ LR LR
comp=Z,349nm,22.8s
NJ2 Nanjing 52.76 320 *e* P **P 09 03 21.3 +2.4**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
PPT Papeete 53.96 106 *e* S **S 09 10 57.4 -3.4**
comp=Z,352nm,27.2s
PPT *e* LR LR 09 19 09.6
comp=Z,345nm,22.8s
PPT Papeete 53.96 106 LR LR 09 22 25.2
comp=Z,255nm,18.2s,MS4.3,baz=346,slow=31
TBI Tubuai 54.65 113 *e* S **S 09 11 07.6 -2.4**
comp=Z,231nm,31.2s
TBI *e* LQ 09 17 09.6
comp=Z,1µm,30.8s
TBI *e* LR LR 09 19 30.1
comp=Z,758nm,28.2s,baz=287
MDJ Mudanjiang 56.86 338 P **P 09 03 49.1 +0.8**
MDJ AP pP 09 04 00.6 -0.6
MDJ XP sP 09 04 05.4 -1.1
MDJ PP PP 09 05 55.5 +0.3
MDJ SCP ScP 09 08 39.6 +0.1
MDJ PCS PcS 09 08 44.4 +0.3
MDJ S **S 09 11 40.1 +1.6**
MDJ XS sS 09 12 00.6 +0.5
MDJ AMB AMB
comp=Z,2.0nm,1.1s,mb4.1
MDJ AMB AMB
comp=Z,75nm,4.1s
MDJ LR LR
comp=N,90nm,34.1s,MS3.7
MDJ LR LR
comp=E,66nm,36.1s,MS3.7
MDJ LR LR
comp=Z,142nm,30.0s
CN2 Changchun 57.86 334 *e* P **P 09 03 58.5 +3.1**
GYA Guiyang 58.41 307 P **P 09 04 00.4 +0.8**
GYA AP pP 09 04 13.6 +1.0
GYA XP sP 09 04 22.8 +5.0
GYA PP PP 09 06 11.3 +1.9
GYA SCP ScP 09 08 43.5 -3.3
GYA S **S 09 11 58.9 -0.6**
GYA XS sS 09 12 20.8 -0.4
GYA SS SS 09 15 51.8 -0.8
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,130nm,5.4s
GYA LR LR
comp=N,670nm,18.8s,MS4.9
GYA LR LR
comp=E,520nm,19.4s,MS4.9
GYA LR LR
comp=Z,680nm,17.9s,MS4.8
BJI Beijing 59.70 325 P **P 09 04 08.6 +0.3**
BJI S **S 09 12 15.0 -0.8**
BJI AMB AMB
comp=Z,7.0nm,0.9s,mb4.7
BJI LR LR
comp=N,213nm,36.1s,MS4.2
BJI LR LR
comp=E,180nm,32.2s,MS4.2
BJI LR LR
comp=Z,257nm,30.2s,MS4.2
NST Nakhon Sawan 59.84 293 P **P 09 04 07.0 -2.6**
PET Petropavlovsk 60.09 2 *e* P **P 09 04 09.9 -0.7**
PET *e* S **S 09 12 21.5 +1.2**
PET *e* SS SS 09 16 22.1 +4.0
PET pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KLR Kul'dur 60.12 342 *e* P **P 09 04 19.2 +8.3**
PETK Petropavlovsk- 60.15 1 P **P 09 04 12.2 +1.1**
comp=Z,2.0nm,0.4s,mb4.5,baz=152,slow=6.5,SNR=5.3
PETK LR LR 09 26 19.2
comp=Z,340nm,21.9s,MS4.4,baz=173,slow=32
DRV Dumont d'Urvil 60.33 187 PP PP 09 06 24.0 -1.4
DRV L 09 19 00.0
DRV R 09 23 00.0
XAN Xi'an 60.59 316 P **P 09 04 14.3 -0.2**
XAN AP pP 09 04 26.9 -0.6
XAN PP PP 09 06 29.1 +0.6
XAN S **S 09 12 29.5 +2.1**
XAN SS SS 09 16 29.8 +3.1
XAN AMB AMB
comp=Z,7.0nm,0.8s,mb4.8
XAN LR LR
comp=N,42nm,26.3s,MS3.9
XAN LR LR
comp=E,115nm,28.0s,MS3.9
XAN LR LR
comp=Z,316nm,25.7s,MS4.3
KMI Kunming 61.00 304 P **P 09 04 18.1 +0.7**
KMI LR LR
comp=Z,241nm,24.9s,MS4.2
CM31 Chiang Mai Arr 61.80 295 *e* P **P 09 04 23.6 +0.6**
comp=Z,46nm,0.9s,mb5.6
CM31 *e* pP pP 09 04 38.0 +2.0
CMAR Chiang Mai Arr 61.80 295 P **P 09 04 23.6 +0.7**
comp=Z,16nm,0.9s,mb5.1,baz=113,slow=5.0,SNR=51
CMAR pP pP 09 04 34.0 -2.0
comp=Z,32nm,0.9s,baz=114,slow=4.8,SNR=7.3
CMAR LR LR 09 29 41.0
comp=Z,65nm,19.0s,MS3.8,baz=321,slow=34
CMAR Chiang Mai Arr 61.80 295 *i* P **P 09 04 23.6 +0.7**
CMAR pmax pmax
comp=Z,16nm,0.9s
CHG Chiang Mai 61.92 296⇑ P **P 09 04 23.9 +0.2**
comp=Z,32nm,1.2s,mb5.3
CHTO Chiang Mai 61.92 296 *e* P **P 09 04 24.0 +0.3**
CHTO *e* *PP pP 09 04 34.2 -2.6
CHTO pmax pmax
comp=Z,42nm,1.2s,mb5.4
CHTO Chiang Mai 61.92 296 *e* P **P 09 04 24.0 +0.3**
comp=Z,42nm,1.2s,mb5.5
CHTO *e* pP pP 09 04 34.1 -2.7
CD2 Chengdu 62.75 310 P **P 09 04 31.3 +2.2**
CD2 AP pP 09 04 43.3 +1.1
CD2 XP sP 09 04 49.3 +1.9
CD2 PP PP 09 06 51.3 +3.7
CD2 PCS PcS 09 09 11.0 +0.2
CD2 S **S 09 12 55.3 +0.4**
CD2 XS sS 09 13 17.0 +0.2
CD2 SS SS 09 17 02.8 +2.3
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,210nm,3.7s
CD2 LR LR
comp=N,320nm,10.1s
CD2 LR LR
comp=Z,370nm,24.4s
HHC Hu-ho-hao-te 62.90 323 *e* P **P 09 04 30.3 +0.4**
HHC AP pP 09 04 43.3 +0.3
HHC XP sP 09 04 48.5 +0.3
HHC PP PP 09 06 51.1 +2.3
HHC PCS PcS 09 09 09.5 -1.6
HHC *e* S **S 09 12 55.3 -1.1**
HHC XS sS 09 13 17.4 -0.9
HHC SS SS 09 17 03.6 +1.1
HHC AMB AMB
comp=Z,18nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,186nm,5.2s
HHC LR LR
comp=N,159nm,14.4s,MS4.5
HHC LR LR
comp=E,217nm,16.7s,MS4.5
HHC LR LR
comp=Z,287nm,15.5s,MS4.5
TAOE Nuku Hiva Isla 63.17 96 *e* LR LR 09 23 23.2
comp=Z,1µm,22.4s
LZH Lanzhou 65.21 315 *e* P **P 09 04 45.9 +0.8**
LZH AP pP 09 04 57.0 -1.3
LZH XP sP 09 05 01.8 -1.7
LZH *e* PP PP 09 07 11.1 +2.0
LZH S S 09 13 28.0 +2.8
LZH XS sS 09 13 50.0 +2.8
LZH SS SS 09 17 40.3 +1.6
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,140nm,5.5s
LZH LR LR
comp=N,548nm,15.5s
LZH LR LR
comp=Z,758nm,16.4s,MS5.0
CASY Casey 66.66 198 *e* P **P 09 04 53.6 -0.3**
RKT Rikitea 67.91 112 *e* LQ 09 22 45.0
comp=Z,348nm,31.5s
RKT *e* LR LR 09 25 37.0
comp=Z,736nm,27.2s,baz=276
GTA Gaotai 69.62 317 *e* P **P 09 05 13.5 +0.6**
GTA AP pP 09 05 26.8 +0.6
GTA XP sP 09 05 31.8 +0.4
GTA S S 09 14 18.0 0.0
GTA XS sS 09 14 40.1 -0.1
GTA SS SS 09 18 48.8 +1.9
GTA AMB AMB
comp=Z,5.0nm,1.7s,mb4.2
GTA AMB AMB
comp=Z,127nm,5.1s
GTA LR LR
comp=N,194nm,19.8s,MS4.4
GTA LR LR
comp=E,98nm,19.5s,MS4.4
GTA LR LR
comp=Z,209nm,20.7s,MS4.4
ULN Ulaanbaatar 69.77 327 *e* P **P 09 05 14.4 +0.8**
ULN *e* *PP pP 09 05 25.0 -1.9
ULN pmax pmax
comp=Z,16nm,0.9s,mb5.0
ULN Ulaanbaatar 69.77 327 *e* P **P 09 05 14.4 +0.8**
comp=Z,16nm,0.9s,mb5.0
ULN *e* pP pP 09 05 25.0 -1.9
SEY Seymchan 70.04 358 *i* P **P 09 05 14.5 -0.5**
SONM Songino Array 70.10 327 P **P 09 05 16.3 +0.6**
comp=Z,8.2nm,0.5s,mb4.9,baz=145,slow=7.0,SNR=69
SONM pP pP 09 05 27.2 -1.8
comp=Z,21nm,0.9s,baz=142,slow=5.1,SNR=18
SONM LR LR 09 35 34.2
comp=Z,136nm,19.7s,MS4.2,baz=98,slow=36
SONM Songino Array 70.10 327 P **P 09 05 16.3 +0.6**
SONM *PP pP 09 05 27.2 -1.8
VNDA Vanda 70.29 179 P **P 09 05 16.2 -0.2**
comp=Z,9.3nm,1.0s,mb4.7,baz=348,slow=7.2,SNR=15
VNDA LR LR 09 30 32.5
comp=Z,346nm,19.5s,MS4.6,baz=358,slow=31
VNDA Vanda 70.29 179 *e* P **P 09 05 16.7 +0.2**
VNDA pmax pmax
comp=Z,51nm,1.7s
VNDA Vanda 70.29 179 *e* P **P 09 05 16.6 +0.2**
comp=Z,51nm,1.7s,mb5.2
SHL Shillong 70.29 300 *e* P **P 09 05 17.5 +0.1**
YAK Yakutsk 72.03 347 *e* P **P 09 05 28.2 +1.1**
YAK pmax pmax
comp=Z,15nm,1.1s,mb4.8
LSA Lhasa 72.25 304 *e* P **P 09 05 30.6 +1.5**
LSA *e* *PP pP 09 05 41.7 -0.8
LSA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LSA Lhasa 72.25 304 *e* P **P 09 05 30.6 +1.4**
comp=Z,8.7nm,0.9s,mb4.7
LSA *e* pP pP 09 05 41.7 -0.8
MIR Mirnyy 72.82 202⇓ *i* P **P 09 05 33.0 +1.2**
MIR pmax pmax
comp=Z,200nm,1.4s,mb5.8
BOD Bodaibo 73.23 338 *e* P **P 09 05 33.5 -0.8**
TLY Talaya 73.80 329 *e* P **P 09 05 38.7 +0.9**
TLY *e* S S 09 15 12.9 +7.2
TLY *e* 09 15 41.6
TLY pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
TLY MLR MLR
comp=Z,119nm,21.0s,MS4.2
TAPN Taplejung 74.40 301 *e* P **P 09 05 42.0 +0.2**
comp=Z,86nm,0.9s,mb5.7
ODAN Odare 74.53 300 *e* P **P 09 05 42.8 +0.2**
comp=Z,114nm,0.7s,mb5.9
MOY Mondy 75.16 328 *e* P **P 09 05 46.1 +0.4**
RAMN Ramite 75.23 300 *e* P **P 09 05 46.7 0.0**
comp=Z,31nm,0.6s,mb5.4
BILL Bilibino 75.47 4⇓ *e* P **P 09 05 47.1 0.0**
BILL *e* pP 09 05 58.5 -2.1
BILL *e* 09 06 05.4
BILL *e* S S 09 15 21.6 -2.1
BILL pmax pmax
comp=Z,14nm,1.3s,mb4.7
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.2
BILL Bilibino 75.47 4 *e* P **P 09 05 46.8 -0.4**
comp=Z,45nm,1.4s,mb5.2
JIRN Jiri 75.78 301 *e* P **P 09 05 50.1 +0.3**
comp=Z,54nm,0.7s,mb5.6
GUN Gumba 76.11 301 *e* P **P 09 05 52.1 +0.4**
comp=Z,81nm,0.7s,mb5.8
PKI Pulchoki 76.42 301 *e* P **P 09 05 53.3 -0.2**
KKN Kakani 76.59 301 *e* P **P 09 05 54.1 -0.3**
comp=Z,58nm,0.8s,mb5.5
KKN Kakani 76.59 301 *e* P **P 09 05 54.1 -0.3**
KKN pmax pmax
comp=Z,58nm,0.8s,mb5.6
DMN Daman 76.69 300 *e* P **P 09 05 55.2 +0.2**
comp=Z,149nm,1.1s,mb5.8
GKN Gorkha 77.20 301 *e* P **P 09 05 57.6 -0.2**
comp=Z,55nm,0.6s,mb5.7
SVW2 Sparrevohn 77.87 22 *e* P **P 09 06 02.4 +1.6**
KOLN Koldanda 78.02 300 *e* P **P 09 06 02.0 -0.4**
DANN Dangsing 78.03 301 *e* P **P 09 06 01.9 -0.6**
comp=Z,39nm,0.5s,mb5.6
HVS Khovu-Aksy 78.87 325⇓ *i* P **P 09 06 06.5 -0.1**
WMQ Urumqi 79.70 317 P **P 09 06 11.5 +0.2**
WMQ AP pP 09 06 26.8 +2.0
WMQ PP PP 09 09 14.6 +1.7
WMQ S S 09 16 08.5 -1.9
WMQ SKS 09 16 19.4
WMQ SCS ScS 09 16 25.1 -6.7
WMQ XS sS 09 16 31.3 -1.8
WMQ SS SS 09 21 20.3 +0.2
WMQ AMB AMB
comp=Z,13nm,1.1s,mb4.8
WMQ AMB AMB
comp=Z,341nm,5.0s
WMQ LR LR
comp=N,100nm,27.0s,MS4.2
WMQ LR LR
comp=E,104nm,29.0s,MS4.2
WMQ LR LR
comp=Z,175nm,27.0s,MS4.3
HYB Hyderabad 80.31 289 *e* P cP 09 06 25.0 +2.9
TIXI Tiksi 80.76 352⇓ *e* P **P 09 06 14.5 -1.9**
TIXI pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
MCK McKinley 81.93 22 *e* P **P 09 06 21.7 -1.0**
MCK *e* *PP pP 09 06 35.1 -1.2
MCK pmax pmax
comp=Z,24nm,1.0s,mb5.1
MCK McKinley 81.93 22 *e* P **P 09 06 21.7 -1.0**
comp=Z,24nm,1.0s,mb5.1
MCK *e* pP pP 09 06 35.1 -1.2
MCK *e* sP sP 09 06 40.0 -1.5
COLA College 82.97 21 *i* P **P 09 06 26.0 -2.1**
COLA College 82.97 21 *e* P **P 09 06 26.0 -2.1**
comp=Z,15nm,1.1s,mb4.9
COLA *e* pP pP 09 06 39.8 -1.9
MENT Mentasta 83.49 24 P **P 09 06 31.1 +0.3**
MENT *e* pP pP 09 06 46.4 +1.9
MK31 Makanchi Array 84.27 318 *e* P **P 09 06 34.9 -0.3**
MK31 *e* *PP pP 09 06 49.5 +0.7
MKAR Makanchi Array 84.27 318 P **P 09 06 34.9 -0.3**
comp=Z,23nm,0.6s,mb5.5,baz=95,slow=8.5,SNR=191
MKAR pP pP 09 06 49.3 +0.5
comp=Z,33nm,0.7s,baz=94,slow=6.4,SNR=25
MKAR LR LR 09 44 51.0
comp=Z,81nm,18.3s,MS4.1,baz=262,slow=36
MKAR Makanchi Array 84.27 318 *i* P **P 09 06 34.9 -0.3**
MKAR pmax pmax
comp=Z,23nm,0.6s
KAD Karad 84.39 288 *i* P **P 09 06 36.0 -0.5**
MAW Mawson 84.54 203 *e* P **P 09 06 36.3 +0.1**
comp=Z,20nm,1.4s,mb5.1
MAW *e* pP 09 06 50.3 +0.5
MAW Mawson 84.54 203 P **P 09 06 36.4 +0.2**
comp=Z,12nm,0.7s,mb5.2,baz=90,slow=7.6,SNR=20
MAW pP pP 09 06 50.7 +0.8
comp=Z,16nm,0.8s,baz=94,slow=5.8,SNR=7.3
MAW LR LR 09 42 26.3
comp=Z,139nm,18.6s,MS4.4,baz=106,slow=34
MAW Mawson 84.54 203 *e* P **P 09 06 36.3 +0.1**
MAW *e* pP 09 06 50.3 +0.5
MAW pmax pmax
comp=Z,21nm,1.4s
ZAA0 Zalesovo Array 84.96 326 *e* P **P 09 06 36.9 -1.6**
ZAA0 *e* pP pP 09 06 51.3 -0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	84.96	326	P	P	09 06 37.2	-1.3
	comp=Z,12nm,0.3s,mb5.4,baz=116,slow=5.7,SNR=47						
ZALV				pP	pP	09 06 52.2	+0.1
	comp=Z,14nm,0.7s,baz=119,slow=5.3,SNR=9.5						
ZALV				LR	LR	09 46 14.1	
	comp=Z,75nm,18.7s,MS4.1,baz=60,slow=37						
ZALV	Zalesovo Beam	84.96	326	P	P	09 06 37.2	-1.3
ZALV				*PP	pP	09 06 52.2	+0.1
EGAK	Eagle	85.37	22	eP	P	09 06 40.1	-0.2
	comp=Z,8.0nm,1.0s,mb4.8						
EGAK				epP	pP	09 06 53.4	-0.6
THN	Thein Dam	85.73	303	ex	P	09 06 40.3	-2.6
NVS	Novosibirsk	86.13	326	i P	P	09 06 42.8	-1.5
NVS				eS	S	09 16 57.0	-18
NVS				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.2						
NVS				pmax	pmax		
	comp=N,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,13nm,1.2s						
NVS				smax			
	comp=N,21nm,1.6s						
NVS				smax			
	comp=E,12nm,1.6s						
KURK	Kurchatov	87.66	322	P	P	09 06 50.7	-1.2
	comp=E,59nm,0.6s,mb6.0,SNR=8.9						
KURK	Kurchatov	87.66	322	LR	LR	09 44 23.0	
	comp=E,86nm,21.6s,MS4.1,baz=105,slow=34						
KURK	Kurchatov	87.66	322	eP	P	09 06 50.2	-1.7
KURK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
KURK	Kurchatov	87.66	322	eP	P	09 06 50.2	-1.7
	comp=Z,14nm,1.0s,mb5.1						
TKM2	Tokmak 2	87.92	314	eP	P	09 06 52.8	-0.5
TKM2				e*PP	pP	09 07 06.3	-0.7
TKM2				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.3						
TKM2	Tokmak 2	87.92	314	P	P	09 06 53.6	+0.3
	SNR=9.8						
TKM2	Tokmak 2	87.92	314	eP	P	09 06 52.8	-0.5
	comp=Z,13nm,0.7s,mb5.3						
TKM2				epP	pP	09 07 06.3	-0.7
KZA	Kyzart	88.00	313	P	P	09 06 55.0	+1.3
	SNR=6.8						
CHMS	Chumysh	88.55	314	P	P	09 06 56.1	-0.1
	SNR=5.7						
AAK	Ala-Archa	88.66	313	eP	P	09 06 56.6	-0.2
AAK				e*PP	pP	09 07 07.2	-3.3
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
AAK	Ala-Archa	88.66	313	P	P	09 06 56.8	0.0
	SNR=6.2						
AAK	Ala-Archa	88.66	313	eP	P	09 06 56.6	-0.2
	comp=Z,10.0nm,0.7s,mb5.2						
AAK				epP	pP	09 07 07.2	-3.3
USP	Ospenovka	88.78	314	P	P	09 06 56.1	-1.2
	SNR=6.4						
AML	Almayashu	89.15	313	P	P	09 06 59.8	+0.7
	SNR=6.1						
AML	Almayashu	89.15	313	eP	P	09 06 59.4	+0.2
	comp=Z,13nm,0.9s,mb5.3						
AML				epP	pP	09 07 14.6	+1.8
INK	Inuvik	89.61	21	eP	P	09 07 01.6	+0.9
INK				e*PP	pP	09 07 13.4	-1.0
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	89.61	21	eP	P	09 07 01.6	+0.9
	comp=Z,3.7nm,0.9s,mb4.7						
INK				epP	pP	09 07 13.4	-1.0
NVAR	Mina Array Bea	91.10	52	P	P	09 07 07.1	-1.2
	comp=Z,1.3nm,1.1s,mb4.2,baz=309,slow=5.7,SNR=3.1						
NVAR				pP	pP	09 07 22.8	+0.8
	comp=Z,1.4nm,0.9s,baz=250,slow=7.2,SNR=5.2						
NVAR	Mina Array Bea	91.10	52	P	P	09 07 07.1	-1.2
NVAR				pP	pP	09 07 22.8	+0.8
KBL	Kabul	91.57	304	eP	P	09 07 08.8	-1.8
KBL				e*PP	pP	09 07 19.5	-4.8
KBL				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
KBL	Kabul	91.57	304	eP	P	09 07 08.8	-1.8
	comp=Z,17nm,1.2s,mb5.3						
KBL				epP	pP	09 07 19.5	-4.9
TPNV	Topopah Spring	92.51	53	P	P	09 07 15.8	+0.9
TPNV				e*PP	pP	09 07 28.2	-0.4
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.8						
TPNV	Topopah Spring	92.51	53	P	P	09 07 15.8	+0.9
	comp=Z,3.9nm,1.1s,mb4.8						
TPNV				epP	pP	09 07 28.2	-0.4
VOSK	Vostochnaya	92.71	323	P	P	09 07 13.2	-2.2
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.1						
BVA0	Borovoye Array	93.11	323	P	P	09 07 15.5	-1.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
BVAR	Borovoye Array	93.11	323	LR	LR	09 48 13.1	
	comp=Z,158nm,19.1s,MS4.5,baz=97,slow=35						
BRVK	Borovoye	93.18	323	eP	P	09 07 15.9	-1.7
BRVK				e*PP	pP	09 07 26.6	-4.7
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
BRVK	Borovoye	93.18	323	eP	P	09 07 15.9	-1.7
	comp=Z,11nm,1.1s,mb5.2						
BRVK				epP	pP	09 07 26.6	-4.7
YKA	Yellowknife Ar	96.10	28	P	P	09 07 29.6	-1.1
	comp=Z,0.5nm,0.6s,mb4.1,baz=264,slow=4.6,SNR=11						
YKA				pP	pP	09 07 42.9	-1.5
	comp=Z,1.0nm,0.8s,baz=263,slow=4.7,SNR=9.2						
YKA				LR	LR	09 46 25.1	
	comp=Z,75nm,20.1s,MS4.2,baz=160,slow=33						
YKA	Yellowknife Ar	96.10	28	P	P	09 07 29.6	-1.1
YKA				*PP	pP	09 07 42.9	-1.6
YKA	Yellowknife Ar	96.10	28	P	P	09 07 29.6	-1.1
YKA				pP	pP	09 07 42.9	-1.5
YKA				LR	LR	09 46 25.1	
PDAR	Pinedale Array	98.13	48	P	P	09 07 39.9	-0.5
	comp=Z,0.4nm,0.9s,mb4.0,baz=248,slow=4.8,SNR=2.8						
PDAR				pP	pP	09 07 53.2	-0.9
	comp=Z,1.0nm,0.9s,baz=219,slow=1.9,SNR=5.2						
PDAR				LR	LR	09 48 07.0	
	comp=Z,227nm,19.5s,MS4.7,baz=286,slow=33						
AB31	Akbulak array	99.41	319	P	P	09 07 43.2	-2.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.7						
SNAA	Sanae	100.00	187	ePdiff	Pdif	09 07 46.3	-2.2
SNAA				e		09 07 50.2	
SNAA				e		09 07 55.3	
SNAA				e		09 08 04.9	
SNAA				e		09 08 11.2	
SNAA	Sanae	100.00	187	ePKiKP	PKiKP	09 12 15.3	-0.5
SNAA				e		09 12 26.5	
VNA3	Neumayer Olymp	101.08	185	ePdiff	Pdif	09 07 51.3	-2.0
VNA3				e		09 08 08.3	
VNA3	Neumayer Olymp	101.08	185	ePKiKP	PKiKP	09 12 17.1	-0.7
VNA3				e		09 12 30.8	
VNA3				e		09 12 37.7	
VNA2	Neumayer--Watz	101.19	185	ePdiff	Pdif	09 07 52.2	-1.6
VNA2				e		09 07 55.5	
VNA2				e		09 08 00.3	
VNA2				e		09 08 12.6	
VNA2	Neumayer--Watz	101.19	185	ePKiKP	PKiKP	09 12 17.5	-0.5
	baz=186,slow=1.0						
VNA2				e		09 12 31.4	
VNA2				e		09 12 38.2	
VNA1	Neumayer--Stat	101.53	185	ePdiff	Pdif	09 07 58.8	+3.5
VNA1				e		09 08 01.9	
VNA1	Neumayer--Stat	101.53	185	ePKiKP		09 12 33.5	
AKASG	Malin Array Be	118.34	325	PKiKP	PKiKP	09 12 49.2	-1.5
	comp=Z,1.8nm,0.4s,baz=49,slow=2.4,SNR=9.0						
AKASG				pPKiKP		09 13 02.6	
	comp=Z,1.4nm,0.5s,baz=57,slow=2.3,SNR=4.4						
AKASG	Malin Array Be	118.34	325	PKPdf	PKPdf	09 12 49.2	-1.5
KMBO	Kilima Mbogo	118.34	265	PKP	PKPdf	09 12 53.6	+1.8
	comp=Z,2.8nm,0.3s,baz=189,slow=0.6,SNR=4.0						
BRTR	Keskin Array B	119.31	312	PKP	PKPdf	09 12 52.2	-0.7
	comp=Z,0.4nm,0.5s,baz=318,slow=1.7,SNR=3.8						
BRTR				pPKP	pPKPdf	09 13 05.5	-1.6
	comp=Z,2.6nm,1.2s,baz=64,slow=3.4,SNR=2.4						
HFS	Hagfors	120.11	339	PKP	PKPdf	09 12 51.9	-1.9
	comp=Z,2.3nm,0.8s,baz=20,slow=4.7,SNR=4.1						
NOA	NORSAR Array B	120.28	341	PKP	PKPdf	09 12 52.5	-1.6
	comp=Z,0.5nm,0.5s,baz=36,slow=1.7,SNR=3.1						
NOA				pPKP	pPKPdf	09 13 07.7	-0.5
	comp=Z,0.9nm,0.7s,baz=83,slow=2.1,SNR=2.3						
NOA	NORSAR Array B	120.28	341	PKP	PKPdf	09 12 52.5	-1.6
NOA				pPKP	pPKPdf	09 13 07.7	-0.5
EIL	Elat	120.48	300	PKP	PKPdf	09 12 53.8	-1.6
	comp=Z,3.4nm,0.8s,baz=214,slow=3.6,SNR=2.8						
BOSA	Boshof	120.64	231	PKP	PKPdf	09 12 55.5	-0.3
	comp=Z,1.3nm,0.6s,baz=136,slow=7.0,SNR=4.8						
BOSA				pPKP	pPKPdf	09 13 09.0	-1.0
	comp=Z,5.5nm,0.8s,baz=98,slow=2.3,SNR=4.6						
BOSA	Boshof	120.64	231	PKP	PKPdf	09 12 55.5	-0.3
BOSA				pPKP	pPKPdf	09 13 09.0	-1.0
LBTB	Lobatse	122.05	235	PKP	PKPdf	09 12 57.0	-1.7
	comp=Z,2.2nm,0.6s,baz=131,slow=3.0,SNR=4.5						
LBTB				pPKP	pPKPdf	09 13 12.5	-0.3
	comp=Z,10nm,0.8s,baz=178,slow=4.3,SNR=12						
LBTB	Lobatse	122.05	235	ePKPdf	PKPdf	09 12 57.8	-0.9
LBTB				epPKPdf	pPKPdf	09 13 12.7	-0.1
LSZ	Lusaka	123.66	246	PKP	PKPdf	09 13 01.8	-0.1
	comp=Z,8.4nm,1.2s,baz=151,slow=2.8,SNR=5.7						
LSZ				pPKP	pPKPdf	09 13 14.4	-1.6
	comp=Z,8.2nm,0.9s,baz=178,slow=1.5,SNR=7.6						
LSZ	Lusaka	123.66	246	ePKPdf	PKPdf	09 13 02.0	+0.1
LSZ				epPKPdf	pPKPdf	09 13 16.3	+0.2
BRG	Berggiesshubel	126.36	331	ePKIKP	pPKPdf	09 13 21.7	+1.5
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRG	Berggiesshubel	126.36	331	e(P)	pPKPdf	09 13 21.7	+1.5
	comp=Z,10nm,1.2s						
CLL	Collm	126.52	332	ePKPdf	PKPdf	09 13 06.0	-0.4
KHC	Kasperske Hory	127.67	330	ePKP	PKPdf	09 13 08.0	-0.6
KHC				epPKP	pPKPdf	09 13 21.5	-1.3
GERES	GERESS Array B	127.80	329	PKP	PKPdf	09 13 08.9	+0.1
	comp=Z,1.5nm,0.5s,baz=64,slow=1.1,SNR=12						
GERES				pPKP	pPKPdf	09 13 21.8	-1.3
	comp=Z,1.6nm,0.7s,baz=50,slow=2.1,SNR=5.9						
BOJS	Bojanci	129.02	325	i PKPdf	pPKPdf	09 13 25.1	-0.4
VISS	Visnje	129.07	326	i PKPdf	pPKPdf	09 13 28.0	+2.4
DAVA	Damuels	130.75	330	⇓iPKPdf	PKPdf	09 13 11.5	-3.0
	comp=Z,8.2nm,1.1s						
GIVF	Givet	130.98	336	ePKP1	PKPdf	09 13 15.1	+0.2
DAVOX	Davos/Dischmat	131.09	329	PKP	PKPdf	09 13 14.2	-1.0
	comp=Z,1.5nm,0.4s,baz=140,slow=12,SNR=5.3						
DAVOS	Davos	131.10	330	PKIKP	PKPdf	09 13 14.2	-1.0
TSUM	Tsumeb	131.32	237	PKP	PKPdf	09 13 14.5	-2.0
	comp=Z,2.0nm,0.7s,baz=224,slow=12,SNR=3.1						
TSUM				pPKP	pPKPdf	09 13 30.8	+0.2
	comp=Z,9.0nm,0.8s,baz=74,slow=2.1,SNR=8.0						
TSUM	Tsumeb	131.32	237	PKP	PKPdf	09 13 14.5	-2.0
TSUM				pPKP	pPKPdf	09 13 30.8	+0.2
HINF	Hinteralfeld	131.82	332	ePKP1	PKPdf	09 13 16.4	-0.2
HAU	Haudompre	131.91	333	ePKP1	PKPdf	09 13 16.7	0.0
CABF	La Chapelle	133.06	332	ePKP1	PKPdf	09 13 19.7	+0.8
CPUP	Villa Florida	133.51	137	PKP	PKPdf	09 13 19.3	-1.1
	comp=Z,1.1nm,0.5s,baz=165,slow=2.4,SNR=3.7						
CPUP				pPKP	pPKPdf	09 13 33.0	-1.6
	comp=Z,1.4nm,0.5s,baz=248,slow=2.6,SNR=2.5						
LPL	La Plagne	133.54	330	ePKP1	PKPdf	09 13 20.7	+0.8
LPG	La Plagne	133.55	330	ePKP1	PKPdf	09 13 20.8	+0.9
	comp=Z,5.8nm,0.5s						
LOR	Lormes	133.57	334	ePKP1	PKPdf	09 13 20.0	+0.1
SMF	Signal de Mont	134.06	333	ePKP1	PKPdf	09 13 21.3	+0.5
	comp=Z,3.9nm,0.5s						
MBDF	Montbardon	134.09	329	ePKP1	PKPdf	09 13 21.1	+0.2
PGF	Pioggiola	134.38	326	ePKP1	PKPdf	09 13 21.9	+0.3
	comp=Z,16nm,0.7s						
ORIF	Oris-en-Rattie	134.39	330	ePKP1	PKPdf	09 13 21.5	0.0
	comp=Z,4.1nm,0.5s						
BGF	Bois d'Agland	134.56	334	ePKP1	PKPdf	09 13 21.6	-0.2
FRF	La Foret Royal	134.97	328	ePKP1	PKPdf	09 13 21.7	-0.9
SMRF	Simiane la Rot	135.22	330	ePKP1	PKPdf	09 13 23.0	-0.1
LASF	Ste Croix	135.99	331	ePKP1	PKPdf	09 13 25.4	+0.9
SIV	San Ignacio	136.63	122	PKP	PKPdf	09 13 25.9	-0.5
	comp=Z,0.7nm,0.4s,baz=259,slow=4.7,SNR=5.0						
SIV				pPKP	pPKPdf	09 13 38.7	-1.9
	comp=Z,4.5nm,0.9s,baz=194,slow=1.9,SNR=8.5						
ETSF	Etsaut	138.94	334	ePKP1	PKPdf	09 13 30.8	+0.8
	comp=Z,5.7nm,0.6s						
ESDC	Sonseca Array	143.05	334	PKhKP		09 13 32.9	
	comp=Z,0.8nm,0.5s,baz=34,slow=2.5,SNR=5.1						
EVIA	Vianos	143.22	331	PKIKP	PKPdf	09 13 34.6	-3.2
PVIS	Viseu	143.72	339	ePKP	PKPdf	09 13 36.1	-2.5
PVIS				epPKP	pPKPdf	09 13 50.7	-2.1
EQES	Quesada	144.16	331	PKP	PKPdf	09 13 37.0	-2.5
EBAN	Banos Encina	144.21	332	PKIKP	PKPdf	09 13 36.7	-2.9
PCBR	Castelo Branco	144.34	338	ePKP	PKPdf	09 13 38.3	-1.5
PCBR				epPKP	pPKPdf	09 13 51.1	-2.8
EADA	Adamuz	144.56	333	PKP	PKPdf	09 13 37.7	-2.5
PMRV	Marv??o	144.66	338	ePKP	PKPdf	09 13 39.0	-1.3
PMRV				epPKP	pPKPdf	09 13 53.5	-1.0
EBER	Berja	144.79	330	PKP	PKPdf	09 13 39.6	-1.1
ECOG	Cogollos-Vega	144.82	331	PKIKP	PKPdf	09 13 38.3	-2.4
ELUQ	Luque	144.92	332	PKIKP	PKPdf	09 13 40.0	-0.8
EBAD	Badajoz	145.10	336	PKP	PKPdf	09 13 39.7	-1.4
ERON	Agron	145.14	331	PKP	PKPdf	09 13 39.0	-2.2
EGUA	Guajares	145.17	331	PKP2	PKPab	09 13 39.2	-1.7
ELOJ	Sierra Loja	145.20	332	PKP2	PKPab	09 13 39.5	-1.5
PESTR	Estremoz	145.23	337	ePKP	PKPdf	09 13 40.8	-0.5
PESTR				epPKP	pPKPdf	09 13 55.0	-0.5
CAM4	Nova Friburgo	145.40	149	(P)	PKPbc	09 13 33.7	-8.3
CAM4				i		09 13 39.3	
CAM4				i		09 13 50.7	
CAM4				i		09 13 55.0	
CAM4				i		09 14 14.3	
PBAR	Barrancos	145.61	336	ePKP	PKPdf	09 13 42.6	+0.6
EVO	Evora	145.68	337	ePKIKP	PKPdf	09 13 42.4	+0.3
	comp=Z,11nm,0.5s						
EVO	Evora	145.68	337	ePKP	PKPdf	09 13 42.1	0.0
EVO				epPKP	pPKPdf	09 13 56.7	+0.4
EMIN	Mina Concepcio	145.81	335	PKP	PKPdf	09 13 41.8	-0.6
PBEJ	Beja	146.06	337	ePKP	PKPdf	09 13 42.8	0.0
PBEJ				epPKP	pPKPdf	09 13 58.9	+1.9
ESPR	Espera	146.21	333	PKP	PKPdf	09 13 43.7	+0.6
EGRO	El Granado	146.34	336	PKP	PKPdf	09 13 44.0	+0.7
BDFB	Brasilia	147.08	134	PKPbc	PKPbc	09 13 46.5	-0.7
	comp=Z,9.9nm,0.6s,baz=235,slow=3.7,SNR=28						
BDFB				pPKPbc	pPKPbc	09 14 00.4	-0.8
	comp=Z,11nm,0.8s,baz=174,slow=17,SNR=8.9						
TAM	Tamanrasset	147.68	302	ePKP2	PKPab	09 13 48.7	-2.3
CAM3	Guarapari	147.79	150	⇓iP	PKPbc	09 13 47.8	-1.2
CAM3				i		09 13 51.1	
CAM3				i		09 14 01.8	
CAM3				i		09 14 05.8	
MDT	Midelt	148.85	327	PKPbc	PKPbc	09 13 51.1	-0.4
	comp=Z,5.4nm,0.6s,baz=80,slow=3.0,SNR=16						
MDT				pPKPbc	pPKPbc	09 14 03.7	-1.9
	comp=Z,7.9nm,0.8s,baz=64,slow=4.7,SNR=8.2						
TOA0	Torodi Ar. Sit	154.06	285	ePKPdf	PKPdf	09 13 56.2	+0.2
TOA0				ePKPbc	PKPbc	09 14 02.6	-1.4
TOA0				ePKPab	PKPab	09 14 17.4	-0.3
TORD	Torodi Ar. Bea	154.06	285	PKP	PKPdf	09 13 54.5	-1.4
	comp=Z,1.4nm,0.8s,baz=12,slow=0.9,SNR=7.5						
TORD				PKPbc	PKPbc	09 14 01.8	-2.3
	comp=Z,5.0nm,0.8s,baz=56,slow=1.8,SNR=20						
TORD				PKPab	PKPab	09 14 15.8	-1.9
	comp=Z,11nm,0.8s,baz=79,slow=2.3,SNR=19						
TORD	Torodi Ar. Bea	154.06	285	PKP	PKPdf	09 13 54.5	-1.4
TORD				PKPbc	PKPbc	09 14 01.8	-2.3
TORD				PKPab	PKPab	09 14 15.8	-1.9
KIC	Kosan Boka	160.86	268	eP	PKPab	09 14 46.0	-1.1
	comp=Z,95nm,1.0s						
DBIC	Dimbokro	161.00	269	PKP	PKPdf	09 14 03.3	-1.3
	comp=Z,2.2nm,0.8s,baz=20,slow=2.4,SNR=3.1						
DBIC				pPKP	pPKPdf	09 14 16.0	-2.9
	comp=Z,9.3nm,1.0s,baz=133,slow=0.6,SNR=5.5						
DBIC				PKPab	PKPab	09 14 46.9	-0.8
	comp=Z,5.3nm,0.5s,baz=56,slow=2.1,SNR=17						
DBIC				pPKPab	pPKPab	09 15 00.6	-0.9
	comp=Z,9.0nm,0.8s,baz=116,slow=3.5,SNR=4.6						
DBIC	Dimbokro	161.00	269	PKIKP	PKPdf	09 14 03.3	-1.4
DBIC						09 14 16.0	
DBIC						09 14 46.9	
DBIC	Dimbokro	161.00	269	PKP	PKPdf	09 14 03.3	-1.3
DBIC				pPKP	pPKPdf	09 14 16.0	-2.9
DBIC				PKPab	PKPab	09 14 46.9	-0.8
DBIC				pPKPab	pPKPab	09 15 00.6	-0.9
LIC	Lamto	161.14	268	eP	PKPab	09 14 47.5	-0.8
	comp=Z,64nm,1.4s						
TIC	Toumodi	161.16	269	eP	PKPab	09 14 47.4	-1.0
	comp=Z,127nm,1.2s						

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*ISCJB **14** 08:54:38.1±0.4, 678N±005×7294W±005, h170^{km}±4^{km}, mb4.0/14, Error ellipse: s-maj=9.8km s-min=5.8km az=139.5*

*IDC **14** 08:54:38.3±0.7, 674N×7292W, h161^{km}±7^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.7/22, mbtmp3.7/10, Error ellipse: s-maj=19.3km s-min=7.4km az=133.0*

*NEIC **14** 08:54:38.7±0.5, 665N×7288W, h170^{km}±6^{km}, mb4.3/10, Error ellipse: s-maj=10.1km s-min=7.3km az=135.0*

*FUNV **14** 08:54:38.1, 673N×7318W, h167^{km}, MW4.0*

ISC 14 08:54:39.3±0.4**, 678N**±005×**7292W**±005**, h164**^{km}±4^{km}**, n44, σ0^{s}91**/52**, mb4.0**/14**, 12D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	29	⇓iP	Pn	08 55 07.9	+0.5
CAPV				eS	Sn	08 55 28.7	-0.4
ROSC	El Rosal	2.37	216	P	Pn	08 55 19.3	-0.3
	162nm,0.3s,baz=88,slow=23,SNR=839						
ROSC				S	Sn	08 55 49.7	-1.1
	120nm,0.3s,baz=102,slow=16,SNR=12						
SOCV	Socops	2.54	54	⇓iP	Pn	08 55 22.7	+1.2
SOCV				eS	Sn	08 55 54.8	+0.6
VIGV	El Vigia	2.56	37	⇓eP	Pn	08 55 22.4	+0.5
VIGV				eS	Sn	08 55 55.4	+0.5
SDV	Santo Domingo	3.08	47	P	Pn	08 55 29.3	+1.0
	150nm,0.3s,baz=237,slow=6.1,SNR=1877						
SDV				S	Sn	08 56 06.1	-0.3
	39nm,0.3s,baz=261,slow=23,SNR=11						
SDV	Santo Domingo	3.08	47	ePn	Pn	08 55 29.2	+0.9
SDV				eSn	Sn	08 56 05.9	-0.5
ELOV	Elorza	3.42	86	⇓eP	Pn	08 55 34.0	+1.5
ELOV				eS	Sn	08 56 14.7	+0.8
VIRV	Villa del Rosa	3.73	8	⇓eP	Pn	08 55 34.6	-1.9
VIRV				eS	Sn	08 56 17.5	-3.6
QARV	Quebrada Arrib	4.15	35	⇓iP	Pn	08 55 42.3	+0.4
QARV				eS	Sn	08 56 28.5	-2.2
SANV	Sanarito	4.31	51	⇓eP	Pn	08 55 44.3	+0.4
CURV	Curarigua	4.35	42	⇓eP	Pn	08 55 44.6	+0.2
DABV	Dabajuro	4.69	29	eP	Pn	08 55 48.9	-0.1
TEPV	Terepaima	4.86	49	⇓eP	Pn	08 55 51.5	+0.3
BAUV	El Baul	5.29	66	⇓iP	Pn	08 55 56.1	-0.7
JACV	Jacura	5.89	43	eP	Pn	08 56 05.0	+0.4
TURV	Turiamo	6.21	54	⇓eP	Pn	08 56 08.4	-0.4
CAOV	Caicara del Or	6.57	85	⇓iP	Pn	08 56 13.1	-0.7
MERV	Las Mercedes	7.00	69	eP	Pn	08 56 18.8	-0.7
FUNV	FUNVISIS	7.07	58	eP	Pn	08 56 19.7	-0.5
CUPV	Cœpira	7.77	65	eP	Pn	08 56 29.1	-0.5
OTAV	Otavalo	8.53	221	ePn	Pn	08 56 37.6	-2.0
	6.5nm,0.6s						
OTAV				eSn	Sn	08 58 17.1	+2.4
PCRV	Puerto La Cruz	8.86	67	P	Pn	08 56 43.5	-0.6
	2.8nm,0.3s,baz=192,slow=8.1,SNR=14						
PCRV	Puerto La Cruz	8.86	67	eP	Pn	08 56 44.4	+0.3
MTDJ	Mount Denham	12.23	339	ePn	Pn	08 57 29.7	+1.5
TEIG	Tepich	20.01	313	eP	P	08 58 60.0	+0.6
	10nm,0.5s						
WVT	Waverly	32.25	337	eP	P	09 00 52.6	+0.5
	3.7nm,0.4s,mb4.5						
WMOK	Wichita Mounta	36.63	323	eP	P	09 01 28.7	-1.2
	1.9nm,0.7s,mb3.8						
TXAR	Lajitas Array	36.64	312	P	P	09 01 30.0	0.0
	0.6nm,0.4s,mb3.6,baz=124,slow=9.1,SNR=25						
JFWS	Jewell Farm	39.10	340	eP	P	09 01 50.2	-0.3
	12nm,0.6s,mb4.7						
SDCO	Great Sand Dun	42.70	321	eP	P	09 02 21.1	+1.1
	1.2nm,0.6s,mb3.7						
PV01	Paradox Valley	44.89	319	eP	P	09 02 38.5	+1.1
WUAZ	Wupatki	45.39	315	eP	P	09 02 42.4	+1.0
	2.5nm,0.9s,mb3.8						
ULM	Lac du Bonnet	47.39	340	P	P	09 02 56.1	-0.7
	4.7nm,0.4s,mb4.5,baz=142,slow=7.1,SNR=10						
ULM	Lac du Bonnet	47.39	340	eP	P	09 02 55.9	-0.8
	4.5nm,0.3s,mb4.6						
SCHQ	Schefferville	48.16	5	P	P	09 03 03.1	+0.4
	4.6nm,0.8s,mb4.2,baz=207,slow=8.2,SNR=4.1						
PDAR	Pinedale Array	48.23	324	P	P	09 03 02.5	-0.9
	0.7nm,0.4s,mb3.6,baz=129,slow=10,SNR=9.8						
HLID	Hailey	51.59	322	eP	P	09 03 29.0	+0.3
	0.9nm,0.5s,mb3.7						
NVAR	Mina Array Bea	51.65	315	P	P	09 03 28.7	-0.5
	0.4nm,0.7s,mb3.2,baz=101,slow=8.0,SNR=3.5						
CMB	Columbia Colle	52.98	313	eP	P	09 03 39.2	+0.2
	6.0nm,0.6s,mb4.5						
YKA	Yellowknife Ar	63.37	340	P	P	09 04 50.5	-0.2
	3.2nm,0.6s,mb4.4,baz=133,slow=6.6,SNR=123						
YKA	Yellowknife Ar	63.37	340	P	P	09 04 50.5	-0.2
TORD	Torodi Ar. Bea	73.55	78	P	P	09 05 53.8	-1.0
	0.2nm,0.4s,mb3.2,baz=278,slow=6.0,SNR=4.1						
ASAR	Alice Springs	149.25	234	PKPbc	PKPbc	09 14 08.6	-0.7
	0.5nm,0.5s,baz=113,slow=3.7,SNR=12						
WRA	Warramunga Arr	150.49	241	PKPbc	PKPbc	09 14 11.9	-0.5
	0.6nm,0.6s,baz=107,slow=2.9,SNR=20						

IDC 14 09:12:32.3±3.9**, 5272N**×**3483E, h0**^{km}**, mb1 4.0**/1**, mb1mx3.2**/22**, mbtmp3.9**/1**, ML3.2**/2**, Error ellipse: s-maj=59.1km s-min=20.1km az=123.0, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.03	242	Pn	Pn	09 13 34.3	-0.8
	1.2nm,0.3s,baz=58,slow=15,SNR=3.2						
AKASG				Pg	Pg	09 13 43.1	-6.4
	1.6nm,0.3s,baz=58,slow=15,SNR=4.0						
AKASG				Sn	Sn	09 14 15.5	-7.5
	1.4nm,0.3s,baz=185,slow=34,SNR=3.4						
AKASG				Lg		09 14 35.8	
	2.0nm,0.3s,baz=63,slow=29,SNR=4.9						
ARCES	ARCESS Array B	17.43	349	Pn	Pn	09 16 28.9	-7.5
	0.1nm,0.3s,baz=161,slow=12,SNR=4.2						

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*IDC **14** 09:27:38.5±21.0, 3593N×6932E, h131^{km}±141^{km}, mb3.6/4, mb1 3.5/8, mb1mx3.2/28, mbtmp3.4/8, ML3.7/4, Error ellipse: s-maj=181.7km s-min=51.7km az=177.0*

*ISCJB **14** 09:27:41.2±0.5, 3631N±003×6959E±007, h153^{km}±7^{km}, mb3.8/3, Error ellipse: s-maj=9.3km s-min=5.3km az=164.4*

*NEIC **14** 09:27:41.8±0.9, 3627N×6959E, h144^{km}±11^{km}, mb4.3/8, Error ellipse: s-maj=13.2km s-min=6.9km az=62.0*

*MOS **14** 09:27:41.1±1.3, 3628N×6955E, h155^{km}, mb3.9/4, Error ellipse: s-maj=19.9km s-min=10.4km az=87.7*

*NNC **14** 09:27:48.2±14.0, 3683N×6957E, h176^{km}±258^{km}, mb3.0, mpv3.7, Error ellipse: s-maj=180.3km s-min=77.0km az=40.0*

ISC 14 09:27:42.2±0.5**, 3630N**±003×**6959E**±007**, h149**^{km}±7^{km}**, n47, σ0^{s}95**/55**, mb3.8**/3**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.81	194	ePn	Pn	09 28 15.4	+0.2
KBL				eSn	Sn	09 28 40.1	-0.2
CEP	Cherat	3.12	142	⇑P	Pn	09 28 32.0	+1.0
CEP				S	Sn	09 29 10.0	+1.2
CHCP	Chirah Chowk	4.00	130	⇑P	Pn	09 28 43.7	+1.2
SBDP	Sheikh Budin	4.12	165	P	Pn	09 28 44.0	0.0
SARP	Sargodha	5.06	149	P	Pn	09 28 55.8	-0.6
DLH	Dalhousie	6.47	124	eP	Pn	09 29 09.0	-6.1
DLH				ex	x	09 30 12.0	
AML	Almayashu	6.64	27	ePn	Pn	09 29 17.1	-0.2
	2.6nm,0.7s						
AML				eSn	Sn	09 30 30.2	-1.6
KK31	Karatay Array	6.83	6	P	Pn	09 29 19.3	-0.5
	3.7nm,0.5s,baz=175,slow=10,SNR=74						
KK31				S	Sn	09 30 31.4	-5.1
	1.8nm,0.3s,baz=193,slow=24,SNR=8.5						
EKS2	Erkin-Say	7.13	26	ePn	Pn	09 29 24.9	+1.1
	1.1nm,0.3s						
EKS2				eSn	Sn	09 30 44.0	+0.4
AAK	Ala-Archa	7.37	29	ePN	Pn	09 29 25.4	-1.7
AAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AAK	Ala-Archa	7.37	29	ePn	Pn	09 29 25.4	-1.8
	comp=Z,3.9nm,0.3s						
SDNR	Sundarnagar	7.78	126	eP	Pn	09 29 23.0	-10
TKM2	Tokmak 2	8.07	33	⇑P	Pn	09 29 36.8	+0.4
	comp=Z,1.7nm,0.5s						
TKM2	Tokmak 2	8.07	33	ePN	Pn	09 29 36.5	+0.1
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TKM2	Tokmak 2	8.07	33	ePn	Pn	09 29 36.5	0.0
	comp=Z,2.6nm,0.7s						
SMLA	Simla	8.15	127	i P	Pn	09 29 37.1	-0.5
SMLA				i S	Sn	09 31 04.4	-3.9
SMLA				ex	x	09 31 10.0	
	comp=E,146nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMLA				ex	x	09 31 11.3	
	comp=N,157nm,0.3s						
KHET	**Khetri**	**9.74**	**146**	eS	**Sn**	**09 31 36.8**	**-10**
JOSI	**Joshimath**	**10.11**	**122**	eP	**Pn**	**09 29 56.7**	**-6.9**
JOSI				eS	**Sn**	**09 31 43.7**	**-12**
SONA	**Sohna**	**10.22**	**140**	eP	**Pn**	**09 29 59.3**	**-5.9**
SONA				eS	**Sn**	**09 31 48.6**	**-10**
MKAR	**Makanchi Array**	**14.13**	**38**	P	**Pn**	**09 30 59.7**	**+4.1**
	comp=N,0.1nm,0.3s,baz=224,slow=11,SNR=7.1						
DANN	**Dangsing**	**14.35**	**120**	eP	**Pn**	**09 30 57.7**	**-0.9**
	comp=N,7.1nm,0.2s						
KOLN	**Koldanda**	**14.60**	**122**	eP	**Pn**	**09 31 00.1**	**-1.5**
AB01	**Akbulak array**	**14.74**	**334**	⇓P	**Pn**	**09 31 02.2**	**-1.0**
	comp=N,2.0nm,0.5s						
GKN	**Gorkha**	**15.18**	**119**	eP	**Pn**	**09 31 07.8**	**-1.1**
DMN	**Daman**	**15.75**	**119**	eP	**Pn**	**09 31 15.4**	**-0.5**
KKN	**Kakani**	**15.76**	**118**	eP	**Pn**	**09 31 15.6**	**-0.5**
	comp=N,8.6nm,0.3s						
KKN	**Kakani**	**15.76**	**118**	eP	**Pn**	**09 31 15.6**	**-0.5**
KKN				pmax	pmax		
	comp=Z,9.0nm,0.3s						
KURK	**Kurchatov**	**15.81**	**21**	P	**Pn**	**09 31 18.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=214,slow=9.7,SNR=9.7						
PKI	**Pulchoki**	**15.99**	**119**	eP	**Pn**	**09 31 18.8**	**0.0**
	comp=Z,7.6nm,0.3s						
PKI	**Pulchoki**	**15.99**	**119**	eP	**Pn**	**09 31 18.8**	**0.0**
PKI				pmax	pmax		
	comp=Z,8.0nm,0.3s						
GUN	**Gumba**	**16.12**	**117**	eP	**Pn**	**09 31 20.8**	**+0.3**
AKTK	**Aktyubinsk**	**16.41**	**333**	P	**Pn**	**09 31 23.8**	**0.0**
AKTO	**Aktyubinsk**	**16.41**	**333**	P	**Pn**	**09 31 23.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=125,slow=12,SNR=2.5						
JIRN	**Jiri**	**16.49**	**117**	eP	**Pn**	**09 31 25.2**	**+0.2**
BVAR	**Borovoye Array**	**16.73**	**2**	P	**Pn**	**09 31 28.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=168,slow=7.4,SNR=4.2						
RAMN	**Ramite**	**17.20**	**118**	eP	**Pn**	**09 31 33.5**	**-0.1**
TAPN	**Taplejung**	**17.77**	**115**	eP	**Pn**	**09 31 41.9**	**+1.5**
	comp=Z,12nm,0.4s						
ZALV	**Zalesovo Beam**	**20.58**	**26**	P	**P**	**09 32 10.7**	**+1.5**
	comp=Z,3.6nm,0.4s,baz=219,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**20.58**	**26**	P	**P**	**09 32 10.7**	**+1.6**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NVS	**Novosibirsk**	**20.79**	**23**	eP	**P**	**09 32 12.2**	**+0.9**
ARCES	**ARCESS Array B**	**40.90**	**338**	P	**P**	**09 35 10.5**	**+1.3**
	comp=Z,2.6nm,0.8s,mb3.9,baz=108,slow=6.9,SNR=7.3						
ARCES	**ARCESS Array B**	**40.90**	**338**	P	**P**	**09 35 10.5**	**+1.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**40.90**	**338**	P	**P**	**09 35 10.5**	**+1.3**
HFS	**Hagfors**	**42.52**	**322**	P	**P**	**09 35 21.7**	**-0.8**
	comp=Z,1.4nm,0.6s,mb3.8,baz=87,slow=12,SNR=4.2						
HFS	**Hagfors**	**42.52**	**322**	P	**P**	**09 35 21.7**	**-0.8**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**43.86**	**323**	P	**P**	**09 35 32.0**	**-1.2**
	comp=Z,0.9nm,0.6s,mb3.6,baz=99,slow=7.9,SNR=3.1						
NOA	**NORSAR Array B**	**43.86**	**323**	P	**P**	**09 35 32.0**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*IDC **14** 09:33:46.4±2.7, 25.24S×177.43W, h0^{km}, mb4.0/5, mb1 4.3/5, mb1mx4.1/15, mbtmp4.0/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=229.7km s-min=25.3km az=156.0*

*ISCJB **14** 09:33:49.1±0.7, 25.6S±0.2×177.5W±0.1, h33^{km}, mb4.4/12, Error ellipse: s-maj=33.1km s-min=14.6km az=155.3*

*NEIC **14** 09:33:50.8±0.7, 25.54S×177.40W, h35^{km}, mb4.5/6, Error ellipse: s-maj=29.9km s-min=13.8km az=156.0*

ISC 14 09:33:51.0±0.7**, 25.6S**±0.2×**177.4W**±0.1**, h35**^{km}**, n15, σ0^{s}92**/14**, mb4.4**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**26.85**	**303**	LR	LR	09 47 08.5	
	comp=Z,45nm,18.1s,baz=50,slow=30						
TAU	**Tasmania Unive**	**33.60**	**230**	P	**P**	**09 40 27.6**	**-0.2**
	23nm,1.1s,mb5.0						
STKA	**Stephens Creek**	**36.35**	**250**	P	**P**	**09 40 53.0**	**+1.3**
	2.1nm,0.7s,mb4.2,baz=63,slow=4.5,SNR=3.6						
PMG	**Port Moresby**	**37.28**	**289**	eP	**P**	**09 40 57.4**	**-2.4**
	4.6nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**44.12**	**262**	P	**P**	**09 41 56.8**	**+0.5**
	2.6nm,0.9s,mb4.0,baz=107,slow=8.3,SNR=21						
WB2	**Warramunga Arr**	**44.66**	**267**	eP	**P**	**09 42 00.3**	**-0.3**
WRAB	**Tennant Creek**	**44.66**	**267**	eP	**P**	**09 42 01.0**	**+0.4**
	1.4nm,0.7s,mb3.9						
NWAO	**Narrogin (SRO)**	**56.72**	**246**	eP	**P**	**09 43 32.3**	**+1.0**
	9.3nm,1.1s,mb4.7						
MBWA	**Marble Bar**	**57.42**	**260**	eP	**P**	**09 43 36.0**	**-0.5**
	9.0nm,1.1s,mb4.7						
SNAA	**Sanae**	**82.94**	**178**	P	**P**	**09 46 10.5**	**-1.4**
	2.0nm,1.1s,mb4.1						
NVAR	**Mina Array Bea**	**84.34**	**43**	P	**P**	**09 46 20.2**	**+0.8**
	1.0nm,0.8s,mb4.0,baz=228,slow=8.3,SNR=6.3						
NVAR	**Mina Array Bea**	**84.34**	**43**	P	**P**	**09 46 20.2**	**+0.8**
COR	**Corvallis**	**85.52**	**35**	P	**P**	**09 46 25.5**	**+0.4**
	22nm,0.4s,mb5.7						
TXAR	**Lajitas Array**	**89.33**	**57**	P	**P**	**09 46 44.3**	**+0.4**
	0.6nm,0.9s,mb3.9,baz=224,slow=7.0,SNR=5.0						
PDAR	**Pinedale Array**	**92.27**	**43**	P	**P**	**09 46 56.6**	**-0.7**
	0.3nm,0.6s,mb3.8,baz=222,slow=1.2,SNR=4.3						

*NNC **14** 09:45:57.4±10.0, 36.92N×66.83E, h8^{km}±81^{km}, mb3.8, mpv3.3, Error ellipse: s-maj=89.4km s-min=66.8km az=31.0*

ISC 14 09:45:58.1±2.2**, 36.6N**±0.2×**67.1E**±0.3**, h35**^{km}**, n12, σ0^{s}94**/14**, 2C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**7.04**	**21**	⇑Pn	**Pn**	**09 47 38.0**	**-0.5**
	0.8nm,0.3s,baz=216,slow=15,SNR=40						
KK31				⇓Sn	**Sn**	**09 48 56.8**	**-0.4**
	1.7nm,0.3s,baz=210,slow=23,SNR=5.5						
KK31				Lg		09 49 32.7	
	9.6nm,0.6s,baz=203,slow=27,SNR=6.8						
AML	**Almayashu**	**7.55**	**41**	P	**Pn**	**09 47 45.1**	**-0.5**
	SNR=13						
EKS2	**Erkin-Say**	**7.98**	**38**	P	**Pn**	**09 47 51.2**	**-0.2**
	SNR=5.5						
AAK	**Ala-Archa**	**8.33**	**41**	P	**Pn**	**09 47 55.6**	**-0.6**
	SNR=15						
KZA	**Kyzart**	**8.38**	**47**	P	**Pn**	**09 47 56.7**	**-0.3**
	SNR=10						
KBK	**Karagaybulak**	**8.59**	**43**	P	**Pn**	**09 48 00.0**	**+0.2**
	SNR=12						
USP	**Ospenovka**	**8.78**	**38**	P	**Pn**	**09 48 01.4**	**-1.1**
	SNR=6.4						
TKM2	**Tokmak 2**	**9.12**	**43**	⇓Pn	**Pn**	**09 48 05.5**	**-1.6**
	3.1nm,0.4s						
TKM2				⇑Sn	**Sn**	**09 49 49.1**	**+0.7**
	2.6nm,0.7s						
TKM2	**Tokmak 2**	**9.12**	**43**	P	**Pn**	**09 48 05.9**	**-1.2**
	SNR=9.6						
MK31	**Makanchi Array**	**15.25**	**43**	⇓P	**Pn**	**09 49 32.9**	**+2.3**
	1.7nm,0.8s,baz=231,slow=14,SNR=5.2						
KURBB	**Kurchatov Arra**	**16.28**	**27**	⇓P	**Pn**	**09 49 45.2**	**+1.4**
	0.6nm,0.7s						
KURK	**Kurchatov**	**16.39**	**27**	⇓P	**Pn**	**09 49 46.1**	**+0.8**
	1.7nm,1.0s						

*CSEM **14** 10:01:20.7±0.1, 40.81N×39.69E, h8^{km}, MD2.6, Error ellipse: s-maj=3.2km s-min=2.3km az=112.0*

*ISCJB **14** 10:01:21.3±0.7, 40.86N±0.06×39.63E±0.06, h11^{km}±5^{km}, Error ellipse: s-maj=10.6km s-min=6.7km az=150.6*

*DDA **14** 10:01:21.6, 40.84N×39.69E, h9^{km}±1^{km}, Md2.6*

ISC 14 10:01:21.4±0.7**, 40.85N**±0.05×**39.63E**±0.06**, h12**^{km}±5^{km}**, n8, σ0^{s}42**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.14**	**48**	*i* P	**Pg**	**10 01 24.5**	**-0.4**
MACK				*i* S	**Sg**	**10 01 27.0**	**-0.3**
KTUT	**Trabzon**	**0.17**	**37**	ePG	**Pg**	**10 01 25.2**	**-0.1**
KTUT				eSG	**Sg**	**10 01 28.5**	**+0.4**
GUMT	**Gumushane**	**0.40**	**196**	ePG	**Pg**	**10 01 29.2**	**-0.2**
ESPY	**Espiye-Giresun**	**0.69**	**276**	ePG	**Pg**	**10 01 34.3**	**-0.5**
GRSN	**GIRESUNGRSN**	**1.03**	**275**	eP	**Pg**	**10 01 42.2**	**+0.8**
KOPT	**Kop Dagi**	**1.06**	**141**	eP	**Pb**	**10 01 41.2**	**-0.5**
KOPT				*i* S	**Sg**	**10 01 56.1**	**+0.5**
DAGI	**Agillar**	**1.75**	**82**	*i* P	**Pn**	**10 01 51.3**	**-0.2**
DAGI				*i* S	**Sn**	**10 02 13.4**	**-0.3**
ARTV	**Artvin**	**1.77**	**78**	*i* P	**Pn**	**10 01 52.0**	**+0.1**
ARTV				*i* S	**Sn**	**10 02 14.8**	**+0.5**

*IDC **14** 10:18:37.3±7.5, 25.96S×177.78W, h229^{km}±67^{km}, mb3.8/11, mb1 4.0/11, mb1mx3.8/17, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.5/18, Error ellipse: s-maj=26.7km s-min=18.8km az=74.0*

*ISCJB **14** 10:18:50.4±1.3, 26.1S±0.1×178.2W±0.1, h369^{km}±12^{km}, mb4.0/16, Error ellipse: s-maj=22.1km s-min=14.7km az=29.4*

*NEIC **14** 10:18:51.4±1.4, 26.13S×178.16W, h365^{km}±13^{km}, mb4.3/9, Error ellipse: s-maj=20.9km s-min=15.3km az=181.0*

ISC 14 10:18:51.5±1.3**, 26.1S**±0.1×**178.1W**±0.1**, h367**^{km}±12^{km}**, n36, σ1^{s}10**/28**, mb4.0**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.17**	**177**	LR	LR	10 20 23.3	
	comp=Z,276nm,18.5s,baz=106,slow=32						
RAO	**Raoul Island**	**3.17**	**177**	Pn	**Pn**	**10 19 53.3**	**-0.2**
DZM	**Mont Dzumac**	**14.66**	**283**	eP	**P**	**10 22 03.4**	**+1.8**
CTA	**Charters Tower**	**33.25**	**273**	eP	**P**	**10 24 57.1**	**+1.2**
	5.0nm,0.3s,mb4.2						
CTA	**Charters Tower**	**33.25**	**273**	P	**P**	**10 24 57.0**	**+1.1**
	6.1nm,0.3s,mb4.2,baz=96,slow=11,SNR=16						
STKA	**Stephens Creek**	**35.57**	**251**	P	**P**	**10 25 16.7**	**+1.2**
	1.8nm,0.6s,mb3.5,baz=110,slow=9.5,SNR=3.7						
STKA				PcP	PcP	10 27 38.0	+2.8
	1.7nm,0.5s,baz=146,slow=22,SNR=5.1						
STKA	**Stephens Creek**	**35.57**	**251**	eP	**P**	**10 25 16.0**	**+0.5**
	5.0nm,1.7s,mb3.5						
PMG	**Port Moresby**	**36.84**	**290**	P	**P**	**10 25 24.3**	**-2.0**
	11nm,0.7s,mb4.2,baz=165,slow=6.6,SNR=4.2						
PMG	**Port Moresby**	**36.84**	**290**	eP	**P**	**10 25 25.3**	**-1.1**
	22nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**43.41**	**262**	P	**P**	**10 26 19.4**	**-0.1**
	1.6nm,0.5s,mb3.4,baz=89,slow=6.8,SNR=39						
WB2	**Warramunga Arr**	**43.99**	**268**	eP	**P**	**10 26 23.3**	**-0.9**
WRAB	**Tennant Creek**	**43.99**	**268**	eP	**P**	**10 26 23.0**	**-1.3**
	3.9nm,0.7s,mb3.6						
WRA	**Warramunga Arr**	**44.00**	**268**	P	**P**	**10 26 23.5**	**-0.8**
	2.7nm,0.5s,mb3.6,baz=103,slow=8.0,SNR=42						
WRA				PcP	PcP	10 28 05.0	+2.4
	1.4nm,0.9s,baz=108,slow=3.2,SNR=5.5						
KAKA	**Kakadu**	**48.23**	**276**	eP	x	10 26 34.9	
	2.3nm,0.3s						
VNDA	**Vanda**	**52.37**	**185**	P	**P**	**10 27 26.8**	**+0.1**
	2.1nm,1.0s,mb3.4,baz=72,slow=3.2,SNR=3.9						
VNDA	**Vanda**	**52.37**	**185**	eP	**P**	**10 27 26.4**	**-0.3**
	35nm,2.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**52.39**	**267**	eP	**P**	**10 27 27.8**	**+0.1**
	7.7nm,0.6s,mb4.2						
MBWA	**Marble Bar**	**56.70**	**261**	eP	**P**	**10 27 56.2**	**-2.2**
	41nm,1.7s,mb4.5						
MAW	**Mawson**	**76.31**	**200**	P	**P**	**10 30 00.8**	**+0.4**
	2.1nm,0.6s,mb4.1,baz=126,slow=8.9,SNR=6.3						
PETK	**Petropavlovsk-**	**81.62**	**346**	P	**P**	**10 30 29.0**	**+0.1**
	4.4nm,0.8s,mb4.3,baz=103,slow=7.8,SNR=9.7						
PETK	**Petropavlovsk-**	**81.62**	**346**	P	**P**	**10 30 29.0**	**+0.1**
SNAA	**Sanae**	**82.46**	**178**	e	**P**	**10 30 32.3**	**-0.9**
SNAA				e		10 30 34.2	
SNAA	**Sanae**	**82.46**	**178**	eP	**P**	**10 30 31.7**	**-1.5**
	3.6nm,1.0s,mb4.2						
VNA3	**Neumayer Olymp**	**82.61**	**176**	e	**P**	**10 30 34.1**	**+0.1**
VNA3				e		10 30 35.7	
VNA3				e		10 30 46.5	
VNA3				e		10 30 53.1	
VNA2	**Neumayer--Watz**	**83.05**	**177**	e	**P**	**10 30 36.8**	**+0.6**
	baz=178,slow=2.7						
VNA2				e		10 30 38.5	
VNA2				e		10 30 48.4	
VNA2				e		10 30 56.0	
VNA1	**Neumayer--Stat**	**83.27**	**177**	e	**P**	**10 30 38.4**	**+1.1**
VNA1				e		10 30 39.8	
NVAR	**Mina Array Bea**	**85.15**	**43**	P	**P**	**10 30 46.9**	**-0.2**
	1.4nm,0.7s,mb3.9,baz=220,slow=9.1,SNR=11						
CMAR	**Chiang Mai Arr**	**91.88**	**290**	P	**P**	**10 31 22.6**	**+3.4**
	1.8nm,0.4s,mb4.3,baz=132,slow=3.4,SNR=13						
CHTO	**Chiang Mai**	**92.03**	**290**	eP	**P**	**10 31 22.4**	**+2.5**
	5.8nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**93.08**	**43**	P	**P**	**10 31 23.7**	**-0.5**
	0.7nm,0.7s,mb3.8,baz=204,slow=3.3,SNR=5.6						
ARCES	**ARCESS Array B**	**134.35**	**349**	PKP	PKPdf	10 37 26.6	+1.3
	9.4nm,1.1s,baz=34,slow=4.5,SNR=8.0						
NB2	**NORSAR Subarra**	**144.48**	**352**	PKP	PKPdf	10 37 43.8	-0.1
	comp=Z,2.7nm,0.6s,baz=12,slow=3.6						
NOA	**NORSAR Array B**	**144.48**	**352**	PKP	PKPdf	10 37 44.1	+0.3
	comp=Z,3.7nm,0.8s,baz=11,slow=2.7,SNR=13						
AKASG	**Malin Array Be**	**147.72**	**327**	PKPbc	PKPbc	10 37 54.0	+0.9
	comp=Z,1.2nm,0.4s,baz=44,slow=4.0,SNR=12						
BRTR	**Keskin Array B**	**150.24**	**305**	PKPbc	PKPbc	10 38 01.4	+1.8
	comp=Z,1.1nm,0.7s,baz=143,slow=4.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**167.13**	**179**	PKP	PKPdf	10 38 15.7	+1.2
	comp=Z,0.4nm,0.6s,baz=333,slow=1.2,SNR=3.7						
TORD				PKPab	PKPab	10 39 21.3	+0.4
	comp=Z,0.7nm,0.6s,baz=177,slow=3.3,SNR=4.9						

*NEIC **14** 10:24:46.4, 15.60N×92.00W, h196^{km}, MD4.0(MEX), After MEX.*

MEX 14 10:24:46.0±1.1**, 15.56N**×**91.97W, h197**^{km}±11^{km}**, MD4.0, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.73**	**347**	*i* P	Pn	10 25 12.6	-1.2
CCIG				*i* S	Sn	10 25 33.1	-2.4
PCIG		**1.22**	**277**	*i* P	Pn	10 25 15.3	-1.8
PCIG				*i* S	Sn	10 25 39.5	-1.5
SCX	**San Cristobal**	**1.33**	**331**	*i* P	Pn	10 25 19.0	+1.0
TGIG		**1.64**	**318**	*i* P	Pn	10 25 20.2	-0.5
TGIG				*i* S	Sn	10 25 44.9	-2.8
CMIG	**Matias Romero**	**3.19**	**299**	*i* P	Pn	10 25 37.2	-0.5
CMIG				*i* S	Sn	10 26 16.3	-1.8
CMIG	**Matias Romero**	**3.19**	**299**	*i* P	Pn	10 25 37.2	-0.5
CMIG				*i* S	Sn	10 26 14.2	-4.0
HUIG	**Huatulco**	**4.00**	**273**	*i* P	Pn	10 25 45.3	-2.3
HUIG				*i* S	Sn	10 26 33.5	-2.4
HUIG	**Huatulco**	**4.00**	**273**	*i* P	Pn	10 25 45.3	-2.3
HUIG				*i* S	Sn	10 26 30.5	-5.4
VHO	**Vista Hermosa**	**4.82**	**289**	*i* P	Pn	10 25 57.3	-0.7
VHO				*i* S	Sn	10 26 53.7	-1.0
TEIG	**Tepich**	**5.82**	**37**	ePn	Pn	10 26 08.4	-2.5

*CSEM **14** 10:53:02.7, 40.97N×27.36E, h7^{km}, MD2.8, After ERD*

DDA 14 10:53:02.7, 40.97N×**27.36E, h7**^{km}±2^{km}**, Md2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SART	**Tekirdag**	**0.32**	**206**	*i* P	Pg	10 53 09.2	+0.3
DURS	**Dursunbey**	**1.61**	**148**	*i* P	Pn	10 53 32.9	+1.4
DURS				*i* S	Sn	10 53 56.5	+3.9

NNC 14 11:07:56.1±2.7**, 47.03N**×**81.38E, h0**^{km}**, mb3.6, mpv2.6, 4C-1D, Error ellipse: s-maj=19.3km s-min=13.6km az=50.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.67**	**111**	⇓P	Pg	11 08 08.5	-0.4
	1.0nm,0.2s,baz=287,slow=17,SNR=332						
MK31				⇑S	Sg	11 08 19.1	+1.5
	11nm,0.3s,baz=296,slow=24,SNR=14						
KURBB	**Kurchatov Arra**	**4.05**	**333**	⇑Sn	Sn	11 09 48.6	+1.2
	1.1nm,0.5s						
KURK	**Kurchatov**	**4.11**	**335**	⇑Pn	Pn	11 09 01.4	+1.4
	4.1nm,0.7s						
KURK				⇑Sn	Sn	11 09 52.1	+3.4
	5.2nm,0.7s						

*ISCJB **14** 11:12:17.3±1.6, 43.46N±0.05×127.54W±0.09, h14^{km}±13^{km}, mb2.9/4, Error ellipse: s-maj=11.9km s-min=6.7km az=146.3*

*NEIC **14** 11:12:18.4±0.8, 43.43N×127.55W, h10^{km}, mb3.3/3, Error ellipse: s-maj=9.5km s-min=5.6km az=53.0*

*IDC **14** 11:12:22.1±4.8, 43.69N×126.85W, h0^{km}, mb2.7/2, mb1 3.4/4, mb1mx3.2/23, mbtmp3.0/4, ML3.5/2, Error ellipse: s-maj=74.5km s-min=29.4km az=67.0*

ISC 14 11:12:19.5±2.0**, 43.45N**±0.05×**127.52W**±0.09**, h16**^{km}±15^{km}**, n96, σ0^{s}69**/99**, mb2.9**/4**, 17C-22D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I02A	**Mapleton**	**2.73**	**77**	⇓P	**Pn**	**11 13 01.1**	**-1.6**
	baz=3.1						
RNO	**Roman Nose**	**2.78**	**79**	P	**Pn**	**11 13 02.3**	**-1.1**
H02A	**Toledo**	**2.82**	**63**	⇓P	**Pn**	**11 13 02.6**	**-1.3**
	baz=3.2						
MPOR	**Mary's Peak**	**3.06**	**68**	P	**Pn**	**11 13 05.7**	**-1.5**
I03A	**Eugene**	**3.12**	**79**	⇓P	**Pn**	**11 13 07.1**	**-0.9**
	baz=3.5						
HSO	**Harness Mounta**	**3.23**	**87**	P	**Pn**	**11 13 09.0**	**-0.5**
HEBO	**Mount Hebo**	**3.23**	**56**	ePn	**Pn**	**11 13 08.0**	**-1.5**
HEBO				eSn	**Sn**	**11 13 47.8**	**+0.2**
COR	**Corvallis**	**3.25**	**68**	P	**Pn**	**11 13 09.0**	**-0.8**
EUO	**Eugene**	**3.28**	**78**	P	**Pn**	**11 13 09.7**	**-0.6**
H03A	**Soap Creek Ran**	**3.29**	**67**	⇓P	**Pn**	**11 13 09.1**	**-1.2**
	baz=3.7,SNR=148						
HUMO	**Hull Mountain**	**3.45**	**103**	ePn	**Pn**	**11 13 10.4**	**-2.2**
HUMO				eSn	**Sn**	**11 13 53.7**	**+0.6**
G03A	**Yamhill**	**3.57**	**57**	⇑P	**Pn**	**11 13 13.3**	**-0.9**
	baz=3.9,SNR=117						
BBOR	**Butler Butte**	**3.59**	**97**	P	**Pn**	**11 13 14.1**	**-0.3**
KMOR	**Kings Mountain**	**3.62**	**51**	P	**Pn**	**11 13 13.9**	**-0.9**
F03A	**Seaside**	**3.76**	**47**	⇓P	**Pn**	**11 13 16.0**	**-0.8**
	baz=4.1						
IRO	**Indian Ridge**	**3.86**	**80**	P	**Pn**	**11 13 18.1**	**-0.1**
SSOR	**Sweet Springs**	**3.91**	**67**	P	**Pn**	**11 13 19.1**	**+0.3**
NLO	**Nicolai Mounta**	**3.92**	**46**	P	**Pn**	**11 13 18.7**	**-0.3**
YBH	**Yreka Blue Hor**	**3.95**	**114**	Pn	**Pn**	**11 13 20.2**	**+0.8**
	0.5nm,0.3s,baz=303,slow=14,SNR=12						
FRIS	**Frissel Point**	**4.00**	**77**	P	**Pn**	**11 13 20.3**	**+0.2**
G04A	**Mulino**	**4.02**	**62**	P	**Pn**	**11 13 20.7**	**+0.3**
	baz=4.4,SNR=56						
H04A	**Detroit Lake**	**4.04**	**70**	⇑P	**Pn**	**11 13 20.5**	**-0.1**
	baz=4.4,SNR=48						
WIFE	**Three Sisters-**	**4.18**	**80**	P	**Pn**	**11 13 23.0**	**+0.4**
E03A	**Lebam**	**4.18**	**41**	⇓P	**Pn**	**11 13 21.6**	**-0.9**
	baz=4.5						
E03A				⇑S	**Sn**	**11 14 09.9**	**-1.2**
	baz=4.5						
BMW	**Boistfort Moun**	**4.29**	**44**	P	**Pn**	**11 13 23.2**	**-1.0**
BKCOR	**Black Crater**	**4.30**	**77**	P	**Pn**	**11 13 24.6**	**+0.4**
RVW	**Rose Valley**	**4.34**	**50**	P	**Pn**	**11 13 24.8**	**0.0**
BPO	**Bald Peter**	**4.37**	**72**	P	**Pn**	**11 13 25.8**	**+0.5**
F04A	**Amboy**	**4.41**	**54**	P	**Pn**	**11 13 25.8**	**+0.1**
	baz=4.8,SNR=83						
VLMM	**Larch Mountain**	**4.45**	**60**	P	**Pn**	**11 13 26.8**	**+0.6**
LVP	**Lakeview Peak**	**4.49**	**53**	P	**Pn**	**11 13 27.1**	**+0.4**
TDH	**Tom, Dick, Har**	**4.50**	**64**	P	**Pn**	**11 13 27.6**	**+0.6**
I05A	**Bend**	**4.58**	**79**	⇑P	**Pn**	**11 13 27.9**	**-0.2**
	baz=4.9						
FL2	**Flat Top 2**	**4.59**	**51**	P	**Pn**	**11 13 28.6**	**+0.3**
HOOD	**Mount Hood Mea**	**4.61**	**64**	ePn	**Pn**	**11 13 29.2**	**+0.8**
E04A	**Onalaska**	**4.63**	**46**	⇓P	**Pn**	**11 13 28.6**	**-0.2**
	baz=5.0						
VLL	**Laurance Lake**	**4.64**	**62**	P	**Pn**	**11 13 30.0**	**+1.0**
SHW	**Mount Saint He**	**4.65**	**52**	P	**Pn**	**11 13 29.9**	**+0.8**
JLK	**June Lake**	**4.68**	**53**	P	**Pn**	**11 13 30.0**	**+0.6**
H05A	**Madras**	**4.69**	**73**	⇓P	**Pn**	**11 13 29.2**	**-0.4**
	baz=5.1,SNR=22						
LCW	**Lucas Creek**	**4.70**	**45**	P	**Pn**	**11 13 29.4**	**-0.3**
CDFW	**Cedar Flats**	**4.72**	**54**	P	**Pn**	**11 13 30.5**	**+0.4**
VFP	**Flag Point**	**4.73**	**65**	P	**Pn**	**11 13 30.4**	**+0.3**
TDL	**Tradedollar La**	**4.76**	**51**	P	**Pn**	**11 13 30.9**	**+0.4**
G05A	**Wamic**	**4.80**	**66**	⇓P	**Pn**	**11 13 31.1**	**0.0**
	baz=5.2,SNR=51						
KOSW	**Kosmos**	**4.84**	**50**	P	**Pn**	**11 13 32.1**	**+0.5**
K05A	**Summer Lake**	**4.91**	**96**	⇓P	**Pn**	**11 13 32.6**	**0.0**
	baz=5.2						
LMW	**Ladd Mountain**	**4.91**	**47**	P	**Pn**	**11 13 32.8**	**+0.3**
F05A	**White Salmon**	**4.96**	**59**	⇑P	**Pn**	**11 13 33.7**	**+0.4**
	baz=5.3,SNR=17						
ASR	**Mount Adams--S**	**5.01**	**55**	P	**Pn**	**11 13 34.9**	**+0.9**
VIPM	**Ingram Point**	**5.09**	**76**	P	**Pn**	**11 13 35.1**	**0.0**
E05A	**Randle**	**5.13**	**51**	⇓P	**Pn**	**11 13 36.4**	**+0.7**
	baz=5.5						
LON	**Longmire**	**5.22**	**49**	ePn	**Pn**	**11 13 37.0**	**+0.1**
G06A	**Carlson Farm,**	**5.25**	**68**	⇓P	**Pn**	**11 13 37.0**	**-0.3**
	baz=5.6,SNR=11						
RVC	**Mount Rainier-**	**5.25**	**46**	P	**Pn**	**11 13 37.9**	**+0.6**
RCM	**Mount Rainier-**	**5.31**	**48**	P	**Pn**	**11 13 38.9**	**+0.7**
H06A	**Lindquist Farm**	**5.33**	**74**	⇓P	**Pn**	**11 13 38.5**	**0.0**
	baz=5.7,SNR=42						
RCS	**Mount Rainier-**	**5.34**	**48**	P	**Pn**	**11 13 39.0**	**+0.6**
F06A	**Goldendale**	**5.34**	**62**	⇑P	**Pn**	**11 13 38.7**	**+0.1**
	baz=5.7,SNR=9.6						
B04A	**Port Angeles**	**5.40**	**30**	⇑P	**Pn**	**11 13 39.2**	**-0.1**
	baz=5.7						
FMW	**Mount Fremont**	**5.41**	**48**	P	**Pn**	**11 13 40.0**	**+0.6**
MOD	**Modoc**	**5.54**	**104**	ePn	**Pn**	**11 13 40.2**	**-1.1**
E06A	**Yakima**	**5.58**	**54**	⇑P	**Pn**	**11 13 42.5**	**+0.7**
	baz=5.9,SNR=34						
I07A	**Izee**	**5.84**	**81**	⇑P	**Pn**	**11 13 45.8**	**+0.4**
	baz=6.2,SNR=10						
H07A	**Lands Inn, Kim**	**5.85**	**76**	⇓P	**Pn**	**11 13 45.9**	**+0.3**
	baz=6.2,SNR=24						
C05A	**Tolt Reservoir**	**5.90**	**42**	⇓P	**Pn**	**11 13 46.4**	**+0.2**
	baz=6.2						
PGC	**Sidney**	**5.92**	**27**	ePn	**Pn**	**11 13 45.8**	**-0.7**
F07A	**Phinny Hill Vi**	**5.94**	**63**	⇓P	**Pn**	**11 13 46.9**	**+0.1**
	baz=6.3,SNR=6.0						
D06A	**Cle Elum**	**6.01**	**49**	⇓P	**Pn**	**11 13 48.3**	**+0.5**
	baz=6.4						
K07A	**Rock Creek Ran**	**6.11**	**94**	⇓P	**Pn**	**11 13 49.3**	**+0.2**
	baz=6.4						
B05A	**Bryant**	**6.13**	**36**	⇑P	**Pn**	**11 13 49.3**	**0.0**
	baz=6.5						
L07A	**Adell**	**6.19**	**101**	⇓P	**Pn**	**11 13 50.4**	**+0.2**
	baz=6.5						
HAWA	**Hanford**	**6.39**	**60**	ePn	**Pn**	**11 13 53.0**	**+0.1**
	7.8nm,0.4s						
G08A	**Pilot Rock**	**6.41**	**70**	⇓P	**Pn**	**11 13 52.9**	**-0.2**
	baz=6.8,SNR=5.9						
H08A	**Prairie City**	**6.48**	**77**	⇑P	**Pn**	**11 13 54.1**	**0.0**
	baz=6.8,SNR=7.4						
RPW	**Rockport**	**6.52**	**38**	P	**Pn**	**11 13 54.7**	**0.0**
B06A	**Marblemount**	**6.59**	**38**	⇑P	**Pn**	**11 13 55.5**	**-0.1**
	baz=6.9						
WVOR	**Wild Horse Val**	**6.60**	**96**	ePn	**Pn**	**11 13 55.1**	**-0.8**
	0.6nm,0.3s						
A05A	**Maple Falls**	**6.71**	**32**	⇑P	**Pn**	**11 13 57.9**	**+0.6**
	baz=7.0						
VDB	**Vedder Mountai**	**6.72**	**32**	P	**Pn**	**11 13 57.9**	**+0.4**
C07A	**Waterville**	**6.74**	**48**	⇓P	**Pn**	**11 13 58.2**	**+0.5**
	baz=7.1						
SAW	**Saint Andrews**	**7.11**	**50**	P	**Pn**	**11 14 03.2**	**+0.4**
B07A	**Winthrop**	**7.19**	**43**	⇑P	**Pn**	**11 14 04.1**	**+0.2**
	baz=7.5						
H09A	**Durkee**	**7.21**	**77**	⇑P	**Pn**	**11 14 04.1**	**0.0**
	baz=7.5						
G09A	**Cove**	**7.22**	**72**	⇑P	**Pn**	**11 14 04.5**	**+0.2**
	baz=7.6						
C08A	**Higginbotham F**	**7.36**	**51**	⇓P	**Pn**	**11 14 06.4**	**+0.2**
	baz=7.7,SNR=6.1						
BMO	**Blue Mountains**	**7.48**	**76**	ePn	**Pn**	**11 14 07.7**	**-0.3**
	2.1nm,0.6s						
H10A	**Noah's Angus R**	**7.85**	**78**	⇑P	**Pn**	**11 14 13.2**	**+0.2**
	baz=8.2,SNR=6.0						
NEW	**Newport**	**8.71**	**53**	ePn	**Pn**	**11 14 24.8**	**+0.1**
	1.7nm,0.3s						
DLMT	**Dillon**	**10.85**	**75**	ePn	**Pn**	**11 14 53.9**	**-0.2**
	2.5nm,1.0s						
PDAR	**Pinedale Array**	**13.15**	**87**	Pn	**Pn**	**11 15 28.1**	**+2.6**
	0.0nm,0.3s,baz=283,slow=16,SNR=4.1						
YKA	**Yellowknife Ar**	**20.53**	**17**	P	**P**	**11 16 57.5**	**+0.7**
	0.4nm,0.8s,baz=201,slow=10,SNR=6.4						
PMR	**Palmer**	**22.23**	**332**	eP	**P**	**11 17 14.7**	**-0.5**
	1.2nm,0.9s,mb3.3						
TXAR	**Lajitas Array**	**23.71**	**119**	P	**P**	**11 17 32.8**	**+2.1**
	0.2nm,0.8s,mb2.6,baz=299,slow=9.0,SNR=4.3						
CHUM	**Lake Minchumin**	**24.89**	**334**	eP	**P**	**11 17 40.3**	**-0.9**
	1.0nm,0.7s,mb3.5						
FCC	**Fort Churchill**	**25.63**	**42**	eP	**P**	**11 17 47.9**	**-0.2**
	0.1nm,1.2s,mb2.2						

MAN 14 11:17:05, 18.22N×**122.39E, h7**^{km}**, mb4.3, ML3.1, MS2.9, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.32**	**274**	eP	Pg	11 17 12.6	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGCP				*e*S	Sg	11 17 18.3	+2.7
PALP	**Palanan**	**1.15**	**178**	*e*P	Pg	11 17 27.4	+0.2
PALP				*e*S	Sg	11 17 44.7	+2.6
CAUP	**Cauayan**	**1.38**	**203**	*e*P	Pn	11 17 31.9	+1.3
ABRA	**Dolores**	**1.69**	**251**	*e*P	Pn	11 17 35.2	+0.2
ABRA				*e*S	Sn	11 17 58.2	+1.3
BALP	**Baler**	**2.58**	**198**	*e*P	Pn	11 17 48.2	+0.9
BALP				*e*S	Sn	11 18 20.7	+1.8

*ISCJB **14** 11:24:27.7±1.7, 3.5N±0.2×97.0E±0.2, h39^{km}, mb3.5/4, Error ellipse: s-maj=44.5km s-min=13.9km az=140.5*
*IDC **14** 11:24:28.4±2.6, 3.22N×96.82E, h38^{km}±8^{km}, mb3.3/4, mb1 3.3/5, mb1mx3.2/22, mbtmp3.3/5, ML2.3/1, Error ellipse: s-maj=80.4km s-min=22.4km az=50.0*
*NEIC **14** 11:24:29.5±1.8, 3.55N×97.13E, h35^{km}, Error ellipse: s-maj=51.0km s-min=14.8km az=55.0*
ISC 14 11:24:30.4±1.7**, 3.6N**±0.2×**97.2E**±0.3**, h41**^{km}**, h41**^{km}±1.9^{km}**:pP-P, n9, σ1**^{s}**00**/9**, mb3.5**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.92**	**115**	Pn	**Pn**	**11 25 01.0**	**+0.5**
	0.9nm,0.3s,baz=285,slow=12,SNR=3.7						
CM31	**Chiang Mai Arr**	**14.86**	**7**	Pn	**Pn**	**11 27 56.7**	**-1.1**
	4.2nm,0.6s						
SONM	**Songino Array**	**44.77**	**9**	P	**P**	**11 32 42.7**	**+2.9**
	0.1nm,0.4s,mb3.0,baz=196,slow=8.0,SNR=2.4						
SONM				pP	pP	11 32 53.0	+1.5
	0.2nm,0.4s,baz=186,slow=9.1,SNR=3.3						
SONM	**Songino Array**	**44.77**	**9**	P	**P**	**11 32 42.7**	**+2.9**
SONM				pP	pP	11 32 53.0	+1.5
ASAR	**Alice Springs**	**44.89**	**129**	P	**P**	**11 32 40.2**	**-0.9**
	0.2nm,0.6s,mb3.1,baz=300,slow=8.1,SNR=4.3						
MK31	**Makanchi Array**	**44.92**	**346**	*e*P	**P**	**11 32 40.7**	**-0.3**
MK31				*e*	pP	11 32 52.3	-0.3
MKAR	**Makanchi Array**	**44.92**	**346**	P	**P**	**11 32 41.2**	**+0.2**
	0.5nm,0.4s,mb3.7,baz=154,slow=9.1,SNR=10						
MKAR				pP	pP	11 32 52.6	0.0
	1.0nm,0.4s,baz=157,slow=9.2,SNR=10						
ZALV	**Zalesovo Beam**	**51.19**	**351**	P	**P**	**11 33 29.6**	**+0.2**
	1.2nm,0.5s,mb4.1,baz=183,slow=8.2,SNR=6.0						
ZALV				pP	pP	11 33 41.2	0.0
	2.5nm,0.5s,baz=181,slow=6.9,SNR=7.8						
ZALV	**Zalesovo Beam**	**51.19**	**351**	P	**P**	**11 33 29.6**	**+0.2**
ZALV				pP	pP	11 33 41.2	0.0

*ISCJB **14** 12:08:58.3±0.8, 29.86N±0.03×36.27E±0.06, h0^{km}, Error ellipse: s-maj=7.1km s-min=4.7km az=178.4*
*GII **14** 12:08:58.7±1.0, 29.85N×36.16E, h0^{km}, ML1.8/1, EXPLOSION*
*SGS **14** 12:08:58.3, 30.04N×36.30E, h6^{km}*
*CSEM **14** 12:08:59.2±0.4, 29.72N×36.24E, h2^{km}, ML3.3, Error ellipse: s-maj=9.1km s-min=5.3km az=78.0*
*HLW **14** 12:09:00.3, 29.70N×36.30E, h6^{km}, Mb3.3*
ISC 14 12:08:58.2±0.8**, 29.86N**±0.03×**36.32E**±0.06**, h0**^{km}**, n27, σ0**^{s}**88**/35**, 2C-2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.11**	**264**	Pg	**Pg**	**12 09 18.8**	**-0.6**
HRFI	**Mount Harif**	**1.12**	**280**	Pg	**Pg**	**12 09 18.9**	**-0.9**
EIL	**Elat**	**1.20**	**262**	Pg	**Pg**	**12 09 20.5**	**-0.8**
ZFRI	**Zfri**	**1.21**	**306**	Pg	**Pg**	**12 09 20.3**	**-1.1**
MBRI	**Mt Berech**	**1.22**	**268**	Pg	**Pg**	**12 09 20.9**	**-0.7**
MBRI				Sg	**Sg**	**12 09 38.0**	**+0.6**
HQLS		**1.22**	**243**	P	**Pg**	**12 09 20.8**	**-1.0**
HQLS		**1.22**	**243**	P	**Pg**	**12 09 20.8**	**-0.9**
HQLS				S	**Sg**	**12 09 38.5**	**+0.9**
PRNI	**Paran**	**1.24**	**294**	Pg	**Pg**	**12 09 21.0**	**-1.0**
PRNI				Sg	**Sg**	**12 09 39.0**	**+0.9**
JLOS		**1.33**	**213**	P	**Pg**	**12 09 23.6**	**0.0**
JLOS		**1.33**	**213**	P	**Pg**	**12 09 23.6**	**-0.1**
JLOS				S	**Sg**	**12 09 42.2**	**+1.3**
KRMI	**Paran Flat**	**1.40**	**281**	Pg	**Pg**	**12 09 23.8**	**-1.4**
KRMI				Sg	**Sg**	**12 09 43.2**	**-0.2**
HBST	**Basata**	**1.52**	**246**⇓	*e*P	**Pn**	**12 09 26.3**	**-0.4**
MZDA	**Masada**	**1.67**	**331**	Pn	**Pn**	**12 09 28.9**	**+0.2**
MZDA				Sn	**Sn**	**12 09 52.2**	**+1.4**
BDAS	**Al Bad‘**	**1.77**	**217**	S	**Sn**	**12 09 55.6**	**+2.2**
BDAS	**Al Bad‘**	**1.77**	**217**	P	**Pn**	**12 09 30.0**	**-0.2**
YTIR	**Yattir**	**1.82**	**326**	Pn	**Pn**	**12 09 31.0**	**+0.1**
RTMI	**Retamim**	**1.84**	**311**	Pn	**Pn**	**12 09 31.5**	**+0.4**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**12 09 32.6**	**+0.8**
KZIT	**Kziot**	**1.96**	**303**	Pn	**Pn**	**12 09 33.5**	**+0.7**
HNKL	**Nakhl**	**2.03**	**273**⇑	*e*P	**Pn**	**12 09 34.2**	**+0.6**
HNKL				S	**Sn**	**12 09 59.2**	**-0.5**
HNKL	**Nakhl**	**2.03**	**273**	P	**Pn**	**12 09 34.2**	**+0.5**
HNKL				S	**Sn**	**12 09 59.2**	**-0.5**
RSHS		**2.04**	**221**	P	**Pn**	**12 09 33.0**	**-0.9**
HKAT	**Jabal Katrina**	**2.43**	**237**⇑	*e*P	**Pn**	**12 09 39.0**	**-0.2**
RSH		**2.50**	**297**	P	**Pn**	**12 09 41.7**	**+1.6**
TR2		**2.70**	**238**	P	**Pn**	**12 09 42.5**	**-0.4**
TR1		**2.77**	**229**	P	**Pn**	**12 09 43.0**	**-0.9**
HRSH	**Kfar Ka'horesh**	**2.97**	**343**	⇓P	**Pn**	**12 09 41.7**	**-5.0**

NDI 14 12:27:11.7±4.8**, 19.50N**×**77.27E, h5**^{km}**, ML2.6, Southern India**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKL	**Akola**	**1.23**	**349**	*e*P	Pg	12 27 33.4	-1.8
AKL				*e*S	Sg	12 27 52.6	+1.5
AKL				AML	AML	12 27 55.0	
	comp=E,161nm,0.2s						
AKL				AML	AML	12 27 55.0	
	comp=N,97nm,0.3s						
LATR	**Latur**	**1.27**	**212**	*e*P	Pg	12 27 22.0	-14
LATR				*e*S	Sg	12 27 36.0	-17
NGP	**Nagpur**	**2.34**	**45**	*e*P	Pn	12 27 49.8	-1.1
NGP				*e*S	Sn	12 28 20.4	+0.3
NGP				*e*x	x	12 28 23.3	
	comp=N,22nm,0.2s						
POO	**Poona**	**3.38**	**254**	*e*P	Pn	12 28 06.2	+1.1
POO				*e*S	Sn	12 28 45.2	-0.5
POO				AML	AML	12 28 49.0	
	comp=N,51nm,0.2s						
POO				AML	AML	12 28 51.0	
	comp=E,13nm,0.1s						
KAD	**Karad**	**3.65**	**234**	*e*P	Pn	12 28 08.7	-0.2
KAD				*e*S	Sn	12 28 51.6	-0.8
KAD				AML	AML	12 28 55.9	
	comp=E,14nm,0.3s						
KAD				AML	AML	12 28 57.3	
	comp=N,18nm,0.1s						
BOM	**Bombay**	**4.26**	**263**	*e*x	x	12 28 52.6	

*CSEM **14** 13:03:19.2±1.0, 36.73N×28.13E, h40^{km}, MD2.9, Error ellipse: s-maj=37.9km s-min=16.3km az=174.0*
*ISCJB **14** 13:03:21.1±1.0, 36.86N±0.09×28.07E±0.06, h33^{km}, Error ellipse: s-maj=13.5km s-min=6.5km az=16.3*
*DDA **14** 13:03:21.0, 36.81N×27.97E, h7^{km}±7^{km}, Md2.9*
ISC 14 13:03:20.9±1.0**, 36.85N**±0.10×**28.07E**±0.06**, h35**^{km}**, n6, σ1**^{s}**53**/10**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.33**	**31**	*e*PG	**Pn**	**13 03 31.2**	**+2.0**
DAT	**Datca**	**0.41**	**253**	*e*PG	**Pn**	**13 03 31.1**	**+0.8**
TURN	**Turunc**	**0.43**	**87**	*i* P	**Pn**	**13 03 30.4**	**-0.2**
TURN				*i* S	**Sn**	**13 03 36.0**	**-1.2**
MLSB	**Milas**	**0.50**	**332**	*e*PG	**Pn**	**13 03 31.0**	**-0.6**
MLSB				*e*SG	**Sn**	**13 03 36.5**	**-2.6**
BDRM	**Kayabasi**	**0.55**	**294**	*i* P	**Pn**	**13 03 31.8**	**-0.4**
BDRM				*i* S	**Sn**	**13 03 38.1**	**-2.0**
GCAM	**G?zelcaml?**	**1.08**	**322**	*i* P	**Pn**	**13 03 41.7**	**+2.2**
GCAM				*i* S	**Sn**	**13 03 55.4**	**+2.1**

*IDC **14** 13:10:36.7±2.6, 12.29N×125.45E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=87.2km s-min=24.7km az=63.0*
*ISCJB **14** 13:10:41.7±1.2, 12.35N±0.08×125.5E±0.1, h57^{km}±11^{km}, mb3.6/4, Error ellipse: s-maj=18.2km s-min=11.8km az=148.4*
ISC 14 13:10:42.7±1.5**, 12.32N**±0.09×**125.6E**±0.1**, h51**^{km}±13^{km}**, n11, σ1**^{s}**16**/14**, mb3.6**/4**, 1D, Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.73**	**191**	*e*P	**Pn**	**13 10 56.7**	**-0.1**
CNP	**Catarman**	**0.92**	**282**	*e*P	**Pn**	**13 10 57.5**	**-1.8**
CNP				*e*S	**Sn**	**13 11 14.9**	**+3.3**
PVCP	**Virac**	**1.89**	**313**	*e*P	**Pn**	**13 11 09.9**	**-2.6**
PVCP				*e*S	**Sn**	**13 11 46.8**	**+12**
MSLP	**Maasin**	**2.28**	**198**	*e*P	**Pn**	**13 11 19.0**	**+1.0**
SCPH	**Surigao**	**2.52**	**182**⇓	*e*P	**Pn**	**13 11 20.5**	**-0.7**
GUIM	**Jordan**	**3.38**	**241**	*e*P	**Pn**	**13 11 33.8**	**+0.8**
GUIM				*e*S	**Sn**	**13 12 10.7**	**-1.2**
OTRP	**Odiongan**	**3.48**	**271**	*e*P	**Pn**	**13 11 34.5**	**+0.1**
BATI	**Baumata**	**22.46**	**185**	P	**P**	**13 15 38.2**	**+0.7**
	6.4nm,0.4s,mb4.4,baz=40,slow=12,SNR=3.7						
CMAR	**Chiang Mai Arr**	**26.38**	**287**	P	**P**	**13 16 13.5**	**-1.0**
	0.3nm,0.3s,mb3.3,baz=94,slow=8.2,SNR=4.1						
ASAR	**Alice Springs**	**36.68**	**167**	P	**P**	**13 17 44.6**	**-0.1**
	0.1nm,0.3s,mb3.1,baz=340,slow=7.4,SNR=6.3						
MKAR	**Makanchi Array**	**50.01**	**322**	P	**P**	**13 19 32.8**	**+0.9**
	0.4nm,0.8s,mb3.5,baz=118,slow=8.1,SNR=4.1						

*ISCJB **14** 13:11:20.3±0.9, 32.8S±0.2×57.2E±0.2, h10^{km}, mb3.9/8, MS3.3/4, Error ellipse: s-maj=29.8km s-min=14.3km az=27.0*
*IDC **14** 13:11:20.3±1.1, 32.84S×57.07E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/23, mbtmp4.1/8, ML4.5/1, MS3.3/4, Ms1 3.3/4, ms1mx3.1/24, Error ellipse: s-maj=55.6km s-min=19.4km az=21.0*
*NEIC **14** 13:11:22.3±0.7, 32.76S×57.13E, h10^{km}, mb3.9/2, Error ellipse: s-maj=23.2km s-min=11.2km az=27.0*
ISC 14 13:11:22.4±0.9**, 32.8S**±0.2×**57.1E**±0.2**, h10**^{km}**, n16, σ0**^{s}**51**/11**, mb3.9**/8**, MS3.3**/4**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**16.31**	**325**	*e*Pn	**Pn**	**13 15 11.3**	**-0.3**
	3.7nm,0.3s						
OPO	**Ambohidratompo**	**16.71**	**325**	Pn	**Pn**	**13 15 17.2**	**+0.5**
	1.6nm,0.3s,baz=136,slow=14,SNR=12						
OPO				Sn	**Sn**	**13 18 08.3**	**-14**
	0.9nm,0.3s,baz=259,slow=16,SNR=5.1						
BOSA	**Boshof**	**27.67**	**270**	LR	LR	13 25 33.6	
	comp=Z,55nm,21.4s,MS3.1,baz=137,slow=31						
LBTB	**Lobatse**	**28.60**	**277**	LR	LR	13 26 54.1	
	comp=Z,38nm,19.4s,MS3.0,baz=224,slow=33						
LBTB	**Lobatse**	**28.60**	**277**	P	**P**	**13 17 19.8**	**+1.0**
	1.1nm,0.6s,mb3.8						
LSZ	**Lusaka**	**31.50**	**297**	P	**P**	**13 17 44.3**	**-0.3**
	0.9nm,0.4s,mb4.0,baz=128,slow=7.8,SNR=4.4						
PSI	**Prapat**	**53.02**	**56**	LR	LR	13 40 08.3	
	comp=Z,43nm,18.5s,MS3.5,baz=88,slow=33						
KAPI	**Kappang**	**64.35**	**79**	LR	LR	13 44 50.4	
	comp=Z,24nm,18.6s,MS3.4,baz=288,slow=31						
CMAR	**Chiang Mai Arr**	**64.73**	**44**	P	**P**	**13 22 01.8**	**+0.7**
	0.3nm,0.3s,mb3.8,baz=232,slow=6.7,SNR=4.2						
ASAR	**Alice Springs**	**66.93**	**104**	P	**P**	**13 22 15.3**	**0.0**
	0.8nm,0.6s,mb3.9,baz=236,slow=5.7,SNR=18						
WRA	**Warramunga Arr**	**69.01**	**101**	P	**P**	**13 22 28.2**	**-0.2**
	1.0nm,0.6s,mb3.9,baz=239,slow=5.5,SNR=6.9						
TORD	**Torodi Ar. Bea**	**69.89**	**301**	P	**P**	**13 22 33.1**	**-0.6**
	1.8nm,0.8s,mb4.1,baz=130,slow=5.2,SNR=14						
DBIC	**Dimbokro**	**70.68**	**292**	P	**P**	**13 22 38.5**	**-0.2**
	2.3nm,0.6s,mb4.3,baz=123,slow=8.3,SNR=4.9						
BRTR	**Keskin Array B**	**75.33**	**341**	P	**P**	**13 23 05.1**	**-0.5**
	1.1nm,0.8s,mb3.8,baz=176,slow=3.7,SNR=3.9						
YKA	**Yellowknife Ar**	**149.78**	**352**	PKPbc	PKPbc	13 31 11.2	-0.5
	0.5nm,0.5s,baz=8.9,slow=2.1,SNR=24						
YKA	**Yellowknife Ar**	**149.78**	**352**	PKPbc	PKPbc	13 31 11.2	-0.5

IDC 14 13:33:31.7±3.7**, 7.99N**×**126.60E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/20**, mbtmp3.5**/3**, Error ellipse: s-maj=192.9km s-min=27.5km az=93.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.79**	**165**	P	P	13 39 31.0	-0.5
	0.3nm,0.7s,baz=344,slow=11,SNR=7.1						
MJAR	**Matsushiro Arr**	**30.32**	**19**	P	P	13 39 45.0	+0.1
	0.9nm,0.5s,baz=217,slow=6.5,SNR=4.9						
ASAR	**Alice Springs**	**32.27**	**167**	P	P	13 40 02.8	+0.6
	0.2nm,0.6s,baz=349,slow=7.3,SNR=5.8						

*NIED **14** 14:00:00, 46.00N×152.80E, h32^{km}, Mw4.4 Best double couple: $M_0$4.62000×10^{15} NP1:ϕ_s98.00000°, δ62.00000°, λ-88.00000°. NP2:ϕ_s274.00000°, δ28.00000°, λ-94.00000°.*
*ISCJB **14** 14:00:29.5±0.3, 45.78N±0.04×152.94E±0.04, h31^{km}, mb4.5/55, MS3.7/21, Error ellipse: s-maj=6.3km s-min=2.9km az=147.7*
*MOS **14** 14:00:30.6±1.0, 45.90N×152.87E, h38^{km}, mb4.6/27, Error ellipse: s-maj=8.5km s-min=7.3km az=74.1*
*BJI **14** 14:00:30.2, 46.01N×152.91E, h25^{km}, mB5.0, mb4.7, Ms4.4, Msz4.2*
*IDC **14** 14:00:31.9±0.7, 45.83N×152.91E, h31^{km}±3^{km}, mb3.9/17, mb1 4.2/20, mb1mx4.1/26, mbtmp4.0/20, ML4.4/3, MS3.6/16, Ms1 3.6/16, ms1mx3.4/44, Error ellipse: s-maj=17.7km s-min=12.3km az=144.0*
*SKHL **14** 14:00:32.5±2.1, 45.80N×153.00E, h67^{km}±11^{km}, mb5.1/5, msh5.9/1*
*NEIC **14** 14:00:32.0±0.3, 45.81N×152.96E, h35^{km}, mb4.8/24, Error ellipse: s-maj=8.2km s-min=4.7km az=141.0*
*JMA **14** 14:00:33.2±0.8, 45.96N×152.78E, h30^{km}, M5.0*
ISC 14 14:00:32.1±0.3**, 45.83N**±0.03×**152.94E**±0.04**, h33**^{km}**, h33**^{km}±1.0^{km}**:pP-P, n196, σ1**^{s}**27**/208**, mb4.5**/55**, MS3.7**/21**, 9C-6D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.61**	**262**	*i* PN	**Pn**	**14 01 23.5**	**-2.1**
KUR				*i* S	**Sn**	**14 02 04.5**	**-2.6**
KUR				pmax	pmax		
	comp=N,840nm,0.5s						
KUR				pmax	pmax		
	comp=E,270nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				smax			
	comp=N,1μm,0.6s						
KUR				smax			
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**3.61**	**262**⇑	*i*P	**Pn**	**14 01 23.5**	**-2.1**
KUR				AMB	AMB	14 01 24.3	
	comp=E,910nm,0.5s						
KUR				AMB	AMB	14 01 24.3	
	comp=E,240nm,0.5s						
KUR				AMB	AMB	14 01 24.3	
	comp=E,2μm,0.5s						
KUR				*i* S	**Sn**	**14 02 04.5**	**-2.6**
KUR				A		14 02 09.8	
	comp=E,1μm,0.6s						
KUR				A		14 02 09.8	
	comp=E,1μm,0.6s						
SKR	**Severo-Kuril's**	**5.30**	**22**	*e*P	**Pn**	**14 01 48.0**	**-0.8**
SKR				AMB	AMB	14 01 49.5	
	comp=E,50nm,0.4s						
SKR				AMB	AMB	14 01 49.5	
	comp=E,160nm,0.4s						
SKR				AMB	AMB	14 01 49.5	
	comp=E,220nm,1.0s						
SKR				*e*S	**Sn**	**14 02 44.0**	**-4.7**
SKR				A		14 02 51.5	
	comp=E,310nm,0.2s						
SKR				A		14 02 51.5	
	comp=E,460nm,0.6s						
SKR				A		14 02 51.5	
	comp=E,140nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.33**	**253**	*e*P	**Pn**	**14 01 51.3**	**+2.0**
YUK				*i* S	**Sn**	**14 02 49.5**	**0.0**
YUK				A		14 02 54.0	
	comp=E,510nm,0.5s						
YUK				A		14 02 54.0	
	comp=E,770nm,0.5s						
YUK				A		14 02 54.0	
	comp=E,5μm,2.0s						
YUK				A		14 02 54.0	
	comp=E,3μm,2.0s						
NEM2	**Nemuro 2**	**5.70**	**247**	P	**Pn**	**14 01 54.4**	**+0.1**
NEM2				*e*S	**Sn**	**14 02 55.5**	**-2.9**
JRA	**Rausu**	**5.87**	**254**	P	**Pn**	**14 01 58.9**	**+2.3**
JRA				*e*S	**Sn**	**14 03 03.0**	**+0.4**
JNK	**Nakash**	**6.27**	**252**	P	**Pn**	**14 02 04.0**	**+1.9**
JNK				*e*S	**Sn**	**14 03 11.6**	**-1.0**
JAK	**Akkeshi**	**6.54**	**247**	P	**Pn**	**14 02 06.0**	**+0.1**
JTKR	**Abashiri--Toko**	**6.68**	**257**	P	**Pn**	**14 02 10.2**	**+2.5**
JAR	**Ashorobuto**	**7.02**	**252**	P	**Pn**	**14 02 14.2**	**+1.8**
JMP	**Maruseppu**	**7.04**	**258**	P	**Pn**	**14 02 15.3**	**+2.6**
JMP	**Maruseppu**	**7.04**	**258**	P	**Pn**	**14 02 16.1**	**+3.4**
YSS	**Yuzh-Sakhalins**	**7.13**	**283**⇓	*i*PN	**Pn**	**14 02 18.5**	**+4.5**
YSS				*e*S	**Sn**	**14 03 37.0**	**+3.2**
YSS				pmax	pmax		
	comp=Z,120nm,0.9s						
YSS				smax			
	comp=E,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.13**	**283**⇓	*i*P	**Pn**	**14 02 18.5**	**+4.5**
YSS				AMB	AMB	14 02 19.0	
	comp=E,120nm,0.9s						
YSS				*e*S	**Sn**	**14 03 37.0**	**+3.2**
YSS				A		14 03 39.5	
	comp=E,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.13**	**283**⇑	*e*Pn	**Pn**	**14 02 18.4**	**+4.4**
JSE	**Soyaes**	**7.34**	**267**	P	**Pn**	**14 02 21.1**	**+4.3**
JKK2	**Kamakawa 2**	**7.50**	**259**	P	**Pn**	**14 02 21.9**	**+2.9**
ASAJ	**Asahikawa**	**7.53**	**261**	Pn	**Pn**	**14 02 22.8**	**+3.4**
	comp=E,15nm,0.3s,baz=292,slow=28,SNR=90						
ASAJ	**Asahikawa**	**7.53**	**261**	P	**Pn**	**14 02 22.7**	**+3.3**
ASAJ	**Asahikawa**	**7.53**	**261**	P	**Pn**	**14 02 22.7**	**+3.3**
ASAJ	**Asahikawa**	**7.53**	**261**	PN	**Pn**	**14 02 22.8**	**+3.4**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.3s						
JCH	**Churui**	**7.59**	**248**	P	**Pn**	**14 02 20.5**	**+0.3**
JCH				*e*S	**Sn**	**14 03 40.8**	**-4.3**
JWK2	**Keihoku**	**7.77**	**270**	P	**Pn**	**14 02 28.2**	**+5.6**
JFR	**Furan**	**7.86**	**254**	P	**Pn**	**14 02 26.0**	**+2.0**
PEA0B	**Petropavlovsk-**	**7.92**	**21**	*e*Pn	**Pn**	**14 02 24.6**	**-0.1**
PEA0B				*e*Sn	**Sn**	**14 03 51.9**	**-1.2**
PETK	**Petropavlovsk-**	**7.92**	**21**	Pn	**Pn**	**14 02 25.7**	**+1.0**
	comp=Z,5.7nm,0.3s,baz=178,slow=12,SNR=150						
PETK				LR	LR	14 05 28.0	
	comp=Z,171nm,20.4s,baz=205,slow=37						
JAB	**Ashibetsu**	**7.98**	**257**	P	**Pn**	**14 02 29.8**	**+4.2**
ERM	**Erimo**	**8.02**	**245**	*e*PN	**Pn**	**14 02 27.3**	**+1.1**
ERM				pmax	pmax		
	comp=Z,106nm,0.8s						
ERM	**Erimo**	**8.02**	**245**	*e*Pn	**Pn**	**14 02 27.3**	**+1.1**
	comp=Z,106nm,0.8s						
ERM				*e*Sn	**Sn**	**14 03 55.8**	**+0.1**
JEM	**Erimo**	**8.02**	**245**	P	**Pn**	**14 02 27.4**	**+1.2**
JEM	**Erimo**	**8.02**	**245**	P	**Pn**	**14 02 28.5**	**+2.3**
UGL	**Uglegorsk**	**8.05**	**298**	*e*P	**Pn**	**14 02 31.0**	**+4.4**
UGL				*e*rx	rx	14 03 10.0	
UGL				*e*rx	rx	14 03 53.0	
UGL				*e*rx	rx	14 03 57.0	
UGL				*e*rx	rx	14 04 01.7	
PET	**Petropavlovsk**	**8.11**	**25**	*e*PN	**Pn**	**14 02 25.4**	**-1.9**
PET				pmax	pmax		
	comp=Z,41nm,0.7s						
PET				MLR	MLR		
	comp=Z,100nm,12.0s						
PET	**Petropavlovsk**	**8.11**	**25**	*e*Pn	**Pn**	**14 02 25.4**	**-1.8**
	comp=Z,34nm,0.8s						
PET				*e*Sn	**Sn**	**14 03 52.2**	**-5.5**
JNBK	**Urakawa-nobuka**	**8.15**	**248**	P	**Pn**	**14 02 27.9**	**0.0**
JBT2	**Biratori 2**	**8.17**	**252**	P	**Pn**	**14 02 29.3**	**+1.1**
JHR	**Hokuryu**	**8.24**	**259**	P	**Pn**	**14 02 32.6**	**+3.4**
TYV	**Tymovskoe**	**8.50**	**310**	*e*P	**Pn**	**14 02 34.5**	**+1.8**
TYV				AMB	AMB	14 02 36.5	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	14 02 36.5	
	comp=Z,26nm,1.0s						
TYV				*e*S	**Sn**	**14 04 05.9**	**-1.4**
TYV				A		14 04 11.5	
	comp=Z,44nm,0.6s						
TYV				A		14 04 11.5	
	comp=Z,38nm,0.6s						
JEW	**Eniwo**	**8.76**	**254**	P	**Pn**	**14 02 38.8**	**+2.5**
JEW	**Eniwo**	**8.76**	**254**	P	**Pn**	**14 02 38.9**	**+2.6**
JNB	**Noboribetsu**	**9.19**	**253**	*e*S	**Sn**	**14 04 21.3**	**-3.0**
JKB	**Kayabe**	**9.46**	**250**	P	**Pn**	**14 02 45.7**	**-0.1**
JKB				*e*S	**Sn**	**14 04 24.7**	**-6.2**
JOT	**Ohata**	**9.70**	**247**	P	**Pn**	**14 02 48.4**	**-0.8**
JSH	**Shimam**	**9.79**	**256**	P	**Pn**	**14 02 52.5**	**+2.2**
JYM2	**Yakumo 2**	**9.79**	**252**	P	**Pn**	**14 02 50.9**	**+0.5**
JANG	**Nango**	**9.97**	**241**	P	**Pn**	**14 02 50.6**	**-2.3**
JANG				*e*S	**Sn**	**14 04 34.8**	**-8.7**
JTM	**Tenmabayashi**	**10.01**	**244**	P	**Pn**	**14 02 52.0**	**-1.4**
JTM	**Tenmabayashi**	**10.01**	**244**	P	**Pn**	**14 02 52.2**	**-1.2**
JTH	**Tanohata**	**10.03**	**238**	P	**Pn**	**14 02 51.7**	**-2.0**
JSR	**Shiriuchi**	**10.03**	**249**	P	**Pn**	**14 02 53.1**	**-0.6**
JOSM	**Okushiri--Mats**	**10.40**	**254**	P	**Pn**	**14 02 59.1**	**+0.3**
JOM	**Ohasama**	**10.66**	**238**	P	**Pn**	**14 03 00.7**	**-1.7**
OFUJ	**Ofunato**	**10.71**	**235**	P	**Pn**	**14 03 01.4**	**-1.6**
NKL	**Nikolayevsk**	**10.82**	**317**	*e*P	**Pn**	**14 03 03.5**	**-0.9**
NKL				AMB	AMB	14 03 06.0	
	comp=Z,10.0nm,0.9s						
NKL				*e*L		14 06 10.0	
NKL				AMS	AMS	14 07 14.0	
	comp=Z,500nm,16.0s						
JRG	**Rokugo**	**11.11**	**239**	P	**Pn**	**14 03 07.1**	**-1.3**
JIO	**Ouri**	**11.32**	**233**	P	**Pn**	**14 03 09.4**	**-1.9**
JMM	**Marumori**	**12.04**	**233**	P	**Pn**	**14 03 19.2**	**-2.0**
JYA	**Atsumi**	**12.17**	**238**	P	**Pn**	**14 03 22.5**	**-0.5**
JYA	**Atsumi**	**12.17**	**238**	P	**Pn**	**14 03 22.6**	**-0.4**
JFK	**Kawauchi**	**12.36**	**231**	P	**Pn**	**14 03 23.3**	**-2.2**
HABR	**Khabarovsk**	**12.46**	**289***c*	*i*PN	**Pn**	**14 03 21.6**	**-5.3**
HABR				MLR	MLR		
	comp=Z,54nm,12.0s						
HABR				MLR	MLR		
	comp=Z,29nm,11.0s						
JFY	**Yanaizu**	**12.98**	**234**	P	**Pn**	**14 03 33.3**	**-0.7**
JRY	**Ryogami san**	**14.42**	**232**	P	**Pn**	**14 03 52.4**	**-1.3**
MAJO	**Matsushiro**	**14.44**	**235**	*e*P	**Pn**	**14 03 52.2**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,57nm,0.6s						
MAJO	**Matsushiro**	**14.44**	**235**	*e*Pn	**Pn**	**14 03 52.2**	**-1.8**
	comp=Z,57nm,0.6s						
MAT	**Matsushiro**	**14.44**	**235**	P	**Pn**	**14 03 52.8**	**-1.1**
MAT	**Matsushiro**	**14.44**	**235**	P	**Pn**	**14 03 53.0**	**-0.9**
MJAR	**Matsushiro Arr**	**14.44**	**235**	Pn	**Pn**	**14 03 53.8**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=31,slow=14,SNR=19						
MJAR	**Matsushiro Arr**	**14.44**	**235**	P	**Pn**	**14 03 53.8**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR	**Kul'dur**	**14.71**	**291**	*e*P	**Pn**	**14 03 55.6**	**-1.9**
FX1	**Attu Island--F**	**14.92**	**54**	Pn	**Pn**	**14 03 59.7**	**-0.7**
	comp=Z,6.4nm,0.3s,baz=285,slow=20,SNR=41						
FX1				LR	LR	14 08 20.5	
	comp=Z,117nm,21.4s,baz=313,slow=31						
FX1	**Attu Island--F**	**14.92**	**54**	P	**Pn**	**14 03 59.7**	**-0.7**
FX1				pmax	pmax		
	comp=Z,6.0nm,0.3s						
FX1				MLR	MLR		
	comp=Z,117nm,21.4s						
FX1	**Attu Island--F**	**14.92**	**54**	Pn	**Pn**	**14 03 59.7**	**-0.7**
FX1				LR	LR	14 08 20.5	
MDJ	**Mudanjiang**	**16.49**	**274**	P	**Pn**	**14 04 20.8**	**+0.2**
MDJ				AP	pP	14 04 30.8	-0.9
MDJ				XP	sP	14 04 34.9	-1.0
MDJ				S	**Sn**	**14 07 21.3**	**-1.1**
MDJ				SCP	ScP	14 12 42.3	-0.3
MDJ				PCS	PcS	14 12 45.8	-0.6
MDJ				AMB	AMB		
	comp=Z,12nm,1.3s						
MDJ				AMB	AMB		
	comp=Z,45nm,3.9s						
MDJ	**Mudanjiang**	**16.49**	**274**	*e*Pn	**Pn**	**14 04 20.4**	**-0.2**
	comp=Z,35nm,0.8s						
ZEA	**Zeya**	**18.30**	**305**	*e*P	**Pn**	**14 04 40.0**	**-3.1**
ZEA				AMB	AMB	14 04 41.4	
	comp=Z,17nm,1.0s						
CN2	**Changchun**	**19.57**	**274**	*e*P	**Pn**	**14 04 55.5**	**-3.0**
CN2				*e*AP	pP	14 05 04.0	-1.8
CN2				*e*S	**Sn**	**14 08 29.3**	**-7.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
KSRS	**Korea Array**	**20.42**	**255**	P	**P**	**14 05 05.8**	**-0.4**
	comp=Z,6.1nm,0.8s,baz=61,slow=11,SNR=12						
KSRS				LR	LR	14 12 17.7	
	comp=Z,109nm,19.5s,MS3.2,baz=243,slow=34						
KSRS	**Korea Array**	**20.42**	**255**	P	**P**	**14 05 05.8**	**-0.4**

KSRS pmax pmax
comp=Z,6.0nm,0.8s
KSRS MLR MLR
comp=Z,109nm,19.5s,MS3.2
YAK Yakutsk 21.04 329 *e*P **P 14 05 10.7 -2.0**
YAK pmax pmax
comp=Z,18nm,0.7s,mb4.5
YAK Yakutsk 21.04 329 *e*P **P 14 05 11.2 -1.5**
comp=Z,36nm,0.8s,mb4.8
SNY Shenyang 21.50 270 ⇓P **P 14 05 19.1 +1.3**
SNY AMB AMB
comp=Z,50nm,0.7s,mb5.0
HIA Hailar 22.57 291 *e*P **P 14 05 26.2 -2.9**
HIA pmax pmax
comp=Z,7.0nm,0.6s
HIA Hailar 22.57 291 *e*P **P 14 05 26.2 -3.0**
comp=Z,7.1nm,0.6s,mb4.3
BILL Bilibino 23.32 13⇓*e*P **P 14 05 37.1 +0.2**
BILL *e* 14 05 48.0
BILL *e* 14 06 10.6
BILL pmax pmax
comp=Z,24nm,2.2s,mb4.2
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.4
BILL Bilibino 23.32 13 *e*P **P 14 05 36.5 -0.4**
comp=Z,22nm,1.5s,mb4.4
BOD Bodaibo 26.50 311 *e*P **P 14 06 04.9 -1.1**
BJI Beijing 27.36 271 P **P 14 06 15.8 +1.9**
BJI S **S 14 10 53.3 +1.8**
BJI AMB AMB
comp=Z,12nm,1.1s,mb4.3
BJI AMB AMB
comp=Z,57nm,3.4s
NJ2 Nanjing 29.62 254 *e*P **P 14 06 38.6 +4.5**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
HHC Hu-ho-hao-te 30.25 276 *e*P **P 14 06 41.1 +1.5**
HHC AP pP 14 06 50.8 +1.6
HHC XP sP 14 06 54.8 +1.6
HHC PP PP 14 07 40.3 -7.8
HHC *e*S **S 14 11 36.8 -0.2**
HHC XS sS 14 11 54.3 +1.5
HHC PCS PcS 14 13 24.8 +1.7
HHC SCS ScS 14 17 14.1 -0.8
HHC AMB AMB
comp=Z,30nm,1.0s,mb5.0
HHC AMB AMB
comp=Z,163nm,4.2s
HHC LR LR
comp=N,203nm,13.1s,MS4.0
HHC LR LR
comp=E,176nm,15.5s,MS4.0
HHC LR LR
comp=Z,233nm,15.5s,MS3.9
ULN Ulaanbaatar 31.10 291⇑*e*P **P 14 06 46.5 -0.5**
ULN Ulaanbaatar 31.10 291 *e*P **P 14 06 46.8 -0.3**
comp=Z,4.9nm,0.8s,mb4.4
SONM Songino Array 31.54 291 P **P 14 06 50.9 0.0**
comp=Z,1.1nm,0.7s,mb3.8,baz=71,slow=7.5,SNR=8.9
SONM LR LR 14 19 54.3
comp=Z,75nm,19.7s,MS3.4,baz=118,slow=37
SONM Songino Array 31.54 291 P **P 14 06 50.9 0.0**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,75nm,19.7s
GUMO Guam 32.85 195 LR LR 14 20 03.8
comp=Z,41nm,19.6s,MS3.1,baz=2.0,slow=36
ZAK Zakamensk 32.97 296 *e*P **P 14 07 02.8 -0.6**
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
WHN Wuhan 33.59 257 P **P 14 07 10.1 +1.1**
XAN Xi'an 35.33 266 P **P 14 07 24.8 +0.8**
XAN AP pP 14 07 32.8 -0.9
XAN PP PP 14 08 44.6 +0.2
XAN S **S 14 12 57.3 +1.4**
XAN AMB AMB
comp=Z,6.0nm,1.0s,mb4.5
XAN AMB AMB
comp=Z,14nm,14.0s
XAN LR LR
comp=Z,63nm,28.0s,MS3.2
COLA College 36.94 38 *i* P **P 14 07 35.8 -1.6**
LZH Lanzhou 37.80 273 *e*P **P 14 07 46.0 +0.9**
LZH AP pP 14 07 56.5 +1.6
LZH XP sP 14 07 59.0 +0.1
LZH PP PP 14 09 14.0 +2.3
LZH *e*S **S 14 13 32.3 -1.4**
LZH XS sS 14 13 53.4 +3.6
LZH AMB AMB
comp=Z,25nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,109nm,4.5s
LZH LR LR
comp=N,648nm,15.5s
LZH LR LR
comp=Z,858nm,16.4s,MS4.6
GTA Gaotai 39.00 280 P **P 14 07 57.0 +1.8**
GTA AP pP 14 08 06.6 +1.7
GTA XP sP 14 08 10.9 +2.0
GTA S **S 14 13 55.6 +3.9**
GTA XS sS 14 14 11.5 +3.7
GTA AMB AMB
comp=Z,15nm,1.2s,mb4.6
GTA AMB AMB
comp=Z,132nm,4.8s
GTA LR LR
comp=N,104nm,13.2s,MS4.0
GTA LR LR
comp=E,89nm,13.5s,MS4.0
GTA LR LR
comp=Z,64nm,13.8s,MS3.6
CD2 Chengdu 40.69 266 P **P 14 08 10.3 +1.1**
CD2 AP pP 14 08 19.6 +0.6
CD2 XP sP 14 08 23.6 +0.6
CD2 PP PP 14 09 47.8 +4.6
CD2 PCP PcP 14 10 11.1 +0.7
CD2 PCS PcS 14 14 00.8 -0.4
CD2 S **S 14 14 18.3 +1.2**
CD2 XS sS 14 14 34.5 +1.2
CD2 SS SS 14 17 15.3 -2.8
CD2 AMB AMB
comp=Z,20nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,190nm,4.8s
CD2 LR LR
comp=N,350nm,5.9s
CD2 LR LR
comp=Z,190nm,7.1s
GYA Guiyang 41.40 258 P **P 14 08 16.1 +0.9**
GYA AP pP 14 08 26.0 +1.0
GYA XP sP 14 08 30.0 +1.0
GYA PP PP 14 09 53.4 +2.4
GYA PCP PcP 14 10 12.3 -0.5
GYA SCP ScP 14 14 00.6 +0.5
GYA S **S 14 14 26.5 -1.3**
GYA XS sS 14 14 46.9 +2.9
GYA SS SS 14 17 25.4 -7.0
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
GYA AMB AMB
comp=Z,50nm,4.2s
GYA LR LR
comp=N,620nm,16.0s,MS4.7
GYA LR LR
comp=E,580nm,17.8s,MS4.7
GYA LR LR
comp=Z,700nm,18.2s,MS4.6
INK Inuvik 42.50 32 *e*P **P 14 08 23.0 -0.6**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 42.50 32 *e*P **P 14 08 23.0 -0.6**
comp=Z,3.4nm,0.8s,mb4.0
ZALV Zalesovo Beam 43.06 307 P **P 14 08 26.6 -1.7**
comp=Z,1.1nm,0.5s,mb3.9,baz=57,slow=6.6,SNR=8.1
ZALV LR LR 14 27 22.5
comp=Z,73nm,19.1s,MS3.6,baz=50,slow=37
ZALV Zalesovo Beam 43.06 307 P **P 14 08 26.7 -1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ZALV MLR MLR
comp=Z,73nm,19.1s,MS3.6
KMI Kunming 44.96 260 P **P 14 08 44.8 +0.9**
KMI AP pP 14 08 55.3 +1.5
KMI XP sP 14 08 59.3 +1.5
KMI PP PP 14 10 31.3 +2.1
KMI S **S 14 15 21.3 +1.3**
KMI XS sS 14 15 38.5 +2.3
KMI SS SS 14 18 34.6 -7.5
KMI AMB AMB
comp=Z,6.0nm,0.9s,mb4.4
KMI AMB AMB
comp=Z,110nm,5.4s
KMI LR LR
comp=N,106nm,14.7s
KMI LR LR
comp=E,94nm,22.6s
KMI LR LR
comp=Z,93nm,22.6s
WMQ Urumqi 45.15 292 *e*P **P 14 08 46.8 +1.6**
WMQ LR LR
comp=N,51nm,16.0s,MS3.6
WMQ LR LR
comp=E,38nm,18.0s,MS3.6
WMQ LR LR
comp=Z,41nm,19.5s,MS3.4
MK31 Makanchi Array 47.26 298 *e*P **P 14 09 01.4 -0.4**
MKAR Makanchi Array 47.26 298 P **P 14 09 01.6 -0.1**
comp=Z,2.2nm,0.5s,mb4.4,baz=67,slow=7.3,SNR=24
MKAR sP sP 14 09 15.0 -0.7
comp=Z,1.5nm,0.5s,baz=68,slow=6.4,SNR=5.6
MKAR LR LR 14 29 32.3
comp=Z,94nm,20.9s,MS3.7,baz=48,slow=37
MKAR Makanchi Array 47.26 298 P **P 14 09 01.7 -0.1**
MKAR *SP sP 14 09 15.0 -0.7
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR MLR MLR
comp=Z,94nm,20.9s
KURK Kurchatov 47.78 304 LR LR 14 30 18.5
comp=Z,47nm,18.1s,MS3.5,baz=35,slow=37
KURK Kurchatov 47.78 304⇓*e*P **P 14 09 04.9 -0.8**
KURK pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
KURK Kurchatov 47.78 304 *e*P **P 14 09 04.6 -1.1**
comp=Z,10nm,1.4s,mb4.7
LSA Lhasa 50.21 274 *e*P **P 14 09 26.8 +2.2**
LSA pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
LSA Lhasa 50.21 274 *e*P **P 14 09 26.8 +2.2**
comp=Z,2.9nm,0.4s,mb4.7
VOSK Vostochnaya 51.18 309 P **P 14 09 30.1 -1.5**
VOSK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
BVA0 Borovoye Array 51.36 310 P **P 14 09 32.0 -0.9**
BVAR Borovoye Array 51.36 310 LR LR 14 31 54.0
comp=Z,84nm,19.8s,MS3.8,baz=102,slow=37
BRVK Borovoye 51.40 310 *e*P **P 14 09 32.8 -0.4**
BRVK pmax pmax
comp=Z,42nm,2.6s,mb4.9
BRVK Borovoye 51.40 310 *e*P **P 14 09 32.8 -0.4**
comp=Z,42nm,2.6s,mb4.9
YKA Yellowknife Ar 51.74 36 P **P 14 09 36.1 +0.5**
comp=Z,0.2nm,0.6s,baz=297,slow=7.0,SNR=3.7
YKA PcP PcP 14 10 48.1 -0.4
comp=Z,0.6nm,0.7s,baz=306,slow=3.4,SNR=4.1
YKA Yellowknife Ar 51.74 36 P **P 14 09 36.1 +0.4**
YKA 14 10 48.1
YKA pmax pmax
comp=Z,1.0nm,0.7s
RES Resolute Bay 51.75 18 P **P 14 09 36.7 +1.1**
comp=Z,5.6nm,0.5s,mb4.8,baz=345,slow=8.4,SNR=24
RES Resolute Bay 51.75 18 P **P 14 09 36.7 +1.1**
RES pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
CMAR Chiang Mai Arr 52.04 257 P **P 14 09 40.0 +1.5**
comp=Z,0.8nm,0.6s,mb3.8,baz=40,slow=7.5,SNR=6.0
CMAR pP pP 14 09 47.2 -1.2
comp=Z,1.1nm,0.8s,baz=38,slow=7.3,SNR=3.5
CMAR sP sP 14 09 52.4 0.0
comp=Z,1.4nm,0.8s,baz=34,slow=7.8,SNR=4.4
CMAR LR LR 14 30 46.8
comp=Z,27nm,18.9s,MS3.3,baz=55,slow=35
CMAR Chiang Mai Arr 52.04 257 P **P 14 09 40.0 +1.5**
CMAR *SP sP 14 09 52.4 0.0
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.8s
TAPN Taplejung 54.03 274 *e*P **P 14 09 53.1 0.0**
AAK Ala-Archa 54.14 297⇓*i*P **P 14 09 53.9 +0.2**
AAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
AAK Ala-Archa 54.14 297 *e*P **P 14 09 54.6 +0.9**
comp=Z,14nm,1.6s,mb4.6
JIRN Jiri 54.90 275 *e*P **P 14 09 59.7 +0.3**
GUN Gumba 54.97 276 *e*P **P 14 09 59.7 -0.2**
comp=Z,9.0nm,0.4s,mb5.1
RAMN Ramite 55.06 274 *e*P **P 14 10 01.3 +0.8**
comp=Z,18nm,0.4s,mb5.5
HNR Honiara 55.36 172 LR LR 14 32 40.5
comp=Z,42nm,18.9s,MS3.5,baz=19,slow=35
KKN Kakani 55.46 276 *e*P **P 14 10 03.8 +0.4**
ARU Arti 55.61 318*c* *i*P **P 14 10 03.8 -0.3**
ARU *e* 14 12 11.1
ARU *e*S **S 14 17 49.4 +2.0**
ARU *e*SS SS 14 21 34.8 +2.8
ARU pmax pmax
comp=Z,17nm,1.7s,mb4.8
ARU Arti 55.61 318 *e*P **P 14 10 02.8 -1.3**
comp=Z,7.2nm,0.5s,mb5.0
DMN Daman 55.69 276 *e*P **P 14 10 05.6 +0.5**
comp=Z,21nm,0.8s,mb5.2
GKN Gorkha 55.77 276 *e*P **P 14 10 06.7 +1.0**
comp=Z,44nm,1.0s,mb5.4
DANN Dangsing 56.17 277 *e*P **P 14 10 10.3 +1.8**
comp=Z,16nm,0.4s,mb5.4
KK31 Karatay Array 56.34 299 *i* P **P 14 10 09.4 -0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
ARCES ARCESS Array B 58.69 341 P **P 14 10 25.6 -0.1**
comp=Z,8.6nm,1.0s,mb4.7,baz=23,slow=6.6,SNR=5.1
ARCES LR LR 14 42 30.1
comp=Z,98nm,18.6s,MS4.0,baz=291,slow=43
AB31 Akbulak array 58.93 310 P **P 14 10 27.1 -0.5**
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
AKTO Aktyubinsk 59.26 312 LR LR 14 38 10.9
comp=Z,116nm,18.3s,MS4.0,baz=235,slow=38
JOF Joensuu 62.11 334 *e*p **P 14 10 49.7 +0.6**
comp=Z,0.7nm,0.4s,mb4.1
JOF Joensuu 62.11 334 *e*P **P 14 10 49.7 +0.6**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
KBL Kabul 62.30 292 *e*P **P 14 10 50.6 -0.2**
KBL *e* pP 14 11 00.6 -0.4
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
KBL Kabul 62.30 292 *e*P **P 14 10 50.6 -0.2**
comp=Z,3.7nm,0.6s,mb4.7
KBL *e* pP 14 11 00.6 -0.4
NVAR Mina Array Bea 62.97 62 P **P 14 10 55.8 +0.6**
comp=Z,2.8nm,0.7s,mb4.5,baz=298,slow=7.0,SNR=23
KAF Kangasniemi 64.23 335 *e*p **P 14 11 03.4 +0.2**
comp=Z,0.9nm,0.4s,mb4.2
KAF Kangasniemi 64.23 335 *e*P **P 14 11 03.4 +0.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
DUG Dugway 65.17 57 *e*P **P 14 11 10.6 +0.9**
DUG pmax pmax
comp=Z,77nm,2.9s,mb5.2
DUG Dugway 65.17 57 *e*P **P 14 11 10.6 +0.9**
comp=Z,77nm,2.9s,mb5.2
PDAR Pinedale Array 65.39 53 P **P 14 11 11.1 +0.1**
comp=Z,1.4nm,0.9s,mb4.0,baz=291,slow=3.1,SNR=10.0
OBN Obninsk 66.00 326⇑*e*P **P 14 11 14.9 +0.1**
OBN pmax pmax
comp=Z,15nm,1.1s,mb4.9
SRU San Rafael 67.22 57 *e*P **P 14 11 23.1 +0.3**
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SRU San Rafael 67.22 57 *e*P **P 14 11 23.1 +0.3**
comp=Z,3.8nm,0.9s,mb4.4
WRAB Tennant Creek 67.59 199⇓*i*P **P 14 11 24.2 -0.9**
WRAB Tennant Creek 67.59 199 *e*P **P 14 11 23.4 -1.7**
comp=Z,4.4nm,1.0s,mb4.4
WB2 Warramunga Arr 67.59 199 *e*P **P 14 11 24.8 -0.4**
WRA Warramunga Arr 67.60 199 P **P 14 11 24.9 -0.4**
comp=Z,2.2nm,0.7s,mb4.3,baz=16,slow=6.7,SNR=18
WRA Warramunga Arr 67.60 199 P **P 14 11 24.9 -0.3**
WRA pmax pmax
comp=Z,2.0nm,0.7s
FITZ Fitzroy Crossi 68.27 208 *e*P **P 14 11 28.4 -1.1**
comp=Z,3.5nm,0.8s,mb4.4
NB2 NORSAR Subarra 69.06 341 P **P 14 11 33.6 -0.4**
comp=Z,7.0nm,0.9s,mb4.6,baz=30,slow=6.5
NOA NORSAR Array B 69.06 341 P **P 14 11 34.5 +0.5**
comp=Z,1.3nm,0.5s,mb4.1,baz=29,slow=6.4,SNR=7.1
NOA pP pP 14 11 43.7 -0.6
comp=Z,1.5nm,0.5s,baz=28,slow=6.4,SNR=5.8
NOA LR LR 14 49 16.1
comp=Z,66nm,19.4s,MS3.9,baz=30,slow=42
NOA NORSAR Array B 69.06 341 P **P 14 11 34.5 +0.5**
NOA *PP pP 14 11 43.7 -0.6
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA NORSAR Array B 69.06 341 P **P 14 11 34.5 +0.5**
NOA pP pP 14 11 43.7 -0.6
NOA LR LR 14 49 16.1
HFS Hagfors 69.28 340 LR LR 14 46 26.0
comp=Z,111nm,18.8s,MS4.1,baz=250,slow=40
ASAR Alice Springs 71.29 198 P **P 14 11 48.6 +0.7**
comp=Z,1.5nm,0.8s,mb4.0,baz=12,slow=5.6,SNR=18
ASAR Alice Springs 71.29 198 P **P 14 11 48.7 +0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 71.36 314 P **P 14 11 51.0 +2.7**
KIV *e* pP 14 11 59.1 +0.4
KIV 14 14 26.0
KIV pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AKASG Malin Array Be 72.25 326 P **P 14 11 53.0 -0.5**
comp=Z,2.5nm,0.4s,mb4.5,baz=34,slow=6.3,SNR=7.1
AKASG pP pP 14 12 03.3 -0.6
comp=Z,1.3nm,0.4s,baz=33,slow=6.2,SNR=3.6
AKASG Malin Array Be 72.25 326 P **P 14 11 53.1 -0.5**
AKASG *PP pP 14 12 03.3 -0.6
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG pmax pmax
comp=Z,1.0nm,0.4s
ANMO Albuquerque 72.42 58⇑*e*P **P 14 11 55.1 +0.2**
SCIA State Center 74.65 45 *e*P **P 14 12 07.8 -0.1**
comp=Z,18nm,0.6s,mb5.2
BUR08 Bucovina Ar. S 76.28 327 *e*P **P 14 12 17.0 0.0**
BUR08 *e* pP 14 12 27.5 0.0
CLL Collm 77.26 336 *e*P pP 14 12 33.0 0.0
CLL Collm 77.26 336 *e*pP pP 14 12 33.0 0.0
TXAR Lajitas Array 78.06 60 P **P 14 12 27.3 -0.1**
comp=Z,4.7nm,0.7s,mb4.5,baz=304,slow=4.2,SNR=54
TXAR Lajitas Array 78.06 60 P **P 14 12 27.3 -0.1**
TXAR pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 78.98 317 P **P 14 12 32.8 +0.5**
comp=Z,0.5nm,0.5s,mb3.7,baz=7,8,slow=10.0,SNR=3.6
BRTR Keskin Array B 78.98 317⇑*e*P **P 14 12 34.4 +2.1**
KHC Kasperske Hory 79.02 334 *e*P **P 14 12 32.5 +0.2**
KHC *e*pP pP 14 12 43.0 +0.2
GERES GERESS Array B 79.23 334 P **P 14 12 33.5 0.0**
comp=Z,0.6nm,0.7s,mb3.6,baz=15,slow=5.1,SNR=3.2
GERES pP pP 14 12 44.3 +0.3
comp=Z,0.7nm,0.6s,baz=39,slow=5.8,SNR=3.9
GERES LR LR 14 49 54.7
comp=Z,82nm,20.8s,MS4.0,baz=328,slow=37
GERES GERESS Array B 79.23 334 P **P 14 12 33.5 0.0**
GERES *PP pP 14 12 44.3 +0.3
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,82nm,20.8s
WVT Waverly 81.77 46 *e*P **P 14 12 43.3 -4.0**
WVT pmax pmax
comp=Z,30nm,1.6s,mb5.0
WVT Waverly 81.77 46 *e*P **P 14 12 43.2 -4.1**
comp=Z,30nm,1.6s,mb5.0
SWET Sewanee 83.43 45 *e*P **P 14 13 03.8 +7.7**
CPUP Villa Florida 149.02 61 PKPbc PKPbc 14 20 16.0 -0.5
comp=Z,1.8nm,0.6s,baz=338,slow=3.0,SNR=8.2
CPUP Villa Florida 149.02 61 PKP2 PKPbc 14 20 16.0 -0.5
CPUP pmax pmax
comp=Z,2.0nm,0.6s
SNAA Sanae 151.63 196 *e*PKPdf PKPdf 14 20 14.8 -0.3
SNAA *e* 14 20 19.5
SNAA *e* 14 20 28.3
SNAA *e* 14 20 41.5
SNAA Sanae 151.63 196 *e*PKPbc PKPbc 14 20 19.0 -2.4
VNA2 Neumayer--Watz 153.08 194 *e*PKPdf PKPdf 14 20 16.1 -1.1
VNA2 *e* 14 20 24.0
VNA2 *e* 14 20 29.2
VNA2 *e* 14 20 36.3
VNA2 *e* 14 20 39.5
VNA2 *e* 14 20 46.2
VNA3 Neumayer Olymp 153.16 192 *e*PKPdf PKPdf 14 20 16.2 -1.2
VNA3 *e* 14 20 24.0
VNA3 *e* 14 20 29.7
VNA3 *e* 14 20 36.1
VNA3 *e* 14 20 39.2
VNA3 *e* 14 20 45.9
VNA1 Neumayer--Stat 153.46 194 *e*PKPdf PKPdf 14 20 16.6 -1.2
VNA1 *e* 14 20 24.0
VNA1 *e* 14 20 29.7
VNA1 *e* 14 20 37.7
VNA1 *e* 14 20 47.1

NEIC 14 14:25:01.6, 3778S×17682E, h5km, ML3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.24**	**209**	P	Pg	14 25 06.8	+0.6
MARZ				S	Sg	14 25 10.5	+1.1
EDRZ	**Edgecumbe**	**0.33**	**191**	P	Pg	14 25 08.6	+0.5
WIZ	**White Island**	**0.39**	**49**	P	Pg	14 25 09.7	+0.7
LIRZ	**Lichensteins R**	**0.41**	**237**	P	Pg	14 25 10.2	+0.7
TGRZ	**Tauranga**	**0.45**	**276**	P	Pg	14 25 10.7	+0.5
MKRZ	**Makatiti**	**0.46**	**218**	P	Pg	14 25 11.4	+1.0
TAZ	**Tarawera**	**0.52**	**208**	P	Pg	14 25 12.4	+0.9
KARZ	**Kaharoa**	**0.52**	**242**	P	Pg	14 25 12.1	+0.6
URZ	**Urewera**	**0.53**	**155**	P	Pg	14 25 12.0	+0.2

SKHL 14 14:26:45.0×0.3, 5500N×13614E, h10km, mb3.7/2, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKMR	**Ekimchan**	**2.70**	**226**	*e*Pn	Pn	14 27 29.4	+1.0
EKMR				*e*Pg	Pg	14 27 34.3	-2.3
EKMR				AMB	AMB	14 27 39.2	
EKMR	6.0nm,0.5s			AMB	AMB	14 27 39.2	
EKMR	5.0nm,0.5s			AMB	AMB	14 27 39.2	
EKMR	19nm,0.5s			*e*Sg	Sg	14 28 10.0	-1.6
EKMR				A		14 28 14.9	
EKMR	24nm,0.4s			A		14 28 14.9	
EKMR	20nm,0.4s					14 28 14.9	
NKL	**Nikolayevsk**	**3.25**	**123**	*e*Pn	Pn	14 27 36.0	0.0
NKL				*e*Sg	Sg	14 28 26.5	-2.9
NKL	26nm,0.9s			A		14 28 31.5	
BMKR	**Bomnak**	**4.23**	**269**	*e*Pg	Pg	14 28 01.0	-4.9
BMKR	5.0nm,0.5s			AMB	AMB	14 28 02.1	
BMKR				*e*Sg	Sg	14 28 56.5	-4.1
BMKR	13nm,0.4s			A		14 29 02.3	
GRNR	**Gornyy**	**4.24**	**178**	*e*Sg	Sg	14 28 57.2	-3.9
GRNR	14nm,0.8s			A		14 29 02.9	
YASR	**Yasnyy**	**5.09**	**254**	*e*Pg	Pg	14 28 16.0	-6.5
YASR				*e*Sg	Sg	14 29 22.6	-5.8
YASR	4.0nm,0.6s			A		14 29 30.3	
ZEA	**Zeya**	**5.35**	**260**	*e*Sg	Sg	14 29 30.5	-6.1

KRSC 14 14:27:57.7±0.3, 5508N×16236E, h45km±44km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.64	215	*i* P	Pn	14 28 11.7	+1.3
MKZ				*i* S	Sn	14 28 21.3	+1.8
KBTR	Krutoberegovo	1.16	13	*i* P	Pn	14 28 19.0	+1.6
KBTR				*i* S	Sn	14 28 34.0	+1.9
BZGR	Bezymyannyi-Gr	1.28	313	*e*P	Pn	14 28 21.0	+1.9
BZGR				*i* S	Sn	14 28 37.1	+2.1
TUMR	Tumrok	1.29	280	*e*P	Pn	14 28 21.0	+1.8
TUMR				*i* S	Sn	14 28 38.3	+3.1
ZLN	Zelenaya	1.29	317	*e*P	Pn	14 28 21.4	+2.2
ZLN				*i* S	Sn	14 28 39.1	+3.8
KMNR	Kamenistaya	1.39	300	*i* P	Pn	14 28 22.5	+2.0
KMNR				*i* S	Sn	14 28 40.5	+2.8
KIRR	Kirishev	1.44	308	*e*P	Pn	14 28 23.1	+1.8
KIRR				*i* S	Sn	14 28 42.0	+3.0
KPT	Kopyto	1.51	307	*e*P	Pn	14 28 24.1	+1.9
KPT				*i* S	Sn	14 28 43.8	+3.2
KRSR	Krestovskiy	1.53	319	*e*P	Pn	14 28 24.2	+1.7
KRSR				*i* S	Sn	14 28 43.5	+2.4
KLY	Klyuchi	1.57	323	*e*P	Pn	14 28 23.9	+0.9
KLY				*i* S	Sn	14 28 42.9	+0.8
SRKR	Sorokina	1.71	337	*e*P	Pn	14 28 27.7	+2.7
KOZ	Kozyrevsk	1.72	306	*e*P	Pn	14 28 26.9	+1.8
KOZ				*i* S	Sn	14 28 48.9	+3.1
SRDR	Sredinnyy	1.94	311	*e*P	Pn	14 28 30.0	+1.9
SRDR				*i* S	Sn	14 28 53.5	+2.2
KII	Karymskiy	1.99	240	*e*P	Pn	14 28 31.1	+2.3
KII				*i* S	Sn	14 28 56.1	+3.6
SPN	Mys Shipunski	2.42	216	*e*P	Pn	14 28 36.1	+1.5
SPN				*i* S	Sn	14 29 03.3	+0.4
NLC	Nalytchevo	2.61	224	*e*P	Pn	14 28 39.1	+1.8
NLC				*i* S	Sn	14 29 10.2	+2.5
AVH	Avacha	2.80	231	*e*P	Pn	14 28 43.1	+3.2
AVH				*e*S	Sn	14 29 15.4	+3.0
GNL	Ganaly	2.93	244	*e*P	Pn	14 28 44.6	+2.9
PET	Petropavlovsk	3.00	228	*e*P	Pn	14 28 44.8	+2.1
PET				*i* S	Sn	14 29 19.6	+2.2
RUS	Russkaya	3.50	222	*e*P	Pn	14 28 51.9	+2.4
RUS				*i* S	Sn	14 29 31.5	+1.9

*ISCJB **14** 14:41:07.5±2.0, 5200S±006×1610E±0.1, h10km±10km, mb4.1/8, MS4.5/9, Error ellipse: s-maj=12.8km s-min=8.9km az=158.6*
*IDC **14** 14:41:08.0±1.1, 5188S×161.17E, h0km, mb3.9/5, mb1 4.1/7, mb1mx4.0/14, mbtmp4.1/7, ML4.3/2, MS4.5/10, Ms1 4.6/10, ms1mx4.5/16, Error ellipse: s-maj=31.7km s-min=23.6km az=70.0*
*NEIC **14** 14:41:08.5±0.7, 5201S×16120E, h10km, mb4.5/5, Error ellipse: s-maj=16.4km s-min=13.2km az=99.0*
*GCMT **14** 14:41:08.5±0.1, 5174S×16085E, h31km, MW5.5/92, Moment Tensor Solution. s81,c138; s92,c173; Duration: 1s4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14±.03; $M_{\theta\theta}$2.10±.03; $M_{\phi\phi}$-2.24±.03; $M_{r\theta}$-0.94±.06; $M_{\theta\phi}$0.79±.03; $M_{\phi r}$0.17±.05; Best double couple: $M_0$2.49900×10^{17} NP1:ϕ_s213.00000°,δ70.00000°, λ171.00000°. NP2:ϕ_s306.00000°,δ81.00000°,λ20.00000°. Principal axes: T 2.5750, Plg20.0000°, Azm171.0000°; N -0.1540, Plg68.0000°, Azm329.0000°; P -2.4240, Plg8.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 14 14:41:08.5±2.0, 5190S±006×1611E±01, h6km±11km, n39, σ1s30/37, mb4.1/8, MS4.5/9, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	2.91	206	*e*P	Pn	14 41 53.2	-2.1
MCQ				*e*S	Sn	14 42 21.8	-8.7
MCQ	Macquarie Isla	2.91	206	*e*Pn	Pn	14 41 52.1	-3.2
MCQ				*e*Sn	Sn	14 42 25.5	-5.0
RPZ	Rata Peaks	10.55	43	Pn	Pn	14 43 38.2	-1.9
	2.8nm,0.3s,baz=287,slow=3.1,SNR=17						
RPZ				Sn	Sn	14 45 26.1	-12
	7.7nm,0.3s,baz=345,slow=8.3,SNR=7.4						
RPZ				LR	LR	14 47 19.6	
	comp=Z,13μm,19.0s,baz=198,slow=35						
MOO	Moorlands	13.38	310	*e*P	Pn	14 44 17.7	-1.0
MOO				*e*S	Sn	14 46 34.8	-13
URZ	Urewera	17.64	46	P	Pn	14 45 14.8	+0.1
	0.8nm,0.3s,baz=253,slow=7.3,SNR=9.1						
TOO	Toolangi	18.07	316	*e*P	Pn	14 45 25.5	+5.5
TOO				*e*S	Sn	14 48 30.8	-11
TOO				*e*T		15 02 53.3	
CNB	Canberra Magne	18.60	328	*e*P	Pn	14 45 28.7	+2.2
CNB				*e*S	Sn	14 48 54.1	-0.5
CNB				*e*T		15 02 28.1	
ARMA	Armidale	22.59	338	*e*P	P	14 46 21.2	+12
ARMA				*e*S	S	14 50 23.0	+5.5
ARMA				*e*T		15 07 21.9	
STKA	Stephens Creek	24.59	317	*e*P	P	14 46 33.3	+4.1
	3.7nm,0.7s,mb4.0						
STKA				*e*S	S	14 50 52.9	+2.5
STKA	Stephens Creek	24.59	317	P	P	14 46 31.0	+1.9
	1.7nm,0.7s,mb3.7,baz=139,slow=9.3,SNR=2.2						
STKA	Stephens Creek	24.59	317	*e*P	P	14 46 30.2	+1.0
	2.9nm,1.2s,mb3.7						
VNDA	Vanda	25.72	180	LR	LR	14 54 53.0	
	comp=Z,2μm,18.1s,MS4.6,baz=6.9,slow=32						
RAO	Raoul Island	27.47	43	LR	LR	14 57 10.8	
	comp=Z,2μm,19.5s,MS4.7,baz=345,slow=35						
ASAR	Alice Springs	35.07	313	P	P	14 48 02.0	-0.1
	0.6nm,0.6s,mb3.7,baz=148,slow=8.3,SNR=15						
WB2	Warramunga Arr	38.14	317	*e*P	P	14 48 32.2	+3.9
WB2				*e*S	S	14 54 20.8	-0.9
WRA	Warramunga Arr	38.15	317	P	P	14 48 28.5	+0.1
	1.7nm,0.8s,mb3.8,baz=147,slow=6.7,SNR=4.1						
WRAB	Tennant Creek	38.15	317	*e*P	P	14 48 27.7	-0.7
	16nm,1.3s,mb4.6						
QSPA	South Pole Qui	38.22	180	P	P	14 48 29.1	+0.8
	3.4nm,0.9s,mb4.1,baz=354,slow=4.0,SNR=10.0						
QSPA	South Pole Qui	38.22	180	*e*P	P	14 48 28.0	-0.4
	19nm,1.3s,mb4.7						
FITZ	Fitzroy Crossi	43.77	307	*e*P	P	14 49 20.1	+5.4
	5.1nm,1.0s,mb4.2						
FITZ				*e*S	S	14 55 42.9	-2.5
FITZ	Fitzroy Crossi	43.77	307	*e*P	P	14 49 16.5	+1.8
	5.4nm,1.0s,mb4.2						
MAW	Mawson	46.30	212	LR	LR	15 06 57.4	
	comp=Z,654nm,21.3s,MS4.5,baz=114,slow=33						
TBI	Tubuai	47.17	72	*e*S	S	14 56 34.3	-0.2
	893nm,28.5s						
TBI				*e*SS	SS	15 00 03.7	+2.3
	436nm,26.2s						
TBI				*e*LQ		15 01 03.0	
	1μm,26.8s						
TBI				*e*LR	LR	15 02 55.9	
	2μm,23.2s,baz=216						
PPT	Papeete	51.61	67	*e*S	S	14 57 37.2	+0.3
	1μm,27.5s						
PPT				*e*SS	SS	15 01 16.8	+3.9
	512nm,25.8s						
PPT				*e*LR	LR	15 05 07.6	
	2μm,22.8s,baz=226						
RKT	Rikitea	56.12	85	*e*S	S	14 58 37.4	-0.4
	820nm,35.5s						
RKT				*e*SS	SS	15 02 27.3	+3.4
	563nm,31.0s						
RKT				*e*LQ		15 04 55.5	
	863nm,28.8s						
RKT				*e*LR	LR	15 07 04.6	
	1μm,24.5s,baz=221						
SNAA	Sanae	56.21	186	*e*	P	14 50 48.0	-0.5
SNAA				*e*		14 51 16.0	
SNAA	Sanae	56.21	186	*e*P	P	14 50 47.0	-1.6
	8.7nm,1.3s,mb4.6						
VNA3	Neumayer Olymp	56.98	184	*e*	P	14 50 55.5	+1.4
VNA3				*e*		14 51 21.3	
VNA2	Neumayer--Watz	57.20	184	*e*	P	14 50 57.6	+2.0
	baz=160,slow=6.2						
VNA2				*e*		14 51 24.2	
USHA	Ushuaia	65.94	151	LR	LR	15 16 32.6	
	comp=Z,401nm,21.6s,MS4.6,baz=188,slow=32						
CFAA	Coronel Fontan	86.27	140	LR	LR	15 24 11.3	
	comp=Z,30nm,21.7s,MS3.7,baz=42,slow=30						
CMAR	Chiang Mai Arr	88.43	303	P	P	14 54 01.8	+0.4
	0.3nm,0.7s,mb3.7,baz=152,slow=4.1,SNR=3.4						
CMAR				LR	LR	15 34 01.0	
	comp=Z,250nm,19.2s,MS4.7,baz=146,slow=36						
MJAR	Matsushiro Arr	90.33	342	LR	LR	15 31 34.5	
	comp=Z,229nm,21.6s,MS4.6,baz=175,slow=34						
BOSA	Boshof	90.98	218	LR	LR	15 28 53.6	
	comp=Z,177nm,19.5s,MS4.5,baz=160,slow=32						
KSRS	Korea Array	93.60	334	LR	LR	15 33 54.5	
	comp=Z,355nm,20.0s,MS4.8,baz=163,slow=34						
COLD	Coldfoot	124.31	21	*e*PKPdf	PKPdf	14 59 59.0	-7.5
YKA	Yellowknife Ar	131.79	38	PKP	PKPdf	15 00 23.5	+2.6
	0.1nm,0.4s,baz=248,slow=3.4,SNR=2.8						
TORD	Torodi Ar. Bea	137.95	211	PKhKP		15 00 29.2	
	0.4nm,0.8s,baz=173,slow=0.8,SNR=2.7						
AKASG	Malin Array Be	150.34	287	PKPbc	PKPbc	15 00 58.9	-0.6
	1.2nm,0.6s,baz=88,slow=2.4,SNR=5.5						

*NEIC **14** 14:45:37.0, 3876N×2593E, h5km, MD2.7(ATH), MD3.4(ISK), After ISK.*
*ISK **14** 14:45:39.5, 3876N×2602E, h5km, MD3.3*
*CSEM **14** 14:45:39.5±0.1, 3875N×2597E, h10km, ML3.7/2, Error ellipse: s-maj=2.3km s-min=1.2km az=82.0*
*THE **14** 14:45:40.6, 3871N×2623E, h12km±1km, ML3.7/2, Error ellipse: s-maj=1.6km s-min=0.5km az=100.0*
*ISCJB **14** 14:45:40.0±0.6, 3874N±002×2603E±004, h9km±4km, Error ellipse: s-maj=5.3km s-min=3.3km az=164.9*
*DDA **14** 14:45:40.2, 3872N×2611E, h3km±3km, Md2.8*
*ATH **14** 14:45:40.6, 3875N×2612E, h30km±1km, MD2.7/4*
ISC 14 14:45:40.6±0.6, 3873N±002×2602E±004, h9km±4km, n46, σ0s82/59, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.34	175	P	Pg	14 45 47.8	+0.5
CHOS				S	Sg	14 45 52.6	+0.8
PRK	Paraskevi	0.56	21	P	Pg	14 45 51.2	-0.2
PRK				S	Sg	14 45 58.9	+0.2
PRK	Paraskevi	0.56	21	*e*PN	Pg	14 45 51.3	-0.1
PRK				*e*SN	Sg	14 45 59.5	+0.8
URLA	Izmir	0.58	129	*i* P	Pg	14 45 51.0	-0.9
URLA				*i* S	Sg	14 45 58.7	-0.8
AYVA	Ayvalik	0.78	42	*i* P	Pg	14 45 54.9	-0.8
AYVA				*i* S	Sg	14 46 05.3	-0.6
BLCB	Balcova	0.87	113	*e*PG	Pg	14 45 57.0	-0.5
BLCB				*e*SG	Sg	14 46 09.1	+0.4
BLCB	Balcova	0.87	113	P	Pg	14 45 54.1	-3.3
IZM	Izmir	1.03	108	*e*PG	Pg	14 45 59.6	-0.8
BOZC	Bozcaada	1.11	1	*i* P	Pg	14 46 00.8	-1.2
BOZC				*i* S	Sg	14 46 18.7	+2.2
EZN	Ezine	1.12	12	*e*PN	Pn	14 46 00.9	-1.6
EZN				*e*SN	Sn	14 46 16.6	-1.5
SMG	Samos	1.21	147	*e*PN	Pn	14 46 03.0	-0.6
SMG				*e*SN	Sn	14 46 18.9	-1.2
LIA	Limnos Island	1.34	331	P	Pn	14 46 05.4	0.0
LIA	Limnos Island	1.34	331	*e*PN	Pn	14 46 05.5	+0.1
LIA				*e*SN	Sn	14 46 23.5	+0.2
GCAM	G?zelcaml?	1.40	137	*i* P	Pn	14 46 05.7	-0.6
GCAM				*i* S	Sb	14 46 25.2	+0.2
AKHS	Akhisar	1.41	83	*i* P	Pn	14 46 06.9	+0.4
AKHS				*i* S	Sn	14 46 25.0	-0.2
AKS	Akhisar	1.41	83	*e*PN	Pn	14 46 06.2	-0.3
GADA	Gvkgeada	1.47	357	*e*PN	Pn	14 46 06.4	-0.8
APE	Apeiranthos	1.70	193	*e*PN	Pn	14 46 11.0	+0.6
APE	Apeiranthos	1.70	193	P	Pn	14 46 09.1	-1.3
APE	Apeiranthos	1.70	193	*e*Pn	Pn	14 46 11.0	+0.6
BALB	Balikesir	1.71	57	*e*PN	Pn	14 46 10.9	+0.3
LPK	Lapseki	1.74	19	*e*PN	Pn	14 46 10.3	-0.7
MLSB	Milas	2.00	135	*e*PN	Pn	14 46 15.1	+0.7
ENEZ	Enez	2.01	3	*e*PN	Pn	14 46 14.3	-0.4
KULA	Kula-Manisa	2.08	95	*e*PN	Pn	14 46 16.2	+0.5
RKY	Sarkoy-Tekirda	2.15	24	*e*PN	Pn	14 46 16.5	-0.2
EDC	Edincik	2.16	41	*e*PN	Pn	14 46 16.9	+0.2
ALN	Alexandroupoli	2.17	1	P	Pn	14 46 16.1	-0.7
ALN				S	Sn	14 46 42.7	-1.1
DST	Dursunbey	2.21	66	*e*PN	Pn	14 46 17.5	0.0
OUR	Ouranopolis	2.25	316	P	Pn	14 46 18.6	+0.7
DAT	Datca	2.35	148	*e*PN	Pn	14 46 20.2	+0.9
THR3	Thira Island,	2.37	192	P	Pn	14 46 19.0	-0.6
KCT	Karacabey	2.38	49	*e*PN	Pn	14 46 19.6	-0.1
THR1	Thera Island	2.39	191	P	Pn	14 46 18.8	-1.2
YER	Yerkesik	2.40	131	*e*PN	Pn	14 46 20.6	+0.7
KHL	Karahalli	2.78	97	*e*PN	Pn	14 46 26.3	+1.0
GEMT	Gemlik	2.99	54	*e*PN	Pn	14 46 28.2	+0.1
SLVT	Silivri	3.02	33	*e*PN	Pn	14 46 28.8	+0.3
NVR	Nevrokopi	3.10	328	P	Pn	14 46 31.0	+1.4
EDRB	Edirne	3.17	10	*e*PN	Pn	14 46 30.9	+0.3
YLV	Yalova	3.18	54	*e*PN	Pn	14 46 31.4	+0.7
ALT	Altintas	3.21	83	*e*PN	Pn	14 46 32.0	+0.8
ISK	Istanbul-Kandi	3.31	44	*e*PN	Pn	14 46 33.1	+0.6
CAVI	Cavuskoy	3.31	62	*e*PN	Pn	14 46 33.5	+1.0
ESKT	Eskisehir	3.84	77	*e*PN	Pn	14 46 41.2	+1.3
GULT	Gulveren	3.87	62	*e*PN	Pn	14 46 41.6	+1.3

*DDA **14** 14:46:06.3, 3870N×2600E, h6km±3km, Md3.2*
*NEIC **14** 14:46:09.0, 3888N×2635E, h5km, MD3.3(ATH), MD3.5(ISK), After ISK.*
*ISCJB **14** 14:46:09.6±0.9, 3876N±003×2610E±007, h23km±7km, Error ellipse: s-maj=9.9km s-min=4.8km az=165.2*
*ISK **14** 14:46:09.1, 3884N×2622E, h13km, MD3.3*
*ATH **14** 14:46:09.9, 3880N×2621E, h50km±3km, MD3.3/4*
*CSEM **14** 14:46:09.1±0.1, 3880N×2621E, h17km±1km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.3km az=75.0*
ISC 14 14:46:08.7±1.0, 3875N±003×2608E±007, h11km±5km, n21, σ0s99/31, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.52	17	*e*P	Pg	14 46 20.9	+2.2
PRK				*e*S	Sg	14 46 29.5	+3.9
PRK	Paraskevi	0.52	17	*e*P	Pg	14 46 20.8	+2.1
PRK				*e*S	Sg	14 46 29.5	+3.9
URLA	Izmir	0.56	134	*i* P	Pg	14 46 17.9	-1.7
URLA				*i* S	Sg	14 46 26.5	-0.5
AYVA	Ayvalik	0.73	40	*i* P	Pg	14 46 22.2	-0.6
AYVA				*i* S	Sg	14 46 33.5	+1.1
BLCB	Balcova	0.84	116	*e*PG	Pg	14 46 24.7	-0.1
BLCB				*e*SG	Sg	14 46 36.1	+0.3
IZM	Izmir	0.99	110	*e*PG	Pg	14 46 27.6	-0.2
IZM				*e*SG	Sg	14 46 41.1	+0.3
EZN	Ezine	1.09	10	*e*PG	Pg	14 46 28.6	-1.1
SMG	Samos	1.20	150	*e*P	Pn	14 46 31.4	0.0
SMG				*e*S	Sb	14 46 47.0	+0.1
LIA	Limnos Island	1.34	329	*e*P	Pn	14 46 33.6	+0.3
AKS	Akhisar	1.36	84	*e*PN	Pn	14 46 32.6	-0.9
AKHS	Akhisar	1.36	84	*i* P	Pn	14 46 33.1	-0.5
AKHS				*i* S	Sb	14 46 53.4	+1.8
AKHS	Akhisar	1.36	84	*i* P	Pn	14 46 33.1	-0.5
AKHS				*i* S	Sb	14 46 53.3	+1.7
GCAM	G?zelcaml?	1.39	139	*i* P	Pn	14 46 35.1	+1.1
GCAM				*i* P		14 46 41.7	
GCAM				*i* S	Sn	14 46 52.1	-0.2
BALB	Balikesir	1.66	57	*e*PN	Pn	14 46 37.0	-0.7
APE	Apeiranthos	1.73	195	*e*P	Pn	14 46 40.2	+1.5
KULA	Kula-Manisa	2.04	96	*e*PN	Pn	14 46 42.2	-0.7
EDC	Edincik	2.11	40	*e*PN	Pn	14 46 42.6	-1.2
RKY	Sarkoy-Tekirda	2.11	23	*e*PN	Pn	14 46 43.4	-0.5
DST	Dursunbey	2.16	66	*e*PN	Pn	14 46 43.1	-1.4
KCT	Karacabey	2.32	49	*e*PN	Pn	14 46 46.9	+0.1
YER	Yerkesik	2.38	132	*e*PN	Pn	14 46 49.2	+1.7

*ISCJB **14** 14:58:22.8±3.6, 854S±006×805W±0.1, h16km±26km, mb4.0/5, MS3.8/2, Error ellipse: s-maj=16.9km s-min=9.5km az=177.2*
*IDC **14** 14:58:22.6±1.1, 855S×8051W, h0km, mb4.0/6, mb1 4.1/9, mb1mx3.9/23, mbtmp4.0/9, ML4.3/3, MS3.8/6, Ms1 3.8/6, ms1mx3.4/31, Error ellipse: s-maj=28.9km s-min=19.9km az=60.0*
*NEIC **14** 14:58:28.3±1.1, 852S×8032W, h35km, Error ellipse: s-maj=31.1km s-min=12.6km az=70.0*
ISC 14 14:58:25.5±3.8, 856S±006×8048W±010, h19km±24km, n20, σ0s97/18, mb4.0/5, MS3.8/2, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.58	53	Pn	Pn	14 59 06.2	-0.1
	65nm,0.3s,baz=263,slow=6.2,SNR=106						
ATAH				Sn	Sn	14 59 37.5	+0.4
	123nm,0.3s,baz=152,slow=23,SNR=10.0						
NNA	Nana	4.94	134	Pn	Pn	14 59 39.5	+0.9
	19nm,0.3s,baz=327,slow=7.6,SNR=8.0						
NNA				Sn	Sn	15 00 30.9	-4.3
	6.1nm,0.3s,baz=180,slow=20,SNR=2.5						
NNA				LR	LR	15 01 33.2	
	comp=Z,881nm,19.1s,baz=312,slow=38						
NNA	Nana	4.94	134	*e*Pn	Pn	14 59 38.7	0.0
NNA				*e*Sn	Sn	15 00 34.6	-0.7
OTAV	Otavalo	8.97	13	*e*Pn	Pn	15 00 35.2	+1.1
	10.0nm,0.8s						
OTAV				Sn	Sn	15 02 14.3	-0.4
ROSC	El Rosal	14.67	25	LR	LR	15 07 28.6	
	comp=Z,333nm,18.6s,baz=29,slow=37						
LVC	Limon Verde	17.85	143	LR	LR	15 10 14.5	
	comp=Z,258nm,18.4s,baz=21,slow=40						
SDV	Santo Domingo	19.91	30	P	Pn	15 02 55.0	-2.9
	0.5nm,0.3s,baz=261,slow=8.8,SNR=3.6						
SDV				LR	LR	15 11 18.5	
	comp=Z,334nm,21.4s,baz=258,slow=39						
SIV	San Ignacio	20.33	113	P	P	15 02 60.0	-0.8
	1.3nm,0.6s,baz=294,slow=14,SNR=7.4						
CFAA	Coronel Fontan	25.60	155	P	P	15 03 53.4	-0.3
	0.1nm,0.3s,mb2.8,baz=354,slow=10,SNR=2.7						
CPUP	Villa Florida	28.19	132	LR	LR	15 17 40.2	
	comp=Z,231nm,20.5s,MS3.8,baz=358,slow=41						
BDFB	Brasilia	32.48	106	LR	LR	15 18 32.1	
	comp=Z,264nm,20.5s,MS3.9,baz=102,slow=37						
ULM	Lac du Bonnet	60.08	349	P	P	15 08 29.7	-1.6
	3.3nm,0.4s,mb4.8,baz=196,slow=13,SNR=7.8						
ULM	Lac du Bonnet	60.08	349	P	P	15 08 29.7	-1.6
YKA	Yellowknife Ar	75.58	344	P	P	15 10 09.5	+0.9
	0.5nm,0.7s,mb3.5,baz=138,slow=5.7,SNR=14						
YKA	Yellowknife Ar	75.58	344	P	P	15 10 09.5	+0.9
DBIC	Dimbokro	76.88	81	P	P	15 10 18.3	+1.2
	3.3nm,0.7s,mb4.3,baz=199,slow=3.0,SNR=6.0						
TOA0	Torodi Ar. Sit	84.39	76	*e*P	P	15 10 58.0	+0.8
TORD	Torodi Ar. Bea	84.39	76	P	P	15 10 57.5	+0.2
	3.0nm,0.9s,mb4.4,baz=259,slow=4.1,SNR=12						
ZALV	Zalesovo Beam	133.22	12	PKP	PKPdf	15 17 42.1	+2.1
	0.3nm,0.3s,baz=302,slow=2.7,SNR=2.2						
CMAR	Chiang Mai Arr	170.15	3	PKPab	PKPab	15 19 48.9	+0.6
	0.6nm,0.8s,baz=319,slow=3.4,SNR=5.0						

KRSC 14 15:05:19.3±0.6, 5554N×16122E, h155km±34km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZGR	Bezymyannyi-Gr	0.50	324	*e*P	Pn	15 05 42.3	+1.2
BZGR				*e*S	Sn	15 05 59.5	+1.6
ZLN	Zelenaya	0.53	334	*e*P	Pn	15 05 42.9	+1.6
ZLN				*e*S	Sn	15 05 59.3	+1.1
KMNR	Kamenistaya	0.60	292	*i* P	Pn	15 05 43.2	+1.6
KMNR				*e*S	Sn	15 06 00.0	+1.3
KIRR	Kirishev	0.65	310	*e*P	Pn	15 05 43.1	+1.2
KIRR				*e*S	Sn	15 06 00.7	+1.5
TUMR	Tumrok	0.66	248	*e*P	Pn	15 05 43.8	+1.8
TUMR				*e*S	Sn	15 06 01.6	+2.2
KPT	Kopyto	0.71	308	*e*P	Pn	15 05 43.3	+1.0
KPT				*e*S	Sn	15 06 01.6	+1.7
KRSR	Krestovskiy	0.77	332	*e*P	Pn	15 05 43.6	+0.9
KRSR				*e*S	Sn	15 06 01.1	+0.4
KLY	Klyuchi	0.84	338	*e*P	Pn	15 05 43.7	+0.5
KLY				*e*S	Sn	15 06 01.5	0.0
KOZ	Kozyrevsk	0.92	305	*e*P	Pn	15 05 44.6	+0.8
KOZ				*e*S	Sn	15 06 02.9	+0.3
MKZ	Mys Kozlova	1.03	163	*i* P	Pn	15 05 46.1	+1.4
MKZ				*e*S	Sn	15 06 05.2	+1.1
SRKR	Sorokina	1.12	359	*e*P	Pn	15 05 46.2	+0.8
SRKR				*e*S	Sn	15 06 05.5	-0.1
KBTR	Krutoberegovo	1.12	53	*i* P	Pn	15 05 46.2	+0.7
KBTR				*e*S	Sn	15 06 05.6	0.0
SRDR	Sredinnyy	1.15	313	*e*P	Pn	15 05 46.5	+0.8
SRDR				*e*S	Sn	15 06 06.4	+0.4
SPN	Mys Shipunski	2.55	196	*e*P	Pn	15 06 02.1	+0.9
SPN				*e*S	Sn	15 06 32.9	-0.5
NLC	Nalytchevo	2.62	206	*e*S	Sn	15 06 36.0	+1.1
GNL	Ganaly	2.66	227	*e*P	Pn	15 06 03.5	+1.0
AVH	Avacha	2.70	213	*e*P	Pn	15 06 04.5	+1.4
RUS	Russkaya	3.50	208	*e*P	Pn	15 06 14.9	+1.8

*TAP **14** 15:05:25.6, 2479N×12252E, h102km, ML3.1, C*
*JMA **14** 15:05:25.5±0.2, 2497N×12260E, h92km, M1.6*
*ISCJB **14** 15:05:26.4±0.9, 2472N±006×12256E±003, h94km±8km, Error ellipse: s-maj=9.5km s-min=3.7km az=174.3*
ISC 14 15:05:26.9±0.9, 2472N±006×12256E±003, h93km±8km, n28, σ0s71/50, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.48	122	P	Pn	15 05 41.6	-0.1
TWC	Suao	0.66	261	*i* P	Pn	15 05 42.7	-0.4
	baz=249						
TWC				*i* S	Sn	15 05 55.2	-0.2
	baz=249						
ENA	Nanau	0.80	249	*i* P	Pn	15 05 44.6	0.0
	baz=238						
ENA				*e*S	Sn	15 05 58.5	+0.6
	baz=238						
TWE	Neicheng	0.81	270	*i* P	Pn	15 05 44.5	-0.2
	baz=264						
TWE				S	Sn	15 05 57.9	-0.2
	baz=264						
ENTT	Nioudou	0.91	265	P	Pn	15 05 45.6	-0.1
	baz=266						
TWA	Mucha	0.93	287	*e*P	Pn	15 05 45.8	-0.1
	baz=274						
TWA				*e*S	Sn	15 06 00.2	0.0
	baz=274						
TWD	Chiawan	1.09	234	P	Pn	15 05 47.0	-0.7
	baz=225						
TWD				*e*S	Sn	15 06 02.8	-0.6
	baz=225						
NSK	Sanguang	1.10	268	P	Pn	15 05 47.4	-0.4
	baz=270						
NSK				S	Sn	15 06 03.6	0.0
	baz=270						
NNS	Nan Shan	1.12	256	*i* P	Pn	15 05 48.1	0.0
	baz=245						
NNS				S	Sn	15 06 04.4	+0.4
	baz=245						
IRIF	Iriomote-Funau	1.13	110	*e*S	Sn	15 06 04.5	+0.2
HATJ	Hateruma jima	1.31	120	*e*S	Sn	15 06 09.9	+1.8
WHF	Hehuan Shan	1.31	244	*i* P	Pn	15 05 50.5	+0.1
	baz=235						
WHF				S	Sn	15 06 08.4	+0.2
	baz=235						
TWT	Tachien	1.35	250	P	Pn	15 05 51.4	+0.6
	baz=246						
TWT				S	Sn	15 06 09.7	+0.8
	baz=246						
ESL	Shilin	1.37	229	P	Pn	15 05 50.2	-0.9
	baz=219						
ESL				*e*S	Sn	15 06 08.4	-1.0
	baz=219						
JKRS	Kuro-shima	1.40	110	P	Pn	15 05 51.3	-0.2
JKRS				*e*S	Sn	15 06 10.6	+0.4
NSTT	Nanjuang	1.42	267	*e*P	Pn	15 05 51.5	-0.3
	baz=263						
NSTT				*e*S	Sn	15 06 10.3	-0.3
	baz=263						
JIJ	Ishigaki jima	1.48	103	P	Pn	15 05 51.9	-0.6
JIJ				*e*S	Sn	15 06 11.5	-0.4
EHY	Hungye	1.66	223	*e*P	Pn	15 05 53.7	-1.0
	baz=214						
EHY				*e*S	Sn	15 06 14.1	-1.7
	baz=214						
SMLT	Sun Moon Lake	1.73	242	*e*P	Pn	15 05 56.3	+0.7
	baz=234						
SMLT				*e*S	Sn	15 06 18.2	+0.7
	baz=234						
TYC	Yuchr	1.75	243	P	Pn	15 05 56.7	+0.7
	baz=237						
TYC				*e*S	Sn	15 06 18.4	+0.3
	baz=237						
TWF1	Yuli	1.79	221	*e*P	Pn	15 05 55.2	-1.2
	baz=225						
TWF1				*e*S	Sn	15 06 16.7	-2.1
	baz=225						
JTJ	Tarama	1.95	92	*e*S	Sn	15 06 22.7	+0.1
CHN5	Tsauling	2.05	237	*e*P	Pn	15 06 00.2	+0.4
	baz=244						
CHN5				*e*S	Sn	15 06 26.2	+1.2

	baz=244						
ELDTW	**Lidau**	**2.08**	**223**	*e*P	**Pn**	**15 05 59.3**	**-0.9**
	baz=219						
CHN4	**Tsaushan**	**2.26**	**233**	*e*P	**Pn**	**15 06 03.1**	**+0.5**
	baz=230						
CHN4				*e*S	**Sn**	**15 06 31.4**	**+1.6**
	baz=230						
STYT	**Tauyuan**	**2.26**	**227**	*e*P	**Pn**	**15 06 03.0**	**+0.4**
	baz=225						
STYT				*e*S	**Sn**	**15 06 30.3**	**+0.3**
	baz=225						
WTP	**Ta-pu**	**2.31**	**231**	*e*P	**Pn**	**15 06 03.4**	**+0.2**
	baz=228						
WTP				*e*S	**Sn**	**15 06 31.4**	**+0.4**
	baz=228						
CHN1	**Nanshi**	**2.41**	**231**	*e*P	**Pn**	**15 06 04.5**	**0.0**
	baz=228						
CHN1				*e*S	**Sn**	**15 06 34.0**	**+0.6**
	baz=228						

BJI ***14*** *15:36:00.1, 12.80N×144.49E, h130km, mB5.1, mb4.6*
ISCJB ***14*** *15:36:04.0±0.7, 13.14N±0.06×144.00E±0.07, h127km±7km, mb4.6/37, Error ellipse: s-maj=12.4km s-min=9.3km az=154.7*
IDC ***14*** *15:36:05.4±0.7, 13.13N×144.12E, h123km±8km, mb4.1/16, mb1 4.2/16, mb1mx4.1/25, mbtmp4.1/16, Error ellipse: s-maj=20.9km s-min=10.7km az=80.0*
NEIC ***14*** *15:36:05.7±0.9, 13.16N×144.08E, h130km±8km, mb4.8/20, Error ellipse: s-maj=10.4km s-min=7.9km az=66.0*
ISC 14 15:36:05.5±0.7**, 13.15N**±0.06**×144.09E**±0.07**, h127**km±6km**,**
n54, σ**0.89**/48**, mb4.6**/37**, 1C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.87**	**60**	P	**Pn**	**15 36 27.4**	**+0.5**
	530nm,0.3s,baz=238,slow=2.1,SNR=557						
GUMO				S	**Sn**	**15 36 42.8**	**-0.4**
	2µm,0.3s,baz=40,slow=21,SNR=97						
JOW	**Kunigami**	**20.12**	**315**	P	**P**	**15 40 31.5**	**+2.0**
	31nm,0.5s,baz=155,slow=13,SNR=15						
PMG	**Port Moresby**	**22.62**	**172**	P	**P**	**15 40 55.1**	**-0.8**
	10nm,0.7s,mb4.3,baz=225,slow=24,SNR=5.8						
PMG	**Port Moresby**	**22.62**	**172**	P	**P**	**15 40 55.1**	**-0.9**
MJAR	**Matsushiro Arr**	**23.88**	**348**	P	**P**	**15 41 06.8**	**-0.5**
	3.6nm,0.7s,mb3.8,baz=167,slow=10.0,SNR=13						
MAJO	**Matsushiro**	**23.88**	**348**	*e*P	**P**	**15 41 05.1**	**-2.2**
	5.6nm,0.4s,mb4.2						
MAT	**Matsushiro**	**23.88**	**348**	P	**P**	**15 41 07.1**	**-0.2**
SSLB	**Suanglung**	**24.32**	**299**	*e*P	**P**	**15 41 10.4**	**-1.1**
	36nm,0.5s,mb5.0						
KSRS	**Korea Array**	**28.18**	**332**	P	**P**	**15 41 46.0**	**0.0**
	8.1nm,0.6s,mb4.5,baz=141,slow=9.5,SNR=42						
CTA	**Charters Tower**	**33.10**	**176**	P	**P**	**15 42 30.3**	**+0.8**
	5.6nm,0.7s,mb4.5,baz=342,slow=8.4,SNR=5.1						
WRAB	**Tennant Creek**	**34.25**	**196**	*e*P	**P**	**15 42 39.0**	**-0.5**
	14nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**34.26**	**196**	P	**P**	**15 42 39.2**	**-0.3**
	10nm,0.7s,mb4.8,baz=16,slow=8.9,SNR=61						
ASAR	**Alice Springs**	**37.93**	**195**	P	**P**	**15 43 10.5**	**-0.1**
	3.4nm,0.6s,mb4.4,baz=21,slow=11,SNR=95						
XAN	**Xi'an**	**38.07**	**309**	P	**P**	**15 43 12.1**	**+0.2**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.6						
MIDW	**Midway**	**38.86**	**61**	*e*P	**P**	**15 43 13.9**	**-4.6**
	comp=Z,54nm,0.7s,mb5.5						
CD2	**Chengdu**	**41.08**	**302**	⇑*i*P	**P**	**15 43 37.1**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
DZM	**Mont Dzumac**	**41.31**	**148**	*e*P	**P**	**15 43 39.7**	**+1.0**
	comp=Z,9.8nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**43.67**	**283**	P	**P**	**15 43 58.6**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.8,baz=86,slow=6.1,SNR=8.0						
CMAR				PcP	PcP	15 45 44.3	+1.2
	comp=Z,1.2nm,0.6s,baz=102,slow=1.8,SNR=8.9						
STKA	**Stephens Creek**	**44.84**	**183**	P	**P**	**15 44 06.6**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.3,baz=358,slow=9.5,SNR=7.9						
STKA	**Stephens Creek**	**44.84**	**183**	*e*	**P**	**15 44 06.5**	**-0.5**
SONM	**Songino Array**	**46.65**	**325**	P	**P**	**15 44 22.4**	**+1.2**
	comp=Z,2.4nm,0.6s,mb4.1,baz=136,slow=6.5,SNR=19						
GTA	**Gaotai**	**46.90**	**312**	*e*P	**P**	**15 44 24.1**	**+0.9**
GTA				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**51.52**	**298**	*e*P	**P**	**15 44 59.7**	**+1.2**
	comp=Z,2.8nm,0.4s,mb4.7						
TAPN	**Taplejung**	**54.33**	**294**	*e*P	**P**	**15 45 18.7**	**-0.5**
JIRN	**Jiri**	**55.70**	**295**	*e*P	**P**	**15 45 28.8**	**-0.2**
	comp=Z,6.2nm,0.4s,mb5.0						
GUN	**Gumba**	**55.98**	**295**	*e*P	**P**	**15 45 30.6**	**-0.5**
	comp=Z,11nm,0.4s,mb5.2						
GKN	**Gorkha**	**57.09**	**295**	*e*P	**P**	**15 45 38.1**	**-0.8**
	comp=Z,7.5nm,0.5s,mb5.0						
DANN	**Dangsing**	**57.87**	**295**	*e*P	**P**	**15 45 43.3**	**-1.1**
	comp=Z,12nm,0.5s,mb5.2						
KOLN	**Koldanda**	**58.00**	**295**	*e*P	**P**	**15 45 46.7**	**+1.5**
MK31	**Makanchi Array**	**61.28**	**316**	*e*P	**P**	**15 46 06.3**	**-1.1**
MKAR	**Makanchi Array**	**61.28**	**316**	P	**P**	**15 46 07.9**	**+0.5**
	comp=Z,2.1nm,0.4s,mb4.5,baz=89,slow=8.8,SNR=32						
ZALV	**Zalesovo Beam**	**61.54**	**325**	P	**P**	**15 46 08.4**	**-0.6**
	comp=Z,1.2nm,0.4s,mb4.3,baz=106,slow=6.9,SNR=8.0						
ZALV				PcP	PcP	15 46 48.9	-0.7
	comp=Z,1.2nm,0.4s,baz=102,slow=4.7,SNR=4.5						
KURK	**Kurchatov**	**64.43**	**320**	P	**P**	**15 46 28.6**	**+0.5**
	comp=Z,5.3nm,0.5s,mb4.6,baz=103,slow=7.0,SNR=16						
KURK	**Kurchatov**	**64.43**	**320**	*e*P	**P**	**15 46 27.6**	**-0.6**
	comp=Z,5.3nm,0.5s,mb4.6						
CHUM	**Lake Minchumin**	**66.77**	**26**	*e*P	**P**	**15 46 33.6**	**-9.3**
	comp=Z,18nm,0.4s,mb5.2						
BRVK	**Borovoye**	**69.86**	**322**	*e*P	**P**	**15 47 01.8**	**-0.6**
	comp=Z,3.9nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**83.59**	**27**	P	**P**	**15 48 19.4**	**+0.1**
	comp=Z,1.2nm,0.3s,mb4.1,baz=286,slow=5.2,SNR=16						
YKA	**Yellowknife Ar**	**83.59**	**27**	P	**P**	**15 48 19.4**	**+0.1**
WVOR	**Wild Horse Val**	**86.52**	**47**	*e*P	**P**	**15 48 33.6**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.2						
BMO	**Blue Mountains**	**86.83**	**45**	*e*P	**P**	**15 48 36.4**	**+0.5**
	comp=Z,8.4nm,1.1s,mb4.6						
NVAR	**Mina Array Bea**	**87.78**	**51**	P	**P**	**15 48 42.6**	**+2.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=320,slow=2.4,SNR=4.9						
TPNV	**Topopah Spring**	**89.75**	**52**	*e*P	**P**	**15 48 48.8**	**-1.0**
	comp=Z,20nm,1.2s,mb5.1						
DLMT	**Dillon**	**89.87**	**43**	*e*P	**P**	**15 48 50.0**	**-0.3**
	comp=Z,3.2nm,0.5s,mb4.7						
IMW	**Indian Meadow**	**91.47**	**44**	*e*P	**P**	**15 48 56.8**	**-0.9**
	comp=Z,8.6nm,1.2s,mb4.8						
RLMT	**Red Lodge**	**92.17**	**43**	*e*P	**P**	**15 49 02.7**	**+1.8**
	comp=Z,2.2nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**92.81**	**45**	P	**P**	**15 49 04.5**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.7,baz=264,slow=0.9,SNR=24						
TUC	**Tucson**	**95.45**	**55**	*e*P	**P**	**15 49 15.8**	**-0.4**
	comp=Z,2.1nm,0.8s,mb4.6						
ACSO	**Alum Creek Sta**	**111.25**	**37**	*e*PKPdf	PKiKP	15 54 23.5	-1.1
VNA2	**Neumayer--Watz**	**119.67**	**190**	*e*	PKPdf	15 54 40.3	+0.5
	baz=197,slow=0.4						
VNA2				*e*		15 55 09.2	
VNA2				*e*		15 55 15.2	
VNA3	**Neumayer Olymp**	**119.78**	**189**	*e*	PKPdf	15 54 40.2	+0.2
VNA3				*e*		15 55 08.9	
VNA3				*e*		15 55 14.6	
TORD	**Torodi Ar. Bea**	**134.48**	**304**	PKP	PKPdf	15 55 10.7	+1.0
	comp=Z,0.3nm,0.4s,baz=47,slow=2.3,SNR=6.3						
KIC	**Kosan Boka**	**143.47**	**300**	*e*PKP1	PKPdf	15 55 23.2	-3.0
	comp=Z,18nm,0.6s						
TIC	**Toumodi**	**143.55**	**301**	*e*PKP1	PKPdf	15 55 23.4	-2.9
	comp=Z,19nm,0.3s						
LIC	**Lamto**	**143.78**	**300**	*e*PKP1	PKPdf	15 55 24.2	-2.5
	comp=Z,22nm,0.4s						

MOS ***14*** *15:36:10.5±1.5, 25.84S×177.54W, h143km, mb5.1/11, Error ellipse: s-maj=13.2km s-min=11.9km az=153.2*
ISCJB ***14*** *15:36:13.7±1.0, 25.93S±0.06×177.63W±0.04, h174km±9km, mb4.8/47, Error ellipse: s-maj=11.0km s-min=5.3km az=155.8*
IDC ***14*** *15:36:13.2±1.9, 25.84S×177.50W, h158km±16km, mb4.5/16, mb1 4.6/18, mb1mx4.6/19, mbtmp4.5/18, MS3.6/2, Ms1 3.6/2, ms1mx3.1/16, Error ellipse: s-maj=16.1km s-min=12.8km az=41.0*
NEIC ***14*** *15:36:21.6±2.5, 25.87S×177.66W, h236km±22km, mb4.9/24, Error ellipse: s-maj=11.9km s-min=9.6km az=129.0*
GCMT ***14*** *15:36:21.5±0.4, 25.83S×177.17W, h183km±4km, MW4.9/67, Moment Tensor Solution. s17,c19; s67,c89; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.12±.14; Mθθ-0.94±.19; Mϕϕ-1.18±.18; Mrθ-0.80±.13; Mθϕ-1.42±.13; Mϕr2.01±.12; Best double couple: M0 3.10600×10¹⁶ NP1:ϕs247.00000°, δ40.00000°, λ139.00000°. NP2: ϕs11.00000°, δ65.00000°, λ58.00000°. Principal axes: T 3.4840, Plg57.0000°, Azm237.0000°; N -0.7550, Plg29.0000°, Azm25.0000°; P -2.7290, Plg14.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***14*** *15:36:22, 26.35S×178.11W, h200km, Mw5.7/4*
BJI ***14*** *15:36:38.0, 25.79S×177.52W, h407km, mB5.1, mb4.8*
SZGRF ***14*** *15:36:42.9, 25.31S×178.60W, h33km, South of Fiji Islands*
ISC 14 15:36:15.1±1.0**, 25.91S**±0.06**×177.59W**±0.04**, h174**km±10km**,**
n403, σ**0.67**/291**, mb4.8**/47**, 123C-90D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.34**	**185**	P	**Pn**	**15 37 06.2**	**-1.5**
	90nm,0.3s,baz=84,slow=22,SNR=2.8						
RAO				S	**Sn**	**15 37 47.5**	**-1.1**
	451nm,0.3s,baz=244,slow=24,SNR=11						
RAO	**Raoul Island**	**3.34**	**185**	*e*P	**Sn**	**15 37 45.2**	**-3.4**
URZ	**Urewera**	**13.10**	**199**	P	**Pn**	**15 39 16.2**	**+1.6**
	6.1nm,0.3s,baz=336,slow=2.5,SNR=28						
URZ				S	**Sn**	**15 41 31.8**	**-8.3**
	3.2nm,0.3s,baz=344,slow=23,SNR=12						
DZM	**Mont Dzumac**	**15.08**	**281**	*e*P	**Pn**	**15 39 42.8**	**+3.3**
DZM	**Mont Dzumac**	**15.08**	**281**	*e*Pn	**Pn**	**15 39 42.9**	**+3.4**
	34nm,0.6s						
RPZ	**Rata Peaks**	**20.02**	**205**	P	**P**	**15 40 29.9**	**-4.5**
	9.6nm,0.7s,baz=138,slow=6.5,SNR=5.4						
RPZ				S	**S**	**15 43 58.3**	**-11**
	4.3nm,0.4s,baz=311,slow=21,SNR=7.3						
TBI	**Tubuai**	**25.68**	**90**	*e*LR	LR	15 46 12.3	
	171nm,32.5s						
TBI	**Tubuai**	**25.68**	**90**	*e*T		16 06 47.0	
	10nm,0.3s						
HNR	**Honiara**	**26.88**	**304**	LR	LR	15 49 49.8	
	comp=Z,85nm,19.3s,baz=152,slow=30						
PAE	**Paea**	**27.23**	**78**	*e*T		16 08 29.3	
	92nm,0.3s						
PPT	**Papeete**	**27.27**	**78**	*e*LR	LR	15 49 06.7	
	87nm,21.8s						
PPT	**Papeete**	**27.27**	**78**	LR	LR	15 50 01.3	
	comp=Z,200nm,19.0s,baz=265,slow=30						
ARMA	**Armidale**	**27.45**	**253**	*e*P	**P**	**15 41 47.8**	**+2.9**
EIDS	**Eidsvold**	**28.21**	**264**	*e*P	**P**	**15 41 53.1**	**+1.4**
	32nm,0.8s,mb5.1						
CNB	**Canberra Magne**	**29.83**	**244**	*e*P	**P**	**15 42 07.9**	**+2.0**
CAN	**Canberra**	**30.12**	**244**	*e*P	**P**	**15 42 09.6**	**+1.1**
CAN				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
CAN	**Canberra**	**30.12**	**244**	*e*P	**P**	**15 42 09.6**	**+1.2**
	comp=Z,23nm,1.2s,mb4.8						
TOO	**Toolangi**	**33.28**	**240**	*e*P	**P**	**15 42 37.4**	**+1.4**
CTA	**Charters Tower**	**33.71**	**272**	*e*P	**P**	**15 42 41.4**	**+1.5**
	comp=Z,44nm,0.9s,mb5.2						
CTA	**Charters Tower**	**33.71**	**272**	P	**P**	**15 42 41.5**	**+1.6**
	comp=Z,50nm,0.8s,mb5.3,baz=100,slow=10,SNR=35						
CTA	**Charters Tower**	**33.71**	**272**	*e*P	**P**	**15 42 41.4**	**+1.5**
CTA				pmax	pmax		
	comp=Z,44nm,0.9s						
CTAO	**Charters Tower**	**33.71**	**272**	*e*P	**P**	**15 42 41.8**	**+1.9**
CTAO				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.4						
CTAO	**Charters Tower**	**33.71**	**272**	*e*P	**P**	**15 42 41.8**	**+1.9**
	comp=Z,77nm,1.0s,mb5.4						
STKA	**Stephens Creek**	**36.07**	**251**	*e*P	**P**	**15 43 00.8**	**+0.8**
	comp=Z,10.0nm,0.9s,mb4.5						
STKA				*e*PCP	PcP	15 45 22.9	+0.6
STKA	**Stephens Creek**	**36.07**	**251**	P	**P**	**15 43 00.6**	**+0.6**
	comp=Z,14nm,0.9s,mb4.6,baz=97,slow=9.4,SNR=16						
STKA				PcP	PcP	15 45 22.8	+0.5
	comp=Z,5.8nm,0.6s,baz=45,slow=2.0,SNR=7.0						
STKA	**Stephens Creek**	**36.07**	**251**	*e*P	**P**	**15 43 00.4**	**+0.4**
	comp=Z,3.6nm,1.0s,mb4.0						
PMG	**Port Moresby**	**37.22**	**290**	P	**P**	**15 43 09.1**	**-0.9**
	comp=Z,26nm,0.7s,mb5.0,baz=103,slow=5.9,SNR=12						
PMG	**Port Moresby**	**37.22**	**290**	⇑*e*P	**P**	**15 43 10.6**	**+0.6**
PMG	**Port Moresby**	**37.22**	**290**	*e*P	**P**	**15 43 07.8**	**-2.2**
COEN	**Coen**	**38.61**	**280**	*e*P	**P**	**15 43 21.4**	**-0.1**
	comp=Z,29nm,1.0s,mb4.9						
ASAR	**Alice Springs**	**43.89**	**262**	P	**P**	**15 44 04.1**	**-0.5**
	comp=Z,26nm,0.7s,mb4.9,baz=99,slow=7.9,SNR=71						
ASAR				PcP	PcP	15 45 48.0	+0.4
	comp=Z,3.9nm,0.8s,baz=101,slow=5.2,SNR=5.1						
ASAR				S	**S**	**15 50 21.0**	**-1.8**
	comp=Z,1.0nm,1.0s,baz=99,slow=16,SNR=4.8						
ASAR				PKiKP	PKiKP	15 52 47.0	-1.6
	comp=Z,0.3nm,0.9s,baz=103,slow=2.0,SNR=4.4						
ASAR	**Alice Springs**	**43.89**	**262**	P	**P**	**15 44 04.1**	**-0.4**
ASAR				PcP	PcP	15 45 48.0	+0.4
ASAR				S	**S**	**15 50 21.0**	**-1.8**
WB2	**Warramunga Arr**	**44.46**	**267**	*e*P	**P**	**15 44 08.4**	**-0.8**
WB2				*e*S	**S**	**15 50 30.1**	**-1.0**
WRAB	**Tennant Creek**	**44.47**	**267**	⇓*i*P	**P**	**15 44 08.4**	**-0.8**
WRAB	**Tennant Creek**	**44.47**	**267**	*e*P	**P**	**15 44 09.0**	**-0.2**
	comp=Z,46nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**44.48**	**267**	P	**P**	**15 44 08.7**	**-0.6**
	comp=Z,41nm,0.7s,mb5.2,baz=104,slow=8.0,SNR=114						
WRA				PcP	PcP	15 45 49.9	+0.2
	comp=Z,6.1nm,0.8s,baz=106,slow=3.8,SNR=7.4						
WRA				S	**S**	**15 50 29.8**	**-1.5**
	comp=Z,3.3nm,1.0s,baz=103,slow=15,SNR=5.3						
WRA				PKiKP	PKiKP	15 52 47.7	-1.6
	comp=Z,0.7nm,1.1s,baz=91,slow=0.3,SNR=7.1						
WRA	**Warramunga Arr**	**44.48**	**267**	P	**P**	**15 44 08.7**	**-0.6**
WRA				PcP	PcP	15 45 49.9	+0.2
WRA				S	**S**	**15 50 29.8**	**-1.5**
FORT	**Forrest**	**47.69**	**251**	*e*P	**P**	**15 44 32.9**	**-1.4**
	comp=Z,81nm,0.6s,mb5.5						
FORT	**Forrest**	**47.69**	**251**	*e*P	**P**	**15 44 31.9**	**-2.4**
	comp=Z,111nm,0.7s,mb5.6						
KAKA	**Kakadu**	**48.68**	**276**	*e*P	x	15 44 20.9	
	comp=Z,14nm,0.6s						
SBA	**Scott Base**	**52.52**	**184**	*e*P	**P**	**15 45 11.4**	**+1.6**
SBA				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.1						
SBA	**Scott Base**	**52.52**	**184**	*e*P	**P**	**15 45 11.4**	**+1.6**
	comp=Z,56nm,1.3s,mb5.1						
VNDA	**Vanda**	**52.58**	**186**	P	**P**	**15 45 11.5**	**+1.2**
	comp=Z,7.7nm,0.7s,mb4.5,baz=14,slow=6.5,SNR=14						
VNDA	**Vanda**	**52.58**	**186**	*e*P	**P**	**15 45 10.7**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,27nm,1.3s						
VNDA	**Vanda**	**52.58**	**186**	*e*P	**P**	**15 45 10.7**	**+0.4**
	comp=Z,27nm,1.3s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.87**	**266**	*e*P	**P**	**15 45 13.2**	**-0.1**
	comp=Z,80nm,0.8s,mb5.5						
KLBR	**Kellerberrin**	**56.25**	**248**	*e*P	**P**	**15 45 36.6**	**-0.8**
	comp=Z,27nm,0.7s,mb5.2						
MBWA	**Marble Bar**	**57.19**	**261**	*e*P	**P**	**15 45 43.1**	**-1.1**
	comp=Z,15nm,0.9s,mb4.8						
BATI	**Baumata**	**57.55**	**274**	P	**P**	**15 45 47.7**	**+0.9**
	comp=Z,11nm,0.5s,mb4.9,baz=163,slow=17,SNR=8.0						
CASY	**Casey**	**59.28**	**207**	*e*P	**P**	**15 45 57.7**	**-0.3**
	comp=Z,120nm,1.1s,mb5.6						
KAPI	**Kappang**	**63.26**	**278**	P	**P**	**15 46 25.0**	**-0.6**
	comp=Z,4.5nm,0.6s,mb4.5,baz=144,slow=8.7,SNR=3.8						
KAPI	**Kappang**	**63.26**	**278**	P	**P**	**15 46 25.0**	**-0.6**
QSPA	**South Pole Qui**	**64.18**	**180**	*e*P	**P**	**15 46 31.7**	**+1.2**
	comp=Z,41nm,0.9s,mb5.3						
KSM	**Kuching**	**74.59**	**279**	*e*P	**P**	**15 47 33.3**	**-2.2**
	comp=Z,15nm,0.8s,mb4.7						
MJAR	**Matsushiro Arr**	**74.79**	**324**	P	**P**	**15 47 35.7**	**-0.4**
	comp=Z,2.7nm,0.9s,mb3.9,baz=163,slow=6.4,SNR=7.8						
MJAR	**Matsushiro Arr**	**74.79**	**324**	P	**P**	**15 47 35.7**	**-0.4**
MAW	**Mawson**	**76.62**	**200**	*e*P	**P**	**15 47 46.9**	**+0.8**
	comp=Z,18nm,0.6s,mb4.9						
MAW	**Mawson**	**76.62**	**200**	P	**P**	**15 47 46.9**	**+0.9**
	comp=Z,19nm,0.6s,mb4.9,baz=120,slow=7.9,SNR=60						
MAW	**Mawson**	**76.62**	**200**	*e*P	**P**	**15 47 46.6**	**+0.5**
MAW				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAW	**Mawson**	**76.62**	**200**	*e*P	**P**	**15 47 46.6**	**+0.5**
	comp=Z,9.4nm,1.0s,mb4.4						
ASAJ	**Asahikawa**	**78.65**	**332**	P	**P**	**15 47 58.0**	**+0.5**
	comp=Z,13nm,0.7s,mb4.7,baz=58,slow=24,SNR=7.0						
YSS	**Yuzh-Sakhalins**	**80.89**	**334**	⇑*e*P	**P**	**15 48 10.3**	**+0.8**
YSS				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.1						
KSRS	**Korea Array**	**81.19**	**319**	P	**P**	**15 48 11.9**	**+0.6**
	comp=Z,3.2nm,0.7s,mb4.0,baz=131,slow=6.3,SNR=8.9						
SYO	**Syowa Base**	**81.55**	**193**	⇑*e*P	**P**	**15 48 11.5**	**-1.3**
PETK	**Petropavlovsk-**	**81.58**	**345**	P	**P**	**15 48 12.9**	**0.0**
	comp=Z,6.3nm,0.6s,mb4.5,baz=111,slow=6.1,SNR=8.9						
MURC	**Murrieta**	**82.42**	**47**	⇑P	**P**	**15 48 18.2**	**+0.4**
	baz=83						
MONP	**Monument Peak**	**82.50**	**48**	⇓P	**P**	**15 48 18.5**	**+0.2**
	baz=83						
SNAA	**Sanae**	**82.61**	**178**	⇑*i*P	**P**	**15 48 17.1**	**-1.2**
SNAA				*e*		15 48 20.0	
SNAA	**Sanae**	**82.61**	**178**	*e*P	**P**	**15 48 17.0**	**-1.3**
SNAA				pmax	pmax		
	comp=Z,51nm,1.3s						
SNAA	**Sanae**	**82.61**	**178**	*e*P	**P**	**15 48 17.0**	**-1.3**
	comp=Z,51nm,1.3s,mb5.1						
EDW2	**Edwards Air Fo**	**82.69**	**46**	⇑P	**P**	**15 48 19.2**	**0.0**
	baz=83						
VNA3	**Neumayer Olymp**	**82.74**	**176**	⇑*i*P	**P**	**15 48 18.4**	**-0.6**
VNA3				*e*		15 48 21.6	
VNA3				*e*		15 48 24.5	
VNA3				*e*		15 48 39.6	
ISA	**Isabella**	**82.87**	**45**	⇓P	**P**	**15 48 20.3**	**+0.2**
	baz=83						
ISA	**Isabella**	**82.87**	**45**	*e*P	**P**	**15 48 20.0**	**-0.1**
VNA2	**Neumayer--Watz**	**83.18**	**177**	⇑*i*P	**P**	**15 48 21.3**	**+0.1**
	baz=173,slow=3.0						
VNA2				*e*		15 48 24.7	
VNA2				*e*		15 48 26.7	
VNA2				*e*		15 48 42.5	
LRMC	**Laurel Mountai**	**83.25**	**45**	⇑P	**P**	**15 48 22.6**	**+0.6**
	baz=84						
VNA1	**Neumayer--Stat**	**83.41**	**176**	⇑*i*P	**P**	**15 48 22.7**	**+0.3**
VNA1				*e*		15 48 26.4	
BELC	**Belle Mtn.**	**83.45**	**47**	⇑P	**P**	**15 48 23.3**	**+0.1**
	baz=84						
CWC	**Cottonwood Cre**	**83.60**	**44**	⇑P	**P**	**15 48 23.7**	**-0.1**
	baz=84						
WDC	**Whiskeytown Da**	**83.61**	**39**	*e*P	**P**	**15 48 23.6**	**-0.2**
BC3	**Big Chuckw Mtn**	**83.61**	**48**	⇓P	**P**	**15 48 23.9**	**-0.1**
	baz=84						
NJ2	**Nanjing**	**83.62**	**310**	*e*P	**P**	**15 48 19.9**	**-4.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
GLA	**Glamis**	**83.67**	**49**	⇑P	**P**	**15 48 25.0**	**+0.7**
	baz=84						
GSC	**Goldstone**	**83.72**	**46**	⇑P	**P**	**15 48 24.8**	**+0.3**
	baz=84						
GSC	**Goldstone**	**83.72**	**46**	*e*P	**P**	**15 48 24.3**	**-0.1**
MPMC	**Manual Prospec**	**83.74**	**45**	⇑P	**P**	**15 48 24.9**	**+0.4**
	baz=84						
WAKR	**Walker**	**84.07**	**42**	*e*P	**P**	**15 48 26.0**	**-0.1**
IRM	**Iron Mountain**	**84.11**	**48**	⇓P	**P**	**15 48 26.8**	**+0.3**
	baz=85						
GMRC	**Granite Mounta**	**84.15**	**47**	⇑P	**P**	**15 48 26.6**	**-0.1**
	baz=85						
Y12C	**Blythe**	**84.29**	**48**	⇑P	**P**	**15 48 27.8**	**+0.4**
	baz=85						
TUQ	**Turquoise Moun**	**84.37**	**46**	⇑P	**P**	**15 48 27.9**	**+0.1**
	baz=85						
WCN	**Washoe City**	**84.39**	**41**	⇑P	**P**	**15 48 27.8**	**+0.1**
	baz=85						
BEKR	**Beckwourth**	**84.40**	**41**	⇓P	**P**	**15 48 28.0**	**+0.2**
	baz=85						
214A	**Organ Pipe Nat**	**84.42**	**51**	⇓P	**P**	**15 48 28.4**	**+0.3**
	baz=85						
NVAR	**Mina Array Bea**	**84.71**	**43**	P	**P**	**15 48 29.6**	**+0.2**
	comp=Z,6.1nm,0.9s,mb4.3,baz=222,slow=8.7,SNR=25						
R08A	**Mina**	**84.78**	**43**	⇓P	**P**	**15 48 29.8**	**0.0**
	baz=85						
Y13A	**Salome**	**84.80**	**49**	⇓P	**P**	**15 48 30.6**	**+0.7**
	baz=85						
O06A	**Flanigan**	**84.90**	**41**	⇑P	**P**	**15 48 30.8**	**+0.5**
	baz=85						
TPNV	**Topopah Spring**	**85.08**	**45**	⇑P	**P**	**15 48 31.8**	**+0.6**
	baz=86						
TPNV	**Topopah Spring**	**85.08**	**45**	*e*P	**P**	**15 48 30.3**	**-0.9**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TPNV	**Topopah Spring**	**85.08**	**45**	*e*P	**P**	**15 48 30.3**	**-0.9**
	comp=Z,3.4nm,0.9s,mb4.1						
Z14A	**Wintersburg**	**85.13**	**49**	⇑P	**P**	**15 48 32.1**	**+0.5**
	baz=86						
MDJ	**Mudanjiang**	**85.15**	**325**	P	**P**	**15 48 32.0**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,95nm,4.0s						
TPH	**Tonopah**	**85.16**	**44**	*e*P	**P**	**15 48 31.3**	**-0.3**
Q08A	**Gabbs**	**85.21**	**43**	⇑P	**P**	**15 48 32.2**	**+0.4**
	baz=86						
V12A	**Nelson**	**85.24**	**47**	⇓P	**P**	**15 48 32.4**	**+0.3**
	baz=86						
115A	**Sonoran Desert**	**85.25**	**50**	⇓P	**P**	**15 48 32.6**	**+0.4**
	baz=86						
X13A	**Yucca**	**85.25**	**48**	⇑P	**P**	**15 48 32.6**	**+0.4**
	baz=86						
N06A	**Buffalo Meadow**	**85.27**	**40**	⇑P	**P**	**15 48 32.2**	**+0.1**
	baz=86						
HABR	**Khabarovsk**	**85.32**	**331**	*e*P	**P**	**15 48 33.3**	**+1.2**
HABR				*e*		15 51 49.9	
HABR				*e*PPP		15 53 44.1	
HABR				*e*S	S	15 58 35.1	-13
HABR				*e*		15 58 51.8	
HABR				*e**SS	sS	16 00 05.0	+2.2
HABR				*e*SSS		16 07 54.2	
HABR				MLR	MLR		
	comp=N,282nm,20.0s						
HABR				MLR	MLR		
	comp=Z,32nm,16.0s						
HABR				MLR	MLR		
	comp=E,148nm,20.0s						
R09A	**Tonopah**	**85.35**	**43**	⇑P	**P**	**15 48 32.8**	**+0.2**
	baz=86						
PSI	**Prapat**	**85.35**	**275**	P	**P**	**15 48 30.7**	**-2.5**
	comp=E,3.6nm,0.3s,mb4.5,baz=160,slow=8.2,SNR=5.3						
Y14A	**Wickenburg**	**85.43**	**49**	⇑P	**P**	**15 48 33.2**	**+0.1**
	baz=86						
S10A	**Tonopah Range,**	**85.45**	**44**	⇓P	**P**	**15 48 33.3**	**+0.2**
	baz=86						
O07A	**Toulon**	**85.46**	**41**	⇑P	**P**	**15 48 33.0**	**0.0**
	baz=86						
W13A	**Hualapai Mount**	**85.51**	**48**	⇑P	**P**	**15 48 33.3**	**-0.1**
	baz=86						
116A	**Eloy**	**85.53**	**51**	⇑P	**P**	**15 48 33.9**	**+0.3**
	baz=86						
217A	**Green Valley**	**85.72**	**52**	⇑P	**P**	**15 48 34.7**	**+0.1**
	baz=86,SNR=6.7						
R10A	**Warm Springs**	**85.86**	**44**	⇓P	**P**	**15 48 35.6**	**+0.5**
	baz=86						
U12A	**Valley of Fire**	**85.86**	**46**	⇓P	**P**	**15 48 35.6**	**+0.5**
	baz=86						
V13A	**Grand Canyon W**	**85.89**	**47**	⇓P	**P**	**15 48 35.8**	**+0.6**
	baz=86						
Y15A	**Casa Rosa Ranc**	**85.89**	**49**	⇑P	**P**	**15 48 35.6**	**+0.3**
	baz=86						
T11A	**Corn Creek, Al**	**85.91**	**45**	⇓P	**P**	**15 48 36.1**	**+0.7**
	baz=86						
WHN	**Wuhan**	**85.95**	**307**	*e*P	**P**	**15 48 37.5**	**+1.8**
K05A	**Summer Lake**	**85.96**	**38**	⇑P	**P**	**15 48 36.1**	**+0.7**
	baz=86						
H03A	**Soap Creek Ran**	**85.96**	**36**	⇓P	**P**	**15 48 35.7**	**+0.3**
	baz=86						
O08A	**Rochester Mine**	**85.97**	**41**	⇓P	**P**	**15 48 35.8**	**+0.3**
	baz=86						
TUC	**Tucson**	**86.04**	**51**	*e*P	**P**	**15 48 36.3**	**+0.2**
TUC				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
TUC	**Tucson**	**86.04**	**51**	*e*P	**P**	**15 48 36.3**	**+0.2**
	comp=Z,11nm,1.2s,mb4.5						
W14A	**Seligman**	**86.11**	**48**	⇓P	**P**	**15 48 36.8**	**+0.4**
	baz=87						
318A	**Bisbee**	**86.12**	**52**	⇑P	**P**	**15 48 36.5**	**0.0**
	baz=87,SNR=5.6						
117A	**Oracle**	**86.21**	**51**	⇑P	**P**	**15 48 37.1**	**+0.1**
	baz=87,SNR=6.3						
U13A	**Pakoon Wash**	**86.23**	**46**	⇑P	**P**	**15 48 37.1**	**+0.2**
	baz=87						
X15A	**Humboldt**	**86.26**	**49**	⇓P	**P**	**15 48 37.8**	**+0.6**
	baz=87						
V14A	**Boquillas Ranc**	**86.34**	**47**	⇑P	**P**	**15 48 37.9**	**+0.4**
	baz=87						
R11A	**Troy Canyon, C**	**86.34**	**44**	⇓P	**P**	**15 48 37.9**	**+0.4**
	baz=87						
218A	**Dragoon**	**86.37**	**52**	⇑P	**P**	**15 48 37.7**	**-0.1**
	baz=87,SNR=9.1						
Y16A	**Circle Bar Ran**	**86.43**	**50**	⇑P	**P**	**15 48 38.3**	**+0.3**
	baz=87,SNR=8.6						
M08A	**Happy Creek Ra**	**86.56**	**40**	⇑P	**P**	**15 48 38.4**	**-0.1**
	baz=87						
319A	**Douglas**	**86.59**	**53**	⇓P	**P**	**15 48 39.0**	**+0.1**

baz=87
N09A Rock Creek Ran 86.69 41 ⇓P P 15 48 38.8 -0.3
baz=87
J06A Christmas Vall 86.71 38 ⇓P P 15 48 38.8 -0.3
baz=87
U14A Mt Trumbull 86.74 47 ⇑P P 15 48 39.5 +0.1
baz=87
X16A Lo Mia Camp, P 86.76 49 ⇑P P 15 48 39.5 -0.1
baz=87,SNR=5.6
Y17A Roosevelt 86.77 50 ⇓P P 15 48 40.0 +0.4
baz=87
118A Homack Ranch, 86.79 51 ⇓P P 15 48 40.2 +0.4
baz=87,SNR=7.1
CN2 Changchun 86.80 323 eP P 15 48 39.4 -0.1
CN2 AMB AMB
comp=Z,20nm,1.0s,mb4.9
K07A Rock Creek Ran 86.86 39 ⇓P P 15 48 39.8 -0.1
baz=87
219A White Tail Can 86.94 52 ⇑P P 15 48 40.7 +0.2
baz=87
R12A Pony Springs, 86.94 45 ⇑P P 15 48 40.7 +0.3
baz=87
S13A Holt Ranch, En 86.98 46 ⇑P P 15 48 40.9 +0.3
baz=87
V15A Kaibab Nationa 87.06 48 ⇑P P 15 48 41.5 +0.5
baz=88
Q12A Willow Creek R 87.23 44 ⇓P P 15 48 41.4 -0.3
baz=88
K08A Mann Creek Ran 87.31 39 ⇑P P 15 48 41.9 -0.1
baz=88
119A Ashpeak Ranch, 87.33 52 ⇑P P 15 48 42.7 +0.3
baz=88
U15A North Rim 87.33 47 ⇓P P 15 48 42.4 +0.1
baz=88,SNR=5.8
KLR Kul'dur 87.36 330 eP P 15 48 37.9 -4.2
Y18A Canyon Day Jun 87.37 50 ⇑P P 15 48 43.1 +0.6
baz=88,SNR=5.3
O11A Cowboy Ranch, 87.38 43 ⇑P P 15 48 42.7 +0.3
baz=88
WUAZ Wupatki 87.43 48 ⇑P P 15 48 43.0 +0.2
baz=88
P12A McGill 87.44 44 ⇑P P 15 48 42.3 -0.4
baz=88
H06A Lindquist Farm 87.58 37 ⇓P P 15 48 43.3 +0.1
baz=88
I07A Izee 87.61 38 ⇑P P 15 48 43.9 +0.5
baz=88
Q13A Wheeler Ranch, 87.69 44 ⇑P P 15 48 43.7 -0.2
baz=88
M10A I.L. Ranch, Tu 87.69 41 ⇓P P 15 48 43.6 -0.3
baz=88
J08A Circle Bar Ran 87.72 39 ⇑P P 15 48 43.8 -0.1
baz=88
K09A Rome 87.73 40 ⇑P P 15 48 44.0 0.0
baz=88
G06A Carlson Farm, 87.74 36 ⇓P P 15 48 43.6 -0.4
baz=88
H07A Lands Inn, Kim 87.90 37 ⇓P P 15 48 44.4 -0.4
baz=88
P13A Bates Ranch, G 87.98 44 ⇑P P 15 48 45.2 -0.1
baz=88
F06A Goldendale 88.01 36 ⇑P P 15 48 45.5 +0.2
baz=88
Y19A Nutrioso 88.01 51 ⇓P P 15 48 46.4 +0.8
baz=88,SNR=6.0
O12A Currie 88.02 43 ⇑P P 15 48 45.2 -0.2
baz=88
E05A Randle 88.03 35 ⇑P P 15 48 45.0 -0.3
baz=88
L10A Juniper Basin 88.07 41 ⇑P P 15 48 44.1 -1.6
baz=88,SNR=7.2
Q14A Sevier Lake (B 88.17 45 ⇑P P 15 48 46.0 -0.2
baz=89,SNR=6.2
N12A Clover Valley, 88.19 42 ⇑P P 15 48 46.1 -0.1
baz=89
X19A St. Johns 88.25 50 ⇓P P 15 48 46.7 0.0
baz=89
G07A Ruggs Ranch, H 88.28 37 ⇓P P 15 48 46.6 +0.1
baz=89
E06A Yakima 88.42 35 ⇑P P 15 48 47.0 -0.2
baz=89
V18A Ganado 88.51 49 ⇑P P 15 48 48.0 +0.2
baz=89
L11A Cat Creek Ranc 88.55 41 ⇑P P 15 48 46.4 -1.5
baz=89
M12A Wells 88.60 42 ⇓P P 15 48 48.2 0.0
baz=89
P14A Drum Mountains 88.66 44 ⇓P P 15 48 48.8 +0.4
baz=89
G08A Pilot Rock 88.68 37 ⇑P P 15 48 48.4 -0.1
baz=89,SNR=9.6
Q15A Fillmore 88.75 45 ⇓P P 15 48 49.5 +0.6
baz=89
C05A Tolt Reservoir 88.82 34 ⇑P P 15 48 49.2 +0.2
baz=89
D06A Cle Elum 88.92 35 ⇑P P 15 48 49.8 +0.3
baz=89
L12A House Creek Ra 88.97 41 ⇑P P 15 48 49.2 -0.7
baz=89
H09A Durkee 89.00 38 ⇑P P 15 48 49.7 -0.2
baz=89
B05A Bryant 89.00 33 ⇓P P 15 48 50.0 +0.2
baz=89
S17A Black Ridge (B 89.00 47 ⇑P P 15 48 50.1 -0.1
baz=90
E07A Sunnyside 89.02 36 ⇑P P 15 48 50.2 +0.2
baz=90
M13A Montello 89.02 42 ⇑P P 15 48 49.7 -0.4
baz=90
F08A Pendleton 89.10 37 ⇓P P 15 48 50.7 +0.3
baz=90
G09A Cove 89.32 38 ⇑P P 15 48 50.9 -0.5
baz=90
T18A Mexican Hat 89.34 48 ⇓P P 15 48 51.9 +0.2
baz=90
D07A Quincy 89.37 35 ⇓P P 15 48 51.5 -0.1
baz=90
E08A Dider Farm, El 89.39 36 ⇑P P 15 48 52.1 +0.4
baz=90
ETW Entiat 89.45 35 eP P 15 48 51.8 -0.2
H10A Noah's Angus R 89.46 39 ⇑P P 15 48 51.7 -0.3
baz=90
R17A Hanksville Air 89.50 46 ⇓P P 15 48 52.5 +0.1
baz=90
F09A S2 Ranch, Elgi 89.52 37 ⇓P P 15 48 52.6 +0.3
baz=90
J12A Stokes Ranch, 89.59 40 ⇓P P 15 48 52.9 +0.1
baz=90
M14A Sheep Mountain 89.60 43 ⇑P P 15 48 52.5 -0.3
baz=90
GYA Guiyang 89.64 300 eP P 15 48 48.9 -4.5
GYA AP pP 15 50 23.8 +47
GYA XP sP 15 51 04.3 +69
GYA PP PP 15 52 27.8 -0.3
GYA SKS 15 58 38.9
GYA S SKSac 15 59 02.6 -4.9
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,80nm,5.7s
C07A Waterville 89.64 35 ⇑P P 15 48 53.0 +0.2
baz=90
TXAR Lajitas Array 89.66 57 P P 15 48 53.0 -0.4
comp=Z,1.9nm,0.9s,mb4.0,baz=217,slow=7.5,SNR=17
TXAR pP pP 15 49 33.6 -3.3
comp=Z,1.9nm,1.1s,baz=201,slow=6.7,SNR=3.5
G10A Bishop Farm, J 89.69 38 ⇑P P 15 48 53.3 +0.2
baz=90
D08A Wollman Farm, 89.83 36 ⇑P P 15 48 52.9 -0.8
baz=90,SNR=8.2
E09A Wood Farm, Sta 89.90 36 ⇑P P 15 48 53.0 -1.1
baz=90,SNR=7.0
I12A Atlanta 89.90 40 ⇑P P 15 48 54.5 +0.4
baz=90
H11A Donnelly 89.94 39 ⇓P P 15 48 54.5 +0.1
baz=90
L14A Malta 89.97 42 ⇓P P 15 48 54.8 +0.2
baz=90
BJI Beijing 89.99 315 P P 15 48 51.3 -3.4
BJI AMB AMB
comp=Z,6.0nm,0.8s,mb4.6
SRU San Rafael 90.00 46 ⇓P P 15 48 54.7 -0.1
baz=90
R18A Canyonlands Na 90.01 47 ⇓P P 15 48 54.7 -0.1
baz=90
F10A Beach Ranch, E 90.05 37 ⇑P P 15 48 53.8 -1.0
baz=90,SNR=7.0
B07A Winthrop 90.12 34 ⇓P P 15 48 55.1 0.0
baz=90
M15A Larsen Ranch, 90.13 43 ⇓P P 15 48 55.2 0.0
baz=91
OD2 Odessa Site #2 90.15 36 eP P 15 48 55.0 -0.2
D09A Jones Farm, Ri 90.16 36 ⇑P P 15 48 54.8 -0.5
baz=91,SNR=5.5
HLID Hailey 90.18 40 ⇓P P 15 48 55.7 +0.2
baz=91
J13A Ove Ranch, Pi 90.22 41 ⇓P P 15 48 55.8 +0.1
baz=91
G11A Walters Elk Ra 90.23 38 ⇓P P 15 48 55.0 -0.6
baz=91,SNR=6.2
C08A Higginbotham F 90.23 35 ⇑P P 15 48 55.4 -0.2
baz=91
A07A Ashnola River, 90.37 34 ⇑P P 15 48 56.2 0.0
baz=91
B08A Colville Reser 90.45 35 ⇓P P 15 48 56.5 -0.1
baz=91
O17A Robinson Place 90.47 45 ⇓P P 15 48 57.0 0.0
baz=91,SNR=5.4
L15A Malad City 90.47 43 ⇓P P 15 48 56.5 -0.4
baz=91
ANMO Albuquerque 90.50 51⇑ eP P 15 48 56.7 -0.5
ANMO pmax pmax
comp=Z,6.0nm,1.3s
H12A Diamond D Ranc 90.51 39 ⇑P P 15 48 56.2 -0.8
baz=91,SNR=8.0
M16A Huntsville 90.55 43 ⇑P P 15 48 56.7 -0.6
baz=91
J14A Carey 90.56 41 ⇓P P 15 48 57.5 +0.2
baz=91
F11A Grangeville 90.59 38 ⇑P P 15 48 56.2 -1.1
baz=91
G12A Big Creek, Yel 90.59 39 ⇑P P 15 48 57.3 0.0
baz=91
C09A Chrisman Ranch 90.64 35 ⇑P P 15 48 57.3 -0.2
baz=91
D10A Wagner Farm, O 90.70 36 ⇑P P 15 48 57.5 -0.2
baz=91
K15A Arbon 90.78 42 ⇑P P 15 48 57.9 -0.4
baz=91
N17A Moffit Pass 90.83 44 ⇓P P 15 48 58.7 +0.2
baz=91
A08A Turner Farm, O 90.86 34 ⇓P P 15 48 58.5 0.0
baz=91
I14A Mackay 90.95 41 ⇑P P 15 48 59.4 +0.3
baz=91
F12A Elk City 91.01 38 ⇑P P 15 48 59.2 0.0
baz=91
L16A Fish Haven 91.06 43 ⇓P P 15 48 59.5 -0.1
baz=92
B09A Rice 91.10 35 ⇑P P 15 48 59.4 -0.2
baz=92
G13A Cobalt 91.19 39 ⇑P P 15 49 00.1 0.0
baz=92
A09A Danville 91.23 34 ⇓P P 15 49 00.1 -0.1
baz=92
H14A Leadore 91.41 40 ⇓P P 15 49 01.1 -0.1
baz=92
K16A Soda Springs 91.43 42 ⇓P P 15 49 00.2 -1.1
baz=92
F13A Darby 91.55 39 ⇑P P 15 49 01.6 -0.2
baz=92
R21A Cimarron 91.55 48 ⇓P P 15 49 02.1 +0.1
baz=92
I15A Monteview 91.56 41 ⇑P P 15 49 01.8 -0.1
baz=92
M18A Lyman 91.58 44 ⇓P P 15 49 02.3 +0.3
baz=92
TRF Thorofare Moun 91.64 12 eP P 15 48 57.8 -3.9
comp=Z,12nm,0.9s,mb4.9
XAN Xi'an 91.69 307 P P 15 49 03.9 +1.2
XAN AP pP 15 50 36.3 +50
XAN PP PP 15 52 47.9 +3.7
XAN S SKSac 15 59 27.8 +8.9
XAN XS sS 16 02 13.6 +69
XAN SS SS 16 05 46.9 -14
XAN AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
XAN AMB AMB
comp=Z,53nm,17.2s
SEY Seymchan 91.71 347⇑ eP P 15 49 01.4 -0.7
C11A Tepee Creek (N 91.73 36 ⇑P P 15 49 02.1 -0.4
baz=92
K17A Gardner Place, 91.79 43 ⇓P P 15 49 03.4 +0.4
baz=92
H15A Lima 91.83 40 ⇓P P 15 49 03.5 +0.4
baz=92
I16A Newdale 92.09 41 ⇑P P 15 49 04.2 -0.1
baz=92
KMI Kunming 92.12 297 P P 15 49 05.6 +0.7
KMI AP pP 15 50 37.0 +48
KMI XP 15 51 17.0
KMI AMB AMB
comp=Z,12nm,0.9s,mb4.9
G15A Dillon 92.23 40 ⇓P P 15 49 04.7 -0.2
baz=93,SNR=6.7
D13A Huson 92.25 38 ⇑P P 15 49 04.9 -0.1
baz=93
CMAR Chiang Mai Arr 92.26 289 P P 15 49 07.5 +1.8
comp=Z,5.1nm,0.8s,mb4.6,baz=141,slow=3.2,SNR=32
CMAR PKKPbc PKKPbc 16 06 19.1 -0.4
comp=Z,0.1nm,0.3s,baz=288,slow=4.6,SNR=5.0
J17A Brown Place, J 92.26 42 ⇑P P 15 49 05.3 +0.1
baz=93
K18A Tolan Ranch, 92.27 43 ⇑P P 15 49 05.2 0.0
baz=93
A11A Hall Mountain, 92.36 35 ⇓P P 15 49 05.4 0.0
baz=93
N20A Spence Gulch, 92.40 45 ⇓P P 15 49 05.8 0.0
baz=93
CHTO Chiang Mai 92.42 290 eP P 15 49 06.7 +0.3
CHTO pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CHTO Chiang Mai 92.42 290 eP P 15 49 06.7 +0.2
comp=Z,7.3nm,0.8s,mb4.8
F15A Butte 92.62 39 ⇑P P 15 49 06.7 0.0
baz=93
BW06 Boulder Array 92.64 43 ⇑P P 15 49 06.5 -0.4
baz=93
PDAR Pinedale Array 92.64 43 PKKPbc PKKPbc 16 06 19.0 -0.7
comp=Z,0.6nm,0.7s,baz=46,slow=6.4,SNR=4.8
G16A Moss Hill, Enn 92.67 40 ⇑P P 15 49 06.6 -0.3
baz=93
A12A Yaak River Ran 92.72 36 ⇑P P 15 49 06.8 -0.3
baz=93
D14A Greenough 92.77 38 ⇓P P 15 49 07.3 -0.1
baz=93
N21A Black Mountain 92.84 46 ⇓P P 15 49 07.9 +0.1
baz=93
L20A Wamsutter 92.98 44 ⇓P P 15 49 08.6 +0.1
baz=93
BOZ Bozeman (W) 93.01 40 ⇑P P 15 49 08.1 -0.4
baz=93
K20A Yellowstone Ra 93.33 44 ⇑P P 15 49 09.8 -0.3
baz=94
HHC Hu-ho-hao-te 93.38 314 eP P 15 49 08.0 -2.3
HHC AP pP 15 50 43.1 +49
HHC XP 15 51 25.3
HHC PP PP 15 53 00.3 +3.0
HHC SKS 15 59 01.3
HHC S SKSac 15 59 36.8 +8.9
HHC XS sS 16 02 25.3 +66
HHC SS SS 16 06 07.6 -17
HHC AMB AMB
comp=Z,17nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,180nm,6.1s
COLA College 93.39 12 i P P 15 49 07.6 -2.2
B14A Marquette Ranc 93.64 37 ⇓P P 15 49 10.5 -0.9
baz=94
A14A Double T Ranch 93.92 36 ⇑P P 15 49 12.0 -0.6
baz=94
CD2 Chengdu 94.00 302 ⇓ iP P 15 49 15.1 +1.6
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.0
BILL Bilibino 94.43 354 ⇓ iP P 15 49 14.5 0.0
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,100nm,15.0s
BILL Bilibino 94.43 354 eP P 15 49 13.8 -0.7
comp=Z,6.5nm,0.9s,mb4.8
C17A Wharram Farm, 94.62 39 ⇓P P 15 49 15.0 -0.8
baz=95
A16A West Butte Ran 94.89 37 ⇓P P 15 49 16.5 -0.6
baz=95
LZH Lanzhou 96.33 307 eP P 15 49 22.5 -1.4
LZH AP pP 15 50 55.5 +48
LZH XP 15 51 38.5
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,59nm,4.3s
YAK Yakutsk 97.25 338⇑ eP P 15 49 27.2 -0.2
YAK pmax pmax
comp=Z,21nm,2.3s,mb5.1
SONM Songino Array 100.05 318 P Pdif 15 49 40.1 -0.4
comp=Z,0.5nm,0.7s,baz=71,slow=5.3,SNR=4.1
SONM PKKPbc PKKPbc 16 05 58.4 -1.2
comp=Z,0.2nm,0.5s,baz=270,slow=1.2,SNR=4.0
GTA Gaotai 100.65 309 P Pdif 15 49 44.3 +1.1
GTA AMB AMB
comp=Z,3.0nm,1.1s
YKA Yellowknife Ar 101.25 25 PKKPbc PKKPbc 16 05 52.9 -3.8
comp=Z,0.7nm,0.8s,baz=40,slow=2.8,SNR=11
WMQ Urumqi 110.70 310 ePKP PKiKP 15 54 21.9 -5.1
ZALV Zalesovo Beam 114.89 320 PKP PKiKP 15 54 33.3 -1.3
comp=Z,2.2nm,0.6s,baz=342,slow=0.3,SNR=13
MK31 Makanchi Array 115.12 312 ePKiKP PKPdf 15 54 33.8 -1.5
MKAR Makanchi Array 115.12 312 PKP PKPdf 15 54 34.2 -1.0
comp=Z,2.0nm,0.6s,baz=98,slow=0.9,SNR=16
MKAR PKKPbc PKKPbc 16 05 11.1 -1.1
comp=Z,0.6nm,0.7s,baz=276,slow=4.0,SNR=4.5
KURK Kurchatov 118.16 316 PKP PKPdf 15 54 39.9 -1.2
comp=Z,4.0nm,0.7s,baz=100,slow=1.9,SNR=15
KURK Kurchatov 118.16 316⇑ iPKiKP PKPdf 15 54 39.4 -1.6
AML Almayashu 120.36 305 eP PKPdf 15 54 44.7 -0.9
BOSA Boshof 121.51 204 PKP PKPdf 15 54 48.6 +0.3
comp=Z,4.9nm,0.8s,baz=178,slow=5.2,SNR=7.5
ARU Arti 129.79 323 i PKiKP PKPdf 15 55 02.8 -0.3
ARU 15 57 13.4
ARCES ARCESS Array B 134.28 349 PKP PKPdf 15 55 10.7 -0.6
comp=Z,10.0nm,0.8s,baz=14,slow=0.5,SNR=11
JOF Joensuu 138.36 341 ep PKPdf 15 55 20.1 +1.1
comp=Z,6.1nm,0.5s
KAF Kangasniemi 140.42 343 ep PKPdf 15 55 23.5 +0.7
comp=Z,4.6nm,0.6s
OBN Obninsk 141.62 329 i PKiKP PKPdf 15 55 22.0 -3.1
OBN pmax pmax
comp=Z,6.0nm,0.6s
GNI Garni 142.13 303⇑ iPKiKP PKiKP 15 55 29.7 +0.1
KIV Kislovodsk 142.83 309 i PKiKP PKPdf 15 55 26.0 -1.6
KIV pmax pmax
comp=Z,4.0nm,0.6s
NB2 NORSAR Subarra 144.38 353 PKP PKPdf 15 55 27.7 -2.1
comp=Z,4.4nm,0.8s,baz=11,slow=3.5
NB2 NORSAR Subarra 144.38 353 PKP PKPdf 15 55 27.7 -2.1
baz=11,slow=3.5
NOA NORSAR Array B 144.38 353 PKP PKPdf 15 55 27.6 -2.2
comp=Z,33nm,0.8s,baz=16,slow=2.4,SNR=94
NAO01 NORSAR Array S 144.60 353 eP PKPdf 15 55 28.1 -2.1
IDID Didziasalis 145.66 335 eP PKPdf 15 55 32.6 +0.4
IIGN Ignalina 145.83 336 eP PKPdf 15 55 32.6 +0.1
AKASG Malin Array Be 147.84 327 PKPbc PKPbc 15 55 38.1 -1.0
comp=Z,8.6nm,0.5s,baz=44,slow=3.8,SNR=32
AKBB Malin Array Si 147.84 327 ePKP2 PKPbc 15 55 37.9 -1.3
SUW Suwalki 147.98 337 ePKP PKPbc 15 55 39.2 -0.2
SUW Suwalki 147.98 337 ePKP PKPbc 15 55 39.2 -0.2
GKP Gorka Klasztor 150.51 342 ePKP PKPbc 15 55 45.7 0.0
BRTR Keskin Array B 150.53 306 PKPbc PKPbc 15 55 46.0 -0.2
comp=Z,13nm,0.9s,baz=137,slow=3.9,SNR=32
BRTR PKPab PKPab 15 55 54.0 +0.5
comp=Z,3.7nm,0.5s,baz=17,slow=16,SNR=19
BEL Belsk 150.59 337 ePKP PKPbc 15 55 46.1 +0.1
LVV L'vov 150.86 331 i PKiKP PKPbc 15 55 46.4 -0.3
BSEG Bad Segeberg 151.40 350 ePKPbc PKPbc 15 55 47.5 -0.3
KWP Kalwaria 151.57 332 ePKP PKPbc 15 55 48.5 +0.2
KWP Kalwaria 151.57 332⇑ iP PKPbc 15 55 48.2 -0.1
KWP Kalwaria 151.57 332 ePKP PKPbc 15 55 48.5 +0.2
BUR08 Bucovina Ar. S 151.84 326 eP PKPbc 15 55 48.9 -0.1
BURAR Bucovina Array 151.85 326⇓ iP PKPbc 15 55 50.5 +1.5
BURAR Bucovina Array 151.85 326 ⇓P PKPbc 15 55 50.5 +1.5
OJC Ojcow 152.28 336 ePKP PKPbc 15 55 49.8 -0.1
STHS Stebnicka Huta 152.35 333 ePKIKP PKPbc 15 55 49.5 -0.6
STHS Stebnicka Huta 152.35 333 ePKP PKPbc 15 55 49.5 -0.6
STHS Stebnicka Huta 152.35 333 ePKP PKPbc 15 55 49.5 -0.6
UZH Uzhgorod 152.51 331 d iPKIKP PKPbc 15 55 50.0 -0.4
UZH i 15 56 01.5
CRVS Cervenica-Dubn 152.66 332 ePKP PKPdf 15 55 41.8 -1.8
CRVS e 15 55 49.7
NIE Niedzica 152.72 334 ePKP PKPbc 15 55 51.6 +0.7
TRPA Tarpa 152.77 330⇓ iP PKPbc 15 55 51.1 +0.1
NRDL Niedersach Rie 152.82 350 ePKPbc PKPbc 15 55 50.7 -0.3
NRDL ePKPab PKPab 15 56 01.1 -1.5
KSP Ksiaz 152.93 340 ePKP PKPbc 15 55 51.8 +0.5
KSP Ksiaz 152.93 340 ePKP PKPbc 15 55 51.4 +0.1
UPC Upice 153.31 340 ePKPbc PKPbc 15 55 52.2 +0.1
UPC ePKPab PKPab 15 56 05.1 +0.4
IBBN Ibbenburen 153.33 353 ePKPbc PKPbc 15 55 52.6 +0.5
DPC Dobruska-Polom 153.35 340 ePKPbc PKPbc 15 55 52.2 0.0
DPC ePKPab PKPab 15 56 05.2 +0.3
CLL Collm 153.38 345 ePKPbc PKPbc 15 55 51.9 -0.4
CLL ePKPab PKPab 15 56 04.3 -0.7
CLL Collm 153.38 345⇑ iPKPbc PKPbc 15 55 51.9 -0.4
CLL i PKPab PKPab 15 56 04.5 -0.5
comp=Z,20nm,0.8s
comp=Z,11nm,0.8s
CLZ Clausthal 153.41 349 ePKPbc PKPbc 15 55 52.2 -0.1
BRG Berggiesshubel 153.55 343 ePKPbc PKPbc 15 55 52.2 -0.4
BRG ePKPab PKPab 15 56 05.3 -0.5
BRG Berggiesshubel 153.55 343 ePKP PKPdf 15 55 44.2 -0.6
comp=Z,7.0nm,1.1s
BRG i 15 55 52.4
comp=Z,12nm,0.7s
BRG i 15 56 05.2
comp=Z,10nm,0.8s
DRGR 153.66 327⇓ iP PKPbc 15 55 52.8 -0.2
DRGR 153.66 327 ⇓P PKPbc 15 55 52.8 -0.2
FBE Freiberg 153.66 344 ePKPbc PKPbc 15 55 52.5 -0.4
FBE ePKPab PKPab 15 56 05.9 -0.3
PVCC Panska Ves 153.70 342 ePKPab PKPab 15 56 06.6 +0.2
NEUB Neuenburg 153.75 347 ePKPbc PKPbc 15 55 52.7 -0.4
NEUB ePKPab PKPab 15 56 06.3 -0.3
VYHS Vyhne 154.05 335 ePKP PKPbc 15 55 53.3 -0.5
VYHS e 15 56 07.9
PSZ Piszkesteto 154.08 332⇓ iP PKPab 15 56 08.8 +0.7
PSZ Piszkesteto 154.08 332 ⇓P PKPab 15 56 08.8 +0.7
KOLL Kolacno 154.14 335 ePKP PKPbc 15 55 54.0 0.0
PRU Pruhonice 154.20 342 ePKPab PKPab 15 56 08.4 -0.1
MOX Moxa 154.31 346 ePKP PKPab 15 56 08.6 -0.4
MOX Moxa 154.31 346 ePKPab PKPab 15 56 08.7 -0.3
TANN Tannenbergstha 154.34 345 ePKPab PKPab 15 56 08.5 -0.6
WERD Werda 154.34 345 ePKPbc PKPbc 15 55 53.9 -0.5
WERD ePKPab PKPab 15 56 08.9 -0.2
GUNZ Gunzen 154.42 345 ePKPbc PKPbc 15 55 54.2 -0.3
GUNZ ePKPab PKPab 15 56 09.1 -0.4
WERN Wernitzgruen 154.48 345 ePKPab PKPab 15 56 09.4 -0.3
GZR Gura Zlata 154.60 325⇑ iP PKPbc 15 55 55.9 +0.8
GZR Gura Zlata 154.60 325 ⇑P PKPbc 15 55 55.9 +0.9
MANZ Manzenberg 154.82 345 ePKPbc PKPbc 15 55 55.1 -0.3
BZS Buzias 155.03 327⇓ iP PKPdf 15 55 55.5 +8.5
BZS Buzias 155.03 327 ⇓P PKPdf 15 55 55.5 +8.5
KHC Kasperske Hory 155.24 342 ePKPdf PKPdf 15 55 46.0 -1.2
KHC ePKPbc PKPdf 15 55 56.0 +8.8
KHC ePKPab PKPab 15 56 13.0 0.0
GRA1 Grafenberg Arr 155.30 346 ePKPbc PKPbc 15 56 12.7 -0.5
GRF Grafenberg Arr 155.30 346 ePKPab PKPab 15 56 12.7 -0.5
WET Wettzell 155.42 343 ePKPab PKPab 15 56 14.2 +0.4
GERES GERESS Array B 155.47 342 PKP PKPdf 15 55 46.7 -0.8
comp=Z,0.8nm,0.8s,baz=90,slow=1.3,SNR=5.7
GERES PKPbc PKPdf 15 55 56.5 +9.0
comp=Z,0.8nm,0.6s,baz=333,slow=1.5,SNR=5.8
GERES PKPab PKPab 15 56 13.9 -0.1
comp=Z,1.7nm,0.7s,baz=30,slow=3.5,SNR=9.3
GIVF Givet 155.78 356 ePKP2 PKPab 15 56 14.5 -0.8
BAIF Baives 155.85 357 ePKP2 PKPab 15 56 15.1 -0.5
PKSM Moragy 155.95 332⇑ iP PKPdf 15 55 47.8 -0.5
PKSM Moragy 155.95 332 ⇑P PKPdf 15 55 47.8 -0.5
WLF Walferdange 156.11 354 ePKPab PKPab 15 56 16.8 +0.1
RJOB Jochberg 156.73 342 ePKPab PKPab 15 56 20.0 +0.6
FLN La Foliniere 157.08 5 ePKP2 PKPab 15 56 19.9 -1.0
comp=Z,22nm,0.9s
CDF Champ du Feu 157.22 352 ePKP2 PKPab 15 56 20.9 -0.6
comp=Z,15nm,1.1s
LDF La Druitiere 157.27 4 ePKP2 PKPab 15 56 20.4 -1.3
comp=Z,23nm,1.1s
MEZF Maizieres J'vi 157.36 355 ePKP2 PKPab 15 56 21.5 -0.6
GRR Gorron 157.42 6 ePKP2 PKPab 15 56 21.5 -0.9
comp=Z,9.5nm,0.6s

HAU	Haudompre	157.73	353	ePKP2	PKPab	15 56 23.0	-0.7
	comp=Z,15nm,0.8s						
SSF	Saint Saulge	158.88	358	ePKP2	PKPab	15 56 28.1	-0.6
	comp=Z,19nm,1.0s						
CABF	La Chapelle	159.14	353	ePKP2	PKPab	15 56 30.5	+0.6
	comp=Z,42nm,1.3s						
AVF	Avril sur Loir	159.15	358	ePKP2	PKPab	15 56 28.9	-1.0
	comp=Z,18nm,1.1s						
LIC	Lamto	159.17	159	ePKP2	PKPab	15 56 30.5	-0.4
	comp=Z,27nm,0.9s						
SMF	Signal de Mont	159.28	357	ePKP2	PKPab	15 56 29.7	-0.8
	comp=Z,20nm,0.9s						
DBIC	Dimbokro	159.65	159	PKP	PKPdf	15 55 53.0	-0.8
	comp=Z,5.2nm,0.9s,baz=139,slow=2.4,SNR=6.1						
DBIC				PKPab	PKPab	15 56 32.6	-0.3
	comp=Z,5.8nm,0.8s,baz=189,slow=5.1,SNR=7.3						
TCF	Toulx Ste Croi	159.67	0	ePKP2	PKPab	15 56 31.3	-0.9
RJF	Les Rejaudoux	160.64	2	ePKP2	PKPab	15 56 35.4	-1.0
	comp=Z,19nm,1.0s						
ORIF	Oris-en-Rattie	160.83	352	ePKP2	PKPab	15 56 37.2	-0.1
	comp=Z,18nm,0.9s						
MBDF	Montbardon	160.90	350	ePKP2	PKPab	15 56 38.1	+0.5
	comp=Z,23nm,1.1s						
LFF	La Frestale	160.97	4	ePKP2	PKPab	15 56 37.2	-0.7
	comp=Z,46nm,1.3s						
CAF	Calviac	161.03	1	ePKP2	PKPab	15 56 37.5	-0.7
	comp=Z,17nm,1.1s						
ESDC	Sonseca Array	165.28	20	PKP	PKPdf	15 55 58.2	-0.4
	comp=Z,0.2nm,0.2s,baz=347,slow=1.7,SNR=4.7						
TOA0	Torodi Ar. Sit	167.28	177	eP	PKPdf	15 55 59.3	-1.5
TORD	Torodi Ar. Bea	167.28	177	PKP	PKPdf	15 55 59.5	-1.3
	comp=Z,4.2nm,0.9s,baz=284,slow=0.5,SNR=17						
TORD				PKPab	PKPab	15 57 06.0	-0.3
	comp=Z,5.0nm,0.8s,baz=171,slow=3.8,SNR=17						
TORD				pPKPab	pPKPab	15 57 48.3	-1.9
	comp=Z,2.6nm,1.0s,baz=181,slow=4.1,SNR=3.0						
TORD				PP	PP	16 00 55.0	+1.5
	comp=Z,2.8nm,1.2s,baz=157,slow=4.0,SNR=4.8						
TORD	Torodi Ar. Bea	167.28	177	PKP	PKPdf	15 55 59.5	-1.3
TORD				PKPab	PKPab	15 57 06.0	-0.3
TORD				pPKPab	pPKPab	15 57 48.3	-1.9
TORD				PP	PP	16 00 55.0	+1.5

IGQ 14 15:39:32.6, 193S×8027W, h12km±8km, Mb4.0, Ms3.8, 2D, Error ellipse: s-maj=9.8km s-min=2.9km az=108.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	0.99	332	P	Pb	15 39 50.5	-1.2
JAMA	Jama	1.66	2	P	Pn	15 40 02.8	+1.2
IGUA	Igualata	1.69	75	P	Pn	15 40 03.3	+1.4
IGUA	Igualata	1.69	75	S	Sn	15 40 26.8	+3.3
PATA	Patacocha	1.88	77	P	Pn	15 40 06.1	+1.5
PISA	Pisayambo	2.07	65	P	Pn	15 40 11.5	+4.3
CAMI	Rancho Maria	2.16	55	P	Pn	15 40 10.9	+2.5
MOV1	Cotopaxi Vol s	2.19	57	⇓P	Pn	15 40 12.9	+4.1
MOV1	Cotopaxi Vol s	2.19	57	⇓S	Sn	15 40 42.4	+6.5
NAS2	Nasa	2.21	55	P	Pn	15 40 13.0	+3.9
TAMB	Tambo	2.26	57	P	Pn	15 40 12.5	+2.6
VC1	Cotopaxi 1	2.26	56	P	Pn	15 40 13.3	+3.5
VC1	Cotopaxi 1	2.26	56	S	Sn	15 40 43.7	+6.0
TERV	Terraza Guagua	2.41	44	P	Pn	15 40 18.4	+6.5
TERV	Terraza Guagua	2.41	44	S	Sn	15 40 50.4	+9.0
YANA	Yana	2.47	43	P	Pn	15 40 15.5	+2.7
ANTI	Antisana	2.57	55	P	Pn	15 40 17.3	+3.2
CAYA	Cayambe	3.02	49	P	Pn	15 40 24.9	+4.6
CAYA	Cayambe	3.02	49	S	Sn	15 41 07.6	+11

NEIC 14 15:45:24.9, 3793S×17608E, h177km, MG3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.88	112	P	Pn	15 45 51.4	0.0
MWZ	Matawai	1.21	110	P	Pn	15 45 54.0	+0.1
TWVZ	Taurewa	1.25	204	P	Pn	15 45 54.7	+0.5
BKZ	Black Stump Fm	1.28	165	P	Pn	15 45 54.5	0.0
BKZ				S	Sn	15 46 17.1	-0.4
NGZ	Ngauruhoe	1.30	197	P	Pn	15 45 55.2	+0.5
TUVZ	Tukino	1.38	194	P	Pn	15 45 55.7	+0.3
WNVZ	Wahianoa	1.45	195	P	Pn	15 45 56.1	+0.1
KNZ	Kokohu	1.66	132	P	Pn	15 45 58.2	+0.1
PUZ	Puketiti	1.73	95	P	Pn	15 45 58.4	-0.4
TSZ	Takapari Road	2.13	182	P	Pn	15 46 02.0	-1.1
MRZ	Mangatainoka R	2.76	188	P	Pn	15 46 08.0	-2.4
KIW	Kapiti Island	3.07	197	P	Pn	15 46 11.5	-2.6
CAW	Cannon Point	3.27	194	P	Pn	15 46 13.6	-3.0
MRW	Makara Radio	3.46	197	P	Pn	15 46 16.0	-3.0
SNZO	South Karori	3.54	197	P	Pn	15 46 16.4	-3.6
MSWZ	Moikau Station	3.54	190	P	Pn	15 46 16.4	-3.6
TCW	Tory Channel	3.56	202	P	Pn	15 46 17.6	-2.7
NNZ	Nelson	3.89	212	P	Pn	15 46 21.3	-3.1
THZ	Tophouse	4.54	212	P	Pn	15 46 29.8	-3.0
KHZ	Kahutara	4.89	203	P	Pn	15 46 33.0	-4.2
LTZ	Lake Taylor	5.65	210	P	Pn	15 46 42.3	-4.9

NNC 14 16:22:15.6±3.4, 4422N×8673E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=61.2km s-min=23.1km az=44.0

BJI 14 16:22:16.8, 4430N×8674E, h14km, ML2.7, 3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	0.84	124	PG	Pg	16 22 30.5	-2.5
WMQ				SG	Sg	16 22 43.0	-1.0
WMQ				Smax			
	comp=N,159nm,0.5s						
WMQ				Smax			
	comp=E,211nm,0.6s						
MK31	Makanchi Array	4.00	310	Pn	Pn	16 23 18.7	+1.1
	comp=E,0.2nm,0.3s,baz=356,slow=16,SNR=21						
MK31				Pg	Pg	16 23 30.0	-3.4
	comp=E,0.6nm,0.3s,baz=138,slow=16,SNR=12						
MK31				Sn	Sn	16 24 07.7	+3.5
	comp=E,0.9nm,0.3s,baz=130,slow=26,SNR=4.6						
MK31				⇓Lg		16 24 25.8	
	comp=E,3.7nm,0.3s,baz=123,slow=29,SNR=7.1						
KURBB	Kurchatov Arra	8.42	322	⇓Lg		16 26 45.4	
	comp=E,0.8nm,1.1s						
KURK	Kurchatov	8.45	322	⇓Lg		16 26 43.1	
	comp=E,2.0nm,0.7s						

JMA 14 16:47:15.3, 3898N×14221E, h46km±1km, M3.8, 4C-5D Broadband fault plane solution: P waves. NP1: ϕs150.00000°, δ20.00000°, λ-2.00000°. NP2: ϕs241.00000°, δ89.00000°, λ-110.00000°. Principal axes: T Plg41.0000°, Azm350.0000°; N Plg20.0000°, Azm241.0000°; P Plg42.0000°, Azm132.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.43	284	⇓P	Pn	16 47 25.6	+0.1
OFUJ				S	Sn	16 47 32.9	+0.2
MIYJ	Miyakonagasawa	0.67	333	⇓P	Pn	16 47 28.3	-0.2
MIYJ				S	Sn	16 47 37.7	-0.2
JMK	Ichinoseki	0.77	268	⇓P	Pn	16 47 29.9	+0.1
JMK				eS	Sn	16 47 40.5	+0.1
JIO	Ouri	0.85	232	⇑P	Pn	16 47 30.7	-0.2
JIO				S	Sn	16 47 41.5	-0.8
JOM	Ohasama	0.87	305	⇓P	Pn	16 47 31.2	+0.1
JOM				S	Sn	16 47 42.6	0.0
JTH	Tanohata	0.99	344	⇑P	Pn	16 47 33.0	+0.2
JTH				eS	Sn	16 47 46.0	+0.3
JOU	Okura	1.36	244	⇑P	Pn	16 47 38.1	+0.3
JYK	Kaneyama	1.45	268	⇓P	Pn	16 47 39.4	+0.4
JANG	Nango	1.49	339	⇑P	Pn	16 47 39.8	+0.2
JANG				eS	Sn	16 47 58.2	+0.3
JMM	Marumori	1.57	225	P	Pn	16 47 40.4	-0.3
JMM				eS	Sn	16 47 59.3	-0.6
MAT	Matsushiro	4.00	234	P	Pn	16 48 17.3	+3.3
MAT				eS	Sn	16 49 01.3	+1.7

ISK 14 16:49:42.8, 3700N×2922E, h4km, MD3.4
DDA 14 16:49:42.5, 3695N×2923E, h24km±1km, Md3.2
CSEM 14 16:49:42.5±0.1, 3699N×2923E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.5km az=3.0
ISCJB 14 16:49:43.4±0.6, 3696N±003×2922E±003, h7km±5km, Error ellipse: s-maj=4.6km s-min=3.7km az=164.9
NEIC 14 16:49:43.0, 3698N×2922E, h7km, MD3.4(ISK), MD3.6(ATH), After ISK.
HLW 14 16:49:47.9, 3692N×2933E, h26km, Mb3.3

ISC 14 16:49:44.0±0.6, 3699N±003×2921E±003, h4km±5km, n42, σ0.70/51, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.37	49	iP	Pg	16 49 50.8	-0.4
GOLH				iS	Sg	16 49 57.5	+1.5
TURN	Turunc	0.50	256	iP	Pg	16 49 58.1	+4.6
TURN				iS	Sg	16 50 12.6	+13
ELL	Elmali	0.61	113	PG	Pg	16 49 54.8	-0.9
ELL				eSG	Sg	16 50 04.3	+0.7
YER	Yerkesik	0.76	281	ePG	Pg	16 49 58.7	+0.3
YER				eSG	Sg	16 50 09.5	+1.2
DENT	Denizli	0.77	350	ePG	Pg	16 49 57.8	-1.0
KSL	Kastellorizon	0.89	160	eP	Pg	16 50 00.0	-1.1
ANTB	Antalya	1.16	94	ePN	Pn	16 50 05.8	-1.1
ARG	Arkhangelos	1.17	229	eP	Pg	16 50 06.2	-0.1
MLSB	Milas	1.18	285	ePN	Pn	16 50 06.4	-0.9
BCK	Bucak	1.20	67	ePN	Pn	16 50 06.0	-1.4
DAT	Datca	1.33	259	ePN	Pn	16 50 09.0	-0.4
ISP	Isparta	1.34	50	ePN	Pn	16 50 08.9	-0.4
ISP	Isparta	1.34	50	P	Pn	16 50 10.0	+0.6
ISP	Isparta	1.34	50	P	Pn	16 50 10.0	+0.6
KHL	Karahalli	1.35	11	ePN	Pn	16 50 09.2	-0.3
KHAL	Karahalli	1.39	9	iP	Pn	16 50 09.5	-0.6
KHAL				iS	Sb	16 50 29.5	+0.9
BDRM	Kayabasi	1.42	273	iP	Pn	16 50 09.7	-0.7
BDRM				iS	Sb	16 50 28.8	-0.5
KULA	Kula-Manisa	1.58	344	ePN	Pn	16 50 12.5	-0.2
NISR	Nisiros	1.71	258	eP	Pn	16 50 15.0	+0.5
SHUT	Suhut-Afyon	1.89	34	ePN	Pn	16 50 16.9	0.0
SMG	Samos	2.02	291	ePn	Pn	16 50 18.6	-0.2
SMG				eSn	Sn	16 50 44.4	0.0
IZM	Izmir	2.09	313	ePN	Pn	16 50 19.8	+0.2
GDZ	Gediz	2.10	6	iP	Pn	16 50 18.5	-1.4
GDZ				iS	Sn	16 50 47.5	+1.0
ALT	Altintas	2.18	19	ePN	Pn	16 50 20.6	-0.4
AKS	Akhisar	2.18	330	ePN	Pn	16 50 20.7	-0.3
KARP	Karpathos	2.20	230	eP	Pn	16 50 21.4	+0.2
KARP	Karpathos	2.20	230	ePn	Pn	16 50 21.9	+0.7
BLCB	Balcova	2.21	310	ePN	Pn	16 50 20.9	-0.5
DST	Dursunbey	2.65	350	ePN	Pn	16 50 27.5	+0.2
KONT	Konya--Tatoy	2.68	68	ePN	Pn	16 50 28.2	+0.4
LADK	Ladik-KONYA	2.78	63	ePN	Pn	16 50 29.7	+0.5
KIZT	Kizilcal	2.83	47	ePN	Pn	16 50 30.2	+0.3
ESKT	Eskisehir	2.83	27	ePN	Pn	16 50 30.2	+0.3
BALB	Balikesir	2.84	339	ePN	Pn	16 50 29.9	-0.2
APE	Apeiranthos	2.94	273	eP	Pn	16 50 31.8	+0.3
NPS	Neapolis	3.38	240	eP	Pn	16 50 38.0	+0.5
NPS	Neapolis	3.38	240	ePn	Pn	16 50 38.5	+1.0
IKL	Isikli	3.68	100	ePN	Pn	16 50 42.2	+0.7
HMAT	Matruh	6.14	197	⇑eP	Pn	16 51 16.2	+0.8
HMAT				S	Sn	16 52 20.4	-5.6
AMAG	Maghara	7.15	151	P	Pn	16 51 29.3	0.0
SWA2		8.34	203	P	Pn	16 51 46.7	+1.1
HFRF	Wahat Farafira	9.85	185	⇓eP	Pn	16 52 06.5	+0.3

BJI 14 17:19:36.1, 087N×9739E, h28km, mB5.3, mb4.7, Ms4.4, Msz4.3
ISCJB 14 17:19:40.1±1.1, 1.16N±007×9732E±009, h46km±9km, mb4.5/26, MS3.9/9, Error ellipse: s-maj=17.5km s-min=7.8km az=143.0
NEIC 14 17:19:40.5±0.5, 1.13N×9735E, h35km, mb4.5/14, Error ellipse: s-maj=13.6km s-min=7.9km az=52.0
NEIC Felt [II] at Gunungsitoli.
IDC 14 17:19:42.0±5.9, 1.14N×9737E, h43km±47km, mb4.1/9, mb1 4.1/11, mb1mx3.9/25, mbtmp4.0/11, ML3.7/2, MS3.8/9, Ms1 3.8/9, ms1mx3.5/34, Error ellipse: s-maj=58.4km s-min=14.5km az=59.0
DJA 14 17:19:41, 137N×9732E, h24km, MLv4.6/6

ISC 14 17:19:41.2±1.3, 114N±008×9731E±010, h37km±10km, n55, σ1.02/47, mb4.5/26, MS3.9/9, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.32	58	P	Pn	17 19 49.2	-0.2
PSI	Prapat	2.31	44	P	Pn	17 20 16.5	-0.3
	4.4nm,0.3s,baz=209,slow=8.7,SNR=31						
PSI				LR	LR	17 20 57.4	
	comp=Z,957nm,18.9s,baz=294,slow=34						
PSI	Prapat	2.31	44	P	Pn	17 20 16.5	-0.3
PSI				LR	LR	17 20 57.4	
PPI	Padang Panjang	3.47	117	P	Pn	17 20 34.1	+1.4
PDSI	Padang	3.75	123	P	Pn	17 20 38.3	+1.7
BSI	Banda Aceh	4.78	335	P	Pn	17 20 49.0	-1.7
IPM	Ipoh	4.98	48	P	Pn	17 20 53.7	+0.2
MYKOM	Kota Tinggi	6.57	84	P	Pn	17 21 16.1	+0.7
KSI	Kapahiang	7.11	132	P	Pn	17 21 29.1	+6.4
KSM	Kuching	13.00	88	Pn	Pn	17 22 43.0	-0.5
CM31	Chiang Mai Arr	17.29	5	ePn	Pn	17 23 36.7	-3.2
CMAR	Chiang Mai Arr	17.29	5	P	Pn	17 23 38.6	-1.2
	0.4nm,0.3s,baz=194,slow=12,SNR=25						
CMAR				LR	LR	17 31 08.8	
	comp=Z,268nm,18.4s,baz=190,slow=40						
CHTO	Chiang Mai	17.64	5	ePn	Pn	17 23 41.2	-2.9
	3.0nm,0.6s						
TRD	Trivandrum	21.55	291	⇓eP	pP	17 24 42.0	+4.8
KAPI	Kappang	23.24	105	P	P	17 24 44.2	-1.3
	5.9nm,0.9s,mb4.0,baz=289,slow=9.9,SNR=6.8						
KMI	Kunming	24.42	12	P	P	17 24 57.6	+1.3
KMI				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.7						
KMI				LR	LR		
	comp=N,672nm,15.1s,MS4.3						
KMI				LR	LR		
	comp=E,293nm,14.8s,MS4.3						
KMI				LR	LR		
	comp=Z,669nm,15.2s,MS4.2						
SHL	Shillong	24.85	348	eP	P	17 25 00.5	+0.3
GYA	Guiyang	26.74	19	P	P	17 25 17.9	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
ODAN	Odare	27.30	340	eP	P	17 25 23.4	+1.0
	comp=Z,17nm,0.8s,mb4.6						
TAPN	Taplejung	27.64	341	eP	P	17 25 26.3	+0.8
	comp=Z,24nm,0.8s,mb4.9						
RAMN	Ramite	27.65	339	eP	P	17 25 27.2	+1.6
	comp=Z,17nm,0.9s,mb4.7						
GUN	Gumba	28.79	339	eP	P	17 25 36.9	+1.2
	comp=Z,26nm,0.7s,mb5.1						
KKN	Kakani	28.90	338	eP	P	17 25 37.1	+0.4
LSA	Lhasa	29.00	349	eP	P	17 25 38.4	+0.8
LSA	Lhasa	29.00	349	eP	P	17 25 39.1	+1.5
	comp=Z,4.9nm,0.8s,mb4.3						
GKN	Gorkha	29.34	337	eP	P	17 25 41.1	+0.5
	comp=Z,39nm,1.4s,mb4.9						
KOLN	Koldanda	29.56	335	eP	P	17 25 42.9	+0.3
	comp=Z,19nm,0.7s,mb4.9						
DANN	Dangsing	30.00	336	eP	P	17 25 46.7	+0.2
XAN	Xi'an	34.49	17	P	P	17 26 24.9	-0.8
XAN				AP	pP	17 26 31.5	-4.8
XAN				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.8						
XAN				AMB	AMB		
	comp=Z,91nm,8.6s						
KAKA	Kakadu	37.48	113	P	x	17 26 56.7	
GTA	Gaotai	38.16	3	P	P	17 26 58.0	+1.0
GTA				AP	pP	17 27 02.3	-5.3
GTA				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
WRA	Warramunga Arr	41.91	122	P	P	17 27 28.2	-0.2
	comp=Z,2.0nm,0.7s,mb3.9,baz=300,slow=9.2,SNR=24						
WRAB	Tennant Creek	41.91	122	eP	P	17 27 26.1	-2.4
ASAR	Alice Springs	43.27	127	P	P	17 27 38.8	-0.6
	comp=Z,2.0nm,0.9s,mb3.9,baz=298,slow=7.6,SNR=16						
WMQ	Urumqi	43.35	350	eP	P	17 27 40.9	+1.1
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
WMQ				LR	LR		
	comp=N,55nm,18.0s,MS3.8						
WMQ				LR	LR		
	comp=E,106nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,60nm,19.0s,MS3.5						
KSRS	Korea Array	45.84	34	P	P	17 27 59.6	-0.1
	comp=Z,7.2nm,0.8s,mb4.6,baz=222,slow=9.3,SNR=15						
KSRS				LR	LR	17 48 24.4	
	comp=Z,97nm,18.9s,MS3.8,baz=9.7,slow=38						
TKM2	Tokmak 2	45.92	338	P	P	17 27 59.8	-0.5
	comp=Z,5.5nm,1.2s,mb4.4						
EKS2	Erkin-Say	46.41	336	eP	P	17 28 05.0	+0.8
	comp=Z,3.7nm,0.8s,mb4.4						
SONM	Songino Array	47.18	8	P	P	17 28 10.2	+0.2
	comp=Z,5.1nm,0.7s,mb4.5,baz=192,slow=8.9,SNR=21						
SONM				PcP	PcP	17 29 40.8	-0.4
	comp=Z,1.4nm,0.7s,baz=190,slow=4.7,SNR=4.6						
SONM				LR	LR	17 50 45.7	
	comp=Z,303nm,18.8s,MS4.3,baz=209,slow=40						
ULN	Ulaanbaatar	47.31	9	eP	P	17 28 10.8	-0.2
	comp=Z,4.6nm,0.8s,mb4.5						
MK31	Makanchi Array	47.33	346	eP	P	17 28 10.8	-0.4
MKAR	Makanchi Array	47.33	346	P	P	17 28 11.6	+0.4
	comp=Z,3.8nm,0.6s,mb4.5,baz=158,slow=7.5,SNR=36						
MKAR				LR	LR	17 53 56.4	
	comp=Z,78nm,18.0s,MS3.7,baz=255,slow=43						
MJAR	Matsushiro Arr	51.66	42	LR	LR	17 50 50.5	
	comp=Z,60nm,19.8s,MS3.6,baz=235,slow=36						
KURK	Kurchatov	51.88	345	P	P	17 28 45.4	-0.5
	comp=Z,3.0nm,0.7s,mb4.3,baz=166,slow=7.1,SNR=20						
STKA	Stephens Creek	53.23	132	P	P	17 28 56.7	+0.5
	comp=Z,3.1nm,0.7s,mb4.3,baz=290,slow=6.2,SNR=4.9						
STKA	Stephens Creek	53.23	132	eP	P	17 28 56.2	0.0
	comp=Z,1.0nm,0.8s,mb3.8						
ZAA0	Zalesovo Array	53.64	351	eP	P	17 28 57.9	-0.9
ZALV	Zalesovo Beam	53.64	351	P	P	17 28 58.6	-0.1
	comp=Z,6.5nm,0.9s,mb4.6,baz=181,slow=7.0,SNR=15						
BVAR	Borovoye Array	56.35	341	LR	LR	17 56 34.4	
	comp=Z,75nm,21.5s,MS3.8,baz=145,slow=39						
BRVK	Borovoye	56.41	341	eP	P	17 29 17.1	-1.7
	comp=Z,2.4nm,0.6s,mb4.4						
PETK	Petropavlovsk-	71.73	34	LR	LR	18 05 33.5	
	comp=Z,43nm,18.4s,MS3.8,baz=51,slow=38						
LBTB	Lobatse	73.95	244	P	P	17 31 11.5	-1.7
	comp=Z,1.8nm,0.8s,mb4.0						
BOSA	Boshof	74.84	240	LR	LR	18 02 09.8	
	comp=Z,58nm,18.8s,MS3.9,baz=163,slow=34						
TXAR	Lajitas Array	143.67	32	PKP	PKPdf	17 39 11.1	-1.8
	comp=Z,0.3nm,0.6s,baz=349,slow=2.8,SNR=3.4						
CPUP	Villa Florida	145.03	222	PKP	PKPdf	17 39 15.4	+0.1
	comp=Z,0.4nm,0.4s,baz=96,slow=7.9,SNR=2.4						

NEIC 14 17:53:36.8±0.7, 796S×15823E, h35km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=14.9km az=177.0
ISCJB 14 17:53:38.6±3.7, 82S±02×1583E±0.1, h65km±38km, mb3.8/8, Error ellipse: s-maj=35.5km s-min=18.7km az=151.1
IDC 14 17:53:40.9±3.8, 8.18S×15837E, h77km±40km, mb3.8/7, mb1 4.0/7, mb1mx3.7/15, mbtmp3.8/7, Error ellipse: s-maj=34.2km s-min=20.4km az=147.0

ISC 14 17:53:39.5±3.8, 81S±02×1583E±02, h59km±40km, n14, σ0.59/14, mb4.0/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.10	129	P	Pn	17 54 12.3	0.0
	145nm,0.3s,baz=245,slow=3.4,SNR=221						
HNR				S	Sn	17 54 37.4	+0.1
	266nm,0.3s,baz=72,slow=21,SNR=31						
HNR	Honiara	2.10	129	ePn	Pn	17 54 12.0	-0.3
HNR				S	Sn	17 54 37.4	+0.1
WRAB	Tennant Creek	25.99	241	eP	P	17 59 07.0	0.0
	3.8nm,0.8s,mb4.0						
WB2	Warramunga Arr	26.00	241	eP	P	17 59 07.5	+0.5
WRA	Warramunga Arr	26.01	241	P	P	17 59 07.6	+0.5
	4.1nm,0.6s,mb4.1,baz=66,slow=9.0,SNR=52						
WRA				PcP	PcP	18 02 32.5	-1.7
	0.2nm,0.4s,baz=64,slow=3.3,SNR=8.9						
ASAR	Alice Springs	28.03	234	P	P	17 59 25.1	-0.1
	1.2nm,0.7s,mb3.6,baz=62,slow=9.2,SNR=13						
STKA	Stephens Creek	28.30	211	P	P	17 59 27.1	-0.4
	1.3nm,0.4s,mb4.0,baz=42,slow=12,SNR=5.8						
STKA	Stephens Creek	28.30	211	eP	P	17 59 26.8	-0.8
SONM	Songino Array	72.05	326	P	P	18 04 58.0	+0.7
	1.1nm,0.7s,mb3.9,baz=107,slow=2.9,SNR=8.4						
MKAR	Makanchi Array	86.40	318	P	P	18 06 15.0	-0.5
	1.6nm,0.5s,mb4.5,baz=95,slow=6.2,SNR=20						
ZALV	Zalesovo Beam	86.93	325	P	P	18 06 16.6	-1.3
	0.4nm,0.6s,mb3.8,baz=146,slow=8.2,SNR=4.4						
NVAR	Mina Array Bea	89.85	51	P	P	18 06 32.9	+0.7
	0.6nm,0.8s,mb4.0,baz=252,slow=6.6,SNR=4.3						
YKA	Yellowknife Ar	95.78	28	pP	sP	18 07 23.1	+1.0
	0.3nm,0.7s,baz=259,slow=4.3,SNR=3.9						
ESDC	Sonseca Array	144.77	336	PKP	PKPdf	18 13 08.3	-1.8
	0.7nm,0.7s,baz=7.4,slow=3.0,SNR=3.1						

IDC 14 18:03:19.2±1.4, 3521S×17857E, h0km, mb4.6/4, mb1 4.7/6, mb1mx4.3/16, mbtmp4.5/6, ML3.8/2, MS4.2/12, Ms1 4.2/12, ms1mx4.0/25, Error ellipse: s-maj=32.8km s-min=27.9km az=77.0
NEIC 14 18:03:20.1, 3526S×17871E, h12km, mb4.7/8, ML4.6(WEL), After WEL.
GCMT 14 18:03:20.1±0.4, 35.15S×17882E, h16km±1km, MW5.0/63, Moment Tensor Solution. s27,c42; s63,c95; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.72±.20; Mθθ0.74±.15; Mϕϕ1.98±.14; Mrθ1.25±.41; Mθϕ2.98±.12; Mϕr-0.25±.40; Best double couple: M0 3.96400×10^16 NP1:ϕs10.00000°, δ49.00000°, λ-135.00000°. NP2: ϕs246.00000°, δ58.00000°, λ-51.00000°. Principal axes: T 4.4570, Plg5.0000°, Azm310.0000°; N -0.9810, Plg32.0000°, Azm43.0000°; P -3.4720, Plg58.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
ISCJB 14 18:03:21.3±2.4, 3533S±006×17852E±008, h26km±17km, mb4.6/12, MS4.3/10 Error ellipse: s-maj=11.0km s-min=10.2km az=176.6

ISC 14 18:03:22.5±2.4, 3534S±006×17851E±008, h23km±17km, h26km±.5km:pP-P, n45, σ1.08/35, mb4.6/12, MS4.3/10, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.22	184	P	Pn	18 03 55.9	-2.0
KUZ	Kuaotunu	2.66	237	P	Pn	18 04 03.7	-0.3
KUZ				S	Sn	18 04 36.5	+1.0
PUZ	Puketiti	2.73	184	P	Pn	18 04 06.8	+1.8
MWZ	Matawai	3.09	195	P	Pn	18 04 10.0	+0.1
URZ	Urewera	3.12	201	Pn	Pn	18 04 11.2	+0.8
	14nm,0.3s,baz=26,slow=5.2,SNR=89						
URZ				Sn	Sn	18 04 48.0	+1.1
	19nm,0.3s,baz=307,slow=24,SNR=6.5						
URZ				LR	LR	18 05 29.6	
	comp=Z,1μm,19.3s,baz=250,slow=40						
URZ	Urewera	3.12	201	P	Pn	18 04 10.9	+0.6
MKAZ	Moumakai	3.23	236	P	Pn	18 04 12.4	+0.6
WCZ	Waipu Caves	3.45	259	P	Pn	18 04 15.3	+0.5
OUZ	Omahuta	4.03	270	P	Pn	18 04 21.7	-1.0
SNZO	South Karori	6.67	206	ePn	Pn	18 04 57.3	-1.7
RAO	Raoul Island	6.78	27	LR	LR	18 07 00.9	
	comp=Z,2μm,18.7s,baz=185,slow=33						
RPZ	Rata Peaks	10.15	212	Pn	Pn	18 05 47.4	+0.7
	0.7nm,0.3s,baz=63,slow=22,SNR=3.6						
RPZ				Sn	Sn	18 07 37.2	-2.5
	0.4nm,0.3s,baz=152,slow=21,SNR=3.2						
RPZ	Rata Peaks	10.15	212	Pn	Pn	18 05 47.4	+0.7
RPZ				Sn	Sn	18 07 37.2	-2.5
RAR	Rarotonga	23.68	59	eP	P	18 08 33.1	+0.5
	19nm,0.6s,mb4.7						
EIDS	Eidsvold	25.60	285	P	P	18 08 53.8	+3.6
	9.7nm,0.8s,mb4.4						
TBI	Tubuai	30.23	75	eLQ		18 15 37.2	
	872nm,26.0s						
TBI				eLR	LR	18 17 15.3	
	517nm,27.0s,baz=238						
STKA	Stephens Creek	30.83	266	LR	LR	18 21 27.1	
	comp=Z,439nm,18.6s,MS4.2,baz=335,slow=35						
CTA	Charters Tower	32.18	290	LR	LR	18 22 12.3	
	comp=Z,149nm,18.9s,MS3.7,baz=304,slow=35						
CTAO	Charters Tower	32.18	290	eP	P	18 09 46.4	-2.3
	16nm,1.0s,mb4.8						
PPT	Papeete	33.41	66	eLQ		18 17 02.8	
	514nm,23.5s						
PPT				eLR	LR	18 18 42.4	
	321nm,24.5s,baz=234						
ASAR	Alice Springs	40.23	274	P	P	18 10 58.4	+0.8
	8.5nm,0.7s,mb4.6,baz=115,slow=7.7,SNR=77						

WB2 **Warramunga Arr** 41.67 280 *e*P **P** **18 11 09.7 +0.3**
WRAB **Tennant Creek** 41.68 280 *e*P **P** **18 11 09.5 +0.1**
7.2nm,0.8s,mb4.3
WRA **Warramunga Arr** 41.68 280 P **P** **18 11 09.6 0.0**
6.6nm,0.7s,mb4.4,baz=118,slow=7.9,SNR=55
RKT **Rikitea** 42.03 86 *e*LQ 18 20 46.3
823nm,29.0s
RKT *e*LR LR 18 22 42.0
593nm,29.2s,baz=248
VNDA **Vanda** 42.91 185 LR LR 18 26 07.8
comp=Z,184nm,18.4s,MS4.0,baz=18,slow=32
FITZ **Fitzroy Crossi** 49.67 276 *e*P **P** **18 12 13.6 +0.9**
13nm,0.7s,mb5.1
MBWA **Marble Bar** 52.98 269 P **P** **18 12 37.1 -0.3**
14nm,1.0s,mb4.9
QSPA **South Pole Qui** 54.78 180 P **P** **18 12 51.3 +1.5**
19nm,0.8s,mb5.2,baz=30,slow=1.6,SNR=76
QSPA LR LR 18 33 32.0
comp=Z,171nm,19.5s,MS4.1,baz=234,slow=33
QSPA **South Pole Qui** 54.78 180 P **P** **18 12 51.3 +1.5**
QSPA LR LR 18 33 32.0
MAW **Mawson** 66.65 202 LR LR 18 43 17.3
comp=Z,290nm,18.2s,MS4.5,baz=306,slow=36
MAW **Mawson** 66.65 202 *e*P **P** **18 14 09.8 -1.0**
0.7nm,0.8s,mb3.7
SNAA **Sanae** 73.28 180 *e* **P** **18 14 50.5 -1.0**
SNAA *e* pP 18 14 57.9 -1.0
SNAA *e* 18 15 00.1
SNAA *e* 18 15 13.0
SNAA **Sanae** 73.28 180 *e*P **P** **18 14 50.0 -1.5**
10nm,1.2s,mb4.6
USHA **Ushuaia** 73.47 146 LR LR 18 41 35.2
comp=Z,229nm,19.0s,MS4.5,baz=168,slow=31
VNA3 **Neumayer Olymp** 73.55 177 *e* **P** **18 14 52.5 -0.6**
VNA3 *e* pP 18 15 00.5 0.0
VNA3 *e* 18 15 02.4
VNA3 *e* 18 15 15.3
VNA2 **Neumayer--Watz** 73.95 178 *e* **P** **18 14 55.1 -0.3**
baz=176,slow=5.0
VNA2 *e* pP 18 15 03.1 +0.3
VNA2 *e* 18 15 05.1
VNA2 *e* 18 15 17.8
VNA1 **Neumayer--Stat** 74.19 178 *e* **P** **18 14 57.2 +0.4**
VNA1 *e* pP 18 15 04.8 +0.5
VNA1 *e* 18 15 06.6
NVAR **Mina Array Bea** 93.83 45 P **P** **18 16 38.0 +0.3**
0.7nm,0.7s,mb4.2,baz=248,slow=6.4,SNR=4.3
NVAR **Mina Array Bea** 93.83 45 P **P** **18 16 38.0 +0.3**
LVC **Limon Verde** 94.00 121 LR LR 18 49 58.9
comp=Z,213nm,18.8s,MS4.6,baz=112,slow=30
ATAH **Atahualpa** 96.55 103 LR LR 18 52 17.0
comp=Z,136nm,18.5s,MS4.5,baz=180,slow=30
ANMO **Albuquerque** 98.91 53 LR LR 18 54 47.5
comp=Z,70nm,18.1s,MS4.2,baz=338,slow=31
CPUP **Villa Florida** 99.08 131 LR LR 18 54 00.1
comp=Z,271nm,18.9s,MS4.8,baz=189,slow=31
TORD **Torodi Ar. Bea** 157.71 188 PKPab PKPab 18 23 46.1 -3.7
0.5nm,0.7s,baz=207,slow=3.1,SNR=3.6

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*IDC **14** 18:24:42.5±3.8, 26.70S×176.39W, h17km±23km, mb4.8/19, mb1 4.9/20, mb1mx4.9/21, mbtmp4.8/20, ML5.3/1, MS4.4/10, Ms1 4.4/10, ms1mx4.2/18, Error ellipse: s-maj=15.2km s-min=12.6km az=139.0*
*BJI **14** 18:24:43.0, 26.09S×176.05W, h21km, mB5.7, mb5.3, Ms5.3, Msz4.9*
*MOS **14** 18:24:43.6±1.2, 26.63S×176.44W, h33km, mb5.2/30, MS4.5/6, Error ellipse: s-maj=13.4km s-min=10.7km az=64.8*
*ISCJB **14** 18:24:44.1±2.0, 26.76S±0.07×176.44W±0.05, h38km±17km, mb5.1/62, MS4.6/19, Error ellipse: s-maj=11.5km s-min=6.9km az=161.0*
*GCMT **14** 18:24:44.7±0.2, 26.66S×175.87W, h20km, MW5.1/73, Moment Tensor Solution. s42,c58; s73,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.35±.21; $M_{\theta\theta}$0.01±.15; $M_{\phi\phi}$-4.36±.15; $M_{r\theta}$1.13±.31; $M_{\theta\phi}$0.03±.11; $M_{\phi r}$3.84±.27; Best double couple: $M_0$5.91400×10^{16} NP1:ϕ_s169.00000°,δ25.00000°,λ70.00000°. NP2: ϕ_s11.00000°,δ66.00000°,λ99.00000°. Principal axes: T 5.9920, Plg67.0000°, Azm297.0000°; N -0.1610, Plg8.0000°, Azm187.0000°; P -5.8350, Plg21.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 18:24:44.7±0.2, 26.63S×176.45W, h35km, mb5.1/41 Error ellipse: s-maj=9.3km s-min=6.3km az=141.0*
*DJA **14** 18:25:08, 26.93S×176.71W, h223km, mb4.9/22*
ISC 14 18:24:40.0±3.3**, 26.68S**±0.05×**176.40W**±0.05**, h0**km±19km**, n448, σ0.67**/356**, mb5.1**/62**, MS4.6**/19**, 121C-110D, South of Fiji Islands**

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

RAO **Raoul Island** 2.89 207 Pn **Pn** **18 25 28.4 +1.1**
395nm,0.3s,baz=278,slow=23,SNR=15
RAO LR LR 18 26 00.2
comp=Z,3µm,18.6s,baz=69,slow=27
RAO Sn **Sn** **18 26 04.5 +1.6**
422nm,0.3s,baz=238,slow=23,SNR=6.4
RAO **Raoul Island** 2.89 207 P **Pn** **18 25 28.4 +1.0**
RAO 18 26 04.5
RAO pmax pmax
comp=Z,395nm,0.3s
RAO MLR MLR
comp=Z,3µm,18.6s
RAO smax
comp=N,422nm,0.3s
RAO **Raoul Island** 2.89 207 *e*Pn **Pn** **18 25 28.4 +1.0**
RAO *e*Sn **Sn** **18 26 03.9 +1.0**
URZ **Urewera** 12.78 204 Pn **Pn** **18 27 34.4 -8.5**
comp=N,0.2nm,0.3s,baz=180,slow=16,SNR=2.3
URZ Sn **Sn** **18 29 55.9 -10**
comp=N,2.9nm,0.3s,baz=14,slow=22,SNR=7.2
RAR **Rarotonga** 16.14 74 Pn **Pn** **18 28 18.6 -10**
comp=N,7.7nm,0.3s,baz=290,slow=4.9,SNR=8.7
RAR **Rarotonga** 16.14 74 P **Pn** **18 28 18.6 -10**
RAR pmax pmax
comp=Z,8.0nm,0.3s
RAR **Rarotonga** 16.14 74 *e*Pn **Pn** **18 28 18.2 -10**
DZM **Mont Dzumac** 16.29 283 *e*Pn **Pn** **18 28 35.9 +5.6**
comp=Z,111nm,1.0s
SNZO **South Karori** 16.34 204 *e*Pn **Pn** **18 28 24.9 -5.8**
NOUC **Port Laguerre** 16.40 282 *e*P **Pn** **18 28 37.0 +5.3**
FUNA **Funafuti** 18.53 346 *e*P **Pn** **18 28 57.0 -1.3**
comp=Z,73nm,0.9s
RPZ **Rata Peaks** 19.81 208 P **Pn** **18 29 08.4 -5.1**
comp=Z,0.6nm,0.3s,baz=11,slow=11,SNR=3.6
RPZ LR LR 18 36 11.2
comp=Z,884nm,21.9s,baz=20,slow=35
TBI **Tubuai** 24.62 88 *e*LR LR 18 35 54.0
comp=Z,2µm,28.0s,baz=252
PPT **Papeete** 26.41 75 *e*LR LR 18 36 42.0
comp=Z,2µm,27.0s,baz=245
PPT **Papeete** 26.41 75 LR LR 18 37 33.0
comp=Z,800nm,21.7s,MS4.2,baz=253,slow=29
HNR **Honiara** 28.19 303 LR LR 18 40 06.1
comp=Z,1µm,20.6s,MS4.5,baz=319,slow=33
ARMA **Armidale** 28.28 255 *e*P **P** **18 30 37.0 +1.8**
EIDS **Eidsvold** 29.21 265 *e*P **P** **18 30 44.5 +1.0**
comp=Z,30nm,1.1s,mb5.0
CTA **Charters Tower** 34.81 273 *e*P **P** **18 31 34.5 +1.8**
comp=Z,11nm,0.8s,mb4.8
CTA **Charters Tower** 34.81 273 P **P** **18 31 32.9 +0.2**
comp=Z,8.5nm,0.4s,mb5.0,baz=105,slow=11,SNR=15
CTA **Charters Tower** 34.81 273 P **P** **18 31 32.9 +0.2**
CTA pmax pmax
comp=Z,9.0nm,0.4s
CTAO **Charters Tower** 34.81 273 *e*P **P** **18 31 33.9 +1.2**
CTAO pmax pmax
comp=Z,35nm,1.1s,mb5.2
CTAO **Charters Tower** 34.81 273 *e*P **P** **18 31 33.9 +1.2**
comp=Z,35nm,1.1s,mb5.2
STKA **Stephens Creek** 36.84 252 *e*P **P** **18 31 49.8 -0.2**
comp=Z,4.6nm,0.9s,mb4.2
STKA **Stephens Creek** 36.84 252 P **P** **18 31 48.8 -1.2**
comp=Z,5.4nm,0.9s,mb4.3,baz=125,slow=11,SNR=6.7
STKA LR LR 18 46 01.1
comp=Z,2µm,18.3s,MS4.9,baz=70,slow=35
STKA **Stephens Creek** 36.84 252 *e*P **P** **18 31 49.7 -0.3**
comp=Z,2.7nm,1.1s
RKT **Rikitea** 37.63 94 *e*LR LR 18 41 54.4
comp=Z,1µm,28.5s,baz=264
PMG **Port Moresby** 38.48 290 P **P** **18 32 04.2 0.0**
comp=Z,9.2nm,0.7s,mb4.6,baz=92,slow=9.6,SNR=6.8
PMG **Port Moresby** 38.48 290 *e*P **P** **18 32 04.3 +0.2**
PMG pmax pmax
comp=Z,14nm,0.8s
PMG **Port Moresby** 38.48 290 *e*P **P** **18 32 04.3 +0.1**
comp=Z,14nm,0.8s,mb4.7
ASAR **Alice Springs** 44.85 262 P **P** **18 32 55.8 -0.5**
comp=Z,13nm,1.0s,mb4.8,baz=110,slow=8.3,SNR=43
ASAR **Alice Springs** 44.85 262 P **P** **18 32 55.8 -0.5**
ASAR pmax pmax
comp=Z,13nm,1.0s
WB2 **Warramunga Arr** 45.50 268 *e*P **P** **18 33 00.0 -1.5**
WRAB **Tennant Creek** 45.50 268 P **P** **18 33 00.0 -1.5**
comp=Z,221nm,0.7s,SNR=21
WRAB **Tennant Creek** 45.50 268 *e*P **P** **18 32 59.2 -2.3**
WRAB pmax pmax
comp=Z,27nm,0.8s,mb5.3
WRAB **Tennant Creek** 45.50 268 *e*P **P** **18 32 59.2 -2.3**
comp=Z,27nm,0.8s,mb5.3
WRA **Warramunga Arr** 45.51 268 P **P** **18 33 00.2 -1.3**
comp=Z,20nm,0.7s,mb5.3,baz=106,slow=7.6,SNR=87
WRA S **S** **18 39 43.5 -1.1**
comp=Z,1.1nm,1.0s,baz=108,slow=15,SNR=4.6
WRA **Warramunga Arr** 45.51 268 P **P** **18 33 00.2 -1.3**
WRA S **S** **18 39 43.5 -1.1**
WRA pmax pmax
comp=Z,20nm,0.7s
WRA smax
comp=N,1.0nm,1.0s
FORT **Forrest** 48.46 251 *e*P **P** **18 33 22.5 -2.0**
comp=N,30nm,0.8s,mb5.5
KAKA **Kakadu** 49.82 276 *e*P x 18 33 13.7
comp=N,16nm,0.6s
SBA **Scott Base** 51.84 184 *e*P **P** **18 33 51.1 +1.6**
SBA pmax pmax
comp=Z,37nm,0.9s,mb5.3
SBA **Scott Base** 51.84 184 *e*P **P** **18 33 51.0 +1.6**
comp=Z,37nm,0.9s,mb5.3
VNDA **Vanda** 51.93 186 P **P** **18 33 51.2 +1.1**
comp=Z,4.5nm,0.8s,mb4.4,baz=5.4,slow=7.5,SNR=6.7
VNDA **Vanda** 51.93 186 *e*P **P** **18 33 51.3 +1.2**
VNDA pmax pmax
comp=Z,9.0nm,1.6s
VNDA **Vanda** 51.93 186 *e*P **P** **18 33 51.3 +1.2**
comp=Z,9.3nm,1.6s,mb4.5
FITZ **Fitzroy Crossi** 53.89 266 *e*P **P** **18 34 04.1 -1.3**
comp=Z,32nm,0.9s,mb5.4
FITZ **Fitzroy Crossi** 53.89 266 *e*P **P** **18 34 04.4 -1.1**
comp=Z,22nm,1.0s,mb5.2
KLBR **Kellerberrin** 56.96 248 *e*P **P** **18 34 26.1 -1.3**
comp=Z,20nm,0.8s,mb5.2
MBWA **Marble Bar** 58.12 261 *e*P **P** **18 34 33.6 -2.2**
comp=Z,8.7nm,0.8s,mb4.8
CASY **Casey** 59.08 207 *e*P **P** **18 34 41.6 -0.1**
CASY **Casey** 59.08 207 *e*P **P** **18 34 41.4 -0.3**
comp=Z,21nm,0.8s,mb5.2
QSPA **South Pole Qui** 63.42 180 P **P** **18 35 11.2 +0.3**
comp=Z,31nm,0.9s,mb5.4,baz=37,slow=1.9,SNR=76
QSPA **South Pole Qui** 63.42 180 *e*P **P** **18 35 10.9 0.0**
comp=Z,40nm,1.0s,mb5.5
KAPI **Kappang** 64.43 278 *e*P **P** **18 35 15.1 -3.5**
comp=Z,8.1nm,0.8s,mb5.0
PMSA **Palmer Station** 75.07 156 P **P** **18 36 22.0 -1.3**
comp=Z,32nm,1.1s,mb5.3,baz=143,slow=14,SNR=3.3
KSM **Kuching** 75.77 279 *e*P **P** **18 36 26.8 -1.5**
comp=Z,17nm,0.9s,mb5.2
MJAR **Matsushiro Arr** 76.04 324 P **P** **18 36 29.2 0.0**
comp=Z,24nm,0.9s,mb5.3,baz=164,slow=5.9,SNR=35
MJAR LR LR 19 04 55.9
comp=Z,128nm,18.5s,MS4.3,baz=120,slow=32
MJAR **Matsushiro Arr** 76.04 324 P **P** **18 36 29.2 0.0**
MJAR pmax pmax
comp=Z,24nm,1.0s
MJAR MLR MLR
comp=Z,128nm,18.5s
MAJO **Matsushiro** 76.04 324 *e*P **P** **18 36 28.8 -0.4**
MAJO pmax pmax
comp=Z,49nm,1.0s,mb5.6
MAJO **Matsushiro** 76.04 324 *e*P **P** **18 36 28.8 -0.4**
comp=Z,49nm,1.0s,mb5.6
MAT **Matsushiro** 76.04 324 P **P** **18 36 28.9 -0.3**
MAT *e*S S 18 46 14.0 +0.4
MAW **Mawson** 76.27 200 *e*P **P** **18 36 30.6 +0.4**
comp=Z,7.9nm,0.7s,mb5.0
MAW **Mawson** 76.27 200 P **P** **18 36 30.3 +0.1**
comp=Z,18nm,1.1s,mb5.1,baz=114,slow=6.8,SNR=9.4
MAW LR LR 19 10 16.0
comp=Z,485nm,18.4s,MS4.8,baz=121,slow=36
MAW **Mawson** 76.27 200 P **P** **18 36 30.3 +0.1**
MAW pmax pmax
comp=Z,18nm,1.1s
MAW MLR MLR
comp=Z,485nm,18.4s
MAW **Mawson** 76.27 200 *e*P **P** **18 36 30.2 0.0**
comp=Z,2.8nm,0.8s,mb4.4
SSLB **Suanglung** 78.61 304 *e*P **P** **18 36 42.6 -1.3**
comp=Z,19nm,0.8s,mb5.2
TATO **Taipei** 78.91 305 *e*P **P** **18 36 41.5 -4.1**
comp=Z,83nm,1.0s,mb5.7
SNAA **Sanae** 81.82 178 *e*P **P** **18 36 58.4 -2.1**
SNAA *e* 18 37 04.2
SNAA *e* 18 37 09.0
SNAA *e* 18 37 11.4
SNAA *e* 18 37 18.4
SNAA **Sanae** 81.82 178 *e*P **P** **18 36 58.1 -2.4**
SNAA pmax pmax
comp=Z,16nm,1.0s
SNAA **Sanae** 81.82 178 *e*P **P** **18 36 58.1 -2.4**
comp=Z,16nm,1.0s,mb5.1
VNA3 **Neumayer Olymp** 81.90 176 *e*P **P** **18 36 59.5 -1.5**
VNA3 *e* 18 37 05.7
VNA3 *e* 18 37 09.7
VNA3 *e* 18 37 12.1
VNA3 *e* 18 37 20.1
YSS **Yuzh-Sakhalins** 82.05 333 ⇑*e*P **P** **18 37 00.1 -1.8**
YSS pmax pmax
comp=Z,160nm,1.8s,mb5.8
YSS **Yuzh-Sakhalins** 82.05 333 *e*P **P** **18 37 03.3 +1.4**
comp=Z,183nm,1.6s,mb6.0
MONP **Monument Peak** 82.23 47 ⇓P **P** **18 37 03.4 +0.2**
baz=82
VNA2 **Neumayer--Watz** 82.36 176 *e*P **P** **18 37 02.5 -0.9**
baz=178,slow=2.6
VNA2 *e* 18 37 09.2
VNA2 *e* 18 37 12.4
VNA2 *e* 18 37 15.9
VNA2 *e* 18 37 24.9
EDW2 **Edwards Air Fo** 82.47 45 ⇓P **P** **18 37 04.3 -0.1**
baz=83
KSRS **Korea Array** 82.47 318 P **P** **18 37 05.6 +1.3**
comp=Z,16nm,0.9s,mb5.2,baz=141,slow=6.0,SNR=32
KSRS LR LR 19 13 02.3
comp=Z,184nm,18.0s,MS4.5,baz=284,slow=35
KSRS **Korea Array** 82.47 318 P **P** **18 37 05.6 +1.3**
KSRS pmax pmax
comp=Z,16nm,0.9s,mb5.2
KSRS MLR MLR
comp=Z,184nm,18.0s,MS4.5
VNA1 **Neumayer--Stat** 82.58 176 *e*P **P** **18 37 03.5 -1.0**
VNA1 *e* 18 37 11.2
VNA1 *e* 18 37 14.4
PEA0B **Petropavlovsk-** 82.59 345 *e*P **P** **18 37 07.0 +2.5**
PETK **Petropavlovsk-** 82.59 345 P **P** **18 37 04.5 -0.1**
comp=Z,16nm,0.7s,mb5.3,baz=97,slow=9.0,SNR=21
ISA **Isabella** 82.67 44 ⇑P **P** **18 37 05.9 +0.5**
baz=83
ISA **Isabella** 82.67 44 *e*P **P** **18 37 05.0 -0.4**
ISA pmax pmax
comp=Z,12nm,1.0s,mb5.1
ISA **Isabella** 82.67 44 *e*P **P** **18 37 05.0 -0.4**
comp=Z,12nm,1.0s,mb5.1
LRMC **Laurel Mountai** 83.04 45 ⇑P **P** **18 37 07.7 +0.4**
baz=83
CMB **Columbia Colle** 83.05 41 *e*P **P** **18 37 07.0 -0.4**
CMB pmax pmax
comp=Z,14nm,1.0s,mb5.2
CMB **Columbia Colle** 83.05 41 *e*P **P** **18 37 07.0 -0.4**
comp=Z,14nm,1.0s,mb5.1
BELC **Belle Mtn.** 83.19 47 ⇓P **P** **18 37 08.3 +0.1**
baz=83
BC3 **Big Chuckw Mtn** 83.33 47 ⇑P **P** **18 37 09.7 +0.7**
baz=84
CWC **Cottonwood Cre** 83.41 44 ⇓P **P** **18 37 09.7 +0.5**
baz=84
GSC **Goldstone** 83.48 45 ⇓P **P** **18 37 10.2 +0.5**
baz=84
MPMC **Manual Prospec** 83.53 44 ⇓P **P** **18 37 10.7 +0.8**
baz=84
WDC **Whiskeytown Da** 83.54 38 *e*P **P** **18 37 09.6 -0.2**
WDC pmax pmax
comp=Z,18nm,1.1s,mb5.2
WDC **Whiskeytown Da** 83.54 38 *e*P **P** **18 37 09.6 -0.2**
comp=Z,18nm,1.1s,mb5.2
IRM **Iron Mountain** 83.84 47 ⇑P **P** **18 37 11.5 0.0**
baz=84
GMRC **Granite Mounta** 83.89 46 ⇑P **P** **18 37 11.5 -0.2**
baz=84
113A **Mohawk Valley,** 83.92 49 ⇑P **P** **18 37 11.9 -0.1**
baz=84
R06C **Coleville** 83.93 41 ⇓P **P** **18 37 12.3 +0.4**
baz=84
TUQ **Turquoise Moun** 84.13 46 ⇓P **P** **18 37 13.0 0.0**
baz=84
SHOC **Shoshone** 84.19 45 ⇑P **P** **18 37 13.8 +0.6**
baz=84
GRAC **Grapevine Rang** 84.20 44 ⇓P **P** **18 37 13.6 +0.3**
baz=84
YBH **Yreka Blue Hor** 84.24 37 P **P** **18 37 13.8 +0.4**
comp=Z,11nm,0.9s,mb5.1,baz=236,slow=0.1,SNR=18
YBH **Yreka Blue Hor** 84.24 37 *e*P **P** **18 37 13.2 -0.1**
YBH pmax pmax
comp=Z,15nm,1.0s
YBH **Yreka Blue Hor** 84.24 37 *e*P **P** **18 37 13.2 -0.1**
comp=Z,15nm,1.0s,mb5.2
WCN **Washoe City** 84.26 41 ⇓P **P** **18 37 13.6 +0.1**
baz=84
BEKR **Beckwourth** 84.29 40 ⇑P **P** **18 37 13.6 0.0**
baz=84
NVAR **Mina Array Bea** 84.55 42 P **P** **18 37 15.3 +0.3**
comp=Z,7.9nm,0.9s,mb5.0,baz=219,slow=8.9,SNR=22
HUMO **Hull Mountain** 84.71 37 *e*P **P** **18 37 15.4 -0.3**
comp=Z,7.9nm,1.0s,mb4.9
S09A **Goldfield** 84.75 43 ⇑P **P** **18 37 16.5 +0.5**
baz=85
O06A **Flanigan** 84.79 40 ⇑P **P** **18 37 16.4 +0.2**
baz=85
TPNV **Topopah Spring** 84.87 44 ⇑P **P** **18 37 17.1 +0.4**
baz=85
TPNV **Topopah Spring** 84.87 44 *e*P **P** **18 37 16.7 0.0**
TPNV pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
TPNV **Topopah Spring** 84.87 44 *e*P **P** **18 37 16.7 0.0**
comp=Z,9.1nm,1.0s,mb5.0
NJ2 **Nanjing** 84.93 310 *e*P **P** **18 37 18.5 +1.4**
NJ2 AP 18 37 30.4
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.5
X13A **Yucca** 84.97 47 ⇓P **P** **18 37 17.3 +0.1**
baz=85
TPH **Tonopah** 84.98 43 *e*P **P** **18 37 16.5 -0.7**
TPH pmax pmax
comp=Z,20nm,1.2s,mb5.2
TPH **Tonopah** 84.98 43 *e*P **P** **18 37 16.5 -0.7**
comp=Z,20nm,1.2s,mb5.2
Q08A **Gabbs** 85.05 42 ⇑P **P** **18 37 17.8 +0.3**
baz=85
Y14A **Wickenburg** 85.13 48 ⇑P **P** **18 37 17.7 -0.3**
baz=85
N06A **Buffalo Meadow** 85.17 40 ⇑P **P** **18 37 17.6 -0.5**
baz=85,SNR=9.1
R09A **Tonopah** 85.17 43 ⇓P **P** **18 37 17.9 -0.3**
baz=85
W13A **Hualapai Mount** 85.24 47 ⇓P **P** **18 37 18.5 0.0**
baz=85
S10A **Tonopah Range,** 85.27 43 ⇓P **P** **18 37 18.2 -0.4**
baz=85,SNR=11
O07A **Toulon** 85.34 40 ⇑P **P** **18 37 18.4 -0.6**
baz=86,SNR=14
217A **Green Valley** 85.36 51 ⇑P **P** **18 37 19.2 -0.1**
baz=86
I03A **Eugene** 85.49 35 ⇓P **P** **18 37 20.1 +0.5**
baz=86
X14A **Yava** 85.52 48 ⇑P **P** **18 37 20.3 +0.3**
baz=86
Y15A **Casa Rosa Ranc** 85.59 49 ⇓P **P** **18 37 20.4 0.0**
baz=86
H02A **Toledo** 85.61 35 ⇓P **P** **18 37 20.8 +0.6**
baz=86
S11A **Rachel** 85.61 44 ⇓P **P** **18 37 20.9 +0.6**
baz=86
U12A **Valley of Fire** 85.63 45 ⇓P **P** **18 37 21.0 +0.5**
baz=86
V13A **Grand Canyon W** 85.63 46 ⇑P **P** **18 37 20.9 +0.3**
baz=86
R10A **Warm Springs** 85.67 43 ⇑P **P** **18 37 21.0 +0.3**
baz=86
MOD **Modoc** 85.67 38 *e*P **P** **18 37 20.5 -0.1**
comp=Z,12nm,1.0s,mb5.0
TUC **Tucson** 85.69 51 *e*P **P** **18 37 19.2 -1.7**
TUC pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
TUC **Tucson** 85.69 51 *e*P **P** **18 37 19.2 -1.7**
comp=Z,7.7nm,1.0s,mb4.8
N07B **Gerlach** 85.69 40 ⇑P **P** **18 37 21.0 +0.3**
baz=86
T11A **Corn Creek, Al** 85.69 45 ⇓P **P** **18 37 20.8 0.0**
baz=86,SNR=13
318A **Bisbee** 85.74 52 ⇓P **P** **18 37 21.2 0.0**
baz=86
W14A **Seligman** 85.83 47 ⇓P **P** **18 37 21.8 +0.3**
baz=86
O08A **Rochester Mine** 85.84 41 ⇓P **P** **18 37 21.4 -0.1**
baz=86,SNR=9.4
117A **Oracle** 85.87 50 ⇓P **P** **18 37 21.8 +0.1**
baz=86
K05A **Summer Lake** 85.90 38 ⇓P **P** **18 37 22.1 +0.4**
baz=86
Q10A **Clear Creek Ra** 85.95 43 ⇑P **P** **18 37 22.2 +0.2**
baz=86
X15A **Humboldt** 85.96 48 ⇓P **P** **18 37 22.2 0.0**
baz=86
H03A **Soap Creek Ran** 85.97 35 ⇑P **P** **18 37 22.6 +0.6**
baz=86
M07A **Soldier Meadow** 85.97 39 ⇑P **P** **18 37 22.3 +0.2**
baz=86
U13A **Pakoon Wash** 85.98 46 ⇑P **P** **18 37 22.9 +0.6**
baz=86
V14A **Boquillas Ranc** 86.07 47 ⇑P **P** **18 37 22.9 +0.2**
baz=86,SNR=9.0
Y16A **Circle Bar Ran** 86.12 49 ⇑P **P** **18 37 22.8 -0.1**
baz=86,SNR=13
R11A **Troy Canyon, C** 86.15 43 ⇑P **P** **18 37 23.2 +0.2**
baz=86
S12A **Delamar Landin** 86.15 44 ⇓P **P** **18 37 23.6 +0.5**
baz=86
N08A **GE Springer Mi** 86.17 40 ⇑P **P** **18 37 23.1 0.0**
baz=86,SNR=12
319A **Douglas** 86.21 52 ⇓P **P** **18 37 23.7 +0.2**
baz=86
L07A **Adell** 86.29 39 ⇓P **P** **18 37 24.2 +0.6**
baz=86
MDJ **Mudanjiang** 86.39 325 P **P** **18 37 24.6 +0.6**
MDJ AP 18 37 31.3
MDJ XP sP 18 37 33.9 +10
MDJ S S 18 47 59.6 -1.2
MDJ XS sS 18 48 11.0 +10
MDJ AMB AMB
comp=Z,14nm,1.1s,mb5.0
MDJ AMB AMB
comp=Z,265nm,4.9s
MDJ LR LR
comp=N,88nm,26.1s,MS4.0
MDJ LR LR
comp=E,30nm,28.4s,MS4.0
MDJ LR LR
comp=Z,131nm,23.1s
MDJ **Mudanjiang** 86.39 325 *e*P **P** **18 37 24.3 +0.3**
comp=Z,16nm,0.9s,mb5.1
Q11A **Duckwater** 86.42 43 ⇓P **P** **18 37 24.3 -0.1**
baz=87
X16A **Lo Mia Camp, P** 86.46 49 ⇓P **P** **18 37 25.1 +0.5**
baz=87
M08A **Happy Creek Ra** 86.46 40 ⇓P **P** **18 37 24.3 -0.2**
baz=87,SNR=5.0
U14A **Mt Trumbull** 86.49 46 ⇓P **P** **18 37 25.3 +0.6**
baz=87
HABR **Khabarovsk** 86.51 330 *e*P **P** **18 37 22.5 -2.0**
HABR *e**PP 18 37 33.0
HABR *e*PPP 18 42 38.5
HABR *e*S S 18 47 45.2 -17
HABR *e* 18 48 04.0
HABR *e*SS SS 18 53 37.6 -5.3
HABR *e*SSS 18 57 09.8

HABR MLR MLR
comp=Z,102nm,16.0s,MS4.3
H04A Detroit Lake 86.55 35 ⇓P P 18 37 25.6 +0.8
baz=87
219A White Tail Can 86.57 52 ⇓P P 18 37 25.6 +0.4
baz=87
J06A Christmas Vall 86.66 37 ⇓P P 18 37 25.0 -0.4
baz=87,SNR=7.4
R12A Pony Springs, 86.74 44 ⇓P P 18 37 26.1 +0.2
baz=87
S13A Holt Ranch, En 86.76 45 ⇑P P 18 37 26.2 +0.1
baz=87
K07A Rock Creek Ran 86.78 38 ⇑P P 18 37 26.3 +0.2
baz=87
V15A Kaibab Nationa 86.79 47 ⇑P P 18 37 26.2 -0.1
baz=87
W16A Flagstaff 86.79 48 ⇓P P 18 37 26.6 +0.4
baz=87
T14A Hurricane 86.94 46 ⇑P P 18 37 27.5 +0.6
baz=87
L08A Fields 86.96 39 ⇑P P 18 37 26.4 -0.6
baz=87,SNR=7.6
119A Ashpeak Ranch, 86.97 51 ⇑P P 18 37 27.4 +0.1
baz=87
H05A Madras 87.02 36 ⇑P P 18 37 27.6 +0.4
baz=87
Q12A Willow Creek R 87.04 43 ⇑P P 18 37 27.3 -0.1
baz=87
R13A O'Grain Ranch, 87.05 44 ⇓P P 18 37 28.0 +0.5
baz=87
U15A North Rim 87.07 47 ⇑P P 18 37 27.7 +0.1
baz=87,SNR=12
I06A Prineville 87.09 37 ⇑P P 18 37 27.7 +0.3
baz=87
WUAZ Wupatki 87.14 48 ⇑P P 18 37 28.0 0.0
baz=87
WUAZ Wupatki 87.14 48 *e*P P 18 37 26.8 -1.2
comp=Z,9.3nm,1.1s,mb4.9
O11A Cowboy Ranch, 87.22 42 ⇓P P 18 37 27.7 -0.5
baz=87,SNR=10
K08A Mann Creek Ran 87.23 39 ⇓P P 18 37 28.2 -0.1
baz=87
P12A McGill 87.26 43 ⇓P P 18 37 28.4 -0.1
baz=87
WHN Wuhan 87.27 306 ⇑P P 18 37 29.8 +1.1
WHN AMB AMB
comp=Z,115nm,0.8s,mb6.2
WHN LR LR
comp=Z,747nm,21.7s,MS5.1
T15A Red Dirt Ranch 87.36 46 ⇑P P 18 37 29.2 +0.2
baz=88
Q13A Wheeler Ranch, 87.49 44 ⇓P P 18 37 29.4 -0.1
baz=88
X18A Snowflake 87.53 49 ⇓P P 18 37 29.5 -0.3
baz=88
H06A Lindquist Farm 87.55 36 ⇓P P 18 37 29.5 -0.2
baz=88
I07A Izee 87.56 37 ⇑P P 18 37 29.7 0.0
baz=88
M10A I.L. Ranch, Tu 87.57 41 ⇑P P 18 37 30.0 +0.1
baz=88
K09A Rome 87.64 39 ⇑P P 18 37 30.2 0.0
baz=88
U16A Tuba City 87.67 47 ⇑P P 18 37 30.6 +0.1
baz=88
Y19A Nutrioso 87.68 50 ⇑P P 18 37 30.6 0.0
baz=88
G06A Carlson Farm, 87.73 36 ⇑P P 18 37 30.4 -0.1
baz=88
P13A Bates Ranch, G 87.80 43 ⇓P P 18 37 31.4 +0.4
baz=88
ELK Elko 87.85 42 P P 18 37 30.9 -0.3
comp=Z,2.4nm,1.0s,mb4.5,baz=221,slow=5.1,SNR=6.0
ELK Elko 87.85 42 P P 18 37 30.9 -0.3
ELK pmax pmax
comp=Z,2.0nm,1.0s
ELK Elko 87.85 42 P P 18 37 30.9 -0.3
O12A Currie 87.85 42 ⇑P P 18 37 31.4 +0.2
baz=88
H07A Lands Inn, Kim 87.86 37 ⇓P P 18 37 31.2 0.0
baz=88
T16A Glen Canyon Da 87.91 47 ⇓P P 18 37 32.1 +0.5
baz=88
M11A Holland Ranch, 87.95 41 ⇓P P 18 37 31.5 -0.2
baz=88
I08A Drewsey 87.96 38 ⇓P P 18 37 31.9 +0.2
baz=88
L10A Juniper Basin 87.96 40 ⇓P P 18 37 31.5 -0.3
baz=88,SNR=11
Q14A Sevier Lake (B 87.97 44 ⇑P P 18 37 31.7 -0.1
baz=88,SNR=10
F06A Goldendale 88.01 35 ⇓P P 18 37 32.4 +0.5
baz=88
E05A Randle 88.05 34 ⇑P P 18 37 32.1 +0.1
baz=88
K10A MacKenzie Ranc 88.17 39 ⇓P P 18 37 32.2 -0.5
baz=88,SNR=7.3
W19A Sanders 88.24 49 ⇑P P 18 37 33.5 +0.3
baz=88
C04A Brinnon 88.25 33 ⇓P P 18 37 33.4 +0.5
baz=88
G07A Ruggs Ranch, H 88.26 36 ⇓P P 18 37 33.0 0.0
baz=88
H08A Prairie City 88.30 37 ⇓P P 18 37 33.1 -0.2
baz=88
T17A Navajo Res., N 88.38 47 ⇑P P 18 37 33.3 -0.5
baz=88
L11A Cat Creek Ranc 88.43 40 ⇑P P 18 37 33.4 -0.5
baz=89,SNR=6.3
E06A Yakima 88.43 35 ⇑P P 18 37 34.0 +0.2
baz=89
M12A Wells 88.46 41 ⇑P P 18 37 33.5 -0.6
baz=89
TIA Tai'an 88.50 312 P P 18 37 36.0 +1.6
KLR Kul'dur 88.56 329 *e*P P 18 37 30.4 -4.0
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.5
G08A Pilot Rock 88.65 37 ⇓P P 18 37 34.6 -0.3
baz=89,SNR=11
K11A Parker Ranch, 88.65 40 ⇓P P 18 37 35.1 +0.1
baz=89
U18A Rough Rock, Ch 88.66 48 ⇓P P 18 37 35.1 0.0
baz=89
L12A House Creek Ra 88.85 41 ⇓P P 18 37 36.1 +0.2
baz=89
C05A Tolt Reservoir 88.86 33 ⇓P P 18 37 36.3 +0.4
baz=89
M13A Montello 88.87 42 ⇓P P 18 37 36.2 +0.2
baz=89
D06A Cle Elum 88.94 34 ⇑P P 18 37 36.5 +0.3
baz=89
H09A Durkee 88.94 38 ⇑P P 18 37 36.4 +0.1
baz=89
E07A Sunnyside 89.02 35 ⇑P P 18 37 37.2 +0.6
baz=89
B05A Bryant 89.05 33 ⇑P P 18 37 36.9 +0.2
baz=89
T18A Mexican Hat 89.06 47 ⇓P P 18 37 37.2 +0.1
baz=89
F08A Pendleton 89.08 36 ⇓P P 18 37 37.3 +0.4
baz=89
MFID Camas Ranch 89.17 39 ⇓P P 18 37 37.7 +0.3
baz=89
TXAR Lajitas Array 89.19 57 P P 18 37 37.7 -0.1
comp=Z,1.4nm,0.8s,mb4.2,baz=207,slow=7.8,SNR=9.5
TXAR LR LR 19 08 30.6
comp=Z,162nm,18.9s,MS4.5,baz=0.0,slow=30
TXAR Lajitas Array 89.19 57 P P 18 37 37.7 -0.1
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,162nm,18.9s
K12A Draper Farm, C 89.22 40 ⇑P P 18 37 37.9 +0.2
baz=89
G09A Cove 89.27 37 ⇓P P 18 37 37.5 -0.3
baz=90
D07A Quincy 89.38 35 ⇑P P 18 37 38.4 +0.2
baz=90
H10A Noah's Angus R 89.39 38 ⇓P P 18 37 38.4 -0.1
baz=90
I11A Placerville 89.41 39 ⇑P P 18 37 38.2 -0.4
baz=90
L13A Double Diamond 89.44 41 ⇓P P 18 37 38.5 -0.2
baz=90
M14A Sheep Mountain 89.44 42 ⇓P P 18 37 39.1 +0.4
baz=90
T19A Beclabito 89.45 48 ⇓P P 18 37 38.7 -0.2
baz=90
F09A S2 Ranch, Elgi 89.48 37 ⇓P P 18 37 38.8 0.0
baz=90
J12A Stokes Ranch, 89.48 40 ⇓P P 18 37 38.7 -0.1
baz=90
G10A Bishop Farm, J 89.64 37 ⇑P P 18 37 40.0 +0.4
baz=90
C07A Waterville 89.67 34 ⇓P P 18 37 40.2 +0.5
baz=90
R18A Canyonlands Na 89.76 46 ⇓P P 18 37 40.3 0.0
baz=90
SRU San Rafael 89.78 45 ⇑P P 18 37 40.4 0.0
baz=90
I12A Atlanta 89.80 39 ⇓P P 18 37 41.0 +0.6
baz=90
D08A Wollman Farm, 89.83 35 ⇑P P 18 37 40.2 -0.2
baz=90,SNR=12
H11A Donnelly 89.87 38 ⇓P P 18 37 41.0 +0.3
baz=90
E09A Wood Farm, Sta 89.88 36 ⇓P P 18 37 40.1 -0.5
baz=90,SNR=12
M15A Larsen Ranch, 89.96 42 ⇑P P 18 37 40.9 -0.2
baz=90
F10A Beach Ranch, E 90.02 37 ⇓P P 18 37 40.6 -0.7
baz=90,SNR=10
HLID Hailey 90.07 40 ⇑P P 18 37 41.7 +0.1
baz=90
J13A Cove Ranch, Pi 90.11 40 ⇓P P 18 37 41.6 -0.2
baz=90
ANMO Albuquerque 90.15 51 P P 18 37 42.5 +0.3
comp=Z,3.7nm,0.9s,mb4.6,baz=211,slow=5.7,SNR=6.3
ANMO Albuquerque 90.15 51 *e*P P 18 37 41.3 -0.9
ANMO pmax pmax
comp=Z,6.0nm,1.0s
ANMO Albuquerque 90.15 51 *e*P P 18 37 41.3 -0.9
comp=Z,5.6nm,1.0s,mb4.8
D09A Jones Farm, Ri 90.15 35 ⇓P P 18 37 41.9 0.0
baz=90
B07A Winthrop 90.15 34 ⇑P P 18 37 41.4 -0.4
baz=90
G11A Walters Elk Ra 90.17 38 ⇓P P 18 37 41.5 -0.6
baz=90,SNR=15
C08A Higginbotham F 90.24 35 ⇑P P 18 37 42.6 +0.3
baz=90
O17A Robinson Place 90.27 44 ⇑P P 18 37 43.0 +0.3
baz=90
M16A Huntsville 90.37 43 ⇓P P 18 37 42.8 -0.3
baz=90
E10A Myers Farm, Un 90.41 36 ⇓P P 18 37 43.3 +0.2
baz=91
A07A Ashnola River, 90.42 33 ⇑P P 18 37 43.0 -0.1
baz=91
H12A Diamond D Ranc 90.42 39 ⇓P P 18 37 42.9 -0.4
baz=91,SNR=7.9
J14A Carey 90.44 41 ⇓P P 18 37 43.6 +0.2
baz=91
I13A Wildhorse Cree 90.45 40 ⇑P P 18 37 44.0 +0.6
baz=91
B08A Colville Reser 90.48 34 ⇑P P 18 37 43.1 -0.3
baz=91
G12A Big Creek, Yel 90.52 38 ⇓P P 18 37 43.6 -0.1
baz=91
F11A Grangeville 90.54 37 ⇓P P 18 37 42.8 -0.9
baz=91
C09A Chrisman Ranch 90.65 35 ⇓P P 18 37 44.1 -0.1
baz=91
PMR Palmer 90.68 13 *e*P P 18 37 42.3 -1.7
PMR pmax pmax
comp=Z,2.0nm,0.3s,mb4.9
PMR Palmer 90.68 13 *e*P P 18 37 42.3 -1.7
comp=Z,1.9nm,0.3s,mb4.9
D10A Wagner Farm, O 90.68 36 ⇑P P 18 37 43.5 -0.9
baz=91,SNR=8.2
H13A Challis 90.77 39 ⇑P P 18 37 44.7 -0.1
baz=91
E11A Bogner Ranch, 90.81 37 ⇓P P 18 37 45.2 +0.2
baz=91
I14A Mackay 90.84 40 ⇑P P 18 37 45.8 +0.6
baz=91
L16A Fish Haven 90.90 42 ⇓P P 18 37 45.4 -0.1
baz=91
A08A Turner Farm, O 90.90 34 ⇓P P 18 37 45.4 0.0
baz=91
GYA Guiyang 90.95 299 ⇑*i*P P 18 37 47.1 +0.9
GYA AP 18 37 55.3
GYA XP sP 18 37 58.6 +12
GYA PP PP 18 41 24.8 +2.3
GYA SKS 18 48 15.0
GYA S S 18 48 41.5 -3.3
GYA SS SS 18 54 45.3 -3.0
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,80nm,5.5s
GYA LR LR
comp=N,680nm,18.9s,MS5.2
GYA LR LR
comp=E,680nm,19.4s,MS5.2
GYA LR LR
comp=Z,740nm,18.2s,MS5.2
F12A Elk City 90.95 38 ⇑P P 18 37 45.7 0.0
baz=91
M17A Scullys Gap (B 91.05 43 ⇑P P 18 37 46.3 +0.1
baz=91
G13A Cobalt 91.11 39 ⇑P P 18 37 45.7 -0.7
baz=91,SNR=6.2
B09A Rice 91.12 35 ⇑P P 18 37 46.1 -0.2
baz=91
J15A Blackfoot 91.12 41 ⇑P P 18 37 46.2 -0.3
baz=91
D11A Klaveano Farm, 91.18 36 ⇓P P 18 37 46.5 -0.2
baz=91
A09A Danville 91.26 34 ⇑P P 18 37 46.8 -0.2
baz=91
R21A Cimarron 91.28 47 ⇑P P 18 37 46.9 -0.5
baz=91
K16A Soda Springs 91.28 42 ⇑P P 18 37 47.4 +0.2
baz=92
BJI Beijing 91.28 315 P P 18 37 48.3 +0.9
BJI AMB AMB
comp=Z,23nm,2.1s,mb5.1
BJI AMB AMB
comp=Z,154nm,5.1s
H14A Leadore 91.31 40 ⇓P P 18 37 47.0 -0.4
baz=92,SNR=6.9
F13A Darby 91.48 38 ⇓P P 18 37 47.3 -0.9
baz=92,SNR=10.0
J16A Bone 91.53 41 ⇑P P 18 37 48.5 0.0
baz=92,SNR=7.2
K17A Gardner Place, 91.64 42 ⇓P P 18 37 49.3 +0.4
baz=92
D12A Red Ives Fores 91.70 37 ⇑P P 18 37 49.2 +0.1
baz=92
H15A Lima 91.72 40 ⇓P P 18 37 49.4 +0.1
baz=92
I16A Newdale 91.95 41 ⇑P P 18 37 50.5 +0.2
baz=92
F14A Wisdom 92.03 39 ⇑P P 18 37 51.0 +0.4
baz=92
B11A Sandpoint 92.04 35 ⇑P P 18 37 50.9 +0.2
baz=92
C12B Naegeli Ranch, 92.05 36 ⇓P P 18 37 50.4 -0.3
baz=92
K18A Toltan Ranch, 92.10 43 ⇓P P 18 37 51.1 0.0
baz=92
J17A Brown Place, J 92.11 42 ⇑P P 18 37 51.1 0.0
baz=92
G15A Dillon 92.14 39 ⇑P P 18 37 50.2 -1.0
baz=92,SNR=6.1
TRF Thorofare Moun 92.17 11 *e*P P 18 37 49.7 -1.2
comp=Z,10nm,0.8s,mb5.2
N20A Spence Gulch, 92.18 45 ⇑P P 18 37 51.2 -0.3
baz=92
D13A Huson 92.21 37 ⇑P P 18 37 51.6 +0.2
baz=92
IMW Indian Meadow 92.29 41 *e*P P 18 37 51.5 -0.4
SDCO Great Sand Dun 92.30 49 *e*P P 18 37 50.7 -1.4
comp=Z,2.8nm,1.0s,mb4.5
A11A Hall Mountain, 92.37 35 ⇓P P 18 37 52.1 0.0
baz=92
J18A Kendall Valley 92.44 42 ⇑P P 18 37 52.1 -0.5
baz=93,SNR=9.4
BW06 Boulder Array 92.47 43 ⇑P P 18 37 52.8 0.0
baz=93
PDAR Pinedale Array 92.47 43 P P 18 37 52.2 -0.6
comp=Z,2.5nm,0.9s,mb4.5,baz=207,slow=3.0,SNR=9.3
PDAR LR LR 19 11 17.5
comp=Z,162nm,21.6s,MS4.4,baz=255,slow=30
I17A Pilgram Creek 92.52 41 ⇓P P 18 37 52.9 -0.1
baz=93
F15A Butte 92.54 39 ⇑P P 18 37 52.6 -0.4
baz=93
G16A Moss Hill, Enn 92.56 40 ⇓P P 18 37 53.0 -0.2
baz=93
H16A Russell Place, 92.58 40 ⇑P P 18 37 53.2 -0.1
baz=93
N21A Black Mountain 92.61 45 ⇓P P 18 37 53.4 -0.1
baz=93
MCK McKinley 92.67 12 *e*P P 18 37 51.0 -2.2
MCK pmax pmax
comp=Z,12nm,1.1s,mb5.2
MCK McKinley 92.67 12 *e*P P 18 37 51.0 -2.3
comp=Z,12nm,1.1s,mb5.2
SEY Seymchan 92.70 346 ⇑*e*P P 18 37 51.8 -1.5
D14A Greenough 92.72 38 ⇓P P 18 37 53.2 -0.6
baz=93
L20A Wamsutter 92.79 44 ⇑P P 18 37 54.3 +0.1
baz=93
E15A Deer Lodge 92.80 38 ⇑P P 18 37 54.3 +0.1
baz=93
I18A Diamond G Ranc 92.84 42 ⇑P P 18 37 54.5 0.0
baz=93
BOZ Bozeman (W) 92.91 39 ⇑P P 18 37 54.7 0.0
baz=93
BOZ Bozeman (W) 92.91 39 *e*P P 18 37 54.4 -0.3
BOZ pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
BOZ Bozeman (W) 92.91 39 *e*P P 18 37 54.4 -0.3
comp=Z,7.5nm,1.0s,mb5.1
K19A Absolon Red Bu 92.93 43 ⇓P P 18 37 54.6 -0.3
baz=93
C14A Swan Lake 93.00 37 ⇓P P 18 37 54.8 -0.3
baz=93
XAN Xi'an 93.01 307 P P 18 37 56.9 +1.4
XAN AP 18 38 03.3
XAN PP PP 18 41 39.6 +0.9
XAN S S 18 49 02.3 -0.7
XAN SS SS 18 55 18.8 +1.1
XAN AMB AMB
comp=Z,9.0nm,1.3s,mb5.0
XAN AMB AMB
comp=Z,41nm,18.9s
XAN LR LR
comp=Z,48nm,22.5s,MS3.9
D15A Lincoln 93.23 38 ⇑P P 18 37 56.3 +0.1
baz=93
KMI Kunming 93.42 296 P P 18 37 59.6 +2.0
KMI XP sP 18 38 13.4 +16
KMI AMB AMB
comp=Z,30nm,1.2s,mb5.6
KMI LR LR
comp=Z,146nm,31.4s,MS4.2
CHRT Chiangrai 93.45 290 ⇑P P 18 37 59.0 +1.1
comp=Z,210nm,0.8s
CMAR Chiang Mai Arr 93.52 289 P P 18 37 59.6 +1.4
comp=Z,7.5nm,0.9s,mb5.0,baz=141,slow=3.4,SNR=66
CMAR Chiang Mai Arr 93.52 289 P P 18 37 59.7 +1.5
CMAR pmax pmax
comp=Z,8.0nm,0.9s
F17A Fitzpatrick Pl 93.61 40 ⇓P P 18 37 58.0 +0.1
baz=94
B14A Marquette Ranc 93.61 37 ⇑P P 18 37 58.0 0.0
baz=94
C15A Salmond Ranch, 93.62 37 ⇑P P 18 37 57.6 -0.4
baz=94
CHG Chiang Mai 93.68 289 ⇑P P 18 38 00.2 +1.3
comp=Z,22nm,1.1s,mb5.4
CHTO Chiang Mai 93.68 289 *e*P P 18 38 00.0 +1.1
CHTO pmax pmax
comp=Z,27nm,1.2s,mb5.5
CHTO Chiang Mai 93.68 289 *e*P P 18 37 60.0 +1.0
comp=Z,27nm,1.2s,mb5.5
D16A Dana Ranch, Ca 93.76 38 ⇑P P 18 37 58.2 -0.4
baz=94
A14A Double T Ranch 93.90 36 ⇓P P 18 37 59.3 0.0
baz=94
A15A Johnson Ranch, 94.27 36 ⇑P P 18 38 00.8 -0.1
baz=94
D17A Six Diamond Ra 94.31 39 ⇑P P 18 38 01.0 -0.2
baz=94
C17A Wharram Farm, 94.55 38 ⇑P P 18 38 02.6 +0.3
baz=95
HHC Hu-ho-hao-te 94.68 314 *e*P P 18 38 03.4 +0.4
HHC AP 18 38 11.4
HHC XP sP 18 38 15.3 +12
HHC PP PP 18 41 55.0 +3.4
HHC SKS 18 48 35.8
HHC S S 18 49 12.6 -4.7
HHC XS sS 18 49 26.9 +10
HHC SS SS 18 55 40.5 -0.9
HHC AMB AMB
comp=Z,14nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,144nm,7.0s
HHC LR LR
comp=N,146nm,16.6s,MS4.7
HHC LR LR
comp=E,140nm,15.5s,MS4.7
HHC LR LR
comp=Z,229nm,17.8s,MS4.7
A16A West Butte Ran 94.86 37 ⇑P P 18 38 04.0 +0.4
baz=95
B17A L&G Farms, Che 94.91 38 ⇓P P 18 38 04.6 +0.7
baz=95
BILL Bilibino 95.31 354 ⇓*i*P P 18 38 05.1 -0.1
BILL *e* 18 38 14.0
BILL pmax pmax
comp=Z,13nm,1.4s,mb5.2
BILL Bilibino 95.31 354 *e*P P 18 38 04.5 -0.8
comp=Z,8.8nm,0.9s,mb5.2
CD2 Chengdu 95.31 302 P P 18 38 08.1 +1.9
CD2 AP 18 38 18.8
CD2 XP sP 18 38 22.6 +16
CD2 PP PP 18 42 01.1 +4.3
CD2 SKS 18 48 40.1
CD2 S S 18 49 17.6 -5.7
CD2 XS sS 18 49 35.3 +12
CD2 SS SS 18 55 49.6 -1.2
CD2 AMB AMB
comp=Z,20nm,1.1s,mb5.5
CD2 AMB AMB
comp=Z,150nm,6.9s
CD2 LR LR
comp=N,260nm,6.5s
CD2 LR LR
comp=Z,220nm,8.3s
A17A Triple J Farms 95.34 37 ⇑P P 18 38 06.5 +0.7
baz=96
LZH Lanzhou 97.64 306 *e*P P 18 38 18.0 +1.4
LZH AP 18 38 25.0
LZH XP sP 18 38 29.8 +13
LZH PP PP 18 42 20.0 +5.4
LZH *e*S S 18 49 36.0 -7.1
LZH XS sS 18 49 52.0 +8.8
LZH AMB AMB
comp=Z,17nm,1.6s,mb5.5
LZH AMB AMB
comp=Z,100nm,5.7s
LZH LR LR
comp=E,558nm,17.4s
LZH LR LR
comp=Z,818nm,18.6s,MS5.2
YAK Yakutsk 98.36 337 ⇑*e*P P 18 38 20.3 +1.1
YAK pmax pmax
comp=Z,9.0nm,0.8s,mb5.5
SONM Songino Array 101.33 318 Pdiff Pdif 18 38 43.8 +11
comp=Z,1.1nm,0.8s,baz=132,slow=5.7,SNR=6.1
SONM Songino Array 101.33 318 P Pdif 18 38 43.8 +11
SONM pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 101.49 25 P Pdif 18 38 32.8 -0.9
comp=Z,0.3nm,0.7s,baz=232,slow=4.4,SNR=7.1
GTA Gaotai 101.97 308 *e*P Pdif 18 38 40.3 +4.5
GTA AP 18 38 48.4
GTA XP 18 38 51.6
GTA PP PP 18 42 53.5 +6.0
GTA S Sdif 18 50 17.6 -1.7
GTA XS 18 50 30.8
GTA SS SS 18 57 25.6 +1.7
GTA AMB AMB
comp=Z,4.0nm,1.2s
GTA AMB AMB
comp=Z,176nm,5.4s
GTA LR LR
comp=N,172nm,17.4s,MS4.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA				LR	LR		
	comp=E,158nm,17.7s,MS4.8						
GTA				LR	LR		
	comp=Z,180nm,18.0s,MS4.6						
WMQ	Urumqi	112.01	309	ePDIF	Pdif	18 39 20.0	-0.5
WMQ				PKP	PKiKP	18 43 15.9	-1.3
WMQ				PP	PP	18 44 03.9	+2.7
WMQ				PKS		18 46 55.5	
WMQ				SKS	SKSdf	18 50 23.0	-7.4
WMQ				SKKS	SKKSac	18 50 58.0	-6.5
WMQ				S	Sdif	18 51 35.3	-7.7
WMQ				SS	SS	18 59 36.0	-4.1
WMQ				PP	PP		
	comp=Z,19nm,13.0s						
WMQ				LR	LR		
	comp=N,43nm,22.0s,MS4.4						
WMQ				LR	LR		
	comp=E,91nm,21.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,98nm,26.0s,MS4.3						
ZALV	Zalesovo Beam	116.16	319	PKP	PKPdf	18 43 22.6	-2.2
	comp=Z,2.2nm,0.8s,baz=144,slow=1.3,SNR=12						
ZALV	Zalesovo Beam	116.16	319	PKIKP	PKPdf	18 43 22.6	-2.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	116.42	311	ePKIKP	PKPdf	18 43 23.6	-1.9
MKAR	Makanchi Array	116.42	311	PKP	PKPdf	18 43 24.0	-1.5
	comp=Z,2.2nm,0.8s,baz=69,slow=2.0,SNR=16						
MKAR	Makanchi Array	116.42	311	PKIKP	PKPdf	18 43 24.0	-1.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVS	Novosibirsk	117.22	320	ePKIKP	PKPdf	18 43 23.9	-2.9
KURK	Kurchatov	119.45	315	⇑iPKIKP	PKPdf	18 43 29.2	-2.0
KURK	Kurchatov	119.45	315	ePKPdf	PKPdf	18 43 28.1	-3.1
AML	Almayashu	121.67	305	ePKPdf	PKPdf	18 43 34.7	-1.0
KBL	Kabul	123.99	295	ePKIKP	PKPdf	18 43 40.0	-0.5
BRVK	Borovoye	124.74	318	ePKIKP	PKPdf	18 43 39.2	-2.1
ARU	Arti	131.05	323	i PKIKP	PKPdf	18 43 52.9	-0.3
ARU						18 46 06.3	
ARU				SS	SS	19 03 30.9	-12
ARCES	ARCESS Array B	135.24	349	PKP	PKPdf	18 44 01.1	+0.3
	comp=Z,3.4nm,0.7s,baz=28,slow=2.1,SNR=3.3						
ARCES	ARCESS Array B	135.24	349	PKIKP	PKPdf	18 44 01.1	+0.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMBO	Kilima Mbogo	137.38	235	PKP	PKPdf	18 44 06.4	-0.1
	comp=Z,4.1nm,0.6s,baz=158,slow=0.2,SNR=3.4						
KMBO	Kilima Mbogo	137.38	235	PKIKP	PKPdf	18 44 06.4	-0.1
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN	Obninsk	142.82	329	i PKIKP	PKPdf	18 44 12.0	-3.0
OBN				e		18 44 22.3	
OBN						18 47 21.0	
OBN				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.8						
KIV	Kislovodsk	144.14	309	⇓iPKIKP	PKPdf	18 44 15.5	-2.2
KIV				e		18 44 29.3	
KIV				pmax	pmax		
	comp=Z,21nm,1.5s						
NB2	NORSAR Subarra	145.26	354	PKP	PKPdf	18 44 17.7	-1.4
	comp=Z,54nm,0.9s,baz=12,slow=3.7						
NB2	NORSAR Subarra	145.26	354	PKP	PKPdf	18 44 17.7	-1.4
	baz=12,slow=3.7						
NOA	NORSAR Array B	145.26	354	PKPbc	PKPbc	18 44 18.1	-0.7
	comp=Z,33nm,0.9s,baz=11,slow=2.4,SNR=70						
NOA	NORSAR Array B	145.26	354	PKIKP	PKPdf	18 44 18.1	-1.0
NOA				pmax	pmax		
	comp=Z,33nm,0.9s						
NAO01	NORSAR Array S	145.49	354	ePKPdf	PKPdf	18 44 18.6	-0.9
KONO	Kongsberg	146.78	354	ePKP2	PKPdf	18 44 22.5	+0.8
IDID	Didziasalis	146.80	336	eP	PKPdf	18 44 23.2	+1.3
ISAL	Salakas	146.82	337	eP	PKPbc	18 44 24.1	+0.5
IIGN	Ignalina	146.96	336	eP	PKPdf	18 44 23.8	+1.7
ANN	Anapa	147.43	313	i PKP2	PKPbc	18 44 24.2	-1.6
ANN				pmax	pmax		
	comp=Z,129nm,2.3s						
AKASG	Malin Array Be	149.06	328	PKPbc	PKPbc	18 44 28.5	-1.4
	comp=Z,9.3nm,0.9s,baz=39,slow=3.4,SNR=22						
AKASG	Malin Array Be	149.06	328	PKP2	PKPbc	18 44 28.5	-1.3
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKBB	Malin Array Si	149.06	328	ePKP2	PKPbc	18 44 28.3	-1.5
SUW	Suwalki	149.10	337	ePKP	PKPbc	18 44 29.1	-0.7
SUW	Suwalki	149.10	337	ePKP	PKPbc	18 44 29.1	-0.7
GKP	Gorka Klasztor	151.56	343	ePKP	PKPbc	18 44 35.6	-0.2
GKP	Gorka Klasztor	151.56	343	ePKP	PKPbc	18 44 35.6	-0.2
BRTR	Keskin Array B	151.84	305	PKPbc	PKPbc	18 44 36.2	-0.7
	comp=Z,5.5nm,0.9s,baz=145,slow=2.0,SNR=17						
BRTR				PKPab	PKPab	18 44 47.3	+1.4
	comp=Z,6.6nm,0.7s,baz=103,slow=3.3,SNR=14						
BRTR	Keskin Array B	151.84	305	PKIKP	PKPbc	18 44 36.2	-0.7
BRTR						18 44 47.3	
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LVV	L'vov	152.05	331	ePKIKP	PKPbc	18 44 36.2	-0.8
KWP	Kalwaria	152.75	332	ePKP	PKPbc	18 44 38.3	-0.3
KWP	Kalwaria	152.75	332	ePKP	PKPbc	18 44 38.3	-0.3
BUR08	Bucovina Ar. S	153.07	327	ePKPbc	PKPbc	18 44 38.5	-0.8
OJC	Ojcow	153.41	336	ePKP	PKPbc	18 44 39.8	-0.2
STHS	Stebnicka Huta	153.51	334	ePKP	PKPbc	18 44 38.7	-1.6
STHS				e		18 44 51.4	
UZH	Uzhgorod	153.69	331	c iPKIKP	PKPbc	18 44 40.7	0.0
UZH				i		18 44 52.5	
CRVS	Cervenica-Dubn	153.83	333	ePKP	PKPbc	18 44 39.1	-1.9
CRVS				e		18 44 51.0	
NIE	Niedzica	153.87	335	ePKP	PKPbc	18 44 41.4	+0.4
UPC	Upice	154.38	341	ePKPab	PKPab	18 44 56.4	+0.2
CLL	Collm	154.39	346	⇑iPKIKP	PKPbc	18 44 41.4	-0.7
CLL				e		18 44 54.0	
CLL				pmax	pmax		
	comp=Z,12nm,1.1s						
CLL	Collm	154.39	346	⇑iPKPbc	PKPbc	18 44 41.4	-0.7
	comp=Z,12nm,1.1s						
CLL				ePKPab	PKPab	18 44 54.0	-2.2
CLL				i pPKPab	pPKPab	18 45 03.4	+7.2
	comp=Z,29nm,1.7s						
CLL				ex	x	18 45 17.0	
CLL	Collm	154.39	346	⇑iPKP	PKPbc	18 44 41.4	-0.7
CLL				ePKP	PKPab	18 44 54.0	-2.2
CLL				i		18 45 03.4	
DPC	Dobruska-Polom	154.43	341	ePKPbc	PKPbc	18 44 41.2	-1.0
DPC				ePKPab	PKPab	18 44 56.7	+0.3
BRG	Berggiesshubel	154.58	345	ePKIKP	PKPdf	18 44 33.0	-1.0
BRG				e		18 44 42.1	
BRG				e		18 44 55.9	
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG	Berggiesshubel	154.58	345	ePKP	PKPdf	18 44 33.0	-1.0
	comp=Z,3.2nm,0.9s						
BRG				e		18 44 42.1	
	comp=Z,8.0nm,1.0s						
BRG				e		18 44 55.9	
	comp=Z,10nm,1.0s						
PVCC	Panska Ves	154.75	343	ePKPbc	PKPbc	18 44 42.6	-0.3
PVCC				ePKPab	PKPab	18 44 57.7	0.0
VYHS	Vyhne	155.19	335	ePKP	PKPdf	18 44 38.8	+3.8
VYHS				e		18 44 59.3	
PRU	Pruhonice	155.25	343	ePKPab	PKPab	18 44 59.5	-0.4
GRF	Grafenberg Arr	156.28	348	ePKP	PKPab	18 45 04.5	+0.2
KHC	Kasperske Hory	156.28	344	ePKPdf	PKPdf	18 44 35.0	-1.4
KHC				ePKPab	PKPab	18 45 01.9	-2.4
GERES	GERESS Array B	156.52	343	PKPab	PKPab	18 45 05.1	-0.3
	comp=Z,0.9nm,0.7s,baz=34,slow=5.0,SNR=6.2						
GERES	GERESS Array B	156.52	343	PKP2	PKPab	18 45 05.1	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BAIF	Baives	156.65	359	ePKP2	PKPab	18 45 05.2	-0.7
ROSF	Rostrenen	157.72	12	ePKP2	PKPab	18 45 09.1	-1.4
FLN	La Foliniere	157.73	7	ePKP2	PKPab	18 45 09.5	-1.0
	comp=Z,24nm,0.9s						
SGMF	Saint Gilles	157.93	11	ePKP2	PKPab	18 45 10.4	-1.0
LIC	Lamto	158.06	156	ePKP2	PKPab	18 45 11.4	-1.5
	comp=Z,13nm,0.9s						
LIC	Lamto	158.06	156	eP	PKPab	18 45 10.9	-2.0
	comp=Z,19nm,0.9s						
PERS	Pernice	158.09	338	i PKPdf	PKPab	18 45 17.2	+5.0
MEZF	Maizieres J'vi	158.19	357	ePKP2	PKPab	18 45 11.9	-0.6
	comp=Z,26nm,1.2s						
KIC	Kosan Boka	158.29	157	eP	PKPab	18 45 12.2	-1.7
	comp=Z,46nm,1.0s						
TIC	Toumodi	158.45	156	eP	PKPab	18 45 13.1	-1.5
	comp=Z,8.4nm,0.2s						
DBIC	Dimbokro	158.53	156	PKP	PKPdf	18 44 39.1	-1.2
	comp=Z,3.3nm,1.1s,baz=238,slow=4.6,SNR=3.9						
DBIC				PKPab	PKPab	18 45 13.8	-1.2
	comp=Z,4.5nm,0.9s,baz=145,slow=6.8,SNR=3.9						
DBIC	Dimbokro	158.53	156	PKIKP	PKPdf	18 44 39.2	-1.2
DBIC						18 45 13.8	
DBIC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DBIC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HAU	Haudompre	158.60	355	ePKP2	PKPab	18 45 13.6	-0.8
	comp=Z,7.8nm,0.8s						
VISS	Visnje	158.91	338	i PKPdf	PKPab	18 45 15.3	-0.5
BOJS	Bojanci	159.03	337	i PKPdf	PKPab	18 45 16.1	-0.2
SSF	Saint Saulge	159.66	0	ePKP2	PKPab	18 45 18.1	-0.8
	comp=Z,15nm,1.0s						
MFF	Saint Martin d	159.89	8	ePKP2	PKPab	18 45 19.1	-0.9
AVF	Avril sur Loir	159.93	0	ePKP2	PKPab	18 45 19.1	-1.0
	comp=Z,6.8nm,0.6s						
SMF	Signal de Mont	160.07	360	ePKP2	PKPab	18 45 19.9	-0.9
	comp=Z,36nm,1.2s						
LPL	La Plagne	161.03	353	ePKP2	PKPab	18 45 25.2	+0.2
	comp=Z,14nm,1.2s						
RJF	Les Rejaudoux	161.34	5	ePKP2	PKPab	18 45 25.1	-1.2
LFF	La Frestale	161.63	6	ePKP2	PKPab	18 45 26.8	-0.8
ORIF	Oris-en-Rattie	161.71	355	ePKP2	PKPab	18 45 27.9	-0.1
	comp=Z,26nm,1.1s						
ESDC	Sonseca Array	165.59	24	PKP	PKPdf	18 44 45.8	-0.9
	comp=Z,0.8nm,0.7s,baz=339,slow=3.7,SNR=4.7						
ESDC				PKPab	PKPab	18 45 44.1	-1.1
	comp=Z,1.2nm,0.8s,baz=323,slow=4.4,SNR=5.0						
TOA0	Torodi Ar. Sit	166.42	172	ePKPdf	PKPdf	18 44 46.4	-1.7
TOA0				ePKPab	PKPab	18 45 47.9	-1.4
TORD	Torodi Ar. Bea	166.42	172	PKP	PKPdf	18 44 47.0	-1.1
	comp=Z,2.2nm,0.8s,baz=240,slow=0.7,SNR=13						
TORD				PKPab	PKPab	18 45 48.4	-1.0
	comp=Z,11nm,0.9s,baz=187,slow=4.0,SNR=29						

*IDC **14** 19:02:38.7±5.7, 17.05S×178.44W, h391km±63km, mb3.9/5, mb1 3.9/6, mb1mx3.4/19, mbtmp3.8/6, Error ellipse: s-maj=35.5km s-min=17.8km az=168.0*
*ISCJB **14** 19:02:41.3±2.8, 17.1S±0.2×178.5W±0.1, h446km±32km, mb4.1/14, Error ellipse: s-maj=32.1km s-min=14.8km az=19.6*
*NEIC **14** 19:02:43.3±2.1, 17.16S×178.38W, h455km±24km, mb4.1/11, Error ellipse: s-maj=23.8km s-min=13.7km az=189.0*
ISC 14 19:02:42.8±2.1**, 17.0S**±0.2×**178.3W**±0.1**, h461**km±23km**, n25, σ0^{s}87**/22**, mb4.1**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.23	248	eP	P	19 05 58.3	+2.1
	5.7nm,0.6s						
RAR	Rarotonga	18.01	106	P	P	19 06 24.9	-0.5
	2.6nm,0.3s,baz=82,slow=16,SNR=2.9						
URZ	Urewera	21.56	190	P	P	19 06 56.9	-0.7
	7.0nm,0.3s,mb4.7,baz=19,slow=7.2,SNR=19						
RPZ	Rata Peaks	28.12	196	P	P	19 07 55.9	-0.1
	11nm,0.9s,mb4.3,baz=326,slow=18,SNR=4.0						
EIDS	Eidsvold	29.68	248	P	P	19 08 09.4	-0.4
	13nm,1.3s,mb4.2						
CTAO	Charters Tower	33.70	259	P	P	19 08 42.7	-1.8
	21nm,1.3s,mb4.4						
PMG	Port Moresby	34.41	278	eP	P	19 08 51.5	+1.0
	14nm,0.9s,mb4.4						
STKA	Stephens Creek	39.16	240	eP	P	19 09 30.1	+0.5
	1.5nm,0.4s,mb3.8						
STKA	Stephens Creek	39.16	240	P	P	19 09 30.3	+0.6
	2.0nm,0.4s,mb3.9,baz=77,slow=11,SNR=13						
STKA	Stephens Creek	39.16	240	eP	P	19 09 29.7	+0.1
	0.5nm,0.5s,mb3.2						
WB2	Warramunga Arr	44.88	259	eP	P	19 10 14.6	-0.6
WRAB	Tennant Creek	44.88	259	eP	P	19 10 14.2	-1.0
	4.2nm,0.7s,mb4.0						
WRA	Warramunga Arr	44.90	259	P	P	19 10 14.9	-0.4
	1.9nm,0.5s,mb3.8,baz=96,slow=7.0,SNR=68						
ASAR	Alice Springs	45.13	253	P	P	19 10 17.1	0.0
	15nm,0.4s,mb4.8,baz=89,slow=8.3,SNR=330						
KAKA	Kakadu	47.70	268	eP	x	19 10 17.1	
	5.6nm,0.3s						
FITZ	Fitzroy Crossi	53.27	260	eP	P	19 11 17.9	+0.2
	2.5nm,0.8s,mb3.6						
MBWA	Marble Bar	58.39	255	eP	P	19 11 52.6	-0.8
	2.2nm,0.6s,mb3.7						
KSM	Kuching	72.66	277	P	P	19 13 24.3	+0.9
	10.0nm,1.0s,mb4.3						
QSPA	South Pole Qui	73.06	180	eP	P	19 13 25.5	+1.1
	7.7nm,1.1s,mb4.2						
MAW	Mawson	84.75	200	eP	P	19 14 27.2	+0.2
	0.5nm,0.6s,mb3.3						
SNAA	Sanae	91.50	179	e	P	19 14 57.9	-0.8
SNAA				e		19 14 59.6	
VNA3	Neumayer Olymp	91.64	176	e	P	19 15 00.2	+0.8
VNA3				e		19 15 02.0	
VNA2	Neumayer--Watz	92.08	177	e	P	19 15 02.0	+0.6
	baz=214,slow=2.1						
VNA2				e		19 15 03.7	
GERES	GERESS Array B	146.76	345	PKPbc	PKPab	19 21 35.2	+0.5
	0.3nm,0.5s,baz=30,slow=2.7,SNR=4.0						
DAVOX	Davos/Dischmat	149.53	349	PKPbc	PKPbc	19 21 42.4	+3.1

*IDC **14** 19:03:45.2±1.4, 30.33N×69.77E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, ML3.3/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/46, Error ellipse: s-maj=27.7km s-min=22.8km az=179.0*
*ISCJB **14** 19:03:48.6±1.8, 30.70N±0.06×70.42E±0.08, h26km±14km, mb3.7/13, MS3.7/2, Error ellipse: s-maj=14.0km s-min=6.7km az=145.2*
*NEIC **14** 19:03:49.4±1.1, 30.45N×70.19E, h35km, mb4.1/5, Error ellipse: s-maj=19.6km s-min=7.9km az=222.0*
*MOS **14** 19:03:49.2±2.4, 30.59N×70.18E, h33km, mb4.1/6, Error ellipse: s-maj=13.4km s-min=9.0km az=82.9*
*NNC **14** 19:03:54.8±11.0, 31.12N×70.08E, h15km±108km, mb3.7, Error ellipse: s-maj=77.5km s-min=40.5km az=160.0*
ISC 14 19:03:48.7±2.3**, 30.61N**±0.06×**70.24E**±0.08**, h16**km±15km**, n62, σ1^{s}50**/71**, mb3.7**/14**, MS3.7**/2**, 3C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	4.05	346	eP	Pn	19 04 50.1	+0.1
THN	Thein Dam	5.02	67	ePB	Pn	19 05 07.0	+3.6
THN				ex	Sg	19 06 46.7	+17
BHK	Bhakra	5.37	80	ex	x	19 05 49.8	
KHET	Khetri	5.48	116	eP	Pb	19 05 23.1	-1.0
KHET				eS	Sg	19 06 50.1	+5.5
KHET				AML	AML	19 07 03.5	
	comp=N,18nm,0.5s						
KHET				AML	AML	19 07 04.5	
	comp=E,21nm,0.5s						
AJM	Ajmer	5.65	136	ex	Pn	19 05 09.0	-3.1
AJM				i x	Sg	19 06 56.0	+5.9
SMLA	Simla	5.98	83	eP	Pn	19 05 13.4	-3.2
SMLA				eS	Sb	19 06 36.9	-7.1
SMLA				ex	x	19 06 39.0	
	comp=N,479nm,0.4s						
SMLA				ex	x	19 06 41.1	
	comp=E,369nm,0.4s						
KUDL	Kundal	5.98	113	ex	Pn	19 05 20.7	+4.0
KUDL				eS	Sg	19 07 01.8	+1.0
KUDL				AML	AML	19 07 28.8	
	comp=E,31nm,0.6s						
KUDL				AML	AML	19 07 29.0	
	comp=N,39nm,0.6s						
NDI	New Delhi	6.37	106	eP	Pn	19 05 29.5	+7.5
NDI				ex	x	19 07 20.0	
SONA	Sohna	6.42	110	ex	Pn	19 05 24.8	+2.2
SONA				eS	Sg	19 07 07.3	-7.4
KLP	Kalpa	6.94	80	eP	Pn	19 05 26.1	-3.6
KLP				eS	Sn	19 06 55.8	+7.5
KLP				AML	AML	19 07 54.6	
	comp=E,237nm,0.5s						
KLP				AML	AML	19 07 57.8	
	comp=N,179nm,0.7s						
JOSI	Joshimath	8.04	88	ex	Pn	19 05 47.3	+2.4
JOSI				eS	Sn	19 07 26.3	+11
JOSI				AML	AML	19 08 26.2	
	comp=N,184nm,0.9s						
JOSI				AML	AML	19 08 28.3	
	comp=E,120nm,0.9s						
AML	Almayashu	11.83	13	ePn	Pn	19 06 36.5	-0.3
	comp=E,12nm,0.5s						
AML				eSn	Sn	19 08 46.8	-1.7
DANN	Dangsing	12.00	97	eP	Pn	19 06 39.5	+0.4
	comp=E,34nm,0.7s						
KOLN	Koldanda	12.02	100	eP	Pn	19 06 39.8	+0.4
	comp=E,27nm,0.7s						
EKS2	Erkin-Say	12.36	12	ePn	Pn	19 06 45.7	+1.7
	comp=E,25nm,1.4s						
EKS2				eSn	Sn	19 09 00.8	-0.6
KK31	Karatay Array	12.47	1	P	Pn	19 06 43.4	-2.2
	comp=E,3.0nm,0.7s,baz=180,slow=11,SNR=28						
KK31				⇓S	Sn	19 08 59.7	-4.4
	comp=E,1.2nm,0.5s,baz=180,slow=19,SNR=3.0						
AAK	Ala-Archa	12.48	15	eP	Pn	19 06 43.7	-1.9
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AAK	Ala-Archa	12.48	15	ePn	Pn	19 06 43.7	-1.9
	comp=Z,5.5nm,0.7s						
AAK				eSn	Sn	19 08 52.1	-12
GKN	Gorkha	12.83	98	eP	Pn	19 06 49.8	-0.8
	comp=Z,14nm,0.6s						
TKM2	Tokmak 2	13.01	18	⇑P	Pn	19 06 55.0	+2.0
	comp=Z,10nm,1.2s						
TKM2	Tokmak 2	13.01	18	ePn	Pn	19 06 53.6	+0.6
DMN	Daman	13.34	99	eP	Pn	19 06 56.0	-1.5
KKN	Kakani	13.44	98	eP	Pn	19 06 57.8	-1.0
PKI	Pulchoki	13.61	99	eP	Pn	19 06 59.4	-1.7
GUN	Gumba	13.92	97	eP	Pn	19 07 03.9	-1.5
	comp=Z,85nm,0.8s						
JIRN	Jiri	14.25	98	eP	Pn	19 07 08.1	-1.8
	comp=Z,24nm,0.5s						
RAMN	Ramite	14.80	100	eP	Pn	19 07 15.4	-2.1
	comp=Z,31nm,0.9s						
ODAN	Odare	15.50	100	eP	Pn	19 07 24.5	-2.2
	comp=Z,12nm,0.7s						
TAPN	Taplejung	15.63	98	eP	Pn	19 07 25.9	-2.5
	comp=Z,21nm,1.0s						
LSA	Lhasa	18.11	88	eP	Pn	19 08 04.5	+4.8
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	18.11	88	ePn	Pn	19 08 04.5	+4.8
	comp=Z,3.6nm,0.8s						
MK31	Makanchi Array	18.66	27	P	Pn	19 08 09.1	+2.8
	comp=Z,2.9nm,0.8s,baz=206,slow=10.0,SNR=11						
MK31	Makanchi Array	18.66	27	eP	Pn	19 08 06.0	-0.2
MKAR	Makanchi Array	18.66	27	P	Pn	19 08 07.8	+1.5
	comp=Z,0.1nm,0.3s,baz=208,slow=9.1,SNR=8.2						
MKAR				LR	LR	19 16 22.2	
	comp=Z,120nm,18.9s,baz=257,slow=40						
AB01	Akbulak array	20.19	340	⇑P	P	19 08 21.7	-0.9
	comp=Z,1.7nm,0.8s						
KURK	Kurchatov	21.04	15	⇓P	P	19 08 32.5	+0.7
	comp=Z,4.1nm,1.0s,mb3.7						
KURK	Kurchatov	21.04	15	P	P	19 08 31.9	+0.1
	comp=Z,1.2nm,0.4s,mb3.6,baz=205,slow=13,SNR=4.9						
KURK	Kurchatov	21.04	15	P	P	19 08 31.9	+0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
AKTK	Aktyubinsk	21.82	339	P	P	19 08 38.7	-1.4
AKTO	Aktyubinsk	21.82	339	⇓P	P	19 08 42.1	+1.9
	comp=Z,1.5nm,1.4s,mb3.2						
AKTO	Aktyubinsk	21.82	339	P	P	19 08 38.7	-1.4
	comp=Z,2.5nm,0.7s,mb3.8,baz=150,slow=14,SNR=8.4						
AKTO	Aktyubinsk	21.82	339	P	P	19 08 38.7	-1.5
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
VOSK	Vostochnaya	22.11	1	⇓P	P	19 08 43.5	+0.3
	comp=Z,4.9nm,1.1s,mb3.9						
BVA0	Borovoye Array	22.40	0	⇑P	P	19 08 46.6	+0.3
	comp=Z,2.2nm,1.6s,mb3.3,baz=169,slow=10,SNR=11						
BVAR	Borovoye Array	22.40	0	P	P	19 08 47.1	+0.8
	comp=Z,1.7nm,0.7s,mb3.6,baz=166,slow=9.2,SNR=8.6						
BVAR	Borovoye Array	22.40	0	P	P	19 08 47.1	+0.8
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	22.43	0	P	P	19 08 45.7	-1.0
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
BRVK	Borovoye	22.43	0	P	P	19 08 45.7	-1.0
	comp=Z,9.9nm,0.9s,mb4.2						
ZAA0	Zalesovo Array	25.60	20	eP	P	19 09 19.5	+2.5
ZALV	Zalesovo Beam	25.60	20	P	P	19 09 19.9	+2.9
	comp=Z,1.9nm,0.4s,mb3.9,baz=219,slow=9.6,SNR=12						
ZALV	Zalesovo Beam	25.60	20	P	P	19 09 19.9	+2.9
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
CHTO	Chiang Mai	28.52	108	P	P	19 09 43.7	+0.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
CHTO	Chiang Mai	28.52	108	P	P	19 09 43.7	+0.1
	comp=Z,2.4nm,0.9s,mb3.9						
CMAR	Chiang Mai Arr	28.69	108	P	P	19 09 46.1	+0.9
	comp=Z,0.4nm,0.7s,mb3.2,baz=291,slow=8.8,SNR=4.8						
EIL	Elat	30.46	277	LR	LR	19 24 20.4	
	comp=Z,96nm,19.7s,MS3.5,baz=91,slow=41						
SONM	Songino Array	32.50	48	P	P	19 10 23.3	+4.8
	comp=Z,0.4nm,0.7s,mb3.5,baz=254,slow=10,SNR=3.5						
AKASG	Malin Array Be	36.42	315	P	P	19 10 51.4	-1.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=90,slow=9.5,SNR=3.2						
ARCES	ARCESS Array B	46.40	340	P	P	19 12 15.5	+1.5
	comp=Z,9.3nm,1.1s,mb4.6,baz=100,slow=10,SNR=3.3						
ARCES	ARCESS Array B	46.40	340	P	P	19 12 15.5	+1.5
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TORD	Torodi Ar. Bea	65.06	271	P	P	19 14 24.4	-4.4
	comp=Z,0.7nm,0.9s,mb3.7,baz=66,slow=5.0,SNR=6.8						
BATI	Baumata	65.39	120	LR	LR	19 44 26.2	
	comp=Z,76nm,19.4s,MS3.9,baz=72,slow=37						
YKA	Yellowknife Ar	87.14	2	P	P	19 16 34.9	+1.2
	comp=Z,0.3nm,0.7s,mb3.6,baz=350,slow=5.0,SNR=4.7						

*IPEC **14** 19:26:00.7±0.4, 51.61N×16.18E, h0km±1km, ML3.1/3, Error ellipse: s-maj=2.1km s-min=1.7km az=175.0*
*ISCJB **14** 19:26:01.9±0.4, 51.41N±0.02×16.10E±0.02, h0km, Error ellipse: s-maj=3.0km s-min=1.8km az=13.3*
*WAR **14** 19:26:03.7, 51.51N×16.11E, ML3.0, Mining Induced*
*CSEM **14** 19:26:03.6±0.1, 51.50N×16.15E, h1km, ML3.8/12, Error ellipse: s-maj=2.0km s-min=1.1km az=22.0*
*PRU **14** 19:26:04.0, 51.46N×16.10E, h0km*
*BGR **14** 19:26:04.1±0.4, 51.47N×16.09E, h1km, ML3.3, Error ellipse: s-maj=4.4km s-min=2.2km az=14.0*
*NEIC **14** 19:26:05.6±0.8, 51.29N×15.98E, h5km, ML2.8(BRG), ML3.0(CLL), Error ellipse: s-maj=10.6km s-min=6.8km az=202.0*
*VIE **14** 19:26:06.2±0.4, 51.26N×15.96E, h0km, mb2.5/3, ML3.3/4, Error ellipse: s-maj=3.2km s-min=2.2km az=88.0, Suspected Mining induced.*
ISC 14 19:26:02.5±0.4**, 51.50N**±0.02×**16.12E**±0.02**, h0**km**, n67, σ0^{s}92**/143**, 4C-7D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	171	ePg	Pg	19 26 16.0	+0.7
KSP				eSg	Sg	19 26 25.6	+1.6
KSP	Ksiaz	0.67	171	ePg	Pg	19 26 16.3	+1.0
KSP				eSg	Sg	19 26 26.5	+2.6
KSP	Ksiaz	0.67	171	ePg	Pg	19 26 15.9	+0.6
KSP				eSg	Sg	19 26 25.0	+1.0
KSP	Ksiaz	0.67	171	⇓iPg	Pg	19 26 16.1	+0.8
KSP				i Sg	Sg	19 26 25.6	+1.6
KSP				e		19 26 31.5	
UPC	Upice	1.00	184	ePG	Pg	19 26 22.1	+0.5
UPC				eSG	Sg	19 26 35.6	+1.0
DPC	Dobruska-Polom	1.16	174	ePn	Pn	19 26 25.0	-1.0
DPC				eSg	Sg	19 26 41.3	+1.6
DPC	Dobruska-Polom	1.16	174	Pn	Pn	19 26 25.0	-1.0
DPC				eSg	Sg	19 26 40.1	+0.3
DPC	Dobruska-Polom	1.16	174	ePG	Pg	19 26 24.9	+0.2
DPC				eSG	Sg	19 26 40.3	+0.5
	comp=Z,131nm,0.7s						
PVCC	Panska Ves	1.38	226	ePG	Pg	19 26 28.8	-0.2
PVCC				eSG	Sg	19 26 47.3	+0.3
	comp=Z,439nm,0.5s						
BRG	Berggiesshubel	1.51	246	ePn	Pn	19 26 30.3	-0.4
BRG				eSg	Sg	19 26 52.1	+1.1
BRG	Berggiesshubel	1.51	246	Pg	Pg	19 26 31.4	0.0
BRG				Sg	Sg	19 26 52.1	+1.1
BRG	Berggiesshubel	1.51	246	PN	Pn	19 26 30.0	-0.8
BRG				PG	Pg	19 26 31.4	0.0

BRG				SG	**Sg**	**19 26 51.8**	**+0.8**
	comp=Z,192nm,0.4s						
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	**Pn**	**19 26 31.0**	**-3.1**
RUE				*e*Sn	**Sn**	**19 26 56.3**	**-0.7**
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**	**19 26 34.6**	**-0.4**
PRU				*e*PG	**Pg**	**19 26 36.5**	**-0.9**
PRU				*e*SG	**Sg**	**19 27 00.0**	**-0.9**
	comp=Z,200nm,0.9s						
FBE	**Freiberg**	**1.84**	**253**	*e*Pn	**Pn**	**19 26 34.6**	**-0.7**
FBE				*e*Sg	**Sg**	**19 27 02.1**	**+0.6**
GKP	**Gorka Klasztor**	**1.90**	**21**	*e*Pn	**Pn**	**19 26 45.3**	**+9.2**
GKP				*e*Sn	**Sn**	**19 27 04.6**	**+4.0**
RAC	**Raciborz**	**1.94**	**136**	*e*Pg	**Pg**	**19 26 40.3**	**+0.7**
RAC				*e*Sg	**Sg**	**19 27 06.6**	**+1.9**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**19 26 36.1**	**-0.9**
CLL				*e*Pg	**Pg**	**19 26 40.0**	**-0.1**
CLL				*e*Sg	**Sg**	**19 27 06.4**	**+0.8**
CLL	**Collm**	**1.96**	**266**	Pg	**Pg**	**19 26 40.0**	**-0.1**
CLL				Sg	**Sg**	**19 27 06.4**	**+0.8**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**19 26 36.0**	**-1.0**
CLL				*e*Pg	**Pg**	**19 26 40.0**	**-0.1**
CLL				*i* x	x	19 26 42.4	
CLL				*i* Sg	**Sg**	**19 27 05.7**	**+0.1**
	comp=Z,111nm,0.8s						
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**19 26 36.0**	**-1.0**
CLL				*e*Pg	**Pg**	**19 26 40.0**	**-0.1**
CLL				*i* Sg	**Sg**	**19 27 05.7**	**+0.1**
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*Pn	**Pn**	**19 26 38.6**	**-0.4**
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*PG	**Pg**	**19 26 42.6**	**-0.3**
OKC				*e*SG	**Sg**	**19 27 10.0**	**-0.1**
	comp=Z,119nm,0.8s						
VRAC	**Vranov**	**2.22**	**172**	*e*Pn	**Pn**	**19 26 40.3**	**-0.2**
VRAC				*e*Sg	**Sg**	**19 27 13.4**	**-0.3**
	comp=Z,131nm,0.8s						
TREC	**Trest**	**2.25**	**191**	*e*PN	**Pn**	**19 26 42.2**	**+1.3**
TREC				*e*PG	**Pg**	**19 26 45.1**	**-0.5**
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**19 26 43.4**	**-0.3**
KRUC				*e*Sg	**Sg**	**19 27 20.7**	**-0.5**
	comp=Z,80nm,0.9s						
TANN	**Tannenbergstha**	**2.56**	**246**	*e*Pn	**Pn**	**19 26 45.1**	**-0.1**
TANN				*e*Sg	**Sg**	**19 27 25.3**	**+0.6**
WERD	**Werda**	**2.63**	**248**	*e*Pn	**Pn**	**19 26 46.3**	**+0.1**
WERD				*e*Sg	**Sg**	**19 27 27.7**	**+0.6**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**19 26 46.7**	**+0.2**
NKC				*e*PG	**Pg**	**19 26 53.0**	**-0.3**
NKC				*e*SG	**Sg**	**19 27 29.4**	**+1.7**
	comp=Z,154nm,0.4s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pn	**Pn**	**19 26 45.9**	**-0.7**
OJC				*e*Pg	**Pg**	**19 26 53.2**	**-0.3**
OJC				*e*Sn	**Sn**	**19 27 17.3**	**-2.2**
OJC				*e*Sg	**Sg**	**19 27 28.5**	**+0.6**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**19 26 54.5**	**+1.0**
OJC				*e*Sg	**Sg**	**19 27 28.6**	**+0.7**
JAVC	**Velka Javorina**	**2.83**	**159**	*e*Pn	**Pn**	**19 26 50.1**	**+1.2**
JAVC				*e*Sg	**Sg**	**19 27 32.9**	**-0.4**
	comp=Z,63nm,0.9s						
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**	**19 26 49.5**	**-0.1**
KHC				*e*PG	**Pg**	**19 26 55.8**	**-1.9**
KHC				*e*SN	**Sn**	**19 27 24.7**	**-0.2**
KHC				*e*SG	**Sg**	**19 27 33.7**	**-1.3**
	comp=Z,41nm,0.6s						
MGBB	**Grossbuechelbe**	**2.92**	**240**	⇓*i*Pn	**Pn**	**19 26 50.3**	**+0.2**
MANZ	**Manzenberg**	**2.97**	**241**	*e*Pn	**Pn**	**19 26 50.9**	**+0.1**
MANZ				*e*Sg	**Sg**	**19 27 38.4**	**+0.6**
MOX	**Moxa**	**2.97**	**255**	*e*Pn	**Pn**	**19 26 50.7**	**-0.2**
MOX				*e*Pg	**Pg**	**19 26 59.0**	**-0.4**
MOX				*e*Sg	**Sg**	**19 27 38.8**	**+0.9**
MOX	**Moxa**	**2.97**	**255**	*e*PN	**Pn**	**19 26 50.8**	**0.0**
MOX				*e*PG	**Pg**	**19 26 59.0**	**-0.4**
MOX				*e*SG	**Sg**	**19 27 38.6**	**+0.7**
ROTZ	**Rotzenmuhle**	**3.04**	**237**	*e*Pn	**Pn**	**19 26 52.1**	**+0.3**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**	**19 26 53.2**	**+0.8**
GEC2				*e*Sg	**Sg**	**19 27 39.6**	**-1.9**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**	**19 26 53.2**	**+0.8**
GEC2				*e*Sg	**Sg**	**19 27 39.6**	**-1.9**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**	**19 26 53.8**	**+0.5**
WET				*e*Sg	**Sg**	**19 27 43.2**	**-0.4**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**	**19 26 53.8**	**+0.5**
WET				*e*Sg	**Sg**	**19 27 43.2**	**-0.3**
KOLL	**Kolacno**	**3.27**	**152**	*e*Pg	**Pg**	**19 27 05.2**	**-0.1**
KOLL				*e*Sg	**Sg**	**19 27 46.7**	**-1.0**
KOLL	**Kolacno**	**3.27**	**152**	*e*PN	**Pn**	**19 26 54.0**	**-1.0**
KOLL				*e*PG	**Pg**	**19 27 05.2**	**-0.1**
KOLL	**Kolacno**	**3.27**	**152**	*e*Pn	**Pn**	**19 26 54.0**	**-1.0**
KOLL				*e*Pg	**Pg**	**19 27 05.2**	**-0.1**
KOLL				*e*Sg	**Sg**	**19 27 46.7**	**-1.0**
ZST	**Bratislava**	**3.37**	**169**	*e*PG	**Pg**	**19 27 05.2**	**-1.9**
ZST				*e*SG	**Sg**	**19 27 50.6**	**-0.1**
NIE	**Niedzica**	**3.39**	**126**	*e*P	**Pg**	**19 27 07.1**	**-0.4**
NIE				*e*S	**Sg**	**19 27 52.7**	**+1.2**
VYHS	**Vyhne**	**3.48**	**149**	*e*Pg	**Pg**	**19 27 09.8**	**+0.6**
VYHS				*e*Sg	**Sg**	**19 27 52.3**	**-2.1**
VYHS	**Vyhne**	**3.48**	**149**	*e*PN	**Pn**	**19 26 57.7**	**-0.2**
VYHS				*e*PG	**Pg**	**19 27 09.8**	**+0.6**
VYHS	**Vyhne**	**3.48**	**149**	*e*Pn	**Pn**	**19 26 57.7**	**-0.2**
VYHS				*e*Pg	**Pg**	**19 27 09.8**	**+0.6**
VYHS				*e*Sg	**Sg**	**19 27 52.3**	**-2.1**
CONA	**Conrad Observa**	**3.58**	**183**	⇓*i*Pn	**Pn**	**19 26 60.0**	**+0.7**
CONA				⇑*i*Sg	**Sg**	**19 27 56.4**	**-1.1**
	comp=Z,65nm,0.7s						
CSNA	**Conrad Observa**	**3.58**	**183**	⇓*i*Pn	**Pn**	**19 26 60.0**	**+0.7**
CSNA				⇑*i*Sg	**Sg**	**19 27 56.4**	**-1.1**
	comp=Z,60nm,0.6s						
CLZ	**Clausthal**	**3.60**	**278**	*e*Pn	**Pn**	**19 26 59.9**	**+0.5**
CLZ				*e*Sg	**Sg**	**19 27 58.1**	**+0.1**
CLZ	**Clausthal**	**3.60**	**278**	*e*Pn	**Pn**	**19 26 59.9**	**+0.4**
CLZ				*e*Sg	**Sg**	**19 27 58.1**	**+0.1**
GRA1	**Grafenberg Arr**	**3.61**	**242**	Pn	**Pn**	**19 27 00.0**	**+0.3**
GRA1				Sg	**Sg**	**19 27 59.5**	**+1.0**
GRA1	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	**Pn**	**19 27 00.0**	**+0.3**
GRA1				*e*Sg	**Sg**	**19 27 59.5**	**+1.0**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	**Pn**	**19 27 00.0**	**+0.4**
GRF				*e*Sg	**Sg**	**19 27 59.5**	**+1.1**
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P	**Pn**	**19 26 59.1**	**-1.6**
BSD				*i* S	**Sn**	**19 27 39.1**	**-5.8**
MOA	**Molln**	**3.85**	**199**	⇑*i*Pn	**Pn**	**19 27 03.5**	**+0.5**
MOA				⇓*i*Sg	**Sg**	**19 28 05.4**	**-0.7**
	comp=Z,53nm,0.6s						
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PN	**Pn**	**19 27 04.0**	**+0.6**
STHS				*e*PG	**Pg**	**19 27 17.5**	**+0.6**
STHS				*e*SG	**Sg**	**19 28 10.1**	**+3.0**
HROE	**Hohe Rhon--Fla**	**3.89**	**258**	⇓*i*Pn	**Pn**	**19 27 03.3**	**-0.2**
ARSA	**Arzberg**	**4.27**	**185**	⇑*i*Pn	**Pn**	**19 27 09.2**	**+0.4**
ARSA				⇓*i*Sg	**Sg**	**19 28 19.4**	**-0.3**
	comp=Z,55nm,0.7s						
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PG	**Pg**	**19 27 25.6**	**+0.6**
CRVS				*e*SG	**Sg**	**19 28 22.7**	**+2.0**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pn	**Pg**	**19 27 27.6**	**-2.9**
KWP	**Kalwaria**	**4.60**	**111**	*e*Pn	**Pg**	**19 27 27.6**	**-2.9**
BFO	**Black Forest**	**5.95**	**241**	*e*Pg	**Pg**	**19 27 56.9**	**+0.4**
	comp=Z,5.6nm,0.6s						
BFO				*e*Sg	**Sg**	**19 29 14.5**	**+0.9**
BFO	**Black Forest**	**5.95**	**241**	*e*Pg	**Pg**	**19 27 56.9**	**+0.4**
	comp=Z,5.6nm,0.6s						
BFO				*e*Sg	**Sg**	**19 29 14.5**	**+0.9**

IDC 14 19:42:14.7±6.4**, 183S×9986E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/21**, mbtmp3.5**/4**, Error ellipse: s-maj=329.0km s-min=24.2km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.20**	**121**	P	P	19 49 36.3	-0.1
	0.3nm,0.4s,baz=303,slow=8.9,SNR=7.1						
ASAR	**Alice Springs**	**39.47**	**126**	P	P	19 49 47.2	+0.1
	0.2nm,0.7s,baz=297,slow=8.2,SNR=4.8						
MKAR	**Makanchi Array**	**50.83**	**344**	P	P	19 51 17.2	+0.2
	0.3nm,0.5s,baz=157,slow=8.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**56.98**	**349**	P	P	19 52 01.6	-0.2
	0.7nm,0.5s,baz=186,slow=6.7,SNR=4.4						
TXAR	**Lajitas Array**	**144.66**	**37**	PKP	PKPdf	20 01 53.5	-0.6
	0.3nm,0.6s,baz=295,slow=1.4,SNR=4.6						

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*CSEM **14** 19:44:05.4±0.1, 3496N×3393E, h60^{km}, Mw3.1, Error ellipse: s-maj=2.9km s-min=2.4km az=102.0*
*ISK **14** 19:44:05.3, 3495N×3395E, h73^{km}, MD3.2*
*ISCJB **14** 19:44:06.0±0.6, 3486N±004×3395E±005, h61^{km}±8^{km}, Error ellipse: s-maj=7.3km s-min=6.5km az=35.9*
*NIC **14** 19:44:07.8±0.2, 3502N×3388E, h51^{km}, ML2.9, MW3.1*
*NEIC **14** 19:44:07.8, 3502N×3388E, h51^{km}, MG2.9(NIC), After NIC.*
*HLW **14** 19:44:08.0, 3486N×3389E, h25^{km}, Mb3.3*
ISC 14 19:44:07.1±0.6**, 3489N**±004×**3395E**±005**, h53**^{km}±8^{km}**, n21,** σ**0**^{s}**92**/29**, 1C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.13**	**31**	⇑*i*P	**Pn**	**19 44 15.7**	**+0.2**
	11nm,0.3s						
PHNC				S	**Sn**	**19 44 20.3**	**-1.2**
CSS	**Prodhromos**	**0.51**	**278**	P	**Pn**	**19 44 18.5**	**-0.2**
	7.3nm,0.2s						
CSS				S	**Sn**	**19 44 27.1**	**0.0**
LFK	**Lefkose**	**0.52**	**319**	*e*PG	**Pn**	**19 44 18.7**	**-0.1**
LFK				*e*SG	**Sn**	**19 44 28.5**	**+1.3**
MAMC	**Mammari**	**0.66**	**295**	P	**Pn**	**19 44 20.3**	**-0.2**
EREN	**Erenkoy**	**0.67**	**16**	*e*PG	**Pn**	**19 44 19.9**	**-0.7**
EREN				*e*SG	**Sn**	**19 44 30.9**	**+0.6**
SZAC	**Souni-Zanaja**	**0.89**	**262**	P	**Pn**	**19 44 23.9**	**+0.5**
	7.6nm,0.1s						
SZAC				S	**Sn**	**19 44 36.6**	**+1.2**
LEF	**Lefka**	**0.90**	**285**	*e*PG	**Pn**	**19 44 23.8**	**+0.2**
ALFC	**Alevga**	**1.14**	**284**	P	**Pn**	**19 44 26.4**	**-0.4**
	6.1nm,0.2s						
ALFC				S	**Sn**	**19 44 40.6**	**-0.8**
IKL	**Isikli**	**1.36**	**351**	*e*PN	**Pn**	**19 44 28.8**	**-1.0**
BHL	**Bhannes**	**1.72**	**124**	*e*Pn	**Pn**	**19 44 34.9**	**+0.2**
HWQ	**Hawqa**	**1.76**	**110**	*e*Pn	**Pn**	**19 44 36.0**	**+0.8**
MERS	**Mersin**	**2.03**	**13**	*e*PN	**Pn**	**19 44 37.5**	**-1.4**
RCY	**Rachaya**	**2.09**	**132**	*e*Pn	**Pn**	**19 44 41.0**	**+1.2**
HRSH	**Kfar Ka'horesh**	**2.45**	**153**	P	Px	19 45 05.9	
KARA	**Karaisali**	**2.53**	**20**	*e*PN	**Pn**	**19 44 45.3**	**-0.5**
RSH		**3.92**	**183**	P	**Pn**	**19 45 05.9**	**+1.1**
AMAG	**Maghara**	**4.28**	**189**	⇓*i*P	**Pn**	**19 45 10.7**	**+1.0**
AMAG				S	**Sn**	**19 45 56.7**	**-1.7**
HNKL	**Nakhl**	**4.95**	**180**	P	**Pn**	**19 45 20.0**	**+1.2**
HNKL				S	**Sn**	**19 46 13.1**	**-1.7**
SUZ		**5.12**	**191**	P	**Pn**	**19 45 21.9**	**+0.6**
SUZ				S	**Sn**	**19 46 17.3**	**-1.7**
HKAT	**Jabal Katrina**	**6.35**	**180**	P	**Pn**	**19 45 38.8**	**+0.7**
TR2		**6.49**	**182**	P	**Pn**	**19 45 40.2**	**+0.2**

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*ISCJB **14** 19:46:12.7±1.8, 2300S±005×7064W±008, h15^{km}±10^{km}, mb4.3/10, MS3.6/3, Error ellipse: s-maj=12.4km s-min=7.8km az=10.3*
*IDC **14** 19:46:15.4±4.7, 2302S×7059W, h20^{km}±26^{km}, mb4.1/5, mb1 4.1/7, mb1mx3.9/18, mbtmp4.1/7, ML4.0/2, MS3.7/4, Ms1 3.7/4, ms1mx3.2/30, Error ellipse: s-maj=35.2km s-min=25.8km az=138.0*
*NEIC **14** 19:46:17.0±2.5, 2303S×7062W, h31^{km}±17^{km}, mb4.4/7, Error ellipse: s-maj=13.2km s-min=8.6km az=96.0*
ISC 14 19:46:16.4±2.6**, 2303S**±005×**7069W**±008**, h28**^{km}±19^{km}**, n32,** σ**0**^{s}**89**/28**, mb4.3**/10**, MS3.7**/3**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.69**	**76**	Pg	**Pn**	**19 46 45.3**	**+1.2**
	212nm,0.3s,baz=254,slow=13,SNR=2113						
LVC				Lg		19 47 06.3	
	909nm,0.3s,baz=123,slow=6.8,SNR=37						
LVC	**Limon Verde**	**1.69**	**76**	*e*Pn	**Pn**	**19 46 45.0**	**+0.8**
LVC				Pg	**Pn**	**19 46 45.3**	**+1.2**
LVC				Lg		19 47 06.3	
LCO	**Las Campanas**	**5.95**	**180**	*e*Pn	**Pn**	**19 47 43.0**	**+0.2**
	29nm,0.6s						
LCO				*e*S	**Sn**	**19 49 06.7**	**+17**
ARE	**Arequipa**	**6.58**	**353**	*e*P	**Pn**	**19 47 52.0**	**+0.6**
ARE				*e*S	**Sn**	**19 49 05.0**	**-0.5**
CFAA	**Coronel Fontan**	**8.81**	**166**	Pn	**Pn**	**19 48 20.8**	**-1.2**
	0.1nm,0.3s,baz=357,slow=13,SNR=4.8						
SIV	**San Ignacio**	**11.45**	**54**	Pn	**Pn**	**19 48 57.6**	**-0.6**
	0.8nm,0.3s,baz=241,slow=12,SNR=29						
SIV				Sn	**Sn**	**19 51 06.3**	**+1.0**
	0.2nm,0.3s,baz=137,slow=20,SNR=3.2						
NNA	**Nana**	**12.45**	**331**	Pn	**Pn**	**19 49 06.1**	**-5.8**
CPUP	**Villa Florida**	**12.58**	**108**	Pn	**Pn**	**19 49 12.7**	**-0.9**
	0.2nm,0.3s,baz=246,slow=13,SNR=4.8						
CPUP				LR	LR	19 54 27.1	
	comp=Z,340nm,20.2s,baz=262,slow=39						
TRQA	**Tornquist**	**16.73**	**155**	*e*Pn	**Pn**	**19 50 10.5**	**+1.7**
	9.6nm,0.9s						
BDFB	**Brasilia**	**22.60**	**75**	P	**P**	**19 51 13.9**	**-1.1**
	2.8nm,0.9s,mb3.7,baz=236,slow=17,SNR=4.8						
BDFB				LR	LR	20 01 16.1	
	comp=Z,124nm,18.2s,MS3.4,baz=96,slow=40						
ROSC	**El Rosal**	**27.95**	**352**	LR	LR	20 03 49.5	
	comp=Z,110nm,19.4s,MS3.5,baz=18,slow=38						
RCBR	**Riachuelo**	**37.63**	**68**	*e*P	**P**	**19 53 29.2**	**0.0**
	19nm,0.9s,mb4.8						
VNA3	**Neumayer Olymp**	**59.17**	**161**	*e*	**P**	**19 56 14.6**	**+0.2**
VNA3				*e*		19 56 19.1	
VNA2	**Neumayer--Watz**	**59.77**	**160**	*e*	**P**	**19 56 18.8**	**+0.3**
	baz=302,slow=8.2						
VNA2				*e*		19 56 23.3	
SNAA	**Sanae**	**61.38**	**160**	*e*	**P**	**19 56 29.1**	**-0.4**
SNAA	**Sanae**	**61.38**	**160**	*e*P	**P**	**19 56 28.5**	**-1.0**
	3.1nm,0.8s,mb4.5						
WMOK	**Wichita Mounta**	**63.34**	**334**	*e*P	**P**	**19 56 41.7**	**-1.4**
	1.8nm,0.7s,mb4.3						
BBTS	**Babate**	**64.89**	**60**	LR	LR	20 21 44.0	
	comp=Z,133nm,20.1s,MS4.1,baz=214,slow=33						
QSPA	**South Pole Qui**	**67.17**	**180**	*e*P	**P**	**19 57 08.1**	**+0.8**
	2.2nm,0.7s,mb4.3						
SDCO	**Great Sand Dun**	**68.75**	**331**	*e*P	**P**	**19 57 20.1**	**+2.3**
	2.7nm,1.2s,mb4.0						
DBIC	**Dimbokro**	**70.74**	**74**	P	**P**	**19 57 30.4**	**-0.2**
	3.9nm,0.8s,mb4.4,baz=189,slow=5.9,SNR=6.2						
DBIC	**Dimbokro**	**70.74**	**74**	*e*P	**P**	**19 57 30.1**	**-0.6**
	5.5nm,0.8s,mb4.5						
TOA0	**Torodi Ar. Sit**	**79.42**	**71**	*e*P	**P**	**19 58 20.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.42**	**71**	P	**P**	**19 58 20.4**	**-0.2**
	4.8nm,0.8s,mb4.5,baz=255,slow=5.2,SNR=26						
BOSA	**Boshof**	**84.18**	**118**	P	**P**	**19 58 45.2**	**-0.3**
	3.7nm,0.9s,mb4.5,baz=21,slow=3.3,SNR=3.6						
YKA	**Yellowknife Ar**	**92.09**	**341**	P	**P**	**19 59 22.7**	**+0.2**
	0.5nm,0.7s,mb3.9,baz=140,slow=4.2,SNR=13						
ASAR	**Alice Springs**	**127.79**	**209**	PKP	PKPdf	20 05 20.6	+0.5
	1.4nm,1.1s,baz=218,slow=1.8,SNR=5.5						
WRA	**Warramunga Arr**	**130.80**	**212**	PKP	PKPdf	20 05 26.6	+0.7
	0.5nm,0.9s,baz=177,slow=1.7,SNR=6.2						
ZALV	**Zalesovo Beam**	**144.03**	**25**	PKP	PKPdf	20 05 50.5	+1.4
	1.6nm,0.7s,baz=299,slow=1.5,SNR=8.0						
AAK	**Ala-Archa**	**145.15**	**48**	*e*PKPdf	PKPdf	20 05 52.7	+1.3
MK31	**Makanchi Array**	**147.83**	**36**	*e*PKPdf	PKPdf	20 05 56.0	+0.2
MK31				*e*PKPbc	PKPbc	20 05 59.2	+0.5
MKAR	**Makanchi Array**	**147.83**	**36**	PKPbc	PKPdf	20 05 56.2	+0.5
	1.7nm,0.7s,baz=123,slow=7.1,SNR=18						

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*MOS **14** 20:08:52.6±1.2, 48.15N×154.44E, h50^{km}, mb4.4/33, Error ellipse: s-maj=8.6km s-min=6.6km az=68.1*
*BJI **14** 20:08:52.8, 4830N×15464E, h61^{km}, mB4.9, mb4.6, Ms4.4, Msz4.4*
*SKHL **14** 20:08:52.7±2.6, 48.12N×154.59E, h54^{km}±23^{km}, mb5.1/6, msh5.7/1*
*ISCJB **14** 20:08:52.7±0.7, 4821N±004×15438E±003, h46^{km}±5^{km}, mb4.5/65, MS3.9/21, Error ellipse: s-maj=7.4km s-min=3.0km az=161.9*
*NEIC **14** 20:08:53.9±0.8, 48.16N×154.40E, h44^{km}±7^{km}, mb4.6/29, Error ellipse: s-maj=8.0km s-min=4.4km az=152.0*
*IDC **14** 20:08:53.1±3.6, 48.15N×154.36E, h33^{km}±27^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.2/35, mbtmp4.1/27, ML4.2/3, MS3.8/16, Ms1 3.8/16, ms1mx3.5/39, Error ellipse: s-maj=16.6km s-min=10.4km az=154.0*
ISC 14 20:08:54.9±0.6**, 4821N**±004×**15434E**±003**, h47**^{km}±5^{km}**, h50**^{km}±2.8^{km}**:pP-P, n334,** σ**0**^{s}**80**/338**, mb4.5**/65**, MS3.9**/21**, 95C-73D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.73**	**24**	*e*PN	**Pn**	**20 09 34.7**	**-1.5**
SKR				*e*S	**Sn**	**20 10 04.0**	**-4.0**
SKR				pmax	pmax		
	comp=E,400nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1µm,1.0s						
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				smax			
	comp=N,10µm,2.0s						
SKR				smax			
	comp=E,3µm,2.0s						
SKR				smax			
	comp=N,2µm,0.5s						
SKR				smax			
	comp=E,1µm,0.2s						
SKR	**Severo-Kuril's**	**2.73**	**24**	*e*P	**Pn**	**20 09 34.7**	**-1.5**
SKR				AMB	AMB	20 09 37.2	
	comp=E,150nm,0.5s						
SKR				AMB	AMB	20 09 37.2	
	comp=E,400nm,1.0s						
SKR				AMB	AMB	20 09 37.2	
	comp=E,1µm,1.0s						
SKR				*e*S	**Sn**	**20 10 04.0**	**-4.0**
SKR				A		20 10 11.0	
	comp=E,10µm,2.0s						
SKR				A		20 10 11.0	
	comp=E,3µm,2.0s						
SKR				A		20 10 11.0	
	comp=E,2µm,3.0s						
SKR				A		20 10 13.0	
	comp=E,1µm,0.2s						
SKR				A		20 10 13.0	
	comp=E,2µm,0.5s						
SKR				A		20 10 13.0	
	comp=E,390nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.35**	**22**	*e*Pn	**Pn**	**20 10 12.9**	**+0.9**
PETK	**Petropavlovsk-**	**5.35**	**22**	Pn	**Pn**	**20 10 13.0**	**+1.0**
	comp=E,12nm,0.3s,baz=175,slow=12,SNR=199						
PETK				Sn	**Sn**	**20 11 16.8**	**+4.5**
	comp=E,3.5nm,0.3s,baz=173,slow=13,SNR=3.5						
PETK				LR	LR	20 12 31.5	
	comp=E,463nm,19.3s,baz=202,slow=40						
PETK	**Petropavlovsk-**	**5.35**	**22**	Pn	**Pn**	**20 10 13.0**	**+1.0**
PETK				Sn	**Sn**	**20 11 16.8**	**+4.5**
PETK				LR	LR	20 12 31.6	
KUR	**Kuril'sk**	**5.36**	**239**	*e*PN	**Pn**	**20 10 11.6**	**-0.6**
KUR				*e*S	**Sn**	**20 11 18.0**	**+5.5**
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax			
	comp=N,430nm,0.9s						
KUR				smax			
	comp=E,280nm,0.9s						
KUR	**Kuril'sk**	**5.36**	**239**	*e*P	**Pn**	**20 10 11.6**	**-0.6**
KUR				AMB	AMB	20 10 13.0	
	comp=E,284nm,0.9s						
KUR				*e*S	**Sn**	**20 11 18.0**	**+5.5**
KUR				A		20 11 34.2	
	comp=E,426nm,0.9s						
KUR				A		20 11 34.2	
	comp=E,284nm,0.9s						
PET	**Petropavlovsk**	**5.55**	**28**	*e*PN	**Pn**	**20 10 14.6**	**-0.2**
PET				pmax	pmax		
	comp=Z,99nm,0.5s						
PET				MLR	MLR		
	comp=Z,500nm,14.0s						
PET	**Petropavlovsk**	**5.55**	**28**	*e*Pn	**Pn**	**20 10 14.1**	**-0.7**
	comp=Z,78nm,0.6s						
PET				*e*Sn	**Sn**	**20 11 15.1**	**-2.0**
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	⇑*i*PN	**Pn**	**20 10 51.0**	**+3.5**
YSS				*i* S	**Sn**	**20 12 21.0**	**+5.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				smax			
	comp=N,120nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	⇑*i*P	**Pn**	**20 10 51.0**	**+3.5**
YSS				AMB	AMB	20 10 51.5	
	comp=N,50nm,0.9s						
YSS				*i* S	**Sn**	**20 12 21.0**	**+5.1**
YSS				A		20 12 22.0	
	comp=N,120nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	*e*Pn	**Pn**	**20 10 51.3**	**+3.8**
	comp=N,76nm,0.8s						
YSS				*e*Sn	**Sn**	**20 12 13.3**	**-2.6**
TYV	**Tymovskoe**	**8.05**	**294**	*e*P	**Pn**	**20 10 50.9**	**+1.8**
TYV				AMB	AMB	20 10 51.0	
	comp=N,11nm,0.8s						
TYV				AMB	AMB	20 10 51.0	
	comp=N,13nm,0.8s						
TYV				AMB	AMB	20 10 51.0	
	comp=N,46nm,1.0s						
TYV				*e*S	**Sn**	**20 12 20.5**	**+1.8**
TYV				A		20 12 23.0	
	comp=N,33nm,1.0s						
TYV				A		20 12 23.0	
	comp=N,44nm,1.0s						
UGL	**Uglegorsk**	**8.18**	**281**	*e*P	**Pn**	**20 10 54.0**	**+3.2**
UGL				AMB	AMB	20 10 56.0	
	comp=N,120nm,0.8s						
UGL				AMS	AMS	20 14 09.0	
	comp=N,2µm,17.0s						
UGL				AMS	AMS	20 14 09.0	
	comp=N,1µm,17.0s						
UGL				AMS	AMS	20 14 09.0	
	comp=N,1µm,17.0s						
ASAJ	**Asahikawa**	**9.12**	**248**	Pn	**Pn**	**20 11 07.8**	**+4.1**
	comp=N,5.1nm,0.3s,baz=71,slow=14,SNR=18						
ASAJ				LR	LR	20 14 11.6	
	comp=N,269nm,21.3s,baz=160,slow=35						
ASAJ	**Asahikawa**	**9.12**	**248**	PN	**Pn**	**20 11 07.8**	**+4.1**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,269nm,21.3s						
NKL	**Nikolayevsk**	**9.98**	**305**	*e*P	**Pn**	**20 11 13.0**	**-2.4**
NKL				AMB	AMB	20 11 15.5	
	comp=Z,15nm,1.0s						
NKL				AMB	AMB	20 11 15.5	
	comp=Z,38nm,1.0s						
NKL				*e*L		20 13 58.0	
NKL				AMS	AMS	20 15 48.0	
	comp=Z,400nm,16.0s						
NKL				AMS	AMS	20 15 48.0	
	comp=Z,600nm,16.0s						
ERM	**Erimo**	**10.04**	**236**	*e*PN	**Pn**	**20 11 16.2**	**-0.1**
HABR	**Khabarovsk**	**12.84**	**278**	*e*PN	**Pn**	**20 11 55.5**	**+1.0**
HABR				pmax	pmax		
	comp=N,11nm,1.4s						
HABR				pmax	pmax		
	comp=E,53nm,1.4s						
HABR				pmax	pmax		
	comp=Z,57nm,1.3s						
HABR				MLR	MLR		
	comp=Z,128nm,14.0s						
FX1	**Attu Island--F**	**12.84**	**62**	Pn	**Pn**	**20 11 52.0**	**-2.5**
	comp=Z,6.1nm,0.3s,baz=292,slow=3.5,SNR=27						
FX1				Sn	**Sn**	**20 14 02.1**	**-14**
	comp=Z,9.9nm,0.3s,baz=25,slow=18,SNR=11						
SEY	**Seymchan**	**14.80**	**356**	⇑*e*P	**Pn**	**20 12 22.8**	**+1.9**
KLR	**Kul'dur**	**14.94**	**282**	*e*P	**Pn**	**20 12 22.0**	**-0.8**
KLR				pmax	pmax		
	comp=E,80nm,1.6s						
KLR				pmax	pmax		
	comp=Z,57nm,1.6s						
MAJO	**Matsushiro**	**16.63**	**231**	*e*P	**Pn**	**20 12 42.3**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s						
MAJO	**Matsushiro**	**16.63**	**231**	*e*P	**Pn**	**20 12 42.2**	**-2.3**
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**16.63**	**231**	P	**Pn**	**20 12 42.2**	**-2.4**
MJAR	**Matsushiro Arr**	**16.63**	**231**	Pn	**Pn**	**20 12 42.8**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=29,slow=13,SNR=13						
MJAR				LR	LR	20 19 06.0	
	comp=Z,118nm,21.2s,baz=75,slow=37						
MDJ	**Mudanjiang**	**17.42**	**267**	P	**Pn**	**20 12 55.3**	**+1.1**
MDJ				AP	pP	20 13 07.3	+1.4
MDJ				XP	sP	20 13 13.8	+2.0
MDJ				S	**S**	**20 16 10.0**	**-3.5**
MDJ				SCP	ScP	20 21 03.8	-0.4
MDJ				PCS	PcS	20 21 09.6	+0.3
MDJ				AMB	AMB		
	comp=Z,12nm,1.4s						
MDJ				AMB	AMB		
	comp=Z,56nm,3.8s						
MDJ	**Mudanjiang**	**17.42**	**267**	*e*Pn	**Pn**	**20 12 55.1**	**+0.9**
	comp=Z,10nm,0.9s						
ZEA	**Zeya**	**17.87**	**298**	*e*P	**Pn**	**20 12 58.9**	**-0.9**
ZEA				AMB	AMB	20 13 02.1	
	comp=Z,28nm,1.2s						
YAK	**Yakutsk**	**19.58**	**324**	*e*P	**Pn**	**20 13 18.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,55nm,0.9s						
YAK				pmax	pmax		

YAK pmax pmax
comp=N,27nm,1.6s
YAK Yakutsk 19.58 324 *e*P **Pn** **20 13 19.8 -0.5**
comp=N,65nm,0.7s
CLNS Chul'man 19.75 307 *e*P **Pn** **20 13 25.7 +3.3**
CLNS *e*S **S** **20 17 00.5 +0.1**
CLNS pmax pmax
comp=Z,92nm,1.0s
CLNS pmax pmax
comp=E,60nm,1.0s
CLNS pmax pmax
comp=N,51nm,1.1s
CLNS pmax pmax
comp=Z,22nm,1.1s
CLNS pmax pmax
comp=N,20nm,0.9s
CLNS pmax pmax
comp=E,19nm,1.0s
CLNS smax
comp=E,158nm,13.2s
CLNS smax
comp=N,106nm,13.4s
CLNS MLR MLR
comp=Z,288nm,18.0s
CLNS MLR MLR
comp=E,123nm,15.0s
CLNS MLR MLR
comp=N,33nm,13.0s
CN2 Changchun 20.49 268 *e*P **P** **20 13 27.4 -1.2**
CN2 AMB AMB
comp=Z,10.0nm,1.1s
BILL Bilibino 20.78 13 P **P** **20 13 34.0 +2.4**
BILL *e* 20 14 00.4
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.3
BILL Bilibino 20.78 13 *e*P **P** **20 13 29.4 -2.2**
comp=Z,7.2nm,0.9s
KSRS Korea Array 22.05 251 P **P** **20 13 46.1 +0.7**
comp=Z,17nm,0.8s,mb4.5,baz=49,slow=10,SNR=30
KSRS Korea Array 22.05 251 P **P** **20 13 46.1 +0.7**
KSRS pmax pmax
comp=Z,17nm,0.8s,mb4.5
HIA Hailar 22.73 286 P **P** **20 13 54.1 +1.6**
BOD Bodaibo 25.73 307 *e*P pP 20 14 35.3 +2.6
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
TIXI Tiksi 26.32 342⇑ *e*P **P** **20 14 26.3 +0.6**
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb3.9
TIXI Tiksi 26.32 342 *e*P **P** **20 14 28.7 +3.0**
comp=Z,2.7nm,0.7s,mb3.9
TIXI *e* pP 20 14 45.1 +7.2
BJI Beijing 28.35 268 P **P** **20 14 43.6 -0.6**
HHC Hu-ho-hao-te 31.04 272 *e*P **P** **20 15 08.0 0.0**
HHC AP pP 20 15 22.6 +2.2
HHC XP sP 20 15 30.0 +4.1
HHC PP PP 20 16 11.8 -6.8
HHC PCP PcP 20 18 02.8 0.0
HHC S **S** **20 20 07.3 -2.4**
HHC XS sS 20 20 32.5 +2.1
HHC SCP ScP 20 21 39.1 -2.4
HHC PCS PcS 20 21 45.8 -1.0
HHC SS SS 20 21 54.4 -29
HHC AMB AMB
comp=Z,12nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,141nm,4.6s
HHC LR LR
comp=N,174nm,16.7s,MS3.9
HHC LR LR
comp=E,166nm,16.6s,MS3.9
HHC LR LR
comp=Z,180nm,16.6s,MS3.8
ULN Ulaanbaatar 31.23 287 *e*P **P** **20 15 09.8 +0.2**
comp=Z,4.2nm,1.0s,mb4.2
NJ2 Nanjing 31.23 252 *e*P **P** **20 15 11.0 +1.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
SONM Songino Array 31.66 288 P **P** **20 15 13.9 +0.5**
comp=Z,1.8nm,0.9s,mb3.9,baz=67,slow=8.7,SNR=12
SONM PcP PcP 20 18 03.0 -1.2
comp=Z,0.5nm,0.6s,baz=66,slow=2.3,SNR=4.7
SONM LR LR 20 29 08.1
comp=Z,155nm,20.0s,MS3.7,baz=328,slow=38
SONM Songino Array 31.66 288 P **P** **20 15 13.9 +0.5**
SONM 20 18 03.0
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,155nm,20.0s
PPLA Purkeypile 32.53 43 *e*P **P** **20 15 20.4 -0.5**
comp=Z,42nm,1.5s,mb5.1
ZAK Zakamensk 32.84 293 *e*P **P** **20 15 24.2 +0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
KTH Kantishna Hill 33.11 42 *e*P **P** **20 15 24.2 -1.7**
comp=Z,22nm,1.3s,mb4.9
MCK McKinley 34.00 42 *e*P **P** **20 15 32.2 -1.5**
MCK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MCK McKinley 34.00 42 *e*P **P** **20 15 32.2 -1.4**
comp=Z,7.9nm,1.0s,mb4.6
COLA College 34.48 40*d i*P **P** **20 15 37.2 -0.6**
COLA College 34.48 40 *e*P **P** **20 15 37.1 -0.6**
comp=Z,7.0nm,0.8s,mb4.6
WHN Wuhan 35.11 255 P **P** **20 15 43.9 +0.3**
XAN Xi'an 36.48 264 P **P** **20 15 56.3 +1.0**
XAN AP pP 20 16 07.8 0.0
XAN PP PP 20 17 19.4 +0.5
XAN S **S** **20 21 34.5 +0.6**
XAN AMB AMB
comp=Z,7.0nm,1.1s,mb4.5
XAN LR LR
comp=Z,82nm,24.2s,MS3.4
LZH Lanzhou 38.69 271 *e*P **P** **20 16 15.5 +1.6**
LZH AP pP 20 16 28.5 +2.0
LZH XP sP 20 16 32.5 +0.5
LZH *e*PP PP 20 17 47.0 +4.0
LZH *e*S **S** **20 22 06.4 -0.9**
LZH XS sS 20 22 29.3 +1.0
LZH SS SS 20 24 48.1 -11
LZH AMB AMB
comp=Z,33nm,1.2s,mb4.9
LZH AMB AMB
comp=Z,137nm,6.3s
LZH LR LR
comp=N,328nm,15.9s
LZH LR LR
comp=Z,549nm,16.2s,MS4.5
GTA Gaotai 39.58 278 *e*P **P** **20 16 22.4 +1.1**
GTA AMB AMB
comp=Z,3.0nm,0.9s,mb4.0
GTA AMB AMB
comp=Z,83nm,4.8s
GTA LR LR
comp=N,159nm,15.0s,MS4.0
GTA LR LR
comp=E,111nm,17.1s,MS4.0
GTA LR LR
comp=Z,155nm,17.4s,MS3.9
INK Inuvik 39.97 33 *e*P **P** **20 16 23.8 -0.5**
INK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 39.97 33 *e*P **P** **20 16 23.8 -0.5**
comp=Z,6.0nm,1.0s,mb4.3
CD2 Chengdu 41.84 265 P **P** **20 16 39.4 -0.7**
CD2 AP pP 20 16 54.0 +1.3
CD2 XP sP 20 17 00.6 +2.4
CD2 PP PP 20 18 20.0 +2.6
CD2 PCP PcP 20 18 35.0 -0.3
CD2 PCS PcS 20 22 25.3 -1.6
CD2 S **S** **20 22 52.0 -2.5**
CD2 XS sS 20 23 18.3 +2.7
CD2 SS SS 20 25 54.4 -7.4
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.1
CD2 AMB AMB
comp=Z,110nm,5.9s
CD2 LR LR
comp=N,260nm,6.2s
CD2 LR LR
comp=Z,210nm,7.3s
ZALV Zalesovo Beam 42.45 305 P **P** **20 16 44.8 +0.1**
comp=Z,1.1nm,0.5s,mb3.7,baz=61,slow=7.1,SNR=6.3
ZALV PcP PcP 20 18 36.3 -0.6
comp=Z,2.1nm,0.8s,baz=69,slow=4.8,SNR=7.4
ZALV LR LR 20 35 27.6
comp=Z,85nm,19.1s,MS3.6,baz=249,slow=38
ZALV Zalesovo Beam 42.45 305 P **P** **20 16 44.8 +0.1**
ZALV 20 18 36.3
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
ZALV MLR MLR
comp=Z,85nm,19.1s,MS3.6
GYA Guiyang 42.85 257⇓ *i*P **P** **20 16 50.0 +1.7**
GYA AP pP 20 17 02.5 +1.5
GYA XP sP 20 17 08.3 +1.8
GYA PP PP 20 18 30.8 +2.5
GYA PCP PcP 20 18 38.9 +0.2
GYA SCP ScP 20 22 23.8 -1.8
GYA PCS PcS 20 22 29.8 -1.3
GYA S **S** **20 23 11.3 +1.9**
GYA SCS ScS 20 26 41.5 -3.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,40nm,4.1s
GYA LR LR
comp=N,460nm,18.0s,MS4.5
GYA LR LR
comp=E,330nm,16.2s,MS4.5
GYA LR LR
comp=Z,450nm,19.8s,MS4.4
WMQ Urumqi 45.18 290 P **P** **20 17 08.0 +1.2**
WMQ AMB AMB
comp=Z,3.0nm,1.0s,mb4.1
WMQ AMB AMB
comp=Z,203nm,5.0s
WMQ LR LR
comp=N,110nm,23.0s,MS3.8
WMQ LR LR
comp=E,48nm,18.0s,MS3.8
WMQ LR LR
comp=Z,98nm,21.0s,MS3.7
KMI Kunming 46.33 259 P **P** **20 17 17.4 +1.3**
KMI AP pP 20 17 32.1 +3.2
KMI XP sP 20 17 37.6 +3.3
KMI PP PP 20 19 05.9 +0.5
KMI S **S** **20 23 59.3 -0.7**
KMI SS SS 20 27 16.8 -8.9
KMI AMB AMB
comp=Z,15nm,1.1s,mb4.8
KMI AMB AMB
comp=Z,64nm,3.3s
KMI LR LR
comp=N,103nm,20.7s,MS3.9
KMI LR LR
comp=E,81nm,18.7s,MS3.9
KMI LR LR
comp=Z,68nm,19.4s,MS3.6
MK31 Makanchi Array 47.02 297 *e*P **P** **20 17 19.9 -1.3**
MKAR Makanchi Array 47.02 297 P **P** **20 17 20.8 -0.5**
comp=Z,3.3nm,0.8s,mb4.3,baz=63,slow=8.0,SNR=27
MKAR LR LR 20 38 21.1
comp=Z,116nm,18.5s,MS3.9,baz=2.4,slow=38
MKAR Makanchi Array 47.02 297 P **P** **20 17 20.8 -0.4**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,116nm,18.5s
KURK Kurchatov 47.26 303 P **P** **20 17 23.1 0.0**
comp=Z,3.4nm,0.6s,mb4.5,baz=68,slow=8.5,SNR=19
KURK LR LR 20 38 34.6
comp=Z,159nm,18.5s,MS4.0,baz=10.0,slow=38
KURK Kurchatov 47.26 303⇑ *e*P **P** **20 17 22.3 -0.7**
KURK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KURK Kurchatov 47.26 303 *e*P **P** **20 17 22.0 -1.1**
RES Resolute Bay 49.19 19 P **P** **20 17 36.1 -1.5**
comp=Z,2.2nm,0.8s,mb4.2,baz=316,slow=9.4,SNR=6.2
RES Resolute Bay 49.19 19 P **P** **20 17 36.3 -1.3**
RES pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
RES Resolute Bay 49.19 19 P **P** **20 17 36.3 -1.3**
comp=Z,2.8nm,0.8s,mb4.3
YKA Yellowknife Ar 49.26 38 P **P** **20 17 37.9 -0.4**
comp=Z,3.5nm,0.8s,mb4.5,baz=298,slow=7.9,SNR=18
YKA Yellowknife Ar 49.26 38 P **P** **20 17 37.9 -0.4**
YKA pmax pmax
comp=Z,4.0nm,0.8s
BVAR Borovoye Array 50.58 309 P **P** **20 17 47.3 -1.2**
comp=Z,1.0nm,0.4s,mb4.1,baz=55,slow=7.5,SNR=14
BVAR PcP PcP 20 19 04.7 -0.9
comp=Z,1.3nm,0.6s,baz=55,slow=3.1,SNR=4.9
BVAR LR LR 20 41 13.3
comp=Z,166nm,18.8s,MS4.1,baz=60,slow=38
BVAR Borovoye Array 50.58 309 P **P** **20 17 47.3 -1.1**
BVAR 20 19 04.7
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,167nm,18.8s
BRVK Borovoye 50.62 309 *e*P **P** **20 17 46.7 -2.0**
LSA Lhasa 51.03 273 *e*P **P** **20 17 55.9 +3.8**
LSA pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LSA Lhasa 51.03 273 *e*P **P** **20 17 55.9 +3.7**
comp=Z,2.7nm,0.6s,mb4.3
TKM2 Tokmak 2 53.11 296 P **P** **20 18 07.2 -0.2**
SHL Shillong 53.24 268 *e*P **P** **20 18 09.0 +0.4**
CHTO Chiang Mai 53.27 257 *e*P **P** **20 18 08.9 0.0**
CHTO pmax pmax
comp=Z,19nm,1.3s,mb4.9
CHTO Chiang Mai 53.27 257 *e*P **P** **20 18 08.9 0.0**
comp=Z,19nm,1.3s,mb4.9
A07A Ashnola River, baz=53 53.41 55⇑P **P** **20 18 08.9 -0.7**
CMAR Chiang Mai Arr 53.52 256 P **P** **20 18 10.8 0.0**
comp=Z,4.1nm,0.8s,mb4.4,baz=35,slow=7.1,SNR=16
CMAR LR LR 20 41 44.2
comp=Z,46nm,18.4s,MS3.6,baz=200,slow=37
CMAR Chiang Mai Arr 53.52 256 P **P** **20 18 10.8 0.0**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
CMAR MLR MLR
comp=Z,46nm,18.4s
B07A Winthrop baz=54 53.89 55⇓P **P** **20 18 12.7 -0.3**
AAK Ala-Archa baz=54 53.94 296⇑ *e*P **P** **20 18 13.0 -0.5**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
AAK Ala-Archa 53.94 296 *e*P **P** **20 18 13.7 +0.2**
comp=Z,4.1nm,0.9s,mb4.4
A08A Turner Farm, O baz=54 54.07 54⇑P **P** **20 18 13.7 -0.7**
EKS2 Erkin-Say 54.35 296 P **P** **20 18 16.9 +0.4**
comp=Z,4.1nm,1.0s,mb4.3
C07A Waterville baz=54 54.36 56⇑P **P** **20 18 15.8 -0.7**
B08A Colville Reser baz=54 54.38 55⇓P **P** **20 18 16.2 -0.4**
A09A Danville baz=54 54.43 54⇓P **P** **20 18 16.8 -0.2**
ARU Arti 54.50 317 *e*P **P** **20 18 15.1 -2.3**
C08A Higginbotham F baz=55 54.87 55⇓P **P** **20 18 19.5 -0.7**
A10A Northport baz=55 54.98 54⇑P **P** **20 18 20.2 -0.8**
G05A Wamic baz=55 55.06 59⇑P **P** **20 18 21.4 -0.2**
ODAN Odare 55.39 273 *e*P **P** **20 18 25.4 +1.2**
JIRN Jiri 55.66 274 *e*P **P** **20 18 26.9 +0.7**
GUN Gumba 55.70 275 *e*P **P** **20 18 26.0 -0.5**
RAMN Ramite 55.86 273 *e*P **P** **20 18 28.2 +0.6**
comp=Z,5.2nm,0.3s,mb5.1
E09A Wood Farm, Sta baz=56 56.11 56⇑P **P** **20 18 28.7 -0.4**
KKN Kakani 56.18 275 *e*P **P** **20 18 30.4 +0.5**
comp=Z,3.7nm,0.3s,mb4.9
YBH Yreka Blue Hor 56.33 63 P **P** **20 18 32.2 +1.4**
comp=Z,2.0nm,0.8s,mb4.2,baz=318,slow=3.2,SNR=4.5
YBH Yreka Blue Hor 56.33 63 P **P** **20 18 32.2 +1.4**
YBH pmax pmax
comp=Z,2.0nm,0.8s
G08A Pilot Rock baz=56 56.38 58⇓P **P** **20 18 30.1 -0.9**
DMN Daman 56.42 275 *e*P **P** **20 18 31.6 0.0**
comp=Z,23nm,1.1s,mb5.1
GKN Gorkha 56.47 276 *e*P **P** **20 18 31.7 -0.3**
A13A Flathead Natio baz=56 56.69 52⇓P **P** **20 18 32.7 -0.4**
ARCES ARCESS Array B 56.75 341 LR LR 20 48 19.8
comp=Z,169nm,19.0s,MS4.2,baz=301,slow=42
I07A Izee baz=57 56.79 59⇓P **P** **20 18 34.3 +0.3**
K05A Summer Lake baz=57 56.81 61⇑P **P** **20 18 34.6 +0.4**
DANN Dangsing 56.83 277 *e*P **P** **20 18 34.7 +0.2**
WALA Waterton Lakes comp=Z,0.1nm,0.6s 56.88 52 *e*P **P** **20 18 34.2 -0.4**
J06A Christmas Vall baz=57,SNR=5.4 56.92 60⇑P **P** **20 18 35.1 +0.2**
B13A Whitefish baz=57 56.99 53⇑P **P** **20 18 35.3 -0.1**
H08A Prairie City baz=57 57.01 58⇑P **P** **20 18 35.1 -0.4**
A14A Double T Ranch baz=57 57.19 52⇑P **P** **20 18 36.1 -0.6**
KOLN Koldanda comp=Z,1.1nm,0.7s,mb5.0 57.31 276 *e*P **P** **20 18 38.4 +0.5**
G10A Bishop Farm, J baz=57,SNR=5.2 57.41 57⇓P **P** **20 18 38.2 -0.2**
I08A Drewsey baz=57 57.43 59⇓P **P** **20 18 38.9 +0.3**
F11A Grangeville baz=57 57.59 56⇓P **P** **20 18 39.4 -0.2**
HNR Honiara comp=Z,72nm,21.7s,MS3.7,baz=14,slow=30 57.60 173 LR LR 20 37 24.1
C14A Swan Lake baz=58 57.75 53⇓P **P** **20 18 40.2 -0.4**
D13A Huson baz=58 57.78 54⇓P **P** **20 18 40.6 -0.3**
K07A Rock Creek Ran baz=58 57.79 60⇑P **P** **20 18 41.1 +0.1**
J08A Circle Bar Ran baz=58 57.83 59⇑P **P** **20 18 41.6 +0.3**
I09A Lost Marbles R baz=58 57.87 58⇑P **P** **20 18 41.8 +0.2**
B15A Bradely Ranch, baz=58 58.04 52⇑P **P** **20 18 42.5 -0.2**
H10A Noah's Angus R baz=58 58.05 57⇑P **P** **20 18 43.1 +0.2**
L07A Adell baz=58 58.15 61⇓P **P** **20 18 43.7 +0.1**
A16A West Butte Ran baz=58 58.15 51⇓P **P** **20 18 43.0 -0.4**
F12A Elk City baz=58 58.17 55⇑P **P** **20 18 43.6 -0.1**
K08A Mann Creek Ran baz=58 58.21 60⇓P **P** **20 18 44.4 +0.4**
J09A Fry Pan Ranch, baz=58 58.25 59⇑P **P** **20 18 44.7 +0.4**
D14A Greenough baz=58 58.30 53⇓P **P** **20 18 44.9 +0.3**
E13A Victor baz=58 58.33 54⇑P **P** **20 18 44.4 -0.3**
C15A Salmond Ranch, baz=58,SNR=5.5 58.35 52⇓P **P** **20 18 44.8 -0.1**
AKTK Aktyubinsk 58.38 312 P **P** **20 18 45.5 +0.5**
AKTK PcP PcP 20 19 37.9 +2.5
AKTO Aktyubinsk comp=Z,0.6nm,0.5s,mb3.9,baz=67,slow=7.2,SNR=4.0 58.38 312 P **P** **20 18 45.5 +0.5**
AKTO PcP PcP 20 19 37.9 +2.5
comp=Z,0.8nm,0.5s,baz=136,slow=1.0,SNR=3.9
AKTO Aktyubinsk 58.38 312 P **P** **20 18 45.6 +0.6**
AKTO 20 19 37.9
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
H11A Donnelly baz=58,SNR=6.9 58.40 57⇑P **P** **20 18 44.9 -0.3**
G12A Big Creek, Yel baz=58 58.52 56⇑P **P** **20 18 46.1 +0.1**
L08A Fields baz=58 58.62 60⇑P **P** **20 18 46.7 -0.2**
M07A Soldier Meadow baz=58,SNR=5.5 58.64 62⇑P **P** **20 18 47.2 +0.2**
N06A Buffalo Meadow baz=58 58.65 63⇓P **P** **20 18 46.8 -0.3**
F13A Darby baz=58 58.65 55⇑P **P** **20 18 46.8 -0.2**
K09A Rome baz=58 58.66 60⇑P **P** **20 18 47.0 -0.2**
C16A Fuhringer Ranc baz=58 58.79 52⇓P **P** **20 18 47.7 -0.2**
BEKR Beckwourth baz=59 58.88 64⇓P **P** **20 18 48.7 0.0**
O06A Flanigan baz=59 59.02 63⇓P **P** **20 18 50.1 +0.5**
M08A Happy Creek Ra baz=59 59.07 61⇑P **P** **20 18 50.7 +0.7**
FFC Flin Flon 59.09 41 *e*P **P** **20 18 49.5 -0.4**
FFC *e* pP 20 19 01.4 -1.7
FFC pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
FFC Flin Flon 59.09 41 *e*P **P** **20 18 49.5 -0.4**
comp=Z,9.6nm,1.4s,mb4.6
FFC *e* pP 20 19 01.4 -1.7
K10A MacKenzie Ranc baz=59 59.11 59⇑P **P** **20 18 50.7 +0.4**
N07B Gerlach baz=59 59.14 62⇑P **P** **20 18 50.8 +0.3**
H12A Diamond D Ranc baz=59 59.14 56⇓P **P** **20 18 51.1 +0.7**
G13A Cobalt baz=59,SNR=5.2 59.14 56⇑P **P** **20 18 50.6 +0.2**
F14A Wisdom baz=59 59.16 54⇓P **P** **20 18 51.1 +0.5**
E15A Deer Lodge baz=59 59.17 54⇑P **P** **20 18 50.6 -0.1**
D16A Dana Ranch, Ca baz=59 59.38 52⇓P **P** **20 18 52.2 +0.2**
C17A Wharram Farm, baz=59 59.41 52⇓P **P** **20 18 51.9 -0.3**
B18A Beardsley Farm baz=59 59.44 50⇑P **P** **20 18 52.2 -0.2**
I12A Atlanta baz=59 59.46 57⇓P **P** **20 18 52.3 -0.3**
H13A Challis baz=59 59.46 56⇓P **P** **20 18 52.8 +0.2**
O07A Toulon baz=59 59.58 63⇓P **P** **20 18 54.0 +0.5**
FCC Fort Churchill comp=Z,0.1nm,0.8s 59.59 34 *e*P **P** **20 18 52.0 -1.3**
K11A Parker Ranch, baz=59 59.59 59⇑P **P** **20 18 53.9 +0.3**
E16A East Helena baz=59 59.62 53⇑P **P** **20 18 53.9 +0.2**
F15A Butte baz=59 59.62 54⇓P **P** **20 18 54.3 +0.5**
M09A Marrel Ranch, baz=59 59.62 61⇓P **P** **20 18 54.0 +0.2**
D17A Six Diamond Ra baz=60 59.75 52⇓P **P** **20 18 54.7 +0.1**
L10A Juniper Basin baz=60 59.78 59⇓P **P** **20 18 55.1 +0.2**
J12A Stokes Ranch, baz=60 59.82 58⇑P **P** **20 18 55.2 +0.1**
O08A Rochester Mine baz=60 59.93 62⇓P **P** **20 18 56.5 +0.6**
N09A Rock Creek Ran baz=60 59.94 61⇑P **P** **20 18 56.4 +0.3**
I13A Wildhorse Cree baz=60 59.95 57⇓P **P** **20 18 56.7 +0.7**
HLID Hailey baz=60 60.01 57⇓P **P** **20 18 56.6 +0.2**
HLID Hailey comp=Z,1.9nm,1.1s,mb4.0 60.01 57 *e*P **P** **20 18 56.5 +0.1**
HLID *e* pP 20 19 08.6 -1.0
CMB Columbia Colle 60.03 65 *e*P **P** **20 18 56.0 -0.6**
CMB pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
CMB Columbia Colle comp=Z,3.3nm,0.8s,mb4.4 60.03 65 *e*P **P** **20 18 56.0 -0.7**
G15A Dillon baz=60 60.05 55⇑P **P** **20 18 56.9 +0.2**
M10A I.L. Ranch, Tu baz=60 60.09 60⇓P **P** **20 18 57.7 +0.7**
E17A Martinsdale baz=60 60.10 53⇓P **P** **20 18 57.7 +0.7**

L11A	Cat Creek Ranc	60.13	59	⇓P	P	20 18 57.5	+0.2
	baz=60,SNR=7.4						
BOZ	Bozeman (W)	60.21	54	⇑P	P	20 18 58.2	+0.4
	baz=60						
J13A	Cove Ranch, Pi	60.25	57	⇑P	P	20 18 58.2	+0.2
	baz=60						
R06C	Coleville	60.28	64	⇑P	P	20 18 58.8	+0.5
	baz=60						
I14A	Mackay	60.31	56	⇓P	P	20 18 58.7	+0.2
	baz=60,SNR=5.2						
K12A	Draper Farm, C	60.32	58	⇑P	P	20 18 58.6	+0.1
	baz=60						
G16A	Moss Hill, Enn	60.38	54	⇓P	P	20 18 59.0	+0.1
	baz=60,SNR=6.2						
F17A	Fitzpatrick Pl	60.57	53	⇑P	P	20 19 00.3	+0.1
	baz=60						
O09A	Fish Creek Ran	60.57	62	⇑P	P	20 19 00.6	+0.2
	baz=60						
M11A	Holland Ranch,	60.58	60	⇑P	P	20 19 00.8	+0.4
	baz=60						
J14A	Carey	60.66	57	⇑P	P	20 19 01.3	+0.4
	baz=60,SNR=6.1						
G17A	Pierce Place,	60.90	54	⇑P	P	20 19 02.8	+0.3
	baz=61						
Q08A	Gabbs	60.98	63	⇓P	P	20 19 02.9	-0.2
	baz=61,SNR=5.7						
H16A	Russell Place,	61.02	54	⇑P	P	20 19 03.8	+0.4
	baz=61						
KAPI	Kappang	61.05	220	P	P	20 19 02.8	-1.0
	comp=Z,1.2nm,0.4s,mb4.4,baz=103,slow=22,SNR=3.8						
F18A	Big Timber	61.07	53	⇑P	P	20 19 04.2	+0.5
	baz=61						
M12A	Wells	61.10	59	⇓P	P	20 19 04.3	+0.4
	baz=61						
L13A	Double Diamond	61.22	58	⇑P	P	20 19 05.6	+0.9
	baz=61						
ELK	Elko	61.34	60	P	P	20 19 06.1	+0.5
	comp=Z,1.5nm,0.8s,mb4.2,baz=265,slow=6.7,SNR=7.2						
ELK	Elko	61.34	60	P	P	20 19 06.1	+0.5
ELK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ELK	Elko	61.34	60	P	P	20 19 06.1	+0.5
K14A	Jones Ranch, D	61.36	57	⇓P	P	20 19 06.1	+0.4
	baz=61						
O11A	Cowboy Ranch,	61.50	61	⇑P	P	20 19 06.8	+0.2
	baz=61						
M13A	Montello	61.56	59	⇑P	P	20 19 07.5	+0.4
	baz=61						
K15A	Arbon	61.63	57	⇓P	P	20 19 08.5	+1.1
	baz=61						
L14A	Malta	61.65	58	⇑P	P	20 19 08.4	+0.8
	baz=61						
J16A	Bone	61.76	56	⇑P	P	20 19 09.1	+0.8
	baz=62						
RLMT	Red Lodge	61.82	53	⇑P	P	20 19 09.5	+0.8
	baz=62						
TPH	Tonopah	61.91	63	*e*P	P	20 19 02.1	-7.3
TPH				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
TPH	Tonopah	61.91	63	*e*P	P	20 19 02.0	-7.4
	comp=Z,5.2nm,0.7s,mb4.8						
M14A	Sheep Mountain	61.94	58	⇓P	P	20 19 09.9	+0.3
	baz=62						
O12A	Currie	61.94	60	⇑P	P	20 19 09.7	+0.1
	baz=62,SNR=5.3						
K16A	Soda Springs	62.06	56	⇑P	P	20 19 11.4	+1.1
	baz=62						
J17A	Brown Place, J	62.19	55	⇓P	P	20 19 11.9	+0.7
	baz=62						
KBL	Kabul	62.30	292	*e*P	P	20 19 11.8	-0.3
KBL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
KBL	Kabul	62.30	292	*e*P	P	20 19 11.8	-0.3
	comp=Z,2.3nm,1.0s,mb4.3						
M15A	Larsen Ranch,	62.47	58	⇑P	P	20 19 13.2	+0.1
	baz=62						
R11A	Troy Canyon, C	62.70	62	⇑P	P	20 19 14.4	-0.3
	baz=62						
P13A	Bates Ranch, G	62.90	60	⇑P	P	20 19 16.2	+0.2
	baz=63						
MPMC	Manual Prospec	63.07	65	⇓P	P	20 19 17.1	-0.1
	baz=63						
DUG	Dugway	63.10	59	⇑P	P	20 19 17.5	+0.2
	baz=63						
DUG	Dugway	63.10	59	*e*P	P	20 19 17.4	+0.1
DUG				*e*	pP	20 19 29.6	-1.0
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
DUG	Dugway	63.10	59	*e*P	P	20 19 17.4	0.0
	comp=Z,3.9nm,1.0s,mb4.5						
DUG				*e*	pP	20 19 29.6	-1.0
FURC	Furnace Creek,	63.18	65	⇑P	P	20 19 17.9	0.0
	baz=63						
BW06	Boulder Array	63.22	55	⇑P	P	20 19 17.9	-0.2
	baz=63						
PDAR	Pinedale Array	63.22	55	P	P	20 19 17.9	-0.1
	comp=Z,1.9nm,0.8s,mb4.3,baz=318,slow=3.0,SNR=15						
Q13A	Wheeler Ranch,	63.22	61	⇑P	P	20 19 18.3	+0.1
	baz=63						
TPNV	Topopah Spring	63.23	64	⇓P	P	20 19 18.0	-0.3
	baz=63						
TPNV	Topopah Spring	63.23	64	*e*P	P	20 19 17.7	-0.5
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
TPNV	Topopah Spring	63.23	64	*e*P	P	20 19 17.7	-0.5
	comp=Z,5.8nm,0.9s,mb4.7						
R12A	Pony Springs,	63.29	62	⇑P	P	20 19 18.5	-0.1
	baz=63						
P14A	Drum Mountains	63.35	60	⇑P	P	20 19 18.7	-0.3
	baz=63						
FRB	Frobisher Bay	63.40	20	P	P	20 19 17.7	-1.2
	comp=Z,5.1nm,1.0s,mb4.6,baz=34,slow=9.5,SNR=3.2						
FRB	Frobisher Bay	63.40	20	P	P	20 19 17.7	-1.2
FRB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
Q14A	Sevier Lake (B	63.63	60	⇑P	P	20 19 21.0	+0.1
	baz=63						
T11A	Corn Creek, Al	63.65	63	⇓P	P	20 19 21.0	0.0
	baz=63						
N17A	Moffit Pass	63.73	57	⇓P	P	20 19 21.4	0.0
	baz=64						
P15A	Leamington	63.82	59	⇓P	P	20 19 22.5	+0.3
	baz=64						
S13A	Holt Ranch, En	64.23	62	⇑P	P	20 19 25.2	+0.4
	baz=64						
TUQ	Turquoise Moun	64.43	65	⇓P	P	20 19 25.8	-0.4
	baz=64						
ULM	Lac du Bonnet	64.88	42	P	P	20 19 27.7	-1.1
	comp=Z,2.3nm,0.6s,mb4.4,baz=325,slow=10.0,SNR=4.2						
V12A	Nelson	64.89	64	⇑P	P	20 19 29.9	+0.8
	baz=65						
U13A	Pakoon Wash	64.95	63	⇑P	P	20 19 30.0	+0.5
	baz=65						
T14A	Hurricane	65.04	62	⇑P	P	20 19 30.6	+0.5
	baz=65						
SRU	San Rafael	65.14	59	⇓P	P	20 19 30.9	+0.2
	baz=65						
R16A	Teasdale	65.15	60	⇑P	P	20 19 31.5	+0.7
	baz=65						
RSSD	Black Hills	65.25	51	*e*P	P	20 19 30.6	-0.8
RSSD				*e*	pP	20 19 43.3	-1.4
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
RSSD	Black Hills	65.25	51	*e*P	P	20 19 30.6	-0.7
	comp=Z,10.0nm,1.1s,mb4.8						
RSSD				*e*	pP	20 19 43.3	-1.4
V13A	Grand Canyon W	65.32	63	⇑P	P	20 19 31.9	0.0
	baz=65						
Q18A	Rafter H Ranch	65.37	58	⇑P	P	20 19 31.9	-0.3
	baz=65						
U14A	Mt Trumbull	65.42	62	⇓P	P	20 19 32.8	+0.3
	baz=65						
L22A	Ellis Ranch, M	65.42	54	⇓P	P	20 19 32.7	+0.2
	baz=65						
PSI	Prapat	65.46	245	P	P	20 19 32.2	-0.9
	comp=Z,1.5nm,0.3s,mb4.5,baz=332,slow=11,SNR=3.6						
PSI	Prapat	65.46	245	P	P	20 19 32.2	-0.9
PSI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
S16A	Weppner Ranch,	65.46	60	⇓P	P	20 19 33.3	+0.5
	baz=65						
T15A	Red Dirt Ranch	65.48	61	⇑P	P	20 19 33.4	+0.5
	baz=65						
R17A	Hanksville Air	65.50	59	⇓P	P	20 19 32.9	-0.1
	baz=65						
P19A	Cripple Cowboy	65.66	57	⇑P	P	20 19 33.8	-0.3
	baz=65						
N21A	Black Mountain	65.70	56	⇑P	P	20 19 34.4	+0.1
	baz=65						
IRM	Iron Mountain	65.76	65	⇓P	P	20 19 34.8	-0.1
	baz=66						
M22A	Cedar Creek Ra	65.77	55	⇑P	P	20 19 35.3	+0.6
	baz=66						
MONP	Monument Peak	65.84	67	⇑P	P	20 19 35.4	0.0
	baz=66						
U15A	North Rim	65.93	62	⇓P	P	20 19 36.3	+0.4
	baz=66						
Q19A	Hogan Spring (	65.96	58	⇓P	P	20 19 35.8	-0.3
	baz=66						
R18A	Canyonlands Na	65.99	59	⇓P	P	20 19 36.2	0.0
	baz=66						
V14A	Boquillas Ranc	65.99	63	⇑P	P	20 19 36.7	+0.4
	baz=66						
N22A	Wattenberg Ran	66.26	55	⇓P	P	20 19 38.0	+0.1
	baz=66						
X13A	Yucca	66.27	64	⇑P	P	20 19 37.8	-0.2
	baz=66						
W14A	Seligman	66.29	63	⇑P	P	20 19 38.1	-0.1
	baz=66						
V15A	Kaibab Nationa	66.42	62	⇑P	P	20 19 39.3	+0.3
	baz=66						
W15A	Williams	66.80	63	⇑P	P	20 19 42.0	+0.5
	baz=67						
U16A	Tuba City	66.81	61	⇓P	P	20 19 41.5	0.0
	baz=67						
WUAZ	Wupatki	67.10	62	⇑P	P	20 19 43.4	0.0
	baz=67						
NOA	NORSAR Array B	67.11	342	P	P	20 19 42.5	-0.5
	comp=Z,0.8nm,0.7s,mb3.9,baz=27,slow=6.6,SNR=3.5						
NOA				PcP	PcP	20 20 12.9	+2.1
	comp=Z,1.2nm,0.8s,baz=26,slow=6.3,SNR=3.4						
NOA				LR	LR	20 53 37.1	
	comp=Z,60nm,19.0s,MS3.8,baz=70,slow=40						
NOA	NORSAR Array B	67.11	342	P	P	20 19 42.5	-0.5
NOA						20 20 12.9	
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,60nm,19.0s						
Y14A	Wickenburg	67.21	64	⇑P	P	20 19 44.0	-0.1
	baz=67						
X15A	Humboldt	67.30	63	⇑P	P	20 19 44.9	+0.3
	baz=67						
R21A	Cimarron	67.34	57	⇓P	P	20 19 45.0	+0.2
	baz=67						
Y15A	Casa Rosa Ranc	67.61	64	⇑P	P	20 19 47.0	+0.4
	baz=67						
X16A	Lo Mia Camp, P	67.82	63	⇓P	P	20 19 48.7	+0.8
	baz=68						
Y16A	Circle Bar Ran	68.17	63	⇓P	P	20 19 50.5	+0.4
	baz=68						
CTAO	Charters Tower	68.37	188	*e*P	P	20 19 50.1	-1.2
CTAO				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
CTAO	Charters Tower	68.37	188	*e*P	P	20 19 50.1	-1.1
	comp=Z,14nm,1.2s,mb4.8						
115A	Sonoran Desert	68.54	65	⇓P	P	20 19 53.0	+0.6
	baz=68						
Y17A	Roosevelt	68.67	63	⇓P	P	20 19 53.3	0.0
	baz=68						
X19A	St. Johns	69.08	62	⇓P	P	20 19 55.7	-0.1
	baz=69						
118A	Homack Ranch,	69.94	63	⇓P	P	20 20 00.9	-0.2
	baz=70						
WRAB	Tennant Creek	70.16	200	*e*P	P	20 20 01.4	-0.9
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
WRAB	Tennant Creek	70.16	200	*e*P	P	20 20 01.4	-0.9
	comp=Z,14nm,1.0s,mb4.8						
WB2	Warramunga Arr	70.16	200	*e*P	P	20 20 01.4	-1.0
WRA	Warramunga Arr	70.17	200	P	P	20 20 01.6	-0.9
	comp=Z,7.7nm,0.8s,mb4.7,baz=15,slow=6.2,SNR=44						
WRA	Warramunga Arr	70.17	200	P	P	20 20 01.6	-0.8
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
218A	Dragoon	70.36	64	⇑P	P	20 20 03.6	0.0
	baz=70						
ANMO	Albuquerque	70.36	59	⇑*e*P	pP	20 20 15.5	-1.6
318A	Bisbee	70.77	64	⇑P	P	20 20 05.8	-0.4
	baz=70						
FITZ	Fitzroy Crossi	70.82	209	*e*P	P	20 20 06.7	+0.2
	comp=Z,9.5nm,0.9s,mb4.7						
319A	Douglas	71.24	64	⇓P	P	20 20 09.0	0.0
	baz=71						
GNI	Garni	72.22	311	LR	LR	20 54 45.0	
	comp=Z,88nm,18.5s,MS4.1,baz=271,slow=38						
ASAR	Alice Springs	73.86	199	P	P	20 20 24.4	-0.1
	comp=Z,2.9nm,0.7s,mb4.3,baz=18,slow=5.5,SNR=21						
ASAR	Alice Springs	73.86	199	P	P	20 20 24.4	-0.1
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TXAR	Lajitas Array	76.06	62	P	P	20 20 36.9	-0.4
	comp=Z,2.6nm,0.7s,mb4.3,baz=296,slow=4.2,SNR=24						
TXAR	Lajitas Array	76.06	62	P	P	20 20 36.9	-0.4
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SADO	Sadowa	76.22	36	P	P	20 20 39.6	+1.6
	comp=Z,10nm,1.0s,mb4.7,baz=301,slow=3.3,SNR=3.1						
KHC	Kasperske Hory	77.28	335	*e*P	P	20 20 43.5	-0.4
GERES	GERESS Array B	77.50	335	P	P	20 20 47.2	+2.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=38,slow=6.8,SNR=5.9						
GERES				LR	LR	20 59 15.6	
	comp=Z,105nm,19.3s,MS4.2,baz=88,slow=39						
GERES	GERESS Array B	77.50	335	P	P	20 20 47.2	+2.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,105nm,19.3s						
BRTR	Keskin Array B	77.89	317	P	P	20 20 47.9	+0.4
	comp=Z,1.7nm,0.9s,mb4.0,baz=57,slow=4.6,SNR=5.6						
BRTR	Keskin Array B	77.89	317	P	P	20 20 47.9	+0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BAIF	Baives	78.79	341	*e*P	P	20 20 51.0	-1.2
STKA	Stephens Creek	80.54	191	LR	LR	20 51 30.4	
	comp=Z,50nm,20.3s,MS3.9,baz=23,slow=32						
PMOR	Pomariorio Ree	81.17	124	*e*T		21 50 20.1	
	comp=Z,12nm,0.2s						
LOR	Lormes	81.49	340	*e*P	P	20 21 03.9	-3.0
SSF	Saint Saulge	81.77	340	*e*P	P	20 21 05.6	-2.7
	comp=Z,6.8nm,0.9s,mb4.3						
AVF	Avril sur Loir	82.06	340	*e*P	P	20 21 08.8	-1.1
SMF	Signal de Mont	82.09	340	*e*P	P	20 21 08.9	-1.1
	comp=Z,28nm,1.1s,mb4.8						
PPT	Papeete	82.36	127	*e*LR	LR	20 46 59.9	
	comp=Z,82nm,22.5s						
LPL	La Plagne	82.45	338	*e*P	P	20 21 10.4	-1.5
	comp=Z,23nm,1.2s,mb4.7						
LPG	La Plagne	82.46	338	*e*P	P	20 21 11.3	-0.7
	comp=Z,31nm,1.2s,mb4.8						
EIL	Elat	85.39	310	LR	LR	21 03 02.7	
	comp=Z,66nm,19.0s,MS4.0,baz=297,slow=38						
TBI	Tubuai	87.19	130	*e*T		21 57 43.8	
	comp=Z,8.9nm,0.4s						
QSPA	South Pole Qui	137.95	180	PKP	PKPdf	20 28 13.0	+0.5
	comp=Z,2.5nm,0.9s,baz=254,slow=1.9,SNR=5.0						
QSPA	South Pole Qui	137.95	180	PKP	PKPdf	20 28 13.0	+0.5
SNAA	Sanae	154.19	196	*e*PKPdf	PKPdf	20 28 45.5	+5.7
SNAA				*e*		20 29 01.0	
VNA2	Neumayer--Watz	155.62	194	*e*PKPdf	PKPdf	20 28 50.1	+8.3
VNA2				*e*		20 29 08.3	
VNA3	Neumayer Olymp	155.70	193	*e*PKPdf	PKPab	20 29 02.1	-6.5
VNA3				*e*		20 29 08.0	
VNA1	Neumayer--Stat	156.01	194	*e*PKPdf	PKPab	20 29 03.9	-6.0
VNA1				*e*		20 29 09.2	

*IDC **14** 20:38:30.2±2.1, 3737N×7026E, h0^{km}, mb3.7/2, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.4/4, Error ellipse: s-maj=42.5km s-min=21.7km az=136.0*

*ISCJB **14** 20:38:35.4±2.6, 3831N±007×695E±0.1, h14^{km}±19^{km}, mb3.7/2, Error ellipse: s-maj=14.5km s-min=10.2km az=35.3*

*NNC **14** 20:38:36.3±1.9, 3832N×6951E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=19.3km s-min=11.3km az=169.0*

*NEIC **14** 20:38:36.2±0.8, 3842N×6938E, h10^{km}, Error ellipse: s-maj=20.1km s-min=9.9km az=117.0*

ISC 14 20:38:41.0±1.1, **3826N**±007×**696E**±01, **h55**^{km}±15^{km}, **n24**, σ1s**32**/27, **mb3.7**/2, **4C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.75	187	*e*Pn	Pn	20 39 37.0	+0.7
KK31	Karatay Array	4.88	8	⇑Pn	Pn	20 39 50.1	-1.7
	0.9nm,0.3s,baz=204,slow=16,SNR=40						
KK31				⇑Pg	Pn	20 40 04.7	+13
	4.8nm,0.6s,baz=190,slow=19,SNR=7.6						
KK31				⇑Lg		20 41 10.1	
	15nm,0.7s,baz=191,slow=29,SNR=6.3						
AML	Almayashu	4.96	38	*e*Pn	Pn	20 39 52.8	-0.1
EKS2	Erkin-Say	5.41	34	*e*Pn	Pn	20 40 01.8	+2.8
	4.8nm,0.6s						
UCH	Uchtor	5.44	42	Pn	Pn	20 40 04.5	+5.0
UCH				*e*Sn	Sn	20 41 02.0	+1.3
AAK	Ala-Archa	5.73	39	*e*Pn	Pn	20 40 01.9	-1.5
	10.0nm,0.8s						
TKM2	Tokmak 2	6.50	42	⇑Pn	Pn	20 40 13.8	-0.2
	6.9nm,0.9s						
TKM2				⇓Sn	Sn	20 41 30.4	+3.7
	9.8nm,0.8s						
TKM2	Tokmak 2	6.50	42	*e*Pn	Pn	20 40 12.9	-1.0
MK31	Makanchi Array	12.63	44	P	Pn	20 41 37.5	-0.2
	0.1nm,0.3s,baz=210,slow=10,SNR=5.1						
MK31	Makanchi Array	12.63	44	*e*Pn	Pn	20 41 35.6	-2.1
MKAR	Makanchi Array	12.63	44	Pn	Pn	20 41 37.4	-0.3
	0.1nm,0.3s,baz=228,slow=14,SNR=8.2						
MKAR	Makanchi Array	12.63	44	Pn	Pn	20 41 37.4	-0.3
AB01	Akbulak array	13.02	331	⇓P	Pn	20 41 39.8	-3.2
	1.1nm,0.7s						
KURK	Kurchatov	13.99	24	Pn	Pn	20 41 52.3	-3.8
	0.0nm,0.3s,baz=212,slow=12,SNR=3.7						
KURK				Lg		20 46 09.2	
	0.0nm,0.3s,baz=340,slow=17,SNR=3.5						
AKTK	Aktyubinsk	14.71	330	Pn	Pn	20 42 09.8	+4.1
AKTO	Aktyubinsk	14.71	330	⇓P	Pn	20 42 05.8	+0.1
	0.8nm,1.2s						
AKTO	Aktyubinsk	14.71	330	Pn	Pn	20 42 09.8	+4.1
	0.4nm,0.3s,baz=128,slow=9.3,SNR=5.5						
BVA0	Borovoye Array	14.77	2	P	Pn	20 42 06.9	+0.5
	0.4nm,0.8s,baz=160,slow=11,SNR=9.1						
BVAR	Borovoye Array	14.77	2	Pn	Pn	20 42 08.4	+1.9
	0.3nm,0.3s,baz=166,slow=10,SNR=7.7						
BRVK	Borovoye	14.80	2	*e*Pn	Pn	20 42 06.2	-0.7
	3.0nm,0.9s						
ZALV	Zalesovo Beam	18.83	29	P	Pn	20 42 54.4	-2.6
	0.2nm,0.3s,baz=214,slow=12,SNR=4.4						
LSA	Lhasa	19.75	109	P	Pn	20 43 07.8	-0.4
TORD	Torodi Ar. Bea	64.70	267	P	P	20 49 13.9	+0.3
	1.6nm,1.1s,mb4.0,baz=45,slow=5.0,SNR=5.5						
YKA	Yellowknife Ar	79.53	2	P	P	20 50 41.7	+0.3
	0.3nm,0.5s,mb3.5,baz=349,slow=5.6,SNR=7.4						

*BJI **14** 20:47:18.0, 830S×11240E, h97^{km}, mB5.4, mb4.9*

*ISCJB **14** 20:47:19.4±0.3, 843S±004×11239E±002, h121^{km}±3^{km}, mb4.5/41, Error ellipse: s-maj=7.5km s-min=3.8km az=12.9*

*NEIC **14** 20:47:19.1±1.0, 825S×11236E, h97^{km}±9^{km}, mb4.6/22, Error ellipse: s-maj=9.3km s-min=6.4km az=214.0*

NEIC Felt [IV] at Blitar; [III] at Karangkates, Pacitan, Ponorogo and Tulungagung.

*DJA **14** 20:47:20, 865S×11236E, h65^{km}, Mw5.3/14*

*IDC **14** 20:47:21.4±3.2, 819S×11249E, h113^{km}±29^{km}, mb4.0/16, mb1 4.1/17, mb1mx4.1/22, mbtmp4.1/17, MS3.1/1, Ms1 3.1/1, ms1mx2.6/32, Error ellipse: s-maj=19.5km s-min=12.1km az=62.0*

ISC 14 20:47:20.4±0.3, **846S**±004×**11239E**±002, **h113**^{km}±3^{km}, **n113**, σ1s**35**/111, **mb4.5**/41, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRKI	Karangkates	0.31	12	P	Pn	20 47 35.9	-0.7
KRKI				S	Sn	20 47 47.3	-1.4
SJI	Sawahan	0.95	320	P	Pn	20 47 40.0	-1.3
UGM	Wanagama	1.92	286	P	Pn	20 47 52.0	-0.6
UGM				S	Sn	20 48 16.9	-0.3
KMMI	Kalianget	2.10	48	P	Pn	20 47 54.4	-0.4
KMMI				S	Sn	20 48 23.1	+1.9
NBBI	Negara	2.21	88	P	Pn	20 47 56.1	-0.1
NBBI				S	Sn	20 48 23.5	-0.2
SMRI	Semarang	2.38	306	P	Pn	20 47 58.4	-0.1
BWJI	Bawean	2.61	6	P	Pn	20 48 02.5	+1.1
IGBI	Denpasar	2.75	98	P	Pn	20 48 01.8	-1.4
DNP	Denpasar	2.80	95	P	Pn	20 48 04.3	+0.4
KHKI	Kahang-Kahang	3.19	89	P	Pn	20 48 08.0	-1.0
KHKI				S	Sn	20 48 46.1	-0.4
JCJI	Jatiwangi	4.53	295	P	Pn	20 48 26.1	-0.8
LEM	Lembang	5.00	289	P	Pn	20 48 34.2	+0.9
	497nm,1.1s,6μm1.9nm						
BBKI	Banjar Baru	5.53	26	P	Pn	20 48 42.4	+1.9
	575nm,0.7s,5μm2.1nm						
PBKI	Pangkalan Bun	5.76	353	P	Pn	20 48 46.0	+2.4
	598nm,1.1s						
CBJI	Citeko	5.85	290	P	Pn	20 48 43.2	-1.6
	1μm,0.8s						
DBJI	Dramaga	5.90	288	P	Pn	20 48 46.3	+0.8
	459nm,0.9s,5μm1.9nm						
SKJI	Sukabumi	5.96	284	P	Pn	20 48 46.3	+0.1
PLKI	Palangkaraya	6.38	14	P	Pn	20 48 53.7	+1.6
XMIS	Christmas Isla	6.94	253	*e*P	Pn	20 48 56.8	-2.8
XMIS				*e*S	Sn	20 50 03.7	-13
XMIS	Christmas Isla	6.94	253	P	Pn	20 48 57.3	-2.3
	1μm,0.9s						
TPI	Tanjungpandan	7.37	320	P	Pn	20 49 07.2	+1.8
	14nm,1.1s,250nm0.1nm						
WSI	Waingapu	7.91	99	P	Pn	20 49 12.2	-0.5
	826nm,0.6s,6.6nm						
KAPI	Kappang	8.08	65	P	Pn	20 49 14.5	-0.5
	12nm,0.3s,baz=260,slow=10,SNR=39						
KAPI				S	Sn	20 50 42.7	-1.9
	1.2nm,0.3s,baz=233,slow=18,SNR=1.5						
KAPI				LR	LR	20 52 45.1	
	comp=Z,114nm,18.8s,baz=237,slow=41						
KAPI	Kappang	8.08	65	P	Pn	20 49 14.5	-0.5
	54nm,1.0s,812nm						
KLI	Kotabumi	8.29	295	P	Pn	20 49 20.9	+3.0
STKI	Sintang	8.52	354	P	Pn	20 49 23.8	+2.8
	174nm,0.9s,2μm						
KSM	Kuching	10.08	348	*e*Pn	Pn	20 49 42.5	+0.3
	42nm,1.0s						
KSM	Kuching	10.08	348	P	Pn	20 49 43.9	+1.7
	60nm,1.1s						
SBUM	Sibu	10.84	359	P	Pn	20 49 54.8	+2.4
	22nm,1.3s						
KSI	Kapahiang	10.85	296	P	Pn	20 49 52.5	0.0
	589nm,0.8s,5μm						
KDI	Kendari	11.11	67	P	Pn	20 49 58.0	+2.0
	31nm,1.0s						
BATI	Baumata	11.26	100	P	Pn	20 49 56.9	-1.1
	35nm,0.3s,baz=331,slow=1.2,SNR=54						
BATI				S	Sn	20 51 59.6	-2.4
	25nm,0.3s,baz=337,slow=14,SNR=6.4						
BATI	Baumata	11.26	100	P	Pn	20 49 56.0	-2.0
	75nm,0.7s,960nm						
PDSI	Padang	14.04	302	P	Pn	20 50 32.3	-2.2
	67nm,0.5s,2μm						
PPI	Padang Panjang	14.35	303	P	Pn	20 50 40.4	+2.0
MBWA	Marble Bar	14.48	151	*e*Pn	Pn	20 50 36.2	-3.7
	14nm,0.4s						
MBWA				*e*Sn	Sn	20 53 00.0	-20
MBWA	Marble Bar	14.48	151	P	Pn	20 50 39.5	-0.5
MYLDM	Lahad Datu	14.86	24	P	Pn	20 50 49.3	+4.5
KKM	Kota Kinabalu	14.91	15	*e*Pn	Pn	20 50 46.7	+1.2
COCO	West Island	15.74	255	Pn	Pn	20 50 57.1	+1.2
	54nm,0.7s						
FITZ	Fitzroy Crossi	16.06	128	*e*P	Pn	20 50 59.8	0.0
	27nm,0.6s						
FITZ				*e*S	S	20 53 40.7	-23
FITZ	Fitzroy Crossi	16.06	128	P	Pn	20 51 00.9	+1.1
	51nm,1.0s						
AAI	Ambon	16.42	74	P	Pn	20 51 07.0	+2.7
	52nm,1.2s,840nm						
LBMI	Labuha	16.94	63	P	Pn	20 51 14.4	+3.7
	48nm,0.8s,688nm						
KAKA	Kakadu	20.16	104	*e*P	x	20 51 25.5	
	22nm,0.4s						
KAKA				*e*S	x	20 54 55.6	
KAKA	Kakadu	20.16	104	P	x	20 51 29.7	
KLBR	Kellerberrin	23.55	168	*e*P	pP	20 52 39.3	-4.3
	51nm,1.6s						
KLBR				*e*S	S	20 56 41.3	+15
MUN	Mundaring	23.67	172	*e*P	pP	20 52 42.0	-2.8
MUN				*e*S	Sx	20 56 49.8	
WRA	Warramunga Arr	24.11	121	P	P	20 52 27.3	+1.5
	12nm,0.4s,mb4.5,baz=295,slow=12,SNR=194						
WRA				S	S	20 56 55.8	+20

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.3nm,0.7s,baz=291,slow=24,SNR=5.5						
WRAB	Tennant Creek	24.12	121	eP	P	20 52 27.3	+1.5
	12nm,0.4s,mb4.6						
WRAB				eS	S	20 56 55.1	+19
WRAB	Tennant Creek	24.12	121	P	P	20 52 27.7	+1.9
WB2	Warramunga Arr	24.12	121	eP	P	20 52 27.3	+1.4
WB2				eS	S	20 56 52.5	+17
ASAR	Alice Springs	25.56	129	P	P	20 52 40.5	+1.6
	7.3nm,0.5s,mb4.4,baz=303,slow=8.6,SNR=133						
ASAR				S	S	20 57 33.0	+35
	3.1nm,0.8s,baz=304,slow=22,SNR=8.5						
FORT	Forrest	26.60	149	eP	pP	20 53 16.1	+3.3
	17nm,0.6s						
FORT				eS	Sx	20 57 53.2	
CM31	Chiang Mai Arr	29.86	334	P	P	20 53 12.0	-5.3
CMAR	Chiang Mai Arr	29.86	334	P	P	20 53 17.4	+0.1
	1.8nm,0.7s,mb3.8,baz=168,slow=7.8,SNR=16						
CHTO	Chiang Mai	30.17	334	eP	P	20 53 20.2	+0.2
	1.6nm,0.8s,mb3.7						
CTA	Charters Tower	34.72	113	P	P	20 54 00.5	+0.7
	3.0nm,0.6s,mb4.3,baz=335,slow=20,SNR=3.4						
CTA	Charters Tower	34.72	113	P	P	20 54 00.5	+0.7
CTAO	Charters Tower	34.72	113	P	P	20 54 00.3	+0.6
	15nm,1.2s,mb4.7						
STKA	Stephens Creek	35.76	135	eP	P	20 54 11.4	+2.8
	3.1nm,0.3s,mb4.7						
STKA	Stephens Creek	35.76	135	P	P	20 54 11.2	+2.6
	3.4nm,0.3s,mb4.7,baz=302,slow=7.4,SNR=30						
SHL	Shillong	39.27	330	eP	P	20 54 39.0	+0.8
ODAN	Odare	42.67	326	eP	P	20 55 05.6	-0.4
	18nm,0.4s,mb5.2						
TAPN	Taplejung	42.88	327	eP	P	20 55 08.0	+0.3
	9.9nm,0.3s,mb5.0						
LSA	Lhasa	43.09	333	eP	P	20 55 10.6	+1.2
LSA	Lhasa	43.09	333	eP	P	20 55 10.0	+0.6
	6.7nm,0.5s,mb4.6						
RAMN	Ramite	43.18	325	eP	P	20 55 10.1	0.0
	14nm,0.4s,mb5.1						
GUN	Gumba	44.33	326	eP	P	20 55 19.3	0.0
	26nm,0.4s,mb5.3						
PKI	Pulchoki	44.33	325	eP	P	20 55 18.7	-0.6
DMN	Daman	44.53	325	eP	P	20 55 20.6	-0.4
	9.3nm,0.3s,mb5.0						
KKN	Kakani	44.57	325	eP	P	20 55 21.3	0.0
GKN	Gorkha	45.10	324	eP	P	20 55 24.6	-0.9
	19nm,0.3s,mb5.3						
KOLN	Koldanda	45.53	323	eP	P	20 55 27.5	-1.4
	7.2nm,0.3s,mb4.9						
DANN	Dangsing	45.87	324	eP	P	20 55 30.7	-0.8
	17nm,0.5s,mb5.0						
KSRS	Korea Array	47.93	17	P	P	20 55 46.9	-0.6
	2.7nm,0.9s,mb4.1,baz=197,slow=8.6,SNR=5.0						
MAJO	Matsushiro	50.91	27	eP	P	20 56 08.0	-2.1
	6.3nm,0.7s,mb4.8						
MJAR	Matsushiro Arr	50.91	27	P	P	20 56 08.6	-1.5
	5.8nm,0.8s,mb4.7,baz=203,slow=8.5,SNR=19						
ULN	Ulaanbaatar	56.28	356	eP	P	20 56 48.3	-0.7
	2.7nm,0.8s,mb4.3						
SONM	Songino Array	56.30	355	P	P	20 56 49.0	-0.2
	1.3nm,0.3s,mb4.4,baz=177,slow=8.7,SNR=21						
SONM				PcP	PcP	20 57 44.0	-1.2
	0.8nm,0.3s,baz=178,slow=4.1,SNR=5.5						
KBL	Kabul	59.24	319	eP	P	20 57 07.6	-2.4
	1.9nm,0.4s,mb4.5						
TKM2	Tokmak 2	61.13	330	eP	P	20 57 22.0	-0.8
	5.7nm,0.9s,mb4.6						
MK31	Makanchi Array	61.19	337	eP	P	20 57 22.1	-0.9
MKAR	Makanchi Array	61.19	337	P	P	20 57 22.4	-0.6
	2.7nm,0.3s,mb4.7,baz=152,slow=6.9,SNR=68						
MKAR	Makanchi Array	61.19	337	P	P	20 57 22.4	-0.6
AAK	Ala-Archa	61.48	329	eP	P	20 57 25.1	0.0
	4.7nm,1.1s,mb4.4						
AML	Almayashu	61.53	328	eP	P	20 57 24.9	-0.6
	4.8nm,0.7s,mb4.6						
EKS2	Erkin-Say	61.87	329	eP	P	20 57 27.1	-0.6
	3.9nm,0.8s,mb4.5						
OPO	Ambohidratompo	63.90	254	P	P	20 57 44.6	+2.9
	1.7nm,0.6s,mb4.0,baz=102,slow=9.2,SNR=6.5						
KURK	Kurchatov	65.80	337	eP	P	20 57 51.9	-1.4
	2.7nm,0.6s,mb4.2						
ZAA0	Zalesovo Array	66.39	343	eP	P	20 57 54.7	-2.3
ZALV	Zalesovo Beam	66.39	343	P	P	20 57 55.5	-1.5
	3.1nm,0.4s,mb4.5,baz=155,slow=5.3,SNR=22						
MAW	Mawson	67.60	198	eP	P	20 57 59.2	-5.3
	2.1nm,1.0s,mb3.9						
PETK	Petropavlovsk-	72.37	27	P	P	20 58 33.3	-0.6
	2.6nm,0.7s,mb4.2,baz=213,slow=0.6,SNR=11						
ARU	Arti	78.30	333	eP	P	20 59 05.7	-2.0
	4.3nm,0.8s,mb4.2						
TIXI	Tiksi	80.69	5	eP	P	20 59 18.8	-1.6
	14nm,1.0s,mb4.7						
KIV	Kislovodsk	81.56	317	P	P	20 59 23.6	-2.0
LSZ	Lusaka	82.25	256	eP	P	20 59 31.0	+1.1
	1.5nm,0.6s,mb4.0						
BOSA	Boshof	83.50	242	P	P	20 59 38.5	+2.4
	1.2nm,0.6s,mb3.9,baz=124,slow=3.8,SNR=3.8						
LBTB	Lobatse	83.58	246	P	P	20 59 39.3	+2.7
	5.0nm,1.0s,mb4.3						
MMAI	Mount Meron Ar	83.80	305	P	P	20 59 39.2	+1.7
	2.0nm,0.7s,mb4.0,baz=106,slow=11,SNR=4.3						
BRTR	Keskin Array B	86.80	311	P	P	20 59 52.0	-0.2
	2.2nm,0.8s,mb4.1,baz=129,slow=7.6,SNR=8.3						
SNAA	Sanae	89.70	197	P	P	21 00 07.2	+1.8
	5.7nm,1.3s,mb4.5						
AKASG	Malin Array Be	92.17	321	P	P	21 00 16.2	-1.0
	0.7nm,0.4s,mb4.2,baz=93,slow=3.8,SNR=4.1						
YKA	Yellowknife Ar	116.28	22	PKP	PKPdf	21 05 50.6	+0.5
	0.4nm,0.5s,baz=318,slow=1.8,SNR=8.3						
NVAR	Mina Array Bea	125.64	48	PKP	PKPdf	21 06 11.2	+2.3
	0.6nm,0.6s,baz=255,slow=0.3,SNR=3.5						
NVAR				pPKP	pPKPdf	21 06 38.0	-1.6
	0.6nm,0.7s,baz=235,slow=4.9,SNR=2.9						
PDAR	Pinedale Array	129.85	40	PKP	PKPdf	21 06 19.1	+2.3
	0.2nm,0.4s,baz=268,slow=2.6,SNR=2.1						
CPUP	Villa Florida	144.00	196	PKP	PKPdf	21 06 44.0	+0.7
	0.9nm,0.3s,baz=14,slow=20,SNR=4.3						
CPUP	Villa Florida	144.00	196	ePKPdf	PKPdf	21 06 43.7	+0.3
MIAR	Mount Ida	144.76	39	ePKPdf	PKPdf	21 06 43.8	-0.6
WCI	Wyandotte Cave	145.91	27	ePKPdf	PKPdf	21 06 47.3	+1.0
SSPA	Standing Stone	146.68	14	ePKPbc	PKPbc	21 06 49.7	+0.4
BDFB	Brasilia	149.17	219	PKPbc	PKPbc	21 06 58.4	+1.8
	1.0nm,0.4s,baz=93,slow=14,SNR=3.1						

IDC 14 21:05:40.5±43.0,1647S×17378W,h0km,mb4.5/3, mb1 4.6/3,mb1mx3.9/16,mbtmp4.5/3,Error ellipse: s-maj=817.4km s-min=168.3km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.19	241	P	P	21 13 43.5	+0.1
	3.6nm,0.7s,baz=101,slow=9.0,SNR=7.1						
WRA	Warramunga Arr	49.25	258	P	P	21 14 30.9	-0.4
	1.3nm,0.5s,baz=95,slow=7.0,SNR=61						
ASAR	Alice Springs	49.44	253	P	P	21 14 32.8	+0.1
	11nm,0.6s,baz=88,slow=8.5,SNR=201						

IDC 14 21:20:53.0±41.0,1595S×17089W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.8/17,mbtmp4.1/3,Error ellipse: s-maj=804.8km s-min=181.9km az=80.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.87	241	P	P	21 29 17.9	+0.5
	1.3nm,0.5s,baz=105,slow=11,SNR=4.9						
WRA	Warramunga Arr	52.08	257	P	P	21 30 04.7	-0.4
	0.4nm,0.4s,baz=96,slow=6.9,SNR=25						
ASAR	Alice Springs	52.24	252	P	P	21 30 06.3	-0.1
	5.4nm,0.5s,baz=89,slow=8.2,SNR=107						

IDC 14 21:44:24.1±46.0,1407S×17072W,h0km,mb4.0/3, mb1 4.1/3,mb1mx3.7/17,mbtmp4.0/3,Error ellipse: s-maj=907.4km s-min=187.0km az=78.0,Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	46.94	239	P	P	21 52 55.8	-1.0
	1.7nm,0.7s,baz=82,slow=7.1,SNR=4.6						
WRA	Warramunga Arr	52.67	256	P	P	21 53 40.1	-0.5
	0.5nm,0.6s,baz=90,slow=6.6,SNR=12						
ASAR	Alice Springs	52.99	251	P	P	21 53 43.9	+1.0
	2.3nm,0.6s,baz=87,slow=8.2,SNR=42						

TEH 14 21:55:24.3,3730N×4763E,h14km,ML4.5
IDC 14 21:55:59.9±0.7,37.12N×4761E,h0km,mb4.3/21, mb1 4.4/24,mb1mx4.3/31,mbtmp4.3/24,ML4.1/1,MS3.3/7, Ms1 3.3/7,ms1mx3.1/39,Error ellipse: s-maj=15.4km s-min=11.2km az=16.0
BJI 14 21:56:01.1,3730N×4770E,h32km,mB5.0,mb4.9,Ms5.2, Msz4.9
ISCJB 14 21:56:01.2±0.2,3736N±002×4767E±002,h10km, mb4.4/65,MS3.3/4,Error ellipse: s-maj=3.6km s-min=2.1km az=37.0
CSEM 14 21:56:02.9±0.0,3731N×4759E,h30km,mb4.6/36,Error ellipse: s-maj=1.9km s-min=0.9km az=32.0
MOS 14 21:56:03.3±0.8,37.17N×4754E,h33km,mb4.6/37,Error ellipse: s-maj=8.6km s-min=5.8km az=123.0
THR 14 21:56:04.3±1.5,3723N×4768E,h33km±12km,ML4.4
NEIC 14 21:56:04.1,3727N×4770E,h33km,mb4.6/36, ML4.4(THR),MN4.5(TEH),After THR.
NEIC Felt at Mianeh.
NNC 14 21:56:06.4±2.6,3775N×4797E,h0km,mb4.1,Error ellipse: s-maj=42.1km s-min=22.5km az=88.0
ISC 14 21:56:03.8±0.5,3732N±002×4765E±002,h17km±3km, n283,σ1.05/305,mb4.4/65,MS3.3/4,15C-9D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	Sarab	0.50	2	Pg	Pg	21 56 13.8	-0.1
ISRB				Pn	Sg	21 56 21.6	+0.9
ISRB	Sarab	0.50	2	ePg	Pg	21 56 13.9	0.0
ISRB				eSg	Sg	21 56 21.6	+0.9
ISRB				e		21 56 25.5	
IBST	Bostanabad	0.71	303	ePg	Pg	21 56 16.5	-1.2
IBST				e		21 56 27.6	
ZNJK	Zanjan	1.06	128	ePg	Pg	21 56 23.1	-1.2
IHRS	Heris	1.10	335	Pg	Pg	21 56 24.2	-1.0
IHRS				Sg	Sg	21 56 40.1	+0.4
IHRS	Heris	1.10	335	ePg	Pg	21 56 24.2	-1.0
IHRS				e		21 56 24.7	
IHRS				eSg	Sg	21 56 40.2	+0.5
ITBZ	Tabriz	1.50	308	ePn	Pn	21 56 30.6	+0.7
ITBZ				e		21 56 32.1	
GRMI	Germi	1.50	7	ePg	Pg	21 56 31.9	-0.8
GRMI				eSg	Sg	21 56 54.7	+2.4
GRMI	Germi	1.50	7	ePg	Pg	21 56 31.9	-0.8
	SNR=96						
GRMI				eSg	Sg	21 56 52.5	+0.2
	SNR=96						
GRMI	Germi	1.50	7	Pg	Pg	21 56 31.0	-1.7
GRMI				Sg	Sg	21 56 52.0	-0.3
ISHB	Shabestar	1.87	301	Pn	Pn	21 56 36.8	+1.7
ISHB				Sn	Sn	21 56 59.0	+0.7
ISHB	Shabestar	1.87	301	ePn	Pn	21 56 36.9	+1.8
ISHB				eSn	Sn	21 56 59.1	+0.8
ISHB				e		21 57 06.3	
GLBA	Clilabad	2.01	17	P	Pn	21 56 39.5	+2.6
	SNR=101						
IMRD	Marand	2.07	313	Pn	Pn	21 56 39.9	+2.1
IMRD	Marand	2.07	313	ePn	Pn	21 56 40.0	+2.2
IMRD				e		21 57 15.4	
SNGE	Sanandaj	2.24	186	ePn	Pn	21 56 40.3	+0.2
SNGE				AML	AML	21 57 11.8	
	comp=E,2μm,0.6s						
SNGE	Sanandaj	2.24	186	Pn	Pn	21 56 40.0	-0.1
ILIN	Lien	2.46	193	Pn	Pn	21 56 42.8	-0.3
ILIN	Lien	2.46	193	ePn	Pn	21 56 42.9	-0.2
ILIN				e		21 57 19.8	
NAX	Nakhchivan	2.51	318	P	Pn	21 56 48.5	+4.7
	SNR=66						
IRAZ	Razeghan	2.66	135	Pn	Pn	21 56 45.2	-0.6
IRAZ				eSn	Sn	21 57 18.2	+0.6
IRAZ	Razeghan	2.66	135	ePn	Pn	21 56 45.2	-0.6
IRAZ				eSn	Sn	21 57 18.2	+0.6
IRAZ				e		21 57 27.1	
IDHR	Dehrash	2.81	202	ePn	Pn	21 56 48.5	+0.6
IDHR				e		21 57 40.1	
IVIS	Veis	2.86	193	ePn	Pn	21 56 49.3	+0.6
IVIS				e		21 57 33.1	
IMHD	Mahdasht	2.93	123	ePn	Pn	21 56 49.0	-0.6
IMHD				eSn	Sn	21 57 24.6	+0.2
IMHD	Mahdasht	2.93	123	ePn	Pn	21 56 49.0	-0.6
IMHD				e		21 57 03.2	
IMHD				eSn	Sn	21 57 23.6	-0.8
THKV	Tehran--Karaj	2.96	117	ePn	Pn	21 56 50.6	+0.7
MAKU	Maku	3.09	312	ePn	Pn	21 56 54.1	+2.4
MAKU	Maku	3.09	312	Pn	Pn	21 56 54.0	+2.2
IGHG	Ghaleghazi	3.11	197	Pn	Pn	21 56 52.5	+0.4
IGHG	Ghaleghazi	3.11	197	ePn	Pn	21 56 52.6	+0.5
IGHG				e		21 57 04.1	
CHTH	Charan	3.13	116	ePn	Pn	21 56 52.3	-0.2
CHTH				AML	AML	21 57 43.8	
	comp=N,704nm,0.6s						
CHTH	Charan	3.13	116	ePn	Pn	21 56 52.8	+0.4
	SNR=54						
CHTH	Charan	3.13	116	Pn	Pn	21 56 52.0	-0.4
CUKT	Cukurca	3.22	270	ePN	Pn	21 56 56.3	+2.7
ASAO	Ashtian	3.37	144	ePn	Pn	21 56 55.9	+0.2
ASAO	Ashtian	3.37	144	Pn	Pn	21 56 55.0	-0.7
CLDR	Caldiran	3.45	303	ePN	Pn	21 56 59.9	+3.1
GANJ	Ganja	3.48	343	P	Pn	21 57 01.0	+3.9
	SNR=23						
VANB	Van	3.60	292	ePN	Pn	21 57 02.7	+3.9
GNI	Garni	3.62	322	Pn	Pn	21 57 02.5	+3.4
	comp=N,3.8nm,0.3s,baz=191,slow=1.4,SNR=21						
GNI				Pg	Pg	21 57 09.5	-3.8
	comp=N,30nm,0.3s,baz=148,slow=1.8,SNR=133						
GNI				Lg		21 57 59.8	
	comp=N,12nm,0.3s,baz=22,slow=21,SNR=2.0						
GNI	Garni	3.62	322	ePn	Pn	21 57 08.5	+9.4
MSL	Mosul	3.75	257	ePn	Pn	21 57 01.0	+0.1
MSL				eSn	Sn	21 57 47.0	+2.4
MSL				i Sb	Sb	21 58 03.0	+8.3
MSL				i Sg	Sg	21 58 13.0	+8.7
DAMV	Damavand	3.87	115	ePn	Pn	21 57 03.1	+0.5
DAMV				AML	AML	21 58 05.5	
	comp=E,688nm,0.6s						
DAMV				AML	AML	21 58 10.5	
	comp=N,751nm,0.5s						
DAMV	Damavand	3.87	115	Pn	Pn	21 57 03.0	+0.4
SEKA	Sheki	3.90	355	P	Pn	21 57 05.3	+2.4
	SNR=7.7						
IPRN	Peran	3.92	105	Pn	Pn	21 57 03.4	+0.2
IPRN	Peran	3.92	105	ePn	Pn	21 57 03.5	+0.3
IPRN				e		21 58 12.7	
IDMV	Damavand	3.94	115	ePn	Pn	21 57 04.2	+0.7
IDMV				e		21 57 24.4	
IVRN	Varamin	4.04	124	ePn	Pn	21 57 04.5	-0.3
IVRN				e		21 57 22.1	
GHVR	GHOM	4.10	133	ePn	Pn	21 57 05.3	-0.4
GHVR				AML	AML	21 58 20.9	
	comp=E,482nm,0.8s						
GHVR				AML	AML	21 58 23.4	
	comp=N,645nm,0.6s						
GHVR	GHOM	4.10	133	ePn	Pn	21 57 05.2	-0.5
	SNR=54						
GHVR	GHOM	4.10	133	Pn	Pn	21 57 05.0	-0.7
AGRB	Hanur-Agry	4.29	303	ePN	Pn	21 57 14.2	+5.9
IALA	Alasht	4.33	105	Pn	Pn	21 57 09.3	+0.4
IALA	Alasht	4.33	105	ePn	Pn	21 57 09.4	+0.5
IALA				e		21 57 29.2	
IFIR	Firoozkooh	4.44	111	Pn	Pn	21 57 10.9	+0.5
IFIR	Firoozkooh	4.44	111	ePn	Pn	21 57 11.0	+0.6
IFIR				e		21 58 30.5	
DGRG	David-gareji	4.48	338	P	Pg	21 57 23.6	-6.1
DGRG				S	Sg	21 58 27.1	-0.6
ILAS	Lasjerd	4.71	113	ePn	Pn	21 57 15.2	+1.2
ILAS	Lasjerd	4.71	113	Pn	Pn	21 57 15.1	+1.1
ILAS	Lasjerd	4.71	113	ePn	Pn	21 57 15.2	+1.2
ISFB	Sefidab	4.77	127	Pn	Pn	21 57 14.1	-0.7
ISFB	Sefidab	4.77	127	ePn	Pn	21 57 14.2	-0.6
ISFB				e		21 57 32.8	
MTA	Mtatsminda	4.89	334	P	Pg	21 57 30.8	-6.7
MTA				S	Sg	21 58 36.5	-4.4
IKIA	Kiasar	4.97	101	Pn	Pn	21 57 18.7	+1.0
IKIA	Kiasar	4.97	101	ePn	Pn	21 57 18.8	+1.1
IKIA				e		21 57 41.5	
IGLO	Ghaloghah	5.02	97	Pn	Pn	21 57 18.7	+0.3
IGLO	Ghaloghah	5.02	97	ePn	Pn	21 57 18.7	+0.3
IGLO				e		21 58 50.5	
IKLH	Kolahrood	5.13	140	Pn	Pn	21 57 20.0	+0.2
IKLH	Kolahrood	5.13	140	ePn	Pn	21 57 20.1	+0.3
IKLH				e		21 57 44.2	
IPIR	Pirpir	5.34	149	ePn	Pn	21 57 23.3	+0.6
IPIR				e		21 57 49.4	
IANJ	Anjilo	5.38	108	ePn	Pn	21 57 23.9	+0.6
IANJ	Anjilo	5.38	108	ePn	Pn	21 57 23.9	+0.6
GOR	Gori	5.40	331	P	Pg	21 57 40.7	-6.5
GOR				S	Sg	21 58 55.8	-1.3
EZM	Erzurum	5.56	300	ePN	Pn	21 57 30.4	+4.8
IZEF	Zefreh	5.85	138	Pn	Pn	21 57 30.1	+0.4
IZEF	Zefreh	5.85	138	ePn	Pn	21 57 30.2	+0.5
IZEF				e		21 58 47.2	
ONI	Oni	6.16	330	P	Pg	21 57 53.2	-8.5
ONI				S	Sg	21 59 24.3	+2.8
NASN	Na'in	6.19	135	ePn	Pn	21 57 35.1	+0.7
NASN	Na'in	6.19	135	Pn	Pn	21 57 35.0	+0.6
ISAD	Sadrabad	7.34	136	ePn	Pn	21 57 50.5	+0.3
ISAD				e		22 00 18.1	
ICHK	Chekchek	7.52	130	ePn	Pn	21 57 51.8	-0.9
ICHK				e		21 58 36.7	
KIV	Kislovodsk	7.62	332	P	Pn	21 58 05.0	+11
KIV				pmax	pmax		
	comp=Z,12nm,1.8s						
KIV	Kislovodsk	7.62	332	ePn	Pn	21 58 01.4	+7.4
ISFR	Sfrayin	8.27	89	Pn	Pn	21 58 02.6	-0.3
ISFR	Sfrayin	8.27	89	ePn	Pn	21 58 02.7	-0.2
ISFR				e		21 58 13.7	
IKRD	Kardeh	8.71	90	ePn	Px	21 58 20.1	
IKRD				e		21 58 29.8	
IEMG	Emamgholi	8.77	86	Pn	Pn	21 58 09.3	-0.4
IEMG	Emamgholi	8.77	86	ePn	Pn	21 58 09.4	-0.3
IEMG				e		21 58 31.5	
IMYA	Miami	10.04	92	ePn	Pn	21 58 26.5	-0.6
IMYA				e		21 58 41.5	
ASF	Jabal al Asfar	10.22	243	Pn	Pn	21 58 34.9	+5.2
	comp=Z,0.2nm,0.3s,baz=307,slow=9.8,SNR=4.0						
ASF				Lg		22 01 20.4	
	comp=Z,0.7nm,0.3s,baz=328,slow=22,SNR=4.4						
ASF				LR	LR	22 03 00.5	
	comp=Z,118nm,20.3s,baz=297,slow=42						
ANN	Anapa	10.73	317	eP	Pn	21 58 47.2	+11
ANN				eS	Sn	22 00 46.5	+10
ANN				pmax	pmax		
	comp=Z,37nm,1.2s						
MMAI	Mount Meron Ar	10.90	250	Pn	Pn	21 58 43.0	+4.0
	comp=Z,0.2nm,0.3s,baz=65,slow=24,SNR=3.2						
BR131	Keskin Array S	11.23	287	ePn	Pn	21 58 48.4	+4.9
	comp=Z,2.6nm,0.8s						
BR131	Keskin Array S	11.23	287	ePn	Pn	21 58 48.4	+4.8
	comp=Z,2.6nm,0.8s						
BRTR	Keskin Array B	11.23	287	Pn	Pn	21 58 50.3	+6.8
	comp=Z,0.1nm,0.3s,baz=114,slow=11,SNR=14						
EIL	Elat	13.05	238	LR	LR	22 04 59.6	
	comp=Z,107nm,18.5s,baz=224,slow=42						
AB01	Akbulak array	14.89	33	⇓P	Pn	21 59 30.5	-3.0
	comp=Z,3.2nm,0.6s,baz=218,slow=14						
AB01				⇑S	Sn	22 02 14.0	-3.9
	comp=Z,3.0nm,0.7s,baz=222,slow=22						
AKTK	Aktyubinsk	15.07	26	Pn	Pn	21 59 34.2	-1.6
AKTK	Aktyubinsk	15.07	26	Pn	Pn	21 59 34.2	-1.6
AKTK				LR	LR	22 06 37.6	
AKTO	Aktyubinsk	15.07	26	⇑P	Pn	21 59 33.7	-2.1
	comp=Z,1.2nm,0.6s						
AKTO				⇓S	Sn	22 02 16.9	-5.3
	comp=Z,1.4nm,0.9s						
AKTO	Aktyubinsk	15.07	26	Pn	Pn	21 59 34.2	-1.6
	comp=Z,1.1nm,0.3s,baz=187,slow=9.2,SNR=8.6						
AKTO				LR	LR	22 06 37.6	
	comp=Z,99nm,20.5s,baz=207,slow=42						
AKTO	Aktyubinsk	15.07	26	P	Pn	21 59 34.2	-1.6
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,99nm,20.5s						
MLR	Muntele Rosu	18.17	303	P	Pn	22 00 22.7	+7.5
	comp=Z,0.2nm,0.3s,baz=274,slow=8.6,SNR=5.0						
MLR				LR	LR	22 09 12.4	
	comp=Z,198nm,18.2s,baz=90,slow=43						
MLR	Muntele Rosu	18.17	303	P	Pn	22 00 22.7	+7.5
MLR				LR	LR	22 09 12.4	
KK31	Karatay Array	18.37	65	⇑P	Pn	22 00 16.9	-0.8
	comp=Z,5.4nm,0.7s						
IDI	Anoyia	18.45	271	P	Pn	22 00 24.3	+5.6
	comp=Z,0.5nm,0.3s,baz=266,slow=21,SNR=4.8						
AKASG	Malin Array Be	18.76	321	P	Pn	22 00 21.6	-0.7
	comp=Z,0.6nm,0.3s,baz=129,slow=10,SNR=5.3						
AKASG	Malin Array Be	18.76	321	P	Pn	22 00 21.6	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	18.76	321	P	Pn	22 00 21.5	-0.8
OBN	Obninsk	19.33	341	P	Pn	22 00 30.0	+0.8
OBN				pmax	pmax		
	comp=Z,25nm,1.2s						
BURAR	Bucovina Array	19.42	309	⇓iP	Pn	22 00 31.6	+1.4
BURAR	Bucovina Array	19.42	309	⇓P	Pn	22 00 31.6	+1.4
BUR08	Bucovina Ar. S	19.44	309	eP	Pn	22 00 28.7	-1.8
BUR08	Bucovina Ar. S	19.44	309	eP	Pn	22 00 28.7	-1.8
GZR	Gura Zlata	20.28	301	⇑iP	P	22 00 39.0	+0.5
GZR	Gura Zlata	20.28	301	⇑P	P	22 00 39.0	+0.5
ARU	Arti	20.47	18	d iP	P	22 00 41.3	+0.8
ARU				e		22 01 03.4	
ARU				eS	S	22 04 20.6	-8.2
ARU				pmax	pmax		
	comp=Z,25nm,1.2s						
ARU	Arti	20.47	18	eP	P	22 00 41.2	+0.7
	comp=Z,19nm,1.0s						
ARU	Arti	20.47	18	eP	P	22 00 41.1	+0.7
	comp=Z,19nm,1.0s						
AML	Almayashu	20.57	68	eP	P	22 00 42.8	+1.2
	comp=Z,8.6nm,0.6s						
AML	Almayashu	20.57	68	eP	P	22 00 42.8	+1.1
	comp=Z,8.6nm,0.6s						
EKS2	Erkin-Say	20.68	67	eP	P	22 00 45.5	+2.6
	comp=Z,6.1nm,1.0s						
EKS2	Erkin-Say	20.68	67	eP	P	22 00 45.5	+2.7
	comp=Z,6.1nm,1.0s						
DRGR		20.72	305	⇑iP	P	22 00 47.5	+4.3
BZS	Buzias	21.12	301	⇓iP	P	22 00 50.3	+2.7
BZS	Buzias	21.12	301	⇓P	P	22 00 50.3	+2.7
TRPA	Tarpa	21.28	308	⇓iP	P	22 00 50.9	+1.6
SVE	Sverdlovsk	21.36	20	⇑eP	P	22 00 49.2	-0.8
SVE				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.3						
UZH	Uzhgorod	21.62	310	eP	P	22 00 56.0	+3.1
KWP	Kalwaria	21.77	312	⇑iP	P	22 00 54.0	-0.5
KWP	Kalwaria	21.77	312	eP	P	22 00 57.9	+3.4
	comp=Z,11nm,0.9s,mb4.3						
TKM2	Tokmak 2	22.04	67	⇑P	P	22 00 58.9	+1.4
	comp=Z,9.4nm,1.2s,mb4.1						
TKM2	Tokmak 2	22.04	67	eP	P	22 00 58.1	+0.6
TKM2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.1						
TKM2	Tokmak 2	22.04	67	eP	P	22 00 58.1	+0.6
	comp=Z,10.0nm,1.2s,mb4.1						
CRVS	Cervenica-Dubn	22.23	310	eP	P	22 00 56.8	-2.6
CRVS				e		22 01 04.6	
CRVS				e		22 04 53.7	
CRVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.4						
CRVS	Cervenica-Dubn	22.23	310	eP	P	22 00 56.8	-2.6
	comp=Z,16nm,1.1s,mb4.4						
CRVS				e		22 01 04.6	
CRVS				ePcP	PcP	22 04 53.7	-1.6
BRVK	Borovoye	22.27	38	eP	P	22 00 59.9	+0.1
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
BRVK	Borovoye	22.27	38	eP	P	22 00 59.8	0.0
	comp=Z,12nm,0.8s,mb4.4						
BRVK	Borovoye	22.27	38	eP	P	22 00 59.9	+0.1
	comp=Z,12nm,0.8s,mb4.4						
BVA0	Borovoye Array	22.30	38	⇑P	P	22 00 59.5	-0.6
	comp=Z,2.4nm,0.8s,mb3.7,baz=222,slow=10,SNR=33						
BVAR	Borovoye Array	22.30	38	P	P	22 01 00.2	+0.1
	comp=Z,9.5nm,0.7s,mb4.3,baz=227,slow=9.9,SNR=27						
BVAR				LR	LR	22 12 01.9	
	comp=Z,80nm,19.1s,MS3.2,baz=107,slow=43						
BVAR	Borovoye Array	22.30	38	P	P	22 01 00.2	+0.1
BVAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,80nm,19.1s						
VOSK	Vostochnaya	22.42	39	⇑P	P	22 01 00.9	-0.5
	comp=Z,16nm,1.4s,mb4.3						
SUW	Suwalki	23.71	323	eP	P	22 01 14.2	-0.5

SUW				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.6						
SUW	**Suwalki**	**23.71**	**323**	*e*P	**P**	**22 01 14.1**	**-0.6**
	comp=Z,21nm,0.8s,mb4.6						
SUW	**Suwalki**	**23.71**	**323**	*e*P	**P**	**22 01 14.2**	**-0.5**
	comp=Z,21nm,0.8s,mb4.6						
OJC	**Ojcow**	**23.73**	**312**	*e*P	**P**	**22 01 15.0**	**+0.1**
VYHS	**Vyhne**	**23.73**	**307**	*e*P	**P**	**22 01 14.2**	**-0.8**
VYHS				*e*pP		22 01 20.0	
VYHS	**Vyhne**	**23.73**	**307**	*e*P	**P**	**22 01 14.3**	**-0.7**
VYHS				*e*		22 01 20.0	
VSU	**Vasula**	**25.18**	**334**	*e*P	**P**	**22 01 28.7**	**+0.7**
KURBB	**Kurchatov Arra**	**25.69**	**49**	⇑P	**P**	**22 01 34.0**	**+1.2**
	comp=Z,2.6nm,1.6s,mb3.5						
KURK	**Kurchatov**	**25.77**	**49**	P	**P**	**22 01 33.3**	**-0.2**
	comp=Z,4.7nm,0.6s,mb4.2,baz=253,slow=10,SNR=40						
KURK				LR	LR	22 13 55.2	
	comp=Z,60nm,20.8s,MS3.1,baz=320,slow=42						
KURK	**Kurchatov**	**25.77**	**49**	⇑*i*P	**P**	**22 01 34.6**	**+1.1**
KURK				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.5						
KURK	**Kurchatov**	**25.77**	**49**	P	**P**	**22 01 34.8**	**+1.3**
	comp=Z,13nm,0.8s,mb4.5						
KURK	**Kurchatov**	**25.77**	**49**	*e*P	**P**	**22 01 34.5**	**+0.9**
	comp=Z,14nm,0.9s,mb4.5						
KURK				LR	LR	22 13 55.2	
DPC	**Dobruska-Polom**	**25.86**	**310**	*e*P	**P**	**22 01 34.7**	**+0.3**
PRU	**Pruhonice**	**26.86**	**309**	*e*P	**P**	**22 01 44.3**	**+1.0**
GERES	**GERESS Array B**	**27.11**	**306**	P	**P**	**22 01 46.1**	**+0.4**
	comp=Z,2.8nm,0.7s,mb3.9,baz=110,slow=10,SNR=16						
GERES	**GERESS Array B**	**27.11**	**306**	P	**P**	**22 01 46.1**	**+0.4**
GERES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	**Makanchi Array**	**27.22**	**59**	⇑P	**P**	**22 01 46.9**	**+0.3**
	comp=Z,4.6nm,0.8s,mb4.1						
MK31	**Makanchi Array**	**27.22**	**59**	*e*P	**P**	**22 01 47.2**	**+0.6**
MKAR	**Makanchi Array**	**27.22**	**59**	P	**P**	**22 01 47.4**	**+0.8**
	comp=Z,4.9nm,0.8s,mb4.1,baz=261,slow=7.2,SNR=36						
MKAR	**Makanchi Array**	**27.22**	**59**	P	**P**	**22 01 47.4**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KHC	**Kasperske Hory**	**27.25**	**307**	*e*P	**P**	**22 01 50.9**	**+4.0**
JOF	**Joensuu**	**27.51**	**344**	*e*p	**P**	**22 01 48.6**	**-0.5**
	comp=Z,2.4nm,0.4s,mb4.2						
JOF	**Joensuu**	**27.51**	**344**	*e*P	**P**	**22 01 48.6**	**-0.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
DAVOX	**Davos/Dischmat**	**29.35**	**301**	P	**P**	**22 02 05.3**	**-0.3**
	comp=Z,3.9nm,0.7s,mb4.3,baz=124,slow=12,SNR=6.1						
DAVOS	**Davos**	**29.41**	**301**	P	**P**	**22 02 05.3**	**-0.9**
NVS	**Novosibirsk**	**29.84**	**43**	*e*P	**P**	**22 02 09.7**	**-0.1**
PGF	**Pioggiola**	**29.91**	**292**	*e*P	**P**	**22 02 09.9**	**-0.7**
	comp=Z,122nm,1.3s,mb5.2						
PGF	**Pioggiola**	**29.91**	**292**	*e*P	**P**	**22 02 09.9**	**-0.7**
PGF				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.2						
PGF	**Pioggiola**	**29.91**	**292**	*e*P	**P**	**22 02 09.9**	**-0.7**
	comp=Z,61nm,1.3s,mb5.2						
ZAA0	**Zalesovo Array**	**30.41**	**45**	*e*P	**P**	**22 02 14.8**	**-0.1**
ZAA0	**Zalesovo Array**	**30.41**	**45**	*e*P	**P**	**22 02 14.8**	**-0.1**
ZALV	**Zalesovo Beam**	**30.41**	**45**	P	**P**	**22 02 15.3**	**+0.4**
	comp=Z,2.2nm,0.7s,mb4.0,baz=253,slow=10,SNR=12						
ZALV				LR	LR	22 16 59.1	
	comp=Z,58nm,18.3s,MS3.3,baz=256,slow=41						
ZALV	**Zalesovo Beam**	**30.41**	**45**	P	**P**	**22 02 15.3**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,58nm,18.3s,MS3.3						
KEST	**Kesra**	**30.68**	**279**	P	**P**	**22 02 17.9**	**+0.3**
	comp=Z,2.3nm,0.9s,mb4.0,baz=217,slow=5.2,SNR=2.5						
HFS	**Hagfors**	**31.39**	**328**	P	**P**	**22 02 23.9**	**+0.4**
	comp=Z,23nm,0.6s,mb5.2,baz=124,slow=9.7,SNR=68						
HFS	**Hagfors**	**31.39**	**328**	P	**P**	**22 02 23.9**	**+0.4**
HFS				pmax	pmax		
	comp=Z,23nm,0.6s						
MBDF	**Montbardon**	**31.45**	**297**	*e*P	**P**	**22 02 23.7**	**-0.5**
	comp=Z,28nm,1.0s,mb4.7						
MBDF	**Montbardon**	**31.45**	**297**	*e*P	**P**	**22 02 23.7**	**-0.5**
MBDF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MBDF	**Montbardon**	**31.45**	**297**	*e*P	**P**	**22 02 23.7**	**-0.5**
	comp=Z,14nm,1.0s,mb4.7						
LPG	**La Plagne**	**31.46**	**298**	*e*P	**P**	**22 02 24.3**	**0.0**
	comp=Z,4.5nm,0.6s,mb4.2						
LPG	**La Plagne**	**31.46**	**298**	*e*P	**P**	**22 02 24.3**	**0.0**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LPG	**La Plagne**	**31.46**	**298**	*e*P	**P**	**22 02 24.3**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.2						
LPL	**La Plagne**	**31.48**	**298**	*e*P	**P**	**22 02 23.8**	**-0.6**
DANN	**Dangsing**	**31.48**	**96**	*e*P	**P**	**22 02 25.1**	**+0.4**
	comp=Z,19nm,0.8s,mb5.0						
KOLN	**Koldanda**	**31.61**	**97**	*e*P	**P**	**22 02 25.8**	**0.0**
	comp=Z,29nm,1.5s,mb4.9						
CABF	**La Chapelle**	**31.94**	**300**	*e*P	**P**	**22 02 28.0**	**-0.5**
	comp=Z,37nm,1.1s,mb4.8						
CABF	**La Chapelle**	**31.94**	**300**	*e*P	**P**	**22 02 28.0**	**-0.5**
CABF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
CABF	**La Chapelle**	**31.94**	**300**	*e*P	**P**	**22 02 28.0**	**-0.5**
	comp=Z,18nm,1.1s,mb4.8						
GKN	**Gorkha**	**32.33**	**96**	*e*P	**P**	**22 02 31.8**	**-0.3**
	comp=Z,6.8nm,0.6s,mb4.7						
DMN	**Daman**	**32.88**	**96**	*e*P	**P**	**22 02 37.0**	**+0.1**
	comp=Z,14nm,0.8s,mb4.9						
NB2	**NORSAR Subarra**	**32.91**	**328**	P	**P**	**22 02 36.5**	**-0.3**
	comp=Z,9.0nm,0.6s,mb4.9,baz=120,slow=8.6						
NOA	**NORSAR Array B**	**32.91**	**328**	P	**P**	**22 02 36.8**	**0.0**
	comp=Z,7.7nm,0.6s,mb4.8,baz=122,slow=8.4,SNR=33						
NOA	**NORSAR Array B**	**32.91**	**328**	P	**P**	**22 02 36.8**	**0.0**
NOA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VIVF	**Saint-Julien-l**	**32.94**	**297**	*e*P	**P**	**22 02 36.5**	**-0.8**
	comp=Z,11nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**32.94**	**297**	*e*P	**P**	**22 02 36.5**	**-0.8**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
VIVF	**Saint-Julien-l**	**32.94**	**297**	*e*P	**P**	**22 02 36.5**	**-0.8**
	comp=Z,5.7nm,0.8s,mb4.5						
NAO01	**NORSAR Array S**	**32.95**	**327**	*e*P	**P**	**22 02 36.9**	**-0.3**
	comp=Z,5.8nm,0.6s,mb4.7						
NAO01	**NORSAR Array S**	**32.95**	**327**	*e*P	**P**	**22 02 36.9**	**-0.3**
	comp=Z,5.8nm,0.6s,mb4.7						
KONO	**Kongsberg**	**32.98**	**325**	*e*P	**P**	**22 02 37.2**	**-0.2**
KONO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KONO	**Kongsberg**	**32.98**	**325**	*e*P	**P**	**22 02 37.2**	**-0.2**
	comp=Z,10nm,0.8s,mb4.8						
KONO	**Kongsberg**	**32.98**	**325**	*e*P	**P**	**22 02 37.2**	**-0.2**
	comp=Z,10nm,0.8s,mb4.8						
GUN	**Gumba**	**33.35**	**95**	*e*P	**P**	**22 02 41.3**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9						
BAIF	**Baives**	**33.42**	**306**	*e*P	**P**	**22 02 40.9**	**-0.5**
	comp=Z,24nm,1.3s,mb4.7						
BAIF	**Baives**	**33.42**	**306**	*e*P	**P**	**22 02 40.9**	**-0.5**
BAIF				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
BAIF	**Baives**	**33.42**	**306**	*e*P	**P**	**22 02 40.9**	**-0.5**
	comp=Z,12nm,1.3s,mb4.7						
SMF	**Signal de Mont**	**33.49**	**300**	*e*P	**P**	**22 02 41.7**	**-0.4**
	comp=Z,8.9nm,0.8s,mb4.5						
SMF	**Signal de Mont**	**33.49**	**300**	*e*P	**P**	**22 02 41.7**	**-0.4**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
SMF	**Signal de Mont**	**33.49**	**300**	*e*P	**P**	**22 02 41.7**	**-0.4**
	comp=Z,4.4nm,0.8s,mb4.5						
JIRN	**Jiri**	**33.71**	**95**	*e*P	**P**	**22 02 44.4**	**+0.2**
SSF	**Saint Saulge**	**33.73**	**301**	*e*P	**P**	**22 02 42.8**	**-1.3**
	comp=Z,4.4nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**33.73**	**301**	*e*P	**P**	**22 02 42.8**	**-1.3**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**33.73**	**301**	*e*P	**P**	**22 02 42.8**	**-1.3**
	comp=Z,2.2nm,0.7s,mb4.2						
AVF	**Avril sur Loir**	**33.83**	**300**	*e*P	**P**	**22 02 43.7**	**-1.3**
	comp=Z,17nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**33.83**	**300**	*e*P	**P**	**22 02 43.7**	**-1.3**
AVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**33.83**	**300**	*e*P	**P**	**22 02 43.7**	**-1.3**
	comp=Z,8.4nm,1.1s,mb4.6						
RAMN	**Ramite**	**34.36**	**96**	*e*P	**P**	**22 02 49.6**	**-0.2**
	comp=Z,15nm,0.6s,mb5.1						
ARCES	**ARCESS Array B**	**34.43**	**346**	P	**P**	**22 02 50.4**	**+0.5**
	comp=Z,8.4nm,1.0s,mb4.6,baz=316,slow=17,SNR=2.8						
ARCES	**ARCESS Array B**	**34.43**	**346**	P	**P**	**22 02 50.4**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TCF	**Toulx Ste Croi**	**34.62**	**300**	*e*P	**P**	**22 02 50.1**	**-1.8**
	comp=Z,20nm,1.3s,mb4.6						
TCF	**Toulx Ste Croi**	**34.62**	**300**	*e*P	**P**	**22 02 50.1**	**-1.8**
TCF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
TCF	**Toulx Ste Croi**	**34.62**	**300**	*e*P	**P**	**22 02 50.1**	**-1.8**
	comp=Z,10.0nm,1.3s,mb4.6						
CAF	**Calviac**	**34.79**	**297**	*e*P	**P**	**22 02 52.8**	**-0.5**
ODAN	**Odare**	**35.03**	**96**	*e*P	**P**	**22 02 56.0**	**+0.4**
	comp=Z,28nm,1.0s,mb5.2						
TAPN	**Taplejung**	**35.06**	**95**	*e*P	**P**	**22 02 56.0**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.7						
LDF	**La Druitiere**	**36.18**	**304**	*e*P	**P**	**22 03 04.2**	**-1.0**
MFF	**Saint Martin d**	**36.24**	**300**	*e*P	**P**	**22 03 04.9**	**-0.9**
	comp=Z,13nm,0.8s,mb4.6						
MFF	**Saint Martin d**	**36.24**	**300**	*e*P	**P**	**22 03 04.9**	**-0.9**
MFF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MFF	**Saint Martin d**	**36.24**	**300**	*e*P	**P**	**22 03 04.9**	**-0.9**
	comp=Z,6.7nm,0.8s,mb4.6						
FLN	**La Foliniere**	**36.41**	**304**	*e*P	**P**	**22 03 06.5**	**-0.8**
	comp=Z,7.8nm,0.5s,mb4.6						
FLN	**La Foliniere**	**36.41**	**304**	*e*P	**P**	**22 03 06.5**	**-0.8**
FLN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
FLN	**La Foliniere**	**36.41**	**304**	*e*P	**P**	**22 03 06.5**	**-0.8**
	comp=Z,3.9nm,0.5s,mb4.6						
GRR	**Gorron**	**36.67**	**303**	*e*P	**P**	**22 03 08.3**	**-1.1**
	comp=Z,11nm,0.5s,mb4.6						
GRR	**Gorron**	**36.67**	**303**	*e*P	**P**	**22 03 08.3**	**-1.1**
GRR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.7						
GRR	**Gorron**	**36.67**	**303**	*e*P	**P**	**22 03 08.3**	**-1.1**
	comp=Z,5.6nm,0.5s,mb4.6						
LSA	**Lhasa**	**36.80**	**89**	*e*P	**P**	**22 03 11.7**	**+0.9**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
LSA	**Lhasa**	**36.80**	**89**	*e*P	**P**	**22 03 11.7**	**+0.9**
	comp=Z,2.3nm,0.8s,mb4.1						
LSA	**Lhasa**	**36.80**	**89**	*e*P	**P**	**22 03 11.7**	**+0.9**
	comp=Z,2.3nm,0.8s,mb4.1						
SGMF	**Saint Gilles**	**37.80**	**303**	*e*P	**P**	**22 03 18.3**	**-0.8**
	comp=Z,44nm,1.1s,mb4.8						
SGMF	**Saint Gilles**	**37.80**	**303**	*e*P	**P**	**22 03 18.3**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
SGMF	**Saint Gilles**	**37.80**	**303**	*e*P	**P**	**22 03 18.3**	**-0.8**
	comp=Z,22nm,1.1s,mb4.8						
QUIF	**Quistinic**	**38.23**	**303**	*e*P	**P**	**22 03 21.6**	**-1.0**
ROSF	**Rostrenen**	**38.28**	**303**	*e*P	**P**	**22 03 21.9**	**-1.2**
EKA	**Eskdalemuir Ar**	**38.44**	**315**	P	**P**	**22 03 24.1**	**-0.1**
	comp=Z,5.9nm,0.7s,mb4.5,baz=103,slow=8.1,SNR=20						
EKA	**Eskdalemuir Ar**	**38.44**	**315**	P	**P**	**22 03 24.2**	**-0.1**
EKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**38.44**	**315**	P	**P**	**22 03 24.1**	**-0.2**
ESDC	**Sonseca Array**	**40.01**	**290**	P	**P**	**22 03 36.1**	**-1.5**
	comp=Z,0.8nm,0.5s,mb3.7,baz=68,slow=8.5,SNR=5.0						
ZAK	**Zakamensk**	**41.25**	**53**	*e*P	**P**	**22 03 48.5**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
TLY	**Talaya**	**41.41**	**51**	*e*P	**P**	**22 03 50.6**	**+1.5**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.2						
TLY				MLR	MLR		
	comp=Z,82nm,21.0s,MS3.6						
SPITS	**Spitsbergen Ar**	**43.01**	**351**	P	**P**	**22 04 02.3**	**+0.5**
	comp=Z,15nm,1.0s,mb4.7,baz=134,slow=8.4,SNR=2.9						
SPITS	**Spitsbergen Ar**	**43.01**	**351**	P	**P**	**22 04 02.3**	**+0.5**
SPITS				pmax	pmax		
	comp=Z,15nm,1.0s						
SONM	**Songino Array**	**43.55**	**57**	P	**P**	**22 04 07.4**	**+0.8**
	comp=Z,0.8nm,0.6s,mb3.6,baz=272,slow=9.3,SNR=7.1						
SONM	**Songino Array**	**43.55**	**57**	P	**P**	**22 04 07.4**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**43.98**	**57**	⇓*i*P	**P**	**22 04 11.3**	**+1.3**
ULN	**Ulaanbaatar**	**43.98**	**57**	*e*P	**P**	**22 04 10.9**	**+0.9**
	comp=Z,5.1nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**43.98**	**57**	*e*P	**P**	**22 04 10.8**	**+0.8**
	comp=Z,5.1nm,0.9s,mb4.2						
TORD	**Torodi Ar. Bea**	**47.44**	**252**	P	**P**	**22 04 35.9**	**-1.8**
	comp=Z,0.5nm,0.7s,mb3.6,baz=37,slow=8.4,SNR=4.9						
TORD				PcP	PcP	22 06 06.3	-1.7
	comp=Z,0.6nm,0.8s,baz=36,slow=3.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**48.46**	**98**	P	**P**	**22 04 43.9**	**-1.7**
	comp=Z,1.2nm,0.4s,mb4.3,baz=298,slow=8.4,SNR=12						
CMAR	**Chiang Mai Arr**	**48.46**	**98**	P	**P**	**22 04 43.9**	**-1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
XAN	**Xi'an**	**49.12**	**74**	P	**P**	**22 04 50.3**	**-0.2**
XAN				AP	pP	22 05 02.3	+6.4
XAN				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
XAN				AMB	AMB		
	comp=Z,21nm,5.0s						
TIXI	**Tiksi**	**52.33**	**23**	*i* P	**P**	**22 05 15.1**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
WHN	**Wuhan**	**54.74**	**76**	P	**P**	**22 05 30.8**	**-1.6**
NJ2	**Nanjing**	**57.53**	**72**	*e*P	**P**	**22 05 50.0**	**-2.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
KSRS	**Korea Array**	**61.79**	**63**	P	**P**	**22 06 21.0**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.3,baz=290,slow=6.9,SNR=6.7						
KSRS	**Korea Array**	**61.79**	**63**	P	**P**	**22 06 21.0**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
BILL	**Bilibino**	**65.44**	**21**	⇑*e*P	**P**	**22 06 45.9**	**+0.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
FRB	**Frobisher Bay**	**67.41**	**334**	P	**P**	**22 06 56.9**	**-0.9**
	comp=Z,4.6nm,0.7s,mb4.6,baz=68,slow=9.7,SNR=7.5						
FRB	**Frobisher Bay**	**67.41**	**334**	P	**P**	**22 06 56.9**	**-0.9**
FRB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FRB	**Frobisher Bay**	**67.41**	**334**	P	**P**	**22 06 56.9**	**-0.9**
BOSA	**Boshof**	**68.87**	**201**	P	**P**	**22 07 05.2**	**-2.2**
	comp=Z,3.3nm,0.7s,mb4.4,baz=338,slow=9.0,SNR=5.7						
BOSA	**Boshof**	**68.87**	**201**	P	**P**	**22 07 05.2**	**-2.2**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
COLA	**College**	**77.42**	**7**	*e*P	**P**	**22 07 57.3**	**-0.2**
COLA				pmax	pmax		
	comp=Z,30nm,1.8s,mb4.9						
COLA	**College**	**77.42**	**7**	*e*P	**P**	**22 07 57.3**	**-0.2**
	comp=Z,30nm,1.8s,mb4.9						
COLA	**College**	**77.42**	**7**	*e*P	**P**	**22 07 57.3**	**-0.2**
	comp=Z,30nm,1.8s,mb4.9						
YKA	**Yellowknife Ar**	**79.51**	**352**	P	**P**	**22 08 07.9**	**-1.1**
	comp=Z,1.1nm,1.0s,mb3.7,baz=10.0,slow=5.8,SNR=10						
YKA	**Yellowknife Ar**	**79.51**	**352**	P	**P**	**22 08 07.9**	**-1.2**
ULM	**Lac du Bonnet**	**87.06**	**338**	P	**P**	**22 08 46.5**	**-1.8**
	comp=Z,2.3nm,0.7s,mb4.5,baz=348,slow=3.4,SNR=4.8						
ULM	**Lac du Bonnet**	**87.06**	**338**	P	**P**	**22 08 46.5**	**-1.8**
PAYG	**Puerto Ayora**	**126.78**	**303**	*e*PKPdf	PKPdf	22 15 09.0	+1.9

CSEM ***14*** *21:59:11.3±0.1, 3827N×3933E, h2^{km}, MD3.5, Error ellipse: s-maj=2.0km s-min=1.4km az=113.0*
NEIC ***14*** *21:59:11.6, 3826N×3930E, h5^{km}, MD3.5(ISK), After ISK.*
DDA ***14*** *21:59:11.7, 3829N×3936E, h16^{km}±1^{km}, Md3.5*
ISCJB ***14*** *21:59:12.2±0.6, 3826N±002×3935E±003, h1^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=3.7km az=22.5*
ISK ***14*** *21:59:12.0, 3829N×3930E, h4^{km}, MD3.5*
ISC 14 21:59:12.7±0.5**, 3827N**±002×**3936E**±003**, h1**^{km}±5^{km}**, n47, σ0^{s}85**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.12**	**341**	PG	**Pg**	**21 59 14.4**	**-0.7**
SVRC				*e*SG	**Sg**	**21 59 16.4**	**-0.2**
ELZG	**Elazig**	**0.37**	**309**	*i* P	**Pg**	**21 59 19.3**	**-0.7**
ELZG				*i* S	**Sg**	**21 59 25.1**	**+0.4**
PTK	**Pertek**	**0.63**	**2**	PG	**Pg**	**21 59 23.5**	**-1.2**
PTK				*e*SG	**Sg**	**21 59 33.2**	**+0.3**
PTK	**Pertek**	**0.63**	**2**	*i* Pg	**Pg**	**21 59 23.5**	**-1.3**
PTK				Sg	**Sg**	**21 59 34.5**	**+1.6**
PTK	**Pertek**	**0.63**	**2**	Pg	**Pg**	**21 59 23.5**	**-1.2**
PTK				Sg	**Sg**	**21 59 34.5**	**+1.6**
DIYA	**Diyarbakir**	**0.69**	**119**	*i* P	**Pg**	**21 59 25.9**	**-0.1**
DIYA				*i* S	**Sg**	**21 59 36.6**	**+1.6**
MYA	**Malataya**	**0.74**	**275**	PG	**Pg**	**21 59 25.7**	**-1.1**
MYA	**Malataya**	**0.74**	**275**	*i* Pg	**Pg**	**21 59 25.7**	**-1.1**
MYA				Sg	**Sg**	**21 59 36.8**	**+0.4**
MYA	**Malataya**	**0.74**	**275**	Pn	**Pn**	**21 59 25.8**	**-4.4**
MYA				Sg	**Sg**	**21 59 36.8**	**+0.4**
URFA	**Urfa**	**0.93**	**207**	*e*PG	**Pg**	**21 59 29.9**	**-0.6**
URFA	**Urfa**	**0.93**	**207**	*e*Pg	**Pg**	**21 59 29.9**	**-0.6**
URFA				Sg	**Sg**	**21 59 43.3**	**+0.9**
URFA	**Urfa**	**0.93**	**207**	Pg	**Pg**	**21 59 30.3**	**-0.2**
URFA				Sg	**Sg**	**21 59 43.3**	**+0.9**
AKCD	**Akcadag**	**1.13**	**272**	*i* P	**Pg**	**21 59 33.3**	**-1.1**
ATAB	**Bozova**	**1.16**	**227**	*i* P	**Pg**	**21 59 35.3**	**+0.4**
ATAB				*i* S	**Sg**	**21 59 51.7**	**+1.8**
KEMA	**Kemaliye**	**1.21**	**326**	*i* P	**Pg**	**21 59 36.2**	**+0.3**
DARE	**Darende-Malaty**	**1.40**	**300**	*e*PN	**Pn**	**21 59 39.5**	**+0.2**
MARD	**Mardin**	**1.47**	**130**	*i* P	**Pn**	**21 59 38.6**	**-1.7**
MARD				*i* S	**Sb**	**21 59 58.6**	**-1.5**
BEST	**Besiri**	**1.56**	**103**	*i* P	**Pn**	**21 59 40.6**	**-0.8**
BNGL	**BINGOL**	**1.56**	**63**	*i* P	**Pn**	**21 59 41.8**	**+0.2**
GZT	**Gaziantep**	**1.69**	**238**	*i* P	**Pn**	**21 59 42.7**	**-0.5**
GAZ	**Gaziantep**	**2.02**	**238**	*e*PN	**Pn**	**21 59 47.8**	**-0.1**
KMRS	**Kahramanmaras**	**2.09**	**249**	*e*PN	**Pn**	**21 59 48.4**	**-0.4**
SARI	**SarD1z-Kayseri**	**2.13**	**282**	*e*PN	**Pb**	**21 59 51.5**	**-0.6**
GUMT	**Gumushane**	**2.19**	**2**	*e*PN	**Pn**	**21 59 50.6**	**+0.3**
GUMT	**Gumushane**	**2.19**	**2**	Pn	**Pn**	**21 59 50.4**	**+0.1**
GUMT	**Gumushane**	**2.19**	**2**	Pn	**Pn**	**21 59 50.4**	**+0.2**
EZM	**Erzurum**	**2.26**	**43**	*e*PN	**Pn**	**21 59 52.3**	**+1.1**
PINB	**Pinarbasi**	**2.35**	**281**	*i* P	**Pn**	**21 59 53.7**	**+1.3**
SVSK	**Karacayir**	**2.47**	**313**	*e*PN	**Pn**	**21 59 53.6**	**-0.4**
SVSK	**Karacayir**	**2.47**	**313**	Pn	**Pn**	**21 59 54.4**	**+0.4**
ANDN	**Andirin**	**2.48**	**255**	*i* P	**Pn**	**21 59 53.4**	**-0.8**
ESPY	**Espiye-Giresun**	**2.69**	**350**	*e*PN	**Pn**	**21 59 56.9**	**-0.2**
BNN	**Bunyan**	**2.81**	**283**	*e*PN	**Pn**	**21 59 58.5**	**-0.3**
BNN	**Bunyan**	**2.81**	**283**	Pn	**Pn**	**21 59 59.3**	**+0.6**
KOZT	**Kozan**	**2.90**	**255**	*e*PN	**Pn**	**21 59 59.5**	**-0.5**
AGRB	**Hanur-Agry**	**3.12**	**64**	*e*PN	**Pn**	**22 00 04.0**	**+1.0**
VANB	**Van**	**3.18**	**83**	*e*PN	**Pn**	**22 00 05.1**	**+1.3**
VANB	**Van**	**3.18**	**83**	Pn	**Pn**	**22 00 06.4**	**+2.5**
HTY	**Hatay**	**3.34**	**231**	*e*PN	**Pn**	**22 00 06.3**	**+0.3**
HTY	**Hatay**	**3.34**	**231**	Pn	**Pn**	**22 00 06.2**	**+0.2**
YOZ	**Yozgat**	**3.43**	**295**	*e*PN	**Pn**	**22 00 07.0**	**-0.3**
YOZ	**Yozgat**	**3.43**	**295**	Pn	**Pn**	**22 00 07.7**	**+0.4**
YOZ	**Yozgat**	**3.43**	**295**	Pn	**Pn**	**22 00 07.7**	**+0.4**
CUKT	**Cukurca**	**3.52**	**105**	*e*PN	**Pn**	**22 00 08.9**	**+0.4**
MSL	**Mosul**	**3.52**	**121**	*e*Pn	**Pn**	**22 00 13.0**	**+4.5**
MSL				*e*Sn	**Sg**	**22 01 05.0**	**-0.9**
HWQ	**Hawqa**	**4.84**	**216**	*e*Pn	**Pn**	**22 00 26.8**	**+0.2**
BHL	**Bhannes**	**5.29**	**216**	*e*Pn	**Pn**	**22 00 32.9**	**+0.2**

NIED ***14*** *22:01:00, 36.10N×141 30E, h23^{km}, Mw3.8 Best double couple: $M_0$5.66000×10^{14} NP1:ϕ_s45.00000°, δ82.00000°, λ102.00000°. NP2:ϕ_s170.00000°, δ15.00000°, λ35.00000°.*
IDC ***14*** *22:01:47.9±1.1, 36.19N×141 57E, h0^{km}, mb4.0/8, mb1 4.0/10, mb1mx3.8/27, mbtmp3.9/10, ML3.6/2, MS2.9/2, Ms1 2.9/2, ms1mx2.6/35, Error ellipse: s-maj=29.5km s-min=18.9km az=71.0*
ISCJB ***14*** *22:01:50.8±1.3, 36.17N±005×141 44E±007, h29^{km}±8^{km}, mb4.0/8, Error ellipse: s-maj=10.0km s-min=7.2km az=158.5*
JMA ***14*** *22:01:51.6±0.1, 36.11N×141 34E, h46^{km}±2^{km}, M3.5*
ISC 14 22:01:51.1±1.2**, 3616N**±004×**14139E**±007**, h18**^{km}±7^{km}**, n20, σ0^{s}80**/25**, mb4.0**/8**, 1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.63**	**224**	P	**Pg**	**22 02 03.4**	**-0.1**
CHOJ				S	**Sg**	**22 02 12.1**	**+0.2**
JHO	**Hitachi**	**0.80**	**305**	⇓P	**Pb**	**22 02 06.5**	**0.0**
JYT	**Yasato**	**0.97**	**274**	P	**Pb**	**22 02 08.4**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.06**	**333**	P	**Pb**	**22 02 10.4**	**-0.4**
JFK	**Kawauchi**	**1.28**	**341**	P	**Pn**	**22 02 13.3**	**-0.7**
BSO3	**Boso 3**	**1.53**	**208**	P	**Pn**	**22 02 17.6**	**+0.1**
BSO1	**Boso 1**	**1.54**	**193**	P	**Pn**	**22 02 17.6**	**0.0**
BSO1				*e*S	**Sn**	**22 02 36.9**	**-0.1**
JAG	**Ashikaga**	**1.59**	**280**	P	**Pn**	**22 02 17.6**	**-0.6**
JAG				*e*S	**Sn**	**22 02 37.0**	**-1.3**
MJAR	**Matsushiro Arr**	**2.60**	**279**	Pn	**Pn**	**22 02 32.5**	**+0.4**
	8.9nm,0.3s,baz=278,slow=4.0,SNR=59						
MJAR				Sn	**Sn**	**22 03 02.4**	**-0.8**
	5.9nm,0.3s,baz=233,slow=32,SNR=5.9						
MJAR				LR	LR	22 03 42.5	
	comp=Z,220nm,18.8s,baz=95,slow=42						
MAT	**Matsushiro**	**2.60**	**279**	P	**Pn**	**22 02 33.0**	**+0.9**
MAT				*e*S	**Sn**	**22 03 05.4**	**+2.2**
JHJ	**Hachijo jima 2**	**3.31**	**204**	Pn	**Pn**	**22 02 43.0**	**+1.0**
	21nm,0.3s,baz=79,slow=23,SNR=7.1						
JHJ				Sn	**Sn**	**22 03 17.6**	**-3.2**
	42nm,0.3s,baz=55,slow=22,SNR=9.4						
KSRS	**Korea Array**	**10.88**	**281**	LR	LR	22 08 04.5	
	comp=Z,52nm,21.8s,baz=155,slow=34						
SONM	**Songino Array**	**28.27**	**305**	P	**P**	**22 07 43.5**	**+0.4**
	0.8nm,0.8s,mb3.4,baz=107,slow=8.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.49**	**313**	P	**P**	**22 09 45.6**	**+0.7**
	1.6nm,0.6s,mb3.8,baz=90,slow=7.4,SNR=7.9						
MKAR	**Makanchi Array**	**44.57**	**303**	P	**P**	**22 10 02.5**	**+0.8**
	1.6nm,0.8s,mb3.9,baz=87,slow=9.6,SNR=12						
KURK	**Kurchatov**	**46.46**	**309**	P	**P**	**22 10 17.4**	**+0.7**
	2.9nm,0.7s,mb4.3,baz=85,slow=7.8,SNR=12						
BVAR	**Borovoye Array**	**51.15**	**313**	P	**P**	**22 10 52.6**	**-0.1**
	2.2nm,0.8s,mb4.1,baz=210,slow=32,SNR=4.8						
WRA	**Warramunga Arr**	**56.19**	**188**	P	**P**	**22 11 29.8**	**0.0**
	0.5nm,0.5s,mb3.8,baz=7.8,slow=7.7,SNR=17						
DLBC	**Dease Lake**	**59.33**	**38**	P	**P**	**22 11 50.7**	**-0.8**
	3.0nm,0.4s,mb4.6,baz=195,slow=19,SNR=4.9						
ASAR	**Alice Springs**	**59.92**	**188**	P	**P**	**22 11 55.6**	**-0.3**
	0.4nm,0.7s,mb3.6,baz=4.1,slow=6.2,SNR=4.7						

TEH ***14*** *22:21:03.8, 3726N×4764E, h8^{km}, ML3.7*
ISCJB ***14*** *22:21:21.6±0.8, 3729N±004×4775E±004, h5^{km}±7^{km}, Error ellipse: s-maj=8.0km s-min=4.1km az=37.5*
CSEM ***14*** *22:21:22.0±0.1, 3726N×4775E, h16^{km}, ML3.7, Error ellipse: s-maj=3.1km s-min=1.7km az=61.0*
THR ***14*** *22:21:22.1±1.4, 3723N×4759E, h30^{km}±9^{km}, ML3.5*
ISC 14 22:21:22.0±0.8**, 3728N**±004×**4767E**±004**, h3**^{km}±7^{km}**, n49, σ0^{s}80**/57**, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRB	**Sarab**	**0.55**	**360**	*e*Pg	**Pg**	**22 21 33.0**	**+0.5**
ISRB				*e*Sg	**Sg**	**22 21 40.7**	**+1.1**
ISRB	**Sarab**	**0.55**	**360**	*e*Pg	**Pg**	**22 21 33.0**	**+0.5**
ISRB				*e*Sg	**Sg**	**22 21 40.7**	**+1.1**
ISRB				*e*		22 21 42.6	
IBST	**Bostanabad**	**0.75**	**305**	*e*Pg	**Pg**	**22 21 35.8**	**-0.6**
IBST				*e*		22 21 46.7	
ZNJK	**Zanjan**	**1.01**	**126**	*e*Pg	**Pg**	**22 21 42.3**	**+1.0**
IHRS	**Heris**	**1.15**	**335**	*e*Pg	**Pg**	**22 21 43.4**	**-0.7**
IHRS				*e*		22 21 43.9	
GRMI	**Germi**	**1.54**	**6**	*e*Pg	**Pg**	**22 21 50.8**	**-0.7**
GRMI				AML	AML	22 22 19.8	
	comp=N,404nm,0.6s						
GRMI				AML	AML	22 22 21.2	
	comp=E,352nm,0.7s						
ITBZ	**Tabriz**	**1.54**	**309**	*e*Pn	**Pn**	**22 21 50.2**	**-0.1**
ITBZ	**Tabriz**	**1.54**	**309**	*e*Pn	**Pn**	**22 21 50.2**	**-0.1**
ITBZ				*e*		22 22 13.8	
ISHB	**Shabestar**	**1.91**	**302**	*e*Pn	**Pn**	**22 21 56.5**	**+1.0**
ISHB				*e*Sn	**Sn**	**22 22 19.2**	**-0.9**
ISHB				*e*		22 22 27.7	
GLBA	**Clilabad**	**2.04**	**16**	P	**Pb**	**22 21 58.7**	**-1.0**
	SNR=17						
IMRD	**Marand**	**2.12**	**313**	*e*Pn	**Pb**	**22 22 00.2**	**-0.8**
IMRD	**Marand**	**2.12**	**313**	*e*Pn	**Pb**	**22 22 00.2**	**-0.8**
IMRD				*e*		22 22 33.4	
SNGE	**Sanandaj**	**2.19**	**187**	*e*Pg	**Pn**	**22 21 59.9**	**+0.6**
SNGE	**Sanandaj**	**2.19**	**187**	*e*Pn	**Pn**	**22 21 59.7**	**+0.4**
	SNR=54						
NAX	**Nakhchivan**	**2.56**	**319**	P	**Pb**	**22 22 07.8**	**-0.6**
	SNR=22						
IRAZ	**Razeghan**	**2.61**	**135**	*e*Pn	**Pn**	**22 22 04.4**	**-0.6**
IRAZ				*e*Sn	**Sn**	**22 22 36.6**	**-0.6**
IRAZ	**Razeghan**	**2.61**	**135**	*e*Pn	**Pn**	**22 22 04.4**	**-0.6**
IRAZ				*e*Sn	**Sn**	**22 22 36.6**	**-0.6**
IRAZ				*e*		22 22 46.3	
IDHR	**Dehrash**	**2.77**	**202**	*e*Pn	**Pn**	**22 22 07.8**	**+0.5**
IDHR	**Dehrash**	**2.77**	**202**	*e*Pn	**Pn**	**22 22 07.8**	**+0.5**
IDHR				*e*		22 22 21.9	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMHD	Mahdasht	2.89	122	ePn	Pn	22 22 08.4	-0.5
IMHD	Mahdasht	2.89	122	ePn	Pn	22 22 08.4	-0.5
IMHD				e		22 22 54.6	
THKV	Tehran--Karaj	2.92	117	ePn	Pn	22 22 09.2	0.0
IGHG	Ghaleghazi	3.07	197	ePn	Pn	22 22 17.8	+6.4
IGHG				e		22 22 23.2	
CHTH	Charan	3.10	115	ePn	Pn	22 22 11.4	-0.3
CHTH				eSg	Sg	22 22 57.2	-4.2
CHTH				AML	AML	22 23 01.0	
	comp=N,133nm,0.6s						
CHTH	Charan	3.10	115	ePn	Pn	22 22 11.4	-0.3
	SNR=54						
CHTH				eSg	Sg	22 22 57.2	-4.2
	SNR=93						
HAKT	HAKKARI	3.17	276	i P	Pn	22 22 21.5	+8.7
ASAO	Ashtian	3.33	144	ePn	Pn	22 22 15.0	+0.1
TVAN	Van	3.60	292	i P	Pn	22 22 22.3	+3.7
MSL	Mosul	3.76	258	ePn	Pb	22 22 30.0	+1.0
MSL				eSn	Sb	22 23 20.0	+5.0
DAMV	Damavand	3.83	114	ePn	Pn	22 22 22.2	+0.3
DAMV				AML	AML	22 23 25.5	
	comp=E,84nm,0.6s						
DAMV				AML	AML	22 23 29.8	
	comp=N,80nm,0.6s						
DYDN	Diyadin	3.86	307	i P	Pb	22 22 31.7	+1.0
IPRN	Peran	3.89	104	ePn	Pn	22 22 21.9	-0.7
IPRN				e		22 23 32.0	
IDMV	Damavand	3.90	114	ePn	Pn	22 22 23.2	+0.4
IDMV	Damavand	3.90	114	ePn	Pn	22 22 23.2	+0.4
IDMV				e		22 23 33.5	
SEKA	Sheki	3.94	355	P	Pn	22 22 24.4	+1.0
	SNR=3.5						
IVRN	Varamin	3.99	124	ePn	Pn	22 22 23.8	-0.3
IVRN	Varamin	3.99	124	ePn	Pn	22 22 23.8	-0.3
IVRN				e		22 22 41.3	
IFIR	Firoozkooh	4.41	110	ePn	Pn	22 22 30.8	+1.0
IFIR	Firoozkooh	4.41	110	ePn	Pn	22 22 31.0	+1.2
IFIR				e		22 23 45.5	
DIGO	Kars	4.59	314	i P	Pg	22 22 49.5	-0.4
ISFB	Sefidab	4.72	127	ePn	Pn	22 22 33.2	-0.9
ISFB	Sefidab	4.72	127	ePn	Pn	22 22 33.2	-0.9
ISFB				e		22 22 56.2	
ISHM	Shahmirzad	4.76	106	ePn	Pn	22 22 37.6	+3.0
ISHM				e		22 24 05.2	
IKIA	Kiasar	4.95	101	ePn	Pn	22 22 37.4	+0.3
IKIA	Kiasar	4.95	101	ePn	Pn	22 22 37.4	+0.3
IKIA				e		22 24 12.7	
IGLO	Ghaloghah	5.00	97	ePn	Pn	22 22 38.0	+0.2
IGLO				e		22 24 09.7	
IKLH	Kolahrood	5.08	140	ePn	Pn	22 22 38.1	-0.9
IKLH	Kolahrood	5.08	140	ePn	Pn	22 22 38.1	-0.9
IKLH				e		22 23 03.4	
BEST	Besiri	5.12	279	eP	Pg	22 22 59.2	-0.8

CSEM ***14*** *22:29:27.4±0.2, 3830N×3933E, h8^{km}, MD2.8, Error ellipse: s-maj=5.4km s-min=3.9km az=98.0*
DDA ***14*** *22:29:27.8, 3828N×3937E, h7^{km}±5^{km}, Md3.1*
ISCJB ***14*** *22:29:28.3±0.5, 3827N±003×3934E±004, h6^{km}±6^{km}, Error ellipse: s-maj=6.0km s-min=4.0km az=31.0*
ISK ***14*** *22:29:28.3, 3829N×3927E, h4^{km}, MD2.8*
ISC 14 22:29:28.6±0.5**, 3827N**±003×**3934E**±004**, h6**^{km}±6^{km}**, n13, σ0^{s}79**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.11	348	PG	Pg	22 29 30.6	-0.3
SVRC				eSG	Sg	22 29 33.1	+0.5
ELZG	Elazig	0.36	310	i P	Pg	22 29 35.6	+0.1
ELZG				i S	Sg	22 29 41.5	+1.3
PTK	Pertek	0.62	4	ePG	Pg	22 29 39.9	-0.6
PTK				eSG	Sg	22 29 50.3	+1.6
DIYA	Diyarbakir	0.71	119	i P	Pg	22 29 42.0	-0.2
DIYA				i S	Sg	22 29 51.5	+0.1
MYA	Malataya	0.72	275	ePG	Pg	22 29 41.5	-0.8
URFA	Urfa	0.92	206	ePG	Pg	22 29 46.7	+0.4
AKCD	Akcadag	1.11	272	i P	Pg	22 29 49.1	-0.8
AKCD				i S	Sg	22 30 04.1	-0.2
ATAB	Bozova	1.15	226	i P	Pg	22 29 50.7	+0.1
ATAB				i S	Sg	22 30 06.1	+0.7
KEMA	Kemaliye	1.19	327	i P	Pg	22 29 49.6	-1.9
KEMA				i S	Sg	22 30 06.3	-0.6
MARD	Mardin	1.49	129	i P	Pn	22 29 55.2	-0.6
MARD				i S	Sn	22 30 15.2	-0.3
BEST	Besiri	1.57	103	i P	Pn	22 29 56.3	-0.7
BEST				i S	Sn	22 30 18.6	+1.0
GZT	Gaziantep	1.67	237	i P	Pn	22 29 58.4	+0.1
GAZ	Gaziantep	2.01	238	ePN	Pn	22 30 04.1	+1.2

ISCJB ***14*** *22:33:40.7±1.6, 3607N±005×2731E±005, h12^{km}±11^{km}, Error ellipse: s-maj=8.9km s-min=5.9km az=155.4*
CSEM ***14*** *22:33:40.2±0.1, 3607N×2739E, h15^{km}, MD3.1, Error ellipse: s-maj=3.4km s-min=2.3km az=170.0*
ATH ***14*** *22:33:41.0, 3599N×2741E, h35^{km}±15^{km}, MD3.1/3*
THE ***14*** *22:33:44.4, 3609N×2709E, h7^{km}±5^{km}, Error ellipse: s-maj=7.1km s-min=0.9km az=74.0*
ISC 14 22:33:41.2±0.8**, 3605N**±005×**2731E**±007**, h14**^{km}±10^{km}**, n13, σ0^{s}55**/19**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.52	193	ePB	Pb	22 33 51.6	-0.6
KARP				eSB	Sb	22 33 59.8	+0.3
KARP	Karpathos	0.52	193	eP	Pg	22 33 51.7	+0.2
KARP				eS	Sb	22 33 59.8	+0.3
ARG	Arkhangelos	0.68	76	ePN	Pg	22 33 53.5	-1.0
ARG				eSN	Sg	22 34 04.0	+0.5
ARG	Arkhangelos	0.68	76	eP	Pg	22 33 53.5	-1.0
ARG				eS	Sg	22 34 04.4	+0.9
ZKR	Zakros	1.29	224	P	Pb	22 34 05.9	+0.6
ZKR				S	Sg	22 34 23.1	+0.2
THR1	Thera Island	1.53	282	P	Pn	22 34 08.0	-0.1
THR6	Thira Island,	1.57	282	P	Pn	22 34 08.9	+0.1
THR3	Thira Island,	1.58	283	P	Pn	22 34 08.8	-0.1
NPS	Neapolis	1.59	241	ePB	Pb	22 34 09.2	-1.2
THR4	Thira Island,	1.60	285	P	Pn	22 34 09.1	0.0
THR5	Thira Island,	1.62	283	P	Pn	22 34 10.3	+0.8
LAST	Lasithi	1.74	240	P	Pn	22 34 11.4	+0.4
LAST				S	Sn	22 34 32.6	-0.3
APE	Apeiranthos	1.75	306	P	Pn	22 34 11.2	0.0

IDC 14 22:34:06.9±1.4**, 032N**×**12214E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, Error ellipse: s-maj=160.1km s-min=22.3km az=65.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.42	150	P	P	22 39 16.5	-1.5
	0.5nm,0.6s,baz=326,slow=10,SNR=4.7						
ASAR	Alice Springs	26.44	155	P	P	22 39 47.1	+1.4
	0.3nm,0.6s,baz=347,slow=12,SNR=4.2						
SONM	Songino Array	49.26	346	P	P	22 42 58.0	+0.7
	0.4nm,0.5s,baz=160,slow=7.6,SNR=5.1						
MKAR	Makanchi Array	57.89	329	P	P	22 44 00.2	-0.5
	0.5nm,0.4s,baz=140,slow=8.0,SNR=4.1						

IDC 14 22:53:09.0±1.6**, 725S**×**11963E, h559**^{km}±10^{km}**, mb3.2**/6**, mb1 3.3**/9**, mb1mx3.1**/21**, mbtmp3.2**/9**, Error ellipse: s-maj=74.5km s-min=10.9km az=58.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.22	3	P	P	22 54 21.2	+0.5
	3.5nm,0.3s,baz=145,slow=8.3,SNR=6.8						
KAPI				S	S	22 55 19.0	+0.3
	1.7nm,0.3s,baz=116,slow=23,SNR=4.4						
BATI	Baumata	4.96	127	P	P	22 54 39.8	+0.7
	6.8nm,0.3s,baz=333,slow=2.3,SNR=6.3						
BATI				S	S	22 55 47.2	-5.3
	5.4nm,0.3s,baz=299,slow=6.8,SNR=8.3						
WRA	Warramunga Arr	19.05	133	P	P	22 56 55.4	-0.6
	0.5nm,0.3s,baz=309,slow=11,SNR=46						
ASAR	Alice Springs	21.32	142	P	P	22 57 16.2	-0.3
	2.6nm,0.3s,baz=319,slow=8.5,SNR=65						
CTA	Charters Tower	28.79	119	P	P	22 58 22.9	+0.3
	3.3nm,0.9s,baz=325,slow=12,SNR=2.4						
STKA	Stephens Creek	31.94	143	P	P	22 58 49.9	+0.4
	2.8nm,0.3s,baz=318,slow=7.7,SNR=12						
SONM	Songino Array	56.08	349	P	P	23 01 55.8	+0.4
	0.6nm,0.5s,baz=164,slow=7.9,SNR=6.2						
MKAR	Makanchi Array	63.20	332	P	P	23 02 43.2	+0.4
	0.4nm,0.5s,baz=147,slow=7.8,SNR=6.0						
ZALV	Zalesovo Beam	67.64	339	P	P	23 03 09.8	-0.6
	1.2nm,0.3s,baz=122,slow=4.8,SNR=5.5						

ISCJB ***14*** *23:01:11.8±0.2, 4933N±001×672E±002, h0^{km}, Error ellipse: s-maj=1.8km s-min=1.7km az=153.5*
NEIC ***14*** *23:01:14.2, 4937N×680E, h1^{km}, ML2.8(STR), ML3.1(LDG), After STR.*
LDG ***14*** *23:01:14.3±0.0, 4938N×683E, h1^{km}, Md3.0/3, Ml3.1/35, Error ellipse: s-maj=0.8km s-min=0.7km az=131.0, Suspected Mining induced.*
CSEM ***14*** *23:01:14.2±0.0, 4937N×684E, h1^{km}, ML3.2/30, Error ellipse: s-maj=0.7km s-min=0.6km az=157.0*
LEDBW ***14*** *23:01:14.2±0.5, 4938N±003×681E±003, h1^{km}, ML2.6, Error ellipse: s-maj=12.0km s-min=6.0km az=134.0*
STR ***14*** *23:01:14.2±0.2, 4937N×680E, h1^{km}, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
BGR ***14*** *23:01:14.2±0.3, 4937N×684E, h1^{km}, ML2.7/8, Error ellipse: s-maj=3.3km s-min=3.3km az=75.0*
BNS ***14*** *23:01:15.1±0.5, 4940N×683E, h1^{km}±7^{km}, ML2.3*
PRU ***14*** *23:01:16.0, 4931N×704E, h0^{km}*
VIE ***14*** *23:01:19.8±0.5, 4925N×725E, h10^{km}, mb2.6/5, ML2.5/7, Error ellipse: s-maj=6.1km s-min=3.5km az=18.0*
ISC 14 23:01:12.7±0.2**, 4935N**±001×**677E**±001**, h0**^{km}**, n143, σ1^{s}27**/287**, 8C-5D, Germany**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WLF	Walferdange	0.51	308	ePg	Pg	23 01 24.8	+2.4
	SNR=18						
WLF				eSg	Sg	23 01 30.6	+1.7
	SNR=6.4						
WLF	Walferdange	0.51	308	ePg	Pg	23 01 24.6	+2.2
WLF				eSg	Sg	23 01 32.4	+3.4
WLF	Walferdange	0.51	308	ePg	Pg	23 01 24.6	+2.2
WLF				eSg	Sg	23 01 32.4	+3.4
ABH	Alteburg	0.73	43	P*	Pb	23 01 27.1	-1.2
ABH	Alteburg	0.73	43	Pg	Pg	23 01 27.4	+0.7
ABH				Sg	Sg	23 01 37.6	+1.3
LANF	Langenberg	0.78	118	⇑iP*	Pb	23 01 28.3	-0.7
LANF	Langenberg	0.78	118	⇑iPg	Pb	23 01 28.3	-0.7
KTD	Kalmit	0.86	92	Pg	Pg	23 01 30.3	+1.2
KTD	Kalmit	0.86	92	Pg	Pg	23 01 30.3	+1.1
KTD				Sg	Sg	23 01 42.5	+2.2
KTD	Kalmit	0.86	92	Pg	Pg	23 01 30.4	+1.2
KTD				Sg	Sg	23 01 42.5	+2.2
BGG	Burgeitz	0.93	23	ePg	Pg	23 01 31.4	+0.9
HILG	Hillesheim	0.94	357	ePg	Pg	23 01 32.3	+1.6
CDF	Champ du Feu	1.00	160	ePg	Pg	23 01 32.7	+0.9
	SNR=1.0						
CDF	Champ du Feu	1.00	160	ePn	Pn	23 01 33.8	-0.1
CDF				eSg	Sg	23 01 46.2	+1.5
	59nm,0.2s,SNR=1.0						
CDF	Champ du Feu	1.00	160	ePn	Pn	23 01 33.8	-0.1
CDF				eSg	Sg	23 01 46.2	+1.5
	29nm,0.2s,SNR=1.0						
CDF	Champ du Feu	1.00	160	ePg	Pg	23 01 32.7	+0.9
CDF				ePn	Pn	23 01 33.8	-0.1
CDF				eSg	Sg	23 01 46.2	+1.5
RFYF	Reffroy	1.12	230	ePg	Pg	23 01 36.4	+2.4
	baz=46						
RFYF				eSg	Sg	23 01 51.2	+2.7
ECH	Echery	1.17	167	Pg	Pg	23 01 36.7	+1.7
ECH				Sg	Sg	23 01 52.7	+2.6
ECH	Echery	1.17	167	P	Pg	23 01 36.6	+1.6
ECH	Echery	1.17	167	Pg	Pg	23 01 36.6	+1.6
ECH				Sg	Sg	23 01 52.7	+2.6
THEF	They Montfort	1.24	205	Pg	Pg	23 01 37.8	+1.4
THEF				Sg	Sg	23 01 55.5	+3.1
THEF	They Montfort	1.24	205	⇓iP	Pg	23 01 38.0	+1.6
THEF	They Montfort	1.24	205	Pg	Pg	23 01 38.0	+1.6
THEF				Sg	Sg	23 01 55.5	+3.1
KOE	Koeppel	1.24	30	ePg	Pg	23 01 37.3	+0.8
STB	Steinbach	1.25	2	ePg	Pg	23 01 37.2	+0.7
STB				eSg	Sg	23 01 53.5	+0.8
	67nm,0.3s						
SWS	Schriesheim-Wi	1.27	83	P	Pg	23 01 36.5	-0.5
SWS				Sg	Sg	23 01 53.3	-0.1
LIBD	Limburg	1.32	155	P*	Pb	23 01 40.0	+1.6
LIBD	Limburg	1.32	155	Pg	Pg	23 01 39.7	+1.7
LIBD				Sg	Sg	23 01 57.5	+2.4
KLL	Kalltalsperre	1.33	347	ePg	Pg	23 01 38.5	+0.3
TOD	Tromm	1.35	78	Pg	Pg	23 01 38.5	-0.1
TOD	Tromm	1.35	78	Pg	Pg	23 01 38.7	+0.1
TOD				Sg	Sg	23 01 57.0	+0.9
DREG	Dreilaegerbach	1.36	346	ePg	Pg	23 01 38.7	0.0
HAU	Haudompre	1.38	192	ePn	Pn	23 01 39.2	+0.1
	SNR=1.0						
HAU				eSn	Sn	23 01 57.5	-0.4
	91nm,0.2s,SNR=1.0						
HAU	Haudompre	1.38	192	ePn	Pn	23 01 39.2	+0.1
	SNR=1.0						
HAU				eSn	Sn	23 01 57.5	-0.4
	45nm,0.2s,SNR=1.0						
MEZF	Maizieres J'vi	1.42	234	ePn	Pn	23 01 40.3	+0.7
	baz=48,SNR=1.0						
MEZF	Maizieres J'vi	1.42	234	ePg	Pg	23 01 41.3	+1.5
MEZF				eSn	Sn	23 01 58.8	-0.1
	60nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.42	234	ePg	Pg	23 01 41.3	+1.5
MEZF				eSn	Sn	23 01 58.8	-0.1
	30nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.42	234	ePn	Pn	23 01 40.3	+0.7
MEZF				ePg	Pg	23 01 41.3	+1.5
MEZF				eSn	Sn	23 01 58.8	-0.1
BFO	Black Forest	1.45	134	ePn	Pn	23 01 40.3	+0.2
	SNR=7.7						
BFO				eSg	Sg	23 01 58.5	-0.8
	SNR=3.5						
BFO	Black Forest	1.45	134	Pn	Pn	23 01 40.3	+0.2
	SNR=7.7						
BFO				eSg	Sg	23 01 58.7	-0.6
BFO	Black Forest	1.45	134	ePg	Pg	23 01 40.2	-0.3
BFO				eSg	Sg	23 01 58.7	-0.6
GIVF	Givet	1.47	302	ePn	Pn	23 01 40.6	+0.3
	SNR=1.0						
GIVF				eSg	Sg	23 02 01.8	+2.0
	60nm,0.3s						
GIVF	Givet	1.47	302	ePn	Pn	23 01 40.6	+0.3
	SNR=1.0						
GIVF				eSg	Sg	23 02 01.8	+2.0
	30nm,0.3s						
LBG	Lerchenberg	1.50	116	Pg	Pg	23 01 42.0	+0.6
LBG				S	Sg	23 01 58.5	-2.4
HGN	Heimansgroeve	1.51	339	ePg	Pg	23 01 41.3	-0.3
	12nm,0.2s						
HGN				eSg	Sg	23 02 02.4	+1.1
HGN	Heimansgroeve	1.51	339	eRg		23 02 23.4	
MOF	Molkenrain	1.52	171	Pg	Pg	23 01 43.2	+1.4
MOF				Sg	Sg	23 02 04.3	+2.8
MOF	Molkenrain	1.52	171	⇓ePg	Pg	23 01 43.4	+1.6
MOF				Sg	Sg	23 02 03.6	+2.1
MOF	Molkenrain	1.52	171	Pg	Pg	23 01 43.2	+1.4
MOF				Sg	Sg	23 02 03.6	+2.1
HINF	Hinteralfeld	1.54	178	ePg	Pg	23 01 43.3	+1.2
	SNR=1.0						
HINF				eSn	Sn	23 02 01.0	-0.9
	69nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.54	178	ePg	Pg	23 01 43.3	+1.2
	SNR=1.0						
HINF				eSn	Sn	23 02 01.0	-0.9
	34nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.54	178	ePn	Pn	23 01 41.6	+0.3
HINF				ePg	Pg	23 01 43.3	+1.2
HINF				eSn	Sn	23 02 01.0	-0.9
KIZ	Kirchzarten	1.59	151	Pg	Pg	23 01 44.0	+0.9
SFTF	Sexfontaines	1.62	226	ePg	Pg	23 01 44.9	+1.2
	baz=54						
SFTF				eSn	Sn	23 02 04.0	0.0
	45nm,0.4s						
SFTF	Sexfontaines	1.62	226	ePg	Pg	23 01 44.9	+1.2
SFTF				eSn	Sn	23 02 04.0	0.0
	22nm,0.4s						
SFTF	Sexfontaines	1.62	226	ePn	Pn	23 01 43.1	+0.7
SFTF				ePg	Pg	23 01 44.9	+1.2
SFTF				eSn	Sn	23 02 04.0	0.0
FELD	Feldberg im Sc	1.69	150	⇑iPg	Pg	23 01 46.3	+1.2
FELD	Feldberg im Sc	1.69	150	⇑iP	Pg	23 01 46.3	+1.2
FELD	Feldberg im Sc	1.69	150	Pg	Pg	23 01 46.3	+1.3
FELD				Sg	Sg	23 02 09.5	+2.6
FELD	Feldberg im Sc	1.69	150	Pg	Pg	23 01 46.2	+1.2
FELD				Sg	Sg	23 02 09.5	+2.6
STU	Stuttgart	1.70	109	eSg	Sg	23 02 05.2	-2.1
BAIF	Baives	1.81	294	ePg	Pg	23 01 48.6	+1.3
BAIF				eSg	Sg	23 02 12.2	+1.6
	35nm,0.3s						
BAIF	Baives	1.81	294	ePg	Pg	23 01 48.6	+1.3
BAIF				eSg	Sg	23 02 12.2	+1.6
	18nm,0.3s						
BAIF	Baives	1.81	294	ePn	Pn	23 01 45.5	+0.5
BAIF				ePg	Pg	23 01 48.6	+1.3
BAIF				eSg	Sg	23 02 12.2	+1.6
SPAK	Spaichingen-Ko	1.83	132	Pg	Pg	23 01 48.6	+0.8
SPAK	Spaichingen-Ko	1.83	132	Pg	Pg	23 01 48.6	+0.9
SPAK				Sg	Sg	23 02 14.2	+2.8
SIND	Sindeldorf	1.86	89	P	Pn	23 01 44.7	-1.0
BUCH	Bad Urach	1.93	117	P	Pn	23 01 47.5	+0.8
LOMF	Lomont	2.00	179	Pg	Pg	23 01 52.1	+1.1
GUT	Gutenstein	2.02	129	P	Pn	23 01 48.8	+0.9
GUT				Sg	Sg	23 02 17.4	0.0
BUG	Bochum--Univer	2.12	9	eSg	Sg	23 02 19.8	-0.8
	SNR=3.9						
UBBA	Unterbreizbach	2.55	54	eSg	Sg	23 02 33.9	-0.6
	SNR=2.6						
UBBA	Unterbreizbach	2.55	54	Sg	Sg	23 02 33.9	-0.6
	SNR=2.6						
CABF	La Chapelle	2.78	190	ePn	Pn	23 01 58.6	+0.2
CABF				eSg	Sg	23 02 42.7	+0.8
	48nm,0.7s						
CABF	La Chapelle	2.78	190	ePn	Pn	23 01 58.6	+0.2
CABF				eSg	Sg	23 02 42.7	+0.8
	24nm,0.7s						
UBR	Ueberruh	2.78	126	P	Pn	23 01 59.7	+1.3
LOR	Lormes	2.85	224	ePn	Pn	23 01 59.5	+0.2
	baz=52,SNR=1.0						
LOR				eSn	Sn	23 02 33.2	-1.1
	SNR=1.0						
LOR				eSg	Sg	23 02 45.5	+1.4
	33nm,0.4s,SNR=1.0						
LOR	Lormes	2.85	224	ePn	Pn	23 01 59.5	+0.2
	SNR=1.0						
LOR				eSn	Sn	23 02 33.2	-1.1
	SNR=1.0						
LOR				eSg	Sg	23 02 45.5	+1.4
	16nm,0.4s,SNR=1.0						
GRA1	Grafenberg Arr	2.92	82	Pg	Pg	23 02 07.1	-1.6
GRA1				Sg	Sg	23 02 44.6	-1.9
GRF	Grafenberg Arr	2.92	82	ePg	Pg	23 02 07.1	-1.6
GRF				eSg	Sg	23 02 44.6	-2.0
DAVA	Damuels	2.93	134	⇑iPn	Pn	23 02 02.6	+2.1
DAVA				⇑iSn	Sn	23 02 35.5	-0.8
SSF	Saint Saulge	3.16	225	ePn	Pn	23 02 03.7	+0.1
	SNR=1.0						
SSF				eSn	Sn	23 02 41.6	-0.4
	SNR=1.0						
SSF				eSg	Sg	23 02 55.6	+1.4
	21nm,0.4s						
SSF	Saint Saulge	3.16	225	ePn	Pn	23 02 03.7	+0.1
	SNR=1.0						
SSF				eSn	Sn	23 02 41.6	-0.4
	SNR=1.0						
SSF				eSg	Sg	23 02 55.6	+1.4
	11nm,0.4s						
SMF	Signal de Mont	3.34	217	ePn	Pn	23 02 05.7	-0.4
	SNR=1.0						
SMF				eSn	Sn	23 02 44.8	-1.7
	SNR=1.0						
SMF				eSg	Sg	23 03 00.8	+0.7
	18nm,0.5s,SNR=1.0						
SMF	Signal de Mont	3.34	217	ePn	Pn	23 02 05.7	-0.4
	SNR=1.0						
SMF				eSn	Sn	23 02 44.8	-1.7
	SNR=1.0						
SMF				eSg	Sg	23 03 00.8	+0.7
	9.0nm,0.5s,SNR=1.0						
MOX	Moxa	3.39	66	ePg	Pg	23 02 15.4	-2.1
MOX				eSg	Sg	23 03 00.2	-1.2
AVF	Avril sur Loir	3.44	223	ePn	Pn	23 02 07.4	0.0
	SNR=1.0						
AVF				eSn	Sn	23 02 47.0	-1.8
AVF				eSg	Sg	23 03 03.5	+0.5
	18nm,0.6s						
AVF	Avril sur Loir	3.44	223	ePn	Pn	23 02 07.4	0.0
	SNR=1.0						
AVF				eSn	Sn	23 02 47.0	-1.8
AVF				eSg	Sg	23 03 03.5	+0.5
	8.8nm,0.6s						
HYF	Humbligny	3.45	234	ePn	Pn	23 02 07.9	+0.3
HYF				eSn	Sn	23 02 48.0	-1.2
HYF				eSg	Sg	23 03 04.3	+0.7
MOTA	Moosalm	3.52	123	⇑iPn	Pn	23 02 10.5	+1.9
MOTA				⇓iSn	Sn	23 02 49.2	-1.7
MOTA				⇓iSg	Sg	23 03 06.0	+0.3
	5.9nm,0.5s						
FETA	Feichten	3.53	130	⇑iPn	Pn	23 02 11.0	+2.3
NKC	Novy Kostel	3.79	74	ePG	Pg	23 02 23.2	-2.0
NKC				eSG	Sg	23 03 10.0	-4.2
	comp=Z,16nm,0.9s						
TANN	Tannenbergstha	3.83	72	eSg	Sg	23 03 13.5	-2.3
	SNR=3.2						
LPL	La Plagne	3.84	180	ePn	Pn	23 02 13.3	+0.4
LPL				eSn	Sn	23 02 56.1	-2.6
LPL				eSg	Sg	23 03 15.6	-0.3
	comp=Z,7.7nm,0.6s						
LPL	La Plagne	3.84	180	ePn	Pn	23 02 13.3	+0.4
LPL				eSn	Sn	23 02 56.1	-2.6
LPL				eSg	Sg	23 03 15.6	-0.3
	comp=Z,3.8nm,0.6s						
BGF	Bois d'Agland	3.84	225	ePn	Pn	23 02 12.9	-0.1
	SNR=1.0						
BGF				eSn	Sn	23 02 57.0	-1.8
BGF				eSg	Sg	23 03 16.0	0.0
	comp=Z,60nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.84	225	ePn	Pn	23 02 12.9	-0.1
	SNR=1.0						
BGF				eSn	Sn	23 02 57.0	-1.8
BGF				eSg	Sg	23 03 16.0	0.0
	comp=Z,30nm,0.4s,SNR=1.0						
LPG	La Plagne	3.86	180	ePn	Pn	23 02 13.6	+0.4
LPG				eSn	Sn	23 02 56.8	-2.3
LPG				eSg	Sg	23 03 16.2	-0.3
	comp=Z,3.8nm,0.4s						
LPG	La Plagne	3.86	180	ePn	Pn	23 02 13.6	+0.4
LPG				eSn	Sn	23 02 56.8	-2.3
LPG				eSg	Sg	23 03 16.2	-0.3
	comp=Z,1.9nm,0.4s						
WTTA	Wattenberg	3.86	121	⇓iPn	Pn	23 02 15.3	+2.0
WET	Wettzell	4.01	91	ePn	Pn	23 02 16.2	+0.9
	SNR=3.6						
TCF	Toulx Ste Croi	4.34	227	ePg	Pg	23 02 35.3	-0.4
TCF				eSg	Sg	23 03 32.0	+0.1
	comp=Z,21nm,0.7s,SNR=1.0						
TCF	Toulx Ste Croi	4.34	227	ePg	Pg	23 02 35.3	-0.4
TCF				eSg	Sg	23 03 32.0	+0.1
	comp=Z,10nm,0.7s,SNR=1.0						
TCF	Toulx Ste Croi	4.34	227	ePn	Pn	23 02 20.0	+0.2
TCF				ePg	Pg	23 02 35.3	-0.4
TCF				eSg	Sg	23 03 32.0	+0.1
CLL	Collm	4.45	62	ePg	Pg	23 02 36.0	-1.9
CLL				eSg	Sg	23 03 34.0	-1.5
KHC	Kasperske Hory	4.47	90	ePN	Pn	23 02 22.0	+0.4
KHC				ex	x	23 02 40.0	
KHC				eSN	Sn	23 03 11.9	-2.3
KHC				eSG	Sg	23 03 31.0	-5.1
ORIF	Oris-en-Rattie	4.48	188	ePn	Pn	23 02 21.6	-0.1
ORIF				eSg	Sg	23 03 35.5	-0.9
	comp=Z,9.3nm,0.5s,SNR=1.0						
ORIF	Oris-en-Rattie	4.48	188	ePn	Pn	23 02 21.6	-0.1
ORIF				eSg	Sg	23 03 35.5	-0.9
	comp=Z,4.7nm,0.5s,SNR=1.0						
GEC2	GERESS Array S	4.58	94	ePn	Pn	23 02 23.9	+0.7
	SNR=23						
GEC2	GERESS Array S	4.58	94	ePn	Pn	23 02 24.0	+0.8
GEC2				eSn	Sn	23 03 15.0	-2.1
LDF	La Druitiere	4.60	263	ePn	Pn	23 02 23.5	+0.1
LDF				eSn	Sn	23 03 14.7	-2.8
LDF				eSg	Sg	23 03 40.1	-0.3
	comp=Z,7.2nm,0.5s						
LDF	La Druitiere	4.60	263	ePn	Pn	23 02 23.5	+0.1
LDF				eSn	Sn	23 03 14.7	-2.8
LDF				eSg	Sg	23 03 40.1	-0.3

	comp=Z,3.6nm,0.5s						
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	**Pn**	**23 02 23.5**	**-0.3**
MBDF				*e*Sg	**Sg**	**23 03 40.0**	**-1.2**
	comp=Z,31nm,1.2s						
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	**Pn**	**23 02 23.5**	**-0.3**
MBDF				*e*Sg	**Sg**	**23 03 40.0**	**-1.2**
	comp=Z,16nm,1.2s						
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pn	**Pn**	**23 02 24.9**	**-0.1**
VIVF				*e*Sg	**Sg**	**23 03 42.9**	**-1.3**
	comp=Z,9.5nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.72**	**198**	*e*Pn	**Pn**	**23 02 24.9**	**-0.1**
VIVF				*e*Sg	**Sg**	**23 03 42.9**	**-1.3**
	comp=Z,4.8nm,0.6s,SNR=1.0						
FLN	**La Foliniere**	**4.80**	**266**	*e*Pn	**Pn**	**23 02 26.4**	**+0.2**
	baz=79						
FLN				*e*Sn	**Sn**	**23 03 20.0**	**-2.5**
FLN				*e*Sg	**Sg**	**23 03 46.3**	**-0.6**
	comp=Z,17nm,0.6s						
FLN	**La Foliniere**	**4.80**	**266**	*e*Pn	**Pn**	**23 02 26.4**	**+0.2**
FLN				*e*Sn	**Sn**	**23 03 20.0**	**-2.5**
FLN				*e*Sg	**Sg**	**23 03 46.3**	**-0.6**
	comp=Z,8.4nm,0.6s						
BRG	**Berggiesshubel**	**4.86**	**69**	SG	**Sg**	**23 03 47.8**	**-1.0**
	comp=Z,4.7nm,0.6s						
PRU	**Pruhonice**	**5.09**	**80**	*e*SG	**Sg**	**23 03 52.5**	**-3.6**
GRR	**Gorron**	**5.12**	**262**	*e*Pn	**Pn**	**23 02 30.3**	**-0.3**
GRR				*e*Sn	**Sn**	**23 03 26.4**	**-4.0**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**23 03 56.3**	**-0.9**
	comp=Z,9.6nm,0.5s						
GRR	**Gorron**	**5.12**	**262**	*e*Pn	**Pn**	**23 02 30.3**	**-0.3**
GRR				*e*Sn	**Sn**	**23 03 26.4**	**-4.0**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**23 03 56.3**	**-0.9**
	comp=Z,4.8nm,0.5s						
MOA	**Molln**	**5.20**	**104**	⇑*i*Pn	**Pn**	**23 02 32.9**	**+1.3**
MOA				⇑*i*Sn	**Sn**	**23 03 29.8**	**-2.4**
MFF	**Saint Martin d**	**5.39**	**242**	*e*Pn	**Pn**	**23 02 34.3**	**0.0**
MFF				*e*Sg	**Sg**	**23 04 05.1**	**-0.8**
	comp=Z,14nm,0.8s						
MFF	**Saint Martin d**	**5.39**	**242**	*e*Pn	**Pn**	**23 02 34.3**	**0.0**
MFF				*e*Sg	**Sg**	**23 04 05.1**	**-0.8**
	comp=Z,7.1nm,0.8s						
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*Pn	**Pn**	**23 02 34.0**	**-0.3**
RJF				*e*Sg	**Sg**	**23 04 04.9**	**-1.0**
	comp=Z,6.3nm,0.5s						
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*Pn	**Pn**	**23 02 34.0**	**-0.3**
RJF				*e*Sg	**Sg**	**23 04 04.9**	**-1.0**
	comp=Z,3.2nm,0.5s						
SMRF	**Simiane la Rot**	**5.44**	**189**	*e*Pn	**Pn**	**23 02 34.8**	**-0.1**
SMRF				*e*Sn	**Sn**	**23 03 34.8**	**-3.4**
	comp=Z,0.8nm,0.3s						
SMRF	**Simiane la Rot**	**5.44**	**189**	*e*Pn	**Pn**	**23 02 34.8**	**-0.1**
SMRF				*e*Sn	**Sn**	**23 03 34.8**	**-3.4**
	comp=Z,0.4nm,0.3s						
CAF	**Calviac**	**5.47**	**218**	*e*Pn	**Pn**	**23 02 34.9**	**-0.4**
CAF				*e*Sn	**Sn**	**23 03 36.1**	**-2.7**
CAF				*e*Sg	**Sg**	**23 04 06.9**	**-1.3**
	comp=Z,7.2nm,0.5s						
CAF	**Calviac**	**5.47**	**218**	*e*Pn	**Pn**	**23 02 34.9**	**-0.4**
CAF				*e*Sn	**Sn**	**23 03 36.1**	**-2.7**
CAF				*e*Sg	**Sg**	**23 04 06.9**	**-1.3**
	comp=Z,3.6nm,0.5s						
LASF	**Ste Croix**	**5.64**	**202**	*e*Sg	**Sg**	**23 04 12.1**	**-1.8**
	comp=Z,4.8nm,0.6s						
LASF	**Ste Croix**	**5.64**	**202**	*e*Sg	**Sg**	**23 04 12.1**	**-1.8**
	comp=Z,2.4nm,0.6s						
FRF	**La Foret Royal**	**5.79**	**181**	*e*Pn	**Pn**	**23 02 39.4**	**-0.4**
FRF				*e*Sn	**Sn**	**23 03 42.8**	**-4.1**
	comp=Z,1.2nm,0.3s						
LMR	**La Mourre**	**6.02**	**182**	*e*Pn	**Pn**	**23 02 42.3**	**-0.6**
LMR				*e*Sn	**Sn**	**23 03 48.2**	**-4.3**
	comp=Z,2.0nm,0.4s						
LFF	**La Frestale**	**6.03**	**225**	*e*Pn	**Pn**	**23 02 43.2**	**+0.2**
LFF				*e*Sn	**Sn**	**23 03 49.4**	**-3.3**
LFF				*e*Sg	**Sg**	**23 04 24.8**	**-1.5**
	comp=Z,18nm,0.7s						
LFF	**La Frestale**	**6.03**	**225**	*e*Pn	**Pn**	**23 02 43.2**	**+0.2**
LFF				*e*Sn	**Sn**	**23 03 49.4**	**-3.3**
LFF				*e*Sg	**Sg**	**23 04 24.8**	**-1.5**
	comp=Z,9.1nm,0.7s						
SGMF	**Saint Gilles**	**6.26**	**263**	*e*Pn	**Pn**	**23 02 45.7**	**-0.4**
SGMF				*e*Sn	**Sn**	**23 03 54.6**	**-3.7**
SGMF				*e*Sg	**Sg**	**23 04 31.9**	**-1.6**
	comp=Z,16nm,0.8s						
SGMF	**Saint Gilles**	**6.26**	**263**	*e*Pn	**Pn**	**23 02 45.7**	**-0.4**
SGMF				*e*Sn	**Sn**	**23 03 54.6**	**-3.7**
SGMF				*e*Sg	**Sg**	**23 04 31.9**	**-1.6**
	comp=Z,7.8nm,0.8s						
ROSF	**Rostrenen**	**6.71**	**265**	*e*Pn	**Pn**	**23 02 51.7**	**-0.6**
ROSF				*e*Sn	**Sn**	**23 04 05.6**	**-3.7**
ROSF				*e*Sg	**Sg**	**23 04 45.9**	**-2.0**
	comp=Z,6.2nm,0.6s						
ROSF	**Rostrenen**	**6.71**	**265**	*e*Pn	**Pn**	**23 02 51.7**	**-0.6**
ROSF				*e*Sn	**Sn**	**23 04 05.6**	**-3.7**
ROSF				*e*Sg	**Sg**	**23 04 45.9**	**-2.0**
	comp=Z,3.1nm,0.6s						
QUIF	**Quistinic**	**6.74**	**261**	*e*Pn	**Pn**	**23 02 52.0**	**-0.7**
QUIF				*e*Sn	**Sn**	**23 04 05.9**	**-4.2**
QUIF				*e*Sg	**Sg**	**23 04 46.9**	**-2.0**
	comp=Z,4.5nm,0.5s						
QUIF	**Quistinic**	**6.74**	**261**	*e*Pn	**Pn**	**23 02 52.0**	**-0.7**
QUIF				*e*Sn	**Sn**	**23 04 05.9**	**-4.2**
QUIF				*e*Sg	**Sg**	**23 04 46.9**	**-2.0**
	comp=Z,2.2nm,0.5s						

JMA ***14*** *23:40:34.6±0.2, 23.17N×122.10E, h73km*

TAP 14 23:40:34.2, 2315N×12198E, h38km, ML3.3, 3C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.57**	**265**	⇑*i*P	Pn	23 40 44.8	-1.0
	baz=265						
CHKT				S	Sn	23 40 52.3	-1.7
	baz=265						
TWF1	**Yuli**	**0.66**	**288**	⇑*i*P	Pn	23 40 46.5	-0.5
	baz=282						
TWF1				S	Sn	23 40 56.4	+0.2
	baz=282						
EHY	**Hungye**	**0.70**	**300**	⇑*i*P	Pn	23 40 47.0	-0.6
	baz=301						
EHY				*e*S	Sn	23 40 57.3	+0.1
	baz=301						
ESL	**Shilin**	**0.83**	**323**	P	Pn	23 40 48.7	-0.7
	baz=330						
ESL				*e*S	Sn	23 40 59.0	-1.5
	baz=330						
TTN	**Taitung**	**0.86**	**243**	*e*P	Pn	23 40 48.9	-1.0
	baz=240						
TTN				*e*S	Sn	23 41 01.2	0.0
	baz=240						
ELDTW	**Lidau**	**0.89**	**273**	P	Pn	23 40 49.6	-0.6
	baz=273						
ELDTW				S	Sn	23 41 00.4	-1.4
	baz=273						
TWG	**Pinlang**	**0.90**	**249**	P	Pn	23 40 50.4	0.0
	baz=249						
TWG				*e*S	Sn	23 41 01.9	-0.2
	baz=249						
TWD	**Chiawan**	**0.99**	**339**	*e*P	Pn	23 40 51.2	-0.4
	baz=339						
TWD				*e*S	Sn	23 41 03.0	-1.4
	baz=339						
ECL	**Taimali**	**1.09**	**240**	P	Pn	23 40 52.5	-0.5
	baz=251						
ECL				*e*S	Sn	23 41 05.0	-1.9
	baz=251						
STYT	**Tauyuan**	**1.13**	**271**	*e*P	Pn	23 40 53.8	+0.3
	baz=267						
LAY	**Lan-yu**	**1.18**	**200**	*i* P	Pn	23 40 52.9	-1.2
	baz=200						
LAY				*e*S	Sn	23 41 08.0	-1.0
	baz=200						
WHF	**Hehuan Shan**	**1.19**	**327**	P	Pn	23 40 54.5	+0.2
	baz=327						
WHF				*e*S	Sn	23 41 08.7	-0.6
	baz=327						
SMLT	**Sun Moon Lake**	**1.23**	**307**	*e*P	Pn	23 40 55.5	+0.6
	baz=302						
SMLT				*e*S	Sn	23 41 10.5	+0.2
	baz=302						
WTP	**Ta-pu**	**1.26**	**275**	*e*P	Pn	23 40 56.9	+1.6
	baz=275						
WTP				*e*S	Sn	23 41 13.3	+2.2
	baz=275						
TAW	**Tawu**	**1.27**	**232**	*e*P	Pn	23 40 55.5	+0.1
	baz=241						
TAW				*e*S	Sn	23 41 11.2	-0.2
	baz=241						
TYC	**Yuchr**	**1.27**	**306**	*e*P	Pn	23 40 56.2	+0.7
	baz=307						
TYC				*e*S	Sn	23 41 11.8	+0.4
	baz=307						
CHN5	**Tsauling**	**1.28**	**291**	P	Pn	23 40 57.4	+1.9
	baz=286						
CHN5				*e*S	Sn	23 41 14.4	+3.0
	baz=286						
CHN4	**Tsaushan**	**1.29**	**279**	*e*P	Pn	23 40 57.5	+1.7
	baz=280						
CHN4				*e*S	Sn	23 41 14.2	+2.4
	baz=280						
ENA	**Nanau**	**1.29**	**350**	P	Pn	23 40 55.8	0.0
	baz=350						
ENA				*e*S	Sn	23 41 11.1	-0.7
	baz=350						
SSD	**Sandimen**	**1.31**	**252**	*e*P	Pn	23 40 56.5	+0.6
	baz=247						
SSD				*e*S	Sn	23 41 10.9	-1.2
	baz=247						
TWT	**Tachien**	**1.32**	**326**	*e*P	Pn	23 40 56.8	+0.7
	baz=326						
TWT				*e*S	Sn	23 41 12.5	-0.1
	baz=326						
CHN1	**Nanshi**	**1.34**	**272**	P	Pn	23 40 58.1	+1.8
	baz=272						
CHN1				*e*S	Sn	23 41 15.8	+2.9
	baz=272						
TWK	**Hsinying**	**1.38**	**275**	*e*P	Pn	23 40 58.8	+1.9
	baz=275						
TWK				*e*S	Sn	23 41 16.4	+2.5
	baz=275						
NNS	**Nan Shan**	**1.40**	**337**	*e*P	Pn	23 40 57.9	+0.7
	baz=337						
NNS				*e*S	Sn	23 41 14.2	-0.2
	baz=337						
TWC	**Suao**	**1.46**	**355**	*e*P	Pn	23 40 58.7	+0.7
	baz=355						
TWC				*e*S	Sn	23 41 16.3	+0.4
	baz=355						
TWM1	**Shoushan**	**1.47**	**258**	*e*P	Pn	23 40 58.0	-0.2
	baz=258						
SCZT	**Fangliau**	**1.48**	**239**	*e*P	Pn	23 40 59.5	+1.3
	baz=238						
ENTT	**Nioudou**	**1.53**	**346**	*e*P	Pn	23 40 58.7	-0.3
	baz=346						
ENTT				*e*S	Sn	23 41 17.2	-0.5
	baz=346						
TWE	**Neicheng**	**1.59**	**350**	*e*P	Pn	23 41 00.7	+0.9
	baz=350						
TWE				*e*S	Sn	23 41 19.5	+0.4
	baz=350						
YOJ	**Yonaguni jima**	**1.61**	**36**	P	Pn	23 41 00.5	+0.4
YOJ				*e*S	Sn	23 41 19.9	+0.2
NSK	**Sanguang**	**1.62**	**340**	*e*P	Pn	23 41 01.1	+0.8
	baz=340						
NSK				*e*S	Sn	23 41 19.2	-0.7
	baz=340						
TWQ1	**Liyutan**	**1.63**	**317**	*e*P	Pn	23 41 02.8	+2.4
	baz=317						
NSTT	**Nanjuang**	**1.73**	**329**	*e*P	Pn	23 41 01.7	0.0
	baz=339						
NSTT				*e*S	Sn	23 41 22.8	+0.3
	baz=339						
HATJ	**Hateruma jima**	**1.90**	**61**	P	Pn	23 41 04.1	0.0
HATJ				*e*S	Sn	23 41 25.9	-1.0
JKRS	**Kuro-shima**	**2.15**	**59**	*e*S	Sn	23 41 32.4	-0.6
JIJ	**Ishigaki jima**	**2.32**	**58**	P	Pn	23 41 10.2	+0.3
JIJ				*e*S	Sn	23 41 36.2	-1.0
JTJ	**Tarama**	**2.90**	**59**	P	Pn	23 41 18.0	+0.2
JTJ				*e*S	Sn	23 41 51.0	-0.5

MEX 14 23:48:30.6±0.7, 1629N×9825W, h23km±12km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**49**	*i* P	Pb	23 48 34.1	-1.4
PNIG				*i* S	Sb	23 48 37.8	-0.8
UTMO	**Huajuapan**	**1.58**	**15**	*i* P	Pn	23 48 55.1	-2.2
UTMO				*i* S	Sn	23 49 12.8	-4.3
MEIG	**Mezcala**	**2.09**	**321**	*e*P	Pn	23 49 01.8	-2.5
MEIG				*i* S	Sn	23 49 26.0	-3.6
PLIG	**Platanillo**	**2.41**	**330**	*i* P	Pn	23 49 07.1	-1.6
PLIG				*i* S	Sn	23 49 35.3	-2.1

MEX 15 00:04:38.4±0.8, 1702N×9963W, h27km±31km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.61**	**273**	*i* P	Pb	00 04 48.0	-2.5
CAIG				*i* S	Sb	00 04 57.0	-1.7
MEIG	**Mezcala**	**0.90**	**1**	*e*P	Pn	00 04 52.5	-2.9
MEIG				*i* S	Sb	00 05 04.1	-2.9
PLIG	**Platanillo**	**1.37**	**5**	*e*P	Pn	00 05 00.2	-1.6
PLIG				*i* S	Sn	00 05 15.6	-3.5
PNIG	**Pinotepa**	**1.57**	**113**	*i* P	Pn	00 05 02.4	-2.2
PNIG				*i* S	Sn	00 05 21.0	-3.0
ZIIG	**Zihuatanejo**	**1.84**	**289**	*e*P	Pn	00 05 06.2	-2.1
ZIIG				*i* S	Sn	00 05 28.6	-2.2
UTMO	**Huajuapan**	**1.92**	**65**	*i* P	Pn	00 05 07.9	-1.5
UTMO				*i* S	Sn	00 05 30.3	-2.4

IDC 15 00:18:47.6±8.8, 671S×14964E, h52km±67km, mb2.6/1, mb1 3.4/3, mb1mx3.2/16, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=114.7km s-min=55.1km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.63**	**222**	P	Pn	00 19 41.4	0.0
	5.7nm,0.3s,baz=233,slow=23,SNR=8.2						
PMG				S	Sn	00 20 24.1	+1.1
	10nm,0.3s,baz=31,slow=22,SNR=8.0						
WRA	**Warramunga Arr**	**19.84**	**227**	P	Pn	00 23 14.2	-2.0
	0.2nm,0.3s,baz=52,slow=11,SNR=10						
ASAR	**Alice Springs**	**22.65**	**220**	P	P	00 23 43.4	-0.9
	0.3nm,0.6s,baz=57,slow=9.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**147.81**	**284**	PKPbc	PKPbc	00 38 27.6	-0.2
	0.4nm,0.8s,baz=85,slow=2.2,SNR=3.5						

IDC ***15*** *00:44:32.9±16.0, 3601N×7055E, h170km±160km, mb2.8/2, mb1 2.8/6, mb1mx2.7/27, mbtmp2.8/6, ML3.5/4, Error ellipse: s-maj=91.4km s-min=62.1km az=173.0*

ISCJB ***15*** *00:44:38.5±0.5, 3657N±004×7032E±008, h200km, Error ellipse: s-maj=8.8km s-min=5.1km az=177.5*

NEIC ***15*** *00:44:39.7±0.8, 3656N×7030E, h207km±11km, mb4.6/9, Error ellipse: s-maj=12.6km s-min=7.6km az=74.0*

ISC 15 00:44:39.6±0.5, 3657N±004×7030E±008, h200km, n22, σ1s04/26, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.27**	**207**	*e*Pn	**Pn**	**00 45 21.5**	**+0.5**
KBL				*e*Sn	**Sn**	**00 45 52.2**	**-0.9**
AML	**Almayashu**	**6.15**	**24**	*e*Pn	**Pn**	**00 46 08.9**	**+0.3**
	122nm,0.6s						
UCH	**Uchtor**	**6.53**	**29**	*e*Pn	**Pn**	**00 46 14.3**	**+0.8**
KK31	**Karatay Array**	**6.53**	**1**	⇑Pn	**Pn**	**00 46 14.3**	**+0.8**
	0.5nm,0.3s,baz=176,slow=12						
KK31				⇑Sn	**Sn**	**00 47 26.2**	**-2.0**
	5.5nm,0.5s,baz=181,slow=23						
AAK	**Ala-Archa**	**6.87**	**27**	*e*Pn	**Pn**	**00 46 18.7**	**+0.7**
	6.8nm,0.6s						
AAK				*e*Sn	**Sn**	**00 47 36.3**	**+0.2**
TKM2	**Tokmak 2**	**7.54**	**31**	⇓Pn	**Pn**	**00 46 26.3**	**-0.5**
	3.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**00 47 47.7**	**-4.3**
	5.3nm,0.8s						
MK31	**Makanchi Array**	**13.57**	**37**	*e*Pn	**Pn**	**00 47 43.3**	**-0.8**
MKAR	**Makanchi Array**	**13.57**	**37**	P	**Pn**	**00 47 43.2**	**-0.8**
	0.1nm,0.3s,baz=210,slow=14,SNR=9.5						
GKN	**Gorkha**	**14.82**	**121**	*e*P	**Pn**	**00 48 00.7**	**+1.0**
	12nm,0.4s						
KURK	**Kurchatov**	**15.35**	**20**	P	**Pn**	**00 48 03.8**	**-2.2**
	0.1nm,0.3s,baz=210,slow=11,SNR=5.5						
DMN	**Daman**	**15.39**	**121**	*e*P	**Pn**	**00 48 06.7**	**+0.1**
	4.8nm,0.3s						
KKN	**Kakani**	**15.40**	**120**	*e*P	**Pn**	**00 48 07.2**	**+0.5**
	11nm,0.4s						
PKI	**Pulchoki**	**15.62**	**121**	*e*P	**Pn**	**00 48 09.1**	**-0.3**
	9.6nm,0.5s						
GUN	**Gumba**	**15.74**	**119**	*e*P	**Pn**	**00 48 11.3**	**+0.4**
	9.3nm,0.5s						
JIRN	**Jiri**	**16.11**	**119**	*e*P	**P**	**00 48 15.2**	**+0.4**
	24nm,0.5s						
AKTK	**Aktyubinsk**	**16.44**	**331**	P	**P**	**00 48 19.6**	**+1.4**
AKTO	**Aktyubinsk**	**16.44**	**331**	P	**P**	**00 48 19.6**	**+1.4**
	0.2nm,0.3s,baz=144,slow=9.7,SNR=4.0						
BVAR	**Borovoye Array**	**16.45**	**0**	P	**P**	**00 48 20.4**	**+2.1**
	0.3nm,0.3s,baz=176,slow=10,SNR=8.0						
RAMN	**Ramite**	**16.84**	**120**	*e*P	**P**	**00 48 21.7**	**-1.0**
	12nm,0.6s						
TAPN	**Taplejung**	**17.38**	**117**	*e*P	**P**	**00 48 28.4**	**-0.3**
ZALV	**Zalesovo Beam**	**20.09**	**26**	P	**P**	**00 48 57.5**	**-0.2**
	0.7nm,0.4s,baz=217,slow=10,SNR=5.4						
TORD	**Torodi Ar. Bea**	**65.15**	**268**	P	**P**	**00 54 57.3**	**-2.2**
	0.1nm,0.8s,baz=50,slow=7.5,SNR=3.4						

IDC 15 01:07:47.7±2.9, 2288S×17469W, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.9/15, mbtmp4.1/3, MS3.6/4, Ms1 3.6/4, ms1mx3.3/18, Error ellipse: s-maj=255.8km s-min=35.0km az=161.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**27.73**	**295**	LR	LR	01 22 29.5	
	comp=Z,140nm,19.1s,baz=150,slow=32						
CTA	**Charters Tower**	**36.38**	**267**	LR	LR	01 28 21.6	
	comp=Z,65nm,18.8s,baz=49,slow=34						
PMG	**Port Moresby**	**38.89**	**284**	LR	LR	01 29 49.3	
	comp=Z,84nm,18.2s,baz=175,slow=34						
ASAR	**Alice Springs**	**47.02**	**258**	P	P	01 16 20.6	-0.6
	5.0nm,1.1s,baz=100,slow=8.3,SNR=22						
WB2	**Warramunga Arr**	**47.35**	**263**	*e*P	P	01 16 24.2	+0.5
WRA	**Warramunga Arr**	**47.36**	**263**	P	P	01 16 24.3	+0.5
	4.2nm,0.9s,baz=102,slow=8.2,SNR=18						
FITZ	**Fitzroy Crossi**	**55.79**	**263**	*e*P	P	01 17 29.4	+2.4
	5.5nm,0.8s						
BATI	**Baumata**	**60.06**	**271**	LR	LR	01 39 20.8	
	comp=Z,55nm,18.5s,baz=151,slow=32						
SNAA	**Sanae**	**85.54**	**177**	*e*	P	01 20 35.1	+7.8
SNAA				*e*		01 20 39.5	
SNAA				*e*		01 20 42.7	
VNA3	**Neumayer Olymp**	**85.55**	**175**	*e*	P	01 20 36.9	+9.5
VNA3				*e*		01 20 42.1	
VNA3				*e*		01 20 46.0	
TXAR	**Lajitas Array**	**85.78**	**56**	P	P	01 20 29.4	+0.1
	0.5nm,0.9s,baz=224,slow=6.3,SNR=3.5						
VNA2	**Neumayer--Watz**	**86.03**	**176**	*e*	P	01 20 39.6	+10
	baz=218,slow=2.9						
VNA2				*e*		01 20 44.3	
VNA2				*e*		01 20 47.7	

IDC ***15*** *01:08:44.8±5.0, 1527N×9268W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.6/20, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=142.0km s-min=28.7km az=30.0*

MEX ***15*** *01:08:44.6±0.8, 1444N×9329W, h12km±26km, MD4.1*

NEIC ***15*** *01:08:45.2, 1444N×9328W, h15km, MD4.1(MEX), After MEX.*

ISC 15 01:08:44.2±1.7, 1462N±008×9324W±006, h7km±8km, n13, σ1s07/20, mb3.5/2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.98**	**73**	*i* P	**Pg**	**01 09 01.6**	**-1.4**
THIG				*i* S	**Sg**	**01 09 16.2**	**+0.3**
PCIG		**1.08**	**1**	*e*P	**Pg**	**01 09 04.4**	**-0.5**
PCIG				*i* S	**Sg**	**01 09 19.5**	**+0.5**
CCIG	**Comitan**	**1.97**	**33**	*i* P	**Pn**	**01 09 17.9**	**0.0**
CCIG				*i* S	**Sn**	**01 09 42.4**	**-0.4**
TGIG		**2.15**	**3**	*i* P	**Pn**	**01 09 20.7**	**+0.2**
TGIG				*i* S	**Sn**	**01 09 46.8**	**-0.7**
SCX	**San Cristobal**	**2.19**	**15**	*e*P	**Pn**	**01 09 22.6**	**+1.7**
CMIG	**Matias Romero**	**2.93**	**327**	Pn	**Pn**	**01 09 30.1**	**-1.0**
	2.7nm,0.3s,baz=134,slow=10.0,SNR=18						
CMIG				Sn	**Sn**	**01 10 00.9**	**-5.6**
	5.9nm,0.3s,baz=108,slow=12,SNR=5.6						
CMIG				Lg		01 10 13.1	
	6.4nm,0.3s,baz=288,slow=20,SNR=6.5						
CMIG	**Matias Romero**	**2.93**	**327**	*e*P	**Pn**	**01 09 30.5**	**-0.6**
CMIG				*i* S	**Sn**	**01 10 05.0**	**-1.5**
CMIG	**Matias Romero**	**2.93**	**327**	*e*P	**Pn**	**01 09 30.5**	**-0.6**
CMIG				*i* S	**Sn**	**01 10 06.2**	**-0.3**
TEIG	**Tepich**	**7.32**	**40**	*e*Pn	**Pn**	**01 10 33.1**	**+1.6**
TXAR	**Lajitas Array**	**17.53**	**328**	Pn	**Pn**	**01 12 50.7**	**+1.6**
	0.0nm,0.3s,baz=151,slow=13,SNR=3.6						
TXAR	**Lajitas Array**	**17.53**	**328**	Pn	**Pn**	**01 12 50.7**	**+1.6**
NVAR	**Mina Array Bea**	**32.44**	**322**	P	**P**	**01 15 15.6**	**+0.6**
	0.2nm,0.6s,mb3.2,baz=138,slow=6.8,SNR=3.1						
YKA	**Yellowknife Ar**	**50.16**	**347**	P	**P**	**01 17 37.7**	**-2.3**
	0.9nm,0.7s,mb3.9,baz=152,slow=7.4,SNR=16						

ISCJB ***15*** *02:09:08.0±1.4, 3637N±005×4118E±005, h6km±8km, Error ellipse: s-maj=9.4km s-min=5.3km az=37.7*

DDA ***15*** *02:09:07.4, 3636N×4097E, h11km±4km, Md3.1*

CSEM ***15*** *02:09:12.0±0.2, 37.11N×4166E, h10km, MD3.1, Error ellipse: s-maj=22.6km s-min=4.3km az=28.0*

ISC 15 02:09:08.2±1.3, 3636N±005×4115E±005, h2km±8km, n14, σ1s26/22, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARD	**Mardin**	**1.00**	**343**	*i* P	**Pg**	**02 09 26.3**	**-1.1**
MARD				*i* S	**Sg**	**02 09 39.9**	**-0.4**
BEST	**Besiri**	**1.53**	**3**	*i* P	**Pg**	**02 09 37.0**	**-0.5**
BEST				*i* S	**Sg**	**02 09 58.3**	**+0.9**
MSL	**Mosul**	**1.58**	**88**	*e*Pn	**Pn**	**02 09 36.0**	**-1.2**
MSL				*e*Sn	**Sn**	**02 09 59.0**	**+0.8**
DIYA	**Diyarbakir**	**1.77**	**332**	*i* P	**Pn**	**02 09 38.5**	**-1.3**
DIYA				*i* S	**Sn**	**02 10 02.1**	**-0.6**
URFA	**Urfa**	**2.16**	**301**	*e*PN	**Pn**	**02 09 42.8**	**-2.4**
SVRC	**Sivrice-ELAZID**	**2.49**	**324**	*e*PN	**Pn**	**02 09 50.9**	**+1.1**
ELZG	**Elazig**	**2.74**	**322**	*i* P	**Pb**	**02 09 59.3**	**+1.4**
ELZG				*i* S	**Sn**	**02 10 26.4**	**-0.5**
PTK	**Pertek**	**2.89**	**332**	*e*PN	**Pn**	**02 09 57.4**	**+2.2**
MYA	**Malataya**	**2.93**	**313**	*e*PN	**Pn**	**02 09 58.9**	**+3.1**
GZT	**Gaziantep**	**3.04**	**290**	*i* P	**Pn**	**02 10 02.2**	**+4.8**
AKCD	**Akcadag**	**3.22**	**308**	*e*P	**Pn**	**02 10 02.8**	**+3.0**
AKCD				*i* S	**Sn**	**02 10 37.1**	**-1.5**
KMRS	**Kahramanmaras**	**3.59**	**290**	*e*P	**Pn**	**02 10 06.0**	**+1.1**
ANDN	**Andirin**	**4.04**	**289**	*e*P	**Pb**	**02 10 19.9**	**-0.1**
ANDN				*i* S	**Sb**	**02 11 09.5**	**+0.2**
BHD	**Baghdad**	**4.07**	**138**	*e*Pn	**Pn**	**02 10 10.0**	**-1.4**
BHD				*e*Sn	**Sn**	**02 11 00.0**	**+0.4**

NIED ***15*** *02:14:00, 4600N×15340E, h8km, Mw4.1 Best double couple: $M_0$1.85000×10^15 NP1:ϕ_s112.00000°, δ74.00000°, λ123.00000°. NP2:ϕ_s225.00000°, δ36.00000°, λ28.00000°.*

IDC ***15*** *02:14:17.9±0.7, 4660N×15254E, h62km±6km, mb3.4/11, mb1 3.7/13, mb1mx3.6/24, mbtmp3.5/13, MS2.9/3, Ms1 2.9/3, ms1mx2.6/25, Error ellipse: s-maj=22.0km s-min=15.0km az=129.0*

NEIC ***15*** *02:14:17.9±0.5, 4661N×15259E, Error ellipse: s-maj=14.2km s-min=9.7km az=143.0*

MOS ***15*** *02:14:17.1±1.4, 4650N×15263E, h71km, mb4.2/6, Error ellipse: s-maj=23.9km s-min=11.3km az=73.8*

ISCJB ***15*** *02:14:18.4±1.4, 465N±0.1×1527E±0.1, h83km±12km, mb3.5/12, Error ellipse: s-maj=19.9km s-min=11.7km az=139.2*

ISC 15 02:14:20.2±1.2, 4657N±010×1527E±01, h82km±11km, h64km±2.8km:pP-P, n31, σ1s07/30, mb3.5/12, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.71**	**28**	*e*PN	**Pn**	**02 15 28.5**	**-0.2**
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
PETK	**Petropavlovsk-**	**7.30**	**24**	P	**Pn**	**02 16 01.5**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=180,slow=11,SNR=19						
PETK				LR	LR	02 19 12.7	
	comp=Z,69nm,18.1s,baz=86,slow=40						

PET	Petropavlovsk	7.53	29	ePN	Pn	02 16 09.7	+2.6
PET				pmax	pmax		
	comp=Z,58nm,0.9s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
ERM	Erimo	8.21	240	i PN	Pn	02 16 17.0	+0.5
FX1	Attu Island--F	14.65	57	P	Pn	02 17 40.9	-2.0
	comp=Z,2.9nm,0.3s,baz=291,slow=17,SNR=7.9						
FX1				LR	LR	02 23 19.5	
	comp=Z,47nm,19.7s,baz=143,slow=37						
FX1	Attu Island--F	14.65	57	P	Pn	02 17 40.9	-2.0
FX1				pmax	pmax		
	comp=Z,3.0nm,0.3s						
FX1				MLR	MLR		
	comp=Z,47nm,19.7s						
MJAR	Matsushiro Arr	14.74	232	eP	Px	02 17 59.3	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	Yakutsk	20.32	328	i P	P	02 18 50.5	+1.2
YAK				pmax	pmax		
	comp=Z,13nm,0.6s						
BILL	Bilibino	22.64	13	⇓eP	P	02 19 14.8	+0.9
BILL				e		02 20 00.6	
BILL				eS	S	02 23 04.1	-11
BILL				pmax	pmax		
	comp=Z,11nm,1.6s,mb3.9						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s						
GUMO	Guam	33.52	194	LR	LR	02 33 20.0	
	comp=Z,31nm,20.0s,baz=128,slow=34						
MKAR	Makanchi Array	46.77	297	P	P	02 22 39.8	-1.1
	comp=Z,0.2nm,0.6s,mb3.0,baz=68,slow=8.5,SNR=3.6						
MKAR				PcP	PcP	02 24 13.4	+0.4
	comp=Z,0.2nm,0.7s,baz=54,slow=3.1,SNR=3.6						
YKA	Yellowknife Ar	51.25	36	P	P	02 23 15.3	+0.4
	comp=Z,0.2nm,0.6s,mb3.3,baz=301,slow=7.9,SNR=4.8						
YKA				pP	pP	02 23 32.1	-3.2
	comp=Z,0.5nm,0.8s,baz=296,slow=7.1,SNR=4.9						
YKA				PcP	PcP	02 24 28.0	-1.0
	comp=Z,0.4nm,0.8s,baz=306,slow=3.7,SNR=4.9						
YKA	Yellowknife Ar	51.25	36	P	P	02 23 15.3	+0.3
YKA				*PP	pP	02 23 32.1	-3.2
YKA						02 24 28.0	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	Mina Array Bea	62.78	62	P	P	02 24 37.3	+0.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=306,slow=8.9,SNR=3.7						
PDAR	Pinedale Array	65.09	54	P	P	02 24 53.2	+1.4
	comp=Z,1.0nm,0.8s,mb3.7,baz=281,slow=2.5,SNR=9.2						
WRA	Warramunga Arr	68.24	199	P	P	02 25 12.0	+0.1
	comp=Z,0.3nm,0.7s,mb3.2,baz=26,slow=8.1,SNR=3.5						
WRA				pP	pP	02 25 28.0	-5.3
	comp=Z,0.9nm,0.9s,baz=19,slow=6.7,SNR=3.8						
WRA	Warramunga Arr	68.24	199	P	P	02 25 12.0	0.0
WRA				*PP	pP	02 25 28.0	-5.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	NORSAR Subarra	68.31	341	P	P	02 25 11.6	-0.3
	comp=Z,2.1nm,0.7s,mb4.1,baz=30,slow=6.5						
NOA	NORSAR Array B	68.31	341	P	P	02 25 11.7	-0.2
	comp=Z,1.7nm,0.7s,mb4.0,baz=28,slow=6.3,SNR=8.6						
NOA	NORSAR Array B	68.31	341	eP	P	02 25 11.7	-0.2
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	71.54	326	P	P	02 25 31.1	-0.8
	comp=Z,0.9nm,0.3s,mb4.0,baz=31,slow=6.3,SNR=5.7						
AKASG	Malin Array Be	71.54	326	eP	P	02 25 31.0	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	71.94	198	P	P	02 25 34.2	-0.3
	comp=Z,0.3nm,0.6s,mb3.3,baz=13,slow=5.8,SNR=4.6						
ASAR				pP	pP	02 25 52.4	-3.5
	comp=Z,1.0nm,0.9s,baz=11,slow=4.9,SNR=5.0						
ASAR	Alice Springs	71.94	198	P	P	02 25 34.2	-0.3
ASAR				*PP	pP	02 25 52.4	-3.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CLL	Collm	76.51	335	eP	P	02 26 01.0	+0.1
TXAR	Lajitas Array	77.84	60	P	P	02 26 08.9	+0.3
	comp=Z,1.0nm,0.8s,mb3.6,baz=292,slow=4.0,SNR=14						
TXAR				pP	pP	02 26 25.6	-4.7
	comp=Z,0.6nm,0.7s,baz=304,slow=3.2,SNR=5.5						
TXAR	Lajitas Array	77.84	60	P	P	02 26 09.0	+0.3
TXAR				*PP	pP	02 26 25.7	-4.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	78.32	316	P	P	02 26 11.2	0.0
	comp=Z,0.8nm,0.9s,mb3.4,baz=64,slow=2.9,SNR=3.7						
BRTR	Keskin Array B	78.32	316	eP	P	02 26 11.1	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	78.49	334	P	P	02 26 10.8	-1.1
	comp=Z,0.5nm,0.7s,mb3.4,baz=42,slow=4.2,SNR=4.2						
GERES	GERESS Array B	78.49	334	P	P	02 26 10.8	-1.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*IDC **15** 02:18:56.0±1.4, 323S×10071E, h0^{km}, mb3.9/7, mb1 3.9/7, mb1mx3.8/21, mbtmp3.9/7, Error ellipse: s-maj=67.4km s-min=18.3km az=51.0*

*ISCJB **15** 02:18:58.3±0.8, 34S±02×1005E±02, h33^{km}, mb3.9/7, Error ellipse: s-maj=39.4km s-min=12.7km az=146.8*

*NEIC **15** 02:19:00.7±0.6, 337S×10058E, h35^{km}, Error ellipse: s-maj=27.8km s-min=9.2km az=57.0*

ISC 15 02:19:00.8±0.8**, 34S**±02×**1006E**±02**, h35**^{km}**, n13, σ0^{s}55**/12**, mb3.9**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.81	119	P	P	02 26 05.5	-0.2
	0.8nm,0.4s,mb3.9,baz=304,slow=9.0,SNR=11						
WRAB	Tennant Creek	36.82	119	eP	P	02 26 06.2	+0.5
ASAR	Alice Springs	37.99	125	P	P	02 26 15.8	+0.2
	0.3nm,0.5s,mb3.3,baz=307,slow=8.6,SNR=4.6						
STKA	Stephens Creek	47.81	131	P	P	02 27 35.3	+0.2
	0.7nm,0.4s,mb4.0,baz=328,slow=9.5,SNR=3.3						
SONM	Songino Array	51.24	5	P	P	02 28 00.0	-0.9
	0.9nm,0.6s,mb3.9,baz=184,slow=9.5,SNR=6.8						
MK31	Makanchi Array	52.49	344	eP	P	02 28 10.9	+0.6
MKAR	Makanchi Array	52.49	344	P	P	02 28 10.5	+0.3
	1.1nm,0.6s,mb4.0,baz=159,slow=9.0,SNR=16						
MKAR	Makanchi Array	52.49	344	P	P	02 28 10.5	+0.3
ZAA0	Zalesovo Array	58.61	349	eP	P	02 28 53.8	-0.3
ZALV	Zalesovo Beam	58.61	349	P	P	02 28 53.7	-0.4
	3.1nm,0.7s,mb4.5,baz=160,slow=6.5,SNR=16						
CASY	Casey	63.18	176	eP	P	02 29 24.1	-0.9
	11nm,0.6s						
BRTR	Keskin Array B	74.67	313	P	P	02 30 37.7	+0.8
	0.5nm,0.6s,mb3.6,baz=125,slow=7.5,SNR=3.7						
TXAR	Lajitas Array	145.41	39	PKPbc	PKPbc	02 38 35.9	+0.1
	0.5nm,0.6s,baz=243,slow=1.1,SNR=9.5						

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*IDC **15** 02:45:56.5±0.6, 1930S×176.11W, h0^{km}, mb4.4/13, mb1 4.6/14, mb1mx4.5/19, mbtmp4.4/14, ML2.3/1, MS4.4/20, Ms1 4.4/20, ms1mx4.2/26, Error ellipse: s-maj=30.6km s-min=15.0km az=153.0*

*BJI **15** 02:45:57.3, 2022S×17573W, h36^{km}, mB5.4, mb5.1, Ms5.2, Msz4.9*

*ISCJB **15** 02:45:59.9±0.2, 1938S±008×17601W±005, h33^{km}, mb4.9/55, MS4.5/25, Error ellipse: s-maj=11.4km s-min=5.2km az=160.7*

*GCMT **15** 02:46:01.8±0.2, 1952S×17580W, h16^{km}±1^{km}, MW5.2/96, Moment Tensor Solution. s46,c57; s96,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.93±.15; $M_{\theta\theta}$-5.34±.14; $M_{\phi\phi}$6.28±.14; $M_{r\theta}$-1.68±.43; $M_{\theta\phi}$0.47±.12; $M_{\phi r}$2.23±.42; Best double couple: $M_0$6.46800×10^{16} NP1:ϕ_s47.00000°, δ64.00000°, λ-3.00000°. NP2: ϕ_s139.00000°, δ87.00000°, λ-154.00000°. Principal axes: T 6.9140, Plg16.0000°, Azm270.0000°; N -0.8820, Plg64.0000°, Azm145.0000°; P -6.0230, Plg21.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 02:46:01.8±0.3, 1946S×17598W, h35^{km}, mb4.9/36 Error ellipse: s-maj=14.8km s-min=6.1km az=162.0*

*MOS **15** 02:46:02.8±2.5, 1893S×17630W, h33^{km}, mb5.1/19, Error ellipse: s-maj=15.7km s-min=11.1km az=149.8*

*DJA **15** 02:46:08, 20.16S×17739W, h10^{km}, mb4.9/10*

ISC 15 02:46:01.7±0.2**, 1939S**±007×**17600W**±005**, h35**^{km}**,** **(h33**^{km}±2.2^{km}**:pP-P), n302, σ0^{s}85**/238**, mb4.9**/55**, MS4.5**/25**,** **66C-72D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.79	37	Pn	Pn	02 47 37.4	-1.5
	3.3nm,0.3s,baz=96,slow=22,SNR=5.9						
AFI				LR	LR	02 49 27.2	
	comp=Z,878nm,19.5s,baz=207,slow=31						
AFI	Afiamalu	6.79	37	ePn	Pn	02 47 28.6	-10
RAO	Raoul Island	9.97	190	LR	LR	02 51 45.0	
	comp=Z,5µm,19.0s,baz=19,slow=35						
RAR	Rarotonga	15.33	100	LR	LR	02 54 11.5	
	comp=Z,1µm,18.3s,baz=244,slow=32						
DZM	Mont Dzumac	16.64	258	eP	Pn	02 49 54.7	+2.4
	73nm,1.6s						
URZ	Urewera	19.73	196	P	Pn	02 50 23.6	-6.5
	0.6nm,0.3s,baz=14,slow=8.3,SNR=6.2						
URZ				LR	LR	02 56 13.9	
	comp=Z,640nm,21.6s,baz=17,slow=31						
SNZO	South Karori	23.24	198	eP	P	02 51 06.9	+0.9
	22nm,1.0s,mb4.5						
TBI	Tubuai	25.01	104	eLQ		02 56 21.3	
	2µm,27.5s						
TBI				eLR	LR	02 57 25.3	
	2µm,28.8s,baz=271						
PAE	Paea	25.10	90	eP	P	02 51 22.8	-0.6
	530nm,1.3s						
PAE	Paea	25.10	90	eP	P	02 51 22.8	-0.6
PAE				pmax	pmax		
	comp=Z,530nm,1.3s,mb5.9						
PPT	Papeete	25.12	90	eP	P	02 51 23.4	-0.2
	comp=Z,93nm,1.4s,mb5.1						
PPT				eLR	LR	02 57 26.5	
	comp=Z,4µm,27.2s,baz=261						
PPT	Papeete	25.12	90	P	P	02 51 21.2	-2.3
	comp=Z,46nm,0.9s,mb5.0,baz=270,slow=8.1,SNR=3.6						
PPT				LR	LR	02 58 30.3	
	comp=Z,1µm,18.6s,MS4.5,baz=232,slow=30						
HNR	Honiara	25.28	290	LR	LR	02 59 43.1	
	comp=Z,622nm,21.6s,MS4.1,baz=344,slow=33						
HNR	Honiara	25.28	290	P	P	02 51 25.2	+0.2
HNR				pmax	pmax		
	comp=Z,125nm,1.5s,mb5.2						
HNR	Honiara	25.28	290	P	P	02 51 25.2	+0.1
	comp=Z,125nm,1.5s,mb5.2						
TIAR	Tiarei	25.34	90	eP	P	02 51 25.3	-0.3
	comp=Z,894nm,1.3s						
TVO	Taravao	25.40	91	eP	P	02 51 25.9	-0.2
	comp=Z,711nm,1.2s						
TVO	Taravao	25.40	91	eP	P	02 51 25.9	-0.2
TVO				pmax	pmax		
	comp=Z,711nm,1.2s						
PMOR	Pomariorio Ree	27.19	85	eP	P	02 51 40.2	-2.1
	comp=Z,124nm,1.2s,mb5.3						
VAH	Vaihoa	27.39	86	eP	P	02 51 42.9	-1.1
	comp=Z,124nm,1.5s,mb5.2						
EIDS	Eidsvold	30.96	253	eP	P	02 52 16.4	+0.7
	comp=Z,28nm,1.8s,mb4.8						
ARMA	Armidale	31.24	243	eP	P	02 52 25.3	+7.1
CTA	Charters Tower	35.49	262	eP	P	02 52 55.1	-0.2
	comp=Z,12nm,1.2s,mb4.7						
CTA				eS	S	02 58 35.8	+7.4
CTA	Charters Tower	35.49	262	P	P	02 52 54.2	-1.1
	comp=Z,5.2nm,0.6s,mb4.7,baz=92,slow=14,SNR=5.8						
CTA				LR	LR	03 05 36.1	
	comp=Z,2µm,20.3s,MS4.8,baz=88,slow=33						
CTA	Charters Tower	35.49	262	eP	P	02 52 55.1	-0.2
CTA				eS	S	02 58 35.8	+7.4
CTA				pmax	pmax		
	comp=Z,12nm,1.2s						
CTAO	Charters Tower	35.49	262	eP	P	02 52 54.5	-0.8
CTAO				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
CTAO	Charters Tower	35.49	262	eP	P	02 52 54.5	-0.8
	comp=Z,32nm,1.2s,mb5.1						
PMG	Port Moresby	36.96	280	P	P	02 53 07.0	-1.0
	comp=Z,21nm,0.9s,mb5.0,baz=68,slow=6.6,SNR=8.3						
PMG				LR	LR	03 06 16.1	
	comp=Z,1µm,18.4s,MS4.7,baz=320,slow=33						
PMG	Port Moresby	36.96	280	i P	P	02 53 06.7	-1.2
PMG				pmax	pmax		
	comp=Z,23nm,1.0s						
PMG	Port Moresby	36.96	280	eP	P	02 53 07.9	-0.1
	comp=Z,31nm,1.1s,mb5.0						
RKT	Rikitea	38.33	103	eLR	LR	03 03 34.7	
	comp=Z,2µm,29.0s,baz=271						
COEN	Coen	39.41	271	eP	P	02 53 26.2	-2.4
	comp=Z,12nm,1.0s,mb4.6						
STKA	Stephens Creek	39.96	243	eP	P	02 53 34.2	+1.2
	comp=Z,6.3nm,0.9s,mb4.3						
STKA	Stephens Creek	39.96	243	P	P	02 53 33.0	+0.1
	comp=Z,5.2nm,0.8s,mb4.3,baz=103,slow=4.8,SNR=6.0						
STKA				LR	LR	03 08 47.0	
	comp=Z,614nm,18.3s,MS4.5,baz=65,slow=34						
ASAR	Alice Springs	46.61	255	P	P	02 54 25.6	-1.2
	comp=Z,6.4nm,0.6s,mb4.7,baz=97,slow=8.2,SNR=43						
WB2	Warramunga Arr	46.62	261	eP	P	02 54 25.6	-1.2
WRAB	Tennant Creek	46.62	261	⇓eP	P	02 54 24.4	-2.5
WRAB	Tennant Creek	46.62	261	eP	P	02 54 25.8	-1.1
	comp=Z,22nm,1.2s,mb5.0						
WRA	Warramunga Arr	46.63	261	P	P	02 54 25.5	-1.4
	comp=Z,4.9nm,0.8s,mb4.5,baz=97,slow=8.7,SNR=42						
KAKA	Kakadu	49.85	270	eP	x	02 54 30.4	
	comp=Z,22nm,1.5s						
FITZ	Fitzroy Crossi	55.05	261	eP	P	02 55 30.0	-0.4
	comp=Z,21nm,1.5s,mb4.9						
BATI	Baumata	58.80	270	LR	LR	03 19 25.3	
	comp=Z,655nm,21.6s,MS4.7,baz=117,slow=34						
VNDA	Vanda	59.18	185	LR	LR	03 18 32.0	
	comp=Z,183nm,18.1s,MS4.2,baz=228,slow=33						
MBWA	Marble Bar	59.94	256	eP	P	02 56 04.4	-0.4
	comp=Z,46nm,1.6s,mb5.3						
NWAO	Narrogin (SRO)	60.55	243	LR	LR	03 19 11.0	
	comp=Z,228nm,20.1s,MS4.3,baz=266,slow=33						
RPN	Rapa Nui	61.12	111	LR	LR	03 15 34.1	
	comp=Z,368nm,20.2s,MS4.5,baz=248,slow=29						
MJAR	Matsushiro Arr	70.46	322	P	P	02 57 12.4	-0.3
	comp=Z,0.4nm,0.4s,baz=134,slow=5.2,SNR=3.2						
PETK	Petropavlovsk-	75.71	344	LR	LR	03 24 06.4	
	comp=Z,150nm,21.1s,MS4.3,baz=188,slow=30						
MONP	Monument Peak	77.07	48	⇑P	P	02 57 51.1	-0.4
	baz=77						
EDW2	Edwards Air Fo	77.10	46	⇓P	P	02 57 51.6	0.0
	baz=77						
ISA	Isabella	77.22	45	⇑P	P	02 57 53.1	+0.7
	baz=77						
ISA	Isabella	77.22	45	eP	P	02 57 53.0	+0.7
ISA				pmax	pmax		
	comp=Z,35nm,1.8s,mb5.0						
ISA	Isabella	77.22	45	eP	P	02 57 53.0	+0.7
	comp=Z,35nm,1.8s,mb5.0						
KSRS	Korea Array	77.33	317	LR	LR	03 25 06.0	
	comp=Z,92nm,20.8s,MS4.1,baz=135,slow=30						
CMB	Columbia Colle	77.38	42	eP	P	02 57 53.4	+0.3
CMB				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CMB	Columbia Colle	77.38	42	eP	P	02 57 53.4	+0.2
	comp=Z,1.9nm,0.9s,mb4.0						
PFO	Pinyon Flat Ob	77.44	47	⇑P	P	02 57 54.1	+0.6
	baz=78						
LRMC	Laurel Mountai	77.64	45	⇓P	P	02 57 55.1	+0.5
	baz=78						
BELC	Belle Mtn.	77.97	47	⇑P	P	02 57 56.8	+0.3
	baz=78						
MPMC	Manual Prospec	78.11	45	⇓P	P	02 57 56.9	-0.3
	baz=78						
GSC	Goldstone	78.14	46	eP	P	02 57 55.7	-1.7
GSC				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GSC	Goldstone	78.14	46	eP	P	02 57 55.7	-1.7
	comp=Z,7.4nm,1.2s,mb4.5						
MTUM	Tungsten Hills	78.14	43	eP	P	02 57 58.3	+0.9
WAKR	Walker	78.26	42	eP	P	02 57 59.7	+1.7
WCN	Washoe City	78.53	41	⇑P	P	02 57 59.7	+0.1
	baz=79						
GMRC	Granite Mounta	78.63	47	⇑P	P	02 57 59.8	-0.3
	baz=79						
TUQ	Turquoise Moun	78.81	46	⇓P	P	02 58 01.2	+0.1
	baz=79						
NVAR	Mina Array Bea	78.94	43	P	P	02 58 02.4	+0.6
	comp=Z,2.7nm,0.8s,mb4.2,baz=222,slow=8.6,SNR=18						
U10A	Ash Meadows, A	79.08	45	⇑P	P	02 58 02.8	+0.2
	baz=79						
N06A	Buffalo Meadow	79.36	40	⇑P	P	02 58 03.8	-0.2
	baz=80						
TPH	Tonopah	79.43	43	eP	P	02 58 04.6	+0.2
TPH				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.7						
TPH	Tonopah	79.43	43	eP	P	02 58 04.6	+0.2
	comp=Z,19nm,1.9s,mb4.7						
TPNV	Topopah Spring	79.43	45	⇓P	P	02 58 04.5	0.0
	baz=80						
TPNV	Topopah Spring	79.43	45	eP	P	02 58 04.9	+0.4
TPNV				pmax	pmax		
	comp=Z,48nm,2.0s,mb5.1						
TPNV	Topopah Spring	79.43	45	eP	P	02 58 04.9	+0.4
	comp=Z,48nm,2.0s,mb5.1						
O07A	Toulon	79.59	41	⇓P	P	02 58 04.7	-0.6
	baz=80						
S10A	Tonopah Range,	79.75	44	⇓P	P	02 58 06.1	-0.1
	baz=80						
X13A	Yucca	79.80	48	⇓P	P	02 58 07.1	+0.6
	baz=80						
SHPR	Sheep Range	79.92	46	eP	P	02 58 07.8	+0.6
W13A	Hualapai Mount	80.03	47	⇓P	P	02 58 08.1	+0.3
	baz=80						
Y14A	Wickenburg	80.04	49	⇑P	P	02 58 08.4	+0.5
	baz=80						
O08A	Rochester Mine	80.11	41	⇑P	P	02 58 07.6	-0.5
	baz=80						
R10A	Warm Springs	80.15	44	⇑P	P	02 58 08.7	+0.4
	baz=80						
T11A	Corn Creek, Al	80.28	45	⇑P	P	02 58 09.1	0.0
	baz=80						
V13A	Grand Canyon W	80.36	47	⇓P	P	02 58 09.7	+0.1
	baz=81						
N08A	GE Springer Mi	80.41	41	⇑P	P	02 58 09.5	-0.2
	baz=81						
L07A	Adell	80.42	39	⇑P	P	02 58 09.8	+0.2
	baz=81						
Y15A	Casa Rosa Ranc	80.53	49	⇓P	P	02 58 10.1	-0.4
	baz=81,SNR=7.7						
217A	Green Valley	80.53	52	⇓P	P	02 58 11.3	+0.7
	baz=81						
NJ2	Nanjing	80.64	309	eP	P	02 58 11.8	+0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
W14A	Seligman	80.65	48	⇑P	P	02 58 11.7	+0.6
	baz=81,SNR=9.3						
M08A	Happy Creek Ra	80.66	40	⇓P	P	02 58 10.8	-0.2
	baz=81						
U13A	Pakoon Wash	80.68	46	⇓P	P	02 58 10.9	-0.4
	baz=81						
MDJ	Mudanjiang	80.71	324	P	P	02 58 12.6	+1.4
TUC	Tucson	80.82	51	eP	P	02 58 12.2	+0.1
TUC				pmax	pmax		
	comp=Z,38nm,2.1s,mb5.0						
TUC	Tucson	80.82	51	eP	P	02 58 12.2	+0.1
	comp=Z,38nm,2.1s,mb5.0						
V14A	Boquillas Ranc	80.86	47	P	P	02 58 12.6	+0.4
	baz=81,SNR=9.9						
X15A	Humboldt	80.87	49	⇑P	P	02 58 12.5	+0.2
	baz=81,SNR=6.2						
318A	Bisbee	80.98	52	⇑P	P	02 58 12.1	-0.9
	baz=81						
T13A	Saint George	81.04	46	⇓P	P	02 58 12.2	-1.0
	baz=81						
WVOR	Wild Horse Val	81.08	39	eP	P	02 58 13.8	+0.6
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
WVOR	Wild Horse Val	81.08	39	eP	P	02 58 13.8	+0.5
	comp=Z,6.4nm,1.1s,mb4.5						
Y16A	Circle Bar Ran	81.10	49	⇓P	P	02 58 13.6	0.0
	baz=81						
L08A	Fields	81.11	39	⇓P	P	02 58 13.4	0.0
	baz=81						
218A	Dragoon	81.20	52	⇓P	P	02 58 14.6	+0.5
	baz=81						
U14A	Mt Trumbull	81.22	47	⇓P	P	02 58 14.7	+0.6
	baz=81,SNR=8.8						
R12A	Pony Springs,	81.28	44	⇓P	P	02 58 14.5	+0.2
	baz=82						
K08A	Mann Creek Ran	81.35	39	⇓P	P	02 58 14.6	-0.1
	baz=82						
H06A	Lindquist Farm	81.49	37	⇑P	P	02 58 15.4	0.0
	baz=82						
I07A	Izee	81.56	37	⇓P	P	02 58 15.6	-0.2
	baz=82						
O11A	Cowboy Ranch,	81.59	42	⇑P	P	02 58 16.6	+0.6
	baz=82						
V15A	Kaibab Nationa	81.60	48	⇓P	P	02 58 17.3	+1.2
	baz=82,SNR=5.9						
T14A	Hurricane	81.62	46	⇑P	P	02 58 16.4	+0.2
	baz=82						
J08A	Circle Bar Ran	81.73	38	⇑P	P	02 58 17.1	+0.4
	baz=82						
K09A	Rome	81.78	39	⇑P	P	02 58 17.5	+0.5
	baz=82						
219A	White Tail Can	81.80	52	⇑P	P	02 58 17.9	+0.6
	baz=82						
U15A	North Rim	81.83	47	⇑P	P	02 58 18.8	+1.5
	baz=82,SNR=6.8						
H07A	Lands Inn, Kim	81.84	37	⇑P	P	02 58 17.5	+0.3
	baz=82						
WUAZ	Wupatki	82.00	48	⇑P	P	02 58 18.7	+0.4
	baz=82						
WUAZ	Wupatki	82.00	48	eP	P	02 58 19.7	+1.4
	comp=Z,11nm,1.3s,mb4.6						
T15A	Red Dirt Ranch	82.08	46	⇑P	P	02 58 19.5	+0.8
	baz=82,SNR=9.0						
Y18A	Canyon Day Jun	82.09	50	⇓P	P	02 58 19.8	+1.0
	baz=82,SNR=6.5						
QIZ	Qiongzhong	82.14	293	P	P	02 58 20.1	+0.8
QIZ				S	S	03 08 30.3	-1.8
QIZ				AMB	AMB		
	comp=Z,13nm,1.7s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,89nm,5.5s						
QIZ				LR	LR		
	comp=Z,204nm,28.8s,MS4.3						
J09A	Fry Pan Ranch,	82.14	39	⇑P	P	02 58 19.3	+0.5
	baz=82						
O12A	Currie	82.25	43	⇑P	P	02 58 20.6	+1.2
	baz=82						
K10A	MacKenzie Ranc	82.34	40	⇓P	P	02 58 20.4	+0.5
	baz=82						
Q14A	Sevier Lake (B	82.51	44	⇓P	P	02 58 21.7	+0.9
	baz=83						
CN2	Changchun	82.59	321	eP	P	02 58 23.1	+1.9
G08A	Pilot Rock	82.60	37	⇓P	P	02 58 21.6	+0.5
	baz=83,SNR=7.0						
L11A	Cat Creek Ranc	82.67	41	⇓P	P	02 58 21.0	-0.6
	baz=83						
Y19A	Nutrioso	82.75	50	⇓P	P	02 58 22.7	+0.5
	baz=83,SNR=8.2						
M12A	Wells	82.77	42	⇓P	P	02 58 22.2	+0.1
	baz=83						
X19A	St. Johns	82.95	50	⇑P	P	02 58 24.8	+1.5
	baz=83,SNR=5.8						
HAWA	Hanford	82.95	36	eP	P	02 58 23.6	+0.6
	comp=Z,22nm,1.4s,mb5.0						
P14A	Drum Mountains	82.97	44	⇑P	P	02 58 23.3	+0.1
	baz=83						
S16A	Weppner Ranch,	82.97	46	⇑P	P	02 58 23.5	+0.2
	baz=83						
MSU	Marysvale	82.99	45	eP	P	02 58 24.9	+1.5
U17A	Shonto	83.05	47	⇑P	P	02 58 25.0	+1.3
	baz=83						
L12A	House Creek Ra	83.12	41	⇓P	P	02 58 24.5	+0.6
	baz=83						
V18A	Ganado	83.12	49	⇓P	P	02 58 25.2	+1.2
	baz=83,SNR=6.1						
T17A	Navajo Res., N	83.15	47	⇑P	P	02 58 23.8	-0.5
	baz=83,SNR=6.5						
M13A	Montello	83.22	42	⇓P	P	02 58 24.7	+0.2
	baz=83						
MAW	Mawson	83.23	199	P	P	02 58 24.7	+0.5
	comp=Z,2.2nm,0.8s,mb4.2,baz=122,slow=13,SNR=2.7						
MAW				LR	LR	03 33 06.1	
	comp=Z,290nm,18.3s,MS4.7,baz=120,slow=34						
G09A	Cove	83.26	37	⇑P	P	02 58 25.0	+0.4
	baz=84						
BMO	Blue Mountains	83.29	38	eP	P	02 58 25.0	+0.3
BMO				pmax	pmax		
	comp=Z,72nm,2.8s,mb5.2						
BMO	Blue Mountains	83.29	38	eP	P	02 58 25.0	+0.2
	comp=Z,72nm,2.8s,mb5.2						
DUG	Dugway	83.45	43	⇓P	P	02 58 24.9	-0.8
	baz=84						
K12A	Draper Farm, C	83.46	41	⇓P	P	02 58 24.7	-0.9
	baz=84						
H10A	Noah's Angus R	83.46	38	⇓P	P	02 58 25.7	+0.1
	baz=84						
C07A	Waterville	83.46	34	⇓P	P	02 58 25.6	0.0

baz=84
S17A Black Ridge (B 83.47 46 ⇑P P 02 58 25.0 -0.9
baz=84
U18A Rough Rock, Ch 83.51 48 ⇑P P 02 58 25.6 -0.5
baz=84,SNR=6.0
N14A Grayback Hills 83.56 43 ⇑P P 02 58 25.0 -1.3
baz=84
J12A Stokes Ranch, 83.68 40 ⇓P P 02 58 24.4 -2.4
baz=84,SNR=5.5
E09A Wood Farm, Sta 83.79 36 ⇑P P 02 58 26.1 -1.2
baz=84
M14A Sheep Mountain 83.81 42 ⇓P P 02 58 26.9 -0.6
baz=84,SNR=5.8
T18A Mexican Hat 83.86 47 ⇑P P 02 58 27.9 0.0
baz=84,SNR=27
R17A Hanksville Air 83.93 46 ⇓P P 02 58 28.8 +0.6
baz=84,SNR=7.4
H11A Donnelly 83.95 38 ⇓P P 02 58 28.4 +0.2
baz=84,SNR=6.9
F10A Beach Ranch, E 83.99 37 ⇓P P 02 58 27.7 -0.6
baz=84,SNR=5.9
OD2 Odessa Site #2 84.00 35 *e*P P 02 58 28.8 +0.5
D09A Jones Farm, Ri 84.03 36 ⇓P P 02 58 28.1 -0.3
baz=84
TMUT Trail Mountain 84.04 45 *e*P P 02 58 30.4 +1.6
G11A Walters Elk Ra 84.20 38 ⇑P P 02 58 29.0 -0.5
baz=84,SNR=7.0
HLID Hailey 84.27 40 ⇑P P 02 58 30.0 +0.2
baz=84
HLID Hailey 84.27 40 *e*P P 02 58 30.7 +1.0
comp=Z,9.8nm,1.3s,mb4.8
SPUT South Promonto 84.28 43 *e*P P 02 58 30.7 +0.8
T19A Beclabito 84.30 48 ⇓P P 02 58 30.2 0.0
baz=84
J13A Cove Ranch, Pi 84.32 40 ⇓P P 02 58 30.4 +0.4
baz=84,SNR=8.2
M15A Larsen Ranch, 84.36 43 P P 02 58 30.4 +0.1
baz=85,SNR=8.1
SRU San Rafael 84.41 45 ⇑P P 02 58 30.3 -0.3
baz=85
SRU San Rafael 84.41 45 *e*P P 02 58 31.4 +0.8
SRU pmax pmax
comp=Z,14nm,1.4s,mb4.9
SRU San Rafael 84.41 45 *e*P P 02 58 31.4 +0.8
comp=Z,14nm,1.4s,mb4.9
R18A Canyonlands Na 84.47 46 ⇓P P 02 58 30.9 -0.1
baz=85,SNR=11
K14A Jones Ranch, D 84.48 41 ⇑P P 02 58 30.9 0.0
baz=85
H12A Diamond D Ranc 84.55 39 ⇑P P 02 58 30.2 -1.0
baz=85
JLU Jordanelle 84.55 44 *e*P P 02 58 32.1 +0.8
DAU Daniels Canyon 84.58 44 *e*P P 02 58 33.2 +1.7
G12A Big Creek, Yel 84.60 38 ⇓P P 02 58 30.5 -0.8
baz=85
I13A Wildhorse Cree 84.64 40 ⇓P P 02 58 30.8 -0.8
baz=85
A08A Turner Farm, O 84.65 34 ⇓P P 02 58 30.7 -0.9
baz=85
J14A Carey 84.68 41 ⇑P P 02 58 32.5 +0.6
baz=85,SNR=6.6
L15A Malad City 84.69 42 ⇓P P 02 58 30.8 -1.1
baz=85
M16A Huntsville 84.81 43 ⇑P P 02 58 31.7 -0.8
baz=85
O17A Robinson Place 84.81 44 ⇑P P 02 58 32.6 0.0
baz=85
LPM Los Pinos Moun 84.83 51 *e*P P 02 58 34.2 +1.4
P18A Preston Nutter 84.85 45 ⇓P P 02 58 32.3 -0.5
baz=85
TXAR Lajitas Array 84.88 57 P P 02 58 34.3 +1.1
comp=Z,4.1nm,1.0s,mb4.5,baz=215,slow=5.7,SNR=27
TXAR LR LR 03 28 52.4
comp=Z,124nm,18.6s,MS4.3,baz=235,slow=30
H13A Challis 84.92 39 ⇑P P 02 58 32.4 -0.7
baz=85
F12A Elk City 84.99 38 ⇑P P 02 58 32.7 -0.7
baz=85
I14A Mackay 85.05 40 ⇓P P 02 58 33.3 -0.5
baz=85
D11A Klaveano Farm, 85.11 36 ⇓P P 02 58 32.8 -1.2
baz=85
N17A Moffit Pass 85.13 44 ⇓P P 02 58 33.3 -0.9
baz=85
Q19A Hogan Spring (85.18 46 ⇓P P 02 58 34.2 -0.3
baz=85,SNR=5.9
ANMO Albuquerque 85.25 51 P P 02 58 36.1 +1.1
comp=Z,6.2nm,1.1s,mb4.7,baz=215,slow=5.2,SNR=11
ANMO Albuquerque 85.25 51 ⇑*i*P P 02 58 34.8 -0.1
ANMO pmax pmax
comp=Z,24nm,2.3s
ANMO Albuquerque 85.25 51 *e*P P 02 58 35.9 +0.9
comp=Z,14nm,1.3s,mb4.9
H14A Leadore 85.47 40 ⇑P P 02 58 34.6 -1.2
baz=86
MCK McKinley 85.50 12 *e*P P 02 58 35.0 -0.5
MCK pmax pmax
comp=Z,13nm,0.9s,mb5.1
MCK McKinley 85.50 12 *e*P P 02 58 35.0 -0.5
comp=Z,13nm,0.9s,mb5.0
F13A Darby 85.55 38 ⇓P P 02 58 35.0 -1.1
baz=86
GDL2 Guadalupe Moun 85.58 54 *e*P P 02 58 37.9 +1.2
SEY Seymchan 85.74 346 *i*P P 02 58 34.3 -2.4
J16A Bone 85.84 41 ⇑P P 02 58 36.8 -0.9
baz=86,SNR=6.7
Q20A Ridgley Place, 85.84 46 ⇑P P 02 58 37.1 -0.7
baz=86,SNR=6.3
B11A Sandpoint 85.89 35 ⇓P P 02 58 37.7 -0.1
baz=86
H15A Lima 85.91 40 ⇑P P 02 58 37.3 -0.7
baz=86
E13A Victor 85.99 38 ⇓P P 02 58 37.3 -1.0
baz=86
K17A Gardner Place, 86.00 42 ⇑P P 02 58 37.4 -1.1
baz=86
D13A Huson 86.20 37 ⇑P P 02 58 38.7 -0.6
baz=86
A11A Hall Mountain, 86.20 35 ⇓P P 02 58 38.6 -0.7
baz=86
REDW Red Top Meadow 86.36 42 *e*P P 02 58 41.4 +1.2
comp=Z,17nm,1.5s,mb5.1
TPAW Teton Pass 86.36 41 *e*P P 02 58 41.1 +0.8
comp=Z,13nm,1.6s,mb4.9
BJI Beijing 86.44 315 P P 02 58 41.8 +1.1
BJI S S 03 09 15.4 +1.0
BJI AMB AMB
comp=Z,8.0nm,0.5s,mb5.2
BJI AMB AMB
comp=Z,149nm,4.2s
BJI LR LR
comp=N,205nm,25.4s,MS4.6
BJI LR LR
comp=E,257nm,25.4s,MS4.6
BJI LR LR
comp=Z,93nm,25.0s,MS4.1
COLA College 86.74 12⇓*e*P P 02 58 40.1 -1.5
COLA College 86.74 12 *e*P P 02 58 41.1 -0.5
comp=Z,10nm,0.8s,mb5.1
SMCO Snowmass 86.85 47 *e*P P 02 58 35.4 -7.3
comp=Z,3.0nm,0.9s,mb4.5
PDAR Pinedale Array 86.87 43 P P 02 58 42.1 -0.7
comp=Z,9nm,1.0s,mb4.0,baz=209,slow=4.6,SNR=3.9
BOZ Bozeman (W) 87.06 39 *e*P P 02 58 45.0 +1.4
BOZ pmax pmax
comp=Z,23nm,1.8s,mb5.1
BOZ Bozeman (W) 87.06 39 *e*P P 02 58 45.0 +1.3
comp=Z,23nm,1.8s,mb5.1
SDCO Great Sand Dun 87.21 48 *e*P P 02 58 44.6 0.0
comp=Z,1.1nm,1.1s,mb4.0
A13A Flathead Natio 87.24 35 ⇑P P 02 58 42.9 -1.5
baz=87
HRY Holter Researc 87.50 38 *e*P P 02 58 46.2 +0.5
B14A Marquette Ranc 87.56 36 ⇓P P 02 58 45.5 -0.5
baz=88
WALA Waterton Lakes 87.59 36 *e*P P 02 58 46.5 +0.4
comp=Z,0.6nm,1.4s
C15A Salmond Ranch, 87.62 37 ⇓P P 02 58 45.3 -1.0
baz=88
GYA Guiyang 87.75 299 P P 02 58 46.9 -0.5
GYA AP pP 02 58 59.3 +0.8
GYA XP sP 02 59 02.4 -0.1
GYA PP PP 03 02 13.0 -0.6
GYA SKS 03 09 08.8
GYA S S 03 09 23.6 -4.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,120nm,5.4s
GYA LR LR
comp=N,660nm,19.6s,MS5.2
GYA LR LR
comp=E,530nm,18.2s,MS5.2
GYA LR LR
comp=Z,650nm,19.8s,MS5.0
C16A Fuhringer Ranc 88.13 37 ⇓P P 02 58 47.3 -1.3
baz=88
BILL Bilibino 88.14 353 *e*P P 02 58 48.5 +0.2
BILL pmax pmax
comp=Z,13nm,1.7s,mb4.9
A15A Johnson Ranch, 88.19 36 ⇓P P 02 58 48.1 -0.9
baz=88
A16A West Butte Ran 88.81 36 ⇑P P 02 58 51.4 -0.5
baz=89
D18A Linhart Farms, 88.94 39 ⇓P P 02 58 51.2 -1.3
baz=89
XAN Xi'an 88.97 307 P P 02 58 55.0 +2.0
XAN AP pP 02 59 03.4 -0.7
XAN PP PP 03 02 22.6 -0.7
XAN S S 03 09 39.1 +0.2
XAN AMB AMB
comp=Z,3.0nm,0.5s,mb4.9
XAN LR LR
comp=Z,109nm,28.0s,MS4.1
SNAA Sanae 89.05 178 *e*P P 02 58 55.4 +2.6
SNAA *e* 02 58 59.0
SNAA *e* pP 02 59 03.6 -0.3
SNAA Sanae 89.05 178 *e*P P 02 58 55.5 +2.7
SNAA pmax pmax
comp=Z,5.0nm,1.0s
VNA3 Neumayer Olymp 89.11 176 *e*P P 02 58 52.3 -0.8
VNA3 *e* 02 58 56.1
VNA3 *e* pP 02 59 00.4 -3.8
VNA2 Neumayer--Watz 89.57 176 *e*P P 02 58 54.7 -0.5
baz=196,slow=3.0
VNA2 *e* 02 58 59.2
VNA2 *e* pP 02 59 03.0 -3.4
VNA1 Neumayer--Stat 89.79 176 *e*P P 02 59 00.5 +4.3
VNA1 *e* 02 59 04.3
HHC Hu-ho-hao-te 89.94 314 *e*P P 02 58 57.6 +0.2
HHC AP pP 02 58 08.1 -0.4
HHC XP sP 02 59 12.5 0.0
HHC PP PP 03 02 31.6 +0.8
HHC SKS 03 09 23.6
HHC *e*S S 03 09 44.8 -2.8
HHC AMB AMB
comp=Z,9.0nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,140nm,5.3s
HHC LR LR
comp=N,95nm,16.7s,MS4.7
HHC LR LR
comp=E,192nm,16.6s,MS4.7
HHC LR LR
comp=Z,140nm,17.8s,MS4.4
KMI Kunming 90.53 296 P P 02 59 00.3 -0.2
KMI AP pP 02 59 12.8 +1.1
KMI PP PP 03 02 38.3 +2.4
KMI S S 03 09 51.8 -1.9
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb5.2
KMI AMB AMB
comp=Z,100nm,3.2s
KMI LR LR
comp=N,150nm,18.1s,MS4.6
KMI LR LR
comp=E,130nm,17.8s,MS4.6
KMI LR LR
comp=Z,160nm,20.3s,MS4.4
CMAR Chiang Mai Arr 91.53 289 P P 02 59 04.9 -0.4
comp=Z,1.0nm,0.4s,mb4.5,baz=87,slow=4.6,SNR=3.3
CMAR LR LR 03 37 21.9
comp=Z,81nm,20.5s,MS4.2,baz=322,slow=34
CD2 Chengdu 91.79 302 P P 02 59 06.9 +0.7
CD2 AP pP 02 59 17.5 +0.1
CD2 XP sP 02 59 21.4 0.0
CD2 PP PP 03 02 47.8 +2.1
CD2 SKS 03 09 35.1
CD2 S S 03 10 01.9 -3.0
CD2 XS sS 03 10 19.6 -3.8
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.4
CD2 AMB AMB
comp=Z,140nm,6.5s
CD2 LR LR
comp=N,250nm,5.3s
CD2 LR LR
comp=Z,300nm,10.2s,MS5.0
INK Inuvik 92.73 15 P P 02 59 09.8 +0.1
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 92.73 15 P P 02 59 09.8 +0.2
comp=Z,4.7nm,1.1s,mb4.8
DGMT Dagmar 92.88 39 *e*P P 02 59 11.8 +1.0
comp=Z,43nm,1.4s,mb5.7
LZH Lanzhou 93.60 307 *e*P P 02 59 14.8 +0.3
LZH AP pP 02 59 25.3 -0.3
LZH XP sP 02 59 29.3 -0.3
LZH *e*PP PP 03 03 02.0 +2.1
LZH SKS 03 09 44.8
LZH *e*S S 03 10 17.5 -3.3
LZH AMB AMB
comp=Z,16nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,87nm,8.3s
LZH LR LR
comp=E,290nm,17.2s
LZH LR LR
comp=Z,341nm,19.7s,MS4.8
YKA Yellowknife Ar 94.73 24 P P 02 59 18.6 -0.4
comp=Z,1.3nm,0.9s,mb4.4,baz=241,slow=4.4,SNR=23
YKA LR LR 03 35 49.7
comp=Z,88nm,18.5s,MS4.3,baz=155,slow=32
GTA Gaotai 97.74 309 *e*P P 02 59 29.8 -3.4
GTA AP pP 02 59 40.3 -4.1
GTA XP sP 02 59 44.1 -4.3
GTA AMB AMB
comp=Z,3.0nm,0.8s,mb4.9
ULM Lac du Bonnet 98.58 40 LR LR 03 37 46.5
comp=Z,179nm,18.8s,MS4.6,baz=349,slow=32
MKAR Makanchi Array 111.80 314 PKiKP PKiKP 03 04 33.6 +0.7
comp=Z,0.2nm,0.6s,baz=85,slow=3.0,SNR=2.8
KURK Kurchatov 114.45 318 PKP PKiKP 03 04 38.1 +0.3
comp=Z,0.3nm,0.2s,baz=101,slow=1.9,SNR=1.7
ARU Arti 125.34 326 *i* PKIKP PKPdf 03 04 58.5 0.0
ARU 03 06 44.8
ARU SS SS 03 23 42.0 -2.5
ARU Arti 125.34 326 *e*PKPdf PKPdf 03 04 58.7 -0.4
OBN Obninsk 136.65 333 ⇑*i*PKIKP PKPdf 03 05 20.7 +0.7
OBN *e* 03 12 22.4
OBN pmax pmax
comp=Z,4.0nm,0.5s
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.8
AKASG Malin Array Be 142.92 333 PKP PKPdf 03 05 30.6 -0.8
comp=Z,0.4nm,0.4s,baz=42,slow=4.1,SNR=4.5
LVV L'vov 145.68 337 *e*PKIKP PKiKP 03 05 42.7 +2.3
KWP Kalwaria 146.32 338 ⇓*i*P PKPdf 03 05 38.4 +1.0
KWP Kalwaria 146.32 338 *e*PKPbc PKPbc 03 05 38.3 -0.3
BUR08 Bucovina Ar. S 146.96 333 *e*PKPbc PKPbc 03 05 42.1 +1.6
BURAR Bucovina Array 146.97 333 ⇓*i*P PKPbc 03 05 41.8 +1.2
BURAR Bucovina Array 146.97 333 ⇓P PKPbc 03 05 41.8 +1.2
STHS Stebnicka Huta 147.00 339 *e*PKIKP PKPdf 03 05 39.6 +1.0
STHS Stebnicka Huta 147.00 339 *e*PKP PKPdf 03 05 39.6 +1.0
STHS *e* 03 05 58.4
STHS Stebnicka Huta 147.00 339 *e*PKP PKPdf 03 05 39.6 +1.0
STHS *e* 03 05 58.4
UZH Uzhgorod 147.30 337 *d i*PKP2 PKPbc 03 05 41.2 -0.3
CLL Collm 147.37 350 *i* PKPbc PKPbc 03 05 41.5 -0.1
comp=Z,38nm,2.1s
CLL *i* (PKiKP) 03 05 47.2
comp=Z,23nm,1.2s
CLL *i* sPKPbc 03 05 57.3
CRVS Cervenica-Dubn 147.37 338 *e*PKP PKPbc 03 05 42.8 +1.2
CRVS *e* 03 05 49.6
BR131 Keskin Array S 147.44 315 *e*PKPbc PKPbc 03 05 43.9 +1.7
BRTR Keskin Array B 147.44 315 PKPbc PKPbc 03 05 42.3 +0.1
comp=Z,1.3nm,0.7s,baz=51,slow=0.7,SNR=7.1
BRG Berggiesshubel 147.61 348 *e*PKP PKPbc 03 05 42.0 -0.2
comp=Z,21nm,1.7s
BRG *e* 03 05 47.5
comp=Z,12nm,1.3s
TRPA Tarpa 147.63 337 ⇑*i*P PKPab 03 05 48.2 +3.6
MOX Moxa 148.24 351 *e*PKP PKPbc 03 05 43.7 -0.2
comp=Z,23nm,1.6s
VYHS Vyhne 148.59 341 *e*PKP PKPbc 03 05 44.8 -0.1
VYHS *e* 03 05 52.7
KOLL Kolacno 148.64 341 *e*PKP PKPbc 03 05 45.6 +0.6
KOLL *e* 03 06 02.0
KOLL Kolacno 148.64 341 *e*PKP PKPbc 03 05 45.6 +0.6
KOLL *e* 03 06 02.0
DRGR 148.66 335 ⇓*i*P PKPbc 03 05 46.0 +0.8
DRGR 148.66 335 ⇓P PKPbc 03 05 46.0 +0.8
PSZ Piszkesteto 148.75 339 *e*PKP2 PKPbc 03 05 45.7 +0.4
MEM Membach 148.81 358 PKPab PKPab 03 05 51.2 +2.0
BCLA Clavier 149.03 358 PKPbc PKPbc 03 05 46.8 +0.8
GRA1 Grafenberg Arr 149.22 351 *e*PKP PKPbc 03 05 46.6 +0.1
GRF Grafenberg Arr 149.22 351 *e*PKP PKPbc 03 05 46.6 +0.1
KHC Kasperske Hory 149.35 348 *e*PKPbc PKPbc 03 05 47.0 +0.2
KHC *e*PKPab PKPab 03 05 53.5 +2.0
ZST Bratislava 149.37 343 *e*PKP PKPbc 03 05 47.3 +0.4
BAIF Baives 149.40 360 *e*PKP1 PKPbc 03 05 45.5 -1.4
GERES GERESS Array B 149.59 347 PKPbc PKPbc 03 05 47.5 +0.1
comp=Z,0.7nm,0.8s,baz=2.3,slow=6.7,SNR=7.1
WLF Walferdange 149.75 357 PKPbc PKPbc 03 05 48.5 +0.7
WLF PKPab PKPab 03 05 53.0 -0.1
GZR Gura Zlata 149.76 333 ⇑*i*P PKPab 03 05 55.2 +1.9
BZS Buzias 150.06 335 ⇑*i*P PKPbc 03 05 48.5 -0.2
BZS Buzias 150.06 335 ⇑P PKPbc 03 05 48.5 -0.2
PKSM Moragy 150.66 339 ⇑*i*P PKPbc 03 05 49.8 -0.3
PKSM Moragy 150.66 339 ⇑P PKPbc 03 05 49.8 -0.2
CDF Champ du Feu 150.93 356 *e*PKP1 PKPbc 03 05 50.5 -0.1
comp=Z,24nm,1.1s
HAU Haudompre 151.40 357 *e*PKP1 PKPbc 03 05 51.5 -0.2
HINF Hinteralfeld 151.55 356 *e*PKP1 PKPbc 03 05 51.7 -0.4
LOR Lormes 152.20 0 *e*PKP1 PKPbc 03 05 53.7 +0.1
comp=Z,14nm,1.0s
SSF Saint Saulge 152.40 1 *e*PKP1 PKPbc 03 05 54.2 +0.1
comp=Z,11nm,1.0s
AVF Avril sur Loir 152.67 1 *e*PKP1 PKPbc 03 05 54.0 -0.7
comp=Z,7.5nm,1.0s
SMF Signal de Mont 152.82 0 *e*PKP1 PKPbc 03 05 54.4 -0.6
TCF Toulx Ste Croi 153.14 3 *e*PKP1 PKPbc 03 05 55.6 -0.1
ESDC Sonseca Array 158.65 17 PKPab PKPab 03 06 30.5 -0.6
comp=Z,0.4nm,0.6s,baz=338,slow=2.8,SNR=2.3
TORD Torodi Ar. Bea 173.41 160 PKP PKPdf 03 06 06.2 -2.1
comp=Z,1.4nm,1.1s,baz=237,slow=1.0,SNR=3.6
TORD PKPab PKPab 03 07 37.6 +1.0
comp=Z,0.8nm,1.0s,baz=172,slow=4.1,SNR=2.4

IDC ***15*** *03:11:02.6±1.3,3789N×6991E,h0km,mb3.5/3,mb1 3.6/8, mb1mx3.4/28,mbtmp3.5/8,ML3.4/5,Error ellipse: s-maj=26.3km s-min=20.3km az=126.0*
NNC ***15*** *03:11:08.0±2.3,3847N×6906E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=19.5km s-min=14.7km az=2.0*
ISCJB ***15*** *03:11:11.4±0.9,3851N±005×6953E±0.010,h78km±14km, mb3.3/3, Error ellipse: s-maj=12.8km s-min=8.0km az=174.8*
NEIC ***15*** *03:11:11.4±0.9,3833N×6958E,h62km±11km, Error ellipse: s-maj=16.1km s-min=9.4km az=109.0*

ISC 15 03:11:12.1±0.8,3846N±005×6947E±009,h65km±12km, n19,σ1s29/24,mb3.3/3,3C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.93**	**185**	*e*Pn		**Pn**	**03 12 07.8**	**-2.0**
KBL				*e*Sn		**Sn**	**03 12 57.7**	**+3.0**
KK31	**Karatay Array**	**4.71**	**9**	Pn		**Pn**	**03 12 20.5**	**+0.1**
	3.7nm,0.7s,baz=200,slow=16,SNR=28							
KK31				⇑Pg		**Pn**	**03 12 35.8**	**+15**
	9.8nm,0.7s,baz=194,slow=17,SNR=9.2							
KK31				Lg			03 13 38.4	
	9.4nm,0.5s,baz=193,slow=30,SNR=7.5							
AML	**Almayashu**	**4.88**	**40**	*e*Pn		**Pn**	**03 12 22.6**	**-0.3**
AML				*e*Sn		**Sn**	**03 13 10.9**	**-7.1**
EKS2	**Erkin-Say**	**5.32**	**37**	*e*Pn		**Pn**	**03 12 29.7**	**+0.7**
AAK	**Ala-Archa**	**5.66**	**41**	*e*Pn		**Pn**	**03 12 34.4**	**+0.9**
	5.7nm,0.4s							
TKM2	**Tokmak 2**	**6.44**	**44**	*e*Pn		**Pn**	**03 12 44.4**	**+0.2**
MKAR	**Makanchi Array**	**12.57**	**44**	Pn		**Pn**	**03 14 03.5**	**-4.4**
	0.1nm,0.3s,baz=227,slow=14,SNR=5.4							
MKAR	**Makanchi Array**	**12.57**	**44**	Pn		**Pn**	**03 14 03.5**	**-4.5**
AB09	**Akbulak array**	**12.80**	**331**	⇓P		**Pn**	**03 14 09.0**	**-1.9**
	0.6nm,0.4s							
AB09				⇓S		**Sn**	**03 16 31.9**	**+0.4**
	1.5nm,0.8s							
KURK	**Kurchatov**	**13.86**	**25**	Pn		**Pn**	**03 14 20.8**	**-4.5**
	0.0nm,0.3s,baz=223,slow=7.9,SNR=2.4							
AKTK	**Aktyubinsk**	**14.48**	**329**	Pn		**Pn**	**03 14 34.6**	**+1.3**
AKTO	**Aktyubinsk**	**14.48**	**329**	⇑P		**Pn**	**03 14 31.8**	**-1.5**
	0.3nm,0.6s							
AKTO				⇑S		**Sn**	**03 17 11.8**	**-0.6**
	3.1nm,3.4s							
AKTO	**Aktyubinsk**	**14.48**	**329**	Pn		**Pn**	**03 14 34.6**	**+1.3**
	0.3nm,0.3s,baz=149,slow=8.4,SNR=8.6							
BVAR	**Borovoye Array**	**14.58**	**2**	Pn		**Pn**	**03 14 35.1**	**+0.5**
	0.5nm,0.3s,baz=168,slow=9.3,SNR=5.2							
BVAR	**Borovoye Array**	**14.58**	**2**	Pn		**Pn**	**03 14 35.1**	**+0.5**
ZALV	**Zalesovo Beam**	**18.71**	**29**	P		**Pn**	**03 15 24.7**	**-1.4**
	0.1nm,0.3s,baz=217,slow=12,SNR=4.5							
TORD	**Torodi Ar. Bea**	**64.58**	**267**	P		**P**	**03 21 43.4**	**+0.6**
	0.6nm,0.7s,mb3.5,baz=48,slow=5.7,SNR=6.8							
YKA	**Yellowknife Ar**	**79.34**	**2**	P		**P**	**03 23 12.3**	**+2.0**
	0.3nm,0.5s,mb3.4,baz=351,slow=5.8,SNR=9.6							
WRA	**Warramunga Arr**	**84.05**	**121**	P		**P**	**03 23 33.8**	**-1.8**
	0.1nm,0.4s,mb3.0,baz=325,slow=4.9,SNR=4.9							

IDC 15 03:19:07.0±2.7,381N×9418E,h0km,mb3.5/3,mb1 3.7/4, mb1mx3.4/23,mbtmp3.5/4,ML3.2/1,Error ellipse: s-maj=100.1km s-min=28.1km az=52.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.85**	**102**	Pn		Pn	03 20 22.1	+0.8
	0.9nm,0.3s,baz=280,slow=18,SNR=3.4							
MKAR	**Makanchi Array**	**44.04**	**348**	P		P	03 27 16.4	-0.1
	0.5nm,0.6s,baz=171,slow=7.3,SNR=4.8							
WRA	**Warramunga Arr**	**45.97**	**122**	P		P	03 27 31.9	-0.4
	1.4nm,0.6s,baz=300,slow=9.4,SNR=17							
WB2	**Warramunga Arr**	**45.98**	**122**	*e*P		P	03 27 32.8	+0.4
ASAR	**Alice Springs**	**47.37**	**127**	P		P	03 27 43.5	+0.3
	0.1nm,0.4s,baz=297,slow=8.1,SNR=6.2							

IGQ 15 04:04:24.1,177S×7806W,h177km±3km,Mb4.0,Ms3.8, 4C-7D,Error ellipse: s-maj=4.7km s-min=2.7km az=40.9, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PATA	**Patacocha**	**0.46**	**305**	⇓P		Pn	04 04 49.2	+0.8
PATA	**Patacocha**	**0.46**	**305**	⇓S		Sn	04 05 06.7	-0.3
ARRY	**Arrayan**	**0.47**	**303**	⇓P		Pn	04 04 49.0	+0.5
ARRY	**Arrayan**	**0.47**	**303**	⇓S		Sn	04 05 05.8	-1.3
RETU	**Refugio**	**0.50**	**309**	P		Pn	04 04 49.5	+0.9
RUN5	**Runtun**	**0.50**	**314**	⇑P		Pn	04 04 49.2	+0.5
JUI6	**Juive**	**0.53**	**310**	⇓P		Pn	04 04 49.5	+0.7
IGUA	**Igualata**	**0.64**	**295**	⇑P		Pn	04 04 50.9	+1.7
PISA	**Pisayambo**	**0.77**	**335**	⇑P		Pn	04 04 50.7	+0.7
TAMB	**Tambo**	**1.11**	**344**	⇓P		Pn	04 04 53.4	+0.9
VC1	**Cotopaxi 1**	**1.17**	**343**	⇓P		Pn	04 04 54.0	+1.0
CAMI	**Rancho Maria**	**1.17**	**338**	P		Pn	04 04 54.2	+1.2
QIL2	**Quilotoa**	**1.23**	**316**	P		Pn	04 04 54.7	+1.2
ANTI	**Antisana**	**1.31**	**356**	P		Pn	04 04 55.0	+0.9
ANTI	**Antisana**	**1.31**	**356**	S		Sn	04 05 19.1	+1.8
GGP	**Refugio Guagua**	**1.67**	**341**	P		Pn	04 04 58.0	+0.4
TERV	**Terraza Guagua**	**1.67**	**341**	P		Pn	04 04 59.1	+1.5
PINO	**Pino**	**1.69**	**341**	P		Pn	04 04 58.6	+0.8
LAV3	**Lava3-Reventad**	**1.71**	**15**	⇑P		Pn	04 04 59.1	+1.1
YANA	**Yana**	**1.71**	**343**	P		Pn	04 04 58.7	+0.7
CONE	**Cono NE Rev Vo**	**1.74**	**14**	P		Pn	04 04 59.3	+1.0
COTA	**Cotacachi**	**2.11**	**352**	P		Pn	04 05 03.4	+1.2
JAMA	**Jama**	**2.61**	**305**	P		Pn	04 05 08.9	+0.9
CHIS	**Cerro-Chispas-**	**2.76**	**285**	P		Pn	04 05 10.2	+0.4

IDC 15 04:09:18.6±1.7,083N×12419E,h0km,mb3.3/3,mb1 3.5/3, mb1mx3.3/18,mbtmp3.3/3,Error ellipse: s-maj=185.5km s-min=24.6km az=63.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.91	155	P	P	04 14 24.3	0.0
	0.6nm,0.5s,baz=333,slow=11,SNR=12						
WB2	**Warramunga Arr**	22.92	155	*e*P	P	04 14 24.5	+0.2
ASAR	**Alice Springs**	26.11	159	P	P	04 14 54.5	+0.1
	0.2nm,0.5s,baz=340,slow=7.1,SNR=4.7						
MKAR	**Makanchi Array**	58.55	327	P	P	04 19 17.0	0.0
	0.3nm,0.5s,baz=116,slow=7.0,SNR=8.7						

*NIED **15** 04:18:00, 39.60N×142.10E, h44^{km}, Mw3.8 Best double couple: $M_0$5.45000×10^{14} NP1:ϕ_s40.00000°, δ79.00000°, λ106.00000°. NP2:ϕ_s164.00000°, δ20.00000°, λ35.00000°.*
*ISCJB **15** 04:18:15.5±0.6, 39.62N±0.03×142.09E±0.08, h58^{km}±4^{km}, mb3.6/10, Error ellipse: s-maj=10.7km s-min=5.4km az=10.0*
*JMA **15** 04:18:16.4±0.1, 39.64N×142.10E, h48^{km}±1^{km}, M3.7*
JMA Felt II J1.
*NEIC **15** 04:18:16.4, 39.64N×142.10E, h48^{km}, MG3.7(JMA), After JMA.*
*IDC **15** 04:18:19.4±2.6, 39.65N×142.11E, h81^{km}±22^{km}, mb3.4/10, mb1 3.5/13, mb1mx3.4/26, mbtmp3.4/13, MS2.5/1, Ms1 2.5/1, ms1mx2.3/20, Error ellipse: s-maj=24.7km s-min=17.0km az=89.0*
ISC 15 04:18:16.5±0.6, **39.63N**±0.03×**142.09E**±0.08, **h50**^{km}±4^{km}, **n30**, σ0^{s}75/41, **mb3.6**/10, **1C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	0.21	256	⇓P	Pn	04 18 24.7	-0.2
MIYJ				S	Sn	04 18 30.4	-0.5
JTH	**Tanohata**	0.35	331	⇓P	Pn	04 18 25.8	-0.3
JTH				S	Sn	04 18 32.3	-0.7
JOM	**Ohasama**	0.63	256	⇓P	Pn	04 18 29.5	+0.1
JOM				S	Sn	04 18 38.9	+0.2
OFUJ	**Ofunato**	0.64	211	⇑P	Pn	04 18 29.1	-0.3
OFUJ				*e*S	Sn	04 18 38.2	-0.5
JKZ	**Kuzumaki**	0.68	302	⇓P	Pn	04 18 30.1	+0.1
JKZ				S	Sn	04 18 39.6	-0.2
JANG	**Nango**	0.86	330	⇓P	Pn	04 18 31.9	-0.5
JMK	**Ichinoseki**	0.95	225	⇓P	Pn	04 18 33.5	0.0
JMK				*e*S	Sn	04 18 46.0	-0.1
JAH	**Hinai**	1.25	297	⇓P	Pn	04 18 37.8	+0.3
JAH				*e*S	Sn	04 18 53.5	+0.3
JIO	**Ouri**	1.30	206	P	Pn	04 18 38.3	0.0
JTM	**Tenmabayashi**	1.40	326	⇓P	Pn	04 18 39.4	-0.1
JTM				*e*S	Sn	04 18 57.1	+0.3
ERM	**Erimo**	2.52	18	*e*Pn	Pn	04 18 55.8	+0.9
ERM				*e*Sn	Sn	04 19 29.7	+5.4
MAJO	**Matsushiro**	4.34	226	*e*Pn	Pn	04 19 23.4	+3.5
MAT	**Matsushiro**	4.34	226	P	Pn	04 19 22.9	+3.0
MAT				*e*S	Sn	04 20 09.2	0.0
MJAR	**Matsushiro Arr**	4.34	226	P	Pn	04 19 23.2	+3.3
	2.2nm,0.3s,baz=34,slow=14,SNR=27						
ASAJ	**Asahikawa**	4.50	5	P	Pn	04 19 23.4	+1.3
	2.4nm,0.3s,baz=220,slow=9.1,SNR=7.0						
ASAJ				S	Sn	04 20 17.9	+4.8
	0.7nm,0.3s,baz=21,slow=17,SNR=3.0						
KSRS	**Korea Array**	11.30	263	P	Pn	04 21 00.5	+5.2
	0.4nm,0.3s,baz=68,slow=14,SNR=5.2						
KSRS				LR	LR	04 25 13.8	
	comp=Z,25nm,21.7s,baz=140,slow=36						
SONM	**Songino Array**	26.87	300	P	P	04 23 53.2	+1.0
	0.4nm,0.7s,mb3.0,baz=70,slow=9.3,SNR=2.9						
ZALV	**Zalesovo Beam**	40.60	310	P	P	04 25 50.9	-0.1
	1.4nm,0.4s,mb3.9,baz=84,slow=8.8,SNR=8.9						
ZALV	**Zalesovo Beam**	40.60	310	P	P	04 25 50.9	-0.1
MKAR	**Makanchi Array**	43.24	300	P	P	04 26 12.4	-0.2
	1.1nm,0.6s,mb3.8,baz=84,slow=10,SNR=14						
KURK	**Kurchatov**	44.79	306	P	P	04 26 25.1	+0.1
	1.2nm,0.5s,mb4.0,baz=83,slow=8.9,SNR=7.0						
AKTK	**Aktyubinsk**	57.36	311	P	P	04 27 58.4	-0.9
AKTO	**Aktyubinsk**	57.36	311	P	P	04 27 58.4	-0.9
	1.3nm,0.8s,mb4.0,baz=74,slow=7.4,SNR=4.7						
WRA	**Warramunga Arr**	59.70	188	P	P	04 28 14.9	-0.9
	0.4nm,0.6s,mb3.6,baz=5.9,slow=7.1,SNR=6.7						
YKA	**Yellowknife Ar**	61.31	31	P	P	04 28 26.6	+0.3
	0.1nm,0.7s,mb3.1,baz=302,slow=6.5,SNR=2.3						
YKA	**Yellowknife Ar**	61.31	31	P	P	04 28 26.6	+0.3
ASAR	**Alice Springs**	63.43	188	P	P	04 28 41.1	+0.3
	0.1nm,0.4s,mb3.3,baz=17,slow=13,SNR=4.6						
NB2	**NORSAR Subarra**	72.00	337	P	P	04 29 34.4	-0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=36,slow=6.5						
NOA	**NORSAR Array B**	72.00	337	P	P	04 29 34.3	-0.2
	comp=Z,0.7nm,0.7s,mb3.7,baz=31,slow=2.7,SNR=3.4						
AKASG	**Malin Array Be**	72.58	322	P	P	04 29 36.7	-1.3
	comp=Z,0.4nm,0.4s,mb3.7,baz=44,slow=6.4,SNR=3.9						

*ISCJB **15** 04:24:28.6±0.7, 23.47N±0.05×93.67E±0.04, h48^{km}±6^{km}, mb4.4/29, MS3.7/2, Error ellipse: s-maj=9.6km s-min=4.7km az=29.4*
*NEIC **15** 04:24:29.6±0.7, 23.48N×93.86E, h42^{km}±7^{km}, mb4.4/7, Error ellipse: s-maj=13.7km s-min=5.8km az=221.0*
*BJI **15** 04:24:29.7, 23.77N×93.76E, h30^{km}, mB4.9, mb4.2, ML4.2, Ms3.7, Msz3.7*
*IDC **15** 04:24:32.5±2.0, 23.49N×93.94E, h71^{km}±16^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.9/25, mbtmp3.9/16, MS3.7/2, Ms1 3.7/2, ms1mx3.1/38, Error ellipse: s-maj=24.9km s-min=12.5km az=57.0*
ISC 15 04:24:31.0±0.6, **23.48N**±0.05×**93.70E**±0.04, **h51**^{km}±5^{km}, **n87**, σ1^{s}19/99, **mb4.4**/29, **MS3.7**/2, **1C-1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	1.31	9	*i* P	Pn	04 24 53.0	0.0
SHL	**Shillong**	2.66	322	⇓*i*PN	Pn	04 25 13.0	+1.7
SHL				*i* SN	Sn	04 25 43.0	+0.7
LSA	**Lhasa**	6.60	340	*e*Sn	Sn	04 27 20.8	+1.5
ODAN	**Odare**	6.63	302	*e*P	Pn	04 26 07.0	+1.1
	128nm,0.3s						
ODAN	**Odare**	6.63	302	*e*Pn	Pn	04 26 07.0	+1.1
ODAN				*e*Sn	Sn	04 27 20.0	-0.2
	576nm,0.4s						
TAPN	**Taplejung**	6.65	307	*e*P	Pn	04 26 06.8	+0.7
	89nm,0.3s						
TAPN	**Taplejung**	6.65	307	*e*Pn	Pn	04 26 07.0	+0.9
TAPN				*e*Sn	Sn	04 27 20.1	-0.4
	406nm,0.6s						
TAPN	**Taplejung**	6.65	307	*e*Pn	Pn	04 26 07.0	+0.9
TAPN				*e*Sn	Sn	04 27 20.1	-0.4
CHRT	**Chiangrai**	6.70	121	P	Pn	04 26 06.0	-0.8
	290nm,0.8s						
CHG	**Chiang Mai**	6.75	133	PG	Px	04 26 21.8	
	16nm,0.8s						
CHTO	**Chiang Mai**	6.75	133	*e*P	Pn	04 26 07.7	+0.2
	12nm,0.8s						
CM31	**Chiang Mai Arr**	7.00	135	*e*Pn	Pn	04 26 04.8	-6.1
CMAR	**Chiang Mai Arr**	7.00	135	P	Pn	04 26 10.2	-0.7
	2.4nm,0.3s,baz=314,slow=14,SNR=8.7						
RAMN	**Ramite**	7.30	300	*e*P	Pn	04 26 16.2	+1.2
	164nm,0.5s						
RAMN	**Ramite**	7.30	300	*e*Pn	Pn	04 26 16.2	+1.2
RAMN				*e*Sn	Sn	04 27 34.8	-1.7
	257nm,0.5s						
JIRN	**Jiri**	7.96	303	*e*P	Pn	04 26 25.1	+1.1
	95nm,0.3s						
JIRN	**Jiri**	7.96	303	*e*Pn	Pn	04 26 25.0	+1.0
JIRN				*e*Sn	Sn	04 27 51.8	-0.8
	218nm,0.4s						
JIRN	**Jiri**	7.96	303	*e*Pn	Pn	04 26 25.0	+1.0
JIRN				*e*Sn	Sn	04 27 51.8	-0.8
GUN	**Gumba**	8.32	304	*e*P	Pn	04 26 30.0	+1.0
	84nm,0.2s						
GUN	**Gumba**	8.32	304	*e*Pn	Pn	04 26 29.9	+0.9
GUN				*e*Sn	Sn	04 27 59.9	-1.7
	197nm,0.4s						
GUN	**Gumba**	8.32	304	*e*Pn	Pn	04 26 29.9	+0.9
GUN				*e*Sn	Sn	04 27 59.9	-1.7
KMI	**Kunming**	8.40	77	⇑P	Pn	04 26 31.9	+1.7
KMI				AMB	AMB		
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	8.52	300	*e*P	Pn	04 26 32.3	+0.5
	comp=Z,37nm,0.2s						
PKI	**Pulchoki**	8.52	300	*e*Pn	Pn	04 26 32.3	+0.5
PKI				*e*Sn	Sn	04 28 04.7	-1.9
	comp=Z,49nm,0.3s						
PKIN	**Phulchoki**	8.54	300	*e*P	Pn	04 26 33.0	+1.0
	comp=Z,78nm,0.3s						
PKIN	**Phulchoki**	8.54	300	*e*P	Pn	04 26 33.1	+1.1
	comp=Z,58nm,0.3s						
PKIN	**Phulchoki**	8.54	300	*e*Pn	Pn	04 26 32.1	+0.1
PKIN				*e*Sn	Sn	04 28 05.0	-1.9
	comp=Z,160nm,0.4s						
KKN	**Kakani**	8.72	301	*e*P	Pn	04 26 35.6	+1.0
	comp=Z,48nm,0.2s						
KKN	**Kakani**	8.72	301	*e*Pn	Pn	04 26 35.4	+0.8
KKN				*e*Sn	Sn	04 28 10.0	-1.5
	comp=Z,156nm,0.5s						
KKN	**Kakani**	8.72	301	*e*Pn	Pn	04 26 35.4	+0.8
KKN				*e*Sn	Sn	04 28 10.0	-1.5
DMN	**Daman**	8.78	300	*e*P	Pn	04 26 35.7	+0.4
	comp=Z,37nm,0.3s						
DMN	**Daman**	8.78	300	*e*Pn	Pn	04 26 34.8	-0.5
DMN	**Daman**	8.78	300	*e*Pn	Pn	04 26 34.8	-0.5
GKN	**Gorkha**	9.33	301	*e*P	Pn	04 26 43.1	+0.3
	comp=Z,356nm,0.3s						
GKN	**Gorkha**	9.33	301	*e*Pn	Pn	04 26 43.0	+0.2
GKN				*e*Sn	Sn	04 28 24.0	-2.3
	comp=Z,296nm,0.4s						
GKN	**Gorkha**	9.33	301	*e*Pn	Pn	04 26 43.0	+0.2
GKN				*e*Sn	Sn	04 28 24.0	-2.3
KOLN	**Koldanda**	10.06	297	*e*P	Pn	04 26 52.4	-0.5
	comp=Z,49nm,0.2s						
KOLN	**Koldanda**	10.06	297	*e*Pn	Pn	04 26 52.3	-0.6
KOLN				*e*Sn	Sn	04 28 39.3	-5.1
	comp=Z,133nm,0.4s						
KOLN	**Koldanda**	10.06	297	*e*Pn	Pn	04 26 52.3	-0.6
KOLN				*e*Sn	Sn	04 28 39.3	-5.1
DANN	**Dangsing**	10.18	301	*e*P	Pn	04 26 54.1	-0.3
	comp=Z,37nm,0.2s						
DANN	**Dangsing**	10.18	301	*e*Pn	Pn	04 26 53.9	-0.5
DANN				*e*Sn	Sn	04 28 43.6	-3.5
	comp=Z,122nm,0.5s						
DANN	**Dangsing**	10.18	301	*e*Pn	Pn	04 26 53.9	-0.5
DANN				*e*Sn	Sn	04 28 43.6	-3.5
HYB	**Hyderabad**	15.42	250	*i* P	Pn	04 28 12.0	+6.7
GTA	**Gaotai**	16.71	17	P	Pn	04 28 21.5	0.0
GTA				AP	pP	04 28 25.9	-8.7
GTA				XP	sP	04 28 28.5	-13
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s						
XAN	**Xi'an**	16.97	48	P	Pn	04 28 22.5	-2.4
XAN				AP	pP	04 28 27.1	-10
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s						
PSI	**Prapat**	21.17	165	P	P	04 29 16.4	+4.3
	comp=Z,5.7nm,0.8s,mb4.0,baz=317,slow=11,SNR=3.8						
KBL	**Kabul**	24.15	303	*e*P	P	04 29 44.3	+1.9
	comp=Z,10.0nm,0.8s,mb4.3						
AAK	**Ala-Archa**	24.87	325	*e*P	P	04 29 51.0	+2.1
	comp=Z,9.7nm,1.0s,mb4.3						
AML	**Almayashu**	24.96	323	*e*P	P	04 29 52.3	+2.6
	comp=Z,12nm,1.0s,mb4.4						
MK31	**Makanchi Array**	25.01	341	*e*P	P	04 29 50.5	+0.5
MKAR	**Makanchi Array**	25.01	341	P	P	04 29 50.5	+0.5
	comp=Z,1.4nm,0.5s,mb3.8,baz=162,slow=9.1,SNR=26						
EKS2	**Erkin-Say**	25.28	324	*e*P	P	04 29 55.2	+2.7
	comp=Z,5.4nm,0.7s,mb4.2						
SONM	**Songino Array**	26.33	20	P	P	04 30 00.9	-1.0
	comp=Z,7.8nm,0.6s,mb4.5,baz=198,slow=9.6,SNR=54						
SONM				ScP	ScP	04 36 59.6	-3.0
	comp=Z,0.5nm,0.6s,baz=191,slow=4.3,SNR=3.7						
ULN	**Ulaanbaatar**	26.56	20	*e*P	P	04 30 03.1	-1.0
	comp=Z,13nm,0.6s,mb4.6						
KURK	**Kurchatov**	29.61	340	P	P	04 30 30.9	-0.3
	comp=Z,0.6nm,0.4s,mb3.7,baz=151,slow=8.4,SNR=6.3						
KURK				ScP	ScP	04 37 10.4	-2.2
	comp=Z,1.5nm,0.7s,baz=146,slow=3.2,SNR=11						
ZALV	**Zalesovo Beam**	31.15	350	P	P	04 30 45.0	+0.2
	comp=Z,0.9nm,0.4s,mb4.0,baz=175,slow=8.5,SNR=5.2						
KSRS	**Korea Array**	32.42	57	LR	LR	04 45 49.6	
	comp=Z,42nm,18.7s,MS3.2,baz=180,slow=40						
BVAR	**Borovoye Array**	34.40	335	ScP	ScP	04 37 27.1	-1.7
	comp=Z,0.7nm,0.7s,baz=144,slow=5.4,SNR=3.3						
AKTK	**Aktyubinsk**	38.60	323	P	P	04 31 49.8	+0.8
AKTO	**Aktyubinsk**	38.60	323	P	P	04 31 49.8	+0.8
	comp=Z,2.5nm,0.5s,mb4.2,baz=125,slow=11,SNR=9.4						
RDF	**Al-Radifah**	41.56	288	*e*P	P	04 32 14.8	+0.9
	baz=291						
RDF				AMb	AMB	04 32 15.5	
	comp=Z,38nm,0.4s,mb5.4,baz=291						
MIB	**Mutribah**	41.70	289	*e*P	P	04 32 15.9	+0.9
	baz=293						
MIB				AMb	AMB	04 32 17.9	
	comp=Z,12nm,0.6s,mb4.7,baz=293						
NAY	**Al-Naaiem**	41.81	288	*e*P	P	04 32 16.7	+0.8
	baz=292						
NAY				AMb	AMB	04 32 17.8	
	comp=Z,14nm,0.5s,mb4.8,baz=292						
TIXI	**Tiksi**	52.15	13	*e*P	P	04 33 34.3	-1.6
	comp=Z,13nm,0.4s,mb5.2						
BRTR	**Keskin Array B**	52.73	303	P	P	04 33 40.9	+0.1
	comp=Z,0.5nm,0.5s,mb3.7,baz=121,slow=8.9,SNR=4.0						
AKASG	**Malin Array Be**	56.13	316	P	P	04 34 04.5	-0.7
	comp=Z,1.2nm,0.3s,mb4.3,baz=83,slow=6.3,SNR=8.4						
JOF	**Joensuu**	56.84	331	*e*p	P	04 34 09.9	-0.1
	comp=Z,0.4nm,0.3s,mb3.9						
WRA	**Warramunga Arr**	58.59	134	P	P	04 34 21.1	-1.9
	comp=Z,2.8nm,0.5s,mb4.6,baz=322,slow=7.5,SNR=58						
WRA				ScP	ScP	04 39 03.0	-6.0
	comp=Z,0.4nm,0.6s,baz=328,slow=4.3,SNR=6.1						
WB2	**Warramunga Arr**	58.60	134	*e*P	P	04 34 21.1	-1.9
ARCES	**ARCESS Array B**	60.60	338	P	P	04 34 35.9	-0.2
	comp=Z,1.0nm,0.6s,mb4.1,baz=102,slow=7.6,SNR=5.3						
ARCES	**ARCESS Array B**	60.60	338	P	P	04 34 35.9	-0.2
ASAR	**Alice Springs**	61.00	137	P	P	04 34 38.1	-1.3
	comp=Z,3.3nm,0.5s,mb4.7,baz=320,slow=6.8,SNR=66						
PMG	**Port Moresby**	61.63	116	LR	LR	05 01 13.0	
	comp=Z,147nm,18.6s,MS4.2,baz=330,slow=36						
BILL	**Bilibino**	61.93	24	*e*P	P	04 34 43.4	-1.7
	comp=Z,5.7nm,0.4s,mb5.0						
NB2	**NORSAR Subarra**	66.14	328	P	P	04 35 12.6	-0.2
	comp=Z,2.2nm,0.9s,mb4.2,baz=85,slow=6.2						
NOA	**NORSAR Array B**	66.14	328	P	P	04 35 12.7	-0.1
	comp=Z,0.7nm,0.7s,mb3.8,baz=85,slow=6.7,SNR=2.7						
GERES	**GERESS Array B**	66.25	315	P	P	04 35 14.3	+0.5
	comp=Z,2.2nm,0.5s,mb4.4,baz=75,slow=6.2,SNR=28						
LSZ	**Lusaka**	74.72	246	*e*P	P	04 36 06.9	+1.0
	comp=Z,9.2nm,0.8s,mb4.8						
INK	**Inuvik**	82.19	16	*e*P	P	04 36 45.2	-1.0
	comp=Z,1.9nm,0.4s,mb4.4						
BOSA	**Boshof**	83.81	235	P	P	04 36 56.0	+0.8
	comp=Z,6.1nm,0.8s,mb4.8,baz=57,slow=8.3,SNR=10						
TOA0	**Torodi Ar. Sit**	86.66	283	*e*P	P	04 37 11.0	+1.2
TORD	**Torodi Ar. Bea**	86.66	283	P	P	04 37 10.7	+0.9
	comp=Z,1.5nm,0.6s,mb4.4,baz=73,slow=4.8,SNR=47						
YKA	**Yellowknife Ar**	91.40	13	P	P	04 37 29.6	-1.7
	comp=Z,0.5nm,0.7s,mb4.0,baz=328,slow=4.5,SNR=13						
YKA	**Yellowknife Ar**	91.40	13	P	P	04 37 29.6	-1.7
TXAR	**Lajitas Array**	124.89	19	PKP	PKPdf	04 43 25.6	-0.3
	comp=Z,0.3nm,0.6s,baz=144,slow=0.6,SNR=4.6						
SDV	**Santo Domingo**	144.37	333	*e*PKPdf	PKPdf	04 44 03.9	+1.4
CPUP	**Villa Florida**	153.59	258	PKPbc	PKPbc	04 44 22.6	-2.0
	comp=Z,0.8nm,0.4s,baz=52,slow=2.6,SNR=6.3						

*ISCJB **15** 04:38:27.6±0.5, 40.64N±0.03×29.11E±0.04, h1^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=3.8km az=146.2*
*ISK **15** 04:38:27.7, 40.65N×29.14E, h7^{km}, MD2.9*
*CSEM **15** 04:38:27.1±0.1, 40.62N×29.12E, h2^{km}, MD2.9, Error ellipse: s-maj=1.4km s-min=1.1km az=56.0*
*DDA **15** 04:38:27.6, 40.63N×29.11E, h11^{km}±1^{km}, Md2.8*
ISC 15 04:38:28.1±0.4, **40.64N**±0.02×**29.12E**±0.04, **h6**^{km}±6^{km}, **n18**, σ0^{s}59/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLV	**Yalova**	0.21	111	PG	Pg	04 38 32.2	-0.1
YLV				*e*SG	Sg	04 38 35.6	+0.6
GEMT	**Gemlik**	0.21	165	PG	Pg	04 38 32.2	-0.1
GEMT				*e*SG	Sg	04 38 36.1	+0.9
ISK	**Istanbul-Kandi**	0.42	354	*e*PG	Pg	04 38 36.6	+0.3
ISK				*e*SG	Sg	04 38 41.7	-0.2
HRT	**Hereke**	0.46	67	PG	Pg	04 38 36.3	-0.5
HRT				*e*SG	Sg	04 38 42.6	-0.3
ULDT	**Uludag**	0.50	178	*i* P	Pg	04 38 37.3	-0.4
ULDT				*i* S	Sg	04 38 42.8	-1.4
ADVT	**Abdulvahap**	0.52	114	*e*PG	Pg	04 38 37.9	-0.2
BGKT	**Bogazkoy**	0.60	334	*e*PG	Pg	04 38 39.9	+0.3
KLYT	**Kilyos**	0.61	355	*e*PG	Pg	04 38 40.3	+0.5
KCT	**Karacabey**	0.69	237	*e*PG	Pg	04 38 41.5	+0.2
CAVI	**Cavuskoy**	0.71	128	*e*PG	Pg	04 38 41.7	0.0
ELBA	**Catalca**	0.72	314	*i* P	Pg	04 38 41.6	-0.4
ELBA				*i* S	Sg	04 38 51.2	-0.2
CTKS	**Kestanelik-??a**	0.75	322	*e*PG	Pg	04 38 43.5	+1.0
EYL	**Eskiyayla**	0.80	95	*e*PG	Pg	04 38 43.0	-0.3
GULT	**Gulveren**	1.09	101	*e*PG	Pg	04 38 48.9	0.0
DURS	**Dursunbey**	1.15	206	*i* P	Pg	04 38 49.4	-0.7
DURS				*i* S	Sg	04 39 05.7	+0.6
BORA	**Eskisehir**	1.27	126	*i* P	Pn	04 38 51.7	-0.6
BORA				*i* S	Sg	04 39 09.7	+0.6
GDZ	**Gediz**	1.58	170	*i* P	Pn	04 38 55.4	-1.1
GDZ				*i* S	Sn	04 39 18.2	+1.1
ALT	**Altintas**	1.76	154	*e*PN	Pn	04 38 59.3	+0.3

*ISCJB **15** 04:44:33.6±2.4, 25.55S±0.1×177.7W±0.1, h55^{km}±19^{km}, mb4.5/14, MS4.2/9, Error ellipse: s-maj=21.4km s-min=13.2km az=37.3*
*IDC **15** 04:44:33.5±4.8, 25.43S×177.68W, h40^{km}±41^{km}, mb4.2/10, mb1 4.5/11, mb1mx4.3/17, mbtmp4.3/11, ML4.8/1, MS4.2/11, Ms1 4.1/11, ms1mx3.9/19, Error ellipse: s-maj=27.0km s-min=20.9km az=7.0*
*NEIC **15** 04:44:33.9±2.7, 25.42S×177.58W, h43^{km}±23^{km}, mb4.8/6, Error ellipse: s-maj=23.7km s-min=15.5km az=199.0*
ISC 15 04:44:34.8±2.2, **25.5S**±0.1×**177.6W**±0.1, **h52**^{km}±18^{km}, **n70**, σ1^{s}03/31, **mb4.5**/14, **MS4.2**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	3.74	184	P	Pn	04 45 29.4	-0.6
	70nm,0.3s,baz=61,slow=22,SNR=10						
RAO				S	Sn	04 46 16.9	+4.2
	171nm,0.3s,baz=288,slow=20,SNR=3.4						
RAO	**Raoul Island**	3.74	184	*e*Pn	Pn	04 45 30.0	+0.1
RAO				*e*Sn	Sn	04 46 19.1	+6.4
AFI	**Afiamalu**	12.78	27	LR	LR	04 50 48.0	
	comp=Z,144nm,19.5s,baz=193,slow=29						
DZM	**Mont Dzumac**	14.99	280	*e*Pn	Pn	04 48 02.6	-0.8
	48nm,1.4s						
RAR	**Rarotonga**	16.93	79	LR	LR	04 53 21.3	
	comp=Z,775nm,18.1s,baz=267,slow=31						
TBI	**Tubuai**	25.70	91	*e*LQ		04 55 02.3	
	1µm,26.2s						
TBI				*e*LR	LR	04 56 11.1	
	2µm,28.0s,baz=264						
HNR	**Honiara**	26.64	303	LR	LR	04 58 47.5	
	comp=Z,1µm,21.8s,MS4.3,baz=84,slow=32						
PPT	**Papeete**	27.21	79	*e*LQ		04 55 48.8	
	2µm,24.5s						
PPT				*e*LR	LR	04 56 48.0	
	2µm,27.2s,baz=246						
PPT	**Papeete**	27.21	79	LR	LR	04 58 15.2	
	comp=Z,508nm,18.5s,MS4.1,baz=255,slow=30						
ARMA	**Armidale**	27.56	253	*e*P	P	04 50 20.8	+4.0
EIDS	**Eidsvold**	28.24	263	*e*P	P	04 50 24.4	+1.5
	20nm,1.4s,mb4.6						
CTA	**Charters Tower**	33.67	272	*e*P	P	04 51 13.6	+2.7
	12nm,0.9s,mb4.8						
CTA	**Charters Tower**	33.67	272	P	P	04 51 08.8	-2.1
	16nm,1.0s,mb4.9,baz=80,slow=11,SNR=2.6						
CTAO	**Charters Tower**	33.67	272	*e*P	P	04 51 11.8	+0.9
	16nm,0.9s,mb4.9						
STKA	**Stephens Creek**	36.18	250	*e*P	P	04 51 33.9	+1.5
	6.7nm,1.1s,mb4.5						
STKA	**Stephens Creek**	36.18	250	P	P	04 51 33.7	+1.3
	5.4nm,0.9s,mb4.5,baz=94,slow=11,SNR=7.1						
STKA				LR	LR	05 04 05.7	
	comp=Z,643nm,21.0s,MS4.4,baz=64,slow=32						
STKA	**Stephens Creek**	36.18	250	*e*P	P	04 51 34.4	+2.0
	0.9nm,1.1s,mb3.6						
PMG	**Port Moresby**	37.07	289	P	P	04 51 39.3	-0.8
	14nm,0.9s,mb4.8,baz=116,slow=5.4,SNR=5.4						
PMG	**Port Moresby**	37.07	289	P	P	04 51 39.3	-0.8
RKT	**Rikitea**	38.81	96	*e*LR	LR	05 02 14.0	
	1µm,28.8s,baz=261						
TAOE	**Nuku Hiva Isla**	39.26	72	*e*LR	LR	05 02 20.9	
	2µm,28.6s						
ASAR	**Alice Springs**	43.93	262	P	P	04 52 35.6	-1.1
	21nm,1.1s,mb4.8,baz=100,slow=7.8,SNR=62						
WB2	**Warramunga Arr**	44.47	267	*e*P	P	04 52 40.8	-0.2
WRAB	**Tennant Creek**	44.47	267	*e*P	P	04 52 41.5	+0.4
	23nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	44.48	267	P	P	04 52 40.9	-0.2
	16nm,0.9s,mb4.7,baz=103,slow=8.1,SNR=57						
KAKA	**Kakadu**	48.62	275	*e*P	x	04 52 53.7	
	11nm,0.9s						
FITZ	**Fitzroy Crossi**	52.88	266	*e*P	P	04 53 45.6	0.0
	25nm,0.9s,mb5.1						
VNDA	**Vanda**	52.98	185	P	P	04 53 47.1	+1.6
	7.8nm,1.2s,mb4.5,baz=15,slow=6.7,SNR=3.9						
VNDA				LR	LR	05 12 31.4	
	comp=Z,102nm,19.7s,MS3.9,baz=28,slow=32						
VNDA	**Vanda**	52.98	185	*e*P	P	04 53 47.5	+1.9
VNDA				LR	LR	05 12 31.4	
GUMO	**Guam**	53.35	312	LR	LR	05 13 43.6	
	comp=Z,422nm,20.7s,MS4.5,baz=125,slow=33						
MJAR	**Matsushiro Arr**	74.45	324	LR	LR	05 22 52.4	
	comp=Z,130nm,21.5s,MS4.2,baz=350,slow=31						
MAW	**Mawson**	77.00	200	P	P	04 56 21.4	-0.2
	2.6nm,0.8s,mb4.2,baz=112,slow=7.4,SNR=3.8						
MAW				LR	LR	05 30 38.6	
	comp=Z,174nm,19.8s,MS4.4,baz=324,slow=36						
KSRS	**Korea Array**	80.87	319	LR	LR	05 26 38.2	
	comp=Z,122nm,21.7s,MS4.2,baz=270,slow=31						
PETK	**Petropavlovsk-**	81.18	345	LR	LR	05 31 30.0	
	comp=Z,113nm,19.2s,MS4.2,baz=63,slow=35						
SNAA	**Sanae**	83.02	178	*e*	P	04 56 51.6	-2.4
SNAA				*e*		04 56 53.7	
SNAA				*e*		04 56 57.3	
SNAA				*e*		04 58 05.8	
SNAA	**Sanae**	83.02	178	*e*P	P	04 56 52.5	-1.5
	19nm,1.5s,mb4.9						
VNA3	**Neumayer Olymp**	83.14	176	*e*	P	04 56 53.6	-1.1
VNA3				*e*		04 56 55.8	
VNA3				*e*		04 56 58.8	
VNA3				*e*		04 58 06.6	
VNA2	**Neumayer--Watz**	83.59	177	*e*	P	04 56 56.0	-0.9
	baz=176,slow=3.5						
VNA2				*e*		04 56 57.8	
VNA2				*e*		04 57 00.6	
VNA2				*e*		04 58 10.6	
VNA1	**Neumayer--Stat**	83.81	176	*e*	P	04 56 57.7	-0.4
VNA1				*e*		04 56 59.6	
VNA1				*e*		04 57 02.9	
NVAR	**Mina Array Bea**	84.42	43	P	P	04 57 01.8	+0.2
	1.1nm,0.7s,mb4.1,baz=219,slow=7.0,SNR=7.0						
TXAR	**Lajitas Array**	89.46	57	P	P	04 57 26.6	+0.3
	0.5nm,0.9s,mb3.9,baz=210,slow=7.2,SNR=5.1						
PDAR	**Pinedale Array**	92.35	43	P	P	04 57 40.5	+1.1
	0.5nm,0.8s,mb3.9,baz=184,slow=2.9,SNR=5.0						
MKAR	**Makanchi Array**	114.84	312	PKP	PKiKP	05 03 07.4	-1.9
	0.6nm,0.8s,baz=90,slow=0.5,SNR=5.1						
NB2	**NORSAR Subarra**	143.97	353	PKP	PKPdf	05 04 01.8	-1.9
	comp=Z,25nm,2.0s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	143.97	353	PKP	PKPdf	05 04 04.3	+0.6
	comp=Z,2.4nm,0.8s,baz=15,slow=4.6,SNR=6.6						
NOA	**NORSAR Array B**	143.97	353	PKP	PKPdf	05 04 04.3	+0.6
IDID	**Didziasalis**	145.29	336	*e*P	PKPbc	05 04 06.1	+0.1
ISAL	**Salakas**	145.32	336	*e*P	PKPbc	05 04 07.4	+1.2
IIGN	**Ignalina**	145.45	336	*e*P	PKPbc	05 04 06.7	+0.2
AKASG	**Malin Array Be**	147.49	328	PKPbc	PKPbc	05 04 11.2	-1.4
	comp=Z,2.8nm,0.7s,baz=40,slow=3.9,SNR=12						
SUW	**Suwalki**	147.60	337	*e*PKPbc	PKPbc	05 04 13.1	+0.2
BRTR	**Keskin Array B**	150.28	306	PKPbc	PKPbc	05 04 17.9	-2.2
	comp=Z,3.1nm,1.1s,baz=143,slow=4.5,SNR=8.7						
MMAI	**Mount Meron Ar**	150.33	292	PKPbc	PKPbc	05 04 21.3	+0.9
	comp=Z,6.0nm,0.9s,baz=96,slow=4.3,SNR=4.1						
KWP	**Kalwaria**	151.21	332	*e*PKPbc	PKPbc	05 04 23.2	+1.2
BUR08	**Bucovina Ar. S**	151.49	327	*e*PKPbc	PKPbc	05 04 25.1	+2.3
OJC	**Ojcow**	151.90	336	*e*PX	PKPbc	05 04 23.3	-0.2
NIE	**Niedzica**	152.35	334	*e*P	PKPbc	05 04 25.9	+1.3
OKC	**Ostrava-Krasne**	152.81	337	*e*PKPbc	PKPbc	05 04 22.6	-3.0
OKC				*e*pPKP	pPKPdf	05 04 31.6	-2.6
UPC	**Upice**	152.92	341	*e*PKPbc	PKPbc	05 04 24.4	-1.4
DPC	**Dobruska-Polom**	152.96	340	*e*PKPbc	PKPbc	05 04 25.8	-0.1
DPC				*e*pPKP	pPKPdf	05 04 32.9	-1.5
CLL	**Collm**	152.99	345	*i* PKPbc	PKPbc	05 04 24.9	-1.0
	comp=Z,13nm,1.3s						
CLL				*i* pPKPdf	pPKPdf	05 04 29.2	-5.2
CLL				*e*PKPab	PKPab	05 04 36.0	-1.3
CLL	**Collm**	152.99	345	*i* P	PKPbc	05 04 24.9	-1.0
CLL				*i*		05 04 29.2	
BRG	**Berggiesshubel**	153.16	344	*e*PKP	PKPbc	05 04 26.2	-0.1
	comp=Z,14nm,1.3s						
PVCC	**Panska Ves**	153.31	343	*e*PKPbc	PKPbc	05 04 27.1	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PRU	Pruhonice	153.81	342	ePKPab	PKPab	05 04 44.0	+3.1
KHC	Kasperske Hory	154.85	343	ePKPdf	PKPdf	05 04 19.5	-1.8
KHC				ex	x	05 04 36.9	
KHC				ePKPab	PKPab	05 04 45.0	-0.3
GRF	Grafenberg Arr	154.90	346	eP	PKPab	05 04 45.8	+0.3
	comp=Z,14nm,1.8s						
GERES	GERESS Array B	155.08	342	PKPbc	PKPdf	05 04 32.9	+11
	comp=Z,0.4nm,0.8s,baz=86,slow=2.7,SNR=3.2						
GERES				PKPab	PKPab	05 04 47.0	+0.7
	comp=Z,0.7nm,0.8s,baz=0.0,slow=1.0,SNR=4.9						
TORD	Torodi Ar. Bea	167.69	177	PKP	PKPdf	05 04 35.2	-0.6
	comp=Z,3.3nm,1.2s,baz=146,slow=0.7,SNR=8.0						
TORD				PKPab	PKPab	05 05 41.0	-1.1
	comp=Z,3.6nm,1.1s,baz=178,slow=3.0,SNR=8.9						
TORD	Torodi Ar. Bea	167.69	177	PKP	PKPdf	05 04 35.2	-0.7
TORD				PKPab	PKPab	05 05 41.0	-1.1

*CSEM **15** 04:59:33.9±0.1, 19.19N×39.27E, h2^{km}, ML3.8, Error ellipse: s-maj=7.3km s-min=3.9km az=141.0*
*BJI **15** 04:59:33.7, 18.86N×39.02E, h18^{km}, mB5.2, mb4.6, Ms4.5, Msz4.3*
*ISCJB **15** 04:59:34.6±0.5, 19.10N±0.06×39.38E±0.05, h10^{km}, mb4.3/16, MS4.0/13, Error ellipse: s-maj=8.8km s-min=5.6km az=23.1*
*IDC **15** 04:59:35.5±1.3, 19.13N×39.22E, h0^{km}, mb4.1/11, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, MS3.9/14, Ms1 3.9/14, ms1mx3.7/28, Error ellipse: s-maj=35.0km s-min=17.6km az=167.0*
*SGS **15** 04:59:36.5, 19.08N×39.21E, h30^{km}*
*NEIC **15** 04:59:37.0±0.6, 19.16N×39.20E, h10^{km}, mb4.5/2, Error ellipse: s-maj=15.3km s-min=8.2km az=161.0*
ISC 15 04:59:36.1±0.5**, 19.00N**±0.06×**39.38E**±0.05**, h10**^{km}**, n51,** σ**1.25**/43**, mb4.3**/16**, MS4.0**/13**, Red Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LTHS	Al Lith	1.60	37	P	Pn	04 59 59.5	-4.9
SHBS		2.02	8	P	Pn	05 00 06.0	-4.2
BLJS	Baljurashi	2.30	65	P	Pn	05 00 13.2	-0.9
FRAS	Faraa	2.31	27	P	Pn	05 00 10.7	-3.6
SHMS		2.45	7	P	Pn	05 00 13.3	-3.0
FDAS		2.96	18	P	Pn	05 00 20.6	-2.7
WBHS	Wadi 'Ibn Hash	3.19	96	P	Pn	05 00 27.0	+0.5
WBHS	Wadi 'Ibn Hash	3.19	96	P	Pn	05 00 27.0	+0.6
WBHS				S	Sn	05 01 04.6	0.0
FRSS	Farasan al Kab	3.44	130	S	Sn	05 01 09.3	-1.3
FRSS	Farasan al Kab	3.44	130	P	Pn	05 00 29.2	-0.7
JAZS	Jizan	3.87	119	P	Pn	05 00 35.8	0.0
JAZS	Jizan	3.87	119	P	Pn	05 00 35.8	0.0
JAZS				S	Sn	05 01 19.8	-1.5
TATS	Tathlith	3.91	81	S	Sn	05 01 21.0	-1.1
TATS	Tathlith	3.91	81	P	Pn	05 00 37.6	+1.3
EIL	Elat	11.36	340	LR	LR	05 05 53.0	
	comp=Z,334nm,20.0s,baz=181,slow=34						
ASF	Jabal al Asfar	13.31	351	LR	LR	05 07 22.7	
	comp=Z,320nm,18.7s,baz=221,slow=36						
MMAI	Mount Meron Ar	14.41	346	LR	LR	05 07 55.0	
	comp=Z,311nm,19.8s,baz=60,slow=35						
BR131	Keskin Array S	21.24	348	eP	P	05 04 21.0	-1.3
BR131	Keskin Array S	21.24	348	eP	P	05 04 21.0	-1.4
	15nm,1.1s,mb4.2						
GNI	Garni	21.58	11	LR	LR	05 13 26.9	
	comp=Z,336nm,18.9s,MS3.8,baz=19,slow=39						
KEST	Kesra	31.29	308	LR	LR	05 20 51.9	
	comp=Z,56nm,20.4s,MS3.2,baz=264,slow=41						
AKASG	Malin Array Be	32.65	348	P	P	05 06 06.7	-1.4
	0.6nm,0.5s,mb3.8,baz=153,slow=6.4,SNR=5.3						
AKASG	Malin Array Be	32.65	348	P	P	05 06 06.7	-1.4
AKTO	Aktyubinsk	34.70	21	LR	LR	05 23 28.2	
	comp=Z,184nm,19.5s,MS3.8,baz=293,slow=41						
GERES	GERESS Array B	36.27	331	P	P	05 06 38.8	-0.7
	0.5nm,0.7s,mb3.6,baz=131,slow=6.1,SNR=4.6						
TOA0	Torodi Ar. Sit	36.63	267	eP	P	05 06 43.0	0.0
TOA0	Torodi Ar. Sit	36.63	267	eP	P	05 06 43.0	0.0
TORD	Torodi Ar. Bea	36.63	267	P	P	05 06 42.8	-0.2
	4.6nm,0.8s,mb4.3,baz=77,slow=8.6,SNR=22						
TORD				LR	LR	05 22 21.2	
	comp=Z,187nm,20.2s,MS3.9,baz=100,slow=37						
ESDC	Sonseca Array	42.54	308	P	P	05 07 31.6	-0.4
	0.9nm,0.7s,mb3.6,baz=88,slow=6.9,SNR=5.0						
KURK	Kurchatov	44.30	35	P	P	05 07 46.9	+0.8
	2.0nm,0.5s,mb4.1,baz=240,slow=8.1,SNR=7.7						
KURK	Kurchatov	44.30	35	eP	P	05 07 46.7	+0.6
KURK	Kurchatov	44.30	35	eP	P	05 07 46.7	+0.6
	14nm,1.4s,mb4.5						
MK31	Makanchi Array	44.66	42	eP	P	05 07 50.6	+1.6
MK31	Makanchi Array	44.66	42	eP	P	05 07 50.6	+1.6
MKAR	Makanchi Array	44.66	42	P	P	05 07 50.5	+1.4
	3.0nm,0.7s,mb4.2,baz=238,slow=5.4,SNR=17						
MKAR				LR	LR	05 30 05.1	
	comp=Z,102nm,19.5s,MS3.8,baz=294,slow=41						
DBIC	Dimbokro	44.71	260	P	P	05 07 49.5	-0.3
	3.4nm,1.0s,mb4.1,baz=71,slow=9.9,SNR=3.5						
DBIC				LR	LR	05 26 48.6	
	comp=Z,225nm,18.6s,MS4.1,baz=54,slow=37						
NOA	NORSAR Array B	46.48	342	P	P	05 08 02.3	-0.8
	3.0nm,1.1s,mb4.2,baz=135,slow=8.8,SNR=3.4						
WMQ	Urumqi	47.25	47	P	P	05 08 11.5	+2.0
WMQ				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,170nm,5.0s						
WMQ				LR	LR		
	comp=N,52nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=E,129nm,23.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,153nm,25.0s,MS3.9						
ZAA0	Zalesovo Array	49.20	34	eP	P	05 08 25.3	+0.9
ZAA0	Zalesovo Array	49.20	34	eP	P	05 08 25.3	+1.0
ZALV	Zalesovo Beam	49.20	34	P	P	05 08 24.8	+0.4
	comp=Z,5.7nm,1.0s,mb4.5,baz=258,slow=7.4,SNR=15						
ZALV				LR	LR	05 33 13.0	
	comp=Z,82nm,18.2s,MS3.8,baz=69,slow=41						
BOSA	Boshof	49.26	196	LR	LR	05 29 39.3	
	comp=Z,294nm,19.0s,MS4.3,baz=4.9,slow=37						
ARCES	ARCESS Array B	51.24	354	LR	LR	05 30 26.3	
	comp=Z,160nm,19.1s,MS4.1,baz=225,slow=36						
GTA	Gaotai	55.51	55	eP	P	05 09 13.1	+1.6
GTA				AP	pP	05 09 16.8	+2.1
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
CMAR	Chiang Mai Arr	56.16	80	P	P	05 09 17.6	+1.2
	comp=Z,1.7nm,0.4s,mb4.5,baz=288,slow=6.5,SNR=4.4						
CMAR	Chiang Mai Arr	56.16	80	P	P	05 09 17.6	+1.1
LZH	Lanzhou	58.66	59	eP	P	05 09 35.0	+1.1
LZH				AP	pP	05 09 39.8	+2.7
LZH				XP	sP	05 09 42.1	+3.8
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,128nm,6.3s						
SONM	Songino Array	60.78	45	P	P	05 09 49.7	+1.4
	comp=Z,3.0nm,1.0s,mb4.4,baz=285,slow=5.8,SNR=11						
HHC	Hu-ho-hao-te	64.50	53	eP	P	05 10 15.6	+2.3
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.1						
HHC				AMB	AMB		
	comp=Z,205nm,5.0s						
HHC				LR	LR		
	comp=N,155nm,15.5s,MS4.5						
HHC				LR	LR		
	comp=E,165nm,13.1s,MS4.5						
HHC				LR	LR		
	comp=Z,260nm,20.2s						
KSRS	Korea Array	77.58	55	LR	LR	05 50 02.6	
	comp=Z,118nm,19.8s,MS4.2,baz=268,slow=39						
MJAR	Matsushiro Arr	85.70	53	LR	LR	05 51 25.2	
	comp=Z,68nm,19.5s,MS4.0,baz=355,slow=36						

*NIED **15** 05:09:00, 37.70N×142.10E, h29^{km}, Mw4.0 Best double couple: $M_0$1.15000×10^{15} NP1:ϕ_s32.00000°, δ48.00000°, λ89.00000°. NP2:ϕ_s214.00000°, δ42.00000°, λ91.00000°.*
*MOS **15** 05:09:31.8±1.1, 37.71N×142.40E, h33^{km}, mb4.3/10, Error ellipse: s-maj=14.3km s-min=13.0km az=96.8*
*ISCJB **15** 05:09:31.1±1.2, 37.72N±0.04×142.27E±0.05, h22^{km}±7^{km}, mb4.0/16, Error ellipse: s-maj=7.4km s-min=5.2km az=44.8*
*JMA **15** 05:09:33.3±0.2, 37.75N×142.13E, h33^{km}±3^{km}, M4.1*
JMA Felt I J1.
*IDC **15** 05:09:34.3±5.5, 37.70N×142.27E, h34^{km}±42^{km}, mb3.8/12, mb1 4.0/14, mb1mx3.9/24, mbtmp3.8/14, ML3.7/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=22.3km s-min=16.4km az=91.0*
*NEIC **15** 05:09:34.1±0.5, 37.70N×142.31E, mb4.6/4, MW4.0(NIED), Error ellipse: s-maj=12.9km s-min=10.1km az=142.0*
NEIC Recorded [1 JMA] in Miyagi Prefecture.
ISC 15 05:09:30.7±1.1**, 37.73N**±0.04×**142.21E**±0.04**, h6**^{km}±5^{km}**, n51,** σ**0.98**/65**, mb4.0**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.99	317	P	Pg	05 09 50.5	+0.8
JIO				S	Sg	05 10 02.7	+0.1
JFK	Kawauchi	1.12	252	P	Pg	05 09 52.1	0.0
JFK				eS	Sg	05 10 05.7	-0.9
JMM	Marumori	1.13	278	P	Pb	05 09 52.2	-0.4
JMM				eS	Sg	05 10 06.3	-0.7
ONAJ	Iwakimizuishiy	1.28	241	P	Pn	05 09 54.4	-0.7
ONAJ				eS	Sb	05 10 09.9	-2.1
JOU	Okura	1.38	298	P	Pn	05 09 56.5	+0.1
JOU				eS	Sb	05 10 13.3	-1.4
JMK	Ichinoseki	1.45	328	P	Pn	05 09 56.9	-0.5
JMK				eS	Sn	05 10 15.0	-1.8
JFT	Otama	1.50	263	P	Pn	05 09 58.6	+0.5
JFT				eS	Sn	05 10 17.1	-0.9
JYS	Shirataka	1.76	287	P	Pn	05 10 02.1	+0.3
JYS				eS	Sn	05 10 25.0	+0.5
JYK	Kaneyama	1.88	310	P	Pn	05 10 03.9	+0.6
JOM	Ohasama	1.89	338	P	Pn	05 10 03.4	0.0
JFY	Yanaizu	2.01	262	P	Pn	05 10 05.9	+0.7
JFY				eS	Sn	05 10 31.2	+0.5
JYA	Atsumi	2.15	295	P	Pn	05 10 07.6	+0.6
MJAR	Matsushiro Arr	3.41	251	Pn	Pn	05 10 26.0	+1.6
	3.9nm,0.3s,baz=65,slow=13,SNR=18						
MJAR				Sn	Sn	05 11 10.9	+5.9
	4.6nm,0.3s,baz=294,slow=26,SNR=4.3						
MJAR				LR	LR	05 12 03.7	
	comp=Z,471nm,18.4s,baz=210,slow=44						
MJAR	Matsushiro Arr	3.41	251	P	Pn	05 10 26.0	+1.7
MJAR						05 11 11.0	
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR				smax			
	comp=N,5.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,471nm,18.4s						
MJAR	Matsushiro Arr	3.41	251	Pn	Pn	05 10 26.0	+1.6
MJAR				Sn	Sn	05 11 10.9	+5.9
MAJO	Matsushiro	3.41	251	eP	Pn	05 10 27.1	+2.7
MAT	Matsushiro	3.41	251	P	Pn	05 10 27.1	+2.7
MAT				eS	Sn	05 11 05.5	+0.4
ASAJ	Asahikawa	6.39	3	Pn	Pn	05 11 05.3	0.0
	comp=Z,2.3nm,0.3s,baz=90,slow=6.4,SNR=7.0						
ASAJ				Sn	Sn	05 12 19.1	+0.5
	comp=Z,1.5nm,0.3s,baz=77,slow=18,SNR=3.1						
ASAJ	Asahikawa	6.39	3	P	Pn	05 11 05.3	0.0
ASAJ						05 12 19.2	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
KSRS	Korea Array	11.34	273	Pn	Pn	05 12 18.4	+5.2
	comp=N,0.2nm,0.3s,baz=81,slow=14,SNR=4.9						
KSRS				Sn	Sn	05 14 22.9	+2.6
	comp=N,2.1nm,0.3s,baz=82,slow=30,SNR=5.3						
KSRS				LR	LR	05 16 29.5	
	comp=N,73nm,18.9s,baz=90,slow=36						
KSRS	Korea Array	11.34	273	P	Pn	05 12 18.4	+5.2
KSRS						05 14 22.9	
KSRS				smax			
	comp=N,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,73nm,18.9s						
SONM	Songino Array	27.93	303	P	P	05 15 22.5	+0.9
	comp=Z,2.3nm,0.8s,mb3.9,baz=102,slow=8.7,SNR=16						
SONM	Songino Array	27.93	303	P	P	05 15 22.5	+0.9
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	41.92	312	P	P	05 17 21.4	-0.4
	comp=Z,0.7nm,0.4s,mb3.7,baz=79,slow=7.7,SNR=6.9						
ZALV				PcP	PcP	05 19 16.0	-1.2
	comp=Z,1.0nm,0.6s,baz=122,slow=5.2,SNR=3.4						
ZALV	Zalesovo Beam	41.92	312	P	P	05 17 21.5	-0.3
ZALV						05 19 16.0	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
CM31	Chiang Mai Arr	42.28	255	eP	P	05 17 25.6	+0.4
	comp=Z,13nm,0.7s,mb4.7						
CM31				epP	pP	05 17 33.4	+6.4
MK31	Makanchi Array	44.29	302	eP	P	05 17 40.7	-0.4
MKAR	Makanchi Array	44.29	302	P	P	05 17 40.7	-0.4
	comp=Z,1.0nm,0.7s,mb3.7,baz=84,slow=9.7,SNR=11						
MKAR	Makanchi Array	44.29	302	P	P	05 17 40.7	-0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	46.01	308	P	P	05 17 54.8	+0.2
	comp=Z,1.6nm,0.4s,mb4.3,baz=83,slow=8.1,SNR=8.4						
KURK	Kurchatov	46.01	308	eP	P	05 17 53.9	-0.8
KURK				e*PP	pP	05 18 04.8	+8.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KURK	Kurchatov	46.01	308	eP	P	05 17 53.9	-0.8
	comp=Z,6.4nm,0.7s,mb4.7						
KURK				epP	pP	05 18 04.8	+8.4
INK	Inuvik	53.48	27	eP	P	05 18 51.4	+0.1
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	Inuvik	53.48	27	eP	P	05 18 51.4	+0.1
	comp=Z,2.3nm,1.1s,mb4.0						
WRAB	Tennant Creek	57.82	189	eP	P	05 19 21.8	-1.2
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	Tennant Creek	57.82	189	eP	P	05 19 21.8	-1.2
	comp=Z,2.8nm,0.6s,mb4.5						
WRA	Warramunga Arr	57.83	189	P	P	05 19 22.0	-1.1
	comp=Z,4.2nm,0.6s,mb4.7,baz=5.9,slow=7.2,SNR=43						
WRA	Warramunga Arr	57.83	189	P	P	05 19 22.0	-1.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTK	Aktyubinsk	58.69	312	P	P	05 19 29.5	+0.7
AKTO	Aktyubinsk	58.69	312	P	P	05 19 29.5	+0.7
	comp=Z,0.7nm,0.5s,mb3.9,baz=65,slow=14,SNR=3.4						
AKTO	Aktyubinsk	58.69	312	P	P	05 19 29.5	+0.7
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ASAR	Alice Springs	61.56	189	P	P	05 19 48.1	-0.6
	comp=Z,1.8nm,0.7s,mb4.3,baz=7.8,slow=6.8,SNR=22						
ASAR	Alice Springs	61.56	189	P	P	05 19 48.1	-0.6
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	62.89	31	P	P	05 19 56.7	-0.6
	comp=Z,0.4nm,0.6s,mb3.8,baz=300,slow=6.3,SNR=10						
NOA	NORSAR Array B	73.79	338	P	P	05 21 04.3	-1.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=44,slow=5.1,SNR=3.7						
NOA	NORSAR Array B	73.79	338	P	P	05 21 04.3	-1.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	73.79	338	P	P	05 21 04.3	-1.2
PDAR	Pinedale Array	76.73	46	P	P	05 21 22.8	0.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=285,slow=3.1,SNR=6.1						
BRTR	Keskin Array B	78.87	312	P	P	05 21 37.3	+2.6
	comp=Z,0.4nm,0.7s,mb3.5,baz=49,slow=3.5,SNR=2.2						
GERES	GERESS Array B	82.46	329	P	P	05 21 52.9	-0.9
	comp=Z,0.3nm,0.5s,mb3.5,baz=61,slow=8.1,SNR=4.0						
TXAR	Lajitas Array	89.20	53	P	P	05 22 27.2	-0.4
	comp=Z,0.4nm,0.6s,mb3.9,baz=295,slow=3.2,SNR=7.1						

*ISCJB **15** 05:31:54.4±0.8, 11.35N±0.06×61.99W±0.04, h122^{km}±6^{km}, Error ellipse: s-maj=9.2km s-min=6.5km az=176.7*
*FUNV **15** 05:31:55.0, 11.38N×61.80W, h107^{km}, MW2.9*
*NEIC **15** 05:31:56.4, 11.40N×61.92W, h112^{km}, MD3.2(TRN), After TRN.*
*TRN **15** 05:31:56.4, 11.40N×61.92W, h112^{km}, MD3.2*
ISC 15 05:31:55.1±0.9**, 11.35N**±0.06×**61.98W**±0.04**, h119**^{km}±7^{km}**, n17,** σ**0.90**/27**, 4C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TCE	Chacachacare	0.69	161	eP	Pn	05 32 14.9	+0.7
TCE				eS	Sn	05 32 29.0	+0.2
GUIV	Guiria	0.74	199	eP	Pn	05 32 14.8	+0.1
GUIV				eS	Sn	05 32 27.6	-1.9
GRW	Mount Saint Ca	0.86	21	eP	Pn	05 32 16.0	+0.2
GRW				eS	Sn	05 32 30.5	-0.9
TRN	Trinidad (W)	0.90	141	⇑iP	Pn	05 32 16.9	+0.8
TRN				eS	Sn	05 32 31.2	-0.7
ITEV	Isla Los Testi	1.13	270	eP	Pn	05 32 18.7	+0.3
ITEV				eS	Sn	05 32 36.3	+0.2
TPP	Pointe-a-Pierr	1.15	153	eP	Pn	05 32 20.4	+1.8
TPP				eS	Sn	05 32 37.4	+1.0
TPR	Prospect	1.19	98	⇑iP	Pn	05 32 18.7	-0.3
TPR				eS	Sn	05 32 36.6	-0.5
TBH	Brigand Hill	1.24	134	⇑iP	Pn	05 32 20.4	+0.8
CRUV	Carupano	1.41	242	⇓eP	Pn	05 32 21.8	+0.4
CRUV				eS	Sn	05 32 40.8	-0.6
GUNV	Guanoco	1.52	219	eP	Pn	05 32 23.6	+1.0
GUNV				eS	Sn	05 32 44.2	+0.5
PCRV	Puerto La Cruz	2.86	246	eP	Pn	05 32 40.8	+1.2
RIOV	Rio Grande	3.27	177	eP	Pn	05 32 44.2	-0.7
GURV	El Guri	3.73	197	eP	Pn	05 32 50.8	-0.3
CUPV	Cœpira	3.96	251	eP	Pn	05 32 54.6	+0.5
CUPV				eS	Sn	05 33 40.0	+0.1
LUEV	Luepa	5.50	175	⇑eP	Pn	05 33 12.2	-2.5
CAOV	Caicara del Or	5.86	227	eP	Pn	05 33 18.4	-1.3
BAUV	El Baul	6.43	249	eP	Pn	05 33 26.4	-1.0

IDC 15 05:48:51.3±10.0**, 3.66N**×**98.13W, h0**^{km}**, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.8**/17**, mbtmp3.8**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx3.1**/14**, Error ellipse: s-maj=391.0km s-min=42.1km az=51.0, Eastcentral Pacific Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	26.07	349	P	P	05 54 28.2	+1.5
	0.6nm,0.8s,baz=156,slow=8.9,SNR=7.2						
TXAR				LR	LR	06 03 47.4	
	comp=Z,77nm,18.3s,baz=165,slow=34						
PDAR	Pinedale Array	40.25	347	P	P	05 56 29.1	-0.7
	0.9nm,0.8s,baz=139,slow=8.4,SNR=5.7						
YKA	Yellowknife Ar	59.97	351	P	P	05 58 58.8	-0.4
	0.7nm,0.8s,baz=162,slow=6.9,SNR=12						
DBIC	Dimbokro	92.82	83	P	P	06 02 06.8	+0.1
	2.5nm,0.8s,baz=280,slow=6.1,SNR=2.3						

*ISCJB **15** 05:59:23.8±0.2, 43.13N±0.02×0.00E±0.02, h0^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.1km az=151.1*
*MDD **15** 05:59:26.7±0.4, 42.99N×0.05W, h0^{km}, mbLg1.9/12, Error ellipse: s-maj=4.9km s-min=1.8km az=22.0, PRXIMO*
*NEIC **15** 05:59:26.1, 43.03N×0.04W, h2^{km}, ML2.3(STR), ML2.6(LDG), MN1.9(MDD), After LDG.*
*LDG **15** 05:59:26.1±0.1, 43.03N×0.04W, h2^{km}, Md2.7/3, Ml2.6/15, Error ellipse: s-maj=1.1km s-min=0.8km az=152.0*
*STR **15** 05:59:26.0±0.1, 42.96N×0.07W, h5^{km}, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **15** 05:59:26.1±0.0, 43.03N×0.05W, h2^{km}, ML2.6/16, Error ellipse: s-maj=0.7km s-min=0.5km az=155.0*
ISC 15 05:59:25.1±0.2**, 43.08N**±0.02×**0.02W**±0.02**, h8**^{km}±3^{km}**, n82,** σ**0.80**/153**, 1C, Pyrenees**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VIEF	Viey	0.19	170	Pg	Pg	05 59 28.7	-0.4
VIEF				Sg	Sg	05 59 30.6	-1.1
EPF	Esparros	0.27	99	ePg	Pg	05 59 31.8	+1.3
	SNR=1.0						
EPF				eSg	Sg	05 59 35.3	+1.2
	94nm,0.3s						
EPF	Esparros	0.27	99	ePg	Pg	05 59 31.8	+1.3
	SNR=1.0						
EPF				eSg	Sg	05 59 35.3	+1.2
	47nm,0.3s						
REYF	Montagne du Re	0.27	269	Pg	Pg	05 59 30.8	+0.3
REYF				Sg	Sg	05 59 34.7	+0.6
RESF	Ens	0.38	135	Pg	Pg	05 59 32.8	+0.3
RESF				Sg	Sg	05 59 37.7	+0.3
RESF	Ens	0.38	135	P	Pg	05 59 32.8	+0.4
RESF				S	Sg	05 59 37.8	+0.4
EBIE	Bielsa	0.41	163	Pg	Pg	05 59 32.7	-0.3
	6.5nm,0.1s,SNR=18						
EBIE				Lg		05 59 37.3	
	72nm,0.1s,SNR=67						
EBIE	Bielsa	0.41	163	⇑Pg	Pg	05 59 32.7	-0.4
	6.5nm,0.1s,SNR=18						
EBIE				Lg		05 59 37.3	
	72nm,0.1s,SNR=67						
ETSF	Etsaut	0.43	246	ePg	Pg	05 59 33.2	-0.3
	SNR=1.0						
ETSF				eSg	Sg	05 59 38.1	-1.1
	97nm,0.2s,SNR=1.0						
ETSF	Etsaut	0.43	246	ePg	Pg	05 59 33.2	-0.3
	SNR=1.0						
ETSF				eSg	Sg	05 59 38.1	-1.1
	49nm,0.2s,SNR=1.0						
FDAF	Les Forges d'A	0.47	238	P	Pg	05 59 33.8	-0.6
FDAF				S	Sg	05 59 39.5	-1.1
ATE	Arette	0.50	271	Pg	Pg	05 59 34.7	0.0
ATE				Sg	Sg	05 59 41.8	+0.6
MELF	Melles	0.61	109	Pg	Pg	05 59 37.8	+0.9
MELF				Sg	Sg	05 59 46.3	+1.5
MELF	Melles	0.61	109	P	Pg	05 59 37.8	+0.9
MELF				S	Sg	05 59 46.0	+1.2
ORDF	Ordiarp	0.68	282	Pg	Pg	05 59 39.7	+1.4
ORDF				Sg	Sg	05 59 49.1	+1.9
ORDF	Ordiarp	0.68	282	P	Pg	05 59 39.5	+1.2
ORDF				S	Sg	05 59 49.0	+1.9
LARF	Larrau	0.71	267	Pg	Pg	05 59 38.9	+0.1
LARF				Sg	Sg	05 59 48.2	+0.2
LARF	Larrau	0.71	267	P	Pg	05 59 38.9	+0.1
LARF				S	Sg	05 59 48.3	+0.3
SJPF	Ste Jean	0.88	273	ePn	Pn	05 59 43.9	+0.1
SJPF				eSg	Sg	05 59 53.5	0.0
	7.7nm,0.2s						
SJPF	Ste Jean	0.88	273	ePn	Pn	05 59 43.9	+0.1
SJPF				eSg	Sg	05 59 53.5	0.0
	3.8nm,0.2s						
SJPF	Ste Jean	0.88	273	ePg	Pg	05 59 42.4	+0.3
SJPF				ePn	Pn	05 59 43.9	+0.1
SJPF				eSg	Sg	05 59 53.5	0.0
IPRE	Itoiz	1.01	255	Pg	Pg	05 59 44.5	-0.1
	0.6nm,0.1s,SNR=7.9						
IPRE	Itoiz	1.01	255	Pg	Pg	05 59 44.5	-0.2
	0.6nm,0.1s,SNR=7.9						
IPRE				Lg		05 59 58.2	
	5.7nm,0.3s,SNR=5.6						
IZUN	Zunzarren	1.07	259	Pg	Pg	05 59 45.6	-0.1
	1.3nm,0.1s,SNR=7.9						
IZUN				Lg		06 00 00.3	
	2.8nm,0.1s,SNR=7.9						
EALK	Alkurruntz	1.10	278	Pg	Pg	05 59 46.4	+0.3
	0.5nm,0.0s,SNR=10.0						
EALK				Lg		06 00 01.6	
	11nm,0.3s,SNR=9.7						
ELIZ	Elizondo	1.11	275	Pg	Pg	05 59 46.8	+0.4
	1.4nm,0.1s,SNR=7.9						
ELIZ				Lg		06 00 02.7	
	4.2nm,0.2s,SNR=7.9						
IUSE	Utxeti	1.13	264	Pg	Pg	05 59 46.7	0.0
	1.2nm,0.1s,SNR=7.9						
IUSE	Utxeti	1.13	264	Pg	Pg	05 59 46.7	0.0
	1.2nm,0.1s,SNR=7.9						
IUSE				Lg		06 00 01.8	
	6.7nm,0.2s,SNR=6.2						
IUNC	Unciti	1.13	254	Pg	Pg	05 59 47.1	+0.3
	2.4nm,0.1s,SNR=7.9						
IUNC	Unciti	1.13	254	Pg	Pg	05 59 47.1	+0.3
	2.4nm,0.1s,SNR=7.9						
IUNC				Lg		06 00 02.4	
	5.3nm,0.2s,SNR=7.9						
ESAC	San Caprasio	1.39	194	Pg	Pg	05 59 51.8	0.0
	7.1nm,0.1s,SNR=11						
ESAC	San Caprasio	1.39	194	Pg	Pg	05 59 51.8	-0.1
	7.1nm,0.1s,SNR=11						
ESAC				Lg		06 00 10.1	
	71nm,0.2s,SNR=22						
MTLF	Montolieu	1.66	80	ePg	Pg	05 59 57.3	+0.3
	SNR=1.0						
MTLF				eSg	Sg	06 00 19.1	+0.6
	13nm,0.2s,SNR=1.0						
MTLF	Montolieu	1.66	80	ePg	Pg	05 59 57.3	+0.3
	SNR=1.0						
MTLF				eSg	Sg	06 00 19.1	+0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	6.3nm,0.2s,SNR=1.0						
ECRI	Cripan	1.89	257	Pg	Pg	06 00 01.0	-0.4
	2.4nm,0.2s,SNR=7.9						
ECRI				Lg		06 00 25.6	
	3.2nm,0.2s,SNR=7.9						
EPOB	Poblet	1.91	154	Pg	Pg	06 00 00.7	-1.0
	0.6nm,0.1s,SNR=8.9						
EPOB				Lg		06 00 24.7	
	9.1nm,0.2s,SNR=5.0						
LFF	La Frestale	1.94	16	ePg	Pg	06 00 03.1	+0.7
	SNR=1.0						
LFF				eSg	Sg	06 00 28.9	+1.3
	18nm,0.3s,SNR=1.0						
LFF	La Frestale	1.94	16	ePg	Pg	06 00 03.1	+0.7
	SNR=1.0						
LFF				eSg	Sg	06 00 28.9	+1.3
	8.9nm,0.3s,SNR=1.0						
LFF	La Frestale	1.94	16	ePn	Pn	05 59 59.2	+0.8
LFF				ePg	Pg	06 00 03.1	+0.7
LFF				eSg	Sg	06 00 28.9	+1.3
ERTA	Horta de San J	2.13	173	Pg	Pg	06 00 04.7	-1.3
	1.0nm,0.1s,SNR=8.8						
ERTA	Horta de San J	2.13	173	Pg	Pg	06 00 04.7	-1.3
	1.0nm,0.1s,SNR=8.8						
ERTA				Lg		06 00 31.5	
	3.2nm,0.1s,SNR=5.0						
EJON	La Jonquera	2.23	105	Pg	Pg	06 00 08.9	+1.0
	0.6nm,0.1s,SNR=7.9						
EJON	La Jonquera	2.23	105	Pg	Pg	06 00 08.9	+1.0
	0.6nm,0.1s,SNR=7.9						
EJON				Lg		06 00 38.0	
	4.3nm,0.4s,SNR=7.9						
CAF	Calviac	2.39	38	ePg	Pg	06 00 11.3	+0.4
	SNR=1.0						
CAF				eSn	Sn	06 00 33.4	-0.5
CAF				eSg	Sg	06 00 42.3	+0.5
	5.1nm,0.2s,SNR=1.0						
CAF	Calviac	2.39	38	ePg	Pg	06 00 11.3	+0.4
	SNR=1.0						
CAF				eSn	Sn	06 00 33.4	-0.5
CAF				eSg	Sg	06 00 42.3	+0.5
	2.5nm,0.2s,SNR=1.0						
CAF	Calviac	2.39	38	ePn	Pn	06 00 05.2	+0.7
CAF				ePg	Pg	06 00 11.3	+0.4
CAF				eSn	Sn	06 00 33.4	-0.5
CAF				eSg	Sg	06 00 42.3	+0.5
RJF	Les Rejaudoux	2.49	26	ePg	Pg	06 00 13.1	+0.3
RJF				eSg	Sg	06 00 45.9	+0.8
	6.8nm,0.2s,SNR=1.0						
RJF	Les Rejaudoux	2.49	26	ePg	Pg	06 00 13.1	+0.3
RJF				eSg	Sg	06 00 45.9	+0.8
	3.4nm,0.2s,SNR=1.0						
RJF	Les Rejaudoux	2.49	26	ePn	Pn	06 00 06.5	+0.6
RJF				ePg	Pg	06 00 13.1	+0.3
RJF				eSg	Sg	06 00 45.9	+0.8
ELAN	Lanestosa	2.50	275	Sn	Sn	06 00 37.8	+1.0
	SNR=7.9						
ELAN	Lanestosa	2.50	275	Sn	Sn	06 00 37.8	+1.0
	SNR=7.9						
ETOR	Torete	2.72	215	Pn	Pn	06 00 10.1	+1.0
	3.1nm,0.1s,SNR=7.9						
ETOR				Sn	Sn	06 00 40.9	-1.2
	SNR=7.9						
EMOS	Mosqueruela	2.73	187	Pn	Pn	06 00 12.5	+3.2
	0.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	2.73	187	Pn	Pn	06 00 12.5	+3.3
	0.2nm,0.1s,SNR=7.9						
EMOS				Lg		06 00 49.5	
	1.3nm,0.2s,SNR=7.9						
LASF	Ste Croix	2.99	69	ePg	Pg	06 00 22.2	-0.3
LASF				eSg	Sg	06 01 01.0	-0.2
	2.9nm,0.2s						
LASF	Ste Croix	2.99	69	ePg	Pg	06 00 22.2	-0.3
LASF				eSg	Sg	06 01 01.0	-0.2
	1.5nm,0.2s						
LASF	Ste Croix	2.99	69	ePn	Pn	06 00 13.1	+0.2
LASF				ePg	Pg	06 00 22.2	-0.3
LASF				eSg	Sg	06 01 01.0	-0.2
MFF	Saint Martin d	3.53	359	ePg	Pg	06 00 32.3	-0.4
MFF				eSg	Sg	06 01 18.0	-0.4
	3.2nm,0.4s,SNR=1.0						
MFF	Saint Martin d	3.53	359	ePg	Pg	06 00 32.3	-0.4
MFF				eSg	Sg	06 01 18.0	-0.4
	1.6nm,0.4s,SNR=1.0						
MFF	Saint Martin d	3.53	359	ePn	Pn	06 00 20.6	+0.4
MFF				ePg	Pg	06 00 32.3	-0.4
MFF				eSg	Sg	06 01 18.0	-0.4
TCF	Toulx Ste Croi	3.59	26	ePg	Pg	06 00 33.5	-0.3
TCF				eSg	Sg	06 01 20.0	-0.3
	2.0nm,0.3s						
TCF	Toulx Ste Croi	3.59	26	ePg	Pg	06 00 33.5	-0.3
TCF				eSg	Sg	06 01 20.0	-0.3
	1.0nm,0.3s						
TCF	Toulx Ste Croi	3.59	26	ePn	Pn	06 00 21.4	+0.4
TCF				ePg	Pg	06 00 33.5	-0.3
TCF				eSg	Sg	06 01 20.0	-0.3
VIVF	Saint-Julien-l	3.83	61	ePg	Pg	06 00 37.4	-1.1
VIVF				eSg	Sg	06 01 27.3	-0.8
	2.1nm,0.3s						
VIVF	Saint-Julien-l	3.83	61	ePg	Pg	06 00 37.4	-1.1
VIVF				eSg	Sg	06 01 27.3	-0.8
	1.0nm,0.3s						
GUD	Guadarrama	3.93	233	Pn	Pn	06 00 25.9	+0.2
	0.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	06 01 11.1	-0.9
	0.4nm,0.2s,SNR=4.0						
BGF	Bois d'Agland	4.04	29	ePg	Pg	06 00 41.5	-0.9
BGF				eSg	Sg	06 01 34.4	-0.3
	11nm,0.4s						
BGF	Bois d'Agland	4.04	29	ePg	Pg	06 00 41.5	-0.9
BGF				eSg	Sg	06 01 34.4	-0.3
	5.7nm,0.4s						
BGF	Bois d'Agland	4.04	29	ePn	Pn	06 00 27.5	+0.3
BGF				ePg	Pg	06 00 41.5	-0.9
BGF				eSg	Sg	06 01 34.4	-0.3
AVF	Avril sur Loir	4.42	32	ePg	Pg	06 00 48.6	-1.2
AVF				eSg	Sg	06 01 45.9	-1.1
	2.4nm,0.5s						
AVF	Avril sur Loir	4.42	32	ePg	Pg	06 00 48.6	-1.2
AVF				eSg	Sg	06 01 45.9	-1.1
	1.2nm,0.5s						
AVF	Avril sur Loir	4.42	32	ePn	Pn	06 00 32.8	+0.3
AVF				ePg	Pg	06 00 48.6	-1.2
AVF				eSg	Sg	06 01 45.9	-1.1
SMF	Signal de Mont	4.50	36	ePn	Pn	06 00 34.1	+0.5
SMF				eSg	Sg	06 01 48.6	-1.1
	1.8nm,0.4s						
SMF	Signal de Mont	4.50	36	ePn	Pn	06 00 34.1	+0.5
SMF				eSg	Sg	06 01 48.6	-1.1
	0.9nm,0.4s						
SSF	Saint Saulge	4.71	31	ePg	Pg	06 00 54.1	-1.1
SSF				eSg	Sg	06 01 55.1	-1.0
	1.7nm,0.4s						
SSF	Saint Saulge	4.71	31	ePg	Pg	06 00 54.1	-1.1
SSF				eSg	Sg	06 01 55.1	-1.0
	0.9nm,0.4s						
SSF	Saint Saulge	4.71	31	ePn	Pn	06 00 36.5	+0.1
SSF				ePg	Pg	06 00 54.1	-1.1
SSF				eSg	Sg	06 01 55.1	-1.0
LOR	Lormes	5.01	32	ePg	Pg	06 00 59.7	-1.4
LOR				eSg	Sg	06 02 04.5	-1.5
	2.3nm,0.5s						
LOR	Lormes	5.01	32	ePg	Pg	06 00 59.7	-1.4
LOR				eSg	Sg	06 02 04.5	-1.5
	1.1nm,0.5s						
LOR	Lormes	5.01	32	ePn	Pn	06 00 40.8	+0.2
LOR				ePg	Pg	06 00 59.7	-1.4
LOR				eSg	Sg	06 02 04.5	-1.5
ECAL	Calabor	5.09	259	Sn	Sn	06 01 38.9	-1.8
	0.8nm,0.2s,SNR=7.9						
ECAL	Calabor	5.09	259	Sn	Sn	06 01 38.9	-1.8
	0.8nm,0.2s,SNR=7.9						

IDC 15 06:19:08.4±2.0, 402N×12767E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=154.4km s-min=24.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.70	165	P	P	06 24 31.7	+0.4
	1.3nm,0.5s,baz=345,slow=10,SNR=8.8						
ASAR	Alice Springs	28.18	168	P	P	06 25 03.0	+0.2
	0.2nm,0.4s,baz=352,slow=7.4,SNR=8.0						
STKA	Stephens Creek	38.08	161	P	P	06 26 28.6	-0.4
	0.5nm,0.3s,baz=333,slow=8.3,SNR=3.2						
MKAR	Makanchi Array	57.85	325	P	P	06 29 02.0	0.0
	0.3nm,0.3s,baz=112,slow=7.6,SNR=6.9						

ISCJB 15 06:19:24.5±0.6, 685N±007×7301W±007, h171km±6km, mb3.5/4, Error ellipse: s-maj=13.9km s-min=7.1km az=44.9
IDC 15 06:19:25.3±0.7, 684N×7307W, h160km±13km, mb3.2/4, mb1 3.6/7, mb1mx3.3/20, mbtmp3.4/7, Error ellipse: s-maj=34.5km s-min=7.7km az=133.0
FUNV 15 06:19:25.8, 682N×7309W, h168km, MW3.5
ISC 15 06:19:25.5±0.6, 683N±007×7299W±007, h165km±6km, n24, σ0s93/29, mb3.5/4, 11C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	33	⇑iP	Pn	06 19 54.6	+0.9
CAPV				eS	Sn	06 20 14.7	-0.6
ROSC	El Rosal	2.37	214	P	Pn	06 20 06.2	+0.3
	46nm,0.3s,baz=244,slow=22,SNR=114						
ROSC				S	Sn	06 20 36.7	-0.6
	60nm,0.3s,baz=82,slow=15,SNR=11						
SOCV	Socops	2.56	56	⇑iP	Pn	06 20 09.2	+1.0
SOCV				eS	Sn	06 20 40.8	-0.4
VIGV	El Vigia	2.56	39	⇑iP	Pn	06 20 09.0	+0.8
VIGV				eS	Sn	06 20 40.5	-0.8
SDV	Santo Domingo	3.10	49	P	Pn	06 20 16.0	+1.2
	53nm,0.3s,baz=242,slow=5.2,SNR=424						
SDV				S	Sn	06 20 53.9	+0.9
	23nm,0.3s,baz=54,slow=20,SNR=14						
ELOV	Elorza	3.48	87	⇑iP	Pn	06 20 20.6	+1.0
VIRV	Villa del Rosa	3.69	9	⇑iP	Pn	06 20 21.4	-0.9
VIRV				eS	Sn	06 21 02.5	-4.0
QARV	Quebrada Arrib	4.14	36	⇑iP	Pn	06 20 28.9	+0.8
SANV	Sanarito	4.33	52	⇑iP	Pn	06 20 30.6	+0.2
CURV	Curarigua	4.35	43	⇑iP	Pn	06 20 31.1	+0.3
DABV	Dabajuro	4.68	30	eP	Pn	06 20 35.1	0.0
TEPV	Terepaima	4.88	50	⇑iP	Pn	06 20 37.7	+0.1
SIQV	Siquisique	4.93	39	⇑iP	Pn	06 20 38.3	0.0
BAUV	El Baul	5.33	67	⇑iP	Pn	06 20 42.5	-1.1
TURV	Turiamo	6.23	54	eP	Pn	06 20 54.4	-1.1
CAOV	Caicara del Or	6.63	85	eP	Pn	06 20 59.4	-1.5
MERV	Las Mercedes	7.05	70	eP	Pn	06 21 05.4	-0.9
CUPV	Cœpira	7.81	65	eP	Pn	06 21 15.1	-1.3
PCRV	Puerto La Cruz	8.90	68	P	Pn	06 21 33.3	+2.4
	0.9nm,0.3s,baz=45,slow=1.4,SNR=6.2						
TXAR	Lajitas Array	36.55	312	P	P	06 26 16.1	+0.6
	0.4nm,0.6s,mb3.2,baz=122,slow=8.8,SNR=7.3						
ULM	Lac du Bonnet	47.32	340	P	P	06 27 40.8	-1.6
	0.7nm,0.3s,mb3.7,baz=153,slow=11,SNR=2.7						
PDAR	Pinedale Array	48.14	324	P	P	06 27 49.6	+0.7
	0.3nm,0.6s,mb3.1,baz=107,slow=5.0,SNR=3.5						
YKA	Yellowknife Ar	63.30	340	P	P	06 29 36.7	+0.3
	0.8nm,0.5s,mb3.8,baz=133,slow=6.6,SNR=23						
ASAR	Alice Springs	149.22	234	PKPbc	PKPbc	06 38 55.1	-0.3
	0.5nm,0.7s,baz=117,slow=3.6,SNR=6.4						

IDC 15 06:43:27.5±2.2, 2293S×11476W, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.6/15, mbtmp3.4/4, MS3.8/4, Ms1 3.8/4, ms1mx3.5/14, Error ellipse: s-maj=74.4km s-min=41.6km az=47.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.45	131	LR	LR	06 46 58.8	
	comp=Z,965nm,18.7s,baz=336,slow=33						
RKT	Rikitea	18.61	265	eLQ		06 51 10.3	
	740nm,28.2s						
TAOE	Nuku Hiva Isla	28.08	296	eLR	LR	06 56 31.3	
	1μm,23.9s						
TBI	Tubuai	31.87	262	eLR	LR	06 57 57.3	
	75nm,25.5s						
PPT	Papeete	33.04	273	eLR	LR	06 58 37.2	
	113nm,26.0s						
ATAH	Atahualpa	38.39	71	LR	LR	07 02 36.2	
	comp=Z,86nm,19.5s,baz=13,slow=30						
SIV	San Ignacio	50.87	92	P	P	06 52 30.4	-0.1
	0.5nm,0.8s,baz=265,slow=9.5,SNR=4.4						
CPUP	Villa Florida	51.96	106	LR	LR	07 08 49.0	
	comp=Z,108nm,20.6s,baz=326,slow=29						
TXAR	Lajitas Array	53.05	12	P	P	06 52 47.1	+0.7
	0.2nm,0.7s,baz=187,slow=13,SNR=2.6						
SDV	Santo Domingo	53.53	59	LR	LR	07 12 30.8	
	comp=Z,77nm,18.1s,baz=149,slow=33						
PDAR	Pinedale Array	65.55	4	P	P	06 54 12.1	-0.6
	0.3nm,0.6s,baz=193,slow=3.7,SNR=2.6						
YKA	Yellowknife Ar	85.13	0	P	P	06 56 05.8	+1.0
	0.6nm,1.1s,baz=178,slow=5.6,SNR=5.2						
BRTR	Keskin Array B	148.45	51	PKPbc	PKPbc	07 03 15.8	-0.5
	0.4nm,0.6s,baz=250,slow=4.2,SNR=2.6						
MKAR	Makanchi Array	152.51	334	PKPbc	PKPbc	07 03 25.6	-0.1
	0.2nm,0.6s,baz=13,slow=1.9,SNR=2.2						

ISCJB 15 07:15:13.2±0.6, 6058S±0.10×519W±03, h10km, mb4.0/11, MS3.8/4, Error ellipse: s-maj=19.9km s-min=10.6km az=147.4
IDC 15 07:15:13.2±0.8, 6057S×5177W, h0km, mb4.0/8, mb1 4.1/9, mb1mx4.0/19, mbtmp4.0/9, ML3.9/1, MS3.8/5, Ms1 3.7/5, ms1mx3.5/21, Error ellipse: s-maj=32.8km s-min=18.9km az=71.0
NEIC 15 07:15:14.7±0.6, 6056S×5170W, h10km, mb4.5/4, Error ellipse: s-maj=21.6km s-min=12.1km az=58.0
ISC 15 07:15:14.6±0.6, 606S±01×522W±02, h10km, n29, σ1s02/20, mb4.0/11, MS3.8/4, South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	10.44	297	Pn	Pn	07 17 47.3	+3.2
	0.9nm,0.3s,baz=100,slow=14,SNR=6.5						
USHA				Sn	Sn	07 19 40.1	-0.8
	0.4nm,0.3s,baz=217,slow=20,SNR=2.8						
USHA				LR	LR	07 20 05.1	
	comp=Z,366nm,19.2s,baz=155,slow=28						
VNA3	Neumayer Olymp	19.80	140	e	Pn	07 19 40.7	-5.5
VNA3				e		07 19 46.9	
VNA3				e		07 19 50.3	
VNA3				e		07 20 09.1	
VNA1	Neumayer--Stat	20.17	138	e	P	07 19 48.6	0.0
VNA1				e		07 19 54.2	
VNA1				e		07 19 57.2	
VNA1				e		07 20 13.2	
VNA2	Neumayer--Watz	20.49	139	e	P	07 19 48.1	-4.0
	baz=292,slow=11						
VNA2				e		07 19 54.8	
VNA2				e		07 19 58.1	
SNAA	Sanae	22.03	140	e	P	07 20 03.3	-5.4
SNAA				e		07 20 09.3	
SNAA				e		07 20 12.0	
SNAA	Sanae	22.03	140	eP	P	07 20 09.0	+0.4
	19nm,1.0s,mb4.5						
QSPA	South Pole Qui	29.59	180	P	P	07 21 21.8	+2.7
	3.6nm,0.8s,mb4.2,baz=164,slow=3.7,SNR=9.2						
CFAA	Coronel Fontan	30.92	333	P	P	07 21 31.2	0.0
	0.3nm,1.1s,mb3.1,baz=225,slow=4.3,SNR=2.8						
CPUP	Villa Florida	34.48	352	P	P	07 22 01.1	-1.2
	0.5nm,0.6s,mb3.6,baz=160,slow=12,SNR=2.6						
VNDA	Vanda	40.49	191	LR	LR	07 40 29.0	
	comp=Z,72nm,20.8s,MS3.5,baz=151,slow=37						
MAW	Mawson	43.64	150	LR	LR	07 40 56.8	
	comp=Z,206nm,18.2s,MS4.1,baz=229,slow=35						
MAW	Mawson	43.64	150	eP	P	07 23 17.3	-1.2
	0.7nm,0.9s,mb3.4						
BDFB	Brasilia	45.04	6	P	P	07 23 30.9	+0.7
	0.8nm,0.8s,mb3.6,baz=195,slow=20,SNR=2.2						
BDFB				LR	LR	07 40 14.6	
	comp=Z,77nm,21.2s,MS3.6,baz=324,slow=33						
BDFB	Brasilia	45.04	6	P	P	07 23 30.9	+0.7
BDFB				LR	LR	07 40 14.6	
SIV	San Ignacio	45.05	348	P	P	07 23 30.8	+0.5
	1.9nm,1.0s,mb3.9,baz=172,slow=8.6,SNR=8.2						
BOSA	Boshof	59.42	95	LR	LR	07 45 48.6	
	comp=Z,97nm,18.1s,MS4.0,baz=50,slow=31						
LBTB	Lobatse	62.58	93	P	P	07 25 38.6	+0.1
	1.4nm,0.5s,mb4.4,baz=222,slow=7.9,SNR=3.7						
LBTB	Lobatse	62.58	93	eP	P	07 25 38.0	-0.5
	2.8nm,0.7s,mb4.5						
OTAV	Otavalo	64.00	331	eP	P	07 25 53.0	+5.0
	13nm,1.3s,mb4.8						
RKT	Rikitea	66.62	264	eT		08 38 16.1	
	1.7nm,0.2s						
TBI	Tubuai	73.40	252	eLR	LR	07 48 59.8	
	140nm,24.0s						
PPT	Papeete	78.43	255	eLR	LR	07 51 22.8	
	95nm,27.5s						
PPT				eLR	LR	07 51 22.8	
	95nm,27.5s						
TOA0	Torodi Ar. Sit	85.05	52	eP	P	07 27 50.2	+0.1
TORD	Torodi Ar. Bea	85.05	52	P	P	07 27 50.6	+0.4
	4.8nm,1.1s,mb4.5,baz=217,slow=5.2,SNR=10						
ASAR	Alice Springs	95.85	186	P	P	07 28 41.0	0.0
	0.5nm,0.6s,mb4.1,baz=169,slow=4.6,SNR=6.1						
YKA	Yellowknife Ar	131.66	327	PKP	PKPdf	07 34 26.8	+0.9
	0.3nm,0.9s,baz=151,slow=2.2,SNR=3.6						
ARU	Arti	145.14	65	ePKPdf	PKPdf	07 34 49.2	-1.5
BVAR	Borovoye Array	148.62	78	PKPbc	PKPbc	07 34 58.1	-2.3
	1.6nm,0.5s,baz=223,slow=3.4,SNR=4.5						
MKAR	Makanchi Array	150.40	97	PKPbc	PKPbc	07 35 02.1	-2.9
	0.6nm,0.7s,baz=306,slow=2.7,SNR=3.6						

CASC 15 07:31:58.9±1.6, 1321N×9040W, h16km±7km, MD4.0, ML2.8, 6C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.98	50	⇓eP	x	07 32 17.0	
SBLS				eS	x	07 32 30.4	
RTR	El Retiro	1.00	47	⇓eP	x	07 32 17.4	
RTR				eS	x	07 32 31.4	
SNJE	San Jose	1.01	50	eP	x	07 32 17.5	
RBDL	Robledal	1.14	38	⇓eP	x	07 32 19.4	
PCG	Pacaya	1.20	350	⇑eP	Pn	07 32 20.0	-1.0
PCG				eS	Sb	07 32 37.2	+0.8
BOQS	Boqueron	1.21	64	⇑eP	x	07 32 20.4	
BOQS				eP	x	07 32 20.4	
SNET	Serv Nac Est T	1.23	67	⇑eP	x	07 32 20.4	
SNET				eS	x	07 32 37.6	
NBG	Las Nubes	1.37	2	eP	Pn	07 32 24.1	+0.7
NBG				eS	Sn	07 32 43.7	+2.5
LBRS	Las Brisas	1.42	68	eP	x	07 32 23.6	
SNVI	San Vicente	1.57	75	⇑eP	x	07 32 26.0	
JAT	Jato	1.63	313	⇑eP	Pn	07 32 25.9	-1.0
MRL	Marmol	1.97	20	⇓eP	Pn	07 32 33.0	+1.4
BLLM	Bellamira	2.12	83	eP	x	07 32 34.2	
BLLM				eS	x	07 33 01.7	
CAHU	Cacacuatique	2.20	75	⇑eP	x	07 32 34.7	
CNCH	Conchagua	2.50	88	⇓eP	x	07 32 39.2	
CNCH				eS	x	07 33 09.3	

IDC 15 07:42:32.3±51.0, 2360S×17830W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/15, mbtmp4.3/3, Error ellipse: s-maj=935.5km s-min=157.2km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.28	248	P	P	07 49 37.1	-0.4
	1.2nm,0.4s,baz=90,slow=11,SNR=7.0						
ASAR	Alice Springs	43.62	260	P	P	07 50 38.5	-0.1
	2.2nm,0.4s,baz=94,slow=7.5,SNR=42						
WRA	Warramunga Arr	43.98	265	P	P	07 50 42.0	+0.4
	2.9nm,0.6s,baz=103,slow=8.0,SNR=7.9						
KAKA	Kakadu	47.84	274	eP	x	07 50 53.0	
	2.4nm,0.4s						
FITZ	Fitzroy Crossi	52.41	265	eP	P	07 51 46.5	-0.3
	3.7nm,0.5s						

CASC 15 07:59:59.9±1.6, 1421N×8777W, h13km±10km, MD3.9, ML4.4, 5C-7D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	0.50	108	⇑iP	Pg	08 00 09.0	-0.8
TGUH				AML	AML	08 00 15.9	
	comp=N,27μm,0.1s						
TGUH				eS	Sg	08 00 16.1	-0.3
CAHU	Cacacuatique	0.62	225	⇓eP	x	08 00 11.4	
CAHU				eS	x	08 00 20.9	
BLLM	Bellamira	0.89	211	⇓eP	x	08 00 16.1	
BLLM				eS	x	08 00 29.6	
VSM	San Miguel	0.92	212	⇓eP	x	08 00 16.6	
VSM				eS	x	08 00 29.0	
CNCH	Conchagua	0.93	184	⇑eP	x	08 00 16.7	
CNCH				eS	x	08 00 29.7	
SNVI	San Vicente	1.20	240	⇓eP	x	08 00 21.5	
SNVI				eS	x	08 00 37.8	
SNVI				eS	x	08 00 38.9	
LBRS	Las Brisas	1.33	249	eP	x	08 00 23.5	
LBRS				eS	x	08 00 41.9	
LFU	La Fuente	1.39	251	eP	x	08 00 24.2	
SNET	Serv Nac Est T	1.52	250	⇓eP	x	08 00 27.0	
BOQS	Boqueron	1.54	252	⇓eP	x	08 00 26.5	
BOQS				eS	x	08 00 48.8	
MTO2	Montecristo 2	1.56	277	eP	x	08 00 27.8	
CRIN	San Cristobal	1.66	155	⇑eP	Pn	08 00 29.1	+0.4
SNJE	San Jose	1.82	259	eP	x	08 00 30.3	
SBLS	San Blas	1.84	259	eP	x	08 00 31.4	
RTR	El Retiro	1.85	261	eP	x	08 00 30.9	
TEL3	Telica 3	1.86	151	⇓eP	Pn	08 00 32.2	+0.7
RBDL	Robledal	1.87	267	eP	x	08 00 30.6	
CNGN	Cerro Negro	1.99	148	⇑eP	Pn	08 00 34.0	+0.7
MIRN	Miramar	2.04	150	eP	Pn	08 00 33.2	-0.8
MOMN	Momotombo	2.15	146	eP	Pn	08 00 34.8	-0.7
CSAN		2.40	147	eP	Pn	08 00 39.0	0.0
HUEN		2.42	140	eP	Pn	08 00 38.5	-0.7
CHI2		16.77	123	⇑eP	x	08 00 29.5	

MOS 15 08:03:07.8±0.8, 746S×12743E, h113km, mb6.1/53, MS5.1/11, Error ellipse: s-maj=8.5km s-min=4.5km az=116.3
BJI 15 08:03:08.0, 824S×12800E, h175km, mB5.9, mb5.6
ISCJB 15 08:03:14.7±0.1, 762S±002×12748E±002, h179km, mb5.8/193, Error ellipse: s-maj=3.2km s-min=2.6km az=156.8
GCMT 15 08:03:15.8±0.1, 775S×12759E, h176km, MW6.0/118, Moment Tensor Solution. s115,c248; s118,c410; Duration: 2s4 Moment tensor: Scale 10^{18}Nm; Mrr1.14±.01; Mθθ-0.94±.01; Mφφ-0.19±.01; Mrθ0.38±.01; Mθφ0.43±.01; Mφr0.45±.01; Best double couple: M0 1.26600×10^{18} NP1:φs314.00000°, δ45.00000°, λ122.00000°. NP2:φs93.00000°, δ53.00000°, λ62.00000°. Principal axes: T 1.3810, Plg68.0000°, Azm303.0000°; N -0.2260, Plg22.0000°, Azm110.0000°; P -1.1520, Plg5.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.
BGS 15 08:03:15.7±1.4, 753S×12747E, h176km, mb5.8(NEIC)
NEIC 15 08:03:15.8±0.1, 753S×12747E, mb5.8/108, MW5.9, Error ellipse: s-maj=4.1km s-min=2.9km az=51.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{18}Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.00000×10^{18} NP1:φs108.00000°, δ52.00000°, λ65.00000°. NP2:φs325.00000°, δ44.00000°, λ118.00000°. Principal axes: T 1.0700, Plg70.0000°, Azm317.0000°; N -0.1600, Plg19.0000°, Azm123.0000°; P -0.9200, Plg4.0000°, Azm215.0000°;
NEIC Felt [III] at Darwin, Australia and at Dili, East Timor. Also felt at Aileu, East Timor.
IDC 15 08:03:16.7±0.7, 756S×12749E, h182km±6km, mb5.4/31, mb1 5.4/34, mb1mx5.4/34, mbtmp5.4/34, MS5.2/9, Ms1 5.2/9, ms1mx4.8/28 Error ellipse: s-maj=7.9km s-min=5.9km az=63.0
DJA 15 08:03:17, 778S×12754E, h190km, Mw6.0/46
ISC 15 08:03:16.4±0.1, 762S±002×12752E±002, h181km, h181km±2.4km:pP-P, n1448, σ1s17/546, mb5.8/192, 266C-215D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	3.96	10	P	Pn	08 04 17.9	+0.7
MSAI	Masohi	4.47	18	P	Pn	08 04 25.9	+2.2
BATI	Baumata	4.59	236	P	Pn	08 04 25.5	+0.3
	9μm,0.3s,baz=123,slow=2.1,SNR=2627						
BATI				S	Sn	08 05 18.8	-0.3
	8μm,0.3s,baz=140,slow=8.1,SNR=15						
BATI	Baumata	4.59	236	P	Pn	08 04 24.9	-0.3
KDI	Kendari	6.08	306	P	Pn	08 04 45.5	+1.0

645nm,1.0s,2.2nm
LBMI Labuha 6.94 360 P **Pn** **08 04 58.0 +2.2**
6µm,1.1s,19nm
KAKA Kakadu 7.01 137⇓*i*P x 08 04 33.3
435nm,0.1s
SWI Sorong 7.68 29 P **Pn** **08 05 04.3 -1.3**
KAPI Kappang 8.14 288 Pn **Pn** **08 05 12.1 +0.5**
3µm,1.3s,SNR=80
KAPI Kappang 8.14 288 P **Pn** **08 05 13.0 +1.4**
SNR=127
KAPI Kappang 8.14 288 P **Pn** **08 05 12.6 +1.0**
8.3nm,0.3s,baz=121,slow=7.4,SNR=85
KAPI S **Sn** **08 06 44.7 +1.8**
baz=63,slow=16,SNR=1.9
KAPI Kappang 8.14 288 *e*Pn **Pn** **08 05 12.3 +0.7**
KAPI Kappang 8.14 288 P **Pn** **08 05 12.8 +1.2**
366nm,1.3s,4µm1.3nm
PCI Palu 10.15 311 P **Pn** **08 05 43.4 +5.4**
FITZ Fitzroy Crossi 10.58 190⇓*i*P **Pn** **08 05 39.1 -4.4**
3µm,0.7s
FITZ *e*S **Sn** **08 07 26.9 -14**
FITZ Fitzroy Crossi 10.58 190 P **Pn** **08 05 39.6 -3.9**
6µm,0.8s
KHKI Kahang-Kahang 11.81 266 P **Pn** **08 05 57.1 -2.5**
416nm,0.7s,6µm
DNP Denpasar 12.23 264 P **Pn** **08 06 07.0 +2.2**
2µm,0.9s
SMKI Samarinda 12.50 304 P **Pn** **08 06 14.3 +5.9**
MMPI Merauke 12.77 95 P **Pn** **08 06 11.8 0.0**
4µm,1.0s
NBBI Negara 12.79 266 P **Pn** **08 06 19.4 +7.4**
BBKI Banjar Baru 13.27 287 P **Pn** **08 06 22.0 +3.9**
4µm,1.6s
KMMI Kalianget 13.45 272 P **Pn** **08 06 22.1 +1.7**
1µm,1.3s,9µm
WRAB Tennant Creek 13.92 152 Pn **Pn** **08 06 21.0 -5.2**
13µm,0.8s
WRAB Tennant Creek 13.92 152 *e*Pn **Pn** **08 06 21.4 -4.8**
WRAB *e*Sn **Sn** **08 08 48.7 -13**
WRAB Tennant Creek 13.92 152 P **Pn** **08 06 20.8 -5.4**
3µm,0.8s
WRA Warramunga Arr 13.92 152 P **Pn** **08 06 21.2 -5.0**
119nm,0.3s,baz=322,slow=13,SNR=449
WRA S **Sn** **08 08 48.1 -13**
354nm,0.3s,baz=326,slow=23,SNR=14
WRA P4KP 08 50 31.5
0.1nm,0.3s,baz=339,slow=4.3,SNR=9.7
WRA Warramunga Arr 13.92 152 P **Pn** **08 06 21.2 -5.0**
WRA S **Sn** **08 08 48.1 -13**
WB2 Warramunga Arr 13.93 152 *e*P **Pn** **08 06 21.1 -5.2**
WB2 *e*S **Sn** **08 08 47.7 -14**
JAY Jayapura 14.08 70 P **Pn** **08 06 27.7 -0.5**
2µm,0.9s
PLKI Palangkaraya 14.54 291 P **Pn** **08 06 37.1 +3.2**
10µm,1.2s
DAV Davao City (W) 14.72 352 P **Pn** **08 06 40.5 +4.4**
SNR=38
DAV Davao City (W) 14.72 352 P **Pn** **08 06 37.0 +0.9**
51nm,0.3s,baz=29,slow=3.4,SNR=30
DAV S **Sn** **08 09 18.3 -2.1**
65nm,0.3s,baz=72,slow=20,SNR=1.7
DAV Davao City (W) 14.72 352⇑*e*P **Pn** **08 06 36.1 0.0**
DAV Davao City (W) 14.72 352 *e*Pn **Pn** **08 06 38.2 +2.0**
DAV Davao City (W) 14.72 352 P **Pn** **08 06 41.7 +5.6**
KCP Kidapawan 14.73 350⇑*e*P **Pn** **08 06 44.6 +8.3**
KRKI Karangkates 14.93 267 P **Pn** **08 06 40.8 +2.0**
2µm,0.7s
CTBH Cotabato--PC H 15.10 347⇑*e*P **Pn** **08 06 43.2 +2.5**
TSM Tawau 15.25 321⇓P **Pn** **08 06 46.0 +3.3**
MBWA Marble Bar 15.42 208 P **Pn** **08 06 42.7 -2.0**
SNR=220
MBWA Marble Bar 15.42 208 *e*P **Pn** **08 06 43.5 -1.2**
2µm,1.3s
MBWA *e*S **S** **08 09 28.4 -7.8**
MBWA *e*ScP ScP 08 14 53.7 +0.2
MBWA Marble Bar 15.42 208 P **Pn** **08 06 43.2 -1.5**
2µm,1.3s
MYLDM Lahad Datu 15.57 324⇓P **Pn** **08 06 50.3 +3.7**
MYLDM Lahad Datu 15.57 324 P **Pn** **08 06 50.8 +4.2**
5µm,1.4s
BUKP Musuan 15.59 351 *e*P **Pn** **08 06 50.1 +3.3**
SJI Sawahan 15.61 269 P **Pn** **08 06 46.1 -1.0**
811nm,0.6s
PAGZ Pagadian 15.91 345 *e*P **Pn** **08 06 53.1 +2.5**
BUTP Butuan 16.59 353 *e*P **Pn** **08 07 01.2 +2.4**
SDKM Sandakan 16.72 322⇓P **Pn** **08 07 03.6 +3.2**
ASAR Alice Springs 17.09 160 P **Pn** **08 07 02.4 -2.5**
149nm,0.3s,baz=326,slow=8.1,SNR=1346
ASAR S **S** **08 10 06.5 -6.0**
60nm,0.3s,baz=331,slow=22,SNR=7.0
ASAR P3KPbc 08 41 57.6
baz=137,slow=4.4,SNR=5.9
ASAR P4KP 08 50 46.5
0.3nm,0.3s,baz=340,slow=4.3,SNR=71
ASAR Alice Springs 17.09 160 P **Pn** **08 07 02.4 -2.5**
ASAR S **S** **08 10 06.5 -6.0**
TBP Tagbilaran 17.58 348 *e*P **Pn** **08 07 11.8 +1.1**
KKM Kota Kinabalu 17.64 320 *e*P **Pn** **08 07 12.0 +0.6**
3µm,1.1s
KKM *e*S **S** **08 10 28.8 +5.0**
KKM *e*PcP PcP 08 11 41.4 +1.6
KKM Kota Kinabalu 17.64 320⇑P **Pn** **08 07 12.8 +1.3**
KKM Kota Kinabalu 17.64 320 P **Pn** **08 07 12.0 +0.6**
3µm,1.2s
STKI Sintang 17.72 295 P **Pn** **08 07 12.6 +0.2**
4µm,1.2s
MSLP Maasin 17.83 351 *e*P **Pn** **08 07 14.2 +0.6**
KDM Kudat 17.94 323⇑P **Pn** **08 07 15.5 +0.6**
BTM Bintulu 17.97 306⇓P **Pn** **08 07 17.0 +1.7**
LLP Lapu-Lapu 18.16 349 *e*P **P** **08 07 17.8 +2.4**
SBUM Sibu 18.25 303⇑P **P** **08 07 20.6 +4.2**
SBUM Sibu 18.25 303 P **P** **08 07 19.0 +2.6**
3µm,1.5s
CLJI Cilicap 18.34 268 P **P** **08 07 17.8 +0.4**
2µm,1.2s
GUIM Jordan 18.78 345 *e*P **P** **08 07 22.9 +0.8**
BATP Bataraza 18.96 329 *e*P **P** **08 07 27.1 +2.9**
JCJI Jatiwangi 19.13 272 P **P** **08 07 26.0 0.0**
1µm,1.5s
PPR Puerto Princes 19.37 333⇑*i*P **P** **08 07 36.7 +8.2**
KSM Kuching 19.39 297 *e*P **P** **08 07 29.8 +0.9**
739nm,0.6s
KSM *e*S **S** **08 11 02.3 +3.7**
KSM *e*PcP PcP 08 11 42.7 -0.1
KSM *e*ScP ScP 08 15 00.8 -1.1
KSM Kuching 19.39 297⇓P **P** **08 07 30.5 +1.6**
KSM Kuching 19.39 297 P **P** **08 07 29.6 +0.8**
2µm,1.1s
CUYO Cuyo Island 19.45 341 *e*P **P** **08 07 31.7 +2.3**
PMG Port Moresby 19.51 97 P **P** **08 07 30.7 +0.6**
20nm,0.3s,baz=255,slow=5.7,SNR=63
PMG ScP ScP 08 15 03.7 +1.5
0.1nm,0.3s,baz=347,slow=2.8,SNR=3.2
PMG Port Moresby 19.51 97 *e*P **P** **08 07 31.2 +1.1**
766nm,0.8s
PMG *e*S **S** **08 10 58.3 -2.5**
PMG Port Moresby 19.51 97 P **P** **08 07 31.0 +0.9**
1µm,0.8s,8µm
RCP Roxas 19.64 346⇓*e*P **P** **08 07 32.5 +1.2**
LEM Lembang 19.75 271 P **P** **08 07 32.1 -0.6**
1µm,1.4s
KALP Kalibo 19.85 345⇓*e*P **P** **08 07 41.3 +7.6**
CNP Catarman 20.20 352 *e*P **P** **08 07 39.2 +1.8**
TPI Tanjungpandan 20.36 283 P **P** **08 07 40.5 +1.3**
514nm,1.1s,7µm
ENPP El Nido 20.36 337 *e*P **P** **08 07 40.9 +1.7**
CBJI Citeko 20.54 272 P **P** **08 07 37.8 -3.4**
OTRP Odiongan 20.59 345 *e*P **P** **08 07 43.0 +1.4**
DBJI Dramaga 20.63 272 P **P** **08 07 39.6 -2.5**
1µm,1.8s
SKJI Sukabumi 20.80 270 P **P** **08 07 44.7 +0.8**
3µm,1.1s
BUSP Coron 20.81 339 *e*P **P** **08 07 45.1 +1.2**
SJMP San Jose 20.94 342 *e*P **P** **08 07 47.2 +1.9**
PVCP Virac 21.34 351 *e*P **P** **08 07 50.7 +1.2**
AUQP San Andres 21.35 347 *e*P **P** **08 07 52.9 +3.2**
XMIS Christmas Isla 21.77 261⇓*i*P **P** **08 07 51.2 -3.0**
XMIS *e*S **S** **08 11 36.1 -6.6**
XMIS Christmas Isla 21.77 261 P **P** **08 07 51.3 -2.9**
2µm,1.1s,mb6.3
GQP Guinayangan 21.97 347⇓*e*P **P** **08 07 56.3 +0.2**
PGP Puerto Galera 21.97 343⇑*i*P **P** **08 07 59.9 +3.7**
PPBI Pangkal Pinang 21.97 283 P **P** **08 07 56.6 +0.4**
2µm,1.4s,mb6.4
CTA Charters Tower 21.98 126 *e*P **P** **08 07 55.8 -0.5**
94nm,0.6s,mb5.4
CTA *e*S **S** **08 11 46.9 +1.0**
CTA Charters Tower 21.98 126 P **P** **08 07 56.0 -0.2**
221nm,1.1s,mb5.5,baz=301,slow=11,SNR=60
CTA S **S** **08 11 55.6 +10**
53nm,0.6s,baz=297,slow=16,SNR=3.1
CTA LR LR 08 16 59.2
comp=Z,8µm,21.7s,baz=302,slow=37
CTA Charters Tower 21.98 126 *e*P **P** **08 07 55.8 -0.5**
CTA *e*S **S** **08 11 46.9 +1.0**
CTA pmax pmax
comp=Z,94nm,0.6s
CTAO Charters Tower 21.98 126 *e*P **P** **08 07 56.0 -0.3**
CTAO pmax pmax
comp=Z,260nm,0.9s,mb5.7
CTAO Charters Tower 21.98 126 *e*P **P** **08 07 56.0 -0.3**
comp=Z,256nm,0.9s,mb5.7
CTAO Charters Tower 21.98 126 P **P** **08 07 56.1 -0.2**
comp=Z,313nm,1.0s,comp=Z,5µm,mb5.7
LUBP Lubang 22.41 341 *e*P **P** **08 08 01.0 +0.8**
KLI Kotabumi 22.69 276 P **P** **08 08 00.9 -1.9**
comp=Z,410nm,1.6s,comp=Z,5µm,mb5.6
POLP Polilio Island 22.88 346 *e*P **P** **08 08 04.7 +0.3**
FORT Forrest 23.05 179 *e*P **P** **08 08 06.0 +0.1**
comp=Z,1µm,0.7s,mb6.4
FORT *e*S **S** **08 12 01.9 -1.0**
PCPH Palayan 23.89 345⇑*e*P **P** **08 08 16.5 +2.8**
BALP Baler 23.94 346 *e*P **P** **08 08 13.3 -0.9**
SCZP Santa Cruz 24.43 342 *e*P **P** **08 08 17.1 -1.5**
BOLP Bolinao 25.00 343 *e*P **P** **08 08 23.4 -0.4**
CAUP Cauayan 25.05 347 *e*P **P** **08 08 24.7 +0.5**
KSI Kapahiang 25.11 278 P **P** **08 08 22.7 -2.1**
comp=Z,491nm,1.4s,comp=Z,8µm,mb5.8
MYKOM Kota Tinggi 25.39 291⇑P **P** **08 08 29.4 +2.0**
MYKOM Kota Tinggi 25.39 291 P **P** **08 08 28.5 +1.1**
comp=Z,2µm,1.6s,mb6.3
KLBR Kellerberrin 25.53 200 *e*P **P** **08 08 28.1 -0.3**
comp=Z,500nm,0.8s,mb6.2
KLBR *e*pP pP 08 08 58.8 -6.4
KGM Kluang 25.97 291⇑P **P** **08 08 34.3 +1.7**
RGRI Rengat 26.12 285 P **P** **08 08 35.1 +1.1**
comp=Z,1µm,1.3s,mb6.3
MUN Mundaring 26.43 202 *e*P **P** **08 08 36.2 -0.2**
MUN *e*pP pP 08 09 06.8 -6.6
MUN *e* 08 10 37.0
MUN *e*S **S** **08 12 55.8 -0.8**
MUN *e* 08 19 30.2
MUN Mundaring 26.43 202 *e*P **P** **08 08 36.2 -0.2**
MUN *e*S **S** **08 12 55.8 -0.8**
NWAO Narrogin (SRO) 26.93 199 P **P** **08 08 41.7 +0.7**
SNR=7.1
NWAO Narrogin (SRO) 26.93 199 P **P** **08 08 41.0 +0.1**
comp=Z,134nm,0.7s,mb5.7,baz=22,slow=8.8,SNR=89
NWAO LR LR 08 20 45.1
comp=Z,11µm,19.0s,baz=33,slow=39
NWAO PKKP 08 34 40.0
comp=Z,15nm,1.1s,baz=98,slow=3.2,SNR=3.2
NWAO Narrogin (SRO) 26.93 199 *e*P **P** **08 08 41.0 +0.1**
NWAO pmax pmax
comp=Z,1µm,1.4s
NWAO Narrogin (SRO) 26.93 199 *e*P **P** **08 08 41.0 0.0**
comp=Z,1µm,1.4s,mb6.3
NWAO *e* 08 13 52.9
GUMO Guam 27.22 39 P **P** **08 08 43.5 -0.2**
comp=Z,106nm,0.7s,mb5.6,baz=186,slow=9.2,SNR=5.0
GUMO S **S** **08 13 08.7 -0.7**
comp=Z,112nm,1.0s,baz=45,slow=19,SNR=5.6
GUMO Guam 27.22 39 P **P** **08 08 43.5 -0.2**
GUMO S **S** **08 13 08.7 -0.7**
GUMO pmax pmax
comp=Z,106nm,0.7s,mb5.6
GUMO smax
comp=N,113nm,1.0s
GUMO Guam 27.22 39 P **P** **08 08 43.8 +0.1**
comp=N,150nm,1.0s,mb5.6
STKA Stephens Creek 27.47 153 *e*P **P** **08 08 45.7 -0.1**
comp=N,206nm,0.7s,mb5.9
STKA *e*S **S** **08 13 05.7 -7.3**
STKA Stephens Creek 27.47 153 P **P** **08 08 45.8 0.0**
comp=N,85nm,0.6s,mb5.5,baz=324,slow=8.8,SNR=183
STKA tx tx 08 51 32.7
comp=N,2.6nm,0.7s,baz=358,slow=7.2,SNR=5.7
KTGM Kuala Trenggan 27.52 297⇑P **P** **08 08 47.9 +1.5**
PDSI Padang 27.77 283 P **P** **08 08 45.9 -2.8**
comp=N,562nm,1.2s,comp=N,4µm,mb6.2
PPI Padang Panjang 27.95 287 P **P** **08 08 48.8 -1.5**
comp=N,1000nm,1.2s,comp=N,7µm,mb6.4
EIDS Eidsvold 28.58 131 *e*P **P** **08 08 55.4 -0.4**
comp=N,108nm,1.0s,mb5.5
IPM Ipoh 29.03 294⇑P **P** **08 09 00.7 +0.8**
IPM Ipoh 29.03 294 P **P** **08 08 59.6 -0.3**
comp=N,1µm,1.2s,mb6.6
ADE Adelaide 29.10 161 *e*P **P** **08 09 02.1 +1.9**
KULM Kulim 29.71 295⇓P **P** **08 09 06.2 +0.4**
KULM Kulim 29.71 295 P **P** **08 09 05.5 -0.4**
comp=N,2µm,1.2s,mb6.6
PSI Prapat 30.35 289 P **P** **08 09 10.6 -0.9**
comp=N,1µm,0.9s,mb6.6,baz=123,slow=5.7,SNR=298
COCO West Island 30.55 259 *e*P **P** **08 09 12.8 -0.5**
comp=N,182nm,1.0s,mb5.8
SNG Songkhla 30.59 298 P **P** **08 09 14.0 +0.4**
comp=N,2µm,1.1s,mb6.8
TWG Pinlang 30.90 348 *e*P **P** **08 09 12.9 -3.2**
comp=N,58nm,0.4s,mb5.7
TWG *e*PcP PcP 08 12 08.6 +0.2
YULB Yu-li 31.41 349 *e*P **P** **08 09 17.4 -3.3**
comp=N,21nm,0.4s,mb5.2
YULB *e*PcP PcP 08 12 08.0 -1.8
TPUB Ta-pu 31.46 348 *e*P **P** **08 09 19.4 -1.7**
comp=N,148nm,0.6s,mb5.9
TPUB *e*PcP PcP 08 12 09.2 -0.7
QIZ Qiongzhong 31.70 327 P **P** **08 09 23.5 +0.3**
QIZ AMB AMB
comp=Z,112nm,1.2s,mb5.5
QIZ AMB AMB
comp=Z,2µm,8.5s
QIZ Qiongzhong 31.70 327 *e*P **P** **08 09 23.0 -0.2**
comp=Z,363nm,1.5s,mb5.9
QIZ *e*PcP PcP 08 12 11.1 +0.5
UBT Ubonrachathani 31.83 316⇑P **P** **08 09 25.0 +0.6**
comp=Z,382nm,0.5s,mb6.4
SSLB Suanglung 31.86 349 *e*P **P** **08 09 23.1 -1.5**
comp=Z,87nm,0.8s,mb5.5
SSLB *e*PcP PcP 08 12 10.6 -0.4
SSLB *e*S **S** **08 14 18.5 -3.4**
ARMA Armidale 32.01 138 *e*P **P** **08 09 27.4 +1.5**
ARMA *e*S **S** **08 14 16.9 -7.3**
HNR Honiara 32.12 96 P **P** **08 09 26.5 -0.5**
comp=Z,96nm,0.7s,mb5.7,baz=197,slow=4.4,SNR=11
HNR ScP ScP 08 15 39.7 +1.1
comp=Z,164nm,0.7s,baz=190,slow=4.7,SNR=6.7
HNR LR LR 08 23 15.4
comp=Z,2µm,19.0s,baz=281,slow=37
HNR Honiara 32.12 96 P **P** **08 09 26.5 -0.5**
HNR pmax pmax
comp=Z,96nm,0.7s,mb5.6
HNR pmax pmax
comp=N,165nm,0.7s
HNR MLR MLR
comp=Z,2µm,19.0s
HNR Honiara 32.12 96 *e*P **P** **08 09 26.4 -0.6**
comp=Z,301nm,1.0s,mb6.0
HNR *e*ScP ScP 08 15 39.9 +1.3
NACB Ninganchiao 32.12 350 *e*P **P** **08 09 25.5 -1.3**
comp=Z,34nm,0.8s,mb5.1
NACB *e*PcP PcP 08 12 11.8 +0.1
YHNB Yeheng 32.65 350 *e*P **P** **08 09 29.8 -1.6**
comp=Z,56nm,0.6s,mb5.5
YHNB *e*ScP PcP 08 12 12.5 -0.6
QZH Quanzhou 33.51 345⇑*i*P **P** **08 09 39.1 +0.2**
QZH AP pP 08 10 15.0 -1.7
QZH S **S** **08 14 45.0 -2.4**
QZH AMB AMB
comp=Z,400nm,1.2s,mb6.0
QZH AMB AMB
comp=Z,3µm,4.3s
QZH LR LR
comp=N,2µm,12.7s
QZH LR LR
comp=E,2µm,11.3s
QZH LR LR
comp=Z,3µm,17.4s
GZH Guangzhou 33.52 336 P **P** **08 09 41.1 +2.1**
GZH S **S** **08 14 48.8 +1.2**
GZH LR LR
comp=N,4µm,19.0s
GZH LR LR
comp=E,9µm,21.4s
GZH LR LR
comp=Z,8µm,19.4s
CAN Canberra 33.89 148 *e*P **P** **08 09 43.8 +1.7**
CAN *e* pP 08 10 18.8 -1.1
CAN pmax pmax
comp=Z,97nm,0.8s,mb5.6
CAN Canberra 33.89 148 *e*P **P** **08 09 43.8 +1.7**
comp=Z,96nm,0.8s,mb5.6
CAN *e* pP 08 10 18.8 -1.1
CAN *e*ScP ScP 08 15 44.5 +0.1
TOO Toolangi 33.99 154 *e*P **P** **08 09 44.8 +1.9**
TOO *e*S **S** **08 14 55.0 +0.5**
TOO *i* SCP ScP 08 15 45.4 +0.8
TOO Toolangi 33.99 154 *e*P **P** **08 09 44.8 +1.9**
TOO *e*S **S** **08 14 55.0 +0.5**
CNB Canberra Magne 34.08 147 *e*P **P** **08 09 45.3 +1.6**
CNB *e*pP pP 08 10 22.0 +0.4
CNB *e*S **S** **08 14 52.0 -4.0**
CNB *e*SCP ScP 08 15 45.4 +0.4
KKTK Khon Kaen 34.11 314⇓P **P** **08 09 44.0 -0.2**
comp=Z,2µm,0.5s,mb7.2
NNT Nongplab 34.14 306 P **P** **08 09 45.0 +0.5**
BSI Banda Aceh 34.68 291 P **P** **08 09 47.1 -2.1**
comp=Z,932nm,1.4s,comp=Z,8µm,mb6.2
NST Nakhon Sawan 35.65 311 P **P** **08 09 57.0 -0.4**
comp=Z,175nm,0.7s,mb5.8
BDT Bhumibol Dam 37.48 311 P **P** **08 10 14.0 +1.2**
comp=Z,207nm,1.0s,mb5.7
CM31 Chiang Mai Arr 38.29 313 *e*P **P** **08 10 19.9 +0.2**
comp=Z,104nm,0.6s,mb5.6
CM31 *e*PcP PcP 08 12 31.0 +1.1
CMAR Chiang Mai Arr 38.29 313 P **P** **08 10 19.9 +0.3**
comp=Z,139nm,0.6s,mb5.7,baz=145,slow=7.0,SNR=234
CMAR PcP PcP 08 12 31.1 +1.1
comp=Z,96nm,0.7s,baz=164,slow=2.7,SNR=18
CMAR ScP ScP 08 16 01.4 +0.6
comp=Z,27nm,0.8s,baz=159,slow=3.3,SNR=15
CMAR PKiKP PKiKP 08 19 44.4 -0.2
comp=Z,1.5nm,0.4s,baz=233,slow=1.1,SNR=5.1
CMAR Chiang Mai Arr 38.29 313 *i* P **P** **08 10 19.8 +0.2**
CMAR pmax pmax
comp=Z,139nm,0.6s
CMAR Chiang Mai Arr 38.29 313 P **P** **08 10 19.9 +0.3**
CMAR PcP PcP 08 12 31.1 +1.1
CMAR ScP ScP 08 16 01.4 +0.6
CHG Chiang Mai 38.52 313⇑P **P** **08 10 21.6 +0.1**
comp=Z,230nm,0.8s,mb5.9
CHTO Chiang Mai 38.52 313 P **P** **08 10 22.0 +0.4**
SNR=57
CHTO Chiang Mai 38.52 313 *e*P **P** **08 10 21.6 +0.1**
CHTO pmax pmax
comp=Z,180nm,0.8s,mb5.8
CHTO Chiang Mai 38.52 313 *e*P **P** **08 10 21.6 +0.1**
comp=Z,177nm,0.8s,mb5.8
CHTO *e*PcP PcP 08 12 31.3 +0.6
CHTO *e*ScP ScP 08 16 01.9 +0.2
CHRT Chiangrai 38.62 315 P **P** **08 10 23.0 +0.6**
comp=Z,3µm,0.8s,mb6.9
MOO Moorlands 38.79 157 *e*P **P** **08 10 25.8 +2.3**
MOO *e* 08 12 00.3
MOO *e* 08 16 03.1
SSE Sheshan 38.97 351 P **P** **08 10 25.4 +0.3**
SSE PCP PcP 08 12 32.5 +0.7
SSE S **S** **08 16 08.8 -1.4**
SSE AMB AMB
comp=Z,105nm,1.1s,mb5.4
SSE AMB AMB
comp=Z,1µm,6.3s
SSE LR LR
comp=N,2µm,17.1s
SSE LR LR
comp=E,1µm,17.1s
SSE LR LR
comp=Z,2µm,16.8s
TAU Tasmania Unive 39.23 157 P **P** **08 10 29.2 +2.0**
comp=Z,547nm,1.0s,mb6.1,SNR=8.8
TAU Tasmania Unive 39.23 157 *e*P **P** **08 10 29.7 +2.5**
TAU pmax pmax
comp=Z,79nm,0.9s,mb5.3
TAU Tasmania Unive 39.23 157 *e*P **P** **08 10 29.7 +2.6**
comp=Z,79nm,0.9s,mb5.3
TAU *e*ScP ScP 08 16 05.3 +1.3
GYA Guiyang 39.46 330⇑*i*P **P** **08 10 29.4 +0.2**
GYA AP pP 08 11 10.4 +2.4
GYA XP sP 08 11 31.8 +3.3
GYA PP PP 08 12 08.6 +4.8
GYA PCP PcP 08 12 35.1 +1.6
GYA SCP ScP 08 16 02.9 -2.3
GYA S **S** **08 16 16.8 -0.9**
GYA XS sS 08 17 27.8 +2.1
GYA SCS ScS 08 20 17.6 -0.4
GYA AMB AMB
comp=Z,320nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,2µm,6.0s
GYA LR LR
comp=N,2µm,15.0s
GYA LR LR
comp=E,2µm,14.3s
GYA LR LR
comp=Z,4µm,15.6s
WHN Wuhan 39.99 342⇑P **P** **08 10 34.0 +0.4**
WHN AP pP 08 11 11.6 -0.8
WHN XP sP 08 11 28.3 -4.6
WHN PP PP 08 12 11.4 +1.9
WHN S **S** **08 16 24.6 -0.9**
WHN SS SS 08 19 30.0 -0.5
WHN AMB AMB
comp=Z,539nm,1.1s,mb6.1
WHN AMB AMB
comp=Z,4µm,7.5s
WHN LR LR
comp=N,2µm,15.0s
WHN LR LR
comp=E,4µm,15.1s
WHN LR LR
comp=Z,3µm,14.2s
NOUC Port Laguerre 40.02 115 *e*P **P** **08 10 33.9 -0.1**
DZM Mont Dzumac 40.14 115 *e*P **P** **08 10 35.1 +0.2**
DZM Mont Dzumac 40.14 115 *e*P **P** **08 10 35.0 +0.1**
comp=Z,36nm,0.7s,mb5.1
NJ2 Nanjing 40.30 349 *e*P **P** **08 10 36.4 +0.3**
NJ2 AP pP 08 11 16.8 +1.8
NJ2 S **S** **08 16 32.5 +2.4**
NJ2 XS sS 08 17 40.0 +1.7
NJ2 AMB AMB
comp=Z,250nm,1.2s,mb5.7
NJ2 AMB AMB
comp=Z,900nm,7.8s
NJ2 LR LR
comp=N,1µm,21.6s
NJ2 LR LR
comp=E,630nm,15.4s
NJ2 LR LR
comp=Z,3µm,15.4s
KMI Kunming 40.51 324⇑P **P** **08 10 39.6 +1.7**
KMI AP pP 08 11 20.9 +4.1
KMI PP PP 08 12 20.8 +5.6
KMI PCP PcP 08 12 37.4 +0.5
KMI S **S** **08 16 32.0 -1.4**
KMI XS sS 08 17 47.1 +5.4
KMI SCS ScS 08 20 22.3 -2.0
KMI AMB AMB
comp=Z,335nm,1.3s,mb5.8
KMI AMB AMB
comp=Z,3µm,6.1s
KMI LR LR
comp=N,2µm,17.3s
KMI LR LR
comp=E,3µm,17.3s
KMI LR LR
comp=Z,3µm,21.6s
CD2 Chengdu 44.56 330 P **P** **08 11 10.3 -0.2**
CD2 XP sP 08 12 13.0 +2.7
CD2 PCP PcP 08 12 50.3 -0.1
CD2 S **S** **08 17 31.0 -1.5**
CD2 XS sS 08 18 42.4 +0.7
CD2 AMB AMB
comp=Z,490nm,1.2s,mb6.0
CD2 AMB AMB
comp=Z,2µm,8.4s
TIA Tai'an 44.68 348 P **P** **08 11 10.5 -0.8**
KSRS Korea Array 44.84 0 P **P** **08 11 12.6 0.0**

comp=Z,38nm,0.8s,mb5.1,baz=179,slow=9.3,SNR=33
KSRS PcP PcP 08 12 51.5 +0.3
comp=Z,70nm,1.0s,baz=183,slow=4.0,SNR=16
KSRS ScP ScP 08 16 26.6 +0.1
comp=Z,16nm,1.0s,baz=173,slow=3.8,SNR=6.4
KSRS S **S** **08 17 37.4 +1.1**
comp=Z,3.5nm,1.0s,baz=172,slow=19,SNR=4.6
KSRS Korea Array 44.84 0 P **P** **08 11 12.6 +0.1**
KSRS 08 12 51.5
KSRS S **S** **08 17 37.4 +1.2**
KSRS pmax pmax
comp=Z,38nm,0.8s,mb5.1
KSRS pmax pmax
comp=Z,70nm,1.0s,mb5.2
KSRS pmax pmax
comp=N,16nm,1.0s
KSRS smax
comp=N,4.0nm,1.0s
XAN Xi'an 45.02 338 P **P** **08 11 12.9 -1.2**
XAN AP pP 08 11 54.3 +0.6
XAN S **S** **08 17 36.0 -3.0**
XAN SCS ScS 08 20 50.5 -1.5
XAN SS SS 08 21 06.0 +1.3
XAN AMB AMB
comp=Z,145nm,1.2s,mb5.5
XAN AMB AMB
comp=Z,1μm,14.2s
XAN LR LR
comp=N,1μm,20.1s
XAN LR LR
comp=E,3μm,20.1s
XAN LR LR
comp=Z,3μm,18.1s
MJAR Matsushiro Arr 45.06 12 P **P** **08 11 12.1 -2.2**
comp=Z,55nm,1.1s,mb5.1,baz=186,slow=9.2,SNR=41
MJAR PcP PcP 08 12 51.7 -0.2
comp=Z,62nm,0.9s,baz=192,slow=4.6,SNR=11
MJAR ScP ScP 08 16 27.0 -0.5
comp=Z,22nm,0.9s,baz=189,slow=4.9,SNR=11
MJAR Matsushiro Arr 45.06 12 P **P** **08 11 12.1 -2.2**
MJAR 08 12 51.7
MAJO Matsushiro 45.06 12 *e*P **P** **08 11 12.2 -2.1**
MAJO pmax pmax
comp=Z,110nm,0.9s,mb5.5
MAJO Matsushiro 45.06 12 *e*P **P** **08 11 12.2 -2.1**
comp=Z,110nm,0.9s,mb5.5
MAJO *e*PcP PcP 08 12 54.0 +2.0
MAT Matsushiro 45.06 12 P **P** **08 11 11.4 -2.9**
MAT S **S** **08 17 35.0 -4.4**
IMP Imphal 45.91 316 *e*P **P** **08 11 20.0 -1.2**
IMP *i* x 08 12 55.0
DL2 Dalian 46.61 354⇑ *i*P **P** **08 11 27.0 +0.6**
DL2 AMB AMB
comp=Z,100nm,1.0s,mb5.4
DL2 AMB AMB
comp=Z,900nm,3.9s
DL2 LR LR
comp=N,1μm,18.4s
DL2 LR LR
comp=Z,1μm,17.4s
SHL Shillong 47.84 315⇑ *i*P **P** **08 11 35.0 -1.2**
SHL *ex* x 08 13 02.5
SHL *e*S **S** **08 18 19.9 +0.5**
BJT Baijiatuau 48.54 348 *e*P **P** **08 11 40.6 -0.7**
BJT *e* 08 13 05.1
BJT *e*S **S** **08 18 27.6 -1.2**
BJT pmax pmax
comp=Z,142nm,0.8s
BJT Baijiatuau 48.54 348 *e*P **P** **08 11 40.5 -0.7**
comp=Z,142nm,0.8s,mb5.7
BJT *e* 08 12 26.4
BJT *e*PcP PcP 08 13 05.1 +0.8
BJT *e*S **S** **08 18 27.6 -1.2**
BJI Beijing 48.56 348 P **P** **08 11 40.6 -0.8**
BJI S **S** **08 18 30.5 +1.4**
BJI SS SS 08 22 05.0 +3.1
BJI AMB AMB
comp=Z,145nm,1.1s,mb5.5
BJI AMB AMB
comp=Z,2μm,4.1s
BJI LR LR
comp=N,1μm,20.2s
BJI LR LR
comp=E,2μm,20.2s
BJI LR LR
comp=Z,2μm,31.8s
CAL Calcutta 48.69 309 *e*P **P** **08 11 42.2 -0.5**
CAL *ex* x 08 12 47.8
LZH Lanzhou 48.84 334⇑⇑ P **P** **08 11 44.3 +0.7**
LZH AP pP 08 12 20.4 -3.4
LZH XP sP 08 12 38.3 -5.7
LZH PCP PcP 08 13 06.3 +0.9
LZH PP PP 08 13 40.0 +1.2
LZH S **S** **08 18 33.5 +0.4**
LZH SS SS 08 22 04.3 -2.1
LZH AMB AMB
comp=Z,598nm,1.5s,mb6.0
LZH AMB AMB
comp=Z,2μm,7.8s
LZH LR LR
comp=N,2μm,15.6s
LZH LR LR
comp=Z,4μm,17.2s
PALK Pallekele 48.97 286 P **P** **08 11 45.3 +0.3**
SNR=14
PALK Pallekele 48.97 286 P **P** **08 11 44.9 -0.1**
comp=Z,792nm,1.1s,mb6.3,SNR=24
PALK Pallekele 48.97 286 *e*P **P** **08 11 44.5 -0.5**
comp=Z,666nm,1.4s,mb6.1
PALK Pallekele 48.97 286 P **P** **08 11 44.7 -0.3**
comp=Z,214nm,1.5s,comp=Z,2μm,mb5.5
BWNR Bhubaneshwar 49.52 305 *e*P **P** **08 11 48.8 -0.2**
BWNR *ex* x 08 18 39.0
VIS Vishakhapatnam 50.38 300 *e*P **P** **08 11 55.7 +0.1**
VIS AMb AMB 08 12 00.0
comp=Z,398nm,1.0s,mb6.0
HHC Hu-ho-hao-te 50.41 344 *e*P **P** **08 11 55.4 0.0**
HHC AP pP 08 12 37.8 +1.9
HHC XP sP 08 12 58.4 +2.5
HHC PCP PcP 08 13 09.8 -1.3
HHC PCS PcS 08 17 06.1 -2.3
HHC S **S** **08 18 51.8 -3.0**
HHC XS sS 08 20 09.3 +3.9
HHC SCS ScS 08 21 22.0 -5.6
HHC SS SS 08 22 29.8 -1.5
HHC AMB AMB
comp=Z,68nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,2μm,7.1s
HHC LR LR
comp=N,1μm,20.6s
HHC LR LR
comp=E,960nm,17.4s
HHC LR LR
comp=Z,1μm,16.6s
BTO Baotou 50.62 343 *e*P **P** **08 11 56.0 -1.0**
LSA Lhasa 50.98 318 P **P** **08 12 01.0 +1.1**
LSA S **S** **08 18 57.9 -5.0**
LSA SCS ScS 08 21 27.6 -4.4
LSA AMB AMB
comp=Z,110nm,0.9s,mb5.5
LSA AMB AMB
comp=Z,2μm,12.0s
LSA LR LR
comp=N,660nm,23.0s
LSA LR LR
comp=E,590nm,22.0s
LSA LR LR
comp=Z,2μm,20.0s
LSA Lhasa 50.98 318 *e*P **P** **08 12 00.8 +0.9**
LSA *e* 08 13 14.2
LSA *e*S **S** **08 19 04.1 +1.1**
LSA pmax pmax
comp=Z,337nm,0.7s,mb6.1
LSA Lhasa 50.98 318 *e*P **P** **08 12 00.8 +1.0**
comp=Z,337nm,0.7s,mb6.1
LSA *e*PcP PcP 08 13 14.2 +0.8
LSA *e*S **S** **08 19 04.1 +1.1**
CN2 Changchun 51.21 358⇑⇑ P **P** **08 12 01.3 0.0**
CN2 *e*XP sP 08 13 05.0 +3.1
CN2 *e*S **S** **08 19 04.5 -1.1**
CN2 SS SS 08 22 41.4 -2.4
CN2 AMB AMB
comp=Z,20nm,1.1s,mb4.7
CN2 AMB AMB
comp=Z,2μm,7.0s
CN2 LR LR
comp=N,900nm,20.0s
CN2 LR LR
comp=E,700nm,20.0s
CN2 LR LR
comp=Z,890nm,21.0s
BOK Bokaro 51.25 309 *e*P **P** **08 12 01.1 -0.9**
BOK AMb AMB 08 12 05.9
comp=Z,160nm,0.6s,mb5.9
MDRS Chennai 51.25 293 *ex* x 08 11 47.4
MDRS AMb AMB 08 11 48.8
comp=Z,761nm,0.7s,mb6.4
MDJ Mudanjiang 52.03 2 P **P** **08 12 07.9 +0.6**
MDJ PCP PcP 08 13 17.3 +0.3
MDJ PP PP 08 14 08.3 +0.8
MDJ SCP ScP 08 16 57.3 +0.5
MDJ S **S** **08 19 16.8 +0.1**
MDJ XS sS 08 20 28.8 +1.1
MDJ AMB AMB
comp=Z,66nm,1.4s,mb5.1
MDJ AMB AMB
comp=Z,1μm,5.7s
MDJ LR LR
comp=N,593nm,16.6s
MDJ LR LR
comp=E,2μm,19.3s
MDJ LR LR
comp=Z,1μm,17.5s
MDJ Mudanjiang 52.03 2 *e*P **P** **08 12 07.3 0.0**
comp=Z,110nm,1.3s,mb5.3
MDJ *e* pP 08 12 49.6 +1.6
RPZ Rata Peaks 52.28 141 P **P** **08 12 09.9 +0.6**
comp=Z,104nm,0.7s,mb5.6,baz=297,slow=3.1,SNR=27
RPZ ScP ScP 08 16 58.2 +0.1
comp=Z,24nm,0.9s,baz=225,slow=1.0,SNR=3.2
RPZ ScS ScS 08 21 41.5 +0.8
comp=Z,10nm,0.8s,baz=40,slow=5.2,SNR=3.1
RPZ LR LR 08 36 02.0
comp=Z,5μm,18.3s,baz=300,slow=38
TRD Trivandrum 52.87 287 *e*P **P** **08 12 13.7 -0.4**
TRD AMb AMB 08 12 16.8
comp=Z,285nm,1.1s,mb5.9
KOD Kodaikanal 52.89 289 *e*P **P** **08 12 14.1 -0.2**
KOD AMb AMB 08 12 17.2
comp=Z,373nm,1.0s,mb6.1
MCQ Macquarie Isla 53.11 158 *e*P **P** **08 12 17.6 +2.5**
MCQ *e*pP pP 08 12 59.2 +3.2
MCQ *e*S **S** **08 19 34.8 +3.6**
GTA Gaotai 53.37 333⇑ *i*P **P** **08 12 17.8 +0.5**
GTA AP pP 08 13 01.5 +3.3
GTA XP sP 08 13 21.8 +3.7
GTA PCP PcP 08 13 22.8 +0.6
GTA PP PP 08 14 22.0 +2.3
GTA S **S** **08 19 32.8 -2.3**
GTA XS sS 08 20 48.4 +2.0
GTA SS SS 08 23 16.3 -1.7
GTA AMB AMB
comp=Z,59nm,0.9s,mb5.3
GTA AMB AMB
comp=Z,2μm,6.0s
GTA LR LR
comp=N,4μm,19.2s
GTA LR LR
comp=E,4μm,20.1s
GTA LR LR
comp=Z,2μm,18.9s
SNZO South Karori 53.55 137 *e*P **P** **08 12 17.9 -0.8**
comp=Z,118nm,1.0s,mb5.6
SNZO *e* pP 08 13 02.0 +2.4
PKI Pulchoki 53.69 312 *e*P **P** **08 12 19.8 0.0**
comp=Z,692nm,0.6s,mb6.5
PKI Pulchoki 53.69 312 *e*P **P** **08 12 19.8 0.0**
PKI pmax pmax
comp=Z,692nm,0.6s,mb6.6
KKN Kakani 53.90 313 *e*P **P** **08 12 21.4 0.0**
comp=Z,833nm,0.9s,mb6.5
KKN Kakani 53.90 313 *e*P **P** **08 12 21.4 0.0**
KKN pmax pmax
comp=Z,833nm,0.9s,mb6.5
URZ Urewera 54.05 132 P **P** **08 12 21.9 -0.4**
comp=Z,31nm,0.5s,mb5.3,baz=293,slow=2.5,SNR=13
URZ S **S** **08 19 43.2 -1.3**
comp=Z,26nm,0.7s,baz=26,slow=23,SNR=19
URZ LR LR 08 37 37.4
comp=Z,3μm,18.0s,baz=95,slow=38
HYB Hyderabad 54.40 298 *e*P **P** **08 12 24.0 -1.1**
HYB pmax pmax
comp=Z,500nm,1.0s,mb6.2
HYB Hyderabad 54.40 298 *i* P **P** **08 12 24.0 -1.1**
comp=Z,500nm,1.0s,mb6.2
HYB *e*pP pP 08 13 05.5 -0.7
HYB *e*sP sP 08 13 22.0 -4.1
HYB *e*PcP PcP 08 13 28.5 +1.9
HYB *e*PP PP 08 14 20.0 -9.3
HYB *e*PPP 08 15 30.0
HYB *e*S **S** **08 19 44.0 -5.6**
HYB *e*sS sS 08 20 48.0 -13
HYB Hyderabad 54.40 298 *e*P **P** **08 12 24.0 -1.1**
comp=Z,500nm,1.0s,mb6.2
ALBI Allahabad 55.21 308 *e*P **P** **08 12 28.5 -2.3**
ALBI *ex* x 08 13 25.0
NGP Nagpur 55.51 302⇑ *i*P **P** **08 12 30.6 -2.5**
NGP *ex* x 08 12 34.0
comp=Z,974nm,1.8s
NGP *ex* x 08 19 59.4
RAO Raoul Island 55.51 120 LR LR 08 35 04.4
comp=Z,2μm,18.6s,baz=12,slow=34
RAO Raoul Island 55.51 120 *e*P **P** **08 12 33.8 +0.8**
RAO pmax pmax
comp=Z,398nm,0.5s,mb6.5
RAO Raoul Island 55.51 120 *e*P **P** **08 12 33.8 +0.8**
comp=Z,398nm,0.5s,mb6.5
JBP Jabalpur 55.64 305 *e*P **P** **08 12 34.1 +0.2**
JBP *e*S **S** **08 20 04.6 -1.5**
YSS Yuzh-Sakhalins 56.00 13 *e*P **P** **08 12 35.0 -1.0**
YSS *e*S **S** **08 20 05.0 -4.9**
YSS MLR MLR
comp=Z,1μm,19.0s
YSS Yuzh-Sakhalins 56.00 13 *e*P **P** **08 12 36.0 0.0**
comp=Z,137nm,1.6s,mb5.5
MNGI Mangalore 56.19 291 *i* P **P** **08 12 37.8 -0.2**
MNGI AMb AMB 08 12 41.1
comp=Z,838nm,2.2s,mb6.2
HABR Khabarovsk 56.24 6*c i*P **P** **08 12 37.2 -0.5**
HABR *e**PP pP 08 13 16.9 -2.2
HABR *e* 08 13 29.9
HABR *e* 08 14 42.1
HABR *e*PPP 08 15 59.8
HABR *e*S **S** **08 20 13.1 0.0**
HABR *e*S **S** **08 20 13.4 +0.3**
HABR *e* 08 22 04.5
HABR *e*SS SS 08 24 00.2 -2.8
HABR pmax pmax
comp=N,59nm,1.0s
HABR pmax pmax
comp=Z,179nm,1.0s,mb5.8
HABR pmax pmax
comp=E,3μm,14.1s
HABR smax
comp=E,2006μm,9.5s
HABR smax
comp=Z,1243μm,9.7s
HABR smax
comp=N,1299μm,5.8s
HABR MLR MLR
comp=Z,582nm,20.0s
KLR Kul'dur 56.73 3 *e*P **P** **08 12 37.0 -4.1**
KLR pmax pmax
comp=Z,85nm,1.8s,mb5.3
KLR pmax pmax
comp=N,900nm,12.0s
KLR pmax pmax
comp=Z,2μm,12.0s
KLR MLR MLR
comp=Z,3μm,13.0s
AKL Akola 57.04 301 *e*P **P** **08 12 42.6 -1.3**
AKL AMb AMB 08 12 46.2
comp=Z,958nm,1.6s,mb6.4
HIA Hailar 57.05 354 *e*P **P** **08 12 43.8 +0.4**
HIA *e* 08 13 36.5
HIA *e*S **S** **08 20 24.3 +0.6**
HIA pmax pmax
comp=Z,54nm,0.9s
HIA Hailar 57.05 354 *e*P **P** **08 12 43.8 +0.4**
comp=Z,54nm,0.9s,mb5.4
HIA *e*PcP PcP 08 13 36.5 +0.3
HIA *e*ScP ScP 08 17 19.6 +0.8
HIA *e*S **S** **08 20 24.2 +0.5**
BHPL Bhopal 57.77 303 *e*P **P** **08 12 47.8 -1.1**
BHPL AMb AMB 08 12 51.5
comp=Z,995nm,1.6s,mb6.4
GOA Goa 57.93 294 *e*P **P** **08 12 50.0 -0.2**
GOA AMb AMB 08 12 53.2
comp=Z,961nm,1.8s,mb6.3
ULN Ulaanbaatar 58.13 344 P **P** **08 12 51.6 +0.6**
SNR=72
ULN Ulaanbaatar 58.13 344*c i*P **P** **08 12 51.4 +0.4**
ULN Ulaanbaatar 58.13 344 *e*P **P** **08 12 51.1 +0.1**
comp=Z,352nm,1.4s,mb6.0
ULN *e*PcP PcP 08 13 40.0 -0.5
ULN *e*ScP ScP 08 17 23.4 -0.2
ULN Ulaanbaatar 58.13 344 P **P** **08 12 51.2 +0.2**
comp=Z,220nm,1.3s,comp=Z,3μm,mb5.8
KAD Karad 58.23 296 *e*P **P** **08 12 51.6 -0.7**
KAD AMb AMB 08 12 54.2
comp=Z,779nm,1.0s,mb6.5
SONM Songino Array 58.28 343 P **P** **08 12 52.1 0.0**
comp=Z,84nm,1.0s,mb5.5,baz=160,slow=6.1,SNR=168
SONM ScP ScP 08 17 25.5 +1.2
comp=Z,8.8nm,0.9s,baz=162,slow=4.8,SNR=4.6
SONM PKPPKP 08 42 22.8
comp=Z,3.6nm,1.0s,baz=291,slow=1.4,SNR=7.9
SONM P4KPbc 08 50 00.2
comp=Z,1.0nm,0.9s,baz=256,slow=6.0,SNR=3.8
SONM Songino Array 58.28 343 P **P** **08 12 52.1 0.0**
SONM ScP ScP 08 17 25.5 +1.2
SONM P'P' 08 42 22.8
LGTI Lohaghat 58.52 311 *e*P **P** **08 12 54.2 +0.2**
PTH Pithoragarh 58.59 311 *e*P **P** **08 12 54.0 -0.5**
PTH *ex* x 08 15 06.0
POO Poona 58.96 297 *e*P **P** **08 12 56.6 -0.7**
POO AMb AMB 08 12 58.1
comp=Z,580nm,1.2s,mb6.3
DRV Dumont d'Urvil 59.58 174 P **P** **08 13 06.0 +5.3**
DRV S **S** **08 20 55.0 -1.0**
DRV SS SS 08 24 53.0 -1.5
DRV R 08 32 00.0
CASY Casey 59.73 188⇑ *i*P **P** **08 13 02.3 +0.6**
CASY *e*S **S** **08 20 59.4 +1.4**
AFI Afiamalu 59.84 102 *e*P **P** **08 13 03.6 +0.2**
AFI *e* 08 13 51.7
AFI pmax pmax
comp=Z,127nm,1.0s,mb5.7
AFI Afiamalu 59.84 102 *e*P **P** **08 13 03.6 +0.2**
comp=Z,127nm,1.0s,mb5.7
AFI *e*PcP PcP 08 13 51.6 +3.5
NDI New Delhi 60.43 309 *ex* P **P** **08 13 03.5 -3.6**
NDI *ex* x 08 21 01.5
DDI Dehra Dun 60.59 311 *e*P **P** **08 13 05.2 -3.0**
AJM Ajmer 61.45 306 *e*P **P** **08 13 12.7 -1.4**
AJM AMb AMB 08 13 16.5
comp=Z,706nm,1.4s,mb6.3
ZAK Zakamensk 61.48 343⇑ *i*P **P** **08 13 13.6 -0.1**
ZAK *e* pP 08 13 53.8 -2.0
ZAK *e* 08 21 19.8
ZAK pmax pmax
comp=Z,54nm,1.3s,mb5.2
SMLA Simla 61.66 311 *i* P **P** **08 13 15.4 0.0**
SMLA *ex* x 08 13 19.2
comp=Z,1μm,0.3s
SMLA *i* S **S** **08 21 22.2 -1.4**
SDNR Sundarnagar 61.99 312 *e*P **P** **08 13 17.6 0.0**
BHK Bhakra 62.36 311 *e*P **P** **08 13 18.8 -1.2**
BHK *ex* x 08 13 56.2
TLY Talaya 62.53 344 P **P** **08 13 21.0 +0.3**
comp=Z,235nm,1.1s,mb5.9,SNR=12
TLY Talaya 62.53 344 P **P** **08 13 21.3 +0.6**
SNR=18
TLY Talaya 62.53 344 *e*P **P** **08 13 20.8 +0.1**
TLY *e* pP 08 14 03.1 +0.2
TLY *e*S **S** **08 21 34.3 +0.7**
TLY pmax pmax
comp=Z,100nm,1.5s,mb5.4
TLY Talaya 62.53 344 *e*P **P** **08 13 21.1 +0.4**
comp=Z,114nm,1.4s,mb5.5
TLY *e* pP 08 13 58.4 -4.5
WMQ Urumqi 62.60 329 P **P** **08 13 21.6 +0.2**
WMQ PCP PcP 08 13 59.5 +0.9
WMQ PP PP 08 15 43.5 +2.0
WMQ S **S** **08 21 32.3 -2.5**
WMQ XS sS 08 22 50.3 +2.1
WMQ SCS ScS 08 22 51.3 -4.7
WMQ AMB AMB
comp=Z,182nm,1.0s,mb5.9
WMQ AMB AMB
comp=Z,2μm,5.0s
WMQ LR LR
comp=N,2μm,26.0s
WMQ LR LR
comp=E,1μm,28.0s
WMQ LR LR
comp=Z,935nm,36.0s
IRK Irkutsk 62.86 344⇓⇓ *i*P **P** **08 13 23.0 +0.1**
IRK *e* 08 13 59.3
IRK *e*S **S** **08 21 40.2 +2.5**
IRK *e* 08 21 58.2
IRK pmax pmax
comp=Z,241nm,2.5s,mb5.6
DLH Dalhousie 63.25 312 *e*P **P** **08 13 25.0 -0.9**
DLH *ex* x 08 13 33.0
MOY Mondy 63.30 342 *e*P **P** **08 13 26.2 +0.4**
MOY *e* 08 14 02.6
MOY pmax pmax
comp=Z,44nm,2.2s,mb4.9
THN Thein Dam 63.38 312 *e*P **P** **08 13 24.3 -2.4**
THN *e*S **S** **08 21 42.4 -2.6**
MIR Mirnyy 63.41 195α *i*P **P** **08 13 27.0 +0.7**
MIR *i* 08 14 03.0
MIR *i* pP 08 14 12.0 +3.4
MIR *i* 08 15 52.0
MIR *i* 08 23 00.0
MIR pmax pmax
comp=Z,400nm,1.5s,mb6.0
MIR pmax pmax
comp=Z,1μm,6.0s
NRGR Nerungri 64.09 358 *i* P **P** **08 13 32.3 +1.4**
NRGR S **S** **08 21 57.4 +4.6**
NRGR smax
comp=E,58nm,0.5s
CLNS Chul'man 64.27 358 *e*P **P** **08 13 31.9 -0.1**
CLNS *e* 08 14 01.2
CLNS *e* 08 15 55.7
CLNS *e* 08 22 35.2
CLNS pmax pmax
comp=Z,33nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,27nm,1.0s
CLNS pmax pmax
comp=E,14nm,0.8s
CLNS pmax pmax
comp=Z,13nm,1.1s,mb4.7
CLNS pmax pmax
comp=N,19nm,1.1s
CLNS pmax pmax
comp=E,14nm,1.1s
BHJ Bhuj 64.32 300 *e*P **P** **08 13 33.1 0.0**
BHJ AMb AMB 08 13 35.6
comp=Z,486nm,1.4s,mb6.1
HVS Khovu-Aksy 65.38 337*d i*P **P** **08 13 39.2 -0.1**
HVS pmax pmax
comp=Z,638nm,1.0s,mb6.4
PEA0B Petropavlovsk- 65.70 19 *e*P **P** **08 13 42.0 +0.7**
PEA0B *e* 08 14 04.0
PETK Petropavlovsk- 65.70 19 P **P** **08 13 41.0 -0.3**
comp=Z,55nm,0.6s,mb5.6,baz=179,slow=3.1,SNR=76
PETK PKP2bc 08 42 23.9
comp=Z,6.7nm,0.9s,baz=87,slow=6.2,SNR=3.9
PETK Petropavlovsk- 65.70 19 P **P** **08 13 41.0 -0.3**
PETK ⇑ *e* 08 42 23.9
PET Petropavlovsk 65.95 20 *e*P **P** **08 13 43.0 +0.1**
PET *e*S S 08 22 15.5 -0.1
PET *e*SS SS 08 26 38.0 +3.4
PET pmax pmax
comp=Z,88nm,1.3s,mb5.4
PET pmax pmax
comp=Z,1μm,10.9s
PET MLR MLR
comp=Z,1μm,20.0s

BOD Bodaibo 66.14 352 *e*P P **08 13 43.1 -0.9**
BOD *e* 08 22 18.4
BOD pmax pmax
comp=Z,126nm,1.0s,mb5.7
KSH Kashi 66.83 319 P P **08 13 50.3 +1.5**
KSH PCP PcP 08 14 18.0 +1.8
KSH AP pP 08 14 35.5 +3.9
KSH PP PP 08 16 22.1 +3.5
KSH SCP 08 18 01.4
KSH PCS 08 18 21.0
KSH S S 08 22 26.8 0.0
KSH SCS ScS 08 23 25.3 -3.5
KSH XS sS 08 23 44.6 +3.5
KSH AMB AMB
comp=Z,2μm,1.4s,mb6.7
KSH AMB AMB
comp=Z,5μm,3.2s
KSH LR LR
comp=N,2μm,7.2s
KSH LR LR
comp=E,1μm,6.4s
KSH LR LR
comp=Z,3μm,13.0s
MK31 Makanchi Array 67.42 328 *i* P P **08 13 52.1 -0.3**
MK31 pmax pmax
comp=Z,208nm,0.8s,mb6.0
MK31 Makanchi Array 67.42 328 *e*P P **08 13 52.2 -0.1**
MK31 *e*PcP PcP 08 14 18.6 +0.1
MKAR Makanchi Array 67.42 328 P P **08 13 52.1 -0.3**
comp=Z,98nm,0.6s,mb5.8,baz=120,slow=7.2,SNR=263
MKAR PKiKP PKiKP 08 20 15.7 -0.3
comp=Z,2.4nm,0.8s,baz=121,slow=2.2,SNR=7.0
MKAR PKP2bc 08 42 15.1
comp=Z,3.3nm,0.9s,baz=300,slow=2.7,SNR=7.2
MKAR P4KPbc 08 50 41.7
comp=Z,2.3nm,0.9s,baz=123,slow=4.5,SNR=11
KZA Kyzart 68.67 321 P P **08 14 00.8 +0.6**
SNR=46
TKM2 Tokmak 2 68.91 322 *e*P P **08 14 01.8 0.0**
TKM2 *e* 08 16 39.7
TKM2 pmax pmax
comp=Z,81nm,0.8s,mb5.5
TKM2 Tokmak 2 68.91 322 P P **08 14 02.1 +0.4**
SNR=53
TKM2 Tokmak 2 68.91 322 *e*P P **08 14 01.8 0.0**
comp=Z,81nm,0.8s,mb5.5
TKM2 *e*PP PP 08 16 39.7 +3.1
KBK Karagaybulak 69.17 321 P P **08 14 03.9 +0.5**
SNR=25
UCH Uchtor 69.21 321 P P **08 14 00.2 -3.4**
SNR=11
UCH Uchtor 69.21 321 *e*P P **08 14 04.4 +0.7**
comp=Z,18nm,0.8s,mb4.8
UCH *e*PcP PcP 08 14 27.2 +1.0
KBL Kabul 69.29 311 *e*P P **08 14 04.2 -0.1**
KBL *e*S S 08 22 55.5 -0.7
KBL pmax pmax
comp=Z,425nm,1.0s,mb6.1
KBL Kabul 69.29 311 *e*P P **08 14 04.2 -0.1**
comp=Z,425nm,1.0s,mb6.1
KBL *e*S S 08 22 55.5 -0.7
AAK Ala-Archa 69.44 321 P P **08 14 05.8 +0.8**
comp=Z,883nm,1.0s,mb6.5,SNR=70
AAK Ala-Archa 69.44 321 P P **08 14 05.7 +0.7**
SNR=59
AAK Ala-Archa 69.44 321*c i*P P **08 14 05.5 +0.5**
AAK pmax pmax
comp=Z,80nm,1.2s,mb5.3
AAK Ala-Archa 69.44 321 P P **08 14 05.6 +0.5**
SNR=66
AAK Ala-Archa 69.44 321 *e*P P **08 14 05.6 +0.6**
comp=Z,129nm,0.8s,mb5.7
AAK *e*PcP PcP 08 14 28.3 +1.2
AAK *e* pP 08 14 48.0 0.0
AAK *e*S S 08 22 59.8 +2.2
AAK Ala-Archa 69.44 321 P P **08 14 05.3 +0.3**
comp=Z,90nm,1.8s,comp=Z,2μm,mb5.2
YAK Yakutsk 69.46 1 *e*P P **08 14 04.0 -0.7**
YAK *e* 08 14 26.6
YAK *e**PP pP 08 14 41.9 -5.8
YAK *i* S S 08 22 56.5 -0.6
YAK *e* 08 23 46.2
YAK pmax pmax
comp=Z,329nm,0.9s,mb6.1
YAK pmax pmax
comp=N,102nm,1.0s
YAK pmax pmax
comp=E,15nm,0.9s
YAK smax
comp=N,1μm,2.7s
YAK smax
comp=E,331nm,2.0s
YAK Yakutsk 69.46 1 *e*P P **08 14 04.1 -0.6**
comp=E,376nm,0.9s,mb6.1
FRU Bishkek 69.47 321⇑*i*P P **08 14 06.0 +0.8**
FRU *e* 08 14 30.0
FRU pmax pmax
comp=Z,440nm,2.0s,mb5.8
CHMS Chumysh 69.48 321 P P **08 14 05.0 -0.3**
SNR=23
AML Almayashu 69.68 320 P P **08 14 07.2 +0.7**
SNR=78
AML Almayashu 69.68 320 *e*P P **08 14 06.9 +0.4**
comp=Z,106nm,0.6s,mb5.8
AML *e*PcP PcP 08 14 29.3 +1.1
USP Ospenovka 69.78 322 P P **08 14 07.2 +0.1**
SNR=108
EKS2 Erkin-Say 69.91 321 P P **08 14 08.5 +0.7**
SNR=52
EKS2 Erkin-Say 69.91 321 *e*P P **08 14 08.2 +0.3**
comp=Z,324nm,1.5s,mb5.8
EKS2 *e*PcP PcP 08 14 29.8 +0.8
ZAA0 Zalesovo Array 71.07 335 *e*P P **08 14 13.4 -1.3**
ZAA0 *e* pP 08 14 56.1 -1.7
ZALV Zalesovo Beam 71.07 335 P P **08 14 13.4 -1.2**
comp=Z,204nm,0.6s,mb6.0,baz=139,slow=5.5,SNR=271
ZALV S S 08 23 11.6 -4.4
comp=Z,8.0nm,0.8s,baz=123,slow=11,SNR=8.9
ZALV P4KPbc 08 42 01.0
comp=Z,3.2nm,0.9s,baz=335,slow=6.7,SNR=4.0
ZALV Zalesovo Beam 71.07 335 P P **08 14 13.5 -1.1**
ZALV S S 08 23 11.6 -4.4
ZALV Zalesovo Beam 71.07 335 P P **08 14 13.4 -1.2**
ZALV S S 08 23 11.6 -4.4
ZALV ⇑*e* 08 42 01.0
MSEY Mahe Island 71.61 268 *e*P P **08 14 19.2 +0.4**
comp=Z,105nm,0.9s,mb5.6
KURK Kurchatov 71.78 330 P P **08 14 18.3 -0.7**
comp=Z,4μm,0.9s,mb7.2
KURK Kurchatov 71.78 330 P P **08 14 18.9 -0.1**
SNR=322
KURK Kurchatov 71.78 330 P P **08 14 18.2 -0.8**
comp=Z,246nm,0.6s,mb6.1,baz=131,slow=5.1,SNR=262
KURK PKiKP PKiKP 08 20 22.0 0.0
comp=Z,3.1nm,0.8s,baz=133,slow=1.2,SNR=6.5
KURK S S 08 23 23.3 -1.1
comp=Z,2.4nm,1.1s,baz=131,slow=12,SNR=6.9
KURK PKPPKP 08 41 54.8
comp=Z,0.6nm,0.3s,baz=284,slow=2.8,SNR=3.7
KURK P4KPbc 08 50 59.7
comp=Z,0.8nm,0.3s,baz=133,slow=3.6,SNR=4.6
KURK Kurchatov 71.78 330 P P **08 14 18.2 -0.8**
KURK S S 08 23 23.3 -1.0
KURK pmax pmax
comp=Z,247nm,0.6s,mb6.1
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK smax
comp=N,2.0nm,1.1s
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURK pmax pmax
comp=Z,1.0nm,0.3s
KURK Kurchatov 71.78 330 *e*P P **08 14 18.9 0.0**
comp=Z,679nm,0.9s,mb6.4
KURK *e*S S 08 23 22.4 -1.9
SMY Shemya 71.95 28 *e*P P **08 14 20.6 +0.6**
SMY pmax pmax
comp=Z,136nm,0.8s,mb5.7
SMY Shemya 71.95 28 *e*P P **08 14 20.6 +0.6**
comp=Z,136nm,0.8s,mb5.7
VNDA Vanda 72.14 173 P P **08 14 21.1 +0.3**
comp=Z,57nm,0.6s,mb5.5,baz=319,slow=6.5,SNR=212
VNDA SKKP 08 37 12.7
comp=Z,1.2nm,0.5s,baz=142,slow=5.9,SNR=7.0
VNDA PKPPKP 08 42 10.6
comp=Z,7.5nm,1.1s,baz=54,slow=3.5,SNR=4.2
VNDA LR LR 08 45 13.1
comp=Z,3μm,20.1s,baz=360,slow=35
VNDA Vanda 72.14 173 *e*P P **08 14 21.0 +0.2**
VNDA *e* pP 08 15 02.2 -1.9
VNDA pmax pmax
comp=Z,55nm,0.7s
VNDA Vanda 72.14 173 *e*P P **08 14 21.0 +0.2**
comp=Z,55nm,0.7s,mb5.4
VNDA *e* pP 08 15 02.2 -1.9
KK31 Karatay Array 72.20 320 *i* P P **08 14 21.9 +0.2**
NVS Novosibirsk 72.36 335⇑*i*P P **08 14 20.8 -1.5**
NVS pmax pmax
comp=N,415nm,1.4s
NVS pmax pmax
comp=E,414nm,1.4s
NVS pmax pmax
comp=Z,741nm,1.4s,mb6.2
SEY Seymchan 72.88 12⇓*e*P P **08 14 25.2 0.0**
SBA Scott Base 73.06 172 *e*P P **08 14 27.9 +1.7**
SBA pmax pmax
comp=Z,86nm,0.9s,mb5.5
SBA Scott Base 73.06 172 *e*P P **08 14 27.9 +1.7**
comp=Z,86nm,0.8s,mb5.5
WBK Wadi Bani Khal 73.46 296⇑P P **08 14 29.7 +0.2**
SNR=36
MAW Mawson 73.48 201⇑*i*P P **08 14 29.6 +0.8**
comp=Z,75nm,0.8s,mb5.5
MAW *e*S S 08 23 21.8 -21
MAW Mawson 73.48 201 P P **08 14 29.7 +0.9**
comp=Z,89nm,0.8s,mb5.6,baz=71,slow=7.0,SNR=145
MAW PKKPbc PKKPbc 08 34 01.5 -4.7
comp=Z,2.0nm,0.7s,baz=277,slow=3.2,SNR=3.8
MAW PKP2bc 08 42 01.0
comp=Z,6.1nm,0.9s,baz=264,slow=6.6,SNR=7.9
MAW LR LR 08 42 45.9
comp=Z,2μm,21.2s,baz=76,slow=32
JMDO Jabal Madar 74.17 296⇓P P **08 14 33.4 -0.2**
SNR=35
SMDO Samad 74.40 296⇓P P **08 14 35.0 0.0**
SNR=67
BIDO Bidbid 74.45 297⇑P P **08 14 35.4 +0.1**
SNR=242
BSY Bisya 75.07 296⇑P P **08 14 38.7 -0.1**
SNR=63
HOQ Hoqain 75.19 297⇓P P **08 14 39.5 0.0**
SNR=72
ARQ Araqi 75.83 296⇑P P **08 14 43.0 -0.1**
SNR=58
ADK Adak 76.00 32 *e*P P **08 14 43.1 -0.3**
ADK pmax pmax
comp=Z,95nm,1.0s,mb5.4
ADK Adak 76.00 32 *e*P P **08 14 43.0 -0.4**
comp=Z,95nm,1.0s,mb5.4
HATD Hatta, Dubai 76.55 298⇓P P **08 14 46.7 -0.5**
SNR=64
RBK Rabkut 76.57 290⇑P P **08 14 47.1 -0.3**
SNR=30
BANOM Banah 76.69 299⇓P P **08 14 47.8 -0.1**
SNR=68
VOSK Vostochnaya 76.82 329 P P **08 14 47.2 -0.9**
VOSK pmax pmax
comp=Z,596nm,1.2s,mb6.1
WHFO Wadi Hawf 77.06 290⇓P P **08 14 49.0 -1.1**
SNR=36
BVA0 Borovoye Array 77.29 329 P P **08 14 50.0 -0.7**
BVA0 pmax pmax
comp=Z,170nm,1.2s,mb5.5
BVAR Borovoye Array 77.29 329 P P **08 14 50.2 -0.5**
comp=Z,401nm,1.0s,mb6.0,baz=132,slow=4.4,SNR=460
BVAR PKP2bc 08 41 52.0
comp=Z,0.5nm,0.4s,baz=294,slow=4.7,SNR=4.0
BVAR P4KPbc 08 51 24.6
BVAR Borovoye Array 77.29 329 P P **08 14 50.2 -0.5**
BVAR ⇑*e* 08 41 52.0
BRVK Borovoye 77.36 329 P P **08 14 51.9 +0.8**
comp=Z,4μm,1.0s,mb7.0
BRVK Borovoye 77.36 329 P P **08 14 51.0 0.0**
SNR=268
BRVK Borovoye 77.36 329 *e*P P **08 14 50.6 -0.4**
comp=Z,971nm,1.1s,mb6.3
ABTO Aybut 77.38 290⇑P P **08 14 51.4 -0.6**
SNR=25
ABPO Ambohimpanom 78.41 252 P P **08 15 00.5 +2.9**
comp=Z,235nm,0.6s,mb6.0,SNR=8.8
ABPO Ambohimpanom 78.41 252 *e*P P **08 14 57.5 -0.2**
comp=Z,266nm,1.2s,mb5.8
OPO Ambohidratompo 78.48 253 P P **08 14 58.6 +0.5**
comp=Z,94nm,0.6s,mb5.6,baz=83,slow=4.9,SNR=196
HON Honolulu 78.48 66 *e*P P **08 14 58.8 +0.8**
ABKT Ailbek 78.74 311 P P **08 14 59.2 +0.2**
comp=Z,2μm,1.3s,mb6.6,SNR=94
TIXI Tiksi 79.11 0*c i*P P **08 14 59.7 -0.6**
TIXI pmax pmax
comp=Z,142nm,0.6s,mb5.8
TIXI Tiksi 79.11 0 *e*P P **08 14 58.9 -1.4**
comp=Z,214nm,0.9s,mb5.8
TIXI *e*S S 08 24 41.1 -3.1
BILL Bilibino 80.29 14⇑*i*P P **08 15 06.3 -0.4**
BILL *e**PP pP 08 15 37.4 -14
BILL *e* 08 18 10.4
BILL *e*S S 08 24 54.0 -2.6
BILL pmax pmax
comp=Z,21nm,0.7s,mb4.9
BILL Bilibino 80.29 14 *e*P P **08 15 06.7 0.0**
comp=Z,28nm,0.9s,mb4.9
POHA Pohakuloa 80.42 69 *e*P P **08 15 08.6 +0.2**
comp=Z,104nm,0.6s,mb5.6
MUKL Al Mukalla 80.85 286 *e*P P **08 15 11.3 +0.5**
PAE Paea 81.00 107 *e*P P **08 15 13.0 +1.4**
comp=Z,743nm,1.1s,mb6.2
PAE Paea 81.00 107 *e*P P **08 15 13.0 +1.4**
PAE pmax pmax
comp=Z,743nm,1.1s,mb6.2
PPT Papeete 81.01 107 *e*P P **08 15 13.2 +1.5**
comp=Z,70nm,1.1s,mb5.2
PPT Papeete 81.01 107 *e*LR LR 08 41 03.3
comp=Z,2μm,30.8s
PPT Papeete 81.01 107 P P **08 15 13.3 +1.7**
comp=Z,88nm,1.0s,mb5.3,baz=261,slow=3.3,SNR=7.8
PPT LR LR 08 46 29.8
comp=Z,375nm,18.6s,baz=274,slow=32
TIAR Tiarei 81.23 107 *e*P P **08 15 14.5 +1.7**
comp=Z,541nm,0.8s,mb6.2
TVO Taravao 81.30 107 *e*P P **08 15 14.9 +1.7**
comp=Z,684nm,0.9s,mb6.3
TVO Taravao 81.30 107 *e*P P **08 15 14.9 +1.7**
TVO pmax pmax
comp=Z,684nm,0.9s,mb6.3
AB31 Akbulak array 81.47 322 P P **08 15 12.4 -1.0**
AB31 pmax pmax
comp=Z,215nm,0.9s,mb5.8
SYO Syowa Base 82.19 201⇓*e*P P **08 15 16.0 -0.8**
QSPA South Pole Qui 82.36 180 P P **08 15 18.3 +0.7**
comp=Z,206nm,0.8s,mb5.8,baz=315,slow=1.2,SNR=3.2
QSPA S S 08 25 17.1 -0.7
comp=Z,4.2nm,1.0s,baz=22,slow=7.5,SNR=17
QSPA PKKPbc PKKPbc 08 33 42.7 -4.2
comp=Z,24nm,0.9s,baz=213,slow=1.8,SNR=21
QSPA South Pole Qui 82.36 180 P P **08 15 18.3 +0.7**
QSPA S S 08 25 17.1 -0.7
QSPA PKKPbc PKKPbc 08 33 42.7 -4.2
MEH Mehetia 82.42 107 *e*P P **08 15 21.0 +2.0**
comp=Z,1μm,1.1s,mb6.5
PMOR Pomariorio Ree 82.87 104 *e*P P **08 15 22.9 +1.5**
comp=Z,136nm,0.8s,mb5.7
AKUT Akutan 82.87 33 *e*P P **08 15 21.5 +0.9**
AKTK Aktyubinsk 83.06 323 P P **08 15 21.6 0.0**
AKTK S S 08 25 23.3 -2.5
AKTK PKKPbc PKKPbc 08 33 42.6 -2.1
AKTO Aktyubinsk 83.06 323 P P **08 15 21.6 0.0**
comp=Z,360nm,0.9s,mb6.1,baz=110,slow=5.7,SNR=246
AKTO S S 08 25 23.3 -2.5
comp=Z,4.2nm,0.9s,baz=246,slow=21,SNR=17
AKTO PKKPbc PKKPbc 08 33 42.6 -2.1
comp=Z,2.7nm,0.7s,baz=317,slow=3.7,SNR=7.7
AKTO Aktyubinsk 83.06 323 P P **08 15 21.7 +0.1**
AKTO S S 08 25 23.3 -2.5
VAH Vaihoa 83.10 104 *e*P P **08 15 23.9 +1.3**
comp=Z,110nm,1.1s,mb5.5
SVE Sverdlovsk 84.03 329⇓*e*P P **08 15 25.8 -0.6**
SVE *e*S S 08 25 34.8 -0.4
SVE *e*SS SS 08 31 09.6 +1.5
SVE *e*SSS 08 34 41.7
SVE pmax pmax
comp=Z,774nm,1.3s,mb6.3
SVE pmax pmax
comp=Z,651nm,7.5s
BDHA Al Bayda' 84.08 285 *e*P P **08 15 28.6 +1.1**
BDHA AMb AMB 08 15 29.9
comp=Z,196nm,0.9s,mb5.8
LBOS 84.36 285 *e*P P **08 15 29.9 +0.9**
GAMB Gambell 84.44 23 *e*P P **08 15 28.5 +0.2**
comp=Z,117nm,0.8s,mb5.7
QRN Al-Qurain 84.60 300 *e*P P **08 15 29.2 -0.7**
baz=300
QRN AMb AMB 08 15 31.2
comp=Z,747nm,1.1s,mb6.3,baz=300
KBD Kabd 84.88 300 *e*P P **08 15 30.3 -1.0**
baz=300
KBD AMb AMB 08 15 32.6
comp=Z,226nm,1.3s,mb5.7,baz=300
UMR Umm Al-Rimmam 84.93 301 *e*P P **08 15 30.3 -1.3**
baz=301
UMR AMb AMB 08 15 32.9
comp=Z,575nm,1.3s,mb6.2,baz=301
ARU Arti 84.94 329 P P **08 15 30.6 -0.3**
comp=Z,3μm,1.2s,mb6.8,SNR=53
ARU Arti 84.94 329*c i*P P **08 15 30.5 -0.4**
ARU *e* 08 18 47.3
ARU *e*PPP 08 20 41.7
ARU *e*S S 08 25 35.9 -8.3
ARU SS SS 08 31 20.9 -0.5
ARU SSS 08 34 51.0
ARU pmax pmax
comp=Z,709nm,1.2s,mb6.3
ARU Arti 84.94 329 *e*P P **08 15 30.1 -0.8**
comp=Z,401nm,0.9s,mb6.2
RDF Al-Radifah 84.95 300 *e*P P **08 15 30.4 -1.3**
baz=300
RDF AMb AMB 08 15 32.9
comp=Z,717nm,1.3s,mb6.2,baz=300
NAY Al-Naaiem 85.28 300 *e*P P **08 15 32.2 -1.0**
baz=300
NAY AMb AMB 08 15 34.4
comp=Z,523nm,0.9s,mb6.3,baz=300
DHBB Dhamar BB 85.30 285 *e*P P **08 15 34.7 +1.1**
DHBB AMb AMB 08 15 35.7
comp=Z,330nm,1.2s,mb5.9
MIB Mutribah 85.30 301 *e*P P **08 15 32.4 -1.0**
baz=301
MIB AMb AMB 08 15 35.3
comp=Z,1μm,1.3s,mb6.4,baz=301
SDPT Sand Point 86.17 33 *e*P P **08 15 37.2 +0.1**
comp=Z,343nm,1.0s,mb6.0
SOKR Solikamsk 86.95 331*c i*P P **08 15 39.8 -0.9**
SOKR S S 08 25 54.8 -8.8
SOKR pmax pmax
comp=Z,200nm,0.7s,mb6.1
CHGN Chignik 87.58 32 *e*P P **08 15 44.4 +0.6**
MAK Makhachkala 87.89 314 *e*P P **08 15 41.2 -4.4**
MAK *e* 08 19 11.5
MAK *i* *SS sS 08 27 23.3 -8.2
MAK *e*SS SS 08 32 01.9 -3.4
MAK pmax pmax
comp=Z,587nm,1.5s,mb6.2
MAK MLR MLR
comp=Z,847nm,19.0s
DGRG David-gareji 89.14 312 P P **08 15 53.0 +1.5**
GNI Garni 89.37 310 P P **08 15 54.0 +1.4**
SNR=6.6
GNI Garni 89.37 310 P P **08 15 54.1 +1.5**
comp=Z,37nm,0.9s,mb5.3,baz=139,slow=8.3,SNR=13
GNI Garni 89.37 310*c i*P P **08 15 53.4 +0.8**
GNI pmax pmax
comp=Z,128nm,1.6s
GNI Garni 89.37 310 *e*P P **08 15 53.3 +0.7**
comp=Z,117nm,1.1s,mb5.7
MTA Mtatsminda 89.61 312 P P **08 15 54.6 +0.9**
KMBO Kilima Mbogo 90.11 269 P Px 08 16 07.8
comp=Z,8.4nm,0.7s,baz=72,slow=5.8,SNR=15
KMBO Kilima Mbogo 90.11 269 P Px 08 16 07.8
KMBO pmax pmax
comp=Z,8.0nm,0.7s
OHAK Old Harbor 90.54 32 *e*P P **08 15 57.5 -0.2**
comp=Z,52nm,0.6s,mb5.7
ONI Oni 90.75 313 P P **08 15 59.7 +0.7**
NVL N'lazarevskaya 91.04 197*c i*P P **08 16 01.0 +1.2**
NVL S SKSac 08 26 15.6 +1.3
NVL pmax pmax
comp=Z,139nm,1.1s,mb5.9
KDAK Kodiak Island 91.04 32 P P **08 16 01.0 +1.0**
comp=Z,213nm,0.9s,mb6.2,SNR=6.5
KDAK Kodiak Island 91.04 32 *e*P P **08 15 58.7 -1.3**
comp=Z,25nm,0.8s,mb5.3
MAIT Maitri 91.06 197 *e*P P **08 15 58.4 -1.5**
TAOE Nukuʻhiva Isla 91.14 99 *e*P P **08 16 02.7 +1.2**
comp=Z,1μm,1.3s,mb6.9
GOF Gofitskoye 91.45 315 *e*P P **08 16 03.2 +1.0**
GOF pmax pmax
comp=Z,190nm,1.0s,mb6.1
KIV Kislovodsk 91.52 314 P P **08 16 03.3 +0.8**
SNR=7.6
KIV Kislovodsk 91.52 314⇑*e*P P **08 16 02.0 -0.6**
KIV *e**PP pP 08 16 27.8 -20
KIV *e* 08 19 47.6
KIV *e*S SKSac 08 26 19.6 +1.7
KIV *e*PS PS 08 28 37.8 +18
KIV *e*SS SS 08 33 08.3 +11
KIV pmax pmax
comp=Z,66nm,1.3s,mb5.5
KIV Kislovodsk 91.52 314 *e*P P **08 16 03.0 +0.4**
comp=Z,45nm,1.0s,mb5.5
PPLA Purkeypile 92.33 27 *e*P P **08 16 05.0 -0.8**
comp=Z,77nm,1.3s,mb5.6
PPLA *e*PKKPdf PKKPdf 08 33 20.1 +0.4
CHUM Lake Minchumin 92.48 26 *e*P P **08 16 05.3 -1.2**
comp=Z,81nm,1.2s,mb5.6
CHUM *e* pP 08 16 52.8 +1.2
CHUM *e* 08 17 06.0
CHUM *e*PKKPdf PKKPdf 08 33 19.5 0.0
FIB Fire Island 92.92 29 *e*P P **08 16 08.3 -0.3**
FIB pmax pmax
comp=Z,58nm,0.7s,mb5.8
FIB Fire Island 92.92 29 *e*P P **08 16 08.3 -0.3**
comp=Z,58nm,0.7s,mb5.8
KTH Kantishna Hill 93.02 26 *e*P P **08 16 07.4 -1.6**
comp=Z,45nm,1.1s,mb5.5
KTH *e*PKKPdf PKKPdf 08 33 17.4 -1.0
SEW Seward 93.08 30 *e*P P **08 16 08.6 -0.8**
comp=Z,66nm,1.3s,mb5.6
BPAW Bear Paw Mtn. 93.09 26 *e*P P **08 16 09.5 +0.2**
comp=Z,60nm,1.6s,mb5.5
BPAW *e*PKKPdf PKKPdf 08 33 17.1 -1.3
BPAW *e* 08 36 39.3
RC01 Rabbit Creek A 93.11 29 *e*P P **08 16 06.9 -2.6**
comp=Z,45nm,0.8s,mb5.7
TRF Thorofare Moun 93.28 26 *e*P P **08 16 08.4 -1.8**
comp=Z,62nm,1.4s,mb5.5
TRF *e*PKKPdf PKKPdf 08 33 17.2 -0.8
VRHR Novokhopersk 93.29 321 *e*P P **08 16 08.9 -1.6**
VRHR pmax pmax
comp=Z,210nm,0.8s,mb6.3
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,80nm,1.0s
PMR Palmer 93.49 28 *e*P P **08 16 09.0 -2.2**
PMR pmax pmax
comp=Z,25nm,0.5s,mb5.6
PMR Palmer 93.49 28 *e*P P **08 16 09.0 -2.2**
comp=Z,25nm,0.5s,mb5.6
RKT Rikitea 93.89 114 *e*P P **08 16 15.0 +1.0**
comp=Z,87nm,1.2s,mb5.8
RKT Rikitea 93.89 114 *e*LR LR 08 47 01.4
comp=Z,884nm,32.5s
RKT Rikitea 93.89 114 *e*P P **08 16 15.0 +1.0**
RKT pmax pmax
comp=Z,87nm,1.2s,mb5.8
MCK McKinley 93.92 26 *e*P P **08 16 11.5 -1.6**
MCK pmax pmax
comp=Z,25nm,0.7s,mb5.5
MCK McKinley 93.92 26 *e*P P **08 16 11.5 -1.7**
comp=Z,25nm,0.7s,mb5.5
COLD Coldfoot 93.99 23 *e*P P **08 16 12.5 -0.9**
comp=Z,35nm,0.7s,mb5.6
SNAA Sanae 94.48 194 *e*P P **08 16 15.7 0.0**
SNAA *e* 08 16 16.8
SNAA *e* 08 16 21.2
SNAA *e* 08 33 11.8
SNAA *e* 08 41 17.3

SNAA e 08 41 22.7
SNAA Sanae 94.48 194 c iP **P** **08 16 15.9 +0.2**
SNAA Sanae 94.48 194 eP **P** **08 16 15.7 0.0**
comp=Z,111nm,0.9s,mb6.0
ASF Jabal al Asfar 94.52 302 P **P** **08 16 16.2 -0.5**
comp=Z,27nm,1.0s,mb5.4,baz=312,slow=1.9,SNR=16
COLA College 94.56 25 i P **P** **08 16 14.2 -1.9**
COLA College 94.56 25 eP **P** **08 16 14.9 -1.1**
comp=Z,18nm,1.1s,mb5.2
VORD Divnogorie 94.74 321 eP **P** **08 16 16.1 -1.1**
VORD pmax pmax
comp=Z,150nm,0.9s,mb6.2
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,110nm,1.1s
VSR Storozhevoye 94.84 321 eP **P** **08 16 15.9 -1.8**
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.7
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,70nm,1.0s
VOR Voronezh 94.88 321 ⇓iP **P** **08 16 16.5 -1.3**
VOR pmax pmax
comp=Z,300nm,1.0s,mb6.5
ANN Anapa 95.36 314 c iP **P** **08 16 18.3 -1.9**
ANN e 08 20 15.7
ANN ePPP 08 22 23.5
ANN eSP SP 08 28 43.7 +4.7
ANN eSS SS 08 33 50.0 -2.4
ANN eSSS 08 37 33.3
ANN pmax pmax
comp=Z,178nm,1.1s,mb6.2
ANN Anapa 95.36 314 ⇑iP **P** **08 16 17.9 -2.3**
PAX Paxson 95.37 27 eP **P** **08 16 19.0 -0.8**
PAX pmax pmax
comp=Z,73nm,1.2s,mb5.8
PAX Paxson 95.37 27 eP **P** **08 16 19.0 -0.7**
comp=Z,73nm,1.2s,mb5.8
MMAI Mount Meron Ar 95.86 302 P **P** **08 16 22.0 -0.8**
comp=Z,23nm,1.0s,mb5.5,baz=106,slow=5.3,SNR=16
EIL Elat 95.94 299 P **P** **08 16 21.9 -1.3**
comp=Z,10nm,0.8s,mb5.2,baz=107,slow=2.2,SNR=7.8
VNA2 Neumayer--Watz 96.07 194 eP **P** **08 16 23.9 +1.0**
VNA2 e 08 16 25.3
VNA2 e 08 16 32.0
VNA2 e 08 21 01.8
VNA2 e 08 33 09.2
VNA2 e 08 41 20.4
VNA2 e 08 41 24.7
MENT Mentasta 96.16 27 eP **P** **08 16 22.2 -1.2**
MOS Moscow 96.17 325 eP **P** **08 16 21.9 -1.7**
MOS e*PP pP 08 17 05.3 -3.5
MOS e 08 20 18.0
MOS pmax pmax
comp=Z,192nm,1.3s,mb6.3
MOS pmax pmax
comp=Z,400nm,1.7s,mb6.5
MOS Moscow 96.17 325 eP **P** **08 16 21.4 -2.2**
VNA3 Neumayer Olymp 96.35 193 eP **P** **08 16 25.0 +0.8**
VNA3 e 08 16 26.0
VNA3 e 08 16 32.1
VNA3 e 08 21 01.0
VNA3 e 08 33 08.2
VNA3 e 08 41 18.3
VNA3 e 08 41 22.7
VNA1 Neumayer--Stat 96.47 194 eP **P** **08 16 25.9 +1.2**
VNA1 e 08 16 27.4
VNA1 e 08 16 33.0
VNA1 e 08 33 08.2
VNA1 e 08 41 18.9
VNA1 e 08 41 22.5
OBN Obninsk 96.73 325 P **P** **08 16 24.8 -1.3**
comp=Z,879nm,1.5s,mb6.9,SNR=8.3
OBN Obninsk 96.73 325 ⇑eP **P** **08 16 24.8 -1.3**
OBN e*PP pP 08 17 06.3 -5.1
OBN i 08 20 22.1
OBN eS SKSac 08 26 45.7 +0.1
OBN eSS SS 08 34 19.7 +8.6
OBN pmax pmax
comp=Z,346nm,1.8s,mb6.4
OBN Obninsk 96.73 325 eP **P** **08 16 25.0 -1.2**
comp=Z,318nm,1.3s,mb6.5
LSZ Lusaka 96.92 254 P **P** **08 16 27.6 -0.3**
comp=Z,11nm,0.5s,mb5.4,baz=98,slow=4.5,SNR=34
LSZ PP PP 08 20 23.7 -2.1
comp=Z,5.9nm,1.1s,baz=103,slow=10,SNR=3.8
LSZ PKKPbc PKKPbc 08 33 10.5 +2.0
comp=Z,5.1nm,0.9s,baz=256,slow=2.5,SNR=6.6
LSZ Lusaka 96.92 254 P **P** **08 16 27.6 -0.3**
LSZ 08 20 23.7
LSZ pmax pmax
comp=Z,11nm,0.5s,mb5.4
LSZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
LSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
LSZ Lusaka 96.92 254 eP **P** **08 16 27.2 -0.8**
comp=Z,31nm,1.0s,mb5.6
LSZ ePKKPdf PKKPdf 08 33 10.7 +0.7
BOSA Boshof 97.03 240 P **P** **08 16 28.0 -0.1**
comp=Z,36nm,0.9s,mb5.7,baz=120,slow=4.4,SNR=33
BOSA PKKPbc PKKPbc 08 33 07.6 -0.9
comp=Z,2.3nm,0.4s,baz=324,slow=2.8,SNR=5.8
BOSA Boshof 97.03 240 eP **P** **08 16 28.0 -0.2**
BOSA pmax pmax
comp=Z,68nm,1.2s,mb5.8
BOSA Boshof 97.03 240 eP **P** **08 16 28.0 -0.2**
comp=Z,68nm,1.2s,mb5.9
EGAK Eagle 97.40 26 eP **P** **08 16 28.2 -0.7**
comp=Z,9.0nm,0.9s,mb5.1
LBTB Lobatse 97.49 244 P **P** **08 16 30.3 0.0**
comp=Z,55nm,1.1s,mb5.8,baz=126,slow=5.4,SNR=40
LBTB PP PP 08 20 28.5 -1.4
comp=Z,19nm,1.4s,baz=75,slow=2.7,SNR=3.5
LBTB PKKPbc PKKPbc 08 33 07.6 +0.4
comp=Z,6.8nm,0.9s,baz=321,slow=1.7,SNR=8.7
LBTB Lobatse 97.49 244 P **P** **08 16 30.3 0.0**
LBTB 08 20 28.5
LBTB pmax pmax
comp=Z,55nm,1.1s,mb5.8
LBTB pmax pmax
comp=Z,19nm,1.4s,mb5.2
LBTB pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
LBTB Lobatse 97.49 244 eP **P** **08 16 30.4 0.0**
comp=Z,73nm,1.2s,mb5.9
LBTB ePKKPbc PKKPbc 08 33 07.4 +0.3
BR131 Keskin Array S 97.79 309 eP **P** **08 16 29.7 -1.6**
comp=Z,17nm,0.7s,mb5.6
BRTR Keskin Array B 97.79 309 P **P** **08 16 29.4 -1.9**
comp=Z,21nm,0.8s,mb5.6,baz=125,slow=5.2,SNR=84
BRTR PKiKP PKiKP 08 21 04.5 +0.3
comp=Z,2.8nm,0.7s,baz=111,slow=4.2,SNR=4.6
BRTR PKKPbc PKKPbc 08 33 06.0 -0.9
comp=Z,2.2nm,0.8s,baz=218,slow=1.8,SNR=7.4
BRTR Keskin Array B 97.79 309 i P **P** **08 16 29.6 -1.7**
BRTR pmax pmax
comp=Z,21nm,0.8s
DAWY Dawson 98.15 26 eP **P** **08 16 32.0 -0.3**
DAWY e pP 08 17 15.5 -2.1
DAWY e 08 17 31.6
APA Apatity 98.56 337 ⇑iP **P** **08 16 32.4 -1.7**
APA pmax pmax
comp=Z,90nm,1.2s,mb6.1
JOF Joensuu 99.56 333 ep Pdif 08 16 36.6 -2.3
comp=Z,23nm,0.7s
JOF Joensuu 99.56 333 ep PKiKP 08 21 07.8 +1.1
comp=Z,1.2nm,0.3s
JOF Joensuu 99.56 333 eP Pdif 08 16 36.6 -2.3
JOF pmax pmax
comp=Z,23nm,0.7s,mb5.7
SUR Sutherland 99.84 235 ePdif Pdif 08 16 43.0 +2.9
comp=Z,85nm,1.3s
SKAG Skagway 100.16 31 ePdif Pdif 08 16 41.1 -0.4
INK Inuvik 100.35 22 eP Pdif 08 16 40.6 -1.8
KEV Kevo 100.74 340 ep Pdif 08 16 42.1 -2.1
comp=Z,16nm,0.8s
KEV Kevo 100.74 340 ep PKiKP 08 21 09.6 +0.9
comp=Z,2.8nm,0.3s
KEV Kevo 100.74 340 eP Pdif 08 16 42.1 -2.1
KEV pmax pmax
comp=Z,16nm,0.8s
AKASG Malin Array Be 101.10 320 P Pdif 08 16 44.2 -1.5
comp=Z,16nm,0.7s,baz=75,slow=4.6,SNR=50
AKASG PP PP 08 20 54.8 -2.0
comp=Z,4.5nm,0.8s,baz=89,slow=7.1,SNR=4.1
AKASG PKiKP PKiKP 08 21 09.9 +0.1
comp=Z,12nm,0.6s,baz=77,slow=2.4,SNR=43
AKASG SKKPbc 08 36 20.7
comp=Z,0.3nm,0.3s,baz=262,slow=3.7,SNR=5.3
AKASG Malin Array Be 101.10 320 P Pdif 08 16 44.2 -1.5
AKASG 08 20 54.8
AKASG Malin Array Be 101.10 320 P Pdif 08 16 44.2 -1.5
AKASG PP PP 08 20 54.8 -2.0
AKBB Malin Array Si 101.10 320 eP Pdif 08 16 44.3 -1.4
ARCES ARCESS Array B 101.29 339 P Pdif 08 16 45.2 -1.4
comp=Z,70nm,0.9s,baz=82,slow=4.6,SNR=44
ARCES PKiKP PKiKP 08 21 09.6 -0.1
comp=Z,3.3nm,0.3s,baz=144,slow=1.1,SNR=67
ARCES PKKPbc PKKPbc 08 32 55.5 -2.7
comp=Z,4.9nm,0.7s,baz=262,slow=3.6,SNR=24
ARE0 ARCESS Array S 101.29 339 ePdif Pdif 08 16 44.9 -1.8
KIS Kishinev 101.46 316 eP Pdif 08 16 47.0 -0.3
KIS e 08 21 03.0
KIS ePS PS 08 30 36.0 +29
KIS MLR MLR
comp=Z,500nm,20.0s
KIS Kishinev 101.46 316 eP Pdif 08 16 47.0 -0.3
KIS eSKKS SKSac 08 27 06.0 -3.4
KIS Kishinev 101.46 316 ePS PS 08 30 36.0 +29
KIS LRM 09 00 32.0
comp=Z,500nm,20.0s
TLCR 101.49 314 ⇓iP Pdif 08 16 47.4 -0.1
TLCR 101.49 314 ⇓P Pdif 08 16 47.4 0.0
SPITS Spitsbergen Ar 101.69 349 P Pdif 08 16 47.2 -1.2
comp=Z,93nm,0.9s,baz=20,slow=6.2,SNR=36
SPB4 Spitsbergen Ar 101.69 349 ePdif Pdif 08 16 46.9 -1.5
TIRR Tirgusor 101.78 314 ⇓iP Pdif 08 16 48.4 -0.4
TIRR Tirgusor 101.78 314 ⇑iP PKiKP 08 21 06.1 -5.2
TIRR Tirgusor 101.78 314 ⇓P Pdif 08 16 48.4 -0.4
KAF Kangasniemi 101.94 332 ep Pdif 08 16 47.1 -2.4
comp=Z,12nm,0.8s,baz=80,slow=4.1
KAF Kangasniemi 101.94 332 ep PKiKP 08 21 11.9 +0.9
comp=Z,2.4nm,0.3s
KAF Kangasniemi 101.94 332 eP Pdif 08 16 47.1 -2.4
KAF pmax pmax
comp=Z,12nm,0.8s
VSU Vasula 102.09 328 c iP Pdif 08 16 48.7 -1.5
VSU pmax pmax
comp=Z,49nm,0.8s
VSU Vasula 102.09 328 ⇑iP Pdif 08 16 48.8 -1.4
IDID Didziasalis 102.36 325 eP Pdif 08 16 50.7 -0.6
IIGN Ignalina 102.65 325 eP Pdif 08 16 52.1 -0.5
IIGN ePP PP 08 21 08.7 +0.5
VRI Vrincioaia 102.94 315 ⇓iP Pdif 08 16 54.0 +0.1
VRI Vrincioaia 102.94 315 ⇓iP PP 08 21 06.2 -4.4
VRI Vrincioaia 102.94 315 ⇓P Pdif 08 16 54.0 0.0
PLOR Plostina 102.99 315 ⇑iP Pdif 08 16 55.2 +1.1
MLR Muntele Rosu 103.50 315 Pdiff Pdif 08 16 56.0 -0.4
comp=Z,22nm,0.8s,baz=101,slow=0.9,SNR=20
MLR PP PP 08 21 14.9 0.0
comp=Z,28nm,0.9s,baz=128,slow=3.2,SNR=7.8
BURAR Bucovina Array 103.88 317 ⇑iP Pdif 08 16 58.4 +0.3
BURAR Bucovina Array 103.88 317 ⇑iP PKiKP 08 21 17.9 +2.9
BURAR Bucovina Array 103.88 317 ⇑P Pdif 08 16 58.4 +0.3
BUR08 Bucovina Ar. S 103.89 317 ePdif Pdif 08 16 57.8 -0.4
BUR08 ePP PP 08 21 16.8 -0.8
BUR08 ePKKPbc PKKPbc 08 32 48.9 -0.9
VOIR 104.13 315 ⇑iP Pdif 08 16 59.5 +0.3
VOIR 104.13 315 ⇓iP PKiKP 08 21 16.4 +0.9
VOIR 104.13 315 ⇑P Pdif 08 16 59.5 +0.3
LVV L'vov 104.48 319 eP Pdif 08 16 59.3 -1.5
LVV e 08 21 16.3
SUW Suwalki 104.55 324 eP Pdif 08 17 00.5 -0.6
SUW Suwalki 104.55 324 eP Pdif 08 17 00.5 -0.6
IDI Anoyia 104.66 304 Pdiff Pdif 08 17 01.6 +0.1
comp=Z,14nm,1.1s,baz=152,slow=7.8,SNR=3.7
IDI PKiKP PKiKP 08 21 16.7 -0.1
comp=Z,28nm,0.6s,baz=196,slow=6.3,SNR=9.7
IDI PKKPbc PKKPbc 08 32 46.9 -0.1
comp=Z,16nm,0.8s,baz=280,slow=4.1,SNR=6.8
KWP Kalwaria 105.36 319 eP Pdif 08 17 05.2 +0.6
KWP Kalwaria 105.36 319 eP Pdif 08 17 05.2 +0.5
DRGR 105.65 316 ⇑iP Pdif 08 17 05.7 -0.3
DRGR 105.65 316 ⇑iP PKiKP 08 21 18.7 +0.4
DRGR 105.65 316 ⇑P Pdif 08 17 05.7 -0.2
GZR Gura Zlata 105.73 315 ⇓iP Pdif 08 17 07.9 +1.6
GZR Gura Zlata 105.73 315 ⇑iP PKiKP 08 21 19.2 +0.7
UZH Uzhgorod 105.74 318 d iP Pdif 08 17 06.0 -0.4
UZH e 08 21 29.0
UZH eS Sdif 08 28 40.0 -7.3
UZH i 08 30 54.0
UZH i 08 31 31.0
TSUM Tsumeb 106.04 248 Pdiff Pdif 08 17 10.4 +2.7
comp=Z,4.0nm,0.9s,baz=72,slow=4.3,SNR=6.1
TSUM PKiKP PKiKP 08 21 18.9 -0.9
comp=Z,3.8nm,0.9s,baz=63,slow=9.0,SNR=2.9
TSUM Tsumeb 106.04 248 ePdif Pdif 08 17 09.9 +2.2
comp=Z,3.9nm,0.8s
TSUM PKPdf PKiKP 08 21 18.9 -0.9
VAY Valandovo 106.21 311 i P PKiKP 08 21 17.4 -2.1
CRVS Cervenica-Dubn 106.25 319 i P Pdif 08 17 08.8 +0.2
CRVS e 08 21 40.5
CRVS Cervenica-Dubn 106.25 319 PDIF Pdif 08 17 08.8 +0.2
CRVS ePP PP 08 21 40.5 +5.5
CRVS e 08 30 19.4
CRVS Cervenica-Dubn 106.25 319 ePdif Pdif 08 17 08.8 +0.2
CRVS ePP PP 08 21 40.5 +5.5
CRVS eSP SP 08 30 19.4 -15
BEL Belsk 106.28 322 eP Pdif 08 17 09.7 +0.9
STHS Stebnicka Huta 106.33 319 i P Pdif 08 17 08.4 -0.6
STHS Stebnicka Huta 106.33 319 PDIF Pdif 08 17 08.4 -0.6
STHS e 08 20 17.4
STHS Stebnicka Huta 106.33 319 ePdif Pdif 08 17 08.4 -0.6
STHS e 08 20 17.4
BZS Buzias 106.52 315 ⇓iP Pdif 08 17 09.9 +0.1
BZS Buzias 106.52 315 ⇓iP PKiKP 08 21 20.5 +0.5
BZS Buzias 106.52 315 ⇓P Pdif 08 17 09.8 0.0
NIE Niedzica 106.93 319 ePdiff Pdif 08 17 12.8 +1.1
NIE ePKiKP PKiKP 08 21 21.8 +1.2
SKO Skopje 107.00 311 eP PKiKP 08 21 21.0 0.0
OJC Ojcow 107.14 320 ePdiff Pdif 08 17 12.5 -0.1
OJC ePKiKP PKiKP 08 21 21.9 +0.9
OJC ePP PP 08 21 41.6 +0.1
OJC eSKSac SKSac 08 27 31.9 -3.3
OJC eSKSdf SKSdf 08 28 12.1 -3.6
OJC L 09 07 15.1
comp=Z,0.6nm,20.5s
BIA Bitola 107.17 310 i P PKiKP 08 21 20.1 -1.2
KRUS Krusevo 107.20 311 i P PKiKP 08 21 21.1 -0.3
PSZ Piszkesteto 107.42 318 ⇓e PKiKP 08 21 20.5 -1.0
VYHS Vyhne 108.03 318 i P Pdif 08 17 15.7 -0.9
VYHS e 08 21 49.6
VYHS Vyhne 108.03 318 PDIF Pdif 08 17 15.7 -0.9
VYHS e 08 20 17.7
VYHS Vyhne 108.03 318 ePKP PKiKP 08 21 22.3 -0.4
VYHS ePP PP 08 21 49.6 +1.6
VYHS e 08 32 36.1
VYHS e 08 32 50.4
VYHS Vyhne 108.03 318 ePdif Pdif 08 17 15.7 -0.9
VYHS e 08 20 17.7
VYHS e 08 21 22.3
VYHS ePP PP 08 21 49.6 +1.6
VYHS e 08 32 36.1
VYHS e 08 32 50.4
BUD Budapest 108.06 317 ⇓e PKiKP 08 21 21.7 -1.1
OKC Ostrava-Krasne 108.25 320 ePKP PKiKP 08 21 23.9 +0.9
OKC e 08 21 50.5
OKC e 08 21 51.4
HFS Hagfors 108.33 331 Pdiff Pdif 08 17 15.9 -1.9
comp=Z,11nm,0.7s,baz=94,slow=4.5,SNR=24
HFS PKiKP PKiKP 08 21 21.1 -1.8
comp=Z,10.0nm,0.7s,baz=155,slow=4.9,SNR=8.4
RES Resolute Bay 108.75 11 Pdiff Pdif 08 17 18.2 -1.5
comp=Z,7.6nm,0.7s,baz=313,slow=5.9,SNR=19
RES PKiKP PKiKP 08 21 22.4 -1.0
comp=Z,15nm,1.0s,baz=296,slow=3.0,SNR=16
RES PKKPbc PKKPbc 08 32 32.1 -3.6
comp=Z,6.0nm,0.9s,baz=185,slow=4.3,SNR=8.0
RES Resolute Bay 108.75 11 P Pdif 08 17 18.2 -1.6
RES pmax pmax
comp=Z,8.0nm,0.7s
RES pmax pmax
comp=Z,15nm,1.0s
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 108.75 11 ePdif Pdif 08 17 18.1 -1.6
comp=Z,7.3nm,0.7s
RES ePKP PKiKP 08 21 22.4 -1.0
RES PKKPbc PKKPbc 08 32 32.1 -3.5
BSD Bornholm Skovb 109.07 326 i P PKiKP 08 21 25.5 +1.1
comp=Z,29nm,0.9s
A05A Maple Falls 109.07 41 ⇓PKiKP PKiKP 08 21 24.7 +0.1
baz=109
B05A Bryant 109.19 42 ⇓PKiKP PKiKP 08 21 25.2 +0.4
baz=109,SNR=12
NOA NORSAR Array B 109.20 332 Pdiff Pdif 08 17 19.9 -1.8
comp=Z,13nm,1.0s,baz=71,slow=4.6,SNR=18
NOA PKiKP PKiKP 08 21 23.6 -0.8
comp=Z,18nm,0.9s,baz=270,slow=3.2,SNR=29
NOA PKKPbc PKKPbc 08 32 30.0 -3.8
comp=Z,2.6nm,0.9s,baz=67,slow=3.2,SNR=5.1
NOA P4KPbc 08 52 31.6
comp=Z,0.9nm,0.8s,baz=154,slow=9.3,SNR=3.2
NOA NORSAR Array B 109.20 332 P Pdif 08 17 19.9 -1.8
NOA 08 32 30.0
NOA NORSAR Array B 109.20 332 Pdif Pdif 08 17 19.9 -1.8
NOA PKPdf PKiKP 08 21 23.6 -0.8
NOA PKKPbc PKKPbc 08 32 30.0 -3.8
NOA e 08 52 31.6
ZST Bratislava 109.22 318 ePKP PKiKP 08 21 24.8 -0.1
ZST ePP PP 08 21 57.9 +1.3
ZST e 08 30 57.6
ZST Bratislava 109.22 318 eP PKiKP 08 21 24.8 -0.1
ZST ePP PP 08 21 57.9 +1.3
ZST e 08 30 57.6
KSP Ksiaz 109.23 321 ePKPdf PKiKP 08 21 24.8 0.0
KSP ePS PS 08 31 28.0 +1.4
KSP e 08 32 15.0
DPC Dobruska-Polom 109.31 321 ePKP PKiKP 08 21 25.5 +0.5
DPC ePP PP 08 21 53.6 -3.6
VRAC Vranov 109.34 320 PKiKP PKiKP 08 21 25.4 +0.2
comp=Z,26nm,1.1s,baz=119,slow=4.0,SNR=9.9
VRAC PP PP 08 21 53.9 -3.6
comp=Z,12nm,1.1s,baz=98,slow=8.4,SNR=4.5
YKA Yellowknife Ar 109.38 26 Pdiff Pdif 08 17 21.2 -1.4
comp=Z,0.9nm,0.6s,baz=291,slow=4.7,SNR=17
YKA PKiKP PKiKP 08 21 24.0 -0.8
comp=Z,26nm,0.8s,baz=295,slow=1.8,SNR=111
YKA PKKPbc PKKPbc 08 32 29.5 -3.8
comp=Z,21nm,0.7s,baz=107,slow=3.1,SNR=82
YKA SKKPbc 08 35 57.2
comp=Z,2.4nm,0.8s,baz=105,slow=2.6,SNR=7.4
YKA PKPPKP 08 40 54.2
comp=Z,0.4nm,0.8s,baz=121,slow=2.3,SNR=4.4
YKA Yellowknife Ar 109.38 26 P Pdif 08 17 21.2 -1.4
YKA 08 32 29.6
YKA Yellowknife Ar 109.38 26 Pdif Pdif 08 17 21.2 -1.4
YKA PKPdf PKiKP 08 21 24.0 -0.8
YKA PKKPbc PKKPbc 08 32 29.6 -3.8
YKA SKKPbc 08 35 57.2
YKA P'P' 08 40 54.2
UPC Upice 109.47 321 ePKP PKiKP 08 21 25.0 -0.3
HUMO Hull Mountain 109.48 48 ePKP PKiKP 08 21 26.2 +0.6
B06A Marblemount 109.55 41 ⇑PKiKP PKiKP 08 21 25.4 -0.1
baz=110,SNR=5.3
LON Longmire 109.65 43 ePKP PKiKP 08 21 25.1 -0.7
SOP Sopron 109.67 318 ⇓eP PKiKP 08 21 26.2 +0.4
E05A Randle 109.72 43 ⇑PKiKP PKiKP 08 21 25.8 -0.1
baz=110,SNR=6.1
WDC Whiskeytown Da 110.05 50 ePKIKP PKiKP 08 21 26.0 -0.7
A07A Ashnola River, 110.16 40 ⇑PKiKP PKiKP 08 21 26.9 +0.2
baz=110,SNR=12
E06A Yakima 110.25 43 ⇑PKiKP PKiKP 08 21 27.2 +0.3
baz=110,SNR=5.4
COP Copenhagen 110.28 327 ePKIKP PKiKP 08 21 28.3 +1.6
COP pmax pmax
comp=Z,24nm,0.8s
COP Copenhagen 110.28 327 i P PKiKP 08 21 28.3 +1.6
comp=Z,24nm,0.8s
PVCC Panska Ves 110.37 321 ePKP PKiKP 08 21 27.1 +0.1
RUE Ruedersdorf 110.38 323 ePKiKP PKiKP 08 21 27.2 +0.2
B07A Winthrop 110.45 41 ⇑PKiKP PKiKP 08 21 26.7 -0.5
baz=110,SNR=9.3
I05A Bend 110.47 46 ⇓PKiKP PKiKP 08 21 27.8 +0.4
baz=110,SNR=6.7
PRU Pruhonice 110.51 321 ePKP PKiKP 08 21 27.1 -0.2
PRU ePP PP 08 22 01.4 -4.4
PRU ePS PS 08 31 38.2 -0.3
F06A Goldendale 110.53 44 ⇓PKiKP PKiKP 08 21 28.2 +0.7
baz=110,SNR=5.4
GOLS Golise 110.61 316 ePKiKP PKiKP 08 21 28.1 +0.5
C07A Waterville 110.64 42 ⇓PKiKP PKiKP 08 21 27.2 -0.4
baz=111
BRG Berggiesshubel 110.67 322 eP Pdif 08 17 29.0 +0.7
BRG pmax pmax
comp=Z,9.0nm,1.4s
BRG Berggiesshubel 110.67 322 ePKiKP PKiKP 08 21 27.4 -0.2
BRG Berggiesshubel 110.67 322 ePDIF Pdif 08 17 29.0 +0.7
comp=Z,14nm,1.4s
BRG Berggiesshubel 110.67 322 i PKiKP 08 21 27.4 -0.2
comp=Z,36nm,0.9s
BRG sP PP 08 22 09.0 +2.0
BRG PP 08 25 20.0
BRG SDIF PKKPab 08 32 34.0 -3.8
BRG SKKS 08 44 03.3
comp=Z,22nm,2.0s
BRG
comp=N,828nm,23.4s
BRG
comp=E,892nm,23.8s
BRG
comp=Z,932nm,28.2s
CESS Cesta pri Krsk 110.73 316 i PKiKP PKiKP 08 21 27.9 +0.1
PERS Pernice 110.84 317 ePKiKP PKiKP 08 21 28.1 +0.1
PERS e 08 22 12.2
TIP Timpagrande 110.85 309 ePKP PKiKP 08 21 28.1 -0.2
A08A Turner Farm, O 110.89 40 ⇑PKiKP PKiKP 08 21 28.2 +0.1
baz=111,SNR=10.0
LBCM Butte Creek Ri 110.92 49 P PKiKP 08 21 28.9 +0.6
BOJS Bojanci 110.96 316 ePKiKP PKiKP 08 21 28.9 +0.6
K05A Summer Lake 110.97 47 ⇑PKiKP PKiKP 08 21 28.9 +0.5
baz=111
B08A Colville Reser 110.98 41 ⇑PKiKP PKiKP 08 21 27.8 -0.4
baz=111,SNR=14
FBE Freiberg 111.03 322 ePKiKP PKiKP 08 21 28.0 -0.2
H06A Lindquist Farm 111.03 45 ⇓PKiKP PKiKP 08 21 28.8 +0.4
baz=111,SNR=8.7
F07A Phinny Hill Vi 111.09 44 PKiKP PKiKP 08 21 29.6 +1.1
baz=111,SNR=11
CLL Collm 111.14 322 ⇓eP Pdif 08 17 30.0 -0.4
CLL i 08 21 28.1
CLL e 08 22 14.0
CLL pmax pmax
comp=Z,48nm,2.1s
CLL pmax pmax
comp=Z,44nm,0.8s
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 111.14 322 ePdif Pdif 08 17 30.0 -0.4
comp=Z,48nm,2.1s
CLL LmV 08 09 00.0
comp=Z,700nm,21.2s
CLL ⇓iPKiKP PKiKP 08 21 28.1 -0.3
comp=Z,44nm,0.8s
CLL ePP PP 08 22 14.0 +3.7
CLL esPP 08 23 12.0
CLL ePPP 08 24 31.0
CLL eSP SP 08 31 24.0 +1.6
CLL ePS PS 08 31 52.0 +7.8
CLL i PKKPbc PKKPbc 08 32 26.0 -1.2
comp=Z,7.0nm,1.1s
CLL esPS 08 32 34.0
CLL i PKKPab PKKPab 08 32 37.3 +1.6
CLL ePPS 08 32 41.0
CLL esPPS 08 33 39.0
CLL eSS SS 08 37 18.0 -10
CLL esSS 08 38 48.0
CLL esSSS 08 42 42.0
CLL esSSSS 08 46 12.0
CLL Collm 111.14 322 ePdif Pdif 08 17 30.0 -0.4
CLL ⇓iPKP PKiKP 08 21 28.1 -0.3
CLL ePP PP 08 22 14.0 +3.7
CLL i PKKP PKKPbc 08 32 26.0 -1.2
MOA Molln 111.16 318 ⇑iPKiKP PKiKP 08 21 27.8 -0.8
comp=Z,26nm,1.3s,SNR=5.3
PRW Prosser 111.19 43 P PKiKP 08 21 30.6 +1.9
I06A Prineville 111.25 46 ⇓PKiKP PKiKP 08 21 29.6 +0.7
baz=111,SNR=12
HAWA Hanford 111.26 43 ePKP PKiKP 08 21 29.3 +0.5

HAWA eSKPdf SKPdf 08 24 48.1 +0.8
C08A Higginbotham F 111.30 42 ⇑PKiKP PKiKP 08 21 28.3 -0.5
baz=111
GEC2 GERESS Array S 111.30 320 *i* PKIKP PKiKP 08 21 28.2 -0.6
GEC2 GERESS Array S 111.30 320 *e*PKiKP PKiKP 08 21 28.2 -0.6
GERES GERESS Array B 111.30 320 Pdiff Pdif 08 17 31.1 0.0
comp=Z,1.6nm,0.9s,baz=70,slow=4.4,SNR=4.5
GERES PKiKP PKiKP 08 21 28.1 -0.8
GERES comp=Z,25nm,0.7s,baz=80,slow=1.1,SNR=63
PKKPbc PKKPbc 08 32 26.2 -0.4
comp=Z,2.5nm,0.9s,baz=225,slow=1.7,SNR=9.4
GERES GERESS Array B 111.30 320 P Pdif 08 17 31.1 0.0
GERES 08 21 28.1
KHC Kasperske Hory 111.31 320 *c i*PKiKP PKiKP 08 21 28.4 -0.4
KHC Kasperske Hory 111.31 320 *ex* x 08 20 44.5
KHC *ex* x 08 21 02.5
KHC *e*PKP PKiKP 08 21 28.3 -0.5
KHC *ex* x 08 21 52.2
KHC *e*PP PP 08 22 16.5 +4.9
KHC *e*PS PS 08 31 48.1 +2.2
KHC *e*PKKP PKKPbc 08 32 21.5 -5.1
KHC *ex* x 08 32 25.5
A09A Danville 111.33 40 ⇓PKiKP PKiKP 08 21 29.0 +0.1
baz=111,SNR=7.7
LJU Ljubljana 111.36 316 *e*PKiKP PKiKP 08 21 29.5 +0.4
LJU *e* 08 22 14.8
G07A Ruggs Ranch, H 111.39 44 ⇓PKiKP PKiKP 08 21 29.7 +0.6
baz=111
J06A Christmas Vall 111.42 47 ⇓PKiKP PKiKP 08 21 29.2 0.0
baz=111,SNR=14
CUC Castrocucco 111.46 310 *e*PKP PKiKP 08 21 26.6 -2.8
MOD Modoc 111.53 48 *e*PKP PKiKP 08 21 29.8 +0.3
MOD *e*SKPdf SKPdf 08 24 48.6 +0.6
D08A Wollman Farm, 111.53 42 ⇑PKiKP PKiKP 08 21 29.5 +0.2
baz=112,SNR=15
E08A Dider Farm, El 111.56 43 ⇓PKiKP PKiKP 08 21 29.2 -0.2
baz=112,SNR=11
OD2 Odessa Site #2 111.60 42 P PKiKP 08 21 30.1 +0.7
CEL Celeste 111.64 308 *e*PKP PKiKP 08 21 29.3 -0.5
TANN Tannenbergstha 111.70 321 *e*PKiKP PKiKP 08 21 29.3 -0.2
I07A Izee 111.73 46 ⇓PKiKP PKiKP 08 21 30.1 +0.3
baz=112,SNR=6.0
B09A Rice 111.74 41 ⇓PKiKP PKiKP 08 21 29.6 -0.1
baz=112,SNR=13
NKC Novy Kostel 111.76 321 *e*PKP PKiKP 08 21 29.4 -0.2
WET Wettzell 111.76 320 *i* PKiKP PKiKP 08 21 29.8 +0.1
WET Wettzell 111.76 320 *e*PKiKP PKiKP 08 21 29.8 +0.1
SGO Sicignano 111.76 311 PKiKP PKiKP 08 21 29.6 -0.4
WERN Wernitzgruen 111.79 321 *e*PKiKP PKiKP 08 21 29.6 -0.1
WERD Werda 111.79 321 *e*PKiKP PKiKP 08 21 28.7 -1.0
GUNZ Gunzen 111.80 321 *e*PKiKP PKiKP 08 21 29.5 -0.2
C09A Chrisman Ranch 111.80 41 ⇓PKiKP PKiKP 08 21 30.0 +0.2
baz=112
BEKR Beckwourth 111.81 50 ⇓PKiKP PKiKP 08 21 30.2 +0.1
baz=112
MTTG Motta San Giov 111.83 308 P PKiKP 08 21 30.4 +0.2
G08A Pilot Rock 111.88 44 ⇓PKiKP PKiKP 08 21 30.5 +0.5
baz=112,SNR=15
F08A Pendleton 111.90 44 ⇓PKiKP PKiKP 08 21 30.5 +0.5
baz=112,SNR=12
CSSN Cassano Irpino 111.93 311 P PKiKP 08 21 29.8 -0.5
KBA Koelnbreinsper 111.94 318 ⇑*i*PKiKP PKiKP 08 21 28.8 -1.3
comp=Z,18nm,0.7s
D09A Jones Farm, Ri 111.94 42 ⇓PKiKP PKiKP 08 21 30.1 0.0
baz=112,SNR=5.5
BSEG Bad Segeberg 111.97 325 *i* PKiKP PKiKP 08 21 30.3 +0.4
BSEG Bad Segeberg 111.97 325 *e*PKiKP PKiKP 08 21 30.3 +0.4
A10A Northport 111.98 40 ⇑PKiKP PKiKP 08 21 29.7 -0.4
baz=112,SNR=5.3
J07A Hines 112.00 46 ⇓PKiKP PKiKP 08 21 30.2 -0.1
baz=112,SNR=11
ROTZ Rotzenmuhle 112.03 321 *e*PKiKP PKiKP 08 21 30.4 +0.2
MANZ Manzenberg 112.03 321 *e*PKiKP PKiKP 08 21 30.0 -0.2
CMB Columbia Colle 112.04 52 *e*PKiKP PKiKP 08 21 30.7 +0.1
CMB *e* 08 24 49.0
N06A Buffalo Meadow 112.07 49 ⇑PKiKP PKiKP 08 21 30.3 -0.2
baz=112
PTCC Patocco-Chiusa 112.08 317 P PKiKP 08 21 30.2 -0.2
RJOB Jochberg 112.15 319 *e*PKiKP PKiKP 08 21 29.6 -0.9
MOX Moxa 112.16 322 *e*PKP PKiKP 08 21 30.4 0.0
comp=Z,34nm,1.1s
MOX *e* 08 22 21.8
MOX Moxa 112.16 322 *e*PKiKP PKiKP 08 21 30.4 0.0
MOX *e* 08 22 21.8
MOX pmax pmax
comp=Z,34nm,1.1s
MOX Moxa 112.16 322 *e*PKiKP PKiKP 08 21 30.3 -0.1
O06A Flanigan 112.16 50 ⇓PKiKP PKiKP 08 21 30.9 +0.1
baz=112
K07A Rock Creek Ran 112.17 47 ⇑PKiKP PKiKP 08 21 30.4 -0.2
baz=112,SNR=16
E09A Wood Farm, Sta 112.17 43 ⇓PKiKP PKiKP 08 21 30.7 +0.1
baz=112,SNR=12
GMNA Gemona 112.18 317 P PKiKP 08 21 30.3 -0.3
P06A Stead Airport, 112.19 50 ⇑PKiKP PKiKP 08 21 31.7 +0.9
baz=112
L07A Adell 112.22 48 ⇑PKiKP PKiKP 08 21 31.1 +0.3
baz=112,SNR=8.3
H08A Prairie City 112.23 45 ⇓PKiKP PKiKP 08 21 31.2 +0.4
baz=112,SNR=5.8
WCN Washoe City 112.35 51 ⇑PKiKP PKiKP 08 21 31.1 -0.1
baz=112
I08A Drewsey 112.43 46 ⇑PKiKP PKiKP 08 21 31.6 +0.5
baz=112,SNR=14
C10A Spilker Farm, 112.43 41 ⇓PKiKP PKiKP 08 21 31.3 +0.3
baz=112
NEW Newport 112.44 41 *e*PKiKP PKiKP 08 21 30.6 -0.4
M07A Soldier Meadow 112.45 48 ⇑PKiKP PKiKP 08 21 32.0 +0.7
baz=112,SNR=20
F09A S2 Ranch, Elgi 112.51 44 ⇓PKiKP PKiKP 08 21 31.2 0.0
baz=112,SNR=13
ABTA Abfaltersbach 112.57 318 ⇑*i*PKiKP PKiKP 08 21 30.3 -1.0
comp=Z,42nm,0.7s,SNR=22
CLZ Clausthal 112.57 323 *i* PKiKP PKiKP 08 21 31.3 +0.2
CLZ Clausthal 112.57 323 *e*PKiKP PKiKP 08 21 31.3 +0.2
J08A Circle Bar Ran 112.60 46 ⇑PKiKP PKiKP 08 21 31.4 0.0
baz=113,SNR=15
D10A Wagner Farm, O 112.63 42 ⇓PKiKP PKiKP 08 21 31.6 +0.2
baz=113,SNR=18
WVOR Wild Horse Val 112.66 47 *e*PKiKP PKiKP 08 21 32.2 +0.6
WVOR *e* 08 24 50.9
GRA1 Grafenberg Arr 112.66 321 *e*Pdif Pdif 08 17 37.9 +0.8
GRA1 *e*PKPdf PKiKP 08 21 31.1 -0.3
GRA1 *e*PP PP 08 22 22.5 +1.3
GRA1 *e*PKKPbc PKKPbc 08 32 22.2 +0.1
GRA1 *e*PKKPab PKKPab 08 32 29.4 +0.5
GRF Grafenberg Arr 112.66 321 *i* PKiKP PKiKP 08 21 31.1 -0.3
GRF *e* 08 22 22.5
GRF Grafenberg Arr 112.66 321 *e*P Pdif 08 17 37.9 +0.8
GRF 08 21 31.1
GRF *e* 08 22 22.5
GRF Grafenberg Arr 112.66 321 *e*Pdiff Pdif 08 17 37.9 +0.8
GRF *e*PKiKP PKiKP 08 21 31.1 -0.3
GRF *e*PP PP 08 22 22.5 +1.3
GRF *e*PKKPbc PKKPbc 08 32 22.2 +0.1
GRF *e*PKKPab PKKPab 08 32 29.4 +0.5
SDI San Donato 112.69 312 PKiKP PKiKP 08 21 30.8 -0.9
G09A Cove 112.69 44 ⇓PKiKP PKiKP 08 21 31.7 +0.1
baz=113,SNR=14
SMMC Simmler 112.70 55 ⇓PKiKP PKiKP 08 21 31.8 -0.1
baz=113
R06C Coleville 112.70 51 ⇑PKiKP PKiKP 08 21 32.4 +0.5
baz=113
N07B Gerlach 112.71 49 ⇑PKiKP PKiKP 08 21 32.2 +0.4
baz=113,SNR=30
K08A Mann Creek Ran 112.71 47 ⇓PKiKP PKiKP 08 21 31.5 -0.2
baz=113,SNR=13
A11A Hall Mountain, 112.75 40 ⇑PKiKP PKiKP 08 21 32.0 +0.4
baz=113,SNR=9.0
SEST Monte Rota 112.76 318 P PKiKP 08 21 31.0 -0.7
E10A Myers Farm, Un 112.88 43 ⇑PKiKP PKiKP 08 21 32.0 +0.1
baz=113,SNR=6.6
O07A Toulon 112.88 50 ⇑PKiKP PKiKP 08 21 31.5 -0.6
baz=113,SNR=22
B11A Sandpoint 112.88 40 ⇑PKiKP PKiKP 08 21 31.8 -0.1
baz=113,SNR=14
H09A Durkee 112.91 45 ⇑PKiKP PKiKP 08 21 32.5 +0.5
baz=113,SNR=13
F10A Beach Ranch, E 112.92 43 ⇑PKiKP PKiKP 08 21 32.0 0.0
baz=113,SNR=22
L08A Fields 112.92 47 ⇑PKiKP PKiKP 08 21 32.4 +0.3
baz=113,SNR=37
NRCA Norcia 112.98 313 P PKiKP 08 21 32.8 +0.6
I09A Lost Marbles R 113.00 45 ⇓PKiKP PKiKP 08 21 32.3 +0.1
baz=113,SNR=7.1

WTTA Wattenberg 113.02 318 ⇑*i*PKiKP PKiKP 08 21 31.8 -0.3
comp=Z,156nm,0.6s,SNR=67
M08A Happy Creek Ra 113.03 48 ⇓PKiKP PKiKP 08 21 33.0 +0.6
baz=113,SNR=12
FUR Furstenfeldbru 113.03 319 *i* PKiKP PKiKP 08 21 31.7 -0.4
FUR Furstenfeldbru 113.03 319 *e*PKiKP PKiKP 08 21 31.7 -0.4
WATA Walderalm 113.05 318 ⇑*i*PKiKP PKiKP 08 21 31.5 -0.6
comp=Z,45nm,0.7s,SNR=17
UBBA Unterbreizbach 113.10 322 *e*PKiKP PKiKP 08 21 32.4 +0.2
C11A Tepee Creek (N 113.11 41 ⇓PKiKP PKiKP 08 21 32.2 -0.1
baz=113
BMO Blue Mountains 113.11 44 *e*PKP PKiKP 08 21 31.6 -0.8
BMO *e*SKPdf SKPdf 08 24 49.8 -1.1
J09A Fry Pan Ranch, 113.12 46 ⇓PKiKP PKiKP 08 21 32.9 +0.5
baz=113,SNR=27
G10A Bishop Farm, J 113.14 44 ⇓PKiKP PKiKP 08 21 32.5 0.0
baz=113,SNR=8.7
BSC Santa Cruz Isl 113.15 56 ⇓PKiKP PKiKP 08 21 32.4 -0.4
baz=113
RCTC Rector, Farmer 113.18 54 ⇑PKiKP PKiKP 08 21 32.5 -0.3
baz=113
A12A Yaak River Ran 113.21 40 ⇑PKiKP PKiKP 08 21 32.2 -0.2
baz=113,SNR=10
HLG Helgoland 113.24 326 *e*PKiKP PKiKP 08 21 32.6 +0.3
D11A Klaveano Farm, 113.26 42 ⇓PKiKP PKiKP 08 21 31.8 -0.8
baz=113,SNR=16
K09A Rome 113.27 47 ⇓PKiKP PKiKP 08 21 32.9 +0.1
baz=113,SNR=14
EDM Edmonton 113.29 35 *e*PKiKP PKiKP 08 21 32.0 -0.5
EDM *e* 08 22 32.0
EDM *e* 08 24 50.5
CTI Castel Tesino 113.31 317 PKiKP PKiKP 08 21 32.4 -0.3
N08A GE Springer Mi 113.33 49 ⇑PKiKP PKiKP 08 21 33.5 +0.6
baz=113,SNR=17
MOTA Moosalm 113.36 318 ⇑*i*PKiKP PKiKP 08 21 32.2 -0.6
comp=Z,50nm,0.8s,SNR=34
VES Vestal, Richgr 113.37 54 ⇓PKiKP PKiKP 08 21 32.6 -0.6
baz=113
B12A Libby 113.38 40 ⇓PKiKP PKiKP 08 21 32.5 -0.3
baz=113,SNR=7.9
O08A Rochester Mine 113.41 49 ⇑PKiKP PKiKP 08 21 33.6 +0.5
baz=113,SNR=26
L09A Wilkinson Ranc 113.45 47 ⇓PKiKP PKiKP 08 21 34.0 +0.9
baz=113,SNR=19
APPI Appiano 113.49 318 P PKiKP 08 21 31.7 -1.4
E11A Bogner Ranch, 113.51 43 ⇑PKiKP PKiKP 08 21 32.4 -0.8
baz=114,SNR=14
H10A Noah's Angus R 113.56 45 ⇑PKiKP PKiKP 08 21 33.2 -0.1
baz=114,SNR=26
BLG Laguna Peak 113.61 56 ⇓PKiKP PKiKP 08 21 33.5 -0.2
baz=114
NVAR Mina Array Bea 113.61 51 Pdiff Pdif 08 17 48.3 +7.0
comp=Z,3.5nm,1.0s,baz=257,slow=4.8,SNR=11
NVAR PKiKP PKiKP 08 21 34.5 +0.9
comp=Z,22nm,0.9s,baz=256,slow=2.3,SNR=62
NVAR PP PP 08 22 29.9 +1.6
comp=Z,5.4nm,0.8s,baz=254,slow=2.5,SNR=4.7
NVAR SKP 08 24 53.3
comp=Z,2.2nm,0.6s,baz=246,slow=4.2,SNR=6.4
NVAR PKKPbc PKKPbc 08 32 19.7 +1.1
comp=Z,2.1nm,0.7s,baz=120,slow=3.7,SNR=7.2
NVAR PKKPab PKKPab 08 32 26.7 +1.7
comp=Z,10nm,0.9s,baz=118,slow=4.3,SNR=19
NVAR tx tx 08 36 16.3
comp=Z,3.7nm,1.1s,baz=112,slow=4.3,SNR=3.8
NVAR Mina Array Bea 113.61 51 PKPdf PKiKP 08 21 34.5 +0.9
NVAR PP PP 08 22 29.9 +1.6
NVAR SKP 08 24 53.3
NVAR PKKPbc PKKPbc 08 32 19.7 +1.1
NVAR PKKPab PKKPab 08 32 26.7 +1.7
I10A Payette 113.64 45 ⇑PKiKP PKiKP 08 21 32.9 -0.6
baz=114,SNR=5.5
C12B Naegeli Ranch, 113.65 41 ⇑PKiKP PKiKP 08 21 32.3 -1.1
baz=114,SNR=8.0
F11A Grangeville 113.66 43 ⇑PKiKP PKiKP 08 21 32.7 -0.7
baz=114,SNR=20
ARVC Arvin 113.67 55 ⇓PKiKP PKiKP 08 21 33.5 -0.3
baz=114
FETA Feichten 113.69 318 ⇑*i*PKiKP PKiKP 08 21 33.1 -0.3
comp=Z,45nm,1.0s,SNR=21
G11A Walters Elk Ra 113.70 44 ⇑PKiKP PKiKP 08 21 32.8 -0.7
baz=114,SNR=25
M09A Marrel Ranch, 113.72 48 ⇑PKiKP PKiKP 08 21 34.2 +0.5
baz=114,SNR=15
R08A Mina 113.77 51 ⇓PKiKP PKiKP 08 21 34.4 +0.5
baz=114
N09A Rock Creek Ran 113.78 49 ⇑PKiKP PKiKP 08 21 34.3 +0.5
baz=114,SNR=11
J10A Berg Farm, Mel 113.81 46 ⇓PKiKP PKiKP 08 21 34.5 +0.8
baz=114
OSI Osito Adit 113.82 56 *e*PKP PKiKP 08 21 35.5 +1.4
Q08A Gabbs 113.82 51 ⇓PKiKP PKiKP 08 21 34.1 +0.2
baz=114,SNR=49
VMG Vicchio 113.86 315 P PKiKP 08 21 33.7 -0.2
K10A MacKenzie Ranc 113.87 47 PKiKP PKiKP 08 21 34.6 +0.7
baz=114,SNR=36
ISA Isabella 113.89 54 ⇑PKiKP PKiKP 08 21 33.8 -0.3
baz=114
ISA Isabella 113.89 54 *e*PKP PKiKP 08 21 34.1 0.0
ISA *e*SKPdf SKPdf 08 24 52.8 +0.1
D12A Red Ives Fores 113.91 42 ⇑PKiKP PKiKP 08 21 32.8 -1.0
baz=114
IBBN Ibbenburen 113.96 324 *e*PKiKP PKiKP 08 21 33.5 -0.3
SEI Scarperia 113.98 315 P PKiKP 08 21 35.6 +1.5
A13A Flathead Natio 113.99 40 ⇓PKiKP PKiKP 08 21 33.1 -0.9
baz=114
H11A Donnelly 114.05 44 ⇑PKiKP PKiKP 08 21 34.4 +0.2
baz=114,SNR=67
BSMT Bassoo Peak 114.06 41 P PKiKP 08 21 33.7 -0.4
BRMO Bormio 114.06 318 P PKiKP 08 21 34.0 -0.2
CWC Cottonwood Cre 114.09 54 ⇓PKiKP PKiKP 08 21 35.1 +0.6
baz=114
B13A Whitefish 114.12 40 ⇓PKiKP PKiKP 08 21 33.9 -0.3
baz=114
O09A Fish Creek Ran 114.15 49 ⇓PKiKP PKiKP 08 21 34.8 +0.2
baz=114,SNR=6.5
DAVA Damuels 114.17 319 *i* PKiKP PKiKP 08 21 34.1 -0.3
comp=Z,104nm,0.8s,SNR=22
DECC Green Verdugo 114.19 56 ⇑PKiKP PKiKP 08 21 34.2 -0.6
baz=114
TOD Tomsk 114.19 321 *e*P PKiKP 08 21 33.6 -0.7
STU Stuttgart 114.20 320 *e*PKiKP PKiKP 08 21 34.3 0.0
STU Stuttgart 114.20 320 *e*PKP PKiKP 08 21 33.9 -0.5
STU *e*PP PP 08 22 30.6 -1.5
C13A Hot Springs 114.25 41 ⇓PKiKP PKiKP 08 21 33.8 -0.6
baz=114,SNR=20
I11A Placerville 114.27 45 PKiKP PKiKP 08 21 35.0 +0.3
baz=114,SNR=19
WALA Waterton Lakes 114.27 39 *e*PKP PKiKP 08 21 34.4 -0.1
F12A Elk City 114.31 43 ⇑PKiKP PKiKP 08 21 34.0 -0.7
baz=114
L10A Jasper Basin 114.31 47 ⇑PKiKP PKiKP 08 21 34.5 -0.3
baz=114,SNR=26
DAVOX Davos/Dischmat 114.31 318 PKP PKiKP 08 21 34.5 -0.1
comp=Z,26nm,0.3s,baz=126,slow=2.2,SNR=60
DAVOX PKKPbc PKKPbc 08 32 15.1 -1.4
comp=Z,9.0nm,0.9s,baz=18,slow=7.6,SNR=8.0
PASC Pasadena Art C 114.32 56 *e*PKP PKiKP 08 21 35.2 +0.2
DAVOS Davos 114.35 318 PKiKP PKiKP 08 21 34.5 -0.2
DAVOS 08 32 15.1
M10A I.L. Ranch, Tu 114.37 48 ⇑PKiKP PKiKP 08 21 35.0 +0.1
baz=114
EDW2 Edwards Air Fo 114.39 55 ⇑PKiKP PKiKP 08 21 35.6 +0.4
baz=114
Q09A Carvers 114.40 51 ⇑PKiKP PKiKP 08 21 35.2 +0.2
baz=114,SNR=10.0
WIT Witteveen 114.41 325 *e*PKP PKiKP 08 21 35.6 +1.0
G12A Big Creek, Yel 114.42 44 ⇓PKiKP PKiKP 08 21 34.8 -0.1
baz=114
MWC Mount Wilson 114.42 56 *e*PKP PKiKP 08 21 35.6 +0.4
MWC *e*SKPdf SKPdf 08 24 54.7 +0.9
GSCL Gusciola 114.44 315 P PKiKP 08 21 35.9 +0.9
K11A Parker Ranch, 114.47 46 ⇓PKiKP PKiKP 08 21 34.9 -0.1
baz=114,SNR=8.0
MFID Camas Ranch 114.47 46 ⇓PKiKP PKiKP 08 21 34.9 -0.1
baz=114,SNR=28
D13A Huson 114.48 42 ⇑PKiKP PKiKP 08 21 34.0 -0.9
baz=114,SNR=16
TPH Tonopah 114.50 52 *e*PKiKP PKiKP 08 21 35.7 +0.4
BDI Bagni Di Lucca 114.51 315 PKiKP PKiKP 08 21 34.4 -0.7
BUG Bochum--Univer 114.53 324 *e*PKiKP PKiKP 08 21 34.6 -0.3
SUMG Summit 114.54 355 *e*PKP PKiKP 08 21 35.0 +0.6
LRMC Laurel Mountai 114.55 55 ⇑PKiKP PKiKP 08 21 35.5 +0.1
baz=114
S09A Goldfield 114.56 52 ⇓PKiKP PKiKP 08 21 36.2 +0.8
baz=114,SNR=66

GRAC Grapevine Rang 114.57 53 ⇑PKiKP PKiKP 08 21 36.1 +0.6
baz=114
R09A Tonopah 114.59 51 ⇓PKiKP PKiKP 08 21 36.2 +0.8
baz=115,SNR=37
MPMC Manual Prospec 114.62 54 ⇑PKiKP PKiKP 08 21 36.0 +0.5
baz=115
WTSB Winterswijk 114.63 324 *e*PKP PKiKP 08 21 34.6 -0.5
comp=Z,28nm,0.9s
PII Pisa 114.64 315 PKiKP PKiKP 08 21 33.7 -1.7
O10A Cortez Mining, 114.65 49 ⇑PKiKP PKiKP 08 21 36.3 +0.8
baz=115,SNR=6.8
BFSC Mount Baldy St 114.75 56 ⇓PKiKP PKiKP 08 21 35.0 -0.8
baz=115
TUE Stuetta 114.75 318 *e*PKP PKiKP 08 21 34.9 -0.5
C14A Swan Lake 114.76 41 ⇑PKiKP PKiKP 08 21 34.2 -1.3
baz=115,SNR=20
P10A Eureka 114.81 50 ⇓PKiKP PKiKP 08 21 36.6 +0.8
baz=115,SNR=6.9
L11A Cat Creek Ranc 114.81 47 ⇓PKiKP PKiKP 08 21 35.7 -0.1
baz=115,SNR=44
E13A Victor 114.84 42 ⇑PKiKP PKiKP 08 21 35.6 -0.1
baz=115,SNR=27
I12A Atlanta 114.88 45 ⇓PKiKP PKiKP 08 21 36.1 +0.3
baz=115
BFO Black Forest 114.88 320 *i* PKiKP PKiKP 08 21 34.8 -0.9
BFO Black Forest 114.88 320 *e*PKiKP PKiKP 08 21 34.8 -0.9
ABH Alteburg 114.88 322 *e*P PKiKP 08 21 36.0 +0.4
H12A Diamond D Ranc 114.88 44 ⇑PKiKP PKiKP 08 21 35.5 -0.3
baz=115,SNR=40
B14A Marquette Ranc 114.89 40 ⇑PKiKP PKiKP 08 21 35.6 -0.1
baz=115,SNR=6.5
MSO Missoula 114.90 42 *e*PKP PKiKP 08 21 35.0 -0.7
MSO *e*PP PP 08 22 28.9 -8.2
MSO *e*SKPdf SKPdf 08 24 53.6 -0.7
F13A Darby 114.92 43 ⇓PKiKP PKiKP 08 21 35.2 -0.6
baz=115,SNR=15
M11A Holland Ranch, 114.94 48 ⇑PKiKP PKiKP 08 21 36.6 +0.6
baz=115,SNR=17
Q10A Clear Creek Ra 115.01 51 ⇑PKiKP PKiKP 08 21 37.0 +0.7
baz=115,SNR=23
LANF Langenberg 115.01 321 *e*P PKiKP 08 21 35.8 -0.1
S10A Tonopah Range, 115.02 52 ⇓PKiKP PKiKP 08 21 36.9 +0.6
baz=115,SNR=46
J12A Stokes Ranch, 115.03 46 ⇓PKiKP PKiKP 08 21 36.5 +0.4
baz=115,SNR=57
A15A Johnson Ranch, 115.04 39 ⇑PKiKP PKiKP 08 21 35.2 -0.7
baz=115,SNR=10
RPN Rapa Nui 115.05 125 *e*Pdif Pdif 08 17 49.3 +1.6
FURC Furnace Creek, 115.06 53 ⇑PKiKP PKiKP 08 21 36.7 +0.3
baz=115
LRW Lerwick 115.10 334 P PKiKP 08 21 35.0 -0.7
LRW AMb AMB 08 21 37.6
comp=Z,196nm,1.5s
LRW Lerwick 115.10 334 *e*P PKiKP 08 21 35.0 -0.7
LRW AMb AMB 08 21 37.6
comp=Z,196nm,1.5s
D14A Greenough 115.11 41 ⇓PKiKP PKiKP 08 21 35.4 -0.7
baz=115,SNR=32
N11A Elko Archery C 115.11 48 ⇓PKiKP PKiKP 08 21 35.4 -1.0
baz=115,SNR=15
G13A Cobalt 115.17 44 ⇓PKiKP PKiKP 08 21 35.8 -0.5
baz=115,SNR=14
R10A Warm Springs 115.18 51 ⇓PKiKP PKiKP 08 21 37.1 +0.5
baz=115,SNR=14
MURC Murrieta 115.21 57 ⇑PKiKP PKiKP 08 21 36.5 -0.2
baz=115
FELD Feldberg im Sc 115.22 320 *e*P PKiKP 08 21 35.3 -1.0
WAL1 Walls 115.22 335 *e*P PKiKP 08 21 35.7 -0.3
RUP Ruppelstein 115.24 322 *e*PKiKP PKPdf 08 21 36.0 -0.3
GSC Goldstone 115.29 55 ⇓PKiKP PKiKP 08 21 36.6 -0.3
baz=115
GSC Goldstone 115.29 55 *e*PKPdf PKPdf 08 21 37.6 +0.7
GSC *e*SKPdf SKPdf 08 24 56.2 +0.9
H13A Challis 115.30 44 ⇓PKiKP PKiKP 08 21 37.1 +0.5
baz=115,SNR=115
E14A Clinton 115.31 42 ⇓PKiKP PKiKP 08 21 35.9 -0.7
baz=115,SNR=18
O11A Cowboy Ranch, 115.31 49 ⇑PKiKP PKiKP 08 21 36.6 -0.2
baz=115,SNR=25
K12A Draper Farm, C 115.31 46 ⇑PKiKP PKiKP 08 21 37.1 +0.4
baz=115,SNR=23
BBRC Big Bear Sol-O 115.35 56 ⇑PKiKP PKiKP 08 21 37.5 +0.4
baz=115
L12A House Creek Ra 115.35 47 ⇓PKiKP PKiKP 08 21 37.6 +0.8
baz=115,SNR=16
B15A Bradely Ranch, 115.35 40 ⇑PKiKP PKiKP 08 21 35.7 -0.9
baz=115,SNR=35
P11A Circle Ranch, 115.36 50 ⇓PKiKP PKiKP 08 21 37.6 +0.7
baz=115,SNR=9.3
109C Camp Elliot, M 115.38 57 ⇑PKiKP PKiKP 08 21 37.4 +0.3
baz=115,SNR=6.0
HLID Hailey 115.44 45 ⇑PKiKP PKiKP 08 21 37.8 +0.8
baz=115
HLID Hailey 115.44 45 *e*PKPdf PKPdf 08 21 38.1 +1.2
HLID *e*PP PP 08 22 33.3 -7.6
HLID *e*SKPdf SKPdf 08 24 56.0 +0.6
TPNV Topopah Spring 115.46 53 ⇓PKiKP PKiKP 08 21 37.5 +0.3
baz=115
TPNV Topopah Spring 115.46 53 *e*PKPdf PKPdf 08 21 37.7 +0.5
TPNV *e*SKPdf SKPdf 08 24 56.8 +1.1
U10A Ash Meadows, A 115.49 53 ⇑PKiKP PKiKP 08 21 38.3 +1.1
baz=116,SNR=38
C15A Salmond Ranch, 115.49 40 ⇓PKiKP PKiKP 08 21 36.4 -0.5
baz=115,SNR=26
ELK Elko 115.50 48 *e*PKPdf PKPdf 08 21 37.5 +0.3
ELK *e*SKPdf SKPdf 08 24 56.1 +0.5
CDF Champ du Feu 115.52 320 *e*PKiKP PKPdf 08 21 35.9 -1.0
comp=Z,44nm,0.8s
I13A Wildhorse Cree 115.56 45 ⇑PKiKP PKiKP 08 21 38.0 +0.9
baz=116,SNR=90
HGN Heimansgroeve 115.56 323 *e*PKP PKPdf 08 21 36.4 -0.5
comp=Z,47nm,1.0s
F14A Wisdom 115.56 43 ⇓PKiKP PKiKP 08 21 37.0 -0.1
baz=116,SNR=16
MEM Membach 115.57 323 PKP PKPdf 08 21 36.4 -0.5
Q11A Duckwater 115.57 51 ⇑PKiKP PKiKP 08 21 38.2 +0.8
baz=116,SNR=49
M12A Wells 115.59 48 ⇓PKiKP PKiKP 08 21 38.1 +0.8
baz=116,SNR=31
SHOC Shoshone 115.61 54 ⇑PKiKP PKiKP 08 21 37.9 +0.4
baz=116
N12A Clover Valley, 115.62 48 ⇓PKiKP PKiKP 08 21 38.0 +0.6
baz=116,SNR=32
J13A Cove Ranch, Pi 115.65 45 ⇓PKiKP PKiKP 08 21 37.8 +0.5
baz=116,SNR=81
ECH Echery 115.66 320 *e*P PKPdf 08 21 36.0 -1.2
ECH Echery 115.66 320 *e*PKPdf PKPdf 08 21 34.7 -2.4
BBS Basel-Blauen 115.67 319 *e*P PKPdf 08 21 35.6 -1.6
BEBN Eben Emael 115.70 323 PKP PKPdf 08 21 37.3 +0.1
R11A Troy Canyon, C 115.72 51 ⇓PKiKP PKiKP 08 21 38.3 +0.7
baz=116,SNR=32
S11A Rachel 115.73 52 ⇑PKiKP PKiKP 08 21 37.7 0.0
baz=116
A16A West Butte Ran 115.76 39 ⇑PKiKP PKiKP 08 21 37.1 -0.2
baz=116,SNR=20
D15A Lincoln 115.77 41 ⇑PKiKP PKiKP 08 21 37.2 -0.2
baz=116,SNR=28
MOF Molkenrain 115.79 320 *e*P PKPdf 08 21 36.9 -0.5
WLF Walferdange 115.81 322 PKP PKPdf 08 21 37.1 -0.3
WLF Walferdange 115.81 322 *e*PKiKP PKiKP 08 21 37.9 +0.5
WLF Walferdange 115.81 322 *e*PKPdf PKPdf 08 21 37.2 -0.3
PFO Pinyon Flat Ob 115.82 56 ⇓PKiKP PKiKP 08 21 37.9 -0.1
baz=116
PFO Pinyon Flat Ob 115.82 56 *e*PKPdf PKPdf 08 21 38.6 +0.6
PFO *e*SKPdf SKPdf 08 24 57.3 +0.8
B16A M & M Farms, S 115.86 40 ⇓PKiKP PKiKP 08 21 36.9 -0.7
baz=116,SNR=17
E15A Deer Lodge 115.87 42 ⇓PKiKP PKiKP 08 21 37.1 -0.5
baz=116,SNR=17
H14A Leadore 115.89 44 ⇑PKiKP PKiKP 08 21 37.6 -0.1
baz=116,SNR=30
K13A Stover Farm, H 115.90 46 ⇓PKiKP PKiKP 08 21 38.6 +0.8
baz=116,SNR=37
MONP Monument Peak 115.95 57 ⇑PKiKP PKiKP 08 21 38.7 +0.5
baz=116
O12A Currie 115.97 49 ⇑PKiKP PKiKP 08 21 38.7 +0.6
baz=116,SNR=31
TUQ Turquoise Moun 115.98 54 ⇓PKiKP PKiKP 08 21 38.7 +0.5
baz=116
HINF Hinteralfeld 115.98 320 *e*PKiKP PKPdf 08 21 36.8 -1.0
comp=Z,116nm,0.6s
PGF Pioggiola 116.00 314 *e*PKiKP PKPdf 08 21 37.5 -0.5
comp=Z,158nm,1.0s
P12A McGill 116.02 50 ⇑PKiKP PKiKP 08 21 38.3 +0.2
baz=116
I14A Mackay 116.02 45 PKiKP PKiKP 08 21 38.8 +0.7

baz=116,SNR=39
C16A Fuhringer Ranc 116.03 40 ⇓PKiKP PKiKP 08 21 37.4 -0.5
baz=116,SNR=11
BCLA Clavier 116.06 323 PKP PKPdf 08 21 37.5 -0.3
J14A Carey 116.13 45 ⇓PKiKP PKiKP 08 21 38.6 +0.3
baz=116,SNR=33
L13A Double Diamond 116.14 47 ⇑PKiKP PKiKP 08 21 39.5 +1.2
baz=116,SNR=45
LOMF Lomont 116.14 319 ePKP PKPdf 08 21 37.5 -0.6
F15A Butte 116.14 42 ⇑PKiKP PKiKP 08 21 38.5 +0.3
baz=116,SNR=19
BELC Belle Mtn. 116.14 56 ⇓PKiKP PKiKP 08 21 38.9 +0.4
baz=116
M13A Montello 116.15 48 ⇑PKiKP PKiKP 08 21 38.5 +0.1
baz=116,SNR=41
Q12A Willow Creek R 116.16 50 ⇓PKiKP PKiKP 08 21 38.9 +0.5
baz=116,SNR=19
DLMT Dillon 116.21 43 ePKPdf PKPdf 08 21 38.9 +0.6
DLMT eSKPdf SKPdf 08 24 57.2 +0.3
T11A Corn Creek, Al 116.22 52 ⇑PKiKP PKiKP 08 21 39.9 +1.3
baz=116,SNR=150
HAU Haudompre 116.24 320 ePKIKP PKPdf 08 21 37.6 -0.7
comp=Z,190nm,0.9s
HAU eMLR MLR
comp=Z,743nm,20.8s
HAU Haudompre 116.24 320 ePKPdf PKPdf 08 21 37.6 -0.7
HAU LR LR
comp=Z,740nm,20.8s
U11A Corn Creek 116.24 53 ⇑PKiKP PKiKP 08 21 39.9 +1.2
baz=116,SNR=9.7
DVTC Desert V Tower 116.25 57 ⇑PKiKP PKiKP 08 21 38.8 0.0
baz=116
GMRC Granite Mounta 116.30 55 ⇑PKiKP PKiKP 08 21 39.7 +0.8
baz=116
V11A Goodsprings 116.30 54 ⇑PKiKP PKiKP 08 21 37.7 -1.2
baz=116,SNR=17
A17A Triple J Farms 116.31 39 ⇓PKiKP PKiKP 08 21 38.2 -0.2
baz=116,SNR=71
G15A Dillon 116.34 43 ⇑PKiKP PKiKP 08 21 38.9 +0.3
baz=116,SNR=34
USHA Ushuaia 116.36 170 PKP PKPdf 08 21 39.3 +0.9
comp=Z,27nm,0.9s,baz=229,slow=1.7,SNR=12
H15A Lima 116.39 44 ⇓PKiKP PKiKP 08 21 39.3 +0.6
baz=116,SNR=82
THEF They Montfort 116.39 320 eP PKPdf 08 21 38.4 -0.2
D16A Dana Ranch, Ca 116.40 41 ⇑PKiKP PKiKP 08 21 38.8 +0.2
baz=116,SNR=26
S12A Delamar Landin 116.44 52 ⇓PKiKP PKiKP 08 21 39.5 +0.4
baz=116,SNR=42
GIVF Givet 116.46 323 ePKIKP PKPdf 08 21 38.4 -0.3
comp=Z,148nm,0.9s
SWSC Sam W. Stewart 116.47 57 ⇑PKiKP PKiKP 08 21 39.8 +0.5
baz=116
B17A L&G Farms, Che 116.47 39 ⇓PKiKP PKiKP 08 21 37.6 -1.1
baz=116,SNR=26
E16A East Helena 116.47 41 ⇑PKiKP PKiKP 08 21 38.1 -0.7
baz=116,SNR=17
UCC Uccle 116.48 324 PKP PKPdf 08 21 38.8 +0.2
R12A Pony Springs, 116.48 51 ⇓PKiKP PKiKP 08 21 38.3 -0.8
baz=116,SNR=33
OG01 Vacheresse 116.55 318 eP PKPdf 08 21 38.8 -0.2
O13A Hicks Ranch, I 116.57 49 ⇓PKiKP PKiKP 08 21 39.4 +0.2
baz=116,SNR=8.6
K14A Jones Ranch, D 116.57 46 ⇓PKiKP PKiKP 08 21 40.0 +0.9
baz=116,SNR=41
DOU Dourbes 116.60 323 PKP PKPdf 08 21 38.7 -0.2
SNF Seneffe 116.63 323 PKP PKPdf 08 21 38.3 -0.7
BC3 Big Chuckw Mtn 116.64 56 ⇑PKiKP PKiKP 08 21 38.7 -0.9
baz=117
SAOF Saorge 116.65 316 eP PKPdf 08 21 39.0 -0.2
L14A Malta 116.66 47 ⇓PKiKP PKiKP 08 21 39.6 +0.3
baz=117,SNR=39
I15A Monteview 116.67 44 ⇑PKiKP PKiKP 08 21 39.9 +0.6
baz=117,SNR=22
LDFC Landfair 116.69 55 ePKPdf PKPdf 08 21 41.1 +1.5
P13A Bates Ranch, G 116.69 50 ⇑PKiKP PKiKP 08 21 38.9 -0.6
baz=117,SNR=53
M14A Sheep Mountain 116.71 47 ⇑PKiKP PKiKP 08 21 39.6 +0.2
baz=117,SNR=47
T12A Moapa 116.71 53 ⇑PKiKP PKiKP 08 21 39.7 +0.1
baz=117,SNR=10
C17A Wharram Farm, 116.72 40 ⇓PKiKP PKiKP 08 21 38.5 -0.8
baz=117,SNR=47
AUTN L'Aution 116.73 316 eP PKPdf 08 21 39.7 +0.3
F16A Kennard Place, 116.74 42 ⇑PKiKP PKiKP 08 21 39.2 -0.2
baz=117,SNR=42
LPG La Plagne 116.76 317 ePKIKP PKPdf 08 21 39.3 -0.1
comp=Z,117nm,0.8s
SBF Sospel 116.76 315 ePKIKP PKPdf 08 21 38.8 -0.7
comp=Z,194nm,0.9s
LPL La Plagne 116.77 317 ePKIKP PKPdf 08 21 39.2 -0.2
comp=Z,122nm,0.7s
BOZ Bozeman (W) 116.78 42 ⇓PKiKP PKiKP 08 21 39.0 -0.5
baz=117
BOZ Bozeman (W) 116.78 42 ePKPdf PKPdf 08 21 40.0 +0.6
G16A Moss Hill, Enn 116.78 43 ⇓PKiKP PKiKP 08 21 39.4 0.0
baz=117,SNR=42
RSL Roseland 116.79 318 eP PKPdf 08 21 39.0 -0.4
V12A Nelson 116.79 54 ⇓PKiKP PKiKP 08 21 39.5 -0.2
baz=117,SNR=54
Q13A Wheeler Ranch, 116.80 50 ⇓PKiKP PKiKP 08 21 39.9 +0.2
baz=117,SNR=35
IRM Iron Mountain 116.81 56 ⇑PKiKP PKiKP 08 21 39.7 -0.2
baz=117
LUCF Luceram 116.82 316 eP PKPdf 08 21 39.7 +0.1
OG22 Abries 116.83 317 eP PKPdf 08 21 38.9 -0.6
BAIF Baives 116.84 323 ePKIKP PKPdf 08 21 39.2 -0.2
comp=Z,141nm,0.9s
W12A Cal Nev Ari 116.85 54 ⇑PKiKP PKiKP 08 21 40.7 +0.8
baz=117
A18A Metzger Ranch, 116.85 39 ⇓PKiKP PKiKP 08 21 38.9 -0.6
baz=117
TOUF Mont Tournerai 116.85 316 eP PKPdf 08 21 39.0 -0.6
CABF La Chapelle 116.86 319 ePKIKP PKPdf 08 21 39.3 -0.2
comp=Z,261nm,0.9s
J15A Blackfoot 116.87 45 ⇓PKiKP PKiKP 08 21 40.0 +0.4
baz=117
MEZF Maizieres J'vi 116.89 321 ePKIKP PKPdf 08 21 39.1 -0.4
comp=Z,73nm,0.8s
U12A Valley of Fire 116.91 53 ⇑PKiKP PKiKP 08 21 40.2 +0.2
baz=117,SNR=16
D17A Six Diamond Ra 116.92 41 ⇑PKiKP PKiKP 08 21 39.2 -0.5
baz=117,SNR=27
BNI Bardonecchia 116.94 317 ePKIKP PKPdf 08 21 39.3 -0.5
MBDF Montbardon 116.97 317 ePKIKP PKPdf 08 21 39.1 -0.7
comp=Z,74nm,0.7s
N14A Grayback Hills 116.99 48 ⇓PKiKP PKiKP 08 21 40.2 +0.2
baz=117,SNR=34
K15A Arbon 117.00 46 ⇓PKiKP PKiKP 08 21 40.3 +0.4
baz=117,SNR=85
R13A O'Grain Ranch, 117.00 51 ⇓PKiKP PKiKP 08 21 40.4 +0.3
baz=117,SNR=23
MLA1 Latheron 117.02 333⇑ ePKP PKPdf 08 21 39.3 -0.2
E17A Martinsdale 117.03 41 ⇓PKiKP PKiKP 08 21 39.5 -0.4
baz=117,SNR=28
B18A Beardsley Farm 117.08 39 ⇓PKiKP PKiKP 08 21 38.9 -1.0
baz=117,SNR=25
CALN Calern 117.17 315 eP PKPdf 08 21 40.1 -0.1
S13A Holt Ranch, En 117.21 52 ⇓PKiKP PKiKP 08 21 41.1 +0.5
baz=117,SNR=62
KEST Kesra 117.21 306 PKP PKPdf 08 21 41.0 +0.5
comp=Z,28nm,0.8s,baz=267,slow=2.2,SNR=45
KEST PP PP 08 22 49.5 -4.1
comp=Z,68nm,1.1s,baz=339,slow=3.4,SNR=14
KEST PKKPbc PKKPbc 08 32 06.5 +0.4
comp=Z,3.4nm,0.9s,baz=289,slow=2.9,SNR=6.5
EGMT Eagleton 117.22 39 ⇓PKiKP PKiKP 08 21 40.1 -0.1
baz=117
EGMT Eagleton 117.22 39 ePKPdf PKPdf 08 21 39.8 -0.4
EGMT eSKPdf SKPdf 08 24 57.7 -1.0
GLA Glamis 117.25 57 ⇓PKiKP PKiKP 08 21 40.6 -0.1
baz=117
GLA Glamis 117.25 57 ePKPdf PKPdf 08 21 41.5 +0.8
L15A Malad City 117.28 47 ⇑PKiKP PKiKP 08 21 40.8 +0.3
baz=117,SNR=31
T13A Saint George 117.29 52 ⇑PKiKP PKiKP 08 21 40.9 +0.2
baz=117,SNR=53
H16A Russell Place, 117.32 43 ⇑PKiKP PKiKP 08 21 41.1 +0.5
baz=117,SNR=20
F17A Fitzpatrick Pl 117.34 42 ⇑PKiKP PKiKP 08 21 40.9 +0.4
baz=117,SNR=76
Q14A Sevier Lake (B 117.36 50 ⇑PKiKP PKiKP 08 21 40.8 0.0
baz=117,SNR=26
U13A Pakoon Wash 117.36 53 ⇑PKiKP PKiKP 08 21 41.3 +0.4
baz=117,SNR=17
MCD Coleburn Disti 117.36 333⇑ eP PKPdf 08 21 39.7 -0.5
MME1 Meikle Cairn 117.38 332⇑ eP PKPdf 08 21 39.6 -0.6

M15A Larsen Ranch, 117.38 47 ⇓PKiKP PKiKP 08 21 40.8 +0.1
baz=117,SNR=11
P14A Drum Mountains 117.38 49 ⇓PKiKP PKiKP 08 21 41.3 +0.5
baz=117,SNR=56
Y12C Blythe 117.39 56 ⇑PKiKP PKiKP 08 21 41.6 +0.6
baz=117,SNR=26
FRF La Foret Royal 117.40 315 ePKIKP PKPdf 08 21 40.1 -0.6
comp=Z,298nm,1.0s
I16A Newdale 117.40 44 ⇑PKiKP PKiKP 08 21 41.2 +0.5
baz=117,SNR=44
DUG Dugway 117.42 49 ⇑PKiKP PKiKP 08 21 41.2 +0.4
baz=117
DUG Dugway 117.42 49 ePKPdf PKPdf 08 21 41.1 +0.3
DUG e 08 22 38.3
DUG eSKPdf SKPdf 08 24 59.5 +0.1
V13A Grand Canyon W 117.46 54 ⇑PKiKP PKiKP 08 21 41.4 +0.3
baz=117,SNR=42
G17A Pierce Place, 117.47 43 ⇓PKiKP PKiKP 08 21 41.5 +0.7
baz=117,SNR=24
D18A Linhart Farms, 117.48 40 ⇓PKiKP PKiKP 08 21 40.3 -0.4
baz=117,SNR=27
J16A Bone 117.48 45 ⇓PKiKP PKiKP 08 21 41.5 +0.6
baz=117,SNR=61
AEU East Anglia Un 117.52 326 eP PKPdf 08 21 40.6 0.0
ORIF Oris-en-Rattie 117.52 317 ePKIKP PKPdf 08 21 40.3 -0.6
comp=Z,76nm,0.6s
ORIF eMLR MLR
comp=Z,1μm,19.8s
112A Yuma 117.54 57 ⇑PKiKP PKiKP 08 21 41.9 +0.5
baz=118,SNR=5.3
OG25 Le Caire 117.56 316 eP PKPdf 08 21 40.1 -0.9
LMR La Mourre 117.56 315 ePKIKP PKPdf 08 21 40.5 -0.5
comp=Z,70nm,0.8s
MVH1 Achvaich 117.60 333 eP PKPdf 08 21 40.0 -0.6
E18A Harlowton 117.62 41 ⇑PKiKP PKiKP 08 21 41.1 +0.1
baz=118,SNR=24
K16A Soda Springs 117.62 45 ⇓PKiKP PKiKP 08 21 40.6 -0.6
baz=118,SNR=65
O15A The Old Anders 117.66 48 ⇑PKiKP PKiKP 08 21 41.6 +0.3
baz=118,SNR=20
W13A Hualapai Mount 117.68 54 ⇓PKiKP PKiKP 08 21 42.2 +0.7
baz=118,SNR=51
DCID1 Drake Creek 117.69 45 ePKPdf PKPdf 08 21 42.0 +0.8
R14A James Farms, M 117.71 51 ⇑PKiKP PKiKP 08 21 42.7 +1.2
baz=118,SNR=7.7
IMW Indian Meadow 117.77 44 ePKPdf PKPdf 08 21 42.0 +0.6
IMW eSKPdf SKPdf 08 25 01.5 +1.6
X13A Yucca 117.81 55 ⇓PKiKP PKiKP 08 21 42.3 +0.5
baz=118,SNR=45
MENF Mencas 117.86 324 eP PKPdf 08 21 41.8 +0.5
H17A Grant Village 117.87 44 ⇓PKiKP PKiKP 08 21 43.5 +1.9
baz=118,SNR=20
TPAW Teton Pass 117.88 45 ePKPdf PKPdf 08 21 42.3 +0.7
TPAW eSKPdf SKPdf 08 25 00.7 +0.6
T14A Hurricane 117.93 52 ⇓PKiKP PKiKP 08 21 43.2 +1.2
baz=118,SNR=36
LKWY Lake 117.94 43 ePKIKP PKPdf 08 21 43.6 +1.9
ESY Stoneypath 117.94 331⇑ eP PKPdf 08 21 40.3 -1.0
MDO Dochfour 117.94 333 eP PKPdf 08 21 40.2 -1.1
MOOW Moose Ponds 117.95 44 ePKPdf PKPdf 08 21 42.0 +0.3
MOOW eSKPdf SKPdf 08 25 00.9 +0.7
Y13A Salome 117.95 56 ⇓PKiKP PKiKP 08 21 42.6 +0.5
baz=118,SNR=30
L16A Fish Haven 117.96 46 ⇑PKiKP PKiKP 08 21 41.7 -0.1
baz=118,SNR=14
F18A Big Timber 117.97 42 ⇓PKiKP PKiKP 08 21 41.8 +0.1
baz=118,SNR=52
P15A Leamington 117.97 49 ⇓PKiKP PKiKP 08 21 42.7 +0.7
baz=118,SNR=9.9
XSO Sourhope Farm 117.98 330⇑ eP PKPdf 08 21 40.9 -0.5
U14A Mt Trumbull 117.98 53 ⇑PKiKP PKiKP 08 21 42.9 +0.8
baz=118,SNR=44
AHID Auburn Hatcher 117.99 45 ePKPdf PKPdf 08 21 42.7 +0.8
AHID eSKPdf SKPdf 08 25 01.6 +1.2
REDW Red Top Meadow 117.99 45 ePKPdf PKPdf 08 21 42.6 +0.8
REDW eSKPdf SKPdf 08 25 01.0 +0.7
M16A Huntsville 118.01 47 ⇑PKiKP PKiKP 08 21 41.8 -0.1
baz=118,SNR=26
I17A Pilgram Creek 118.01 44 ⇓PKiKP PKiKP 08 21 42.8 +0.9
baz=118,SNR=23
SMRF Simiane la Rot 118.02 316 ePKIKP PKPdf 08 21 41.8 -0.1
comp=Z,194nm,0.9s
SNOW Snow King Moun 118.03 45 ePKPdf PKPdf 08 21 42.7 +0.8
SNOW eSKPdf SKPdf 08 25 01.3 +0.9
Q15A Fillmore 118.03 50 ⇓PKiKP PKiKP 08 21 43.0 +0.9
baz=118,SNR=42
LOR Lormes 118.07 320 ePKIKP PKPdf 08 21 41.3 -0.6
comp=Z,140nm,0.9s
LOR eMLR MLR
comp=Z,782nm,22.2s
LOR Lormes 118.07 320 ePKPdf PKPdf 08 21 41.3 -0.6
LOR LR LR
comp=Z,780nm,22.3s
J17A Brown Place, J 118.09 45 ⇑PKiKP PKiKP 08 21 42.6 +0.5
baz=118,SNR=123
LOHW Long Hollow 118.09 44 ePKPdf PKPdf 08 21 42.6 +0.6
LOHW e 08 22 42.6
LOHW eSKPdf SKPdf 08 25 01.2 +0.7
K17A Gardner Place, 118.12 45 ⇑PKiKP PKiKP 08 21 42.8 +0.7
baz=118,SNR=18
113A Mohawk Valley, 118.18 57 ⇓PKiKP PKiKP 08 21 42.4 -0.2
baz=118,SNR=11
EBH Black Hill 118.19 331 eP PKPdf 08 21 41.5 -0.3
V14A Boquillas Ranc 118.20 54 ⇑PKiKP PKiKP 08 21 43.5 +0.9
baz=118,SNR=86
EBL Broad Law 118.22 331⇑ eP PKPdf 08 21 41.8 -0.1
N16A Rees Ranch, Co 118.26 48 ⇑PKiKP PKiKP 08 21 42.9 +0.5
baz=118,SNR=19
XAL Allendale 118.28 330⇑ eP PKPdf 08 21 40.8 -1.2
R15A Junction 118.30 51 ⇑PKiKP PKiKP 08 21 43.4 +0.7
baz=118,SNR=9.6
W14A Seligman 118.30 54 ⇑PKiKP PKiKP 08 21 43.7 +0.9
baz=118,SNR=51
SMF Signal de Mont 118.30 319 ePKIKP PKPdf 08 21 41.7 -0.6
SSB Saint Sauveur 118.31 318 eP PKPdf 08 21 42.1 -0.3
SSB Saint Sauveur 118.31 318 ePKPdf PKPdf 08 21 42.0 -0.4
KAC Achnashellach 118.33 333 eP PKPdf 08 21 41.6 -0.5
L17A Cokeville 118.34 46 ⇓PKiKP PKiKP 08 21 42.8 +0.3
baz=118,SNR=36
S15A Panguitch 118.35 51 ⇓PKiKP PKiKP 08 21 44.3 +1.6
baz=118,SNR=12
VIVF Saint-Julien-l 118.36 317 ePKIKP PKPdf 08 21 42.0 -0.5
comp=Z,119nm,0.9s
SSF Saint Saulge 118.37 320 ePKIKP PKPdf 08 21 42.0 -0.4
comp=Z,342nm,0.9s
EAU Auchinoon 118.38 331 eP PKPdf 08 21 41.9 -0.3
HPK Haverah Park 118.43 329 eP PKPdf 08 21 42.0 -0.3
HPK AMb AMB 08 21 44.0
comp=Z,183nm,0.9s
P16A Fountain Green 118.43 49 ⇑PKiKP PKiKP 08 21 43.5 +0.6
baz=118,SNR=13
T15A Red Dirt Ranch 118.48 52 ⇓PKiKP PKiKP 08 21 43.7 +0.7
baz=118,SNR=62
RLMT Red Lodge 118.52 42 ⇑PKiKP PKiKP 08 21 42.4 -0.4
baz=118
RLMT Red Lodge 118.52 42 ePKPdf PKPdf 08 21 43.8 +1.0
RLMT eSKPdf SKPdf 08 25 02.1 +0.8
ESK Eskdalemuir 118.54 330 eP PKPdf 08 21 42.0 -0.4
ESK AMb AMB 08 21 44.8
comp=Z,113nm,1.6s
CMAH Djebel Manchou 118.56 308 P PKPdf 08 21 43.2 +0.1
AVF Avril sur Loir 118.57 320 ePKIKP PKPdf 08 21 42.1 -0.7
comp=Z,156nm,0.8s
KPL Plockton 118.58 333 eP PKPdf 08 21 42.1 -0.4
KPL AMb AMB 08 21 43.9
comp=Z,177nm,1.0s
ABSA Djebel Ababsia 118.59 307 P PKPdf 08 21 43.9 +0.7
X14A Yava 118.60 55 ⇑PKiKP PKiKP 08 21 43.5 +0.2
baz=119,SNR=36
I18A Diamond G Ranc 118.60 44 ⇑PKiKP PKiKP 08 21 43.2 +0.2
baz=118
Y14A Wickenburg 118.61 56 PKiKP PKiKP 08 21 43.6 +0.3
baz=119,SNR=21
J18A Kendall Valley 118.61 45 ⇑PKiKP PKiKP 08 21 43.6 +0.6
baz=118,SNR=33
EAB Aberfoyle 118.62 332 eP PKPdf 08 21 41.7 -0.9
M17A Scullys Gap (B 118.66 47 ⇑PKiKP PKiKP 08 21 42.9 -0.4
baz=119,SNR=25
PLDF La Plantade 118.68 319 eP PKPdf 08 21 43.0 -0.1
U15A North Rim 118.68 53 ⇑PKiKP PKiKP 08 21 44.7 +1.2
baz=119,SNR=86
N17A Moffit Pass 118.69 47 ⇑PKiKP PKiKP 08 21 43.6 +0.3
baz=119,SNR=73
KBI1 Birley Grange 118.72 328⇑ eP PKPdf 08 21 41.9 -1.0
FFC Flin Flon 118.74 30 ePKPdf PKPdf 08 21 42.2 -0.7
FFC eSKPdf SKPdf 08 25 01.2 -0.2

FFC ePKKPbc PKKPbc 08 32 00.7 -0.6
LHO Holmfirth 118.75 328⇑ eP PKPdf 08 21 42.3 -0.7
Z14A Wintersburg 118.76 56 ⇓PKiKP PKiKP 08 21 44.5 +0.9
baz=119,SNR=15
K18A Toltan Ranch, 118.77 45 ⇑PKiKP PKiKP 08 21 44.1 +0.7
baz=119,SNR=132
COLF Collangettes 118.79 318 eP PKPdf 08 21 42.9 -0.4
CWF Charnwood Fore 118.84 327⇑ eP PKPdf 08 21 42.8 -0.4
CWF AMb AMB 08 21 44.1
comp=Z,72nm,1.0s
HYF Humbligny 118.85 320 ePKIKP PKPdf 08 21 43.2 -0.1
R16A Teasdale 118.89 50 ⇑PKiKP PKiKP 08 21 44.4 +0.7
baz=119,SNR=43
KAR1 Arisaig 118.90 333 eP PKPdf 08 21 43.0 -0.1
V15A Kaibab Nationa 118.91 53 ⇓PKiKP PKiKP 08 21 44.6 +0.7
baz=119,SNR=94
S16A Weppner Ranch, 118.93 51 ⇑PKiKP PKiKP 08 21 44.5 +0.6
baz=119,SNR=89
O17A Robinson Place 118.96 48 ⇓PKiKP PKiKP 08 21 43.9 0.0
baz=119,SNR=100
W15A Williams 118.96 54 ⇓PKiKP PKiKP 08 21 44.8 +0.8
baz=119,SNR=16
Q16A Castle Valley 118.97 50 ⇓PKiKP PKiKP 08 21 44.2 +0.3
baz=119,SNR=48
AGO Saint Agoulin 118.97 319 eP PKPdf 08 21 43.5 -0.1
BGF Bois d'Agland 118.97 320 ePKIKP PKPdf 08 21 43.4 -0.2
comp=Z,352nm,0.7s
L18A Fontenelle, Gr 118.99 46 ⇑PKiKP PKiKP 08 21 44.4 +0.5
baz=119,SNR=103
KWE Weaver Farm 119.00 328⇑ eP PKPdf 08 21 42.9 -0.6
BW06 Boulder Array 119.07 45 ⇑PKiKP PKiKP 08 21 43.7 -0.2
baz=119
PDAR Pinedale Array 119.07 45 PKP PKPdf 08 21 44.0 0.0
comp=Z,28nm,0.8s,baz=219,slow=1.9,SNR=80
PDAR SKP 08 25 01.9
comp=Z,7.1nm,0.9s,baz=193,slow=1.1,SNR=6.4
PDAR PKKPbc PKKPbc 08 31 55.9 -3.8
comp=Z,6.4nm,0.8s,baz=123,slow=5.6,SNR=6.2
PDAR SKKPbc 08 35 27.3
comp=Z,3.1nm,0.9s,baz=119,slow=4.4,SNR=5.6
PDAR SKKP 08 35 48.8
comp=Z,3.1nm,0.9s,baz=125,slow=7.4,SNR=4.7
M18A Lyman 119.11 47 ⇓PKiKP PKiKP 08 21 44.0 -0.1
baz=119,SNR=24
214A Organ Pipe Nat 119.11 58 ⇑PKiKP PKiKP 08 21 44.1 -0.3
baz=119,SNR=12
X15A Humboldt 119.13 55 ⇓PKiKP PKiKP 08 21 44.3 0.0
baz=119,SNR=42
P17A Butcher Ranch, 119.15 49 ⇑PKiKP PKiKP 08 21 43.6 -0.6
baz=119,SNR=40
Y15A Casa Rosa Ranc 119.15 55 ⇑PKiKP PKiKP 08 21 43.9 -0.5
baz=119,SNR=50
CKFL Kef-Lekhel 119.16 307 P PKPdf 08 21 44.8 +0.5
LASF Ste Croix 119.16 317 ePKIKP PKPdf 08 21 43.7 -0.4
comp=Z,197nm,1.0s
T16A Glen Canyon Da 119.17 52 ⇓PKiKP PKiKP 08 21 43.7 -0.6
baz=119,SNR=18
CASM Ain Smara 119.37 307 P PKPdf 08 21 44.4 -0.3
SRU San Rafael 119.41 49 ⇓PKiKP PKiKP 08 21 44.5 -0.2
baz=119
R17A Hanksville Air 119.44 50 ⇓PKiKP PKiKP 08 21 44.9 0.0
baz=119,SNR=82
WOL Wolverton 119.46 326 eP PKPdf 08 21 44.2 -0.2
115A Sonoran Desert 119.47 57 ⇓PKiKP PKiKP 08 21 45.7 +0.6
baz=119,SNR=30
P18A Preston Nutter 119.48 49 ⇓PKiKP PKiKP 08 21 45.0 +0.2
baz=119,SNR=24
O18A Roosevelt 119.48 48 ⇑PKiKP PKiKP 08 21 45.0 +0.2
baz=119,SNR=68
CTEI Djebel Teioual 119.48 307 P PKPdf 08 21 45.0 +0.1
TCF Toulx Ste Croi 119.48 319 ePKIKP PKPdf 08 21 44.3 -0.3
comp=Z,206nm,0.9s
VERF Verneugheol 119.50 319 eP PKPdf 08 21 44.8 +0.1
GAL1 Galloway 119.51 331⇑ eP PKPdf 08 21 43.6 -0.8
GAL1 AMb AMB 08 21 47.1
comp=Z,144nm,1.4s
N18A Larsen Ranch, 119.52 47 ⇓PKiKP PKiKP 08 21 44.6 -0.3
baz=120,SNR=18
K19A Absolon Red Bu 119.55 45 ⇓PKiKP PKiKP 08 21 44.9 0.0
baz=120,SNR=116
S17A Black Ridge (B 119.57 51 ⇑PKiKP PKiKP 08 21 45.3 +0.2
baz=120,SNR=36
W16A Flagstaff 119.57 54 ⇓PKiKP PKiKP 08 21 46.0 +0.8
baz=120,SNR=13
WUAZ Wupatki 119.61 53 ⇓PKiKP PKiKP 08 21 45.6 +0.4
baz=120
WUAZ Wupatki 119.61 53 ePKPdf PKPdf 08 21 45.9 +0.7
WUAZ ePP PP 08 23 07.7 -2.5
WUAZ eSKPdf SKPdf 08 25 04.9 +1.2
U16A Tuba City 119.66 53 ⇑PKiKP PKiKP 08 21 45.7 +0.4
baz=120,SNR=73
SWN1 Swindon 119.69 326 P PKPdf 08 21 44.0 -0.9
SWN1 AMb AMB 08 21 46.4
comp=Z,298nm,1.5s
SWN1 Swindon 119.69 326 eP PKPdf 08 21 44.0 -0.9
SWN1 AMb AMB 08 21 46.4
comp=Z,298nm,1.5s
Q18A Rafter H Ranch 119.70 49 ⇓PKiKP PKiKP 08 21 45.2 -0.1
baz=120,SNR=59
T17A Navajo Res., N 119.72 52 ⇓PKiKP PKiKP 08 21 46.1 +0.7
baz=120,SNR=148
M19A Rock Springs 119.74 46 ⇑PKiKP PKiKP 08 21 45.7 +0.4
baz=120,SNR=22
X16A Lo Mia Camp, P 119.78 55 ⇑PKiKP PKiKP 08 21 46.3 +0.7
baz=120,SNR=41
DFRA Djebel Bou Aff 119.79 308 P PKPdf 08 21 47.0 +1.5
SBD1 Bryn Du 119.80 328⇑ eP PKPdf 08 21 45.0 0.0
Y16A Circle Bar Ran 119.86 55 ⇓PKiKP PKiKP 08 21 46.4 +0.6
baz=120,SNR=11
WIM Isle of Man 119.88 330⇑ eP PKPdf 08 21 44.5 -0.6
N19A John Jarvie Ra 119.91 47 ⇓PKiKP PKiKP 08 21 45.2 -0.5
baz=120,SNR=31
FCC Fort Churchill 119.92 24 ePKIKP PKPdf 08 21 43.6 -1.4
116A Eloy 119.93 57 ⇓PKiKP PKiKP 08 21 46.2 +0.2
baz=120,SNR=59
WPM1 Penmaenmawr 119.95 329 eP PKPdf 08 21 44.5 -0.8
K20A Yellowstone Ra 119.96 45 PKiKP PKiKP 08 21 45.7 0.0
baz=120,SNR=80
Z16A Peralta Trail, 120.01 56 PKiKP PKiKP 08 21 46.6 +0.5
baz=120,SNR=35
LDF La Drutiere 120.03 323 ePKIKP PKPdf 08 21 44.9 -0.7
comp=Z,170nm,1.0s
R18A Canyonlands Na 120.07 50 PKiKP PKiKP 08 21 46.5 +0.4
baz=120,SNR=66
CAF Calviac 120.08 318 ePKIKP PKPdf 08 21 45.8 0.0
comp=Z,274nm,1.0s
WME Myndd Eilian 120.09 329 eP PKPdf 08 21 44.4 -1.1
MCH1 Michaelchurch 120.11 327 eP PKPdf 08 21 44.5 -1.1
MCH1 AMb AMB 08 21 46.5
comp=Z,126nm,1.0s
YLL Llanberis 120.15 329⇑ eP PKPdf 08 21 45.4 -0.3
L20A Wamsutter 120.17 46 PKiKP PKiKP 08 21 46.7 +0.6
baz=120,SNR=38
FLN La Foliniere 120.17 323 ePKIKP PKPdf 08 21 45.3 -0.5
comp=Z,159nm,1.0s
FLN eMLR MLR
comp=Z,1μm,22.0s
FLN La Foliniere 120.17 323 ePKPdf PKPdf 08 21 45.3 -0.5
FLN LR LR
comp=Z,1μm,22.0s
S18A Hurst Farm, Bl 120.17 51 ⇑PKiKP PKiKP 08 21 46.8 +0.5
baz=120,SNR=78
HGH Gray Hill 120.18 327⇑ eP PKPdf 08 21 45.6 -0.2
WLF1 Llynfaes 120.19 329 eP PKPdf 08 21 45.1 -0.7
WLF1 AMb AMB 08 21 46.8
comp=Z,199nm,1.0s
CKHR Kef el Ahmar 120.20 307 P PKPdf 08 21 47.3 +1.0
W17A Winslow 120.23 54 ⇓PKiKP PKiKP 08 21 47.2 +0.7
baz=120
216A Three Points, 120.24 57 ⇑PKiKP PKiKP 08 21 47.1 +0.5
baz=120,SNR=25
SET Setif 120.25 308 P PKPdf 08 21 47.0 +0.6
RJF Les Rejaudoux 120.30 319 ePKIKP PKPdf 08 21 46.2 0.0
comp=Z,348nm,1.4s
RJF eMLR MLR
comp=Z,903nm,22.8s
RJF Les Rejaudoux 120.30 319 ePKPdf PKPdf 08 21 46.2 0.0
RJF LR LR
comp=Z,900nm,22.8s
YRC Rhoscolyn 120.30 329⇑ eP PKPdf 08 21 45.8 -0.1
X17A Forest Lakes 120.31 55 ⇑PKiKP PKiKP 08 21 47.9 +1.2
baz=120,SNR=49
EJON La Jonquera 120.36 315 PKP PKPdf 08 21 45.9 -0.5
Q19A Hogan Spring (120.39 49 ⇓PKiKP PKiKP 08 21 47.2 +0.5
baz=120,SNR=77
T18A Mexican Hat 120.41 51 ⇑PKiKP PKiKP 08 21 46.7 -0.1

	baz=120,SNR=114						
P19A	**Cripple Cowboy**	**120.41**	**48**	⇑PKiKP	PKiKP	08 21 45.9	-0.8
	baz=120,SNR=56						
Y17A	**Roosevelt**	**120.42**	**55**	⇓PKiKP	PKiKP	08 21 46.9	0.0
	baz=120,SNR=44						
M20A	**Sweetwater, Wa**	**120.44**	**46**	⇑PKiKP	PKiKP	08 21 46.5	-0.2
	baz=120,SNR=32						
DGMT	**Dagmar**	**120.47**	**37**	⇓PKiKP	PKiKP	08 21 45.9	-0.7
	baz=120						
DGMT	**Dagmar**	**120.47**	**37**	*e*PKPdf	PKPdf	08 21 46.2	-0.3
DGMT				*e*SKPdf	SKPdf	08 25 04.7	-0.2
MTLF	**Montolieu**	**120.53**	**316**	*e*PKIKP	PKPdf	08 21 46.2	-0.5
	comp=Z,198nm,0.9s						
FILF	**Fillols**	**120.56**	**315**	*e*P	PKPdf	08 21 46.6	-0.2
GRR	**Gorron**	**120.56**	**323**	*e*PKIKP	PKPdf	08 21 46.2	-0.4
	comp=Z,192nm,1.1s						
R19A	**Curley Farm, L**	**120.58**	**50**	⇑PKiKP	PKiKP	08 21 46.4	-0.7
	baz=120,SNR=12						
N20A	**Spence Gulch,**	**120.59**	**47**	⇑PKiKP	PKiKP	08 21 47.1	+0.1
	baz=120,SNR=81						
U18A	**Rough Rock, Ch**	**120.59**	**52**	⇑PKiKP	PKiKP	08 21 47.3	+0.1
	baz=120,SNR=56						
SFJD	**Kangerlussuaq**	**120.70**	**359**	*i* PKIKP	PKPdf	08 21 45.5	-0.8
SFJD				pmax	pmax		
	comp=Z,100nm,0.8s						
SFJD	**Kangerlussuaq**	**120.70**	**359**	*i* P	PKPdf	08 21 45.5	-0.8
	comp=Z,101nm,0.8s						
V18A	**Ganado**	**120.71**	**53**	⇑PKiKP	PKiKP	08 21 47.8	+0.4
	baz=121,SNR=58						
117A	**Oracle**	**120.73**	**57**	⇓PKiKP	PKiKP	08 21 47.5	-0.1
	baz=121,SNR=44						
TUC	**Tucson**	**120.74**	**57**	*e*PKPdf	PKPdf	08 21 48.1	+0.6
TUC				*e*SKPdf	SKPdf	08 25 07.3	+1.4
O20A	**White River Ci**	**120.81**	**48**	⇓PKiKP	PKiKP	08 21 48.1	+0.6
	baz=121,SNR=143						
217A	**Green Valley**	**120.82**	**58**	⇑PKiKP	PKiKP	08 21 48.3	+0.6
	baz=121,SNR=33						
S19A	**Harvey Farm, M**	**120.82**	**50**	⇑PKiKP	PKiKP	08 21 48.1	+0.5
	baz=121,SNR=19						
MFF	**Saint Martin d**	**120.86**	**321**	*e*PKIKP	PKPdf	08 21 46.7	-0.6
	comp=Z,315nm,0.9s						
L21A	**Rawlins**	**120.86**	**45**	⇓PKiKP	PKiKP	08 21 47.4	-0.1
	baz=121,SNR=108						
LFF	**La Frestale**	**120.94**	**318**	*e*PKIKP	PKPdf	08 21 47.4	-0.1
	comp=Z,298nm,0.9s						
X18A	**Snowflake**	**120.96**	**54**	⇓PKiKP	PKiKP	08 21 47.7	-0.2
	baz=121,SNR=24						
JSA	**Saint Aubin**	**120.98**	**324**	*e*P	PKPdf	08 21 46.3	-1.1
JSA				AMb	AMB	08 21 49.5	
	comp=Z,124nm,1.6s						
VALF	**Valcebollere**	**120.99**	**315**	*e*P	PKPdf	08 21 47.8	+0.2
W18A	**Petrified Fore**	**121.00**	**54**	⇓PKiKP	PKiKP	08 21 47.1	-0.9
	baz=121,SNR=23						
Y18A	**Canyon Day Jun**	**121.06**	**55**	⇓PKiKP	PKiKP	08 21 48.5	+0.3
	baz=121,SNR=28						
RWWY	**Rawlins**	**121.07**	**46**	*e*PKPdf	PKPdf	08 21 47.7	-0.1
RWWY				*e*SKPdf	SKPdf	08 25 06.6	+0.3
Q20A	**Ridgley Place,**	**121.12**	**49**	⇓PKiKP	PKiKP	08 21 46.9	-1.2
	baz=121,SNR=117						
T19A	**Beclabito**	**121.14**	**51**	⇓PKiKP	PKiKP	08 21 48.7	+0.5
	baz=121,SNR=19						
N21A	**Black Mountain**	**121.14**	**47**	⇑PKiKP	PKiKP	08 21 48.5	+0.4
	baz=121,SNR=34						
Z18A	**Geronimo**	**121.20**	**56**	⇓PKiKP	PKiKP	08 21 48.7	+0.2
	baz=121,SNR=5.8						
ETOS	**Mallorca**	**121.26**	**312**	PKP	PKPdf	08 21 48.2	-0.1
O21A	**Pagoda**	**121.35**	**47**	⇓PKiKP	PKiKP	08 21 48.3	-0.2
	baz=121,SNR=9.8						
118A	**Homack Ranch,**	**121.35**	**56**	⇓PKiKP	PKiKP	08 21 48.7	-0.1
	baz=121,SNR=50						
DYA	**Yadsworthy**	**121.39**	**326**	*e*P	PKPdf	08 21 47.2	-0.9
DYA				AMb	AMB	08 21 49.6	
	comp=Z,230nm,1.3s						
V19A	**Window Rock**	**121.41**	**53**	⇑PKiKP	PKiKP	08 21 48.2	-0.5
	baz=121,SNR=20						
HTL	**Hartland**	**121.42**	**327**	*e*P	PKPdf	08 21 47.9	-0.3
HTL				AMb	AMB	08 21 49.9	
	comp=Z,188nm,1.3s						
218A	**Dragoon**	**121.42**	**57**	⇑PKiKP	PKiKP	08 21 49.7	+0.8
	baz=121,SNR=15						
MLS	**Moulis**	**121.43**	**316**	*e*P	PKPdf	08 21 47.6	-0.9
MVCO	**Mesa Verde**	**121.45**	**51**	⇓PKiKP	PKiKP	08 21 48.7	-0.1
	baz=121						
MVCO	**Mesa Verde**	**121.45**	**51**	*e*PKPdf	PKPdf	08 21 49.4	+0.7
MVCO				*e*SKPdf	SKPdf	08 25 08.4	+1.2
L22A	**Ellis Ranch, M**	**121.50**	**45**	⇑PKiKP	PKiKP	08 21 47.9	-0.9
	baz=121,SNR=35						
X19A	**St. Johns**	**121.52**	**54**	⇓PKiKP	PKiKP	08 21 49.5	+0.4
	baz=122,SNR=28						
318A	**Bisbee**	**121.57**	**58**	⇑PKiKP	PKiKP	08 21 49.4	+0.2
	baz=122,SNR=49						
M22A	**Cedar Creek Ra**	**121.60**	**46**	⇑PKiKP	PKiKP	08 21 48.0	-0.9
	baz=122,SNR=50						
SGMF	**Saint Gilles**	**121.63**	**323**	*e*PKIKP	PKPdf	08 21 47.9	-0.8
	comp=Z,234nm,0.9s						
Y19A	**Nutrioso**	**121.65**	**55**	⇓PKiKP	PKiKP	08 21 49.9	+0.6
	baz=122,SNR=39						
MELF	**Melles**	**121.69**	**316**	*e*P	PKPdf	08 21 48.9	-0.1
Z19A	**T-Link Ranch,**	**121.79**	**56**	⇓PKiKP	PKiKP	08 21 49.5	-0.1
	baz=122,SNR=6.7						
ADJB	**Djebel Djouab**	**121.79**	**308**	P	PKPdf	08 21 51.0	+1.6
R21A	**Cimarron**	**121.85**	**49**	⇑PKiKP	PKiKP	08 21 50.2	+0.7
	baz=122,SNR=29						
119A	**Ashpeak Ranch,**	**121.87**	**56**	⇓PKiKP	PKiKP	08 21 50.5	+0.7
	baz=122,SNR=28						
N22A	**Wattenberg Ran**	**121.90**	**46**	⇑PKiKP	PKiKP	08 21 50.2	+0.7
	baz=122,SNR=28						
EPF	**Esparros**	**121.92**	**316**	*e*PKIKP	PKPdf	08 21 49.0	-0.4
	comp=Z,138nm,1.0s						
ABA	**Alger-Bouzarea**	**121.94**	**309**	P	PKPdf	08 21 50.4	+0.8
EPOB	**Poblet**	**122.00**	**314**	PKP	PKPdf	08 21 48.9	-0.7
RESF	**Ens**	**122.00**	**316**	*e*P	PKPdf	08 21 49.9	+0.3
ROSF	**Rostrenen**	**122.02**	**323**	*e*PKIKP	PKPdf	08 21 48.7	-0.7
	comp=Z,110nm,0.9s						
SMCO	**Snowmass**	**122.03**	**48**	*e*PKPdf	PKPdf	08 21 42.7	-7.0
219A	**White Tail Can**	**122.07**	**57**	⇑PKiKP	PKiKP	08 21 50.2	0.0
	baz=122,SNR=51						
QUIF	**Quistinic**	**122.15**	**323**	*e*PKIKP	PKPdf	08 21 49.0	-0.7
	comp=Z,132nm,0.9s						
EMHD	**Djebel Mahouad**	**122.16**	**308**	P	PKPdf	08 21 51.1	+1.0
319A	**Douglas**	**122.18**	**58**	⇑PKiKP	PKiKP	08 21 51.1	+0.6
	baz=122,SNR=48						
EBIE	**Bielsa**	**122.18**	**316**	PKP	PKPdf	08 21 50.1	+0.2
VIEF	**Viey**	**122.19**	**316**	*e*P	PKPdf	08 21 50.5	+0.6
RSSD	**Black Hills**	**122.37**	**42**	*e*PKPdf	PKPdf	08 21 49.7	-0.5
RSSD				*e*SKPdf	SKPdf	08 25 09.0	+0.3
TAM	**Tamanrasset**	**122.37**	**292**	*e*PKIKP	PKPdf	08 21 51.7	+0.8
REYF	**Montagne du Re**	**122.41**	**317**	*e*P	PKPdf	08 21 51.2	+0.9
PHWY	**Pilot Hill**	**122.44**	**45**	*e*PKPdf	PKPdf	08 21 50.3	-0.2
EIBI	**Ibiza**	**122.57**	**312**	PKP	PKPdf	08 21 51.6	+0.8
ETSF	**Etsaut**	**122.58**	**317**	*e*PKIKP	PKPdf	08 21 51.1	+0.4
	comp=Z,170nm,0.8s						
ATE	**Arette**	**122.61**	**317**	*e*P	PKPdf	08 21 51.1	+0.4
ERTA	**Horta de San J**	**122.67**	**314**	PKP	PKPdf	08 21 50.2	-0.7
LARF	**Larrau**	**122.82**	**317**	*e*P	PKPdf	08 21 51.7	+0.6
ISCO	**Idaho Springs**	**122.83**	**47**	*e*PKIKP	PKPdf	08 21 51.5	+0.2
SJPF	**Ste Jean**	**122.95**	**317**	*e*PKIKP	PKPdf	08 21 51.6	+0.2
	comp=Z,192nm,1.0s						
ESAC	**San Caprasio**	**122.96**	**315**	PKP	PKPdf	08 21 50.9	-0.5
EALK	**Alkurruntz**	**123.10**	**317**	PKP	PKPdf	08 21 51.2	-0.4
ELIZ	**Elizondo**	**123.14**	**317**	PKIKP	PKPdf	08 21 51.5	-0.2
EBNR	**Beni Rached**	**123.24**	**309**	P	PKPdf	08 21 54.2	+2.0
ECHA	**Ech Chlef**	**123.41**	**308**	P	PKPdf	08 21 53.2	+0.7
EMOS	**Mosqueruela**	**123.45**	**314**	PKP	PKPdf	08 21 53.1	+0.7
Y22D	**IRIS PASSCAL I**	**123.51**	**54**	⇓PKiKP	PKiKP	08 21 53.6	+0.6
	baz=124,SNR=12						
SDCO	**Great Sand Dun**	**123.58**	**49**	*e*PKPdf	PKPdf	08 21 53.5	+0.7
SDCO				*e*SKPdf	SKPdf	08 25 12.9	+1.7
ANMO	**Albuquerque**	**123.64**	**53**	*e*PKIKP	PKPdf	08 21 53.4	+0.4
EANR	**'Ain N'Sour**	**123.67**	**308**	P	PKPdf	08 21 53.3	+0.3
ETRT	**Tiaret**	**123.67**	**308**	P	PKPdf	08 21 53.5	+0.5
EBEN	**Beniarda**	**123.83**	**312**	PKP	PKPdf	08 21 52.7	-0.5
OKGL	**Djebel Kef Gue**	**124.00**	**309**	P	PKPdf	08 21 55.0	+1.4
ECRI	**Cripan**	**124.02**	**317**	PKIKP	PKPdf	08 21 54.0	+0.6
OJGS	**Djebel Guires**	**124.07**	**308**	P	PKPdf	08 21 54.0	+0.2
ECHE	**Chera**	**124.07**	**313**	PKIKP	PKPdf	08 21 54.0	+0.4
ULM	**Lac du Bonnet**	**124.30**	**32**	PKP	PKPdf	08 21 52.6	-1.1
	comp=Z,93nm,0.8s,baz=303,slow=2.3,SNR=84						
ULM				SKP		08 25 10.6	
	comp=Z,9.1nm,0.8s,baz=314,slow=4.7,SNR=3.4						
ULM				PKKPbc	PKKPbc	08 31 37.6	-2.5
	comp=Z,4.7nm,0.6s,baz=110,slow=3.6,SNR=6.1						
ULM	**Lac du Bonnet**	**124.30**	**32**	*e*PKPdf	PKPdf	08 21 52.5	-1.3
OJBR	**Djebel Berber**	**124.37**	**308**	P	PKPdf	08 21 55.0	+0.7
ELAN	**Lanestosa**	**124.38**	**318**	PKP	PKPdf	08 21 54.0	-0.1

ETOR	**Torete**	**124.40**	**315**	PKIKP	PKPdf	08 21 54.0	-0.2
CART	**Cartagena**	**124.78**	**311**	*e*PKPdf	PKPdf	08 21 54.1	-1.0
ETOB	**Tobarra**	**124.83**	**312**	PKP	PKPdf	08 21 55.5	+0.4
EMUR	**La Murta**	**124.87**	**311**	PKP	PKPdf	08 21 54.8	-0.4
AGMN	**Agassiz Refuge**	**125.39**	**34**	*e*PKPdf	PKPdf	08 21 54.2	-1.7
EARI	**Arriondas**	**125.52**	**319**	PKP	PKPdf	08 21 56.1	-0.1
EVIA	**Vianos**	**125.53**	**313**	PKIKP	PKPdf	08 21 56.4	-0.1
ODZI	**Dziouia**	**125.68**	**308**	P	PKPdf	08 21 57.0	+0.1
ENIJ	**Nijar**	**125.89**	**311**	PKIKP	PKPdf	08 21 56.8	-0.4
GUD	**Guadarrama**	**125.94**	**315**	PKIKP	PKPdf	08 21 57.5	+0.3
ESDC	**Sonseca Array**	**126.19**	**314**	PKP	PKPdf	08 21 57.7	0.0
	comp=Z,39nm,0.9s,baz=37,slow=1.6,SNR=4.7						
ESDC				PP	PP	08 23 52.7	-1.5
	comp=Z,22nm,1.2s,baz=61,slow=6.9,SNR=7.3						
ESDC				SKKP		08 35 27.9	
	comp=Z,0.5nm,0.3s,baz=284,slow=4.2,SNR=6.8						
ESDC	**Sonseca Array**	**126.19**	**314**	PKP	PKPdf	08 21 57.6	-0.1
ESLA	**Sonseca Array**	**126.19**	**314**	*e*PKPdf	PKPdf	08 21 57.9	+0.2
ESLA				*e*PP	PP	08 23 53.7	-0.5
EQES	**Quesada**	**126.25**	**312**	PKP	PKPdf	08 21 57.6	-0.3
EBER	**Berja**	**126.43**	**311**	PKP	PKPdf	08 21 58.1	-0.1
TOA0	**Torodi Ar. Sit**	**126.50**	**281**	*e*PKPdf	PKPdf	08 21 58.3	-0.6
TORD	**Torodi Ar. Bea**	**126.50**	**281**	PKP	PKPdf	08 21 58.9	-0.1
	comp=Z,96nm,0.9s,baz=66,slow=1.8,SNR=188						
TORD				SKP		08 25 10.7	
	comp=Z,6.0nm,0.6s,baz=88,slow=4.0,SNR=4.1						
TORD				PKKPbc		08 31 31.8	
	comp=Z,2.7nm,1.0s,baz=278,slow=2.4,SNR=4.2						
PAB	**San Pablo**	**126.52**	**314**	*e*PKIKP	PKPdf	08 21 58.9	+0.6
PAB				*e*		08 23 55.5	
EBAN	**Banos Encina**	**126.64**	**312**	PKIKP	PKPdf	08 21 58.8	+0.2
EPON	**Pontenova**	**126.77**	**320**	PKP	PKPdf	08 21 58.9	+0.2
ECOG	**Cogollos-Vega**	**126.80**	**311**	PKIKP	PKPdf	08 21 58.1	-0.8
EGUA	**Guajares**	**126.96**	**311**	PKIKP	PKPdf	08 21 59.2	-0.1
ERON	**Agron**	**127.07**	**311**	PKP	PKPdf	08 21 58.9	-0.6
ECAL	**Calabor**	**127.14**	**318**	PKP	PKPdf	08 21 59.7	+0.3
ERUA	**La Rua**	**127.20**	**319**	PKIKP	PKPdf	08 22 00.0	+0.5
PBRG	**Braganca**	**127.21**	**318**	*e*PKPdf	PKPdf	08 22 00.1	+0.5
EADA	**Adamuz**	**127.22**	**313**	PKP	PKPdf	08 21 59.9	+0.2
ELUQ	**Luque**	**127.22**	**312**	PKIKP	PKPdf	08 21 59.6	-0.1
ELOJ	**Sierra Loja**	**127.28**	**311**	PKIKP	PKPdf	08 21 59.5	-0.4
ECSD	**EROS,Sioux Fal**	**127.34**	**39**	*e*PKPdf	PKPdf	08 21 59.5	-0.3
TXAR	**Lajitas Array**	**127.36**	**59**	PKP	PKPdf	08 22 00.3	0.0
	comp=Z,40nm,1.1s,baz=222,slow=1.2,SNR=58						
TXAR				SKPbc		08 25 01.8	
	comp=Z,7.2nm,0.9s,baz=270,slow=3.5,SNR=6.7						
TXAR				PKKPbc		08 31 29.5	
	comp=Z,1.7nm,0.7s,baz=111,slow=5.7,SNR=13						
TXAR				SKKPbc		08 35 05.1	
	comp=Z,1.3nm,1.0s,baz=103,slow=5.5,SNR=3.7						
TXAR	**Lajitas Array**	**127.36**	**59**	PKP	PKPdf	08 22 00.3	0.0
TXAR				SKPbc		08 25 01.8	
TXAR				PKKPbc		08 31 29.5	
TXAR				SKKPbc		08 35 05.1	
AMTX	**Amarillo**	**127.41**	**52**	*e*PKPdf	PKPdf	08 22 01.1	+0.9
CBKS	**Cedar Bluff**	**127.44**	**46**	*e*PKIKP	PKPdf	08 22 00.3	+0.2
MVO	**Moncorvo**	**127.69**	**317**	*e*PKPdf	PKPdf	08 22 01.4	+0.9
STS	**Santiago**	**127.88**	**320**	PKIKP	PKPdf	08 22 01.5	+0.7
EMIJ	**Mijas**	**127.96**	**311**	PKP	PKPdf	08 21 59.8	-1.4
EYMN	**Ely**	**127.98**	**32**	*e*PKPdf	PKPdf	08 22 00.4	-0.5
ELOB	**Lobios**	**128.05**	**318**	PKP	PKPdf	08 22 01.8	+0.6
PCAB	**Cabril**	**128.10**	**318**	*e*PKPdf	PKPdf	08 22 02.3	+1.0
EMAZ	**Mazaricos**	**128.12**	**320**	PKP	PKPdf	08 22 02.0	+0.7
EZAM	**Zamans**	**128.33**	**319**	PKIKP	PKPdf	08 22 02.1	+0.4
MTE	**Manteigas**	**128.38**	**317**	*e*PKPdf	PKPdf	08 22 03.0	+1.1
MTE	**Manteigas**	**128.38**	**317**	*e*PKPdf	PKPdf	08 22 02.3	+0.5
PVIS	**Viseu**	**128.48**	**317**	*e*PKPdf	PKPdf	08 22 03.0	+1.0
EJIF	**Jimena Fronter**	**128.52**	**311**	PKIKP	PKPdf	08 22 02.5	+0.2
PCBR	**Castelo Branco**	**128.58**	**316**	*e*PKPdf	PKPdf	08 22 03.2	+0.9
ESPR	**Espera**	**128.65**	**312**	PKP	PKPdf	08 22 03.2	+0.7
PMRV	**Marv??o**	**128.71**	**315**	*e*PKPdf	PKPdf	08 22 02.8	+0.3
EBAD	**Badajoz**	**128.73**	**314**	PKP	PKPdf	08 22 03.0	+0.4
PTO	**Porto**	**128.75**	**318**	*e*PKPdf	PKPdf	08 22 03.6	+1.1
EMIN	**Mina Concepcio**	**128.90**	**313**	PKP	PKPdf	08 22 03.6	+0.7
PBAR	**Barrancos**	**128.99**	**314**	*e*PKPdf	PKPdf	08 22 03.5	+0.4
PESTR	**Estremoz**	**129.09**	**315**	*e*PKPdf	PKPdf	08 22 03.6	+0.3
KSU1	**Kansas State U**	**129.53**	**45**	*e*PKPdf	PKPdf	08 22 04.3	+0.3
EVO	**Evora**	**129.53**	**315**	*e*PKIKP	PKPdf	08 22 04.2	+0.1
	comp=Z,342nm,1.3s						
EVO				*e*MLR	MLR		
	comp=Z,513nm,19.2s						
EVO	**Evora**	**129.53**	**315**	*e*PKPdf	PKPdf	08 22 05.0	+0.9
EGRO	**El Granado**	**129.58**	**313**	PKP	PKPdf	08 22 05.1	+0.8
PBEJ	**Beja**	**129.65**	**314**	*e*PKPdf	PKPdf	08 22 05.9	+1.6
WMOK	**Wichita Mounta**	**129.70**	**51**	*e*PKIKP	PKPdf	08 22 05.0	+0.5
PVAQ	**Vaqueiros**	**129.80**	**313**	*e*PKPdf	PKPdf	08 22 05.5	+0.8
PBDV	**Barranco-do-Ve**	**130.02**	**313**	*e*PKPdf	PKPdf	08 22 05.3	+0.2
PMAFR	**Mafra**	**130.23**	**316**	*e*PKPdf	PKPdf	08 22 06.4	+1.0
SCIA	**State Center**	**130.42**	**40**	*e*PKPdf	PKPdf	08 22 05.3	-0.3
SCIA				*e*SKPbc	SKPbc	08 25 11.8	-0.4
PTEO	**Sao Teotonio**	**130.47**	**314**	*e*PKPdf	PKPdf	08 22 07.9	+2.0
MORF	**Marmelete**	**130.52**	**313**	*e*PKPdf	PKPdf	08 22 07.8	+1.8
PFVI	**Vila Bisbo**	**130.72**	**313**	*e*PKPdf	PKPdf	08 22 08.2	+1.8
SCHQ	**Schefferville**	**131.53**	**11**	PKP	PKPdf	08 22 06.9	-0.5
	comp=Z,81nm,0.8s,baz=357,slow=1.9,SNR=46						
SCHQ				SKPbc	SKPbc	08 25 15.9	0.0
	comp=Z,115nm,0.8s,baz=7.3,slow=5.0,SNR=37						
SCHQ	**Schefferville**	**131.53**	**11**	*e*PKPdf	PKPdf	08 22 07.4	0.0
SCHQ				*e*SKPbc	SKPbc	08 25 15.6	-0.3
JFWS	**Jewell Farm**	**131.69**	**37**	*e*PKPdf	PKPdf	08 22 05.8	-2.3
JFWS				*e*SKPbc	SKPbc	08 25 16.8	-0.1
DBIC	**Dimbokro**	**132.75**	**272**	PKhKP		08 21 58.2	
	comp=Z,3.2nm,0.5s,baz=126,slow=3.5,SNR=7.3						
DBIC				PKP	PKPdf	08 22 10.6	-0.3
	comp=Z,63nm,0.7s,baz=82,slow=2.5,SNR=48						
DBIC				SKPbc	SKPbc	08 25 20.8	-0.8
	comp=Z,34nm,0.7s,baz=93,slow=4.1,SNR=14						
DBIC	**Dimbokro**	**132.75**	**272**	PKHKP		08 21 58.2	
DBIC						08 22 10.6	
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
DBIC				pmax	pmax		
	comp=Z,63nm,0.7s						
DBIC				pmax	pmax		
	comp=N,34nm,0.7s						
DBIC	**Dimbokro**	**132.75**	**272**	*e*PKPpre		08 21 56.1	
DBIC				PKP	PKPdf	08 22 10.6	-0.3
DBIC				*e*PKPdf	PKPdf	08 22 11.8	+0.9
DBIC				SKPbc	SKPbc	08 25 20.8	-0.8
DBIC				*e*SKPbc	SKPbc	08 25 22.1	+0.6
DBIC				*e*SKPdf	SKPdf	08 25 29.0	-0.2
LIC	**Lamto**	**132.88**	**271**	*e*PKIKP	PKPdf	08 22 10.7	-0.5
	comp=N,179nm,0.8s						
LIC				*e*MLR	MLR		
	comp=Z,707nm,22.0s						
LIC	**Lamto**	**132.88**	**271**	*e*PKPdf	PKPdf	08 22 10.7	-0.5
LIC				LR	LR		
	comp=Z,350nm,22.0s						
GLMI	**Grayling**	**133.62**	**32**	*e*PKPpre		08 22 02.9	
GLMI				*e*PKPdf	PKPdf	08 22 11.6	-0.1
GLMI				*e*SKPbc	SKPbc	08 25 22.9	-0.6
HDIL	**Hopedale**	**133.63**	**39**	*e*PKPpre		08 22 01.4	
HDIL				*e*PKPdf	PKPdf	08 22 11.7	-0.1
HDIL				*e*SKPbc	SKPbc	08 25 22.6	-1.1
TRQA	**Tornquist**	**133.71**	**170**	*e*PKPdf	PKPdf	08 22 12.5	+0.4
TRQA				*e*SKPbc	SKPbc	08 25 24.6	+0.6
CCM	**Cathedral Cave**	**133.72**	**43**	*e*PKHKP		08 21 59.7	
CCM				*e*		08 22 11.4	
CCM	**Cathedral Cave**	**133.72**	**43**	*e*PKPpre		08 21 59.7	
CCM				*e*PKPdf	PKPdf	08 22 11.4	-0.6
CCM				*e*SKPbc	SKPbc	08 25 24.3	+0.3
HKT	**Hockley**	**133.72**	**56**	*e*PKPdf	PKPdf	08 22 12.9	+0.6
HKT				*e*SKPbc	SKPbc	08 25 25.4	+1.1
MIAR	**Mount Ida**	**133.72**	**49**	*e*PKHKP		08 22 01.1	
MIAR				*e*		08 22 13.3	
MIAR	**Mount Ida**	**133.72**	**49**	*e*PKPpre		08 22 01.1	
MIAR				*e*PKPdf	PKPdf	08 22 13.3	+1.1
MIAR				*e*PKPbc		08 25 24.4	
NATX	**Nacogdoches**	**134.01**	**53**	*e*PKPpre		08 22 01.5	
NATX				*e*PKPdf	PKPdf	08 22 13.3	+0.5
NATX				*e*SKPbc	SKPbc	08 25 25.2	0.0
SLM	**Saint Louis**	**134.09**	**42**	*e*SKPbc	SKPbc	08 25 25.2	0.0
FVM	**French Village**	**134.31**	**43**	*e*PKHKP		08 22 01.5	
FVM				*e*		08 22 14.0	
FVM	**French Village**	**134.31**	**43**	*e*PKPpre		08 22 01.5	
FVM				*e*PKPdf	PKPdf	08 22 14.0	+0.9
FVM				*e*SKPbc	SKPbc	08 25 25.2	-0.7
UALR	**University of**	**134.52**	**48**	*e*PKPpre		08 22 03.6	
UALR				*e*PKPdf	PKPdf	08 22 15.2	+1.6
UALR				*e*SKPbc	SKPbc	08 25 27.6	+0.8
SIUC	**Southern Illin**	**135.26**	**42**	*e*PKPpre		08 22 02.8	
SIUC				*e*PKPdf	PKPdf	08 22 15.6	+0.7

SIUC				*e*SKPbc	SKPbc	08 25 28.5	-0.5
OLIL	**Olney**	**135.43**	**40**	*e*PKPpre		08 22 01.8	
OLIL				*e*PKPdf	PKPdf	08 22 15.6	+0.4
OLIL				*e*SKPbc	SKPbc	08 25 29.5	0.0
PVMO	**Portageville**	**135.62**	**44**	*e*PKPdf	PKPdf	08 22 16.5	+0.9
AAM	**Ann Arbor**	**135.85**	**33**	*e*PKPdf	PKPdf	08 22 15.0	-0.9
AAM				*e*SKPbc	SKPbc	08 25 30.2	-0.4
USIN	**University of**	**136.14**	**41**	*e*PKPpre		08 22 03.5	
USIN				*e*PKPdf	PKPdf	08 22 16.4	-0.2
USIN				*e*SKPbc	SKPbc	08 25 31.5	-0.2
BLO	**Bloomington**	**136.17**	**39**	*e*PKHKP		08 22 05.2	
BLO				*e*		08 22 17.2	
BLO	**Bloomington**	**136.17**	**39**	*e*PKPpre		08 22 05.2	
BLO				*e*PKPdf	PKPdf	08 22 17.2	+0.6
BLO				*e*		08 23 13.7	
BLO				*e*SKPbc	SKPbc	08 25 30.8	-0.9
UTMT	**University of**	**136.23**	**44**	*e*PKPdf	PKPdf	08 22 16.4	-0.4
UTMT				*e*SKPbc	SKPbc	08 25 32.1	+0.1
OXF	**Oxford**	**136.78**	**46**	*e*PKHKP		08 22 06.7	
OXF				*e*		08 22 18.1	
OXF	**Oxford**	**136.78**	**46**	*e*PKPpre		08 22 06.7	
OXF				*e*PKPdf	PKPdf	08 22 18.1	+0.3
OXF				*e*SKPbc	SKPbc	08 25 33.4	-0.3
WCI	**Wyandotte Cave**	**136.87**	**40**	*e*PKHKP		08 22 04.5	
WCI				*e*		08 22 18.7	
WCI	**Wyandotte Cave**	**136.87**	**40**	*e*PKPpre		08 22 04.5	
WCI				*e*PKPdf	PKPdf	08 22 18.7	+0.8
WCI				*e*SKPbc	SKPbc	08 25 32.7	-1.2
VBMS	**Vicksburg**	**137.03**	**50**	*e*PKPpre		08 22 11.0	
VBMS				*e*PKPdf	PKPdf	08 22 19.9	+1.5
VBMS				*e*SKPbc	SKPbc	08 25 35.2	+0.7
WVT	**Waverly**	**137.05**	**43**	*e*PKHKP		08 22 07.2	
WVT				*e*		08 22 18.1	
WVT	**Waverly**	**137.05**	**43**	*e*PKPpre		08 22 07.2	
WVT				*e*PKPdf	PKPdf	08 22 18.1	-0.2
WVT				*e*SKPbc	SKPbc	08 25 33.8	-0.7
ACSO	**Alum Creek Sta**	**137.62**	**35**	*e*PKPpre		08 22 08.9	
ACSO				*e*PKPdf	PKPdf	08 22 18.5	-0.7
ACSO				*e*SKPbc	SKPbc	08 25 35.2	-0.8
ERPA	**Erie**	**137.92**	**31**	*e*PKPdf	PKPdf	08 22 19.9	+0.2
ERPA				*e*SKPbc	SKPbc	08 25 36.4	-0.4
CFAA	**Coronel Fontan**	**138.19**	**160**	PKhKP		08 22 11.3	
	comp=Z,1.0nm,0.3s,baz=217,slow=2.5,SNR=22						
CFAA				SKPbc	SKPbc	08 25 38.0	0.0
	comp=Z,3.9nm,0.8s,baz=223,slow=4.2,SNR=12						
CFTV	**Fuerteventura**	**138.30**	**305**	PKP	PKPdf	08 22 21.0	+0.2
PMAR	**Madeira**	**138.64**	**312**	*e*PKPdf	PKPdf	08 22 22.5	+1.2
NCB	**Newcomb**	**139.11**	**24**	*e*PKPpre		08 22 11.8	
NCB				*e*PKPdf	PKPdf	08 22 21.2	-0.6
NCB				*e*SKPdf	SKPdf	08 25 39.6	-0.2
LRAL	**Lakeview Retre**	**139.25**	**47**	*e*PKPpre		08 22 13.9	
LRAL				*e*PKPdf	PKPdf	08 22 21.9	-0.5
LRAL				*e*SKPdf	SKPdf	08 25 40.5	+0.1
LCO	**Las Campanas**	**139.57**	**155**	*e*PKP	PKPdf	08 22 15.1	-8.1
LCO				*e*SKPdf	SKPdf	08 25 41.1	+0.1
EOSO	**Osorio**	**139.63**	**305**	PKP	PKPdf	08 22 23.8	+0.5
TZTN	**Tazewell**	**139.63**	**40**	*e*PKP	PKPdf	08 22 13.3	-10
MCWV	**Mont Chateau**	**139.76**	**33**	*e*PKPpre		08 22 14.3	
MCWV				*e*PKPdf	PKPdf	08 22 23.1	-0.1
MCWV				*e*SKPdf	SKPdf	08 25 41.5	+0.5
PKME	**Peaks-Kenny Pk**	**139.77**	**18**	*e*PKPpre		08 22 16.6	
PKME				*e*PKPdf	PKPdf	08 22 25.0	+2.0
LBNH	**Lisbon**	**139.77**	**22**	*e*PKIKP	PKPdf	08 22 23.1	+0.1
BINY	**Binghamton**	**139.79**	**27**	*e*PKPpre		08 22 15.3	
BINY				*e*PKPdf	PKPdf	08 22 23.1	-0.1
BINY				*e*SKPdf	SKPdf	08 25 40.8	-0.1
TKL	**Tuckaleechee C**	**140.02**	**41**	*e*PKHKP		08 22 15.4	
TKL				*e*		08 22 23.9	
TKL	**Tuckaleechee C**	**140.02**	**41**	*e*PKPpre		08 22 15.3	
TKL				*e*PKPdf	PKPdf	08 22 23.9	+0.1
TKL				*e*SKPdf	SKPdf	08 25 42.7	+1.1
SSPA	**Standing Stone**	**140.08**	**31**	*e*PKP	PKPdf	08 22 15.3	-8.4
SSPA				*e*SKPdf	SKPdf	08 25 42.7	+1.2
EBAJ	**Bajamar**	**140.08**	**306**	PKP	PKPdf	08 22 23.6	-0.5
BRAL	**Brewton**	**140.21**	**50**	*e*PKP	PKPdf	08 22 17.1	-7.2
BRAL				*e*SKPdf	SKPdf	08 25 43.6	+1.6
BRAL				*e*SKPab		08 25 53.2	
EGOM	**La Gomera**	**140.93**	**306**	PKP	PKPdf	08 22 21.0	-4.7
BLA	**Blacksburg**	**141.12**	**37**	*e*PKP	PKPdf	08 22 19.3	-6.4
BLA				*e*SKPdf	SKPdf	08 25 45.0	+1.6
CMLA	**Cha da Macela**	**141.31**	**325**	*e*PKPdf	PKPdf	08 22 25.0	-1.0
PAYG	**Puerto Ayora**	**141.41**	**101**	*e*PKPdf	PKPdf	08 22 28.9	+2.0
GOGA	**Godfrey**	**141.54**	**44**	*e*PKHKP		08 22 20.1	
GOGA				*e*		08 22 27.3	
GOGA	**Godfrey**	**141.54**	**44**	*e*PKPpre		08 22 20.1	
GOGA				*e*PKPdf	PKPdf	08 22 27.3	+0.7
GOGA				*e*SKPbc	SKPbc	08 25 46.2	-0.7
CBN	**Corbin**	**142.15**	**33**	*e*PKP	PKPdf	08 22 23.1	-4.4
RBDL	**Robledal**	**142.94**	**77**	*e*P	x	08 22 26.4	
RTR	**El Retiro**	**143.00**	**77**	*e*P	x	08 22 27.1	
SBLS	**San Blas**	**143.03**	**77**	*e*P	x	08 22 27.9	
SNJE	**San Jose**	**143.04**	**77**	*e*P	x	08 22 27.3	
TEIG	**Tepich**	**143.17**	**66**	*e*P	PKPdf	08 22 28.0	-1.8
TEIG	**Tepich**	**143.17**	**66**	*e*PKPdf	PKPdf	08 22 27.5	-2.3
TEIG				*e*SKPbc	SKPbc	08 25 50.1	-1.2
BOQS	**Boqueron**	**143.37**	**77**	*e*P	x	08 22 28.7	
SNET	**Serv Nac Est T**	**143.42**	**77**	*e*P	x	08 22 28.9	
LBRS	**Las Brisas**	**143.60**	**77**	*e*P	x	08 22 28.5	
SNVI	**San Vicente**	**143.81**	**77**	*e*P	x	08 22 29.6	
NHSC	**New Hope**	**143.93**	**41**	*e*PKPdf	PKPdf	08 22 29.3	-1.5
NHSC				*e*SKPbc	SKPbc	08 25 53.5	+0.7
CNNC	**Cliffs of the**	**143.96**	**37**	*e*PKPdf	PKPdf	08 22 28.1	-2.7
CNNC				*e*SKPbc	SKPbc	08 25 52.3	-0.5
VSM	**San Miguel**	**144.37**	**78**	*e*P	x	08 22 31.5	
CAHU	**Cacacuatique**	**144.40**	**77**	*e*P	x	08 22 31.0	
BLLM	**Bellamira**	**144.41**	**78**	*e*P	x	08 22 30.9	
CNCH	**Conchagua**	**144.81**	**78**	*e*P	x	08 22 32.8	
TGUH	**Tegucigalpa,Un**	**145.27**	**76**	*e*P	PKPdf	08 22 33.8	+0.2
TGUH	**Tegucigalpa,Un**	**145.27**	**76**	*e*PKPdf	PKPdf	08 22 33.5	-0.1
CRIN	**San Cristobal**	**145.63**	**79**	*e*P	PKPdf	08 22 34.6	+0.3
TEL3	**Telica 3**	**145.84**	**79**	*e*P	PKPdf	08 22 35.4	+0.8
DWPF	**Disney**	**145.89**	**50**	*e*PKPdf	PKPdf	08 22 34.5	+0.2
DWPF				*e*		08 23 32.0	
DWPF				*e*		08 25 57.3	
LVC	**Limon Verde**	**145.92**	**152**	PKPbc	PKPbc	08 22 37.0	+1.5
	comp=Z,246nm,0.9s,baz=247,slow=2.4,SNR=101						
LVC				SKPbc	SKPbc	08 26 00.2	+2.5
	comp=Z,22nm,0.8s,baz=304,slow=0.7,SNR=5.0						
LVC	**Limon Verde**	**145.92**	**152**	*e*PKPbc	PKPbc	08 22 36.4	+0.9
LVC				*e*SKPbc	SKPbc	08 25 59.5	+1.8
CPUP	**Villa Florida**	**145.93**	**172**	PKPbc	PKPbc	08 22 35.0	-0.5
	comp=Z,102nm,0.6s,baz=168,slow=1.8,SNR=219						
CPUP	**Villa Florida**	**145.93**	**172**	*e*PKPdf	PKPdf	08 22 34.8	+0.4
CPUP				*e*PKPbc	PKPbc	08 22 36.0	+0.6
CPUP				*e*		08 25 55.8	
MIRN	**Miramar**	**145.98**	**79**	*e*P	PKPdf	08 22 35.7	+0.9
CNGN	**Cerro Negro**	**145.99**	**79**	*e*P	PKPdf	08 22 34.4	-0.4
CNGN				*e*P		08 22 36.1	
MOMN	**Momotombo**	**146.15**	**79**	*e*P	PKPdf	08 22 36.6	+1.5
CSAN		**146.28**	**80**	*e*P	PKPdf	08 22 36.6	+1.3
XAVN	**Gruta Xavier**	**146.38**	**80**	*e*P	PKPdf	08 22 36.2	+0.7
TISN	**Laguna Tiscapa**	**146.43**	**80**	*e*P	PKPdf	08 22 37.1	+1.5
MGAN	**Managua**	**146.45**	**80**	*e*P	PKPdf	08 22 37.3	+1.7
HUEN		**146.51**	**79**	*e*P	PKPdf	08 22 37.5	+1.8
WILN	**Americas 2**	**146.51**	**80**	*e*P	PKPdf	08 22 37.4	+1.7
APON	**Apoyo**	**146.65**	**80**	*e*P	PKPdf	08 22 36.2	+0.2
SSN	**San Juan del S**	**146.90**	**81**	*e*P	PKPdf	08 22 36.8	+0.4
CONN	**Concepcion**	**147.10**	**81**	*e*P	PKPdf	08 22 37.3	+0.6
VCR	**Vista de Mar**	**147.16**	**83**	*e*P	PKPdf	08 22 38.0	+1.2
JCR	**Jicaral**	**147.68**	**84**	*e*P	PKPdf	08 22 38.7	+1.0
FORC	**Fortuna**	**148.10**	**82**	*e*P	PKPdf	08 22 40.3	+1.9
CGA2	**Cerro Gallo 2**	**148.32**	**83**	*e*P	PKPbc	08 22 41.7	-0.7
PRS1	**Puriscal**	**148.47**	**83**	*e*P	PKPdf	08 22 40.6	+1.6
QCR	**Quepos**	**148.62**	**84**	*e*P	PKPdf	08 22 40.0	+0.8
LAJ	**Bijagual**	**148.66**	**84**	*e*P	PKPdf	08 22 40.3	+1.0
CAM4	**Nova Friburgo**	**148.66**	**198**	⇑*i*P	PKPdf	08 22 37.9	-1.2
CAM4				*i*		08 22 44.2	
CAM4				*i*		08 22 50.4	
CAM4				*i*		08 22 55.9	
CAM4				*i*		08 23 01.0	
NNA	**Nana**	**148.92**	**129**	PKP	PKPdf	08 22 40.8	+1.1
	comp=Z,173nm,0.9s,baz=288,slow=2.6,SNR=20						
NNA				PKPbc	PKPbc	08 22 44.2	+0.3
	comp=Z,472nm,1.2s,baz=217,slow=2.4,SNR=44						
NNA	**Nana**	**148.92**	**129**	*e*PKPdf	PKPdf	08 22 40.1	+0.4
NNA				*e*PKPbc	PKPbc	08 22 45.0	+1.2
URSC	**Urasca**	**149.00**	**84**	*e*P	PKPdf	08 22 40.9	+1.0
BAR1		**149.47**	**85**	*e*P	PKPdf	08 22 41.1	+0.5
CAM3	**Guarapari**	**149.47**	**202**	⇑*i*P	PKPbc	08 22 45.8	+0.7
CAM3				*i*		08 22 48.1	

CAM3 i 08 22 53.2
CAM3 i 08 22 59.3
ARE Arequipa 149.57 142 eP PKPdf 08 22 42.0 +1.3
ARE e 08 22 46.0
ACR Cerro Adams 149.61 86 eP PKPdf 08 22 41.6 +0.7
ATAH Atahualpa 150.36 119 PKP PKPdf 08 22 44.1 +2.1
comp=Z,81nm,0.9s,baz=294,slow=1.1,SNR=23
ATAH PKPbc PKPbc 08 22 49.6 +2.2
comp=Z,202nm,0.9s,baz=302,slow=2.4,SNR=62
BBSR BB Station 152.88 23 ePKPdf PKPdf 08 22 46.2 +0.9
BBSR ePKPbc PKPbc 08 22 52.9 +0.2
BCIP Isla Barro Col 152.90 85 ePKPbc PKPbc 08 22 52.1 -1.1
OTAV Otavalo 153.09 105 ePKPdf PKPdf 08 22 48.1 +2.0
CVJ Coleyville 153.44 64⥣eP PKPdf 08 22 45.4 -1.1
MTDJ Mount Denham 153.44 64 ePKPdf PKPdf 08 22 46.3 -0.2
MTDJ ePKPbc PKPbc 08 22 53.1 -1.2
STH Stony Hill 154.14 64⥣iP PKPdf 08 22 48.0 +0.6
GWJ Greenwich 154.22 64⥥iP PKPdf 08 22 47.9 +0.3
CMJ Castle Mountai 154.51 63⥣eP PKPab 08 23 12.0 +0.2
SIV San Ignacio 155.05 160 PKP PKPdf 08 22 49.4 +0.6
comp=Z,46nm,0.9s,baz=208,slow=1.6,SNR=129
SIV PKPab PKPab 08 23 14.0 +0.2
comp=Z,47nm,0.9s,baz=205,slow=3.6,SNR=5.9
BDFB Brasilia 156.47 191 PKP PKPdf 08 22 50.8 +0.1
comp=Z,13nm,0.9s,baz=164,slow=2.5,SNR=32
BDFB PKPab PKPab 08 23 20.3 +0.4
comp=Z,13nm,0.7s,baz=197,slow=13,SNR=7.3
ROSC El Rosal 158.11 96 PKP PKPdf 08 22 53.6 +0.7
comp=Z,27nm,0.9s,baz=102,slow=2.3,SNR=18
ROSC PKPab PKPab 08 23 29.0 +1.5
comp=Z,46nm,0.9s,baz=123,slow=6.7,SNR=8.7
ROSC El Rosal 158.11 96 ePKPdf PKPdf 08 22 53.1 +0.2
ROSC ePKPab PKPab 08 23 30.6 +3.2
CHI2 158.66 97 eP x 08 22 35.0
LAPE La Pedrera 161.08 89 eP x 08 22 36.5
SDV Santo Domingo 162.00 85 PKP PKPdf 08 22 56.7 -0.4
comp=Z,73nm,0.9s,baz=22,slow=0.5,SNR=64
SDV PKPab PKPab 08 23 44.5 +0.1
comp=Z,13nm,0.7s,baz=348,slow=2.6,SNR=3.8
SDV Santo Domingo 162.00 85 ePKPdf PKPdf 08 22 56.5 -0.7
CRPR Cabo Rojo, PR 162.41 53 ePKPdf PKPdf 08 22 57.7 +0.2
CRPR ePKPab PKPab 08 23 46.9 +0.9
ICM Isla Caja Muer 162.94 52 ePKPdf PKPdf 08 22 57.0 -1.0
SJG San Juan 163.10 51 ePKIKP PKPdf 08 22 57.6 -0.5
FDF Fort de France 168.95 49⥣eP PKPdf 08 23 03.0 +0.2

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*NEIC **15** 08:33:18.3±2.5, 7.30S×128.99E, h118km±25km, mb4.8/8, Error ellipse: s-maj=20.4km s-min=12.5km az=221.0*
*ISCJB **15** 08:33:20.3±0.8, 7.35S±0.05×129.24E±0.07, h165km±9km, mb4.4/11, Error ellipse: s-maj=12.9km s-min=6.3km az=155.5*
*DJA **15** 08:33:22, 7.32S×129.23E, h56km, MLv4.6/5*
*IDC **15** 08:33:23.3±2.8, 7.27S×129.05E, h164km±26km, mb3.8/7, mb1 3.8/10, mb1mx3.7/19, mbtmp3.8/10, Error ellipse: s-maj=23.7km s-min=13.2km az=44.0*
ISC 15 08:33:21.0±0.9**, 7.35S**±0.05×**129.25E**±0.08**, h153**km±9km**, n38,** σ1.13/38**, mb4.4**/11**, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AAI Ambon 3.79 344 P **Pn 08 34 18.6 0.0**
KAKA Kakadu 6.18 150 eP x 08 34 31.0
93nm,0.2s
KAKA eS x 08 35 37.4
KAKA Kakadu 6.18 150 P x 08 34 31.1
BATI Baumata 6.21 242 P **Pn 08 34 51.5 +0.9**
17nm,0.3s,baz=99,slow=2.6,SNR=14
BATI S **Sn 08 36 00.3 -0.5**
39nm,0.3s,baz=39,slow=23,SNR=18
BATI Baumata 6.21 242 P **Pn 08 34 51.6 +1.0**
83nm,0.8s,2μm0.7nm
LBMI Labuha 6.89 345 P **Pn 08 35 00.4 +0.7**
116nm,0.8s,0.3nm
KDI Kendari 7.41 297 P **Pn 08 35 07.3 +0.7**
23nm,1.1s,0.1nm
FITZ Fitzroy Crossi 11.26 198 eP **Pn 08 35 57.1 -0.5**
8.8nm,0.3s
FITZ eS **Sn 08 37 53.0 -9.1**
WRAB Tennant Creek 13.45 159 ePn **Pn 08 36 24.7 -1.2**
18nm,0.6s
WRAB eSn **Sn 08 38 45.6 -9.4**
WRAB Tennant Creek 13.45 159 P **Pn 08 36 25.3 -0.6**
WRA Warramunga Arr 13.46 159 P **Pn 08 36 24.5 -1.5**
3.5nm,0.3s,baz=343,slow=13,SNR=45
WRA S **Sn 08 38 50.1 -5.0**
6.4nm,0.3s,baz=331,slow=23,SNR=18
WB2 Warramunga Arr 13.46 159 eP **Pn 08 36 24.7 -1.4**
WB2 eS **Sn 08 38 45.2 -10**
BBKI Banjar Baru 14.86 284 P **Pn 08 36 48.1 +4.4**
115nm,1.0s
ASAR Alice Springs 16.83 165 P **Pn 08 37 09.2 +1.5**
1.6nm,0.3s,baz=339,slow=9.6,SNR=113
ASAR S **S 08 40 08.9 -6.0**
1.2nm,0.3s,baz=344,slow=22,SNR=9.8
SJI Sawahan 17.34 268 P **Pn 08 37 19.1 +5.1**
PMG Port Moresby 17.83 98 P **Pn 08 37 23.3 +3.5**
0.5nm,0.3s,baz=287,slow=14,SNR=3.2
PMG Port Moresby 17.83 98 P **Pn 08 37 23.3 +3.5**
CTA Charters Tower 20.78 129 P **P 08 37 53.6 +3.4**
4.6nm,0.6s,baz=317,slow=13,SNR=8.7
CTAO Charters Tower 20.78 129 eP **P 08 37 53.2 +2.9**
5.2nm,0.7s
FORT Forrest 23.34 183 eP **P 08 38 17.8 +2.2**
18nm,0.6s,mb4.7
STKA Stephens Creek 26.98 156 P **P 08 38 50.8 +2.2**
2.4nm,0.4s,mb4.2,baz=333,slow=8.7,SNR=7.5
STKA Stephens Creek 26.98 156 eP **P 08 38 50.9 +2.3**
0.7nm,0.7s,mb3.4
STKA e pP 08 39 20.2 -0.3
CMAR Chiang Mai Arr 39.39 311 P **P 08 40 35.8 -0.3**
1.6nm,0.4s,mb4.0,baz=146,slow=6.9,SNR=9.5
TAPN Taplejung 52.97 312 eP **P 08 42 21.2 -0.8**
7.6nm,0.4s,mb4.8
RAMN Ramite 53.56 311 eP **P 08 42 26.7 +0.3**
22nm,0.6s,mb5.1
JIRN Jiri 54.26 312 eP **P 08 42 30.7 -0.7**
9.2nm,0.5s,mb4.8
GUN Gumba 54.63 312 eP **P 08 42 33.8 -0.3**
24nm,0.7s,mb5.0
GKN Gorkha 55.60 311 eP **P 08 42 40.2 -0.8**
POO Poona 60.38 296 ex x 08 43 58.0
MKAR Makanchi Array 68.11 327 P **P 08 44 04.7 +0.4**
1.5nm,0.3s,mb4.1,baz=114,slow=8.4,SNR=58
ZALV Zalesovo Beam 71.57 334 P **P 08 44 24.0 -1.2**
0.7nm,0.4s,mb3.8,baz=154,slow=4.6,SNR=4.1
ZALV Zalesovo Beam 71.57 334 P **P 08 44 24.0 -1.3**
KURK Kurchatov 72.43 329 P **P 08 44 30.5 +0.1**
1.6nm,0.4s,mb4.1,baz=126,slow=5.2,SNR=4.6
KURK Kurchatov 72.43 329 eP **P 08 44 30.3 -0.2**
1.8nm,0.4s,mb4.2
MAW Mawson 74.36 201 P **P 08 44 42.9 +1.3**
1.6nm,0.7s,mb3.8,baz=79,slow=10,SNR=4.0
TXAR Lajitas Array 125.74 59 PKP PKPdf 08 52 05.7 +0.6
0.1nm,0.5s,baz=173,slow=2.8,SNR=3.5
TXAR Lajitas Array 125.74 59 PKP PKPdf 08 52 05.7 +0.6
CPUP Villa Florida 145.92 169 PKPbc PKPbc 08 52 44.5 +1.2
0.6nm,0.4s,baz=112,slow=1.9,SNR=4.0

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*MOS **15** 09:00:57.6±1.4, 52.41N×160.50E, h22km, mb4.9/23, Error ellipse: s-maj=9.4km s-min=5.9km az=102.7*
*IDC **15** 09:00:57.5±0.6, 52.72N×160.28E, h0km, mb4.2/23, mb1 4.4/25, mb1mx4.3/30, mbtmp4.3/25, ML4.2/2, MS3.5/3, Ms1 3.5/3, ms1mx3.3/39, Error ellipse: s-maj=17.5km s-min=10.1km az=168.0*
*KRSC **15** 09:00:58.0±0.2, 52.34N×160.61E, h10km±10km, ML5.1*
*BJI **15** 09:00:59.9, 52.59N×160.34E, h38km, mB4.9, mb4.7, Ms4.3, Msz4.2*
*ISCJB **15** 09:01:00.3±0.6, 52.31N±0.03×160.62E±0.05, h48km±3km, mb4.5/58, MS4.1/13, Error ellipse: s-maj=6.4km s-min=3.6km az=42.8*
*NEIC **15** 09:01:02.9±0.9, 52.59N×160.43E, h41km±8km, mb4.7/20, Error ellipse: s-maj=11.4km s-min=7.0km az=169.0*
ISC 15 09:01:02.0±0.6**, 52.31N**±0.03×**160.55E**±0.05**, h46**km±4km**, h38**km±2.3km**: pP-P, n154,** σ1.22/184**, mb4.5**/58**, MS4.1**/13**, 8C-9D, Off east coast of Kamchatka Peninsula**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SPN Mys Shipunski 0.85 338 i P **Pn 09 01 14.4 -3.2**
NLC Nalytchevo 1.13 320 eP **Pn 09 01 18.7 -2.7**
RUS Russkaya 1.26 276 eP **Pn 09 01 22.8 -0.3**
RUS i S **Sn 09 01 40.6 +1.8**
PET Petropavlovsk 1.36 302⥥iPN **Pn 09 01 23.2 -1.3**
PET eS **Sn 09 01 42.1 +0.8**
PET pmax pmax
comp=Z,3μm,0.5s
PET smax
comp=N,5μm,0.6s
PET smax
comp=N,7μm,0.5s
PET Petropavlovsk 1.36 302 eP **Pn 09 01 23.3 -1.2**
PET i S **Sn 09 01 41.0 -0.3**
PET Petropavlovsk 1.36 302 ePn **Pn 09 01 23.2 -1.3**
INSR Institute 1.41 303 eP **Pn 09 01 23.1 -2.0**
INSR i S **Sn 09 01 41.3 -1.2**
AVH Avacha 1.46 312 i P **Pn 09 01 25.3 -0.6**
AVH i S **Sn 09 01 44.5 +0.7**
GRL Gorelyy 1.54 280 i P **Pn 09 01 26.9 0.0**
GRL i S **Sn 09 01 47.8 +2.1**
PEA0B Petropavlovsk- 1.91 296 ePn **Pn 09 01 32.1 0.0**
PETK Petropavlovsk- 1.91 296 Pn **Pn 09 01 31.6 -0.5**
comp=N,266nm,0.3s,baz=104,slow=19,SNR=583
PETK Sn **Sn 09 02 00.8 +5.9**
comp=N,204nm,0.3s,baz=90,slow=33,SNR=11
GNL Ganaly 2.10 312 eP **Pn 09 01 34.9 +0.3**
GNL i S **Sn 09 02 01.2 +1.7**
MIPR Malaya Ipel'ka 2.33 271 eP **Pn 09 01 39.4 +1.6**
TUMR Tumrok 2.99 356 eP **Pn 09 01 46.1 -0.7**
TUMR i S **Sn 09 02 22.2 +0.9**
SKR Severo-Kuril's 3.22 241 ePN **Pn 09 01 49.4 -0.5**
SKR eS **Sn 09 02 26.5 -0.5**
SKR pmax pmax
comp=E,80nm,0.5s
SKR pmax pmax
comp=Z,90nm,0.5s
SKR smax
comp=N,650nm,0.6s
SKR smax
comp=E,1μm,0.7s
KMNR Kamenistaya 3.46 357 eP **Pn 09 01 53.1 -0.1**
KMNR i S **Sn 09 02 33.5 +0.6**
BZGR Bezymyannyi-Gr 3.64 1 eP **Pn 09 01 56.0 +0.3**
BZGR i S **Sn 09 02 38.0 +0.7**
KIRR Kirishev 3.65 358 eP **Pn 09 01 55.5 -0.4**
KIRR i S **Sn 09 02 38.7 +1.1**
KPT Kopyto 3.67 357 eP **Pn 09 01 56.5 +0.4**
ZLN Zelenaya 3.72 2 eP **Pn 09 01 57.6 +0.8**
ZLN i S **Sn 09 02 39.9 +0.7**
KOZ Kozyrevsk 3.78 354 eP **Pn 09 01 57.5 -0.1**
KOZ i S **Sn 09 02 41.0 +0.3**
KOZR Kozyr 3.78 354 PN **Pn 09 01 57.5 -0.2**
KOZR S **Sn 09 02 41.0 +0.1**
KRSR Krestovskiy 3.92 0 eP **Pn 09 01 58.7 -0.8**
KRSR i S **Sn 09 02 44.7 +0.6**
SRDR Sredinnyy 4.04 353 eP **Pn 09 02 01.4 +0.1**
KBTR Krutoberegovo 4.12 18 eP **Pn 09 02 01.3 -1.1**
KBTR i S **Sn 09 02 49.1 -0.2**
SRKR Sorokina 4.37 4 eP **Pn 09 02 06.6 +0.9**
SRKR i S **Sn 09 02 55.8 +0.6**
FX1 Attu Island--F 7.70 81 Pn **Pn 09 02 50.7 -0.8**
comp=E,14nm,0.3s,baz=282,slow=4.3,SNR=35
FX1 Sn **Sn 09 04 10.8 -6.5**
comp=E,17nm,0.3s,baz=90,slow=14,SNR=6.4
FX1 LR LR 09 05 11.4
comp=E,206nm,21.3s,baz=59,slow=32
FX1 Attu Island--F 7.70 81 Pn **Pn 09 02 50.7 -0.8**
FX1 Sn **Sn 09 04 10.8 -6.5**
FX1 LR LR 09 05 11.4
SMY Shemya 8.28 82 ePN **Pn 09 02 59.1 -0.2**
ASAJ Asahikawa 14.48 243 Pn **Pn 09 04 24.2 +0.3**
comp=E,1.3nm,0.3s,baz=40,slow=21,SNR=9.8
ASAJ Asahikawa 14.48 243 P **Pn 09 04 24.2 +0.3**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ERM Erimo 15.64 236 eP **Pn 09 04 37.4 -1.7**
ERM pmax pmax
comp=Z,9.0nm,0.4s
ERM Erimo 15.64 236 ePn **Pn 09 04 37.4 -1.7**
comp=Z,8.7nm,0.4s
BILL Bilibino 16.02 8⥣eP **Pn 09 04 43.3 -0.5**
BILL eS **S 09 07 39.0 -13**
BILL pmax pmax
comp=Z,10.0nm,1.6s
BILL MLR MLR
comp=Z,300nm,17.0s
BILL Bilibino 16.02 8 ePn **Pn 09 04 42.6 -1.1**
comp=Z,15nm,0.7s
HABR Khabarovsk 16.68 267 eP **Pn 09 05 01.9 +10**
HABR 09 07 55.2
HABR MLR MLR
comp=Z,181nm,16.0s
HABR MLR MLR
comp=Z,350nm,13.0s
KLR Kul'dur 18.42 272 eP **Pn 09 05 10.2 -3.4**
YAK Yakutsk 19.17 313 eP **Pn 09 05 17.7 -4.8**
YAK pmax pmax
comp=E,17nm,1.1s
YAK pmax pmax
comp=Z,40nm,1.1s
YAK Yakutsk 19.17 313 eP **Pn 09 05 19.1 -3.4**
comp=Z,41nm,0.8s
MAJO Matsushiro 22.29 234 eP **P 09 05 58.1 +2.9**
MAJO pmax pmax
comp=Z,30nm,0.8s,mb4.8
MAJO Matsushiro 22.29 234 eP **P 09 05 58.1 +2.9**
comp=Z,30nm,0.8s,mb4.8
MAT Matsushiro 22.29 234 P **P 09 05 58.0 +2.8**
MAT S **S 09 09 59.0 +1.3**
MJAR Matsushiro Arr 22.29 234 P **P 09 05 58.0 +2.8**
comp=Z,7.9nm,0.7s,mb4.3,baz=20,slow=12,SNR=25
MJAR Matsushiro Arr 22.29 234 P **P 09 05 58.0 +2.8**
TIXI Tiksi 23.91 336d iP **P 09 06 09.2 -1.8**
TIXI pmax pmax
comp=Z,11nm,0.7s,mb4.4
TIXI MLR MLR
comp=Z,300nm,29.0s,MS3.6
TIXI Tiksi 23.91 336 eP **P 09 06 08.9 -2.2**
comp=Z,12nm,0.7s,mb4.4
CN2 Changchun 24.75 264 eP **P 09 06 18.5 -0.5**
CN2 eAP 09 06 32.0
CN2 eS **S 09 10 33.8 -4.0**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.3
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.1
CN2 LR LR
comp=E,480nm,17.0s,MS4.1
CN2 LR LR
comp=Z,480nm,17.0s,MS4.1
HIA Hailar 25.74 280 eP **P 09 06 26.4 -1.4**
HIA pmax pmax
comp=Z,23nm,0.7s
HIA Hailar 25.74 280 eP **P 09 06 26.4 -1.4**
comp=Z,23nm,0.7s,mb4.8
BOD Bodaibo 26.78 300 eP **P 09 06 34.7 -2.4**
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
KSRS Korea Array 27.20 250 P **P 09 06 43.1 +2.1**
comp=Z,3.8nm,0.6s,mb4.1,baz=39,slow=9.5,SNR=12
KSRS LR LR 09 16 52.2
comp=Z,115nm,18.4s,MS3.5,baz=151,slow=35
KSRS Korea Array 27.20 250 P **P 09 06 43.1 +2.0**
KSRS pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
KSRS MLR MLR
comp=Z,115nm,18.4s,MS3.5
BJI Beijing 32.58 266 P **P 09 07 29.1 +0.5**
BJI AMB AMB
comp=Z,4.0nm,0.3s,mb4.8
ULN Ulaanbaatar 33.96 284⥥eP **P 09 07 40.2 -0.4**
ULN Ulaanbaatar 33.96 284 eP **P 09 07 40.1 -0.5**
comp=Z,2.7nm,0.7s,mb4.3
SONM Songino Array 34.36 285 P **P 09 07 43.6 -0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=62,slow=7.2,SNR=16
SONM PcP PcP 09 10 20.7 +1.7
comp=Z,0.9nm,0.9s,baz=52,slow=2.4,SNR=3.5
HHC Hu-ho-hao-te 34.92 271 eP **P 09 07 48.3 -0.7**
HHC AP pP 09 08 00.4 -0.9
HHC XP sP 09 08 05.9 -0.9
HHC PP PP 09 09 06.3 -2.4
HHC PCP PcP 09 10 19.9 -0.8
HHC eS **S 09 13 14.4 -2.7**
HHC XS sS 09 13 34.0 -3.7
HHC PCS PcS 09 14 06.1 -1.3
HHC SS SS 09 15 29.6 -20
HHC SCS ScS 09 18 03.6 -2.0
HHC AMB AMB
comp=Z,14nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,201nm,6.1s
HHC LR LR
comp=N,173nm,15.3s,MS4.1
HHC LR LR
comp=E,190nm,13.1s,MS4.1
HHC LR LR
comp=Z,293nm,16.3s,MS4.1
ZAK Zakamensk 35.03 290 eP **P 09 07 46.8 -3.0**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
JOW Kunigami 35.09 236 P **P 09 07 54.6 +4.0**
comp=Z,10nm,0.4s,mb5.1,baz=27,slow=9.8,SNR=10
HVS Khovu-Aksy 40.09 296 i P **P 09 08 31.8 -0.8**
HVS pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
HVS MLR MLR
comp=Z,1μm,17.0s,MS4.8
XAN Xi'an 40.87 264 P **P 09 08 39.6 +0.4**
XAN AP pP 09 08 48.5 -3.2
XAN PP PP 09 10 13.8 -0.1
XAN S **S 09 14 48.6 +1.5**
XAN AMB AMB
comp=Z,3.0nm,0.5s,mb4.2
XAN LR LR
comp=N,28nm,21.9s,MS3.4
XAN LR LR
comp=E,56nm,21.9s,MS3.4
XAN LR LR
comp=Z,103nm,21.9s,MS3.6
LZH Lanzhou 42.62 271 eP **P 09 08 53.9 +0.4**
LZH AP pP 09 09 04.1 -1.9
LZH XP sP 09 09 08.0 -3.5
LZH ePP PP 09 10 34.5 +1.7
LZH eS **S 09 15 14.0 +1.0**
LZH XS sS 09 15 30.1 -3.9
LZH eSS SS 09 18 16.3 -7.8
LZH AMB AMB
comp=Z,25nm,1.4s,mb4.8
LZH AMB AMB
comp=Z,97nm,5.3s
LZH LR LR
comp=N,552nm,13.7s
LZH LR LR
comp=Z,834nm,17.5s,MS4.7
GTA Gaotai 42.98 278 eP **P 09 09 00.4 +4.0**
GTA AP pP 09 09 09.9 +1.0
GTA XP sP 09 09 13.9 -0.4
GTA AMB AMB
comp=Z,3.0nm,0.9s,mb4.0
ZAA0 Zalesovo Array 43.44 304 eP **P 09 08 57.6 -2.3**
ZALV Zalesovo Beam 43.44 304 P **P 09 08 57.3 -2.6**
comp=Z,1.7nm,0.3s,mb4.2,baz=59,slow=7.1,SNR=11
ZALV PP PP 09 10 39.9 -1.4
comp=Z,0.4nm,0.3s,baz=66,slow=7.1,SNR=2.0
ZALV LR LR 09 26 26.8
comp=Z,97nm,19.5s,MS3.7,baz=232,slow=36
ZALV Zalesovo Beam 43.44 304 P **P 09 08 57.3 -2.6**
ZALV 09 10 39.9
YKA Yellowknife Ar 43.55 42 P **P 09 09 01.4 +0.7**
comp=Z,0.4nm,0.5s,mb3.4,baz=298,slow=7.5,SNR=11
NVS Novosibirsk 43.79 305 eP **P 09 09 00.2 -2.5**
NVS pmax pmax
comp=N,8.0nm,0.9s
NVS pmax pmax
comp=E,17nm,0.9s
NVS pmax pmax
comp=Z,27nm,0.9s,mb5.0
RES Resolute Bay 43.95 22 P **P 09 09 04.2 +0.5**
comp=Z,3.3nm,0.9s,mb4.1,baz=318,slow=11,SNR=7.1
CD2 Chengdu 46.18 265 P **P 09 09 23.8 +1.8**
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.4
WMQ Urumqi 47.50 290 eP **P 09 09 33.4 +1.3**
GYA Guiyang 47.61 259 eP **P 09 09 33.3 +0.1**
GYA AP pP 09 09 44.8 -1.1
GYA XP sP 09 09 48.8 -2.5
GYA PCP PcP 09 11 03.3 +1.0
GYA PP PP 09 11 24.9 0.0
GYA SCP ScP 09 14 52.3 -0.1
GYA S **S 09 16 23.0 -2.3**
GYA XS sS 09 16 43.3 -3.2
GYA SS SS 09 19 46.8 -6.8
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,90nm,4.9s
GYA LR LR
comp=N,460nm,19.0s,MS4.6
GYA LR LR
comp=E,440nm,18.3s,MS4.6
GYA LR LR
comp=Z,480nm,18.6s,MS4.5
SPB4 Spitsbergen Ar 47.96 351 eP **P 09 09 35.8 +0.5**
KURK Kurchatov 48.39 303 P **P 09 09 38.2 -0.7**
comp=Z,4.1nm,0.3s,mb4.9,baz=58,slow=7.6,SNR=32
KURK Kurchatov 48.39 303⥥eP **P 09 09 37.6 -1.3**
KURK pmax pmax
comp=Z,17nm,0.8s,mb5.1
KURK MLR MLR
comp=Z,200nm,22.0s,MS4.1
KURK Kurchatov 48.39 303 eP **P 09 09 37.4 -1.5**
comp=Z,17nm,0.7s,mb5.2
MK31 Makanchi Array 48.75 297 eP **P 09 09 40.4 -1.3**
MKAR Makanchi Array 48.75 297 P **P 09 09 40.3 -1.4**
comp=Z,2.6nm,0.5s,mb4.5,baz=57,slow=6.8,SNR=65
KMI Kunming 50.97 261 P **P 09 10 00.8 +2.0**
KMI AP pP 09 10 11.0 -0.7
KMI S **S 09 17 13.3 +0.9**
KMI SS SS 09 20 44.6 -2.8
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.7
KMI LR LR
comp=Z,132nm,22.3s,MS3.9
BVAR Borovoye Array 51.10 309 P **P 09 09 58.5 -1.0**
comp=Z,5.1nm,0.6s,mb4.7,baz=62,slow=8.5,SNR=28
BRVK Borovoye 51.13 309 eP **P 09 09 59.0 -0.7**
APA Apatity 54.08 338⥥eP **P 09 10 26.0 +4.7**
APA pmax pmax
comp=Z,110nm,1.5s,mb5.6
ARCES ARCESS Array B 54.12 342 P **P 09 10 21.1 -0.4**
comp=Z,11nm,0.8s,mb4.8,baz=44,slow=8.2,SNR=22
ARU Arti 54.16 318d iP **P 09 10 21.3 -0.8**
ARU e 09 12 21.7
ARU eS **S 09 17 57.5 +2.3**
ARU SS SS 09 21 39.3 +2.7
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.8
ARU Arti 54.16 318 eP **P 09 10 21.2 -0.8**
comp=Z,16nm,1.1s,mb4.9
SUMG Summit 54.71 7 eP **P 09 10 27.2 +1.4**
comp=Z,22nm,1.1s,mb5.1
AAK Ala-Archa 55.68 297⥥eP **P 09 10 33.3 +0.1**
AAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
AAK MLR MLR
comp=Z,100nm,15.0s,MS4.0
AAK Ala-Archa 55.68 297 eP **P 09 10 33.1 -0.1**
NVAR Mina Array Bea 55.75 70 P **P 09 10 37.5 +3.7**
comp=Z,0.3nm,0.8s,mb3.4,baz=321,slow=8.4,SNR=2.8
EKS2 Erkin-Say 56.05 297 eP **P 09 10 36.0 +0.1**
comp=Z,5.6nm,1.2s,mb4.5
KK31 Karatay Array 57.51 300 i P **P 09 10 45.4 -0.8**
KK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
PDAR Pinedale Array 57.66 61 P **P 09 10 49.6 +2.4**
comp=Z,0.6nm,0.8s,mb3.7,baz=332,slow=4.7,SNR=4.8
CHTO Chiang Mai 58.03 259 eP **P 09 10 52.2 +2.1**
CHTO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CHTO Chiang Mai 58.03 259 eP **P 09 10 52.2 +2.1**
comp=Z,9.7nm,0.9s,mb4.8
CMAR Chiang Mai Arr 58.30 259 P **P 09 10 54.3 +2.2**
comp=Z,7.6nm,0.7s,mb4.8,baz=26,slow=6.8,SNR=31
CMAR Chiang Mai Arr 58.30 259 i P **P 09 10 54.7 +2.7**
CMAR pmax pmax
comp=Z,8.0nm,0.7s
JOF Joensuu 58.40 335 ep **P 09 10 51.9 -0.2**
comp=Z,13nm,0.6s,mb5.1

JOF	**Joensuu**	**58.40**	**335**	*e*P	**P**	**09 10 51.9**	**-0.2**
JOF				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
AKTK	**Aktyubinsk**	**58.56**	**313**	P	**P**	**09 10 52.6**	**-0.8**
AKTK				PcP	PcP	09 11 42.1	-1.2
AKTO	**Aktyubinsk**	**58.56**	**313**	P	**P**	**09 10 52.6**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.2,baz=41,slow=5.0,SNR=6.6						
AKTO				PcP	PcP	09 11 42.1	-1.2
	comp=Z,1.7nm,0.6s,baz=40,slow=3.3,SNR=4.5						
KAF	**Kangasniemi**	**60.32**	**337**	*e*p	**P**	**09 11 05.1**	**-0.2**
	comp=Z,7.3nm,0.5s,mb5.0,baz=31,slow=6.4						
KAF	**Kangasniemi**	**60.32**	**337**	*e*P	**P**	**09 11 05.1**	**-0.2**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
OBN	**Obninsk**	**63.33**	**328⇓**	*e*P	**P**	**09 11 25.5**	**-0.2**
OBN				*e*		09 13 42.0	
OBN				*e*S	**S**	**09 19 48.2**	**-5.9**
OBN				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.3						
NB2	**NORSAR Subarra**	**64.37**	**344**	P	**P**	**09 11 32.3**	**-0.2**
	comp=Z,2.4nm,0.7s,mb4.3,baz=22,slow=6.9						
NOA	**NORSAR Array B**	**64.37**	**344**	P	**P**	**09 11 32.3**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.5,baz=21,slow=6.7,SNR=12						
SCHQ	**Schefferville**	**66.22**	**28**	P	**P**	**09 11 44.4**	**-0.1**
	comp=Z,3.4nm,1.0s,mb4.3,baz=279,slow=13,SNR=3.5						
AKASG	**Malin Array Be**	**69.43**	**329**	P	**P**	**09 12 04.1**	**-0.7**
	comp=Z,3.4nm,0.4s,mb4.7,baz=29,slow=6.1,SNR=23						
AKBB	**Malin Array Si**	**69.43**	**329**	*e*P	**P**	**09 12 04.7**	**-0.1**
TXAR	**Lajitas Array**	**70.69**	**67**	P	**P**	**09 12 15.0**	**+2.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=301,slow=4.6,SNR=6.8						
TXAR	**Lajitas Array**	**70.69**	**67**	P	**P**	**09 12 15.0**	**+2.2**
KWP	**Kalwaria**	**72.32**	**333**	*e*P	**P**	**09 12 23.2**	**+0.9**
KWP				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
KWP	**Kalwaria**	**72.32**	**333**	*e*P	**P**	**09 12 23.2**	**+0.9**
	comp=Z,19nm,0.9s,mb5.0						
CLL	**Collm**	**73.19**	**339**	*i* P	**P**	**09 12 28.4**	**+1.0**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
CLL	**Collm**	**73.19**	**339**	*i* P	**P**	**09 12 28.4**	**+1.0**
	comp=Z,7.0nm,0.7s,mb4.7						
UPC	**Upice**	**73.25**	**337**	*e*P	**P**	**09 12 29.0**	**+1.2**
DPC	**Dobruska-Polom**	**73.33**	**337**	*e*P	**P**	**09 12 30.3**	**+2.0**
BUR08	**Bucovina Ar. S**	**73.37**	**330**	*e*P	**P**	**09 12 29.5**	**+0.9**
BURAR	**Bucovina Array**	**73.39**	**330⇓**	*i*P	**P**	**09 12 29.5**	**+0.8**
PRU	**Pruhonice**	**74.08**	**338**	*e*P	**P**	**09 12 33.4**	**+0.7**
DRGR		**74.88**	**331⇑**	*i*P	**P**	**09 12 40.0**	**+2.6**
DRGR		**74.88**	**331**	⇑P	**P**	**09 12 40.0**	**+2.6**
KHC	**Kasperske Hory**	**75.11**	**338**	*e*P	**P**	**09 12 40.1**	**+1.5**
MEM	**Membach**	**75.22**	**344**	P	**P**	**09 12 41.0**	**+1.8**
	comp=Z,9.0nm,1.3s,mb4.5						
GERES	**GERESS Array B**	**75.34**	**338**	P	**P**	**09 12 40.3**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.9,baz=53,slow=5.2,SNR=5.7						
VOIR		**75.39**	**329⇑**	*i*P	**P**	**09 12 41.9**	**+1.5**
VOIR		**75.39**	**329**	⇑P	**P**	**09 12 41.9**	**+1.5**
GIVF	**Givet**	**75.91**	**344**	*e*P	**P**	**09 12 42.9**	**-0.3**
BAIF	**Baives**	**76.05**	**345**	*e*P	**P**	**09 12 43.2**	**-0.9**
GZR	**Gura Zlata**	**76.13**	**331⇑**	*i*P	pP	09 12 55.7	-2.3
BZS	**Buzias**	**76.27**	**332⇑**	*i*P	**P**	**09 12 43.3**	**-2.1**
BZS	**Buzias**	**76.27**	**332**	⇑P	**P**	**09 12 43.3**	**-2.1**
CDF	**Champ du Feu**	**77.10**	**342**	*e*P	**P**	**09 12 49.0**	**-1.0**
BRTR	**Keskin Array B**	**77.41**	**321**	P	**P**	**09 12 51.0**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.0,baz=357,slow=2.5,SNR=8.0						
HINF	**Hinteralfeld**	**77.75**	**342**	*e*P	**P**	**09 12 52.3**	**-1.4**
LOR	**Lormes**	**78.81**	**344**	*e*P	**P**	**09 12 58.5**	**-1.0**
CABF	**La Chapelle**	**79.06**	**342**	*e*P	**P**	**09 13 01.0**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.4						
CABF	**La Chapelle**	**79.06**	**342**	*e*P	**P**	**09 13 01.0**	**+0.1**
CABF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CABF	**La Chapelle**	**79.06**	**342**	*e*P	**P**	**09 13 01.0**	**+0.1**
	comp=Z,4.3nm,0.8s,mb4.4						
SSF	**Saint Saulge**	**79.08**	**344**	*e*P	**P**	**09 13 00.1**	**-0.9**
	comp=Z,7.7nm,0.9s,mb4.3						
SSF	**Saint Saulge**	**79.08**	**344**	*e*P	**P**	**09 13 00.1**	**-0.9**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SSF	**Saint Saulge**	**79.08**	**344**	*e*P	**P**	**09 13 00.1**	**-0.9**
	comp=Z,3.8nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**79.16**	**205**	P	**P**	**09 13 04.5**	**+3.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=15,slow=5.6,SNR=9.6						
AVF	**Avril sur Loir**	**79.36**	**344**	*e*P	**P**	**09 13 01.7**	**-0.8**
	comp=Z,14nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**79.36**	**344**	*e*P	**P**	**09 13 01.7**	**-0.8**
AVF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**79.36**	**344**	*e*P	**P**	**09 13 01.7**	**-0.8**
	comp=Z,7.0nm,1.0s,mb4.5						
SMF	**Signal de Mont**	**79.42**	**344**	*e*P	**P**	**09 13 02.2**	**-0.7**
LPL	**La Plagne**	**79.99**	**342**	*e*P	**P**	**09 13 04.2**	**-1.7**
	comp=Z,9.4nm,0.8s,mb4.5						
LPL	**La Plagne**	**79.99**	**342**	*e*P	**P**	**09 13 04.2**	**-1.7**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LPL	**La Plagne**	**79.99**	**342**	*e*P	**P**	**09 13 04.2**	**-1.7**
	comp=Z,4.7nm,0.8s,mb4.5						
LPG	**La Plagne**	**80.00**	**342**	*e*P	**P**	**09 13 04.4**	**-1.6**
	comp=Z,6.3nm,0.7s,mb4.4						
LPG	**La Plagne**	**80.00**	**342**	*e*P	**P**	**09 13 04.4**	**-1.6**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
LPG	**La Plagne**	**80.00**	**342**	*e*P	**P**	**09 13 04.4**	**-1.6**
	comp=Z,3.2nm,0.7s,mb4.4						
TCF	**Toulx Ste Croi**	**80.04**	**345**	*e*P	**P**	**09 13 05.6**	**-0.6**
ESDC	**Sonseca Array**	**87.41**	**348**	P	**P**	**09 13 44.5**	**+0.4**
	comp=Z,1.7nm,0.7s,mb4.4,baz=7.9,slow=6.2,SNR=6.8						

IDC ***15*** *09:02:34.1±75.0, 1322S×16930E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=1273.0km s-min=119.3km az=64.0*
NOU ***15*** *09:02:56.0±0.3, 1381S×16583E, h30km, MD3.6, ML4.3*
ISC 15 09:02:54.8±1.6**, 1409S**±008×**1676E**±02**, h35**km**, n8, σ0.82**/9**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.02**	**188**	*e*P	**Pn**	**09 04 52.5**	**+3.7**
DZM				*e*S	**Sn**	**09 06 18.7**	**+0.4**
DZM				AMP		09 06 22.4	
	comp=Z,325nm,4.5s						
NOUC	**Port Laguerre**	**8.06**	**189**	*e*S	**Sn**	**09 06 17.8**	**-1.7**
PLUM	**Mont Dore**	**8.19**	**187**	*e*S	**Sn**	**09 06 23.5**	**+0.9**
STKA	**Stephens Creek**	**29.68**	**229**	P	**P**	**09 08 57.8**	**+0.4**
	comp=Z,3.6nm,0.5s,mb4.3,baz=59,slow=6.3,SNR=12						
WRA	**Warramunga Arr**	**32.34**	**255**	P	**P**	**09 09 21.0**	**-0.1**
	comp=Z,0.3nm,0.7s,mb3.2,baz=86,slow=8.7,SNR=3.7						
ASAR	**Alice Springs**	**33.24**	**248**	P	**P**	**09 09 28.8**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=78,slow=9.0,SNR=17						
VNA3	**Neumayer Olymp**	**94.85**	**181**	*e*	**P**	**09 16 12.6**	**-0.2**
VNA3				*e*		09 16 16.2	
VNA2	**Neumayer--Watz**	**95.12**	**182**	*e*	**P**	**09 16 13.8**	**-0.2**
	baz=180,slow=5.3						
VNA2				*e*		09 16 17.2	

KRSC 15 09:08:44.4±1.1**, 5252N**×**16049E, h11**km±11km**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.65**	**334**	*e*P	Pg	09 08 58.5	+1.6
SPN				*i* S	Sg	09 09 08.7	+3.3
NLC	**Nalytchevo**	**0.95**	**314**	*e*P	Pg	09 09 03.3	+0.6
NLC				*i* S	Sg	09 09 17.4	+2.3
RUS	**Russkaya**	**1.21**	**267**	*e*P	Pn	09 09 07.1	-0.1
RUS				*i* S	Sb	09 09 23.8	+0.9
PET	**Petropavlovsk**	**1.23**	**295**	*e*P	Pn	09 09 07.5	+0.1
PET				*i* S	Sb	09 09 24.7	+1.4
AVH	**Avacha**	**1.30**	**306**	*e*P	Pn	09 09 09.4	+1.0
AVH				*i* S	Sb	09 09 27.4	+2.0
GNL	**Ganaly**	**1.94**	**308**	*e*P	Pn	09 09 19.3	+2.1
GNL				*i* S	Sn	09 09 45.0	+3.5
TUMR	**Tumrok**	**2.78**	**356**	*e*P	Pn	09 09 30.4	+1.7
TUMR				*i* S	Sn	09 10 03.3	+1.1
KMNR	**Kamenistaya**	**3.25**	**357**	*e*P	Pn	09 09 36.0	+0.8
KBTR	**Krutoberegovo**	**3.94**	**19**	*e*P	Pn	09 09 45.3	+0.6

NEIC ***15*** *09:13:27.7±5.1, 547S×15051E, h100km±24km, mb3.8/2, Error ellipse: s-maj=62.4km s-min=15.8km az=190.0*
IDC ***15*** *09:13:31.4±5.4, 576S×15034E, h108km±33km, mb3.5/3, mb1 3.7/4, mb1mx3.3/16, mbtmp3.6/4, MS4.3/1, Ms1 4.3/1, ms1mx3.2/25, Error ellipse: s-maj=67.9km s-min=39.7km az=115.0*
ISC 15 09:13:30.5±4.5**, 57S**±03×**1505E**±01**, h106**km±29km**, n12, σ0.57**/12**, mb3.7**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.89**	**222**	P	**Pn**	**09 14 42.3**	**+0.4**
	6.1nm,0.3s,baz=24,slow=7.0,SNR=19						
PMG				S	**Sn**	**09 15 37.0**	**-0.4**
	8.5nm,0.3s,baz=348,slow=20,SNR=7.5						
PMG	**Port Moresby**	**4.89**	**222**	P	**Pn**	**09 14 42.3**	**+0.4**
PMG				S	**Sn**	**09 15 37.0**	**-0.4**
EIDS	**Eidsvold**	**19.54**	**178**	*e*P	**P**	**09 17 50.8**	**+1.1**
WRAB	**Tennant Creek**	**21.08**	**227**	*e*P	**P**	**09 18 06.3**	**-0.1**
	1.6nm,0.4s,mb3.7						
WB2	**Warramunga Arr**	**21.08**	**226**	*e*P	**P**	**09 18 06.3**	**-0.1**
WRA	**Warramunga Arr**	**21.09**	**227**	P	**P**	**09 18 06.2**	**-0.4**
	1.4nm,0.4s,mb3.6,baz=52,slow=11,SNR=24						
WRA				ScP	ScP	09 25 37.1	+0.8
	0.6nm,1.0s,baz=44,slow=2.8,SNR=4.7						
DZM	**Mont Dzumac**	**22.43**	**138**	*e*P	**P**	**09 18 20.0**	**-0.8**
ASAR	**Alice Springs**	**23.91**	**220**	P	**P**	**09 18 35.5**	**+0.8**
	1.7nm,0.6s,mb3.6,baz=56,slow=8.7,SNR=35						
FITZ	**Fitzroy Crossi**	**27.16**	**241**	*e*P	**P**	**09 19 03.9**	**-0.2**
	2.1nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**27.30**	**197**	P	**P**	**09 19 04.7**	**-0.4**
	1.6nm,0.5s,mb3.8,baz=33,slow=12,SNR=4.6						
CBIJ	**Chichi jima**	**33.60**	**347**	LR	LR	09 31 11.4	
	comp=Z,542nm,21.5s,baz=10.0,slow=32						
TORD	**Torodi Ar. Bea**	**148.34**	**286**	PKPbc	PKPbc	09 33 04.7	-0.7
	0.2nm,0.6s,baz=72,slow=2.1,SNR=4.0						

ISCJB ***15*** *09:18:45.7±0.9, 2987N±003×3627E±006, h0km, Error ellipse: s-maj=7.7km s-min=4.7km az=175.1*
CSEM ***15*** *09:18:45.0±0.6, 2983N×3636E, h2km, ML2.6, Error ellipse: s-maj=12.5km s-min=8.1km az=60.0*
HLW ***15*** *09:18:46.0, 2979N×3667E, h25km, Mb2.6*
SGS ***15*** *09:18:46.6, 3001N×3623E, h3km*
GII ***15*** *09:18:46.2±1.0, 2984N×36.19E, h0km, ML1.9/2, EXPLOSION*
ISC 15 09:18:45.9±0.9**, 2986N**±003×**3630E**±006**, h0**km**, n21, σ0.81**/27**, 1C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.10**	**263**	Pg	**Pg**	**09 19 06.0**	**-0.9**
HRFI	**Mount Harif**	**1.11**	**279**	Pg	**Pg**	**09 19 06.4**	**-0.8**
EIL	**Elat**	**1.19**	**261**	Pg	**Pg**	**09 19 07.9**	**-0.8**
ZFRI	**Zfri**	**1.19**	**306**	Pg	**Pg**	**09 19 07.8**	**-0.9**
ZFRI				Sg	**Sg**	**09 19 24.6**	**+0.4**
MBRI	**Mt Berech**	**1.21**	**267**	Pg	**Pg**	**09 19 08.1**	**-0.9**
MBRI				Sg	**Sg**	**09 19 26.4**	**+1.7**
PRNI	**Paran**	**1.22**	**294**	Pg	**Pg**	**09 19 08.4**	**-1.0**
JLOS		**1.33**	**212**	P	**Pg**	**09 19 11.2**	**-0.2**
JLOS		**1.33**	**212**	P	**Pg**	**09 19 11.1**	**-0.3**
JLOS				S	**Sg**	**09 19 29.7**	**+1.1**
KRMI	**Paran Flat**	**1.39**	**281**	Pg	**Pg**	**09 19 11.3**	**-1.2**
HBST	**Basata**	**1.51**	**245**	P	**Pn**	**09 19 14.4**	**+0.2**
HBST				S	**Sg**	**09 19 34.4**	**-0.1**
RMNI	**Mount Ramon**	**1.52**	**299**	Pn	**Pn**	**09 19 13.6**	**-0.7**
TBKS	**Tabuk**	**1.65**	**173**	P	**Pn**	**09 19 16.9**	**+0.7**
MZDA	**Masada**	**1.65**	**331**	Pn	**Pn**	**09 19 16.4**	**+0.2**
MZDA				Sn	**Sn**	**09 19 39.5**	**+1.4**
BDAS	**Al Bad'**	**1.77**	**217**	S	**Sn**	**09 19 41.0**	**-0.1**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**09 19 17.6**	**-0.2**
RTMI	**Retamim**	**1.83**	**311**	Pn	**Pn**	**09 19 19.1**	**+0.5**
DSI	**Dead Sea**	**1.88**	**335**	Pn	**Pn**	**09 19 20.4**	**+1.1**
KZIT	**Kziot**	**1.95**	**303**	Pn	**Pn**	**09 19 19.7**	**-0.5**
HNKL	**Nakhl**	**2.02**	**272**	P	**Pn**	**09 19 21.5**	**+0.4**
HNKL				S	**Sn**	**09 19 48.4**	**+1.3**
HKAT	**Jabal Katrina**	**2.42**	**237**	P	**Pn**	**09 19 26.6**	**-0.1**
TR2		**2.69**	**237⇑**	*i*P	**Pn**	**09 19 30.2**	**-0.3**

BJI ***15*** *09:39:45.2, 686S×13141E, h26km, mB6.3, mb5.9, Ms5.9, Msz5.7*
IGIL ***15*** *09:39:47.9, 662S×131.17E, h15km, MS6.0*
MOS ***15*** *09:39:49.7±1.1, 654S×13105E, h33km, mb6.3/53, MS5.7/66, Error ellipse: s-maj=8.8km s-min=5.0km az=116.1*
BGS ***15*** *09:39:50.4±2.5, 661S×13109E, h33km, MS5.7*
GCMT ***15*** *09:39:52.9±0.1, 659S×131.14E, h77km, MW6.4/119, Moment Tensor Solution. s119,c289; s119,c448; Duration: 3.9 Moment tensor: Scale 10¹⁸Nm; Mrr1.93±.03; Mθθ-4.62±.03; Mφφ2.68±.03; Mrθ-0.29±.02; Mθφ2.36±.02; Mφr1.93±.02; Best double couple: M0 5.00000×10¹⁸ NP1: φs66.00000°, δ61.00000°, λ21.00000°. NP2: φs326.00000°, δ72.00000°, λ150.00000°. Principal axes: T 4.5860, Plg34.0000°, Azm283.0000°; N 0.8170, Plg55.0000°, Azm117.0000°; P -5.4140, Plg7.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISCJB ***15*** *09:39:52.2±0.4, 666S±002×131.12E±002, h62km±3km, mb6.1/191 Error ellipse: s-maj=3.7km s-min=3.0km az=149.6*
NEIC ***15*** *09:39:53.6±0.1, 662S×13109E, h57km, mb6.0/97, ME6.1, MW6.3, Error ellipse: s-maj=4.6km s-min=3.3km az=56.0, Moment Tensor Solution. s46 Moment tensor: Scale 10¹⁸Nm; Mrr1.18; Mθθ-2.90; Mφφ1.73; Mrθ0.14; Mθφ2.55; Mφr1.27; Best double couple: M0 3.80000×10¹⁸ NP1: φs72.00000°, δ67.00000°, λ17.00000°. NP2: φs335.00000°, δ74.00000°, λ156.00000°. Principal axes: T 3.5000, Plg27.0000°, Azm292.0000°; N 0.5700, Plg61.0000°, Azm122.0000°; P -4.0600, Plg4.0000°, Azm24.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [V] at Saumlaki, [IV] at Tual and [III] at Aru. Felt [III] at Darwin, Australia. Also felt at Palmerston. Felt at Dili, East Timor.
DJA ***15*** *09:39:54, 678S×13123E, h80km, Mw6.8/50*
IDC ***15*** *09:39:54.6±0.9, 664S×131.13E, h65km±7km, mb5.5/30, mb1 5.5/33, mb1mx5.4/34, mbtmp5.6/33, MS5.7/19, Ms1 5.7/19, ms1mx5.5/31, Error ellipse: s-maj=10.6km s-min=7.8km az=72.0*
ISC 15 09:39:54.2±0.4**, 666S**±002×**13113E**±002**, h65**km±3km**, h26**km±2.3km**: pP-P, n1091, σ1.09**/561**, mb6.0**/190**, 140C-101D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.89**	**58**	P	**Sn**	**09 40 45.9**	**-1.3**
MSAI	**Masohi**	**3.95**	**326**	P	**Pn**	**09 40 54.9**	**+2.5**
AAI	**Ambon**	**4.15**	**315**	P	**Pn**	**09 40 56.6**	**+1.5**
SWI	**Sorong**	**5.76**	**1**	P	**Pn**	**09 41 14.9**	**-2.2**
KAKA	**Kakadu**	**6.15**	**168**	*e*P	x	09 40 59.1	
	568nm,0.2s						
KAKA	**Kakadu**	**6.15**	**168**	P	x	09 40 59.2	
LBMI	**Labuha**	**6.99**	**329**	P	**Pn**	**09 41 34.5**	**+0.5**
	7µm,1.0s,86nm						
BAKI	**Biak**	**7.36**	**43**	P	**Pn**	**09 41 37.1**	**-1.9**
	10µm,0.9s,36nm						
BATI	**Baumata**	**8.18**	**244**	P	**Pn**	**09 41 51.4**	**+1.0**
	606nm,0.3s,baz=130,slow=2.0,SNR=347						
BATI				S	**Sn**	**09 43 20.4**	**-0.9**
	2µm,0.3s,baz=282,slow=22,SNR=22						
BATI	**Baumata**	**8.18**	**244**	P	**Pn**	**09 41 50.7**	**+0.4**
	5µm,0.7s						
TNTI	**Ternate**	**8.28**	**333**	P	**Pn**	**09 41 54.1**	**+2.4**
	2µm,1.2s						
KDI	**Kendari**	**8.89**	**287**	P	**Pn**	**09 42 04.4**	**+4.4**
	3µm,1.8s						
MMPI	**Merauke**	**9.35**	**102**	P	**Pn**	**09 42 05.1**	**-1.2**
MNI	**Manado**	**10.21**	**322**	P	**Pn**	**09 42 18.2**	**+0.2**
	2µm,0.9s						
JAY	**Jayapura**	**10.39**	**67**	P	**Pn**	**09 42 18.2**	**-2.4**
	1µm,0.9s						
WSI	**Waingapu**	**11.13**	**254**	P	**Pn**	**09 42 31.2**	**+0.6**
KAPI	**Kappang**	**11.43**	**278**	Pn	**Pn**	**09 42 36.8**	**+2.0**
	9µm,0.8s						
KAPI	**Kappang**	**11.43**	**278**	P	**Pn**	**09 42 36.7**	**+1.9**
	3.6nm,0.3s,baz=112,slow=7.0,SNR=44						
KAPI				S	**Sn**	**09 44 44.6**	**+3.7**
	4.4nm,0.3s,baz=264,slow=22,SNR=1.3						
KAPI				LR	LR	09 47 50.9	
	comp=Z,53µm,18.3s,baz=119,slow=42						
KAPI	**Kappang**	**11.43**	**278⇑**	*i*Pn	**Pn**	**09 42 36.7**	**+1.9**
KAPI	**Kappang**	**11.43**	**278**	P	**Pn**	**09 42 35.4**	**+0.6**
	738nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.57**	**205**	*e*P	**Pn**	**09 42 44.9**	**-5.4**
	7µm,0.6s						
FITZ				*e*S	**Sn**	**09 44 53.8**	**-15**
FITZ	**Fitzroy Crossi**	**12.57**	**205**	P	**Pn**	**09 42 45.0**	**-5.3**
PCI	**Palu**	**12.63**	**296**	P	**Pn**	**09 42 55.8**	**+4.7**
	6µm,1.2s						
WRAB	**Tennant Creek**	**13.56**	**167**	Pn	**Pn**	**09 42 57.0**	**-6.7**
	18µm,0.6s						
WRAB	**Tennant Creek**	**13.56**	**167**	*e*P	**Pn**	**09 42 57.8**	**-5.9**
WRAB	**Tennant Creek**	**13.56**	**167⇓**	*i*Pn	**Pn**	**09 42 56.8**	**-7.0**
WRAB				*e*Sn	**Sn**	**09 45 18.2**	**-15**
WRAB	**Tennant Creek**	**13.56**	**167**	P	**Pn**	**09 42 56.9**	**-6.8**
	4µm,0.6s						
WRA	**Warramunga Arr**	**13.57**	**167**	P	**Pn**	**09 42 56.3**	**-7.5**
	41nm,0.3s,baz=352,slow=13,SNR=531						
WRA				S	**Sn**	**09 45 19.4**	**-14**
	393nm,0.3s,baz=349,slow=23,SNR=12						
WRA				P3KPbc		10 18 48.4	
	0.1nm,0.3s,baz=162,slow=3.0,SNR=4.9						
WRA	**Warramunga Arr**	**13.57**	**167**	P	**Pn**	**09 42 56.3**	**-7.5**
WRA				S	**Sn**	**09 45 19.4**	**-14**
WB2	**Warramunga Arr**	**13.57**	**167**	*e*P	**Pn**	**09 42 56.2**	**-7.6**
WB2				*e*S	**Sn**	**09 45 15.9**	**-17**
COEN	**Coen**	**13.89**	**122**	*e*Pn	**Pn**	**09 43 01.7**	**-6.4**
	743nm,0.6s						
COEN				*e*Sn	**Sn**	**09 45 26.9**	**-14**
GSPH	**General Santos**	**14.08**	**334⇑**	*e*P	**Pn**	**09 43 08.6**	**-2.0**
DAV	**Davao City (W)**	**14.72**	**338**	P	**Pn**	**09 43 18.3**	**-0.6**
	58nm,0.3s,baz=81,slow=7.9,SNR=14						
DAV				S	**Sn**	**09 46 05.9**	**+5.0**
	86nm,0.3s,baz=114,slow=8.1,SNR=2.3						
DAV	**Davao City (W)**	**14.72**	**338⇓**	*e*P	**Pn**	**09 43 18.6**	**-0.3**
DAV	**Davao City (W)**	**14.72**	**338**	*e*Pn	**Pn**	**09 43 19.9**	**+1.0**
	1µm,0.6s						
DAV				*e*Sn	**Sn**	**09 46 02.5**	**+1.6**
DAV	**Davao City (W)**	**14.72**	**338**	P	**Pn**	**09 43 20.1**	**+1.2**
	2µm,1.1s						
DMPH	**Davao City--Mi**	**14.76**	**338**	*e*P	**Pn**	**09 43 19.4**	**0.0**
KCP	**Kidapawan**	**14.85**	**336⇓**	*e*P	**Pn**	**09 43 26.3**	**+5.7**
SMKI	**Samarinda**	**15.20**	**293**	P	**Pn**	**09 43 29.3**	**+4.2**
	5µm,1.1s						
CTBH	**Cotabato--PC H**	**15.40**	**333**	*e*P	**Pn**	**09 43 27.0**	**-0.7**
CTBH				*i* S	sP	09 43 59.3	+6.4
KHKI	**Kahang-Kahang**	**15.48**	**263**	P	**Pn**	**09 43 26.6**	**-2.2**
	1µm,0.8s						
BUKP	**Musuan**	**15.65**	**337**	*e*P	**Pn**	**09 43 31.5**	**+0.6**
DNP	**Denpasar**	**15.90**	**262**	P	**Pn**	**09 43 33.1**	**-1.0**
	2µm,0.5s						
IGBI	**Denpasar**	**15.98**	**261**	P	**Pn**	**09 43 34.1**	**-1.0**
	3µm,0.9s						
PMG	**Port Moresby**	**16.11**	**101**	P	**Pn**	**09 43 34.5**	**-2.2**
	62nm,0.3s,baz=285,slow=8.7,SNR=105						
PMG				S	**S**	**09 46 24.8**	**-20**
	116nm,0.3s,baz=193,slow=21,SNR=9.3						
PMG				ScP	ScP	09 52 00.7	+2.2
	1.3nm,0.3s,baz=315,slow=7.2,SNR=3.5						
PMG	**Port Moresby**	**16.11**	**101**	*e*Pn	**Pn**	**09 43 34.4**	**-2.3**
	12µm,2.0s						
PAGZ	**Pagadian**	**16.35**	**332**	*e*P	**Pn**	**09 43 39.0**	**-0.7**
PAGZ	**Pagadian**	**16.35**	**332**	*e*P	**Pn**	**09 43 43.0**	**+3.3**
NBBI	**Negara**	**16.45**	**263**	P	**Pn**	**09 43 40.0**	**-1.1**
	2µm,0.9s						
BUTP	**Butuan**	**16.46**	**340**	*e*P	**Pn**	**09 43 41.5**	**+0.3**
BBKI	**Banjar Baru**	**16.53**	**280**	P	**Pn**	**09 43 44.7**	**+2.7**
KMMI	**Kalianget**	**17.04**	**268**	P	**Pn**	**09 43 48.3**	**-0.1**
	4µm,0.8s						
ASAR	**Alice Springs**	**17.12**	**171**	P	**Pn**	**09 43 44.8**	**-4.5**
	64nm,0.3s,baz=1.2,slow=15,SNR=764						
ASAR				S	**S**	**09 46 47.8**	**-17**
	147nm,0.3s,baz=358,slow=26,SNR=6.4						
ASAR				P3KPbc		10 18 48.0	
	0.1nm,0.3s,baz=166,slow=2.3,SNR=3.8						
ASAR	**Alice Springs**	**17.12**	**171**	P	**Pn**	**09 43 44.8**	**-4.5**
ASAR				S	**S**	**09 46 47.8**	**-17**
TSM	**Tawau**	**17.13**	**309**	⇓P	**Pn**	**09 43 49.8**	**+0.4**
MYLDM	**Lahad Datu**	**17.24**	**313**	⇓P	**Pn**	**09 43 53.4**	**+2.7**
MYLDM	**Lahad Datu**	**17.24**	**313**	P	**Pn**	**09 43 50.8**	**0.0**
	2µm,1.2s						
PLKI	**Palangkaraya**	**17.68**	**284**	P	**Pn**	**09 43 57.7**	**+1.4**
	10µm,0.9s						
TBP	**Tagbilaran**	**17.78**	**336**	*e*P	**Pn**	**09 43 57.5**	**+0.1**
MSLP	**Maasin**	**17.81**	**339**	*e*P	**Pn**	**09 43 58.7**	**+0.9**
MBWA	**Marble Bar**	**18.15**	**216**	P	**Pn**	**09 43 59.6**	**-2.3**
	SNR=169						
MBWA	**Marble Bar**	**18.15**	**216**	*e*Pn	**Pn**	**09 43 59.2**	**-2.7**
	1µm,0.8s						
MBWA	**Marble Bar**	**18.15**	**216**	P	**Pn**	**09 43 58.5**	**-3.4**
	2µm,1.0s						
LLP	**Lapu-Lapu**	**18.31**	**337⇓**	*e*P	**Pn**	**09 44 05.6**	**+1.8**
SDKM	**Sandakan**	**18.51**	**311**	⇓P	**Pn**	**09 44 07.5**	**+1.2**
KRKI	**Karangkates**	**18.58**	**264**	P	**Pn**	**09 44 04.1**	**-3.0**
	4µm,0.8s						
OCLP	**Ormoc**	**18.75**	**340**	*e*P	**Pn**	**09 44 09.7**	**+0.6**
GUIM	**Jordan**	**19.16**	**334**	*e*P	**Pn**	**09 44 13.9**	**0.0**
SJI	**Sawahan**	**19.24**	**266**	P	**Pn**	**09 44 11.4**	**-3.6**
	2µm,0.7s						
KKM	**Kota Kinabalu**	**19.51**	**310**	*e*P	**Pn**	**09 44 17.0**	**-1.2**
	3µm,1.0s						
KKM	**Kota Kinabalu**	**19.51**	**310**	⇓P	**Pn**	**09 44 17.9**	**-0.3**
KKM	**Kota Kinabalu**	**19.51**	**310**	P	**Pn**	**09 44 15.7**	**-2.5**
	3µm,1.1s						
KDM	**Kudat**	**19.63**	**313**	⇓P	**Pn**	**09 44 19.1**	**-0.4**
CTA	**Charters Tower**	**19.84**	**134**	*e*P	**Pn**	**09 44 21.1**	**-1.0**
	738nm,1.4s						
CTA				*e*S	**S**	**09 47 55.8**	**-4.2**
CTA	**Charters Tower**	**19.84**	**134**	P	**Pn**	**09 44 21.3**	**-0.8**
	18nm,0.3s,baz=310,slow=12,SNR=156						
CTA				S	**S**	**09 47 54.4**	**-5.7**
	13nm,0.3s,baz=45,slow=18,SNR=3.6						
CTA				LR	LR	09 53 06.1	
	comp=Z,51µm,18.1s,baz=314,slow=40						
CTA	**Charters Tower**	**19.84**	**134**	*e*P	**Pn**	**09 44 21.1**	**-1.0**
CTA				*e*S	**S**	**09 47 55.8**	**-4.2**
CTA				pmax	pmax		
	comp=Z,738nm,1.4s						
CTAO	**Charters Tower**	**19.84**	**134**	*e*P	**Pn**	**09 44 21.1**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,3µm,1.6s						
CTAO	**Charters Tower**	**19.84**	**134**	*e*Pn	**Pn**	**09 44 21.1**	**-1.0**
	comp=Z,3µm,1.6s						
CTAO	**Charters Tower**	**19.84**	**134**	P	**Pn**	**09 44 21.2**	**-0.9**
	comp=Z,1µm,1.4s						
RCP	**Roxas**	**19.93**	**335⇓**	*e*P	**Pn**	**09 44 21.4**	**-1.6**
RCP				*e*S	**S**	**09 48 02.2**	**+0.5**
CUYO	**Cuyo Island**	**20.09**	**330**	*e*P	**P**	**09 44 23.7**	**+1.0**
CNP	**Catarman**	**20.10**	**341**	*e*P	**P**	**09 44 24.3**	**+1.6**
KALP	**Kalibo**	**20.20**	**334⇓**	*e*P	**P**	**09 44 28.4**	**+4.5**
BATP	**Bataraza**	**20.30**	**319**	*e*P	**P**	**09 44 26.6**	**+1.6**
PPR	**Puerto Princes**	**20.47**	**323⇑**	*i*P	**P**	**09 44 28.6**	**+1.8**
UGM	**Wanagama**	**20.48**	**265**	P	**P**	**09 44 24.7**	**-2.2**
	comp=Z,2µm,0.8s						
BTM	**Bintulu**	**20.50**	**298**	⇑P	**P**	**09 44 28.7**	**+1.5**
SMRI	**Semarang**	**20.54**	**268**	P	**P**	**09 44 25.5**	**-2.1**
	comp=Z,2µm,0.8s						
STKI	**Sintang**	**20.71**	**288**	P	**P**	**09 44 28.0**	**-1.5**
	comp=Z,1µm,1.9s						
SBUM	**Sibu**	**20.93**	**295**	⇑P	**P**	**09 44 32.8**	**+1.0**
SBUM	**Sibu**	**20.93**	**295**	P	**P**	**09 44 30.6**	**-1.2**
	comp=Z,1µm,1.1s						
OTRP	**Odiongan**	**20.95**	**334**	*e*P	**P**	**09 44 32.1**	**+0.1**
ENPP	**El Nido**	**21.23**	**327**	*e*P	**P**	**09 44 35.4**	**+0.4**
PVCP	**Virac**	**21.28**	**341**	*e*P	**P**	**09 44 37.9**	**+2.4**
SJMP	**San Jose**	**21.44**	**332**	*e*P	**P**	**09 44 38.2**	**+1.0**
BUSP	**Coron**	**21.49**	**330**	*e*P	**P**	**09 44 38.0**	**+0.2**
BUSP	**Coron**	**21.49**	**330**	*e*P	**P**	**09 44 38.8**	**+1.1**
AUQP	**San Andres**	**21.55**	**337**	*e*P	**P**	**09 44 42.8**	**+4.4**
CLJI	**Cilicap**	**21.96**	**266**	P	**P**	**09 44 40.6**	**-2.3**
	comp=Z,3µm,0.9s,mb6.6						
GQP	**Guinayangan**	**22.17**	**337⇓**	*e*P	**P**	**09 44 45.3**	**+0.4**
KSM	**Kuching**	**22.30**	**291**	*e*P	**P**	**09 44 45.0**	**-1.3**
	comp=Z,507nm,0.9s,mb5.8						
KSM	**Kuching**	**22.30**	**291**	⇓P	**P**	**09 44 46.5**	**+0.1**
KSM	**Kuching**	**22.30**	**291**	P	**P**	**09 44 44.9**	**-1.5**
	comp=Z,852nm,1.0s,mb6.0						
PGP	**Puerto Galera**	**22.43**	**333⇓**	*e*P	**P**	**09 44 50.6**	**+2.8**
JCJI	**Jatiwangi**	**22.71**	**269**	P	**P**	**09 44 50.7**	**-0.1**
	comp=Z,4µm,1.0s,mb6.7						
LUBP	**Lubang**	**22.96**	**332**	*e*P	**P**	**09 44 53.1**	**-0.2**
POLP	**Polilio Island**	**23.12**	**337**	*e*P	**P**	**09 44 54.5**	**-0.5**
LEM	**Lembang**	**23.35**	**268**	P	**P**	**09 44 54.2**	**-3.0**
	comp=Z,4µm,0.9s,mb6.7						

TPI **Tanjungpandan** 23.71 278 P **P** 09 44 57.8 -2.7
comp=Z,617nm,0.8s,mb6.0
CBJI **Citeko** 24.12 269 P **P** 09 45 04.2 0.0
FORT **Forrest** 24.17 186 *e*P **P** 09 45 04.5 0.0
comp=Z,3μm,0.7s,mb6.7
FORT *e*S **S** 09 49 14.4 -3.7
BALP **Baler** 24.18 337 *e*P **P** 09 45 04.3 -0.3
PCPH **Palayan** 24.21 336⇓ *e*P **P** 09 45 05.7 +0.8
GUMO **Guam** 24.30 34 P **P** 09 45 05.8 0.0
comp=Z,653nm,0.7s,mb6.1,baz=194,slow=8.2,SNR=41
GUMO ScP ScP 09 52 16.5 -1.1
comp=Z,104nm,0.7s,baz=200,slow=5.7,SNR=5.2
GUMO Guam 24.30 34 P **P** **09 45 05.8 0.0**
GUMO pmax pmax
comp=N,104nm,0.7s
GUMO pmax pmax
comp=Z,653nm,0.7s,mb6.1
GUMO Guam 24.30 34 *e*P **P** **09 45 05.6 -0.2**
comp=Z,1μm,1.1s,mb6.1
GUMO LR LR
comp=Z,19μm,21.0s
GUMO Guam 24.30 34 P **P** **09 45 05.6 -0.2**
comp=Z,1μm,1.1s,mb6.2
SCZP **Santa Cruz** 24.90 334 *e*P **P** 09 45 09.3 -2.0
PALP **Palanan** 25.09 340 *e*P **P** 09 45 16.8 +3.9
CAUP **Cauayan** 25.19 339 *e*P **P** 09 45 15.9 +2.0
PPBI **Pangkal Pinang** 25.31 279 P **P** 09 45 14.9 -0.1
comp=Z,1μm,0.8s,mb6.3
BOLP **Bolinao** 25.44 334 *e*P **P** 09 45 14.6 -1.5
XMIS **Christmas Isla** 25.47 260 *e*P **P** 09 45 15.6 -0.9
XMIS *e*S **S** 09 49 32.0 -7.2
XMIS Christmas Isla 25.47 260 P **P** **09 45 15.1 -1.4**
comp=Z,0.0nm,0.8s,comp=Z,0.0nm
KLI **Kotabumi** 26.20 272 P **P** 09 45 22.4 -0.7
comp=Z,606nm,0.8s,comp=Z,9μm,mb6.1
EIDS **Eidsvold** 26.65 136 *e*P **P** 09 45 26.9 -0.1
comp=Z,196nm,0.9s,mb5.6
PIP **Pasuquin** 26.90 337⇓ *i*P sP 09 45 54.0 +1.3
STKA **Stephens Creek** 26.93 160 *e*P **P** **09 45 28.5 -0.9**
comp=Z,309nm,1.9s,mb5.5
STKA *e*S **S** **09 49 59.0 -2.9**
STKA Stephens Creek 26.93 160 P **P** **09 45 29.3 -0.1**
comp=Z,61nm,0.4s,mb5.5,baz=340,slow=7.7,SNR=164
STKA S **S** **09 49 58.3 -3.6**
comp=Z,88nm,0.8s,baz=117,slow=6.8,SNR=2.9
STKA ScP ScP 09 52 22.9 -2.0
comp=Z,322nm,0.9s,baz=331,slow=8.7,SNR=2.9
STKA LR LR 09 58 12.2
comp=Z,42μm,19.0s,baz=329,slow=41
KLBR **Kellerberrin** 27.78 205 *e*P **P** **09 45 37.4 +0.3**
comp=Z,781nm,1.2s,mb6.1
KLBR *e*S **S** **09 50 13.7 -1.6**
MYKOM **Kota Tinggi** 28.49 286 ⇑P **P** **09 45 46.6 +3.0**
MYKOM **Kota Tinggi** 28.49 286 P **P** **09 45 43.3 -0.4**
comp=Z,656nm,1.3s,mb6.0
KSI **Kapahiang** 28.57 275 P **P** **09 45 43.8 -0.6**
comp=Z,511nm,0.9s,mb6.2
HNR Honiara 28.66 97 P **P** **09 45 44.4 -0.8**
comp=Z,153nm,0.8s,mb5.7,baz=211,slow=2.5,SNR=16
HNR ScP ScP 09 52 32.0 +1.4
comp=Z,110nm,0.9s,baz=157,slow=5.8,SNR=6.5
HNR Honiara 28.66 97 P **P** **09 45 44.4 -0.8**
HNR pmax pmax
comp=Z,153nm,0.8s,mb5.7
HNR pmax pmax
comp=N,110nm,0.9s
HNR Honiara 28.66 97 *e*P **P** **09 45 44.1 -1.1**
comp=N,818nm,0.9s,mb6.4
HNR LR LR
comp=Z,14μm,22.0s
MUN **Mundaring** 28.79 207 *e*P **P** **09 45 46.3 +0.3**
MUN *e*S **S** **09 50 30.9 -0.2**
ADE **Adelaide** 29.03 167⇓ *i*P **P** **09 45 48.1 0.0**
KGM **Kluang** 29.07 286 ⇑P **P** **09 45 48.5 -0.3**
KGM **Kluang** 29.07 286 P **P** **09 45 48.5 -0.2**
NWAO **Narrogin (SRO)** 29.16 204 P **P** **09 45 50.5 +1.2**
SNR=9.7
NWAO Narrogin (SRO) 29.16 204 P **P** **09 45 49.5 +0.2**
comp=Z,90nm,0.6s,mb5.6,baz=31,slow=7.9,SNR=70
NWAO LR LR 09 58 10.6
comp=Z,22μm,19.9s,baz=20,slow=38
NWAO Narrogin (SRO) 29.16 204 *e*P **P** **09 45 50.6 +1.3**
comp=Z,381nm,0.9s,mb6.0
NWAO LR LR
comp=Z,21μm,19.0s
KTGM **Kuala Trenggan** 30.37 292 ⇑P **P** **09 45 59.7 -0.6**
ARMA **Armidale** 30.49 143 *e*P **P** **09 46 01.8 +0.7**
ARMA *e*S **S** **09 50 55.9 -2.0**
TWG **Pinlang** 30.90 342 *e*P **P** **09 46 01.6 -3.3**
comp=Z,101nm,0.8s,mb5.6
PDSI **Padang** 31.11 279 P **P** **09 46 05.8 -1.1**
comp=Z,496nm,1.4s,mb6.1
PPI **Padang Panjang** 31.27 280 P **P** **09 46 07.3 -0.9**
comp=Z,1μm,1.9s,mb6.4
YULB **Yu-li** 31.37 342 *e*P **P** **09 46 07.8 -1.1**
comp=Z,69nm,0.8s,mb5.4
TPUB **Ta-pu** 31.49 341 *e*P **P** **09 46 09.3 -0.7**
comp=Z,157nm,0.9s,mb5.7
SSLB **Suanglung** 31.85 342 *e*P **P** **09 46 13.2 0.0**
comp=Z,184nm,0.9s,mb5.8
IPM **Ipoh** 32.02 289 ⇓P **P** **09 46 16.9 +2.1**
IPM **Ipoh** 32.02 289 P **P** **09 46 13.6 -1.2**
comp=Z,251nm,2.8s,mb5.5
NACB **Ninganchiao** 32.02 343 *e*P **P** **09 46 13.1 -1.6**
comp=Z,66nm,0.8s,mb5.4
YHNB **Yeheng** 32.55 343 *e*P **P** **09 46 18.9 -0.4**
comp=Z,83nm,0.6s,mb5.7
YHNB LR LR
comp=Z,10μm,22.0s
KULM **Kulim** 32.65 291 P **P** **09 46 19.1 -1.3**
KULM **Kulim** 32.65 291 P **P** **09 46 19.3 -1.1**
KULM **Kulim** 32.65 291 ⇓P **P** **09 46 19.4 -1.0**
TATO **Taipei** 32.81 344 *e*P **P** **09 46 20.1 -1.4**
comp=Z,27nm,0.4s,mb5.4
TATO LR LR
comp=Z,5μm,20.0s
CAN Canberra 32.92 153 *e*P **P** **09 46 23.9 +1.5**
CAN pmax pmax
comp=Z,223nm,0.8s,mb6.0
CAN Canberra 32.92 153 *e*P **P** **09 46 23.9 +1.5**
comp=Z,223nm,0.8s,mb6.0
QIZ **Qiongzhong** 33.04 321 ⇑P **P** **09 46 23.3 -0.3**
QIZ AP pP 09 46 30.5 -9.0
QIZ AMB AMB
comp=Z,188nm,2.1s,mb5.5
QIZ AMB AMB
comp=Z,4μm,7.0s
QIZ LR LR
comp=N,14μm,19.4s
QIZ LR LR
comp=Z,10μm,21.1s
QIZ Qiongzhong 33.04 321 *e*P **P** **09 46 22.9 -0.7**
comp=Z,174nm,1.1s,mb5.8
QIZ LR LR
comp=Z,12μm,21.0s
CNB **Canberra Magne** 33.09 152⇓ *i*P **P** **09 46 25.1 +1.2**
CNB *e*S **S** **09 51 38.4 +0.1**
HKC **Hong Kong Obse** 33.23 330⇑ *i*P **P** **09 46 24.0 -1.2**
HKC *i* S **S** **09 51 40.0 -0.7**
SNG **Songkhla** 33.40 294 P **P** **09 46 25.0 -1.8**
comp=Z,380nm,1.0s,mb6.2
JOW **Kunigami** 33.40 355 P **P** **09 46 27.2 +0.6**
comp=Z,215nm,0.6s,mb6.2,baz=179,slow=8.6,SNR=59
JOW ScP ScP 09 52 43.8 -2.2
comp=Z,29nm,1.0s,baz=147,slow=6.7,SNR=4.6
TOO **Toolangi** 33.43 159 *e*P **P** **09 46 28.1 +1.2**
TOO *e*S **S** **09 51 46.8 +3.2**
PSI **Prapat** 33.49 285 P **P** **09 46 25.3 -2.4**
comp=Z,377nm,0.8s,mb6.3,baz=142,slow=4.9,SNR=40
PSI ScP ScP 09 52 45.3 -1.4
comp=Z,44nm,1.0s,baz=230,slow=6.6,SNR=6.6
QZH **Quanzhou** 33.70 339⇑ *i*P **P** **09 46 28.4 -0.9**
QZH S **S** **09 51 43.1 -4.8**
QZH AMB AMB
comp=Z,220nm,0.7s,mb6.1
QZH LR LR
comp=N,13μm,14.4s
QZH LR LR
comp=E,3μm,11.3s
QZH LR LR
comp=Z,17μm,21.7s
COCO **West Island** 34.25 258 *e*P **P** **09 46 36.6 +2.3**
comp=Z,272nm,1.1s,mb6.0
COCO LR LR
comp=Z,5μm,20.0s
GZH **Guangzhou** 34.30 330 P **P** **09 46 30.3 -4.2**
GZH S **S** **09 51 51.4 -5.9**
GZH LR LR
comp=N,11μm,18.6s
GZH LR LR
comp=E,6μm,28.3s
GZH LR LR
comp=Z,14μm,37.5s
GSI Gunungsitoli 34.41 282 P **P** **09 46 35.5 -0.2**
comp=Z,776nm,2.1s,mb6.2
CBIJ **Chichi jima** 35.22 17 P **P** **09 46 41.8 -0.6**
comp=Z,68nm,0.3s,mb5.9,baz=277,slow=20,SNR=7.8
KKTK **Khon Kaen** 36.15 309 ⇑P **P** **09 46 50.5 0.0**
comp=Z,7μm,0.4s
NNT **Nongplab** 36.59 301 P **P** **09 46 54.2 -0.2**
NOUC **Port Laguerre** 37.24 118 *e*P **P** **09 46 59.0 -0.8**
DZM **Mont Dzumac** 37.36 118 *e*P **P** **09 46 59.8 -1.0**
BSI **Banda Aceh** 37.74 288 P **P** **09 47 01.9 -2.3**
NST **Nakhon Sawan** 37.88 306 ⇓P **P** **09 47 05.0 -0.2**
comp=Z,183nm,1.1s,mb5.8
MOO **Moorlands** 38.37 161 *e*P **P** **09 47 11.0 +2.0**
MOO *e*S **S** **09 52 56.1 -2.9**
SSE **Sheshan** 38.72 346 P **P** **09 47 12.1 0.0**
SSE S **S** **09 53 01.0 -3.6**
SSE SS SS 09 55 48.6 -9.1
SSE AMB AMB
comp=Z,113nm,0.8s,mb5.8
SSE AMB AMB
comp=Z,1μm,4.5s
SSE LR LR
comp=N,7μm,17.4s
SSE LR LR
comp=E,7μm,17.4s
SSE LR LR
comp=Z,9μm,20.0s
TAU Tasmania Unive 38.83 161 P **P** **09 47 14.0 +1.1**
comp=Z,561nm,1.2s,mb6.3,SNR=13
TAU Tasmania Unive 38.83 161 *e*P **P** **09 47 15.1 +2.2**
comp=Z,232nm,1.4s,mb5.8
TAU LR LR
comp=Z,38μm,19.0s
BDT **Bhumibol Dam** 39.65 307 ⇑P **P** **09 47 21.0 +1.0**
comp=Z,247nm,1.0s,mb6.0
NJ2 **Nanjing** 40.23 344 *e*P **P** **09 47 25.3 +0.7**
NJ2 AP pP 09 47 31.8 -9.1
NJ2 XP sP 09 47 35.3 -13
NJ2 S **S** **09 53 31.0 +3.8**
NJ2 AMB AMB
comp=Z,110nm,0.8s,mb5.7
NJ2 AMB AMB
comp=Z,1μm,5.3s
NJ2 LR LR
comp=N,13μm,12.6s
NJ2 LR LR
comp=E,17μm,12.8s
NJ2 LR LR
comp=Z,16μm,12.8s
WHN Wuhan 40.33 337 ⇓P **P** **09 47 25.8 +0.3**
WHN PP PP 09 49 01.6 +2.0
WHN SCP ScP 09 53 12.6 +0.9
WHN SS SS 09 56 23.9 -6.0
WHN AMB AMB
comp=Z,142nm,0.8s,mb5.8
WHN AMB AMB
comp=Z,6μm,3.9s
WHN LR LR
comp=N,7μm,15.0s
WHN LR LR
comp=E,14μm,15.1s
WHN LR LR
comp=Z,21μm,19.5s
CM31 Chiang Mai Arr 40.38 309 PFAKE 09 47 40.0 +14
CM31 LR LR
comp=Z,7μm,21.0s
CMAR Chiang Mai Arr 40.38 309 P **P** **09 47 26.5 +0.4**
comp=Z,225nm,0.8s,mb6.1,baz=139,slow=7.6,SNR=355
CMAR ScP ScP 09 53 12.6 +0.4
comp=Z,28nm,0.8s,baz=157,slow=3.3,SNR=9.0
CMAR LR LR 10 05 03.6
comp=Z,6μm,18.5s,baz=325,slow=37
JHJ Hachijo jima 2 40.40 11 LR LR 10 02 54.0
comp=Z,9μm,21.6s,baz=181,slow=34
CHRT Chiangrai 40.57 311 P **P** **09 47 28.0 +0.3**
comp=Z,2μm,0.7s,mb7.0
GYA Guiyang 40.58 325 ⇑ *i*P **P** **09 47 28.6 +1.0**
GYA AP pP 09 47 34.3 -10
GYA PP PP 09 49 06.4 +4.1
GYA PCP PcP 09 49 30.0 +1.2
GYA SCP ScP 09 53 17.0 +4.2
GYA SS SS 09 56 31.8 -3.1
GYA AMB AMB
comp=Z,70nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,3μm,5.4s
GYA LR LR
comp=N,8μm,17.9s
GYA LR LR
comp=E,7μm,16.3s
GYA LR LR
comp=Z,8μm,17.6s
CHG Chiang Mai 40.59 309 ⇑P **P** **09 47 28.0 +0.2**
comp=Z,711nm,0.9s,mb6.5
CHTO Chiang Mai 40.59 309 P **P** **09 47 27.7 -0.1**
CHTO Chiang Mai 40.59 309 *e*P **P** **09 47 28.2 +0.4**
CHTO pmax pmax
comp=Z,591nm,1.0s,mb6.4
CHTO MLR MLR
comp=Z,11μm,20.0s
CHTO Chiang Mai 40.59 309 *e*P **P** **09 47 28.2 +0.4**
comp=Z,590nm,1.0s,mb6.4
CHTO LR LR
comp=Z,11μm,20.0s
KMI Kunming 41.96 320 ⇑P **P** **09 47 39.8 +0.8**
KMI AP pP 09 47 47.8 -7.5
KMI XP sP 09 47 50.3 -13
KMI PP PP 09 49 20.4 +3.1
KMI PCP PcP 09 49 36.6 +3.2
KMI S **S** **09 53 56.1 +3.0**
KMI XS sS 09 54 08.0 -13
KMI SS SS 09 57 01.9 -0.4
KMI AMB AMB
comp=Z,254nm,1.2s,mb5.8
KMI AMB AMB
comp=Z,4μm,4.3s
KMI LR LR
comp=N,11μm,20.1s
KMI LR LR
comp=E,13μm,16.7s
KMI LR LR
comp=Z,10μm,22.1s
TARA Tarawa 42.47 81 PFAKE 09 47 50.0 +6.7
TARA LR LR
comp=Z,9μm,19.0s
MAJO Matsushiro 43.48 8 *e*P **P** **09 47 50.1 -1.0**
comp=Z,270nm,0.9s,mb6.0
MAJO *e*ScP ScP 09 53 23.3 -0.9
MAJO *e*S **S** **09 54 12.7 -2.3**
MAJO LR LR
comp=Z,11μm,22.0s
MAT Matsushiro 43.48 8 P **P** **09 47 49.5 -1.6**
MAT S **S** **09 54 11.0 -4.0**
MJAR Matsushiro Arr 43.48 8 P **P** **09 47 49.9 -1.2**
comp=Z,75nm,0.9s,mb5.4,baz=185,slow=9.2,SNR=94
MJAR ScP ScP 09 53 23.4 -0.7
comp=Z,20nm,0.9s,baz=186,slow=5.2,SNR=6.7
MJAR LR LR 10 03 15.8
comp=Z,11μm,21.4s,baz=195,slow=32
MJAR Matsushiro Arr 43.48 8 P **P** **09 47 49.9 -1.2**
MJAR ScP ScP 09 53 23.4 -0.7
MJAR LR LR 10 03 15.8
KSRS Korea Array 43.98 356 P **P** **09 47 56.1 +1.0**
comp=Z,21nm,0.6s,mb5.0,baz=170,slow=8.7,SNR=79
KSRS LR LR 10 05 29.3
comp=Z,13μm,21.9s,baz=183,slow=35
KSRS Korea Array 43.98 356 P **P** **09 47 56.1 +1.0**
KSRS pmax pmax
comp=Z,21nm,0.6s,mb5.0
KSRS MLR MLR
comp=Z,13μm,21.9s
TIA Tai'an 44.62 344 P **P** **09 48 00.0 -0.2**
TIA S **S** **09 54 30.0 -1.7**
TIA LR LR
comp=E,8μm,8.0s
XAN Xi'an 45.61 334 P **P** **09 48 07.3 -0.8**
XAN AP pP 09 48 12.3 -12
XAN PP PP 09 49 55.8 -0.3
XAN S **S** **09 54 43.3 -2.7**
XAN SS SS 09 58 10.9 -0.3
XAN AMB AMB
comp=Z,176nm,1.6s,mb5.5
XAN AMB AMB
comp=Z,3μm,12.3s
XAN LR LR
comp=N,3μm,30.3s
XAN LR LR
comp=E,8μm,34.1s
XAN LR LR
comp=Z,10μm,30.9s
CD2 Chengdu 45.62 326 P **P** **09 48 07.4 -0.9**
CD2 AP pP 09 48 13.1 -12
CD2 XP sP 09 48 16.1 -16
CD2 PP PP 09 49 56.3 0.0
CD2 AMB AMB
comp=Z,340nm,1.4s,mb5.9
CD2 AMB AMB
comp=Z,5μm,9.2s
CD2 LR LR
comp=N,10μm,20.2s
CD2 LR LR
comp=Z,9μm,22.6s
DL2 Dalian 46.18 350 P **P** **09 48 11.6 -0.9**
DL2 S **S** **09 54 51.8 -2.2**
DL2 AMB AMB
comp=Z,40nm,0.7s,mb5.3
DL2 AMB AMB
comp=Z,660nm,3.8s
DL2 LR LR
comp=N,6μm,18.9s
FUNA Funafuti 47.66 95 *e*P **P** **09 48 24.2 -0.3**
comp=N,515nm,1.3s,mb6.2
FUNA LR LR
comp=Z,12μm,20.0s
IMP Imphal 47.84 312 *i* P **P** **09 48 24.0 -1.7**
IMP *ex* x 09 53 42.0
BJT Baijiatuau 48.45 345 *e*P **P** **09 48 30.0 -0.1**
BJT pmax pmax
comp=Z,475nm,0.6s
BJT MLR MLR
comp=Z,5μm,21.0s
BJT Baijiatuau 48.45 345 *e*P **P** **09 48 30.0 -0.1**
comp=Z,475nm,0.6s,mb6.5
BJT LR LR
comp=Z,5μm,21.0s
BJI Beijing 48.47 345 P **P** **09 48 30.1 -0.2**
BJI S **S** **09 55 21.5 -5.1**
BJI SS SS 09 58 52.8 -4.6
BJI AMB AMB
comp=Z,580nm,0.7s,mb6.5
BJI AMB AMB
comp=Z,2μm,3.7s
BJI LR LR
comp=N,4μm,20.2s
BJI LR LR
comp=E,6μm,23.1s
BJI LR LR
comp=Z,5μm,24.9s
SNY Shenyang 48.74 352 ⇑P **P** **09 48 32.3 0.0**
SNY AP pP 09 48 40.6 -8.4
SNY XP sP 09 48 47.8 -8.6
SNY PP PP 09 50 27.0 +0.9
SNY S **S** **09 55 28.1 -2.2**
SNY AMB AMB
comp=Z,87nm,0.9s,mb5.7
SNY AMB AMB
comp=Z,1μm,10.8s
SNY LR LR
comp=N,5μm,21.0s
SNY LR LR
comp=E,8μm,16.2s
SNY LR LR
comp=Z,12μm,26.4s
LZH Lanzhou 49.64 331 ⇑P **P** **09 48 39.9 +0.6**
LZH AP pP 09 48 50.0 -6.0
LZH XP sP 09 48 53.9 -10
LZH PP PP 09 50 34.8 +0.4
LZH S **S** **09 55 44.3 +1.2**
LZH XS sS 09 56 02.9 -8.5
LZH SS SS 09 59 16.3 -0.1
LZH AMB AMB
comp=Z,168nm,1.5s,mb5.8
LZH AMB AMB
comp=Z,2μm,8.1s
LZH LR LR
comp=E,6μm,13.0s
LZH LR LR
comp=Z,10μm,20.0s
ERM Erimo 49.67 12 PFAKE 09 48 50.0 +11
ERM LR LR
comp=Z,6μm,21.0s
SHL Shillong 49.80 312⇑ *i*P **P** **09 48 40.0 -0.8**
SHL *i* x x 09 55 40.0
CN2 Changchun 50.48 355 ⇓P **P** **09 48 44.8 -0.7**
CN2 *e*XP sP 09 48 53.6 -16
CN2 PCP PcP 09 50 02.4 -0.4
CN2 *e*S **S** **09 55 57.0 +2.4**
CN2 SCS ScS 09 58 31.5 +1.0
CN2 AMB AMB
comp=Z,40nm,1.1s,mb5.3
CN2 AMB AMB
comp=Z,2μm,9.0s
CN2 LR LR
comp=N,6μm,19.0s
CN2 LR LR
comp=E,7μm,19.0s
CN2 LR LR
comp=Z,7μm,23.0s
HHC Hu-ho-hao-te 50.58 341 *e*P **P** **09 48 46.8 +0.5**
HHC AP pP 09 48 52.8 -10
HHC PCP PcP 09 50 03.0 -0.3
HHC PP PP 09 50 43.5 +0.6
HHC PCS PcS 09 54 02.8 +2.3
HHC S **S** **09 55 54.1 -1.9**
HHC SCS ScS 09 58 32.6 +1.3
HHC AMB AMB
comp=Z,103nm,0.7s,mb6.0
HHC AMB AMB
comp=Z,3μm,5.0s
HHC LR LR
comp=N,7μm,22.6s
HHC LR LR
comp=E,5μm,20.2s
HHC LR LR
comp=Z,10μm,23.9s
RPZ Rata Peaks 50.83 143 P **P** **09 48 49.4 +1.2**
comp=Z,166nm,0.8s,mb6.1,baz=265,slow=3.2,SNR=50
RPZ LR LR 10 11 32.0
comp=Z,19μm,18.7s,baz=305,slow=37
BTO Baotou 50.88 339 *e*P **P** **09 48 48.0 -0.6**
CAL Calcutta 50.95 306 *e*P **P** **09 48 49.7 +0.2**
CAL *ex* x 09 55 56.6
MDJ Mudanjiang 51.05 359 P **P** **09 48 50.3 +0.5**
MDJ AP pP 09 48 53.4 -13
MDJ PCP PcP 09 50 06.3 +1.4
MDJ PP PP 09 50 46.8 -0.3
MDJ PCS PcS 09 54 05.3 +2.9
MDJ S **S** **09 56 01.3 -1.1**
MDJ AMB AMB
comp=Z,72nm,1.3s,mb5.5
MDJ AMB AMB
comp=Z,1μm,9.5s
MDJ LR LR
comp=N,9μm,27.0s
MDJ LR LR
comp=E,3μm,21.2s
MDJ LR LR
comp=Z,9μm,25.1s
MDJ Mudanjiang 51.05 359 *e*P **P** **09 48 50.1 +0.3**
comp=Z,89nm,0.8s,mb5.8
MDJ LR LR
comp=Z,8μm,22.0s
ASAJ Asahikawa 51.59 11 P **P** **09 48 54.8 +0.9**
comp=Z,80nm,0.6s,mb5.9,baz=225,slow=8.5,SNR=6.8
ASAJ Asahikawa 51.59 11 P **P** **09 48 54.8 +1.0**
ASAJ pmax pmax
comp=Z,80nm,0.6s
SNZO South Karori 51.84 139 *e*P **P** **09 48 55.5 -0.3**
comp=Z,229nm,1.0s,mb6.2
SNZO LR LR
comp=Z,21μm,19.0s
BWNR Bhubaneshwar 51.98 302 *e*P **P** **09 48 57.4 +0.2**
BWNR *ex* x 09 56 11.8

URZ **Urewera** 52.09 134 P **P** 09 48 57.6 -0.2
comp=Z,31nm,0.5s,mb5.6,baz=259,slow=9.9,SNR=37
URZ LR LR 10 08 18.5
comp=Z,5μm,21.5s,baz=311,slow=33
PALK **Pallekele** 52.17 284 P **P** 09 48 58.8 +0.1
SNR=14
PALK **Pallekele** 52.17 284 P **P** 09 48 58.8 +0.1
comp=Z,460nm,1.1s,mb6.4,SNR=13
PALK **Pallekele** 52.17 284 *e*P **P** 09 48 58.9 +0.2
comp=Z,498nm,1.5s,mb6.3
MCQ **Macquarie Isla** 52.70 160 *e*P **P** 09 49 03.3 +1.3
MCQ *e*S **S** 09 56 26.0 +1.1
LSA **Lhasa** 52.73 315 P **P** 09 49 03.6 +1.0
LSA S **S** 09 56 22.9 -3.1
LSA SS SS 10 00 11.5 +5.9
LSA AMB AMB
comp=Z,170nm,0.9s,mb6.1
LSA AMB AMB
comp=Z,4μm,5.0s
LSA LR LR
comp=N,2μm,22.0s
LSA LR LR
comp=E,3μm,27.0s
LSA LR LR
comp=Z,4μm,23.0s
LSA **Lhasa** 52.73 315 *e*P **P** 09 49 03.8 +1.2
LSA pmax pmax
comp=Z,230nm,0.7s,mb6.3
LSA MLR MLR
comp=Z,4μm,20.0s
LSA **Lhasa** 52.73 315 *e*P **P** 09 49 03.8 +1.2
comp=Z,230nm,0.7s,mb6.3
LSA LR LR
comp=Z,4μm,20.0s
RAO **Raoul Island** 52.93 122 PFAKE 09 49 10.0 +5.9
RAO LR LR
comp=Z,8μm,20.0s
VIS **Vishakhapatnam** 53.05 298 *e*P **P** 09 49 05.5 +0.4
VIS AMb AMB 09 49 11.3
comp=Z,1μm,1.1s,mb6.8
BOK **Bokaro** 53.52 306 *e*P **P** 09 49 08.1 -0.5
BOK AMb AMB 09 49 13.0
comp=Z,355nm,1.8s,mb6.1
ODAN **Odare** 53.88 310 *e*P **P** 09 49 11.3 +0.2
comp=Z,491nm,0.5s,mb6.8
TAPN **Taplejung** 53.90 311 *e*P **P** 09 49 11.4 +0.1
comp=Z,468nm,0.4s,mb6.9
MDRS **Chennai** 54.21 291 *ex* x 09 48 59.0
MDRS AMb AMB 09 49 02.3
comp=Z,798nm,1.1s,mb6.7
GTA **Gaotai** 54.22 330⇑ *i*P **P** 09 49 14.1 +0.8
GTA AP pP 09 49 20.3 -10
GTA XP sP 09 49 23.1 -15
GTA PCP PcP 09 50 17.8 +0.8
GTA SCP ScP 09 54 10.8 +1.1
GTA S **S** 09 56 49.8 +3.9
GTA XS sS 09 57 00.0 -15
GTA SCS ScS 09 58 57.1 +0.3
GTA SS SS 10 00 31.8 +3.0
GTA AMB AMB
comp=Z,128nm,1.5s,mb5.7
GTA AMB AMB
comp=Z,4μm,3.9s
GTA LR LR
comp=N,5μm,19.8s
GTA LR LR
comp=E,8μm,17.4s
GTA LR LR
comp=Z,5μm,20.7s
YSS **Yuzh-Sakhalins** 54.36 10 *i* P **P** 09 49 13.9 -0.3
YSS pmax pmax
comp=Z,86nm,0.8s,mb5.8
YSS MLR MLR
comp=Z,1μm,17.0s
YSS **Yuzh-Sakhalins** 54.36 10 PFAKE 09 49 20.0 +5.8
YSS LR LR
comp=Z,2μm,19.0s
RAMN **Ramite** 54.53 310 *e*P **P** 09 49 16.3 +0.4
comp=Z,855nm,0.5s,mb7.0
HABR **Khabarovsk** 55.00 3 *e*P **P** 09 49 15.6 -3.2
HABR *e**PP pP 09 49 27.0 -8.8
HABR *e**SP sP 09 49 30.9 -12
HABR *e* 09 50 15.1
HABR *e* 09 51 19.9
HABR *e*PPP 09 52 31.2
HABR *e*S **S** **09 56 55.0 -1.0**
HABR *e**SS sS 09 57 13.8 -11
HABR *e* 09 58 59.7
HABR *e*SS SS 10 00 37.6 -3.2
HABR pmax pmax
comp=N,88nm,1.8s
HABR pmax pmax
comp=Z,201nm,1.5s,mb5.9
HABR pmax pmax
comp=E,73nm,1.6s
HABR pmax pmax
comp=Z,1292μm,5.2s
HABR MLR MLR
comp=E,3μm,22.0s
HABR MLR MLR
comp=Z,4μm,18.0s
HABR MLR MLR
comp=N,3μm,20.0s
JIRN **Jiri** 55.21 310 *e*P **P** 09 49 21.0 +0.3
comp=N,449nm,0.6s,mb6.7
GUN **Gumba** 55.58 310 *e*P **P** 09 49 23.6 +0.2
comp=N,770nm,0.5s,mb7.0
KLR **Kul'dur** 55.65 0 *e*P **P** 09 49 19.8 -3.7
KLR *i* S **S** **09 56 57.5 -7.2**
KLR pmax pmax
comp=Z,220nm,1.8s,mb5.9
KLR smax
comp=N,10μm,9.0s
KLR smax
comp=E,9μm,9.0s
PKI **Pulchoki** 55.76 310 *e*P **P** 09 49 24.5 -0.2
comp=E,304nm,0.6s,mb6.5
PKI **Pulchoki** 55.76 310 *e*P **P** 09 49 24.8 +0.1
PKI pmax pmax
comp=Z,181nm,0.5s,mb6.4
PKI **Pulchoki** 55.76 310 *e*P **P** 09 49 24.8 +0.1
comp=Z,180nm,0.5s,mb6.4
PKIN **Phulchoki** 55.77 310 *e*P **P** 09 49 24.6 -0.2
comp=Z,186nm,0.5s,mb6.3
PKIN **Phulchoki** 55.77 310 *e*P **P** 09 49 24.8 0.0
comp=Z,180nm,0.5s,mb6.4
KKN **Kakani** 55.97 310 *e*P **P** 09 49 26.2 0.0
comp=Z,472nm,0.7s,mb6.6
KKN **Kakani** 55.97 310 *e*P **P** 09 49 26.2 0.0
KKN pmax pmax
comp=Z,472nm,0.7s,mb6.6
KOD **Kodaikanal** 56.01 287 *e*P **P** 09 49 26.8 +0.1
KOD AMb AMB 09 50 30.8
comp=Z,131nm,0.6s,mb6.1
DMN **Daman** 56.01 310 *e*P **P** 09 49 26.7 +0.2
TRD **Trivandrum** 56.06 285 *e*P **P** 09 49 27.6 +0.5
TRD AMb AMB 09 49 32.7
comp=Z,240nm,0.8s,mb6.3
AFI **Afiamalu** 56.53 102 P **P** 09 49 31.0 +0.6
comp=Z,76nm,1.2s,mb5.6,baz=301,slow=19,SNR=4.9
AFI **Afiamalu** 56.53 102 P **P** 09 49 36.2 +5.8
AFI pmax pmax
comp=Z,210nm,1.3s,mb6.0
AFI **Afiamalu** 56.53 102 *e*P **P** 09 49 31.2 +0.8
comp=Z,207nm,1.4s,mb6.0
AFI LR LR
comp=Z,5μm,19.0s
GKN **Gorkha** 56.57 310 *e*P **P** 09 49 30.5 +0.1
comp=Z,495nm,0.4s,mb6.9
HIA **Hailar** 56.57 351 *e*P **P** 09 49 30.3 +0.3
HIA pmax pmax
comp=Z,40nm,0.8s
HIA MLR MLR
comp=Z,10μm,22.0s
HIA **Hailar** 56.57 351 *e*P **P** 09 49 30.3 +0.3
comp=Z,40nm,0.8s,mb5.5
HIA LR LR
comp=Z,10μm,22.0s
HYB **Hyderabad** 57.17 296 *e*P **P** 09 49 34.0 -0.9
HYB *e*S **S** **09 57 20.0 -5.9**
HYB pmax pmax
comp=Z,270nm,1.0s,mb6.2
HYB **Hyderabad** 57.17 296 *i* P **P** 09 49 34.0 -0.9
comp=Z,270nm,1.0s,mb6.2
HYB *e*PP pP 09 49 54.5 +2.6
HYB *e*SP sP 09 49 59.5 +0.2
HYB *e*PcP PcP 09 50 31.0 +2.1
HYB *e*ScP ScP 09 54 21.0 -2.2
HYB *e*S **S** **09 57 20.0 -5.9**
HYB *e* 09 58 06.0
HYB *e*ScS ScS 09 59 17.5 -1.5
HYB LR LR 10 10 24.0
comp=Z,20nm,28.0s
HYB **Hyderabad** 57.17 296 *e*P **P** 09 49 34.0 -0.9
comp=Z,270nm,1.0s,mb6.2
HYB *e*S **S** **09 57 20.0 -5.9**
HYB *e* 10 10 24.0
KOLN **Koldanda** 57.25 309 *e*P **P** 09 49 35.4 +0.1
comp=Z,2μm,1.2s,mb7.0
DANN **Dangsing** 57.41 310 *e*P **P** 09 49 36.5 +0.1
ALBI **Allahabad** 57.51 306 *ex* x 09 49 34.0
ALBI *ex* x 09 50 01.0
NGP **Nagpur** 58.09 300⇑ *i*P **P** 09 49 39.1 -2.2
NGP *ex* x 09 49 40.6
comp=Z,248nm,1.1s
NGP *e*S **S** **09 57 34.6 -3.2**
JBP **Jabalpur** 58.10 302 *e*P **P** 09 49 41.4 +0.1
JBP *ex* x 09 57 33.7
ULN **Ulaanbaatar** 58.29 341 P **P** 09 49 43.6 +1.5
SNR=75
ULN **Ulaanbaatar** 58.29 341 *e*P **P** 09 49 43.0 +0.8
ULN *e*S **S** **09 57 35.4 -4.1**
ULN pmax pmax
comp=Z,191nm,0.7s,mb6.2
ULN MLR MLR
comp=Z,6μm,22.0s
ULN **Ulaanbaatar** 58.29 341 *e*P **P** 09 49 43.0 +0.9
comp=Z,192nm,0.7s,mb6.2
ULN *e*S **S** **09 57 35.4 -4.2**
ULN LR LR
comp=Z,6μm,22.0s
SONM **Songino Array** 58.48 341 P **P** 09 49 44.4 +0.9
comp=Z,115nm,0.7s,mb6.0,baz=156,slow=7.1,SNR=270
SONM LR LR 10 14 56.8
comp=Z,4μm,20.0s,baz=158,slow=36
SONM PKPPKP 10 19 13.9
comp=Z,2.1nm,1.1s,baz=270,slow=3.2,SNR=5.1
SONM **Songino Array** 58.48 341 Pn **S** **09 57 36.3 -5.7**
comp=Z,0.1nm,0.3s,baz=167,slow=7.1,SNR=2.5
MNGI **Mangalore** 59.23 289 *i* P **P** 09 49 48.7 -0.6
MNGI AMb AMB 09 49 52.6
comp=Z,410nm,3.8s
LATR **Latur** 59.30 296 *e*P **P** 09 49 48.5 -1.2
AKL **Akola** 59.69 299 *e*P **P** 09 49 51.1 -1.2
AKL AMb AMB 09 49 55.5
comp=Z,545nm,3.4s
DRV **Dumont d'Urvil** 60.23 176 P **P** 09 49 59.0 +3.8
DRV S **S** **09 58 05.0 +1.0**
DRV L 10 05 00.0
DRV R 10 09 00.0
BHPL **Bhopal** 60.28 301 *e*P **P** 09 49 55.9 -0.5
BHPL AMb AMB 09 49 60.0
comp=Z,539nm,1.8s,mb6.3
CIT **Chita** 60.35 348 *e*P **P** 09 49 54.3 -2.0
CIT *e* pP 09 50 12.0 -1.5
MIDW **Midway** 60.56 52 PFAKE 09 50 10.0 +12
MIDW LR LR
comp=Z,5μm,20.0s
PTH **Pithoragarh** 60.71 309 *e*P **P** 09 49 58.0 -1.2
GOA **Goa** 60.87 292⇑ *i*P **P** 09 50 00.2 -0.3
GOA AMb AMB 09 50 04.7
comp=Z,591nm,1.0s,mb6.6
GOA *i* x x 09 58 07.5
GOA *i* x x 09 58 07.6
KAD **Karad** 61.08 294 *e*P **P** **09 50 01.2 -0.7**
KAD AMb AMB 09 50 02.1
comp=Z,5μm,2.5s,mb7.1
CASY **Casey** 61.22 189⇑ *i*P **P** **09 50 02.6 +0.6**
CASY *e*S **S** **09 58 16.6 0.0**
ZAK **Zakamensk** 61.72 340⇓ *i*P **P** **09 50 06.0 +0.4**
ZAK *e* 09 58 23.0
ZAK pmax pmax
comp=Z,92nm,1.0s,mb5.8
POO **Poona** 61.77 295 *e*P **P** **09 50 05.8 -0.8**
POO AMb AMB 09 50 11.5
comp=Z,478nm,2.0s,mb6.2
POO *i* PCP PcP 09 50 46.0 -1.2
POO *i* x x 09 52 18.5
POO *e*SCS ScS 09 59 52.0 -1.0
NDI **New Delhi** 62.67 307 *e*P **P** **09 50 10.0 -2.4**
NDI *ex* x 09 58 27.0
TLY **Talaya** 62.70 341 P **P** **09 50 13.8 +1.6**
comp=Z,866nm,0.6s,mb6.9,SNR=45
TLY **Talaya** 62.70 341 P **P** **09 50 13.5 +1.4**
SNR=28
TLY **Talaya** 62.70 341 *c* *i*P **P** **09 50 12.9 +0.7**
TLY *e*PPP 09 53 56.5
TLY *e*S **S** **09 58 32.8 -3.0**
TLY pmax pmax
comp=Z,230nm,1.9s,mb5.8
TLY **Talaya** 62.70 341 *e*P **P** **09 50 13.2 +1.0**
comp=Z,82nm,0.6s,mb5.8
TLY LR LR
comp=Z,4μm,22.0s
DDI **Dehra Dun** 62.73 309 *e*P **P** **09 50 10.6 -2.2**
DDI *e*S **S** **09 58 37.8 +0.9**
IRK **Irkutsk** 62.99 342⇑ *i*P **P** **09 50 14.5 +0.5**
IRK *e* 09 50 57.9
IRK *e*S **S** **09 58 40.9 +1.6**
IRK *e* 09 59 17.5
IRK pmax pmax
comp=Z,493nm,1.2s,mb6.3
NRGR **Nerungri** 63.31 356 *i* P **P** **09 50 17.5 +1.4**
NRGR S **S** **09 58 43.9 +0.8**
NRGR smax
comp=N,32nm,0.5s
CLNS **Chul'man** 63.48 356 *e*P **P** **09 50 16.0 -1.2**
CLNS *e**PP pP 09 50 29.8 -4.7
CLNS *e* 09 52 35.3
CLNS *e*PPP 09 54 07.4
CLNS *e*S **S** **09 58 42.1 -3.1**
CLNS *e**SS sS 09 59 14.2 -0.3
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,49nm,1.5s,mb5.2
CLNS pmax pmax
comp=N,45nm,1.5s
CLNS pmax pmax
comp=E,25nm,0.9s
CLNS pmax pmax
comp=Z,28nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,52nm,1.0s
CLNS smax
comp=E,4μm,12.3s
CLNS smax
comp=N,4μm,12.5s
CLNS MLR MLR
comp=E,2μm,20.0s
CLNS MLR MLR
comp=Z,4μm,18.0s
CLNS MLR MLR
comp=N,4μm,22.0s
MOY **Mondy** 63.58 340 *e*P **P** **09 50 19.3 +1.4**
MOY pmax pmax
comp=Z,84nm,3.4s
PEA0B **Petropavlovsk-** 63.66 18 *e*P **P** **09 50 20.1 +1.7**
PETK **Petropavlovsk-** 63.66 18 P **P** **09 50 18.5 0.0**
comp=Z,71nm,0.7s,mb5.6,baz=163,slow=3.2,SNR=27
PETK LR LR 10 15 14.0
comp=Z,2μm,19.5s,baz=207,slow=33
WMQ **Urumqi** 63.72 326⇑ *i*P **P** **09 50 20.0 +0.9**
WMQ AP pP 09 50 27.0 -9.4
WMQ PP PP 09 52 42.3 +2.2
WMQ S **S** **09 58 48.3 -0.5**
WMQ SCS ScS 10 00 07.8 +0.9
WMQ AMB AMB
comp=Z,437nm,1.2s,mb6.2
WMQ AMB AMB
comp=Z,7μm,3.5s
WMQ LR LR
comp=N,4μm,17.0s
WMQ LR LR
comp=E,4μm,15.0s
WMQ LR LR
comp=Z,5μm,17.0s
SMLA **Simla** 63.77 309 *i* P **P** **09 50 21.2 +1.5**
SMLA *ex* x 09 50 22.9
comp=Z,5μm,0.4s
SMLA *i* S **S** **09 58 48.0 -1.8**
AJM **Ajmer** 63.86 304 *e*P **P** **09 50 19.5 -0.8**
AJM AMb AMB 09 50 24.1
comp=Z,413nm,1.4s,mb6.1
PET **Petropavlovsk** 63.87 18 *e*P **P** **09 50 18.5 -1.3**
PET *i* S **S** **09 58 49.5 -0.8**
PET *e*SS SS 10 02 57.4 -2.5
PET pmax pmax
comp=Z,163nm,0.8s,mb5.9
PET pmax pmax
comp=Z,3μm,14.4s
PET pmax pmax
comp=Z,3μm,6.6s
PET MLR MLR
comp=Z,3μm,13.0s
PET **Petropavlovsk** 63.87 18 *e*P **P** **09 50 21.7 +1.9**
comp=Z,232nm,1.1s,mb5.9
PET LR LR
comp=Z,4μm,20.0s
SDNR **Sundarnagar** 64.09 310 *e*P **P** **09 50 22.4 +0.7**
SDNR *e*S **S** **09 58 52.6 -1.2**
BHK **Bhakra** 64.48 309 *e*P **P** **09 50 23.4 -0.9**
BHK *ex* x 09 50 47.8
MIR **Mirnyy** 65.27 196*α* *i*P **P** **09 50 30.0 +1.2**
MIR *i* 09 51 00.0
MIR *i* S S 09 59 08.0 +0.8
MIR *i* PS 09 59 32.0
MIR *i* SS SS 10 03 20.0 -1.0
MIR *i* SSS 10 06 20.0
MIR pmax pmax
comp=Z,800nm,2.0s,mb6.2
MIR pmax pmax
comp=Z,2μm,4.0s
DLH **Dalhousie** 65.31 310 *e*P **P** **09 50 29.0 -0.7**
DLH *ex* x 09 51 03.0
THN **Thein Dam** 65.45 310 *e*P **P** **09 50 28.8 -1.8**
THN *ex* x 09 59 05.2
BOD **Bodaibo** 65.75 350 *e*P **P** **09 50 31.5 -0.4**
BOD *e* 09 59 11.7
BOD pmax pmax
comp=Z,106nm,1.5s,mb5.5
HVS **Khovu-Aksy** 65.95 335*d* *i*P **P** **09 50 34.2 +0.8**
HVS pmax pmax
comp=Z,785nm,0.5s,mb6.8
HVS MLR MLR
comp=Z,26μm,21.0s
BHJ **Bhuj** 66.98 299 *e*P **P** **09 50 40.0 -0.5**
NIL **Nilore** 67.84 310 PFAKE 09 51 00.0 +14
NIL LR LR
comp=Z,75nm,19.0s
RAR **Rarotonga** 68.16 110 P **P** **09 50 48.6 +0.6**
comp=Z,32nm,0.9s,mb5.2,baz=37,slow=2.9,SNR=3.1
RAR **Rarotonga** 68.16 110 P **P** **09 50 48.6 +0.6**
RAR LR LR
comp=Z,3μm,19.0s
YAK **Yakutsk** 68.49 359 *e*P **P** **09 50 49.0 -0.3**
YAK *e**PP pP 09 51 17.7 +11
YAK *i* S S 09 59 43.7 -2.3
YAK *e**SS sS 10 00 25.9 +10
YAK *e* 10 00 39.2
YAK pmax pmax
comp=Z,534nm,0.9s,mb6.4
YAK pmax pmax
comp=N,64nm,0.9s
YAK pmax pmax
comp=E,37nm,0.9s
YAK smax
comp=E,4μm,3.2s
YAK smax
comp=N,5μm,4.3s
YAK **Yakutsk** 68.49 359 *e*P **P** **09 50 49.3 0.0**
comp=N,572nm,0.8s,mb6.5
YAK LR LR
comp=Z,3μm,22.0s
KSH **Kashi** 68.53 317 P **P** **09 50 52.0 +2.0**
KSH AP pP 09 50 58.3 -9.2
KSH XP sP 09 51 00.4 -14
KSH PCP PcP 09 51 17.5 +2.8
KSH PP PP 09 53 25.6 +3.5
KSH SCP 09 55 18.3
KSH PCS 09 55 20.3
KSH S S 09 59 50.8 +3.5
KSH SCS ScS 10 00 46.3 +2.0
KSH SS SS 10 04 16.3 +3.6
KSH AMB AMB
comp=Z,1μm,1.0s,mb6.6
KSH LR LR
comp=N,6μm,12.8s
KSH LR LR
comp=E,7μm,14.1s
KSH LR LR
comp=Z,15μm,24.0s
MK31 **Makanchi Array** 68.56 326 *e*P **P** **09 50 50.7 +0.7**
MKAR **Makanchi Array** 68.56 326 P **P** **09 50 50.0 0.0**
comp=Z,238nm,0.5s,mb6.3,baz=119,slow=5.5,SNR=973
MKAR PKP2bc 10 18 57.0
comp=Z,0.9nm,0.7s,baz=344,slow=4.0,SNR=4.3
MKAR **Makanchi Array** 68.56 326 P S 09 59 47.9 +0.5
baz=119,slow=11,SNR=9.9
MKAR **Makanchi Array** 68.56 326 P **P** **09 50 50.0 0.0**
MKAR ⇑ *e* 10 18 57.0
FX1 **Attu Island--F** 69.17 26 P **P** **09 50 54.4 +0.7**
comp=Z,72nm,0.7s,mb5.6,baz=284,slow=2.5,SNR=21
FX1 LR LR 10 18 54.3
comp=Z,3μm,19.7s,baz=246,slow=34
SMY **Shemya** 69.47 26 *e*P **P** **09 50 59.4 +3.9**
SMY pmax pmax
comp=Z,54nm,0.6s,mb5.5
SMY **Shemya** 69.47 26 *e*Pn **P** **09 50 59.4 +3.9**
comp=Z,54nm,0.6s,mb5.6
ULHL **Ulahol** 69.69 320 P **P** **09 50 58.4 +1.3**
SNR=20
AAA **Alma-Ata** 69.76 321 *e*P **P** **09 50 58.3 +0.8**
AAA *e*S S 10 00 02.0 +0.3
AAA pmax pmax
comp=Z,7μm,4.2s
AAA smax
comp=E,13μm,10.4s
AAA **Alma-Ata** 69.76 321 *i* P **P** **09 50 58.2 +0.7**
KZA **Kyzart** 70.25 319 P **P** **09 51 02.0 +1.5**
SNR=236
TKM2 **Tokmak 2** 70.44 320 *e*P **P** **09 51 02.8 +1.1**
TKM2 pmax pmax
comp=Z,112nm,0.6s,mb5.9
TKM2 MLR MLR
comp=Z,5μm,20.0s
TKM2 **Tokmak 2** 70.44 320 P **P** **09 51 02.2 +0.5**
SNR=117
TKM2 **Tokmak 2** 70.44 320 *e*P **P** **09 51 02.8 +1.2**
comp=Z,112nm,0.6s,mb5.9
TKM2 LR LR
comp=Z,5μm,20.0s
KBK **Karagaybulak** 70.72 320 P **P** **09 51 04.4 +1.0**
SNR=52
UCH **Uchtor** 70.80 319 P **P** **09 51 05.9 +2.0**
SNR=44
UCH **Uchtor** 70.80 319 *e*P **P** **09 51 05.8 +2.0**
comp=Z,626nm,2.1s,mb6.1
UCH LR LR
comp=Z,2μm,22.0s
AAK **Ala-Archa** 71.00 319 P **P** **09 51 06.5 +1.4**
comp=Z,1μm,1.4s,mb6.6,SNR=64
AAK **Ala-Archa** 71.00 319 P **P** **09 51 06.6 +1.5**
SNR=162
AAK **Ala-Archa** 71.00 319 *c* *i*P **P** **09 51 06.3 +1.2**
AAK pmax pmax
comp=Z,251nm,1.5s,mb5.8
AAK **Ala-Archa** 71.00 319 P **P** **09 51 06.6 +1.4**
SNR=84
AAK **Ala-Archa** 71.00 319 *e*P **P** **09 51 06.4 +1.2**
comp=Z,296nm,1.1s,mb6.0
AAK LR LR
comp=Z,3μm,20.0s
CHMS **Chumysh** 71.02 320 P **P** **09 51 05.8 +0.6**
SNR=33
FRU **Bishkek** 71.02 320⇑ *i*P **P** **09 51 05.0 -0.2**
FRU *i* 09 51 30.0
FRU *e* 09 53 42.0
FRU *i* S S 10 00 08.0 -8.4
FRU *i* 10 01 04.0
FRU pmax pmax
comp=Z,1μm,2.0s,mb6.3
FRU pmax pmax
comp=Z,6μm,6.0s
FRU smax

comp=E,18µm,8.0s
SEY Seymchan 71.27 10⇑ *i*P **P 09 51 07.4 +1.1**
AML Almayashu 71.29 319 P **P 09 51 08.3 +1.4**
SNR=251
AML Almayashu 71.29 319 *e*P **P 09 51 08.5 +1.6**
comp=E,593nm,1.1s,mb6.3
AML LR LR
comp=Z,2µm,21.0s
USP Ospenovka 71.31 320 P **P 09 51 07.6 +0.6**
SNR=163
KBL Kabul 71.40 310 *e*P **P 09 51 08.3 +0.6**
KBL pmax pmax
comp=Z,168nm,0.5s,mb6.1
KBL Kabul 71.40 310 *e*P **P 09 51 08.3 +0.6**
comp=Z,168nm,0.5s,mb6.1
EKS2 Erkin-Say 71.48 319 P **P 09 51 08.7 +0.6**
SNR=108
EKS2 Erkin-Say 71.48 319 *e*P **P 09 51 09.4 +1.3**
comp=Z,775nm,1.5s,mb6.3
EKS2 LR LR
comp=Z,4µm,22.0s
ZALV Zalesovo Beam 71.78 333 P **P 09 51 08.8 -0.7**
comp=Z,104nm,0.5s,mb5.9,baz=122,slow=5.4,SNR=206
ZALV PKPPKP 10 18 59.8
comp=Z,1.7nm,0.8s,baz=343,slow=3.1,SNR=4.6
ZALV Zalesovo Beam 71.78 333 P S 10 00 09.9 -15
comp=Z,1.9nm,0.7s,baz=124,slow=12,SNR=2.5
XMAS Kiritimati 71.81 86 PFAKE 09 51 20.0 +9.4
XMAS LR LR
comp=Z,7µm,22.0s
VNDA Vanda 72.65 173 P **P 09 51 15.0 +0.5**
comp=Z,57nm,0.8s,mb5.4,baz=320,slow=6.3,SNR=115
VNDA LR LR 10 21 59.5
comp=Z,8µm,20.2s,baz=344,slow=35
VNDA Vanda 72.65 173 *e*P **P 09 51 14.9 +0.5**
comp=Z,68nm,0.8s,mb5.5
VNDA LR LR
comp=Z,8µm,20.0s
KURK Kurchatov 72.81 328 P **P 09 51 15.8 0.0**
comp=Z,2µm,0.5s,mb7.2
KURK Kurchatov 72.81 328 P **P 09 51 16.3 +0.5**
SNR=104
KURK Kurchatov 72.81 328 P **P 09 51 15.2 -0.6**
comp=Z,186nm,0.5s,mb6.2,baz=124,slow=4.9,SNR=276
KURK PKPPKP 10 18 49.8
comp=Z,0.9nm,0.8s,baz=284,slow=2.9,SNR=5.6
KURK Kurchatov 72.81 328 P S 10 00 27.8 -8.8
comp=Z,20nm,1.1s,baz=132,slow=13,SNR=12
KURK Kurchatov 72.81 328*c i*P **P 09 51 15.8 0.0**
KURK pmax pmax
comp=Z,359nm,1.1s,mb6.1
KURK MLR MLR
comp=Z,3µm,21.0s
KURK Kurchatov 72.81 328 *e*P **P 09 51 16.0 +0.2**
comp=Z,169nm,0.6s,mb6.0
KURK LR LR
comp=Z,3µm,22.0s
NVS Novosibirsk 73.06 333⇑ *i*P **P 09 51 16.4 -0.8**
NVS *e*S S 10 00 31.8 -7.5
NVS pmax pmax
comp=E,260nm,1.4s
NVS pmax pmax
comp=Z,416nm,1.4s,mb6.1
NVS pmax pmax
comp=N,261nm,1.5s
NVS smax
comp=N,1µm,3.0s
NVS smax
comp=E,3µm,3.3s
ADK Adak 73.31 31 *e*P **P 09 51 20.7 +2.0**
ADK pmax pmax
comp=Z,465nm,1.6s,mb6.1
ADK MLR MLR
comp=Z,5µm,21.0s
ADK Adak 73.31 31 *e*P **P 09 51 20.7 +2.0**
comp=Z,465nm,1.6s,mb6.1
ADK LR LR
comp=Z,5µm,21.0s
SBA Scott Base 73.53 173 P **P 09 51 22.1 +2.5**
SBA pmax pmax
comp=Z,140nm,1.1s,mb5.6
SBA Scott Base 73.53 173 *e*P **P 09 51 21.8 +2.2**
comp=Z,139nm,1.1s,mb5.6
SBA LR LR
comp=Z,6µm,20.0s
KK31 Karatay Array 73.83 318 *i*P **P 09 51 22.2 +0.3**
KIP Kipapa 74.83 66 PFAKE 09 51 40.0 +12
KIP LR LR
comp=Z,6µm,20.0s
MSEY Mahe Island 75.24 267 P **P 09 51 32.6 +1.8**
SNR=5.7
MSEY Mahe Island 75.24 267 *e*P **P 09 51 31.1 +0.4**
comp=Z,199nm,1.1s,mb5.8
MSEY LR LR
comp=Z,5µm,22.0s
MAW Mawson 75.68 202 *e*P **P 09 51 33.1 +0.9**
comp=Z,81nm,0.6s,mb5.6
MAW *e*S S 10 01 06.8 -1.5
MAW Mawson 75.68 202 P **P 09 51 33.4 +1.2**
comp=Z,93nm,0.6s,mb5.7,baz=73,slow=5.7,SNR=210
MAW LR LR 10 24 36.7
comp=Z,6µm,20.2s,baz=66,slow=35
MAW Mawson 75.68 202 P **P 09 51 33.4 +1.2**
MAW pmax pmax
comp=Z,93nm,0.6s
MAW MLR MLR
comp=Z,6µm,20.2s
WBK Wadi Bani Khal 76.28 295 ⇓P **P 09 51 37.5 +1.0**
SNR=23
POHA Pohakuloa 76.73 68 PFAKE 09 51 50.0 +11
POHA LR LR
comp=Z,6µm,21.0s
JMDO Jabal Madar 77.00 295 ⇓P **P 09 51 41.1 +0.5**
SNR=22
SMDO Samad 77.21 295 ⇓P **P 09 51 42.4 +0.7**
SNR=41
BIDO Bidbid 77.24 296 ⇓P **P 09 51 42.9 +1.1**
SNR=119
PAE Paea 77.84 107 *e*P **P 09 51 45.5 +0.1**
PPT Papeete 77.85 106 *e*P **P 09 51 45.7 +0.3**
PPT Papeete 77.85 106 *e*PP PP 09 54 41.6 -0.3
comp=Z,1µm,29.0s
PPT Papeete 77.85 106 *e*SS SS 10 06 42.2 +6.6
comp=Z,3µm,25.0s
PPT *e*LR LR 10 15 59.6
comp=Z,10µm,33.8s
PPT Papeete 77.85 106 P **P 09 51 45.9 +0.5**
comp=Z,20nm,0.7s,mb5.0,baz=27,slow=7.7,SNR=4.9
PPT LR LR 10 23 53.1
comp=Z,2µm,18.9s,baz=266,slow=34
BSY Bisya 77.90 295 ⇓P **P 09 51 46.1 +0.5**
SNR=32
VOSK Vostochnaya 77.92 327 P **P 09 51 44.6 -0.4**
VOSK pmax pmax
comp=Z,230nm,0.6s,mb6.1
HOQ Hoqain 77.98 296 ⇑P **P 09 51 46.8 +0.8**
SNR=32
TIAR Tiarei 78.07 106 *e*P **P 09 51 46.8 +0.2**
comp=Z,1µm,1.0s,mb6.5
TVO Taravao 78.14 107 *e*P **P 09 51 47.0 -0.1**
comp=Z,1µm,1.1s,mb6.6
TIXI Tiksi 78.16 359*c i*P **P 09 51 44.2 -1.8**
TIXI pmax pmax
comp=Z,70nm,1.1s,mb5.3
TIXI MLR MLR
comp=Z,6µm,24.0s
TIXI Tiksi 78.16 359⇑ *i*P **P 09 51 44.3 -1.7**
TIXI LR LR
comp=Z,6µm,20.0s
BVA0 Borovoye Array 78.37 327 *i*P **P 09 51 47.6 +0.1**
BVA0 pmax pmax
comp=Z,42nm,0.8s,mb5.2
BVAR Borovoye Array 78.37 327 P **P 09 51 47.6 +0.1**
comp=Z,105nm,0.5s,mb5.8,baz=124,slow=8.4,SNR=218
BVAR PKKPbc PKKPbc 10 10 45.8 -1.5
comp=Z,1.4nm,0.6s,baz=284,slow=6.0,SNR=4.7
BRVK Borovoye 78.45 327 P **P 09 51 48.6 +0.7**
comp=Z,1µm,0.7s,mb6.8,SNR=77
BRVK Borovoye 78.45 327 P **P 09 51 48.4 +0.4**
SNR=76
BRVK Borovoye 78.45 327 *e*P **P 09 51 48.1 +0.2**
BRVK pmax pmax
comp=Z,317nm,1.0s,mb6.0
BRVK MLR MLR
comp=Z,3µm,20.0s
BRVK Borovoye 78.45 327 *e*P **P 09 51 48.1 +0.2**
comp=Z,317nm,1.0s,mb6.0
BRVK LR LR
comp=Z,3µm,20.0s
BILL Bilibino 78.53 13⇓ *e*P **P 09 51 48.6 +0.5**
BILL *e* 09 54 43.6
BILL *i*S S 10 01 36.6 -2.5
BILL pmax pmax
comp=Z,43nm,1.8s,mb5.0
BILL MLR MLR
comp=Z,2µm,16.0s
BILL Bilibino 78.53 13 *e*P **P 09 51 48.5 +0.4**
comp=Z,15nm,0.6s,mb5.0
BILL LR LR
comp=Z,3µm,20.0s
ARQ Araqi 78.64 295 P **P 09 51 50.1 +0.5**
SNR=31
MEH Mehetia 79.27 107 *e*P **P 09 51 52.8 -0.4**
comp=Z,1µm,1.2s,mb6.6
HATD Hatta, Dubai 79.30 297 ⇓P **P 09 51 53.8 +0.5**
SNR=49
BANOM Banah 79.39 298 ⇓P **P 09 51 54.6 +0.9**
SNR=45
UNV Unalaska Valle 79.62 32 *e*P **P 09 51 56.1 +1.8**
comp=Z,337nm,1.5s,mb6.0
PMOR Pomariorio Ree 79.62 104 *e*P **P 09 51 55.1 -0.1**
comp=Z,159nm,1.0s,mb5.8
RBK Rabkut 79.63 289 ⇑P **P 09 51 55.5 +0.4**
SNR=30
VAH Vaihoa 79.86 104 *e*P **P 09 51 56.3 -0.2**
comp=Z,150nm,1.3s,mb5.7
WHFO Wadi Hawf 80.11 289 ⇓P **P 09 51 57.5 -0.3**
SNR=45
AKUT Akutan 80.13 32 *e*P **P 09 51 56.7 -0.4**
comp=Z,26nm,0.5s,mb5.3
ABTO Aybut 80.45 289 ⇓P **P 09 52 00.2 +0.6**
SNR=32
ABKT Ailbek 80.85 310 P **P 09 52 02.1 +0.8**
comp=Z,945nm,1.5s,mb6.4,SNR=39
FALS False Pass 81.68 32 *e*P **P 09 52 03.0 -2.4**
comp=Z,542nm,1.1s,mb6.3
ABPO Ambohimpanom 82.12 252 *e*P **P 09 52 09.0 +0.6**
comp=Z,209nm,1.6s,mb5.7
ABPO LR LR
comp=Z,3µm,20.0s
OPO Ambohidratompo 82.19 252 P **P 09 52 09.6 +0.8**
comp=Z,26nm,0.6s,mb5.2,baz=87,slow=4.3,SNR=50
AB31 Akbulak array 82.94 321 P **P 09 52 11.3 -0.7**
AB31 pmax pmax
comp=Z,167nm,1.1s,mb5.8
QSPA South Pole Qui 83.32 180 P **P 09 52 14.0 +0.5**
comp=Z,186nm,0.7s,mb6.0,baz=321,slow=1.9,SNR=425
QSPA South Pole Qui 83.32 180 P **P 09 52 14.0 +0.5**
QSPA LR LR
comp=Z,9µm,19.0s
SDPT Sand Point 83.43 32 *e*P **P 09 52 14.9 +0.5**
comp=Z,268nm,0.8s,mb6.1
MUKL Al Mukalla 84.04 285⇑ *e*P **P 09 52 19.4 +1.0**
SYO Syowa Base 84.39 201⇓ *e*P **P 09 52 18.4 -0.7**
SYO Syowa Base 84.39 201 *e*SH SKSac 10 02 38.2 +1.3
AKTK Aktyubinsk 84.49 322 P **P 09 52 20.0 0.0**
AKTO Aktyubinsk 84.49 322 P **P 09 52 20.0 0.0**
comp=Z,54nm,0.7s,mb5.5,baz=106,slow=5.7,SNR=79
CHGN Chignik 84.86 32 *e*P **P 09 52 22.2 +0.5**
CHGN *epP* pP 09 52 29.4 -10
SVE Sverdlovsk 85.06 329⇓ *e*P **P 09 52 22.3 -0.3**
SVE *e*S S 10 02 41.9 -4.8
SVE *e*SSS 10 11 51.8
SVE pmax pmax
comp=Z,608nm,1.6s,mb6.3
SVE pmax pmax
comp=Z,1µm,7.2s
SVE MLR MLR
comp=Z,4µm,24.0s
ARU Arti 86.01 328 P **P 09 52 26.9 -0.5**
comp=Z,1µm,0.6s,mb6.9,SNR=21
ARU Arti 86.01 328*c i*P **P 09 52 25.6 -1.8**
ARU *e* 09 55 45.8
ARU *e*PPP 09 57 42.8
ARU *e*S S 10 02 48.4 -7.7
ARU *e*PS 10 03 54.4
ARU pmax pmax
comp=Z,173nm,1.0s,mb5.9
ARU MLR MLR
comp=Z,3µm,18.0s
ARU Arti 86.01 328 *e*P **P 09 52 26.3 -1.1**
comp=Z,160nm,0.9s,mb6.0
ARU *e*PP PP 09 55 46.0 -2.2
ARU LR LR
comp=Z,4µm,22.0s
QRN Al-Qurain 87.25 299 *e*P **P 09 52 33.5 -0.6**
baz=299
QRN AMb AMB 09 52 39.0
comp=Z,829nm,1.5s,mb6.4,baz=299
KBD Kabd 87.51 300 *e*P **P 09 52 34.9 -0.4**
baz=300
KBD AMb AMB 09 52 40.2
comp=Z,259nm,1.9s,mb5.9,baz=300
UMR Umm Al-Rimmam 87.55 300 *e*P **P 09 52 35.0 -0.5**
baz=300
UMR AMb AMB 09 52 40.3
comp=Z,613nm,1.7s,mb6.4,baz=300
RDF Al-Radifah 87.59 299 *e*P **P 09 52 34.9 -0.8**
baz=299
RDF AMb AMB 09 52 40.5
comp=Z,538nm,1.8s,mb6.3,baz=299
LBOS 87.60 284⇑ *e*P **P 09 52 37.4 +1.4**
LBOS AMb AMB 09 52 38.7
comp=Z,543nm,1.3s,mb6.4
OHAK Old Harbor 87.83 32 *e*P **P 09 52 36.6 +0.4**
comp=Z,75nm,0.6s,mb5.9
SOKR Solikamsk 87.86 331*c i*P **P 09 52 34.8 -1.5**
SOKR S SKSac 10 02 54.5 -4.2
SOKR pmax pmax
comp=Z,150nm,1.3s,mb5.9
NAY Al-Naaiem 87.91 300 *e*P **P 09 52 36.5 -0.8**
baz=300
NAY AMb AMB 09 52 41.6
comp=Z,223nm,1.1s,mb6.1,baz=300
MIB Mutribah 87.91 300 *e*P **P 09 52 36.8 -0.5**
baz=300
MIB AMb AMB 09 52 42.1
comp=Z,519nm,1.0s,mb6.5,baz=300
KDAK Kodiak Island 88.34 31 P **P 09 52 39.0 +0.4**
comp=Z,760nm,0.9s,mb6.7,SNR=14
KDAK Kodiak Island 88.34 31 P **P 09 52 38.3 -0.3**
comp=Z,36nm,0.6s,mb5.6,baz=232,slow=7.2,SNR=16
KDAK LR LR 10 29 39.5
comp=Z,4µm,21.1s,baz=247,slow=34
KDAK Kodiak Island 88.34 31 *e*P **P 09 52 39.1 +0.5**
comp=Z,332nm,1.3s,mb6.2
KDAK *epP* pP 09 52 46.8 -10
KDAK *esP* sP 09 52 50.4 -13
KDAK LR LR
comp=Z,5µm,22.0s
DHBB Dhamar BB 88.51 285⇑ *e*P **P 09 52 41.8 +1.4**
MAK Makhachkala 89.84 313 *e*P **P 09 52 44.6 -1.4**
MAK *e* 09 56 17.4
MAK *e*PPP 09 58 13.7
MAK *e* 10 03 10.2
MAK *e* 10 03 25.6
MAK *e*SP SP 10 04 44.9 +6.0
MAK pmax pmax
comp=E,276nm,1.1s
MAK pmax pmax
comp=N,455nm,1.5s
MAK pmax pmax
comp=Z,341nm,1.0s,mb6.4
MAK pmax pmax
comp=Z,299nm,1.0s,mb6.4
PPLA Purkeypile 89.86 26 *e*P **P 09 52 46.1 +0.4**
comp=Z,106nm,1.4s,mb5.8
CHUM Lake Minchumin 90.06 25 *e*P **P 09 52 47.3 +0.7**
comp=Z,69nm,0.9s,mb5.8
SEW Seward 90.48 30 *e*P **P 09 52 49.1 +0.6**
comp=Z,101nm,1.1s,mb5.9
RC01 Rabbit Creek A 90.55 29 *e*P **P 09 52 49.9 +1.0**
comp=Z,70nm,1.0s,mb5.8
KTH Kantishna Hill 90.58 26 *e*P **P 09 52 49.0 0.0**
comp=Z,36nm,0.9s,mb5.5
BPAW Bear Paw Mtn. 90.68 25 *e*P **P 09 52 49.1 -0.3**
comp=Z,14nm,0.8s,mb5.1
TRF Thorofare Moun 90.83 26 *e*P **P 09 52 50.2 +0.1**
comp=Z,34nm,1.1s,mb5.4
PMR Palmer 90.95 28 *e*P **P 09 52 51.7 +1.0**
PMR pmax pmax
comp=Z,12nm,0.6s,mb5.2
PMR Palmer 90.95 28 *e*P **P 09 52 51.7 +1.0**
comp=Z,12nm,0.6s,mb5.2
RKT Rikitea 90.99 113 *e*PP PP 09 56 27.9 -1.0
comp=Z,624nm,30.5s
RKT *e*SKSac SKSac 10 03 19.2 +0.5
comp=Z,3µm,28.8s
RKT Rikitea 90.99 113 *e*LR LR 10 22 00.3
comp=Z,6µm,37.8s
DGRG David-gareji 91.18 311 P **P 09 52 52.4 +0.1**
DGRG S S 10 03 54.6 +9.0
MCK McKinley 91.48 26 *e*P **P 09 52 52.9 -0.3**
MCK pmax pmax
comp=Z,55nm,1.0s,mb5.6
MCK McKinley 91.48 26 *e*P **P 09 52 52.9 -0.3**
comp=Z,55nm,1.0s,mb5.6
GNI Garni 91.49 310 P **P 09 52 55.1 +1.3**
SNR=7.0
GNI Garni 91.49 310 P **P 09 52 54.5 +0.8**
comp=Z,4.6nm,0.3s,mb5.1,baz=358,slow=15,SNR=5.8
GNI LR LR 10 41 27.2
comp=Z,789nm,18.7s,baz=183,slow=40
GNI Garni 91.49 310 *e*P **P 09 52 54.4 +0.7**
comp=Z,78nm,1.0s,mb5.8
GNI LR LR
comp=Z,3µm,22.0s
COLD Coldfoot 91.72 22 *e*P **P 09 52 53.8 -0.5**
comp=Z,64nm,1.0s,mb5.8
HAKT HAKKARI 91.97 307⇑ *i*P **P 09 53 02.7 +6.6**
COLA College 92.17 25 *e*P **P 09 52 55.4 -0.9**
COLA pmax pmax
comp=Z,13nm,0.7s,mb5.3
COLA MLR MLR
comp=Z,3µm,22.0s
COLA College 92.17 25 *e*P **P 09 52 55.4 -0.9**
comp=Z,13nm,0.7s,mb5.3
COLA LR LR
comp=Z,3µm,22.0s
DYDN Diyadin 92.22 309⇑ *i*P **P 09 52 58.5 +1.3**
DIGO Kars 92.56 310⇑ *i*P **P 09 52 59.7 +1.0**
ONI Oni 92.75 312 P **P 09 52 58.1 -1.4**
ONI S S 10 04 00.8 +1.3
TUTA Tutak 92.88 309⇑ *i*P **P 09 53 01.2 +1.1**
PAX Paxson 92.88 27 *e*P **P 09 53 00.7 +1.1**
PAX *e**PP pP 09 53 09.9 -8.0
PAX pmax pmax
comp=Z,46nm,1.2s,mb5.7
PAX Paxson 92.88 27 *e*P **P 09 53 00.7 +1.0**
comp=Z,46nm,1.2s,mb5.7
PAX *ep*P pP 09 53 09.9 -8.0
NVL N'lazarevskaya 93.01 197*c i*P **P 09 53 01.6 +1.4**
NVL S SKSac 10 03 35.5 +7.3
NVL pmax pmax
comp=Z,266nm,2.8s,mb6.1
MAIT Maitri 93.03 197 *e*P **P 09 52 59.3 -1.0**
GOF Gofitskoye 93.31 315 *e*P **P 09 53 00.8 -1.3**
GOF *e*S SKSac 10 03 26.5 -4.3
GOF pmax pmax
comp=Z,50nm,1.6s,mb5.6
GOF smax
comp=N,10.0nm,1.2s
GOF smax
comp=E,50nm,1.2s
KIV Kislovodsk 93.45 314 P **P 09 53 03.3 +0.6**
SNR=5.5
KIV Kislovodsk 93.45 314⇓ *e*P **P 09 53 02.0 -0.7**
KIV *i* 09 56 47.0
KIV *i*S SKSac 10 03 25.9 -5.7
KIV *e*PS PS 10 05 26.5 -0.8
KIV pmax pmax
comp=Z,76nm,2.3s,mb5.6
KIV Kislovodsk 93.45 314⇑ *i*P **P 09 53 02.1 -0.6**
KIV LR LR
comp=Z,1µm,21.0s
HOMI Horasan 93.64 310⇑ *i*P **P 09 53 04.2 +0.5**
MENT Mentasta 93.67 27 *e*P **P 09 53 04.3 +1.0**
ARTV Artvin 93.73 311⇑ *i*P **P 09 53 04.5 +0.4**
DAGI Agillar 93.73 311⇑ *i*P **P 09 53 04.4 +0.3**
DDEM Demirkent 93.84 311⇑ *i*P **P 09 53 04.8 +0.2**
BEST Besiri 93.93 308⇑ *i*P **P 09 53 05.3 +0.2**
DBOC Borcka 93.94 311⇑ *i*P **P 09 53 05.0 0.0**
BNGL BINGOL 94.12 309⇑ *i*P **P 09 53 07.0 +1.1**
MARD Mardin 94.26 307⇑ *i*P **P 09 53 06.8 +0.1**
KOPT Kop Dagi 94.71 310⇑ *i*P **P 09 53 09.5 +0.9**
VRHR Novokhopersk 94.81 321 *e*P **P 09 53 07.9 -0.9**
VRHR *e**PP pP 09 53 15.8 -11
VRHR *e* 09 56 58.8
VRHR *e*S S 10 04 08.2 -9.1
VRHR pmax pmax
comp=E,20nm,0.5s
VRHR pmax pmax
comp=Z,50nm,0.5s,mb6.2
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=Z,90nm,2.2s,mb5.8
VRHR pmax pmax
comp=N,80nm,1.9s
VRHR pmax pmax
comp=E,70nm,0.9s
VRHR smax
comp=E,5µm,9.6s
VRHR smax
comp=Z,800nm,3.1s
VRHR smax
comp=N,2µm,3.5s
DIYA Diyarbakir 94.83 307⇑ *i*P **P 09 53 09.5 +0.2**
EGAK Eagle 95.00 25 *e*P **P 09 53 09.4 +0.1**
comp=N,39nm,1.0s,mb5.8
EGAK *e*PP PP 09 56 56.1 -3.1
EGAK LR LR
comp=Z,2µm,20.0s
PTCN Pitcairn Islan 95.10 116 PFAKE 09 53 20.0 +9.2
PTCN LR LR
comp=Z,3µm,19.0s
SOC Sochi 95.56 313*c i*P **P 09 53 10.5 -1.9**
SOC *e**PP pP 09 53 20.2 -10
SOC *i* 09 57 01.5
SOC *e*S SKSac 10 03 43.7 +0.8
SOC *e* 10 04 24.7
SOC *e*SS SS 10 10 50.4 -3.5
SOC pmax pmax
comp=Z,25nm,0.9s,mb5.6
DAWY Dawson 95.71 26 *e*P **P 09 53 12.7 +0.1**
DAWY *ep*P pP 09 53 21.4 -9.5
ELZG Elazig 95.77 308⇑ *i*P **P 09 53 14.2 +0.8**
KEMA Kemaliye 96.20 309⇑ *i*P **P 09 53 15.7 +0.3**
SNAA Sanae 96.25 193 *e*P **P 09 53 14.8 -0.2**
SNAA *e* 09 53 16.5
SNAA *e* 09 53 22.9
SNAA *e* 09 53 25.0
SNAA *e* pP 09 53 30.9 -2.4
SNAA *e* 09 53 42.1
SNAA Sanae 96.25 193 *e*P **P 09 53 15.0 0.0**
SNAA pmax pmax
comp=Z,81nm,1.0s
SNAA Sanae 96.25 193 *e*P **P 09 53 14.9 -0.1**
comp=Z,81nm,1.0s,mb6.1
VORD Divnogorie 96.28 321 *e*P **P 09 53 14.5 -1.0**
VORD *e**PP pP 09 53 23.2 -11
VORD *e* 09 57 10.7
VORD *e*S S 10 04 22.5 -7.4
VORD pmax pmax
comp=Z,90nm,1.5s,mb6.0
VORD pmax pmax
comp=N,40nm,1.2s
VORD pmax pmax
comp=E,50nm,1.0s
VORD pmax pmax
comp=Z,30nm,1.5s,mb5.5
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,40nm,1.4s
VORD smax
comp=N,3µm,7.2s
VORD smax
comp=Z,480nm,5.1s
VORD smax
comp=E,2µm,7.0s
VORD MLR MLR
comp=Z,3µm,23.0s
VORD MLR MLR
comp=E,4µm,25.0s
VSR Storozhevoye 96.37 321 *e*P **P 09 53 13.8 -2.1**
VSR *e**PP pP 09 53 23.1 -11
VSR *e* 09 57 08.3
VSR pmax pmax

comp=Z,10.0nm,1.4s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
VSR pmax pmax
comp=E,50nm,1.4s
VSR MLR MLR
comp=Z,1µm,22.0s
VSR MLR MLR
comp=N,1µm,20.0s
VSR MLR MLR
comp=E,2µm,24.0s
VOR Voronezh 96.37 321 *e*P **P** **09 53 15.0 -0.9**
VOR pmax pmax
comp=Z,260nm,2.0s,mb6.3
AKCD Akcadag 96.59 308⇑ *i*P **P** **09 53 17.1 -0.1**
ANN Anapa 97.26 314 *e*P **P** **09 53 14.9 -5.2**
ANN *e**PP pP 09 53 25.6 -13
ANN *e* 09 57 14.0
ANN pmax pmax
comp=N,94nm,1.5s
ANN pmax pmax
comp=E,36nm,1.5s
ANN pmax pmax
comp=Z,72nm,1.5s,mb5.9
MOS Moscow 97.43 325 *e*P **P** **09 53 16.4 -4.2**
MOS *e* 09 57 13.9
MOS *e*S SKSac 10 03 51.6 -0.5
MOS *i* 10 04 29.8
MOS *i* PS PS 10 06 00.4 -10
MOS *e*SS SS 10 11 16.1 -3.5
MOS *e*SSS 10 15 10.1
MOS pmax pmax
comp=Z,900nm,3.7s
MOS pmax pmax
comp=Z,126nm,1.6s,mb6.1
MOS Moscow 97.43 325 *e*P **P** **09 53 16.9 -3.7**
SKAG Skagway 97.49 31 *e*P **P** **09 53 21.8 +1.0**
comp=Z,49nm,1.9s,mb5.6
PINB Pinarbasi 97.80 308⇑ *i*P **P** **09 53 22.0 -0.6**
ANDN Andirin 97.80 307⇑ *i*P **P** **09 53 22.6 -0.2**
VNA2 Neumayer--Watz 97.81 193 *e*P **P** **09 53 23.2 +1.1**
VNA2 *e* 09 53 24.7
VNA2 *e* 09 53 29.5
VNA2 *e* 09 53 31.8
VNA2 *e* pP 09 53 38.2 -2.1
VNA2 *e* 09 53 50.2
OBN Obninsk 98.03 325⇑ *e*P **P** **09 53 21.6 -1.7**
OBN *i* 09 57 24.2
OBN *e*PS PS 10 06 08.2 -8.7
OBN pmax pmax
comp=Z,47nm,0.9s,mb6.0
OBN Obninsk 98.03 325 *e*P **P** **09 53 21.3 -1.9**
comp=Z,51nm,0.9s,mb6.0
OBN LR LR
comp=Z,3µm,21.0s
VNA3 Neumayer Olymp 98.05 192 *e*P **P** **09 53 23.6 +0.5**
VNA3 *e* 09 53 25.4
VNA3 *e* 09 53 30.3
VNA3 *e* 09 53 32.9
VNA3 *e* pP 09 53 38.9 -2.5
VNA3 *e* 09 53 50.9
INK Inuvik 98.13 22 *e*P **P** **09 53 23.1 -0.3**
comp=Z,43nm,1.2s,mb5.8
VNA1 Neumayer--Stat 98.21 193 *e*P **P** **09 53 24.9 +1.0**
VNA1 *e* 09 53 27.2
VNA1 *e* 09 53 31.8
VNA1 *e* 09 53 33.6
VNA1 *e* pP 09 53 39.5 -2.6
VNA1 *e* 09 53 54.7
LVZ Lovozero 98.57 338 *i* P **P** **09 53 24.3 -1.1**
LVZ MLR MLR
comp=Z,4µm,19.0s
AVNT Avonos 99.01 308⇑ *i*P **P** **09 53 27.2 -0.9**
APA Apatity 99.06 337⇓ *e*P **P** **09 53 23.0 -4.7**
APA *e*S S 10 04 46.0 -7.0
APA pmax pmax
comp=Z,54nm,1.4s,mb5.9
APA MLR MLR
comp=Z,5µm,23.0s
WRAK Wrangell Islan 99.12 34 PFAKE 09 53 40.0 +12
WRAK LR LR
comp=Z,3µm,19.0s
CDAG Cicekdag 99.40 309⇓ *i*P **P** **09 53 26.0 -3.8**
SIM Simferopol' 99.62 314 *e*P Pdif 09 53 29.5 -1.0
SIM *e* 09 57 35.0
SIM *e* 10 04 04.0
SIM *e*S S 10 04 52.0 -6.7
SIM *e*SS SS 10 11 45.0 -6.0
SIM pmax pmax
comp=Z,220nm,8.0s
BR131 Keskin Array S 99.97 309 *e*Pdif Pdif 09 53 32.7 +0.7
comp=Z,8.8nm,0.9s
BR131 LR LR
comp=Z,2µm,22.0s
BRTR Keskin Array B 99.97 309 P Pdif 09 53 31.1 -0.9
comp=Z,12nm,1.1s,baz=113,slow=3.2,SNR=25
BRTR LR LR 10 43 57.7
comp=Z,991nm,20.0s,baz=79,slow=38
BRTR Keskin Array B 99.97 309 *i* P Pdif 09 53 31.6 -0.4
BRTR pmax pmax
comp=Z,12nm,1.1s
CSS Prodhromos 100.16 304 PFAKE 09 53 40.0 +7.2
CSS LR LR
comp=Z,3µm,21.0s
JOF Joensuu 100.36 333 *e*p Pdif 09 53 32.6 -1.2
comp=Z,15nm,0.6s
JOF Joensuu 100.36 333 *e*P Pdif 09 53 32.6 -1.2
JOF pmax pmax
comp=Z,15nm,0.6s
BOSA Boshof 100.60 239 P Pdif 09 53 35.0 +0.2
comp=Z,8.7nm,1.0s,baz=142,slow=5.4,SNR=6.4
BOSA Boshof 100.60 239 *e*P Pdif 09 53 35.3 +0.5
BOSA pmax pmax
comp=Z,17nm,1.1s
BOSA MLR MLR
comp=Z,3µm,21.0s
BOSA Boshof 100.60 239 *e*Pdif Pdif 09 53 35.3 +0.5
comp=Z,17nm,1.1s
BOSA LR LR
comp=Z,3µm,21.0s
LSZ Lusaka 100.63 253 P Pdif 09 53 36.3 +1.4
SNR=7.2
LSZ Lusaka 100.63 253 *e*Pdif Pdif 09 53 35.8 +0.9
LSZ LR LR
comp=Z,4µm,21.0s
KEV Kevo 101.09 340 PFAKE 09 53 50.0 +13
KEV LR LR
comp=Z,6µm,21.0s
LBTB Lobatse 101.12 243 P Pdif 09 53 37.2 0.0
comp=Z,6.4nm,0.7s,baz=170,slow=1.2,SNR=8.8
LBTB Lobatse 101.12 243 *e*P Pdif 09 53 37.7 +0.6
LBTB pmax pmax
comp=Z,10.0nm,0.8s
LBTB MLR MLR
comp=Z,4µm,22.0s
LBTB Lobatse 101.12 243 *e*Pdif Pdif 09 53 37.6 +0.5
comp=Z,9.8nm,0.8s
LBTB LR LR
comp=Z,4µm,22.0s
ARCES ARCESS Array B 101.65 340 P Pdif 09 53 38.5 -1.0
comp=Z,9.1nm,0.7s,baz=79,slow=6.4,SNR=26
ARCES PKiKP PKiKP 09 58 02.8 +0.5
comp=Z,9.6nm,1.0s,baz=96,slow=2.7,SNR=5.0
ARCES PKKPbc PKKPbc 10 09 45.1 -3.7
comp=Z,2.7nm,0.5s,baz=256,slow=2.4,SNR=14
ARCES ARCESS Array B 101.65 340 P Pdif 09 53 38.5 -1.0
KBS Kingsbay 101.92 350 *e*PP PP 09 57 53.9 +2.1
KBS Kingsbay 101.92 350 PFAKE 09 53 50.0 +9.3
KBS LR LR
comp=Z,3µm,21.0s
ISP Isparta 102.43 307 PFAKE 09 53 50.0 +7.1
ISP LR LR
comp=Z,2µm,21.0s
KTK1 Kautokeino 102.55 339 *e*PP PP 09 57 58.0 +1.3
KTK1 *e*SKS 10 04 16.6
AKASG Malin Array Be 102.66 320 P Pdif 09 53 42.1 -1.8
comp=Z,2.6nm,0.5s,baz=73,slow=4.5,SNR=14
AKASG PP PP 09 57 57.6 -0.4
comp=Z,2.9nm,0.7s,baz=73,slow=7.7,SNR=4.4
AKASG PKKP PKKPbc 10 10 00.3 +15
comp=Z,1.1nm,0.7s,baz=257,slow=3.6,SNR=4.3
AKASG Malin Array Be 102.66 320 P Pdif 09 53 42.2 -1.8
AKASG 09 57 57.7
KAF Kangasniemi 102.77 332 *e*p Pdif 09 53 43.4 -1.1
comp=Z,7.8nm,0.6s
KAF Kangasniemi 102.77 332 *e*P Pdif 09 53 43.4 -1.1
KAF pmax pmax
comp=Z,8.0nm,0.6s
MNK Minsk 103.11 324 *e*P Pdif 09 53 43.0 -3.0
MNK *e*S Sdif 10 05 14.0 -13
MNK *e*SSS 10 16 32.0
MNK MLR MLR
comp=Z,11µm,24.0s
KIS Kishinev 103.23 317 *e*P Pdif 09 53 45.0 -1.5
KIS *e* 09 57 58.0
KIS *i* 10 05 20.0
KIS MLR MLR
comp=Z,1µm,20.0s
KIS MLR MLR
comp=Z,2µm,22.0s
KIS Kishinev 103.23 317 *e*PP PP 09 57 58.0 -4.5
KIS Kishinev 103.23 317 *i* PS SP 10 06 50.0 -14
SUR Sutherland 103.32 235 PFAKE 09 54 00.0 +13
SUR LR LR
comp=Z,4µm,21.0s
TRO Tromso 103.84 340 *e*PP PP 09 58 06.1 -0.2
TRO *e*SKS 10 04 20.6
TRO *e*SS SS 10 12 44.6 -3.3
BURAR Bucovina Array 105.61 318⇓ *i*P Pdif 09 53 57.8 +0.7
BUR08 Bucovina Ar. S 105.61 318 *e*Pdif Pdif 09 53 57.5 +0.4
COR Corvallis 105.73 46 PFAKE 09 58 20.0 +9.5
COR LR LR
comp=Z,4µm,19.0s
LVV L'vov 106.07 320 *e*P Pdif 09 54 06.3 +7.2
LVV *e* 09 58 18.7
LVV *e* 10 05 49.9
LVV *e* 10 07 33.3
LVV *e* 10 13 20.7
LVV MLR MLR
comp=Z,1µm,22.0s
LVV MLR MLR
comp=N,500nm,21.0s
LVV MLR MLR
comp=E,700nm,21.0s
HUMO Hull Mountain 106.19 48 PFAKE 09 58 20.0 +8.6
HUMO LR LR
comp=Z,4µm,20.0s
HOPS Hopland 106.44 51 PFAKE 09 58 20.0 +8.0
HOPS LR LR
comp=Z,3µm,21.0s
YBH Yreka Blue Hor 106.46 49 PFAKE 09 58 20.0 +8.0
YBH LR LR
comp=Z,4µm,22.0s
MCCM Marconi Confer 106.66 52 PFAKE 09 58 20.0 +7.6
MCCM LR LR
comp=Z,3µm,20.0s
WDC Whiskeytown Da 106.70 50 PFAKE 09 58 20.0 +7.6
WDC LR LR
comp=Z,4µm,20.0s
YKA Yellowknife Ar 106.95 26 Pdiff Pdif 09 54 02.8 -0.2
comp=Z,0.6nm,0.5s,baz=290,slow=4.8,SNR=8.5
YKA PKiKP PKiKP 09 58 11.9 -0.3
comp=Z,6.6nm,0.6s,baz=291,slow=1.8,SNR=56
YKA SKP 10 01 41.6
comp=Z,1.6nm,0.8s,baz=297,slow=1.2,SNR=4.3
YKA PKKPbc PKKPbc 10 09 29.8 -2.8
comp=Z,3.3nm,0.7s,baz=102,slow=3.0,SNR=21
YKA Yellowknife Ar 106.95 26 Pdif Pdif 09 54 02.8 -0.2
YKA PKPdf PKiKP 09 58 11.9 -0.3
YKA SKP 10 01 41.6
YKA PKKPbc PKKPbc 10 09 29.8 -2.8
KWP Kalwaria 106.95 320 *e*P Pdif 09 53 57.0 -6.0
KWP pmax pmax
comp=Z,22nm,0.9s
KWP MLR MLR
comp=Z,3µm,21.0s
KWP Kalwaria 106.95 320 *e*Pdif Pdif 09 53 57.0 -6.1
comp=Z,22nm,0.9s
KWP LR LR
comp=Z,3µm,21.0s
IDI Anoyia 107.06 305 PKiKP PKiKP 09 58 13.7 +0.4
comp=Z,8.6nm,0.7s,baz=62,slow=4.6,SNR=6.0
RES Resolute Bay 107.11 12 Pdiff Pdif 09 54 03.5 -0.3
comp=Z,2.0nm,0.5s,baz=330,slow=4.6,SNR=8.1
RES PKiKP PKiKP 09 58 12.6 +0.4
comp=Z,3.8nm,0.7s,baz=272,slow=1.9,SNR=5.6
RES Resolute Bay 107.11 12 Pdif Pdif 09 54 03.5 -0.3
RES PKPdf PKiKP 09 58 12.6 +0.4
UZH Uzhgorod 107.39 319*c* *i*P Pdif 09 54 04.3 -0.7
UZH *i* 09 58 33.0
UZH *e*PS PS 10 07 48.0 -7.9
DRGR 107.42 317⇑ *i*P Pdif 09 54 06.1 +1.0
PMSA Palmer Station 107.87 173 PFAKE 09 58 20.0 +6.1
PMSA LR LR
comp=Z,7µm,22.0s
CRVS Cervenica-Dubn 107.89 319 *i* P Pdif 09 54 07.6 +0.4
CRVS Cervenica-Dubn 107.89 319 PDIF Pdif 09 54 07.6 +0.4
CRVS *e*PP PP 09 58 40.2 +3.5
CRVS Cervenica-Dubn 107.89 319 *e*Pdif Pdif 09 54 07.6 +0.4
CRVS *e*PP PP 09 58 40.3 +3.6
CRVS LR LR
comp=Z,2µm,30.2s
SAO San Andreas Ge 107.91 54 PFAKE 09 58 30.0 +15
SAO LR LR
comp=Z,3µm,19.0s
STHS Stebnicka Huta 107.93 320 *i* P Pdif 09 54 08.3 +0.9
STHS *e* 09 58 41.2
STHS Stebnicka Huta 107.93 320 PDIF Pdif 09 54 08.3 +0.9
STHS *e*PP PP 09 58 41.2 +4.2
STHS Stebnicka Huta 107.93 320 *e*Pdif Pdif 09 54 08.3 +0.9
STHS *e*PP PP 09 58 41.2 +4.2
HAWA Hanford 108.11 43 PFAKE 09 58 30.0 +15
HAWA LR LR
comp=Z,3µm,21.0s
MOD Modoc 108.23 48 PFAKE 09 58 30.0 +15
MOD LR LR
comp=Z,3µm,21.0s
NSS Namsos 108.25 337 *e*SS SS 10 13 50.1 +2.1
NIE Niedzica 108.53 320 *e*Pdiff Pdif 09 54 11.0 +1.0
NIE *e*PP PP 09 58 42.8 +1.4
CMB Columbia Colle 108.62 52 *e*P Pdif 09 54 14.7 +4.2
CMB pmax pmax
comp=Z,8.0nm,1.0s
CMB MLR MLR
comp=Z,2µm,21.0s
CMB Columbia Colle 108.62 52 *e*Pdif Pdif 09 54 14.7 +4.2
comp=Z,7.9nm,1.0s
CMB LR LR
comp=Z,2µm,21.0s
OJC Ojcow 108.68 321 *e*Pdiff Pdif 09 54 10.5 -0.2
OJC *e*PP PP 09 58 41.8 -0.7
OJC *e*SKSdf SKSdf 10 05 28.8 +6.6
OJC *e*SS SS 10 14 01.1 +6.4
OJC L 10 53 16.8
comp=Z,2.2nm,23.9s
OJC Ojcow 108.68 321 *e*P Pdif 09 54 10.5 -0.2
OJC *e* 09 58 41.8
OJC *e* 10 05 28.8
OJC *e*SS SS 10 14 01.1 +6.4
PSZ Piszkesteto 109.10 318 PFAKE 09 58 30.0 +13
PSZ LR LR
comp=Z,2µm,21.0s
NEW Newport 109.37 41 *e*PKPdf PKiKP 09 58 19.1 +1.9
NEW LR LR
comp=Z,3µm,22.0s
WVOR Wild Horse Val 109.38 47 PFAKE 09 58 30.0 +13
WVOR LR LR
comp=Z,3µm,20.0s
D10A Wagner Farm, O 109.51 42⇑ P PKiKP 09 58 18.5 +1.0
baz=110
L08A Fields 109.63 48⇑ P PKiKP 09 58 19.0 +1.2
baz=110
VYHS Vyhne 109.67 319 *i* P Pdif 09 54 14.6 -0.5
VYHS Vyhne 109.67 319 PDIF Pdif 09 54 14.6 -0.5
VYHS *e*PP PP 09 58 53.1 +3.4
VYHS Vyhne 109.67 319 *e*Pdif Pdif 09 54 14.6 -0.5
VYHS *e*PP PP 09 58 53.1 +3.4
VYHS LR LR
comp=Z,2µm,27.1s
TSUM Tsumeb 109.72 247 PFAKE 09 58 30.0 +11
TSUM LR LR
comp=Z,3µm,22.0s
F10A Beach Ranch, E 109.76 44⇓ P PKiKP 09 58 18.3 +0.3
baz=110
OKC Ostrava-Krasne 109.81 321 *ex* x 10 06 14.5
OKC *e*SP SP 10 08 11.8 0.0
OKC *e*SS SS 10 14 05.3 -4.6
OKC *ex* x 10 18 21.2
OKC AMS AMS 10 54 30.0
comp=Z,2µm,13.7s
B11A Sandpoint 109.82 41⇓ P PKiKP 09 58 19.1 +1.1
baz=110,SNR=5.6
BMO Blue Mountains 109.92 45 PFAKE 09 58 30.0 +12
BMO LR LR
comp=Z,3µm,21.0s
KOLL Kolacno 109.93 319 *e*PP PP 09 58 48.5 -3.1
NB2 NORSAR Subarra 109.98 333 P Pdif 09 54 15.4 -1.1
comp=Z,7.3nm,0.9s,baz=71,slow=4.4
NOA NORSAR Array B 109.98 333 Pdiff Pdif 09 54 15.2 -1.3
comp=Z,3.6nm,0.9s,baz=75,slow=4.2,SNR=9.9
NOA SKP 10 01 42.6
comp=Z,0.8nm,0.6s,baz=61,slow=6.6,SNR=5.3
NOA PKKPbc PKKPbc 10 09 23.1 +0.2
comp=Z,2.3nm,0.9s,baz=66,slow=2.8,SNR=7.4
N08A GE Springer Mi 110.00 49⇓ P PKiKP 09 58 19.8 +1.2
baz=110
C11A Tepee Creek (N 110.03 41⇑ P PKiKP 09 58 19.2 +0.7
baz=110
D11A Klaveano Farm, 110.14 42⇓ P PKiKP 09 58 18.7 0.0
baz=110
NAO01 NORSAR Array S 110.20 333 PFAKE 09 58 30.0 +12
NAO01 LR LR
comp=Z,4µm,21.0s
NVAR Mina Array Bea 110.20 52 Pdiff Pdif 09 54 21.4 +3.8
comp=Z,4.8nm,1.2s,baz=274,slow=6.3,SNR=8.2
NVAR PKiKP PKiKP 09 58 20.2 +1.2
comp=Z,3.7nm,0.6s,baz=240,slow=2.4,SNR=8.9
NVAR SKP 10 01 50.4
comp=Z,3.9nm,1.0s,baz=252,slow=1.8,SNR=4.4
NVAR PKKPbc PKKPbc 10 09 22.7 +1.2
comp=Z,2.9nm,0.7s,baz=119,slow=3.5,SNR=12
NVAR Mina Array Bea 110.20 52 Pdif Pdif 09 54 21.4 +3.8
NVAR PKPdf PKiKP 09 58 20.2 +1.2
NVAR SKP 10 01 50.4
NVAR PKKPbc PKKPbc 10 09 22.7 +1.2
TIR Tirane 110.30 312 PFAKE 09 58 30.0 +11
TIR LR LR
comp=Z,2µm,21.0s
H10A Noah's Angus R 110.36 45⇑ P PKiKP 09 58 20.0 +0.9
baz=110
E11A Bogner Ranch, 110.37 43⇓ P PKiKP 09 58 19.7 +0.5
baz=110
EDM Edmonton 110.45 35 *e*PKIKP PKiKP 09 58 20.0 +0.9
C12B Naegeli Ranch, 110.57 41⇓ P PKiKP 09 58 20.0 +0.5
baz=110
KSP Ksiaz 110.70 322 *e*P Pdif 09 54 19.8 +0.1
KSP *e* 09 58 56.0
KSP *e*SP SP 10 08 26.0 +6.0
KSP *e*SS SS 10 14 22.0 +0.2
KSP Ksiaz 110.70 322 *e*Pdif Pdif 09 54 19.8 +0.1
KSP *e*PP PP 09 58 56.0 -1.1
KSP *e*Sdif Sdif 10 06 30.0 -0.7
KSP *e*SP SP 10 08 26.0 +6.0
KSP *e*SS SS 10 14 22.0 +0.2
KSP LR LR
comp=Z,7µm,25.2s
BMN Battle Mountai 110.74 49 PFAKE 09 58 30.0 +10
BMN LR LR
comp=Z,3µm,20.0s
D12A Red Ives Fores 110.80 42⇑ P PKiKP 09 58 20.7 +0.8
baz=111
PASC Pasadena Art C 110.81 56 *e*PKPdf PKiKP 09 58 22.0 +1.6
DPC Dobruska-Polom 110.82 322 *e*PKIKP PKiKP 09 58 21.5 +1.7
DPC *e* 10 14 24.4
DPC Dobruska-Polom 110.82 322 *e*PKP PKiKP 09 58 21.5 +1.7
DPC *ex* x 09 58 47.8
DPC *ex* x 10 06 24.1
DPC *ex* x 10 08 13.5
DPC *e*SS SS 10 14 24.4 +1.1
DPC *ex* x 10 18 33.5
DPC AMS AMS 10 44 30.0
comp=Z,4µm,26.6s
H11A Donnelly 110.85 45⇑ P PKiKP 09 58 21.2 +1.1
baz=111
ZST Bratislava 110.86 319 *e*PP PP 09 58 54.1 -4.2
EDW2 Edwards Air Fo 110.89 55⇑ P PKiKP 09 58 21.7 +1.2
baz=111
A13A Flathead Natio 110.96 40⇓ P PKiKP 09 58 21.5 +1.4
baz=111
UPC Upice 110.97 322 *e*PKP PKiKP 09 58 21.3 +1.2
UPC *ex* x 09 58 47.1
L10A Juniper Basin 111.02 48⇓ P PKiKP 09 58 21.8 +1.3
baz=111
I11A Placerville 111.05 46⇑ P PKiKP 09 58 21.7 +1.2
baz=111
DAC Darwin (Calif) 111.05 54 PFAKE 09 58 30.0 +9.3
DAC LR LR
comp=Z,3µm,19.0s
LRMC Laurel Mountai 111.07 55⇑ P PKiKP 09 58 21.2 +0.4
baz=111
TPH Tonopah 111.10 52 PFAKE 09 58 30.0 +9.2
TPH LR LR
comp=Z,2µm,19.0s
F12A Elk City 111.15 43⇑ P PKiKP 09 58 21.9 +1.3
baz=111
C13A Hot Springs 111.17 41⇑ P PKiKP 09 58 20.8 +0.2
baz=111
KONO Kongsberg 111.28 332 *e*SS SS 10 14 23.9 -4.9
KONO Kongsberg 111.28 332 PFAKE 09 58 30.0 +10
KONO LR LR
comp=Z,3µm,21.0s
D13A Huson 111.38 42⇓ P PKiKP 09 58 21.7 +0.6
baz=111
P10A Eureka 111.45 50⇑ P PKiKP 09 58 21.9 +0.5
baz=111
FURC Furnace Creek, 111.61 53⇓ P PKiKP 09 58 21.9 +0.2
baz=112
TREC Trest 111.62 321 *e*PKP PKiKP 09 58 21.9 +0.5
TREC *ex* x 09 58 51.4
TREC AMS AMS 10 49 20.0
comp=Z,3µm,21.5s
I12A Atlanta 111.65 45⇑ P PKiKP 09 58 22.5 +0.9
baz=112
C14A Swan Lake 111.69 41⇓ P PKiKP 09 58 22.4 +0.9
baz=112
E13A Victor 111.72 43⇑ P PKiKP 09 58 22.4 +0.8
baz=112
MSO Missoula 111.79 42 PFAKE 09 58 30.0 +8.2
MSO LR LR
comp=Z,2µm,20.0s
GSC Goldstone 111.81 55 *e*PKIKP PKiKP 09 58 24.5 +2.3
B14A Marquette Ranc 111.84 40⇑ P PKiKP 09 58 22.4 +0.6
baz=112
PVCC Panska Ves 111.85 322 *e*PKP PKiKP 09 58 23.1 +1.3
PVCC *ex* x 10 06 30.9
PVCC AMS AMS 10 49 00.0
comp=Z,4µm,20.6s
O11A Cowboy Ranch, 111.97 49⇓ P PKiKP 09 58 23.0 +0.6
baz=112
D14A Greenough 112.02 42⇓ P PKiKP 09 58 22.6 +0.4
baz=112,SNR=6.3
PRU Pruhonice 112.02 321 *e*PKIKP PKiKP 09 58 22.4 +0.3
PRU *e* 10 08 31.3
PRU Pruhonice 112.02 321 *e*PKP PKiKP 09 58 22.4 +0.3
PRU *ex* x 09 58 48.2
PRU *ex* x 10 06 35.8
PRU *e*SP SP 10 08 31.3 -0.9
PRU *e*SS SS 10 14 32.3 -7.0
PRU AMS AMS 10 45 20.0
comp=Z,3µm,28.7s
TPNV Topopah Spring 112.03 53 PFAKE 09 58 30.0 +7.4
TPNV LR LR
comp=Z,3µm,21.0s
H13A Challis 112.11 45⇑ P PKiKP 09 58 23.8 +1.4
baz=112
BRG Berggiesshubel 112.12 323 *e*PDIF Pdif 09 54 27.4 +1.3
comp=Z,8.5nm,1.3s
BRG *e* 09 54 42.2
comp=Z,28nm,1.9s
BRG PP PP 09 58 59.0 -8.2
BRG *i* 09 59 47.8
comp=Z,55nm,1.7s
BRG SDIF Sdif 10 06 39.0 -3.6
BRG SS SS 10 14 41.0 +0.3
comp=N,2µm,24.9s
BRG
comp=E,5µm,28.8s

BRG
comp=Z,4µm,26.1s
BRG Berggiesshubel 112.12 323 *e*Pdif Pdif 09 54 27.4 +1.3
BRG *e* 09 54 42.2
BRG PP PP 09 58 59.0 -8.2
BRG *i* 09 59 47.8
BRG Sdif Sdif 10 06 39.0 -3.6
BRG SS SS 10 14 41.0 +0.3
BRG LR LR
comp=Z,3µm,26.1s
ELK Elko 112.17 49 PFAKE 09 58 30.0 +7.3
ELK LR LR
comp=Z,3µm,21.0s
E14A Clinton 112.19 42 ⇓P PKiKP 09 58 23.4 +0.8
baz=112,SNR=6.4
HLID Hailey 112.21 46 *e*PKPdf PKiKP 09 58 24.0 +1.3
HLID LR LR
comp=Z,4µm,22.0s
N12A Clover Valley, 112.30 49 ⇑P PKiKP 09 58 23.8 +0.8
baz=112
PFO Pinyon Flat Ob 112.31 56 ⇓P PKiKP 09 58 22.7 -0.5
PFO Pinyon Flat Ob 112.31 56 *e*PKPdf PKiKP 09 58 24.3 +1.1
PFO LR LR
comp=Z,4µm,21.0s
B15A Bradely Ranch, 112.31 40 ⇓P PKiKP 09 58 23.1 +0.4
baz=112,SNR=5.6
I13A Wildhorse Cree 112.35 45 ⇓P PKiKP 09 58 23.9 +1.0
baz=112
C15A Salmond Ranch, 112.43 41 ⇑P PKiKP 09 58 23.2 +0.2
baz=112,SNR=7.8
CRES Cresnjev 112.53 317 *e*PP PP 09 59 12.4 +2.1
CRES *e*Sdiff Sdif 10 06 45.6 -0.4
CRES *e*SP SP 10 08 45.0 +7.8
CRES *e* 10 09 45.4
CLL Collm 112.56 323 *e*PKiKP PKiKP 09 58 24.0 +0.9
CLL *i* 09 59 11.5
CLL pmax pmax
comp=Z,17nm,1.2s
CLL pmax pmax
comp=Z,101nm,1.7s
CLL MLR MLR
comp=Z,3µm,21.5s
CLL Collm 112.56 323 *e*PKiKP PKiKP 09 58 24.0 +0.9
comp=Z,17nm,1.2s
CLL *ep*PKiKP 09 58 41.0
CLL *i* sPKiKP 09 58 48.2
CLL *i* PP PP 09 59 11.5 +1.2
comp=Z,101nm,1.7s
CLL *ex* x 09 59 18.0
CLL *e*SKKSac SKKSac 10 06 01.0 -5.8
CLL *e*Sdif Sdif 10 06 42.0 -4.2
CLL *e*SP SP 10 08 31.0 -6.0
CLL *e*PS PS 10 08 45.0 -0.5
CLL *e*PPS 10 09 43.0
CLL *e*SS SS 10 14 48.0 +1.7
CLL *e*SSS 10 18 56.0
CLL *e*SSSS 10 22 18.0
CLL *ex* x 10 25 30.0
CLL LmV 10 50 00.0
comp=Z,3µm,21.5s
CLL Collm 112.56 323 *e*PKP PKiKP 09 58 24.0 +0.9
CLL *e* 09 58 41.0
CLL *i* PP PP 09 59 11.5 +1.2
CLL *e*Sdif Sdif 10 06 42.0 -4.2
CLL LR LR
comp=Z,3µm,21.5s
PERS Pernice 112.56 318 *i* PKiKP PKiKP 09 58 24.3 +1.0
PERS *e*PP PP 09 59 12.6 +2.1
PERS *e*SP SP 10 08 40.5 +3.1
PERS *e* 10 09 44.2
PERS *e* 10 11 18.8
RPN Rapa Nui 112.60 123 PFAKE 09 58 30.0 +6.0
RPN LR LR
comp=Z,2µm,20.0s
O12A Currie 112.63 49 ⇑P PKiKP 09 58 24.9 +1.3
baz=113
K13A Stover Farm, H 112.64 47 ⇑P PKiKP 09 58 23.2 -0.3
baz=113
P12A McGill 112.66 50 ⇑P PKiKP 09 58 23.2 -0.5
baz=113
H14A Leadore 112.71 44 ⇓P PKiKP 09 58 24.9 +1.3
baz=113,SNR=6.8
A16A West Butte Ran 112.75 39 ⇓P PKiKP 09 58 24.2 +0.6
baz=113
BOJS Bojanci 112.75 317 *i* PKiKP PKiKP 09 58 24.8 +1.1
BOJS *e*PP PP 09 59 14.4 +2.5
BOJS *e*Sdiff Sdif 10 06 46.5 -1.3
I14A Mackay 112.81 45 ⇓P PKiKP 09 58 24.9 +1.0
baz=113,SNR=6.0
BER Bergen 112.86 334 *e*SS SS 10 14 50.7 +0.9
KHC Kasperske Hory 112.87 321 *e*PKiKP PKiKP 09 58 24.6 +0.8
KHC *e* 10 08 35.1
KHC MLR MLR
comp=Z,3µm,24.2s
KHC Kasperske Hory 112.87 321 *e*PKP PKiKP 09 58 24.6 +0.8
KHC *ex* x 09 58 54.0
KHC *ex* x 10 06 41.1
KHC *e*SP SP 10 08 35.1 -4.9
KHC *ex* x 10 14 30.9
KHC *ex* x 10 18 48.2
KHC AMS AMS 10 45 10.0
comp=Z,3µm,24.2s
GEC2 GERESS Array S 112.87 320 *e*PKiKP PKiKP 09 58 24.2 +0.4
GERES GERESS Array B 112.87 320 Pdiff Pdif 09 54 29.3 -0.1
comp=Z,0.3nm,0.6s,baz=160,slow=27,SNR=3.7
GERES PKiKP PKiKP 09 58 23.3 -0.5
comp=Z,6.3nm,0.6s,baz=74,slow=1.6,SNR=27
GERES PKKP PKKPdf 10 09 34.2 +0.8
comp=Z,1.4nm,0.9s,baz=217,slow=6.5,SNR=3.6
GERES GERESS Array B 112.87 320 P Pdif 09 54 29.3 -0.1
GERES 09 58 23.3
TIP Timpagrande 113.02 310 PFAKE 09 58 30.0 +5.6
TIP LR LR
comp=Z,931nm,20.0s
DLMT Dillon 113.06 43 *e*PKPdf PKiKP 09 58 25.4 +1.1
LJU Ljubljana 113.11 317 *i* PKiKP PKiKP 09 58 25.4 +1.1
LJU *e* 09 59 16.1
LJU Ljubljana 113.11 317 *i* PKiKP PKiKP 09 58 25.4 +1.1
LJU *i* 09 58 43.9
LJU *e*PP PP 09 59 16.1 +1.6
LJU *e*Sdiff Sdif 10 06 50.6 -0.2
LJU *e* 10 11 10.3
H15A Lima 113.21 44 ⇑P PKiKP 09 58 25.9 +1.3
baz=113,SNR=13
LDFC Landfair 113.21 55 *e*PKPdf PKiKP 09 58 19.3 -5.6
NKC Novy Kostel 113.23 322 *e*PKP PKiKP 09 58 23.9 -0.5
NKC *ex* x 09 58 53.2
NKC *ex* x 10 06 02.9
NKC *e*SP SP 10 08 46.8 +3.6
NKC *e*SS SS 10 14 58.6 +3.3
NKC AMS AMS 10 51 10.0
comp=Z,3µm,20.7s
NKC Novy Kostel 113.23 322 *e*PKP PKiKP 09 58 23.9 -0.5
NKC *e* 09 58 53.2
NKC *e* 10 06 02.9
NKC *e* 10 08 46.8
NKC *e*SS SS 10 14 58.6 +3.3
A17A Triple J Farms 113.31 39 ⇑P PKiKP 09 58 24.6 0.0
baz=113
M14A Sheep Mountain 113.42 48 ⇑P PKiKP 09 58 25.5 +0.4
baz=113
B17A L&G Farms, Che 113.45 40 ⇑P PKiKP 09 58 25.2 +0.3
baz=113
I15A Monteview 113.47 45 ⇑P PKiKP 09 58 26.3 +1.2
baz=113,SNR=5.8
VOY Vojsko 113.53 317 *e*PKiKP PKiKP 09 58 25.9 +0.7
VOY *e* 09 58 42.9
VOY *e* 09 59 18.8
VOJS Vojsko 113.54 317 *e*PP PP 09 59 18.9 +1.4
CUC Castrocucco 113.58 311 PFAKE 09 58 40.0 +15
CUC LR LR
comp=Z,2µm,20.0s
MOX Moxa 113.60 323 *e*PKP PKiKP 09 58 29.0 +3.9
comp=Z,14nm,1.5s
MOX
comp=Z,3µm,20.0s
MOX Moxa 113.60 323 *e*PKiKP PKiKP 09 58 29.0 +3.9
MOX pmax pmax
comp=Z,14nm,1.5s
MOX MLR MLR
comp=Z,3µm,20.0s
F16A Kennard Place, 113.61 43 ⇑P PKiKP 09 58 25.8 +0.5
baz=114,SNR=15
BOZ Bozeman (W) 113.64 43 PFAKE 09 58 40.0 +15
BOZ LR LR
comp=Z,2µm,22.0s
C17A Wharram Farm, 113.66 41 ⇓P PKiKP 09 58 25.8 +0.5
baz=114
N14A Grayback Hills 113.68 48 ⇓P PKiKP 09 58 26.0 +0.4
baz=114
TRI Trieste 113.71 317 PFAKE 09 58 40.0 +15
TRI LR LR
comp=Z,3µm,21.0s
K15A Arbon 113.75 46 ⇑P PKiKP 09 58 26.8 +1.1
baz=114,SNR=11
SUMG Summit 113.84 357 *e*PKPdf PKiKP 09 58 27.2 +2.3
CEL Celeste 113.85 309 *e*PKPdf PKiKP 09 58 27.5 +1.5
CEL LR LR
comp=Z,1µm,19.0s
A18A Metzger Ranch, 113.86 39 ⇑P PKiKP 09 58 26.0 +0.3
baz=114
P14A Drum Mountains 114.03 50 ⇓P PKiKP 09 58 26.6 +0.3
baz=114
B18A Beardsley Farm 114.06 40 ⇑P PKiKP 09 58 26.2 +0.1
baz=114
DUG Dugway 114.10 49 *e*PKIKP PKiKP 09 58 28.5 +2.1
DUG MLR MLR
comp=Z,2µm,19.0s
GRA1 Grafenberg Arr 114.16 322 *e*PKPdf PKiKP 09 58 26.3 +0.1
GRA1 *e*SP SP 10 08 46.1 -5.6
GRA1 LR LR
comp=Z,3µm,21.7s
GRF Grafenberg Arr 114.16 322 *i* PKIKP PKiKP 09 58 26.3 +0.1
GRF *e* 10 08 46.1
GRF MLR MLR
comp=Z,3µm,21.5s
GRF Grafenberg Arr 114.16 322 *e*PKiKP PKiKP 09 58 26.3 +0.1
GRF *e*SP SP 10 08 46.1 -5.6
GRF *e*L 10 50 52.5
comp=Z,3µm,21.7s
EGMT Eagleton 114.19 40 *e*PKPdf PKiKP 09 58 27.5 +1.1
EGMT *e*SKPdf SKPdf 10 01 56.6 +0.3
EGMT LR LR
comp=Z,2µm,21.0s
I16A Newdale 114.20 45 ⇓P PKiKP 09 58 27.5 +1.0
baz=114,SNR=6.0
F17A Fitzpatrick Pl 114.23 42 ⇑P PKiKP 09 58 27.8 +1.3
baz=114,SNR=11
ABTA Abfaltersbach 114.25 319 ⇑*i*PKPdf PKiKP 09 58 25.8 -0.7
comp=Z,15nm,0.8s,SNR=6.1
G17A Pierce Place, 114.33 43 ⇓P PKiKP 09 58 28.0 +1.3
baz=114
K16A Soda Springs 114.39 46 ⇓P PKiKP 09 58 27.6 +0.7
baz=114,SNR=6.9
D18A Linhart Farms, 114.42 41 ⇓P PKiKP 09 58 26.3 -0.5
baz=114
DCID1 Drake Creek 114.49 45 *e*PKPdf PKiKP 09 58 29.6 +2.5
IMW Indian Meadow 114.58 45 *e*PKPdf PKiKP 09 58 29.7 +2.5
P15A Leamington 114.63 49 ⇓P PKiKP 09 58 28.4 +1.0
baz=115
WTTA Wattenberg 114.67 319 ⇓*i*PKPdf PKiKP 09 58 27.0 -0.3
comp=Z,44nm,0.8s,SNR=11
TPAW Teton Pass 114.68 45 *e*PKPdf PKiKP 09 58 29.7 +2.3
WATA Walderalm 114.69 319 ⇑*i*PKiKP PKiKP 09 58 27.9 +0.6
comp=Z,12nm,0.7s
L16A Fish Haven 114.70 47 ⇓P PKiKP 09 58 28.0 +0.5
baz=115,SNR=6.7
MOOW Moose Ponds 114.75 45 *e*Sn PKiKP 09 58 26.7 -0.9
AHID Auburn Hatcher 114.76 46 *e*PKPdf PKiKP 09 58 29.4 +1.8
AHID LR LR
comp=Z,3µm,20.0s
LKWY Lake 114.77 44 PFAKE 09 58 40.0 +12
LKWY LR LR
comp=Z,5µm,22.0s
REDW Red Top Meadow 114.78 45 *e*PKPdf PKiKP 09 58 28.9 +1.3
SNOW Snow King Moun 114.82 45 *e*PKPdf PKiKP 09 58 29.6 +1.9
AQU L'Aquila 114.83 314 PFAKE 09 58 40.0 +12
AQU LR LR
comp=Z,2µm,21.0s
J17A Brown Place, J 114.88 45 ⇑P PKiKP 09 58 29.4 +1.6
baz=115,SNR=11
K17A Gardner Place, 114.89 46 ⇓P PKiKP 09 58 29.3 +1.4
baz=115,SNR=7.4
LOHW Long Hollow 114.89 45 *e*PKPdf PKiKP 09 58 29.2 +1.4
LOHW *e*SKPdf SKPdf 10 01 58.9 +1.0
MVU Marysvale 114.90 51 PFAKE 09 58 40.0 +12
MVU LR LR
comp=Z,2µm,20.0s
MOTA Moosalm 114.99 319 ⇑*i*PKPdf PKiKP 09 58 27.5 -0.4
comp=Z,11nm,0.6s
L17A Cokeville 115.09 47 ⇓P PKiKP 09 58 28.3 +0.1
baz=115,SNR=8.1
FETA Feichten 115.33 319 ⇑*i*PKPdf PKPdf 09 58 27.8 -0.7
comp=Z,15nm,0.9s
WDD Wield Dalam 115.37 307 PFAKE 09 58 40.0 +11
WDD LR LR
comp=Z,1µm,21.0s
RLMT Red Lodge 115.39 43 PFAKE 09 58 40.0 +11
RLMT LR LR
comp=Z,3µm,21.0s
M17A Scullys Gap (B 115.39 47 ⇑P PKiKP 09 58 29.6 +0.7
baz=115,SNR=9.4
N17A Moffit Pass 115.40 48 ⇓P PKiKP 09 58 30.1 +1.2
baz=115,SNR=8.1
J18A Kendall Valley 115.41 45 ⇓P PKiKP 09 58 30.3 +1.4
baz=115,SNR=8.3
I18A Diamond G Ranc 115.41 45 ⇓P PKiKP 09 58 29.2 +0.3
baz=115,SNR=7.7
R16A Teasdale 115.51 51 ⇓P PKiKP 09 58 30.2 +1.0
baz=115,SNR=6.1
S16A Weppner Ranch, 115.54 51 ⇑P PKiKP 09 58 30.5 +1.2
baz=116,SNR=6.4
K18A Toltan Ranch, 115.54 46 ⇓P PKiKP 09 58 30.1 +1.0
baz=116,SNR=19
Q16A Castle Valley 115.61 50 ⇑P PKiKP 09 58 30.7 +1.3
baz=116,SNR=6.6
O17A Robinson Place 115.65 49 ⇑P PKiKP 09 58 30.6 +1.2
baz=116,SNR=11
L18A Fontenelle, Gr 115.73 47 ⇑P PKiKP 09 58 30.6 +1.1
baz=116,SNR=20
DAVA Damuels 115.80 320 ⇑*i*PKPdf PKPdf 09 58 28.7 -0.7
comp=Z,25nm,0.8s
P17A Butcher Ranch, 115.81 49 ⇓P PKPdf 09 58 31.1 +1.4
baz=116,SNR=6.3
M18A Lyman 115.84 47 ⇑P PKPdf 09 58 30.1 +0.3
baz=116
BW06 Boulder Array 115.85 46 PFAKE 09 58 40.0 +10
BW06 LR LR
comp=Z,3µm,20.0s
PDAR Pinedale Array 115.85 46 PKP PKPdf 09 58 31.1 +1.3
comp=Z,10nm,0.7s,baz=224,slow=1.1,SNR=25
PDAR SKP 10 02 00.2
comp=Z,7.5nm,0.7s,baz=212,slow=1.1,SNR=8.6
PDAR PKKPbc PKKPbc 10 09 02.2 -0.4
comp=Z,4.5nm,0.8s,baz=116,slow=5.6,SNR=16
SRU San Rafael 116.06 50 ⇑P PKPdf 09 58 30.5 +0.3
baz=116
R17A Hanksville Air 116.07 50 ⇑P PKPdf 09 58 30.6 +0.3
baz=116,SNR=9.2
FFC Flin Flon 116.09 31 PFAKE 09 58 40.0 +10
FFC LR LR
comp=Z,2µm,22.0s
WUAZ Wupatki 116.15 54 *e*PKPdf PKPdf 09 58 32.8 +2.3
WUAZ LR LR
comp=Z,2µm,19.0s
O18A Roosevelt 116.17 48 ⇑P PKPdf 09 58 31.7 +1.3
baz=116,SNR=6.7
S17A Black Ridge (B 116.17 51 ⇓P PKPdf 09 58 31.4 +0.9
baz=116,SNR=6.4
U16A Tuba City 116.22 53 ⇓P PKPdf 09 58 31.2 +0.6
baz=116,SNR=8.8
X16A Lo Mia Camp, P 116.30 55 ⇑P PKPdf 09 58 31.8 +0.9
baz=116,SNR=9.4
T17A Navajo Res., N 116.31 52 ⇓P PKPdf 09 58 32.2 +1.4
baz=116,SNR=29
Q18A Rafter H Ranch 116.36 50 ⇓P PKPdf 09 58 31.9 +1.1
baz=116,SNR=9.8
116A Eloy 116.40 57 ⇓P PKPdf 09 58 32.4 +1.3
baz=116,SNR=15
TUE Stuetta 116.41 319 *e*PKPdf PKPdf 09 58 31.5 +0.8
TUE LR LR
comp=Z,3µm,21.0s
BFO Black Forest 116.41 321 PFAKE 09 58 40.0 +9.4
BFO LR LR
comp=Z,3µm,19.0s
VLC Villacollemand 116.45 316 PFAKE 09 58 40.0 +9.2
VLC LR LR
comp=Z,3µm,20.0s
M19A Rock Springs 116.48 47 ⇑P PKPdf 09 58 32.0 +1.1
baz=116,SNR=8.2
Z16A Peralta Trail, 116.50 56 ⇓P PKPdf 09 58 32.5 +1.3
baz=116,SNR=9.8
USHA Ushuaia 116.59 167 PKP PKPdf 09 58 31.4 +0.5
comp=Z,22nm,0.7s,baz=135,slow=1.5,SNR=18
USHA SKP 10 02 01.6
comp=Z,5.2nm,0.8s,baz=63,slow=4.5,SNR=3.7
216A Three Points, 116.70 58 ⇑P PKPdf 09 58 32.1 +0.4
baz=117,SNR=5.7
R18A Canyonlands Na 116.71 50 ⇓P PKPdf 09 58 31.4 -0.1
baz=117,SNR=12
K20A Yellowstone Ra 116.74 45 ⇑P PKPdf 09 58 31.4 0.0
baz=117
Y17A Roosevelt 116.92 56 ⇑P PKPdf 09 58 32.7 +0.7
baz=117,SNR=12
MEM Membach 116.93 324 PKP PKPdf 09 58 31.4 -0.2
T18A Mexican Hat 117.00 52 ⇓P PKPdf 09 58 32.3 +0.2
baz=117,SNR=11
CDF Champ du Feu 117.03 322 *e*PKIKP PKPdf 09 58 30.1 -1.7
Q19A Hogan Spring (117.05 50 ⇑P PKPdf 09 58 32.9 +0.8
baz=117,SNR=7.6
U18A Rough Rock, Ch 117.16 52 ⇓P PKPdf 09 58 33.4 +1.0
baz=117,SNR=14
117A Oracle 117.20 57 ⇑P PKPdf 09 58 33.0 +0.4
baz=117,SNR=12
TUC Tucson 117.21 57 *e*PKPdf PKPdf 09 58 34.5 +1.8
TUC *e*SKPdf SKPdf 10 02 04.0 +1.3
TUC LR LR
comp=Z,3µm,19.0s
WLF Walferdange 117.23 323 PKP PKPdf 09 58 33.0 +0.9
WLF Walferdange 117.23 323 PFAKE 09 58 40.0 +7.9
WLF LR LR
comp=Z,3µm,20.0s
V18A Ganado 117.26 53 ⇓P PKPdf 09 58 33.7 +1.0
baz=117,SNR=11
217A Green Valley 117.28 58 ⇑P PKPdf 09 58 32.6 -0.2
baz=117,SNR=11
Z17A San Carlos Hig 117.30 56 ⇓P PKPdf 09 58 32.3 -0.4
baz=117,SNR=6.1
BCLA Clavier 117.42 324 PKP PKPdf 09 58 33.6 +1.1
X18A Snowflake 117.49 55 ⇓P PKPdf 09 58 31.7 -1.4
baz=117,SNR=6.8
O20A White River Ci 117.51 48 ⇑P PKPdf 09 58 33.1 +0.1
baz=117,SNR=25
DGMT Dagmar 117.52 38 *e*PKPdf PKPdf 09 58 34.1 +1.4
DGMT LR LR
comp=Z,2µm,22.0s
HINF Hinteralfeld 117.52 321 *e*PKIKP PKPdf 09 58 31.9 -0.9
comp=Z,34nm,0.8s
W18A Petrified Fore 117.54 54 ⇓P PKPdf 09 58 33.4 +0.2
baz=118,SNR=6.1
Y18A Canyon Day Jun 117.57 55 ⇓P PKPdf 09 58 33.4 +0.1
baz=118,SNR=7.1
FCC Fort Churchill 117.58 25 *e*PKIKP PKPdf 09 58 31.9 -0.6
ORO Oropa 117.59 318 PKIKP PKPdf 09 58 34.0 +1.0
L21A Rawlins 117.63 46 ⇑P PKPdf 09 58 33.9 +0.7
baz=118
T19A Beclabito 117.74 52 ⇓P PKPdf 09 58 34.0 +0.5
baz=118,SNR=5.9
HAU Haudompre 117.76 321 *e*PKIKP PKPdf 09 58 32.6 -0.6
comp=Z,25nm,0.8s
HAU *e*MLR MLR
comp=Z,3µm,20.8s
HAU Haudompre 117.76 321 *e*PKPdf PKPdf 09 58 32.6 -0.6
HAU LR LR
comp=Z,3µm,20.8s
Q20A Ridgley Place, 117.78 49 ⇑P PKPdf 09 58 33.9 +0.4
baz=118
UCC Uccle 117.80 325 PKP PKPdf 09 58 34.0 +0.8
GIVF Givet 117.83 324 ⇑*i*PKIKP PKPdf 09 58 33.2 -0.1
comp=Z,32nm,0.8s
RWWY Rawlins 117.83 46 *e*PKPdf PKPdf 09 58 35.0 +1.5
118A Homack Ranch, 117.83 57 ⇓P PKPdf 09 58 33.8 -0.1
baz=118,SNR=12
N21A Black Mountain 117.87 47 ⇓P PKPdf 09 58 34.2 +0.5
baz=118
218A Dragoon 117.89 57 ⇑P PKPdf 09 58 34.5 +0.6
baz=118,SNR=12
DOU Dourbes 117.97 324 PKP PKPdf 09 58 34.1 +0.6
SNF Seneffe 117.97 325 PKP PKPdf 09 58 34.4 +0.9
318A Bisbee 118.03 58 ⇓P PKPdf 09 58 34.8 +0.5
baz=118,SNR=8.8
X19A St. Johns 118.05 55 ⇓P PKPdf 09 58 34.9 +0.7
baz=118,SNR=9.4
MVCO Mesa Verde 118.06 51 *e*PKPdf PKPdf 09 58 36.5 +2.3
MVCO LR LR
comp=Z,3µm,21.0s
Y19A Nutrioso 118.17 55 ⇑P PKPdf 09 58 34.5 0.0
baz=118,SNR=7.8
BAIF Baives 118.21 324 *e*PKIKP PKPdf 09 58 33.8 -0.2
comp=Z,26nm,0.8s
119A Ashpeak Ranch, 118.36 56 ⇑P PKPdf 09 58 35.4 +0.5
baz=118,SNR=11
MEZF Maizieres J'vi 118.36 322 *e*PKIKP PKPdf 09 58 34.0 -0.4
comp=Z,27nm,0.8s
LPG La Plagne 118.45 319 ⇑*i*PKIKP PKPdf 09 58 34.5 -0.1
comp=Z,31nm,0.7s
LPL La Plagne 118.45 319 ⇑*i*PKIKP PKPdf 09 58 34.4 -0.2
comp=Z,32nm,0.7s
CABF La Chagelle 118.46 320 *e*PKIKP PKPdf 09 58 33.7 -0.9
comp=Z,31nm,0.6s
219A White Tail Can 118.54 57 ⇑P PKPdf 09 58 36.0 +0.7
baz=118,SNR=18
319A Douglas 118.63 58 ⇓P PKPdf 09 58 35.4 0.0
baz=119,SNR=15
BNI Bardonecchia 118.66 318 *e*PKIKP PKPdf 09 58 35.6 +0.6
BNI MLR MLR
comp=Z,4µm,20.0s
MDO Dochfour 118.68 334 *e*P PKPdf 09 58 33.4 -1.3
MBDF Montbardon 118.71 318 ⇑*i*PKIKP PKPdf 09 58 35.7 +0.6
comp=Z,34nm,0.7s
ESY Stoneypath 118.81 332 *e*P PKPdf 09 58 33.7 -1.3
XSO Sourhope Farm 118.88 332 *e*P PKPdf 09 58 35.1 -0.1
EBH Black Hill 119.02 333 *e*P PKPdf 09 58 35.9 +0.5
PHWY Pilot Hill 119.20 46 *e*PKPdf PKPdf 09 58 37.5 +1.3
FRF La Foret Royal 119.20 317 *e*PKIKP PKPdf 09 58 35.5 -0.6
XAL Allendale 119.22 331 *e*P PKPdf 09 58 35.5 -0.3
EAU Auchinoon 119.23 333 *e*P PKPdf 09 58 36.5 +0.7
ORIF Oris-en-Rattie 119.23 318 *e*PKIKP PKPdf 09 58 35.6 -0.5
comp=Z,24nm,0.7s
ORIF *e*MLR MLR
comp=Z,3µm,23.0s
RSSD Black Hills 119.25 43 *e*PKIKP PKPdf 09 58 37.0 +0.8
RSSD MLR MLR
comp=Z,3µm,19.0s
KPL Plockton 119.29 335 P PKPdf 09 58 35.0 -0.8
KPL AMS AMS 11 02 25.9
comp=Z,2µm,19.5s
KPL Plockton 119.29 335 *e*P PKPdf 09 58 35.0 -0.8
KPL AMS AMS 11 02 25.9
comp=Z,2µm,19.5s
LMR La Mourre 119.37 316 *e*PKIKP PKPdf 09 58 35.9 -0.6
comp=Z,35nm,1.1s
ESK Eskdalemuir 119.43 332 *e*P PKPdf 09 58 35.9 -0.3
ESK AMS AMS 10 53 09.2
comp=Z,2µm,18.7s
ESK Eskdalemuir 119.43 332 PFAKE 09 58 50.0 +14
ESK LR LR
comp=Z,4µm,21.0s
KEST Kesra 119.51 307 PKP PKPdf 09 58 38.1 +1.1
comp=Z,6.4nm,1.0s,baz=77,slow=0.7,SNR=7.3
ISCO Idaho Springs 119.55 48 *e*PKIKP PKPdf 09 58 32.4 -4.5
ISCO MLR MLR
comp=Z,3µm,21.0s
LOR Lormes 119.60 321 *e*PKIKP PKPdf 09 58 36.1 -0.7
comp=Z,12nm,0.7s
LOR *e*MLR MLR
comp=Z,2µm,21.8s
LOR Lormes 119.60 321 *e*PKPdf PKPdf 09 58 36.1 -0.7
LOR LR LR
comp=Z,2µm,21.8s
SFJD Kangerlussuaq 119.74 1 PFAKE 09 58 50.0 +14
SFJD LR LR
comp=Z,3µm,19.0s
LHO Holmfirth 119.77 330 *e*P PKPdf 09 58 36.2 -0.7
SMRF Simiane la Rot 119.78 317 *e*PKIKP PKPdf 09 58 37.3 +0.1
comp=Z,43nm,0.9s
SMF Signal de Mont 119.87 321 *e*PKIKP PKPdf 09 58 37.0 -0.3
comp=Z,15nm,0.7s
SSF Saint Saulge 119.91 321 ⇑*i*PKIKP PKPdf 09 58 37.1 -0.3
comp=Z,41nm,0.8s
CWF Charnwood Fore 119.93 329 *e*P PKPdf 09 58 37.4 +0.2
SSB Saint Sauveur 119.97 319 *e*PKIKP PKPdf 09 58 39.3 +1.7
VIVF Saint-Julien-l 120.05 319 *e*PKIKP PKPdf 09 58 37.2 -0.5
comp=Z,26nm,0.8s
KWE Weaver Farm 120.06 329 *e*P PKPdf 09 58 37.6 +0.1
AVF Avril sur Loir 120.12 321 *e*PKIKP PKPdf 09 58 37.1 -0.7

comp=Z,12nm,0.5s
ANMO Albuquerque 120.20 53 *e*PKIKP PKPdf 09 58 39.8 +1.5
ANMO MLR MLR
comp=Z,2μm,20.0s
SDCO Great Sand Dun 120.22 50 *e*PKPdf PKPdf 09 58 39.6 +1.3
SDCO LR LR
comp=Z,3μm,22.0s
PLDF La Plantade 120.29 320 *e*P PKPdf 09 58 38.4 +0.3
BGF Bois d'Agland 120.53 321 ⇑*i*PKIKP PKPdf 09 58 38.4 -0.2
comp=Z,47nm,0.7s
AGO Saint Agoulin 120.56 320 *e*P PKPdf 09 58 39.8 +1.1
SBD1 Bryn Du 120.83 330 *e*P PKPdf 09 58 40.0 +1.0
LASF Ste Croix 120.89 318 *e*PKIKP PKPdf 09 58 39.7 +0.3
WPM1 Penmaenmawr 120.95 330 *e*P PKPdf 09 58 39.9 +0.7
TCF Toulx Ste Croi 121.04 321 ⇑*i*PKIKP PKPdf 09 58 39.3 -0.3
comp=Z,25nm,0.7s
YLL Llanberis 121.15 330 *e*P PKPdf 09 58 40.1 +0.5
WLF1 Llynfaes 121.17 331 *e*P PKPdf 09 58 38.9 -0.7
EFI East Falkland 121.37 173 *e*PKIKP PKPdf 09 58 40.8 +0.7
EFI MLR MLR
comp=Z,6μm,22.0s
LDF La Druitiere 121.39 324 *e*PKIKP PKPdf 09 58 39.7 -0.5
FLN La Foliniere 121.52 325 *e*PKIKP PKPdf 09 58 40.0 -0.4
FLN *e*MLR MLR
comp=Z,3μm,22.5s
FLN La Foliniere 121.52 325 *e*PKPdf PKPdf 09 58 40.0 -0.4
FLN LR LR
comp=Z,3μm,22.5s
ULM Lac du Bonnet 121.55 33 PKP PKPdf 09 58 39.9 -0.6
comp=Z,26nm,0.6s,baz=314,slow=2.3,SNR=38
ULM SKP 10 02 09.8
comp=Z,15nm,0.7s,baz=303,slow=2.3,SNR=7.3
ULM PKKPbc PKKPbc 10 08 40.5 -1.7
comp=Z,3.3nm,0.4s,baz=141,slow=4.1,SNR=7.2
ULM Lac du Bonnet 121.55 33 *e*PKPdf PKPdf 09 58 39.9 -0.5
ULM LR LR
comp=Z,3μm,20.0s
CASM Ain Smara 121.61 309 P PKPdf 09 58 41.0 0.0
CAF Calviac 121.72 320 *e*PKIKP PKPdf 09 58 41.0 +0.1
RJF Les Rejaudoux 121.91 320 *e*PKIKP PKPdf 09 58 41.1 -0.2
RJF *e*MLR MLR
comp=Z,2μm,22.0s
RJF Les Rejaudoux 121.91 320 *e*PKPdf PKPdf 09 58 41.1 -0.2
RJF LR LR
comp=Z,2μm,22.0s
GRR Gorron 121.92 324 *e*PKIKP PKPdf 09 58 40.8 -0.4
comp=Z,30nm,0.9s
DFRA Djebel Bou Aff 122.00 309 P PKPdf 09 58 44.0 +2.3
MTLF Montolieu 122.27 318 *e*PKIKP PKPdf 09 58 41.5 -0.5
comp=Z,146nm,1.4s
MFF Saint Martin d 122.36 322 *e*PKIKP PKPdf 09 58 41.7 -0.4
comp=Z,52nm,0.7s
SET Setif 122.47 309 P PKPdf 09 58 45.0 +2.3
HTL Hartland 122.54 328 *e*P PKPdf 09 58 43.1 +0.8
HTL AMS AMS 10 56 33.0
comp=Z,2μm,20.0s
AGMN Agassiz Refuge 122.56 35 *e*PKPdf PKPdf 09 58 42.5 0.0
AGMN LR LR
comp=Z,2μm,20.0s
LFF La Frestale 122.56 320 *e*PKIKP PKPdf 09 58 42.6 +0.1
comp=Z,26nm,0.7s
SGMF Saint Gilles 122.97 325 *e*PKIKP PKPdf 09 58 42.7 -0.5
comp=Z,35nm,0.8s
ETOS Mallorca 123.23 314 PKP PKPdf 09 58 44.4 +0.4
ROSF Rostrenen 123.33 325 *e*PKIKP PKPdf 09 58 43.3 -0.6
QUIF Quistinic 123.49 325 *e*PKIKP PKPdf 09 58 43.7 -0.5
comp=Z,32nm,0.8s
EPF Esparros 123.65 318 *e*PKIKP PKPdf 09 58 44.4 -0.3
comp=Z,28nm,1.0s
AKET Djebel Ketaf 123.69 309 P PKPdf 09 58 46.6 +1.6
RESF Ens 123.75 318 *e*P PKPdf 09 58 46.8 +1.9
TXAR Lajitas Array 123.79 59 PKP PKPdf 09 58 45.7 +0.3
comp=Z,9.9nm,0.8s,baz=227,slow=1.7,SNR=62
TXAR PKKPbc PKKPbc 10 08 33.5 +0.6
comp=Z,1.9nm,0.9s,baz=118,slow=6.5,SNR=5.7
TXAR Lajitas Array 123.79 59 PKP PKPdf 09 58 45.7 +0.3
TXAR PKKPbc PKKPbc 10 08 33.5 +0.6
EPOB Poblet 123.85 316 PKP PKPdf 09 58 44.9 -0.3
EBIE Bielsa 123.93 318 PKP PKPdf 09 58 46.6 +1.4
ADJB Djebel Djouab 124.00 309 P PKPdf 09 58 48.0 +2.4
AMTX Amarillo 124.00 52 *e*PKPdf PKPdf 09 58 46.9 +1.2
AMTX LR LR
comp=Z,3μm,21.0s
REYF Montagne du Re 124.12 318 *e*P PKPdf 09 58 46.4 +0.8
CBKS Cedar Bluff 124.17 47 *e*PKIKP PKPdf 09 58 47.1 +1.3
CBKS MLR MLR
comp=Z,2μm,20.0s
ETSF Etsaut 124.30 318 *e*PKIKP PKPdf 09 58 46.5 +0.5
comp=Z,67nm,1.0s
EMHD Djebel Mahouad 124.35 310 P PKPdf 09 58 42.0 -4.3
LARF Larrau 124.52 319 *e*P PKPdf 09 58 47.0 +0.6
SJPF Ste Jean 124.64 319 *e*PKIKP PKPdf 09 58 46.9 +0.3
comp=Z,34nm,0.9s
TRIS Tristan da Cun 124.69 215 PFAKE 09 59 00.0 +13
TRIS LR LR
comp=Z,3μm,19.0s
EALK Alkurruntz 124.78 319 PKP PKPdf 09 58 48.2 +1.3
EYMN Ely 125.22 34 *e*PKPdf PKPdf 09 58 48.1 +0.5
EYMN LR LR
comp=Z,3μm,22.0s
TAM Tamanrasset 125.31 293 *e*PKIKP PKPdf 09 58 49.8 +1.3
EMOS Mosqueruela 125.33 316 PKP PKPdf 09 58 48.8 +0.8
EBNR Beni Rached 125.41 310 P PKPdf 09 58 58.0 +10
ECRI Cripan 125.72 319 PKIKP PKPdf 09 58 50.7 +2.0
EBEN Beniarda 125.82 314 PKP PKPdf 09 58 49.1 +0.1
EANR 'Ain N'Sour 125.85 310 P PKPdf 09 58 53.8 +4.7
ETRT Tiaret 125.89 309 P PKPdf 09 58 49.8 +0.6
ECHE Chera 125.99 315 PKIKP PKPdf 09 58 50.2 +0.9
ELAN Lanestosa 126.02 320 PKP PKPdf 09 58 49.4 +0.2
ETOR Torete 126.22 317 PKIKP PKPdf 09 58 50.1 +0.4
KSU1 Kansas State U 126.31 46 *e*PKPdf PKPdf 09 58 50.9 +0.9
KSU1 LR LR
comp=Z,3μm,22.0s
WMOK Wichita Mounta 126.31 51 *e*PKIKP PKPdf 09 58 51.1 +1.0
WMOK MLR MLR
comp=Z,2μm,21.0s
JCT Junction City 126.77 57 *e*PKIKP PKPdf 09 58 51.4 +0.3
JCT MLR MLR
comp=Z,3μm,22.0s
ETOB Tobarra 126.79 314 PKP PKPdf 09 58 51.8 +0.9
EMUR La Murta 126.89 313 PKP PKPdf 09 58 50.6 -0.5
SCIA State Center 127.37 41 *e*PKPdf PKPdf 09 58 52.5 +0.6
SCIA LR LR
comp=Z,2μm,21.0s
EVIA Vianos 127.47 314 PKIKP PKPdf 09 58 50.7 -1.5
GUD Guadarrama 127.72 317 PKIKP PKPdf 09 58 51.3 -1.3
ENIJ Nijar 127.94 312 PKIKP PKPdf 09 58 53.8 +0.7
ESDC Sonseca Array 128.04 316 PKP PKPdf 09 58 54.0 +0.8
comp=Z,1.5nm,0.6s,baz=22,slow=4.2,SNR=10
ESDC PP PP 10 00 59.2 +2.7
comp=Z,7.1nm,0.9s,baz=65,slow=6.6,SNR=6.9
ESDC Sonseca Array 128.04 316 PKP PKPdf 09 58 54.0 +0.8
ESDC PP PP 10 00 59.2 +2.7
ESLA Sonseca Array 128.04 316 PFAKE 09 59 00.0 +6.8
ESLA LR LR
comp=Z,13μm,22.0s
EQES Quesada 128.23 314 PKP PKPdf 09 58 52.3 -1.4
EPON Pontenova 128.30 322 PKP PKPdf 09 58 53.9 +0.3
PAB San Pablo 128.36 316 *e*PKIKP PKPdf 09 58 54.6 +0.8
PAB MLR MLR
comp=Z,1μm,20.0s
EBER Berja 128.47 313 PKP PKPdf 09 58 54.5 +0.3
EBAN Banos Encina 128.59 314 PKIKP PKPdf 09 58 54.2 -0.1
JFWS Jewell Farm 128.74 39 *e*PKIKP PKPdf 09 58 54.4 0.0
JFWS MLR MLR
comp=Z,2μm,21.0s
ECAL Calabor 128.77 320 PKP PKPdf 09 58 54.7 +0.2
ERUA La Rua 128.79 321 PKIKP PKPdf 09 58 55.3 +0.7
ECOG Cogollos-Vega 128.81 313 PKIKP PKPdf 09 58 55.0 +0.2
PBRG Braganca 128.85 320 *e*PKPdf PKPdf 09 58 55.4 +0.7
PBRG Braganca 128.85 320 *e*PP PP 10 01 02.2 +0.5
PBRG *e*P 10 02 09.8
EGUA Guajares 129.00 313 PKIKP PKPdf 09 58 55.5 +0.4
ERON Agron 129.09 313 PKP PKPdf 09 58 55.1 -0.2
EADA Adamuz 129.15 315 PKP PKPdf 09 58 55.5 +0.1
KVTX Kingsville 129.15 60 PFAKE 09 59 10.0 +14
KVTX LR LR
comp=Z,2μm,22.0s
ELUQ Luque 129.19 314 PKIKP PKPdf 09 58 55.7 +0.2
ELOJ Sierra Loja 129.29 313 PKIKP PKPdf 09 58 55.2 -0.5
EPLA Plasencia 129.29 318 PKIKP PKPdf 09 58 55.9 +0.3
MVO Moncorvo 129.36 319 *e*PKPdf PKPdf 09 58 56.2 +0.5
MVO Moncorvo 129.36 319 *e*PP PP 10 01 05.5 +0.4
MVO *e*P 10 02 11.4
MVO *e*SS SS 10 18 23.5 +1.9
MVO *e*LQ 10 35 58.9
MVO *e*LR LR 10 42 42.4
comp=Z,1μm,20.0s
STS Santiago 129.40 322 PKIKP PKPdf 09 58 55.8 +0.1
ELOB Lobios 129.65 321 PKP PKPdf 09 58 54.5 -1.7
PCAB Cabril 129.72 320 *e*PKPdf PKPdf 09 58 57.7 +1.4
PCAB Cabril 129.72 320 *e*PP PP 10 01 04.1 -3.2
PCAB *e*P 10 02 12.8
SCHQ Schefferville 129.84 13 PKP PKPdf 09 58 56.6 +0.4
comp=Z,20nm,0.8s,baz=350,slow=2.6,SNR=18
SCHQ SKPbc 10 02 11.4
comp=Z,20nm,0.7s,baz=8.1,slow=3.6,SNR=14
SCHQ Schefferville 129.84 13 *e*PKPdf PKPdf 09 58 56.6 +0.4
SCHQ LR LR
comp=Z,3μm,20.0s
TOA0 Torodi Ar. Sit 129.84 282 *e*PKPdf PKPdf 09 58 57.6 +0.3
TORD Torodi Ar. Bea 129.84 282 PKhKP 09 58 45.8
comp=Z,0.8nm,0.4s,baz=92,slow=1.3,SNR=10
TORD PKP PKPdf 09 58 57.6 +0.3
comp=Z,23nm,0.7s,baz=75,slow=3.1,SNR=11
TORD SKPbc 10 02 12.9
comp=Z,85nm,0.9s,baz=76,slow=3.5,SNR=22
TORD PKP2bc 10 11 47.8
comp=Z,1.9nm,0.8s,baz=255,slow=5.3,SNR=3.9
TORD Torodi Ar. Bea 129.84 282 PKP PKPdf 09 58 57.6 +0.3
TORD SKPbc 10 02 12.9
TORD ⇑*e* 10 11 47.8
MTE Manteigas 130.09 319 *e*PKPdf PKPdf 09 58 58.8 +1.7
MTE Manteigas 130.09 319 *e*PP PP 10 01 12.5 +2.6
MTE *e*P 10 02 14.4
MTE *e*SS SS 10 18 36.5 +5.9
MTE *e*LQ 10 33 57.4
MTE *e*LR LR 10 45 15.3
comp=Z,2μm,20.0s
MTE Manteigas 130.09 319 *e*PKPdf PKPdf 09 58 59.2 +2.2
MTE LR LR
comp=Z,2μm,21.0s
PVIS Viseu 130.16 319 *e*PKPdf PKPdf 09 58 59.7 +2.5
PVIS *e*P 10 02 14.6
HKT Hockley 130.21 56 *e*PKIKP PKPdf 09 58 59.0 +1.4
HKT MLR MLR
comp=Z,3μm,21.0s
PCBR Castelo Branco 130.33 318 *e*PKPdf PKPdf 09 58 58.8 +1.2
PCBR Castelo Branco 130.33 318 *e*PP PP 10 01 14.0 +2.6
PCBR *e*P 10 02 15.3
MIAR Mount Ida 130.38 50 *e*PKIKP PKPdf 09 58 58.9 +1.1
MIAR MLR MLR
comp=Z,3μm,21.0s
PMRV Marv??o 130.48 318 *e*PKPdf PKPdf 09 58 58.1 +0.2
PMRV Marv??o 130.48 318 *e*PP PP 10 01 14.1 +1.7
PMRV *e*P 10 02 14.9
PMRV *e*SS SS 10 18 37.7 +2.2
PMRV *e*LQ 10 36 51.0
PMRV *e*LR LR 10 41 49.5
comp=Z,2μm,20.0s
EJIF Jimena Fronter 130.54 313 PKIKP PKPdf 09 58 58.3 +0.2
CCM Cathedral Cave 130.54 44 *e*PKIKP PKPdf 09 58 58.5 +0.5
CCM MLR MLR
comp=Z,2μm,20.0s
EBAD Badajoz 130.56 317 PKP PKPdf 09 58 56.8 -1.2
NATX Nacogdoches 130.57 53 PFAKE 09 59 10.0 +12
NATX LR LR
comp=Z,3μm,20.0s
HDIL Hopedale 130.60 41 *e*PKPdf PKPdf 09 58 58.6 +0.6
HDIL LR LR
comp=Z,3μm,22.0s
ESPR Espera 130.63 314 PKP PKPdf 09 58 58.8 +0.6
EMIN Mina Concepcio 130.80 315 PKP PKPdf 09 58 57.6 -0.9
PBAR Barrancos 130.86 316 *e*PKPdf PKPdf 09 58 59.1 +0.5
PBAR Barrancos 130.86 316 *e*PP PP 10 01 13.6 -1.3
PBAR *e*P 10 02 16.4
PBAR *e*LR LR 10 44 39.4
comp=Z,1μm,20.0s
GLMI Grayling 130.89 33 *e*PKPdf PKPdf 09 58 59.6 +1.2
GLMI LR LR
comp=Z,3μm,20.0s
PESTR Estremoz 130.90 317 *e*PKPdf PKPdf 09 58 59.3 +0.6
PESTR Estremoz 130.90 317 *e*PP PP 10 01 16.5 +1.4
PESTR *e*P 10 02 17.7
PESTR *e*SS SS 10 18 44.4 +3.8
PESTR *e*LQ 10 34 06.2
PESTR *e*LR LR 10 41 09.2
comp=Z,2μm,22.0s
SFS San Fernando 131.07 314 PFAKE 09 59 10.0 +11
SFS LR LR
comp=Z,4μm,22.0s
FVM French Village 131.15 44 *e*PKIKP PKPdf 09 58 59.6 +0.4
UALR University of 131.21 49 *e*PKPdf PKPdf 09 59 00.8 +1.4
EVO Evora 131.35 317 *e*PKIKP PKPdf 09 58 59.4 -0.1
comp=Z,303nm,1.9s
EVO *e*MLR MLR
comp=Z,2μm,23.0s
EVO Evora 131.35 317 *e*PKPdf PKPdf 09 59 01.1 +1.6
EVO Evora 131.35 317 *e*PP PP 10 01 19.8 +1.7
EVO *e*P 10 02 18.9
MDT Midelt 131.39 308 SKPbc SKPbc 10 02 18.8 -0.7
comp=Z,25nm,0.8s,baz=76,slow=4.9,SNR=9.7
PBEJ Beja 131.50 316 *e*PKPdf PKPdf 09 59 01.5 +1.7
PBEJ Beja 131.50 316 *e*PP PP 10 01 20.4 +1.3
PBEJ *e*P 10 02 21.3
PVAQ Vaqueiros 131.70 315 *e*PKPdf PKPdf 09 59 00.1 -0.1
PVAQ Vaqueiros 131.70 315 *e*PP PP 10 01 22.0 +1.6
PVAQ *e*P 10 02 19.9
PVAQ *e*SS SS 10 18 52.9 +2.4
PVAQ *e*LQ 10 34 16.3
PVAQ *e*LR LR 10 42 40.1
comp=Z,1μm,22.0s
SHEL Horse Pasture 131.75 242 PFAKE 09 59 10.0 +9.1
SHEL LR LR
comp=Z,2μm,22.0s
PBDV Barranco-do-Ve 131.93 315 *e*PKPdf PKPdf 09 59 01.5 +0.8
PBDV Barranco-do-Ve 131.93 315 *e*PP PP 10 01 23.1 +1.2
PBDV *e*P 10 02 21.1
PBDV *e*SS SS 10 19 00.3 +7.0
PBDV *e*LR LR 10 42 35.6
comp=Z,2μm,22.0s
PMAFR Mafra 131.99 318 *e*PKPdf PKPdf 09 59 02.2 +1.5
PMAFR Mafra 131.99 318 *e*PP PP 10 01 24.8 +2.7
PMAFR *e*P 10 02 21.7
PMAFR *e*SS SS 10 18 56.3 +2.5
PMAFR *e*LQ 10 34 05.2
PMAFR *e*LR LR 10 41 33.4
comp=Z,2μm,22.0s
LIS Lisbon 132.02 318 *e*PP PP 10 01 22.4 0.0
LIS *e*SS SS 10 18 59.8 +5.6
LIS *e*SS SS 10 18 59.9 +5.6
LIS *e*SS SS 10 19 00.5 +6.3
LIS AMS AMS 10 54 07.0
comp=E,2μm,11.3s
LIS Lisbon 132.02 318 *e*PP PP 10 01 22.4 0.0
LIS *e*SS SS 10 18 59.8 +5.6
SIUC Southern Illin 132.11 44 *e*PKPdf PKPdf 09 59 01.4 +0.4
PTEO Sao Teotonio 132.33 316 *e*PKPdf PKPdf 09 59 03.1 +1.7
PTEO Sao Teotonio 132.33 316 *e*PP PP 10 01 27.6 +3.2
PTEO *e*P 10 02 24.0
OLIL Olney 132.34 42 *e*PKPdf PKPdf 09 59 02.6 +1.2
MORF Marmelete 132.40 316 *e*PKPdf PKPdf 09 59 03.4 +1.8
MORF Marmelete 132.40 316 *e*PP PP 10 01 26.3 +1.4
MORF *e*P 10 02 23.3
MORF *e*SS SS 10 19 02.7 +3.7
MORF *e*LQ 10 34 31.0
MORF A 11 03 09.5
comp=E,2μm,19.8s
PFVI Vila Bisbo 132.61 316 *e*PKPdf PKPdf 09 59 02.7 +0.7
PFVI Vila Bisbo 132.61 316 *e*PP PP 10 01 27.9 +1.7
PFVI *e*P 10 02 24.6
PFVI *e*SS SS 10 19 05.9 +4.4
PFVI *e*LQ 10 34 33.8
PFVI *e*LR LR 10 45 12.6
comp=E,2μm,20.0s
AAM Ann Arbor 133.04 35 *e*PKIKP PKPdf 09 59 03.1 +0.5
AAM MLR MLR
comp=Z,3μm,22.0s
BLO Bloomington 133.14 41 *e*PKIKP PKPdf 09 59 03.9 +1.0
OXF Oxford 133.50 48 *e*PKIKP PKPdf 09 59 05.0 +1.3
OXF MLR MLR
comp=Z,3μm,21.0s
VBMS Vicksburg 133.65 51 *e*PKPdf PKPdf 09 59 05.2 +1.2
VBMS LR LR
comp=Z,2μm,20.0s
WCI Wyandotte Cave 133.81 42 PFAKE 09 59 10.0 +5.8
WCI LR LR
comp=Z,2μm,20.0s
WVT Waverly 133.86 45 *e*PKIKP PKPdf 09 59 04.6 +0.2
WVT MLR MLR
comp=Z,3μm,20.0s
TRQA Tornquist 133.87 166 *e*PKPdf PKPdf 09 59 05.6 +1.2
TRQA LR LR
comp=Z,3μm,20.0s
ACSO Alum Creek Sta 134.73 37 *e*PKPdf PKPdf 09 59 07.8 +2.0
ACSO LR LR
comp=Z,3μm,22.0s
ERPA Erie 135.21 33 PFAKE 09 59 20.0 +13
ERPA LR LR
comp=Z,3μm,22.0s
LRAL Lakeview Retre 135.96 48 PFAKE 09 59 20.0 +12
LRAL LR LR
comp=Z,3μm,22.0s
DBIC Dimbokro 136.29 273 PKhKP 09 58 57.8
comp=Z,4.5nm,0.6s,baz=72,slow=4.0,SNR=8.7
DBIC PKP PKPdf 09 59 09.7 +0.1
comp=Z,27nm,0.7s,baz=77,slow=1.8,SNR=11
DBIC SKPbc SKPbc 10 02 34.9 -1.4
comp=Z,59nm,1.1s,baz=77,slow=3.8,SNR=9.5
DBIC Dimbokro 136.29 273 PKHKP 09 58 57.8
DBIC 09 59 09.7
DBIC pmax pmax
comp=Z,5.0nm,0.6s
DBIC pmax pmax
comp=Z,27nm,0.7s
DBIC pmax pmax
comp=N,59nm,1.1s
DBIC Dimbokro 136.29 273 PKP PKPdf 09 59 09.7 +0.1
DBIC SKPbc SKPbc 10 02 34.9 -1.4
DBIC LR LR
comp=Z,2μm,21.0s
LIC Lamto 136.44 272 *e*PKIKP PKPdf 09 59 10.9 +1.1
comp=Z,55nm,0.7s
LIC *e*MLR MLR
comp=Z,2μm,20.2s
LIC Lamto 136.44 272 *e*PKPdf PKPdf 09 59 10.9 +1.1
LIC LR LR
comp=Z,1μm,20.3s
TZTN Tazewell 136.56 42 *e*PKPdf PKPdf 09 59 10.5 +1.1
NCB Newcomb 136.70 27 *e*PKPdf PKPdf 09 59 10.4 +1.0
NCB LR LR
comp=Z,3μm,21.0s
BRAL Brewton 136.84 51 *e*PKPdf PKPdf 09 59 13.0 +3.0
BRAL LR LR
comp=Z,2μm,21.0s
TKL Tuckaleechee C 136.91 43 SKPbc SKPbc 10 02 37.3 -0.2
comp=Z,46nm,0.8s,baz=202,slow=1.4,SNR=22
MCWV Mont Chateau 136.94 36 PFAKE 09 59 20.0 +10
MCWV LR LR
comp=Z,4μm,22.0s
BINY Binghamton 137.23 30 *e*PKPdf PKPdf 09 59 11.7 +1.2
BINY LR LR
comp=Z,3μm,19.0s
SSPA Standing Stone 137.37 33 PFAKE 09 59 20.0 +9.2
SSPA LR LR
comp=Z,2μm,20.0s
LBNH Lisbon 137.48 25 PFAKE 09 59 20.0 +9.2
LBNH LR LR
comp=Z,2μm,21.0s
PKME Peaks-Kenny Pk 137.64 21 PFAKE 09 59 20.0 +8.9
PKME LR LR
comp=Z,2μm,22.0s
CFAA Coronel Fontan 137.70 155 PKhKP 09 59 03.2
comp=Z,2.3nm,0.7s,baz=239,slow=3.3,SNR=22
CFAA PKP PKPdf 09 59 13.1 +1.4
comp=Z,2.9nm,0.6s,baz=210,slow=3.3,SNR=14
CFAA SKPbc SKPbc 10 02 40.3 +0.3
comp=Z,3.5nm,1.1s,baz=195,slow=2.0,SNR=9.1
CFAA Coronel Fontan 137.70 155 PKP PKPdf 09 59 13.1 +1.4
CFAA SKPbc SKPbc 10 02 40.3 +0.3
PAYG Puerto Ayora 138.04 98 PFAKE 09 59 20.0 +7.2
PAYG LR LR
comp=Z,2μm,20.0s
BLA Blacksburg 138.17 39 PFAKE 09 59 20.0 +7.7
BLA LR LR
comp=Z,3μm,22.0s
GOGA Godfrey 138.34 46 PFAKE 09 59 20.0 +7.2
GOGA LR LR
comp=Z,3μm,20.0s
LCO Las Campanas 138.78 150 PFAKE 09 59 20.0 +6.3
LCO LR LR
comp=Z,3μm,20.0s
CBN Corbin 139.35 35 *e*PKPdf PKPdf 09 59 15.9 +1.4
CBN LR LR
comp=Z,3μm,22.0s
TEIG Tepich 139.50 67 PFAKE 09 59 30.0 +15
TEIG LR LR
comp=Z,1μm,21.0s
FUL Funchal 140.61 315 *e*PKPdf PKPdf 09 59 18.8 +1.9
CFTV Fuerteventura 140.63 308 PKP PKPdf 09 59 16.1 -1.0
NHSC New Hope 140.80 44 PFAKE 09 59 30.0 +13
NHSC LR LR
comp=Z,3μm,22.0s
CNNC Cliffs of the 141.00 39 *e*PKPdf PKPdf 09 59 19.2 +1.6
CNNC LR LR
comp=Z,3μm,20.0s
TGUH Tegucigalpa,Un 141.56 76 *e*PKPdf PKPdf 09 59 19.6 +0.5
TGUH LR LR
comp=Z,1μm,19.0s
EOSO Osorio 141.94 308 PKP PKPdf 09 59 17.8 -1.7
CMLA Cha da Macela 142.47 329 PFAKE 09 59 30.0 +10
CMLA LR LR
comp=Z,3μm,21.0s
DWPF Disney 142.52 51 PFAKE 09 59 30.0 +10
DWPF LR LR
comp=Z,1μm,20.0s
CCAN Las Canadas 142.69 309 PKP PKPdf 09 59 17.6 -3.2
EGOM La Gomera 143.19 309 PKP PKPdf 09 59 18.3 -3.4
EHIG Higuera 143.44 310 PKP PKPdf 09 59 19.0 -3.1
CHIE El Hierro 143.98 309 PKP PKPdf 09 59 21.3 -1.8
JCR Jicaral 144.01 82 *e*P PKPdf 09 59 24.1 +0.6
FORC Fortuna 144.41 81 *e*P PKPdf 09 59 25.3 +1.2
CGA2 Cerro Gallo 2 144.64 82 *e*P PKPdf 09 59 26.1 +1.5
PRS1 Puriscal 144.79 82 *e*P PKPdf 09 59 26.6 +1.8
LVC Limon Verde 144.91 147 PKP PKPdf 09 59 26.2 +1.3
comp=Z,127nm,0.7s,baz=253,slow=3.7,SNR=99
LVC SKPbc SKPbc 10 02 60.0 +1.2
comp=Z,17nm,0.6s,baz=245,slow=2.4,SNR=6.9
LVC Limon Verde 144.91 147 *e*PKPdf PKPdf 09 59 26.1 +1.3
LVC LR LR
comp=Z,3μm,22.0s
QCR Quepos 144.96 83 *e*P PKPdf 09 59 25.9 +0.8
LAJ Bijagual 144.98 82 *e*P PKPdf 09 59 27.4 +2.2
URSC Urasca 145.32 82 *e*P PKPbc 09 59 27.4 +1.8
BAR1 145.80 83 *e*P PKPdf 09 59 27.8 +1.2
ACR Cerro Adams 145.96 84 *e*P PKPbc 09 59 29.6 +1.9
CPUP Villa Florida 146.20 166 *e*PKPdf PKPdf 09 59 27.8 -0.2
comp=Z,118nm,0.7s,baz=182,slow=1.0,SNR=233
CPUP Villa Florida 146.20 166 *e*PKPdf PKPdf 09 59 28.0 +1.1
CPUP LR LR
comp=Z,788nm,21.0s
NNA Nana 146.58 124 PKPbc PKPbc 09 59 29.8 +0.4
comp=Z,109nm,0.7s,baz=254,slow=5.7,SNR=49
NNA Nana 146.58 124 *e*PKPdf PKPdf 09 59 29.7 +1.9
NNA LR LR
comp=Z,3μm,19.0s
BBTS Babate 147.27 287 PKPbc PKPbc 09 59 32.0 +0.7
comp=Z,178nm,0.8s,baz=54,slow=0.9,SNR=6.7
ATAH Atahualpa 147.57 114 PKPbc PKPbc 09 59 32.1 -0.2
comp=Z,91nm,0.7s,baz=229,slow=0.6,SNR=30
ARE Arequipa 147.93 136 *e*P PKPdf 09 59 31.0 +0.9
ARE *i* 09 59 54.7
BCIP Isla Barro Col 149.23 83 *e*PKPdf PKPdf 09 59 33.4 +1.2
BCIP LR LR
comp=Z,2μm,22.0s
MCJ Malvern 149.75 66‖ *e*P PKPbc 09 59 38.8 +1.1
CVJ Coleyville 149.79 65‖ *e*P PKPdf 09 59 34.6 +1.6
MTDJ Mount Denham 149.79 65 *e*PKPbc PKPbc 09 59 38.9 +1.1
OTAV Otavalo 149.81 101 *e*PKPdf PKPdf 09 59 34.8 +1.6
OTAV LR LR
comp=Z,2μm,22.0s
BBSR BB Station 150.47 28 *e*PKPbc PKPbc 09 59 39.2 +0.1
BBSR LR LR
comp=Z,2μm,21.0s
STH Stony Hill 150.50 65‖ *e*P PKPbc 09 59 40.5 +1.0
GWJ Greenwich 150.57 65⇑‖ *e*P PKPdf 09 59 35.9 +1.7
HOJ Hope 150.57 65‖ *e*P PKPbc 09 59 40.6 +0.9
SIV San Ignacio 154.46 152 PKP PKPdf 09 59 41.2 +1.1
comp=Z,16nm,0.9s,baz=210,slow=1.6,SNR=60
SIV PKPbc PKPbc 09 59 49.8 +1.4
comp=Z,26nm,0.7s,baz=194,slow=2.4,SNR=36
SIV PKPab PKPab 10 00 04.0 +1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,51nm,0.7s,baz=207,slow=5.3,SNR=20						
ROSC	El Rosal	154.61	93	PKP	PKPdf	09 59 41.8	+1.5
	comp=Z,27nm,0.7s,baz=83,slow=23,SNR=13						
ROSC				PKPbc	PKPbc	09 59 50.2	+1.4
	comp=Z,24nm,0.7s,baz=276,slow=16,SNR=7.0						
ROSC				PKPab	PKPab	10 00 04.9	+1.2
	comp=Z,26nm,0.5s,baz=110,slow=23,SNR=6.4						
ROSC	El Rosal	154.61	93	*e*PKPdf	PKPdf	09 59 41.8	+1.4
SDDR	Presa de Saban	154.99	59	PFAKE		09 59 50.0	+9.3
SDDR				LR	LR		
	comp=Z,2μm,22.0s						
BDFB	Brasilia	157.83	182	PKP	PKPdf	09 59 45.6	+1.1
	comp=Z,14nm,0.8s,baz=157,slow=4.6,SNR=34						
BDFB	Brasilia	157.83	182	PKP	PKPdf	09 59 45.6	+1.1
BDFB				LR	LR		
	comp=Z,3μm,22.0s						
SDV	Santo Domingo	158.33	83	PKP	PKPdf	09 59 45.5	+0.4
	comp=Z,79nm,0.8s,baz=191,slow=0.7,SNR=71						
SDV	Santo Domingo	158.33	83	*e*PKPdf	PKPdf	09 59 45.4	+0.3
SDV				LR	LR		
	comp=Z,1μm,22.0s						
CRPR	Cabo Rojo, PR	158.94	56	*e*PKPdf	PKPdf	09 59 46.9	+1.1
ICM	Isla Caja Muer	159.48	55	*e*PKPdf	PKPdf	09 59 47.3	+0.9
SJG	San Juan	159.67	54	PFAKE		10 00 00.0	+13
SJG				LR	LR		
	comp=Z,2μm,20.0s						
RCBR	Riachuelo	162.07	227	PFAKE		10 00 00.0	+11
RCBR				LR	LR		
	comp=Z,2μm,22.0s						
GRGR	Grenville	166.27	66	PFAKE		10 00 00.0	+6.9
GRGR				LR	LR		
	comp=Z,2μm,21.0s						
BBGH	Gun Hill	167.66	58	PFAKE		10 00 00.0	+5.9
BBGH				LR	LR		
	comp=Z,6μm,22.0s						

*NIED **15** 09:46:00,4460N×15000E,h11^{km},Mw4.5 Best double couple: M$_0$7.07000×10^{15} NP1:φ$_s$42.00000°,δ63.00000°,λ80.00000°. NP2:φ$_s$245.00000°,δ28.00000°,λ110.00000°.*
*IDC **15** 09:46:52.0±1.4,4456N×14984E,h0^{km},mb4.6/14, mb1 4.6/16,mb1mx4.6/27,mbtmp4.6/16,ML3.6/2,MS4.0/1, Ms1 4.0/1,ms1mx3.3/42,Error ellipse: s-maj=41.1km s-min=16.2km az=165.0*
*JMA **15** 09:46:54.8±0.7,4455N×15000E,h30^{km},M4.8*
*ISCJB **15** 09:46:55.6±1.7,443N±01×1500E±02,h49^{km}±15^{km}, mb4.6/14,Error ellipse: s-maj=22.8km s-min=16.9km az=151.4*
*NEIC **15** 09:46:55.6±3.3,4450N×15005E,h27^{km}±23^{km},mb4.8/1, Error ellipse: s-maj=24.0km s-min=9.5km az=158.0*
ISC 15 09:46:57.1±1.4**,443N**±01×**1500E**±01**,h45**^{km}±11^{km}**,n44,** σ1^{s}**02**/44**,mb4.6**/14**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NEM2	Nemuro 2	3.21	255	P	Pn	09 47 43.3	-1.7
NEM2				*e*S	Sx	09 48 19.0	
JRA	Rausu	3.53	266	P	Pn	09 47 49.1	-0.2
JRA				*e*S	Sx	09 48 30.3	
JNK	Nakash	3.87	261	P	Pn	09 47 53.3	-0.8
JAK	Akkeshi	4.05	253	P	Pn	09 47 55.0	-1.5
JAK				*e*S	Sx	09 48 40.2	
JTKR	Abashiri--Toko	4.39	268	P	Pn	09 48 01.5	+0.3
JAR	Ashorobuto	4.61	260	P	Pn	09 48 03.7	-0.5
JOB	Onbets	4.68	255	P	Pn	09 48 04.6	-0.6
JOB				*e*S	Sx	09 48 56.5	
JMP	Maruseppu	4.78	269	P	Pn	09 48 07.3	+0.8
JCH	Churui	5.11	253	P	Pn	09 48 10.0	-1.0
JCH				*e*S	Sx	09 49 07.4	
JKK2	Kamakawa 2	5.24	268	P	Pn	09 48 13.8	+1.0
ASAJ	Asahikawa	5.32	271	Pn	Pn	09 48 14.6	+0.7
	18nm,0.3s,baz=94,slow=16,SNR=75						
ASAJ				LR	LR	09 50 17.0	
	comp=Z,2μm,18.5s,baz=90,slow=39						
ASAJ	Asahikawa	5.32	271	P	Pn	09 48 15.3	+1.4
JFR	Furan	5.48	261	P	Pn	09 48 16.7	+0.6
JEM	Erimo	5.49	248	P	Pn	09 48 17.1	+0.8
ERM	Erimo	5.49	248	*e*P	Pn	09 48 17.4	+1.1
	196nm,0.9s						
JNBK	Urakawa-nobuka	5.65	252	P	Pn	09 48 17.3	-1.2
JAB	Ashibetsu	5.67	265	P	Pn	09 48 20.3	+1.6
YSS	Yuzh-Sakhalins	5.74	300	*e*Pn	Pn	09 48 19.5	-0.2
	48nm,0.7s						
YSS				*e*Sn	Sx	09 49 15.0	
JBT2	Biratori 2	5.75	257	P	Pn	09 48 19.1	-0.7
JWK2	Keihoku	5.85	283	P	Pn	09 48 23.4	+2.2
JHR	Hokuryu	5.99	268	P	Pn	09 48 24.8	+1.7
JEW	Eniwo	6.37	260	P	Pn	09 48 29.0	+0.6
JNB	Noboribetsu	6.77	258	P	Pn	09 48 33.2	-0.6
JKB	Kayabe	6.98	253	P	Pn	09 48 35.9	-0.8
JKB				*e*S	Sx	09 49 50.1	
PETK	Petropavlovsk-	10.19	27	Pn	Pn	09 49 17.4	-3.2
	0.5nm,0.3s,baz=191,slow=9.8,SNR=9.0						
KSRS	Korea Array	18.00	255	P	Pn	09 51 03.1	-0.7
	0.2nm,0.3s,baz=51,slow=12,SNR=3.9						
SONM	Songino Array	30.16	292	P	P	09 53 02.5	-0.1
	7.2nm,0.7s,mb4.5,baz=84,slow=7.6,SNR=2.9						
MKAR	Makanchi Array	46.15	298	P	P	09 55 15.9	-1.0
	19nm,0.6s,mb5.2,baz=77,slow=8.6,SNR=6.2						
KURK	Kurchatov	46.93	304	P	P	09 55 21.4	-1.6
	8.4nm,0.6s,mb4.8,baz=70,slow=8.6,SNR=3.9						
CMAR	Chiang Mai Arr	49.65	256	P	P	09 55 45.5	+1.2
	2.9nm,0.6s,mb4.5,baz=42,slow=7.2,SNR=4.8						
BVAR	Borovoye Array	50.74	310	P	P	09 55 51.5	-0.6
	10nm,0.8s,mb4.8,baz=74,slow=5.1,SNR=3.5						
RES	Resolute Bay	53.86	17	P	P	09 56 14.8	-0.2
	27nm,0.8s,mb5.2,baz=326,slow=8.0,SNR=22						
YKA	Yellowknife Ar	54.21	35	P	P	09 56 17.6	-0.1
	1.5nm,0.6s,mb4.1,baz=301,slow=6.8,SNR=5.5						
YKA	Yellowknife Ar	54.21	35	P	P	09 56 17.6	-0.1
AKTK	Aktyubinsk	58.73	312	P	P	09 56 50.4	+0.4
AKTO	Aktyubinsk	58.73	312	P	P	09 56 50.4	+0.4
	10nm,0.7s,mb5.0,baz=70,slow=6.8,SNR=3.9						
NVAR	Mina Array Bea	65.55	60	P	P	09 57 37.1	+1.2
	1.0nm,0.7s,mb4.0,baz=284,slow=7.3,SNR=3.9						
PDAR	Pinedale Array	67.99	51	P	P	09 57 52.0	+0.6
	1.0nm,0.8s,mb3.9,baz=278,slow=2.6,SNR=3.8						
NB2	NORSAR Subarra	69.83	340	P	P	09 58 01.1	-1.3
	comp=Z,2.0nm,0.5s,mb4.3,baz=28,slow=6.5						
NOA	NORSAR Array B	69.83	340	P	P	09 58 01.4	-1.0
	comp=Z,4.2nm,0.8s,mb4.4,baz=31,slow=6.3,SNR=13						
AKASG	Malin Array Be	72.34	325	P	P	09 58 16.8	-1.0
	comp=Z,20nm,0.8s,mb5.1,baz=34,slow=6.2,SNR=16						
SCHQ	Schefferville	76.42	21	P	P	09 58 42.6	+1.2
	comp=Z,3.1nm,0.9s,mb4.2,baz=311,slow=9.3,SNR=4.1						
BRTR	Keskin Array B	78.64	315	P	P	09 58 54.9	+0.8
	comp=Z,6.0nm,0.7s,mb4.6,baz=75,slow=4.2,SNR=4.3						
SFI	Santa Sofia	84.60	331	P	P	09 59 29.6	+4.1

*MOS **15** 10:14:03.3±1.3,5224N×15974E,h14^{km},mb4.1/6,Error ellipse: s-maj=16.6km s-min=7.7km az=91.0*
*ISCJB **15** 10:14:08.5±0.6,5238N±004×15946E±007,h57^{km}±5^{km}, mb3.9/14,Error ellipse: s-maj=9.0km s-min=4.7km az=41.7*
*KRSC **15** 10:14:09.4±0.2,5250N×15947E,h18^{km}±18^{km},ML4.4*
*NEIC **15** 10:14:10.4±1.2,5262N×15948E,h54^{km}±11^{km},Error ellipse: s-maj=23.0km s-min=12.7km az=178.0*
*IDC **15** 10:14:13.9±1.5,5261N×15917E,h82^{km}±10^{km},mb3.5/13, mb1 3.7/13,mb1mx3.5/26,mbtmp3.5/13,Error ellipse: s-maj=20.2km s-min=17.7km az=159.0*
ISC 15 10:14:09.9±0.6**,5238N**±004×**15938E**±007**,h52**^{km}±5^{km}**, n56,**σ1^{s}**22**/75**,mb3.9**/14**,2D,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RUS	Russkaya	0.54	276	*e*P	Pn	10 14 21.2	-0.5
RUS				*i* S	Sn	10 14 28.8	-1.4
PET	Petropavlovsk	0.79	326	κ *i*PN	Pn	10 14 23.9	-0.9
PET				*e*S	Sn	10 14 34.7	-1.0
PET				pmax	pmax		
	comp=Z,751nm,0.6s						
PET				smax			
	comp=N,2μm,0.3s						
PET				smax			
	comp=N,1μm,0.4s						
PET	Petropavlovsk	0.79	326	*e*P	Pn	10 14 23.8	-1.0
PET				*i* S	Sn	10 14 34.5	-1.2
PET	Petropavlovsk	0.79	326	*e*Pn	Pn	10 14 23.5	-1.3
PET				*e*Sn	Sn	10 14 34.6	-1.1
NLC	Nalytchevo	0.80	358	*e*P	Pn	10 14 22.9	-2.0
NLC				*i* S	Sn	10 14 33.3	-2.6
GRL	Gorelyy	0.82	283	*e*P	Pn	10 14 25.8	+0.6
GRL				*i* S	Sn	10 14 37.8	+1.3
SPN	Mys Shipunski	0.82	28	*e*P	Pn	10 14 22.9	-2.4
SPN				*i* S	Sn	10 14 32.5	-4.0
UGLR	Uglovaya	0.90	338	*i* P	Pn	10 14 25.7	-0.6
SMAR	Somma	0.95	339	*i* P	Pn	10 14 26.1	-0.9
AVH	Avacha	0.97	337	*i* P	Pn	10 14 26.8	-0.5
AVH				*i* S	Sn	10 14 39.1	-0.9
KOK	Koryaka	1.02	334	*i* P	Pn	10 14 27.6	-0.3
PETK	Petropavlovsk-	1.26	306	P	Pn	10 14 31.4	+0.3
	comp=N,46nm,0.3s,baz=108,slow=18,SNR=420						
PETK				S	Sn	10 14 48.7	+1.7
	comp=N,82nm,0.3s,baz=236,slow=20,SNR=19						
PETK	Petropavlovsk-	1.26	306	P	Pn	10 14 31.4	+0.3
PETK				S	Sn	10 14 48.7	+1.7
GNL	Ganaly	1.58	327	*i* P	Pn	10 14 35.8	+0.3
GNL				*i* S	Sn	10 14 55.4	+0.6
MIPR	Malaya Ipel'ka	1.61	267	*e*P	Pn	10 14 38.6	+2.7
KII	Karymskiy	1.66	1	*e*P	Pn	10 14 36.7	+0.1
KII				*i* S	Sn	10 14 57.2	+0.4
SKR	Severo-Kuril's	2.65	232	*e*PN	Pn	10 14 50.2	+0.1
SKR				*e*S	Sn	10 15 20.8	-0.2
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,280nm,0.5s						
SKR				smax			
	comp=E,180nm,0.5s						
TUMR	Tumrok	2.95	9	*e*P	Pn	10 14 55.6	+1.4
KMNR	Kamenistaya	3.42	8	*e*P	Pn	10 15 03.1	+2.4
KIRR	Kirishev	3.63	9	*e*P	Pn	10 15 04.3	+0.8
BZGR	Bezymyannyi-Gr	3.65	12	*e*P	Pn	10 15 05.0	+1.2
BZGR				*i* S	Sn	10 15 46.8	+1.2
ZLN	Zelenaya	3.74	12	*e*P	Pn	10 15 06.7	+1.7
ZLN				*i* S	Sn	10 15 48.6	+0.8
KRSR	Krestovskiy	3.91	10	*e*P	Pn	10 15 09.4	+2.1
SRDR	Sredinnyy	3.95	3	*e*P	Pn	10 15 09.3	+1.4
KLY	Klyuchi	4.01	10	*e*P	Pn	10 15 09.9	+1.1
KLY				*i* S	Sn	10 15 54.3	-0.1
KBTR	Krutoberegovo	4.33	26	*e*P	Pn	10 15 13.3	+0.1
KBTR				*i* S	Sn	10 16 01.1	-1.2
FX1	Attu Island--F	8.40	81	P	Pn	10 16 07.3	-1.6
	comp=E,3.0nm,0.3s,baz=349,slow=5.9,SNR=4.8						
FX1				S	Sn	10 17 31.8	-10
	comp=E,14nm,0.3s,baz=132,slow=21,SNR=10						
FX1	Attu Island--F	8.40	81	P	Pn	10 16 07.3	-1.6
FX1				S	Sn	10 17 31.8	-10
MJAR	Matsushiro Arr	21.76	232	P	P	10 19 00.2	+3.3
	comp=E,1.8nm,0.9s,mb3.5,baz=29,slow=11,SNR=4.6						
MJAR	Matsushiro Arr	21.76	232	*e*P	P	10 19 00.2	+3.3
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HIA	Hailar	25.02	279	*i* P	P	10 19 32.8	+4.2
YKA	Yellowknife Ar	43.98	42	P	P	10 22 11.4	-0.1
	comp=Z,0.8nm,0.6s,mb3.6,baz=297,slow=7.9,SNR=11						
YKA	Yellowknife Ar	43.98	42	*e*P	P	10 22 11.3	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	47.75	302	P	P	10 22 40.4	-0.8
	comp=Z,0.9nm,0.7s,mb3.9,baz=60,slow=7.6,SNR=5.9						
SPITS	Spitsbergen Ar	47.77	350	P	P	10 22 39.9	-1.2
	comp=Z,18nm,1.1s,mb5.0,baz=62,slow=9.1,SNR=4.6						
MKAR	Makanchi Array	48.08	296	P	P	10 22 41.9	-1.9
	comp=Z,0.4nm,0.6s,mb3.6,baz=59,slow=7.4,SNR=4.3						
MKAR	Makanchi Array	48.08	296	*e*P	P	10 22 42.3	-1.6
MKAR	Makanchi Array	48.08	296	P	P	10 22 41.9	-1.9
ARCES	ARCESS Array B	53.83	342	P	P	10 23 26.1	-0.6
	comp=Z,1.9nm,0.8s,mb4.1,baz=40,slow=7.1,SNR=3.2						
ARCES	ARCESS Array B	53.83	342	P	P	10 23 26.1	-0.6
NVAR	Mina Array Bea	56.40	69	P	P	10 23 47.5	+1.8
	comp=Z,0.2nm,0.6s,mb3.3,baz=303,slow=7.2,SNR=2.5						
CMAR	Chiang Mai Arr	57.61	258	*e*P	P	10 23 49.5	-5.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDAR	Pinedale Array	58.25	60	P	P	10 23 59.7	+1.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=316,slow=2.9,SNR=8.3						
NB2	NORSAR Subarra	64.11	343	P	P	10 24 36.9	-1.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=24,slow=6.9						
NOA	NORSAR Array B	64.11	343	P	P	10 24 37.3	-0.7
	comp=Z,1.0nm,0.5s,mb4.2,baz=22,slow=6.7,SNR=7.9						
NOA	NORSAR Array B	64.11	343	*e*P	P	10 24 37.2	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	64.50	342	P	P	10 24 39.6	-0.9
	comp=Z,1.4nm,0.4s,mb4.3,baz=88,slow=2.9,SNR=16						
HFS	Hagfors	64.50	342	P	P	10 24 39.6	-1.0
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	69.00	329	P	P	10 25 08.1	-1.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=27,slow=7.4,SNR=3.7						
AKASG	Malin Array Be	69.00	329	P	P	10 25 08.1	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	Eskdalemuir Ar	71.69	350	P	P	10 25 25.2	-0.4
	comp=Z,1.4nm,0.8s,mb3.9,baz=8.9,slow=5.0,SNR=4.0						
EKA	Eskdalemuir Ar	71.69	350	P	P	10 25 25.3	-0.4
EKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CLL	Collm	72.87	339	*e*P	P	10 25 32.0	-0.8
GERES	GERESS Array B	75.01	337	P	P	10 25 45.1	-0.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=38,slow=5.0,SNR=3.4						
GERES	GERESS Array B	75.01	337	P	P	10 25 45.1	-0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	78.93	204	P	P	10 26 09.1	+1.6
	comp=Z,0.2nm,0.5s,mb3.3,baz=16,slow=5.3,SNR=3.5						

*CSEM **15** 10:17:56.5±0.1,3821N×2654E,h5^{km},MD3.1,Error ellipse: s-maj=1.7km s-min=1.2km az=110.0*
*DDA **15** 10:17:57.7,3825N×2662E,h4^{km}±1^{km},Md3.1*
*ISCJB **15** 10:17:57.2±0.5,3821N±002×2655E±003,h8^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=3.2km az=170.3*
*NEIC **15** 10:17:57.0,3823N×2659E,h5^{km},MD3.5(ATH), ML3.3(ISK),After ISK.*
*THE **15** 10:17:57.3,3822N×2660E,h3^{km}±1^{km},ML3.8/2,Error ellipse: s-maj=1.7km s-min=0.7km az=74.0*
*ISK **15** 10:17:57.1,3822N×2660E,h5^{km},ML3.3*
*ATH **15** 10:17:57.1,3820N×2640E,h23^{km}±3^{km},MD3.5/4*
ISC 15 10:17:57.8±0.4**,3823N**±002×**2656E**±003**,h9**^{km}±3^{km}**,n39,** σ0^{s}**90**/56**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
URLA	Izmir	0.14	13	*i* P	Pg	10 18 00.3	-0.6
URLA				*i* S	Sg	10 18 02.5	-0.5
BLCB	Balcova	0.41	67	P	Pg	10 18 05.1	-0.8
BLCB				S	Sg	10 18 10.4	-1.0
BLCB	Balcova	0.41	67	*e*Pg	Pg	10 18 05.2	-0.7
CHOS	Chios island	0.42	292	P	Pg	10 18 06.5	+0.4
CHOS				S	Sg	10 18 13.1	+1.4
SMG	Samos	0.56	157	⇑*i*PB	Pb	10 18 08.7	-1.1
SMG				*e*SN	Sg	10 18 18.1	+2.1
IZM	Izmir	0.58	73	*e*PG	Pg	10 18 08.5	-0.6
IZM				*e*SG	Sg	10 18 16.7	0.0
GCAM	G?zelcaml?	0.75	134	*i* P	Pg	10 18 12.1	-0.1
GCAM				*i* S	Sg	10 18 22.7	+0.7
PRK	Paraskevi	1.04	348	P	Pg	10 18 17.1	-0.8
PRK				S	Sg	10 18 32.2	+0.8
PRK	Paraskevi	1.04	348	*e*PN	Pn	10 18 17.0	-1.6
PRK				*e*SN	Sn	10 18 32.0	-1.3
AYVA	Ayvalik	1.09	6	*i* P	Pg	10 18 17.4	-1.3
AYVA				*i* S	Sg	10 18 34.0	+1.1
AKHS	Akhisar	1.18	56	*i* P	Pb	10 18 19.0	-1.4
AKHS				*i* S	Sb	10 18 35.5	-0.3
AKS	Akhisar	1.18	56	*e*PN	Pn	10 18 19.0	-1.5
AKS				*e*SN	Sn	10 18 35.9	-0.8
MLSB	Milas	1.34	133	*e*PN	Pn	10 18 22.7	0.0
MLSB				*e*SN	Sn	10 18 41.0	+0.4
BDRM	Kayabasi	1.36	148	*i* P	Pn	10 18 23.9	+1.0
APE	Apeiranthos	1.41	215	P	Pn	10 18 22.8	-0.9
APE				S	Sn	10 18 42.0	-0.4
APE	Apeiranthos	1.41	215	*e*Pn	Pn	10 18 22.3	-1.4
APE				S	Sn	10 18 42.0	-0.4
EZN	Ezine	1.61	354	*e*PN	Pn	10 18 26.8	+0.5
KULA	Kula-Manisa	1.68	79	*e*PN	Pn	10 18 28.2	+0.8
DAT	Datca	1.70	151	*e*PN	Pn	10 18 27.4	-0.3
BALB	Balikesir	1.75	36	*e*PN	Pn	10 18 28.9	+0.6
YER	Yerkesik	1.75	128	*e*PN	Pn	10 18 29.1	+0.8
LIA	Limnos Island	1.98	328	P	Pn	10 18 30.7	-0.8
LIA				S	Sn	10 18 56.5	0.0
LIA	Limnos Island	1.98	328	*e*Pn	Pn	10 18 30.8	-0.7
LIA				S	Sn	10 18 56.5	0.0
THR4	Thira Island,	1.99	208	P	Pn	10 18 30.9	-0.7
GADA	Gvkgeada	2.03	346	*e*PN	Pn	10 18 32.1	0.0
THR3	Thira Island,	2.03	207	P	Pn	10 18 31.2	-1.0
THR5	Thira Island,	2.05	208	P	Pn	10 18 31.6	-0.8
THR6	Thira Island,	2.08	207	P	Pn	10 18 32.5	-0.4
KHL	Karahalli	2.34	87	*e*PN	Pn	10 18 36.9	+0.5
EDC	Edincik	2.35	25	*e*PN	Pn	10 18 37.8	+1.3
KCT	Karacabey	2.47	34	*e*PN	Pn	10 18 39.2	+0.9
RKY	Sarkoy-Tekirda	2.50	11	*e*PN	Pn	10 18 39.6	+0.9
ALN	Alexandroupoli	2.70	352	P	Pn	10 18 41.5	+0.2
ALN				S	Sn	10 19 14.9	+0.8
DID	Didima	2.72	256	P	Pn	10 18 41.4	-0.3
LTK	Loutraki	2.84	267	P	Pn	10 18 43.3	0.0
ALT	Altintas	2.91	72	*e*PN	Pn	10 18 45.6	+1.4
ZKR	Zakros	3.12	185	P	Pn	10 18 47.2	+0.1
YLV	Yalova	3.20	42	*e*PN	Pn	10 18 49.6	+1.4
EDRB	Edirne	3.62	2	*e*PN	Pn	10 18 55.6	+1.6

*ISCJB **15** 10:19:50.5±0.3,1196N±006×8649W±006,h164^{km}±4^{km}, mb4.4/45,Error ellipse: s-maj=12.0km s-min=5.1km az=44.0*
*IDC **15** 10:19:50.4±0.7,1219N×8612W,h145^{km}±5^{km},mb3.8/14, mb1 4.0/14,mb1mx3.9/21,mbtmp3.8/14,Error ellipse: s-maj=22.9km s-min=10.3km az=56.0*
*NEIC **15** 10:19:51.3±1.0,1194N×8657W,h158^{km}±9^{km},mb4.7/32, Error ellipse: s-maj=12.4km s-min=6.5km az=219.0*
*CASC **15** 10:19:51.2±1.9,1245N×8619W,h25^{km}±20^{km},MD4.2, mb4.7(NEIC)*
*BJI **15** 10:19:52.2,1190N×8660W,h158^{km},mB4.8*
ISC 15 10:19:51.4±0.3**,1195N**±006×**8651W**±006**,h157**^{km}±5^{km}**, h155**^{km}±3.0^{km}**:pP-P,n114,**σ1^{s}**12**/94**,mb4.4**/45**,7C-10D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LIM1	Limonal	1.75	135	⇓*i*P	Pn	10 20 23.3	-0.8
LIM1				*i* S	Sn	10 20 48.1	-1.2
CUI	Cuipilapa	1.84	134	⇓*i*P	Pn	10 20 24.3	-0.9
CUI				*i* S	Sn	10 20 50.5	-0.6
2RIO	Dos Rios de Up	1.89	138	⇓*e*P	Pn	10 20 21.3	-4.4
VCR	Vista de Mar	2.00	155	⇑*e*P	Pn	10 20 26.8	-0.3
TGUH	Tegucigalpa,Un	2.23	340	*e*Pn	Pn	10 20 27.9	-1.7
FORC	Fortuna	2.33	129	⇓*e*P	Pn	10 20 30.0	-0.8
JCR	Jicaral	2.50	147	⇑*e*P	Pn	10 20 33.1	+0.2
JCR				*e*S	Sn	10 21 07.7	+2.9
CGA2	Cerro Gallo 2	2.77	134	⇑*e*P	Pn	10 20 36.3	0.0
PRS1	Puriscal	2.91	132	⇓*e*P	Pn	10 20 38.5	+0.6
LAJ	Bijagual	3.13	131	⇓*e*P	Pn	10 20 38.6	-2.0
SJS	Escuela Geolog	3.13	129	*e*P	Pn	10 20 40.2	-0.5
QCR	Quepos	3.40	137	⇑*e*P	Pn	10 20 44.1	0.0
URSC	Urasca	3.41	128	⇓*e*P	Pn	10 20 44.4	+0.3
BUS	Buena Vista	3.60	131	⇑*e*P	Pn	10 20 47.6	+1.0
BAR1		4.13	130	⇓*i*P	Pn	10 20 55.4	+1.8
MRL	Marmol	4.38	315	⇑*e*P	Pn	10 20 57.8	+1.0
NBG	Las Nubes	4.57	305	⇑*e*P	Pn	10 21 00.3	+1.1
ACR	Cerro Adams	4.64	135	*e*P	Pn	10 21 00.5	+0.3
JAT	Jato	5.53	296	⇓*e*P	Pn	10 21 12.6	+0.7
BCIP	Isla Barro Col	7.12	112	*e*Pn	Pn	10 21 33.8	+0.8
TEIG	Tepich	8.40	349	*e*Pn	Pn	10 21 50.0	-0.1
CMIG	Matias Romero	9.59	303	P	Pn	10 22 04.5	-1.3
	12nm,0.3s,baz=149,slow=9.5,SNR=263						
CMIG				S	Sn	10 23 42.8	-9.5
	1.8nm,0.3s,baz=359,slow=16,SNR=3.4						
PAYG	Puerto Ayora	13.09	197	*e*Pn	Pn	10 23 01.8	+10
ROSC	El Rosal	13.95	119	P	Pn	10 23 07.0	+4.5
	2.0nm,0.3s,baz=104,slow=10,SNR=9.0						
ROSC	El Rosal	13.95	119	*e*Pn	Pn	10 23 07.9	+5.4
OTAV	Otavalo	14.12	145	*e*Pn	Pn	10 23 10.8	+6.2
LAPE	La Pedrera	15.35	105	⇓*e*P	x	10 20 20.7	
LAPE				*i* S	x	10 20 43.7	
SDV	Santo Domingo	15.90	100	P	Pn	10 23 26.8	0.0
	1.0nm,0.3s,baz=293,slow=8.3,SNR=27						
SDV	Santo Domingo	15.90	100	*e*Pn	Pn	10 23 27.1	+0.4
	32nm,1.0s						
LSP	Las Mesas	19.74	69	*e*Pn	P	10 24 11.2	+2.0
OBIP	Obispado Ponce	20.15	70	*e*P	P	10 24 14.2	+0.7
ICM	Isla Caja Muer	20.19	71	*e*P	P	10 24 15.3	+1.4
ATAH	Atahualpa	20.48	156	P	P	10 24 22.7	+5.6
	9.7nm,0.8s,baz=345,slow=6.6,SNR=6.4						
VBMS	Vicksburg	20.51	350	*e*P	P	10 24 19.4	+2.2
	36nm,0.8s						
LRAL	Lakeview Retre	20.99	359	*e*P	P	10 24 23.0	+0.7
	30nm,1.0s						
PCRV	Puerto La Cruz	21.54	93	P	P	10 24 29.9	+1.5
	35nm,0.7s,mb4.9,baz=235,slow=5.0,SNR=16						
GOGA	Godfrey	21.54	7	*e*P	P	10 24 28.4	+0.2
	36nm,1.0s,mb4.8						
NHSC	New Hope	21.84	14	*e*P	P	10 24 30.9	-0.4
	102nm,1.1s,mb5.2						
JCT	Junction City	22.18	328	*e*P	P	10 24 34.9	0.0
	12nm,1.0s,mb4.3						
OXF	Oxford	22.62	354	*e*P	P	10 24 38.2	-0.7
	53nm,0.9s,mb5.0						
SWET	Sewanee	23.17	1	*e*P	P	10 24 44.0	0.0
UALR	University of	23.34	348	*e*P	P	10 24 45.6	+0.1
	15nm,1.1s,mb4.3						
CPCT	Cooper Cave	23.47	4	*e*P	P	10 24 46.8	+0.1
TXAR	Lajitas Array	23.55	320	P	P	10 24 48.0	+0.5
	16nm,0.8s,mb4.6,baz=139,slow=9.7,SNR=176						
TXAR				pP		10 25 17.2	
	4.9nm,0.7s,baz=141,slow=9.1,SNR=4.0						
TXAR	Lajitas Array	23.55	320	P	P	10 24 48.0	+0.4
TXAR				pP		10 25 17.2	
TKL	Tuckaleechee C	23.73	6	P	P	10 24 49.2	+0.1
	27nm,0.9s,mb4.8,baz=173,slow=10,SNR=19						
TKL	Tuckaleechee C	23.73	6	*e*P	P	10 24 49.5	+0.4
WVT	Waverly	24.11	357	*e*P	P	10 24 51.8	-0.7
	8.2nm,0.8s,mb4.3						
CNNC	Cliffs of the	24.47	17	*e*P	P	10 24 57.9	+2.0
	28nm,0.9s,mb4.8						
TZTN	Tazewell	24.63	6	*e*P	P	10 24 57.7	+0.5
	22nm,0.9s,mb4.7						
WMOK	Wichita Mounta	25.28	336	*e*P	P	10 25 05.0	+1.8
	12nm,0.8s,mb4.5						
SIUC	Southern Illin	25.77	355	*e*P	P	10 25 07.2	-0.4
	16nm,0.8s,mb4.7						
WCI	Wyandotte Cave	26.17	0	*e*P	P	10 25 10.6	-0.6
	44nm,1.8s,mb4.8						
WCI				*e*pP	pP	10 25 43.8	0.0
CCM	Cathedral Cave	26.34	352	*e*P	P	10 25 11.2	-1.4
	10nm,0.8s,mb4.5						
CCM				*e*pP	pP	10 25 44.7	-0.6
BLO	Bloomington	27.11	360	*e*P	P	10 25 18.1	-1.4
	89nm,2.2s,mb5.0						
CBN	Corbin	27.39	16	*e*P	P	10 25 23.1	+1.0
	22nm,0.6s,mb5.0						
ACSO	Alum Creek Sta	28.34	6	*e*P	P	10 25 30.2	-0.3
	27nm,1.1s,mb4.9						
HDIL	Hopedale	28.60	356	*e*P	P	10 25 31.7	-1.0
	17nm,0.8s,mb4.8						
SDMD	Soldier's Deli	28.66	16	*e*P	P	10 25 33.7	+0.3
	27nm,1.1s,mb4.9						
ANMO	Albuquerque	29.20	325	P	P	10 25 39.4	+1.2
	2.1nm,0.8s,mb3.9,baz=144,slow=7.0,SNR=10						
MVL	Millersville	29.35	16	*e*P	P	10 25 40.3	+0.9
	42nm,1.4s,mb5.0						
SSPA	Standing Stone	29.57	13	*e*P	P	10 25 41.4	+0.1
	20nm,1.0s,mb4.8						
SDCO	Great Sand Dun	30.80	330	*e*P	P	10 25 53.0	+0.8
	22nm,2.3s,mb4.5						
SDCO				*e*pP	pP	10 26 28.4	+3.0
JFWS	Jewell Farm	31.02	355	*e*P	P	10 25 52.9	-1.2
	17nm,0.8s,mb4.8						
BINY	Binghamton	31.50	15	*e*P	P	10 25 58.5	+0.1
	46nm,0.8s,mb5.2						
WUAZ	Wupatki	32.51	320	*e*P	P	10 26 09.6	+2.3
	8.4nm,1.1s,mb4.4						
TRY	Troy	32.64	18	*e*P	P	10 26 09.0	+0.8
ECSD	EROS,Sioux Fal	32.85	346	*e*P	P	10 26 08.3	-1.8
	8.5nm,1.0s,mb4.4						
SRU	San Rafael	34.44	326	*e*P	P	10 26 24.9	+0.9
	3.8nm,0.8s,mb4.2						
MPU	Maple Canyon	35.69	326	*e*P	P	10 26 35.6	+1.0
	7.4nm,1.0s,mb4.3						
MPU				*e*pP	pP	10 27 10.0	+1.8
PDAR	Pinedale Array	36.65	331	P	P	10 26 42.4	-0.4
	1.1nm,0.7s,mb3.6,baz=128,slow=10.0,SNR=11						
PDAR				pP	pP	10 27 13.8	-2.8
	2.1nm,0.8s,baz=126,slow=7.5,SNR=7.1						
AGMN	Agassiz Refuge	37.07	350	*e*P	P	10 26 44.6	-1.5

9.9nm,0.8s,mb4.5
SIV San Ignacio 37.47 137 P P 10 26 49.8 -0.1
4.0nm,0.5s,mb4.3,baz=322,slow=11,SNR=5.9
REDW Red Top Meadow 37.72 331 eP P 10 26 52.0 +0.2
1.3nm,0.4s,mb3.9
REDW epP pP 10 27 25.4 -0.3
SNOW Snow King Moun 37.75 331 eP P 10 26 52.6 +0.6
9.5nm,0.8s,mb4.5
SNOW epP pP 10 27 26.3 +0.4
MTUM Tungsten Hills 38.26 317 eP P 10 26 53.5 -2.9
NVAR Mina Array Bea 38.69 319 P P 10 27 01.3 +1.4
1.5nm,0.6s,mb3.8,baz=129,slow=7.9,SNR=17
NVAR PcP PcP 10 29 09.9 +1.2
0.5nm,0.8s,baz=150,slow=4.0,SNR=3.5
ULM Lac du Bonnet 38.96 350 P P 10 26 59.6 -2.3
7.1nm,0.5s,mb4.5,baz=171,slow=10.0,SNR=13
HLID Hailey 39.65 328 eP P 10 27 08.4 +0.6
OHCM Honcut 41.26 318 eP P 10 27 16.3 -4.9
SCHQ Schefferville 45.50 16 P P 10 27 53.1 -1.7
5.1nm,0.4s,mb4.5,baz=215,slow=6.4,SNR=32
CFAA Coronel Fontan 46.71 158 P P 10 28 05.6 +1.0
0.2nm,0.5s,baz=21,slow=8.1,SNR=3.7
BDFB Brasilia 46.93 125 P P 10 28 04.0 -2.6
2.3nm,0.7s,mb3.9,baz=296,slow=18,SNR=6.1
CPUP Villa Florida 47.46 144 P P 10 28 09.2 -1.3
0.4nm,0.4s,mb3.5,baz=333,slow=11,SNR=3.7
CPUP pP pP 10 28 44.1 -1.6
1.2nm,0.6s,baz=354,slow=2.0,SNR=2.1
YKA Yellowknife Ar 54.34 344 P P 10 28 59.4 -1.9
1.1nm,0.6s,mb3.7,baz=138,slow=7.3,SNR=26
YKA pP pP 10 29 33.5 -4.0
1.3nm,0.7s,baz=139,slow=7.4,SNR=6.9
YKA Yellowknife Ar 54.34 344 P P 10 28 59.4 -1.9
YKA pP pP 10 29 33.5 -4.0
RES Resolute Bay 62.90 358 P P 10 29 59.6 -0.8
1.0nm,0.4s,mb4.0,baz=178,slow=14,SNR=11
RES pP pP 10 30 34.2 -3.3
1.8nm,0.7s,baz=183,slow=12,SNR=3.8
RES Resolute Bay 62.90 358 P P 10 29 59.6 -0.8
RES pP pP 10 30 34.2 -3.3
EKA Eskdalemuir Ar 76.49 36 P P 10 31 21.6 -2.2
1.3nm,0.8s,mb3.6,baz=260,slow=7.1,SNR=4.1
ESDC Sonseca Array 76.77 52 P P 10 31 24.6 -1.1
1.1nm,0.7s,mb3.6,baz=283,slow=5.3,SNR=5.8
ESDC pP pP 10 32 00.3 -4.0
2.0nm,0.7s,baz=282,slow=5.3,SNR=3.5
NOA NORSAR Array B 83.36 29 P P 10 31 59.7 -0.9
1.2nm,0.8s,mb3.6,baz=284,slow=4.9,SNR=3.0
TORD Torodi Ar. Bea 85.62 78 pP pP 10 32 47.9 -4.3
0.5nm,0.6s,baz=291,slow=4.0,SNR=3.2
CN2 Changchun 117.34 334 ePKP PKPdf 10 38 18.8 +0.4
BJI Beijing 124.15 339 PKP PKPdf 10 38 32.4 +0.8
WMQ Urumqi 124.25 5 ePKP PKPdf 10 38 32.6 +0.9
HHC Hu-ho-hao-te 124.87 343 ePKP PKPdf 10 38 32.0 -1.0
HHC XPKP 10 39 31.1
HHC PP PP 10 40 24.6 +2.9
HHC PKS 10 42 07.4
HHC SKS SKSdf 10 45 26.8 -3.5
HHC SKKS SKKSac 10 46 58.3 -7.5
HHC PP PP
comp=Z,426nm,9.9s
HHC LR LR
comp=N,221nm,16.6s
HHC LR LR
comp=E,240nm,15.5s
HHC LR LR
comp=Z,296nm,16.6s
TOO Toolangi 127.13 232 eP PKPdf 10 38 38.7 +1.4
GTA Gaotai 128.57 354 ePKP PKPdf 10 38 46.0 +5.9
NJ2 Nanjing 129.96 332 ePKP PKPdf 10 38 43.3 +0.3
LZH Lanzhou 131.24 349 ePKP PKPdf 10 38 45.0 -0.3
LZH LR LR
comp=E,107nm,18.5s
LZH LR LR
comp=Z,175nm,20.1s
STKA Stephens Creek 131.61 238 eP PKPdf 10 38 44.1 -1.9
comp=Z,0.7nm,0.6s
STKA e 10 38 47.4
STKA e 10 39 21.4
STKA Stephens Creek 131.61 238 PKP PKPdf 10 38 47.4 +1.4
comp=Z,3.8nm,0.7s,baz=30,slow=2.2,SNR=11
XAN Xi'an 131.97 343 PKP PKPdf 10 38 46.5 -0.2
XAN XPKP 10 39 45.3
XAN PP PP 10 41 11.9 +3.8
XAN SKS SKSdf 10 45 39.9 -3.8
XAN SKKS SKKSac 10 47 44.3 -6.0
XAN LR LR
comp=N,36nm,21.8s
XAN LR LR
comp=Z,82nm,23.8s
CD2 Chengdu 136.26 347 ePKP PKPdf 10 38 54.6 -0.3
GYA Guiyang 139.73 342 ePDIF Pdif 10 36 12.3 -2.9
GYA PKP PKPdf 10 39 00.4 -0.9
GYA XPKP 10 39 57.8
GYA PP PP 10 42 00.6 +3.7
GYA PP PP
comp=Z,80nm,8.7s
ASAR Alice Springs 139.94 247 PKhKP 10 38 54.8
comp=Z,0.4nm,0.8s,baz=221,slow=28,SNR=4.7
ASAR PKP PKPdf 10 39 03.1 +1.4
comp=Z,3.5nm,0.7s,baz=98,slow=1.8,SNR=12
ASAR pPKP pPKPdf 10 39 40.9 -2.4
comp=Z,0.8nm,0.8s,baz=100,slow=1.7,SNR=2.0
WB2 Warramunga Arr 140.00 253 eP 10 38 56.9
WB2 e PKPdf 10 39 03.3 +1.4
WB2 e 10 39 43.1
WRA Warramunga Arr 140.01 253 PKhKP 10 38 56.9
comp=Z,0.4nm,0.4s,baz=91,slow=3.2,SNR=12
WRA PKP PKPdf 10 39 03.2 +1.2
comp=Z,6.0nm,0.7s,baz=91,slow=2.1,SNR=13
KMI Kunming 142.07 346 PKP PKPdf 10 39 05.1 -0.5
FITZ Fitzroy Crossi 148.39 255 eP PKPdf 10 39 17.6 +1.1
comp=Z,5.1nm,1.1s
FITZ e 10 39 21.8
FITZ e 10 40 01.9
CMAR Chiang Mai Arr 149.31 350 PKP PKPdf 10 39 17.9 -0.2
comp=Z,0.9nm,0.3s,baz=332,slow=3.1,SNR=3.4
CMAR PKPbc PKPbc 10 39 21.6 -0.9
comp=Z,1.0nm,0.3s,baz=327,slow=4.3,SNR=4.2
KLBR Kellerberrin 150.30 225 eP PKPbc 10 39 25.2 +0.6
comp=Z,21nm,0.8s
BATI Baumata 150.35 270 PKPbc PKPbc 10 39 27.8 +2.7
comp=Z,10nm,0.3s,baz=263,slow=1.8,SNR=3.7
MUN Mundaring 151.11 223 eP PKPbc 10 39 27.3 +0.8

MOS ***15*** *10:20:29.5±0.8, 52.29N×159.76E, h17km, mb4.0/4, Error ellipse: s-maj=20.6km s-min=9.2km az=88.1*
ISCJB ***15*** *10:20:32.3±0.8, 52.37N±0.005×159.52E±0.008, h50km±8km, mb3.8/5, Error ellipse: s-maj=10.1km s-min=5.9km az=137.9*
KRSC ***15*** *10:20:32.3±0.2, 52.47N×159.50E, h17km±17km, ML4.3*
IDC ***15*** *10:20:33.8±4.8, 52.16N×159.04E, h74km±25km, mb3.4/5, mb1 3.7/5, mb1mx3.3/24, mbtmp3.4/5, MS4.3/1, Ms1 4.3/1, ms1mx3.4/26, Error ellipse: s-maj=83.0km s-min=30.6km az=26.0*
ISC 15 10:20:33.7±0.7, 5238N±0.005×15945E±0.007, h46km±9km, n35, σ1§36/48, mb3.8/5, 2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RUS	Russkaya	0.57	276	*i* P		Pn	10 20 44.6	-1.0
RUS				*i* S		Sn	10 20 53.4	-0.7
NLC	Nalytchevo	0.80	356	eP		Pn	10 20 46.4	-2.2
NLC				*i* S		Sn	10 20 57.6	-1.8
SPN	Mys Shipunski	0.81	26	*i* P		Pn	10 20 46.4	-2.2
SPN				*i* S		Sn	10 20 57.1	-2.4
PET	Petropavlovsk	0.81	324	*i* PN		Pn	10 20 47.2	-1.5
PET				*e*S		Sn	10 20 57.0	-2.6
PET				pmax	pmax			
comp=Z,720nm,0.7s								
PET				smax				
comp=N,1μm,0.3s								
PET				smax				
comp=N,867nm,0.3s								
PET				smax				
comp=E,498nm,0.2s								
PET	Petropavlovsk	0.81	324	*i* P		Pn	10 20 47.2	-1.5
PET				*i* S		Sn	10 20 57.5	-2.1
GRL	Gorelyy	0.86	282	*i* P		Pn	10 20 49.7	+0.4
GRL				*i* S		Sn	10 21 01.8	+1.0
AVH	Avacha	0.99	335	*i* P		Pn	10 20 50.2	-0.9
AVH				*i* S		Sn	10 21 03.3	-0.7
PETK	Petropavlovsk-	1.29	305	P		Pn	10 20 54.8	-0.4
comp=E,27nm,0.3s,baz=106,slow=20,SNR=251								
PETK				S		Sn	10 21 12.2	+0.8
comp=E,60nm,0.3s,baz=237,slow=20,SNR=19								
GNL	Ganaly	1.60	326	*i* P		Pn	10 20 59.2	-0.3
GNL				*i* S		Sn	10 21 19.2	+0.2
KII	Karymskiy	1.66	0	*e*P		Pn	10 21 00.3	0.0
KII				*i* S		Sn	10 21 20.0	-0.4
SKR	Severo-Kuril's	2.68	232	*e*PN		Pn	10 21 16.5	+2.2
SKR				pmax	pmax			
comp=Z,90nm,0.2s								
TUMR	Tumrok	2.94	8	*e*P		Pn	10 21 18.9	+1.1
TUMR				*i* S		Sn	10 21 53.6	+1.7
KMNR	Kamenistaya	3.42	8	*e*P		Pn	10 21 26.5	+2.1
BZMR	Bezymyannaya	3.62	9	*e*P		Pn	10 21 28.0	+0.9
KIRR	Kirishev	3.62	8	*e*P		Pn	10 21 28.7	+1.5
BZGR	Bezymyannyi-Gr	3.65	11	*e*P		Pn	10 21 28.8	+1.3
BZGR				*i* S		Sn	10 22 11.6	+2.4
KOZ	Kozyrevsk	3.70	4	*e*P		Pn	10 21 29.7	+1.5
KOZR	Kozyr	3.71	4	PN		Pn	10 21 29.7	+1.4
ZLN	Zelenaya	3.74	12	*e*P		Pn	10 21 30.3	+1.6
KRSR	Krestovskiy	3.91	9	*e*P		Pn	10 21 33.1	+2.1
SRDR	Sredinnyy	3.95	2	*e*P		Pn	10 21 31.8	+0.1
KLY	Klyuchi	4.01	10	*e*P		Pn	10 21 33.9	+1.5
KBTR	Krutoberegovo	4.32	26	*i* P		Pn	10 21 36.7	0.0
KBTR				*i* S		Sn	10 22 24.0	-1.7
SRKR	Sorokina	4.40	12	*e*P		Pn	10 21 38.0	+0.1
FX1	Attu Island--F	8.37	81	P		Pn	10 22 30.8	-1.4
comp=Z,2.8nm,0.3s,baz=94,slow=18,SNR=8.4								
FX1				S		Sn	10 23 55.6	-10
comp=Z,6.5nm,0.3s,baz=285,slow=23,SNR=13								
JHJ	Hachijo jima 2	23.92	224	LR		LR	10 34 11.2	
comp=Z,705nm,19.7s,baz=332,slow=35								
YKA	Yellowknife Ar	43.96	42	P		P	10 28 34.8	-0.8
comp=Z,0.5nm,0.6s,mb3.4,baz=296,slow=7.9,SNR=7.3								
YKA	Yellowknife Ar	43.96	42	*e*P		P	10 28 34.8	-0.8
YKA				pmax	pmax			
comp=Z,1.0nm,0.6s								
PDAR	Pinedale Array	58.22	60	P		P	10 30 22.9	+0.1
comp=Z,0.5nm,0.6s,mb3.8,baz=300,slow=3.3,SNR=3.9								
NOA	NORSAR Array B	64.12	343	P		P	10 31 00.6	-1.9
comp=Z,0.8nm,0.8s,mb3.8,baz=16,slow=5.5,SNR=4.6								
NOA	NORSAR Array B	64.12	343	P		P	10 31 00.6	-1.9
NOA				pmax	pmax			
comp=Z,1.0nm,0.8s								
HFS	Hagfors	64.51	342	P		P	10 31 02.8	-2.2
comp=Z,2.2nm,0.9s,mb4.2,baz=58,slow=3.8,SNR=6.9								
HFS	Hagfors	64.51	342	P		P	10 31 02.8	-2.2
HFS				pmax	pmax			
comp=Z,2.0nm,0.9s								
TXAR	Lajitas Array	71.28	66	P		P	10 31 48.0	-0.1
comp=Z,0.5nm,0.7s,mb3.6,baz=296,slow=4.5,SNR=5.8								
TXAR	Lajitas Array	71.28	66	*e*P		P	10 31 48.0	-0.1
TXAR				pmax	pmax			
comp=Z,1.0nm,0.7s								

ISCJB ***15*** *10:36:51.4±0.9, 6.17S±0.05×104.4E±0.1, h10km, mb3.6/5, Error ellipse: s-maj=15.5km s-min=7.7km az=174.1*
IDC ***15*** *10:36:52.7±1.3, 5.89S×104.69E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.7/21, mbtmp3.7/7, ML4.6/1, Error ellipse: s-maj=63.7km s-min=18.8km az=47.0*
NEIC ***15*** *10:36:53.5±0.8, 6.07S×104.55E, h10km, mb3.9/2, Error ellipse: s-maj=29.5km s-min=11.9km az=59.0*
DJA ***15*** *10:36:57, 6.03S×104.74E, h10km, MLv4.4/2*
ISC 15 10:36:53.8±6.3, 6.10S±0.006×104.5E±0.01, h11km±40km, n15, σ0§87/15, mb3.6/5, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KLI	Kotabumi	1.28	16	P		Pn	10 37 17.8	+0.2
KLI				S		Sb	10 37 34.2	-0.1
DBJI	Dramaga	2.27	102	P		Pn	10 37 30.8	-0.5
LEM	Lembang	3.17	103	P		Pn	10 37 45.6	+1.9
XMIS	Christmas Isla	4.50	165	*e*P		Pn	10 38 01.3	-0.6
XMIS				*e*			10 38 08.0	
BATI	Baumata	19.39	103	P		Pn	10 41 20.2	-0.9
1.6nm,0.3s,baz=214,slow=2.0,SNR=2.9								
WRA	Warramunga Arr	32.08	118	P		P	10 43 20.4	-0.6
0.2nm,0.5s,baz=306,slow=9.1,SNR=4.7								
WRAB	Tennant Creek	32.08	118	*e*P		P	10 43 20.6	-0.5
0.4nm,0.4s,mb3.6								
WB2	Warramunga Arr	32.09	118	*e*P		P	10 43 21.1	0.0
ASAR	Alice Springs	33.23	125	P		P	10 43 31.1	0.0
0.6nm,0.8s,mb3.6,baz=297,slow=8.1,SNR=6.9								
STKA	Stephens Creek	43.08	131	*e*P		P	10 44 55.1	+1.1
2.8nm,0.6s,mb4.2								
STKA	Stephens Creek	43.08	131	P		P	10 44 55.4	+1.3
1.9nm,0.5s,mb4.1,baz=309,slow=9.5,SNR=9.5								
SONM	Songino Array	53.73	2	P		P	10 46 15.6	-0.1
0.2nm,0.5s,mb3.3,baz=184,slow=6.4,SNR=2.6								
MKAR	Makanchi Array	56.23	342	P		P	10 46 32.6	-1.3
0.1nm,0.4s,baz=141,slow=7.8,SNR=4.0								
BRTR	Keskin Array B	79.39	312	P		P	10 49 01.6	+1.5
0.5nm,0.6s,mb3.6,baz=115,slow=6.8,SNR=3.0								
TXAR	Lajitas Array	144.77	46	PKP		PKPdf	10 56 31.1	-0.4
0.2nm,0.6s,baz=259,slow=1.6,SNR=4.6								

ISCJB ***15*** *10:46:53.1±0.2, 24.17N±0.002×122.52E±0.002, h66km±3km, mb3.6/8, Error ellipse: s-maj=4.0km s-min=2.1km az=163.4*
TAP ***15*** *10:46:53.6, 24.14N×122.48E, h58km, ML4.6, C*
NEIC ***15*** *10:46:53.3±0.7, 24.18N×122.53E, h57km±8km, MG3.9(JMA), Error ellipse: s-maj=10.7km s-min=9.3km az=111.0*
JMA ***15*** *10:46:54.0±0.1, 24.28N×122.52E, h69km±1km, M3.9*
IDC ***15*** *10:46:55.1±0.8, 24.33N×122.65E, h74km±7km, mb3.4/8, mb1 3.6/9, mb1mx3.5/22, mbtmp3.5/9, MS4.4/1, Ms1 4.4/1, ms1mx3.4/31, Error ellipse: s-maj=17.3km s-min=12.7km az=75.0*
ISC 15 10:46:54.0±0.2, 24.16N±0.002×122.51E±0.002, h59km±4km, h77km±3.1km: pP-P, n93, σ1§05/150, mb3.7/8, 18C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOJ	Yonaguni jima	0.55	57	P		Pn	10 47 06.6	+0.2
YOJ				S		Sn	10 47 15.8	+0.4
YOJ	Yonaguni jima	0.55	57	*i* P		Pn	10 47 06.7	+0.4
baz=55								
YOJ				S		Sn	10 47 15.7	+0.3
baz=55								
TWC	Suao	0.75	306	*i* P		Pn	10 47 08.4	-0.3
baz=309								
TWC				*i* S		Sn	10 47 18.2	-1.4
baz=309								
ENA	Nanau	0.75	291	*i* P		Pn	10 47 08.5	-0.3
baz=301								
ENA				*e*S		Sn	10 47 18.8	-0.9
baz=301								
NACB	Ninganchiao	0.84	271	*e*Pg		Pn	10 47 08.9	-1.0
NACB				*e*S		Sn	10 47 16.0	-5.6
TWD	Chiawan	0.84	265	*i* P		Pn	10 47 09.0	-0.9
baz=258								
TWD				*e*S		Sn	10 47 19.6	-2.0
baz=258								
HWA	Hwalien	0.85	258	*e*P		Pn	10 47 09.1	-1.0
baz=259								
HWA				*e*S		Sn	10 47 20.8	-1.0
baz=259								
ILA	Ilan	0.92	311	P		Pn	10 47 11.2	+0.3
baz=323								
ILA				S		Sn	10 47 24.3	+0.9
baz=323								
TWE	Neicheng	0.95	306	*i* P		Pn	10 47 11.5	+0.2
baz=302								
TWE				S		Sn	10 47 24.8	+0.7
baz=302								
ESF	Shoufeng Towns	0.96	253	*e*P		Pn	10 47 09.6	-1.9
baz=250								
TWB1	Santiao Chiao	0.97	331	*i* P		Pn	10 47 11.5	-0.1
baz=341								
TWB1				S		Sn	10 47 24.0	-0.5
baz=341								
ENTT	Nioudou	0.98	299	*i* P		Pn	10 47 12.0	+0.2
baz=301								
ENTT				*e*S		Sn	10 47 24.9	0.0
baz=301								
TEGC	Jichi Village	1.00	243	*e*P		Pn	10 47 10.7	-1.2
baz=235								
TEGC				*e*S		Sn	10 47 24.0	-1.2
baz=235								
ESL	Shilin	1.04	251	*i* P		Pn	10 47 11.3	-1.3
baz=251								
NNS	Nan Shan	1.07	285	*i* P		Pn	10 47 12.8	-0.2
baz=287								
NNS				*e*S		Sn	10 47 26.6	-0.4
baz=287								
NWF	Wu-fen Shan	1.12	324	*i* P		Pn	10 47 13.7	+0.1
baz=326								
IRIF	Iriomote-Funau	1.13	81	P		Pn	10 47 14.0	+0.4
IRIF				S		Sn	10 47 29.0	+0.7
WHF	Hehuan Shan	1.14	269	*i* P		Pn	10 47 13.5	-0.3
baz=261								
WHF				*e*S		Sn	10 47 27.6	-1.0
baz=261								
YHNB	Yeheng	1.15	296	*e*Pn		Pn	10 47 13.6	-0.4
NSK	Sanguang	1.17	296	*i* P		Pn	10 47 14.4	+0.2
baz=288								
NSK				S		Sn	10 47 28.4	-0.9
baz=288								
TWA	Mucha	1.17	314	*i* P		Pn	10 47 14.5	+0.2
baz=326								
TWA				*e*S		Sn	10 47 28.9	-0.5
baz=326								
HATJ	Hateruma jima	1.19	95	P		Pn	10 47 15.0	+0.5
HATJ				*e*S		Sn	10 47 31.3	+1.6
TWT	Tachien	1.22	274	*i* P		Pn	10 47 15.3	+0.4
baz=266								
TWT				S		Sn	10 47 30.3	-0.2
baz=266								
TATO	Taipei	1.23	311	*e*Pn		Pn	10 47 15.0	-0.1
TAP1	Taipei	1.25	314	*e*P		Pn	10 47 14.6	-0.8
baz=328								
EHY	Hungye	1.27	239	*i* P		Pn	10 47 14.5	-1.1
baz=237								
EHY				*e*S		Sn	10 47 28.3	-3.4
baz=237								
YULB	Yu-li	1.35	236	*e*Pn		Pn	10 47 15.5	-1.1
YULB				*e*Sn		Sn	10 47 28.0	-5.6
TWS1	Kuangyinshan	1.36	313	*i* P		Pn	10 47 17.0	+0.2
baz=324								
TWS1				*e*S		Sn	10 47 35.6	+1.6
baz=324								
JKRS	Kuro-shima	1.37	87	P		Pn	10 47 17.6	+0.7
JKRS				S		Sn	10 47 35.1	+1.0
TWF1	Yuli	1.37	234	*i* P		Pn	10 47 16.1	-0.8
baz=247								
TWF1				*e*S		Sn	10 47 32.1	-2.0
baz=247								
TWY	Chenhua	1.38	323	*e*P		Pn	10 47 17.1	0.0
baz=325								
NCU	National Centr	1.45	304	P		Pn	10 47 18.4	+0.5
baz=305								
NCU				*e*S		Sn	10 47 36.6	+0.7
baz=305								
NSTT	Nanjuang	1.45	289	*i* P		Pn	10 47 18.8	+0.8
baz=290								
NSTT				S		Sn	10 47 36.3	+0.2
baz=290								
SSLB	Suanglung	1.47	256	*e*Pn		Pn	10 47 17.9	-0.4
CHKT	Chengkung	1.49	225	P		Pn	10 47 16.8	-1.7
baz=220								
CHKT				*e*S		Sn	10 47 33.0	-4.0
baz=220								
SMLT	Sun Moon Lake	1.50	260	*i* P		Pn	10 47 18.8	+0.2
baz=260								
SMLT				*e*S		Sn	10 47 36.4	-0.8
baz=260								
JIJ	Ishigaki jima	1.50	82	P		Pn	10 47 18.8	+0.1
JIJ				S		Sn	10 47 36.9	-0.4
PCYT	Pengchaiyu	1.51	345	P		Pn	10 47 18.9	+0.1
baz=346								
TYC	Yuchr	1.53	261	*i* P		Pn	10 47 19.1	0.0
baz=261								
TYC				S		Sn	10 47 37.2	-0.9
baz=261								
HSN	Hsinchu	1.54	295	*e*P		Pn	10 47 18.6	-0.6
baz=298								
TWQ1	Liyutan	1.60	277	*i* P		Pn	10 47 20.9	+1.0
baz=278								
TWQ1				S		Sn	10 47 40.7	+1.1
baz=278								
TCU	Taichung	1.68	270	P		Pn	10 47 21.8	+0.8
baz=270								
TCU				*e*S		Sn	10 47 42.8	+1.3
baz=270								
ELDTW	Lidau	1.68	235	*i* P		Pn	10 47 20.2	-0.9
baz=227								
ELDTW				*e*S		Sn	10 47 39.3	-2.2
baz=227								
WNT	Mingjian	1.69	261	P		Pn	10 47 22.6	+1.4
baz=252								
WNT				S		Sn	10 47 43.0	+1.1
baz=252								
CHN5	Tsauling	1.77	252	*e*P		Pn	10 47 23.0	+0.7
baz=252								
WGK	Gukeng	1.84	255	*e*P		Pn	10 47 24.4	+1.1
baz=256								
TWG	Pinlang	1.88	225	*e*Pn		Pn	10 47 22.2	-1.6
TWG				*e*Sn		Sn	10 47 37.5	-8.9
TWG	Pinlang	1.88	225	*i* P		Pn	10 47 22.4	-1.4
baz=234								
TWG				*e*S		Sn	10 47 43.0	-3.5
baz=234								
TTN	Taitung	1.88	222	*e*P		Pn	10 47 22.8	-1.0
baz=231								
TPUB	Ta-pu	1.93	244	*e*Pn		Pn	10 47 25.4	+1.0
TPUB				*e*Sn		Sn	10 47 48.5	+1.0
CHN4	Tsaushan	1.93	246	*e*P		Pn	10 47 25.7	+1.1
baz=246								
CHN4				*e*S		Sn	10 47 49.1	+1.4
baz=246								
WTP	Ta-pu	1.96	243	*e*P		Pn	10 47 25.6	+0.7
baz=243								
WTP				*e*S		Sn	10 47 49.8	+1.3
baz=243								
CHN2	Minshiung	1.97	252	*e*P		Pn	10 47 25.7	+0.7
baz=252								
CHN2				*e*S		Sn	10 47 50.4	+1.8
baz=252								
CHY	Chiayi	2.02	251	*e*P		Pn	10 47 26.3	+0.6
baz=252								
CHY				*e*S		Sn	10 47 51.2	+1.3
baz=252								
JTJ	Tarama	2.05	76	P		Pn	10 47 26.7	+0.5
JTJ				S		Sn	10 47 50.5	-0.2
TWK	Hsinying	2.06	245	*e*P		Pn	10 47 27.4	+1.2
baz=245								
TWK				*e*S		Sn	10 47 52.0	+1.3
baz=245								
WTCT	Ta-ch'eng	2.06	262	*e*P		Pn	10 47 26.3	+0.1
baz=273								
WTCT				*e*S		Sn	10 47 51.4	+0.6
baz=273								
CHN1	Nanshi	2.06	242	*e*P		Pn	10 47 27.2	+0.9
baz=252								
CHN1				*e*S		Sn	10 47 52.2	+1.3
baz=252								
ECL	Taimali	2.12	223	P		Pn	10 47 25.4	-1.6
baz=229								
WSF	Szhu	2.16	256	*e*P		Pn	10 47 25.3	-2.3
baz=257								
WSF				*e*S		Sn	10 47 54.8	+1.5
baz=257								
SSD	Sandimen	2.23	231	P		Pn	10 47 28.5	0.0
baz=228								
CHN3	Shinhua	2.25	242	*e*P		Pn	10 47 29.9	+1.1
baz=250								
CHN8	Yiju	2.26	249	*e*P		Pn	10 47 29.4	+0.5
baz=250								
CHN8				*e*S		Sn	10 47 56.7	+1.0
baz=250								
LAY	Lan-yu	2.29	203	*i* P		Pn	10 47 27.6	-1.9
baz=198								
LAY				*e*S		Sn	10 47 51.3	-5.2
baz=198								
TAW	Tawu	2.33	220	*e*P		Pn	10 47 31.4	+1.5
baz=227								
TAW				*e*S		Sn	10 47 54.4	-3.0
baz=227								
TWM1	Shoushan	2.33	236	*e*P		Pn	10 47 32.9	+2.9
baz=248								
SCLT	Jiali	2.34	246	*e*P		Pn	10 47 30.0	-0.1
baz=246								
SCLT				*e*S		Sn	10 47 59.0	+1.3
baz=246								
SCZT	Fangliau	2.49	225	*e*P		Pn	10 47 32.5	+0.4
baz=222								

JMJ	**Miyako jima 2**	**2.62**	**75**	P	**Pn**	**10 47 34.7**	**+0.9**
JMJ				S	**Sn**	**10 48 04.9**	**+0.4**
TWP	**Hsiaoliuchiu**	**2.68**	**228**	*e*P	**Pn**	**10 47 37.1**	**+2.4**
	baz=227						
HEN	**Hengchun**	**2.70**	**218**	*e*P	**Pn**	**10 47 37.6**	**+2.7**
	baz=217						
JOGS	**Gusukube**	**2.71**	**77**	P	**Pn**	**10 47 36.0**	**+1.0**
JOGS				*e*S	**Sn**	**10 48 07.5**	**+0.9**
TWK1	**Hengchun**	**2.71**	**216**	*e*P	**Pn**	**10 47 34.2**	**-1.0**
	baz=219						
PNG	**Penghu**	**2.77**	**258**	*e*P	**Pn**	**10 47 35.0**	**-0.9**
	baz=258						
KNM	**Kinmen**	**3.73**	**275**	*e*P	**Pn**	**10 47 48.8**	**-0.2**
	baz=265						
JKE	**Kume jima 2**	**4.43**	**60**	P	**Pn**	**10 47 58.8**	**+0.1**
JKE				*e*S	**Sn**	**10 48 48.6**	**-0.3**
JAGN	**Aguni-jima**	**4.91**	**60**	P	**Pn**	**10 48 05.5**	**+0.2**
JAGN				*e*S	**Sn**	**10 48 59.8**	**-1.0**
JOW	**Kunigami**	**5.85**	**62**	P	**Pn**	**10 48 17.0**	**-1.1**
	5.7nm,0.3s,baz=229,slow=8.9,SNR=32						
JOW				S	**Sn**	**10 49 20.6**	**-3.1**
	2.1nm,0.3s,baz=110,slow=26,SNR=3.2						
JOW	**Kunigami**	**5.85**	**62**	P	**Pn**	**10 48 17.0**	**-1.1**
JOW				*e*S	**Sn**	**10 49 20.0**	**-3.8**
JOW	**Kunigami**	**5.85**	**62**	*e*P	**Pn**	**10 48 16.6**	**-1.5**
	baz=62						
JTK	**Tokunoshima**	**6.83**	**57**	P	**Pn**	**10 48 29.8**	**-1.7**
JTK				*e*S	**Sn**	**10 49 43.4**	**-4.4**
JAM	**Amami Oshima**	**7.64**	**55**	P	**Pn**	**10 48 40.6**	**-2.1**
JMZ	**Minamidaito 2**	**8.07**	**76**	P	**Pn**	**10 48 44.7**	**-3.9**
JMZ				*e*S	**Sn**	**10 50 08.4**	**-10**
KSRS	**Korea Array**	**14.04**	**18**	P	**Pn**	**10 50 12.6**	**+2.8**
	0.6nm,0.3s,baz=196,slow=11,SNR=23						
SONM	**Songino Array**	**26.87**	**336**	P	**P**	**10 52 28.5**	**-0.5**
	1.1nm,0.8s,mb3.5,baz=152,slow=11,SNR=8.2						
SONM				pP	pP	10 52 43.8	+0.3
	0.8nm,0.8s,baz=123,slow=5.5,SNR=3.3						
MKAR	**Makanchi Array**	**39.20**	**315**	P	**P**	**10 54 15.9**	**-0.3**
	0.5nm,0.4s,mb3.6,baz=99,slow=9.9,SNR=21						
ZALV	**Zalesovo Beam**	**40.92**	**327**	P	**P**	**10 54 28.9**	**-1.5**
	1.3nm,0.5s,mb3.8,baz=100,slow=8.1,SNR=7.2						
ZALV				PcP	PcP	10 56 28.3	-1.6
	0.6nm,0.6s,baz=107,slow=3.5,SNR=3.0						
WRA	**Warramunga Arr**	**45.33**	**164**	P	**P**	**10 55 06.1**	**-0.2**
	0.3nm,0.4s,mb3.4,baz=347,slow=8.7,SNR=6.1						
WRA				pP	pP	10 55 25.5	+3.9
	0.2nm,0.4s,baz=345,slow=8.7,SNR=2.5						
WRA				PcP	PcP	10 56 44.3	-0.8
	0.5nm,0.6s,baz=345,slow=3.4,SNR=5.7						
BVAR	**Borovoye Array**	**48.46**	**320**	LR	LR	11 16 38.1	
	comp=Z,426nm,19.9s,baz=179,slow=37						
ASAR	**Alice Springs**	**48.81**	**166**	P	**P**	**10 55 33.8**	**+0.4**
	0.4nm,0.6s,mb3.6,baz=350,slow=6.4,SNR=4.7						
ASAR				pP	pP	10 55 53.6	+4.8
	0.3nm,0.5s,baz=353,slow=14,SNR=2.4						
ASAR				PcP	PcP	10 56 56.9	-0.5
	0.3nm,0.6s,baz=350,slow=5.0,SNR=3.7						
STKA	**Stephens Creek**	**58.64**	**161**	P	**P**	**10 56 45.3**	**+0.2**
	0.8nm,0.5s,mb4.0,baz=170,slow=19,SNR=2.7						
STKA				pP	pP	10 57 04.5	+3.6
	1.2nm,0.7s,baz=315,slow=11,SNR=2.0						
NOA	**NORSAR Array B**	**78.81**	**332**	P	**P**	**10 58 49.0**	**-1.2**
	0.6nm,0.8s,mb3.6,baz=56,slow=5.8,SNR=2.6						
YKA	**Yellowknife Ar**	**82.52**	**23**	P	**P**	**10 59 09.3**	**-0.7**
	0.7nm,0.6s,mb3.9,baz=308,slow=5.0,SNR=27						

ISCJB ***15*** *11:07:01.4±1.0, 32.00N±0.06×48.7E±0.1, h11km±9km, Error ellipse: s-maj=19.5km s-min=6.7km az=22.2*
KISR ***15*** *11:07:01.7, 32.03N×48.77E, h43km, ML2.9*
CSEM ***15*** *11:07:01.0±0.1, 32.05N×48.65E, h12km, ML2.8, Error ellipse: s-maj=6.1km s-min=2.2km az=115.0*
SGS ***15*** *11:07:01.5, 32.02N×48.61E, h7km*
THR ***15*** *11:07:02.2±0.5, 32.18N×48.72E, h10km±7km, ML2.8*
ISC 15 11:07:01.1±1.7**, 32.00N**±0.05×**48.7E**±0.1**, h1**km±14km**, n20, σ0.82**/25**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.17**	**49**	*e*Pg	**Pg**	**11 07 04.8**	**+0.4**
MIB	**Mutribah**	**2.46**	**208**	*e*P	**Pn**	**11 07 43.2**	**+0.8**
MIB				*e*S	**Sn**	**11 08 13.5**	**+0.3**
	28nm,0.4s						
MIB	**Mutribah**	**2.46**	**208**	*e*P	**Pn**	**11 07 43.2**	**+0.8**
	baz=209						
MIB				*e*S	**Sn**	**11 08 13.5**	**+0.3**
	baz=209						
MIB				AML	AML	11 08 17.5	
	comp=Z,28nm,0.4s,baz=209						
UMR	**Umm Al-Rimmam**	**2.57**	**199**	*e*P	**Pn**	**11 07 44.0**	**+0.1**
	baz=200						
UMR				AML	AML	11 08 34.8	
	comp=Z,71nm,0.4s,baz=200						
ASAO	**Ashtian**	**2.79**	**24**	*e*Pn	**Pn**	**11 07 46.5**	**-0.5**
ASAO				AML	AML	11 08 33.7	
	comp=N,68nm,0.7s						
ASAO				AML	AML	11 08 37.6	
	comp=E,42nm,0.7s						
KBD	**Kabd**	**2.93**	**197**	*e*P	**Pn**	**11 07 49.7**	**+0.8**
	baz=198						
KBD				AML	AML	11 08 28.4	
	comp=Z,29nm,0.3s,baz=198						
NAY	**Al-Naaiem**	**3.00**	**204**	*e*P	**Pn**	**11 07 50.4**	**+0.6**
RDF	**Al-Radifah**	**3.21**	**198**	*e*P	**Pn**	**11 07 52.7**	**0.0**
RDF				*e*S	**Sn**	**11 08 32.3**	**+0.7**
	comp=Z,52nm,0.4s						
RDF	**Al-Radifah**	**3.21**	**198**	*e*P	**Pn**	**11 07 52.7**	**+0.1**
	baz=199						
RDF				*e*S	**Sn**	**11 08 32.3**	**+0.7**
	baz=199						
RDF				AML	AML	11 08 34.0	
	comp=Z,52nm,0.4s,baz=199						
SNGE	**Sanandaj**	**3.27**	**341**	*e*Pn	**Pn**	**11 07 53.8**	**+0.2**
SNGE				AML	AML	11 08 51.7	
	comp=E,18nm,0.6s						
QRN	**Al-Qurain**	**3.31**	**191**	*e*P	**Pn**	**11 07 54.5**	**+0.5**
	baz=193						
QRN				*e*S	**Sn**	**11 08 34.0**	**0.0**
	baz=193						
QRN				AML	AML	11 08 36.0	
	comp=Z,33nm,0.2s,baz=193						
NASN	**Na'in**	**3.60**	**76**	*e*Pn	**Pn**	**11 07 59.1**	**+1.0**
KFJS		**3.85**	**189**	P	**Pn**	**11 08 01.5**	**0.0**
CHTH	**Charan**	**4.41**	**27**	*e*Pn	**Pn**	**11 08 08.8**	**-0.4**
DAMV	**Damavand**	**4.55**	**36**	*e*Pn	**Pn**	**11 08 11.4**	**+0.2**
ASYS		**5.84**	**221**	S	**Sn**	**11 09 30.6**	**-5.9**
ASYS		**5.84**	**221**	P	**Pn**	**11 08 26.6**	**-2.3**
BTHS		**8.15**	**166**	S	**Sn**	**11 10 27.4**	**-6.2**
BTHS		**8.15**	**166**	P	**Pn**	**11 08 58.9**	**-1.8**
HRDDS		**9.06**	**175**	P	**Pn**	**11 09 11.9**	**-1.3**

IDC ***15*** *11:11:34.6±1.3, 27.06S×175.82W, h0km, mb3.9/6, mb1 4.2/7, mb1mx4.0/15, mbtmp3.9/7, ML4.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.8/26, Error ellipse: s-maj=53.6km s-min=20.9km az=148.0*
ISCJB ***15*** *11:11:45.0±2.6, 28.1S±0.2×175.7W±0.2, h110km±23km, mb3.7/7, Error ellipse: s-maj=41.8km s-min=24.8km az=167.3*
NEIC ***15*** *11:11:45.0±2.2, 28.09S×175.57W, h100km±20km, mb3.8/3, Error ellipse: s-maj=28.2km s-min=18.0km az=177.0*
ISC 15 11:11:38.6±7.0**, 27.1S**±0.2×**175.9W**±0.2**, h24**km±50km**, n15, σ0.88**/15**, mb3.9**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.84**	**219**	Pn	**Pn**	**11 12 22.3**	**-0.1**
	135nm,0.3s,baz=73,slow=21,SNR=4.0						
RAO				Sn	**Sn**	**11 12 56.0**	**+0.2**
	646nm,0.3s,baz=232,slow=23,SNR=14						
RAO				LR	LR	11 13 13.4	
	comp=Z,316nm,18.5s,baz=122,slow=35						
RAO	**Raoul Island**	**2.84**	**219**	Pn	**Pn**	**11 12 22.3**	**-0.1**
RAO				Sn	**Sn**	**11 12 56.0**	**+0.2**
RAO				LR	LR	11 13 13.4	
URZ	**Urewera**	**12.64**	**206**	Pn	**Pn**	**11 14 30.3**	**-6.5**
	0.1nm,0.3s,baz=254,slow=8.8,SNR=3.3						
DZM	**Mont Dzumac**	**16.83**	**283**	P	pP	11 15 41.4	+0.1
	1.5nm,0.6s						
CTA	**Charters Tower**	**35.30**	**273**	P	**P**	**11 18 33.8**	**+2.0**
	4.0nm,0.5s,mb4.6,baz=104,slow=9.9,SNR=8.6						
CTAO	**Charters Tower**	**35.30**	**273**	P	**P**	**11 18 33.8**	**+2.0**
	3.2nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**37.17**	**252**	P	**P**	**11 18 48.3**	**+0.6**
	1.1nm,0.5s,mb3.9,baz=96,slow=5.9,SNR=3.0						
ASAR	**Alice Springs**	**45.27**	**263**	P	**P**	**11 19 53.5**	**-0.9**
	0.3nm,0.4s,mb3.4,baz=94,slow=6.9,SNR=8.0						
WB2	**Warramunga Arr**	**45.96**	**268**	*e*P	**P**	**11 19 59.3**	**-0.5**
WRAB	**Tennant Creek**	**45.96**	**268**	*e*P	**P**	**11 20 00.1**	**+0.2**
	0.7nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**45.97**	**268**	P	**P**	**11 19 58.5**	**-1.5**
	0.3nm,0.4s,mb3.6,baz=101,slow=5.9,SNR=8.3						
NVAR	**Mina Array Bea**	**84.51**	**42**	P	**P**	**11 24 10.0**	**+0.7**
	0.3nm,0.5s,mb3.7,baz=210,slow=8.6,SNR=4.4						
NVAR	**Mina Array Bea**	**84.51**	**42**	P	**P**	**11 24 10.0**	**+0.7**
TXAR	**Lajitas Array**	**89.00**	**56**	P	**P**	**11 24 31.1**	**-0.4**
	0.7nm,1.0s,mb4.0,baz=204,slow=8.2,SNR=4.8						
HFS	**Hagfors**	**146.28**	**351**	PKPbc	PKPbc	11 31 16.0	-0.4
	1.6nm,0.6s,baz=58,slow=5.4,SNR=5.5						

ISCJB ***15*** *11:19:52.3±0.2, 23.11S±0.03×70.30W±0.04, h26km, mb4.7/26, Error ellipse: s-maj=5.9km s-min=3.6km az=175.3*
GUC ***15*** *11:19:52.9±0.7, 23.12S×70.50W, h38km±2km, MD4.7, ML4.8*
NEIC ***15*** *11:19:53.9±0.2, 23.16S×70.42W, mb5.0/16, ML4.8(GUC), Error ellipse: s-maj=8.5km s-min=5.3km az=66.0*
NEIC Felt [III] at Mejillones and [II] at Antofagasta.
BJI ***15*** *11:19:53.9, 23.20S×70.40W, h28km, mB5.4, Ms5.3, Msz5.1*
IDC ***15*** *11:19:54.4±3.4, 23.07S×70.41W, h32km±23km, mb4.0/10, mb1 4.2/13, mb1mx4.1/19, mbtmp4.0/13, ML4.3/2, MS3.3/1, Ms1 3.3/1, ms1mx3.0/24, Error ellipse: s-maj=24.2km s-min=19.8km az=53.0*
ISC 15 11:19:54.3±0.2**, 23.18S**±0.02×**70.36W**±0.04**, h27**km**, h27**km±.2km**: pP-P, n293, σ0.75**/229**, mb4.7**/26**, 133C-156D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.12**	**312**	*e*P	**Pb**	**11 19 58.7**	**-0.6**
MECH				*i* S	**Sb**	**11 20 03.5**	**+0.8**
MECH				AML	AML	11 20 04.5	
	comp=E,447µm,0.5s						
CEN1	**Los Morros**	**0.25**	**145**	*e*P	**Pb**	**11 20 03.2**	**+2.4**
CEN1				*i* S	**Sb**	**11 20 10.6**	**+5.4**
ANCH	**Antofagasta**	**0.50**	**186**	*e*P	**Pb**	**11 20 04.6**	**0.0**
ANCH				*i* S	**Sb**	**11 20 12.5**	**+0.9**
MACH	**Maria Elena**	**1.13**	**29**	*e*P	**Pn**	**11 20 13.9**	**-0.4**
MACH				*i* S	**Sn**	**11 20 29.4**	**+0.6**
PB04	**Plate Boundary**	**1.22**	**41**	⇓*i*P	**Pn**	**11 20 09.3**	**-6.2**
PB04				*i* S	**Sn**	**11 20 21.0**	**-10**
PB04				AML	AML	11 20 23.1	
	comp=E,53µm,0.6s						
CPN1	**Cerro Paranal**	**1.44**	**182**	*e*P	**Pn**	**11 20 18.7**	**+0.1**
CPN1				*i* S	**Sn**	**11 20 37.0**	**+0.4**
LVC	**Limon Verde**	**1.45**	**67**	Pg	**Pn**	**11 20 21.3**	**+2.7**
	comp=E,799nm,0.3s,baz=254,slow=11,SNR=6062						
LVC				Lg		11 20 42.0	
	comp=E,4µm,0.3s,baz=354,slow=9.1,SNR=17						
LVC	**Limon Verde**	**1.45**	**67**	*e*Pn	**Pn**	**11 20 20.8**	**+2.2**
LVC	**Limon Verde**	**1.45**	**67**	⇑*e*P	**Pn**	**11 20 20.2**	**+1.6**
LVC				*i* S	**Sn**	**11 20 41.0**	**+4.3**
LVC				AML	AML	11 20 44.1	
	comp=N,9µm,0.3s						
PB01	**Plate Boundary**	**2.28**	**21**	*e*P	**Pn**	**11 20 29.9**	**-0.2**
PB01				*i* S	**Sn**	**11 20 57.4**	**+0.2**
PB01				AML	AML	11 21 04.8	
	comp=E,7µm,0.6s						
LCO	**Las Campanas**	**5.81**	**183**	*e*Pn	**Pn**	**11 21 17.3**	**-1.3**
	comp=E,61nm,0.5s						
LCO				*e*Sn	**Sn**	**11 22 29.7**	**+5.2**
ARE	**Arequipa**	**6.77**	**351**	⇑*i*P	**Pn**	**11 21 29.4**	**-2.5**
ARE				*i* S	**Sn**	**11 22 41.0**	**-7.1**
CFAA	**Coronel Fontan**	**8.60**	**168**	Pn	**Pn**	**11 21 56.8**	**-0.1**
	comp=E,0.2nm,0.3s,baz=341,slow=13,SNR=9.8						
CFAA				Sn	**Sn**	**11 23 31.1**	**-2.0**
	baz=203,slow=14,SNR=1.5						
CFAA				LR	LR	11 25 40.7	
	comp=E,182nm,18.3s,baz=2.5,slow=40						
SIV	**San Ignacio**	**11.30**	**52**	Pn	**Pn**	**11 22 33.2**	**-0.8**
	comp=E,1.6nm,0.3s,baz=241,slow=13,SNR=20						
SIV				Sn	**Sn**	**11 24 41.6**	**+2.2**
	baz=257,slow=17,SNR=2.9						
CPUP	**Villa Florida**	**12.24**	**107**	Pn	**Pn**	**11 22 48.7**	**+1.8**
	comp=E,0.4nm,0.3s,baz=278,slow=12,SNR=5.9						
CPUP	**Villa Florida**	**12.24**	**107**	*e*Pn	**Pn**	**11 22 47.4**	**+0.5**
	comp=E,51nm,1.0s						
TRQA	**Tornquist**	**16.47**	**156**	*e*Pn	**Pn**	**11 23 43.3**	**-0.2**
	comp=E,13nm,0.7s						
ATAH	**Atahualpa**	**17.85**	**333**	P	**Pn**	**11 24 01.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=171,slow=22,SNR=2.2						
BDFB	**Brasilia**	**22.35**	**74**	P	**P**	**11 24 50.1**	**-0.1**
	comp=E,2.0nm,0.7s,mb3.7,baz=232,slow=12,SNR=6.1						
VNA3	**Neumayer Olymp**	**58.93**	**161**	*e*P	**P**	**11 29 51.1**	**+0.5**
VNA3				*e*	pP	11 29 59.7	+0.6
VNA3				*e*		11 30 03.6	
VNA3				*e*		11 30 10.0	
VNA1	**Neumayer--Stat**	**59.16**	**160**	*e*P	pP	11 30 01.8	+1.1
VNA1				*e*		11 30 05.5	
VNA2	**Neumayer--Watz**	**59.52**	**160**	*e*P	**P**	**11 29 55.0**	**+0.3**
VNA2				*e*	pP	11 30 04.0	+0.8
VNA2				*e*		11 30 06.9	
VNA2				*e*		11 30 13.6	
CPCT	**Cooper Cave**	**59.84**	**347**	*e*P	**P**	**11 29 55.2**	**-2.1**
SWET	**Sewanee**	**59.93**	**345**	*e*P	**P**	**11 29 56.1**	**-1.8**
OXF	**Oxford**	**60.16**	**342**	*e*P	**P**	**11 30 05.5**	**+6.0**
	comp=E,24nm,1.0s,mb5.2						
JCT	**Junction City**	**60.38**	**331**	*e*P	**P**	**11 30 00.1**	**-1.0**
	comp=E,11nm,0.9s,mb4.9						
SNAA	**Sanae**	**61.14**	**160**	*e*P	**P**	**11 30 05.1**	**-0.7**
SNAA				*e*	pP	11 30 13.7	-0.6
SNAA				*e*		11 30 18.1	
SNAA	**Sanae**	**61.14**	**160**	*e*P	**P**	**11 30 05.3**	**-0.5**
	comp=E,10nm,1.0s,mb4.9						
SNAA				*e*pP	pP	11 30 13.9	-0.4
SNAA				*e*sP	sP	11 30 18.6	+1.1
WVT	**Waverly**	**61.26**	**344**	*e*P	**P**	**11 30 04.7**	**-2.3**
	comp=E,15nm,1.0s,mb5.1						
TXAR	**Lajitas Array**	**61.27**	**327**	P	**P**	**11 30 06.4**	**-0.8**
	comp=E,0.6nm,0.7s,mb3.8,baz=150,slow=8.6,SNR=6.6						
MIAR	**Mount Ida**	**61.50**	**338**	*e*P	**P**	**11 30 07.5**	**-1.2**
WCI	**Wyandotte Cave**	**62.89**	**346**	*e*P	**P**	**11 30 15.1**	**-2.7**
	comp=E,10nm,0.9s,mb5.0						
FVM	**French Village**	**63.70**	**342**	*e*P	**P**	**11 30 21.6**	**-1.7**
	comp=E,26nm,1.1s,mb5.2						
CCM	**Cathedral Cave**	**64.00**	**342**	*e*P	**P**	**11 30 23.5**	**-1.7**
	comp=E,12nm,1.0s,mb4.9						
319A	**Douglas**	**65.82**	**324**	⇑P	**P**	**11 30 37.4**	**+0.1**
	baz=66,SNR=5.9						
318A	**Bisbee**	**66.26**	**323**	⇓P	**P**	**11 30 40.3**	**+0.3**
	baz=66						
219A	**White Tail Can**	**66.29**	**324**	⇑P	**P**	**11 30 40.3**	**0.0**
	baz=66						
218A	**Dragoon**	**66.70**	**324**	⇓P	**P**	**11 30 43.0**	**+0.1**
	baz=67						
217A	**Green Valley**	**66.97**	**323**	⇓P	**P**	**11 30 44.6**	**0.0**
	baz=67						
118A	**Homack Ranch,**	**67.17**	**324**	⇑P	**P**	**11 30 46.5**	**+0.6**
	baz=67						
ANMO	**Albuquerque**	**67.20**	**328**	*e*P	**P**	**11 30 46.3**	**+0.3**
	comp=E,9.5nm,1.3s,mb4.7						
CBKS	**Cedar Bluff**	**67.54**	**335**	*e*P	**P**	**11 30 48.0**	**+0.1**
	comp=E,25nm,0.9s,mb5.2						
Y19A	**Nutrioso**	**67.81**	**326**	⇑P	**P**	**11 30 50.3**	**+0.5**
	baz=68,SNR=7.0						
Y17A	**Roosevelt**	**68.45**	**324**	⇑P	**P**	**11 30 54.5**	**+0.7**
	baz=69,SNR=6.0						
Y17A				⇑pP	pP	11 31 02.8	+0.3
	baz=69						
Z16A	**Peralta Trail,**	**68.49**	**324**	⇓P	**P**	**11 30 55.0**	**+0.8**
	baz=69						
Z16A				⇑pP	pP	11 31 03.0	+0.2
	baz=69						
X17A	**Forest Lakes**	**68.92**	**325**	⇓P	**P**	**11 30 57.7**	**+1.0**
	baz=69						
Y16A	**Circle Bar Ran**	**68.93**	**324**	⇓pP	pP	11 31 05.0	-0.4
	baz=69						
W18A	**Petrified Fore**	**68.96**	**326**	⇑pP	pP	11 31 05.7	0.0
	baz=69						
SDCO	**Great Sand Dun**	**69.03**	**331**	*e*P	**P**	**11 30 57.4**	**0.0**
	comp=E,12nm,1.0s,mb4.8						
X16A	**Lo Mia Camp, P**	**69.32**	**324**	⇑P	**P**	**11 31 00.0**	**+0.8**
	baz=70						
Y15A	**Casa Rosa Ranc**	**69.45**	**324**	⇑P	**P**	**11 31 00.5**	**+0.4**
	baz=70						
Y15A				⇑pP	pP	11 31 08.2	-0.4
	baz=70						
X15A	**Humboldt**	**69.80**	**324**	⇑P	**P**	**11 31 02.7**	**+0.5**
	baz=70						
X15A				⇓pP	pP	11 31 10.2	-0.6
	baz=70						
W16A	**Flagstaff**	**69.88**	**325**	⇓P	**P**	**11 31 03.5**	**+0.8**
	baz=70						
W16A				⇑pP	pP	11 31 11.6	+0.3
	baz=70,SNR=5.8						
T19A	**Beclabito**	**69.95**	**328**	⇓P	**P**	**11 31 03.8**	**+0.7**
	baz=70						
T19A				⇓pP	pP	11 31 11.1	-0.6
	baz=70						
MVCO	**Mesa Verde**	**69.99**	**328**	⇓P	**P**	**11 31 03.4**	**0.0**
	baz=70						
MVCO				⇓pP	pP	11 31 11.7	-0.3
	baz=70						
U18A	**Rough Rock, Ch**	**70.05**	**327**	⇓P	**P**	**11 31 04.4**	**+0.7**
	baz=70						
U18A				⇓pP	pP	11 31 12.6	+0.3
	baz=70						
WUAZ	**Wupatki**	**70.12**	**325**	⇓P	**P**	**11 31 04.8**	**+0.6**
	baz=70						
WUAZ				⇓pP	pP	11 31 13.3	+0.5
	baz=70						
WUAZ	**Wupatki**	**70.12**	**325**	*e*P	**P**	**11 31 05.1**	**+0.9**
	comp=E,13nm,1.1s,mb4.8						
WUAZ				*e*pP	pP	11 31 13.6	+0.9
LIC	**Lamto**	**70.14**	**74**	*e*P	**P**	**11 31 03.0**	**-1.8**
	comp=E,38nm,1.4s,mb5.1						
Y13A	**Salome**	**70.17**	**322**	⇑P	**P**	**11 31 04.4**	**-0.2**
	baz=70						
Y13A				⇑pP	pP	11 31 13.1	0.0
	baz=70						
W15A	**Williams**	**70.34**	**324**	⇓pP	pP	11 31 14.7	+0.5
	baz=70						
TIC	**Toumodi**	**70.34**	**73**	*e*P	**P**	**11 31 05.3**	**-0.7**
	comp=E,27nm,0.7s,mb5.3						
KIC	**Kosan Boka**	**70.45**	**74**	*e*P	**P**	**11 31 06.0**	**-0.7**
	comp=E,36nm,0.8s,mb5.3						
R21A	**Cimarron**	**70.47**	**330**	⇓pP	pP	11 31 14.3	-0.5
	baz=71						
U16A	**Tuba City**	**70.47**	**326**	⇑P	**P**	**11 31 06.9**	**+0.6**
	baz=71						
U16A				⇑pP	pP	11 31 14.8	-0.1
	baz=71						
DBIC	**Dimbokro**	**70.49**	**74**	P	**P**	**11 31 06.7**	**-0.3**
	comp=E,5.5nm,0.6s,mb4.6,baz=247,slow=6.9,SNR=8.3						
T18A	**Mexican Hat**	**70.61**	**327**	⇑P	**P**	**11 31 07.5**	**+0.4**
	baz=71						
T18A				⇑pP	pP	11 31 15.1	-0.6
	baz=71						
DVTC	**Desert V Tower**	**70.64**	**320**	⇓pP	pP	11 31 15.5	-0.6
	baz=71						
SWSC	**Sam W. Stewart**	**70.66**	**321**	⇑pP	pP	11 31 15.1	-1.1
	baz=71						
S19A	**Harvey Farm, M**	**70.73**	**328**	⇓P	**P**	**11 31 07.7**	**-0.2**
	baz=71						
S19A				⇓pP	pP	11 31 16.7	+0.3
	baz=71						
X13A	**Yucca**	**70.75**	**323**	⇑P	**P**	**11 31 08.2**	**+0.2**
	baz=71						
X13A				⇓pP	pP	11 31 16.5	-0.2
	baz=71						
ISCO	**Idaho Springs**	**70.77**	**332**	*e*P	**P**	**11 31 08.4**	**+0.4**
V15A	**Kaibab Nationa**	**70.77**	**325**	⇑P	**P**	**11 31 09.3**	**+1.2**
	baz=71						
V15A				⇑pP	pP	11 31 17.7	+0.9
	baz=71,SNR=5.2						
W14A	**Seligman**	**70.80**	**324**	⇓P	**P**	**11 31 09.3**	**+0.9**
	baz=71						
W14A				⇑pP	pP	11 31 17.4	+0.4
	baz=71						
SMCO	**Snowmass**	**70.86**	**331**	*e*P	**P**	**11 31 01.4**	**-7.2**
	comp=E,10nm,1.0s,mb4.7						
T17A	**Navajo Res., N**	**70.97**	**327**	⇓P	**P**	**11 31 10.4**	**+1.1**
	baz=71,SNR=5.1						
T17A				⇑pP	pP	11 31 18.4	+0.5
	baz=71						
BC3	**Big Chuckw Mtn**	**70.98**	**321**	⇑pP	pP	11 31 18.3	+0.2
	baz=71						
S18A	**Hurst Farm, Bl**	**71.10**	**328**	P	**P**	**11 31 10.7**	**+0.6**
	baz=71,SNR=7.4						
S18A				⇑pP	pP	11 31 19.2	+0.4
	baz=71						
V14A	**Boquillas Ranc**	**71.13**	**324**	⇓P	**P**	**11 31 11.2**	**+0.9**
	baz=71						
V14A				⇑pP	pP	11 31 19.4	+0.4
	baz=71						
IRM	**Iron Mountain**	**71.17**	**322**	⇓P	**P**	**11 31 11.0**	**+0.4**
	baz=71						
IRM				⇓pP	pP	11 31 19.4	+0.1
	baz=71						
U15A	**North Rim**	**71.30**	**325**	⇓P	**P**	**11 31 11.9**	**+0.6**
	baz=72						
U15A				⇓pP	pP	11 31 20.5	+0.6
	baz=72						
R18A	**Canyonlands Na**	**71.60**	**328**	⇓pP	pP	11 31 21.6	-0.1
	baz=72						
Q19A	**Hogan Spring (**	**71.75**	**329**	⇓pP	**P**	**11 31 14.2**	**+0.3**
	baz=72						
Q19A				⇓pP	pP	11 31 22.8	+0.2
	baz=72						
U14A	**Mt Trumbull**	**71.76**	**325**	⇑pP	**P**	**11 31 14.4**	**+0.3**
	baz=72						
U14A				⇓pP	pP	11 31 22.0	-0.7
	baz=72						
V13A	**Grand Canyon W**	**71.77**	**324**	⇓pP	**P**	**11 31 14.4**	**+0.3**
	baz=72						
V13A				pP	pP	11 31 23.6	+0.8
	baz=72,SNR=5.2						
T15A	**Red Dirt Ranch**	**71.79**	**326**	⇓pP	**P**	**11 31 14.9**	**+0.6**
	baz=72						
T15A				⇑pP	pP	11 31 22.9	0.0
	baz=72						
S16A	**Weppner Ranch,**	**71.93**	**327**	⇑pP	**P**	**11 31 15.5**	**+0.4**
	baz=72						
S16A				⇓pP	pP	11 31 23.7	0.0
	baz=72						
N22A	**Wattenberg Ran**	**71.96**	**332**	⇑pP	**P**	**11 31 15.3**	**+0.1**
	baz=72						
N22A				⇓pP	pP	11 31 24.3	+0.5
	baz=72						
R17A	**Hanksville Air**	**72.02**	**328**	⇓pP	pP	11 31 24.3	+0.1
	baz=72						
V12A	**Nelson**	**72.15**	**323**	⇑pP	pP	11 31 24.7	-0.4
	baz=72						
U13A	**Pakoon Wash**	**72.17**	**324**	⇓pP	pP	11 31 25.5	+0.2
	baz=72						
O20A	**White River Ci**	**72.21**	**330**	⇓pP	**P**	**11 31 16.8**	**+0.1**
	baz=72						
O20A				⇑pP	pP	11 31 25.0	-0.3
	baz=72						
BBRC	**Big Bear Sol-O**	**72.26**	**321**	⇑pP	pP	11 31 27.1	+1.3
	baz=72						
HEC	**Hector,Ludlow**	**72.33**	**322**	⇑pP	pP	11 31 26.9	+0.7
	baz=72						
N21A	**Black Mountain**	**72.39**	**331**	⇓pP	pP	11 31 27.2	+0.7
	baz=73						
SRU	**San Rafael**	**72.47**	**328**	⇑P	**P**	**11 31 18.1**	**-0.2**
	baz=73						
SRU				⇓pP	pP	11 31 26.7	-0.2
	baz=73						
V11A	**Goodsprings**	**72.55**	**323**	⇑pP	pP	11 31 27.9	+0.4
	baz=73						
T13A	**Saint George**	**72.59**	**325**	⇑P	**P**	**11 31 19.4**	**+0.3**
	baz=73						
T13A				⇓pP	pP	11 31 28.0	+0.2
	baz=73						
Q16A	**Castle Valley**	**72.64**	**328**	⇑P	**P**	**11 31 19.9**	**+0.6**
	baz=73						
Q16A				⇑pP	pP	11 31 28.5	+0.5
	baz=73						
P18A	**Preston Nutter**	**72.74**	**329**	⇓P	**P**	**11 31 20.5**	**+0.6**
	baz=73						
P18A				⇑pP	pP	11 31 29.0	+0.5
	baz=73						
N20A	**Spence Gulch,**	**72.78**	**331**	⇓P	**P**	**11 31 20.1**	**-0.1**
	baz=73						
N20A				⇑pP	pP	11 31 29.1	+0.3
	baz=73						
MSU	**Marysvale**	**72.83**	**327**	*e*P	**P**	**11 31 21.3**	**+0.9**
P17A	**Butcher Ranch,**	**72.86**	**328**	⇓P	**P**	**11 31 20.9**	**+0.3**
	baz=73						
P17A				⇓pP	pP	11 31 29.7	+0.4
	baz=73						
GSC	**Goldstone**	**72.94**	**322**	⇑pP	pP	11 31 30.3	+0.5
	baz=73						
S13A	**Holt Ranch, En**	**72.99**	**325**	⇓P	**P**	**11 31 22.5**	**+1.1**

baz=73
S13A ⇓pP pP 11 31 30.6 +0.5
baz=73
R14A James Farms, M 73.09 326 ⇓pP pP 11 31 30.6 -0.1
baz=73
O18A Roosevelt 73.13 329 ⇑pP pP 11 31 30.5 -0.4
baz=73
N19A John Jarvie Ra 73.25 330 ⇑P **P** **11 31 22.6 -0.3**
baz=74
N19A ⇓pP pP 11 31 30.4 -1.1
baz=74
M20A Sweetwater, Wa 73.28 331 ⇓pP pP 11 31 30.4 -1.3
baz=74
Q15A Fillmore 73.30 327 ⇓pP pP 11 31 31.2 -0.6
baz=74
L21A Rawlins 73.31 332 ⇓P **P** **11 31 22.9 -0.3**
baz=74
L21A ⇑pP pP 11 31 31.1 -0.8
baz=74
EDW2 Edwards Air Fo 73.32 321 ⇓P **P** **11 31 23.1 -0.4**
baz=74
O17A Robinson Place 73.42 329 P **P** **11 31 24.6 +0.7**
baz=74,SNR=5.1
O17A ⇑pP pP 11 31 32.3 -0.3
baz=74
T11A Corn Creek, Al 73.46 324 ⇑P **P** **11 31 24.8 +0.6**
baz=74
T11A ⇓P pP 11 31 32.5 -0.4
baz=74,SNR=6.0
RSSD Black Hills 73.74 335 *e*P **P** **11 31 25.3 -0.4**
Q14A Sevier Lake (B 73.75 326 ⇑P **P** **11 31 26.0 +0.2**
baz=74
L20A Wamsutter 73.76 331 ⇑pP pP 11 31 33.5 -1.0
baz=74
FURC Furnace Creek, 73.81 322 ⇑P **P** **11 31 26.7 +0.4**
baz=74
TPNV Topopah Spring 73.81 323 *e*P **P** **11 31 25.3 -1.0**
comp=E,14nm,1.4s,mb4.7
TPNV *e*pP pP 11 31 35.8 +0.9
R12A Pony Springs, 73.94 325 ⇑P **P** **11 31 28.1 +1.1**
baz=74
R12A pP pP 11 31 36.4 +0.8
baz=74,SNR=5.4
ARVC Arvin 73.99 320 ⇑P **P** **11 31 28.5 +1.1**
baz=74
SBC Santa Barbara 74.04 319 ⇑P **P** **11 31 28.9 +1.2**
baz=74
N17A Moffit Pass 74.05 329 ⇑P **P** **11 31 28.3 +0.7**
baz=74,SNR=6.1
N17A ⇓pP pP 11 31 36.6 +0.4
baz=74
M18A Lyman 74.08 330 ⇓pP pP 11 31 35.8 -0.6
baz=74
JLU Jordanelle 74.08 329 *e*P **P** **11 31 28.4 +0.6**
P14A Drum Mountains 74.10 327 ⇓P **P** **11 31 28.8 +0.9**
baz=74
P14A ⇓pP pP 11 31 36.2 -0.4
baz=74
Q13A Wheeler Ranch, 74.10 326 ⇑P **P** **11 31 28.2 +0.3**
baz=74
ISA Isabella 74.15 321 ⇓P **P** **11 31 28.6 +0.3**
baz=74
DUG Dugway 74.43 328 ⇑P **P** **11 31 28.4 -1.4**
baz=75
L18A Fontenelle, Gr 74.46 330 ⇑P **P** **11 31 29.9 -0.1**
baz=75
L18A ⇓pP pP 11 31 37.8 -0.8
baz=75
R11A Troy Canyon, C 74.47 325 ⇓P **P** **11 31 30.6 +0.5**
baz=75
P13A Bates Ranch, G 74.47 326 ⇑P **P** **11 31 30.8 +0.8**
baz=75
Q12A Willow Creek R 74.58 326 ⇓P **P** **11 31 31.6 +0.8**
baz=75
S10A Tonopah Range, 74.70 324 ⇓P **P** **11 31 32.1 +0.6**
baz=75
S10A ⇓pP pP 11 31 39.9 -0.3
baz=75
AGMN Agassiz Refuge 74.74 343 *e*P **P** **11 31 30.2 -1.2**
R10A Warm Springs 74.81 324 ⇑pP pP 11 31 40.8 0.0
baz=75
Q11A Duckwater 74.87 325 ⇓P **P** **11 31 31.6 -0.8**
baz=75
Q11A ⇓pP pP 11 31 41.3 +0.2
baz=75
BW06 Boulder Array 74.91 331 ⇑pP pP 11 31 40.6 -0.6
baz=75
PDAR Pinedale Array 74.91 331 P **P** **11 31 31.7 -0.8**
comp=E,0.2nm,0.4s,baz=139,slow=8.4,SNR=3.3
K18A Toltan Ranch, 75.02 331 ⇑P **P** **11 31 33.4 +0.2**
baz=75
K18A ⇑pP pP 11 31 40.8 -1.1
baz=75
R09A Tonopah 75.19 324 ⇑pP pP 11 31 42.9 -0.1
baz=75
M15A Larsen Ranch, 75.22 329 ⇓pP pP 11 31 42.7 -0.3
baz=76
Q10A Clear Creek Ra 75.25 324 ⇓pP pP 11 31 42.1 -1.2
baz=76
O12A Currie 75.45 326 ⇓P **P** **11 31 35.8 +0.1**
baz=76
J18A Kendall Valley 75.47 331 ⇓P **P** **11 31 35.5 -0.2**
baz=76
K17A Gardner Place, 75.51 330 P **P** **11 31 35.8 -0.2**
baz=76,SNR=5.4
K17A ⇑pP pP 11 31 42.6 -2.1
baz=76
L15A Malad City 75.61 329 ⇓P **P** **11 31 36.2 -0.4**
baz=76
L15A ⇑pP pP 11 31 44.9 -0.4
baz=76
I18A Diamond G Ranc 75.77 332 ⇓P **P** **11 31 37.5 +0.1**
baz=76
I18A ⇑pP pP 11 31 45.2 -0.9
baz=76
K16A Soda Springs 75.88 330 ⇓P **P** **11 31 38.6 +0.5**
baz=76
K16A ⇓pP pP 11 31 47.4 +0.6
baz=76
J17A Brown Place, J 75.90 331 ⇑P **P** **11 31 38.5 +0.3**
baz=76
REDW Red Top Meadow 75.96 331 *e*P **P** **11 31 38.8 +0.2**
M13A Montello 75.98 328 ⇓P **P** **11 31 38.4 -0.3**
baz=76
M13A ⇓pP pP 11 31 45.7 -1.7
baz=76
SNOW Snow King Moun 76.00 331 *e*P **P** **11 31 39.2 +0.4**
NVAR Mina Array Bea 76.01 323 P **P** **11 31 38.5 -0.5**
comp=E,0.5nm,0.7s,mb3.6,baz=153,slow=6.1,SNR=3.0
L14A Malta 76.04 329 ⇓P **P** **11 31 38.1 -1.0**
baz=76
L14A ⇓pP pP 11 31 46.3 -1.5
baz=76
Q08A Gabbs 76.11 324 ⇑pP pP 11 31 45.8 -2.4
baz=76
K15A Arbon 76.20 329 ⇓pP pP 11 31 46.8 -1.8
baz=76
J16A Bone 76.24 330 ⇓P **P** **11 31 40.1 0.0**
baz=76
I17A Pilgram Creek 76.28 331 ⇓pP pP 11 31 49.0 -0.1
baz=76
L13A Double Diamond 76.42 328 ⇑P **P** **11 31 41.3 +0.1**
baz=77
L13A ⇑pP pP 11 31 48.4 -1.5
baz=77
ULM Lac du Bonnet 76.52 343 P **P** **11 31 39.4 -2.2**
comp=E,2.0nm,0.8s,mb4.1,baz=149,slow=5.3,SNR=3.3
ULM Lac du Bonnet 76.52 343 P **P** **11 31 39.4 -2.2**
RLMT Red Lodge 76.67 333 ⇓P **P** **11 31 42.7 +0.2**
baz=77
RLMT ⇓pP pP 11 31 51.4 +0.2
baz=77
R06C Coleville 76.71 322 ⇑pP pP 11 31 51.1 -0.5
baz=77
J15A Blackfoot 76.71 330 ⇓pP pP 11 31 50.7 -0.8
baz=77
M11A Holland Ranch, 76.85 327 ⇓P **P** **11 31 44.5 +0.9**
baz=77
M11A ⇑pP pP 11 31 51.8 -0.5
baz=77
G18A Lazy EL Ranch, 76.95 333 ⇓P **P** **11 31 44.6 +0.5**
baz=77
L12A House Creek Ra 76.99 328 ⇑P **P** **11 31 45.0 +0.6**
baz=77
J14A Carey 77.16 329 ⇓P **P** **11 31 45.7 +0.4**
baz=77
J14A ⇑pP pP 11 31 53.6 -0.4
baz=77
H16A Russell Place, 77.19 331 ⇓P **P** **11 31 46.1 +0.6**
baz=77
I15A Monteview 77.20 330 ⇑P **P** **11 31 46.0 +0.5**
baz=77
K12A Draper Farm, C 77.30 328 ⇑P **P** **11 31 46.5 +0.3**
baz=78
K12A ⇑pP pP 11 31 54.3 -0.6
baz=78,SNR=5.7
G17A Pierce Place, 77.46 332 ⇓P **P** **11 31 46.7 -0.3**
baz=78
F18A Big Timber 77.49 333 ⇓P **P** **11 31 47.0 -0.1**
baz=78
F18A ⇓pP pP 11 31 54.6 -1.2
baz=78
DGMT Dagmar 77.50 338 ⇑P **P** **11 31 47.7 +0.6**
baz=78
DGMT Dagmar 77.50 338 *e*P **P** **11 31 47.5 +0.5**
comp=E,29nm,1.0s,mb5.2
DGMT *e*pP pP 11 31 55.6 -0.2
PAHR Pah Rah Range 77.50 323 *e*P **P** **11 31 48.5 +1.2**
J13A Cove Ranch, Pi 77.53 329 ⇓P **P** **11 31 47.3 -0.1**
baz=78
J13A ⇓pP pP 11 31 54.1 -2.0
baz=78
L10A Juniper Basin 77.67 327 ⇓P **P** **11 31 47.9 -0.3**
baz=78
L10A ⇑pP pP 11 31 55.9 -1.0
baz=78
H15A Lima 77.75 331 ⇓pP pP 11 31 56.2 -1.2
baz=78
HLID Hailey 77.76 329 ⇑P **P** **11 31 48.8 +0.1**
baz=78
HLID Hailey 77.76 329 *e*P **P** **11 31 49.5 +0.8**
HLID *e*pP pP 11 31 58.2 +0.8
J12A Stokes Ranch, 77.86 328 ⇑P **P** **11 31 49.0 -0.2**
baz=78
J12A ⇑pP pP 11 31 57.7 -0.3
baz=78
F17A Fitzpatrick Pl 77.89 332 ⇓P **P** **11 31 49.3 0.0**
baz=78
F17A ⇓pP pP 11 31 57.1 -0.9
baz=78
I13A Wildhorse Cree 77.89 329 ⇓P **P** **11 31 49.5 +0.1**
baz=78
E18A Harlowton 78.10 333 ⇓pP pP 11 31 58.1 -1.1
baz=78
G15A Dillon 78.10 331 ⇑P **P** **11 31 50.9 +0.3**
baz=78
M08A Happy Creek Ra 78.20 325 ⇓P **P** **11 31 50.7 -0.5**
baz=78
I12A Atlanta 78.28 329 ⇑P **P** **11 31 51.8 +0.2**
baz=78
I12A ⇑pP pP 11 31 59.7 -0.6
baz=78
K10A MacKenzie Ranc 78.38 327 ⇓pP pP 11 31 59.4 -1.5
baz=79
E17A Martinsdale 78.41 333 ⇑P **P** **11 31 52.3 +0.1**
baz=79
H13A Challis 78.45 330 ⇓P **P** **11 31 53.1 +0.6**
baz=79,SNR=5.5
H13A ⇓pP pP 11 31 59.3 -1.9
baz=79
N06A Buffalo Meadow 78.48 324 ⇑pP pP 11 32 00.4 -1.1
baz=79
D18A Linhart Farms, 78.56 334 ⇑P **P** **11 31 52.3 -0.7**
baz=79
D18A ⇓pP pP 11 32 00.5 -1.3
baz=79
M07A Soldier Meadow 78.57 325 ⇑pP pP 11 32 00.7 -1.2
baz=79
F15A Butte 78.63 331 ⇑P **P** **11 31 52.9 -0.5**
baz=79
F15A ⇑pP pP 11 32 01.0 -1.1
baz=79
L08A Fields 78.71 326 ⇓P **P** **11 31 53.5 -0.5**
baz=79
L08A ⇓pP pP 11 32 01.3 -1.4
baz=79
H12A Diamond D Ranc 78.72 329 ⇓P **P** **11 31 53.8 -0.2**
baz=79
K09A Rome 78.76 326 ⇑pP pP 11 32 01.7 -1.3
baz=79
I11A Placerville 78.77 328 ⇓P **P** **11 31 53.0 -1.3**
baz=79
G13A Cobalt 78.84 330 P **P** **11 31 55.2 +0.6**
baz=79,SNR=8.8
G13A ⇑pP pP 11 32 02.3 -1.0
baz=79
D17A Six Diamond Ra 78.89 333 ⇓P **P** **11 31 54.4 -0.5**
baz=79
D17A ⇓pP pP 11 32 02.1 -1.5
baz=79
F14A Wisdom 79.00 331 ⇓pP pP 11 32 03.6 -0.6
baz=79
E15A Deer Lodge 79.15 332 ⇑P **P** **11 31 56.0 -0.3**
baz=79
E15A ⇓pP pP 11 32 04.2 -0.8
baz=79,SNR=5.3
D16A Dana Ranch, Ca 79.15 333 ⇓pP pP 11 32 04.3 -0.7
baz=79
TOA0 Torodi Ar. Sit 79.18 71 *e*P **P** **11 31 56.1 -1.0**
TORD Torodi Ar. Bea 79.18 71 P **P** **11 31 56.6 -0.6**
comp=E,10nm,0.8s,mb4.8,baz=259,slow=5.3,SNR=59
EGMT Eagleton 79.21 334 ⇓pP pP 11 32 04.7 -0.6
baz=80
C17A Wharram Farm, 79.30 334 ⇓pP pP 11 32 05.2 -0.6
baz=80
G12A Big Creek, Yel 79.37 329 ⇓P **P** **11 31 57.9 +0.4**
baz=80
G12A ⇑pP pP 11 32 05.2 -1.0
baz=80
H11A Donnelly 79.38 329 ⇑pP pP 11 32 05.2 -1.1
baz=80
F13A Darby 79.41 330 P **P** **11 31 58.0 +0.2**
baz=80,SNR=7.4
F13A ⇑pP pP 11 32 05.1 -1.4
baz=80
B18A Beardsley Farm 79.51 335 ⇓pP pP 11 32 05.4 -1.6
baz=80
E14A Clinton 79.52 331 ⇑P **P** **11 31 57.8 -0.5**
baz=80
D15A Lincoln 79.58 332 ⇓P **P** **11 31 59.0 +0.3**
baz=80
I09A Lost Marbles R 79.69 327 ⇓P **P** **11 31 59.7 +0.4**
baz=80
F12A Elk City 79.81 330 ⇑pP pP 11 32 08.0 -0.6
baz=80
C16A Fuhringer Ranc 79.84 333 ⇓P **P** **11 32 00.0 0.0**
baz=80
E13A Victor 79.85 331 ⇓P **P** **11 32 00.4 +0.3**
baz=80
E13A ⇓pP pP 11 32 07.4 -1.4
baz=80
A18A Metzger Ranch, 79.96 335 ⇓P **P** **11 31 59.9 -0.7**
baz=80
A18A ⇓pP pP 11 32 07.8 -1.6
baz=80
G11A Walters Elk Ra 80.02 329 ⇑P **P** **11 32 01.3 +0.3**
baz=80
G11A ⇑pP pP 11 32 09.1 -0.7
baz=80,SNR=5.0
D14A Greenough 80.03 332 ⇑P **P** **11 32 01.1 0.0**
baz=80
D14A ⇓pP pP 11 32 09.1 -0.7
baz=80
I08A Drewsey 80.06 327 ⇑P **P** **11 32 01.0 -0.3**
baz=80
I08A ⇑pP pP 11 32 09.9 -0.2
baz=80,SNR=5.0
BMO Blue Mountains 80.11 328 *e*P **P** **11 32 02.0 +0.5**
C15A Salmond Ranch, 80.18 333 ⇓P **P** **11 32 02.3 +0.4**
baz=80,SNR=5.5
C15A ⇓pP pP 11 32 09.8 -0.9
baz=80
A17A Triple J Farms 80.32 334 ⇓P **P** **11 32 01.7 -0.8**
baz=81
A17A ⇑pP pP 11 32 09.8 -1.5
baz=81
F11A Grangeville 80.33 329 ⇑P **P** **11 32 02.0 -0.7**
baz=81
F11A ⇑pP pP 11 32 09.9 -1.5
baz=81
G10A Bishop Farm, J 80.35 329 ⇓P **P** **11 32 02.8 0.0**
baz=81
E12A Beaver Dam Sad 80.45 330 ⇓P **P** **11 32 03.2 -0.2**
baz=81
E12A ⇑pP pP 11 32 10.5 -1.6
baz=81
D13A Huson 80.46 331 ⇑P **P** **11 32 03.2 -0.2**
baz=81
D13A ⇓pP pP 11 32 11.1 -1.0
baz=81
B15A Bradely Ranch, 80.58 333 ⇓P **P** **11 32 03.5 -0.5**
baz=81
B15A ⇑pP pP 11 32 11.1 -1.6
baz=81
G09A Cove 80.65 328 ⇓P **P** **11 32 04.8 +0.3**
baz=81
G09A ⇓pP pP 11 32 11.6 -1.6
baz=81
C14A Swan Lake 80.67 332 ⇑P **P** **11 32 03.9 -0.5**
baz=81
C14A ⇓pP pP 11 32 12.2 -1.0
baz=81
A16A West Butte Ran 80.69 334 P **P** **11 32 04.5 0.0**
baz=81,SNR=7.5
A16A ⇑pP pP 11 32 12.6 -0.6
baz=81
E11A Bogner Ranch, 80.70 330 ⇓P **P** **11 32 04.0 -0.7**
baz=81
D12A Red Ives Fores 80.83 331 ⇓P **P** **11 32 05.4 0.0**
baz=81
D12A ⇓pP pP 11 32 13.8 -0.4
baz=81
TSUM Tsumeb 80.84 107 *e*P **P** **11 32 07.1 +0.9**
F10A Beach Ranch, E 80.90 329 ⇑P **P** **11 32 05.3 -0.4**
baz=81
F10A ⇑pP pP 11 32 14.1 -0.4
baz=81
I06A Prineville 80.92 326 ⇑P **P** **11 32 05.7 -0.2**
baz=81
I06A ⇑pP pP 11 32 14.4 -0.2
baz=81
C13A Hot Springs 80.96 331 ⇑P **P** **11 32 06.1 0.0**
baz=81
C13A ⇑pP pP 11 32 14.7 0.0
baz=81
H07A Lands Inn, Kim 81.04 327 ⇑P **P** **11 32 05.8 -0.8**
baz=81
H07A ⇓pP pP 11 32 13.7 -1.6
baz=81
G08A Pilot Rock 81.24 328 ⇑pP pP 11 32 14.9 -1.4
baz=82
D11A Klaveano Farm, 81.27 330 ⇓P **P** **11 32 05.8 -1.9**
baz=82
D11A ⇓pP pP 11 32 15.2 -1.2
baz=82
C12B Naegeli Ranch, 81.38 331 ⇑pP pP 11 32 15.6 -1.4
baz=82
A14A Double T Ranch 81.46 333 ⇓P **P** **11 32 07.9 -0.8**
baz=82
A14A ⇑pP pP 11 32 15.8 -1.6
baz=82
H06A Lindquist Farm 81.53 327 ⇓pP pP 11 32 17.6 -0.3
baz=82
G07A Ruggs Ranch, H 81.57 327 ⇓pP pP 11 32 18.2 +0.1
baz=82
I05A Bend 81.61 326 ⇓pP pP 11 32 18.7 +0.3
baz=82
D10A Wagner Farm, O 81.71 330 ⇓pP pP 11 32 17.8 -1.0
baz=82
E09A Wood Farm, Sta 81.73 329 ⇓P **P** **11 32 09.8 -0.3**
baz=82
E09A ⇑pP pP 11 32 17.9 -1.0
baz=82
WALA Waterton Lakes 81.73 333 *e*P **P** **11 32 10.1 0.0**
C11A Tepee Creek (N 81.83 331 ⇓P **P** **11 32 10.3 -0.4**
baz=82
C11A ⇓pP pP 11 32 18.0 -1.4
baz=82
A13A Flathead Natio 81.84 332 P **P** **11 32 11.0 +0.3**
baz=82,SNR=11
B12A Libby 82.00 332 ⇓P **P** **11 32 11.1 -0.5**
baz=82
B12A ⇓pP pP 11 32 19.3 -1.0
baz=82
D09A Jones Farm, Ri 82.20 329 ⇓P **P** **11 32 12.2 -0.4**
baz=82
C10A Spilker Farm, 82.29 330 ⇑P **P** **11 32 13.1 +0.1**
baz=82
A12A Yaak River Ran 82.38 332 ⇑P **P** **11 32 13.3 -0.2**
baz=83
A12A ⇑pP pP 11 32 20.5 -1.8
baz=83
A11A Hall Mountain, 82.71 331 ⇑P **P** **11 32 14.7 -0.6**
baz=83
A11A pP pP 11 32 23.6 -0.4
baz=83,SNR=5.2
C09A Chrisman Ranch 82.72 330 ⇑P **P** **11 32 14.7 -0.6**
baz=83
MAW Mawson 83.11 164 P **P** **11 32 17.5 +0.3**
comp=E,6.3nm,0.9s,mb4.6,baz=197,slow=4.1,SNR=12
MAW Mawson 83.11 164 *e*P **P** **11 32 17.6 +0.4**
comp=E,2.0nm,1.0s,mb4.1
A09A Danville 83.72 330 ⇑P **P** **11 32 20.1 -0.3**
baz=84
BOSA Boshof 83.84 118 P **P** **11 32 21.8 +0.1**
comp=E,4.2nm,0.7s,mb4.7,baz=268,slow=6.1,SNR=8.4
BOSA Boshof 83.84 118 P **P** **11 32 21.8 0.0**
FCC Fort Churchill 83.97 348 *e*P **P** **11 32 20.6 -0.9**
A08A Turner Farm, O 84.01 330 ⇓P **P** **11 32 21.7 -0.2**
baz=84
EDM Edmonton 84.72 336 *e*P **P** **11 32 23.8 -1.7**
YKA Yellowknife Ar 92.33 341 P **P** **11 33 00.3 -1.2**
comp=E,1.1nm,0.7s,mb4.3,baz=137,slow=4.4,SNR=39
YKA Yellowknife Ar 92.33 341 P **P** **11 33 00.3 -1.2**
ASAR Alice Springs 127.81 208 PKP PKPdf 11 38 57.0 -0.9
comp=E,1.0nm,0.8s,baz=136,slow=2.1,SNR=8.9
WRA Warramunga Arr 130.83 211 PKP PKPdf 11 39 03.3 -0.5
comp=E,1.2nm,0.8s,baz=148,slow=1.5,SNR=11
BVAR Borovoye Array 137.93 35 PKP PKPdf 11 39 16.6 +0.6
comp=E,0.7nm,0.5s,baz=191,slow=0.8,SNR=4.5
ZALV Zalesovo Beam 144.04 25 PKP PKPdf 11 39 24.7 -2.2
comp=E,2.7nm,0.6s,baz=316,slow=4.1,SNR=13
EKS2 Erkin-Say 144.52 48 *e*PKPdf PKPdf 11 39 27.9 -0.3
AML Almayashu 144.66 49 *e*PKPdf PKPdf 11 39 28.8 +0.3
AAK Ala-Archa 145.03 48 *e*PKPdf PKPdf 11 39 29.7 +0.6
TKM2 Tokmak 2 145.66 47 *e*PKPbc PKPbc 11 39 32.0 +1.6
MK31 Makanchi Array 147.78 36 *e*PKPdf PKPdf 11 39 33.6 +0.1
MKAR Makanchi Array 147.78 36 PKPbc PKPdf 11 39 33.4 -0.2
comp=E,4.4nm,0.7s,baz=323,slow=2.8,SNR=26
MJAR Matsushiro Arr 152.00 305 PKPbc PKPbc 11 39 46.3 -0.8
comp=E,2.4nm,1.1s,baz=182,slow=17,SNR=4.9
MAT Matsushiro 152.00 305 *e*PKP PKPbc 11 39 46.0 -1.1
WMQ Urumqi 152.61 36 *e*PKP PKPdf 11 39 40.0 -1.2
WMQ PP PP
comp=Z,257nm,5.0s
WMQ LR LR
comp=N,135nm,25.0s
WMQ LR LR
comp=E,106nm,22.0s
WMQ LR LR
comp=Z,131nm,22.0s
SONM Songino Array 155.26 5 PKP PKPdf 11 39 44.2 -0.6
comp=Z,0.4nm,0.7s,baz=225,slow=0.4,SNR=2.9
CN2 Changchun 155.66 331 *e*PKP PKPdf 11 39 44.6 -0.9
BJI Beijing 162.31 343 PKP PKPdf 11 39 54.3 +0.8
BJI SS SS 12 04 44.8 +2.3
BJI LR LR
comp=N,288nm,17.1s
BJI LR LR
comp=E,302nm,14.0s
BJI LR LR
comp=Z,335nm,22.2s
HHC Hu-ho-hao-te 162.31 355 *e*PKP PKPdf 11 39 49.6 -3.8
HHC APKP 11 40 00.1
HHC XPKP 11 40 04.3
HHC PKP2 PKPab 11 40 38.1 -2.5
HHC PKS 11 43 21.8
HHC PP PP 11 44 22.6 -1.2
HHC SKS SKSdf 11 46 48.3 -8.1
HHC SKKS SKKSac 11 51 05.6 -5.5
HHC PP PP
comp=Z,170nm,5.0s
HHC LR LR
comp=N,337nm,15.5s
HHC LR LR
comp=E,360nm,14.3s
HHC LR LR
comp=Z,511nm,20.2s
LZH Lanzhou 166.19 20 *e*PKP PKPdf 11 39 54.5 -2.6
LZH APKP 11 40 05.3
LZH XPKP 11 40 09.0
LZH *e*PP PP 11 44 45.5 +1.1
LZH SKKS SKKSac 11 51 27.5 -3.5

LZH				*e*SS	SS	12 05 19.8	-2.8
LZH				PP	PP		
	comp=Z,115nm,8.7s						
LZH				LR	LR		
	comp=N,128nm,18.2s						
LZH				LR	LR		
	comp=Z,193nm,20.3s						
NJ2	**Nanjing**	**167.98**	**319**	*e*PKP	PKPdf	11 39 57.3	-1.2
CMAR	**Chiang Mai Arr**	**168.95**	**113**	PKP	PKPdf	11 39 59.4	-0.2
	comp=Z,0.2nm,0.3s,baz=100,slow=41,SNR=2.7						
XAN	**Xi'an**	**169.16**	**3**	PKP	PKPdf	11 39 58.1	-1.2
XAN				APKP		11 40 08.9	
XAN				PKP2	PKPab	11 41 10.8	-0.1
XAN				PP	PP	11 45 01.3	+2.0
XAN				SKS	SKSdf	11 46 56.6	-4.6
XAN				SKKS	SKKSac	11 51 42.8	-2.8
XAN				SS	SS	12 05 48.9	-3.1
XAN				LR	LR		
	comp=N,53nm,26.3s						
XAN				LR	LR		
	comp=E,161nm,24.5s						
XAN				LR	LR		
	comp=Z,355nm,26.3s						
CD2	**Chengdu**	**170.69**	**33**	PKP	PKPdf	11 39 58.3	-1.9
CD2				APKP		11 40 09.0	
CD2				XPKP		11 40 12.6	
CD2				PKP2	PKPab	11 41 17.8	-0.1
CD2				PKS		11 43 29.4	
CD2				PP	PP	11 45 09.0	+1.3
CD2				SKS	SKSdf	11 46 56.6	-5.4
CD2				SKKS	SKKSac	11 51 50.1	-3.3
CD2				SS	SS	12 06 03.8	-4.5
CD2				PP	PP		
	comp=Z,190nm,8.9s						
CD2				LR	LR		
	comp=N,310nm,19.6s						
CD2				LR	LR		
	comp=Z,350nm,25.0s						
KMI	**Kunming**	**173.41**	**72**	PKP	PKPdf	11 40 02.1	+0.5
GYA	**Guiyang**	**175.76**	**39**	PKP	PKPdf	11 40 00.6	-1.7
GYA				APKP		11 40 09.8	
GYA				PKP2	PKPab	11 41 39.8	-0.8
GYA				PKS		11 43 30.3	
GYA				PP	PP	11 45 33.8	+1.1
GYA				SKKS	SKKSac	11 52 15.0	-2.9
GYA				SS	SS	12 06 54.8	-3.2
GYA				PP	PP		
	comp=Z,120nm,8.9s						
GYA				LR	LR		
	comp=N,160nm,21.9s						
GYA				LR	LR		
	comp=E,140nm,20.3s						
GYA				LR	LR		
	comp=Z,180nm,22.6s						

IDC 15 11:40:20.0±2.5**,2317S**×**6958W,h80**km±16km**,mb3.6**/5**, mb1 3.9**/6**,mb1mx3.6**/17**,mbtmp3.7**/6**,Error ellipse: s-maj=44.2km s-min=27.7km az=15.0,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.83**	**48**	P	Pn	11 40 37.3	+0.2
	322nm,0.3s,baz=228,slow=10,SNR=6090						
LVC				S	Sn	11 40 51.5	+1.7
	2μm,0.3s,baz=223,slow=22,SNR=95						
CFAA	**Coronel Fontan**	**8.48**	**172**	P	Pn	11 42 16.8	-3.3
	0.1nm,0.3s,baz=354,slow=13,SNR=5.9						
CFAA				S	Sn	11 43 51.2	-2.9
	0.2nm,0.3s,baz=333,slow=20,SNR=1.7						
SIV	**San Ignacio**	**10.74**	**50**	P	Pn	11 42 49.5	-1.4
	3.0nm,0.3s,baz=248,slow=12,SNR=58						
SIV				S	Sn	11 44 50.6	+1.3
	0.1nm,0.3s,baz=342,slow=20,SNR=2.1						
TXAR	**Lajitas Array**	**61.65**	**326**	P	P	11 50 29.2	-0.3
	0.5nm,0.8s,baz=148,slow=8.3,SNR=5.4						
DBIC	**Dimbokro**	**69.81**	**73**	P	P	11 51 21.4	-0.9
	3.4nm,0.8s,baz=252,slow=4.0,SNR=3.5						
NVAR	**Mina Array Bea**	**76.43**	**323**	P	P	11 52 01.6	+0.8
	0.4nm,0.8s,baz=170,slow=5.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**78.50**	**70**	P	P	11 52 13.4	+0.5
	0.7nm,0.7s,baz=256,slow=4.6,SNR=4.2						
YKA	**Yellowknife Ar**	**92.55**	**341**	P	P	11 53 21.3	-0.5
	0.5nm,0.5s,baz=142,slow=4.4,SNR=28						
ASAR	**Alice Springs**	**128.15**	**208**	PKP	PKPdf	11 59 17.2	-0.4
	0.3nm,0.3s,baz=154,slow=2.6,SNR=4.0						
WRA	**Warramunga Arr**	**131.20**	**210**	PKP	PKPdf	11 59 23.4	-0.1
	0.3nm,0.5s,baz=146,slow=1.8,SNR=8.1						
MKAR	**Makanchi Array**	**147.34**	**37**	PKPbc	PKPbc	11 59 54.7	+0.4
	0.6nm,0.6s,baz=313,slow=3.2,SNR=7.7						

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*CSEM **15** 11:42:23.0,3021N×3632E,h0km,ML2.6,After SNSN*
*SGS **15** 11:42:23.0,3021N×3632E,h0km*
*ISCJB **15** 11:42:26.0±1.1,30.13N±004×3579E±008,h0km,Error ellipse: s-maj=9.9km s-min=4.7km az=163.5*
*GII **15** 11:42:27.1±0.8,30.13N×3567E,h0km,ML2.0/4, EXPLOSION*
ISC 15 11:42:26.1±1.1**,3014N**±004×**3582E**±008**,h0km,n16, σ0^{s}68**/20**,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**0.69**	**262**	Pg	**Pg**	**11 42 39.0**	**-0.3**
HRFI				Sg	**Sg**	**11 42 47.8**	**-0.4**
ZFRI	**Zfri**	**0.69**	**307**	Pg	**Pg**	**11 42 39.9**	**+0.4**
ZFRI				Sg	**Sg**	**11 42 49.6**	**+1.1**
PRNI	**Paran**	**0.74**	**287**	Pg	**Pg**	**11 42 39.9**	**-0.4**
AQBJ	**Aqaba**	**0.78**	**239**	Pg	**Pg**	**11 42 41.8**	**+0.7**
MBRI	**Mt Berech**	**0.86**	**247**	Pg	**Pg**	**11 42 42.2**	**-0.4**
EIL	**Elat**	**0.89**	**239**	Pg	**Pg**	**11 42 43.1**	**0.0**
KRMI	**Paran Flat**	**0.95**	**269**	Pg	**Pg**	**11 42 43.6**	**-0.7**
RMNI	**Mount Ramon**	**1.02**	**297**	Pg	**Pg**	**11 42 46.2**	**+0.5**
RTMI	**Retamim**	**1.34**	**314**	Pg	**Pg**	**11 42 51.4**	**-0.3**
JLOS		**1.43**	**192**	P	**Pn**	**11 42 52.5**	**-0.7**
JLOS		**1.43**	**192**	P	**Pn**	**11 42 52.5**	**-0.7**
JLOS				S	**Sg**	**11 43 12.9**	**+1.0**
KZIT	**Kziot**	**1.45**	**302**	Pn	**Pn**	**11 42 52.9**	**-0.7**
KZIT				Sn	**Sn**	**11 43 13.1**	**-0.2**
DSI	**Dead Sea**	**1.48**	**345**	Pn	**Pn**	**11 42 54.8**	**+0.8**
BDAS	**Al Bad'**	**1.81**	**201**	S	**Sn**	**11 43 23.1**	**+0.9**
BDAS	**Al Bad'**	**1.81**	**201**	P	**Pn**	**11 42 57.3**	**-1.3**
TBKS	**Tabuk**	**2.01**	**162**	P	**Pn**	**11 42 56.4**	**-4.9**

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*ISCJB **15** 11:44:59.8±0.7,2480N±004×12234E±002,h116km±5km, Error ellipse: s-maj=7.4km s-min=3.5km az=170.4*
*TAP **15** 11:44:59.8,2488N×12226E,h120km,ML3.3,C*
*JMA **15** 11:44:59.6±0.2,2486N×12235E,h120km,M2.2*
ISC 15 11:45:00.3±0.8**,2481N**±005×**12233E**±003**,h116**km±5km**, n34,σ0^{s}50**/63**,5D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.37**	**302**	*i* P	**Pn**	**11 45 17.1**	**+0.1**
	baz=289						
TWB1				*i* S	**Sn**	**11 45 29.1**	**-0.5**
	baz=289						
TWC	**Suao**	**0.48**	**245**	*i* P	**Pn**	**11 45 17.6**	**0.0**
	baz=241						
TWC				*i* S	**Sn**	**11 45 30.6**	**-0.1**
	baz=241						
NWF	**Wu-fen Shan**	**0.56**	**297**	P	**Pn**	**11 45 18.2**	**+0.1**
	baz=284						
NWF				*e*S	**Sn**	**11 45 31.4**	**-0.3**
	baz=284						
TWE	**Neicheng**	**0.61**	**262**	P	**Pn**	**11 45 18.5**	**0.0**
	baz=257						
TWE				S	**Sn**	**11 45 32.1**	**-0.1**
	baz=257						
ENA	**Nanau**	**0.66**	**235**	P	**Pn**	**11 45 19.2**	**+0.3**
	baz=222						
ENA				*e*S	**Sn**	**11 45 32.8**	**-0.1**
	baz=222						
TWA	**Mucha**	**0.70**	**284**	*e*P	**Pn**	**11 45 18.7**	**-0.4**
	baz=273						
TWA				*e*S	**Sn**	**11 45 33.0**	**-0.4**
	baz=273						
YOJ	**Yonaguni jima**	**0.71**	**119**	P	**Pn**	**11 45 19.3**	**0.0**
YOJ				*e*S	**Sn**	**11 45 34.1**	**+0.5**
ENTT	**Nioudou**	**0.72**	**256**	⇓*i*P	**Pn**	**11 45 19.7**	**+0.4**
	baz=251						
ENTT				S	**Sn**	**11 45 33.6**	**-0.1**
	baz=251						
TWS1	**Kuangyinshan**	**0.88**	**289**	*e*P	**Pn**	**11 45 20.9**	**+0.1**
	baz=289						
TWS1				*e*S	**Sn**	**11 45 36.3**	**+0.1**
	baz=289						
NSK	**Sanguang**	**0.90**	**261**	⇓*i*P	**Pn**	**11 45 20.9**	**0.0**
	baz=256						
NSK				*e*S	**Sn**	**11 45 36.4**	**-0.1**
	baz=256						
NNS	**Nan Shan**	**0.95**	**247**	⇓*i*P	**Pn**	**11 45 22.1**	**+0.7**
	baz=242						
NNS				*e*S	**Sn**	**11 45 37.8**	**+0.4**
	baz=242						
TWD	**Chiawan**	**0.99**	**223**	P	**Pn**	**11 45 21.6**	**-0.2**
	baz=218						
TWD				*e*S	**Sn**	**11 45 37.6**	**-0.6**
	baz=218						
HWA	**Hwalien**	**1.06**	**219**	*e*P	**Pn**	**11 45 23.2**	**+0.6**
	baz=207						
WHF	**Hehuan Shan**	**1.18**	**236**	⇓*i*P	**Pn**	**11 45 24.4**	**+0.6**
	baz=237						
WHF				*e*S	**Sn**	**11 45 41.8**	**+0.2**
	baz=237						
TWT	**Tachien**	**1.19**	**242**	P	**Pn**	**11 45 24.9**	**+0.9**
	baz=239						
TWT				*e*S	**Sn**	**11 45 43.0**	**+1.2**
	baz=239						
NSTT	**Nanjuang**	**1.22**	**262**	*e*P	**Pn**	**11 45 24.0**	**-0.3**
	baz=258						
NSTT				*e*S	**Sn**	**11 45 41.9**	**-0.6**
	baz=258						
ESL	**Shilin**	**1.29**	**220**	*e*P	**Pn**	**11 45 24.2**	**-0.8**
	baz=222						
ESL				*e*S	**Sn**	**11 45 42.9**	**-0.9**
	baz=222						
IRIF	**Iriomote-Funau**	**1.36**	**110**	P	**Pn**	**11 45 25.4**	**-0.4**
IRIF				*e*S	**Sn**	**11 45 45.5**	**+0.3**
TWQ1	**Liyutan**	**1.49**	**252**	*e*P	**Pn**	**11 45 27.2**	**-0.1**
	baz=256						
TWQ1				*e*S	**Sn**	**11 45 47.8**	**-0.1**
	baz=256						
HATJ	**Hateruma jima**	**1.54**	**119**	*e*S	**Sn**	**11 45 49.7**	**+0.8**
EHY	**Hungye**	**1.59**	**216**	*e*P	**Pn**	**11 45 28.6**	**0.0**
	baz=218						
EHY				*e*S	**Sn**	**11 45 50.0**	**-0.1**
	baz=218						
SMLT	**Sun Moon Lake**	**1.60**	**235**	P	**Pn**	**11 45 29.4**	**+0.7**
	baz=232						
SMLT				*e*S	**Sn**	**11 45 50.6**	**+0.4**
	baz=232						
TYC	**Yuchr**	**1.62**	**236**	⇓P	**Pn**	**11 45 29.4**	**+0.6**
	baz=233						
TYC				*e*S	**Sn**	**11 45 51.1**	**+0.5**
	baz=233						
JKRS	**Kuro-shima**	**1.63**	**110**	P	**Pn**	**11 45 29.2**	**+0.2**
JKRS				*e*S	**Sn**	**11 45 51.0**	**+0.1**
JIJ	**Ishigaki jima**	**1.71**	**105**	P	**Pn**	**11 45 29.6**	**-0.3**
JIJ				*e*S	**Sn**	**11 45 51.6**	**-0.9**
TWF1	**Yuli**	**1.73**	**213**	*e*P	**Pn**	**11 45 29.1**	**-1.2**
	baz=217						
TWF1				*e*S	**Sn**	**11 45 52.6**	**-0.4**
	baz=217						
CHKT	**Chengkung**	**1.92**	**208**	*e*P	**Pn**	**11 45 31.5**	**-1.1**
	baz=200						
CHN5	**Tsauling**	**1.94**	**232**	*e*P	**Pn**	**11 45 33.0**	**+0.3**
	baz=236						
CHN5				*e*S	**Sn**	**11 45 58.3**	**+0.8**
	baz=236						
ELDTW	**Lidau**	**2.01**	**217**	*e*P	**Pn**	**11 45 33.1**	**-0.6**
	baz=212						
ELDTW				*e*S	**Sn**	**11 45 59.4**	**+0.2**
	baz=212						
CHN4	**Tsaushan**	**2.15**	**228**	*e*P	**Pn**	**11 45 35.3**	**-0.1**
	baz=226						
CHN4				*e*S	**Sn**	**11 46 02.8**	**+0.4**
	baz=226						
JTJ	**Tarama**	**2.16**	**94**	*e*S	**Sn**	**11 46 02.7**	**+0.1**
TWG	**Pinlang**	**2.29**	**210**	*e*P	**Pn**	**11 45 36.2**	**-1.0**
	baz=205						
CHN1	**Nanshi**	**2.31**	**226**	*e*P	**Pn**	**11 45 37.1**	**-0.4**
	baz=224						
CHN1				*e*S	**Sn**	**11 46 06.1**	**+0.1**
	baz=224						
JOGS	**Gusukube**	**2.80**	**90**	P	**Pn**	**11 45 44.3**	**+0.6**
JOGS				*e*S	**Sn**	**11 46 17.2**	**0.0**

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*IDC **15** 12:06:53.5±0.8,4894S×16432E,h0km,mb4.3/6, mb1 4.5/8,mb1mx4.3/14,mbtmp4.3/8,ML3.8/2,MS4.1/2, Ms1 4.1/2,ms1mx3.6/24,Error ellipse: s-maj=28.8km s-min=20.6km az=68.0*
*NEIC **15** 12:06:54.7±0.7,4902S×16435E,h10km,mb4.4/4,Error ellipse: s-maj=11.6km s-min=10.6km az=90.0*
*ISCJB **15** 12:06:55.1±4.1,4893S±006×1645E±0.1,h15km±26km, mb4.3/8,MS4.0/2,Error ellipse: s-maj=11.8km s-min=9.5km az=32.7*
ISC 15 12:06:53.6±4.0**,4895S**±006×**16438E**±010**,h1**km±26km**, n30,σ1^{s}08**/24**,mb4.3**/8**,MS4.0**/2**,Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.50**	**209**	*e*P	**Pn**	**12 08 27.7**	**-2.5**
RPZ	**Rata Peaks**	**6.98**	**44**	Pn	**Pn**	**12 08 36.4**	**-0.5**
	2.7nm,0.3s,baz=245,slow=5.1,SNR=18						
RPZ				Sn	**Sn**	**12 09 55.8**	**-1.1**
	3.2nm,0.3s,baz=69,slow=19,SNR=7.3						
TAU	**Tasmania Unive**	**13.31**	**291**	*e*Pn	**Pn**	**12 10 01.8**	**-1.9**
	78nm,1.4s						
MOO	**Moorlands**	**13.65**	**292**	*e*P	**Pn**	**12 10 04.4**	**-3.8**
MOO				*e*T		12 23 34.0	
URZ	**Urewera**	**14.09**	**45**	Pn	**Pn**	**12 10 15.2**	**+0.9**
	0.2nm,0.3s,baz=198,slow=6.4,SNR=3.1						
CNB	**Canberra Magne**	**17.55**	**315**	*e*P	**Pn**	**12 10 59.8**	**+0.3**
CNB				*e*T		12 27 36.4	
CAN	**Canberra**	**17.72**	**315**	*e*Pn	**Pn**	**12 11 02.8**	**+1.3**
	29nm,1.1s						
TOO	**Toolangi**	**17.80**	**303**	*e*P	**Pn**	**12 11 03.3**	**+0.8**
ARMA	**Armidale**	**20.90**	**328**	*e*P	**P**	**12 11 39.7**	**+2.5**
STKA	**Stephens Creek**	**24.18**	**306**	*e*P	**P**	**12 12 12.3**	**+0.9**
	5.7nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**24.18**	**306**	P	**P**	**12 12 12.1**	**+0.7**
	5.1nm,0.7s,mb4.1,baz=132,slow=10,SNR=10						
STKA				LR	LR	12 20 18.2	
	comp=Z,483nm,19.1s,MS4.0,baz=179,slow=33						
VNDA	**Vanda**	**28.69**	**181**	P	**P**	**12 12 52.5**	**+0.9**
	4.8nm,1.1s,mb4.2,baz=349,slow=11,SNR=3.7						
VNDA				LR	LR	12 21 12.7	
	comp=Z,377nm,19.8s,MS4.0,baz=174,slow=30						
ASAR	**Alice Springs**	**34.81**	**305**	P	**P**	**12 13 45.5**	**-0.4**
	3.3nm,0.7s,mb4.4,baz=138,slow=8.1,SNR=48						
WB2	**Warramunga Arr**	**37.64**	**310**	*e*P	**P**	**12 14 09.3**	**-0.8**
WRA	**Warramunga Arr**	**37.65**	**310**	P	**P**	**12 14 09.0**	**-1.1**
	3.9nm,0.9s,mb4.2,baz=137,slow=7.7,SNR=26						
WRAB	**Tennant Creek**	**37.65**	**310**	*e*P	**P**	**12 14 09.4**	**-0.7**
	13nm,1.3s,mb4.5						
QSPA	**South Pole Qui**	**41.17**	**180**	P	**P**	**12 14 39.0**	**+0.1**
	4.6nm,1.0s,mb4.2,baz=354,slow=3.1,SNR=9.2						
FITZ	**Fitzroy Crossi**	**43.84**	**301**	*e*P	**P**	**12 15 01.4**	**+0.1**
	15nm,0.6s,mb4.9						
KAKA	**Kakadu**	**44.74**	**313**	*e*P	x	12 14 48.1	
	8.2nm,1.0s						
SNAA	**Sanae**	**59.34**	**185**	*e*	**P**	**12 16 55.6**	**-1.0**
VNA3	**Neumayer Olymp**	**60.04**	**182**	*e*	**P**	**12 17 02.2**	**+0.8**
VNA2	**Neumayer--Watz**	**60.29**	**183**	*e*	**P**	**12 17 03.3**	**+0.2**
VNA1	**Neumayer--Stat**	**60.59**	**183**	*e*	**P**	**12 17 06.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**88.66**	**300**	P	**P**	**12 19 48.4**	**0.0**
	0.5nm,0.3s,mb4.2,baz=152,slow=3.4,SNR=4.1						
YKA	**Yellowknife Ar**	**128.18**	**36**	PKP	PKPdf	12 25 59.8	-0.4
	0.1nm,0.8s,baz=268,slow=2.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**141.54**	**208**	PKhKP		12 26 20.9	
	0.6nm,0.9s,baz=141,slow=0.9,SNR=2.6						
BRTR	**Keskin Array B**	**144.14**	**274**	PKP	PKPdf	12 26 28.9	-1.6
	2.0nm,1.0s,baz=129,slow=4.9,SNR=5.5						
SPITS	**Spitsbergen Ar**	**148.33**	**348**	PKPbc	PKPbc	12 26 40.9	+0.9
	11nm,0.9s,baz=137,slow=8.8,SNR=2.7						
AKASG	**Malin Array Be**	**151.35**	**291**	PKPbc	PKPbc	12 26 46.5	-1.6
	1.3nm,0.6s,baz=92,slow=2.2,SNR=5.0						
ARCES	**ARCESS Array B**	**151.47**	**331**	PKPbc	PKPbc	12 26 47.9	+0.1
	4.4nm,0.8s,baz=46,slow=2.6,SNR=5.8						

CASC 15 12:13:40.0±1.3**,1278N**×**8870W,h35**km±999km**,MD3.7, ML2.8,4C-8D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.77**	**33**	⇑*e*P	x	12 13 55.1	
BLLM	**Bellamira**	**0.80**	**34**	⇓*e*P	x	12 13 55.2	
SNVI	**San Vicente**	**0.84**	**351**	⇓*e*P	x	12 13 55.7	
SNVI				*e*S	x	12 14 07.3	
CNCH	**Conchagua**	**0.98**	**60**	⇓*e*P	x	12 13 57.7	
CNCH				*e*S	x	12 14 11.3	
LBRS	**Las Brisas**	**1.01**	**341**	⇑*e*P	x	12 13 58.2	
LBRS				*e*S	x	12 14 11.0	
CAHU	**Cacacuatique**	**1.10**	**26**	⇓*e*P	x	12 13 60.0	
BOQS	**Boqueron**	**1.11**	**330**	⇓*e*P	x	12 13 59.4	
BOQS				*e*S	x	12 14 14.2	
SBLS	**San Blas**	**1.39**	**320**	⇓*e*P	x	12 14 03.3	
SBLS				*e*S	x	12 14 21.3	
SNJE	**San Jose**	**1.40**	**321**	⇑*e*P	x	12 14 03.5	
SNJE				*e*S	x	12 14 21.3	
RTR	**El Retiro**	**1.44**	**321**	⇑*e*P	x	12 14 04.4	
RTR				*e*S	x	12 14 23.2	
CRIN	**San Cristobal**	**1.62**	**92**	*e*P	Pn	12 14 06.1	+0.1
RBDL	**Robledal**	**1.64**	**324**	⇓*e*P	x	12 14 07.2	
TGUH	**Tegucigalpa,Un**	**1.89**	**47**	*e*P	Pn	12 14 10.4	+0.7
TGUH				⇓*e*P		12 14 10.5	
CNGN	**Cerro Negro**	**1.98**	**98**	*e*P	Pn	12 14 10.5	-0.5
CNGN				*e*P		12 14 10.8	
CNGN				*e*S	Sn	12 14 34.1	-0.4
CNGN				AML	AML	12 14 48.3	
	comp=N,82nm,0.3s						

IDC 15 12:28:34.9±0.9**,2560S**×**17747W,h0**km**,mb4.2**/8**, mb1 4.4**/9**,mb1mx4.2**/17**,mbtmp4.3**/9**,ML2.3**/1**,MS4.4**/13**, Ms1 4.4**/13**,ms1mx4.2**/25**,Error ellipse: s-maj=37.6km s-min=20.0km az=154.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.66**	**186**	Pn	Pn	12 29 39.1	+6.4
	118nm,0.3s,baz=272,slow=22,SNR=6.2						
RAO				Sn	Sn	12 30 27.6	+11
	46nm,0.3s,baz=95,slow=22,SNR=3.1						
AFI	**Afiamalu**	**12.80**	**26**	Pn	Pn	12 31 38.8	+0.5
	0.9nm,0.3s,baz=56,slow=22,SNR=3.1						
AFI				Sn	Sn	12 34 02.7	+1.1
	1.2nm,0.3s,baz=122,slow=22,SNR=3.8						
URZ	**Urewera**	**13.43**	**199**	LR	LR	12 36 23.8	
	comp=Z,2μm,19.3s,baz=141,slow=35						
RAR	**Rarotonga**	**16.82**	**79**	LR	LR	12 37 41.1	
	comp=Z,813nm,19.7s,baz=267,slow=32						
HNR	**Honiara**	**26.80**	**303**	LR	LR	12 42 55.4	
	comp=Z,1μm,21.8s,baz=131,slow=32						
PPT	**Papeete**	**27.10**	**78**	*e*LQ		12 39 57.6	
	3μm,24.2s						
PPT				*e*LR	LR	12 40 56.2	
	3μm,27.5s,baz=246						
PPT	**Papeete**	**27.10**	**78**	LR	LR	12 42 02.2	
	comp=Z,882nm,19.6s,baz=253,slow=30						
CTA	**Charters Tower**	**33.81**	**272**	P	P	12 35 18.5	-0.4
	5.7nm,0.8s,baz=80,slow=11,SNR=3.3						
CTA				LR	LR	12 46 49.3	
	comp=Z,836nm,21.5s,baz=95,slow=32						
STKA	**Stephens Creek**	**36.27**	**250**	P	P	12 35 41.8	+1.8
	1.4nm,0.6s,baz=61,slow=6.4,SNR=4.2						
STKA				LR	LR	12 48 02.8	
	comp=Z,819nm,21.7s,baz=69,slow=32						
PMG	**Port Moresby**	**37.22**	**289**	P	P	12 35 49.1	+0.8
	11nm,0.9s,baz=89,slow=13,SNR=3.5						
RKT	**Rikitea**	**38.68**	**96**	*e*LR	LR	12 46 22.2	
	1μm,28.8s,baz=262						
ASAR	**Alice Springs**	**44.05**	**262**	P	P	12 36 43.2	-1.5
	2.7nm,1.0s,baz=102,slow=8.3,SNR=16						
WRA	**Warramunga Arr**	**44.60**	**267**	P	P	12 36 49.5	+0.4
	7.6nm,0.8s,baz=104,slow=8.0,SNR=14						
GUMO	**Guam**	**53.51**	**312**	LR	LR	12 58 02.0	
	comp=Z,352nm,19.0s,baz=258,slow=33						
NWAO	**Narrogin (SRO)**	**56.64**	**246**	LR	LR	13 02 40.8	
	comp=Z,317nm,19.3s,baz=262,slow=36						
BATI	**Baumata**	**57.64**	**274**	LR	LR	13 02 18.6	
	comp=Z,413nm,20.4s,baz=102,slow=35						
KAPI	**Kappang**	**63.33**	**278**	LR	LR	13 05 21.7	
	comp=Z,288nm,21.1s,baz=88,slow=35						
MAW	**Mawson**	**76.95**	**200**	LR	LR	13 11 36.4	
	comp=Z,247nm,19.9s,baz=248,slow=34						
PETK	**Petropavlovsk-**	**81.30**	**345**	P	P	12 40 53.5	+0.9
	8.4nm,1.0s,baz=116,slow=17,SNR=2.8						
VNA3	**Neumayer Olymp**	**83.04**	**176**	*e*	P	12 41 01.0	-0.8
VNA3				*e*		12 41 03.9	
VNA3				*e*		12 41 13.6	
VNA2	**Neumayer--Watz**	**83.49**	**177**	*e*	P	12 41 02.7	-1.3
	baz=168,slow=5.1						
VNA2				*e*		12 41 06.1	
VNA2				*e*		12 41 16.5	
VNA1	**Neumayer--Stat**	**83.71**	**176**	*e*	P	12 41 05.1	-0.1
VNA1				*e*		12 41 07.9	
VNA1				*e*		12 41 16.0	
NVAR	**Mina Array Bea**	**84.41**	**43**	P	P	12 41 11.4	+2.2
	0.9nm,0.8s,baz=222,slow=8.4,SNR=4.9						
TXAR	**Lajitas Array**	**89.40**	**57**	P	P	12 41 32.6	-1.1
	0.0nm,0.5s,baz=23,slow=35,SNR=2.5						
CMAR	**Chiang Mai Arr**	**92.26**	**289**	LR	LR	13 21 20.7	
	comp=Z,91nm,21.1s,baz=195,slow=34						
SONM	**Songino Array**	**99.89**	**318**	LR	LR	13 20 13.7	
	comp=Z,166nm,21.9s,baz=191,slow=31						
ZALV	**Zalesovo Beam**	**114.72**	**320**	PKP	PKiKP	12 47 16.8	-0.1
	0.5nm,0.5s,baz=27,slow=1.0,SNR=3.2						
MKAR	**Makanchi Array**	**114.99**	**312**	PKP	PKiKP	12 47 17.7	+0.1
	0.5nm,0.7s,baz=115,slow=2.4,SNR=5.0						
KURK	**Kurchatov**	**118.02**	**316**	PKP	PKPdf	12 47 23.4	+0.1
	0.4nm,0.7s,baz=110,slow=1.5,SNR=4.2						
BVAR	**Borovoye Array**	**123.23**	**318**	PKP	PKPdf	12 47 32.7	-0.6
	1.4nm,0.7s,baz=346,slow=1.8,SNR=5.3						
NB2	**NORSAR Subarra**	**144.08**	**353**	PKP	PKPdf	12 48 10.6	-1.3
	comp=Z,1.0nm,0.7s,baz=6.6,slow=3.1						
NOA	**NORSAR Array B**	**144.08**	**353**	PKP	PKPdf	12 48 09.8	-2.1
	comp=Z,1.5nm,0.8s,baz=14,slow=4.5,SNR=4.5						
AKASG	**Malin Array Be**	**147.64**	**328**	PKPbc	PKPbc	12 48 18.5	-2.5
	comp=Z,2.0nm,0.6s,baz=43,slow=3.9,SNR=8.8						
BRTR	**Keskin Array B**	**150.43**	**306**	PKPbc	PKPbc	12 48 27.2	-1.2
	comp=Z,2.5nm,0.9s,baz=151,slow=5.6,SNR=7.8						
MMAI	**Mount Meron Ar**	**150.48**	**292**	PKPbc	PKPbc	12 48 29.5	+0.7
	comp=Z,3.0nm,0.7s,baz=86,slow=5.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**167.59**	**176**	PKP	PKPdf	12 48 43.6	-0.2
	comp=Z,0.6nm,0.7s,baz=198,slow=0.6,SNR=3.0						
TORD				PKPab	PKPab	12 49 49.3	-0.1
	comp=Z,1.6nm,1.1s,baz=189,slow=4.6,SNR=4.2						

IDC 15 12:31:29.8±1.0**,1224N**×**14368E,h0**km**,mb4.1**/13**, mb1 4.2**/13**,mb1mx4.1**/25**,mbtmp4.1**/13**,Error ellipse: s-maj=23.5km s-min=20.8km az=137.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.77**	**41**	Pn	Pn	12 32 02.6	+0.8
	223nm,0.3s,baz=30,slow=22,SNR=71						
GUMO				Sn	Sn	12 32 27.3	+2.3
	145nm,0.3s,baz=176,slow=24,SNR=13						
JOW	**Kunigami**	**20.50**	**317**	P	P	12 36 11.1	+1.6
	7.0nm,0.6s,baz=145,slow=16,SNR=2.6						
KSRS	**Korea Array**	**28.80**	**333**	P	P	12 37 31.0	+1.5
	1.4nm,0.8s,baz=137,slow=8.2,SNR=3.4						
ASAR	**Alice Springs**	**36.94**	**195**	P	P	12 38 41.6	+0.9
	0.2nm,0.5s,baz=12,slow=9.7,SNR=2.5						
SONM	**Songino Array**	**47.18**	**326**	P	P	12 40 04.3	+0.2
	1.4nm,0.5s,baz=147,slow=7.5,SNR=13						
MKAR	**Makanchi Array**	**61.66**	**317**	P	P	12 41 49.1	-0.4
	0.8nm,0.6s,baz=92,slow=9.3,SNR=8.5						
ZALV	**Zalesovo Beam**	**62.05**	**325**	P	P	12 41 51.5	-0.4
	1.2nm,0.4s,baz=109,slow=7.5,SNR=9.1						
KURK	**Kurchatov**	**64.87**	**320**	P	P	12 42 10.6	-0.1
	4.7nm,0.8s,baz=104,slow=6.7,SNR=3.5						
BVAR	**Borovoye Array**	**70.27**	**322**	P	P	12 42 44.8	0.0
	3.0nm,0.3s,baz=103,slow=8.6,SNR=19						
AKTO	**Aktyubinsk**	**77.92**	**319**	P	P	12 43 29.4	-0.2
	0.9nm,0.5s,baz=84,slow=13,SNR=3.6						
YKA	**Yellowknife Ar**	**84.58**	**27**	P	P	12 44 04.2	-0.6
	0.8nm,0.4s,baz=286,slow=5.1,SNR=35						
ARCES	**ARCESS Array B**	**88.00**	**342**	P	P	12 44 20.8	-0.8
	9.7nm,1.2s,baz=57,slow=7.4,SNR=3.6						
NVAR	**Mina Array Bea**	**88.67**	**51**	P	P	12 44 25.6	+0.2
	1.6nm,0.8s,baz=256,slow=6.3,SNR=7.9						
PDAR	**Pinedale Array**	**93.73**	**45**	P	P	12 44 49.0	+0.2
	0.1nm,0.4s,baz=220,slow=3.5,SNR=3.1						

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*ISCJB **15** 13:28:49.7±0.5,4141N±004×14041E±007,h147km±4km, mb3.3/5,Error ellipse: s-maj=8.5km s-min=6.4km az=13.4*

IDC ***15*** *13:28:51.0±1.7, 4151N×14035E, h144km±14km, mb3.1/5, mb1 3.2/7, mb1mx3.1/23, mbtmp3.0/7, Error ellipse: s-maj=27.6km s-min=15.6km az=136.0*
NEIC ***15*** *13:28:50.7±0.9, 4151N×14036E, h142km±15km, mb3.5/1, Error ellipse: s-maj=22.7km s-min=10.4km az=140.0*
JMA ***15*** *13:28:50.9±0.1, 4141N×14042E, h142km±1km, M2.6*
ISC 15 13:28:50.7±0.5**, 4141N**±004×**14042E**±007**, h144**km±4km**, n20, σ0^{s}64**/30**, mb3.3**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSR	**Shiriuchi**	**0.12**	**1**	P	**Pn**	**13 29 09.9**	**-0.1**
JSR				*e*S	**Sn**	**13 29 24.6**	**-0.2**
JSI2	**Shiura 2**	**0.35**	**181**	P	**Pn**	**13 29 10.9**	**+0.2**
JSI2				*e*S	**Sn**	**13 29 25.7**	**-0.1**
JOT	**Ohata**	**0.48**	**93**	P	**Pn**	**13 29 11.4**	**+0.2**
JKB	**Kayabe**	**0.67**	**44**	P	**Pn**	**13 29 12.3**	**0.0**
JYM2	**Yakumo 2**	**0.71**	**357**	P	**Pn**	**13 29 12.8**	**+0.2**
JYM2				*e*S	**Sn**	**13 29 29.3**	**0.0**
JOSM	**Okushiri--Mats**	**0.97**	**314**	P	**Pn**	**13 29 14.6**	**0.0**
JOSM				*e*S	**Sn**	**13 29 32.0**	**-0.9**
JANG	**Nango**	**1.33**	**141**	P	**Pn**	**13 29 17.5**	**-0.5**
JANG				S	**Sn**	**13 29 38.3**	**-0.4**
JEW	**Eniwo**	**1.63**	**28**	P	**Pn**	**13 29 21.9**	**+0.8**
JEW				*e*S	**Sn**	**13 29 46.0**	**+1.6**
JNBK	**Urakawa-nobuka**	**1.95**	**63**	P	**Pn**	**13 29 25.2**	**+0.4**
JNBK				*e*S	**Sn**	**13 29 51.8**	**+0.8**
JOM	**Ohasama**	**2.04**	**161**	P	**Pn**	**13 29 25.5**	**-0.5**
JOM				*e*S	**Sn**	**13 29 52.6**	**-0.4**
ERM	**Erimo**	**2.14**	**73**	*e*Pn	**Pn**	**13 29 27.1**	**+0.1**
ERM				*e*Sn	**Sn**	**13 29 53.6**	**-1.4**
ASAJ	**Asahikawa**	**3.15**	**30**	P	**Pn**	**13 29 40.0**	**+0.3**
	4.2nm,0.3s,baz=215,slow=12,SNR=80						
ASAJ				S	**Sn**	**13 30 16.6**	**-0.9**
	1.5nm,0.3s,baz=87,slow=32,SNR=7.2						
MAJO	**Matsushiro**	**5.15**	**200**	Pn	**Pn**	**13 30 07.0**	**+0.9**
	1.5nm,0.5s						
MJAR	**Matsushiro Arr**	**5.15**	**200**	P	**Pn**	**13 30 07.4**	**+1.4**
	0.2nm,0.3s,baz=12,slow=15,SNR=3.9						
SONM	**Songino Array**	**24.91**	**296**	P	**P**	**13 33 59.6**	**-0.5**
	0.3nm,0.5s,mb3.1,baz=90,slow=10,SNR=2.1						
ZALV	**Zalesovo Beam**	**38.49**	**308**	P	**P**	**13 35 57.9**	**-0.6**
	0.8nm,0.5s,mb3.6,baz=93,slow=8.0,SNR=5.1						
MKAR	**Makanchi Array**	**41.27**	**298**	P	**P**	**13 36 21.1**	**-0.4**
	0.8nm,0.8s,mb3.4,baz=79,slow=8.9,SNR=7.8						
YKA	**Yellowknife Ar**	**60.44**	**31**	P	**P**	**13 38 44.8**	**+0.3**
	0.1nm,0.6s,mb2.9,baz=302,slow=6.8,SNR=3.2						
YKA	**Yellowknife Ar**	**60.44**	**31**	P	**P**	**13 38 44.8**	**+0.3**
PDAR	**Pinedale Array**	**75.16**	**46**	P	**P**	**13 40 16.9**	**-0.1**
	0.4nm,0.4s,mb3.4,baz=316,slow=6.2,SNR=4.2						

ISCJB ***15*** *13:45:36.0±1.7, 192S±02×1694E±02, h278km±15km, mb3.8/9, Error ellipse: s-maj=38.1km s-min=22.9km az=148.7*
NEIC ***15*** *13:45:38.7±6.8, 1914S×16933E, h290km±63km, mb3.8/5, Error ellipse: s-maj=33.4km s-min=26.1km az=98.0*
IDC ***15*** *13:45:40.0±11.0, 1904S×16927E, h297km±111km, mb3.5/7, mb1 3.6/7, mb1mx3.4/15, mbtmp3.5/7, Error ellipse: s-maj=57.0km s-min=40.6km az=124.0*
ISC 15 13:45:36.4±1.8**, 191S**±02×**1694E**±02**, h266**km±16km**, n22, σ0^{s}80**/16**, mb3.8**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.01**	**223**	*e*P	**Pn**	**13 46 41.4**	**+0.4**
NOUC	**Port Laguerre**	**4.12**	**224**	*e*P	**Pn**	**13 46 41.9**	**-0.4**
EIDS	**Eidsvold**	**18.02**	**247**	*e*P	**P**	**13 49 28.8**	**+0.5**
	6.2nm,0.4s						
CTA	**Charters Tower**	**21.79**	**264**	P	**P**	**13 50 08.2**	**+0.9**
	1.8nm,0.5s,mb3.6,baz=49,slow=9.3,SNR=3.8						
CTAO	**Charters Tower**	**21.79**	**264**	*e*P	**P**	**13 50 07.2**	**-0.1**
	1.1nm,0.4s,mb3.5						
STKA	**Stephens Creek**	**28.01**	**238**	P	**P**	**13 51 04.9**	**+1.8**
	2.3nm,0.6s,mb3.8,baz=64,slow=8.6,SNR=10						
STKA	**Stephens Creek**	**28.01**	**238**	*e*P	**P**	**13 51 04.7**	**+1.6**
	0.5nm,0.6s,mb3.1						
WB2	**Warramunga Arr**	**32.98**	**263**	*e*P	**P**	**13 51 46.2**	**-0.6**
WRAB	**Tennant Creek**	**32.98**	**263**	*e*P	**P**	**13 51 45.4**	**-1.4**
	0.7nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**32.99**	**263**	P	**P**	**13 51 45.8**	**-1.1**
	0.5nm,0.3s,mb3.6,baz=86,slow=7.0,SNR=26						
ASAR	**Alice Springs**	**33.27**	**256**	P	**P**	**13 51 49.9**	**+0.6**
	6.5nm,0.4s,mb4.5,baz=82,slow=8.9,SNR=131						
CASY	**Casey**	**60.28**	**203**	P	**P**	**13 55 16.2**	**-0.6**
	6.9nm,1.0s,mb4.1						
PETK	**Petropavlovsk-**	**72.64**	**353**	P	**P**	**13 56 35.0**	**+0.3**
	9.0nm,1.2s,mb4.3,baz=266,slow=4.0,SNR=4.0						
SONM	**Songino Array**	**87.20**	**323**	P	**P**	**13 57 53.3**	**+0.8**
	0.6nm,0.7s,mb3.5,baz=140,slow=5.6,SNR=4.4						
NVAR	**Mina Array Bea**	**88.63**	**48**	P	**P**	**13 57 59.2**	**-0.3**
	0.4nm,0.6s,mb3.4,baz=220,slow=9.1,SNR=3.7						
NVAR	**Mina Array Bea**	**88.63**	**48**	P	**P**	**13 57 59.2**	**-0.3**
YKA	**Yellowknife Ar**	**100.51**	**27**	P	Pdif	13 58 54.0	+0.5
	0.2nm,0.6s,baz=257,slow=4.7,SNR=7.0						
YKA	**Yellowknife Ar**	**100.51**	**27**	P	Pdif	13 58 54.0	+0.5
MKAR	**Makanchi Array**	**101.74**	**316**	P	Pdif	13 59 00.2	+1.2
	0.2nm,0.7s,baz=141,slow=0.9,SNR=3.1						
ARCES	**ARCESS Array B**	**124.99**	**345**	PKP	PKPdf	14 04 03.4	-0.8
	5.6nm,1.0s,baz=77,slow=2.7,SNR=9.5						
ARCES	**ARCESS Array B**	**124.99**	**345**	PKP	PKPdf	14 04 03.4	-0.8
GERES	**GERESS Array B**	**144.45**	**332**	PKP	PKPdf	14 04 39.8	-1.1
	0.7nm,0.6s,baz=38,slow=5.4,SNR=5.0						

IGQ 15 14:40:08.2, 070N×8006W, h12km±4km**, Mb4.1, Ms3.9, 3C-3D, Error ellipse: s-maj=3.5km s-min=1.5km az=55.1, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.96**	**189**	⇑P	Pg	14 40 26.1	-0.6
JAMA				⇑S	Sg	14 40 39.0	-0.3
PINO	**Pino**	**1.68**	**120**	P	Pn	14 40 39.3	+1.9
TERV	**Terraza Guagua**	**1.69**	**121**	P	Pn	14 40 39.9	+2.3
YANA	**Yana**	**1.69**	**119**	P	Pn	14 40 39.8	+2.2
YANA	**Yana**	**1.69**	**119**	S	Sn	14 41 03.5	+4.3
GGP	**Refugio Guagua**	**1.70**	**121**	P	Pn	14 40 39.5	+1.8
COTA	**Cotacachi**	**1.76**	**102**	⇓P	Pn	14 40 41.5	+3.0
COTA	**Cotacachi**	**1.76**	**102**	⇓S	Sn	14 41 08.4	+7.6
QIL2	**Quilotoa**	**1.93**	**144**	P	Pn	14 40 42.1	+1.3
CAMI	**Rancho Maria**	**2.07**	**131**	⇓P	Pn	14 40 46.5	+3.7
VC1	**Cotopaxi 1**	**2.12**	**129**	P	Pn	14 40 46.7	+3.2
TAMB	**Tambo**	**2.19**	**129**	P	Pn	14 40 47.6	+3.2
ANTI	**Antisana**	**2.21**	**121**	P	Pn	14 40 49.0	+4.3
PISA	**Pisayambo**	**2.42**	**136**	P	Pn	14 40 51.9	+4.4
PISA	**Pisayambo**	**2.42**	**136**	S	Sn	14 41 24.2	+7.1
CONE	**Cono NE Rev Vo**	**2.54**	**107**	⇑P	Pn	14 40 55.7	+6.6
LAV3	**Lava3-Reventad**	**2.55**	**108**	P	Pn	14 40 55.3	+5.9
ARRY	**Arrayan**	**2.71**	**144**	P	Pn	14 40 55.3	+3.7

ISCJB ***15*** *14:41:42.8±0.2, 3833N±002×22.10E±002, h81km±3km, mb3.8/12, Error ellipse: s-maj=3.0km s-min=2.6km az=146.9*
CSEM ***15*** *14:41:42.6±0.0, 3833N×22.11E, h80km, ML4.1, Error ellipse: s-maj=1.2km s-min=1.0km az=33.0*
ATH ***15*** *14:41:43.5, 3834N×22.17E, h69km±1km, ML4.1*
NEIC ***15*** *14:41:43.5, 3835N×22.17E, h68km, mb4.1/2, After ATH.*
THE ***15*** *14:41:44.3, 3835N×22.16E, h59km±2km, ML4.1/9, Error ellipse: s-maj=2.7km s-min=0.6km az=85.0*
IDC ***15*** *14:41:45.1±2.0, 3836N×22.11E, h87km±19km, mb3.5/10, mb1 3.6/14, mb1mx3.5/28, mbtmp3.5/14, Error ellipse: s-maj=17.5km s-min=16.2km az=26.0*
PDG ***15*** *14:41:50.0±0.3, 3864N×21.14E, h13km±11km, ML3.7/10, Error ellipse: s-maj=101.9km s-min=46.4km az=90.0*
BEO ***15*** *14:42:02.9±1.7, 3992N×2121E*
ISC 15 14:41:44.0±0.2**, 3834N**±002×**2210E**±002**, h73**km±3km**, n141, σ1^{s}09**/201**, mb3.8**/12**, 12C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.57**	**241**	*e*P	**Pn**	**14 41 57.7**	**-0.1**
RLS				*e*S	**Sn**	**14 42 08.4**	**+0.5**
RLS	**Riolos of Patr**	**0.57**	**241**	*e*P	**Pn**	**14 41 57.6**	**-0.2**
RLS				*e*S	**Sn**	**14 42 08.2**	**+0.3**
EVR	**Evrytania**	**0.62**	**338**	*e*P	**Pn**	**14 41 58.5**	**+0.2**
EVR				*e*S	**Sn**	**14 42 09.2**	**+0.4**
EVR	**Evrytania**	**0.62**	**338**	*e*P	**Pn**	**14 41 58.6**	**+0.3**
EVR				*e*S	**Sn**	**14 42 09.2**	**+0.4**
AGG	**Agios Georgios**	**0.71**	**15**	P	**Pn**	**14 41 58.8**	**-0.4**
AGG				S	**Sn**	**14 42 09.4**	**-1.0**
LTK	**Loutraki**	**0.75**	**115**	P	**Pn**	**14 41 58.5**	**-1.1**
LTK				S	**Sn**	**14 42 09.1**	**-2.1**
LKR	**Lokris**	**0.77**	**66**	*e*P	**Pn**	**14 41 59.1**	**-0.8**
LKR				*e*S	**Sn**	**14 42 10.6**	**-1.0**
LKR	**Lokris**	**0.77**	**66**	*e*P	**Pn**	**14 41 59.1**	**-0.8**
LKR				S	**Sn**	**14 42 09.2**	**-2.4**
KFL	**Anninata**	**1.06**	**258**	P	**Pn**	**14 42 03.0**	**-0.3**
ITM	**Ithomi**	**1.17**	**187**	*e*P	**Pn**	**14 42 05.4**	**+0.7**
ITM				*e*S	**Sn**	**14 42 21.2**	**+1.0**
ITM	**Ithomi**	**1.17**	**187**	*e*P	**Pn**	**14 42 05.7**	**+1.0**
ITM				*e*S	**Sn**	**14 42 21.7**	**+1.5**
THL	**Klokotos Trika**	**1.23**	**357**	P	**Pn**	**14 42 05.5**	**0.0**
THL				S	**Sn**	**14 42 22.1**	**+0.5**
THL	**Klokotos Trika**	**1.23**	**357**	*e*P	**Pn**	**14 42 06.0**	**+0.5**
THL				*e*S	**Sn**	**14 42 21.9**	**+0.3**
NAIG	**Nisos Aigina**	**1.24**	**117**	*e*P	**Pn**	**14 42 05.0**	**-0.6**
NEO	**Neokhori**	**1.30**	**42**	*e*P	**Pn**	**14 42 06.2**	**-0.3**
NEO				*e*S	**Sn**	**14 42 23.1**	**-0.3**
ATH	**Athens Observa**	**1.32**	**106**	*e*P	**Pn**	**14 42 06.4**	**-0.3**
ATH				*e*S	**Sn**	**14 42 22.9**	**-0.9**
XOR	**Xorichti**	**1.33**	**39**	P	**Pn**	**14 42 06.6**	**-0.2**
XOR				S	**Sn**	**14 42 23.3**	**-0.7**
PTL	**Penteli**	**1.42**	**101**	⇓*i*P	**Pn**	**14 42 07.5**	**-0.4**
PTL				*e*S	**Sn**	**14 42 24.9**	**-1.1**
PTL	**Penteli**	**1.42**	**101**	⇓*i*P	**Pn**	**14 42 07.7**	**-0.2**
PTL				*e*S	**Sn**	**14 42 24.9**	**-1.1**
PYL	**PYLOS**	**1.47**	**191**	P	**Pn**	**14 42 09.0**	**+0.4**
PYL				S	**Sn**	**14 42 27.1**	**-0.1**
AOS	**Alonnisos**	**1.62**	**59**	P	**Pn**	**14 42 10.0**	**-0.6**
AOS				S	**Sn**	**14 42 29.4**	**-1.3**
JAN	**Janina**	**1.64**	**324**	⇓*i*P	**Pn**	**14 42 11.8**	**+1.0**
JAN	**Janina**	**1.64**	**324**	⇓*i*P	**Pn**	**14 42 12.0**	**+1.2**
VLI	**Veliai**	**1.75**	**157**	*e*P	**Pn**	**14 42 12.7**	**+0.4**
LIT	**Litokhoron**	**1.79**	**10**	P	**Pn**	**14 42 13.2**	**+0.4**
LIT				S	**Sn**	**14 42 33.8**	**-0.9**
IGT	**Igoumenitsa**	**1.82**	**311**	P	**Pn**	**14 42 13.2**	**-0.1**
IGT				S	**Sn**	**14 42 36.9**	**+1.3**
KZN	**Kozani**	**1.98**	**353**	*e*P	**Pn**	**14 42 16.5**	**+1.1**
PAIG	**Paliouri**	**2.00**	**37**	P	**Pn**	**14 42 15.2**	**-0.5**
PAIG				S	**Sn**	**14 42 39.6**	**-0.3**
KEK	**Kerkira**	**2.26**	**308**	⇓*i*P	**Pn**	**14 42 20.0**	**+0.9**
KEK	**Kerkira**	**2.26**	**308**	⇓*i*P	**Pn**	**14 42 19.9**	**+0.8**
PLG	**Polygyros**	**2.28**	**27**	P	**Pn**	**14 42 19.3**	**-0.2**
PLG				S	**Sn**	**14 42 46.5**	**-0.1**
PLG	**Polygyros**	**2.28**	**27**	*e*P	**Pn**	**14 42 19.6**	**+0.1**
HORT	**Hortiatis**	**2.38**	**19**	P	**Pn**	**14 42 21.4**	**+0.6**
HORT				S	**Sn**	**14 42 49.7**	**+0.6**
THE	**Thessaloniki**	**2.39**	**16**	P	**Pn**	**14 42 20.5**	**-0.4**
THE				S	**Sn**	**14 42 50.0**	**+0.9**
OUR	**Ouranopolis**	**2.47**	**36**	P	**Pn**	**14 42 21.8**	**-0.2**
OUR				S	**Sn**	**14 42 51.5**	**+0.4**
FNA	**Florina**	**2.51**	**347**	P	**Pn**	**14 42 23.7**	**+1.2**
FNA				S	**Sn**	**14 42 52.9**	**+0.9**
GRG	**Griva**	**2.62**	**5**	P	**Pn**	**14 42 24.4**	**+0.3**
GRG				S	**Sn**	**14 42 54.9**	**0.0**
SOH	**Sokhos**	**2.66**	**21**	P	**Pn**	**14 42 25.2**	**+0.6**
SOH				S	**Sn**	**14 42 55.9**	**+0.1**
BIA	**Bitola**	**2.75**	**348**	P	**Pn**	**14 42 26.1**	**+0.4**
BIA				S	**Sn**	**14 42 58.1**	**+0.3**
LIA	**Limnos Island**	**2.86**	**56**	P	**Pn**	**14 42 27.1**	**-0.1**
LIA				S	**Sn**	**14 42 59.3**	**-1.2**
LIA	**Limnos Island**	**2.86**	**56**	*e*P	**Pn**	**14 42 27.5**	**+0.3**
LIA	**Limnos Island**	**2.86**	**56**	*e*P	**Pn**	**14 42 27.2**	**0.0**
LIA				S	**Sn**	**14 42 59.3**	**-1.2**
KNT	**Kendrikon**	**2.89**	**12**	P	**Pn**	**14 42 28.4**	**+0.8**
KNT				S	**Sn**	**14 43 02.0**	**+0.8**
APE	**Apeiranthos**	**3.00**	**114**	*e*P	**Pn**	**14 42 29.5**	**+0.3**
APE	**Apeiranthos**	**3.00**	**114**	*e*P	**Pn**	**14 42 29.1**	**-0.1**
APE				S	**Sn**	**14 43 01.8**	**-2.2**
APE	**Apeiranthos**	**3.00**	**114**	⇓*i*P	**Pn**	**14 42 29.3**	**+0.1**
APE				S	**Sn**	**14 43 01.8**	**-2.2**
VAY	**Valandovo**	**3.00**	**7**	P	**Pn**	**14 42 29.2**	**0.0**
VAY				S	**Sn**	**14 43 04.8**	**+0.8**
VAY	**Valandovo**	**3.00**	**7**	P	**Pn**	**14 42 29.2**	**0.0**
VAY				S	**Sn**	**14 43 04.8**	**+0.8**
VAY	**Valandovo**	**3.00**	**7**	*i* Pn	**Pn**	**14 42 28.9**	**-0.3**
KRUS	**Krusevo**	**3.10**	**348**	*i* Pn	**Pn**	**14 42 31.8**	**+1.3**
KRUS	**Krusevo**	**3.10**	**348**	*i* Pn	**Pn**	**14 42 31.9**	**+1.4**
CHOS	**Chios island**	**3.11**	**88**	P	**Pn**	**14 42 31.0**	**+0.4**
THR5	**Thira Island,**	**3.22**	**126**	P	**Pn**	**14 42 32.6**	**+0.4**
THR3	**Thira Island,**	**3.26**	**125**	P	**Pn**	**14 42 33.6**	**+0.9**
KARN	**Karanos**	**3.27**	**153**	P	**Pn**	**14 42 33.8**	**+0.9**
NVR	**Nevrokopi**	**3.30**	**24**	P	**Pn**	**14 42 34.7**	**+1.5**
THR1	**Thera Island**	**3.32**	**125**	P	**Pn**	**14 42 33.8**	**+0.3**
VAM	**Vamos**	**3.37**	**149**	*e*P	**Pn**	**14 42 35.2**	**+0.9**
VAM	**Vamos**	**3.37**	**149**	*e*P	**Pn**	**14 42 35.0**	**+0.7**
PRK	**Paraskevi**	**3.38**	**73**	P	**Pn**	**14 42 34.5**	**+0.1**
PRK				S	**Sn**	**14 43 12.4**	**-0.9**
PRK	**Paraskevi**	**3.38**	**73**	*e*P	**Pn**	**14 42 34.8**	**+0.4**
PRK	**Paraskevi**	**3.38**	**73**	*e*P	**Pn**	**14 42 34.4**	**0.0**
IDI	**Anoyia**	**3.78**	**143**	P	**Pn**	**14 42 40.0**	**+0.2**
	4.9nm,0.3s,baz=326,slow=14,SNR=36						
IDI				S	**Sn**	**14 43 21.7**	**-1.3**
	17nm,0.3s,baz=309,slow=16,SNR=8.8						
SMG	**Samos**	**3.79**	**98**	*e*P	**Pn**	**14 42 40.5**	**+0.6**
RDO	**Rodhopi**	**3.86**	**42**	*e*P	**Pn**	**14 42 41.6**	**+0.8**
RDO	**Rodhopi**	**3.86**	**42**	*e*P	**Pn**	**14 42 41.2**	**+0.4**
NPS	**Neapolis**	**4.17**	**136**	*e*P	**Pn**	**14 42 45.5**	**+0.4**
ULC	**Ulcinj**	**4.23**	**330**	⇑*i*Pn	**Pn**	**14 42 46.6**	**+0.7**
ULC				*e*Sn	**Sn**	**14 43 30.6**	**-3.4**
TIP	**Timpagrande**	**4.26**	**283**	*e*Pn	**Pn**	**14 42 45.5**	**-0.9**
TIP	**Timpagrande**	**4.26**	**283**	*e*Pn	**Pn**	**14 42 45.5**	**-0.9**
TIP				*e*Sn	**Sn**	**14 43 28.6**	**-6.2**
BARS	**Barje**	**4.48**	**357**	*e*Pn	**Pn**	**14 42 49.4**	**+0.1**
GRI	**Girifalco**	**4.48**	**278**	Pn	**Pn**	**14 42 48.5**	**-0.8**
PVY	**Plav**	**4.55**	**340**	⇑*i*Pn	**Pn**	**14 42 52.9**	**+2.6**
PVY				*e*Sn	**Sn**	**14 43 41.1**	**-0.8**
PDG	**Podgorica**	**4.63**	**333**	⇑*i*Pn	**Pn**	**14 42 53.3**	**+2.0**
PDG				*e*Sn	**Sn**	**14 43 41.2**	**-2.5**
TTG	**Podgorica**	**4.63**	**333**	⇑*i*Pn	**Pn**	**14 42 53.3**	**+2.0**
TTG				*e*Sn	**Sn**	**14 43 41.2**	**-2.5**
BUM	**Brajici-Budva**	**4.65**	**329**	⇓*i*Pn	**Pn**	**14 42 53.2**	**+1.5**
BUM				*e*Sn	**Sn**	**14 43 40.6**	**-3.8**
ORI	**Oriolo Calabro**	**4.72**	**293**	Pn	**Pn**	**14 42 52.1**	**-0.5**
BEY	**Berane**	**4.83**	**340**	*e*Pn	**Pn**	**14 42 56.7**	**+2.6**
BEY				*e*Sn	**Sn**	**14 43 47.4**	**-1.3**
IVA	**Berane**	**4.83**	**340**	*e*Pn	**Pn**	**14 42 56.7**	**+2.6**
IVA				*e*Sn	**Sn**	**14 43 47.4**	**-1.3**
SG1	**Sgolgore (BA)**	**4.88**	**303**	*e*Pn	**Pn**	**14 42 54.2**	**-0.6**
SG1				*e*Sn	**Sn**	**14 43 43.6**	**-6.3**
CEL	**Celeste**	**4.88**	**271**	Pn	**Pn**	**14 42 53.9**	**-1.0**
HCY	**Herceg Novi**	**4.94**	**327**	⇑*i*Pn	**Pn**	**14 42 56.3**	**+0.7**
HCY				*e*Sn	**Sn**	**14 43 46.7**	**-4.7**
NKY	**Niksic**	**5.06**	**333**	⇓*i*Pn	**Pn**	**14 42 59.6**	**+2.4**
NKY				*e*Sn	**Sn**	**14 43 50.8**	**-3.4**
MTTG	**Motta San Giov**	**5.06**	**268**	Pn	**Pn**	**14 42 56.1**	**-1.2**
	27nm,0.6s						
CUC	**Castrocucco**	**5.16**	**291**	*e*Pn	**Pn**	**14 42 58.2**	**-0.4**
	117nm,0.6s						
CUC				*e*Sn	**Sn**	**14 43 54.8**	**-1.9**
CUC	**Castrocucco**	**5.16**	**291**	*e*Pn	**Pn**	**14 42 58.2**	**-0.4**
	117nm,0.6s						
CUC				*e*Sn	**Sn**	**14 43 54.8**	**-2.0**
PTRP	**Pietrapertosa**	**5.16**	**297**	Pn	**Pn**	**14 42 58.8**	**+0.2**
TREB	**Trebinje**	**5.22**	**328**	*e*Pn	**Pn**	**14 42 57.8**	**-1.7**
TREB				*e*Sg	**Sn**	**14 43 54.8**	**-3.6**
TREB	**Trebinje**	**5.22**	**328**	⇓*i*Pn	**Pn**	**14 42 57.6**	**-1.9**
BRY	**Bratogost**	**5.30**	**330**	⇑*i*Pn	**Pn**	**14 43 01.2**	**+0.7**
BRY				*e*Sn	**Sn**	**14 43 56.4**	**-3.8**
ACER	**Acerenza**	**5.35**	**299**	Pn	**Pn**	**14 43 00.8**	**-0.4**
	1.9nm,0.3s						
MGR	**Morigerati**	**5.39**	**292**	Pn	**Pn**	**14 43 01.2**	**-0.6**
	44nm,0.4s						
PLE	**Pljevlja**	**5.39**	**338**	⇑*i*Pn	**Pn**	**14 43 04.7**	**+2.9**
PLE				*e*Sn	**Sn**	**14 44 00.0**	**-2.5**
UPM	**Unac-Piva**	**5.43**	**335**	⇑*i*Pn	**Pn**	**14 43 04.4**	**+2.1**
UPM				*e*Sn	**Sn**	**14 44 00.5**	**-2.9**
BOLS	**Boljevac**	**5.49**	**359**	*e*Pn	**Pn**	**14 43 04.0**	**+0.9**
GRUS	**Gruza**	**5.64**	**350**	*e*Pn	**Pn**	**14 43 07.8**	**+2.6**
SGO	**Sicignano**	**5.71**	**295**	Pn	**Pn**	**14 43 05.9**	**-0.2**
SGO				Sn	**Sn**	**14 44 02.2**	**-8.0**
BBLS	**Lazići**	**5.89**	**341**	*e*Pn	**Pn**	**14 43 08.7**	**+0.2**
RGNG	**Rignano Grg**	**6.01**	**306**	Pn	**Pn**	**14 43 08.9**	**-1.3**
RGNG				Sn	**Sn**	**14 44 13.7**	**-3.9**
CSSN	**Cassano Irpino**	**6.02**	**297**	Pn	**Pn**	**14 43 10.6**	**+0.2**
CSSN				Sn	**Sn**	**14 44 15.3**	**-2.5**
FG5	**Orsara di Pugl**	**6.03**	**301**	Pn	**Pn**	**14 43 10.1**	**-0.4**
ISP	**Isparta**	**6.65**	**92**	⇑*i*P	**Pn**	**14 43 19.1**	**+0.1**
GZR	**Gura Zlata**	**7.07**	**4**	⇑*i*P	**Pn**	**14 43 30.6**	**+6.0**
GZR	**Gura Zlata**	**7.07**	**4**	⇑P	**Pn**	**14 43 30.6**	**+5.9**
SDI	**San Donato**	**7.20**	**300**	Pn	**Pn**	**14 43 27.5**	**+1.0**
SDI				Sn	**Sn**	**14 44 44.8**	**-1.9**
VOIR		**7.43**	**16**	⇑*i*P	**Pn**	**14 43 31.8**	**+2.3**
PTQR	**Pietraquaria**	**7.61**	**302**	Pn	**Pn**	**14 43 34.1**	**+2.0**
	145nm,1.8s						
MLR	**Muntele Rosu**	**7.70**	**21**	P	**Pn**	**14 43 34.8**	**+1.6**
	0.7nm,0.3s,baz=166,slow=11,SNR=7.3						
NRCA	**Norcia**	**8.18**	**306**	Pn	**Pn**	**14 43 40.2**	**+0.3**
NRCA				Sn	**Sn**	**14 45 06.1**	**-4.6**
PLOR	**Plostina**	**8.23**	**23**	⇓*i*P	**Pn**	**14 43 44.1**	**+3.6**
VRI	**Vrincioaia**	**8.27**	**23**	⇓*i*P	**Pn**	**14 43 44.3**	**+3.2**
VRI	**Vrincioaia**	**8.27**	**23**	⇓P	**Pn**	**14 43 44.3**	**+3.2**
PKSM	**Moragy**	**8.28**	**343**	*e*Pn	**Pn**	**14 43 39.4**	**-1.7**
BR131	**Keskin Array S**	**9.09**	**78**	*e*Pn	**Pn**	**14 43 54.8**	**+2.6**
	3.0nm,0.4s						
BRTR	**Keskin Array B**	**9.09**	**78**	P	**Pn**	**14 43 55.1**	**+2.9**
	1.2nm,0.3s,baz=259,slow=12,SNR=32						
PSZ	**Piszkesteto**	**9.71**	**351**	*e*Pn	**Pn**	**14 44 03.0**	**+2.3**
PSZ	**Piszkesteto**	**9.71**	**351**	*e*Pn	**Pn**	**14 44 03.0**	**+2.3**
PSZ				*e*Sn	**Sn**	**14 45 47.6**	**-0.3**
MMAI	**Mount Meron Ar**	**12.04**	**112**	P	**Pn**	**14 44 33.6**	**+1.0**
	1.0nm,0.3s,baz=301,slow=14,SNR=5.1						
ESDC	**Sonseca Array**	**20.28**	**282**	P	**P**	**14 46 14.2**	**+0.6**
	2.3nm,0.6s,baz=80,slow=11,SNR=9.3						
ESLA	**Sonseca Array**	**20.28**	**282**	*e*P	**P**	**14 46 13.3**	**-0.3**
	0.3nm,0.5s						
ESLA	**Sonseca Array**	**20.28**	**282**	*e*P	**P**	**14 46 13.3**	**-0.3**
	0.3nm,0.5s						
HFS	**Hagfors**	**22.46**	**349**	P	**P**	**14 46 36.0**	**-0.7**
	1.7nm,0.5s,mb3.7,baz=145,slow=10,SNR=13						
KONO	**Kongsberg**	**22.78**	**343**	P	**P**	**14 46 36.9**	**-3.1**
KONO	**Kongsberg**	**22.78**	**343**	P	**P**	**14 46 36.9**	**-3.0**
	5.6nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**23.73**	**347**	P	**P**	**14 46 48.2**	**-0.8**
	comp=Z,0.9nm,0.5s,mb3.4,baz=151,slow=10						
NOA	**NORSAR Array B**	**23.73**	**347**	P	**P**	**14 46 48.2**	**-0.8**
	comp=Z,0.9nm,0.5s,mb3.4,baz=160,slow=9.9,SNR=11						
NOA	**NORSAR Array B**	**23.73**	**347**	P	**P**	**14 46 48.2**	**-0.8**
EKA	**Eskdalemuir Ar**	**24.03**	**323**	P	**P**	**14 46 52.1**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.1,baz=126,slow=10,SNR=3.6						
ARU	**Arti**	**30.12**	**41**	*e*P	**P**	**14 47 45.2**	**-1.2**
	comp=Z,3.6nm,0.7s,mb4.1						
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P	**P**	**14 47 54.5**	**+0.3**
	comp=Z,0.5nm,0.6s,mb3.4,baz=32,slow=9.2,SNR=5.3						
ARCES	**ARCESS Array B**	**31.31**	**2**	P	**P**	**14 47 55.4**	**-1.4**
	comp=Z,3.3nm,0.9s,mb4.1,baz=186,slow=9.8,SNR=5.6						
MK31	**Makanchi Array**	**44.16**	**59**	*e*P	**P**	**14 49 44.9**	**-0.3**
MK31	**Makanchi Array**	**44.16**	**59**	*e*P	**P**	**14 49 44.9**	**-0.2**
MKAR	**Makanchi Array**	**44.16**	**59**	P	**P**	**14 49 45.1**	**-0.1**
	comp=Z,4.6nm,0.5s,mb4.5,baz=274,slow=7.5,SNR=108						
ZALV	**Zalesovo Beam**	**44.66**	**48**	P	**P**	**14 49 48.7**	**-0.3**
	comp=Z,9.8nm,0.4s,mb4.9,baz=271,slow=8.6,SNR=50						
ZALV	**Zalesovo Beam**	**44.66**	**48**	P	**P**	**14 49 48.7**	**-0.3**
SONM	**Songino Array**	**59.39**	**51**	P	**P**	**14 51 38.4**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.9,baz=278,slow=7.1,SNR=4.1						
YKA	**Yellowknife Ar**	**73.66**	**341**	P	**P**	**14 53 09.4**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.1,baz=35,slow=5.3,SNR=9.3						
KSRS	**Korea Array**	**78.26**	**51**	P	**P**	**14 53 35.2**	**-0.7**
	comp=Z,1.1nm,0.8s,mb3.6,baz=86,slow=38,SNR=4.0						
WRA	**Warramunga Arr**	**119.30**	**93**	PKP	PKPdf	15 00 23.6	-1.5
	comp=Z,0.4nm,0.9s,baz=311,slow=2.3,SNR=3.5						
ASAR	**Alice Springs**	**120.95**	**97**	PKP	PKPdf	15 00 27.7	-0.5
	comp=Z,0.1nm,0.3s,baz=326,slow=1.4,SNR=3.5						

IDC ***15*** *14:54:59.7±0.6, 1.10N×9721E, h0km, mb4.4/17, mb1 4.5/19, mb1mx4.4/26, mbtmp4.4/19, ML4.3/2, MS3.8/4, Ms1 3.8/4, ms1mx3.5/33, Error ellipse: s-maj=18.6km s-min=13.9km az=48.0*
BJI ***15*** *14:55:00.7, 074N×9747E, h35km, mB5.0, mb4.9, Ms4.6, Msz4.4*
MOS ***15*** *14:55:02.9±1.0, 1.11N×9734E, h33km, mb5.0/11, Error ellipse: s-maj=12.2km s-min=7.1km az=101.8*
ISCJB ***15*** *14:55:04.3±0.8, 109N±004×9732E±004, h45km±6km, mb4.7/59, MS4.2/18, Error ellipse: s-maj=8.2km s-min=6.4km az=140.5*
NEIC ***15*** *14:55:05.2±0.3, 1.13N×9745E, h35km, mb4.7/30, Error ellipse: s-maj=9.0km s-min=5.4km az=223.0*
DJA ***15*** *14:55:16, 139N×98.17E, h34km, MLv4.5/5*
ISC 15 14:55:06.7±0.7**, 110N**±004×**9735E**±005**, h48**km±6km**, h36**km±.5km**:pP-P, n120, σ1^{s}02**/123**, mb4.7**/59**, MS4.2**/18**, 10C-8D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.31**	**43**	Pn	**Pn**	**14 55 40.3**	**-2.0**
	14nm,0.3s,baz=207,slow=6.6,SNR=43						
PSI				Sn	**Sn**	**14 56 10.2**	**+0.7**
	28nm,0.3s,baz=229,slow=12,SNR=5.0						
PPI	**Padang Panjang**	**3.42**	**117**	P	**Pn**	**14 55 57.9**	**+0.5**
PDSI	**Padang**	**3.70**	**123**	P	**Pn**	**14 56 07.7**	**+6.4**
BSI	**Banda Aceh**	**4.83**	**335**	P	Px	14 56 29.2	
IPM	**Ipoh**	**4.98**	**47**	P	**Pn**	**14 56 19.7**	**+0.8**
IPM	**Ipoh**	**4.98**	**47**	P	**Pn**	**14 56 19.6**	**+0.7**
KULM	**Kulim**	**5.31**	**38**	⇓P	**Pn**	**14 56 22.5**	**-0.9**
KULM	**Kulim**	**5.31**	**38**	P	**Pn**	**14 56 22.9**	**-0.6**
KGM	**Kluang**	**6.04**	**81**	⇓P	**Pn**	**14 56 34.4**	**+0.9**
MYKOM	**Kota Tinggi**	**6.53**	**84**	⇑P	**Pn**	**14 56 41.1**	**+0.8**
KTGM	**Kuala Trenggan**	**7.14**	**54**	⇑P	**Pn**	**14 56 49.1**	**+0.5**
KSM	**Kuching**	**12.96**	**88**	*e*Pn	**Pn**	**14 58 03.6**	**-4.6**
	46nm,1.8s						
SBUM	**Sibu**	**14.92**	**85**	⇑P	**Pn**	**14 58 36.6**	**+1.9**
SBUM	**Sibu**	**14.92**	**85**	P	**Pn**	**14 58 41.5**	**+6.8**
UBT	**Ubonrachathani**	**15.97**	**28**	⇑P	**Pn**	**14 58 51.0**	**+2.8**
CM31	**Chiang Mai Arr**	**17.32**	**5**	*e*Pn	**Pn**	**14 59 02.8**	**-2.3**
	7.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**17.32**	**5**	P	**Pn**	**14 59 03.1**	**-2.0**
	1.4nm,0.3s,baz=194,slow=11,SNR=48						
CMAR				PcP	PcP	15 03 46.5	+0.7
	0.1nm,0.3s,baz=217,slow=2.5,SNR=5.3						
CMAR				LR	LR	15 05 43.0	
	comp=Z,243nm,21.6s,baz=190,slow=37						
CHG	**Chiang Mai**	**17.68**	**5**	⇑P	**Pn**	**14 59 08.3**	**-1.2**
	8.0nm,0.7s						
CHTO	**Chiang Mai**	**17.68**	**5**	*e*P	**Pn**	**14 59 07.4**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**17.68**	**5**	*e*Pn	**Pn**	**14 59 07.4**	**-2.1**
	comp=Z,6.6nm,0.9s						
PALK	**Pallekele**	**17.69**	**291**	*e*P	**Pn**	**14 59 09.1**	**-0.7**
PALK				pmax	pmax		
	comp=Z,39nm,1.3s						
PALK	**Pallekele**	**17.69**	**291**	*e*Pn	**Pn**	**14 59 09.1**	**-0.7**
	comp=Z,39nm,1.3s						
KMMI	**Kalianget**	**18.45**	**116**	P	**Pn**	**14 59 18.5**	**-0.5**
CHRT	**Chiangrai**	**18.81**	**7**	P	**Pn**	**14 59 22.0**	**-1.3**
KKM	**Kota Kinabalu**	**19.45**	**75**	*e*Pn	**Pn**	**14 59 27.6**	**-3.4**
	comp=Z,24nm,0.8s						
KKM	**Kota Kinabalu**	**19.45**	**75**	⇑P	**Pn**	**14 59 32.6**	**+1.5**
QIZ	**Qiongzhong**	**21.62**	**34**	P	**P**	**14 59 51.8**	**-1.1**
QIZ				S	**S**	**15 03 51.8**	**+2.0**
QIZ				XS	sS	15 04 04.1	-4.2
QIZ				AMB	AMB		
	comp=Z,27nm,1.6s,mb4.4						
QIZ				LR	LR		
	comp=E,423nm,13.8s						
QIZ				LR	LR		
	comp=Z,408nm,11.9s,MS4.0						
QIZ	**Qiongzhong**	**21.62**	**34**	P	**P**	**14 59 51.0**	**-1.9**
	comp=Z,14nm,0.9s,mb4.4						
KAPI	**Kappang**	**23.19**	**105**	P	**P**	**15 00 09.4**	**-0.2**
	comp=Z,9.2nm,0.7s,mb4.3,baz=304,slow=7.0,SNR=6.0						
KAPI	**Kappang**	**23.19**	**105**	*e*P	**P**	**15 00 09.2**	**-0.3**
	comp=Z,5.1nm,0.8s,mb4.0						
KMI	**Kunming**	**24.45**	**12**	P	**P**	**15 00 22.3**	**+1.2**
KMI				AP		15 00 31.9	
KMI				XP	sP	15 00 35.8	-3.5
KMI				PP		15 00 57.6	
KMI				S	**S**	**15 04 36.3**	**-1.6**
KMI				XS	sS	15 04 54.3	-4.6
KMI				SS		15 05 33.8	
KMI				AMB	AMB		
	comp=Z,58nm,1.5s,mb4.8						
KMI				AMB	AMB		
	comp=Z,259nm,4.8s						
KMI				LR	LR		
	comp=N,785nm,13.2s,MS4.4						
KMI				LR	LR		
	comp=E,321nm,13.2s,MS4.4						
KMI				LR	LR		
	comp=Z,859nm,15.6s,MS4.3						
SHL	**Shillong**	**24.89**	**348**	⇓*i*P	**P**	**15 00 26.0**	**+0.9**

GYA	Guiyang	26.76	19	P	P	15 00 41.5	-0.5
GYA				AP	pP	15 00 51.3	-3.2
GYA				PP		15 01 27.6	
GYA				S	S	15 05 07.9	-6.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,60nm,5.0s						
GYA				LR	LR		
	comp=N,370nm,12.2s,MS4.4						
GYA				LR	LR		
	comp=E,470nm,11.9s,MS4.4						
GYA				LR	LR		
	comp=Z,510nm,10.5s,MS4.4						
ODAN	Odare	27.34	340	eP	P	15 00 48.2	+0.9
	comp=Z,27nm,0.8s,mb4.9						
TAPN	Taplejung	27.69	341	eP	P	15 00 51.7	+1.3
	comp=Z,60nm,0.9s,mb5.2						
RAMN	Ramite	27.70	339	eP	P	15 00 51.8	+1.3
	comp=Z,24nm,0.7s,mb5.0						
JIRN	Jiri	28.50	339	eP	P	15 00 58.6	+1.1
	comp=Z,22nm,0.7s,mb4.9						
PKI	Pulchoki	28.71	338	eP	P	15 01 01.2	+1.8
GUN	Gumba	28.84	339	eP	P	15 01 01.7	+1.1
	comp=Z,47nm,0.7s,mb5.3						
DMN	Daman	28.86	337	eP	P	15 01 02.7	+2.0
	comp=Z,25nm,0.9s,mb4.9						
KKN	Kakani	28.95	337	eP	P	15 01 01.8	+0.2
	comp=Z,24nm,0.8s,mb5.0						
KKN	Kakani	28.95	337	eP	P	15 01 01.8	+0.2
KKN				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.0						
LSA	Lhasa	29.05	349	eP	P	15 01 03.5	+1.1
LSA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
LSA	Lhasa	29.05	349	eP	P	15 01 03.5	+1.1
	comp=Z,8.9nm,0.9s,mb4.5						
GKN	Gorkha	29.39	337	eP	P	15 01 06.0	+0.5
	comp=Z,43nm,1.0s,mb5.1						
KOLN	Koldanda	29.61	335	eP	P	15 01 08.2	+0.7
	comp=Z,27nm,0.7s,mb5.1						
DANN	Dangsing	30.05	336	eP	P	15 01 11.6	+0.2
	comp=Z,16nm,0.5s,mb5.0						
CD2	Chengdu	30.27	11	P	P	15 01 13.3	+0.1
CD2				AP	pP	15 01 22.8	-3.0
CD2				XP	sP	15 01 26.8	-4.8
CD2				PP	PP	15 02 12.8	-9.5
CD2				PCP	PcP	15 04 13.1	+0.1
CD2				S	S	15 06 19.8	+10
CD2				XS	sS	15 06 25.9	-5.1
CD2				SS	SS	15 07 49.8	-31
CD2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.3						
CD2				AMB	AMB		
	comp=Z,150nm,5.1s						
CD2				LR	LR		
	comp=N,850nm,14.9s						
CD2				LR	LR		
	comp=Z,890nm,15.5s,MS4.5						
NACB	Ninganchiao	32.82	44	eP	P	15 01 33.8	-2.0
	comp=Z,11nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	33.75	126	eP	P	15 01 43.3	-0.6
	comp=Z,4.0nm,0.6s,mb4.5						
XAN	Xi'an	34.52	17	P	P	15 01 49.3	-1.1
XAN				AP	pP	15 01 59.8	-3.3
XAN				PP	PP	15 03 09.6	+0.2
XAN				S	S	15 07 18.8	+3.0
XAN				SCS	ScS	15 12 10.9	+2.0
XAN				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.1						
XAN				LR	LR		
	comp=N,26nm,19.8s,MS3.8						
XAN				LR	LR		
	comp=E,147nm,17.8s,MS3.8						
XAN				LR	LR		
	comp=Z,295nm,19.2s,MS4.0						
LZH	Lanzhou	35.33	9	eP	P	15 01 56.5	-0.9
LZH				AP	pP	15 02 06.3	-3.8
LZH				XP	sP	15 02 10.3	-5.5
LZH				PP	PP	15 03 16.6	-1.7
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,101nm,5.2s						
LZH				LR	LR		
	comp=N,536nm,13.3s						
LZH				LR	LR		
	comp=Z,853nm,17.2s,MS4.6						
NJ2	Nanjing	36.87	31	eP	P	15 02 09.6	-1.0
NJ2				AP	pP	15 02 19.4	-4.0
NJ2				XP	sP	15 02 23.3	-5.8
NJ2				PP	PP	15 03 34.4	-1.0
NJ2				S	S	15 07 51.0	-1.0
NJ2				XS	sS	15 08 06.5	-7.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
NJ2				LR	LR		
	comp=N,710nm,14.0s,MS4.6						
NJ2				LR	LR		
	comp=E,300nm,18.0s,MS4.6						
NJ2				LR	LR		
	comp=Z,870nm,18.0s,MS4.6						
KAKA	Kakadu	37.42	113	eP	x	15 01 53.8	
	comp=Z,4.3nm,0.7s						
GTA	Gaotai	38.20	3	⇓P	P	15 02 22.0	+0.3
GTA				AP	pP	15 02 31.8	-2.7
GTA				XP	sP	15 02 35.8	-4.4
GTA				S	S	15 08 13.8	+1.9
GTA				XS	sS	15 08 29.3	-4.2
GTA				SS	SS	15 10 52.4	-9.1
GTA				AMB	AMB		
	comp=Z,16nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,126nm,6.0s						
GTA				LR	LR		
	comp=N,227nm,18.3s,MS4.2						
GTA				LR	LR		
	comp=E,222nm,16.5s,MS4.2						
GTA				LR	LR		
	comp=Z,252nm,18.0s,MS4.1						
HHC	Hu-ho-hao-te	41.61	16	eP	P	15 02 50.6	+0.6
HHC				AP	pP	15 03 00.3	-2.7
HHC				XP	sP	15 03 05.0	-3.7
HHC				PP	PP	15 04 30.1	+3.1
HHC				PCS	PcS	15 08 37.5	-0.2
HHC				eS	S	15 09 03.8	+0.8
HHC				XS	sS	15 09 21.0	-3.7
HHC				SS	SS	15 12 04.3	-5.4
HHC				AMB	AMB		
	comp=Z,15nm,0.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,186nm,5.7s						
HHC				LR	LR		
	comp=N,455nm,15.5s,MS4.5						
HHC				LR	LR		
	comp=E,180nm,13.1s,MS4.5						
HHC				LR	LR		
	comp=Z,347nm,16.7s,MS4.3						
WRA	Warramunga Arr	41.85	122	P	P	15 02 52.1	-0.2
	comp=Z,2.6nm,0.7s,mb4.0,baz=300,slow=9.1,SNR=21						
WRAB	Tennant Creek	41.86	122⇓	eP	P	15 02 51.8	-0.6
WRAB	Tennant Creek	41.86	122	eP	P	15 02 51.3	-1.0
	comp=Z,7.8nm,1.0s,mb4.3						
WB2	Warramunga Arr	41.86	122	eP	P	15 02 52.4	0.0
BJI	Beijing	42.38	22	P	P	15 02 56.8	+0.5
BJI				S	S	15 09 13.3	-1.0
BJI				AMB	AMB		
	comp=Z,38nm,0.6s,mb5.2						
BJI				AMB	AMB		
	comp=Z,117nm,4.3s						
BJI				LR	LR		
	comp=N,188nm,16.1s,MS4.3						
BJI				LR	LR		
	comp=E,267nm,16.4s,MS4.3						
BJI				LR	LR		
	comp=Z,63nm,20.5s,MS3.5						
ASAR	Alice Springs	43.21	127	P	P	15 03 03.1	-0.2
	comp=Z,3.1nm,0.9s,mb4.0,baz=299,slow=7.3,SNR=33						
WMQ	Urumqi	43.40	350	P	P	15 03 05.8	+1.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,141nm,5.8s						
WMQ				LR	LR		
	comp=N,72nm,22.0s,MS3.8						
WMQ				LR	LR		
	comp=E,140nm,25.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,87nm,20.0s,MS3.7						
DL2	Dalian	43.70	28	P	P	15 03 06.4	-0.6
DL2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
KSRS	Korea Array	45.85	34	P	P	15 03 24.4	+0.2
	comp=Z,13nm,0.9s,mb4.9,baz=222,slow=9.2,SNR=20						
KSRS				LR	LR	15 25 19.6	
	comp=Z,90nm,18.1s,MS3.8,baz=355,slow=40						
AML	Almayashu	46.06	336	eP	P	15 03 26.2	+0.5
	comp=Z,6.9nm,0.8s,mb4.6						
AAK	Ala-Archa	46.15	337⇑	eP	P	15 03 28.6	+2.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb4.0						
AAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.7						
AAK	Ala-Archa	46.15	337	eP	P	15 03 27.9	+1.4
	comp=Z,9.4nm,1.4s,mb4.5						
EKS2	Erkin-Say	46.47	336	eP	P	15 03 29.8	+0.9
	comp=Z,5.0nm,0.9s,mb4.4						
SONM	Songino Array	47.21	8	P	P	15 03 34.9	+0.3
	comp=Z,8.8nm,0.5s,mb5.0,baz=192,slow=9.2,SNR=37						
SONM				PcP	PcP	15 05 06.2	+0.7
	comp=Z,3.4nm,0.7s,baz=195,slow=3.2,SNR=8.4						
ULN	Ulaanbaatar	47.34	9c	iP	P	15 03 35.9	+0.3
ULN	Ulaanbaatar	47.34	9	eP	P	15 03 36.1	+0.5
	comp=Z,6.8nm,0.6s,mb4.8						
MK31	Makanchi Array	47.38	346	eP	P	15 03 36.1	+0.2
MKAR	Makanchi Array	47.38	346	P	P	15 03 36.3	+0.4
	comp=Z,7.7nm,0.6s,mb4.8,baz=160,slow=8.9,SNR=92						
KK31	Karatay Array	48.21	334	iP	P	15 03 42.3	-0.2
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
CN2	Changchun	49.33	27	eP	P	15 03 50.8	-0.2
CN2				eAP	pP	15 04 00.8	-3.5
CN2				eS	S	15 10 54.4	+0.3
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,230nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=Z,370nm,15.0s,MS4.5						
HVS	Khovu-Aksy	49.95	357	iP	P	15 03 55.5	-0.2
HVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
PMG	Port Moresby	50.69	103	eP	P	15 04 01.1	-0.8
PMG				pmax	pmax		
	comp=Z,13nm,1.1s						
PMG	Port Moresby	50.69	103	eP	P	15 04 01.1	-0.7
	comp=Z,13nm,1.1s,mb4.8						
MJAR	Matsushiro Arr	51.67	42	P	P	15 04 08.8	-0.1
	comp=Z,1.8nm,0.9s,mb4.0,baz=217,slow=7.5,SNR=6.4						
HIA	Hailar	51.69	19	eP	P	15 04 08.8	0.0
KURK	Kurchatov	51.93	345⇓	eP	P	15 04 10.8	+0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KURK				MLR	MLR		
	comp=Z,200nm,26.0s,MS4.0						
KURK	Kurchatov	51.93	345	eP	P	15 04 10.4	-0.1
	comp=Z,10nm,1.0s,mb4.7						
STKA	Stephens Creek	53.18	132	eP	P	15 04 21.2	+1.1
	comp=Z,5.4nm,0.7s,mb4.6						
STKA	Stephens Creek	53.18	132	P	P	15 04 21.4	+1.2
	comp=Z,7.5nm,0.8s,mb4.7,baz=293,slow=6.6,SNR=16						
STKA	Stephens Creek	53.18	132	eP	P	15 04 20.9	+0.8
	comp=Z,1.8nm,0.8s,mb4.0						
ZALV	Zalesovo Beam	53.68	351	P	P	15 04 22.8	-0.6
	comp=Z,12nm,0.6s,mb5.0,baz=177,slow=6.8,SNR=51						
ZALV				LR	LR	15 32 29.1	
	comp=Z,64nm,18.0s,MS3.7,baz=25,slow=42						
KLR	Kul'dur	56.28	26	eP	P	15 04 37.3	-4.9
BVA0	Borovoye Array	56.40	341	iP	P	15 04 41.6	-1.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BRVK	Borovoye	56.46	341	eP	P	15 04 42.8	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
BRVK	Borovoye	56.46	341	eP	P	15 04 42.8	-0.7
	comp=Z,5.0nm,0.7s,mb4.7						
BOD	Bodaibo	58.08	10	eP	P	15 04 54.7	-0.1
BOD				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
AKTK	Aktyubinsk	59.39	332	P	P	15 05 02.9	-1.2
AKTO	Aktyubinsk	59.39	332	P	P	15 05 02.9	-1.2
	comp=Z,2.7nm,0.8s,mb4.3,baz=125,slow=6.3,SNR=7.4						
ARMA	Armidale	60.35	126	eP	P	15 05 13.3	+2.2
ARU	Arti	63.34	337c	iP	P	15 05 29.5	-1.1
ARU				e		15 07 47.2	
ARU				eS	S	15 13 59.6	+0.3
ARU				SS	SS	15 18 05.8	-0.8
ARU				pmax	pmax		
	comp=Z,17nm,2.5s,mb4.7						
YAK	Yakutsk	65.48	16	eP	P	15 05 42.6	-1.9
YAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK	Yakutsk	65.48	16	eP	P	15 05 43.5	-1.0
	comp=E,17nm,0.7s,mb5.2						
BRTR	Keskin Array B	69.29	312	P	P	15 06 08.1	-1.0
	comp=E,1.6nm,0.8s,mb4.0,baz=126,slow=6.3,SNR=8.2						
OBN	Obninsk	72.78	328⇑	eP	P	15 06 29.1	-0.8
OBN				e*PP	pP	15 06 50.2	+6.4
OBN				e		15 09 13.4	
OBN				eSS	SS	15 20 40.4	+7.7
OBN				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
TIXI	Tiksi	73.26	10⇓	eP	P	15 06 31.7	-0.7
TIXI				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.3						
TIXI	Tiksi	73.26	10	eP	P	15 06 31.6	-0.8
	comp=Z,7.9nm,0.9s,mb4.6						
SEY	Seymchan	73.80	23⇓	eP	P	15 06 36.2	+0.5
BOSA	Boshof	74.86	240	P	P	15 06 43.1	+0.5
	comp=Z,4.7nm,1.2s,mb4.3,baz=155,slow=12,SNR=2.4						
BOSA				LR	LR	15 33 53.8	
	comp=Z,102nm,18.6s,MS4.2,baz=2.0,slow=31						
AKASG	Malin Array Be	75.43	322	P	P	15 06 44.2	-1.2
	comp=Z,0.2nm,0.3s,mb3.6,baz=90,slow=4.8,SNR=5.7						
AKASG	Malin Array Be	75.43	322	P	P	15 06 44.2	-1.2
BUR08	Bucovina Ar. S	77.22	319	eP	P	15 06 55.6	0.0
ARCES	ARCESS Array B	82.68	340	P	P	15 07 24.5	-0.3
	comp=Z,3.1nm,0.9s,mb4.3,baz=93,slow=4.9,SNR=11						
ARCES	ARCESS Array B	82.68	340	P	P	15 07 24.4	-0.3
GERES	GERESS Array B	84.99	319	P	P	15 07 36.8	-0.2
	comp=Z,1.3nm,0.7s,mb4.2,baz=90,slow=4.5,SNR=8.2						
NB2	NORSAR Subarra	87.17	331	P	P	15 07 46.8	-0.6
	comp=Z,2.1nm,0.8s,mb4.4,baz=92,slow=5.1						
NOA	NORSAR Array B	87.17	331	P	P	15 07 46.5	-0.9
	comp=Z,1.9nm,0.8s,mb4.4,baz=93,slow=5.0,SNR=5.8						
EKA	Eskdalemuir Ar	95.08	326	P	P	15 08 24.6	+0.2
	comp=Z,1.7nm,0.7s,mb4.6,baz=97,slow=5.2,SNR=4.7						
NVAR	Mina Array Bea	128.78	36	PKP	PKPdf	15 14 10.3	+1.1
	comp=Z,0.6nm,0.8s,baz=236,slow=2.9,SNR=4.8						
PDAR	Pinedale Array	130.07	26	PKP	PKPdf	15 14 12.5	+0.9
	comp=Z,0.4nm,0.7s,baz=207,slow=0.6,SNR=3.1						
TXAR	Lajitas Array	143.68	32	PKP	PKPdf	15 14 35.5	-1.6
	comp=Z,0.6nm,0.7s,baz=102,slow=0.3,SNR=8.7						
JCT	Junction City	144.60	26	ePKIKP	PKPdf	15 14 38.0	-0.6
CPUP	Villa Florida	145.03	222	PKP	PKPdf	15 14 39.3	-0.2
	comp=Z,1.0nm,0.6s,baz=59,slow=3.2,SNR=5.1						
CPUP	Villa Florida	145.03	222	ePKPdf	PKPdf	15 14 38.6	-0.8
LRAL	Lakeview Retre	145.81	7	ePKPdf	PKPdf	15 14 40.3	-0.4

*IDC **15** 15:18:33.6±1.3, 2525S×17731W, h0^{km}, mb4.4/4, mb1 4.6/4, mb1mx4.1/16, mbtmp4.4/4, MS3.9/4, Ms1 3.9/4, ms1mx3.4/24, Error ellipse: s-maj=60.6km s-min=33.0km az=171.0*

*ISCJB **15** 15:18:34.9±0.9, 249S±02×177.1W±0.1, h33^{km}, mb4.6/11, MS3.8/3, Error ellipse: s-maj=27.4km s-min=15.7km az=27.9*

*NEIC **15** 15:18:37.3±0.8, 25.11S×177.15W, h35^{km}, mb4.7/9, Error ellipse: s-maj=27.0km s-min=18.2km az=182.0*

ISC 15 15:18:36.3±0.9**, 248S**±02×**1771W**±01**, h35^{km}, (h37^{km}**±3.8^{km}**:pP-P), n35,** σ**0.98**/21**, mb4.6**/11**, MS3.8**/3**,**
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	16.30	81	LR	LR	15 26 54.5	
	comp=Z,345nm,21.4s,baz=271,slow=30						
PPT	Papeete	26.58	80	eLQ		15 29 56.9	
	541nm,25.2s						
PPT				eLR	LR	15 30 56.3	
	492nm,27.8s,baz=239						
PPT	Papeete	26.58	80	LR	LR	15 31 52.0	
	comp=Z,312nm,20.1s,MS3.9,baz=258,slow=30						
HNR	Honiara	26.72	301	LR	LR	15 32 55.3	
	comp=Z,291nm,21.2s,MS3.8,baz=349,slow=32						
ARMA	Armidale	28.25	252	eP	P	15 24 27.7	+1.5
CTA	Charters Tower	34.17	270	eP	P	15 25 20.1	+1.7
	2.8nm,0.9s,mb4.2						
CTA	Charters Tower	34.17	270	P	P	15 25 19.6	+1.2
	4.8nm,1.0s,mb4.4,baz=104,slow=12,SNR=3.8						
CTAO	Charters Tower	34.17	270	eP	P	15 25 18.0	-0.5
	6.9nm,1.0s,mb4.5						
STKA	Stephens Creek	36.90	249	P	P	15 25 41.5	-0.2
	2.5nm,0.8s,mb4.1,baz=94,slow=9.0,SNR=4.7						
STKA				LR	LR	15 37 50.7	
	comp=Z,170nm,21.5s,MS3.8,baz=26,slow=32						
STKA	Stephens Creek	36.90	249	eP	P	15 25 39.9	-1.9
	0.4nm,0.8s						
PMG	Port Moresby	37.34	288	eP	P	15 25 46.2	+0.6
	11nm,1.1s,mb4.6						
RKT	Rikitea	38.38	96	eLR	LR	15 36 23.0	
	222nm,27.5s						
ASAR	Alice Springs	44.54	261	P	P	15 26 44.5	-0.4
	6.9nm,1.0s,mb4.4,baz=104,slow=8.4,SNR=35						
WB2	Warramunga Arr	45.02	266	eP	P	15 26 48.8	+0.1
WRAB	Tennant Creek	45.02	266	eP	P	15 26 47.8	-1.0
	13nm,0.9s,mb4.8						
WRA	Warramunga Arr	45.03	266	P	P	15 26 48.5	-0.3
	9.3nm,0.9s,mb4.6,baz=104,slow=8.0,SNR=48						
KAKA	Kakadu	49.07	275	eP	x	15 27 00.6	
	5.6nm,0.8s						
GUMO	Guam	53.27	312	eP	P	15 27 49.2	-2.6
	609nm,1.6s						
FITZ	Fitzroy Crossi	53.44	265	eP	P	15 27 54.4	+1.2
	14nm,0.9s,mb4.9						
MBWA	Marble Bar	57.86	260	eP	P	15 28 24.5	-0.4
	19nm,1.3s,mb5.0						
QSPA	South Pole Qui	65.27	180	eP	P	15 29 13.4	-0.5
	6.3nm,1.0s,mb4.6						
SNAA	Sanae	83.68	178	e	P	15 30 59.9	-1.1
SNAA				e		15 31 03.4	
SNAA				e	pP	15 31 07.7	-4.3
SNAA				e	pP	15 31 12.7	+0.7
SNAA	Sanae	83.68	178	eP	P	15 30 59.5	-1.5
	6.7nm,1.1s,mb4.7						
VNA3	Neumayer Olymp	83.79	176	e	P	15 31 02.1	+0.6
VNA3				e		15 31 05.0	
VNA3				e		15 31 08.4	
VNA3				e	pP	15 31 12.7	+0.1
VNA2	Neumayer--Watz	84.24	177	e	P	15 31 04.1	+0.3
	baz=156,slow=3.5						
VNA2				e		15 31 07.1	
VNA2				e		15 31 11.3	
VNA2				e	pP	15 31 15.6	+0.7
VNA1	Neumayer--Stat	84.46	176	e	P	15 31 05.4	+0.5
VNA1				e		15 31 08.4	
VNA1				e		15 31 12.4	
VNA1				e	pP	15 31 16.7	+0.7
TRF	Thorofare Moun	90.48	12	eP	P	15 31 34.6	+0.8
	2.1nm,0.4s,mb4.8						
MKAR	Makanchi Array	114.76	312	PKP	PKiKP	15 37 15.9	+3.0
	0.6nm,0.8s,baz=91,slow=8.5,SNR=4.6						
NOA	NORSAR Array B	143.36	353	PKP	PKiKP	15 38 09.1	-0.6
	2.4nm,1.0s,baz=15,slow=5.0,SNR=3.4						
NOA	NORSAR Array B	143.36	353	PKP	PKiKP	15 38 09.1	-0.6
AKASG	Malin Array Be	147.18	329	PKPbc	PKPab	15 38 18.8	+1.6
	1.9nm,0.7s,baz=40,slow=3.4,SNR=7.5						
AKASG	Malin Array Be	147.18	329	PKPbc	PKPab	15 38 18.8	+1.6
BRTR	Keskin Array B	150.28	307	PKPbc	PKPab	15 38 26.9	-3.2
	0.8nm,0.7s,baz=150,slow=5.3,SNR=4.9						
CLL	Collm	152.45	346	ePKPbc	PKPab	15 38 34.0	-4.7
	comp=Z,6.0nm,1.0s						
CLL				ePKPab	pPKPdf	15 38 45.0	+12
TORD	Torodi Ar. Bea	168.32	174	PKP	PKPdf	15 38 42.1	+2.0
	comp=Z,0.8nm,0.9s,baz=54,slow=1.2,SNR=3.8						
TORD				PKPab	PKPab	15 39 49.4	+0.9
	comp=Z,2.3nm,1.2s,baz=176,slow=2.7,SNR=5.0						

*ISCJB **15** 15:29:04.4±0.4, 4001N±006×11482E±004, h10^{km}, mb3.5/7, Error ellipse: s-maj=9.5km s-min=4.0km az=12.7*

*IDC **15** 15:29:04.3±0.8, 3990N×11466E, h0^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.6/25, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=24.5km s-min=16.5km az=45.0*

*NEIC **15** 15:29:05.6±0.6, 4002N×11478E, h10^{km}, mb3.9/2, Error ellipse: s-maj=15.3km s-min=10.0km az=196.0*

*BJI **15** 15:29:05.4, 4000N×11476E, h19^{km}, mB4.5, mb4.4, ML3.9, Ms3.7, Msz3.7*

ISC 15 15:29:06.0±0.4**, 4008N**±006×**11478E**±004**, h10^{km}, n18,** σ**1.15**/25**, mb3.5**/7**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJT	Baijiatuau	1.06	93	eP	Pg	15 29 24.8	-1.7
BJT				eS	Sg	15 29 40.6	+0.3
HHC	Hu-ho-hao-te	2.57	288	ePG	Pb	15 29 51.0	-1.2
HHC				S	Sn	15 30 20.5	+1.5
HHC				SG	Sg	15 30 25.1	-3.5
HHC				Smax			
	comp=N,480nm,0.5s						
HHC				Smax			
	comp=E,723nm,0.4s						
BTO	Baotou	3.68	280	ePG	Pb	15 30 09.8	-1.2
BTO				SG	Sb	15 30 56.8	+1.2
BTO				Smax			
	comp=N,74nm,0.5s						
BTO				Smax			
	comp=E,55nm,0.3s						
TIA	Tai'an	4.28	154	P	Pn	15 30 11.5	+0.4
TIA				PG	Pb	15 30 20.0	-1.2
TIA				SG	Sb	15 31 15.6	+2.7
TIA				Smax			
	comp=N,89nm,0.6s						
TIA				Smax			
	comp=E,84nm,0.6s						
LZH	Lanzhou	9.50	249	eP	Pn	15 31 24.0	+1.3
LZH				AP		15 31 27.3	
LZH				XP		15 31 30.6	
LZH				PP		15 31 31.8	
LZH				AMB	AMB		
	comp=Z,23nm,1.0s						
LZH				AMB	AMB		
	comp=Z,82nm,4.1s						
LZH				LR	LR		
	comp=N,356nm,10.7s						
LZH				LR	LR		
	comp=Z,542nm,11.2s						
WHN	Wuhan	9.52	182	eP	Pn	15 31 22.5	-0.6
SONM	Songino Array	9.83	325	Pn	Pn	15 31 26.5	-0.7
	comp=Z,0.3nm,0.3s,baz=149,slow=14,SNR=15						
SONM				Lg		15 34 17.5	
	comp=Z,2.0nm,0.3s,baz=146,slow=27,SNR=7.4						
KSRS	Korea Array	10.59	100	Pn	Pn	15 31 38.7	+1.0
	comp=Z,0.3nm,0.3s,baz=287,slow=14,SNR=7.7						
KSRS				Sn	Sn	15 33 36.2	-0.1
	comp=Z,0.2nm,0.3s,baz=262,slow=16,SNR=4.7						
KSRS				Lg		15 34 45.9	
	comp=Z,0.3nm,0.3s,baz=286,slow=27,SNR=4.2						
MJAR	Matsushiro Arr	18.71	93	P	Pn	15 33 26.1	+1.2
	comp=Z,0.1nm,0.3s,baz=317,slow=16,SNR=4.0						
MK31	Makanchi Array	24.41	297	eP	P	15 34 24.5	+0.1
MKAR	Makanchi Array	24.41	297	P	P	15 34 25.0	+0.7
	comp=Z,0.5nm,0.6s,mb3.1,baz=96,slow=12,SNR=6.0						
CM31	Chiang Mai Arr	25.52	217	eP	P	15 34 34.9	+0.2
	comp=Z,3.2nm,0.8s,mb3.9						
CMAR	Chiang Mai Arr	25.52	217	P	P	15 34 33.1	-1.5
	comp=Z,0.4nm,0.6s,mb3.2,baz=16,slow=9.4,SNR=6.0						
KURK	Kurchatov	27.27	305	P	P	15 34 50.9	+0.6
	comp=Z,1.2nm,0.7s,mb3.5,baz=104,slow=9.2,SNR=5.9						
KURK	Kurchatov	27.27	305	eP	P	15 34 49.5	-0.7
	comp=Z,1.5nm,0.8s,mb3.6						
WRA	Warramunga Arr	62.43	159	P	P	15 39 27.7	-1.4
	comp=Z,0.6nm,0.8s,mb3.8,baz=347,slow=7.5,SNR=6.5						
ASAR	Alice Springs	65.87	161	P	P	15 39 50.8	-0.9
	comp=Z,0.7nm,0.6s,mb3.9,baz=342,slow=6.1,SNR=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**70.36**	**22**	P	**P**	**15 40 21.1**	**+1.6**
	comp=Z,0.1nm,0.7s,mb2.9,baz=325,slow=6.1,SNR=3.4						

*ISCJB **15** 15:35:09.7±0.5, 30.10N±0.09×98.25E±0.04, h10km, mb3.7/4, Error ellipse: s-maj=13.3km s-min=5.2km az=173.4*
*BJI **15** 15:35:12.3, 29.64N×97.79E, h32km, ML3.2*
*NEIC **15** 15:35:15.3±1.1, 30.11N×98.25E, h35km, mb4.7/2, Error ellipse: s-maj=18.2km s-min=10.1km az=208.0*
*IDC **15** 15:35:31.6±8.5, 28.37N×101.57E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=206.5km s-min=34.0km az=120.0*

ISC 15 15:35:13.4±0.5**, 30.02N**±0.09×**98.20E**±0.04**, h10**km**, n20,** σ0.94/21**, mb3.7**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**4.88**	**78**	PG	**Pg**	**15 36 46.3**	**-0.5**
CD2				SG	**Sg**	**15 37 50.3**	**+0.3**
CD2				Smax			
	comp=N,30nm,0.8s						
LSA	**Lhasa**	**6.13**	**269**	*e*Pn	**Pn**	**15 36 47.8**	**+3.7**
	comp=N,4.0nm,0.6s						
TAPN	**Taplejung**	**9.59**	**256**	*e*P	**Pn**	**15 37 31.9**	**+0.4**
	comp=N,4.2nm,0.5s						
ODAN	**Odare**	**10.02**	**254**	*e*P	**Pn**	**15 37 37.9**	**+0.4**
	comp=N,10.0nm,0.6s						
RAMN	**Ramite**	**10.66**	**256**	*e*P	**Pn**	**15 37 46.6**	**+0.5**
	comp=N,11nm,0.8s						
JIRN	**Jiri**	**10.79**	**260**	*e*P	**Pn**	**15 37 48.3**	**+0.3**
	comp=N,5.5nm,0.4s						
GUN	**Gumba**	**10.99**	**262**	*e*P	**Pn**	**15 37 51.1**	**+0.3**
	comp=N,5.6nm,0.4s						
PKI	**Pulchoki**	**11.48**	**261**	*e*P	**Pn**	**15 37 57.7**	**+0.2**
	comp=N,7.1nm,0.4s						
PKI	**Pulchoki**	**11.48**	**261**	*e*P	**Pn**	**15 37 57.9**	**+0.4**
	comp=N,4.0nm,0.4s						
PKIN	**Phulchoki**	**11.49**	**261**	*e*P	**Pn**	**15 37 57.9**	**+0.3**
	comp=N,4.0nm,0.4s						
CM31	**Chiang Mai Arr**	**11.53**	**176**	*e*P	**Pn**	**15 37 58.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**11.53**	**176**	Pn	**Pn**	**15 37 59.5**	**+1.3**
	comp=N,0.1nm,0.3s,baz=352,slow=11,SNR=5.4						
KKN	**Kakani**	**11.54**	**262**	*e*P	**Pn**	**15 37 58.2**	**0.0**
	comp=N,6.3nm,0.4s						
GKN	**Gorkha**	**12.04**	**264**	*e*P	**Pn**	**15 38 04.1**	**-1.0**
KOLN	**Koldanda**	**12.99**	**264**	*e*P	**Pn**	**15 38 16.4**	**-1.6**
AAK	**Ala-Archa**	**22.79**	**310**	*e*P	**P**	**15 40 15.9**	**-0.1**
	comp=N,0.7nm,0.4s,mb3.4						
KSRS	**Korea Array**	**25.73**	**65**	P	**P**	**15 40 46.1**	**+2.1**
	comp=N,1.0nm,0.6s,mb3.5,baz=256,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**60.65**	**140**	P	**P**	**15 45 23.5**	**-1.3**
	comp=N,1.0nm,0.7s,mb4.0,baz=328,slow=7.7,SNR=16						
RGN	**Rugen**	**63.28**	**319**	*e*P	**P**	**15 45 38.2**	**-3.8**
	comp=N,19nm,0.3s						
ASAR	**Alice Springs**	**63.45**	**143**	P	**P**	**15 45 42.2**	**-1.3**
	comp=N,0.3nm,0.5s,mb3.7,baz=328,slow=6.8,SNR=9.9						

*IDC **15** 15:35:59.7±1.0, 32.14S×70.88W, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.9/15, mbtmp3.8/4, ML4.2/1, MS3.2/2, Ms1 3.2/2, ms1mx3.0/20, Error ellipse: s-maj=47.2km s-min=34.4km az=12.0*
*ISCJB **15** 15:36:11.2±0.5, 31.66S±0.03×71.1W±0.1, h87km±7km, mb4.3/5, Error ellipse: s-maj=15.6km s-min=5.4km az=177.0*
*NEIC **15** 15:36:11.9, 31.67S×71.05W, h42km, MD4.3(GUC), After GUC.*
NEIC Felt [III] at Cabildo and [II] at Illapel and Petorca.
*GUC **15** 15:36:11.9±0.4, 31.67S×71.05W, h42km±3km, MD4.3, ML4.3*

ISC 15 15:36:12.3±0.5**, 31.68S**±0.03×**71.2W**±0.1**, h79**km±7km**, n37,** σ0.62/45**, mb4.3**/5**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.11**	**155**	*e*P	**Pn**	**15 36 31.5**	**-1.0**
ROCH	**El Roble**	**1.30**	**175**	*i* P	**Pn**	**15 36 35.0**	**0.0**
IHA	**Instituto Hidr**	**1.41**	**197**	*e*P	**Pn**	**15 36 36.4**	**0.0**
IHA				*i* S	**Sn**	**15 36 54.9**	**+0.3**
PEL	**Peldehue**	**1.52**	**165**	⇑*i*P	**Pn**	**15 36 37.5**	**-0.2**
PEL				*i* S	**Sn**	**15 36 56.9**	**-0.1**
PEL				AML	AML	15 36 57.9	
	comp=N,12μm,0.5s						
CLCH	**Cerro Calan**	**1.79**	**163**	⇓*e*P	**Pn**	**15 36 41.3**	**-0.1**
CLCH				*i* S	**Sn**	**15 37 03.3**	**-0.1**
CLCH				AML	AML	15 37 06.8	
	comp=E,4μm,0.8s						
FCH	**Farellones**	**1.80**	**157**	⇓*i*P	**Pn**	**15 36 41.6**	**+0.2**
FCH				*i* S	**Sn**	**15 37 04.3**	**+0.7**
SAN	**Santiago**	**1.82**	**167**	*e*P	**Pn**	**15 36 41.5**	**-0.3**
SAN				*i* S	**Sn**	**15 37 04.1**	**0.0**
ANTU	**Antumapu**	**1.94**	**167**	⇓*e*P	**Pn**	**15 36 43.0**	**-0.3**
ANTU				*i* S	**Sn**	**15 37 06.8**	**-0.1**
ANTU	**Antumapu**	**1.94**	**167**	⇓*e*P	**Pn**	**15 36 43.0**	**-0.3**
ANTU				*i* S	**Sn**	**15 37 06.8**	**-0.1**
ANTU				AML	AML	15 37 08.2	
	comp=E,3μm,0.4s						
TACH	**Talagante**	**1.98**	**175**	⇑*i*P	**Pn**	**15 36 43.7**	**-0.2**
TACH				*i* S	**Sn**	**15 37 08.2**	**+0.3**
PCH	**Pirque**	**2.01**	**165**	⇑*i*P	**Pn**	**15 36 44.3**	**0.0**
PCH				*i* S	**Sn**	**15 37 09.0**	**+0.3**
SJCH	**San Jose de Ma**	**2.07**	**161**	*e*P	**Pn**	**15 36 45.3**	**+0.2**
SJCH				*i* S	**Sn**	**15 37 10.2**	**+0.2**
YECH	**El Yeso**	**2.18**	**156**	*e*P	**Pn**	**15 36 46.7**	**+0.2**
YECH				*i* S	**Sn**	**15 37 12.9**	**+0.3**
YECH				AML	AML	15 37 14.8	
	comp=N,2μm,0.6s						
LNV	**Longovilo**	**2.29**	**186**	*e*P	**Pn**	**15 36 47.2**	**-0.7**
LMEL	**Las Melosas**	**2.31**	**160**	*e*P	**Pn**	**15 36 48.3**	**+0.1**
LMEL				*i* S	**Sn**	**15 37 16.1**	**+0.4**
LMEL	**Las Melosas**	**2.31**	**160**	*e*P	**Pn**	**15 36 48.3**	**+0.1**
LMEL				*i* S	**Sn**	**15 37 16.1**	**+0.4**
LMEL				AML	AML	15 37 17.7	
	comp=N,1μm,0.1s						
CACH	**El Canelo**	**2.48**	**169**	*e*P	**Pn**	**15 36 50.4**	**-0.1**
LCO	**Las Campanas**	**2.68**	**8**	*e*Pn	**Pn**	**15 36 53.0**	**-0.3**
LCO				*e*Sn	**Sn**	**15 37 24.0**	**-0.8**
LVC	**Limon Verde**	**9.24**	**13**	*e*Pn	**Pn**	**15 38 17.9**	**-4.9**
	comp=N,9.3nm,0.8s						
LVC				*e*Sn	**Sn**	**15 40 07.0**	**+1.9**
TRQA	**Tornquist**	**9.86**	**133**	*e*Pn	**Pn**	**15 38 26.0**	**-5.0**
	comp=N,6.1nm,0.8s						
TRQA				*e*Sn	**Sn**	**15 40 10.2**	**-10**
CPUP	**Villa Florida**	**13.21**	**70**	Pn	**Pn**	**15 39 09.1**	**-7.5**
	comp=N,0.3nm,0.3s,baz=222,slow=12,SNR=4.8						
CPUP	**Villa Florida**	**13.21**	**70**	*e*Pn	**Pn**	**15 39 10.2**	**-6.4**
BDFB	**Brasilia**	**26.44**	**58**	LR	LR	15 51 42.0	
	comp=N,44nm,21.3s,baz=353,slow=36						
PAYG	**Puerto Ayora**	**35.75**	**326**	P	**P**	**15 43 03.8**	**0.0**
	comp=N,65nm,1.5s,mb5.3						
SDV	**Santo Domingo**	**40.33**	**1**	LR	LR	15 59 19.0	
	comp=N,51nm,21.5s,slow=34						
VNA3	**Neumayer Olymp**	**51.23**	**159**	*e*	pP	15 45 28.0	+1.0
VNA3				*e*		15 45 40.0	
VNA2	**Neumayer--Watz**	**51.87**	**158**	*e*	**P**	**15 45 11.8**	**-0.3**
VNA2				*e*	pP	15 45 32.9	+1.1
VNA2				*e*		15 45 44.5	
TEIG	**Tepich**	**54.16**	**340**	*e*P	**P**	**15 45 29.0**	**-0.5**
	comp=N,35nm,1.1s,mb5.3						
TXAR	**Lajitas Array**	**68.09**	**330**	P	**P**	**15 47 04.6**	**+0.9**
	comp=N,0.7nm,0.6s,mb3.7,baz=152,slow=8.3,SNR=13						
TXAR	**Lajitas Array**	**68.09**	**330**	P	**P**	**15 47 04.6**	**+0.9**
NVAR	**Mina Array Bea**	**82.42**	**324**	P	**P**	**15 48 26.7**	**+1.1**
	comp=N,0.6nm,0.6s,mb3.6,baz=144,slow=6.3,SNR=6.3						
TORD	**Torodi Ar. Bea**	**82.71**	**70**	P	**P**	**15 48 24.7**	**-3.0**
	comp=N,0.7nm,0.8s,mb3.6,baz=255,slow=9.7,SNR=6.0						
ASAR	**Alice Springs**	**119.98**	**207**	PKP	PKPdf	15 54 51.8	-2.4
	comp=N,0.1nm,0.4s,baz=122,slow=1.9,SNR=3.8						
WRA	**Warramunga Arr**	**123.15**	**209**	PKP	PKPdf	15 54 58.4	-2.0
	comp=N,0.3nm,0.5s,baz=159,slow=1.6,SNR=9.9						
KURK	**Kurchatov**	**150.65**	**41**	PKPbc	PKPbc	15 55 53.6	-1.2
	comp=N,0.9nm,0.6s,baz=313,slow=3.5,SNR=4.8						
ZALV	**Zalesovo Beam**	**151.86**	**31**	PKPbc	PKPbc	15 55 56.1	-1.4
	comp=N,1.9nm,0.3s,baz=308,slow=3.1,SNR=10						
MKAR	**Makanchi Array**	**154.64**	**46**	PKPbc	PKPbc	15 56 03.2	-0.5
	comp=N,0.4nm,0.8s,baz=220,slow=1.1,SNR=3.2						
MKAR				PKPab	PKPab	15 56 17.6	-1.3
	comp=N,0.6nm,0.6s,baz=269,slow=3.8,SNR=9.3						

*ISCJB **15** 16:08:35.8±1.7, 17.3S±0.2×177.4W±0.1, h344km±30km, mb3.9/8, Error ellipse: s-maj=33.5km s-min=22.1km az=9.6*
*IDC **15** 16:08:38.2±1.7, 17.29S×176.99W, h388km±27km, mb3.5/5, mb1 3.6/6, mb1mx3.3/19, mbtmp3.6/6, Error ellipse: s-maj=31.5km s-min=22.8km az=133.0*
*NEIC **15** 16:08:41.4±0.9, 16.96S×176.21W, h520km±27km, mb4.4/5, Error ellipse: s-maj=32.2km s-min=19.7km az=219.0*

ISC 15 16:08:37.5±1.7**, 17.2S**±0.2×**177.2W**±0.2**, h365**km±35km**, n19,** σ1.39/20**, mb3.9**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.16**	**59**	P	**Pn**	**16 10 12.2**	**+1.4**
	10nm,0.3s,baz=164,slow=20,SNR=23						
AFI				S	**S**	**16 11 25.5**	**-0.9**
	1.4nm,0.3s,baz=291,slow=21,SNR=2.2						
AFI	**Afiamalu**	**6.16**	**59**	*e*P	**Pn**	**16 10 11.8**	**+1.1**
	122nm,1.0s						
AFI				P		16 10 12.2	
AFI				*e*S	**S**	**16 11 25.3**	**-1.1**
AFI				S	**S**	**16 11 25.5**	**-0.9**
URZ	**Urewera**	**21.57**	**192**	P	**P**	**16 12 57.0**	**-1.6**
	2.3nm,0.4s,mb3.8,baz=184,slow=21,SNR=5.7						
ARMA	**Armidale**	**31.30**	**239**	*e*P	**P**	**16 14 27.2**	**+2.0**
CTAO	**Charters Tower**	**34.71**	**259**	*e*P	**P**	**16 14 55.4**	**+0.8**
	16nm,1.3s,mb4.1						
PMG	**Port Moresby**	**35.49**	**278**	P	**P**	**16 15 02.8**	**+1.5**
	8.8nm,0.8s,mb4.0,baz=80,slow=6.1,SNR=4.3						
PMG	**Port Moresby**	**35.49**	**278**	*e*P	**P**	**16 15 01.9**	**+0.5**
	23nm,1.3s,mb4.2						
STKA	**Stephens Creek**	**39.98**	**241**	*e*P	**P**	**16 15 39.7**	**+1.4**
	1.4nm,0.3s,mb3.7						
STKA	**Stephens Creek**	**39.98**	**241**	P	**P**	**16 15 39.8**	**+1.5**
	1.9nm,0.4s,mb3.7,baz=89,slow=10,SNR=5.5						
STKA	**Stephens Creek**	**39.98**	**241**	*e*P	**P**	**16 15 38.6**	**+0.4**
	0.5nm,0.6s,mb2.9						
WRAB	**Tennant Creek**	**45.89**	**259**	*e*P	**P**	**16 16 23.7**	**-1.6**
WRA	**Warramunga Arr**	**45.90**	**259**	P	**P**	**16 16 24.2**	**-1.2**
	0.6nm,0.2s,mb3.4,baz=82,slow=6.8,SNR=12						
WRA				PcP	PcP	16 17 55.0	-0.6
	0.8nm,1.0s,baz=97,slow=3.2,SNR=4.6						
ASAR	**Alice Springs**	**46.10**	**254**	P	**P**	**16 16 26.1**	**-0.7**
	6.7nm,0.6s,mb4.0,baz=89,slow=7.7,SNR=152						
ASAR				PcP	PcP	16 17 54.8	-1.4
	0.4nm,0.7s,baz=97,slow=3.8,SNR=4.1						
KAKA	**Kakadu**	**48.76**	**268**	*e*P	x	16 16 26.3	
MBWA	**Marble Bar**	**59.37**	**255**	*e*P	**P**	**16 18 01.1**	**-1.9**
	13nm,1.2s,mb4.2						
QSPA	**South Pole Qui**	**72.86**	**180**	*e*P	**P**	**16 19 18.1**	**-8.7**
	17nm,2.1s,mb4.4						
QSPA				*e*		16 19 27.7	
VNA3	**Neumayer Olymp**	**91.37**	**176**	*e*	**P**	**16 21 03.4**	**+1.1**
VNA3				*e*		16 21 11.4	
VNA2	**Neumayer--Watz**	**91.82**	**177**	*e*	**P**	**16 21 06.5**	**+2.1**
	baz=198,slow=5.2						
VNA2				*e*		16 21 14.4	
BRTR	**Keskin Array B**	**145.09**	**316**	PKPbc	PKPbc	16 27 30.6	-1.9
	0.7nm,0.6s,baz=29,slow=3.3,SNR=4.5						

JMA 15 16:39:59.8±0.3**, 43.99N**×**148.16E, h0**km**, M3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.86**	**251**	P	Pn	16 40 33.4	+0.5
NEM2				*e*S	Sn	16 40 57.7	+0.6
JRA	**Rausu**	**2.19**	**270**	P	Pn	16 40 38.2	+0.7
JRA				*e*S	Sn	16 41 06.5	+1.2
JNK	**Nakash**	**2.52**	**262**	P	Pn	16 40 42.9	+0.9
JNK				*e*S	Sn	16 41 14.0	+0.5
JAK	**Akkeshi**	**2.71**	**250**	P	Pn	16 40 45.6	+1.0
JAK				*e*S	Sn	16 41 18.7	+0.7
JAR	**Ashorobuto**	**3.26**	**259**	P	Pn	16 40 54.0	+1.9
JAR				*e*S	Sn	16 41 34.2	+2.6
JCH	**Churui**	**3.76**	**250**	P	Pn	16 41 00.9	+1.9
JNBK	**Urakawa-nobuka**	**4.31**	**249**	P	Pn	16 41 08.2	+1.6
JKB	**Kayabe**	**5.64**	**251**	P	Pn	16 41 26.7	+1.9
JOT	**Ohata**	**5.85**	**246**	P	Pn	16 41 29.5	+1.7
JOT				*e*S	Sn	16 42 35.5	0.0
JANG	**Nango**	**6.12**	**236**	*e*S	Sn	16 42 40.8	-1.2

IDC 15 16:57:19.2±2.2**, 5.96S**×**129.03E, h0**km**, mb3.6**/1**, mb1 4.0**/3**, mb1mx3.6**/16**, mbtmp3.8**/3**, ML3.7**/2**, Error ellipse: s-maj=156.6km s-min=30.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.83**	**160**	Pn	Pn	17 00 51.5	+1.1
	0.2nm,0.3s,baz=340,slow=9.9,SNR=12						
WRA				Sn	Sn	17 03 23.6	-12
	0.4nm,0.3s,baz=330,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**18.22**	**166**	P	Pn	17 01 33.2	-0.6
	0.7nm,0.3s,baz=348,slow=12,SNR=82						
ASAR				S	Sn	17 04 44.5	-13
	0.1nm,0.3s,baz=347,slow=21,SNR=6.7						
MKAR	**Makanchi Array**	**66.83**	**327**	P	P	17 08 13.0	+0.1
	0.3nm,0.5s,baz=119,slow=8.4,SNR=6.4						

*NIED **15** 17:26:00, 42.10N×142.70E, h56km, Mw4.0 Best double couple: Mo1.05000×10^15 NP1:φs29.00000°, δ67.00000°, λ89.00000°. NP2:φs211.00000°, δ23.00000°, λ92.00000°.*
*MOS **15** 17:26:06.3±0.9, 42.46N×142.51E, h27km, mb4.5/15, Error ellipse: s-maj=12.1km s-min=9.5km az=103.9*
*ISCJB **15** 17:26:09.5±0.3, 42.06N±0.04×142.63E±0.04, h68km±2km, mb4.1/40, Error ellipse: s-maj=7.6km s-min=4.8km az=156.3*
*JMA **15** 17:26:10.3±0.2, 42.05N×142.65E, h61km±2km, M4.0 Broadband fault plane solution: P waves. NP1: φs209.00000°, δ29.00000°, λ84.00000°. NP2:φs35.00000°, δ61.00000°, λ93.00000°. Principal axes: T Plg74.0000°, Azm314.0000°; N Plg3.0000°, Azm214.0000°; P Plg16.0000°, Azm123.0000°;*
JMA Felt II J1.
*NEIC **15** 17:26:11.1±0.6, 42.13N×142.62E, h67km±6km, mb4.5/24, MW4.0(NIED) Error ellipse: s-maj=8.5km s-min=6.4km az=142.0*
NEIC Recorded [2 JMA] in south-central Hokkaido and [1 JMA] in southwestern Hokkaido and in the Tomakomai area.
*IDC **15** 17:26:12.3±1.7, 42.06N×142.60E, h80km±13km, mb3.5/14, mb1 3.7/17, mb1mx3.7/24, mbtmp3.5/17, MS3.0/2, Ms1 3.0/2, ms1mx2.5/30, Error ellipse: s-maj=18.0km s-min=11.7km az=113.0*

ISC 15 17:26:10.7±0.3**, 42.08N**±0.04×**142.62E**±0.04**, h61**km±2km**, n86,** σ0.91/91**, mb4.2**/40**, 5C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.22**	**27**	⇑P	**Pn**	**17 26 19.9**	**-0.5**
JNBK				*e*S	**Sn**	**17 26 27.3**	**-0.1**
ERM	**Erimo**	**0.41**	**99**	*e*Pg	**Pn**	**17 26 21.2**	**-0.6**
ERM				*e*Sn	**Sn**	**17 26 28.6**	**-1.3**
JEM	**Erimo**	**0.41**	**99**	⇑P	**Pn**	**17 26 21.4**	**-0.4**
JEM				*e*S	**Sn**	**17 26 29.6**	**-0.3**
JBT2	**Biratori 2**	**0.72**	**345**	⇓P	**Pn**	**17 26 25.1**	**-0.1**
JCH	**Churui**	**0.77**	**46**	⇑P	**Pn**	**17 26 25.6**	**-0.2**
JCH				*e*S	**Sn**	**17 26 37.0**	**+0.1**
JFR	**Furan**	**1.08**	**359**	⇓P	**Pn**	**17 26 29.6**	**-0.2**
JEW	**Eniwo**	**1.15**	**312**	⇓P	**Pn**	**17 26 30.9**	**+0.3**
JKB	**Kayabe**	**1.20**	**261**	⇓P	**Pn**	**17 26 30.8**	**-0.5**
JKB				*e*S	**Sn**	**17 26 46.0**	**-0.7**
JOB	**Onbets**	**1.22**	**47**	⇑P	**Pn**	**17 26 32.4**	**+0.8**
JNB	**Noboribetsu**	**1.23**	**289**	⇓P	**Pn**	**17 26 31.0**	**-0.8**
JNB				*e*S	**Sn**	**17 26 47.1**	**-0.4**
JOT	**Ohata**	**1.37**	**240**	⇓P	**Pn**	**17 26 33.0**	**-0.5**
JAB	**Ashibetsu**	**1.45**	**349**	⇓P	**Pn**	**17 26 35.1**	**+0.4**
JAR	**Ashorobuto**	**1.48**	**35**	⇑P	**Pn**	**17 26 35.1**	**0.0**
ASAJ	**Asahikawa**	**2.03**	**360**	P	**Pn**	**17 26 43.8**	**+1.2**
	87nm,0.3s,baz=219,slow=9.8,SNR=420						
ASAJ				S	**Sn**	**17 27 10.4**	**+3.6**
	34nm,0.3s,baz=323,slow=32,SNR=14						
YUK	**Yuzh-Kuril'sk**	**3.08**	**50**	*e*PN	**Pn**	**17 26 58.5**	**+1.8**
YUK				*e*S	**Sn**	**17 27 32.3**	**0.0**
YUK				pmax	pmax		
	comp=Z,290nm,0.3s						
YUK				smax			
	comp=N,460nm,0.4s						
YUK				smax			
	comp=E,350nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.87**	**1**	*e*PN	**Pn**	**17 27 23.2**	**+1.9**
MAJO	**Matsushiro**	**6.50**	**213**	*e*PN	**Pn**	**17 27 44.7**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAJO	**Matsushiro**	**6.50**	**213**	*e*Pn	**Pn**	**17 27 44.6**	**+1.0**
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**6.50**	**213**	P	**Pn**	**17 27 46.2**	**+2.5**
	comp=Z,0.8nm,0.3s,baz=30,slow=12,SNR=12						
KSRS	**Korea Array**	**12.21**	**253**	P	**Pn**	**17 29 04.2**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=65,slow=14,SNR=5.5						
KSRS				LR	LR	17 33 04.0	
	comp=Z,33nm,20.1s,baz=350,slow=34						
CBIJ	**Chichi jima**	**14.96**	**181**	LR	LR	17 34 22.3	
	comp=Z,113nm,21.3s,baz=288,slow=33						
HIA	**Hailar**	**17.48**	**302**	P	**Pn**	**17 30 10.2**	**+0.2**
HIA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HIA	**Hailar**	**17.48**	**302**	P	**Pn**	**17 30 10.2**	**+0.1**
	comp=Z,6.8nm,1.4s						
YAK	**Yakutsk**	**21.42**	**343**	P	**P**	**17 30 50.2**	**-3.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
YAK	**Yakutsk**	**21.42**	**343**	P	**P**	**17 30 50.2**	**-3.0**
	comp=Z,7.4nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**25.66**	**295**	*e*P	**P**	**17 31 34.1**	**-0.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ULN	**Ulaanbaatar**	**25.66**	**295**	*e*P	**P**	**17 31 34.1**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.4						
SONM	**Songino Array**	**26.10**	**295**	P	**P**	**17 31 39.0**	**+0.6**
	comp=Z,1.3nm,0.7s,mb3.6,baz=64,slow=9.1,SNR=6.8						
ZALV	**Zalesovo Beam**	**39.37**	**308**	P	**P**	**17 33 33.8**	**0.0**
	comp=Z,6.0nm,0.7s,mb4.4,baz=79,slow=8.0,SNR=28						
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**17 33 58.6**	**-0.3**
	comp=Z,2.0nm,0.8s,mb3.8,baz=83,slow=8.9,SNR=13						
MKAR				PcP	PcP	17 35 51.0	-0.1
	comp=Z,0.2nm,0.4s,baz=69,slow=3.6,SNR=4.5						
LSA	**Lhasa**	**42.89**	**270**	P	**P**	**17 34 04.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
LSA	**Lhasa**	**42.89**	**270**	P	**P**	**17 34 04.4**	**+1.4**
	comp=Z,2.1nm,0.5s,mb4.1						
KURK	**Kurchatov**	**43.70**	**304**	*e*P	**P**	**17 34 08.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
KURK	**Kurchatov**	**43.70**	**304**	*e*P	**P**	**17 34 08.7**	**-0.7**
	comp=Z,2.8nm,0.5s,mb4.2						
CMAR	**Chiang Mai Arr**	**43.85**	**251**	P	**P**	**17 34 11.9**	**+1.1**
	comp=Z,0.6nm,0.5s,mb3.6,baz=41,slow=8.4,SNR=5.6						
TAPN	**Taplejung**	**46.70**	**270**	*e*P	**P**	**17 34 34.1**	**+0.7**
	comp=Z,6.6nm,0.6s,mb4.8						
JIRN	**Jiri**	**47.66**	**271**	*e*P	**P**	**17 34 41.3**	**+0.4**
	comp=Z,6.5nm,0.4s,mb5.0						
RAMN	**Ramite**	**47.75**	**270**	*e*P	**P**	**17 34 41.7**	**+0.2**
	comp=Z,12nm,0.6s,mb5.1						
GUN	**Gumba**	**47.76**	**272**	*e*P	**P**	**17 34 42.3**	**+0.7**
	comp=Z,27nm,0.4s						
BRVK	**Borovoye**	**48.03**	**309**	*e*P	**P**	**17 34 42.3**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BRVK	**Borovoye**	**48.03**	**309**	*e*P	**P**	**17 34 42.3**	**-1.0**
	comp=Z,2.5nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**48.20**	**295**	*e*P	**P**	**17 34 44.3**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**48.20**	**295**	*e*P	**P**	**17 34 44.3**	**-0.5**
	comp=Z,5.3nm,0.7s,mb4.7						
KKN	**Kakani**	**48.27**	**272**	*e*P	**P**	**17 34 45.9**	**+0.4**
	comp=Z,7.8nm,0.6s,mb4.9						
KKN	**Kakani**	**48.27**	**272**	*e*P	**P**	**17 34 45.9**	**+0.4**
KKN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
PKI	**Pulchoki**	**48.29**	**272**	*e*P	**P**	**17 34 45.9**	**+0.2**
	comp=Z,3.6nm,0.3s,mb4.8						
PKI	**Pulchoki**	**48.29**	**272**	*e*P	**P**	**17 34 46.6**	**+0.9**
PKI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
PKI	**Pulchoki**	**48.29**	**272**	*e*P	**P**	**17 34 46.6**	**+0.9**
	comp=Z,2.3nm,0.3s,mb4.7						
PKIN	**Phulchoki**	**48.30**	**272**	*e*P	**P**	**17 34 46.6**	**+0.8**
	comp=Z,2.3nm,0.3s,mb4.7						
DMN	**Daman**	**48.50**	**272**	*e*P	**P**	**17 34 47.4**	**+0.1**
	comp=Z,8.6nm,0.6s,mb5.0						
GKN	**Gorkha**	**48.63**	**273**	*e*P	**P**	**17 34 48.2**	**-0.1**
	comp=Z,5.6nm,0.4s,mb5.0						
AAK	**Ala-Archa**	**49.06**	**295**	*e*P	**P**	**17 34 50.9**	**-0.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**49.06**	**295**	*e*P	**P**	**17 34 50.9**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.3						
DANN	**Dangsing**	**49.10**	**274**	*e*P	**P**	**17 34 52.6**	**+0.7**
	comp=Z,6.4nm,0.2s,mb5.3						
INK	**Inuvik**	**49.50**	**29**	*e*P	**P**	**17 34 53.8**	**-0.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**49.50**	**29**	*e*P	**P**	**17 34 53.8**	**-0.6**
	comp=Z,0.7nm,0.5s,mb4.0						
EKS2	**Erkin-Say**	**49.53**	**295**	*e*P	**P**	**17 34 54.4**	**-0.6**
	comp=Z,2.8nm,0.6s,mb4.5						
KOLN	**Koldanda**	**49.53**	**273**	*e*P	**P**	**17 34 55.6**	**+0.4**
	comp=Z,6.2nm,0.2s,mb5.2						
ARU	**Arti**	**53.27**	**316**	P	**P**	**17 35 21.8**	**-0.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ARU	**Arti**	**53.27**	**316**	P	**P**	**17 35 21.8**	**-0.9**
	comp=Z,2.9nm,0.6s,mb4.4						
RES	**Resolute Bay**	**57.49**	**15**	*e*P	**P**	**17 35 51.7**	**-1.1**
RES				*e*	pP	17 36 05.2	-3.8
RES				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
RES	**Resolute Bay**	**57.49**	**15**	*e*P	**P**	**17 35 51.7**	**-1.1**
	comp=Z,2.1nm,0.5s,mb4.4						
RES				*e*	pP	17 36 05.2	-3.8
YKA	**Yellowknife Ar**	**59.01**	**32**	P	**P**	**17 36 03.3**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.4,baz=306,slow=6.4,SNR=6.8						
JOF	**Joensuu**	**61.97**	**331**	*e*p	**P**	**17 36 22.4**	**-1.3**
	comp=Z,1.2nm,0.4s,mb4.4						
JOF	**Joensuu**	**61.97**	**331**	*e*P	**P**	**17 36 22.4**	**-1.3**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**62.18**	**189**	P	**P**	**17 36 24.4**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=7.7,slow=6.9,SNR=6.6						
KAF	**Kangasniemi**	**64.27**	**332**	*e*p	**P**	**17 36 37.9**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.9						
KAF	**Kangasniemi**	**64.27**	**332**	*e*P	**P**	**17 36 37.9**	**-1.0**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**65.91**	**189**	P	**P**	**17 36 48.1**	**-1.8**
	comp=Z,0.3nm,0.8s,mb3.4,baz=1.7,slow=7.3,SNR=5.5						
FCC	**Fort Churchill**	**69.09**	**28**	*e*P	**P**	**17 37 09.2**	**-0.5**
NB2	**NORSAR Subarra**	**69.90**	**337**	P	**P**	**17 37 13.8**	**-0.8**
	comp=Z,1.0nm,0.5s,mb4.0,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**69.90**	**337**	P	**P**	**17 37 13.8**	**-0.8**
	comp=Z,1.6nm,0.6s,mb4.1,baz=37,slow=6.2,SNR=7.8						
CMB	**Columbia Colle**	**70.24**	**56**	P	**P**	**17 37 18.3**	**+1.2**
CMB				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
CMB	**Columbia Colle**	**70.24**	**56**	P	**P**	**17 37 18.3**	**+1.2**
	comp=Z,1.4nm,0.7s,mb4.0						
AKASG	**Malin Array Be**	**70.89**	**322**	P	**P**	**17 37 20.1**	**-0.7**
	comp=Z,1.2nm,0.4s,mb4.2,baz=44,slow=5.9,SNR=6.9						
NVAR	**Mina Array Bea**	**71.28**	**55**	P	**P**	**17 37 24.5**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.7,baz=296,slow=5.6,SNR=5.9						
TPNV	**Topopah Spring**	**73.47**	**55**	P	**P**	**17 37 37.2**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
TPNV	**Topopah Spring**	**73.47**	**55**	P	**P**	**17 37 37.2**	**+0.7**
	comp=Z,1.3nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**73.51**	**47**	P	**P**	**17 37 37.0**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=274,slow=3.4,SNR=4.8						
BRTR	**Keskin Array B**	**76.21**	**311**	P	**P**	**17 37 51.4**	**-0.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=47,slow=5.8,SNR=4.3						
PSZ	**Piszkesteto**	**77.09**	**325**	P	**P**	**17 37 53.8**	**-3.3**
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
PSZ	**Piszkesteto**	**77.09**	**325**	P	**P**	**17 37 53.8**	**-3.3**
	comp=Z,6.0nm,1.1s,mb4.4						
GERES	**GERESS Array B**	**78.91**	**328**	P	**P**	**17 38 06.9**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=12,slow=5.2,SNR=3.2						
TXAR	**Lajitas Array**	**86.33**	**53**	P	**P**	**17 38 47.1**	**+1.0**
	comp=Z,0.5nm,0.7s,mb3.9,baz=306,slow=3.4,SNR=7.1						
VNA2	**Neumayer--Watz**	**147.41**	**198**	*e*	PKPbc	17 45 46.5	+0.3
	baz=105,slow=2.4						
VNA2				*e*		17 45 51.2	
VNA3	**Neumayer Olymp**	**147.67**	**196**	*e*	PKPbc	17 45 47.2	+0.3
VNA3				*e*		17 45 52.0	

ISCJB ***15*** *17:37:23.8±1.2, 5144N±006×1605E±006, h0km, Error ellipse: s-maj=8.8km s-min=4.4km az=24.0*
PRU ***15*** *17:37:25.7, 5143N×1612E, h0km*
WAR ***15*** *17:37:25.8, 5149N×1609E, ML2.2, Mining Induced*
ISC 15 17:37:24.7±1.3**, 5147N**±006×**1611E**±006**, h0**km**, n12, σ0s68**/22**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPC	Upice	0.96	184	ePG	Pg	17 37 43.8	+0.7
DPC	Dobruska-Polom	1.12	173	ePG	Pg	17 37 46.5	+0.2
DPC				eSG	Sg	17 38 00.9	+0.1
	comp=Z,5.6nm,0.3s						
PVCC	Panska Ves	1.35	227	ePG	Pg	17 37 50.7	+0.1
PVCC				eSG	Sg	17 38 08.2	+0.1
	comp=Z,35nm,0.2s						
BRG	Berggiesshubel	1.48	247	PG	Pg	17 37 53.2	0.0
BRG				SG	Sg	17 38 13.4	+1.0
	comp=Z,13nm,0.4s						
PRU	Pruhonice	1.78	215	ePG	Pg	17 37 58.3	-0.6
PRU				eSG	Sg	17 38 21.5	-0.4
CLL	Collm	1.95	267	ePg	Pg	17 38 01.0	-1.1
CLL				eSg	Sg	17 38 27.0	-0.4
OKC	Ostrava-Krasne	2.08	141	eSG	Sg	17 38 31.9	+0.2
NKC	Novy Kostel	2.63	243	eP	Pn	17 38 09.0	+0.7
NKC				e		17 38 15.4	
NKC	Novy Kostel	2.63	243	ePN	Pn	17 38 09.0	+0.7
NKC				ePG	Pg	17 38 15.4	+0.3
NKC				eSG	Sg	17 38 50.4	+1.3
	comp=Z,11nm,0.3s						
KHC	Kasperske Hory	2.84	216	eP	Pn	17 38 11.8	+0.5
KHC				e		17 38 17.8	
KHC	Kasperske Hory	2.84	216	ePN	Pn	17 38 11.8	+0.5
KHC				ePG	Pg	17 38 17.8	-1.4
KHC				ex	x	17 38 46.0	
KHC				eSG	Sg	17 38 55.0	-1.1
MOX	Moxa	2.95	256	ePG	Pg	17 38 20.7	-0.6
MOX				eSG	Sg	17 38 59.8	+0.3

IDC 15 17:57:40.5±8.0**, 773S**×**12838E, h159**km±86km**, mb3.0**/1**, mb1 3.3**/4**, mb1mx3.0**/17**, mbtmp3.1**/4**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/8**, Error ellipse: s-maj=82.9km s-min=26.2km az=35.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.27	242	P	Pn	17 58 58.3	+0.7
	4.9nm,0.3s,baz=143,slow=3.6,SNR=20						
BATI				S	Sn	17 59 58.2	+0.4
	6.5nm,0.3s,baz=95,slow=20,SNR=9.8						
WRA	Warramunga Arr	13.44	155	P	Pn	18 00 43.5	-1.5
	0.6nm,0.3s,baz=324,slow=14,SNR=13						
WRA				S	Sn	18 03 08.8	-5.3
	0.4nm,0.3s,baz=331,slow=24,SNR=4.3						
WRA				LR	LR	18 06 27.7	
	comp=Z,103nm,20.2s,baz=105,slow=39						
ASAR	Alice Springs	16.71	162	P	Pn	18 01 26.4	+1.0
	0.2nm,0.3s,baz=337,slow=9.8,SNR=23						
MKAR	Makanchi Array	67.97	328	P	P	18 08 22.2	0.0
	0.2nm,0.6s,baz=120,slow=6.9,SNR=4.5						

CRAAG ***15*** *18:05:40.7, 3560N×057W, Ml3.4*
NEIC ***15*** *18:05:40.4, 3562N×050W, h0km, MG3.9(MDD), After MDD.*
MDD ***15*** *18:05:41.9±0.8, 3566N×058W, h5km±7km, mb3.7/18, Error ellipse: s-maj=9.8km s-min=5.8km az=7.0, PRXIMO*
INMG ***15*** *18:05:41.0±1.2, 3561N×047W, h15km±19km, Error ellipse: s-maj=16.0km s-min=5.8km az=143.0*
ISCJB ***15*** *18:05:41.3±0.6, 3573N±005×058W±004, h17km±8km, Error ellipse: s-maj=8.5km s-min=5.1km az=166.0*
CSEM ***15*** *18:05:41.3±0.1, 3573N×060W, h15km, ML3.4, Error ellipse: s-maj=3.9km s-min=2.0km az=23.0*
ISC 15 18:05:41.6±0.7**, 3570N**±005×**057W**±004**, h13**km±6km**, n51, σ1s21**/80**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USTO	Oran	0.04	23	P	Pg	18 05 44.0	0.0
ODJA	Bouhanifia	0.50	137	P	Pg	18 05 46.0	-5.5
OJBR	Djebel Berber	0.75	99	P	Pg	18 05 55.0	-1.2
OLHC	Oulhaca	0.83	237	P	Pg	18 05 56.0	-1.7
OKGL	Djebel Kef Gue	1.04	71	P	Pb	18 06 02.0	+0.5
OJGS	Djebel Guires	1.09	100	P	Pb	18 06 06.0	+3.6
EANR	'Ain N'Sour	1.38	79	P	Pn	18 06 06.6	0.0
ETRT	Tiaret	1.55	101	P	Pn	18 06 09.8	+0.8
ECHF	Ech Chlef	1.61	73	P	Pn	18 06 15.0	+5.2
ECHA	Ech Chlef	1.63	73	P	Pn	18 06 15.0	+4.9
ECHA				P		18 06 27.6	
EBNR	Beni Rached	1.80	70	P	Pn	18 06 19.8	+7.4
ENIJ	Nijar	1.83	314	P	Pn	18 06 12.1	-0.8
	5.3nm,0.1s,SNR=9.9						
ENIJ				S	Sn	18 06 35.0	-0.9
	7.8nm,0.2s,SNR=7.9						
EALB	Alboran	2.02	278	P	Pn	18 06 15.1	-0.3
	4.1nm,0.1s,SNR=7.9						
EALB				S	Sn	18 06 40.1	-0.4
	10nm,0.3s,SNR=7.9						
EALB	Alboran	2.02	278	P	Pn	18 06 15.1	-0.3
	4.1nm,0.1s,SNR=7.9						
EALB				S	Sn	18 06 40.1	-0.5
	10nm,0.3s,SNR=7.9						
EMUR	La Murta	2.21	346	P	Pn	18 06 17.4	-0.6
	2.8nm,0.1s,SNR=9.6						
EMUR				S	Sn	18 06 41.5	-3.6
	6.0nm,0.2s,SNR=7.9						
EMUR	La Murta	2.21	346	P	Pn	18 06 17.4	-0.6
	2.8nm,0.1s,SNR=9.6						
EMUR				S	Sn	18 06 41.5	-3.6
	6.0nm,0.2s,SNR=7.9						
EBER	Berja	2.22	303	P	Pn	18 06 17.9	-0.3
	3.0nm,0.2s,SNR=33						
EBER				S	Sn	18 06 45.6	0.0
	4.6nm,0.2s,SNR=7.9						
EBER	Berja	2.22	303	P	Pn	18 06 17.9	-0.3
	3.0nm,0.2s,SNR=33						
EBER				S	Sn	18 06 45.6	0.0
	4.6nm,0.2s,SNR=7.9						
EBER	Berja	2.22	303	P	Pn	18 06 17.9	-0.3
EBER				S	Sn	18 06 45.6	0.0
EGUA	Guajares	2.67	296	P	Pn	18 06 23.5	-0.9
	3.9nm,0.2s,SNR=7.9						
EGUA				S	Sn	18 06 57.6	+0.9
	6.8nm,0.2s,SNR=7.9						
EGUA	Guajares	2.67	296	P	Pn	18 06 23.5	-0.9
	3.9nm,0.2s,SNR=7.9						
EGUA				S	Sn	18 06 57.6	+1.0
	6.8nm,0.2s,SNR=7.9						
EQUE	Quentar	2.76	304	P	Pn	18 06 26.7	+1.1
	3.9nm,0.1s,SNR=25						
EQES	Quesada	2.91	317	P	Pn	18 06 29.4	+1.8
	5.5nm,0.1s,SNR=40						
EQES				S	Sn	18 07 04.4	+2.0
	4.2nm,0.1s,SNR=7.9						
EQES	Quesada	2.91	317	P	Pn	18 06 29.4	+1.8
	5.5nm,0.1s,SNR=40						
EQES				S	Sn	18 07 04.4	+2.0
	4.2nm,0.1s,SNR=7.9						
ERON	Agron	2.93	298	P	Pn	18 06 28.6	+0.7
	5.1nm,0.3s,SNR=7.9						
ERON				S	Sn	18 07 04.9	+2.0
	2.5nm,0.4s,SNR=7.9						
EBEN	Beniarda	3.01	5	P	Pn	18 06 28.7	-0.3
	0.7nm,0.2s,SNR=28						
EBEN				S	Sn	18 07 02.6	-2.4
	3.0nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.01	5	P	Pn	18 06 28.7	-0.4
	0.7nm,0.2s,SNR=28						
EBEN				S	Sn	18 07 02.6	-2.4
	3.0nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.04	345	P	Pn	18 06 30.4	+0.9
	4.9nm,0.3s,SNR=31						
ETOB				S	Sn	18 07 04.9	-0.8
	3.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.04	345	P	Pn	18 06 30.4	+0.9
	4.9nm,0.3s,SNR=31						
ETOB				S	Sn	18 07 04.9	-0.8
	3.6nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	3.23	298	P	Pn	18 06 34.3	+2.2
	0.7nm,0.2s,SNR=7.9						
EVIA	Vianos	3.31	333	P	Pn	18 06 33.8	+0.6
	3.9nm,0.2s,SNR=8.8						
EVIA				S	Sn	18 07 12.8	+0.3
	3.7nm,0.2s,SNR=7.9						
EMIJ	Mijas	3.51	285	P	Pn	18 06 34.2	-1.7
	0.5nm,0.1s,SNR=5.7						
EMIJ				S	Sn	18 07 14.8	-2.5
	1.7nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.56	315	P	Pn	18 06 39.0	+2.4
EBAN				S	Sn	18 07 19.8	+1.2
	SNR=7.9						
EBAN	Banos Encina	3.56	315	P	Pn	18 06 39.1	+2.4
	2.3nm,0.2s,SNR=7.9						
EBAN				S	Sn	18 07 19.8	+1.2
	SNR=7.9						
EIBI	Ibiza	3.65	24	P	Pn	18 06 38.3	+0.4
	0.9nm,0.1s,SNR=7.9						
EIBI				S	Sn	18 07 18.6	-2.2
	SNR=7.9						
EIBI	Ibiza	3.65	24	P	Pn	18 06 38.3	+0.4
	0.9nm,0.1s,SNR=7.9						
EIBI				S	Sn	18 07 18.6	-2.2
	SNR=7.9						
EADA	Adamuz	4.05	309	P	Pn	18 06 44.3	+1.0
	0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	18 07 31.0	+0.5
	0.9nm,0.2s,SNR=7.9						
EADA	Adamuz	4.05	309	P	Pn	18 06 44.3	+1.1
	0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	18 07 31.0	+0.5
	0.9nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.66	1	P	Pn	18 06 53.3	+1.6
	1.6nm,0.2s,SNR=14						
EMOS				S	Sn	18 07 43.8	-1.8
	4.3nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	4.66	1	P	Pn	18 06 53.3	+1.6
	1.6nm,0.2s,SNR=14						
EMOS				S	Sn	18 07 43.8	-1.7
	4.3nm,0.6s,SNR=7.9						
ESDC	Sonseca Array	4.79	327	P	Pn	18 06 54.2	+0.7
	2.0nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	4.79	327	P	Pn	18 06 54.2	+0.6
	2.0nm,0.1s,baz=143,slow=13,SNR=7.9						
EMIN	Mina Concepcio	5.32	295	P	Pn	18 07 00.2	-0.6
	0.4nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.32	295	P	Pn	18 07 00.1	-0.6
	0.4nm,0.1s,SNR=7.9						
PBAR	Barrancos	5.74	297	ePn	Pn	18 07 06.5	-0.1
EBAD	Badajoz	5.98	303	P	Pn	18 07 09.9	+0.1
	0.4nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.98	303	P	Pn	18 07 09.9	0.0
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	18 08 16.2	-2.0
	1.1nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	6.00	289	ePn	Pn	18 07 10.0	-0.1
PVAQ				eSn	Sn	18 08 15.6	-3.1
PBEJ	Beja	6.29	294	ePn	Pn	18 07 13.8	-0.4
PESTR	Estremoz	6.43	302	ePn	Pn	18 07 16.1	+0.1
EVO	Evora	6.59	298	ePn	Pn	18 07 18.0	-0.2

ISCJB ***15*** *18:16:36.9±3.4, 64S±05×1491E±08, h61km±39km, mb4.0/3, Error ellipse: s-maj=151.2km s-min=24.2km az=32.1*
NEIC ***15*** *18:16:37.2±1.7, 627S×14890E, h35km, mb4.1/2, Error ellipse: s-maj=67.8km s-min=14.2km az=115.0*
IDC ***15*** *18:16:38.1±5.7, 642S×14912E, h54km±59km, mb3.6/2, mb1 3.9/4, mb1mx3.4/16, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=117.5km s-min=33.1km az=119.0*
ISC 15 18:16:35.6±6.6**, 61S**±02×**1486E**±04**, h17**km±41km**, n8, σ0s85**/11**, mb4.0**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	203	P	Pn	18 17 30.9	+0.9
	12nm,0.3s,baz=34,slow=4.3,SNR=56						
PMG				S	Sn	18 18 12.2	+0.7
	16nm,0.3s,baz=107,slow=23,SNR=10						
PMG	Port Moresby	3.54	203	ePn	Pn	18 17 30.6	+0.6
PMG				P		18 17 30.9	
PMG				eSn	Sn	18 18 09.6	-1.9
PMG				S	Sn	18 18 12.2	+0.7
WRAB	Tennant Creek	19.47	224	eP	Pn	18 21 03.0	-0.1
	5.5nm,0.8s						
WB2	Warramunga Arr	19.48	224	eP	Pn	18 21 02.6	-0.5
WRA	Warramunga Arr	19.48	224	P	Pn	18 21 02.3	-1.0
	0.4nm,0.3s,baz=50,slow=11,SNR=26						
ASAR	Alice Springs	22.43	217	P	P	18 21 33.5	-0.2
	0.9nm,0.7s,mb3.3,baz=55,slow=9.4,SNR=25						
FITZ	Fitzroy Crossi	25.34	240	eP	P	18 22 03.5	+1.6
	4.0nm,0.5s,mb4.2						
PETK	Petropavlovsk-	59.51	6	P	P	18 26 37.5	-0.3
	4.1nm,0.9s,mb4.5,baz=168,slow=7.3,SNR=5.4						

DJA 15 18:17:00, 024S×**12456E, h54**km**, MLv3.8**/6**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	Manado	1.70	9	P	Pn	18 17 27.7	+0.4
LBMI	Labuha	2.97	98	P	Pn	18 17 43.9	-0.7
TNTI	Ternate	2.98	70	P	Pn	18 17 45.5	+0.7
KDI	Kendari	4.17	208	P	Pn	18 18 01.2	0.0
AAI	Ambon	4.99	133	P	Pn	18 18 12.6	+0.2

BJI ***15*** *18:22:26.8, 3239S×7200W, h30km, mB5.8, Ms5.9, Msz5.8*
NEIC ***15*** *18:22:27.2±0.1, 3269S×7170W, h25km, mb5.5/145, ME5.6, MS5.7/21, MW5.9, ML6.0(GUC), Error ellipse: s-maj=5.1km s-min=3.1km az=59.0, Moment Tensor Solution. s98 Moment tensor: Scale 10^17Nm; Mrr5.07; Mθθ2.07; Mφφ-7.14; Mrθ0.05; Mθφ0.77; Mφr-4.09; Best double couple: M0 7.60000×10^17 NP1:φs179.00000°, δ62.00000°, λ94.00000°. NP2:φs350.00000°, δ28.00000°, λ83.00000°. Principal axes: T 6.3200, Plg72.0000°, Azm98.0000°; N 2.1200, Plg3.0000°, Azm356.0000°; P -8.4400, Plg16.0000°, Azm265.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Four people injured at Vina del Mar and several buildings damaged at Con Con and Valparaiso. Felt [VI] at Puchuncavi; [V] at San Felipe, Valparaiso and Vina del Mar; [IV] at La Ligua, Los Andes, Papudo, Petorca, San Antonio and Santiago; [III] at Illapel and Rancagua; [II] at San Fernando. Felt at Buin, Colina, Limache, Paine, Penaflor, Puente Alto and Quilpe.
IDC ***15*** *18:22:27.9±0.5, 3271S×7154W, h27km±3km, mb5.2/23, mb1 5.2/25, mb1mx5.2/25, mbtmp5.1/25, ML5.2/1, MS5.5/21, Ms1 5.5/21, ms1mx5.4/25 Error ellipse: s-maj=14.8km s-min=8.2km az=75.0*
GUC ***15*** *18:22:27.0±0.7, 3280S×7174W, h45km±3km, ML6.0*
GCMT ***15*** *18:22:27.9±0.1, 3281S×7202W, h33km, MW5.9/104, Moment Tensor Solution. s104,c211; s97,c270; Duration: 2s2 Moment tensor: Scale 10^18Nm; Mrr0.55±.01; Mθθ0.09±.01; Mφφ-0.63±.01; Mrθ0.01±.01; Mθφ0.01±.00; Mφr-0.66±.01; Best double couple: M0 0.88500×10^18 NP1:φs359.00000°, δ21.00000°, λ89.00000°. NP2:φs179.00000°, δ69.00000°, λ90.00000°. Principal axes: T 0.8410, Plg66.0000°, Azm90.0000°; N 0.0880, Plg0.0000°, Azm359.0000°; P -0.9290, Plg24.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
MOS ***15*** *18:22:27.7±1.0, 3261S×7175W, h33km, mb5.8/57, MS5.7/19 Error ellipse: s-maj=11.6km s-min=6.4km az=96.6*
ISCJB ***15*** *18:22:28.6±0.5, 3266S±003×7160W±004, h42km±4km, mb5.5/164, MS5.7/51, Error ellipse: s-maj=6.1km s-min=4.2km az=152.9*
DJA ***15*** *18:22:58, 3357S×7085W, h249km, Mw5.6/6*
ISC 15 18:22:28.5±0.8**, 3269S**±003×**7162W**±003**, h29**km±5km**, h33**km±1.6km**:pP-P, n849, σ0s82**/636**, mb5.5**/163**, MS5.7**/51**, 181C-173D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.33	183	⇑iP	Pb	18 22 35.2	-1.1
ROCH	El Roble	0.58	119	⇑iP	Pb	18 22 40.5	+0.3
JACH	Jahuel	0.86	90	eP	Pn	18 22 44.9	+0.2
PEL	Peldehue	0.91	120	⇓iP	Pn	18 22 44.9	-0.4
PEL				iS	Sn	18 22 58.4	+1.1
PEL				AML	AML	18 23 02.2	
	comp=E,652µm,0.5s						
SAN	Santiago	1.10	134	eP	Pn	18 22 48.2	+0.2
CLCH	Cerro Calan	1.15	128	⇓iP	Pn	18 22 49.8	+1.2
CLCH				AML	AML	18 23 11.8	
	comp=E,560µm,0.8s						
ANTU	Antumapu	1.20	137	eP	Pn	18 22 49.2	-0.1
ANTU				iS	Sn	18 23 07.2	+2.6
LNV	Longovilo	1.27	172	⇑iP	Pn	18 22 49.1	-1.2
FCH	Farellones	1.28	120	⇓iP	Pn	18 22 50.6	+0.2
FCH				iS	Sn	18 23 08.3	+1.6
SJCH	San Jose de Ma	1.42	132	eP	Pn	18 22 53.2	+0.9
YECH	El Yeso	1.61	127	⇓iP	Pn	18 22 59.3	+4.3
YECH				iS	Sn	18 23 22.5	+7.7
LMEL	Las Melosas	1.65	135	⇓iP	Pn	18 22 56.9	+1.4
LMEL				AML	AML	18 23 26.8	
	comp=N,225µm,0.6s						
CACH	El Canelo	1.66	149	⇑iP	Pn	18 22 56.9	+1.4
TLL	Tololo Astrono	2.61	16	⇑iP	Pn	18 23 10.0	+1.3
TLL				S	Sn	18 23 44.2	+4.7
TLL	Tololo Astrono	2.61	16	⇑iP	Pn	18 23 10.0	+1.3
TLL				iS	Sn	18 23 44.2	+4.7
TLL				AML	AML	18 23 52.9	
	comp=E,80µm,0.5s						
CFAA	Coronel Fontan	3.07	70	Pn	Pn	18 23 18.6	+3.7
	comp=E,97nm,0.3s,baz=245,slow=12,SNR=552						
CFAA				Lg		18 23 56.8	
	comp=E,87nm,0.3s,baz=234,slow=14,SNR=2.8						
CFAA				LR	LR	18 24 49.2	
	comp=E,22µm,20.5s,baz=228,slow=47						
LCO	Las Campanas	3.75	12	⇑ePn	Pn	18 23 24.9	+0.5
LCO				eSn	Sn	18 24 08.6	+0.9
TRQA	Tornquist	9.52	127	ePn	Pn	18 24 43.8	+0.4
	comp=E,490nm,0.8s						
LVC	Limon Verde	10.32	14	Pn	Pn	18 24 51.3	-3.4
	comp=E,3.9nm,0.3s,baz=203,slow=9.9,SNR=29						
LVC				Sn	Sn	18 27 03.3	+14
	comp=E,20nm,0.3s,baz=212,slow=12,SNR=3.5						
LVC				LR	LR	18 29 17.6	
	comp=E,50µm,18.7s,baz=211,slow=40						
LVC	Limon Verde	10.32	14	ePn	Pn	18 24 50.9	-3.7
LVC				eSn	Sn	18 27 03.9	+15
LVC	Limon Verde	10.32	14	⇓eP	Pn	18 24 51.1	-3.6
LVC				AMS	AMS	18 28 53.4	
	comp=N,38µm,18.4s						
LPA	La Plata	11.60	105	ceP	Pn	18 25 11.0	-1.1
LPA				epP		18 25 15.0	
LPA				ePP		18 25 19.0	
COYC	Coyhaique	12.87	181	AMS	AMS	18 31 23.1	
	comp=Z,36µm,17.9s						
CPUP	Villa Florida	13.96	67	Pn	Pn	18 25 43.0	-1.3
	comp=Z,2.7nm,0.3s,baz=224,slow=12,SNR=26						
CPUP				Sn	Sn	18 28 18.6	+0.3
	comp=Z,10nm,0.3s,baz=246,slow=15,SNR=3.0						
CPUP				LR	LR	18 32 01.1	
	comp=Z,11µm,18.7s,baz=230,slow=41						
CPUP	Villa Florida	13.96	67	P	Pn	18 25 43.1	-1.2
CPUP						18 28 18.7	
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CPUP				smax			
	comp=N,11nm,0.3s						
CPUP				MLR	MLR		
	comp=Z,11µm,18.7s						
CPUP	Villa Florida	13.96	67	ePn	Pn	18 25 42.0	-2.3
	comp=Z,40nm,1.0s						
CPUP				eSn	Sn	18 28 16.4	-1.9
ARE	Arequipa	16.16	0	eP	Pn	18 26 15.0	+1.4
ARE				i		18 26 18.0	
ARE				i		18 30 17.2	
SIV	San Ignacio	19.18	32	P	Pn	18 26 48.0	-2.9
	baz=224,slow=13						
SIV				S	Sn	18 30 37.6	+12
	comp=Z,0.3nm,0.3s,baz=102,slow=19,SNR=2.7						
NNA	Nana	21.16	346	P	P	18 27 12.1	+0.8
	comp=Z,28nm,0.7s,mb4.7,baz=207,slow=9.1,SNR=14						
NNA				S	S	18 31 07.1	+1.8
	comp=Z,2.7nm,0.3s,baz=163,slow=14,SNR=1.7						
NNA				LR	LR	18 33 59.0	
	comp=Z,11µm,18.8s,MS5.2,baz=178,slow=33						
NNA	Nana	21.16	346	eP	P	18 27 12.1	+0.7
	comp=Z,89nm,0.9s,mb5.1						
NNA				eSn	S	18 31 09.1	+3.8
EFI	East Falkland	21.40	156	P	P	18 27 13.1	-0.6
	comp=Z,2µm,0.6s,mb6.5,SNR=28						
EFI	East Falkland	21.40	156	eP	P	18 27 12.4	-1.3
EFI				eS	S	18 31 08.9	-0.6
EFI				pmax	pmax		
	comp=Z,170nm,0.6s,mb5.5						
EFI	East Falkland	21.40	156	eP	P	18 27 12.4	-1.3
	comp=Z,170nm,0.6s,mb5.5						
EFI				eS	S	18 31 08.9	-0.6
USHA	Ushuaia	22.25	175	P	P	18 27 23.4	+0.7
	comp=Z,91nm,0.9s,mb5.2,baz=339,slow=4.1,SNR=22						
USHA				S	S	18 31 26.0	+0.1
	comp=Z,10.0nm,0.9s,baz=328,slow=13,SNR=1.8						
USHA				LR	LR	18 37 36.2	
	comp=Z,7µm,19.4s,MS5.1,baz=341,slow=41						
ATAH	Atahualpa	26.33	345	P	P	18 28 01.9	0.0
	comp=Z,7.8nm,0.7s,mb4.3,baz=150,slow=9.1,SNR=7.8						
ATAH				LR	LR	18 37 03.6	
	comp=Z,9µm,18.9s,MS5.3,baz=292,slow=33						
BDFB	Brasilia	27.32	57	P	P	18 28 10.3	-0.5
	comp=Z,95nm,1.0s,mb5.3,baz=217,slow=14,SNR=108						
BDFB				LR	LR	18 40 03.8	
	comp=Z,23µm,21.6s,MS5.7,baz=221,slow=39						
BDFB	Brasilia	27.32	57	P	P	18 28 10.3	-0.6
BDFB				pmax	pmax		
	comp=Z,95nm,1.0s						
BDFB				MLR	MLR		
	comp=Z,23µm,21.6s						
BDFB	Brasilia	27.32	57	⇑eP	P	18 28 09.7	-1.1
	comp=Z,396nm,1.3s,mb5.8						
CAM4	Nova Friburgo	27.67	76	eP	P	18 28 12.3	-1.7
CAM4				i		18 28 14.7	
CAM4				i		18 28 23.5	
CAM4				i		18 28 26.6	
CAM4				i		18 28 35.7	
CAM4				i		18 28 47.2	
CAM4				i		18 29 01.7	
CAM3	Guarapari	30.11	74	⇓iP	P	18 28 34.9	-0.8
CAM3				i		18 28 39.5	
CAM3				i		18 28 48.3	
CAM3				i		18 29 20.4	
PMSA	Palmer Station	32.45	174	P	P	18 28 52.8	-3.0
	comp=Z,48nm,0.8s,mb5.4						
RPN	Rapa Nui	33.04	270	LR	LR	18 38 41.6	
	comp=Z,15µm,20.8s,MS5.7,baz=59,slow=29						
OTAV	Otavalo	33.38	348	⇑iP	P	18 29 06.4	+2.0
	comp=Z,60nm,1.3s,mb5.4						
OTAV				ePcP	PcP	18 31 46.2	+0.4
PAYG	Puerto Ayora	36.38	327	P	P	18 29 28.3	-2.1
	comp=Z,103nm,1.4s,mb5.6						
ROSC	El Rosal	37.43	356	P	P	18 29 41.2	+2.0
	comp=Z,113nm,1.0s,mb5.7,baz=126,slow=4.1,SNR=28						
ROSC				S	S	18 35 27.4	+1.5
	comp=Z,4.2nm,0.3s,baz=90,slow=20,SNR=1.8						
ROSC				LR	LR	18 45 23.0	
	comp=Z,5µm,19.0s,MS5.3,baz=186,slow=37						
ROSC	El Rosal	37.43	356	⇑eP	P	18 29 41.5	+2.2
ROSC				ePcP	PcP	18 31 57.3	-0.3
SDV	Santo Domingo	41.36	1	⇑iP	P	18 30 11.3	-0.6
	comp=Z,106nm,0.9s,mb5.5						
BCIP	Isla Barro Col	42.36	348	eP	P	18 30 21.5	+1.4
	comp=Z,162nm,1.2s,mb5.5						
RCBR	Riachuelo	42.66	59	⇑iP	P	18 30 22.0	-0.7
	comp=Z,224nm,1.6s,mb5.7						
RCBR				epP	pP	18 30 33.4	+2.0
RCBR				ePcP	PcP	18 32 12.3	-2.1
GRGR	Grenville	45.58	14	⇑iP	P	18 30 44.6	-1.4
	comp=Z,524nm,1.3s,mb6.3						
FDF	Fort de France	48.21	14	eP	P	18 31 02.6	-3.9
FDF				pmax	pmax		
	comp=Z,291nm,1.3s,mb6.2						
FDF	Fort de France	48.21	14	eP	P	18 31 02.6	-4.0
	comp=Z,291nm,1.3s,mb6.2						
TGUH	Tegucigalpa,Un	48.84	340	⇑eP	P	18 31 10.5	-0.9
VNA3	Neumayer Olymp	50.44	158	eP	P	18 31 23.1	+0.2
VNA3				e	pP	18 31 33.3	+1.6
VNA3				e		18 31 36.1	
VNA3				e		18 31 38.8	
VNA3				e		18 32 40.9	
VNA3				e		18 36 58.6	
VNA3				e		18 37 09.6	

CRPR Cabo Rojo, PR 50.60 6⇑ *e*P P **18 31 23.3 -1.4**
comp=Z,81nm,1.2s,mb5.5
VNA1 Neumayer--Stat 50.74 157 *e*P P **18 31 25.7 +0.5**
VNA1 *e* 18 31 36.7
VNA1 *e* 18 31 39.3
VNA1 *e* 18 31 42.2
VNA1 *e* 18 32 42.4
SJG San Juan 50.79 7 *e*P P **18 31 25.3 -0.8**
SJG pmax pmax
comp=Z,163nm,1.1s
SJG San Juan 50.79 7 *e*P P **18 31 25.3 -0.8**
comp=Z,164nm,1.1s,mb5.9
MTDJ Mount Denham 50.95 353 *e*P P **18 31 25.2 -2.2**
comp=Z,174nm,1.3s,mb5.8
ANWB Willy Bob 50.95 12 *e*P P **18 31 26.4 -1.0**
VNA2 Neumayer--Watz 51.08 158 *e*P P **18 31 28.0 +0.2**
baz=290,slow=8.9
VNA2 *e* 18 31 38.6
VNA2 *e* 18 31 41.6
VNA2 *e* 18 31 43.2
VNA2 *e* 18 37 03.0
VNA2 *e* 18 37 12.8
SDDR Presa de Saban 51.38 0⇑ *e*P P **18 31 31.3 +0.7**
comp=Z,52nm,1.0s,mb5.4
SNAA Sanae 52.66 158 *e*P P **18 31 38.5 -1.1**
SNAA *e* pP 18 31 47.9 -0.5
SNAA *e* 18 31 50.9
SNAA *e* 18 31 53.0
SNAA Sanae 52.66 158⇑ *i*P P **18 31 38.4 -1.2**
SNAA *e**PP pP 18 31 48.3 -0.1
SNAA *e*S S 18 39 26.2 +21
SNAA pmax pmax
comp=Z,158nm,1.3s
SNAA Sanae 52.66 158⇑ *i*P P **18 31 38.4 -1.2**
comp=Z,158nm,1.3s,mb5.8
SNAA *e*pP pP 18 31 48.3 -0.1
SNAA *e*S S 18 39 26.2 +21
CMIG Matias Romero 54.28 332 P P **18 31 52.1 +0.1**
comp=Z,13nm,0.8s,mb4.9,baz=113,slow=3.6,SNR=20
CMIG LR LR 18 51 02.9
comp=Z,3μm,18.1s,MS5.4,baz=130,slow=32
TEIG Tepich 54.98 341⇑ *i*P P **18 31 56.4 -0.7**
comp=Z,90nm,0.8s,mb5.8
RKT Rikitea 56.08 263 *e*S S **18 39 50.6 -1.7**
comp=Z,3μm,27.8s
RKT *e*SS SS 18 43 42.0 +3.4
comp=Z,2μm,29.5s
RKT *e*LR LR 18 48 31.0
comp=Z,8μm,25.0s,baz=123
MAIT Maitri 57.35 157 *e*P P **18 32 10.5 -2.9**
MAIT *e*pP pP 18 32 22.5 +0.2
MAIT *e*S S **18 40 24.9 +17**
NVL N'lazarevskaya 57.38 157 *c i*P P **18 32 13.6 -0.1**
NVL S S **18 40 08.6 +0.5**
NVL pmax pmax
comp=Z,166nm,1.7s,mb5.8
QSPA South Pole Qui 57.54 180 LR LR 18 59 02.9
comp=Z,2μm,18.5s,MS5.3,baz=38,slow=38
QSPA PKPPKP 19 02 03.8
comp=Z,3.8nm,1.1s,baz=199,slow=2.3,SNR=5.6
QSPA South Pole Qui 57.54 180⇑ *i*P P **18 32 14.9 +0.2**
comp=Z,120nm,1.0s,mb5.9
DWPF Disney 61.18 350 *e*P P **18 32 40.4 0.0**
comp=Z,58nm,1.0s,mb5.7
SBA Scott Base 64.42 192 P P **18 33 03.0 +1.6**
BRAL Brewton 65.02 345 *e*P P **18 33 06.6 +0.8**
comp=Z,97nm,1.0s,mb5.8
BBSR BB Station 65.04 6 *e*P P **18 33 05.4 -0.5**
comp=Z,32nm,0.8s,mb5.4
VNDA Vanda 65.45 191 P P **18 33 08.4 +0.3**
comp=Z,9.5nm,0.9s,mb4.8,baz=128,slow=4.0,SNR=9.8
VNDA Vanda 65.45 191 P P **18 33 08.4 +0.3**
VNDA pmax pmax
comp=Z,10.0nm,1.0s
VNDA Vanda 65.45 191 *e*P P **18 33 07.7 -0.4**
comp=Z,34nm,1.3s,mb5.2
NHSC New Hope 65.94 352 *e*P P **18 33 11.7 -0.1**
comp=Z,401nm,1.4s,mb6.3
GOGA Godfrey 66.69 349 *e*P P **18 33 15.3 -1.2**
GOGA pmax pmax
comp=Z,51nm,1.0s,mb5.5
GOGA Godfrey 66.69 349 *e*P P **18 33 15.3 -1.2**
comp=Z,51nm,1.0s,mb5.5
LRAL Lakeview Retre 66.97 346 *e*P P **18 33 17.4 -0.8**
comp=Z,54nm,1.1s,mb5.5
VBMS Vicksburg 66.98 343 *e*P P **18 33 18.6 +0.2**
comp=Z,61nm,0.8s,mb5.7
TAOE Nuku Hiva Isla 67.22 274 *e*S S 18 42 11.3 -2.3
comp=Z,10μm,25.7s
TAOE Nuku Hiva Isla 67.22 274 *e*LR LR 18 53 46.8
comp=Z,28μm,23.0s,baz=136
NATX Nacogdoches 67.70 339 *e*P P **18 33 23.0 +0.1**
comp=Z,92nm,1.0s,mb5.8
CNNC Cliffs of the 67.83 354 *e*P P **18 33 22.8 -0.9**
comp=Z,111nm,1.2s,mb5.8
JCT Junction City 68.26 334 *e*P P **18 33 26.4 -0.1**
JCT pmax pmax
comp=Z,96nm,1.2s,mb5.7
JCT Junction City 68.26 334 *e*P P **18 33 26.4 -0.2**
comp=Z,96nm,1.2s,mb5.7
TXAR Lajitas Array 68.77 330 P P **18 33 29.9 +0.2**
comp=Z,16nm,1.1s,mb4.9,baz=149,slow=7.2,SNR=36
TXAR pP pP 18 33 38.9 +0.1
comp=Z,9.6nm,0.7s,baz=162,slow=9.5,SNR=19
TXAR LR LR 18 59 28.1
comp=Z,5μm,18.5s,MS5.8,baz=100,slow=32
TXAR PKPPKP 19 01 40.8
comp=Z,0.3nm,0.7s,baz=252,slow=1.8,SNR=3.0
TXAR Lajitas Array 68.77 330 P P **18 33 29.9 +0.2**
TXAR *PP pP 18 33 38.9 +0.1
OXF Oxford 68.91 344 *e*P P **18 33 29.4 -1.1**
OXF pmax pmax
comp=Z,184nm,0.8s,mb6.1
OXF Oxford 68.91 344 *e*P P **18 33 29.4 -1.1**
comp=Z,184nm,0.8s,mb6.1
TKL Tuckaleechee C 68.94 349 P P **18 33 29.9 -0.8**
comp=Z,33nm,0.9s,mb5.3,baz=161,slow=7.1,SNR=11
TKL Tuckaleechee C 68.94 349 P P **18 33 29.9 -0.7**
TKL pmax pmax
comp=Z,33nm,0.9s,mb5.3
TKL Tuckaleechee C 68.94 349 *e*P P **18 33 29.4 -1.2**
MEH Mehetia 69.38 262 *e*P P **18 33 31.7 -2.2**
comp=Z,402nm,1.0s,mb6.3
TZTN Tazewell 69.78 350 *e*P P **18 33 34.7 -1.1**
comp=Z,28nm,0.8s,mb5.2
UALR University of 69.88 342 *e*P P **18 33 36.4 -0.1**
comp=Z,50nm,1.2s,mb5.3
MIAR Mount Ida 69.99 341 *e*P P **18 33 36.4 -0.8**
MIAR pmax pmax
comp=Z,45nm,1.0s,mb5.3
MIAR Mount Ida 69.99 341 *e*P P **18 33 36.4 -0.7**
comp=Z,45nm,1.0s,mb5.4
WVT Waverly 70.13 346 *e*P P **18 33 36.8 -1.1**
VAH Vaihoa 70.29 264 *e*P P **18 33 37.1 -2.5**
comp=Z,53nm,1.0s,mb5.4
TVO Taravao 70.41 261 *e*P P **18 33 38.4 -1.9**
comp=Z,411nm,1.1s,mb6.3
TVO Taravao 70.41 261 *e*P P **18 33 38.4 -1.9**
TVO pmax pmax
comp=Z,411nm,1.1s,mb6.3
UTMT University of 70.55 345 *e*P P **18 33 39.1 -1.4**
comp=Z,325nm,1.0s,mb6.2
TIAR Tiarei 70.60 261 *e*P P **18 33 39.2 -2.2**
comp=Z,303nm,1.1s,mb6.2
PMOR Pomariorio Ree 70.63 264 *e*P P **18 33 39.5 -2.1**
comp=Z,112nm,1.2s,mb5.7
CBN Corbin 70.74 355 *e*P P **18 33 39.2 -2.4**
comp=Z,33nm,0.7s,mb5.4
PAE Paea 70.74 261 *e*P P **18 33 40.2 -2.1**
comp=Z,638nm,1.2s,mb6.4
PAE Paea 70.74 261 *e*P P **18 33 40.2 -2.1**
PAE pmax pmax
comp=Z,638nm,1.2s,mb6.4
PPT Papeete 70.79 261 *e*P P **18 33 40.6 -1.9**
comp=Z,87nm,1.3s,mb5.5
PPT *e*S S 18 42 52.8 -2.9
comp=Z,3μm,27.2s
PPT Papeete 70.79 261 *e*LR LR 18 55 14.3
comp=Z,8μm,26.0s,baz=115
PPT Papeete 70.79 261 P P **18 33 43.0 +0.4**
comp=Z,18nm,0.4s,mb5.4,baz=150,slow=8.1,SNR=2.9
PPT LR LR 18 56 43.9
comp=Z,2μm,20.4s,MS5.5,baz=153,slow=29
WMOK Wichita Mounta 71.76 337 *e*P P **18 33 45.5 -2.4**
WMOK pmax pmax
comp=Z,49nm,1.3s,mb5.3
WMOK Wichita Mounta 71.76 337 *e*P P **18 33 45.5 -2.4**
comp=Z,49nm,1.3s,mb5.3
USIN University of 71.87 347 *e*P P **18 33 47.0 -1.5**
comp=Z,203nm,1.1s,mb6.0
WCI Wyandotte Cave 71.87 348 *e*P P **18 33 46.6 -1.9**
WCI pmax pmax
comp=Z,60nm,1.3s,mb5.4
WCI Wyandotte Cave 71.87 348 *e*P P **18 33 46.6 -1.8**
comp=Z,60nm,1.3s,mb5.4
SIUC Southern Illin 71.94 345 *e*P P **18 33 47.6 -1.3**
comp=Z,116nm,1.1s,mb5.7
MCWV Mont Chateau 72.39 353 *e*P P **18 33 50.1 -1.5**
comp=Z,76nm,1.2s,mb5.5
FVM French Village 72.47 345⇑ *i*P P **18 33 51.2 -0.8**
FVM pmax pmax
comp=Z,159nm,1.2s,mb5.8
FVM French Village 72.47 345⇑ *i*P P **18 33 51.2 -0.8**
comp=Z,159nm,1.2s,mb5.8
OLIL Olney 72.70 347 *e*P P **18 33 52.0 -1.4**
comp=Z,103nm,1.2s,mb5.6
CCM Cathedral Cave 72.72 344 *e*P P **18 33 52.8 -0.8**
CCM pmax pmax
comp=Z,120nm,1.0s,mb5.8
CCM Cathedral Cave 72.72 344 *e*P P **18 33 52.8 -0.8**
comp=Z,120nm,1.0s,mb5.8
BLO Bloomington 72.83 348⇑ *i*P P **18 33 52.6 -1.6**
BLO pmax pmax
comp=Z,35nm,0.8s,mb5.3
BLO Bloomington 72.83 348⇑ *i*P P **18 33 52.6 -1.6**
comp=Z,35nm,0.8s,mb5.3
AMTX Amarillo 72.91 334 *e*P P **18 33 54.5 -0.3**
comp=Z,103nm,1.2s,mb5.6
AMTX LR LR
comp=Z,1μm,19.0s,MS5.3
319A Douglas 73.00 327 ⇓P P **18 33 56.0 +0.7**
baz=73,SNR=20
SLM Saint Louis 73.05 345⇑ *i*P P **18 33 54.5 -1.0**
SLM pmax pmax
comp=Z,99nm,0.9s,mb5.7
SLM Saint Louis 73.05 345⇑ *i*P P **18 33 54.5 -1.0**
comp=Z,99nm,0.9s,mb5.7
SSPA Standing Stone 73.19 355⇑ *i*P P **18 33 56.3 0.0**
comp=Z,52nm,1.2s,mb5.3
ACSO Alum Creek Sta 73.32 351 *e*P P **18 33 55.8 -1.3**
comp=Z,96nm,0.8s,mb5.8
ACSO LR LR
comp=Z,2μm,22.0s,MS5.4
318A Bisbee 73.38 326 ⇓P P **18 33 58.3 +0.6**
baz=74,SNR=28
219A White Tail Can 73.51 327 ⇑P P **18 33 59.0 +0.7**
baz=74,SNR=58
218A Dragoon 73.85 327 P P **18 34 01.2 +0.8**
baz=74,SNR=23
LIC Lamto 74.03 72⇑ *i*P P **18 34 01.3 -0.6**
comp=Z,96nm,0.8s,mb5.5
LIC *e*MLR MLR
comp=Z,6μm,19.2s,MS5.6
LIC Lamto 74.03 72⇑ *i*P P **18 34 01.3 -0.6**
comp=Z,48nm,0.8s,mb5.5
LIC LR LR
comp=Z,3μm,19.3s,MS5.6
217A Green Valley 74.05 326 P P **18 34 02.4 +0.8**
baz=74,SNR=29
119A Ashpeak Ranch, 74.17 328 ⇓P P **18 34 03.1 +0.8**
baz=74,SNR=15
MAW Mawson 74.33 164 *e*P P **18 34 02.5 -0.3**
comp=Z,28nm,0.7s,mb5.3
MAW Mawson 74.33 164 P P **18 34 02.5 -0.2**
comp=Z,30nm,0.6s,mb5.4,baz=210,slow=6.5,SNR=75
MAW LR LR 19 10 08.5
comp=Z,8μm,18.3s,MS6.0,baz=224,slow=38
MAW Mawson 74.33 164 *e*P P **18 34 02.5 -0.3**
MAW pmax pmax
comp=Z,28nm,0.7s
118A Homack Ranch, 74.37 327 ⇓P P **18 34 04.0 +0.5**
baz=75,SNR=9.8
DBIC Dimbokro 74.43 71 P P **18 34 03.9 -0.4**
comp=Z,37nm,0.7s,mb5.4,baz=211,slow=5.5,SNR=43
DBIC LR LR 19 07 07.8
comp=Z,4μm,18.1s,MS5.8,baz=216,slow=36
DBIC Dimbokro 74.43 71 P P **18 34 03.9 -0.3**
DBIC pmax pmax
comp=Z,37nm,0.7s
DBIC MLR MLR
comp=Z,4μm,18.1s
DBIC Dimbokro 74.43 71 *e*P P **18 34 03.2 -1.0**
comp=Z,279nm,1.5s,mb6.0
TUC Tucson 74.47 326⇑ *e*P P **18 34 03.9 -0.1**
TUC pmax pmax
comp=Z,28nm,1.3s,mb5.0
TUC Tucson 74.47 326⇑ *e*P P **18 34 03.9 -0.2**
comp=Z,32nm,1.3s,mb5.1
216A Three Points, 74.54 326 ⇑P P **18 34 05.1 +0.7**
baz=75,SNR=22
Z19A T-Hk Ranch, 74.60 328 ⇑P P **18 34 05.1 +0.3**
baz=75,SNR=5.0
BINY Binghamton 74.63 357⇑ *e*P P **18 34 04.5 -0.2**
comp=Z,82nm,1.4s,mb5.5
BINY LR LR
comp=Z,2μm,21.0s,MS5.5
117A Oracle 74.67 326 ⇑P P **18 34 05.6 +0.4**
baz=75,SNR=13
ANMO Albuquerque 74.81 331⇑ *e*P P **18 34 06.7 +0.8**
ANMO pmax pmax
comp=Z,50nm,1.4s
ANMO MLR MLR
comp=Z,700nm,13.0s
ANMO Albuquerque 74.81 331 *e*P P **18 34 06.4 +0.4**
comp=Z,37nm,1.1s,mb5.2
ANMO LR LR
comp=Z,5μm,21.0s,MS5.8
ERPA Erie 74.84 354 *e*P P **18 34 04.7 -1.2**
comp=Z,104nm,1.4s,mb5.6
KSU1 Kansas State U 75.11 340 *e*P P **18 34 06.2 -1.3**
comp=Z,38nm,0.9s,mb5.3
116A Eloy 75.12 326 ⇓P P **18 34 08.5 +0.7**
baz=75,SNR=11
Z17A San Carlos Hig 75.15 327 ⇑P P **18 34 08.9 +1.0**
baz=75
214A Organ Pipe Nat 75.15 325 ⇓P P **18 34 08.8 +0.9**
baz=75,SNR=15
SUR Sutherland 75.15 119 P P **18 34 09.7 +1.5**
comp=Z,350nm,0.8s,mb6.3,SNR=15
SUR Sutherland 75.15 119 *e*P P **18 34 08.7 +0.5**
comp=Z,98nm,1.3s,mb5.6
Y19A Nutrioso 75.16 328 ⇑P P **18 34 09.3 +1.4**
baz=76,SNR=106
Y18A Canyon Day Jun 75.36 328 ⇓P P **18 34 09.7 +0.6**
baz=76,SNR=11
AAM Ann Arbor 75.44 351 *e*P P **18 34 08.0 -1.4**
AAM pmax pmax
comp=Z,36nm,0.8s,mb5.3
AAM MLR MLR
comp=Z,3μm,22.0s,MS5.6
AAM Ann Arbor 75.44 351 *e*P P **18 34 08.0 -1.3**
comp=Z,36nm,0.8s,mb5.4
AAM LR LR
comp=Z,3μm,22.0s,MS5.6
115A Sonoran Desert 75.48 325 ⇓P P **18 34 10.6 +0.7**
baz=76,SNR=16
X19A St. Johns 75.57 329 ⇑P P **18 34 10.9 +0.7**
baz=76,SNR=12
Y17A Roosevelt 75.66 327 ⇓P P **18 34 11.5 +0.7**
baz=76,SNR=42
CBKS Cedar Bluff 75.79 338 *e*P P **18 34 10.9 -0.5**
CBKS pmax pmax
comp=Z,90nm,0.9s,mb5.7
CBKS Cedar Bluff 75.79 338 *e*P P **18 34 10.9 -0.6**
comp=Z,90nm,0.9s,mb5.7
X18A Snowflake 75.95 328 ⇓P P **18 34 13.2 +0.8**
baz=76,SNR=8.8
Y16A Circle Bar Ran 76.10 327 P P **18 34 14.4 +1.1**
baz=76,SNR=21
X17A Forest Lakes 76.17 327 ⇓P P **18 34 14.9 +1.2**
baz=76,SNR=13
W19A Sanders 76.19 329 ⇑P P **18 34 14.7 +0.9**
baz=76,SNR=7.7
NCB Newcomb 76.33 358 *e*P P **18 34 14.0 -0.4**
comp=Z,31nm,1.0s,mb5.2
W18A Petrified Fore 76.35 329 ⇑P P **18 34 15.5 +0.8**
baz=77,SNR=11
Z14A Wintersburg 76.37 325 ⇓P P **18 34 16.5 +1.6**
baz=77
X16A Lo Mia Camp, P 76.53 327 P P **18 34 16.9 +1.2**
baz=77,SNR=67
V19A Window Rock 76.55 329 P P **18 34 17.2 +1.3**
baz=77,SNR=21
Y15A Casa Rosa Ranc 76.56 326 ⇑P P **18 34 16.6 +0.6**
baz=77,SNR=20
LBNH Lisbon 76.56 360 *e*P P **18 34 16.2 +0.5**
LBNH pmax pmax
comp=Z,68nm,1.1s,mb5.5
LBNH Lisbon 76.56 360 *e*P P **18 34 16.2 +0.5**
comp=Z,68nm,1.1s,mb5.5
W17A Winslow 76.75 328 ⇑P P **18 34 18.3 +1.3**
baz=77,SNR=5.5
SCIA State Center 76.85 344 *e*P P **18 34 16.3 -1.1**
comp=Z,96nm,1.0s,mb5.7
SDCO Great Sand Dun 76.86 333 *e*P P **18 34 18.0 +0.4**
comp=Z,25nm,0.9s,mb5.1
Y14A Wickenburg 76.86 326 ⇑P P **18 34 18.1 +0.4**
baz=77,SNR=15
V18A Ganado 76.94 329 ⇑P P **18 34 18.6 +0.6**
baz=77,SNR=11
X15A Humboldt 76.95 326 ⇑P P **18 34 19.0 +0.8**
baz=77,SNR=31
LONY Lake Ozonia 76.99 358 *e*P P **18 34 17.9 -0.2**
comp=Z,47nm,1.0s,mb5.4
GLA Glamis 77.03 324 ⇓P P **18 34 19.0 +0.3**
baz=77
GLA Glamis 77.03 324 *e*P P **18 34 18.7 +0.1**
GLA *e* pP 18 34 28.4 +0.6
GLA pmax pmax
comp=Z,23nm,1.2s,mb5.0
GLA Glamis 77.03 324 *e*P P **18 34 18.7 0.0**
comp=Z,71nm,1.2s,mb5.5
GLA *e* pP 18 34 28.4 +0.5
W16A Flagstaff 77.13 327 ⇓P P **18 34 20.2 +1.0**
baz=77,SNR=41
JFWS Jewell Farm 77.16 346 *e*P P **18 34 18.1 -1.0**
JFWS pmax pmax
comp=Z,56nm,0.9s,mb5.5
JFWS Jewell Farm 77.16 346 *e*P P **18 34 18.1 -0.9**
comp=Z,56nm,0.9s,mb5.5
X14A Yava 77.25 326 ⇑P P **18 34 20.5 +0.7**
baz=78,SNR=12
RAR Rarotonga 77.37 253 LR LR 19 01 11.8
comp=Z,2μm,18.2s,MS5.5,baz=306,slow=30
SADO Sadowa 77.40 355 P P **18 34 19.7 -0.6**
comp=Z,36nm,0.8s,mb5.3,baz=213,slow=4.7,SNR=18
WUAZ Wupatki 77.41 328 ⇓P P **18 34 21.5 +0.8**
baz=78
WUAZ Wupatki 77.41 328 *e*P P **18 34 21.2 +0.5**
comp=Z,69nm,1.1s,mb5.5
Y12C Blythe 77.45 324 ⇑P P **18 34 21.3 +0.4**
baz=78,SNR=5.6
T19A Beclabito 77.49 330 P P **18 34 21.8 +0.7**
baz=78,SNR=42
U18A Rough Rock, Ch 77.50 329 P P **18 34 22.4 +1.2**
baz=78,SNR=31
W15A Williams 77.54 327 ⇑P P **18 34 22.3 +0.9**
baz=78,SNR=17
MVCO Mesa Verde 77.60 331 ⇓P P **18 34 22.3 +0.6**
baz=78
MVCO Mesa Verde 77.60 331 *e*P P **18 34 22.2 +0.5**
comp=Z,47nm,1.0s,mb5.4
PKME Peaks-Kenny Pk 77.62 2 *e*P P **18 34 21.0 -0.5**
comp=Z,75nm,1.1s,mb5.5
MONP Monument Peak 77.71 323 ⇓P P **18 34 23.1 +0.7**
baz=78
X13A Yucca 77.79 325 ⇓P P **18 34 23.6 +0.7**
baz=78,SNR=38
U16A Tuba City 77.82 328 ⇓P P **18 34 23.7 +0.8**
baz=78,SNR=27
BC3 Big Chuckw Mtn 77.83 324 ⇓P P **18 34 23.8 +0.7**
baz=78
W14A Seligman 77.95 326 ⇓P P **18 34 24.7 +1.0**
baz=78,SNR=22
U17A Shonto 78.00 329 ⇓P P **18 34 25.1 +1.1**
baz=78,SNR=14
V15A Kaibab Nationa 78.02 327 ⇑P P **18 34 25.1 +1.0**
baz=78,SNR=43
DRV Dumont d'Urvil 78.05 192 P P **18 34 24.0 +0.1**
DRV S S 18 44 18.0 +2.4
DRV SS SS 18 49 19.0 +3.0
DRV L 18 55 00.0
DRV R 19 00 00.0
IRM Iron Mountain 78.08 324 ⇓P P **18 34 25.1 +0.7**
baz=78
T18A Mexican Hat 78.11 330 ⇓P P **18 34 24.8 +0.3**
baz=78,SNR=23
R21A Cimarron 78.20 332 ⇓P P **18 34 25.8 +0.7**
baz=78,SNR=15
W13A Hualapai Mount 78.23 326 ⇓P P **18 34 26.2 +0.9**
baz=78,SNR=20
PFO Pinyon Flat Ob 78.30 323 P P **18 34 26.8 +1.1**
comp=Z,202nm,1.0s,mb6.0,SNR=5.7
PFO Pinyon Flat Ob 78.30 323 ⇑P P **18 34 26.7 +1.0**
baz=79
PFO Pinyon Flat Ob 78.30 323 *e*P P **18 34 26.7 +1.0**
PFO pmax pmax
comp=Z,65nm,1.2s,mb5.4
PFO Pinyon Flat Ob 78.30 323 *e*P P **18 34 26.7 +1.0**
comp=Z,65nm,1.2s,mb5.4
V14A Boquillas Ranc 78.30 327 ⇓P P **18 34 26.8 +1.2**
baz=79,SNR=33
S19A Harvey Farm, M 78.32 330 P P **18 34 26.2 +0.6**
baz=79,SNR=30
BELC Belle Mtn. 78.38 324 ⇑P P **18 34 26.6 +0.5**
baz=79
T17A Navajo Res., N 78.39 329 ⇓P P **18 34 27.3 +1.1**
baz=79,SNR=38
PV01 Paradox Valley 78.42 331 *e*P P **18 34 26.8 +0.5**
comp=Z,3μm,1.1s
OGNE Ogallala 78.47 337 *e*P P **18 34 25.4 -1.0**
comp=Z,91nm,1.5s,mb5.5
U15A North Rim 78.58 328 ⇑P P **18 34 28.2 +1.0**
baz=79,SNR=30
S18A Hurst Farm, Bl 78.63 330 ⇑P P **18 34 28.4 +1.0**
baz=79,SNR=78
SMCO Snowmass 78.68 333 *e*P P **18 34 20.6 -7.1**
comp=Z,70nm,1.1s,mb5.5
T16A Glen Canyon Da 78.69 328 ⇑P P **18 34 28.6 +0.9**
baz=79,SNR=17
ISCO Idaho Springs 78.70 334 *e*P P **18 34 28.3 +0.5**
ISCO pmax pmax
comp=Z,22nm,0.8s,mb5.1
ISCO Idaho Springs 78.70 334 *e*P P **18 34 28.3 +0.5**
comp=Z,22nm,0.8s,mb5.2
LDFC Landfair 78.80 325 *e*P P **18 34 29.6 +1.2**
comp=Z,66nm,1.1s,mb5.5
CHIE El Hierro 78.80 47 P P **18 34 29.4 +0.7**
GMRC Granite Mounta 78.83 324 ⇑P P **18 34 29.6 +1.0**
baz=79
R19A Curley Farm, L 78.83 331 ⇓P P **18 34 29.0 +0.5**
baz=79,SNR=15
W12A Cal Nev Ari 78.86 325 ⇑P P **18 34 29.2 +0.4**
baz=79,SNR=11
V13A Grand Canyon W 78.89 326 ⇑P P **18 34 29.7 +0.8**
baz=79,SNR=35
S17A Black Ridge (B 78.93 329 ⇑P P **18 34 29.2 +0.2**
baz=79,SNR=18
U14A Mt Trumbull 78.98 327 ⇓P P **18 34 30.1 +0.7**
baz=79,SNR=45
Q20A Ridgley Place, 79.00 332 ⇓P P **18 34 29.6 +0.2**
baz=79,SNR=6.8
T15A Red Dirt Ranch 79.11 328 ⇓P P **18 34 30.9 +0.8**
baz=79,SNR=18
R18A Canyonlands Na 79.17 330 ⇑P P **18 34 30.7 +0.3**
baz=80,SNR=12
V12A Nelson 79.20 325 ⇑P P **18 34 31.0 +0.4**
baz=80,SNR=28
HEC Hector,Ludlow 79.20 324 ⇓P P **18 34 31.5 +0.9**
baz=80
TSUM Tsumeb 79.23 106 P P **18 34 31.6 +0.3**
comp=Z,60nm,0.8s,mb5.6,baz=224,slow=6.0,SNR=87
TSUM PKiKP PKiKP 18 40 04.5 0.0
comp=Z,3.8nm,0.7s,baz=242,slow=4.8,SNR=3.7
TSUM Tsumeb 79.23 106 *e*P P **18 34 31.4 +0.1**
comp=Z,211nm,1.4s,mb5.9
U13A Pakoon Wash 79.34 326 ⇑P P **18 34 32.1 +0.8**
baz=80,SNR=21
S16A Weppner Ranch, 79.35 329 ⇑P P **18 34 31.5 +0.2**
baz=80,SNR=17
Q19A Hogan Spring (79.40 331 ⇑P P **18 34 31.9 +0.3**
baz=80,SNR=14
ECSD EROS,Sioux Fal 79.42 342 *e*P P **18 34 30.9 -0.7**
comp=Z,106nm,0.9s,mb5.8
T14A Hurricane 79.46 327 P P **18 34 32.8 +0.8**
baz=80,SNR=21
TUQ Turquoise Moun 79.48 325 ⇑P P **18 34 32.8 +0.7**
baz=80
R17A Hanksville Air 79.55 330 P P **18 34 32.7 +0.3**
baz=80,SNR=32
V11A Goodsprings 79.57 325 ⇑P P **18 34 33.2 +0.7**
baz=80,SNR=13

EGOM **La Gomera** 79.58 47 P P 18 34 33.3 +0.5
comp=Z,38nm,1.0s,mb5.3
MWC **Mount Wilson** 79.60 322 eP P 18 34 33.5 +0.7
MWC pmax pmax
comp=Z,58nm,1.3s,mb5.3
MWC **Mount Wilson** 79.60 322 eP P 18 34 33.5 +0.7
comp=Z,58nm,1.3s,mb5.3
U12A **Valley of Fire** 79.62 326 ⇓P P 18 34 33.2 +0.4
baz=80,SNR=14
S15A **Panguitch** 79.64 328 ⇓P P 18 34 33.2 +0.2
baz=80,SNR=7.3
DECC **Green Verdugo** 79.76 322 ⇑P P 18 34 33.8 +0.1
baz=80
R16A **Teasdale** 79.77 329 ⇓P P 18 34 34.3 +0.7
baz=80,SNR=7.3
O21A **Pagoda** 79.77 333 ⇑P P 18 34 34.7 +1.2
baz=80,SNR=5.1
T13A **Saint George** 79.81 327 ⇓P P 18 34 34.5 +0.7
baz=80,SNR=20
GSC **Goldstone** 79.81 324 ⇓P P 18 34 34.9 +1.0
baz=80
GSC **Goldstone** 79.81 324 eP P 18 34 34.5 +0.6
GSC pmax pmax
comp=Z,28nm,0.9s,mb5.2
GSC **Goldstone** 79.81 324 eP P 18 34 34.5 +0.5
comp=Z,28nm,0.9s,mb5.2
P19A **Cripple Cowboy** 79.86 332 P P 18 34 35.0 +0.9
baz=80,SNR=32
Q18A **Rafter H Ranch** 79.88 331 ⇑P P 18 34 34.4 +0.2
baz=80,SNR=24
N22A **Wattenberg Ran** 79.89 334 ⇑P P 18 34 35.5 +1.3
baz=80,SNR=26
PHWY **Pilot Hill** 79.97 335 eP P 18 34 34.4 -0.2
comp=Z,42nm,0.9s,mb5.4
CCAN **Las Canadas** 79.99 47 P P 18 34 38.0 +2.9
comp=Z,24nm,0.9s,mb5.1
O20A **White River Ci** 80.00 332 ⇓P P 18 34 35.3 +0.5
baz=80,SNR=6.6
COWI **Conover** 80.01 348 eP P 18 34 33.6 -1.2
comp=Z,56nm,1.2s,mb5.4
U11A **Corn Creek** 80.02 325 ⇓P P 18 34 35.7 +0.7
baz=80
SHOC **Shoshone** 80.03 325 ⇓P P 18 34 35.6 +0.5
baz=80
BLG **Laguna Peak** 80.03 322 ⇓P P 18 34 35.6 +0.5
baz=80
R15A **Junction** 80.05 329 ⇓P P 18 34 35.4 +0.2
baz=80,SNR=8.1
SRU **San Rafael** 80.05 330 ⇓P P 18 34 35.3 +0.1
baz=80
EDW2 **Edwards Air Fo** 80.08 323 ⇑P P 18 34 35.5 +0.2
baz=80
Q16A **Castle Valley** 80.16 330 ⇓P P 18 34 36.7 +1.0
baz=80,SNR=20
BSC **Santa Cruz Isl** 80.24 321 ⇑P P 18 34 37.0 +0.7
baz=80
S13A **Holt Ranch, En** 80.24 327 ⇓P P 18 34 36.8 +0.6
baz=80,SNR=31
OSI **Osito Adit** 80.25 322 ⇓P P 18 34 36.3 0.0
baz=80
OSI **Osito Adit** 80.25 322 eP P 18 34 35.7 -0.6
comp=Z,49nm,0.9s,mb5.4
N21A **Black Mountain** 80.26 333 ⇑P P 18 34 36.9 +0.7
baz=81,SNR=10.0
BOSA **Boshof** 80.37 118 P P 18 34 37.0 -0.3
comp=Z,49nm,0.8s,mb5.5,baz=235,slow=4.6,SNR=72
BOSA LR LR 19 07 43.0
comp=Z,8µm,18.9s,MS6.1,baz=228,slow=34
BOSA **Boshof** 80.37 118 eP P 18 34 37.0 -0.3
BOSA pmax pmax
comp=Z,101nm,1.0s,mb5.7
BOSA **Boshof** 80.37 118 eP P 18 34 37.0 -0.3
comp=Z,101nm,1.0s,mb5.7
P18A **Preston Nutter** 80.37 331 ⇓P P 18 34 37.5 +0.6
baz=81,SNR=33
MIR **Mirnyy** 80.37 174 ⇓iP P 18 34 37.0 +0.4
MIR *i* pP 18 34 45.0 -0.8
MIR *i* 18 34 50.0
MIR *e*S S 18 44 38.0 -2.2
MIR *i* 18 44 54.0
MIR *i* SS SS 18 50 00.0 +9.3
MIR MLR MLR
comp=Z,2µm,20.0s,MS5.6
LRMC **Laurel Mountai** 80.39 323 ⇓P P 18 34 37.4 +0.3
baz=81
P17A **Butcher Ranch,** 80.44 330 ⇑P P 18 34 37.2 0.0
baz=81,SNR=17
M22A **Cedar Creek Ra** 80.47 334 ⇑P P 18 34 38.1 +0.8
baz=81,SNR=8.3
U10A **Ash Meadows, A** 80.47 325 ⇑P P 18 34 38.1 +0.7
baz=81,SNR=9.0
EOSO **Osorio** 80.54 48 P P 18 34 39.5 +1.4
comp=Z,28nm,0.7s,mb5.3
T11A **Corn Creek, Al** 80.60 326 ⇓P P 18 34 39.0 +0.9
baz=81,SNR=52
N20A **Spence Gulch,** 80.61 333 ⇑P P 18 34 38.6 +0.5
baz=81,SNR=14
Q15A **Fillmore** 80.75 329 ⇓P P 18 34 39.7 +0.9
baz=81,SNR=11
MPMC **Manual Prospec** 80.75 324 ⇓P P 18 34 39.4 +0.4
baz=81
FURC **Furnace Creek,** 80.77 325 ⇓P P 18 34 39.1 0.0
baz=81
R13A **O'Grain Ranch,** 80.78 327 ⇓P P 18 34 40.0 +0.9
baz=81,SNR=16
O18A **Roosevelt** 80.81 331 ⇑P P 18 34 40.2 +1.0
baz=81,SNR=8.6
TPNV **Topopah Spring** 80.85 325 ⇑P P 18 34 40.5 +1.1
baz=81
TPNV **Topopah Spring** 80.85 325 eP P 18 34 40.3 +0.8
TPNV pmax pmax
comp=Z,31nm,0.9s,mb5.2
TPNV **Topopah Spring** 80.85 325 eP P 18 34 40.3 +0.9
comp=Z,31nm,0.9s,mb5.2
ISA **Isabella** 80.94 323 ⇑P P 18 34 40.8 +0.9
baz=81
ISA **Isabella** 80.94 323 eP P 18 34 40.7 +0.7
ISA pmax pmax
comp=Z,30nm,0.9s,mb5.2
ISA **Isabella** 80.94 323 eP P 18 34 40.6 +0.7
comp=Z,30nm,0.9s,mb5.2
RWWY **Rawlins** 80.94 334 eP P 18 34 36.5 -3.4
P16A **Fountain Green** 80.95 330 ⇑P P 18 34 40.6 +0.7
baz=81
L22A **Ellis Ranch, M** 80.96 334 ⇓P P 18 34 40.3 +0.4
baz=81
N19A **John Jarvie Ra** 81.01 332 P P 18 34 40.5 +0.3
baz=81,SNR=12
PKM **Peak Mountain** 81.03 322 ⇓P P 18 34 40.9 +0.4
baz=81
O17A **Robinson Place** 81.05 331 ⇓P P 18 34 40.9 +0.4
baz=81,SNR=26
Q14A **Sevier Lake (B** 81.13 328 ⇑P P 18 34 41.7 +0.8
baz=81,SNR=16
M20A **Sweetwater, Wa** 81.14 333 ⇓P P 18 34 41.5 +0.6
baz=82,SNR=8.6
P15A **Leamington** 81.18 329 ⇓P P 18 34 41.6 +0.5
baz=82,SNR=12
R12A **Pony Springs,** 81.19 327 ⇑P P 18 34 42.0 +0.8
baz=82,SNR=9.1
L21A **Rawlins** 81.24 334 ⇓P P 18 34 41.6 +0.1
baz=82,SNR=17
N18A **Larsen Ranch,** 81.28 332 ⇑P P 18 34 41.5 -0.1
baz=82,SNR=14
CASY **Casey** 81.33 181 eP P 18 34 41.1 -0.6
comp=Z,90nm,1.2s,mb5.6
O16A **Springville** 81.38 330 ⇓P P 18 34 42.9 +0.7
baz=82
VES **Vestal, Richgr** 81.39 323 ⇓P P 18 34 42.5 +0.1
baz=82
GRAC **Grapevine Rang** 81.44 325 ⇓P P 18 34 43.4 +0.8
baz=82
Q13A **Wheeler Ranch,** 81.44 328 ⇑P P 18 34 42.9 +0.4
baz=82,SNR=18
SMMC **Simmler** 81.45 322 ⇑P P 18 34 43.0 +0.4
baz=82
M19A **Rock Springs** 81.53 332 ⇓P P 18 34 42.9 -0.1
baz=82,SNR=6.3
P14A **Drum Mountains** 81.54 329 ⇑P P 18 34 43.4 +0.3
baz=82,SNR=33
L20A **Wamsutter** 81.64 333 P P 18 34 43.9 +0.3
baz=82,SNR=5.8
R11A **Troy Canyon, C** 81.66 327 ⇓P P 18 34 44.3 +0.6
baz=82,SNR=44
CFTV **Fuerteventura** 81.71 49 P P 18 34 44.3 +0.1
comp=Z,19nm,0.8s,mb5.1
N17A **Moffit Pass** 81.72 331 ⇓P P 18 34 44.6 +0.6
baz=82,SNR=7.3
S10A **Tonopah Range,** 81.79 326 ⇓P P 18 34 44.7 +0.3
baz=82,SNR=23
P13A **Bates Ranch, G** 81.84 328 ⇓P P 18 34 45.1 +0.4
baz=82,SNR=15
O15A **The Old Anders** 81.85 330 ⇑P P 18 34 46.0 +1.3
baz=82
Q12A **Willow Creek R** 81.87 327 ⇑P P 18 34 45.6 +0.8
baz=82,SNR=8.7
TIN **Tinemaha** 81.90 324 ⇑P P 18 34 44.6 -0.5
baz=82
N16A **Rees Ranch, Co** 81.92 331 ⇓P P 18 34 45.2 +0.1
baz=82,SNR=7.1
DUG **Dugway** 81.93 329 ⇓P P 18 34 44.8 -0.3
baz=82
DUG **Dugway** 81.93 329 eP P 18 34 44.3 -0.8
DUG pmax pmax
comp=Z,51nm,1.2s,mb5.3
DUG **Dugway** 81.93 329 eP P 18 34 44.3 -0.8
comp=Z,51nm,1.2s,mb5.3
S09A **Goldfield** 81.94 325 ⇑P P 18 34 45.2 0.0
baz=82,SNR=28
R10A **Warm Springs** 81.95 326 ⇑P P 18 34 44.8 -0.4
baz=82
RSSD **Black Hills** 81.97 337 eP P 18 34 44.6 -0.6
RSSD pmax pmax
comp=Z,53nm,1.2s,mb5.3
RSSD **Black Hills** 81.97 337 eP P 18 34 44.6 -0.6
comp=Z,53nm,1.2s,mb5.3
Q11A **Duckwater** 82.09 327 ⇓P P 18 34 45.5 -0.5
baz=82,SNR=23
M17A **Scullys Gap (B** 82.10 331 ⇓P P 18 34 45.0 -1.0
baz=82
K20A **Yellowstone Ra** 82.20 334 ⇑P P 18 34 46.0 -0.4
baz=82
TPH **Tonopah** 82.22 325 eP P 18 34 47.4 +0.7
TPH *e* pP 18 34 56.9 +1.0
TPH pmax pmax
comp=Z,51nm,1.0s,mb5.4
TPH **Tonopah** 82.22 325 eP P 18 34 47.4 +0.7
comp=Z,50nm,1.0s,mb5.4
TPH *e* pP 18 34 56.9 +0.9
EYMN **Ely** 82.23 347 eP P 18 34 43.2 -3.3
comp=Z,52nm,1.0s,mb5.4
P12A **McGill** 82.26 328 ⇑P P 18 34 47.1 +0.2
baz=83
R09A **Tonopah** 82.27 326 ⇑P P 18 34 47.3 +0.3
baz=83,SNR=27
M16A **Huntsville** 82.36 331 ⇑P P 18 34 47.3 -0.1
baz=83,SNR=5.7
O13A **Hicks Ranch, I** 82.38 329 ⇓P P 18 34 47.7 +0.2
baz=83,SNR=9.6
Q10A **Clear Creek Ra** 82.42 326 ⇑P P 18 34 47.6 -0.1
baz=83,SNR=26
LBTB **Lobatse** 82.53 115 P P 18 34 48.5 -0.4
comp=Z,46nm,0.4s,mb5.8,baz=255,slow=5.6,SNR=163
LBTB **Lobatse** 82.53 115 P P 18 34 48.5 -0.3
LBTB pmax pmax
comp=Z,46nm,0.4s,mb5.9
LBTB **Lobatse** 82.53 115 eP P 18 34 48.2 -0.6
comp=Z,54nm,0.6s,mb5.8
K19A **Absolon Red Bu** 82.54 333 ⇑P P 18 34 47.8 -0.4
baz=83,SNR=19
N14A **Grayback Hills** 82.63 330 ⇑P P 18 34 48.5 -0.3
baz=83,SNR=14
MLAC **Mammoth Lakes** 82.65 324 ⇓P P 18 34 49.5 +0.5
baz=83
L17A **Cokeville** 82.71 332 P P 18 34 48.8 -0.3
baz=83,SNR=7.0
BW06 **Boulder Array** 82.76 333 ⇑P P 18 34 49.3 -0.1
baz=83
PDAR **Pinedale Array** 82.76 333 P P 18 34 49.1 -0.2
comp=Z,5.5nm,0.8s,mb4.6,baz=140,slow=5.3,SNR=33
PDAR PKKP PKKPbc 18 53 12.3 -2.6
comp=Z,1.4nm,0.6s,baz=155,slow=0.4,SNR=14
PDAR LR LR 19 08 09.3
comp=Z,4µm,20.0s,MS5.8,baz=145,slow=33
Q09A **Carvers** 82.80 326 ⇓P P 18 34 49.5 -0.2
baz=83,SNR=5.1
M15A **Larsen Ranch,** 82.82 330 ⇑P P 18 34 49.1 -0.6
baz=83,SNR=8.4
O12A **Currie** 82.83 328 ⇓P P 18 34 50.1 +0.3
baz=83,SNR=20
K18A **Toltan Ranch,** 82.84 332 P P 18 34 50.2 +0.5
baz=83,SNR=16
L16A **Fish Haven** 82.86 331 ⇑P P 18 34 49.4 -0.6
baz=83,SNR=11
NVAR **Mina Array Bea** 83.02 325 P P 18 34 51.5 +0.7
comp=Z,17nm,0.7s,mb5.2,baz=153,slow=6.0,SNR=78
NVAR pP pP 18 35 00.2 +0.1
comp=Z,15nm,0.9s,baz=169,slow=4.2,SNR=11
NVAR PKKPbc PKKPbc 18 53 13.9 -0.1
comp=Z,1.0nm,0.7s,baz=282,slow=2.5,SNR=6.4
NVAR PKPPKP 19 01 24.9
comp=Z,0.4nm,0.6s,baz=235,slow=3.2,SNR=4.5
NVAR **Mina Array Bea** 83.02 325 P P 18 34 51.5 +0.7
NVAR pP pP 18 35 00.2 +0.1
NVAR PKKPbc PKKPbc 18 53 13.9 -0.1
NVAR P'P' 19 01 24.9
P10A **Eureka** 83.09 327 ⇓P P 18 34 51.5 +0.4
baz=83,SNR=11
O11A **Cowboy Ranch,** 83.13 328 ⇓P P 18 34 51.7 +0.4
baz=83,SNR=69
Q08A **Gabbs** 83.18 325 ⇓P P 18 34 51.0 -0.6
baz=84,SNR=25
M14A **Sheep Mountain** 83.23 330 P P 18 34 51.8 -0.1
baz=84,SNR=41
L15A **Malad City** 83.25 331 P P 18 34 51.5 -0.4
baz=84,SNR=23
K17A **Gardner Place,** 83.28 332 ⇑P P 18 34 51.8 -0.3
baz=84,SNR=7.8
J18A **Kendall Valley** 83.31 333 ⇑P P 18 34 51.7 -0.6
baz=84,SNR=22
AHID **Auburn Hatcher** 83.36 332 eP P 18 34 51.9 -0.6
comp=Z,3.8nm,0.3s,mb4.9
AHID LR LR
comp=Z,3µm,20.0s,MS5.7
TOA0 **Torodi Ar. Sit** 83.43 70 eP P 18 34 52.8 -0.7
TORD **Torodi Ar. Bea** 83.43 70 P P 18 34 53.0 -0.6
comp=Z,74nm,1.1s,mb5.6,baz=251,slow=3.5,SNR=181
TORD LR LR 19 08 45.5
comp=Z,6µm,21.9s,MS5.9,baz=240,slow=33
TORD **Torodi Ar. Bea** 83.43 70 P P 18 34 53.0 -0.6
TORD LR LR 19 08 45.5
N12A **Clover Valley,** 83.44 328 ⇑P P 18 34 52.8 -0.1
baz=84,SNR=15
ELK **Elko** 83.44 328 eP P 18 34 52.9 0.0
ELK pmax pmax
comp=Z,29nm,0.9s
ELK **Elko** 83.44 328 eP P 18 34 52.9 0.0
comp=Z,29nm,0.9s,mb5.3
M13A **Montello** 83.47 329 ⇑P P 18 34 52.7 -0.4
baz=84,SNR=24
AGMN **Agassiz Refuge** 83.50 344 eP P 18 34 52.1 -1.0
comp=Z,32nm,0.8s,mb5.4
AGMN LR LR
comp=Z,1µm,19.0s,MS5.4
K16A **Soda Springs** 83.61 332 P P 18 34 54.2 +0.5
baz=84,SNR=28
L14A **Malta** 83.63 330 P P 18 34 54.3 +0.4
baz=84,SNR=11
O10A **Cortez Mining,** 83.64 327 ⇑P P 18 34 55.3 +1.3
baz=84,SNR=5.5
R06C **Coleville** 83.65 324 ⇓P P 18 34 55.1 +1.0
baz=84,SNR=16
I18A **Diamond G Ranc** 83.65 333 P P 18 34 54.3 +0.4
baz=84,SNR=22
J17A **Brown Place, J** 83.71 332 ⇓P P 18 34 54.2 0.0
baz=84,SNR=13
CMB **Columbia Colle** 83.74 323 eP P 18 34 54.3 -0.3
CMB pmax pmax
comp=Z,14nm,1.0s,mb5.0
CMB **Columbia Colle** 83.74 323 eP P 18 34 54.3 -0.3
comp=Z,14nm,1.0s,mb5.0
REDW **Red Top Meadow** 83.77 332 eP P 18 34 54.1 -0.4
comp=Z,29nm,1.1s,mb5.3
SNOW **Snow King Moun** 83.81 332 eP P 18 34 54.4 -0.4
comp=Z,19nm,0.8s,mb5.3
M12A **Wells** 83.84 329 P P 18 34 55.1 +0.2
baz=84,SNR=20
K15A **Arbon** 83.87 331 ⇑P P 18 34 55.0 -0.1
baz=84
LOHW **Long Hollow** 83.88 333 eP P 18 34 54.7 -0.4
comp=Z,20nm,1.1s,mb5.2
TPAW **Teton Pass** 83.91 332 eP P 18 34 54.1 -1.2
comp=Z,34nm,1.1s,mb5.4
L13A **Double Diamond** 83.97 330 ⇓P P 18 34 56.1 +0.5
baz=84,SNR=18
J16A **Bone** 83.99 332 ⇑P P 18 34 55.5 -0.2
baz=84,SNR=12
K14A **Jones Ranch, D** 84.02 330 ⇓P P 18 34 55.7 -0.2
baz=84,SNR=12
MOOW **Moose Ponds** 84.05 333 eP P 18 34 54.1 -1.9
comp=Z,34nm,1.6s,mb5.2
BMN **Battle Mountai** 84.08 327 eP P 18 34 55.2 -1.1
BMN pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
BMN MLR MLR
comp=Z,2µm,19.0s,MS5.5
BMN **Battle Mountai** 84.08 327 eP P 18 34 55.2 -1.1
comp=Z,8.7nm,0.9s,mb4.9
BMN LR LR
comp=Z,2µm,19.0s,MS5.5
DCID1 **Drake Creek** 84.09 332 eP P 18 34 56.3 +0.1
comp=Z,53nm,1.2s,mb5.5
I17A **Pilgram Creek** 84.13 333 ⇑P P 18 34 56.7 +0.3
baz=84,SNR=17
M11A **Holland Ranch,** 84.24 328 P P 18 34 57.7 +0.7
baz=84,SNR=50
IMW **Indian Meadow** 84.25 333 eP P 18 34 56.4 -0.6
comp=Z,30nm,1.1s,mb5.3
O08A **Rochester Mine** 84.41 326 ⇑P P 18 34 58.0 +0.1
baz=85,SNR=24
J15A **Blackfoot** 84.43 331 ⇓P P 18 34 58.1 +0.2
baz=85
I16A **Newdale** 84.45 332 ⇓P P 18 34 58.1 +0.1
baz=85,SNR=15
L12A **House Creek Ra** 84.48 329 ⇓P P 18 34 58.6 +0.4
baz=85,SNR=5.4
M10A **I.L. Ranch, Tu** 84.64 328 ⇓P P 18 34 59.5 +0.4
baz=85
O07A **Toulon** 84.65 326 ⇓P P 18 34 59.3 +0.2
baz=85,SNR=16
RLMT **Red Lodge** 84.66 334 ⇑P P 18 34 59.0 0.0
baz=85
RLMT **Red Lodge** 84.66 334 eP P 18 34 58.8 -0.3
comp=Z,38nm,1.2s,mb5.4
N08A **GE Springer Mi** 84.78 326 P P 18 34 59.5 -0.3
baz=85,SNR=23
J14A **Carey** 84.81 331 ⇑P P 18 34 59.8 0.0
baz=85
L11A **Cat Creek Ranc** 84.81 329 ⇑P P 18 35 00.2 +0.3
baz=85,SNR=33
K12A **Draper Farm, C** 84.83 329 ⇑P P 18 35 00.2 +0.3
baz=85,SNR=18
G18A **Lazy EL Ranch,** 84.94 334 ⇑P P 18 34 60.0 -0.4
baz=85,SNR=14
I15A **Monteview** 84.95 332 ⇑P P 18 35 00.1 -0.4
baz=85,SNR=8.7
H16A **Russell Place,** 85.05 333 ⇑P P 18 35 01.0 0.0
baz=85,SNR=11
L10A **Juniper Basin** 85.06 328 ⇑P P 18 35 01.4 +0.2
baz=85,SNR=39
O06A **Flanigan** 85.11 325 ⇓P P 18 35 01.6 +0.2
baz=85,SNR=10
J13A **Cove Ranch, Pi** 85.14 330 ⇓P P 18 35 01.5 0.0
baz=85,SNR=30
N07B **Gerlach** 85.18 326 ⇓P P 18 35 02.0 +0.2
baz=86,SNR=24
I14A **Mackay** 85.28 331 ⇓P P 18 35 02.7 +0.5
baz=86,SNR=15
ULM **Lac du Bonnet** 85.33 345 P P 18 35 01.1 -1.2
comp=Z,40nm,1.0s,mb5.5,baz=160,slow=3.9,SNR=30
ULM PKKP PKKPbc 18 53 06.5 -2.7
comp=Z,1.6nm,0.4s,baz=288,slow=0.7,SNR=3.6
ULM **Lac du Bonnet** 85.33 345 eP P 18 35 00.4 -1.9
comp=Z,50nm,1.1s,mb5.6
HLID **Hailey** 85.37 330 eP P 18 35 02.2 -0.4
comp=Z,40nm,1.3s,mb5.4
G17A **Pierce Place,** 85.38 333 ⇑P P 18 35 03.4 +0.8
baz=86,SNR=6.7
J12A **Stokes Ranch,** 85.41 330 P P 18 35 03.2 +0.3
baz=86,SNR=42
K11A **Parker Ranch,** 85.42 329 ⇑P P 18 35 03.1 +0.1
baz=86,SNR=14
M08A **Happy Creek Ra** 85.42 327 ⇓P P 18 35 03.2 +0.3
baz=86,SNR=13
F18A **Big Timber** 85.49 334 ⇑P P 18 35 02.9 -0.3
baz=86,SNR=22
H15A **Lima** 85.52 332 ⇓P P 18 35 03.7 +0.3
baz=86,SNR=14
I13A **Wildhorse Cree** 85.54 331 ⇓P P 18 35 03.8 +0.4
baz=86,SNR=26
N06A **Buffalo Meadow** 85.56 325 ⇓P P 18 35 03.9 +0.2
baz=86,SNR=32
G16A **Moss Hill, Enn** 85.71 333 ⇓P P 18 35 04.2 -0.1
baz=86
M07A **Soldier Meadow** 85.75 326 ⇑P P 18 35 04.5 -0.1
baz=86,SNR=9.4
K10A **MacKenzie Ranc** 85.80 328 P P 18 35 04.9 +0.1
baz=86,SNR=19
H14A **Leadore** 85.81 332 ⇓P P 18 35 05.0 +0.2
baz=86,SNR=16
F17A **Fitzpatrick Pl** 85.84 334 P P 18 35 05.0 0.0
baz=86,SNR=16
MFID **Camas Ranch** 85.85 329 P P 18 35 05.2 +0.2
baz=86,SNR=17
I12A **Atlanta** 85.86 330 ⇑P P 18 35 05.4 +0.3
baz=86
DGMT **Dagmar** 85.89 339 eP P 18 35 00.6 -4.5
comp=Z,177nm,1.2s,mb6.2
G15A **Dillon** 85.92 332 ⇑P P 18 35 05.2 -0.1
baz=86,SNR=14
BOZ **Bozeman (W)** 85.99 333 ⇑P P 18 35 05.5 -0.2
baz=86
L08A **Fields** 85.99 327 ⇓P P 18 35 05.4 -0.3
baz=86,SNR=20
K09A **Rome** 86.11 328 ⇑P P 18 35 06.4 0.0
baz=86,SNR=17
DLMT **Dillon** 86.12 332 eP P 18 35 06.0 -0.3
comp=Z,43nm,1.2s,mb5.6
H13A **Challis** 86.13 331 P P 18 35 06.8 +0.4
baz=86,SNR=28
E18A **Harlowton** 86.13 335 ⇓P P 18 35 06.2 -0.1
baz=86,SNR=7.8
LCCM **Lewis and Clar** 86.24 333 P P 18 35 07.4 +0.4
I11A **Placerville** 86.31 330 ⇑P P 18 35 07.0 -0.3
baz=87,SNR=6.4
L07A **Adell** 86.32 326 ⇓P P 18 35 07.5 +0.1
baz=87,SNR=15
WVOR **Wild Horse Val** 86.32 327 eP P 18 35 06.5 -0.9
WVOR pmax pmax
comp=Z,30nm,1.3s,mb5.4
WVOR **Wild Horse Val** 86.32 327 eP P 18 35 06.5 -0.9
comp=Z,30nm,1.3s,mb5.4
H12A **Diamond D Ranc** 86.36 331 ⇑P P 18 35 08.0 +0.4
baz=87,SNR=12
LBCM **Butte Creek Ri** 86.36 325 P P 18 35 07.5 -0.2
E17A **Martinsdale** 86.39 334 ⇓P P 18 35 07.4 -0.2
baz=87,SNR=6.4
F15A **Butte** 86.48 333 P P 18 35 08.5 +0.4
baz=87,SNR=33
K08A **Mann Creek Ran** 86.48 327 ⇑P P 18 35 08.5 +0.3
baz=87,SNR=10
G13A **Cobalt** 86.55 331 P P 18 35 08.9 +0.4
baz=87,SNR=41
D18A **Linhart Farms,** 86.63 335 ⇓P P 18 35 08.4 -0.3
baz=87,SNR=16
J09A **Fry Pan Ranch,** 86.64 328 ⇓P P 18 35 09.4 +0.5
baz=87,SNR=17
MOD **Modoc** 86.68 326 eP P 18 35 09.7 +0.5
comp=Z,26nm,0.8s,mb5.5
E16A **East Helena** 86.75 334 ⇓P P 18 35 08.7 -0.7
baz=87,SNR=7.0
WDC **Whiskeytown Da** 86.76 324 eP P 18 35 08.3 -1.3
WDC pmax pmax
comp=Z,26nm,1.1s,mb5.4
WDC **Whiskeytown Da** 86.76 324 eP P 18 35 08.3 -1.3
comp=Z,26nm,1.1s,mb5.4
K07A **Rock Creek Ran** 86.80 327 ⇓P P 18 35 10.0 +0.2
baz=87,SNR=37
F14A **Wisdom** 86.80 332 P P 18 35 10.3 +0.7
baz=87,SNR=24
I10A **Payette** 86.81 329 ⇓P P 18 35 10.2 +0.5
baz=87,SNR=12
D17A **Six Diamond Ra** 86.91 334 ⇓P P 18 35 09.9 -0.2
baz=87,SNR=31
J08A **Circle Bar Ran** 86.97 328 ⇓P P 18 35 11.0 +0.5
baz=87,SNR=52
H11A **Donnelly** 86.97 330 ⇓P P 18 35 10.3 -0.2
baz=87,SNR=36
E15A **Deer Lodge** 87.03 333 P P 18 35 10.8 +0.1
baz=87,SNR=12
G12A **Big Creek, Yel** 87.03 331 ⇓P P 18 35 10.9 +0.1
baz=87
D16A **Dana Ranch, Ca** 87.12 334 ⇓P P 18 35 11.2 0.0
baz=87,SNR=11

I09A Lost Marbles R 87.13 329 P P 18 35 11.8 +0.5
baz=87,SNR=43
F13A Darby 87.16 332 ⇑P P 18 35 11.2 -0.3
baz=88,SNR=41
H10A Noah's Angus R 87.19 330 ⇓P P 18 35 11.2 -0.4
baz=88,SNR=49
SCHQ Schefferville 87.27 3 P P 18 35 11.1 -0.6
comp=Z,36nm,0.9s,mb5.6,baz=178,slow=3.8,SNR=21
SCHQ pP pP 18 35 20.2 -0.7
comp=Z,24nm,1.0s,baz=109,slow=4.7,SNR=6.6
SCHQ LR LR 19 12 09.1
comp=Z,2µm,22.0s,MS5.4,baz=199,slow=34
SCHQ Schefferville 87.27 3 *e*P P 18 35 10.2 -1.4
comp=Z,131nm,1.4s,mb6.0
EGMT Eagleton 87.32 335 ⇓P P 18 35 11.6 -0.5
baz=88
EGMT Eagleton 87.32 335 *e*P P 18 35 11.1 -1.0
comp=Z,29nm,1.0s,mb5.5
C17A Wharram Farm, 87.34 335 P P 18 35 11.7 -0.5
baz=88,SNR=14
E14A Clinton 87.35 332 ⇓P P 18 35 12.8 +0.5
baz=88,SNR=12
J07A Hines 87.36 327 ⇓P P 18 35 13.4 +1.0
baz=88,SNR=13
I08A Drewsey 87.45 328 ⇑P P 18 35 13.3 +0.4
baz=88,SNR=7.0
D15A Lincoln 87.50 333 ⇓P P 18 35 12.8 -0.2
baz=88,SNR=25
F12A Elk City 87.51 331 ⇓P P 18 35 12.9 -0.2
baz=88
LAMM Antelope Mount 87.58 324 P P 18 35 13.4 -0.2
K05A Summer Lake 87.59 326 ⇑P P 18 35 13.7 +0.1
baz=88
G11A Walters Elk Ra 87.64 330 ⇑P P 18 35 13.7 -0.1
baz=88,SNR=61
B18A Beardsley Farm 87.64 336 ⇓P P 18 35 12.7 -1.0
baz=88,SNR=15
BMO Blue Mountains 87.64 329 *e*P P 18 35 13.1 -0.7
BMO pmax pmax
comp=Z,20nm,0.8s,mb5.4
BMO MLR MLR
comp=Z,3µm,20.0s,MS5.7
BMO Blue Mountains 87.64 329 *e*P P 18 35 13.1 -0.7
comp=Z,20nm,0.8s,mb5.4
BMO LR LR
comp=Z,3µm,20.0s,MS5.7
E13A Victor 87.64 332 ⇓P P 18 35 13.3 -0.4
baz=88,SNR=28
J06A Christmas Vall 87.65 327 ⇓P P 18 35 13.8 -0.1
baz=88,SNR=16
YBH Yreka Blue Hor 87.71 324 *e*P P 18 35 13.2 -1.0
YBH pmax pmax
comp=Z,45nm,1.3s
YBH Yreka Blue Hor 87.71 324 *e*P P 18 35 13.2 -1.0
comp=Z,45nm,1.3s,mb5.5
C16A Fuhringer Ranc 87.84 334 ⇑P P 18 35 14.2 -0.5
baz=88,SNR=23
MSO Missoula 87.86 332 *e*P P 18 35 14.3 -0.4
comp=Z,14nm,1.2s,mb5.1
D14A Greenough 87.90 333 ⇓P P 18 35 14.3 -0.7
baz=88,SNR=23
B17A L&G Farms, Che 87.91 335 P P 18 35 14.4 -0.6
baz=88,SNR=16
G10A Bishop Farm, J 87.91 330 ⇓P P 18 35 14.4 -0.6
baz=88,SNR=15
H08A Prairie City 87.97 328 ⇑P P 18 35 14.4 -0.9
baz=88,SNR=13
F11A Grangeville 87.99 331 ⇑P P 18 35 14.2 -1.2
baz=88,SNR=11
I07A Izee 88.00 328 ⇑P P 18 35 14.9 -0.6
baz=88,SNR=18
A18A Metzger Ranch, 88.11 336 ⇑P P 18 35 14.6 -1.3
baz=88,SNR=15
C15A Salmond Ranch, 88.14 334 ⇑P P 18 35 16.0 -0.1
baz=88,SNR=25
E12A Beaver Dam Sad 88.17 331 ⇑P P 18 35 15.8 -0.5
baz=88
G09A Cove 88.18 329 ⇑P P 18 35 15.8 -0.5
baz=88,SNR=40
I06A Prineville 88.22 327 ⇑P P 18 35 16.2 -0.3
baz=88,SNR=17
D13A Huson 88.28 332 ⇑P P 18 35 16.9 +0.1
baz=89,SNR=20
B16A M & M Farms, S 88.34 335 ⇓P P 18 35 16.2 -0.8
baz=89
E11A Bogner Ranch, 88.39 331 ⇓P P 18 35 15.9 -1.4
baz=89,SNR=12
H07A Lands Inn, Kim 88.43 328 ⇓P P 18 35 16.5 -1.0
baz=89
A17A Triple J Farms 88.43 335 ⇓P P 18 35 16.8 -0.6
baz=89,SNR=20
C14A Swan Lake 88.56 333 ⇑P P 18 35 17.4 -0.6
baz=89
B15A Bradely Ranch, 88.57 334 ⇑P P 18 35 16.9 -1.1
baz=89,SNR=24
F09A S2 Ranch, Elgi 88.58 330 ⇑P P 18 35 18.2 0.0
baz=89,SNR=10
D12A Red Ives Fores 88.60 332 ⇑P P 18 35 17.4 -0.9
baz=89
G08A Pilot Rock 88.70 329 ⇑P P 18 35 18.3 -0.5
baz=89,SNR=14
A16A West Butte Ran 88.75 335 P P 18 35 18.4 -0.5
baz=89,SNR=38
C13A Hot Springs 88.81 333 ⇑P P 18 35 17.7 -1.5
baz=89,SNR=11
VIPM Ingram Point 88.84 327 P P 18 35 20.4 +1.0
E10A Myers Farm, Un 88.86 330 ⇓P P 18 35 18.2 -1.3
baz=89,SNR=18
I05A Bend 88.87 327 ⇓P P 18 35 18.8 -0.8
baz=89
B14A Marquette Ranc 88.87 334 ⇑P P 18 35 19.2 -0.3
baz=89,SNR=11
H06A Lindquist Farm 88.88 328 ⇓P P 18 35 20.2 +0.6
baz=89,SNR=10
D11A Klaveano Farm, 89.00 331 ⇓P P 18 35 18.5 -1.6
baz=89
G07A Ruggs Ranch, H 89.00 328 ⇑P P 18 35 20.4 +0.3
baz=89,SNR=12
BSMT Bassoo Peak 89.03 333 P P 18 35 20.6 +0.3
C12B Naegeli Ranch, 89.19 332 ⇑P P 18 35 20.7 -0.3
baz=90,SNR=12
A15A Johnson Ranch, 89.19 334 ⇑P P 18 35 19.7 -1.3
baz=90,SNR=6.9
B13A Whitefish 89.34 333 ⇑P P 18 35 20.6 -1.0
baz=90
D10A Wagner Farm, O 89.39 331 ⇑P P 18 35 21.3 -0.6
baz=90,SNR=10
A14A Double T Ranch 89.44 334 ⇓P P 18 35 21.8 -0.3
baz=90,SNR=12
C11A Tepee Creek (N 89.60 332 ⇓P P 18 35 22.4 -0.5
baz=90
E08A Dider Farm, El 89.69 329 ⇓P P 18 35 23.3 -0.1
baz=90,SNR=5.2
WALA Waterton Lakes 89.69 334 *e*P P 18 35 22.5 -0.8
comp=Z,1.7nm,1.3s,mb4.2
HAWA Hanford 89.82 329 *e*P P 18 35 24.2 +0.3
comp=Z,34nm,1.0s,mb5.6
D09A Jones Farm, Ri 89.82 330 ⇓P P 18 35 23.5 -0.5
baz=90,SNR=7.9
B12A Libby 89.85 332 ⇓P P 18 35 24.1 0.0
baz=90,SNR=6.8
LSZ Lusaka 89.88 108 ⇑P P 18 35 26.8 +1.7
SNR=38
LSZ Lusaka 89.88 108 P P 18 35 26.0 +0.9
comp=Z,58nm,1.1s,mb5.8,baz=227,slow=2.7,SNR=53
LSZ Lusaka 89.88 108 P P 18 35 26.0 +0.9
LSZ pmax pmax
comp=Z,58nm,1.1s,mb5.8
LSZ Lusaka 89.88 108 *e*P P 18 35 25.7 +0.6
comp=Z,201nm,1.5s,mb6.2
F06A Goldendale 89.88 328 ⇓P P 18 35 24.3 0.0
baz=90
SNIWA Snively Ranch 89.93 329 P P 18 35 26.1 +1.7
D08A Wollman Farm, 90.08 330 ⇓P P 18 35 25.1 -0.1
baz=90,SNR=9.4
E07A Sunnyside 90.09 329 ⇑P P 18 35 25.6 +0.3
baz=90,SNR=6.0
A12A Yaak River Ran 90.25 333 ⇑P P 18 35 25.2 -0.8
baz=90,SNR=6.7
NEW Newport 90.29 332 *e*P P 18 35 24.7 -1.4
NEW pmax pmax
comp=Z,19nm,1.2s
NEW Newport 90.29 332 *e*P P 18 35 24.7 -1.4
comp=Z,18nm,1.2s,mb5.3
C09A Chrisman Ranch 90.39 331 ⇑P P 18 35 26.4 -0.2
baz=91,SNR=14
A11A Hall Mountain, 90.55 332 ⇑P P 18 35 26.5 -0.8
baz=91,SNR=32

D07A Quincy 90.63 329 ⇓P P 18 35 27.7 -0.1
baz=91,SNR=8.3
B09A Rice 90.83 331 ⇓P P 18 35 27.7 -1.0
baz=91,SNR=16
PFVI Vila Bisbo 90.86 45 *e*S S 18 46 27.6 +3.7
PFVI *e*LR LR 19 07 26.8
comp=Z,4µm,20.0s
FFC Flin Flon 90.91 343 *e*P P 18 35 27.5 -1.3
FFC pmax pmax
comp=Z,19nm,1.3s,mb5.3
FFC Flin Flon 90.91 343 *e*P P 18 35 27.5 -1.3
comp=Z,19nm,1.3s,mb5.3
AFI Afiamalu 90.92 253 PFAKE 18 35 40.0 +10
AFI LR LR
comp=Z,5µm,19.0s,MS6.0
A10A Northport 91.04 332 ⇓P P 18 35 28.7 -0.9
baz=91,SNR=16
C07A Waterville 91.05 330 ⇓P P 18 35 29.0 -0.7
baz=91,SNR=10
MORF Marmelete 91.08 45 *e*LR LR 19 07 32.4
comp=Z,4µm,20.0s
PTEO Sao Teotonio 91.19 45 *e*P P 18 35 30.6 0.0
comp=Z,50nm,1.1s,mb5.8
B08A Colville Reser 91.27 330 ⇑P P 18 35 29.7 -0.9
baz=92
A09A Danville 91.44 331 ⇑P P 18 35 30.4 -1.0
baz=92
PBDV Barranco-do-Ve 91.47 46 *e*P P 18 35 32.7 +0.8
PBDV *e*LR LR 19 07 35.2
comp=Z,3µm,20.0s
B07A Winthrop 91.68 330 ⇓P P 18 35 31.5 -1.1
baz=92
PVAQ Vaqueiros 91.70 46 *e*LR LR 19 06 21.6
comp=Z,3µm,20.0s
A08A Turner Farm, O 91.71 331 ⇑P P 18 35 31.8 -0.9
baz=92
PMAFR Mafra 91.80 44 *e*LR LR 19 07 18.8
comp=Z,4µm,20.0s
EGRO El Granado 91.93 46 P P 18 35 34.4 +0.4
comp=Z,8.7nm,0.8s,mb5.1
TAM Tamanrasset 91.94 64 *e*P P 18 35 34.4 -0.1
TAM pmax pmax
comp=Z,60nm,1.5s,mb5.7
TAM Tamanrasset 91.94 64 *e*P P 18 35 34.4 0.0
comp=Z,60nm,1.5s,mb5.7
PBEJ Beja 92.02 45 *e*P P 18 35 34.8 +0.3
comp=Z,26nm,1.8s,mb5.2
A07A Ashnola River, 92.24 330 ⇑P P 18 35 34.8 -0.4
baz=92,SNR=7.6
EVO Evora 92.26 45 *e*P P 18 35 34.7 -0.9
comp=Z,26nm,1.1s,mb5.2
EVO *e*MLR MLR
comp=Z,4µm,22.2s,MS5.6
EVO Evora 92.26 45 *e*P P 18 35 35.7 +0.1
comp=Z,22nm,2.0s,mb5.2
ESPR Espera 92.50 47 P P 18 35 38.0 +1.3
comp=Z,8.8nm,0.9s,mb5.1
EMIN Mina Concepcio 92.57 46 P P 18 35 37.4 +0.4
comp=Z,18nm,1.1s,mb5.4
PBAR Barrancos 92.61 45 *e*P P 18 35 35.5 -1.7
PBAR *e*LQ 19 05 16.2
PBAR *e*LR LR 19 08 12.9
comp=Z,4µm,20.0s
PESTR Estremoz 92.73 45 *e*P P 18 35 38.5 +0.8
comp=Z,32nm,1.6s,mb5.5
PESTR *e*LQ 19 05 27.7
PESTR *e*LR LR 19 09 22.9
comp=Z,3µm,16.0s
A05A Maple Falls 92.92 329 ⇑P P 18 35 38.1 -0.3
baz=93
EDM Edmonton 92.93 336 *e*P P 18 35 34.9 -3.4
EBAD Badajoz 93.00 45 P P 18 35 39.9 +0.9
comp=Z,6.2nm,0.8s,mb5.1
FCC Fort Churchill 93.02 348 *e*P P 18 35 37.4 -1.1
FCC pmax pmax
comp=Z,1.0nm,1.3s
FCC Fort Churchill 93.02 348 *e*P P 18 35 37.4 -1.2
comp=Z,1.2nm,1.3s,mb4.2
PMRV Marv??o 93.21 44 *e*P P 18 35 39.1 -0.8
PMRV *e*LQ 19 05 24.9
PMRV *e*LR LR 19 09 10.5
comp=Z,2µm,18.0s
PCBR Castelo Branco 93.43 44 *e*P P 18 35 40.6 -0.3
comp=Z,22nm,1.7s,mb5.3
ELOJ Sierra Loja 93.73 48 P P 18 35 42.6 +0.2
MTE Manteigas 93.76 43 *e*P P 18 35 42.3 -0.1
comp=Z,30nm,1.1s,mb5.6
MTE *e*LQ 19 02 10.3
MTE *e*LR LR 19 08 15.6
comp=Z,5µm,22.0s
PVIS Viseu 93.76 43 *e*P P 18 35 42.8 +0.4
comp=Z,36nm,1.8s,mb5.5
ELUQ Luque 93.92 47 P P 18 35 43.7 +0.5
EADA Adamuz 94.10 47 P P 18 35 45.2 +1.1
comp=Z,4.5nm,1.0s,mb4.8
ECOG Cogollos-Vega 94.17 48 P P 18 35 44.1 -0.3
ECOG pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
ECOG Cogollos-Vega 94.17 48 P P 18 35 44.1 -0.3
comp=Z,2.8nm,0.7s,mb4.8
MVO Moncorvo 94.55 43 *e*P P 18 35 45.5 -0.5
comp=Z,33nm,1.1s,mb5.7
MVO *e*LQ 19 03 02.9
MVO *e*LR LR 19 08 31.8
comp=Z,5µm,22.0s
EBAN Banos Encina 94.59 47 P P 18 35 46.1 -0.2
EBAN pmax pmax
comp=Z,23nm,1.0s,mb5.6
EBAN Banos Encina 94.59 47 P P 18 35 46.1 -0.2
comp=Z,23nm,1.0s,mb5.6
EQES Quesada 94.81 48 P P 18 35 47.3 0.0
comp=Z,8.0nm,1.1s,mb5.1
ESDC Sonseca Array 95.42 46 P P 18 35 49.6 -0.4
comp=Z,3.0nm,0.8s,mb4.8,baz=239,slow=4.1,SNR=14
ESDC LR LR 19 15 50.4
comp=Z,2µm,20.6s,MS5.6,baz=225,slow=34
ESDC Sonseca Array 95.42 46 P P 18 35 49.9 -0.1
comp=Z,3.6nm,0.9s,mb4.8
ESLA Sonseca Array 95.42 46 *e*P P 18 35 47.8 -2.2
EVIA Vianos 95.67 47 P P 18 35 51.1 -0.1
EPON Pontenova 95.87 41 P P 18 35 51.4 -0.6
SJPF Ste Jean 99.14 44 *e*P P 18 36 06.0 -0.8
comp=Z,23nm,0.8s,mb5.5
SJPF Ste Jean 99.14 44 *e*P P 18 36 06.0 -0.8
SJPF pmax pmax
comp=Z,12nm,0.8s,mb5.5
SJPF Ste Jean 99.14 44 *e*P P 18 36 06.0 -0.8
comp=Z,12nm,0.8s,mb5.5
ETSF Etsaut 99.41 45 *e*P P 18 36 08.0 0.0
comp=Z,25nm,1.0s,mb5.4
ETSF Etsaut 99.41 45 *e*P P 18 36 08.0 0.0
ETSF pmax pmax
comp=Z,13nm,1.0s,mb5.4
ETSF Etsaut 99.41 45 *e*P P 18 36 08.0 0.0
comp=Z,13nm,1.0s,mb5.4
EPF Esparros 100.02 45 *e*P Pdif 18 36 10.5 -0.4
comp=Z,82nm,1.6s
EPF Esparros 100.02 45 *e*P Pdif 18 36 10.5 -0.4
EPF pmax pmax
comp=Z,41nm,1.6s
EPF Esparros 100.02 45 *e*P Pdif 18 36 10.5 -0.4
comp=Z,41nm,1.6s
YKA Yellowknife Ar 100.94 341 P Pdif 18 36 12.8 -2.2
comp=Z,1.0nm,0.5s,baz=145,slow=4.4,SNR=32
YKA PP PP 18 40 23.8 +0.7
comp=Z,2.2nm,1.1s,baz=137,slow=7.5,SNR=5.4
YKA PKiKP PKiKP 18 40 39.5 0.0
comp=Z,0.3nm,0.5s,baz=146,slow=1.7,SNR=5.1
YKA PKKPbc PKKPbc 18 52 24.6 -3.5
comp=Z,0.8nm,0.4s,baz=321,slow=3.5,SNR=18
YKA Yellowknife Ar 100.94 341 P Pdif 18 36 12.8 -2.2
YKA 18 40 23.8
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA pmax pmax
comp=Z,2.0nm,1.1s
YKA pmax pmax
comp=Z,1.0nm,0.4s
YKA Yellowknife Ar 100.94 341 P Pdif 18 36 12.8 -2.1
YKA PP PP 18 40 23.8 +0.7
LFF La Frestale 101.36 44 *e*P Pdif 18 36 15.5 -1.4
comp=Z,16nm,0.7s
LFF La Frestale 101.36 44 *e*P Pdif 18 36 15.5 -1.4
LFF pmax pmax
comp=Z,8.0nm,0.7s
LFF La Frestale 101.36 44 *e*P Pdif 18 36 15.5 -1.4
comp=Z,8.0nm,0.7s

MFF Saint Martin d 101.81 42 *e*P Pdif 18 36 17.9 -1.0
CAF Calviac 102.12 44 *e*P Pdif 18 36 19.5 -0.8
ABPO Ambohimpanom 102.17 122 PFAKE 18 36 30.0 +10
ABPO LR LR
comp=Z,2µm,21.0s,MS5.7
GRR Gorron 102.44 40 *e*P Pdif 18 36 20.8 -0.9
TCF Toulx Ste Croi 102.97 43 *e*P Pdif 18 36 23.1 -0.9
AVF Avril sur Loir 103.91 43 *e*P Pdif 18 36 27.1 -1.1
SMF Signal de Mont 104.11 43 *e*P Pdif 18 36 28.4 -0.7
comp=Z,66nm,1.4s
SMF Signal de Mont 104.11 43 *e*P Pdif 18 36 28.4 -0.7
SMF pmax pmax
comp=Z,33nm,1.4s
SMF Signal de Mont 104.11 43 *e*P Pdif 18 36 28.4 -0.7
comp=Z,33nm,1.4s
SSF Saint Saulge 104.14 43 *e*P Pdif 18 36 28.8 -0.4
LOR Lormes 104.46 43 *e*P Pdif 18 36 29.5 -1.1
comp=Z,20nm,1.1s
LOR *e*MLR MLR
comp=Z,5µm,22.0s,MS5.7
LOR Lormes 104.46 43 *e*P Pdif 18 36 29.5 -1.1
LOR pmax pmax
comp=Z,10.0nm,1.1s
LOR MLR MLR
comp=Z,5µm,22.0s,MS6.0
LOR Lormes 104.46 43 *e*P Pdif 18 36 29.5 -1.1
comp=Z,9.8nm,1.1s
LOR LR LR
comp=Z,5µm,22.0s,MS6.0
BNI Bardonecchia 104.95 46 PFAKE 18 36 40.0 +7.2
BNI LR LR
comp=Z,4µm,22.0s,MS6.0
LPL La Plagne 105.22 46 *e*P Pdif 18 36 33.3 -0.7
LPG La Plagne 105.22 46 *e*P Pdif 18 36 33.9 -0.2
comp=Z,13nm,1.0s
LPG La Plagne 105.22 46 *e*P Pdif 18 36 33.9 -0.2
LPG pmax pmax
comp=Z,6.0nm,1.0s
LPG La Plagne 105.22 46 *e*P Pdif 18 36 33.9 -0.2
comp=Z,6.4nm,1.0s
CDF Champ du Feu 107.02 43 *e*P Pdif 18 36 41.1 -0.9
BFO Black Forest 107.59 44 PFAKE 18 41 00.0 +7.9
BFO LR LR
comp=Z,3µm,21.0s,MS5.8
AQU L'Aquila 107.85 51 PFAKE 18 41 00.0 +7.2
AQU LR LR
comp=Z,2µm,19.0s,MS5.7
STKA Stephens Creek 108.52 209 PKKP PKKPbc 18 52 11.8 +7.9
comp=Z,1.4nm,0.7s,baz=333,slow=2.3,SNR=3.2
GRF Grafenberg Arr 109.91 43 *e*L 19 24 47.8
comp=Z,3µm,21.5s
NKC Novy Kostel 110.86 43 AMS AMS 19 26 10.0
comp=Z,3µm,20.4s
GERES GERESS Array B 110.98 45 PKiKP PKiKP 18 40 57.7 -0.8
comp=Z,1.5nm,0.8s,baz=185,slow=1.4,SNR=6.4
KHC Kasperske Hory 111.04 45 *e*x x 18 52 33.7
KHC AMS AMS 19 32 10.0
comp=Z,3µm,20.8s
CLL Collm 111.64 42 *i* PKIKP PKiKP 18 41 00.3 +0.6
CLL *e* 18 41 42.0
CLL MLR MLR
comp=Z,4µm,19.1s,MS6.0
CLL Collm 111.64 42 *i* PKiKP PKiKP 18 41 00.3 +0.6
CLL *e*PP PP 18 41 42.0 -0.3
CLL *e*x x 18 41 59.0
CLL *e*Sdif Sdif 18 49 24.0 +3.3
CLL *e*PS PS 18 51 22.0 +7.5
CLL *e*x x 18 51 53.0
CLL *e*PPS 18 52 31.0
CLL *e*SS SS 18 57 29.0 +13
CLL *e*SSS 19 01 30.0
CLL *e*SSSS 19 05 00.0
CLL Lm 19 27 00.0
comp=N,2µm,19.2s
CLL Lm 19 27 00.0
comp=E,3µm,18.9s
CLL Lm 19 27 00.0
comp=Z,4µm,19.1s
CLL Collm 111.64 42 *i* PKP PKiKP 18 41 00.3 +0.6
CLL *e*PP PP 18 41 42.0 -0.3
CLL *e*Sdif Sdif 18 49 24.0 +3.3
CLL LR LR
comp=Z,4µm,19.1s,MS6.0
PRU Pruhonice 111.97 44 *e*SP SP 18 51 11.1 -2.5
PRU AMS AMS 19 25 20.0
comp=Z,2µm,20.0s
BRG Berggiesshubel 112.00 43 *e*PKIKP PKiKP 18 41 01.8 +1.5
BRG *e* 18 51 22.0
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG MLR MLR
comp=N,246nm,11.3s
BRG MLR MLR
comp=E,1µm,22.9s
BRG MLR MLR
comp=Z,2µm,22.8s
BRG Berggiesshubel 112.00 43 *e*P PKiKP 18 41 01.8 +1.4
comp=Z,4.8nm,0.9s
BRG *e* 18 51 22.0
BRG
comp=N,411nm,11.3s
BRG
comp=E,2µm,22.9s
BRG
comp=Z,3µm,22.8s
BRG Berggiesshubel 112.00 43 *e*P PKiKP 18 41 01.8 +1.4
BRG *e* 18 51 22.0
BRG LR LR
comp=Z,2µm,22.8s,MS5.7
PVCC Panska Ves 112.21 43 AMS AMS 19 26 00.0
comp=Z,3µm,20.8s
TREC Trest 112.24 45 AMS AMS 19 32 00.0
comp=Z,3µm,18.2s
ZST Bratislava 112.76 47 *e*PP PP 18 41 43.8 -6.6
PKSM Moragy 112.92 49⇓*i*P PKiKP 18 41 02.0 -0.3
PKSM Moragy 112.92 49 ⇓P PKiKP 18 41 02.0 -0.3
DPC Dobruska-Polom 113.16 44 *e*PKKP PKKPbc 18 51 42.4 -6.9
DPC AMS AMS 19 26 20.0
comp=Z,2µm,21.6s
VYHS Vyhne 113.94 47 *e*PP PP 18 41 53.4 -5.4
OKC Ostrava-Krasne 114.04 45 *e*PKKP PKKPbc 18 51 43.6 -2.7
OKC AMS AMS 19 27 00.0
comp=Z,2µm,23.0s
BZS Buzias 114.60 50⇓*i*P PKiKP 18 41 05.0 -0.5
BZS Buzias 114.60 50 ⇓P PKiKP 18 41 05.0 -0.5
NOA NORSAR Array B 114.73 32 PKP PKiKP 18 41 05.0 -0.3
comp=Z,1.6nm,0.8s,baz=252,slow=2.0,SNR=4.7
NOA PKKPbc PKKPbc 18 51 47.8 +3.5
comp=Z,1.7nm,0.8s,baz=77,slow=4.3,SNR=4.8
CRVS Cervenica-Dubn 115.71 47 *e*PP PP 18 42 07.9 -3.3
DRGR 115.74 50⇑*i*P PKPdf 18 41 07.1 -0.6
DRGR 115.74 50 ⇑P PKPdf 18 41 07.1 -0.5
STHS Stebnicka Huta 115.76 46 *i* P Pdif 18 37 14.8 -6.1
STHS *e* 18 42 08.3
STHS Stebnicka Huta 115.76 46 PDIF Pdif 18 37 14.8 -6.1
STHS *e*PP PP 18 42 08.3 -3.2
STHS Stebnicka Huta 115.76 46 *e*Pdif Pdif 18 37 14.8 -6.1
STHS *e*PP PP 18 42 08.3 -3.2
UZH Uzhgorod 116.13 47 *e*PKIKP PKPdf 18 41 08.0 -0.3
UZH *e* 18 41 14.0
UZH *i* 18 41 19.0
UZH *i* 18 42 11.0
KWP Kalwaria 116.73 47 *e*PKP PKPdf 18 41 10.0 +0.6
KWP Kalwaria 116.73 47⇓*i*P PKPdf 18 41 10.1 +0.6
KWP Kalwaria 116.73 47 *e*PKP PKPdf 18 41 10.0 +0.5
VOIR 116.79 52⇓*i*P PKPdf 18 41 09.3 -0.4
VOIR 116.79 52 ⇓P PKPdf 18 41 09.3 -0.4
BUR08 Bucovina Ar. S 117.63 49 *e*PKPdf PKPdf 18 41 11.0 -0.2
BURAR Bucovina Array 117.63 49⇓*i*P PKPdf 18 41 12.1 +0.8
BURAR Bucovina Array 117.63 49 ⇓P PKPdf 18 41 12.1 +0.8
PLOR Plostina 117.98 52⇑*i*P PKPdf 18 41 10.1 -1.9
VRI Vrincioaia 118.04 52⇑*i*P PKPdf 18 41 10.8 -1.3
VRI Vrincioaia 118.04 52 ⇑P PKPdf 18 41 10.8 -1.3
SUW Suwalki 118.40 42 *e*PKP PKPdf 18 41 11.3 -1.2
SUW Suwalki 118.40 42 *e*PKP PKPdf 18 41 11.3 -1.2
TIRR Tirgusor 118.71 54⇓*i*P PKPdf 18 41 12.9 -0.6
TIRR Tirgusor 118.71 54 ⇓P PKPdf 18 41 12.9 -0.5
ASAR Alice Springs 118.89 207 PKP PKPdf 18 41 12.7 -1.9
comp=Z,1.7nm,0.7s,baz=141,slow=2.1,SNR=18
ASAR PKKPbc PKKPbc 18 51 28.4 -0.5
comp=Z,2.1nm,0.8s,baz=336,slow=3.1,SNR=17
KIS Kishinev 119.77 51 *e*PKIKP PKPdf 18 41 13.0 -2.4
KIS MLR MLR
comp=Z,2µm,22.0s,MS5.7

KIS MLR MLR
comp=N,600nm,20.0s,MS5.5
KIS MLR MLR
comp=E,1μm,20.0s,MS5.5
KIS MLR MLR
comp=Z,2μm,20.0s
KIS Kishinev 119.77 51 *e*PP PP 18 42 30.0 -9.5
KIS Kishinev 119.77 51 *e*PS PKKPdf 18 52 00.0 +1.9
KIS LRM 19 33 02.0
comp=Z,2μm,22.0s
BR131 Keskin Array S 120.89 60 *e*PKPdf PKPdf 18 41 16.7 -1.1
BRTR Keskin Array B 120.89 60 PKP PKPdf 18 41 16.7 -1.1
comp=Z,5.1nm,0.7s,baz=192,slow=2.9,SNR=22
BRTR pPKP pPKPdf 18 41 26.4 -0.9
comp=Z,4.2nm,0.8s,baz=180,slow=1.9,SNR=8.5
AKASG Malin Array Be 121.05 47 PKP PKPdf 18 41 15.8 -1.9
comp=Z,5.9nm,0.6s,baz=263,slow=2.8,SNR=24
AKASG PP PP 18 42 44.1 -4.0
comp=Z,3.4nm,0.9s,baz=249,slow=8.8,SNR=6.3
AKBB Malin Array Si 121.05 47 *e*PKIKP PKPdf 18 41 15.7 -2.0
KAF Kangasniemi 121.94 33 *ep* PKPdf 18 41 18.3 -0.8
comp=Z,7.1nm,0.4s
KAF Kangasniemi 121.94 33 *e*PKIKP PKPdf 18 41 18.3 -0.8
KAF pmax pmax
comp=Z,7.0nm,0.4s
WB2 Warramunga Arr 122.07 209 *e*P PKPdf 18 41 19.2 -1.6
WRA Warramunga Arr 122.07 209 PKP PKPdf 18 41 19.0 -1.8
comp=Z,3.6nm,0.8s,baz=162,slow=1.6,SNR=43
WRA pPKP pPKPdf 18 41 28.7 -1.7
comp=Z,4.8nm,0.8s,baz=161,slow=1.6,SNR=10
WRA PKKPbc PKKPbc 18 51 16.8 -0.1
comp=Z,2.1nm,0.7s,baz=342,slow=4.3,SNR=11
WRA Warramunga Arr 122.07 209 PKIKP PKPdf 18 41 19.0 -1.8
WRA 18 41 28.7
WRAB Tennant Creek 122.08 209 ⇓ *i*PKIKP PKPdf 18 41 18.4 -2.4
WRAB Tennant Creek 122.08 209 *e*PKPdf PKPdf 18 41 18.3 -2.5
ARCES ARCESS Array B 122.68 24 PKP PKPdf 18 41 19.6 -0.7
comp=Z,1.9nm,0.8s,baz=255,slow=3.5,SNR=11
ARCES pPKP pPKPdf 18 41 28.8 -1.1
comp=Z,6.1nm,0.9s,baz=14,slow=0.5,SNR=2.4
ADK Adak 123.90 314 PFAKE 18 41 30.0 +6.8
ADK LR LR
comp=Z,2μm,20.0s,MS5.7
JOF Joensuu 124.36 33 *ep* PKPdf 18 41 23.3 -0.4
comp=Z,3.6nm,0.4s
JOF Joensuu 124.36 33 *e*PKIKP PKPdf 18 41 23.3 -0.4
JOF pmax pmax
comp=Z,4.0nm,0.4s
ANN Anapa 124.99 55 *i* PKIKP PKPdf 18 41 26.1 +0.6
ANN *e* 18 43 18.8
ANN *e*SSS 19 04 54.0
ANN pmax pmax
comp=N,48nm,1.7s
ANN pmax pmax
comp=E,33nm,1.7s
ANN pmax pmax
comp=Z,67nm,1.7s
APA Apatity 125.47 27 ⇑ *i*PKIKP PKPdf 18 41 27.0 +1.3
APA MLR MLR
comp=Z,2μm,24.0s,MS5.8
OBN Obninsk 126.24 43 ⇑ *i*PKIKP PKPdf 18 41 27.3 -0.3
OBN *e* 18 43 21.2
OBN *e* 18 48 22.3
OBN *e*PS PS 18 53 21.6 -4.2
OBN pmax pmax
comp=Z,61nm,1.4s
OBN Obninsk 126.24 43 *e*PKPdf PKPdf 18 41 26.9 -0.7
FITZ Fitzroy Crossi 126.86 201 *e*P PKPdf 18 41 28.5 -1.5
comp=Z,11nm,0.8s
MOS Moscow 126.91 42 *e*PKIKP PKPdf 18 41 28.7 -0.1
MOS pmax pmax
comp=Z,53nm,0.8s
MOS MLR MLR
comp=E,3μm,18.0s
MOS MLR MLR
comp=Z,4μm,19.0s,MS6.1
KIV Kislovodsk 128.50 57 ⇑ *i*PKIKP PKPdf 18 41 32.4 +0.2
KIV *e* 18 43 37.3
KIV *e* 18 48 32.7
KIV *e*PS PS 18 53 45.3 -0.6
KIV *e*SS SS 19 01 00.1 +7.1
KIV pmax pmax
comp=Z,52nm,1.6s
KIV Kislovodsk 128.50 57 *e*PKPdf PKPdf 18 41 32.1 -0.1
GNI Garni 129.22 62 ⇑ *e*PKIKP PKPdf 18 41 33.1 -0.6
BILL Bilibino 131.81 335 ⇓ *i*PKIKP PKPdf 18 41 37.9 +0.1
BILL *e* 18 44 02.5
BILL pmax pmax
comp=Z,30nm,1.4s
BILL MLR MLR
comp=Z,900nm,18.0s,MS5.5
BILL Bilibino 131.81 335 *e*PKPdf PKPdf 18 41 37.6 -0.2
BILL *e*SKP 18 45 01.6
BATI Baumata 134.92 201 PKP PKPdf 18 41 46.9 +1.5
comp=Z,6.1nm,0.6s,baz=86,slow=4.9,SNR=3.9
SOKR Solikamsk 136.84 36 *i* PKIKP PKPdf 18 41 48.0 +0.6
SOKR pmax pmax
comp=Z,40nm,1.1s
ARU Arti 138.52 40 *i* PKIKP PKPdf 18 41 50.8 +0.2
ARU 18 44 39.0
ARU SS SS 19 02 50.2 -3.1
ARU MLR MLR
comp=Z,2μm,21.0s,MS5.9
ARU Arti 138.52 40 *e*PKPpre 18 41 40.0
ARU *e*PKPdf PKPdf 18 41 50.2 -0.4
ARU ⇓ *e*PKP PKPdf 18 41 50.9 +0.3
ARU LR LR
comp=Z,2μm,20.0s,MS5.9
SEY Seymchan 139.07 331 ⇓ *e*PKIKP PKPdf 18 41 51.3 -0.1
AKTO Aktyubinsk 139.22 49 PKHKP 18 41 42.1
AKTO pmax pmax
comp=Z,3.0nm,1.2s
TIXI Tiksi 139.47 350 ⇓ *i*PKIKP PKPdf 18 41 49.1 -2.9
TIXI Tiksi 139.47 350 *e*PKPdf 18 41 41.2
TIXI ⇓ *e*PKP PKPdf 18 41 49.2 -2.8
PETK Petropavlovsk- 139.49 315 PKP PKPdf 18 41 53.9 +1.4
comp=Z,9.2nm,0.8s,baz=90,slow=4.4,SNR=9.3
SVE Sverdlovsk 139.53 39 *i* PKHKP 18 41 46.3
SVE pmax pmax
comp=Z,21nm,1.4s
SVE MLR MLR
comp=Z,2μm,24.0s,MS5.8
AB31 Akbulak array 140.59 51 PKHKP 18 41 46.2
AB31 pmax pmax
comp=Z,11nm,0.6s
KOD Kodaikanal 143.80 121 *e*P PKPdf 18 41 59.2 -2.2
PALK Pallekele 143.94 128 *e*PKPdf PKPdf 18 41 58.7 -3.0
GOA Goa 144.31 110 *e*P PKPdf 18 42 00.1 -2.1
BHJ Bhuj 144.69 95 *e*P PKPdf 18 41 59.7 -3.1
KAD Karad 145.61 108 *e*P PKPdf 18 42 02.5 -2.0
POO Poona 145.99 106 ⇓ *i*P PKPdf 18 42 02.0 -3.1
comp=Z,909nm,1.2s
POO *e*P 18 42 03.2
BRVK Borovoye 146.01 42 ⇓P PKPdf 18 42 04.4 +0.3
SNR=62
BRVK Borovoye 146.01 42 *e*PKPdf PKPdf 18 42 03.0 -1.0
BVA0 Borovoye Array 146.08 42 *i* PKP2 PKPab 18 42 04.7 -1.1
BVA0 pmax pmax
comp=Z,26nm,1.1s
KBL Kabul 147.33 76 *e*PKIKP PKPdf 18 42 06.3 -0.6
YAK Yakutsk 147.61 341 *i* PKP2 PKPdf 18 42 08.3 +1.8
YAK *e* 18 45 32.0
YAK pmax pmax
comp=Z,224nm,1.2s
YAK pmax pmax
comp=E,20nm,1.0s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=Z,337nm,3.8s
YAK Yakutsk 147.61 341 *e*PKPdf PKPdf 18 42 06.9 +0.4
YAK *e*PKPbc PKPbc 18 42 08.3 -0.9
MDRS Chennai 147.71 121 *ex* x 18 41 54.0
KK31 Karatay Array 148.60 60 *i* PKIKP PKPdf 18 42 09.1 +0.4
KK31 pmax pmax
comp=Z,198nm,1.4s
KSM Kuching 148.89 184 *e*PKPdf PKPdf 18 42 08.2 -2.0
KSM *e*PKPbc PKPbc 18 42 13.0 -1.1
PSI Prapat 148.97 161 PKP PKPdf 18 42 09.5 -0.7
comp=Z,48nm,0.7s,baz=191,slow=4.7,SNR=29
PSI PKPbc PKPbc 18 42 13.1 -1.2
comp=Z,61nm,0.7s,baz=193,slow=4.9,SNR=16
PSI Prapat 148.97 161 PKP PKPdf 18 42 09.5 -0.8
PSI PKPbc PKPbc 18 42 13.1 -1.2
HYB Hyderabad 149.13 112 *i* PKP PKPdf 18 42 10.5 +0.2
HYB *e* 18 42 14.5
HYB *e*PKPAB PKPab 18 42 22.5 +3.6
HYB *e*PP PP 18 45 44.0 -2.0
HYB *e* 18 56 08.0
HYB Hyderabad 149.13 112 *e*P PKPdf 18 42 10.5 +0.2
HYB *e* 18 42 14.5
AKL Akola 149.65 105 *e*P PKPdf 18 42 10.6 -0.5
YSS Yuzh-Sakhalins 150.27 309 *i* PKIKP PKPbc 18 42 15.0 -1.4
YSS *e* 18 42 27.0
YSS pmax pmax
comp=Z,90nm,1.1s
YSS MLR MLR
comp=Z,1μm,18.0s,MS5.7
YSS Yuzh-Sakhalins 150.27 309 *e*PKPbc PKPbc 18 42 15.5 -0.9
EKS2 Erkin-Say 151.04 60 P PKPbc 18 42 18.9 +0.6
SNR=8.3
EKS2 Erkin-Say 151.04 60 *e*PKPdf PKPdf 18 42 12.3 -0.3
EKS2 *e*PKPbc PKPbc 18 42 18.6 +0.2
AML Almayashu 151.05 61 P PKPbc 18 42 19.1 +0.7
SNR=20
AML Almayashu 151.05 61 *e*PKPdf PKPdf 18 42 12.8 +0.1
AML *e*PKPbc PKPbc 18 42 18.9 +0.5
AML LR LR
comp=Z,2μm,20.0s,MS6.0
ASAJ Asahikawa 151.06 303 PKPbc PKPbc 18 42 18.2 -0.2
comp=Z,51nm,0.9s,baz=264,slow=5.1,SNR=12
ASAJ Asahikawa 151.06 303 PKIKP PKPbc 18 42 18.2 -0.2
ASAJ pmax pmax
comp=Z,51nm,0.9s
BHPL Bhopal 151.17 101 *e*P PKPdf 18 42 11.0 -2.4
USP Ospenovka 151.46 58 P PKPbc 18 42 20.3 +0.9
SNR=6.3
NGP Nagpur 151.53 106 *e*P PKPdf 18 42 11.7 -2.3
AAK Ala-Archa 151.56 60 ⇓ P PKPdf 18 42 14.3 +0.9
SNR=32
AAK Ala-Archa 151.56 60 P PKPbc 18 42 20.9 +1.3
SNR=5.3
AAK Ala-Archa 151.56 60 *e*PKPdf PKPdf 18 42 13.3 -0.1
AAK *e*PKPbc PKPbc 18 42 20.1 +0.5
AAK LR LR
comp=Z,2μm,20.0s,MS5.9
FRU Bishkek 151.62 59 *i* PKIKP PKPbc 18 42 20.0 +0.3
FRU pmax pmax
comp=Z,360nm,2.0s
FRU MLR MLR
comp=Z,2μm,20.0s,MS5.8
UCH Uchtor 151.64 61 P PKPbc 18 42 20.8 +1.0
SNR=12
UCH Uchtor 151.64 61 *e*PKPbc PKPbc 18 42 19.3 -0.5
KURK Kurchatov 151.68 42 ⇑ P PKPdf 18 42 13.2 -0.1
SNR=29
KURK Kurchatov 151.68 42 *e*PKPdf PKPdf 18 42 11.8 -1.4
KURK *e*PKPbc PKPbc 18 42 19.5 -0.1
CHMS Chumysh 151.69 59 P PKPbc 18 42 20.0 +0.1
SNR=30
KBK Karagaybulak 151.89 60 P PKPbc 18 42 20.8 +0.5
SNR=16
KZA Kyzart 152.20 61 P PKPbc 18 42 22.0 +0.9
SNR=13
TKM2 Tokmak 2 152.31 59 P PKPdf 18 42 14.3 -0.2
SNR=8.0
TKM2 Tokmak 2 152.31 59 *e*PKPdf PKPdf 18 42 14.2 -0.4
TKM2 *e*PKPbc PKPbc 18 42 21.1 -0.3
THN Thein Dam 152.53 82 *ex* PKPbc 18 42 20.4 -1.7
ULHL Ulahol 152.90 60 P PKPbc 18 42 23.6 +0.9
SNR=5.9
ZALV Zalesovo Beam 152.93 31 PKP PKPdf 18 42 13.5 -1.5
comp=Z,12nm,0.9s,baz=274,slow=2.2,SNR=38
ZALV PKPbc PKPbc 18 42 21.5 -0.8
comp=Z,98nm,0.7s,baz=302,slow=3.1,SNR=92
ZALV pPKPbc pPKPbc 18 42 30.6 -1.2
comp=Z,57nm,0.8s,baz=297,slow=3.1,SNR=5.7
ZALV Zalesovo Beam 152.93 31 PKP PKPdf 18 42 13.5 -1.5
ZALV PKPbc PKPbc 18 42 21.5 -0.8
ZALV pPKPbc pPKPbc 18 42 30.6 -1.2
NDI New Delhi 152.96 90 *e*P PKPdf 18 42 15.0 -0.9
VIS Vishakhapatnam 152.96 117 *e*P PKPdf 18 42 12.0 -4.2
CLNS Chul'man 153.31 340 *e*PKIKP PKPbc 18 42 21.1 -1.9
CLNS pmax pmax
comp=Z,28nm,0.8s
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,1.1s
SDNR Sundarnagar 153.41 84 *ex* PKPbc 18 42 24.0 -0.1
SMLA Simla 153.50 85 *i* x PKPbc 18 42 24.1 -0.2
DDI Dehra Dun 154.08 87 *e*P PKPdf 18 42 17.0 -0.5
HABR Khabarovsk 154.51 316 *e*PKIKP PKPdf 18 42 14.9 -2.6
HABR *i* 18 42 24.6
HABR *e* 18 42 25.7
HABR *e* 18 42 38.9
HABR *e* 18 49 19.7
HABR *e*PPP 18 49 44.7
HABR *e*SSS 19 11 46.4
BOD Bodaibo 154.58 353 *e*PKIKP PKPbc 18 42 23.2 -2.5
BOD *e* 18 42 36.5
BOD pmax pmax
comp=Z,34nm,1.1s
MJAR Matsushiro Arr 155.20 287 PKP PKPdf 18 42 17.8 -1.0
comp=Z,3.0nm,1.1s,baz=273,slow=2.1,SNR=5.4
MJAR PKPbc PKPdf 18 42 29.2 +10
comp=Z,3.7nm,0.7s,baz=133,slow=3.0,SNR=7.2
MAT Matsushiro 155.20 287 PKP PKPdf 18 42 18.2 -0.6
MK31 Makanchi Array 155.63 47 *e*PKIKP PKPdf 18 42 18.1 -1.0
MK31 *e* 18 42 44.8
MK31 *e* 18 46 19.7
MKAR Makanchi Array 155.63 47 PKP PKPdf 18 42 18.3 -0.7
comp=Z,5.8nm,0.9s,baz=297,slow=0.8,SNR=24
MKAR PKPab PKPab 18 42 44.9 -0.4
comp=Z,18nm,0.6s,baz=292,slow=3.8,SNR=33
KLR Kul'dur 155.98 320 *e*PKIKP PKPdf 18 42 14.3 -5.1
KLR MLR MLR
comp=Z,1μm,12.5s,MS6.0
KOLN Koldanda 158.05 96 *e*P PKPdf 18 42 22.2 -0.6
comp=Z,113nm,1.5s
BOK Bokaro 158.32 108 *e*P PKPdf 18 42 18.8 -4.5
DANN Dangsing 158.37 95 *e*P PKPdf 18 42 22.9 -0.3
comp=Z,233nm,1.6s
HVS Khovu-Aksy 158.65 26 *d* i PKIKP PKPdf 18 42 22.0 -0.7
GKN Gorkha 159.00 97 *e*P PKPdf 18 42 22.9 -1.0
comp=Z,151nm,1.5s
DMN Daman 159.26 98 *e*P PKPdf 18 42 23.4 -0.8
comp=Z,124nm,1.6s
KKN Kakani 159.47 98 *e*P PKPdf 18 42 23.8 -0.7
comp=Z,113nm,1.7s
PKI Pulchoki 159.50 98 *e*P PKPdf 18 42 23.8 -0.7
comp=Z,141nm,1.6s
CAL Calcutta 159.59 115 *ex* x 18 42 29.7
CAL *ex* x 18 53 44.0
MDJ Mudanjiang 159.67 312 PKP PKPdf 18 42 24.3 +0.1
MDJ APKP 18 42 34.3
MDJ XPKP 18 42 37.3
MDJ PKS 18 45 57.8
MDJ PP PP 18 46 44.0 -0.6
MDJ PP PP
comp=Z,252nm,6.8s
MDJ LR LR
comp=N,646nm,15.8s,MS5.8
MDJ LR LR
comp=E,1μm,20.3s,MS5.8
MDJ LR LR
comp=Z,2μm,18.6s,MS5.9
GUN Gumba 160.01 98 *e*P PKPdf 18 42 24.6 -0.5
comp=Z,222nm,1.8s
JIRN Jiri 160.18 99 *e*P PKPdf 18 42 24.5 -0.8
comp=Z,102nm,1.6s
IRK Irkutsk 160.24 7 *e*PKP2 PKPab 18 43 04.8 -0.1
IRK *e* 18 46 48.5
IRK pmax pmax
comp=Z,95nm,1.7s
RAMN Ramite 160.27 101 *e*P PKPdf 18 42 25.1 -0.3
comp=Z,358nm,1.8s
MOY Mondy 160.28 14 *e*PKP2 PKPab 18 43 07.1 +1.9
CIT Chita 160.32 350 *e*PKP2 PKPab 18 42 57.1 -8.2
WMQ Urumqi 160.38 50 PKP PKPdf 18 42 25.1 +0.1
WMQ XPKP 18 42 39.1
WMQ PKP2 PKPab 18 43 07.6 +1.7
WMQ PKS 18 45 57.1
WMQ PP PP 18 46 49.0 +0.5
WMQ SKS SKSdf 18 49 25.3 -2.7
WMQ SKKS SKKSac 18 53 33.8 -1.0
WMQ SS SS 19 06 55.4 -2.3
WMQ PP PP
comp=Z,865nm,6.0s
WMQ LR LR
comp=N,1μm,23.0s
WMQ LR LR
comp=E,1μm,20.0s
WMQ LR LR
comp=Z,2μm,21.0s
TLY Talaya 160.71 9 *e* PP 18 46 50.7 +1.5
TLY *e*PPS 19 00 17.6
TLY pmax pmax
comp=Z,78nm,2.4s
ODAN Odare 160.89 102 *e*P PKPdf 18 42 25.1 -1.0
comp=Z,98nm,1.5s
TAPN Taplejung 161.33 101 *e*P PKPdf 18 42 26.0 -0.5
comp=Z,93nm,1.6s
ZAK Zakamensk 161.93 11 *e*PKIKP PKPdf 18 42 17.1 -9.3
ZAK *e* 18 43 09.6
ZAK pmax pmax
comp=Z,4.0nm,1.5s
ZAK pmax pmax
comp=Z,15nm,1.6s
CN2 Changchun 162.64 315 *e*PKP PKPdf 18 42 27.3 0.0
CN2 *e*XPKP 18 42 41.6
CN2 PP PP 18 47 04.0 +3.6
CN2 PP PP
comp=Z,490nm,19.0s
CN2 LR LR
comp=N,640nm,23.0s
CN2 LR LR
comp=E,1μm,23.0s
CN2 LR LR
comp=Z,960nm,27.0s
KSRS Korea Array 163.32 292 PKP PKPdf 18 42 27.4 -0.9
comp=Z,4.7nm,0.8s,baz=154,slow=0.7,SNR=12
KSRS PKPab PKPab 18 43 20.0 +0.9
comp=Z,9.3nm,1.1s,baz=84,slow=5.3,SNR=7.5
KSRS Korea Array 163.32 292 PKIKP PKPdf 18 42 27.4 -0.8
KSRS pmax pmax
comp=Z,5.0nm,0.9s
KSRS pmax pmax
comp=Z,9.0nm,1.1s
CMAR Chiang Mai Arr 163.48 147 PKP PKPdf 18 42 28.1 -0.9
comp=Z,2.7nm,0.8s,baz=250,slow=2.1,SNR=26
CMAR PKPab PKPab 18 43 19.6 -0.4
comp=Z,8.6nm,1.2s,baz=220,slow=4.1,SNR=7.1
CHTO Chiang Mai 163.79 146 ⇓P PKPdf 18 42 28.4 -0.7
SNR=5.6
CHTO Chiang Mai 163.79 146 *e*PKPdf PKPdf 18 42 27.6 -1.6
CHTO *e*PKPab PKPab 18 43 19.9 -1.5
SHL Shillong 163.94 112 *e*P PKPdf 18 42 29.0 -0.2
SHL *ex* x 18 47 10.0
SONM Songino Array 164.80 5 PKP PKPdf 18 42 28.7 -0.5
comp=Z,0.9nm,0.8s,baz=226,slow=0.8,SNR=7.0
SONM PKPab PKPab 18 43 25.6 +0.6
comp=Z,7.1nm,0.9s,baz=344,slow=3.8,SNR=13
ULN Ulaanbaatar 164.81 3 *e*PKIKP PKPdf 18 42 27.8 -1.4
ULN *e* 18 43 25.4
ULN *e* 18 47 10.7
LSA Lhasa 164.95 97 *e*PKIKP PKPdf 18 42 30.0 +0.1
LSA *e* 18 43 27.8
LSA *e* 18 47 09.8
QIZ Qiongzhong 166.33 186 PKP PKPdf 18 42 31.9 +0.5
QIZ PKP2 PKPab 18 43 34.3 +1.8
QIZ PP PP 18 47 18.1 -0.7
QIZ SS SS 19 07 59.0 +1.7
QIZ LR LR
comp=N,928nm,19.7s
QIZ LR LR
comp=Z,2μm,20.9s
QZH Quanzhou 168.18 232 *i* PKP PKPdf 18 42 32.5 -0.1
QZH PP PP 18 47 32.8 +3.3
QZH SKKS SKKSac 18 54 13.4 -1.6
QZH PP PP
comp=Z,830nm,9.5s
QZH LR LR
comp=N,2μm,18.8s
QZH LR LR
comp=E,3μm,19.3s
QZH LR LR
comp=Z,2μm,20.1s
SSE Sheshan 169.00 265 PKP PKPdf 18 42 32.1 -0.8
SSE SKKS SKKSac 18 54 13.4 -5.7
SSE PP PP
comp=Z,452nm,11.0s
SSE LR LR
comp=N,252nm,21.6s
SSE LR LR
comp=E,901nm,22.0s
SSE LR LR
comp=Z,988nm,21.5s
BJI Beijing 170.35 322 PKP PKPdf 18 42 33.3 -0.1
BJI PP PP 18 47 40.6 +0.6
BJI SKS SKSdf 18 49 34.3 -0.5
BJI PP PP
comp=Z,688nm,10.3s
BJI LR LR
comp=N,636nm,22.9s
BJI LR LR
comp=E,862nm,22.9s
GTA Gaotai 170.36 44 ⇑ PKP PKPdf 18 42 33.5 +0.1
GTA APKP 18 42 44.3
GTA XPKP 18 42 47.9
GTA PKP2 PKPab 18 43 50.8 +0.8
GTA PP PP 18 47 42.3 +2.1
GTA SKKS SKKSac 18 54 24.0 -1.1
GTA SS SS 19 08 35.9 -3.4
GTA PP PP
comp=Z,667nm,11.7s
GTA LR LR
comp=N,1μm,22.2s
GTA LR LR
comp=E,1μm,22.2s
GTA LR LR
comp=Z,2μm,21.6s
KMI Kunming 170.98 145 PKP PKPdf 18 42 33.1 -1.1
KMI APKP 18 42 44.3
KMI XPKP 18 42 47.3
KMI PKS 18 46 03.1
KMI PP PP 18 47 41.8 -1.2
KMI SKS SKSdf 18 49 31.8 -3.9
KMI SKKS SKKSac 18 54 27.8 -0.7
KMI SS SS 19 08 44.0 -0.9
KMI PP PP
comp=Z,573nm,5.8s
KMI LR LR
comp=N,1μm,16.7s
KMI LR LR
comp=E,1μm,21.5s
KMI LR LR
comp=Z,2μm,20.3s
NJ2 Nanjing 171.12 269 *e*PKP PKPdf 18 42 33.3 -0.8
NJ2 APKP 18 42 44.1
NJ2 XPKP 18 42 47.8
NJ2 PP PP 18 47 48.0 +3.0
NJ2 SKS SKSdf 18 49 31.0 -4.5
NJ2 SKKS SKKSac 18 54 28.0 -1.4
NJ2 SS SS 19 08 46.0 -2.6
NJ2 PP PP
comp=Z,110nm,6.5s
NJ2 LR LR
comp=N,9μm,19.2s
NJ2 LR LR
comp=E,11μm,22.2s
HHC Hu-ho-hao-te 171.47 344 *e*PKP PKPdf 18 42 33.6 -0.4
HHC APKP 18 42 44.5
HHC XPKP 18 42 48.6
HHC PKP2 PKPab 18 43 55.5 +0.8
HHC PKS 18 46 05.5
HHC PP PP 18 47 43.0 -2.0
HHC SKS SKSdf 18 49 31.8 -3.4
HHC SKKS SKKSac 18 54 29.4 -0.7
HHC SS SS 19 08 43.8 -5.0
HHC PP PP
comp=Z,516nm,11.8s
HHC LR LR
comp=N,1μm,17.8s
HHC LR LR
comp=E,1μm,18.0s
HHC LR LR
comp=Z,2μm,21.4s
TIA Tai'an 171.97 298 PKP PKPdf 18 42 34.0 -0.4
GYA Guiyang 173.61 166 *i* PKP PKPdf 18 42 32.3 -3.1
GYA APKP 18 42 43.4
GYA PKP2 PKPab 18 44 04.9 +0.3
GYA PKS 18 46 02.3
GYA PP PP 18 47 56.6 +1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GYA				SKS	SKSdf	18 49 31.4	-5.2
GYA				SKKS	SKKSac	18 54 38.6	-2.3
GYA				SS	SS	19 09 07.0	-2.6
GYA				PP	PP		
	comp=Z,2μm,10.8s						
GYA				LR	LR		
	comp=N,4μm,20.2s						
GYA				LR	LR		
	comp=E,3μm,22.9s						
GYA				LR	LR		
	comp=Z,5μm,21.5s						
WHN	Wuhan	174.48	249	PKP	PKPdf	18 42 35.5	0.0
WHN				PKP2	PKPab	18 44 10.4	+1.7
WHN				PP	PP	18 48 04.8	+3.5
WHN				LR	LR		
	comp=N,2μm,18.9s						
WHN				LR	LR		
	comp=E,1μm,19.1s						
WHN				LR	LR		
	comp=Z,3μm,20.2s						
LZH	Lanzhou	174.95	47	⇑PKP	PKPdf	18 42 35.0	-0.5
LZH				APKP		18 42 45.8	
LZH				XPKP		18 42 49.5	
LZH				PKS		18 46 05.9	
LZH				PP	PP	18 48 01.5	-1.4
LZH				SKS	SKSdf	18 49 33.3	-3.2
LZH				PP	PP		
	comp=Z,785nm,9.2s						
LZH				LR	LR		
	comp=N,2μm,18.5s						
LZH				LR	LR		
	comp=Z,3μm,20.0s						
CD2	Chengdu	175.68	113	PKP	PKPdf	18 42 36.8	+0.9
CD2				APKP		18 42 46.4	
CD2				XPKP		18 42 51.8	
CD2				PKP2	PKPab	18 44 14.4	+0.4
CD2				PKS		18 46 07.5	
CD2				SKKS	SKKSac	18 54 51.4	+0.2
CD2				SS	SS	19 09 29.8	-2.6
CD2				LR	LR		
	comp=N,880nm,22.6s						
CD2				LR	LR		
	comp=Z,1μm,26.5s						

*IDC **15** 18:30:16.6±2.4, 12.16N×125.13E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, Error ellipse: s-maj=94.8km s-min=26.9km az=56.0*
*ISCJB **15** 18:30:18.0±2.6, 12.46N±0.05×125.4E±0.1, h8km±11km, mb3.4/3, Error ellipse: s-maj=18.1km s-min=8.1km az=168.8*
*MAN **15** 18:30:20, 12.47N×125.33E, h21km, mb4.4, ML3.2, MS3.1*
ISC 15 18:30:17.9±2.5**, 12.46N**±0.06×**125.4E**±0.1**, h7**km±12km**, n8, σ1.s09**/12**, mb3.4**/3**, 1C, Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNP	Catarman	0.74	274	eP	Pg	18 30 32.8	+0.5
CNP				eS	Sg	18 30 41.3	-0.7
OCLP	Ormoc	1.61	210	eP	Pn	18 30 47.0	+0.2
OCLP				eS	Sn	18 31 07.4	-0.6
PVCP	Virac	1.67	312	eP	Pn	18 30 48.4	+0.8
PVCP				eS	Sn	18 31 10.3	+0.9
MSLP	Maasin	2.38	194	eP	Pn	18 30 59.2	+1.8
MSLP				eS	Sn	18 31 27.8	+0.9
RCP	Roxas	2.77	251⇑	eP	Pn	18 31 02.2	-0.5
CMAR	Chiang Mai Arr	26.19	286	P	P	18 35 51.6	-1.9
	0.3nm,0.6s,mb3.0,baz=103,slow=7.8,SNR=3.8						
ASAR	Alice Springs	36.85	167	P	P	18 37 24.8	-2.2
	0.2nm,0.5s,mb3.2,baz=346,slow=6.6,SNR=9.8						
MKAR	Makanchi Array	49.79	322	P	P	18 39 11.6	+0.2
	0.9nm,0.8s,mb3.8,baz=110,slow=8.0,SNR=6.1						

IDC 15 18:32:22.8±2.2**, 3258S**×**7183W, h0**km**, mb3.9**/2**, mb1 4.0**/3**, mb1mx3.8**/16**, mbtmp4.0**/3**, ML4.0**/1**, Error ellipse: s-maj=129.5km s-min=30.9km az=104.0, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	10.26	15	Pn	Pn	18 34 50.8	-0.5
	0.1nm,0.3s,baz=241,slow=17,SNR=2.1						
QSPA	South Pole Qui	57.65	180	P	P	18 42 14.4	+0.2
	1.3nm,0.9s,baz=131,slow=19,SNR=2.4						
TORD	Torodi Ar. Bea	83.56	70	P	P	18 44 53.0	-0.2
	1.0nm,0.8s,baz=247,slow=4.2,SNR=3.7						
ZALV	Zalesovo Beam	152.93	31	PKPbc	PKPbc	18 52 21.4	+0.1
	1.7nm,0.6s,baz=315,slow=4.1,SNR=5.2						
MKAR	Makanchi Array	155.68	47	PKPab	PKPab	18 52 44.8	+0.3
	0.8nm,0.8s,baz=301,slow=2.5,SNR=4.9						

*ISCJB **15** 18:54:26.9±0.3, 32.72S±0.05×71.64W±0.09, h20km, mb4.5/28, Error ellipse: s-maj=10.6km s-min=6.5km az=170.0*
*NEIC **15** 18:54:27.6±3.0, 32.67S×71.65W, h15km±17km, mb4.7/17, Error ellipse: s-maj=10.3km s-min=6.1km az=70.0*
*IDC **15** 18:54:29.5±0.5, 32.71S×71.61W, h26km±3km, mb4.4/12, mb1 4.4/14, mb1mx4.3/19, mbtmp4.3/14, ML4.8/2, MS3.2/2, Ms1 3.2/2, ms1mx3.0/25, Error ellipse: s-maj=18.2km s-min=16.2km az=86.0*
*MOS **15** 18:54:29.2±1.4, 32.66S×71.57W, h33km, mb5.0/10, Error ellipse: s-maj=17.7km s-min=14.7km az=106.9*
ISC 15 18:54:29.0±0.3**, 3265S**±005×**7161W**±008**, h21**km**, h21**km±1.5km**:pP-P, n74, σ0.s93**/59**, mb4.5**/28**, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	3.04	71	Pn	Pn	18 55 20.4	+4.5
	10nm,0.3s,baz=236,slow=9.5,SNR=154						
CFAA				Lg		18 56 01.3	
	29nm,0.3s,baz=149,slow=19,SNR=12						
CFAA				LR	LR	18 56 37.1	
	comp=Z,201nm,18.5s,baz=109,slow=42						
LCO	Las Campanas	3.71	12	ePn	Pn	18 55 26.6	+1.5
LCO				eSn	Sn	18 56 12.1	+4.1
TRQA	Tornquist	9.53	127	ePn	Pn	18 56 45.8	+0.9
	49nm,0.9s						
LVC	Limon Verde	10.28	14	Pn	Pn	18 56 53.0	-2.3
	0.3nm,0.3s,baz=225,slow=11,SNR=6.6						
LVC				Sn	Sn	18 59 00.9	+11
	1.7nm,0.3s,baz=42,slow=18,SNR=3.2						
LVC				LR	LR	19 01 02.8	
	comp=Z,213nm,19.5s,baz=186,slow=38						
LVC	Limon Verde	10.28	14	Pn	Pn	18 56 53.0	-2.3
LVC				ePn	Pn	18 56 53.2	-2.0
LVC				Sn	Sn	18 59 00.9	+11
LVC				LR	LR	19 01 02.8	
CPUP	Villa Florida	13.93	67	Pn	Pn	18 57 45.4	+0.2
	3.4nm,0.3s,baz=217,slow=9.8,SNR=16						
CPUP				Sn	Sn	19 00 15.8	-3.4
	0.6nm,0.3s,baz=225,slow=14,SNR=2.3						
CPUP	Villa Florida	13.93	67	ePn	Pn	18 57 45.2	0.0
CPUP				Pn	Pn	18 57 45.4	+0.2
CPUP				Sn	Sn	19 00 15.8	-3.4
SIV	San Ignacio	19.14	32	P	Pn	18 58 51.6	-0.1
	0.3nm,0.3s,baz=215,slow=11,SNR=12						
NNA	Nana	21.12	346	P	P	18 59 10.2	-2.2
	25nm,1.2s,mb4.4						
EFI	East Falkland	21.43	156	P	P	18 59 14.8	-0.7
EFI				pmax	pmax		
	comp=Z,61nm,1.1s,mb4.8						
EFI	East Falkland	21.43	156	P	P	18 59 14.8	-0.6
	comp=Z,61nm,1.1s,mb4.8						
USHA	Ushuaia	22.29	175	P	P	18 59 22.8	-1.8
	comp=Z,21nm,1.0s,mb4.5,baz=330,slow=5.7,SNR=5.3						
BDFB	Brasilia	27.29	57	P	P	19 00 11.7	-0.4
	comp=Z,6.2nm,1.0s,mb4.1,baz=211,slow=16,SNR=9.0						
RPN	Rapa Nui	33.05	270	P	P	19 01 02.5	-0.5
	comp=Z,25nm,0.6s,mb5.3,baz=98,slow=1.7,SNR=2.9						
VNA3	Neumayer Olymp	50.47	158	e	P	19 03 25.1	+0.3
VNA3				e	pP	19 03 30.7	-0.8
VNA3				e		19 03 36.8	
VNA1	Neumayer--Stat	50.77	157	e	P	19 03 27.7	+0.6
VNA1				e	pP	19 03 33.5	-0.3
VNA1				e		19 03 40.1	
VNA2	Neumayer--Watz	51.12	158	e	P	19 03 30.2	+0.6
	baz=292,slow=9.3						
VNA2				e	pP	19 03 36.1	-0.3
VNA2				e		19 03 42.6	
SNAA	Sanae	52.70	158	e	P	19 03 40.6	-0.8
SNAA				e	pP	19 03 45.3	-2.9
SNAA	Sanae	52.70	158	eP	P	19 03 40.3	-1.1
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SNAA	Sanae	52.70	158	eP	P	19 03 40.3	-1.1
	comp=Z,9.5nm,1.1s,mb4.6						
TEIG	Tepich	54.94	341	eP	P	19 03 58.1	-0.3
	comp=Z,7.8nm,0.5s,mb5.0						
QSPA	South Pole Qui	57.58	180	P	P	19 04 17.1	+0.5
	comp=Z,15nm,0.9s,mb5.0,baz=168,slow=2.3,SNR=18						
QSPA	South Pole Qui	57.58	180	P	P	19 04 17.1	+0.5
TXAR	Lajitas Array	68.74	330	P	P	19 05 31.7	+0.6
	comp=Z,0.4nm,0.5s,mb3.6,baz=156,slow=9.0,SNR=5.4						
TXAR				pP	pP	19 05 39.3	+1.3
	comp=Z,0.7nm,0.6s,baz=152,slow=8.1,SNR=5.9						
WVT	Waverly	70.09	346	eP	P	19 05 38.6	-0.7
WVT				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
WVT	Waverly	70.09	346	eP	P	19 05 38.6	-0.7
	comp=Z,16nm,0.8s,mb5.0						
CCM	Cathedral Cave	72.68	344	P	P	19 05 53.6	-1.3
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CCM	Cathedral Cave	72.68	344	P	P	19 05 53.6	-1.3
	comp=Z,5.8nm,1.0s,mb4.5						
ACSO	Alum Creek Sta	73.28	351	eP	P	19 05 57.4	-1.0
	comp=Z,12nm,0.8s,mb4.9						
MAW	Mawson	74.37	164	P	P	19 06 04.8	+0.2
	comp=Z,4.9nm,0.6s,mb4.7,baz=220,slow=6.9,SNR=16						
DBIC	Dimbokro	74.41	71	P	P	19 06 05.5	-0.1
	comp=Z,5.2nm,0.9s,mb4.5,baz=192,slow=8.5,SNR=5.4						
DBIC	Dimbokro	74.41	71	eP	P	19 06 05.4	-0.3
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DBIC	Dimbokro	74.41	71	eP	P	19 06 05.4	-0.3
	comp=Z,5.0nm,0.8s,mb4.5						
ANMO	Albuquerque	74.78	331⇑	eP	P	19 06 08.1	+0.8
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	Albuquerque	74.78	331	P	P	19 06 07.5	+0.2
	comp=Z,2.1nm,1.0s,mb4.0						
SDCO	Great Sand Dun	76.83	333	eP	P	19 06 19.9	+0.9
	comp=Z,1.8nm,0.8s,mb4.0						
TSUM	Tsumeb	79.23	106	eP	P	19 06 33.3	+0.4
	comp=Z,8.9nm,0.9s,mb4.7						
ECSD	EROS,Sioux Fal	79.38	342	eP	P	19 06 32.5	-0.5
	comp=Z,7.6nm,0.9s,mb4.6						
BOSA	Boshof	80.38	118	P	P	19 06 38.9	-0.1
	comp=Z,6.7nm,0.8s,mb4.6,baz=244,slow=5.4,SNR=8.0						
ISA	Isabella	80.91	323	eP	P	19 06 42.5	+1.1
ISA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ISA	Isabella	80.91	323	eP	P	19 06 42.5	+1.1
	comp=Z,2.3nm,0.6s,mb4.3						
RSSD	Black Hills	81.93	337	eP	P	19 06 47.3	+0.7
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
RSSD	Black Hills	81.93	337	eP	P	19 06 47.3	+0.7
	comp=Z,3.0nm,0.8s,mb4.3						
LBTB	Lobatse	82.54	115	eP	P	19 06 50.5	0.0
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
LBTB	Lobatse	82.54	115	eP	P	19 06 50.5	0.0
	comp=Z,4.9nm,0.4s,mb4.9						
PDAR	Pinedale Array	82.72	333	P	P	19 06 51.8	+0.9
	comp=Z,0.5nm,0.8s,mb3.6,baz=150,slow=6.2,SNR=3.8						
NVAR	Mina Array Bea	82.99	325	P	P	19 06 53.5	+1.3
	comp=Z,1.7nm,0.7s,mb4.2,baz=161,slow=5.8,SNR=13						
NVAR				pP	pP	19 07 01.4	+2.1
	comp=Z,1.1nm,0.8s,baz=165,slow=4.7,SNR=5.4						
TORD	Torodi Ar. Bea	83.41	70	P	P	19 06 54.8	-0.2
	comp=Z,5.5nm,0.8s,mb4.7,baz=257,slow=4.6,SNR=27						
ULM	Lac du Bonnet	85.29	345	P	P	19 07 02.8	-0.9
	comp=Z,1.9nm,0.7s,mb4.4,baz=184,slow=7.0,SNR=4.5						
HLID	Hailey	85.34	330	P	P	19 07 05.0	+0.9
	comp=Z,1.8nm,1.0s,mb4.2						
LSZ	Lusaka	89.88	108	eP	P	19 07 27.4	+0.6
LSZ				pmax	pmax		
	comp=Z,28nm,1.9s,mb5.3						
LSZ	Lusaka	89.88	108	eP	P	19 07 27.4	+0.6
	comp=Z,28nm,1.9s,mb5.3						
YKA	Yellowknife Ar	100.90	341	P	Pdif	19 08 14.6	-1.8
	comp=Z,0.1nm,0.4s,baz=141,slow=5.0,SNR=3.6						
KONO	Kongsberg	113.39	33⇑	iPKIKP	PKiKP	19 13 02.2	-2.2
ASAR	Alice Springs	118.93	207	PKP	PKPdf	19 13 14.5	-1.8
	comp=Z,0.2nm,0.8s,baz=112,slow=1.9,SNR=3.2						
BRTR	Keskin Array B	120.86	60	PKP	PKPdf	19 13 19.4	0.0
	comp=Z,0.5nm,0.8s,baz=245,slow=3.0,SNR=2.9						
AKASG	Malin Array Be	121.01	47	PKP	PKPdf	19 13 17.7	-1.6
	comp=Z,0.3nm,0.3s,baz=275,slow=2.3,SNR=5.0						
WRA	Warramunga Arr	122.11	209	PKP	PKPdf	19 13 21.0	-1.6
	comp=Z,0.2nm,0.4s,baz=173,slow=1.5,SNR=8.1						
OBN	Obninsk	126.20	43⇓	iPKIKP	PKPdf	19 13 25.7	-3.4
OBN				e		19 15 29.1	
OBN				pmax	pmax		
	comp=Z,24nm,1.6s						
BRVK	Borovoye	145.97	42	ePKP2	PKPab	19 14 05.8	-1.2
BVAR	Borovoye Array	146.04	42	PKPbc	PKPbc	19 14 06.7	+0.1
	comp=Z,4.0nm,0.5s,baz=298,slow=2.8,SNR=36						
BVAR				pPKPbc	pPKPbc	19 14 15.2	+1.3
	comp=Z,2.2nm,0.6s,baz=295,slow=1.5,SNR=7.0						
YAK	Yakutsk	147.58	341	ePKP2	PKPdf	19 14 09.3	+1.2
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.5s						
AML	Almayashu	151.02	61	ePKPbc	PKPbc	19 14 20.7	+0.7
AAK	Ala-Archa	151.53	60c	iPKIKP	PKPbc	19 14 21.9	+0.7
AAK	Ala-Archa	151.53	60	ePKPbc	PKPbc	19 14 21.5	+0.3
NVS	Novosibirsk	151.60	31	i PKIKP	PKPdf	19 14 20.9	+6.2
NVS				i		19 14 29.4	
NVS				pmax	pmax		
	comp=Z,15nm,1.0s						
NVS				pmax	pmax		
	comp=N,8.0nm,1.9s						
NVS				pmax	pmax		
	comp=E,16nm,2.1s						
KURK	Kurchatov	151.64	42	PKP	PKPdf	19 14 15.1	+0.2
	comp=E,0.7nm,0.9s,baz=291,slow=2.7,SNR=11						
KURK				PKPbc	PKPbc	19 14 21.1	-0.1
	comp=E,8.7nm,0.7s,baz=300,slow=3.0,SNR=12						
KURK				pPKPbc	pPKPbc	19 14 29.6	+1.1
	comp=E,5.6nm,0.7s,baz=299,slow=3.0,SNR=14						
KURK	Kurchatov	151.64	42	PKP	PKPdf	19 14 15.1	+0.2
KURK				PKPbc	PKPbc	19 14 21.1	-0.1
KURK				pPKPbc	pPKPbc	19 14 29.6	+1.1
KURK				ePKPab	PKPab	19 14 29.7	-0.2
TKM2	Tokmak 2	152.28	59	ePKIKP	PKPbc	19 14 22.8	-0.1
ZALV	Zalesovo Beam	152.89	31	PKP	PKPdf	19 14 15.9	-0.8
	comp=E,0.6nm,0.6s,baz=264,slow=3.0,SNR=5.6						
ZALV				PKPbc	PKPbc	19 14 23.6	-0.3
	comp=E,9.7nm,0.7s,baz=296,slow=3.2,SNR=44						
ZALV				pPKPbc	pPKPbc	19 14 32.3	+1.2
	comp=E,5.5nm,0.6s,baz=292,slow=3.5,SNR=9.9						
BOD	Bodaibo	154.54	353	ePKIKP	pPKPbc	19 14 35.5	+0.9
MK31	Makanchi Array	155.59	47	ePKP2	PKPab	19 14 46.3	-0.5
MKAR	Makanchi Array	155.59	47	PKP	PKPdf	19 14 20.6	0.0
	comp=E,0.8nm,0.9s,baz=225,slow=0.6,SNR=3.4						
MKAR				PKPbc	pPKPdf	19 14 29.5	+1.5
	comp=E,0.8nm,0.8s,baz=295,slow=2.4,SNR=4.6						
MKAR				PKPab	PKPab	19 14 47.0	+0.2
	comp=E,2.1nm,0.7s,baz=298,slow=3.6,SNR=17						
MKAR				pPKPab	pPKPab	19 14 55.6	+1.7
	comp=E,0.7nm,0.7s,baz=267,slow=2.4,SNR=3.1						
MKAR	Makanchi Array	155.59	47	PKIKP	PKPdf	19 14 20.7	0.0
MKAR						19 14 29.5	

*CSEM **15** 19:07:17.3±0.1, 38.30N×39.36E, h13km±1km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.6km az=38.0*
*ISCJB **15** 19:07:18.5±0.6, 38.26N±0.04×39.34E±0.04, h2km±7km, Error ellipse: s-maj=6.6km s-min=4.3km az=25.5*
*DDA **15** 19:07:18.1, 38.33N×39.36E, h7km±5km, Md2.8*
*ISK **15** 19:07:18.0, 38.27N×39.34E, h7km, MD2.8*
ISC 15 19:07:18.9±0.6**, 3828N**±004×**3935E**±004**, h6**km±7km**, n8, σ0.s76**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.11	343	PG	Pg	19 07 20.8	-0.5
SVRC				eSG	Sg	19 07 22.9	+0.1
ELZG	Elazig	0.36	308	eP	Pg	19 07 25.9	0.0
ELZG				eS	Sg	19 07 31.2	+0.6
DIYA	Diyarbakir	0.71	120	eP	Pg	19 07 32.1	-0.4
DIYA				eS	Sg	19 07 42.3	+0.6
MYA	Malataya	0.72	274	ePG	Pg	19 07 32.2	-0.7
MYA				eSG	Sg	19 07 43.0	+0.7
URFA	Urfa	0.93	207	ePG	Pg	19 07 36.6	-0.2
URFA				eSG	Sg	19 07 49.3	+0.4
AKCD	Akcadag	1.12	271	eP	Pg	19 07 39.0	-1.4
AKCD				eS	Sg	19 07 55.4	+0.5
MARD	Mardin	1.49	130	eP	Pn	19 07 47.1	+0.9
MARD				eS	Sn	19 08 04.7	-1.3
BEST	Besiri	1.57	104	eP	Pn	19 07 46.5	-0.8
BEST				eS	Sn	19 08 09.3	+1.4

CASC 15 19:11:08.3±1.5**, 1335N**×**8986W, h34**km±3km**, MD3.7, 6C-10D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.54	26⇓	eP	x	19 11 19.7	
SBLS				eS	x	19 11 28.5	
SNJE	San Jose	0.57	26⇓	eP	x	19 11 20.0	
SNJE				eS	x	19 11 29.7	
RTR	El Retiro	0.58	21⇓	eP	x	19 11 20.4	
RTR				eS	x	19 11 29.6	
BOQS	Boqueron	0.68	56⇑	eP	x	19 11 21.9	
BOQS				eS	x	19 11 32.7	
SNET	Serv Nac Est T	0.70	61⇓	eP	x	19 11 21.9	
SNET				eS	x	19 11 32.8	
RBDL	Robledal	0.78	13⇓	iP	x	19 11 23.1	
RBDL				eS	x	19 11 33.7	
LFRS	El Faro	0.82	71⇓	eP	x	19 11 23.4	
LFRS				eS	x	19 11 34.9	
LBRS	Las Brisas	0.88	64⇑	eP	x	19 11 24.8	
LBRS				eS	x	19 11 36.1	
IXG	Ixpaco	1.00	325⇑	eP	Pn	19 11 25.2	-0.7
IXG				eS	Sn	19 11 40.9	+2.1
SNVI	San Vicente	1.03	75⇑	eP	x	19 11 26.5	
SNVI				eS	x	19 11 40.5	
MTO2	Montecristo 2	1.15	25⇓	eP	x	19 11 28.2	
PCG	Pacaya	1.26	325	eP	Pn	19 11 31.1	+1.5
PCG				eS	Sn	19 11 45.3	-0.1
NBG	Las Nubes	1.31	339⇑	eP	Pn	19 11 31.5	+1.3
NBG				eS	Sn	19 11 48.5	+1.8
VSM	San Miguel	1.55	87⇓	eP	x	19 11 34.4	
VSM				eS	x	19 11 54.0	
BLLM	Bellamira	1.58	87⇓	eP	x	19 11 34.6	
BLLM				eS	x	19 11 54.0	
CAHU	Cacacuatique	1.66	75⇑	eP	x	19 11 35.4	
MRL	Marmol	1.71	6⇓	eP	Pn	19 11 37.2	+1.4
CNCH	Conchagua	1.98	92	eP	x	19 11 39.5	
CNCH				eS	x	19 12 04.4	

IDC 15 19:28:20.1±1.6**, 134N**×**3067W, h0**km**, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.5**/21**, mbtmp3.8**/3**, Error ellipse: s-maj=73.7km s-min=34.0km az=5.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	34.12	68	P	P	19 35 06.9	-0.1
	1.7nm,0.9s,baz=256,slow=9.8,SNR=7.2						
TXAR	Lajitas Array	74.54	300	P	P	19 40 01.2	+0.1
	0.3nm,0.7s,baz=99,slow=10,SNR=3.2						
YKA	Yellowknife Ar	86.01	332	P	P	19 41 02.4	+0.2
	0.9nm,1.0s,baz=92,slow=5.3,SNR=6.6						
ASAR	Alice Springs	153.24	147	PKPbc	PKPbc	19 48 21.0	+0.1
	1.0nm,1.0s,baz=221,slow=1.2,SNR=5.4						

CASC 15 19:37:24.0±1.9**, 1369N**×**9126W, h30**km±21km**, MD3.6, 1C-8D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	0.72	329⇓	eP	Pb	19 37 38.8	+0.7
JAT				eS	Sb	19 37 46.5	-1.2
IXG	Ixpaco	0.92	58⇓	eP	Pn	19 37 41.1	+0.3
IXG				eS	Sn	19 37 54.8	+1.7
PCG	Pacaya	0.94	42⇓	eP	Pn	19 37 42.1	+0.8
NBG	Las Nubes	1.25	45⇑	eP	Pn	19 37 47.2	+1.6
NBG				eS	Sn	19 38 04.6	+3.1
RTR	El Retiro	1.58	82	eP	x	19 37 50.3	
RTR				eS	x	19 38 11.3	
RBDL	Robledal	1.58	74⇓	eP	x	19 37 50.7	
RBDL				eS	x	19 38 10.0	
SBLS	San Blas	1.59	85⇓	eP	x	19 37 50.5	
SBLS				eS	x	19 38 10.8	
SNJE	San Jose	1.61	84⇓	eP	x	19 37 51.0	
SNJE				eS	x	19 38 11.1	
BOQS	Boqueron	1.92	88⇓	eP	x	19 37 55.4	
BOQS				eS	x	19 38 19.9	
MTO2	Montecristo 2	1.97	69	eP	x	19 37 55.4	
LFRS	El Faro	2.14	92⇓	eP	x	19 37 58.5	
LFRS				eS	x	19 38 24.4	

*CSEM **15** 19:48:46.8±0.1, 39.25N×30.78E, h12km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.6km az=90.0*
*ISCJB **15** 19:48:47.7±0.6, 39.26N±0.03×30.81E±0.05, h7km±7km, Error ellipse: s-maj=6.3km s-min=4.9km az=164.3*
*DDA **15** 19:48:47.6, 39.27N×30.79E, h7km±3km, Md2.8*
*ISK **15** 19:48:47.2, 39.25N×30.82E, h18km, MD2.7*
ISC 15 19:48:48.1±0.6**, 3926N**±003×**3080E**±005**, h12**km±6km**, n11, σ0.s84**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESKT	Eskisehir	0.26	8	PG	Pg	19 48 53.3	-0.2
ESKT				eSG	Sg	19 48 58.3	+1.2
ESKT	Eskisehir	0.26	8	i P	Pg	19 48 53.4	-0.1
ESKT				i S	Sg	19 48 56.8	-0.3
SEYT	Eskypehyr	0.26	8	i P	Pg	19 48 53.4	-0.1
BOLV	Bolvadin	0.56	168	i P	Pg	19 48 58.9	0.0
BOLV				i S	Sg	19 49 06.4	+0.1
ALT	Altintas	0.57	249	ePG	Pg	19 48 59.8	+0.5
ALT				eSG	Sg	19 49 07.4	+0.5
BORA	Eskisehir	0.67	337	i P	Pg	19 49 01.1	-0.1
BORA				i S	Sg	19 49 10.4	+0.4
SHUT	Suhut-Afyon	0.73	195	ePG	Pg	19 49 00.9	-1.4
KIZT	Kizilcal	0.92	114	ePG	Pg	19 49 05.4	-0.5
GDZ	Gediz	1.04	261	eP	Pb	19 49 07.0	-1.0
GDZ				eS	Sb	19 49 22.4	+0.8
GULT	Gulveren	1.19	349	ePN	Pn	19 49 09.6	-0.9
KDHN	Kadinhani	1.27	125	eP	Pn	19 49 11.1	-0.4
KDHN				eS	Sb	19 49 30.4	+2.4

*CSEM **15** 20:05:58.5±0.1, 38.81N×33.07E, h2km, MD2.9, Error ellipse: s-maj=5.8km s-min=2.7km az=144.0*
*ISK **15** 20:05:58.8, 38.81N×33.08E, h5km, MD2.9*
*ISCJB **15** 20:05:59.9±0.6, 38.82N±0.06×33.04E±0.05, h10km, Error ellipse: s-maj=9.3km s-min=3.8km az=154.3*
*DDA **15** 20:05:59.5, 38.77N×33.11E, h7km±1km, Md2.9*
ISC 15 20:06:00.0±0.7**, 3880N**±006×**3308E**±005**, h3**km±11km**, n10, σ0.s93**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAMT	Kaman	0.75	41	ePG	Pg	20 06 13.6	-0.8
KAMT				eSG	Sg	20 06 24.4	+0.2
KDHN	Kadinhani	0.80	250	eP	Pg	20 06 15.2	-0.2
KDHN				eS	Sg	20 06 27.2	+1.4
KDHN	Kadinhani	0.80	250	eP	Pg	20 06 15.2	-0.2
KDHN				eS	Sg	20 06 27.2	+1.4
LADK	Ladik-KONYA	0.82	223	ePG	Pg	20 06 15.9	+0.2
KIZT	Kizilcal	0.94	275	ePG	Pg	20 06 17.5	-0.5
KIZT				eSG	Sg	20 06 30.7	+0.5
KONT	Konya--Tatoy	1.02	214	ePG	Pg	20 06 18.7	-0.9
CDAG	Cicekdag	1.30	50	eP	Pg	20 06 24.2	-0.7
CDAG				eS	Sg	20 06 42.7	+1.0
AVNT	Avonos	1.39	90	eP	Pn	20 06 25.1	-1.2
AVNT				eS	Sb	20 06 46.4	+1.7
ELDT	Eldivan	1.71	9	eP	Pn	20 06 30.1	-0.6
ELDT				eS	Sn	20 06 56.8	+3.7
ELDT	Eldivan	1.71	9	eP	Pn	20 06 30.0	-0.7
ELDT				eS	Sn	20 06 56.8	+3.8

*CSEM **15** 21:17:33.3±1.0, 37.60N×37.89E, h25km, MD2.7, Error ellipse: s-maj=27.1km s-min=14.6km az=127.0*
*ISK **15** 21:17:36.2, 37.81N×37.69E, h6km, MD2.7*

DDA 15 21:17:37.8,3785N×3763E,h7km±3km,Md2.8,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.49**	**186**	eP	Pg	21 17 47.8	+0.5
GZT				eS	Sg	21 17 54.8	+1.0
AKCD	**Akcadag**	**0.50**	**27**	⇓iP	Pg	21 17 47.4	-0.1
AKCD				iS	Sg	21 17 55.4	+1.3
KMRS	**Kahramanmaras**	**0.67**	**240**	ePG	Pg	21 17 50.5	-0.2
KMRS				eSG	Sg	21 17 59.4	-0.1
SARI	**SarD1z-Kayseri**	**1.11**	**319**	ePN	Pn	21 17 59.1	-0.6
SARI				eSN	Sn	21 18 16.0	+0.8
DARE	**Darende-Malaty**	**1.11**	**7**	ePG	Pg	21 17 51.9	-7.2
DARE				eSG	Pn	21 18 02.4	+2.6

*ISCJB **15** 21:21:28.8±1.0,2.0N±0.1×128.6E±0.2,h33km,mb3.8/6, Error ellipse: s-maj=25.9km s-min=14.7km az=159.8*
*NEIC **15** 21:21:30.8±0.8,2.07N×128.73E,h35km,mb3.9/2,Error ellipse: s-maj=20.9km s-min=11.7km az=69.0*
*IDC **15** 21:21:40.6±10.0,1.68N×128.05E,h130km±104km,mb3.5/5, mb1 3.6/6,mb1mx3.4/18,mbtmp3.5/6,ML3.8/1,Error ellipse: s-maj=86.4km s-min=16.9km az=61.0*
ISC 15 21:21:30.9±1.0,**2.0N**±0.1×**128.7E**±0.2,**h35**km,**n11**,σ**0^{s}67**/11, **mb3.8**/6,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.33**	**232**	P	**Pn**	**21 24 09.6**	**-0.8**
	0.7nm,0.3s,baz=63,slow=3.4,SNR=3.7						
KAPI	**Kappang**	**11.33**	**232**	ePn	**Pn**	**21 24 11.4**	**+1.0**
WRAB	**Tennant Creek**	**22.53**	**166**	eP	**P**	**21 26 28.9**	**+1.1**
	2.2nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**22.54**	**166**	P	**P**	**21 26 27.6**	**-0.3**
	1.6nm,0.5s,mb3.7,baz=343,slow=11,SNR=34						
WB2	**Warramunga Arr**	**22.54**	**166**	eP	**P**	**21 26 27.9**	**-0.1**
ASAR	**Alice Springs**	**26.05**	**169**	P	**P**	**21 27 00.6**	**-0.6**
	0.2nm,0.3s,mb3.1,baz=348,slow=7.3,SNR=4.5						
STKA	**Stephens Creek**	**35.89**	**161**	eP	**P**	**21 28 27.8**	**0.0**
	2.5nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**35.89**	**161**	P	**P**	**21 28 27.0**	**-0.8**
	1.2nm,0.4s,mb4.1,baz=8.8,slow=7.2,SNR=7.4						
STKA	**Stephens Creek**	**35.89**	**161**	eP	**P**	**21 28 28.1**	**+0.4**
	0.3nm,1.1s,mb3.1						
SONM	**Songino Array**	**49.52**	**340**	P	**P**	**21 30 18.7**	**+0.7**
	1.2nm,0.6s,mb4.1,baz=150,slow=8.0,SNR=13						
MKAR	**Makanchi Array**	**60.04**	**325**	P	**P**	**21 31 33.6**	**-0.7**
	1.8nm,0.5s,mb4.4,baz=116,slow=8.3,SNR=37						

*CSEM **15** 21:26:43.1±0.1,39.63N×35.04E,h5km,MD3.1,Error ellipse: s-maj=4.2km s-min=3.2km az=21.0*
*ISK **15** 21:26:43.7,39.63N×35.07E,h11km,MD3.1*
*ISCJB **15** 21:26:44.1±0.6,39.63N±0.03×35.07E±0.03,h6km±5km, Error ellipse: s-maj=5.6km s-min=4.1km az=11.3*
*DDA **15** 21:26:44.5,39.63N×35.07E,h7km±1km,Md2.9*
ISC 15 21:26:44.8±0.5,**39.64N**±0.03×**35.07E**±0.03,**h10**km±4km,**n15**, σ**0^{s}67**/25,**1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.20**	**89**	PG	**Pg**	**21 26 48.5**	**-0.4**
YOZ				eSG	**Sg**	**21 26 50.9**	**-0.7**
CDAG	**Cicekdag**	**0.54**	**269**	⇑iP	**Pg**	**21 26 55.1**	**0.0**
CDAG				iS	**Sg**	**21 27 02.7**	**+0.4**
AVNT	**Avonos**	**0.87**	**191**	eP	**Pg**	**21 27 01.1**	**-0.5**
AVNT				eS	**Sg**	**21 27 13.6**	**+0.7**
AVNT	**Avonos**	**0.87**	**191**	eP	**Pg**	**21 27 01.0**	**-0.5**
AVNT				eS	**Sg**	**21 27 13.6**	**+0.7**
BNN	**Bunyan**	**0.99**	**142**	ePG	**Pg**	**21 27 03.1**	**-0.7**
BNN				eSG	**Sg**	**21 27 17.1**	**+0.5**
CTKT	**Corum**	**1.01**	**348**	eP	**Pg**	**21 27 04.4**	**+0.2**
CTKT				eS	**Sg**	**21 27 18.5**	**+1.3**
KAMT	**Kaman**	**1.08**	**256**	ePN	**Pn**	**21 27 04.8**	**-1.1**
KAMT				eSN	**Sn**	**21 27 20.2**	**-0.8**
PINB	**Pinarbasi**	**1.41**	**132**	eP	**Pn**	**21 27 11.0**	**+0.5**
PINB				eS	**Sn**	**21 27 31.1**	**+1.9**
CANT	**Cankiri**	**1.47**	**312**	ePN	**Pn**	**21 27 11.2**	**-0.1**
SVSK	**Karacayir**	**1.51**	**79**	ePN	**Pn**	**21 27 11.2**	**-0.7**
SVSK				eSN	**Sn**	**21 27 31.2**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.59**	**127**	ePN	**Pn**	**21 27 13.5**	**+0.5**
KVT	**Kavak**	**1.62**	**27**	ePN	**Pn**	**21 27 13.6**	**+0.2**
KMRS	**Kahramanmaras**	**2.57**	**145**	ePN	**Pn**	**21 27 26.1**	**-0.3**
KIZT	**Kizilcal**	**2.59**	**254**	ePN	**Pn**	**21 27 26.6**	**-0.1**
KEMA	**Kemaliye**	**2.68**	**97**	eP	**Pb**	**21 27 32.9**	**+0.1**
KEMA				eS	**Sg**	**21 28 10.6**	**-0.1**

*CSEM **15** 21:33:00.8±0.1,40.26N×29.54E,h10km,MD2.8,Error ellipse: s-maj=3.6km s-min=2.7km az=7.0*
*ISCJB **15** 21:33:01.5±0.6,40.29N±0.06×29.53E±0.04,h8km±11km, Error ellipse: s-maj=10.3km s-min=4.7km az=16.9*
*DDA **15** 21:33:01.9,40.25N×29.47E,h7km±1km,Md2.8*
*ISK **15** 21:33:01.0,40.28N×29.55E,h6km,MD2.8*
ISC 15 21:33:01.8±0.6,**40.28N**±0.04×**29.53E**±0.04,**h5**km±14km,**n11**, σ**0^{s}68**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADVT	**Abdulvahap**	**0.22**	**46**	ePG	**Pg**	**21 33 06.5**	**+0.3**
ADVT				eSG	**Sg**	**21 33 08.7**	**-0.4**
CAVI	**Cavuskoy**	**0.25**	**107**	ePG	**Pg**	**21 33 06.2**	**-0.4**
CAVI				eSG	**Sg**	**21 33 09.3**	**-0.7**
GEMT	**Gemlik**	**0.30**	**301**	ePG	**Pg**	**21 33 07.9**	**+0.3**
GEMT				eSG	**Sg**	**21 33 12.0**	**+0.4**
YLV	**Yalova**	**0.31**	**338**	ePG	**Pg**	**21 33 08.1**	**+0.3**
GULT	**Gulveren**	**0.77**	**78**	ePG	**Pg**	**21 33 16.3**	**-0.2**
BORA	**Eskisehir**	**0.81**	**119**	eP	**Pg**	**21 33 17.0**	**-0.4**
BORA				eS	**Sg**	**21 33 30.4**	**+2.5**
KCT	**Karacabey**	**0.90**	**270**	ePG	**Pg**	**21 33 19.2**	**+0.2**
DURS	**Dursunbey**	**1.06**	**231**	eP	**Pg**	**21 33 21.2**	**-0.8**
DURS				eS	**Sg**	**21 33 35.4**	**-0.2**
DURS	**Dursunbey**	**1.06**	**231**	eP	**Pg**	**21 33 21.2**	**-0.8**
DURS				eS	**Sg**	**21 33 35.4**	**-0.3**
GDZ	**Gediz**	**1.19**	**182**	eP	**Pg**	**21 33 23.9**	**-0.6**
GDZ				eS	**Sg**	**21 33 40.6**	**+0.7**
ESKT	**Eskisehir**	**1.27**	**126**	ePN	**Pn**	**21 33 26.1**	**-0.1**

MEX 15 21:58:54.9±1.2,**19.12N**×**102.36W**,**h82**km±25km,**MD3.9**, **Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZ5V		**1.23**	**287**	iP	Pn	21 59 15.2	-1.6
EZ5V				iS	Sn	21 59 32.6	-0.7
MOIG	**Morelia**	**1.24**	**63**	iP	Pn	21 59 15.4	-1.5
MOIG				iS	Sn	21 59 31.9	-1.6
MMIG	**Aquila**	**1.25**	**229**	iP	Pn	21 59 15.2	-1.9
MMIG				iS	Sn	21 59 32.4	-1.3
SFJM	**Santa Fe**	**1.51**	**335**	iP	Pn	21 59 20.5	+0.1
SFJM				iS	Sn	21 59 37.5	-2.1
R15V		**1.54**	**272**	eP	Pn	21 59 20.0	-0.8
R15V				iS	Sn	21 59 37.8	-2.5
ZIIG	**Zihuatanejo**	**1.73**	**150**	eP	Pn	21 59 22.7	-0.5
ZIIG				iS	Sn	21 59 44.6	-0.1

*ISCJB **15** 22:05:58.6±1.4,5.55S±0.08×148.70E±0.08,h148km±13km, mb4.5/10,Error ellipse: s-maj=15.3km s-min=9.6km az=43.6*
*IDC **15** 22:06:01.2±1.3,5.73S×148.73E,h160km±11km,mb4.0/7, mb1 4.3/11,mb1mx4.0/18,mbtmp4.2/11,MS3.4/3, Ms1 3.4/3,ms1mx2.9/30,Error ellipse: s-maj=22.3km s-min=9.2km az=116.0*
*NEIC **15** 22:06:02.0±1.3,5.61S×148.72E,h169km±12km,mb4.8/8, Error ellipse: s-maj=11.1km s-min=9.4km az=146.0*
ISC 15 22:06:01.5±1.2,**5.66S**±0.07×**148.66E**±0.08,**h157**km±10km, **n36**,σ**0^{s}98**/39,**mb4.5**/10,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.01**	**202**	P	**Pn**	**22 07 02.3**	**+0.3**
	17nm,0.3s,baz=32,slow=4.9,SNR=33						
PMG				S	**Sn**	**22 07 48.3**	**-1.0**
	78nm,0.3s,baz=195,slow=15,SNR=8.8						
PMG				LR	LR	22 08 34.0	
	comp=Z,196nm,19.2s,baz=356,slow=38						
PMG	**Port Moresby**	**4.01**	**202**	ePn	**Pn**	**22 07 02.5**	**+0.4**
PMG				eSn	**Sn**	**22 07 54.0**	**+4.8**
PMG				LR	LR	22 08 34.0	
COEN	**Coen**	**9.86**	**213**	ePn	**Pn**	**22 08 22.0**	**+2.5**
	43nm,0.8s						
COEN				eSn	**Sn**	**22 10 06.8**	**-2.1**
HNR	**Honiara**	**11.80**	**109**	P	**Pn**	**22 08 43.3**	**-1.7**
	9.3nm,0.3s,baz=231,slow=4.5,SNR=10						
HNR	**Honiara**	**11.80**	**109**	ePn	**Pn**	**22 08 43.8**	**-1.3**
CTA	**Charters Tower**	**14.53**	**189**	eP	**Pn**	**22 09 21.4**	**+1.6**
	28nm,1.1s						
CTA	**Charters Tower**	**14.53**	**189**	P	**Pn**	**22 09 20.0**	**+0.2**
	1.0nm,0.3s,baz=12,slow=15,SNR=16						
CTA				LR	LR	22 14 15.1	
	comp=Z,91nm,18.1s,baz=45,slow=34						
CTAO	**Charters Tower**	**14.53**	**189**	ePn	**Pn**	**22 09 21.2**	**+1.3**
	43nm,1.0s						
KAKA	**Kakadu**	**17.47**	**245**	eP	x	22 09 34.3	
	20nm,0.6s						
KAKA				eS	x	22 12 46.0	
EIDS	**Eidsvold**	**19.74**	**174**	eP	**P**	**22 10 20.4**	**+1.3**
	33nm,0.7s						
WRAB	**Tennant Creek**	**19.88**	**223**	eP	**P**	**22 10 21.3**	**+0.6**
	83nm,0.6s						
WB2	**Warramunga Arr**	**19.88**	**223**	eP	**P**	**22 10 21.3**	**+0.6**
WB2				e		22 10 24.7	
WB2				eS	**S**	**22 13 55.7**	**-0.4**
WRA	**Warramunga Arr**	**19.89**	**223**	P	**P**	**22 10 21.2**	**+0.3**
	9.4nm,0.3s,baz=50,slow=11,SNR=204						
WRA				S	**S**	**22 13 55.2**	**-1.1**
	baz=41,slow=18,SNR=11						
WRA				ScP	ScP	22 17 52.2	-1.1
	baz=44,slow=2.4,SNR=5.1						
ASAR	**Alice Springs**	**22.86**	**217**	P	**P**	**22 10 52.1**	**+0.7**
	41nm,0.7s,mb5.0,baz=46,slow=9.2,SNR=471						
ASAR				S	**S**	**22 14 50.5**	**+1.5**
	4.1nm,0.9s,baz=40,slow=16,SNR=5.3						
ASAR				ScP	ScP	22 17 59.2	-1.3
	1.4nm,0.8s,baz=23,slow=2.4,SNR=4.4						
DZM	**Mont Dzumac**	**23.71**	**135**	eP	**P**	**22 10 58.0**	**-1.2**
DZM	**Mont Dzumac**	**23.71**	**135**	eP	**P**	**22 10 59.0**	**-0.2**
	34nm,0.8s,mb4.9						
ARMA	**Armidale**	**24.79**	**174**	eP	**P**	**22 11 09.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**25.66**	**239**	eP	**P**	**22 11 16.8**	**-0.1**
	140nm,0.5s						
FITZ				eS	**S**	**22 15 50.5**	**+17**
FITZ	**Fitzroy Crossi**	**25.66**	**239**	eP	**P**	**22 11 17.0**	**+0.1**
	110nm,0.5s						
FITZ				eS	**S**	**22 15 50.5**	**+17**
STKA	**Stephens Creek**	**26.91**	**193**	eP	**P**	**22 11 27.2**	**-0.8**
	2.8nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**26.91**	**193**	P	**P**	**22 11 26.8**	**-1.2**
	2.5nm,0.5s,mb4.1,baz=348,slow=7.1,SNR=10						
CNB	**Canberra Magne**	**29.52**	**179**	eP	**P**	**22 11 51.6**	**+0.5**
FORT	**Forrest**	**31.61**	**215**	eP	**P**	**22 12 09.3**	**-0.3**
	21nm,0.8s,mb4.9						
TOO	**Toolangi**	**31.90**	**185**	eP	**P**	**22 12 12.5**	**+0.5**
MBWA	**Marble Bar**	**31.99**	**238**	eP	**P**	**22 12 12.9**	**-0.2**
	12nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**38.76**	**224**	eP	**P**	**22 13 09.7**	**-1.1**
	11nm,0.5s,mb4.8						
MUN	**Mundaring**	**40.07**	**225**	eP	**P**	**22 13 21.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**54.55**	**297**	P	**P**	**22 15 13.2**	**-0.6**
	0.2nm,0.3s,baz=131,slow=6.6,SNR=4.2						
PETK	**Petropavlovsk-**	**59.04**	**6**	P	**P**	**22 15 45.1**	**+0.4**
	12nm,0.6s,mb4.9,baz=154,slow=6.0,SNR=30						
PPT	**Papeete**	**61.41**	**107**	LR	LR	22 35 18.8	
	comp=Z,152nm,21.6s,baz=6.3,slow=29						
SONM	**Songino Array**	**64.92**	**330**	P	**P**	**22 16 25.5**	**+1.4**
	0.4nm,0.3s,mb3.7,baz=143,slow=7.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**79.61**	**327**	P	**P**	**22 17 49.8**	**-1.2**
	1.1nm,0.4s,mb3.8,baz=69,slow=7.9,SNR=2.6						
YKA	**Yellowknife Ar**	**98.10**	**28**	P	**P**	**22 19 19.0**	**-0.9**
	0.9nm,0.9s,mb4.2,baz=277,slow=5.1,SNR=9.2						
TORD	**Torodi Ar. Bea**	**146.60**	**285**	PKPbc	PKPbc	22 25 23.5	-2.1
	0.9nm,0.5s,baz=94,slow=2.8,SNR=13						
TORD	**Torodi Ar. Bea**	**146.60**	**285**	PKPbc	PKPbc	22 25 23.5	-2.1
BDFB	**Brasilia**	**153.16**	**142**	PKPbc	PKPbc	22 25 39.9	-1.7
	1.1nm,0.4s,baz=168,slow=27,SNR=5.3						

*ISCJB **15** 22:12:27.4±0.4,44.98N±0.02×14.76E±0.02,h11km±2km, Error ellipse: s-maj=3.3km s-min=2.6km az=144.2*
*CSEM **15** 22:12:28.4±0.1,45.00N×14.82E,h12km,ML3.5/10,Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*
*NEIC **15** 22:12:29.7±0.4,45.07N×14.75E,h10km,ML2.7(LJU), ML3.0(ROM),Error ellipse: s-maj=4.9km s-min=3.3km az=138.0*
*VIE **15** 22:12:29.6±0.9,45.06N×14.81E,h8km±3km,mb2.4/8, ML3.0/8,Error ellipse: s-maj=5.5km s-min=3.4km az=168.0*
*ROM **15** 22:12:29.8±0.8,45.06N×14.92E,h10km,Md3.1/9,Ml3.0/4, Error ellipse: s-maj=12.3km s-min=5.2km az=81.0*
*PRU **15** 22:12:30.3,45.06N×14.88E,h2km*
*LDG **15** 22:12:30.8±0.3,44.91N×14.85E,h10km,Ml3.2/9,Error ellipse: s-maj=6.5km s-min=4.1km az=136.0*
ISC 15 22:12:29.0±0.4,**45.01N**±0.02×**14.78E**±0.02,**h8**km±2km,**n113**, σ**1^{s}15**/194,**18C-11D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.45**	**172**	ePg	**Pg**	**22 12 38.3**	**+0.7**
NVLJ				Sg	**Sg**	**22 12 46.0**	**+2.4**
NVLJ	**Novalja**	**0.45**	**172**	ePg	**Pg**	**22 12 38.3**	**+0.6**
NVLJ				Sg	**Sg**	**22 12 45.9**	**+2.4**
KNDS	**Knezji Dol**	**0.59**	**331**	iSg	**Sg**	**22 12 48.8**	**+0.5**
BOJS	**Bojanci**	**0.60**	**33**	⇓iPg	**Pg**	**22 12 40.2**	**-0.3**
BOJS				iSg	**Sg**	**22 12 48.7**	**+0.4**
BOJS							
	comp=Z,199nm,0.1s						
BOJS	**Bojanci**	**0.60**	**33**	⇓iPg	**Pg**	**22 12 40.2**	**-0.3**
BOJS				iSg	**Sg**	**22 12 48.7**	**+0.3**
BOJS	**Bojanci**	**0.60**	**33**	⇓iPg	**Pg**	**22 12 40.2**	**-0.3**
BOJS				iSg	**Sg**	**22 12 48.7**	**+0.4**
SKDS	**Skadanscina**	**0.77**	**315**	iPg	**Pg**	**22 12 42.9**	**-0.9**
SKDS				iSg	**Sg**	**22 12 54.2**	**+0.5**
CEY	**Cerknica**	**0.78**	**341**	⇑iPg	**Pg**	**22 12 43.3**	**-0.6**
CEY				iSg	**Sg**	**22 12 54.5**	**+0.5**
CEY							
	comp=Z,210nm,0.1s						
CEY	**Cerknica**	**0.78**	**341**	⇓ePn	**Pn**	**22 12 43.1**	**-3.1**
CEY	**Cerknica**	**0.78**	**341**	⇑iPg	**Pg**	**22 12 43.3**	**-0.6**
CEY				eSn	**Sg**	**22 12 54.3**	**+0.3**
CEY				iSg	**Sg**	**22 12 54.5**	**+0.5**
CEY	**Cerknica**	**0.78**	**341**	⇑iPg	**Pg**	**22 12 43.3**	**-0.6**
CEY				iSg	**Sg**	**22 12 54.5**	**+0.5**
VISS	**Visnje**	**0.80**	**3**	iPg	**Pg**	**22 12 43.7**	**-0.7**
VISS				iSg	**Sg**	**22 12 55.3**	**+0.5**
VISS							
	comp=Z,98nm,0.1s						
VISS	**Visnje**	**0.80**	**3**	iPg	**Pg**	**22 12 43.7**	**-0.7**
VISS				iSg	**Sg**	**22 12 55.3**	**+0.5**
VISS	**Visnje**	**0.80**	**3**	iPg	**Pg**	**22 12 43.7**	**-0.7**
VISS				iSg	**Sg**	**22 12 55.3**	**+0.5**
CRES	**Cresnjev**	**0.95**	**30**	iPg	**Pg**	**22 12 46.5**	**-0.7**
CRES				iSg	**Sg**	**22 12 58.5**	**-1.0**
CRES							
	comp=Z,193nm,0.3s						
CRES	**Cresnjev**	**0.95**	**30**	ePn	**Pn**	**22 12 46.8**	**-1.8**
CRES				iSg	**Sg**	**22 12 58.5**	**-1.0**
CRES				eSn	**Sn**	**22 12 59.5**	**-2.8**
CRES	**Cresnjev**	**0.95**	**30**	iPg	**Pg**	**22 12 46.5**	**-0.7**
CRES				iSg	**Sg**	**22 12 58.5**	**-1.0**
TRI	**Trieste**	**1.00**	**315**	Pg	**Pg**	**22 12 47.9**	**-0.4**
TRI				Sg	**Sg**	**22 13 02.9**	**+1.5**
	comp=Z,178nm,0.4s						
TRI	**Trieste**	**1.00**	**315**	ePg	**Pg**	**22 12 49.4**	**+1.0**
TRI				eSg	**Sg**	**22 13 03.1**	**+1.7**
TRI	**Trieste**	**1.00**	**315**	Pg	**Pg**	**22 12 47.9**	**-0.4**
TRI				Sg	**Sg**	**22 13 02.9**	**+1.5**
	comp=Z,178nm,0.4s						
LEGS	**Legarje**	**1.01**	**22**	iPg	**Pg**	**22 12 47.7**	**-0.8**
LEGS				eSg	**Sg**	**22 13 00.8**	**-0.8**
JAVS	**Javornik**	**1.02**	**331**	iPg	**Pg**	**22 12 47.0**	**-1.6**
JAVS				eSg	**Sg**	**22 13 02.2**	**+0.3**
JAVS							
	comp=Z,87nm,0.2s						
JAVS	**Javornik**	**1.02**	**331**	iPg	**Pg**	**22 12 47.0**	**-1.6**
JAVS				eSg	**Sg**	**22 13 02.2**	**+0.3**
JAVS	**Javornik**	**1.02**	**331**	iPg	**Pg**	**22 12 47.0**	**-1.6**
JAVS				eSg	**Sg**	**22 13 02.2**	**+0.3**
GCIS	**Gornji Cirnik**	**1.05**	**34**	iPg	**Pg**	**22 12 48.8**	**-0.3**
LJU	**Ljubljana**	**1.05**	**350**	iPg	**Pg**	**22 12 49.2**	**0.0**
LJU				eSg	**Sg**	**22 13 04.6**	**+1.7**
PDKS	**Podkum**	**1.07**	**8**	iPg	**Pg**	**22 12 48.7**	**-0.8**
PDKS							
	comp=Z,131nm,0.3s						
CESS	**Cesta pri Krsk**	**1.08**	**26**	iPg	**Pg**	**22 12 49.7**	**0.0**
CESS				iSg	**Sg**	**22 13 03.3**	**-0.5**
CESS							
	comp=Z,90nm,0.1s						
CESS	**Cesta pri Krsk**	**1.08**	**26**	iPg	**Pg**	**22 12 49.7**	**0.0**
CESS				iSg	**Sg**	**22 13 03.3**	**-0.4**
CESS	**Cesta pri Krsk**	**1.08**	**26**	iPg	**Pg**	**22 12 49.7**	**0.0**
CESS				iSg	**Sg**	**22 13 03.3**	**-0.5**
VNDS	**Vrh nad Dolski**	**1.10**	**357**	iPg	**Pg**	**22 12 49.3**	**-0.8**
GOLS	**Golise**	**1.17**	**30**	iPg	**Pg**	**22 12 51.0**	**-0.4**
GOLS				eSg	**Sg**	**22 13 06.1**	**-0.4**
GOLS							
	comp=Z,94nm,0.2s						
GOLS	**Golise**	**1.17**	**30**	iPg	**Pg**	**22 12 51.0**	**-0.4**
GOLS				eSg	**Sg**	**22 13 06.1**	**-0.4**
GOLS	**Golise**	**1.17**	**30**	iPg	**Pg**	**22 12 51.0**	**-0.4**
GOLS				eSg	**Sg**	**22 13 06.1**	**-0.4**
VOJS	**Vojsko**	**1.21**	**329**	iPg	**Pg**	**22 12 50.7**	**-1.4**
SISC	**Sisak**	**1.21**	**67**	ePg	**Pg**	**22 12 52.3**	**0.0**
SISC				Sg	**Sg**	**22 13 08.5**	**+0.5**
DOBS	**Dobrina**	**1.24**	**23**	iPg	**Pg**	**22 12 52.1**	**-0.7**
MOZS	**Mozjanca**	**1.31**	**350**	iPg	**Pg**	**22 12 54.1**	**-0.1**
DRE	**Drenchia**	**1.42**	**326**	⇓ePg	**Pg**	**22 12 56.3**	**+0.1**
DRE				eSg	**Sg**	**22 13 16.1**	**+1.6**
GORS	**Gorjuse**	**1.42**	**337**	iPg	**Pg**	**22 12 55.2**	**-1.1**
GORS							
	comp=Z,71nm,0.2s						
ZAVS	**Zavodnje**	**1.44**	**7**	iPg	**Pg**	**22 12 55.7**	**-0.9**
TLI	**Talmassons**	**1.50**	**308**	⇑iPg	**Pg**	**22 12 57.4**	**-0.3**
TLI				iSg	**Sg**	**22 13 18.4**	**+1.3**
TLI	**Talmassons**	**1.50**	**308**	iPg	**Pg**	**22 12 57.4**	**-0.3**
TLI				iSg	**Sg**	**22 13 18.4**	**+1.3**
COLI	**Coloredo**	**1.50**	**319**	⇑iPg	**Pg**	**22 12 57.0**	**-0.8**
COLI				iSg	**Sg**	**22 13 18.0**	**+0.9**
OBKA	**Obir**	**1.51**	**354**	⇑ePg	**Pg**	**22 12 57.4**	**-0.6**
	SNR=8.2						
OBKA				⇑iSg	**Sg**	**22 13 19.3**	**+1.7**
	comp=Z,69nm,0.3s						
ROBS	**Robic**	**1.53**	**325**	iPn	**Pn**	**22 12 57.8**	**+1.3**
BAD	**Bernadia**	**1.64**	**319**	⇓iPg	**Pg**	**22 12 59.4**	**-1.0**
BAD				iSg	**Sg**	**22 13 22.2**	**+0.6**
BAD	**Bernadia**	**1.64**	**319**	iPg	**Pg**	**22 12 59.4**	**-1.0**
BAD				iSg	**Sg**	**22 13 22.2**	**+0.5**
PERS	**Pernice**	**1.65**	**8**	iPn	**Pn**	**22 12 59.2**	**+1.0**
BISS	**Bistriski jare**	**1.66**	**8**	iPn	**Pn**	**22 12 59.3**	**+1.0**
GMNA	**Gemona**	**1.67**	**320**	Pg	**Pg**	**22 13 00.5**	**-0.5**
GMNA				Sg	**Sg**	**22 13 25.0**	**+2.3**
	comp=Z,417nm,0.6s						
GMNA	**Gemona**	**1.67**	**320**	Pg	**Pg**	**22 13 00.5**	**-0.5**
GMNA				Sg	**Sg**	**22 13 25.0**	**+2.3**
	comp=Z,417nm,0.6s						
SOKA	**Soboth**	**1.68**	**6**	⇓iPg	**Pg**	**22 12 59.5**	**-1.7**
SOKA				⇑iSn	**Sn**	**22 13 20.4**	**+0.1**
SOKA				⇓iSg	**Sg**	**22 13 24.0**	**+1.0**
	comp=Z,16nm,0.2s						
BUA	**Buia**	**1.68**	**317**	⇓iPg	**Pg**	**22 13 00.3**	**-0.9**
BUA				iSg	**Sg**	**22 13 24.1**	**+1.0**
LSR	**Lussari**	**1.71**	**330**	⇑ePg	**Pg**	**22 13 01.0**	**-0.8**
LSR				eSg	**Sg**	**22 13 25.3**	**+1.2**
PTCC	**Patocco-Chiusa**	**1.72**	**325**	Pg	**Pg**	**22 13 01.2**	**-0.8**
PTCC				Sg	**Sg**	**22 13 25.4**	**+1.1**
	comp=Z,53nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.72**	**325**	Pg	**Pg**	**22 13 01.2**	**-0.8**
PTCC				Sg	**Sg**	**22 13 25.4**	**+1.1**
	comp=Z,53nm,0.3s						
BLY	**Banja Luka**	**1.73**	**98**	⇑iPn	**Pn**	**22 13 00.8**	**+1.5**
BLY				eSn	**Sn**	**22 13 25.2**	**+3.8**
KOGS	**Kog**	**1.77**	**35**	iPn	**Pn**	**22 13 00.6**	**+0.7**
KOGS	**Kog**	**1.77**	**35**	iPn	**Pn**	**22 13 00.6**	**+0.7**
KOGS				eSn	**Sn**	**22 13 22.9**	**+0.3**
MYKA	**Terra Mystica**	**1.81**	**334**	⇑iPg	**Pg**	**22 13 02.5**	**-1.2**
MYKA				⇑iSn	**Sn**	**22 13 23.4**	**-0.1**
MYKA				⇓iSg	**Sg**	**22 13 28.4**	**+1.3**
	comp=Z,42nm,0.2s						
MYKA	**Terra Mystica**	**1.81**	**334**	Pg	**Pg**	**22 13 02.5**	**-1.2**
MYKA				Sn	**Sn**	**22 13 23.4**	**-0.1**
MYKA				Sg	**Sg**	**22 13 28.4**	**+1.2**
	comp=Z,42nm,0.2s						
MLNI	**Malnisio**	**1.91**	**308**	⇑iPn	**Pn**	**22 13 03.0**	**+1.2**
MLNI				iSn	**Sn**	**22 13 28.9**	**+2.9**
FSSB	**Fossombrone**	**1.95**	**228**	Pg	**Pg**	**22 13 04.8**	**-1.6**
FSSB				Sg	**Sg**	**22 13 31.3**	**-0.3**
	comp=Z,106nm,0.5s						
FSSB	**Fossombrone**	**1.95**	**228**	Pg	**Pg**	**22 13 04.8**	**-1.6**
FSSB				Sg	**Sg**	**22 13 31.3**	**-0.3**
	comp=Z,106nm,0.5s						
FVI	**Forni Avoltri**	**2.12**	**319**	Pg	**Pg**	**22 13 06.4**	**-3.2**
	comp=Z,90nm,0.5s						
FVI	**Forni Avoltri**	**2.12**	**319**	Pg	**Pg**	**22 13 06.4**	**-3.2**
	comp=Z,90nm,0.5s						
ARSA	**Arzberg**	**2.30**	**13**	⇑ePn	**Pn**	**22 13 08.3**	**+1.1**
	SNR=5.1						
ARSA				⇑iSn	**Sn**	**22 13 35.9**	**+0.2**
CTI	**Castel Tesino**	**2.44**	**296**	Pg	**Pg**	**22 13 10.8**	**-4.9**
	comp=Z,38nm,0.4s						
CTI	**Castel Tesino**	**2.44**	**296**	Pg	**Pg**	**22 13 10.8**	**-4.9**
	comp=Z,38nm,0.4s						
ASS	**Assisi**	**2.48**	**219**	Pg	**Pg**	**22 13 11.5**	**-5.0**
ASS	**Assisi**	**2.48**	**219**	Pg	**Pg**	**22 13 11.5**	**-5.0**
	comp=Z,19nm,0.4s						
MOA	**Molln**	**2.87**	**353**	⇑ePn	**Pn**	**22 13 16.6**	**+1.7**
	SNR=6.7						
MOA	**Molln**	**2.87**	**353**	Pn	**Pn**	**22 13 16.6**	**+1.6**
	SNR=6.7						
APPI	**Appiano**	**2.89**	**302**	Pg	**Pg**	**22 13 18.6**	**-5.8**
APPI	**Appiano**	**2.89**	**302**	Pg	**Pg**	**22 13 18.6**	**-5.8**
STON	**Ston**	**3.00**	**134**	ePn	**Pn**	**22 13 19.9**	**+3.2**
STON				Sn	**Sn**	**22 13 58.2**	**+5.3**
CONA	**Conrad Observa**	**3.02**	**14**	ePn	**Pn**	**22 13 18.5**	**+1.5**
	SNR=13						
CONA				⇑iSn	**Sn**	**22 13 53.0**	**-0.3**
CSNA	**Conrad Observa**	**3.02**	**14**	⇑iPn	**Pn**	**22 13 18.4**	**+1.4**
CSNA				⇓iSn	**Sn**	**22 13 53.1**	**-0.1**
MAGA	**Magasa**	**3.03**	**286**	Pg	**Pg**	**22 13 18.1**	**-8.9**
	comp=Z,90nm,0.6s						
TUE	**Stuetta**	**4.08**	**293**	ePn	**Pn**	**22 13 35.1**	**+3.5**
TUE	**Stuetta**	**4.08**	**293**	ePn	**Pn**	**22 13 35.1**	**+3.5**
TUE				eSn	**Sn**	**22 14 24.1**	**+4.6**
KHC	**Kasperske Hory**	**4.21**	**349**	ePN	**Pn**	**22 13 34.8**	**+1.4**
KHC				eSN	**Sn**	**22 14 23.7**	**+1.0**
KHC				eSG	**Sg**	**22 14 42.4**	**-1.7**
TREC	**Trest**	**4.32**	**6**	ePN	**Pn**	**22 13 35.2**	**+0.3**
PGF	**Pioggiola**	**4.86**	**242**	eP	**Pn**	**22 13 45.9**	**+3.6**
PRU	**Pruhonice**	**4.99**	**358**	ePN	**Pn**	**22 13 44.5**	**+0.4**
PRU				eSN	**Sn**	**22 14 41.2**	**-0.7**
SBF	**Sospel**	**5.39**	**260**	ePn	**Pn**	**22 13 49.5**	**-0.1**
NKC	**Novy Kostel**	**5.46**	**344**	eSN	**Sn**	**22 14 52.2**	**-1.4**
LPG	**La Plagne**	**5.69**	**278**	ePn	**Pn**	**22 13 54.6**	**+0.8**
LPG				eSn	**Sn**	**22 14 57.0**	**-2.3**
	comp=Z,15nm,0.6s						
LPG	**La Plagne**	**5.69**	**278**	ePn	**Pn**	**22 13 54.6**	**+0.8**
LPG				eSn	**Sn**	**22 14 57.0**	**-2.3**
	comp=Z,7.3nm,0.6s						
MBDF	**Montbardon**	**5.70**	**270**	ePn	**Pn**	**22 13 53.1**	**-0.8**
MBDF				eSn	**Sn**	**22 14 55.8**	**-3.7**
	comp=Z,5.3nm,0.5s						
MBDF	**Montbardon**	**5.70**	**270**	ePn	**Pn**	**22 13 53.1**	**-0.8**
MBDF				eSn	**Sn**	**22 14 55.8**	**-3.7**
	comp=Z,2.7nm,0.5s						
LPL	**La Plagne**	**5.71**	**278**	ePn	**Pn**	**22 13 55.6**	**+1.6**
LPL				eSn	**Sn**	**22 14 56.6**	**-3.0**
	comp=Z,6.7nm,0.5s						
LPL	**La Plagne**	**5.71**	**278**	ePn	**Pn**	**22 13 55.6**	**+1.6**
LPL				eSn	**Sn**	**22 14 56.6**	**-3.0**
	comp=Z,3.3nm,0.5s						
FRF	**La Foret Royal**	**6.02**	**259**	ePn	**Pn**	**22 13 58.1**	**-0.1**
MOX	**Moxa**	**6.03**	**340**	ePN	**Pn**	**22 13 57.8**	**-0.6**
MOX				eSN	**Sn**	**22 15 06.8**	**-0.8**
MOX				eSG	**Sg**	**22 15 45.3**	**+2.8**
MOX	**Moxa**	**6.03**	**340**	ePn	**Pn**	**22 13 57.8**	**-0.6**
MOX				eSn	**Sn**	**22 15 06.8**	**-0.8**
MOX				eSg	**Sg**	**22 15 45.3**	**+2.8**
HINF	**Hinteralfeld**	**6.16**	**300**	ePn	**Pn**	**22 14 00.9**	**+0.7**
HINF				eSn	**Sn**	**22 15 07.4**	**-3.4**
	comp=Z,4.3nm,0.5s						
LMR	**La Mourre**	**6.18**	**257**	ePn	**Pn**	**22 13 59.9**	**-0.6**
CDF	**Champ du Feu**	**6.18**	**306**	ePn	**Pn**	**22 14 00.2**	**-0.3**
CDF				eSg	**Sg**	**22 15 46.9**	**-0.5**
	comp=Z,4.2nm,0.7s						
CABF	**La Chapelle**	**6.29**	**288**	ePn	**Pn**	**22 14 02.8**	**+0.9**
ORIF	**Oris-en-Rattie**	**6.32**	**272**	ePn	**Pn**	**22 14 02.3**	**-0.1**

ORIF				eSn	**Sn**	**22 15 12.4**	**-2.3**
	comp=Z,6.6nm,0.5s						
ORIF	**Oris-en-Rattie**	**6.32**	**272**	ePn	**Pn**	**22 14 02.3**	**-0.1**
ORIF				eSn	**Sn**	**22 15 12.4**	**-2.3**
	comp=Z,3.3nm,0.5s						
CLL	**Collm**	**6.42**	**350**	eSg	**Sg**	**22 15 53.0**	**-1.9**
HAU	**Haudompre**	**6.55**	**300**	ePn	**Pn**	**22 14 05.3**	**-0.2**
HAU				eSn	**Sn**	**22 15 17.2**	**-3.1**
	comp=Z,3.7nm,0.3s						
VIVF	**Saint-Julien-l**	**7.18**	**272**	ePn	**Pn**	**22 14 13.4**	**-0.8**
MEZF	**Maizieres J'vi**	**7.54**	**301**	ePn	**Pn**	**22 14 19.9**	**+0.7**
SMF	**Signal de Mont**	**7.82**	**286**	ePn	**Pn**	**22 14 22.8**	**-0.1**
SMF				eSn	**Sn**	**22 15 48.1**	**-3.5**
	comp=Z,3.3nm,0.4s						
LASF	**Ste Croix**	**7.86**	**267**	ePn	**Pn**	**22 14 23.2**	**-0.4**
LOR	**Lormes**	**7.92**	**290**	ePn	**Pn**	**22 14 24.8**	**+0.5**
LOR				eSn	**Sn**	**22 15 50.6**	**-3.4**
	comp=Z,4.5nm,0.4s						
SSF	**Saint Saulge**	**8.11**	**289**	ePn	**Pn**	**22 14 27.6**	**+0.6**
AVF	**Avril sur Loir**	**8.17**	**287**	ePn	**Pn**	**22 14 28.1**	**+0.3**
BGF	**Bois d'Agland**	**8.49**	**285**	ePn	**Pn**	**22 14 33.4**	**+1.3**

NNC 15 22:14:00.5±3.5, 4986N×8804E, h0^{km}, mb3.5, mpv3.1, 6C-2D, Error ellipse: s-maj=26.1km s-min=15.6km az=70.0, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.91**	**234**	⇑Pn	Pn	22 15 16.4	+0.8
	1.9nm,0.5s,baz=52,slow=16,SNR=97						
MK31				Sn	Sn	22 16 14.8	+1.8
	6.4nm,0.7s,baz=53,slow=26,SNR=3.9						
MK31				⇓Lg		22 16 36.7	
	12nm,0.6s,baz=48,slow=25,SNR=6.7						
KURK	**Kurchatov**	**6.10**	**282**	⇑Pn	Pn	22 15 31.7	-0.1
	3.3nm,0.9s						
KURK				⇑Sn	Sn	22 16 43.1	+0.9
	2.1nm,0.4s						
KURK				⇓Lg		22 17 13.0	
	9.5nm,0.7s						
KURBB	**Kurchatov Arra**	**6.15**	**281**	⇑Pn	Pn	22 15 32.9	+0.4
	0.3nm,0.3s,baz=93,slow=14						
KURBB				⇑Sn	Sn	22 16 43.3	-0.1
	1.6nm,0.6s,baz=350,slow=28						
KURBB				⇑Lg		22 17 13.5	
	2.0nm,0.7s,baz=193,slow=26						

ISC 15 22:42:22.9±0.7, 4503N±003×1482E±007, h12^{km}±12^{km}, n12, $\sigma 0^{s}87$/18, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.47**	**176**	ePg	**Pg**	**22 42 31.9**	**-0.2**
NVLJ				Sg	**Sg**	**22 42 39.5**	**+1.2**
BOJS	**Bojanci**	**0.56**	**33**	i Pg	**Pg**	**22 42 33.8**	**-0.2**
BOJS				i Sg	**Sg**	**22 42 42.4**	**+0.9**
BOJS							
	comp=Z,37nm,0.1s						
KNDS	**Knezji Dol**	**0.59**	**328**	i Sg	**Sg**	**22 42 42.6**	**+0.5**
CEY	**Cerknica**	**0.76**	**339**	i Pg	**Pg**	**22 42 36.9**	**-0.8**
CEY				i Sg	**Sg**	**22 42 48.3**	**+0.6**
CEY							
	comp=Z,17nm,0.1s						
SKDS	**Skadanscina**	**0.77**	**313**	i Pg	**Pg**	**22 42 36.5**	**-1.3**
SKDS				i Sg	**Sg**	**22 42 47.8**	**-0.1**
VISS	**Visnje**	**0.77**	**1**	⇑i Pg	**Pg**	**22 42 37.2**	**-0.7**
VISS							
	comp=Z,10.0nm,0.1s						
LEGS	**Legarje**	**0.98**	**21**	i Pg	**Pg**	**22 42 41.5**	**-0.4**
JAVS	**Javornik**	**1.01**	**329**	i Pg	**Pg**	**22 42 40.9**	**-1.6**
JAVS				i Sg	**Sg**	**22 42 56.8**	**+1.1**
JAVS							
	comp=Z,5.0nm,0.1s						
PDKS	**Podkum**	**1.04**	**7**	ePg	**Pg**	**22 42 42.4**	**-0.5**
VNDS	**Vrh nad Dolski**	**1.08**	**356**	i Pg	**Pg**	**22 42 43.7**	**+0.1**
VOY	**Vojsko**	**1.20**	**327**	ePg	**Pg**	**22 42 45.0**	**-0.9**
VOY				e		22 42 49.8	
VOY				eSg	**Sg**	**22 43 03.1**	**+1.6**
GORS	**Gorjuse**	**1.41**	**336**	i Pn	**Pn**	**22 42 49.1**	**+0.8**
GORS				i		22 42 50.0	

*BJI **15** 22:45:33.5, 6630N×14220W, h5^{km}, mB4.9, mb4.6, Ms4.7, Msz4.5*
*ISCJB **15** 22:45:36.0±0.4, 6640N±004×14182W±007, h10^{km}, mb4.1/11, MS3.8/2, Error ellipse: s-maj=5.2km s-min=3.8km az=156.6*
*NEIC **15** 22:45:38.6, 6626N×14219W, h1^{km}, mb4.2/1, ML4.2(AEIC), MW4.0(PGC), After AEIC.*
*IDC **15** 22:45:40.2±0.8, 6630N×14195W, h0^{km}, mb3.8/6, mb1 4.3/9, mb1mx3.9/25, mbtmp3.9/9, ML4.0/3, MS3.7/1, Ms1 3.7/1, ms1mx2.5/36, Error ellipse: s-maj=19.4km s-min=11.5km az=39.0*
*PGC **15** 22:45:41.1±4.8, 6621N×14180W, h5^{km}, ML4.4/2, Mw4.0, 263km northwest of Dawson, Yt Alaska*
ISC 15 22:45:38.6±0.3, 6636N±003×14198W±007, h10^{km}, n52, $\sigma 1^{s}27$/66, mb4.1/11, MS3.8/2, 10D, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BM3	**Burnt Mountain**	**1.48**	**317**	P	**Pn**	**22 46 06.2**	**+0.9**
EGAK	**Eagle**	**1.63**	**168**	P	**Pn**	**22 46 07.0**	**-0.2**
EGAK				S	**Sn**	**22 46 29.1**	**+0.8**
DAWY	**Dawson**	**2.55**	**154**	Pn	**Pn**	**22 46 20.6**	**+0.6**
DAWY				⇑Sn	**Sn**	**22 46 48.9**	**-2.1**
DAWY				⇓Sg	**Sg**	**22 46 55.0**	**-5.5**
DAWY	**Dawson**	**2.55**	**154**	P	**Pn**	**22 46 20.5**	**+0.5**
DAWY				S	**Sn**	**22 46 51.9**	**+0.9**
IL1	**Eielson Array**	**2.59**	**234**	P	**Pn**	**22 46 19.4**	**-1.1**
COLA	**College**	**2.86**	**241**	P	**Pn**	**22 46 23.8**	**-0.4**
COLA				S	**Sn**	**22 46 59.8**	**+1.1**
DOT	**Dot Lake**	**2.87**	**199**	P	**Pn**	**22 46 24.1**	**-0.2**
DOT				S	**Sn**	**22 47 00.2**	**+1.4**
BCA3	**Beaver Creek A**	**3.31**	**179**	P	**Pn**	**22 46 30.2**	**-0.2**
COLD	**Coldfoot**	**3.37**	**289**	P	**Pn**	**22 46 32.3**	**+1.1**
MENT	**Mentasta**	**3.52**	**193**	eP	**Pn**	**22 46 33.2**	**-0.1**
PAX	**Paxson**	**3.72**	**205**	P	**Pn**	**22 46 36.3**	**+0.2**
INK	**Inuvik**	**3.81**	**55**	⇑Pn	**Pn**	**22 46 40.4**	**+3.1**
INK				⇑Sn	**Sn**	**22 47 23.9**	**+1.9**
INK				⇓Sg	**Sg**	**22 47 40.1**	**-0.7**
INK	**Inuvik**	**3.81**	**55**	ePn	**Pn**	**22 46 40.1**	**+2.8**
MCK	**McKinley**	**3.96**	**231**	P	**Pn**	**22 46 38.8**	**-0.5**
BPAW	**Bear Paw Mtn.**	**4.42**	**243**	P	**Pn**	**22 46 44.0**	**-1.6**
TRF	**Thorofare Moun**	**4.59**	**234**	P	**Pn**	**22 46 47.6**	**-0.4**
KTH	**Kantishna Hill**	**4.73**	**238**	P	**Pn**	**22 46 49.2**	**-0.8**
IM3	**Indian Mountai**	**4.79**	**271**	P	**Pn**	**22 46 49.6**	**-1.1**
CHUM	**Lake Minchumin**	**5.03**	**245**	ePn	**Pn**	**22 46 52.7**	**-1.2**
SML	**Sawmill**	**5.35**	**214**	P	**Pn**	**22 46 57.4**	**-1.1**
PPLA	**Purkeypile**	**5.60**	**236**	P	**Pn**	**22 47 01.1**	**-0.7**
PMR	**Palmer**	**5.73**	**217**	eP	**Pn**	**22 47 05.3**	**+1.7**
EYAK	**Cordova Ski Ar**	**6.08**	**198**	P	**Pn**	**22 47 08.2**	**-0.2**
RAGM	**Ragged Mountai**	**6.12**	**193**	P	**Pn**	**22 47 10.4**	**+1.4**
RC01	**Rabbit Creek A**	**6.31**	**217**	ePn	**Pn**	**22 47 13.7**	**+2.1**
	40nm,0.6s						
WHY	**Whitehorse**	**6.54**	**148**	⇓Pn	**Pn**	**22 47 15.0**	**+0.3**
WHY	**Whitehorse**	**6.54**	**148**	P	**Pn**	**22 47 15.6**	**+0.8**
PLBC	**Pleasant Camp**	**7.39**	**157**	⇓Pn	**Pn**	**22 47 25.4**	**-0.9**
PLBC				⇓Sg	**Sg**	**22 49 25.3**	**-10**
DLBC	**Dease Lake**	**9.67**	**140**	Pn	**Pn**	**22 47 58.8**	**+1.2**
	1.1nm,0.3s,baz=318,slow=9.8,SNR=14						
DLBC				Sn	**Sn**	**22 49 44.6**	**-1.5**
	1.0nm,0.3s,baz=102,slow=25,SNR=2.6						
DLBC				Lg		22 50 39.7	
	0.7nm,0.3s,baz=64,slow=21,SNR=5.2						
DLBC	**Dease Lake**	**9.67**	**140**	⇓Pn	**Pn**	**22 47 58.5**	**+0.9**
DLBC				⇓Sg	Sn	22 50 36.6	+50
DLBC	**Dease Lake**	**9.67**	**140**	Pn	**Pn**	**22 47 58.8**	**+1.2**
DLBC				Sn	**Sn**	**22 49 44.6**	**-1.5**
KDAK	**Kodiak Island**	**9.93**	**215**	Pn	**Pn**	**22 47 59.4**	**-1.7**
	0.2nm,0.3s,baz=42,slow=15,SNR=2.7						
CTLN	**Castor Lake**	**10.96**	**88**	⇓P	**Pn**	**22 48 14.3**	**-0.9**
CTLN				⇑Sn	**Sn**	**22 50 09.9**	**-7.7**
FNBB	**Fort Nelson**	**11.46**	**122**	⇓P	**Pn**	**22 48 21.1**	**-0.9**
JERN	**Jeri Cho Mine,**	**12.27**	**78**	⇑P	**Pn**	**22 48 32.3**	**-0.7**
YKW3	**Yellowknife Ar**	**12.34**	**95**	⇓P	**Pn**	**22 48 33.2**	**-0.9**
YKA	**Yellowknife Ar**	**12.38**	**95**	Pn	**Pn**	**22 48 33.6**	**-1.0**
	1.3nm,0.3s,baz=295,slow=13,SNR=65						
YKA				Sn	**Sn**	**22 50 45.2**	**-7.2**
	1.4nm,0.3s,baz=300,slow=22,SNR=6.1						
YKA	**Yellowknife Ar**	**12.38**	**95**	Pn	**Pn**	**22 48 33.6**	**-1.0**
YKA				Sn	**Sn**	**22 50 45.2**	**-7.2**
RES	**Resolute Bay**	**17.22**	**41**	P	**Pn**	**22 49 37.8**	**-1.0**
	0.9nm,0.3s,baz=244,slow=15,SNR=14						
RES				S	**Sn**	**22 52 39.9**	**-10**
	0.3nm,0.3s,baz=212,slow=7.9,SNR=2.6						
IMW	**Indian Meadow**	**28.11**	**128**	eP	**P**	**22 51 34.5**	**+4.2**
	3.5nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**29.57**	**127**	P	**P**	**22 51 45.2**	**+2.0**
	2.3nm,0.9s,mb3.9,baz=356,slow=5.2,SNR=14						
NVAR	**Mina Array Bea**	**31.08**	**142**	P	**P**	**22 51 59.6**	**+3.1**
	1.2nm,0.6s,mb3.9,baz=334,slow=8.6,SNR=8.6						
TXAR	**Lajitas Array**	**43.76**	**128**	P	**P**	**22 53 47.0**	**+3.1**
	0.4nm,0.7s,mb3.3,baz=357,slow=7.5,SNR=5.8						
TXAR	**Lajitas Array**	**43.76**	**128**	P	**P**	**22 53 47.0**	**+3.1**
CN2	**Changchun**	**51.83**	**293**	eP	**P**	**22 54 46.8**	**+0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
ZALV	**Zalesovo Beam**	**54.91**	**328**	P	**P**	**22 55 12.7**	**+3.9**
	comp=Z,0.3nm,0.3s,mb3.8,baz=0.0,slow=5.8,SNR=2.2						
CMIG	**Matias Romero**	**58.01**	**124**	LR	LR	23 23 13.5	
	comp=Z,58nm,18.7s,MS3.7,baz=182,slow=39						
BJI	**Beijing**	**58.48**	**298**	P	**P**	**22 55 32.0**	**-2.4**
BJI				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.6						
MKAR	**Makanchi Array**	**62.19**	**327**	P	**P**	**22 56 03.4**	**+3.8**
	comp=Z,0.2nm,0.7s,mb3.4,baz=18,slow=6.1,SNR=3.9						
XAN	**Xi'an**	**66.40**	**301**	P	**P**	**22 56 23.3**	**-4.1**
XAN				PP	PP	22 58 50.8	-2.3
XAN				S	S	23 05 16.3	-0.8
XAN				SS	SS	23 09 33.4	+0.5
XAN				AMB	AMB		
	comp=Z,1.0nm,0.6s,mb4.0						
XAN				LR	LR		
	comp=N,12nm,19.9s,MS3.8						
XAN				LR	LR		
	comp=E,51nm,18.6s,MS3.8						
XAN				LR	LR		
	comp=Z,58nm,18.6s,MS3.8						
GYA	**Guiyang**	**74.11**	**300**	P	**P**	**22 57 11.3**	**-3.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CMAR	**Chiang Mai Arr**	**84.15**	**304**	P	**P**	**22 58 12.2**	**+2.5**
	comp=Z,0.7nm,0.4s,mb4.1,baz=2.5,slow=6.7,SNR=6.8						

*ISCJB **15** 23:10:30.5±1.1, 2296S±004×7043W±008, h40^{km}±11^{km}, mb4.0/10, Error ellipse: s-maj=12.3km s-min=6.3km az=0.1*
*IDC **15** 23:10:31.8±3.2, 2304S×7030W, h34^{km}±22^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.9/19, mbtmp3.9/12, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/26, Error ellipse: s-maj=24.5km s-min=20.9km az=47.0*
*NEIC **15** 23:10:32.6±0.9, 2301S×7035W, h35^{km}, mb4.0/1, Error ellipse: s-maj=16.0km s-min=11.0km az=77.0*
ISC 15 23:10:33.5±0.9, 2292S±004×7031W±009, h49^{km}±9^{km}, h46^{km}±6.3^{km}:pP-P, n28, $\sigma 0^{s}98$/29, mb4.0/10, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.32**	**77**	Pg	**Pn**	**23 10 56.9**	**+1.4**
	372nm,0.3s,baz=252,slow=13,SNR=365						
LVC				Lg		23 11 16.1	
	baz=78,slow=19						
LVC	**Limon Verde**	**1.32**	**77**	Pg	**Pn**	**23 10 56.9**	**+1.4**
LVC				Lg		23 11 16.1	
LCO	**Las Campanas**	**6.07**	**183**	Pn	**Pn**	**23 12 07.6**	**+6.8**
	35nm,0.5s						
LCO				Sn	**Sn**	**23 13 08.8**	**-0.1**
ARE	**Arequipa**	**6.52**	**350**	eP	**Pn**	**23 12 07.0**	**+0.1**
ARE				eS	**Sn**	**23 13 19.0**	**-1.0**
CFAA	**Coronel Fontan**	**8.84**	**168**	Pn	**Pn**	**23 12 35.5**	**-3.2**
	0.1nm,0.3s,baz=338,slow=14,SNR=6.9						
CFAA				Sn	**Sn**	**23 14 18.2**	**+1.3**
	0.2nm,0.3s,baz=358,slow=16,SNR=2.3						
CFAA				LR	LR	23 16 20.4	
	comp=Z,35nm,21.5s,baz=347,slow=40						
CFAA	**Coronel Fontan**	**8.84**	**168**	Pn	**Pn**	**23 12 35.5**	**-3.2**
CFAA				Sn	**Sn**	**23 14 18.2**	**+1.3**
CFAA				LR	LR	23 16 20.4	
SIV	**San Ignacio**	**11.10**	**53**	Pn	**Pn**	**23 13 09.2**	**-0.5**
	2.0nm,0.3s,baz=251,slow=13,SNR=29						
SIV				Sn	**Sn**	**23 15 17.7**	**+5.3**
	0.4nm,0.3s,baz=148,slow=21,SNR=5.5						
CPUP	**Villa Florida**	**12.28**	**109**	Pn	**Pn**	**23 13 24.9**	**-0.8**
	0.4nm,0.3s,baz=277,slow=9.4,SNR=5.3						
CPUP				LR	LR	23 18 45.6	
	comp=Z,287nm,18.2s,baz=261,slow=40						
CPUP	**Villa Florida**	**12.28**	**109**	Pn	**Pn**	**23 13 24.9**	**-0.8**
CPUP				ePn	**Pn**	**23 13 25.1**	**-0.6**
CPUP				LR	LR	23 18 45.6	
TRQA	**Tornquist**	**16.69**	**157**	ePn	**Pn**	**23 14 24.2**	**+0.3**
	9.3nm,0.8s						
BDFB	**Brasilia**	**22.23**	**75**	P	**P**	**23 15 26.8**	**+0.6**
	1.0nm,0.6s,mb3.5,baz=289,slow=20,SNR=4.2						
BDFB				LR	LR	23 25 45.5	
	comp=Z,57nm,21.8s,baz=75,slow=41						
CMIG	**Matias Romero**	**46.47**	**327**	P	**P**	**23 18 57.6**	**+1.8**
	1.5nm,0.7s,mb4.0,baz=246,slow=21,SNR=1.8						
VNA3	**Neumayer Olymp**	**59.16**	**161**	e	**P**	**23 20 28.4**	**-0.4**
VNA3				e		23 20 31.9	
VNA3				e	pP	23 20 38.7	-3.8
VNA3				e	pP	23 20 42.3	-0.2
VNA2	**Neumayer--Watz**	**59.75**	**160**	e	**P**	**23 20 32.3**	**-0.6**
VNA2				e		23 20 36.1	
VNA2				e	pP	23 20 43.0	-3.6
VNA2				e	pP	23 20 47.2	+0.6
TXAR	**Lajitas Array**	**61.08**	**327**	P	**P**	**23 20 42.2**	**-0.3**
	0.4nm,0.8s,mb3.6,baz=148,slow=7.4,SNR=4.5						
SNAA	**Sanae**	**61.37**	**161**	e	**P**	**23 20 41.3**	**-2.6**
SNAA				e		23 20 44.9	
SNAA				e	pP	23 20 54.4	-3.3
DBIC	**Dimbokro**	**70.38**	**74**	P	**P**	**23 21 42.6**	**-0.2**
	6.2nm,0.9s,mb4.5,baz=203,slow=6.6,SNR=6.3						
PDAR	**Pinedale Array**	**74.71**	**331**	P	**P**	**23 22 09.2**	**+1.3**
	0.2nm,0.7s,mb3.2,baz=123,slow=6.6,SNR=2.0						
TORD	**Torodi Ar. Bea**	**79.05**	**71**	P	**P**	**23 22 33.0**	**0.0**
	3.8nm,0.6s,mb4.5,baz=255,slow=5.4,SNR=54						
MAW	**Mawson**	**83.34**	**164**	P	**P**	**23 22 55.0**	**+0.1**
	1.2nm,0.6s,mb4.1,baz=217,slow=10,SNR=3.9						
BOSA	**Boshof**	**83.92**	**118**	P	**P**	**23 22 57.8**	**-0.9**
	3.7nm,0.9s,mb4.5,baz=291,slow=5.2,SNR=6.4						
ESDC	**Sonseca Array**	**87.75**	**45**	P	**P**	**23 23 17.7**	**+0.6**
	0.1nm,0.3s,mb3.6,baz=341,slow=40,SNR=2.7						
YKA	**Yellowknife Ar**	**92.10**	**341**	P	**P**	**23 23 37.0**	**+0.1**
	0.9nm,0.7s,mb4.2,baz=136,slow=4.4,SNR=25						
ASAR	**Alice Springs**	**128.06**	**209**	PKP	PKPdf	23 29 34.3	-0.5
	0.8nm,0.8s,baz=164,slow=3.1,SNR=9.2						
WRA	**Warramunga Arr**	**131.08**	**211**	PKP	PKPdf	23 29 40.2	-0.4
	0.7nm,0.7s,baz=152,slow=1.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**143.78**	**25**	PKP	PKPdf	23 30 02.2	-0.6
	1.1nm,0.5s,baz=322,slow=3.1,SNR=8.6						
MKAR	**Makanchi Array**	**147.54**	**36**	PKP	PKPdf	23 30 10.1	+0.6
	2.7nm,0.8s,baz=354,slow=2.9,SNR=16						
MKAR				PKPbc	PKPbc	23 30 12.7	+0.5
	2.7nm,0.8s,baz=332,slow=3.1,SNR=15						
MJAR	**Matsushiro Arr**	**151.88**	**305**	PKP	PKPdf	23 30 15.8	-0.9
	0.7nm,0.6s,baz=219,slow=33,SNR=3.0						
MJAR				PKPbc	PKPbc	23 30 23.3	+0.1
	0.9nm,0.7s,baz=278,slow=18,SNR=3.2						

*ISCJB **16** 00:01:41.9±0.5, 5140N±003×1612E±003, h0^{km}, Error ellipse: s-maj=3.9km s-min=2.3km az=17.8*
*NEIC **16** 00:01:43.5±0.7, 5147N×1610E, h5^{km}, MG2.6(WAR), Error ellipse: s-maj=8.4km s-min=5.1km az=215.0*
*IPEC **16** 00:01:43.8±0.4, 5146N×1620E, h8^{km}±1^{km}, ML2.2/2, Error ellipse: s-maj=2.7km s-min=1.1km az=31.0*
*CSEM **16** 00:01:44.4±0.1, 5142N×1614E, h1^{km}, ML3.2/9, Error ellipse: s-maj=2.6km s-min=1.6km az=21.0*
*WAR **16** 00:01:44, 5146N×1610E, ML2.7, Mining Induced*
*VIE **16** 00:01:45.7±0.5, 5127N×1601E, h0^{km}, mb2.3/2, ML2.6/3, Error ellipse: s-maj=4.3km s-min=3.2km az=88.0, Suspected Mining induced.*
ISC 16 00:01:42.7±0.5, 5147N±002×1612E±003, h0^{km}, n37, $\sigma 0^{s}94$/77, 2C-5D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**170**	ePg	**Pg**	**00 01 55.8**	**+0.9**
KSP				eSg	**Sg**	**00 02 04.3**	**+1.1**
KSP	**Ksiaz**	**0.64**	**170**	ePg	**Pg**	**00 01 55.7**	**+0.8**
KSP				eSg	**Sg**	**00 02 04.1**	**+0.9**
KSP	**Ksiaz**	**0.64**	**170**	⇓i Pg	**Pg**	**00 01 55.8**	**+0.9**
KSP				eSg	**Sg**	**00 02 04.3**	**+1.1**
UPC	**Upice**	**0.97**	**184**	ePg	**Pg**	**00 02 01.7**	**+0.5**
UPC				Sg	**Sg**	**00 02 14.4**	**+0.6**
UPC	**Upice**	**0.97**	**184**	ePG	**Pg**	**00 02 01.8**	**+0.6**
UPC				eSG	**Sg**	**00 02 14.4**	**+0.6**
DPC	**Dobruska-Polom**	**1.13**	**173**	Pg	**Pg**	**00 02 04.6**	**+0.3**
DPC				eSg	**Sg**	**00 02 19.0**	**0.0**
DPC	**Dobruska-Polom**	**1.13**	**173**	ePG	**Pg**	**00 02 04.6**	**+0.3**
DPC				eSG	**Sg**	**00 02 19.1**	**+0.1**
	comp=Z,23nm,0.4s						
PVCC	**Panska Ves**	**1.36**	**227**	Pg	**Pg**	**00 02 09.0**	**+0.3**
PVCC				eSg	**Sg**	**00 02 27.3**	**+0.9**
PVCC	**Panska Ves**	**1.36**	**227**	ePG	**Pg**	**00 02 09.0**	**+0.3**
PVCC				eSG	**Sg**	**00 02 27.7**	**+1.4**
	comp=Z,121nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**247**	PN	**Pn**	**00 02 10.2**	**-0.5**
BRG				PG	**Pg**	**00 02 11.7**	**+0.4**
BRG				SG	**Sg**	**00 02 31.7**	**+1.0**
	comp=Z,43nm,0.3s						
PRU	**Pruhonice**	**1.79**	**215**	ePN	**Pn**	**00 02 14.6**	**-0.2**
PRU				ePG	**Pg**	**00 02 16.2**	**-0.8**
PRU				eSG	**Sg**	**00 02 39.3**	**-0.9**
	comp=Z,24nm,0.6s						
CLL	**Collm**	**1.96**	**266**	ePn	**Pn**	**00 02 17.0**	**-0.1**
CLL				ePg	**Pg**	**00 02 19.0**	**-1.2**
CLL				ex	x	00 02 24.0	
CLL				ex	x	00 02 34.0	
CLL				eSg	**Sg**	**00 02 45.0**	**-0.6**
	comp=Z,15nm,0.4s						
CLL	**Collm**	**1.96**	**266**	ePn	**Pn**	**00 02 17.0**	**-0.1**
CLL				ePg	**Pg**	**00 02 19.0**	**-1.2**
CLL				eSg	**Sg**	**00 02 45.0**	**-0.6**
OKC	**Ostrava-Krasne**	**2.08**	**141**	ePG	**Pg**	**00 02 21.4**	**-1.2**
OKC				eSG	**Sg**	**00 02 48.1**	**-1.5**
	comp=Z,37nm,0.7s						
VRAC	**Vranov**	**2.19**	**172**	ePn	**Pn**	**00 02 20.6**	**+0.4**
VRAC				eSg	**Sg**	**00 02 50.7**	**-2.2**
	comp=Z,13nm,0.3s						
TREC	**Trest**	**2.22**	**191**	ePN	**Pn**	**00 02 21.5**	**+0.8**
TREC				ePG	**Pg**	**00 02 24.8**	**-0.3**
KRUC	**Moravsky**	**2.42**	**176**	ePn	**Pn**	**00 02 23.8**	**+0.4**
KRUC				eSg	**Sg**	**00 02 59.9**	**-0.5**
	comp=Z,11nm,0.4s						
NKC	**Novy Kostel**	**2.64**	**243**	ePN	**Pn**	**00 02 26.0**	**-0.4**
NKC				ePG	**Pg**	**00 02 33.4**	**+0.2**
NKC				eSG	**Sg**	**00 03 07.8**	**+0.5**
	comp=Z,22nm,0.3s						
OJC	**Ojcow**	**2.65**	**117**	ePg	**Pg**	**00 02 33.6**	**+0.2**
OJC				eSg	**Sg**	**00 03 09.5**	**+1.8**
KHC	**Kasperske Hory**	**2.85**	**216**	ePN	**Pn**	**00 02 29.9**	**+0.5**
KHC				ePG	**Pg**	**00 02 35.7**	**-1.6**
KHC				eSN	**Sn**	**00 03 03.5**	**-0.9**
KHC				eSG	**Sg**	**00 03 13.2**	**-1.1**
	comp=Z,11nm,0.4s						
MOX	**Moxa**	**2.96**	**255**	ePg	**Pg**	**00 02 39.5**	**+0.1**
MOX				eSg	**Sg**	**00 03 19.5**	**+1.8**
MOX	**Moxa**	**2.96**	**255**	ePG	**Pg**	**00 02 39.5**	**+0.1**
MOX				eSG	**Sg**	**00 03 19.5**	**+1.8**
GEC2	**GERESS Array S**	**3.06**	**212**	ePn	**Pn**	**00 02 32.9**	**+0.7**
SMOL	**Smolenice**	**3.08**	**164**	ePG	**Pg**	**00 02 40.6**	**-1.1**
SMOL				eSG	**Sg**	**00 03 23.0**	**+1.4**
WET	**Wettzell**	**3.12**	**223**	ePn	**Pn**	**00 02 33.6**	**+0.5**
KOLL	**Kolacno**	**3.25**	**152**	ePG	**Pg**	**00 02 45.0**	**+0.1**
KOLL				eSG	**Sg**	**00 03 25.0**	**-2.0**
ZST	**Bratislava**	**3.34**	**169**	eSG	**Sg**	**00 03 30.1**	**+0.1**
NIE	**Niedzica**	**3.38**	**126**	eP	**Pg**	**00 02 47.1**	**-0.3**
NIE				eS	**Sg**	**00 03 31.7**	**+0.5**
VYHS	**Vyhne**	**3.46**	**148**	ePN	**Pn**	**00 02 37.5**	**-0.2**
VYHS				ePG	**Pg**	**00 02 47.4**	**-1.5**
VYHS				eSG	**Sg**	**00 03 33.4**	**-0.3**
CONA	**Conrad Observa**	**3.55**	**183**	⇑i Pn	**Pn**	**00 02 39.6**	**+0.6**
CONA				⇓i Sg	**Sg**	**00 03 36.6**	**-0.2**
	comp=Z,9.1nm,0.4s						
CSNA	**Conrad Observa**	**3.55**	**183**	⇓i Pn	**Pn**	**00 02 39.9**	**+0.9**
CSNA				⇓i Sg	**Sg**	**00 03 36.7**	**0.0**
	comp=Z,5.9nm,0.3s						
GRA1	**Grafenberg Arr**	**3.59**	**242**	ePn	**Pn**	**00 02 40.2**	**+0.6**
GRF	**Grafenberg Arr**	**3.59**	**242**	ePn	**Pn**	**00 02 40.2**	**+0.6**
CLZ	**Clausthal**	**3.60**	**278**	ePn	**Pn**	**00 02 40.7**	**+1.1**
BSD	**Bornholm Skovb**	**3.72**	**349**	i P	**Pn**	**00 02 40.2**	**-1.1**
BSD				i S	**Sn**	**00 03 24.0**	**-1.7**
MOA	**Molln**	**3.82**	**199**	⇓i Pn	**Pn**	**00 02 42.0**	**-0.7**
MOA				⇑i Sg	**Sg**	**00 03 44.9**	**-0.4**
	comp=Z,17nm,0.6s						
STHS	**Stebnicka Huta**	**3.87**	**120**	ePN	**Pn**	**00 02 44.4**	**+1.1**
STHS				ePG	**Pg**	**00 02 58.8**	**+2.0**
STHS				eSG	**Sg**	**00 03 50.6**	**+3.7**

*GUC **16** 00:06:14.4±2.1, 2327S×7075W, h35^{km}±6^{km}, ML4.5*
*ISCJB **16** 00:06:15.1±0.5, 2332S±003×7064W±006, h42^{km}±4^{km}, mb4.6/26, MS4.0/9, Error ellipse: s-maj=8.8km s-min=4.5km az=4.7*
*IDC **16** 00:06:15.1±3.8, 2322S×7059W, h27^{km}±23^{km}, mb4.3/14, mb1 4.4/16, mb1mx4.3/23, mbtmp4.3/16, ML4.7/2, MS4.0/12, Ms1 4.0/12, ms1mx3.7/27, Error ellipse: s-maj=23.5km s-min=16.4km az=47.0*
*NEIC **16** 00:06:16.2±0.3, 2331S×7058W, h35^{km}, mb4.7/11, ML4.4(GUC), Error ellipse: s-maj=11.1km s-min=6.8km az=64.0*
NEIC Felt at Antofagasta.
*BJI **16** 00:06:17.2, 2330S×7060W, h35^{km}, mB5.4, Ms5.3, Msz5.0*
ISC 16 00:06:15.4±0.6, 2331S±003×7067W±005, h28^{km}±4^{km}, h33^{km}±.3^{km}:pP-P, n101, $\sigma 1^{s}12$/82, mb4.6/26, MS4.0/9, 4C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.29**	**45**	⇓i P	**Pb**	**00 06 21.8**	**-0.7**
MECH				i S	**Sb**	**00 06 27.8**	**+0.5**
MECH				AML	AML	00 06 28.5	
	comp=N,87μm,0.3s						
CEN1	**Los Morros**	**0.44**	**101**	⇑i P	**Pb**	**00 06 23.9**	**-0.8**
CEN1				i S	**Sb**	**00 06 30.4**	**-0.8**
ANCH	**Antofagasta**	**0.44**	**148**	⇓i P	**Pb**	**00 06 26.3**	**+1.5**
ANCH				i S	**Sb**	**00 06 33.5**	**+2.3**
PB06	**Plate Boundary**	**1.18**	**60**	⇓i P	**Pn**	**00 06 35.7**	**-0.3**
PB06				i S	**Sn**	**00 06 52.3**	**+1.3**
TOCH	**Tocopilla**	**1.28**	**20**	eP	**Pn**	**00 06 36.1**	**-1.4**
TOCH				i S	**Sn**	**00 06 53.0**	**-0.7**
TOCH				AML	AML	00 06 59.6	
	comp=E,15μm,0.4s						
CPN1	**Cerro Paranal**	**1.33**	**170**	⇑i P	**Pn**	**00 06 37.8**	**-0.3**
CPN1				i S	**Sn**	**00 06 55.2**	**+0.3**
CPN1				AML	AML	00 06 59.1	
	comp=E,17μm,0.6s						
MACH	**Maria Elena**	**1.39**	**37**	eP	**Pn**	**00 06 39.1**	**+0.2**
MACH				i S	**Sn**	**00 06 57.8**	**+1.5**
PB04	**Plate Boundary**	**1.50**	**47**	eP	**Pn**	**00 06 33.6**	**-6.9**
PB04				i S	**Sn**	**00 06 47.9**	**-11**
PB04				AML	AML	00 06 52.1	
	comp=E,21μm,0.8s						
PB07	**Plate Boundary**	**1.73**	**25**	eP	**Pn**	**00 06 43.5**	**-0.1**
PB07				i S	**Sn**	**00 07 06.5**	**+1.7**
LVC	**Limon Verde**	**1.76**	**67**	Pg	**Pn**	**00 06 45.5**	**+1.5**
	baz=250,slow=12						
LVC				Lg		00 07 09.3	
	baz=33,slow=17						
LVC				LR	LR	00 07 27.9	
	comp=E,6μm,18.5s,baz=171,slow=44						
LVC	**Limon Verde**	**1.76**	**67**	ePn	**Pn**	**00 06 45.5**	**+1.5**
LVC				eSn	**Sn**	**00 07 09.3**	**+3.8**
LVC	**Limon Verde**	**1.76**	**67**	⇑i P	**Pn**	**00 06 45.5**	**+1.5**
LVC				i S	**Sn**	**00 07 09.6**	**+4.1**
LVC				AML	AML	00 07 12.2	
	comp=N,5μm,0.7s						
PB01	**Plate Boundary**	**2.50**	**26**	eP	**Pn**	**00 06 53.9**	**-0.4**
PB01				i S	**Sn**	**00 07 23.2**	**-0.7**
PB01				AML	AML	00 07 37.2	
	comp=E,5μm,0.5s						
LCO	**Las Campanas**	**5.68**	**180**	ePn	**Pn**	**00 07 36.9**	**-1.0**
	comp=E,100nm,0.6s						
ARE	**Arequipa**	**6.85**	**353**	eP	**Pn**	**00 07 52.0**	**-2.1**
ARE				eS	**Sn**	**00 09 06.0**	**-5.2**
CFAA	**Coronel Fontan**	**8.54**	**166**	Pn	**Pn**	**00 08 16.1**	**-1.0**
	comp=E,0.3nm,0.3s,baz=348,slow=15,SNR=13						
CFAA				Sn	**Sn**	**00 09 48.9**	**-3.7**
	comp=E,0.7nm,0.3s,baz=260,slow=18,SNR=2.8						
CFAA				LR	LR	00 11 44.6	
	comp=E,128nm,19.7s,baz=333,slow=38						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SIV	**San Ignacio**	**11.60**	**53**	Pn	**Pn**	**00 08 56.6**	**-2.5**
	comp=E,2.2nm,0.3s,baz=249,slow=12,SNR=44						
SIV				Sn	**Sn**	**00 11 09.0**	**+1.2**
	baz=164,slow=18,SNR=1.9						
SIV				LR	LR	00 14 03.9	
	comp=E,1µm,19.4s,baz=230,slow=41						
CPUP	**Villa Florida**	**12.48**	**107**	Pn	**Pn**	**00 09 11.2**	**0.0**
	comp=E,1.1nm,0.3s,baz=263,slow=12,SNR=6.6						
CPUP				LR	LR	00 14 25.3	
	comp=E,1µm,18.4s,baz=267,slow=39						
CPUP	**Villa Florida**	**12.48**	**107**	*e*Pn	**Pn**	**00 09 12.3**	**+1.1**
	comp=E,28nm,0.7s						
NNA	**Nana**	**12.70**	**331**	Sn	**Sn**	**00 11 26.0**	**-8.7**
	comp=E,2.0nm,0.3s,baz=245,slow=16,SNR=5.0						
TRQA	**Tornquist**	**16.48**	**155**	*e*Pn	**Pn**	**00 10 03.2**	**-1.3**
	comp=E,26nm,0.8s						
BDFB	**Brasilia**	**22.66**	**74**	P	**P**	**00 11 12.3**	**-2.2**
	comp=E,4.4nm,0.6s,mb4.1,baz=230,slow=18,SNR=7.7						
BDFB				LR	LR	00 21 19.2	
	comp=E,198nm,18.4s,MS3.6,baz=63,slow=40						
OTAV	**Otavalo**	**24.60**	**341**	P	**P**	**00 11 37.1**	**+3.9**
	comp=E,12nm,1.0s,mb4.4						
CAM4	**Nova Friburgo**	**25.91**	**93**⇑	*i*P	**P**	**00 11 44.1**	**-1.1**
CAM4				*i*		00 11 47.0	
CAM4				*i*	pP	00 11 53.1	-0.3
ROSC	**El Rosal**	**28.22**	**352**	LR	LR	00 23 49.4	
	comp=E,152nm,19.6s,MS3.6,baz=169,slow=38						
USHA	**Ushuaia**	**31.53**	**178**	LR	LR	00 25 57.1	
	comp=E,545nm,18.9s,MS4.2,baz=345,slow=37						
PCRV	**Puerto La Cruz**	**33.80**	**11**	LR	LR	00 25 42.0	
	comp=E,205nm,20.9s,MS3.8,baz=180,slow=35						
CMIG	**Matias Romero**	**46.61**	**327**	LR	LR	00 30 05.6	
	comp=E,47nm,19.1s,MS3.5,baz=346,slow=31						
RKT	**Rikitea**	**58.63**	**256**	*e*LR	LR	00 33 37.9	
	comp=E,308nm,25.2s						
VNA3	**Neumayer Olymp**	**58.91**	**161**	*e*P	**P**	**00 16 12.0**	**+0.6**
VNA3				*e*		00 16 16.0	
VNA3				*e*	pP	00 16 21.7	+1.5
VNA3				*e*		00 16 35.0	
VNA1	**Neumayer--Stat**	**59.15**	**160**	*e*P	**P**	**00 16 14.4**	**+1.3**
VNA1				*e*		00 16 17.8	
VNA1				*e*	pP	00 16 23.6	+1.7
VNA2	**Neumayer--Watz**	**59.50**	**160**	*e*P	**P**	**00 16 15.9**	**+0.3**
	baz=298,slow=6.1						
VNA2				*e*		00 16 19.9	
VNA2				*e*	pP	00 16 25.6	+1.3
VNA2				*e*		00 16 39.9	
TKL	**Tuckaleechee C**	**59.94**	**348**	P	**P**	**00 16 17.7**	**-1.3**
	comp=E,12nm,0.9s,mb4.9,baz=157,slow=7.1,SNR=8.4						
TKL	**Tuckaleechee C**	**59.94**	**348**	P	**P**	**00 16 17.7**	**-1.3**
SWET	**Sewanee**	**59.98**	**346**	*e*P	**P**	**00 16 18.6**	**-0.6**
SNAA	**Sanae**	**61.12**	**160**	*e*P	**P**	**00 16 24.7**	**-1.9**
SNAA				*e*		00 16 29.0	
SNAA				*e*	pP	00 16 34.5	-0.9
SNAA				*e*		00 16 48.5	
SNAA	**Sanae**	**61.12**	**160**	*e*P	**P**	**00 16 25.2**	**-1.4**
	comp=E,17nm,1.4s,mb5.0						
TXAR	**Lajitas Array**	**61.22**	**327**	P	**P**	**00 16 27.5**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.6,baz=148,slow=11,SNR=4.1						
WVT	**Waverly**	**61.30**	**344**	*e*P	**P**	**00 16 27.2**	**-1.0**
	comp=E,12nm,0.8s,mb5.1						
WCI	**Wyandotte Cave**	**62.94**	**346**	*e*P	**P**	**00 16 38.0**	**-1.2**
FVM	**French Village**	**63.73**	**343**	*e*P	**P**	**00 16 43.7**	**-0.7**
	comp=E,15nm,0.8s,mb5.1						
CCM	**Cathedral Cave**	**64.03**	**342**	*e*P	**P**	**00 16 45.7**	**-0.6**
	comp=E,6.6nm,0.8s,mb4.7						
ANMO	**Albuquerque**	**67.16**	**329**	P	**P**	**00 17 07.3**	**+0.7**
	comp=E,1.3nm,0.8s,mb4.0,baz=58,slow=9.5,SNR=4.0						
SADO	**Sadowa**	**68.19**	**354**	P	**P**	**00 17 12.0**	**-0.9**
	comp=E,8.7nm,0.9s,mb4.8,baz=149,slow=6.2,SNR=3.8						
SADO	**Sadowa**	**68.19**	**354**	P	**P**	**00 17 12.0**	**-0.9**
SDCO	**Great Sand Dun**	**69.00**	**331**	*e*P	**P**	**00 17 19.8**	**+1.6**
	comp=E,5.3nm,1.0s,mb4.4						
LIC	**Lamto**	**70.45**	**74**	*e*P	**P**	**00 17 26.9**	**-0.8**
	comp=E,23nm,0.7s,mb5.2						
TIC	**Toumodi**	**70.65**	**74**	*e*P	**P**	**00 17 28.1**	**-0.8**
	comp=E,9.3nm,0.2s,mb5.4						
KIC	**Kosan Boka**	**70.77**	**74**	*e*P	**P**	**00 17 29.1**	**-0.5**
	comp=E,60nm,0.8s,mb5.6						
DBIC	**Dimbokro**	**70.81**	**74**	P	**P**	**00 17 29.6**	**-0.3**
	comp=E,13nm,0.8s,mb4.9,baz=214,slow=8.6,SNR=16						
DBIC				LR	LR	00 49 10.6	
	comp=E,270nm,18.6s,MS4.5,baz=94,slow=36						
DBIC	**Dimbokro**	**70.81**	**74**	*e*P	**P**	**00 17 29.4**	**-0.4**
	comp=E,14nm,0.8s,mb4.9						
ECSD	**EROS,Sioux Fal**	**70.84**	**340**	*e*P	**P**	**00 17 28.9**	**-0.4**
MSU	**Marysvale**	**72.77**	**327**	*e*P	**P**	**00 17 43.2**	**+2.1**
PPT	**Papeete**	**73.34**	**258**	*e*S	S	00 27 16.6	+4.2
	comp=E,82nm,27.2s						
PPT	**Papeete**	**73.34**	**258**	*e*LR	LR	00 40 34.7	
	comp=E,211nm,26.0s						
PPT	**Papeete**	**73.34**	**258**	*e*LR	LR	00 17 05.2	
	comp=E,86nm,25.2s						
PPT	**Papeete**	**73.34**	**258**	LR	LR	00 41 16.7	
	comp=E,162nm,19.5s,MS4.3,baz=81,slow=29						
ISA	**Isabella**	**74.07**	**321**	*e*P	**P**	**00 17 50.9**	**+2.1**
DUG	**Dugway**	**74.38**	**328**	*e*P	**P**	**00 17 52.0**	**+1.5**
	comp=E,10nm,1.4s,mb4.6						
AGMN	**Agassiz Refuge**	**74.77**	**343**	*e*P	**P**	**00 17 52.0**	**-0.6**
PDAR	**Pinedale Array**	**74.88**	**331**	P	**P**	**00 17 52.5**	**-0.8**
	comp=E,0.5nm,0.7s,mb3.6,baz=142,slow=5.6,SNR=4.5						
AHID	**Auburn Hatcher**	**75.57**	**330**	*e*P	**P**	**00 17 58.5**	**+1.2**
NVAR	**Mina Array Bea**	**75.93**	**323**	P	**P**	**00 17 59.7**	**+0.2**
	comp=E,1.2nm,0.9s,mb3.8,baz=149,slow=5.9,SNR=6.5						
NVAR	**Mina Array Bea**	**75.93**	**323**	P	**P**	**00 17 59.7**	**+0.2**
ELK	**Elko**	**76.00**	**327**	P	**P**	**00 18 01.0**	**+1.1**
	comp=E,0.5nm,0.4s,mb3.8,baz=148,slow=4.8,SNR=4.8						
LOHW	**Long Hollow**	**76.02**	**331**	*e*P	**P**	**00 18 01.2**	**+1.3**
TPAW	**Teton Pass**	**76.08**	**331**	*e*P	**P**	**00 18 02.1**	**+1.9**
RLMT	**Red Lodge**	**76.65**	**333**	*e*P	**P**	**00 18 04.7**	**+1.3**
	comp=E,4.8nm,1.0s,mb4.4						
TOA0	**Torodi Ar. Sit**	**79.49**	**71**	*e*P	**P**	**00 18 19.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**00 18 19.4**	**-0.5**
	comp=E,20nm,0.8s,mb5.1,baz=252,slow=5.1,SNR=95						
TSUM	**Tsumeb**	**81.08**	**107**	*e*P	**P**	**00 18 28.6**	**+0.2**
	comp=E,9.3nm,0.8s,mb4.8						
WALA	**Waterton Lakes**	**81.71**	**333**	*e*P	**P**	**00 18 32.1**	**+1.1**
MAW	**Mawson**	**83.07**	**164**	P	**P**	**00 18 38.7**	**+0.7**
	comp=E,8.4nm,0.8s,mb4.8,baz=219,slow=5.8,SNR=8.3						
BOSA	**Boshof**	**84.03**	**118**	P	**P**	**00 18 44.0**	**+0.3**
	comp=E,7.9nm,0.8s,mb4.9,baz=188,slow=2.1,SNR=12						
BOSA				LR	LR	00 52 19.4	
	comp=E,81nm,18.1s,MS4.2,baz=55,slow=33						
FRB	**Frobisher Bay**	**86.78**	**1**	P	**P**	**00 18 55.8**	**-0.6**
	comp=E,3.8nm,0.9s,mb4.6,baz=213,slow=4.6,SNR=4.6						
YKA	**Yellowknife Ar**	**92.35**	**341**	P	**P**	**00 19 21.9**	**-0.7**
	comp=E,2.1nm,0.7s,mb4.6,baz=138,slow=4.5,SNR=39						
KEST	**Kesra**	**95.68**	**54**	LR	LR	01 07 58.1	
	comp=E,98nm,18.5s,MS4.3,baz=251,slow=39						
BRTR	**Keskin Array B**	**115.19**	**56**	PKP	PKiKP	00 24 54.1	0.0
	comp=E,0.6nm,0.8s,baz=224,slow=6.9,SNR=3.6						
ASAR	**Alice Springs**	**127.56**	**209**	PKP	PKPdf	00 25 18.4	-0.1
	comp=E,1.6nm,0.8s,baz=132,slow=1.7,SNR=18						
WRA	**Warramunga Arr**	**130.57**	**212**	PKP	PKPdf	00 25 24.2	-0.1
	comp=E,1.4nm,0.8s,baz=169,slow=1.6,SNR=10						
KURK	**Kurchatov**	**143.72**	**33**	PKP	PKPdf	00 25 45.5	-1.9
	comp=E,2.0nm,0.7s,baz=304,slow=3.3,SNR=5.0						
ZAA0	**Zalesovo Array**	**144.27**	**25**	*e*PKPdf	PKPdf	00 25 47.0	-1.3
ZALV	**Zalesovo Beam**	**144.27**	**25**	PKP	PKPdf	00 25 46.3	-2.0
	comp=E,7.0nm,0.8s,baz=322,slow=4.5,SNR=24						
AML	**Almayashu**	**144.96**	**49**	P	PKPdf	00 25 50.9	+1.0
	SNR=11						
USP	**Ospenovka**	**145.08**	**47**	P	PKPbc	00 25 50.6	+1.1
	SNR=5.8						
AAK	**Ala-Archa**	**145.32**	**48**	P	PKPbc	00 25 52.1	+1.7
	SNR=19						
CHMS	**Chumysh**	**145.35**	**47**	P	PKPbc	00 25 51.7	+1.2
	SNR=5.9						
KBK	**Karagaybulak**	**145.62**	**48**	P	PKPdf	00 25 53.2	+2.2
	SNR=9.3						
TKM2	**Tokmak 2**	**145.95**	**47**	P	PKPdf	00 25 53.3	+1.7
	SNR=5.4						
MK31	**Makanchi Array**	**148.04**	**36**	*e*PKPdf	PKPdf	00 25 56.0	+1.0
MKAR	**Makanchi Array**	**148.04**	**36**	PKPbc	PKPbc	00 25 55.9	-2.2
	comp=E,6.3nm,0.7s,baz=313,slow=1.9,SNR=37						
MJAR	**Matsushiro Arr**	**151.83**	**305**	PKPbc	PKPbc	00 26 07.5	-0.2
	comp=E,3.4nm,0.9s,baz=85,slow=1.2,SNR=5.9						
MJAR				PKPab	PKPab	00 26 16.8	0.0
	comp=E,3.5nm,0.8s,baz=114,slow=2.7,SNR=4.5						
WMQ	**Urumqi**	**152.88**	**36**	*e*PKP	PKPdf	00 26 02.6	0.0
SONM	**Songino Array**	**155.41**	**5**	PKP	PKPdf	00 26 06.0	0.0
	comp=E,0.8nm,0.8s,baz=305,slow=1.9,SNR=5.5						
SONM				PKPab	PKPab	00 26 32.3	+0.9
	comp=E,1.2nm,0.9s,baz=344,slow=2.9,SNR=3.8						
BJI	**Beijing**	**162.34**	**342**	PKP	PKPdf	00 26 14.0	-0.5
BJI				LR	LR		
	comp=N,225nm,15.1s						
BJI				LR	LR		
	comp=E,186nm,15.1s						
BJI				LR	LR		
	comp=Z,32nm,14.2s						
HHC	**Hu-ho-hao-te**	**162.41**	**354**	*e*PKP	PKPdf	00 26 13.6	-0.9
HHC				APKP		00 26 24.3	
HHC				PKS		00 29 45.8	
HHC				SKS	SKSdf	00 33 13.3	-4.1
HHC				PP	PP		
	comp=Z,88nm,6.8s						
HHC				LR	LR		
	comp=N,159nm,14.3s						
HHC				LR	LR		
	comp=E,228nm,14.3s						
HHC				LR	LR		
	comp=Z,161nm,16.6s						
LZH	**Lanzhou**	**166.41**	**19**	*e*PKP	PKPdf	00 26 18.0	-0.2
LZH				LR	LR		
	comp=E,142nm,18.2s						
LZH				LR	LR		
	comp=Z,205nm,20.3s						
XAN	**Xi'an**	**169.30**	**2**	PKP	PKPdf	00 26 19.6	-0.7
XAN				SKS	SKSdf	00 33 17.9	-4.2
XAN				LR	LR		
	comp=E,78nm,22.4s						
XAN				LR	LR		
	comp=Z,90nm,19.6s						
CD2	**Chengdu**	**170.95**	**32**	PKP	PKPdf	00 26 20.4	-0.9
KMI	**Kunming**	**173.72**	**72**	PKP	PKPdf	00 26 21.1	-1.6
GYA	**Guiyang**	**176.04**	**37**	*e*PKP	PKPdf	00 26 20.4	-3.0
GYA				PKP2	PKPab	00 28 01.8	-0.9
GYA				PKS		00 29 50.3	
GYA				PP	PP		
	comp=Z,90nm,8.9s						
GYA				LR	LR		
	comp=N,110nm,20.9s						
GYA				LR	LR		
	comp=E,100nm,21.4s						
GYA				LR	LR		
	comp=Z,120nm,20.8s						

*ISCJB **16** 00:10:19.1±1.9, 2333S±005×7060W±008, h14^{km}±10^{km}, mb4.4/14, Error ellipse: s-maj=13.0km s-min=8.6km az=14.0*

*IDC **16** 00:10:23.2±3.7, 2320S×7059W, h28^{km}±24^{km}, mb4.0/11, mb1 4.2/14, mb1mx4.1/20, mbtmp4.0/14, ML3.8/3, Error ellipse: s-maj=22.7km s-min=19.0km az=75.0*

ISC 16 00:10:22.3±3.6**, 2331S**±005×**7069W**±010**, h23**^{km}±25^{km}**, n28, σ0**^{s}**98**/24**, mb4.4**/14**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.78**	**67**	Pg	**Pn**	**00 10 53.5**	**+1.9**
	2µm,0.3s,baz=250,slow=12,SNR=137						
LVC				Lg		00 11 17.2	
	972nm,0.3s,baz=4.7,slow=15,SNR=27						
CFAA	**Coronel Fontan**	**8.54**	**166**	Pn	**Pn**	**00 12 24.9**	**+0.4**
	0.1nm,0.3s,baz=47,slow=7.1,SNR=4.8						
CFAA				Sn	**Sn**	**00 13 59.9**	**-0.3**
	0.3nm,0.3s,baz=158,slow=19,SNR=2.0						
SIV	**San Ignacio**	**11.62**	**53**	Pn	**Pn**	**00 13 05.4**	**-1.4**
	1.7nm,0.3s,baz=242,slow=10.0,SNR=11						
SIV				Sn	**Sn**	**00 15 17.3**	**+1.4**
	baz=336,slow=20,SNR=1.9						
CPUP	**Villa Florida**	**12.50**	**107**	Pn	**Pn**	**00 13 18.7**	**-0.1**
	0.2nm,0.3s,baz=315,slow=20,SNR=1.9						
BDFB	**Brasilia**	**22.68**	**74**	P	**P**	**00 15 21.1**	**-1.2**
	1.6nm,0.4s,mb3.8,baz=247,slow=16,SNR=5.5						
VNA3	**Neumayer Olymp**	**58.91**	**161**	*e*	**P**	**00 20 19.4**	**+0.3**
VNA3				*e*		00 20 30.2	
VNA3				*e*		00 20 33.8	
VNA1	**Neumayer--Stat**	**59.15**	**160**	*e*	**P**	**00 20 21.2**	**+0.5**
VNA1				*e*		00 20 32.8	
VNA1				*e*		00 20 38.0	
VNA2	**Neumayer--Watz**	**59.51**	**160**	*e*	**P**	**00 20 23.8**	**+0.6**
	baz=296,slow=7.9						
VNA2				*e*		00 20 33.5	
VNA2				*e*		00 20 37.6	
TKL	**Tuckaleechee C**	**59.94**	**348**	P	**P**	**00 20 25.8**	**-0.8**
	6.9nm,1.0s,mb4.7,baz=144,slow=11,SNR=3.5						
SNAA	**Sanae**	**61.12**	**160**	*e*	**P**	**00 20 32.2**	**-2.1**
SNAA				*e*		00 20 42.4	
SNAA				*e*		00 20 47.4	
TXAR	**Lajitas Array**	**61.21**	**327**	P	**P**	**00 20 34.4**	**-1.0**
	0.6nm,1.0s,mb3.7,baz=144,slow=7.8,SNR=3.2						
LIC	**Lamto**	**70.47**	**74**	*e*P	**P**	**00 21 34.5**	**-1.0**
	40nm,1.6s,mb5.1						
TIC	**Toumodi**	**70.67**	**74**	*e*P	**P**	**00 21 36.1**	**-0.6**
	9.1nm,0.2s,mb5.4						
KIC	**Kosan Boka**	**70.78**	**74**	*e*P	**P**	**00 21 36.6**	**-0.8**
	42nm,0.9s,mb5.4						
DBIC	**Dimbokro**	**70.82**	**74**	P	**P**	**00 21 37.4**	**-0.3**
	8.3nm,0.8s,mb4.7,baz=244,slow=6.3,SNR=11						
VNDA	**Vanda**	**74.78**	**190**	P	**P**	**00 22 01.5**	**+1.4**
	1.0nm,0.5s,mb4.0,baz=5.9,slow=2.0,SNR=8.5						
PDAR	**Pinedale Array**	**74.88**	**331**	P	**P**	**00 22 01.5**	**+0.5**
	0.3nm,0.6s,mb3.4,baz=127,slow=7.0,SNR=2.8						
NVAR	**Mina Array Bea**	**75.93**	**323**	P	**P**	**00 22 09.2**	**+2.1**
	0.3nm,0.6s,mb3.4,baz=156,slow=5.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P	**P**	**00 22 27.4**	**-0.3**
	12nm,0.8s,mb4.8,baz=254,slow=5.0,SNR=33						
MAW	**Mawson**	**83.07**	**164**	P	**P**	**00 22 46.1**	**+0.5**
	3.0nm,0.6s,mb4.5,baz=213,slow=2.3,SNR=9.0						
BOSA	**Boshof**	**84.04**	**118**	P	**P**	**00 22 51.9**	**+0.4**
	4.9nm,0.9s,mb4.7,baz=64,slow=17,SNR=7.8						
YKA	**Yellowknife Ar**	**92.35**	**341**	P	**P**	**00 23 30.2**	**0.0**
	1.0nm,0.7s,mb4.3,baz=139,slow=4.4,SNR=13						
ASAR	**Alice Springs**	**127.55**	**209**	PKP	PKPdf	00 29 26.4	+0.2
	0.9nm,0.8s,baz=124,slow=1.4,SNR=9.5						
WRA	**Warramunga Arr**	**130.56**	**212**	PKP	PKPdf	00 29 32.6	+0.7
	0.5nm,0.4s,baz=139,slow=1.5,SNR=3.7						
KURK	**Kurchatov**	**143.74**	**33**	PKP	PKPdf	00 29 52.5	-2.7
	0.7nm,0.7s,baz=314,slow=3.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**144.28**	**25**	PKP	PKPdf	00 29 54.4	-1.7
	2.3nm,0.6s,baz=282,slow=2.9,SNR=8.2						
MKAR	**Makanchi Array**	**148.06**	**36**	PKPbc	PKPbc	00 30 04.3	-1.5
	3.4nm,0.7s,baz=328,slow=2.9,SNR=15						
SONM	**Songino Array**	**155.42**	**5**	PKP	PKPdf	00 30 13.6	-0.1
	0.8nm,0.9s,baz=135,slow=0.8,SNR=3.5						

*NEIC **16** 00:20:49.1, 3277S×7181W, h14^{km}, ML3.9(GUC), After GUC.*

GUC 16 00:20:49.1±1.0**, 3277S**×**7181W, h14**^{km}±6^{km}**, MD3.9, ML3.9, 7C-11D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.29**	**151**⇑	*i*P	Pg	00 20 56.2	+1.0
PACH	**Papudo**	**0.39**	**54**⇑	*i*P	Pg	00 20 56.7	-0.3
ROCH	**El Roble**	**0.70**	**107**⇑	*i*P	Pg	00 21 02.1	-0.7
PEL	**Peldehue**	**1.02**	**112**⇑	*i*P	Pb	00 21 07.2	-1.2
PEL				*i* S	Sb	00 21 21.3	-0.4
PEL				AML	AML	00 21 22.8	
	comp=E,17µm,0.3s						
TACH	**Talagante**	**1.15**	**140**⇓	*i*P	Pb	00 21 09.5	-1.2
SAN	**Santiago**	**1.18**	**126**⇓	*i*P	Pn	00 21 09.9	-1.3
SAN				*i* S	Sb	00 21 25.9	-0.5
SAN	**Santiago**	**1.18**	**126**⇓	*i*P	Pn	00 21 09.9	-1.3
SAN				*i* S	Sb	00 21 25.9	-0.5
SAN				AML	AML	00 21 28.7	
	comp=N,4µm,0.5s						
LNV	**Longovilo**	**1.23**	**164**⇑	*i*P	Pn	00 21 10.2	-1.7
LNV				*i* S	Sb	00 21 26.2	-1.5
CLCH	**Cerro Calan**	**1.24**	**121**⇓	*i*P	Pn	00 21 10.7	-1.3
CLCH				*i* S	Sb	00 21 26.9	-1.1
CLCH				AML	AML	00 21 29.7	
	comp=N,5µm,0.6s						
CLCH				AML	AML	00 21 30.6	
	comp=N,5µm,0.6s						
ANTU	**Antumapu**	**1.27**	**129**	*e*P	Pn	00 21 11.7	-0.7
ANTU				*i* S	Sb	00 21 28.2	-0.7
ANTU	**Antumapu**	**1.27**	**129**	*e*P	Pn	00 21 11.7	-0.7
ANTU				*i* S	Sb	00 21 28.2	-0.7
ANTU				AML	AML	00 21 34.1	
	comp=E,4µm,0.3s						
PCH	**Pirque**	**1.38**	**128**⇓	*i*P	Pn	00 21 13.1	-0.8
PCH				*i* S	Sn	00 21 31.6	-0.3
FCH	**Farellones**	**1.39**	**114**⇓	*i*P	Pn	00 21 13.1	-1.0
FCH				*i* S	Sn	00 21 31.5	-0.8
FCH				AML	AML	00 21 32.0	
	comp=N,3µm,0.2s						
SJCH	**San Jose de Ma**	**1.50**	**126**⇓	*i*P	Pn	00 21 15.4	-0.2
SJCH				*i* S	Sn	00 21 34.7	-0.1
SJCH	**San Jose de Ma**	**1.50**	**126**⇓	*i*P	Pn	00 21 15.4	-0.2
SJCH				*i* S	Sn	00 21 34.7	-0.1
SJCH				AML	AML	00 21 39.3	
	comp=N,2µm,0.6s						
CACH	**El Canelo**	**1.68**	**143**⇑	*i*P	Pn	00 21 18.5	+0.4
CACH				*i* S	Sn	00 21 42.0	+2.6
YECH	**El Yeso**	**1.70**	**122**⇑	*i*P	Pn	00 21 18.4	+0.1
YECH				*i* S	Sn	00 21 41.0	+1.2
YECH				AML	AML	00 21 46.3	
	comp=N,1µm,0.5s						
LMEL	**Las Melosas**	**1.72**	**129**⇓	*i*P	Pn	00 21 18.9	+0.3
LMEL				AML	AML	00 21 46.1	
	comp=N,3µm,0.2s						
OVCH	**Ovalle**	**2.22**	**14**	AML	AML	00 22 04.2	
	comp=N,1µm,0.6s						
NICH	**Los Niches**	**2.28**	**168**	*e*P	Pn	00 21 26.2	-0.1
TLL	**Tololo Astrono**	**2.73**	**19**⇓	*i*P	Pn	00 21 34.2	+1.7
TLL				*e*S	Sn	00 22 08.5	+3.1
TLL	**Tololo Astrono**	**2.73**	**19**⇓	*i*P	Pn	00 21 34.2	+1.7
TLL				*e*S	Sn	00 22 08.5	+3.1
TLL				AML	AML	00 22 19.5	
	comp=N,876nm,0.6s						
LCO	**Las Campanas**	**3.87**	**15**	*e*Pn	Pn	00 21 47.7	-0.4

*ISCJB **16** 00:24:02.7±1.4, 2322S±005×7094W±007, h15^{km}±10^{km}, mb3.9/2, Error ellipse: s-maj=11.2km s-min=7.7km az=22.2*

*GUC **16** 00:24:05.3±1.7, 2322S×7080W, h36^{km}±5^{km}, ML3.6*

*NEIC **16** 00:24:06.1, 2330S×7068W, h35^{km}, ML3.6(GUC), After GUC.*

*IDC **16** 00:24:08.2±6.0, 2270S×7063W, h29^{km}±37^{km}, mb3.8/2, mb1 3.8/3, mb1mx3.5/17, mbtmp3.7/3, ML3.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/21, Error ellipse: s-maj=43.2km s-min=32.5km az=107.0*

ISC 16 00:24:03.4±1.4**, 2320S**±005×**7083W**±007**, h4**^{km}±9^{km}**, n18, σ1**^{s}**05**/24**, mb3.9**/2**, 2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.36**	**75**⇓	*i*P	**Pg**	**00 24 13.3**	**+2.9**
MECH				*i* S	**Sg**	**00 24 19.4**	**+4.2**
MECH				AML	AML	00 24 20.0	
	comp=N,21µm,0.4s						
CEN1	**Los Morros**	**0.61**	**108**⇑	*i*P	**Pg**	**00 24 15.2**	**+0.1**
CEN1				*i* S	**Sg**	**00 24 22.0**	**-1.0**
CEN1				AML	AML	00 24 22.3	
	comp=N,3µm,0.4s						
ANCH	**Antofagasta**	**0.61**	**142**⇓	*i*P	**Pg**	**00 24 15.5**	**+0.2**
ANCH				*i* S	**Sg**	**00 24 22.6**	**-0.6**
TOCH	**Tocopilla**	**1.24**	**28**	AML	AML	00 24 49.2	
	comp=E,2µm,0.2s						
PB06	**Plate Boundary**	**1.26**	**67**⇓	*i*P	**Pn**	**00 24 27.1**	**-0.7**
PB06				*i* S	**Sg**	**00 24 43.9**	**0.0**
MACH	**Maria Elena**	**1.41**	**45**	*e*P	**Pn**	**00 24 30.3**	**+0.6**
MACH				*i* S	**Sb**	**00 24 48.8**	**+0.4**
PB04	**Plate Boundary**	**1.55**	**53**⇑	*i*P	**Pn**	**00 24 25.1**	**-6.7**
PB04				*i* S	**Sn**	**00 24 39.8**	**-12**
PB04				AML	AML	00 24 43.2	
	comp=N,4µm,0.7s						
LVC	**Limon Verde**	**1.86**	**72**	Pg	**Pg**	**00 24 36.9**	**-2.2**
	comp=N,254nm,0.3s,baz=252,slow=12,SNR=805						
LVC				Lg		00 25 00.8	
	comp=N,148nm,0.3s,baz=233,slow=20,SNR=35						
LVC				LR	LR	00 25 19.1	
	comp=N,431nm,18.4s,baz=235,slow=44						
LVC	**Limon Verde**	**1.86**	**72**	*e*P	**Pn**	**00 24 36.9**	**+0.9**
LVC				*i* S	**Sn**	**00 25 00.4**	**+0.4**
LVC				AML	AML	00 25 03.7	
	comp=N,870nm,0.7s						
PB01	**Plate Boundary**	**2.48**	**30**	*e*P	**Pn**	**00 24 45.3**	**+0.7**
PB01				*i* S	**Sn**	**00 25 15.7**	**+0.4**
LCO	**Las Campanas**	**5.79**	**179**	*e*Pn	**Pn**	**00 25 32.0**	**+1.9**
LCO				*e*Sn	Sn	00 26 56.0	+19
ARE	**Arequipa**	**6.73**	**355**	P	**Pn**	**00 25 43.0**	**0.0**
ARE				*e*S	**Sn**	**00 26 59.0**	**-1.2**
CFAA	**Coronel Fontan**	**8.68**	**165**	Pn	**Pn**	**00 26 18.1**	**+8.3**
	comp=N,0.2nm,0.3s,baz=344,slow=14,SNR=6.4						
CFAA				Sn	**Sn**	**00 28 00.8**	**+13**
	comp=N,0.2nm,0.3s,baz=168,slow=16,SNR=11						
SIV	**San Ignacio**	**11.65**	**54**	LR	LR	00 31 46.5	
	comp=N,106nm,20.2s,baz=331,slow=41						
BDFB	**Brasilia**	**22.77**	**75**	LR	LR	00 38 32.4	
	comp=N,70nm,18.4s,baz=217,slow=38						
TORD	**Torodi Ar. Bea**	**79.59**	**71**	P	**P**	**00 36 10.5**	**-1.7**
	comp=N,1.7nm,0.7s,mb4.1,baz=255,slow=4.5,SNR=9.9						
YKA	**Yellowknife Ar**	**92.20**	**341**	P	**P**	**00 37 13.3**	**-0.5**
	comp=N,0.1nm,0.3s,mb3.6,baz=142,slow=5.1,SNR=3.9						
MKAR	**Makanchi Array**	**148.04**	**36**	PKPbc	PKPbc	00 43 49.6	-0.5
	comp=N,0.5nm,0.6s,baz=320,slow=2.8,SNR=6.7						

PRE 16 00:35:52.6±1.2**, 2136S**×**3330E, h5**^{km}**, ML3.6, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.20**	**252**	*e*P	Pn	00 36 45.4	+1.9
MSNA				*e*S	Sn	00 37 22.3	+0.2
MSNA				AML	AML	00 37 32.7	
	comp=Z,60nm,0.6s						
LBTB	**Lobatse**	**7.96**	**241**	*e*P	Pn	00 37 49.4	+0.4
LBTB				*e*S	Sn	00 39 16.4	-3.1
LBTB				AML	AML	00 40 19.2	
	comp=Z,4.9nm,0.5s						
SEK	**Senekal**	**8.63**	**215**	*e*S	Sn	00 39 32.6	-3.4
SEK				AML	AML	00 40 38.7	
	comp=Z,4.9nm,0.8s						
KSD	**Kokstad**	**9.78**	**200**	*e*P	Pn	00 38 15.3	+1.3
BOSA	**Boshof**	**10.26**	**224**	*e*P	Pn	00 38 22.1	+1.6
BOSA				*e*S	Sn	00 40 10.3	-5.7
BOSA				AML	AML	00 41 18.2	
	comp=Z,2.5nm,0.8s						
PKA	**Prieska**	**12.60**	**227**	*e*P	Pn	00 38 53.7	+1.1

*IDC **16** 00:41:31.2±1.0, 5550N×16272E, h0^{km}, mb3.7/4, mb1 3.8/6, mb1mx3.5/25, mbtmp3.6/6, ML3.5/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/30, Error ellipse: s-maj=32.5km s-min=15.1km az=17.0*

*ISCJB **16** 00:41:36.0±0.7, 5505N±003×16293E±008, h72^{km}±7^{km}, mb3.7/5, Error ellipse: s-maj=7.9km s-min=5.1km az=11.7*

*MOS **16** 00:41:36.2±1.5, 5507N×16287E, h69^{km}, mb4.3/1, Error ellipse: s-maj=21.3km s-min=12.8km az=90.8*

*NEIC **16** 00:41:36.8±0.7, 5532N×16281E, h45^{km}, Error ellipse: s-maj=16.9km s-min=12.1km az=164.0*

*KRSC **16** 00:41:37.2±0.5, 5506N×16270E, h40^{km}±40^{km}, ML4.1*

ISC 16 00:41:37.4±0.6**, 5507N**±003×**16292E**±008**, h64**^{km}±7^{km}**, n29, σ0**^{s}**89**/48**, mb3.8**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.14**	**357**	*i* P	**Pn**	**00 41 56.7**	**-0.6**
KBTR				*i* S	**Sn**	**00 42 10.7**	**-1.5**
ZLN	**Zelenaya**	**1.53**	**309**	*i* P	**Pn**	**00 42 03.2**	**+0.7**
ZLN				*i* S	**Sn**	**00 42 22.7**	**+1.3**
TUMR	**Tumrok**	**1.60**	**279**	*i* P	**Pn**	**00 42 03.7**	**+0.3**
TUMR				*i* S	**Sn**	**00 42 23.1**	**-0.1**
BZMR	**Bezymyannaya**	**1.63**	**303**	*e*P	**Pn**	**00 42 04.1**	**+0.3**
BZMR				*i* S	**Sn**	**00 42 23.5**	**-0.3**
KMNR	**Kamenistaya**	**1.67**	**295**	*i* P	**Pn**	**00 42 04.7**	**+0.3**
KMNR				*i* S	**Sn**	**00 42 25.1**	**+0.2**
KRSR	**Krestovskiy**	**1.76**	**312**	*i* P	**Pn**	**00 42 05.8**	**+0.3**
KRSR				*i* S	**Sn**	**00 42 26.4**	**-0.5**
KPT	**Kopyto**	**1.77**	**301**	*i* P	**Pn**	**00 42 06.0**	**+0.2**
KPT				*i* S	**Sn**	**00 42 27.0**	**-0.3**
KLY	**Klyuchi**	**1.79**	**315**	*i* P	**Pn**	**00 42 04.7**	**-1.2**
KLY				*i* S	**Sn**	**00 42 24.8**	**-2.8**
SRKR	**Sorokina**	**1.87**	**329**	*i* P	**Pn**	**00 42 07.3**	**+0.3**
SRKR				*i* S	**Sn**	**00 42 29.5**	**0.0**
KOZR	**Kozyr**	**1.98**	**301**	PN	**Pn**	**00 42 09.3**	**+0.7**
KOZR				S	**Sn**	**00 42 33.1**	**+0.8**
KOZ	**Kozyrevsk**	**1.99**	**301**	*e*P	**Pn**	**00 42 09.3**	**+0.6**
KOZ				*i* S	**Sn**	**00 42 33.1**	**+0.6**
SRDR	**Sredinnyy**	**2.20**	**306**	*i* P	**Pn**	**00 42 12.0**	**+0.5**
SRDR				*i* S	**Sn**	**00 42 37.4**	**-0.2**
SPN	**Mys Shipunski**	**2.61**	**222**	*e*P	**Pn**	**00 42 16.0**	**-1.1**
SPN				*i* S	**Sn**	**00 42 43.5**	**-4.1**
NLC	**Nalytchevo**	**2.84**	**229**	*e*P	**Pn**	**00 42 20.0**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLC				i S	Sn	00 42 51.3	-1.8
AVH	Avacha	3.05	235	i P	Pn	00 42 24.4	+1.3
AVH				i S	Sn	00 42 57.9	-0.5
GNL	Ganaly	3.22	247	i P	Pn	00 42 26.8	+1.4
GNL				i S	Sn	00 43 02.2	-0.3
PET	Petropavlovsk	3.24	233	ePN	Pn	00 42 27.0	+1.3
PET				eS	Sn	00 43 01.7	-1.4
PET				pmax	pmax		
	comp=Z,29nm,0.3s						
PET				smax			
	comp=E,59nm,0.4s						
PET				smax			
	comp=N,68nm,0.4s						
PET	Petropavlovsk	3.24	233	eP	Pn	00 42 26.3	+0.6
PET				i S	Sn	00 43 02.0	-1.1
PEA0B	Petropavlovsk-	3.65	240	ePn	Pn	00 42 32.4	+1.1
PETK	Petropavlovsk-	3.65	240	Pn	Pn	00 42 31.7	+0.5
	comp=N,1.7nm,0.3s,baz=65,slow=18,SNR=27						
PETK				Sn	Sn	00 43 18.3	+5.3
	comp=N,2.7nm,0.3s,baz=52,slow=19,SNR=6.3						
FX1	Attu Island--F	6.43	106	Pn	Pn	00 43 09.5	+0.2
	comp=N,5.3nm,0.3s,baz=70,slow=16,SNR=12						
FX1				Sn	Sn	00 44 16.9	-4.3
	comp=N,17nm,0.3s,baz=136,slow=11,SNR=15						
KURK	Kurchatov	48.10	302	LR	LR	01 11 40.9	
	comp=N,112nm,18.7s,baz=315,slow=38						
MKAR	Makanchi Array	48.80	296	P	P	00 50 14.4	-1.2
	comp=N,0.4nm,0.5s,mb3.7,baz=52,slow=6.8,SNR=9.3						
JOF	Joensuu	56.46	336	ep	P	00 51 11.5	-0.4
	comp=N,1.8nm,0.5s,mb4.4						
KAF	Kangasniemi	58.30	338	ep	P	00 51 24.5	-0.4
AKASG	Malin Array Be	67.75	330	P	P	00 52 27.0	-0.7
	comp=N,0.4nm,0.3s,mb3.9,baz=27,slow=5.3,SNR=3.3						
TXAR	Lajitas Array	68.36	70	P	P	00 52 35.2	+3.3
	comp=N,0.2nm,0.5s,mb3.4,baz=287,slow=4.9,SNR=5.8						
TXAR	Lajitas Array	68.36	70	P	P	00 52 35.2	+3.3
BRTR	Keskin Array B	76.12	322	P	P	00 53 18.9	+1.0
	comp=N,0.5nm,0.5s,mb3.7,baz=23,slow=4.2,SNR=3.6						

GUC 16 01:16:22.0±2.0, 2215S×6854W, h115^{km}±14^{km}, ML3.8, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.58	217	i P	Pn	01 16 40.7	+0.8
LVC				i S	Sn	01 16 54.4	+0.9
LVC				AML	AML	01 16 55.2	
	comp=N,1μm,0.7s						
PB04	Plate Boundary	0.89	262	⇑i P	Pn	01 16 49.9	+7.4
PB04				i S	Sn	01 17 10.9	+13
PB04				AML	AML	01 17 18.4	
	comp=N,1μm,0.4s						
PB06	Plate Boundary	1.11	240	eP	Pn	01 16 45.8	+1.1
PB06				i S	Sn	01 17 03.5	+1.6
MACH	Maria Elena	1.13	267	⇑i P	Pn	01 16 46.0	+1.0
MACH				i S	Sn	01 17 03.6	+1.3
PB07	Plate Boundary	1.32	288	⇑i P	Pn	01 16 47.9	+0.9
PB07				i S	Sn	01 17 06.9	+0.9
PB01	Plate Boundary	1.41	321	⇓i P	Pn	01 16 48.6	+0.5
PB01				i S	Sn	01 17 08.7	+0.8
PB01				AML	AML	01 17 09.8	
	comp=E,1μm,0.5s						
CEN1	Los Morros	1.97	231	eP	Pn	01 16 58.7	+3.9
CEN1				AML	AML	01 17 32.1	
	comp=N,1μm,0.3s						
MECH	Mejillones	2.01	241	AML	AML	01 17 36.8	
	comp=N,1μm,0.2s						
HMBC	Humberston	2.25	326	⇑i P	Pn	01 16 58.5	+0.1
HMBC				i S	Sn	01 17 25.8	-0.5
ANCH	Antofagasta	2.31	228	eP	Pn	01 17 02.0	+2.9
ANCH				i S	Sn	01 17 30.8	+3.2
CPN1	Cerro Paranal	3.00	214	eP	Pn	01 17 09.9	+1.7
CPN1				AML	AML	01 17 55.3	
	comp=E,933nm,0.6s						

*ISK **16** 01:23:49.8, 3892N×2673E, h6^{km}, MD3.0*
*CSEM **16** 01:23:50.8±0.2, 3890N×2680E, h10^{km}, MD2.8, Error ellipse: s-maj=3.4km s-min=2.0km az=107.0*
*ISCJB **16** 01:23:52.3±0.6, 3887N±003×2686E±005, h12^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=4.7km az=154.6*
*DDA **16** 01:23:52.1, 3887N×2685E, h7^{km}±3^{km}, Md2.8*
ISC 16 01:23:52.6±0.6, 3887N±003×2685E±004, h15^{km}±5^{km}, n13, σ0^{s}72/21, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.45	344	eP	Pg	01 24 01.6	-0.1
AYVA				eS	Sg	01 24 07.9	+0.1
BLCB	Balcova	0.51	163	ePG	Pg	01 24 02.2	-0.5
BLCB				eSG	Sg	01 24 09.6	+0.1
URLA	Izmir	0.55	201	eP	Pg	01 24 02.7	-0.7
URLA				eS	Sg	01 24 10.8	+0.1
IZM	Izmir	0.57	146	ePG	Pg	01 24 03.4	-0.4
IZM				eSG	Sg	01 24 13.0	+1.5
AKHS	Akhisar	0.75	89	eP	Pg	01 24 07.0	-0.2
AKHS				eS	Sg	01 24 17.0	-0.1
AKS	Akhisar	0.75	89	ePG	Pg	01 24 06.5	-0.7
AKS				eSG	Sg	01 24 17.9	+0.8
EZN	Ezine	1.04	337	ePG	Pg	01 24 07.6	-5.0
BALB	Balikesir	1.11	46	ePN	Pn	01 24 12.1	-1.5
BALB				eSN	Sn	01 24 28.5	0.0
BOZC	Bozcaada	1.15	328	eP	Pn	01 24 13.6	-0.5
BOZC				eS	Sb	01 24 30.6	+1.7
DURS	Dursunbey	1.46	59	eP	Pn	01 24 18.2	-0.1
KULA	Kula-Manisa	1.46	104	ePN	Pn	01 24 19.3	+0.9
DST	Dursunbey	1.56	61	ePN	Pn	01 24 19.9	+0.1
KCT	Karacabey	1.81	39	ePN	Pn	01 24 23.0	-0.3

*IDC **16** 01:55:18.6±1.1, 259N×12689E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.8/8, Error ellipse: s-maj=118.3km s-min=16.2km az=67.0*
*ISCJB **16** 01:55:22.2±0.8, 24N±03×1265E±07, h33^{km}, mb3.8/10, Error ellipse: s-maj=109.2km s-min=11.1km az=157.1*
*NEIC **16** 01:55:24.1±0.7, 238N×12650E, h35^{km}, mb4.1/2, Error ellipse: s-maj=93.2km s-min=9.3km az=67.0*
ISC 16 01:55:24.2±0.8, 24N±03×1265E±07, h35^{km}, n14, σ0^{s}68/14, mb3.8/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	23.46	161	eP	P	02 00 31.1	+0.2
	3.1nm,0.7s,mb3.9						
WRA	Warramunga Arr	23.47	161	P	P	02 00 30.5	-0.5
	2.0nm,0.7s,mb3.7,baz=343,slow=10,SNR=9.3						
ASAR	Alice Springs	26.87	165	P	P	02 01 00.7	-1.1
	0.4nm,0.6s,mb3.1,baz=351,slow=7.3,SNR=8.1						
STKA	Stephens Creek	36.95	158	P	P	02 02 31.5	+1.4
	2.1nm,0.7s,mb4.1,baz=316,slow=9.3,SNR=4.0						
ULN	Ulaanbaatar	48.34	342	eP	P	02 04 02.1	-0.1
	1.5nm,0.6s,mb4.2						
SONM	Songino Array	48.51	342	P	P	02 04 03.5	-0.2
	0.2nm,0.3s,mb3.6,baz=144,slow=5.2,SNR=3.0						
SONM	Songino Array	48.51	342	P	P	02 04 03.5	-0.2
MK31	Makanchi Array	58.55	326	eP	P	02 05 17.4	+0.1
MKAR	Makanchi Array	58.55	326	P	P	02 05 17.1	-0.2
	0.7nm,0.6s,mb3.9,baz=122,slow=7.9,SNR=9.3						
KURK	Kurchatov	62.77	328	P	P	02 05 45.7	-0.3
	0.6nm,0.5s,mb4.0,baz=129,slow=6.3,SNR=5.8						
KURK	Kurchatov	62.77	328	P	P	02 05 45.7	-0.3
BVAR	Borovoye Array	68.34	327	P	P	02 06 21.1	-0.8
	0.3nm,0.4s,mb3.7,baz=125,slow=7.4,SNR=3.6						
AKTK	Aktyubinsk	74.59	322	P	P	02 07 00.5	+0.8
AKTO	Aktyubinsk	74.59	322	P	P	02 07 00.5	+0.8
	1.7nm,0.7s,mb4.1,baz=94,slow=9.9,SNR=7.3						

NEIC 16 01:58:30.1, 4007S×17493E, h32^{km}, ML3.7(WEL), After WEL., Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.32	8	P	Pb	01 58 37.8	-0.1
MRZ	Mangatainoka R	0.77	140	P	Pn	01 58 44.5	-0.3
MRZ				S	Sn	01 58 54.0	-1.3
TSZ	Takapari Road	0.79	90	P	Pn	01 58 44.5	-0.5
KIW	Kapiti Island	0.79	181	P	Pn	01 58 44.4	-0.6
WNVZ	Wahianoa	0.90	35	P	Pn	01 58 46.2	-0.3
MOVZ	Moawhango	0.92	44	P	Pn	01 58 46.0	-0.7
SNZO	South Karori	1.25	188	ePn	Pn	01 58 52.3	+1.0
SNZO				eSn	Sn	01 59 08.6	+1.6

*IDC **16** 02:05:33.2±1.3, 256N×12690E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.6/20, mbtmp3.6/6, Error ellipse: s-maj=121.4km s-min=19.5km az=68.0*
*ISCJB **16** 02:05:36.7±1.2, 24N±04×1266E±10, h33^{km}, mb3.6/7, Error ellipse: s-maj=149.6km s-min=12.8km az=156.9*
*NEIC **16** 02:05:38.4±0.9, 245N×12674E, h35^{km}, mb3.6/1, Error ellipse: s-maj=115.0km s-min=9.8km az=67.0*
ISC 16 02:05:38.6±1.3, 25N±04×1268E±10, h35^{km}, n11, σ0^{s}31/11, mb3.6/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	23.46	162	eP	P	02 10 45.1	-0.1
	1.3nm,0.6s,mb3.5						
WRA	Warramunga Arr	23.46	162	P	P	02 10 45.4	+0.1
	0.9nm,0.4s,mb3.5,baz=343,slow=10,SNR=5.7						
ASAR	Alice Springs	26.88	165	P	P	02 11 16.1	-0.1
	0.2nm,0.5s,mb2.9,baz=344,slow=7.7,SNR=6.1						
SONM	Songino Array	48.51	342	P	P	02 14 18.1	+0.1
	0.3nm,0.6s,mb3.5,baz=148,slow=8.5,SNR=3.0						
MK31	Makanchi Array	58.62	326	eP	P	02 15 31.8	-0.3
MKAR	Makanchi Array	58.62	326	P	P	02 15 31.9	-0.2
	0.5nm,0.5s,mb3.8,baz=121,slow=8.4,SNR=14						
MKAR	Makanchi Array	58.62	326	P	P	02 15 31.9	-0.2
KURK	Kurchatov	62.83	328	P	P	02 16 00.2	-0.5
	0.5nm,0.5s,mb4.0,baz=129,slow=6.1,SNR=5.8						
KURK	Kurchatov	62.83	328	P	P	02 16 00.2	-0.5
AKTK	Aktyubinsk	74.67	322	P	P	02 17 15.0	+0.5
AKTO	Aktyubinsk	74.67	322	P	P	02 17 15.0	+0.5
	0.8nm,0.6s,mb3.8,baz=104,slow=10,SNR=5.0						

*DDA **16** 02:11:01.9, 3642N×27.11E, h7^{km}±5^{km}, Md3.2*
*NEIC **16** 02:11:02.4, 3643N×27.12E, h26^{km}, MD3.0(ATH), After ATH.*
*CSEM **16** 02:11:02.3±0.1, 3646N×2706E, h2^{km}, MD3.2, Error ellipse: s-maj=1.8km s-min=1.5km az=96.0*
*ISCJB **16** 02:11:02.1±1.1, 3638N±004×27.12E±006, h9^{km}±7^{km}, Error ellipse: s-maj=8.2km s-min=6.1km az=9.5*
*ATH **16** 02:11:02.4, 3643N×27.12E, h26^{km}±4^{km}, MD3.0/5*
*ISK **16** 02:11:02.2, 3643N×27.11E, h3^{km}, MD3.2*
ISC 16 02:11:02.2±1.2, 3637N±004×2713E±006, h9^{km}±8^{km}, n14, σ1^{s}07/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAT	Datca	0.51	45	PG	Pg	02 11 11.6	-0.5
DAT				eSG	Sg	02 11 19.2	+0.4
BDRM	Kayabasi	0.74	20	eP	Pg	02 11 15.5	-1.0
BDRM				eS	Sg	02 11 25.1	-1.0
KARP	Karpathos	0.82	178	ePN	Pn	02 11 19.7	-0.2
KARP				eSN	Sn	02 11 32.0	-0.1
ARG	Arkhangelos	0.82	100	ePN	Pn	02 11 18.8	-1.1
ARG				eSN	Sn	02 11 30.8	-1.4
MLSB	Milas	1.06	29	ePG	Pg	02 11 22.8	+0.2
MLSB				eSG	Sg	02 11 37.8	+1.4
YER	Yerkesik	1.20	50	ePN	Pn	02 11 25.9	+0.8
TURN	Turunc	1.29	67	eP	Pn	02 11 20.9	-5.5
TURN				eS	Sb	02 11 35.7	-7.5
GCAM	G?zelcaml?	1.33	4	eP	Pn	02 11 25.2	-1.8
GCAM				eS	Sb	02 11 44.4	0.0
SMG	Samos	1.36	350	ePN	Pn	02 11 26.9	-0.4
APE	Apeiranthos	1.46	299	ePN	Pn	02 11 28.6	-0.1
NPS	Neapolis	1.65	229	ePN	Pn	02 11 32.3	+1.0
BLCB	Balcova	2.01	358	ePN	Pn	02 11 36.9	+0.5
GOLH	Golhisar	2.14	65	eP	Pn	02 11 40.2	+2.2
GOLH				eS	Sn	02 12 08.6	+4.0
ELL	Elmali	2.27	80	ePN	Pn	02 11 42.8	+2.9

*IDC **16** 02:11:39.6±0.7, 4907S×16459E, h0^{km}, mb4.3/7, mb1 4.4/8, mb1mx4.3/14, mbtmp4.3/8, ML4.1/1, MS3.6/8, Ms1 3.6/8, ms1mx3.5/21, Error ellipse: s-maj=27.9km s-min=20.8km az=65.0*
*NEIC **16** 02:11:42.6±2.0, 4930S×16445E, h20^{km}±14^{km}, mb4.6/8, Error ellipse: s-maj=9.7km s-min=8.4km az=149.0*
*ISCJB **16** 02:11:43.7±1.9, 49.17S±008×1646E±0.1, h41^{km}±19^{km}, mb4.4/14, MS3.6/8, Error ellipse: s-maj=15.9km s-min=12.0km az=137.6*
ISC 16 02:11:43.2±2.8, 4919S±006×16451E±009, h21^{km}±21^{km}, h21^{km}±.7^{km}:pP-P, n61, σ1^{s}17/34, mb4.4/14, MS3.6/8, Auckland Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	4.03	37	P	Pn	02 12 43.9	+0.2
WHZ				S	Sn	02 13 29.2	-1.1
DCZ	Deep Cove	4.12	27	P	Pn	02 12 45.2	+0.3
MLZ	Mavora Lakes	4.58	34	P	Pn	02 12 51.6	+0.4
MCQ	Macquarie Isla	6.33	211	ePn	Pn	02 13 12.5	-2.7
	2μm,0.5s						
RPZ	Rata Peaks	7.09	42	Pn	Pn	02 13 23.2	-2.5
	3.3nm,0.3s,baz=234,slow=3.9,SNR=6.4						
RPZ				Sn	Sn	02 14 41.7	-3.9
	11nm,0.3s,baz=62,slow=18,SNR=6.3						
SNZO	South Karori	10.65	46	ePn	Pn	02 14 17.1	+2.5
TAU	Tasmania Unive	13.47	291	ePn	Pn	02 14 51.0	-2.1
	26nm,0.4s						
CNB	Canberra Magne	17.78	316	eP	Pn	02 15 50.6	+1.3
TOO	Toolangi	17.99	303	eP	Pn	02 15 53.4	+1.5
STKA	Stephens Creek	24.39	307	eP	P	02 17 01.0	+1.2
	3.2nm,1.3s,mb3.6						
STKA	Stephens Creek	24.39	307	P	P	02 17 00.7	+0.9
	2.6nm,0.9s,mb3.7,baz=141,slow=9.6,SNR=4.4						
STKA				LR	LR	02 25 00.7	
	comp=Z,191nm,18.4s,MS3.6,baz=206,slow=33						
STKA	Stephens Creek	24.39	307	eP	P	02 17 01.4	+1.6
VNDA	Vanda	28.46	181	LR	LR	02 27 07.3	
	comp=Z,121nm,18.7s,MS3.5,baz=351,slow=32						
CTA	Charters Tower	32.51	327	P	P	02 18 11.9	-0.4
	3.0nm,0.7s,mb4.3,baz=234,slow=14,SNR=3.2						
CTAO	Charters Tower	32.51	327	eP	P	02 18 13.0	+0.6
	2.7nm,0.7s,mb4.3						
ASAR	Alice Springs	35.01	306	P	P	02 18 33.8	-0.4
	3.7nm,0.8s,mb4.4,baz=135,slow=8.3,SNR=40						
ASAR				PcP	PcP	02 21 05.4	-0.6
	1.1nm,0.8s,baz=148,slow=3.9,SNR=6.9						
WB2	Warramunga Arr	37.85	310	eP	P	02 18 57.7	-0.7
WRA	Warramunga Arr	37.86	310	P	P	02 18 57.3	-1.2
	7.4nm,0.9s,mb4.4,baz=144,slow=7.9,SNR=48						
WRA				PcP	PcP	02 21 14.1	-0.5
	2.9nm,0.8s,baz=145,slow=2.7,SNR=15						
WRA				LR	LR	02 33 27.6	
	comp=Z,66nm,19.3s,MS3.5,baz=145,slow=35						
WRAB	Tennant Creek	37.86	310	eP	P	02 18 57.5	-1.0
	9.9nm,0.8s,mb4.6						
COEN	Coen	39.27	326	eP	P	02 19 10.7	+0.4
	3.5nm,0.8s,mb4.1						
QSPA	South Pole Qui	40.94	180	P	P	02 19 24.8	+1.3
	3.5nm,1.1s,mb3.9,baz=34,slow=5.5,SNR=7.9						
QSPA				PcP	PcP	02 21 23.9	+0.5
	1.6nm,0.8s,baz=256,slow=2.9,SNR=4.1						
QSPA	South Pole Qui	40.94	180	P	P	02 19 24.8	+1.3
QSPA				PcP	PcP	02 21 23.9	+0.5
PMG	Port Moresby	42.23	334	LR	LR	02 34 14.1	
	comp=Z,86nm,19.9s,MS3.6,baz=140,slow=32						
PMG	Port Moresby	42.23	334	eP	P	02 19 36.3	+1.5
	10nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	44.03	301	eP	P	02 19 49.7	+0.3
	17nm,0.6s,mb5.0						
KAKA	Kakadu	44.96	313	eP	x	02 19 36.1	
	13nm,0.6s						
MBWA	Marble Bar	45.13	292	eP	P	02 19 57.2	-0.9
	7.8nm,0.8s,mb4.6						
KAPI	Kappang	58.02	304	LR	LR	02 46 46.4	
	comp=Z,86nm,19.3s,MS3.9,baz=113,slow=36						
SNAA	Sanae	59.11	185	e	P	02 21 39.9	-1.5
SNAA				e	pP	02 21 45.8	-2.2
SNAA	Sanae	59.11	185	eP	P	02 21 39.8	-1.6
	4.5nm,1.2s,mb4.4						
VNA3	Neumayer Olymp	59.81	182	e	P	02 21 46.7	+0.5
VNA3				e	pP	02 21 53.5	+0.7
VNA3				e		02 21 57.0	
VNA3				e		02 22 02.9	
VNA2	Neumayer--Watz	60.06	183	e	P	02 21 48.2	+0.3
VNA2				e	pP	02 21 54.4	-0.2
VNA2				e		02 21 57.1	
VNA2				e		02 22 04.9	
VNA1	Neumayer--Stat	60.36	183	e	P	02 21 50.6	+0.6
VNA1				e	pP	02 21 56.5	-0.1
RPN	Rapa Nui	67.58	106	LR	LR	02 46 09.2	
	comp=Z,16nm,18.5s,MS3.3,baz=268,slow=31						
KSM	Kuching	68.63	299	eP	P	02 22 44.6	-0.2
	7.5nm,0.7s,mb4.7						
CMAR	Chiang Mai Arr	88.84	300	P	P	02 24 35.2	-0.4
	1.2nm,0.3s,mb4.7,baz=161,slow=3.6,SNR=6.6						
CMAR				LR	LR	03 11 15.2	
	comp=Z,23nm,19.1s,MS3.6,baz=140,slow=40						
KSRS	Korea Array	92.16	332	P	P	02 24 51.4	+0.8
	1.8nm,0.8s,mb4.5,baz=156,slow=6.6,SNR=5.4						
BOSA	Boshof	94.45	215	LR	LR	03 02 25.1	
	comp=Z,51nm,18.0s,MS4.0,baz=171,slow=32						
MKAR	Makanchi Array	119.16	309	PKP	PKPdf	02 30 29.0	-0.7
	0.9nm,0.9s,baz=168,slow=3.3,SNR=3.4						
TKM2	Tokmak 2	120.19	302	ePKPdf	PKPdf	02 30 30.2	-1.6
UCH	Uchtor	120.35	301	ePKPdf	PKPdf	02 30 32.9	+0.8
ZALV	Zalesovo Beam	122.63	316	PKP	PKPdf	02 30 34.6	-1.5
	0.7nm,0.7s,baz=174,slow=2.6,SNR=3.0						
KURK	Kurchatov	123.55	310	PKP	PKPdf	02 30 37.2	-0.8
	0.9nm,0.7s,baz=112,slow=1.7,SNR=6.4						
INK	Inuvik	125.87	24	ePKPdf	PKPdf	02 30 41.5	-0.4
YKA	Yellowknife Ar	128.32	36	PKP	PKPdf	02 30 45.8	-0.9
	0.4nm,0.8s,baz=246,slow=1.7,SNR=6.0						
YKA	Yellowknife Ar	128.32	36	PKP	PKPdf	02 30 45.8	-0.9
BVAR	Borovoye Array	129.04	309	PKP	PKPdf	02 30 48.7	+0.3
	0.8nm,0.6s,baz=240,slow=39,SNR=3.8						
TORD	Torodi Ar. Bea	141.37	207	PKhKP		02 31 05.1	
	0.3nm,0.5s,baz=146,slow=2.6,SNR=8.4						
TORD				PKP	PKPdf	02 31 10.2	-2.4
	0.7nm,0.8s,baz=155,slow=2.7,SNR=19						
BR131	Keskin Array S	144.24	274	ePKPdf	PKPdf	02 31 14.8	-2.1
BRTR	Keskin Array B	144.24	274	PKP	PKPdf	02 31 15.1	-1.8
	2.5nm,0.8s,baz=143,slow=4.4,SNR=14						
IDI	Anoyia	147.44	260	PKPbc	PKPbc	02 31 25.5	+0.5
	4.7nm,0.7s,baz=68,slow=7.5,SNR=5.4						
SPITS	Spitsbergen Ar	148.58	348	PKPbc	PKPbc	02 31 27.6	+0.8
	8.2nm,0.6s,baz=349,slow=4.0,SNR=10						
KEV	Kevo	151.15	331	epkp	PKPbc	02 31 32.5	-0.7
	8.6nm,0.5s						
JOF	Joensuu	151.23	316	epkp	PKPbc	02 31 32.1	-1.5
	5.6nm,0.7s						
AKASG	Malin Array Be	151.51	290	PKPbc	PKPbc	02 31 34.1	-0.5
	3.3nm,0.5s,baz=86,slow=2.5,SNR=15						
AKASG				PKPab	PKPab	02 31 41.1	-2.1
	2.1nm,0.7s,baz=96,slow=2.8,SNR=5.0						
AKBB	Malin Array Si	151.51	290	ePKPdf	PKPdf	02 31 27.8	-0.7
AKBB				ePKPbc	PKPbc	02 31 33.8	-0.9
ARCES	ARCESS Array B	151.72	331	PKPbc	PKPbc	02 31 35.1	+0.6
	9.3nm,0.6s,baz=94,slow=1.6,SNR=44						
ARCES				PKPab	PKPab	02 31 41.9	-1.6
	8.3nm,0.8s,baz=32,slow=4.7,SNR=5.0						
MLR	Muntele Rosu	151.93	278	PKPbc	PKPbc	02 31 35.6	-0.2
	3.4nm,0.7s,baz=181,slow=1.3,SNR=14						
KAF	Kangasniemi	153.64	315	epkp	PKPbc	02 31 38.1	-0.9
	1.8nm,0.6s						
HFS	Hagfors	160.06	314	PKP	PKPdf	02 31 40.6	+1.1
	1.0nm,0.2s,baz=40,slow=46,SNR=21						
HFS				PKPab	PKPab	02 32 16.4	-3.1
	1.6nm,0.8s,baz=22,slow=41,SNR=4.2						
GERES	GERESS Array B	160.90	280	PKPab	PKPab	02 32 23.4	-0.2
	1.9nm,0.8s,baz=123,slow=4.9,SNR=7.8						

*NIED **16** 02:12:00, 3400N×13520E, h5^{km}, Mw3.6 Best double couple: $M_0$2.65000×10^{14} NP1:ϕ_s166.00000°, δ58.00000°, λ43.00000°. NP2:ϕ_s50.00000°, δ55.00000°, λ139.00000°.*
*IDC **16** 02:12:26.4±1.0, 3399N×13528E, h0^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.5/26, mbtmp3.4/8, ML2.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=23.2km s-min=16.5km az=126.0*
*ISCJB **16** 02:12:27.2±0.8, 3402N±004×13526E±004, h15^{km}±6^{km}, mb3.6/7, Error ellipse: s-maj=6.6km s-min=5.6km az=173.4*
*JMA **16** 02:12:27.6, 3403N×13525E, h4^{km}, M3.7*
JMA Felt II J1.
*NEIC **16** 02:12:31.4±2.5, 3404N×13532E, h35^{km}±26^{km}, mb3.6/1, Error ellipse: s-maj=24.1km s-min=14.0km az=60.0*
ISC 16 02:12:27.7±0.5, 3403N±003×13525E±004, h7^{km}±4^{km}, n16, σ0^{s}73/23, mb3.6/7, 1C-4D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWM	Minabe	0.20	154	⇓P	Pg	02 12 31.7	0.0
JWM				S	Sg	02 12 34.5	+0.1
JWY	Kouya	0.34	56	⇑P	Pg	02 12 34.4	0.0
JWY				S	Sg	02 12 39.3	+0.4
JAJ2	Tsuna	0.49	322	⇓P	Pg	02 12 37.3	0.0
JAJ2				S	Sg	02 12 43.9	+0.2
JWZ	Kozaga	0.63	142	⇓P	Pg	02 12 39.9	+0.1
JWZ				S	Sg	02 12 48.5	+0.5
JAI	Aioi	0.71	251	⇓P	Pg	02 12 40.8	-0.5
JAI				S	Sg	02 12 49.8	-0.7
MAJO	Matsushiro	3.48	43	ePn	Pn	02 13 22.3	0.0
MAT	Matsushiro	3.48	43	P	Pn	02 13 22.5	+0.3
MAT				eS	Sn	02 14 02.9	-0.8
MJAR	Matsushiro Arr	3.48	43	Pn	Pn	02 13 22.8	+0.5
	1.1nm,0.3s,baz=246,slow=22,SNR=13						
MJAR				Pg	Pg	02 13 31.4	-3.0
	1.7nm,0.3s,baz=235,slow=15,SNR=14						
MJAR				Lg		02 14 17.6	
	3.7nm,0.3s,baz=219,slow=28,SNR=11						
KSRS	Korea Array	6.87	302	Pn	Pn	02 14 11.1	+2.4
	0.2nm,0.3s,baz=117,slow=14,SNR=3.4						
KSRS				LR	LR	02 16 52.1	
	comp=Z,45nm,18.0s,baz=340,slow=38						
SONM	Songino Array	25.62	311	P	P	02 17 57.5	-0.1
	0.7nm,0.8s,mb3.2,baz=121,slow=11,SNR=4.1						
MKAR	Makanchi Array	41.54	304	P	P	02 20 15.9	+0.3
	0.4nm,0.8s,mb3.1,baz=74,slow=11,SNR=3.5						
KURK	Kurchatov	43.91	310	eP	P	02 20 35.3	+0.4
	0.7nm,0.5s,mb3.6						
BVAR	Borovoye Array	48.93	313	P	P	02 21 14.0	-0.1
	1.0nm,0.5s,mb4.1,baz=231,slow=40,SNR=3.1						
WRA	Warramunga Arr	53.68	181	P	P	02 21 49.1	-1.0
	1.5nm,1.0s,mb3.9,baz=358,slow=7.5,SNR=5.4						
ASAR	Alice Springs	57.39	181	P	P	02 22 17.1	+0.4
	0.3nm,0.6s,mb3.5,baz=11,slow=13,SNR=6.2						
YKA	Yellowknife Ar	68.87	28	P	P	02 23 31.7	-0.8
	0.5nm,1.0s,mb3.4,baz=294,slow=6.7,SNR=4.1						

*IDC **16** 02:28:45.6±2.1, 3742N×7034E, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.4/26, mbtmp3.5/7, ML3.5/4, Error ellipse: s-maj=42.8km s-min=21.8km az=143.0*
*NNC **16** 02:28:49.1±3.5, 3823N×6930E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=34.1km s-min=18.0km az=172.0*
*ISCJB **16** 02:28:56.6±1.1, 38.19N±009×70.1E±02, h79^{km}±16^{km}, mb3.3/3, Error ellipse: s-maj=23.1km s-min=11.9km az=29.2*
*NEIC **16** 02:28:57.9±0.9, 38.18N×7005E, h72^{km}±13^{km}, Error ellipse: s-maj=19.7km s-min=9.1km az=116.0*
ISC 16 02:28:58.0±1.0, 3821N±009×700E±02, h72^{km}±16^{km}, n17, σ0^{s}88/20, mb3.3/3, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.75	192	ePn	Pn	02 29 53.4	0.0
AML	Almayashu	4.82	35	ePn	Pn	02 30 08.3	+0.3
KK31	Karatay Array	4.90	4	⇑Pn	Pn	02 30 06.5	-2.6
	0.8nm,0.4s,baz=168,slow=10.0,SNR=20						
KK31				Pg	Pn	02 30 21.1	+12
	9.0nm,0.8s,baz=190,slow=19,SNR=12						
KK31				⇓Lg		02 31 23.9	
	8.7nm,0.6s,baz=197,slow=30,SNR=6.4						
EKS2	Erkin-Say	5.29	32	ePn	Pn	02 30 15.6	+1.1
AAK	Ala-Archa	5.58	36	ePn	Pn	02 30 18.8	+0.3
	6.4nm,0.8s						
TKM2	Tokmak 2	6.34	40	⇑Pn	Pn	02 30 29.5	+0.8
	2.7nm,0.6s						
TKM2				⇓Sn	Sn	02 31 47.7	+8.0
	5.4nm,0.8s						
TKM2				⇑Lg		02 32 23.2	
	5.7nm,0.7s						
MKAR	Makanchi Array	12.46	43	Pn	Pn	02 31 51.0	-1.2
	0.0nm,0.3s,baz=227,slow=14,SNR=2.9						
AB09	Akbulak array	13.23	330	⇑Pn	Pn	02 31 56.0	-6.7
	2.9nm,1.2s						
AB09				⇑Sn	Sn	02 34 19.4	-8.4
	0.8nm,0.6s						
BVAR	Borovoye Array	14.82	1	Pn	Pn	02 32 23.6	+0.2
	0.3nm,0.3s,baz=168,slow=10,SNR=6.1						
AKTK	Aktyubinsk	14.91	329	Pn	Pn	02 32 24.8	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**14.91**	**329**	⇑Pn	**Pn**	**02 32 18.7**	**-6.0**
	0.4nm,0.8s						
AKTO	**Aktyubinsk**	**14.91**	**329**	Pn	**Pn**	**02 32 24.8**	**+0.1**
	0.4nm,0.3s,baz=148,slow=8.8,SNR=7.4						
ZALV	**Zalesovo Beam**	**18.73**	**28**	P	**Pn**	**02 33 10.4**	**-1.5**
	0.2nm,0.3s,baz=215,slow=8.3,SNR=4.3						
ESDC	**Sonseca Array**	**55.98**	**296**	P	**P**	**02 38 29.6**	**+0.6**
	0.1nm,0.3s,mb3.3,baz=64,slow=8.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**65.00**	**267**	P	**P**	**02 39 29.9**	**-0.9**
	0.6nm,0.7s,mb3.5,baz=46,slow=7.1,SNR=5.4						
YKA	**Yellowknife Ar**	**79.57**	**2**	P	**P**	**02 40 57.8**	**+1.0**
	0.2nm,0.5s,mb3.2,baz=352,slow=5.9,SNR=7.9						
YKA	**Yellowknife Ar**	**79.57**	**2**	P	**P**	**02 40 57.8**	**+1.0**

NEIC 16 02:29:05.7, 4007S×17494E, h32^{km}, ML4.0(WEL)**, After WEL., Cook Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.32**	**6**	P	Pb	02 29 13.4	-0.1
MRZ	**Mangatainoka R**	**0.77**	**141**	P	Pn	02 29 20.1	-0.2
MRZ				S	Sn	02 29 29.8	-0.9
TSZ	**Takapari Road**	**0.78**	**90**	P	Pn	02 29 20.1	-0.4
TSZ				S	Sn	02 29 30.1	-1.0
KIW	**Kapiti Island**	**0.79**	**182**	P	Pn	02 29 20.0	-0.6
WNVZ	**Wahianoa**	**0.90**	**35**	P	Pn	02 29 21.8	-0.3
MOVZ	**Moawhango**	**0.91**	**44**	P	Pn	02 29 21.5	-0.7
MOVZ				S	Sn	02 29 33.3	-0.9
SNZO	**South Karori**	**1.25**	**188**	*e*Pn	Pn	02 29 28.0	+1.1
SNZO				*e*Sn	Sn	02 29 44.2	+1.6

ISCJB ***16*** *02:29:06.9±1.8, 2290N±008×1431E±02, h114^{km}±15^{km}, mb4.1/19, Error ellipse: s-maj=32.6km s-min=13.0km az=170.4*
IDC ***16*** *02:29:09.0±3.0, 2288N×14310E, h117^{km}±27^{km}, mb3.7/12, mb1 3.8/14, mb1mx3.7/23, mbtmp3.7/14, MS3.1/1, Ms1 3.1/1, ms1mx2.3/31, Error ellipse: s-maj=28.1km s-min=13.7km az=80.0*
NEIC ***16*** *02:29:09.1±2.1, 2290N×14314E, h121^{km}±18^{km}, mb4.2/7, Error ellipse: s-maj=18.5km s-min=7.6km az=80.0*
ISC 16 02:29:08.1±1.7**, 2292N**±008×**1432E**±02**, h110**^{km}±14^{km}**, n29,** σ**0^{s}67**/27**, mb4.1**/19**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.25**	**348**	P	**Pn**	**02 30 11.9**	**+1.2**
	27nm,0.3s,baz=89,slow=21,SNR=6.3						
CBIJ				S	**Sn**	**02 30 57.9**	**-1.5**
	35nm,0.3s,baz=286,slow=23,SNR=9.8						
JHJ	**Hachijo jima 2**	**10.59**	**344**	LR	LR	02 35 21.3	
	comp=Z,112nm,21.5s,baz=304,slow=35						
MJAR	**Matsushiro Arr**	**14.23**	**344**	P	**Pn**	**02 32 25.1**	**+0.6**
	0.2nm,0.3s,baz=122,slow=10,SNR=3.1						
KSRS	**Korea Array**	**19.54**	**321**	P	**P**	**02 33 33.0**	**+6.1**
	0.6nm,0.3s,baz=148,slow=9.1,SNR=11						
ULN	**Ulaanbaatar**	**38.01**	**320**	*e*P	**P**	**02 36 15.2**	**-0.1**
	2.4nm,0.9s,mb4.0						
SONM	**Songino Array**	**38.39**	**320**	P	**P**	**02 36 18.9**	**+0.3**
	1.4nm,0.5s,mb4.0,baz=131,slow=7.7,SNR=22						
CMAR	**Chiang Mai Arr**	**41.48**	**272**	P	**P**	**02 36 44.9**	**+0.3**
	1.4nm,0.3s,mb4.2,baz=69,slow=11,SNR=4.2						
WRAB	**Tennant Creek**	**43.45**	**192**	*e*P	**P**	**02 36 60.0**	**-0.3**
	1.4nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**43.46**	**192**	P	**P**	**02 37 00.1**	**-0.3**
	0.8nm,0.4s,mb3.8,baz=18,slow=9.6,SNR=14						
ASAR	**Alice Springs**	**47.17**	**192**	P	**P**	**02 37 28.9**	**-0.7**
	0.2nm,0.5s,mb3.1,baz=16,slow=9.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**53.24**	**321**	P	**P**	**02 38 14.8**	**-0.3**
	1.0nm,0.5s,mb4.1,baz=108,slow=8.4,SNR=4.9						
MK31	**Makanchi Array**	**53.86**	**312**	*e*P	**P**	**02 38 19.8**	**+0.1**
MKAR	**Makanchi Array**	**53.86**	**312**	P	**P**	**02 38 20.2**	**+0.4**
	1.6nm,0.5s,mb4.3,baz=86,slow=9.5,SNR=46						
MKAR	**Makanchi Array**	**53.86**	**312**	P	**P**	**02 38 20.2**	**+0.4**
STKA	**Stephens Creek**	**54.50**	**182**	P	**P**	**02 38 24.8**	**+0.3**
	1.3nm,0.4s,mb4.3,baz=337,slow=10,SNR=6.0						
KURK	**Kurchatov**	**56.57**	**317**	P	**P**	**02 38 39.5**	**+0.4**
	2.6nm,0.5s,mb4.6,baz=91,slow=7.8,SNR=11						
KURK	**Kurchatov**	**56.57**	**317**	*e*P	**P**	**02 38 39.2**	**0.0**
	1.8nm,0.5s,mb4.4						
TKM2	**Tokmak 2**	**58.58**	**307**	*e*P	**P**	**02 38 54.3**	**+0.9**
	1.3nm,0.4s,mb4.3						
BVAR	**Borovoye Array**	**61.73**	**319**	P	**P**	**02 39 14.7**	**+0.1**
	2.6nm,0.5s,mb4.6,baz=95,slow=8.3,SNR=15						
BRVK	**Borovoye**	**61.80**	**319**	*e*P	**P**	**02 39 15.2**	**+0.1**
	1.9nm,0.6s,mb4.3						
KBL	**Kabul**	**64.73**	**299**	*e*P	**P**	**02 39 35.0**	**+0.2**
	4.0nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**75.39**	**28**	P	**P**	**02 40 40.4**	**+1.0**
	0.4nm,0.4s,mb3.5,baz=292,slow=5.9,SNR=9.7						
ARCES	**ARCESS Array B**	**77.76**	**341**	P	**P**	**02 40 52.7**	**+0.1**
	2.0nm,0.7s,mb3.9,baz=81,slow=7.6,SNR=5.1						
ARCES	**ARCESS Array B**	**77.76**	**341**	P	**P**	**02 40 52.7**	**+0.1**
JOF	**Joensuu**	**79.21**	**334**	*e*p	**P**	**02 40 59.0**	**-1.7**
	2.8nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**81.61**	**335**	*e*p	**P**	**02 41 13.4**	**-0.1**
	1.1nm,0.4s,mb4.0						
NVAR	**Mina Array Bea**	**82.41**	**52**	pP	pP	02 41 47.6	+1.2
	0.3nm,0.7s,baz=263,slow=4.5,SNR=2.3						
BRTR	**Keskin Array B**	**89.49**	**313**	P	**P**	**02 41 52.2**	**-0.9**
	0.4nm,0.7s,mb3.6,baz=108,slow=4.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**127.95**	**310**	PKP	PKPdf	02 48 01.5	-0.4
	0.1nm,0.5s,baz=242,slow=3.1,SNR=2.7						

TIR ***16*** *02:34:09.8±1.1, 4222N×1959E, h0^{km}±420^{km}*
CSEM ***16*** *02:34:11.0±0.1, 4230N×1939E, h2^{km}, ML2.4/8, Error ellipse: s-maj=4.2km s-min=3.3km az=51.0*
PDG ***16*** *02:34:11.5±0.1, 4233N×1936E, h9^{km}, MD2.6, ML2.4/8, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
ISCJB ***16*** *02:34:12.0±0.4, 4233N±002×1931E±003, h10^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=151.2*
BEO ***16*** *02:34:14.1±0.6, 4228N×1931E, h19^{km}±5^{km}, ML2.6/4*
ISC 16 02:34:12.7±0.4**, 4233N**±002×**1930E**±003**, h10**^{km}**, n34,** σ**1^{s}31**/59**, 7C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.11**	**343**	*e*PN	**Pg**	**02 34 14.2**	**-1.2**
PDG				*i* SN	**Sg**	**02 34 16.4**	**-0.9**
PDG	**Podgorica**	**0.11**	**343**	⇑*i*Pg	**Pg**	**02 34 14.2**	**-1.2**
TTG	**Podgorica**	**0.11**	**343**	⇑*i*Pg	**Pg**	**02 34 14.2**	**-1.2**
TTG				*e*Sg	**Sg**	**02 34 16.4**	**-0.9**
BUM	**Brajici-Budva**	**0.30**	**265**	⇑*i*Pg	**Pg**	**02 34 18.0**	**-0.7**
BUM				*e*Sg	**Sg**	**02 34 23.7**	**+0.9**
BUM	**Brajici-Budva**	**0.30**	**265**	*e*PN	**Pg**	**02 34 18.3**	**-0.4**
BUM				*i* SN	**Sg**	**02 34 23.7**	**+0.9**
ULC	**Ulcinj**	**0.37**	**186**	⇓*i*Pg	**Pg**	**02 34 18.7**	**-1.2**
ULC				*e*Sg	**Sg**	**02 34 24.8**	**0.0**
ULC	**Ulcinj**	**0.37**	**186**	*e*PG	**Pg**	**02 34 18.7**	**-1.2**
ULC				*i* SG	**Sg**	**02 34 24.8**	**0.0**
NKY	**Niksic**	**0.54**	**335**	⇑*i*Pg	**Pg**	**02 34 21.9**	**-1.2**
NKY				*e*Sg	**Sg**	**02 34 30.7**	**+0.5**
NKY	**Niksic**	**0.54**	**335**	*e*PN	**Pg**	**02 34 21.9**	**-1.2**
NKY				*i* SN	**Sg**	**02 34 30.7**	**+0.5**
PVY	**Plav**	**0.56**	**61**	*e*Pg	**Pg**	**02 34 21.2**	**-2.4**
PVY				*e*Sg	**Sg**	**02 34 29.6**	**-1.4**
PVY	**Plav**	**0.56**	**61**	*i* PG	**Pg**	**02 34 21.7**	**-1.9**
PVY				*i* SG	**Sg**	**02 34 29.6**	**-1.4**
HCY	**Herceg Novi**	**0.61**	**282**	⇑*i*Pg	**Pg**	**02 34 23.6**	**-0.9**
HCY				*e*Sg	**Sg**	**02 34 33.9**	**+1.4**
HCY	**Herceg Novi**	**0.61**	**282**	*e*PN	**Pg**	**02 34 23.3**	**-1.2**
HCY				*i* SN	**Sg**	**02 34 33.9**	**+1.4**
BEY	**Berane**	**0.70**	**39**	*e*PN	**Pg**	**02 34 23.7**	**-2.5**
BEY				*i* SN	**Sg**	**02 34 34.5**	**-0.9**
BEY	**Berane**	**0.70**	**39**	*e*Pg	**Pg**	**02 34 23.7**	**-2.5**
BEY				*e*Sg	**Sg**	**02 34 34.5**	**-0.9**
IVA	**Berane**	**0.70**	**39**	*e*Pg	**Pg**	**02 34 23.7**	**-2.5**
IVA				*e*Sg	**Sg**	**02 34 34.5**	**-0.9**
BRY	**Bratogost**	**0.80**	**316**	⇑*i*Pg	**Pg**	**02 34 26.6**	**-1.6**
BRY				*e*Sg	**Sg**	**02 34 39.6**	**+1.0**
BRY	**Bratogost**	**0.80**	**316**	*e*PN	**Pg**	**02 34 26.6**	**-1.6**
BRY				*i* SN	**Sg**	**02 34 39.6**	**+1.0**
UPM	**Unac-Piva**	**0.92**	**342**	⇓*i*Pg	**Pg**	**02 34 28.6**	**-1.9**
UPM				*e*Sg	**Sg**	**02 34 43.5**	**+1.0**
PLE	**Pljevlja**	**1.00**	**4**	⇑*i*Pg	**Pg**	**02 34 30.2**	**-1.8**
PLE				*e*Sg	**Sg**	**02 34 45.8**	**+0.7**
SJES	**Sjenica**	**1.06**	**28**	*e*Pg	**Pg**	**02 34 33.7**	**+0.7**
SJES				*e*Sg	**Sg**	**02 34 49.1**	**+2.4**
TIR	**Tirane**	**1.06**	**157**	*e*PG	**Pg**	**02 34 31.6**	**-1.6**
TIR	**Tirane**	**1.06**	**157**	*e*Pg	**Pg**	**02 34 31.4**	**-1.8**
TIR				*e*Sg	**Sg**	**02 34 48.1**	**+1.1**
STON	**Ston**	**1.30**	**295**	*e*Pn	**Pn**	**02 34 36.3**	**-0.7**
STON				Sn	**Sn**	**02 34 59.3**	**+4.9**
STON	**Ston**	**1.30**	**295**	*e*Pn	**Pn**	**02 34 36.2**	**-0.7**
STON				Sn	**Sn**	**02 34 59.2**	**+4.8**
BBLS	**Lazići**	**1.54**	**3**	*e*Pn	**Pn**	**02 34 41.6**	**+1.4**
BBLS				*e*Sg	**Sg**	**02 35 04.9**	**+2.7**
SKO	**Skopje**	**1.63**	**102**	*e*Pn	**Pn**	**02 34 41.8**	**+0.4**
SKO				*e*Sg	**Sg**	**02 35 05.6**	**+0.6**
SKO	**Skopje**	**1.63**	**102**	*e*Pn	**Pn**	**02 34 43.3**	**+2.0**
KRUS	**Krusevo**	**1.74**	**123**	*i* Pn	**Pn**	**02 34 44.6**	**+1.7**
GRUS	**Gruza**	**1.87**	**33**	*e*Pn	**Pn**	**02 34 46.4**	**+1.6**
BARS	**Barje**	**1.92**	**74**	*e*Pn	**Pn**	**02 34 45.6**	**+0.2**
BIA	**Bitola**	**2.00**	**130**	*e*Pn	**Pn**	**02 34 48.4**	**+1.9**
STIP	**Stip**	**2.24**	**105**	*e*Pn	**Pn**	**02 34 49.9**	**+0.1**
BOLS	**Boljevac**	**2.45**	**51**	*e*Pn	**Pn**	**02 34 52.9**	**+0.1**

CSEM ***16*** *02:41:55.1±0.1, 3692N×2928E, h2^{km}, MD3.2, Error ellipse: s-maj=2.1km s-min=1.2km az=174.0*
ISCJB ***16*** *02:41:56.7±0.7, 3693N±004×2926E±003, h7^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=4.4km az=178.9*
DDA ***16*** *02:41:56.2, 3697N×2923E, h7^{km}±4^{km}, Md3.2*
ISK ***16*** *02:41:56.6, 3694N×2926E, h12^{km}, MD2.9*
ISC 16 02:41:57.2±0.7**, 3693N**±004×**2926E**±003**, h11**^{km}±5^{km}**, n13,** σ**0^{s}78**/22**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.39**	**38**	⇑*i*P	**Pg**	**02 42 03.4**	**-1.4**
GOLH				*i* S	**Sg**	**02 42 10.3**	**+0.2**
ELL	**Elmali**	**0.55**	**109**	*e*Pg	**Pg**	**02 42 07.7**	**-0.2**
ELL				*e*Sg	**Sg**	**02 42 16.3**	**+1.2**
ELL				*e*SG	**Sg**	**02 42 16.3**	**+1.2**
ELL	**Elmali**	**0.55**	**109**	*e*PG	**Pg**	**02 42 07.7**	**-0.2**
YER	**Yerkesik**	**0.81**	**285**	*e*PG	**Pg**	**02 42 12.8**	**0.0**
YER				*e*SG	**Sg**	**02 42 24.1**	**+0.6**
DENT	**Denizli**	**0.84**	**347**	*e*PG	**Pg**	**02 42 13.3**	**-0.2**
DENT				*e*SG	**Sg**	**02 42 25.2**	**+0.8**
ANTB	**Antalya**	**1.11**	**91**	*e*PN	**Pn**	**02 42 18.1**	**-0.6**
BCK	**Bucak**	**1.18**	**63**	*e*PN	**Pn**	**02 42 19.4**	**-0.3**
BCK				*e*SN	**Sn**	**02 42 37.0**	**+1.3**
MLSB	**Milas**	**1.24**	**287**	*e*PN	**Pn**	**02 42 20.2**	**-0.3**
ISP	**Isparta**	**1.35**	**47**	*e*PN	**Pn**	**02 42 21.6**	**-0.4**
DAT	**Datca**	**1.37**	**262**	*e*PN	**Pn**	**02 42 22.2**	**0.0**
DAT				*e*SN	**Sn**	**02 42 40.9**	**+0.6**
KHAL	**Karahalli**	**1.45**	**7**	*e*P	**Pn**	**02 42 22.8**	**-0.5**
KHAL				*e*S	**Sn**	**02 42 42.5**	**+0.1**
BDRM	**Kayabasi**	**1.46**	**276**	*e*P	**Pn**	**02 42 21.3**	**-2.2**
BDRM				*e*S	**Sn**	**02 42 43.6**	**+0.9**
KULA	**Kula-Manisa**	**1.65**	**343**	*e*PN	**Pn**	**02 42 26.0**	**-0.1**

ISCJB ***16*** *03:04:29.0±0.3, 4168N±003×14133E±004, h106^{km}±2^{km}, mb3.8/11, Error ellipse: s-maj=6.4km s-min=4.6km az=135.8*
MOS ***16*** *03:04:29.2±0.6, 4177N×14127E, h106^{km}, mb4.2/7, Error ellipse: s-maj=17.0km s-min=13.8km az=73.8*
JMA ***16*** *03:04:30.0±0.1, 4166N×14134E, h100^{km}±1^{km}, M3.3*
JMA Felt I J1.
IDC ***16*** *03:04:30.8±2.0, 4180N×14125E, h105^{km}±15^{km}, mb3.5/8, mb1 3.6/10, mb1mx3.4/25, mbtmp3.4/10, Error ellipse: s-maj=23.6km s-min=14.7km az=145.0*
NEIC ***16*** *03:04:30.3±0.8, 4184N×14124E, h96^{km}±11^{km}, mb4.2/4, Error ellipse: s-maj=17.7km s-min=7.5km az=160.0*
ISC 16 03:04:30.0±0.3**, 4168N**±003×**14133E**±004**, h101**^{km}±3^{km}**, n44,** σ**0^{s}70**/60**, mb3.8**/11**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.31**	**313**	P	**Pn**	**03 04 44.7**	**0.0**
JOT	**Ohata**	**0.36**	**216**	P	**Pn**	**03 04 44.9**	**-0.1**
JOT				*e*S	**Sn**	**03 04 56.9**	**+0.7**
JSR	**Shiriuchi**	**0.70**	**258**	P	**Pn**	**03 04 47.6**	**+0.1**
JSR				*e*S	**Sn**	**03 05 00.3**	**-0.3**
JNB	**Noboribetsu**	**0.82**	**345**	P	**Pn**	**03 04 48.4**	**-0.2**
JNB				*e*S	**Sn**	**03 05 02.7**	**+0.1**
JYM2	**Yakumo 2**	**0.84**	**302**	P	**Pn**	**03 04 49.1**	**+0.3**
JYM2				*e*S	**Sn**	**03 05 03.3**	**+0.3**
JTM	**Tenmabayashi**	**0.91**	**193**	P	**Pn**	**03 04 49.5**	**-0.1**
JTM				*e*S	**Sn**	**03 05 04.3**	**+0.1**
JEW	**Eniwo**	**1.16**	**4**	P	**Pn**	**03 04 52.9**	**+0.6**
JEW				*e*S	**Sn**	**03 05 09.5**	**+0.4**
JNBK	**Urakawa-nobuka**	**1.22**	**60**	P	**Pn**	**03 04 53.3**	**+0.4**
JNBK				*e*S	**Sn**	**03 05 11.1**	**+0.9**
JANG	**Nango**	**1.31**	**174**	P	**Pn**	**03 04 53.5**	**-0.5**
JANG				*e*S	**Sn**	**03 05 11.1**	**-1.0**
JBT2	**Biratori 2**	**1.34**	**35**	P	**Pn**	**03 04 54.9**	**+0.6**
JBT2				*e*S	**Sn**	**03 05 13.7**	**+1.0**
ERM	**Erimo**	**1.40**	**76**	*e*Pn	**Pn**	**03 04 55.5**	**+0.4**
ERM				*e*Sn	**Sn**	**03 05 12.6**	**-1.5**
JOSM	**Okushiri--Mats**	**1.45**	**287**	P	**Pn**	**03 04 55.1**	**-0.5**
JOSM				*e*S	**Sn**	**03 05 14.0**	**-1.0**
JFR	**Furan**	**1.75**	**32**	P	**Pn**	**03 04 59.1**	**-0.3**
JFR				*e*S	**Sn**	**03 05 21.4**	**-0.4**
JCH	**Churui**	**1.77**	**58**	P	**Pn**	**03 05 00.3**	**+0.6**
JCH				*e*S	**Sn**	**03 05 22.1**	**-0.2**
ASAJ	**Asahikawa**	**2.61**	**20**	P	**Pn**	**03 05 10.9**	**+0.5**
	2.5nm,0.3s,baz=188,slow=11,SNR=11						
ASAJ				S	**Sn**	**03 05 41.1**	**-0.5**
	6.4nm,0.3s,baz=79,slow=33,SNR=10.0						
ASAJ	**Asahikawa**	**2.61**	**20**	P	**Pn**	**03 05 11.0**	**+0.5**
ASAJ				S	**Sn**	**03 05 41.1**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.08**	**53**	P	**Pn**	**03 05 29.6**	**-0.6**
YUK				*e*S	**Sn**	**03 06 14.0**	**-2.8**
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=N,350nm,0.5s						
YUK				smax			
	comp=E,250nm,0.5s						
MJAR	**Matsushiro Arr**	**5.67**	**206**	P	**Pn**	**03 05 53.8**	**+1.9**
	comp=E,0.3nm,0.3s,baz=13,slow=13,SNR=4.2						
KSRS	**Korea Array**	**11.18**	**252**	P	**Pn**	**03 07 10.8**	**+4.2**
	comp=E,0.2nm,0.3s,baz=61,slow=14,SNR=5.0						
SONM	**Songino Array**	**25.41**	**296**	P	**P**	**03 09 46.9**	**-0.9**
	comp=E,0.7nm,0.9s,mb3.1,baz=102,slow=8.8,SNR=3.4						
SONM	**Songino Array**	**25.41**	**296**	P	**P**	**03 09 46.9**	**-0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**38.87**	**308**	P	**P**	**03 11 44.5**	**-0.5**
	comp=Z,1.7nm,0.4s,mb4.2,baz=87,slow=8.6,SNR=8.2						
ZALV	**Zalesovo Beam**	**38.87**	**308**	P	**P**	**03 11 44.6**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
MK31	**Makanchi Array**	**41.75**	**298**	*e*P	**P**	**03 12 08.7**	**-0.2**
MKAR	**Makanchi Array**	**41.75**	**298**	P	**P**	**03 12 08.5**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.7,baz=84,slow=11,SNR=17						
MKAR	**Makanchi Array**	**41.75**	**298**	P	**P**	**03 12 08.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**41.75**	**298**	P	**P**	**03 12 08.5**	**-0.4**
KURK	**Kurchatov**	**43.14**	**304**	P	**P**	**03 12 20.1**	**-0.1**
	comp=Z,1.8nm,0.4s,mb4.2,baz=78,slow=9.0,SNR=9.4						
KURK	**Kurchatov**	**43.14**	**304**	*e*P	**P**	**03 12 19.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
KURK	**Kurchatov**	**43.14**	**304**	*e*P	**P**	**03 12 19.7**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.1						
COLA	**College**	**45.24**	**35**	*e*P	**P**	**03 12 37.3**	**+0.6**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
COLA	**College**	**45.24**	**35**	*e*P	**P**	**03 12 37.2**	**+0.6**
	comp=Z,2.2nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**47.49**	**309**	P	**P**	**03 12 54.4**	**-0.1**
	comp=Z,1.0nm,0.4s,mb3.9,baz=72,slow=9.8,SNR=8.7						
BVAR	**Borovoye Array**	**47.49**	**309**	P	**P**	**03 12 54.4**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TKM2	**Tokmak 2**	**47.50**	**295**	*e*P	**P**	**03 12 54.7**	**0.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
TKM2	**Tokmak 2**	**47.50**	**295**	*e*P	**P**	**03 12 54.7**	**0.0**
	comp=Z,4.2nm,0.5s,mb4.4						
AAK	**Ala-Archa**	**48.36**	**295**	*e*P	**P**	**03 13 01.8**	**+0.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
AAK	**Ala-Archa**	**48.36**	**295**	*e*P	**P**	**03 13 01.8**	**+0.5**
	comp=Z,1.9nm,0.5s,mb4.2						
INK	**Inuvik**	**50.32**	**29**	*e*P	**P**	**03 13 16.0**	**+0.2**
YKA	**Yellowknife Ar**	**59.85**	**31**	P	**P**	**03 14 24.1**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.7,baz=302,slow=6.8,SNR=8.3						
YKA	**Yellowknife Ar**	**59.85**	**31**	P	**P**	**03 14 24.1**	**-0.3**
NVAR	**Mina Array Bea**	**72.29**	**54**	P	**P**	**03 15 45.7**	**+1.3**
	comp=Z,0.2nm,0.5s,mb3.2,baz=297,slow=7.4,SNR=4.2						
NVAR	**Mina Array Bea**	**72.29**	**54**	P	**P**	**03 15 45.7**	**+1.3**
PDAR	**Pinedale Array**	**74.48**	**46**	P	**P**	**03 15 57.3**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=342,slow=1.9,SNR=5.1						

NEIC ***16*** *03:34:57.8, 3275S×7179W, h21^{km}, ML2.8(GUC), After GUC.*
GUC 16 03:34:57.8±0.9**, 3275S**×**7179W, h21**^{km}±14^{km}**, MD3.6, ML2.8, 5C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.30**	**155**	*i* P	Pb	03 35 04.8	+0.2
IHA				*i* S	Sb	03 35 09.4	+0.1
PEL	**Peldehue**	**1.01**	**113**	⇓*i*P	Pb	03 35 15.3	-1.3
PEL				*i* S	Sb	03 35 29.0	-0.4
PEL				AML	AML	03 35 30.7	
	comp=E,953nm,0.3s						
CLCH	**Cerro Calan**	**1.23**	**122**	⇓*i*P	Pn	03 35 19.1	-0.7
CLCH				*i* S	Sn	03 35 36.1	+0.3
CLCH				AML	AML	03 35 37.3	
	comp=N,283nm,0.4s						
LNV	**Longovilo**	**1.24**	**165**	*i* P	Pn	03 35 18.9	-1.0
LNV				*i* S	Sn	03 35 35.3	-0.7
ANTU	**Antumapu**	**1.27**	**130**	⇑*i*P	Pn	03 35 20.3	+0.1
ANTU				AML	AML	03 35 38.8	
	comp=N,236nm,0.6s						
PCH	**Pirque**	**1.38**	**129**	⇑*i*P	Pn	03 35 21.8	0.0
PCH				*i* S	Sn	03 35 39.8	+0.4
FCH	**Farellones**	**1.39**	**115**	⇓*i*P	Pn	03 35 21.5	-0.3
FCH				*i* S	Sn	03 35 39.3	-0.3
FCH				AML	AML	03 35 39.7	
	comp=N,280nm,0.3s						
CHCH	**Chadas Angostu**	**1.52**	**141**	⇑*i*P	Pn	03 35 24.3	+0.7
CACH	**El Canelo**	**1.69**	**144**	*i* P	Pn	03 35 27.3	+1.2
YECH	**El Yeso**	**1.70**	**123**	*i* P	Pn	03 35 26.9	+0.7
YECH				*i* S	Sn	03 35 49.6	+2.4
YECH				AML	AML	03 35 53.9	
	comp=N,142nm,0.3s						
LMEL	**Las Melosas**	**1.72**	**130**	⇑*i*P	Pn	03 35 27.6	+1.1
LMEL				*i* S	Sn	03 35 50.0	+2.2
LMEL	**Las Melosas**	**1.72**	**130**	⇑*i*P	Pn	03 35 27.6	+1.1
LMEL				*i* S	Sn	03 35 50.0	+2.2
LMEL				AML	AML	03 35 52.5	
	comp=N,269nm,0.2s						

NEIC ***16*** *03:35:13.0, 3941N×2629E, h11^{km}, ML3.4(ATH), ML3.7(ISK), After ISK.*
DDA ***16*** *03:35:14.0, 3943N×2629E, h25^{km}±1^{km}, Md4.0, Ml4.1*
ATH ***16*** *03:35:13.8, 3936N×2625E, h24^{km}, MD3.7/18, ML3.4*
ISCJB ***16*** *03:35:13.7±0.4, 3940N±001×2624E±002, h9^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=2.0km az=149.0*
ISK ***16*** *03:35:13.8, 3941N×2628E, h11^{km}, ML3.8*
CSEM ***16*** *03:35:14.1±0.0, 3940N×2628E, h15^{km}, ML3.4, Error ellipse: s-maj=0.9km s-min=0.8km az=7.0*
THE ***16*** *03:35:15.7, 3937N×2625E, h12^{km}±1^{km}, ML4.1/5, Error ellipse: s-maj=1.2km s-min=0.5km az=91.0*
ISC 16 03:35:14.8±0.3**, 3940N**±001×**2627E**±002**, h11**^{km}±2^{km}**, n135,** σ**0^{s}76**/179**, 13C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.15**	**178**	⇑*i*PB	**Pg**	**03 35 18.7**	**+0.4**
PRK				*e*SB	**Sg**	**03 35 21.9**	**+1.2**
PRK	**Paraskevi**	**0.15**	**178**	⇑*i*Pb	**Pg**	**03 35 18.8**	**+0.5**
PRK				*e*Sb	**Sg**	**03 35 21.9**	**+1.2**
AYVA	**Ayvalik**	**0.34**	**105**	⇑*i*P	**Pg**	**03 35 21.9**	**+0.2**
AYVA				*i* S	**Sg**	**03 35 26.9**	**+0.7**
EZN	**Ezine**	**0.43**	**6**	PG	**Pg**	**03 35 22.9**	**-0.4**
EZN				*e*SG	**Sg**	**03 35 29.2**	**+0.1**
BOZC	**Bozcaada**	**0.47**	**340**	⇑*i*P	**Pg**	**03 35 23.8**	**-0.4**
BOZC				*i* S	**Sg**	**03 35 30.0**	**-0.4**
GADA	**Gvkgeada**	**0.84**	**340**	PG	**Pg**	**03 35 30.4**	**-0.7**
GADA				*e*SG	**Sg**	**03 35 41.6**	**-0.5**
LIA	**Limnos Island**	**0.97**	**301**	*e*PN	**Pn**	**03 35 33.1**	**-1.3**
LIA				*e*SN	**Sn**	**03 35 46.4**	**-1.8**
LIA	**Limnos Island**	**0.97**	**301**	*e*Pn	**Pn**	**03 35 33.3**	**-1.1**
LIA				*e*Sn	**Sn**	**03 35 46.4**	**-1.8**
LIA				S	**Sg**	**03 35 47.1**	**+0.8**
LIA	**Limnos Island**	**0.97**	**301**	*e*Pn	**Pn**	**03 35 33.3**	**-1.1**
LIA				*e*Sn	**Sn**	**03 35 46.4**	**-1.8**
CHOS	**Chios island**	**1.02**	**189**	P	**Pg**	**03 35 34.3**	**-0.2**
CHOS				S	**Sg**	**03 35 48.5**	**+0.7**
LPK	**Lapseki**	**1.04**	**21**	PG	**Pg**	**03 35 34.1**	**-0.9**
URLA	**Izmir**	**1.07**	**166**	⇓*i*P	**Pb**	**03 35 35.0**	**-0.3**
URLA				*i* S	**Sb**	**03 35 49.7**	**+0.5**
BLCB	**Balcova**	**1.18**	**149**	PN	**Pn**	**03 35 37.1**	**-0.1**
BLCB				*e*SN	**Sn**	**03 35 53.4**	**+0.2**
BLCB	**Balcova**	**1.18**	**149**	P	**Pb**	**03 35 36.8**	**-0.4**
BLCB				S	**Sb**	**03 35 53.3**	**+0.9**
IZM	**Izmir**	**1.27**	**142**	PN	**Pn**	**03 35 38.3**	**-0.1**
BALB	**Balikesir**	**1.27**	**79**	PN	**Pn**	**03 35 38.3**	**-0.3**
BALB				*e*SN	**Sn**	**03 35 55.5**	**-0.1**
AKHS	**Akhisar**	**1.31**	**113**	⇓*i*P	**Pn**	**03 35 38.8**	**-0.3**
AKHS				*i* S	**Sb**	**03 35 56.5**	**+0.3**
AKS	**Akhisar**	**1.31**	**113**	PN	**Pn**	**03 35 38.7**	**-0.3**
AKS				*e*SN	**Sn**	**03 35 56.4**	**-0.1**
ENEZ	**Enez**	**1.34**	**356**	PN	**Pn**	**03 35 39.1**	**-0.4**
ENEZ				*e*SN	**Sn**	**03 35 57.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.47**	**28**	PN	**Pn**	**03 35 40.2**	**-1.0**
RKY				*e*SN	**Sn**	**03 36 00.4**	**0.0**
SART	**Tekirdag**	**1.47**	**28**	⇑*i*P	**Pn**	**03 35 40.7**	**-0.5**
SART				*i* S	**Sn**	**03 35 59.9**	**-0.6**
ALN	**Alexandroupoli**	**1.51**	**354**	P	**Pn**	**03 35 41.1**	**-0.7**
ALN				S	**Sn**	**03 36 01.1**	**-0.3**
EDC	**Edincik**	**1.55**	**52**	PN	**Pn**	**03 35 41.9**	**-0.5**
BNT	**Bandirma**	**1.59**	**53**	PN	**Pn**	**03 35 42.5**	**-0.5**
SMG	**Samos**	**1.75**	**165**	*e*PN	**Pn**	**03 35 44.4**	**-0.6**
KCT	**Karacabey**	**1.83**	**61**	PN	**Pn**	**03 35 46.1**	**-0.1**
RDO	**Rodhopi**	**1.83**	**343**	*e*PB	**Pb**	**03 35 46.0**	**-2.4**
RDO				*e*SN	**Sn**	**03 36 10.6**	**+1.2**
RDO	**Rodhopi**	**1.83**	**343**	*e*Pb	**Pb**	**03 35 46.0**	**-2.4**
RDO				*e*Sn	**Sn**	**03 36 10.7**	**+1.3**
GCAM	**G?zelcaml?**	**1.86**	**156**	*e*P	**Pn**	**03 35 49.8**	**+3.2**
GCAM				*e*S	**Sn**	**03 36 13.0**	**+3.0**
TKR	**Tekirdag**	**1.86**	**31**	*e*PN	**Pn**	**03 35 46.9**	**+0.2**
AOS	**Alonnisos**	**1.87**	**264**	P	**Pn**	**03 35 46.1**	**-0.6**
OUR	**Ouranopolis**	**1.99**	**299**	P	**Pn**	**03 35 47.9**	**-0.5**
CRLT	**Corlu**	**2.06**	**33**	*e*PN	**Pn**	**03 35 49.4**	**0.0**
KULA	**Kula-Manisa**	**2.06**	**115**	*e*PN	**Pn**	**03 35 50.0**	**+0.6**
PAIG	**Paliouri**	**2.06**	**286**	P	**Pn**	**03 35 48.7**	**-0.7**
PAIG				S	**Sn**	**03 36 14.9**	**-0.2**
PTL	**Penteli**	**2.31**	**235**	*e*PN	**Pn**	**03 35 52.0**	**-0.8**
PTL				*e*SN	**Sn**	**03 36 19.8**	**-1.4**
SLVT	**Silivri**	**2.36**	**38**	*e*PN	**Pn**	**03 35 53.6**	**+0.2**
NEO	**Neokhori**	**2.36**	**269**	*e*PN	**Pn**	**03 35 52.9**	**-0.6**
NEO	**Neokhori**	**2.36**	**269**	*e*Pn	**Pn**	**03 35 52.6**	**-0.9**
PLG	**Polygyros**	**2.38**	**295**	P	**Pn**	**03 35 53.9**	**+0.2**
PLG				S	**Sn**	**03 36 23.1**	**+0.2**
PLG	**Polygyros**	**2.38**	**295**	*e*Pn	**Pn**	**03 35 53.3**	**-0.4**
PLG				S	**Sn**	**03 36 23.1**	**+0.2**
XOR	**Xorichti**	**2.38**	**270**	P	**Pn**	**03 35 53.6**	**-0.2**
XOR				S	**Sn**	**03 36 22.6**	**-0.4**
APE	**Apeiranthos**	**2.40**	**194**	P	**Pn**	**03 35 52.8**	**-1.2**
APE				S	**Sn**	**03 36 22.9**	**-0.4**
APE	**Apeiranthos**	**2.40**	**194**	*e*Pn	**Pn**	**03 35 53.3**	**-0.7**
APE				S	**Sn**	**03 36 22.9**	**-0.4**
APE	**Apeiranthos**	**2.40**	**194**	⇓*i*P	**Pn**	**03 35 53.5**	**-0.5**
CTT	**Catalca**	**2.41**	**43**	*e*PN	**Pn**	**03 35 53.6**	**-0.5**
MLSB	**Milas**	**2.41**	**150**	*e*PN	**Pn**	**03 35 53.6**	**-0.5**
ATH	**Athens Observa**	**2.45**	**235**	*e*PN	**Pn**	**03 35 53.8**	**-0.9**
ATH	**Athens Observa**	**2.45**	**235**	*e*Pn	**Pn**	**03 35 53.6**	**-1.1**
EDRB	**Edirne**	**2.47**	**8**	*e*PN	**Pn**	**03 35 54.9**	**-0.2**
GEMT	**Gemlik**	**2.48**	**64**	*e*PN	**Pn**	**03 35 55.0**	**-0.1**
CTKS	**Kestanelik-??a**	**2.51**	**42**	*e*PN	**Pn**	**03 35 55.5**	**-0.1**
CTYL	**Yal??k??y-??at**	**2.59**	**36**	*e*PN	**Pn**	**03 35 56.5**	**-0.1**
BGKT	**Bogazkoy**	**2.62**	**46**	*e*PN	**Pn**	**03 35 56.7**	**-0.4**
SOH	**Sokhos**	**2.65**	**303**	P	**Pn**	**03 35 57.9**	**+0.5**
SOH				S	**Sn**	**03 36 29.7**	**+0.2**
LKR	**Lokris**	**2.65**	**255**	*e*PN	**Pn**	**03 35 56.8**	**-0.7**
YLV	**Yalova**	**2.66**	**63**	*e*PN	**Pn**	**03 35 57.0**	**-0.6**
NVR	**Nevrokopi**	**2.68**	**317**	*e*PN	**Pn**	**03 35 57.9**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ISK	Istanbul-Kandi	2.71	51	ePN	Pn	03 35 57.9	-0.4
HORT	Hortiatis	2.71	297	P	Pn	03 35 58.4	+0.1
HORT				S	Sn	03 36 32.3	+1.2
DENT	Denizli	2.72	126	ePN	Pn	03 35 58.5	+0.1
YER	Yerkesik	2.76	144	ePN	Pn	03 35 59.8	+0.8
KLYT	Kilyos	2.82	48	ePN	Pn	03 35 59.4	-0.3
DAT	Datca	2.86	158	ePN	Pn	03 36 00.1	-0.2
ADVT	Abdulvahap	2.86	68	ePN	Pn	03 35 59.8	-0.6
CAVI	Cavuskoy	2.87	73	ePN	Pn	03 36 00.8	+0.3
LTK	Loutraki	2.92	243	P	Pn	03 36 00.5	-0.7
LTK				S	Sn	03 36 35.8	-0.5
PLD	Plovdiv	2.95	337	P	Pn	03 36 02.0	+0.4
PLD				S	Sn	03 36 37.4	+0.3
HRT	Hereke	2.97	60	ePN	Pn	03 36 01.4	-0.5
LIT	Litokhoron	2.99	285	P	Pn	03 36 02.4	+0.2
LIT				S	Sn	03 36 39.3	+1.2
ALT	Altintas	3.00	95	ePN	Pn	03 36 02.4	+0.1
THR4	Thira Island,	3.01	193	P	Pn	03 36 01.9	-0.6
DID	Didima	3.04	232	P	Pn	03 36 02.4	-0.4
THR3	Thira Island,	3.06	193	P	Pn	03 36 03.1	0.0
THR5	Thira Island,	3.06	194	P	Pn	03 36 02.4	-0.8
JMB	Yambol	3.08	4	P	Pn	03 36 03.4	+0.1
JMB				S	Sn	03 36 42.0	+1.9
AGG	Agios Georgios	3.08	264	P	Pn	03 36 03.2	-0.2
AGG				S	Sn	03 36 39.4	-0.8
THR1	Thera Island	3.09	192	P	Pn	03 36 02.4	-1.1
KNT	Kendrikon	3.12	305	P	Pn	03 36 04.1	+0.2
SILT	Sile	3.12	55	ePN	Pn	03 36 03.4	-0.5
GPA	Golpazari	3.24	73	ePN	Pn	03 36 06.3	+0.8
GRG	Griva	3.34	299	P	Pn	03 36 08.0	+1.0
GRG				S	Sn	03 36 48.4	+1.7
VAY	Valandovo	3.42	305	P	Pn	03 36 08.2	+0.2
VAY				S	Sn	03 36 49.3	+0.9
VAY	Valandovo	3.42	305	ePn	Pn	03 36 11.0	+3.0
VAY				S	Sn	03 36 49.3	+0.9
VAY	Valandovo	3.42	305	ePn	Pn	03 36 11.0	+3.0
GULT	Gulveren	3.43	71	ePN	Pn	03 36 08.1	-0.1
SHUT	Suhut-Afyon	3.44	103	ePN	Pn	03 36 08.9	+0.5
EVR	Evrytania	3.50	264	ePN	Pn	03 36 09.6	+0.5
EVR	Evrytania	3.50	264	ePn	Pn	03 36 09.7	+0.6
ARG	Arkhangelos	3.50	155	ePN	Pn	03 36 09.1	-0.1
ESKT	Eskisehir	3.55	87	ePN	Pn	03 36 09.5	-0.3
ISP	Isparta	3.67	114	ePN	Pn	03 36 12.0	+0.6
VLI	Veliai	3.75	226	ePN	Pn	03 36 11.9	-0.7
VLI	Veliai	3.75	226	ePn	Pn	03 36 11.8	-0.8
STIP	Stip	3.86	308	ePn	Pn	03 36 17.5	+3.4
BCK	Bucak	3.91	118	ePN	Pn	03 36 15.1	+0.3
KARP	Karpathos	3.91	169	ePN	Pn	03 36 14.3	-0.5
RLS	Riolos of Patr	3.98	252	ePN	Pn	03 36 16.2	+0.4
FNA	Florina	4.00	292	P	Pn	03 36 16.3	+0.3
ITM	Ithomi	4.07	238	ePN	Pn	03 36 17.3	+0.3
ITM	Ithomi	4.07	238	ePn	Pn	03 36 17.6	+0.6
NPS	Neapolis	4.16	187	ePN	Pn	03 36 18.0	-0.2
LAST	Lasithi	4.28	189	P	Pn	03 36 20.0	+0.2
LAST				S	Sn	03 37 09.7	0.0
KRUS	Krusevo	4.31	299	ePn	Pn	03 36 22.3	+2.0
KRUS	Krusevo	4.31	299	ePn	Pn	03 36 22.4	+2.1
KIZT	Kizilcal	4.40	95	ePN	Pn	03 36 23.0	+1.5
KARN	Karanos	4.41	206	P	Pn	03 36 21.6	0.0
KARN				S	Sn	03 37 14.0	+1.1
BARS	Barje	4.79	317	ePn	Pn	03 36 27.8	+0.9
TIRR	Tirgusor	5.30	17	⇓iP	Pn	03 36 33.9	0.0
TIRR	Tirgusor	5.30	17	⇓P	Pn	03 36 33.9	0.0
BOLS	Boljevac	5.48	325	ePn	Pn	03 36 36.6	+0.2
BR131	Keskin Array S	5.71	84	ePn	Pn	03 36 39.9	+0.4
	3.1nm,0.4s						
BR131				eSn	Sn	03 37 43.8	-1.2
TLCR		6.08	17	⇑iP	Pn	03 36 44.7	0.0
TLCR		6.08	17	⇑P	Pn	03 36 44.7	0.0
VOIR		6.10	352	P	Pn	03 36 45.3	+0.4
VOIR		6.10	352	⇑iP	Pn	03 36 45.0	+0.1
VOIR		6.10	352	P	Pn	03 36 45.3	+0.4
GRUS	Gruza	6.12	319	ePn	Pn	03 36 46.0	+0.9
PLOR	Plostina	6.46	2	⇑iP	Pn	03 36 51.1	+1.4
VRI	Vrincioaia	6.47	3	P	Pn	03 36 53.3	+3.3
VRI	Vrincioaia	6.47	3	⇑iP	Pn	03 36 51.1	+1.1
VRI	Vrincioaia	6.47	3	P	Pn	03 36 53.3	+3.3
GZR	Gura Zlata	6.52	338	P	Pn	03 36 50.1	-0.6
GZR	Gura Zlata	6.52	338	⇑iP	Pn	03 36 50.0	-0.7
GZR	Gura Zlata	6.52	338	P	Pn	03 36 50.1	-0.5
BZS	Buzias	7.10	333	P	Pn	03 36 58.4	-0.2
BZS	Buzias	7.10	333	⇓iP	Pn	03 36 58.5	-0.1
BZS	Buzias	7.10	333	P	Pn	03 36 58.4	-0.1
DRGR		7.83	342	⇓iP	Pn	03 37 07.5	-1.1
BURAR	Bucovina Array	8.25	355	⇓iP	Pn	03 37 16.4	+2.1
BUR08	Bucovina Ar. S	8.28	355	ePn	Pn	03 37 15.7	+0.9
BUR08	Bucovina Ar. S	8.28	355	ePn	Pn	03 37 15.7	+0.9
PKSM	Moragy	8.82	323	ePn	Pn	03 37 22.0	-0.1
PKSM	Moragy	8.82	323	⇑iP	Pn	03 37 22.1	0.0
PKSM	Moragy	8.82	323	⇑P	Pn	03 37 22.1	0.0

NNC 16 04:06:30.3±3.8, 3579N×6812E, h0km, mb3.8, mpv3.3, 2C-1D, Error ellipse: s-maj=52.2km s-min=30.2km az=102.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	7.53	13	Pn	Pn	04 08 23.6	+2.3
	0.5nm,0.3s,baz=196,slow=14,SNR=16						
KK31				⇑Sn	Sn	04 09 54.0	+6.6
	6.4nm,0.7s,baz=194,slow=28,SNR=7.6						
TKM2	Tokmak 2	9.17	37	⇑Pn	Pn	04 08 45.7	+1.9
	1.7nm,0.4s						
AB09	Akbulak array	14.74	338	⇓Pn	Pn	04 10 01.0	+1.1
	0.6nm,0.5s						

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*CSEM **16** 04:26:28.6±0.1, 3257N×4757E, h10km, mb4.5/9, Error ellipse: s-maj=1.7km s-min=1.5km az=124.0*
*IDC **16** 04:26:28.3±1.8, 3264N×4759E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/27, mbtmp3.8/11, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/50, Error ellipse: s-maj=42.1km s-min=19.6km az=163.0*
*KISR **16** 04:26:30.4, 3258N×4778E, h44km, ML3.2*
*THR **16** 04:26:31.1±0.3, 3236N×4762E, h40km±2km, ML3.4*
*NEIC **16** 04:26:31.1, 3236N×4762E, h40km, mb4.2/10, After THR.*
*MOS **16** 04:26:32.9±1.4, 3286N×4763E, h33km, mb4.3/14, Error ellipse: s-maj=12.3km s-min=8.5km az=118.9*
*SGS **16** 04:26:32.5, 3246N×4759E, h14km*
*ISCJB **16** 04:26:32.4±0.4, 3253N±002×4769E±003, h52km±5km, mb4.0/22, Error ellipse: s-maj=4.9km s-min=4.0km az=12.8*
ISC 16 04:26:33.5±0.3, 3255N±002×4765E±003, h42km±5km, n120, σ1.10/138, mb4.0/22, 5C-5D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.07	114	ePg	Pn	04 26 50.6	-1.4
SHGR				eSg	Sn	04 27 04.9	-0.7
SHGR				AML	AML	04 27 11.7	
	comp=E,1μm,0.7s						
SHGR				AML	AML	04 27 30.6	
	comp=N,991nm,0.6s						
SHGR	Shooshtar-Gavs	1.07	114	Pg	Pn	04 26 50.0	-2.0
SHGR				eSg	Sn	04 27 04.9	-0.7
	SNR=105						
SHGR	Shooshtar-Gavs	1.07	114	Pg	Pn	04 26 50.0	-2.0
SHGR				Sg	Sn	04 27 04.0	-1.6
IKOM	Komasi	1.63	356	ePn	Pn	04 27 00.2	+0.6
IKOM				Sg	Sn	04 27 24.3	+4.9
IGHG	Ghaleghazi	1.99	333	ePn	Pn	04 27 05.9	+1.2
IGHG	Ghaleghazi	1.99	333	Pn	Pn	04 27 05.8	+1.1
IVIS	Veis	2.08	341	Pn	Pn	04 27 06.5	+0.6
IVIS				eSn	Sn	04 27 31.2	+0.6
IVIS	Veis	2.08	341	Pn	Pn	04 27 06.5	+0.6
IVIS				Sn	Sn	04 27 31.1	+0.5
SNGE	Sanandaj	2.55	354	ePn	Pn	04 27 14.5	+2.2
SNGE				eSg	Sn	04 27 55.0	+13
SNGE				AML	AML	04 27 55.8	
	comp=N,98nm,0.6s						
SNGE				AML	AML	04 27 58.6	
	comp=E,117nm,0.5s						
SNGE	Sanandaj	2.55	354	Pn	Pn	04 27 14.0	+1.7
SNGE				Sg	Sn	04 27 54.0	+12
IPIR	Pirpir	2.74	86	ePn	Pn	04 27 16.0	+1.1
IPIR	Pirpir	2.74	86	Pn	Pn	04 27 15.9	+1.0
IPIR				Sn	Sn	04 27 45.6	-1.2
MIB	Mutribah	2.75	186	eP	Pn	04 27 15.4	+0.3
MIB	Mutribah	2.75	186	eP	Pn	04 27 15.4	+0.4
	baz=188						
MIB				AML	AML	04 28 04.2	
	comp=Z,149nm,0.6s,baz=188						
ASAO	Ashtian	2.81	44	ePn	Pn	04 27 17.7	+1.8
ASAO				AML	AML	04 28 03.2	
	comp=E,118nm,0.6s						
ASAO				AML	AML	04 28 08.8	
	comp=N,149nm,0.6s						
ASAO	Ashtian	2.81	44	Pn	Pn	04 27 17.0	+1.1
BHD	Baghdad	2.84	286	ePn	Pn	04 27 14.0	-2.3
BHD				eSn	Sn	04 27 48.0	-1.4
NAY	Al-Naaiem	3.31	186	eP	Pn	04 27 22.6	-0.2
NAY				eS	Sn	04 28 02.2	+1.4
NAY	Al-Naaiem	3.31	186	eP	Pn	04 27 22.6	-0.2
	baz=188						
NAY				eS	Sn	04 28 02.2	+1.4
	baz=188						
NAY				AML	AML	04 28 12.8	
	comp=Z,21nm,0.6s,baz=188						
KBD	Kabd	3.36	179	eP	Pn	04 27 23.9	+0.4
KBD				eS	Sn	04 28 03.2	+1.0
KBD	Kabd	3.36	179	eP	Pn	04 27 23.9	+0.4
	baz=181						
KBD				eS	Sn	04 28 03.2	+1.1
	baz=181						
KBD				AML	AML	04 28 09.4	
	comp=Z,30nm,0.4s,baz=181						
IKLH	Kolahrood	3.39	76	ePn	Pn	04 27 24.6	+0.7
IKLH				eSn	Sn	04 28 01.8	-1.1
IKLH	Kolahrood	3.39	76	Pn	Pn	04 27 24.5	+0.6
IKLH				Sn	Sn	04 28 01.8	-1.1
IRAZ	Razeghan	3.42	33	ePn	Pn	04 27 24.4	+0.1
IRAZ	Razeghan	3.42	33	Pn	Pn	04 27 24.3	0.0
GHVR	GHOM	3.60	57	ePn	Pn	04 27 27.6	+0.9
GHVR				AML	AML	04 28 18.4	
	comp=N,56nm,0.5s						
GHVR				AML	AML	04 28 36.3	
	comp=E,104nm,0.7s						
GHVR	GHOM	3.60	57	Pn	Pn	04 27 27.0	+0.2
RDF	Al-Radifah	3.61	181	eP	Pn	04 27 27.3	+0.4
RDF				eS	Sn	04 28 10.3	+2.0
	comp=E,59nm,0.5s						
RDF	Al-Radifah	3.61	181	eP	Pn	04 27 27.3	+0.4
	baz=183						
RDF				eS	Sn	04 28 10.3	+2.0
	baz=183						
RDF				AML	AML	04 28 12.6	
	comp=Z,59nm,0.5s,baz=183						
QRN	Al-Qurain	3.80	176	eP	Pn	04 27 29.3	-0.2
	baz=178						
QRN				AML	AML	04 28 17.8	
	comp=Z,50nm,0.3s,baz=178						
IZEF	Zefreh	3.96	84	Pn	Pn	04 27 32.2	+0.5
IVRN	Varamin	4.18	53	ePn	Pn	04 27 34.9	+0.2
IVRN	Varamin	4.18	53	Pn	Pn	04 27 34.8	+0.1
ISFB	Sefidab	4.24	64	ePn	Pn	04 27 35.4	-0.1
KFJS		4.35	177	P	Pn	04 27 36.5	-0.7
NASN	Na'in	4.36	85	ePn	Pn	04 27 37.5	+0.3
NASN	Na'in	4.36	85	Pn	Pn	04 27 37.0	-0.1
CHTH	Charan	4.42	40	ePn	Pn	04 27 39.8	+1.8
CHTH	Charan	4.42	40	Pn	Pn	04 27 39.0	+1.0
IDMV	Damavand	4.73	49	ePn	Pn	04 27 42.6	+0.4
IDMV	Damavand	4.73	49	Pn	Pn	04 27 42.5	+0.3
IFIR	Firoozkooh	5.24	53	ePn	Pn	04 27 49.3	+0.1
MSL	Mosul	5.37	317	ePn	Pn	04 27 49.0	-2.0
MSL				eSn	Sn	04 28 51.0	-0.6
ISHM	Shahmirzad	5.69	54	ePn	Pn	04 27 55.4	-0.1
ASYS		5.79	211	P	Pn	04 27 54.6	-2.2
BTHS		8.93	161	P	Pn	04 28 39.0	-0.9
HRDDS		9.72	170	P	Pn	04 28 49.8	-0.9
LYLS		10.47	182	P	Pn	04 28 57.8	-3.3
AKTK	Aktyubinsk	19.45	20	P	Pn	04 30 56.0	-1.8
AKTO	Aktyubinsk	19.45	20	P	Pn	04 30 56.0	-1.8
	comp=Z,0.2nm,0.3s,baz=208,slow=10,SNR=12						
MLR	Muntele Rosu	21.16	314	P	P	04 31 16.9	+1.9
	comp=Z,3.4nm,0.9s,mb3.7,baz=258,slow=4.9,SNR=4.8						
MLR	Muntele Rosu	21.16	314	P	P	04 31 16.9	+1.9
MLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VOIR		21.69	313	⇑iP	P	04 31 21.7	+1.1
VOIR		21.69	313	⇑P	P	04 31 21.7	+1.0
AKASG	Malin Array Be	22.66	329	P	P	04 31 28.6	-2.3
	comp=Z,0.5nm,0.4s,mb3.3,baz=138,slow=10,SNR=4.1						
AKASG	Malin Array Be	22.66	329	P	P	04 31 28.6	-2.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BURAR	Bucovina Array	22.71	318	⇑iP	P	04 31 32.8	+1.3
BURAR	Bucovina Array	22.71	318	⇑P	P	04 31 32.8	+1.3
BUR08	Bucovina Ar. S	22.74	318	eP	P	04 31 32.3	+0.5
BUR08	Bucovina Ar. S	22.74	318	eP	P	04 31 32.3	+0.6
AAK	Ala-Archa	23.45	57	eP	P	04 31 40.7	+1.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
AAK	Ala-Archa	23.45	57	eP	P	04 31 40.7	+1.6
	comp=Z,1.3nm,0.6s,mb3.5						
AAK	Ala-Archa	23.45	57	eP	P	04 31 40.7	+1.6
	comp=Z,1.3nm,0.6s,mb3.5						
DRGR		23.76	314	⇓P	P	04 31 42.2	+0.2
DRGR		23.76	314	⇓iP	P	04 31 42.3	+0.3
DRGR		23.76	314	⇓P	P	04 31 42.2	+0.3
TKM2	Tokmak 2	24.30	57	eP	P	04 31 48.2	+1.2
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
TKM2	Tokmak 2	24.30	57	eP	P	04 31 48.2	+1.2
	comp=Z,3.1nm,0.9s,mb3.7						
TKM2	Tokmak 2	24.30	57	eP	P	04 31 48.2	+1.2
	comp=Z,3.1nm,0.9s,mb3.7						
PSZ	Piszkesteto	25.98	314	eP	P	04 32 04.3	+2.2
	comp=Z,3.1nm,0.8s,mb3.9						
PSZ	Piszkesteto	25.98	314	⇑iP	P	04 32 04.7	+2.6
PSZ	Piszkesteto	25.98	314	eP	P	04 32 04.3	+2.1
	comp=Z,3.1nm,0.8s,mb3.9						
PKSM	Moragy	26.08	310	⇓iP	P	04 32 03.8	+0.8
PKSM	Moragy	26.08	310	⇓P	P	04 32 03.8	+0.7
BRVK	Borovoye	26.18	32	eP	P	04 32 04.0	+0.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
BRVK	Borovoye	26.18	32	eP	P	04 32 04.0	+0.1
	comp=Z,4.4nm,0.9s,mb4.0						
BRVK	Borovoye	26.18	32	eP	P	04 32 04.0	+0.1
	comp=Z,4.4nm,0.9s,mb4.0						
BVAR	Borovoye Array	26.20	32	P	P	04 32 04.3	+0.2
	comp=Z,2.4nm,0.7s,mb3.8,baz=220,slow=8.9,SNR=13						
BVAR	Borovoye Array	26.20	32	P	P	04 32 04.3	+0.2
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VRAC	Vranov	28.55	315	P	P	04 32 26.0	+0.8
	comp=Z,0.4nm,0.3s,mb3.6,baz=130,slow=16,SNR=2.1						
KURK	Kurchatov	29.11	42	P	P	04 32 30.1	0.0
	comp=Z,1.3nm,0.6s,mb3.8,baz=245,slow=9.3,SNR=11						
KURK	Kurchatov	29.11	42	P	P	04 32 30.1	0.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MK31	Makanchi Array	29.95	51	eP	P	04 32 37.8	+0.2
MK31	Makanchi Array	29.95	51	eP	P	04 32 37.8	+0.2
MKAR	Makanchi Array	29.95	51	P	P	04 32 38.0	+0.5
	comp=Z,1.3nm,0.5s,mb3.9,baz=249,slow=10,SNR=12						
MKAR	Makanchi Array	29.95	51	P	P	04 32 38.1	+0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	29.95	51	P	P	04 32 38.0	+0.4
JOF	Joensuu	32.11	346	ep	P	04 32 54.6	-1.8
	comp=Z,1.8nm,0.8s,mb4.0						
JOF	Joensuu	32.11	346	eP	P	04 32 54.6	-1.8
JOF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
KAF	Kangasniemi	32.60	341	ep	P	04 32 59.1	-1.6
	comp=Z,1.5nm,0.8s,mb4.0						
KAF	Kangasniemi	32.60	341	eP	P	04 32 59.1	-1.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
NVS	Novosibirsk	33.48	38	eP	P	04 33 06.1	-2.4
MBDF	Montbardon	33.83	303	eP	P	04 33 12.1	+0.4
	comp=Z,28nm,1.3s,mb4.8						
MBDF	Montbardon	33.83	303	eP	P	04 33 12.1	+0.4
MBDF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
MBDF	Montbardon	33.83	303	eP	P	04 33 12.1	+0.4
	comp=Z,28nm,1.3s,mb5.0						
ZALV	Zalesovo Beam	33.93	40	P	P	04 33 12.2	-0.2
	comp=Z,0.9nm,0.3s,mb4.2,baz=254,slow=8.8,SNR=9.4						
ZALV	Zalesovo Beam	33.93	40	P	P	04 33 12.2	-0.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
LPG	La Plagne	33.94	304	eP	P	04 33 13.1	+0.5
	comp=Z,12nm,0.9s,mb4.5						
LPG	La Plagne	33.94	304	eP	P	04 33 13.1	+0.5
LPG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LPG	La Plagne	33.94	304	eP	P	04 33 13.1	+0.5
	comp=Z,11nm,0.9s,mb4.8						
LPL	La Plagne	33.96	304	eP	P	04 33 12.9	+0.1
	comp=Z,22nm,1.1s,mb4.7						
LPL	La Plagne	33.96	304	eP	P	04 33 12.9	+0.1
LPL				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
LPL	La Plagne	33.96	304	eP	P	04 33 12.9	+0.1
	comp=Z,22nm,1.1s,mb5.0						
CABF	La Chapelle	34.56	306	eP	P	04 33 17.9	-0.1
	comp=Z,61nm,1.5s,mb5.0						
CABF	La Chapelle	34.56	306	eP	P	04 33 17.9	-0.1
CABF				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
CABF	La Chapelle	34.56	306	eP	P	04 33 17.9	-0.1
	comp=Z,60nm,1.5s,mb5.3						
HAU	Haudompre	34.63	309	eP	P	04 33 17.7	-0.9
SMF	Signal de Mont	36.10	306	eP	P	04 33 30.5	-0.7
	comp=Z,6.7nm,0.7s,mb4.4						
SMF	Signal de Mont	36.10	306	eP	P	04 33 30.5	-0.7
SMF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SMF	Signal de Mont	36.10	306	eP	P	04 33 30.5	-0.7
	comp=Z,6.0nm,0.7s,mb4.6						
AVF	Avril sur Loir	36.45	306	eP	P	04 33 34.2	0.0
ARCES	ARCESS Array B	39.07	348	P	P	04 33 56.4	+0.4
	comp=Z,6.4nm,1.1s,mb4.3,baz=161,slow=8.6,SNR=4.0						
ARCES	ARCESS Array B	39.07	348	P	P	04 33 56.4	+0.4
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARCES	ARCESS Array B	39.07	348	P	P	04 33 56.4	+0.4
EKA	Eskdalemuir Ar	41.90	318	P	P	04 34 18.8	-0.7
	comp=Z,2.9nm,0.9s,mb3.9,baz=119,slow=7.8,SNR=4.1						
EKA	Eskdalemuir Ar	41.90	318	P	P	04 34 18.8	-0.7
EKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TORD	Torodi Ar. Bea	46.13	256	P	P	04 34 54.6	+0.6
	comp=Z,0.3nm,0.7s,mb3.3,baz=56,slow=7.9,SNR=2.8						
SONM	Songino Array	46.30	53	LR	LR	04 57 34.8	
	comp=Z,68nm,18.1s,baz=98,slow=40						
YKA	Yellowknife Ar	84.22	352	P	P	04 38 59.0	-1.2
	comp=Z,0.2nm,0.7s,mb3.4,baz=8.0,slow=4.3,SNR=4.0						
YKA	Yellowknife Ar	84.22	352	P	P	04 38 59.0	-1.2

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*DDA **16** 04:46:34.9, 3939N×2622E, h7km±4km, Md2.7*
*ISCJB **16** 04:46:36.0±0.6, 3943N±003×2627E±006, h7km±6km, Error ellipse: s-maj=7.7km s-min=4.8km az=157.4*
*CSEM **16** 04:46:36.0±0.1, 3939N×2636E, h15km, MD2.7, Error ellipse: s-maj=1.9km s-min=1.7km az=83.0*
*ATH **16** 04:46:36.5, 3941N×2623E, h6km±4km, MD3.0/3*
ISC 16 04:46:36.1±0.6, 3942N±004×2626E±006, h11km±5km, n8, σ0.72/15, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.18	177	ePG	Pg	04 46 39.9	0.0
PRK				eSG	Sg	04 46 42.6	0.0
AYVA	Ayvalik	0.35	109	eP	Pg	04 46 43.0	-0.1
AYVA				eS	Sg	04 46 48.0	+0.2
BOZC	Bozcaada	0.45	339	⇑iP	Pg	04 46 44.8	-0.1
BOZC				i S	Sg	04 46 51.3	+0.4
LIA	Limnos Island	0.96	300	ePB	Pb	04 46 54.4	-0.3
LIA				eSB	Sb	04 47 07.5	+0.1
URLA	Izmir	1.09	166	eP	Pb	04 46 55.4	-1.5
URLA				eS	Sb	04 47 11.5	+0.3
SART	Tekirdag	1.45	29	eP	Pn	04 47 02.0	-0.2
SART				eS	Sn	04 47 21.1	-0.1
SART	Tekirdag	1.45	29	eP	Pn	04 47 02.0	-0.2
SART				eS	Sn	04 47 21.1	-0.1
SMG	Samos	1.77	165	ePN	Pn	04 47 09.6	+3.0

IDC 16 04:51:24.1±20.0, 377N×12477E, h270km±212km, mb3.0/3, mb1 3.3/4, mb1mx3.0/19, mbtmp3.2/4, Error ellipse: s-maj=213.0km s-min=25.2km az=58.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	13.93	185	P	Pn	04 54 30.9	0.0
	3.3nm,0.3s,baz=67,slow=3.1,SNR=4.6						
KAKA	Kakadu	18.06	155	eP	x	04 55 02.9	
	2.9nm,0.6s						
FITZ	Fitzroy Crossi	21.75	178	eP	P	04 55 49.8	-4.5
	2.8nm,0.8s						
WRA	Warramunga Arr	25.37	159	P	P	04 56 27.5	+0.3
	0.7nm,0.4s,baz=337,slow=10,SNR=8.5						
WB2	Warramunga Arr	25.38	159	eP	P	04 56 27.1	-0.1
ASAR	Alice Springs	28.69	162	P	P	04 56 56.4	-0.3
	0.2nm,0.4s,baz=344,slow=6.9,SNR=6.3						
MKAR	Makanchi Array	56.42	326	P	P	05 00 37.9	0.0
	0.3nm,0.4s,baz=129,slow=7.5,SNR=8.9						

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*CSEM **16** 05:03:14.9±0.1, 3847N×39.15E, h15km, MD2.8, Error ellipse: s-maj=5.3km s-min=2.7km az=25.0*
*DDA **16** 05:03:15.7, 3845N×39.13E, h15km±1km, Md2.8*
*ISCJB **16** 05:03:16.4±0.7, 3845N±007×39.13E±005, h9km±5km, Error ellipse: s-maj=12.4km s-min=5.0km az=26.4*
ISC 16 05:03:16.2±0.9, 3846N±006×3914E±005, h14km±8km, n7, σ0.56/12, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.12	287	⇑iP	Pg	05 03 19.6	+0.1
ELZG				i S	Sg	05 03 22.1	+0.1
ELZG	Elazig	0.12	287	i P	Pg	05 03 19.6	+0.1
SVRC	Sivrice-ELAZID	0.16	121	PG	Pg	05 03 19.7	-0.3
SVRC				SG	Sg	05 03 22.1	-0.6
MYA	Malataya	0.57	257	ePG	Pg	05 03 27.4	-0.1
DIYA	Diyarbakir	0.94	124	eP	Pg	05 03 34.6	+0.2
DIYA				eS	Sg	05 03 47.6	+0.8
KEMA	Kemaliye	0.95	328	eP	Pg	05 03 33.6	-0.9
KEMA				eS	Sg	05 03 47.8	+0.8
AKCD	Akcadag	0.97	261	⇑iP	Pb	05 03 34.0	-0.7
AKCD				i S	Sg	05 03 48.0	+0.5

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*ISCJB **16** 05:04:04.3±0.5, 458S±007×360E±0.1, h10km, mb3.9/16, MS3.5/2, Error ellipse: s-maj=16.3km s-min=10.1km az=12.0*
*IDC **16** 05:04:05.0±0.7, 454S×3600E, h0km, mb3.8/13, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, ML4.5/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/29, Error ellipse: s-maj=24.9km s-min=14.6km az=111.0*
*NEIC **16** 05:04:06.1±0.6, 449S×3603E, h10km, mb4.3/1, Error ellipse: s-maj=18.7km s-min=9.8km az=109.0*
ISC 16 05:04:06.5±0.5, 456S±007×360E±01, h10km, n27, σ0.81/29, mb3.9/16, MS3.5/2, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	3.64	20	Pg	Pg	05 05 10.9	-5.4
	11nm,0.3s,baz=194,slow=16,SNR=47						
KMBO				Sn	Sn	05 05 54.9	+8.8
	36nm,0.3s,baz=75,slow=21,SNR=5.1						
KMBO				Lg		05 06 04.0	
	62nm,0.3s,baz=247,slow=23,SNR=14						
LSZ	Lusaka	13.12	215	Pn	Pn	05 07 12.3	-0.8
	0.5nm,0.3s,baz=34,slow=10,SNR=14						
LSZ				Sn	Sn	05 09 29.7	-9.4
	0.6nm,0.3s,baz=277,slow=19,SNR=3.2						
LSZ				Lg		05 10 50.1	
	1.4nm,0.3s,baz=109,slow=15,SNR=4.0						
LSZ				LR	LR	05 12 26.0	
	comp=Z,106nm,19.0s,baz=344,slow=38						
OPO	Ambohidratompo	17.72	143	Pn	Pn	05 08 13.5	0.0
	9.4nm,0.3s,baz=271,slow=14,SNR=15						
MSNA	Messina	18.60	198	eP	Pn	05 08 19.5	-4.8
MSNA				AMb	AMB	05 08 39.8	
	comp=Z,10nm,1.8s						
SLR	Silverton	22.31	199	eP	P	05 08 57.1	-7.2
SLR				AMb	AMB	05 09 34.2	
	comp=Z,20nm,1.8s,mb4.2						
LBTB	Lobatse	22.65	205	P	P	05 09 07.7	-0.3
	comp=Z,8.7nm,0.9s,mb4.2,baz=31,slow=12,SNR=12						
LBTB				Lg		05 15 54.9	

comp=Z,7.0nm,0.9s,baz=311,slow=19,SNR=3.5
LBTB Lobatse 22.65 205 P P 05 09 07.7 -0.3
LBTB Lg 05 15 54.9
ERPM east rand prop 22.89 198 *e*P P 05 09 03.6 -6.9
ERPM AMb AMB 05 09 13.0
comp=Z,19nm,1.3s,mb4.4
KSR Koster 22.89 201 *e*P P 05 09 03.7 -6.8
KSR AML AML 05 09 18.2
comp=Z,19nm,1.8s
TSUM Tsumeb 23.11 229 P P 05 09 13.3 +0.4
comp=Z,0.4nm,0.5s,mb3.1,baz=30,slow=14,SNR=3.0
TSUM Lg 05 16 04.1
comp=Z,4.3nm,0.8s,baz=284,slow=17,SNR=2.1
TSUM LR LR 05 18 33.5
comp=Z,98nm,18.5s,MS3.3,baz=336,slow=38
PRYS Parys 23.71 199 *e*P P 05 09 11.0 -7.9
PRYS AMb AMB 05 10 41.3
comp=Z,16nm,1.7s,mb4.2
SEK Senekal 24.93 198 *e*P P 05 09 23.5 -6.5
BOSA Boshof 26.00 202 P P 05 09 41.1 +1.4
comp=Z,3.6nm,0.7s,mb4.0,baz=47,slow=8.5,SNR=8.2
BOSA Boshof 26.00 202 *e*P P 05 09 40.7 +1.0
comp=Z,7.8nm,1.1s,mb4.2
TORD Torodi Ar. Bea 38.33 298 P P 05 11 27.3 -0.5
comp=Z,0.4nm,0.8s,mb3.2,baz=114,slow=6.7,SNR=3.0
TORD LR LR 05 29 29.9
comp=Z,118nm,19.1s,MS3.7,baz=355,slow=40
BRTR Keskin Array B 44.12 357 P P 05 12 16.5 +1.4
comp=Z,0.4nm,0.8s,mb3.2,baz=180,slow=11,SNR=2.8
BRTR Keskin Array B 44.12 357 P P 05 12 16.5 +1.4
AKASG Malin Array Be 55.35 355 P P 05 13 40.0 -0.4
comp=Z,2.0nm,0.7s,mb4.2,baz=175,slow=6.4,SNR=8.2
GERES GERESS Array B 56.63 343 P P 05 13 49.5 -0.2
comp=Z,1.2nm,0.8s,mb4.0,baz=161,slow=5.7,SNR=8.7
ESDC Sonseca Array 57.34 324 P P 05 13 55.7 +0.8
comp=Z,0.9nm,0.7s,mb3.9,baz=131,slow=7.7,SNR=7.1
ESDC Sonseca Array 57.34 324 P P 05 13 55.7 +0.8
MKAR Makanchi Array 65.44 33 P P 05 14 48.8 -0.8
comp=Z,1.4nm,1.0s,mb4.0,baz=216,slow=6.0,SNR=5.9
CMAR Chiang Mai Arr 66.09 68 P P 05 14 54.3 -0.1
comp=Z,0.7nm,0.4s,mb4.0,baz=257,slow=8.3,SNR=5.0
NOA NORSAR Array B 68.19 347 P P 05 15 06.3 -0.5
comp=Z,1.0nm,0.8s,mb3.9,baz=152,slow=6.0,SNR=2.6
NOA NORSAR Array B 68.19 347 P P 05 15 06.3 -0.5
ZALV Zalesovo Beam 71.09 28 P P 05 15 23.5 -1.4
comp=Z,0.4nm,0.4s,mb3.8,baz=232,slow=7.1,SNR=2.4
SONM Songino Array 80.40 40 P P 05 16 19.7 +1.3
comp=Z,1.1nm,0.8s,mb3.9,baz=249,slow=6.0,SNR=7.5

IDC 16 05:05:15.9±1.0**, 1518N×4493W, h0^{km}, mb3.9**/6**, mb1 4.1**/6**, mb1mx3.8**/22**, mbtmp3.9**/6**, MS3.6**/9**, Ms1 3.6**/9**, ms1mx3.4**/27**, Error ellipse: s-maj=33.0km s-min=27.3km az=11.0, Northern Mid-Atlantic Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SDV Santo Domingo 25.89 259 LR LR 05 20 01.4
comp=Z,68nm,19.5s,baz=318,slow=34
BBTS Babate 27.43 87 LR LR 05 18 34.4
comp=Z,167nm,21.8s,baz=265,slow=29
ROSC El Rosal 30.67 254 LR LR 05 23 29.5
comp=Z,58nm,20.5s,baz=93,slow=36
BDFB Brasilia 30.77 186 LR LR 05 22 26.5
comp=Z,69nm,20.3s,baz=173,slow=34
SIV San Ignacio 34.84 208 P P 05 12 09.9 +1.1
0.4nm,0.6s,baz=0.0,slow=12,SNR=3.0
ATAH Atahualpa 39.82 239 LR LR 05 30 13.9
comp=Z,95nm,18.6s,baz=268,slow=38
DBIC Dimbokro 40.19 98 LR LR 05 25 28.5
comp=Z,84nm,20.1s,baz=181,slow=30
NNA Nana 41.56 231 LR LR 05 30 38.2
comp=Z,56nm,21.8s,baz=306,slow=37
CPUP Villa Florida 42.99 196 LR LR 05 33 42.0
comp=Z,93nm,18.3s,baz=147,slow=40
TORD Torodi Ar. Bea 45.19 86 P P 05 13 34.8 -0.2
2.6nm,1.0s,baz=285,slow=6.2,SNR=9.5
TXAR Lajitas Array 55.64 295 LR LR 05 40 29.9
comp=Z,92nm,18.8s,baz=95,slow=38
PDAR Pinedale Array 61.27 311 P P 05 15 33.6 +0.6
0.9nm,1.1s,baz=95,slow=7.9,SNR=4.0
YKA Yellowknife Ar 67.28 332 P P 05 16 11.1 -1.0
0.3nm,0.7s,baz=100,slow=7.3,SNR=4.3
BRTR Keskin Array B 71.75 53 P P 05 16 41.5 +1.3
3.2nm,0.8s,baz=264,slow=4.3,SNR=15
BOSA Boshof 80.57 123 P P 05 17 29.1 -1.5
4.6nm,0.8s,baz=273,slow=10.0,SNR=3.2

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*NIED **16** 05:15:00, 4020N×14470E, h14^{km}, Mw4.3 Best double couple: $M_0$3.29000×10^{15} NP1:ϕ_s348.00000°, δ56.00000°, λ-93.00000°. NP2:ϕ_s174.00000°, δ34.00000°, λ-86.00000°.*
*BJI **16** 05:15:44.9, 4061N×14503E, h46^{km}, mB5.0, mb4.9, Ms4.3, Msz3.9*
*MOS **16** 05:15:44.8±0.8, 4023N×14470E, h31^{km}, mb4.9/44, Error ellipse: s-maj=9.1km s-min=5.0km az=110.9*
*JMA **16** 05:15:45.6±0.3, 40.19N×14466E, h42^{km}, M4.9*
*ISCJB **16** 05:15:45.6±0.1, 4020N±002×14474E±002, h41^{km}, mb4.7/86, MS3.8/9, Error ellipse: s-maj=3.3km s-min=2.1km az=178.8*
*NEIC **16** 05:15:47.3±0.2, 40.13N×14482E, mb4.9/44, MW4.3(NIED), Error ellipse: s-maj=4.8km s-min=3.5km az=153.0*
*IDC **16** 05:15:47.0±0.5, 40.10N×14485E, h42^{km}±3^{km}, mb4.2/23, mb1 4.3/28, mb1mx4.3/32, mbtmp4.2/28, ML4.2/5, MS3.6/7, Ms1 3.6/7, ms1mx3.3/30, Error ellipse: s-maj=12.5km s-min=9.0km az=132.0*
*SZGRF **16** 05:15:51.4, 4040N×14339E, h33^{km}, mb4.6, Off east coast of Honshu, Japan*
ISC 16 05:15:47.5±0.1**, 4022N**±002×**14473E**±002**, h43^{km}, h43^{km}**±2.4^{km}**:pP-P, n443,** σ0^s**89**/459**, mb4.7**/86**, MS3.8**/9**, 88C-102D, Off east coast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ERM Erimo 2.16 327 *d i*P **Pn 05 16 20.1 -0.8**
ERM Erimo 2.16 327 *e*Pn **Pn 05 16 20.4 -0.6**
JEM Erimo 2.16 327 P **Pn 05 16 20.2 -0.7**
JEM *e*S **Sn 05 16 46.1 -0.3**
JTH Tanohata 2.22 264 P **Pn 05 16 20.0 -1.8**
MIYJ Miyakonagasawa 2.33 255 P **Pn 05 16 22.0 -1.3**
MIYJ *e*S **Sn 05 16 48.7 -2.0**
JANG Nango 2.47 275 P **Pn 05 16 24.0 -1.2**
JANG S **Sn 05 16 51.6 -2.5**
JNBK Urakawa-nobuka 2.55 325 P **Pn 05 16 25.9 -0.4**
JNBK *e*S **Sn 05 16 57.1 +1.1**
JCH Churui 2.61 337 P **Pn 05 16 26.0 -1.2**
JCH *e*S **Sn 05 16 56.0 -1.6**
JOM Ohasama 2.75 255 P **Pn 05 16 28.4 -0.7**
JOM *e*S **Sn 05 16 59.5 -1.6**
JAK Akkeshi 2.78 359 P **Pn 05 16 27.4 -2.1**
JAK *e*S **Sn 05 16 59.9 -1.8**
JMK Ichinoseki 2.99 246 P **Pn 05 16 31.1 -1.3**
JMK *e*S **Sn 05 17 04.8 -2.3**
JOT Ohata 3.03 294 P **Pn 05 16 32.5 -0.4**
JOT *e*S **Sn 05 17 06.7 -1.3**
NEM2 Nemuro 2 3.24 13 P **Pn 05 16 32.6 -3.2**
NEM2 *e*S **Sn 05 17 08.6 -4.4**
JKB Kayabe 3.26 302 P **Pn 05 16 35.6 -0.5**
JKB *e*S **Sn 05 17 12.3 -1.3**
JTKR Abashiri--Toko 3.80 351 P **Pn 05 16 42.7 -0.8**
JTKR *e*S **Sn 05 17 26.6 -0.4**
YUK Yuzh-Kuril'sk 3.91 12⇓*i*P **Pn 05 16 42.5 -2.5**
YUK *i* S **Sn 05 17 23.9 -5.6**
YUK pmax pmax
comp=N,280nm,0.5s
YUK pmax pmax
comp=E,180nm,0.5s
YUK pmax pmax
comp=Z,740nm,0.5s
YUK smax
comp=N,2µm,0.7s
YUK smax
comp=E,8µm,0.7s
YUK smax
comp=N,3µm,0.5s
YUK smax
comp=E,3µm,0.5s
JHR Hokuryu 4.18 329 P **Pn 05 16 49.9 +1.2**
JHR *e*S **Sn 05 17 38.4 +2.2**
ASAJ Asahikawa 4.21 339 P **Pn 05 16 48.6 -0.5**
comp=E,15nm,0.3s,baz=190,slow=10,SNR=39
ASAJ S **Sn 05 17 36.0 -0.9**
comp=E,17nm,0.3s,baz=129,slow=7.8,SNR=3.6
ASAJ LR LR 05 18 53.6
comp=E,722nm,21.6s,baz=148,slow=43
ASAJ Asahikawa 4.21 339 P **Pn 05 16 48.6 -0.5**
ASAJ S **Sn 05 17 36.1 -0.9**
ASAJ pmax pmax
comp=Z,15nm,0.3s
ASAJ smax
comp=N,17nm,0.3s
ASAJ MLR MLR
comp=Z,722nm,21.6s
JOSM Okushiri--Mats 4.39 297 P **Pn 05 16 51.0 -0.5**
JOSM *e*S **Sn 05 17 39.6 -1.7**
KUR Kuril'sk 5.52 24 *e*P **Pn 05 16 59.0 -8.1**
KUR pmax pmax
comp=N,240nm,0.4s
KUR pmax pmax
comp=E,230nm,0.4s
KUR pmax pmax
comp=Z,330nm,0.4s
MAJO Matsushiro 6.30 236 *e*P **Pn 05 17 17.3 -0.6**
MAT Matsushiro 6.30 236 P **Pn 05 17 17.1 -0.8**
MAT S **Sn 05 18 27.6 -1.0**
MJAR Matsushiro Arr 6.30 236 P **Pn 05 17 16.9 -0.9**
comp=Z,10.0nm,0.3s,baz=32,slow=12,SNR=151
MJAR S **Sn 05 18 27.6 -0.9**
baz=243,slow=8.0,SNR=2.3
MJAR Matsushiro Arr 6.30 236 P **Pn 05 17 17.0 -0.9**
MJAR S **Sn 05 18 27.6 -0.9**
MJAR pmax pmax
comp=Z,10.0nm,0.3s
YSS Yuzh-Sakhalins 6.89 349 *e*P **Pn 05 17 25.9 +0.1**
YSS *e*S **Sn 05 18 39.9 -2.9**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 6.89 349 *e*Pn **Pn 05 17 26.2 +0.4**
JHJ Hachijo jima 2 8.12 211 P **Pn 05 17 39.4 -3.5**
comp=Z,20nm,0.3s,baz=72,slow=19,SNR=3.5
JHJ S **Sn 05 19 02.2 -11**
comp=Z,39nm,0.3s,baz=32,slow=23,SNR=8.4
HABR Khabarovsk 10.77 323*de*P **Pn 05 18 18.3 -0.7**
HABR 05 20 19.9
HABR pmax pmax
comp=Z,13nm,1.0s
HABR MLR MLR
comp=Z,91nm,7.0s
MDJ Mudanjiang 12.02 296 P **Pn 05 18 36.0 -0.1**
MDJ AP 05 18 40.1
MDJ S **Sn 05 20 51.8 +3.1**
MDJ AMB AMB
comp=Z,21nm,0.9s
MDJ AMB AMB
comp=Z,154nm,5.2s
MDJ LR LR
comp=Z,183nm,18.9s
KLR Kul'dur 12.89 319 *e*P **Pn 05 18 46.2 -1.7**
KSRS Korea Array 13.39 263 P **Pn 05 18 54.2 -0.7**
comp=Z,1.3nm,0.3s,baz=79,slow=13,SNR=12
KSRS LR LR 05 23 57.3
comp=Z,334nm,18.3s,baz=75,slow=36
KSRS Korea Array 13.39 263 P **Pn 05 18 54.2 -0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,334nm,18.3s
CN2 Changchun 14.78 290 *e*P **Pn 05 19 13.6 +0.1**
CN2 *e*S **Sn 05 21 58.3 +2.4**
CN2 *e*SS 05 22 15.3
CN2 LR LR
comp=N,600nm,8.0s
CN2 LR LR
comp=E,400nm,8.0s
CN2 LR LR
comp=Z,380nm,9.0s
PETK Petropavlovsk- 15.63 30 P **Pn 05 19 22.5 -2.1**
comp=Z,0.3nm,0.3s,baz=194,slow=10.0,SNR=7.3
PETK LR LR 05 25 02.5
comp=Z,156nm,18.3s,baz=216,slow=35
JOW Kunigami 19.10 231 P **Pn 05 20 06.0 -1.7**
comp=Z,0.7nm,0.3s,baz=109,slow=18,SNR=3.4
CLNS Chul'man 21.07 329 *e*P **P 05 20 17.4 -10**
CLNS pmax pmax
comp=Z,17nm,1.4s,mb4.2
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,1.0s
BJI Beijing 21.80 279 P **P 05 20 35.5 -0.3**
BJI S **S 05 24 38.0 +3.7**
BJI AMB AMB
comp=Z,14nm,0.7s,mb4.5
BJI AMB AMB
comp=Z,101nm,3.5s
BJI LR LR
comp=N,200nm,10.7s
BJI LR LR
comp=E,229nm,16.9s
BJI LR LR
comp=Z,106nm,17.4s
SEY Seymchan 23.21 9⇑*e*P **P 05 20 51.4 +1.0**
YAK Yakutsk 23.68 342 *e*P **P 05 20 54.1 -0.8**
YAK pmax pmax
comp=Z,26nm,0.9s,mb4.7
YAK Yakutsk 23.68 342 *e*P **P 05 20 54.8 -0.1**
comp=Z,37nm,0.7s,mb4.9
BOD Bodaibo 26.42 322 *e*P **P 05 21 18.6 -1.2**
BOD pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
ULN Ulaanbaatar 27.93 298⇓*e*P **P 05 21 35.1 +1.7**
ULN Ulaanbaatar 27.93 298 *e*P **P 05 21 34.5 +1.0**
comp=Z,5.6nm,0.9s,mb4.2
SONM Songino Array 28.37 298 P **P 05 21 38.7 +1.4**
comp=Z,1.8nm,0.6s,mb3.9,baz=76,slow=8.9,SNR=17
SONM LR LR 05 34 00.6
comp=Z,137nm,18.8s,MS3.6,baz=256,slow=38
SONM Songino Array 28.37 298 P **P 05 21 38.7 +1.3**
SONM pmax pmax
comp=Z,2.0nm,0.6s
SONM MLR MLR
comp=Z,137nm,18.8s
XAN Xi'an 29.07 269 P **P 05 21 47.4 +3.6**
XAN S **S 05 26 36.9 +4.5**
XAN AMB AMB
comp=Z,4.0nm,0.9s,mb4.2
XAN LR LR
comp=N,35nm,27.2s
XAN LR LR
comp=E,89nm,18.2s
XAN LR LR
comp=Z,119nm,18.2s
BILL Bilibino 30.25 16 *e*P **P 05 21 54.0 +0.2**
BILL pmax pmax
comp=Z,11nm,1.1s,mb4.5
BILL Bilibino 30.25 16 *e*P **P 05 21 53.6 -0.3**
comp=Z,9.2nm,0.9s,mb4.5
TLY Talaya 30.39 306 *e*P **P 05 21 54.8 -0.5**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
TLY Talaya 30.39 306 *e*P **P 05 21 54.8 -0.5**
comp=Z,5.7nm,0.9s,mb4.3
MOY Mondy 32.03 306 *e*P **P 05 22 15.2 +5.5**
LZH Lanzhou 32.22 276 *e*P **P 05 22 13.5 +2.0**
LZH *e*PP PP 05 23 20.6 -4.1
LZH *e*S **S 05 27 14.5 -7.1**
LZH *e*SS SS 05 29 18.3 -23
LZH AMB AMB
comp=Z,23nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,82nm,4.6s
LZH LR LR
comp=N,567nm,13.2s
LZH LR LR
comp=Z,852nm,17.3s,MS4.5
GTA Gaotai 34.23 284 ⇑P **P 05 22 31.1 +2.0**
GTA PCP PcP 05 25 06.1 +1.2
GTA S **S 05 27 59.5 +6.7**
GTA AMB AMB
comp=Z,7.0nm,1.1s,mb4.5
GTA AMB AMB
comp=Z,152nm,5.7s
GTA LR LR
comp=N,221nm,19.4s,MS4.1
GTA LR LR
comp=E,267nm,18.2s,MS4.1
GTA LR LR
comp=Z,181nm,17.9s,MS3.9
CD2 Chengdu 34.35 267 P **P 05 22 32.8 +2.7**
CD2 PP PP 05 23 48.4 0.0
CD2 PCP PcP 05 25 08.5 +3.2
CD2 S **S 05 27 59.3 +4.6**
CD2 SS SS 05 30 09.5 -15
CD2 AMB AMB
comp=Z,110nm,0.6s,mb6.0
CD2 AMB AMB
comp=Z,230nm,4.7s
CD2 LR LR
comp=N,270nm,8.9s
CD2 LR LR
comp=Z,270nm,13.1s,MS4.2
HVS Khovu-Aksy 36.60 305⇑*e*P **P 05 22 50.0 +0.8**
HVS pmax pmax
comp=Z,14nm,0.9s,mb4.8
KMI Kunming 38.05 260 P **P 05 23 03.0 +1.2**
KMI AP pP 05 23 10.3 -3.3
KMI S **S 05 28 53.4 +2.0**
KMI AMB AMB
comp=Z,8.0nm,0.8s,mb4.5
KMI AMB AMB
comp=Z,140nm,3.5s
KMI LR LR
comp=N,219nm,11.3s,MS4.3
KMI LR LR
comp=E,241nm,13.8s,MS4.3
KMI LR LR
comp=Z,151nm,13.8s,MS4.0
ZAA0 Zalesovo Array 41.79 310 *e*P **P 05 23 33.3 +0.8**
ZALV Zalesovo Beam 41.79 310 P **P 05 23 33.4 +1.0**
comp=Z,5.2nm,0.8s,mb4.2,baz=84,slow=7.6,SNR=23
ZALV pP pP 05 23 43.6 -0.7
comp=Z,14nm,0.7s,baz=85,slow=7.9,SNR=23
ZALV PcP PcP 05 25 28.6 +0.7
comp=Z,10nm,0.5s,baz=94,slow=3.2,SNR=15
ZALV LR LR 05 40 31.7
comp=Z,94nm,20.9s,MS3.6,baz=10.0,slow=35
ZALV Zalesovo Beam 41.79 310 P **P 05 23 33.4 +0.9**
ZALV *PP pP 05 23 43.7 -0.6
ZALV 05 25 28.6
ZALV pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
ZALV pmax pmax
comp=Z,14nm,0.7s,mb4.7
ZALV pmax pmax
comp=Z,11nm,0.5s,mb4.7
ZALV MLR MLR
comp=Z,94nm,20.9s,MS3.6
ZALV Zalesovo Beam 41.79 310 P **P 05 23 33.4 +1.0**
ZALV pP pP 05 23 43.6 -0.7
ZALV PcP PcP 05 25 28.6 +0.7
ZALV LR LR 05 40 31.8
WMQ Urumqi 41.81 294 P **P 05 23 31.6 -1.2**
WMQ AMB AMB
comp=Z,7.0nm,1.0s,mb4.2
WMQ AMB AMB
comp=Z,216nm,3.0s
WMQ LR LR
comp=N,64nm,19.0s,MS3.8
WMQ LR LR
comp=E,75nm,15.5s,MS3.8
WMQ LR LR
comp=Z,91nm,15.0s,MS3.8
NVS Novosibirsk 42.61 311 *e*P **P 05 23 38.7 -0.5**
NVS pmax pmax
comp=Z,14nm,1.5s,mb4.5
NVS pmax pmax
comp=N,12nm,2.0s
NVS pmax pmax
comp=E,10.0nm,1.5s
KDAK Kodiak Island 43.00 44 P **P 05 23 40.7 -1.6**
comp=E,13nm,0.8s,mb4.7,baz=207,slow=4.5,SNR=4.1
KDAK Kodiak Island 43.00 44 P **P 05 23 40.7 -1.6**
CHTO Chiang Mai 44.61 255 *e*P **P 05 23 56.6 +0.9**
CHTO pmax pmax
comp=Z,37nm,2.1s,mb4.8
CHTO Chiang Mai 44.61 255 *e*P **P 05 23 56.6 +0.9**
comp=Z,38nm,2.1s,mb4.8
MK31 Makanchi Array 44.71 300 *i* P **P 05 23 56.7 +0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
MK31 Makanchi Array 44.71 300 *e*P **P 05 23 56.6 +0.4**
MKAR Makanchi Array 44.71 300 P **P 05 23 56.7 +0.6**
comp=Z,2.1nm,0.7s,mb4.1,baz=82,slow=9.7,SNR=24
MKAR pP pP 05 24 07.3 -0.8
comp=Z,3.7nm,0.7s,baz=81,slow=10.0,SNR=14
MKAR LR LR 05 44 00.3
comp=Z,66nm,21.7s,MS3.5,baz=146,slow=38
MKAR Makanchi Array 44.71 300 P **P 05 23 56.7 +0.5**
MKAR *PP pP 05 24 07.3 -0.8
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR MLR MLR
comp=Z,66nm,21.7s
MKAR Makanchi Array 44.71 300 P **P 05 23 56.7 +0.6**
MKAR pP pP 05 24 07.3 -0.8
MKAR LR LR 05 44 00.3
CMAR Chiang Mai Arr 44.83 255 P **P 05 23 58.9 +1.4**
comp=Z,0.6nm,0.3s,mb3.9,baz=57,slow=7.2,SNR=5.3
CMAR pP pP 05 24 11.1 +1.6
comp=Z,2.0nm,0.6s,baz=44,slow=7.2,SNR=3.6
CMAR PcP PcP 05 25 39.5 +0.7
comp=Z,0.6nm,0.3s,baz=51,slow=2.9,SNR=4.6
CMAR LR LR 05 42 55.8
comp=Z,33nm,18.0s,MS3.3,baz=35,slow=36
CMAR Chiang Mai Arr 44.83 255 P **P 05 23 58.9 +1.5**
CMAR *PP pP 05 24 11.1 +1.7
CMAR 05 25 39.5
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,33nm,18.0s
KURK Kurchatov 46.09 306 *e*P **P 05 24 07.5 +0.5**
KURK pmax pmax
comp=Z,23nm,0.8s,mb5.2
KURK Kurchatov 46.09 306 *e*P **P 05 24 07.5 +0.5**
comp=Z,23nm,0.8s,mb5.2
TAPN Taplejung 48.35 273 *e*P **P 05 24 26.3 +1.4**
JIRN Jiri 49.35 274 *e*P **P 05 24 34.3 +1.7**
comp=Z,11nm,0.5s,mb5.1
RAMN Ramite 49.40 273 *e*P **P 05 24 34.5 +1.5**
comp=Z,33nm,0.8s,mb5.4
GUN Gumba 49.46 275 *e*P **P 05 24 34.6 +1.1**
comp=Z,41nm,0.5s,mb5.7
KKN Kakani 49.98 275 *e*P **P 05 24 38.4 +1.0**
comp=Z,25nm,0.6s,mb5.4
KKN Kakani 49.98 275 *e*P **P 05 24 38.4 +1.0**
KKN pmax pmax
comp=Z,25nm,0.6s,mb5.4
PKI Pulchoki 49.99 275 *e*P **P 05 24 38.7 +1.2**
PKIN Phulchoki 50.00 275 *e*P **P 05 24 38.2 +0.7**
VOSK Vostochnaya 50.15 310 P **P 05 24 39.1 +0.8**
VOSK pmax pmax
comp=Z,11nm,0.8s,mb4.9
DMN Daman 50.20 275 *e*P **P 05 24 40.6 +1.5**
comp=Z,20nm,0.8s,mb5.2
GKN Gorkha 50.36 276 *e*P **P 05 24 41.0 +0.7**
INK Inuvik 50.37 29 *e*P **P 05 24 40.3 +0.6**
BVA0 Borovoye Array 50.41 311 *i* P **P 05 24 40.4 +0.1**
BVA0 pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
TKM2 Tokmak 2 50.45 297 *e*P **P 05 24 41.9 +1.1**
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TKM2 Tokmak 2 50.45 297 *e*P **P 05 24 41.9 +1.1**
comp=Z,8.5nm,0.8s,mb4.8
BRVK Borovoye 50.46 311 *e*P **P 05 24 41.5 +0.9**
BRVK *e**PP pP 05 24 47.5 -5.3
BRVK pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BRVK Borovoye 50.46 311 *e*P **P 05 24 41.5 +0.9**
comp=Z,8.6nm,0.6s,mb5.0
BRVK *e*pP pP 05 24 47.5 -5.3
DANN Dangsing 50.85 276 *e*P **P 05 24 45.3 +1.3**
comp=Z,66nm,0.6s,mb5.8
KOLN Koldanda 51.27 276 *e*P **P 05 24 48.1 +1.0**
comp=Z,36nm,1.1s,mb5.2
EKS2 Erkin-Say 51.79 297 *e*P **P 05 24 51.8 +1.0**

comp=Z,3.5nm,0.6s,mb4.5
AML Almayashu 52.05 297 *e*P P 05 24 54.0 +1.2
comp=Z,8.5nm,1.0s,mb4.6
KK31 Karatay Array 53.82 299 *i* P P 05 25 05.6 -0.2
KAKA Kakadu 53.88 195 *e*P x 05 24 44.4
comp=Z,14nm,0.7s
SVE Sverdlovsk 54.51 318 *e*P P 05 25 10.2 -0.4
SVE pmax pmax
comp=Z,15nm,1.0s,mb5.0
DLBC Dease Lake 54.52 40 P P 05 25 10.4 -0.2
comp=Z,2.1nm,1.0s,mb4.1,baz=229,slow=9.3,SNR=2.8
ARU Arti 55.73 318 *d i*P P 05 25 20.0 +0.6
ARU *e* 05 27 20.8
ARU *e*S S 05 33 07.4 +4.8
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.8
ARU Arti 55.73 318 *e*P P 05 25 20.0 +0.7
comp=Z,7.0nm,0.9s,mb4.7
ARU *e*pP pP 05 25 25.3 -6.3
AB31 Akbulak array 57.90 310 P P 05 25 35.1 +0.2
AB31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
AKTO Aktyubinsk 58.50 312 *i* P P 05 25 39.0 -0.1
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
KBL Kabul 58.72 291 *e*P P 05 25 41.2 +0.3
RES Resolute Bay 58.86 16 P P 05 25 41.3 +0.1
comp=Z,5.6nm,0.6s,mb4.8,baz=316,slow=6.6,SNR=21
RES pP pP 05 25 53.0 -0.6
comp=Z,4.4nm,0.5s,baz=306,slow=5.9,SNR=7.7
RES Resolute Bay 58.86 16 P P 05 25 41.3 +0.1
RES *PP pP 05 25 53.0 -0.6
RES pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
RES pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
RES Resolute Bay 58.86 16 *e*P P 05 25 41.1 -0.1
comp=Z,7.3nm,0.6s,mb4.9
YKA Yellowknife Ar 59.75 32 P P 05 25 46.9 -0.5
comp=Z,1.0nm,0.8s,mb3.9,baz=299,slow=6.6,SNR=17
YKA pP pP 05 25 59.4 -0.4
comp=Z,0.9nm,0.8s,baz=302,slow=6.7,SNR=6.7
YKA Yellowknife Ar 59.75 32 P P 05 25 46.9 -0.6
YKA *PP pP 05 25 59.4 -0.5
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 59.75 32 P P 05 25 46.9 -0.5
YKA pP pP 05 25 59.4 -0.4
CTA Charters Tower 60.01 178 P P 05 25 46.8 -2.9
comp=Z,3.1nm,1.0s,mb4.3,baz=343,slow=11,SNR=2.6
CTA Charters Tower 60.01 178 P P 05 25 46.8 -2.9
CTA pmax pmax
comp=Z,3.0nm,1.0s
WRAB Tennant Creek 60.61 191 *e*P P 05 25 51.7 -2.1
WRAB Tennant Creek 60.61 191 *e*P P 05 25 52.0 -1.8
comp=Z,12nm,0.8s,mb5.1
WB2 Warramunga Arr 60.62 191 *e*P P 05 25 52.1 -1.8
WRA Warramunga Arr 60.62 191 P P 05 25 52.0 -1.9
comp=Z,9.2nm,0.8s,mb5.0,baz=14,slow=6.9,SNR=65
WRA Warramunga Arr 60.62 191 P P 05 25 52.0 -1.9
WRA pmax pmax
comp=Z,9.0nm,0.8s
KEV Kevo 61.39 339 *e*p P 05 25 58.3 -0.3
ARCES ARCESS Array B 61.93 340 P P 05 26 02.9 +0.7
comp=Z,4.5nm,1.0s,mb4.6,baz=39,slow=7.8,SNR=4.8
ARCES ARCESS Array B 61.93 340 P P 05 26 02.9 +0.7
ARCES pmax pmax
comp=Z,5.0nm,1.0s
ARCES ARCESS Array B 61.93 340 P P 05 26 02.9 +0.7
KLMR Klimovskoe 62.46 328 *e*P P 05 26 05.5 -0.4
KLMR pmax pmax
comp=Z,16nm,1.3s,mb5.0
ASAR Alice Springs 64.35 191 P P 05 26 17.6 -1.1
comp=Z,4.5nm,0.7s,mb4.6,baz=10,slow=5.9,SNR=50
ASAR Alice Springs 64.35 191 P P 05 26 17.7 -1.0
ASAR pmax pmax
comp=Z,5.0nm,0.7s
JOF Joensuu 64.38 332 *e*p P 05 26 18.1 -0.4
comp=Z,8.3nm,0.5s,mb5.0
JOF Joensuu 64.38 332 *e*P P 05 26 18.1 -0.4
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
A09A Danville 64.84 46 P P 05 26 20.3 -1.5
baz=65
YBH Yreka Blue Hor 66.36 55 P P 05 26 32.3 +0.5
comp=Z,2.6nm,0.8s,mb4.3,baz=347,slow=4.0,SNR=4.5
YBH Yreka Blue Hor 66.36 55 P P 05 26 32.3 +0.6
YBH pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 66.66 333 *e*p P 05 26 32.4 -0.9
comp=Z,5.8nm,0.5s,mb4.9,baz=46,slow=6.1
KAF Kangasniemi 66.66 333 *e*P P 05 26 32.4 -0.9
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
C11A Tepee Creek (N 66.77 46 P P 05 26 34.2 0.0
baz=66
K05A Summer Lake 66.94 53 P P 05 26 33.9 -1.4
baz=67
E10A Myers Farm, Un 67.06 48 P P 05 26 35.7 -0.3
baz=67
OBN Obninsk 67.09 324 *e*P P 05 26 36.4 +0.2
OBN pmax pmax
comp=Z,13nm,1.3s,mb4.8
B13A Whitefish 67.44 45 P P 05 26 37.2 -1.3
baz=67
F11A Grangeville 67.94 48 P P 05 26 40.9 -0.8
baz=68
K07A Rock Creek Ran 67.96 52 P P 05 26 41.2 -0.7
baz=68
E12A Beaver Dam Sad 67.97 47 P P 05 26 41.1 -0.7
baz=68
B14A Marquette Ranc 68.09 45 P P 05 26 42.3 -0.3
baz=68
G11A Walters Elk Ra 68.16 49 P P 05 26 42.8 -0.3
baz=68,SNR=6.7
D13A Huson 68.19 46 P P 05 26 42.8 -0.4
baz=68
L07A Adell 68.29 53 P P 05 26 43.5 -0.4
baz=68
H10A Noah's Angus R 68.35 49 P P 05 26 43.9 -0.4
baz=68
K08A Mann Creek Ran 68.40 52 P P 05 26 44.0 -0.5
baz=68
B15A Bradely Ranch, 68.50 44 P P 05 26 45.3 +0.1
baz=68
N06A Buffalo Meadow 68.71 54 P P 05 26 46.1 -0.4
baz=68
H11A Donnelly 68.71 49 P P 05 26 46.1 -0.5
baz=68
D14A Greenough 68.73 46 P P 05 26 45.7 -0.8
baz=68
M07A Soldier Meadow 68.75 53 P P 05 26 46.5 -0.4
baz=68
C15A Salmond Ranch, 68.80 45 P P 05 26 46.9 -0.2
baz=69
BEKR Beckwourth 68.89 55 P P 05 26 47.3 -0.4
baz=69
B16A M & M Farms, S 68.90 44 P P 05 26 47.2 -0.4
baz=69
F13A Darby 69.03 47 P P 05 26 48.1 -0.4
baz=69
O06A Flanigan 69.05 55 P P 05 26 47.9 -0.8
baz=69
M08A Happy Creek Ra 69.20 53 P P 05 26 50.0 +0.4
baz=69
C16A Fuhringer Ranc 69.25 45 P P 05 26 50.1 +0.3
baz=69,SNR=5.0
B17A L&G Farms, Che 69.46 44 P P 05 26 50.9 -0.2
baz=69
G13A Cobalt 69.50 48 P P 05 26 50.1 -1.3
baz=69,SNR=5.5
PAHR Pah Rah Range 69.59 55 *e*P P 05 26 52.3 +0.3
comp=Z,5.7nm,1.0s,mb4.5
E15A Deer Lodge 69.60 46 P P 05 26 51.7 -0.2
baz=69
I12A Atlanta 69.76 49 P P 05 26 52.6 -0.5
baz=70
H13A Challis 69.81 48 P P 05 26 52.0 -1.3
baz=70,SNR=5.7
CMB Columbia Colle 69.93 57 *e*P P 05 26 54.7 +0.5
O08A Rochester Mine 70.02 54 P P 05 26 53.6 -1.1
baz=70
F15A Butte 70.03 46 P P 05 26 54.2 -0.5
baz=70,SNR=5.9
E16A East Helena 70.06 46 P P 05 26 54.2 -0.6
baz=70,SNR=6.1
LRM Limekiln Ridge 70.07 46 *e*P P 05 26 55.5 +0.7
J12A Stokes Ranch, 70.11 50 P P 05 26 54.3 -0.8
baz=70
EGMT Eagleton 70.17 43 P P 05 26 54.4 -1.1
baz=70
R06C Coleville 70.24 56 P P 05 26 55.6 -0.5
baz=70
L11A Cat Creek Ranc 70.36 51 P P 05 26 56.1 -0.6
baz=70
G15A Dillon 70.44 47 P P 05 26 57.1 -0.1
baz=70,SNR=7.1
F16A Kennard Place, 70.55 46 P P 05 26 57.0 -0.8
baz=70
E17A Martinsdale 70.55 45 P P 05 26 57.5 -0.3
baz=70,SNR=6.3
J13A Cove Ranch, Pi 70.56 49 P P 05 26 55.9 -1.9
baz=70
I14A Mackay 70.65 49 P P 05 26 58.1 -0.3
baz=70,SNR=8.7
KIV Kislovodsk 70.77 312 *e*P P 05 27 01.2 +2.0
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.1
KIV Kislovodsk 70.77 312 *e*P P 05 27 01.0 +1.8
L12A House Creek Ra 70.82 51 P P 05 26 58.4 -1.1
baz=71
J14A Carey 70.98 49 P P 05 27 01.4 +0.9
baz=71,SNR=8.0
Q08A Gabbs 71.00 55 P P 05 26 59.3 -1.4
baz=71
F17A Fitzpatrick Pl 71.00 46 P P 05 27 00.9 +0.3
baz=71,SNR=5.2
NVAR Mina Array Bea 71.02 56 P P 05 27 01.5 +0.7
comp=Z,4.6nm,0.8s,mb4.5,baz=288,slow=6.3,SNR=32
NVAR Mina Array Bea 71.02 56 P P 05 27 01.5 +0.7
ONI Oni 71.16 310 P P 05 27 03.2 +1.6
M12A Wells 71.32 51 P P 05 27 03.2 +0.7
baz=71,SNR=7.0
H16A Russell Place, 71.42 47 P P 05 27 03.6 +0.5
baz=71
L13A Double Diamond 71.48 50 P P 05 27 04.6 +1.1
baz=71
F18A Big Timber 71.52 45 P P 05 27 03.9 +0.2
baz=71
J15A Blackfoot 71.56 49 P P 05 27 04.9 +0.9
baz=71
O11A Cowboy Ranch, 71.65 53 P P 05 27 05.5 +1.0
baz=71
K14A Jones Ranch, D 71.66 50 P P 05 27 05.2 +0.6
baz=71
STKA Stephens Creek 71.79 183 *e*P P 05 27 04.3 -0.9
comp=Z,2.9nm,1.0s,mb4.2
STKA Stephens Creek 71.79 183 P P 05 27 04.4 -0.9
comp=Z,1.5nm,0.7s,mb4.0,baz=9.6,slow=9.5,SNR=4.3
M13A Montello 71.80 51 P P 05 27 05.8 +0.4
baz=72,SNR=7.9
I16A Newdale 71.80 48 P P 05 27 06.5 +1.1
baz=72,SNR=6.8
R09A Tonopah 71.91 55 P P 05 27 06.5 +0.3
baz=72
TPH Tonopah 71.92 55 *e*P P 05 27 06.5 +0.3
TPH pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TPH Tonopah 71.92 55 *e*P P 05 27 06.5 +0.3
comp=Z,7.8nm,0.8s,mb4.7
Q10A Clear Creek Ra 71.98 54 P P 05 27 06.6 0.0
baz=72
VES Vestal, Richgr 72.07 58 P P 05 27 06.7 -0.5
baz=72
IMW Indian Meadow 72.10 47 *e*P P 05 27 08.8 +1.6
comp=Z,6.4nm,0.9s,mb4.5
J16A Bone 72.11 48 P P 05 27 08.3 +1.0
baz=72,SNR=6.1
O12A Currie 72.12 52 P P 05 27 08.2 +0.8
baz=72,SNR=6.5
S09A Goldfield 72.13 56 P P 05 27 07.7 +0.2
baz=72
M14A Sheep Mountain 72.20 51 P P 05 27 08.4 +0.6
baz=72
NB2 NORSAR Subarra 72.23 338 P P 05 27 07.8 +0.1
comp=Z,12nm,0.9s,mb4.8,baz=35,slow=6.2
NOA NORSAR Array B 72.23 338 P P 05 27 07.8 +0.1
comp=Z,5.4nm,0.7s,mb4.6,baz=37,slow=6.0,SNR=19
NOA pP pP 05 27 21.0 +0.7
comp=Z,5.1nm,0.8s,baz=36,slow=6.0,SNR=7.7
NOA NORSAR Array B 72.23 338 P P 05 27 07.8 +0.1
NOA *PP pP 05 27 21.0 +0.7
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA NORSAR Array B 72.23 338 P P 05 27 07.8 +0.1
NOA pP pP 05 27 21.0 +0.7
I17A Pilgram Creek 72.29 47 P P 05 27 09.4 +1.0
baz=72,SNR=9.0
MOOW Moose Ponds 72.30 47 *e*P P 05 27 09.0 +0.6
TPAW Teton Pass 72.35 48 *e*P P 05 27 10.2 +1.6
comp=Z,15nm,1.4s,mb4.7
HVU Hansel Valley 72.36 50 *e*P P 05 27 09.9 +1.1
HVU pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
HVU Hansel Valley 72.36 50 *e*P P 05 27 09.8 +1.0
comp=Z,6.1nm,0.9s,mb4.5
R10A Warm Springs 72.37 55 P P 05 27 09.3 +0.4
baz=72
K16A Soda Springs 72.40 49 P P 05 27 10.1 +1.1
baz=72,SNR=8.5
S10A Tonopah Range, 72.41 55 P P 05 27 09.2 0.0
baz=72
Q11A Duckwater 72.43 54 P P 05 27 09.5 +0.3
baz=72
L15A Malad City 72.45 50 P P 05 27 10.0 +0.6
baz=72
GRAC Grapevine Rang 72.47 56 P P 05 27 10.0 +0.5
baz=72
REDW Red Top Meadow 72.48 48 *e*P P 05 27 09.9 +0.4
comp=Z,21nm,1.7s,mb4.8
P12A McGill 72.50 53 P P 05 27 10.0 +0.3
baz=72
ARVC Arvin 72.66 59 P P 05 27 10.2 -0.5
baz=72
N14A Grayback Hills 72.69 51 P P 05 27 10.9 +0.1
baz=72,SNR=7.2
M15A Larsen Ranch, 72.75 50 P P 05 27 11.6 +0.5
baz=72,SNR=11
R11A Troy Canyon, C 72.78 54 P P 05 27 11.8 +0.5
baz=72,SNR=9.3
Q12A Willow Creek R 72.82 53 P P 05 27 12.3 +0.7
baz=73
MPMC Manual Prospec 72.97 57 P P 05 27 12.8 +0.3
baz=73
OSI Osito Adit 73.04 59 P P 05 27 12.7 -0.2
baz=73
J18A Kendall Valley 73.05 48 P P 05 27 13.2 +0.3
baz=73
P13A Bates Ranch, G 73.06 53 P P 05 27 13.6 +0.6
baz=73
FURC Furnace Creek, 73.12 56 P P 05 27 14.0 +0.6
baz=73
ANN Anapa 73.17 315 *e*P P 05 27 31.1 +18
ANN pmax pmax
comp=Z,42nm,1.3s,mb5.2
LRMC Laurel Mountai 73.19 58 P P 05 27 12.6 -1.2
baz=73
TPNV Topopah Spring 73.22 56 P P 05 27 13.7 -0.3
baz=73
TPNV Topopah Spring 73.22 56 *e*P P 05 27 14.4 +0.4
L17A Cokeville 73.27 49 P P 05 27 14.5 +0.4
baz=73,SNR=6.2
M16A Huntsville 73.32 50 P P 05 27 14.2 -0.3
baz=73,SNR=5.3
DUG Dugway 73.33 51 P P 05 27 15.2 +0.6
baz=73
DUG Dugway 73.33 51 *e*P P 05 27 14.9 +0.4
AKASG Malin Array Be 73.34 323 P P 05 27 14.6 +0.1
comp=Z,3.1nm,0.5s,mb4.5,baz=45,slow=5.9,SNR=19
AKASG pP pP 05 27 27.9 +0.7
comp=Z,4.1nm,0.6s,baz=43,slow=6.0,SNR=9.1
AKASG Malin Array Be 73.34 323 P P 05 27 14.6 +0.1
AKASG *PP pP 05 27 27.9 +0.7
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
EDW2 Edwards Air Fo 73.36 58 P P 05 27 14.2 -0.6
baz=73
Q13A Wheeler Ranch, 73.37 53 P P 05 27 14.7 -0.1
baz=73,SNR=5.1
R12A Pony Springs, 73.39 54 P P 05 27 14.7 -0.3
baz=73
K18A Toltan Ranch, 73.40 48 P P 05 27 14.7 -0.2
baz=73
U10A Ash Meadows, A 73.49 56 P P 05 27 14.3 -1.2
baz=73
P14A Drum Mountains 73.55 52 P P 05 27 15.8 -0.1
baz=73
BW06 Boulder Array 73.59 48 P P 05 27 16.3 +0.2
baz=73
BW06 Boulder Array 73.59 48 *e*P P 05 27 16.2 +0.1
PDAR Pinedale Array 73.59 48 P P 05 27 16.1 0.0
comp=Z,3.8nm,0.7s,mb4.4,baz=267,slow=1.8,SNR=30
T11A Corn Creek, Al 73.69 55 P P 05 27 16.9 +0.1
baz=74,SNR=7.2
S12A Delamar Landin 73.69 54 P P 05 27 16.7 0.0
baz=74
N16A Rees Ranch, Co 73.71 50 P P 05 27 17.0 +0.2
baz=74
M17A Scullys Gap (B 73.78 49 P P 05 27 17.5 +0.2
baz=74
Q14A Sevier Lake (B 73.80 53 P P 05 27 17.9 +0.5
baz=74,SNR=7.5
L18A Fontenelle, Gr 73.86 49 P P 05 27 17.4 -0.3
baz=74
GSC Goldstone 73.87 57 P P 05 27 17.4 -0.5
baz=74
NLU North Lily Min 73.92 51 *e*P P 05 27 18.7 +0.6
K19A Absolon Red Bu 73.96 47 P P 05 27 16.7 -1.5
baz=74
N17A Moffit Pass 74.03 50 P P 05 27 18.9 +0.3
baz=74,SNR=9.6
P15A Leamington 74.04 52 P P 05 27 18.6 -0.1
baz=74
O16A Springville 74.10 51 P P 05 27 19.0 -0.1
baz=74
MPU Maple Canyon 74.14 51 *e*P P 05 27 19.9 +0.5
comp=Z,8.8nm,0.9s,mb4.7
SHPR Sheep Range 74.18 56 *e*P P 05 27 20.6 +0.9
S13A Holt Ranch, En 74.32 54 P P 05 27 21.0 +0.5
baz=74
K20A Yellowstone Ra 74.35 47 P P 05 27 19.8 -0.7
baz=74
TUQ Turquoise Moun 74.35 57 P P 05 27 20.3 -0.4
baz=74
V11A Goodsprings 74.42 56 P P 05 27 20.7 -0.3
baz=74
HEC Hector,Ludlow 74.47 58 P P 05 27 21.0 -0.3
baz=74
O17A Robinson Place 74.56 50 P P 05 27 22.4 +0.7
baz=74,SNR=5.2
T13A Saint George 74.64 54 P P 05 27 23.2 +0.9
baz=74
L20A Wamsutter 74.77 48 P P 05 27 23.5 +0.5
baz=74
V12A Nelson 74.86 56 P P 05 27 24.3 +0.7
baz=75
R15A Junction 74.90 53 P P 05 27 25.1 +1.3
baz=75
GMRC Granite Mounta 74.93 57 P P 05 27 24.2 +0.1
baz=75
O18A Roosevelt 74.94 50 P P 05 27 25.2 +1.2
baz=75,SNR=5.2
U13A Pakoon Wash 74.99 55 P P 05 27 24.2 -0.1
baz=75,SNR=10.0
P17A Butcher Ranch, 75.02 51 P P 05 27 24.7 +0.2
baz=75
N19A John Jarvie Ra 75.02 49 P P 05 27 24.2 -0.2
baz=75
Q16A Castle Valley 75.11 52 P P 05 27 25.2 +0.2
baz=75
T14A Hurricane 75.13 54 P P 05 27 25.9 +0.8
baz=75,SNR=5.2
109C Camp Elliot, M 75.16 59 P P 05 27 25.4 0.0
baz=75
BELC Belle Mtn. 75.20 58 P P 05 27 25.1 -0.5
baz=75
M20A Sweetwater, Wa 75.20 48 P P 05 27 25.3 -0.1
baz=75
P18A Preston Nutter 75.21 50 P P 05 27 25.6 +0.1
baz=75,SNR=5.2
V13A Grand Canyon W 75.33 55 P P 05 27 26.6 +0.3
baz=75,SNR=7.4
R16A Teasdale 75.33 52 P P 05 27 27.3 +1.0
baz=75,SNR=8.0
L21A Rawlins 75.35 47 P P 05 27 25.8 -0.5
baz=75
SRU San Rafael 75.38 51 P P 05 27 26.5 -0.1
baz=75
SRU San Rafael 75.38 51 *e*P P 05 27 27.2 +0.7
ULM Lac du Bonnet 75.42 35 P P 05 27 25.9 -0.6
comp=Z,2.4nm,0.8s,mb4.2,baz=316,slow=5.3,SNR=3.7
ULM Lac du Bonnet 75.42 35 P P 05 27 25.9 -0.6
U14A Mt Trumbull 75.47 55 P P 05 27 26.9 -0.2
baz=75,SNR=7.4
N20A Spence Gulch, 75.58 49 P P 05 27 27.0 -0.6
baz=75,SNR=5.3
T15A Red Dirt Ranch 75.59 54 P P 05 27 27.9 +0.1
baz=75
S16A Weppner Ranch, 75.62 53 P P 05 27 28.4 +0.5
baz=75,SNR=5.4
IRM Iron Mountain 75.65 57 P P 05 27 28.5 +0.3
baz=75
R17A Hanksville Air 75.71 52 P P 05 27 28.8 +0.4
baz=76,SNR=6.0
BC3 Big Chuckw Mtn 75.77 58 P P 05 27 28.3 -0.5
baz=76
L22A Ellis Ranch, M 75.83 47 P P 05 27 28.8 -0.3
baz=76
W13A Hualapai Mount 75.86 56 P P 05 27 29.7 +0.4
baz=76
P19A Cripple Cowboy 75.95 50 P P 05 27 28.5 -1.3
baz=76
V14A Boquillas Ranc 76.02 55 P P 05 27 29.1 -1.1
baz=76,SNR=9.3
U15A North Rim 76.02 54 P P 05 27 30.0 -0.2
baz=76,SNR=8.8
O20A White River Ci 76.05 49 P P 05 27 29.4 -0.9
baz=76
N21A Black Mountain 76.06 48 P P 05 27 29.9 -0.5
baz=76
S17A Black Ridge (B 76.16 52 P P 05 27 30.4 -0.6
baz=76,SNR=7.9
X13A Yucca 76.22 56 P P 05 27 31.0 -0.4
baz=76
R18A Canyonlands Na 76.22 51 P P 05 27 30.9 -0.4
baz=76
Q19A Hogan Spring (76.23 51 P P 05 27 31.0 -0.4
baz=76,SNR=9.1
W14A Seligman 76.30 55 P P 05 27 31.7 -0.1
baz=76,SNR=5.2
Y12C Blythe 76.31 57 P P 05 27 31.6 -0.4
baz=76
V15A Kaibab Nationa 76.48 55 P P 05 27 32.6 -0.2
baz=76,SNR=5.4
S18A Hurst Farm, Bl 76.61 52 P P 05 27 32.7 -0.8
baz=76
Q20A Ridgley Place, 76.80 50 P P 05 27 34.3 -0.3
baz=77
X14A Yava 76.90 56 P P 05 27 36.1 +0.9
baz=77
U16A Tuba City 76.92 54 P P 05 27 34.9 -0.5
baz=77,SNR=12
KWP Kalwaria 77.02 326 *i*P P 05 27 36.1 +0.4
KWP Kalwaria 77.02 326 P P 05 27 36.1 +0.4
T18A Mexican Hat 77.05 52 P P 05 27 35.1 -0.9
baz=77,SNR=5.6
S19A Harvey Farm, M 77.09 51 P P 05 27 36.1 -0.2
baz=77,SNR=7.6
NWAO Narrogin (SRO) 77.09 203 P P 05 27 36.6 +0.6
comp=Z,14nm,1.1s,mb4.8,baz=27,slow=4.5,SNR=2.8
NWAO Narrogin (SRO) 77.09 203 *e*P P 05 27 37.1 +1.1
NWAO pmax pmax
comp=Z,109nm,2.0s
NWAO Narrogin (SRO) 77.09 203 *e*P P 05 27 37.1 +1.0
comp=Z,109nm,2.0s,mb5.4
Y14A Wickenburg 77.16 56 P P 05 27 36.0 -0.7
baz=77,SNR=6.2
WUAZ Wupatki 77.18 54 P P 05 27 36.5 -0.3
baz=77
WUAZ Wupatki 77.18 54 *e*P P 05 27 37.8 +1.0
X15A Humboldt 77.30 56 P P 05 27 37.4 -0.1
baz=77,SNR=6.6
BUR08 Bucovina Ar. S 77.38 323 *e*P P 05 27 38.6 +1.0
BURAR Bucovina Array 77.39 323 *i*P P 05 27 38.8 +1.1
BURAR Bucovina Array 77.39 323 P P 05 27 38.8 +1.0
U18A Rough Rock, Ch 77.52 53 P P 05 27 38.8 +0.1
baz=77

Y15A Casa Rosa Ranc 77.58 56 ⇓P **P 05 27 39.0 0.0**
baz=77,SNR=6.9
OJC Ojcow 77.81 327 *e*P **P 05 27 41.1 +1.1**
STHS Stebnicka Huta 77.81 326 *e*P **P 05 27 38.9 -1.2**
STHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
STHS Stebnicka Huta 77.81 326 *e*P **P 05 27 38.9 -1.2**
STHS Stebnicka Huta 77.81 326 *e*P **P 05 27 38.9 -1.2**
comp=Z,4.3nm,1.2s,mb4.2
MVCO Mesa Verde 77.83 51 ⇑P **P 05 27 40.0 -0.3**
baz=78
X16A Lo Mia Camp, P 77.84 55 ⇑P **P 05 27 40.9 +0.4**
baz=78,SNR=5.9
V18A Ganado 77.94 53 ⇓P **P 05 27 41.8 +0.8**
baz=78,SNR=6.1
NIE Niedzica 78.21 327 *e*P **P 05 27 43.9 +1.6**
TRPA Tarpa 78.22 325⇓*i*P **P 05 27 43.4 +1.0**
X17A Forest Lakes 78.30 55 ⇓P **P 05 27 43.8 +0.8**
baz=78
Z16A Peralta Trail, 78.55 56 ⇓P **P 05 27 45.1 +0.6**
baz=78
BR131 Keskin Array S 78.65 313 *e*P **P 05 27 45.7 +0.8**
comp=Z,1.6nm,0.7s,mb4.1
BR131 *e*pP pP 05 27 51.1 -6.6
BRTR Keskin Array B 78.65 313 P **P 05 27 45.9 +1.0**
comp=Z,1.1nm,0.6s,mb4.0,baz=76,slow=4.1,SNR=7.6
BRTR pP pP 05 27 58.8 +1.1
comp=Z,1.5nm,0.9s,baz=134,slow=7.2,SNR=5.6
BRTR Keskin Array B 78.65 313 P **P 05 27 45.9 +1.0**
BRTR *PP pP 05 27 58.8 +1.1
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR pmax pmax
comp=Z,2.0nm,0.9s
W19A Sanders 78.67 54 ⇓P **P 05 27 44.8 -0.3**
baz=78
UPC Upice 79.10 330 *e*P **P 05 27 48.1 +0.9**
UPC *e*PCP PcP 05 27 52.9 -2.6
UPC *e*pP pP 05 28 01.3 +1.3
DPC Dobruska-Polom 79.11 329 *e*P **P 05 27 48.4 +1.2**
DPC *e*PCP PcP 05 27 53.4 -2.1
DPC *e*pP pP 05 28 01.5 +1.5
Y18A Canyon Day Jun 79.15 55 ⇓P **P 05 27 46.4 -1.3**
baz=79,SNR=7.1
X19A St. Johns 79.18 54 ⇓P **P 05 27 46.6 -1.4**
baz=79,SNR=11
PSZ Piszkesteto 79.54 326⇓*i*P **P 05 27 51.0 +1.4**
PSZ Piszkesteto 79.54 326 ⇓P **P 05 27 51.0 +1.4**
VYHS Vyhne 79.54 327 *e*P **P 05 27 50.6 +1.0**
VYHS *e*PP PP 05 30 30.6 -19
CLL Collm 79.59 332 *i* P **P 05 27 50.1 +0.3**
CLL *i* 05 27 55.0
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 79.59 332 *i* P **P 05 27 50.1 +0.3**
comp=Z,8.0nm,0.8s,mb4.7
CLL *i* x x 05 27 52.7
CLL *i* x x 05 27 55.0
CLL *i* PcP PcP 05 27 58.1 +0.5
CLL ⇑*i*pP pP 05 28 03.1 +0.5
comp=Z,7.0nm,0.8s
CLL *i* pPcP 05 28 11.7
CLL Collm 79.59 332 *i* P **P 05 27 50.1 +0.3**
comp=Z,8.0nm,0.8s,mb4.7
CLL *i* 05 27 55.0
PVCC Panska Ves 79.64 330 *e*P **P 05 27 51.0 +0.9**
PVCC *e*x x 05 27 55.1
VRAC Vranov 79.82 328⇓*i*P **P 05 27 52.6 +1.5**
VRAC Vranov 79.82 328 ⇓P **P 05 27 52.6 +1.5**
118A Homack Ranch, 79.94 56 ⇓P **P 05 27 50.4 -1.6**
baz=80
PRU Pruhonice 80.08 330 *e*P **P 05 27 53.3 +0.8**
TREC Trest 80.27 329 *e*P **P 05 27 54.2 +0.7**
ANMO Albuquerque 80.56 52⇑*e*P **P 05 27 55.5 +0.1**
ANMO pmax pmax
comp=Z,5.0nm,0.9s
NKC Novy Kostel 80.67 331 *e*P **P 05 28 01.2 +5.5**
NKC *e*pP pP 05 28 09.2 +0.7
318A Bisbee 80.72 57 ⇑P **P 05 27 55.3 -0.9**
baz=80
219A White Tail Can 80.81 56 ⇑P **P 05 27 55.6 -1.2**
baz=81
KHC Kasperske Hory 81.15 330 *e*P **P 05 27 58.9 +0.7**
KHC *e* 05 28 03.8
KHC *e* pP 05 28 12.4 +1.3
KHC Kasperske Hory 81.15 330 *e*P **P 05 27 58.9 +0.7**
KHC *e*PCP PcP 05 28 03.8 -0.6
KHC *e*pP pP 05 28 12.4 +1.3
KHC *e*x x 05 28 20.5
319A Douglas 81.21 56 ⇑P **P 05 27 58.6 -0.3**
baz=81
GERES GERESS Array B 81.33 330 P **P 05 27 59.7 +0.5**
comp=Z,1.6nm,0.7s,mb4.0,baz=38,slow=3.7,SNR=7.2
GERES GERESS Array B 81.33 330 P **P 05 27 59.7 +0.5**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 81.33 330 P **P 05 27 59.6 +0.5**
GRA1 Grafenberg Arr 81.57 332 *e*P **P 05 28 01.0 +0.6**
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.57 332 *e*P **P 05 28 01.0 +0.6**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.57 332 *e*P **P 05 28 01.0 +0.6**
GRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GRF Grafenberg Arr 81.57 332 *e*P **P 05 28 01.0 +0.6**
comp=Z,6.0nm,1.1s,mb4.4
MEM Membach 82.59 335 P **P 05 28 06.6 +0.9**
comp=Z,12nm,2.7s,mb4.5
BCLA Clavier 82.98 335 P **P 05 28 08.2 +0.4**
comp=Z,11nm,2.6s,mb4.4
GIVF Givet 83.41 335 *e*P **P 05 28 10.8 +0.8**
BAIF Baives 83.64 336 *e*P **P 05 28 11.8 +0.6**
GDL2 Guadalupe Moun 83.72 53 *e*P **P 05 28 12.2 +0.2**
CDF Champ du Feu 84.05 333 *e*P **P 05 28 13.3 0.0**
MEZF Maizieres J'vi 84.73 334 *e*P **P 05 28 16.9 +0.2**
CABF La Chapelle 86.01 333 *e*P **P 05 28 23.3 +0.1**
comp=Z,35nm,1.3s,mb5.1
CABF La Chapelle 86.01 333 *e*P **P 05 28 23.3 +0.1**
CABF pmax pmax
comp=Z,17nm,1.3s,mb5.1
CABF La Chapelle 86.01 333 *e*P **P 05 28 23.3 +0.1**
comp=Z,17nm,1.3s,mb5.1
TXAR Lajitas Array 86.14 54 P **P 05 28 24.4 +0.3**
comp=Z,6.4nm,0.7s,mb5.0,baz=298,slow=3.5,SNR=86
TXAR pP pP 05 28 37.7 +0.6
comp=Z,3.5nm,0.7s,baz=305,slow=3.6,SNR=10
TXAR Lajitas Array 86.14 54 P **P 05 28 24.4 +0.2**
TXAR *PP pP 05 28 37.7 +0.6
TXAR pmax pmax
comp=Z,6.0nm,0.7s
TXAR pmax pmax
comp=Z,4.0nm,0.7s
TXAR Lajitas Array 86.14 54 P **P 05 28 24.4 +0.3**
TXAR pP pP 05 28 37.7 +0.6
LOR Lormes 86.19 334 *e*P **P 05 28 24.0 -0.1**
comp=Z,52nm,1.3s,mb5.3
LOR Lormes 86.19 334 *e*P **P 05 28 24.0 -0.1**
LOR pmax pmax
comp=Z,26nm,1.3s,mb5.3
LOR Lormes 86.19 334 *e*P **P 05 28 24.0 -0.1**
comp=Z,26nm,1.3s,mb5.3
FLN La Foliniere 86.21 338 *e*P **P 05 28 23.9 -0.2**
LDF La Druitiere 86.26 337 *e*P **P 05 28 24.6 +0.2**
SSF Saint Saulge 86.49 335 *e*P **P 05 28 25.6 0.0**
comp=Z,9.9nm,0.9s,mb4.7
SSF Saint Saulge 86.49 335 *e*P **P 05 28 25.6 0.0**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
SSF Saint Saulge 86.49 335 *e*P **P 05 28 25.6 0.0**
comp=Z,4.9nm,0.9s,mb4.7
LPL La Plagne 86.72 332 *e*P **P 05 28 27.3 +0.6**
comp=Z,31nm,1.4s,mb5.0
LPL La Plagne 86.72 332 *e*P **P 05 28 27.3 +0.6**
LPL pmax pmax
comp=Z,15nm,1.4s,mb5.0
LPL La Plagne 86.72 332 *e*P **P 05 28 27.3 +0.6**
comp=Z,15nm,1.4s,mb5.0
LPG La Plagne 86.73 332 *e*P **P 05 28 27.5 +0.7**
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 86.73 332 *e*P **P 05 28 27.5 +0.7**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
LPG La Plagne 86.73 332 *e*P **P 05 28 27.5 +0.7**
comp=Z,5.3nm,0.8s,mb4.8
SMF Signal de Mont 86.75 334 *e*P **P 05 28 26.8 0.0**
comp=Z,28nm,1.1s,mb5.1
SMF Signal de Mont 86.75 334 *e*P **P 05 28 26.8 0.0**
SMF pmax pmax
comp=Z,14nm,1.1s,mb5.1
SMF Signal de Mont 86.75 334 *e*P **P 05 28 26.8 0.0**
comp=Z,14nm,1.1s,mb5.1
CCM Cathedral Cave 86.76 41 *e*P **P 05 28 26.6 -0.4**
CCM pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
CCM Cathedral Cave 86.76 41 *e*P **P 05 28 26.6 -0.5**
comp=Z,10nm,0.9s,mb5.1
AVF Avril sur Loir 86.78 335 *e*P **P 05 28 27.1 +0.1**
comp=Z,31nm,1.0s,mb5.2
AVF Avril sur Loir 86.78 335 *e*P **P 05 28 27.1 +0.1**
AVF pmax pmax
comp=Z,16nm,1.0s,mb5.2
AVF Avril sur Loir 86.78 335 *e*P **P 05 28 27.1 +0.1**
comp=Z,16nm,1.0s,mb5.2
SGMF Saint Gilles 87.26 339 *e*P **P 05 28 29.5 +0.2**
MBDF Montbardon 87.39 331 *e*P **P 05 28 29.9 0.0**
ORIF Oris-en-Rattie 87.54 332 *e*P **P 05 28 31.0 +0.3**
comp=Z,58nm,1.6s,mb5.3
ORIF Oris-en-Rattie 87.54 332 *e*P **P 05 28 31.0 +0.3**
ORIF pmax pmax
comp=Z,29nm,1.6s,mb5.3
ORIF Oris-en-Rattie 87.54 332 *e*P **P 05 28 31.0 +0.3**
comp=Z,29nm,1.6s,mb5.3
TCF Toulx Ste Croi 87.60 335 *e*P **P 05 28 31.2 +0.3**
SBF Sospel 87.88 331 *e*P **P 05 28 33.2 +0.9**
VIVF Saint-Julien-l 88.03 333 *e*P **P 05 28 32.8 -0.2**
MFF Saint Martin d 88.06 337 *e*P **P 05 28 33.5 +0.4**
RJF Les Rejaudoux 88.69 335 *e*P **P 05 28 36.4 +0.3**
CAF Calviac 88.85 334 *e*P **P 05 28 37.6 +0.7**
SDV Santo Domingo 121.22 42 PKP PKPdf 05 34 35.9 -0.3
comp=Z,4.0nm,0.7s,baz=93,slow=2.2,SNR=6.5
SDV pPKP pPKPdf 05 34 49.1 -0.5
comp=Z,3.4nm,0.7s,baz=292,slow=5.1,SNR=3.6
DBIC Dimbokro 125.58 322 PKP PKPdf 05 34 44.1 -0.4
comp=Z,2.0nm,0.7s,baz=69,slow=3.3,SNR=4.9
DBIC Dimbokro 125.58 322 PKIKP PKPdf 05 34 44.1 -0.5
DBIC pmax pmax
comp=Z,2.0nm,0.7s
QSPA South Pole Qui 129.95 180 PKP PKPdf 05 34 50.3 -0.6
comp=Z,2.3nm,0.6s,baz=292,slow=1.5,SNR=16
QSPA pPKP pPKPdf 05 35 04.5 +0.2
comp=Z,1.1nm,0.5s,baz=264,slow=4.1,SNR=3.1
SNAA Sanae 144.55 197 *e*PKPdf PKPdf 05 35 14.0 -3.9
SNAA *e* 05 35 18.6
SNAA *e* 05 35 26.1
SNAA *e* 05 35 33.7
SNAA Sanae 144.55 197 *e*PKPdf PKPdf 05 35 13.8 -4.1
VNA2 Neumayer--Watz 146.09 196 *e*PKPdf PKPdf 05 35 21.0 +0.4
baz=144,slow=2.5
VNA2 *e* 05 35 26.4
VNA2 *e* 05 35 34.4
VNA2 *e* 05 35 42.9
VNA3 Neumayer Olymp 146.30 195 *e*PKPdf PKPdf 05 35 21.1 +0.2
VNA3 *e* 05 35 26.5
VNA3 *e* 05 35 34.5
VNA3 *e* 05 35 43.1
VNA1 Neumayer--Stat 146.49 196 *e*PKPdf PKPdf 05 35 22.0 +0.8
VNA1 *e* 05 35 28.0
VNA1 *e* 05 35 35.5
VNA1 *e* 05 35 42.9
LVC Limon Verde 146.61 68 PKPbc PKPbc 05 35 23.1 -1.4
comp=Z,4.9nm,0.8s,baz=319,slow=3.6,SNR=3.4
SIV San Ignacio 147.05 50 PKPbc PKPbc 05 35 24.1 -1.8
comp=Z,13nm,0.8s,baz=306,slow=2.1,SNR=43
CFAA Coronel Fontan 152.07 83 PKPbc PKPbc 05 35 37.4 -0.7
comp=Z,0.7nm,0.8s,baz=296,slow=3.5,SNR=13
BDFB Brasilia 153.11 28 PKPbc PKPbc 05 35 39.7 -1.0
comp=Z,2.8nm,1.0s,baz=148,slow=22,SNR=6.3
BDFB Brasilia 153.11 28 PKIKP PKPbc 05 35 39.7 -1.0
BDFB pmax pmax
comp=Z,3.0nm,1.0s

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*DDA **16** 05:20:56.0, 39.43N×26.27E, h7km±6km, Md2.9*
*ISCJB **16** 05:20:56.7±0.6, 39.43N±0.03×26.29E±0.05, h11km±5km, Error ellipse: s-maj=6.8km s-min=4.7km az=152.2*
*CSEM **16** 05:20:56.7±0.1, 39.38N×26.36E, h15km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.5km az=79.0*
*ATH **16** 05:20:56.8, 39.41N×26.26E, h13km±1km, MD2.9/3*
ISC 16 05:20:56.7±0.6**, 39.41N**±0.03×**26.27E**±0.05**, h14**km±4km**, n9, σ0.58**/17**, 1C, Turkey**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PRK Paraskevi 0.17 179 *e*PG **Pg 05 21 00.6 -0.1**
PRK *e*SG **Sg 05 21 03.6 +0.1**
AYVA Ayvalik 0.34 108 *e*P **Pg 05 21 03.4 -0.3**
AYVA *e*S **Sg 05 21 08.9 +0.5**
BOZC Bozcaada 0.46 339⇑*i*P **Pg 05 21 05.6 -0.2**
BOZC *i* S **Sg 05 21 11.9 0.0**
LIA Limnos Island 0.97 300 *e*PB **Pb 05 21 15.1 -0.2**
LIA *e*SB **Sb 05 21 28.3 +0.4**
URLA Izmir 1.08 166 *e*P **Pb 05 21 16.7 -0.6**
URLA *e*S **Sb 05 21 31.6 +0.3**
URLA Izmir 1.08 166 *e*P **Pb 05 21 16.7 -0.5**
URLA *e*S **Sb 05 21 31.5 +0.3**
SART Tekirdag 1.45 28 *e*P **Pn 05 21 22.9 +0.3**
SART *e*S **Sn 05 21 41.8 +0.4**
DURS Dursunbey 1.72 83 *e*P **Pn 05 21 23.1 -3.1**
DURS *e*S **Sn 05 21 48.0 +0.1**
SMG Samos 1.76 165 *e*PN **Pb 05 21 29.1 +0.3**

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*ISCJB **16** 05:22:17.6±0.7, 23.03S±0.06×70.25W±0.10, h33km, mb4.0/7, MS3.9/3, Error ellipse: s-maj=13.2km s-min=8.4km az=11.1*
*IDC **16** 05:22:18.5±3.9, 23.05S×70.41W, h26km±25km, mb3.9/7, mb1 4.0/9, mb1mx3.8/19, mbtmp3.9/9, ML3.9/2, MS3.8/3, Ms1 3.8/3, ms1mx3.1/24, Error ellipse: s-maj=25.8km s-min=19.6km az=80.0*
ISC 16 05:22:21.1±2.2**, 23.00S**±0.07×**70.3W**±0.2**, h45**km±20km**, n18, σ0.80**/13**, mb4.0**/7**, MS3.9**/3**, Near coast of northern Chile**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
LVC Limon Verde 1.34 74 Pg **Pn 05 22 45.6 +2.1**
272nm,0.3s,baz=251,slow=12,SNR=1509
LVC Lg 05 23 05.1
2μm,0.3s,baz=14,slow=17,SNR=48
CFAA Coronel Fontan 8.76 168 Pn **Pn 05 24 21.4 -3.8**
0.0nm,0.3s,baz=350,slow=18,SNR=5.0
CFAA Sn **Sn 05 26 02.3 -0.4**
0.0nm,0.3s,baz=0.0,slow=20,SNR=2.8
CFAA LR LR 05 28 06.5
comp=Z,28nm,20.4s,baz=329,slow=40
SIV San Ignacio 11.15 53 Pn **Pn 05 24 57.5 -0.5**
1.1nm,0.3s,baz=242,slow=11,SNR=26
SIV Sn **Sn 05 27 00.4 -1.0**
baz=228,slow=12,SNR=3.6
CPUP Villa Florida 12.26 108 Pn **Pn 05 25 13.3 +0.2**
0.1nm,0.3s,baz=271,slow=11,SNR=3.5
ROSC El Rosal 27.96 351 LR LR 05 38 59.3
comp=Z,70nm,18.2s,MS3.3,baz=154,slow=36
TXAR Lajitas Array 61.14 327 P **P 05 32 31.5 +0.5**
0.5nm,0.8s,mb3.7,baz=152,slow=7.0,SNR=4.7
QSPA South Pole Qui 67.20 180 P **P 05 33 10.1 +0.1**
1.3nm,0.7s,mb4.1,baz=113,slow=1.0,SNR=10
DBIC Dimbokro 70.40 74 P **P 05 33 31.1 +0.1**
1.6nm,0.6s,mb4.1,baz=208,slow=7.7,SNR=3.7
PDAR Pinedale Array 74.78 331 P **P 05 33 55.5 -0.9**
0.2nm,0.7s,mb3.2,baz=102,slow=8.4,SNR=2.7
SCHQ Schefferville 77.57 2 LR LR 06 10 14.2
comp=Z,105nm,19.6s,MS4.2,baz=56,slow=37
TORD Torodi Ar. Bea 79.08 71 P **P 05 34 21.4 +0.2**
3.0nm,0.7s,mb4.3,baz=256,slow=5.1,SNR=36
MAW Mawson 83.27 164 LR LR 06 12 36.4
comp=Z,79nm,18.2s,MS4.1,baz=225,slow=36
BOSA Boshof 83.88 118 P **P 05 34 46.9 +0.4**
1.9nm,0.7s,mb4.3,baz=256,slow=4.2,SNR=3.4
YKA Yellowknife Ar 92.17 341 P **P 05 35 25.3 0.0**
0.7nm,0.7s,mb4.1,baz=136,slow=4.3,SNR=23
ASAR Alice Springs 127.98 208 PKP PKPdf 05 41 22.4 -0.4
0.5nm,0.8s,baz=148,slow=1.8,SNR=5.0
ASAR pPKP pPKPdf 05 41 32.2 -4.5
0.3nm,0.7s,baz=130,slow=2.3,SNR=4.1
WRA Warramunga Arr 131.01 211 PKP PKPdf 05 41 28.6 0.0
0.3nm,0.8s,baz=180,slow=18,SNR=4.2
ZALV Zalesovo Beam 143.85 25 PKP PKPdf 05 41 51.6 +0.5
1.0nm,0.6s,baz=298,slow=3.2,SNR=5.5

MKAR Makanchi Array 147.60 36 PKPbc PKPbc 05 42 00.8 +0.3
1.0nm,0.7s,baz=309,slow=3.3,SNR=11

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*NEIC **16** 05:26:23.7±4.4, 5.55S×149.17E, h64km±28km, mb4.6/1, Error ellipse: s-maj=39.7km s-min=31.1km az=197.0*
*IDC **16** 05:26:24.7±5.5, 6.10S×149.69E, h80km±42km, mb3.8/4, mb1 4.0/5, mb1mx3.6/15, mbtmp3.9/5, ML3.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/25, Error ellipse: s-maj=61.7km s-min=24.6km az=97.0*
*ISCJB **16** 05:26:26.5±3.4, 5.9S±0.1×149.1E±0.3, h86km±25km, mb3.9/5, Error ellipse: s-maj=45.3km s-min=23.6km az=10.9*
ISC 16 05:26:27.8±3.3**, 5.9S**±0.2×**149.1E**±0.3**, h82**km±24km**, n15, σ0.52**/13**, mb3.9**/5**, New Britain region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
PMG Port Moresby 4.01 209 P **Pn 05 27 26.9 0.0**
17nm,0.3s,baz=349,slow=4.6,SNR=33
PMG S **Sn 05 28 12.6 -0.1**
119nm,0.3s,baz=158,slow=21,SNR=20
CTA Charters Tower 14.40 191 LR LR 05 34 38.2
comp=Z,49nm,18.8s,baz=53,slow=34
KAKA Kakadu 17.81 246 *e*P x 05 30 08.8
6.9nm,0.4s
WRAB Tennant Creek 20.04 224 *e*P **P 05 30 54.4 0.0**
23nm,0.7s
WRAB *e*pP 05 31 09.3
WB2 Warramunga Arr 20.05 224 *e*P **P 05 30 54.6 +0.1**
WRA Warramunga Arr 20.05 224 P **P 05 30 54.9 +0.3**
21nm,0.7s,baz=49,slow=11,SNR=13
ASAR Alice Springs 22.97 218 P **P 05 31 25.1 -0.5**
0.9nm,0.6s,mb3.3,baz=56,slow=8.9,SNR=9.1
ASAR S **S 05 35 34.9 +5.3**
1.4nm,1.0s,baz=28,slow=24,SNR=6.9
FITZ Fitzroy Crossi 25.95 240 *e*P **P 05 31 52.6 -0.2**
33nm,0.6s,mb4.9
STKA Stephens Creek 26.81 194 *e*P **P 05 32 02.0 +1.6**
3.2nm,1.7s,mb3.6
STKA Stephens Creek 26.81 194 P **P 05 31 55.9 -4.5**
1.3nm,0.7s,mb3.6,baz=7.4,slow=7.2,SNR=2.5
STKA LR LR 05 42 33.8
comp=Z,43nm,19.5s,baz=28,slow=36
STKA Stephens Creek 26.81 194 *e*P **P 05 32 02.0 +1.6**
STKA LR LR 05 42 33.8
KSRS Korea Array 47.44 337 P **P 05 34 54.3 +0.1**
0.9nm,0.6s,mb3.7,baz=148,slow=8.9,SNR=3.4
VNDA Vanda 71.91 177 P **P 05 37 41.1 -0.7**
1.5nm,0.7s,mb3.9,baz=344,slow=7.4,SNR=5.6
SIV San Ignacio 143.04 126 PKP PKPdf 05 45 46.6 -6.6
0.6nm,0.5s,baz=236,slow=3.6,SNR=4.7
TORD Torodi Ar. Bea 147.11 285 PKPbc PKPbc 05 46 01.0 -1.5
0.3nm,0.6s,baz=83,slow=2.7,SNR=4.0

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*ISCJB **16** 05:36:11.0±3.9, 28.8S±0.1×70.5W±0.5, h91km±19km, mb3.8/2, Error ellipse: s-maj=79.7km s-min=9.9km az=170.3*
*IDC **16** 05:36:13.0±3.1, 28.83S×70.37W, h86km±20km, mb3.8/2, mb1 3.5/4, mb1mx3.3/18, mbtmp3.5/4, Error ellipse: s-maj=49.4km s-min=12.6km az=80.0*
ISC 16 05:36:11.9±3.8**, 28.9S**±0.1×**70.6W**±0.5**, h88**km±17km**, n9, σ1.21**/6**, mb3.8**/2**, Central Chile**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
CFAA Coronel Fontan 3.41 144 P **Pn 05 37 03.9 +1.0**
1.4nm,0.3s,baz=327,slow=11,SNR=265
CFAA S **Sn 05 37 41.7 -0.5**
4.4nm,0.3s,baz=133,slow=20,SNR=9.8
LVC Limon Verde 6.42 14 P **Pn 05 37 42.8 -1.0**
0.9nm,0.3s,baz=160,slow=9.6,SNR=8.5
LVC S **Sn 05 38 56.2 +0.6**
2.1nm,0.3s,baz=236,slow=18,SNR=2.2
DBIC Dimbokro 72.40 72 P **P 05 47 28.6 -0.3**
2.0nm,0.9s,mb3.9,baz=206,slow=2.6,SNR=4.1
TORD Torodi Ar. Bea 81.31 70 P **P 05 48 19.1 +0.3**
0.7nm,0.5s,mb3.8,baz=250,slow=3.5,SNR=14
NORM Noumea 105.12 234 *e*P Pdif 05 50 11.0 +1.2
WRA Warramunga Arr 125.82 209 PKP PKPdf 05 55 04.6 +0.6
0.2nm,0.6s,baz=168,slow=1.7,SNR=6.2
KURK Kurchatov 148.20 38 PKPbc PKPbc 05 55 48.3 +1.1
0.2nm,0.3s,baz=294,slow=3.3,SNR=2.8
ZALV Zalesovo Beam 149.20 29 PKPbc PKPbc 05 55 51.1 +1.5
1.0nm,0.4s,baz=340,slow=5.5,SNR=6.2
MKAR Makanchi Array 152.31 42 PKPbc PKPbc 05 55 58.1 +0.9
0.5nm,0.6s,baz=310,slow=1.9,SNR=6.5

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*ATH **16** 06:20:13.4, 41.35N×19.62E, h23km, MD3.3/3*
*TIR **16** 06:20:15.7±1.2, 41.05N×19.90E, h17km±4km*
*SKO **16** 06:20:17.4, 41.05N×19.95E, h0km, M2.3, ML2.8*
*CSEM **16** 06:20:17.1±0.1, 41.15N×20.07E, h2km, ML2.5, Error ellipse: s-maj=3.4km s-min=2.0km az=49.0*
*THE **16** 06:20:17.9, 41.14N×20.06E, h0km±1km, ML3.2/6, Error ellipse: s-maj=1.8km s-min=0.8km az=315.0*
*NEIC **16** 06:20:17.2, 41.09N×19.97E, h11km, MD3.3(ATH), ML2.9(PDG), After PDG.*
*PDG **16** 06:20:17.2±0.4, 41.09N×19.97E, h11km±1km, ML2.9/9, Error ellipse: s-maj=1.2km s-min=1.8km az=0.0*
*ISCJB **16** 06:20:18.1±0.3, 41.13N±0.02×20.03E±0.03, h10km, Error ellipse: s-maj=3.8km s-min=2.0km az=139.7*
*BEO **16** 06:20:18.4±2.1, 41.13N×19.93E, h10km±5km, ML2.5/2*
ISC 16 06:20:18.7±0.3**, 41.11N**±0.02×**20.02E**±0.03**, h10**km**, n48, σ1.23**/85**, 9C-4D, Albania**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
TIR Tirane 0.26 335 P **Pg 06 20 22.5 -1.6**
TIR S **Sg 06 20 27.4 -0.3**
TIR Tirane 0.26 335 *e*PG **Pg 06 20 22.1 -2.0**
TIR *i* SG **Sg 06 20 27.8 +0.1**
TIR Tirane 0.26 335 *e*Pg **Pg 06 20 22.6 -1.5**
TIR *e*Sg **Sg 06 20 27.8 +0.1**
TIR Tirane 0.26 335 *e*Pg **Pg 06 20 22.4 -1.7**
KBN Korca 0.76 129 *e*PG **Pg 06 20 31.5 -1.9**
KBN *i* SG **Sg 06 20 43.9 +0.6**
KRUS Krusevo 0.97 74 *i* Pg **Pg 06 20 35.5 -1.8**
KRUS *e*Sg **Sg 06 20 50.6 +0.8**
KRUS Krusevo 0.97 74 *i* Pg **Pg 06 20 35.5 -1.7**
KRUS *e*Sg **Sg 06 20 50.6 +0.8**
KRUS *e*Lg 06 20 53.3
comp=N,28nm,0.2s
KRUS *e*Lg 06 20 54.3
comp=E,35nm,0.3s
BIA Bitola 0.99 95 P **Pg 06 20 35.5 -2.3**
BIA S **Sg 06 20 50.6 -0.1**
BIA Bitola 0.99 95 *i* Pg **Pg 06 20 35.9 -1.9**
BIA *i* Sg **Sg 06 20 50.4 -0.3**
BIA Bitola 0.99 95 *i* Pg **Pg 06 20 35.9 -1.9**
BIA *i* Sg **Sg 06 20 50.5 -0.3**
BIA *e*Lg 06 20 53.6
comp=E,66nm,0.5s
BIA *e*Lg 06 20 53.7
comp=N,43nm,0.3s
ULC Ulcinj 1.03 326⇑*i*Pg **Pg 06 20 36.4 -2.1**
ULC *e*Sg **Sg 06 20 53.0 +1.1**
ULC Ulcinj 1.03 326 *e*PN **Pn 06 20 36.2 -3.0**
ULC *i* SN **Sn 06 20 53.4 -0.2**
FNA Florina 1.08 107 P **Pb 06 20 37.5 -2.0**
FNA S **Sg 06 20 53.4 -0.1**
SKO Skopje 1.37 51 P **Pn 06 20 43.9 0.0**
SKO S **Sb 06 21 03.3 +1.2**
SKO Skopje 1.37 51 *e*Pg **Pn 06 20 43.9 0.0**
SKO *e*Sg **Sg 06 21 03.1 +0.2**
SKO Skopje 1.37 51 *i* Pg **Pg 06 20 43.9 -1.2**
SKO *e*Sg **Sg 06 21 03.0 +0.1**
SKO *e*Lg 06 21 03.3
comp=E,116nm,0.7s
SKO *e*Lg 06 21 03.9
comp=N,173nm,0.8s
KEK Kerkira 1.40 187 *e*PN **Pn 06 20 42.5 -1.8**
KEK *e*SN **Sn 06 21 04.6 +1.7**
PDG Podgorica 1.44 337 *e*PN **Pn 06 20 43.3 -1.5**
PDG *i* SN **Sg 06 21 05.3 +0.4**
PDG Podgorica 1.44 337⇓*i*Pg **Pg 06 20 43.7 -2.5**
PDG *e*Sg **Sg 06 21 05.3 +0.4**
TTG Podgorica 1.44 337⇓*i*Pg **Pg 06 20 43.7 -2.5**
TTG *e*Sg **Sg 06 21 05.3 +0.4**
BUM Brajici-Budva 1.46 325⇓*i*Pg **Pn 06 20 43.8 -1.2**

BUM				eSg	Sg	06 21 05.7	+0.2
BUM	**Brajici-Budva**	**1.46**	**325**	ePN	**Pn**	**06 20 43.8**	**-1.2**
BUM				i SN	Sg	06 21 05.7	+0.2
PVY	**Plav**	**1.48**	**359**⇑	iPg	**Pg**	**06 20 45.8**	**-1.4**
PVY				eSg	Sg	06 21 07.3	+0.8
PVY	**Plav**	**1.48**	**359**	i PN	**Pn**	**06 20 45.7**	**+0.3**
PVY				i SN	Sn	06 21 07.6	+2.7
KZN	**Kozani**	**1.56**	**120**	ePN	**Pn**	**06 20 47.3**	**+0.9**
JAN	**Janina**	**1.58**	**156**	ePN	**Pn**	**06 20 47.0**	**+0.2**
JAN				eSN	Sn	06 21 11.0	+3.7
IGT	**Igoumenitsa**	**1.59**	**171**	P	**Pn**	**06 20 46.7**	**-0.2**
IGT				S	Sn	06 21 09.5	+2.0
HCY	**Herceg Novi**	**1.75**	**320**⇑	iPn	**Pn**	**06 20 48.5**	**-0.6**
HCY				eSn	Sn	06 21 12.7	+1.2
HCY	**Herceg Novi**	**1.75**	**320**	ePN	**Pn**	**06 20 48.5**	**-0.6**
HCY				i SN	Sn	06 21 12.7	+1.2
BEY	**Berane**	**1.76**	**357**	ePN	**Pn**	**06 20 49.9**	**+0.6**
BEY				i SN	Sn	06 21 14.2	+2.4
BEY	**Berane**	**1.76**	**357**⇑	iPn	**Pn**	**06 20 49.9**	**+0.6**
BEY				eSn	Sn	06 21 14.2	+2.4
IVA	**Berane**	**1.76**	**357**⇑	iPn	**Pn**	**06 20 49.9**	**+0.6**
IVA				eSn	Sn	06 21 14.2	+2.4
GRG	**Griva**	**1.81**	**94**	P	**Pn**	**06 20 48.4**	**-1.5**
GRG				S	Sn	06 21 14.0	+1.1
BRY	**Bratogost**	**2.10**	**329**⇑	iPn	**Pn**	**06 20 54.0**	**+0.1**
BRY				eSn	Sn	06 21 21.7	+1.7
BRY	**Bratogost**	**2.10**	**329**	ePN	**Pn**	**06 20 54.0**	**+0.1**
LIT	**Litokhoron**	**2.14**	**117**	P	**Pn**	**06 20 53.5**	**-0.9**
LIT				S	Sn	06 21 22.8	+1.9
SJES	**Sjenica**	**2.15**	**359**	ePn	**Pn**	**06 20 54.8**	**+0.2**
BARS	**Barje**	**2.17**	**38**	ePn	**Pn**	**06 20 55.8**	**+0.9**
THL	**Klokotos Trika**	**2.17**	**135**	P	**Pn**	**06 20 55.2**	**+0.3**
THL				S	Sn	06 21 23.0	+1.2
KNT	**Kendrikon**	**2.18**	**88**	P	**Pn**	**06 20 54.1**	**-0.9**
UPM	**Unac-Piva**	**2.25**	**339**⇑	iPn	**Pn**	**06 20 55.8**	**-0.1**
UPM				eSn	Sn	06 21 25.2	+1.5
PLE	**Pljevlja**	**2.27**	**348**⇑	iPn	**Pn**	**06 20 56.7**	**+0.5**
PLE				eSn	Sn	06 21 26.0	+1.8
AGG	**Agios Georgios**	**2.74**	**139**	P	**Pn**	**06 21 02.7**	**0.0**
AGG				S	Sn	06 21 37.3	+1.5
BBLS	**Lazići**	**2.79**	**351**	ePn	**Pn**	**06 21 02.5**	**-0.9**
GRUS	**Gruza**	**2.83**	**10**	ePn	**Pn**	**06 21 03.7**	**-0.2**
BOLS	**Boljevac**	**3.07**	**27**	ePn	**Pn**	**06 21 06.1**	**-1.2**
BZS	**Buzias**	**4.65**	**14**⇑	iP	**Pn**	**06 21 28.2**	**-0.8**
GZR	**Gura Zlata**	**4.73**	**24**⇓	iP	**Pn**	**06 21 30.0**	**-0.1**

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*ISCJB **16** 06:25:01.4±0.5, 23.11S±0.10×69.2E±0.1, h10km, mb4.3/19, MS4.2/4, Error ellipse: s-maj=14.1km s-min=13.5km az=139.1*
*IDC **16** 06:25:01.7±0.6, 23.10S×69.18E, h0km, mb4.2/16, mb1 4.2/16, mb1mx4.1/26, mbtmp4.2/16, MS4.1/4, Ms1 4.1/4, ms1mx3.5/45, Error ellipse: s-maj=19.6km s-min=16.3km az=77.0*
*NEIC **16** 06:25:02.9±0.4, 23.09S×69.11E, h10km, mb4.1/1, Error ellipse: s-maj=13.9km s-min=13.2km az=66.0*
ISC 16 06:25:03.3±0.5, **23.10S**±0.10×**69.11E**±0.10, **h10km, n32, σ0s70**/23, **mb4.3**/19, **MS4.2**/4, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**20.82**	**277**	eP	**P**	**06 29 43.5**	**-1.6**
	14nm,1.5s						
LSZ	**Lusaka**	**39.32**	**274**	P	**P**	**06 32 33.6**	**+0.7**
	1.3nm,0.6s,mb3.8,baz=124,slow=6.3,SNR=6.3						
MAW	**Mawson**	**44.67**	**183**	P	**P**	**06 33 17.0**	**+1.1**
	1.5nm,0.7s,mb3.9,baz=17,slow=14,SNR=3.4						
TSUM	**Tsumeb**	**48.02**	**264**	LR	LR	06 51 05.1	
	comp=Z,309nm,22.0s,MS4.2,baz=325,slow=32						
CMAR	**Chiang Mai Arr**	**50.55**	**38**	P	**P**	**06 34 02.5**	**+0.3**
	1.1nm,0.3s,mb4.2,baz=234,slow=6.7,SNR=12						
SHL	**Shillong**	**53.18**	**26**	eP	**P**	**06 34 23.0**	**+1.3**
ASAR	**Alice Springs**	**58.98**	**105**	P	**P**	**06 35 02.7**	**-0.7**
	2.0nm,0.8s,mb4.2,baz=257,slow=6.4,SNR=18						
WRA	**Warramunga Arr**	**60.31**	**101**	P	**P**	**06 35 12.2**	**-0.5**
	4.9nm,1.2s,mb4.4,baz=255,slow=7.0,SNR=10						
EIL	**Elat**	**61.91**	**326**	LR	LR	06 59 00.1	
	comp=Z,62nm,18.9s,MS3.8,baz=267,slow=33						
QSPA	**South Pole Qui**	**67.02**	**180**	P	**P**	**06 35 56.1**	**+0.1**
	2.8nm,1.0s,mb4.2,baz=233,slow=4.9,SNR=4.8						
VNDA	**Vanda**	**68.21**	**166**	P	**P**	**06 36 03.0**	**-0.5**
	2.6nm,1.0s,mb4.2,baz=314,slow=9.1,SNR=4.1						
MKAR	**Makanchi Array**	**70.58**	**10**	P	**P**	**06 36 18.3**	**-0.1**
	2.4nm,0.8s,mb4.2,baz=197,slow=6.5,SNR=15						
BRTR	**Keskin Array B**	**70.73**	**332**	P	**P**	**06 36 20.2**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=152,slow=5.6,SNR=6.6						
CTA	**Charters Tower**	**70.98**	**104**	LR	LR	07 05 19.8	
	comp=Z,193nm,18.4s,MS4.4,baz=110,slow=34						
KURK	**Kurchatov**	**73.97**	**6**	P	**P**	**06 36 38.1**	**-0.5**
	2.2nm,0.8s,mb4.1,baz=202,slow=6.3,SNR=8.9						
TORD	**Torodi Ar. Bea**	**75.15**	**291**	P	**P**	**06 36 46.4**	**+0.1**
	2.4nm,1.1s,mb4.0,baz=101,slow=4.9,SNR=10						
TORD	**Torodi Ar. Bea**	**75.15**	**291**	P	**P**	**06 36 46.4**	**+0.1**
PMG	**Port Moresby**	**75.43**	**94**	LR	LR	07 05 17.4	
	comp=Z,116nm,19.8s,MS4.2,baz=306,slow=32						
BVAR	**Borovoye Array**	**75.81**	**1**	P	**P**	**06 36 48.9**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=164,slow=5.9,SNR=5.9						
KIC	**Kosan Boka**	**77.79**	**282**	eP	**P**	**06 37 01.7**	**+0.4**
	44nm,1.2s,mb5.3						
ZAA0	**Zalesovo Array**	**77.92**	**9**	eP	**P**	**06 36 59.9**	**-1.2**
ZALV	**Zalesovo Beam**	**77.92**	**9**	P	**P**	**06 37 01.1**	**0.0**
	5.4nm,0.9s,mb4.5,baz=211,slow=5.2,SNR=18						
LIC	**Lamto**	**77.99**	**282**	eP	**P**	**06 37 02.9**	**+0.5**
	15nm,0.8s,mb5.0						
SONM	**Songino Array**	**78.15**	**25**	P	**P**	**06 37 03.5**	**+1.0**
	2.6nm,1.0s,mb4.1,baz=216,slow=5.3,SNR=12						
TIC	**Toumodi**	**78.16**	**282**	eP	**P**	**06 37 03.2**	**-0.2**
	7.3nm,0.2s,mb5.3						
AKASG	**Malin Array Be**	**81.48**	**336**	P	**P**	**06 37 20.3**	**-0.2**
	0.8nm,0.6s,mb3.8,baz=132,slow=4.3,SNR=6.4						
KSRS	**Korea Array**	**81.77**	**43**	P	**P**	**06 37 22.0**	**-0.3**
	1.5nm,0.9s,mb3.9,baz=241,slow=6.8,SNR=3.6						
YKA	**Yellowknife Ar**	**140.55**	**3**	PKhKP		06 44 29.0	
	0.3nm,0.9s,baz=342,slow=2.2,SNR=3.8						
YKA				PKP	PKPdf	06 44 33.8	+1.5
	0.7nm,1.0s,baz=341,slow=2.6,SNR=7.6						
YKA				PP	PP	06 47 31.1	+0.1
	0.3nm,1.0s,baz=353,slow=7.6,SNR=5.1						
YKA	**Yellowknife Ar**	**140.55**	**3**	PKP		06 44 29.1	
YKA				PKP	PKPdf	06 44 33.9	+1.5
YKA				PP	PP	06 47 31.1	0.0
ULM	**Lac du Bonnet**	**150.47**	**340**	PKPbc	PKPbc	06 44 54.0	-1.0
	4.7nm,0.9s,baz=62,slow=0.3,SNR=5.3						
NVAR	**Mina Array Bea**	**163.46**	**21**	PKPab	PKPab	06 45 57.6	+0.1
	1.1nm,1.0s,baz=303,slow=4.0,SNR=4.9						
TXAR	**Lajitas Array**	**171.03**	**315**	PKPab	PKPab	06 46 32.1	+0.8
	1.3nm,1.2s,baz=90,slow=3.8,SNR=4.0						

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*CSEM **16** 06:34:44.8±0.2, 39.96N×29.44E, h15km, MD2.7, Error ellipse: s-maj=3.9km s-min=3.1km az=92.0*
*ISCJB **16** 06:34:45.6±0.4, 39.98N±0.02×29.45E±0.03, h10km, Error ellipse: s-maj=3.8km s-min=3.2km az=141.6*
*DDA **16** 06:34:45.3, 39.96N×29.42E, h7km±2km, Md2.7*
*ISK **16** 06:34:45.3, 39.98N×29.46E, h6km, MD2.8*
ISC 16 06:34:45.9±0.5, **39.98N**±0.02×**29.45E**±0.03, **h8km**±7km, **n15, σ0s65**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.29**	**305**	i P	**Pg**	**06 34 51.3**	**-0.4**
ULDT				i S	**Sg**	**06 34 55.7**	**+0.1**
CAVI	**Cavuskoy**	**0.38**	**53**	ePG	**Pg**	**06 34 52.4**	**-1.0**
CAVI				eSG	**Sg**	**06 34 57.8**	**-0.5**
GEMT	**Gemlik**	**0.50**	**337**	ePG	**Pg**	**06 34 55.5**	**-0.2**
GEMT				eSG	**Sg**	**06 35 02.7**	**+0.5**
ADVT	**Abdulvahap**	**0.51**	**26**	ePG	**Pg**	**06 34 56.1**	**+0.3**
YLV	**Yalova**	**0.59**	**354**	ePG	**Pg**	**06 34 57.8**	**+0.4**
YLV				eSG	**Sg**	**06 35 05.0**	**-0.2**
GPA	**Golpazari**	**0.73**	**64**	ePG	**Pg**	**06 35 00.3**	**+0.3**
BORA	**Eskisehir**	**0.78**	**97**	i P	**Pg**	**06 35 01.2**	**+0.3**
BORA				i S	**Sg**	**06 35 11.1**	**+0.1**
DURS	**Dursunbey**	**0.84**	**244**	i P	**Pg**	**06 35 01.6**	**-0.5**
DURS				i S	**Sg**	**06 35 14.7**	**+1.7**
GDZ	**Gediz**	**0.89**	**178**	i P	**Pg**	**06 35 01.9**	**-1.0**
GDZ				i S	**Sg**	**06 35 14.4**	**-0.1**
GULT	**Gulveren**	**0.94**	**60**	ePG	**Pg**	**06 35 03.3**	**-0.6**
GULT				eSG	**Sg**	**06 35 17.4**	**+1.3**
ALT	**Altintas**	**1.05**	**151**	ePG	**Pg**	**06 35 05.6**	**-0.5**
ALT				eSG	**Sg**	**06 35 19.8**	**0.0**
ISK	**Istanbul-Kandi**	**1.13**	**345**	ePN	**Pn**	**06 35 07.0**	**-1.0**
ESKT	**Eskisehir**	**1.17**	**112**	i P	**Pb**	**06 35 08.2**	**-0.2**
ESKT				i S	**Sb**	**06 35 24.7**	**+1.0**
ESKT	**Eskisehir**	**1.17**	**112**	ePn	**Pn**	**06 35 08.7**	**+0.1**
SEYT	**Eskypehyr**	**1.17**	**112**	i P	**Pb**	**06 35 08.2**	**-0.2**
SEYT				i S	**Sb**	**06 35 24.7**	**+1.0**

IDC 16 06:35:19.2±15.0, **23.35S**×**68.87E, h0km, mb3.7**/4, **mb1 3.7**/4, **mb1mx3.5**/22, **mbtmp3.7**/4, **Error ellipse: s-maj=514.5km s-min=39.7km az=53.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**59.14**	**104**	P	P	06 45 22.1	0.0
	0.3nm,0.7s,baz=263,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**70.86**	**10**	P	P	06 46 37.1	-0.5
	0.6nm,0.7s,baz=176,slow=5.1,SNR=5.0						
ZALV	**Zalesovo Beam**	**78.20**	**10**	P	P	06 47 20.5	+0.3
	1.1nm,0.6s,baz=193,slow=5.9,SNR=6.2						
SONM	**Songino Array**	**78.47**	**25**	P	P	06 47 22.7	+0.9
	0.5nm,0.8s,baz=219,slow=3.8,SNR=4.3						

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*ISCJB **16** 06:35:49.7±0.4, 23.10S±0.08×69.29E±0.08, h10km, mb4.4/31, MS4.9/7, Error ellipse: s-maj=11.4km s-min=10.8km az=18.4*
*IDC **16** 06:35:49.9±0.5, 23.11S×69.25E, h0km, mb4.2/23, mb1 4.3/23, mb1mx4.2/30, mbtmp4.2/23, MS4.9/6, Ms1 4.8/6, ms1mx4.5/13, Error ellipse: s-maj=15.4km s-min=13.9km az=41.0*
*NEIC **16** 06:35:51.5±0.3, 23.10S×69.22E, h10km, mb4.5/2, Error ellipse: s-maj=9.3km s-min=8.1km az=221.0*
*GCMT **16** 06:35:51.5±0.2, 22.92S×69.08E, h12km, MW5.2/97, Moment Tensor Solution. s42,c59; s97,c164; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.71±.01; Mθθ0.08±.01; Mφφ0.63±.01; Mrθ0.18±.04; Mθφ-0.17±.01; Mφr0.37±.04; Best double couple: M0 0.80800×10^17 NP1:φs329.00000°, δ35.00000°, λ-118.00000°. NP2: φs182.00000°, δ59.00000°, λ-72.00000°. Principal axes: T 0.7530, Plg13.0000°, Azm259.0000°; N 0.1110, Plg16.0000°, Azm352.0000°; P -0.8630, Plg70.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **16** 06:35:51.2, 22.53S×68.89E, h10km, mB5.2, mb4.4, Ms4.8, Msz4.6*
ISC 16 06:35:51.7±0.4, **23.10S**±0.08×**69.25E**±0.08, **h10km, n46, σ0s80**/39, **mb4.4**/31, **MS4.9**/7, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**37.97**	**301**	P	**P**	**06 43 11.7**	**+1.7**
	3.1nm,0.4s,mb4.4,baz=10,slow=1.0,SNR=2.5						
LSZ	**Lusaka**	**39.45**	**274**	P	**P**	**06 43 22.0**	**-0.4**
	3.4nm,0.9s,mb4.1,baz=108,slow=13,SNR=3.5						
BOSA	**Boshof**	**39.80**	**253**	P	**P**	**06 43 24.7**	**-0.5**
	3.0nm,1.0s,mb4.0,baz=98,slow=13,SNR=3.1						
BOSA				LR	LR	06 56 40.2	
	comp=Z,2μm,21.2s,MS4.9,baz=101,slow=31						
MAW	**Mawson**	**44.68**	**183**	P	**P**	**06 44 04.0**	**-0.4**
	4.0nm,0.9s,mb4.2,baz=27,slow=9.0,SNR=3.6						
TSUM	**Tsumeb**	**48.15**	**264**	P	**P**	**06 44 31.8**	**-0.5**
	0.5nm,0.5s,mb3.8,baz=108,slow=9.6,SNR=2.7						
CMAR	**Chiang Mai Arr**	**50.47**	**38**	P	**P**	**06 44 50.3**	**+0.3**
	1.1nm,0.3s,mb4.4,baz=233,slow=6.9,SNR=9.2						
SHL	**Shillong**	**53.12**	**26**	eP	**P**	**06 45 12.0**	**+2.4**
KBL	**Kabul**	**57.33**	**360**	eP	**P**	**06 45 40.2**	**+0.4**
	44nm,2.3s,mb5.1						
ASAR	**Alice Springs**	**58.86**	**105**	P	**P**	**06 45 50.6**	**-0.3**
	2.4nm,0.9s,mb4.2,baz=251,slow=6.2,SNR=19						
WRA	**Warramunga Arr**	**60.19**	**100**	P	**P**	**06 45 59.7**	**-0.5**
	3.8nm,1.1s,mb4.3,baz=256,slow=6.5,SNR=14						
WRA				LR	LR	07 10 22.2	
	comp=Z,680nm,18.3s,MS4.8,baz=255,slow=34						
WRAB	**Tennant Creek**	**60.20**	**100**	eP	**P**	**06 46 01.0**	**+0.8**
	12nm,1.3s,mb4.8						
STKA	**Stephens Creek**	**63.73**	**115**	P	**P**	**06 46 24.1**	**+0.3**
	1.6nm,1.0s,mb4.0,baz=259,slow=3.8,SNR=3.0						
STKA				LR	LR	07 10 19.7	
	comp=Z,870nm,20.2s,MS4.9,baz=218,slow=32						
QSPA	**South Pole Qui**	**67.02**	**180**	P	**P**	**06 46 44.4**	**+0.1**
	1.8nm,0.7s,mb4.2,baz=295,slow=1.9,SNR=5.4						
VNDA	**Vanda**	**68.18**	**166**	P	**P**	**06 46 51.5**	**-0.2**
	1.8nm,0.9s,mb4.1,baz=277,slow=9.5,SNR=3.8						
GTA	**Gaotai**	**68.44**	**25**	P	**P**	**06 46 53.9**	**+0.2**
GTA				AP	pP	06 47 04.3	+7.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.3						
WMQ	**Urumqi**	**68.71**	**14**	eP	**P**	**06 46 54.5**	**-0.8**
WMQ				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,224nm,5.5s						
WMQ				LR	LR		
	comp=N,404nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=E,219nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,353nm,22.0s,MS4.5						
MK31	**Makanchi Array**	**70.56**	**9**	eP	**P**	**06 47 05.2**	**-1.5**
MKAR	**Makanchi Array**	**70.56**	**9**	P	**P**	**06 47 06.3**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=188,slow=6.0,SNR=22						
BR131	**Keskin Array S**	**70.80**	**332**	eP	**P**	**06 47 08.2**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**70.80**	**332**	P	**P**	**06 47 08.2**	**0.0**
	comp=Z,1.5nm,0.9s,mb3.9,baz=150,slow=10.0,SNR=3.8						
CTA	**Charters Tower**	**70.86**	**104**	P	**P**	**06 47 10.3**	**+1.0**
	comp=Z,7.9nm,1.1s,mb4.6,baz=329,slow=3.4,SNR=4.0						
CTA	**Charters Tower**	**70.86**	**104**	P	**P**	**06 47 10.3**	**+1.0**
AKTK	**Aktyubinsk**	**73.88**	**353**	P	**P**	**06 47 27.1**	**+0.6**
AKTO	**Aktyubinsk**	**73.88**	**353**	P	**P**	**06 47 27.1**	**+0.6**
	comp=Z,2.2nm,0.9s,mb4.1,baz=172,slow=7.1,SNR=4.1						
KURK	**Kurchatov**	**73.96**	**6**	P	**P**	**06 47 27.7**	**+0.8**
	comp=Z,2.0nm,0.7s,mb4.2,baz=204,slow=6.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**75.27**	**291**	P	**P**	**06 47 35.5**	**+0.1**
	comp=Z,2.6nm,1.1s,mb4.1,baz=122,slow=4.3,SNR=7.2						
TORD				LR	LR	07 20 11.2	
	comp=Z,611nm,18.4s,MS4.9,baz=125,slow=35						
TORD	**Torodi Ar. Bea**	**75.27**	**291**	P	**P**	**06 47 35.5**	**+0.1**
TORD				LR	LR	07 20 11.2	
BVAR	**Borovoye Array**	**75.81**	**1**	P	**P**	**06 47 36.9**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.0,baz=156,slow=7.6,SNR=7.7						
ZAA0	**Zalesovo Array**	**77.90**	**9**	eP	**P**	**06 47 48.3**	**-1.0**
ZALV	**Zalesovo Beam**	**77.90**	**9**	P	**P**	**06 47 48.4**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.4,baz=203,slow=5.6,SNR=13						
ZALV	**Zalesovo Beam**	**77.90**	**9**	P	**P**	**06 47 48.4**	**-0.9**
KIC	**Kosan Boka**	**77.91**	**282**	eP	**P**	**06 47 51.5**	**+1.1**
	comp=Z,162nm,1.8s,mb5.7						
SONM	**Songino Array**	**78.10**	**25**	P	**P**	**06 47 50.6**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=223,slow=6.1,SNR=8.6						
SONM				LR	LR	07 20 40.5	
	comp=Z,482nm,20.7s,MS4.8,baz=190,slow=34						
LIC	**Lamto**	**78.11**	**282**	eP	**P**	**06 47 52.5**	**+1.0**
	comp=Z,52nm,1.6s,mb5.2						
DBIC	**Dimbokro**	**78.15**	**283**	LR	LR	07 20 29.7	
	comp=Z,827nm,18.6s,MS5.1,baz=104,slow=34						
TIC	**Toumodi**	**78.28**	**282**	eP	**P**	**06 47 56.6**	**+4.2**
	comp=Z,9.3nm,0.2s,mb5.4						
MLR	**Muntele Rosu**	**78.81**	**331**	P	**P**	**06 47 54.3**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=154,slow=15,SNR=2.9						
AKASG	**Malin Array Be**	**81.53**	**336**	P	**P**	**06 48 08.1**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=143,slow=4.6,SNR=6.2						
KSRS	**Korea Array**	**81.68**	**43**	P	**P**	**06 48 09.6**	**-0.7**
	comp=Z,1.8nm,0.8s,mb4.1,baz=237,slow=4.3,SNR=5.3						
MTE	**Manteigas**	**95.24**	**312**	eP	**P**	**06 49 14.8**	**-0.8**
	comp=Z,33nm,1.5s,mb5.5						
YKA	**Yellowknife Ar**	**140.54**	**3**	PKhKP		06 55 16.1	
	comp=Z,0.4nm,0.9s,baz=354,slow=2.9,SNR=5.0						
YKA				PKP	PKPdf	06 55 22.1	+1.4
	comp=Z,0.5nm,1.0s,baz=346,slow=2.6,SNR=6.3						
YKA	**Yellowknife Ar**	**140.54**	**3**	PKP	PKPdf	06 55 22.1	+1.4
EDM	**Edmonton**	**149.86**	**3**	ePKPbc	PKPbc	06 55 40.5	-1.2
ULM	**Lac du Bonnet**	**150.51**	**340**	PKPbc	PKPbc	06 55 43.6	+0.1
	comp=Z,3.3nm,0.7s,baz=24,slow=17,SNR=3.2						
NVAR	**Mina Array Bea**	**163.41**	**21**	PKPab	PKPab	06 56 46.5	+0.8
	comp=Z,0.2nm,0.4s,baz=329,slow=1.6,SNR=3.1						
TXAR	**Lajitas Array**	**171.12**	**316**	PKPab	PKPab	06 57 19.9	-0.2
	comp=Z,0.5nm,0.9s,baz=77,slow=4.9,SNR=2.7						

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*DDA **16** 06:56:31.6, 39.40N×26.29E, h7km±8km, Md2.6*
*CSEM **16** 06:56:31.7±0.3, 39.39N×26.29E, h10km, MD2.6, Error ellipse: s-maj=8.9km s-min=4.5km az=80.0*
*ISCJB **16** 06:56:32.6±0.8, 39.44N±0.05×26.31E±0.09, h10km±9km, Error ellipse: s-maj=12.4km s-min=7.4km az=166.9*
*ISK **16** 06:56:34.4, 39.60N×26.10E, h5km, MD2.7*
ISC 16 06:56:32.6±0.8, **39.42N**±0.04×**26.3E**±0.1, **h14km**±8km, **n9, σ0s68**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.34**	**108**	i P	**Pg**	**06 56 39.5**	**-0.1**
AYVA				i S	**Sg**	**06 56 49.9**	**+5.5**
AYVA	**Ayvalik**	**0.34**	**108**	i P	**Pg**	**06 56 39.5**	**-0.1**
AYVA				i S	**Sg**	**06 56 49.8**	**+5.5**
EZN	**Ezine**	**0.41**	**6**	ePG	**Pg**	**06 56 41.1**	**+0.2**
EZN				eSG	**Sg**	**06 56 46.5**	**+0.1**
BOZC	**Bozcaada**	**0.46**	**339**	i P	**Pg**	**06 56 41.2**	**-0.5**
BOZC				i S	**Sg**	**06 56 48.2**	**+0.4**
GADA	**Gvkgeada**	**0.82**	**340**	ePG	**Pg**	**06 56 47.4**	**-1.2**
URLA	**Izmir**	**1.09**	**166**	i P	**Pb**	**06 56 52.1**	**-1.0**
URLA				i S	**Sg**	**06 57 08.6**	**+0.9**
BALB	**Balikesir**	**1.27**	**79**	ePN	**Pn**	**06 57 02.0**	**+6.1**
ENEZ	**Enez**	**1.32**	**356**	ePN	**Pn**	**06 56 57.9**	**+1.2**
DURS	**Dursunbey**	**1.72**	**83**	i P	**Pn**	**06 57 02.1**	**0.0**
DURS				i S	**Sn**	**06 57 23.6**	**-0.2**

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*ISCJB **16** 07:36:07.5±1.4, 3.5N±0.2×94.6E±0.2, h33km, mb4.0/5, Error ellipse: s-maj=30.0km s-min=12.3km az=136.9*
*NEIC **16** 07:36:10.0±1.3, 3.54N×94.63E, mb4.3/3, Error ellipse: s-maj=29.0km s-min=12.0km az=47.0*
*IDC **16** 07:36:10.1±2.0, 3.59N×94.64E, h37km±8km, mb3.4/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, ML3.0/2, MS2.7/1, Ms1 2.7/1, ms1mx2.5/31, Error ellipse: s-maj=75.8km s-min=18.7km az=55.0*
ISC 16 07:36:09.7±1.4, **3.5N**±0.2×**94.6E**±0.2, **h35km, (h40km**±1.0km**:pP-P), n11, σ0s86**/11, **mb4.0**/5, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.37**	**99**	Pn	**Pn**	**07 37 13.0**	**-0.7**
	1.5nm,0.3s,baz=306,slow=11,SNR=6.0						
PSI				LR	LR	07 39 00.4	
	comp=Z,87nm,19.9s,baz=184,slow=39						
PSI	**Prapat**	**4.37**	**99**	Pn	**Pn**	**07 37 13.0**	**-0.7**
PSI				LR	LR	07 39 00.4	
CMAR	**Chiang Mai Arr**	**15.43**	**16**	Pn	**Pn**	**07 39 45.3**	**+0.4**
	0.0nm,0.3s,baz=209,slow=12,SNR=5.1						
KSM	**Kuching**	**15.82**	**97**	ePn	**Pn**	**07 39 48.5**	**-1.4**
	3.6nm,0.4s						
KKM	**Kota Kinabalu**	**21.68**	**83**	P	**P**	**07 40 59.6**	**+1.9**
	20nm,1.0s,mb4.5						
MK31	**Makanchi Array**	**44.40**	**348**	eP	**P**	**07 44 16.5**	**-0.4**
MK31				epP	pP	07 44 27.3	+0.1
MKAR	**Makanchi Array**	**44.40**	**348**	P	**P**	**07 44 16.6**	**-0.2**
	0.4nm,0.4s,mb3.5,baz=169,slow=8.2,SNR=13						
MKAR				pP	pP	07 44 27.5	+0.2
	0.9nm,0.4s,baz=163,slow=7.9,SNR=8.6						
WRAB	**Tennant Creek**	**45.47**	**122**	eP	**P**	**07 44 26.4**	**+0.6**
	5.6nm,1.3s,mb4.2						
ASAR	**Alice Springs**	**46.86**	**127**	P	**P**	**07 44 37.0**	**+0.3**
	0.3nm,0.3s,mb3.7,baz=293,slow=7.5,SNR=11						
ASAR				pP	pP	07 44 48.5	+1.3
	0.2nm,0.6s,baz=298,slow=8.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**50.90**	**353**	P	**P**	**07 45 06.8**	**-0.3**
	0.5nm,0.3s,mb3.9,baz=153,slow=4.5,SNR=3.2						
ZALV				pP	pP	07 45 17.3	-0.3
	0.7nm,0.5s,baz=194,slow=10,SNR=2.1						
ZALV	**Zalesovo Beam**	**50.90**	**353**	P	**P**	**07 45 06.8**	**-0.3**
ZALV				pP	pP	07 45 17.3	-0.3

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*IDC **16** 07:47:44.3±1.2, 10.04N×126.05E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/18, mbtmp3.6/5, Error ellipse: s-maj=82.7km s-min=24.1km az=70.0*
*MAN **16** 07:47:45, 10.30N×126.22E, h2km, mb4.3, ML3.1, MS2.9*
*ISCJB **16** 07:47:49.2±1.6, 10.14N±0.08×126.3E±0.1, h49km±16km, mb3.6/5, Error ellipse: s-maj=19.5km s-min=10.6km az=153.7*
ISC 16 07:47:50.0±1.6, **10.13N**±0.07×**126.3E**±0.1, **h39km**±16km, **n13, σ1s22**/18, **mb3.6**/5, **3C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.85**	**246**⇑	eP	**Pn**	**07 48 03.0**	**-2.5**
SCPH				eS	**Sn**	**07 48 13.4**	**-3.5**
BUTP	**Butuan**	**1.33**	**210**	eP	**Pn**	**07 48 12.6**	**+0.5**
MSLP	**Maasin**	**1.40**	**270**	eP	**Pn**	**07 48 12.2**	**-0.9**
MSLP				eS	**Sn**	**07 48 30.0**	**-0.3**
PLP	**Palo**	**1.64**	**309**⇑	eP	**Pn**	**07 48 16.1**	**-0.2**
PLP				eS	**Sn**	**07 48 38.0**	**+1.7**
LLP	**Lapu-Lapu**	**2.29**	**275**	eP	**Pn**	**07 48 25.4**	**+0.2**
LLP				eS	**Sn**	**07 48 52.5**	**+0.3**
BUKP	**Musuan**	**2.54**	**208**	eP	**Pn**	**07 48 30.6**	**+1.8**
BUKP				eS	**Sn**	**07 49 03.2**	**+4.7**
RCP	**Roxas**	**3.75**	**293**⇑	eP	**Pn**	**07 48 47.0**	**+1.5**
PVCP	**Virac**	**4.03**	**329**	eP	**Pn**	**07 48 46.5**	**-2.6**
ASAR	**Alice Springs**	**34.41**	**168**	P	**P**	**07 54 33.1**	**-0.6**
	0.2nm,0.4s,mb3.4,baz=352,slow=6.6,SNR=11						
SONM	**Songino Array**	**41.15**	**340**	P	**P**	**07 55 30.5**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=160,slow=9.2,SNR=3.3						
MKAR	**Makanchi Array**	**52.14**	**323**	P	**P**	**07 56 55.4**	**-1.1**
	0.6nm,0.7s,mb3.6,baz=120,slow=7.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**54.75**	**331**	P	**P**	**07 57 15.6**	**+0.1**
	0.3nm,0.3s,mb3.8,baz=126,slow=7.3,SNR=2.1						
YKA	**Yellowknife Ar**	**93.88**	**24**	P	**P**	**08 01 04.3**	**+1.1**
	0.3nm,0.7s,mb3.9,baz=299,slow=4.5,SNR=9.5						

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*NEIC **16** 07:50:20.0, 36.94N×29.27E, h16km, MD3.5(ISK), ML3.2(ATH), After ISK.*
*CSEM **16** 07:50:20.9±0.1, 36.98N×29.29E, h10km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.2km az=25.0*
*ISK **16** 07:50:21.0, 36.95N×29.26E, h14km, MD3.5*
*DDA **16** 07:50:21.1, 36.97N×29.20E, h21km±2km, Md3.3*
*ISCJB **16** 07:50:21.4±0.5, 36.94N±0.03×29.28E±0.03, h13km±4km, Error ellipse: s-maj=4.3km s-min=3.5km az=9.0*
*HLW **16** 07:50:21.2, 36.95N×28.58E, h33km, Mb3.3*
ISC 16 07:50:22.0±0.6, **36.95N**±0.02×**29.27E**±0.03, **h11km**±4km, **n65, σ0s86**/81, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.37**	**39**	i P	**Pg**	**07 50 28.6**	**-0.7**
GOLH				i S	**Sg**	**07 50 35.3**	**+1.2**
TURN	**Turunc**	**0.54**	**262**	i P	**Pg**	**07 50 36.4**	**+3.9**
TURN				i S	**Sg**	**07 50 47.7**	**+8.0**
ELL	**Elmali**	**0.55**	**112**	ePG	**Pg**	**07 50 32.2**	**-0.5**
ELL				eSG	**Sg**	**07 50 40.9**	**+0.9**
ELL	**Elmali**	**0.55**	**112**	Pg	**Pg**	**07 50 32.2**	**-0.5**
ELL				eSg	**Sg**	**07 50 40.9**	**+0.9**
YER	**Yerkesik**	**0.81**	**283**	ePG	**Pg**	**07 50 37.2**	**-0.4**
YER				eSG	**Sg**	**07 50 48.4**	**+0.2**
DENT	**Denizli**	**0.82**	**347**	ePG	**Pg**	**07 50 37.1**	**-0.7**
ANTB	**Antalya**	**1.11**	**92**	ePN	**Pn**	**07 50 42.3**	**-1.3**
BCK	**Bucak**	**1.17**	**64**	ePN	**Pn**	**07 50 43.3**	**-1.0**
ARG	**Arkhangelos**	**1.18**	**232**	eP	**Pb**	**07 50 43.1**	**-1.3**
ARG	**Arkhangelos**	**1.18**	**232**	P	**Pb**	**07 50 43.7**	**-0.7**
MLSB	**Milas**	**1.24**	**286**	ePN	**Pn**	**07 50 44.6**	**-0.8**
ISP	**Isparta**	**1.33**	**48**	ePN	**Pn**	**07 50 46.0**	**-0.6**
ISP	**Isparta**	**1.33**	**48**	P	**Pn**	**07 50 47.0**	**+0.5**
ISP	**Isparta**	**1.33**	**48**	P	**Pn**	**07 50 47.0**	**+0.5**
DAT	**Datca**	**1.38**	**261**	ePN	**Pn**	**07 50 45.9**	**-1.3**
KHL	**Karahalli**	**1.38**	**8**	ePN	**Pn**	**07 50 46.9**	**-0.4**
KHAL	**Karahalli**	**1.43**	**7**	i P	**Pn**	**07 50 47.8**	**-0.1**
KHAL				i S	**Sn**	**07 51 06.9**	**+0.3**
BDRM	**Kayabasi**	**1.47**	**275**	i P	**Pn**	**07 50 48.5**	**0.0**
BDRM				i S	**Sn**	**07 51 10.0**	**+2.4**
KULA	**Kula-Manisa**	**1.63**	**343**	ePN	**Pn**	**07 50 50.5**	**-0.2**
MANT	**Manisa**	**1.64**	**340**	i P	**Pn**	**07 50 50.4**	**-0.4**
MANT				i S	**Sn**	**07 51 10.6**	**-1.2**
GCAM	**G?zelcaml?**	**1.79**	**295**	i P	**Pn**	**07 50 52.9**	**0.0**
GCAM				i S	**Sn**	**07 51 16.0**	**+0.4**
SHUT	**Suhut-Afyon**	**1.89**	**32**	ePN	**Pn**	**07 50 54.2**	**-0.1**
SMG	**Samos**	**2.08**	**292**	eP	**Pn**	**07 50 56.8**	**-0.1**
SMG	**Samos**	**2.08**	**292**	P	**Pn**	**07 50 57.0**	**+0.1**
GDZ	**Gediz**	**2.14**	**4**	i P	**Pn**	**07 50 56.6**	**-1.0**
GDZ				i S	**Sn**	**07 51 24.3**	**+0.1**
IZM	**Izmir**	**2.15**	**313**	ePN	**Pn**	**07 50 57.9**	**+0.1**
ALT	**Altintas**	**2.20**	**17**	ePN	**Pn**	**07 50 57.9**	**-0.7**
BOLV	**Bolvadin**	**2.21**	**37**	i P	**Pn**	**07 50 59.3**	**+0.7**
BOLV				i S	**Sn**	**07 51 29.9**	**+4.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KARP	**Karpathos**	**2.21**	**231**	*e*P	**Pn**	**07 51 00.0**	**+1.4**
KARP	**Karpathos**	**2.21**	**231**	P	**Pn**	**07 51 01.5**	**+2.9**
AKHS	**Akhisar**	**2.24**	**329**	*i* P	**Pn**	**07 50 58.2**	**-0.9**
AKHS				*i* S	**Sn**	**07 51 26.6**	**-0.2**
AKS	**Akhisar**	**2.24**	**329**	*e*PN	**Pn**	**07 50 58.7**	**-0.4**
BLCB	**Balcova**	**2.27**	**310**	*e*PN	**Pn**	**07 50 59.9**	**+0.3**
KONT	**Konya--Tatoy**	**2.65**	**67**	*e*PN	**Pn**	**07 51 04.3**	**-0.4**
LADK	**Ladik-KONYA**	**2.75**	**62**	*e*PN	**Pn**	**07 51 06.0**	**-0.1**
KIZT	**Kizilcal**	**2.82**	**46**	*e*PN	**Pn**	**07 51 06.6**	**-0.5**
ESKT	**Eskisehir**	**2.85**	**25**	*i* P	**Pn**	**07 51 07.3**	**-0.1**
ESKT				*i* S	**Sn**	**07 51 42.1**	**+0.4**
ESKT	**Eskisehir**	**2.85**	**25**	*e*Pn	**Pn**	**07 51 07.5**	**+0.1**
SEYT	**Eskypehyr**	**2.85**	**25**	*i* P	**Pn**	**07 51 07.3**	**-0.1**
SEYT				*i* S	**Sn**	**07 51 42.1**	**+0.4**
BALB	**Balikesir**	**2.90**	**338**	*e*PN	**Pn**	**07 51 08.1**	**0.0**
APE	**Apeiranthos**	**3.00**	**273**	*e*P	**Pn**	**07 51 10.0**	**+0.5**
APE	**Apeiranthos**	**3.00**	**273**	P	**Pn**	**07 51 11.5**	**+2.0**
PRK	**Paraskevi**	**3.29**	**315**	*e*P	**Pn**	**07 51 13.6**	**+0.1**
PRK	**Paraskevi**	**3.29**	**315**	P	**Pn**	**07 51 14.8**	**+1.3**
NPS	**Neapolis**	**3.41**	**241**	*e*P	**Pn**	**07 51 16.7**	**+1.6**
NPS	**Neapolis**	**3.41**	**241**	P	**Pn**	**07 51 17.5**	**+2.4**
LEF	**Lefka**	**3.46**	**121**	*e*PN	**Pn**	**07 51 15.3**	**-0.5**
GEMT	**Gemlik**	**3.48**	**359**	*e*PN	**Pn**	**07 51 16.7**	**+0.6**
ADVT	**Abdulvahap**	**3.49**	**6**	*e*PN	**Pn**	**07 51 16.2**	**-0.1**
GULT	**Gulveren**	**3.61**	**15**	*e*PN	**Pn**	**07 51 17.6**	**-0.3**
YLV	**Yalova**	**3.61**	**1**	*e*PN	**Pn**	**07 51 18.6**	**+0.8**
IKL	**Isikli**	**3.62**	**100**	*e*PN	**Pn**	**07 51 18.5**	**+0.4**
EZN	**Ezine**	**3.69**	**322**	*e*PN	**Pn**	**07 51 18.5**	**-0.4**
LFK	**Lefkose**	**3.83**	**115**	*e*PN	**Pn**	**07 51 21.3**	**+0.3**
MERS	**Mersin**	**4.21**	**90**	*e*PN	**Pn**	**07 51 26.7**	**+0.5**
KAMT	**Kaman**	**4.25**	**54**	*e*PN	**Pn**	**07 51 27.2**	**+0.5**
BR131	**Keskin Array S**	**4.41**	**50**	*e*Pn	**Pn**	**07 51 30.2**	**+1.3**
BR131	**Keskin Array S**	**4.41**	**50**	*e*Pn	**Pn**	**07 51 30.2**	**+1.3**
KARA	**Karaisali**	**4.63**	**84**	*e*PN	**Pn**	**07 51 32.9**	**+0.9**
HMAT	**Matruh**	**6.12**	**198**	P	**Pn**	**07 51 47.9**	**-4.5**
SLUM		**6.40**	**213**	P	**Pn**	**07 51 49.2**	**-7.0**
SLUM				S	**Sn**	**07 52 54.1**	**-15**
AMAG	**Maghara**	**7.09**	**151**	P	**Pn**	**07 52 07.1**	**+1.3**
GLL	**Jalalah**	**7.63**	**164**	P	**Pn**	**07 52 13.2**	**0.0**
SUZ		**7.69**	**156**	P	**Pn**	**07 52 14.4**	**+0.4**
SUZ				S	**Sn**	**07 53 37.9**	**-3.3**
HFRF	**Wahat Farafira**	**9.81**	**185**	P	**Pn**	**07 52 40.8**	**-2.3**

*LDG **16** 08:09:15.6±0.3, 2145S×7022W, h10km, Mb6.1/43, Ms6.4/10, Error ellipse: s-maj=18.5km s-min=8.6km az=2.0*
*DJA **16** 08:09:16, 23.18S×6979W, h10km, Mw7.2/10*
*IDC **16** 08:09:16.3±1.7, 2291S×7009W, h34km±12km, mb5.7/33, mb1 5.7/38, mb1mx5.7/38, mbtmp5.6/38, ML4.8/5, MS6.3/21, Ms1 6.3/21, ms1mx6.1/25, Error ellipse: s-maj=11.5km s-min=8.4km az=74.0*
*MOS **16** 08:09:16.8±1.2, 2275S×7028W, h42km, mb6.4/98, MS6.4/63, Error ellipse: s-maj=7.6km s-min=4.9km az=83.6*
*BJI **16** 08:09:17.9, 2300S×7020W, h45km, mB6.5, Ms6.8, Msz6.8*
*NEIC **16** 08:09:17.9±0.1, 2295S×70.18W, h45km, mb6.2/245, ME6.5, MS6.4/205, MW6.7, Error ellipse: s-maj=4.3km s-min=3.4km az=46.0, Moment Tensor Solution. s133 Moment tensor: Scale 10^{19}Nm; M_{rr}0.37; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-0.38; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.18; $M_{\phi r}$1.08; Best double couple: $M_0$1.20000×10^{19} NP1:ϕ_s222.00000°, δ12.00000°, λ127.00000°. NP2:ϕ_s5.00000°, δ80.00000°, λ83.00000°. Principal axes: T 1.1400, Plg54.0000°, Azm265.0000°; N 0.0400, Plg7.0000°, Azm6.0000°; P -1.1800, Plg34.0000°, Azm101.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s185.00000°, δ5.00000°, λ90.00000°. NP2: ϕ_s5.00000°, δ85.00000°, λ90.00000°. Principal axes: T Plg50.0000°, Azm275.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm95.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [VI] at Baquedano, Maria Elena, Mejillones, Sierra Gorda and Tocopilla; [V] at Antofagasta, Calama, Iquique and San Pedro de Atacama; [IV] at Alto Hospicio, Huara, Pica, Pozo Almonte and Taltal. Also felt at Arica and Copiapo. Felt [II] at Arequipa, Peru. Power and communications disrupted throughout the epicentral area from Antofagasta to Iquique.
*GUC **16** 08:09:17.0±1.1, 2296S×7020W, h45km±2km, ML6.1, MS5.9*
*GCMT **16** 08:09:17.9±0.1, 2302S×7041W, h31km, MW6.7/113, Moment Tensor Solution. s113,c283; s112,c383; Duration: 5s5 Moment tensor: Scale 10^{19}Nm; M_{rr}0.13±.00; $M_{\theta\theta}$-0.03±.00; $M_{\phi\phi}$-0.10±.00; $M_{r\theta}$-0.09±.01; $M_{\theta\phi}$-0.14±.00; $M_{\phi r}$1.45±.02; Best double couple: $M_0$1.46400×10^{19} NP1:ϕ_s246.00000°, δ6.00000°, λ159.00000°. NP2:ϕ_s357.00000°, δ88.00000°, λ84.00000°. Principal axes: T 1.4850, Plg47.0000°, Azm261.0000°; N -0.0420, Plg6.0000°, Azm357.0000°; P -1.4430, Plg43.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BGS **16** 08:09:18.2±1.9, 2295S×70.18W, h45km, mb6.1, MS6.3*
*ISCJB **16** 08:09:18.1±0.1, 2292S±0.02×7023W±0.02, h55km, mb6.1/302, MS6.4/263, Error ellipse: s-maj=3.0km s-min=2.5km az=29.2*
*IGIL **16** 08:09:19.2, 2291S×7006W, h58km, MS6.5*
*SZGRF **16** 08:09:30.7, 2162S×6878W, h48km, mb6.4, Chile-Bolivia border region*

ISC 16 08:09:20.0±0.1**, 2289S**±0.02×**7013W**±0.02**, h57**km**, h57**km±1.1km**:pP-P, n1622, σ0.97**/1154**, mb6.1**/301**, MS6.4**/263**, 234C-180D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.36**	**234**	⇓*i*P	**Pn**	**08 09 25.1**	**-5.3**
MECH				*i* S	**Sn**	**08 09 31.3**	**-6.5**
MECH				AML	AML	08 09 40.3	
	comp=E,1577µm,0.7s						
PB06	**Plate Boundary**	**0.55**	**71**	⇑*i*P	**Pn**	**08 09 30.1**	**-2.1**
PB06				*i* S	**Sn**	**08 09 40.0**	**-1.1**
MACH	**Maria Elena**	**0.77**	**27**	*e*P	**Pn**	**08 09 33.5**	**-1.5**
MACH				*i* S	**Sn**	**08 09 45.9**	**0.0**
TOCH	**Tocopilla**	**0.79**	**355**	*e*P	**Pn**	**08 09 32.9**	**-2.4**
TOCH				*i* S	**Sn**	**08 09 44.9**	**-1.6**
TOCH				AML	AML	08 09 48.9	
	comp=E,1653µm,0.3s						
PB04	**Plate Boundary**	**0.86**	**44**	⇑*i*P	**Pn**	**08 09 30.0**	**-6.1**
PB04				*i* S	**Sn**	**08 09 40.4**	**-7.5**
PB04				AML	AML	08 09 47.1	
	comp=E,1425µm,0.6s						
LVC	**Limon Verde**	**1.16**	**77**	Pg	**Pn**	**08 09 39.3**	**-0.7**
	comp=E,17µm,0.3s,baz=251,slow=12						
LVC	**Limon Verde**	**1.16**	**77**	*e*Pg	**Pn**	**08 09 39.5**	**-0.6**
LVC				*e*Sg	**Sn**	**08 09 54.1**	**-0.8**
LVC	**Limon Verde**	**1.16**	**77**	⇑*i*P	**Pn**	**08 09 38.9**	**-1.1**
LVC				*i* S	**Sn**	**08 09 56.0**	**+1.1**
LVC				AML	AML	08 09 60.0	
	comp=N,510µm,0.4s						
PB07	**Plate Boundary**	**1.18**	**11**	*e*P	**Pn**	**08 09 39.6**	**-0.7**
PB07				*i* S	**Sn**	**08 09 55.7**	**+0.3**
CPN1	**Cerro Paranal**	**1.75**	**188**	AML	AML	08 10 13.3	
	comp=E,432µm,0.4s						
PB01	**Plate Boundary**	**1.93**	**18**	⇓*i*P	**Pn**	**08 09 50.0**	**-0.5**
PB01				*i* S	**Sn**	**08 10 14.6**	**+1.0**
PB01				AML	AML	08 10 21.6	
	comp=E,574µm,0.4s						
LCO	**Las Campanas**	**6.12**	**185**	*e*Pn	**Pn**	**08 10 43.0**	**-4.8**
	comp=E,4µm,0.6s						
LCO				*e*Sn	**Sn**	**08 11 57.8**	**+1.3**
ARE	**Arequipa**	**6.52**	**348**	⇑*i*P	**Pn**	**08 10 50.0**	**-3.4**
ARE				*e*S	**Sn**	**08 12 04.0**	**-2.4**
CFAA	**Coronel Fontan**	**8.84**	**169**	Pn	**Pn**	**08 11 19.8**	**-5.4**
	comp=E,3.2nm,0.3s,baz=346,slow=12,SNR=273						
CFAA				Sn	**Sn**	**08 13 02.1**	**-1.2**
	comp=E,3.6nm,0.3s,baz=2.6,slow=14,SNR=2.0						
CFAA				LR	LR	08 15 20.9	
	comp=E,39µm,18.6s,baz=336,slow=41						
CFAA	**Coronel Fontan**	**8.84**	**169**	Pn	**Pn**	**08 11 19.8**	**-5.4**
CFAA				Sn	**Sn**	**08 13 02.1**	**-1.2**
CFAA				LR	LR	08 15 20.9	
PEL	**Peldehue**	**10.23**	**183**	AMS	AMS	08 15 23.3	
	comp=E,397µm,22.1s						
FCH	**Farellones**	**10.40**	**181**	AMS	AMS	08 15 24.0	
	comp=E,157µm,20.3s						
CLCH	**Cerro Calan**	**10.47**	**182**	AMS	AMS	08 15 21.3	
	comp=E,132µm,19.7s						
LMEL	**Las Melosas**	**10.92**	**180**	AMS	AMS	08 16 23.6	
	comp=E,133µm,21.8s						
SIV	**San Ignacio**	**10.95**	**53**	Pn	**Pn**	**08 11 50.5**	**-3.6**
	comp=E,17nm,0.3s,baz=247,slow=13,SNR=172						
SIV				Sn	**Sn**	**08 13 54.4**	**-0.8**
	baz=318,slow=23,SNR=4.5						
CPUP	**Villa Florida**	**12.14**	**109**	Pn	**Pn**	**08 12 07.4**	**-2.8**
	comp=E,1.9nm,0.3s,baz=275,slow=12,SNR=78						
CPUP				LR	LR	08 17 32.1	
	comp=E,599µm,18.2s,baz=264,slow=41						
CPUP	**Villa Florida**	**12.14**	**109**	*e*P	**Pn**	**08 12 06.7**	**-3.5**
CPUP				*e*		08 14 38.4	
CPUP				pmax	pmax		
	comp=Z,370nm,1.3s						
CPUP	**Villa Florida**	**12.14**	**109**	*e*Pn	**Pn**	**08 12 06.7**	**-3.5**
	comp=Z,370nm,1.3s						
CPUP				*e*Sn	**Sn**	**08 14 38.4**	**+14**
NNA	**Nana**	**12.59**	**328**	Pn	**Pn**	**08 12 16.9**	**+0.5**
	comp=Z,2µm,0.8s,SNR=16						
NNA	**Nana**	**12.59**	**328**	Pn	**Pn**	**08 12 13.5**	**-2.9**
	comp=Z,6.3nm,0.3s,baz=154,slow=14,SNR=37						
NNA				Sn	**Sn**	**08 14 30.8**	**-4.2**
	comp=Z,37nm,0.3s,baz=230,slow=18,SNR=5.6						
NNA				LR	LR	08 16 42.8	
	comp=Z,195µm,21.9s,baz=149,slow=35						
NNA	**Nana**	**12.59**	**328**	P	**Pn**	**08 12 16.1**	**-0.3**
NNA				*e*Sn	**Sn**	**08 14 31.8**	**-3.3**
LPA	**La Plata**	**16.03**	**141**	*ce*P	**Pn**	**08 12 57.0**	**-4.7**
	comp=Z,807nm,0.9s						
LPA				*e*pP	pP	08 13 07.0	-10
LPA				*e*S	**S**	**08 16 09.0**	**-0.5**
TRQA	**Tornquist**	**16.66**	**157**	*e*Pn	**Pn**	**08 13 06.3**	**-3.3**
	comp=Z,4µm,1.4s						
TRQA				*e*Sn	**Sn**	**08 16 11.0**	**-2.7**
ATAH	**Atahualpa**	**17.69**	**332**	P	**Pn**	**08 13 19.5**	**-3.0**
	comp=Z,1.4nm,0.3s,baz=156,slow=10,SNR=64						
ATAH				S	**S**	**08 16 36.6**	**-6.9**
	comp=Z,1.4nm,0.3s,baz=316,slow=12,SNR=1.7						
BDFB	**Brasilia**	**22.07**	**75**	P	**P**	**08 14 07.3**	**-3.0**
	comp=Z,346nm,1.0s,mb5.7,baz=237,slow=18,SNR=123						
BDFB				S	**S**	**08 18 07.1**	**-3.5**
	comp=Z,79nm,0.9s,baz=344,slow=23,SNR=1.9						
BDFB				LR	LR	08 24 11.1	
	comp=Z,117µm,18.3s,MS6.3,baz=64,slow=41						
BDFB	**Brasilia**	**22.07**	**75**	P	**P**	**08 14 07.3**	**-3.0**
BDFB				S	**S**	**08 18 07.1**	**-3.5**
OTAV	**Otavalo**	**24.37**	**339**	*e*P	**P**	**08 14 33.6**	**+0.7**
	comp=Z,3µm,1.7s,mb6.5						
OTAV				*e*pP		08 14 48.9	
OTAV				LR	LR		
	comp=Z,66µm,20.0s,MS6.1						
CAM4	**Nova Friburgo**	**25.44**	**94**	⇑*i*P	**P**	**08 14 40.7**	**-2.0**
CAM4				*i*		08 14 42.3	
CAM4				*i*		08 14 43.1	
CAM4				*i*		08 14 45.5	
CAM4				*i*		08 14 48.8	
CAM4				*i*	pP	08 14 57.8	+1.1
CAM4				*i*		08 15 02.3	
CAM4				*i*		08 15 08.5	
CAM4				*i*		08 15 30.1	
CAM4				*i*		08 23 08.4	
CAM3	**Guarapari**	**27.55**	**91**	⇑*i*P	**P**	**08 14 59.1**	**-2.6**
CAM3				*i*		08 15 00.1	
CAM3				*i*		08 15 01.7	
CAM3				*i*		08 15 04.1	
CAM3				*i*		08 15 07.6	
CAM3				*i*	pP	08 15 12.4	-3.5
CAM3				*i*	pP	08 15 15.0	-0.8
CAM3				*i*		08 15 21.3	
CAM3				*i*		08 15 26.7	
CHI2		**27.59**	**352**	*e*P	x	08 16 41.2	
ROSC	**El Rosal**	**27.88**	**351**	P	**P**	**08 15 03.9**	**-0.7**
	comp=Z,40nm,0.6s,mb5.3,baz=197,slow=1.4,SNR=22						
ROSC				S	**S**	**08 19 40.4**	**-3.8**
	comp=Z,27nm,1.0s,baz=88,slow=21,SNR=1.3						
ROSC				LR	LR	08 27 10.9	
	comp=Z,85µm,18.8s,MS6.3,baz=192,slow=38						
ROSC	**El Rosal**	**27.88**	**351**	*e*P	**P**	**08 15 05.0**	**+0.4**
ROSC				*e*S	**S**	**08 19 48.1**	**+4.0**
PAYG	**Puerto Ayora**	**29.52**	**316**	*e*P	**P**	**08 15 19.5**	**+0.3**
PAYG	**Puerto Ayora**	**29.52**	**316**	*e*P	**P**	**08 15 19.8**	**+0.5**
	comp=Z,242nm,0.9s,mb5.9						
PAYG				*e*pP	pP	08 15 33.8	+0.3
PAYG				LR	LR		
	comp=Z,133µm,22.0s,MS6.5						
EFI	**East Falkland**	**30.21**	**165**	P	**P**	**08 15 22.9**	**-2.1**
	comp=Z,2µm,0.8s,mb6.8,SNR=8.3						
EFI	**East Falkland**	**30.21**	**165**	*d i*P	**P**	**08 15 23.7**	**-1.3**
EFI				*i* *PP	pP	08 15 39.6	+0.4
EFI	**East Falkland**	**30.21**	**165**	*e*P	**P**	**08 15 23.2**	**-1.8**
	comp=Z,499nm,1.3s,mb6.1						
EFI				LR	LR		
	comp=Z,97µm,20.0s,MS6.4						
SDV	**Santo Domingo**	**31.58**	**359**	P	**P**	**08 15 35.4**	**-1.9**
	comp=Z,82nm,0.9s,mb5.6,baz=264,slow=3.0,SNR=17						
SDV				S	**S**	**08 20 35.1**	**-7.1**
	comp=Z,23nm,1.0s,baz=270,slow=18,SNR=1.9						
SDV	**Santo Domingo**	**31.58**	**359**	*e*P	**P**	**08 15 35.4**	**-1.9**
SDV	**Santo Domingo**	**31.58**	**359**	*e*P	**P**	**08 15 35.5**	**-1.9**
	comp=Z,136nm,1.0s,mb5.7						
SDV				LR	LR		
	comp=Z,34µm,20.0s,MS6.0						
USHA	**Ushuaia**	**31.93**	**178**	P	**P**	**08 15 37.8**	**-2.2**
	comp=Z,33nm,0.5s,mb5.5,baz=354,slow=6.2,SNR=69						
USHA				S	**S**	**08 20 39.9**	**-7.1**
	comp=Z,29nm,1.2s,baz=29,slow=7.2,SNR=1.5						
USHA				LR	LR	08 30 39.9	
	comp=Z,83µm,18.2s,MS6.5,baz=344,slow=40						
BCIP	**Isla Barro Col**	**33.24**	**342**	*e*P	**P**	**08 15 52.6**	**+0.7**
BCIP	**Isla Barro Col**	**33.24**	**342**	*e*P	**P**	**08 15 52.2**	**+0.3**
	comp=Z,346nm,1.1s,mb6.2						
BCIP				*e*pP	pP	08 16 11.9	+5.6
BCIP				LR	LR		
	comp=Z,59µm,22.0s,MS6.2						
PCRV	**Puerto La Cruz**	**33.30**	**10**	P	**P**	**08 15 50.8**	**-1.6**
	comp=Z,26nm,0.6s,mb5.3,baz=190,slow=3.9,SNR=11						
PCRV				S	**S**	**08 21 04.3**	**-4.6**
	comp=Z,20nm,0.9s,baz=90,slow=14,SNR=2.2						
ACR	**Cerro Adams**	**33.85**	**336**	⇑*e*P	**P**	**08 15 58.2**	**+1.0**
TBH	**Brigand Hill**	**34.33**	**16**	*e*P	pP	08 16 13.5	-2.3
TRN	**Trinidad (W)**	**34.41**	**15**	*e*P	sP	08 16 17.2	-5.8
BAR1		**34.44**	**337**	*e*P	**P**	**08 16 03.5**	**+1.2**
QCR	**Quepos**	**34.93**	**335**	⇑*e*P	**P**	**08 16 07.4**	**+0.9**
TPR	**Prospect**	**35.08**	**16**	*e*P	**P**	**08 16 10.2**	**+2.4**
URSC	**Urasca**	**35.16**	**336**	⇑*e*P	**P**	**08 16 09.8**	**+1.2**
LAJ	**Bijagual**	**35.32**	**336**	*e*P	**P**	**08 16 11.4**	**+1.5**
PRS1	**Puriscal**	**35.50**	**335**	*e*P	**P**	**08 16 13.5**	**+2.1**
CGA2	**Cerro Gallo 2**	**35.59**	**335**	*e*P	**P**	**08 16 14.0**	**+1.8**
RPN	**Rapa Nui**	**35.68**	**255**	P	**P**	**08 16 12.9**	**-0.1**
	comp=Z,4µm,1.1s,mb7.2,SNR=7.9						
RPN	**Rapa Nui**	**35.68**	**255**	P	**P**	**08 16 12.8**	**-0.2**
	comp=Z,574nm,1.0s,mb6.5,baz=93,slow=3.5,SNR=19						
RPN				LR	LR	08 26 58.9	
	comp=Z,78µm,19.0s,MS6.5,baz=79,slow=30						
RPN	**Rapa Nui**	**35.68**	**255**	*e*P	**P**	**08 16 12.2**	**-0.7**
	comp=Z,796nm,1.1s,mb6.6						
RPN				LR	LR		
	comp=Z,95µm,19.0s,MS6.6						
JCR	**Jicaral**	**35.69**	**334**	*e*P	**P**	**08 16 14.1**	**+1.0**
GRGR	**Grenville**	**35.78**	**14**	*e*P	**P**	**08 16 13.7**	**-0.1**
	comp=Z,688nm,1.4s,mb6.4						
GRGR				LR	LR		
	comp=Z,69µm,19.0s,MS6.4						
GRW	**Mount Saint Ca**	**35.80**	**14**	*e*P	**P**	**08 16 15.5**	**+1.5**
VCR	**Vista de Mar**	**36.15**	**334**	*e*P	**P**	**08 16 17.9**	**+0.8**
RCBR	**Riachuelo**	**37.10**	**68**	*e*P	**P**	**08 16 24.3**	**-0.9**
	comp=Z,3µm,1.1s,mb7.0						
RCBR				*e*pP	pP	08 16 37.5	-2.2
RCBR				*e*PP	PP	08 17 51.2	+0.5
RCBR				LR	LR		
	comp=Z,167µm,21.0s,MS6.8						
BBGH	**Gun Hill**	**37.27**	**17**	PFAKE		08 16 40.0	+13
BBGH				LR	LR		
	comp=Z,118µm,22.0s,MS6.6						
SSN	**San Juan del S**	**37.31**	**334**	*e*P	**P**	**08 16 27.6**	**+0.8**
CONN	**Concepcion**	**37.45**	**334**	*e*P	**P**	**08 16 28.8**	**+0.7**
APON	**Apoyo**	**37.95**	**334**	*e*P	**P**	**08 16 33.0**	**+0.7**
CRUN	**El Crucero**	**38.10**	**334**	*e*P	**P**	**08 16 34.9**	**+1.3**
WILN	**Americas 2**	**38.22**	**334**	*e*P	**P**	**08 16 34.2**	**-0.4**
MGAN	**Managua**	**38.23**	**334**	*e*P	**P**	**08 16 34.7**	**0.0**
MGAN	**Managua**	**38.23**	**334**	P	**P**	**08 16 36.5**	**+1.9**
TISN	**Laguna Tiscapa**	**38.23**	**334**	*e*P	**P**	**08 16 34.8**	**+0.1**
XAVN	**Gruta Xavier**	**38.26**	**334**	*e*P	**P**	**08 16 35.0**	**+0.1**
CSAN		**38.33**	**334**	*e*P	**P**	**08 16 35.2**	**-0.3**
HUEN		**38.37**	**334**	*e*P	**P**	**08 16 36.1**	**+0.2**
FDF	**Fort de France**	**38.41**	**14**	*e*P	**P**	**08 16 34.4**	**-1.7**
FDF				pmax	pmax		
	comp=Z,477nm,0.8s,mb6.3						
FDF				MLR	MLR		
	comp=Z,70µm,20.0s,MS6.5						
FDF	**Fort de France**	**38.41**	**14**	*e*P	**P**	**08 16 33.1**	**-3.0**
FDF	**Fort de France**	**38.41**	**14**	*e*P	**P**	**08 16 34.4**	**-1.7**
	comp=Z,477nm,0.8s,mb6.3						
FDF				LR	LR		
	comp=Z,70µm,20.0s,MS6.5						
MOMN	**Momotombo**	**38.59**	**334**	*e*P	**P**	**08 16 38.0**	**+0.3**
MIRN	**Miramar**	**38.69**	**334**	*e*P	**P**	**08 16 37.7**	**-0.8**
CNGN	**Cerro Negro**	**38.73**	**334**	*e*P	**P**	**08 16 38.4**	**-0.5**
CNGN	**Cerro Negro**	**38.73**	**334**	P	**P**	**08 16 38.7**	**-0.2**
TEL3	**Telica 3**	**38.86**	**333**	*e*P	**P**	**08 16 39.3**	**-0.6**
CRIN	**San Cristobal**	**39.06**	**333**	*e*P	**P**	**08 16 41.6**	**0.0**
CRIN	**San Cristobal**	**39.06**	**333**	P	**P**	**08 16 42.9**	**+1.3**
CNCH	**Conchagua**	**39.91**	**333**	*e*P	x	08 16 48.4	
BLLM	**Bellamira**	**40.23**	**332**	*e*P	x	08 16 50.8	
BLLM				*e*P	x	08 16 54.3	
VSM	**San Miguel**	**40.23**	**332**	*e*P	x	08 16 50.9	
VSM				*e*P	x	08 16 51.3	
TGUH	**Tegucigalpa,Un**	**40.37**	**334**	*e*P	**P**	**08 16 52.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**40.37**	**334**	*e*P	**P**	**08 16 52.5**	**0.0**
	comp=Z,546nm,0.9s,mb6.3						
TGUH				LR	LR		
	comp=Z,29µm,21.0s,MS6.1						
CAHU	**Cacacuatique**	**40.51**	**332**	*e*P	x	08 16 53.9	
ICM	**Isla Caja Muer**	**40.68**	**5**	*e*P	**P**	**08 16 53.5**	**-1.5**
CRPR	**Cabo Rojo, PR**	**40.75**	**4**	*e*P	**P**	**08 16 53.2**	**-2.4**
	comp=Z,430nm,1.4s,mb5.9						
OBIP	**Obispado Ponce**	**40.82**	**5**	*e*P	**P**	**08 16 55.0**	**-1.1**
LBRS	**Las Brisas**	**40.84**	**331**	*e*P	x	08 16 57.0	
CELP	**Cerrillos**	**40.86**	**5**	*e*P	**P**	**08 16 52.2**	**-4.2**
LSP	**Las Mesas**	**40.92**	**4**	*e*P	**P**	**08 16 54.6**	**-2.3**
SJG	**San Juan**	**40.93**	**6**	*e*P	**P**	**08 16 54.5**	**-2.6**
SJG	**San Juan**	**40.93**	**6**	*e*P	**P**	**08 16 54.2**	**-2.8**
	comp=Z,449nm,0.8s,mb6.2						
SJG				*e*pP	pP	08 17 07.5	-4.2
SJG				LR	LR		
	comp=Z,64µm,20.0s,MS6.5						
BOQS	**Boqueron**	**40.95**	**331**	*e*P	x	08 16 58.1	
MPR	**Mayaguez**	**40.95**	**4**	*e*P	**P**	**08 16 54.8**	**-2.4**
HUMP	**Col San Antoni**	**40.99**	**6**	*e*P	**P**	**08 16 55.3**	**-2.2**
	comp=Z,772nm,1.5s,mb6.1						
LRS	**Lares**	**41.05**	**5**	*e*P	**P**	**08 16 55.4**	**-2.6**
ANWB	**Willy Bob**	**41.12**	**12**	*e*P	**P**	**08 16 56.6**	**-2.1**
	comp=Z,298nm,1.0s,mb5.9						
ANWB				LR	LR		
	comp=Z,42µm,21.0s,MS6.3						
SBLS	**San Blas**	**41.19**	**331**	*e*P	x	08 16 59.6	
SNJE	**San Jose**	**41.21**	**331**	*e*P	x	08 16 59.8	
RTR	**El Retiro**	**41.25**	**331**	*e*P	x	08 17 00.2	
STVI	**Saint Thomas**	**41.30**	**7**	*e*P	**P**	**08 16 59.0**	**-1.0**
RBDL	**Robledal**	**41.46**	**331**	*e*P	x	08 17 02.2	
MTDJ	**Mount Denham**	**41.50**	**349**	*e*P	**P**	**08 17 01.8**	**+0.1**
MTDJ				*e*pP	pP	08 17 20.0	+3.6
MTO2	**Montecristo 2**	**41.57**	**331**	*e*P	x	08 17 02.7	
SDDR	**Presa de Saban**	**41.63**	**358**	*e*P	**P**	**08 17 02.1**	**-0.6**
SDDR	**Presa de Saban**	**41.63**	**358**	*e*P	**P**	**08 17 01.2**	**-1.6**
	comp=Z,172nm,1.1s,mb5.6						
SDDR				LR	LR		
	comp=Z,55µm,19.0s,MS6.5						
PMSA	**Palmer Station**	**42.07**	**176**	P	**P**	**08 17 04.9**	**-0.9**
	comp=Z,96nm,1.0s,mb5.4,baz=16,slow=7.7,SNR=10.0						
PMSA				S	**S**	**08 23 23.3**	**+2.5**
	comp=Z,31nm,1.1s,baz=214,slow=10,SNR=2.7						
PMSA				LR	LR	08 35 03.9	
	comp=Z,36µm,20.3s,MS6.2,baz=348,slow=37						
PMSA	**Palmer Station**	**42.07**	**176**	*e*P	**P**	**08 17 02.6**	**-3.2**
	comp=Z,289nm,1.0s,mb5.9						
PMSA				LR	LR		
	comp=Z,35µm,20.0s,MS6.2						
NBG	**Las Nubes**	**42.18**	**330**	*e*P	**P**	**08 17 10.5**	**+3.2**
FUG	**Fuego 3**	**42.29**	**329**	*e*P	**P**	**08 17 09.9**	**+1.7**
MRL	**Marmol**	**42.30**	**331**	*e*P	**P**	**08 17 09.5**	**+1.2**
JAT	**Jato**	**42.55**	**328**	*e*P	**P**	**08 17 11.8**	**+1.4**
GTBY	**Guantanamo Bay**	**42.83**	**353**	*e*P	**P**	**08 17 11.8**	**-0.8**
MASC	**Masc**	**42.99**	**354**	*e*P	**P**	**08 17 14.5**	**+0.7**
LMGC	**Las Mercedes**	**43.21**	**351**	*e*P	**P**	**08 17 16.9**	**+1.3**
	baz=158						
LMGC				*e*S	**S**	**08 23 36.2**	**-2.3**
	comp=N,27µm,21.4s						
LMGC				*e*			
	comp=E,31µm,20.5s						
MOAC	**Moa**	**43.54**	**353**	*e*P	**P**	**08 17 18.6**	**+0.4**
CCCC	**Cccc**	**44.45**	**350**	*e*P	**P**	**08 17 26.5**	**+1.0**
CCIG	**Comitan**	**44.49**	**329**	*e*P	**P**	**08 17 25.1**	**-0.8**
CCIG				*i* S	**S**	**08 23 58.7**	**+1.5**
MGV	**Manicaragua**	**45.74**	**347**	*e*P	**P**	**08 17 35.8**	**0.0**
HUIG	**Huatulco**	**46.07**	**324**	*e*P	**P**	**08 17 38.2**	**-0.2**
HUIG				*i* S	**S**	**08 24 22.9**	**+2.8**
TEIG	**Tepich**	**46.37**	**336**	*e*P	**P**	**08 17 39.7**	**-1.1**
TEIG	**Tepich**	**46.37**	**336**	*e*P	**P**	**08 17 39.8**	**-1.0**
	comp=E,109nm,0.5s,mb6.0						
TEIG				*e*pP	pP	08 17 55.2	-0.4
TEIG				LR	LR		
	comp=Z,17µm,19.0s,MS6.0						
CMIG	**Matias Romero**	**46.53**	**327**	P	**P**	**08 17 41.6**	**-0.5**
	comp=Z,74nm,0.9s,mb5.6,baz=138,slow=6.3,SNR=35						
CMIG				S	**S**	**08 24 27.2**	**+0.6**
	comp=Z,3.2nm,1.1s,baz=155,slow=17,SNR=1.5						
CMIG				LR	LR	08 36 17.8	
	comp=Z,7µm,18.7s,MS5.7,baz=136,slow=35						
CMIG	**Matias Romero**	**46.53**	**327**	*i* P	**P**	**08 17 40.6**	**-1.4**
TUIG	**Tuzandepetl**	**47.10**	**328**	*i* P	**P**	**08 17 45.4**	**-1.0**
SOR	**Soroa**	**47.10**	**344**	*e*P	**P**	**08 17 45.3**	**-1.2**
VHO	**Vista Hermosa**	**47.48**	**324**	*i* P	**P**	**08 17 48.6**	**-0.9**
PNIG	**Pinotepa**	**47.69**	**322**	*i* P	**P**	**08 17 46.7**	**-4.4**
ACX	**Acapulco**	**49.09**	**321**	*i* P	**P**	**08 18 00.3**	**-1.6**
CAIG	**El Cayaco**	**49.44**	**321**	*e*P	**P**	**08 18 03.7**	**-0.9**
CAIG				*i* S	**S**	**08 25 09.1**	**+1.3**
PLIG	**Platanillo**	**50.07**	**323**	*e*P	**P**	**08 18 08.8**	**-0.6**
PPM	**Popocatepetl**	**50.13**	**324**	*e*P	**P**	**08 18 11.1**	**+1.3**
YAIG	**Yautepec**	**50.21**	**323**	*e*P	**P**	**08 18 10.8**	**+0.5**
ZIIG	**Zihuatanejo**	**50.58**	**320**	*i* P	**P**	**08 18 10.4**	**-2.8**
UNM	**Universidad Na**	**50.65**	**324**	*e*P	**P**	**08 18 14.5**	**+0.8**
TRIS	**Tristan da Cun**	**51.32**	**120**	*e*P	**P**	**08 18 19.1**	**+0.4**
	comp=Z,3µm,1.4s,mb7.1						
TRIS				*e*pP	pP	08 18 33.4	-0.3
TRIS				LR	LR		
	comp=Z,24µm,22.0s,MS6.2						
DWPF	**Disney**	**51.86**	**347**	PFAKE		08 18 30.0	+7.4
DWPF				LR	LR		
	comp=Z,20µm,21.0s,MS6.1						
MOIG	**Morelia**	**52.05**	**322**	*e*P	**P**	**08 18 24.8**	**+0.6**
CJM	**Chamela**	**54.19**	**318**	*e*P	**P**	**08 18 39.0**	**-0.9**
PTCN	**Pitcairn Islan**	**54.44**	**255**	*e*P	**P**	**08 18 41.7**	**-0.1**
	comp=Z,835nm,1.1s,mb6.6						
PTCN				*e*PP	sP	08 18 56.6	-6.9
PTCN				LR	LR		
	comp=Z,28µm,22.0s,MS6.3						
BBSR	**BB Station**	**55.19**	**6**	*e*P	**P**	**08 18 45.5**	**-1.4**
	comp=Z,645nm,1.4s,mb6.5						
BBSR				LR	LR		
	comp=Z,11µm,20.0s,MS5.9						
ZAIG	**Zacatecas**	**55.28**	**323**	*e*P	**P**	**08 18 48.5**	**+0.8**
BRAL	**Brewton**	**56.00**	**342**	PFAKE		08 19 00.0	+7.3
BRAL				LR	LR		
	comp=Z,18µm,20.0s,MS6.2						
NHSC	**New Hope**	**56.50**	**350**	*e*P	**P**	**08 18 51.4**	**-4.9**
	comp=Z,886nm,1.4s,mb6.6						
NHSC				LR	LR		
	comp=Z,37µm,21.0s,MS6.5						
KVTX	**Kingsville**	**56.86**	**330**	*e*P	**P**	**08 18 59.3**	**+0.3**
	comp=Z,9µm,3.0s						
KVTX				LR	LR		
	comp=Z,17µm,19.0s,MS6.2						
GOGA	**Godfrey**	**57.41**	**347**	*e*P	**P**	**08 19 00.4**	**-2.3**
GOGA				*e**PP	pP	08 19 19.4	+1.4
GOGA				pmax	pmax		
	comp=Z,1µm,2.5s,mb6.4						
GOGA				MLR	MLR		
	comp=Z,29µm,22.0s,MS6.3						
GOGA	**Godfrey**	**57.41**	**347**	*e*P	**P**	**08 19 00.4**	**-2.3**
	comp=Z,1µm,2.5s,mb6.4						
GOGA				*e*pP	pP	08 19 19.4	+1.3
GOGA				LR	LR		
	comp=Z,29µm,22.0s,MS6.3						
MAIG	**Mazatlaan**	**57.82**	**320**	*e*P	**P**	**08 19 06.0**	**+0.1**
LRAL	**Lakeview Retre**	**57.89**	**343**	*e*P	**P**	**08 19 04.2**	**-1.9**
	comp=Z,262nm,1.4s,mb6.1						

LRAL LR LR
comp=Z,19µm,20.0s,MS6.2
HKT Hockley 58.05 334 *e*P **P** **08 19 06.3 -1.0**
HKT *e**PP pP 08 19 22.6 -0.1
HKT pmax pmax
comp=Z,633nm,1.8s,mb6.3
HKT MLR MLR
comp=Z,15µm,21.0s,MS6.1
HKT Hockley 58.05 334 *e*P **P** **08 19 06.3 -1.0**
comp=Z,633nm,1.8s,mb6.3
HKT *e*pP pP 08 19 22.6 -0.1
HKT LR LR
comp=Z,15µm,21.0s,MS6.1
VBMS Vicksburg 58.16 340 *e*P **P** **08 19 06.9 -1.1**
comp=Z,794nm,1.7s,mb6.5
VBMS LR LR
comp=Z,16µm,22.0s,MS6.1
CNNC Cliffs of the 58.27 353 *e*P **P** **08 19 08.5 -0.3**
comp=Z,358nm,1.1s,mb6.3
CNNC LR LR
comp=Z,9µm,19.0s,MS5.9
VNA3 Neumayer Olymp 59.14 161 *e*P **P** **08 19 12.9 -1.4**
VNA3 *e* 08 19 15.2
VNA3 *e* 08 19 17.9
VNA3 *e* 08 19 20.8
VNA3 *e* pP 08 19 28.6 -1.1
VNA3 *e* 08 19 34.4
VNA3 *e* 08 19 42.7
NATX Nacogdoches 59.20 336 *e*P **P** **08 19 14.9 -0.3**
comp=Z,5µm,2.9s,mb7.1
NATX LR LR
comp=Z,7µm,19.0s,MS5.8
RKT Rikitea 59.21 256 *e*P **P** **08 19 15.0 -0.7**
comp=Z,206nm,0.9s,mb6.2
RKT *e*S **S** **08 27 16.0 -3.6**
comp=Z,19µm,29.0s
RKT *e*SS SS 08 31 27.5 +13
comp=Z,7µm,29.0s
RKT *e*LQ 08 34 18.6
comp=Z,16µm,31.2s
RKT *e*LR LR 08 36 56.8
comp=Z,282µm,27.5s,baz=108
RKT Rikitea 59.21 256 *e*P **P** **08 19 15.0 -0.7**
RKT *e*S **S** **08 27 16.0 -3.6**
RKT pmax pmax
comp=Z,206nm,0.9s,mb6.2
RKT Rikitea 59.21 256 *e*P **P** **08 19 15.0 -0.7**
comp=Z,206nm,0.9s,mb6.2
RKT *e*S **S** **08 27 16.0 -3.6**
RKT *e*SS SS 08 31 27.5 +13
RKT *e*LQ 08 34 18.6
VNA1 Neumayer--Stat 59.37 160 *e*P **P** **08 19 15.0 -0.9**
VNA1 *e* 08 19 16.7
VNA1 *e* 08 19 19.8
VNA1 *e* 08 19 23.0
VNA1 *e* pP 08 19 31.2 -0.1
VNA1 *e* 08 19 38.1
VNA1 *e* 08 19 46.5
VNA1 *e* 08 48 56.6
CPCT Cooper Cave 59.60 346 *e*P **P** **08 19 16.1 -1.8**
TKL Tuckaleechee C 59.64 347 P **P** **08 19 16.4 -1.8**
comp=Z,97nm,0.8s,mb5.9,baz=162,slow=8.5,SNR=31
TKL S **S** **08 27 18.8 -5.6**
comp=Z,3.8nm,0.8s,baz=50,slow=22,SNR=2.1
TKL Tuckaleechee C 59.64 347 *e*P **P** **08 19 16.4 -1.9**
TKL *e*pP pP 08 19 35.1 +1.4
SWET Sewanee 59.70 345 *e*P **P** **08 19 16.9 -1.7**
VNA2 Neumayer--Watz 59.73 160 *e*P **P** **08 19 17.4 -1.0**
VNA2 *e* 08 19 19.5
VNA2 *e* 08 19 22.6
VNA2 *e* 08 19 24.9
VNA2 *e* pP 08 19 33.2 -0.6
VNA2 *e* 08 19 38.8
VNA2 *e* 08 19 48.3
OXF Oxford 59.95 342 *e*P **P** **08 19 18.1 -2.3**
OXF pmax pmax
comp=Z,498nm,1.0s,mb6.5
OXF MLR MLR
comp=Z,13µm,20.0s,MS6.1
OXF Oxford 59.95 342 *e*P **P** **08 19 18.1 -2.3**
comp=Z,498nm,1.0s,mb6.5
OXF LR LR
comp=Z,13µm,20.0s,MS6.1
JCT Junction City 60.23 331 *e*P **P** **08 19 21.4 -1.0**
comp=Z,278nm,0.8s,mb6.3
JCT LR LR
comp=Z,7µm,20.0s,MS5.8
TZTN Tazewell 60.45 348 *e*P **P** **08 19 21.5 -2.2**
comp=Z,234nm,1.3s,mb6.1
BLA Blacksburg 60.56 351 *e*P **P** **08 19 23.2 -1.2**
BLA pmax pmax
comp=Z,356nm,1.2s,mb6.4
BLA MLR MLR
comp=Z,16µm,20.0s,MS6.2
BLA Blacksburg 60.56 351 *e*P **P** **08 19 23.1 -1.3**
comp=Z,356nm,1.2s,mb6.4
BLA LR LR
comp=Z,16µm,20.0s,MS6.2
MET Memphis--Engin 60.67 341 *e*P **P** **08 19 22.8 -2.5**
comp=Z,264nm,0.7s,mb6.5
JSRW J. Sargeant Re 60.70 353 *e*P **P** **08 19 25.3 -0.1**
SHEL Horse Pasture 60.71 96 P **P** **08 19 27.3 +1.3**
comp=Z,4µm,0.9s,mb7.5,SNR=14
SHEL Horse Pasture 60.71 96 *e*P **P** **08 19 26.4 +0.3**
comp=Z,705nm,0.9s,mb6.8
SHEL LR LR
comp=Z,39µm,21.0s,MS6.5
LPIG La Paz 60.87 318 *i* P **P** **08 19 26.4 -0.4**
WVT Waverly 61.04 344 *e*P **P** **08 19 25.4 -2.3**
WVT *e**PP pP 08 19 44.9 +1.7
WVT pmax pmax
comp=Z,414nm,1.2s,mb6.4
WVT MLR MLR
comp=Z,18µm,22.0s,MS6.2
WVT Waverly 61.04 344 *e*P **P** **08 19 25.4 -2.4**
comp=Z,414nm,1.2s,mb6.4
WVT *e*pP pP 08 19 44.9 +1.7
WVT LR LR
comp=Z,18µm,22.0s,MS6.2
UALR University of 61.10 339 *e*P **P** **08 19 27.2 -1.0**
comp=Z,504nm,1.6s,mb6.4
TXAR Lajitas Array 61.14 327 P **P** **08 19 27.9 -0.7**
comp=Z,74nm,1.0s,mb5.8,baz=145,slow=8.8,SNR=153
TXAR S **S** **08 27 39.2 -4.5**
comp=Z,0.7nm,0.7s,baz=83,slow=8.3,SNR=2.0
TXAR LR LR 08 42 39.7
comp=Z,32µm,21.5s,MS6.4,baz=15,slow=33
TXAR PKPPKP 08 48 34.2
comp=Z,1.1nm,1.1s,baz=207,slow=1.4,SNR=4.2
TXAR PKP2bc 08 48 47.1
comp=Z,1.4nm,1.0s,baz=90,slow=1.3,SNR=4.9
TXAR Lajitas Array 61.14 327 P **P** **08 19 27.9 -0.7**
TXAR S **S** **08 27 39.2 -4.6**
TXAR Lajitas Array 61.14 327 P **P** **08 19 27.9 -0.7**
TXAR *S* **S** **08 27 39.2 -4.5**
TXAR LR LR 08 42 39.7
TXAR P'P' 08 48 34.2
TXAR ⇑*e* 08 48 47.1
CBN Corbin 61.15 353 *e*P **P** **08 19 27.8 -0.6**
comp=Z,534nm,1.4s,mb6.5
CBN LR LR
comp=Z,19µm,21.0s,MS6.2
MIAR Mount Ida 61.31 338 *e*P **P** **08 19 28.2 -1.4**
MIAR pmax pmax
comp=Z,365nm,1.3s,mb6.3
MIAR MLR MLR
comp=Z,9µm,19.0s,MS6.0
MIAR Mount Ida 61.31 338 *e*P **P** **08 19 28.2 -1.4**
comp=Z,365nm,1.3s,mb6.3
MIAR LR LR
comp=Z,9µm,19.0s,MS6.0
SNAA Sanae 61.35 161 *e*P **P** **08 19 25.9 -3.6**
SNAA *e* 08 19 28.5
SNAA *e* 08 19 30.9
SNAA *e* 08 19 33.8
SNAA *e* pP 08 19 42.4 -2.5
SNAA *e* 08 19 48.7
SNAA *e* 08 19 57.0
SNAA Sanae 61.35 161 *e*P **P** **08 19 26.1 -3.4**
SNAA pmax pmax
comp=Z,1µm,1.4s
SNAA Sanae 61.35 161 *e*P **P** **08 19 26.1 -3.4**
comp=Z,1µm,1.4s,mb6.8
SNAA *e*S **S** **08 27 38.0 -7.5**
GNAR Gosnell 61.48 342 *e*P **P** **08 19 29.8 -0.9**
comp=Z,12µm,1.5s
UTMT University of 61.51 343 *e*P **P** **08 19 29.1 -1.8**
comp=Z,406nm,0.9s,mb6.5
GLAT Glass 61.56 342 *e*P **P** **08 19 29.7 -1.6**
PARMO Parma 62.06 342 *e*P **P** **08 19 33.7 -1.0**
WCI Wyandotte Cave 62.66 346 *e*P **P** **08 19 35.9 -2.7**
WCI LR LR
comp=Z,25µm,22.0s,MS6.3
USIN University of 62.73 344 *e*P **P** **08 19 37.0 -2.1**
comp=Z,458nm,1.2s,mb6.5
MVL Millersville 62.83 355 *e*P **P** **08 19 39.2 -0.5**
comp=Z,276nm,1.3s,mb6.2
MCWV Mont Chateau 62.88 352 *e*P **P** **08 19 39.0 -1.0**
comp=Z,88nm,0.9s,mb5.9
MCWV LR LR
comp=Z,30µm,22.0s,MS6.4
SIUC Southern Illin 62.90 343 *e*P **P** **08 19 38.5 -1.7**
comp=Z,643nm,1.1s,mb6.7
WMOK Wichita Mounta 63.44 334 *e*P **P** **08 19 41.9 -1.9**
comp=Z,16nm,0.7s,mb5.3
WMOK LR LR
comp=Z,9µm,19.0s,MS6.0
FVM French Village 63.48 342 *e*P **P** **08 19 42.4 -1.7**
FVM pmax pmax
comp=Z,810nm,1.6s,mb6.6
FVM French Village 63.48 342 *e*P **P** **08 19 42.4 -1.7**
comp=Z,1µm,1.6s,mb6.7
OLIL Olney 63.57 344 *e*P **P** **08 19 42.2 -2.4**
comp=Z,387nm,1.3s,mb6.3
SSPA Standing Stone 63.61 353 *e*P **P** **08 19 44.3 -0.5**
comp=Z,152nm,1.2s,mb5.9
SSPA LR LR
comp=Z,25µm,20.0s,MS6.4
BLO Bloomington 63.61 346 *e*P **P** **08 19 42.5 -2.4**
BLO pmax pmax
comp=Z,850nm,1.8s,mb6.5
BLO Bloomington 63.61 346 *e*P **P** **08 19 42.5 -2.4**
comp=Z,848nm,1.8s,mb6.5
BLO *e*pP pP 08 19 59.7 -0.7
PAL Palisades 63.66 357 *e*P **P** **08 19 45.3 +0.1**
PAL pmax pmax
comp=Z,220nm,1.2s,mb6.1
PAL Palisades 63.66 357 *e*P **P** **08 19 45.3 +0.1**
comp=Z,224nm,1.3s,mb6.0
CCM Cathedral Cave 63.78 342 *e*P **P** **08 19 44.0 -2.0**
comp=Z,104nm,0.9s,mb5.9
CCM *e*pP pP 08 20 01.9 +0.3
CCM LR LR
comp=Z,13µm,20.0s,MS6.1
GDL2 Guadalupe Moun 63.81 328 *e*P **P** **08 19 46.1 -0.3**
ACSO Alum Creek Sta 63.92 349 *e*P **P** **08 19 45.2 -1.7**
comp=Z,322nm,0.9s,mb6.3
ACSO LR LR
comp=Z,13µm,22.0s,MS6.1
YLE Yale 63.93 358 *e*P **P** **08 19 47.1 +0.2**
SLM Saint Louis 64.04 343 *e*P **P** **08 19 45.5 -2.2**
SLM *e**PP pP 08 20 03.3 0.0
SLM pmax pmax
comp=Z,53nm,0.6s,mb5.8
SLM Saint Louis 64.04 343 *e*P **P** **08 19 45.5 -2.2**
comp=Z,53nm,0.6s,mb5.7
SLM *e*pP pP 08 20 03.3 0.0
BBTS Babate 64.38 60 P **P** **08 19 49.3 -1.1**
comp=Z,409nm,0.9s,mb6.4,baz=260,slow=1.8,SNR=41
BBTS S **S** **08 28 20.4 -4.5**
comp=Z,6.0nm,0.3s,baz=188,slow=9.6,SNR=2.1
BRYW Bryant College 64.49 359 *e*P **P** **08 19 50.7 +0.2**
AMTX Amarillo 64.79 332 *e*P **P** **08 19 51.4 -1.3**
comp=Z,117nm,1.0s,mb5.9
AMTX LR LR
comp=Z,9µm,22.0s,MS5.9
ALLY Alegheny Colle 64.88 352 *e*P **P** **08 19 51.8 -1.3**
comp=Z,422nm,1.3s,mb6.3
BINY Binghamton 64.98 355 *e*P **P** **08 19 53.1 -0.7**
comp=Z,175nm,1.0s,mb6.0
BINY LR LR
comp=Z,17µm,22.0s,MS6.2
ERPA Erie 65.32 352 *e*P **P** **08 19 54.6 -1.4**
comp=Z,100nm,0.7s,mb6.0
ERPA LR LR
comp=Z,17µm,20.0s,MS6.2
TRY Troy 65.37 357 *e*P **P** **08 19 56.3 +0.1**
319A Douglas 65.71 324 ⇓P **P** **08 19 59.1 +0.4**
baz=66,SNR=170
MAIT Maitri 65.92 159 *e*P **P** **08 19 56.9 -2.6**
MAIT *e*pP pP 08 20 11.9 -3.3
MAIT *e*S S 08 28 35.4 -6.8
NVL N'lazarevskaya 65.95 159 *d i*P **P** **08 20 00.2 +0.4**
NVL S S 08 28 42.8 +0.2
NVL pmax pmax
comp=Z,619nm,1.7s,mb6.4
NVL MLR MLR
comp=N,2µm,17.9s,MS6.3
NVL MLR MLR
comp=E,17µm,17.9s,MS6.3
NVL MLR MLR
comp=Z,26µm,17.9s,MS6.5
ACCN Adirondack Com 66.02 357 *e*P **P** **08 19 59.7 -0.8**
AAM Ann Arbor 66.05 349 *e*P **P** **08 19 59.1 -1.6**
comp=Z,33nm,0.4s,mb5.7
AAM LR LR
comp=Z,20µm,22.0s,MS6.3
318A Bisbee 66.15 323 ⇓P **P** **08 20 01.9 +0.3**
baz=66,SNR=139
219A White Tail Can 66.18 324 ⇑P **P** **08 20 02.0 +0.2**
baz=66
HNH Hanover 66.29 358 *e*P **P** **08 20 02.4 +0.2**
KSU1 Kansas State U 66.46 338 *e*P **P** **08 20 01.7 -1.7**
comp=Z,98nm,0.8s,mb5.9
KSU1 LR LR
comp=Z,14µm,20.0s,MS6.2
218A Dragoon 66.59 324 ⇑P **P** **08 20 04.7 +0.4**
baz=67,SNR=151
Y22D IRIS PASSCAL I 66.59 327 ⇑P **P** **08 20 04.8 +0.5**
baz=67,SNR=17
MDV Middlebury 66.61 358 *e*P **P** **08 20 03.8 -0.5**
LPM Los Pinos Moun 66.63 328 *e*P **P** **08 20 04.8 +0.3**
NCB Newcomb 66.63 357 *e*P **P** **08 20 03.4 -0.9**
NCB LR LR
comp=Z,15µm,21.0s,MS6.2
LENM Lemitar 66.69 327 *e*P **P** **08 20 05.3 +0.3**
119A Ashpeak Ranch, 66.79 325 ⇓P **P** **08 20 06.0 +0.4**
baz=67,SNR=46
LBNH Lisbon 66.82 359 *e*P **P** **08 20 05.1 -0.4**
LBNH pmax pmax
comp=Z,119nm,1.1s,mb5.8
LBNH MLR MLR
comp=Z,10µm,21.0s,MS6.0
LBNH Lisbon 66.82 359 *e*P **P** **08 20 05.1 -0.4**
comp=Z,119nm,1.1s,mb5.8
LBNH LR LR
comp=Z,10µm,21.0s,MS6.0
217A Green Valley 66.86 323 ⇓P **P** **08 20 06.3 +0.2**
baz=67,SNR=91
118A Homack Ranch, 67.05 324 ⇑P **P** **08 20 07.6 +0.3**
baz=67,SNR=116
ANMO Albuquerque 67.06 328 ⇓*i*P **P** **08 20 05.9 -1.4**
ANMO *i* *PP pP 08 20 21.8 -1.2
ANMO Albuquerque 67.06 328 PFAKE 08 20 20.0 +13
ANMO LR LR
comp=Z,31µm,21.0s,MS6.5
WVL Waterville 67.12 0 *e*P **P** **08 20 07.8 +0.3**
Z19A T-Link Ranch, 67.18 325 ⇑P **P** **08 20 08.8 +0.7**
baz=68,SNR=32
TUC Tucson 67.25 323 *e*P **P** **08 20 08.4 -0.2**
comp=Z,112nm,1.1s,mb5.8
TUC *e*pP pP 08 20 24.8 +0.6
TUC *e*S S 08 29 16.5 +17
TUC LR LR
comp=Z,19µm,20.0s,MS6.3
LONY Lake Ozonia 67.30 357 *e*P **P** **08 20 07.7 -0.9**
comp=Z,338nm,1.4s,mb6.2
LONY LR LR
comp=Z,17µm,21.0s,MS6.2
QSPA South Pole Qui 67.31 180 P **P** **08 20 07.3 -1.0**
comp=Z,90nm,0.5s,mb6.0,baz=152,slow=2.6,SNR=76
QSPA S S 08 28 57.2 -1.6
comp=Z,2.3nm,0.6s,baz=57,slow=15,SNR=3.7
QSPA PKKP 08 40 17.8
comp=Z,0.8nm,0.2s,baz=258,slow=1.3,SNR=3.9
QSPA South Pole Qui 67.31 180 P **P** **08 20 07.3 -1.0**
QSPA S S 08 28 57.2 -1.6
QSPA PKKP 08 40 17.8
QSPA LR LR
comp=Z,20µm,22.0s,MS6.3
EMMW East Machias 67.31 2 *e*P **P** **08 20 08.9 +0.2**
CBKS Cedar Bluff 67.36 335 *e*P **P** **08 20 08.5 -0.6**
CBKS Cedar Bluff 67.36 335 *e*P **P** **08 20 08.4 -0.7**
comp=Z,445nm,1.0s,mb6.5
CBKS *e*pP pP 08 20 23.4 -1.4
CBKS *e*PP PP 08 22 36.6 -1.8
CBKS LR LR
comp=Z,6µm,20.0s,MS5.8
216A Three Points, 67.39 323 P **P** **08 20 09.9 +0.4**
baz=68,SNR=64
117A Oracle 67.42 323 ⇑P **P** **08 20 10.0 +0.3**
baz=68,SNR=187
Z18A Geronimo 67.43 324 ⇑P **P** **08 20 10.1 +0.4**
baz=68,SNR=17
Y19A Nutrioso 67.69 325 ⇑P **P** **08 20 12.3 +1.0**
baz=68,SNR=388
PKME Peaks-Kenny Pk 67.83 1 *e*P **P** **08 20 11.7 -0.2**
comp=Z,173nm,0.8s,mb6.1
PKME *e*pP pP 08 20 26.4 -1.1
PKME LR LR
comp=Z,17µm,21.0s,MS6.2
SADO Sadowa 67.83 353 P **P** **08 20 10.4 -1.5**
comp=Z,126nm,0.8s,mb6.0,baz=193,slow=5.2,SNR=22
SADO S S 08 29 00.5 -5.2
comp=Z,9.4nm,0.9s,baz=332,slow=11,SNR=1.9
Z17A San Carlos Hig 67.83 324 ⇑P **P** **08 20 12.5 +0.3**
baz=68,SNR=40
SCIA State Center 67.92 342 *e*P **P** **08 20 11.1 -1.5**
comp=Z,150nm,0.8s,mb6.1
SCIA *e*pP pP 08 20 28.6 +0.4
SCIA LR LR
comp=Z,11µm,20.0s,MS6.1
116A Eloy 67.95 323 ⇓P **P** **08 20 13.2 +0.3**
baz=68,SNR=77
Y18A Canyon Day Jun 67.96 325 ⇓P **P** **08 20 13.5 +0.5**
baz=68,SNR=74
JFWS Jewell Farm 68.05 344 *e*P **P** **08 20 11.8 -1.6**
comp=Z,126nm,0.7s,mb6.0
JFWS *e*pP pP 08 20 29.2 +0.2
JFWS LR LR
comp=Z,21µm,22.0s,MS6.3
X19A St. Johns 68.07 326 ⇓P **P** **08 20 14.1 +0.4**
baz=68,SNR=42
214A Organ Pipe Nat 68.12 322 ⇑P **P** **08 20 14.5 +0.4**
baz=68,SNR=63
TAOE Nuku Hiva Isla 68.25 269 *e*P **P** **08 20 16.4 +1.1**
comp=Z,3µm,1.3s,mb7.2
TAOE *e*S S 08 29 11.9 -0.2
comp=Z,87µm,28.5s
TAOE Nuku Hiva Isla 68.25 269 *e*LR LR 08 40 56.9
comp=Z,223µm,27.5s
Y17A Roosevelt 68.33 324 ⇑P **P** **08 20 15.9 +0.5**
baz=69,SNR=227
115A Sonoran Desert 68.34 323 ⇓P **P** **08 20 15.9 +0.4**
baz=69,SNR=33
Z16A Peralta Trail, 68.38 324 ⇑P **P** **08 20 16.0 +0.3**
baz=69,SNR=104
X18A Snowflake 68.50 325 ⇑P **P** **08 20 16.9 +0.5**
baz=69,SNR=54
W19A Sanders 68.65 326 ⇑P **P** **08 20 17.8 +0.4**
baz=69,SNR=18
GLMI Grayling 68.67 349 *e*P **P** **08 20 15.2 -2.0**
comp=Z,140nm,0.9s,mb5.9
GLMI LR LR
comp=Z,20µm,20.0s,MS6.3
Z15A Gila River Ind 68.75 323 ⇑P **P** **08 20 18.3 +0.3**
baz=69,SNR=14
X17A Forest Lakes 68.80 325 ⇓P **P** **08 20 19.2 +1.0**
baz=69,SNR=151
Y16A Circle Bar Ran 68.81 324 ⇓P **P** **08 20 18.9 +0.5**
baz=69,SNR=79
W18A Petrified Fore 68.84 326 ⇑P **P** **08 20 18.9 +0.4**
baz=69,SNR=36
SDCO Great Sand Dun 68.88 331 *e*P **P** **08 20 19.0 +0.3**
comp=Z,182nm,0.9s,mb6.0
SDCO *e*pP pP 08 20 35.2 +0.9
SDCO LR LR
comp=Z,10µm,22.0s,MS6.0
V19A Window Rock 68.95 327 ⇑P **P** **08 20 19.6 +0.5**
baz=69,SNR=132
X16A Lo Mia Camp, P 69.20 324 ⇑P **P** **08 20 21.4 +0.6**
baz=70,SNR=207
Z14A Wintersburg 69.24 323 ⇓P **P** **08 20 21.2 +0.2**
baz=70,SNR=18
113A Mohawk Valley, 69.27 322 ⇑P **P** **08 20 21.1 -0.1**
baz=70,SNR=21
W17A Winslow 69.32 325 ⇓P **P** **08 20 21.7 +0.3**
baz=70
Y15A Casa Rosa Ranc 69.34 323 ⇓P **P** **08 20 21.9 +0.3**
baz=70,SNR=98
V18A Ganado 69.40 326 P **P** **08 20 22.0 +0.1**
baz=70,SNR=58
112A Yuma 69.57 321 ⇑P **P** **08 20 23.2 +0.1**
baz=70,SNR=30
X15A Humboldt 69.68 324 P **P** **08 20 24.4 +0.7**
baz=70,SNR=160
Y14A Wickenburg 69.70 323 P **P** **08 20 24.1 +0.3**
baz=70,SNR=64
W16A Flagstaff 69.76 325 ⇑P **P** **08 20 25.1 +1.0**
baz=70,SNR=174
T19A Beclabito 69.81 328 P **P** **08 20 24.5 0.0**
baz=70,SNR=112
MVCO Mesa Verde 69.86 328 ⇓P **P** **08 20 25.0 +0.3**
baz=70
MVCO Mesa Verde 69.86 328 *e*P **P** **08 20 25.0 +0.3**
comp=Z,132nm,0.8s,mb5.9
MVCO *e*pP pP 08 20 40.9 +0.4
MVCO LR LR
comp=Z,23µm,21.0s,MS6.4
LIC Lamto 69.86 74 ⇓*i*P **P** **08 20 23.4 -1.9**
comp=Z,930nm,1.2s,mb6.3
LIC *e*MLR MLR
comp=Z,55µm,19.5s,MS6.5
LIC Lamto 69.86 74 *e*P **P** **08 20 23.2 -2.1**
comp=Z,2µm,1.6s,mb6.7
LIC Lamto 69.86 74 ⇓*i*P **P** **08 20 23.4 -1.9**
comp=Z,465nm,1.2s,mb6.3
LIC LR LR
comp=Z,28µm,19.5s,MS6.5
U18A Rough Rock, Ch 69.92 327 P **P** **08 20 25.6 +0.6**
baz=70,SNR=194
WUAZ Wupatki 70.00 325 ⇑P **P** **08 20 26.3 +0.6**
baz=70
WUAZ Wupatki 70.00 325 *e*P **P** **08 20 26.4 +0.8**
comp=Z,217nm,0.9s,mb6.1
WUAZ *e*pP pP 08 20 42.3 +0.9
WUAZ LR LR
comp=Z,29µm,22.0s,MS6.5
X14A Yava 70.03 323 ⇑P **P** **08 20 26.4 +0.6**
baz=70,SNR=92
TIC Toumodi 70.05 73 *e*P **P** **08 20 25.6 -0.9**
comp=Z,3µm,1.2s,mb7.1
Y13A Salome 70.07 322 ⇓P **P** **08 20 26.5 +0.4**
baz=70,SNR=117
GLA Glamis 70.08 321 ⇑P **P** **08 20 26.5 +0.3**
baz=70
GLA Glamis 70.08 321 *e*P **P** **08 20 26.6 +0.4**
comp=Z,94nm,1.1s,mb5.6
GLA *e*pP pP 08 20 42.8 +0.8
GLA *e*S S 08 29 37.2 +4.3
OGNE Ogallala 70.09 335 PFAKE 08 20 40.0 +14
OGNE LR LR
comp=Z,9µm,20.0s,MS6.0
KIC Kosan Boka 70.17 74 *e*P **P** **08 20 23.9 -3.3**
comp=Z,2µm,1.0s,mb7.1
DBIC Dimbokro 70.21 74 P **P** **08 20 25.8 -1.6**
comp=Z,777nm,1.0s,mb6.6,baz=221,slow=6.0,SNR=174
DBIC S S 08 29 31.5 -3.6
comp=Z,7.4nm,1.1s,baz=102,slow=22,SNR=7.6
DBIC PKPPKP 08 48 31.6
comp=Z,9.4nm,1.1s,baz=125,slow=7.9,SNR=4.1
DBIC LR LR 08 49 06.8
comp=Z,36µm,21.4s,MS6.6,baz=207,slow=34
DBIC Dimbokro 70.21 74 *e*P **P** **08 20 25.8 -1.6**
DBIC *e**PP pP 08 20 40.3 -2.9
DBIC *e*S S 08 29 26.8 -8.4
DBIC pmax pmax
comp=Z,741nm,0.9s
DBIC MLR MLR
comp=Z,42µm,22.0s
DBIC Dimbokro 70.21 74 *e*P **P** **08 20 25.8 -1.6**
comp=Z,741nm,0.9s,mb6.6
DBIC *e*pP pP 08 20 40.3 -2.9
DBIC *e*S S 08 29 26.8 -8.4
DBIC LR LR
comp=Z,42µm,22.0s,MS6.6
W15A Williams 70.22 324 ⇓P **P** **08 20 28.0 +1.0**
baz=70,SNR=87

R21A **Cimarron** 70.33 330 ⇑P P 08 20 28.1 +0.5
baz=71,SNR=134
U16A **Tuba City** 70.35 326 ⇑P P 08 20 28.4 +0.6
baz=71,SNR=112
Y12C **Blythe** 70.42 322 ⇑P P 08 20 28.7 +0.5
baz=71,SNR=127
U17A **Shonto** 70.46 326 ⇑P P 08 20 29.1 +0.7
baz=71,SNR=226
T18A **Mexican Hat** 70.48 327 P P 08 20 28.7 +0.2
baz=71,SNR=289
DVTC **Desert V Tower** 70.55 320 ⇓P P 08 20 29.5 +0.5
baz=71
SWSC **Sam W. Stewart** 70.57 320 ⇓P P 08 20 29.3 +0.1
baz=71
S19A **Harvey Farm, M** 70.59 328 ⇑P P 08 20 29.4 +0.3
baz=71,SNR=295
ISCO **Idaho Springs** 70.61 332 eP P 08 20 29.4 +0.1
comp=Z,38nm,0.7s,mb5.4
ISCO LR LR
comp=Z,13µm,22.0s,MS6.1
ECSD **EROS,Sioux Fal** 70.61 340 PFAKE 08 20 40.0 +11
ECSD LR LR
comp=Z,13µm,20.0s,MS6.2
X13A **Yucca** 70.64 323 ⇓P P 08 20 29.9 +0.3
baz=71,SNR=136
V15A **Kaibab Nationa** 70.65 325 ⇓P P 08 20 30.6 +1.0
baz=71,SNR=164
W14A **Seligman** 70.69 324 ⇓P P 08 20 30.6 +0.8
baz=71,SNR=100
SMCO **Snowmass** 70.71 330 eP P 08 20 22.7 -7.2
comp=Z,146nm,1.0s,mb5.9
SMCO epP pP 08 20 38.7 -7.0
SMCO eS S 08 29 54.6 +15
T17A **Navajo Res., N** 70.84 326 ⇑P P 08 20 31.7 +1.0
baz=71,SNR=144
BC3 **Big Chuckw Mtn** 70.88 321 ⇓P P 08 20 31.5 +0.4
baz=71
MONP **Monument Peak** 70.90 320 ⇓P P 08 20 31.6 +0.4
baz=71
S18A **Hurst Farm, Bl** 70.97 327 P P 08 20 32.3 +0.8
baz=71,SNR=441
PV04 **Paradox Valley** 70.99 329 eP P 08 20 31.8 +0.2
V14A **Boquillas Ranc** 71.01 324 ⇑P P 08 20 32.8 +1.0
baz=71,SNR=175
W13A **Hualapai Mount** 71.04 323 ⇓P P 08 20 32.7 +0.7
baz=71,SNR=98
IRM **Iron Mountain** 71.07 322 ⇑P P 08 20 32.5 +0.3
baz=71
R19A **Curley Farm, L** 71.08 328 ⇓P P 08 20 32.2 +0.1
baz=71,SNR=38
Q20A **Ridgley Place,** 71.14 329 ⇑P P 08 20 32.4 -0.1
baz=72,SNR=34
U15A **North Rim** 71.17 325 ⇑P P 08 20 33.8 +1.0
baz=72,SNR=180
T16A **Glen Canyon Da** 71.19 326 ⇓P P 08 20 33.4 +0.6
baz=72,SNR=76
CHIE **El Hierro** 71.19 48 P P 08 20 33.8 +0.8
comp=Z,35nm,1.0s,mb5.2
109C **Camp Elliot, M** 71.31 320 ⇓P P 08 20 33.6 -0.1
baz=72,SNR=15
S17A **Black Ridge (B** 71.33 327 ⇓P P 08 20 34.2 +0.5
baz=72,SNR=72
PFO **Pinyon Flat Ob** 71.43 320 P P 08 20 34.5 +0.1
comp=Z,458nm,1.2s,mb6.3,SNR=40
PFO **Pinyon Flat Ob** 71.43 320 ⇓P P 08 20 34.8 +0.4
baz=72
PFO **Pinyon Flat Ob** 71.43 320 eP P 08 20 34.9 +0.5
comp=Z,96nm,1.1s,mb5.6
PFO epP pP 08 20 51.2 +1.0
PFO eS S 08 29 59.8 +11
PFO LR LR
comp=Z,36µm,22.0s,MS6.6
BELC **Belle Mtn.** 71.44 321 ⇑P P 08 20 34.8 +0.4
baz=72
R18A **Canyonlands Na** 71.46 328 ⇑P P 08 20 34.5 0.0
baz=72,SNR=114
Q19A **Hogan Spring (** 71.60 329 ⇑P P 08 20 35.5 +0.2
baz=72,SNR=134
U14A **Mt Trumbull** 71.64 325 ⇓P P 08 20 36.6 +1.0
baz=72,SNR=267
V13A **Grand Canyon W** 71.65 324 P P 08 20 36.3 +0.6
baz=72,SNR=195
T15A **Red Dirt Ranch** 71.67 325 ⇓P P 08 20 36.6 +0.9
baz=72,SNR=167
LDFC **Landfair** 71.71 322 eP P 08 20 37.0 +1.0
comp=Z,165nm,1.1s,mb5.9
W12A **Cal Nev Ari** 71.74 323 ⇑P P 08 20 36.5 +0.3
baz=72,SNR=28
O21A **Pagoda** 71.78 331 ⇑P P 08 20 36.9 +0.6
baz=72,SNR=30
PHWY **Pilot Hill** 71.78 333 eP P 08 20 36.4 +0.1
comp=Z,275nm,1.6s,mb5.9
PHWY epP pP 08 20 52.6 +0.4
S16A **Weppner Ranch,** 71.80 326 ⇑P P 08 20 36.6 +0.2
baz=72,SNR=104
N22A **Wattenberg Ran** 71.80 332 ⇑P P 08 20 36.8 +0.4
baz=72,SNR=81
GMRC **Granite Mounta** 71.81 322 ⇑P P 08 20 37.2 +0.6
baz=72
EHIG **Higuera** 71.82 47 P P 08 20 37.3 +0.4
comp=Z,4µm,2.5s,mb6.9
MURC **Murrieta** 71.87 320 ⇑P P 08 20 37.3 +0.3
baz=72
R17A **Hanksville Air** 71.89 327 ⇓P P 08 20 37.3 +0.3
baz=72,SNR=289
EGOM **La Gomera** 71.98 48 ⇓P P 08 20 37.8 0.0
comp=Z,2µm,2.8s,mb6.6
P19A **Cripple Cowboy** 72.00 329 ⇑P P 08 20 38.2 +0.5
baz=72,SNR=258
V12A **Nelson** 72.04 323 ⇓P P 08 20 38.2 +0.2
baz=72,SNR=112
U13A **Pakoon Wash** 72.06 324 ⇓P P 08 20 38.7 +0.6
baz=72,SNR=50
O20A **White River Ci** 72.06 330 ⇓P P 08 20 38.4 +0.4
baz=72,SNR=189
T14A **Hurricane** 72.07 325 ⇑P P 08 20 38.9 +0.8
baz=72,SNR=33
Q18A **Rafter H Ranch** 72.14 328 ⇓P P 08 20 38.8 +0.3
baz=72,SNR=64
S15A **Panguitch** 72.16 326 ⇓P P 08 20 38.4 -0.3
baz=72,SNR=61
BBRC **Big Bear Sol-O** 72.17 321 ⇑P P 08 20 39.3 +0.5
baz=72
R16A **Teasdale** 72.17 327 ⇓P P 08 20 39.1 +0.4
baz=72,SNR=52
HEC **Hector,Ludlow** 72.23 321 ⇑P P 08 20 39.8 +0.7
baz=72
N21A **Black Mountain** 72.24 331 ⇓P P 08 20 39.6 +0.6
baz=73,SNR=51
SRU **San Rafael** 72.33 328 ⇑P P 08 20 39.8 +0.2
baz=73
SRU **San Rafael** 72.33 328 eP P 08 20 39.8 +0.1
M22A **Cedar Creek Ra** 72.35 332 ⇑P P 08 20 39.9 +0.2
baz=73,SNR=52
U12A **Valley of Fire** 72.38 324 ⇑P P 08 20 40.6 +0.6
baz=73,SNR=57
CCAN **Las Canadas** 72.43 48 P P 08 20 41.5 +1.1
comp=Z,145nm,0.8s,mb6.0
TUQ **Turquoise Moun** 72.43 322 ⇓P P 08 20 40.8 +0.5
baz=73
V11A **Goodsprings** 72.44 323 ⇑P P 08 20 40.8 +0.4
baz=73,SNR=56
MEH **Mehetia** 72.45 258 eP P 08 20 40.6 -0.3
comp=Z,2µm,1.1s,mb7.0
T13A **Saint George** 72.48 324 P P 08 20 41.4 +0.8
baz=73,SNR=102
Q16A **Castle Valley** 72.50 328 ⇓P P 08 20 41.1 +0.4
baz=73,SNR=132
R15A **Junction** 72.52 326 P P 08 20 41.4 +0.6
baz=73,SNR=125
BFSC **Mount Baldy St** 72.58 320 ⇓P P 08 20 41.4 +0.1
baz=73
FMP **Fort Macarthur** 72.60 319 ⇑P P 08 20 41.6 +0.3
baz=73
P18A **Preston Nutter** 72.60 329 ⇓P P 08 20 41.9 +0.7
baz=73,SNR=171
N20A **Spence Gulch,** 72.63 331 ⇓P P 08 20 41.6 +0.2
baz=73,SNR=92
RRX **Edison Barstow** 72.65 321 ⇑P P 08 20 42.1 +0.5
baz=73
T12A **Moapa** 72.69 324 ⇓P P 08 20 41.7 -0.2
baz=73,SNR=9.3
MSU **Marysvale** 72.70 327 eP P 08 20 42.6 +0.8
MVU **Marysvale** 72.71 327 PFAKE 08 20 50.0 +8.1
MVU LR LR
comp=Z,21µm,22.0s,MS6.4
P17A **Butcher Ranch,** 72.72 328 P P 08 20 42.2 +0.2
baz=73,SNR=168

SHPR **Sheep Range** 72.78 323 eP P 08 20 43.0 +0.6
L22A **Ellis Ranch, M** 72.80 332 P P 08 20 42.8 +0.4
baz=73,SNR=18
EBAJ **Bajamar** 72.81 48 ⇓P P 08 20 44.4 +1.6
comp=Z,5µm,4.7s
MWC **Mount Wilson** 72.81 320 eP P 08 20 42.9 +0.2
comp=Z,273nm,1.6s,mb5.9
TMUT **Trail Mountain** 72.81 328 eP P 08 20 43.0 +0.5
GSC **Goldstone** 72.84 321 ⇓P P 08 20 43.2 +0.5
baz=73
GSC **Goldstone** 72.84 321 eP P 08 20 43.1 +0.4
comp=Z,242nm,1.6s,mb5.9
U11A **Corn Creek** 72.84 323 ⇓P P 08 20 43.7 +0.9
baz=73
PASC **Pasadena Art C** 72.85 320 eP P 08 20 43.0 +0.1
comp=Z,677nm,1.3s,mb6.4
RWWY **Rawlins** 72.85 332 eP P 08 20 42.8 +0.1
comp=Z,930nm,1.7s,mb6.4
S13A **Holt Ranch, En** 72.87 325 ⇓P P 08 20 43.8 +0.9
baz=73,SNR=193
VAH **Vaihoa** 72.92 260 eP P 08 20 43.5 -0.2
comp=Z,609nm,1.2s,mb6.4
SHOC **Shoshone** 72.97 322 ⇓P P 08 20 43.6 +0.1
baz=73
R14A **James Farms, M** 72.97 326 ⇓P P 08 20 44.3 +0.9
baz=73,SNR=109
O18A **Roosevelt** 72.99 329 ⇑P P 08 20 44.0 +0.5
baz=73,SNR=78
DECC **Green Verdugo** 72.99 320 ⇓P P 08 20 43.9 +0.2
baz=73
SNCC **San Nicolas Is** 73.03 318 ⇑P P 08 20 43.8 -0.1
baz=73
SNCC **San Nicolas Is** 73.03 318 eP P 08 20 43.7 -0.2
comp=Z,157nm,1.1s,mb5.9
EOSO **Osorio** 73.06 49 ⇓P P 08 20 45.5 +1.2
comp=Z,2µm,1.9s,mb6.7
EYMN **Ely** 73.07 345 eP P 08 20 42.0 -1.8
comp=Z,152nm,0.9s,mb5.9
EYMN LR LR
comp=Z,19µm,22.0s,MS6.3
N19A **John Jarvie Ra** 73.10 330 ⇓P P 08 20 44.0 -0.1
baz=73,SNR=194
M20A **Sweetwater, Wa** 73.12 331 ⇓P P 08 20 44.4 +0.1
baz=74,SNR=40
L21A **Rawlins** 73.15 332 ⇑P P 08 20 44.3 -0.1
baz=74,SNR=104
Q15A **Fillmore** 73.17 327 P P 08 20 45.2 +0.6
baz=74,SNR=104
EDW2 **Edwards Air Fo** 73.23 320 ⇑P P 08 20 44.9 -0.1
baz=74
PMOR **Pomariorio Ree** 73.24 261 eP P 08 20 45.5 -0.1
comp=Z,355nm,1.0s,mb6.3
P16A **Fountain Green** 73.28 328 P P 08 20 46.0 +0.8
baz=74,SNR=47
O17A **Robinson Place** 73.28 329 P P 08 20 46.0 +0.8
baz=74,SNR=228
BLG **Laguna Peak** 73.33 319 ⇑P P 08 20 45.6 -0.1
baz=74
T11A **Corn Creek, Al** 73.35 324 ⇓P P 08 20 46.6 +0.8
baz=74,SNR=148
U10A **Ash Meadows, A** 73.37 323 ⇑P P 08 20 46.6 +0.7
baz=74,SNR=106
R13A **O'Grain Ranch,** 73.37 325 ⇓P P 08 20 46.8 +1.0
baz=74,SNR=109
N18A **Larsen Ranch,** 73.39 330 ⇑P P 08 20 45.7 -0.2
baz=74,SNR=38
S12A **Delamar Landin** 73.42 324 P P 08 20 47.0 +0.9
baz=74,SNR=47
CMLA **Cha da Macela** 73.47 35 eP P 08 20 47.6 +1.2
comp=Z,197nm,1.3s,mb5.9
CMLA LR LR
comp=Z,12µm,20.0s,MS6.2
LRMC **Laurel Mountai** 73.47 321 ⇓P P 08 20 46.7 +0.2
baz=74
OSI **Osito Adit** 73.48 320 ⇓P P 08 20 46.5 0.0
baz=74
OSI **Osito Adit** 73.48 320 eP P 08 20 46.5 -0.1
comp=Z,95nm,1.0s,mb5.7
TVO **Taravao** 73.55 257 eP P 08 20 47.5 +0.1
comp=Z,4µm,1.3s,mb7.1
TVO **Taravao** 73.55 257 eP P 08 20 47.5 +0.1
TVO pmax pmax
comp=Z,4µm,1.3s,mb7.1
P15A **Leamington** 73.55 327 ⇑P P 08 20 47.2 +0.3
baz=74,SNR=71
RSSD **Black Hills** 73.56 335 eP P 08 20 46.5 -0.3
comp=Z,78nm,0.8s,mb5.7
RSSD LR LR
comp=Z,16µm,21.0s,MS6.3
M19A **Rock Springs** 73.57 330 ⇓P P 08 20 46.7 -0.2
baz=74,SNR=14
MPU **Maple Canyon** 73.58 328 eP P 08 20 47.3 +0.3
BSC **Santa Cruz Isl** 73.60 319 ⇓P P 08 20 47.2 0.0
baz=74
L20A **Wamsutter** 73.61 331 ⇑P P 08 20 47.2 +0.1
baz=74,SNR=92
Q14A **Sevier Lake (B** 73.62 326 P P 08 20 48.0 +0.8
baz=74,SNR=138
O16A **Springville** 73.66 328 ⇓P P 08 20 47.7 +0.3
baz=74
DAU **Daniels Canyon** 73.70 328 eP P 08 20 48.2 +0.5
FURC **Furnace Creek,** 73.70 322 ⇓P P 08 20 48.3 +0.5
baz=74
TPNV **Topopah Spring** 73.70 323 ⇑P P 08 20 48.7 +0.9
baz=74
TPNV **Topopah Spring** 73.70 323 eP P 08 20 48.5 +0.7
comp=Z,85nm,0.9s,mb5.7
TPNV LR LR
comp=Z,18µm,22.0s,MS6.3
TIAR **Tiarei** 73.71 258 eP P 08 20 48.0 -0.4
comp=Z,985nm,1.1s,mb6.7
NLU **Noh Lily Min** 73.75 328 eP P 08 20 48.5 +0.5
MPMC **Manual Prospec** 73.77 322 ⇓P P 08 20 48.3 +0.1
baz=74
R12A **Pony Springs,** 73.82 325 ⇓P P 08 20 49.4 +1.0
baz=74,SNR=290
PAE **Paea** 73.88 257 eP P 08 20 49.2 -0.2
comp=Z,3µm,1.1s,mb7.1
PAE **Paea** 73.88 257 eP P 08 20 49.2 -0.2
PAE pmax pmax
comp=Z,3µm,1.1s,mb7.1
ARVC **Arvin** 73.89 320 ⇓P P 08 20 49.1 +0.1
baz=74
N17A **Moffit Pass** 73.91 329 ⇑P P 08 20 49.6 +0.7
baz=74,SNR=266
PPT **Papeete** 73.91 257 eP P 08 20 49.8 +0.2
comp=Z,267nm,1.2s,mb6.0
PPT eS S 08 30 15.2 -2.4
comp=Z,43µm,31.5s
PPT **Papeete** 73.91 257 eLR LR 08 43 40.1
comp=Z,224µm,28.2s,baz=107
PPT **Papeete** 73.91 257 P P 08 20 48.6 -1.0
comp=Z,223nm,1.1s,mb6.0,baz=105,slow=6.9,SNR=15
PPT LR LR 08 44 58.4
comp=Z,38µm,21.1s,MS6.7,baz=28,slow=29
M18A **Lyman** 73.93 330 ⇑P P 08 20 48.5 -0.5
baz=74,SNR=54
JLU **Jordanelle** 73.94 328 eP P 08 20 49.4 +0.3
SBC **Santa Barbara** 73.95 319 ⇓P P 08 20 49.1 -0.3
baz=74
P14A **Drum Mountains** 73.97 327 ⇑P P 08 20 49.7 +0.4
baz=74,SNR=190
Q13A **Wheeler Ranch,** 73.97 326 ⇓P P 08 20 49.8 +0.5
baz=74,SNR=147
DAC **Darwin (Calif)** 73.98 322 PFAKE 08 21 00.0 +11
DAC LR LR
comp=Z,28µm,21.0s,MS6.5
ISA **Isabella** 74.06 321 ⇑P P 08 20 50.3 +0.4
baz=74
ISA **Isabella** 74.06 321 eP P 08 20 50.3 +0.4
comp=Z,72nm,0.8s,mb5.7
K20A **Yellowstone Ra** 74.13 332 ⇑P P 08 20 49.7 -0.4
baz=74,SNR=88
N16A **Rees Ranch, Co** 74.15 329 ⇓P P 08 20 50.4 0.0
baz=74,SNR=54
O15A **The Old Anders** 74.19 328 ⇓P P 08 20 51.1 +0.5
baz=74,SNR=37
M17A **Scullys Gap (B** 74.24 330 ⇑P P 08 20 50.4 -0.5
baz=75,SNR=31
SBA **Scott Base** 74.26 191 eP P 08 20 50.6 0.0
SBA pmax pmax
comp=Z,213nm,1.3s,mb5.9
SBA MLR MLR
comp=Z,8µm,20.0s,MS6.0
SBA **Scott Base** 74.26 191 eP P 08 20 50.6 +0.1
comp=Z,213nm,1.3s,mb5.9
SBA LR LR
comp=Z,8µm,20.0s,MS6.0

DUG **Dugway** 74.30 327 ⇑P P 08 20 51.6 +0.4
baz=75
DUG **Dugway** 74.30 327 eP P 08 20 51.6 +0.4
comp=Z,135nm,0.9s,mb5.9
DUG LR LR
comp=Z,14µm,22.0s,MS6.2
CFTV **Fuerteventura** 74.30 49 P P 08 20 52.2 +0.7
comp=Z,184nm,1.0s,mb6.0
NOQ **North Oquirrh** 74.30 328 eP P 08 20 51.5 +0.3
L18A **Fontenelle, Gr** 74.31 330 ⇑P P 08 20 51.3 +0.1
baz=75,SNR=222
PKM **Peak Mountain** 74.33 319 ⇓P P 08 20 52.0 +0.5
baz=75
P13A **Bates Ranch, G** 74.35 326 ⇑P P 08 20 52.2 +0.7
baz=75,SNR=172
R11A **Troy Canyon, C** 74.35 324 P P 08 20 52.3 +0.7
baz=75,SNR=159
GRAC **Grapevine Rang** 74.36 322 ⇓P P 08 20 52.3 +0.6
baz=75
CWC **Cottonwood Cre** 74.37 322 ⇑P P 08 20 52.3 +0.5
baz=75
Q12A **Willow Creek R** 74.46 325 ⇑P P 08 20 52.5 +0.3
baz=75,SNR=100
K19A **Absolon Red Bu** 74.49 331 ⇑P P 08 20 51.6 -0.7
baz=75,SNR=87
AGMN **Agassiz Refuge** 74.52 342 eP P 08 20 50.8 -1.5
comp=Z,133nm,0.8s,mb5.9
AGMN LR LR
comp=Z,17µm,22.0s,MS6.3
VES **Vestal, Richgr** 74.54 321 ⇓P P 08 20 52.8 +0.1
baz=75
M16A **Huntsville** 74.58 329 P P 08 20 52.6 -0.1
baz=75,SNR=71
S10A **Tonopah Range,** 74.59 324 ⇓P P 08 20 53.5 +0.5
baz=75,SNR=147
R10A **Warm Springs** 74.70 324 ⇑P P 08 20 54.7 +1.1
baz=75,SNR=162
SMMC **Simmler** 74.72 320 ⇑P P 08 20 54.4 +0.6
baz=75
Q11A **Duckwater** 74.75 325 P P 08 20 54.5 +0.7
baz=75,SNR=129
BW06 **Boulder Array** 74.76 331 ⇓P P 08 20 53.3 -0.5
baz=75
BW06 **Boulder Array** 74.76 331 eP P 08 20 53.2 -0.6
comp=Z,45nm,0.9s,mb5.4
BW06 LR LR
comp=Z,7µm,19.0s,MS6.0
PDAR **Pinedale Array** 74.76 331 P P 08 20 53.2 -0.6
comp=Z,24nm,1.0s,mb5.1,baz=152,slow=6.7,SNR=52
PDAR S S 08 30 24.0 -1.8
comp=Z,0.7nm,1.0s,baz=102,slow=8.4,SNR=3.1
PDAR PKPPKP 08 48 27.4
comp=Z,1.0nm,0.9s,baz=0.0,slow=1.5,SNR=4.2
PDAR LR LR 08 57 02.2
comp=Z,6µm,18.6s,MS5.9,baz=143,slow=38
PDAR **Pinedale Array** 74.76 331 P P 08 20 53.2 -0.6
PDAR S S 08 30 24.0 -1.8
PDAR P'P' 08 48 27.4
PDAR LR LR 08 57 02.2
S09A **Goldfield** 74.80 323 P P 08 20 54.5 +0.3
baz=75,SNR=67
P12A **McGill** 74.82 326 ⇑P P 08 20 54.9 +0.6
baz=75
L17A **Cokeville** 74.83 330 P P 08 20 53.7 -0.5
baz=75,SNR=65
O13A **Hicks Ranch, I** 74.83 327 P P 08 20 54.6 +0.3
baz=75,SNR=66
K18A **Toltan Ranch,** 74.87 331 ⇓P P 08 20 54.9 +0.4
baz=75,SNR=181
TIN **Tinemaha** 74.89 322 ⇑P P 08 20 55.3 +0.6
baz=75
RCTC **Rector, Farmer** 74.95 321 ⇑P P 08 20 54.9 -0.2
baz=75
SPUT **South Promonto** 74.97 328 eP P 08 20 55.0 0.0
N14A **Grayback Hills** 74.98 328 ⇓P P 08 20 55.0 -0.1
baz=75,SNR=118
L16A **Fish Haven** 75.02 329 ⇓P P 08 20 55.0 -0.3
baz=75,SNR=65
TPH **Tonopah** 75.05 323 eP P 08 20 56.0 +0.4
comp=Z,99nm,0.9s,mb5.7
TPH LR LR
comp=Z,12µm,20.0s,MS6.2
PMAR **Madeira** 75.08 44 eP P 08 20 57.5 +1.6
comp=Z,572nm,1.2s,mb6.4
PMAR epP pP 08 21 11.6 -0.2
PMAR **Madeira** 75.08 44 ePP PP 08 23 45.4 +0.5
R09A **Tonopah** 75.08 323 P P 08 20 56.2 +0.4
baz=75,SNR=129
M15A **Larsen Ranch,** 75.08 328 P P 08 20 55.5 -0.2
baz=75,SNR=183
EFAM **Famara** 75.11 49 ⇓P P 08 20 58.1 +1.9
comp=Z,6µm,4.2s
Q10A **Clear Creek Ra** 75.14 324 ⇓P P 08 20 56.9 +0.8
baz=75,SNR=82
MTUM **Tungsten Hills** 75.29 322 eP P 08 20 57.3 +0.3
VNDA **Vanda** 75.29 190 P P 08 20 56.1 -0.4
comp=Z,37nm,0.9s,mb5.3,baz=122,slow=4.1,SNR=57
VNDA S S 08 30 32.0 +0.9
comp=Z,0.9nm,0.8s,baz=76,slow=17,SNR=1.8
VNDA LR LR 08 53 42.7
comp=Z,14µm,20.6s,MS6.2,baz=139,slow=35
VNDA **Vanda** 75.29 190 P P 08 20 56.2 -0.3
VNDA S S 08 30 32.0 +0.9
J18A **Kendall Valley** 75.31 331 P P 08 20 56.8 -0.2
baz=76,SNR=224
P11A **Circle Ranch,** 75.32 325 ⇓P P 08 20 57.6 +0.4
baz=76,SNR=15
O12A **Currie** 75.33 326 ⇑P P 08 20 57.4 +0.2
baz=76,SNR=177
K17A **Gardner Place,** 75.36 330 P P 08 20 57.2 -0.1
baz=76,SNR=142
AHID **Auburn Hatcher** 75.45 330 PFAKE 08 21 10.0 +12
AHID LR LR
comp=Z,29µm,21.0s,MS6.5
L15A **Malad City** 75.47 329 ⇓P P 08 20 57.5 -0.4
baz=76,SNR=161
HVU **Hansel Valley** 75.48 328 eP P 08 20 57.8 -0.2
M14A **Sheep Mountain** 75.55 328 ⇑P P 08 20 58.3 -0.1
baz=76,SNR=109
Q09A **Carvers** 75.57 324 ⇓P P 08 20 59.1 +0.5
baz=76,SNR=60
SYO **Syowa Base** 75.61 160 ⇑eP P 08 20 54.0 -4.4
SYO **Syowa Base** 75.61 160 ⇑eP P 08 20 55.4 -3.0
SYO **Syowa Base** 75.61 160 ⇑rP P 08 20 57.8 -0.6
SYO **Syowa Base** 75.61 160 ⇑rP pP 08 21 12.4 -1.9
I18A **Diamond G Ranc** 75.61 331 ⇑P P 08 20 58.9 +0.2
baz=76
MLAC **Mammoth Lakes** 75.64 322 ⇓P P 08 20 59.5 +0.5
baz=76
O11A **Cowboy Ranch,** 75.70 326 P P 08 20 59.7 +0.5
baz=76,SNR=66
R08A **Mina** 75.73 323 ⇑P P 08 21 00.1 +0.5
baz=76,SNR=13
K16A **Soda Springs** 75.73 330 ⇑P P 08 20 59.7 +0.3
baz=76,SNR=172
J17A **Brown Place, J** 75.75 331 ⇑P P 08 20 59.7 +0.3
baz=76,SNR=102
P10A **Eureka** 75.75 325 P P 08 21 00.5 +0.9
baz=76,SNR=31
REDW **Red Top Meadow** 75.81 331 eP P 08 20 59.8 0.0
comp=Z,179nm,1.2s,mb5.9
M13A **Montello** 75.85 327 P P 08 20 59.8 -0.3
baz=76,SNR=120
LOHW **Long Hollow** 75.89 331 eP P 08 21 00.4 +0.1
comp=Z,68nm,0.8s,mb5.6
NVAR **Mina Array Bea** 75.90 323 P P 08 21 00.7 +0.3
comp=Z,59nm,0.8s,mb5.5,baz=153,slow=6.6,SNR=123
NVAR PKPPKP 08 48 20.6
comp=Z,0.5nm,0.7s,baz=274,slow=4.3,SNR=3.7
N12A **Clover Valley,** 75.91 326 ⇑P P 08 21 00.3 -0.1
baz=76,SNR=45
ELK **Elko** 75.93 326 eP P 08 21 00.7 +0.1
ELK pmax pmax
comp=Z,96nm,0.9s
ELK MLR MLR
comp=Z,30µm,22.0s
ELK **Elko** 75.93 326 eP P 08 21 00.7 +0.1
comp=Z,96nm,0.9s,mb5.7
ELK LR LR
comp=Z,30µm,22.0s,MS6.5
Q08A **Gabbs** 76.00 323 P P 08 21 01.1 +0.1
baz=76,SNR=140
K15A **Arbon** 76.06 329 P P 08 21 01.2 0.0
baz=76,SNR=59
MOOW **Moose Ponds** 76.06 331 eP P 08 21 01.2 -0.1
comp=Z,47nm,0.9s,mb5.4
J16A **Bone** 76.09 330 P P 08 21 01.5 +0.1

baz=76,SNR=50
I17A **Pilgram Creek** 76.12 331 P P 08 21 02.4 +0.7
baz=76,SNR=159
DCID1 **Drake Creek** 76.14 331 eP P 08 21 02.1 +0.4
comp=Z,135nm,0.9s,mb5.9
N11A **Elko Archery C** 76.24 326 ⇑P P 08 21 02.3 0.0
baz=77
O10A **Cortez Mining,** 76.25 325 ⇑P P 08 21 02.6 +0.1
baz=77,SNR=34
K14A **Jones Ranch, D** 76.26 329 ⇓P P 08 21 01.9 -0.5
baz=77,SNR=50
M12A **Wells** 76.26 327 ⇓P P 08 21 02.3 -0.2
baz=77,SNR=86
IMW **Indian Meadow** 76.27 331 eP P 08 21 02.7 +0.2
comp=Z,286nm,1.4s,mb6.0
L13A **Double Diamond** 76.28 328 ⇓P P 08 21 02.9 +0.3
baz=77,SNR=141
ULM **Lac du Bonnet** 76.30 343 P P 08 21 00.8 -1.7
comp=Z,44nm,0.5s,mb5.6,baz=158,slow=6.2,SNR=46
ULM S S 08 30 33.8 -8.8
comp=Z,1.5nm,0.7s,baz=174,slow=18,SNR=1.6
ULM LR LR 08 57 07.0
comp=Z,15μm,21.1s,MS6.3,baz=146,slow=38
ULM **Lac du Bonnet** 76.30 343 eP P 08 21 00.7 -1.8
comp=Z,95nm,1.0s,mb5.7
ULM LR LR
comp=Z,30μm,22.0s,MS6.5
H17A **Grant Village** 76.50 331 ⇑P P 08 21 04.6 +0.9
baz=77,SNR=20
I16A **Newdale** 76.50 331 ⇑P P 08 21 03.9 +0.1
baz=77,SNR=86
RLMT **Red Lodge** 76.51 333 ⇓P P 08 21 03.9 +0.1
baz=77
RLMT **Red Lodge** 76.51 333 eP P 08 21 03.7 0.0
comp=Z,75nm,0.7s,mb5.7
RLMT LR LR
comp=Z,11μm,20.0s,MS6.2
O09A **Fish Creek Ran** 76.53 325 ⇓P P 08 21 03.5 -0.5
baz=77,SNR=39
Q07A **Schurz** 76.54 323 ⇓P P 08 21 04.7 +0.6
baz=77,SNR=6.9
LKWY **Lake** 76.55 332 eP P 08 21 05.7 +1.7
LKWY **Lake** 76.55 332 eP P 08 21 05.1 +1.1
comp=Z,70nm,0.8s,mb5.6
LKWY LR LR
comp=Z,26μm,22.0s,MS6.5
SAO **San Andreas Ge** 76.56 320 eP P 08 21 04.1 -0.1
comp=Z,46nm,0.9s,mb5.4
SAO LR LR
comp=Z,13μm,21.0s,MS6.2
J15A **Blackfoot** 76.56 330 P P 08 21 04.5 +0.4
baz=77,SNR=81
N10A **Dunphy** 76.57 326 ⇑P P 08 21 04.2 -0.1
baz=77
WAKR **Walker** 76.58 322 eP P 08 21 04.9 +0.5
R06C **Coleville** 76.61 322 P P 08 21 05.2 +0.8
baz=77,SNR=91
YFT **Old Faithful** 76.66 331 eP P 08 21 06.2 +1.6
P08A **Dixie Valley** 76.67 324 ⇑P P 08 21 04.9 +0.1
baz=77,SNR=17
M11A **Holland Ranch,** 76.72 326 ⇓P P 08 21 05.4 +0.4
baz=77,SNR=140
BMN **Battle Mountai** 76.73 325 eP P 08 21 05.0 -0.2
comp=Z,41nm,0.9s,mb5.4
BMN LR LR
comp=Z,19μm,22.0s,MS6.4
K13A **Stover Farm, H** 76.78 328 P P 08 21 05.5 +0.1
baz=77,SNR=76
G18A **Lazy EL Ranch,** 76.79 333 P P 08 21 05.3 0.0
baz=77,SNR=143
YNR **Norris Junctio** 76.79 332 eP P 08 21 06.6 +1.2
CMB **Columbia Colle** 76.80 321 eP P 08 21 05.3 -0.3
comp=Z,33nm,0.9s,mb5.3
CMB LR LR
comp=Z,9μm,20.0s,MS6.1
L12A **House Creek Ra** 76.86 327 ⇑P P 08 21 06.1 +0.3
baz=77,SNR=114
P07A **Fallon** 77.00 323 ⇑P P 08 21 07.1 +0.5
baz=77
J14A **Carey** 77.01 329 ⇑P P 08 21 07.1 +0.4
baz=77,SNR=90
H16A **Russell Place,** 77.04 331 P P 08 21 07.5 +0.7
baz=77,SNR=92
I15A **Monteview** 77.05 330 ⇑P P 08 21 07.5 +0.7
baz=77,SNR=76
O08A **Rochester Mine** 77.13 324 ⇓P P 08 21 07.1 -0.3
baz=77,SNR=122
K12A **Draper Farm, C** 77.17 328 P P 08 21 08.2 +0.6
baz=78,SNR=263
M10A **I.L. Ranch, Tu** 77.17 326 ⇓P P 08 21 07.6 0.0
baz=78,SNR=29
N09A **Rock Creek Ran** 77.20 325 ⇓P P 08 21 07.0 -0.7
baz=78,SNR=15
QLMT **Earthquake Lak** 77.22 331 eP P 08 21 08.5 +0.8
L11A **Cat Creek Ranc** 77.24 327 ⇑P P 08 21 08.2 +0.2
baz=78,SNR=79
G17A **Pierce Place,** 77.30 332 ⇑P P 08 21 08.8 +0.6
baz=78,SNR=46
DGMT **Dagmar** 77.30 338 ⇑P P 08 21 08.1 0.0
baz=78
DGMT **Dagmar** 77.30 338 eP P 08 21 08.2 +0.1
comp=Z,220nm,0.8s,mb6.1
DGMT LR LR
comp=Z,13μm,21.0s,MS6.2
WCN **Washoe City** 77.32 323 ⇓P P 08 21 09.1 +0.6
baz=78
F18A **Big Timber** 77.32 333 ⇓P P 08 21 08.3 0.0
baz=78,SNR=132
J13A **Cove Ranch, Pi** 77.38 329 ⇓P P 08 21 09.0 +0.3
baz=78,SNR=118
PAHR **Pah Rah Range** 77.39 323 eP P 08 21 09.4 +0.6
O07A **Toulon** 77.43 324 P P 08 21 09.1 0.0
baz=78,SNR=72
I14A **Mackay** 77.44 329 ⇓P P 08 21 09.8 +0.8
baz=78,SNR=153
SCHQ **Schefferville** 77.45 2 P P 08 21 07.7 -1.1
comp=Z,60nm,0.8s,mb5.6,baz=201,slow=4.5,SNR=20
SCHQ S S 08 30 51.7 -3.2
comp=Z,8.9nm,1.0s,baz=349,slow=11,SNR=3.1
SCHQ **Schefferville** 77.45 2 eP P 08 21 07.5 -1.3
comp=Z,75nm,0.8s,mb5.7
SCHQ LR LR
comp=Z,14μm,22.0s,MS6.2
N08A **GE Springer Mi** 77.47 325 ⇓P P 08 21 08.4 -0.9
baz=78,SNR=39
L10A **Juniper Basin** 77.54 327 ⇓P P 08 21 09.9 +0.3
baz=78,SNR=253
M09A **Marrel Ranch,** 77.57 326 ⇓P P 08 21 09.8 0.0
baz=78,SNR=106
H15A **Lima** 77.60 330 P P 08 21 10.6 +0.7
baz=78,SNR=40
HLID **Hailey** 77.62 329 ⇑P P 08 21 10.7 +0.6
baz=78
HLID **Hailey** 77.62 329 eP P 08 21 10.6 +0.5
comp=Z,132nm,0.8s,mb5.9
HLID LR LR
comp=Z,11μm,20.0s,MS6.2
P06A **Stead Airport,** 77.66 323 ⇑P P 08 21 10.8 +0.5
baz=78,SNR=28
SAC **San Andreas** 77.68 320 eP P 08 21 11.0 +0.4
G16A **Moss Hill, Enn** 77.69 331 ⇑P P 08 21 10.4 0.0
baz=78,SNR=30
J12A **Stokes Ranch,** 77.72 328 ⇑P P 08 21 10.8 +0.2
baz=78,SNR=108
F17A **Fitzpatrick Pl** 77.72 332 ⇑P P 08 21 10.8 +0.2
baz=78,SNR=95
I13A **Wildhorse Cree** 77.75 329 P P 08 21 11.5 +0.7
baz=78,SNR=128
K11A **Parker Ranch,** 77.83 327 ⇓P P 08 21 11.3 +0.1
baz=78,SNR=92
MCMT **McKenzie Canyo** 77.85 330 P P 08 21 12.0 +0.7
N07B **Gerlach** 77.92 324 ⇑P P 08 21 11.8 0.0
baz=78,SNR=95
H14A **Leadore** 77.93 330 ⇓P P 08 21 11.9 +0.2
baz=78,SNR=121
E18A **Harlowton** 77.93 333 ⇑P P 08 21 11.6 -0.1
baz=78,SNR=58
BOZ **Bozeman (W)** 77.94 332 ⇓P P 08 21 11.5 -0.3
baz=78
BOZ **Bozeman (W)** 77.94 332 eP P 08 21 11.4 -0.4
BOZ pmax pmax
comp=Z,96nm,1.3s,mb5.6
BOZ MLR MLR
comp=Z,14μm,21.0s,MS6.2
BOZ **Bozeman (W)** 77.94 332 eP P 08 21 11.4 -0.4
comp=Z,96nm,1.3s,mb5.6
BOZ LR LR
comp=Z,14μm,21.0s,MS6.2

G15A **Dillon** 77.95 331 P P 08 21 12.1 +0.3
baz=78,SNR=83
O06A **Flanigan** 77.96 323 ⇑P P 08 21 12.0 0.0
baz=78,SNR=26
BEKR **Beckwourth** 78.04 323 ⇓P P 08 21 12.8 +0.3
baz=78
F16A **Kennard Place,** 78.05 332 ⇓P P 08 21 12.2 -0.2
baz=78,SNR=33
M08A **Happy Creek Ra** 78.08 325 ⇑P P 08 21 12.4 -0.2
baz=78,SNR=43
L09A **Wilkinson Ranc** 78.11 326 ⇓P P 08 21 12.8 0.0
baz=78,SNR=66
I12A **Atlanta** 78.14 328 ⇓P P 08 21 13.4 +0.5
baz=78
DLMT **Dillon** 78.15 331 eP P 08 21 13.2 +0.3
comp=Z,108nm,1.0s,mb5.7
MFID **Camas Ranch** 78.20 328 ⇑P P 08 21 13.5 +0.2
baz=78,SNR=53
E17A **Martinsdale** 78.25 333 P P 08 21 13.5 +0.1
baz=79,SNR=84
K10A **MacKenzie Ranc** 78.25 327 P P 08 21 13.6 +0.1
baz=79,SNR=99
H13A **Challis** 78.30 329 ⇑P P 08 21 14.2 +0.4
baz=79,SNR=237
OHCM **Honcut** 78.32 322 eP P 08 21 13.9 -0.2
MCCM **Marconi Confer** 78.33 320 eP P 08 21 13.8 -0.3
comp=Z,126nm,1.0s,mb5.8
MCCM LR LR
comp=Z,12μm,19.0s,MS6.2
N06A **Buffalo Meadow** 78.36 324 ⇓P P 08 21 14.3 +0.1
baz=79,SNR=108
D18A **Linhart Farms,** 78.39 334 ⇑P P 08 21 14.1 -0.1
baz=79,SNR=49
LRM **Limekiln Ridge** 78.44 331 eP P 08 21 14.8 +0.2
G14A **Jackson** 78.45 330 ⇑P P 08 21 14.9 +0.3
baz=79
M07A **Soldier Meadow** 78.45 325 ⇓P P 08 21 14.8 0.0
baz=79,SNR=103
F15A **Butte** 78.47 331 P P 08 21 14.9 +0.2
baz=79,SNR=84
H12A **Diamond D Ranc** 78.57 329 ⇑P P 08 21 15.5 +0.2
baz=79,SNR=94
L08A **Fields** 78.58 326 ⇑P P 08 21 15.2 -0.2
baz=79,SNR=93
I11A **Placerville** 78.63 328 ⇓P P 08 21 15.1 -0.5
baz=79,SNR=76
K09A **Rome** 78.63 326 ⇓P P 08 21 15.6 -0.1
baz=79,SNR=70
E16A **East Helena** 78.66 332 P P 08 21 15.8 +0.1
baz=79,SNR=27
J10A **Berg Farm, Mel** 78.67 327 ⇑P P 08 21 15.3 -0.6
baz=79,SNR=18
G13A **Cobalt** 78.69 330 P P 08 21 16.6 +0.7
baz=79,SNR=501
D17A **Six Diamond Ra** 78.72 333 ⇑P P 08 21 15.9 -0.2
baz=79,SNR=85
F14A **Wisdom** 78.84 331 ⇑P P 08 21 17.2 +0.4
baz=79,SNR=102
SUR **Sutherland** 78.86 120 P P 08 21 17.4 +0.1
comp=Z,2μm,0.9s,mb7.1,SNR=16
SUR **Sutherland** 78.86 120 P P 08 21 17.7 +0.4
comp=Z,487nm,1.1s,mb6.3
SUR ePP pP 08 21 32.2 -1.1
SUR ePP PP 08 24 03.9 -12
SUR LR LR
comp=Z,34μm,22.0s,MS6.6
HRY **Holter Researc** 78.86 332 eP P 08 21 17.1 +0.2
TOA0 **Torodi Ar. Sit** 78.88 71 eP P 08 21 15.9 -1.8
TOA0 ePP pP 08 21 30.7 -2.9
TOA0 ePP PP 08 24 13.3 -3.8
TORD **Torodi Ar. Bea** 78.88 71 P P 08 21 16.0 -1.7
comp=Z,739nm,0.8s,mb6.7,baz=252,slow=5.4,SNR=306
TORD S S 08 31 07.2 -4.7
comp=Z,3.2nm,1.1s,baz=216,slow=3.8,SNR=2.2
TORD PKKPbc PKKPbc 08 40 11.9 +1.4
comp=Z,1.1nm,0.5s,baz=50,slow=2.0,SNR=6.4
TORD PKPPKP 08 48 08.5
comp=Z,0.7nm,1.0s,baz=169,slow=3.0,SNR=3.6
TORD LR LR 08 57 08.9
comp=Z,18μm,18.1s,MS6.4,baz=240,slow=36
TORD **Torodi Ar. Bea** 78.88 71 P P 08 21 16.0 -1.7
TORD S S 08 31 07.2 -4.7
TORD PKKPbc PKKPbc 08 40 11.9 +1.4
TORD P'P' 08 48 08.5
TORD LR LR 08 57 08.9
WVOR **Wild Horse Val** 78.91 326 eP P 08 21 16.6 -0.6
WVOR e 08 24 17.7
WVOR pmax pmax
comp=Z,121nm,1.3s,mb5.7
WVOR MLR MLR
comp=Z,21μm,22.0s,MS6.4
WVOR **Wild Horse Val** 78.91 326 eP P 08 21 16.6 -0.6
comp=Z,121nm,1.3s,mb5.7
WVOR ePP PP 08 24 17.7 +0.8
WVOR LR LR
comp=Z,21μm,22.0s,MS6.4
L07A **Adell** 78.99 325 ⇑P P 08 21 18.0 +0.4
baz=79,SNR=64
D16A **Dana Ranch, Ca** 78.99 333 ⇑P P 08 21 17.5 0.0
baz=79,SNR=80
E15A **Deer Lodge** 78.99 332 ⇓P P 08 21 17.6 +0.1
baz=79,SNR=100
HOPS **Hopland** 79.00 321 eP P 08 21 17.2 -0.6
comp=Z,1μm,2.4s,mb6.3
HOPS LR LR
comp=Z,12μm,21.0s,MS6.2
EGMT **Eagleton** 79.03 334 ⇑P P 08 21 17.2 -0.6
baz=79
EGMT **Eagleton** 79.03 334 eP P 08 21 17.1 -0.7
EGMT LR LR
comp=Z,18μm,22.0s,MS6.4
K08A **Mann Creek Ran** 79.04 326 P P 08 21 17.9 0.0
baz=79,SNR=31
J09A **Fry Pan Ranch,** 79.11 327 ⇓P P 08 21 17.9 -0.3
baz=79,SNR=56
C17A **Wharram Farm,** 79.13 333 ⇓P P 08 21 17.8 -0.5
baz=80,SNR=27
I10A **Payette** 79.17 328 P P 08 21 18.6 0.0
baz=80,SNR=34
H11A **Donnelly** 79.24 329 ⇑P P 08 21 18.7 -0.3
baz=80,SNR=53
LBCM **Butte Creek Ri** 79.26 323 P P 08 21 18.6 -0.6
F13A **Darby** 79.26 330 P P 08 21 19.3 +0.3
baz=80,SNR=366
B18A **Beardsley Farm** 79.34 334 ⇓P P 08 21 19.1 -0.3
baz=80,SNR=55
E14A **Clinton** 79.36 331 P P 08 21 20.1 +0.5
baz=80,SNR=83
K07A **Rock Creek Ran** 79.41 325 P P 08 21 20.2 +0.2
baz=80,SNR=69
D15A **Lincoln** 79.42 332 ⇓P P 08 21 20.1 +0.3
baz=80,SNR=52
MOD **Modoc** 79.42 324 eP P 08 21 20.0 0.0
comp=Z,158nm,0.9s,mb5.9
MOD LR LR
comp=Z,14μm,22.0s,MS6.2
J08A **Circle Bar Ran** 79.48 326 P P 08 21 20.4 +0.1
baz=80,SNR=58
H10A **Noah's Angus R** 79.51 328 P P 08 21 19.9 -0.5
baz=80,SNR=101
I09A **Lost Marbles R** 79.55 327 ⇑P P 08 21 20.5 -0.2
baz=80,SNR=90
CHMT **Chamberlain Mo** 79.64 332 eP P 08 21 21.2 +0.1
B17A **L&G Farms, Che** 79.67 334 ⇑P P 08 21 20.4 -0.8
baz=80,SNR=16
C16A **Fuhringer Ranc** 79.68 333 P P 08 21 21.0 -0.2
baz=80,SNR=81
E13A **Victor** 79.69 331 ⇓P P 08 21 21.4 0.0
baz=80,SNR=113
WDC **Whiskeytown Da** 79.75 322 eP P 08 21 20.1 -1.8
WDC pmax pmax
comp=Z,100nm,0.8s,mb5.8
WDC MLR MLR
comp=Z,9μm,22.0s,MS6.0
WDC **Whiskeytown Da** 79.75 322 eP P 08 21 20.1 -1.8
comp=Z,100nm,0.8s,mb5.8
WDC LR LR
comp=Z,9μm,22.0s,MS6.0
A18A **Metzger Ranch,** 79.79 335 ⇑P P 08 21 20.9 -0.9
baz=80,SNR=37
D14A **Greenough** 79.88 332 ⇑P P 08 21 22.3 -0.1
baz=80,SNR=64
G11A **Walters Elk Ra** 79.88 329 ⇑P P 08 21 21.8 -0.6
baz=80,SNR=172
MSO **Missoula** 79.88 331 eP P 08 21 22.4 0.0
comp=Z,41nm,1.1s,mb5.3
MSO LR LR

comp=Z,16μm,21.0s,MS6.3
J07A **Hines** 79.92 326 ⇑P P 08 21 22.9 +0.2
baz=80,SNR=65
I08A **Drewsey** 79.93 327 ⇓P P 08 21 22.7 0.0
baz=80,SNR=192
BMO **Blue Mountains** 79.97 328 eP P 08 21 22.5 -0.5
comp=Z,89nm,0.8s,mb5.8
BMO LR LR
comp=Z,12μm,22.0s,MS6.2
SLMT **Seeley Lake** 79.99 332 eP P 08 21 22.9 0.0
H09A **Durkee** 80.02 328 ⇑P P 08 21 23.0 -0.2
baz=80,SNR=18
C15A **Salmond Ranch,** 80.02 332 ⇑P P 08 21 23.3 +0.2
baz=80,SNR=186
B16A **M & M Farms, S** 80.14 333 ⇑P P 08 21 22.9 -0.8
baz=80,SNR=18
A17A **Triple J Farms** 80.15 334 ⇑P P 08 21 23.3 -0.5
baz=80,SNR=33
F11A **Grangeville** 80.18 329 ⇑P P 08 21 23.6 -0.4
baz=80
G10A **Bishop Farm, J** 80.21 328 P P 08 21 24.4 +0.3
baz=80,SNR=141
J06A **Christmas Vall** 80.28 325 P P 08 21 24.6 0.0
baz=81,SNR=132
E12A **Beaver Dam Sad** 80.30 330 ⇑P P 08 21 24.4 -0.3
baz=81
K05A **Summer Lake** 80.31 325 ⇓P P 08 21 24.6 -0.2
baz=81,SNR=85
D13A **Huson** 80.31 331 ⇑P P 08 21 24.6 -0.1
baz=81,SNR=106
H08A **Prairie City** 80.41 327 ⇓P P 08 21 25.2 -0.1
baz=81,SNR=70
HOG **Hogback Mounta** 80.41 324 P P 08 21 25.4 0.0
B15A **Bradely Ranch,** 80.42 333 P P 08 21 24.3 -0.9
baz=81,SNR=98
SWMT **Swartz Lake** 80.42 332 eP P 08 21 25.2 -0.1
C14A **Swan Lake** 80.51 332 ⇑P P 08 21 25.5 -0.2
baz=81,SNR=67
A16A **West Butte Ran** 80.51 334 ⇑P P 08 21 25.2 -0.5
baz=81,SNR=214
G09A **Cove** 80.52 328 ⇑P P 08 21 25.9 +0.1
baz=81,SNR=258
I07A **Izee** 80.52 326 ⇓P P 08 21 25.7 -0.2
baz=81,SNR=72
E11A **Bogner Ranch,** 80.55 330 ⇓P P 08 21 25.4 -0.7
baz=81,SNR=53
YBH **Yreka Blue Hor** 80.62 323 S S 08 31 26.5 -2.7
comp=Z,1.5nm,0.9s,baz=295,slow=10,SNR=1.8
YBH **Yreka Blue Hor** 80.62 323 eP P 08 21 25.2 -1.3
YBH pmax pmax
comp=Z,63nm,0.9s
YBH MLR MLR
comp=Z,9μm,22.0s
YBH **Yreka Blue Hor** 80.62 323 eP P 08 21 25.2 -1.3
comp=Z,63nm,0.9s,mb5.5
YBH LR LR
comp=Z,9μm,22.0s,MS6.1
KHMM **Horse Mountain** 80.62 322 eP P 08 21 27.2 +0.7
D12A **Red Ives Fores** 80.68 331 ⇑P P 08 21 26.5 -0.2
baz=81
YBMT **Yellow Bay** 80.69 332 eP P 08 21 26.9 +0.2
TSUM **Tsumeb** 80.72 107 eP P 08 21 27.0 -0.6
comp=Z,474nm,1.0s,mb6.4
TSUM LR LR
comp=Z,53μm,21.0s,MS6.9
JTMT **Jette** 80.72 332 eP P 08 21 27.0 +0.1
F10A **Beach Ranch, E** 80.75 329 P P 08 21 26.9 -0.2
baz=81,SNR=212
B14A **Marquette Ranc** 80.76 332 ⇑P P 08 21 26.4 -0.6
baz=81,SNR=39
I06A **Prineville** 80.79 326 P P 08 21 27.9 +0.6
baz=81,SNR=74
C13A **Hot Springs** 80.80 331 ⇓P P 08 21 27.4 +0.1
baz=81,SNR=59
F09A **S2 Ranch, Elgi** 80.89 328 ⇑P P 08 21 27.4 -0.5
baz=81,SNR=63
A15A **Johnson Ranch,** 81.01 333 ⇓P P 08 21 27.2 -1.1
baz=81,SNR=34
BSMT **Bassoo Peak** 81.03 331 eP P 08 21 28.5 0.0
E10A **Myers Farm, Un** 81.07 329 ⇑P P 08 21 28.6 -0.1
baz=81,SNR=176
G08A **Pilot Rock** 81.10 327 P P 08 21 28.9 -0.1
baz=81,SNR=75
D11A **Klaveano Farm,** 81.12 330 ⇓P P 08 21 28.2 -0.8
baz=81,SNR=42
LNOR **Lincton Counta** 81.19 328 eP P 08 21 28.2 -1.2
C12B **Naegeli Ranch,** 81.22 331 ⇑P P 08 21 29.6 0.0
baz=82,SNR=58
B13A **Whitefish** 81.28 332 ⇑P P 08 21 29.6 -0.2
baz=82,SNR=52
A14A **Double T Ranch** 81.29 333 P P 08 21 29.3 -0.6
baz=82,SNR=61
HUMO **Hull Mountain** 81.34 323 eP P 08 21 29.0 -1.3
comp=Z,85nm,1.2s,mb5.5
HUMO LR LR
comp=Z,13μm,21.0s,MS6.3
F08A **Pendleton** 81.38 328 ⇑P P 08 21 29.5 -0.9
baz=82
VIPM **Ingram Point** 81.39 326 P P 08 21 31.0 +0.5
H06A **Lindquist Farm** 81.41 326 ⇑P P 08 21 31.0 +0.4
baz=82,SNR=75
G07A **Ruggs Ranch, H** 81.44 327 P P 08 21 31.3 +0.5
baz=82,SNR=78
I05A **Bend** 81.49 325 ⇓P P 08 21 31.4 +0.4
baz=82,SNR=131
WALA **Waterton Lakes** 81.56 333 eP P 08 21 30.9 -0.4
comp=Z,5.8nm,1.0s
D10A **Wagner Farm, O** 81.56 330 ⇑P P 08 21 30.6 -0.8
baz=82,SNR=82
E09A **Wood Farm, Sta** 81.58 329 ⇑P P 08 21 30.7 -0.8
baz=82,SNR=31
C11A **Tepee Creek (N** 81.67 331 ⇓P P 08 21 31.6 -0.3
baz=82
A13A **Flathead Natio** 81.68 332 ⇓P P 08 21 32.0 +0.1
baz=82
RAR **Rarotonga** 81.69 251 P P 08 21 31.4 -1.4
comp=Z,31nm,0.8s,mb5.3,baz=225,slow=5.6,SNR=6.0
RAR **Rarotonga** 81.69 251 P P 08 21 31.4 -1.4
RAR LR LR
comp=Z,18μm,22.0s,MS6.4
H05A **Madras** 81.80 326 ⇓P P 08 21 32.9 +0.2
baz=82,SNR=17
B12A **Libby** 81.84 331 ⇑P P 08 21 32.8 0.0
baz=82,SNR=36
G06A **Carlson Farm,** 81.91 327 P P 08 21 33.6 +0.4
baz=82,SNR=26
FFC **Flin Flon** 81.98 342 P P 08 21 32.2 -1.2
comp=Z,539nm,0.6s,mb6.7,SNR=52
FFC **Flin Flon** 81.98 342 eP P 08 21 32.0 -1.4
FFC pmax pmax
comp=Z,164nm,1.1s,mb5.9
FFC MLR MLR
comp=Z,18μm,21.0s,MS6.4
FFC **Flin Flon** 81.98 342 eP P 08 21 32.0 -1.4
comp=Z,164nm,1.1s,mb5.9
FFC LR LR
comp=Z,18μm,21.0s,MS6.4
E08A **Dider Farm, El** 82.01 328 ⇑P P 08 21 33.2 -0.5
baz=82,SNR=14
F07A **Phinny Hill Vi** 82.01 327 ⇓P P 08 21 33.9 +0.1
baz=82,SNR=15
D09A **Jones Farm, Ri** 82.06 329 P P 08 21 33.4 -0.6
baz=82,SNR=78
C10A **Spilker Farm,** 82.14 330 ⇑P P 08 21 34.0 -0.4
baz=82,SNR=93
B11A **Sandpoint** 82.17 331 ⇑P P 08 21 33.6 -0.9
baz=82,SNR=14
HAWA **Hanford** 82.17 328 eP P 08 21 34.4 -0.1
comp=Z,162nm,0.8s,mb6.0
HAWA LR LR
comp=Z,13μm,20.0s,MS6.3
RSW **Rattlesnake Hi** 82.20 328 eP P 08 21 34.7 0.0
A12A **Yaak River Ran** 82.22 332 ⇑P P 08 21 34.5 -0.3
baz=82,SNR=166
G05A **Wamic** 82.26 326 ⇓P P 08 21 35.1 +0.1
baz=83,SNR=26
KEBM **Edson Butte** 82.28 323 eP P 08 21 35.8 +0.6
H04A **Detroit Lake** 82.33 325 P P 08 21 34.7 -0.7
baz=83,SNR=23
D08A **Wollman Farm,** 82.34 329 ⇓P P 08 21 35.0 -0.5
baz=83,SNR=35
F06A **Goldendale** 82.35 327 ⇓P P 08 21 35.5 -0.1
baz=83,SNR=35
NEW **Newport** 82.38 330 eP P 08 21 34.4 -1.2
NEW pmax pmax
comp=Z,712nm,2.1s
NEW MLR MLR
comp=Z,11μm,20.0s

NEW Newport 82.38 330 *e*P P 08 21 34.4 -1.3
comp=Z,712nm,2.1s,mb6.2
NEW LR LR
comp=Z,11µm,20.0s,MS6.2
I03A Eugene 82.43 324 ⇓P P 08 21 35.8 -0.2
baz=83,SNR=15
E07A Sunnyside 82.44 328 ⇓P P 08 21 35.8 -0.2
baz=83,SNR=23
B10A Chitwood Farm, 82.45 330 ⇑P P 08 21 35.0 -1.0
baz=83
OD2 Odessa Site #2 82.48 329 P P 08 21 35.9 -0.3
A11A Hall Mountain, 82.55 331 P P 08 21 36.0 -0.4
baz=83,SNR=149
RTC Rabat Centre 82.56 48 PFAKE 08 21 50.0 +13
RTC LR LR
comp=Z,4µm,19.0s,MS5.8
C09A Chrisman Ranch 82.57 330 ⇑P P 08 21 36.3 -0.4
baz=83,SNR=87
I02A Mapleton 82.75 324 ⇓P P 08 21 37.3 -0.4
baz=83
F05A White Salmon 82.77 327 ⇑P P 08 21 36.4 -1.3
baz=83,SNR=18
G04A Mulino 82.83 326 ⇓P P 08 21 37.2 -0.8
baz=83,SNR=31
COR Corvallis 82.85 325 *e*P P 08 21 38.1 -0.1
COR *e**PP pP 08 21 56.3 +2.0
COR pmax pmax
comp=Z,266nm,0.8s,mb6.3
COR MLR MLR
comp=Z,16µm,22.0s,MS6.3
COR Corvallis 82.85 325 *e*P P 08 21 38.0 -0.1
comp=Z,266nm,0.8s,mb6.3
COR *e*PcP PcP 08 21 42.2 -0.7
COR *e*pP pP 08 21 56.3 +2.0
COR LR LR
comp=Z,16µm,22.0s,MS6.3
H03A Soap Creek Ran 82.91 325 ⇑P P 08 21 38.0 -0.5
baz=83,SNR=20
C08A Higginbotham F 82.92 329 ⇓P P 08 21 37.5 -1.0
baz=83,SNR=22
D07A Quincy 82.95 328 ⇓P P 08 21 38.3 -0.3
baz=83,SNR=28
B09A Rice 82.97 330 ⇑P P 08 21 37.8 -0.9
baz=83,SNR=51
E06A Yakima 82.99 327 ⇓P P 08 21 38.6 -0.3
baz=83,SNR=13
PFVI Vila Bisbo 83.02 45 *e*P P 08 21 41.0 +1.8
comp=Z,282nm,1.9s,mb6.0
PFVI *e*pP pP 08 21 54.5 -0.9
PFVI *e*S S 08 31 59.2 +5.0
PFVI *e*SS SS 08 37 31.8 +12
PFVI *e*LQ 08 43 45.9
PFVI *e*LR LR 08 49 16.2
comp=Z,21µm,21.4s
EBG Ellensburg 83.04 328 P P 08 21 39.1 0.0
A10A Northport 83.10 331 ⇑P P 08 21 38.1 -1.2
baz=83,SNR=29
MORF Marmelete 83.24 45 *e*P P 08 21 42.0 +1.6
comp=Z,411nm,1.4s,mb6.3
MORF *e*pP pP 08 21 55.4 -1.1
MORF *e*S S 08 32 01.4 +5.0
MORF *e*SS SS 08 36 59.7 -23
MORF *e*LQ 08 43 47.1
MORF *e*LR LR 08 50 01.3
comp=Z,23µm,20.7s
WTV Waterville 83.30 329 P P 08 21 39.7 -0.7
F04A Amboy 83.30 326 ⇓P P 08 21 39.8 -0.7
baz=84,SNR=30
G03A Yamhill 83.33 325 ⇓P P 08 21 40.0 -0.6
baz=84,SNR=23
PTEO Sao Teotonio 83.33 45 *e*P P 08 21 42.6 +1.8
comp=Z,720nm,1.6s,mb6.5
PTEO *e*pP pP 08 21 57.0 +0.1
MAW Mawson 83.33 164 *e*P P 08 21 38.9 -1.5
comp=Z,128nm,0.8s,mb6.0
MAW *e*pP pP 08 21 56.0 -0.5
MAW *e*SKS 08 31 56.2
MAW Mawson 83.33 164 P P 08 21 39.0 -1.4
comp=Z,166nm,0.8s,mb6.1,baz=218,slow=6.0,SNR=107
MAW S S 08 31 55.1 -1.4
comp=Z,4.8nm,1.0s,baz=344,slow=21,SNR=1.9
MAW LR LR 08 58 54.0
comp=Z,17µm,21.2s,MS6.4,baz=134,slow=36
MAW Mawson 83.33 164 *e*P P 08 21 38.9 -1.5
MAW *e**PP pP 08 21 56.0 -0.5
MAW *e* 08 31 56.2
MAW pmax pmax
comp=Z,128nm,0.8s
MAW MLR MLR
comp=Z,30µm,22.0s
MAW Mawson 83.33 164 *e*P P 08 21 38.9 -1.5
comp=Z,128nm,0.8s,mb6.0
MAW *e*pP pP 08 21 56.0 -0.5
MAW *e*SKS 08 31 56.2
MAW LR LR
comp=Z,30µm,22.0s,MS6.6
C07A Waterville 83.34 329 ⇓P P 08 21 40.0 -0.6
baz=84,SNR=49
E05A Randle 83.39 327 ⇓P P 08 21 40.0 -0.9
baz=84,SNR=8.4
ETW Entiat 83.41 328 *e*P P 08 21 40.5 -0.4
B08A Colville Reser 83.47 329 ⇑P P 08 21 40.0 -1.2
baz=84,SNR=31
MDT Midelt 83.50 50 P P 08 21 41.7 -0.1
comp=Z,209nm,1.0s,mb6.1,baz=246,slow=5.2,SNR=170
MDT S S 08 32 02.9 +3.7
comp=Z,1.9nm,1.1s,baz=81,slow=8.4,SNR=2.3
HEBO Mount Hebo 83.51 325 *e*P P 08 21 42.0 +0.4
comp=Z,239nm,1.1s,mb6.2
LON Longmire 83.55 327 *e*P P 08 21 40.4 -1.3
LON *e**PP pP 08 21 58.2 +0.4
LON *e* 08 24 55.8
LON pmax pmax
comp=Z,111nm,1.5s,mb5.8
LON Longmire 83.55 327 *e*P P 08 21 40.4 -1.3
comp=Z,111nm,1.5s,mb5.8
LON *e*pP pP 08 21 58.2 +0.4
LON *e*PP PP 08 24 55.8 +0.7
A09A Danville 83.56 330 ⇓P P 08 21 40.7 -1.0
baz=84,SNR=60
PBDV Barranco-do-Ve 83.67 45 *e*P P 08 21 44.3 +1.7
comp=Z,647nm,1.3s,mb6.6
PBDV *e*pP pP 08 21 58.0 -0.7
PBDV *e*S S 08 32 04.6 +3.9
PBDV *e*SS SS 08 37 32.8 +3.7
PBDV *e*LQ 08 43 45.3
PBDV *e*LR LR 08 49 02.2
comp=Z,24µm,22.3s
FCC Fort Churchill 83.73 348 *e*P P 08 21 41.1 -1.2
FCC Fort Churchill 83.73 348 *e*pP pP 08 21 57.9 -0.6
LIS Lisbon 83.74 43 *e*P P 08 21 40.9 -2.0
LIS *e*S S 08 31 59.8 -1.5
LIS *e*S S 08 31 59.8 -1.5
LIS AMS AMS 08 55 34.3
comp=Z,21µm,17.6s,MS6.6
PMAFR Mafra 83.79 43 *e*P P 08 21 45.1 +1.9
comp=Z,452nm,1.3s,mb6.4
PMAFR *e*pP pP 08 21 58.2 -1.1
PMAFR *e*S S 08 32 04.8 +2.9
PMAFR *e*SS SS 08 37 31.9 +1.0
PMAFR *e*LQ 08 44 09.1
PMAFR *e*LR LR 08 49 17.8
comp=Z,20µm,21.2s
BOSA Boshof 83.79 118 P P 08 21 41.9 -1.7
comp=Z,266nm,0.8s,mb6.5,baz=253,slow=4.4,SNR=179
BOSA S S 08 31 56.7 -5.9
comp=Z,2.8nm,1.1s,baz=69,slow=20,SNR=1.7
BOSA PKKPbc PKKPbc 08 40 02.2 +3.0
comp=Z,4.0nm,0.8s,baz=9.9,slow=2.2,SNR=4.2
BOSA LR LR 08 56 05.8
comp=Z,36µm,19.6s,MS6.8,baz=244,slow=34
BOSA Boshof 83.79 118 *e*P P 08 21 42.4 -1.2
BOSA *e**PP pP 08 21 55.2 -4.5
BOSA pmax pmax
comp=Z,408nm,0.9s,mb6.6
BOSA MLR MLR
comp=Z,36µm,20.0s,MS6.8
BOSA Boshof 83.79 118 *e*P P 08 21 42.4 -1.2
comp=Z,408nm,0.9s,mb6.6
BOSA *e*pP pP 08 21 55.2 -4.5
BOSA LR LR
comp=Z,36µm,20.0s,MS6.8
A08A Turner Farm, O 83.86 330 ⇓P P 08 21 41.5 -1.7
baz=84,SNR=104
PVAQ Vaqueiros 83.90 45 *e*P P 08 21 45.8 +2.0
comp=Z,548nm,1.6s,mb6.4
PVAQ *e*pP pP 08 21 59.1 -0.8
PVAQ *e*S S 08 32 07.3 +4.2
PVAQ *e*SS SS 08 37 35.3 +2.7
PVAQ *e*LQ 08 43 46.9
PVAQ *e*LR LR 08 49 05.4
comp=Z,23µm,21.7s
B07A Winthrop 83.91 329 ⇑P P 08 21 42.5 -1.1
baz=84,SNR=53
EGRO El Granado 84.13 45 P P 08 21 45.8 +0.9
comp=Z,2µm,1.7s,mb6.9
C05A Tolt Reservoir 84.13 328 ⇓P P 08 21 42.8 -1.9
baz=84,SNR=16
PBEJ Beja 84.16 45 *e*P P 08 21 46.4 +1.3
comp=Z,462nm,1.4s,mb6.4
PBEJ *e*pP pP 08 22 01.2 0.0
ALMR Almeirim 84.35 43 *e*P P 08 21 45.0 -1.0
EVO Evora 84.36 44 *i*/P P 08 21 45.7 -0.3
comp=Z,656nm,1.2s,mb6.3
EVO *e*MLR MLR
comp=Z,39µm,22.5s,MS6.4
EVO Evora 84.36 44 *e*P P 08 21 47.6 +1.6
comp=Z,364nm,1.4s,mb6.3
EVO *e*pP pP 08 22 01.1 -1.1
SFS San Fernando 84.38 47 *e*P P 08 21 48.2 +2.0
SFS *e**PP pP 08 22 02.0 -0.4
SFS pmax pmax
comp=Z,590nm,1.0s,mb6.7
SFS MLR MLR
comp=Z,30µm,22.0s,MS6.6
SFS San Fernando 84.38 47 *e*P P 08 21 48.2 +2.0
comp=Z,590nm,1.0s,mb6.7
SFS *e*pP pP 08 22 02.0 -0.3
SFS LR LR
comp=Z,30µm,22.0s,MS6.6
A07A Ashnola River, 84.45 329 ⇑P P 08 21 45.7 -0.5
baz=85,SNR=80
EDM Edmonton 84.54 336 *e*P P 08 21 44.7 -1.9
EDM *e**PP pP 08 22 02.5 -0.3
RPW Rockport 84.57 328 *e*P P 08 21 45.3 -1.6
JCW Jim Creek 84.59 328 *e*P P 08 21 45.5 -1.5
B06A Marblemount 84.60 329 ⇑P P 08 21 45.4 -1.7
baz=85,SNR=21
B05A Bryant 84.72 328 ⇑P P 08 21 46.2 -1.4
baz=85,SNR=17
PBAR Barrancos 84.78 45 *e*P P 08 21 50.1 +1.9
comp=Z,566nm,1.2s,mb6.6
PBAR *e*pP pP 08 22 03.0 -1.4
PBAR *e*S S 08 32 12.8 +1.0
PBAR *e*SS SS 08 37 55.1 +10
PBAR *e*LQ 08 44 31.8
PBAR *e*LR LR 08 49 48.6
comp=Z,24µm,21.4s
EMIN Mina Concepcio 84.79 45 P P 08 21 48.7 +0.5
comp=Z,1µm,1.1s,mb6.9
PESTR Estremoz 84.82 44 *e*P P 08 21 50.2 +1.8
comp=Z,621nm,1.3s,mb6.6
PESTR *e*pP pP 08 22 03.6 -0.9
PESTR *e*S S 08 32 12.8 +0.7
PESTR *e*SS SS 08 37 48.6 +2.6
PESTR *e*LQ 08 44 33.6
PESTR *e*LR LR 08 49 52.7
comp=Z,23µm,23.8s
ESPR Espera 84.83 47 P P 08 21 49.3 +0.8
comp=Z,2µm,1.3s,mb7.0
EJIF Jimena Fronter 84.87 47 P P 08 21 50.2 +1.5
EJIF pmax pmax
comp=Z,724nm,1.3s,mb6.7
EJIF Jimena Fronter 84.87 47 P P 08 21 50.2 +1.6
comp=Z,724nm,1.3s,mb6.7
A06A Chilliwack 85.00 329 ⇑P P 08 21 47.8 -1.2
baz=85,SNR=10
EBAD Badajoz 85.13 44 P P 08 21 50.3 +0.4
comp=Z,1µm,1.7s,mb6.7
A05A Maple Falls 85.22 329 ⇑P P 08 21 48.9 -1.3
baz=86
PMRV Marv??o 85.26 44 *e*P P 08 21 51.8 +1.2
comp=Z,277nm,1.2s,mb6.3
PMRV *e*pP pP 08 22 05.2 -1.6
PMRV *e*S S 08 32 15.2 -1.3
PMRV *e*SS SS 08 37 57.9 +5.3
PMRV *e*LQ 08 44 38.2
PMRV *e*LR LR 08 50 08.9
comp=Z,21µm,23.5s
EMIJ Mijas 85.40 47 P P 08 21 51.4 0.0
comp=Z,752nm,1.1s,mb6.7
PCBR Castelo Branco 85.44 43 *e*P P 08 21 52.8 +1.3
comp=Z,348nm,1.3s,mb6.3
PCBR *e*pP pP 08 22 06.7 -0.9
LBTB Lobatse 85.46 115 S S 08 32 11.9 -7.4
comp=Z,1.4nm,0.7s,baz=185,slow=20,SNR=1.8
LBTB PKKPbc PKKPbc 08 39 54.9 -0.3
comp=Z,8.4nm,0.8s,baz=205,slow=0.9,SNR=7.7
LBTB Lobatse 85.46 115 *e*P P 08 21 51.1 -1.0
LBTB *e* 08 25 06.2
LBTB *e*S S 08 32 16.1 -3.2
LBTB pmax pmax
comp=Z,370nm,1.3s,mb6.3
LBTB MLR MLR
comp=Z,24µm,20.0s,MS6.6
LBTB Lobatse 85.46 115 *e*P P 08 21 51.1 -1.0
comp=Z,370nm,1.3s,mb6.3
LBTB *e*PP PP 08 25 06.2 -4.6
LBTB *e*S S 08 32 16.1 -3.2
LBTB LR LR
comp=Z,24µm,20.0s,MS6.6
PGC Sidney 85.65 328 *e*P P 08 21 51.4 -0.9
comp=Z,6.1nm,0.8s,mb4.9
PVIS Viseu 85.68 42 *e*P P 08 21 54.1 +1.5
comp=Z,376nm,1.3s,mb6.5
PVIS *e*pP pP 08 22 07.5 -1.3
MTE Manteigas 85.72 43 *e*S S 08 32 18.6 -2.4
MTE *e*SS SS 08 38 07.6 +8.4
MTE *e*LQ 08 44 38.5
MTE *e*LR LR 08 51 21.3
comp=Z,32µm,22.3s
MTE Manteigas 85.72 43 *e*P P 08 21 52.5 -0.4
comp=Z,401nm,1.0s,mb6.6
MTE *e*pP pP 08 22 08.4 -0.6
MTE LR LR
comp=Z,19µm,21.0s,MS6.5
EZAM Zamans 86.02 41 P P 08 21 55.7 +1.4
EZAM pmax pmax
comp=Z,23nm,0.8s,mb5.5
EZAM Zamans 86.02 41 P P 08 21 55.7 +1.5
comp=Z,23nm,0.8s,mb5.5
ELOJ Sierra Loja 86.13 47 P P 08 21 55.2 +0.3
ELOJ pmax pmax
comp=Z,640nm,1.0s,mb6.8
ELOJ Sierra Loja 86.13 47 P P 08 21 55.2 +0.2
comp=Z,640nm,1.0s,mb6.8
PCAB Cabril 86.17 42 *e*P P 08 21 55.1 +0.1
comp=Z,459nm,1.1s,mb6.6
PCAB *e*pP pP 08 22 10.9 -0.3
ELOB Lobios 86.24 41 P P 08 21 55.5 +0.1
comp=Z,629nm,1.7s,mb6.6
EALB Alboran 86.25 49 P P 08 21 56.7 +1.1
comp=Z,236nm,1.0s,mb6.4
ELUQ Luque 86.28 47 P P 08 21 56.4 +0.8
ELUQ pmax pmax
comp=Z,1µm,0.8s,mb7.2
ELUQ Luque 86.28 47 P P 08 21 56.4 +0.8
comp=Z,1µm,0.8s,mb7.2
ERON Agron 86.30 47 P P 08 21 57.6 +1.9
comp=Z,31nm,0.6s,mb5.7
EMAZ Mazaricos 86.32 40 P P 08 21 56.9 +1.1
comp=Z,92nm,1.0s,mb6.0
EGUA Guajares 86.36 48 P P 08 21 56.3 +0.2
EGUA pmax pmax
comp=Z,379nm,1.1s,mb6.5
EGUA Guajares 86.36 48 P P 08 21 56.3 +0.2
comp=Z,379nm,1.1s,mb6.5
EADA Adamuz 86.39 46 P P 08 21 56.0 -0.3
comp=Z,649nm,1.1s,mb6.8
TAM Tamanrasset 86.45 64 *e*P P 08 21 56.5 -0.3
TAM *e* 08 25 17.9
TAM *e*S S 08 32 16.2 -13
TAM pmax pmax
comp=Z,311nm,1.2s,mb6.4
TAM MLR MLR
comp=Z,62µm,19.0s,MS7.0
TAM Tamanrasset 86.45 64 *e*P P 08 21 56.5 -0.3
comp=Z,311nm,1.2s,mb6.4
TAM *e*PP PP 08 25 17.9 -1.4
TAM *e*S S 08 32 16.2 -13
TAM LR LR
comp=Z,62µm,19.0s,MS7.0
EPLA Plasencia 86.46 44 P P 08 21 56.5 0.0
EPLA pmax pmax
comp=Z,303nm,1.1s,mb6.4
EPLA Plasencia 86.46 44 P P 08 21 56.5 0.0
comp=Z,303nm,1.1s,mb6.4
MVO Moncorvo 86.48 42 *e*P P 08 21 57.8 +1.3
comp=Z,379nm,1.5s,mb6.4
MVO *e*pP pP 08 22 11.3 -1.4
MVO *e*S S 08 32 20.7 -7.6
MVO *e*SS SS 08 38 20.3 +10
MVO *e*LQ 08 44 48.7
MVO *e*LR LR 08 50 41.0
comp=Z,16µm,24.3s
STS Santiago 86.54 40 P P 08 21 58.4 +1.6
STS pmax pmax
comp=Z,46nm,0.8s,mb5.8
STS Santiago 86.54 40 P P 08 21 58.4 +1.6
comp=Z,46nm,0.8s,mb5.8
ECOG Cogollos-Vega 86.60 47 P P 08 21 57.9 +0.7
ECOG pmax pmax
comp=Z,196nm,1.0s,mb6.3
ECOG Cogollos-Vega 86.60 47 P P 08 21 57.9 +0.7
comp=Z,196nm,1.0s,mb6.3
EBER Berja 86.86 48 P P 08 21 59.9 +1.4
comp=Z,708nm,1.9s,mb6.6
EBAN Banos Encina 86.92 46 P P 08 21 59.0 +0.2
EBAN pmax pmax
comp=Z,1µm,1.4s,mb6.9
EBAN Banos Encina 86.92 46 P P 08 21 59.0 +0.2
comp=Z,1µm,1.4s,mb6.9
PBRG Braganca 87.02 42 *e*P P 08 22 00.5 +1.3
comp=Z,210nm,1.7s,mb6.1
PBRG *e*pP pP 08 22 15.0 -0.4
ECAL Calabor 87.10 42 P P 08 21 59.5 -0.1
comp=Z,88nm,0.9s,mb6.0
EQES Quesada 87.21 47 P P 08 22 01.1 +0.9
comp=Z,505nm,1.5s,mb6.5
PAB San Pablo 87.29 45 *e*P P 08 22 00.4 -0.1
PAB *e**PP pP 08 22 14.6 -2.2
PAB pmax pmax
comp=Z,319nm,1.2s,mb6.4
PAB MLR MLR
comp=Z,30µm,22.0s,MS6.7
PAB San Pablo 87.29 45 *e*P P 08 22 00.4 -0.2
comp=Z,319nm,1.2s,mb6.4
PAB *e*pP pP 08 22 14.6 -2.1
PAB LR LR
comp=Z,30µm,22.0s,MS6.7
ENIJ Nijar 87.36 48 P P 08 22 02.1 +1.1
ENIJ pmax pmax
comp=Z,156nm,1.0s,mb6.2
ENIJ Nijar 87.36 48 P P 08 22 02.1 +1.2
comp=Z,156nm,1.0s,mb6.2
ESDC Sonseca Array 87.61 45 P P 08 22 01.4 -0.7
comp=Z,44nm,1.0s,mb5.7,baz=241,slow=3.6,SNR=91
ESDC S S 08 32 28.8 -11
comp=Z,0.1nm,0.3s,baz=256,slow=3.7,SNR=3.6
ESDC PKKPbc PKKPbc 08 39 51.2 -0.3
comp=Z,1.1nm,0.7s,baz=8.3,slow=2.3,SNR=5.7
ESDC LR LR 08 57 51.1
comp=Z,21µm,21.7s,MS6.5,baz=240,slow=33
ESDC Sonseca Array 87.61 45 P P 08 22 01.4 -0.7
ESDC S S 08 32 28.8 -11
ESDC PKKPbc PKKPbc 08 39 51.2 -0.3
ESDC LR LR 08 57 51.1
ESLA Sonseca Array 87.61 45 *e*P P 08 22 02.0 -0.1
comp=Z,343nm,1.8s,mb6.3
ESLA *e*pP pP 08 22 16.9 -1.4
ESLA LR LR
comp=Z,174µm,22.0s,MS7.4
EPON Pontenova 87.63 41 P P 08 22 02.8 +0.7
comp=Z,581nm,1.7s,mb6.5
DRV Dumont d'Urvil 87.88 192 P P 08 22 03.0 0.0
DRV S S 08 32 38.0 -3.2
DRV SS SS 08 38 34.0 +5.9
DRV L 08 45 00.0
DRV R 08 51 00.0
USTO Oran 87.88 50 P P 08 22 06.0 +2.5
ODJA Bouhanifia 87.96 50 P P 08 22 09.0 +5.1
GUD Guadarrama 88.00 44 P P 08 22 04.5 +0.6
GUD pmax pmax
comp=Z,100nm,1.4s,mb5.8
GUD Guadarrama 88.00 44 P P 08 22 04.5 +0.6
comp=Z,100nm,1.4s,mb5.8
EVIA Vianos 88.03 46 P P 08 22 05.8 +1.7
EVIA pmax pmax
comp=Z,113nm,0.9s,mb6.1
EVIA Vianos 88.03 46 P P 08 22 05.8 +1.7
comp=Z,113nm,0.9s,mb6.1
XMAS Kiritimati 88.31 273 PFAKE 08 22 20.0 +14
XMAS LR LR
comp=Z,40µm,22.0s,MS6.8
OJBR Djebel Berber 88.44 50 P P 08 22 07.0 +0.9
EMUR La Murta 88.47 48 P P 08 22 06.4 +0.2
comp=Z,1µm,4.0s
CART Cartagena 88.50 48 *e*P P 08 22 06.3 0.0
comp=Z,94nm,0.9s,mb6.1
CART *e*pP pP 08 22 19.6 -3.0
CART *e*sP sP 08 22 26.7 -2.2
ETOB Tobarra 88.67 47 P P 08 22 08.3 +1.2
comp=Z,298nm,1.4s,mb6.4
OJGS Djebel Guires 88.69 50 P P 08 22 11.0 +3.7
EARI Arriondas 88.79 41 P P 08 22 09.5 +1.9
comp=Z,283nm,1.6s,mb6.3
OKGL Djebel Kef Gue 88.87 50 P P 08 22 11.0 +2.9
ETRT Tiaret 89.02 51 P P 08 22 10.8 +1.9
EANR 'Ain N'Sour 89.15 50 P P 08 22 11.5 +2.0
ECHA Ech Chlef 89.44 50 P P 08 22 13.9 +3.1
ETOR Torete 89.45 45 P P 08 22 10.4 -0.3
ETOR pmax pmax
comp=Z,157nm,1.4s,mb6.2
ETOR Torete 89.45 45 P P 08 22 10.4 -0.3
comp=Z,157nm,1.4s,mb6.2
ECHE Chera 89.54 46 P P 08 22 13.2 +2.0
ECHE pmax pmax
comp=Z,120nm,0.9s,mb6.2
ECHE Chera 89.54 46 P P 08 22 13.2 +2.0
comp=Z,120nm,0.9s,mb6.2
EBNR Beni Rached 89.62 50 P P 08 22 14.1 +2.4
ELAN Lanestosa 89.84 42 P P 08 22 13.9 +1.4
comp=Z,626nm,2.1s,mb6.6
MIR Mirnyy 89.93 173 *e*P P 08 22 11.0 -1.7
MIR *i* pP 08 22 28.0 -0.9
MIR *i* 08 25 55.0
MIR *i* PPP 08 27 54.0
MIR *i* S S 08 32 56.0 -4.5
MIR *i* SS SS 08 39 00.0 +2.2
MIR pmax pmax
comp=Z,300nm,1.5s,mb6.4
MIR MLR MLR
comp=Z,24µm,20.0s,MS6.6
ECRI Cripan 90.09 43 P P 08 22 14.7 +1.0
ECRI pmax pmax
comp=Z,36nm,0.8s,mb5.8
ECRI Cripan 90.09 43 P P 08 22 14.7 +1.1
comp=Z,36nm,0.8s,mb5.8
EMOS Mosqueruela 90.26 46 P P 08 22 16.6 +2.0
comp=Z,85nm,1.0s,mb6.0
EMHD Djebel Mahouad 90.59 51 P P 08 22 12.2 -4.0
SFJD Kangerlussuaq 90.80 8 P P 08 22 14.9 -1.4
comp=Z,18nm,0.3s,mb5.4,baz=179,slow=8.1,SNR=6.3
SFJD Kangerlussuaq 90.80 8 *e*P P 08 22 15.8 -0.6
SFJD pmax pmax
comp=Z,974nm,2.6s,mb6.7
SFJD MLR MLR
comp=Z,11µm,21.0s,MS6.3
SFJD Kangerlussuaq 90.80 8 *i* P P 08 22 10.8 -5.6
comp=Z,20nm,0.8s,mb5.5
SFJD
comp=Z,11µm,21.0s
SFJD Kangerlussuaq 90.80 8 *e*P P 08 22 15.8 -0.5
comp=Z,974nm,2.6s,mb6.7
SFJD LR LR
comp=Z,11µm,21.0s,MS6.3
ADJB Djebel Djouab 90.92 51 P P 08 22 20.2 +2.5
ABA Alger-Bouzarea 90.93 50 P P 08 22 22.5 +4.8
ESAC San Caprasio 90.94 45 P P 08 22 19.3 +1.6
comp=Z,105nm,0.9s,mb6.2
ELIZ Elizondo 91.00 43 P P 08 22 18.9 +1.0
ELIZ pmax pmax
comp=Z,26nm,1.0s,mb5.5
ELIZ Elizondo 91.00 43 P P 08 22 18.9 +1.0
comp=Z,26nm,1.0s,mb5.5
EALK Alkurruntz 91.04 43 P P 08 22 20.2 +2.1
comp=Z,33nm,1.0s,mb5.6

ERTA Horta de San J 91.08 46 P **P 08 22 20.1 +1.7**
comp=Z,537nm,1.2s,mb6.8
CASY Casey 91.11 180 *e*P **P 08 22 17.1 -1.1**
CASY *e*pP pP 08 22 37.8 +3.4
CASY *e*SKS 08 33 08.5
CASY Casey 91.11 180 *e*P **P 08 22 17.1 -1.1**
CASY *e*pP pP 08 22 37.8 +3.4
CASY *e*SKS 08 33 08.5
CASY LR LR
comp=Z,27µm,22.0s,MS6.7
SJPF Ste Jean 91.16 43 *e*P **P 08 22 18.4 -0.2**
comp=Z,409nm,1.4s,mb6.2
SJPF Ste Jean 91.16 43 *e*P **P 08 22 18.4 -0.2**
SJPF pmax pmax
comp=Z,205nm,1.4s,mb6.3
SJPF Ste Jean 91.16 43 *e*P **P 08 22 18.4 -0.2**
comp=Z,205nm,1.4s,mb6.3
AKET Djebel Ketaf 91.19 51 P **P 08 22 21.9 +3.0**
OSSF Osses 91.21 43 *e*P **P 08 22 19.9 +1.0**
LARF Larrau 91.27 43 *e*P **P 08 22 20.9 +1.7**
ETSF Etsaut 91.47 44 *e*P **P 08 22 19.9 -0.2**
comp=Z,181nm,1.1s,mb6.0
ETSF Etsaut 91.47 44 *e*P **P 08 22 19.9 -0.2**
ETSF pmax pmax
comp=Z,90nm,1.1s,mb6.0
ETSF Etsaut 91.47 44 *e*P **P 08 22 19.9 -0.2**
comp=Z,90nm,1.1s,mb6.0
ATE Arette 91.48 43 *e*P **P 08 22 21.3 +1.2**
LSZ Lusaka 91.58 107 S SKSac 08 32 55.0 +5.4
comp=Z,0.9nm,0.4s,baz=267,slow=21,SNR=2.0
LSZ PKKP PKKPbc 08 39 39.4 -0.8
comp=Z,5.7nm,0.8s,baz=32,slow=2.5,SNR=9.4
LSZ Lusaka 91.58 107 *e*P **P 08 22 22.5 +1.2**
LSZ *e**PP pP 08 22 35.6 -2.0
LSZ *e* 08 25 58.5
LSZ pmax pmax
comp=Z,444nm,1.8s,mb6.5
LSZ MLR MLR
comp=Z,49µm,19.0s,MS7.0
LSZ Lusaka 91.58 107 *e*P **P 08 22 22.5 +1.2**
comp=Z,444nm,1.8s,mb6.5
LSZ *e*pP pP 08 22 35.6 -1.9
LSZ *e*PP PP 08 25 58.5 -1.4
LSZ *e*S SKSac 08 32 58.5 +8.9
LSZ LR LR
comp=Z,49µm,19.0s,MS7.0
REYF Montagne du Re 91.67 43 *e*P **P 08 22 22.8 +1.8**
EPOB Poblet 91.77 45 P **P 08 22 22.4 +0.9**
comp=Z,137nm,1.2s,mb6.2
EBIE Bielsa 91.82 44 P **P 08 22 24.1 +2.4**
comp=Z,520nm,2.8s,mb6.4
VIEF Viey 91.84 44 *e*P **P 08 22 23.4 +1.6**
RESF Ens 92.00 44 *e*P **P 08 22 24.4 +1.9**
EPF Esparros 92.11 44 *e*P **P 08 22 22.5 -0.6**
comp=Z,526nm,1.8s,mb6.3
EPF Esparros 92.11 44 *e*P **P 08 22 22.5 -0.6**
EPF pmax pmax
comp=Z,263nm,1.8s,mb6.3
EPF Esparros 92.11 44 *e*P **P 08 22 22.5 -0.6**
comp=Z,263nm,1.8s,mb6.3
YKA Yellowknife Ar 92.12 341 P **P 08 22 21.1 -1.5**
comp=Z,86nm,0.7s,mb6.2,baz=139,slow=4.3,SNR=476
YKA PKKP PKKPbc 08 39 39.6 -1.6
comp=Z,0.8nm,0.7s,baz=326,slow=3.2,SNR=6.3
YKA PKPPKP 08 47 47.5
comp=Z,1.4nm,1.2s,baz=331,slow=2.3,SNR=4.9
YKA LR LR 09 04 02.7
comp=Z,6µm,21.8s,MS6.0,baz=120,slow=36
YKA Yellowknife Ar 92.12 341 P **P 08 22 21.1 -1.5**
YKA 08 39 39.6
YKA Yellowknife Ar 92.12 341 P **P 08 22 21.1 -1.5**
YKA PKKP PKKPbc 08 39 39.6 -1.6
YKA P'P' 08 47 47.5
YKA LR LR 09 04 02.7
MELF Melles 92.30 44 *e*P **P 08 22 25.6 +1.7**
SET Setif 92.35 52 P **P 08 22 26.0 +1.7**
SNZO South Karori 92.36 223 PFAKE 08 22 30.0 +5.6
SNZO LR LR
comp=Z,30µm,21.0s,MS6.7
URZ Urewera 92.43 227 P **P 08 22 25.0 +0.1**
comp=Z,32nm,0.9s,mb5.6,baz=64,slow=3.2,SNR=11
URZ S SKSac 08 32 50.1 -3.6
comp=Z,4.8nm,1.0s,baz=180,slow=22,SNR=2.0
URZ PKKP PKKPbc 08 39 37.0 -1.6
comp=Z,7.4nm,0.8s,baz=204,slow=3.9,SNR=4.7
QUIF Quistinic 92.49 38 *e*P **P 08 22 23.2 -1.5**
comp=Z,109nm,0.9s,mb5.9
QUIF Quistinic 92.49 38 *e*P **P 08 22 23.2 -1.5**
QUIF pmax pmax
comp=Z,55nm,0.9s,mb5.9
QUIF Quistinic 92.49 38 *e*P **P 08 22 23.2 -1.5**
comp=Z,55nm,0.9s,mb5.9
MLS Moulis 92.56 44 *e*P **P 08 22 26.4 +1.3**
ROSF Rostrenen 92.65 38 *e*P **P 08 22 24.0 -1.4**
comp=Z,266nm,1.1s,mb6.3
ROSF Rostrenen 92.65 38 *e*P **P 08 22 24.0 -1.4**
ROSF pmax pmax
comp=Z,133nm,1.1s,mb6.3
ROSF Rostrenen 92.65 38 *e*P **P 08 22 24.0 -1.4**
comp=Z,133nm,1.1s,mb6.3
DFRA Djebel Bou Aff 92.85 51 P **P 08 22 29.0 +2.4**
SGMF Saint Gilles 93.01 38 *e*P **P 08 22 25.3 -1.8**
comp=Z,150nm,1.3s,mb6.0
SGMF Saint Gilles 93.01 38 *e*P **P 08 22 25.3 -1.8**
SGMF pmax pmax
comp=Z,75nm,1.3s,mb6.0
SGMF Saint Gilles 93.01 38 *e*P **P 08 22 25.3 -1.8**
comp=Z,75nm,1.3s,mb6.0
CTEI Djebel Teioual 93.02 52 P **P 08 22 30.0 +2.6**
CARF Carcanieres 93.09 45 *e*P **P 08 22 27.4 -0.2**
CASM Ain Smara 93.17 52 P **P 08 22 31.5 +3.4**
RPZ Rata Peaks 93.21 220 P **P 08 22 29.0 +0.7**
comp=Z,49nm,1.0s,mb5.9,baz=154,slow=7.0,SNR=5.6
LFF La Frestale 93.30 42 *e*P **P 08 22 27.5 -1.0**
comp=Z,391nm,1.1s,mb6.5
LFF La Frestale 93.30 42 *e*P **P 08 22 27.5 -1.0**
LFF pmax pmax
comp=Z,196nm,1.1s,mb6.5
LFF La Frestale 93.30 42 *e*P **P 08 22 27.5 -1.0**
comp=Z,196nm,1.1s,mb6.5
FILF Fillols 93.32 45 *e*P **P 08 22 30.3 +1.7**
RAO Raoul Island 93.34 236 PFAKE 08 22 40.0 +11
RAO LR LR
comp=Z,18µm,22.0s,MS6.5
CKFL Kef-Lekhel 93.39 52 P **P 08 22 32.0 +2.9**
DYA Yadsworthy 93.40 36 *e*P **P 08 22 28.7 -0.1**
DYA AMb AMB 08 22 35.5
comp=Z,203nm,1.7s,mb6.3
DYA AMS AMS 09 00 31.3
comp=Z,17µm,22.7s,MS6.4
HTL Hartland 93.40 35 *e*P **P 08 22 29.6 +0.8**
HTL AMb AMB 08 22 34.9
comp=Z,150nm,1.5s,mb6.2
HTL *e* 08 53 32.8
HTL AMS AMS 09 03 43.2
comp=Z,10µm,20.9s,MS6.2
POHA Pohakuloa 93.46 290 PFAKE 08 22 40.0 +10
POHA LR LR
comp=Z,33µm,20.0s,MS6.8
MTLF Montolieu 93.46 44 *e*P **P 08 22 28.1 -1.2**
comp=Z,317nm,1.6s,mb6.2
MTLF Montolieu 93.46 44 *e*P **P 08 22 28.1 -1.2**
MTLF pmax pmax
comp=Z,159nm,1.6s,mb6.2
MTLF Montolieu 93.46 44 *e*P **P 08 22 28.1 -1.2**
comp=Z,159nm,1.6s,mb6.2
EJON La Jonquera 93.48 45 P **P 08 22 30.7 +1.3**
comp=Z,43nm,1.0s,mb5.8
MFF Saint Martin d 93.58 40 *e*P **P 08 22 28.6 -1.1**
comp=Z,208nm,1.1s,mb6.2
MFF Saint Martin d 93.58 40 *e*P **P 08 22 28.6 -1.1**
MFF pmax pmax
comp=Z,104nm,1.1s,mb6.2
MFF Saint Martin d 93.58 40 *e*P **P 08 22 28.6 -1.1**
comp=Z,104nm,1.1s,mb6.2
DLF Lyons Farm 93.62 33 *e*P **P 08 22 28.3 -1.4**
DSB Dublin 93.67 33 *e*P **P 08 22 28.9 -1.0**
comp=Z,138nm,1.4s,mb6.2
DSB *e*pP pP 08 22 45.3 -1.0
RJF Les Rejaudoux 93.96 42 *e*P **P 08 22 30.3 -1.2**
comp=Z,265nm,1.3s,mb6.2
RJF *e*MLR MLR
comp=Z,32µm,22.8s,MS6.4
RJF Les Rejaudoux 93.96 42 *e*P **P 08 22 30.3 -1.2**
RJF pmax pmax
comp=Z,132nm,1.3s,mb6.2
RJF MLR MLR
comp=Z,32µm,22.8s,MS6.7
RJF Les Rejaudoux 93.96 42 *e*P **P 08 22 30.3 -1.2**
comp=Z,132nm,1.3s,mb6.2
RJF LR LR
comp=Z,32µm,22.8s,MS6.7
CMAH Djebel Manchou 94.00 52 P **P 08 22 34.0 +2.1**
GRR Gorron 94.05 39 *e*P **P 08 22 30.2 -1.7**
comp=Z,154nm,1.1s,mb6.0
GRR Gorron 94.05 39 *e*P **P 08 22 30.2 -1.7**
GRR pmax pmax
comp=Z,77nm,1.1s,mb6.0
GRR Gorron 94.05 39 *e*P **P 08 22 30.2 -1.7**
comp=Z,77nm,1.1s,mb6.0
CAF Calviac 94.12 43 *e*P **P 08 22 31.2 -1.1**
comp=Z,233nm,1.5s,mb6.1
CAF Calviac 94.12 43 *e*P **P 08 22 31.2 -1.1**
CAF pmax pmax
comp=Z,116nm,1.5s,mb6.1
CAF Calviac 94.12 43 *e*P **P 08 22 31.2 -1.1**
comp=Z,116nm,1.5s,mb6.1
FLN La Foliniere 94.46 38 *e*P **P 08 22 32.2 -1.5**
comp=Z,200nm,1.3s,mb6.1
FLN *e*MLR MLR
comp=Z,13µm,21.2s,MS6.1
FLN La Foliniere 94.46 38 *e*P **P 08 22 32.2 -1.5**
FLN pmax pmax
comp=Z,100nm,1.3s,mb6.1
FLN MLR MLR
comp=Z,13µm,21.3s,MS6.4
FLN La Foliniere 94.46 38 *e*P **P 08 22 32.2 -1.5**
comp=Z,100nm,1.3s,mb6.1
FLN LR LR
comp=Z,13µm,21.3s,MS6.4
YRC Rhoscolyn 94.58 33 *e*P **P 08 22 33.9 -0.3**
LDF La Druitiere 94.58 39 *e*P **P 08 22 32.7 -1.6**
comp=Z,118nm,1.0s,mb6.0
LDF La Druitiere 94.58 39 *e*P **P 08 22 32.7 -1.6**
LDF pmax pmax
comp=Z,59nm,1.0s,mb6.0
LDF La Druitiere 94.58 39 *e*P **P 08 22 32.7 -1.6**
comp=Z,59nm,1.0s,mb6.0
FRNF Fournols 94.65 42 *e*P **P 08 22 35.6 +0.9**
WLF1 Llynfaes 94.69 33 P **P 08 22 34.8 +0.1**
WLF1 AMb AMB 08 22 36.6
comp=Z,95nm,1.3s,mb6.1
WLF1 Llynfaes 94.69 33 *e*P **P 08 22 34.8 +0.1**
WLF1 AMb AMB 08 22 36.6
comp=Z,95nm,1.3s,mb6.1
MCH1 Michaelchurch 94.72 35 *e*P **P 08 22 34.6 -0.2**
MCH1 AMb AMB 08 22 41.5
comp=Z,99nm,1.5s,mb6.0
MCH1 AMS AMS 09 00 50.2
comp=Z,12µm,23.7s,MS6.3
WRAK Wrangell Islan 94.74 330 *e*P **P 08 22 32.4 -2.4**
comp=Z,132nm,1.3s,mb6.2
WRAK LR LR
comp=Z,8µm,20.0s,MS6.2
VERF Verneugheol 94.77 42 *e*P **P 08 22 36.6 +1.4**
WME Myndd Eilian 94.79 33 *e*P **P 08 22 35.2 +0.1**
TCF Toulx Ste Croi 94.85 42 *e*P **P 08 22 34.2 -1.4**
comp=Z,155nm,1.3s,mb6.0
TCF Toulx Ste Croi 94.85 42 *e*P **P 08 22 34.2 -1.4**
TCF pmax pmax
comp=Z,78nm,1.3s,mb6.0
TCF Toulx Ste Croi 94.85 42 *e*P **P 08 22 34.2 -1.4**
comp=Z,78nm,1.3s,mb6.0
LASF Ste Croix 94.86 44 *e*P **P 08 22 34.9 -0.8**
comp=Z,430nm,1.9s,mb6.2
DLBC Dease Lake 94.91 333 *e*P **P 08 22 34.8 -0.7**
DLBC *e*pP pP 08 22 52.6 +0.7
DLBC *e*PP PP 08 26 25.7 +0.2
WPM1 Penmaenmawr 94.92 33 *e*P **P 08 22 36.0 +0.3**
LBL Lubilhac 95.00 43 *e*P **P 08 22 39.2 +2.9**
WIM Isle of Man 95.01 32 *e*P **P 08 22 35.9 -0.2**
KEST Kesra 95.03 53 P **P 08 22 36.6 -0.1**
comp=Z,32nm,0.9s,mb5.7,baz=236,slow=1.8,SNR=34
KEST LR LR 09 06 33.9
comp=Z,25µm,20.7s,MS6.7,baz=200,slow=36
AFI Afiamalu 95.07 253 PFAKE 08 22 50.0 +13
AFI LR LR
comp=Z,15µm,20.0s,MS6.5
BORG Borgarnes 95.09 19 P **P 08 22 36.1 -0.1**
comp=Z,28nm,0.9s,mb5.7,baz=188,slow=4.9,SNR=3.7
BORG Borgarnes 95.09 19 P **P 08 22 36.1 -0.1**
BORG LR LR
comp=Z,13µm,22.0s,MS6.4
SWN1 Swindon 95.11 36 AMS AMS 09 01 46.9
comp=Z,15µm,22.4s,MS6.4
AGO Saint Agoulin 95.31 42 *e*P **P 08 22 39.9 +2.2**
SSW Stow on the Wo 95.32 35 *e*P **P 08 22 36.9 -0.7**
BGF Bois d'Agland 95.37 42 *e*P **P 08 22 36.7 -1.2**
comp=Z,180nm,1.1s,mb6.1
BGF Bois d'Agland 95.37 42 *e*P **P 08 22 36.7 -1.2**
BGF pmax pmax
comp=Z,90nm,1.1s,mb6.1
BGF Bois d'Agland 95.37 42 *e*P **P 08 22 36.7 -1.2**
comp=Z,90nm,1.1s,mb6.1
GAL1 Galloway 95.38 32 *e*P **P 08 22 38.1 +0.3**
GAL1 AMb AMB 08 22 40.2
comp=Z,101nm,1.7s,mb6.0
GAL1 *e* 08 54 57.3
GAL1 AMS AMS 09 00 54.8
comp=Z,11µm,22.9s,MS6.3
COLF Collangettes 95.41 43 *e*P **P 08 22 40.2 +2.0**
HYF Humbligny 95.57 41 *e*P **P 08 22 37.6 -1.3**
PLDF La Plantade 95.57 42 *e*P **P 08 22 41.5 +2.6**
STNC Stoke 95.70 34 AMS AMS 09 01 33.0
comp=Z,12µm,22.6s,MS6.3
VIVF Saint-Julien-l 95.73 44 *e*P **P 08 22 39.0 -0.6**
comp=Z,145nm,1.4s,mb5.9
VIVF Saint-Julien-l 95.73 44 *e*P **P 08 22 39.0 -0.6**
VIVF pmax pmax
comp=Z,73nm,1.4s,mb5.9
VIVF Saint-Julien-l 95.73 44 *e*P **P 08 22 39.0 -0.6**
comp=Z,73nm,1.4s,mb5.9
AVF Avril sur Loir 95.78 41 *e*P **P 08 22 38.3 -1.5**
comp=Z,144nm,1.3s,mb6.0
AVF Avril sur Loir 95.78 41 *e*P **P 08 22 38.3 -1.5**
AVF pmax pmax
comp=Z,72nm,1.3s,mb5.9
AVF Avril sur Loir 95.78 41 *e*P **P 08 22 38.3 -1.5**
comp=Z,72nm,1.3s,mb5.9
SSB Saint Sauveur 95.84 43 *e*P **P 08 22 41.5 +1.4**
SSB Saint Sauveur 95.84 43 *e*P **P 08 22 39.5 -0.6**
SSB *e**PP pP 08 22 55.0 -1.4
SSB *e* 08 26 30.2
SSB pmax pmax
comp=Z,193nm,1.8s,mb6.2
SSB MLR MLR
comp=Z,19µm,22.0s,MS6.5
SSB Saint Sauveur 95.84 43 *e*P **P 08 22 39.5 -0.6**
comp=Z,192nm,1.8s,mb6.2
SSB *e*pP pP 08 22 55.0 -1.4
SSB *e*PP PP 08 26 30.2 -2.9
SSB LR LR
comp=Z,19µm,22.0s,MS6.5
KWE Weaver Farm 95.85 34 *e*P **P 08 22 40.7 +0.7**
SMRF Simiane la Rot 95.92 45 *e*P **P 08 22 40.4 -0.1**
comp=Z,282nm,1.5s,mb6.2
SMRF Simiane la Rot 95.92 45 *e*P **P 08 22 40.4 -0.1**
comp=Z,282nm,1.5s,mb6.5
CWF Charnwood Fore 95.99 35 *e*P **P 08 22 40.5 -0.1**
CWF AMb AMB 08 22 41.1
comp=Z,135nm,1.7s,mb6.1
CWF AMS AMS 09 07 34.0
comp=Z,11µm,19.4s,MS6.3
PGBU Glenifferbraes 96.00 31 AMb AMB 08 22 42.7
comp=Z,165nm,1.2s,mb6.3
PGBU AMS AMS 09 05 10.6
comp=Z,16µm,19.4s,MS6.5
PGBU Glenifferbraes 96.00 31 AMb AMB 08 22 42.7
comp=Z,165nm,1.2s,mb6.3
PGBU AMS AMS 09 05 10.6
comp=Z,16µm,19.4s
SSF Saint Saulge 96.00 41 *e*P **P 08 22 39.1 -1.7**
comp=Z,70nm,1.0s,mb5.8
SSF Saint Saulge 96.00 41 *e*P **P 08 22 39.1 -1.7**
SSF pmax pmax
comp=Z,35nm,1.0s,mb5.7
SSF Saint Saulge 96.00 41 *e*P **P 08 22 39.1 -1.7**
comp=Z,35nm,1.0s,mb5.8
SMF Signal de Mont 96.02 42 *e*P **P 08 22 39.7 -1.2**
comp=Z,252nm,1.1s,mb6.3
SMF Signal de Mont 96.02 42 *e*P **P 08 22 39.7 -1.2**
SMF pmax pmax
comp=Z,126nm,1.1s,mb6.3
SMF Signal de Mont 96.02 42 *e*P **P 08 22 39.7 -1.2**
comp=Z,126nm,1.1s,mb6.3
LHO Holmfirth 96.12 34 *e*P **P 08 22 41.1 0.0**
KBI1 Birley Grange 96.14 34 *e*P **P 08 22 41.1 -0.2**
KIP Kipapa 96.24 291 PFAKE 08 22 50.0 +7.5
KIP LR LR
comp=Z,34µm,22.0s,MS6.8
LMR La Mourre 96.25 46 *e*P **P 08 22 41.3 -0.8**
comp=Z,674nm,1.6s,mb6.5
LMR La Mourre 96.25 46 *e*P **P 08 22 41.3 -0.8**
LMR pmax pmax
comp=Z,337nm,1.6s,mb6.5
LMR La Mourre 96.25 46 *e*P **P 08 22 41.3 -0.8**
comp=Z,337nm,1.6s,mb6.5
EAB Aberfoyle 96.27 31 *e*P **P 08 22 42.4 +0.6**
KPL Plockton 96.28 29 AMS AMS 09 07 16.1
comp=Z,8µm,21.9s,MS6.1
LOR Lormes 96.31 41 *e*P **P 08 22 40.5 -1.7**
comp=Z,127nm,1.3s,mb5.9
LOR *e*MLR MLR
comp=Z,15µm,20.2s,MS6.2
LOR Lormes 96.31 41 *e*P **P 08 22 40.5 -1.7**
LOR pmax pmax
comp=Z,63nm,1.3s,mb5.9
LOR MLR MLR
comp=Z,15µm,20.3s,MS6.5
LOR Lormes 96.31 41 *e*P **P 08 22 40.5 -1.7**
comp=Z,64nm,1.3s,mb5.9
LOR LR LR
comp=Z,15µm,20.3s,MS6.5
ESK Eskdalemuir 96.35 32 *e*P **P 08 22 42.3 +0.1**
ESK AMb AMB 08 22 48.9
comp=Z,114nm,1.6s,mb6.0
ESK AMS AMS 09 01 34.4
comp=Z,12µm,23.0s,MS6.3
ESK Eskdalemuir 96.35 32 *e*P **P 08 22 42.1 -0.1**
ESK *e**PP pP 08 22 57.6 -0.9
ESK pmax pmax
comp=Z,106nm,1.5s,mb6.0
ESK MLR MLR
comp=Z,8µm,21.0s,MS6.2
ESK Eskdalemuir 96.35 32 *e*P **P 08 22 42.1 -0.1**
comp=Z,106nm,1.5s,mb6.0
ESK *e*pP pP 08 22 57.6 -0.9
ESK LR LR
comp=Z,8µm,21.0s,MS6.2
EKA Eskdalemuir Ar 96.39 32 P **P 08 22 40.7 -1.6**
comp=Z,32nm,1.0s,mb5.7,baz=248,slow=4.4,SNR=24
OG25 Le Caire 96.42 44 *e*P **P 08 22 44.4 +1.6**
FRF La Foret Royal 96.44 45 *e*P **P 08 22 42.2 -0.7**
comp=Z,511nm,1.6s,mb6.4
FRF La Foret Royal 96.44 45 *e*P **P 08 22 42.2 -0.7**
FRF pmax pmax
comp=Z,256nm,1.6s,mb6.4
FRF La Foret Royal 96.44 45 *e*P **P 08 22 42.2 -0.7**
comp=Z,256nm,1.6s,mb6.4
HPK Haverah Park 96.44 34 *e*P **P 08 22 42.4 -0.2**
HPK AMb AMB 08 22 44.9
comp=Z,154nm,1.3s,mb6.3
HPK AMS AMS 09 02 20.2
comp=Z,10µm,21.4s,MS6.3
EAU Auchinoon 96.51 31 *e*P **P 08 22 43.3 +0.4**
ORIF Oris-en-Rattie 96.53 44 *e*P **P 08 22 43.1 -0.2**
comp=Z,232nm,1.3s,mb6.2
ORIF *e*MLR MLR
comp=Z,37µm,22.2s,MS6.5
ORIF Oris-en-Rattie 96.53 44 *e*P **P 08 22 43.1 -0.2**
ORIF pmax pmax
comp=Z,116nm,1.3s,mb6.2
ORIF Oris-en-Rattie 96.53 44 *e*P **P 08 22 43.1 -0.2**
comp=Z,116nm,1.3s,mb6.2
GRN Grenoble 96.58 44 *e*P **P 08 22 45.2 +1.7**
XAL Allendale 96.61 33 *e*P **P 08 22 42.8 -0.5**
EDI Edinburgh 96.68 31 AMS AMS 09 01 34.2
comp=Z,14µm,23.0s,MS6.4
CALN Calern 96.68 45 *e*P **P 08 22 45.9 +1.9**
EBH Black Hill 96.69 31 *e*P **P 08 22 43.4 -0.3**
OG05 Jujurieux 96.75 43 *e*P **P 08 22 45.1 +0.9**
GDM Grand'Maison 96.80 44 *e*P **P 08 22 46.2 +1.7**
XSO Sourhope Farm 96.91 32 *e*P **P 08 22 44.5 -0.2**
MVIF Mont Vial 96.92 45 *e*P **P 08 22 47.3 +2.3**
SURF Saint Ours 96.94 45 *e*P **P 08 22 47.3 +2.2**
ESY Stoneypath 96.95 32 *e*P **P 08 22 44.7 -0.2**
REVF Revere 96.99 45 *e*P **P 08 22 47.0 +1.6**
MBDF Montbardon 97.02 44 *e*P **P 08 22 45.1 -0.4**
comp=Z,107nm,1.1s,mb5.9
MBDF Montbardon 97.02 44 *e*P **P 08 22 45.1 -0.4**
MBDF pmax pmax
comp=Z,53nm,1.1s,mb5.9
MBDF Montbardon 97.02 44 *e*P **P 08 22 45.1 -0.4**
comp=Z,53nm,1.1s,mb5.9
TOUF Mont Tournerai 97.03 45 *e*P **P 08 22 47.8 +2.3**
LUCF Luceram 97.04 45 *e*P **P 08 22 47.8 +2.2**
SBF Sospel 97.09 45 *e*P **P 08 22 45.4 -0.4**
comp=Z,607nm,1.5s,mb6.5
SBF Sospel 97.09 45 *e*P **P 08 22 45.4 -0.4**
SBF pmax pmax
comp=Z,304nm,1.5s,mb6.5
SBF Sospel 97.09 45 *e*P **P 08 22 45.4 -0.4**
comp=Z,304nm,1.5s,mb6.5
BNI Bardonecchia 97.10 44 *e*P **P 08 22 47.6 +1.8**
BNI pmax pmax
comp=Z,64nm,1.4s,mb5.9
BNI MLR MLR
comp=Z,39µm,22.0s,MS6.8
BNI Bardonecchia 97.10 44 *e*P **P 08 22 47.6 +1.7**
comp=Z,64nm,1.4s,mb5.9
BNI LR LR
comp=Z,39µm,22.0s,MS6.8
SAOF Saorge 97.22 45 *e*P **P 08 22 48.0 +1.6**
AEU East Anglia Un 97.29 36 *e*P **P 08 22 45.6 -0.9**
LPL La Plagne 97.33 44 *e*P **P 08 22 46.9 0.0**
comp=Z,221nm,1.4s,mb6.1
LPL La Plagne 97.33 44 *e*P **P 08 22 46.9 0.0**
LPL pmax pmax
comp=Z,111nm,1.4s,mb6.1
LPL La Plagne 97.33 44 *e*P **P 08 22 46.9 0.0**
comp=Z,111nm,1.4s,mb6.1
LPG La Plagne 97.33 44 *e*P **P 08 22 47.0 +0.1**
comp=Z,185nm,1.2s,mb6.1
LPG La Plagne 97.33 44 *e*P **P 08 22 47.0 +0.1**
LPG pmax pmax
comp=Z,93nm,1.2s,mb6.1
LPG La Plagne 97.33 44 *e*P **P 08 22 47.0 +0.1**
comp=Z,93nm,1.2s,mb6.1
RSL Roselend 97.33 43 *e*P **P 08 22 48.5 +1.6**
CABF La Chapelle 97.39 42 *e*P **P 08 22 46.2 -0.9**
comp=Z,88nm,1.3s,mb5.7
CABF La Chapelle 97.39 42 *e*P **P 08 22 46.2 -0.9**
CABF pmax pmax
comp=Z,44nm,1.3s,mb5.7
CABF La Chapelle 97.39 42 *e*P **P 08 22 46.2 -0.9**
comp=Z,44nm,1.3s,mb5.7
MEZF Maizieres J'vi 97.58 40 *e*P **P 08 22 46.6 -1.3**
comp=Z,218nm,1.3s,mb6.2
MEZF Maizieres J'vi 97.58 40 *e*P **P 08 22 46.6 -1.3**
comp=Z,218nm,1.3s,mb6.5
PGF Pioggiola 97.58 47 *e*P **P 08 22 47.6 -0.5**
comp=Z,299nm,1.5s,mb6.3
PGF Pioggiola 97.58 47 *e*P **P 08 22 47.6 -0.5**
PGF pmax pmax
comp=Z,149nm,1.5s,mb6.3
PGF Pioggiola 97.58 47 *e*P **P 08 22 47.6 -0.5**
comp=Z,149nm,1.5s,mb6.3
SUMG Summit 97.60 9 *e*P **P 08 22 47.2 -0.3**
comp=Z,34nm,0.9s,mb5.9
BAIF Baives 97.77 39 *e*P **P 08 22 47.3 -1.4**
comp=Z,63nm,1.1s,mb5.7
BAIF Baives 97.77 39 *e*P **P 08 22 47.3 -1.4**
BAIF pmax pmax
comp=Z,32nm,1.1s,mb5.8
BAIF Baives 97.77 39 *e*P **P 08 22 47.3 -1.4**
comp=Z,32nm,1.1s,mb5.8
DOU Dourbes 98.01 39 P **P 08 22 48.8 -1.0**
comp=Z,61nm,1.9s,mb5.8
DOU AP pP 08 23 05.1 -1.0
SNF Seneffe 98.01 38 P **P 08 22 48.7 -1.1**
comp=Z,72nm,1.9s,mb5.9
SNF AP pP 08 23 05.4 -0.7
THEF They Montfort 98.02 41 *e*P **P 08 22 50.6 +0.7**
GIVF Givet 98.14 39 *e*P **P 08 22 49.2 -1.2**
comp=Z,212nm,1.1s,mb6.3
GIVF Givet 98.14 39 *e*P **P 08 22 49.2 -1.2**
GIVF pmax pmax

comp=Z,106nm,1.1s,mb6.3
GIVF Givet 98.14 39 *e*P **P 08 22 49.2 -1.2**
comp=Z,106nm,1.1s,mb6.3
HAU Haudompre 98.15 41 *e*P **P 08 22 48.9 -1.6**
comp=Z,76nm,1.2s,mb5.8
HAU *e*MLR MLR
comp=Z,17µm,22.5s,MS6.2
HAU Haudompre 98.15 41 *e*P **P 08 22 48.9 -1.6**
HAU pmax pmax
comp=Z,38nm,1.2s,mb5.8
HAU MLR MLR
comp=Z,17µm,22.5s,MS6.5
HAU Haudompre 98.15 41 *e*P **P 08 22 48.9 -1.6**
comp=Z,38nm,1.2s,mb5.8
HAU LR LR
comp=Z,17µm,22.5s,MS6.5
LOMF Lomont 98.17 42 *e*P **P 08 22 51.4 +0.8**
UCC Uccle 98.18 38 P **P 08 22 51.0 +0.4**
comp=Z,78nm,1.3s,mb6.1
HINF Hinteralfeld 98.38 42 *e*P **P 08 22 49.8 -1.7**
comp=Z,94nm,1.4s,mb5.8
HINF Hinteralfeld 98.38 42 *e*P **P 08 22 49.8 -1.7**
HINF pmax pmax
comp=Z,47nm,1.4s,mb5.8
HINF Hinteralfeld 98.38 42 *e*P **P 08 22 49.8 -1.7**
comp=Z,47nm,1.4s,mb5.8
BCLA Clavier 98.56 39 P **P 08 22 53.3 +1.0**
comp=Z,77nm,2.0s,mb5.9
BCLA AP pP 08 23 08.9 +0.3
MOF Molkenrain 98.56 42 *e*P **P 08 22 52.5 +0.1**
ECH Echery 98.73 41 *e*P **P 08 22 53.4 +0.3**
ECH Echery 98.73 41 *e*P **P 08 22 51.9 -1.2**
ECH pmax pmax
comp=Z,97nm,1.5s,mb6.1
ECH MLR MLR
comp=Z,11µm,20.0s,MS6.3
ECH Echery 98.73 41 *e*P **P 08 22 51.9 -1.2**
comp=Z,97nm,1.5s,mb6.1
ECH LR LR
comp=Z,11µm,20.0s,MS6.3
WLF Walferdange 98.73 40 P **P 08 22 52.6 -0.5**
comp=Z,128nm,1.9s,mb6.1
WLF AP pP 08 23 08.6 -0.9
WLF Walferdange 98.73 40 *e*P **P 08 22 52.4 -0.7**
WLF pmax pmax
comp=Z,121nm,1.1s,mb6.3
WLF MLR MLR
comp=Z,18µm,22.0s,MS6.5
WLF Walferdange 98.73 40 *e*Pdiff **P 08 22 53.8 +0.7**
WLF *e*Sdiff S 08 34 17.8 -0.2
WLF *e*SP SP 08 35 41.9 -1.7
WLF *e*SS SS 08 41 07.7 +2.0
WLF Walferdange 98.73 40 *e*P **P 08 22 52.4 -0.7**
comp=Z,121nm,1.1s,mb6.3
WLF LR LR
comp=Z,18µm,22.0s,MS6.5
CDF Champ du Feu 98.88 41 *e*P **P 08 22 52.4 -1.4**
comp=Z,79nm,1.2s,mb5.8
CDF Champ du Feu 98.88 41 *e*P **P 08 22 52.4 -1.4**
CDF pmax pmax
comp=Z,40nm,1.2s,mb5.8
CDF Champ du Feu 98.88 41 *e*P **P 08 22 52.4 -1.4**
comp=Z,40nm,1.2s,mb5.8
BEBN Eben Emael 98.94 39 P **P 08 22 55.0 +1.0**
comp=Z,24nm,1.6s,mb5.5
WDD Wield Dalam 98.96 55 PFAKE 08 23 10.0 +16
WDD LR LR
comp=Z,41µm,22.0s,MS6.9
MEM Membach 99.05 39 P **P 08 22 53.7 -0.8**
comp=Z,36nm,1.6s,mb5.7
HGN Heimansgroeve 99.07 39 *e*P **P 08 22 54.9 +0.4**
comp=Z,52nm,0.9s,mb6.1
HGN Heimansgroeve 99.07 39 *e*pP pP 08 23 09.3 -1.6
comp=Z,71nm,1.3s
FELD Feldberg im Sc 99.11 42 *e*P **P 08 22 55.5 +0.7**
VLC Villacollemand 99.15 46 *e*P **P 08 22 55.7 +0.6**
comp=Z,88nm,1.3s,mb6.1
VLC LR LR
comp=Z,8µm,20.0s,MS6.2
RUP Ruppelstein 99.28 40 *e*P **P 08 22 56.2 +0.7**
TUE Stuetta 99.39 44 *e*P **P 08 22 55.7 -0.4**
comp=Z,51nm,1.1s,mb6.0
TUE *e*PP PP 08 26 57.7 -2.5
TUE LR LR
comp=Z,18µm,21.0s,MS6.5
LANF Langenberg 99.43 41 *e*P **P 08 22 57.0 +0.8**
BFO Black Forest 99.49 42 *e*P **P 08 22 56.8 +0.3**
BFO *e*S S 08 34 26.1 +1.7
BFO *e*SP SP 08 35 51.2 -0.6
BFO Black Forest 99.49 42 *e*Pdiff **P 08 22 56.8 +0.3**
BFO *e*Sdiff S 08 34 26.1 +1.7
BFO *e*SP SP 08 35 51.2 -0.6
BFO *e*SS SS 08 41 04.6 -12
BFO Black Forest 99.49 42 *e*Pdif **P 08 22 56.8 +0.3**
BFO *e*Sdif S 08 34 26.1 +1.7
BFO *e*SP SP 08 35 51.2 -0.6
BFO *e*SS SS 08 41 04.6 -12
BFO LR LR
comp=Z,7µm,21.0s,MS6.2
ABH Alteburg 99.65 40 *e*P Pdif 08 22 58.3 +1.0
LRW Lerwick 99.73 28 AMS AMS 09 05 22.1
comp=Z,10µm,20.3s,MS6.3
DAVOS Davos 99.81 43 P Pdif 08 22 57.3 -0.8
DAVOX Davos/Dischmat 99.84 43 P Pdif 08 22 57.2 -1.0
comp=Z,20nm,0.9s,baz=241,slow=4.9,SNR=19
PAF Port-aux-Franc 99.89 155 PFAKE 08 23 10.0 +12
PAF LR LR
comp=Z,15µm,19.0s,MS6.5
DAVA Damuels 100.04 43 *i* Pdiff Pdif 08 23 01.0 +1.9
comp=Z,42nm,1.3s,SNR=7.7
WTSB Winterswijk 100.06 38 *e*P Pdif 08 22 59.6 +0.4
comp=Z,81nm,1.4s
BUG Bochum--Univer 100.12 38 *e*Pdiff Pdif 08 22 59.9 +0.5
BUG *e*Sdiff Sdif 08 34 28.8 -1.1
BUG *e*SP SP 08 35 57.4 -1.0
BUG *e*SS SS 08 41 13.3 -12
STU Stuttgart 100.19 41 *e*P Pdif 08 22 59.6 -0.2
STU pmax pmax
comp=Z,55nm,1.1s
STU Stuttgart 100.19 41 *e*Pdiff Pdif 08 23 00.1 +0.3
STU *e*Sdiff Sdif 08 34 31.8 +1.2
STU *e*SP SP 08 35 59.0 -0.3
STU *e*SS SS 08 41 14.9 -11
STU Stuttgart 100.19 41 *e*Pdif Pdif 08 22 59.5 -0.2
comp=Z,55nm,1.1s
TOD Tromm 100.28 40 *e*P Pdif 08 23 00.5 +0.3
WIT Witteveen 100.34 37 *e*P Pdif 08 23 01.6 +1.2
FETA Feichten 100.47 43 *i* Pdiff Pdif 08 23 02.6 +1.6
comp=Z,54nm,1.4s,SNR=12
AQU L'Aquila 100.52 49 *e*P Pdif 08 23 02.7 +1.5
AQU pmax pmax
comp=Z,107nm,1.3s
AQU MLR MLR
comp=Z,15µm,19.0s,MS6.5
AQU L'Aquila 100.52 49 *e*Pdif Pdif 08 23 02.6 +1.4
comp=Z,107nm,1.3s
AQU LR LR
comp=Z,15µm,19.0s,MS6.5
RETA Reutte 100.67 43 *i* Pdiff Pdif 08 23 03.3 +1.5
comp=Z,42nm,1.2s,SNR=12
IBBN Ibbenburen 100.74 38 *e*Pdiff Pdif 08 23 02.7 +0.5
IBBN *e*Sdiff Sdif 08 34 32.4 -2.7
IBBN *e*SP SP 08 36 05.4 +0.4
IBBN *e*SS SS 08 41 25.4 -8.2
MOTA Moosalm 100.83 43⇑ *i*Pdiff Pdif 08 23 02.4 -0.2
comp=Z,74nm,1.3s,SNR=9.7
CEL Celeste 100.84 53 PFAKE 08 23 10.0 +7.4
CEL LR LR
comp=Z,33µm,22.0s,MS6.8
WATA Walderalm 101.13 43⇓ *i*Pdiff Pdif 08 23 04.9 +1.0
comp=Z,32nm,0.9s,SNR=16
WTTA Wattenberg 101.14 43⇓ *i*Pdiff Pdif 08 23 05.5 +1.5
comp=Z,113nm,1.2s,SNR=23
FUR Furstenfeldbru 101.24 42 *e*P Pdif 08 23 05.2 +0.8
FUR *e*S Sdif 08 34 41.6 +2.3
FUR *e*SP SP 08 36 10.3 -0.3
FUR Furstenfeldbru 101.24 42 *e*Pdiff Pdif 08 23 05.2 +0.8
FUR *e*Sdiff Sdif 08 34 41.6 +2.3
FUR *e*SP SP 08 36 10.3 -0.3
FUR *e*SS SS 08 41 29.1 -12
CUC Castrocucco 101.39 51 PFAKE 08 23 20.0 +15
CUC LR LR
comp=Z,26µm,19.0s,MS6.8
UBBA Unterbreizbach 101.46 40 *e*Pdiff Pdif 08 23 05.8 +0.4
UBBA *e*Sdiff Sdif 08 34 42.2 +1.1
UBBA *e*SP SP 08 36 12.9 +0.2
UBBA *e*SS SS 08 41 32.0 -12
ABTA Abfaltersbach 101.51 44 *i* Pdiff Pdif 08 23 07.5 +1.9
comp=Z,57nm,1.3s,SNR=13
DAWY Dawson 101.75 335 *e*Pdif Pdif 08 23 04.3 -2.4
GRA1 Grafenberg Arr 101.77 41 *e*Pdif Pdif 08 23 07.4 +0.6
GRA1 *e*PP PP 08 27 15.4 -2.8
GRA1 *e*SKSac SKSac 08 33 45.7 +4.8
GRA1 *e*Sdif Sdif 08 34 46.2 +2.5
GRA1 *e*SP SP 08 36 16.8 +0.7
GRA1 *e*SS SS 08 41 36.5 -12
GRA1 LR LR
comp=Z,12µm,22.0s,MS6.4
GRF Grafenberg Arr 101.77 41 *e*P Pdif 08 23 07.4 +0.6
GRF *e* 08 27 15.4
GRF *e* 08 33 45.7
GRF S Sdif 08 34 46.2 +2.5
GRF *e*SP SP 08 36 16.8 +0.7
GRF MLR MLR
comp=Z,12µm,22.0s,MS6.4
GRF Grafenberg Arr 101.77 41 *e*P Pdif 08 23 07.4 +0.6
GRF *e* 08 27 15.4
GRF *e* 08 33 45.7
GRF *e*S Sdif 08 34 46.2 +2.5
GRF *e*SP SP 08 36 16.8 +0.7
GRF MLR MLR
comp=Z,12µm,22.0s,MS6.4
GRF Grafenberg Arr 101.77 41 *e*Pdiff Pdif 08 23 07.4 +0.6
GRF *ep*Pdiff 08 23 21.8
GRF *e*PP PP 08 27 15.4 -2.8
GRF *e*SKSac SKSac 08 33 45.7 +4.8
GRF *e*Sdiff Sdif 08 34 46.2 +2.5
GRF *e*SP SP 08 36 16.8 +0.7
GRF *e*SS SS 08 41 36.5 -12
GRF *e*L 09 09 06.4
comp=Z,12µm,22.0s
TIP Timpagrande 101.79 52 PFAKE 08 23 20.0 +13
TIP LR LR
comp=Z,31µm,22.0s,MS6.8
INK Inuvik 101.85 340 *e*P Pdif 08 23 05.1 -2.0
INK pmax pmax
comp=Z,50nm,1.1s
INK Inuvik 101.85 340 *e*Pdif Pdif 08 23 05.1 -2.1
comp=Z,50nm,1.1s
TRI Trieste 101.95 45 PFAKE 08 23 20.0 +12
TRI LR LR
comp=Z,9µm,20.0s,MS6.3
RJOB Jochberg 102.04 43 *e*Pdiff Pdif 08 23 08.9 +0.9
RJOB *e*Sdiff Sdif 08 34 47.4 +1.4
RJOB *e*SP SP 08 36 18.2 -0.9
RJOB *e*SS SS 08 41 38.1 -14
CLZ Clausthal 102.06 39 *e*P Pdif 08 23 08.7 +0.7
CLZ *e*S Sdif 08 34 46.1 0.0
CLZ *e*SP SP 08 36 20.1 +1.1
CLZ Clausthal 102.06 39 *e*Pdiff Pdif 08 23 08.7 +0.7
CLZ *e*Sdiff Sdif 08 34 46.1 0.0
CLZ *e*SP SP 08 36 20.1 +1.1
CLZ *e*SS SS 08 41 38.8 -13
NRDL Niedersach Rie 102.14 38 *e*SS SS 08 41 39.8 -13
VOY Vojsko 102.15 45 *e* PP 08 27 04.2 -17
VOY *e* 08 27 18.2
VOY *e* 08 27 37.2
KBA Koelnbreinsper 102.16 44⇑ *i*Pdiff Pdif 08 23 10.0 +1.5
comp=Z,45nm,1.6s,SNR=9.4
MYKA Terra Mystica 102.20 44⇑ *i*Pdiff Pdif 08 23 10.7 +2.0
comp=Z,46nm,1.0s
JAVS Javornik 102.22 45 *i* Pdiff Pdif 08 23 10.2 +1.4
JAVS *i* PP PP 08 27 17.0 -4.7
NVLJ Novalja 102.30 47 P PP 08 27 17.0 -5.3
MOX Moxa 102.35 40 *e*P Pdif 08 23 10.4 +1.1
comp=Z,29nm,1.6s
MOX *e* 08 23 25.1
comp=Z,72nm,1.8s
MOX *e* 08 27 39.1
MOX
comp=Z,7µm,20.0s
MOX Moxa 102.35 40 *e*P Pdif 08 23 10.4 +1.1
MOX pmax pmax
comp=Z,29nm,1.6s
MOX pmax pmax
comp=Z,72nm,1.8s
MOX MLR MLR
comp=Z,7µm,20.0s,MS6.2
MOX Moxa 102.35 40 *e*Pdiff Pdif 08 23 10.0 +0.7
MOX *e*Sdiff Sdif 08 34 51.6 +3.0
MOX *e*SP SP 08 36 23.5 +1.3
MOX *e*SS SS 08 41 44.2 -12
ROTZ Rotzenmuhle 102.39 41 *e*Pdiff Pdif 08 23 10.6 +1.1
ROTZ *e*Sdif Sdif 08 34 52.0 +3.1
ROTZ *e*SP SP 08 36 24.4 +1.7
ROTZ *e*SS SS 08 41 44.7 -12
MANZ Manzenberg 102.41 41 *e*Pdiff Pdif 08 23 10.6 +1.0
MANZ *e*Sdiff Sdif 08 34 52.5 +3.4
MANZ *e*SP SP 08 36 23.6 +0.7
MANZ *e*SS SS 08 41 45.5 -11
LJU Ljubljana 102.57 45 *i* Pdiff Pdif 08 23 11.7 +1.4
WET Wettzell 102.59 42 *e*P Pdif 08 23 11.1 +0.7
WET *e*S Sdif 08 34 53.2 +2.7
WET *e*SP SP 08 36 25.0 +0.2
WET Wettzell 102.59 42 *e*Pdiff Pdif 08 23 11.1 +0.7
WET *e*Sdiff Sdif 08 34 53.2 +2.7
WET *e*SP SP 08 36 25.0 +0.2
WET *e*SS SS 08 41 46.1 -13
NKC Novy Kostel 102.70 41 *i* P Pdif 08 23 11.4 +0.5
NKC *e* 08 27 22.7
NKC *e* 08 33 51.4
NKC *e* 08 34 55.9
NKC *e* 08 36 27.0
NKC MLR MLR
comp=Z,19µm,23.1s,MS6.5
NKC Novy Kostel 102.70 41 *e*PDIF Pdif 08 23 11.4 +0.5
NKC *ep*P 08 23 27.2
NKC *e*PP PP 08 27 22.7 -2.5
NKC *e*SKS 08 33 51.4
NKC *e*SDIF Sdif 08 34 55.9 +4.4
NKC *e*SP SP 08 36 27.0 +1.0
NKC *e*SS SS 08 41 50.8 -10
NKC AMS AMS 09 05 40.0
comp=Z,19µm,23.1s
NKC Novy Kostel 102.70 41 *e*Pdif Pdif 08 23 11.4 +0.5
NKC *e* 08 23 27.2
NKC *e*PP PP 08 27 22.7 -2.5
NKC *e*SKS 08 33 51.4
NKC *e* 08 34 55.9
NKC *e* 08 36 27.0
BER Bergen 102.75 30 *e* Sdif 08 34 54.8 +2.9
BER AMS AMS 09 09 23.7
comp=Z,8µm,15.1s,MS6.4
EGAK Eagle 102.76 335 *e*Pdif Pdif 08 23 07.0 -4.2
comp=Z,7.1nm,0.4s
EGAK LR LR
comp=Z,14µm,19.0s,MS6.5
TANN Tannenbergstha 102.78 41 *e*Pdiff Pdif 08 23 12.8 +1.6
TANN *e*Sdiff Sdif 08 34 55.4 +3.3
TANN *e*SP SP 08 36 29.0 +2.3
TANN *e*SS SS 08 41 50.7 -11
BSEG Bad Segeberg 102.79 37 *e*P Pdif 08 23 11.9 +0.6
BSEG *e*S Sdif 08 34 50.5 -1.7
BSEG *e*SP SP 08 36 25.5 -1.2
BSEG Bad Segeberg 102.79 37 *e*Pdiff Pdif 08 23 11.9 +0.6
BSEG *e*Sdiff Sdif 08 34 50.5 -1.7
BSEG *e*SP SP 08 36 25.5 -1.2
BSEG *e*SS SS 08 41 48.3 -14
JMIC Jan Mayen 102.81 17 *e*SS SS 08 42 03.7 +2.3
BOJS Bojanci 102.87 46 *i* Pdiff Pdif 08 23 13.2 +1.5
BOJS *i* PP PP 08 27 16.1 -11
GEC2 GERESS Array S 102.99 42 *e*P Pdif 08 23 12.9 +0.7
GEC2 *e*S Sdif 08 34 56.2 +2.3
GEC2 *e*SP SP 08 36 27.9 -1.2
GEC2 GERESS Array S 102.99 42 *e*Pdif Pdif 08 23 12.9 +0.7
GEC2 *e*Sdiff Sdif 08 34 56.2 +2.3
GEC2 *e*SP SP 08 36 27.9 -1.2
GEC2 *e*SS SS 08 41 51.6 -13
GERES GERESS Array B 102.99 42 Pdiff Pdif 08 23 11.0 -1.2
comp=Z,4.2nm,0.8s,baz=298,slow=2.9,SNR=23
GERES PP PP 08 27 24.8 -2.6
comp=Z,3.1nm,1.0s,baz=242,slow=5.7,SNR=3.8
GERES PKKP PKKPbc 08 39 12.9 +2.6
comp=Z,0.6nm,0.7s,baz=98,slow=4.0,SNR=4.0
GERES PKKPab 08 39 24.9
comp=Z,1.0nm,0.8s,baz=79,slow=2.9,SNR=4.1
GERES GERESS Array B 102.99 42 P Pdif 08 23 11.0 -1.2
GERES 08 27 24.8
MOA Molln 103.01 43 *i* Pdiff Pdif 08 23 13.6 +1.3
comp=Z,52nm,1.4s,SNR=16
KHC Kasperske Hory 103.01 42 *i* P Pdif 08 23 12.8 +0.5
KHC *e* 08 27 25.2
KHC *e* 08 33 51.3
KHC *e* 08 34 52.6
KHC MLR MLR
comp=Z,13µm,23.8s,MS6.4
KHC Kasperske Hory 103.01 42 *e*PDIF Pdif 08 23 12.8 +0.5
KHC *ex* x 08 23 19.0
KHC *ep*P 08 23 26.9
KHC *e*PP PP 08 27 25.2 -2.4
KHC *e*SKS 08 33 51.3
KHC *e*SDIF Sdif 08 34 52.6 -1.5
KHC *e*SS SS 08 41 56.7 -8.5
KHC AMS AMS 09 10 10.0
comp=Z,13µm,23.8s
CLL Collm 103.40 40 *i* P Pdif 08 23 14.6 +0.6
CLL *e* 08 33 56.0
CLL pmax pmax
comp=Z,25nm,1.3s
CLL pmax pmax
comp=Z,125nm,2.3s
CLL MLR MLR
comp=Z,17µm,22.1s,MS6.5
CLL Collm 103.40 40 *e*Pdiff Pdif 08 23 14.6 +0.6
CLL *e*Sdiff Sdif 08 34 58.9 +1.6
CLL *e*SP SP 08 36 34.7 +1.4
CLL *e*SS SS 08 41 57.2 -13
CLL Collm 103.40 40 *i* Pdif Pdif 08 23 14.6 +0.6
comp=Z,25nm,1.3s
CLL *i* pPdif 08 23 29.0
comp=Z,130nm,2.0s
CLL *i* sPdif 08 23 34.7
CLL *ex* x 08 26 23.0
CLL *i* x x 08 26 38.4
CLL *e*PP PP 08 27 25.0 -5.4
comp=Z,125nm,2.3s
CLL *i* sPP 08 27 45.9
comp=Z,188nm,2.0s
CLL *e*SKSac SKSac 08 33 56.0 +7.5
CLL *e*Sdif Sdif 08 35 05.0 +7.7
CLL *ex* x 08 35 31.0
CLL *e*PS PS 08 36 40.0 -0.7
CLL *e*PPS 08 37 35.0
CLL *e*sPKKPdf 08 39 40.0
CLL *e*SS SS 08 42 12.0 +1.5
CLL *e*SSS 08 45 54.0
CLL *ex* x 08 47 24.0
CLL *e*PKPPKPdf 08 47 28.0
CLL *ex* x 08 47 42.0
CLL Collm 103.40 40 *i* Pdif Pdif 08 23 14.6 +0.6
comp=Z,25nm,1.3s
CLL *i* pP 08 23 29.0
CLL *e*PP PP 08 27 25.0 -5.4
CLL *e*SKS 08 33 56.0
CLL *e*Sdif Sdif 08 35 05.0 +7.7
CLL *eP'P'* 08 47 28.0
CLL LR LR
comp=Z,17µm,22.1s,MS6.5
SISC Sisak 103.60 46 P PP 08 27 27.9 -4.1
ARSA Arzberg 103.62 44 *i* Pdiff Pdif 08 23 16.3 +1.3
comp=Z,27nm,1.2s,SNR=9.5
STON Ston 103.68 49 P PP 08 27 26.3 -6.4
BRG Berggiesshubel 103.82 40 *e*P Pdif 08 23 16.6 +0.7
BRG 08 33 55.0
BRG S Sdif 08 35 06.0 +5.2
BRG pmax pmax
comp=Z,22nm,1.8s
BRG pmax pmax
comp=Z,89nm,2.3s
BRG pmax pmax
comp=Z,22nm,1.7s
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG MLR MLR
comp=N,4µm,20.3s,MS6.3
BRG MLR MLR
comp=E,9µm,21.8s,MS6.3
BRG MLR MLR
comp=Z,12µm,23.2s,MS6.4
BRG Berggiesshubel 103.82 40 *e*Pdiff Pdif 08 23 16.8 +0.9
BRG *e*Sdiff Sdif 08 35 03.0 +2.2
BRG *e*SP SP 08 36 38.8 +1.2
BRG *e*SS SS 08 42 03.3 -13
BRG Berggiesshubel 103.82 40 *e*PDIF Pdif 08 23 16.6 +0.8
comp=Z,36nm,1.8s
BRG *i* 08 23 31.6
comp=Z,148nm,2.3s
BRG PP PP 08 27 21.0 -13
BRG *e* 08 27 51.0
BRG SKS 08 33 55.0
BRG S Sdif 08 35 06.0 +5.2
BRG *e*PKKP PKKPab 08 39 47.8 +23
comp=Z,37nm,1.7s
BRG SS SS 08 41 57.0 -19
BRG *e*PKPPKP 08 47 45.5
comp=Z,17nm,1.6s
BRG
comp=N,7µm,20.3s
BRG
comp=E,15µm,21.8s
BRG
comp=Z,21µm,23.2s
BRG Berggiesshubel 103.82 40 *e*Pdif Pdif 08 23 16.6 +0.8
comp=Z,22nm,1.8s
BRG *i* 08 23 31.6
BRG PP PP 08 27 21.0 -13
BRG *e* 08 27 51.0
BRG SKS 08 33 55.0
BRG S Sdif 08 35 06.0 +5.2
BRG *e*PKKP PKKPab 08 39 47.8 +23
BRG SS SS 08 41 57.0 -19
BRG *eP'P'* 08 47 45.5
BRG LR LR
comp=Z,12µm,23.2s,MS6.4
PRU Pruhonice 103.89 41 *i* P Pdif 08 23 16.6 +0.4
PRU *e* 08 27 31.9
PRU *e* 08 33 57.4
PRU *e* 08 35 07.4
PRU *e* 08 36 37.9
PRU *e* 08 42 12.2
PRU MLR MLR
comp=Z,8µm,20.6s,MS6.2
PRU Pruhonice 103.89 41 *e*PDIF Pdif 08 23 16.6 +0.4
PRU *ep*P 08 23 31.9
PRU *e*PP PP 08 27 31.9 -2.2
PRU *e*SKS 08 33 57.4
PRU *ex* x 08 35 07.4
PRU *e*SP SP 08 36 37.9 -0.6
PRU *e*SS SS 08 42 12.2 -5.0
PRU AMS AMS 09 12 50.0
comp=Z,8µm,20.6s
PRU Pruhonice 103.89 41 *e*Pdif Pdif 08 23 16.6 +0.4
PRU *e* 08 23 31.9
PRU *e*PP PP 08 27 31.9 -2.2
PRU *e*SKS 08 33 57.4
PRU *e* 08 35 07.4
PRU *e* 08 36 37.9
PRU LR LR
comp=Z,8µm,20.6s,MS6.2
CSNA Conrad Observa 104.05 44⇑ *i*Pdiff Pdif 08 23 18.5 +1.6
comp=Z,35nm,1.7s
CONA Conrad Observa 104.05 44 *i* Pdiff Pdif 08 23 18.6 +1.7
comp=Z,38nm,1.7s,SNR=7.2
PVCC Panska Ves 104.08 41 *i* P Pdif 08 23 18.4 +1.4
PVCC *e* 08 27 33.7
PVCC *e* 08 33 57.8
PVCC *e* 08 36 41.1
PVCC MLR MLR
comp=Z,14µm,19.0s,MS6.5
PVCC Panska Ves 104.08 41 *e*PDIF Pdif 08 23 18.4 +1.4
PVCC *ep*P 08 23 33.8
PVCC *e*PP PP 08 27 33.7 -1.8
PVCC *e*SKS 08 33 57.8
PVCC *e*SP SP 08 36 41.1 +0.7
PVCC *ex* x 08 42 05.8
PVCC AMS AMS 09 10 10.0
comp=Z,14µm,19.0s
PVCC Panska Ves 104.08 41 *e*Pdif Pdif 08 23 18.4 +1.4
PVCC *e* 08 23 33.8
PVCC *e*PP PP 08 27 33.7 -1.8

PVCC eSKS 08 33 57.8
PVCC e 08 36 41.1
PVCC LR LR
comp=Z,14µm,19.0s,MS6.5
DAG Danmarks Havn 104.12 11 eP Pdif 08 23 16.0 -1.2
DAG MLR MLR
comp=N,18µm,23.0s
DAG MLR MLR
comp=Z,27µm,23.0s,MS6.7
DAG Danmarks Havn 104.12 11 i P Pdif 08 23 16.0 -1.2
DAG
comp=Z,27µm,23.0s
KEK Kerkira 104.19 53 eP PKiKP 08 27 34.3 0.0
TREC Trest 104.25 42 i P Pdif 08 23 19.4 +1.6
TREC e 08 33 56.6
TREC e 08 35 09.2
TREC e 08 36 42.4
TREC MLR MLR
comp=Z,20µm,27.1s,MS6.5
TREC Trest 104.25 42 ePDIF Pdif 08 23 19.4 +1.6
TREC ePP PP 08 27 28.8 -8.0
TREC eSKS 08 33 56.6
TREC ex x 08 35 09.2
TREC eSP SP 08 36 42.4 +0.1
TREC eSS SS 08 42 14.7 -7.5
TREC AMS AMS 09 04 50.0
comp=Z,20µm,27.1s
KONO Kongsberg 104.45 31 ePP PP 08 27 38.7 +0.7
KONO eSKS 08 33 59.2
KONO eSS SS 08 42 26.2 +1.8
KONO AMS AMS 09 07 52.0
comp=Z,11µm,17.8s,MS6.4
KONO Kongsberg 104.45 31 PFAKE 08 23 30.0 +11
KONO LR LR
comp=Z,13µm,20.0s,MS6.5
COP Copenhagen 104.54 35 eP Px 08 23 35.0
COP i S SKSac 08 33 51.7 -1.9
COP i 08 35 10.1
COP MLR MLR
comp=Z,4µm,23.0s,MS5.9
COP Copenhagen 104.54 35 i P Px 08 23 35.0
COP i S SKSac 08 33 51.7 -1.9
COP i 08 35 10.1
COP
comp=Z,4µm,23.0s
TIR Tirane 104.74 51 PFAKE 08 23 30.0 +10
TIR LR LR
comp=Z,26µm,21.0s,MS6.7
ZST Bratislava 104.93 44 eP Pdif 08 23 19.7 -1.1
ZST eS SKSac 08 33 56.3 +0.6
ZST eSP PS 08 36 56.9 +0.1
ZST eSS 08 42 46.9
ZST Bratislava 104.93 44 PDIF Pdif 08 23 19.7 -1.1
ZST ePP PP 08 27 30.5 -11
ZST Bratislava 104.93 44⇑ eSKSp SKSac 08 33 56.2 +0.5
ZST eSP SP 08 36 56.9 +7.5
ZST eSS SS 08 42 46.9 +15
ZST Bratislava 104.93 44 eP Pdif 08 23 19.7 -1.1
ZST ePP PP 08 27 30.5 -11
ZST eS SKSac 08 33 56.3 +0.6
ZST eSP PS 08 36 56.9 +0.1
ZST eSS 08 42 46.9
ZST LR LR
comp=Z,12µm,23.8s,MS6.3
RLS Riolos of Patr 104.93 55 eP PP 08 27 39.3 -2.8
VRAC Vranov 104.94 43 Pdiff Pdif 08 23 21.2 +0.3
comp=Z,4.6nm,0.8s,baz=252,slow=3.5,SNR=6.9
JAN Janina 104.95 53 eP PP 08 27 40.4 -1.8
UPC Upice 104.95 41 i P Pdif 08 23 19.9 -1.0
UPC Upice 104.95 41 ePDIF Pdif 08 23 19.9 -1.0
DPC Dobruska-Polom 105.09 41 i P Pdif 08 23 22.7 +1.2
DPC e 08 34 01.6
DPC e 08 35 15.3
DPC e 08 36 52.0
DPC e 08 36 53.3
DPC MLR MLR
comp=Z,11µm,19.2s,MS6.4
DPC Dobruska-Polom 105.09 41 ePDIF Pdif 08 23 22.7 +1.2
DPC ePP PP 08 27 36.0 -7.0
DPC eSKS SKSac 08 34 01.6 +5.3
DPC ex x 08 35 15.3
DPC eSP SP 08 36 52.0 +1.0
DPC eE 08 42 19.5
DPC AMS AMS 09 11 30.0
comp=Z,11µm,19.2s
DPC Dobruska-Polom 105.09 41 ePdif Pdif 08 23 22.7 +1.2
DPC ePP PP 08 27 36.0 -7.0
DPC eSKS SKSac 08 34 01.6 +5.3
DPC e 08 35 15.3
DPC e 08 36 52.0
DPC e 08 36 53.3
DPC LR LR
comp=Z,11µm,19.2s,MS6.4
KDAK Kodiak Island 105.17 327 PFAKE 08 27 50.0 +14
KDAK LR LR
comp=Z,10µm,21.0s,MS6.3
KSP Ksiaz 105.22 41 ePdiff Pdif 08 23 24.4 +2.3
KSP Ksiaz 105.22 41 ePdif Pdif 08 23 23.5 +1.4
KSP ePKPdf PKiKP 08 27 32.0 -3.9
KSP ePP PP 08 27 40.5 -3.4
KSP eSKS SKSac 08 34 02.0 +5.1
KSP eSdif Sdif 08 35 16.0 +3.5
KSP eSP SP 08 36 53.5 +1.2
KSP eSS SS 08 42 32.0 -3.4
KSP LR LR
comp=Z,28µm,23.9s,MS6.7
PKSM Moragy 105.34 46⇑ iP Pdif 08 23 24.7 +2.1
PKSM Moragy 105.34 46⇑ P Pdif 08 23 24.7 +2.1
FUNA Funafuti 105.37 254 PFAKE 08 27 50.0 +13
FUNA LR LR
comp=Z,17µm,21.0s,MS6.6
COLA College 105.42 334 eP Pdif 08 23 20.7 -2.3
COLA pmax pmax
comp=Z,19nm,0.9s
COLA MLR MLR
comp=Z,13µm,21.0s,MS6.5
COLA College 105.42 334 ePdif Pdif 08 23 20.7 -2.3
comp=Z,19nm,0.9s
COLA LR LR
comp=Z,13µm,21.0s,MS6.5
NAO01 NORSAR Array S 105.46 30 PFAKE 08 27 50.0 +14
NAO01 LR LR
comp=Z,12µm,22.0s,MS6.4
MCK McKinley 105.47 333 ePKPdf PKiKP 08 27 34.4 -1.5
NB2 NORSAR Subarra105.68 30 P Pdif 08 23 24.1 0.0
comp=Z,98nm,2.0s,baz=250,slow=4.3
NOA NORSAR Array B 105.68 30 Pdiff Pdif 08 23 23.8 -0.3
comp=Z,4.2nm,1.0s,baz=250,slow=4.3,SNR=6.6
NOA PP PP 08 27 46.5 -0.5
comp=Z,5.6nm,1.0s,baz=244,slow=7.0,SNR=4.2
NOA PKKP PKKPbc 08 39 13.4 +11
comp=Z,3.2nm,1.0s,baz=71,slow=4.4,SNR=3.6
NOA NORSAR Array B 105.68 30 P Pdif 08 23 23.8 -0.3
NOA 08 27 46.5
BSD Bornholm Skovb 105.71 36 eP Px 08 23 39.0
BSD i S SKSac 08 33 55.7 -3.1
BSD i 08 35 18.1
BSD MLR MLR
comp=Z,9µm,19.0s,MS6.3
BSD Bornholm Skovb 105.71 36 i P Px 08 23 39.0
BSD i S SKSac 08 33 55.7 -3.1
BSD i 08 35 18.1
BSD
comp=Z,9µm,19.0s
KRUS Krusevo 105.74 51 eP PP 08 27 43.7 -4.4
THL Klokotos Trika 105.78 53 eP PP 08 27 42.4 -6.0
KOLL Kolacno 105.87 44 PDIF Pdif 08 23 26.3 +1.3
KOLL Kolacno 105.87 44 eP Pdif 08 23 26.3 +1.3
TRF Thorofare Moun 105.94 333 ePKPdf PKiKP 08 27 37.4 +0.6
TAU Tasmania Unive 106.00 208 PFAKE 08 27 50.0 +12
TAU LR LR
comp=Z,8µm,20.0s,MS6.3
ABPO Ambohimpanom 106.00 119 PFAKE 08 27 50.0 +12
ABPO LR LR
comp=Z,20µm,21.0s,MS6.6
SKO Skopje 106.05 51 i P PP 08 27 47.1 -3.2
OKC Ostrava-Krasne 106.06 42 i P Pdif 08 23 20.4 -5.5
OKC e 08 34 06.5
OKC e 08 37 04.2
OKC MLR MLR
comp=Z,12µm,25.6s,MS6.3
OKC Ostrava-Krasne 106.06 42 ePDIF Pdif 08 23 20.4 -5.5
OKC eSKS SKSac 08 34 06.5 +5.8
OKC eSDIF Sdif 08 35 21.5 +2.0
OKC ePS PS 08 37 04.2 -4.3
OKC ex x 08 42 30.4
OKC AMS AMS 09 06 00.0
comp=Z,12µm,25.6s
OKC Ostrava-Krasne 106.06 42 ePdif Pdif 08 23 20.4 -5.5
OKC eSKS SKSac 08 34 06.5 +5.8
OKC e 08 35 21.5
OKC e 08 35 24.3
OKC e 08 37 04.2
VYHS Vyhne 106.12 44 eP Pdif 08 23 26.8 +0.7
VYHS eS SKSac 08 34 02.3 +1.3
VYHS eSP PS 08 37 08.1 -1.1
VYHS eSS SS 08 42 56.7 +8.9
VYHS Vyhne 106.12 44 PDIF Pdif 08 23 26.8 +0.7
VYHS pPDIF 08 23 38.1
VYHS ePP PP 08 27 38.9 -12
VYHS Vyhne 106.12 44⇑ eSKSp 08 34 02.3
VYHS SDIF Sdif 08 35 25.2 +5.2
VYHS eSP SP 08 37 08.1 +6.4
VYHS eSS SS 08 42 56.7 +8.9
VYHS Vyhne 106.12 44 eP Pdif 08 23 26.8 +0.7
VYHS e 08 23 38.1
VYHS ePP PP 08 27 38.9 -12
VYHS eS SKSac 08 34 02.3 +1.3
VYHS e Sdif 08 35 25.2 +5.2
VYHS eSP PS 08 37 08.1 -1.1
VYHS eSS SS 08 42 56.7 +8.9
VYHS LR LR
comp=Z,10µm,28.5s,MS6.2
BPAW Bear Paw Mtn. 106.44 333 ePKPdf PKiKP 08 27 36.8 -0.9
STIP Stip 106.51 51 i P PP 08 27 50.8 -2.9
ATH Athens Observa 106.61 55 eP PP 08 27 52.3 -2.2
PSZ Piszkesteto 106.64 45⇓ iP Pdif 08 23 30.9 +2.5
PSZ Piszkesteto 106.64 45⇓ P Pdif 08 23 30.9 +2.5
PSZ LR LR
comp=Z,13µm,21.0s,MS6.5
VAY Valandovo 106.68 52 eP PP 08 27 52.1 -2.9
PTL Penteli 106.74 55 eP PP 08 27 53.4 -2.1
NSS Namsos 107.09 27 eSS SS 08 43 01.6 +1.5
BZS Buzias 107.17 47⇓ iP Pdif 08 23 33.5 +2.7
BZS Buzias 107.17 47⇓ P Pdif 08 23 33.5 +2.8
KECS Kecovo 107.17 44 PDIF Pdif 08 23 30.9 +0.1
KECS ePP PP 08 27 55.4 -3.0
KECS Kecovo 107.17 44 eP Pdif 08 23 30.9 +0.1
KECS ePP PP 08 27 55.4 -3.0
OJC Ojcow 107.19 42 ePdiff Pdif 08 23 32.1 +1.2
OJC ePP PP 08 27 55.3 -3.2
OJC eSKSac SKSac 08 34 04.2 -1.4
OJC eSP SP 08 37 12.7 0.0
OJC eSS SS 08 42 57.1 -5.2
OJC L 09 12 36.3
comp=Z,12nm,21.8s
NIE Niedzica 107.31 43 ePdiff Pdif 08 23 34.2 +2.8
NIE ePP PP 08 27 59.2 -0.1
NPS Neapolis 107.32 59 eP PP 08 27 57.6 -2.2
STHS Stebnicka Huta 107.89 43 ePP PP 08 27 54.7 -8.9
GZR Gura Zlata 107.90 48⇓ iP Pdif 08 23 39.0 +5.0
CRVS Cervenica-Dubn 107.91 44 eP Pdif 08 23 36.0 +2.0
CRVS e 08 27 59.2
CRVS eS SKSac 08 34 10.3 +1.5
CRVS eSP SP 08 37 22.1 +2.1
CRVS eSS SS 08 43 14.5 +2.5
CRVS Cervenica-Dubn 107.91 44 PDIF Pdif 08 23 36.0 +2.0
CRVS ePP PP 08 27 59.2 -4.5
CRVS Cervenica-Dubn 107.91 44⇑ eSKSp 08 34 10.3
CRVS SDIF Sdif 08 35 42.6 +7.7
CRVS eSP SP 08 37 22.1 +2.1
CRVS eSS SS 08 43 14.5 +2.5
CRVS Cervenica-Dubn 107.91 44 eP Pdif 08 23 36.0 +2.0
CRVS ePP PP 08 27 59.2 -4.5
CRVS eS SKSac 08 34 10.3 +1.5
CRVS e 08 35 42.6
CRVS eSP SP 08 37 22.1 +2.1
CRVS eSS SS 08 43 14.5 +2.5
CRVS LR LR
comp=Z,8µm,30.1s,MS6.1
DRGR 108.20 46⇓ iP Pdif 08 23 39.3 +3.9
DRGR 108.20 46⇓ P Pdif 08 23 39.3 +3.9
LIA Limnos Island 108.22 54 eP PP 08 27 58.3 -8.0
UZH Uzhgorod 108.37 44 eP Pdif 08 23 38.0 +1.9
UZH e 08 28 03.5
UZH i 08 34 11.0
UZH i PS PS 08 37 27.0 -5.2
UZH i SS SS 08 43 18.0 -0.3
UZH MLR MLR
comp=N,5µm,21.0s,MS6.4
UZH MLR MLR
comp=E,9µm,21.0s,MS6.4
UZH MLR MLR
comp=Z,4µm,21.0s,MS6.0
KOLS Kolonicke sedl 108.43 44 eSP SP 08 37 28.2 +2.8
KWP Kalwaria 108.87 43 ePdiff Pdif 08 23 36.1 -2.2
KWP Kalwaria 108.87 43 ePdif Pdif 08 23 36.1 -2.2
KWP LR LR
comp=Z,16µm,22.0s,MS6.5
URLA Izmir 108.90 56⇑ iP PP 08 28 04.8 -6.5
GCAM G?zelcaml? 109.22 56⇑ iP PKiKP 08 27 38.1 -5.7
VOIR 109.46 48⇓ iP Pdif 08 23 47.7 +6.7
SART Tekirdag 109.90 53⇑ iP PP 08 28 09.6 -8.8
BURAR Bucovina Array 110.05 46⇑ iP Pdif 08 23 46.8 +3.2
TURN Turunc 110.08 58⇑ iP PKiKP 08 27 58.9 +13
SUW Suwalki 110.10 39 ePdiff Pdif 08 23 47.9 +4.1
SUW Suwalki 110.10 39 ePdif Pdif 08 23 47.9 +4.1
VRI Vrincioaia 110.70 48⇓ iP Pdif 08 23 53.2 +6.7
KBS Kingsbay 110.78 12 ePP PP 08 28 32.5 +8.7
KBS AMS AMS 09 16 55.2
comp=Z,6µm,21.4s,MS6.2
KBS Kingsbay 110.78 12 PFAKE 08 28 00.0 +14
KBS LR LR
comp=Z,7µm,21.0s,MS6.2
TRO Tromso 110.91 22 eSKS SKSac 08 34 22.7 +2.1
TRO e 08 35 55.8
TRO e 08 37 54.1
TRO AMS AMS 09 09 38.6
comp=Z,5µm,24.0s,MS6.0
CAN Canberra 111.25 214 PFAKE 08 28 00.0 +12
CAN LR LR
comp=Z,11µm,21.0s,MS6.4
BJO Bjornoya 111.69 17 eSS SS 08 44 05.0 +3.6
BJO AMS AMS 09 12 44.7
comp=Z,7µm,17.7s,MS6.3
ISP Isparta 111.78 57 PFAKE 08 28 00.0 +11
ISP LR LR
comp=Z,28µm,22.0s,MS6.8
KIS Kishinev 112.34 47 ePKIKP PKiKP 08 27 49.0 -0.3
KIS e 08 28 08.0
KIS e 08 28 34.0
KIS i 08 34 28.0
KIS e 08 34 48.0
KIS Kishinev 112.34 47 ePKP PKiKP 08 27 49.0 -0.3
KIS epPKP 08 28 08.0
KIS Kishinev 112.34 47 ePP PP 08 28 34.0 -1.8
KIS i SKS SKSac 08 34 28.0 +0.7
KIS Kishinev 112.34 47 i PS PS 08 38 12.0 +1.9
KIS LRM 09 20 14.0
comp=Z,8µm,19.0s
ESKT Eskisehir 112.39 55⇑ iP PKiKP 08 27 45.5 -4.2
MNK Minsk 112.87 39 ePKIKP PKiKP 08 27 43.0 -7.1
MNK ePPP 08 34 28.0
MNK ePS SP 08 38 05.0 -2.2
KAF Kangasniemi 112.95 30 ep PKiKP 08 27 48.6 -1.4
comp=Z,0.6nm,0.4s
KAF Kangasniemi 112.95 30 ePKIKP PKiKP 08 27 48.6 -1.4
KAF pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 113.19 43 PKiKP PKiKP 08 27 49.1 -1.7
comp=Z,7.8nm,0.7s,baz=261,slow=3.1,SNR=20
AKASG PKKPbc PKKPbc 08 38 37.1 -0.9
comp=Z,4.0nm,0.6s,baz=67,slow=4.2,SNR=14
AKASG PKKP PKKPdf 08 38 55.9 -3.5
comp=Z,1.3nm,0.5s,baz=64,slow=4.0,SNR=4.5
AKBB Malin Array Si 113.19 43 ePKIKP PKiKP 08 27 49.1 -1.7
ARCES ARCESS Array B 113.19 22 PKKPbc PKKPbc 08 38 36.5 -2.0
comp=Z,3.0nm,0.6s,baz=83,slow=3.4,SNR=8.3
ARCES PKKP PKKPdf 08 39 00.2 +0.5
comp=Z,8.9nm,0.7s,baz=74,slow=5.2,SNR=5.5
CSS Prodhromos 113.38 60 ePKPdf PKiKP 08 27 51.6 -0.1
CSS LR LR
comp=Z,19µm,22.0s,MS6.7
KEV Kevo 113.73 22 PFAKE 08 28 00.0 +8.7
KEV LR LR
comp=Z,6µm,20.0s,MS6.2
BR131 Keskin Array S 114.55 55 ePKPdf PKiKP 08 27 52.8 -1.0
BR131 LR LR
comp=Z,16µm,21.0s,MS6.6
BRTR Keskin Array B 114.55 55 PKiKP PKiKP 08 27 53.0 -0.8
comp=Z,14nm,0.8s,baz=202,slow=2.9,SNR=28
BRTR PKKPbc PKKPbc 08 38 38.9 +5.8
comp=Z,2.7nm,0.8s,baz=92,slow=4.0,SNR=8.0
MMAI Mount Meron Ar 114.66 63 PKKPbc PKKPbc 08 38 40.7 +8.3
comp=Z,9.1nm,0.9s,baz=37,slow=8.5,SNR=7.5
MMAI PKKP PKKPdf 08 39 00.2 +4.1
comp=Z,10nm,1.1s,baz=339,slow=4.5,SNR=5.5
BALT Daday 114.66 53⇑ iP PKiKP 08 27 50.8 -3.2
MIDW Midway 115.03 292 PFAKE 08 28 10.0 +15
MIDW LR LR
comp=Z,28µm,22.0s,MS6.8
BHL Bhannes 115.04 62 eP PKiKP 08 27 57.4 +2.5
TARA Tarawa 115.27 260 PFAKE 08 28 10.0 +14
TARA LR LR
comp=Z,32µm,20.0s,MS6.9
JOF Joensuu 115.31 30 ep PKiKP 08 27 54.5 0.0
comp=Z,5.8nm,0.8s
JOF Joensuu 115.31 30 ePKIKP PKPdf 08 27 54.5 0.0
JOF pmax pmax
comp=Z,6.0nm,0.8s
AVNT Avonos 115.31 57⇑ iP PKPdf 08 27 54.2 -1.1
HWQ Hawqa 115.36 62 eP PKPdf 08 28 01.1 +5.6
CTKT Corum 115.56 55⇑ iP PKPdf 08 27 54.7 -1.0
SIM Simferopol' 115.68 50 P Pdif 08 24 23.3 +15
SIM i 08 27 55.3
SIM e 08 28 57.0
SIM ePS PS 08 38 33.0 -7.8
SIM pmax pmax
comp=Z,1.0nm,13.0s
SIM MLR MLR
comp=Z,7µm,19.0s,MS6.3
ASF Jabal al Asfar 115.72 64 PKKPbc PKKPab 08 38 38.6 +5.8
comp=Z,3.8nm,0.8s,baz=302,slow=2.4,SNR=4.6
ASF PKKP PKKPdf 08 38 57.3 +3.2
comp=Z,3.1nm,0.8s,baz=341,slow=1.8,SNR=3.2
APA Apatity 116.10 25⇑ iPKIKP PKPdf 08 27 57.4 +1.5
APA i 08 28 11.8
APA ePS PS 08 38 35.0 -8.7
APA ePPS 08 39 48.0
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,9µm,20.0s,MS6.4
ANDN Andirin 116.27 58⇑ iP PKPdf 08 27 53.8 -3.3
PINB Pinarbasi 116.49 57⇑ iP PKPdf 08 27 57.4 -0.2
LVZ Lovozero 116.55 24⇓ iPKIKP PKPdf 08 27 54.8 -2.0
LVZ MLR MLR
comp=Z,7µm,20.0s,MS6.3
LVZ Lovozero 116.55 24⇓ iPKP PKPdf 08 27 54.9 -1.9
LVZ LR LR
comp=Z,7µm,21.0s,MS6.3
STKA Stephens Creek 117.66 210 ePKP PKPdf 08 27 58.7 -1.5
comp=Z,7.2nm,0.7s
STKA Stephens Creek 117.66 210 PKiKP PKiKP 08 27 58.9 -1.3
comp=Z,9.1nm,0.7s,baz=63,slow=1.7,SNR=19
STKA PKKPbc PKKPbc 08 38 22.9 +0.7
comp=Z,7.4nm,0.8s,baz=342,slow=6.1,SNR=9.8
ADK Adak 117.80 318 PFAKE 08 28 10.0 +10
ADK LR LR
comp=Z,11µm,22.0s,MS6.5
OBN Obninsk 117.95 39⇓ iPKIKP PKPdf 08 27 56.4 -3.4
OBN i 08 28 15.3
OBN i PS PS 08 38 54.9 -6.1
OBN pmax pmax
comp=Z,75nm,1.1s
OBN MLR MLR
comp=Z,13µm,21.0s,MS6.5
ANN Anapa 118.01 50 i PKIKP PKPdf 08 28 00.5 +0.2
ANN i 08 28 15.5
ANN i 08 29 13.4
ANN ePPP 08 31 53.1
ANN i 08 34 50.3
ANN eSS SS 08 45 43.0 +17
ANN pmax pmax
comp=Z,99nm,1.6s
ANN Anapa 118.01 50 ePKP PKPdf 08 28 00.3 0.0
KEMA Kemaliye 118.19 57⇑ iP PKPdf 08 27 54.0 -6.9
ELZG Elazig 118.47 58⇑ iP PKPdf 08 27 58.4 -2.9
MOS Moscow 118.55 38 ePKIKP PKPdf 08 27 59.9 -1.1
MOS e 08 28 16.1
MOS e 08 29 17.2
MOS i 08 34 51.9
MOS i SS SS 08 45 28.7 -3.6
MOS pmax pmax
comp=Z,63nm,0.8s
MOS MLR MLR
comp=Z,8µm,19.0s,MS6.3
MOS MLR MLR
comp=E,8µm,19.0s
KLMR Klimovskoe 119.27 32 ePKIKP PKPdf 08 28 02.4 +0.2
KLMR 08 29 24.9
SOC Sochi 119.55 52 i PKIKP PKPdf 08 28 00.2 -3.1
SOC e 08 28 18.6
SOC e 08 29 23.5
SOC e 08 34 54.7
SOC ePS PS 08 39 11.7 -4.2
SOC eSS SS 08 45 45.7 -0.3
SOC pmax pmax
comp=Z,3µm,0.8s
SOC MLR MLR
comp=Z,4µm,20.0s,MS6.1
VORD Divnogorie 119.57 43 i PKIKP PKPdf 08 28 01.2 -1.9
VORD e 08 29 22.5
VORD e 08 34 53.7
VORD pmax pmax
comp=Z,40nm,0.9s
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,1µm,9.9s
VORD pmax pmax
comp=N,200nm,8.1s
VORD pmax pmax
comp=E,810nm,8.4s
VORD MLR MLR
comp=Z,9µm,21.0s,MS6.4
VORD MLR MLR
comp=N,7µm,24.0s,MS6.4
VORD MLR MLR
comp=E,6µm,22.0s,MS6.4
KOPT Kop Dagi 119.81 56⇑ iP PKPdf 08 28 04.8 +0.8
BEST Besiri 120.18 58⇑ iP PKPdf 08 28 03.9 -0.8
BNGL BINGOL 120.20 57⇓ iP PKPdf 08 28 00.8 -3.9
MSEY Mahe Island 120.26 110 PFAKE 08 28 20.0 +14
MSEY LR LR
comp=Z,25µm,22.0s,MS6.8
ERZM Erzurum 120.47 56⇑ iP PKPdf 08 28 07.8 +2.6
ARTV Artvin 121.00 55⇑ iP PKPdf 08 28 03.2 -2.9
VRHR Novokhopersk 121.04 43 i PKIKP PKPdf 08 28 04.2 -1.7
VRHR e 08 29 32.7
VRHR e 08 34 58.5
VRHR pmax pmax
comp=Z,60nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,2µm,9.5s
VRHR pmax pmax
comp=N,260nm,8.5s
VRHR pmax pmax
comp=E,990nm,9.9s
VRHR MLR MLR
comp=Z,11µm,20.0s,MS6.5
VRHR MLR MLR
comp=N,6µm,18.0s,MS6.4
VRHR MLR MLR
comp=E,6µm,19.0s,MS6.4
HNR Honiara 121.40 242 PFAKE 08 28 20.0 +12
HNR LR LR
comp=Z,24µm,22.0s,MS6.8
TUTA Tutak 121.53 57⇑ iP PKPdf 08 28 07.0 -0.3
KIV Kislovodsk 121.72 51 eP Pdif 08 24 31.1 -4.3
KIV ePPP 08 32 15.6
KIV e 08 34 56.8
KIV ePS PS 08 39 29.0 -6.2
KIV eSS SS 08 46 09.2 -4.5

KIV pmax pmax
comp=Z,74nm,1.0s
KIV MLR MLR
comp=Z,8µm,21.0s,MS6.4
KIV Kislovodsk 121.72 51 *e*PKPdf PKPdf 08 28 06.2 -1.3
KIV LR LR
comp=Z,5µm,21.0s,MS6.2
ONI Oni 122.22 53 P PKPdf 08 28 09.3 +0.8
GOR Gori 122.68 54 P PKPdf 08 28 11.4 +2.0
GNI Garni 123.07 56 *e*PKIKP PKPdf 08 28 10.1 -0.1
GNI MLR MLR
comp=Z,14µm,22.0s
MTA Mtatsminda 123.18 54 P PKPdf 08 28 11.0 +0.6
BILL Bilibino 123.39 338 *i* PKIKP PKPdf 08 28 08.5 -1.4
BILL *e* 08 29 55.3
BILL pmax pmax
comp=Z,16nm,1.3s
BILL Bilibino 123.39 338 *e*PKPdf PKPdf 08 28 08.8 -1.1
BILL LR LR
comp=Z,9µm,22.0s,MS6.4
DGRG David-gareji 123.61 55 P PKPdf 08 28 12.6 +1.4
FORT Forrest 123.86 199 *e*PKP PKPdf 08 28 11.0 -1.1
comp=Z,22nm,0.6s
NAY Al-Naaiem 123.95 69 *e*P PKPdf 08 28 13.0 +0.7
baz=69
NAY AMb AMB 08 28 14.1
comp=Z,46nm,0.9s,baz=69
FX1 Attu Island--F 123.97 319 PKP PKPdf 08 28 11.6 +0.1
comp=Z,5.5nm,0.5s,baz=85,slow=23,SNR=4.6
NWAO Narrogin (SRO) 124.06 187 PKP PKPdf 08 28 12.5 +0.1
comp=Z,23nm,0.7s,baz=162,slow=1.0,SNR=13
NWAO Narrogin (SRO) 124.06 187 *e*PKPdf PKPdf 08 28 11.8 -0.7
NWAO LR LR
comp=Z,8µm,21.0s,MS6.4
RDF Al-Radifah 124.17 70 *e*P PKPdf 08 28 13.6 +0.9
baz=70
RDF AMb AMB 08 28 14.6
comp=Z,88nm,0.9s,baz=70
UMR Umm Al-Rimmam124.41 69 *e*P PKPdf 08 28 14.1 +1.0
baz=69
UMR AMb AMB 08 28 15.3
comp=Z,210nm,0.8s,baz=69
CTA Charters Tower 124.46 223 *e*PKP PKPdf 08 28 12.2 -1.3
comp=Z,14nm,0.6s
CTA *e*pPKP pPKPdf 08 28 27.0 -3.4
CTA Charters Tower 124.46 223 PKP PKPdf 08 28 12.2 -1.4
comp=Z,22nm,0.7s,baz=130,slow=2.4,SNR=25
CTA PKKPbc 08 37 58.9
comp=Z,8.4nm,0.9s,baz=322,slow=4.9,SNR=6.2
CTAO Charters Tower 124.46 223 *e*PKPdf PKPdf 08 28 12.2 -1.3
CTAO *e*SKPdf SKPdf 08 31 33.7 -10
CTAO LR LR
comp=Z,12µm,22.0s,MS6.5
MUN Mundaring 125.11 187 *e*PKP PKPdf 08 28 14.7 +0.2
MAK Makhachkala 125.21 53 *e*P Pdif 08 24 55.2 +4.2
MAK *i* 08 30 03.2
MAK *e*PPP 08 32 44.4
MAK *i* 08 35 20.4
MAK *e*SP SP 08 39 54.0 -4.9
MAK *i* PS PS 08 40 04.7 -1.5
MAK *e*SS SS 08 47 04.3 +6.3
MAK pmax pmax
comp=Z,277nm,1.4s
KLBR Kellerberrin 125.31 188 *e*PKP PKPdf 08 28 13.1 -1.8
comp=Z,50nm,0.7s
SOKR Solikamsk 127.94 31 *i* PKIKP PKPdf 08 28 19.1 +0.2
SOKR pmax pmax
comp=Z,70nm,1.3s
ASAR Alice Springs 128.16 208 PKP PKPdf 08 28 18.3 -2.2
comp=Z,57nm,0.7s,baz=139,slow=2.0,SNR=80
ARU Arti 129.93 34 *i* PKIKP PKPdf 08 28 22.4 -0.3
ARU 08 30 34.3
ARU Arti 129.93 34⇑ *e*PKP PKPdf 08 28 19.0 -3.7
ARU *e*PKPdf PKPdf 08 28 22.1 -0.6
ARU LR LR
comp=Z,15µm,22.0s,MS6.7
TIXI Tiksi 130.02 352⇑ *i*PKIKP PKPdf 08 28 20.8 -1.7
TIXI MLR MLR
comp=Z,14µm,24.0s,MS6.6
TIXI Tiksi 130.02 352 *e*PKPdf PKPdf 08 28 21.1 -1.5
TIXI LR LR
comp=Z,12µm,21.0s,MS6.6
SVE Sverdlovsk 130.85 33⇓ *i*PKIKP PKPdf 08 28 24.4 -0.1
SVE *e* 08 30 41.2
SVE *e*PS PS 08 40 40.5 -14
SVE pmax pmax
comp=Z,108nm,1.8s
SEY Seymchan 130.91 336⇑ *i*PKIKP PKPdf 08 28 23.5 -0.9
SEY Seymchan 130.91 336⇑ *i*P PKPdf 08 28 23.5 -0.9
SEY Seymchan 130.91 336⇑ *e*PKP PKPdf 08 28 23.6 -0.8
COEN Coen 130.97 225 *e*PKPdf PKPdf 08 28 24.2 -1.8
COEN *e*PP PP 08 30 37.5 -4.6
WB2 Warramunga Arr 131.18 211 *e*PKP PKPdf 08 28 24.6 -1.8
WB2 *e* 08 31 45.1
WB2 *e*PKS 08 31 49.3
WRAB Tennant Creek 131.19 211*d i*PKIKP PKPdf 08 28 25.0 -1.4
WRAB Tennant Creek 131.19 211 *e*PKPdf PKPdf 08 28 24.7 -1.6
WRAB LR LR
comp=Z,21µm,22.0s,MS6.8
PMG Port Moresby 131.39 233 PKP PKPdf 08 28 25.4 -1.4
comp=Z,62nm,1.1s,baz=335,slow=1.5,SNR=12
PMG Port Moresby 131.39 233 *e*PKPdf PKPdf 08 28 25.8 -1.1
PMG LR LR
comp=Z,9µm,20.0s,MS6.5
AKTK Aktyubinsk 131.42 42 PKP PKPdf 08 28 24.0 -1.8
AKTO Aktyubinsk 131.42 42 PKP PKPdf 08 28 24.0 -1.7
comp=Z,21nm,1.0s,baz=289,slow=1.8,SNR=5.5
AKTO Aktyubinsk 131.42 42 *i* PKIKP PKPdf 08 28 24.9 -0.9
AKTO pmax pmax
comp=Z,11nm,1.3s
PET Petropavlovsk 132.47 322 *e*PKIKP PKPdf 08 28 27.3 -0.4
PET *e* 08 30 57.8
PET *e*PPP 08 33 41.9
PET *e*PS PS 08 41 11.6 +2.7
PET *e*PPS 08 42 48.8
PET *e*SS SS 08 48 32.3 +5.5
PET pmax pmax
comp=Z,4µm,17.3s
PET pmax pmax
comp=Z,5µm,17.7s
PET Petropavlovsk 132.47 322⇑ *i*PKP PKPdf 08 28 27.8 +0.1
PET LR LR
comp=Z,7µm,22.0s,MS6.3
AB31 Akbulak array 132.93 43 PKIKP PKPdf 08 28 28.3 -0.4
AB31 pmax pmax
comp=Z,78nm,0.9s
PETK Petropavlovsk- 132.98 322 PKP PKPdf 08 28 28.6 0.0
comp=Z,34nm,0.9s,baz=62,slow=2.7,SNR=14
VAN Vannovskaya 133.47 59⇓ *i*PKIKP PKPdf 08 28 31.3 +1.2
SKR Severo-Kuril's 134.76 320 *e*PKHKP 08 28 02.0
SKR *e* 08 31 08.0
SKR pmax pmax
comp=Z,6µm,12.0s
MBWA Marble Bar 135.18 193 *e*PKPdf PKPdf 08 28 32.3 -1.5
MBWA LR LR
comp=Z,10µm,21.0s,MS6.5
FITZ Fitzroy Crossi 136.44 202 *e*PKP 08 28 22.7
comp=Z,7.8nm,0.6s
FITZ *e*PKIKP PKPdf 08 28 36.5 +0.2
FITZ *es*PKIKP 08 28 57.2
FITZ *e*SKP 08 32 00.5
FITZ *e*PKS 08 32 09.1
FITZ *e* 08 32 29.9
FITZ Fitzroy Crossi 136.44 202 *e*PKPdf PKPdf 08 28 36.5 +0.2
FITZ *e*SKP 08 32 00.5
FITZ *e*PKS 08 32 09.1
FITZ *e* 08 32 29.9
BRVK Borovoye 137.50 35 *e*PKPdf PKPdf 08 28 35.8 -1.3
BRVK *e*pPKPdf pPKPdf 08 28 52.2 -1.7
BRVK *e*PP PP 08 31 20.9 -2.5
BRVK LR LR
comp=Z,15µm,21.0s,MS6.7
BVA0 Borovoye Array 137.57 35 PKIKP PKPdf 08 28 35.2 -2.0
BVA0 pmax pmax
comp=Z,15nm,1.3s
BVAR Borovoye Array 137.57 35 PKhKP 08 28 26.7
comp=Z,0.2nm,0.3s,baz=226,slow=39,SNR=3.9
BVAR PKP PKPdf 08 28 35.3 -1.9
comp=Z,11nm,0.9s,baz=318,slow=2.0,SNR=6.5
BVAR Borovoye Array 137.57 35 PKP PKPdf 08 28 35.3 -1.9
VOSK Vostochnaya 138.03 35 PKHKP 08 28 30.0
VOSK pmax pmax
comp=Z,52nm,1.0s
KAKA Kakadu 138.28 214 *e*PKP x 08 28 07.9
comp=Z,49nm,0.9s
YAK Yakutsk 138.60 346 *i* PKHKP 08 28 29.2
YAK pmax pmax
comp=Z,93nm,0.9s
YAK pmax pmax
comp=Z,635nm,4.4s
YAK pmax pmax
comp=N,223nm,3.0s
YAK pmax pmax
comp=E,158nm,3.2s
YAK Yakutsk 138.60 346 *e*PKPdf 08 28 30.3
YAK ⇑*i*PKP PKPdf 08 28 37.8 -1.0
YAK LR LR
comp=Z,9µm,21.0s,MS6.5
QUE Quetta 141.10 70 *e*P PKPdf 08 28 48.0 +3.6
QUE *e*S PP 08 31 56.0 +9.3
KK31 Karatay Array 141.77 49 *i* PKIKP PKPdf 08 28 40.4 -4.8
NVS Novosibirsk 142.40 25 *i* PKIKP PKPdf 08 28 42.0 -3.9
NVS *i* 08 44 15.4
NVS pmax pmax
comp=Z,440nm,1.9s
NVS pmax pmax
comp=N,53nm,2.0s
NVS pmax pmax
comp=E,132nm,1.6s
KBL Kabul 142.59 63 *e*PKIKP PKPdf 08 28 42.7 -4.2
COCO West Island 142.87 159 PFAKE 08 29 00.0 +12
COCO LR LR
comp=Z,9µm,20.0s,MS6.5
BHJ Bhuj 143.08 81 *e*P PKPdf 08 28 46.6 -1.5
KURK Kurchatov 143.10 33 P PKPdf 08 28 44.0 -3.3
SNR=26
KURK Kurchatov 143.10 33 PKP PKPdf 08 28 43.6 -3.7
comp=Z,64nm,0.9s,baz=305,slow=3.4,SNR=74
KURK Kurchatov 143.10 33⇑ *i*PKIKP PKPdf 08 28 44.0 -3.3
KURK Kurchatov 143.10 33 *e*PKPdf PKPdf 08 28 43.4 -3.9
KURK LR LR
comp=Z,12µm,20.0s,MS6.6
ZAA0 Zalesovo Array 143.68 25 *e*PKPdf PKPdf 08 28 44.5 -3.7
ZALV Zalesovo Beam 143.68 25 PKP PKPdf 08 28 44.7 -3.5
comp=Z,65nm,0.7s,baz=337,slow=4.3,SNR=80
YUK Yuzh-Kuril'sk 143.71 314⇑ *i*PKIKP PKPdf 08 28 46.0 -2.6
YUK *e* 08 29 04.0
YUK *e* 08 35 52.0
YUK pmax pmax
comp=Z,8µm,3.0s
EKS2 Erkin-Say 144.17 48 P PKPdf 08 28 48.2 -1.2
SNR=105
EKS2 Erkin-Say 144.17 48 *e*PKPdf PKPdf 08 28 47.9 -1.5
EKS2 LR LR
comp=Z,11µm,20.0s,MS6.6
AML Almayashu 144.31 49 P PKPdf 08 28 48.7 -1.0
SNR=340
AML Almayashu 144.31 49 *e*PKPdf PKPdf 08 28 48.8 -0.9
AML LR LR
comp=Z,13µm,22.0s,MS6.7
YSS Yuzh-Sakhalins 144.31 320α *i*PKIKP PKPdf 08 28 46.5 -3.0
YSS *e* 08 32 04.0
YSS pmax pmax
comp=E,320nm,1.9s
YSS pmax pmax
comp=Z,510nm,1.9s
YSS pmax pmax
comp=Z,6µm,11.0s
YSS Yuzh-Sakhalins 144.31 320 *e*PKPdf PKPdf 08 28 47.1 -2.4
YSS LR LR
comp=Z,4µm,21.0s,MS6.2
CLNS Chul'man 144.35 346 *i* PKIKP PKPdf 08 28 46.7 -2.6
CLNS pmax pmax
comp=E,29nm,0.9s
CLNS pmax pmax
comp=Z,106nm,0.8s
CLNS pmax pmax
comp=N,55nm,0.8s
CLNS pmax pmax
comp=E,18nm,1.2s
CLNS pmax pmax
comp=N,23nm,1.0s
CLNS pmax pmax
comp=Z,15nm,1.1s
CLNS pmax pmax
comp=N,1µm,13.8s
CLNS pmax pmax
comp=E,1µm,15.9s
USP Ospenovka 144.43 47 P PKPdf 08 28 48.5 -1.3
SNR=126
BATI Baumata 144.44 204 PKP PKPdf 08 28 48.8 -2.0
comp=E,332nm,1.2s,baz=221,slow=1.4,SNR=16
NRGR Nerungri 144.55 346 *i* PKIKP PKPdf 08 28 48.2 -1.4
AAK Ala-Archa 144.67 48 P PKPdf 08 28 49.9 -0.4
SNR=497
AAK Ala-Archa 144.67 48 *e*PKPdf PKPdf 08 28 49.8 -0.5
AAK LR LR
comp=Z,14µm,22.0s,MS6.7
FRU Bishkek 144.68 47⇑ *e*PKIKP PKPdf 08 28 49.5 -0.8
FRU *i* 08 29 05.0
FRU *e*PPS 08 44 40.0
FRU *e*SS SS 08 50 58.0 +6.7
FRU pmax pmax
comp=Z,1µm,1.9s
FRU pmax pmax
comp=Z,6µm,5.0s
CHMS Chumysh 144.71 47 P PKPdf 08 28 49.5 -0.9
SNR=165
UCH Uchtor 144.84 48 P PKPdf 08 28 51.1 +0.5
SNR=78
UCH Uchtor 144.84 48 *e*PKPdf PKPdf 08 28 50.8 +0.2
UCH LR LR
comp=Z,6µm,21.0s,MS6.4
KBK Karagaybulak 144.97 47 P PKPdf 08 28 52.8 +2.0
SNR=8.5
BOD Bodaibo 144.98 356 *e*PKIKP PKPdf 08 28 47.7 -2.6
BOD pmax pmax
comp=Z,422nm,1.3s
GOA Goa 145.24 96⇓ *i*P PKPbc 08 28 51.0 -0.8
GOA *ex* x 08 38 58.0
MNGI Mangalore 145.30 100 *i* P PKPbc 08 28 50.8 -1.3
MNGI *i* x x 08 32 28.1
TKM2 Tokmak 2 145.30 47 P PKPbc 08 28 53.2 +2.0
SNR=5.7
TKM2 Tokmak 2 145.30 47 PFAKE 08 29 00.0 +8.7
TKM2 LR LR
comp=Z,10µm,20.0s,MS6.6
TRD Trivandrum 145.35 109 *e*P PKPbc 08 28 51.6 -0.6
KZA Kyzart 145.40 48 P PKPdf 08 28 53.0 +1.4
SNR=179
GUMO Guam 145.57 261 PKPbc PKPbc 08 28 50.9 -2.0
comp=Z,1µm,0.9s,baz=180,slow=8.5,SNR=18
GUMO Guam 145.57 261 *e*PKPbc PKPbc 08 28 51.2 -1.7
GUMO LR LR
comp=Z,10µm,20.0s,MS6.6
ASAJ Asahikawa 145.80 316 PKPbc PKPbc 08 28 52.1 -0.7
comp=Z,156nm,0.8s,baz=262,slow=4.6,SNR=14
ULHL Ulahol 146.01 47 P PKPdf 08 28 56.6 +4.0
SNR=8.7
AAA Alma-Ata 146.05 45 *i* PKP2 PKPab 08 28 55.5 +1.3
AAA pmax pmax
comp=Z,23µm,9.5s
AAA MLR MLR
comp=Z,7µm,27.0s,MS6.3
POO Poona 146.08 91 *e*P PKPdf 08 28 52.4 -1.0
KAD Karad 146.09 93 *i* P PKPdf 08 28 53.7 +0.2
ERM Erimo 146.34 312 *i* PKP2 PKPab 08 28 54.2 -1.2
ERM Erimo 146.34 312 *e*PKPbc PKPbc 08 28 54.1 -0.4
ERM LR LR
comp=Z,20µm,20.0s,MS6.9
KOD Kodaikanal 146.58 107 *e*P PKPdf 08 28 55.6 +1.2
XMIS Christmas Isla 146.58 172 *e*PKPbc PKPbc 08 28 56.8 +0.8
XMIS epPKPdf pPKPdf 08 29 11.6 +0.2
KSH Kashi 146.84 52 PKP PKPbc 08 28 56.4 +0.4
KSH XPKP 08 29 10.3
KSH PKS 08 32 31.8
KSH PP PP
comp=Z,12µm,4.0s
KSH LR LR
comp=N,26µm,18.8s,MS7.2
KSH LR LR
comp=E,30µm,19.8s,MS7.2
KSH LR LR
comp=Z,36µm,20.7s,MS7.1
MK31 Makanchi Array 147.41 36 *i* PKIKP PKPdf 08 28 53.8 -1.0
MK31 pmax pmax
comp=Z,506nm,1.1s
MK31 Makanchi Array 147.41 36 *e*PKPdf PKPdf 08 28 54.2 -0.6
MKAR Makanchi Array 147.41 36 PKPbc PKPdf 08 28 53.8 -1.0
comp=Z,27nm,0.8s,baz=305,slow=1.3,SNR=84
HABR Khabarovsk 147.57 328 *e*PKHKP 08 28 52.0
HABR *i* 08 28 57.7
HABR *e* 08 32 26.7
HABR *e*PPP 08 35 40.0
HABR *e* 08 35 55.4
HABR *e* 08 44 55.9
HABR *e*SS SS 08 51 22.9 -0.2
HABR *e*SSS 08 56 56.4
HABR pmax pmax
comp=N,145nm,1.8s
HABR pmax pmax
comp=Z,284nm,1.0s
HABR pmax pmax
comp=E,77nm,1.0s
HABR MLR MLR
comp=Z,4µm,17.0s,MS6.3
HABR MLR MLR
comp=E,4µm,24.0s
HABR MLR MLR
comp=N,4µm,23.0s
AJM Ajmer 147.85 76 *e*P PKPdf 08 28 55.3 -0.9
PALK Pallekele 147.94 114 *e*PKPbc PKPbc 08 28 58.7 -1.1
THN Thein Dam 148.40 65 *e*P PKPdf 08 28 55.6 -1.3
KLR Kul'dur 148.54 332 *e*PKHKP 08 28 51.5
KLR pmax pmax
comp=Z,420nm,2.0s
LATR Latur 148.55 92 *e*P PKPdf 08 28 58.0 +0.5
DLH Dalhousie 148.59 65 *ex* PKPbc 08 29 01.0 0.0
DLH *ex* x 08 29 16.0
BHK Bhakra 149.14 67 *ex* PKPab 08 29 06.0 -0.9
AKL Akola 149.45 88 *e*P PKPdf 08 28 58.9 0.0
SDNR Sundarnagar 149.59 66 *e*P PKPdf 08 28 59.0 +0.1
SMLA Simla 149.81 67 *i* P PKPdf 08 28 59.3 +0.1
SMLA *i* x x 08 36 48.9
HYB Hyderabad 150.14 95 *i* PKP PKPdf 08 28 59.0 -1.1
HYB *e* 08 29 04.5
HYB *e*PKPAB PKPab 08 29 13.5 +2.2
HYB *e*PP PP 08 32 44.0 +3.4
HYB *e*SKS SKSdf 08 36 00.0 -3.5
HYB *e*SKKS SKKSac 08 39 28.0 +1.2
HYB *e* 08 42 48.0
HYB *e*SS SS 08 51 52.0 -2.6
HYB LR LR 09 33 04.0
comp=Z,25nm,20.0s
HYB Hyderabad 150.14 95 *e*P PKPdf 08 28 59.0 -1.1
MDRS Chennai 150.23 104 *ex* x 08 28 49.7
IRK Irkutsk 150.38 7 *e*PKIKP PKPdf 08 28 59.5 +0.1
IRK *e* 08 29 13.0
IRK pmax pmax
comp=Z,351nm,2.0s
CBIJ Chichi jima 150.46 285 PKP PKPdf 08 28 58.2 -2.1
comp=Z,123nm,0.8s,baz=315,slow=18,SNR=3.4
CBIJ PKPbc PKPbc 08 29 03.6 -2.1
comp=Z,230nm,0.8s,baz=283,slow=7.6,SNR=3.9
MOY Mondy 150.46 11 *e*PKIKP PKPdf 08 29 00.3 +0.7
MOY pmax pmax
comp=Z,115nm,1.9s
KAPI Kappang 150.64 200 PKP PKPdf 08 28 58.3 -2.8
comp=Z,60nm,0.9s,baz=206,slow=17,SNR=5.9
KAPI PKPbc PKPbc 08 29 03.4 -3.2
comp=Z,151nm,0.9s,baz=202,slow=3.5,SNR=26
KAPI Kappang 150.64 200 PKP PKPdf 08 28 58.3 -2.8
KAPI PKPbc PKPbc 08 29 03.4 -3.2
KAPI *e*PKPbc PKPbc 08 29 05.0 -1.5
KAPI LR LR
comp=Z,10µm,22.0s,MS6.6
DDI Dehra Dun 150.67 69 *e*P PKPdf 08 28 58.0 -2.6
DDI *ex* x 08 32 34.0
CIT Chita 150.78 355 *e*PKIKP PKPbc 08 29 05.8 +0.1
CIT pmax pmax
comp=Z,1µm,2.1s
TLY Talaya 150.86 8 *e*PKPdf PKPdf 08 28 59.6 -0.6
TLY *e*PKPbc PKPbc 08 29 05.3 -0.6
TLY LR LR
comp=Z,10µm,20.0s,MS6.6
NGP Nagpur 151.40 88 *e*P PKPdf 08 29 00.1 -1.8
NGP *ex* x 08 53 29.4
JHJ Hachijo jima 2 151.78 298 PKPbc PKPbc 08 29 07.0 -1.7
comp=Z,786nm,0.8s,baz=168,slow=3.7,SNR=10.0
MJAR Matsushiro Arr 152.00 305 PKP PKPdf 08 29 01.3 -1.1
comp=Z,26nm,0.7s,baz=96,slow=1.1,SNR=21
MJAR PKPbc PKPbc 08 29 07.5 -1.5
comp=Z,69nm,0.8s,baz=114,slow=0.7,SNR=42
MAJO Matsushiro 152.00 305 *e*PKPdf PKPdf 08 29 02.5 0.0
MAJO *e*PKPbc PKPbc 08 29 08.2 -0.8
MAJO LR LR
comp=Z,20µm,22.0s,MS6.9
MAT Matsushiro 152.00 305 PKP PKPdf 08 29 02.9 +0.5
ZAK Zakamensk 152.08 9 *e*PKIKP PKPdf 08 29 01.9 -0.2
ZAK pmax pmax
comp=Z,152nm,1.1s
WMQ Urumqi 152.25 36 PKP PKPdf 08 29 02.4 -0.2
WMQ PKP2 PKPab 08 29 20.3 +1.0
WMQ XPKP 08 29 22.3
WMQ PKS 08 32 35.5
WMQ PP PP 08 32 52.8 +1.5
WMQ SKS SKSdf 08 36 00.4 -4.6
WMQ SKKS SKKSac 08 39 34.6 -2.5
WMQ SS SS 08 52 12.0 -3.4
WMQ PP PP
comp=Z,3µm,7.0s
WMQ LR LR
comp=N,14µm,24.0s,MS6.8
WMQ LR LR
comp=E,14µm,23.0s,MS6.8
WMQ LR LR
comp=Z,21µm,25.0s,MS6.8
JBP Jabalpur 152.51 84 *e*P PKPdf 08 29 03.9 +0.3
JBP *ex* x 08 39 32.4
HIA Hailar 152.54 346 PFAKE 08 29 10.0 +7.2
HIA LR LR
comp=Z,10µm,22.0s,MS6.6
PTH Pithoragarh 152.63 70 *e*P PKPdf 08 29 05.0 +1.4
PTH *ex* x 08 32 53.0
MDJ Mudanjiang 152.96 328 PKP PKPdf 08 29 03.3 -0.3
MDJ APKP 08 29 17.8
MDJ XPKP 08 29 23.9
MDJ PP PP 08 32 54.4 -0.8
MDJ PP PP
comp=Z,6µm,15.1s
MDJ LR LR
comp=E,9µm,30.7s
MDJ LR LR
comp=Z,12µm,30.7s,MS6.5
MDJ Mudanjiang 152.96 328 *e*PKPdf PKPdf 08 29 02.7 -0.9
MDJ LR LR
comp=Z,12µm,22.0s,MS6.7
ALBI Allahabad 154.29 79 *e*P PKPdf 08 29 02.5 -3.6
VIS Vishakhapatnam 154.60 97 *e*P PKPdf 08 29 04.8 -2.0
SONM Songino Array 154.95 6 PKP PKPdf 08 29 05.8 -0.5
comp=Z,28nm,0.8s,baz=335,slow=1.2,SNR=25
SONM PKPab PKPab 08 29 30.3 -0.2
comp=Z,24nm,0.8s,baz=1.2,slow=1.4,SNR=6.8
ULN Ulaanbaatar 154.97 4*c i*PKIKP PKPdf 08 29 05.6 -0.7
ULN Ulaanbaatar 154.97 4 *e*PKPdf PKPdf 08 29 05.4 -0.9
ULN LR LR
comp=Z,13µm,21.0s,MS6.7
CN2 Changchun 155.50 332 PKP PKPdf 08 29 05.4 -1.8
CN2 SKKS SKKSac 08 39 54.3 -0.2
CN2 PP PP
comp=Z,4µm,14.0s
CN2 LR LR
comp=N,7µm,22.0s,MS6.6
CN2 LR LR
comp=E,7µm,22.0s,MS6.6
CN2 LR LR
comp=Z,12µm,25.0s,MS6.6
KOLN Koldanda 155.78 73 *e*P PKPdf 08 29 08.1 0.0
comp=Z,107nm,1.2s
DANN Dangsing 155.86 72 *e*P PKPdf 08 29 07.3 -0.9
comp=Z,260nm,0.8s
GKN Gorkha 156.67 72 *e*P PKPdf 08 29 08.3 -0.9
comp=Z,109nm,0.9s
DMN Daman 157.13 73 *e*P PKPdf 08 29 08.9 -0.9
comp=Z,94nm,1.2s
KKN Kakani 157.26 73 *e*P PKPdf 08 29 09.0 -1.0
comp=Z,77nm,0.7s
PKIN Phulchoki 157.39 73 *e*P PKPdf 08 29 09.0 -1.1
PSI Prapat 157.39 150 PKP PKPdf 08 29 10.4 -0.2
comp=Z,14nm,0.8s,baz=208,slow=4.6,SNR=12
PSI PKPab PKPab 08 29 37.7 -4.2
comp=Z,39nm,0.9s,baz=299,slow=2.5,SNR=4.8
PKI Pulchoki 157.40 73 *e*P PKPdf 08 29 09.1 -1.1
comp=Z,450nm,1.9s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BWNR	**Bhubaneshwar**	**157.48**	**92**	*e*x	PKPdf	08 29 13.1	+2.6
BWNR				*e*x	x	08 33 24.9	
GUN	**Gumba**	**157.77**	**72**	*e*P	PKPdf	08 29 09.6	-1.0
	comp=Z,246nm,1.1s						
SNY	**Shenyang**	**157.90**	**332**	⇑PKP	PKPdf	08 29 10.5	+0.2
SNY				PP	PP	08 33 24.8	+2.2
SNY				SS	SS	08 53 17.3	+1.2
SNY				PP	PP		
	comp=Z,6μm,11.3s						
SNY				LR	LR		
	comp=N,5μm,21.8s,MS6.6						
SNY				LR	LR		
	comp=E,8μm,20.6s,MS6.6						
SNY				LR	LR		
	comp=Z,5μm,22.0s,MS6.3						
BOK	**Bokaro**	**157.96**	**83**	*e*P	PKPdf	08 29 08.3	-2.7
JIRN	**Jiri**	**158.08**	**73**	*e*P	PKPdf	08 29 10.3	-0.7
	comp=Z,72nm,0.9s						
DAV	**Davao City (W)**	**158.18**	**226**	⇑P	PKPdf	08 29 09.6	-2.0
DAV	**Davao City (W)**	**158.18**	**226**	PFAKE		08 29 20.0	+8.5
DAV				LR	LR		
	comp=Z,9μm,21.0s,MS6.6						
MYKOM	**Kota Tinggi**	**158.23**	**164**	⇑P	PKPdf	08 29 11.5	-0.1
KGM	**Kluang**	**158.30**	**162**	⇓P	PKPdf	08 29 13.9	+2.2
RAMN	**Ramite**	**158.52**	**74**	*e*P	PKPdf	08 29 10.4	-1.2
	comp=Z,302nm,1.1s						
KSM	**Kuching**	**158.71**	**181**	*e*PKPdf	PKPdf	08 29 11.2	-1.0
KSM				*e*PKPab	PKPab	08 29 46.6	-0.9
KSM				LR	LR		
	comp=Z,12μm,22.0s,MS6.7						
KSM	**Kuching**	**158.71**	**181**	⇑P	PKPdf	08 29 12.6	+0.4
KSRS	**Korea Array**	**158.74**	**317**	PKP	PKPdf	08 29 10.9	-0.6
	comp=Z,23nm,0.9s,baz=65,slow=0.6,SNR=21						
KSRS				PKPab	PKPab	08 29 46.6	-0.7
	comp=Z,48nm,0.9s,baz=60,slow=4.4,SNR=12						
ODAN	**Odare**	**159.23**	**74**	*e*P	PKPdf	08 29 11.4	-1.0
	comp=Z,154nm,0.8s						
TAPN	**Taplejung**	**159.46**	**73**	*e*P	PKPdf	08 29 11.5	-1.1
	comp=Z,78nm,0.9s						
SBUM	**Sibu**	**159.56**	**187**	⇑P	PKPdf	08 29 13.7	+0.5
IPM	**Ipoh**	**159.80**	**154**	⇑P	PKPdf	08 29 14.0	+0.5
TSM	**Tawau**	**159.96**	**204**	⇑P	PKPdf	08 29 13.9	+0.2
CAL	**Calcutta**	**160.12**	**87**	⇑*i*x	x	08 29 30.8	
CAL				*e*x	x	08 33 41.3	
MYLDM	**Lahad Datu**	**160.52**	**207**	⇓P	PKPdf	08 29 16.4	+2.1
DL2	**Dalian**	**161.14**	**331**	⇑*i*PKP	PKPdf	08 29 14.8	+0.6
DL2				PKP2	PKPab	08 29 59.1	+1.5
DL2				SS	SS	08 53 54.3	+3.9
DL2				PP	PP		
	comp=Z,2μm,9.4s						
DL2				LR	LR		
	comp=N,4μm,21.6s						
DL2				LR	LR		
	comp=Z,6μm,22.0s						
GTA	**Gaotai**	**161.44**	**25**	⇑PKP	PKPdf	08 29 14.3	-0.1
GTA				APKP		08 29 24.9	
GTA				XPKP		08 29 28.5	
GTA				PKP2	PKPab	08 30 02.9	+4.0
GTA				PP	PP	08 33 47.3	+5.7
GTA				SKS	SKSdf	08 36 14.1	-0.5
GTA				SKKS	SKKSac	08 40 31.0	+5.2
GTA				PP	PP		
	comp=Z,3μm,8.4s						
GTA				LR	LR		
	comp=N,7μm,22.8s						
GTA				LR	LR		
	comp=E,10μm,22.8s						
GTA				LR	LR		
	comp=Z,15μm,23.4s						
SDKM	**Sandakan**	**161.45**	**204**	⇑P	PKPdf	08 29 16.3	+1.0
LLP	**Lapu-Lapu**	**161.62**	**229**	*e*P	PKPab	08 29 59.0	-1.4
LSA	**Lhasa**	**161.91**	**64**	PKP	PKPdf	08 29 16.0	+0.8
LSA				PP	PP	08 33 47.3	+1.7
LSA				LR	LR		
	comp=N,89μm,25.3s						
LSA				LR	LR		
	comp=E,84μm,34.9s						
LSA				LR	LR		
	comp=Z,100μm,26.9s						
LSA	**Lhasa**	**161.91**	**64**	*e*PKPdf	PKPdf	08 29 15.7	+0.4
LSA				LR	LR		
	comp=Z,17μm,22.0s						
TURI	**Tura**	**161.98**	**78**	*e*x	PKPab	08 30 04.5	+2.6
TURI				*e*x	x	08 30 51.0	
HHC	**Hu-ho-hao-te**	**162.03**	**356**	*e*PKP	PKPdf	08 29 15.4	+0.4
HHC				APKP		08 29 26.3	
HHC				XPKP		08 29 32.3	
HHC				PKP2	PKPab	08 30 04.0	+2.6
HHC				PKS		08 32 48.3	
HHC				PP	PP	08 33 44.5	+0.1
HHC				SKS	SKSdf	08 36 15.6	+0.5
HHC				SKKS	SKKSac	08 40 28.8	+0.2
HHC				SS	SS	08 54 00.8	+2.0
HHC				PP	PP		
	comp=Z,4μm,9.8s						
HHC				LR	LR		
	comp=N,3μm,17.8s						
HHC				LR	LR		
	comp=E,7μm,21.4s						
HHC				LR	LR		
	comp=Z,15μm,21.4s						
BJI	**Beijing**	**162.08**	**344**	PKP	PKPdf	08 29 15.0	-0.1
BJI				PP	PP	08 33 45.4	+0.6
BJI				SS	SS	08 54 00.5	+0.9
BJI				PP	PP		
	comp=Z,2μm,25.4s						
BJI				LR	LR		
	comp=N,5μm,25.1s						
BJI				LR	LR		
	comp=E,11μm,25.1s						
BJI				LR	LR		
	comp=Z,13μm,28.5s						
BJT	**Baijiatuau**	**162.11**	**344**	PFAKE		08 29 30.0	+15
BJT				LR	LR		
	comp=Z,13μm,22.0s						
KKM	**Kota Kinabalu**	**162.17**	**201**	PFAKE		08 29 30.0	+14
KKM				LR	LR		
	comp=Z,10μm,22.0s						
KKM	**Kota Kinabalu**	**162.17**	**201**	⇓P	PKPdf	08 29 20.0	+4.0
BTO	**Baotou**	**162.33**	**360**	*e*PKP	PKPdf	08 29 14.8	-0.5
JOW	**Kunigami**	**162.84**	**287**	PKP	PKPdf	08 29 16.0	-0.3
	comp=Z,24nm,0.9s,baz=77,slow=29,SNR=7.0						
SHL	**Shillong**	**163.38**	**77**	*e*P	PKPdf	08 29 16.0	-0.8
SHL				*e*x	x	08 33 55.0	
PPR	**Puerto Princes**	**164.45**	**214**	*e*P	PKPdf	08 29 18.8	+0.7
IMP	**Imphal**	**165.29**	**79**	*i* x	PKPdf	08 29 20.0	+1.5
TIA	**Tai'an**	**165.31**	**336**	PKP	PKPdf	08 29 17.5	-0.7
TIA				PP	PP	08 34 00.6	-1.4
TIA				LR	LR		
	comp=N,3μm,24.2s						
TIA				LR	LR		
	comp=E,3μm,21.8s						
LZH	**Lanzhou**	**165.84**	**20**	⇑PKP	PKPdf	08 29 18.9	+0.2
LZH				APKP		08 29 29.8	
LZH				XPKP		08 29 33.5	
LZH				PP	PP	08 34 07.8	+3.1
LZH				SKS	SKSdf	08 36 17.5	-0.5
LZH				SKKS	SKKSac	08 40 53.3	+5.1
LZH				PP	PP		
	comp=Z,5μm,8.6s						
LZH				LR	LR		
	comp=E,14μm,19.0s						
LZH				LR	LR		
	comp=Z,22μm,20.4s						
SSE	**Sheshan**	**167.02**	**311**	PKP	PKPdf	08 29 19.0	-0.7
SSE				XPKP		08 29 37.5	
SSE				PP	PP	08 34 10.4	-1.4
SSE				PP	PP		
	comp=Z,2μm,7.1s						
SSE				LR	LR		
	comp=N,17μm,24.5s						
SSE				LR	LR		
	comp=E,4μm,24.5s						
SSE				LR	LR		
	comp=Z,21μm,23.4s						
NJ2	**Nanjing**	**167.88**	**321**	*e*PKP	PKPdf	08 29 21.3	+1.0
NJ2				APKP		08 29 31.3	
NJ2				XPKP		08 29 34.6	
NJ2				PKP2	PKPab	08 30 29.3	+1.8
NJ2				PKS		08 32 53.5	
NJ2				PP	PP	08 34 16.0	+0.2
NJ2				PP	PP		
	comp=Z,2μm,8.2s						
NJ2				LR	LR		
	comp=N,3μm,28.3s						
NJ2				LR	LR		
	comp=E,5μm,28.0s						
NJ2				LR	LR		
	comp=Z,5μm,28.0s						
NST	**Nakhon Sawan**	**168.34**	**126**	P	PKPdf	08 29 20.2	-0.8
BDT	**Bhumibol Dam**	**168.35**	**117**	P	PKPdf	08 29 20.0	-1.0
	comp=Z,16nm,1.1s						
XAN	**Xi'an**	**168.86**	**4**	PKP	PKPdf	08 29 20.4	-0.5
XAN				XPKP		08 29 34.8	
XAN				PKS		08 32 51.5	
XAN				SKS	SKSdf	08 36 16.6	-3.3
XAN				PP	PP		
	comp=Z,3μm,20.7s						
XAN				LR	LR		
	comp=N,2μm,19.9s						
XAN				LR	LR		
	comp=E,8μm,25.1s						
XAN				LR	LR		
	comp=Z,20μm,23.0s						
CM31	**Chiang Mai Arr**	**168.86**	**111**	PFAKE		08 29 30.0	+8.7
CM31				LR	LR		
	comp=Z,9μm,20.0s						
CMAR	**Chiang Mai Arr**	**168.86**	**111**	PKP	PKPdf	08 29 20.0	-1.3
	comp=Z,18nm,0.9s,baz=273,slow=2.0,SNR=47						
CMAR				PKPab	PKPab	08 30 32.9	+0.5
	comp=Z,29nm,0.9s,baz=255,slow=4.5,SNR=13						
CMAR				PP	PP	08 34 22.4	+0.6
	comp=Z,7.0nm,0.5s,baz=247,slow=4.5,SNR=5.2						
CHG	**Chiang Mai**	**169.01**	**110**	⇓P	PKPdf	08 29 20.3	-1.1
	comp=Z,142nm,0.9s						
CHTO	**Chiang Mai**	**169.01**	**110**	*e*PKPdf	PKPdf	08 29 20.2	-1.2
CHTO				LR	LR		
	comp=Z,9μm,22.0s						
TATO	**Taipei**	**169.17**	**283**	PFAKE		08 29 30.0	+8.6
TATO				LR	LR		
	comp=Z,21μm,22.0s						
YHNB	**Yeheng**	**169.32**	**282**	PFAKE		08 29 30.0	+8.5
YHNB				LR	LR		
	comp=Z,30μm,22.0s						
YULB	**Yu-li**	**169.47**	**275**	*e*PKPdf	PKPdf	08 29 20.2	-1.4
YULB				*e*PKPab	PKPab	08 30 34.1	-0.9
SSLB	**Suanglung**	**169.78**	**277**	*e*PKPdf	PKPdf	08 29 21.2	-0.6
TPUB	**Ta-pu**	**170.09**	**274**	*e*PKPdf	PKPdf	08 29 23.0	+1.1
CD2	**Chengdu**	**170.33**	**33**	PKP	PKPdf	08 29 23.8	+1.9
CD2				APKP		08 29 34.4	
CD2				XPKP		08 29 37.8	
CD2				PKP2	PKPab	08 30 41.0	+2.7
CD2				PP	PP	08 34 30.1	+2.2
CD2				SKKS	SKKSac	08 41 13.9	+3.2
CD2				SS	SS	08 55 27.0	+2.9
CD2				PP	PP		
	comp=Z,6μm,6.8s						
CD2				LR	LR		
	comp=N,11μm,24.5s						
CD2				LR	LR		
	comp=Z,27μm,29.7s						
KKTK	**Khon Kaen**	**170.70**	**133**	P	PKPab	08 30 40.0	-0.3
	comp=Z,370nm,0.5s						
WHN	**Wuhan**	**171.39**	**333**	*i* PKP	PKPdf	08 29 20.6	-1.8
WHN				APKP		08 29 37.3	
WHN				PKP2	PKPab	08 30 42.0	-1.0
WHN				PP	PP	08 34 31.0	-2.0
WHN				SS	SS	08 55 32.4	-1.8
WHN				LR	LR		
	comp=N,11μm,18.7s						
WHN				LR	LR		
	comp=E,21μm,20.5s						
WHN				LR	LR		
	comp=Z,50μm,28.3s						
QZH	**Quanzhou**	**171.76**	**286**	*i* PKP	PKPdf	08 29 24.1	+1.3
QZH				PKP2	PKPab	08 30 41.9	-3.2
QZH				PP	PP	08 34 35.1	-1.4
QZH				SKKS	SKKSac	08 41 19.1	+0.8
QZH				PP	PP		
	comp=Z,13μm,9.6s						
QZH				LR	LR		
	comp=N,21μm,23.1s						
QZH				LR	LR		
	comp=E,35μm,22.9s						
QZH				LR	LR		
	comp=Z,43μm,23.4s						
KMI	**Kunming**	**173.11**	**70**	PKP	PKPdf	08 29 23.9	+0.5
KMI				LR	LR		
	comp=N,4μm,11.6s						
KMI				LR	LR		
	comp=E,8μm,7.5s						
KMI				LR	LR		
	comp=Z,10μm,11.6s						
GYA	**Guiyang**	**175.40**	**39**	*i* PKP	PKPdf	08 29 23.3	-0.8
GYA				APKP		08 29 38.8	
GYA				XPKP		08 29 44.8	
GYA				PKP2	PKPab	08 31 00.4	-0.6
GYA				PKS		08 32 53.8	
GYA				PP	PP	08 34 53.3	+0.3
GYA				SKKS	SKKSac	08 41 36.0	+0.8
GYA				SS	SS	08 56 11.6	-2.3
GYA				PP	PP		
	comp=Z,4μm,9.3s						
GYA				LR	LR		
	comp=N,10μm,22.8s						
GYA				LR	LR		
	comp=E,12μm,22.5s						
GYA				LR	LR		
	comp=Z,9μm,21.6s						
HKC	**Hong Kong Obse**	**175.98**	**262**	⇑PKPdf	PKPdf	08 29 26.0	+1.7
QIZ	**Qiongzhong**	**176.16**	**180**	PKP	PKPdf	08 29 25.3	+0.8
QIZ				PP	PP	08 35 01.6	+5.9
QIZ				SS	SS	08 56 21.8	+2.4
QIZ				PP	PP		
	comp=Z,6μm,6.7s						
QIZ				LR	LR		
	comp=E,8μm,24.6s						
QIZ				LR	LR		
	comp=Z,22μm,22.6s						
QIZ	**Qiongzhong**	**176.16**	**180**	*e*PKPdf	PKPdf	08 29 24.9	+0.5
QIZ				LR	LR		
	comp=Z,19μm,22.0s						
GZH	**Guangzhou**	**176.79**	**274**	PKP	PKPdf	08 29 24.4	-0.1
GZH				PKP2	PKPab	08 31 08.1	+0.6
GZH				LR	LR		
	comp=N,4μm,22.5s						
GZH				LR	LR		
	comp=E,14μm,22.6s						

NEIC ***16*** *08:10:28.2, 1671N×10072W, h1km, MD4.0(MEX), After MEX.*

MEX 16 08:10:29.6±0.8**, 1658N×10060W, h18**km±7km**, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.57**	**34**	*i* P	Pg	08 10 38.5	-2.4
CAIG				*i* S	Sg	08 10 46.1	-2.5
ACX	**Acapulco**	**0.71**	**66**	*i* P	Pb	08 10 41.7	-1.8
ACX				*i* S	Sb	08 10 50.5	-2.4
ACX	**Acapulco**	**0.71**	**66**	*i* P	Pb	08 10 42.5	-1.0
ACX				*i* S	Sb	08 10 53.6	+0.7
ACX				*i* S	Sb	08 10 54.2	+1.3
ZIIG	**Zihuatanejo**	**1.32**	**321**	*i* P	Pn	08 10 49.5	-3.6
ZIIG				*i* S	Sn	08 11 05.7	-4.6
ZIIG	**Zihuatanejo**	**1.32**	**321**	*i* P	Pn	08 10 46.7	-6.4
ZIIG				*i* S	Sn	08 11 02.5	-7.8
PLIG	**Platanillo**	**2.09**	**30**	*i* P	Pn	08 11 01.6	-2.1
PLIG				*i* S	Sn	08 11 25.7	-3.5
PLIG	**Platanillo**	**2.09**	**30**	*i* P	Pn	08 11 00.6	-3.1
PLIG				*i* S	Sn	08 11 24.4	-4.8
PNIG	**Pinotepa**	**2.38**	**94**	*i* P	Pn	08 11 04.9	-2.7
PNIG				*i* S	Sn	08 11 31.7	-4.6
PNIG	**Pinotepa**	**2.38**	**94**	*i* P	Pn	08 11 07.2	-0.4
PNIG				*i* S	Sn	08 11 36.0	-0.4

IDC ***16*** *08:10:36.0±3.8, 1892N×6927W, h85km±43km, mb3.8/6, mb1 4.2/9, mb1mx3.9/23, mbtmp4.0/9, MS4.6/2, Ms1 4.6/2, ms1mx3.9/31, Error ellipse: s-maj=39.8km s-min=26.9km az=38.0*

RSPR ***16*** *08:10:35.4, 1906N×6944W, h135km±12km, MD4.2/7, MD4.2/7*

ISCJB ***16*** *08:10:36.7±0.4, 1867N±006×6951W±004, h117km±6km, mb4.1/8, Error ellipse: s-maj=10.2km s-min=5.5km az=14.3*

NEIC ***16*** *08:10:37.7±0.5, 1885N×6941W, h100km±10km, mb4.4/2, MD4.2(RSPR), Error ellipse: s-maj=10.8km s-min=8.1km az=178.0*

ISC 16 08:10:37.0±0.4**, 1874N**±006×**6959W**±004**, h93**km±8km**, n31, σ1§19**/43**, mb4.1**/8**, 15C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**1.63**	**279**	⇑*e*P	**Pn**	**08 11 07.2**	**+2.7**
SDDR				*e*S	**Sn**	**08 11 29.9**	**+4.6**
IMO	**Isla Mona**	**1.71**	**111**	⇑*e*P	**Pn**	**08 11 05.6**	**+0.1**
IMO				*e*S	**Sn**	**08 11 30.8**	**+3.5**
MPR	**Mayaguez**	**2.38**	**102**	⇑*e*P	**Pn**	**08 11 14.0**	**-0.3**
MPR				*e*S	**Sn**	**08 11 44.7**	**+1.8**
LSP	**Las Mesas**	**2.44**	**103**	⇑*e*P	**Pn**	**08 11 15.2**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.46**	**107**	⇑*e*P	**Pn**	**08 11 15.2**	**-0.1**
CRPR				*e*S	**Sn**	**08 11 46.6**	**+1.8**
LRS	**Lares**	**2.64**	**99**	⇑*e*P	**Pn**	**08 11 18.1**	**+0.4**
GBPR	**Guanica, Bosqu**	**2.68**	**106**	⇑*e*P	**Pn**	**08 11 18.8**	**+0.6**
GBPR	**Guanica, Bosqu**	**2.68**	**106**	*e*S	**Sn**	**08 11 50.1**	**0.0**
OBIP	**Obispado Ponce**	**2.91**	**103**	⇑*e*P	**Pn**	**08 11 21.1**	**-0.3**
OBIP				*e*S	**Sn**	**08 11 56.3**	**+0.7**
CELP	**Cerrillos**	**2.93**	**102**	⇑*e*P	**Pn**	**08 11 21.5**	**-0.1**
CELP				*e*S	**Sn**	**08 11 55.7**	**-0.3**
ICM	**Isla Caja Muer**	**3.03**	**106**	⇑*e*P	**Pn**	**08 11 21.9**	**-1.0**
ICM				*e*S	**Sn**	**08 11 57.3**	**-1.2**
SJG	**San Juan**	**3.32**	**100**	⇑*e*P	**Pn**	**08 11 26.5**	**-0.4**
SJG	**San Juan**	**3.32**	**100**	⇑*e*P	**Pn**	**08 11 25.7**	**-1.2**
HUMP	**Col San Antoni**	**3.60**	**99**	⇑*e*P	**Pn**	**08 11 28.5**	**-2.1**
STVI	**Saint Thomas**	**4.41**	**94**	⇑*e*P	**Pn**	**08 11 38.7**	**-3.0**
MASC	**Masc**	**4.61**	**289**	*e*P	**Pn**	**08 11 43.0**	**-1.3**
	baz=90						
MASC				*e*S	**Sn**	**08 12 35.8**	**-0.9**
	comp=N,405nm,0.1s						
MASC				*e*			
	comp=E,374nm,0.1s						
CDVI	**St. Croix**	**4.69**	**101**	⇑*e*P	**Pn**	**08 11 43.6**	**-1.8**
LMGC	**Las Mercedes**	**7.12**	**282**	*e*P	**Pn**	**08 12 17.8**	**-0.7**
	baz=118						
LMGC				*e*S	**Sn**	**08 13 34.0**	**-4.0**
	comp=N,52nm,0.3s						
LMGC				*e*			
	comp=E,126nm,0.5s						
PCRV	**Puerto La Cruz**	**9.77**	**150**	P	**Pn**	**08 12 54.6**	**0.0**
	comp=E,6.0nm,0.3s,baz=351,slow=6.2,SNR=21						
PCRV				S	**Sn**	**08 14 34.8**	**-7.7**
	comp=E,2.6nm,0.3s,baz=328,slow=18,SNR=4.0						
PCRV				LR	LR	08 16 32.8	
	comp=E,2μm,21.0s,baz=172,slow=36						
SDV	**Santo Domingo**	**9.84**	**186**	P	**Pn**	**08 12 57.1**	**+1.4**
	comp=E,14nm,0.3s,baz=55,slow=7.2,SNR=165						
SDV				S	**Sn**	**08 14 42.7**	**-1.7**
	comp=E,2.4nm,0.3s,baz=351,slow=18,SNR=3.2						
SDV				LR	LR	08 16 19.2	
	comp=E,4μm,19.2s,baz=109,slow=34						
BBGH	**Gun Hill**	**11.13**	**119**	Pn	**Pn**	**08 13 15.3**	**+2.1**
	comp=E,2μm,1.8s						
ROSC	**El Rosal**	**14.55**	**199**	P	**Pn**	**08 14 03.1**	**+4.7**
	comp=E,1.6nm,0.3s,baz=79,slow=23,SNR=6.3						
TKL	**Tuckaleechee C**	**21.01**	**326**	P	**P**	**08 15 13.2**	**+0.1**
	comp=E,3.0nm,0.7s,mb3.7,baz=236,slow=12,SNR=5.5						
TKL				S	**S**	**08 18 56.1**	**-5.8**
	comp=E,2.7nm,0.5s,baz=240,slow=23,SNR=2.9						
TXAR	**Lajitas Array**	**32.76**	**295**	P	**P**	**08 17 02.3**	**+1.2**
	comp=E,1.4nm,0.4s,mb4.1,baz=119,slow=7.8,SNR=52						
PDAR	**Pinedale Array**	**41.34**	**314**	P	**P**	**08 18 14.1**	**+0.5**
	comp=E,0.6nm,0.5s,mb3.7,baz=120,slow=11,SNR=7.1						
PDAR				PcP	PcP	08 20 10.2	-0.1
	comp=E,0.6nm,0.6s,baz=119,slow=5.6,SNR=5.0						
RLMT	**Red Lodge**	**42.11**	**318**	*e*P	**P**	**08 18 20.5**	**+0.7**
	comp=E,4.5nm,0.6s,mb4.4						
LOHW	**Long Hollow**	**42.37**	**315**	*e*P	**P**	**08 18 22.3**	**+0.3**
	comp=E,2.6nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**46.47**	**306**	P	**P**	**08 18 56.7**	**+1.9**
	comp=E,3.5nm,0.9s,mb4.1,baz=84,slow=7.4,SNR=24						
YKA	**Yellowknife Ar**	**53.57**	**336**	P	**P**	**08 19 47.2**	**-0.8**
	comp=E,1.4nm,0.7s,mb4.1,baz=114,slow=7.8,SNR=22						
YKA				PcP	PcP	08 20 53.2	-0.3
	comp=E,0.4nm,0.4s,baz=121,slow=3.6,SNR=7.1						
YKA	**Yellowknife Ar**	**53.57**	**336**	P	**P**	**08 19 47.2**	**-0.8**
YKA				PcP	PcP	08 20 53.2	-0.3
ARCES	**ARCESS Array B**	**74.38**	**21**	P	**P**	**08 22 02.8**	**-1.5**
	comp=E,7.4nm,1.1s,mb4.3,baz=316,slow=3.3,SNR=4.2						

MOS ***16*** *08:23:34.7±1.1, 4135N×13149E, h551km, mb4.2/16, Error ellipse: s-maj=14.1km s-min=9.3km az=116.2*

ISCJB ***16*** *08:23:35.0±0.3, 4125N±004×13158E±005, h560km±4km, mb4.0/39, Error ellipse: s-maj=6.1km s-min=5.1km az=33.7*

NEIC ***16*** *08:23:35.3±0.5, 4124N×13141E, h549km±7km, mb4.5/13, Error ellipse: s-maj=9.2km s-min=6.8km az=192.0*

IDC ***16*** *08:23:35.6±1.0, 4127N×13139E, h550km±13km, mb3.7/23, mb1 3.8/29, mb1mx3.8/37, mbtmp3.8/29, Error ellipse: s-maj=10.6km s-min=10.2km az=158.0*

JMA ***16*** *08:23:35.2±0.3, 4113N×13190E, h615km, M4.2*

BJI ***16*** *08:23:36.2, 4144N×13142E, h576km, mB4.5, mb5.0*

ISC 16 08:23:35.5±0.3**, 4122N**±004×**13157E**±005**, h555**km±4km**, n112, σ1§07**/124**, mb4.0**/39**, 3D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**3.69**	**337**	P	**P**	**08 24 57.4**	**+2.1**
MDJ				S	**S**	**08 26 00.8**	**+0.1**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
KSRS	**Korea Array**	**4.70**	**218**	P	**P**	**08 25 04.8**	**+1.5**
	comp=Z,16nm,0.3s,baz=30,slow=8.1,SNR=382						
KSRS	**Korea Array**	**4.70**	**218**	P	**P**	**08 25 04.8**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,16nm,0.3s						
CN2	**Changchun**	**5.21**	**302**	⇓P	**P**	**08 25 07.9**	**+0.6**
CN2				AMB	AMB		
	comp=Z,180nm,0.7s						
JHG	**Hegura jima**	**5.33**	**127**	P	**P**	**08 25 10.3**	**+1.8**
JHS	**Saijyo**	**6.33**	**168**	P	**P**	**08 25 19.2**	**+1.7**
JHS				*e*S	**S**	**08 26 41.3**	**+0.5**
JTU	**Tsushima**	**6.90**	**195**	P	**P**	**08 25 24.2**	**+1.4**
MAJO	**Matsushiro**	**6.97**	**130**	*e*P	**P**	**08 25 23.6**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,118nm,0.7s						
MAJO	**Matsushiro**	**6.97**	**130**	*e*P	**P**	**08 25 23.6**	**+0.1**
	comp=Z,118nm,0.7s						
MAT	**Matsushiro**	**6.97**	**130**	P	**P**	**08 25 23.5**	**+0.1**
MAT				*e*S	**S**	**08 26 52.8**	**+1.1**
MJAR	**Matsushiro Arr**	**6.97**	**130**	P	**P**	**08 25 24.1**	**+0.6**
	comp=Z,10.0nm,0.3s,baz=315,slow=10,SNR=165						
MJAR	**Matsushiro Arr**	**6.97**	**130**	P	**P**	**08 25 24.1**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
JOT	**Ohata**	**7.14**	**86**	P	**P**	**08 25 25.1**	**+0.2**
JMK	**Ichinoseki**	**7.74**	**104**	P	**P**	**08 25 29.6**	**-1.2**
JMK				S	**S**	**08 27 00.0**	**-5.2**
JRY	**Ryogami san**	**7.74**	**130**	P	**P**	**08 25 29.8**	**-1.0**
JRY				*e*S	**S**	**08 27 03.2**	**-2.1**
JHR	**Hokuryu**	**7.92**	**68**	P	**P**	**08 25 32.7**	**+0.3**
JIE	**Ise**	**7.93**	**148**	P	**P**	**08 25 33.3**	**+0.5**
JIE				*e*S	**S**	**08 27 07.4**	**-1.5**
KLR	**Kul'dur**	**8.01**	**1**	⇓*i*P	**P**	**08 25 30.0**	**-3.2**
KLR				*e*S	**S**	**08 27 05.0**	**-5.0**
KLR				pmax	pmax		
	comp=N,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,180nm,1.6s						
JWZ	**Kozaga**	**8.35**	**155**	P	**P**	**08 25 37.2**	**+0.2**
JOD2	**Odawara 2**	**8.38**	**133**	P	**P**	**08 25 36.2**	**-1.0**
JOD2				S	**S**	**08 27 13.6**	**-3.4**
JWK2	**Keihoku**	**8.57**	**58**	P	**P**	**08 25 39.6**	**+0.7**
ASAJ	**Asahikawa**	**8.62**	**67**	P	**P**	**08 25 39.2**	**-0.2**
	comp=Z,7.5nm,0.3s,baz=257,slow=13,SNR=17						
ASAJ	**Asahikawa**	**8.62**	**67**	P	**P**	**08 25 39.2**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
JCH	**Churui**	**8.90**	**77**	P	**P**	**08 25 41.2**	**-1.0**
JCH				*e*S	**S**	**08 27 19.3**	**-7.0**
JTKR	**Abashiri--Toko**	**9.51**	**69**	P	**P**	**08 25 48.4**	**+0.1**
JTKR				*e*S	**S**	**08 27 35.1**	**-2.4**
YSS	**Yuzh-Sakhalins**	**9.88**	**51**	*e*P	**P**	**08 25 52.0**	**0.0**
YSS				pmax	pmax		
	comp=Z,90nm,0.6s						
YSS	**Yuzh-Sakhalins**	**9.88**	**51**	*e*P	**P**	**08 25 52.5**	**+0.5**
	comp=Z,39nm,0.6s						
BSO1	**Boso 1**	**9.90**	**128**	P	**P**	**08 25 51.4**	**-1.1**

BSO1				eS	S	08 27 42.4	-2.7
JHJ	Hachijo jima 2	10.40	138	P	P	08 25 59.3	+1.6
	comp=Z,16nm,0.3s,baz=62,slow=23,SNR=5.6						
NEM2	Nemuro 2	10.72	74	P	P	08 26 00.3	-0.4
NEM2				S	S	08 27 55.1	-5.0
YUK	Yuzh-Kuril'sk	10.90	70	P	P	08 26 03.5	+0.9
YUK				eS	S	08 28 02.9	-0.6
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=N,230nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
HIA	Hailar	11.58	318	eP	P	08 26 08.8	-0.6
HIA				pmax	pmax		
	comp=Z,86nm,0.6s						
HIA	Hailar	11.58	318	eP	P	08 26 08.8	-0.6
	comp=Z,86nm,0.6s						
BJT	Baijiatuau	11.77	269	eP	P	08 26 09.3	-2.3
BJT				pmax	pmax		
	comp=Z,40nm,0.6s						
BJT	Baijiatuau	11.77	269	eP	P	08 26 09.3	-2.3
	comp=Z,40nm,0.6s						
JOW	Kunigami	14.61	192	P	P	08 26 40.2	-0.8
	comp=Z,4.8nm,0.3s,baz=111,slow=17,SNR=24						
HHC	Hu-ho-hao-te	15.11	275	eP	P	08 26 45.0	-0.9
HHC				AMB	AMB		
	comp=Z,16nm,1.0s						
HHC				AMB	AMB		
	comp=Z,114nm,4.7s						
ULN	Ulaanbaatar	18.65	299	eP	P	08 27 18.9	+0.1
ULN				pmax	pmax		
	comp=Z,33nm,0.7s						
ULN	Ulaanbaatar	18.65	299	eP	P	08 27 18.9	0.0
	comp=Z,33nm,0.7s						
SONM	Songino Array	19.08	299	P	P	08 27 23.8	+1.1
	comp=Z,7.1nm,0.3s,baz=104,slow=9.2,SNR=260						
SONM	Songino Array	19.08	299	P	P	08 27 23.8	+1.1
SONM				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK	Petropavlovsk-	21.24	47	P	P	08 27 42.6	+0.4
	comp=Z,3.0nm,0.8s,mb4.0,baz=219,slow=4.2,SNR=4.6						
ZAK	Zakamensk	21.64	305	eP	P	08 27 46.1	+0.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.1						
TLY	Talaya	21.77	308	eP	P	08 27 47.8	+0.8
TLY				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
TLY	Talaya	21.77	308	eP	P	08 27 47.8	+0.8
	comp=Z,12nm,0.8s,mb4.6						
FX1	Attu Island--F	30.22	53	P	P	08 29 02.6	+1.4
	comp=Z,27nm,0.7s,mb4.9,baz=41,slow=0.4,SNR=5.6						
FX1	Attu Island--F	30.22	53	P	P	08 29 02.7	+1.5
FX1				pmax	pmax		
	comp=Z,27nm,0.7s						
NNT	Nongplab	39.84	234	P	P	08 30 20.0	-1.6
BVAR	Borovoye Array	42.03	308	P	P	08 30 38.0	-0.4
	comp=Z,7.3nm,0.5s,mb4.5,baz=81,slow=9.4,SNR=19						
BVAR	Borovoye Array	42.03	308	P	P	08 30 38.0	-0.5
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KDAK	Kodiak Island	49.22	43	P	P	08 31 32.6	-0.5
	comp=Z,13nm,0.4s,mb4.8,baz=17,slow=3.4,SNR=13						
AKTK	Aktyubinsk	50.12	307	P	P	08 31 39.3	-0.5
AKTO	Aktyubinsk	50.12	307	P	P	08 31 39.3	-0.5
	comp=Z,13nm,0.8s,mb4.4,baz=277,slow=4.0,SNR=6.8						
AKTO	Aktyubinsk	50.12	307	P	P	08 31 39.3	-0.5
AKTO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
BATI	Baumata	51.68	190	P	P	08 31 51.5	0.0
	comp=Z,25nm,0.5s,mb4.8,baz=304,slow=3.6,SNR=4.0						
EGAK	Eagle	52.52	33	eP	P	08 31 57.7	+0.8
	comp=Z,6.1nm,0.6s,mb4.1						
KEV	Kevo	56.68	336	ep	P	08 32 24.0	-1.9
	comp=Z,7.9nm,0.6s,mb4.1						
KEV	Kevo	56.68	336	eP	P	08 32 24.0	-1.9
KEV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.1						
ARCES	ARCESS Array B	57.25	336	P	P	08 32 29.4	-0.3
	comp=Z,4.1nm,0.4s,mb4.0,baz=65,slow=8.6,SNR=32						
ARCES	ARCESS Array B	57.25	336	P	P	08 32 29.5	-0.3
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
JOF	Joensuu	58.53	328	ep	P	08 32 35.1	-3.4
	comp=Z,3.5nm,0.4s,mb3.9						
JOF	Joensuu	58.53	328	eP	P	08 32 35.1	-3.4
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.0						
DLBC	Dease Lake	59.98	37	P	P	08 32 50.5	+2.2
	comp=Z,2.1nm,0.4s,mb3.8,baz=190,slow=17,SNR=9.8						
RES	Resolute Bay	60.35	13	P	P	08 32 50.9	+0.4
	comp=Z,7.3nm,0.7s,mb4.1,baz=319,slow=6.1,SNR=4.9						
RES	Resolute Bay	60.35	13	P	P	08 32 50.9	+0.4
RES				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
KAF	Kangasniemi	60.93	329	ep	P	08 32 52.9	-1.6
	comp=Z,6.1nm,0.5s,mb4.2,baz=55,slow=6.2						
KAF	Kangasniemi	60.93	329	eP	P	08 32 52.9	-1.6
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
YKA	Yellowknife Ar	63.90	28	P	P	08 33 14.3	+0.7
	comp=Z,2.2nm,0.4s,mb3.9,baz=312,slow=5.9,SNR=61						
ASAR	Alice Springs	64.59	178	P	P	08 33 19.4	+0.8
	comp=Z,2.5nm,0.5s,mb3.9,baz=355,slow=7.0,SNR=10						
ASAR	Alice Springs	64.59	178	P	P	08 33 19.4	+0.9
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	66.17	317	P	P	08 33 27.0	-1.2
	comp=Z,2.7nm,0.3s,mb4.2,baz=52,slow=6.4,SNR=13						
AKASG	Malin Array Be	66.17	317	P	P	08 33 27.0	-1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NB2	NORSAR Subarra	67.18	333	P	P	08 33 33.2	-1.0
	comp=Z,3.9nm,0.6s,mb4.1,baz=45,slow=6.2						
NOA	NORSAR Array B	67.18	333	P	P	08 33 33.6	-0.6
	comp=Z,4.7nm,0.6s,mb4.2,baz=42,slow=6.1,SNR=19						
NOA	NORSAR Array B	67.18	333	P	P	08 33 33.6	-0.6
NOA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MMAI	Mount Meron Ar	73.27	299	P	P	08 34 04.9	-5.8
	comp=Z,2.3nm,0.5s,mb3.9,baz=69,slow=12,SNR=5.0						
STKA	Stephens Creek	73.32	171	P	P	08 34 12.4	+1.7
	comp=Z,2.5nm,0.4s,mb4.0,baz=359,slow=3.6,SNR=6.4						
CLL	Collm	73.47	325	⇓iP	P	08 34 11.2	-0.3
	comp=Z,6.0nm,0.6s,mb4.2						
YBH	Yreka Blue Hor	73.60	49	P	P	08 34 14.2	+1.7
	comp=Z,1.2nm,0.7s,mb3.5,baz=162,slow=11,SNR=3.5						
YBH	Yreka Blue Hor	73.60	49	P	P	08 34 14.2	+1.7
YBH				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	74.94	323	P	P	08 34 19.8	-0.1
	comp=Z,1.6nm,0.8s,mb3.5,baz=36,slow=6.4,SNR=8.0						
GERES	GERESS Array B	74.94	323	P	P	08 34 19.8	-0.1
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EKA	Eskdalemuir Ar	76.39	335	P	P	08 34 27.9	+0.2
	comp=Z,3.0nm,0.5s,mb4.0,baz=34,slow=4.4,SNR=21						
EKA	Eskdalemuir Ar	76.39	335	P	P	08 34 27.9	+0.2
EKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BAIF	Baives	78.07	328	eP	P	08 34 36.9	-0.1
CDF	Champ du Feu	78.10	326	eP	P	08 34 36.3	-0.8
	comp=Z,4.9nm,0.8s,mb3.6						
CDF	Champ du Feu	78.10	326	eP	P	08 34 36.3	-0.8
CDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.5						
CDF	Champ du Feu	78.10	326	eP	P	08 34 36.3	-0.8
	comp=Z,2.5nm,0.8s,mb3.6						
DAVOS	Davos	78.20	323	P	P	08 34 38.0	+0.3
DAVOX	Davos/Dischmat	78.20	323	P	P	08 34 38.0	+0.3
	comp=Z,4.3nm,0.6s,mb4.0,baz=16,slow=2.8,SNR=7.6						
NVAR	Mina Array Bea	78.32	49	P	P	08 34 40.6	+2.1
	comp=Z,1.5nm,0.6s,mb3.5,baz=296,slow=5.1,SNR=11						
IDI	Anoyia	78.44	307	P	P	08 34 38.8	-0.5
	comp=Z,3.8nm,0.4s,mb4.1,baz=42,slow=6.7,SNR=7.2						
HAU	Haudompre	78.80	326	eP	P	08 34 40.4	-0.5
	comp=Z,3.1nm,0.4s,mb3.6						
PDAR	Pinedale Array	79.87	41	P	P	08 34 47.9	+1.2
	comp=Z,2.7nm,0.8s,mb3.7,baz=114,slow=1.9,SNR=14						
ULM	Lac du Bonnet	79.88	29	P	P	08 34 46.8	+0.2
	comp=Z,2.0nm,0.5s,mb3.7,baz=318,slow=1.7,SNR=3.8						
CABF	La Chapelle	80.00	325	eP	P	08 34 47.5	+0.2
LOR	Lormes	80.42	327	eP	P	08 34 48.8	-0.6
	comp=Z,3.7nm,0.6s,mb3.6						
LPL	La Plagne	80.58	324	eP	P	08 34 50.4	+0.1
	comp=Z,11nm,0.5s,mb4.2						
LPL	La Plagne	80.58	324	eP	P	08 34 50.4	+0.1
LPL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.2						
LPL	La Plagne	80.58	324	eP	P	08 34 50.4	+0.1
	comp=Z,5.4nm,0.5s,mb4.2						
LPG	La Plagne	80.58	324	eP	P	08 34 50.5	+0.2
	comp=Z,14nm,0.5s,mb4.3						
LPG	La Plagne	80.58	324	eP	P	08 34 50.5	+0.2
LPG				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.3						
LPG	La Plagne	80.58	324	eP	P	08 34 50.5	+0.2
	comp=Z,6.9nm,0.5s,mb4.3						
SSF	Saint Saulge	80.73	327	eP	P	08 34 51.4	+0.3
	comp=Z,4.5nm,0.6s,mb3.8						
SMF	Signal de Mont	80.93	327	eP	P	08 34 51.3	-0.8
	comp=Z,3.4nm,0.5s,mb3.8						
AVF	Avril sur Loir	81.01	327	eP	P	08 34 52.0	-0.5
MBDF	Montbardon	81.17	324	eP	P	08 34 52.7	-0.7
	comp=Z,13nm,0.8s,mb4.1						
MBDF	Montbardon	81.17	324	eP	P	08 34 52.7	-0.7
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
MBDF	Montbardon	81.17	324	eP	P	08 34 52.7	-0.7
	comp=Z,6.7nm,0.8s,mb4.1						
TCF	Toulx Ste Croi	81.89	327	eP	P	08 34 56.6	-0.4
TXAR	Lajitas Array	93.19	46	P	P	08 35 52.9	+1.9
	comp=Z,0.2nm,0.5s,mb3.4,baz=259,slow=3.1,SNR=8.7						
LVC	Limon Verde	154.69	49	ePKPab	PKPab	08 42 51.9	0.0

IDC ***16*** *08:26:40.6±2.8,2304S×70.18W,h34km±20km,mb4.0/12, mb1 4.2/13,mb1mx4.1/19,mbtmp4.0/13,MS4.9/1, Ms1 4.9/1,ms1mx3.8/23,Error ellipse: s-maj=22.1km s-min=15.8km az=90.0*

ISCJB ***16*** *08:26:42.2±1.4,23.12S±007×70.1W±0.1,h64km±12km, mb4.2/14,Error ellipse: s-maj=16.3km s-min=10.9km az=10.2*

NEIC ***16*** *08:26:43.4±1.1,2307S×70.11W,h59km±9km,mb4.3/2, Error ellipse: s-maj=12.9km s-min=8.3km az=105.0*

ISC 16 08:26:43.6±1.2**,2307S**±006×**701W**±01**,h52**km±.3km**:pP-P,n35,**σ**0s89**/31**,mb4.2**/14**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.19	68	Pg	Pn	08 27 05.2	+1.0
	891nm,0.3s,SNR=83						
LVC				Lg		08 27 21.2	
LCO	Las Campanas	5.94	185	ePn	Pn	08 28 08.8	-0.1
CFAA	Coronel Fontan	8.66	169	Pn	Pn	08 28 44.9	-1.3
	0.1nm,0.3s,baz=30,slow=9.3,SNR=3.5						
CFAA				Sn	Sn	08 30 32.0	+10
	0.6nm,0.3s,baz=164,slow=16,SNR=3.7						
SIV	San Ignacio	11.05	52	Pn	Pn	08 29 17.2	-1.7
	3.8nm,0.3s,baz=252,slow=10,SNR=24						
CPUP	Villa Florida	12.06	108	Pn	Pn	08 29 34.0	+1.3
	0.8nm,0.3s,baz=270,slow=9.0,SNR=6.3						
CPUP	Villa Florida	12.06	108	Pn	Pn	08 29 34.0	+1.3
NNA	Nana	12.75	329	LR	LR	08 34 07.6	
	comp=Z,6μm,18.6s,baz=45,slow=35						
TRQA	Tornquist	16.48	157	ePn	Pn	08 30 30.7	-0.2
BDFB	Brasilia	22.10	74	P	P	08 31 35.1	+1.0
	3.0nm,0.6s,mb3.9,baz=53,slow=25,SNR=5.0						
USHA	Ushuaia	31.74	178	P	P	08 33 02.2	+0.4
	1.9nm,0.6s,mb4.1,baz=359,slow=14,SNR=3.6						
TRIS	Tristan da Cun	51.21	120	eP	P	08 35 40.8	-0.4
	109nm,0.3s						
VNA3	Neumayer Olymp	58.96	161	e	P	08 36 37.2	+0.7
VNA3				e	pP	08 36 51.1	-1.1
VNA2	Neumayer--Watz	59.55	160	e	P	08 36 41.7	+1.1
	baz=297,slow=9.5						
VNA2				e	pP	08 36 55.4	-0.9
SNAA	Sanae	61.17	161	e	P	08 36 50.9	-0.8
SNAA				e	pP	08 37 04.9	-2.5
TXAR	Lajitas Array	61.30	327	P	P	08 36 53.1	0.0
	0.9nm,0.8s,mb4.0,baz=160,slow=9.8,SNR=8.2						
QSPA	South Pole Qui	67.13	180	P	P	08 37 29.7	-0.9
	2.7nm,0.5s,mb4.5,baz=159,slow=1.5,SNR=8.6						
QSPA	South Pole Qui	67.13	180	P	P	08 37 29.7	-0.9
WUAZ	Wupatki	70.16	325	eP	P	08 37 51.5	+1.5
	3.1nm,0.8s,mb4.3						
DBIC	Dimbokro	70.24	73	P	P	08 37 50.4	-0.6
	1.7nm,0.7s,mb4.1,baz=221,slow=6.6,SNR=3.3						
DBIC	Dimbokro	70.24	73	P	P	08 37 50.4	-0.6
PDAR	Pinedale Array	74.93	331	P	P	08 38 18.4	+0.2
	0.4nm,0.5s,mb3.6,baz=136,slow=6.8,SNR=4.4						
VNDA	Vanda	75.12	190	P	P	08 38 20.8	+1.9
	1.6nm,0.8s,mb4.0,baz=131,slow=2.0,SNR=3.4						
NVAR	Mina Array Bea	76.06	323	P	P	08 38 25.2	+0.4
	0.9nm,0.7s,mb3.8,baz=148,slow=5.3,SNR=6.5						
ULM	Lac du Bonnet	76.48	343	P	P	08 38 25.9	-1.0
	1.6nm,0.4s,mb4.3,baz=175,slow=8.8,SNR=3.3						
ULM	Lac du Bonnet	76.48	343	P	P	08 38 25.9	-1.0
TOA0	Torodi Ar. Sit	78.92	71	eP	P	08 38 41.0	-0.4
TORD	Torodi Ar. Bea	78.92	71	P	P	08 38 41.0	-0.3
	2.5nm,0.5s,mb4.4,baz=254,slow=5.2,SNR=28						
TSUM	Tsumeb	80.65	107	eP	P	08 38 50.0	-0.7
	4.1nm,1.1s,mb4.3						
BOSA	Boshof	83.69	118	P	P	08 39 06.2	-0.2
	1.2nm,0.5s,mb4.3,baz=35,slow=4.5,SNR=5.7						
YKA	Yellowknife Ar	92.30	341	P	P	08 39 46.3	-0.6
	1.5nm,0.6s,mb4.5,baz=141,slow=4.2,SNR=25						
YKA	Yellowknife Ar	92.30	341	P	P	08 39 46.3	-0.6
ASAR	Alice Springs	128.01	208	PKP	PKPdf	08 45 43.4	-0.3
	1.2nm,0.7s,baz=132,slow=1.7,SNR=11						
ZALV	Zalesovo Beam	143.84	25	PKP	PKPdf	08 46 10.4	-1.5
	0.8nm,0.4s,baz=343,slow=4.6,SNR=3.9						
MKAR	Makanchi Array	147.55	36	PKPbc	PKPbc	08 46 21.3	+0.1
	1.5nm,0.6s,baz=339,slow=2.5,SNR=12						
MKAR	Makanchi Array	147.55	36	PKPbc	PKPbc	08 46 21.3	+0.1

CSEM ***16*** *08:33:00.4±0.1,3874N×3175E,h18km±1km,MD2.8,Error ellipse: s-maj=3.1km s-min=2.4km az=32.0*

DDA ***16*** *08:33:00.7,3877N×3174E,h7km±4km,Md2.8*

ISCJB ***16*** *08:33:01.4±0.6,3875N±005×3176E±005,h17km±9km, Error ellipse: s-maj=9.5km s-min=5.1km az=31.2*

ISK ***16*** *08:33:01.0,3873N×3177E,h15km,MD2.8*

ISC 16 08:33:01.2±0.6**,3874N**±004×**3174E**±005**,h17**km±5km**,n9, σ0s22**/16**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZT	Kizilcal	0.18	38	PG	Pg	08 33 05.8	+0.1
KIZT				eSG	Sg	08 33 08.5	-0.2
KDHN	Kadinhani	0.37	126	i P	Pg	08 33 09.1	+0.3
KDHN				i S	Sg	08 33 13.8	-0.1
BOLV	Bolvadin	0.62	268	i P	Pg	08 33 13.6	+0.2
BOLV				i S	Sg	08 33 21.3	-0.3
LADK	Ladik-KONYA	0.73	137	ePG	Pg	08 33 15.2	-0.3
LADK				eSG	Sg	08 33 25.2	+0.1
KONT	Konya--Tatoy	0.93	148	ePG	Pn	08 33 19.6	+0.1
KONT				eSG	Sn	08 33 32.2	-0.3
SHUT	Suhut-Afyon	0.95	259	ePG	Pg	08 33 19.8	+0.2
ESKT	Eskisehir	1.04	319	i P	Pb	08 33 20.5	-0.3
ESKT				i S	Sb	08 33 34.4	+0.2
SEYT	Eskypehyr	1.04	319	i P	Pb	08 33 20.5	-0.3
SEYT				i S	Sb	08 33 34.3	+0.1
KAMT	Kaman	1.66	67	ePN	Pn	08 33 29.7	+0.2

ISCJB ***16*** *08:57:35.1±2.0,72S±02×1549E±0.1,h100km±21km, mb3.6/8,Error ellipse: s-maj=28.3km s-min=15.8km az=162.2*

NEIC ***16*** *08:57:36.5±1.2,724S×15490E,h100km±12km,mb4.2/2, Error ellipse: s-maj=17.1km s-min=10.0km az=163.0*

IDC ***16*** *08:57:36.5±3.1,724S×15490E,h100km±31km,mb3.4/6, mb1 3.6/8,mb1mx3.4/18,mbtmp3.5/8,Error ellipse: s-maj=34.2km s-min=22.9km az=142.0*

ISC 16 08:57:36.6±1.7**,73S**±02×**1549E**±01**,h100**km±17km**,n14, σ0s48**/13**,mb3.6**/8**,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.44	114	P	Pn	08 58 55.3	0.0
	3.6nm,0.3s,baz=283,slow=14,SNR=2.0						
PMG	Port Moresby	7.96	254	P	Pn	08 59 29.5	0.0
	1.3nm,0.3s,baz=62,slow=6.6,SNR=5.3						
KAKA	Kakadu	22.77	254	eP	x	09 02 09.8	
	3.6nm,0.6s						
WRAB	Tennant Creek	23.58	236	eP	P	09 02 37.6	-0.7
	5.9nm,0.9s,mb3.9						
WB2	Warramunga Arr	23.59	236	eP	P	09 02 38.5	+0.1
WRA	Warramunga Arr	23.60	236	P	P	09 02 38.8	+0.3
	3.4nm,0.8s,mb3.7,baz=61,slow=9.7,SNR=20						
ASAR	Alice Springs	25.94	229	P	P	09 02 59.2	-0.5
	0.8nm,0.6s,mb3.3,baz=59,slow=9.0,SNR=11						
STKA	Stephens Creek	27.47	205	P	P	09 03 14.0	+0.7
	2.0nm,0.7s,mb3.8,baz=14,slow=21,SNR=3.0						
STKA	Stephens Creek	27.47	205	P	P	09 03 14.0	+0.7
FITZ	Fitzroy Crossi	30.47	246	eP	P	09 03 40.1	0.0
	5.0nm,0.6s,mb4.3						
SONM	Songino Array	69.50	327	P	P	09 08 35.1	+0.9
	0.1nm,0.3s,mb3.1,baz=134,slow=8.3,SNR=3.3						
MKAR	Makanchi Array	83.53	319	P	P	09 09 53.1	-0.4
	0.1nm,0.4s,mb3.0,baz=85,slow=8.8,SNR=3.5						
YKA	Yellowknife Ar	96.60	28	P	P	09 10 54.4	-0.4
	0.1nm,0.5s,mb3.5,baz=262,slow=4.6,SNR=4.0						
YKA	Yellowknife Ar	96.60	28	P	P	09 10 54.4	-0.5

IDC 16 09:04:05.3±3.9**,2275S**×**7018W,h35**km±31km**,mb3.6**/3**, mb1 3.8**/6**,mb1mx3.6**/19**,mbtmp3.6**/6**,ML3.7**/3**,Error ellipse: s-maj=34.7km s-min=27.6km az=94.0,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.18	84	Pg	Pn	09 04 28.0	+2.7
	135nm,0.3s,SNR=93						
LVC				Lg		09 04 44.1	
	418nm,0.3s,SNR=44						
CFAA	Coronel Fontan	8.99	169	Pn	Pn	09 06 14.7	+2.1
	0.2nm,0.3s,baz=355,slow=13,SNR=17						
CFAA				Sn	Sn	09 07 52.5	-0.1
	0.1nm,0.3s,baz=229,slow=20,SNR=2.2						
SIV	San Ignacio	10.91	54	Pn	Pn	09 06 40.7	+1.7
	0.5nm,0.3s,baz=234,slow=12,SNR=15						
CPUP	Villa Florida	12.23	110	Pn	Pn	09 06 57.1	+0.2
	0.2nm,0.3s,baz=250,slow=12,SNR=2.9						
TXAR	Lajitas Array	60.99	327	P	P	09 14 16.5	+1.2
	0.2nm,0.6s,baz=105,slow=9.6,SNR=3.4						
TORD	Torodi Ar. Bea	78.88	71	P	P	09 16 04.1	-1.3
	1.1nm,0.7s,baz=248,slow=5.1,SNR=9.2						
YKA	Yellowknife Ar	91.97	341	P	P	09 17 09.4	-0.4
	0.5nm,0.7s,baz=141,slow=4.4,SNR=16						
YKA				pP	pP	09 17 24.1	+3.3
	0.2nm,0.6s,baz=140,slow=4.2,SNR=7.9						

NNC ***16*** *09:10:38.1±5.5,4158N×7448E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=55.7km s-min=20.4km az=158.0*

ISCJB ***16*** *09:10:40.9±0.9,4184N±005×7429E±004,h10km,Error ellipse: s-maj=6.8km s-min=4.2km az=2.3*

KNET ***16*** *09:10:41.0±0.6,4188N×7434E,h15km±3km,ml2.7,Error ellipse: s-maj=3.5km s-min=2.8km az=31.0*

NEIC ***16*** *09:10:43.5±2.5,4199N×7424E,h10km,Error ellipse: s-maj=28.3km s-min=10.7km az=175.0*

ISC 16 09:10:40.6±1.1**,4183N**±005×**7429E**±004**,h4**km±6km**,n21, σ0s91**/37**,14C-12D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	Uchtor	0.43	22	⇑P	Pg	09 10 49.5	+0.6
	37nm,0.1s,SNR=22						
UCH				⇑S	Sg	09 10 55.6	+1.1
	230nm,0.2s						
UCH	Uchtor	0.43	22	ePg	Pg	09 10 49.5	+0.6
UCH				eSg	Sg	09 10 54.2	-0.4
AML	Almayashu	0.54	304	P	Pg	09 10 52.0	+1.0
	396nm,0.2s,SNR=1199						
AML				⇑S	Sg	09 10 59.6	+1.6
	320nm,0.2s						
AML	Almayashu	0.54	304	ePg	Pg	09 10 51.7	+0.7
AML				eSg	Sg	09 10 59.6	+1.6
KZA	Kyzart	0.76	70	⇓P	Pg	09 10 54.9	-0.2
	66nm,0.1s,SNR=123						
KZA				⇓S	Sg	09 11 05.1	+0.2
	462nm,0.2s						
AAK	Ala-Archa	0.82	10	P	Pg	09 10 56.6	+0.3
	70nm,0.2s,SNR=68						
AAK				⇓S	Sg	09 11 07.5	+0.6
	466nm,0.2s						
AAK	Ala-Archa	0.82	10	ePg	Pg	09 10 56.5	+0.2
AAK				eSg	Sg	09 11 05.8	-1.1
EKS2	Erkin-Say	0.92	335	P	Pg	09 10 58.6	+0.3
	13nm,0.1s,SNR=56						
EKS2	Erkin-Say	0.92	335	⇓iPg	Pg	09 10 58.5	+0.3
EKS2				eSg	Sg	09 11 08.4	-1.7
KBK	Karagaybulak	0.96	30	⇑P	Pg	09 10 59.1	+0.1
	79nm,0.1s,SNR=78						
KBK				⇓S	Sg	09 11 12.4	+0.9
	194nm,0.1s						
CHMS	Chumysh	1.22	16	⇓P	Pg	09 11 03.7	-0.3
	18nm,0.1s,SNR=16						
CHMS				⇑S	Sg	09 11 19.6	-0.2
	44nm,0.1s						
USP	Ospenovka	1.45	6	⇑P	Pn	09 11 07.8	+0.2
	26nm,0.2s,SNR=32						
USP				⇑S	Sb	09 11 26.9	0.0
	71nm,0.2s						
TKM2	Tokmak 2	1.46	41	⇓P	Pn	09 11 07.6	-0.1
	14nm,0.3s						
TKM2				⇑S	Sb	09 11 27.1	-0.1
	19nm,0.3s						
TKM2	Tokmak 2	1.46	41	⇓P	Pn	09 11 07.7	+0.1
	34nm,0.1s,SNR=74						
TKM2	Tokmak 2	1.46	41	ePn	Pn	09 11 07.7	0.0
ULHL	Ulahol	1.51	73	⇓P	Pn	09 11 08.0	-0.4
	20nm,0.1s,SNR=183						
ULHL				⇑S	Sn	09 11 27.8	-0.7
	90nm,0.1s						
KNDC	Almaty	2.41	54	⇓Pg	Pg	09 11 24.9	-2.0
	27nm,0.4s						
KNDC				⇓Lg		09 11 59.0	
	58nm,0.5s						
KK31	Karatay Array	3.08	296	⇑Pn	Pb	09 11 36.0	+0.1
	7.6nm,0.4s,baz=129,slow=16,SNR=80						
KK31				Sn	Sg	09 12 17.4	-2.0
	15nm,0.5s,baz=131,slow=29,SNR=16						
MK31	Makanchi Array	7.58	46	⇑Pn	Pn	09 12 34.0	+2.2
	0.4nm,0.4s,baz=224,slow=14,SNR=13						
MK31				⇓Sn	Sn	09 14 05.6	+7.5
	0.9nm,0.6s						
MK31				⇑Lg		09 14 37.5	
	2.9nm,0.7s						
MK31	Makanchi Array	7.58	46	ePn	Pn	09 12 34.8	+3.0
AB08	Akbulak array	12.49	311	⇑Pn	Pn	09 13 39.1	+0.1
	0.6nm,0.5s						
AB08				⇑Sn	Sn	09 16 05.0	+6.5
	1.4nm,1.0s						

BJI ***16*** *09:13:52.2,407S×10070E,h43km,mB5.5,mb4.8*

IDC ***16*** *09:13:53.4±1.0,341S×10048E,h0km,mb4.5/14, mb1 4.5/16,mb1mx4.3/26,mbtmp4.5/16,ML4.2/2,Error ellipse: s-maj=32.1km s-min=12.8km az=47.0*

ISCJB ***16*** *09:13:53.4±1.4,351S±005×10039E±007,h16km±10km, mb4.7/38,Error ellipse: s-maj=12.6km s-min=6.9km az=144.9*

MOS ***16*** *09:13:56.9±1.0,325S×10061E,h33km,mb4.9/9,Error ellipse: s-maj=23.6km s-min=9.0km az=104.2*

DJA ***16*** *09:13:59,329S×10004E,h30km,MLv4.7/6*

NEIC ***16*** *09:14:00.6±2.0,327S×10063E,h44km±17km,mb5.1/8, Error ellipse: s-maj=22.6km s-min=7.4km az=46.0*

ISC 16 09:13:54.8±2.1**,347S**±005×**10049E**±007**,h10**km±13km**, n70,σ1s10**/70**,mb4.7**/38**,7C-2D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	2.10	95	P	Pn	09 14 39.6	+10
KSI				S	Sn	09 15 11.0	+15
PDSI	Padang	2.54	359	P	Pn	09 14 36.1	0.0
PPI	Padang Panjang	2.99	358	P	Pn	09 14 42.8	+0.4
RGRI	Rengat	3.60	31	P	Pn	09 14 52.3	+1.5
GSI	Gunungsitoli	5.57	328	P	Pn	09 15 18.0	+0.2
MYKOM	Kota Tinggi	6.21	33	P	Pn	09 15 29.8	+3.2
	50nm,1.3s,0.3nm						
PSI	Prapat	6.42	346	Pn	Pn	09 15 28.5	-1.0
	2.2nm,0.3s,baz=171,slow=17,SNR=12						
PSI				Sn	Sn	09 16 40.6	-2.3
	1.0nm,0.3s,baz=206,slow=14,SNR=4.2						
PSI	Prapat	6.42	346	Pn	Pn	09 15 28.5	-1.0
PSI				Sn	Sn	09 16 40.6	-2.3
DBJI	Dramaga	6.94	116	P	Pb	09 15 53.8	-1.8
LEM	Lembang	7.84	115	P	Pb	09 16 04.0	-6.9

COCO West Island 9.39 202 P Pn 09 16 09.5 -0.8
BSI Banda Aceh 10.31 330 P Pn 09 16 22.3 -0.6
KAPI Kappang 19.27 95 P Pn 09 18 20.6 -0.2
1.7nm,0.3s,baz=262,slow=7.1,SNR=5.5
CMAR Chiang Mai Arr 21.84 356 P P 09 18 46.1 -1.5
5.4nm,0.8s,mb4.0,baz=187,slow=9.6,SNR=24
BATI Baumata 23.95 107 P P 09 19 11.3 +1.9
8.4nm,0.3s,mb4.7,baz=191,slow=5.2,SNR=3.3
FITZ Fitzroy Crossi 28.60 122 eP P 09 19 55.3 +3.8
14nm,1.8s,mb4.4
ODAN Odare 32.70 338 eP P 09 20 29.1 +1.5
KAKA Kakadu 32.90 108 eP x 09 20 07.4
2.5nm,0.6s
TAPN Taplejung 33.03 339 eP P 09 20 32.1 +1.7
82nm,1.1s,mb5.6
RAMN Ramite 33.09 337 eP P 09 20 32.6 +1.7
JIRN Jiri 33.88 337 eP P 09 20 39.6 +1.7
GUN Gumba 34.23 337 eP P 09 20 42.2 +1.3
32nm,0.5s,mb5.5
DMN Daman 34.27 335 eP P 09 20 42.6 +1.3
KKN Kakani 34.36 336 eP P 09 20 43.1 +1.0
GKN Gorkha 34.82 335 eP P 09 20 46.9 +0.9
21nm,0.4s,mb5.4
KOLN Koldanda 35.07 333 eP P 09 20 49.2 +1.0
48nm,1.0s,mb5.4
DANN Dangsing 35.50 334 eP P 09 20 53.1 +1.3
WRAB Tennant Creek 36.85 119⇓iP P 09 21 03.7 +0.1
WRAB Tennant Creek 36.85 119 eP P 09 21 04.2 +0.6
5.1nm,0.4s,mb4.7
WB2 Warramunga Arr 36.85 119 eP P 09 21 04.3 +0.7
18nm,0.4s,mb5.3
ASAR Alice Springs 38.00 125 P P 09 21 14.4 +1.1
5.5nm,0.4s,mb4.6,baz=299,slow=7.5,SNR=8.9
ASAR S S 09 27 06.8 +1.1
0.5nm,0.8s,baz=298,slow=14,SNR=4.1
XAN Xi'an 38.15 11 P P 09 21 13.1 -1.2
XAN AMB AMB
comp=Z,19nm,1.4s,mb4.6
LZH Lanzhou 39.47 4 ⇓P P 09 21 25.0 -0.4
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,85nm,4.2s
JOW Kunigami 40.35 40 P P 09 21 32.5 -0.4
comp=Z,4.7nm,0.4s,mb4.5,baz=190,slow=6.1,SNR=6.6
GTA Gaotai 42.67 359 eP P 09 21 51.8 +0.1
GTA AMB AMB
comp=Z,6.0nm,1.4s,mb4.1
HHC Hu-ho-hao-te 45.25 12 eP P 09 22 12.9 +0.5
HHC AMB AMB
comp=Z,18nm,1.0s,mb4.9
HHC AMB AMB
comp=Z,1µm,9.2s
STKA Stephens Creek 47.81 131 eP P 09 22 30.5 -2.3
comp=Z,1.8nm,0.4s,mb4.5
KSRS Korea Array 48.03 30 P P 09 22 34.0 -0.3
comp=Z,8.0nm,1.1s,mb4.7,baz=222,slow=8.5,SNR=18
WMQ Urumqi 48.46 348 P P 09 22 37.9 +0.4
WMQ AMB AMB
comp=Z,17nm,1.0s,mb5.0
SONM Songino Array 51.35 5 P P 09 23 00.4 +1.0
comp=Z,9.1nm,0.5s,mb4.9,baz=189,slow=9.4,SNR=86
SONM PcP PcP 09 24 14.0 -0.2
comp=Z,1.1nm,0.5s,baz=187,slow=4.4,SNR=4.1
ULN Ulaanbaatar 51.44 6⇑eP P 09 23 00.7 +0.6
ULN Ulaanbaatar 51.44 6 eP P 09 23 00.8 +0.7
comp=Z,18nm,1.1s,mb4.9
CN2 Changchun 52.13 23 eP P 09 23 04.6 -0.7
CN2 AMB AMB
comp=Z,70nm,1.1s,mb5.5
MK31 Makanchi Array 52.57 344 i P P 09 23 08.4 -0.1
MK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
MK31 Makanchi Array 52.57 344 eP P 09 23 08.7 +0.2
MKAR Makanchi Array 52.57 344 P P 09 23 08.7 +0.2
comp=Z,3.8nm,0.4s,mb4.7,baz=153,slow=9.3,SNR=96
MKAR Makanchi Array 52.57 344⇑eP P 09 23 08.6 +0.1
MJAR Matsushiro Arr 53.11 38 P P 09 23 11.2 -1.5
comp=Z,3.6nm,1.1s,mb4.2,baz=223,slow=8.5,SNR=5.4
HVS Khovu-Aksy 54.70 355⇑iP P 09 23 24.3 +0.2
HVS pmax pmax
comp=Z,16nm,1.3s,mb4.9
KURK Kurchatov 57.15 344 P P 09 23 40.3 -1.3
comp=Z,8.5nm,1.0s,mb4.7,baz=160,slow=6.6,SNR=16
KURK Kurchatov 57.15 344⇑eP P 09 23 41.2 -0.4
KURK pmax pmax
comp=Z,18nm,1.3s,mb4.9
ZAA0 Zalesovo Array 58.69 349 eP P 09 23 52.0 -0.4
ZALV Zalesovo Beam 58.69 349 P P 09 23 52.0 -0.3
comp=Z,12nm,0.9s,mb4.9,baz=165,slow=6.2,SNR=35
NVS Novosibirsk 59.84 349 eP P 09 23 59.3 -1.0
NVS pmax pmax
comp=N,8.0nm,1.5s
NVS pmax pmax
comp=E,7.0nm,1.5s
NVS pmax pmax
comp=Z,13nm,1.5s,mb4.7
VOSK Vostochnaya 61.27 340 P P 09 24 08.6 -1.5
VOSK pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
BVA0 Borovoye Array 61.72 340 eP P 09 24 12.1 -1.1
BVA0 pmax pmax
comp=Z,1.0nm,1.0s,mb3.9
BVAR Borovoye Array 61.72 340 P P 09 24 12.3 -0.8
comp=Z,1.5nm,0.4s,mb4.5,baz=140,slow=7.7,SNR=12
YSS Yuzh-Sakhalins 62.47 31⇑iP P 09 24 18.1 -0.2
YSS pmax pmax
comp=Z,46nm,1.7s,mb5.3
AB31 Akbulak array 63.16 331 P P 09 24 21.7 -1.2
AB31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
AKTK Aktyubinsk 64.88 332 P P 09 24 34.1 0.0
AKTO Aktyubinsk 64.88 332 P P 09 24 34.1 0.0
comp=Z,1.5nm,0.5s,mb4.3,baz=97,slow=8.1,SNR=4.9
MAK Makhachkala 66.40 320 eP pP 09 24 54.2 +6.7
YAK Yakutsk 69.03 14 eP P 09 24 58.2 -2.2
YAK pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRTR Keskin Array B 74.67 313 P P 09 25 34.0 -0.7
comp=Z,0.9nm,0.8s,mb3.8,baz=132,slow=6.8,SNR=5.2
TIXI Tiksi 77.22 9⇑eP P 09 25 47.0 -1.6
TIXI pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
TIXI Tiksi 77.22 9 eP P 09 25 47.5 -1.1
comp=Z,4.3nm,0.9s,mb4.4
ARCES ARCESS Array B 88.01 340 P P 09 26 45.5 +0.6
comp=Z,3.2nm,0.9s,mb4.5,baz=93,slow=4.3,SNR=4.1
KBS Kingsbay 93.10 349⇑eP P 09 27 01.8 -6.7
CPUP Villa Florida 143.42 215 PKP PKPdf 09 33 31.1 +0.6
comp=Z,0.2nm,0.4s,baz=159,slow=8.6,SNR=1.9
TXAR Lajitas Array 145.54 39 PKPbc PKPbc 09 33 35.0 +0.8
comp=Z,3.6nm,0.5s,baz=239,slow=0.7,SNR=112

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*IDC **16** 09:26:00.6±5.4, 5190S×16186E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/12, mbtmp3.9/5, MS4.7/1, Ms1 4.7/1, ms1mx4.3/16, Error ellipse: s-maj=244.4km s-min=21.7km az=67.0*
*ISCJB **16** 09:26:02.0±0.9, 52.14S±007×161.1E±03, h10km, mb3.8/5, Error ellipse: s-maj=22.6km s-min=9.9km az=2.4*
*NEIC **16** 09:26:04.3±1.5, 52.17S×16082E, h10km, mb3.7/1, Error ellipse: s-maj=48.4km s-min=13.3km az=78.0*
ISC 16 09:26:04.2±0.9**, 5215S**±007×**1609E**±03**, h10km, (h11km±.6km:pP-P), n15, σ0.73**/15**, mb3.8**/5**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**2.63**	**206**	*e*Pn	**Pn**	**09 26 46.0**	**-0.6**
MCQ				*e*Sn	**Sn**	**09 27 18.9**	**+0.3**
RPZ	**Rata Peaks**	**10.83**	**43**	LR	LR	09 32 16.8	
	comp=Z,4µm,18.9s,baz=290,slow=37						
TAU	**Tasmania Unive**	**13.01**	**310**	*e*Pn	**Pn**	**09 29 03.0**	**-5.9**
TAU				*e*Sn	**Sn**	**09 31 16.6**	**-17**
STKA	**Stephens Creek**	**24.68**	**318**	P	**P**	**09 31 25.9**	**+0.8**
	2.2nm,0.8s,mb3.7,baz=151,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**24.68**	**318**	P	**P**	**09 31 25.9**	**+0.8**
VNDA	**Vanda**	**25.48**	**180**	P	**P**	**09 31 33.1**	**+1.2**
	1.2nm,0.9s,mb3.4,baz=334,slow=7.6,SNR=3.6						
VNDA	**Vanda**	**25.48**	**180**	*e*P	**P**	**09 31 33.3**	**+1.3**
	1.4nm,0.7s,mb3.6						
ASAR	**Alice Springs**	**35.14**	**314**	P	**P**	**09 32 57.1**	**-0.8**
	0.8nm,0.6s,mb3.8,baz=150,slow=8.0,SNR=9.7						
QSPA	**South Pole Qui**	**37.97**	**180**	P	**P**	**09 33 20.6**	**-0.9**
	1.4nm,0.3s,mb4.1,baz=85,slow=6.2,SNR=4.4						
WRA	**Warramunga Arr**	**38.23**	**317**	P	**P**	**09 33 24.3**	**+0.1**
	1.8nm,1.0s,mb3.7,baz=150,slow=7.8,SNR=4.8						
SNAA	**Sanae**	**55.95**	**186**	*e*	**P**	**09 35 40.7**	**-1.1**
SNAA				*e*	pP	09 35 43.5	-1.5
VNA3	**Neumayer Olymp**	**56.73**	**184**	*e*	**P**	**09 35 47.6**	**+0.2**
VNA3				*e*	pP	09 35 50.5	-0.1
VNA3				*e*		09 36 11.8	
VNA2	**Neumayer--Watz**	**56.95**	**185**	*e*	**P**	**09 35 48.9**	**0.0**
	baz=145,slow=5.3						
VNA2				*e*	pP	09 35 52.5	+0.4
VNA2				*e*		09 36 13.8	
VNA1	**Neumayer--Stat**	**57.26**	**184**	*e*	**P**	**09 35 51.9**	**+0.7**
VNA1				*e*	pP	09 35 54.9	+0.5
VNA1				*e*		09 36 17.2	
AKASG	**Malin Array Be**	**150.27**	**287**	PKPbc	PKPbc	09 45 53.9	-0.6
	0.2nm,0.3s,baz=147,slow=0.5,SNR=3.1						

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*CSEM **16** 10:05:02.8±0.1, 7198N×057W, h10km, mb4.4/23, Error ellipse: s-maj=2.9km s-min=2.4km az=148.0*
*NAO **16** 10:05:03.7±4.2, 7186N×0.16E, ML3.0*
*IDC **16** 10:05:03.4±0.7, 7195N×037W, h0km, mb3.8/14, mb1 4.1/19, mb1mx4.0/31, mbtmp3.9/19, ML3.9/5, Error ellipse: s-maj=17.6km s-min=13.7km az=54.0*
*ISCJB **16** 10:05:03.9±0.5, 7197N±005×04E±02, h10km, mb4.2/46, Error ellipse: s-maj=8.5km s-min=6.3km az=22.5*
*NEIC **16** 10:05:04.8±0.4, 7196N×006W, h10km, mb4.4/22, Error ellipse: s-maj=7.6km s-min=5.1km az=93.0*
*MOS **16** 10:05:04.4±0.9, 7199N×058W, h22km, mb4.4/27, Error ellipse: s-maj=33.9km s-min=4.7km az=96.0*
*BER **16** 10:05:06.3±2.5, 7202N×002E, h10km, MD2.8, ML2.9, ML3.0(NAO)*
*SZGRF **16** 10:05:15.6, 7125N×067E, h33km, mb4.4, Norwegian Sea*
ISC 16 10:05:05.1±0.4**, 7196N**±004×**00W**±02**, h10km, n163, σ0.98**/169**, mb4.2**/46**, 8C-1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEI	**Steigen**	**6.62**	**120**	*e*P	**Pn**	**10 06 41.3**	**-0.8**
TRO	**Tromso**	**6.66**	**101**	*e*P	**Pn**	**10 06 39.9**	**-2.9**
TRO				*e*S	**Sn**	**10 07 50.8**	**-7.8**
KONS	**Konsvik**	**7.19**	**133**	*e*P	**Pn**	**10 06 49.2**	**-0.8**
KONS				AML	AML	10 08 11.9	
	comp=Z,12nm,0.9s						
STOK	**Stokkvaagen**	**7.31**	**134**	*e*P	**Pn**	**10 06 50.9**	**-0.7**
STOK				AML	AML	10 08 16.4	
	comp=Z,14nm,0.7s						
FLOS	**Flostrand**	**7.38**	**133**	*e*P	**Pn**	**10 06 51.8**	**-0.8**
SPA0	**Spitsbergen Ar**	**7.50**	**26**	Pn	**Pn**	**10 06 54.5**	**+0.2**
	baz=217,slow=14						
SPITS	**Spitsbergen Ar**	**7.50**	**26**	Pn	**Pn**	**10 06 54.5**	**+0.2**
	baz=243,slow=13,SNR=34						
KBS	**Kingsbay**	**7.59**	**18**	Pn	**Pn**	**10 06 54.0**	**-1.5**
MOR8	**Moi Rana**	**7.76**	**131**	*e*P	**Pn**	**10 06 57.7**	**-0.2**
MOR8				*e*S	**Sn**	**10 08 18.5**	**-7.2**
MOR8				AML	AML	10 08 26.6	
	comp=Z,11nm,0.6s						
MOR8	**Moi Rana**	**7.76**	**131**	*e*P	**Pn**	**10 06 57.7**	**-0.2**
MOR8				*e*S	**Sn**	**10 08 18.5**	**-7.2**
NSS	**Namsos**	**8.67**	**143**	*e*P	**Pn**	**10 07 09.3**	**-1.0**
NSS				*e*S	**Sn**	**10 08 38.8**	**-9.1**
NSS				AML	AML	10 08 46.6	
	comp=Z,15nm,0.7s						
NSS	**Namsos**	**8.67**	**143**	*e*P	**Pn**	**10 07 09.3**	**-1.0**
NSS				*e*S	**Sn**	**10 08 38.8**	**-9.1**
ARA0	**ARCESS Array S**	**8.74**	**94**	Pn	**Pn**	**10 07 09.9**	**-1.3**
	baz=296,slow=11						
ARCES	**ARCESS Array B**	**8.74**	**94**	Pn	**Pn**	**10 07 10.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=298,slow=11,SNR=31						
ARCES	**ARCESS Array B**	**8.74**	**94**	P	**Pn**	**10 07 10.0**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**9.11**	**91**	*e*p	**Pn**	**10 07 09.9**	**-6.3**
HYA	**Hoyanger**	**11.11**	**164**	*e*Pn	**Pn**	**10 07 43.6**	**-0.2**
NB2	**NORSAR Subarra**	**11.82**	**152**	Pn	**Pn**	**10 07 53.1**	**-0.2**
	baz=330,slow=12						
NB2	**NORSAR Subarra**	**11.82**	**152**	Pn	**Pn**	**10 07 52.7**	**-0.6**
	comp=Z,11nm,1.0s,baz=343,slow=14						
NB2	**NORSAR Subarra**	**11.82**	**152**	Pn	**Pn**	**10 07 52.7**	**-0.6**
	baz=343,slow=14						
NB2				Pn	**Pn**	**10 07 53.1**	**-0.2**
	baz=330,slow=12						
NOA	**NORSAR Array B**	**11.82**	**152**	Pn	**Pn**	**10 07 52.5**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=332,slow=12,SNR=12						
NOA				Sn	**Sn**	**10 10 00.6**	**-4.4**
	comp=Z,0.3nm,0.3s,baz=249,slow=6.7,SNR=2.9						
HFS	**Hagfors**	**13.06**	**148**	Pn	**Pn**	**10 08 09.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=3.6,slow=12,SNR=35						
HFS				Sn	**Sn**	**10 10 25.5**	**-10**
	comp=Z,0.3nm,0.3s,baz=345,slow=23,SNR=3.7						
HFS	**Hagfors**	**13.06**	**148**	Pn	**Pn**	**10 08 09.6**	**-0.8**
	baz=348,slow=12						
HFS				Sn	**Sn**	**10 10 27.5**	**-8.0**
	baz=336,slow=28						
KAF	**Kangasniemi**	**14.09**	**121**	*e*p	**Pn**	**10 08 21.7**	**-2.6**
	comp=Z,12nm,0.8s						
KAF	**Kangasniemi**	**14.09**	**121**	*e*P	**Pn**	**10 08 21.7**	**-2.6**
KAF				pmax	pmax		
	comp=Z,12nm,0.8s						
FIA0	**FINESS Array S**	**14.59**	**123**	Pn	**Pn**	**10 08 29.6**	**-1.5**
	baz=328,slow=14						
FIA0	**FINESS Array S**	**14.59**	**123**	Pn	**Pn**	**10 08 29.5**	**-1.6**
	SNR=50						
JOF	**Joensuu**	**14.84**	**112**	*e*p	**Pn**	**10 08 30.5**	**-4.0**
	comp=Z,11nm,0.7s						
JOF	**Joensuu**	**14.84**	**112**	*e*P	**Pn**	**10 08 30.5**	**-4.0**
JOF				pmax	pmax		
	comp=Z,11nm,0.7s						
EKA	**Eskdalemuir Ar**	**16.75**	**186**	Pn	**Pn**	**10 08 59.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=1.0,slow=10,SNR=12						
NRDL	**Niedersach Rie**	**20.04**	**162**	*e*P	**P**	**10 09 38.5**	**+0.7**
	comp=Z,29nm,1.5s						
SUW	**Suwalki**	**20.60**	**139**	*e*P	**P**	**10 09 43.6**	**-0.2**
SUW	**Suwalki**	**20.60**	**139**	*e*P	**P**	**10 09 43.6**	**-0.2**
CLZ	**Clausthal**	**20.72**	**162**	*e*P	**P**	**10 09 45.7**	**+0.6**
CLZ				pmax	pmax		
	comp=Z,23nm,1.1s						
CLZ	**Clausthal**	**20.72**	**162**	*e*P	**P**	**10 09 45.7**	**+0.6**
	comp=Z,23nm,1.1s						
CLL	**Collm**	**21.53**	**157**	*i* P	**P**	**10 09 53.5**	**-0.4**
CLL				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.3						
CLL	**Collm**	**21.53**	**157**	*e*P	**P**	**10 09 53.4**	**-0.5**
	comp=Z,16nm,1.4s,mb4.3						
CLL	**Collm**	**21.53**	**157**	*i* P	**P**	**10 09 53.5**	**-0.4**
	comp=Z,16nm,1.4s,mb4.3						
UBBA	**Unterbreizbach**	**21.69**	**163**	*e*P	**P**	**10 09 55.3**	**-0.3**
	comp=Z,17nm,1.4s,mb4.3						
FBE	**Freiberg**	**21.95**	**157**	*e*P	**P**	**10 09 58.0**	**-0.4**
	comp=Z,42nm,1.5s,mb4.7						
MOX	**Moxa**	**22.03**	**160**	*e*P	**P**	**10 10 00.3**	**+1.1**
	comp=Z,31nm,1.6s,mb4.5						
MOX				*e*		10 10 06.5	
MOX	**Moxa**	**22.03**	**160**	*e*P	**P**	**10 10 00.3**	**+1.1**
MOX				*e*		10 10 06.5	
MOX				pmax	pmax		
	comp=Z,31nm,1.6s,mb4.5						
MOX	**Moxa**	**22.03**	**160**	*e*P	**P**	**10 09 59.5**	**+0.3**
	comp=Z,29nm,1.6s,mb4.5						
GIVF	**Givet**	**22.05**	**172**	*e*P	**P**	**10 10 00.8**	**+1.4**
	comp=Z,67nm,1.4s,mb4.6						
GIVF	**Givet**	**22.05**	**172**	*e*P	**P**	**10 10 00.8**	**+1.4**
GIVF				pmax	pmax		
	comp=Z,33nm,1.4s,mb4.6						
GIVF	**Givet**	**22.05**	**172**	*e*P	**P**	**10 10 00.8**	**+1.4**
	comp=Z,33nm,1.4s,mb4.6						
BAIF	**Baives**	**22.06**	**173**	*e*P	**P**	**10 09 59.2**	**-0.4**
	comp=Z,29nm,1.0s,mb4.3						
BAIF	**Baives**	**22.06**	**173**	*e*P	**P**	**10 09 59.2**	**-0.4**
BAIF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
BAIF	**Baives**	**22.06**	**173**	*e*P	**P**	**10 09 59.2**	**-0.4**
	comp=Z,14nm,1.0s,mb4.4						
BRG	**Berggiesshubel**	**22.07**	**156**	*e*P	**P**	**10 09 59.3**	**-0.4**
BRG				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.1						
BRG	**Berggiesshubel**	**22.07**	**156**	*e*P	**P**	**10 09 59.2**	**-0.5**
	comp=Z,23nm,1.5s,mb4.4						
BRG	**Berggiesshubel**	**22.07**	**156**	*e*P	**P**	**10 09 59.3**	**-0.4**
	comp=Z,23nm,1.6s,mb4.4						
BEL	**Belsk**	**22.20**	**144**	*e*P	**P**	**10 10 01.7**	**+0.6**
WERD	**Werda**	**22.30**	**159**	*e*P	**P**	**10 10 02.5**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.2						
TANN	**Tannenbergstha**	**22.35**	**159**	*e*P	**P**	**10 10 02.8**	**+0.2**
	comp=Z,12nm,1.1s,mb4.2						
GUNZ	**Gunzen**	**22.38**	**159**	*e*P	**P**	**10 10 03.2**	**+0.2**
	comp=Z,24nm,1.7s,mb4.3						
KSP	**Ksiaz**	**22.42**	**152**	*e*P	**P**	**10 10 03.2**	**-0.2**
WERN	**Wernitzgruen**	**22.46**	**159**	*e*P	**P**	**10 10 04.5**	**+0.7**
	comp=Z,27nm,1.2s,mb4.5						
PVCC	**Panska Ves**	**22.49**	**155**	*e*P	**P**	**10 10 04.1**	**-0.1**
NKC	**Novy Kostel**	**22.52**	**159**	*e*P	**P**	**10 10 04.9**	**+0.4**
WLF	**Walferdange**	**22.55**	**169**	*e*P	**P**	**10 10 04.7**	**-0.1**
	comp=Z,34nm,1.7s,mb4.5						
MOS	**Moscow**	**22.61**	**116**	*e*P	**P**	**10 10 04.8**	**-0.6**
MOS				pmax	pmax		
	comp=Z,46nm,1.0s,mb4.9						
UPC	**Upice**	**22.71**	**153**	*e*P	**P**	**10 10 06.3**	**-0.2**
DPC	**Dobruska-Polom**	**22.91**	**152**	*e*P	**P**	**10 10 08.8**	**+0.2**
GRA1	**Grafenberg Arr**	**22.93**	**161**	*e*P	**P**	**10 10 08.5**	**-0.3**
	comp=Z,35nm,1.8s,mb4.5						
GRF	**Grafenberg Arr**	**22.93**	**161**	*e*P	**P**	**10 10 08.5**	**-0.3**
GRF				pmax	pmax		
	comp=Z,35nm,1.8s,mb4.5						
GRF	**Grafenberg Arr**	**22.93**	**161**	*e*P	**P**	**10 10 08.5**	**-0.3**
GRF				pmax	pmax		
	comp=Z,35nm,1.8s,mb4.5						
GRF	**Grafenberg Arr**	**22.93**	**161**	*e*P	**P**	**10 10 08.5**	**-0.3**
	comp=Z,35nm,1.8s,mb4.5						
PRU	**Pruhonice**	**23.02**	**155**	*e*P	**P**	**10 10 10.2**	**+0.5**
FLN	**La Foliniere**	**23.28**	**181**	*e*P	**P**	**10 10 11.0**	**-1.5**
LDF	**La Druitiere**	**23.45**	**180**	*e*P	**P**	**10 10 12.1**	**-2.2**
	comp=Z,110nm,1.7s,mb4.7						
LDF	**La Druitiere**	**23.45**	**180**	*e*P	**P**	**10 10 12.1**	**-2.2**
LDF				pmax	pmax		
	comp=Z,55nm,1.7s,mb4.7						
LDF	**La Druitiere**	**23.45**	**180**	*e*P	**P**	**10 10 12.1**	**-2.2**
	comp=Z,55nm,1.7s,mb4.7						
WET	**Wettzell**	**23.65**	**159**	*e*P	**P**	**10 10 16.9**	**+0.7**
WET				pmax	pmax		
	comp=Z,40nm,2.2s,mb4.5						
WET	**Wettzell**	**23.65**	**159**	*e*P	**P**	**10 10 16.9**	**+0.7**
	comp=Z,40nm,2.2s,mb4.5						
KHC	**Kasperske Hory**	**23.74**	**157**	*e*P	**P**	**10 10 18.0**	**+0.9**
KHC				*e*pP		10 10 22.5	
SGMF	**Saint Gilles**	**23.82**	**184**	*e*P	**P**	**10 10 16.6**	**-1.2**
TREC	**Trest**	**23.82**	**154**	*e*P	**P**	**10 10 18.5**	**+0.7**
CDF	**Champ du Feu**	**23.87**	**168**	*e*P	**P**	**10 10 17.8**	**-0.4**
	comp=Z,34nm,1.5s,mb4.2						
CDF	**Champ du Feu**	**23.87**	**168**	*e*P	**P**	**10 10 17.8**	**-0.4**
CDF				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.2						
CDF	**Champ du Feu**	**23.87**	**168**	*e*P	**P**	**10 10 17.8**	**-0.4**
	comp=Z,17nm,1.5s,mb4.2						
VRAC	**Vranov**	**23.96**	**153**	P	**P**	**10 10 20.0**	**+0.9**
	comp=Z,10nm,0.8s,mb4.3,baz=346,slow=10,SNR=9.4						
VRAC	**Vranov**	**23.96**	**153**	P	**P**	**10 10 20.0**	**+0.9**
VRAC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRAC	**Vranov**	**23.96**	**153**	*e*P	**P**	**10 10 19.4**	**+0.3**
GEC2	**GERESS Array S**	**24.04**	**157**	*e*P	**P**	**10 10 20.2**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
GEC2	**GERESS Array S**	**24.04**	**157**	*e*P	**P**	**10 10 20.2**	**+0.4**
	comp=Z,14nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**24.04**	**157**	P	**P**	**10 10 21.2**	**+1.4**
	comp=Z,7.5nm,0.8s,mb4.2,baz=355,slow=9.4,SNR=54						
GERES	**GERESS Array B**	**24.04**	**157**	P	**P**	**10 10 21.2**	**+1.4**
GERES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIE	**Niedzica**	**24.44**	**147**	*e*P	**P**	**10 10 24.5**	**+1.0**
STHS	**Stebnicka Huta**	**24.61**	**145**	*e*P	**P**	**10 10 26.6**	**+1.7**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**24.61**	**145**	*e*P	**P**	**10 10 26.6**	**+1.7**
	comp=Z,5.1nm,0.9s,mb4.0						
STHS	**Stebnicka Huta**	**24.61**	**145**	*e*P	**P**	**10 10 26.6**	**+1.7**
	comp=Z,5.1nm,0.9s,mb4.0						
LOR	**Lormes**	**24.84**	**174**	*e*P	**P**	**10 10 26.5**	**-0.6**
	comp=Z,17nm,1.1s,mb4.2						
LOR	**Lormes**	**24.84**	**174**	*e*P	**P**	**10 10 26.5**	**-0.6**
LOR				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
LOR	**Lormes**	**24.84**	**174**	*e*P	**P**	**10 10 26.5**	**-0.6**
	comp=Z,8.6nm,1.1s,mb4.2						
SMOL	**Smolenice**	**24.86**	**152**	*e*P	**P**	**10 10 27.9**	**+0.6**
KOLL	**Kolacno**	**24.95**	**150**	*e*P	**P**	**10 10 27.6**	**-0.4**
KOLL	**Kolacno**	**24.95**	**150**	*e*P	**P**	**10 10 27.5**	**-0.5**
AKASG	**Malin Array Be**	**25.02**	**133**	P	**P**	**10 10 27.6**	**-1.1**
	comp=Z,7.5nm,0.7s,mb4.3,baz=338,slow=10,SNR=12						
AKASG	**Malin Array Be**	**25.02**	**133**	P	**P**	**10 10 27.6**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKBB	**Malin Array Si**	**25.02**	**133**	*e*P	**P**	**10 10 28.1**	**-0.6**
AKBB	**Malin Array Si**	**25.02**	**133**	*e*P	**P**	**10 10 28.1**	**-0.6**
RJOB	**Jochberg**	**25.02**	**159**	*e*P	**P**	**10 10 29.4**	**+0.6**
	comp=Z,43nm,2.0s,mb4.6						
SSF	**Saint Saulge**	**25.04**	**174**	*e*P	**P**	**10 10 27.3**	**-1.6**
	comp=Z,14nm,0.9s,mb4.2						
SSF	**Saint Saulge**	**25.04**	**174**	*e*P	**P**	**10 10 27.3**	**-1.6**
SSF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
SSF	**Saint Saulge**	**25.04**	**174**	*e*P	**P**	**10 10 27.3**	**-1.6**
	comp=Z,6.8nm,0.9s,mb4.2						
MOA	**Molln**	**25.08**	**157**⇑	*i*P	**P**	**10 10 29.8**	**+0.5**
	comp=Z,23nm,1.4s,mb4.5						
VYHS	**Vyhne**	**25.09**	**150**	*e*P	**P**	**10 10 29.8**	**+0.4**
ZST	**Bratislava**	**25.12**	**152**	*e*P	**P**	**10 10 30.5**	**+0.8**
ZST				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
ZST	**Bratislava**	**25.12**	**152**	*e*P	**P**	**10 10 30.5**	**+0.8**
	comp=Z,7.9nm,1.1s,mb4.2						
ZST	**Bratislava**	**25.12**	**152**	*e*P	**P**	**10 10 30.5**	**+0.8**
	comp=Z,7.9nm,1.1s,mb4.2						
CRVS	**Cervenica-Dubn**	**25.14**	**145**	*e*P	**P**	**10 10 29.7**	**-0.1**
CRVS				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.1						
CRVS	**Cervenica-Dubn**	**25.14**	**145**	*e*P	**P**	**10 10 29.7**	**-0.1**
	comp=Z,8.1nm,1.2s,mb4.1						
CRVS	**Cervenica-Dubn**	**25.14**	**145**	*e*P	**P**	**10 10 29.7**	**-0.1**
	comp=Z,8.1nm,1.2s,mb4.1						
CONA	**Conrad Observa**	**25.21**	**154**⇓	*i*P	**P**	**10 10 31.7**	**+1.2**
	comp=Z,25nm,1.5s,mb4.5						
CSNA	**Conrad Observa**	**25.21**	**154**⇑	*i*P	**P**	**10 10 31.3**	**+0.9**
	comp=Z,21nm,1.5s,mb4.5						
KOLS	**Kolonicke sedl**	**25.26**	**144**	*e*P	**P**	**10 10 32.1**	**+1.2**
KOLS				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
KOLS	**Kolonicke sedl**	**25.26**	**144**	*e*P	**P**	**10 10 32.1**	**+1.2**
KOLS	**Kolonicke sedl**	**25.26**	**144**	*e*P	**P**	**10 10 32.2**	**+1.3**
	comp=Z,1.6nm,1.1s,mb3.5						
AVF	**Avril sur Loir**	**25.30**	**175**	*e*P	**P**	**10 10 30.1**	**-1.2**
	comp=Z,12nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**25.30**	**175**	*e*P	**P**	**10 10 30.1**	**-1.2**
AVF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
AVF	**Avril sur Loir**	**25.30**	**175**	*e*P	**P**	**10 10 30.1**	**-1.2**
	comp=Z,6.1nm,1.0s,mb4.1						
WTTA	**Wattenberg**	**25.37**	**161**⇑	*i*P	**P**	**10 10 33.0**	**+1.1**
	comp=Z,16nm,1.5s,mb4.3						
KECS	**Kecovo**	**25.38**	**147**	*e*P	**P**	**10 10 32.5**	**+0.5**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
KECS	**Kecovo**	**25.38**	**147**	*e*P	**P**	**10 10 32.5**	**+0.5**
KECS	**Kecovo**	**25.38**	**147**	*e*P	**P**	**10 10 32.5**	**+0.5**
	comp=Z,2.7nm,0.9s,mb3.8						
MFF	**Saint Martin d**	**25.44**	**180**	*e*P	**P**	**10 10 31.8**	**-0.7**
SMF	**Signal de Mont**	**25.46**	**174**	*e*P	**P**	**10 10 31.8**	**-0.9**
BGF	**Bois d'Agland**	**25.52**	**175**	*e*P	**P**	**10 10 32.5**	**-0.8**
UZH	**Uzhgorod**	**25.55**	**144***c*	*i*P	**P**	**10 10 34.0**	**+0.5**
UZH				*e*		10 11 08.0	
TCF	**Toulx Ste Croi**	**25.77**	**176**	*e*P	**P**	**10 10 34.4**	**-1.2**
	comp=Z,46nm,1.4s,mb4.5						
TCF	**Toulx Ste Croi**	**25.77**	**176**	*e*P	**P**	**10 10 34.4**	**-1.2**
TCF				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.5						
TCF	**Toulx Ste Croi**	**25.77**	**176**	*e*P	**P**	**10 10 34.4**	**-1.2**
	comp=Z,23nm,1.4s,mb4.5						
TRPA	**Tarpa**	**26.08**	**144**⇑	*i*P	**P**	**10 10 40.3**	**+2.0**
BUR08	**Bucovina Ar. S**	**27.05**	**141**	*e*P	**P**	**10 10 48.5**	**+1.4**
BUR08	**Bucovina Ar. S**	**27.05**	**141**	*e*P	**P**	**10 10 48.5**	**+1.4**
BURAR	**Bucovina Array**	**27.08**	**141**⇑	*i*P	**P**	**10 10 51.0**	**+3.6**
DRGR		**27.40**	**145**⇑	*i*P	**P**	**10 10 51.7**	**+1.5**
BZS	**Buzias**	**28.35**	**147**⇑	*i*P	**P**	**10 10 59.3**	**+0.6**
MLR	**Muntele Rosu**	**29.26**	**141**	P	**P**	**10 11 08.0**	**+1.2**
	comp=Z,2.8nm,1.0s,mb4.0,baz=175,slow=3.2,SNR=3.3						
MLR	**Muntele Rosu**	**29.26**	**141**	P	**P**	**10 11 08.0**	**+1.2**
MLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						

ESDC	**Sonseca Array**	**32.42**	**186**	P	**P**	**10 11 34.7**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=360,slow=9.1,SNR=3.4						
TIXI	**Tiksi**	**32.93**	**27**	eP	**P**	**10 11 40.6**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TIXI	**Tiksi**	**32.93**	**27**	eP	**P**	**10 11 40.6**	**+1.7**
	comp=Z,2.2nm,0.7s,mb4.2						
AKTK	**Aktyubinsk**	**33.28**	**99**	P	**P**	**10 11 43.0**	**+0.8**
AKTK	**Aktyubinsk**	**33.28**	**99**	P	**P**	**10 11 43.0**	**+0.8**
AKTO	**Aktyubinsk**	**33.28**	**99**	P	**P**	**10 11 43.0**	**+0.8**
	comp=Z,2.3nm,1.1s,mb4.0,baz=357,slow=7.9,SNR=4.3						
AKTO	**Aktyubinsk**	**33.28**	**99**	P	**P**	**10 11 43.0**	**+0.8**
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
BVAR	**Borovoye Array**	**34.88**	**84**	P	**P**	**10 11 58.1**	**+2.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=350,slow=7.5,SNR=2.9						
BRTR	**Keskin Array B**	**36.41**	**134**	P	**P**	**10 12 10.6**	**+1.4**
	comp=Z,1.6nm,0.9s,mb4.0,baz=340,slow=5.9,SNR=5.8						
BRTR	**Keskin Array B**	**36.41**	**134**	P	**P**	**10 12 10.6**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	**38.61**	**317**	P	**P**	**10 12 25.4**	**-2.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=26,slow=9.1,SNR=7.5						
YKA				PcP	PcP	10 14 39.0	-0.5
	comp=Z,0.2nm,0.8s,baz=15,slow=2.8,SNR=3.8						
YKA	**Yellowknife Ar**	**38.61**	**317**	P	**P**	**10 12 25.4**	**-2.2**
YKA						10 14 39.0	
YKA	**Yellowknife Ar**	**38.61**	**317**	PcP	PcP	10 14 39.0	-0.5
YKA	**Yellowknife Ar**	**38.61**	**317**	P	**P**	**10 12 25.4**	**-2.1**
YKA				PcP	PcP	10 14 39.0	-0.5
MKAR	**Makanchi Array**	**44.02**	**78**	P	**P**	**10 13 13.3**	**+1.1**
	comp=Z,0.2nm,0.5s,mb3.1,baz=342,slow=5.9,SNR=4.0						
SONM	**Songino Array**	**50.00**	**58**	P	**P**	**10 13 58.8**	**0.0**
	comp=Z,0.2nm,0.6s,mb3.3,baz=3.6,slow=12,SNR=2.8						
PDAR	**Pinedale Array**	**55.52**	**303**	P	**P**	**10 14 39.5**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.5,baz=21,slow=7.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**58.80**	**178**	P	**P**	**10 15 02.5**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.3,baz=355,slow=6.8,SNR=18						
TXAR	**Lajitas Array**	**66.48**	**292**	P	**P**	**10 15 53.8**	**-0.6**
	comp=Z,0.6nm,1.0s,mb3.6,baz=38,slow=4.7,SNR=3.6						
TXAR	**Lajitas Array**	**66.48**	**292**	P	**P**	**10 15 53.8**	**-0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MAW	**Mawson**	**145.42**	**143**	PKPbc	PKPbc	10 24 42.0	+0.9
	comp=Z,2.7nm,1.0s,baz=309,slow=10,SNR=3.4						
MAW	**Mawson**	**145.42**	**143**	PKIKP	PKPdf	10 24 42.0	+1.0
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						

*ISCJB **16** 10:28:25.3±0.9, 343N±0.1×818E±03, h10km, mb3.4/5, Error ellipse: s-maj=32.7km s-min=12.8km az=159.7*
*IDC **16** 10:28:25.4±1.1, 34.19N×81.75E, h0km, mb3.4/6, mb1 3.6/9, mb1mx3.4/25, mbtmp3.5/9, ML3.4/2, Error ellipse: s-maj=41.8km s-min=19.1km az=63.0*
ISC 16 10:28:31.1±4.0**, 344N**±02×**819E**±03**, h38**km±36km**, n9, σ0s96**/9**, mb3.4**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.43**	**1**	Pn	**Pn**	**10 31 25.4**	**0.0**
	0.1nm,0.3s,baz=178,slow=12,SNR=4.9						
KURK	**Kurchatov**	**16.52**	**353**	Pn	**Pn**	**10 32 17.2**	**-2.6**
	baz=179,slow=11,SNR=5.7						
ZALV	**Zalesovo Beam**	**19.70**	**5**	P	**Pn**	**10 32 59.1**	**+0.5**
	0.2nm,0.3s,baz=187,slow=7.8,SNR=2.9						
BVAR	**Borovoye Array**	**20.39**	**340**	P	**P**	**10 33 06.0**	**+1.6**
	1.1nm,0.8s,baz=144,slow=10,SNR=6.1						
CMAR	**Chiang Mai Arr**	**21.94**	**132**	P	**P**	**10 33 22.0**	**+0.6**
	3.0nm,0.9s,mb3.7,baz=320,slow=12,SNR=11						
WRA	**Warramunga Arr**	**73.50**	**129**	P	**P**	**10 40 00.0**	**0.0**
	0.3nm,0.7s,mb3.3,baz=324,slow=5.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**74.68**	**276**	P	**P**	**10 40 06.9**	**-0.2**
	0.4nm,0.5s,mb3.6,baz=50,slow=5.1,SNR=4.5						
ASAR	**Alice Springs**	**75.95**	**132**	P	**P**	**10 40 13.3**	**-0.8**
	0.2nm,0.8s,mb3.1,baz=327,slow=5.5,SNR=3.2						
YKA	**Yellowknife Ar**	**82.58**	**8**	P	**P**	**10 40 49.7**	**0.0**
	0.2nm,0.5s,mb3.5,baz=338,slow=5.4,SNR=9.0						

*NEIC **16** 10:35:48.7, 1830N×10352W, h5km, MD4.1(MEX), After MEX.*
MEX 16 10:35:46.9±0.9**, 1815N×10350W, h11**km±6km**, MD4.1, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.20**	**46**	eP	Pg	10 35 50.8	-0.4
MMIG				iS	Sg	10 35 53.9	-0.3
R15V		**1.11**	**336**	eP	Pb	10 36 04.4	-3.8
R15V				iS	Sb	10 36 18.4	-4.3
EZ5V		**1.33**	**356**	iP	Pn	10 36 08.7	-2.7
EZ5V				iS	Sb	10 36 24.6	-4.2
CJM	**Chamela**	**1.98**	**313**	eP	Pn	10 36 17.2	-3.2
CJM				iS	Sn	10 36 40.8	-4.5
CJM	**Chamela**	**1.98**	**313**	eP	Pn	10 36 18.9	-1.5
CJM				iS	Sn	10 36 39.8	-5.5
ZIIG	**Zihuatanejo**	**2.01**	**105**	eP	Pn	10 36 17.8	-2.9
ZIIG				iS	Sn	10 36 41.6	-4.3
ZIIG	**Zihuatanejo**	**2.01**	**105**	iP	Pn	10 36 22.6	+1.8
ZIIG				iS	Sn	10 36 45.7	-0.1
SFJM	**Santa Fe**	**2.37**	**10**	iP	Pn	10 36 21.5	-4.1
SFJM				iS	Sn	10 36 50.5	-4.1
MOIG	**Morelia**	**2.66**	**55**	eP	Pn	10 36 26.0	-3.8
MOIG				iS	Sn	10 36 56.9	-5.0
MOIG	**Morelia**	**2.66**	**55**	iP	Pn	10 36 29.4	-0.3
MOIG				iS	Sn	10 37 00.6	-1.4

*ISCJB **16** 10:49:45.5±1.6, 3558N±006×2752E±007, h0km±9km, Error ellipse: s-maj=12.6km s-min=6.2km az=139.2*
*ISK **16** 10:49:46.6, 3565N×2760E, h5km, MD3.1*
*CSEM **16** 10:49:47.3±0.2, 3563N×2750E, h12km, MD3.1, Error ellipse: s-maj=8.3km s-min=3.2km az=142.0*
*ATH **16** 10:49:47.3, 3572N×2742E, h21km±3km, MD3.2/3*
*DDA **16** 10:50:06.9, 3696N×2837E, h8km±3km, Md2.7*
ISC 16 10:49:47.4±1.2**, 3560N**±007×**2752E**±008**, h8**km±6km**, n13, σ0s97**/23**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**261**	ePB	**Pg**	**10 49 53.3**	**0.0**
KARP				eSB	**Sg**	**10 49 58.3**	**+1.1**
KARP	**Karpathos**	**0.30**	**261**	ePb	**Pg**	**10 49 53.2**	**-0.1**
KARP				eSb	**Sg**	**10 49 58.3**	**+1.1**
ARG	**Arkhangelos**	**0.79**	**38**	ePN	**Pn**	**10 50 02.2**	**-2.6**
ARG				eSN	**Sg**	**10 50 13.1**	**+0.2**
DAT	**Datca**	**1.13**	**2**	ePG	**Pg**	**10 50 08.2**	**-0.9**
DAT				eSG	**Sg**	**10 50 23.9**	**0.0**
BDRM	**Kayabasi**	**1.47**	**358**	iP	**Pn**	**10 50 13.4**	**-0.8**
BDRM				iS	**Sn**	**10 50 32.4**	**-1.2**
BDRM	**Kayabasi**	**1.47**	**358**	iP	**Pn**	**10 50 13.4**	**-0.8**
BDRM				iS	**Sn**	**10 50 32.3**	**-1.2**
TURN	**Turunc**	**1.55**	**34**	iP	**Pn**	**10 50 11.2**	**-4.0**
TURN				iS	**Sn**	**10 50 30.7**	**-4.8**
NPS	**Neapolis**	**1.59**	**259**	ePN	**Pn**	**10 50 15.3**	**-0.6**
YER	**Yerkesik**	**1.66**	**22**	ePN	**Pn**	**10 50 16.7**	**0.0**
YER				eSN	**Sn**	**10 50 39.4**	**+1.3**
MLSB	**Milas**	**1.71**	**7**	ePN	**Pn**	**10 50 18.1**	**+0.6**
ELL	**Elmali**	**2.25**	**59**	ePN	**Pn**	**10 50 24.9**	**0.0**
GOLH	**Golhisar**	**2.32**	**45**	iP	**Pn**	**10 50 26.6**	**+0.7**
GOLH				iS	**Sn**	**10 51 03.5**	**+8.9**
KHAL	**Karahalli**	**3.19**	**29**	iP	**Pn**	**10 50 37.7**	**-0.1**
KHAL				iS	**Sn**	**10 51 17.6**	**+1.7**

*ISCJB **16** 11:06:02.2±0.5, 14.19N±0.04×92.30W±0.04, h49km±4km, mb4.5/32, MS4.5/3, Error ellipse: s-maj=8.1km s-min=2.8km az=43.1*
*IDC **16** 11:06:03.5±0.8, 14.36N×92.03W, h46km±6km, mb4.0/11, mb1 4.2/14, mb1mx3.9/26, mbtmp4.0/14, ML4.5/2, MS3.7/2, Ms1 3.7/2, ms1mx3.2/40, Error ellipse: s-maj=29.2km s-min=9.5km az=48.0*
*BJI **16** 11:06:03.1, 14.10N×92.20W, h51km, mB5.2, Ms5.2, Msz4.8*
*NEIC **16** 11:06:03.2±0.9, 14.15N×92.19W, h51km±8km, mb4.6/26, MD4.7(MEX), Error ellipse: s-maj=13.0km s-min=7.7km az=208.0*
*CASC **16** 11:06:04.5±1.9, 14.29N×92.16W, h64km±23km, MD4.6, mb4.6(NEIC)*
*MEX **16** 11:06:04.0±1.1, 14.11N×92.49W, h16km±42km, MD4.7*
ISC 16 11:06:04.1±0.4**, 1425N**±004×**9229W**±004**, h44**km±3km**, h50**km±2.1km**:pP-P, n233, σ1s04**/229**, mb4.5**/32**, MS4.5**/3**, 63C-64D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.63**	**84**	⇑iP	**Pn**	**11 06 17.1**	**+0.4**
THIG		**0.65**	**2**	iP	**Pn**	**11 06 16.0**	**-1.1**
THIG				iS	**Sn**	**11 06 26.9**	**+0.6**
FUG	**Fuego 3**	**1.41**	**82**	⇑iP	**Pn**	**11 06 26.5**	**-0.9**
PCG	**Pacaya**	**1.63**	**85**	⇑eP	**Pn**	**11 06 29.9**	**-0.5**
PCIG		**1.70**	**328**	eP	**Pn**	**11 06 29.7**	**-1.7**
PCIG				iS	**Sn**	**11 06 50.1**	**-1.9**
NBG	**Las Nubes**	**1.91**	**80**	⇑eP	**Pn**	**11 06 35.2**	**+1.0**
CCIG	**Comitan**	**2.02**	**4**	eP	**Pn**	**11 06 37.5**	**+1.7**
CCIG				iS	**Sn**	**11 07 02.5**	**+2.6**
CCIG	**Comitan**	**2.02**	**4**	eP	**Pn**	**11 06 37.7**	**+1.9**
CCIG				iS	**Sn**	**11 07 02.5**	**+2.6**
SCX	**San Cristobal**	**2.49**	**352**	iP	**Pn**	**11 06 44.3**	**+2.1**
SCX				iS	**Sn**	**11 07 14.0**	**+2.6**
RBDL	**Robledal**	**2.52**	**93**	⇓eP	x	11 06 42.1	
RTR	**El Retiro**	**2.59**	**97**	⇑eP	x	11 06 43.4	
RTR				eS	x	11 07 12.9	
SBLS	**San Blas**	**2.62**	**99**	eP	x	11 06 42.9	
SBLS				eS	x	11 07 14.1	
SNJE	**San Jose**	**2.63**	**98**	eP	x	11 06 43.1	
SNJE				eS	x	11 07 13.7	
MRL	**Marmol**	**2.64**	**72**	⇑eP	**Pn**	**11 06 44.8**	**+0.6**
TGIG		**2.64**	**342**	eP	**Pn**	**11 06 44.2**	**0.0**
TGIG				iS	**Sn**	**11 07 16.1**	**+1.1**
BOQS	**Boqueron**	**2.96**	**100**	⇓eP	x	11 06 48.2	
BOQS				eS	x	11 07 21.8	
SNET	**Serv Nac Est T**	**3.02**	**100**	⇑eP	x	11 06 48.6	
SNET				eS	x	11 07 22.0	
SNET				eS	x	11 07 22.4	
LBRS	**Las Brisas**	**3.19**	**99**	eP	x	11 06 51.5	
SNVI	**San Vicente**	**3.41**	**100**	eP	x	11 06 54.3	
CMIG	**Matias Romero**	**3.77**	**319**	P	**Pn**	**11 06 58.7**	**-1.1**
	24nm,0.3s,baz=144,slow=10,SNR=376						
CMIG				S	**Sn**	**11 07 43.2**	**+0.2**
	126nm,0.3s,baz=67,slow=15,SNR=7.1						
CMIG				LR	LR	11 07 52.4	
	comp=Z,474nm,21.4s,baz=230,slow=28						
CMIG	**Matias Romero**	**3.77**	**319**	iP	**Pn**	**11 06 58.8**	**-1.0**
CMIG				iS	**Sn**	**11 07 41.8**	**-1.2**
VSM	**San Miguel**	**3.98**	**101**	eP	x	11 07 03.0	
CAHU	**Cacacuatique**	**3.98**	**96**	⇑eP	x	11 07 02.2	
HUIG	**Huatulco**	**3.99**	**293**	iP	**Pn**	**11 07 01.1**	**-1.7**
HUIG				iS	**Sn**	**11 07 43.5**	**-4.8**
TUIG	**Tuzandepetl**	**4.29**	**332**	eP	**Pn**	**11 07 06.3**	**-0.6**
TUIG				iS	**Sn**	**11 07 55.2**	**-0.4**
CNCH	**Conchagua**	**4.43**	**102**	⇓eP	x	11 07 08.2	
TGUH	**Tegucigalpa,Un**	**4.87**	**92**	eP	**Pn**	**11 07 14.1**	**-0.8**
TGUH	**Tegucigalpa,Un**	**4.87**	**92**	ePn	**Pn**	**11 07 13.8**	**-1.1**
VHO	**Vista Hermosa**	**5.12**	**304**	iP	**Pn**	**11 07 16.8**	**-1.6**
VHO				iS	**Sn**	**11 08 13.9**	**-2.3**
CRIN	**San Cristobal**	**5.32**	**106**	⇓eP	**Pn**	**11 07 20.9**	**-0.2**
TEL3	**Telica 3**	**5.55**	**107**	eP	**Pn**	**11 07 23.7**	**-0.6**
CNGN	**Cerro Negro**	**5.71**	**107**	eP	**Pn**	**11 07 24.5**	**-1.9**
CNGN				⇑eP		11 07 25.5	
CNGN				eS	**Sn**	**11 08 33.8**	**+3.1**
MIRN	**Miramar**	**5.72**	**108**	eP	**Pn**	**11 07 25.3**	**-1.2**
MOMN	**Momotombo**	**5.88**	**107**	eP	**Pn**	**11 07 29.1**	**+0.3**
PNIG	**Pinotepa**	**6.03**	**291**	iP	**Pn**	**11 07 29.7**	**-1.1**
PNIG				iS	**Sn**	**11 08 34.5**	**-4.0**
PNIG	**Pinotepa**	**6.03**	**291**	iP	**Pn**	**11 07 29.7**	**-1.1**
PNIG				iS	**Sn**	**11 08 32.8**	**-5.7**
CSAN		**6.07**	**109**	⇓eP	**Pn**	**11 07 30.4**	**-0.9**
APYN	**Apoyeque**	**6.12**	**108**	eP	**Pn**	**11 07 31.1**	**-0.9**
TISN	**Laguna Tiscapa**	**6.22**	**109**	eP	**Pn**	**11 07 32.8**	**-0.7**
MGAN	**Managua**	**6.24**	**109**	eP	**Pn**	**11 07 32.9**	**-0.8**
MGAN				eP		11 07 34.4	
HUEN		**6.25**	**107**	⇑eP	**Pn**	**11 07 33.1**	**-0.7**
CRUN	**El Crucero**	**6.25**	**110**	⇓eP	**Pn**	**11 07 34.7**	**+0.9**
TICN	**Ticuantepe**	**6.29**	**110**	eP	**Pn**	**11 07 34.1**	**-0.4**
SSN	**San Juan del S**	**6.92**	**114**	eP	**Pn**	**11 07 42.5**	**-0.6**
CONN	**Concepcion**	**7.02**	**112**	eP	**Pn**	**11 07 45.7**	**+1.3**
TEIG	**Tepich**	**7.07**	**32**	iP	**Pn**	**11 07 44.9**	**-0.2**
TEIG	**Tepich**	**7.07**	**32**	eP	**Pn**	**11 07 44.9**	**-0.2**
TEIG	**Tepich**	**7.07**	**32**	ePn	**Pn**	**11 07 44.5**	**-0.6**
VCR	**Vista de Mar**	**7.69**	**121**	eP	**Pn**	**11 07 54.1**	**+0.5**
PPM	**Popocatepetl**	**7.74**	**309**	iP	**Pn**	**11 07 59.5**	**+5.2**
PPM				iS	**Sn**	**11 09 17.4**	**-3.2**
CAIG	**El Cayaco**	**8.18**	**291**	iP	**Pn**	**11 08 00.7**	**+0.4**
JCR	**Jicaral**	**8.27**	**121**	eP	**Pn**	**11 08 02.6**	**+1.1**
FORC	**Fortuna**	**8.34**	**116**	eP	**Pn**	**11 08 03.5**	**+1.0**
CGA2	**Cerro Gallo 2**	**8.73**	**118**	eP	**Pn**	**11 08 09.4**	**+1.6**
PRS1	**Puriscal**	**8.88**	**118**	eP	**Pn**	**11 08 11.7**	**+1.8**
LAJ	**Bijagual**	**9.10**	**118**	eP	**Pn**	**11 08 09.6**	**-3.3**
QCR	**Quepos**	**9.28**	**120**	⇑eP	**Pn**	**11 08 15.6**	**+0.1**
URSC	**Urasca**	**9.41**	**117**	eP	**Pn**	**11 08 17.8**	**+0.6**
ZIIG	**Zihuatanejo**	**9.44**	**292**	iP	**Pn**	**11 08 17.7**	**+0.2**
BUS	**Buena Vista**	**9.56**	**118**	⇓eP	**Pn**	**11 08 20.1**	**+0.8**
MOIG	**Morelia**	**10.08**	**304**	iP	**Pn**	**11 08 30.2**	**+3.8**
BAR1		**10.10**	**119**	eP	**Pn**	**11 08 27.2**	**+0.6**
ACR	**Cerro Adams**	**10.52**	**121**	eP	**Pn**	**11 08 34.8**	**+2.3**
JCT	**Junction City**	**17.57**	**338**	ePn	**Pn**	**11 10 07.8**	**+1.9**
	27nm,1.4s						
JCT				eSn	**Sn**	**11 13 15.2**	**-5.4**
TXAR	**Lajitas Array**	**18.34**	**327**	P	**Pn**	**11 10 16.2**	**+1.0**
	0.5nm,0.3s,baz=147,slow=11,SNR=38						
TXAR	**Lajitas Array**	**18.34**	**327**	P	**Pn**	**11 10 16.2**	**+1.0**
OTAV	**Otavalo**	**19.52**	**134**	ePn	**Pn**	**11 10 33.9**	**+4.2**
	8.1nm,1.3s						
ROSC	**El Rosal**	**20.00**	**116**	P	**Pn**	**11 10 31.3**	**-4.0**
	0.5nm,0.3s,baz=101,slow=23,SNR=2.0						
MIAR	**Mount Ida**	**20.24**	**357**	eP	**P**	**11 10 34.5**	**-1.2**
	40nm,1.1s						
MIAR				eS	**S**	**11 14 05.3**	**-15**
UALR	**University of**	**20.44**	**360**	eP	**P**	**11 10 39.4**	**+1.6**
	32nm,0.8s						
CHI2		**20.62**	**116**	eP	x	11 07 19.5	
WMOK	**Wichita Mounta**	**21.23**	**345**	eP	**P**	**11 10 45.6**	**-0.7**
	12nm,1.0s,mb4.2						
WMOK				eS	**S**	**11 14 34.0**	**-5.8**
SDV	**Santo Domingo**	**21.86**	**102**	P	**P**	**11 10 50.8**	**-2.5**
	2.8nm,0.5s,mb3.9,baz=349,slow=6.9,SNR=6.3						
AMTX	**Amarillo**	**22.23**	**339**	eP	**P**	**11 10 56.1**	**-0.9**
	19nm,0.6s,mb4.7						
TKL	**Tuckaleechee C**	**22.65**	**18**	P	**P**	**11 10 59.5**	**-1.9**
	5.2nm,0.6s,mb4.1,baz=183,slow=18,SNR=11						
TKL				LR	LR	11 19 47.2	
	comp=Z,472nm,21.1s,MS3.9,baz=101,slow=37						
319A	**Douglas**	**23.10**	**320**	⇓P	**P**	**11 11 07.1**	**+0.9**
	baz=23,SNR=5.1						
219A	**White Tail Can**	**23.52**	**322**	⇓P	**P**	**11 11 11.2**	**+0.8**
	baz=24,SNR=12						
SIUC	**Southern Illin**	**23.53**	**6**	eP	**P**	**11 11 07.7**	**-2.7**
	30nm,0.8s,mb4.8						
SIUC				epP		11 11 21.5	
318A	**Bisbee**	**23.58**	**319**	⇓P	**P**	**11 11 11.9**	**+0.9**
	baz=24,SNR=15						
CCM	**Cathedral Cave**	**23.73**	**2**	eP	**P**	**11 11 10.7**	**-1.5**
	8.4nm,0.9s,mb4.2						
ANMO	**Albuquerque**	**24.25**	**331**	P	**P**	**11 11 17.5**	**+0.4**
	6.1nm,0.6s,mb4.2,baz=146,slow=12,SNR=47						
ANMO	**Albuquerque**	**24.25**	**331**	eP	**P**	**11 11 17.2**	**+0.2**
	7.4nm,0.7s,mb4.2						
118A	**Homack Ranch,**	**24.39**	**322**	⇑P	**P**	**11 11 19.4**	**+1.0**
	baz=24						
WCI	**Wyandotte Cave**	**24.47**	**11**	eP	**P**	**11 11 15.2**	**-3.8**
	343nm,2.9s,mb5.3						
TUC	**Tucson**	**24.67**	**320**	eP	**P**	**11 11 24.0**	**+3.1**
	2.0nm,0.8s,mb3.7						
TUC				epP		11 11 35.7	
OLIL	**Olney**	**24.67**	**8**	eP	**P**	**11 11 18.8**	**-2.0**
	18nm,0.8s,mb4.7						
Y19A	**Nutrioso**	**24.93**	**325**	⇑P	**P**	**11 11 24.5**	**+1.3**
	baz=25,SNR=8.2						
Z17A	**San Carlos Hig**	**25.15**	**322**	⇑P	**P**	**11 11 26.6**	**+1.2**
	baz=25						
ATAH	**Atahualpa**	**25.21**	**146**	P	**P**	**11 11 26.8**	**+0.7**
	18nm,0.8s,mb4.7,baz=23,slow=3.4,SNR=12						
Y18A	**Canyon Day Jun**	**25.24**	**323**	⇑P	**P**	**11 11 27.1**	**+1.0**
	baz=25						
X17A	**Forest Lakes**	**26.09**	**323**	⇑P	**P**	**11 11 34.7**	**+1.0**
	baz=26						
X16A	**Lo Mia Camp, P**	**26.51**	**323**	P	**P**	**11 11 38.6**	**+1.0**
	baz=26,SNR=5.8						
X15A	**Humboldt**	**27.03**	**322**	⇓P	**P**	**11 11 42.7**	**+0.4**
	baz=27						
MVCO	**Mesa Verde**	**27.05**	**331**	⇓P	**P**	**11 11 43.1**	**+0.7**
	baz=27						
MVCO	**Mesa Verde**	**27.05**	**331**	eP	**P**	**11 11 43.3**	**+0.9**
	18nm,0.9s,mb4.6						
MVCO				epP	pP	11 11 56.5	+2.5
WUAZ	**Wupatki**	**27.25**	**324**	⇑P	**P**	**11 11 45.2**	**+1.0**
	baz=27						
WUAZ	**Wupatki**	**27.25**	**324**	eP	**P**	**11 11 45.4**	**+1.1**
	23nm,1.8s,mb4.4						
U16A	**Tuba City**	**27.57**	**326**	⇓P	**P**	**11 11 47.9**	**+0.8**
	baz=28						
T18A	**Mexican Hat**	**27.66**	**329**	⇓P	**P**	**11 11 48.1**	**+0.2**
	baz=28,SNR=6.6						
V15A	**Kaibab Nationa**	**27.93**	**324**	⇑P	**P**	**11 11 51.3**	**+1.1**
	baz=28						
W14A	**Seligman**	**28.04**	**322**	⇑P	**P**	**11 11 52.2**	**+0.9**
	baz=28						
S18A	**Hurst Farm, Bl**	**28.15**	**329**	⇑P	**P**	**11 11 52.8**	**+0.5**
	baz=28						
PV04	**Paradox Valley**	**28.19**	**332**	eP	**P**	**11 11 53.5**	**+0.9**
V14A	**Boquillas Ranc**	**28.34**	**322**	⇑P	**P**	**11 11 55.0**	**+1.0**
	baz=28,SNR=7.0						
U15A	**North Rim**	**28.43**	**325**	⇑P	**P**	**11 11 54.8**	**+0.1**
	baz=28						
S17A	**Black Ridge (B**	**28.52**	**328**	⇓P	**P**	**11 11 56.0**	**+0.5**
	baz=28						
BC3	**Big Chuckw Mtn**	**28.54**	**317**	⇑P	**P**	**11 11 56.7**	**+0.9**
	baz=29						
Q19A	**Hogan Spring (**	**28.81**	**332**	⇓P	**P**	**11 11 57.2**	**-0.9**
	baz=29						
T15A	**Red Dirt Ranch**	**28.90**	**325**	⇓P	**P**	**11 11 59.5**	**+0.5**
	baz=29						
U14A	**Mt Trumbull**	**28.93**	**324**	⇑P	**P**	**11 12 00.2**	**+1.1**
	baz=29						
V13A	**Grand Canyon W**	**29.01**	**322**	⇓P	**P**	**11 12 00.6**	**+0.7**
	baz=29,SNR=5.5						
R17A	**Hanksville Air**	**29.07**	**329**	⇓P	**P**	**11 12 00.1**	**-0.4**
	baz=29,SNR=6.2						
T14A	**Hurricane**	**29.32**	**325**	⇑P	**P**	**11 12 03.7**	**+1.0**
	baz=29						
R16A	**Teasdale**	**29.36**	**328**	⇑P	**P**	**11 12 03.5**	**+0.5**
	baz=29,SNR=6.9						
U13A	**Pakoon Wash**	**29.38**	**323**	⇓P	**P**	**11 12 04.1**	**+0.9**
	baz=29						
V12A	**Nelson**	**29.45**	**321**	⇑P	**P**	**11 12 04.3**	**+0.5**
	baz=30,SNR=6.6						
SRU	**San Rafael**	**29.52**	**330**	eP	**P**	**11 12 05.1**	**+0.7**
	6.2nm,1.3s,mb4.2						
Q16A	**Castle Valley**	**29.69**	**329**	⇑P	**P**	**11 12 06.1**	**+0.2**
	baz=30,SNR=6.3						
P17A	**Butcher Ranch,**	**29.91**	**331**	⇓P	**P**	**11 12 07.6**	**-0.2**
	baz=30,SNR=5.5						
N20A	**Spence Gulch,**	**29.93**	**335**	⇓P	**P**	**11 12 07.6**	**-0.4**
	baz=30						
S13A	**Holt Ranch, En**	**30.13**	**324**	⇓P	**P**	**11 12 10.7**	**+0.9**
	baz=30,SNR=8.9						
O18A	**Roosevelt**	**30.21**	**332**	⇓P	**P**	**11 12 11.2**	**+0.8**
	baz=30						
N19A	**John Jarvie Ra**	**30.36**	**334**	⇑P	**P**	**11 12 11.2**	**-0.6**
	baz=30						
O17A	**Robinson Place**	**30.48**	**331**	⇓P	**P**	**11 12 13.3**	**+0.4**
	baz=30						
R13A	**O'Grain Ranch,**	**30.61**	**325**	⇑P	**P**	**11 12 15.5**	**+1.4**
	baz=31						
MPU	**Maple Canyon**	**30.77**	**330**	eP	**P**	**11 12 15.8**	**+0.4**
	8.2nm,0.8s,mb4.6						
O16A	**Springville**	**30.85**	**331**	⇓P	**P**	**11 12 16.8**	**+0.6**
	baz=31						
R12A	**Pony Springs,**	**31.07**	**325**	⇓P	**P**	**11 12 19.6**	**+1.5**
	baz=31						
TPNV	**Topopah Spring**	**31.11**	**321**	⇑P	**P**	**11 12 19.8**	**+1.4**
	baz=31						
N17A	**Moffit Pass**	**31.12**	**332**	⇓P	**P**	**11 12 19.1**	**+0.6**
	baz=31						
P14A	**Drum Mountains**	**31.16**	**328**	⇓P	**P**	**11 12 19.6**	**+0.8**
	baz=31,SNR=5.5						
Q13A	**Wheeler Ranch,**	**31.19**	**326**	⇑P	**P**	**11 12 19.8**	**+0.6**
	baz=31						
MPMC	**Manual Prospec**	**31.33**	**318**	⇑P	**P**	**11 12 20.5**	**+0.1**
	baz=31						
DUG	**Dugway**	**31.48**	**329**	⇓P	**P**	**11 12 21.2**	**-0.5**
	baz=31						
P13A	**Bates Ranch, G**	**31.55**	**327**	⇑P	**P**	**11 12 23.0**	**+0.7**
	baz=32,SNR=5.5						
R11A	**Troy Canyon, C**	**31.64**	**324**	⇓P	**P**	**11 12 23.9**	**+0.7**
	baz=32						
S10A	**Tonopah Range,**	**31.95**	**322**	⇓P	**P**	**11 12 27.1**	**+1.2**
	baz=32						
R10A	**Warm Springs**	**32.02**	**323**	⇑P	**P**	**11 12 27.1**	**+0.7**
	baz=32						
Q11A	**Duckwater**	**32.02**	**324**	⇓P	**P**	**11 12 27.7**	**+1.3**
	baz=32						
L17A	**Cokeville**	**32.08**	**333**	⇓P	**P**	**11 12 25.7**	**-1.2**
	baz=32,SNR=5.9						
PDAR	**Pinedale Array**	**32.08**	**336**	P	**P**	**11 12 26.3**	**-0.6**
	0.4nm,0.6s,mb3.5,baz=138,slow=10.0,SNR=5.6						
PDAR				PcP	PcP	11 15 15.2	-0.4
	0.4nm,0.5s,baz=134,slow=6.7,SNR=5.3						
N14A	**Grayback Hills**	**32.16**	**329**	⇓P	**P**	**11 12 27.5**	**-0.2**
	baz=32,SNR=7.6						
K18A	**Toltan Ranch,**	**32.17**	**335**	⇑P	**P**	**11 12 27.4**	**-0.2**
	baz=32						
S09A	**Goldfield**	**32.20**	**321**	⇓P	**P**	**11 12 28.2**	**+0.1**
	baz=32						
L16A	**Fish Haven**	**32.25**	**333**	⇑P	**P**	**11 12 27.8**	**-0.6**
	baz=32,SNR=6.1						
M15A	**Larsen Ranch,**	**32.28**	**331**	⇓P	**P**	**11 12 28.7**	**0.0**
	baz=32,SNR=7.4						
O12A	**Currie**	**32.53**	**327**	P	**P**	**11 12 32.1**	**+1.2**
	baz=32,SNR=6.2						
L15A	**Malad City**	**32.67**	**332**	⇓P	**P**	**11 12 30.7**	**-1.4**
	baz=33,SNR=7.3						
HVU	**Hansel Valley**	**32.68**	**331**	eP	**P**	**11 12 32.5**	**+0.3**
	9.0nm,0.9s,mb4.7						
M14A	**Sheep Mountain**	**32.74**	**330**	⇓P	**P**	**11 12 32.9**	**+0.2**
	baz=33,SNR=10.0						
M13A	**Montello**	**33.03**	**329**	⇓P	**P**	**11 12 35.6**	**+0.3**
	baz=33,SNR=12						
J17A	**Brown Place, J**	**33.04**	**335**	⇓P	**P**	**11 12 35.4**	**0.0**
	baz=33,SNR=6.9						
REDW	**Red Top Meadow**	**33.10**	**335**	eP	**P**	**11 12 35.9**	**0.0**
	12nm,1.0s,mb4.8						
ELK	**Elko**	**33.13**	**327**	eP	**P**	**11 12 37.4**	**+1.2**
	26nm,2.0s,mb4.8						
SNOW	**Snow King Moun**	**33.14**	**335**	eP	**P**	**11 12 36.6**	**+0.4**
	12nm,0.7s,mb4.9						
LOHW	**Long Hollow**	**33.21**	**335**	eP	**P**	**11 12 36.5**	**-0.3**
	33nm,2.3s,mb4.8						
TPAW	**Teton Pass**	**33.25**	**335**	eP	**P**	**11 12 37.3**	**+0.2**
	42nm,1.9s,mb5.0						
K15A	**Arbon**	**33.28**	**332**	⇑P	**P**	**11 12 37.6**	**+0.2**
	baz=33,SNR=6.3						
NVAR	**Mina Array Bea**	**33.30**	**321**	P	**P**	**11 12 39.4**	**+1.7**
	5.6nm,0.8s,mb4.5,baz=134,slow=8.4,SNR=37						
NVAR				pP	pP	11 12 51.2	+1.8
	6.2nm,0.7s,baz=133,slow=9.1,SNR=13						
NVAR				PcP	PcP	11 15 19.3	+0.2
	0.4nm,0.6s,baz=108,slow=4.8,SNR=3.4						
MOOW	**Moose Ponds**	**33.38**	**335**	eP	**P**	**11 12 38.2**	**-0.1**
	17nm,1.9s,mb4.7						
M12A	**Wells**	**33.45**	**328**	⇓P	**P**	**11 12 39.2**	**+0.3**
	baz=33,SNR=10						
K14A	**Jones Ranch, D**	**33.46**	**331**	P	**P**	**11 12 39.0**	**-0.1**
	baz=33,SNR=13						
J14A	**Carey**	**34.23**	**332**	⇑P	**P**	**11 12 45.0**	**-0.6**
	baz=34,SNR=8.0						
K12A	**Draper Farm, C**	**34.35**	**330**	⇓P	**P**	**11 12 46.6**	**-0.2**
	baz=34,SNR=7.4						
M10A	**I.L. Ranch, Tu**	**34.37**	**327**	⇑P	**P**	**11 12 47.5**	**+0.5**
	baz=34						
L11A	**Cat Creek Ranc**	**34.43**	**328**	⇑P	**P**	**11 12 47.3**	**-0.1**
	baz=34,SNR=7.8						
J13A	**Cove Ranch, Pi**	**34.59**	**331**	⇓P	**P**	**11 12 48.2**	**-0.6**
	baz=34,SNR=6.0						
I14A	**Mackay**	**34.67**	**333**	⇓P	**P**	**11 12 50.0**	**+0.5**
	baz=35,SNR=6.1						
L10A	**Juniper Basin**	**34.73**	**328**	⇓P	**P**	**11 12 50.2**	**+0.1**
	baz=35,SNR=7.9						
HLID	**Hailey**	**34.82**	**331**	⇓P	**P**	**11 12 50.6**	**-0.2**
	baz=35						
HLID	**Hailey**	**34.82**	**331**	eP	**P**	**11 12 50.9**	**+0.1**
	4.6nm,0.9s,mb4.4						
H15A	**Lima**	**34.87**	**334**	⇑P	**P**	**11 12 51.3**	**+0.1**
	baz=35,SNR=7.2						
I13A	**Wildhorse Cree**	**34.96**	**332**	⇓P	**P**	**11 12 51.0**	**-1.0**
	baz=35,SNR=10						
K11A	**Parker Ranch,**	**35.01**	**329**	⇑P	**P**	**11 12 51.9**	**-0.6**
	baz=35						
H14A	**Leadore**	**35.18**	**334**	⇓P	**P**	**11 12 52.6**	**-1.3**
	baz=35,SNR=5.1						

I12A	Atlanta	35.34	331	⇑P	P	11 12 55.5	+0.2
	baz=35						
BEKR	Beckwourth	35.45	321	⇑P	P	11 12 57.4	+1.1
	baz=35						
H13A	Challis	35.53	333	P	P	11 12 57.0	+0.2
	baz=35,SNR=20						
N06A	Buffalo Meadow	35.69	323	⇑P	P	11 12 58.6	+0.3
	baz=36						
H12A	Diamond D Ranc	35.79	332	⇑P	P	11 12 59.0	0.0
	baz=36,SNR=18						
I11A	Placerville	35.82	330	⇓P	P	11 12 59.3	-0.1
	baz=36,SNR=34						
OHCM	Honcut	35.82	320	*e*P	P	11 12 59.2	-0.2
K09A	Rome	35.83	327	⇑P	P	11 12 59.9	+0.4
	baz=36,SNR=8.7						
L07A	Adell	36.24	325	⇑P	P	11 13 03.5	+0.6
	baz=36						
K08A	Mann Creek Ran	36.25	327	⇓P	P	11 13 03.6	+0.5
	baz=36						
J09A	Fry Pan Ranch,	36.30	328	⇑P	P	11 13 03.8	+0.3
	baz=36,SNR=6.9						
H11A	Donnelly	36.44	331	P	P	11 13 04.4	-0.2
	baz=36,SNR=11						
F13A	Darby	36.52	334	⇓P	P	11 13 03.8	-1.5
	baz=36						
K07A	Rock Creek Ran	36.64	326	⇓P	P	11 13 06.3	0.0
	baz=37						
J08A	Circle Bar Ran	36.68	327	⇓P	P	11 13 06.8	+0.1
	baz=37,SNR=18						
H10A	Noah's Angus R	36.70	330	⇓P	P	11 13 05.8	-1.1
	baz=37,SNR=5.8						
I09A	Lost Marbles R	36.74	329	⇑P	P	11 13 07.0	-0.2
	baz=37,SNR=26						
E13A	Victor	36.98	335	⇑P	P	11 13 08.1	-1.2
	baz=37,SNR=5.3						
G11A	Walters Elk Ra	37.08	332	⇑P	P	11 13 09.5	-0.7
	baz=37,SNR=10						
I08A	Drewsey	37.12	328	⇓P	P	11 13 10.3	-0.1
	baz=37						
C16A	Fuhringer Ranc	37.15	338	⇑P	P	11 13 09.9	-0.8
	baz=37,SNR=5.2						
BMO	Blue Mountains	37.16	330	*e*P	P	11 13 09.6	-1.2
	37nm,2.3s,mb4.8						
H09A	Durkee	37.20	330	⇑P	P	11 13 10.4	-0.7
	baz=37,SNR=5.2						
G10A	Bishop Farm, J	37.40	331	⇓P	P	11 13 12.1	-0.7
	baz=37						
E12A	Beaver Dam Sad	37.55	333	⇑P	P	11 13 12.6	-1.4
	baz=37						
H08A	Prairie City	37.60	329	⇑P	P	11 13 14.3	-0.2
	baz=38						
G09A	Cove	37.71	330	⇑P	P	11 13 14.2	-1.2
	baz=38						
E11A	Bogner Ranch,	37.79	333	⇓P	P	11 13 14.1	-1.9
	baz=38						
F10A	Beach Ranch, E	37.96	331	⇓P	P	11 13 16.8	-0.7
	baz=38,SNR=14						
F09A	S2 Ranch, Elgi	38.08	331	⇑P	P	11 13 17.7	-0.9
	baz=38						
C13A	Hot Springs	38.13	335	⇑P	P	11 13 18.0	-1.0
	baz=38						
D11A	Klaveano Farm,	38.37	333	⇑P	P	11 13 20.1	-0.9
	baz=38						
A14A	Double T Ranch	38.75	338	⇑P	P	11 13 23.1	-1.0
	baz=39						
E09A	Wood Farm, Sta	38.79	331	⇓P	P	11 13 23.1	-1.3
	baz=39						
C11A	Tepee Creek (N	38.95	334	⇓P	P	11 13 25.0	-0.9
	baz=39						
HOOD	Mount Hood Mea	39.69	327	*e*P	P	11 13 35.1	+3.1
	52nm,1.5s,mb5.0						
B09A	Rice	40.21	333	⇓P	P	11 13 35.3	-1.0
	baz=40						
C07A	Waterville	40.54	331	⇑P	P	11 13 38.9	-0.2
	baz=40						
A09A	Danville	40.82	333	P	P	11 13 40.8	-0.5
	baz=41,SNR=5.5						
A08A	Turner Farm, O	41.10	333	⇓P	P	11 13 42.9	-0.7
	baz=41						
A07A	Ashnola River,	41.67	332	⇓P	P	11 13 47.9	-0.4
	baz=42						
EDM	Edmonton	42.31	341	*e*P	P	11 13 51.4	-2.0
SIV	San Ignacio	43.06	133	P	P	11 13 57.6	-2.4
	4.1nm,0.8s,mb4.2,baz=310,slow=9.3,SNR=18						
SCHQ	Schefferville	45.09	21	P	P	11 14 12.5	-3.3
	1.4nm,0.5s,mb4.0,baz=236,slow=15,SNR=3.4						
YKA	Yellowknife Ar	50.72	347	P	P	11 14 56.7	-2.5
	3.6nm,0.7s,mb4.4,baz=151,slow=7.2,SNR=79						
YKA				pP	pP	11 15 09.9	-1.6
	1.8nm,0.8s,baz=148,slow=7.5,SNR=7.6						
YKA				ScP	ScP	11 20 09.5	+0.8
	0.6nm,0.9s,baz=141,slow=4.5,SNR=7.7						
YKA	Yellowknife Ar	50.72	347	P	P	11 14 56.7	-2.5
YKA				pP	pP	11 15 09.9	-1.6
YKA				ScP	ScP	11 20 09.5	+0.8
CPUP	Villa Florida	52.75	140	P	P	11 15 11.4	-3.5
	1.4nm,0.6s,mb4.1,baz=306,slow=7.4,SNR=6.8						
BDFB	Brasilia	52.89	123	P	P	11 15 13.7	-2.3
	1.2nm,0.5s,mb4.1,baz=343,slow=25,SNR=4.0						
BJI	Beijing	119.85	335	PKP	PKPdf	11 24 49.0	-1.0
HHC	Hu-ho-hao-te	120.89	339	*e*PKP	PKPdf	11 24 49.8	-2.2
HHC				PP	PP	11 26 20.9	+1.0
HHC				PKS		11 28 24.6	
HHC				SKS	SKSdf	11 31 50.3	-10
HHC				PP	PP		
	comp=Z,141nm,10.2s						
HHC				LR	LR		
	comp=N,172nm,15.5s,MS5.0						
HHC				LR	LR		
	comp=E,173nm,14.3s,MS5.0						
HHC				LR	LR		
	comp=Z,115nm,15.5s,MS4.6						
WMQ	Urumqi	122.21	0	*e*PKP	PKPdf	11 24 52.9	-1.6
NJ2	Nanjing	125.14	328	*e*PKP	PKPdf	11 24 59.4	-1.0
LZH	Lanzhou	127.67	343	*e*PKP	PKPdf	11 25 03.5	-1.7
LZH				LR	LR		
	comp=N,125nm,18.3s						
LZH				LR	LR		
	comp=Z,183nm,20.5s,MS4.8						
XAN	Xi'an	127.91	338	PKP	PKPdf	11 25 04.3	-1.4
XAN				PP	PP	11 27 09.6	+2.6
XAN				LR	LR		
	comp=E,79nm,25.3s						
XAN				LR	LR		
	comp=Z,158nm,43.6s						
CD2	Chengdu	132.52	341	PKP	PKPdf	11 25 12.6	-1.9
GYA	Guiyang	135.54	335	*e*PDIF	Pdif	11 22 18.8	-3.8
GYA				PKP	PKPdf	11 25 16.8	-3.5
GYA				PP	PP	11 27 57.3	+1.1
GYA				PP	PP		
	comp=Z,70nm,7.6s						
KMI	Kunming	138.21	339	PKP	PKPdf	11 25 25.3	0.0
CMAR	Chiang Mai Arr	145.67	341	PKPbc	PKPbc	11 25 36.9	-2.1
	comp=Z,2.6nm,0.9s,baz=342,slow=3.7,SNR=15						
CMAR				pPKPbc	pPKPbc	11 25 52.0	-0.5
	comp=Z,4.2nm,0.8s,baz=339,slow=3.5,SNR=9.7						

IDC ***16*** *11:15:46.6±1.2,2671N×12734E,h167^{km}±11^{km},mb2.8/4, mb1 3.0/4,mb1mx2.8/21,mbtmp2.8/4,Error ellipse: s-maj=40.3km s-min=23.6km az=66.0*
ISCJB ***16*** *11:15:47.7±0.5,276N±0.1×1273E±0.1,h139^{km}±13^{km}, mb3.1/3,Error ellipse: s-maj=25.0km s-min=6.1km az=141.4*
NEIC ***16*** *11:15:49.2,2766N×12728E,h126^{km},MG3.7(JMA),After JMA.*
JMA ***16*** *11:15:49.2±0.3,2766N×12728E,h126^{km},M3.7*
ISC 16 11:15:48.6±0.5**,276N**±01×**1273E**±01**,h136**^{km}±13^{km}**,n17,** σ**0^{s}83**/25**,mb3.1**/3**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	Iheya	0.82	133	P	Pn	11 16 11.1	+0.6
JAGN	Aguni-jima	1.00	183	P	Pn	11 16 12.4	+0.3
JAGN				S	Sn	11 16 30.0	+0.1
JOW	Kunigami	1.16	131	P	Pn	11 16 13.9	+0.4
	174nm,0.3s,baz=125,slow=24,SNR=1333						
JOW				S	Sn	11 16 31.8	-0.6
	127nm,0.3s,baz=156,slow=27,SNR=27						
JOW	Kunigami	1.16	131	P	Pn	11 16 13.9	+0.4
JOW				S	Sn	11 16 32.0	-0.4
JKE	Kume jima 2	1.34	200	P	Pn	11 16 15.7	+0.2
JKE				S	Sn	11 16 35.4	-0.5
NAH1	Naha	1.43	166	P	Pn	11 16 17.1	+0.7
NAH1				S	Sn	11 16 37.3	-0.2
JTK	Tokunoshima	1.48	82	P	Pn	11 16 16.8	-0.1
JTK				S	Sn	11 16 37.9	-0.5
JJT2	Tamagusuku 2	1.50	164	P	Pn	11 16 18.3	+1.1
JAM	Amami Oshima	2.20	68	P	Pn	11 16 25.2	-0.1
JAM				*e*S	Sn	11 16 52.6	-0.8
JZK	Kikaishima	2.47	73	P	Pn	11 16 29.3	+0.6
JZK				*e*S	Sn	11 16 59.7	+0.2
JTN	Tanegashima 3	4.43	46	P	Pn	11 16 54.2	0.0
YHNB	Yeheng	6.07	243	*e*Pn	Pn	11 17 17.5	+1.4
NACB	Ninganchiao	6.16	238	*e*Pn	Pn	11 17 15.8	-1.6
SSLB	Suanglung	6.86	238	*e*Pn	Pn	11 17 25.2	-1.6
SONM	Songino Array	25.96	327	P	P	11 21 10.2	+1.9
	0.4nm,0.4s,mb3.4,baz=146,slow=10,SNR=6.9						
MKAR	Makanchi Array	40.01	311	P	P	11 23 09.4	-0.6
	0.1nm,0.5s,mb2.7,baz=88,slow=12,SNR=3.7						
YKA	Yellowknife Ar	77.64	25	P	P	11 27 28.7	-0.9
	0.2nm,0.4s,mb3.1,baz=304,slow=5.8,SNR=8.1						

ISCJB ***16*** *11:27:30.9±0.9,2280S±007×704W±0.1,h10^{km},mb4.1/5, Error ellipse: s-maj=15.8km s-min=10.5km az=2.0*
IDC ***16*** *11:27:35.9±4.3,2298S×7021W,h33^{km}±29^{km},mb4.0/5, mb1 4.0/7,mb1mx3.7/18,mbtmp3.9/7,ML3.8/3,Error ellipse: s-maj=35.4km s-min=24.5km az=91.0*
ISC 16 11:27:33.3±3.8**,230S**±01×**704W**±02**,h17**^{km}±21^{km}**,n13,** σ**0^{s}56**/10**,mb4.1**/5**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.38	74	Pg	Pg	11 27 59.8	-0.1
	431nm,0.3s,SNR=215						
LVC				Lg		11 28 16.8	
	448nm,0.3s,SNR=59						
LVC				LR	LR	11 28 31.7	
	comp=Z,1μm,21.5s,baz=135,slow=44						
CFAA	Coronel Fontan	8.78	168	Pn	Pn	11 29 39.1	-0.3
	0.1nm,0.3s,baz=2.3,slow=14,SNR=8.0						
CFAA				Sn	Sn	11 31 26.5	+8.5
	0.1nm,0.3s,baz=135,slow=14,SNR=3.4						
SIV	San Ignacio	11.18	53	Pn	Pn	11 30 12.5	+0.1
	0.9nm,0.3s,baz=240,slow=11,SNR=15						
CPUP	Villa Florida	12.30	108	Pn	Pn	11 30 28.4	+0.7
	0.3nm,0.3s,baz=270,slow=15,SNR=2.1						
ULM	Lac du Bonnet	76.35	343	P	P	11 39 21.0	-0.2
	1.2nm,0.4s,mb4.1,baz=132,slow=2.6,SNR=2.9						
TORD	Torodi Ar. Bea	79.11	71	P	P	11 39 36.4	-1.0
	2.3nm,0.6s,mb4.3,baz=255,slow=5.2,SNR=25						
MAW	Mawson	83.28	164	P	P	11 39 59.2	+0.5
	1.5nm,0.6s,mb4.2,baz=219,slow=6.5,SNR=5.7						
BOSA	Boshof	83.92	118	P	P	11 40 02.3	-0.5
	2.2nm,0.9s,mb4.3,baz=301,slow=5.9,SNR=4.3						
YKA	Yellowknife Ar	92.15	341	P	P	11 40 42.1	+0.8
	0.2nm,0.6s,mb3.6,baz=138,slow=4.1,SNR=8.4						
ASAR	Alice Springs	127.97	209	PKP	PKPdf	11 46 38.6	-0.3
	0.2nm,0.9s,baz=116,slow=2.2,SNR=4.5						
WRA	Warramunga Arr	130.99	211	PKP	PKPdf	11 46 44.4	-0.4
	0.3nm,0.8s,baz=162,slow=1.9,SNR=5.5						
MKAR	Makanchi Array	147.62	36	PKPbc	PKPbc	11 47 16.9	+0.1
	0.4nm,0.6s,baz=356,slow=3.2,SNR=4.5						
PSI	Prapat	157.39	151	PKP	PKPdf	11 47 30.6	+1.1
	4.3nm,0.3s,baz=162,slow=17,SNR=4.7						

KRSC ***16*** *12:09:11.8±0.8,5268N×15533E,h577^{km}±37^{km},ML4.5*
MOS ***16*** *12:09:16.4±1.4,5340N×15434E,h503^{km},mb3.7/5,Error ellipse: s-maj=24.3km s-min=18.8km az=67.8*
ISCJB ***16*** *12:09:17.1±0.4,5341N±009×1539E±02,h484^{km}±9^{km}, mb3.3/8,Error ellipse: s-maj=19.2km s-min=11.3km az=37.8*
NEIC ***16*** *12:09:18.0±0.4,5347N×15378E,h476^{km}±8^{km},mb4.2/2, Error ellipse: s-maj=14.8km s-min=8.4km az=139.0*
IDC ***16*** *12:09:18.1±1.2,5347N×15380E,h479^{km}±18^{km},mb2.9/8, mb1 3.1/10,mb1mx2.9/25,mbtmp3.0/10,Error ellipse: s-maj=18.7km s-min=15.6km az=152.0*
ISC 16 12:09:18.0±0.4**,5343N**±009×**1539E**±02**,h479**^{km}±9^{km}**,n36,** σ**0^{s}97**/41**,mb3.3**/8**,1C,Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.09	122	P	P	12 10 22.6	+1.0
PEA0B	Petropavlovsk-	2.32	96	*e*P	P	12 10 23.3	+0.5
PETK	Petropavlovsk-	2.32	96	P	P	12 10 23.1	+0.3
	5.5nm,0.3s,baz=260,slow=7.2,SNR=236						
GNL	Ganaly	2.44	82	*i* P	P	12 10 24.2	+0.7
GRL	Gorelyy	2.68	107	P	P	12 10 23.7	-1.4
PET	Petropavlovsk	2.90	96	⇑*i*P	P	12 10 26.5	0.0
PET				*e*S	S	12 11 23.0	+0.7
PET				pmax	pmax		
	comp=Z,88nm,0.6s						
PET				smax			
	comp=E,20nm,0.5s						
PET				smax			
	comp=N,27nm,0.6s						
PET	Petropavlovsk	2.90	96	*i* P	P	12 10 26.4	-0.1
PET	Petropavlovsk	2.90	96	*e*P	P	12 10 26.5	0.0
RUS	Russkaya	2.98	108	P	P	12 10 23.8	-3.2
RUS				*e*S	S	12 11 18.0	-5.3
SPN	Mys Shipunski	3.71	93	*e*P	P	12 10 31.1	-1.4
SPN				*e*S	S	12 11 27.2	-6.1
TUMR	Tumrok	4.11	61	*e*P	P	12 10 36.9	+1.2
TUMR				S	S	12 11 37.2	-2.1
KMNR	Kamenistaya	4.37	55	*i* P	P	12 10 39.1	+1.1
SRDR	Sredinnyy	4.45	47	P	P	12 10 40.0	+1.4
ZLN	Zelenaya	4.78	54	P	P	12 10 40.7	-0.9
KLY	Klyuchi	4.86	51	S	S	12 11 52.4	+1.0
KBTR	Krutoberegovo	5.87	58	P	P	12 10 49.4	-2.5
KBTR				*e*S	S	12 12 01.6	-7.3
FX1	Attu Island--F	11.59	85	P	P	12 11 52.5	+0.5
	comp=N,4.0nm,0.3s,baz=358,slow=11,SNR=6.9						
FX1	Attu Island--F	11.59	85	P	P	12 11 52.5	+0.5
FX1				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ERM	Erimo	13.49	216	*e*P	P	12 12 11.8	-0.6
BILL	Bilibino	15.81	17	P	P	12 12 36.4	-0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BILL	Bilibino	15.81	17	P	P	12 12 36.4	-0.1
	comp=Z,3.0nm,0.4s						
MJAR	Matsushiro Arr	20.12	219	P	P	12 13 19.5	+0.8
	comp=Z,1.2nm,0.6s,baz=18,slow=9.9,SNR=8.6						
MJAR	Matsushiro Arr	20.12	219	P	P	12 13 19.5	+0.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HIA	Hailar	21.59	273	P	P	12 13 31.7	-0.2
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	Hailar	21.59	273	P	P	12 13 31.7	-0.2
	comp=Z,5.3nm,0.8s,mb4.1						
SONM	Songino Array	30.17	279	P	P	12 14 47.7	0.0
	comp=Z,0.3nm,0.4s,mb3.0,baz=59,slow=8.4,SNR=3.5						
KURK	Kurchatov	44.34	298	P	P	12 16 44.0	-0.1
	comp=Z,1.3nm,0.5s,mb3.6,baz=61,slow=7.9,SNR=5.3						
KURK	Kurchatov	44.34	298	P	P	12 16 44.0	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
KURK	Kurchatov	44.34	298	P	P	12 16 44.0	-0.1
MKAR	Makanchi Array	44.60	292	P	P	12 16 45.9	-0.3
	comp=Z,0.6nm,0.5s,mb3.3,baz=57,slow=7.1,SNR=24						
MKAR	Makanchi Array	44.60	292	P	P	12 16 45.9	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	45.40	41	P	P	12 16 52.4	+0.4
	comp=Z,0.4nm,0.6s,mb3.0,baz=302,slow=7.3,SNR=13						
BVAR	Borovoye Array	47.20	305	P	P	12 17 05.5	-0.4
	comp=Z,1.1nm,0.4s,mb3.6,baz=51,slow=8.9,SNR=8.9						
BVAR	Borovoye Array	47.20	305	P	P	12 17 05.5	-0.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	54.66	252	P	P	12 18 01.1	+0.3
	comp=Z,0.2nm,0.3s,mb2.9,baz=22,slow=5.6,SNR=5.4						
ASAR	Alice Springs	78.70	199	P	P	12 20 29.7	+0.1
	comp=Z,0.3nm,0.5s,mb3.1,baz=12,slow=4.8,SNR=11						

CSEM ***16*** *12:23:01.5±0.5,2997N×3642E,h10^{km},ML3.3,Error ellipse: s-maj=12.5km s-min=5.7km az=70.0*
HLW ***16*** *12:23:02.4,2997N×3667E,h25^{km},Mb3.3*
SGS ***16*** *12:23:02.5,3015N×3626E,h6^{km}*
ISCJB ***16*** *12:23:03.3±0.8,2986N±004×3625E±006,h0^{km},Error ellipse: s-maj=7.7km s-min=5.1km az=173.0*
GII ***16*** *12:23:03.3±0.0,2984N×3628E,h0^{km},EXPLOSION*
ISC 16 12:23:03.5±0.8**,2987N**±004×**3629E**±006**,h0**^{km}**,n24,** σ**0^{s}79**/28**,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.08	263	Pg	Pg	12 23 23.7	-0.6
HRFI	Mount Harif	1.10	279	Pg	Pg	12 23 23.8	-0.8
ZFRI	Zfri	1.18	306	Pg	Pg	12 23 25.5	-0.6
EIL	Elat	1.18	261	Pg	Pg	12 23 26.4	+0.3
MBRI	Mt Berech	1.20	267	Pg	Pg	12 23 25.9	-0.5
MBRI				Sg	Sg	12 23 43.3	+1.4
PRNI	Paran	1.21	294	Pg	Pg	12 23 25.9	-0.8
JLOS		1.33	212	P	Pg	12 23 28.7	-0.3
JLOS		1.33	212	P	Pg	12 23 28.7	-0.3
JLOS				S	Sg	12 23 48.5	+2.3
KRMI	Paran Flat	1.38	281	Pn	Pn	12 23 29.1	-0.8
HBST	Basata	1.50	245	P	Pn	12 23 31.4	-0.3
RMNI	Mount Ramon	1.50	299	Pn	Pn	12 23 31.1	-0.7
MZDA	Masada	1.64	331	Pn	Pn	12 23 33.8	+0.1
TBKS	Tabuk	1.66	172	P	Pn	12 23 34.0	+0.1
BDAS	Al Bad'	1.77	216	S	Sn	12 23 58.8	+0.2
BDAS	Al Bad'	1.77	216	P	Pn	12 23 34.8	-0.6
YTIR	Yattir	1.80	326	Pn	Pn	12 23 36.1	+0.3
RTMI	Retamim	1.81	311	Pn	Pn	12 23 36.7	+0.7
DSI	Dead Sea	1.86	335	Pn	Pn	12 23 37.7	+1.0
DSI				Sn	Sn	12 24 03.2	+2.2
HNKL	Nakhl	2.00	272	P	Pn	12 23 38.6	0.0
HNKL				S	Sn	12 24 04.4	0.0
HKAT	Jabal Katrina	2.41	237	P	Pn	12 23 44.0	-0.2
TR2		2.69	237	P	Pn	12 23 47.7	-0.3
AMAG	Maghara	2.77	287	P	Pn	12 23 48.3	-0.9
SUZ		3.00	270	P	Pn	12 23 51.9	-0.4
BIDS	Bi'r al Bayda'	3.05	169	P	Pn	12 23 53.2	+0.2

IDC 16 12:27:23.1±2.1**,3358S**×**7177W,h0**^{km}**,mb4.0**/1**, mb1 3.7**/3**,mb1mx3.6**/16**,mbtmp3.6**/3**,ML4.1**/1**,Error ellipse: s-maj=220.0km s-min=39.7km az=152.0,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	3.58	58	Pn	Pn	12 28 21.2	+1.5
	1.5nm,0.3s,baz=247,slow=10,SNR=41						
CFAA				Sn	Sn	12 29 02.1	-0.6
	2.0nm,0.3s,baz=87,slow=17,SNR=5.1						
CPUP	Villa Florida	14.45	64	Pn	Pn	12 30 47.0	-1.9
	0.2nm,0.3s,baz=124,slow=3.6,SNR=2.2						
CPUP				Sn	Sn	12 33 22.6	-7.2
	0.3nm,0.3s,baz=252,slow=20,SNR=2.2						
TORD	Torodi Ar. Bea	83.86	70	P	P	12 39 55.1	+0.2
	1.0nm,0.8s,baz=251,slow=4.9,SNR=5.5						
ZALV	Zalesovo Beam	153.75	32	PKPbc	PKPbc	12 47 22.9	-0.6
	0.9nm,0.4s,baz=300,slow=2.8,SNR=5.3						
MKAR	Makanchi Array	156.32	48	PKPab	PKPab	12 47 47.7	+0.1
	0.4nm,0.6s,baz=277,slow=4.6,SNR=5.2						

DDA ***16*** *12:37:01.2,3940N×2625E,h7^{km}±5^{km},Md2.9*
ISCJB ***16*** *12:37:02.3±0.7,3945N±004×2632E±008,h25^{km}±8^{km}, Error ellipse: s-maj=11.8km s-min=5.0km az=150.3*
CSEM ***16*** *12:37:03.3±0.1,3968N×2666E,h2^{km},MD2.8,Error ellipse: s-maj=1.8km s-min=1.1km az=30.0*
ISK ***16*** *12:37:04.6,3977N×2667E,h9^{km},MD2.8*
ISC 16 12:37:02.3±0.7**,3945N**±004×**2630E**±008**,h25**^{km}±7^{km}**,n10,** σ**1^{s}13**/16**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.34	114	*i* P	Pb	12 37 11.3	+1.4
AYVA				*i* S	Sb	12 37 14.3	-0.7
EZN	Ezine	0.38	3	*e*PG	Pb	12 37 10.0	-0.6
EZN				*e*SG	Sb	12 37 15.3	-0.9
BOZC	Bozcaada	0.44	334	*i* P	Pb	12 37 11.3	-0.2
BOZC				*i* S	Sb	12 37 17.5	-0.3
GADA	Gvkgeada	0.80	338	*e*PG	Pb	12 37 19.4	+1.8
GADA				*e*SG	Sb	12 37 28.7	+0.6
URLA	Izmir	1.11	168	*i* P	Pn	12 37 20.6	-1.6
URLA				*i* S	Sb	12 37 37.4	+0.6
BALB	Balikesir	1.24	81	*e*PG	Pn	12 37 22.3	-1.7
IZM	Izmir	1.29	144	*e*PN	Pn	12 37 31.8	+7.1
ENEZ	Enez	1.29	355	*e*PG	Pn	12 37 25.8	+1.1
RKY	Sarkoy-Tekirda	1.41	28	*e*PG	Pn	12 37 24.9	-1.4
DURS	Dursunbey	1.69	84	*i* P	Pn	12 37 30.2	0.0
DURS				*i* S	Sn	12 37 52.9	+1.9

BEO ***16*** *12:54:33.8±1.5,4418N×1719E,ML2.9/3*
CSEM ***16*** *12:54:35.8±0.2,4439N×1762E,h22^{km}±1^{km},ML2.9,Error ellipse: s-maj=7.5km s-min=2.2km az=34.0*
ISCJB ***16*** *12:54:38.6±1.2,4447N±009×175E±0.1,h22^{km}±8^{km},Error ellipse: s-maj=18.7km s-min=6.5km az=35.9*
VIE ***16*** *12:54:39.2±0.9,4458N×1748E,h10^{km},mb2.4/1,ML2.0/2, Error ellipse: s-maj=9.2km s-min=4.6km az=11.0 77 km SSW of Slavonski Brod*
ISC 16 12:54:38.2±1.1**,4443N**±010×**1751E**±010**,h16**^{km}±6^{km}**,n13,** σ**0^{s}63**/23**,3C-1D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	0.40	324	*e*Pg	Pg	12 54 45.5	-0.8
BLY				*e*Sg	Sg	12 54 52.5	+0.8
BBLS	Lazići	1.48	112	*e*Pg	Pg	12 55 02.7	-3.9
BBLS				*e*Sg	Sg	12 55 25.8	-0.1
FRGS	Fruska Gora	1.79	65	*e*Pn	Pn	12 55 09.5	+1.0
BOJS	Bojanci	1.93	305	*i* Pn	Pn	12 55 10.2	-0.1
BOJS				*i* Sn	Sn	12 55 35.1	+0.9
BOJS							
	comp=Z,7.0nm,0.3s						
BOJS	Bojanci	1.93	305	*i* Pn	Pn	12 55 10.2	-0.1
BOJS				*i* Sn	Sn	12 55 35.1	+0.9
CRES	Cresnjev	2.02	315	*i* Pn	Pn	12 55 11.5	0.0
CRES				*i* Sn	Sn	12 55 40.4	+4.0
CRES	Cresnjev	2.02	315	*e*Pn	Pn	12 55 10.8	-0.7
CRES				*e*Sn	Sn	12 55 35.8	-0.5
KOGS	Kog	2.21	337	*e*Pn	Pn	12 55 13.9	-0.2
KOGS				*e*Sn	Sn	12 55 40.9	-0.1
PDKS	Podkum	2.41	314	*i* Pn	Pn	12 55 17.0	+0.1
CEY	Cerknica	2.54	302	*e*Pn	Pn	12 55 18.7	-0.1
ARSA	Arzberg	3.15	335	⇓*i*Pn	Pn	12 55 26.6	-0.5
ARSA				⇑*i*Sn	Sn	12 56 03.8	-0.4
MOA	Molln	4.10	328	⇑*i*Pn	Pn	12 55 41.0	+0.9
MOA				⇑*i*Sn	Sn	12 56 27.1	-0.5
MOA	Molln	4.10	328	Pn	Pn	12 55 41.0	+0.9
MOA				Sn	Sn	12 56 27.1	-0.6

IDC ***16*** *12:54:53.8±1.1,1560N×12041E,h0^{km},mb3.4/5, mb1 3.6/5,mb1mx3.5/19,mbtmp3.4/5,Error ellipse: s-maj=59.1km s-min=19.6km az=60.0*
ISCJB ***16*** *12:54:58.4±1.2,1556N±004×11955E±006,h20^{km}±8^{km}, mb3.4/4,Error ellipse: s-maj=10.3km s-min=6.8km az=5.8*
ISC 16 12:54:59.7±1.1**,1561N**±003×**11958E**±006**,h16**^{km}±5^{km}**, n18,** σ**1^{s}33**/27**,mb3.4**/4**,1C-2D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.36	63	*e*P	Pg	12 55 07.8	+0.6
SCZP				*e*S	Sg	12 55 11.8	-0.3
BOLP	Bolinao	0.83	23	*e*P	Pb	12 55 15.2	-0.6
BOLP				*e*S	Sb	12 55 25.0	-1.7
BALP	Baler	1.93	86	*e*P	Pn	12 55 30.0	-1.8
BALP				*e*S	Sn	12 55 50.2	-5.4
LUBP	Lubang	1.97	161	*e*P	Pn	12 55 34.1	+1.7
TGY	Tagaytay City	1.99	139	⇓*e*P	Pg	12 55 39.1	+1.2
ABRA	Dolores	2.30	28	*e*P	Pn	12 55 36.9	-0.1
ABRA				*e*S	Sn	12 56 04.9	-0.1
POLP	Polilio Island	2.44	111	*e*P	Pn	12 55 40.4	+1.5
POLP				*e*S	Sn	12 56 07.2	-1.2
SIPP	Brgy, Tapao	2.45	20	⇑*i*P	Pn	12 55 41.8	+2.8
SIPP				*i* S	Sg	12 56 16.4	-2.1
CAUP	Cauayan	2.53	58	*e*P	Pn	12 55 40.2	+0.1
CAUP				*e*S	Sn	12 56 10.5	-0.1
PIP	Pasuquin	2.88	20	⇓*i*P	Pn	12 55 46.5	+1.7
PIP				*i* S	Sn	12 56 21.1	+2.0
PALP	Palanan	3.09	62	*e*P	Pn	12 55 49.5	+1.7
BUSP	Coron	3.64	170	*e*P	Pn	12 55 53.7	-1.6
BUSP				*e*S	Sn	12 56 24.2	-14
ENPP	El Nido	4.38	182	*e*P	Pn	12 56 03.9	-1.7
CMAR	Chiang Mai Arr	19.93	281	P	Pn	12 59 36.8	+4.1
	0.5nm,0.7s,baz=90,slow=8.6,SNR=4.4						
SONM	Songino Array	33.93	344	P	P	13 01 41.0	-1.0

	0.6nm,0.6s,mb3.7,baz=173,slow=8.8,SNR=5.8						
WRA	**Warramunga Arr**	**38.19**	**157**	P	**P**	**13 02 12.5**	**-6.3**
	0.3nm,0.4s,mb3.4,baz=331,slow=9.9,SNR=10.0						
WRA				PcP	PcP	13 04 29.1	-4.2
	0.4nm,0.5s,baz=339,slow=3.1,SNR=8.0						
ASAR	**Alice Springs**	**41.47**	**160**	P	**P**	**13 02 40.2**	**-5.7**
	0.2nm,0.3s,mb3.2,baz=338,slow=7.7,SNR=12						
ASAR				PcP	PcP	13 04 40.1	-3.5
	0.3nm,0.5s,baz=342,slow=3.1,SNR=5.2						
MKAR	**Makanchi Array**	**43.86**	**323**	P	**P**	**13 03 05.0**	**-0.2**
	0.5nm,0.7s,mb3.4,baz=117,slow=9.9,SNR=5.4						

*TIF **16** 13:07:02.9, 41.45N×43.56E, h10km±2km*
*ISCJB **16** 13:07:03.5±0.8, 41.53N±0.03×43.45E±0.03, h6km±6km, Error ellipse: s-maj=5.3km s-min=3.5km az=175.0*
*ISK **16** 13:07:04.0, 41.52N×43.32E, h10km, MD3.3*
*NSSP **16** 13:07:05.9, 41.33N×43.47E, h15km, ML2.8*
*CSEM **16** 13:07:07.6±0.3, 41.32N×43.32E, h30km, MD3.3, Error ellipse: s-maj=8.1km s-min=3.5km az=22.0*
*DDA **16** 13:07:10.8, 41.12N×43.01E, h7km±6km, Md2.9*
ISC 16 13:07:03.6±0.5, **41.55N**±0.03×**43.44E**±0.03, **h4**km±5km, **n22**, σ**0.92**/39, **5D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.67**	**49**	P	**Pg**	**13 07 16.6**	**+0.2**
GOR				S	**Sg**	**13 07 26.5**	**+1.4**
KAMZ	**Kamo**	**0.82**	**152**	⇓P	**Pg**	**13 07 21.1**	**+1.8**
KAMZ				S	**Sg**	**13 07 30.7**	**+0.8**
STE	**Stepanavan**	**0.89**	**127**	⇓P	**Pg**	**13 07 19.5**	**-1.2**
STE				S	**Sg**	**13 07 30.5**	**-1.7**
KARS	**Kars**	**0.97**	**196**	*e*PG	**Pg**	**13 07 22.2**	**0.0**
KARS				*e*SG	**Sg**	**13 07 35.0**	**+0.3**
MTA	**Mtatsminda**	**1.03**	**81**	P	**Pg**	**13 07 22.0**	**-1.3**
MTA				S	**Sg**	**13 07 35.6**	**-1.0**
HARI	**Harich**	**1.03**	**155**	⇓P	**Pg**	**13 07 24.6**	**+1.2**
HARI				S	**Sg**	**13 07 36.4**	**-0.3**
HNAZ	**Hnaberd**	**1.06**	**149**	⇓P	**Pg**	**13 07 25.0**	**+1.1**
HNAZ				S	**Sg**	**13 07 38.2**	**+0.6**
DIGO	**Kars**	**1.13**	**182**	*i* P	**Pg**	**13 07 24.7**	**-0.6**
DIGO				*i* S	**Sg**	**13 07 37.2**	**-2.8**
ARTV	**Artvin**	**1.19**	**253**	*i* P	**Pg**	**13 07 27.0**	**+0.6**
ARTV				*i* S	**Sg**	**13 07 41.4**	**-0.5**
ARTV	**Artvin**	**1.19**	**253**	*i* P	**Pg**	**13 07 27.0**	**+0.6**
ARTV				*i* S	**Sg**	**13 07 41.3**	**-0.6**
DAGI	**Agillar**	**1.24**	**248**	*i* P	**Pg**	**13 07 27.9**	**+0.6**
DAGI				*i* P		13 07 43.0	
DAGI				*i* S	**Sg**	**13 07 43.2**	**-0.2**
DBOC	**Borcka**	**1.34**	**262**	*i* P	**Pn**	**13 07 29.7**	**+0.5**
DBOC				*i* S	**Sg**	**13 07 47.0**	**+0.1**
BCA	**Borcka**	**1.37**	**266**	*e*PN	**Pn**	**13 07 28.1**	**-1.3**
DGRG	**David-gareji**	**1.46**	**93**	P	**Pn**	**13 07 30.0**	**-0.7**
DGRG				S	**Sb**	**13 07 50.7**	**+0.5**
GNI	**Garni**	**1.71**	**144**	*e*PN	**Pn**	**13 07 34.8**	**+0.7**
GNI				*e*SN	**Sn**	**13 07 57.5**	**+1.1**
GNI	**Garni**	**1.71**	**144**	⇓P	**Pn**	**13 07 34.5**	**+0.3**
GNI	**Garni**	**1.71**	**144**	*e*Pn	**Pn**	**13 07 34.8**	**+0.6**
GNI				S	**Sn**	**13 07 55.6**	**-0.8**
GNI				*e*Sn	**Sn**	**13 07 57.6**	**+1.2**
PZAR	**Pazar-Rize**	**1.94**	**260**	*e*PN	**Pn**	**13 07 36.6**	**-0.8**
AGRB	**Hanur-Agry**	**2.00**	**190**	*e*PN	**Pn**	**13 07 38.7**	**+0.6**
VADZ	**Vardenis**	**2.23**	**127**	P	**Pn**	**13 07 36.0**	**-5.2**
VADZ				S	**Sn**	**13 08 09.0**	**-0.1**
EZM	**Erzurum**	**2.27**	**225**	*e*PN	**Pn**	**13 07 41.7**	**-0.2**
GUMT	**Gumushane**	**3.18**	**251**	*e*PN	**Pn**	**13 07 54.6**	**+0.2**

*IDC **16** 13:56:23.1±1.6, 2.73N×127.15E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/18, mbtmp3.7/5, Error ellipse: s-maj=136.0km s-min=19.8km az=67.0*
*ISCJB **16** 13:56:25.2±1.4, 3.0N±0.2×127.8E±0.6, h33km, mb3.6/6, Error ellipse: s-maj=96.8km s-min=12.6km az=160.0*
*NEIC **16** 13:56:27.8±0.8, 2.83N×127.46E, h35km, mb4.0/2, Error ellipse: s-maj=57.8km s-min=9.3km az=71.0*
ISC 16 13:56:26.9±1.3, **3.1N**±0.2×**128.1E**±0.6, **h35**km, **n10**, σ**0.24**/10, **mb3.6**/6, **North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.19**	**186**	Pn	**P**	**14 01 09.6**	**+0.1**
WRAB	**Tennant Creek**	**23.70**	**165**	*e*P	**P**	**14 01 35.7**	**0.0**
	1.7nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**23.70**	**165**	P	**P**	**14 01 35.9**	**+0.1**
	1.8nm,0.7s,mb3.6,baz=343,slow=11,SNR=18						
ASAR	**Alice Springs**	**27.20**	**168**	P	**P**	**14 02 07.3**	**-0.1**
	0.3nm,0.8s,mb2.9,baz=346,slow=7.5,SNR=12						
MK31	**Makanchi Array**	**58.84**	**325**	*e*P	**P**	**14 06 21.8**	**-0.2**
MKAR	**Makanchi Array**	**58.84**	**325**	P	**P**	**14 06 22.1**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=120,slow=8.4,SNR=11						
KURK	**Kurchatov**	**62.99**	**327**	P	**P**	**14 06 50.7**	**+0.6**
	0.4nm,0.5s,mb3.8,baz=132,slow=6.0,SNR=4.0						
KURK	**Kurchatov**	**62.99**	**327**	*e*P	**P**	**14 06 50.6**	**+0.5**
	0.7nm,0.4s,mb4.1						
AKTK	**Aktyubinsk**	**74.98**	**322**	P	**P**	**14 08 04.4**	**-0.3**
AKTO	**Aktyubinsk**	**74.98**	**322**	P	**P**	**14 08 04.4**	**-0.3**
	0.7nm,0.5s,mb3.9,baz=116,slow=7.5,SNR=3.5						

*IDC **16** 14:28:46.4±0.7, 47.26N×156.38E, h0km, mb3.9/13, mb1 4.1/17, mb1mx4.0/28, mbtmp3.9/17, ML3.5/4, Error ellipse: s-maj=20.9km s-min=13.3km az=155.0*
*ISCJB **16** 14:28:49.7±0.6, 47.39N±0.06×156.3E±0.1, h33km, mb4.0/21, Error ellipse: s-maj=11.4km s-min=6.6km az=39.0*
*MOS **16** 14:28:49.9±1.1, 47.34N×156.34E, h35km, mb4.3/16, Error ellipse: s-maj=13.1km s-min=9.7km az=99.6*
*NEIC **16** 14:28:51.7±0.6, 47.43N×156.39E, h35km, mb4.2/5, Error ellipse: s-maj=14.2km s-min=8.7km az=146.0*
ISC 16 14:28:46.9±2.3, **47.33N**±0.06×**156.41E**±0.09, **h2**km±14km, **n59**, σ**1.06**/58, **mb4.0**/21, **3C-5D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.36**	**357**	*e*PN	**Pn**	**14 29 41.6**	**+1.2**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PEA0B	**Petropavlovsk-**	**5.84**	**8**	*e*Pn	**Pn**	**14 30 14.6**	**+0.2**
PETK	**Petropavlovsk-**	**5.84**	**8**	Pn	**Pn**	**14 30 13.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=245,slow=29,SNR=22						
PETK				Sn	**Sn**	**14 31 21.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=107,slow=18,SNR=2.4						
PET	**Petropavlovsk**	**5.88**	**13**	*e*PN	**Pn**	**14 30 13.9**	**-1.0**
PET	**Petropavlovsk**	**5.88**	**13**	*e*Pn	**Pn**	**14 30 12.1**	**-2.9**
YSS	**Yuzh-Sakhalins**	**9.32**	**273**	*e*PN	**Pn**	**14 31 04.0**	**+1.9**
YSS	**Yuzh-Sakhalins**	**9.32**	**273**	P	**Pn**	**14 31 01.8**	**-0.3**
ASAJ	**Asahikawa**	**10.18**	**257**	Pn	**Pn**	**14 31 12.1**	**-1.9**
	comp=Z,1.3nm,0.3s,baz=111,slow=20,SNR=11						
ASAJ	**Asahikawa**	**10.18**	**257**	PN	**Pn**	**14 31 12.1**	**-1.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**10.83**	**245**	⇑*i*PN	**Pn**	**14 31 24.7**	**+1.9**
FX1	**Attu Island--F**	**12.10**	**56**	Pn	**Pn**	**14 31 39.0**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=264,slow=19,SNR=3.5						
FX1	**Attu Island--F**	**12.10**	**56**	PN	**Pn**	**14 31 39.0**	**-1.1**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1	**Attu Island--F**	**12.10**	**56**	Pn	**Pn**	**14 31 39.0**	**-1.1**
HABR	**Khabarovsk**	**14.37**	**282**	*e*P	**Pn**	**14 32 10.2**	**-1.0**
HABR						14 34 50.1	
HABR				MLR	MLR		
	comp=Z,53nm,15.0s						
HABR				MLR	MLR		
	comp=Z,22nm,14.0s						
MJAR	**Matsushiro Arr**	**17.27**	**238**	P	**Pn**	**14 32 46.2**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=29,slow=14,SNR=3.7						
YAK	**Yakutsk**	**21.12**	**324**	⇓*i*P	**P**	**14 33 35.4**	**+2.9**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
BILL	**Bilibino**	**21.37**	**10**	⇓*i*P	**P**	**14 33 37.7**	**+2.5**
BILL				*i*		14 33 56.4	
BILL				pmax	pmax		
	comp=Z,16nm,2.5s,mb3.9						
BILL	**Bilibino**	**21.37**	**10**	*e*P	**P**	**14 33 36.5**	**+1.3**
	comp=Z,9.3nm,1.2s,mb4.0						
KSRS	**Korea Array**	**23.12**	**255**	P	**P**	**14 33 54.5**	**+0.4**
	comp=Z,1.9nm,0.6s,mb3.7,baz=56,slow=9.9,SNR=9.4						
KSRS	**Korea Array**	**23.12**	**255**	*e*P	**P**	**14 33 55.2**	**+1.0**
HIA	**Hailar**	**24.32**	**288**	⇑*i*P	**P**	**14 34 06.1**	**+0.5**
TIXI	**Tiksi**	**27.59**	**342**	⇑*i*P	**P**	**14 34 34.8**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb3.9						
INK	**Inuvik**	**39.95**	**33**	*e*P	**P**	**14 36 22.7**	**+0.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**39.95**	**33**	*e*P	**P**	**14 36 22.7**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.6						
HVS	**Khovu-Aksy**	**40.03**	**299**	⇓*i*P	**P**	**14 36 25.9**	**+3.0**
ZALV	**Zalesovo Beam**	**44.09**	**306**	P	**P**	**14 36 55.1**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.6,baz=47,slow=8.9,SNR=3.7						
MK31	**Makanchi Array**	**48.66**	**298**	*e*P	**P**	**14 37 31.3**	**-0.8**
MKAR	**Makanchi Array**	**48.66**	**298**	P	**P**	**14 37 31.9**	**-0.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=63,slow=7.5,SNR=11						
MKAR	**Makanchi Array**	**48.66**	**298**	P	**P**	**14 37 31.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**48.66**	**298**	P	**P**	**14 37 31.9**	**-0.2**
KURK	**Kurchatov**	**48.91**	**304**	P	**P**	**14 37 34.9**	**+0.9**
	comp=Z,2.3nm,0.5s,mb4.5,baz=65,slow=7.8,SNR=6.0						
KURK	**Kurchatov**	**48.91**	**304**	⇓*i*P	**P**	**14 37 33.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KURK	**Kurchatov**	**48.91**	**304**	*e*P	**P**	**14 37 33.9**	**0.0**
YKA	**Yellowknife Ar**	**49.10**	**38**	P	**P**	**14 37 35.4**	**+0.2**
	comp=Z,0.3nm,0.8s,mb3.4,baz=294,slow=7.3,SNR=3.8						
BVAR	**Borovoye Array**	**52.22**	**310**	P	**P**	**14 37 58.9**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.2,baz=57,slow=7.9,SNR=18						
BVAR	**Borovoye Array**	**52.22**	**310**	P	**P**	**14 37 58.9**	**0.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**52.26**	**310**	*e*P	**P**	**14 37 58.7**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BRVK	**Borovoye**	**52.26**	**310**	*e*P	**P**	**14 37 58.7**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.2						
CHTO	**Chiang Mai**	**54.45**	**259**	*e*P	**P**	**14 38 16.2**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CHTO	**Chiang Mai**	**54.45**	**259**	*e*P	**P**	**14 38 16.2**	**+0.5**
	comp=Z,2.5nm,0.9s,mb4.1						
CMAR	**Chiang Mai Arr**	**54.70**	**259**	P	**P**	**14 38 17.9**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=35,slow=7.1,SNR=15						
CMAR	**Chiang Mai Arr**	**54.70**	**259**	*i* P	**P**	**14 38 18.2**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**55.58**	**298**	*e*P	**P**	**14 38 23.8**	**+0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**55.58**	**298**	*e*P	**P**	**14 38 23.8**	**+0.2**
	comp=Z,2.0nm,0.8s,mb4.2						
ARU	**Arti**	**56.09**	**318**	*d i*P	**P**	**14 38 27.1**	**0.0**
ARU						14 40 28.4	
ARU				S	**S**	**14 46 15.7**	**-0.6**
ARU				SS	SS	14 50 01.8	+0.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
AKTK	**Aktyubinsk**	**60.00**	**313**	P	**P**	**14 38 54.5**	**-0.1**
AKTO	**Aktyubinsk**	**60.00**	**313**	P	**P**	**14 38 54.5**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=93,slow=14,SNR=3.0						
AKTO	**Aktyubinsk**	**60.00**	**313**	P	**P**	**14 38 54.5**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
NVAR	**Mina Array Bea**	**60.16**	**64**	P	**P**	**14 38 56.5**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.7,baz=284,slow=7.5,SNR=4.3						
PDAR	**Pinedale Array**	**62.57**	**56**	P	**P**	**14 39 12.7**	**+0.5**
	comp=Z,0.7nm,0.9s,mb3.8,baz=34,slow=0.5,SNR=5.4						
WRA	**Warramunga Arr**	**69.85**	**202**	P	**P**	**14 39 57.3**	**-1.6**
	comp=Z,1.3nm,0.9s,mb3.9,baz=20,slow=6.5,SNR=8.0						
WRA	**Warramunga Arr**	**69.85**	**202**	P	**P**	**14 39 57.3**	**-1.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**73.52**	**201**	P	**P**	**14 40 20.7**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.0,baz=9.3,slow=5.1,SNR=17						
ASAR	**Alice Springs**	**73.52**	**201**	P	**P**	**14 40 20.7**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**75.23**	**63**	P	**P**	**14 40 31.6**	**+0.5**
	comp=Z,1.5nm,0.6s,mb4.1,baz=302,slow=4.6,SNR=33						
TXAR	**Lajitas Array**	**75.23**	**63**	P	**P**	**14 40 31.6**	**+0.5**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SNAA	**Sanae**	**153.71**	**195**	*e*PKPdf	PKPab	14 48 57.2	-1.6
VNA2	**Neumayer--Watz**	**155.09**	**193**	*e*PKPdf	PKPab	14 49 04.3	-0.4
VNA3	**Neumayer Olymp**	**155.12**	**191**	*e*PKPdf	PKPab	14 49 04.1	-0.7

*DJA **16** 15:22:05, 25.81S×177.28W, h97km, mb5.2/7*
*MOS **16** 15:22:08.7±0.9, 25.78S×177.67W, h137km, mb5.0/11, Error ellipse: s-maj=11.6km s-min=10.5km az=179.2*
*BJI **16** 15:22:09.5, 25.64S×177.00W, h153km, mB5.3, mb4.9*
*ISCJB **16** 15:22:11.6±0.2, 25.93S±0.05×177.66W±0.05, h165km, mb4.8/57, Error ellipse: s-maj=6.9km s-min=6.2km az=141.0*
*GCMT **16** 15:22:12.7±0.4, 25.87S×177.47W, h177km±3km, MW5.2/66, Moment Tensor Solution. s30,c34; s66,c98; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.68±.23; Mθθ-6.31±.22; Mφφ3.63±.22; Mrθ-2.15±.22; Mθφ2.21±.23; Mφr-3.04±.20; Best double couple: M0 6.98800×10^16 NP1:φs140.00000°, δ55.00000°, λ156.00000°. NP2: φs244.00000°, δ71.00000°, λ37.00000°. Principal axes: T 6.9460, Plg40.0000°, Azm107.0000°; N 0.0830, Plg49.0000°, Azm268.0000°; P -7.0290, Plg10.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **16** 15:22:12.7±0.2, 26.04S×177.66W, mb4.9/27 Error ellipse: s-maj=8.9km s-min=6.3km az=158.0*
*IDC **16** 15:22:13.4±0.6, 25.89S×177.74W, h168km±5km, mb4.4/22, mb1 4.4/24, mb1mx4.4/25, mbtmp4.4/24, MS3.6/3, Ms1 3.6/3, ms1mx3.2/24, Error ellipse: s-maj=10.5km s-min=8.4km az=79.0*
ISC 16 15:22:13.2±0.2, **25.95S**±0.05×**177.65W**±0.05, **h167**km±1.9km**:pP-P**, **n176**, σ**1.21**/111, **mb4.8**/57, **11C-6D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.30**	**184**	P	**Pn**	**15 23 04.4**	**-0.6**
	614nm,0.3s,baz=276,slow=7.6,SNR=12						
RAO				S	**Sn**	**15 23 45.9**	**+0.6**
	1μm,0.3s,baz=284,slow=23,SNR=14						
RAO				LR	LR	15 24 00.2	
	comp=Z,705nm,18.6s,baz=200,slow=32						
RAO	**Raoul Island**	**3.30**	**184**	*e*P	**Pn**	**15 23 03.4**	**-1.5**
RAO				*e*S	**Sn**	**15 23 45.8**	**+0.6**
URZ	**Urewera**	**13.05**	**199**	P	**Pn**	**15 25 02.9**	**-9.4**
	1.7nm,0.3s,baz=256,slow=2.9,SNR=11						
URZ				S	**Sn**	**15 27 22.5**	**-14**
	15nm,0.3s,baz=128,slow=23,SNR=11						
AFI	**Afiamalu**	**13.19**	**26**	P	**Pn**	**15 25 04.3**	**-10**
	96nm,0.3s,baz=90,slow=1.3,SNR=80						
AFI				S	Sn	15 27 17.7	-23
	7.1nm,0.3s,baz=36,slow=19,SNR=3.5						
AFI	**Afiamalu**	**13.19**	**26**	*e*P	**Pn**	**15 25 04.2**	**-10**
NOUC	**Port Laguerre**	**15.15**	**281**	*e*P	**Pn**	**15 25 41.4**	**+2.7**
RAR	**Rarotonga**	**17.05**	**78**	P	**Pn**	**15 26 00.2**	**-1.7**
	3.8nm,0.3s,baz=214,slow=7.3,SNR=7.2						
RAR				S	**S**	**15 28 59.7**	**-10**
	1.7nm,0.3s,baz=22,slow=7.6,SNR=5.2						
RPZ	**Rata Peaks**	**19.97**	**205**	P	**P**	**15 26 28.5**	**-3.9**
	0.7nm,0.3s,baz=41,slow=11,SNR=2.8						
RPZ				S	**S**	**15 29 55.1**	**-13**
	1.7nm,0.3s,baz=138,slow=23,SNR=13						
HNR	**Honiara**	**26.86**	**304**	P	**P**	**15 27 36.1**	**-2.3**
	46nm,0.6s,mb5.3,baz=254,slow=3.7,SNR=3.6						
HNR				LR	LR	15 35 44.6	
	comp=Z,108nm,21.6s,baz=161,slow=30						
PAE	**Paea**	**27.30**	**78**	*e*P	**P**	**15 27 41.3**	**-1.0**
	177nm,1.0s,mb5.7						
PAE	**Paea**	**27.30**	**78**	*e*P	**P**	**15 27 41.3**	**-1.0**
PAE				pmax	pmax		
	comp=Z,177nm,1.0s,mb5.7						
ARMA	**Armidale**	**27.39**	**254**	*e*P	**P**	**15 27 47.4**	**+4.3**
TVO	**Taravao**	**27.54**	**79**	*e*P	**P**	**15 27 43.6**	**-0.9**
	comp=Z,134nm,0.7s,mb5.8						
TVO	**Taravao**	**27.54**	**79**	*e*P	**P**	**15 27 43.6**	**-0.9**
TVO				pmax	pmax		
	comp=Z,134nm,0.7s,mb5.8						
TIAR	**Tiarei**	**27.54**	**78**	*e*P	**P**	**15 27 44.0**	**-0.5**
	comp=Z,632nm,0.9s						
VAH	**Vaihoa**	**29.99**	**75**	*e*P	**P**	**15 28 05.6**	**-0.6**
	comp=Z,76nm,1.1s,mb5.3						
CTA	**Charters Tower**	**33.65**	**272**	*e*P	**P**	**15 28 40.1**	**+1.9**
	comp=Z,18nm,0.9s,mb4.8						
CTA				*e*	pP	15 29 15.2	+1.7
CTA	**Charters Tower**	**33.65**	**272**	*e*P	**P**	**15 28 40.1**	**+1.9**
CTA				pmax	pmax		
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	**33.65**	**272**	*e*P	**P**	**15 28 39.1**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
CTAO	**Charters Tower**	**33.65**	**272**	*e*P	**P**	**15 28 39.1**	**+0.9**
	comp=Z,17nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**36.00**	**251**	*e*P	**P**	**15 28 59.1**	**+0.9**
	comp=Z,3.2nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**36.00**	**251**	P	**P**	**15 28 59.0**	**+0.8**
	comp=Z,2.8nm,0.7s,mb4.0,baz=96,slow=14,SNR=9.8						
STKA				pP	pP	15 29 33.4	-0.5
	comp=Z,5.6nm,0.8s,baz=62,slow=8.4,SNR=3.2						
STKA				PcP	PcP	15 31 22.0	+0.9
	comp=Z,3.3nm,0.5s,baz=58,slow=4.6,SNR=4.4						
STKA				LR	LR	15 41 14.4	
	comp=Z,190nm,19.4s,baz=72,slow=32						
PMG	**Port Moresby**	**37.18**	**290**	P	**P**	**15 29 08.6**	**+0.2**
	comp=Z,44nm,0.7s,mb5.2,baz=101,slow=5.1,SNR=29						
PMG	**Port Moresby**	**37.18**	**290**	*c i*P	**P**	**15 29 08.3**	**-0.1**
RKT	**Rikitea**	**38.81**	**95**	*e*P	**P**	**15 29 20.5**	**-1.4**
	comp=Z,72nm,1.3s,mb5.1						
RKT	**Rikitea**	**38.81**	**95**	*e*P	**P**	**15 29 20.5**	**-1.4**
RKT				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.1						
ASAR	**Alice Springs**	**43.84**	**262**	P	**P**	**15 30 02.5**	**-0.4**
	comp=Z,4.0nm,0.5s,mb4.3,baz=94,slow=7.2,SNR=117						
ASAR				pP	pP	15 30 40.4	+0.7
	comp=Z,32nm,1.0s,baz=103,slow=8.2,SNR=14						
ASAR				ScP	ScP	15 35 22.2	-0.1
	comp=Z,1.8nm,1.0s,baz=119,slow=4.5,SNR=4.7						
ASAR				S	**S**	**15 36 18.6**	**-2.7**
	comp=Z,0.9nm,0.8s,baz=97,slow=15,SNR=5.1						
ASAR				PKiKP	PKiKP	15 38 45.9	-1.7
	comp=Z,0.2nm,0.4s,baz=114,slow=1.5,SNR=6.0						
ASAR	**Alice Springs**	**43.84**	**262**	P	**P**	**15 30 02.5**	**-0.4**
ASAR				pP	pP	15 30 40.4	+0.7
ASAR				ScP	ScP	15 35 22.2	-0.1
ASAR				S	**S**	**15 36 18.6**	**-2.7**
WB2	**Warramunga Arr**	**44.41**	**267**	*e*P	**P**	**15 30 06.5**	**-1.0**
WB2				*e*pP	pP	15 30 47.4	+3.1
WB2				*e*S	**S**	**15 36 24.7**	**-5.0**
WRAB	**Tennant Creek**	**44.41**	**267**	⇑*i*P	**P**	**15 30 06.7**	**-0.8**
WRAB	**Tennant Creek**	**44.41**	**267**	*e*P	**P**	**15 30 06.5**	**-1.0**
	comp=Z,60nm,1.3s,mb5.1						
WRA	**Warramunga Arr**	**44.42**	**267**	P	**P**	**15 30 06.8**	**-0.7**
	comp=Z,2.6nm,0.3s,mb4.3,baz=102,slow=7.4,SNR=140						
WRA				pP	pP	15 30 44.0	-0.4
	comp=Z,7.1nm,0.7s,baz=99,slow=7.6,SNR=4.8						
WRA				ScP	ScP	15 35 25.4	+0.7
	comp=Z,3.2nm,1.0s,baz=107,slow=4.2,SNR=5.9						
WRA				S	**S**	**15 36 26.4**	**-3.4**
	comp=Z,1.3nm,0.8s,baz=100,slow=14,SNR=5.6						
WRA				PKiKP	PKiKP	15 38 46.0	-2.1
	comp=Z,0.2nm,0.7s,baz=118,slow=0.8,SNR=4.9						
WRA	**Warramunga Arr**	**44.42**	**267**	P	**P**	**15 30 06.8**	**-0.7**
WRA				pP	pP	15 30 44.0	-0.4
WRA				ScP	ScP	15 35 25.4	+0.7
WRA				S	**S**	**15 36 26.4**	**-3.4**
KAKA	**Kakadu**	**48.63**	**276**	*e*P	x	15 30 18.5	
	comp=Z,4.3nm,0.4s						
VNDA	**Vanda**	**52.54**	**186**	P	**P**	**15 31 10.8**	**+2.0**
	comp=Z,1.9nm,0.6s,mb4.0,baz=4.7,slow=8.9,SNR=13						
VNDA				PcP	PcP	15 32 17.4	+0.7
	comp=Z,1.2nm,0.8s,baz=27,slow=2.3,SNR=4.5						
VNDA	**Vanda**	**52.54**	**186**	P	**P**	**15 31 10.8**	**+2.0**
VNDA				PcP	PcP	15 32 17.4	+0.7
FITZ	**Fitzroy Crossi**	**52.81**	**266**	*e*P	**P**	**15 31 10.8**	**-0.8**
	comp=Z,9.2nm,0.6s,mb4.7						
FITZ				*e*pP	pP	15 31 49.9	+0.2
KLBR	**Kellerberrin**	**56.18**	**248**	*e*P	**P**	**15 31 33.7**	**-2.1**
	comp=Z,50nm,1.6s,mb5.1						
CASY	**Casey**	**59.22**	**207**	*e*P	**P**	**15 31 54.8**	**-1.6**
	comp=Z,5.1nm,0.7s,mb4.5						
QSPA	**South Pole Qui**	**64.14**	**180**	P	**P**	**15 32 30.6**	**+1.5**
	comp=Z,20nm,0.9s,mb4.9,baz=42,slow=1.8,SNR=49						
QSPA				PcP	PcP	15 33 03.6	+0.9
	comp=Z,9.4nm,0.5s,baz=287,slow=0.9,SNR=10						
QSPA	**South Pole Qui**	**64.14**	**180**	*e*P	**P**	**15 32 30.3**	**+1.2**
	comp=Z,31nm,1.1s,mb5.0						
QSPA				*e*		15 33 03.4	
MJAR	**Matsushiro Arr**	**74.79**	**324**	P	**P**	**15 33 33.5**	**-1.5**
	comp=Z,7.3nm,0.7s,mb4.4,baz=163,slow=5.9,SNR=22						
MAT	**Matsushiro**	**74.79**	**324**	P	**P**	**15 33 33.0**	**-1.9**
MAW	**Mawson**	**76.57**	**200**	P	**P**	**15 33 45.3**	**+0.7**
	comp=Z,9.6nm,0.5s,mb4.7,baz=139,slow=6.2,SNR=15						
MAW	**Mawson**	**76.57**	**200**	*e*P	**P**	**15 33 44.9**	**+0.2**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAW	**Mawson**	**76.57**	**200**	*e*P	**P**	**15 33 44.9**	**+0.3**
	comp=Z,1.9nm,0.5s,mb4.0						
ERM	**Erimo**	**76.71**	**331**	⇓*i*P	**P**	**15 33 44.6**	**-1.1**
ASAJ	**Asahikawa**	**78.66**	**332**	P	**P**	**15 33 57.0**	**+0.5**
	comp=Z,13nm,0.7s,mb4.6,baz=176,slow=12,SNR=7.0						
FX1	**Attu Island--F**	**78.90**	**354**	P	**P**	**15 33 56.9**	**-0.6**
	comp=Z,33nm,0.7s,mb5.1,baz=167,slow=4.3,SNR=7.7						
USHA	**Ushuaia**	**79.43**	**146**	P	**P**	**15 34 00.9**	**+0.3**
	comp=Z,11nm,0.9s,mb4.5,baz=234,slow=6.7,SNR=9.1						
UNV	**Unalaska Valle**	**80.05**	**7**	*e*P	**P**	**15 34 02.6**	**-1.1**
YSS	**Yuzh-Sakhalins**	**80.89**	**334**	⇑*i*P	**P**	**15 34 08.0**	**-0.4**
YSS				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.8						
KSRS	**Korea Array**	**81.18**	**319**	P	**P**	**15 34 10.5**	**+0.4**
	comp=Z,1.5nm,0.6s,mb3.8,baz=126,slow=5.4,SNR=8.4						
KSRS				pP	pP	15 34 52.3	+1.0
	comp=Z,2.5nm,1.1s,baz=134,slow=7.2,SNR=2.3						
PEA0B	**Petropavlovsk-**	**81.60**	**345**	*e*P	**P**	**15 34 11.1**	**-0.8**
PETK	**Petropavlovsk-**	**81.60**	**345**	P	**P**	**15 34 11.4**	**-0.5**
	comp=Z,20nm,0.8s,mb4.8,baz=105,slow=9.0,SNR=27						
SNAA	**Sanae**	**82.58**	**178**	*e*P	**P**	**15 34 15.1**	**-1.9**
SNAA				*e*		15 34 18.0	
SNAA				*e*	pP	15 34 57.7	-0.6
SNAA	**Sanae**	**82.58**	**178**	*e*P	**P**	**15 34 15.1**	**-1.9**
SNAA				pmax	pmax		
	comp=Z,35nm,0.8s						
SNAA	**Sanae**	**82.58**	**178**	*e*P	**P**	**15 34 15.1**	**-1.9**
	comp=Z,35nm,0.8s,mb5.2						
VNA3	**Neumayer Olymp**	**82.71**	**176**	*e*P	**P**	**15 34 17.6**	**-0.1**
VNA3				*e*		15 34 20.2	
VNA3				*e*	pP	15 34 58.5	-0.5
VNA3				*e*		15 35 15.2	
VNA2	**Neumayer--Watz**	**83.15**	**177**	*e*P	**P**	**15 34 20.5**	**+0.6**
	baz=206,slow=3.0						
VNA2				*e*	pP	15 35 00.6	-0.7
VNA2				*e*		15 35 18.0	
VNA1	**Neumayer--Stat**	**83.38**	**176**	*e*P	**P**	**15 34 21.6**	**+0.5**
VNA1				*e*		15 34 24.1	
NJ2	**Nanjing**	**83.61**	**310**	*e*P	**P**	**15 34 24.4**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GSC	**Goldstone**	**83.78**	**46**	*e*P	**P**	**15 34 24.1**	**+0.5**
GSC				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
GSC	**Goldstone**	**83.78**	**46**	*e*P	**P**	**15 34 24.1**	**+0.5**
	comp=Z,14nm,1.3s,mb4.5						
YBH	**Yreka Blue Hor**	**84.35**	**38**	P	**P**	**15 34 27.2**	**+0.8**
	comp=Z,3.0nm,0.8s,mb4.1,baz=188,slow=12,SNR=5.6						
LDFC	**Landfair**	**84.75**	**47**	*e*P	**P**	**15 34 29.8**	**+1.2**
	comp=Z,33nm,1.3s,mb4.9						
NVAR	**Mina Array Bea**	**84.77**	**43**	P	**P**	**15 34 29.4**	**+0.9**
	comp=Z,5.5nm,0.7s,mb4.4,baz=221,slow=8.8,SNR=45						
TPNV	**Topopah Spring**	**85.14**	**45**	*e*P	**P**	**15 34 30.9**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
TPNV	**Topopah Spring**	**85.14**	**45**	*e*P	**P**	**15 34 30.9**	**+0.4**
	comp=Z,5.5nm,1.0s,mb4.2						
MDJ	**Mudanjiang**	**85.15**	**325**	P	**P**	**15 34 32.8**	**+2.5**
MDJ				XP	sP	15 35 29.5	+0.1
MDJ				PP	PP	15 37 53.8	+3.3
MDJ				S	S	15 44 52.4	+6.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,77nm,5.1s						
HABR	**Khabarovsk**	**85.33**	**331**	*i* P	**P**	**15 34 29.3**	**-1.8**
HABR				*e*		15 37 49.4	
HABR				*e*S	S	15 44 38.0	-9.3
HABR				*e*SS	SS	15 50 25.7	-1.0
HABR				*e*SSS		15 53 57.8	
HABR				pmax	pmax		
	comp=E,14nm,0.7s						
HABR				pmax	pmax		
	comp=N,19nm,2.0s						
HABR				pmax	pmax		
	comp=Z,31nm,1.6s,mb4.8						

HABR MLR MLR
comp=Z,59nm,17.0s
KDAK Kodiak Island 86.02 13 P **P 15 34 34.3 0.0**
comp=Z,11nm,0.8s,mb4.7,baz=219,slow=6.5,SNR=2.6
TUC Tucson 86.10 51 *e*P **P 15 34 36.3 +1.0**
TUC pmax pmax
comp=Z,26nm,1.4s,mb4.8
TUC Tucson 86.10 51 *e*P **P 15 34 36.3 +1.0**
comp=Z,26nm,1.4s,mb4.8
CN2 Changchun 86.80 323 *e*P **P 15 34 37.9 -0.5**
CN2 *e*XP sP 15 35 35.5 -2.2
CN2 *e*S S 15 45 01.3 -0.6
CN2 AMB AMB
comp=Z,10.0nm,1.4s,mb4.5
CN2 AMB AMB
comp=Z,180nm,5.0s
KLR Kul'dur 87.36 330 *e*P **P 15 34 37.2 -3.8**
WUAZ Wupatki 87.49 48 *e*P **P 15 34 42.4 +0.5**
comp=Z,3.8nm,0.9s,mb4.2
GYA Guiyang 89.61 300 P **P 15 34 51.4 -0.8**
GYA AP pP 15 35 33.8 -0.3
GYA XP sP 15 35 51.4 -0.2
GYA PP PP 15 38 29.6 +2.9
GYA SKS 15 45 04.3
GYA S S 15 45 25.8 -3.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,80nm,5.2s
TXAR Lajitas Array 89.73 57 P **P 15 34 53.4 +0.8**
comp=Z,3.2nm,0.9s,mb4.3,baz=210,slow=7.7,SNR=26
BJI Beijing 89.98 315 P **P 15 34 55.3 +1.8**
BJI S S 15 45 30.4 -1.5
BJI SS SS 15 51 38.8 +4.0
BJI AMB AMB
comp=Z,7.0nm,0.4s,mb4.9
BJI AMB AMB
comp=Z,204nm,4.8s
BJI LR LR
comp=N,182nm,15.2s
BJI LR LR
comp=E,219nm,15.5s
BJI LR LR
comp=Z,38nm,17.6s
ANMO Albuquerque 90.56 51 P **P 15 34 56.7 +0.4**
comp=Z,2.7nm,0.9s,mb4.3,baz=209,slow=4.2,SNR=10
ANMO Albuquerque 90.56 51 ⇓*i*P **P 15 34 57.2 +0.9**
KTH Kantishna Hill 91.67 12 *e*P **P 15 34 59.4 -1.3**
comp=Z,11nm,0.7s,mb5.0
XAN Xi'an 91.67 307 P **P 15 35 04.1 +2.6**
XAN AP pP 15 35 43.1 -0.4
XAN PP PP 15 38 43.9 +1.1
XAN S S 15 45 50.3 +2.7
XAN SS SS 15 52 03.3 +3.8
XAN AMB AMB
comp=Z,14nm,0.8s,mb5.0
XAN AMB AMB
comp=Z,69nm,8.5s
XAN LR LR
comp=E,36nm,17.4s
XAN LR LR
comp=Z,48nm,21.8s
TRF Thorofare Moun 91.69 12 *e*P **P 15 35 00.8 -0.1**
comp=Z,28nm,0.7s,mb5.4
SEY Seymchan 91.73 347 ⇑*i*P **P 15 35 03.5 +2.4**
KMI Kunming 92.09 297 P **P 15 35 07.4 +3.7**
KMI AMB AMB
comp=Z,11nm,0.9s,mb4.9
CMAR Chiang Mai Arr 92.22 289 P **P 15 35 05.8 +1.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=142,slow=3.3,SNR=29
CMAR pP pP 15 35 46.6 +0.2
comp=Z,4.0nm,1.1s,baz=134,slow=3.5,SNR=3.1
CMAR PKKP PKKPbc 15 52 19.1 +0.5
comp=Z,0.8nm,0.4s,baz=290,slow=4.4,SNR=8.1
SNOW Snow King Moun 92.36 42 *e*P **P 15 35 05.4 +1.0**
comp=Z,10nm,1.2s,mb4.7
CHTO Chiang Mai 92.38 290 *e*P **P 15 35 05.8 +0.7**
CHTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CHTO Chiang Mai 92.38 290 *e*P **P 15 35 05.8 +0.6**
comp=Z,4.5nm,0.8s,mb4.5
IMW Indian Meadow 92.49 42 *e*P **P 15 35 05.9 +0.9**
comp=Z,5.1nm,1.1s,mb4.5
PDAR Pinedale Array 92.70 43 P **P 15 35 06.0 0.0**
comp=Z,3.3nm,0.7s,mb4.6,baz=211,slow=3.1,SNR=25
HHC Hu-ho-hao-te 93.37 314 *e*P **P 15 35 07.9 -1.3**
HHC PP PP 15 38 56.1 +0.2
HHC SKS 15 45 27.3
HHC S S 15 46 00.6 -1.7
HHC SS SS 15 52 24.4 +1.0
HHC AMB AMB
comp=Z,18nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,122nm,3.8s
HHC LR LR
comp=N,166nm,16.6s
HHC LR LR
comp=E,132nm,17.8s
HHC LR LR
comp=Z,85nm,19.0s
COLA College 93.44 12 ⇑*i*P **P 15 35 09.2 +0.3**
COLA College 93.44 12 *e*P **P 15 35 08.9 0.0**
comp=Z,3.8nm,0.6s,mb4.7
CD2 Chengdu 93.98 302 P **P 15 35 13.3 +1.1**
CD2 AP pP 15 35 53.9 -0.4
CD2 XP sP 15 36 11.0 -0.7
CD2 PP PP 15 39 05.0 +4.1
CD2 SKS 15 45 31.5
CD2 S S 15 46 06.9 -1.2
CD2 SS SS 15 52 35.9 +3.4
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,120nm,11.4s
BILL Bilibino 94.46 354 ⇓*i*P **P 15 35 13.8 +0.3**
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
BILL Bilibino 94.46 354 *e*P **P 15 35 13.3 -0.3**
comp=Z,3.8nm,0.6s,mb4.7
EGAK Eagle 94.77 15 *e*P **P 15 35 16.9 +1.9**
comp=Z,6.0nm,0.8s,mb4.9
LZH Lanzhou 96.31 307 P **P 15 35 25.0 +2.3**
LZH AP pP 15 36 06.3 +1.5
LZH PP PP 15 39 22.5 +3.7
LZH AMB AMB
comp=Z,20nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,125nm,6.6s
YAK Yakutsk 97.26 338 ⇓*i*P **P 15 35 25.6 -0.8**
YAK pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ULN Ulaanbaatar 99.66 319 *i*P Pdif 15 35 37.9 +0.2
SONM Songino Array 100.04 318 P Pdif 15 35 39.4 +0.1
comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=2.7
SONM PKKPbc PKKPbc 15 51 57.5 -1.1
comp=Z,1.2nm,0.6s,baz=272,slow=3.2,SNR=8.9
GTA Gaotai 100.63 309 *e*P Pdif 15 35 44.8 +2.8
GTA AP 15 36 25.4
GTA XP 15 36 42.4
GTA AMB AMB
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 101.30 25 P Pdif 15 35 44.5 -0.4
comp=Z,0.2nm,0.8s,baz=231,slow=4.6,SNR=3.5
YKA PKKPbc PKKPbc 15 51 52.5 -3.0
comp=Z,0.3nm,0.7s,baz=33,slow=3.0,SNR=5.0
YKA Yellowknife Ar 101.30 25 P Pdif 15 35 44.5 -0.4
YKA PKKPbc PKKPbc 15 51 52.5 -3.0
WMQ Urumqi 110.68 310 *e*PKP PKiKP 15 40 25.5 -0.4
ZALV Zalesovo Beam 114.88 320 PKP PKiKP 15 40 31.8 -1.8
comp=Z,1.2nm,0.7s,baz=168,slow=6.6,SNR=6.6
MKAR Makanchi Array 115.10 312 PKP PKPdf 15 40 32.9 -1.3
comp=Z,1.0nm,0.5s,baz=208,slow=1.2,SNR=16
MKAR PKKPbc PKKPbc 15 51 10.8 -0.3
comp=Z,1.5nm,0.6s,baz=273,slow=3.0,SNR=13
MKAR Makanchi Array 115.10 312 PKP PKPdf 15 40 32.9 -1.3
MKAR PKKPbc PKKPbc 15 51 10.8 -0.3
BDFB Brasilia 115.90 124 PKP PKPdf 15 40 34.7 -2.0
comp=Z,0.7nm,0.5s,baz=197,slow=20,SNR=3.3
KURK Kurchatov 118.15 316 PKP PKPdf 15 40 38.8 -1.2
comp=Z,1.7nm,0.6s,baz=102,slow=1.9,SNR=8.3
KURK Kurchatov 118.15 316 ⇑*i*PKiKP PKPdf 15 40 38.1 -1.8
AML Almayashu 120.33 305 *e*PKPdf PKPdf 15 40 43.3 -1.1
BOSA Boshof 121.45 204 PKP PKPdf 15 40 47.5 +0.3
comp=Z,4.0nm,0.5s,baz=176,slow=3.6,SNR=22
BOSA Boshof 121.45 204 PKP PKPdf 15 40 47.5 +0.3
SPITS Spitsbergen Ar 127.30 356 PKP PKPdf 15 40 56.3 -0.5
comp=Z,11nm,0.9s,baz=44,slow=5.9,SNR=4.1
ARU Arti 129.79 323 *i* PKiKP PKPdf 15 41 01.1 -1.0
ARU 15 43 12.0
ARU SS SS 16 00 24.9 -1.0
LSZ Lusaka 131.92 214 *e*PKiKP PKPdf 15 41 07.4 0.0
ARCES ARCESS Array B 134.31 349 PKP PKPdf 15 41 09.3 -0.9
comp=Z,4.9nm,0.6s,baz=335,slow=1.2,SNR=20
ARCES SKPbc SKPbc 15 44 24.4 +0.1
comp=Z,4.0nm,0.7s,baz=27,slow=4.1,SNR=4.4
NB2 NORSAR Subarra1 144.40 353 PKP PKPdf 15 41 26.7 -2.1
comp=Z,2.6nm,0.7s,baz=16,slow=3.2
NOA NORSAR Array B 144.40 353 PKP PKPdf 15 41 26.9 -1.9
comp=Z,3.5nm,0.6s,baz=18,slow=2.8,SNR=21
NOA NORSAR Array B 144.40 353 PKP PKPdf 15 41 26.9 -1.9
IDID Didziasalis 145.67 335 *e*P PKPdf 15 41 31.6 +0.5
ISAL Salakas 145.71 336 *e*P PKPdf 15 41 31.8 +0.6
IIGN Ignalina 145.84 336 *e*P PKPdf 15 41 32.3 +0.9
SUW Suwalki 147.99 337 *e*PKP PKPbc 15 41 40.3 +1.9
BR131 Keskin Array S 150.50 306 *e*PKPbc PKPbc 15 41 44.3 -0.8
BR131 *e*PKPab PKPab 15 41 53.2 +0.9
BRTR Keskin Array B 150.50 306 PKPbc PKPbc 15 41 44.4 -0.7
comp=Z,3.4nm,0.7s,baz=143,slow=4.9,SNR=18
BRTR PKPab PKPab 15 41 53.0 +0.6
comp=Z,14nm,0.6s,baz=87,slow=2.1,SNR=34
GKP Gorka Klasztor 150.53 342 *e*PKP PKPbc 15 41 44.7 0.0
BUR08 Bucovina Ar. S 151.84 326 *e*PKPbc PKPbc 15 41 47.8 -0.1
BURAR Bucovina Array 151.85 326 ⇓*i*P PKPbc 15 41 49.0 +1.1
HARR Harsova 152.16 319 ⇑*i*P PKPbc 15 41 54.6 +5.9
VRI Vrincioaia 152.17 322 ⇑*i*P PKPbc 15 41 54.0 +5.3
OJC Ojcow 152.28 336 *e*PKP PKPbc 15 41 48.7 -0.1
STHS Stebnicka Huta 152.36 333 *e*PKP PKPbc 15 41 49.1 +0.1
CRVS Cervenica-Dubn 152.67 332 *e*PKP PKPdf 15 41 42.2 -0.3
CRVS *e* 15 41 59.2
TRPA Tarpa 152.77 330 ⇑*i*P PKPbc 15 41 52.8 +2.8
KSP Ksiaz 152.94 340 *e*PKP PKPbc 15 41 50.2 -0.1
KSP *e* 15 41 57.0
UPC Upice 153.32 340 *e*PKPbc PKPbc 15 41 51.0 -0.1
UPC *e*PKPab PKPab 15 42 03.3 -0.4
VOIR 153.36 323 ⇑*i*P PKPbc 15 41 53.8 +2.5
DPC Dobruska-Polom 153.37 340 *e*PKPbc PKPbc 15 41 51.4 +0.2
DPC *e*PKPab PKPab 15 42 03.4 -0.5
DPC *ex* x 15 42 42.5
KECS Kecovo 153.40 332 *e*PKP PKPbc 15 41 51.1 -0.2
KECS *e* 15 42 03.7
KECS Kecovo 153.40 332 *e*PKP PKPbc 15 41 51.1 -0.2
KECS *e* 15 42 03.7
CLL Collm 153.40 345 *e*PKPdf PKPdf 15 41 43.0 -0.5
CLL *i* PKPbc PKPbc 15 41 50.9 -0.3
comp=Z,10.0nm,0.8s
CLL *i* PKPab PKPab 15 42 03.0 -1.0
comp=Z,10.0nm,1.0s
CLL *e*pPKPbc pPKPbc 15 42 33.0 -2.1
CLL *e*pPKPab pPKPab 15 42 42.0 -4.4
CLL Collm 153.40 345 *e*PKP PKPdf 15 41 43.0 -0.5
CLL *i* PKP PKPbc 15 41 50.9 -0.3
CLL *i* PKP PKPab 15 42 03.0 -1.0
CLL *e*pPKP pPKPdf 15 42 33.0 +5.4
BRG Berggiesshubel 153.57 343 *e*PKP PKPbc 15 41 51.2 -0.4
comp=Z,8.3nm,1.1s
BRG *e* 15 41 58.3
comp=Z,5.2nm,0.9s
VYHS Vyhne 154.06 334 *e*PKP PKPbc 15 41 52.4 -0.3
VYHS *e* 15 42 06.8
PRU Pruhonice 154.22 342 *e*PKPab PKPab 15 42 07.4 -0.1
PRU *e*pPKP pPKPab 15 42 48.6 -1.3
GZR Gura Zlata 154.60 325 ⇓*i*P PKPbc 15 41 59.1 +5.1
KHC Kasperske Hory 155.26 342 *e*PKIKP PKPdf 15 41 44.5 -1.7
KHC *e* 15 42 11.8
KHC Kasperske Hory 155.26 342 *e*PKPdf PKPdf 15 41 44.5 -1.7
KHC *ex* x 15 41 55.0
KHC *e*PKPab PKPab 15 42 11.8 -0.2
KHC *e*pPKP pPKPab 15 42 53.9 -0.4
GRA1 Grafenberg Arr 155.32 346 *e*PKPab PKPab 15 42 11.5 -0.7
GRA1 *e*pPKPab pPKPab 15 42 54.0 -0.6
GRF Grafenberg Arr 155.32 346 *e*PKPab PKPab 15 42 11.5 -0.7
GRF *e*pPKPab pPKPab 15 42 54.0 -0.6
GERES GERESS Array B 155.48 342 PKP PKPdf 15 41 45.9 -0.5
comp=Z,0.6nm,0.8s,baz=199,slow=2.8,SNR=3.9
GERES PKPab PKPab 15 42 11.7 -1.3
comp=Z,0.6nm,0.5s,baz=24,slow=4.5,SNR=4.0
BAIF Baives 155.89 357 *e*PKP2 PKPab 15 42 14.0 -0.6
CDF Champ du Feu 157.25 351 *e*PKP2 PKPab 15 42 20.1 -0.4
comp=Z,5.0nm,0.7s
HAU Haudompre 157.76 353 *e*PKP2 PKPab 15 42 22.4 -0.4
comp=Z,9.9nm,0.7s
LIC Lamto 159.16 159 ⇑*i*PKIKP PKPdf 15 41 51.6 -0.6
comp=Z,11nm,0.8s
LIC Lamto 159.16 159 *e*PKIKP PKPdf 15 41 51.8 -0.4
comp=Z,56nm,0.8s
AVF Avril sur Loir 159.19 358 *e*PKP2 PKPab 15 42 28.7 -0.3
SMF Signal de Mont 159.31 357 *e*PKP2 PKPab 15 42 28.8 -0.7
comp=Z,11nm,0.7s
KIC Kosan Boka 159.38 160 *e*PKIKP PKPdf 15 41 52.1 -0.4
comp=Z,94nm,0.8s
TIC Toumodi 159.56 159 *e*PKIKP PKPdf 15 41 52.2 -0.5
comp=Z,67nm,0.8s
DBIC Dimbokro 159.63 159 PKP PKPdf 15 41 52.4 -0.4
comp=Z,7.4nm,1.0s,baz=110,slow=3.1,SNR=6.2
DBIC PKPab PKPab 15 42 31.9 +0.2
comp=Z,9.3nm,0.8s,baz=157,slow=5.3,SNR=11
DBIC Dimbokro 159.63 159 PKP PKPdf 15 41 52.4 -0.4
DBIC PKPab PKPab 15 42 31.9 +0.1
LPL La Plagne 160.16 351 *e*PKP2 PKPab 15 42 33.6 +0.3
LPG La Plagne 160.18 351 *e*PKP2 PKPab 15 42 33.7 +0.4
comp=Z,9.4nm,0.8s
ORIF Oris-en-Rattie 160.86 352 *e*PKP2 PKPab 15 42 36.3 0.0
comp=Z,16nm,0.9s
LFF La Frestale 161.01 4 *e*PKP2 PKPab 15 42 35.8 -1.2
comp=Z,18nm,0.7s
ESDC Sonseca Array 165.33 20 PKP PKPdf 15 41 58.0 +0.5
comp=Z,0.6nm,0.7s,baz=50,slow=2.0,SNR=3.9
ESDC PKPab PKPab 15 42 56.2 +0.1
comp=Z,0.1nm,0.3s,baz=190,slow=24,SNR=3.9
ESDC Sonseca Array 165.33 20 PKP PKPdf 15 41 58.0 +0.5
ESDC PKPab PKPab 15 42 56.2 +0.1
TOA0 Torodi Ar. Sit 167.25 177 *e*PKPdf PKPdf 15 41 58.3 -1.5
TORD Torodi Ar. Bea 167.25 177 PKP PKPdf 15 41 58.8 -1.0
comp=Z,5.4nm,0.9s,baz=321,slow=0.4,SNR=24
TORD PKPab PKPab 15 43 05.1 0.0
comp=Z,11nm,0.8s,baz=171,slow=2.9,SNR=4.6
TORD pPKPab pPKPab 15 43 46.9 -0.4
comp=Z,2.1nm,0.8s,baz=199,slow=3.1,SNR=2.5
TORD Torodi Ar. Bea 167.25 177 PKP PKPdf 15 41 58.8 -1.0
TORD PKPab PKPab 15 43 05.1 0.0
TORD pPKPab pPKPab 15 43 46.9 -0.4

IDC 16 15:30:59.0±52.0, 1637S×17411W, h0km, mb4.1/3, Error ellipse: s-maj=1001.0km s-min=175.8km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.97**	**241**	P	P	15 39 00.9	+0.9
	1.2nm,0.5s,baz=32,slon=13,SNR=4.4						
WB2	**Warramunga Arr**	**48.96**	**258**	*e*P	P	15 39 46.8	-0.7
WRA	**Warramunga Arr**	**48.97**	**258**	P	P	15 39 47.0	-0.6
	0.6nm,0.4s,baz=97,slow=7.2,SNR=17						
ASAR	**Alice Springs**	**49.17**	**253**	P	P	15 39 48.9	-0.2
	4.4nm,0.5s,baz=90,slow=7.8,SNR=147						

*NEIC **16** 15:53:12.6, 3276S×7168W, h25km, ML4.0(GUC), After GUC.*
NEIC Felt [III] at Puchuncavi, Quintero, Valparaiso and Vina del Mar.

GUC 16 15:53:12.6±1.0, 3276S×7168W, h25km±5km, MD4.1, ML4.0, 6C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.27**	**172**	⇑*i*P	Pb	15 53 19.5	+0.3
IHA				*i* S	Sb	15 53 23.5	-0.1
PACH	**Papudo**	**0.30**	**43**	⇓*i*P	Pb	15 53 19.8	+0.1
PACH				*i* S	Sb	15 53 25.1	+0.6
ROCH	**El Roble**	**0.60**	**111**	⇑*i*P	Pb	15 53 24.5	0.0
ROCH				*i* S	Sb	15 53 33.6	+0.9
LCCH	**Las Cruces**	**0.72**	**172**	*e*P	Pb	15 53 26.0	-0.5
LCCH				*i* S	Sb	15 53 35.7	-0.4
JACH	**Jahuel**	**0.92**	**86**	⇑*i*P	Pb	15 53 28.9	-1.0
JACH				*i* S	Sb	15 53 42.1	+0.3
PEL	**Peldehue**	**0.92**	**115**	⇑*i*P	Pb	15 53 29.6	-0.3
PEL				*i* S	Sb	15 53 42.5	+0.7
PEL				AML	AML	15 53 43.9	
	comp=N,8μm,0.3s						
SAN	**Santiago**	**1.10**	**129**	AML	AML	15 53 53.0	
	comp=E,2μm,0.3s						
CLCH	**Cerro Calan**	**1.15**	**124**	⇓*i*P	Pn	15 53 33.2	0.0
CLCH				AML	AML	15 53 54.0	
	comp=N,3μm,0.5s						
CLCH				AML	AML	15 53 54.6	
	comp=N,4μm,0.4s						
ANTU	**Antumapu**	**1.20**	**133**	*e*P	Pn	15 53 34.2	+0.5
ANTU				*i* S	Sn	15 53 49.7	+0.5
ANTU	**Antumapu**	**1.20**	**133**	*e*P	Pn	15 53 34.2	+0.5
ANTU				*i* S	Sn	15 53 49.7	+0.5
ANTU				AML	AML	15 53 53.8	
	comp=E,4μm,0.5s						
LNV	**Longovilo**	**1.22**	**169**	*e*P	Pn	15 53 33.4	-0.6
LNV				*i* S	Sn	15 53 49.2	-0.5
FCH	**Farellones**	**1.30**	**116**	⇓*i*P	Pn	15 53 35.5	+0.4
FCH				*i* S	Sn	15 53 53.0	+1.2
FCH				AML	AML	15 53 53.3	
	comp=E,2μm,0.2s						
PCH	**Pirque**	**1.30**	**132**	*i* P	Pn	15 53 35.5	+0.2
SJCH	**San Jose de Ma**	**1.42**	**129**	*e*P	Pn	15 53 37.8	+1.0
SJCH				*i* S	Sn	15 53 56.2	+1.5
SJCH	**San Jose de Ma**	**1.42**	**129**	*e*P	Pn	15 53 37.8	+1.0
SJCH				*i* S	Sn	15 53 56.2	+1.5
SJCH				AML	AML	15 53 59.4	
	comp=N,1μm,0.2s						
CHCH	**Chadas Angostu**	**1.46**	**144**	⇓*i*P	Pn	15 53 38.0	+0.7
YECH	**El Yeso**	**1.62**	**124**	AML	AML	15 54 10.4	
	comp=N,1μm,0.3s						
CACH	**El Canelo**	**1.63**	**147**	*e*P	Pn	15 53 41.1	+1.4
CACH				*i* S	Sn	15 54 03.3	+3.4
LMEL	**Las Melosas**	**1.65**	**132**	⇑*i*P	Pn	15 53 41.5	+1.5
LMEL				*i* S	Sn	15 54 03.8	+3.4
LMEL	**Las Melosas**	**1.65**	**132**	⇑*i*P	Pn	15 53 41.5	+1.5
LMEL				*i* S	Sn	15 54 03.8	+3.4
LMEL				AML	AML	15 54 06.6	
	comp=N,3μm,0.3s						
OVCH	**Ovalle**	**2.18**	**11**	*i* S	Sn	15 54 15.9	+2.4
OVCH				AML	AML	15 54 22.6	
	comp=N,1μm,0.7s						
NICH	**Los Niches**	**2.27**	**171**	⇓*i*P	Pn	15 53 49.5	+1.0
TLL	**Tololo Astrono**	**2.69**	**16**	AML	AML	15 54 39.2	
	comp=N,537nm,0.2s						
CPN1	**Cerro Paranal**	**8.18**	**8**	AML	AML	15 54 09.1	
	comp=E,167nm,0.3s						

IGQ 16 16:17:44.3, 049S×8073W, h8km±7km, Mb4.4, Ms4.2, 2C-1D, Error ellipse: s-maj=6.4km s-min=3.7km az=178.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**0.55**	**180**	⇓P	Pg	16 17 54.5	-0.5
JAMA	**Jama**	**0.57**	**66**	P	Pg	16 18 01.0	+5.7
QIL2	**Quilotoa**	**1.85**	**102**	P	Pn	16 18 17.8	+1.5
QIL2	**Quilotoa**	**1.85**	**102**	S	Sn	16 18 44.0	+4.2
PINO	**Pino**	**2.14**	**81**	P	Pn	16 18 22.6	+2.3
TERV	**Terraza Guagua**	**2.14**	**82**	P	Pn	16 18 22.7	+2.3
GGP	**Refugio Guagua**	**2.15**	**82**	P	Pn	16 18 22.8	+2.3
YANA	**Yana**	**2.19**	**80**	P	Pn	16 18 22.9	+1.9
CAMI	**Rancho Maria**	**2.23**	**95**	P	Pn	16 18 23.7	+2.1
IGUA	**Igualata**	**2.31**	**115**	P	Pn	16 18 25.2	+2.6
IGUA	**Igualata**	**2.31**	**115**	S	Sn	16 18 51.4	+0.1
VC1	**Cotopaxi 1**	**2.33**	**94**	P	Pn	16 18 25.5	+2.6
TAMB	**Tambo**	**2.37**	**95**	P	Pn	16 18 28.2	+4.7
PISA	**Pisayambo**	**2.41**	**104**	P	Pn	16 18 27.0	+3.0
JUI6	**Juive**	**2.44**	**112**	P	Pn	16 18 27.2	+2.7
JUI6	**Juive**	**2.44**	**112**	S	Sn	16 18 57.1	+2.7
RUN5	**Runtun**	**2.48**	**112**	P	Pn	16 18 28.0	+3.1
RUN5	**Runtun**	**2.48**	**112**	S	Sn	16 18 57.9	+2.5
ARRY	**Arrayan**	**2.48**	**114**	P	Pn	16 18 24.9	-0.2
PATA	**Patacocha**	**2.50**	**114**	⇑P	Pn	16 18 28.5	+3.2
PATA	**Patacocha**	**2.50**	**114**	⇑S	Sn	16 18 58.8	+2.8
COTA	**Cotacachi**	**2.52**	**71**	P	Pn	16 18 29.8	+4.1
ANTI	**Antisana**	**2.56**	**89**	P	Pn	16 18 29.5	+3.3
CONE	**Cono NE Rev Vo**	**3.11**	**82**	P	Pn	16 18 41.7	+8.0
LAV3	**Lava3-Reventad**	**3.12**	**83**	P	Pn	16 18 41.5	+7.7

*CSEM **16** 16:55:08.8±0.2, 3655N×2683E, h152km±3km, ML3.5, Error ellipse: s-maj=7.1km s-min=4.6km az=109.0*
*ISCJB **16** 16:55:09.2±1.1, 3653N±009×268E±0.1, h152km±8km, Error ellipse: s-maj=15.2km s-min=13.3km az=147.1*
*ATH **16** 16:55:14.8, 3661N×2683E, h10km, MD3.2/3*
*HLW **16** 16:55:17.3, 3593N×27.14E, h33km, Mb3.5*

ISC 16 16:55:09.9±1.2, 3655N±009×268E±01, h148km±8km, n17, σ0§51/21, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**1.03**	**164**	*e*PB	**Pn**	**16 55 35.5**	**+0.7**
KARP	**Karpathos**	**1.03**	**164**	*e*P	**Pn**	**16 55 35.6**	**+0.8**
KARP				*e*S	**Sn**	**16 55 53.9**	**+0.2**
ARG	**Arkhangelos**	**1.10**	**107**	*e*P	**Pn**	**16 55 36.0**	**+0.6**
ARG				*e*S	**Sn**	**16 55 54.1**	**-0.7**
SMG	**Samos**	**1.16**	**1**	*e*PB	**Pn**	**16 55 35.5**	**-0.4**
NPS	**Neapolis**	**1.61**	**218**	*e*P	**Pn**	**16 55 40.5**	**0.0**
		5.21	**195**	P	**Pn**	**16 56 26.3**	**+0.1**
SLUM				S	**Sn**	**16 57 16.5**	**-9.1**
HMAT	**Matruh**	**5.44**	**177**	P	**Pn**	**16 56 27.9**	**-1.2**
HMAT				S	**Sn**	**16 57 19.3**	**-12**
SWA2		**7.37**	**189**	P	**Pn**	**16 56 55.2**	**+0.3**
AMAG	**Maghara**	**7.94**	**136**	P	**Pn**	**16 57 02.8**	**+0.3**
HRSH	**Kfar Ka'horesh**	**7.96**	**116**	P	**Pn**	**16 57 03.3**	**+0.6**
HSAF	**As Saff**	**7.97**	**149**	P	**Pn**	**16 57 02.3**	**-0.6**
RSH		**8.00**	**132**	P	**Pn**	**16 57 03.3**	**0.0**
GLL	**Jalalah**	**8.07**	**148**	P	**Pn**	**16 57 03.8**	**-0.4**
SUZ		**8.37**	**141**	P	**Pn**	**16 57 08.4**	**+0.2**
AWBH		**8.39**	**167**	P	**Pn**	**16 57 08.2**	**-0.3**
AWBH		**8.39**	**167**	P	**Pn**	**16 57 08.1**	**-0.4**
HFRF	**Wahat Farafira**	**9.45**	**172**	P	**Pn**	**16 57 23.2**	**+0.5**

*IDC **16** 16:56:56.2±0.5, 1915N×11992E, h0km, mb4.3/16, mb1 4.4/19, mb1mx4.3/24, mbtmp4.3/19, ML3.6/3, MS3.4/11, Ms1 3.4/11, ms1mx3.3/43, Error ellipse: s-maj=23.4km s-min=11.8km az=72.0*
*ISCJB **16** 16:56:57.8±1.1, 1919N±003×11993E±006, h20km±8km, mb4.5/32, MS3.5/9, Error ellipse: s-maj=9.2km s-min=4.5km az=163.4*
*BJI **16** 16:56:59.4, 1911N×11982E, h29km, mB4.4, mb4.4, ML4.0, Ms4.0, Ms3.8*
*NEIC **16** 16:57:00.6±0.2, 1918N×11999E, mb4.8/13, Error ellipse: s-maj=6.2km s-min=4.9km az=80.0*
*MAN **16** 16:57:01, 1894N×11997E, h19km, mb4.9, ML3.8, MS3.9*

ISC 16 16:56:57.8±1.2, 1916N±003×11995E±005, h8km±8km, n78, σ0§99/77, mb4.5/32, MS3.5/9, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**1.04**	**142**	⇑*i*P	**Pg**	**16 57 18.2**	**+0.4**
PIP				*e*S	**Sg**	**16 57 31.6**	**+0.3**
SIPP	**Brgy, Tapao**	**1.32**	**158**	⇑*i*P	**Pn**	**16 57 21.5**	**-0.9**
SIPP				*i* S	**Sb**	**16 57 38.6**	**-1.2**
ABRA	**Dolores**	**1.67**	**154**	*e*P	**Pn**	**16 57 26.5**	**-0.7**
ABRA				*e*S	**Sn**	**16 57 48.7**	**-0.1**
SGCP	**Mt. Cagua**	**2.19**	**114**	*e*P	**Pn**	**16 57 36.1**	**+1.7**
CAUP	**Cauayan**	**2.83**	**141**	*e*P	**Pn**	**16 57 45.1**	**+1.9**
PALP	**Palanan**	**3.14**	**131**	*e*P	**Pn**	**16 57 50.0**	**+2.4**
PALP				*e*S	**Sg**	**16 58 35.8**	**-3.0**
BALP	**Baler**	**3.73**	**155**	*e*P	**Pn**	**16 57 57.4**	**+1.7**
TWG	**Pinlang**	**3.80**	**16**	*e*Pn	**Pn**	**16 57 55.4**	**-1.1**
TPUB	**Ta-pu**	**4.17**	**9**	*e*Pn	**Pn**	**16 58 01.1**	**-0.7**
YULB	**Yu-li**	**4.40**	**16**	*e*Pn	**Pn**	**16 58 04.6**	**-0.3**
SSLB	**Suanglung**	**4.71**	**11**	*e*Pn	**Pn**	**16 58 08.3**	**-0.8**
NACB	**Ninganchiao**	**5.22**	**17**	*e*Pn	**Pn**	**16 58 16.4**	**+0.2**
	25nm,0.4s						
YHNB	**Yeheng**	**5.65**	**13**	*e*Pn	**Pn**	**16 58 22.6**	**+0.6**
	34nm,0.4s						
QZH	**Quanzhou**	**5.90**	**348**	P	**Pn**	**16 58 23.3**	**-2.1**
QZH				Smax			
	comp=N,80nm,0.4s						
QZH				Smax			
	comp=E,120nm,0.7s						
QZH				LR	LR		

	comp=N,1μm,13.8s						
QZH				LR	LR		
	comp=E,1μm,11.7s						
QZH				LR	LR		
	comp=Z,1μm,10.8s						
QIZ	Qiongzhong	9.55	271	P	Pn	16 59 12.3	-3.4
QIZ				S	Sn	17 00 53.8	-9.5
QIZ				LR	LR		
	comp=N,361nm,13.2s						
QIZ				LR	LR		
	comp=Z,316nm,16.9s						
QIZ	Qiongzhong	9.55	271	*e*Pn	Pn	16 59 12.4	-3.3
	comp=Z,19nm,0.5s						
JOW	Kunigami	10.82	44	Pn	Pn	16 59 34.6	+1.6
	comp=Z,0.6nm,0.3s,baz=101,slow=16,SNR=5.1						
DAV	Davao City (W)	13.20	155	LR	LR	17 06 03.2	
	comp=Z,171nm,21.5s,baz=332,slow=41						
KSRS	Korea Array	19.52	19	P	Pn	17 01 26.0	-0.8
	comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=8.4						
KSRS				LR	LR	17 09 08.3	
	comp=Z,39nm,19.0s,baz=210,slow=38						
CHTO	Chiang Mai	19.86	272	P	Pn	17 01 26.6	-4.4
	comp=Z,6.7nm,0.9s						
CMAR	Chiang Mai Arr	19.90	271	P	Pn	17 01 30.9	-0.6
	comp=Z,0.1nm,0.3s,baz=80,slow=8.7,SNR=13						
CMAR				PcP	PcP	17 05 46.9	-0.2
	comp=Z,0.1nm,0.3s,baz=61,slow=0.6,SNR=14						
CMAR				LR	LR	17 08 48.1	
	comp=Z,48nm,18.7s,baz=100,slow=36						
CBIJ	Chichi jima	21.90	65	LR	LR	17 10 13.0	
	comp=Z,93nm,19.4s,MS3.2,baz=81,slow=36						
LZH	Lanzhou	22.04	323	*e*P	P	17 01 53.5	+0.7
LZH				AP		17 02 04.5	
LZH				XP	sP	17 02 10.3	+14
LZH				*e*PP		17 02 20.5	
LZH				*e*S	S	17 05 50.1	-6.0
LZH				AMB	AMB		
	comp=Z,36nm,1.4s,mb4.6						
LZH				AMB	AMB		
	comp=Z,83nm,5.2s						
LZH				LR	LR		
	comp=E,201nm,10.2s						
LZH				LR	LR		
	comp=Z,297nm,14.3s,MS3.9						
MJAR	Matsushiro Arr	23.61	39	P	P	17 02 09.6	+0.2
	comp=Z,1.6nm,0.9s,mb3.4,baz=136,slow=45,SNR=3.3						
KAPI	Kappang	24.02	180	P	P	17 02 12.3	-0.9
	comp=Z,9.8nm,0.8s,mb4.3						
GUMO	Guam	24.53	99	LR	LR	17 10 18.0	
	comp=Z,50nm,19.4s,MS3.0,baz=340,slow=33						
PSI	Prapat	26.21	234	LR	LR	17 11 20.1	
	comp=Z,50nm,19.0s,MS3.1,baz=200,slow=33						
GTA	Gaotai	26.64	324	*e*P	P	17 02 37.4	+0.5
GTA				AP	pP	17 02 46.3	+6.9
GTA				XP	sP	17 02 50.1	+10
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.0						
LSA	Lhasa	28.17	297	*e*P	P	17 02 52.3	+1.6
	comp=Z,11nm,1.1s,mb4.4						
BATI	Baumata	29.40	173	P	P	17 03 01.8	+0.1
	comp=Z,14nm,0.8s,mb4.7,baz=87,slow=6.4,SNR=5.0						
ULN	Ulaanbaatar	30.50	343	*e*P	P	17 03 11.8	+0.7
TAPN	Taplejung	30.65	291	*e*P	P	17 03 13.4	+0.6
	comp=Z,13nm,1.1s,mb4.7						
SONM	Songino Array	30.66	342	P	P	17 03 12.1	-0.5
	comp=Z,2.2nm,0.6s,mb4.1,baz=161,slow=10,SNR=22						
SONM				LR	LR	17 15 34.1	
	comp=Z,70nm,18.7s,MS3.3,baz=115,slow=36						
ODAN	Odare	30.87	290	*e*P	P	17 03 15.1	+0.4
	comp=Z,12nm,0.7s,mb4.8						
RAMN	Ramite	31.58	290	*e*P	P	17 03 21.6	+0.6
	comp=Z,20nm,0.7s,mb5.0						
JIRN	Jiri	32.03	292	*e*P	P	17 03 25.5	+0.5
GUN	Gumba	32.34	292	*e*P	P	17 03 27.8	+0.1
	comp=Z,21nm,0.8s,mb5.0						
PKI	Pulchoki	32.71	291	*e*P	P	17 03 30.9	0.0
PKI	Pulchoki	32.71	291	*e*P	P	17 03 31.7	+0.8
PKIN	Phulchoki	32.72	291	*e*P	P	17 03 31.7	+0.7
KKN	Kakani	32.85	292	*e*P	P	17 03 32.4	+0.3
DMN	Daman	32.98	291	*e*P	P	17 03 33.1	-0.2
GKN	Gorkha	33.44	292	*e*P	P	17 03 36.9	-0.4
	comp=Z,19nm,0.9s,mb5.0						
KAKA	Kakadu	33.97	158	*e*P	x	17 03 19.6	
	comp=Z,10nm,0.6s						
DANN	Dangsing	34.26	292	*e*P	P	17 03 44.3	-0.1
	comp=Z,48nm,1.3s,mb5.3						
KOLN	Koldanda	34.33	291	*e*P	P	17 03 44.8	-0.2
	comp=Z,23nm,1.1s,mb5.0						
FITZ	Fitzroy Crossi	37.44	171	*e*P	P	17 04 10.7	-1.0
	comp=Z,2.9nm,0.6s,mb4.3						
FITZ				*e*		17 04 18.7	
FITZ	Fitzroy Crossi	37.44	171	*e*P	P	17 04 10.3	-1.3
FITZ				*e*		17 04 18.7	
PMG	Port Moresby	39.05	134	P	P	17 04 25.7	+0.4
	comp=Z,3.4nm,0.5s,mb4.3,baz=43,slow=16,SNR=2.4						
MK31	Makanchi Array	41.31	321	*e*P	P	17 04 44.7	+1.0
MK31				*e*		17 04 53.3	
MKAR	Makanchi Array	41.31	321	P	P	17 04 44.7	+1.0
	comp=Z,8.0nm,0.8s,mb4.4,baz=115,slow=9.9,SNR=55						
MKAR	Makanchi Array	41.31	321	P	P	17 04 44.7	+1.0
WRAB	Tennant Creek	41.33	159	*e*P	P	17 04 42.6	-1.5
	comp=Z,14nm,0.9s,mb4.6						
WRA	Warramunga Arr	41.34	159	P	P	17 04 43.3	-0.9
	comp=Z,7.8nm,0.8s,mb4.4,baz=342,slow=9.0,SNR=46						
WRA				PcP	PcP	17 06 42.5	-0.2
	comp=Z,0.6nm,0.6s,baz=346,slow=3.4,SNR=3.6						
WB2	Warramunga Arr	41.34	159	*e*P	P	17 04 43.2	-1.0
WB2				*e*		17 04 52.6	
ZAA0	Zalesovo Array	43.94	331	*e*P	P	17 05 04.8	-0.1
ZALV	Zalesovo Beam	43.94	331	P	P	17 05 04.6	-0.4
	comp=Z,6.5nm,0.8s,mb4.4,baz=120,slow=7.5,SNR=28						
ZALV				LR	LR	17 24 01.7	
	comp=Z,67nm,19.1s,MS3.6,baz=71,slow=37						
ASAR	Alice Springs	44.69	162	P	P	17 05 10.8	-0.4
	comp=Z,4.2nm,0.6s,mb4.4,baz=340,slow=7.0,SNR=96						
AML	Almayashu	45.23	311	*e*P	P	17 05 17.3	+1.7
KURK	Kurchatov	45.33	324	*e*P	P	17 05 15.8	-0.3
CTAO	Charters Tower	46.75	145	*e*P	P	17 05 28.3	+0.6
	comp=Z,9.2nm,1.2s,mb4.6						
BRVK	Borovoye	51.00	324	*e*P	P	17 06 00.6	+0.6
STKA	Stephens Creek	54.82	157	*e*P	P	17 06 29.2	+0.8
	comp=Z,7.0nm,0.6s,mb4.9						
STKA	Stephens Creek	54.82	157	P	P	17 06 29.1	+0.7
	comp=Z,5.9nm,0.6s,mb4.8,baz=347,slow=6.3,SNR=14						
STKA				LR	LR	17 31 58.4	
	comp=Z,53nm,18.8s,MS3.6,baz=24,slow=38						
STKA	Stephens Creek	54.82	157	*e*P	P	17 06 29.0	+0.6
TOO	Toolangi	61.34	157	*e*P	P	17 07 16.5	+2.6
GNI	Garni	66.77	306	LR	LR	17 39 04.3	
	comp=Z,63nm,18.4s,MS3.9,baz=89,slow=38						
KIV	Kislovodsk	67.91	311	*e*P	P	17 07 57.8	+0.9
	comp=Z,21nm,0.8s,mb5.2						
JOF	Joensuu	72.53	331	*e*p	P	17 08 24.1	-0.8
	comp=Z,6.6nm,0.6s,mb4.7						
KEV	Kevo	73.21	339	*e*p	P	17 08 28.1	-0.7
ARCES	ARCESS Array B	73.77	339	P	P	17 08 31.6	-0.6
	comp=Z,1.7nm,0.6s,mb4.2,baz=79,slow=7.9,SNR=8.8						
SPITS	Spitsbergen Ar	74.14	348	P	P	17 08 33.5	-0.7
	comp=Z,10nm,1.0s,mb4.7,baz=70,slow=11,SNR=2.8						
KAF	Kangasniemi	74.95	331	*e*p	P	17 08 37.0	-2.1
	comp=Z,4.0nm,0.7s,mb4.5						
BRTR	Keskin Array B	75.25	307	P	P	17 08 40.8	-0.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=100,slow=6.8,SNR=3.7						
NOA	NORSAR Array B	82.12	332	P	P	17 09 17.5	-1.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=64,slow=5.2,SNR=3.7						
NOA				LR	LR	17 46 37.2	
	comp=Z,89nm,20.9s,MS4.1,baz=35,slow=36						
GERES	GERESS Array B	85.98	321	P	P	17 09 38.6	-0.1
	comp=Z,0.4nm,0.5s,mb3.9,baz=81,slow=12,SNR=3.3						
YKA	Yellowknife Ar	88.03	22	P	P	17 09 47.8	-0.5
	comp=Z,1.3nm,0.8s,mb4.2,baz=315,slow=4.6,SNR=22						
TXAR	Lajitas Array	116.02	42	PKP	PKPdf	17 15 41.7	-0.2
	comp=Z,0.2nm,0.6s,baz=120,slow=4.6,SNR=3.1						

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*MOS **16** 17:16:29.4±1.4, 5356N×16039E, h44km, mb4.1/6, Error ellipse: s-maj=18.2km s-min=13.7km az=82.0*
*NEIC **16** 17:16:30.7±0.6, 5358N×16050E, h35km, mb4.2/2, Error ellipse: s-maj=15.3km s-min=9.1km az=153.0*
*ISCJB **16** 17:16:31.0±0.6, 5328N±003×16058E±007, h60km±5km, mb3.7/14, Error ellipse: s-maj=8.3km s-min=3.4km az=31.4*
*IDC **16** 17:16:31.5±1.4, 5352N×16061E, h48km±14km, mb3.3/10, mb1 3.6/11, mb1mx3.4/25, mbtmp3.4/11, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/24, Error ellipse: s-maj=21.3km s-min=10.3km az=171.0*
*KRSC **16** 17:16:32.2±0.4, 5333N×16042E, h42km±42km, ML3.9*
ISC 16 17:16:32.2±0.5, **5328N**±003×**16054E**±007, **h55**km±5km, **n49**, σ1.16/71, **mb3.8**/14, **2C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.36	240	*i* P	Pn	17 16 41.1	-1.2
SPN				*i* S	Sn	17 16 47.6	-1.9
NLC	Nalytchevo	0.72	262	*i* P	Pn	17 16 45.8	-0.6
NLC				*i* S	Sn	17 16 55.5	-1.4
AVH	Avacha	1.08	270	*i* P	Pn	17 16 51.2	+0.1
AVH				*i* S	Sn	17 17 04.5	-0.6
PET	Petropavlovsk	1.16	258	*e*PN	Pn	17 16 51.9	-0.3
PET				*e*S	Sn	17 17 06.2	-0.9
PET				pmax	pmax		
	comp=Z,100nm,0.2s						
PET				smax			
	comp=N,383nm,0.4s						
PET				smax			
	comp=E,648nm,0.4s						
PET	Petropavlovsk	1.16	258	*i* P	Pn	17 16 51.9	-0.3
PET				*i* S	Sn	17 17 05.7	-1.4
PET	Petropavlovsk	1.16	258	⇓*i*Pn	Pn	17 16 51.9	-0.3
PET				*e*Sn	Sn	17 17 07.7	+0.6
RUS	Russkaya	1.49	236	*i* P	Pn	17 16 56.3	-0.3
RUS				*i* S	Sn	17 17 13.7	-1.2
GNL	Ganaly	1.61	286	*i* P	Pn	17 16 58.5	+0.3
GNL				*i* S	Sn	17 17 17.8	0.0
GRL	Gorelyy	1.66	245	*e*P	Pn	17 16 59.1	+0.2
GRL				*i* S	Sn	17 17 19.2	+0.2
PEA0B	Petropavlovsk-	1.72	266	*e*P	Pn	17 17 00.4	+0.8
PEA0B				*e*Sn	Sn	17 17 22.7	+2.2
PETK	Petropavlovsk-	1.72	266	P	Pn	17 17 00.4	+0.7
	comp=E,48nm,0.3s,baz=92,slow=21,SNR=1783						
PETK				S	Sn	17 17 22.1	+1.7
	comp=E,20nm,0.3s,baz=82,slow=39,SNR=12						
TUMR	Tumrok	2.02	354	*i* P	Pn	17 17 04.0	+0.1
TUMR				*i* S	Sn	17 17 27.3	-0.7
KMNR	Kamenistaya	2.49	356	*e*P	Pn	17 17 11.3	+1.1
KMNR				*i* S	Sn	17 17 39.0	-0.4
MIPR	Malaya Ipel'ka	2.50	248	*e*P	Pn	17 17 12.2	+1.8
MIPR				*e*S	Sn	17 17 40.9	+1.2
BZMR	Bezymyannaya	2.67	359	*e*P	Pn	17 17 13.9	+1.3
BZMR				*i* S	Sn	17 17 44.3	+0.7
KPT	Kopyto	2.70	356	P	Pn	17 17 14.7	+1.6
KPT				*i* S	Sn	17 17 45.8	+1.2
ZLN	Zelenaya	2.75	3	*e*P	Pn	17 17 14.8	+1.0
ZLN				*i* S	Sn	17 17 46.6	+0.8
KOZ	Kozyrevsk	2.82	352	P	Pn	17 17 15.8	+1.2
KOZ				*i* S	Sn	17 17 47.5	+0.2
KRSR	Krestovskiy	2.95	0	P	Pn	17 17 17.6	+1.1
KRSR				*i* S	Sn	17 17 50.5	-0.1
KLY	Klyuchi	3.04	1	P	Pn	17 17 18.4	+0.6
KLY				*i* S	Sn	17 17 51.7	-1.3
SRDR	Sredinnyy	3.09	351	*e*P	Pn	17 17 18.9	+0.6
SRDR				*e*S	Sn	17 17 52.9	-1.0
KBTR	Krutoberegovo	3.22	23	*e*P	Pn	17 17 20.2	0.0
KBTR				*i* S	Sn	17 17 55.2	-2.1
FX1	Attu Island--F	7.62	88	P	Pn	17 18 19.8	-0.6
	comp=E,5.7nm,0.3s,baz=226,slow=4.7,SNR=23						
FX1				S	Sn	17 19 39.8	-5.4
	comp=E,6.3nm,0.3s,baz=297,slow=21,SNR=11						
YSS	Yuzh-Sakhalins	13.03	248	⇑*i*PN	Pn	17 19 32.0	-2.3
YAK	Yakutsk	18.52	310	⇓*i*P	Pn	17 20 40.3	-4.1
YAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAJO	Matsushiro	22.87	232	*e*P	P	17 21 31.7	+1.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
MAJO	Matsushiro	22.87	232	*e*P	P	17 21 31.7	+0.9
	comp=Z,4.7nm,0.7s,mb4.0						
MJAR	Matsushiro Arr	22.87	232	P	P	17 21 31.7	+1.0
	comp=Z,1.5nm,0.6s,mb3.6,baz=20,slow=12,SNR=7.2						
MJAR	Matsushiro Arr	22.87	232	P	P	17 21 31.7	+1.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	23.03	335	⇑*i*P	P	17 21 30.2	-1.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb3.6						
SONM	Songino Array	34.12	283	LR	LR	17 37 06.1	
	comp=Z,49nm,20.7s,baz=181,slow=36						
YKA	Yellowknife Ar	42.85	43	P	P	17 24 24.3	+0.1
	comp=Z,0.2nm,0.6s,mb3.0,baz=297,slow=8.0,SNR=3.7						
YKA	Yellowknife Ar	42.85	43	*e*P	P	17 24 25.1	+0.8
KURK	Kurchatov	47.87	302	P	P	17 25 03.0	-1.1
	comp=Z,0.4nm,0.2s,mb4.0,baz=59,slow=7.5,SNR=5.0						
MKAR	Makanchi Array	48.32	296	P	P	17 25 06.0	-1.7
	comp=Z,0.2nm,0.4s,mb3.5,baz=60,slow=7.2,SNR=6.9						
MKAR	Makanchi Array	48.32	296	*e*P	P	17 25 06.6	-1.1
BVAR	Borovoye Array	50.49	308	P	P	17 25 21.6	-2.5
	comp=Z,0.2nm,0.3s,mb3.6,baz=59,slow=10,SNR=3.1						
ARCES	ARCESS Array B	53.20	342	P	P	17 25 42.5	-1.6
	comp=Z,6.9nm,1.0s,mb4.5,baz=31,slow=16,SNR=3.3						
ARCES	ARCESS Array B	53.20	342	P	P	17 25 42.5	-1.5
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JOF	Joensuu	57.52	335	*e*p	P	17 26 13.9	-1.2
	comp=Z,0.5nm,0.3s,mb4.0						
JOF	Joensuu	57.52	335	*e*P	P	17 26 13.9	-1.2
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KAF	Kangasniemi	59.42	337	*e*p	P	17 26 26.3	-2.1
	comp=Z,0.7nm,0.3s,mb4.2						
KAF	Kangasniemi	59.42	337	*e*P	P	17 26 26.3	-2.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
NOA	NORSAR Array B	63.44	344	P	P	17 26 54.9	-0.6
	comp=Z,0.8nm,0.8s,mb3.9,baz=63,slow=13,SNR=3.0						
NOA	NORSAR Array B	63.44	344	P	P	17 26 54.9	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	70.32	67	P	P	17 27 41.0	+1.2
	comp=Z,0.2nm,0.5s,mb3.3,baz=300,slow=5.2,SNR=6.6						
TXAR	Lajitas Array	70.32	67	*e*P	P	17 27 41.4	+1.6
WRA	Warramunga Arr	76.36	205	P	P	17 28 16.3	+1.1
	comp=Z,0.3nm,0.7s,mb3.4,baz=12,slow=5.7,SNR=4.8						
ASAR	Alice Springs	80.03	205	P	P	17 28 37.4	+1.9
	comp=Z,0.3nm,0.4s,mb3.5,baz=16,slow=5.1,SNR=18						

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*NEIC **16** 17:32:05.3, 1568N×9546W, h15km, mb4.6/1, MD4.3(MEX), After MEX.*
MEX 16 17:32:05.5±0.6, **1568N**×**9546W**, **h15**km±7km, **MD4.3, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.63	278	*e*P	Pg	17 32 15.5	-2.3
HUIG				*i* S	Sg	17 32 23.7	-2.5
CMIG	Matias Romero	1.51	22	*i* P	Pn	17 32 28.4	-3.6
CMIG				*i* S	Sn	17 32 46.0	-5.4
VHO	Vista Hermosa	1.84	319	*e*P	Pn	17 32 34.3	-2.3
VHO				*i* S	Sn	17 32 55.8	-3.9
PCIG		2.16	89	*i* P	Pn	17 32 37.6	-3.3
PCIG				*i* S	Sn	17 33 03.0	-4.5
TGIG		2.50	64	*e*P	Pn	17 32 43.0	-2.6
TGIG				*i* S	Sn	17 33 12.2	-3.7
PNIG	Pinotepa	2.66	286	*i* P	Pn	17 32 44.6	-3.2
PNIG				*i* S	Sn	17 33 16.8	-2.9
CCIG	Comitan	3.26	79	*e*P	Pn	17 32 54.3	-1.7
CCIG				*i* S	Sn	17 33 31.7	-2.8
PPM	Popocatepetl	4.52	319	*i* P	Pn	17 33 12.0	-1.4
PPM				*i* S	Sn	17 34 02.7	-3.1
CAIG	El Cayaco	4.81	287	*i* P	Pn	17 33 14.7	-2.7
IIO	Organos	4.98	322	*i* P	Pn	17 33 21.7	+2.0
ZIIG	Zihuatanejo	6.06	289	*i* P	Pn	17 33 32.9	-1.7
ZIIG				*i* S	Sn	17 34 33.8	-10
TEIG	Tepich	8.20	55	*e*Pn	Pn	17 34 01.1	-2.8
	8.2nm,0.4s						
PAYG	Puerto Ayora	17.04	162	*e*Pn	Pn	17 35 50.7	-13
LVC	Limon Verde	46.09	145	*e*P	P	17 40 23.8	-5.4
	1.9nm,0.3s						

NEIC 16 17:32:14.6, 3834S×17812E, h30km, ML3.7(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.29	22	P	Pb	17 32 21.5	-0.4
PUZ				S	Sb	17 32 27.0	+0.2
MWZ	Matawai	0.47	270	P	Pb	17 32 24.4	-0.1
MWZ				S	Sb	17 32 31.6	+0.4
KNZ	Kokohu	0.77	207	P	Pn	17 32 28.6	-0.7
MXZ	Matakaoa Point	0.79	11	P	Pn	17 32 29.4	-0.3
URZ	Urewera	0.80	275	P	Pn	17 32 29.5	-0.3

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*IDC **16** 17:34:50.0±2.0, 6264N×15141W, h69km±21km, mb3.7/11, mb1 3.8/14, mb1mx3.6/27, mbtmp3.7/14, Error ellipse: s-maj=15.7km s-min=14.9km az=48.0*
*ISCJB **16** 17:34:51.7±0.3, 6260N±003×15128W±008, h105km±3km, mb3.9/11, Error ellipse: s-maj=6.1km s-min=4.5km az=172.5*
*NEIC **16** 17:34:53.3, 6260N×15125W, h94km, MG3.7(AEIC), After AEIC.*
ISC 16 17:34:52.8±0.3, **6258N**±003×**15128W**±008, **h98**km±3km, **n46**, σ0.77/55, **mb3.9**/11, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	Purkeypile	0.52	307	P	Pn	17 35 08.9	+0.4
PPLA				S	Sn	17 35 20.7	+0.4
SKT	Skwentna	0.62	191	P	Pn	17 35 09.2	0.0
SKT				S	Sn	17 35 21.4	-0.2
TRF	Thorofare Moun	0.98	27	P	Pn	17 35 13.1	+0.3
TRF				S	Sn	17 35 28.3	+0.4
KTH	Kantishna Hill	0.99	9	P	Pn	17 35 13.0	+0.1
KTH				S	Sn	17 35 27.6	-0.4
GHO	Glory Hole Cre	1.37	125	P	Pn	17 35 17.9	+0.6
CHUM	Lake Minchumin	1.39	341	P	Pn	17 35 17.8	+0.3
CHUM				S	Sn	17 35 35.8	-0.4
PMR	Palmer	1.42	134	P	Pn	17 35 17.7	-0.2
FIB	Fire Island	1.52	159	P	Pn	17 35 20.5	+1.4
BPAW	Bear Paw Mtn.	1.53	5	P	Pn	17 35 19.1	-0.1
BPAW				S	Sn	17 35 38.0	-1.2
MCK	McKinley	1.57	42	P	Pn	17 35 20.1	+0.4
MCK				S	Sn	17 35 40.1	-0.1
RC01	Rabbit Creek A	1.67	153	P	Pn	17 35 20.6	-0.4
RC01				S	Sn	17 35 42.1	-0.3
SLKM	Skilak Lake	2.15	166	P	Pn	17 35 27.5	+0.4
TT01	Tatalina	2.21	281	P	Pn	17 35 27.9	0.0
SVW2	Sparrevohn	2.53	236	P	Pn	17 35 32.4	+0.3
SEW	Seward	2.64	160	P	Pn	17 35 34.2	+0.6
PAX	Paxson	2.70	79	P	Pn	17 35 34.8	+0.4
COLA	College	2.76	32	P	Pn	17 35 35.3	+0.1
IL1	Eielson Array	2.94	40	P	Pn	17 35 37.5	-0.1
EYAK	Cordova Ski Ar	3.34	125	P	Pn	17 35 42.3	-0.6
DOT	Dot Lake	3.45	69	P	Pn	17 35 44.4	0.0
MENT	Mentasta	3.49	81	*e*P	Pn	17 35 45.3	+0.3
IM3	Indian Mountai	3.58	344	P	Pn	17 35 46.8	+0.6
RAGM	Ragged Mountai	3.86	122	P	Pn	17 35 50.5	+0.6
MID	Middleton Isla	3.98	141	*e*P	Pn	17 35 52.1	+0.6
BCA3	Beaver Creek A	4.38	79	P	Pn	17 35 56.6	-0.4
COLD	Coldfoot	4.69	5	P	Pn	17 36 01.6	+0.6
KDAK	Kodiak Island	4.86	188	P	Pn	17 36 01.4	-2.1
	1.0nm,0.3s,baz=40,slow=13,SNR=9.2						
KDAK				S	Sn	17 36 55.7	-2.8
	3.6nm,0.3s,baz=296,slow=23,SNR=10						
KDAK	Kodiak Island	4.86	188	P	Pn	17 36 01.4	-2.2
EGAK	Eagle	5.01	60	P	Pn	17 36 05.4	-0.1
OHAK	Old Harbor	5.47	192	*e*P	Pn	17 36 11.9	+0.1
DAWY	Dawson	5.56	69	P	Pn	17 36 12.6	-0.3
INK	Inuvik	9.33	44	*e*Pn	Pn	17 37 04.4	+0.3
	22nm,0.9s						
DLBC	Dease Lake	11.24	102	P	Pn	17 37 28.0	-2.1
	0.1nm,0.3s,baz=314,slow=17,SNR=3.1						
YKA	Yellowknife Ar	16.77	74	P	Pn	17 38 40.5	-0.7
	0.4nm,0.3s,baz=284,slow=11,SNR=33						
YKA				ScP	ScP	17 46 49.7	+1.1
	0.0nm,0.3s,baz=283,slow=2.1,SNR=5.7						
EDM	Edmonton	21.90	98	*e*P	P	17 39 37.7	+0.1
RES	Resolute Bay	22.68	35	P	P	17 39 44.6	-1.0
	0.6nm,0.4s,mb3.2,baz=248,slow=16,SNR=7.0						
NVAR	Mina Array Bea	31.39	125	P	P	17 41 05.2	+1.2
	0.2nm,0.5s,mb3.1,baz=284,slow=3.6,SNR=2.9						
SPITS	Spitsbergen Ar	39.27	4	P	P	17 42 10.3	-0.8
	11nm,0.8s,mb4.7,baz=58,slow=5.0,SNR=6.4						
SCHQ	Schefferville	41.50	60	P	P	17 42 29.8	+0.1
	3.6nm,1.0s,mb4.1,baz=300,slow=8.1,SNR=7.8						
TXAR	Lajitas Array	45.21	115	P	P	17 43 01.8	+2.0
	1.3nm,0.7s,mb3.8,baz=327,slow=6.6,SNR=18						
KSRS	Korea Array	53.44	282	P	P	17 44 03.3	+1.0
	1.1nm,0.7s,mb4.0,baz=29,slow=6.2,SNR=4.8						
SONM	Songino Array	53.95	306	P	P	17 44 06.8	+1.0
	1.6nm,0.7s,mb4.2,baz=29,slow=6.7,SNR=14						
ZALV	Zalesovo Beam	55.78	324	P	P	17 44 18.1	-0.8
	0.8nm,0.4s,mb4.1,baz=29,slow=8.9,SNR=5.9						
BVAR	Borovoye Array	60.16	332	P	P	17 44 48.7	-0.8
	1.0nm,0.7s,mb4.0,baz=28,slow=6.7,SNR=6.6						
BVAR				sP	sP	17 45 14.7	-10
	0.6nm,0.6s,baz=28,slow=6.7,SNR=4.1						
KURK	Kurchatov	60.35	326	P	P	17 44 51.1	+0.3
	0.6nm,0.5s,mb3.9,baz=27,slow=7.0,SNR=3.4						
MKAR	Makanchi Array	62.92	322	P	P	17 45 07.3	-0.8
	0.7nm,0.5s,mb3.9,baz=40,slow=6.9,SNR=16						

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*NEIC **16** 18:27:52.2±2.4, 3488N×1507W, h10km, MG3.9(MDD), Error ellipse: s-maj=54.8km s-min=10.5km az=178.0*
*CSEM **16** 18:27:59.3±0.2, 36.14N×15.19W, h10km, ML2.2, Error ellipse: s-maj=9.2km s-min=2.7km az=176.0*
*MDD **16** 18:28:03.0±3.1, 35.16N×14.19W, h0km, mb3.9/5, Error ellipse: s-maj=49.6km s-min=24.4km az=143.0, PRXIMO SOLUCIN POBRE*
*INMG **16** 18:28:04.7±0.9, 3501N×1455W, h10km, ML2.2, Error ellipse: s-maj=12.1km s-min=6.9km az=128.0*
ISC 16 18:28:07.1±1.5, **3543N**±010×**139W**±01, **h10**km, **n23**, σ0.77/37, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	4.46	66	*e*Pn	Pn	18 29 14.8	+0.1
PFVI				*e*Sn	Sn	18 30 06.7	0.0
MORF	Marmelete	4.65	65	*e*Pn	Pn	18 29 17.6	+0.2
MORF				*e*Sn	Sn	18 30 12.9	+1.5
PMAFR	Mafra	5.11	45	*e*Sn	Sn	18 30 23.7	+1.0
PBDV	Barranco-do-Ve	5.17	68	*e*Pn	Pn	18 29 24.8	+0.3
PBDV				*e*Sn	Sn	18 30 25.1	+0.9
PVAQ	Vaqueiros	5.38	67	*e*Pn	Pn	18 29 27.7	+0.3
PVAQ				*e*Sn	Sn	18 30 29.2	-0.2
EGRO	El Granado	5.60	66	P	Pn	18 29 30.7	+0.3
	0.5nm,0.1s,SNR=7.9						
EGRO				S	Sn	18 30 34.8	0.0
	0.7nm,0.1s,SNR=7.9						
EGRO	El Granado	5.60	66	P	Pn	18 29 30.7	+0.2
	0.5nm,0.1s,SNR=7.9						
EGRO				S	Sn	18 30 34.8	-0.1
	0.7nm,0.1s,SNR=7.9						
EVO	Evora	5.66	55	*e*Sn	Sn	18 30 36.5	+0.3
PESTR	Estremoz	6.11	54	*e*Sn	Sn	18 30 48.5	+1.0
PBAR	Barrancos	6.17	62	*e*Pn	Pn	18 29 38.8	+0.6
PBAR				*e*Sn	Sn	18 30 49.4	+0.6
EMIN	Mina Concepcio	6.29	66	P	Pn	18 29 39.9	+0.1
	1.1nm,0.1s,SNR=12						
EMIN				S	Sn	18 30 50.8	-0.9
	0.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	6.29	66	P	Pn	18 29 39.9	0.0
	1.1nm,0.1s,SNR=12						
EMIN				S	Sn	18 30 50.8	-0.9
	0.2nm,0.1s,SNR=7.9						
EBAD	Badajoz	6.45	57	P	Pn	18 29 42.8	+0.8
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	18 30 55.0	-0.6
	0.2nm,0.0s,SNR=7.9						
EBAD	Badajoz	6.45	57	P	Pn	18 29 42.8	+0.8
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	18 30 55.0	-0.7
	0.2nm,0.0s,SNR=7.9						
PMRV	Marv??o	6.55	51	*e*Sn	Sn	18 30 58.2	-0.1
ESPR	Espera	6.69	75	P	Pn	18 29 44.1	-1.3
	0.3nm,0.1s,SNR=7.9						
ESPR				S	Sn	18 31 00.4	-1.2
	2.0nm,0.1s,SNR=7.9						
ESPR	Espera	6.69	75	P	Pn	18 29 44.1	-1.3
	0.3nm,0.1s,SNR=7.9						
ESPR				S	Sn	18 31 00.4	-1.2
	2.0nm,0.1s,SNR=7.9						
MTE	Manteigas	7.07	44	Pn	Pn	18 29 49.6	-1.0
	140nm,2.4s						
ELOB	Lobios	7.89	34	S	Sn	18 31 29.8	-1.5
	0.3nm,0.1s,SNR=4.0						
ELOB	Lobios	7.89	34	S	Sn	18 31 29.8	-1.5
	0.3nm,0.1s,SNR=4.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EADA	**Adamuz**	**7.98**	**67**	P	**Pn**	**18 30 03.4**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 31 32.3**	**-1.2**
	0.1nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.98**	**67**	P	**Pn**	**18 30 03.4**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 31 32.3**	**-1.2**
	0.1nm,0.1s,SNR=7.9						
ESLA	**Sonseca Array**	**8.97**	**59**	*e*Pn	Px	18 30 34.2	

*NEIC **16** 18:47:48.5±8.7, 421S×15382E, h122km±45km, mb4.1/3, Error ellipse: s-maj=101.0km s-min=30.3km az=77.0*
*IDC **16** 18:47:57.2±8.4, 432S×15332E, h180km±57km, mb3.4/5, mb1 3.6/6, mb1mx3.3/18, mbtmp3.5/6, Error ellipse: s-maj=70.2km s-min=29.3km az=72.0*
ISC 16 18:47:51.1±6.0**, 42S**±02×**1537E**±03**, h141**km±41km**, n10, σ0^{s}58**/11**, mb3.8**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.29**	**231**	P	**Pn**	**18 49 49.2**	**+0.9**
	4.5nm,0.3s,baz=53,slow=5.5,SNR=21						
PMG				S	**Sn**	**18 51 20.7**	**+0.2**
	3.5nm,0.3s,baz=137,slow=23,SNR=9.9						
PMG	**Port Moresby**	**8.29**	**231**	*e*Pn	**Pn**	**18 49 47.3**	**-1.1**
	18nm,0.6s						
PMG				*e*Sn	**Sn**	**18 51 20.5**	**0.0**
KAKA	**Kakadu**	**22.63**	**247**	*e*P	x	18 52 17.4	
WRAB	**Tennant Creek**	**24.48**	**229**	*e*P	**P**	**18 52 58.1**	**+0.9**
	3.7nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**24.50**	**229**	P	**P**	**18 52 57.4**	**0.0**
	3.2nm,0.4s,mb4.2,baz=50,slow=9.8,SNR=35						
ASAR	**Alice Springs**	**27.18**	**223**	P	**P**	**18 53 20.9**	**-0.6**
	0.2nm,0.6s,mb2.9,baz=55,slow=9.1,SNR=8.8						
STKA	**Stephens Creek**	**29.77**	**201**	P	**P**	**18 53 44.6**	**+0.2**
	1.0nm,0.5s,mb3.8,baz=33,slow=15,SNR=5.3						
STKA	**Stephens Creek**	**29.77**	**201**	*e*P	**P**	**18 53 44.3**	**-0.2**
	0.5nm,0.8s,mb3.3						
BATI	**Baumata**	**30.36**	**257**	P	**P**	**18 53 49.1**	**-0.7**
	2.1nm,0.4s,mb4.2,baz=104,slow=4.2,SNR=1.9						
CMAR	**Chiang Mai Arr**	**58.43**	**295**	P	**P**	**18 57 32.8**	**+0.4**
	0.7nm,0.7s,mb3.6,baz=115,slow=5.2,SNR=8.3						

*NEIC **16** 18:48:26.1, 1563N×9545W, h20km, MD4.2(MEX), After MEX.*
MEX 16 18:48:26.2±0.6**, 1566N**×**9547W, h20**km±26km**, MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.63**	**280**	*i* P	Pb	18 48 36.3	-2.2
HUIG				*i* S	Sb	18 48 44.5	-2.4
CMIG	**Matias Romero**	**1.53**	**21**	*i* P	Pn	18 48 49.0	-3.4
CMIG				*i* S	Sn	18 49 07.5	-4.2
CMIG	**Matias Romero**	**1.53**	**21**	*i* P	Pn	18 48 49.0	-3.4
CMIG				*i* S	Sn	18 49 07.0	-4.6
CMIG				*i* S	Sn	18 49 07.5	-4.2
VHO	**Vista Hermosa**	**1.86**	**319**	*e*P	Pn	18 48 55.3	-1.6
VHO				*i* S	Sn	18 49 16.1	-3.7
VHO	**Vista Hermosa**	**1.86**	**319**	*e*P	Pn	18 48 56.1	-0.8
PCIG		**2.17**	**88**	*i* P	Pn	18 48 59.0	-2.2
PCIG				*e*S	Sn	18 49 23.0	-4.4
TGIG		**2.51**	**63**	*i* P	Pn	18 49 03.4	-2.5
TGIG				*i* S	Sn	18 49 32.8	-3.1
PNIG	**Pinotepa**	**2.66**	**286**	*i* P	Pn	18 49 05.3	-2.6
PNIG				*i* S	Sn	18 49 35.5	-4.1
CCIG	**Comitan**	**3.26**	**79**	*e*P	Pn	18 49 13.7	-2.6
CCIG				*i* S	Sn	18 49 51.6	-2.8
TPIG	**Tehuac#an**	**3.29**	**327**	*i* P	Pn	18 49 18.3	+1.7
TPIG				*i* S	Sn	18 49 53.4	-1.8
PPM	**Popocatepetl**	**4.54**	**319**	*i* P	Pn	18 49 31.3	-2.5
CAIG	**El Cayaco**	**4.81**	**287**	*i* P	Pn	18 49 35.6	-1.9
ZIIG	**Zihuatanejo**	**6.07**	**289**	*i* P	Pn	18 49 54.2	-0.6
ZIIG				*i* S	Sn	18 51 00.0	-3.7
TEIG	**Tepich**	**8.21**	**55**	*e*Pn	Pn	18 50 21.6	-2.6
	8.1nm,0.4s						

*NEIC **16** 19:07:51.6, 1598N×98.17W, h5km, MD3.9(MEX), After MEX.*
MEX 16 19:07:50.3±0.4**, 1595N**×**9825W, h6**km±3km**, MD3.9, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.46**	**15**	*i* P	Pg	19 07 58.7	-0.5
PNIG				*i* S	Sg	19 08 05.4	+0.3
VHO	**Vista Hermosa**	**1.83**	**52**	*i* P	Pn	19 08 19.2	-3.1
VHO				*i* S	Sn	19 08 41.5	-4.3
UTMO	**Huajuapan**	**1.92**	**13**	*e*P	Pn	19 08 20.9	-2.6
UTMO				*i* S	Sn	19 08 43.7	-4.3
HUIG	**Huatulco**	**2.07**	**95**	*i* P	Pn	19 08 22.3	-3.2
HUIG				*i* S	Sn	19 08 46.0	-5.6
HUIG	**Huatulco**	**2.07**	**95**	*i* P	Pn	19 08 23.4	-2.1
HUIG				*i* S	Sn	19 08 47.8	-3.8
CAIG	**El Cayaco**	**2.22**	**300**	*e*P	Pn	19 08 24.7	-3.0
CAIG				*i* S	Sn	19 08 50.6	-4.8
CAIG	**El Cayaco**	**2.22**	**300**	*i* P	Pn	19 08 27.7	0.0
CAIG				*i* S	Sn	19 08 55.7	+0.3
TPIG	**Tehuac#an**	**2.60**	**19**	*i* S	Sn	19 09 00.9	-3.8
PPM	**Popocatepetl**	**3.12**	**353**	*i* P	Pn	19 08 36.5	-3.5
PPM				*i* S	Sn	19 09 13.9	-3.7
PPM	**Popocatepetl**	**3.12**	**353**	*i* P	Pn	19 08 42.4	+2.3
PPM				*i* S	Sn	19 09 15.6	-2.0
CMIG	**Matias Romero**	**3.42**	**70**	*e*P	Pn	19 08 40.8	-3.3
CMIG				*i* S	Sn	19 09 20.8	-4.3
CMIG	**Matias Romero**	**3.42**	**70**	*e*P	Pn	19 08 39.3	-4.8
CMIG				*i* S	Sn	19 09 20.8	-4.3

*ISCJB **16** 19:07:51.9±1.6, 1866S±0.10×1756W±0.1, h163km±18km, mb4.2/16, Error ellipse: s-maj=18.3km s-min=13.4km az=139.0*
*IDC **16** 19:07:52.5±2.1, 1864S×17558W, h152km±22km, mb4.0/10, mb1 4.1/11, mb1mx3.9/20, mbtmp4.0/11, MS3.0/1, Ms1 3.0/1, ms1mx2.5/32, Error ellipse: s-maj=25.6km s-min=13.7km az=127.0*
*NEIC **16** 19:07:54.0±1.6, 1873S×17546W, h174km±16km, mb4.4/9, Error ellipse: s-maj=15.9km s-min=11.9km az=132.0*
ISC 16 19:07:53.0±1.5**, 1868S**±010×**1755W**±01**, h162**km±16km**, n31, σ0^{s}97**/29**, mb4.2**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.93**	**37**	P	**Pn**	**19 09 20.0**	**+1.0**
	9.2nm,0.3s,baz=35,slow=19,SNR=9.1						
AFI				S	**Sn**	**19 10 25.4**	**-1.0**
	13nm,0.3s,baz=58,slow=19,SNR=9.0						
URZ	**Urewera**	**20.55**	**197**	P	**P**	**19 12 19.6**	**+0.7**
	6.8nm,0.3s,baz=349,slow=3.6,SNR=16						
HNR	**Honiara**	**25.51**	**288**	LR	LR	19 22 06.2	
	comp=Z,34nm,19.0s,baz=159,slow=34						
RPZ	**Rata Peaks**	**27.41**	**202**	P	**P**	**19 13 23.2**	**-0.1**
	6.1nm,0.7s,mb4.3,baz=263,slow=20,SNR=2.6						
ARMA	**Armidale**	**32.00**	**242**	*e*P	**P**	**19 14 06.3**	**+2.3**
CTA	**Charters Tower**	**36.06**	**261**	*e*P	**P**	**19 14 39.9**	**+0.6**
	13nm,0.6s,mb4.8						
CTAO	**Charters Tower**	**36.06**	**261**	*e*P	**P**	**19 14 39.2**	**0.0**
	12nm,0.6s,mb4.7						
PMG	**Port Moresby**	**37.32**	**279**	P	**P**	**19 14 49.8**	**-0.1**
	13nm,0.9s,mb4.5,baz=123,slow=4.1,SNR=5.5						
PMG	**Port Moresby**	**37.32**	**279**	P	**P**	**19 14 49.8**	**-0.1**
STKA	**Stephens Creek**	**40.72**	**243**	*e*P	**P**	**19 15 18.6**	**+0.7**
	3.5nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**40.72**	**243**	P	**P**	**19 15 18.4**	**+0.4**
	1.1nm,0.4s,mb3.8,baz=112,slow=7.4,SNR=8.5						
STKA	**Stephens Creek**	**40.72**	**243**	*e*P	**P**	**19 15 17.8**	**-0.1**
	1.9nm,1.2s,mb3.6						
WB2	**Warramunga Arr**	**47.21**	**260**	*e*P	**P**	**19 16 09.4**	**-0.5**
WRAB	**Tennant Creek**	**47.21**	**260**	*e*P	**P**	**19 16 09.1**	**-0.8**
	5.3nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**47.22**	**260**	P	**P**	**19 16 09.5**	**-0.5**
	5.2nm,0.5s,mb4.4,baz=98,slow=6.0,SNR=166						
ASAR	**Alice Springs**	**47.26**	**255**	P	**P**	**19 16 10.0**	**-0.2**
	22nm,0.6s,mb5.0,baz=90,slow=8.4,SNR=371						
ASAR				PcP	PcP	19 17 38.0	-0.8
	1.1nm,0.7s,baz=102,slow=3.1,SNR=4.3						
KAKA	**Kakadu**	**50.34**	**269**	*e*P	x	19 16 12.9	
	7.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**55.64**	**261**	*e*P	**P**	**19 17 12.2**	**-0.3**
	3.0nm,0.5s,mb4.4						
SBA	**Scott Base**	**59.84**	**184**	*e*P	**P**	**19 17 38.5**	**-2.4**
	3.4nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**61.30**	**242**	P	**P**	**19 17 50.9**	**-0.6**
	39nm,1.3s,mb5.1						
MJAR	**Matsushiro Arr**	**70.20**	**322**	P	**P**	**19 18 48.3**	**0.0**
	1.3nm,0.7s,mb3.8,baz=156,slow=5.9,SNR=5.3						
QSPA	**South Pole Qui**	**71.38**	**180**	*e*P	**P**	**19 18 55.5**	**+0.7**
	3.0nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**84.08**	**57**	P	**P**	**19 20 07.8**	**+1.9**
	1.0nm,1.0s,mb3.5,baz=198,slow=7.5,SNR=6.2						
TXAR	**Lajitas Array**	**84.08**	**57**	P	**P**	**19 20 07.8**	**+1.9**
SNAA	**Sanae**	**89.74**	**178**	*e*P	**P**	**19 20 29.8**	**-2.7**
	0.6nm,0.7s,mb3.6						
VNA3	**Neumayer Olymp**	**89.78**	**175**	*e*	**P**	**19 20 32.2**	**-0.5**
VNA3				*e*		19 20 35.1	
VNA3				*e*		19 20 37.9	
VNA3				*e*		19 20 46.5	
VNA2	**Neumayer--Watz**	**90.25**	**176**	*e*	**P**	**19 20 35.0**	**+0.1**
	baz=213,slow=3.4						
VNA2				*e*		19 20 37.5	
VNA2				*e*		19 20 40.5	
VNA2				*e*		19 20 49.0	
VNA1	**Neumayer--Stat**	**90.46**	**176**	*e*	**P**	**19 20 36.5**	**+0.6**
VNA1				*e*		19 20 39.9	
VNA1				*e*		19 20 43.2	
VNA1				*e*		19 20 49.9	
CMAR	**Chiang Mai Arr**	**91.76**	**289**	P	**P**	**19 20 43.4**	**+0.6**
	1.2nm,0.9s,mb3.9,baz=99,slow=2.7,SNR=8.9						
YKA	**Yellowknife Ar**	**93.89**	**24**	P	**P**	**19 20 51.6**	**0.0**
	0.1nm,0.4s,mb3.3,baz=245,slow=4.2,SNR=3.6						
BRTR	**Keskin Array B**	**147.28**	**316**	PKPbc	PKPbc	19 27 17.1	-0.5
	0.7nm,0.6s,baz=133,slow=3.7,SNR=4.3						

*ISCJB **16** 19:11:43.7±0.5, 4433N±007×12935W±007, h10km, mb4.7/13, MS4.2/7, Error ellipse: s-maj=10.8km s-min=6.1km az=19.2*
*IDC **16** 19:11:44.2±1.6, 4426N×12925W, h0km, mb3.6/5, mb1 3.7/10, mb1mx3.6/25, mbtmp3.5/10, ML3.4/4, MS3.1/5, Ms1 3.1/5, ms1mx2.9/32, Error ellipse: s-maj=42.5km s-min=17.1km az=36.0*
*NEIC **16** 19:11:46.1±1.0, 4433N×12935W, h10km, mb4.7/3, Error ellipse: s-maj=13.7km s-min=9.5km az=61.0*
*BJI **16** 19:11:48.3, 45.14N×13034W, h10km, mB5.1, mb5.0, Ms4.8, Msz4.5*
ISC 16 19:11:45.3±0.5**, 4430N**±007×**12945W**±007**, h10**km**, (h15**km±1.2km**:pP-P), n40, σ1^{s}20**/40**, mb4.7**/13**, MS4.2**/7**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.41**	**84**	*e*Pn	**Pn**	**19 12 49.7**	**-2.6**
YBH	**Yreka Blue Hor**	**5.57**	**115**	Pn	**Pn**	**19 13 08.8**	**+0.6**
	0.4nm,0.3s,baz=282,slow=7.2,SNR=10						
YBH				Sn	**Sn**	**19 14 06.2**	**-5.9**
	0.1nm,0.3s,baz=100,slow=18,SNR=1.9						
YBH				LR	LR	19 15 10.4	
	comp=Z,186nm,19.1s,baz=286,slow=38						
HOOD	**Mount Hood Mea**	**5.64**	**77**	*e*Pn	**Pn**	**19 13 07.7**	**-1.4**
LON	**Longmire**	**5.90**	**63**	*e*Pn	**Pn**	**19 13 10.9**	**-1.8**
	12nm,0.8s						
JCW	**Jim Creek**	**6.50**	**51**	*e*Pn	**Pn**	**19 13 20.9**	**0.0**
RPW	**Rockport**	**6.88**	**50**	*e*Pn	**Pn**	**19 13 26.1**	**0.0**
MOD	**Modoc**	**7.11**	**107**	Pn	**Pn**	**19 13 22.0**	**-7.4**
	1.4nm,0.4s						
HAWA	**Hanford**	**7.29**	**70**	*e*Pn	**Pn**	**19 13 30.8**	**-1.1**
	4.7nm,0.8s						
OHCM	**Honcut**	**7.75**	**127**	*e*Pn	**Pn**	**19 13 38.9**	**+0.9**
WVOR	**Wild Horse Val**	**8.10**	**100**	*e*Pn	**Pn**	**19 13 45.5**	**+2.7**
	1.6nm,0.7s						
NVAR	**Mina Array Bea**	**10.22**	**121**	Pn	**Pn**	**19 14 12.2**	**+0.2**
	0.1nm,0.3s,baz=304,slow=16,SNR=2.4						
HLID	**Hailey**	**10.87**	**89**	*e*Pn	**Pn**	**19 14 21.7**	**+0.8**
ELK	**Elko**	**11.07**	**104**	Pn	**Pn**	**19 14 23.9**	**+0.2**
	0.1nm,0.3s,baz=243,slow=6.8,SNR=3.0						
ELK				LR	LR	19 18 43.9	
	comp=Z,112nm,19.6s,baz=300,slow=38						
SLMT	**Seeley Lake**	**11.53**	**70**	*e*Pn	**Pn**	**19 14 30.1**	**+0.3**
BOZ	**Bozeman (W)**	**12.69**	**78**	*e*Pn	**Pn**	**19 14 46.9**	**+1.2**
IMW	**Indian Meadow**	**13.31**	**85**	*e*Pn	**Pn**	**19 14 54.7**	**+0.5**
LDFC	**Landfair**	**14.36**	**125**	*e*Pn	**Pn**	**19 15 08.3**	**-0.3**
PDAR	**Pinedale Array**	**14.51**	**89**	Pn	**Pn**	**19 15 11.8**	**+1.2**
	0.0nm,0.3s,baz=292,slow=7.8,SNR=6.7						
SRU	**San Rafael**	**15.05**	**104**	*e*Pn	**Pn**	**19 15 24.1**	**+6.2**
RWWY	**Rawlins**	**16.47**	**91**	*e*Pn	**Pn**	**19 15 30.8**	**-5.6**
	15nm,0.6s						
ANMO	**Albuquerque**	**19.97**	**110**	P	**Pn**	**19 16 18.1**	**-1.2**
	0.0nm,0.3s,baz=297,slow=11,SNR=3.9						
ANMO				LR	LR	19 24 15.6	
	comp=Z,81nm,20.3s,baz=337,slow=38						
YKA	**Yellowknife Ar**	**20.16**	**20**	P	**P**	**19 16 20.5**	**+1.0**
	0.8nm,0.8s,baz=208,slow=11,SNR=9.5						
YKA				LR	LR	19 23 08.1	
	comp=Z,9.9nm,20.0s,baz=305,slow=34						
FFC	**Flin Flon**	**20.53**	**50**	*e*P	**P**	**19 16 23.8**	**+0.3**
	69nm,2.4s						
ULM	**Lac du Bonnet**	**23.41**	**63**	P	**P**	**19 16 54.5**	**+0.2**
	2.4nm,0.8s,mb3.7,baz=288,slow=11,SNR=3.9						
TXAR	**Lajitas Array**	**25.34**	**117**	P	**P**	**19 17 10.7**	**-1.6**
	0.4nm,0.8s,baz=321,slow=3.8,SNR=2.8						
NATX	**Nacogdoches**	**29.90**	**103**	*e*P	**P**	**19 17 52.5**	**-0.6**
	25nm,0.4s,mb5.3						
SCHQ	**Schefferville**	**40.64**	**52**	LR	LR	19 36 30.2	
	comp=Z,69nm,18.7s,MS3.5,baz=274,slow=37						
MDJ	**Mudanjiang**	**67.06**	**310**	P	**P**	**19 22 38.3**	**-0.2**
MDJ				PP	PP	19 25 05.6	-0.2
MDJ				S	S	19 31 31.6	-0.6
MDJ				AMB	AMB		
	comp=Z,7.0nm,2.4s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,126nm,4.5s						
MDJ				LR	LR		
	comp=N,27nm,18.1s,MS3.6						
MDJ				LR	LR		
	comp=E,24nm,18.9s,MS3.6						
CN2	**Changchun**	**69.84**	**312**	*e*P	**P**	**19 22 54.3**	**-1.6**
CN2				*e*XP	sP	19 23 01.1	+0.7
SONM	**Songino Array**	**75.95**	**325**	P	**P**	**19 23 33.4**	**+1.3**
	comp=E,1.5nm,1.1s,mb3.9,baz=44,slow=3.2,SNR=6.0						
BJI	**Beijing**	**77.38**	**314**	P	**P**	**19 23 39.9**	**-0.4**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.4s,mb5.0						
BJI				AMB	AMB		
	comp=Z,98nm,5.0s						
ZALV	**Zalesovo Beam**	**77.84**	**340**	P	**P**	**19 23 43.6**	**+1.0**
	comp=Z,0.4nm,0.4s,mb3.8,baz=2.9,slow=5.8,SNR=2.4						
HHC	**Hu-ho-hao-te**	**79.07**	**317**	*e*P	**P**	**19 23 47.8**	**-1.9**
HHC				AP	pP	19 23 52.1	-0.9
HHC				PP	PP	19 26 47.8	-0.3
HHC				*e*S	S	19 33 44.4	-4.3
HHC				XS	sS	19 33 52.3	-1.9
HHC				SKS		19 33 57.6	
HHC				SCS	ScS	19 34 04.8	-7.1
HHC				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.9						
HHC				AMB	AMB		
	comp=Z,141nm,6.5s						
HHC				LR	LR		
	comp=N,144nm,16.6s,MS4.4						
HHC				LR	LR		
	comp=E,85nm,19.0s,MS4.4						
HHC				LR	LR		
	comp=Z,141nm,20.2s,MS4.3						
NJ2	**Nanjing**	**81.83**	**307**	*e*P	**P**	**19 24 07.6**	**+3.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
XAN	**Xi'an**	**85.69**	**315**	P	**P**	**19 24 22.1**	**-2.3**
XAN				AP	pP	19 24 27.3	-0.4
XAN				PP	PP	19 27 42.0	-0.7
XAN				S	S	19 34 55.9	-0.9
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.3						
XAN				AMB	AMB		
	comp=Z,25nm,15.4s						
XAN				LR	LR		
	comp=E,30nm,19.5s						
XAN				LR	LR		
	comp=Z,42nm,17.4s,MS3.9						
WMQ	**Urumqi**	**86.22**	**334**	*e*P	**P**	**19 24 29.5**	**+2.7**
LZH	**Lanzhou**	**86.53**	**319**	*e*P	**P**	**19 24 29.0**	**+0.5**
LZH				AP	pP	19 24 32.3	+0.5
LZH				XP	sP	19 24 33.6	+0.6
LZH				PP	PP	19 27 52.1	+2.7
LZH				AMB	AMB		
	comp=Z,23nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,121nm,6.2s						
LZH				LR	LR		
	comp=N,223nm,16.5s						
LZH				LR	LR		
	comp=Z,297nm,18.7s,MS4.7						
CD2	**Chengdu**	**90.79**	**316**	P	**P**	**19 24 49.1**	**+0.3**
CD2				AP	pP	19 24 53.9	+1.8
CD2				XP	sP	19 24 56.1	+2.8
CD2				PP	PP	19 28 26.5	+2.9
CD2				SKS		19 35 18.3	
CD2				XS	sS	19 35 49.9	-1.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.4						
CD2				AMB	AMB		
	comp=Z,90nm,8.3s						
CD2				LR	LR		
	comp=N,260nm,12.3s						
CD2				LR	LR		
	comp=Z,150nm,16.7s,MS4.5						
GYA	**Guiyang**	**92.89**	**312**	P	**P**	**19 24 57.3**	**-1.3**
GYA				PP	PP	19 28 41.6	+1.3
GYA				SKS		19 35 29.8	
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,70nm,6.2s						
GYA				LR	LR		
	comp=N,420nm,18.9s,MS5.0						
GYA				LR	LR		
	comp=E,390nm,19.4s,MS5.0						
GYA				LR	LR		
	comp=Z,360nm,19.8s,MS4.8						
KMI	**Kunming**	**96.03**	**314**	P	**P**	**19 25 13.9**	**+0.9**
KMI				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb5.0						

PGC 16 19:13:37.9±0.0**, 5200N**×**13185W, h20**km**, ML2.5**/4**, 5D, 138km south of Sandspit, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**0.58**	**6**	⇓P	Pb	19 13 48.8	-0.4
BNB				⇓S	Sb	19 13 56.9	-0.1
MOBC	**Moresby Island**	**1.15**	**356**	⇑P	Pn	19 13 58.5	-0.2
MOBC				⇓S	Sb	19 14 13.6	+0.3
DIB	**Dawson Inlet,**	**1.26**	**343**	Pn	Pn	19 14 00.5	+0.2
DIB				Sn	Sn	19 14 18.2	+1.6
	SNR=767						
DIB	**Dawson Inlet,**	**1.26**	**343**	P	Pn	19 14 00.4	+0.1
DIB				⇑S	Sn	19 14 17.4	+0.7
VIB	**Van Inlet**	**1.32**	**342**	Pn	Pn	19 14 01.3	+0.2
VIB				Sn	Sn	19 14 17.9	-0.2
	SNR=285						
VIB	**Van Inlet**	**1.32**	**342**	⇓P	Pn	19 14 01.4	+0.3
VIB				⇑S	Sn	19 14 18.2	+0.1
NDB	**Naden**	**2.06**	**342**	⇑Pg	Pn	19 14 14.7	+3.4
NDB				⇓Sg	Sn	19 14 42.5	+6.1

*ISCJB **16** 19:19:33.8±0.7, 3920N±005×3495E±005, h10km±10km, Error ellipse: s-maj=8.7km s-min=6.1km az=11.6*
*CSEM **16** 19:19:33.5, 3920N×3495E, h8km, MD3.0, After ISK*
*ISK **16** 19:19:33.5, 3920N×3495E, h8km, MD3.0*
ISC 16 19:19:34.4±0.7**, 3921N**±005×**3495E**±005**, h13**km±10km**, n7, σ0^{s}36**/10**, 2C, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AVNT	**Avonos**	**0.43**	**190**	⇑*i*P	**Pg**	**19 19 43.0**	**+0.1**
YOZ	**Yozgat**	**0.52**	**33**	PG	**Pg**	**19 19 43.9**	**-0.6**
YOZ				*e*SG	**Sg**	**19 19 51.9**	**+0.4**
CDAG	**Cicekdag**	**0.61**	**313**	⇑*i*P	**Pg**	**19 19 46.3**	**-0.1**
BNN	**Bunyan**	**0.78**	**117**	*e*PG	**Pg**	**19 19 49.0**	**-0.4**
BNN				*e*SG	**Sg**	**19 20 00.1**	**+0.4**
KAMT	**Kaman**	**0.98**	**280**	*e*PG	**Pg**	**19 19 52.9**	**-0.3**
KAMT				*e*SG	**Sg**	**19 20 06.4**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.46**	**111**	*e*PN	**Pn**	**19 20 00.1**	**-0.2**
SVSK	**Karacayir**	**1.73**	**65**	*e*PN	**Pn**	**19 20 04.5**	**+0.4**

*ISCJB **16** 19:29:21.1±2.6, 2301S±006×7031W±008, h24km±19km, mb4.1/11, Error ellipse: s-maj=13.0km s-min=8.3km az=151.6*
*IDC **16** 19:29:24.1±3.1, 2301S×7020W, h33km±21km, mb4.0/10, mb1 4.1/13, mb1mx4.0/21, mbtmp4.0/13, ML3.7/4, Error ellipse: s-maj=26.7km s-min=18.5km az=37.0*
*NEIC **16** 19:29:24.4±0.4, 2304S×7026W, h35km, mb4.1/3, Error ellipse: s-maj=10.3km s-min=7.1km az=52.0*
ISC 16 19:29:24.6±1.0**, 2299S**±005×**7031W**±007**, h35**km±10km**, n35, σ1^{s}19**/35**, mb4.1**/11**, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.35**	**74**	Pg	**Pn**	**19 29 48.8**	**+1.9**
	baz=226,slow=0.0						
LVC				Lg		19 30 05.0	
	2μm,0.3s,SNR=100						
LVC	**Limon Verde**	**1.35**	**74**	Pg	**Pn**	**19 29 48.8**	**+1.9**
LVC				⇓*i*Pn	**Pn**	**19 29 49.0**	**+2.0**
LVC				*e*Sn	**Sn**	**19 30 04.6**	**+1.0**
LVC				Lg		19 30 05.0	
ARE	**Arequipa**	**6.58**	**350**	*e*P	**Pn**	**19 31 00.0**	**+1.0**
ARE				*e*S	**Sn**	**19 32 11.0**	**-1.8**
CFAA	**Coronel Fontan**	**8.78**	**168**	Pn	**Pn**	**19 31 28.4**	**-0.6**
	0.1nm,0.3s,baz=350,slow=12,SNR=12						
CFAA				Sn	**Sn**	**19 33 15.8**	**+9.0**
	0.2nm,0.3s,baz=229,slow=12,SNR=3.1						
CFAA	**Coronel Fontan**	**8.78**	**168**	Pn	**Pn**	**19 31 28.4**	**-0.6**
CFAA				Sn	**Sn**	**19 33 15.8**	**+9.0**
SIV	**San Ignacio**	**11.15**	**53**	Pn	**Pn**	**19 32 00.7**	**-0.9**
	1.1nm,0.3s,baz=243,slow=11,SNR=30						
CPUP	**Villa Florida**	**12.27**	**108**	Pn	**Pn**	**19 32 12.9**	**-4.0**
	0.2nm,0.3s,baz=166,slow=12,SNR=1.9						
CPUP	**Villa Florida**	**12.27**	**108**	*e*Pn	**Pn**	**19 32 14.8**	**-2.1**
	21nm,0.8s						
NNA	**Nana**	**12.58**	**329**	Sn	**Sn**	**19 34 38.7**	**-1.4**
	1.3nm,0.3s,baz=213,slow=13,SNR=2.7						
NNA	**Nana**	**12.58**	**329**	*e*Pn	**Pn**	**19 32 22.1**	**+0.9**
	89nm,1.9s						
TRQA	**Tornquist**	**16.64**	**156**	*e*P	**Pn**	**19 33 14.4**	**-0.6**
	38nm,1.0s						
ATAH	**Atahualpa**	**17.69**	**333**	P	**Pn**	**19 33 29.0**	**+0.7**
	0.2nm,0.3s,baz=355,slow=20,SNR=1.9						
BDFB	**Brasilia**	**22.26**	**75**	P	**P**	**19 34 18.6**	**-0.1**
	2.0nm,0.6s,mb3.7,baz=245,slow=20,SNR=6.6						
BDFB	**Brasilia**	**22.26**	**75**	*e*P	**P**	**19 34 18.2**	**-0.5**
	6.6nm,0.8s,mb4.1						
OTAV	**Otavalo**	**24.40**	**340**	*e*P	**P**	**19 34 41.8**	**+1.9**
	2.1nm,0.8s,mb3.6						
VNA3	**Neumayer Olymp**	**59.10**	**161**	*e*	**P**	**19 39 21.7**	**+0.7**
VNA3				*e*		19 39 35.6	
VNA3				*e*		19 39 40.8	
VNA3				*e*		19 39 47.1	
VNA1	**Neumayer--Stat**	**59.33**	**160**	*e*	**P**	**19 39 25.6**	**+3.0**
VNA1				*e*		19 39 38.8	
VNA1				*e*		19 39 44.0	
VNA1				*e*		19 39 51.0	
VNA2	**Neumayer--Watz**	**59.70**	**160**	*e*	**P**	**19 39 26.0**	**+0.9**
	baz=305,slow=5.6						
VNA2				*e*		19 39 40.2	
VNA2				*e*		19 39 45.4	
VNA2				*e*		19 39 51.7	
TXAR	**Lajitas Array**	**61.12**	**327**	P	**P**	**19 39 34.4**	**-1.1**
	0.4nm,0.4s,mb3.9,baz=143,slow=6.2,SNR=23						
SNAA	**Sanae**	**61.31**	**161**	*e*	**P**	**19 39 34.8**	**-1.4**
SNAA				*e*		19 39 49.1	
SNAA				*e*		19 39 53.3	
SNAA				*e*		19 39 59.5	
ANMO	**Albuquerque**	**67.05**	**328**	P	**P**	**19 40 15.1**	**+0.8**
	1.5nm,0.7s,mb4.2,baz=126,slow=6.0,SNR=7.5						
ANMO	**Albuquerque**	**67.05**	**328**	P	**P**	**19 40 15.1**	**+0.8**
DBIC	**Dimbokro**	**70.40**	**74**	P	**P**	**19 40 34.3**	**-1.3**
	5.9nm,1.0s,mb4.5,baz=94,slow=8.0,SNR=3.0						
NVAR	**Mina Array Bea**	**75.87**	**323**	P	**P**	**19 41 08.2**	**+0.8**
	0.4nm,0.4s,mb3.7,baz=145,slow=7.6,SNR=4.2						
ELK	**Elko**	**75.92**	**326**	P	**P**	**19 41 08.8**	**+1.3**
	0.3nm,0.3s,mb3.7,baz=93,slow=5.8,SNR=4.4						
ELK	**Elko**	**75.92**	**326**	P	**P**	**19 41 08.8**	**+1.2**

ULM	Lac du Bonnet	76.35	343	P	P	19 41 09.8	+0.1
	2.0nm,0.5s,mb4.3,baz=164,slow=7.9,SNR=3.1						
TORD	Torodi Ar. Bea	79.08	71	P	P	19 41 24.8	-1.0
	3.6nm,0.8s,mb4.4,baz=252,slow=5.2,SNR=22						
BOSA	Boshof	83.90	118	P	P	19 41 49.8	-1.4
	4.0nm,0.9s,mb4.5,baz=241,slow=8.8,SNR=3.9						
YKA	Yellowknife Ar	92.16	341	P	P	19 42 29.6	-0.3
	1.6nm,0.6s,mb4.5,baz=138,slow=4.2,SNR=42						
ASAR	Alice Springs	128.00	209	PKP	PKPdf	19 48 27.6	+0.1
	0.7nm,0.7s,baz=136,slow=1.9,SNR=10.0						
WRA	Warramunga Arr	131.02	211	PKP	PKPdf	19 48 33.9	+0.6
	0.6nm,0.5s,baz=150,slow=1.6,SNR=15						
ZALV	Zalesovo Beam	143.84	25	PKP	PKPdf	19 48 56.7	+0.9
	0.5nm,0.4s,baz=264,slow=2.9,SNR=3.3						
MKAR	Makanchi Array	147.59	36	PKPbc	PKPbc	19 49 05.3	+0.2
	1.0nm,0.7s,baz=340,slow=2.3,SNR=8.7						
MJAR	Matsushiro Arr	151.91	305	PKPbc	PKPbc	19 49 15.0	-1.1
	1.4nm,1.1s,baz=41,slow=53,SNR=2.9						

*ISCJB **16** 19:35:56.7±1.0, 29.3S±0.1×178.4W±0.1, h151km±9km, mb4.0/12, Error ellipse: s-maj=21.9km s-min=15.9km az=143.1*
*IDC **16** 19:35:57.5±0.7, 29.10S×178.36W, h147km±7km, mb3.8/6, mb1 4.0/6, mb1mx3.8/13, mbtmp3.8/6, Error ellipse: s-maj=23.5km s-min=21.5km az=158.0*
*NEIC **16** 19:35:57.0±0.8, 29.27S×178.13W, h152km±7km, mb4.1/8, Error ellipse: s-maj=14.7km s-min=11.7km az=157.0*
ISC 16 19:35:57.7±1.0**, 29.3S**±0.1×**178.3W**±0.1**, h147**km±9km**, n38,** σ**1.07**/25**, mb4.0**/12**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.35	89	P	Pn	19 36 18.6	+0.6
	3µm,0.3s,baz=259,slow=23,SNR=90						
RAO	Raoul Island	0.35	89	P	Pn	19 36 18.6	+0.6
URZ	Urewera	9.75	202	P	Pn	19 38 12.3	-2.1
	0.3nm,0.3s,baz=312,slow=15,SNR=3.2						
URZ				S	Sn	19 39 56.8	-5.5
	3.0nm,0.3s,baz=335,slow=20,SNR=7.7						
RAR	Rarotonga	18.58	69	P	P	19 39 59.3	-4.2
	0.4nm,0.3s,baz=214,slow=19,SNR=3.1						
CMSA	Cobar Meteorol	31.04	257	eP	P	19 42 03.4	+1.7
	13nm,1.6s,mb4.4						
CTAO	Charters Tower	33.35	278	eP	P	19 42 22.7	+0.7
STKA	Stephens Creek	34.48	255	eP	P	19 42 32.4	+0.8
	1.3nm,0.4s,mb4.0						
STKA	Stephens Creek	34.48	255	P	P	19 42 31.7	+0.1
	1.9nm,0.5s,mb4.1,baz=112,slow=10,SNR=14						
STKA	Stephens Creek	34.48	255	eP	P	19 42 31.9	+0.2
	0.5nm,0.6s,mb3.4						
ASAR	Alice Springs	42.90	266	P	P	19 43 41.2	-0.7
	2.1nm,0.6s,mb3.9,baz=98,slow=7.3,SNR=52						
WB2	Warramunga Arr	43.77	271	eP	P	19 43 49.3	+0.4
WRAB	Tennant Creek	43.78	271	eP	P	19 43 48.4	-0.5
	4.5nm,0.8s,mb4.2						
WRA	Warramunga Arr	43.79	271	P	P	19 43 48.2	-0.8
	2.1nm,0.4s,mb4.2,baz=110,slow=6.2,SNR=85						
WRA				ScP	ScP	19 49 10.5	-0.5
	0.6nm,1.0s,baz=103,slow=3.7,SNR=5.6						
VNDA	Vanda	49.20	186	P	P	19 44 32.2	+1.8
	1.3nm,0.6s,mb3.7,baz=149,slow=10.0,SNR=6.6						
VNDA	Vanda	49.20	186	eP	P	19 44 31.0	+0.5
	1.2nm,0.6s,mb3.7						
KNA	Kununurra	50.31	273	eP	P	19 44 41.0	+1.3
	12nm,1.3s,mb4.4						
FITZ	Fitzroy Crossi	52.09	269	eP	P	19 44 52.0	-0.9
	2.1nm,0.8s,mb3.8						
QSPA	South Pole Qui	60.85	180	eP	P	19 45 53.9	-0.1
	2.3nm,0.6s,mb4.2						
MJAR	Matsushiro Arr	77.14	325	P	P	19 47 34.2	-0.7
	1.7nm,0.8s,mb3.8,baz=163,slow=5.3,SNR=5.1						
SNAA	Sanae	79.30	179	eP	P	19 47 44.0	-2.4
	4.3nm,1.2s,mb4.0						
VNA3	Neumayer Olymp	79.46	176	e	P	19 47 47.6	+0.3
VNA3				e		19 47 49.1	
VNA3				e		19 47 53.3	
VNA2	Neumayer--Watz	79.89	177	e	P	19 47 50.4	+0.8
	baz=187,slow=4.4						
VNA2				e		19 47 51.9	
VNA2				e		19 47 55.3	
VNA1	Neumayer--Stat	80.12	177	e	P	19 47 52.1	+1.2
VNA1				e		19 47 53.8	
PETK	Petropavlovsk-	84.64	346	P	P	19 48 13.3	-0.9
	5.0nm,1.0s,mb4.2,baz=178,slow=11,SNR=4.0						
MKAR	Makanchi Array	116.82	311	PKP	PKPdf	19 54 23.2	-1.2
	0.6nm,0.5s,baz=183,slow=2.6,SNR=14						
ZALV	Zalesovo Beam	116.99	319	PKP	PKPdf	19 54 24.0	-0.5
	0.5nm,0.5s,baz=175,slow=3.5,SNR=2.8						
BOSA	Boshof	118.20	204	PKP	PKPdf	19 54 28.6	+0.8
	1.3nm,0.4s,baz=278,slow=18,SNR=5.9						
KBL	Kabul	123.51	294	ePKPdf	PKPdf	19 54 37.8	+0.1
ARCES	ARCESS Array B	137.42	348	PKhKP		19 54 56.5	
	3.7nm,1.0s,baz=20,slow=2.9,SNR=4.2						
ARCES				PKP	PKPdf	19 55 00.7	-2.2
	2.5nm,0.8s,baz=52,slow=1.5,SNR=3.8						
JOF	Joensuu	141.25	339	ep	PKPdf	19 55 04.9	-5.2
	2.5nm,0.7s						
KAF	Kangasniemi	143.38	341	ep	PKPdf	19 55 09.2	-4.7
	1.9nm,0.6s						
NB2	NORSAR Subarra	147.58	351	PKP	PKPdf	19 55 23.0	+1.9
	comp=Z,2.3nm,0.6s,baz=12,slow=2.9						
NOA	NORSAR Array B	147.58	351	PKPbc	PKPbc	19 55 22.8	-1.1
	comp=Z,3.4nm,0.7s,baz=14,slow=4.4,SNR=10						
BR131	Keskin Array S	151.80	300	ePKPbc	PKPbc	19 55 34.3	-0.7
BRTR	Keskin Array B	151.80	300	PKPbc	PKPbc	19 55 33.9	-1.1
	comp=Z,1.4nm,0.5s,baz=153,slow=7.5,SNR=13						
CLL	Collm	156.40	342	i PKPab	PKPab	19 56 03.8	+0.2
	comp=Z,9.0nm,1.3s						
GERES	GERESS Array B	158.38	338	PKPab	PKPab	19 56 12.6	+0.4
	comp=Z,0.6nm,0.6s,baz=54,slow=6.8,SNR=5.1						
TORD	Torodi Ar. Bea	163.97	180	PKP	PKPdf	19 55 43.9	-0.2
	comp=Z,0.4nm,0.9s,baz=247,slow=2.2,SNR=3.5						
TORD				PKPab	PKPab	19 56 36.1	-1.3
	comp=Z,1.4nm,0.7s,baz=174,slow=3.3,SNR=8.1						

NEIC 16 19:45:48.1, 38.42S×178.61E, h36km**, ML4.1**(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.44	321	P	Pn	19 45 57.3	-0.7
PUZ				S	Sn	19 46 04.8	0.0
MWZ	Matawai	0.85	275	P	Pn	19 46 03.3	-0.3
MWZ				S	Sn	19 46 14.9	0.0
MXZ	Matakaoa Point	0.89	344	P	Pn	19 46 03.9	-0.2
MXZ				S	Sn	19 46 16.7	+1.0
KNZ	Kokohu	0.95	230	P	Pn	19 46 04.3	-0.6
URZ	Urewera	1.19	277	P	Pn	19 46 08.0	-0.2
SNZO	South Karori	4.17	225	ePn	Pn	19 46 46.2	-3.0
SNZO				eSn	Sn	19 47 33.4	-3.2

IDC 16 19:47:27.0±11.0**, 24.68S×67.17W, h0**km**, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.5**/16**, mbtmp3.6**/2**, Error ellipse: s-maj=482.6km s-min=68.4km az=18.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	76.96	69	P	P	19 59 22.0	+0.1
	0.4nm,0.7s,baz=246,slow=5.1,SNR=5.3						
YKA	Yellowknife Ar	94.71	340	P	P	20 00 49.5	-0.1
	0.3nm,0.7s,baz=130,slow=4.4,SNR=6.0						
MKAR	Makanchi Array	147.15	40	PKPbc	PKPbc	20 07 11.2	-0.7
	0.3nm,0.6s,baz=300,slow=2.5,SNR=6.1						

*IDC **16** 20:38:38.4±1.8, 67.71N×11.84W, h0km, mb3.1/1, mb1 3.8/5, mb1mx3.4/27, mbtmp3.7/5, ML3.3/4, Error ellipse: s-maj=37.4km s-min=24.4km az=162.0*
*CSEM **16** 20:38:41.0, 67.61N×11.95W, h14km, ML3.5, After REY*
REY 16 20:38:41.0, 67.61N×11.95W, h14km**, ML3.5, ML3.5, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILEI	Leirhofn	2.15	238	P	Pn	20 39 16.1	-0.3
ILEI				S	Sn	20 39 42.5	-0.4
IGIL	Gilhagi	2.32	231	P	Pn	20 39 18.5	-0.3
IGIL				S	Sn	20 39 47.6	+0.5
IGRS	Grimsstaoir	2.59	222	P	Pn	20 39 22.4	0.0
IGRS				S	Sn	20 39 53.9	+0.3
IGRI	Grimsey	2.60	249	P	Pn	20 39 22.8	+0.2
IHED	Heoinshofoi	2.62	237	P	Pn	20 39 22.3	-0.5
IHED				S	Sn	20 39 53.9	-0.4
IKVO	Krokottuvotn	2.74	228	P	Pn	20 39 24.5	+0.1
IKVO				S	Sn	20 39 57.8	+0.6
IBRE	Brettingsstaoi	2.79	240	P	Pn	20 39 24.8	-0.3
IBRE				S	Sn	20 39 58.7	+0.2
IREN	Reynihlio	2.79	227	P	Pn	20 39 25.2	0.0
IREN				S	Sn	20 39 59.0	+0.4
IGRA	Granastaoir	2.81	235	P	Pn	20 39 25.0	-0.4
IGRA				S	Sn	20 39 59.0	0.0
IGLU	Glumsstadir	2.93	207	P	Pn	20 39 27.0	-0.1
IGLU				S	Sn	20 40 02.8	+0.8
IADA	Aoalbol	2.99	211	P	Pn	20 39 27.9	0.0
IADA				S	Sn	20 40 04.5	+1.1
IHLA	Hella	3.05	240	P	Pn	20 39 28.6	-0.2
IHLA				S	Sn	20 40 05.6	+0.6
IHVA	Hvannstoosfjol	3.10	213	P	Pn	20 39 29.7	+0.2
IHVA				S	Sn	20 40 08.3	+2.0
ISVA	Svartarkot	3.12	225	P	Pn	20 39 29.8	+0.1
ISIG	Siglufjorour	3.13	245	P	Pn	20 39 29.1	-0.7
IVSH	V-Sauoahnukur	3.20	210	P	Pn	20 39 30.9	0.0
IBRU	Bruarjokull	3.26	213	P	Pn	20 39 31.7	+0.1
IBRU				S	Sn	20 40 11.7	+1.6
IHRN	Hraun	3.56	249	P	Pn	20 39 36.0	+0.2
BORG	Borgarnes	4.77	237	Pn	Pn	20 39 53.8	+1.5
	1.5nm,0.3s,baz=232,slow=7.6,SNR=5.2						
BORG				Sn	Sn	20 40 49.5	+2.2
	baz=345,slow=18,SNR=1.9						
NOA	NORSAR Array B	11.94	112	Pn	Pn	20 41 27.8	-2.7
	0.1nm,0.3s,baz=310,slow=12,SNR=2.8						
SPITS	Spitsbergen Ar	13.25	25	Pn	Pn	20 41 47.7	-0.6
	baz=233,slow=16,SNR=3.3						
ARCES	ARCESS Array B	13.67	65	Pn	Pn	20 41 50.0	-4.2
	0.1nm,0.3s,baz=288,slow=13,SNR=2.9						
YKA	Yellowknife Ar	38.82	314	P	P	20 46 03.4	-1.4
	0.1nm,0.5s,baz=35,slow=8.1,SNR=5.3						

*ISCJB **16** 20:51:58.0±0.4, 10.32S±0.06×87.52E±0.07, h10km, mb4.7/34, MS3.8/10, Error ellipse: s-maj=10.2km s-min=7.9km az=174.6*
*BJI **16** 20:51:57.0, 10.40S×87.50E, h10km, mB5.2, mb4.7, Ms4.0*
*IDC **16** 20:51:58.1±0.8, 10.24S×87.48E, h0km, mb4.0/12, mb1 4.1/13, mb1mx4.0/25, mbtmp4.1/13, ML4.3/1, MS3.8/10, Ms1 3.8/10, ms1mx3.5/30, Error ellipse: s-maj=22.8km s-min=16.9km az=147.0*
*NEIC **16** 20:51:59.6±0.4, 10.36S×87.53E, h10km, mb4.9/20, Error ellipse: s-maj=9.4km s-min=7.7km az=69.0*
ISC 16 20:51:59.8±0.3**, 10.34S**±0.05×**87.51E**±0.07**, h10**km**, n58,** σ**0.97**/53**, mb4.7**/34**, MS3.8**/10**, 5C-1D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	17.31	42	P	Pn	20 55 59.5	-2.3
	0.9nm,0.3s,baz=134,slow=12,SNR=2.4						
PSI				LR	LR	21 01 19.0	
	comp=Z,213nm,21.2s,baz=130,slow=33						
PSI	Prapat	17.31	42	P	Pn	20 55 59.5	-2.3
PSI				LR	LR	21 01 19.0	
PALK	Pallekele	18.76	339	eP	Pn	20 56 20.9	+1.2
	36nm,1.1s						
KSM	Kuching	25.55	64	eP	P	20 57 23.9	-5.2
	8.6nm,0.9s,mb4.3						
CMAR	Chiang Mai Arr	30.76	22	P	P	20 58 14.2	-1.4
	0.2nm,0.3s,baz=225,slow=29,SNR=4.6						
CMAR				LR	LR	21 09 39.1	
	comp=Z,49nm,18.1s,MS3.2,baz=195,slow=35						
MBWA	Marble Bar	32.76	113	eP	P	20 58 34.5	+1.3
	19nm,1.2s,mb4.9						
NWAO	Narrogin (SRO)	35.40	134	eP	P	20 58 54.9	-1.2
	189nm,2.0s,mb5.7						
ODAN	Odare	36.98	360	eP	P	20 59 10.4	+0.9
	42nm,0.9s,mb5.3						
RAMN	Ramite	37.08	359	eP	P	20 59 11.6	+1.2
TAPN	Taplejung	37.47	0	eP	P	20 59 14.8	+1.2
	34nm,1.0s,mb5.1						
PKI	Pulchoki	37.74	357	eP	P	20 59 16.3	+0.3
PKI	Pulchoki	37.74	357	eP	P	20 59 16.4	+0.4
PKIN	Phulchoki	37.75	357	eP	P	20 59 16.4	+0.4
DMN	Daman	37.80	357	eP	P	20 59 17.4	+1.0
	17nm,0.7s,mb4.9						
JIRN	Jiri	37.80	358	eP	P	20 59 17.6	+1.2
	15nm,0.8s,mb4.8						
KKN	Kakani	37.97	357	eP	P	20 59 18.4	+0.5
	25nm,0.9s,mb5.0						
GUN	Gumba	38.06	358	eP	P	20 59 19.8	+1.2
	40nm,0.8s,mb5.2						
KOLN	Koldanda	38.07	354	eP	P	20 59 19.7	+0.9
	47nm,1.0s,mb5.2						
GKN	Gorkha	38.22	356	eP	P	20 59 20.7	+0.7
	16nm,0.6s,mb4.9						
DANN	Dangsing	38.63	355	eP	P	20 59 24.5	+1.0
	24nm,0.8s,mb5.0						
OPO	Ambohidratompo	39.82	253	P	P	20 59 34.5	+0.9
	3.4nm,1.0s,mb4.0,baz=60,slow=9.1,SNR=4.3						
LSA	Lhasa	39.96	5	eP	P	20 59 35.7	+1.2
	9.0nm,0.9s,mb4.5						
WRA	Warramunga Arr	46.07	108	P	P	21 00 24.8	+0.5
	0.7nm,0.6s,mb3.7,baz=275,slow=11,SNR=10						
WRA				LR	LR	21 16 59.3	
	comp=Z,36nm,19.2s,MS3.3,baz=290,slow=32						
WRAB	Tennant Creek	46.08	108	eP	P	21 00 23.9	-0.5
	1.9nm,0.6s,mb4.2						
ASAR	Alice Springs	46.10	113	P	P	21 00 24.6	+0.1
	0.1nm,0.5s,baz=282,slow=37,SNR=2.8						
GTA	Gaotai	50.80	12	eP	P	21 01 00.8	+0.4
GTA				AP	pP	21 01 07.0	+3.4
GTA				XP	sP	21 01 09.8	+5.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
AML	Almayashu	53.73	347	eP	P	21 01 22.2	+0.1
	comp=Z,7.3nm,0.6s,mb4.8						
WMQ	Urumqi	53.90	0	P	P	21 01 23.8	+0.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,216nm,5.0s						
WMQ				LR	LR		
	comp=N,57nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=E,66nm,18.0s,MS3.9						
AAK	Ala-Archa	54.05	348	eP	P	21 01 24.2	-0.2
	comp=E,15nm,1.5s,mb4.7						
STKA	Stephens Creek	54.21	122	LR	LR	21 21 28.2	
	comp=E,117nm,19.0s,MS4.0,baz=26,slow=33						
NAY	Al-Naaiem	55.29	317	eP	P	21 01 31.9	-1.9
NAY				AMb	AMB	21 01 32.5	
	comp=Z,20nm,1.6s,mb4.9						
MIB	Mutribah	55.58	317	eP	P	21 01 34.1	-1.7
MIB				AMb	AMB	21 01 36.9	
	comp=Z,17nm,0.9s,mb5.1						
MKAR	Makanchi Array	57.06	356	P	P	21 01 45.1	-1.0
	comp=Z,1.6nm,0.8s,mb4.1,baz=183,slow=5.7,SNR=15						
MKAR				LR	LR	21 27 09.8	
	comp=Z,70nm,18.4s,MS3.8,baz=277,slow=37						
LSZ	Lusaka	57.91	258	P	P	21 01 52.7	0.0
	comp=Z,0.7nm,0.5s,mb4.0,baz=82,slow=7.5,SNR=6.1						
SONM	Songino Array	60.30	15	P	P	21 02 08.4	-0.2
	comp=Z,2.6nm,0.8s,mb4.3,baz=194,slow=8.2,SNR=20						
LBTB	Lobatse	60.31	247	P	P	21 02 08.9	-0.3
	comp=Z,2.6nm,0.6s,mb4.4,baz=76,slow=8.1,SNR=5.7						
ULN	Ulaanbaatar	60.49	15	eP	P	21 02 09.3	-0.6
	comp=Z,2.5nm,0.9s,mb4.2						
KSRS	Korea Array	60.78	36	P	P	21 02 11.5	-0.5
	comp=Z,1.1nm,0.8s,mb4.0,baz=244,slow=8.0,SNR=3.2						
KSRS				LR	LR	21 29 01.9	
	comp=Z,63nm,18.6s,MS3.8,baz=13,slow=37						
BOSA	Boshof	60.81	243	P	P	21 02 12.2	-0.4
	comp=Z,3.3nm,0.8s,mb4.5,baz=67,slow=7.9,SNR=4.2						
BOSA				LR	LR	21 24 00.6	
	comp=Z,65nm,18.5s,MS3.8,baz=358,slow=32						
KURK	Kurchatov	61.29	354	eP	P	21 02 13.6	-1.7
	comp=Z,14nm,0.9s,mb5.1						
ZAA0	Zalesovo Array	64.08	358	eP	P	21 02 32.9	-0.9
ZALV	Zalesovo Beam	64.08	358	P	P	21 02 32.7	-1.1
	comp=Z,12nm,0.9s,mb4.9,baz=197,slow=4.6,SNR=38						
KIV	Kislovodsk	67.62	327	eP	P	21 02 55.9	-1.0
	comp=Z,14nm,1.0s,mb5.0						
BRTR	Keskin Array B	70.49	319	P	P	21 03 14.2	-0.7
	comp=Z,2.4nm,0.9s,mb4.1,baz=136,slow=5.7,SNR=9.7						
BRTR				LR	LR	21 34 37.6	
	comp=Z,72nm,18.1s,MS4.0,baz=208,slow=36						
TIRR	Tirgusor	76.27	321	⇑iP	pP	21 04 00.5	+8.4
VNDA	Vanda	76.60	168	LR	LR	21 32 38.8	
	comp=Z,129nm,18.8s,MS4.3,baz=326,slow=32						
VRI	Vrincioaia	77.99	321	⇑iP	P	21 03 56.9	-1.5
PLOR	Plostina	78.03	321	⇓iP	P	21 03 58.4	-0.3
MLR	Muntele Rosu	78.30	321	P	P	21 04 00.3	+0.2
	comp=Z,7.0nm,0.7s,mb4.7,baz=158,slow=5.9,SNR=18						
VOIR		78.83	320	⇑iP	P	21 04 02.3	-0.8
SNAA	Sanae	80.37	199	e	P	21 04 10.3	-0.8
SNAA				e		21 04 20.2	
DRGR		80.89	321	⇑iP	P	21 04 13.6	-0.6
BZS	Buzias	81.08	320	⇑iP	P	21 04 15.0	-0.3
VNA2	Neumayer--Watz	81.91	199	e	P	21 04 20.6	+1.4
	baz=89,slow=5.3						
VNA2				e		21 04 31.1	
VNA2				e		21 04 40.6	
VNA1	Neumayer--Stat	82.23	200	e	P	21 04 22.7	+1.7
VNA1				e		21 04 34.8	
VNA3	Neumayer Olymp	82.59	199	e	P	21 04 23.7	+0.9
VNA3				e		21 04 34.8	
VNA3				e		21 04 45.4	
PETK	Petropavlovsk-	86.63	35	LR	LR	21 45 05.8	
	comp=Z,76nm,18.1s,MS4.1,baz=74,slow=37						
PDAR	Pinedale Array	144.42	22	PKP	PKPdf	21 11 35.6	-1.1
	comp=Z,0.6nm,0.7s,baz=90,slow=1.5,SNR=5.2						

*IDC **16** 21:04:43.0±1.1, 6.59S×131.46E, h0km, mb3.7/3, mb1 4.3/6, mb1mx3.9/14, mbtmp4.1/6, ML4.4/2, Error ellipse: s-maj=31.5km s-min=21.1km az=77.0*
*NEIC **16** 21:04:47.4±0.4, 6.74S×131.44E, h35km, mb3.7/3, Error ellipse: s-maj=13.5km s-min=6.0km az=69.0*
*ISCJB **16** 21:04:53.4±2.5, 7.18S±0.09×131.21E±0.09, h119km±26km, mb3.7/3, Error ellipse: s-maj=19.0km s-min=8.4km az=135.3*
ISC 16 21:04:52.0±3.0**, 7.1S**±0.1×**131.3E**±0.1**, h89**km±32km**, n20,** σ**1.00**/24**, mb3.7**/3**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	5.69	169	eP	x	21 05 57.3	
	54nm,0.4s						
KAKA				eS	x	21 07 01.8	
BATI	Baumata	8.20	247	Pn	Pn	21 06 49.1	+0.9
	16nm,0.3s,baz=87,slow=3.7,SNR=28						
BATI				Sn	Sn	21 08 18.5	-0.8
	7.2nm,0.3s,baz=327,slow=23,SNR=3.9						
FITZ	Fitzroy Crossi	12.28	206	eP	Pn	21 07 44.6	+0.9
	7.2nm,0.2s						
FITZ				eS	Sn	21 09 53.8	-4.9
WRAB	Tennant Creek	13.10	167	ePn	Pn	21 07 55.1	+0.5
	11nm,0.6s						
WRAB				eSn	Sn	21 10 14.4	-4.3
WRA	Warramunga Arr	13.11	167	Pn	Pn	21 07 55.2	+0.5
	1.3nm,0.3s,baz=348,slow=13,SNR=71						
WRA				Sn	Sn	21 10 17.6	-1.2
	1.8nm,0.3s,baz=345,slow=24,SNR=6.0						
WB2	Warramunga Arr	13.11	167	eP	Pn	21 07 54.9	+0.2
WB2				eS	Sn	21 10 18.4	-0.5
ASAR	Alice Springs	16.67	172	P	Pn	21 08 42.8	+2.7
	1.6nm,0.3s,baz=11,slow=11,SNR=60						
CTAO	Charters Tower	19.39	133	eP	Pn	21 09 11.9	-1.1
	5.6nm,1.1s						
KKM	Kota Kinabalu	19.95	310	P	Pn	21 09 15.2	-4.4
KSM	Kuching	22.65	291	P	P	21 09 44.7	-1.2
GUMO	Guam	24.54	33	P	P	21 09 59.9	-3.6
	143nm,1.0s,baz=221,slow=20,SNR=3.7						
STKA	Stephens Creek	26.46	160	eP	P	21 10 26.5	+5.8
	7.1nm,1.7s,mb3.8						
STKA	Stephens Creek	26.46	160	P	P	21 10 26.3	+5.6
	0.9nm,0.4s,mb3.6,baz=353,slow=8.2,SNR=8.5						
STKA	Stephens Creek	26.46	160	eP	P	21 10 26.0	+5.3
	0.2nm,0.3s,mb3.0						
CMAR	Chiang Mai Arr	40.81	309	P	P	21 12 24.2	-0.8
	0.1nm,0.5s,baz=142,slow=8.0,SNR=4.3						
BJT	Baijiatuau	48.92	345	P	P	21 13 28.2	-0.8
MK31	Makanchi Array	69.03	326	eP	P	21 15 48.6	+0.6
MKAR	Makanchi Array	69.03	326	P	P	21 15 48.8	+0.7
	0.4nm,0.3s,mb3.7,baz=118,slow=7.3,SNR=7.9						
AAK	Ala-Archa	71.47	319	eP	P	21 16 03.6	+0.6
	0.8nm,0.3s,mb4.0						
ARU	Arti	86.48	328	P	P	21 17 25.1	+0.5

IDC 16 21:05:06.2±2.3**, 7.94N×124.95E, h0**km**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/18**, mbtmp3.8**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/29**, Error ellipse: s-maj=109.5km s-min=29.0km az=59.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	18.07	184	LR	LR	21 16 26.3	
	comp=Z,33nm,21.5s,baz=237,slow=38						
CMAR	Chiang Mai Arr	27.35	295	P	P	21 10 53.4	+0.1
	0.3nm,0.5s,baz=111,slow=7.4,SNR=4.9						
ASAR	Alice Springs	32.61	165	P	P	21 11 39.8	+0.1
	0.6nm,0.5s,baz=339,slow=12,SNR=4.4						
MKAR	Makanchi Array	53.12	324	P	P	21 14 25.6	0.0
	0.7nm,0.5s,baz=122,slow=8.2,SNR=17						

IDC 16 21:52:25.8±7.0**, 10.29S×116.15W, h0**km**, mb3.5**/2**, mb1 4.0**/2**, mb1mx3.7**/13**, mbtmp3.5**/2**, Error ellipse: s-maj=331.8km s-min=56.7km az=125.0, Eastcentral Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	41.19	17	P	P	22 00 12.2	0.0
	0.6nm,1.0s,baz=198,slow=11,SNR=3.7						
YKA	Yellowknife Ar	72.56	1	P	P	22 03 54.4	0.0
	0.5nm,0.9s,baz=177,slow=5.9,SNR=8.7						
KURK	Kurchatov	137.90	346	PKP	PKPdf	22 11 52.8	+0.5
	0.4nm,0.3s,baz=38,slow=4.8,SNR=5.7						
CMAR	Chiang Mai Arr	145.10	287	PKPbc	PKPbc	22 12 04.7	-0.9
	1.0nm,1.0s,baz=47,slow=0.9,SNR=7.1						

IDC 16 21:53:30.1±15.0**, 21.72S×70.11W, h0**km**, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.5**/15**, mbtmp3.8**/2**, Error ellipse: s-maj=667.9km s-min=61.8km az=20.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	78.48	71	P	P	22 05 33.5	+0.1
	1.4nm,0.8s,baz=256,slow=4.5,SNR=13						
YKA	Yellowknife Ar	91.02	341	P	P	22 06 35.6	-0.1
	0.1nm,0.6s,baz=140,slow=4.2,SNR=5.5						
MKAR	Makanchi Array	146.46	35	PKPbc	PKPbc	22 13 12.4	-0.6
	0.9nm,1.0s,baz=304,slow=3.5,SNR=3.5						

SKHL 16 22:57:34.3±1.7**, 52.80N×142.60E, h10**km**, mb4.1**/2**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	Okha	0.78	15	ePg	Pg	22 57 49.7	+0.4
OKH				AMB	AMB	22 57 49.9	
	600nm,0.4s						
OKH				eSg	Sg	22 58 00.5	+1.1
OKH				A		22 58 02.5	
	1µm,0.5s						
NKL	Nikolayevsk	1.21	288	ePg	Pg	22 57 57.0	-0.6
NKL				AMB	AMB	22 57 58.4	
	6.0nm,0.4s						
NKL				AMB	AMB	22 57 58.4	
	17nm,0.4s						
NKL				AMB	AMB	22 57 58.4	
	26nm,0.4s						
NKL				eSg	Sg	22 58 15.0	+1.7
NKL				A		22 58 17.8	
	190nm,0.4s						
NKL				A		22 58 17.8	
	160nm,0.4s						
TYV	Tymovskoe	1.94	179	eSg	Sg	22 58 39.6	+3.0
UGL	Uglegorsk	3.74	185	eSg	Sg	22 59 41.0	+6.6
GRNR	Gornyy	4.34	245	eSg	Sg	22 59 58.5	+4.9
EKMR	Ekimchan	5.84	276	eSg	Sg	23 00 51.5	+10
EKMR				A		23 00 52.8	
	5.0nm,0.7s						

IDC 16 23:09:48.2±1.5**, 2.79N×126.66E, h0**km**, mb3.5**/4**, mb1 3.7**/4**,**

mb1mx3.5/16, mbtmp3.5/4, Error ellipse: s-maj=146.1km s-min=21.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.82	162	P	P	23 15 03.1	0.0
	1.0nm,0.6s,baz=342,slow=11,SNR=13						
ASAR	Alice Springs	27.23	165	P	P	23 15 34.7	+0.7
	0.2nm,0.3s,baz=351,slow=8.1,SNR=4.5						
SONM	Songino Array	48.16	342	P	P	23 18 30.5	+0.4
	0.3nm,0.6s,baz=157,slow=9.1,SNR=3.0						
MKAR	Makanchi Array	58.28	326	P	P	23 19 44.2	-0.5
	0.5nm,0.6s,baz=121,slow=7.7,SNR=10						

IDC 16 23:12:38.8±2.3, 1107S×11993E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=67.1km s-min=30.3km az=38.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.77	77	Pn	Pn	23 13 39.1	+0.9
	8.6nm,0.3s,baz=331,slow=0.9,SNR=8.6						
BATI				Sn	Sn	23 14 29.0	+5.7
	3.6nm,0.3s,baz=294,slow=4.9,SNR=1.8						
WRA	Warramunga Arr	16.44	124	Pn	Pn	23 16 29.0	-2.1
	0.1nm,0.3s,baz=304,slow=13,SNR=6.4						
ASAR	Alice Springs	18.28	135	P	Pn	23 16 54.8	+0.7
	0.1nm,0.3s,baz=320,slow=8.7,SNR=4.2						
MKAR	Makanchi Array	66.70	333	P	P	23 23 31.6	0.0
	0.2nm,0.5s,baz=157,slow=8.1,SNR=4.2						

ISCJB 16 23:14:31.9±2.4, 278N±006×12876E±009, h267km±25km, mb4.2/25, Error ellipse: s-maj=15.1km s-min=8.7km az=163.5
IDC 16 23:14:31.6±1.9, 278N×12874E, h244km±19km, mb3.8/12, mb1 3.9/13, mb1mx3.8/18, mbtmp3.8/13, Error ellipse: s-maj=23.0km s-min=9.3km az=80.0
NEIC 16 23:14:31.5±1.8, 278N×12872E, h247km±18km, mb4.4/16, Error ellipse: s-maj=10.2km s-min=5.9km az=72.0
ISC 16 23:14:32.6±2.4, 276N±006×12877E±009, h258km±26km, n53, σ0.71/51, mb4.2/25, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	11.87	229	P	Pn	23 17 14.7	+0.2
	1.5nm,0.3s,baz=295,slow=20,SNR=4.1						
KAPI	Kappang	11.87	229	P	Pn	23 17 14.7	+0.2
KAKA	Kakadu	15.80	167	eP	x	23 17 39.8	
	6.5nm,0.4s						
KSM	Kuching	18.49	266	P	P	23 18 26.3	-3.9
FITZ	Fitzroy Crossi	20.96	188	eP	P	23 18 54.7	-1.6
	4.7nm,0.4s						
WRAB	Tennant Creek	23.21	167	eP	P	23 19 17.8	+0.7
	5.5nm,0.4s,mb4.2						
WRA	Warramunga Arr	23.22	167	P	P	23 19 17.6	+0.5
	4.1nm,0.3s,mb4.2,baz=342,slow=10,SNR=57						
WRA				ScP	ScP	23 26 13.5	+2.9
	0.3nm,0.6s,baz=339,slow=3.1,SNR=4.9						
WB2	Warramunga Arr	23.22	167	eP	P	23 19 18.1	+1.0
WB2	Warramunga Arr	23.22	167	eP	P	23 19 17.7	+0.6
MBWA	Marble Bar	25.37	200	eP	P	23 19 36.0	-0.5
ASAR	Alice Springs	26.74	169	P	P	23 19 48.9	+0.1
	3.8nm,0.5s,mb4.1,baz=351,slow=7.6,SNR=62						
ASAR				ScP	ScP	23 26 21.8	+1.3
	0.6nm,0.9s,baz=343,slow=3.2,SNR=4.0						
CMAR	Chiang Mai Arr	33.11	300	P	P	23 20 45.2	+0.3
	1.2nm,0.3s,mb3.9,baz=108,slow=6.8,SNR=4.9						
KS15	Wonju Array Si	34.52	359	eP	P	23 20 57.2	+0.5
KSRS	Korea Array	34.53	359	P	P	23 20 57.5	+0.7
	3.0nm,0.4s,mb4.2,baz=175,slow=9.7,SNR=8.7						
MJAR	Matsushiro Arr	34.72	13	P	P	23 20 57.7	-0.7
	4.3nm,0.7s,mb4.1,baz=187,slow=9.8,SNR=13						
MAJO	Matsushiro	34.73	13	eP	P	23 20 57.7	-0.7
	7.8nm,0.7s,mb4.3						
KLBR	Kellerberrin	35.73	196	eP	P	23 21 06.5	-0.6
	26nm,1.2s,mb4.6						
STKA	Stephens Creek	36.54	162	P	P	23 21 14.4	+0.6
	4.1nm,0.4s,mb4.2,baz=343,slow=8.0,SNR=24						
STKA	Stephens Creek	36.54	162	eP	P	23 21 14.6	+0.7
	0.8nm,0.4s,mb3.5						
MUN	Mundaring	36.55	198	eP	P	23 21 13.6	-0.4
NWAO	Narrogin (SRO)	37.14	196	P	P	23 21 18.8	-0.1
	12nm,0.9s,mb4.3,baz=14,slow=10,SNR=4.4						
NWAO	Narrogin (SRO)	37.14	196	eP	P	23 21 18.9	0.0
	1.8nm,0.4s,mb3.9						
BJT	Baijiatuau	38.81	344	P	P	23 21 31.5	-1.2
LSA	Lhasa	44.60	311	eP	P	23 22 20.9	+1.2
	2.6nm,0.8s,mb3.5						
YSS	Yuzh-Sakhalins	45.66	13	eP	P	23 22 26.0	-1.7
	10nm,0.4s,mb4.5						
TAPN	Taplejung	46.23	306	eP	P	23 22 32.8	+0.3
RAMN	Ramite	46.97	305	eP	P	23 22 38.5	+0.3
	16nm,0.4s,mb4.7						
JIRN	Jiri	47.59	306	eP	P	23 22 43.4	+0.5
	13nm,0.4s,mb4.7						
GUN	Gumba	47.94	306	eP	P	23 22 45.9	+0.3
	18nm,0.6s,mb4.6						
PALK	Pallekele	48.07	277	P	P	23 22 46.5	-0.4
PKI	Pulchoki	48.19	305	eP	P	23 22 47.3	-0.2
PKIN	Phulchoki	48.20	305	eP	P	23 22 47.2	-0.4
KKN	Kakani	48.38	305	eP	P	23 22 49.9	+0.9
DMN	Daman	48.45	305	eP	P	23 22 49.8	+0.3
ULN	Ulaanbaatar	48.68	341	eP	P	23 22 51.3	+0.4
	3.3nm,1.1s,mb3.6						
SONM	Songino Array	48.88	340	P	P	23 22 53.1	+0.8
	1.3nm,0.7s,mb3.4,baz=152,slow=7.9,SNR=12						
GKN	Gorkha	48.98	305	eP	P	23 22 53.4	-0.2
KOLN	Koldanda	49.74	305	eP	P	23 22 59.6	+0.3
	18nm,0.6s,mb4.6						
DANN	Dangsing	49.83	305	eP	P	23 23 00.0	+0.1
	23nm,0.5s,mb4.7						
PETK	Petropavlovsk-	55.58	21	P	P	23 23 43.2	+1.8
	2.7nm,0.8s,mb3.8,baz=193,slow=4.4,SNR=3.6						
YAK	Yakutsk	59.13	1	P	P	23 24 05.3	-0.7
MK31	Makanchi Array	59.51	325	eP	P	23 24 09.1	+0.2
MK31				ePcP	PcP	23 24 53.9	+0.4
MKAR	Makanchi Array	59.51	325	P	P	23 24 09.1	+0.2
	1.8nm,0.4s,mb3.9,baz=116,slow=8.3,SNR=50						
ZALV	Zalesovo Beam	62.38	332	P	P	23 24 26.9	-1.1
	0.9nm,0.3s,mb3.8,baz=115,slow=6.7,SNR=6.3						
AAK	Ala-Archa	62.44	317	P	P	23 24 29.0	+0.4
KURK	Kurchatov	63.65	327	eP	P	23 24 35.9	-0.4
	4.3nm,0.6s,mb4.3						
BRVK	Borovoye	69.31	327	eP	P	23 25 12.0	-0.1
	3.0nm,0.6s,mb4.2						
ARU	Arti	76.84	328	P	P	23 25 55.2	-0.8
GNI	Garni	83.66	310	eP	P	23 26 31.9	-0.7
ARCES	ARCESS Array B	92.05	340	P	P	23 27 11.6	-0.4
	4.4nm,0.9s,mb4.4,baz=80,slow=5.8,SNR=9.2						
ARCES	ARCESS Array B	92.05	340	P	P	23 27 11.6	-0.4
DLBC	Dease Lake	93.52	31	P	P	23 27 19.6	+0.6
TORD	Torodi Ar. Bea	125.15	288	PKP	PKPdf	23 33 04.0	+0.6
	0.2nm,0.6s,baz=58,slow=1.4,SNR=4.4						

ISCJB 16 23:19:52.9±0.8, 2182N±007×12149E±003, h8km±8km, Error ellipse: s-maj=11.6km s-min=4.3km az=10.8
TAP 16 23:19:54.9, 2186N×12134E, h15km, ML3.4, C
JMA 16 23:19:55.4±0.6, 2177N×12166E, h137km, M2.9
ISC 16 23:19:53.7±0.8, 2186N±004×12147E±003, h4km±4km, n33, σ0.98/60, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.20	23	iP	Pg	23 20 01.4	+3.8
	baz=56						
LAY				eS	Sg	23 20 06.3	+6.1
	baz=56						
TWK1	Hengchun	0.62	278⇑	iP	Pg	23 20 05.7	+0.1
	baz=278						
TWK1				S	Sg	23 20 13.7	0.0
	baz=278						
HEN	Hengchun	0.69	283	P	Pg	23 20 07.0	0.0
	baz=294						
HEN				eS	Sg	23 20 16.2	+0.1
	baz=294						
TAW	Tawu	0.73	313	eP	Pg	23 20 08.0	+0.2
	baz=319						
TAW				eS	Sg	23 20 17.6	+0.4
	baz=319						
EAST	Anshuo	0.78	312	eP	Pg	23 20 07.7	-1.0
	baz=318						
ECL	Taimali	0.88	327	P	Pg	23 20 10.1	-0.5
	baz=333						
ECL				eS	Sg	23 20 21.6	-0.4
	baz=333						
SCZT	Fangliau	0.94	303⇑	iP	Pg	23 20 11.5	-0.3
	baz=306						
SCZT				eS	Sg	23 20 23.7	-0.3
	baz=306						
TTN	Taitung	0.94	342	eP	Pg	23 20 10.1	-1.7
	baz=347						
TWG	Pinlang	1.03	339	eP	Pg	23 20 12.3	-1.1
	baz=329						
TWG				S	Sg	23 20 26.4	-0.4
	baz=329						
TWP	Hsiaoliuchiu	1.14	296	eP	Pg	23 20 15.6	+0.1
	baz=295						
SSD	Sandimen	1.18	319	eP	Pb	23 20 15.5	-1.2
	baz=330						
SSD				eS	Sb	23 20 30.1	-2.2
	baz=330						
CHKT	Chengkung	1.24	356	eP	Pn	23 20 17.7	-0.2
	baz=11						
CHKT				S	Sb	23 20 34.2	+0.1
	baz=11						
TWM1	Shoushan	1.36	315	eP	Pn	23 20 19.4	-0.2
	baz=316						
ELDTW	Lidau	1.39	343	eP	Pn	23 20 17.4	-2.5
	baz=345						
TWF1	Yuli	1.50	354	eP	Pn	23 20 20.3	-1.2
	baz=344						
TWF1				eS	Sn	23 20 40.5	-1.0
	baz=344						
CHN1	Nanshi	1.58	327	eP	Pn	23 20 22.7	0.0
	baz=327						
CHN1				eS	Sn	23 20 43.5	-0.1
	baz=327						
WTP	Ta-pu	1.59	330	eP	Pn	23 20 22.7	-0.1
	baz=332						
WTP				eS	Sn	23 20 43.4	-0.4
	baz=332						
TWK	Hsinying	1.67	327	eP	Pn	23 20 23.8	0.0
	baz=328						
TWK				eS	Sn	23 20 45.3	-0.5
	baz=328						
CHN4	Tsaushan	1.69	332	eP	Pn	23 20 24.2	0.0
	baz=332						
CHN4				eS	Sn	23 20 48.4	+2.1
	baz=332						
CHN5	Tsauling	1.88	337	eP	Pn	23 20 26.8	+0.1
	baz=338						
CHN5				eS	Sn	23 20 52.0	+1.1
	baz=338						
ESL	Shilin	1.95	359	eP	Pn	23 20 28.1	+0.4
	baz=349						
ESL				eS	Sn	23 20 51.8	-0.8
	baz=349						
SMLT	Sun Moon Lake	2.08	346	eP	Pn	23 20 30.8	+1.3
	baz=347						
SMLT				eS	Sn	23 20 56.7	+0.7
	baz=347						
TYC	Yuchr	2.12	345	eP	Pn	23 20 30.5	+0.5
	baz=346						
TYC				eS	Sn	23 20 58.1	+1.4
	baz=346						
WHF	Hehuan Shan	2.29	355	eP	Pn	23 20 34.0	+1.7
	baz=358						
WHF				eS	Sn	23 21 01.4	+0.4
	baz=358						
TWC	Suao	2.76	7	eP	Pn	23 20 40.7	+1.8
	baz=10.0						
ENTT	Nioudou	2.77	2	eP	Pn	23 20 40.0	+1.0
	baz=5.0						
ENTT				eS	Sn	23 21 14.2	+1.3
	baz=5.0						
NSK	Sanguang	2.81	358	eP	Pn	23 20 41.6	+2.2
	baz=1.0						
NSK				eS	Sn	23 21 13.7	-0.1
	baz=1.0						
YOJ	Yonaguni jima	2.96	28	P	Pn	23 20 42.1	+0.6
YOJ				eS	Sn	23 21 18.2	+0.7
HATJ	Hateruma jima	3.07	44	P	Pn	23 20 42.9	-0.2
HATJ				S	Sn	23 21 18.2	-2.1
IRIF	Iriomote-Funau	3.23	40	P	Pn	23 20 45.3	0.0
IRIF				S	Sn	23 21 23.4	-0.8
JKRS	Kuro-shima	3.33	44	P	Pn	23 20 46.8	+0.1
JKRS				eS	Sn	23 21 27.4	+0.7
JIJ	Ishigaki jima	3.51	44	P	Pn	23 20 48.4	-0.7
JIJ				S	Sn	23 21 28.6	-2.4
JTJ	Tarama	4.07	46	P	Pn	23 20 55.6	-1.2
JTJ				eS	Sn	23 21 44.0	-0.9

TAP 16 23:26:29.5, 2495N×12169E, h92km, ML3.6, 5C-4D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWA	Mucha	0.10	287⇓	iP	Pn	23 26 43.0	+0.6
	baz=271						
TWA				iS	Sn	23 26 52.4	+0.4
	baz=271						
NWF	Wu-fen Shan	0.14	35⇑	iP	Pn	23 26 42.9	+0.3
	baz=37						
NWF				iS	Sn	23 26 52.6	+0.4
	baz=37						
ILA	Ilan	0.19	164	eP	Pn	23 26 43.3	+0.6
	baz=163						
ILA				eS	Sn	23 26 53.3	+0.9
	baz=163						
TWE	Neicheng	0.23	185⇑	iP	Pn	23 26 43.3	+0.5
	baz=183						
TWE				iS	Sn	23 26 53.1	+0.4
	baz=183						
TWB1	Santiao Chiao	0.28	78	iP	Pn	23 26 43.3	+0.3
	baz=79						
TWB1				iS	Sn	23 26 53.6	+0.6
	baz=79						
TWS1	Kuangyinshan	0.29	301⇓	iP	Pn	23 26 43.5	+0.5
	baz=290						
TWS1				S	Sn	23 26 53.6	+0.5
	baz=290						
ENTT	Nioudou	0.33	200⇓	iP	Pn	23 26 43.7	+0.4
	baz=206						
ENTT				eS	Sn	23 26 53.4	-0.1
	baz=206						
TWY	Chenhua	0.33	346⇑	iP	Pn	23 26 43.7	+0.4
	baz=350						
TWY				S	Sn	23 26 54.1	+0.5
	baz=350						
TWC	Suao	0.37	157⇑	iP	Pn	23 26 44.4	+0.9
	baz=147						
TWC				S	Sn	23 26 55.4	+1.5
	baz=147						
NSK	Sanguang	0.41	228	P	Pn	23 26 44.0	+0.2
	baz=236						
NSK				S	Sn	23 26 54.1	-0.2
	baz=236						
NCU	National Centr	0.46	272	eP	Pn	23 26 44.6	+0.5
	baz=271						
NCU				eS	Sn	23 26 55.3	+0.4
	baz=271						
ENA	Nanau	0.52	175	eP	Pn	23 26 45.0	+0.4
	baz=185						
ENA				eS	Sn	23 26 57.2	+1.4
	baz=185						
NNS	Nan Shan	0.58	209	P	Pn	23 26 45.8	+0.7
	baz=210						
NNS				S	Sn	23 26 57.4	+0.6
	baz=210						
HSN	Hsinchu	0.67	257	eP	Pn	23 26 45.7	-0.2
	baz=252						
NSTT	Nanjuang	0.70	243⇓	iP	Pn	23 26 46.8	+0.6
	baz=241						
NSTT				S	Sn	23 26 59.2	+0.6
	baz=241						
TWT	Tachien	0.84	214	eP	Pn	23 26 48.9	+1.3
	baz=222						
TWT				eS	Sn	23 27 02.7	+1.6
	baz=222						
TWD	Chiawan	0.87	186	eP	Pn	23 26 47.4	-0.5
	baz=185						
TWD				eS	Sn	23 27 02.3	+0.6
	baz=185						
WHF	Hehuan Shan	0.89	206⇑	iP	Pn	23 26 49.5	+1.4
	baz=209						
WHF				eS	Sn	23 27 03.6	+1.6
	baz=209						
TWQ1	Liyutan	1.03	234	P	Pn	23 26 50.3	+0.7
	baz=233						
TWQ1				eS	Sn	23 27 05.2	+0.5
	baz=233						
ESL	Shilin	1.16	192	eP	Pn	23 26 50.9	-0.3
	baz=186						
ESL				eS	Sn	23 27 06.2	-1.2
	baz=186						
TCU	Taichung	1.22	229	eP	Pn	23 26 52.2	+0.3
	baz=228						
SMLT	Sun Moon Lake	1.28	214	P	Pn	23 26 53.7	+1.1
	baz=221						
SMLT				eS	Sn	23 27 11.6	+1.4
	baz=221						
TYC	Yuchr	1.29	216	iP	Pn	23 26 53.7	+0.9
	baz=222						
TYC				S	Sn	23 27 11.2	+1.0
	baz=222						
EHY	Hungye	1.48	193	eP	Pn	23 26 54.5	-0.6
	baz=189						
EHY				eS	Sn	23 27 14.4	0.0
	baz=189						
TWF1	Yuli	1.63	193	eP	Pn	23 26 57.3	+0.3
	baz=187						
TWF1				eS	Sn	23 27 19.2	+1.3
	baz=187						
CHN5	Tsauling	1.63	215	eP	Pn	23 26 57.7	+0.6
	baz=220						
CHN5				S	Sn	23 27 18.8	+0.9
	baz=220						
CHN4	Tsaushan	1.88	212	eP	Pn	23 27 01.5	+1.2
	baz=220						
CHN4				eS	Sn	23 27 25.4	+1.7
	baz=220						
WTP	Ta-pu	1.96	210	eP	Pn	23 27 02.2	+1.0
	baz=210						
CHN1	Nanshi	2.05	211	eP	Pn	23 27 03.0	+0.5
	baz=210						
CHN1				eS	Sn	23 27 28.0	+0.4
	baz=210						

IDC 16 23:31:49.1±5.5, 11.14N×9340E, h105km±48km, mb3.8/13, mb1 3.9/14, mb1mx3.7/24, mbtmp3.8/14, Error ellipse: s-maj=37.3km s-min=13.0km az=58.0
ISCJB 16 23:31:50.5±1.5, 11.18N±007×9348E±007, h136km±14km, mb4.0/20, Error ellipse: s-maj=14.0km s-min=8.1km az=140.6
BJI 16 23:31:50.5, 11.16N×9274E, h141km, mb4.6
NEIC 16 23:31:52.1±1.5, 11.19N×9350E, h132km±14km, mb4.6/14, Error ellipse: s-maj=12.2km s-min=5.9km az=50.0
ISC 16 23:31:51.4±1.6, 1115N±007×9348E±008, h125km±15km, n53, σ0.99/54, mb4.1/20, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.98	35	P	Pn	23 33 57.2	-0.9
	1.0nm,0.3s,baz=228,slow=14,SNR=26						
CHTO	Chiang Mai	9.26	34	Pn	Pn	23 34 00.6	-1.3
VIS	Vishakhapatnam	11.80	305	iP	Pn	23 34 32.8	-3.0
VIS				iS	Sn	23 36 29.9	-16
VIS				ex	x	23 36 32.8	
	comp=E,60nm,0.5s						
VIS				ex	x	23 36 34.3	
	comp=N,70nm,0.5s						
SHL	Shillong	14.42	354	eP	Pn	23 35 13.0	+3.4
SHL				eP		23 37 39.5	
ODAN	Odare	16.65	341	eP	Pn	23 35 38.5	+1.2
RAMN	Ramite	17.00	339	eP	Pn	23 35 42.4	+0.8
	comp=N,21nm,0.3s						
TAPN	Taplejung	17.00	342	eP	Pn	23 35 42.3	+0.7
QIZ	Qiongzhong	17.62	62	eP	Pn	23 35 48.1	-1.0
JIRN	Jiri	17.79	338	eP	Pn	23 35 51.1	0.0
	comp=N,14nm,0.4s						
PKI	Pulchoki	18.01	336	eP	P	23 35 54.0	+1.5
	comp=N,15nm,0.4s						
PKI	Pulchoki	18.01	336	eP	P	23 35 54.4	+1.9
	comp=N,23nm,0.6s						
PKIN	Phulchoki	18.02	336	eP	P	23 35 54.4	+1.8
	comp=N,23nm,0.6s						
GUN	Gumba	18.13	338	eP	P	23 35 54.0	+0.1
	comp=N,21nm,0.6s						
DMN	Daman	18.16	336	eP	P	23 35 57.0	+2.8
	comp=N,16nm,0.4s						
KKN	Kakani	18.25	336	eP	P	23 35 56.2	+1.0
LSA	Lhasa	18.58	354	P	P	23 35 59.0	+0.2
LSA	Lhasa	18.58	354	eP	P	23 35 58.6	-0.1
	comp=N,10nm,0.7s						
LSA				eS	S	23 39 14.7	-9.4
GKN	Gorkha	18.70	335	eP	P	23 36 00.0	-0.1
	comp=N,30nm,0.3s						
KOLN	Koldanda	18.96	332	eP	P	23 36 03.0	+0.1
	comp=N,29nm,0.6s						
DANN	Dangsing	19.38	333	eP	P	23 36 07.7	+0.2
	comp=N,21nm,0.4s						
KKM	Kota Kinabalu	23.04	101	P	P	23 36 48.1	+2.3
COCO	West Island	23.43	172	P	P	23 36 49.0	-0.3
DGAR	Diego Garcia	27.89	230	P	P	23 37 29.5	-0.3
GTA	Gaotai	28.70	10	eP	P	23 37 37.4	+0.8
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
KBL	Kabul	32.22	320	P	P	23 38 06.4	-1.3
AAK	Ala-Archa	35.46	336	eP	P	23 38 35.9	+0.2
	comp=Z,2.5nm,1.0s,mb4.0						
MKAR	Makanchi Array	36.77	347	P	P	23 38 46.3	-0.4
	comp=Z,1.5nm,0.3s,mb4.4,baz=171,slow=9.2,SNR=45						
SONM	Songino Array	38.14	14	P	P	23 38 58.5	+0.2
	comp=Z,0.8nm,0.3s,mb4.0,baz=200,slow=8.1,SNR=18						
SONM				PcP	PcP	23 41 11.6	+1.0
	comp=Z,0.7nm,0.8s,baz=198,slow=3.9,SNR=4.1						
KURK	Kurchatov	41.29	346	P	P	23 39 23.4	-0.9
	comp=Z,1.3nm,0.3s,mb4.2,baz=162,slow=7.3,SNR=13						
KURK	Kurchatov	41.29	346	eP	P	23 39 23.9	-0.4
KURK				e	pP	23 39 48.4	-4.1
FITZ	Fitzroy Crossi	43.04	132	eP	P	23 39 38.5	-0.4
	comp=Z,1.5nm,0.6s,mb3.9						
ZALV	Zalesovo Beam	43.24	353	P	P	23 39 40.0	-0.1
	comp=Z,2.2nm,0.4s,mb4.2,baz=163,slow=8.1,SNR=12						
BVAR	Borovoye Array	45.70	341	P	P	23 39 58.8	-0.8
	comp=Z,1.4nm,0.3s,mb4.1,baz=136,slow=8.3,SNR=12						
BRVK	Borovoye	45.76	341	eP	P	23 39 59.3	-0.8
	comp=Z,2.1nm,0.4s,mb4.2						
AKTK	Aktyubinsk	48.78	330	P	P	23 40 23.1	-0.5
AKTO	Aktyubinsk	48.78	330	P	P	23 40 23.1	-0.5
	comp=Z,0.6nm,0.3s,mb4.0,baz=99,slow=7.0,SNR=5.7						
WRA	Warramunga Arr	50.72	127	P	P	23 40 38.1	-0.6
	comp=Z,1.6nm,0.4s,mb4.4,baz=307,slow=8.4,SNR=46						
WRAB	Tennant Creek	50.72	127	eP	P	23 40 39.5	+0.9
	comp=Z,2.5nm,0.4s,mb4.6						
GNI	Garni	51.72	313	P	P	23 40 44.9	-0.9
ASAR	Alice Springs	52.53	131	P	P	23 40 52.0	0.0
	comp=Z,1.1nm,0.4s,mb4.2,baz=304,slow=7.8,SNR=17						
ARU	Arti	52.64	336	eP	P	23 40 51.8	-0.5
	comp=Z,2.0nm,0.3s,mb4.6						
CTAO	Charters Tower	60.50	121	P	P	23 41 47.6	-1.0
STKA	Stephens Creek	62.84	135	P	P	23 42 06.0	+2.0
	comp=Z,0.6nm,0.4s,mb3.9,baz=307,slow=10,SNR=2.9						
STKA	Stephens Creek	62.84	135	eP	P	23 42 06.3	+2.2
	comp=Z,0.2nm,0.5s,mb3.3						
JOF	Joensuu	67.63	334	ep	P	23 42 33.5	-0.9
	comp=Z,3.9nm,0.5s,mb4.5						
KAF	Kangasniemi	69.60	332	ep	P	23 42 45.5	-1.2
ARCES	ARCESS Array B	71.98	340	P	P	23 43 01.1	+0.2
	comp=Z,7.7nm,1.0s,mb4.5,baz=94,slow=6.4,SNR=12						
GERES	GERESS Array B	74.97	318	P	P	23 43 18.8	0.0
	comp=Z,0.3nm,0.5s,mb3.3,baz=93,slow=6.2,SNR=2.7						
NOA	NORSAR Array B	76.58	330	P	P	23 43 26.8	-1.0
	comp=Z,1.5nm,1.1s,mb3.6,baz=115,slow=3.3,SNR=2.5						
BOSA	Boshof	76.79	237	P	P	23 43 29.9	+0.4
	comp=Z,2.2nm,0.8s,mb3.9,baz=252,slow=18,SNR=3.5						
BOSA	Boshof	76.79	237	P	P	23 43 29.9	+0.4
MAW	Mawson	81.60	191	P	P	23 43 55.9	+1.1
HAWA	Hanford	115.52	25	ePKPdf	PKPdf	23 50 18.7	0.0

NEIC 16 23:33:05.3±0.8, 31.15S×17752W, h35km, mb4.4/4, Error ellipse: s-maj=20.8km s-min=13.9km az=135.0
IDC 16 23:33:07.6±5.5, 3105S×17769W, h45km±47km, mb4.2/4, mb1 4.3/4, mb1mx4.0/15, mbtmp4.2/4, MS3.4/2, Ms1 3.4/2, ms1mx2.8/22, Error ellipse: s-maj=44.5km s-min=27.6km az=137.0
ISC 16 23:33:01.5±4.1, 3122S±008×1770W±06, h35km, n23, σ1.07/16, mb4.2/6, MS3.4/2, Kermadec Islands region

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.10**	**338**	P	**Pn**	**23 33 35.6**	**+1.3**
	166nm,0.3s,baz=247,slow=23,SNR=3.8						
RAO				S	**Sn**	**23 33 58.2**	**-1.0**
	313nm,0.3s,baz=76,slow=17,SNR=5.3						
RAO	**Raoul Island**	**2.10**	**338**	P	**Pn**	**23 33 35.6**	**+1.3**
RAO				S	**Sn**	**23 33 58.2**	**-1.0**
URZ	**Urewera**	**8.52**	**213**	P	**Pn**	**23 34 58.3**	**-4.0**
	0.7nm,0.3s,baz=234,slow=5.0,SNR=3.3						
URZ				S	**Sn**	**23 36 29.2**	**-8.0**
	2.0nm,0.3s,baz=263,slow=22,SNR=8.8						
CTA	**Charters Tower**	**34.75**	**280**	P	**P**	**23 39 49.4**	**+0.8**
	3.8nm,0.5s,mb4.6,baz=100,slow=9.7,SNR=9.7						
CTAO	**Charters Tower**	**34.75**	**280**	*e*P	**P**	**23 39 49.4**	**+0.8**
	4.7nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**35.11**	**258**	P	**P**	**23 39 52.6**	**+1.0**
	3.4nm,0.9s,mb4.3,baz=104,slow=8.3,SNR=3.9						
STKA				LR	LR	23 52 55.8	
	comp=Z,65nm,19.1s,MS3.4,baz=206,slow=34						
STKA	**Stephens Creek**	**35.11**	**258**	*e*P	**P**	**23 39 52.4**	**+0.8**
	0.7nm,0.8s,mb3.6						
STKA				LR	LR	23 52 55.9	
ASAR	**Alice Springs**	**43.90**	**267**	P	**P**	**23 41 04.9**	**0.0**
	0.5nm,0.6s,mb3.4,baz=105,slow=7.5,SNR=5.4						
WB2	**Warramunga Arr**	**44.95**	**272**	*e*P	**P**	**23 41 13.2**	**-0.2**
WRAB	**Tennant Creek**	**44.96**	**272**	*e*P	**P**	**23 41 13.1**	**-0.3**
	9.8nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**44.96**	**272**	P	**P**	**23 41 13.2**	**-0.2**
	6.4nm,0.8s,mb4.5,baz=113,slow=7.8,SNR=39						
WRA				LR	LR	23 59 55.6	
	comp=Z,44nm,19.4s,MS3.4,baz=180,slow=36						
FITZ	**Fitzroy Crossi**	**53.19**	**270**	*e*P	**P**	**23 42 17.8**	**+1.3**
	2.2nm,0.6s,mb4.3						
KKM	**Kota Kinabalu**	**73.60**	**288**	P	**P**	**23 44 28.9**	**-2.6**
ULN	**Ulaanbaatar**	**103.94**	**318**	Pdif	Pdif	23 46 55.4	-5.2
TLY	**Talaya**	**107.74**	**320**	PKiKP	PKiKP	23 51 28.1	+3.6
MK31	**Makanchi Array**	**118.93**	**310**	PKPdf	PKPdf	23 51 48.0	+2.0
MKAR	**Makanchi Array**	**118.93**	**310**	PKP	PKPdf	23 51 49.3	+3.3
	0.2nm,0.5s,baz=279,slow=1.0,SNR=3.9						
KURK	**Kurchatov**	**122.21**	**313**	PKP	PKPdf	23 51 55.7	+3.5
	0.5nm,0.6s,baz=109,slow=2.1,SNR=3.8						
KURK	**Kurchatov**	**122.21**	**313**	PKP	PKPdf	23 51 55.7	+3.5
KURK				PKPdf	PKPdf	23 51 55.8	+3.6
BVAR	**Borovoye Array**	**127.57**	**315**	PKP	PKPdf	23 52 06.4	+4.1
	0.3nm,0.4s,baz=140,slow=2.6,SNR=4.2						
KAF	**Kangasniemi**	**145.59**	**341**	*e*p	PKPdf	23 52 38.0	+2.8
	6.5nm,0.5s						
NB2	**NORSAR Subarra**	**149.68**	**352**	PKP	PKPab	23 53 00.5	+8.5
	comp=Z,0.7nm,0.6s,baz=15,slow=2.6						
TORD	**Torodi Ar. Bea**	**161.98**	**176**	PKPab	PKPab	23 53 51.0	+5.3
	comp=Z,0.4nm,0.7s,baz=177,slow=4.7,SNR=4.2						

TEH ***16*** *23:38:42.2, 35.82N×61.00E, h22km, ML3.7*
CSEM ***16*** *23:38:42.2, 35.81N×61.02E, h19km, ML3.7, After TEH*
ISC 16 23:40:08.1±1.7**, 35.81N**±0.07×**61.0E**±0.1**, h15**km±6km**, n18,** σ**0.85**/34**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMYA	**Miami**	**0.89**	**307**	*e*Pg	**Pg**	**23 40 24.5**	**-0.9**
IMYA				*e*Sg	**Sg**	**23 40 37.4**	**+0.3**
IMYA	**Miami**	**0.89**	**307**	*e*Pg	**Pg**	**23 40 24.5**	**-0.9**
IMYA				*e*Sg	**Sg**	**23 40 37.4**	**+0.3**
IMYA				*e*		23 40 45.1	
MHI	**Mashad**	**1.33**	**293**	*e*Pg	**Pg**	**23 40 33.0**	**-0.6**
MHI				*e*Sg	**Sg**	**23 40 51.2**	**+0.3**
MHI				*e*		23 40 56.6	
IMOG	**Moghan**	**1.37**	**283**	*e*Pn	**Pn**	**23 40 32.9**	**+0.2**
IMOG				*e*Sn	**Sn**	**23 40 51.4**	**+0.8**
IMOG	**Moghan**	**1.37**	**283**	*e*Pn	**Pn**	**23 40 32.9**	**+0.2**
IMOG				*e*Sn	**Sn**	**23 40 51.4**	**+0.8**
IMOG				*e*		23 40 58.4	
IPAY	**Payeh**	**1.73**	**292**	*e*Pn	**Pn**	**23 40 38.6**	**+0.9**
IPAY				*e*Sn	**Sn**	**23 41 00.2**	**+0.6**
IPAY	**Payeh**	**1.73**	**292**	*e*Pn	**Pn**	**23 40 38.6**	**+0.9**
IPAY				*e*Sn	**Sn**	**23 40 59.1**	**-0.5**
IPAY				*e*		23 41 08.0	
IAKL	**Akhelmad**	**1.97**	**294**	*e*Pn	**Pn**	**23 40 41.6**	**+0.6**
IAKL				*e*Sn	**Sn**	**23 41 06.0**	**+0.6**
IAKL	**Akhelmad**	**1.97**	**294**	*e*Pn	**Pn**	**23 40 41.0**	**0.0**
IAKL				*e*Sn	**Sn**	**23 41 06.0**	**+0.6**
IAKL				*e*		23 41 16.7	
IKRD	**Kardeh**	**2.22**	**297**	*e*Pn	**Pn**	**23 40 36.0**	**-8.4**
IKRD				*e*Sn	**Sn**	**23 40 54.6**	**-17**
IKRD				*e*		23 41 01.4	
IEMG	**Emamgholi**	**2.47**	**311**	*e*Pn	**Pn**	**23 40 48.1**	**+0.3**
IEMG				*e*Sn	**Sn**	**23 41 15.8**	**-2.0**
IEMG	**Emamgholi**	**2.47**	**311**	*e*Pn	**Pn**	**23 40 48.1**	**+0.3**
IEMG				*e*Sn	**Sn**	**23 41 15.8**	**-2.0**
IEMG				*e*		23 41 33.9	
ISFR	**Sfrayin**	**2.71**	**298**	*e*Pn	**Pn**	**23 40 52.7**	**+1.6**
ISFR				*e*Sn	**Sn**	**23 41 23.1**	**-0.6**
ISFR	**Sfrayin**	**2.71**	**298**	*e*Pn	**Pn**	**23 40 52.7**	**+1.6**
ISFR				*e*Sn	**Sn**	**23 41 21.6**	**-2.1**
ISFR				*e*		23 41 44.4	
IMON	**Monand**	**2.83**	**203**	*e*Pn	**Pn**	**23 40 52.7**	**0.0**
IMON				*e*Sn	**Sn**	**23 41 25.8**	**-0.7**
IMON	**Monand**	**2.83**	**203**	*e*Pn	**Pn**	**23 40 52.7**	**0.0**
IMON				*e*Sn	**Sn**	**23 41 25.8**	**-0.7**
IMON				*e*		23 41 42.7	
ITEG	**Tejag**	**3.44**	**213**	*e*Pn	**Pn**	**23 41 01.1**	**-0.1**
ITEG	**Tejag**	**3.44**	**213**	*e*Pn	**Pn**	**23 41 01.1**	**-0.1**
ITEG				*e*Lg		23 41 57.0	
ITEG				*e*		23 42 01.5	

IDC 16 23:40:42.5±1.2**, 29.96N**×**83.88E, h0**km**, mb3.5**/4**, mb1 3.7**/6**, mb1mx3.4**/24**, mbtmp3.5**/6**, ML3.3**/2**, Error ellipse: s-maj=45.6km s-min=24.3km az=55.0, Nepal**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**16.85**	**356**	Pn	Pn	23 44 39.8	+0.1
	0.1nm,0.3s,baz=175,slow=12,SNR=6.6						
CMAR	**Chiang Mai Arr**	**17.86**	**126**	P	Pn	23 44 54.5	+1.9
	0.0nm,0.3s,baz=298,slow=11,SNR=6.8						
KURK	**Kurchatov**	**21.10**	**351**	P	P	23 45 26.9	-1.6
	1.3nm,0.9s,baz=169,slow=10,SNR=6.3						
BVAR	**Borovoye Array**	**25.08**	**341**	P	P	23 46 08.3	-0.3
	0.3nm,0.5s,baz=167,slow=8.6,SNR=2.6						
WRA	**Warramunga Arr**	**69.43**	**129**	P	P	23 51 52.0	-0.7
	0.7nm,1.0s,baz=317,slow=6.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**76.87**	**278**	P	P	23 52 37.4	+0.4
	1.1nm,0.7s,baz=52,slow=4.6,SNR=11						

MOS ***17*** *00:09:34.1±1.4, 9.07S×112.41E, h33km, mb5.6/41, Error ellipse: s-maj=10.0km s-min=5.8km az=113.5*
BJI ***17*** *00:09:35.2, 9.20S×112.40E, h48km, mB5.2, mb5.3, Ms4.5, Msz4.2*
ISCJB ***17*** *00:09:36.0±0.2, 9.20S±0.03×112.41E±0.03, h53km, mb5.4/112, MS4.0/28, Error ellipse: s-maj=5.2km s-min=3.9km az=40.3*
GCMT ***17*** *00:09:37.2±0.3, 9.41S×112.41E, h67km±1km, MW5.0/63, Moment Tensor Solution. s50,c61; s63,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.20±.14; $M_{\theta\theta}$-0.86±.13; $M_{\phi\phi}$-3.34±.15; $M_{r\theta}$-0.27±.09; $M_{\theta\phi}$2.29±.09; $M_{\phi r}$0.36±.12; Best double couple: $M_0$4.47500×10^{16} NP1:ϕ_s150.00000°,δ42.00000°,λ91.00000°. NP2: ϕ_s329.00000°,δ48.00000°,λ89.00000°. Principal axes: T 4.2230, Plg87.0000°, Azm225.0000°; N 0.5010, Plg1.0000°, Azm329.0000°; P -4.7280, Plg3.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***17*** *00:09:37.2±0.8, 9.22S×112.39E, h48km±7km, mb5.4/51 Error ellipse: s-maj=6.5km s-min=4.3km az=224.0*
NEIC Felt [IV] at Malang. Also felt at Blitar.
AUST ***17*** *00:09:37, 9.50S×112.40E, h19km, ML5.0*
DJA ***17*** *00:09:38, 9.69S×112.37E, h42km, Mw5.6/20*
IDC ***17*** *00:09:39.6±0.6, 9.17S×112.41E, h71km±4km, mb4.9/23, mb1 4.9/24, mb1mx4.9/25, mbtmp4.9/24, MS4.0/18, Ms1 4.0/18, ms1mx4.0/23, Error ellipse: s-maj=13.7km s-min=7.8km az=66.0*
ISC 17 00:09:37.8±0.2**, 9.27S**±0.03×**112.39E**±0.03**, h55**km**, h55**km±3.2km**:pP-P, n737,** σ**1.07**/343**, mb5.4**/112**, MS4.0**/28**, 180C-198D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJI	**Sawahan**	**1.65**	**338**	P	**Pn**	**00 10 07.1**	**+2.6**
NBBI	**Negara**	**2.38**	**68**	P	**Pn**	**00 10 17.1**	**+2.7**
KMMI	**Kalianget**	**2.70**	**35**	P	**Pn**	**00 10 22.1**	**+3.2**
DNP	**Denpasar**	**2.84**	**78**	P	**Pn**	**00 10 23.2**	**+2.4**
KHKI	**Kahang-Kahang**	**3.30**	**74**	P	**Pn**	**00 10 28.9**	**+1.8**
CLJI	**Cilicap**	**3.68**	**295**	P	**Pn**	**00 10 36.0**	**+3.7**
JCJI	**Jatiwangi**	**4.93**	**304**	P	**Pn**	**00 10 51.2**	**+1.8**
	1μm,1.0s,8.8nm						
LEM	**Lembang**	**5.32**	**297**	P	**Pn**	**00 10 58.2**	**+3.5**
	1μm,0.9s,4.7nm						
CBJI	**Citeko**	**6.18**	**297**	P	**Pn**	**00 11 07.0**	**+0.5**
	3μm,0.9s,12nm						
DBJI	**Dramaga**	**6.21**	**295**	P	**Pn**	**00 11 10.2**	**+3.3**
	716nm,0.9s,10μm3.0nm						
BBKI	**Banjar Baru**	**6.26**	**23**	P	**Pn**	**00 11 12.3**	**+4.6**
	2μm,0.8s,5.7nm						
XMIS	**Christmas Isla**	**6.75**	**259**	*e*P	**Pn**	**00 11 12.9**	**-1.5**
XMIS				*e*S	**Sn**	**00 12 18.8**	**-11**
XMIS	**Christmas Isla**	**6.75**	**259**	P	**Pn**	**00 11 13.0**	**-1.4**
	3μm,0.6s,12nm						
SBJI	**Serang**	**6.95**	**296**	P	**Pn**	**00 11 22.4**	**+5.3**
	550nm,0.8s,6μm2.1nm						
PLKI	**Palangkaraya**	**7.17**	**13**	P	**Pn**	**00 11 26.9**	**+6.8**
	976nm,0.9s,2.7nm						
TPI	**Tanjungpandan**	**8.01**	**324**	P	Px	00 11 43.3	
KAPI	**Kappang**	**8.44**	**60**	Pn	**Pn**	**00 11 38.9**	**+1.4**
	1μm,0.7s,SNR=19						
KAPI	**Kappang**	**8.44**	**60**	P	**Pn**	**00 11 38.8**	**+1.3**
	13nm,0.3s,baz=252,slow=10.0,SNR=32						
KAPI				LR	LR	00 15 22.1	
	comp=Z,1μm,21.4s,baz=251,slow=41						
KAPI	**Kappang**	**8.44**	**60**	*e*Pn	**Pn**	**00 11 39.0**	**+1.5**
KAPI	**Kappang**	**8.44**	**60**	P	**Pn**	**00 11 38.6**	**+1.1**
	155nm,1.1s,992nm0.4nm						
STKI	**Sintang**	**9.32**	**354**	P	**Pn**	**00 11 54.9**	**+5.3**
	156nm,0.8s						
PPBI	**Pangkal Pinang**	**9.41**	**318**	P	**Pn**	**00 11 59.2**	**+8.3**
	102nm,0.8s						
KSM	**Kuching**	**10.87**	**349**	*e*Pn	**Pn**	**00 12 14.9**	**+4.0**
	46nm,0.8s						
KSM	**Kuching**	**10.87**	**349**	⇑P	**Pn**	**00 12 15.3**	**+4.4**
KSM	**Kuching**	**10.87**	**349**	P	Px	00 12 23.0	
PCI	**Palu**	**11.13**	**42**	P	**Pn**	**00 12 19.6**	**+5.2**
	269nm,1.0s,3μm						
BATI	**Baumata**	**11.15**	**96**	P	**Pn**	**00 12 13.2**	**-1.4**
	44nm,0.3s,baz=325,slow=1.0,SNR=53						
BATI				S	**Sn**	**00 14 08.4**	**-9.4**
	16nm,0.3s,baz=218,slow=19,SNR=4.3						
BATI	**Baumata**	**11.15**	**96**	P	**Pn**	**00 12 13.6**	**-1.0**
	305nm,0.9s,2μm						
KSI	**Kapahiang**	**11.22**	**299**	P	**Pn**	**00 12 16.8**	**+1.2**
	1μm,0.8s						
KDI	**Kendari**	**11.45**	**63**	P	**Pn**	**00 12 22.2**	**+3.5**
	112nm,1.3s,2μm						
SBUM	**Sibu**	**11.64**	**359**	⇑P	**Pn**	**00 12 27.4**	**+6.0**
SBUM	**Sibu**	**11.64**	**359**	P	**Pn**	**00 12 26.9**	**+5.5**
	82nm,1.0s,716nm						
MBWA	**Marble Bar**	**13.77**	**150**	*e*Pn	**Pn**	**00 12 46.4**	**-4.0**
MBWA				*e*Sn	**Sn**	**00 15 06.8**	**-15**
MYKOM	**Kota Tinggi**	**13.90**	**322**	⇑P	**Pn**	**00 12 59.1**	**+7.0**
KGM	**Kluang**	**14.40**	**321**	⇓P	**Pn**	**00 13 04.3**	**+5.5**
PDSI	**Padang**	**14.49**	**304**	P	**Pn**	**00 12 57.3**	**-2.6**
PPI	**Padang Panjang**	**14.81**	**306**	P	**Pn**	**00 13 02.7**	**-1.4**
COCO	**West Island**	**15.56**	**258**	*e*P	**Pn**	**00 13 16.2**	**+2.4**
SDKM	**Sandakan**	**15.57**	**18**	⇑P	**Pn**	**00 13 20.2**	**+6.3**
FITZ	**Fitzroy Crossi**	**15.57**	**126**	*e*P	**Pn**	**00 13 12.0**	**-1.9**
	64nm,0.7s						
FITZ				*e*S	**Sn**	**00 15 49.9**	**-16**
FITZ	**Fitzroy Crossi**	**15.57**	**126**	P	**Pn**	**00 13 11.9**	**-2.0**
	140nm,1.0s,2μm						
MYLDM	**Lahad Datu**	**15.59**	**23**	⇑P	**Pn**	**00 13 15.5**	**+1.2**
MYLDM	**Lahad Datu**	**15.59**	**23**	P	**Pn**	**00 13 21.3**	**+7.1**
	126nm,0.8s,1μm						
AAI	**Ambon**	**16.65**	**72**	P	**Pn**	**00 13 30.1**	**+2.5**
	235nm,1.4s,4μm						
KDM	**Kudat**	**16.68**	**16**	⇑P	**Pn**	**00 13 28.3**	**+0.3**
KTGM	**Kuala Trenggan**	**17.19**	**327**	⇓P	Px	00 13 45.1	
LBMI	**Labuha**	**17.31**	**61**	P	**Pn**	**00 13 39.9**	**+4.1**
	356nm,1.0s,3μm						
IPM	**Ipoh**	**17.75**	**320**	⇑P	**Pn**	**00 13 46.1**	**+4.9**
IPM	**Ipoh**	**17.75**	**320**	P	**Pn**	**00 13 49.8**	**+8.6**
PSI	**Prapat**	**18.00**	**311**	LR	LR	00 21 44.6	
	comp=Z,670nm,19.7s,baz=132,slow=41						
KAKA	**Kakadu**	**19.97**	**102**	*e*P	x	00 13 44.2	
	81nm,0.6s						
DAV	**Davao City (W)**	**20.88**	**39**	LR	LR	00 23 35.8	
	comp=Z,244nm,19.8s,MS3.6,baz=229,slow=40						
KLBR	**Kellerberrin**	**22.76**	**168**	*e*P	pP	00 14 45.5	-2.6
	17nm,0.6s						
KLBR				*e*S	**S**	**00 18 38.6**	**-1.9**
MUN	**Mundaring**	**22.87**	**172**	*e*P	**P**	**00 14 36.5**	**-0.2**
MUN				*e*S	**S**	**00 18 42.1**	**-0.2**
WRA	**Warramunga Arr**	**23.71**	**119**	P	**P**	**00 14 44.2**	**-0.7**
	88nm,0.7s,mb5.3,baz=295,slow=11,SNR=920						
WRA				pP		00 15 03.0	
	68nm,0.9s,baz=294,slow=11,SNR=6.8						
WRA				sP	sP	00 15 10.5	+5.4
	93nm,1.1s,baz=295,slow=11,SNR=5.5						
WRA				PcP	PcP	00 18 28.1	+0.1
	15nm,0.7s,baz=292,slow=2.1,SNR=11						
WRA				LR	LR	00 24 33.7	
	comp=Z,374nm,20.6s,MS3.8,baz=300,slow=38						
WRA	**Warramunga Arr**	**23.71**	**119**	P	**P**	**00 14 44.2**	**-0.7**
WRA						00 18 28.1	
WRAB	**Tennant Creek**	**23.71**	**119**	*e*P	**P**	**00 14 44.5**	**-0.5**
WRAB				*e*		00 18 28.5	
WRAB				pmax	pmax		
	comp=Z,76nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**23.71**	**119**	*e*P	**P**	**00 14 44.5**	**-0.4**
	comp=Z,76nm,0.7s,mb5.2						
WRAB				*e*PcP	PcP	00 18 28.5	+0.5
WRAB	**Tennant Creek**	**23.71**	**119**	P	**P**	**00 14 44.0**	**-1.0**
	comp=Z,141nm,0.8s,comp=Z,1μm,mb5.5						
WB2	**Warramunga Arr**	**23.72**	**119**	*e*P	**P**	**00 14 44.3**	**-0.7**
NWAO	**Narrogin (SRO)**	**23.96**	**170**	P	**P**	**00 14 46.4**	**-0.7**
	comp=Z,8.9nm,0.6s,mb4.3,baz=346,slow=7.0,SNR=5.7						
NWAO				LR	LR	00 23 25.1	
	comp=Z,372nm,21.9s,MS3.8,baz=340,slow=34						
ASAR	**Alice Springs**	**25.05**	**127**	P	**P**	**00 14 56.8**	**-0.4**
	comp=Z,46nm,0.6s,mb5.2,baz=304,slow=9.3,SNR=318						
ASAR				pP	pP	00 15 16.1	+5.2
	comp=Z,80nm,0.9s,baz=305,slow=7.9,SNR=11						
ASAR				PcP	PcP	00 18 30.3	-0.5
	comp=Z,12nm,0.7s,baz=324,slow=2.1,SNR=12						
FORT	**Forrest**	**25.91**	**148**	*e*P	**P**	**00 15 05.0**	**+0.2**
	comp=Z,113nm,0.7s,mb5.5						
FORT				*e*S	S	00 19 54.1	+23
COEN	**Coen**	**30.49**	**102**	*e*P	**P**	**00 15 46.3**	**+0.4**
	comp=Z,27nm,0.8s,mb5.0						
COEN				*e*PcP	PcP	00 18 45.1	+0.9
COEN	**Coen**	**30.49**	**102**	P	**P**	**00 15 49.5**	**+3.6**
	comp=Z,23nm,1.1s,mb4.8						
CM31	**Chiang Mai Arr**	**30.58**	**334**	*e*P	**P**	**00 15 48.0**	**+1.4**
	comp=Z,13nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**30.58**	**334**	P	**P**	**00 15 46.2**	**-0.4**
	comp=Z,16nm,0.7s,mb4.9,baz=169,slow=8.5,SNR=64						
CMAR				PcP	PcP	00 18 45.5	+1.2
	comp=Z,7.6nm,0.8s,baz=198,slow=3.1,SNR=8.3						
CMAR				S	**S**	**00 20 46.8**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=157,slow=15,SNR=4.3						
CMAR				LR	LR	00 29 26.6	
	comp=Z,229nm,18.8s,MS3.9,baz=327,slow=39						
CMAR	**Chiang Mai Arr**	**30.58**	**334**	*i* P	**P**	**00 15 47.7**	**+1.1**
CHTO	**Chiang Mai**	**30.90**	**335**	*e*P	**P**	**00 15 50.3**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
CHTO	**Chiang Mai**	**30.90**	**335**	*e*P	**P**	**00 15 50.3**	**+0.9**
	comp=Z,9.4nm,0.8s,mb4.7						
PMG	**Port Moresby**	**34.30**	**93**	P	**P**	**00 16 19.0**	**-0.2**
	comp=Z,6.4nm,0.6s,mb4.8,baz=249,slow=8.6,SNR=5.3						
PMG	**Port Moresby**	**34.30**	**93**	*e*P	**P**	**00 16 21.0**	**+1.7**
PMG				pmax	pmax		
	comp=Z,18nm,0.7s						
PMG	**Port Moresby**	**34.30**	**93**	*e*P	**P**	**00 16 21.0**	**+1.8**
	comp=Z,18nm,0.7s,mb5.1						
PMG	**Port Moresby**	**34.30**	**93**	P	**P**	**00 16 26.2**	**+6.9**
CTA	**Charters Tower**	**34.40**	**112**	*e*P	**P**	**00 16 20.8**	**+0.7**
	comp=Z,18nm,1.0s,mb5.0						
CTA				*e*		00 16 26.7	
CTA				*e*sP	sP	00 16 41.2	+0.5
CTA				*e*PCP	PcP	00 18 55.2	+0.3
CTA	**Charters Tower**	**34.40**	**112**	P	**P**	**00 16 21.0**	**+0.9**
	comp=Z,22nm,0.9s,mb5.1,baz=281,slow=11,SNR=20						
CTA				PcP	PcP	00 18 55.3	+0.4
	comp=Z,16nm,0.7s,baz=291,slow=3.7,SNR=5.7						
CTA	**Charters Tower**	**34.40**	**112**	*e*P	**P**	**00 16 20.8**	**+0.7**
CTA				*e*		00 16 26.7	
CTA				*e*		00 18 55.2	
CTA				pmax	pmax		
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	**34.40**	**112**	*e*P	**P**	**00 16 20.9**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.4						
CTAO	**Charters Tower**	**34.40**	**112**	*e*P	**P**	**00 16 20.9**	**+0.8**
	comp=Z,38nm,0.7s,mb5.4						
CTAO	**Charters Tower**	**34.40**	**112**	P	**P**	**00 16 20.8**	**+0.7**
	comp=Z,71nm,1.0s,mb5.5						
YHNB	**Yeheng**	**34.85**	**14**	P	**P**	**00 16 24.4**	**+0.6**
	comp=Z,16nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**35.20**	**134**	*e*P	**P**	**00 16 27.0**	**+0.2**
	comp=Z,40nm,0.5s,mb5.6						
STKA				*e*		00 16 33.1	
STKA				*e*sP	sP	00 16 47.8	+0.4
STKA				*e*PCP	PcP	00 18 57.2	+0.2
STKA	**Stephens Creek**	**35.20**	**134**	P	**P**	**00 16 27.1**	**+0.3**
	comp=Z,48nm,0.5s,mb5.7,baz=308,slow=8.5,SNR=157						
STKA				PcP	PcP	00 18 57.0	0.0
	comp=Z,23nm,0.7s,baz=319,slow=3.3,SNR=4.7						
STKA				LR	LR	00 32 18.5	
	comp=Z,376nm,19.0s,MS4.2,baz=283,slow=38						
KMI	**Kunming**	**35.46**	**345**	P	**P**	**00 16 31.4**	**+2.4**
KMI				AP	pP	00 16 40.3	-2.8
KMI				XP	sP	00 16 43.9	-5.7
KMI				S	**S**	**00 22 02.6**	**+2.3**
KMI				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,92nm,5.1s						
KMI				LR	LR		
	comp=N,200nm,23.6s,MS4.0						
KMI				LR	LR		
	comp=E,239nm,19.5s,MS4.0						
KMI				LR	LR		
	comp=Z,240nm,23.6s,MS3.9						
PALK	**Pallekele**	**35.60**	**296**	*e*P	**P**	**00 16 31.8**	**+1.4**
PALK				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
PALK	**Pallekele**	**35.60**	**296**	*e*P	**P**	**00 16 31.8**	**+1.3**
	comp=Z,44nm,1.0s,mb5.3						
GYA	**Guiyang**	**35.95**	**351**	⇓*i*P	**P**	**00 16 35.3**	**+2.1**
GYA				AP	pP	00 16 47.3	0.0
GYA				XP	sP	00 16 54.3	+0.5
GYA				S	**S**	**00 22 11.9**	**+4.1**
GYA				SCS	ScS	00 26 45.3	-1.2
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,170nm,4.9s						
GYA				LR	LR		
	comp=Z,2μm,17.8s,MS4.8						
JOW	**Kunigami**	**39.06**	**23**	P	**P**	**00 16 60.0**	**+0.4**
	comp=Z,26nm,0.8s,mb5.0,baz=230,slow=6.9,SNR=9.7						
VIS	**Vishakhapatnam**	**39.29**	**313**	*e*P	**P**	**00 17 02.2**	**+0.6**
VIS				AMb	AMB	00 17 03.9	
	comp=Z,61nm,0.9s,mb5.3						
TRD	**Trivandrum**	**39.46**	**296**	*e*P	**P**	**00 17 04.2**	**+1.0**
TRD				AMb	AMB	00 17 05.4	
	comp=Z,54nm,0.7s,mb5.4						
WHN	**Wuhan**	**39.63**	**3**	P	**P**	**00 17 04.4**	**+0.2**
WHN				LR	LR		
	comp=Z,537nm,23.9s,MS4.3						
KOD	**Kodaikanal**	**39.79**	**298**	*e*P	**P**	**00 17 06.7**	**+0.9**
KOD				AMb	AMB	00 17 07.6	
	comp=Z,55nm,1.7s,mb5.0						
SHL	**Shillong**	**39.97**	**330**	⇑*i*x	**P**	**00 17 09.5**	**+2.3**
SHL				*e*x	x	00 23 06.5	
EIDS	**Eidsvold**	**40.07**	**119**	*e*P	**P**	**00 17 09.1**	**+1.0**
	comp=Z,26nm,0.8s,mb5.0						
CD2	**Chengdu**	**40.80**	**349**	P	**P**	**00 17 14.3**	**+0.4**
CD2				AP	pP	00 17 25.6	-2.7
CD2				XP	sP	00 17 32.1	-2.6
CD2				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.3						
CD2				AMB	AMB		
	comp=Z,210nm,5.9s						
CD2				LR	LR		
	comp=N,300nm,10.7s						
CD2				LR	LR		
	comp=Z,240nm,16.1s						
TOO	**Toolangi**	**41.04**	**139**	*e*P	pP	00 17 38.6	+8.4
NJ2	**Nanjing**	**41.55**	**8**	*e*P	**P**	**00 17 22.1**	**+2.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
BOK	**Bokaro**	**41.85**	**322**	*e*P	**P**	**00 17 23.0**	**+0.3**
BOK				AMb	AMB	00 17 24.0	
	comp=Z,35nm,0.5s,mb5.3						
ARMA	**Armidale**	**42.18**	**126**	*e*P	**P**	**00 17 27.2**	**+1.9**
HYB	**Hyderabad**	**42.68**	**308**	*i* P	**P**	**00 17 29.0**	**-0.5**
XAN	**Xi'an**	**43.20**	**356**	P	**P**	**00 17 33.8**	**+0.4**
XAN				AP	pP	00 17 47.5	-0.3
XAN				PP	PP	00 19 17.8	+3.0
XAN				S	**S**	**00 24 02.6**	**+6.3**
XAN				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
XAN				AMB	AMB		
	comp=Z,130nm,12.9s						
XAN				LR	LR		
	comp=N,81nm,25.3s,MS3.7						
XAN				LR	LR		
	comp=E,77nm,20.6s,MS3.7						
XAN				LR	LR		
	comp=Z,195nm,23.7s,MS3.9						
ODAN	**Odare**	**43.34**	**327**	*e*P	**P**	**00 17 34.8**	**+0.1**
	comp=Z,210nm,0.9s,mb5.9						
TAPN	**Taplejung**	**43.56**	**327**	*e*P	**P**	**00 17 36.9**	**+0.4**
	comp=Z,176nm,0.8s,mb5.9						
LSA	**Lhasa**	**43.81**	**333**	P	**P**	**00 17 39.4**	**+0.9**
LSA	**Lhasa**	**43.81**	**333**	*e*P	**P**	**00 17 39.8**	**+1.3**
LSA				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.3						
LSA	**Lhasa**	**43.81**	**333**	*e*P	**P**	**00 17 39.8**	**+1.4**
	comp=Z,54nm,0.8s,mb5.3						
RAMN	**Ramite**	**43.85**	**326**	*e*P	**P**	**00 17 38.7**	**-0.1**
NGP	**Nagpur**	**44.57**	**313**	*e*P	**P**	**00 17 43.0**	**-1.7**
NGP				AMb	AMB	00 17 44.2	
	comp=Z,68nm,1.1s,mb5.4						
JIRN	**Jiri**	**44.63**	**326**	*e*P	**P**	**00 17 45.2**	**+0.2**
	comp=Z,169nm,0.8s,mb5.9						
PKI	**Pulchoki**	**44.99**	**325**	*e*P	**P**	**00 17 47.5**	**-0.4**
	comp=Z,62nm,0.9s,mb5.4						
PKI	**Pulchoki**	**44.99**	**325**	*e*P	**P**	**00 17 47.5**	**-0.4**
PKI				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.4						
GUN	**Gumba**	**44.99**	**326**	*e*P	**P**	**00 17 48.1**	**+0.2**
	comp=Z,132nm,0.6s,mb5.9						
PKIN	**Phulchoki**	**45.01**	**325**	*e*P	**P**	**00 17 47.3**	**-0.7**
	comp=Z,46nm,0.9s,mb5.3						
DMN	**Daman**	**45.19**	**325**	*e*P	**P**	**00 17 49.3**	**-0.2**
	comp=Z,106nm,0.7s,mb5.8						
KKN	**Kakani**	**45.23**	**325**	*e*P	**P**	**00 17 49.5**	**-0.3**
	comp=Z,93nm,1.0s,mb5.6						
KKN	**Kakani**	**45.23**	**325**	*e*P	**P**	**00 17 49.5**	**-0.3**
KKN				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.6						
GOA	**Goa**	**45.44**	**302**	*e*P	**P**	**00 17 51.8**	**+0.1**
GOA				AMb	AMB	00 17 52.4	
	comp=Z,110nm,1.3s,mb5.5						
GKN	**Gorkha**	**45.76**	**325**	*e*P	**P**	**00 17 53.5**	**-0.5**
AKL	**Akola**	**45.79**	**311**	*e*P	**P**	**00 17 55.0**	**+0.6**
AKL				AMb	AMB	00 20 14.8	
	comp=Z,61nm,1.1s,mb5.5						
LZH	**Lanzhou**	**45.83**	**350**	⇑P	**P**	**00 17 55.4**	**+1.0**
LZH				AP	pP	00 18 05.0	-3.9
LZH				XP	sP	00 18 09.5	-5.8
LZH				PP	PP	00 19 42.4	-0.4
LZH				S	**S**	**00 24 34.1**	**-0.3**
LZH				AMB	AMB		
	comp=Z,81nm,1.3s,mb5.5						
LZH				AMB	AMB		
	comp=Z,176nm,5.7s						
LZH				LR	LR		
	comp=E,798nm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,17.5s,MS4.9						
KOLN	**Koldanda**	**46.18**	**324**	*e*P	**P**	**00 17 56.9**	**-0.4**
	comp=Z,102nm,0.6s,mb6.0						
DANN	**Dangsing**	**46.52**	**324**	*e*P	**P**	**00 17 59.7**	**-0.3**
POO	**Poona**	**47.00**	**306**	*e*P	**P**	**00 18 03.5**	**-0.4**
KSRS	**Korea Array**	**48.70**	**16**	P	**P**	**00 18 16.6**	**-0.2**
	comp=Z,20nm,0.9s,mb5.1,baz=202,slow=7.2,SNR=38						
KSRS				pP	pP	00 18 34.5	+3.1
	comp=Z,10.0nm,0.8s,baz=202,slow=7.7,SNR=5.5						
KSRS				LR	LR	00 37 51.9	

comp=Z,94nm,19.7s,MS3.8,baz=198,slow=35
BJT Baijiatuau 49.16 4 *e*P **P** **00 18 20.0 -0.2**
BJT pmax pmax
comp=Z,42nm,0.6s
BJT Baijiatuau 49.16 4 *e*P **P** **00 18 20.0 -0.2**
comp=Z,42nm,0.6s,mb5.7
BJI Beijing 49.19 4 P **P** **00 18 19.9 -0.5**
BJI AP pP 00 18 33.4 -1.6
BJI S **S** **00 25 28.5 +6.5**
BJI AMB AMB
comp=Z,68nm,0.7s,mb5.8
BJI AMB AMB
comp=Z,128nm,3.5s
BJI LR LR
comp=N,95nm,26.1s,MS4.0
BJI LR LR
comp=E,198nm,26.8s,MS4.0
BJI LR LR
comp=Z,164nm,22.4s,MS4.0
LGTI Lohaghat 49.41 322 *e*P **P** **00 18 20.2 -2.1**
GTA Gaotai 49.82 347 P **P** **00 18 26.3 +1.1**
GTA AP pP 00 18 38.6 -1.3
GTA XP sP 00 18 44.0 -2.3
GTA PP PP 00 20 23.1 +2.6
GTA S **S** **00 25 32.1 +1.2**
GTA SCS ScS 00 28 08.3 -3.5
GTA AMB AMB
comp=Z,21nm,1.0s,mb5.1
GTA AMB AMB
comp=Z,72nm,5.4s
GTA LR LR
comp=N,156nm,14.0s,MS4.3
GTA LR LR
comp=E,151nm,15.5s,MS4.3
GTA LR LR
comp=Z,182nm,14.6s,MS4.2
HHC Hu-ho-hao-te 49.87 359 *e*P **P** **00 18 25.3 -0.3**
HHC AP pP 00 18 38.1 -2.2
HHC XP sP 00 18 42.9 -3.8
HHC PP PP 00 20 21.8 +0.8
HHC PCS PcS 00 23 40.5 -1.7
HHC SCS ScS 00 28 09.1 -3.0
HHC AMB AMB
comp=Z,17nm,0.7s,mb5.2
HHC AMB AMB
comp=Z,173nm,4.5s
HHC LR LR
comp=N,151nm,14.3s,MS4.3
HHC LR LR
comp=E,158nm,15.5s,MS4.3
HHC LR LR
comp=Z,109nm,17.8s,MS3.9
AJM Ajmer 51.05 315 *e*P **P** **00 18 33.6 -1.2**
AJM AMb AMB 00 18 34.5
comp=Z,17nm,0.6s,mb5.2
DDI Dehra Dun 51.36 321 *ex* **P** **00 18 32.0 -5.0**
DDI *ex* x 00 25 37.0
MAJO Matsushiro 51.63 27 *e*P **P** **00 18 37.2 -1.7**
MAJO pmax pmax
comp=Z,19nm,0.6s,mb5.2
MAJO Matsushiro 51.63 27 *e*P **P** **00 18 37.2 -1.7**
comp=Z,19nm,0.6s,mb5.2
MAT Matsushiro 51.63 27 P **P** **00 18 36.7 -2.2**
MAT S **S** **00 25 59.0 +2.9**
MJAR Matsushiro Arr 51.63 27 P **P** **00 18 36.8 -2.1**
comp=Z,14nm,0.8s,mb5.0,baz=205,slow=8.1,SNR=30
MJAR PcP PcP 00 19 52.5 +0.4
comp=Z,5.5nm,0.9s,baz=211,slow=6.1,SNR=4.0
MJAR LR LR 00 40 06.3
comp=Z,48nm,18.6s,MS3.6,baz=225,slow=35
MJAR Matsushiro Arr 51.63 27 P **P** **00 18 36.8 -2.1**
MJAR 00 19 52.5
MJAR Matsushiro Arr 51.63 27 P **P** **00 18 36.8 -2.1**
MJAR PcP PcP 00 19 52.5 +0.4
MJAR LR LR 00 40 06.3
SMLA Simla 52.47 321 *i* P **P** **00 18 43.7 -1.5**
SMLA *ex* x 00 18 44.7
comp=Z,755nm,0.5s
SMLA *i* x x 00 25 59.4
SDNR Sundarnagar 52.85 322 *e*P **P** **00 18 47.4 -0.7**
DZM Mont Dzumac 53.32 111 *e*P **P** **00 18 52.7 +0.9**
comp=Z,14nm,0.9s,mb4.9
CN2 Changchun 54.13 12 *e*P **P** **00 18 55.5 -1.7**
CN2 PCP PcP 00 19 58.8 -2.5
CN2 *e*S **S** **00 26 28.6 -1.3**
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,100nm,7.0s
THN Thein Dam 54.26 322 *ex* x 00 18 54.3
MDJ Mudanjiang 55.84 15 P **P** **00 19 08.6 -1.0**
MDJ S **S** **00 26 50.3 -2.5**
MDJ AMB AMB
comp=Z,49nm,0.8s,mb5.6
MDJ AMB AMB
comp=Z,89nm,4.2s
MDJ LR LR
comp=N,58nm,31.2s
MDJ LR LR
comp=E,81nm,25.1s
MDJ LR LR
comp=Z,86nm,31.2s,MS3.6
MDJ Mudanjiang 55.84 15 *e*P **P** **00 19 08.6 -1.0**
comp=Z,44nm,0.9s,mb5.5
ULN Ulaanbaatar 57.08 356 ⇓P **P** **00 19 18.1 -0.2**
SNR=8.9
ULN Ulaanbaatar 57.08 356⇑*e*P **P** **00 19 17.8 -0.5**
ULN Ulaanbaatar 57.08 356 *e*P **P** **00 19 18.1 -0.2**
comp=Z,26nm,0.8s,mb5.3
ULN Ulaanbaatar 57.08 356 P **P** **00 19 17.9 -0.4**
SONM Songino Array 57.10 355 P **P** **00 19 18.2 -0.2**
comp=Z,18nm,0.6s,mb5.3,baz=176,slow=8.2,SNR=173
SONM PcP PcP 00 20 12.4 -0.3
comp=Z,18nm,1.2s,baz=194,slow=3.7,SNR=5.3
SONM ScP ScP 00 24 06.2 -1.7
comp=Z,1.8nm,0.8s,baz=176,slow=4.0,SNR=4.6
SONM Songino Array 57.10 355 P **P** **00 19 18.2 -0.2**
SONM 00 20 12.4
WMQ Urumqi 57.40 339 P **P** **00 19 20.4 -0.3**
WMQ AP pP 00 19 32.6 -3.0
WMQ PP PP 00 21 30.0 +1.3
WMQ S **S** **00 27 12.3 -1.2**
WMQ SCS ScS 00 29 02.3 -2.9
WMQ AMB AMB
comp=Z,21nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,222nm,3.6s
WMQ LR LR
comp=N,132nm,28.0s
WMQ LR LR
comp=E,71nm,19.0s
WMQ LR LR
comp=Z,99nm,24.0s,MS3.8
HIA Hailar 58.64 6⇑*i*P **P** **00 19 27.9 -1.3**
HIA Hailar 58.64 6⇑*i*P **P** **00 19 27.0 -2.2**
MIR Mirnyy 58.71 189⇓*i*P **P** **00 19 30.0 +0.5**
MIR pmax pmax
comp=Z,200nm,1.5s,mb5.9
KSH Kashi 59.14 328 *e*P **P** **00 19 33.1 +0.2**
KSH *e*XP sP 00 19 51.3 -2.9
KSH PP PP 00 21 45.6 +1.4
KSH S **S** **00 27 33.9 -2.3**
KSH SCS ScS 00 29 15.4 -2.8
KSH AMB AMB
comp=Z,224nm,0.8s,mb6.2
KBL Kabul 59.85 319 *e*P **P** **00 19 36.5 -1.4**
KBL pmax pmax
comp=Z,16nm,0.8s,mb5.1
KBL Kabul 59.85 319 *e*P **P** **00 19 36.5 -1.4**
comp=Z,16nm,0.8s,mb5.1
ZAK Zakamensk 59.93 353 *e*P **P** **00 19 37.6 -0.5**
ZAK *e* 00 20 23.0
ZAK pmax pmax
comp=Z,9.0nm,1.4s,mb4.6
KLR Kul'dur 60.68 14 *e*P **P** **00 19 37.7 -5.5**
HABR Khabarovsk 60.87 17 *e*P **P** **00 19 43.1 -1.5**
HABR *e**PP pP 00 20 00.1 +0.4
HABR *e* 00 20 25.0
HABR *e*PPP 00 23 21.2
HABR *e*S **S** **00 27 55.3 -2.9**
HABR *e**SS sS 00 28 26.8 +3.2
HABR *e* 00 29 25.9
HABR *e*SS SS 00 31 54.6 -3.8
HABR pmax pmax
comp=Z,40nm,1.5s,mb5.3
HABR pmax pmax
comp=N,6.0nm,0.8s
HABR pmax pmax
comp=E,19nm,1.1s
HABR MLR MLR
comp=Z,34nm,16.0s,MS3.6
WBK Wadi Bani Khal 61.16 302 P **P** **00 19 47.7 +0.6**
SNR=6.2
TLY Talaya 61.17 354*c* *i*P **P** **00 19 46.0 -0.5**
TLY pmax pmax
comp=Z,33nm,1.7s,mb5.2
TLY Talaya 61.17 354 *e*P **P** **00 19 46.8 +0.3**
comp=Z,24nm,1.2s,mb5.2
KZA Kyzart 61.38 329 P **P** **00 19 48.7 +0.6**
SNR=42
MOY Mondy 61.48 352 *e*P **P** **00 19 48.9 +0.3**
IRK Irkutsk 61.66 354 *e*P **P** **00 19 48.4 -1.4**
IRK pmax pmax
comp=Z,48nm,1.2s,mb5.5
JMDO Jabal Madar 61.79 301 P **P** **00 19 51.4 +0.2**
SNR=8.3
TKM2 Tokmak 2 61.83 330 *e*P **P** **00 19 51.1 -0.1**
TKM2 pmax pmax
comp=Z,57nm,0.9s,mb5.7
TKM2 Tokmak 2 61.83 330 P **P** **00 19 51.2 0.0**
SNR=62
TKM2 Tokmak 2 61.83 330 *e*P **P** **00 19 51.1 -0.1**
comp=Z,58nm,0.9s,mb5.7
UCH Uchtor 61.87 329 P **P** **00 19 51.8 +0.4**
SNR=5.5
UCH Uchtor 61.87 329 *e*P **P** **00 19 52.0 +0.6**
comp=Z,7.2nm,0.6s,mb5.0
MK31 Makanchi Array 61.94 337 *e*P **P** **00 19 51.4 -0.4**
MKAR Makanchi Array 61.94 337 P **P** **00 19 51.2 -0.6**
comp=Z,37nm,0.7s,mb5.7,baz=149,slow=7.3,SNR=298
MKAR S **S** **00 28 09.5 -2.2**
comp=Z,1.9nm,1.0s,baz=157,slow=14,SNR=4.9
MKAR LR LR 00 51 50.7
comp=Z,95nm,19.5s,MS4.0,baz=160,slow=41
MKAR Makanchi Array 61.94 337⇑*e*P **P** **00 19 50.2 -1.6**
KBK Karagaybulak 61.96 329 P **P** **00 19 52.2 +0.2**
SNR=95
SMDO Samad 62.12 302 ⇓P **P** **00 19 53.5 0.0**
SNR=10
YSS Yuzh-Sakhalins 62.17 23 *e*P **P** **00 19 52.0 -1.3**
YSS *e* pP 00 20 09.5 +1.0
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 62.17 23 *e*P **P** **00 19 52.7 -0.6**
comp=Z,67nm,1.3s,mb5.6
AAK Ala-Archa 62.17 329 P **P** **00 19 53.8 +0.3**
comp=Z,244nm,0.7s,mb6.4,SNR=31
AAK Ala-Archa 62.17 329 P **P** **00 19 53.9 +0.4**
SNR=16
AAK Ala-Archa 62.17 329 P **P** **00 19 53.5 +0.1**
SNR=31
AAK Ala-Archa 62.17 329 *e*P **P** **00 19 53.6 +0.2**
AAK Ala-Archa 62.17 329 P **P** **00 19 53.3 -0.2**
AML Almayashu 62.22 328 P **P** **00 19 54.2 +0.5**
SNR=14
AML Almayashu 62.22 328 *e*P **P** **00 19 54.2 +0.4**
comp=Z,74nm,0.6s,mb6.0
AML *e*PcP PcP 00 20 33.9 +0.6
BIDO Bidbid 62.25 303 ⇑P **P** **00 19 54.5 +0.1**
SNR=16
FRU Bishkek 62.26 329⇑*i*P **P** **00 19 53.0 -1.0**
FRU pmax pmax
comp=Z,60nm,1.6s,mb5.5
HVS Khovu-Aksy 62.30 347*d* *i*P **P** **00 19 53.3 -0.8**
HVS pmax pmax
comp=Z,64nm,0.6s,mb5.9
CHMS Chumysh 62.31 330 P **P** **00 19 53.8 -0.6**
SNR=7.9
EKS2 Erkin-Say 62.56 329 P **P** **00 19 56.4 +0.3**
SNR=72
EKS2 Erkin-Say 62.56 329 *e*P **P** **00 19 56.4 +0.3**
comp=Z,63nm,0.7s,mb5.9
USP Ospenovka 62.63 330 P **P** **00 19 55.8 -0.7**
SNR=37
HOQ Hoqain 62.95 302 ⇓P **P** **00 19 59.3 +0.2**
SNR=14
ARQ Araqi 63.51 302 ⇓P **P** **00 20 02.4 -0.4**
SNR=6.6
ABPO Ambohimpanom 63.64 253 *e*P **P** **00 20 04.9 +1.2**
ABPO pmax pmax
comp=Z,22nm,1.0s,mb5.1
ABPO Ambohimpanom 63.64 253 *e*P **P** **00 20 04.9 +1.1**
comp=Z,22nm,1.0s,mb5.2
HATD Hatta, Dubai 64.45 303 P **P** **00 20 08.9 0.0**
SNR=17
KURK Kurchatov 66.54 337 P **P** **00 20 21.2 -0.7**
comp=Z,147nm,0.8s,mb6.1,SNR=16
KURK Kurchatov 66.54 337 ⇓P **P** **00 20 21.4 -0.5**
SNR=6.6
KURK Kurchatov 66.54 337 P **P** **00 20 20.8 -1.1**
comp=Z,13nm,0.8s,mb5.0,baz=153,slow=5.2,SNR=34
KURK PcP PcP 00 20 50.2 -0.7
comp=Z,11nm,0.7s,baz=147,slow=4.1,SNR=5.5
KURK Kurchatov 66.54 337 *e*P **P** **00 20 21.1 -0.8**
KURK pmax pmax
comp=Z,21nm,0.8s,mb5.2
KURK Kurchatov 66.54 337 *e*P **P** **00 20 21.1 -0.8**
comp=Z,21nm,0.8s,mb5.2
MAW Mawson 66.83 198 P **P** **00 20 23.8 +0.3**
comp=Z,22nm,0.8s,mb5.2,baz=55,slow=6.8,SNR=34
MAW PcP PcP 00 20 53.1 +1.2
comp=Z,4.4nm,0.6s,baz=334,slow=7.5,SNR=4.2
MAW LR LR 00 42 30.6
comp=Z,162nm,20.1s,MS4.2,baz=62,slow=29
MAW Mawson 66.83 198 *e*P **P** **00 20 23.9 +0.4**
MAW pmax pmax
comp=Z,6.0nm,0.9s
MAW Mawson 66.83 198 *e*P **P** **00 20 23.9 +0.3**
comp=Z,5.9nm,0.9s,mb4.6
BOD Bodaibo 66.87 1 *e*P **P** **00 20 22.6 -1.2**
BOD pmax pmax
comp=Z,25nm,0.9s,mb5.2
ZAA0 Zalesovo Array 67.16 343 *e*P **P** **00 20 24.6 -1.1**
ZALV Zalesovo Beam 67.16 343 P **P** **00 20 24.6 -1.2**
comp=Z,33nm,0.6s,mb5.5,baz=158,slow=4.6,SNR=162
ZALV PcP PcP 00 20 53.7 +0.3
comp=Z,8.8nm,0.6s,baz=147,slow=4.6,SNR=5.3
ZALV S S 00 29 10.4 -5.4
comp=Z,2.8nm,0.9s,baz=155,slow=11,SNR=7.8
ZALV LR LR 00 51 06.0
comp=Z,81nm,18.9s,MS4.0,baz=146,slow=37
ZALV Zalesovo Beam 67.16 343 P **P** **00 20 24.6 -1.1**
ZALV 00 20 53.7
ZALV S S 00 29 10.4 -5.5
ZALV Zalesovo Beam 67.16 343 P **P** **00 20 24.6 -1.2**
ZALV PcP PcP 00 20 53.7 +0.3
ZALV S S 00 29 10.4 -5.4
ZALV LR LR 00 51 06.0
NVS Novosibirsk 68.40 342 *i* P **P** **00 20 32.2 -1.3**
NVS *e*S S 00 29 24.1 -6.6
NVS pmax pmax
comp=Z,13nm,0.6s,mb5.1
NVS pmax pmax
comp=N,5.0nm,0.4s
NVS pmax pmax
comp=E,12nm,1.0s
NVS smax
comp=N,4.0nm,0.6s
NVS smax
comp=E,2.0nm,0.3s
ABKT Ailbek 69.03 317 P **P** **00 20 37.1 -0.7**
comp=E,267nm,1.0s,mb6.1,SNR=17
BVAR Borovoye Array 71.61 335 P **P** **00 20 52.3 -0.9**
comp=E,7.2nm,0.7s,mb4.7,baz=142,slow=8.3,SNR=56
BVAR pP pP 00 21 10.5 +1.9
comp=E,6.2nm,0.6s,baz=142,slow=5.6,SNR=6.9
BRVK Borovoye 71.67 335 P **P** **00 20 52.5 -1.1**
comp=E,64nm,0.8s,mb5.6,SNR=12
BRVK Borovoye 71.67 335 P **P** **00 20 52.9 -0.7**
SNR=6.6
BRVK Borovoye 71.67 335 *e*P **P** **00 20 52.9 -0.7**
BRVK pmax pmax
comp=Z,13nm,0.8s,mb4.9
BRVK Borovoye 71.67 335 *e*P **P** **00 20 52.9 -0.8**
comp=Z,13nm,0.8s,mb4.9
YAK Yakutsk 72.35 8 *e*P **P** **00 20 56.0 -1.5**
YAK *e**PP pP 00 21 01.7 -11
YAK *e* pP 00 21 14.3 +1.4
YAK *e*S S 00 30 14.9 -1.5
YAK *e* 00 30 53.0
YAK pmax pmax
comp=Z,87nm,1.1s,mb5.6
YAK pmax pmax
comp=N,32nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK pmax pmax
comp=Z,321nm,4.9s
YAK pmax pmax
comp=N,205nm,3.5s
YAK pmax pmax
comp=E,299nm,4.6s
YAK smax
comp=N,214nm,3.5s
YAK smax
comp=E,108nm,2.5s
YAK MLR MLR
comp=Z,24nm,6.0s
YAK Yakutsk 72.35 8 *e*P **P** **00 20 56.4 -1.1**
comp=Z,45nm,0.8s,mb5.5
QRN Al-Qurain 72.73 304 *e*P **P** **00 20 59.3 -1.1**
baz=304
QRN AMb AMB 00 21 00.4
comp=Z,177nm,0.6s,mb6.2,baz=304
VNDA Vanda 72.80 170 P **P** **00 20 60.0 -0.1**
comp=Z,15nm,0.8s,mb5.0,baz=310,slow=5.8,SNR=29
VNDA LR LR 00 49 21.5
comp=Z,129nm,21.4s,MS4.2,baz=324,slow=33
VNDA Vanda 72.80 170 *e*P **P** **00 21 00.0 0.0**
VNDA pmax pmax
comp=Z,27nm,1.1s
VNDA Vanda 72.80 170 *e*P **P** **00 21 00.0 0.0**
comp=Z,27nm,1.1s,mb5.1
KBD Kabd 73.06 304 *e*P **P** **00 21 01.8 -0.6**
baz=304
KBD AMb AMB 00 21 02.5
comp=Z,85nm,0.6s,mb5.8,baz=304
PETK Petropavlovsk- 73.09 27 P **P** **00 21 01.4 -0.6**
comp=Z,16nm,0.7s,mb5.0,baz=209,slow=1.3,SNR=26
PETK Petropavlovsk- 73.09 27 P **P** **00 21 01.4 -0.6**
RDF Al-Radifah 73.09 304 *e*P **P** **00 21 01.8 -0.8**
baz=304
RDF AMb AMB 00 21 02.6
comp=Z,210nm,0.7s,mb6.2,baz=304
UMR Umm Al-Rimmam 73.18 305 *e*P **P** **00 21 02.3 -0.9**
baz=305
UMR AMb AMB 00 21 03.2
comp=Z,267nm,0.6s,mb6.3,baz=305
MIB Mutribah 73.58 305 *e*P **P** **00 21 04.5 -0.9**
baz=305
MIB AMb AMB 00 21 06.4
comp=Z,128nm,1.2s,mb5.7,baz=305
AFI Afiamalu 74.16 102 LR LR 00 51 12.6
comp=Z,112nm,21.5s,MS4.1,baz=282,slow=34
SYO Syowa Base 75.26 201⇓*e*P **P** **00 21 12.8 -1.7**
SYO Syowa Base 75.26 201⇑*e*P **P** **00 21 19.7 +5.2**
AKTK Aktyubinsk 75.84 328 P **P** **00 21 17.7 -0.4**
AKTO Aktyubinsk 75.84 328 P **P** **00 21 17.7 -0.4**
comp=Z,43nm,0.7s,mb5.5,baz=128,slow=5.9,SNR=164
SEY Seymchan 78.25 17⇑*e*P **P** **00 21 30.9 -0.4**
SEY Seymchan 78.25 17⇑*e*P **P** **00 21 30.0 -1.3**
SVE Sverdlovsk 78.33 334⇑*e*P **P** **00 21 31.0 -0.9**
SVE *e* 00 21 40.3
SVE *e*S S 00 31 23.1 +0.2
SVE pmax pmax
comp=Z,99nm,0.9s,mb5.7
MAK Makhachkala 78.53 317 *e*P **P** **00 21 33.0 -0.4**
MAK *e*S S 00 31 30.3 +4.7
MAK pmax pmax
comp=Z,85nm,0.9s,mb5.7
ARU Arti 79.01 333 P **P** **00 21 35.0 -0.7**
comp=Z,342nm,1.2s,mb6.2,SNR=20
ARU Arti 79.01 333*c* *i*P **P** **00 21 34.9 -0.8**
ARU *e* 00 24 31.0
ARU PPP 00 26 29.2
ARU *e*S S 00 31 29.6 -0.6
ARU SS SS 00 36 35.3 -1.8
ARU pmax pmax
comp=Z,67nm,1.0s,mb5.5
ARU Arti 79.01 333 *e*P **P** **00 21 35.2 -0.5**
comp=Z,53nm,0.9s,mb5.5
HAKT HAKKARI 79.16 311 *i* P **P** **00 21 42.9 +5.9**
GNI Garni 79.34 314 P **P** **00 21 38.7 +0.8**
SNR=6.4
GNI Garni 79.34 314 P **P** **00 21 38.6 +0.7**
comp=Z,14nm,0.8s,mb4.9,baz=282,slow=2.5,SNR=16
GNI Garni 79.34 314⇑*e*P **P** **00 21 38.0 +0.1**
GNI pmax pmax
comp=Z,55nm,1.4s
GNI Garni 79.34 314 *e*P **P** **00 21 38.8 +0.9**
comp=Z,24nm,0.8s,mb5.2
DGRG David-gareji 79.39 315 P **P** **00 21 39.3 +1.2**
DYDN Dyadin 79.88 313 *i* P **P** **00 21 41.7 +0.9**
MTA Mtatsminda 79.88 315 P **P** **00 21 41.1 +0.4**
TBLG Delisi 79.94 315 *e*P **P** **00 21 41.7 +0.7**
TBLG Delisi 79.94 315 P **P** **00 21 41.7 +0.6**
TUTA Tutak 80.46 313 *i* P **P** **00 21 44.5 +0.5**
GOR Gori 80.47 315 P **P** **00 21 49.2 +5.3**
BEST Besiri 81.09 311 *i* P **P** **00 21 47.5 +0.1**
ONI Oni 81.14 316 P **P** **00 21 48.4 +0.9**
HOMI Horasan 81.34 313 *i* P **P** **00 21 49.8 +1.2**
TIXI Tiksi 81.49 5⇑*e*P **P** **00 21 46.9 -1.8**
TIXI pmax pmax
comp=Z,61nm,1.0s,mb5.5
TIXI Tiksi 81.49 5 *e*P **P** **00 21 47.3 -1.4**
comp=Z,42nm,0.8s,mb5.4
SOKR Solikamsk 81.60 335*c* *i*P **P** **00 21 49.1 -0.4**
SOKR pmax pmax
comp=Z,20nm,0.6s,mb5.2
DAGI Agillar 81.69 314 *i* P **P** **00 21 50.5 +0.1**
ERZM Erzurum 81.69 313 *i* P **P** **00 21 51.9 +1.4**
ARTV Artvin 81.71 314 *i* P **P** **00 21 51.1 +0.5**
DDEM Demirkent 81.74 314 *i* P **P** **00 21 51.2 +0.5**
DBOC Borcka 81.95 314 *i* P **P** **00 21 52.0 +0.2**
LSZ Lusaka 82.06 256 *e*P **P** **00 21 54.0 +1.0**
LSZ pmax pmax
comp=Z,19nm,0.8s,mb5.1
LSZ Lusaka 82.06 256 *e*P **P** **00 21 54.0 +1.0**
comp=Z,19nm,0.8s,mb5.1
KIV Kislovodsk 82.15 317 P **P** **00 21 53.4 +0.6**
comp=Z,259nm,0.8s,mb6.2,SNR=18
KIV Kislovodsk 82.15 317 ⇓P **P** **00 21 53.3 +0.5**
SNR=14
KIV Kislovodsk 82.15 317*c* *i*P **P** **00 21 53.1 +0.3**
KIV pmax pmax
comp=Z,53nm,1.2s,mb5.3
KIV MLR MLR
comp=Z,86nm,18.0s,MS4.2
KIV Kislovodsk 82.15 317 *e*P **P** **00 21 53.2 +0.4**
comp=Z,80nm,1.3s,mb5.5
ELZG Elazig 83.00 311 *i* P **P** **00 21 58.5 +1.1**
BOSA Boshof 83.13 242 P **P** **00 21 58.2 -0.1**
comp=Z,24nm,0.9s,mb5.2,baz=94,slow=4.5,SNR=20
BOSA LR LR 00 51 41.3
comp=Z,206nm,20.4s,MS4.5,baz=146,slow=30
BOSA Boshof 83.13 242 *e*P **P** **00 21 58.8 +0.5**
BOSA pmax pmax
comp=Z,39nm,1.1s,mb5.3
BOSA Boshof 83.13 242 *e*P **P** **00 21 58.8 +0.5**
comp=Z,39nm,1.1s,mb5.3
KEMA Kemaliye 83.59 311 *i* P **P** **00 22 01.5 +1.1**
AKCD Akcadag 83.73 310 *i* P **P** **00 22 02.3 +1.2**
GZT Gaziantep 83.73 309 *i* P **P** **00 22 02.1 +0.9**
KUZU Kuzuini 83.94 309 *i* P **P** **00 22 03.1 +0.9**
RCY Rachaya 84.05 305 *e*P **P** **00 22 04.4 +1.6**
SOC Sochi 84.05 316 *e*P **P** **00 22 00.7 -1.9**
SOC *e* 00 25 12.3
SOC *e*PPP 00 27 17.5
SOC *e*S S 00 32 16.1 -6.7
SOC *e*SS SS 00 37 53.7 +1.0
SOC *e*SSS 00 41 14.8
SOC pmax pmax
comp=Z,49nm,0.9s,mb5.6
SOC pmax pmax
comp=Z,125nm,5.5s
GRSN GIRESUNGRSN 84.25 313 *i* P **P** **00 22 03.6 -0.1**
BHL Bhannes 84.29 306 *e*P **P** **00 22 05.3 +1.2**
ANDN Andirin 84.73 309 *i* P **P** **00 22 06.8 +0.7**
VRHR Novokhopersk 85.36 323*c* *i*P **P** **00 22 08.5 -0.5**
VRHR pmax pmax
comp=Z,70nm,0.9s,mb5.8
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,40nm,1.2s
TOKA Tokat 85.38 312 *i* P **P** **00 22 10.2 +0.8**
BILL Bilibino 85.95 18⇓*i*P **P** **00 22 10.7 -0.9**

BILL pmax pmax
comp=Z,16nm,1.6s,mb5.0
ANN Anapa 85.99 316 *e*P **P 00 22 10.6 -1.7**
ANN *e* pP 00 22 28.8 +0.7
ANN pmax pmax
comp=Z,80nm,1.2s,mb5.8
AVNT Avonos 86.18 310 *i* P **P 00 22 13.7 +0.3**
VORD Divnogorie 86.71 323 *e*P **P 00 22 14.7 -1.0**
VORD pmax pmax
comp=Z,30nm,0.6s,mb5.7
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,30nm,0.9s
VSR Storozhevoye 86.86 323 *c i*P **P 00 22 15.7 -0.7**
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.8
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,30nm,0.6s
BR131 Keskin Array S 87.33 311 *e*P **P 00 22 18.9 -0.1**
comp=E,37nm,0.8s,mb5.7
BRTR Keskin Array B 87.33 311 P **P 00 22 18.9 -0.1**
comp=E,39nm,0.8s,mb5.7,baz=133,slow=6.7,SNR=200
BRTR LR LR 01 01 58.3
comp=E,61nm,21.9s,MS4.0,baz=83,slow=36
BRTR Keskin Array B 87.33 311⇑ *e*P **P 00 22 18.9 -0.1**
BALT Daday 87.96 312 *i* P **P 00 22 23.0 +1.0**
SIM Simferopol' 88.30 316 P **P 00 22 18.1 -5.3**
SIM pmax pmax
comp=Z,24nm,0.9s,mb5.4
SNAA Sanae 88.93 197 *e*P **P 00 22 24.8 -1.2**
SNAA *e* 00 22 28.3
SNAA *e* 00 22 31.5
SNAA Sanae 88.93 197 *e*P **P 00 22 25.2 -0.8**
SNAA pmax pmax
comp=Z,41nm,0.8s
SNAA Sanae 88.93 197 *e*P **P 00 22 25.1 -0.8**
comp=Z,41nm,0.8s,mb5.8
MOS Moscow 89.16 327 *e*P **P 00 22 26.6 -0.6**
MOS *e* pP 00 22 41.7 -1.4
MOS pmax pmax
comp=Z,121nm,1.1s,mb6.1
ISP Isparta 89.28 308⇑ *i*P **P 00 22 28.1 -0.2**
ESKT Eskisehir 89.38 310 *i* P **P 00 22 28.1 -0.6**
OBN Obninsk 89.55 326 P **P 00 22 29.1 0.0**
comp=Z,696nm,0.8s,SNR=8.8
OBN Obninsk 89.55 326 *c i*P **P 00 22 28.8 -0.3**
OBN *PP pP 00 22 44.9 -0.1
OBN *e* 00 25 59.2
OBN pmax pmax
comp=Z,185nm,1.6s,mb6.2
OBN Obninsk 89.55 326 *e*P **P 00 22 29.0 -0.1**
comp=Z,165nm,1.3s,mb6.2
KLMR Klimovskoe 89.84 332 *e*P **P 00 22 27.0 -3.3**
KLMR pmax pmax
comp=Z,66nm,1.2s,mb5.8
VNA2 Neumayer--Watz 90.58 197 *e*P **P 00 22 34.6 +0.9**
VNA2 *e* 00 22 38.4
VNA2 *e* 00 22 41.3
VNA1 Neumayer--Stat 90.97 197 *e*P **P 00 22 36.6 +1.1**
VNA1 *e* 00 22 39.6
VNA1 *e* 00 22 43.1
VNA3 Neumayer Olymp 91.04 196 *e*P **P 00 22 36.5 +0.7**
VNA3 *e* 00 22 39.8
VNA3 *e* 00 22 42.9
TSUM Tsumeb 91.48 250 *e*P **P 00 22 41.2 +2.2**
comp=Z,21nm,1.5s,mb5.2
TLCR 92.01 315⇑ *i*P **P 00 22 40.6 -0.2**
TIRR Tirgusor 92.15 315⇓ *i*P **P 00 22 40.5 -1.0**
HARR Harsova 92.53 315⇑ *i*P **P 00 22 43.4 +0.2**
AKASG Malin Array Be 92.80 321 LR LR 01 10 58.1
comp=Z,63nm,21.1s,MS4.0,baz=325,slow=40
VRI Vrincioaia 93.58 316⇓ *i*P **P 00 22 48.1 +0.1**
PLOR Plostina 93.63 316⇓ *i*P **P 00 22 49.6 +1.4**
PUL Pulkovo 93.97 330 *i* P **P 00 22 49.6 +0.2**
PUL Pulkovo 93.97 330 *i* P **P 00 22 49.6 +0.2**
JOF Joensuu 94.14 333 *e*p **P 00 22 48.9 -1.3**
comp=Z,16nm,0.6s,mb5.6
JOF Joensuu 94.14 333 *e*P **P 00 22 48.9 -1.3**
JOF pmax pmax
comp=Z,16nm,0.6s,mb5.6
VOIR 94.67 315⇑ *i*P **P 00 22 52.1 -0.9**
PPT Papeete 94.79 109 *e*LR LR 00 53 45.4
comp=Z,164nm,23.2s
PPT Papeete 94.79 109 LR LR 00 59 46.3
comp=Z,169nm,21.6s,MS4.5,baz=224,slow=32
BURAR Bucovina Array 94.87 317⇓ *i*P **P 00 22 54.5 +0.6**
BUR08 Bucovina Ar. S 94.89 317 *e*P **P 00 22 54.2 +0.2**
GZR Gura Zlata 96.25 315⇓ *i*P **P 00 23 01.6 +1.4**
KAF Kangasniemi 96.29 332 *e*p **P 00 22 58.9 -1.1**
comp=Z,16nm,0.8s,mb5.5,baz=91,slow=4.1
KAF Kangasniemi 96.29 332 *e*P **P 00 22 58.9 -1.1**
KAF pmax pmax
comp=Z,16nm,0.8s,mb5.5
DRGR 96.46 316⇓ *i*P **P 00 23 00.8 -0.4**
KWP Kalwaria 96.78 319⇑ *i*P **P 00 23 02.5 0.0**
SUW Suwalki 96.96 324 *e*P **P 00 23 02.3 -1.0**
SUW Suwalki 96.96 324 *e*P **P 00 23 02.3 -0.9**
BZS Buzias 97.09 315⇓ *i*P **P 00 23 03.4 -0.6**
ARCES ARCESS Array B 97.53 339 P **P 00 23 04.3 -1.2**
comp=Z,8.6nm,1.0s,mb5.2,baz=106,slow=6.4,SNR=5.2
PKSM Moragy 99.21 315⇓ *i*P **P 00 23 13.7 +0.2**
GERES GERESS Array B 102.63 318 P Pdif 00 23 30.2 +1.6
comp=Z,0.3nm,0.4s,baz=80,slow=8.3,SNR=4.0
NOA NORSAR Array B 103.47 331 Pdiff Pdif 00 23 31.5 -0.8
comp=Z,2.1nm,1.0s,baz=90,slow=4.9,SNR=3.7
NOA NORSAR Array B 103.47 331 Pdif Pdif 00 23 31.5 -0.8
RKT Rikitea 106.69 117 *e*LR LR 00 59 13.6
comp=Z,172nm,28.0s
TOA0 Torodi Ar. Sit 112.09 280 *e*PKPdf PKiKP 00 28 07.8 -0.3
TORD Torodi Ar. Bea 112.09 280 PKiKP PKiKP 00 28 06.0 -2.0
comp=Z,2.3nm,0.6s,baz=72,slow=1.0,SNR=17
ESDC Sonseca Array 116.10 310 PKP PKPdf 00 28 15.0 -0.1
comp=Z,0.8nm,0.5s,baz=19,slow=2.4,SNR=6.8
ESDC PKKPbc PKKPbc 00 38 46.9 +0.5
comp=Z,0.3nm,0.4s,baz=287,slow=3.3,SNR=4.4
YKA Yellowknife Ar 117.02 22 PKP PKPdf 00 28 15.7 -0.5
comp=Z,5.2nm,0.6s,baz=316,slow=1.8,SNR=96
YKA pPKP pPKPdf 00 28 35.7 +3.1
comp=Z,1.6nm,0.6s,baz=311,slow=1.7,SNR=4.9
YKA PKKPbc PKKPbc 00 38 45.0 +1.2
comp=Z,0.5nm,0.7s,baz=115,slow=4.4,SNR=6.9
YKA Yellowknife Ar 117.02 22 PKP PKPdf 00 28 15.7 -0.5
YKA pPKP pPKPdf 00 28 35.7 +3.1
YKA PKKPbc PKKPbc 00 38 45.0 +1.2
DBIC Dimbokro 117.87 273 PKP PKPdf 00 28 18.6 -0.7
comp=Z,3.8nm,0.6s,baz=114,slow=2.7,SNR=14
DBIC Dimbokro 117.87 273 *e*PKPdf PKPdf 00 28 19.0 -0.2
C04A Brinnon 119.79 40⇑P PKPdf 00 28 22.2 +0.3
baz=120
E03A Lebam 119.82 41⇓P PKPdf 00 28 23.0 +1.0
baz=120
A05A Maple Falls 119.88 38⇑P PKPdf 00 28 22.2 +0.2
baz=120
B05A Bryant 120.15 39⇓P PKPdf 00 28 23.5 +0.9
baz=120
A06A Chilliwack 120.21 38⇑P PKPdf 00 28 23.0 +0.3
baz=120
E04A Onalaska 120.35 41⇑P PKPdf 00 28 23.6 +0.6
baz=120
G03A Yamhill 120.41 43⇑P PKPdf 00 28 24.0 +0.8
baz=120
B06A Marblemount 120.43 39⇓P PKPdf 00 28 23.5 +0.4
baz=120
I02A Mapleton 120.45 44⇓P PKPdf 00 28 23.5 +0.2
baz=120
H03A Soap Creek Ran 120.61 43⇓P PKPdf 00 28 24.4 +0.8
baz=121
C05A Tolt Reservoir 120.61 39⇓P PKPdf 00 28 24.1 +0.6
baz=120
F04A Amboy 120.77 42⇑P PKPdf 00 28 24.3 +0.5
baz=121
LON Longmire 120.88 41 *e*PKIKP PKPdf 00 28 24.7 +0.6
A07A Ashnola River, 120.89 38⇓P PKPdf 00 28 24.7 +0.7
baz=121
E05A Randle 120.98 41⇓P PKPdf 00 28 24.8 +0.6
baz=121
G04A Mulino 120.98 42⇑P PKPdf 00 28 25.0 +0.7
baz=121
B07A Winthrop 121.29 38⇑P PKPdf 00 28 25.5 +0.8
baz=121
TDH Tom, Dick, Har 121.41 42 P PKPdf 00 28 25.8 +0.7
E06A Yakima 121.49 41⇓P PKPdf 00 28 26.2 +0.9
baz=121
A08A Turner Farm, O 121.60 37⇓P PKPdf 00 28 26.3 +0.9
baz=122
EBG Ellensburg 121.61 40 P PKPdf 00 28 26.4 +0.9
C07A Waterville 121.63 39⇑P PKPdf 00 28 25.8 +0.4
baz=122
G05A Wamic 121.74 42⇑P PKPdf 00 28 25.9 +0.2
baz=122
B08A Colville Reser 121.81 38⇑P PKPdf 00 28 25.9 +0.1
baz=122,SNR=8.5
D07A Quincy 121.88 39⇑P PKPdf 00 28 26.8 +0.8
baz=122
F06A Goldendale 121.90 41⇑P PKPdf 00 28 27.1 +1.0
baz=122
A09A Danville 122.00 37⇓P PKPdf 00 28 27.0 +0.9
baz=122
H05A Madras 122.01 43⇑P PKPdf 00 28 27.4 +1.1
baz=122
EPH Ephrata 122.05 39 P PKPdf 00 28 26.7 +0.4
I05A Bend 122.15 43⇑P PKPdf 00 28 27.9 +1.4
baz=122
G06A Carlson Farm, 122.19 42⇑P PKPdf 00 28 27.3 +0.7
baz=122
E07A Sunnyside 122.20 40⇑P PKPdf 00 28 27.5 +0.9
baz=122
C08A Higginbotham F 122.22 39⇑P PKPdf 00 28 27.1 +0.5
baz=122
F07A Phinny Hill Vi 122.41 41⇑P PKPdf 00 28 28.1 +1.0
baz=122
VIPM Ingram Point 122.46 43 PKIKP PKPdf 00 28 28.3 +1.1
B09A Rice 122.50 38⇓P PKPdf 00 28 27.7 +0.6
baz=122,SNR=10
H06A Lindquist Farm 122.57 42⇑P PKPdf 00 28 28.4 +1.0
baz=122
D08A Wollman Farm, 122.59 39⇑P PKPdf 00 28 27.9 +0.6
baz=122,SNR=7.6
A10A Northport 122.61 37⇓P PKPdf 00 28 28.0 +0.7
baz=122
C09A Chrisman Ranch 122.69 38⇑P PKPdf 00 28 28.0 +0.5
baz=123
E08A Dider Farm, El 122.73 40⇑P PKPdf 00 28 28.5 +0.9
baz=123
G07A Ruggs Ranch, H 122.81 42⇑P PKPdf 00 28 28.7 +0.9
baz=123
EDM Edmonton 122.83 31 *e*PKIKP PKPdf 00 28 28.1 +0.5
K05A Summer Lake 122.89 45⇓P PKPdf 00 28 29.1 +1.1
baz=123
I06A Prineville 122.94 43⇑P PKPdf 00 28 29.1 +1.0
baz=123
D09A Jones Farm, Ri 122.97 39⇓P PKPdf 00 28 28.5 +0.4
baz=123,SNR=5.3
H07A Lands Inn, Kim 123.13 42⇓P PKPdf 00 28 29.3 +0.9
baz=123
NEW Newport 123.18 37 *e*PKIKP PKPdf 00 28 30.2 +1.8
F08A Pendleton 123.19 41⇓P PKPdf 00 28 29.0 +0.5
baz=123
J06A Christmas Vall 123.22 44⇓P PKPdf 00 28 29.5 +0.8
baz=123
G08A Pilot Rock 123.27 41⇓P PKPdf 00 28 29.6 +0.9
baz=123
E09A Wood Farm, Sta 123.30 40⇓P PKPdf 00 28 29.6 +0.9
baz=123
A11A Hall Mountain, 123.32 36⇓P PKPdf 00 28 29.6 +1.0
baz=123
I07A Izee 123.36 43⇓P PKPdf 00 28 30.0 +1.1
baz=123
B11A Sandpoint 123.56 37⇓P PKPdf 00 28 30.1 +1.0
baz=124
D10A Wagner Farm, O 123.61 39⇓P PKPdf 00 28 30.0 +0.7
baz=124,SNR=6.9
A12A Yaak River Ran 123.75 36⇓P PKPdf 00 28 30.3 +0.8
baz=124
J07A Hines 123.75 43⇓P PKPdf 00 28 31.0 +1.3
baz=124
H08A Prairie City 123.75 42⇓P PKPdf 00 28 30.9 +1.2
baz=124
F09A S2 Ranch, Elgi 123.78 40⇓P PKPdf 00 28 30.2 +0.5
baz=124,SNR=6.2
C11A Tepee Creek (N 123.89 38⇑P PKPdf 00 28 30.2 +0.4
baz=124,SNR=9.4
E10A Myers Farm, Un 123.96 39⇑P PKPdf 00 28 30.4 +0.4
baz=124,SNR=5.2
B12A Libby 124.00 37⇑P PKPdf 00 28 30.9 +0.9
baz=124
G09A Cove 124.04 41⇑P PKPdf 00 28 30.8 +0.6
baz=124
K07A Rock Creek Ran 124.04 44⇓P PKPdf 00 28 31.3 +1.0
baz=124
I08A Drewsey 124.05 43⇓P PKPdf 00 28 31.3 +1.1
baz=124
F10A Beach Ranch, E 124.10 40⇓P PKPdf 00 28 31.0 +0.8
baz=124,SNR=6.6
BEKR Beckwourth 124.20 48⇓P PKPdf 00 28 31.7 +1.1
baz=124
D11A Klaveano Farm, 124.20 38⇓P PKPdf 00 28 30.3 -0.1
baz=124,SNR=8.8
L07A Adell 124.21 45⇑P PKPdf 00 28 31.9 +1.3
baz=124
N06A Buffalo Meadow 124.29 47⇓P PKPdf 00 28 31.8 +1.0
baz=124
J08A Circle Bar Ran 124.33 43⇑P PKPdf 00 28 32.0 +1.2
baz=124
C12B Naegeli Ranch, 124.42 37⇓P PKPdf 00 28 30.9 0.0
baz=124
A13A Flathead Natio 124.46 36⇓P PKPdf 00 28 31.7 +0.8
baz=124
O06A Flanigan 124.49 47⇓P PKPdf 00 28 32.2 +1.0
baz=124
K08A Mann Creek Ran 124.55 44⇓P PKPdf 00 28 32.4 +1.2
baz=124
M07A Soldier Meadow 124.55 46⇓P PKPdf 00 28 32.3 +1.0
baz=124
E11A Bogner Ranch, 124.58 39⇑P PKPdf 00 28 31.2 0.0
baz=124,SNR=7.4
B13A Whitefish 124.70 36⇑P PKPdf 00 28 31.7 +0.3
baz=125,SNR=7.8
BSMT Bassoo Peak 124.76 37 P PKPdf 00 28 31.8 +0.3
D12A Red Ives Fores 124.80 38⇓P PKPdf 00 28 31.5 -0.1
baz=125
J09A Fry Pan Ranch, 124.81 43⇑P PKPdf 00 28 33.1 +1.4
baz=125
WCN Washoe City 124.81 48⇓P PKPdf 00 28 32.9 +1.1
baz=125
F11A Grangeville 124.82 40⇓P PKPdf 00 28 32.0 +0.4
baz=125
L08A Fields 124.84 45⇓P PKPdf 00 28 33.5 +1.6
baz=125
N07B Gerlach 124.90 46⇓P PKPdf 00 28 33.6 +1.6
baz=125
E12A Beaver Dam Sad 124.95 39⇓P PKPdf 00 28 32.5 +0.6
baz=125
G11A Walters Elk Ra 124.96 40⇑P PKPdf 00 28 31.7 -0.3
baz=125,SNR=6.2
C13A Hot Springs 124.97 37⇑P PKPdf 00 28 31.7 -0.2
baz=125,SNR=6.6
H10A Noah's Angus R 124.99 41⇑P PKPdf 00 28 32.1 +0.1
baz=125,SNR=15
A14A Double T Ranch 125.01 35⇓P PKPdf 00 28 32.6 +0.7
baz=125
K09A Rome 125.08 44⇑P PKPdf 00 28 33.2 +0.9
baz=125
M08A Happy Creek Ra 125.09 45⇑P PKPdf 00 28 33.7 +1.4
baz=125
I10A Payette 125.16 42⇓P PKPdf 00 28 33.5 +1.2
baz=125
O07A Toulon 125.18 47⇑P PKPdf 00 28 33.9 +1.3
baz=125
R06C Coleville 125.28 49⇓P PKPdf 00 28 34.1 +1.3
baz=125
D13A Huson 125.32 38⇓P PKPdf 00 28 32.5 -0.1
baz=125,SNR=10
L09A Wilkinson Ranc 125.38 44⇑P PKPdf 00 28 34.3 +1.5
baz=125
A15A Johnson Ranch, 125.40 35⇑P PKPdf 00 28 33.0 +0.3
baz=125
B14A Marquette Ranc 125.40 36⇑P PKPdf 00 28 33.0 +0.3
baz=125
H11A Donnelly 125.42 41⇓P PKPdf 00 28 33.6 +0.8
baz=125,SNR=10
C14A Swan Lake 125.42 37⇑P PKPdf 00 28 33.1 +0.4
baz=125
F12A Elk City 125.44 39⇓P PKPdf 00 28 33.2 +0.3
baz=125
J10A Berg Farm, Mel 125.44 43⇓P PKPdf 00 28 34.2 +1.3
baz=125
N08A GE Springer Mi 125.50 46⇓P PKPdf 00 28 34.5 +1.3
baz=125
K10A MacKenzie Ranc 125.63 43⇓P PKPdf 00 28 34.9 +1.6
baz=126
O08A Rochester Mine 125.65 47⇓P PKPdf 00 28 34.6 +1.2
baz=126
M09A Marrel Ranch, 125.75 45⇓P PKPdf 00 28 34.7 +1.1
baz=126
MSO Missoula 125.76 38 *e*PKPdf PKPdf 00 28 33.8 +0.4
I11A Placerville 125.78 42⇓P PKPdf 00 28 34.2 +0.7
baz=126,SNR=6.1
E13A Victor 125.79 38⇓P PKPdf 00 28 33.8 +0.4
baz=126,SNR=12
B15A Bradely Ranch, 125.84 36⇓P PKPdf 00 28 33.7 +0.2
baz=126
D14A Greenough 125.90 37⇑P PKPdf 00 28 33.4 -0.3
baz=126,SNR=8.5
N09A Rock Creek Ran 125.90 46⇑P PKPdf 00 28 35.2 +1.3
baz=126
F13A Darby 126.00 39⇓P PKPdf 00 28 34.1 +0.2
baz=126
PKM Peak Mountain 126.04 53⇓P PKPdf 00 28 35.9 +1.6
baz=126
MFID Camas Ranch 126.08 42⇑P PKPdf 00 28 35.0 +0.9
baz=126,SNR=5.9
C15A Salmond Ranch, 126.08 36⇑P PKPdf 00 28 34.0 0.0
baz=126,SNR=11
CHMT Chamberlain Mo 126.13 37 P PKPdf 00 28 34.4 +0.3
NVAR Mina Array Bea 126.17 49 PKP PKPdf 00 28 35.6 +1.1
comp=Z,8.0nm,0.8s,baz=252,slow=2.5,SNR=38
L10A Juniper Basin 126.18 44⇑P PKPdf 00 28 35.7 +1.4
baz=126
K11A Parker Ranch, 126.20 43⇓P PKPdf 00 28 35.3 +0.9
baz=126,SNR=5.7
E14A Clinton 126.22 38⇓P PKPdf 00 28 34.5 +0.2
baz=126,SNR=7.2
H12A Diamond D Ranc 126.23 41⇓P PKPdf 00 28 34.9 +0.5
baz=126,SNR=6.5
B16A M & M Farms, S 126.27 35⇑P PKPdf 00 28 34.7 +0.4
baz=126
Q08A Gabbs 126.30 48⇓P PKPdf 00 28 36.5 +1.8
baz=126
VES Vestal, Richgr 126.36 52⇑P PKPdf 00 28 35.1 +0.2
baz=126
I12A Atlanta 126.38 42⇑P PKPdf 00 28 35.8 +1.1
baz=126
BSC Santa Cruz Isl 126.42 54⇓P PKPdf 00 28 36.1 +1.0
baz=126
D15A Lincoln 126.50 37⇓P PKPdf 00 28 34.9 +0.1
baz=126,SNR=6.2
A17A Triple J Farms 126.56 34⇑P PKPdf 00 28 35.3 +0.4
baz=126
C16A Fuhringer Ranc 126.57 36⇓P PKPdf 00 28 35.2 +0.2
baz=126
F14A Wisdom 126.59 39⇑P PKPdf 00 28 35.9 +0.8
baz=126,SNR=5.9
H13A Challis 126.61 40⇑P PKPdf 00 28 36.1 +1.0
baz=126,SNR=14
J12A Stokes Ranch, 126.63 42⇑P PKPdf 00 28 36.5 +1.2
baz=127,SNR=27
L11A Cat Creek Ranc 126.63 44⇑P PKPdf 00 28 36.6 +1.3
baz=127,SNR=21
E15A Deer Lodge 126.73 38⇓P PKPdf 00 28 35.8 +0.5
baz=127
ARVC Arvin 126.76 53⇓P PKPdf 00 28 36.4 +0.7
baz=127
G14A Jackson 126.80 39⇓P PKPdf 00 28 36.1 +0.7
baz=127
O10A Cortez Mining, 126.83 46⇑P PKPdf 00 28 36.7 +1.0
baz=127
B17A L&G Farms, Che 126.85 35⇑P PKPdf 00 28 36.1 +0.6
baz=127
ISA Isabella 126.89 52⇓P PKPdf 00 28 37.0 +1.1
baz=127
ISA Isabella 126.89 52 *e*PKPdf PKPdf 00 28 36.8 +0.8
M11A Holland Ranch, 126.90 44⇑P PKPdf 00 28 37.0 +1.2
baz=127,SNR=7.9
HLID Hailey 126.94 42⇑P PKPdf 00 28 37.0 +1.2
baz=127
HLID Hailey 126.94 42 *e*PKPdf PKPdf 00 28 37.4 +1.6
CWC Cottonwood Cre 126.96 51⇓P PKPdf 00 28 37.5 +1.4
baz=127
OSI Osito Adit 126.98 53⇓P PKPdf 00 28 37.8 +1.7
baz=127
I13A Wildhorse Cree 126.98 41⇑P PKPdf 00 28 36.9 +1.0
baz=127,SNR=23
K12A Draper Farm, C 127.02 43⇓P PKPdf 00 28 37.3 +1.4
baz=127
A18A Metzger Ranch, 127.04 34⇑P PKPdf 00 28 36.6 +0.8
baz=127
D16A Dana Ranch, Ca 127.08 37⇑P PKPdf 00 28 36.3 +0.3
baz=127,SNR=9.2
FFC Flin Flon 127.09 24 *e*PKIKP PKPdf 00 28 35.9 +0.2
F15A Butte 127.11 38⇓P PKPdf 00 28 36.5 +0.4
baz=127,SNR=7.9
L12A House Creek Ra 127.14 43⇓P PKPdf 00 28 37.8 +1.6
baz=127,SNR=6.8
R09A Tonopah 127.14 49⇓P PKPdf 00 28 37.5 +1.1
baz=127
H14A Leadore 127.15 40⇓P PKPdf 00 28 37.3 +1.1
baz=127
J13A Cove Ranch, Pi 127.17 42⇓P PKPdf 00 28 37.7 +1.5
baz=127,SNR=19
N11A Elko Archery C 127.18 45⇓P PKPdf 00 28 38.0 +1.7
baz=127
S09A Goldfield 127.20 49⇓P PKPdf 00 28 38.2 +1.7
baz=127
C17A Wharram Farm, 127.22 36⇓P PKPdf 00 28 37.0 +0.8
baz=127
E16A East Helena 127.26 37⇓P PKPdf 00 28 36.9 +0.6
baz=127
GRAC Grapevine Rang 127.33 50⇑P PKPdf 00 28 38.1 +1.3
baz=127
B18A Beardsley Farm 127.37 34⇑P PKPdf 00 28 37.2 +0.7
baz=127
I14A Mackay 127.41 41⇑P PKPdf 00 28 37.8 +1.1
baz=127,SNR=7.0
Q10A Clear Creek Ra 127.44 48⇓P PKPdf 00 28 38.4 +1.5
baz=127
G15A Dillon 127.44 39⇓P PKPdf 00 28 38.1 +1.4
baz=127,SNR=9.1
LCCM Lewis and Clar 127.49 38 P PKPdf 00 28 38.0 +1.3
EDW2 Edwards Air Fo 127.49 53⇑P PKPdf 00 28 38.8 +1.6
baz=127
O11A Cowboy Ranch, 127.49 46⇓P PKPdf 00 28 38.7 +1.8
baz=127,SNR=8.9
M12A Wells 127.51 44⇑P PKPdf 00 28 38.6 +1.7
baz=127,SNR=11
D17A Six Diamond Ra 127.52 36⇑P PKPdf 00 28 37.6 +0.8
baz=127
MPMC Manual Prospec 127.53 51⇑P PKPdf 00 28 38.5 +1.3
baz=128
ELK Elko 127.55 45 *e*PKIKP PKPdf 00 28 38.6 +1.6
K13A Stover Farm, H 127.56 42⇓P PKPdf 00 28 38.8 +1.8
baz=128,SNR=11
EGMT Eagleton 127.58 35⇑P PKPdf 00 28 38.1 +1.2
baz=128
EGMT Eagleton 127.58 35 *e*PKPdf PKPdf 00 28 38.0 +1.1
H15A Lima 127.60 40⇑P PKPdf 00 28 38.8 +1.8
baz=128,SNR=9.6
S10A Tonopah Range, 127.61 49⇓P PKPdf 00 28 38.8 +1.6
baz=128
J14A Carey 127.64 41⇓P PKPdf 00 28 38.9 +1.7
baz=128,SNR=9.4
N12A Clover Valley, 127.65 45⇓P PKPdf 00 28 39.0 +1.8
baz=128,SNR=11
F16A Kennard Place, 127.67 38⇓P PKPdf 00 28 38.3 +1.2
baz=128,SNR=6.9
R10A Warm Springs 127.70 48⇓P PKPdf 00 28 38.9 +1.5
baz=128
BOZ Bozeman (W) 127.73 38⇑P PKPdf 00 28 38.8 +1.5
baz=128
E17A Martinsdale 127.78 37⇓P PKPdf 00 28 38.5 +1.2
baz=128
G16A Moss Hill, Enn 127.83 39⇓P PKPdf 00 28 38.7 +1.3
baz=128,SNR=13
FURC Furnace Creek, 127.89 51⇑P PKPdf 00 28 39.1 +1.3
baz=128
L13A Double Diamond 127.89 43⇓P PKPdf 00 28 39.7 +2.1
baz=128,SNR=9.9
Q11A Duckwater 127.97 47⇑P PKPdf 00 28 39.4 +1.5
baz=128
I15A Monteview 128.00 40⇓P PKPdf 00 28 39.4 +1.6
baz=128
D18A Linhart Farms, 128.01 36⇓P PKPdf 00 28 38.8 +1.1
baz=128
M13A Montello 128.05 44⇑P PKPdf 00 28 39.6 +1.7
baz=128,SNR=11
O12A Currie 128.09 45⇓P PKPdf 00 28 39.8 +1.8
baz=128,SNR=11
F17A Fitzpatrick Pl 128.19 37⇓P PKPdf 00 28 39.6 +1.5

baz=128,SNR=8.0
TPNV **Topopah Spring** 128.19 50 ⇓P PKPdf 00 28 40.2 +1.8
baz=128
TPNV **Topopah Spring** 128.19 50 *e*PKPdf PKPdf 00 28 40.3 +1.9
R11A **Troy Canyon, C** 128.20 48 ⇑P PKPdf 00 28 40.3 +2.0
baz=128
K14A **Jones Ranch, D** 128.21 42 ⇑P PKPdf 00 28 39.8 +1.6
baz=128,SNR=11
P12A **McGill** 128.28 46 ⇑P PKPdf 00 28 40.1 +1.6
baz=128,SNR=9.0
E18A **Harlowton** 128.28 36 ⇓P PKPdf 00 28 39.7 +1.4
baz=128
GSC **Goldstone** 128.29 52 ⇑P PKPdf 00 28 40.5 +1.9
baz=128
GSC **Goldstone** 128.29 52 *e*PKPdf PKPdf 00 28 40.9 +2.2
U10A **Ash Meadows, A** 128.31 51 ⇓P PKPdf 00 28 41.0 +2.4
baz=128
J15A **Blackfoot** 128.31 41 ⇑P PKPdf 00 28 40.2 +1.8
baz=128,SNR=7.8
S11A **Rachel** 128.33 49 ⇑P PKPdf 00 28 40.5 +1.8
baz=128
H16A **Russell Place,** 128.43 39 ⇓P PKPdf 00 28 40.6 +2.0
baz=128
G17A **Pierce Place,** 128.44 38 ⇓P PKPdf 00 28 40.6 +2.0
baz=128,SNR=6.1
MURC **Murrieta** 128.48 54 ⇑P PKPdf 00 28 40.4 +1.4
baz=128
Q12A **Willow Creek R** 128.50 47 ⇑P PKPdf 00 28 40.6 +1.7
baz=128
SHOC **Shoshone** 128.51 51 ⇓P PKPdf 00 28 40.8 +1.8
baz=128
M14A **Sheep Mountain** 128.54 43 ⇑P PKPdf 00 28 40.7 +1.8
baz=128,SNR=12
K15A **Arbon** 128.57 42 ⇓P PKPdf 00 28 40.9 +1.9
baz=128,SNR=11
O13A **Hicks Ranch, I** 128.68 45 ⇓P PKPdf 00 28 40.8 +1.6
baz=129
I16A **Newdale** 128.69 40 ⇑P PKPdf 00 28 41.0 +1.8
baz=129,SNR=7.6
F18A **Big Timber** 128.75 37 ⇓P PKPdf 00 28 41.0 +1.9
baz=129
HEC **Hector,Ludlow** 128.81 53 ⇓P PKPdf 00 28 41.1 +1.5
baz=129
T11A **Corn Creek, Al** 128.87 49 ⇑P PKPdf 00 28 42.0 +2.3
baz=129,SNR=25
J16A **Bone** 128.90 41 ⇑P PKPdf 00 28 41.3 +1.8
baz=129
P13A **Bates Ranch, G** 128.92 46 ⇓P PKPdf 00 28 41.7 +2.0
baz=129,SNR=9.9
N14A **Grayback Hills** 128.93 44 ⇓P PKPdf 00 28 41.3 +1.6
baz=129,SNR=12
TUQ **Turquoise Moun** 128.93 52 ⇓P PKPdf 00 28 41.6 +1.8
baz=129
L15A **Malad City** 128.97 42 ⇑P PKPdf 00 28 41.1 +1.4
baz=129,SNR=7.8
H17A **Grant Village** 129.00 39 ⇓P PKPdf 00 28 42.0 +2.3
baz=129
S12A **Delamar Landin** 129.01 49 ⇑P PKPdf 00 28 42.4 +2.4
baz=129
U11A **Corn Creek** 129.03 50 ⇑P PKPdf 00 28 42.0 +2.0
baz=129
PFO **Pinyon Flat Ob** 129.07 54 ⇓P PKPdf 00 28 41.9 +1.7
baz=129
PFO **Pinyon Flat Ob** 129.07 54 *e*PKPdf PKPdf 00 28 41.7 +1.6
Q13A **Wheeler Ranch,** 129.11 47 ⇑P PKPdf 00 28 41.8 +1.7
baz=129,SNR=7.5
K16A **Soda Springs** 129.12 41 ⇓P PKPdf 00 28 41.9 +1.9
baz=129,SNR=6.5
M15A **Larsen Ranch,** 129.17 43 ⇓P PKPdf 00 28 41.5 +1.4
baz=129
V11A **Goodsprings** 129.18 51 ⇑P PKPdf 00 28 42.3 +2.0
baz=129
TPAW **Teton Pass** 129.22 40 *e*PKPdf PKPdf 00 28 41.7 +1.6
I17A **Pilgram Creek** 129.24 39 ⇓P PKPdf 00 28 42.2 +2.1
baz=129
MONP **Monument Peak** 129.30 55 ⇑P PKPdf 00 28 42.4 +1.8
baz=129
BELC **Belle Mtn.** 129.32 53 ⇓P PKPdf 00 28 42.5 +1.8
baz=129
REDW **Red Top Meadow** 129.34 40 *e*PKPdf PKPdf 00 28 41.9 +1.5
GMRC **Granite Mounta** 129.35 52 ⇑P PKPdf 00 28 42.5 +1.9
baz=129
SNOW **Snow King Moun** 129.35 40 *e*PKPdf PKPdf 00 28 42.1 +1.8
J17A **Brown Place, J** 129.43 40 ⇑P PKPdf 00 28 42.5 +1.9
baz=129,SNR=10
R13A **O'Grain Ranch,** 129.45 48 ⇓P PKPdf 00 28 42.5 +1.8
baz=129
DUG **Dugway** 129.47 45 ⇑P PKPdf 00 28 42.6 +1.9
baz=129
DUG **Dugway** 129.47 45 *e*PKPdf PKPdf 00 28 42.9 +2.2
P14A **Drum Mountains** 129.54 46 ⇓P PKPdf 00 28 42.8 +2.0
baz=130,SNR=14
L16A **Fish Haven** 129.60 42 ⇑P PKPdf 00 28 42.3 +1.4
baz=130,SNR=8.6
DVTC **Desert V Tower** 129.63 55 ⇓P PKPdf 00 28 43.1 +1.8
baz=130
Q14A **Sevier Lake (B** 129.63 46 ⇑P PKPdf 00 28 42.9 +1.8
baz=130,SNR=5.7
U12A **Valley of Fire** 129.66 50 ⇑P PKPdf 00 28 43.5 +2.3
baz=130
V12A **Nelson** 129.66 51 ⇑P PKPdf 00 28 43.6 +2.4
baz=130,SNR=21
LDFC **Landfair** 129.68 52 *e*PKPdf PKPdf 00 28 44.0 +2.7
S13A **Holt Ranch, En** 129.75 48 ⇑P PKPdf 00 28 43.6 +2.3
baz=130,SNR=9.2
M16A **Huntsville** 129.79 43 ⇓P PKPdf 00 28 42.8 +1.5
baz=130
SWSC **Sam W. Stewart** 129.79 55 ⇑P PKPdf 00 28 43.5 +1.9
baz=130
BC3 **Big Chuckw Mtn** 129.86 54 ⇑P PKPdf 00 28 43.7 +2.1
baz=130
T13A **Saint George** 129.93 49 ⇓P PKPdf 00 28 44.0 +2.3
baz=130,SNR=5.9
L17A **Cokeville** 129.93 42 ⇓P PKPdf 00 28 43.4 +1.9
baz=130
IRM **Iron Mountain** 129.94 53 ⇑P PKPdf 00 28 43.5 +1.7
baz=130
J18A **Kendall Valley** 129.94 40 ⇑P PKPdf 00 28 43.3 +1.8
baz=130
U13A **Pakoon Wash** 130.10 50 ⇑P PKPdf 00 28 43.8 +1.8
baz=130
K18A **Toltan Ranch,** 130.21 41 ⇓P PKPdf 00 28 43.7 +1.6
baz=130,SNR=5.4
Q15A **Fillmore** 130.27 46 ⇓P PKPdf 00 28 44.2 +1.9
baz=130
V13A **Grand Canyon W** 130.28 50 ⇓P PKPdf 00 28 44.6 +2.2
baz=130,SNR=9.8
DGMT **Dagmar** 130.31 31 ⇓P PKPdf 00 28 43.5 +1.4
baz=130
M17A **Scullys Gap (B** 130.36 42 ⇓P PKPdf 00 28 43.5 +1.1
baz=130
BW06 **Boulder Array** 130.46 40 ⇑P PKPdf 00 28 43.7 +1.1
baz=130
PDAR **Pinedale Array** 130.46 40 PKP PKPdf 00 28 42.3 -0.2
comp=Z,1.8nm,0.7s,baz=270,slow=0.4,SNR=13
PDAR SKPbc SKPbc 00 31 58.6 -2.7
comp=Z,0.9nm,0.8s,baz=240,slow=1.8,SNR=4.2
N17A **Moffit Pass** 130.49 43 ⇓P PKPdf 00 28 44.1 +1.5
baz=130,SNR=5.2
GLA **Glamis** 130.54 54 ⇓P PKPdf 00 28 44.3 +1.3
baz=130
L18A **Fontenelle, Gr** 130.56 42 ⇑P PKPdf 00 28 44.4 +1.6
baz=130,SNR=9.4
W13A **Hualapai Mount** 130.62 51 ⇑P PKPdf 00 28 45.0 +2.0
baz=131,SNR=7.6
U14A **Mt Trumbull** 130.69 49 ⇑P PKPdf 00 28 45.0 +1.9
baz=131,SNR=6.5
M18A **Lyman** 130.78 42 ⇑P PKPdf 00 28 44.3 +1.1
baz=131
S15A **Panguitch** 130.81 48 ⇓P PKPdf 00 28 45.7 +2.4
baz=131
X13A **Yucca** 130.83 52 ⇑P PKPdf 00 28 44.8 +1.3
baz=131,SNR=6.7
K19A **Absolon Red Bu** 130.88 40 ⇑P PKPdf 00 28 44.2 +0.9
baz=131
O17A **Robinson Place** 130.90 44 ⇑P PKPdf 00 28 45.1 +1.7
baz=131,SNR=9.8
V14A **Boquillas Ranc** 131.03 50 ⇑P PKPdf 00 28 46.0 +2.2
baz=131,SNR=12
T15A **Red Dirt Ranch** 131.06 48 ⇓P PKPdf 00 28 46.1 +2.2
baz=131
Y13A **Salome** 131.09 53 ⇓P PKPdf 00 28 45.8 +1.8
baz=131
Q16A **Castle Valley** 131.16 46 ⇓P PKPdf 00 28 46.0 +2.0
baz=131
W14A **Seligman** 131.20 51 ⇑P PKPdf 00 28 46.2 +2.1
baz=131,SNR=12
R16A **Teasdale** 131.20 46 ⇑P PKPdf 00 28 46.0 +1.9
baz=131
P17A **Butcher Ranch,** 131.22 45 ⇓P PKPdf 00 28 45.1 +1.1
baz=131,SNR=7.0
K20A **Yellowstone Ra** 131.29 40 ⇓P PKPdf 00 28 45.2 +1.1
baz=131
M19A **Rock Springs** 131.34 42 ⇑P PKPdf 00 28 45.2 +1.0
baz=131
U15A **North Rim** 131.35 49 ⇓P PKPdf 00 28 46.5 +2.1
baz=131,SNR=14
S16A **Weppner Ranch,** 131.35 47 ⇑P PKPdf 00 28 46.0 +1.6
baz=131,SNR=7.1
O18A **Roosevelt** 131.36 43 ⇑P PKPdf 00 28 45.7 +1.4
baz=131,SNR=7.1
113A **Mohawk Valley,** 131.47 54 ⇓P PKPdf 00 28 46.5 +1.8
baz=131
P18A **Preston Nutter** 131.49 44 ⇑P PKPdf 00 28 46.6 +2.0
baz=131,SNR=5.3
SRU **San Rafael** 131.53 45 ⇑P PKPdf 00 28 46.3 +1.7
baz=132
X14A **Yava** 131.60 52 ⇓P PKPdf 00 28 46.4 +1.4
baz=132,SNR=8.5
L20A **Wamsutter** 131.62 41 ⇓P PKPdf 00 28 46.6 +1.8
baz=132
V15A **Kaibab Nationa** 131.67 50 ⇓P PKPdf 00 28 47.2 +2.2
baz=132,SNR=14
R17A **Hanksville Air** 131.70 46 ⇓P PKPdf 00 28 45.9 +0.9
baz=132,SNR=8.2
Y14A **Wickenburg** 131.70 52 ⇓P PKPdf 00 28 46.2 +1.0
baz=132,SNR=5.3
T16A **Glen Canyon Da** 131.72 48 ⇑P PKPdf 00 28 46.8 +1.7
baz=132
Q18A **Rafter H Ranch** 131.80 45 ⇓P PKPdf 00 28 46.1 +0.9
baz=132,SNR=6.4
S17A **Black Ridge (B** 131.96 47 ⇑P PKPdf 00 28 46.6 +1.1
baz=132,SNR=5.6
M20A **Sweetwater, Wa** 131.98 41 ⇓P PKPdf 00 28 46.9 +1.5
baz=132
X15A **Humboldt** 132.10 51 ⇓P PKPdf 00 28 47.6 +1.7
baz=132,SNR=8.6
Y15A **Casa Rosa Ranc** 132.22 52 ⇑P PKPdf 00 28 47.8 +1.6
baz=132,SNR=14
T17A **Navajo Res., N** 132.22 48 ⇓P PKPdf 00 28 47.9 +1.8
baz=132,SNR=16
N20A **Spence Gulch,** 132.26 42 ⇑P PKPdf 00 28 46.9 +0.9
baz=132
L21A **Rawlins** 132.26 40 ⇓P PKPdf 00 28 47.0 +1.1
baz=132
R18A **Canyonlands Na** 132.29 46 ⇑P PKPdf 00 28 47.6 +1.5
baz=132,SNR=7.0
U16A **Tuba City** 132.32 49 ⇓P PKPdf 00 28 48.5 +2.2
baz=132,SNR=8.9
WUAZ **Wupatki** 132.38 50 ⇓P PKPdf 00 28 48.1 +1.7
baz=132
WUAZ **Wupatki** 132.38 50 *e*PKPdf PKPdf 00 28 48.4 +2.0
W16A **Flagstaff** 132.42 50 ⇓P PKPdf 00 28 48.5 +2.0
baz=132,SNR=5.7
Q19A **Hogan Spring (** 132.47 45 ⇑P PKPdf 00 28 47.8 +1.4
baz=132,SNR=9.3
U17A **Shonto** 132.49 48 ⇓P PKPdf 00 28 48.8 +2.2
baz=132
S18A **Hurst Farm, BI** 132.52 47 ⇓P PKPdf 00 28 48.4 +1.8
baz=132,SNR=6.3
O20A **White River Ci** 132.62 43 ⇓P PKPdf 00 28 48.6 +1.9
baz=132
115A **Sonoran Desert** 132.72 54 ⇑P PKPdf 00 28 48.7 +1.6
baz=133
X16A **Lo Mia Camp, P** 132.74 51 ⇓P PKPdf 00 28 49.4 +2.3
baz=133,SNR=13
R19A **Curley Farm, L** 132.78 45 ⇓P PKPdf 00 28 48.9 +1.9
baz=133
N21A **Black Mountain** 132.78 42 ⇓P PKPdf 00 28 48.6 +1.7
baz=133
L22A **Ellis Ranch, M** 132.82 40 ⇓P PKPdf 00 28 48.6 +1.6
baz=133
T18A **Mexican Hat** 132.84 47 ⇑P PKPdf 00 28 48.8 +1.6
baz=133,SNR=13
ULM **Lac du Bonnet** 132.91 25 PKP PKPdf 00 28 45.4 -1.5
comp=Z,7.1nm,0.9s,baz=280,slow=2.5,SNR=8.6
ULM SKPbc SKPbc 00 32 09.8 -0.2
comp=Z,2.0nm,0.5s,baz=327,slow=5.0,SNR=4.1
M22A **Cedar Creek Ra** 133.05 40 ⇑P PKPdf 00 28 49.3 +1.8
baz=133
RSSD **Black Hills** 133.08 36 *e*PKIKP PKPdf 00 28 47.9 +0.5
O21A **Pagoda** 133.09 42 ⇓P PKPdf 00 28 49.1 +1.5
baz=133
S19A **Harvey Farm, M** 133.11 46 ⇓P PKPdf 00 28 49.3 +1.6
baz=133
Z16A **Peralta Trail,** 133.14 53 ⇑P PKPdf 00 28 49.4 +1.5
baz=133
Q20A **Ridgley Place,** 133.14 44 ⇓P PKPdf 00 28 49.2 +1.5
baz=133
U18A **Rough Rock, Ch** 133.15 48 ⇑P PKPdf 00 28 49.9 +2.1
baz=133,SNR=6.4
116A **Eloy** 133.19 54 ⇑P PKPdf 00 28 49.6 +1.6
baz=133
X17A **Forest Lakes** 133.26 51 ⇓P PKPdf 00 28 50.5 +2.4
baz=133,SNR=14
V18A **Ganado** 133.39 49 ⇑P PKPdf 00 28 50.6 +2.3
baz=133,SNR=5.0
P21A **Newcastle** 133.44 43 ⇓P PKPdf 00 28 50.3 +2.0
baz=133
Y17A **Roosevelt** 133.47 52 ⇓P PKPdf 00 28 50.2 +1.7
baz=133,SNR=5.1
T19A **Beclabito** 133.59 47 ⇓P PKPdf 00 28 50.3 +1.7
baz=134
Q21A **Lamborn Mesa,** 133.69 44 ⇑P PKPdf 00 28 50.6 +1.8
baz=134
W18A **Petrified Fore** 133.77 50 ⇓P PKPdf 00 28 51.2 +2.1
baz=134
MVCO **Mesa Verde** 133.80 46 ⇑P PKPdf 00 28 50.7 +1.7
baz=134
MVCO **Mesa Verde** 133.80 46 *e*PKPdf PKPdf 00 28 50.7 +1.7
X18A **Snowflake** 133.84 50 ⇓P PKPdf 00 28 51.2 +2.0
baz=134
R21A **Cimarron** 133.93 44 ⇑P PKPdf 00 28 51.0 +1.8
baz=134
117A **Oracle** 133.95 53 ⇑P PKPdf 00 28 51.1 +1.7
baz=134
TUC **Tucson** 134.00 54 *e*PKIKP PKPdf 00 28 50.6 +1.1
V19A **Window Rock** 134.04 49 ⇑P PKPdf 00 28 52.1 +2.6
baz=134
Y18A **Canyon Day Jun** 134.06 51 ⇓P PKPdf 00 28 51.8 +2.2
baz=134,SNR=5.5
S21A **Coal Bank Pass** 134.10 45 ⇓P PKPdf 00 28 51.6 +2.1
baz=134
217A **Green Valley** 134.16 54 ⇑P PKPdf 00 28 51.4 +1.6
baz=134
X19A **St. Johns** 134.38 50 ⇓P PKPdf 00 28 52.5 +2.4
baz=134,SNR=8.9
ISCO **Idaho Springs** 134.53 42 *e*PKIKP PKPdf 00 28 51.4 +1.1
118A **Homack Ranch,** 134.53 53 ⇓P PKPdf 00 28 52.5 +1.9
baz=134
SCHQ **Schefferville** 134.56 359 PKP PKPdf 00 28 50.5 +0.7
comp=Z,9.2nm,0.9s,baz=51,slow=3.5,SNR=11
SCHQ SKPbc SKPbc 00 32 11.4 -3.9
comp=Z,2.9nm,0.7s,baz=302,slow=5.7,SNR=3.9
Y19A **Nutrioso** 134.59 51 ⇓P PKPdf 00 28 52.8 +2.2
baz=134,SNR=9.7
218A **Dragoon** 134.71 54 ⇑P PKPdf 00 28 52.7 +1.8
baz=135
318A **Bisbee** 134.93 54 ⇓P PKPdf 00 28 52.8 +1.5
baz=135
119A **Ashpeak Ranch,** 135.01 52 ⇓P PKPdf 00 28 53.1 +1.7
baz=135
219A **White Tail Can** 135.32 53 ⇑P PKPdf 00 28 53.4 +1.4
baz=135
319A **Douglas** 135.53 54 ⇓P PKPdf 00 28 53.9 +1.5
baz=136,SNR=7.1
ANMO **Albuquerque** 136.28 48 ⇑*i*PKIKP PKPdf 00 28 54.7 +1.0
ANMO **Albuquerque** 136.28 48 PKPdf PKPdf 00 28 56.5 +2.8
ECSD **EROS,Sioux Fal** 137.40 31 *e*PKPdf PKPdf 00 28 55.7 +0.2
TXAR **Lajitas Array** 140.79 54 PKhKP 00 28 55.4
comp=Z,3.5nm,0.6s,baz=261,slow=2.5,SNR=56
TXAR PKP PKPdf 00 29 02.5 +0.3
comp=Z,3.9nm,0.7s,baz=181,slow=1.2,SNR=17
TXAR SKPbc SKPbc 00 32 32.2 -2.0
comp=Z,1.2nm,0.9s,baz=230,slow=3.1,SNR=3.6
TXAR **Lajitas Array** 140.79 54 PKP PKPdf 00 29 02.5 +0.3
TXAR SKPbc SKPbc 00 32 32.2 -2.0
CPUP **Villa Florida** 143.23 196 PKP PKPdf 00 29 05.1 -1.5
comp=Z,5.9nm,0.7s,baz=163,slow=2.6,SNR=19
CPUP **Villa Florida** 143.23 196 *e*PKPdf PKPdf 00 29 03.8 -2.9
JCT **Junction City** 143.31 50 PKIKP PKPdf 00 29 05.7 -0.9
SLM **Saint Louis** 144.40 31 *e*PKIKP PKPdf 00 29 06.3 -2.0
FVM **French Village** 144.79 32 *e*PKIKP PKPdf 00 29 07.7 -1.3
NCB **Newcomb** 144.96 8 *e*PKPbc PKPdf 00 29 08.9 -0.2
RCBR **Riachuelo** 145.02 246 *e*PKPbc PKPbc 00 29 10.8 +1.3
MIAR **Mount Ida** 145.38 40 *e*PKIKP PKPdf 00 29 10.5 +0.4
OLIL **Olney** 145.38 29 *e*PKPbc PKPbc 00 29 10.1 +0.2
SIUC **Southern Illin** 145.62 31 *e*PKPbc PKPbc 00 29 10.8 +0.2
BLO **Bloomington** 145.75 27 *e*PKP2 PKPab 00 29 11.2 -0.2
UALR **University of** 145.99 38 *e*PKPbc PKPbc 00 29 12.7 +0.8
USIN **University of** 146.19 29 *e*PKPbc PKPbc 00 29 12.6 +0.2
ACSO **Alum Creek Sta** 146.27 21 *e*PKPbc PKPbc 00 29 12.8 +0.2
HKT **Hockley** 146.55 48 *e*PKP2 PKPab 00 29 15.1 +0.3
WCI **Wyandotte Cave** 146.62 27 *e*PKP2 PKPab 00 29 13.9 -0.9
UTMT **University of** 146.84 32 *e*PKPbc PKPbc 00 29 14.9 +0.5
SSPA **Standing Stone** 147.46 15 *e*PKPbc PKPbc 00 29 16.3 +0.3
WVT **Waverly** 147.55 31 *e*PKP2 PKPbc 00 29 16.4 +0.1
MCWV **Mont Chateau** 147.83 18 *e*PKPbc PKPbc 00 29 17.5 +0.5
OXF **Oxford** 147.90 35 *e*PKP2 PKPbc 00 29 17.5 +0.1
LVC **Limon Verde** 148.29 178 PKPbc PKPab 00 29 20.8 -0.9
comp=Z,22nm,0.5s,baz=216,slow=0.0,SNR=23
BDFB **Brasilia** 148.55 218 PKP PKPdf 00 29 16.6 +0.7
comp=Z,18nm,0.8s,baz=152,slow=24,SNR=9.5
BDFB PKPbc PKPbc 00 29 20.6 +1.0
comp=Z,14nm,0.6s,baz=128,slow=6.3,SNR=53
VBMS **Vicksburg** 148.83 40 *e*PKPbc PKPbc 00 29 20.6 +0.8
TZTN **Tazewell** 149.23 26 *e*PKPbc PKPbc 00 29 21.1 +0.4
TKL **Tuckaleechee C** 149.88 27 *e*PKP2 PKPbc 00 29 22.9 +0.5
LRAL **Lakeview Retre** 150.34 34 *e*PKPbc PKPbc 00 29 23.7 +0.2
BRAL **Brewton** 151.79 37 *e*PKPbc PKPbc 00 29 27.9 +0.9
SIV **San Ignacio** 154.08 195 PKP PKPdf 00 29 24.1 -0.2
comp=Z,5.4nm,0.9s,baz=163,slow=2.0,SNR=20
SIV PKPbc PKPbc 00 29 32.5 +0.1
comp=Z,7.7nm,0.9s,baz=181,slow=0.7,SNR=15
SIV PKPab PKPab 00 29 46.7 +0.9
comp=Z,9.0nm,0.7s,baz=156,slow=5.4,SNR=14
OTAV **Otavalo** 165.96 129 *e*PKPdf PKPdf 00 29 39.4 +1.6

*NEIC **17** 00:27:49.7, 3268S×7177W, h28km, ML3.8(GUC), After GUC.*
NEIC Felt [III] at Puchuncavi, Quilpue, Quintero, Valparaiso and Vina del Mar.

GUC 17 00:27:49.7±0.4, 3268S×7177W, h28km±3km, MD3.9, ML3.8, 8C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.36**	**163**	⇑*i*P		P	Pb	00 27 57.6	-0.2
IHA				*i*S		S	Sb	00 28 03.7	+0.3
ROCH	**El Roble**	**0.70**	**115**	*i*P		P	Pb	00 28 03.1	-0.2
ROCH				*i*S		S	Sb	00 28 13.8	+1.2
JACH	**Jahuel**	**0.99**	**90**	⇑*i*P		P	Pn	00 28 07.6	-0.1
JACH				*i*S		S	Sn	00 28 21.1	+0.4
PEL	**Peldehue**	**1.02**	**117**	⇑*i*P		P	Pn	00 28 08.4	+0.3
PEL				*i*S		S	Sn	00 28 21.9	+0.4
PEL					AML	AML		00 28 23.7	
	comp=E,10μm,0.1s								
TACH	**Talagante**	**1.19**	**145**	⇑*i*P		P	Pn	00 28 10.5	0.0
TACH				*i*S		S	Sn	00 28 26.5	+0.7
CLCH	**Cerro Calan**	**1.25**	**125**	⇓*i*P		P	Pn	00 28 11.8	+0.5
CLCH				*i*S		S	Sn	00 28 28.2	+0.9
CLCH					AML	AML		00 28 37.3	
	comp=E,2μm,0.5s								
ANTU	**Antumapu**	**1.30**	**133**	*i*P		P	Pn	00 28 12.5	+0.5
ANTU				*i*S		S	Sn	00 28 29.3	+0.9
ANTU	**Antumapu**	**1.30**	**133**	*i*P		P	Pn	00 28 12.5	+0.5
ANTU				*i*S		S	Sn	00 28 29.3	+0.9
ANTU					AML	AML		00 28 35.0	
	comp=E,2μm,0.3s								
FCH	**Farellones**	**1.40**	**118**	⇓*i*P		P	Pn	00 28 14.3	+1.0
FCH					AML	AML		00 28 32.9	
	comp=N,2μm,0.2s								
PCH	**Pirque**	**1.41**	**132**	*e*P		P	Pn	00 28 14.2	+0.7
PCH				*i*S		S	Sn	00 28 32.8	+1.7
YECH	**El Yeso**	**1.72**	**125**	*i*P		P	Pn	00 28 19.6	+1.8
YECH				*i*S		S	Sn	00 28 42.4	+3.6
YECH					AML	AML		00 28 46.6	
	comp=N,1μm,0.3s								
CACH	**El Canelo**	**1.73**	**146**	⇓*i*P		P	Pn	00 28 20.1	+2.2
CACH				*i*S		S	Sn	00 28 43.2	+4.1
LMEL	**Las Melosas**	**1.75**	**132**	*e*P		P	Pn	00 28 19.8	+1.6
LMEL				*i*S		S	Sn	00 28 42.7	+3.1
LMEL	**Las Melosas**	**1.75**	**132**	*e*P		P	Pn	00 28 19.8	+1.6
LMEL				*i*S		S	Sn	00 28 42.7	+3.1
LMEL					AML	AML		00 28 46.0	
	comp=N,2μm,0.3s								
OVCH	**Ovalle**	**2.12**	**13**	⇑*i*P		P	Pn	00 28 24.7	+1.4
OVCH				*i*S		S	Sn	00 28 51.3	+2.6
OVCH	**Ovalle**	**2.12**	**13**	⇑*i*P		P	Pn	00 28 24.7	+1.4
OVCH				*i*S		S	Sn	00 28 51.3	+2.6
OVCH					AML	AML		00 29 02.1	
	comp=N,2μm,0.8s								
TLL	**Tololo Astrono**	**2.64**	**18**	⇑*i*P		P	Pn	00 28 32.3	+1.9
TLL				*i*S		S	Sn	00 29 04.6	+3.2
TLL	**Tololo Astrono**	**2.64**	**18**	⇑*i*P		P	Pn	00 28 32.3	+1.9
TLL				*i*S		S	Sn	00 29 04.6	+3.2
TLL					AML	AML		00 29 14.2	
	comp=N,354nm,0.7s								

*NEIC **17** 00:31:32.3, 3274S×7171W, h21km, ML3.4(GUC), After GUC.*

GUC 17 00:31:32.3±0.6, 3274S×7171W, h21km±10km, MD4.1, ML3.4, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.29**	**168**	⇓*i*P		P	Pb	00 31 38.8	-0.1
IHA				*i*S		S	Sb	00 31 44.0	+0.5
ROCH	**El Roble**	**0.63**	**112**	⇑*i*P		P	Pb	00 31 44.7	0.0
ROCH				*i*S		S	Sb	00 31 53.9	+0.8
LCCH	**Las Cruces**	**0.75**	**171**	*e*P		P	Pb	00 31 45.7	-0.9
LCCH				*i*S		S	Sb	00 31 56.0	-0.3
JACH	**Jahuel**	**0.94**	**87**	⇑*i*P		P	Pb	00 31 49.2	-0.8
JACH				*i*S		S	Sb	00 32 02.0	0.0
TACH	**Talagante**	**1.12**	**145**	⇑*i*P		P	Pn	00 31 51.9	-0.9
SAN	**Santiago**	**1.13**	**129**	*e*P		P	Pn	00 31 52.6	-0.4
SAN				*i*S		S	Sb	00 32 07.3	-0.2
SAN	**Santiago**	**1.13**	**129**	*e*P		P	Pn	00 31 52.6	-0.4
SAN				*i*S		S	Sb	00 32 07.3	-0.2
SAN					AML	AML		00 32 11.2	
	comp=E,1μm,0.3s								
CLCH	**Cerro Calan**	**1.19**	**124**	*e*P		P	Pn	00 31 54.0	+0.3
CLCH				*i*S		S	Sb	00 32 10.2	+1.2
CLCH	**Cerro Calan**	**1.19**	**124**	*e*P		P	Pn	00 31 54.0	+0.3
CLCH				*i*S		S	Sb	00 32 10.2	+1.2
CLCH					AML	AML		00 32 13.0	
	comp=N,2μm,0.5s								
ANTU	**Antumapu**	**1.23**	**133**	⇓*i*P		P	Pn	00 31 54.1	-0.1
ANTU				*i*S		S	Sb	00 32 09.9	-0.3
ANTU	**Antumapu**	**1.23**	**133**	⇓*i*P		P	Pn	00 31 54.1	-0.1
ANTU				*i*S		S	Sb	00 32 09.9	-0.3
ANTU					AML	AML		00 32 13.4	
	comp=N,1μm,0.6s								
PCH	**Pirque**	**1.34**	**132**	*e*P		P	Pn	00 31 55.9	+0.2
SJCH	**San Jose de Ma**	**1.45**	**129**	*e*P		P	Pn	00 31 57.4	+0.1
SJCH				*i*S		S	Sn	00 32 16.4	+0.7
SJCH	**San Jose de Ma**	**1.45**	**129**	*e*P		P	Pn	00 31 57.4	+0.1
SJCH				*i*S		S	Sn	00 32 16.4	+0.7
SJCH					AML	AML		00 32 22.8	
	comp=N,546nm,0.5s								
YECH	**El Yeso**	**1.65**	**125**	*e*P		P	Pn	00 32 01.0	+0.9
YECH				*i*S		S	Sn	00 32 22.7	+2.1
YECH					AML	AML		00 32 27.5	
	comp=E,533nm,0.3s								
CACH	**El Canelo**	**1.66**	**146**	⇑*i*P		P	Pn	00 32 01.1	+0.9
LMEL	**Las Melosas**	**1.68**	**132**	*e*P		P	Pn	00 32 01.3	+0.9
LMEL				*i*S		S	Sn	00 32 23.1	+1.8
LMEL	**Las Melosas**	**1.68**	**132**	*e*P		P	Pn	00 32 01.3	+0.9
LMEL				*i*S		S	Sn	00 32 23.1	+1.8
LMEL					AML	AML		00 32 27.4	
	comp=N,1μm,0.6s								

*NEIC **17** 00:55:54.2±2.4, 7405S×12841E, h92km±24km, mb4.4/1, Error ellipse: s-maj=22.4km s-min=14.5km az=49.0*
*ISCJB **17** 00:55:57.8±2.1, 7665S±009×1283E±0.1, h151km±23km, mb3.7/6, Error ellipse: s-maj=20.8km s-min=8.7km az=137.7*
*IDC **17** 00:55:58.1±3.7, 7575S×12824E, h130km±35km, mb3.7/6, mb1 3.9/9, mb1mx3.8/16, mbtmp3.8/9, Error ellipse: s-maj=31.9km s-min=16.6km az=58.0*

ISC 17 00:55:59.6±2.0, 78S±01×1283E±01, h154km±22km, n19, σ1§02/23, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.16	242	P	Pn	00 57 15.7	+0.4
	36nm,0.3s,baz=75,slow=1.4,SNR=63						
BATI				S	Sn	00 58 13.6	-0.8
	29nm,0.3s,baz=280,slow=22,SNR=13						
KAKA	Kakadu	6.39	141	eP	x	00 57 13.2	
	62nm,0.4s						
KAKA				eS	x	00 58 23.3	
FITZ	Fitzroy Crossi	10.58	194	eP	Pn	00 58 26.8	-0.5
	19nm,0.3s						
FITZ				eS	Sn	01 00 19.8	-4.7
FITZ	Fitzroy Crossi	10.58	194	ePn	Pn	00 58 27.0	-0.3
	9.2nm,0.3s						
FITZ				eSn	Sn	01 00 24.4	-0.1
WRAB	Tennant Creek	13.44	155	ePn	Pn	00 59 05.4	+1.0
	18nm,0.9s						
WRAB				eSn	Sn	01 01 31.9	-1.4
WRA	Warramunga Arr	13.45	155	P	Pn	00 59 04.8	+0.4
	2.2nm,0.3s,baz=329,slow=13,SNR=116						
WRA				S	Sn	01 01 29.1	-4.3
	2.0nm,0.3s,baz=334,slow=23,SNR=8.2						
WB2	Warramunga Arr	13.45	155	eP	Pn	00 59 04.9	+0.4
WB2				eS	Sn	01 01 26.0	-7.5
MBWA	Marble Bar	15.66	211	eP	Pn	00 59 34.6	+2.5
ASAR	Alice Springs	16.70	162	P	Pn	00 59 48.3	+3.7
	1.0nm,0.3s,baz=335,slow=11,SNR=37						
ASAR				S	S	01 02 49.2	-1.2
	0.6nm,0.3s,baz=321,slow=15,SNR=6.1						
MEEK	Meekatharra	20.89	205	eP	P	01 00 34.1	+4.3
	27nm,1.5s						
STKA	Stephens Creek	27.00	154	P	P	01 01 28.7	+1.5
	1.0nm,0.3s,mb3.9,baz=326,slow=16,SNR=4.6						
STKA	Stephens Creek	27.00	154	P	P	01 01 28.7	+1.5
CMAR	Chiang Mai Arr	38.95	312	P	P	01 03 10.6	-0.2
	1.0nm,0.3s,mb3.9,baz=140,slow=7.1,SNR=4.6						
KSRS	Korea Array	44.99	360	P	P	01 03 58.9	-0.6
	1.0nm,0.4s,mb3.8,baz=180,slow=8.8,SNR=3.8						
SONM	Songino Array	58.65	343	P	P	01 05 40.6	+0.1
	1.2nm,0.7s,mb3.8,baz=167,slow=7.5,SNR=9.9						
MKAR	Makanchi Array	67.95	328	P	P	01 06 41.4	-0.4
	0.3nm,0.5s,mb3.3,baz=120,slow=8.8,SNR=16						
ZALV	Zalesovo Beam	71.53	335	P	P	01 07 02.5	-1.0
	0.9nm,0.6s,mb3.7,baz=134,slow=4.3,SNR=5.4						
TORD	Torodi Ar. Bea	127.28	281	PKP	PKPdf	01 14 47.6	+0.8
	0.4nm,0.7s,baz=90,slow=1.3,SNR=3.6						
CPUP	Villa Florida	145.67	171	PKPbc	PKPbc	01 15 23.7	+2.7
	0.6nm,0.3s,baz=333,slow=0.7,SNR=4.9						

*NEIC **17** 01:02:21.0, 18.12N×100.01W, h63km, MD3.7(MEX), After MEX.*

MEX 17 01:02:21.1±0.9**, 18.12N×100.00W, h63**km±14km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	Platanillo	0.54	60	i P	Pn	01 02 32.9	-0.9
PLIG				i S	Sn	01 02 41.1	-2.0
CAIG	El Cayaco	1.09	194	i P	Pn	01 02 39.5	-1.0
CAIG				i S	Sn	01 02 53.1	-1.8
ZIIG	Zihuatanejo	1.49	250	eP	Pn	01 02 44.2	-1.5
ZIIG				i S	Sn	01 03 01.6	-2.6
UTMO	Huajuapan	2.11	97	eP	Pn	01 02 53.3	-0.7
UTMO				i S	Sn	01 03 17.8	-1.4
PNIG	Pinotepa	2.48	134	eP	Pn	01 02 56.8	-2.2
PNIG				i S	Sn	01 03 27.4	-0.8

*NNC **17** 01:36:29.2±4.3, 40.82N×73.90E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=51.2km s-min=22.2km az=161.0*

ISC 17 01:36:30.3±5.3**, 40.5N**±.04×**74.1E**±.02**, h35km, n13,** σ1s10/13**, 4C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	1.65	349	P	Pn	01 36 55.5	-1.3
	SNR=32						
UCH	Uchtor	1.75	10	P	Pn	01 36 57.3	-0.8
	SNR=6.1						
KZA	Kyzart	1.79	28	P	Pn	01 36 56.9	-1.8
	SNR=7.1						
AAK	Ala-Archa	2.14	8	P	Pn	01 37 03.3	-0.3
	SNR=34						
EKS2	Erkin-Say	2.17	353	P	Pn	01 37 04.2	+0.3
	SNR=54						
KBK	Karagaybulak	2.24	16	P	Pn	01 37 04.3	-0.5
	SNR=26						
ULHL	Ulahol	2.36	42	P	Pn	01 37 05.5	-1.1
	SNR=36						
CHMS	Chumysh	2.54	11	P	Pn	01 37 10.1	+1.2
	SNR=9.1						
TKM2	Tokmak 2	2.66	24	⇓Pn	Pn	01 37 11.3	+0.7
	4.0nm,0.4s						
TKM2				⇑Lg		01 37 45.0	
	14nm,0.4s						
TKM2	Tokmak 2	2.66	24	P	Pn	01 37 11.7	+1.1
	SNR=11						
USP	Ospenovka	2.77	6	P	Pn	01 37 13.5	+1.3
	SNR=22						
KNDC	Almaty	3.44	37	⇑Pn	Pn	01 37 23.6	+2.1
	6.0nm,0.4s						
KNDC				⇑Lg		01 38 11.0	
	29nm,0.6s						
KK31	Karatay Array	3.74	315	⇑Pn	Pn	01 37 25.7	+0.2
	0.9nm,0.4s,baz=131,slow=16						
KK31				⇓Lg		01 38 20.7	
	2.1nm,0.4s,baz=133,slow=28						

*CASC **17** 01:43:48.8±2.2, 9.37N×82.84W, h8km±9km, MD3.5*
*UCR **17** 01:43:49.7, 9.36N×82.88W, h6km, MD3.4*

UPA 17 01:43:39.2, 9.27N×81.86W, h10km, MW4.3, 3C-1D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNI	Changuinola	0.67	283	eP	Pg	01 43 54.8	+2.6
CNI				eS	Sg	01 44 00.8	-0.1
BRU2	Volcan	0.95	240	eP	Pg	01 44 00.4	+2.9
BRU2				eS	Sg	01 44 09.3	-0.6
ACR	Cerro Adams	1.43	245	⇓eP	Pn	01 44 04.0	-1.3
BAR1		1.44	269	⇑eP	Pn	01 43 58.4	-6.9
BAR1				eS	Sn	01 44 05.2	-19
URSC	Urasca	1.98	287	eP	Pn	01 44 07.9	-4.9
QCR	Quepos	2.28	274	⇑eP	Pn	01 44 12.9	-4.1
QCR				eS	Sn	01 44 30.0	-15
LAJ	Bijagual	2.31	285	eP	Pn	01 44 19.8	+2.5
LAJ				eS	Sn	01 44 42.4	-3.5
PRS1	Puriscal	2.52	287	⇑eP	Pn	01 44 17.9	-2.4
PRS1				eS	Sn	01 44 38.7	-12
CGA2	Cerro Gallo 2	2.68	286	eP	Pn	01 44 19.9	-2.5
CGA2				eS	Sn	01 44 41.8	-13

*ISCJB **17** 02:03:20.8±0.5, 38.31N±.003×31.98E±.004, h10km, Error ellipse: s-maj=5.3km s-min=3.5km az=40.7*
*CSEM **17** 02:03:20.1±0.1, 38.34N×32.02E, h5km, MD3.0, Error ellipse: s-maj=2.7km s-min=1.8km az=50.0*
*DDA **17** 02:03:20.4, 38.75N×32.06E, h3km±5km, Md3.0*
*ISK **17** 02:03:20.2, 38.33N×32.01E, h4km, MD2.8*

ISC 17 02:03:20.8±0.6**, 38.29N**±.003×**31.95E**±.004**, h1**km±6km**, n15,** σ0s81/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDHN	Kadinhani	0.26	30	i P	Pg	02 03 25.1	-0.8
KDHN				i S	Sg	02 03 29.7	+0.5
KDHN	Kadinhani	0.26	30	i P	Pg	02 03 25.0	-0.8
LADK	Ladik-KONYA	0.34	106	PG	Pg	02 03 26.9	-0.4
LADK				eSG	Sg	02 03 32.2	+0.5
KONT	Konya--Tatoy	0.47	137	PG	Pg	02 03 29.9	+0.1
KONT				eSG	Sg	02 03 36.4	+0.4
KIZT	Kizilcal	0.59	355	ePG	Pg	02 03 31.2	-0.8
KIZT				eSG	Sg	02 03 40.0	+0.3
BOLV	Bolvadin	0.89	299	i P	Pg	02 03 36.4	-1.6
BOLV				i S	Sg	02 03 50.7	+1.3
SHUT	Suhut-Afyon	1.13	284	ePN	Pn	02 03 42.6	-1.1
ISP	Isparta	1.22	249	ePN	Pn	02 03 45.7	+0.7
BCK	Bucak	1.36	233	ePN	Pn	02 03 47.8	+0.9
ESKT	Eskisehir	1.50	325	i P	Pn	02 03 47.5	-1.3
ESKT				i S	Sb	02 04 09.3	+0.5
ESKT	Eskisehir	1.50	325	ePn	Pn	02 03 48.7	-0.1
SEYT	Eskypehyr	1.50	325	i P	Pn	02 03 47.5	-1.3
SEYT				i S	Sb	02 04 09.3	+0.4
ALT	Altintas	1.63	298	ePN	Pn	02 03 50.5	-0.1
BORA	Eskisehir	1.97	324	i P	Pn	02 03 54.8	-0.4
BORA				i S	Sg	02 04 25.0	+1.0
CDAG	Cicekdag	2.31	54	i P	Pn	02 03 58.9	-1.1
CDAG				i S	Sn	02 04 30.0	+1.0

IDC 17 02:12:08.5±49.0**, 15.65S×176.37W, h0km, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.7**/16**, mbtmp3.9**/3**, Error ellipse: s-maj=912.9km s-min=162.6km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.44	239	P	P	02 19 56.6	-0.5
	1.3nm,0.7s,baz=61,slow=13,SNR=2.9						
WRA	Warramunga Arr	47.00	257	P	P	02 20 41.4	-0.4
	0.4nm,0.8s,baz=90,slow=7.6,SNR=6.5						
ASAR	Alice Springs	47.31	252	P	P	02 20 44.8	+0.6
	2.0nm,0.5s,baz=89,slow=8.1,SNR=35						

*BJI **17** 02:17:51.5, 2.10N×127.95E, h35km, mB4.9, mb4.7*
*IDC **17** 02:17:55.4±0.6, 2.92N×127.52E, h0km, mb4.3/11, mb1 4.5/12, mb1mx4.4/18, mbtmp4.4/12, ML4.1/1, MS3.4/1, Ms1 3.3/1, ms1mx2.7/27, Error ellipse: s-maj=34.1km s-min=14.2km az=70.0*
*ISCJB **17** 02:17:58.8±0.4, 2.86N±.004×127.35E±.009, h33km, mb4.5/24, Error ellipse: s-maj=12.3km s-min=6.2km az=177.1*
*NEIC **17** 02:18:00.6±0.2, 2.89N×127.53E, h35km, mb4.5/8, Error ellipse: s-maj=10.1km s-min=4.1km az=79.0*

ISC 17 02:18:00.8±0.4**, 2.86N**±.004×**127.46E**±.009**, h35km, n36,** σ0s61/33**, mb4.5**/24**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	10.98	225	Pn	Pn	02 20 36.7	+1.2
	1.3nm,0.3s,baz=84,slow=4.6,SNR=6.2						
KAPI				Sn	Sn	02 22 36.2	-1.0
	0.7nm,0.3s,baz=198,slow=20,SNR=2.9						
KAKA	Kakadu	16.24	162	eP	x	02 21 27.5	
	7.5nm,0.6s						
FITZ	Fitzroy Crossi	20.91	185	eP	P	02 22 40.1	-0.3
	6.9nm,0.5s						
TPUB	Ta-pu	21.37	343	eP	P	02 22 44.7	-0.6
	34nm,0.5s,mb4.9						
SSLB	Suanglung	21.73	344	eP	P	02 22 48.9	-0.3
	20nm,0.8s,mb4.6						
WRAB	Tennant Creek	23.64	164	eP	P	02 23 09.1	0.0
	9.9nm,0.6s,mb4.4						
WRA	Warramunga Arr	23.65	164	P	P	02 23 08.9	-0.2
	11nm,0.8s,mb4.4,baz=342,slow=10,SNR=106						
WRA				PcP	PcP	02 26 53.2	-0.1
	0.4nm,0.5s,baz=329,slow=2.2,SNR=5.1						
WB2	Warramunga Arr	23.65	164	eP	P	02 23 08.8	-0.4
MBWA	Marble Bar	25.05	197	eP	P	02 23 22.9	+1.0
	4.0nm,0.5s,mb4.2						
ASAR	Alice Springs	27.10	167	P	P	02 23 40.5	0.0
	1.7nm,0.5s,mb3.8,baz=345,slow=7.6,SNR=18						
ASAR				PcP	PcP	02 27 01.4	+0.4
	1.7nm,0.5s,baz=352,slow=2.4,SNR=11						
CMAR	Chiang Mai Arr	31.94	301	P	P	02 24 22.5	-1.1
	2.3nm,0.4s,mb4.4,baz=116,slow=7.2,SNR=17						
CHTO	Chiang Mai	32.09	302	eP	P	02 24 24.7	-0.1
	3.6nm,0.7s,mb4.3						
FORT	Forrest	33.46	179	eP	P	02 24 35.9	-0.7
	19nm,0.8s,mb5.1						
KSRS	Korea Array	34.43	1	P	P	02 24 41.2	-3.7
	1.3nm,0.6s,mb4.1,baz=174,slow=9.9,SNR=3.4						
KLBR	Kellerberrin	35.48	194	eP	P	02 24 54.2	0.0
	16nm,1.0s,mb4.9						
XAN	Xi'an	35.52	333	P	P	02 24 54.3	-0.1
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				AMB	AMB		
	comp=Z,46nm,7.6s						
MUN	Mundaring	36.26	196	eP	P	02 25 01.3	+0.5
STKA	Stephens Creek	37.06	160	eP	P	02 25 07.7	0.0
	comp=Z,15nm,0.6s,mb5.0						
STKA	Stephens Creek	37.06	160	P	P	02 25 07.7	+0.1
	comp=Z,20nm,0.7s,mb5.1,baz=334,slow=7.8,SNR=15						
STKA				LR	LR	02 40 07.4	
	comp=Z,56nm,19.3s,baz=204,slow=36						
STKA	Stephens Creek	37.06	160	eP	P	02 25 08.0	+0.3
	comp=Z,1.1nm,0.6s,mb3.9						
LZH	Lanzhou	39.62	329	eP	P	02 25 30.0	+0.9
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.6						
LZH				AMB	AMB		
	comp=Z,105nm,5.0s						
GTA	Gaotai	44.21	329	eP	P	02 26 07.3	+0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
SONM	Songino Array	48.35	341	P	P	02 26 39.3	+0.3
	comp=Z,1.7nm,0.6s,mb4.3,baz=154,slow=8.4,SNR=9.9						
PETK	Petropavlovsk-	55.96	21	P	P	02 27 35.0	-0.5
	comp=Z,2.8nm,0.9s,mb4.3,baz=207,slow=4.8,SNR=3.5						
MK31	Makanchi Array	58.68	325	eP	P	02 27 55.1	+0.4
MK31				ePcP	PcP	02 28 44.9	+0.4
MKAR	Makanchi Array	58.68	325	P	P	02 27 55.0	+0.3
	comp=Z,2.7nm,0.5s,mb4.5,baz=119,slow=7.7,SNR=51						
ZAA0	Zalesovo Array	61.69	333	eP	P	02 28 15.1	-0.1
ZALV	Zalesovo Beam	61.69	333	P	P	02 28 14.6	-0.7
	comp=Z,2.7nm,0.6s,mb4.5,baz=126,slow=7.3,SNR=9.8						
KURK	Kurchatov	62.86	327	eP	P	02 28 23.7	+0.5
	comp=Z,21nm,0.8s,mb5.3						
BRVK	Borovoye	68.51	327	eP	P	02 28 59.8	+0.2
	comp=Z,15nm,1.0s,mb4.9						
ARU	Arti	76.06	328	eP	P	02 29 44.0	-0.6
	comp=Z,6.5nm,0.9s,mb4.6						
VNDA	Vanda	82.48	173	P	P	02 30 19.2	0.0
	comp=Z,1.7nm,0.9s,mb4.0,baz=314,slow=5.2,SNR=4.8						
BRTR	Keskin Array B	91.13	310	P	P	02 31 03.2	+0.9
	comp=Z,0.7nm,0.8s,mb4.1,baz=106,slow=4.0,SNR=4.4						
YKA	Yellowknife Ar	99.98	25	P	Pdif	02 31 41.4	-0.8
	comp=Z,0.1nm,0.6s,baz=293,slow=4.8,SNR=2.8						
TXAR	Lajitas Array	121.54	53	PKP	PKPdf	02 36 51.6	+0.2
	comp=Z,0.1nm,0.5s,baz=63,slow=0.3,SNR=4.8						
TORD	Torodi Ar. Bea	123.88	288	PKP	PKPdf	02 36 55.8	-0.5
	comp=Z,0.4nm,0.7s,baz=84,slow=1.1,SNR=3.1						

*IDC **17** 02:44:50.0±2.4, 0.30N×127.16E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/16, mbtmp3.5/3, Error ellipse: s-maj=213.3km s-min=26.7km az=66.0*
*ISCJB **17** 02:45:03.3±0.9, 0.2N±0.1×127.4E±0.1, h138km±8km, mb3.4/3, Error ellipse: s-maj=27.0km s-min=12.0km az=135.7*
*DJA **17** 02:45:05, 0.16N×127.27E, h110km, MLv3.7/4*

ISC 17 02:45:04.6±0.9**, 0.2N**±.01×**127.3E**±.01**, h132**km±8km**, n7,** σ0s53/9**, mb3.4**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.58	4	P	Pn	02 45 24.3	-0.2
TNTI				S	Sn	02 45 39.5	0.0
LBMI	Labuha	0.83	168	P	Pn	02 45 26.5	+0.2
MNI	Manado	2.79	297	P	Pn	02 45 49.2	+0.6
MNI				S	Sn	02 46 22.1	-0.4
AAI	Ambon	3.94	167	P	Pn	02 46 03.6	-0.1
WRA	Warramunga Arr	21.15	161	P	P	02 49 38.3	-1.0
	1.0nm,0.3s,mb3.6,baz=340,slow=11,SNR=36						
ASAR	Alice Springs	24.55	165	P	P	02 50 13.2	+1.0
	0.4nm,0.4s,mb3.3,baz=344,slow=8.4,SNR=6.3						
MKAR	Makanchi Array	60.80	326	P	P	02 55 02.6	-0.1
	0.2nm,0.4s,mb3.3,baz=117,slow=8.1,SNR=5.5						

*ISK **17** 02:46:46.2, 35.50N×27.36E, h8km, MD3.5*
*HLW **17** 02:46:46.7, 35.58N×27.61E, h18km, Mb3.4*
*ISCJB **17** 02:46:47.3±0.7, 35.39N±.002×27.66E±.003, h28km±6km, Error ellipse: s-maj=4.3km s-min=3.4km az=20.2*
*THE **17** 02:46:50.2, 35.71N×27.43E, h2km±9km, Error ellipse: s-maj=17.8km s-min=1.7km az=101.0*
*CSEM **17** 02:46:50.0±0.1, 35.61N×27.49E, h30km, MD3.5, Error ellipse: s-maj=4.3km s-min=1.9km az=158.0*
*ATH **17** 02:46:50.1, 35.69N×27.41E, h28km±1km, MD3.5/4*
*NEIC **17** 02:46:50.5, 35.87N×27.24E, h4km, MD3.5(ATH), After ATH.*
*DDA **17** 02:46:51.3, 35.86N×27.66E, h27km, Md3.3*

ISC 17 02:46:48.7±0.7**, 35.44N**±.002×**27.61E**±.003**, h25**km±6km**, n44,** σ1s24/70**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.38	286	ePB	Pb	02 46 56.6	-0.3
KARP				eSB	Sb	02 47 02.0	-0.5
KARP	Karpathos	0.38	286	ePg	Pb	02 46 56.5	-0.4
KARP				eSg	Sb	02 47 02.5	0.0
ARG	Arkhangelos	0.88	29	ePN	Pn	02 47 05.5	0.0
ARG				eSN	Sn	02 47 17.1	-0.4
ZKR	Zakros	1.18	254	P	Pn	02 47 09.7	+0.1
ZKR				S	Sn	02 47 28.3	+3.4
DAT	Datca	1.28	359	PN	Pn	02 47 10.3	-0.8
DAT				eSN	Sn	02 47 27.7	+0.2
BDRM	Kayabasi	1.63	355	i P	Pn	02 47 13.8	-1.9
BDRM				i S	Sn	02 47 35.1	-0.8
NPS	Neapolis	1.64	264	ePN	Pn	02 47 17.3	+1.4
TURN	Turunc	1.64	29	i P	Pn	02 47 13.0	-3.0
TURN				i S	Sn	02 47 31.5	-4.7
LAST	Lasithi	1.76	261	P	Pn	02 47 19.3	+1.7
LAST				S	Sn	02 47 41.5	+2.3
YER	Yerkesik	1.78	18	ePN	Pn	02 47 18.8	+1.0
MLSB	Milas	1.86	4	ePN	Pn	02 47 18.5	-0.4
MLSB				eSN	Sn	02 47 42.3	+0.8
THR1	Thera Island	1.97	299	P	Pn	02 47 19.5	-1.0
THR6	Thira Island,	2.01	298	P	Pn	02 47 20.4	-0.6
THR6				S	Sn	02 47 43.4	-2.0
THR3	Thira Island,	2.03	299	P	Pn	02 47 20.3	-1.0
THR4	Thira Island,	2.06	300	P	Pn	02 47 20.9	-0.8
THR5	Thira Island,	2.08	299	P	Pn	02 47 21.3	-0.6
IDI	Anoyia	2.23	267	ePn	Pn	02 47 25.0	+1.0
IDI				eSn	Sn	02 47 51.3	+0.7
IDI	Anoyia	2.23	267	ePn	Pn	02 47 25.0	+1.0
IDI				eSn	Sn	02 47 51.3	+0.6
GCAM	G?zelcaml?	2.27	353	i P	Pn	02 47 23.2	-1.5
GCAM				i S	Sn	02 47 50.5	-1.3
ELL	Elmali	2.28	54	ePN	Pn	02 47 26.5	+1.9
SIVA	Sivas	2.33	260	P	Pn	02 47 27.3	+1.9
SIVA				S	Sn	02 47 55.8	+2.6
APE	Apeiranthos	2.33	315	P	Pn	02 47 24.3	-1.2
APE				S	Sn	02 47 49.9	-3.4
APE	Apeiranthos	2.33	315	ePN	Pn	02 47 24.7	-0.8
APE				eSN	Sn	02 47 50.4	-2.9
APE	Apeiranthos	2.33	315	ePg	Pn	02 47 24.5	-1.0
APE				S	Sn	02 47 49.9	-3.4
APE				eSb	Sn	02 47 50.4	-2.9
SMG	Samos	2.35	345	P	Pn	02 47 25.4	-0.2
GOLH	Golhisar	2.39	41	i P	Pn	02 47 27.3	+1.1
GOLH				i S	Sn	02 47 59.1	+4.5
DENT	Denizli	2.58	26	ePN	Pn	02 47 30.9	+2.0
BLCB	Balcova	2.97	351	ePN	Pn	02 47 33.2	-1.1
KARN	Karanos	3.01	270	P	Pn	02 47 36.0	+1.2
KARN				S	Sn	02 48 10.8	+0.7
BCK	Bucak	3.14	49	ePN	Pn	02 47 38.8	+2.3
KULA	Kula-Manisa	3.18	15	ePN	Pn	02 47 38.8	+1.7
KHAL	Karahalli	3.29	27	i P	Pn	02 47 37.4	-1.2
KHAL				i S	Sn	02 48 19.1	+2.1
AKS	Akhisar	3.44	3	ePN	Pn	02 47 40.2	-0.4
HMAT	Matruh	4.36	186	P	Pn	02 47 53.2	-0.1
HMAT				S	Sn	02 48 41.7	-1.5
SLUM		4.42	208	P	Pn	02 47 53.6	-0.5
SLUM				S	Sn	02 48 42.7	-2.1
KDHN	Kadinhani	4.74	48	i P	Pn	02 47 59.8	+1.3
KDHN				i S	Sn	02 48 52.2	-0.5
SWA2		6.44	197	P	Pn	02 48 21.9	0.0
SWA2				S	Sn	02 49 31.6	-3.1
HHAG	Hagoal	6.65	144	P	Pn	02 48 24.6	-0.2
HHAG				S	Sn	02 49 36.2	-3.6
HSAF	As Saff	6.69	149	P	Pn	02 48 25.3	-0.1
GLL	Jalalah	6.80	148	P	Pn	02 48 26.7	-0.1
SUZ		7.11	140	P	Pn	02 48 30.9	-0.2
AWBH		7.18	171	P	Pn	02 48 31.9	-0.2
HFRF	Wahat Farafira	8.29	176	P	Pn	02 48 47.6	+0.3
TR2		8.74	142	P	Pn	02 48 53.6	+0.1

*BJI **17** 02:53:25.7, 8.86S×66.42E, h10km, mB5.0, mb4.8, Ms4.8, Msz4.5*
*ISCJB **17** 02:53:26.8±1.9, 9.12S±.007×67.22E±.006, h5km±12km, mb4.6/53, MS4.1/30, Error ellipse: s-maj=12.4km s-min=9.0km az=137.3*
*IDC **17** 02:53:27.5±0.6, 9.15S×67.28E, h0km, mb4.2/17, mb1 4.4/17, mb1mx4.3/23, mbtmp4.2/17, MS4.0/21, Ms1 4.0/21, ms1mx3.9/33, Error ellipse: s-maj=19.5km s-min=15.2km az=171.0*
*MOS **17** 02:53:27.2±1.1, 9.08S×67.25E, h10km, mb4.9/12, Error ellipse: s-maj=15.5km s-min=10.2km az=70.2*
*NEIC **17** 02:53:29.4±0.4, 9.11S×67.29E, h10km, mb4.9/18, Error ellipse: s-maj=10.3km s-min=6.9km az=146.0*
*GCMT **17** 02:53:29.5±0.2, 9.21S×67.25E, h19km±1km, MW5.0/88, Moment Tensor Solution. s30,c39; s88,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.48±.15; $M_{\theta\theta}$-3.93±.12; $M_{\phi\phi}$4.41±.14; $M_{r\theta}$-0.12±.26; $M_{\theta\phi}$0.91±.11; $M_{\phi r}$0.10±.26; Best double couple: $M_0$4.27100×10^{16} NP1:ϕ_s51.00000°, δ88.00000°, λ-1.00000°. NP2: ϕ_s141.00000°, δ89.00000°, λ-178.00000°. Principal axes: T 4.5090, Plg1.0000°, Azm276.0000°; N -0.4770, Plg88.0000°, Azm161.0000°; P -4.0330, Plg2.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **17** 02:53:32, 8.58S×67.20E, h10km, mb4.9/10*

ISC 17 02:53:30.8±2.1**, 9.13S**±.006×**67.23E**±.006**, h18**km±13km**, h14**km±.8km**:pP-P, n97,** σ1s04/86**, mb4.6**/53**, MS4.1**/30**, 9C-1D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	12.47	290	ePn	Pn	02 56 28.3	+0.8
	60nm,0.4s						
OPO	Ambohidratompo	21.58	242	P	P	02 58 23.2	+3.5
	2.0nm,0.7s,mb3.7,baz=80,slow=13,SNR=4.0						
ABPO	Ambohimpanom	21.72	241	eP	P	02 58 22.5	+1.3
	42nm,1.4s,mb4.7						
LSZ	Lusaka	38.60	257	P	P	03 00 53.1	-0.1
	13nm,1.1s,mb4.6,baz=97,slow=9.0,SNR=19						
LSZ	Lusaka	38.60	257	eP	P	03 00 53.3	+0.1
LSZ				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
LSZ	Lusaka	38.60	257	eP	P	03 00 53.3	0.0
	comp=Z,13nm,1.0s,mb4.6						
KOLN	Koldanda	39.96	23	eP	P	03 01 04.7	+0.3
	comp=Z,32nm,0.9s,mb5.1						
DMN	Daman	40.42	25	eP	P	03 01 08.9	+0.7
	comp=Z,45nm,0.9s,mb5.2						
RAMN	Ramite	40.49	27	eP	P	03 01 09.5	+0.7
	comp=Z,41nm,0.6s,mb5.3						
PKI	Pulchoki	40.51	25	eP	P	03 01 08.9	0.0
PKIN	Phulchoki	40.51	25	eP	P	03 01 08.9	0.0
DANN	Dangsing	40.54	23	eP	P	03 01 09.1	-0.1
	comp=Z,30nm,0.9s,mb4.9						
GKN	Gorkha	40.57	24	eP	P	03 01 09.6	+0.1
	comp=Z,40nm,0.9s,mb5.1						
ODAN	Odare	40.77	28	eP	P	03 01 11.6	+0.5
	comp=Z,47nm,0.7s,mb5.2						
JIRN	Jiri	40.92	26	eP	P	03 01 11.8	-0.5
	comp=Z,23nm,0.8s,mb4.9						
GUN	Gumba	41.01	26	eP	P	03 01 13.7	+0.7
	comp=Z,43nm,0.9s,mb5.1						
TAPN	Taplejung	41.34	28	eP	P	03 01 15.6	-0.2
	comp=Z,46nm,1.1s,mb5.0						
CMAR	Chiang Mai Arr	41.60	49	P	P	03 01 18.4	+0.3
	comp=Z,4.1nm,0.4s,mb4.4,baz=243,slow=9.3,SNR=19						
CMAR				LR	LR	03 16 36.2	
	comp=Z,72nm,18.2s,MS3.6,baz=235,slow=33						
CHTO	Chiang Mai	41.83	48	eP	P	03 01 20.8	+0.9
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CHTO	Chiang Mai	41.83	48	eP	P	03 01 20.8	+0.9
	comp=Z,9.3nm,0.8s,mb4.5						
SHL	Shillong	42.02	34	eP	P	03 01 21.0	-0.4
LBTB	Lobatse	42.61	243	P	P	03 01 26.7	+0.4
	comp=Z,3.9nm,0.9s,mb4.1,baz=68,slow=6.6,SNR=4.5						
LBTB	Lobatse	42.61	243	P	P	03 01 26.7	+0.4
KBL	Kabul	43.46	2	eP	P	03 01 33.9	+1.0
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
KBL	Kabul	43.46	2	eP	P	03 01 33.9	+0.9
	comp=Z,7.7nm,0.8s,mb4.5						
BOSA	Boshof	43.89	238	P	P	03 01 36.2	-0.4

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=Z,3.9nm,0.8s,mb4.2,baz=117,slow=3.3,SNR=5.5						
BOSA				LR	LR	03 19 40.3	
	comp=Z,124nm,18.2s,MS3.9,baz=248,slow=36						
LSA	**Lhasa**	**44.95**	**30**	P	**P**	**03 01 43.0**	**-2.0**
KMI	**Kunming**	**48.54**	**45**	P	**P**	**03 02 15.9**	**+2.7**
KMI				AP	pP	03 02 18.9	+0.2
KMI				XP	sP	03 02 20.3	-0.6
KMI				PP	PP	03 04 08.9	+2.7
KMI				S	**S**	**03 09 16.8**	**+2.7**
KMI				SS	SS	03 12 43.5	-1.0
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6						
KMI				AMB	AMB		
	comp=Z,29nm,3.6s						
KMI				LR	LR		
	comp=N,181nm,19.6s,MS4.1						
KMI				LR	LR		
	comp=E,149nm,24.0s,MS4.1						
KMI				LR	LR		
	comp=Z,110nm,25.8s,MS3.7						
AML	**Almayashu**	**51.35**	**6**	eP	**P**	**03 02 34.3**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9						
AAK	**Ala-Archa**	**51.94**	**7**	eP	**P**	**03 02 38.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**51.94**	**7**	eP	**P**	**03 02 38.3**	**-0.3**
	comp=Z,4.6nm,0.8s,mb4.5						
GYA	**Guiyang**	**52.13**	**46**	P	**P**	**03 02 41.6**	**+1.2**
GYA				PCP	PcP	03 03 52.4	+0.2
GYA				PP	PP	03 04 40.3	+1.4
GYA				SCP	ScP	03 07 48.9	+0.3
GYA				S	**S**	**03 10 04.6**	**+0.5**
GYA				SS	SS	03 13 39.6	-2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,460nm,18.8s,MS4.7						
GYA				LR	LR		
	comp=E,440nm,16.7s,MS4.7						
GYA				LR	LR		
	comp=Z,460nm,19.8s,MS4.5						
KAPI	**Kappang**	**52.25**	**89**	LR	LR	03 21 07.3	
	comp=Z,127nm,21.5s,MS3.9,baz=222,slow=32						
TKM2	**Tokmak 2**	**52.36**	**8**	eP	**P**	**03 02 41.3**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**52.36**	**8**	eP	**P**	**03 02 41.3**	**-0.4**
	comp=Z,7.4nm,0.8s,mb4.7						
CD2	**Chengdu**	**53.03**	**40**	P	**P**	**03 02 46.3**	**-0.6**
CD2				AP	pP	03 02 50.3	-2.2
CD2				XP	sP	03 02 52.1	-2.6
CD2				PCP	PcP	03 03 54.3	-1.2
CD2				PP	PP	03 04 47.5	+0.6
CD2				PCS	PcS	03 07 51.8	-2.5
CD2				S	**S**	**03 10 14.4**	**-1.8**
CD2				SS	SS	03 13 52.4	-3.4
CD2				AMB	AMB		
	comp=Z,12nm,0.5s,mb5.1						
CD2				AMB	AMB		
	comp=Z,150nm,5.4s						
CD2				LR	LR		
	comp=N,240nm,5.3s						
CD2				LR	LR		
	comp=Z,210nm,5.1s						
GNI	**Garni**	**53.26**	**339**	⇑iP	**P**	**03 02 47.8**	**-0.7**
GNI				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ	**Urumqi**	**55.88**	**18**	eP	**P**	**03 03 08.8**	**+1.4**
WMQ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,216nm,4.5s						
WMQ				LR	LR		
	comp=N,217nm,21.0s,MS4.5						
WMQ				LR	LR		
	comp=E,412nm,24.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,193nm,26.0s,MS4.1						
LZH	**Lanzhou**	**56.66**	**35**	eP	**P**	**03 03 14.5**	**+1.3**
LZH				AP	pP	03 03 17.8	-1.0
LZH				XP	sP	03 03 21.3	+0.4
LZH				PP	PP	03 05 22.3	+2.9
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,126nm,6.5s						
LZH				LR	LR		
	comp=N,405nm,16.3s						
LZH				LR	LR		
	comp=Z,597nm,18.2s,MS4.7						
GTA	**Gaotai**	**56.98**	**30**	eP	**P**	**03 03 15.3**	**-0.1**
GTA				AP	pP	03 03 19.6	-1.4
GTA				XP	sP	03 03 22.5	-0.6
GTA				PP	PP	03 05 23.1	+0.9
GTA				S	**S**	**03 11 04.6**	**-4.3**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,133nm,6.6s						
GTA				LR	LR		
	comp=N,161nm,13.4s,MS4.4						
GTA				LR	LR		
	comp=E,183nm,16.4s,MS4.4						
GTA				LR	LR		
	comp=Z,202nm,17.6s,MS4.3						
MK31	**Makanchi Array**	**57.27**	**12**	eP	**P**	**03 03 16.0**	**-1.2**
MKAR	**Makanchi Array**	**57.27**	**12**	P	**P**	**03 03 15.4**	**-1.8**
	comp=Z,1.1nm,0.6s,mb4.1,baz=185,slow=7.2,SNR=10						
MKAR				LR	LR	03 25 39.8	
	comp=Z,122nm,20.4s,MS4.0,baz=177,slow=34						
FITZ	**Fitzroy Crossi**	**57.27**	**106**	eP	**P**	**03 03 18.2**	**+0.3**
BRTR	**Keskin Array B**	**57.72**	**330**	P	**P**	**03 03 19.6**	**-1.0**
	comp=Z,1.5nm,0.9s,mb4.0,baz=140,slow=9.7,SNR=6.5						
BRTR				LR	LR	03 27 13.4	
	comp=Z,92nm,18.3s,MS3.9,baz=133,slow=35						
BRTR	**Keskin Array B**	**57.72**	**330**	i P	**P**	**03 03 20.7**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
XAN	**Xi'an**	**58.37**	**40**	P	**P**	**03 03 26.6**	**+1.4**
XAN				AP	pP	03 03 31.1	+0.2
XAN				PP	PP	03 05 36.6	+1.9
XAN				S	**S**	**03 11 29.8**	**+2.5**
XAN				SCS	ScS	03 13 15.8	+1.3
XAN				SS	SS	03 15 23.5	+3.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
XAN				AMB	AMB		
	comp=Z,18nm,15.1s						
XAN				LR	LR		
	comp=N,26nm,21.0s,MS3.6						
XAN				LR	LR		
	comp=E,41nm,16.1s,MS3.6						
XAN				LR	LR		
	comp=Z,76nm,19.8s,MS3.8						
MAW	**Mawson**	**58.47**	**182**	LR	LR	03 22 05.8	
	comp=Z,156nm,21.6s,MS4.1,baz=327,slow=29						
DAV	**Davao City (W)**	**60.33**	**77**	LR	LR	03 28 48.5	
	comp=Z,84nm,20.0s,MS3.9,baz=345,slow=35						
KURK	**Kurchatov**	**60.41**	**8**	LR	LR	03 28 11.9	
	comp=Z,50nm,19.2s,MS3.7,baz=240,slow=35						
KURK	**Kurchatov**	**60.41**	**8**	⇑iP	**P**	**03 03 37.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,15nm,2.5s,mb4.6						
KURK	**Kurchatov**	**60.41**	**8**	eP	**P**	**03 03 38.0**	**-1.0**
	comp=Z,8.0nm,0.8s,mb4.8						
BVAR	**Borovoye Array**	**61.97**	**2**	LR	LR	03 26 41.6	
	comp=Z,188nm,21.5s,MS4.2,baz=4.8,slow=32						
NJ2	**Nanjing**	**64.07**	**48**	eP	**P**	**03 04 05.3**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
HVS	**Khovu-Aksy**	**64.25**	**18**	⇓iP	**P**	**03 04 03.2**	**-1.5**
HVS				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
HHC	**Hu-ho-hao-te**	**64.33**	**36**	eP	**P**	**03 04 06.8**	**+1.3**
HHC				AP	pP	03 04 11.3	+0.1
HHC				PCP	PcP	03 04 42.0	+2.0
HHC				PP	PP	03 06 29.8	+2.5
HHC				PCS		03 08 42.0	
HHC				eS	**S**	**03 12 42.8**	**-0.2**
HHC				XS	sS	03 12 51.0	-1.3
HHC				SCS	ScS	03 13 57.3	-1.7
HHC				SS	SS	03 16 54.8	+1.6
HHC				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,132nm,5.0s						
HHC				LR	LR		
	comp=N,162nm,16.7s,MS4.3						
HHC				LR	LR		
	comp=E,107nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=Z,111nm,15.5s,MS4.2						
ZAA0	**Zalesovo Array**	**64.58**	**11**	eP	**P**	**03 04 06.5**	**-0.2**
ZALV	**Zalesovo Beam**	**64.58**	**11**	P	**P**	**03 04 05.1**	**-1.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=197,slow=7.3,SNR=6.1						
ZALV				LR	LR	03 29 01.5	
	comp=Z,62nm,18.3s,MS3.8,baz=161,slow=33						
ZALV	**Zalesovo Beam**	**64.58**	**11**	P	**P**	**03 04 05.1**	**-1.6**
ZALV				LR	LR	03 29 01.5	
ASAR	**Alice Springs**	**65.08**	**112**	P	**P**	**03 04 10.3**	**-0.5**
	comp=Z,3.9nm,0.9s,mb4.5,baz=280,slow=6.6,SNR=18						
NVS	**Novosibirsk**	**65.13**	**10**	eP	**P**	**03 04 04.3**	**-6.1**
WRA	**Warramunga Arr**	**65.50**	**108**	P	**P**	**03 04 12.6**	**-0.9**
	comp=Z,5.4nm,0.9s,mb4.6,baz=278,slow=5.9,SNR=24						
WRA				LR	LR	03 29 25.1	
	comp=Z,206nm,20.5s,MS4.3,baz=275,slow=33						
WRAB	**Tennant Creek**	**65.51**	**108**	⇑iP	**P**	**03 04 12.4**	**-1.2**
WRAB	**Tennant Creek**	**65.51**	**108**	eP	**P**	**03 04 13.5**	**-0.1**
	comp=Z,9.2nm,0.8s,mb4.9						
ARU	**Arti**	**65.71**	**355**	c iP	**P**	**03 04 12.9**	**-1.2**
ARU				eS	S	03 12 58.2	-1.1
ARU				eSS	SS	03 17 09.2	-4.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
SONM	**Songino Array**	**66.46**	**28**	P	**P**	**03 04 19.3**	**+0.1**
	comp=Z,3.2nm,0.8s,mb4.4,baz=216,slow=6.6,SNR=24						
SONM				LR	LR	03 32 59.6	
	comp=Z,130nm,19.0s,MS4.2,baz=178,slow=36						
BJI	**Beijing**	**66.62**	**39**	P	**P**	**03 04 20.8**	**+0.5**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.0						
ULN	**Ulaanbaatar**	**66.79**	**28**	⇑iP	**P**	**03 04 20.8**	**-0.4**
AKASG	**Malin Array Be**	**68.09**	**335**	P	**P**	**03 04 29.4**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.1,baz=135,slow=5.5,SNR=7.3						
AKASG				LR	LR	03 31 43.2	
	comp=Z,71nm,21.0s,MS3.9,baz=335,slow=34						
TORD	**Torodi Ar. Bea**	**68.73**	**288**	P	**P**	**03 04 32.7**	**-1.4**
	comp=Z,1.4nm,1.2s,mb3.8,baz=151,slow=3.4,SNR=4.9						
TORD				LR	LR	03 32 30.2	
	comp=Z,198nm,18.6s,MS4.4,baz=115,slow=34						
TORD	**Torodi Ar. Bea**	**68.73**	**288**	P	**P**	**03 04 32.7**	**-1.4**
TORD				LR	LR	03 32 30.2	
KEST	**Kesra**	**70.39**	**313**	LR	LR	03 34 28.4	
	comp=Z,32nm,21.6s,MS3.5,baz=318,slow=35						
STKA	**Stephens Creek**	**71.99**	**121**	P	**P**	**03 04 51.5**	**-2.3**
	comp=Z,2.6nm,1.0s,mb4.1,baz=333,slow=19,SNR=3.4						
KLMR	**Klimovskoe**	**73.11**	**346**	eP	**P**	**03 04 57.3**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
KSRS	**Korea Array**	**73.19**	**46**	P	**P**	**03 04 59.7**	**-1.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=243,slow=6.1,SNR=3.5						
KSRS				LR	LR	03 35 59.0	
	comp=Z,80nm,19.0s,MS4.0,baz=58,slow=35						
DBIC	**Dimbokro**	**73.52**	**280**	LR	LR	03 34 12.7	
	comp=Z,91nm,19.9s,MS4.1,baz=79,slow=33						
CN2	**Changchun**	**74.46**	**40**	eP	**P**	**03 05 07.5**	**-0.6**
CN2				eXP	sP	03 05 14.3	-1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
SNAA	**Sanae**	**75.17**	**198**	⇑iP	**P**	**03 05 17.2**	**+5.5**
CLL	**Collm**	**76.13**	**328**	eP	**P**	**03 05 25.0**	**+7.5**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
CLL	**Collm**	**76.13**	**328**	e(sP)	sP	03 05 24.0	-1.4
	comp=Z,5.0nm,1.1s						
CLL	**Collm**	**76.13**	**328**	e(sP)	sP	03 05 24.0	-1.4
VNA2	**Neumayer--Watz**	**76.41**	**199**	eP	**P**	**03 05 19.3**	**+0.4**
VNA2				e		03 05 22.0	
VNA2				e	pP	03 05 24.3	-0.3
VNA2				e		03 05 27.8	
VNA2				e		03 05 31.5	
VNA2				e		03 05 35.8	
CTA	**Charters Tower**	**76.68**	**109**	LR	LR	03 36 47.5	
	comp=Z,198nm,20.0s,MS4.4,baz=120,slow=34						
VNA3	**Neumayer Olymp**	**77.20**	**199**	eP	**P**	**03 05 23.4**	**+0.1**
VNA3				e		03 05 26.0	
VNA3				e	pP	03 05 28.4	-0.7
VNA3				e		03 05 31.3	
VNA3				e		03 05 35.0	
VNA3				e		03 05 40.6	
MDJ	**Mudanjiang**	**77.48**	**40**	P	**P**	**03 05 28.5**	**+3.2**
MDJ				S	S	03 15 21.0	+5.5
MDJ				SS	SS	03 20 21.0	+6.0
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,121nm,3.6s						
MDJ				LR	LR		
	comp=N,65nm,23.5s,MS4.0						
MDJ				LR	LR		
	comp=E,47nm,22.7s,MS4.0						
MDJ				LR	LR		
	comp=Z,44nm,21.2s,MS3.8						
PMG	**Port Moresby**	**78.70**	**98**	⇑iP	**P**	**03 05 32.6**	**-0.2**
MDT	**Midelt**	**79.97**	**306**	LR	LR	03 41 16.2	
	comp=Z,179nm,19.0s,MS4.4,baz=111,slow=36						
MJAR	**Matsushiro Arr**	**80.46**	**51**	P	**P**	**03 05 41.2**	**-0.6**
	comp=Z,2.1nm,0.8s,mb4.1,baz=255,slow=8.6,SNR=3.8						
ESDC	**Sonseca Array**	**81.63**	**312**	P	**P**	**03 05 49.0**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=101,slow=3.9,SNR=5.5						
VNDA	**Vanda**	**82.16**	**167**	LR	LR	03 38 15.5	
	comp=Z,102nm,18.2s,MS4.2,baz=88,slow=33						
ARCES	**ARCESS Array B**	**83.59**	**346**	P	**P**	**03 05 57.8**	**+0.3**
	comp=Z,7.7nm,0.8s,mb4.9,baz=132,slow=1.8,SNR=7.0						
YAK	**Yakutsk**	**85.62**	**25**	⇑iP	**P**	**03 06 10.3**	**+2.3**
YAK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.5						
TIXI	**Tiksi**	**90.05**	**16**	⇑iP	**P**	**03 06 28.7**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,100nm,23.0s,MS4.2						
PETK	**Petropavlovsk-**	**97.51**	**37**	LR	LR	03 54 51.8	
	comp=Z,71nm,18.4s,MS4.2,baz=85,slow=38						
YKA	**Yellowknife Ar**	**126.72**	**1**	PKP	PKPdf	03 12 31.5	-1.4
	comp=Z,0.8nm,0.8s,baz=356,slow=2.3,SNR=12						
PDAR	**Pinedale Array**	**146.38**	**356**	PKPbc	PKPbc	03 13 11.8	+0.9
	comp=Z,3.6nm,1.1s,baz=22,slow=1.6,SNR=8.0						
NVAR	**Mina Array Bea**	**150.41**	**9**	PKPbc	PKPbc	03 13 22.8	+1.1
	comp=Z,4.4nm,0.9s,baz=242,slow=1.6,SNR=15						
TXAR	**Lajitas Array**	**158.16**	**338**	PKPab	PKPab	03 14 02.5	+1.5
	comp=Z,1.6nm,0.8s,baz=48,slow=3.6,SNR=12						

IDC 17 03:04:07.5±17.0**, 8.39S**×**118.45E, h0**km**, mb3.8**/2**, mb1 3.8**/3**, mb1mx3.4**/17**, mbtmp3.6**/3**, ML3.5**/1**, Error ellipse: s-maj=311.7km s-min=183.1km az=180.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.19**	**128**	P	Pn	03 08 32.6	-1.3
	0.1nm,0.3s,baz=301,slow=12,SNR=9.7						
ASAR	**Alice Springs**	**21.21**	**138**	P	P	03 08 55.7	+0.7
	1.8nm,0.6s,baz=313,slow=9.0,SNR=22						
STKA	**Stephens Creek**	**31.77**	**141**	P	P	03 10 33.4	-0.2
	0.8nm,0.4s,baz=312,slow=14,SNR=4.2						

IDC 17 03:14:12.9±1.6, 55.50N×166.37E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/25, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=30.5km s-min=17.8km az=26.0
ISCJB 17 03:14:16.6±3.7, 55.1N±0.4×166.4E±0.1, h50km±49km, mb3.3/2, Error ellipse: s-maj=60.3km s-min=10.2km az=3.2
ISC 17 03:14:17.8±3.4**, 55.3N**±0.4×**166.5E**±0.1**, h38**km±48km**, n4, σ0.13**/6**, mb3.3**/2**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**4.61**	**119**	Pn	**Pn**	**03 15 24.8**	**-0.1**
	1.0nm,0.3s,baz=329,slow=5.9,SNR=7.4						
FX1				Sn	**Sn**	**03 16 17.2**	**+0.1**
	0.6nm,0.3s,baz=253,slow=19,SNR=4.4						
PETK	**Petropavlovsk-**	**5.59**	**251**	Pn	**Pn**	**03 15 38.4**	**+0.1**
	0.5nm,0.3s,baz=74,slow=19,SNR=7.3						
PETK				Sn	**Sn**	**03 16 41.1**	**0.0**
	0.2nm,0.3s,baz=101,slow=19,SNR=2.8						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**38.98**	**46**	P	**P**	**03 21 39.8**	**0.0**
	0.2nm,0.7s,mb3.0,baz=297,slow=8.1,SNR=3.9						
TXAR	**Lajitas Array**	**66.37**	**72**	P	**P**	**03 25 02.5**	**0.0**
	0.4nm,0.6s,mb3.6,baz=288,slow=3.2,SNR=5.9						

ISCJB 17 03:20:35.0±1.6, 6.91S±0.10×155.60E±0.06, h99km±16km, mb4.0/17, Error ellipse: s-maj=16.5km s-min=10.0km az=169.0
IDC 17 03:20:36.2±2.2, 6.90S×155.61E, h95km±20km, mb3.9/13, mb1 4.0/16, mb1mx3.9/22, mbtmp3.9/16, MS3.3/3, Ms1 3.3/3, ms1mx3.0/20, Error ellipse: s-maj=17.1km s-min=15.0km az=165.0
NEIC 17 03:20:36.0±1.0, 6.88S×155.61E, h96km±9km, mb4.2/6, Error ellipse: s-maj=11.0km s-min=7.9km az=146.0
ISC 17 03:20:36.4±1.3**, 6.90S**±0.10×**155.60E**±0.06**, h98**km±14km**, n41, σ0.61**/31**, mb4.0**/17**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.99**	**121**	P	**Pn**	**03 21 48.8**	**-0.2**
	38nm,0.3s,baz=214,slow=7.0,SNR=8.1						
HNR				S	**Sn**	**03 22 45.8**	**+0.4**
	50nm,0.3s,baz=170,slow=20,SNR=4.2						
HNR				LR	LR	03 23 44.7	
	comp=Z,293nm,18.9s,baz=176,slow=38						
PMG	**Port Moresby**	**8.71**	**253**	P	**Pn**	**03 22 40.2**	**+0.5**
	3.7nm,0.3s,baz=54,slow=10,SNR=17						
PMG				LR	LR	03 25 51.2	
	comp=Z,195nm,19.6s,baz=38,slow=36						
PMG	**Port Moresby**	**8.71**	**253**	ePn	**Pn**	**03 22 38.3**	**-1.4**
PMG				LR	LR	03 25 51.2	
COEN	**Coen**	**14.08**	**239**	eP	**Pn**	**03 23 51.4**	**-0.1**
	5.2nm,0.7s						
CTA	**Charters Tower**	**15.93**	**214**	eP	**Pn**	**03 24 16.1**	**+1.1**
	3.6nm,0.8s						
CTA	**Charters Tower**	**15.93**	**214**	P	**Pn**	**03 24 15.0**	**-0.1**
	0.2nm,0.3s,baz=52,slow=11,SNR=4.5						
CTAO	**Charters Tower**	**15.93**	**214**	eP	**Pn**	**03 24 16.3**	**+1.3**
	7.3nm,1.3s						
KAKA	**Kakadu**	**23.53**	**254**	eP	x	03 25 16.7	
	4.8nm,0.4s						
WRAB	**Tennant Creek**	**24.35**	**236**	eP	**P**	**03 25 46.0**	**+0.7**
	14nm,1.0s,mb4.2						
WB2	**Warramunga Arr**	**24.35**	**236**	eP	**P**	**03 25 45.4**	**+0.1**
WRA	**Warramunga Arr**	**24.36**	**236**	P	**P**	**03 25 45.7**	**+0.3**
	3.3nm,0.6s,mb3.9,baz=62,slow=10,SNR=42						
WRA				PcP	PcP	03 29 23.3	+0.6
	0.8nm,0.4s,baz=63,slow=2.8,SNR=8.9						
CMSA	**Cobar Meteorol**	**26.20**	**199**	eP	**P**	**03 26 01.2**	**-0.8**
	4.8nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**26.68**	**229**	P	**P**	**03 26 06.0**	**-0.5**
	1.2nm,0.7s,mb3.6,baz=59,slow=9.6,SNR=12						
ASAR				PcP	PcP	03 29 28.7	+0.8
	1.1nm,0.8s,baz=57,slow=3.0,SNR=5.9						
STKA	**Stephens Creek**	**28.07**	**206**	eP	Px	03 26 29.2	
	2.8nm,1.0s						
STKA	**Stephens Creek**	**28.07**	**206**	P	**P**	**03 26 17.9**	**-0.8**
	2.2nm,0.9s,mb3.7,baz=343,slow=17,SNR=2.5						
STKA				PcP	PcP	03 29 31.7	+0.6
	2.2nm,0.9s,baz=32,slow=9.5,SNR=2.6						
STKA	**Stephens Creek**	**28.07**	**206**	P	**P**	**03 26 17.9**	**-0.8**
STKA				PcP	PcP	03 29 31.7	+0.6
FITZ	**Fitzroy Crossi**	**31.24**	**246**	eP	**P**	**03 26 46.3**	**-0.6**
	12nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**31.24**	**246**	eP	**P**	**03 26 46.9**	**-0.1**
	5.0nm,0.7s,mb4.3						
MBWA	**Marble Bar**	**37.45**	**244**	eP	**P**	**03 27 40.5**	**-0.1**
	3.7nm,0.7s,mb4.4						
NWAO	**Narrogin (SRO)**	**44.00**	**229**	LR	LR	03 46 26.2	
	comp=Z,45nm,20.6s,baz=251,slow=35						
MJAR	**Matsushiro Arr**	**46.19**	**341**	P	**P**	**03 28 51.0**	**-0.4**
	0.8nm,0.4s,mb3.8,baz=90,slow=0.7,SNR=4.8						
CMAR	**Chiang Mai Arr**	**61.28**	**295**	P	**P**	**03 30 42.3**	**+0.4**
	2.5nm,0.5s,mb4.5,baz=123,slow=5.3,SNR=11						
SONM	**Songino Array**	**69.58**	**327**	P	**P**	**03 31 36.2**	**+1.4**
	1.9nm,0.7s,mb4.0,baz=141,slow=6.1,SNR=14						
MKAR	**Makanchi Array**	**83.73**	**319**	P	**P**	**03 32 54.9**	**+0.4**
	1.9nm,0.6s,mb4.1,baz=102,slow=4.9,SNR=16						
MKAR	**Makanchi Array**	**83.73**	**319**	P	**P**	**03 32 54.9**	**+0.4**
ZALV	**Zalesovo Beam**	**84.44**	**326**	P	**P**	**03 32 58.0**	**+0.1**
	0.8nm,0.3s,mb4.0,baz=119,slow=5.2,SNR=4.4						
MAW	**Mawson**	**84.71**	**203**	P	**P**	**03 32 59.8**	**+0.7**
	1.7nm,0.5s,mb4.2,baz=111,slow=14,SNR=8.5						
KURK	**Kurchatov**	**87.13**	**322**	P	**P**	**03 33 11.5**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=96,slow=5.3,SNR=4.0						
KURK	**Kurchatov**	**87.13**	**322**	P	**P**	**03 33 11.5**	**+0.2**
INK	**Inuvik**	**89.42**	**21**	P	**P**	**03 33 20.6**	**-1.2**
	1.3nm,0.8s,mb4.0,baz=226,slow=8.2,SNR=6.5						
BVAR	**Borovoye Array**	**92.58**	**323**	P	**P**	**03 33 36.7**	**-0.1**
	0.3nm,0.4s,mb4.0,baz=108,slow=4.7,SNR=2.8						
YKA	**Yellowknife Ar**	**95.98**	**28**	P	**P**	**03 33 51.8**	**-0.3**
	0.4nm,0.5s,mb4.1,baz=267,slow=4.5,SNR=18						
YKA	**Yellowknife Ar**	**95.98**	**28**	P	**P**	**03 33 51.8**	**-0.4**
NB2	**NORSAR Subarra**	**119.81**	**341**	PKPdf	PKPdf	03 39 13.9	-1.0
	comp=Z,1.6nm,0.8s,baz=44,slow=1.8						
NOA	**NORSAR Array B**	**119.81**	**341**	PKP	PKPdf	03 39 13.6	-1.3
	comp=Z,1.1nm,0.8s,baz=46,slow=1.8,SNR=3.9						
NOA	**NORSAR Array B**	**119.81**	**341**	PKP	PKPdf	03 39 13.6	-1.3
GERES	**GERESS Array B**	**127.28**	**329**	PKP	PKPdf	03 39 29.8	+0.2
	comp=Z,1.2nm,0.8s,baz=70,slow=1.6,SNR=4.8						
MDT	**Midelt**	**148.33**	**327**	PKPbc	PKPbc	03 40 12.9	+1.0
	comp=Z,2.5nm,0.8s,baz=62,slow=4.7,SNR=6.4						
TORD	**Torodi Ar. Bea**	**153.58**	**286**	PKP	PKPdf	03 40 16.2	-0.7
	comp=Z,0.3nm,0.7s,baz=4.7,slow=2.1,SNR=2.9						
TORD				PKPbc	PKPbc	03 40 24.4	-0.2
	comp=Z,0.7nm,0.4s,baz=50,slow=2.1,SNR=24						
TORD				PKPab	PKPab	03 40 37.7	+0.1
	comp=Z,2.2nm,0.7s,baz=73,slow=3.7,SNR=13						
TORD	**Torodi Ar. Bea**	**153.58**	**286**	PKP	PKPdf	03 40 16.2	-0.7
TORD				PKPbc	PKPbc	03 40 24.4	-0.2
TORD				PKPab	PKPab	03 40 37.7	+0.1
DBIC	**Dimbokro**	**160.59**	**270**	PKPab	PKPab	03 41 08.6	+0.7
	comp=Z,1.1nm,0.4s,baz=67,slow=5.5,SNR=4.9						

MAN 17 03:57:34, 12.36N×123.78E, h23km, mb4.3, ML3.1, MS2.9, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.15**	**270**	⇓iP	Pb	03 57 41.8	+2.9
MMPH				i S	Sb	03 57 45.8	+3.6
CNP	**Catarman**	**0.88**	**80**	eP	Pb	03 57 49.3	-1.3
CNP				eS	Sb	03 58 02.4	+0.5
RCP	**Roxas**	**1.28**	**232**	⇓eP	Pn	03 57 55.6	-0.9
RCP				eS	Sn	03 58 13.6	+0.6
PVCP	**Virac**	**1.28**	**17**	eP	Pn	03 57 57.6	+1.0
PLP	**Palo**	**1.67**	**135**	⇑iP	Pn	03 58 01.9	+0.1
PLP				i S	Sn	03 58 24.2	+1.6
OTRP	**Odiongan**	**1.72**	**270**	eP	Pn	03 58 02.8	+0.3
OTRP				eS	Sn	03 58 24.5	+0.8
GQP	**Guinayangan**	**2.01**	**320**	eP	Pn	03 58 11.7	+5.2
GQP				eS	Sn	03 58 41.5	+10
GUIM	**Jordan**	**2.08**	**214**	eP	Pn	03 58 08.7	+1.3
GUIM				eS	Sn	03 58 32.8	+0.2
MSLP	**Maasin**	**2.45**	**154**	eP	Pn	03 58 14.5	+1.9
MSLP				eS	Sn	03 58 44.6	+2.7

CSEM 17 04:00:25.5±0.2, 39.02N×41.13E, h5km, MD3.1, Error ellipse: s-maj=7.0km s-min=5.4km az=140.0
ISCJB 17 04:00:26.6±0.7, 39.04N±0.03×41.08E±0.04, h4km±5km, Error ellipse: s-maj=5.5km s-min=4.2km az=15.5
DDA 17 04:00:26.5, 39.02N×41.07E, h8km±1km, Md3.3
ISK 17 04:00:26.2, 39.03N×41.06E, h6km, MD3.1
ISC 17 04:00:27.0±0.6**, 39.03N**±0.02×**41.08E**±0.04**, h4**km±5km**, n12, σ0.90**/22**, 2C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.09**	**143**	⇓iP	**Pg**	**04 00 28.9**	**0.0**
BNGL				i S	**Sg**	**04 00 31.0**	**+0.8**
EZM	**Erzurum**	**0.91**	**14**	PG	**Pg**	**04 00 43.7**	**-0.7**
EZM				eSG	**Sg**	**04 00 56.9**	**+0.8**
ERZM	**Erzurum**	**0.91**	**14**	⇓iP	**Pg**	**04 00 43.5**	**-0.9**
ERZM				i S	**Sg**	**04 00 57.7**	**+1.6**
TATV	**Tatvan**	**1.06**	**119**	eP	**Pg**	**04 00 45.9**	**-1.4**
TATV				i S	**Sg**	**04 01 00.8**	**-0.3**
BEST	**Besiri**	**1.14**	**172**	⇑iP	**Pg**	**04 00 48.4**	**-0.5**
BEST				eS	**Sg**	**04 01 04.8**	**+1.1**
PTK	**Pertek**	**1.32**	**265**	ePN	**Pn**	**04 00 50.9**	**-1.3**
PTK				eSN	**Sn**	**04 01 10.4**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**1.33**	**215**	*e*P	**Pn**	**04 00 52.0**	**-0.4**
DIYA				*i* S	**Sg**	**04 01 09.8**	**0.0**
TUTA	**Tutak**	**1.40**	**74**	*e*P	**Pn**	**04 00 51.0**	**-2.3**
TUTA				*i* S	**Sb**	**04 01 12.6**	**+0.7**
AGRB	**Hanur-Agry**	**1.58**	**69**	*e*PN	**Pn**	**04 00 55.2**	**-0.6**
AGRB				*e*SN	**Sn**	**04 01 17.4**	**+0.7**
MARD	**Mardin**	**1.73**	**188**	⇑*i*P	**Pn**	**04 00 57.6**	**-0.2**
MARD				*i* S	**Sn**	**04 01 21.3**	**+1.0**
GUMT	**Gumushane**	**1.89**	**320**	*e*PN	**Pn**	**04 01 00.7**	**+0.7**
URFA	**Urfa**	**2.38**	**229**	*e*PN	**Pn**	**04 01 07.3**	**+0.6**

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*NEIC **17** 04:12:25.7±0.6, 22.27N×143.79E, h35km, mb4.0/1, Error ellipse: s-maj=22.6km s-min=15.1km az=88.0*

IDC 17 04:12:45.6±6.4**, 22.14N×143.55E, h222**km±60km**, mb3.1**/8**, mb1 3.3**/8**, mb1mx3.2**/21**, mbtmp3.1**/8**, Error ellipse: s-maj=32.5km s-min=17.6km az=82.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.37**	**322**	P	P	04 17 06.0	+0.8
	1.3nm,0.4s,baz=149,slow=9.4,SNR=5.5						
SONM	**Songino Array**	**39.22**	**320**	P	P	04 19 52.1	-0.1
	0.2nm,0.4s,baz=122,slow=7.6,SNR=4.2						
WRAB	**Tennant Creek**	**42.77**	**193**	*e*P	P	04 20 21.5	+0.1
	4.0nm,1.2s						
WRA	**Warramunga Arr**	**42.78**	**193**	P	P	04 20 21.3	-0.2
	0.3nm,0.3s,baz=14,slow=9.0,SNR=14						
ZALV	**Zalesovo Beam**	**54.08**	**321**	P	P	04 21 46.0	-1.1
	0.4nm,0.3s,baz=96,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**54.65**	**312**	P	P	04 21 51.6	+0.2
	0.2nm,0.4s,baz=83,slow=10,SNR=6.8						
MKAR				PcP	PcP	04 22 52.0	+0.7
	0.2nm,0.4s,baz=57,slow=5.3,SNR=4.3						
YKA	**Yellowknife Ar**	**75.90**	**28**	P	P	04 24 06.8	-0.5
	0.4nm,0.5s,baz=292,slow=5.4,SNR=6.6						
YKA	**Yellowknife Ar**	**75.90**	**28**	P	P	04 24 06.8	-0.5
NVAR	**Mina Array Bea**	**82.60**	**52**	P	P	04 24 45.2	+1.1
	0.3nm,0.3s,baz=270,slow=5.4,SNR=2.9						
PDAR	**Pinedale Array**	**86.84**	**45**	P	P	04 25 05.7	+0.6
	0.3nm,0.7s,baz=339,slow=4.8,SNR=2.3						
TORD	**Torodi Ar. Bea**	**128.73**	**310**	PKP	PKPdf	04 31 27.4	+0.1
	0.7nm,1.1s,baz=34,slow=1.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**128.73**	**310**	PKP	PKPdf	04 31 27.4	+0.1

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*IDC **17** 04:37:34.7±1.8, 14.95S×168.11E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.1/17, mbtmp4.1/8, MS3.2/4, Ms1 3.2/4, ms1mx2.9/29, Error ellipse: s-maj=71.9km s-min=25.2km az=141.0*

*ISCJB **17** 04:37:37.3±0.7, 15.36S±0.07×168.2E±0.1, h33km, mb4.0/10, MS3.1/4, Error ellipse: s-maj=20.0km s-min=9.0km az=9.6*

*NEIC **17** 04:37:39.0±0.9, 15.25S×168.27E, h35km, mb4.1/2, Error ellipse: s-maj=27.6km s-min=16.2km az=122.0*

ISC 17 04:37:37.7±6.9**, 15.3S**±0.1×**168.3E**±0.2**, h26**km±47km**, n27, σ1.04**/17**, mb4.0**/10**, MS3.1**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.98**	**194**	*e*P	**Pn**	**04 39 17.3**	**-0.9**
DZM				*e*S	**Sn**	**04 40 36.4**	**-0.3**
DZM	**Mont Dzumac**	**6.98**	**194**	*e*Pn	**Pn**	**04 39 18.2**	**0.0**
	16nm,0.5s						
DZM				*e*Sn	**Sn**	**04 40 40.9**	**+4.2**
PMG	**Port Moresby**	**21.45**	**283**	LR	LR	04 49 31.8	
	comp=Z,52nm,20.8s,MS2.9,baz=53,slow=34						
CTA	**Charters Tower**	**21.53**	**254**	LR	LR	04 49 16.9	
	comp=Z,79nm,19.6s,MS3.1,baz=53,slow=33						
STKA	**Stephens Creek**	**29.40**	**231**	P	**P**	**04 43 41.5**	**+2.6**
	1.1nm,0.6s,mb3.7,baz=102,slow=19,SNR=3.4						
STKA				LR	LR	04 53 37.6	
	comp=Z,42nm,19.2s,MS3.1,baz=204,slow=33						
WRAB	**Tennant Creek**	**32.65**	**257**	*e*P	**P**	**04 44 06.3**	**-1.4**
	2.4nm,1.0s,mb4.1						
WRA	**Warramunga Arr**	**32.66**	**257**	P	**P**	**04 44 07.7**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=85,slow=8.7,SNR=10.0						
WRA				LR	LR	04 55 59.9	
	comp=Z,46nm,19.5s,MS3.2,baz=150,slow=34						
ASAR	**Alice Springs**	**33.41**	**250**	P	**P**	**04 44 14.4**	**+0.1**
	1.5nm,0.7s,mb4.1,baz=78,slow=8.8,SNR=15						
FITZ	**Fitzroy Crossi**	**40.89**	**260**	*e*P	**P**	**04 45 19.2**	**+1.3**
	2.7nm,0.6s,mb4.0						
SONM	**Songino Array**	**83.53**	**323**	P	**P**	**04 50 04.1**	**+0.9**
	1.3nm,0.8s,mb4.1,baz=144,slow=4.6,SNR=7.2						
NVAR	**Mina Array Bea**	**86.88**	**49**	P	**P**	**04 50 21.4**	**+1.1**
	0.6nm,0.7s,mb4.0,baz=248,slow=7.8,SNR=3.6						
VNA3	**Neumayer Olymp**	**93.68**	**181**	*e*	**P**	**04 50 50.9**	**-0.6**
VNA3				*e*	pP	04 50 59.3	-0.8
VNA3				*e*		04 51 01.2	
VNA2	**Neumayer--Watz**	**93.96**	**181**	*e*	**P**	**04 50 52.9**	**+0.1**
	baz=163,slow=2.2						
VNA2				*e*	pP	04 51 00.0	-1.3
VNA2				*e*	pP	04 51 01.7	+0.4
YKA	**Yellowknife Ar**	**97.58**	**27**	P	**P**	**04 51 09.2**	**-0.1**
	0.3nm,0.9s,mb3.8,baz=254,slow=4.6,SNR=5.6						
YKA	**Yellowknife Ar**	**97.58**	**27**	P	**P**	**04 51 09.2**	**-0.1**
MKAR	**Makanchi Array**	**98.28**	**316**	P	**P**	**04 51 11.4**	**-1.4**
	0.7nm,0.7s,mb4.3,baz=126,slow=4.4,SNR=5.3						
ZALV	**Zalesovo Beam**	**98.42**	**324**	P	**P**	**04 51 12.2**	**-1.1**
	0.3nm,0.3s,mb4.2,baz=91,slow=7.2,SNR=2.6						
FLN	**La Foliniere**	**145.36**	**347**	*e*PKP1	PKPbc	04 57 14.0	+0.9
CABF	**La Chapelle**	**145.41**	**338**	*e*PKP1	PKPbc	04 57 14.9	+1.6
	49nm,1.3s						
LDF	**La Druitiere**	**145.44**	**346**	*e*PKP1	PKPbc	04 57 14.0	+0.7
LOR	**Lormes**	**145.58**	**341**	*e*PKP1	PKPbc	04 57 15.1	+1.3
	12nm,0.9s						
GRR	**Gorron**	**145.80**	**347**	*e*PKP1	PKPbc	04 57 15.6	+1.2
	90nm,1.5s						
SSF	**Saint Saulge**	**145.88**	**341**	*e*PKP1	PKPbc	04 57 16.2	+1.5
	13nm,0.8s						
SMF	**Signal de Mont**	**146.14**	**341**	*e*PKP1	PKPbc	04 57 16.7	+1.2
AVF	**Avril sur Loir**	**146.16**	**341**	*e*PKP1	PKPbc	04 57 16.7	+1.1
BGF	**Bois d'Agland**	**146.53**	**342**	*e*PKP1	PKPbc	04 57 17.9	+1.2
TCF	**Toulx Ste Croi**	**146.96**	**342**	*e*PKP1	PKPbc	04 57 18.3	+0.3

IDC 17 04:43:11.6±4.8**, 12.80S×167.46E, h0**km**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.9**/17**, mbtmp4.1**/4**, Error ellipse: s-maj=128.8km s-min=47.8km az=117.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.41**	**227**	P	P	04 49 26.1	+0.4
	2.0nm,0.4s,baz=59,slow=10,SNR=6.6						
WRA	**Warramunga Arr**	**32.52**	**253**	P	P	04 49 44.4	0.0
	0.6nm,0.4s,baz=85,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**33.57**	**246**	P	P	04 49 53.4	-0.2
	1.4nm,0.3s,baz=75,slow=9.4,SNR=38						
MKAR	**Makanchi Array**	**95.94**	**317**	P	P	04 56 40.4	-0.1
	0.2nm,0.8s,baz=90,slow=5.2,SNR=6.4						

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*IDC **17** 05:09:38.0±0.7, 22.99S×70.17W, h33km±4km, mb4.2/11, mb1 4.3/15, mb1mx4.2/21, mbtmp4.1/15, ML3.9/4, MS3.5/8, Ms1 3.4/8, ms1mx3.3/22, Error ellipse: s-maj=16.1km s-min=10.9km az=178.0*

*ISCJB **17** 05:09:39.3±0.4, 23.05S±0.04×70.15W±0.05, h60km±3km, mb4.3/19, Error ellipse: s-maj=8.4km s-min=6.3km az=11.7*

*GUC **17** 05:09:40.0±0.7, 22.98S×70.17W, h52km±6km, ML4.6*

*NEIC **17** 05:09:40.0, 22.98S×70.17W, h52km, mb4.3/12, After GUC.*

ISC 17 05:09:40.4±0.4**, 23.02S**±0.04×**70.14W**±0.05**, h52**km±4km**, h57**km±1.8km**:pP-P, n57, σ1.10**/55**, mb4.3**/19**, MS3.5**/5**, 3C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.30**	**253**	*e*P	**Pn**	**05 09 49.4**	**-0.3**
MECH				*i* S	**Sn**	**05 09 56.2**	**-0.2**
MECH				AML	AML	05 09 57.8	
	comp=N,81μm,0.2s						
CEN1	**Los Morros**	**0.38**	**188**	⇑*i*P	**Pn**	**05 09 53.0**	**+2.6**
CEN1				*i* S	**Sn**	**05 10 02.4**	**+4.8**
CEN1				AML	AML	05 10 04.0	
	comp=E,27μm,0.5s						
MACH	**Maria Elena**	**0.89**	**23**	⇓*i*P	**Pn**	**05 09 56.8**	**+0.1**
MACH				*i* S	**Sn**	**05 10 09.3**	**+0.6**
TOCH	**Tocopilla**	**0.92**	**356**	⇓*i*P	**Pn**	**05 09 56.5**	**-0.6**
TOCH				*i* S	**Sn**	**05 10 08.8**	**-0.6**
TOCH				AML	AML	05 10 09.8	
	comp=E,39μm,0.5s						
PB04	**Plate Boundary**	**0.96**	**39**	⇑*i*P	**Pn**	**05 09 53.7**	**-3.9**
PB04				*i* S	**Sn**	**05 10 03.6**	**-6.7**
LVC	**Limon Verde**	**1.20**	**71**	Pg	**Pn**	**05 10 02.7**	**+1.8**
LVC				Lg		05 10 18.7	
	comp=E,3μm,0.3s,SNR=114						
LVC				LR	LR	05 10 34.1	
	comp=E,38μm,20.8s,baz=315,slow=46						
LVC	**Limon Verde**	**1.20**	**71**	Pg	**Pn**	**05 10 02.7**	**+1.8**
LVC				Lg		05 10 18.7	
LVC				LR	LR	05 10 34.1	
LVC	**Limon Verde**	**1.20**	**71**	⇓*i*P	**Pn**	**05 10 01.9**	**+1.0**
LVC				*i* S	**Sn**	**05 10 18.5**	**+2.4**
LVC				AML	AML	05 10 20.6	
	comp=N,14μm,0.4s						
PB01	**Plate Boundary**	**2.06**	**17**	⇑*i*P	**Pn**	**05 10 12.7**	**+0.2**
PB01				*i* S	**Sn**	**05 10 37.5**	**+0.5**
PB01				AML	AML	05 10 51.0	
	comp=E,7μm,0.3s						
ARE	**Arequipa**	**6.64**	**349**	⇓*i*P	**Pn**	**05 11 13.1**	**-2.3**
ARE				*i* S	**Sn**	**05 12 25.0**	**-4.8**
CFAA	**Coronel Fontan**	**8.72**	**169**	Pn	**Pn**	**05 11 42.6**	**-1.3**
	comp=E,0.3nm,0.3s,baz=347,slow=12,SNR=33						
CFAA				Sn	**Sn**	**05 13 29.4**	**+8.7**
	comp=E,0.3nm,0.3s,baz=143,slow=15,SNR=4.7						
SIV	**San Ignacio**	**11.04**	**52**	Pn	**Pn**	**05 12 13.5**	**-2.1**
	comp=E,2.4nm,0.3s,baz=239,slow=12,SNR=61						
SIV				LR	LR	05 17 03.4	
	comp=E,292nm,21.8s,baz=133,slow=40						
CPUP	**Villa Florida**	**12.11**	**108**	Pn	**Pn**	**05 12 29.1**	**-1.1**
	comp=E,0.5nm,0.3s,baz=270,slow=11,SNR=9.0						
CPUP				LR	LR	05 18 01.4	
	comp=E,179nm,21.0s,baz=268,slow=42						
CPUP	**Villa Florida**	**12.11**	**108**	*e*Pn	**Pn**	**05 12 30.1**	**0.0**
	comp=E,27nm,0.6s						
NNA	**Nana**	**12.69**	**329**	Sn	**Sn**	**05 14 49.8**	**-8.2**
	comp=E,3.5nm,0.3s,baz=189,slow=13,SNR=6.8						
NNA				LR	LR	05 17 15.3	
	comp=E,104nm,18.4s,baz=140,slow=36						
TRQA	**Tornquist**	**16.54**	**157**	*e*P	**Pn**	**05 13 27.1**	**-1.7**
	comp=E,56nm,0.9s						
ATAH	**Atahualpa**	**17.80**	**332**	P	**Pn**	**05 13 40.9**	**-3.5**
	comp=E,0.1nm,0.3s,baz=119,slow=10,SNR=1.9						
BDFB	**Brasilia**	**22.11**	**75**	P	**P**	**05 14 29.6**	**-1.9**
	comp=E,4.0nm,0.6s,mb4.0,baz=247,slow=16,SNR=14						
BDFB				LR	LR	05 24 31.4	
	comp=E,62nm,20.4s,MS3.0,baz=70,slow=40						
BDFB	**Brasilia**	**22.11**	**75**	*e*P	**P**	**05 14 30.3**	**-1.3**
	comp=E,5.2nm,0.6s,mb4.1						
OTAV	**Otavalo**	**24.49**	**340**	*e*P	**P**	**05 14 54.7**	**-0.1**
	comp=E,5.2nm,1.1s,mb3.9						
CAM4	**Nova Friburgo**	**25.44**	**94**	⇓*i*P	**P**	**05 15 02.8**	**-0.6**
CAM4				*i*		05 15 06.0	
ROSC	**El Rosal**	**28.00**	**351**	LR	LR	05 27 53.9	
	comp=E,41nm,18.7s,MS3.0,baz=182,slow=39						
USHA	**Ushuaia**	**31.80**	**178**	P	**P**	**05 15 59.8**	**+0.1**
	comp=E,5.1nm,0.7s,mb4.5,baz=319,slow=12,SNR=4.9						
RCBR	**Riachuelo**	**37.16**	**68**	*e*P	**P**	**05 16 46.1**	**-0.4**
	comp=E,18nm,0.8s,mb4.9						
VNA3	**Neumayer Olymp**	**59.02**	**161**	*e*	**P**	**05 19 35.0**	**+0.6**
VNA3				*e*	pP	05 19 50.7	+2.0
VNA3				*e*		05 19 56.2	
VNA3				*e*		05 20 05.7	
VNA1	**Neumayer--Stat**	**59.25**	**160**	*e*	**P**	**05 19 37.1**	**+1.1**
VNA1				*e*	pP	05 19 52.1	+1.7
VNA1				*e*		05 19 57.5	
VNA2	**Neumayer--Watz**	**59.61**	**160**	*e*	**P**	**05 19 39.2**	**+0.7**
	baz=290,slow=9.2						
VNA2				*e*	pP	05 19 53.3	+0.4
VNA2				*e*		05 19 59.9	
VNA2				*e*		05 20 08.3	
SNAA	**Sanae**	**61.23**	**161**	*e*P	**P**	**05 19 47.8**	**-1.8**
	comp=E,16nm,1.4s,mb5.0						
TXAR	**Lajitas Array**	**61.24**	**327**	P	**P**	**05 19 50.5**	**+0.3**
	comp=E,0.8nm,0.7s,mb4.0,baz=152,slow=8.7,SNR=9.0						
TXAR				sP	sP	05 20 03.7	-6.8
	comp=E,0.6nm,0.6s,baz=148,slow=8.0,SNR=6.6						
TXAR	**Lajitas Array**	**61.24**	**327**	P	**P**	**05 19 50.5**	**+0.3**
TXAR				sP	sP	05 20 03.7	-6.8
ANMO	**Albuquerque**	**67.16**	**328**	*e*P	**P**	**05 20 29.5**	**+0.7**
	comp=E,1.0nm,0.6s,mb4.0						
SDCO	**Great Sand Dun**	**68.98**	**331**	*e*P	**P**	**05 20 41.2**	**+1.1**
	comp=E,3.5nm,0.9s,mb4.3						
WUAZ	**Wupatki**	**70.10**	**325**	*e*P	**P**	**05 20 48.9**	**+1.8**
	comp=E,3.8nm,0.9s,mb4.3						
DBIC	**Dimbokro**	**70.26**	**73**	P	**P**	**05 20 47.9**	**-0.7**
	comp=E,9.1nm,0.6s,mb4.9,baz=214,slow=6.1,SNR=29						
DBIC				LR	LR	05 47 41.2	
	comp=E,38nm,19.6s,MS3.6,baz=272,slow=32						
DBIC	**Dimbokro**	**70.26**	**73**	*e*P	**P**	**05 20 47.9**	**-0.7**
	comp=E,8.4nm,0.6s,mb4.8						
PPT	**Papeete**	**73.87**	**257**	LR	LR	05 45 06.3	
	comp=E,104nm,19.3s,MS4.1,baz=133,slow=29						
PDAR	**Pinedale Array**	**74.86**	**331**	P	**P**	**05 21 16.0**	**+0.7**
	comp=E,0.3nm,0.5s,mb3.5,baz=130,slow=8.4,SNR=3.5						
PDAR				PcP	PcP	05 21 29.7	+0.7
	comp=E,0.3nm,0.5s,baz=131,slow=7.2,SNR=3.1						
NVAR	**Mina Array Bea**	**75.99**	**323**	P	**P**	**05 21 23.0**	**+1.1**
	comp=E,1.1nm,0.8s,mb3.8,baz=160,slow=5.0,SNR=5.5						
ULM	**Lac du Bonnet**	**76.42**	**343**	P	**P**	**05 21 23.0**	**-1.0**
	comp=E,1.2nm,0.4s,mb4.2,baz=166,slow=5.8,SNR=3.1						
HLID	**Hailey**	**77.73**	**329**	*e*P	**P**	**05 21 32.9**	**+1.4**
	comp=E,2.1nm,0.8s,mb4.1						
TOA0	**Torodi Ar. Sit**	**78.93**	**71**	*e*P	**P**	**05 21 38.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**78.93**	**71**	P	**P**	**05 21 38.4**	**-0.4**
	comp=E,16nm,0.7s,mb5.1,baz=256,slow=5.2,SNR=285						
TSUM	**Tsumeb**	**80.70**	**107**	*e*P	**P**	**05 21 49.1**	**+0.7**
	comp=E,3.7nm,0.8s,mb4.4						
MAW	**Mawson**	**83.21**	**164**	*e*P	**P**	**05 22 01.4**	**+0.7**
	comp=E,4.8nm,0.6s,mb4.7						
MAW	**Mawson**	**83.21**	**164**	P	**P**	**05 22 01.2**	**+0.5**
	comp=E,5.8nm,0.6s,mb4.8,baz=222,slow=7.4,SNR=17						
MAW	**Mawson**	**83.21**	**164**	*e*P	**P**	**05 22 00.9**	**+0.3**
	comp=E,1.2nm,0.5s,mb4.2						
BOSA	**Boshof**	**83.74**	**118**	P	**P**	**05 22 04.3**	**+0.1**
	comp=E,8.3nm,0.6s,mb5.0,baz=253,slow=3.8,SNR=22						
BOSA				sP	sP	05 22 19.4	-5.6
	comp=E,3.8nm,0.9s,baz=337,slow=0.4,SNR=2.1						
BOSA				LR	LR	05 54 39.8	
	comp=E,35nm,20.9s,MS3.7,baz=327,slow=32						
YKA	**Yellowknife Ar**	**92.24**	**341**	P	**P**	**05 22 43.3**	**-0.8**
	comp=E,0.6nm,0.7s,mb4.0,baz=138,slow=4.3,SNR=12						
YKA				sP	sP	05 22 57.9	-7.1
	comp=E,0.9nm,0.7s,baz=138,slow=4.2,SNR=9.7						
ASAR	**Alice Springs**	**128.05**	**208**	PKP	PKPdf	05 28 40.9	-0.3
	comp=E,0.4nm,0.6s,baz=128,slow=1.9,SNR=6.7						
ASAR				sPKP		05 28 55.9	
	comp=E,1.1nm,0.8s,baz=161,slow=2.9,SNR=5.5						
WRA	**Warramunga Arr**	**131.07**	**211**	PKP	PKPdf	05 28 47.4	+0.3
	comp=E,0.5nm,0.5s,baz=149,slow=1.6,SNR=15						
WRA				sPKP		05 29 01.7	
	comp=E,0.4nm,0.4s,baz=153,slow=1.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**143.80**	**25**	PKP	PKPdf	05 29 07.0	-2.4
	comp=E,1.4nm,0.6s,baz=311,slow=3.5,SNR=7.1						
AML	**Almayashu**	**144.40**	**49**	*e*PKPdf	PKPdf	05 29 10.9	+0.1
AAK	**Ala-Archa**	**144.77**	**48**	*e*PKPdf	PKPdf	05 29 11.9	+0.5
TKM2	**Tokmak 2**	**145.40**	**47**	*e*PKPdf	PKPdf	05 29 13.3	+0.8
MK31	**Makanchi Array**	**147.53**	**36**	*e*PKPbc	PKPbc	05 29 18.4	-0.2
MKAR	**Makanchi Array**	**147.53**	**36**	PKPbc	PKPbc	05 29 18.8	+0.2
	comp=E,2.5nm,0.7s,baz=318,slow=3.1,SNR=20						
SONM	**Songino Array**	**155.08**	**6**	PKPab	PKPab	05 29 52.4	+0.4
	comp=E,0.5nm,0.8s,baz=25,slow=3.9,SNR=3.6						

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*NIED **17** 05:26:00, 38.50N×140.20E, h110km, Mw3.8 Best double couple: M0 6.46000×10^14 NP1:φs 213.00000°, δ86.00000°, λ-92.00000°. NP2:φs 59.00000°, δ5.00000°, λ-64.00000°.*

*ISCJB **17** 05:26:35.8±0.3, 38.52N±0.06×140.21E±0.06, h130km±3km, mb4.0/18, Error ellipse: s-maj=10.5km s-min=6.4km az=141.4*

*JMA **17** 05:26:36.8±0.1, 38.49N×140.23E, h124km±1km, M3.6*

*IDC **17** 05:26:37.1±1.8, 38.52N×140.07E, h128km±17km, mb3.5/13, mb1 3.6/16, mb1mx3.5/26, mbtmp3.5/16, Error ellipse: s-maj=17.2km s-min=15.2km az=144.0*

*NEIC **17** 05:26:37.0±1.0, 38.57N×140.15E, h125km±11km, mb4.7/7, MW3.8(NIED), Error ellipse: s-maj=15.4km s-min=9.4km az=161.0*

ISC 17 05:26:36.9±0.3**, 38.52N**±0.05×**140.21E**±0.06**, h124**km±3km**, n40, σ0.64**/48**, mb4.2**/18**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYS	**Shirataka**	**0.32**	**200**	P	**Pn**	**05 26 54.5**	**+0.1**
JYS				*e*S	**Sn**	**05 27 07.9**	**+0.4**
JOU	**Okura**	**0.39**	**113**	P	**Pn**	**05 26 54.7**	**0.0**
JOU				*e*S	**Sn**	**05 27 08.5**	**+0.4**
JYA	**Atsumi**	**0.39**	**281**	P	**Pn**	**05 26 54.9**	**+0.2**
JYA				S	**Sn**	**05 27 08.5**	**+0.4**
JYK	**Kaneyama**	**0.41**	**17**	P	**Pn**	**05 26 54.9**	**+0.1**
JYK				S	**Sn**	**05 27 08.3**	**0.0**
JAW	**Awa shima**	**0.76**	**265**	P	**Pn**	**05 26 57.1**	**+0.1**
JMM	**Marumori**	**0.80**	**145**	P	**Pn**	**05 26 57.1**	**-0.3**
JMM				*e*S	**Sn**	**05 27 12.6**	**-0.4**
JIO	**Ouri**	**0.90**	**94**	P	**Pn**	**05 26 57.8**	**-0.5**
JIO				*e*S	**Sn**	**05 27 13.7**	**-0.8**
JMK	**Ichinoseki**	**0.90**	**61**	P	**Pn**	**05 26 58.2**	**-0.1**
JNS	**Sasagawa**	**0.99**	**225**	P	**Pn**	**05 26 59.0**	**-0.2**
JNS				*e*S	**Sn**	**05 27 15.6**	**-0.4**
JFT	**Otama**	**1.01**	**174**	P	**Pn**	**05 26 59.3**	**0.0**
JOM	**Ohasama**	**1.27**	**41**	P	**Pn**	**05 27 02.7**	**+0.7**
MAJO	**Matsushiro**	**2.54**	**219**	*e*Pn	**Pn**	**05 27 17.6**	**+0.4**
MAT	**Matsushiro**	**2.54**	**219**	P	**Pn**	**05 27 17.6**	**+0.3**
MAT				*e*S	**Sn**	**05 27 48.3**	**0.0**
MJAR	**Matsushiro Arr**	**2.54**	**219**	P	**Pn**	**05 27 17.6**	**+0.3**
	4.4nm,0.3s,baz=37,slow=12,SNR=21						
ASAJ	**Asahikawa**	**5.87**	**17**	P	**Pn**	**05 28 01.6**	**0.0**
	1.5nm,0.3s,baz=192,slow=20,SNR=3.8						
KSRS	**Korea Array**	**9.76**	**268**	P	**Pn**	**05 28 52.4**	**-1.5**
	0.3nm,0.3s,baz=98,slow=15,SNR=3.5						
SONM	**Songino Array**	**26.18**	**302**	P	**P**	**05 31 58.9**	**-0.6**
	1.0nm,0.4s,mb3.6,baz=111,slow=9.8,SNR=8.4						
ZALV	**Zalesovo Beam**	**40.21**	**311**	P	**P**	**05 33 59.5**	**-1.4**
	0.5nm,0.3s,mb3.8,baz=95,slow=5.6,SNR=5.6						
MKAR	**Makanchi Array**	**42.53**	**301**	P	**P**	**05 34 19.3**	**-0.6**
	0.5nm,0.5s,mb3.5,baz=83,slow=11,SNR=9.3						
KURK	**Kurchatov**	**44.27**	**307**	P	**P**	**05 34 34.0**	**+0.2**
	3.9nm,0.5s,mb4.4,baz=82,slow=8.2,SNR=11						
KURK	**Kurchatov**	**44.27**	**307**	*e*P	**P**	**05 34 32.8**	**-1.0**
	4.3nm,0.5s,mb4.4						
TAPN	**Taplejung**	**44.91**	**272**	*e*P	**P**	**05 34 39.6**	**+0.4**
JIRN	**Jiri**	**45.96**	**273**	*e*P	**P**	**05 34 48.8**	**+1.4**
	4.1nm,0.3s,mb4.6						
RAMN	**Ramite**	**45.97**	**272**	*e*P	**P**	**05 34 47.8**	**+0.3**
GUN	**Gumba**	**46.08**	**274**	*e*P	**P**	**05 34 48.7**	**+0.3**
KKN	**Kakani**	**46.61**	**274**	*e*P	**P**	**05 34 52.1**	**-0.4**
	10nm,0.5s,mb4.8						
KDAK	**Kodiak Island**	**46.65**	**43**	P	**P**	**05 34 52.0**	**-0.4**
	7.8nm,0.9s,mb4.5,baz=321,slow=6.5,SNR=3.1						
DMN	**Daman**	**46.83**	**274**	*e*P	**P**	**05 34 55.0**	**+0.8**
	5.7nm,0.3s,mb4.7						
GKN	**Gorkha**	**47.01**	**274**	*e*P	**P**	**05 34 56.6**	**+0.9**
	5.3nm,0.3s,mb4.8						
DANN	**Dangsing**	**47.54**	**275**	*e*P	**P**	**05 35 00.4**	**+0.7**
	16nm,0.4s,mb5.2						
KOLN	**Koldanda**	**47.93**	**275**	*e*P	**P**	**05 35 01.8**	**-1.0**
TKM2	**Tokmak 2**	**48.09**	**297**	*e*P	**P**	**05 35 04.7**	**+0.9**
	3.0nm,0.4s,mb4.5						
INK	**Inuvik**	**53.51**	**27**	P	**P**	**05 35 45.1**	**+1.1**
	0.3nm,0.4s,mb3.6,baz=284,slow=5.5,SNR=4.6						
ASAR	**Alice Springs**	**62.14**	**187**	P	**P**	**05 36 44.1**	**-0.5**
	1.4nm,0.8s,mb4.1,baz=11,slow=7.7,SNR=15						
ARCES	**ARCESS Array B**	**62.27**	**339**	P	**P**	**05 36 44.8**	**-0.3**
	6.2nm,1.0s,mb4.6,baz=46,slow=8.7,SNR=4.6						
YKA	**Yellowknife Ar**	**63.01**	**30**	P	**P**	**05 36 50.2**	**+0.1**
	0.1nm,0.7s,baz=306,slow=6.1,SNR=3.5						
NOA	**NORSAR Array B**	**72.45**	**337**	P	**P**	**05 37 48.3**	**-1.0**
	1.2nm,0.9s,mb3.7,baz=41,slow=5.9,SNR=2.7						
AKASG	**Malin Array Be**	**72.54**	**322**	P	**P**	**05 37 49.0**	**-1.0**
	0.5nm,0.3s,mb3.8,baz=45,slow=6.5,SNR=4.3						
NVAR	**Mina Array Bea**	**74.86**	**53**	P	**P**	**05 38 05.0**	**+1.2**
	0.4nm,0.6s,mb3.3,baz=300,slow=6.1,SNR=2.9						
BRTR	**Keskin Array B**	**77.16**	**311**	P	**P**	**05 38 16.7**	**0.0**
	0.4nm,0.4s,mb3.5,baz=68,slow=5.4,SNR=3.4						

IDC 17 05:29:27.8±10.0**, 23.81S×179.83W, h543**km±112km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/15**, mbtmp3.4**/4**, Error ellipse: s-maj=91.3km s-min=41.2km az=25.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.64**	**190**	P	P	05 32 33.3	-0.1
	1.1nm,0.3s,baz=28,slow=10,SNR=7.0						
URZ				S	S	05 35 04.7	-1.4
	0.2nm,0.3s,baz=77,slow=18,SNR=2.5						
STKA	**Stephens Creek**	**34.90**	**248**	P	P	05 35 34.8	+0.7
	2.8nm,0.9s,baz=313,slow=16,SNR=3.6						
RKT	**Rikitea**	**41.02**	**98**	*e*LR	LR	05 37 19.3	
	194nm,30.0s						
ASAR	**Alice Springs**	**42.20**	**260**	P	P	05 36 33.4	0.0
	2.4nm,0.5s,baz=99,slow=7.3,SNR=26						
WRA	**Warramunga Arr**	**42.57**	**266**	P	P	05 36 35.6	-0.7
	4.7nm,0.5s,baz=102,slow=8.3,SNR=79						
MKAR	**Makanchi Array**	**112.21**	**313**	PKiKP	PKiKP	05 47 01.9	+0.3
	0.2nm,0.4s,baz=127,slow=1.0,SNR=3.7						
AKASG	**Malin Array Be**	**144.98**	**327**	PKP	PKPdf	05 48 02.6	-0.4
	1.4nm,0.5s,baz=43,slow=4.2,SNR=8.1						
BRTR	**Keskin Array B**	**147.65**	**307**	PKPbc	PKPbc	05 48 10.5	-0.9
	0.3nm,0.4s,baz=114,slow=3.5,SNR=3.5						
BRTR				PKPab	PKPab	05 48 15.6	-0.1
	1.1nm,0.8s,baz=75,slow=3.0,SNR=4.9						

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*ISCJB **17** 05:42:35.9±0.8, 3.2S±0.5×102.9E±0.7, h308km±23km, mb3.4/6, Error ellipse: s-maj=132.8km s-min=13.6km az=144.9*

*IDC **17** 05:42:39.4±17.0, 2.79S×103.55E, h309km±164km, mb3.1/6, mb1 3.3/6, mb1mx3.0/19, mbtmp3.1/6, Error ellipse: s-maj=195.6km s-min=13.3km az=57.0*

*DJA **17** 05:42:48, 3.47S×98.76E, h10km, MLv4.1/2*

ISC 17 05:42:36.9±1.0**, 3.0S**±0.5×**103.3E**±0.8**, h292**km±35km**, n9, σ0.55**/10**, mb3.4**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.95**	**224**	P	**S**	**05 43 47.7**	**+0.4**
PDSI	**Padang**	**3.46**	**306**	P	**Pn**	**05 43 36.7**	**-0.1**
PDSI				S	Sx	05 44 11.6	
PPI	**Padang Panjang**	**3.79**	**311**	P	**Pn**	**05 43 40.2**	**-0.2**
PPI				S	**S**	**05 44 27.1**	**-4.1**
CMAR	**Chiang Mai Arr**	**21.70**	**349**	P	**P**	**05 47 05.6**	**+0.6**
	0.9nm,0.3s,mb3.6,baz=177,slow=9.7,SNR=6.3						
WRA	**Warramunga Arr**	**34.71**	**121**	P	**P**	**05 48 59.3**	**-0.8**
	0.7nm,0.5s,mb3.5,baz=304,slow=9.1,SNR=14						
ASAR	**Alice Springs**	**36.07**	**127**	P	**P**	**05 49 11.4**	**-0.2**
	1.1nm,0.5s,mb3.7,baz=299,slow=7.7,SNR=12						
STKA	**Stephens Creek**	**46.10**	**133**	P	**P**	**05 50 33.1**	**+0.5**
	1.4nm,0.5s,mb3.5,baz=324,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**52.88**	**342**	P	**P**	**05 51 22.7**	**-0.5**
	0.1nm,0.3s,mb2.6,baz=152,slow=9.0,SNR=6.9						
ZALV	**Zalesovo Beam**	**58.76**	**347**	P	**P**	**05 52 05.3**	**+0.7**
	0.5nm,0.4s,mb3.3,baz=156,slow=11,SNR=2.6						

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*IDC **17** 05:50:30.2±1.0, 8.19S×118.52E, h0km, mb4.0/5, mb1 4.1/8, mb1mx3.9/19, mbtmp3.9/8, ML4.0/3, MS2.9/3, Ms1 2.9/3, ms1mx2.7/32, Error ellipse: s-maj=40.9km s-min=18.4km az=61.0*

*ISCJB **17** 05:50:32.7±0.6, 8.22S±0.05×118.63E±0.07, h33km, mb4.0/6, Error ellipse: s-maj=10.2km s-min=6.5km az=164.4*

*NEIC **17** 05:50:35.2±0.6, 8.21S×118.62E, h35km, mb4.0/3, Error ellipse: s-maj=16.1km s-min=7.9km az=71.0*

*DJA **17** 05:50:36, 8.03S×118.56E, h105km, MLv4.4/5*

ISC 17 05:50:34.0±3.1**, 8.20S**±0.05×**118.62E**±0.08**, h29**km±25km**, n28, σ0.93**/32**, mb4.0**/6**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.21**	**131**	P	**Pn**	**05 51 13.3**	**+4.6**
KHKI	**Kahang-Kahang**	**2.98**	**267**	P	**Pn**	**05 51 18.5**	**-0.9**
KAPI	**Kappang**	**3.36**	**20**	Pn	**Pn**	**05 51 25.1**	**+0.6**
	26nm,0.3s,baz=186,slow=7.4,SNR=59						
KAPI				Sn	**Sn**	**05 52 02.2**	**-1.3**
	52nm,0.3s,baz=210,slow=17,SNR=17						
KAPI				LR	LR	05 53 01.2	
	comp=Z,159nm,20.0s,baz=169,slow=45						
KAPI	**Kappang**	**3.36**	**20**	Pn	**Pn**	**05 51 25.1**	**+0.6**
KAPI				Sn	**Sn**	**05 52 02.2**	**-1.3**
KAPI				LR	LR	05 53 01.2	
KAPI	**Kappang**	**3.36**	**20**	P	**Pn**	**05 51 24.9**	**+0.3**
IGBI	**Denpasar**	**3.49**	**260**	P	**Pn**	**05 51 32.2**	**+5.9**
BATI	**Baumata**	**5.36**	**112**	Pn	**Pn**	**05 51 52.9**	**+0.8**
	3.1nm,0.3s,baz=89,slow=6.2,SNR=2.9						
BATI				Sn	**Sn**	**05 53 07.0**	**+14**
	7.1nm,0.3s,baz=71,slow=21,SNR=2.2						
BATI				LR	LR	05 54 19.7	
	comp=Z,203nm,19.1s,baz=211,slow=42						
BATI	**Baumata**	**5.36**	**112**	P	**Pn**	**05 51 57.8**	**+5.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	30nm,0.8s,651nm0.1nm						
FITZ	Fitzroy Crossi	11.98	146	eP	Pn	05 53 23.9	+1.0
	23nm,0.8s						
FITZ				eS	Sn	05 55 33.1	-2.5
FITZ	Fitzroy Crossi	11.98	146	ePn	Pn	05 53 23.3	+0.4
FITZ	Fitzroy Crossi	11.98	146	P	Pn	05 53 23.5	+0.6
MBWA	Marble Bar	12.93	175	ePn	Pn	05 53 35.4	-0.5
MBWA				eSn	Sn	05 55 46.6	-12
KAKA	Kakadu	14.31	109	eP	x	05 53 31.1	
	10nm,0.6s						
WRA	Warramunga Arr	19.18	129	Pn	Pn	05 54 56.0	-0.5
	0.5nm,0.3s,baz=302,slow=13,SNR=23						
WRA				LR	LR	06 03 19.0	
	comp=Z,28nm,18.1s,baz=185,slow=40						
WRA	Warramunga Arr	19.18	129	Pn	Pn	05 54 56.0	-0.5
WRA				LR	LR	06 03 18.9	
WRAB	Tennant Creek	19.18	129	eP	Pn	05 54 56.0	-0.5
	13nm,1.2s						
WB2	Warramunga Arr	19.19	129	eP	Pn	05 54 56.4	-0.2
WB2				eS	Sn	05 58 23.2	-7.8
ASAR	Alice Springs	21.24	138	P	P	05 55 19.0	+1.2
	3.3nm,0.5s,mb3.9,baz=318,slow=9.2,SNR=32						
COEN	Coen	24.76	106	eP	P	05 55 54.7	+1.4
	4.8nm,0.7s,mb4.1						
COEN	Coen	24.76	106	eP	P	05 55 54.0	+0.6
	5.8nm,0.7s,mb4.2						
STKA	Stephens Creek	31.80	141	eP	P	05 56 57.6	+1.5
	2.1nm,0.5s,mb4.2						
STKA	Stephens Creek	31.80	141	P	P	05 56 57.2	+1.1
	2.7nm,0.6s,mb4.3,baz=311,slow=12,SNR=7.7						
STKA	Stephens Creek	31.80	141	eP	P	05 56 57.0	+0.8
	0.5nm,0.5s,mb3.6						
MKAR	Makanchi Array	63.58	333	P	P	06 01 02.5	+0.5
	0.4nm,0.5s,mb3.7,baz=148,slow=6.9,SNR=7.6						
MKAR	Makanchi Array	63.58	333	P	P	06 01 02.5	+0.5
ZALV	Zalesovo Beam	68.17	339	P	P	06 01 31.1	-0.2
	0.9nm,0.5s,mb4.1,baz=147,slow=6.3,SNR=4.6						
VNDA	Vanda	72.83	171	P	P	06 02 00.1	+0.5
	1.4nm,0.9s,mb3.9,baz=313,slow=12,SNR=5.5						
CPUP	Villa Florida	145.45	186	PKPbc	PKPbc	06 10 11.5	+1.5
	0.6nm,0.4s,baz=170,slow=3.4,SNR=5.8						

*IDC **17** 05:59:55.7±2.6, 424N×12697E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/31, Error ellipse: s-maj=332.6km s-min=17.3km az=66.0*

*NEIC **17** 06:00:01.1±0.9, 4.17N×12685E, h35km, mb3.9/4, Error ellipse: s-maj=78.9km s-min=11.6km az=70.0*

*ISCJB **17** 06:00:02.6±2.3, 42N±02×1268E±06, h68km±22km, mb3.8/9, Error ellipse: s-maj=106.5km s-min=13.0km az=159.4*

ISC 17 06:00:03.7±2.1**, 41N**±02×**1268E**±06**, h58**km±21km**, n17, σ0.84**/12**, mb3.9**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.17	338	LR	LR	06 02 19.8	
	comp=Z,222nm,18.6s,baz=357,slow=46						
BUKP	Musuan	4.11	336	eP	Pn	06 01 04.0	0.0
KAKA	Kakadu	17.63	161	eP	x	06 06 18.7	
	2.9nm,0.2s						
KAKA				eS	x	06 07 22.3	
FITZ	Fitzroy Crossi	22.10	183	eP	P	06 04 54.0	-0.2
	2.3nm,0.6s,mb3.8						
PMG	Port Moresby	24.36	124	LR	LR	06 14 11.9	
	comp=Z,47nm,20.8s,baz=284,slow=35						
WRAB	Tennant Creek	25.02	163	eP	P	06 05 22.9	+0.4
	3.8nm,0.7s,mb4.0						
WRA	Warramunga Arr	25.03	163	P	P	06 05 21.7	-0.9
	3.0nm,0.7s,mb3.9,baz=342,slow=10,SNR=18						
ASAR	Alice Springs	28.47	166	P	P	06 05 55.0	+1.6
	0.4nm,0.6s,mb3.2,baz=355,slow=7.3,SNR=6.2						
STKA	Stephens Creek	38.47	160	P	P	06 07 19.5	-0.6
	1.9nm,0.6s,mb4.0,baz=354,slow=11,SNR=5.4						
STKA	Stephens Creek	38.47	160	eP	P	06 07 19.1	-1.0
	0.8nm,0.9s,mb3.5						
MKAR	Makanchi Array	57.27	325	P	P	06 09 45.9	+0.5
	0.6nm,0.5s,mb3.9,baz=117,slow=8.5,SNR=5.9						
ZALV	Zalesovo Beam	60.27	333	P	P	06 10 07.2	+1.2
	0.4nm,0.3s,mb4.0,baz=163,slow=5.4,SNR=2.7						
KURK	Kurchatov	61.44	327	P	P	06 10 13.1	-1.0
	1.6nm,0.6s,mb4.3,baz=128,slow=6.4,SNR=5.3						
KURK	Kurchatov	61.44	327	eP	P	06 10 13.1	-1.0
	2.4nm,0.3s,mb4.8						
BVAR	Borovoye Array	67.03	327	P	P	06 10 49.9	-0.7
	0.8nm,0.7s,mb3.9,baz=116,slow=9.8,SNR=3.3						
TORD	Torodi Ar. Bea	122.84	288	PKP	PKPdf	06 18 53.9	-0.4
	0.5nm,1.0s,baz=90,slow=1.4,SNR=2.6						
TORD	Torodi Ar. Bea	122.84	288	PKP	PKPdf	06 18 53.9	-0.4

MAN 17 06:00:54, 1245N×12371E, h19km, mb4.4, ML3.2, MS3.0, 1C-3D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.12	222⇑	iP	Pg	06 01 00.2	+2.1
MMPH				iS	Sg	06 01 02.1	+1.3
CNP	Catarman	0.94	86	eP	Pb	06 01 11.2	-0.5
CNP				eS	Sb	06 01 28.8	+5.1
PVCP	Virac	1.22	21	eP	Pn	06 01 15.8	-0.2
PVCP				eS	Sb	06 01 32.7	+0.9
RCP	Roxas	1.29	227⇓	eP	Pn	06 01 17.0	-0.1
RCP				eS	Sn	06 01 34.4	+0.5
AUQP	San Andres	1.33	311	eP	Pn	06 01 18.9	+1.3
AUQP				eS	Sn	06 01 41.6	+6.9
OTRP	Odiongan	1.65	267	eP	Pn	06 01 20.5	-1.5
OTRP				eS	Sn	06 01 44.3	+1.6
PLP	Palo	1.78	136⇓	eP	Pn	06 01 25.0	+1.2
PLP				eS	Sn	06 01 47.8	+1.8
GQP	Guinayangan	1.90	320⇓	eP	Pn	06 01 25.9	+0.6
GQP				eS	Sn	06 01 50.7	+1.9
GUIM	Jordan	2.12	211	eP	Pn	06 01 27.9	-0.6
LLP	Lapu-Lapu	2.14	173	eP	Pn	06 01 29.9	+1.3
LLP				eS	Sn	06 01 57.6	+2.9
BUKP	Musuan	4.74	164	eS	Pn	06 02 09.7	+5.2

IDC 17 06:03:30.3±3.4**, 2956N×8457E, h0km, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.4**/23**, mbtmp3.5**/5**, ML3.4**/1**, Error ellipse: s-maj=91.3km s-min=39.7km az=118.0, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.30	355	P	Pn	06 07 31.3	-1.9
	0.1nm,0.3s,baz=179,slow=12,SNR=3.6						
ZALV	Zalesovo Beam	24.38	0	P	P	06 08 49.9	0.0
	0.5nm,0.4s,baz=177,slow=10,SNR=3.2						
BVAR	Borovoye Array	25.66	340	P	P	06 09 02.6	+0.9
	0.4nm,0.5s,baz=106,slow=9.2,SNR=3.5						
TORD	Torodi Ar. Bea	77.51	278	P	P	06 15 28.1	-0.3
	0.9nm,0.8s,baz=53,slow=4.2,SNR=7.4						
YKA	Yellowknife Ar	86.99	9	P	P	06 16 17.3	+0.2
	0.1nm,0.7s,baz=335,slow=5.8,SNR=4.1						

*IDC **17** 06:05:40.4±0.9, 2735N×10766E, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.1/23, mbtmp4.1/14, ML3.9/1, Error ellipse: s-maj=32.7km s-min=19.1km az=51.0*

*BJI **17** 06:05:41.9, 2742N×10776E, h10km, mb4.3, ML3.7, Ms4.0, Msz3.6*

*NEIC **17** 06:05:42.0±0.6, 2736N×10775E, h10km, mb4.6/17, Error ellipse: s-maj=12.4km s-min=7.6km az=154.0*

*ISCJB **17** 06:05:43.8±2.4, 2742N±006×10771E±006, h33km±17km, mb4.3/23, Error ellipse: s-maj=11.4km s-min=7.0km az=146.7*

*MOS **17** 06:05:44.2±0.9, 2740N×10773E, h39km, mb4.6/12, Error ellipse: s-maj=15.9km s-min=9.1km az=125.8*

ISC 17 06:05:44.5±2.4**, 2736N**±006×**10772E**±005**, h26**km±17km**, n76, σ0.96**/82**, mb4.3**/23**, Southeastern China**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GYA	Guiyang	1.30	227	PG	Pn	06 06 06.6	-0.4
GYA				SG	Sn	06 06 24.3	+0.8
GYA				Smax			
	comp=N,2µm,0.4s						
GYA				Smax			
	comp=E,2µm,0.7s						
CD2	Chengdu	4.95	317	P	Pn	06 06 58.8	+1.6
CD2				PG	Pn	06 07 08.9	+12
CD2				S	Sn	06 07 54.0	+0.4
CD2				SG	Sn	06 08 06.9	+13
CD2				Smax			
	comp=N,500nm,0.9s						
CD2				Smax			
	comp=E,740nm,0.6s						
CD2				LR	LR		
	comp=N,1µm,3.6s						
CD2				LR	LR		
	comp=Z,440nm,3.8s						
KMI	Kunming	5.00	245	P	Pn	06 07 02.1	+4.3
KMI				S	Sn	06 08 03.6	+8.9
KMI				Smax			
	comp=N,56nm,0.9s						
KMI				Smax			
	comp=E,47nm,1.1s						
KMI				LR	LR		
	comp=N,611nm,7.2s						
KMI				LR	LR		
	comp=E,491nm,5.1s						
KMI				LR	LR		
	comp=Z,158nm,4.5s						
WHN	Wuhan	6.62	60	P	Pn	06 07 22.4	+2.3
WHN				S	Sn	06 08 32.4	-2.2
WHN				LR	LR		
	comp=N,784nm,5.0s						
WHN				LR	LR		
	comp=E,317nm,5.8s						
LSA	Lhasa	14.75	283	eP	Pn	06 09 13.1	+1.7
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	14.75	283	ePn	Pn	06 09 13.1	+1.6
	comp=Z,12nm,0.6s						
TAPN	Taplejung	17.78	275	eP	Pn	06 09 50.4	+0.2
	comp=Z,22nm,0.8s						
RAMN	Ramite	18.80	274	eP	Pn	06 10 03.4	+0.7
	comp=Z,9.0nm,0.4s						
JIRN	Jiri	19.10	276	eP	Pn	06 10 06.4	+0.1
GUN	Gumba	19.36	277	eP	Pn	06 10 07.7	-1.7
	comp=Z,28nm,0.6s						
KSRS	Korea Array	19.77	54	P	Pn	06 10 12.4	-1.7
	comp=Z,0.4nm,0.3s,baz=240,slow=10,SNR=12						
PKI	Pulchoki	19.80	276	eP	Pn	06 10 13.4	-1.2
	comp=Z,17nm,0.7s						
PKI	Pulchoki	19.80	276	eP	Pn	06 10 13.4	-1.2
PKI				pmax	pmax		
	comp=Z,17nm,0.7s						
PKIN	Phulchoki	19.81	276	eP	Pn	06 10 12.8	-1.9
	comp=Z,14nm,0.5s						
KKN	Kakani	19.90	276	eP	Pn	06 10 14.3	-1.5
	comp=Z,24nm,0.6s						
KKN	Kakani	19.90	276	eP	Pn	06 10 14.3	-1.5
KKN				pmax	pmax		
	comp=Z,24nm,0.6s						
DMN	Daman	20.06	276	eP	P	06 10 16.2	+0.3
	comp=Z,22nm,0.7s						
GKN	Gorkha	20.45	277	eP	P	06 10 20.1	0.0
	comp=Z,22nm,0.5s						
SONM	Songino Array	20.47	357	P	P	06 10 20.7	+0.7
	comp=Z,2.1nm,0.7s,baz=177,slow=11,SNR=12						
SONM	Songino Array	20.47	357	P	P	06 10 20.7	+0.7
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	Ulaanbaatar	20.48	359	eP	P	06 10 20.8	+0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	20.48	359	eP	P	06 10 20.8	+0.7
	comp=Z,3.5nm,0.8s						
DANN	Dangsing	21.20	278	eP	P	06 10 27.9	-0.3
	comp=Z,73nm,0.9s,mb5.0						
KOLN	Koldanda	21.38	277	eP	P	06 10 28.8	-1.3
	comp=Z,14nm,0.6s,mb4.4						
CN2	Changchun	21.77	36	eP	P	06 10 35.6	+1.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
ZAK	Zakamensk	23.24	353	eP	P	06 10 49.1	-0.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
MKAR	Makanchi Array	27.87	321	P	P	06 11 31.9	0.0
	comp=Z,0.7nm,0.6s,mb3.5,baz=118,slow=9.2,SNR=5.8						
MKAR				PcP	PcP	06 14 47.9	+0.6
	comp=Z,0.3nm,0.7s,baz=129,slow=5.4,SNR=4.4						
MKAR	Makanchi Array	27.87	321	P	P	06 11 31.9	0.0
MKAR						06 14 47.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	31.46	334	P	P	06 12 03.3	-0.3
	comp=Z,1.8nm,0.5s,mb4.2,baz=125,slow=9.3,SNR=7.4						
ZALV	Zalesovo Beam	31.46	334	P	P	06 12 03.3	-0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
KURK	Kurchatov	32.12	324	P	P	06 12 09.6	+0.1
	comp=Z,2.9nm,0.6s,mb4.3,baz=128,slow=8.4,SNR=8.6						
KURK	Kurchatov	32.12	324	P	P	06 12 09.6	+0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
KURK	Kurchatov	32.12	324	P	P	06 12 09.6	+0.1
BVAR	Borovoye Array	37.67	323	P	P	06 12 57.3	0.0
	comp=Z,1.2nm,0.5s,mb3.9,baz=121,slow=7.6,SNR=5.4						
BVAR	Borovoye Array	37.67	323	P	P	06 12 57.3	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTK	Aktyubinsk	44.00	315	P	P	06 13 49.1	-0.4
AKTO	Aktyubinsk	44.00	315	P	P	06 13 49.1	-0.4
	comp=Z,0.7nm,0.4s,mb3.7,baz=96,slow=14,SNR=3.6						
AKTO	Aktyubinsk	44.00	315	P	P	06 13 49.2	-0.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ASAR	Alice Springs	56.68	151	P	P	06 15 26.0	+0.3
	comp=Z,0.9nm,0.7s,mb3.9,baz=335,slow=6.2,SNR=5.9						
ASAR				PcP	PcP	06 16 21.9	+0.1
	comp=Z,0.6nm,0.6s,baz=339,slow=3.7,SNR=5.6						
ASAR	Alice Springs	56.68	151	P	P	06 15 26.0	+0.3
ASAR						06 16 21.9	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	61.37	302	P	P	06 15 58.5	+0.2
	comp=Z,0.5nm,0.5s,mb3.9,baz=79,slow=3.3,SNR=4.4						
BRTR	Keskin Array B	61.37	302	P	P	06 15 58.5	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	61.95	337	P	P	06 16 01.2	-0.4
	comp=Z,9.1nm,0.9s,mb4.9,baz=84,slow=8.0,SNR=15						
ARCES	ARCESS Array B	61.95	337	P	P	06 16 01.2	-0.4
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARCES	ARCESS Array B	61.95	337	P	P	06 16 01.2	-0.4
AKASG	Malin Array Be	62.25	315	P	P	06 16 03.1	-0.8
	comp=Z,2.0nm,0.5s,mb4.5,baz=71,slow=6.2,SNR=4.7						
AKASG	Malin Array Be	62.25	315	P	P	06 16 03.1	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	NORSAR Array B	69.49	329	P	P	06 16 49.5	-0.9
	comp=Z,1.6nm,0.8s,mb4.0,baz=72,slow=6.2,SNR=4.3						
NOA	NORSAR Array B	69.49	329	P	P	06 16 49.5	-0.9
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	69.49	329	P	P	06 16 49.5	-0.9
GERES	GERESS Array B	72.42	316	P	P	06 17 08.6	+0.3
	comp=Z,1.1nm,0.5s,mb4.0,baz=59,slow=11,SNR=6.7						
GERES	GERESS Array B	72.42	316	P	P	06 17 08.6	+0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CDF	Champ du Feu	76.50	318	eP	P	06 17 32.3	+0.2
CABF	La Chapelle	78.02	316	eP	P	06 17 40.8	+0.1
	comp=Z,35nm,1.3s,mb4.8						
CABF	La Chapelle	78.02	316	eP	P	06 17 40.8	+0.1
CABF				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
CABF	La Chapelle	78.02	316	eP	P	06 17 40.8	+0.1
	comp=Z,17nm,1.3s,mb4.8						
LPG	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
	comp=Z,15nm,0.7s,mb4.8						
LPG	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
LPG	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
	comp=Z,7.6nm,0.7s,mb4.7						
LPL	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
	comp=Z,9.0nm,0.5s,mb4.6						
LPL	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
LPL				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
LPL	La Plagne	78.12	315	eP	P	06 17 42.1	+0.9
	comp=Z,4.5nm,0.5s,mb4.7						
ORIF	Oris-en-Rattie	78.93	315	eP	P	06 17 46.1	+0.4
	comp=Z,18nm,1.1s,mb4.6						
ORIF	Oris-en-Rattie	78.93	315	eP	P	06 17 46.1	+0.4
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
ORIF	Oris-en-Rattie	78.93	315	eP	P	06 17 46.1	+0.4
	comp=Z,9.1nm,1.1s,mb4.6						
LOR	Lormes	79.07	318	eP	P	06 17 46.5	+0.1
SMF	Signal de Mont	79.38	317	eP	P	06 17 48.2	+0.1
	comp=Z,17nm,1.1s,mb4.6						
SMF	Signal de Mont	79.38	317	eP	P	06 17 48.2	+0.1
SMF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
SMF	Signal de Mont	79.38	317	eP	P	06 17 48.2	+0.1
	comp=Z,8.5nm,1.1s,mb4.6						
AVF	Avril sur Loir	79.60	317	eP	P	06 17 49.4	+0.1
	comp=Z,7.8nm,0.9s,mb4.3						
AVF	Avril sur Loir	79.60	317	eP	P	06 17 49.4	+0.1
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AVF	Avril sur Loir	79.60	317	eP	P	06 17 49.4	+0.1
	comp=Z,3.9nm,0.9s,mb4.3						
TCF	Toulx Ste Croi	80.53	317	eP	P	06 17 56.8	+2.4
	comp=Z,9.8nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	80.53	317	eP	P	06 17 56.8	+2.4
TCF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	80.53	317	eP	P	06 17 56.8	+2.4
	comp=Z,4.9nm,0.8s,mb4.5						
YKA	Yellowknife Ar	84.28	18	P	P	06 18 13.5	-0.1
	comp=Z,0.9nm,0.7s,mb4.0,baz=325,slow=5.0,SNR=20						

*IDC **17** 06:18:35.8±1.8, 266N×9537E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.7/25, mbtmp3.9/9, ML4.2/2, Error ellipse: s-maj=58.7km s-min=18.4km az=53.0*

*ISCJB **17** 06:18:41.8±4.6, 28N±02×956E±02, h55km±36km, mb3.9/8, Error ellipse: s-maj=44.5km s-min=14.2km az=142.4*

*NEIC **17** 06:18:41.1±0.8, 268N×9545E, h35km, mb4.0/2, Error ellipse: s-maj=21.9km s-min=8.8km az=51.0*

ISC 17 06:18:43.3±4.8**, 28N**±02×**956E**±02**, h50**km±38km**, n13, σ0.50**/14**, mb3.9**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.33	89	Pn	Pn	06 19 32.3	-0.6
	5.9nm,0.3s,baz=282,slow=6.9,SNR=20						
PSI				Sn	Sn	06 20 11.2	-0.1
	2.1nm,0.3s,baz=332,slow=8.0,SNR=3.8						
CMAR	Chiang Mai Arr	15.94	12	Pn	Pn	06 22 25.4	+1.2
	0.9nm,0.3s,baz=208,slow=11,SNR=7.7						
WRA	Warramunga Arr	44.23	122	P	P	06 26 47.7	-0.2
	0.3nm,0.4s,mb3.3,baz=299,slow=9.3,SNR=3.1						
WRAB	Tennant Creek	44.23	122	eP	P	06 26 48.4	+0.4
	0.9nm,0.6s,mb3.7						
MK31	Makanchi Array	45.35	347	eP	P	06 26 56.4	-0.1
MKAR	Makanchi Array	45.35	347	P	P	06 26 56.6	+0.1
	2.9nm,0.6s,mb4.3,baz=162,slow=8.6,SNR=39						
ASAR	Alice Springs	45.62	127	P	P	06 26 59.6	+0.7
	0.2nm,0.4s,mb3.4,baz=302,slow=7.8,SNR=3.5						
SONM	Songino Array	45.85	10	P	P	06 26 59.9	-0.5
	0.9nm,0.6s,mb3.9,baz=192,slow=9.6,SNR=3.5						
KURK	Kurchatov	49.88	346	P	P	06 27 31.1	-0.4
	0.6nm,0.6s,mb3.8,baz=162,slow=7.0,SNR=4.9						
KURK	Kurchatov	49.88	346	eP	P	06 27 31.7	+0.2
	1.2nm,0.6s,mb4.1						
ZAA0	Zalesovo Array	51.78	352	eP	P	06 27 45.6	-0.1
ZALV	Zalesovo Beam	51.78	352	P	P	06 27 45.6	-0.1
	3.3nm,0.6s,mb4.5,baz=183,slow=8.1,SNR=16						
BVAR	Borovoye Array	54.26	342	P	P	06 28 03.3	-0.7
	1.4nm,0.7s,mb4.0,baz=134,slow=6.4,SNR=7.1						

*IDC **17** 06:29:47.5±0.6, 3267S×7179W, h0km, mb4.3/10, mb1 4.4/13, mb1mx4.3/18, mbtmp4.3/13, ML4.5/3, MS4.1/12, Ms1 4.1/12, ms1mx4.0/19, Error ellipse: s-maj=22.7km s-min=18.7km az=82.0*

*ISCJB **17** 06:29:50.8±0.8, 3269S±004×7188W±005, h25km±5km, mb4.6/38, MS4.1/11, Error ellipse: s-maj=8.2km s-min=4.3km az=141.4*

*NEIC **17** 06:29:51.6, 3271S×7181W, h13km, mb4.8/31, ML4.7(GUC), After GUC.*

NEIC Felt [VI] at Vina del Mar; [III] at Puchuncavi, Quilpue, Quintero, Santiago and Valparaiso; [II] at La Ligua and Papudo. Also felt at Colina.

*GUC **17** 06:29:51.6±0.7, 3271S×7181W, h13km±3km, ML4.7*

*BJI **17** 06:29:51.6, 3270S×7180W, h12km, mB5.3, Ms5.1, Msz4.6*

ISC 17 06:29:51.5±0.8**, 3269S**±003×**7181W**±004**, h18**km±5km**, n104, σ1.00**/89**, mb4.6**/38**, MS4.1**/11**, 4C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.36	157⇓	iP	Pg	06 29 59.2	0.0
IHA				iS	Sg	06 30 04.7	+0.3
PEL	Peldehue	1.05	116⇑	iP	Pb	06 30 10.5	-0.7
PEL				iS	Sb	06 30 24.6	+0.1
PEL				AML	AML	06 30 28.8	
	comp=N,64µm,0.2s						
TACH	Talagante	1.21	143⇑	iP	Pn	06 30 12.6	-0.9
SAN	Santiago	1.23	129⇓	iP	Pn	06 30 13.0	-0.8
SAN				iS	Sb	06 30 29.2	-0.5
SAN	Santiago	1.23	129⇓	iP	Pn	06 30 13.0	-0.8
SAN				iS	Sb	06 30 29.2	-0.5
SAN				AML	AML	06 30 38.0	
	comp=N,19µm,0.7s						
CLCH	Cerro Calan	1.28	124⇑	iP	Pn	06 30 14.0	-0.5
CLCH				iS	Sn	06 30 30.8	-0.4
CLCH				AML	AML	06 30 36.7	
	comp=E,40µm,0.6s						
LNV	Longovilo	1.31	165⇓	iP	Pn	06 30 13.9	-0.9
ANTU	Antumapu	1.32	132⇓	iP	Pn	06 30 14.6	-0.5
ANTU				iS	Sn	06 30 31.9	-0.3
ANTU	Antumapu	1.32	132⇓	iP	Pn	06 30 14.6	-0.5
ANTU				iS	Sn	06 30 31.9	-0.3
ANTU				AML	AML	06 30 37.2	
	comp=E,32µm,0.8s						
FCH	Farellones	1.43	117⇓	iP	Pn	06 30 16.5	0.0
FCH				iS	Sn	06 30 35.8	+1.0
FCH				AML	AML	06 30 37.9	
	comp=E,25µm,0.2s						
PCH	Pirque	1.43	131⇑	iP	Pn	06 30 16.3	-0.3
YECH	El Yeso	1.75	124⇓	iP	Pn	06 30 21.5	+0.7
YECH				iS	Sn	06 30 44.9	+2.2
YECH				AML	AML	06 30 49.4	
	comp=N,8µm,0.7s						
CACH	El Canelo	1.75	145	eP	Pn	06 30 22.1	+1.2
LMEL	Las Melosas	1.77	131⇓	iP	Pn	06 30 21.8	+0.6
LMEL				iS	Sn	06 30 45.4	+2.1
LMEL	Las Melosas	1.77	131⇓	iP	Pn	06 30 21.8	+0.6
LMEL				iS	Sn	06 30 45.4	+2.1
LMEL				AML	AML	06 30 49.1	
	comp=N,18µm,0.2s						
OVCH	Ovalle	2.14	14	eP	Pn	06 30 26.2	-0.1
OVCH				iS	Sn	06 30 53.2	+0.8
TLL	Tololo Astrono	2.66	19	eS	Sn	06 31 09.9	+4.8
TLL				AML	AML	06 31 20.1	
	comp=E,3µm,0.5s						
CFAA	Coronel Fontan	3.22	71	Pn	Pn	06 30 43.5	+2.4
	comp=E,0.4nm,0.3s,baz=240,slow=12,SNR=119						
CFAA				Sn	Sn	06 31 26.9	+7.9
	comp=E,14nm,0.3s,baz=12,slow=12,SNR=6.7						
TRQA	Tornquist	9.65	126	ePn	Pn	06 32 10.7	+1.3
LVC	Limon Verde	10.36	15	Pn	Pn	06 32 18.9	-0.3
	comp=E,0.5nm,0.3s,baz=262,slow=0.0,SNR=6.6						
LVC	Limon Verde	10.36	15	ePn	Pn	06 32 21.9	+2.6
CPUP	Villa Florida	14.11	67	Pn	Pn	06 33 10.2	-0.2
	comp=E,1.5nm,0.3s,baz=208,slow=9.7,SNR=14						
CPUP				Sn	Sn	06 35 45.6	-0.9
	comp=E,0.7nm,0.3s,baz=131,slow=20,SNR=2.2						
CPUP				LR	LR	06 38 55.8	
	comp=E,1µm,18.5s,baz=228,slow=39						
CPUP	Villa Florida	14.11	67	ePn	Pn	06 33 10.1	-0.3
	comp=E,51nm,0.7s						
ARE	Arequipa	16.16	1	eP	Pn	06 33 41.0	+3.3
SIV	San Ignacio	19.27	33	P	Pn	06 34 14.3	-1.9
	comp=E,0.2nm,0.3s,baz=239,slow=10.0,SNR=11						
NNA	Nana	21.12	346	LR	LR	06 40 40.1	
	comp=E,305nm,19.4s,MS3.7,baz=155,slow=31						
EFI	East Falkland	21.47	156	eP	P	06 34 38.0	-0.8
	comp=E,24nm,0.7s,mb4.6						
USHA	Ushuaia	22.26	175	P	P	06 34 47.7	+0.4
	comp=E,7.6nm,0.7s,mb4.2,baz=353,slow=11,SNR=4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
USHA				LR	LR	06 44 04.2	
	comp=E,381nm,18.5s,MS3.9,baz=336,slow=38						
ATAH	Atahualpa	26.28	345	LR	LR	06 43 50.2	
	comp=E,183nm,19.2s,MS3.6,baz=92,slow=32						
BDFB	Brasilia	27.46	57	P	P	06 35 34.4	-2.1
	comp=E,3.4nm,1.1s,mb3.8,baz=218,slow=16,SNR=5.4						
BDFB				LR	LR	06 48 06.5	
	comp=E,380nm,20.9s,MS4.0,baz=54,slow=40						
BDFB	Brasilia	27.46	57	eP	P	06 35 34.5	-2.0
	comp=E,5.4nm,0.8s,mb4.1						
OTAV	Otavalo	33.34	348	eP	P	06 36 31.3	+2.7
	comp=E,3.9nm,1.2s,mb4.2						
OTAV				ePcP	PcP	06 39 09.9	-0.5
VNA3	Neumayer Olymp	50.50	158	eP	P	06 38 48.1	+0.1
VNA3				e		06 38 58.9	
VNA3				e		06 39 00.9	
VNA3				e		06 39 02.9	
VNA3				e		06 39 07.4	
VNA3				e		06 40 05.0	
VNA1	Neumayer--Stat	50.80	157	eP	P	06 38 50.7	+0.4
VNA1				e		06 39 01.5	
VNA1				e		06 39 03.5	
VNA1				e		06 39 06.0	
VNA1				e		06 40 07.0	
VNA2	Neumayer--Watz	51.15	158	eP	P	06 38 52.9	0.0
	baz=286,slow=8.2						
VNA2				e		06 39 07.1	
VNA2				e		06 39 11.7	
VNA2				e		06 40 07.4	
SNAA	Sanae	52.73	158	eP	P	06 39 02.4	-2.2
SNAA				e		06 39 13.6	
SNAA				e		06 39 16.3	
SNAA				e		06 39 22.9	
SNAA				e		06 40 12.1	
SNAA	Sanae	52.73	158	eP	P	06 39 02.5	-2.1
	comp=E,36nm,1.8s,mb5.0						
TEIG	Tepich	54.92	341	eP	P	06 39 20.4	-0.9
	comp=E,11nm,0.6s,mb5.0						
TEIG				e		06 39 37.2	
RKT	Rikitea	55.92	263	eLR	LR	06 55 50.3	
	comp=E,162nm,24.5s						
JCT	Junction City	68.19	334	eP	P	06 40 50.4	-0.3
	comp=E,28nm,1.4s,mb5.1						
TXAR	Lajitas Array	68.69	330	P	P	06 40 53.3	-0.6
	comp=E,1.1nm,0.7s,mb3.9,baz=152,slow=8.1,SNR=15						
TXAR				LR	LR	07 06 42.3	
	comp=E,160nm,18.4s,MS4.3,baz=50,slow=32						
TXAR	Lajitas Array	68.69	330	P	P	06 40 53.3	-0.6
TXAR				LR	LR	07 06 42.3	
SWET	Sewanee	68.84	348	eP	P	06 40 53.9	-0.7
SWET				e		06 41 05.5	
WVT	Waverly	70.08	346	eP	P	06 41 01.3	-1.0
	comp=E,26nm,0.9s,mb5.2						
PPT	Papeete	70.63	261	eS	S	06 50 21.1	+1.6
	comp=E,62nm,23.0s						
PPT	Papeete	70.63	261	eLR	LR	07 02 29.1	
	comp=E,87nm,24.5s						
PPT	Papeete	70.63	261	LR	LR	07 05 06.9	
	comp=E,151nm,20.3s,MS4.2,baz=102,slow=30						
WMOK	Wichita Mounta	71.70	337	eP	P	06 41 11.7	-0.4
	comp=E,2.7nm,1.2s,mb4.0						
FVM	French Village	72.42	345	eP	P	06 41 15.2	-1.1
	comp=E,42nm,1.6s,mb5.1						
AMTX	Amarillo	72.83	335	eP	P	06 41 19.1	+0.1
	comp=E,25nm,1.6s,mb4.9						
ACSO	Alum Creek Sta	73.29	351	eP	P	06 41 20.4	-1.1
	comp=E,8.7nm,0.4s,mb5.0						
MAW	Mawson	74.38	164	P	P	06 41 27.2	-0.5
	comp=E,13nm,1.1s,mb4.8,baz=196,slow=6.5,SNR=7.3						
MAW				LR	LR	07 17 40.5	
	comp=E,224nm,18.1s,MS4.5,baz=222,slow=39						
MAW	Mawson	74.38	164	eP	P	06 41 26.7	-1.0
	comp=E,4.5nm,1.5s,mb4.2						
TUC	Tucson	74.38	326	eP	P	06 41 27.8	-0.3
	comp=E,16nm,1.8s,mb4.6						
DBIC	Dimbokro	74.58	71	P	P	06 41 28.8	-1.0
	comp=E,5.1nm,1.0s,mb4.4,baz=218,slow=5.4,SNR=4.9						
DBIC				LR	LR	07 12 28.1	
	comp=E,112nm,18.4s,MS4.2,baz=215,slow=34						
DBIC	Dimbokro	74.58	71	eP	P	06 41 28.6	-1.2
	comp=E,5.4nm,0.8s,mb4.5						
ANMO	Albuquerque	74.73	331	eP	P	06 41 30.7	+0.6
	comp=E,6.9nm,1.2s,mb4.5						
SDCO	Great Sand Dun	76.79	333	eP	P	06 41 42.0	+0.2
	comp=E,8.6nm,1.5s,mb4.5						
WUAZ	Wupatki	77.32	328	eP	P	06 41 46.1	+1.3
	comp=E,14nm,1.4s,mb4.7						
MVCO	Mesa Verde	77.51	331	eP	P	06 41 46.0	+0.1
	comp=E,6.7nm,0.9s,mb4.6						
PFO	Pinyon Flat Ob	78.20	323	eP	P	06 41 50.8	+1.0
	comp=E,5.7nm,1.1s,mb4.4						
PV01	Paradox Valley	78.33	331	eP	P	06 41 51.2	+0.8
	comp=E,4µm,2.2s						
ISCO	Idaho Springs	78.63	334	eP	P	06 41 52.9	+0.9
	comp=E,38nm,2.0s,mb5.0						
PV10	Paradox Valley	78.73	331	eP	P	06 41 52.7	+0.1
	comp=E,95nm,0.9s,mb5.7						
TSUM	Tsumeb	79.39	106	eP	P	06 41 56.5	-0.3
	comp=E,53nm,1.9s,mb5.1						
SHPR	Sheep Range	79.88	326	eP	P	06 42 00.2	+1.3
SRU	San Rafael	79.97	330	eP	P	06 41 59.8	+0.5
	comp=E,19nm,1.8s,mb4.7						
BOSA	Boshof	80.51	118	P	P	06 42 01.4	-1.4
	comp=E,4.0nm,0.7s,mb4.5,baz=224,slow=5.3,SNR=8.7						
BOSA				LR	LR	07 15 04.2	
	comp=E,212nm,18.0s,MS4.5,baz=191,slow=34						
TPNV	Topopah Spring	80.76	325	eP	P	06 42 05.0	+1.4
	comp=E,14nm,1.4s,mb4.7						
ISA	Isabella	80.83	323	eP	P	06 42 05.3	+1.3
	comp=E,37nm,2.3s,mb4.9						
CASY	Casey	81.33	181	eP	P	06 42 06.3	-0.1
	comp=E,8.8nm,0.8s,mb4.7						
DUG	Dugway	81.84	329	eP	P	06 42 10.0	+0.7
	comp=E,11nm,1.4s,mb4.6						
SPUT	South Promonto	82.61	330	eP	P	06 42 13.0	-0.3
	comp=E,8.1nm,1.3s,mb4.6						
PDAR	Pinedale Array	82.68	333	P	P	06 42 13.0	-0.6
	comp=E,0.7nm,0.8s,mb3.7,baz=157,slow=4.8,SNR=5.6						
PDAR				LR	LR	07 15 11.8	
	comp=E,95nm,19.0s,MS4.2,baz=344,slow=33						
NVAR	Mina Array Bea	82.92	325	P	P	06 42 15.4	+0.4
	comp=E,1.4nm,0.6s,mb4.1,baz=157,slow=5.9,SNR=8.8						
ELK	Elko	83.35	328	eP	P	06 42 17.7	+0.5
	comp=E,12nm,1.4s,mb4.7						
TOA0	Torodi Ar. Sit	83.58	70	eP	P	06 42 17.7	-1.3
TORD	Torodi Ar. Bea	83.58	70	P	P	06 42 17.8	-1.2
	comp=E,3.6nm,0.8s,mb4.6,baz=263,slow=4.6,SNR=22						
TORD				LR	LR	07 15 04.1	
	comp=E,144nm,21.0s,MS4.3,baz=240,slow=32						
ULM	Lac du Bonnet	85.28	345	P	P	06 42 24.3	-2.4
	comp=E,3.3nm,0.8s,mb4.5,baz=140,slow=4.6,SNR=5.1						
HLID	Hailey	85.29	330	eP	P	06 42 27.2	+0.3
	comp=E,6.4nm,1.2s,mb4.6						
LSZ	Lusaka	90.03	108	eP	P	06 42 51.5	+1.0
	comp=E,1.7nm,0.5s,mb4.6						
YKA	Yellowknife Ar	100.88	341	P	Pdif	06 43 36.8	-2.7
	comp=E,0.2nm,0.5s,baz=145,slow=4.7,SNR=8.5						
ASAR	Alice Springs	118.82	207	PKP	PKPdf	06 48 37.0	-2.2
	comp=E,0.2nm,0.5s,baz=118,slow=1.3,SNR=4.8						
AKASG	Malin Array Be	121.16	47	PKP	PKPdf	06 48 40.2	-2.5
	comp=E,0.8nm,0.5s,baz=255,slow=3.2,SNR=4.9						
WRA	Warramunga Arr	122.00	209	PKP	PKPdf	06 48 44.0	-1.4
	comp=E,0.6nm,0.5s,baz=159,slow=1.6						
BRVK	Borovoye	146.12	42	ePKP	PKPdf	06 49 29.6	+0.6
BVAR	Borovoye Array	146.19	42	PKPbc	PKPbc	06 49 29.2	-0.9
	comp=E,4.6nm,0.6s,baz=300,slow=3.3,SNR=20						
EKS2	Erkin-Say	151.18	60	ePKPbc	PKPbc	06 49 43.4	-0.1
AAK	Ala-Archa	151.70	60	ePKPbc	PKPbc	06 49 44.4	-0.2
KURK	Kurchatov	151.78	42	PKPbc	PKPbc	06 49 43.8	-0.7
	comp=E,8.4nm,0.6s,baz=300,slow=3.0,SNR=28						
KURK	Kurchatov	151.78	42	ePKPbc	PKPbc	06 49 43.7	-0.9
TKM2	Tokmak 2	152.45	59	ePKPbc	PKPbc	06 49 45.6	-0.7
ZAA0	Zalesovo Array	153.01	31	ePKPbc	PKPbc	06 49 46.0	-1.2
ZALV	Zalesovo Beam	153.01	31	PKPbc	PKPbc	06 49 46.2	-1.0
	comp=E,11nm,0.7s,baz=299,slow=3.1,SNR=31						
MKAR	Makanchi Array	155.75	47	PKP	PKPdf	06 49 42.5	-1.4
	comp=E,0.8nm,0.9s,baz=318,slow=1.9,SNR=3.4						
MKAR				PKPab	PKPab	06 50 09.6	-0.9
	comp=E,2.2nm,0.8s,baz=302,slow=4.1,SNR=9.8						
WMQ	Urumqi	160.50	49	ePKP	PKPdf	06 49 48.8	-1.0
SONM	Songino Array	164.81	5	PKPab	PKPab	06 50 47.0	-2.7
	comp=E,1.3nm,1.0s,baz=345,slow=4.5,SNR=5.2						
BJI	Beijing	170.24	321	PKP	PKPdf	06 49 57.0	-1.1
BJI				SS	SS	07 16 03.8	+0.2
BJI				LR	LR		
	comp=N,139nm,15.8s						
BJI				LR	LR		
	comp=E,184nm,16.0s						
BJI				LR	LR		
	comp=Z,45nm,17.8s						
KMI	Kunming	171.08	146	PKP	PKPdf	06 49 56.3	-2.7
HHC	Hu-ho-hao-te	171.42	343	ePKP	PKPdf	06 49 58.1	-0.6
HHC				APKP		06 50 08.3	
HHC				PKP2	PKPab	06 51 20.9	+1.7
HHC				PKS		06 53 29.5	
HHC				PP	PP	06 55 11.8	+2.4
HHC				SKS	SKSdf	06 56 57.6	-3.5
HHC				SKKS	SKKSac	07 01 53.8	-1.9
HHC				SS	SS	07 16 12.0	-2.1
HHC				PP	PP		
	comp=Z,132nm,4.3s						
HHC				LR	LR		
	comp=N,134nm,19.0s						
HHC				LR	LR		
	comp=E,273nm,19.0s						
HHC				LR	LR		
	comp=Z,72nm,17.8s						
GYA	Guiyang	173.65	168	ePKP	PKPdf	06 49 57.3	-2.8
GYA				PKP2	PKPab	06 51 29.5	+0.1
GYA				PKS		06 53 27.4	
GYA				PP	PP	06 55 20.8	+0.5
GYA				PP	PP		
	comp=Z,90nm,8.9s						
LZH	Lanzhou	175.06	45	ePKP	PKPdf	06 49 59.3	-1.0
LZH				LR	LR		
	comp=E,156nm,18.3s						
LZH				LR	LR		
	comp=Z,217nm,20.5s						
CD2	Chengdu	175.83	114	PKP	PKPdf	06 50 01.3	+0.7
XAN	Xi'an	178.52	336	PKP	PKPdf	06 50 02.6	+1.6
XAN				PKP2		06 51 54.6	
XAN				PP	PP	06 55 49.9	+6.1
XAN				SKS	SKSdf	06 57 00.3	-2.7
XAN				SKKS	SKKSac	07 02 30.9	+1.3
XAN				SS	SS	07 17 21.8	-0.7
XAN				LR	LR		
	comp=E,61nm,16.5s						
XAN				LR	LR		
	comp=Z,75nm,18.4s						

*NEIC **17** 06:38:24.3, 3276S×7178W, h24km, ML3.6(GUC), After GUC.*

GUC 17 06:38:24.3±0.6**, 3276S×7178W, h24km±5km, MD3.9, ML3.6, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.29	156	⇓iP	Pb	06 38 31.2	0.0
IHA				iS	Sb	06 38 36.0	+0.1
PEL	Peldehue	1.00	113	⇑iP	Pn	06 38 42.3	-0.5
PEL				iS	Sb	06 38 55.9	+0.2
PEL				AML	AML	06 38 59.8	
	comp=E,7µm,0.3s						
CLCH	Cerro Calan	1.23	122	⇓iP	Pn	06 38 45.8	-0.1
CLCH				iS	Sn	06 39 01.9	+0.2
CLCH				AML	AML	06 39 07.9	
	comp=E,2µm,0.6s						
LNV	Longovilo	1.24	165	⇑iP	Pn	06 38 45.7	-0.3
LNV				iS	Sn	06 39 01.8	-0.2
ANTU	Antumapu	1.26	130	eP	Pn	06 38 46.5	+0.1
ANTU				iS	Sn	06 39 03.0	+0.4
ANTU	Antumapu	1.26	130	eP	Pn	06 38 46.5	+0.1
ANTU				iS	Sn	06 39 03.0	+0.4
ANTU				AML	AML	06 39 07.4	
	comp=E,2µm,0.5s						
FCH	Farellones	1.38	115	⇓iP	Pn	06 38 48.4	+0.4
FCH				iS	Sn	06 39 07.0	+1.6
FCH				AML	AML	06 39 09.3	
	comp=E,2µm,0.2s						
SJCH	San Jose de Ma	1.49	127	eP	Pn	06 38 50.4	+0.9
SJCH				iS	Sn	06 39 10.1	+1.9
CACH	El Canelo	1.68	144	eP	Pn	06 38 53.8	+1.6
CACH				iS	Sn	06 39 16.4	+3.5
YECH	El Yeso	1.69	123	⇑iP	Pn	06 38 53.6	+1.3
YECH				iS	Sn	06 39 15.7	+2.5
YECH				AML	AML	06 39 28.3	
	comp=N,560nm,0.2s						
LMEL	Las Melosas	1.71	130	eP	Pn	06 38 53.8	+1.2
LMEL				iS	Sn	06 39 16.5	+2.8
LMEL	Las Melosas	1.71	130	eP	Pn	06 38 53.8	+1.2
LMEL				iS	Sn	06 39 16.5	+2.8
LMEL				AML	AML	06 39 20.4	
	comp=N,1µm,0.2s						
NICH	Los Niches	2.29	169	eP	Pn	06 39 01.6	+1.1

GUC 17 06:39:23.7±0.8**, 2305S×7022W, h54km±7km, ML3.7, 2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.21	255	⇑iP	Pn	06 39 32.9	+0.2
MECH				iS	Sn	06 39 39.7	+0.7
MECH				AML	AML	06 39 44.5	
	comp=E,6µm,0.5s						
CEN1	Los Morros	0.34	176	eP	Pn	06 39 35.9	+2.3
CEN1				iS	Sn	06 39 44.7	+3.9
CEN1				AML	AML	06 39 45.0	
	comp=N,4µm,0.4s						
TOCH	Tocopilla	0.95	1	eP	Pn	06 39 41.4	+0.4
TOCH				iS	Sn	06 39 54.3	+0.7
TOCH				AML	AML	06 39 55.1	
	comp=E,6µm,0.3s						
PB04	Plate Boundary	1.03	41	⇓iP	Pn	06 39 38.6	-3.4
PB04				iS	Sn	06 39 49.0	-6.5
PB04				AML	AML	06 39 49.7	
	comp=N,8µm,0.3s						
LVC	Limon Verde	1.29	71	eP	Pn	06 39 46.7	+1.3
LVC				iS	Sn	06 40 03.8	+2.2
PB01	Plate Boundary	2.11	19	⇑iP	Pn	06 39 57.8	+1.2
PB01				iS	Sn	06 40 23.2	+1.5
PB01				AML	AML	06 40 29.4	
	comp=E,577nm,0.2s						

*IDC **17** 06:43:32.9±8.7, 3597N×7133E, h109km±71km, mb3.2/5, mb1 3.3/9, mb1mx3.2/25, mbtmp3.3/9, ML3.7/4, Error ellipse: s-maj=61.2km s-min=27.4km az=170.0*
*ISCJB **17** 06:43:37.1±0.4, 3642N±003×7133E±005, h135km±7km, mb3.3/4, Error ellipse: s-maj=7.1km s-min=4.1km az=171.2*
*NEIC **17** 06:43:37.7±0.7, 3634N×7126E, h136km±8km, mb3.5/1, Error ellipse: s-maj=8.6km s-min=6.3km az=73.0*
*NNC **17** 06:43:43.1±1.8, 3731N×7066E, h0km, mb4.0, mpv4.2, Error ellipse: s-maj=15.2km s-min=14.0km az=85.0*
ISC 17 06:43:38.2±0.4**, 3640N**±002×**7132E**±005**, h132km**±6km**, n52, σ0.97**/65**, mb3.3**/4**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.61	169	⇑P	Pn	06 44 21.4	+1.5
CEP				S	Sn	06 44 54.0	+2.0
KBL	Kabul	2.62	226	ePn	Pn	06 44 19.4	-0.6
KBL				eSn	Sn	06 44 50.4	-1.9
CHCP	Chirah Chowk	3.17	149	P	Pn	06 44 29.2	+2.2
SBDP	Sheikh Budin	4.11	186	P	Pn	06 44 39.6	+0.1
SARP	Sargodha	4.60	166	P	Pn	06 44 46.1	+0.1
THN	Thein Dam	5.37	136	eP	Pn	06 44 56.5	+0.2
THN				eS	Sn	06 45 56.4	-0.7
DLH	Dalhousie	5.43	134	eS	Sn	06 45 58.0	-0.6
UCH	Uchtor	6.33	22	P	Sn	06 46 18.0	-1.9
	SNR=15						
KZA	Kyzart	6.44	27	P	Pn	06 45 10.9	+0.4
	SNR=6.7						
EKS2	Erkin-Say	6.54	16	P	Pn	06 45 11.8	0.0
	SNR=11						
EKS2	Erkin-Say	6.54	16	ePn	Pn	06 45 11.8	-0.1
EKS2				eSn	Sn	06 46 24.8	-0.3
AAK	Ala-Archa	6.69	21	P	Pn	06 45 14.5	+0.6
	SNR=15						
AAK	Ala-Archa	6.69	21	ePn	Pn	06 45 14.2	+0.3
AAK				eSn	Sn	06 46 28.0	-0.8
KK31	Karatay Array	6.72	355	Pn	Pn	06 45 13.5	-0.9
	23nm,0.5s,baz=182,slow=14,SNR=363						
KK31				⇓Sn	Sn	06 46 23.8	-5.8
	5.5nm,0.4s,baz=188,slow=24,SNR=6.0						
ULHL	Ulahol	6.97	32	P	Pn	06 45 18.3	+0.6
	SNR=11						
CHMS	Chumysh	7.10	21	P	Pn	06 45 19.6	+0.2
	SNR=5.7						
SMLA	Simla	7.16	136	iP	Pn	06 45 20.9	+0.6
SMLA				iS	Sn	06 46 37.1	-3.2
SMLA				iS	Sn	06 46 37.8	-2.5
USP	Ospenovka	7.28	19	P	Pn	06 45 22.1	+0.3
	SNR=7.2						
TKM2	Tokmak 2	7.30	26	⇑Pn	Pn	06 45 22.5	+0.4
	6.0nm,0.5s						
TKM2				⇑Sn	Sn	06 46 42.9	-0.5
	7.6nm,0.6s						
TKM2	Tokmak 2	7.30	26	P	Pn	06 45 22.6	+0.5
	SNR=15						
TKM2	Tokmak 2	7.30	26	ePn	Pn	06 45 22.5	+0.4
KLP	Kalpa	7.53	128	eP	Pn	06 45 27.0	+1.7
KLP				eS	Sn	06 46 45.1	-4.0
KLP				AML	AML	06 46 52.0	
	comp=N,90nm,0.5s						
KLP				AML	AML	06 46 53.4	
	comp=E,97nm,0.3s						
JOSI	Joshimath	9.01	128	eS	Sn	06 47 20.7	-4.3
JOSI				AML	AML	06 47 29.5	
	comp=E,77nm,0.4s						
JOSI				AML	AML	06 47 31.8	
	comp=N,56nm,0.5s						
KHET	Khetri	9.13	154	eS	Sn	06 47 22.0	-5.8
KHET				AML	AML	06 47 25.4	
	comp=N,22nm,0.2s						
KHET				AML	AML	06 47 25.5	
	comp=E,16nm,0.2s						
KUDL	Kundal	9.32	151	eS	Sn	06 47 24.9	-7.5
KUDL				AML	AML	06 47 27.2	
	comp=E,13nm,0.4s						
KUDL				AML	AML	06 47 27.9	
	comp=N,7.3nm,0.3s						
DANN	Dangsing	13.22	124	eP	Pn	06 46 39.3	-1.4
MK31	Makanchi Array	13.22	35	ePn	Pn	06 46 40.7	+0.1
MKAR	Makanchi Array	13.22	35	P	Pn	06 46 41.4	+0.7
	comp=N,0.2nm,0.3s,baz=206,slow=12,SNR=4.6						
GKN	Gorkha	14.03	123	eP	Pn	06 46 50.6	-0.6
GKN				eS	Sn	06 49 16.1	-10
PKIN	Phulchoki	14.82	122	eP	Pn	06 47 01.5	+0.4
PKI	Pulchoki	14.83	122	eP	Pn	06 47 00.2	-1.1
PKI	Pulchoki	14.83	122	eP	Pn	06 47 01.5	+0.2
GUN	Gumba	14.94	120	eP	Pn	06 47 02.0	-0.6
KURK	Kurchatov	15.24	18	P	Pn	06 47 07.2	+1.0
	comp=N,0.1nm,0.3s,baz=206,slow=11,SNR=7.0						
KURK	Kurchatov	15.24	18	eP	Pn	06 47 07.7	+1.5
	comp=N,1.9nm,0.8s						
AB09	Akbulak array	15.31	331	⇓Pn	Pn	06 47 05.9	-1.2
	comp=N,1.4nm,0.5s						
AB09				⇓Sn	Sn	06 49 46.2	-11
	comp=N,1.6nm,0.7s						
JIRN	Jiri	15.31	120	eP	Pn	06 47 07.2	-0.1
RAMN	Ramite	16.04	122	eP	Pn	06 47 16.0	-0.3
TAPN	Taplejung	16.57	118	eP	Pn	06 47 23.4	+0.7
BVA0	Borovoye Array	16.64	358	Pn	Pn	06 47 24.1	+0.8
	comp=N,0.3nm,0.5s,baz=157,slow=13,SNR=7.8						
BVAR	Borovoye Array	16.64	358	P	Pn	06 47 23.4	+0.1
	comp=N,0.6nm,0.3s,baz=152,slow=10,SNR=8.9						
AKTK	Aktyubinsk	17.00	330	P	Pn	06 47 28.1	+0.5
AKTO	Aktyubinsk	17.00	330	⇑Pn	Pn	06 47 27.8	+0.1
	comp=N,0.7nm,0.8s						
AKTO				⇑Sn	Sn	06 50 25.4	-12
	comp=N,0.8nm,1.3s						
AKTO	Aktyubinsk	17.00	330	P	Pn	06 47 28.1	+0.5
	comp=N,0.5nm,0.3s,baz=136,slow=10,SNR=12						
ZAA0	Zalesovo Array	19.90	24	eP	P	06 48 00.2	+1.1
ZALV	Zalesovo Beam	19.90	24	P	P	06 47 59.6	+0.6
	comp=N,2.0nm,0.3s,baz=218,slow=9.4,SNR=10						
SONM	Songino Array	28.18	55	P	P	06 49 17.0	-1.0
	comp=N,0.9nm,0.7s,mb3.6,baz=159,slow=13,SNR=6.6						
CLL	Collm	43.46	309	e(P)	P	06 51 29.0	+1.2
NOA	NORSAR Array B	44.62	323	P	P	06 51 36.5	-0.4
	comp=N,1.7nm,1.0s,mb3.6,baz=96,slow=7.8,SNR=3.3						
NOA	NORSAR Array B	44.62	323	P	P	06 51 36.5	-0.4
TORD	Torodi Ar. Bea	65.97	269	P	P	06 54 07.9	-2.6
	comp=N,0.2nm,0.6s,mb3.1,baz=42,slow=5.5,SNR=5.3						
YKA	Yellowknife Ar	81.33	3	P	P	06 55 39.5	+0.1
	comp=N,0.2nm,0.6s,mb2.9,baz=344,slow=4.8,SNR=5.2						

IDC 17 06:54:13.2±3.8**, 457S×15286E, h0km, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/16**, mbtmp3.5**/3**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.2**/17**, Error ellipse: s-maj=127.5km s-min=34.0km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	8.53	125	LR	LR	06 58 55.7	
	comp=Z,37nm,18.5s,baz=200,slow=33						
WRA	Warramunga Arr	23.64	228	P	P	06 59 27.0	+0.4
	0.5nm,0.5s,baz=52,slow=9.7,SNR=6.8						
ASAR	Alice Springs	26.36	222	P	P	06 59 51.5	+0.2
	0.2nm,0.4s,baz=56,slow=9.0,SNR=3.3						
MKAR	Makanchi Array	80.19	319	P	P	07 06 26.3	+0.8
	0.6nm,0.5s,baz=102,slow=6.5,SNR=12						
TORD	Torodi Ar. Bea	150.29	289	PKPbc	PKPbc	07 14 05.3	-2.2
	0.6nm,0.9s,baz=71,slow=2.3,SNR=3.5						

*SKO **17** 07:05:53.9, 4097N×2026E, h20km, M2.3, ML2.6*
*CSEM **17** 07:05:53.0±0.3, 4107N×2028E, h5km, ML2.6, Error ellipse: s-maj=7.0km s-min=2.6km az=15.0*
*BEO **17** 07:05:55.3±1.3, 4096N×2008E, ML2.4/2*
ISC 17 07:05:51.4±1.6**, 4094N**±008×**2018E**±006**, h10km, n11, σ0.88**/21**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.47	330	ePg	Pg	07 06 01.2	+0.6
TIR				eSg	Sg	07 06 08.1	+1.2
BIA	Bitola	0.87	84	ePg	Pg	07 06 07.7	-0.4
BIA				eSg	Sg	07 06 20.7	+1.3
BIA				eLg		07 06 20.9	
	74nm,0.4s						
BIA	Bitola	0.87	84	ePg	Pg	07 06 07.8	-0.3
BIA				eSg	Sg	07 06 20.7	+1.3
BIA				eLg		07 06 20.9	
	comp=N,74nm,0.4s						
BIA				eLg		07 06 21.1	
	comp=E,79nm,0.5s						
KRUS	Krusevo	0.91	62	ePg	Pg	07 06 09.6	+0.6
KRUS				eSg	Sg	07 06 21.7	+0.8
KRUS				eLg		07 06 22.3	
	comp=E,45nm,0.4s						
KRUS	Krusevo	0.91	62	ePg	Pg	07 06 09.6	+0.6
KRUS				eSg	Sg	07 06 21.7	+0.9
KRUS				eLg		07 06 22.2	
	comp=E,38nm,0.4s						
KRUS				eLg		07 06 22.3	
	comp=N,45nm,0.4s						
SKO	Skopje	1.40	42	ePg	Pg	07 06 18.5	+0.2
SKO				eSg	Sg	07 06 35.9	-0.5
SKO				eLg		07 06 36.3	
	comp=N,114nm,0.7s						
SKO	Skopje	1.40	42	ePg	Pg	07 06 18.6	+0.3
SKO				eSg	Sg	07 06 36.0	-0.5
SKO				eLg		07 06 36.3	
	comp=E,114nm,0.7s						
SKO				eLg		07 06 37.6	
	comp=N,101nm,0.4s						
VAY	Valandovo	1.84	77	ePg	Pg	07 06 26.1	-0.6
VAY				eSg	Sg	07 06 50.2	-0.5
VAY	Valandovo	1.84	77	ePg	Pg	07 06 26.2	-0.6
VAY				eSg	Sg	07 06 50.2	-0.4
BARS	Barje	2.24	32	ePn	Pg	07 06 32.6	-1.7
BARS				eSn	Sg	07 07 03.3	0.0
BBLS	Lazići	2.98	349	ePn	Pg	07 06 47.1	-1.4

*IDC **17** 07:30:40.3±0.7, 3944N×7476E, h0km, mb4.3/16, mb1 4.4/21, mb1mx4.3/28, mbtmp4.3/21, ML3.9/5, MS3.8/18, Ms1 3.8/18, ms1mx3.6/34, Error ellipse: s-maj=15.0km s-min=11.7km az=162.0*
*SZGRF **17** 07:30:41.7, 3981N×7600E, h33km, mb4.4, Southern Xinjiang, China*
*DJA **17** 07:30:44, 3943N×7477E, h10km, mb5.0/7*
*MOS **17** 07:30:44.5±1.2, 3971N×7474E, h33km, mb4.7/30, Error ellipse: s-maj=7.5km s-min=5.1km az=108.1*
*NNC **17** 07:30:44.9±2.7, 3986N×7454E, h0km, mb4.8, mpv4.8,*

Error ellipse: s-maj=26.0km s-min=12.4km az=5.0
NEIC **17** 07:30:46.0±0.3, 3945N×75.12E, mb4.6/27, Error ellipse: s-maj=7.1km s-min=4.6km az=55.0
ISCJB **17** 07:30:47.3±0.5, 3966N±003×7477E±003, h65km±4km, mb4.5/54, Error ellipse: s-maj=4.5km s-min=4.4km az=20.4
BJI **17** 07:30:47.5, 3981N×7508E, h50km, mB4.8, mb4.7, ML4.4, Ms4.3, Msz3.9
ISC 17 07:30:48.9±0.4**, 3968N**±003×**7481E**±003**, h64**km±4km**, h53**km±2.9km**: pP-P, n203,** σ1^s**18**/217**, mb4.5**/54**, 10C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	2.42	8	P	Pn	07 31 27.1	+1.1
	SNR=68						
UCH	Uchtor	2.55	355	P	Pn	07 31 29.8	+1.8
	SNR=42						
UCH	Uchtor	2.55	355	*e*Pn	Pn	07 31 28.9	+0.9
UCH				*e*Sn	Sn	07 31 58.9	+1.0
ULHL	Ulahol	2.78	22	P	Pn	07 31 31.1	+0.1
	SNR=132						
AAK	Ala-Archa	2.96	355	P	Pn	07 31 34.9	+1.5
	SNR=52						
AAK	Ala-Archa	2.96	355	*e*Pn	Pn	07 31 34.4	+0.9
KBK	Karagaybulak	2.98	2	P	Pn	07 31 35.5	+1.9
	SNR=60						
EKS2	Erkin-Say	3.08	346	P	Pn	07 31 36.0	+1.0
	SNR=23						
EKS2	Erkin-Say	3.08	346	*e*Pn	Pn	07 31 35.3	+0.2
EKS2				*e*Sn	Sn	07 32 18.4	+7.7
FRU	Bishkek	3.15	357	*i* PN	Pn	07 31 37.0	+0.9
FRU				*i* S	Sn	07 32 20.0	+7.5
FRU				pmax	pmax		
	comp=Z,2μm,1.6s						
FRU				smax			
	comp=N,6μm,2.0s						
TKM2	Tokmak 2	3.29	10	⇓Pn	Pn	07 31 38.6	+0.6
TKM2				⇓Lg		07 32 23.1	
	comp=N,25nm,0.3s						
TKM2	Tokmak 2	3.29	10	P	Pn	07 31 39.2	+1.2
	SNR=290						
TKM2	Tokmak 2	3.29	10	*e*Pn	Pn	07 31 39.0	+1.1
TKM2				*e*Sn	Sn	07 32 23.0	+7.2
CHMS	Chumysh	3.31	359	P	Pn	07 31 39.6	+1.3
	SNR=31						
USP	Ospenovka	3.59	356	P	Pn	07 31 43.5	+1.5
	SNR=11						
KNDC	Almaty	3.89	24	⇑Pn	Pn	07 31 47.2	+1.1
	comp=N,734nm,0.9s						
KNDC				⇓Lg		07 32 46.2	
	comp=N,4μm,1.2s						
AAA	Alma-Ata	3.93	23	*i* PN	Pn	07 31 53.7	+7.0
AAA				*i* S	Sn	07 32 45.3	+14
AAA				pmax	pmax		
	comp=Z,383nm,0.6s						
AAA				smax			
	comp=N,2μm,1.0s						
KK31	Karatay Array	4.71	318	Pn	Pn	07 31 56.0	-1.4
	comp=N,38nm,0.5s,baz=126,slow=12,SNR=1018						
KK31				⇑Sn	Sn	07 32 52.3	+1.8
	comp=N,58nm,0.5s,baz=135,slow=22,SNR=5.1						
KK31				⇓Lg		07 33 07.3	
	comp=N,207nm,0.7s						
KK31	Karatay Array	4.71	318	*i* PN	Pn	07 31 55.9	-1.4
KK31				pmax	pmax		
	comp=Z,35nm,0.3s						
CHCP	Chirah Chowk	6.14	192	P	Pn	07 32 17.1	+0.1
CEP	Cherat	6.29	203	P	Pn	07 32 19.1	0.0
CEP				S	Sn	07 33 31.0	+1.4
KBL	Kabul	6.90	224	*e*PN	Pn	07 32 27.1	-0.2
KBL				pmax	pmax		
	comp=Z,27nm,0.6s						
KBL	Kabul	6.90	224	*e*Pn	Pn	07 32 27.1	-0.2
	comp=Z,27nm,0.6s						
SARP	Sargodha	7.94	193	P	Pn	07 32 39.6	-2.0
SBDP	Sheikh Budin	8.05	205	⇓P	Pn	07 32 41.5	-1.6
MK31	Makanchi Array	8.96	35	Pn	Pn	07 32 54.9	-0.6
	comp=Z,18nm,0.8s,baz=209,slow=12,SNR=38						
MK31				⇓Lg		07 35 30.1	
	comp=Z,95nm,1.2s,baz=228,slow=31,SNR=4.4						
MK31	Makanchi Array	8.96	35	*i* P	Pn	07 32 54.8	-0.6
MK31				pmax	pmax		
	comp=Z,82nm,1.5s						
MK31	Makanchi Array	8.96	35	*e*Pn	Pn	07 32 55.6	+0.2
MKAR	Makanchi Array	8.96	35	Pn	Pn	07 32 55.2	-0.2
	comp=Z,0.5nm,0.3s,baz=219,slow=12,SNR=20						
MKAR				Lg		07 35 29.1	
	comp=Z,0.5nm,0.3s,baz=214,slow=27,SNR=3.5						
MKAR				LR	LR	07 37 07.3	
	comp=Z,108nm,18.2s,baz=218,slow=42						
WMQ	Urumqi	10.47	63	P	Pn	07 33 14.5	-1.7
WMQ				S	Sn	07 35 06.8	-5.0
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.2s						
WMQ				AMB	AMB		
	comp=Z,180nm,4.5s						
WMQ				LR	LR		
	comp=N,455nm,7.0s						
WMQ				LR	LR		
	comp=E,424nm,4.0s						
KURBB	Kurchatov Arra	11.25	12	⇑Pn	Pn	07 33 24.9	-1.8
	comp=E,2.0nm,0.8s						
KURBB				⇑Lg		07 36 38.0	
	comp=E,64nm,1.4s						
KURK	Kurchatov	11.35	12	⇑Pn	Pn	07 33 26.0	-2.1
	comp=E,18nm,1.3s						
KURK				⇓Lg		07 36 41.0	
	comp=E,369nm,1.7s						
KURK	Kurchatov	11.35	12	Pn	Pn	07 33 24.6	-3.5
	comp=E,0.1nm,0.3s,baz=198,slow=11,SNR=13						
KURK				Lg		07 36 36.9	
	comp=E,0.2nm,0.3s,baz=354,slow=15,SNR=7.7						
KURK				LR	LR	07 37 54.7	
	comp=E,893nm,18.8s,baz=210,slow=38						
KURK	Kurchatov	11.35	12	*e*Pn	Pn	07 33 26.2	-1.9
VOSK	Vostochnaya	13.31	350	⇓Pn	Pn	07 33 51.7	-3.1
	comp=E,22nm,1.1s						
VOSK				⇓Lg		07 37 40.9	
	comp=E,211nm,1.7s						
DANN	Dangsing	13.51	144	*e*P	Pn	07 33 50.2	-7.4
	comp=E,38nm,0.5s						
DANN				*e*S	Sn	07 36 14.6	-11
BVA0	Borovoye Array	13.69	349	Pn	Pn	07 33 56.6	-3.2
	comp=E,5.5nm,0.9s,baz=150,slow=12,SNR=26						
BVA0				Lg		07 37 53.4	
	comp=E,22nm,1.4s,baz=172,slow=29,SNR=10						
BVA0	Borovoye Array	13.69	349	*i* P	Pn	07 33 56.6	-3.2
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	13.69	349	Pn	Pn	07 33 57.2	-2.6
	comp=Z,0.2nm,0.3s,baz=158,slow=12,SNR=20						
BVAR				Sn	Sn	07 36 28.4	-1.6
	comp=Z,0.2nm,0.3s,baz=176,slow=23,SNR=4.0						
BVAR				Lg		07 37 53.1	
	comp=Z,0.4nm,0.3s,baz=145,slow=24,SNR=9.9						
BVAR				LR	LR	07 39 18.1	
	comp=Z,766nm,18.9s,baz=158,slow=37						
BVAR	Borovoye Array	13.69	349	P	Pn	07 33 57.2	-2.6
BVAR						07 36 28.4	
BVAR				MLR	MLR		
	comp=Z,767nm,18.9s						
BRVK	Borovoye	13.74	348	*e*P	Pn	07 33 57.5	-2.9
KOLN	Koldanda	13.94	146	*e*P	Pn	07 33 55.6	-7.7
	comp=Z,45nm,0.7s						
GKN	Gorkha	14.21	142	*e*P	Pn	07 33 59.3	-7.6
	comp=Z,34nm,0.3s						
AB31	Akbulak array	14.27	317	P	Pn	07 34 03.4	-4.1
AB31				pmax	pmax		
	comp=Z,40nm,0.6s						
AB09	Akbulak array	14.29	317	⇑Pn	Pn	07 34 04.1	-3.6
	comp=Z,32nm,0.7s						
AB09				⇑Sn	Sn	07 36 37.5	-7.1
	comp=Z,10nm,1.0s						
KKN	Kakani	14.70	141	*e*P	Pn	07 34 06.4	-6.8
	comp=Z,40nm,0.6s						
KKN	Kakani	14.70	141	*e*P	Pn	07 34 06.4	-6.8
KKN				pmax	pmax		
	comp=Z,40nm,0.6s						
DMN	Daman	14.77	142	*e*P	Pn	07 34 07.0	-7.1
	comp=Z,25nm,0.5s						
GUN	Gumba	14.90	139	*e*P	Pn	07 34 08.9	-6.9
PKIN	Phulchoki	14.93	141	*e*P	Pn	07 34 09.5	-6.8
	comp=Z,37nm,0.6s						
PKI	Pulchoki	14.94	141	*e*P	Pn	07 34 09.7	-6.7
	comp=Z,46nm,0.6s						
PKI	Pulchoki	14.94	141	*e*P	Pn	07 34 09.7	-6.7
PKI				pmax	pmax		
	comp=Z,46nm,0.6s						
JIRN	Jiri	15.26	138	*e*P	Pn	07 34 14.0	-6.5
	comp=Z,70nm,0.5s						
ZAA0	Zalesovo Array	15.80	22	*e*P	Pn	07 34 25.4	-1.9
ZALV	Zalesovo Beam	15.80	22	Pn	Pn	07 34 25.4	-1.9
	comp=Z,0.7nm,0.3s,baz=213,slow=12,SNR=27						
ZALV				Lg		07 39 01.7	
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=4.0						
ZALV				LR	LR	07 40 50.6	
	comp=Z,276nm,21.1s,baz=216,slow=38						
AKTK	Aktyubinsk	15.97	318	Pn	Pn	07 34 27.7	-1.7
AKTK				Sn	Sn	07 37 09.0	-17
AKTK				LR	LR	07 41 01.5	
AKTO	Aktyubinsk	15.97	318	⇑Pn	Pn	07 34 27.5	-1.9
	comp=Z,7.3nm,0.9s						
AKTO				⇑Sn	Sn	07 37 21.1	-4.4
	comp=Z,8.3nm,3.0s						
AKTO	Aktyubinsk	15.97	318	Pn	Pn	07 34 27.7	-1.7
	comp=Z,2.4nm,0.3s,baz=126,slow=13,SNR=44						
AKTO				Sn	Sn	07 37 09.0	-17
	comp=Z,0.0nm,0.3s,baz=134,slow=15,SNR=1.5						
AKTO				LR	LR	07 41 01.5	
	comp=Z,498nm,19.6s,baz=274,slow=38						
RAMN	Ramite	16.05	139	*e*P	Pn	07 34 23.1	-7.4
	comp=Z,99nm,0.7s						
RAMN				*e*S	S	07 37 13.7	-24
NVS	Novosibirsk	16.19	18	*i* P	Pn	07 34 30.0	-2.1
NVS				pmax	pmax		
	comp=Z,86nm,1.8s						
TAPN	Taplejung	16.31	135	*e*P	Pn	07 34 26.8	-7.1
ODAN	Odare	16.53	137	*e*P	Pn	07 34 30.0	-6.6
	comp=Z,49nm,0.4s						
LSA	Lhasa	16.70	122	P	Pn	07 34 38.3	-0.4
LSA	Lhasa	16.70	122	*e*P	Pn	07 34 38.0	-0.7
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
LSA	Lhasa	16.70	122	*e*P	Pn	07 34 38.0	-0.7
	comp=Z,14nm,0.7s						
HVS	Khovu-Aksy	17.47	43	⇓*i*P	Pn	07 34 46.5	-1.4
HVS				pmax	pmax		
	comp=Z,199nm,1.6s						
GTA	Gaotai	19.27	83	*e*P	Pn	07 35 09.3	-0.5
GTA				AP	pP	07 35 21.0	-0.7
GTA				XP	sP	07 35 28.4	-1.4
GTA				S	S	07 38 42.8	-0.2
GTA				AMB	AMB		
	comp=Z,19nm,1.3s						
GTA				AMB	AMB		
	comp=Z,164nm,5.7s						
GTA				LR	LR		
	comp=N,235nm,14.3s						
GTA				LR	LR		
	comp=E,114nm,10.8s						
GTA				LR	LR		
	comp=Z,257nm,14.6s						
SVE	Sverdlovsk	19.51	336	*e*P	Pn	07 35 11.9	-0.6
SVE				pmax	pmax		
	comp=Z,35nm,1.5s						
ARU	Arti	19.88	333	*d* *i*P	Pn	07 35 14.7	-2.2
ARU				*e*S	S	07 38 55.5	+0.6
ARU				pmax	pmax		
	comp=Z,28nm,1.2s						
ARU				MLR	MLR		
	comp=Z,409nm,18.0s						
ARU	Arti	19.88	333	*e*P	Pn	07 35 16.1	-0.8
	comp=Z,43nm,1.4s						
MOY	Mondy	21.74	48	*e*P	P	07 35 36.2	+1.5
MOY				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb3.7						
HYB	Hyderabad	22.42	171	*i* P	P	07 35 43.0	+0.8
HYB	Hyderabad	22.42	171	*e*P	P	07 35 43.0	+0.8
HYB				*e*S	S	07 40 07.0	+23
ZAK	Zakamensk	22.65	52	⇓*i*P	P	07 35 44.9	+0.5
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1						
GNI	Garni	23.02	281	P	P	07 35 47.0	-1.5
	comp=Z,6.7nm,0.5s,mb4.3,baz=10,slow=22,SNR=4.7						
GNI				LR	LR	07 46 28.0	
	comp=Z,89nm,18.2s,baz=304,slow=41						
GNI	Garni	23.02	281	*e*P	P	07 35 49.6	+1.1
GNI				pmax	pmax		
	comp=Z,34nm,1.7s						
GNI				MLR	MLR		
	comp=Z,100nm,17.0s						
GNI	Garni	23.02	281	*e*P	P	07 35 50.2	+1.7
	comp=Z,61nm,1.1s,mb5.0						
GNI				LR	LR	07 46 28.0	
LZH	Lanzhou	23.15	90	*e*P	P	07 35 50.6	+0.8
LZH				*e*PP		07 36 21.3	
LZH				*e*S	S	07 39 57.3	+1.1
LZH				AMB	AMB		
	comp=Z,39nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,87nm,4.0s						
LZH				LR	LR		
	comp=E,591nm,12.5s						
LZH				LR	LR		
	comp=Z,725nm,14.7s						
TLY	Talaya	23.28	49	*e*P	P	07 35 51.7	+0.9
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
SONM	Songino Array	24.09	60	P	P	07 35 59.1	+0.9
	comp=Z,1.6nm,0.6s,mb3.6,baz=262,slow=9.8,SNR=15						
SONM				LR	LR	07 46 10.3	
	comp=Z,228nm,18.7s,baz=287,slow=38						
SONM	Songino Array	24.09	60	P	P	07 35 59.1	+0.8
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,228nm,18.7s						
KIV	Kislovodsk	24.23	291	*e*P	P	07 36 03.7	+4.1
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
KIV				MLR	MLR		
	comp=Z,60nm,14.0s						
KIV	Kislovodsk	24.23	291	*e*P	P	07 36 01.1	+1.5
	comp=Z,32nm,1.2s,mb4.6						
KIV				*e*		07 36 14.4	
ULN	Ulaanbaatar	24.54	60	*e*P	P	07 36 02.9	+0.6
ULN	Ulaanbaatar	24.54	60	*e*P	P	07 36 03.2	+0.9
	comp=Z,6.6nm,0.9s,mb4.2						
CD2	Chengdu	25.11	101	P	P	07 36 09.6	+1.9
CD2				AP	pP	07 36 23.9	+0.9
CD2				PP		07 36 49.8	
CD2				PCP	PcP	07 39 44.3	+3.8
CD2				S	S	07 40 26.4	-1.4
CD2				XS	sS	07 40 49.3	-4.8
CD2				SS		07 41 27.3	
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
CD2				AMB	AMB		
	comp=Z,190nm,6.2s						
CD2				LR	LR		
	comp=N,210nm,5.4s						
CD2				LR	LR		
	comp=Z,340nm,5.9s						
VOR	Voronezh	27.35	308	P	P	07 36 30.0	+2.3
VOR				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.6						
KMI	Kunming	27.55	113	P	P	07 36 30.9	+1.2
KMI				AP	pP	07 36 44.3	-0.9
KMI				XP	sP	07 36 51.3	-1.4
KMI				PP		07 37 19.4	
KMI				S	S	07 41 04.8	-1.6
KMI				XS	sS	07 41 29.9	-3.0
KMI				SS		07 42 25.8	
KMI				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,64nm,5.6s						
KMI				LR	LR		
	comp=N,134nm,20.6s						
KMI				LR	LR		
	comp=E,204nm,17.6s						
KMI				LR	LR		
	comp=Z,155nm,15.2s						
XAN	Xi'an	27.76	91	P	P	07 36 32.9	+1.4
XAN				AP	pP	07 36 44.6	-2.4
XAN				PP	PP	07 37 22.9	-12
XAN				S	S	07 41 09.9	+0.4
XAN				SS		07 42 23.6	
XAN				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.3						
XAN				LR	LR		
	comp=E,61nm,16.4s						
XAN				LR	LR		
	comp=Z,73nm,17.2s						
HHC	Hu-ho-hao-te	27.94	76	*e*P	P	07 36 33.8	+0.7
HHC				AP	pP	07 36 45.3	-3.2
HHC				XP	sP	07 36 51.3	-4.8
HHC				PP	PP	07 37 24.0	-13
HHC				PCP	PcP	07 39 48.8	+1.9
HHC				*e*S	S	07 41 12.3	0.0
HHC				XS	sS	07 41 31.6	-7.2
HHC				SS		07 42 34.3	
HHC				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.6						
HHC				AMB	AMB		
	comp=Z,124nm,4.9s						
HHC				LR	LR		
	comp=N,172nm,15.5s						
HHC				LR	LR		
	comp=E,264nm,13.1s						
HHC				LR	LR		
	comp=Z,218nm,13.1s						
GYA	Guiyang	29.60	107	P	P	07 36 47.3	-0.7
GYA				AP	pP	07 37 01.4	-2.1
GYA				XP	sP	07 37 10.6	-0.4
GYA				PP	PP	07 37 44.8	-11
GYA				PCP	PcP	07 39 51.0	-0.4
GYA				S	S	07 41 36.5	-2.2
GYA				XS	sS	07 42 01.3	-3.9
GYA				SCP	ScP	07 43 25.9	-1.7
GYA				SCS	ScS	07 47 20.4	-2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,90nm,4.7s						
GYA				LR	LR		
	comp=N,420nm,11.9s						
GYA				LR	LR		
	comp=E,490nm,13.4s						
GYA				LR	LR		
	comp=Z,460nm,12.8s						
OBN	Obninsk	29.69	314	*e*P	P	07 36 51.1	+2.7
OBN				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s						
CMAR	Chiang Mai Arr	29.70	128	LR	LR	07 51 20.1	
	comp=Z,64nm,20.9s,baz=285,slow=42						
CMAR	Chiang Mai Arr	29.70	128	*i* P	pP	07 36 58.7	-5.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLMR	Klimovskoe	30.36	326	*e*P	P	07 36 54.2	-0.1
KLMR				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.8						
BR131	Keskin Array S	31.48	284	*e*P	P	07 37 05.7	+1.2
	comp=Z,7.1nm,0.8s,mb4.5						
BR131				*e*pP	pP	07 37 20.4	+0.4
BRTR	Keskin Array B	31.48	284	P	P	07 37 05.2	+0.8
	comp=Z,4.4nm,0.7s,mb4.4,baz=94,slow=8.1,SNR=20						
BRTR	Keskin Array B	31.48	284	P	P	07 37 05.3	+0.9
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI	Beijing	31.55	76	P	P	07 37 03.8	-1.2
BJI				S	S	07 42 06.3	-2.6
BJI				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
BJI				LR	LR		
	comp=N,154nm,15.3s						
BJI				LR	LR		
	comp=E,186nm,16.6s						
BJI				LR	LR		
	comp=Z,36nm,19.7s						
WHN	Wuhan	33.38	93	⇑P	P	07 37 22.8	+1.7
AKASG	Malin Array Be	33.46	305	P	P	07 37 21.6	0.0
	comp=Z,3.3nm,0.6s,mb4.4,baz=82,slow=6.9,SNR=15						
AKASG	Malin Array Be	33.46	305	P	P	07 37 21.6	0.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	Joensuu	34.75	326	*e*p	P	07 37 33.5	+0.9
	comp=Z,4.9nm,0.9s,mb4.4						
JOF	Joensuu	34.75	326	*e*P	P	07 37 33.5	+0.9
JOF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
NJ2	Nanjing	36.20	88	*e*P	P	07 37 46.1	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CN2	Changchun	37.53	67	*e*P	P	07 37 54.9	-1.7
NIE	Niedzica	39.26	303	*e*P	P	07 38 12.7	+1.7
ARCES	ARCESS Array B	39.44	335	P	P	07 38 11.8	-0.5
	comp=Z,4.2nm,0.6s,mb4.3,baz=106,slow=8.9,SNR=14						
ARCES				LR	LR	07 56 07.5	
	comp=Z,218nm,18.2s,baz=266,slow=38						
ARCES	ARCESS Array B	39.44	335	P	P	07 38 11.8	-0.5
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,218nm,18.2s						
ARCES	ARCESS Array B	39.44	335	P	P	07 38 11.8	-0.5
ARCES				LR	LR	07 56 07.5	
YAK	Yakutsk	39.63	37	*e*P	P	07 38 15.1	+1.2
YAK				pmax	pmax		
	comp=Z,35nm,1.5s,mb4.9						
KSRS	Korea Array	41.08	76	P	P	07 38 26.2	-0.1
	comp=Z,1.8nm,0.8s,mb3.8,baz=292,slow=6.6,SNR=6.8						
KSRS				LR	LR	07 58 25.3	
	comp=Z,71nm,19.1s,baz=153,slow=40						
KSRS	Korea Array	41.08	76	P	P	07 38 26.2	-0.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
KSRS				MLR	MLR		
	comp=Z,71nm,19.1s						
TIXI	Tiksi	41.69	23	⇓*i*P	P	07 38 31.5	+0.7
TIXI				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.5						
DPC	Dobruska-Polom	41.70	305	*e*P	P	07 38 32.0	+0.9
UPC	Upice	41.87	305	*e*P	P	07 38 33.4	+0.9
PRU	Pruhonice	42.88	305	*e*P	P	07 38 41.5	+0.7
BRG	Berggiesshubel	43.11	306	*e*P	P	07 38 43.4	+0.8
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
BRG	Berggiesshubel	43.11	306	*e*P	P	07 38 43.5	+0.9
	comp=Z,4.0nm,0.7s,mb4.3						
BRG	Berggiesshubel	43.11	306	*e*P	P	07 38 43.4	+0.8
	comp=Z,4.5nm,0.8s,mb4.2						
FBE	Freiberg	43.47	306	*e*P	P	07 38 46.4	+0.9
	comp=Z,5.0nm,0.7s,mb4.3						
CLL	Collm	43.62	307	*e*P	P	07 38 47.5	+0.8
	comp=Z,5.0nm,0.6s,mb4.4						
CLL	Collm	43.62	307	*e*P	P	07 38 47.0	+0.3
CLL				*e*PP	PP	07 40 29.0	0.0
CLL				LmV		07 59 00.0	
	comp=Z,200nm,18.5s						
CLL	Collm	43.62	307	*e*P	P	07 38 50.0	+3.3
GEC2	GERESS Array S	43.64	303	*e*P	P	07 38 47.9	+1.0
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
GEC2	GERESS Array S	43.64	303	*e*P	P	07 38 47.9	+1.0
	comp=Z,10.0nm,1.3s,mb4.4						
GERES	GERESS Array B	43.64	303	P	P	07 38 48.0	+1.1
	comp=Z,3.1nm,0.6s,mb4.2,baz=66,slow=7.7,SNR=16						
GERES				LR	LR	07 59 23.0	
	comp=Z,147nm,18.8s,baz=84,slow=39						
GERES	GERESS Array B	43.64	303	P	P	07 38 48.0	+1.1
GERES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES				MLR	MLR		
	comp=Z,147nm,18.8s						
KHC	Kasperske Hory	43.66	303	⇓*i*P	P	07 38 48.0	+1.0
KHC	Kasperske Hory	43.66	303	*e*P	P	07 38 47.9	+0.9
NB2	NORSAR Subarra	43.73	321	P	P	07 38 47.3	-0.1
	comp=Z,2.3nm,0.6s,mb4.1,baz=90,slow=8.6						
NOA	NORSAR Array B	43.73	321	P	P	07 38 47.6	+0.2
	comp=Z,2.4nm,0.5s,mb4.2,baz=91,slow=8.1,SNR=14						
NOA				LR	LR	07 57 37.4	
	comp=Z,171nm,19.6s,baz=70,slow=37						
NOA	NORSAR Array B	43.73	321	P	P	07 38 47.7	+0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA				MLR	MLR		
	comp=Z,171nm,19.6s						
NAO01	NORSAR Array S	43.90	321	*e*P	P	07 38 48.7	0.0
	comp=Z,6.8nm,0.8s,mb4.4						
WET	Wettzell	44.11	304	*e*P	P	07 38 51.6	+1.0
WET				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
WET	Wettzell	44.11	304	*e*P	P	07 38 51.6	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,4.0nm,1.0s,mb4.1						
GRA1	Grafenberg Arr	45.05	305	eP	P	07 38 58.8	+0.7
	comp=Z,4.0nm,0.8s,mb4.3						
GRF	Grafenberg Arr	45.05	305	eP	P	07 38 58.8	+0.7
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
GRF	Grafenberg Arr	45.05	305	eP	P	07 38 58.8	+0.7
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
GRF	Grafenberg Arr	45.05	305	eP	P	07 38 58.8	+0.7
	comp=Z,4.0nm,0.8s,mb4.3						
JOW	Kunigami	45.89	89	P	P	07 39 06.0	+1.0
	comp=Z,5.9nm,0.6s,mb4.7,baz=215,slow=16,SNR=2.8						
CDF	Champ du Feu	47.88	304	eP	P	07 39 19.6	-0.7
PGF	Pioggiola	48.54	296	eP	P	07 39 23.2	-2.3
MJAR	Matsushiro Arr	49.05	72	P	P	07 39 30.1	+0.6
	comp=Z,2.5nm,0.9s,mb4.3,baz=294,slow=9.2,SNR=4.3						
MJAR	Matsushiro Arr	49.05	72	P	P	07 39 30.1	+0.6
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPG	La Plagne	49.09	300	eP	P	07 39 28.9	-0.7
	comp=Z,16nm,0.9s,mb4.8						
LPG	La Plagne	49.09	300	eP	P	07 39 28.9	-0.7
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
LPG	La Plagne	49.09	300	eP	P	07 39 28.9	-0.7
	comp=Z,8.0nm,0.9s,mb4.8						
LPL	La Plagne	49.10	300	eP	P	07 39 28.7	-1.0
	comp=Z,8.0nm,0.6s,mb4.6						
LPL	La Plagne	49.10	300	eP	P	07 39 28.7	-1.0
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
LPL	La Plagne	49.10	300	eP	P	07 39 28.7	-1.0
	comp=Z,4.0nm,0.6s,mb4.6						
SBF	Sospel	49.17	298	eP	P	07 39 29.4	-0.9
	comp=Z,116nm,1.2s,mb5.5						
SBF	Sospel	49.17	298	eP	P	07 39 29.4	-0.9
SBF				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.5						
SBF	Sospel	49.17	298	eP	P	07 39 29.4	-0.9
	comp=Z,58nm,1.2s,mb5.5						
CABF	La Chapelle	49.18	302	eP	P	07 39 29.5	-0.8
BNI	Bardonecchia	49.28	300	eP	P	07 39 32.8	+1.7
BNI				e*PP	pP	07 39 47.3	-0.2
BNI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
BNI	Bardonecchia	49.28	300	eP	P	07 39 32.8	+1.6
	comp=Z,12nm,0.9s,mb4.9						
BNI				epP	pP	07 39 47.3	-0.2
MBDF	Montbardon	49.33	299	eP	P	07 39 31.3	-0.2
	comp=Z,42nm,1.2s,mb5.0						
MBDF	Montbardon	49.33	299	eP	P	07 39 31.3	-0.2
MBDF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
MBDF	Montbardon	49.33	299	eP	P	07 39 31.3	-0.2
	comp=Z,21nm,1.2s,mb5.0						
FRF	La Foret Royal	49.81	298	eP	P	07 39 34.0	-1.1
ORIF	Oris-en-Rattie	49.86	300	eP	P	07 39 34.5	-1.0
SMRF	Simiane la Rot	50.39	299	eP	P	07 39 39.0	-0.5
LOR	Lormes	50.42	303	eP	P	07 39 38.8	-0.9
SMF	Signal de Mont	50.63	303	eP	P	07 39 40.4	-0.9
VIVF	Saint-Julien-l	50.69	300	eP	P	07 39 41.0	-0.8
	comp=Z,13nm,0.9s,mb4.6						
VIVF	Saint-Julien-l	50.69	300	eP	P	07 39 41.0	-0.8
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
VIVF	Saint-Julien-l	50.69	300	eP	P	07 39 41.0	-0.8
	comp=Z,6.7nm,0.9s,mb4.6						
SSF	Saint Saulge	50.71	303	eP	P	07 39 41.3	-0.6
AVF	Avril sur Loir	50.90	303	eP	P	07 39 42.4	-0.9
	comp=Z,24nm,0.9s,mb4.8						
AVF	Avril sur Loir	50.90	303	eP	P	07 39 42.4	-0.9
AVF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
AVF	Avril sur Loir	50.90	303	eP	P	07 39 42.4	-0.9
	comp=Z,12nm,0.9s,mb4.8						
KEST	Kesra	50.92	288	LR	LR	08 01 36.7	
	comp=Z,20nm,20.4s,baz=98,slow=36						
MTLF	Montolieu	52.89	299	eP	P	07 39 57.7	-0.5
PETK	Petropavlovsk-	55.60	46	LR	LR	08 05 52.7	
	comp=Z,52nm,21.6s,baz=115,slow=38						
ESDC	Sonseca Array	58.65	298	P	P	07 40 39.5	0.0
	comp=Z,1.4nm,0.6s,mb4.2,baz=55,slow=7.2,SNR=5.6						
COLD	Coldfoot	68.07	17	eP	P	07 41 42.4	+1.2
	comp=Z,6.0nm,0.9s,mb4.6						
TOA0	Torodi Ar. Sit	68.78	270	eP	P	07 41 45.0	-1.4
TORD	Torodi Ar. Bea	68.78	270	P	P	07 41 45.0	-1.4
	comp=Z,2.0nm,0.6s,mb4.2,baz=48,slow=5.1,SNR=22						
LSZ	Lusaka	69.82	228	eP	P	07 41 53.2	+0.5
LSZ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
LSZ	Lusaka	69.82	228	eP	P	07 41 53.2	+0.5
	comp=Z,11nm,1.0s,mb4.7						
INK	Inuvik	70.26	11	eP	P	07 41 54.8	+0.1
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	70.26	11	eP	P	07 41 54.8	+0.1
	comp=Z,7.2nm,1.1s,mb4.5						
COLA	College	70.56	18	eP	P	07 41 55.5	-1.1
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
COLA	College	70.56	18	eP	P	07 41 55.5	-1.1
	comp=Z,5.3nm,0.9s,mb4.5						
DBIC	Dimbokro	77.83	269	P	P	07 42 39.5	-0.3
	comp=Z,1.3nm,0.6s,mb4.0,baz=52,slow=4.6,SNR=3.2						
DBIC	Dimbokro	77.83	269	P	P	07 42 39.5	-0.3
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	77.89	4	P	P	07 42 39.5	+0.2
	comp=Z,2.5nm,0.6s,mb4.3,baz=349,slow=5.7,SNR=68						
YKA				LR	LR	08 17 54.5	
	comp=Z,34nm,18.1s,baz=20,slow=36						
YKA	Yellowknife Ar	77.89	4	P	P	07 42 39.5	+0.2
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,34nm,18.2s						
YKA	Yellowknife Ar	77.89	4	P	P	07 42 39.5	+0.2
YKA				LR	LR	08 17 54.5	
LBTB	Lobatse	79.05	224	eP	P	07 42 46.8	+0.7
LBTB				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
LBTB	Lobatse	79.05	224	eP	P	07 42 46.8	+0.7
	comp=Z,27nm,1.1s,mb5.1						
WRAB	Tennant Creek	81.22	125	eP	P	07 42 57.6	-0.3
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
WRAB	Tennant Creek	81.22	125	eP	P	07 42 57.6	-0.4
	comp=Z,12nm,0.8s,mb4.9						
BOSA	Boshof	82.12	222	P	P	07 43 02.9	+0.4
	comp=Z,9.9nm,1.0s,mb4.7,baz=18,slow=4.5,SNR=6.8						
BOSA	Boshof	82.12	222	eP	P	07 43 03.0	+0.5
BOSA				e*PP	pP	07 43 15.7	-4.4
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BOSA	Boshof	82.12	222	eP	P	07 43 03.0	+0.5
	comp=Z,8.2nm,0.8s,mb4.7						
BOSA				epP	pP	07 43 15.7	-4.4
ASAR	Alice Springs	83.71	128	P	P	07 43 10.5	-0.2
	comp=Z,4.6nm,0.7s,mb4.7,baz=316,slow=5.1,SNR=46						
ULM	Lac du Bonnet	90.08	354	LR	LR	08 26 15.3	
	comp=Z,138nm,18.4s,baz=312,slow=37						
STKA	Stephens Creek	94.32	128	LR	LR	08 29 34.2	
	comp=Z,43nm,19.1s,baz=25,slow=38						
PDAR	Pinedale Array	97.84	3	LR	LR	08 30 53.1	
	comp=Z,79nm,18.3s,baz=186,slow=37						
VNA2	Neumayer--Watz	124.48	203	ePKPdf	PKPdf	07 49 41.0	+1.5
	baz=20,slow=4.0						
VNA3	Neumayer Olymp	125.29	203	ePKPdf	PKPdf	07 49 42.3	+1.3

ATH 17 07:35:00.9, 3589N×2910E, h28km, MD3.2/3
ISCJB 17 07:35:01.2±1.7, 3588N±010×2914E±009, h47km±29km, Error ellipse: s-maj=17.0km s-min=11.1km az=154.2
DDA 17 07:35:01.6, 3610N×2888E, h6km±6km, Md3.3
CSEM 17 07:35:02.3±0.2, 3600N×2908E, h25km, MD3.3, Error ellipse: s-maj=4.9km s-min=2.7km az=170.0
ISC 17 07:35:01.7±1.3, **3597N**±008×**2907E**±007, **h20**km±7km, **n8**, σ1s**16**/13, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.46	66	ePB	Pg	07 35 11.0	-0.1
ARG	Arkhangelos	0.81	288	ePB	Pg	07 35 16.8	-0.7
ARG				eSN	Sg	07 35 30.2	+2.0
ARG	Arkhangelos	0.81	288	ePb	Pg	07 35 17.0	-0.5
ARG				eSn	Sg	07 35 30.3	+2.1
TURN	Turunc	0.98	338	i P	Pg	07 35 20.0	-0.9
TURN				i S	Sg	07 35 33.9	+0.1
GOLH	Golhisar	1.33	17	i P	Pn	07 35 25.1	-0.1
GOLH				i S	Sn	07 35 44.1	+1.8
KARP	Karpathos	1.61	256	ePN	Pn	07 35 29.7	+0.7
BDRM	Kayabasi	1.71	310	i P	Pn	07 35 30.6	+0.3
GCAM	G?zelcaml?	2.27	320	i P	Pn	07 35 36.5	-1.6
GCAM				i S	Sn	07 36 02.3	-3.3

IDC 17 07:38:15.0±6.4, **362S**×**14081E**, **h0**km, **mb3.4**/2, **mb1 3.7**/3, **mb1mx3.5**/14, **mbtmp3.5**/3, **ML3.4**/1, **Error ellipse: s-maj=239.7km s-min=32.7km az=90.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.41	201	P	Pn	07 42 17.8	-1.7
	0.1nm,0.3s,baz=21,slow=12,SNR=2.4						
ASAR	Alice Springs	21.02	198	P	P	07 43 01.4	+0.9
	1.2nm,0.7s,baz=28,slow=9.7,SNR=13						
MKAR	Makanchi Array	71.78	322	P	P	07 49 39.5	+0.1
	0.4nm,0.9s,baz=97,slow=7.1,SNR=4.1						

GUC 17 08:16:53.4±0.9, **2294S**×**7014W**, **h44**km±3km, **ML3.8, 2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.33	240	⇓iP	Pn	08 17 02.3	0.0
MECH				i S	Sn	08 17 09.3	+0.7
MECH				AML	AML	08 17 10.3	
	comp=N,6μm,0.3s						
CEN1	Los Morros	0.45	187	⇓iP	Pn	08 17 06.4	+2.6
CEN1				i S	Sn	08 17 16.1	+5.1
CEN1				AML	AML	08 17 16.6	
	comp=N,3μm,0.4s						
MACH	Maria Elena	0.82	26	⇑iP	Pn	08 17 09.6	+1.0
MACH				eS	Sn	08 17 21.1	+1.5
TOCH	Tocopilla	0.84	356	eP	Pn	08 17 09.0	+0.2
TOCH				i S	Sn	08 17 21.0	+0.9
TOCH				AML	AML	08 17 21.9	
	comp=E,13μm,0.2s						
PB04	Plate Boundary	0.90	42	⇓iP	Pn	08 17 06.3	-3.4
PB04				i S	Sn	08 17 15.7	-5.9
PB04				AML	AML	08 17 16.2	
	comp=E,13μm,0.5s						
LVC	Limon Verde	1.18	74	eP	Pn	08 17 15.0	+1.6
LVC				i S	Sn	08 17 31.6	+3.3
PB01	Plate Boundary	1.98	18	⇑iP	Pn	08 17 25.8	+1.4
PB01				i S	Sn	08 17 50.3	+2.3
PB01				AML	AML	08 17 56.2	
	comp=E,786nm,0.1s						

SGS 17 08:18:08.5, 3012N×3664E, h7km
ISCJB 17 08:18:11.2±1.0, 2988N±005×3626E±007, h0km, Error ellipse: s-maj=8.5km s-min=7.0km az=150.4
GII 17 08:18:13.3±1.2, 2995N×3610E, h0km, ML2.3/2, EXPLOSION
CSEM 17 08:18:13.3±0.3, 2962N×3629E, h10km, ML3.0, Error ellipse: s-maj=6.5km s-min=2.7km az=72.0
HLW 17 08:18:13.6, 2963N×3636E, h5km, Mb3.0
ISC 17 08:18:11.3±1.0, **2988N**±005×**3631E**±007, **h0**km, **n19**, σ1s**21**/22, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.10	263	Pg	Pg	08 18 32.7	+0.3
HRFI	Mount Harif	1.11	278	Pg	Pg	08 18 31.9	-0.7
EIL	Elat	1.20	260	Pg	Pg	08 18 33.4	-0.8
EIL				Sg	Sg	08 18 50.0	+0.3
MBRI	Mt Berech	1.21	266	Pg	Pg	08 18 33.8	-0.7
PRNI	Paran	1.22	293	Pg	Pg	08 18 33.7	-1.0
JLOS		1.34	212	P	Pg	08 18 36.7	-0.3
KRMI	Paran Flat	1.39	280	Pg	Pg	08 18 36.0	-1.9
KRMI				Sg	Sg	08 18 54.4	-1.7
HBST	Basata	1.52	245	P	Pn	08 18 40.2	+0.5
MZDA	Masada	1.64	331	Pn	Pn	08 18 41.7	+0.3
TBKS	Tabuk	1.66	173	P	Pn	08 18 39.4	-2.3
BDAS	Al Bad‘	1.79	216	S	Sn	08 19 08.8	+2.1
BDAS	Al Bad‘	1.79	216	P	Pn	08 18 43.0	-0.4
DSI	Dead Sea	1.87	335	Pn	Pn	08 18 45.0	+0.6
HNKL	Nakhl	2.02	272	P	Pn	08 18 48.4	+1.8
HNKL				S	Sn	08 19 14.1	+1.6
HKAT	Jabal Katrina	2.43	237	P	Pn	08 18 52.1	-0.1
TR2		2.71	237	P	Pn	08 18 55.8	-0.3
TR1		2.78	228	P	Pn	08 18 56.5	-0.5
AMAG	Maghara	2.79	287	P	Pn	08 19 00.0	+2.9
SUZ		3.02	270	P	Pn	08 19 02.2	+1.9

IGQ 17 08:29:24.5, 057N×8024W, h10km±7km, **Mb4.0, Ms3.8, 1C, Error ellipse: s-maj=10.2km s-min=6.1km az=85.5, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PINO	Pino	1.78	114	⇑P	Pn	08 29 57.5	+2.1
TERV	Terraza Guagua	1.79	114	P	Pn	08 29 57.6	+2.1
GGP	Refugio Guagua	1.80	114	P	Pn	08 29 57.7	+2.0
YANA	Yana	1.80	112	P	Pn	08 29 57.9	+2.2
YANA	Yana	1.80	112	S	Sn	08 30 22.4	+3.8
COTA	Cotacachi	1.92	97	P	Pn	08 29 59.8	+2.6
COTA	Cotacachi	1.92	97	S	Sn	08 30 27.0	+5.6
QIL2	Quilotoa	1.94	137	P	Pn	08 30 00.2	+2.6
VC1	Cotopaxi 1	2.19	123	P	Pn	08 30 04.5	+3.5
TAMB	Tambo	2.25	124	P	Pn	08 30 06.1	+4.3
ANTI	Antisana	2.31	116	P	Pn	08 30 08.2	+5.5
ANTI	Antisana	2.31	116	S	Sn	08 30 40.5	+9.3
PISA	Pisayambo	2.46	131	P	Pn	08 30 09.0	+4.3

MOS 17 09:03:15.4±0.8, 5120N×17950E, h33km, mb5.1/71, MS4.7/18, Error ellipse: s-maj=7.5km s-min=5.0km az=95.6
NEIC 17 09:03:16.8, 5097N×17963E, h24km, mb5.0/95, MS4.7/5, ML5.0(AEIC), ML5.2(PMR), After AEIC.
ISCJB 17 09:03:17.8±0.7, 5120N±004×17954E±002, h54km±5km, mb5.0/159, MS4.7/35, Error ellipse: s-maj=6.9km s-min=2.3km az=6.3
SZGRF 17 09:03:17.9, 5123N×17954W, h33km, mb4.8, MS4.5, Andreanof Islands, Aleutian Islands, United States
IDC 17 09:03:19.1±2.5, 51.19N×17958E, h53km±21km, mb4.4/26, mb1 4.6/28, mb1mx4.5/32, mbtmp4.4/28, ML4.4/2, MS4.6/8, Ms1 4.6/8, ms1mx4.2/17, Error ellipse: s-maj=15.9km s-min=9.3km az=164.0
GCMT 17 09:03:20.0±0.3, 5103N×17957E, h26km, MW5.2/85, Moment Tensor Solution. s53,c83; s85,c139; Duration: 1s0 Moment tensor: Scale 10^17Nm; M_{rr}0.73±.03; $M_{\theta\theta}$-0.63±.02; $M_{\phi\phi}$-0.10±.02; $M_{r\theta}$0.29±.03; $M_{\theta\phi}$-0.15±.01; $M_{\phi r}$0.16±.03; Best double couple: $M_0$0.77300×10^17 NP1:ϕ_s259.00000°, δ33.00000°, λ98.00000°. NP2: ϕ_s69.00000°, δ57.00000°, λ85.00000°. Principal axes: T 0.8060, Plg77.0000°, Azm322.0000°; N -0.0660, Plg5.0000°, Azm72.0000°; P -0.7400, Plg12.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
BJI 17 09:03:21.3, 5166N×17887E, h61km, mB5.2, mb5.1, Ms4.9, Msz4.7
ISC 17 09:03:20.4±0.5, **5126N**±004×**17955E**±002, **h60**km±4km, **h53**km±1.9km**:pP-P, n753**, σ0s**61**/740, **mb5.0**/159, **176C-186D, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	Adak	2.43	74	P	Pn	09 03 55.8	-1.8
ADK				S	Sn	09 04 29.2	+3.0
SMY	Shemya	3.68	296	P	Pn	09 04 15.1	+0.4
SMY				S	Sn	09 05 01.2	+4.4
FX1	Attu Island--F	4.27	295	P	Pn	09 04 21.4	-1.3
	105nm,0.3s,baz=153,slow=8.6,SNR=149						
FX1				S	Sn	09 05 11.9	+0.8
	26nm,0.3s,baz=88,slow=5.2,SNR=1.4						
FX1	Attu Island--F	4.27	295	P	Pn	09 04 22.5	-0.2
FX1				S	Sn	09 05 18.5	+7.4
NIKO	Nikolski	7.34	72	P	Pn	09 05 05.3	+0.5
OKCE	Okmok Cone E	7.83	69	P	Pn	09 05 12.3	+0.8
SPIA	Saint Paul Isl	8.42	41	P	Pn	09 05 22.1	+2.6
UNV	Unalaska Valle	8.88	68	ePn	Pn	09 05 25.2	-0.7
AKUT	Akutan	9.37	66	eP	Pn	09 05 33.5	+1.1
	300nm,1.9s						
SDPT	Sand Point	12.62	63	eP	Pn	09 06 15.8	-1.0
	73nm,0.7s						
PET	Petropavlovsk	12.96	286	eP	Pn	09 06 22.9	+1.5
PET				eS	Sn	09 08 45.4	+1.7
PET				pmax	pmax		
	comp=Z,18nm,1.0s						
GAMB	Gambell	13.39	17	ePn	Pn	09 06 25.7	-1.5
PEA0B	Petropavlovsk-	13.53	286	ePn	Pn	09 06 28.8	-0.4
PETK	Petropavlovsk-	13.53	286	P	Pn	09 06 28.2	-1.0
	comp=Z,0.6nm,0.3s,baz=100,slow=16,SNR=12						
PETK	Petropavlovsk-	13.53	286	P	Pn	09 06 28.2	-1.1
CHGN	Chignik	13.95	60	eP	Pn	09 06 33.9	-0.8
TNA	Tin City	15.72	19	eP	Pn	09 06 57.5	-0.2
	comp=Z,31nm,0.9s						
OHAK	Old Harbor	16.89	59	eP	Pn	09 07 11.3	-1.1
	comp=Z,13nm,0.3s						
KDAK	Kodiak Island	17.36	57	P	Pn	09 07 13.6	-4.6
	comp=Z,2.9nm,0.3s,baz=295,slow=12,SNR=22						
KDAK	Kodiak Island	17.36	57	eP	Pn	09 07 17.2	-1.0
KDAK				pmax	pmax		
	comp=Z,299nm,1.9s						
KDAK	Kodiak Island	17.36	57	ePn	Pn	09 07 17.1	-1.0
	comp=Z,299nm,1.9s						
BILL	Bilibino	18.05	344c	iP	Pn	09 07 27.8	+1.3
BILL				pmax	pmax		
	comp=Z,63nm,1.1s						
BILL				MLR	MLR		
	comp=Z,3μm,17.0s						
BILL	Bilibino	18.05	344	ePn	Pn	09 07 28.0	+1.5
	comp=Z,78nm,1.1s						
SEY	Seymchan	18.66	319	eP	Pn	09 07 33.1	-0.8
PPLA	Purkeypile	19.09	42	eP	Pn	09 07 39.1	+0.1
	comp=Z,46nm,0.6s						
SEW	Seward	19.42	51	eP	Pn	09 07 41.0	-2.0
	comp=Z,32nm,0.6s						
CHUM	Lake Minchumin	19.47	39	eP	Pn	09 07 43.0	-0.5
	comp=Z,30nm,0.7s						
RC01	Rabbit Creek A	19.54	48	eP	Pn	09 07 43.5	-0.9
	comp=Z,20nm,0.6s						
KTH	Kantishna Hill	19.88	40	eP	Pn	09 07 46.7	-1.7
	comp=Z,74nm,0.8s						
PMR	Palmer	19.96	47	eP	Pn	09 07 48.7	-0.7
PMR				pmax	pmax		
	comp=Z,15nm,0.8s						
PMR	Palmer	19.96	47	eP	Pn	09 07 48.7	-0.7
	comp=Z,14nm,0.8s						
BPAW	Bear Paw Mtn.	20.09	39	eP	P	09 07 49.0	+0.4
	comp=Z,37nm,0.7s						
TRF	Thorofare Moun	20.10	41	eP	P	09 07 48.9	+0.1
	comp=Z,105nm,1.0s						
MCK	McKinley	20.77	41	eP	P	09 07 56.9	+1.0
MCK				pmax	pmax		
	comp=Z,177nm,1.8s						
MCK	McKinley	20.77	41	ePn	P	09 07 56.9	+1.0
	comp=Z,177nm,1.8s						
COLA	College	21.65	39	eP	P	09 08 06.1	+0.8
COLA	College	21.65	39	eP	P	09 08 05.5	+0.1
	comp=Z,26nm,0.7s,mb4.8						
COLD	Coldfoot	21.90	32	ePn	P	09 08 08.2	+0.2
	comp=Z,16nm,0.7s,mb4.5						
PAX	Paxson	22.00	44	eP	P	09 08 07.4	-1.7
PAX				pmax	pmax		
	comp=Z,39nm,0.9s,mb4.8						
PAX	Paxson	22.00	44	eP	P	09 08 07.4	-1.6
	comp=Z,39nm,0.9s,mb4.8						
YSS	Yuzh-Sakhalins	24.30	274	⇑eP	P	09 08 30.5	-1.4
YSS				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.1						
YSS				MLR	MLR		
	comp=E,2μm,17.0s						
YSS				MLR	MLR		
	comp=Z,2μm,17.0s						
YSS	Yuzh-Sakhalins	24.30	274	eP	P	09 08 32.6	+0.7
	comp=Z,51nm,0.8s,mb5.0						
EGAK	Eagle	24.32	41	eP	P	09 08 31.6	-0.3
	comp=Z,99nm,1.5s,mb5.0						
PNL	Peninsula	24.39	54	eP	P	09 08 33.0	+0.5
DAWY	Dawson	24.91	43	eP	P	09 08 36.3	-0.9
HYT	Haines Junctio	25.38	51	eP	P	09 08 43.3	+1.8
ASAJ	Asahikawa	25.67	268	P	P	09 08 44.2	-0.1
	comp=Z,92nm,0.8s,mb5.3,baz=65,slow=8.6,SNR=20						
ASAJ				LR	LR	09 18 56.5	
	comp=Z,1μm,19.8s,baz=28,slow=36						
ASAJ	Asahikawa	25.67	268	P	P	09 08 44.3	0.0
ASAJ				pmax	pmax		
	comp=Z,92nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,1μm,19.8s						
INK	Inuvik	28.16	35	P	P	09 09 06.3	-0.1
	comp=Z,3.7nm,0.5s,mb4.3,baz=248,slow=12,SNR=21						
INK	Inuvik	28.16	35	P	P	09 09 06.3	-0.1
INK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
INK	Inuvik	28.16	35	eP	P	09 09 06.3	-0.1
HABR	Khabarovsk	28.49	282	eP	P	09 09 07.9	-1.7
HABR				e*PP	pP	09 09 20.3	-4.1
HABR				e		09 12 18.0	
HABR				eS	S	09 13 53.5	+0.8
HABR				eSS	SS	09 15 17.5	-37
HABR				e		09 19 47.9	
HABR				pmax	pmax		
	comp=N,14nm,1.1s						
HABR				pmax	pmax		
	comp=E,34nm,1.3s						
HABR				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.9						
HABR				MLR	MLR		
	comp=Z,960nm,17.0s						
YAK	Yakutsk	28.73	311	eP	P	09 09 10.4	-1.1
YAK				ePPP		09 10 06.7	
YAK				eS	S	09 13 54.4	-1.7
YAK				e*SS	sS	09 14 14.7	-6.6
YAK				eSS	SS	09 15 21.1	-38
YAK				eSSS		09 15 47.8	
YAK				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.1						
YAK				pmax	pmax		
	comp=E,30nm,1.5s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
YAK				pmax	pmax		
	comp=N,7.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.8s						
YAK				smax			
	comp=N,399nm,4.7s						
YAK				smax			
	comp=E,374nm,5.5s						
YAK				MLR	MLR		
	comp=Z,2μm,19.0s						
YAK				MLR	MLR		
	comp=E,1μm,14.0s						
YAK				MLR	MLR		
	comp=N,834nm,15.0s						
YAK	Yakutsk	28.73	311	eP	P	09 09 10.5	-1.0
	comp=N,46nm,1.0s,mb5.2						
KLR	Kul’dur	30.22	285	⇓iP	P	09 09 20.5	-4.4
KLR				pmax	pmax		
	comp=E,68nm,1.0s						
KLR				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.5						
TIXI	Tiksi	30.24	331	eP	P	09 09 24.5	-0.3
TIXI				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.3						
TIXI	Tiksi	30.24	331	eP	P	09 09 24.4	-0.4
	comp=Z,5.9nm,0.9s,mb4.3						
MAT	Matsushiro	32.75	260	P	P	09 09 46.4	-0.8
MAT				S	S	09 15 05.0	+5.5
MJAR	Matsushiro Arr	32.75	260	P	P	09 09 46.7	-0.5
	comp=Z,4.8nm,0.8s,mb4.5,baz=54,slow=7.4,SNR=11						
MJAR				PcP	PcP	09 12 30.7	-0.6
	comp=Z,2.9nm,0.9s,baz=61,slow=1.8,SNR=5.1						
MJAR				LR	LR	09 21 31.7	
	comp=Z,1μm,21.3s,baz=70,slow=33						
MJAR	Matsushiro Arr	32.75	260	P	P	09 09 46.7	-0.5
MJAR						09 12 30.7	
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR				pmax	pmax		

comp=Z,3.0nm,0.9s
MJAR MLR MLR
comp=Z,1µm,21.3s
MDJ Mudanjiang 33.57 279 P P 09 09 53.0 -1.3
MDJ AMB AMB
comp=Z,17nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,102nm,5.0s
MDJ LR LR
comp=E,1µm,19.5s
MDJ LR LR
comp=Z,2µm,19.8s
YKA Yellowknife Ar 36.06 46 P P 09 10 14.8 -0.8
comp=Z,8.5nm,0.8s,mb4.7,baz=282,slow=8.2,SNR=102
YKA Yellowknife Ar 36.06 46 P P 09 10 14.8 -0.8
YKA pmax pmax
comp=Z,9.0nm,0.8s
CN2 Changchun 36.55 280 *eP* **P 09 10 19.1 -0.9**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
C04A Brinnon 36.69 72 ⇓P **P 09 10 21.6 +0.6**
baz=37
B05A Bryant 36.96 71 ⇑P **P 09 10 23.6 +0.2**
baz=37,SNR=5.5
CBIJ Chichi jima 37.09 244 LR LR 09 23 39.1
comp=Z,800nm,21.0s,baz=20,slow=33
BOD Bodaibo 37.22 306 *eP* **P 09 10 24.5 -1.0**
BOD pmax pmax
comp=Z,57nm,0.9s,mb5.4
HIA Hailar 37.37 291 *eP* **P 09 10 25.8 -1.0**
HIA pmax pmax
comp=Z,36nm,1.1s
HIA Hailar 37.37 291 *eP* **P 09 10 25.8 -1.0**
comp=Z,36nm,1.1s,mb5.1
C05A Tolt Reservoir 37.47 72 ⇓P **P 09 10 28.2 +0.6**
baz=37
A07A Ashnola River, 37.62 69 ⇓P **P 09 10 29.3 +0.4**
baz=38
C06A Tall Timber Ra 37.83 71 ⇓P **P 09 10 31.2 +0.5**
baz=38
LON Longmire 37.84 73 *eP* **P 09 10 31.5 +0.6**
LON pmax pmax
comp=Z,14nm,0.7s,mb4.8
LON Longmire 37.84 73 *eP* **P 09 10 31.5 +0.6**
comp=Z,14nm,0.7s,mb4.8
F04A Amboy 37.88 75 ⇓P **P 09 10 31.8 +0.6**
baz=38
E05A Randle 37.97 73 ⇓P **P 09 10 32.0 +0.1**
baz=38
B07A Winthrop 38.04 70 ⇑P **P 09 10 32.5 0.0**
baz=38,SNR=7.1
A08A Turner Farm, O 38.31 69 ⇑P **P 09 10 35.1 +0.4**
baz=38
ETW Entiat 38.32 71 *eP* **P 09 10 35.6 +0.7**
C07A Waterville 38.44 71 ⇓P **P 09 10 35.7 -0.2**
baz=38,SNR=10
F05A White Salmon 38.48 74 ⇓P **P 09 10 36.2 0.0**
baz=38
B08A Colville Reser 38.55 70 ⇑P **P 09 10 36.3 -0.5**
baz=38,SNR=8.6
KSRS Korea Array 38.61 270 P **P 09 10 38.0 +0.6**
comp=Z,13nm,0.9s,mb4.7,baz=58,slow=8.2,SNR=30
KSRS PcP PcP 09 12 49.0 +0.5
comp=Z,2.5nm,0.8s,baz=19,slow=1.9,SNR=5.8
KSRS LR LR 09 25 13.7
comp=Z,486nm,21.5s,baz=54,slow=34
KSRS Korea Array 38.61 270 P **P 09 10 38.0 +0.6**
KSRS 09 12 49.1
KSRS pmax pmax
comp=Z,13nm,0.9s,mb4.7
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
H04A Detroit Lake 38.65 76 ⇑P **P 09 10 38.1 +0.4**
baz=38
A09A Danville 38.70 68 ⇑P **P 09 10 38.3 +0.2**
baz=39
D07A Quincy 38.73 72 ⇑P **P 09 10 37.7 -0.6**
baz=39,SNR=6.8
SNY Shenyang 38.77 278 ⇓P **P 09 10 39.3 +0.6**
SNY AMB AMB
comp=Z,27nm,1.1s,mb4.9
SNY AMB AMB
comp=Z,30nm,5.4s
SNY LR LR
comp=E,778nm,20.9s
SNY LR LR
comp=Z,1µm,21.4s
G05A Wamic 38.89 75 ⇓P **P 09 10 40.4 +0.7**
baz=39
C08A Higginbotham F 38.99 70 ⇓P **P 09 10 40.2 -0.3**
baz=39,SNR=5.2
E07A Sunnyside 39.11 72 ⇓P **P 09 10 42.0 +0.5**
baz=39
B09A Rice 39.22 69 ⇓P **P 09 10 42.6 +0.2**
baz=39
A10A Northport 39.30 68 ⇓P **P 09 10 43.3 +0.3**
baz=39
RSW Rattlesnake Hi 39.35 72 *eP* **P 09 10 44.1 +0.6**
OD2 Odessa Site #2 39.38 71 *eP* **P 09 10 43.8 0.0**
HAWA Hanford 39.39 72 *eP* **P 09 10 44.2 +0.5**
F07A Phinny Hill Vi 39.40 73 ⇓P **P 09 10 44.3 +0.4**
baz=39
D08A Wollman Farm, 39.42 71 ⇓P **P 09 10 43.7 -0.3**
baz=39,SNR=7.6
C09A Chrisman Ranch 39.44 70 ⇓P **P 09 10 43.8 -0.4**
baz=39,SNR=6.7
I05A Bend 39.48 76 ⇑P **P 09 10 44.8 +0.2**
baz=39
E08A Dider Farm, El 39.62 72 ⇓P **P 09 10 45.6 -0.1**
baz=40,SNR=10.0
H06A Lindquist Farm 39.75 75 ⇓P **P 09 10 47.3 +0.5**
baz=40
EDM Edmonton 39.77 60 *eP* **P 09 10 46.3 -0.6**
D09A Jones Farm, Ri 39.78 71 ⇓P **P 09 10 47.0 -0.1**
baz=40
B10A Chitwood Farm, 39.82 69 ⇑P **P 09 10 47.6 +0.2**
baz=40
G07A Ruggs Ranch, H 39.88 74 ⇓P **P 09 10 48.2 +0.4**
baz=40
NEW Newport 39.89 69 *eP* **P 09 10 47.6 -0.4**
NEW pmax pmax
comp=Z,16nm,0.8s
NEW Newport 39.89 69 *eP* **P 09 10 47.6 -0.4**
comp=Z,16nm,0.8s,mb4.8
YBH Yreka Blue Hor 39.92 80 P **P 09 10 49.1 +0.9**
comp=Z,2.6nm,1.0s,mb3.9,baz=245,slow=10.0,SNR=3.3
YBH LR LR 09 24 25.4
comp=Z,818nm,21.0s,baz=299,slow=32
YBH Yreka Blue Hor 39.92 80 P **P 09 10 49.1 +0.9**
YBH LR LR 09 24 25.4
C10A Spilker Farm, 40.00 69 ⇑P **P 09 10 49.1 +0.2**
baz=40
A11A Hall Mountain, 40.00 67 ⇑P **P 09 10 48.6 -0.2**
baz=40,SNR=6.5
F08A Pendleton 40.14 73 ⇑P **P 09 10 50.2 +0.1**
baz=40
E09A Wood Farm, Sta 40.15 71 ⇓P **P 09 10 49.9 -0.2**
baz=40,SNR=8.7
I06A Prineville 40.25 76 ⇓P **P 09 10 51.6 +0.7**
baz=40
B11A Sandpoint 40.25 68 ⇓P **P 09 10 51.5 +0.6**
baz=40
RES Resolute Bay 40.28 24 P **P 09 10 51.0 +0.1**
comp=Z,7.9nm,0.8s,mb4.5,baz=262,slow=11,SNR=15
RES PcP PcP 09 12 53.9 +0.7
comp=Z,11nm,0.5s,baz=292,slow=5.4,SNR=28
RES Resolute Bay 40.28 24 P **P 09 10 51.0 +0.1**
RES 09 12 53.9
RES pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
RES pmax pmax
comp=Z,11nm,0.5s,mb4.8
RES Resolute Bay 40.28 24 *eP* **P 09 10 50.5 -0.3**
G08A Pilot Rock 40.29 74 ⇓P **P 09 10 51.8 +0.5**
baz=40
H07A Lands Inn, Kim 40.30 75 ⇑P **P 09 10 51.7 +0.3**
baz=40
D10A Wagner Farm, O 40.40 70 ⇑P **P 09 10 51.9 -0.3**
baz=40,SNR=15
A12A Yaak River Ran 40.42 67 ⇑P **P 09 10 52.6 +0.2**
baz=40
K05A Summer Lake 40.49 78 ⇓P **P 09 10 53.2 +0.3**
baz=40
I07A Izee 40.60 75 ⇓P **P 09 10 54.1 +0.2**
baz=40,SNR=5.1
C11A Tepee Creek (N 40.61 69 ⇓P **P 09 10 54.2 +0.3**
baz=40
J06A Christmas Vall 40.66 77 ⇓P **P 09 10 54.8 +0.4**
baz=40
WDC Whiskeytown Da 40.68 82 *eP* **P 09 10 59.6 +5.0**
B12A Libby 40.69 68 ⇓P **P 09 10 55.1 +0.6**
baz=40
F09A S2 Ranch, Elgi 40.71 72 ⇓P **P 09 10 54.9 +0.1**
baz=41,SNR=8.1
E10A Myers Farm, Un 40.78 71 ⇑P **P 09 10 54.9 -0.5**
baz=41,SNR=19
D11A Klaveano Farm, 40.96 70 ⇑P **P 09 10 55.8 -0.9**
baz=41,SNR=13
F10A Beach Ranch, E 40.98 72 ⇓P **P 09 10 56.6 -0.4**
baz=41,SNR=7.7
G09A Cove 41.01 73 ⇓P **P 09 10 57.2 0.0**
baz=41
J07A Hines 41.10 76 ⇑P **P 09 10 58.1 0.0**
baz=41
C12B Naegeli Ranch, 41.13 68 ⇑P **P 09 10 57.9 -0.3**
baz=41,SNR=14
A13A Flathead Natio 41.14 66 ⇓P **P 09 10 58.0 -0.2**
baz=41
I08A Drewsey 41.26 75 ⇓P **P 09 10 59.1 -0.2**
baz=41,SNR=5.7
MOD Modoc 41.31 79 *eP* **P 09 11 00.1 +0.3**
WALA Waterton Lakes 41.37 66 *eP* **P 09 11 00.0 -0.1**
B13A Whitefish 41.38 67 ⇓P **P 09 11 00.4 +0.1**
baz=41
E11A Bogner Ranch, 41.39 71 ⇑P **P 09 10 59.7 -0.6**
baz=41
G10A Bishop Farm, J 41.40 73 ⇑P **P 09 11 00.4 0.0**
baz=41,SNR=12
H09A Durkee 41.41 74 ⇑P **P 09 11 01.2 +0.7**
baz=41
BSMT Bassoo Peak 41.46 68 *eP* **P 09 11 00.4 -0.5**
K07A Rock Creek Ran 41.52 77 ⇑P **P 09 11 01.5 0.0**
baz=41,SNR=7.0
BMO Blue Mountains 41.52 73 *eP* **P 09 11 01.6 +0.2**
D12A Red Ives Fores 41.53 69 ⇑P **P 09 11 01.3 -0.2**
baz=41
J08A Circle Bar Ran 41.62 76 ⇓P **P 09 11 02.4 +0.2**
baz=42
F11A Grangeville 41.66 71 ⇑P **P 09 11 02.3 -0.2**
baz=42,SNR=6.0
C13A Hot Springs 41.67 68 ⇓P **P 09 11 02.7 +0.1**
baz=42
A14A Double T Ranch 41.69 66 ⇓P **P 09 11 02.5 -0.2**
baz=42,SNR=22
I09A Lost Marbles R 41.73 75 ⇓P **P 09 11 03.5 +0.3**
baz=42
E12A Beaver Dam Sad 41.73 70 ⇑P **P 09 11 03.1 -0.1**
baz=42,SNR=24
JTMT Jette 41.81 68 *eP* **P 09 11 03.8 +0.1**
L07A Adell 41.84 78 ⇓P **P 09 11 04.6 +0.5**
baz=42
G11A Walters Elk Ra 41.85 72 ⇑P **P 09 11 04.1 0.0**
baz=42,SNR=9.8
K08A Man Creek Ran 41.96 77 ⇑P **P 09 11 05.5 +0.4**
baz=42
H10A Noah's Angus R 42.00 73 ⇑P **P 09 11 04.7 -0.7**
baz=42,SNR=8.8
D13A Huson 42.04 69 ⇓P **P 09 11 05.0 -0.6**
baz=42,SNR=5.3
WVOR Wild Horse Val 42.04 77 P **P 09 11 06.4 +0.7**
WVOR pmax pmax
comp=Z,13nm,0.7s,mb4.7
WVOR Wild Horse Val 42.04 77 *eP* **P 09 11 05.7 0.0**
comp=Z,13nm,0.6s,mb4.7
J09A Fry Pan Ranch, 42.07 75 ⇓P **P 09 11 06.1 +0.2**
baz=42
B14A Marquette Ranc 42.08 67 ⇑P **P 09 11 05.4 -0.5**
baz=42,SNR=18
A15A Johnson Ranch, 42.08 65 ⇑P **P 09 11 05.0 -1.0**
baz=42,SNR=5.8
C14A Swan Lake 42.11 68 ⇑P **P 09 11 05.8 -0.4**
baz=42
I10A Payette 42.24 74 ⇓P **P 09 11 07.1 -0.2**
baz=42
N06A Buffalo Meadow 42.26 80 ⇑P **P 09 11 07.7 +0.2**
baz=42
F12A Elk City 42.27 71 ⇓P **P 09 11 07.3 -0.2**
baz=42,SNR=30
M07A Soldier Meadow 42.30 79 ⇑P **P 09 11 08.3 +0.5**
baz=42,SNR=25
L08A Fields 42.35 77 ⇑P **P 09 11 08.8 +0.5**
baz=42
H11A Donnelly 42.38 73 ⇑P **P 09 11 07.6 -0.8**
baz=42,SNR=6.2
K09A Rome 42.45 76 ⇓P **P 09 11 09.3 +0.3**
baz=42
BEKR Beckwourth 42.45 81 ⇓P **P 09 11 09.0 -0.1**
baz=42
MSO Missoula 42.48 69 *eP* **P 09 11 08.6 -0.6**
comp=Z,12nm,0.9s,mb4.5
B15A Bradley Ranch, 42.52 66 ⇓P **P 09 11 08.7 -0.8**
baz=42,SNR=13
SLMT Seeley Lake 42.52 68 *eP* **P 09 11 09.4 -0.2**
E13A Victor 42.53 69 ⇑P **P 09 11 09.1 -0.6**
baz=42,SNR=20
D14A Greenough 42.60 68 ⇓P **P 09 11 09.5 -0.7**
baz=42,SNR=18
O06A Flanigan 42.61 81 ⇑P **P 09 11 10.7 +0.3**
baz=42
J10A Berg Farm, Mel 42.62 75 ⇓P **P 09 11 10.2 -0.2**
baz=42
A16A West Butte Ran 42.74 65 ⇓P **P 09 11 10.3 -1.0**
baz=43,SNR=8.9
M08A Happy Creek Ra 42.76 78 ⇓P **P 09 11 11.8 +0.2**
baz=43
C15A Salmond Ranch, 42.76 67 ⇑P **P 09 11 11.0 -0.5**
baz=43,SNR=14
N07B Gerlach 42.78 79 ⇑P **P 09 11 12.3 +0.6**
baz=43
F13A Darby 42.80 70 ⇑P **P 09 11 11.2 -0.6**
baz=43,SNR=15
CHMT Chamberlain Mo 42.84 68 *eP* **P 09 11 11.7 -0.4**
I11A Placerville 42.84 74 ⇓P **P 09 11 12.3 +0.1**
baz=43
L09A Wilkinson Ranc 42.87 77 ⇓P **P 09 11 12.8 +0.4**
baz=43
K10A MacKenzie Ranc 42.92 76 ⇓P **P 09 11 12.5 -0.3**
baz=43,SNR=10
ALE Alert 42.92 10 P **P 09 11 13.6 +1.2**
comp=Z,85nm,0.7s,mb5.6,SNR=9.0
ALE Alert 42.92 10 P **P 09 11 13.0 +0.6**
B16A M & M Farms, S 42.95 66 ⇓P **P 09 11 11.9 -1.1**
baz=43,SNR=14
E14A Clinton 42.96 69 ⇓P **P 09 11 12.6 -0.5**
baz=43,SNR=9.6
PAHR Pah Rah Range 43.15 81 *eP* **P 09 11 15.3 +0.6**
H12A Diamond D Ranc 43.16 72 ⇑P **P 09 11 14.1 -0.6**
baz=43,SNR=5.9
D15A Lincoln 43.20 68 ⇓P **P 09 11 14.4 -0.6**
baz=43,SNR=9.0
MFID Camas Ranch 43.20 74 ⇑P **P 09 11 15.1 +0.1**
baz=43
O07A Toulon 43.20 80 ⇓P **P 09 11 15.1 0.0**
baz=43
G13A Cobalt 43.23 71 ⇑P **P 09 11 14.8 -0.5**
baz=43,SNR=19
C16A Fuhringer Ranc 43.25 66 ⇑P **P 09 11 14.6 -0.8**
baz=43,SNR=12
A17A Triple J Farms 43.26 65 ⇓P **P 09 11 14.7 -0.7**
baz=43,SNR=16
N08A GE Springer Mi 43.29 79 ⇑P **P 09 11 16.2 +0.4**
baz=43
M09A Marrel Ranch, 43.34 77 ⇓P **P 09 11 16.4 +0.1**
baz=43
F14A Wisdom 43.35 70 ⇑P **P 09 11 16.3 0.0**
baz=43
I12A Atlanta 43.41 73 ⇓P **P 09 11 16.9 +0.2**
baz=43
K11A Parker Ranch, 43.44 75 ⇑P **P 09 11 17.2 +0.2**
baz=43
E15A Deer Lodge 43.45 69 ⇓P **P 09 11 16.1 -1.0**
baz=43,SNR=16
H13A Challis 43.51 72 ⇓P **P 09 11 17.0 -0.5**
baz=43
B17A L&G Farms, Che 43.54 65 ⇑P **P 09 11 17.2 -0.5**
baz=43,SNR=21
CMB Columbia Colle 43.54 83 *eP* **P 09 11 18.1 +0.2**
CMB pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
CMB Columbia Colle 43.54 83 *eP* **P 09 11 18.1 +0.3**
comp=Z,8.3nm,1.1s,mb4.4
L10A Juniper Basin 43.56 76 ⇑P **P 09 11 18.0 0.0**
baz=43,SNR=7.8
O08A Rochester Mine 43.57 79 ⇓P **P 09 11 18.2 +0.1**
baz=43
J12A Stokes Ranch, 43.73 74 ⇑P **P 09 11 19.3 -0.1**
baz=44,SNR=8.0
A18A Metzger Ranch, 43.75 64 ⇑P **P 09 11 18.7 -0.7**
baz=44
D16A Dana Ranch, Ca 43.77 67 ⇑P **P 09 11 18.7 -0.9**
baz=44
HRY Holter Researc 43.77 68 *eP* **P 09 11 19.1 -0.5**
R06C Coleville 43.82 82 ⇓P **P 09 11 20.1 -0.1**
baz=44
M10A I.L. Ranch, Tu 43.84 77 ⇑P **P 09 11 20.8 +0.5**
baz=44,SNR=6.7
F15A Butte 43.85 69 ⇓P **P 09 11 19.7 -0.6**
baz=44,SNR=11
LRM Limekiln Ridge 43.89 69 *eP* **P 09 11 20.5 -0.1**
C17A Wharram Farm, 43.90 66 ⇓P **P 09 11 20.0 -0.7**
baz=44
I13A Wildhorse Cree 43.95 73 ⇓P **P 09 11 20.9 -0.2**
baz=44,SNR=22
L11A Cat Creek Ranc 43.95 76 ⇑P **P 09 11 21.0 -0.1**
baz=44,SNR=16
E16A East Helena 43.96 68 ⇑P **P 09 11 20.4 -0.7**
baz=44,SNR=5.8
HLID Hailey 43.97 73 ⇑P **P 09 11 21.3 +0.1**
baz=44
HLID Hailey 43.97 73 *eP* **P 09 11 21.4 +0.2**
comp=Z,12nm,0.9s,mb4.6
H14A Leadore 44.01 71 ⇓P **P 09 11 21.6 +0.1**
baz=44,SNR=25
DLMT Dillon 44.05 70 *eP* **P 09 11 21.7 -0.2**
BMN Battle Mountai 44.06 79 *eP* **P 09 11 26.1 +4.1**
BMN pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
BMN Battle Mountai 44.06 79 *eP* **P 09 11 22.7 +0.7**
comp=Z,10nm,0.6s,mb4.7
B18A Beardsley Farm 44.06 65 ⇑P **P 09 11 21.7 -0.3**
baz=44,SNR=12
K12A Draper Farm, C 44.20 74 ⇑P **P 09 11 22.9 -0.2**
baz=44,SNR=7.4
D17A Six Diamond Ra 44.20 67 ⇑P **P 09 11 23.3 +0.2**
baz=44,SNR=6.4
J13A Cove Ranch, Pi 44.20 73 ⇑P **P 09 11 23.3 +0.2**
baz=44,SNR=20
G15A Dillon 44.22 70 ⇓P **P 09 11 23.0 -0.2**
baz=44,SNR=22
O09A Fish Creek Ran 44.23 79 ⇓P **P 09 11 23.5 +0.1**
baz=44
EGMT Eagleton 44.27 65 ⇑P **P 09 11 23.5 -0.1**
baz=44
EGMT Eagleton 44.27 65 *eP* **P 09 11 22.7 -0.9**
comp=Z,15nm,0.7s,mb4.8
N10A Dunphy 44.33 78 ⇑P **P 09 11 24.4 +0.2**
baz=44
I14A Mackay 44.34 72 ⇑P **P 09 11 24.3 +0.1**
baz=44,SNR=25
M11A Holland Ranch, 44.35 76 ⇓P **P 09 11 24.7 +0.4**
baz=44,SNR=10
BJI Beijing 44.39 281 P **P 09 11 24.5 -0.1**
BJI AMB AMB
comp=Z,34nm,0.9s,mb5.1
BJI AMB AMB
comp=Z,128nm,3.6s
BJI LR LR
comp=N,782nm,21.7s
BJI LR LR
comp=E,846nm,22.0s
BJI LR LR
comp=Z,921nm,21.7s
F16A Kennard Place, 44.39 69 ⇓P **P 09 11 24.3 -0.3**
baz=44,SNR=13
L12A House Creek Ra 44.41 75 ⇓P **P 09 11 25.3 +0.5**
baz=44,SNR=15
H15A Lima 44.44 71 ⇓P **P 09 11 24.8 -0.1**
baz=44,SNR=12
BOZ Bozeman (W) 44.47 69 ⇓P **P 09 11 25.2 0.0**
baz=44
BOZ Bozeman (W) 44.47 69 *eP* **P 09 11 25.1 -0.1**
E17A Martinsdale 44.47 68 ⇓P **P 09 11 24.9 -0.3**
baz=44,SNR=12
Q08A Gabbs 44.56 81 ⇓P **P 09 11 26.0 -0.1**
baz=44
NVAR Mina Array Bea 44.59 82 P **P 09 11 26.4 +0.1**
comp=Z,4.3nm,0.8s,mb4.3,baz=289,slow=8.3,SNR=10
G16A Moss Hill, Enn 44.59 70 ⇓P **P 09 11 25.9 -0.4**
baz=44,SNR=23
IRK Irkutsk 44.63 302 *eP* **P 09 11 25.4 -1.1**
IRK *eS* **S 09 18 17.0 +19**
IRK pmax pmax
comp=Z,46nm,1.7s,mb5.0
P09A Austin 44.63 79 ⇓P **P 09 11 26.7 +0.1**
baz=44
J14A Carey 44.64 73 ⇑P **P 09 11 27.2 +0.6**
baz=44,SNR=12
K13A Stover Farm, H 44.68 74 ⇑P **P 09 11 27.2 +0.2**
baz=44
D18A Linhart Farms, 44.69 66 ⇑P **P 09 11 27.3 +0.3**
baz=44,SNR=6.4
N11A Elko Archery C 44.74 77 ⇑P **P 09 11 28.0 +0.5**
baz=45
I15A Monteview 44.88 71 ⇑P **P 09 11 28.8 +0.4**
baz=45
F17A Fitzpatrick Pl 44.89 68 ⇑P **P 09 11 28.2 -0.3**
baz=45,SNR=12
M12A Wells 44.90 76 ⇑P **P 09 11 29.1 +0.4**
baz=45,SNR=5.9
E18A Harlowton 44.96 67 ⇑P **P 09 11 29.1 -0.1**
baz=45,SNR=10
QLMT Earthquake Lak 45.03 70 *eP* **P 09 11 30.0 +0.2**
Q09A Carvers 45.04 80 ⇓P **P 09 11 30.0 +0.1**
baz=45
ELK Elko 45.09 77 P **P 09 11 30.8 +0.6**
ELK pmax pmax
comp=Z,10.0nm,0.8s
ELK Elko 45.09 77 *eP* **P 09 11 30.4 +0.2**
comp=Z,10nm,0.8s,mb4.7
L13A Double Diamond 45.09 75 ⇑P **P 09 11 30.4 +0.2**
baz=45,SNR=6.5
MTUM Tungsten Hills 45.09 83 *eP* **P 09 11 31.1 +0.8**
N12A Clover Valley, 45.15 77 ⇓P **P 09 11 30.7 0.0**
baz=45,SNR=8.3
G17A Pierce Place, 45.17 69 ⇑P **P 09 11 30.7 -0.1**
baz=45,SNR=11
O11A Cowboy Ranch, 45.20 78 ⇑P **P 09 11 31.2 +0.1**
baz=45
H16A Russell Place, 45.21 70 ⇓P **P 09 11 31.0 -0.1**
baz=45,SNR=12
J15A Blackfoot 45.25 72 ⇑P **P 09 11 31.6 +0.2**
baz=45,SNR=8.9
TLY Talaya 45.26 302 *eP* **P 09 11 31.6 +0.2**
TLY pmax pmax
comp=Z,15nm,0.8s,mb4.9
K14A Jones Ranch, D 45.29 74 ⇓P **P 09 11 32.0 +0.2**
baz=45
RCTC Rector, Farmer 45.33 85 ⇓P **P 09 11 32.5 +0.4**
baz=45
M13A Montello 45.38 76 ⇑P **P 09 11 32.7 +0.2**
baz=45,SNR=9.9
ULN Ulaanbaatar 45.39 296 *c iP* **P 09 11 33.1 +0.6**
ULN Ulaanbaatar 45.39 296 *eP* **P 09 11 33.0 +0.6**
comp=Z,13nm,0.9s,mb4.8
F18A Big Timber 45.44 68 ⇑P **P 09 11 32.7 -0.2**
baz=45,SNR=5.4
R09A Tonopah 45.47 81 ⇓P **P 09 11 33.2 -0.1**
baz=45,SNR=14
TPH Tonopah 45.48 81 P **P 09 11 35.3 +1.9**
TPH pmax pmax
comp=Z,13nm,0.8s,mb4.8
TPH Tonopah 45.48 81 *eP* **P 09 11 33.6 +0.2**
comp=Z,13nm,0.8s,mb4.8
SMMC Simmler 45.48 86 ⇓P **P 09 11 33.4 0.0**
baz=45
P11A Circle Ranch, 45.49 79 ⇓P **P 09 11 33.9 +0.5**
baz=45
TIN Tinemaha 45.49 83 ⇓P **P 09 11 33.8 +0.4**
baz=45
Q10A Clear Creek Ra 45.53 80 ⇓P **P 09 11 34.2 +0.5**
baz=45
I16A Newdale 45.54 71 ⇑P **P 09 11 34.0 +0.2**
baz=45,SNR=18
YNR Norris Junctio 45.54 70 *eP* **P 09 11 34.8 +1.0**
YFT Old Faithful 45.60 70 *eP* **P 09 11 35.8 +1.6**
K15A Arbon 45.60 73 ⇑P **P 09 11 34.7 +0.4**
baz=46
O12A Currie 45.68 77 ⇓P **P 09 11 35.0 +0.1**
baz=46,SNR=22
S09A Goldfield 45.70 82 ⇑P **P 09 11 35.1 +0.1**
baz=46
VES Vestal, Richgr 45.72 85 ⇑P **P 09 11 35.0 -0.2**
baz=46

SONM **Songino Array** 45.77 296 P P 09 11 36.3 +0.8
comp=Z,7.8nm,0.8s,mb4.7,baz=57,slow=9.2,SNR=56
SONM **Songino Array** 45.77 296 P P 09 11 36.3 +0.8
SONM pmax pmax
comp=Z,8.0nm,0.8s
H17A **Grant Village** 45.78 70 ⇓P P 09 11 36.4 +0.7
baz=46,SNR=15
M14A **Sheep Mountain** 45.80 75 ⇓P P 09 11 36.2 +0.4
baz=46
J16A **Bone** 45.81 72 ⇓P P 09 11 36.2 +0.3
baz=46,SNR=8.6
IMW **Indian Meadow** 45.85 71 *e*P P 09 11 36.8 +0.5
G18A **Lazy EL Ranch,** 45.86 68 ⇑P P 09 11 36.3 0.0
baz=46
R10A **Warm Springs** 45.92 80 ⇓P P 09 11 36.9 +0.1
baz=46
S10A **Tonopah Range,** 45.97 81 ⇑P P 09 11 37.1 0.0
baz=46,SNR=6.3
Q11A **Duckwater** 45.98 79 ⇓P P 09 11 37.5 +0.2
baz=46
HVU **Hansel Valley** 45.98 74 *e*P P 09 11 38.0 +0.8
MOOW **Moose Ponds** 46.05 71 *e*P P 09 11 37.9 +0.1
I17A **Pilgram Creek** 46.05 70 ⇑P P 09 11 38.7 +0.9
baz=46,SNR=6.9
GRAC **Grapevine Rang** 46.06 82 ⇓P P 09 11 38.4 +0.5
baz=46
P12A **McGill** 46.06 78 ⇓P P 09 11 38.2 +0.4
baz=46
TPAW **Teton Pass** 46.08 71 *e*P P 09 11 38.1 +0.1
comp=Z,11nm,0.8s,mb4.8
K16A **Soda Springs** 46.08 72 ⇑P P 09 11 39.1 +1.1
baz=46,SNR=11
L15A **Malad City** 46.08 74 ⇑P P 09 11 38.6 +0.6
baz=46
ZAK **Zakamensk** 46.13 300 *e*P P 09 11 38.5 +0.2
ZAK pmax pmax
comp=Z,16nm,1.4s,mb4.8
RLMT **Red Lodge** 46.14 68 ⇓P P 09 11 39.1 +0.6
baz=46
RLMT **Red Lodge** 46.14 68 *e*P P 09 11 38.1 -0.3
comp=Z,46nm,1.0s,mb5.4
TIA **Tai'an** 46.15 276 ⇑P P 09 11 38.4 -0.3
TIA AMB AMB
comp=Z,22nm,0.9s,mb5.1
REDW **Red Top Meadow** 46.21 71 *e*P P 09 11 39.8 +0.8
comp=Z,13nm,1.0s,mb4.8
SNOW **Snow King Moun** 46.21 71 *e*P P 09 11 39.9 +0.9
ISA **Isabella** 46.22 85 ⇓P P 09 11 38.5 -0.7
baz=46
ISA **Isabella** 46.22 85 P P 09 11 38.6 -0.6
ISA pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ISA **Isabella** 46.22 85 *e*P P 09 11 38.6 -0.6
LOHW **Long Hollow** 46.22 71 *e*P P 09 11 38.8 -0.3
O13A **Hicks Ranch, I** 46.23 77 ⇓P P 09 11 39.5 +0.3
baz=46
N14A **Grayback Hills** 46.28 75 ⇑P P 09 11 39.9 +0.3
baz=46,SNR=8.4
J17A **Brown Place, J** 46.30 71 ⇑P P 09 11 40.0 +0.3
baz=46,SNR=8.3
R11A **Troy Canyon, C** 46.33 80 ⇑P P 09 11 40.0 0.0
baz=46,SNR=7.4
ARVC **Arvin** 46.34 85 ⇓P P 09 11 39.5 -0.6
baz=46
M15A **Larsen Ranch,** 46.37 74 ⇓P P 09 11 40.4 +0.2
baz=46,SNR=6.2
Q12A **Willow Creek R** 46.37 79 ⇓P P 09 11 40.4 +0.1
baz=46
SPUT **South Promonto** 46.46 75 *e*P P 09 11 42.0 +1.1
K17A **Gardner Place,** 46.53 72 ⇑P P 09 11 41.6 +0.1
baz=46
MPMC **Manual Prospec** 46.58 84 ⇓P P 09 11 42.2 +0.2
baz=46
P13A **Bates Ranch, G** 46.62 78 ⇓P P 09 11 42.3 0.0
baz=46,SNR=8.1
I18A **Diamond G Ranc** 46.63 70 ⇑P P 09 11 42.8 +0.5
baz=46,SNR=9.8
L16A **Fish Haven** 46.65 73 ⇓P P 09 11 43.2 +0.7
baz=46,SNR=6.9
MOY **Mondy** 46.67 303 *e*P P 09 11 43.0 +0.5
FURC **Furnace Creek,** 46.71 83 ⇓P P 09 11 43.0 -0.1
baz=47
HHC **Hu-ho-hao-te** 46.73 285 *e*P P 09 11 43.8 +0.7
HHC AP pP 09 11 55.9 -2.7
HHC XP sP 09 12 01.3 -4.3
HHC AMB AMB
comp=Z,30nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,205nm,5.6s
HHC LR LR
comp=N,686nm,15.5s
HHC LR LR
comp=E,371nm,14.3s
HHC LR LR
comp=Z,520nm,19.0s
OSI **Osito Adit** 46.73 86 ⇓P P 09 11 43.5 +0.3
baz=47
TPNV **Topopah Spring** 46.79 82 ⇓P P 09 11 43.8 +0.2
baz=47
TPNV **Topopah Spring** 46.79 82 P P 09 11 44.0 +0.4
TPNV pmax pmax
comp=Z,31nm,0.8s,mb5.3
TPNV **Topopah Spring** 46.79 82 *e*P P 09 11 43.6 -0.1
comp=Z,31nm,0.8s,mb5.3
FCC **Fort Churchill** 46.79 46 *e*P P 09 11 42.5 -0.8
J18A **Kendall Valley** 46.79 71 ⇓P P 09 11 43.8 +0.2
baz=47,SNR=16
DUG **Dugway** 46.90 76 ⇑P P 09 11 44.8 +0.3
baz=47
DUG **Dugway** 46.90 76 *e*P P 09 11 44.8 +0.3
DUG pmax pmax
comp=Z,18nm,0.9s,mb5.0
DUG **Dugway** 46.90 76 *e*P P 09 11 44.8 +0.3
comp=Z,18nm,0.9s,mb5.0
Q13A **Wheeler Ranch,** 46.92 78 ⇓P P 09 11 45.1 +0.5
baz=47
L17A **Cokeville** 46.94 73 ⇑P P 09 11 45.4 +0.7
baz=47
R12A **Pony Springs,** 46.94 79 ⇑P P 09 11 45.1 +0.2
baz=47
M16A **Huntsville** 46.95 74 ⇑P P 09 11 45.0 +0.2
baz=47,SNR=20
SSE **Sheshan** 46.96 268 P P 09 11 45.1 0.0
SSE AP pP 09 12 00.3 -0.3
SSE XP sP 09 12 07.3 -0.2
SSE S **S** **09 18 30.8 -1.0**
SSE XS sS 09 18 57.4 -0.7
SSE AMB AMB
comp=Z,35nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,106nm,8.4s
SSE LR LR
comp=N,166nm,17.8s
SSE LR LR
comp=E,173nm,17.9s
SSE LR LR
comp=Z,254nm,17.8s
EDW2 **Edwards Air Fo** 47.02 85 ⇓P P 09 11 45.4 -0.1
baz=47
O15A **The Old Anders** 47.06 76 ⇓P P 09 11 46.1 +0.4
baz=47
U10A **Ash Meadows, A** 47.07 82 ⇑P P 09 11 46.4 +0.6
baz=47
P14A **Drum Mountains** 47.11 77 ⇑P P 09 11 46.4 +0.3
baz=47,SNR=13
K18A **Toltan Ranch,** 47.12 72 ⇑P P 09 11 47.0 +0.8
baz=47,SNR=19
S12A **Delamar Landin** 47.24 80 ⇓P P 09 11 47.5 +0.3
baz=47
T11A **Corn Creek, Al** 47.24 81 ⇓P P 09 11 47.4 +0.2
baz=47,SNR=18
N16A **Rees Ranch, Co** 47.32 74 ⇓P P 09 11 48.5 +0.8
baz=47
BW06 **Boulder Array** 47.33 71 ⇑P P 09 11 48.1 +0.3
baz=47
BW06 **Boulder Array** 47.33 71 *e*P P 09 11 47.7 0.0
PDAR **Pinedale Array** 47.33 71 P P 09 11 47.7 -0.1
comp=Z,22nm,0.7s,mb5.2,baz=306,slow=3.4,SNR=156
Q14A **Sevier Lake (B** 47.36 78 ⇑P P 09 11 48.4 +0.4
baz=47,SNR=11
R13A **O'Grain Ranch,** 47.43 79 ⇓P P 09 11 48.9 +0.2
baz=47
SHOC **Shoshone** 47.43 83 ⇓P P 09 11 48.8 +0.1
baz=47
M17A **Scullys Gap (B** 47.44 73 ⇓P P 09 11 48.9 +0.3
baz=47
JLU **Jordanelle** 47.49 75 *e*P P 09 11 49.9 +0.8
GSC **Goldstone** 47.49 84 ⇑P P 09 11 49.0 -0.1
baz=47
GSC **Goldstone** 47.49 84 P P 09 11 49.2 +0.1
GSC pmax pmax
comp=Z,13nm,0.8s,mb4.9
GSC **Goldstone** 47.49 84 *e*P P 09 11 49.2 0.0
NLU **North Lily Min** 47.50 76 *e*P P 09 11 49.8 +0.7
L18A **Fontenelle, Gr** 47.54 72 ⇓P P 09 11 49.8 +0.3
baz=47,SNR=12
P15A **Leamington** 47.61 76 ⇑P P 09 11 50.3 +0.3
baz=48,SNR=6.4
BFSC **Mount Baldy St** 47.65 86 ⇓P P 09 11 50.2 -0.1
baz=48
N17A **Moffit Pass** 47.65 74 ⇓P P 09 11 51.0 +0.7
baz=48
O16A **Springville** 47.69 75 ⇑P P 09 11 50.8 +0.2
baz=48,SNR=8.9
K19A **Absolon Red Bu** 47.72 71 ⇑P P 09 11 50.3 -0.5
baz=48,SNR=33
MPU **Maple Canyon** 47.73 75 *e*P P 09 11 51.7 +0.8
BTO **Baotou** 47.81 286 *e*P P 09 11 51.0 -0.5
M18A **Lyman** 47.82 73 ⇓P P 09 11 51.8 +0.2
baz=48,SNR=9.1
S13A **Holt Ranch, En** 47.87 79 ⇓P P 09 11 52.2 +0.1
baz=48,SNR=6.6
Q15A **Fillmore** 47.90 77 ⇑P P 09 11 52.5 +0.3
baz=48,SNR=6.2
P16A **Fountain Green** 47.96 76 ⇓P P 09 11 53.1 +0.4
baz=48
V11A **Goodsprings** 48.00 82 ⇓P P 09 11 53.2 +0.1
baz=48
HEC **Hector,Ludlow** 48.09 84 ⇑P P 09 11 53.8 0.0
baz=48
K20A **Yellowstone Ra** 48.12 71 ⇓P P 09 11 53.5 -0.4
baz=48
O17A **Robinson Place** 48.16 75 ⇓P P 09 11 54.1 -0.2
baz=48
U12A **Valley of Fire** 48.18 81 ⇑P P 09 11 54.4 0.0
baz=48
T13A **Saint George** 48.20 80 ⇑P P 09 11 54.7 +0.1
baz=48,SNR=5.6
M19A **Rock Springs** 48.32 72 ⇑P P 09 11 55.8 +0.3
baz=48
MSU **Marysvale** 48.33 77 *e*P P 09 11 56.4 +0.9
N18A **Larsen Ranch,** 48.33 73 ⇑P P 09 11 55.6 +0.1
baz=48
MURC **Murrieta** 48.35 86 ⇓P P 09 11 55.5 -0.3
baz=48
V12A **Nelson** 48.44 82 ⇓P P 09 11 56.2 -0.2
baz=48
R15A **Junction** 48.45 78 ⇓P P 09 11 57.0 +0.5
baz=48
L20A **Wamsutter** 48.51 71 ⇓P P 09 11 57.0 +0.1
baz=48
GMRC **Granite Mounta** 48.54 84 ⇑P P 09 11 57.2 -0.1
baz=48
U13A **Pakoon Wash** 48.54 81 ⇓P P 09 11 57.3 +0.1
baz=48
O18A **Roosevelt** 48.56 74 ⇑P P 09 11 57.5 +0.2
baz=48
T14A **Hurricane** 48.68 79 ⇓P P 09 11 58.6 +0.4
baz=48,SNR=7.1
N19A **John Jarvie Ra** 48.68 73 ⇑P P 09 11 58.2 -0.1
baz=48
Q16A **Castle Valley** 48.69 76 ⇑P P 09 11 58.6 +0.3
baz=48
LDFC **Landfair** 48.69 83 *e*P P 09 11 57.6 -0.8
comp=Z,12nm,0.6s,mb5.1
P18A **Preston Nutter** 48.81 75 ⇑P P 09 11 59.7 +0.4
baz=49
PFO **Pinyon Flat Ob** 48.81 85 ⇓P P 09 11 59.0 -0.4
baz=49
PFO **Pinyon Flat Ob** 48.81 85 P P 09 11 59.0 -0.3
PFO pmax pmax
comp=Z,11nm,1.1s,mb4.8
PFO **Pinyon Flat Ob** 48.81 85 *e*P P 09 11 58.4 -0.9
comp=Z,11nm,1.1s,mb4.8
BELC **Belle Mtn.** 48.84 85 ⇑P P 09 11 59.2 -0.3
baz=49
109C **Camp Elliot, M** 48.88 87 ⇑P P 09 11 59.5 -0.3
baz=49
R16A **Teasdale** 48.89 77 ⇓P P 09 12 00.8 +0.9
baz=49,SNR=9.8
V13A **Grand Canyon W** 48.89 81 ⇓P P 09 12 00.1 +0.2
baz=49
M20A **Sweetwater, Wa** 48.91 72 ⇓P P 09 12 00.2 +0.2
baz=49,SNR=6.4
SRU **San Rafael** 48.96 76 ⇑P P 09 12 00.6 +0.2
baz=49
U14A **Mt Trumbull** 49.03 80 ⇓P P 09 12 00.7 -0.3
baz=49
L21A **Rawlins** 49.11 71 ⇓P P 09 12 01.5 0.0
baz=49,SNR=12
T15A **Red Dirt Ranch** 49.14 79 ⇑P P 09 12 02.0 +0.2
baz=49,SNR=7.7
S16A **Weppner Ranch,** 49.18 78 ⇓P P 09 12 01.8 -0.2
baz=49,SNR=6.4
Q18A **Rafter H Ranch** 49.21 75 ⇑P P 09 12 02.1 -0.2
baz=49,SNR=8.3
N20A **Spence Gulch,** 49.27 72 ⇓P P 09 12 02.7 0.0
baz=49,SNR=5.3
IRM **Iron Mountain** 49.27 84 ⇑P P 09 12 02.4 -0.4
baz=49
R17A **Hanksville Air** 49.28 76 ⇑P P 09 12 02.8 -0.1
baz=49,SNR=12
MONP **Monument Peak** 49.31 86 ⇓P P 09 12 03.1 -0.1
baz=49
BC3 **Big Chuckw Mtn** 49.41 85 ⇓P P 09 12 03.3 -0.6
baz=49
W13A **Hualapai Mount** 49.44 82 ⇑P P 09 12 04.1 0.0
baz=49
U15A **North Rim** 49.57 80 ⇓P P 09 12 05.1 0.0
baz=49,SNR=12
P19A **Cripple Cowboy** 49.57 74 ⇑P P 09 12 05.0 -0.1
baz=49
V14A **Boquillas Ranc** 49.58 81 ⇓P P 09 12 04.8 -0.4
baz=49,SNR=9.6
L22A **Ellis Ranch, M** 49.62 70 ⇓P P 09 12 05.5 +0.1
baz=50
DVTC **Desert V Tower** 49.66 86 ⇑P P 09 12 05.7 -0.2
baz=50
O20A **White River Ci** 49.71 73 ⇑P P 09 12 06.2 +0.1
baz=50,SNR=12
S17A **Black Ridge (B** 49.72 77 ⇑P P 09 12 06.3 +0.1
baz=50,SNR=27
N21A **Black Mountain** 49.76 72 ⇑P P 09 12 06.4 0.0
baz=50
R18A **Canyonlands Na** 49.80 76 ⇓P P 09 12 06.1 -0.7
baz=50,SNR=6.4
X13A **Yucca** 49.80 82 ⇑P P 09 12 06.2 -0.7
baz=50
Q19A **Hogan Spring (** 49.83 75 ⇑P P 09 12 06.5 -0.4
baz=50,SNR=12
W14A **Seligman** 49.87 81 ⇓P P 09 12 07.1 -0.3
baz=50
M22A **Cedar Creek Ra** 49.91 71 ⇓P P 09 12 07.3 -0.3
baz=50,SNR=8.5
Y12C **Blythe** 49.93 84 ⇑P P 09 12 07.3 -0.5
baz=50
P20A **De Beque** 50.01 74 ⇑P P 09 12 08.2 -0.2
baz=50
V15A **Kaibab Nationa** 50.04 80 ⇑P P 09 12 08.5 -0.1
baz=50,SNR=10
O21A **Pagoda** 50.12 73 ⇑P P 09 12 09.3 +0.1
baz=50
T17A **Navajo Res., N** 50.12 78 ⇓P P 09 12 08.9 -0.4
baz=50
S18A **Hurst Farm, BI** 50.18 77 ⇑P P 09 12 09.5 -0.2
baz=50,SNR=22
GLA **Glamis** 50.20 85 ⇓P P 09 12 09.6 -0.3
baz=50
GLA **Glamis** 50.20 85 P P 09 12 09.9 0.0
GLA pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
R19A **Curley Farm, L** 50.25 76 ⇑P P 09 12 10.3 +0.2
baz=50,SNR=8.6
Y13A **Salome** 50.32 83 ⇓P P 09 12 10.5 -0.3
baz=50
N22A **Wattenberg Ran** 50.37 71 ⇓P P 09 12 11.1 +0.1
baz=50,SNR=8.3
W15A **Williams** 50.40 81 ⇓P P 09 12 11.2 -0.1
baz=50
Q20A **Ridgley Place,** 50.41 74 ⇑P P 09 12 11.1 -0.3
baz=50
SPB4 **Spitsbergen Ar** 50.42 356 *e*P P 09 12 10.8 -0.2
SPITS **Spitsbergen Ar** 50.42 356 P P 09 12 10.9 -0.1
comp=Z,35nm,0.6s,mb5.6,baz=40,slow=6.6,SNR=84
SPITS **Spitsbergen Ar** 50.42 356 P P 09 12 10.9 -0.1
SPITS pmax pmax
comp=Z,35nm,0.6s
U17A **Shonto** 50.47 78 ⇓P P 09 12 11.6 -0.2
baz=50
X14A **Yava** 50.47 82 ⇓P P 09 12 11.8 -0.1
baz=50
U16A **Tuba City** 50.47 79 ⇓P P 09 12 11.7 -0.2
baz=50
P21A **Newcastle** 50.57 73 ⇓P P 09 12 12.7 +0.1
baz=50
T18A **Mexican Hat** 50.61 77 ⇓P P 09 12 12.6 -0.3
baz=50,SNR=14
ULM **Lac du Bonnet** 50.61 56 P P 09 12 11.3 -1.5
comp=Z,2.9nm,0.6s,mb4.4,baz=331,slow=8.0,SNR=3.6
ULM PcP PcP 09 13 29.1 -0.4
comp=Z,4.1nm,0.9s,baz=288,slow=5.5,SNR=3.0
S19A **Harvey Farm, M** 50.67 76 ⇑P P 09 12 13.2 -0.2
baz=50,SNR=25
WUAZ **Wupatki** 50.73 80 ⇓P P 09 12 14.0 +0.1
baz=51
WUAZ **Wupatki** 50.73 80 *e*P P 09 12 13.9 0.0
comp=Z,15nm,0.8s,mb5.0
HVS **Khovu-Aksy** 50.75 306 *d i*P P 09 12 14.3 +0.5
HVS pmax pmax
comp=Z,182nm,1.4s,mb5.8
Y14A **Wickenburg** 50.75 82 ⇓P P 09 12 13.6 -0.4
baz=51,SNR=5.7
X15A **Humboldt** 50.87 81 ⇑P P 09 12 14.9 0.0
baz=51,SNR=6.4
W16A **Flagstaff** 50.91 80 ⇑P P 09 12 15.4 +0.2
baz=51
Q21A **Lamborn Mesa,** 50.92 74 ⇓P P 09 12 15.2 -0.1
baz=51
113A **Mohawk Valley,** 51.05 84 ⇓P P 09 12 15.8 -0.5
baz=51
SMCO **Snowmass** 51.07 73 *e*P P 09 12 11.8 -4.6
comp=Z,4.6nm,0.7s,mb4.5
U18A **Rough Rock, Ch** 51.07 78 ⇑P P 09 12 16.2 -0.2
baz=51
Y15A **Casa Rosa Ranc** 51.16 82 ⇑P P 09 12 17.0 -0.1
baz=51
R21A **Cimarron** 51.24 74 ⇑P P 09 12 17.7 +0.1
baz=51
T19A **Beclabito** 51.32 77 ⇓P P 09 12 18.1 -0.2
baz=51,SNR=23
MVCO **Mesa Verde** 51.40 76 ⇑P P 09 12 18.8 -0.1
baz=51
MVCO **Mesa Verde** 51.40 76 *e*P P 09 12 18.9 0.0
comp=Z,12nm,0.7s,mb4.9
X16A **Lo Mia Camp, P** 51.41 81 ⇓P P 09 12 18.7 -0.2
baz=51,SNR=14
V18A **Ganado** 51.49 79 ⇓P P 09 12 19.6 0.0
baz=51
ISCO **Idaho Springs** 51.49 72 P P 09 12 20.3 +0.8
ISCO pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ISCO **Idaho Springs** 51.49 72 *e*P P 09 12 20.1 +0.6
comp=Z,6.7nm,0.8s,mb4.6
S21A **Coal Bank Pass** 51.54 75 ⇓P P 09 12 20.2 +0.3
baz=51
WHN **Wuhan** 51.63 273 P P 09 12 19.8 -0.9
WHN S **S** 09 19 41.6 +4.4
WHN LR LR
comp=Z,954nm,16.1s
Y16A **Circle Bar Ran** 51.74 81 ⇑P P 09 12 20.8 -0.6
baz=52
X17A **Forest Lakes** 51.85 81 ⇑P P 09 12 22.1 -0.2
baz=52
W18A **Petrified Fore** 52.00 79 ⇑P P 09 12 23.5 +0.1
baz=52
115A **Sonoran Desert** 52.06 83 ⇓P P 09 12 24.0 +0.1
baz=52
Z16A **Peralta Trail,** 52.13 82 ⇑P P 09 12 24.0 -0.4
baz=52
214A **Organ Pipe Nat** 52.20 84 ⇑P P 09 12 24.2 -0.6
baz=52
Y17A **Roosevelt** 52.26 81 ⇓P P 09 12 25.2 -0.1
baz=52,SNR=6.6
X18A **Snowflake** 52.26 80 ⇓P P 09 12 25.4 +0.1
baz=52
SSLB **Suanglung** 52.27 261 *e*P P 09 12 25.0 -0.5
comp=Z,21nm,0.9s,mb5.1
116A **Eloy** 52.48 83 ⇑P P 09 12 26.9 0.0
baz=52
XAN **Xi'an** 52.67 280 P P 09 12 27.8 -0.5
XAN AP pP 09 12 41.8 -2.3
XAN AMB AMB
comp=Z,14nm,0.9s,mb4.9
XAN LR LR
comp=N,120nm,24.6s
XAN LR LR
comp=E,380nm,24.0s
XAN LR LR
comp=Z,837nm,22.2s
Y18A **Canyon Day Jun** 52.70 81 ⇓P P 09 12 28.6 0.0
baz=53
X19A **St. Johns** 52.73 79 ⇑P P 09 12 29.3 +0.5
baz=53
Z17A **San Carlos Hig** 52.75 81 ⇓P P 09 12 29.7 +0.8
baz=53
117A **Oracle** 53.07 82 ⇓P P 09 12 31.2 -0.1
baz=53
TUC **Tucson** 53.22 82 *e*P P 09 12 32.2 -0.2
TUC pmax pmax
comp=Z,16nm,1.4s,mb4.8
TUC **Tucson** 53.22 82 *e*P P 09 12 32.2 -0.2
comp=Z,18nm,1.4s,mb4.8
ZAA0 **Zalesovo Array** 53.36 313 *e*P P 09 12 32.6 -0.6
ZALV **Zalesovo Beam** 53.36 313 P P 09 12 32.6 -0.5
comp=Z,2.1nm,0.4s,mb4.5,baz=50,slow=8.0,SNR=14
ZALV PcP PcP 09 13 40.6 +0.8
comp=Z,7.3nm,0.7s,baz=19,slow=4.1,SNR=7.1
ZALV **Zalesovo Beam** 53.36 313 P P 09 12 32.7 -0.4
ZALV 09 13 40.6
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ZALV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
118A **Homack Ranch,** 53.51 82 ⇓P P 09 12 34.3 -0.2
baz=53,SNR=5.8
NVS **Novosibirsk** 53.52 314 *i*P P 09 12 34.0 -0.3
NVS pmax pmax
comp=N,21nm,1.2s
NVS pmax pmax
comp=E,22nm,1.2s
NVS pmax pmax
comp=Z,36nm,1.2s,mb5.2
217A **Green Valley** 53.56 83 ⇑P P 09 12 34.5 -0.5
baz=53
SUMG **Summit** 53.66 13 *e*P P 09 12 35.6 +0.5
comp=Z,18nm,0.9s,mb5.0
119A **Ashpeak Ranch,** 53.84 81 ⇓P P 09 12 36.7 -0.2
baz=54
ANMO **Albuquerque** 54.13 77 *i*P P 09 12 38.8 -0.2
ANMO **Albuquerque** 54.13 77 *e*P P 09 12 38.7 -0.3
comp=Z,6.0nm,0.9s,mb4.5
318A **Bisbee** 54.31 83 ⇓P P 09 12 40.1 -0.2
baz=54
219A **White Tail Can** 54.38 82 ⇓P P 09 12 40.7 -0.2
baz=54
LZH **Lanzhou** 54.42 285 ⇑P P 09 12 41.9 +0.7
LZH AMB AMB
comp=Z,55nm,1.1s,mb5.4
LZH AMB AMB
comp=Z,176nm,5.7s
LZH LR LR
comp=E,1μm,16.2s
LZH LR LR
comp=Z,2μm,17.5s
GTA **Gaotai** 54.65 291 P P 09 12 43.3 +0.6
GTA AP pP 09 12 55.8 -2.8
GTA XP sP 09 13 00.3 -5.2
GTA AMB AMB
comp=Z,22nm,1.0s,mb5.1
GTA AMB AMB
comp=Z,211nm,6.0s
GTA LR LR
comp=N,562nm,18.2s
GTA LR LR
comp=E,646nm,18.8s
GTA LR LR
comp=Z,1μm,19.1s
319A **Douglas** 54.79 82 ⇓P P 09 12 44.1 +0.2
baz=55
CBKS **Cedar Bluff** 55.61 69 P P 09 12 50.0 +0.3
CBKS pmax pmax
comp=Z,40nm,0.9s,mb5.5

CBKS Cedar Bluff 55.61 69 *e*P P 09 12 49.5 -0.2
comp=Z,40nm,0.9s,mb5.4
AMTX Amarillo 57.08 74 *e*P P 09 12 59.2 -0.9
comp=Z,6.6nm,0.6s,mb4.8
KSU1 Kansas State U 57.24 67 *e*P P 09 13 00.6 -0.6
comp=Z,16nm,0.6s,mb5.2
SCIA State Center 57.30 62 *e*P P 09 13 01.7 +0.1
comp=Z,11nm,0.7s,mb5.0
CD2 Chengdu 57.98 281 P P 09 13 05.8 -0.8
CD2 AP pP 09 13 21.8 -0.8
CD2 XP sP 09 13 28.8 -0.6
CD2 PCP PcP 09 13 57.0 -1.1
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,130nm,5.4s
CD2 LR LR
comp=N,640nm,17.2s
CD2 LR LR
comp=Z,710nm,19.6s
ARCES ARCESS Array B 58.03 350 P P 09 13 05.5 -0.9
comp=Z,14nm,0.8s,mb5.0,baz=24,slow=7.8,SNR=9.2
ARCES ARCESS Array B 58.03 350 P P 09 13 05.5 -0.9
ARCES pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 58.35 313 *e*P P 09 13 09.2 +0.3
comp=Z,65nm,1.1s,mb5.6
WMQ Urumqi 58.54 302 ⇑P P 09 13 10.9 +0.6
WMQ AP pP 09 13 23.6 -2.7
WMQ PCP PcP 09 14 00.5 +0.5
WMQ AMB AMB
comp=Z,25nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,284nm,5.0s
WMQ LR LR
comp=N,1μm,19.5s
WMQ LR LR
comp=E,583nm,24.0s
WMQ LR LR
comp=Z,1μm,26.0s
WMOK Wichita Mounta 58.92 72 P P 09 13 13.3 +0.2
WMOK pmax pmax
comp=Z,11nm,0.9s,mb4.9
WMOK Wichita Mounta 58.92 72 *e*P P 09 13 13.0 0.0
comp=Z,11nm,0.9s,mb4.9
MK31 Makanchi Array 59.30 308 P P 09 13 15.4 -0.1
MK31 Makanchi Array 59.30 308 *e*P P 09 13 15.1 -0.4
MKAR Makanchi Array 59.30 308 P P 09 13 15.1 -0.4
comp=Z,8.5nm,0.6s,mb5.0,baz=56,slow=7.1,SNR=61
MKAR Makanchi Array 59.30 308 P P 09 13 15.1 -0.4
MKAR pmax pmax
comp=Z,9.0nm,0.6s
GYA Guiyang 59.31 275 P P 09 13 15.4 -0.4
GYA AP pP 09 13 30.8 -1.1
GYA XP sP 09 13 36.9 -1.8
GYA PCP PcP 09 14 03.3 -0.1
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,120nm,5.9s
GYA LR LR
comp=N,480nm,19.8s
GYA LR LR
comp=E,460nm,18.7s
GYA LR LR
comp=Z,490nm,19.8s
TXAR Lajitas Array 59.69 80 P P 09 13 18.1 -0.4
comp=Z,2.3nm,0.7s,mb4.3,baz=304,slow=4.8,SNR=34
TXAR LR LR 09 39 08.8
comp=Z,651nm,18.1s,baz=5.0,slow=36
TXAR Lajitas Array 59.69 80 P P 09 13 18.1 -0.4
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR MLR MLR
comp=Z,651nm,18.1s
VOSK Vostochnaya 60.29 318 P P 09 13 22.1 -0.1
VOSK pmax pmax
comp=Z,44nm,0.9s,mb5.5
BVA0 Borovoye Array 60.31 319 *i* P P 09 13 22.3 0.0
BVA0 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BRVK Borovoye 60.33 319 *e*P P 09 13 23.5 +1.0
BRVK pmax pmax
comp=Z,52nm,0.9s,mb5.6
BRVK Borovoye 60.33 319 *e*P P 09 13 23.5 +1.0
comp=Z,52nm,0.9s,mb5.6
HDIL Hopedale 60.38 61 *e*P P 09 13 22.9 -0.1
comp=Z,20nm,0.7s,mb5.2
SCHQ Schefferville 60.74 37 P P 09 13 24.2 -1.0
comp=Z,3.2nm,0.5s,mb4.7,baz=328,slow=8.5,SNR=10
JCT Junction City 61.26 76 P P 09 13 28.7 -0.5
JCT pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
JCT Junction City 61.26 76 *e*P P 09 13 28.2 -0.9
comp=Z,2.9nm,0.6s,mb4.6
MIAR Mount Ida 62.14 69 P P 09 13 35.1 +0.1
MIAR pmax pmax
comp=Z,28nm,1.0s,mb5.3
MIAR Mount Ida 62.14 69 *e*P P 09 13 34.6 -0.3
comp=Z,28nm,0.9s,mb5.4
ARU Arti 62.16 327 *d i*P P 09 13 35.8 +1.0
ARU *e* 09 14 11.4
ARU *e*PPP 09 17 21.7
ARU *e*S **S** **09 22 01.0 +5.8**
ARU *e*SS SS 09 26 03.4 +5.5
ARU pmax pmax
comp=Z,54nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,999nm,21.0s
ARU Arti 62.16 327 *e*P P 09 13 35.1 +0.3
comp=Z,36nm,0.8s,mb5.5
OLIL Olney 62.32 62 *e*P P 09 13 35.8 -0.3
comp=Z,16nm,0.6s,mb5.3
DAV Davao City (W) 62.49 245 LR LR 09 37 30.6
comp=Z,687nm,20.8s,baz=62,slow=33
KMI Kunming 62.72 277 P P 09 13 41.0 +2.0
KMI AP pP 09 13 55.3 +0.2
KMI XP sP 09 14 01.6 -0.3
KMI AMB AMB
comp=Z,8.0nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,103nm,4.9s
KMI LR LR
comp=N,337nm,18.7s
KMI LR LR
comp=E,292nm,19.6s
KMI LR LR
comp=Z,392nm,25.0s
USIN University of 63.10 62 *e*P P 09 13 40.9 -0.5
comp=Z,21nm,0.6s,mb5.4
JOF Joensuu 63.45 344 *e*p P 09 13 42.3 -0.9
comp=Z,6.9nm,0.7s,mb4.9
JOF Joensuu 63.45 344 *e*P P 09 13 42.3 -0.9
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KLMR Klimovskoe 63.74 339 *e*P P 09 13 44.6 -0.6
KLMR pmax pmax
comp=Z,13nm,1.2s,mb4.8
OXF Oxford 64.58 66 P P 09 13 51.0 -0.1
OXF pmax pmax
comp=Z,100nm,1.0s,mb5.8
OXF Oxford 64.58 66 *e*P P 09 13 50.5 -0.5
comp=Z,100nm,1.0s,mb5.8
KAF Kangasniemi 65.00 346 *e*p P 09 13 51.4 -2.0
comp=Z,6.0nm,0.7s,mb4.7
KAF Kangasniemi 65.00 346 *e*P P 09 13 51.4 -2.0
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TKM2 Tokmak 2 65.39 308 *e*P P 09 13 57.2 +1.0
TKM2 Tokmak 2 65.39 308 P P 09 13 57.2 +1.0
SNR=30
TKM2 Tokmak 2 65.39 308 *e*P P 09 13 57.0 +0.8
ULHL Ulahol 65.57 307 P P 09 13 58.5 +1.1
SNR=13
VBMS Vicksburg 65.58 69 *e*P P 09 13 57.6 0.0
comp=Z,33nm,0.8s,mb5.4
USP Ospenovka 65.67 309 P P 09 13 59.1 +1.1
SNR=39
CHMS Chumysh 65.75 309 P P 09 13 59.5 +1.0
SNR=8.9
KBK Karagaybulak 65.91 309 P P 09 14 00.8 +1.2
SNR=6.7
FRU Bishkek 65.94 309 *e*P P 09 14 00.0 +0.3
FRU MLR MLR
comp=Z,600nm,16.0s
AAK Ala-Archa 66.14 309 *e*P P 09 14 02.0 +0.9
AAK Ala-Archa 66.14 309 P P 09 14 02.2 +1.1
SNR=17
AAK Ala-Archa 66.14 309 *e*P P 09 14 01.9 +0.8
KZA Kyzart 66.19 308 P P 09 14 02.8 +1.4
SNR=11
EKS2 Erkin-Say 66.47 309 P P 09 14 04.4 +1.2
SNR=26
EKS2 Erkin-Say 66.47 309 *e*P P 09 14 04.2 +1.1
comp=Z,24nm,0.8s,mb5.3
LSA Lhasa 66.50 288 *e*P P 09 14 05.1 +1.5
LSA pmax pmax
comp=Z,25nm,0.8s,mb5.3
LSA Lhasa 66.50 288 *e*P P 09 14 05.1 +1.5
comp=Z,25nm,0.8s,mb5.3
AML Almayashu 66.91 309 P P 09 14 07.9 +1.9
SNR=28
AML Almayashu 66.91 309 *e*P P 09 14 07.5 +1.5
comp=Z,25nm,0.9s,mb5.2
AKTO Aktyubinsk 67.18 324 *i* P P 09 14 07.9 +0.3
AKTO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AB31 Akbulak array 67.41 322 P P 09 14 09.4 +0.4
AB31 pmax pmax
comp=Z,47nm,1.1s,mb5.4
NB2 NORSAR Subarra 67.67 354 P P 09 14 10.2 -0.2
comp=Z,30nm,0.9s,mb5.3,baz=6.9,slow=6.5
NOA NORSAR Array B 67.67 354 P P 09 14 10.3 -0.1
comp=Z,19nm,0.8s,mb5.2,baz=9.1,slow=6.4,SNR=51
NOA NORSAR Array B 67.67 354 P P 09 14 10.3 -0.1
NOA pmax pmax
comp=Z,19nm,0.8s
KK31 Karatay Array 67.70 312 *i* P P 09 14 11.1 +0.1
KK31 pmax pmax
comp=Z,13nm,0.6s,mb5.1
SHL Shillong 69.09 285 ⇑*i*P P 09 14 19.0 -0.9
SHL *ex* x 09 15 48.0
KONO Kongsberg 69.15 355 *e*P P 09 14 19.6 -0.1
TAOE Nuku Hiva Isla 69.22 137 *e*LR LR 09 35 13.4
comp=Z,5μm,22.0s,baz=339
OBN Obninsk 69.61 338 *i* P P 09 14 22.4 -0.2
OBN *e* 09 16 56.1
OBN pmax pmax
comp=Z,24nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,1μm,18.0s
CHTO Chiang Mai 69.73 275 *e*P P 09 14 23.4 -0.5
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CHTO Chiang Mai 69.73 275 *e*P P 09 14 23.4 -0.5
comp=Z,8.9nm,0.9s,mb4.7
CMAR Chiang Mai Arr 70.00 275 P P 09 14 25.3 -0.3
comp=Z,6.4nm,0.8s,mb4.6,baz=26,slow=6.8,SNR=35
CMAR Chiang Mai Arr 70.00 275 P P 09 14 25.3 -0.3
CMAR pmax pmax
comp=Z,6.0nm,0.8s
TAPN Taplejung 70.28 289 *e*P P 09 14 28.0 +0.8
comp=Z,141nm,0.9s,mb5.9
ODAN Odare 70.83 289 *e*P P 09 14 31.1 +0.5
comp=Z,60nm,0.9s,mb5.5
GUN Gumba 70.94 291 *e*P P 09 14 32.1 +0.9
comp=Z,190nm,0.9s,mb6.0
JIRN Jiri 70.94 290 *e*P P 09 14 32.4 +1.2
comp=Z,150nm,0.9s,mb5.9
RAMN Ramite 71.23 290 *e*P P 09 14 33.6 +0.6
comp=Z,245nm,0.9s,mb6.1
KKN Kakani 71.38 291 *e*P P 09 14 34.7 +0.8
comp=Z,50nm,0.7s,mb5.6
KKN Kakani 71.38 291 *e*P P 09 14 34.7 +0.8
KKN pmax pmax
comp=Z,50nm,0.7s,mb5.5
PKI Pulchoki 71.47 291 *e*P P 09 14 35.0 +0.6
comp=Z,94nm,1.0s,mb5.7
PKI Pulchoki 71.47 291 *e*P P 09 14 35.0 +0.6
PKI pmax pmax
comp=Z,94nm,1.0s,mb5.7
PKIN Phulchoki 71.47 291 *e*P P 09 14 34.9 +0.5
comp=Z,57nm,1.0s,mb5.5
GKN Gorkha 71.60 292 *e*P P 09 14 35.6 +0.4
comp=Z,114nm,0.9s,mb5.8
DMN Daman 71.62 291 *e*P P 09 14 36.3 +1.0
comp=Z,70nm,0.9s,mb5.6
DANN Dangsing 71.85 293 *e*P P 09 14 37.5 +0.8
comp=Z,107nm,0.8s,mb5.8
KOLN Koldanda 72.38 292 *e*P P 09 14 40.3 +0.4
comp=Z,52nm,0.9s,mb5.5
PPT Papeete 73.67 149 *e*P P 09 14 51.2 +3.8
PPT *e*S S 09 24 20.0 +6.8
comp=Z,1μm,28.0s
PPT Papeete 73.67 149 *e*LR LR 09 37 19.4
comp=Z,1μm,23.0s,baz=342
CMIG Matias Romero 74.11 82 LR LR 09 46 38.2
comp=Z,290nm,19.3s,baz=127,slow=35
KBL Kabul 75.09 307 P P 09 14 55.7 +0.1
KBL pmax pmax
comp=Z,38nm,0.8s,mb5.4
KBL Kabul 75.09 307 *e*P P 09 14 55.4 -0.2
comp=Z,38nm,0.8s,mb5.4
AKASG Malin Array Be 75.34 341 P P 09 14 56.2 -0.5
comp=Z,3.7nm,0.6s,mb4.5,baz=14,slow=4.8,SNR=16
AKASG Malin Array Be 75.34 341 P P 09 14 56.3 -0.5
AKASG pmax pmax
comp=Z,4.0nm,0.6s
KAKA Kakadu 75.69 228 *e*P x 09 14 36.0
comp=Z,18nm,0.9s
KAKA *e*pP x 09 14 49.2
CTA Charters Tower 76.81 212 P P 09 15 03.9 -1.5
comp=Z,4.1nm,0.8s,mb4.4,baz=34,slow=9.0,SNR=6.1
CTA Charters Tower 76.81 212 P P 09 15 03.9 -1.5
CTA pmax pmax
comp=Z,4.0nm,0.8s
ABKT Ailbek 77.47 316 P P 09 15 10.2 +1.1
comp=Z,141nm,0.9s,mb5.9,SNR=6.7
ABKT Ailbek 77.47 316 P P 09 15 10.5 +1.5
BRG Berggiesshubel 77.52 351 *e*P P 09 15 08.4 -0.7
BRG pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BRG MLR MLR
comp=N,383nm,20.5s
BRG MLR MLR
comp=E,337nm,22.3s
BRG MLR MLR
comp=Z,491nm,17.4s
BRG Berggiesshubel 77.52 351 *e*P P 09 15 07.9 -1.2
comp=Z,11nm,1.2s,mb4.7
BRG Berggiesshubel 77.52 351 *e*P P 09 15 08.3 -0.7
comp=Z,11nm,1.2s,mb4.7
BRG
comp=N,640nm,20.5s
BRG
comp=E,563nm,22.3s
BRG
comp=Z,820nm,17.4s
KWP Kalwaria 77.57 345 *e*P P 09 15 10.1 +0.7
KWP Kalwaria 77.57 345 P P 09 15 10.2 +0.8
KWP pmax pmax
comp=Z,34nm,1.0s,mb5.2
KWP Kalwaria 77.57 345 ⇓*i*P P 09 15 10.2 +0.8
DPC Dobruska-Polom 77.77 349 *e*P P 09 15 10.6 +0.1
MOX Moxa 77.96 352 *e*P P 09 15 11.4 -0.2
comp=Z,6.0nm,0.8s,mb4.6
STHS Stebnicka Huta 78.01 346 *e*P P 09 15 13.1 +1.2
STHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
STHS Stebnicka Huta 78.01 346 *e*P P 09 15 13.1 +1.2
STHS Stebnicka Huta 78.01 346 *e*P P 09 15 13.1 +1.2
comp=Z,8.6nm,1.2s,mb4.6
KIV Kislovodsk 78.06 330 *e*P P 09 15 12.8 +0.5
KIV *e*S S 09 25 02.5 +1.2
KIV pmax pmax
comp=Z,12nm,0.8s,mb4.9
WERD Werda 78.10 352 *e*P P 09 15 12.1 -0.2
comp=Z,6.0nm,1.2s,mb4.4
WERN Wernitzgruen 78.25 352 *e*P P 09 15 13.3 +0.1
comp=Z,8.0nm,0.9s,mb4.7
NKC Novy Kostel 78.30 352 *e*P P 09 15 13.8 +0.4
KOLS Kolonicke sedl 78.32 345 *e*P P 09 15 12.5 -1.1
KOLS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
KOLS Kolonicke sedl 78.32 345 *e*P P 09 15 12.5 -1.1
comp=Z,1.1nm,1.1s,mb4.0
PRU Pruhonice 78.33 350 *e*P P 09 15 12.8 -0.8
CRVS Cervenica-Dubn 78.48 345 *e*P P 09 15 14.0 -0.4
MANZ Manzenberg 78.57 352 *e*P P 09 15 14.9 0.0
comp=Z,10.0nm,1.4s,mb4.5
ANN Anapa 78.87 334 *e*P P 09 15 10.6 -6.1
ANN pmax pmax
comp=Z,89nm,1.7s,mb5.4
ANN MLR MLR
comp=N,1μm,19.0s
ANN MLR MLR
comp=Z,632nm,19.0s
GIVF Givet 78.92 357 *e*P P 09 15 16.5 -0.4
GRA1 Grafenberg Arr 78.94 352 *e*P P 09 15 17.1 +0.1
comp=Z,20nm,0.9s,mb5.0
GRA1 LR LR
comp=Z,200nm,21.2s
GRF Grafenberg Arr 78.94 352 *e*P P 09 15 17.1 +0.1
GRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GRF MLR MLR
comp=Z,200nm,21.2s
GRF Grafenberg Arr 78.94 352 *e*P P 09 15 17.1 +0.1
GRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GRF MLR MLR
comp=Z,200nm,21.2s
GRF Grafenberg Arr 78.94 352 *e*P P 09 15 17.1 +0.1
comp=Z,20nm,0.9s,mb5.0
GRF *e*L 09 54 08.3
comp=Z,246nm,21.2s
BAIF Baives 78.99 357 *e*P P 09 15 17.2 0.0
KECS Kecovo 79.04 346 *e*P P 09 15 17.0 -0.5
KECS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
KECS Kecovo 79.04 346 *e*P P 09 15 17.0 -0.5
comp=Z,4.1nm,1.2s,mb4.2
BUR08 Bucovina Ar. S 79.05 343 *e*P P 09 15 18.1 +0.5
TRPA Tarpa 79.05 345 ⇑*i*P P 09 15 18.0 +0.4
BURAR Bucovina Array 79.07 343 ⇑*i*P P 09 15 18.4 +0.7
BURAR Bucovina Array 79.07 343 ⇑P P 09 15 18.4 +0.7
VYHS Vyhne 79.27 347 *e*P P 09 15 19.5 +0.7
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 79.27 347 *e*P P 09 15 19.5 +0.7
comp=Z,4.0nm,1.0s,mb4.3
KHC Kasperske Hory 79.28 351 P P 09 15 19.5 +0.7
KHC Kasperske Hory 79.28 351 *e*P P 09 15 17.7 -1.1
SOC Sochi 79.32 332 *e*P P 09 15 20.1 +1.0
SOC *e* 09 18 21.0
SOC *e*S S 09 25 17.9 +3.3
SOC *e* 09 25 36.1
SOC *e*SS SS 09 30 27.5 +6.4
SOC *e*SSS 09 33 51.9
SOC pmax pmax
comp=Z,15nm,0.8s,mb5.0
SOC MLR MLR
comp=Z,378nm,16.0s
GERES GERESS Array B 79.55 351 P P 09 15 20.1 -0.2
comp=Z,13nm,0.7s,mb4.0,baz=18,slow=4.8,SNR=5.5
GERES GERESS Array B 79.55 351 P P 09 15 20.1 -0.2
GERES pmax pmax
comp=Z,1.0nm,0.7s
ZST Bratislava 79.79 348 *e*P P 09 15 21.2 -0.4
ZST pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ZST Bratislava 79.79 348 *e*P P 09 15 21.2 -0.4
comp=Z,9.6nm,1.0s,mb4.7
CONA Conrad Observa 80.21 349 ⇑*i*P P 09 15 24.6 +0.7
comp=Z,6.8nm,1.0s,mb4.5
CSNA Conrad Observa 80.21 349 ⇑*i*P P 09 15 24.7 +0.7
comp=Z,6.6nm,1.0s,mb4.5
DRGR 80.32 344 ⇓*i*P P 09 15 25.1 +0.6
FLN La Foliniere 80.36 0 *e*P P 09 15 24.1 -0.6
FLN *e*MLR MLR
comp=Z,588nm,19.0s
FLN La Foliniere 80.36 0 *e*P P 09 15 24.1 -0.6
FLN LR LR
comp=Z,590nm,19.0s
CDF Champ du Feu 80.49 355 *e*P P 09 15 24.9 -0.5
LDF La Druitiere 80.53 360 *e*P P 09 15 24.9 -0.7
comp=Z,39nm,1.0s,mb5.0
LDF La Druitiere 80.53 360 *e*P P 09 15 24.9 -0.7
LDF pmax pmax
comp=Z,19nm,1.0s,mb5.0
LDF La Druitiere 80.53 360 *e*P P 09 15 24.9 -0.7
comp=Z,19nm,1.0s,mb5.0
GRR Gorron 80.74 0 *e*P P 09 15 26.3 -0.4
GRR pmax pmax
comp=Z,55nm,1.2s,mb5.1
GRR Gorron 80.74 0 *e*P P 09 15 26.3 -0.4
GRR pmax pmax
comp=Z,27nm,1.2s,mb5.0
GRR Gorron 80.74 0 *e*P P 09 15 26.3 -0.4
comp=Z,27nm,1.2s,mb5.1
ROSF Rostrenen 80.76 2 *e*P P 09 15 25.9 -0.9
SGMF Saint Gilles 80.86 1 *e*P P 09 15 26.7 -0.6
comp=Z,27nm,0.7s,mb5.0
SGMF Saint Gilles 80.86 1 *e*P P 09 15 26.7 -0.6
SGMF pmax pmax
comp=Z,13nm,0.7s,mb5.0
SGMF Saint Gilles 80.86 1 *e*P P 09 15 26.7 -0.6
comp=Z,13nm,0.7s,mb5.0
HAU Haudompre 80.95 355 *e*P P 09 15 27.5 -0.3
HAU *e*MLR MLR
comp=Z,512nm,20.8s
HAU Haudompre 80.95 355 *e*P P 09 15 27.5 -0.3
HAU LR LR
comp=Z,510nm,20.8s
HINF Hinteralfeld 81.11 355 *e*P P 09 15 28.1 -0.6
VOIR 81.20 342 ⇑*i*P P 09 15 30.7 +1.5
VOIR 81.20 342 ⇑P P 09 15 30.7 +1.4
WRAB Tennant Creek 81.20 222 *e*P P 09 15 27.2 -2.2
WB2 Warramunga Arr 81.21 222 *e*P P 09 15 27.0 -2.4
WRA Warramunga Arr 81.22 223 P P 09 15 27.4 -2.1
comp=Z,3.5nm,0.9s,mb4.3,baz=31,slow=5.8,SNR=4.6
WRA Warramunga Arr 81.22 223 P P 09 15 27.4 -2.1
WRA pmax pmax
comp=Z,4.0nm,0.9s
KBA Koelnbreinsper 81.33 351 ⇑*i*P P 09 15 31.0 +1.1
comp=Z,20nm,0.8s,mb5.1
TIRR Tirgusor 81.44 340 ⇑*i*P P 09 15 31.2 +0.7
TIRR Tirgusor 81.44 340 ⇑P P 09 15 31.2 +0.6
PKSM Moragy 81.53 347 ⇑*i*P P 09 15 32.0 +1.0
PKSM Moragy 81.53 347 ⇑P P 09 15 32.0 +1.0
SOKA Soboth 81.54 349 ⇑*i*P P 09 15 31.5 +0.5
comp=Z,28nm,1.2s,mb5.0
FETA Feichten 81.63 352 ⇑*i*P P 09 15 31.7 +0.2
comp=Z,14nm,1.1s,mb4.8
GZR Gura Zlata 81.66 344 ⇑*i*P P 09 15 32.5 +0.8
GZR Gura Zlata 81.66 344 ⇑P P 09 15 32.5 +0.9
LOR Lormes 81.79 357 *e*P P 09 15 31.8 -0.5
LOR *e*MLR MLR
comp=Z,422nm,19.5s
LOR Lormes 81.79 357 *e*P P 09 15 31.8 -0.5
LOR LR LR
comp=Z,420nm,19.5s
SSF Saint Saulge 82.01 357 *e*P P 09 15 32.9 -0.6
comp=Z,7.2nm,0.6s,mb4.5
SSF Saint Saulge 82.01 357 *e*P P 09 15 32.9 -0.6
SSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SSF Saint Saulge 82.01 357 *e*P P 09 15 32.9 -0.6
comp=Z,3.6nm,0.6s,mb4.5
AVF Avril sur Loir 82.28 357 *e*P P 09 15 34.5 -0.4
TUE Stuetta 82.29 353 *e*P P 09 15 35.3 +0.4
comp=Z,6.9nm,0.8s,mb4.6
CABF La Chapelle 82.35 355 *e*P P 09 15 34.5 -0.8
SMF Signal de Mont 82.41 357 *e*P P 09 15 35.0 -0.6
comp=Z,44nm,1.2s,mb5.0
SMF Signal de Mont 82.41 357 *e*P P 09 15 35.0 -0.6
SMF pmax pmax
comp=Z,22nm,1.2s,mb5.0
SMF Signal de Mont 82.41 357 *e*P P 09 15 35.0 -0.6
comp=Z,22nm,1.2s,mb5.0
MFF Saint Martin d 82.52 360 *e*P P 09 15 35.2 -1.0
comp=Z,23nm,1.0s,mb4.9
MFF Saint Martin d 82.52 360 *e*P P 09 15 35.2 -1.0
MFF pmax pmax
comp=Z,11nm,1.0s,mb4.8
MFF Saint Martin d 82.52 360 *e*P P 09 15 35.2 -1.0
comp=Z,11nm,1.0s,mb4.8
BGF Bois d'Agland 82.53 358 *e*P P 09 15 35.7 -0.5
TCF Toulx Ste Croi 82.81 358 *e*P P 09 15 37.3 -0.4
comp=Z,26nm,1.1s,mb4.9
TCF Toulx Ste Croi 82.81 358 *e*P P 09 15 37.3 -0.4
TCF pmax pmax
comp=Z,13nm,1.1s,mb4.9
TCF Toulx Ste Croi 82.81 358 *e*P P 09 15 37.3 -0.4
comp=Z,13nm,1.1s,mb4.9
HYB Hyderabad 83.29 289 *i* P P 09 15 40.0 -0.6
HYB Hyderabad 83.29 289 *e*P P 09 15 40.0 -0.6
LPL La Plagne 83.41 355 *e*P P 09 15 40.4 -0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LPG	**La Plagne**	**83.43**	**355**	*e*P	**P**	**09 15 40.7**	**-0.2**
	comp=Z,36nm,1.4s,mb4.9						
LPG	**La Plagne**	**83.43**	**355**	*e*P	**P**	**09 15 40.7**	**-0.2**
LPG				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
LPG	**La Plagne**	**83.43**	**355**	*e*P	**P**	**09 15 40.7**	**-0.2**
	comp=Z,18nm,1.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**83.58**	**231**	*e*P	**P**	**09 15 40.6**	**-1.2**
	comp=Z,16nm,0.9s,mb5.1						
FITZ				*e*pP	pP	09 15 55.2	-3.5
FITZ	**Fitzroy Crossi**	**83.58**	**231**	*e*S	S	09 26 02.6	+3.5
ORIF	**Oris-en-Rattie**	**84.05**	**355**	*e*P	**P**	**09 15 43.7**	**-0.4**
ORIF				*e*MLR	MLR		
	comp=Z,330nm,22.0s						
RKT	**Rikitea**	**84.14**	**139**	*e*LR	LR	09 42 10.6	
	comp=Z,927nm,23.2s,baz=331						
VIVF	**Saint-Julien-l**	**84.17**	**356**	*e*P	**P**	**09 15 43.8**	**-0.9**
CAF	**Calviac**	**84.18**	**358**	*e*P	**P**	**09 15 43.6**	**-1.1**
	comp=Z,15nm,0.9s,mb4.8						
CAF	**Calviac**	**84.18**	**358**	*e*P	**P**	**09 15 43.6**	**-1.1**
CAF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
CAF	**Calviac**	**84.18**	**358**	*e*P	**P**	**09 15 43.6**	**-1.1**
	comp=Z,7.3nm,0.9s,mb4.8						
LFF	**La Frestale**	**84.18**	**359**	*e*P	**P**	**09 15 43.8**	**-0.9**
MBDF	**Montbardon**	**84.20**	**355**	*e*P	**P**	**09 15 43.7**	**-1.1**
BR131	**Keskin Array S**	**84.62**	**334**	*e*P	**P**	**09 15 47.7**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.9						
BRTR	**Keskin Array B**	**84.62**	**334**	P	**P**	**09 15 47.2**	**+0.2**
	comp=Z,9.1nm,0.8s,mb5.0,baz=55,slow=3.0,SNR=39						
BRTR	**Keskin Array B**	**84.62**	**334**	*i* P	**P**	**09 15 47.9**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ASAR	**Alice Springs**	**84.70**	**221**	P	**P**	**09 15 46.1**	**-1.3**
	comp=Z,2.1nm,0.9s,mb4.3,baz=26,slow=4.5,SNR=16						
ASAR	**Alice Springs**	**84.70**	**221**	P	**P**	**09 15 46.1**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MTLF	**Montolieu**	**85.76**	**358**	*e*P	**P**	**09 15 52.2**	**-0.4**
EPF	**Esparros**	**86.09**	**359**	*e*P	**P**	**09 15 53.7**	**-0.6**
ETSF	**Etsaut**	**86.23**	**0**	*e*P	**P**	**09 15 55.3**	**+0.3**
STKA	**Stephens Creek**	**89.27**	**212**	P	**P**	**09 16 08.9**	**-0.4**
	comp=Z,5.1nm,1.0s,mb4.8,baz=328,slow=15,SNR=2.9						
TORD	**Torodi Ar. Bea**	**115.84**	**358**	PKP	PKPdf	09 21 55.2	-1.0
	comp=Z,1.0nm,0.7s,baz=338,slow=2.2,SNR=6.2						
TORD				PKKPbc	PKKPbc	09 32 26.5	+0.8
	comp=Z,0.8nm,1.0s,baz=156,slow=7.8,SNR=3.3						
DBIC	**Dimbokro**	**122.18**	**5**	PKP	PKPdf	09 22 08.5	0.0
	comp=Z,2.1nm,0.6s,baz=119,slow=9.6,SNR=4.7						
DBIC	**Dimbokro**	**122.18**	**5**	PKIKP	PKPdf	09 22 08.5	0.0
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CFAA	**Coronel Fontan**	**127.47**	**96**	PKP	PKPdf	09 22 17.1	-0.8
	comp=Z,0.1nm,0.3s,baz=230,slow=3.6,SNR=2.9						
BDFB	**Brasilia**	**128.09**	**65**	PKP	PKPdf	09 22 19.3	-0.3
	comp=Z,0.5nm,0.4s,baz=159,slow=24,SNR=3.6						
BDFB	**Brasilia**	**128.09**	**65**	PKIKP	PKPdf	09 22 19.3	-0.3
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CPUP	**Villa Florida**	**130.64**	**82**	PKP	PKPdf	09 22 24.0	-0.1
	comp=Z,0.4nm,0.4s,baz=180,slow=1.7,SNR=4.0						
PLCA	**Paso Flores**	**131.92**	**106**	PKP	PKPdf	09 22 26.1	0.0
	comp=Z,0.9nm,0.7s,baz=266,slow=3.7,SNR=4.6						
PLCA	**Paso Flores**	**131.92**	**106**	PKIKP	PKPdf	09 22 26.1	0.0
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAW	**Mawson**	**145.75**	**217**	PKPbc	PKPbc	09 22 50.1	-0.9
	comp=Z,2.5nm,0.9s,baz=108,slow=9.0,SNR=3.4						
MAW	**Mawson**	**145.75**	**217**	PKP2	PKPab	09 22 50.1	-1.4
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**150.28**	**310**	PKPbc	PKPbc	09 23 04.3	0.0
	comp=Z,16nm,0.8s,baz=67,slow=1.8,SNR=16						
BOSA	**Boshof**	**150.28**	**310**	PKIKP	PKPbc	09 23 04.3	0.0
BOSA				pmax	pmax		
	comp=Z,16nm,0.9s						
BOSA	**Boshof**	**150.28**	**310**	PKPbc	PKPbc	09 23 04.3	0.0
VNA3	**Neumayer Olymp**	**159.51**	**171**	*e*PKPdf	PKPdf	09 23 09.0	-1.4
VNA3				*e*		09 23 23.9	
VNA2	**Neumayer--Watz**	**160.00**	**173**	*e*PKPdf	PKPdf	09 23 09.4	-1.5
	baz=5.1,slow=1.1						
VNA2				*e*		09 23 24.0	
VNA1	**Neumayer--Stat**	**160.21**	**172**	*e*PKPdf	PKPdf	09 23 10.2	-1.0
VNA1				*e*		09 23 25.1	

MOS ***17*** *09:04:43.4±1.1, 51.19N×179.63E, h33km, mb4.9/32, Error ellipse: s-maj=10.7km s-min=9.3km az=112.9*

BJI ***17*** *09:04:44.1, 51.10N×179.60E, h53km, mB5.2, mb5.0, Ms4.9, Msz4.7*

ISCJB ***17*** *09:04:46.0±0.8, 51.20N±0.06×179.53E±0.03, h55km±7km, mb4.9/63, MS4.8/14, Error ellipse: s-maj=10.7km s-min=3.1km az=3.3*

IDC ***17*** *09:04:47.8±2.8, 51.19N×179.52E, h58km±23km, mb4.3/23, mb1 4.5/25, mb1mx4.4/31, mbtmp4.4/25, ML4.5/2, MS4.6/3, Ms1 4.6/3, ms1mx4.2/16, Error ellipse: s-maj=18.1km s-min=11.0km az=158.0*

NEIC ***17*** *09:04:47.2±0.2, 51.14N×179.57E, mb5.1/28, ML4.7(AEIC), Error ellipse: s-maj=8.0km s-min=3.8km az=180.0*

ISC 17 09:04:48.6±0.8**, 51.22N**±0.06×**179.54E**±0.03**, h62**km±6km**, h51**km±2.4km**:pP-P, n390,** σ0.61/384**, mb4.9**/63**, 126C-109D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.69**	**296**	P	**Pn**	**09 05 44.6**	**+1.6**
SMY				S	**Sn**	**09 06 33.6**	**+8.5**
FX1	**Attu Island--F**	**4.27**	**295**	P	**Pn**	**09 05 50.1**	**-0.8**
	162nm,0.3s,baz=299,slow=17,SNR=3.5						
FX1				S	**Sn**	**09 06 39.2**	**-0.2**
	baz=101,slow=15,SNR=1.4						
FX1	**Attu Island--F**	**4.27**	**295**	P	**Pn**	**09 05 50.1**	**-0.9**
FX1				S	**Sn**	**09 06 39.3**	**-0.2**
FX1				pmax	pmax		
	comp=Z,162nm,0.3s						
NIKO	**Nikolski**	**7.37**	**72**	*e*Pn	**Pn**	**09 06 32.6**	**-0.7**
PETK	**Petropavlovsk-**	**13.53**	**287**	P	**Pn**	**09 07 58.4**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=97,slow=18,SNR=2.6						
OHAK	**Old Harbor**	**16.92**	**59**	*e*Pn	**Pn**	**09 08 38.3**	**-2.5**
KDAK	**Kodiak Island**	**17.39**	**57**	P	**Pn**	**09 08 43.7**	**-3.0**
	comp=Z,4.2nm,0.3s,baz=283,slow=5.8,SNR=8.3						
KDAK	**Kodiak Island**	**17.39**	**57**	P	**Pn**	**09 08 43.7**	**-3.0**
BILL	**Bilibino**	**18.08**	**344**	*e*P	**Pn**	**09 08 54.4**	**-0.6**
BILL	**Bilibino**	**18.08**	**344**	*e*Pn	**Pn**	**09 08 54.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**24.29**	**274**	*e*P	**P**	**09 10 01.4**	**+1.6**
YSS				pmax	pmax		
	comp=Z,240nm,1.9s,mb5.3						
YSS	**Yuzh-Sakhalins**	**24.29**	**274**	*e*P	**P**	**09 10 01.4**	**+1.6**
	comp=Z,244nm,1.9s,mb5.3						
ASAJ	**Asahikawa**	**25.66**	**269**	P	**P**	**09 10 12.5**	**+0.2**
	comp=Z,43nm,0.7s,mb5.1,baz=94,slow=3.9,SNR=8.6						
ASAJ	**Asahikawa**	**25.66**	**269**	P	**P**	**09 10 12.5**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,43nm,0.7s						
INK	**Inuvik**	**28.19**	**35**	P	**P**	**09 10 34.8**	**0.0**
	comp=Z,7.2nm,0.9s,mb4.3,baz=214,slow=4.2,SNR=5.8						
INK	**Inuvik**	**28.19**	**35**	P	**P**	**09 10 34.8**	**0.0**
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DLBC	**Dease Lake**	**29.32**	**56**	LR	LR	09 23 41.4	
	comp=Z,2µm,19.0s,baz=183,slow=39						
KLR	**Kul'dur**	**30.22**	**285**	⇓*i*P	**P**	**09 10 48.1**	**-4.8**
KLR				pmax	pmax		
	comp=E,40nm,0.8s						
KLR				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
MJAR	**Matsushiro Arr**	**32.73**	**260**	P	**P**	**09 11 14.6**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4,baz=51,slow=8.1,SNR=6.0						
MJAR	**Matsushiro Arr**	**32.73**	**260**	P	**P**	**09 11 14.6**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAT	**Matsushiro**	**32.73**	**260**	P	**P**	**09 11 14.5**	**-0.6**
MDJ	**Mudanjiang**	**33.57**	**279**	P	**P**	**09 11 20.8**	**-1.5**
MDJ				S	**S**	**09 16 34.8**	**-5.2**
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,163nm,5.8s						
MDJ				LR	LR		
	comp=E,1µm,19.7s						
MDJ				LR	LR		
	comp=Z,2µm,18.6s						
YKA	**Yellowknife Ar**	**36.10**	**46**	P	**P**	**09 11 43.0**	**-0.9**
	comp=Z,5.0nm,0.7s,mb4.5,baz=280,slow=9.2,SNR=14						
YKA				PcP	PcP	09 14 08.6	+0.2
	comp=Z,1.1nm,0.8s,baz=290,slow=3.3,SNR=4.2						
YKA				LR	LR	09 28 08.7	
	comp=Z,1µm,18.4s,baz=140,slow=39						
YKA	**Yellowknife Ar**	**36.10**	**46**	P	**P**	**09 11 43.0**	**-0.9**
YKA						09 14 08.6	
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA				MLR	MLR		
	comp=Z,1µm,18.4s						
YKA	**Yellowknife Ar**	**36.10**	**46**	P	**P**	**09 11 43.0**	**-0.9**
YKA				PcP	PcP	09 14 08.7	+0.2
YKA				LR	LR	09 28 08.7	
C04A	**Brinnon**	**36.71**	**72**	⇓P	**P**	**09 11 49.7**	**+0.4**
	baz=37						
B05A	**Bryant**	**36.98**	**71**	⇑P	**P**	**09 11 51.9**	**+0.3**
	baz=37						
BOD	**Bodaibo**	**37.24**	**306**	*e*P	**P**	**09 11 52.9**	**-0.7**
BOD				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.1						
HIA	**Hailar**	**37.37**	**291**	*e*P	**P**	**09 11 53.9**	**-1.0**
HIA				pmax	pmax		
	comp=Z,28nm,1.1s						
HIA	**Hailar**	**37.37**	**291**	*e*P	**P**	**09 11 53.9**	**-1.0**
	comp=Z,28nm,1.1s,mb5.0						
C05A	**Tolt Reservoir**	**37.49**	**72**	⇑P	**P**	**09 11 56.0**	**+0.1**
	baz=37						
A07A	**Ashnola River,**	**37.64**	**69**	⇓P	**P**	**09 11 57.6**	**+0.5**
	baz=38						
F04A	**Amboy**	**37.90**	**75**	⇑P	**P**	**09 11 59.2**	**-0.2**
	baz=38						
B07A	**Winthrop**	**38.06**	**70**	⇑P	**P**	**09 12 00.8**	**+0.1**
	baz=38,SNR=6.1						
ETW	**Entiat**	**38.34**	**71**	*e*P	**P**	**09 12 03.6**	**+0.5**
ETW				*e*pP	pP	09 12 16.7	-1.8
C07A	**Waterville**	**38.46**	**71**	⇑P	**P**	**09 12 03.9**	**-0.1**
	baz=38						
B08A	**Colville Reser**	**38.58**	**70**	⇑P	**P**	**09 12 05.0**	**0.0**
	baz=38						
KSRS	**Korea Array**	**38.59**	**270**	P	**P**	**09 12 05.6**	**+0.3**
	comp=Z,8.4nm,0.9s,mb4.5,baz=58,slow=8.6,SNR=8.4						
KSRS				PcP	PcP	09 14 16.5	0.0
	comp=Z,3.1nm,0.8s,baz=55,slow=2.5,SNR=7.4						
KSRS	**Korea Array**	**38.59**	**270**	P	**P**	**09 12 05.6**	**+0.3**
KSRS						09 14 16.5	
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
H04A	**Detroit Lake**	**38.67**	**76**	⇑P	**P**	**09 12 06.3**	**+0.4**
	baz=38						
D07A	**Quincy**	**38.75**	**71**	⇓P	**P**	**09 12 06.5**	**0.0**
	baz=39						
G05A	**Wamic**	**38.91**	**75**	⇑P	**P**	**09 12 08.6**	**+0.7**
	baz=39						
C08A	**Higginbotham F**	**39.02**	**70**	⇓P	**P**	**09 12 08.6**	**-0.2**
	baz=39						
E07A	**Sunnyside**	**39.13**	**72**	⇑P	**P**	**09 12 10.0**	**+0.2**
	baz=39						
OD2	**Odessa Site #2**	**39.41**	**71**	*e*P	**P**	**09 12 11.8**	**-0.1**
HAWA	**Hanford**	**39.41**	**72**	*e*P	**P**	**09 12 12.0**	**0.0**
F07A	**Phinny Hill Vi**	**39.42**	**73**	⇑P	**P**	**09 12 12.6**	**+0.5**
	baz=39						
D08A	**Wollman Farm,**	**39.45**	**71**	⇓P	**P**	**09 12 12.3**	**0.0**
	baz=39,SNR=5.3						
C09A	**Chrisman Ranch**	**39.47**	**70**	⇑P	**P**	**09 12 12.0**	**-0.4**
	baz=39						
E08A	**Dider Farm, El**	**39.64**	**72**	⇓P	**P**	**09 12 13.8**	**-0.1**
	baz=40						
D09A	**Jones Farm, Ri**	**39.81**	**71**	⇓P	**P**	**09 12 14.8**	**-0.5**
	baz=40						
NEW	**Newport**	**39.92**	**69**	*e*P	**P**	**09 12 15.7**	**-0.5**
C10A	**Spilker Farm,**	**40.02**	**69**	⇑P	**P**	**09 12 16.7**	**-0.4**
	baz=40						
A11A	**Hall Mountain,**	**40.03**	**67**	⇑P	**P**	**09 12 17.3**	**+0.2**
	baz=40						
E09A	**Wood Farm, Sta**	**40.18**	**71**	⇑P	**P**	**09 12 17.9**	**-0.5**
	baz=40						
RES	**Resolute Bay**	**40.32**	**24**	P	**P**	**09 12 19.3**	**+0.1**
	comp=Z,4.8nm,0.7s,mb4.3,baz=152,slow=3.1,SNR=3.0						
RES				PcP	PcP	09 14 21.2	-0.2
	comp=Z,4.9nm,0.9s,baz=311,slow=3.9,SNR=4.3						
RES	**Resolute Bay**	**40.32**	**24**	P	**P**	**09 12 19.3**	**0.0**
RES						09 14 21.2	
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
RES	**Resolute Bay**	**40.32**	**24**	P	**P**	**09 12 19.3**	**+0.1**
RES				PcP	PcP	09 14 21.2	-0.2
D10A	**Wagner Farm, O**	**40.42**	**70**	⇓P	**P**	**09 12 19.7**	**-0.7**
	baz=40						
I07A	**Izee**	**40.62**	**75**	⇓P	**P**	**09 12 22.0**	**-0.1**
	baz=40						
F09A	**S2 Ranch, Elgi**	**40.73**	**72**	⇑P	**P**	**09 12 22.7**	**-0.3**
	baz=41,SNR=5.2						
E10A	**Myers Farm, Un**	**40.81**	**71**	⇑P	**P**	**09 12 23.0**	**-0.5**
	baz=41,SNR=6.2						
D11A	**Klaveano Farm,**	**40.98**	**70**	⇓P	**P**	**09 12 24.1**	**-0.9**
	baz=41						
G09A	**Cove**	**41.03**	**73**	⇓P	**P**	**09 12 25.2**	**-0.3**
	baz=41						
C12B	**Naegeli Ranch,**	**41.16**	**68**	⇓P	**P**	**09 12 26.3**	**-0.1**
	baz=41						
A13A	**Flathead Natio**	**41.17**	**66**	⇓P	**P**	**09 12 26.1**	**-0.4**
	baz=41						
I08A	**Drewsey**	**41.28**	**75**	⇓P	**P**	**09 12 27.9**	**+0.4**
	baz=41						
B13A	**Whitefish**	**41.41**	**67**	⇑P	**P**	**09 12 28.3**	**-0.2**
	baz=41						
E11A	**Bogner Ranch,**	**41.41**	**71**	⇓P	**P**	**09 12 27.6**	**-0.9**
	baz=41						
G10A	**Bishop Farm, J**	**41.42**	**72**	⇓P	**P**	**09 12 28.6**	**0.0**
	baz=41,SNR=6.5						
K07A	**Rock Creek Ran**	**41.54**	**77**	⇓P	**P**	**09 12 29.9**	**+0.3**
	baz=41						
D12A	**Red Ives Fores**	**41.56**	**69**	⇓P	**P**	**09 12 30.1**	**+0.4**
	baz=41						
J08A	**Circle Bar Ran**	**41.64**	**76**	⇑P	**P**	**09 12 30.6**	**+0.1**
	baz=42						
C13A	**Hot Springs**	**41.70**	**68**	⇓P	**P**	**09 12 31.0**	**+0.2**
	baz=42						
A14A	**Double T Ranch**	**41.72**	**66**	⇑P	**P**	**09 12 30.4**	**-0.6**
	baz=42,SNR=7.0						
I09A	**Lost Marbles R**	**41.75**	**75**	⇑P	**P**	**09 12 31.0**	**-0.4**
	baz=42						
E12A	**Beaver Dam Sad**	**41.76**	**70**	⇑P	**P**	**09 12 30.7**	**-0.7**
	baz=42,SNR=5.3						
G11A	**Walters Elk Ra**	**41.88**	**72**	⇓P	**P**	**09 12 32.0**	**-0.3**
	baz=42						
H10A	**Noah's Angus R**	**42.02**	**73**	⇓P	**P**	**09 12 33.8**	**+0.2**
	baz=42						
WVOR	**Wild Horse Val**	**42.06**	**77**	*e*P	**P**	**09 12 33.5**	**-0.4**
B14A	**Marquette Ranc**	**42.11**	**66**	⇑P	**P**	**09 12 33.8**	**-0.4**
	baz=42						
A15A	**Johnson Ranch,**	**42.11**	**65**	⇑P	**P**	**09 12 33.6**	**-0.6**
	baz=42						
I10A	**Payette**	**42.26**	**74**	⇑P	**P**	**09 12 35.3**	**-0.1**
	baz=42						
F12A	**Elk City**	**42.29**	**71**	⇑P	**P**	**09 12 35.4**	**-0.3**
	baz=42,SNR=8.0						
L08A	**Fields**	**42.37**	**77**	⇓P	**P**	**09 12 36.5**	**0.0**
	baz=42						
K09A	**Rome**	**42.47**	**76**	⇑P	**P**	**09 12 37.2**	**0.0**
	baz=42						
B15A	**Bradely Ranch,**	**42.54**	**66**	⇑P	**P**	**09 12 36.7**	**-1.0**
	baz=42,SNR=5.3						
E13A	**Victor**	**42.56**	**69**	⇑P	**P**	**09 12 37.7**	**-0.2**
	baz=42,SNR=6.1						
O06A	**Flanigan**	**42.62**	**80**	⇑P	**P**	**09 12 38.2**	**-0.3**
	baz=42						
D14A	**Greenough**	**42.63**	**68**	⇓P	**P**	**09 12 38.2**	**-0.2**
	baz=42,SNR=6.0						
J10A	**Berg Farm, Mel**	**42.64**	**75**	⇑P	**P**	**09 12 38.4**	**-0.3**
	baz=42						
A16A	**West Butte Ran**	**42.77**	**65**	⇓P	**P**	**09 12 38.8**	**-0.8**
	baz=43						
C15A	**Salmond Ranch,**	**42.79**	**67**	⇑P	**P**	**09 12 39.0**	**-0.7**
	baz=43						
F13A	**Darby**	**42.82**	**70**	⇑P	**P**	**09 12 39.7**	**-0.3**
	baz=43						
I11A	**Placerville**	**42.87**	**74**	⇓P	**P**	**09 12 39.8**	**-0.6**
	baz=43						
K10A	**MacKenzie Ranc**	**42.94**	**75**	⇓P	**P**	**09 12 41.1**	**0.0**
	baz=43						
B16A	**M & M Farms, S**	**42.98**	**66**	⇓P	**P**	**09 12 40.4**	**-0.9**
	baz=43						
E14A	**Clinton**	**42.98**	**69**	⇑P	**P**	**09 12 40.3**	**-1.0**
	baz=43						
H12A	**Diamond D Ranc**	**43.18**	**72**	⇓P	**P**	**09 12 42.5**	**-0.4**
	baz=43						
D15A	**Lincoln**	**43.22**	**68**	⇓P	**P**	**09 12 42.9**	**-0.4**
	baz=43						
G13A	**Cobalt**	**43.25**	**71**	⇓P	**P**	**09 12 43.2**	**-0.3**
	baz=43						
A17A	**Triple J Farms**	**43.28**	**64**	⇓P	**P**	**09 12 43.1**	**-0.7**
	baz=43,SNR=5.2						
N08A	**GE Springer Mi**	**43.31**	**79**	⇓P	**P**	**09 12 43.9**	**-0.2**
	baz=43						
F14A	**Wisdom**	**43.38**	**70**	⇑P	**P**	**09 12 44.3**	**-0.2**
	baz=43						
I12A	**Atlanta**	**43.43**	**73**	⇓P	**P**	**09 12 44.7**	**-0.3**
	baz=43						
K11A	**Parker Ranch,**	**43.46**	**75**	⇓P	**P**	**09 12 45.3**	**+0.1**
	baz=43						
E15A	**Deer Lodge**	**43.48**	**69**	⇓P	**P**	**09 12 44.6**	**-0.7**
	baz=43,SNR=5.9						
H13A	**Challis**	**43.53**	**72**	⇓P	**P**	**09 12 45.4**	**-0.3**
	baz=43						
B17A	**L&G Farms, Che**	**43.56**	**65**	⇓P	**P**	**09 12 45.4**	**-0.5**
	baz=43,SNR=6.5						
L10A	**Juniper Basin**	**43.58**	**76**	⇓P	**P**	**09 12 46.1**	**-0.1**
	baz=43						
G14A	**Jackson**	**43.63**	**70**	⇑P	**P**	**09 12 45.9**	**-0.7**
	baz=44						
N09A	**Rock Creek Ran**	**43.65**	**78**	⇑P	**P**	**09 12 46.4**	**-0.3**
	baz=44						
A18A	**Metzger Ranch,**	**43.78**	**64**	⇓P	**P**	**09 12 47.2**	**-0.5**
	baz=44						
M10A	**I.L. Ranch, Tu**	**43.86**	**77**	⇓P	**P**	**09 12 49.0**	**+0.5**
	baz=44						
F15A	**Butte**	**43.88**	**69**	⇑P	**P**	**09 12 48.1**	**-0.5**
	baz=44						
C17A	**Wharram Farm,**	**43.93**	**66**	⇓P	**P**	**09 12 49.6**	**+0.7**
	baz=44						
L11A	**Cat Creek Ranc**	**43.97**	**76**	⇑P	**P**	**09 12 49.7**	**+0.4**
	baz=44,SNR=5.2						
I13A	**Wildhorse Cree**	**43.97**	**72**	⇑P	**P**	**09 12 49.4**	**+0.1**
	baz=44						
E16A	**East Helena**	**43.98**	**68**	⇓P	**P**	**09 12 49.1**	**-0.2**
	baz=44						
HLID	**Hailey**	**43.99**	**73**	⇑P	**P**	**09 12 49.8**	**+0.3**
	baz=44						
H14A	**Leadore**	**44.03**	**71**	⇓P	**P**	**09 12 49.6**	**-0.2**
	baz=44,SNR=7.1						
B18A	**Beardsley Farm**	**44.09**	**65**	⇑P	**P**	**09 12 49.8**	**-0.4**
	baz=44,SNR=5.2						
K12A	**Draper Farm, C**	**44.22**	**74**	⇓P	**P**	**09 12 51.4**	**+0.1**
	baz=44						
J13A	**Cove Ranch, Pi**	**44.23**	**73**	⇓P	**P**	**09 12 51.2**	**-0.2**
	baz=44,SNR=5.9						
G15A	**Dillon**	**44.25**	**70**	⇑P	**P**	**09 12 50.8**	**-0.7**
	baz=44,SNR=6.8						
EGMT	**Eagleton**	**44.30**	**65**	⇑P	**P**	**09 12 51.8**	**0.0**
	baz=44						
N10A	**Dunphy**	**44.35**	**78**	⇑P	**P**	**09 12 52.5**	**+0.2**
	baz=44						
I14A	**Mackay**	**44.36**	**72**	⇓P	**P**	**09 12 52.4**	**-0.1**
	baz=44						
M11A	**Holland Ranch,**	**44.37**	**76**	⇓P	**P**	**09 12 53.2**	**+0.6**
	baz=44						
BJI	**Beijing**	**44.38**	**281**	P	**P**	**09 12 52.3**	**-0.3**
BJI				S	**S**	**09 19 22.9**	**+0.4**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.6						
BJI				AMB	AMB		
	comp=Z,196nm,3.6s						
BJI				LR	LR		
	comp=N,782nm,21.1s						
BJI				LR	LR		
	comp=E,837nm,21.4s						
BJI				LR	LR		
	comp=Z,921nm,21.4s						
F16A	**Kennard Place,**	**44.42**	**69**	⇑P	**P**	**09 12 52.2**	**-0.6**
	baz=44						
L12A	**House Creek Ra**	**44.43**	**75**	⇓P	**P**	**09 12 53.4**	**+0.4**
	baz=44						
H15A	**Lima**	**44.46**	**71**	⇑P	**P**	**09 12 52.7**	**-0.4**
	baz=44,SNR=6.1						
BOZ	**Bozeman (W)**	**44.49**	**69**	⇑P	**P**	**09 12 53.1**	**-0.4**
	baz=44						
BOZ	**Bozeman (W)**	**44.49**	**69**	*e*P	**P**	**09 12 53.1**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
BOZ	**Bozeman (W)**	**44.49**	**69**	*e*P	**P**	**09 12 53.1**	**-0.3**
	comp=Z,18nm,0.8s,mb4.8						
E17A	**Martinsdale**	**44.50**	**68**	⇑P	**P**	**09 12 53.5**	**0.0**
	baz=44						
NVAR	**Mina Array Bea**	**44.61**	**81**	P	**P**	**09 12 54.5**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.3,baz=280,slow=8.0,SNR=3.6						
NVAR				PcP	PcP	09 14 37.5	+1.2
	comp=Z,3.6nm,0.8s,baz=281,slow=3.5,SNR=3.8						
G16A	**Moss Hill, Enn**	**44.62**	**70**	⇑P	**P**	**09 12 53.8**	**-0.6**
	baz=44,SNR=7.9						
J14A	**Carey**	**44.66**	**73**	⇑P	**P**	**09 12 55.2**	**+0.3**
	baz=44						
K13A	**Stover Farm, H**	**44.71**	**74**	⇑P	**P**	**09 12 56.0**	**+0.8**
	baz=44						
D18A	**Linhart Farms,**	**44.71**	**66**	⇑P	**P**	**09 12 55.6**	**+0.5**
	baz=44						
F17A	**Fitzpatrick Pl**	**44.92**	**68**	⇓P	**P**	**09 12 56.8**	**0.0**
	baz=45						
QLMT	**Earthquake Lak**	**45.06**	**70**	*e*P	**P**	**09 12 58.5**	**+0.5**
MTUM	**Tungsten Hills**	**45.11**	**83**	*e*P	**P**	**09 12 59.6**	**+1.1**
L13A	**Double Diamond**	**45.11**	**74**	⇓P	**P**	**09 12 59.3**	**+0.9**
	baz=45						
N12A	**Clover Valley,**	**45.17**	**77**	⇓P	**P**	**09 12 59.9**	**+1.0**
	baz=45						
G17A	**Pierce Place,**	**45.19**	**69**	⇑P	**P**	**09 12 59.6**	**+0.6**
	baz=45						
O11A	**Cowboy Ranch,**	**45.22**	**78**	⇑P	**P**	**09 12 60.0**	**+0.7**
	baz=45						
H16A	**Russell Place,**	**45.24**	**70**	⇓P	**P**	**09 12 59.5**	**+0.2**
	baz=45,SNR=8.8						
K14A	**Jones Ranch, D**	**45.31**	**74**	⇓P	**P**	**09 13 02.0**	**+2.0**
	baz=45						
ULN	**Ulaanbaatar**	**45.39**	**296**	*e*P	**P**	**09 13 01.0**	**+0.4**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**45.39**	**296**	*e*P	**P**	**09 13 01.0**	**+0.5**
	comp=Z,9.8nm,1.0s,mb4.6						
M13A	**Montello**	**45.41**	**75**	⇑P	**P**	**09 13 01.0**	**+0.3**
	baz=45,SNR=5.3						
F18A	**Big Timber**	**45.47**	**68**	⇑P	**P**	**09 13 01.3**	**+0.1**
	baz=45						
TIN	**Tinemaha**	**45.51**	**83**	⇓P	**P**	**09 13 02.1**	**+0.5**
	baz=45						
Q10A	**Clear Creek Ra**	**45.55**	**80**	⇑P	**P**	**09 13 03.3**	**+1.3**
	baz=45						
I16A	**Newdale**	**45.56**	**71**	⇑P	**P**	**09 13 02.4**	**+0.4**
	baz=45						
YNR	**Norris Junctio**	**45.57**	**70**	*e*P	**P**	**09 13 03.3**	**+1.3**
YNR				*e*pP	pP	09 13 17.9	+0.1
K15A	**Arbon**	**45.62**	**73**	⇓P	**P**	**09 13 03.0**	**+0.6**
	baz=46						
YFT	**Old Faithful**	**45.62**	**70**	*e*P	**P**	**09 13 04.2**	**+1.8**
O12A	**Currie**	**45.70**	**77**	⇓P	**P**	**09 13 03.4**	**+0.3**
	baz=46,SNR=6.5						
SONM	**Songino Array**	**45.78**	**296**	P	**P**	**09 13 04.3**	**+0.6**
	comp=Z,4.8nm,0.9s,mb4.4,baz=56,slow=9.9,SNR=5.7						
SONM	**Songino Array**	**45.78**	**296**	P	**P**	**09 13 04.3**	**+0.7**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H17A	**Grant Village**	**45.81**	**70**	⇑P	**P**	**09 13 04.9**	**+1.0**
	baz=46,SNR=8.5						
M14A	**Sheep Mountain**	**45.82**	**75**	⇓P	**P**	**09 13 04.1**	**+0.1**
	baz=46						
J16A	**Bone**	**45.83**	**72**	⇓P	**P**	**09 13 04.7**	**+0.6**
	baz=46						
IMW	**Indian Meadow**	**45.88**	**71**	*e*P	**P**	**09 13 05.1**	**+0.7**
	comp=Z,10nm,0.8s,mb4.8						
PKM	**Peak Mountain**	**45.88**	**86**	⇓P	**P**	**09 13 05.4**	**+0.8**
	baz=46						
R10A	**Warm Springs**	**45.94**	**80**	⇓P	**P**	**09 13 05.3**	**+0.4**
	baz=46						
S10A	**Tonopah Range,**	**45.98**	**81**	⇓P	**P**	**09 13 05.3**	**0.0**
	baz=46						
MOOW	**Moose Ponds**	**46.08**	**71**	*e*P	**P**	**09 13 06.4**	**+0.4**
	comp=Z,90nm,2.5s,mb5.3						
P12A	**McGill**	**46.08**	**78**	⇑P	**P**	**09 13 06.4**	**+0.3**
	baz=46						
I17A	**Pilgram Creek**	**46.08**	**70**	⇑P	**P**	**09 13 06.2**	**+0.2**
	baz=46						

Sta	Name	Dist	Az	Phase	ISC	Time	Res
K16A	Soda Springs	46.10	72	⇑P	P	09 13 07.2	+0.9
	baz=46,SNR=6.1						
RLMT	Red Lodge	46.17	68	⇓P	P	09 13 07.2	+0.5
	baz=46						
ISA	Isabella	46.23	85	eP	P	09 13 06.3	-1.0
ISA				e*PP	pP	09 13 20.9	-2.2
ISA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ISA	Isabella	46.23	85	eP	P	09 13 06.3	-1.0
	comp=Z,6.1nm,0.8s,mb4.6						
ISA				epP	pP	09 13 20.9	-2.2
O13A	Hicks Ranch, I	46.25	77	⇑P	P	09 13 07.9	+0.5
	baz=46						
N14A	Grayback Hills	46.30	75	⇓P	P	09 13 08.4	+0.6
	baz=46,SNR=5.2						
J17A	Brown Place, J	46.32	71	⇑P	P	09 13 08.3	+0.4
	baz=46						
ARVC	Arvin	46.35	85	⇓P	P	09 13 07.9	-0.4
	baz=46						
M15A	Larsen Ranch,	46.39	74	⇑P	P	09 13 08.6	+0.1
	baz=46						
K17A	Gardner Place,	46.55	72	⇑P	P	09 13 09.4	-0.3
	baz=46						
MPMC	Manual Prospec	46.59	83	⇑P	P	09 13 10.1	0.0
	baz=46						
P13A	Bates Ranch, G	46.64	77	⇑P	P	09 13 10.4	-0.1
	baz=46						
I18A	Diamond G Ranc	46.65	70	⇑P	P	09 13 10.8	+0.3
	baz=46						
L16A	Fish Haven	46.67	73	⇑P	P	09 13 10.9	+0.2
	baz=46						
FURC	Furnace Creek,	46.73	83	⇑P	P	09 13 11.2	0.0
	baz=47						
HHC	Hu-ho-hao-te	46.73	285	eP	P	09 13 11.8	+0.7
HHC				AP	pP	09 13 24.5	-2.4
HHC				XP	sP	09 13 29.1	-4.9
HHC				PCP	PcP	09 14 46.1	+2.5
HHC				PP	PP	09 15 00.6	-1.0
HHC				PCS	PcS	09 18 40.4	+1.9
HHC				S	S	09 19 55.3	-0.9
HHC				XS	sS	09 20 15.5	-7.4
HHC				SCS	ScS	09 23 00.6	+0.9
HHC				SS	SS	09 23 13.9	-8.8
HHC				AMB	AMB		
	comp=Z,27nm,0.8s,mb5.2						
HHC				AMB	AMB		
	comp=Z,152nm,4.3s						
HHC				LR	LR		
	comp=N,425nm,15.5s						
HHC				LR	LR		
	comp=E,520nm,15.5s						
HHC				LR	LR		
	comp=Z,658nm,15.5s						
OSI	Osito Adit	46.75	86	⇑P	P	09 13 11.6	+0.2
	baz=47						
TPNV	Topopah Spring	46.80	82	⇑P	P	09 13 11.8	0.0
	baz=47						
TPNV	Topopah Spring	46.80	82	eP	P	09 13 11.9	+0.1
J18A	Kendall Valley	46.82	71	⇓P	P	09 13 11.7	-0.1
	baz=47,SNR=5.9						
DUG	Dugway	46.92	76	⇑P	P	09 13 12.9	+0.3
	baz=47						
L17A	Cokeville	46.96	73	⇓P	P	09 13 13.4	+0.5
	baz=47						
R12A	Pony Springs,	46.96	79	⇑P	P	09 13 12.6	-0.4
	baz=47						
M16A	Huntsville	46.97	74	⇑P	P	09 13 13.0	0.0
	baz=47						
EDW2	Edwards Air Fo	47.04	85	⇓P	P	09 13 13.6	0.0
	baz=47						
P14A	Drum Mountains	47.13	77	⇓P	P	09 13 14.5	+0.2
	baz=47,SNR=6.3						
K18A	Toltan Ranch,	47.14	72	⇓P	P	09 13 14.4	+0.1
	baz=47						
T11A	Corn Creek, Al	47.26	81	⇑P	P	09 13 15.0	-0.4
	baz=47						
BW06	Boulder Array	47.35	71	⇑P	P	09 13 15.5	-0.4
	baz=47						
PDAR	Pinedale Array	47.35	71	P	P	09 13 15.9	-0.1
	comp=Z,23nm,0.8s,mb5.2,baz=304,slow=3.5,SNR=7.5						
Q14A	Sevier Lake (B	47.38	78	⇑P	P	09 13 16.0	-0.2
	baz=47						
SHOC	Shoshone	47.45	83	⇓P	P	09 13 16.7	-0.2
	baz=47						
M17A	Scullys Gap (B	47.46	73	⇓P	P	09 13 16.4	-0.4
	baz=47						
GSC	Goldstone	47.51	84	⇑P	P	09 13 16.8	-0.4
	baz=47						
L18A	Fontenelle, Gr	47.57	72	⇑P	P	09 13 17.2	-0.4
	baz=47,SNR=6.8						
P15A	Leamington	47.63	76	⇓P	P	09 13 18.1	-0.1
	baz=48						
BFSC	Mount Baldy St	47.66	86	⇓P	P	09 13 18.0	-0.5
	baz=48						
K19A	Absolon Red Bu	47.74	71	⇑P	P	09 13 18.0	-0.9
	baz=48,SNR=8.0						
NJ2	Nanjing	47.77	271	eP	P	09 13 21.6	+2.2
NJ2				AP	pP	09 13 37.1	+1.9
NJ2				PP	PP	09 15 13.4	+2.0
NJ2				S	S	09 20 13.0	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,100nm,5.7s						
NJ2				LR	LR		
	comp=N,780nm,20.2s						
NJ2				LR	LR		
	comp=E,340nm,21.0s						
NJ2				LR	LR		
	comp=Z,600nm,25.4s						
M18A	Lyman	47.84	73	⇓P	P	09 13 19.9	+0.1
	baz=48,SNR=5.3						
S13A	Holt Ranch, En	47.89	79	⇓P	P	09 13 20.8	+0.6
	baz=48						
Q15A	Fillmore	47.92	77	⇑P	P	09 13 20.5	0.0
	baz=48,SNR=8.9						
R14A	James Farms, M	47.96	78	⇑P	P	09 13 21.2	+0.4
	baz=48						
V11A	Goodsprings	48.02	82	⇑P	P	09 13 21.7	+0.4
	baz=48						
K20A	Yellowstone Ra	48.14	71	⇓P	P	09 13 22.0	-0.1
	baz=48						
U12A	Valley of Fire	48.20	81	⇑P	P	09 13 22.7	+0.1
	baz=48						
T13A	Saint George	48.21	80	⇓P	P	09 13 22.8	+0.1
	baz=48						
N18A	Larsen Ranch,	48.35	73	⇑P	P	09 13 23.7	0.0
	baz=48						
MURC	Murrieta	48.37	86	⇑P	P	09 13 23.5	-0.5
	baz=48						
R15A	Junction	48.47	78	⇑P	P	09 13 25.1	+0.4
	baz=48						
U13A	Pakoon Wash	48.56	81	⇑P	P	09 13 25.5	+0.1
	baz=48						
P17A	Butcher Ranch,	48.63	75	⇓P	P	09 13 26.1	+0.3
	baz=48						
N19A	John Jarvie Ra	48.70	73	⇑P	P	09 13 26.3	-0.2
	baz=48						
LDFC	Landfair	48.71	83	eP	P	09 13 25.7	-0.9
	comp=Z,12nm,0.8s,mb5.0						
BELC	Belle Mtn.	48.85	85	⇓P	P	09 13 27.2	-0.5
	baz=49						
109C	Camp Elliot, M	48.90	86	⇓P	P	09 13 27.9	-0.1
	baz=49						
V13A	Grand Canyon W	48.91	81	⇓P	P	09 13 28.0	-0.1
	baz=49						
R16A	Teasdale	48.91	77	⇑P	P	09 13 28.6	+0.6
	baz=49						
M20A	Sweetwater, Wa	48.93	72	⇑P	P	09 13 28.5	+0.3
	baz=49						
L21A	Rawlins	49.13	71	⇑P	P	09 13 29.9	+0.2
	baz=49						
T15A	Red Dirt Ranch	49.16	79	⇓P	P	09 13 30.3	+0.3
	baz=49						
S16A	Weppner Ranch,	49.20	78	⇑P	P	09 13 30.7	+0.4
	baz=49						
Q18A	Rafter H Ranch	49.23	75	⇓P	P	09 13 30.7	+0.3
	baz=49						
IRM	Iron Mountain	49.28	84	⇓P	P	09 13 31.0	0.0
	baz=49						
N20A	Spence Gulch,	49.29	72	⇑P	P	09 13 31.6	+0.7
	baz=49						
R17A	Hanksville Air	49.30	76	⇑P	P	09 13 31.7	+0.7
	baz=49						
MONP	Monument Peak	49.32	86	⇓P	P	09 13 31.2	-0.1
	baz=49						
BC3	Big Chuckw Mtn	49.42	84	⇑P	P	09 13 31.8	-0.3
	baz=49						
U15A	North Rim	49.59	80	⇑P	P	09 13 33.6	+0.4
	baz=49						
V14A	Boquillas Ranc	49.60	81	⇑P	P	09 13 33.5	+0.1
	baz=49						
L22A	Ellis Ranch, M	49.65	70	⇓P	P	09 13 33.5	-0.1
	baz=50						
DVTC	Desert V Tower	49.68	86	⇑P	P	09 13 33.8	-0.2
	baz=50						
SWSC	Sam W. Stewart	49.68	85	⇓P	P	09 13 33.7	-0.3
	baz=50						
O20A	White River Ci	49.73	73	⇓P	P	09 13 34.5	+0.2
	baz=50						
N21A	Black Mountain	49.78	72	⇑P	P	09 13 34.3	-0.3
	baz=50						
R18A	Canyonlands Na	49.82	76	⇑P	P	09 13 34.8	-0.2
	baz=50						
X13A	Yucca	49.82	82	⇑P	P	09 13 34.7	-0.3
	baz=50						
Q19A	Hogan Spring (	49.85	75	⇓P	P	09 13 34.7	-0.5
	baz=50						
M22A	Cedar Creek Ra	49.93	71	⇑P	P	09 13 36.0	+0.2
	baz=50						
Y12C	Blythe	49.94	84	⇑P	P	09 13 36.1	+0.1
	baz=50						
P20A	De Beque	50.03	74	⇓P	P	09 13 36.6	0.0
	baz=50						
V15A	Kaibab Nationa	50.06	80	⇓P	P	09 13 37.4	+0.6
	baz=50						
T17A	Navajo Res., N	50.14	78	⇑P	P	09 13 37.3	-0.2
	baz=50						
O21A	Pagoda	50.15	73	⇓P	P	09 13 37.4	0.0
	baz=50						
S18A	Hurst Farm, Bl	50.20	77	⇓P	P	09 13 38.0	+0.2
	baz=50						
GLA	Glamis	50.22	85	⇑P	P	09 13 37.8	-0.2
	baz=50						
GLA	Glamis	50.22	85	eP	P	09 13 37.4	-0.6
GLA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
GLA	Glamis	50.22	85	eP	P	09 13 37.4	-0.6
	comp=Z,9.4nm,0.7s,mb4.9						
R19A	Curley Farm, L	50.27	76	⇓P	P	09 13 38.5	+0.2
	baz=50						
Y13A	Salome	50.34	83	⇑P	P	09 13 38.8	-0.2
	baz=50						
N22A	Wattenberg Ran	50.39	71	⇓P	P	09 13 39.4	+0.2
	baz=50						
SPB4	Spitsbergen Ar	50.46	356	eP	P	09 13 39.3	-0.1
SPITS	Spitsbergen Ar	50.46	356	P	P	09 13 38.8	-0.5
	comp=Z,28nm,0.5s,mb5.5,baz=46,slow=8.4,SNR=21						
SPITS	Spitsbergen Ar	50.46	356	P	P	09 13 38.8	-0.5
SPITS				pmax	pmax		
	comp=Z,28nm,0.5s						
X14A	Yava	50.49	82	⇓P	P	09 13 40.7	+0.6
	baz=50						
U16A	Tuba City	50.49	79	⇑P	P	09 13 40.5	+0.4
	baz=50						
P21A	Newcastle	50.59	73	⇑P	P	09 13 41.3	+0.5
	baz=50						
T18A	Mexican Hat	50.63	77	⇑P	P	09 13 41.2	+0.1
	baz=50						
S19A	Harvey Farm, M	50.69	76	⇑P	P	09 13 41.6	+0.1
	baz=50,SNR=5.7						
WUAZ	Wupatki	50.75	80	⇓P	P	09 13 42.3	+0.3
	baz=51						
Y14A	Wickenburg	50.77	82	⇓P	P	09 13 42.2	0.0
	baz=51						
X15A	Humboldt	50.88	81	⇑P	P	09 13 43.4	+0.3
	baz=51						
W16A	Flagstaff	50.92	80	⇓P	P	09 13 44.0	+0.6
	baz=51						
T19A	Beclabito	51.34	77	⇓P	P	09 13 46.6	+0.1
	baz=51						
MVCO	Mesa Verde	51.42	76	⇓P	P	09 13 47.1	+0.1
	baz=51						
X16A	Lo Mia Camp, P	51.42	81	⇑P	P	09 13 47.3	+0.2
	baz=51						
V18A	Ganado	51.51	79	⇓P	P	09 13 48.1	+0.4
	baz=51						
ISCO	Idaho Springs	51.52	72	eP	P	09 13 48.1	+0.4
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ISCO	Idaho Springs	51.52	72	eP	P	09 13 48.1	+0.4
	comp=Z,3.8nm,0.9s,mb4.3						
S21A	Coal Bank Pass	51.56	75	⇑P	P	09 13 48.6	+0.5
	baz=51						
Z15A	Gila River Ind	51.73	82	⇓P	P	09 13 49.6	+0.2
	baz=52						
Y16A	Circle Bar Ran	51.76	81	⇑P	P	09 13 49.7	+0.1
	baz=52						
W18A	Petrified Fore	52.02	79	⇓P	P	09 13 51.8	+0.3
	baz=52						
115A	Sonoran Desert	52.08	83	⇓P	P	09 13 52.0	0.0
	baz=52						
Z16A	Peralta Trail,	52.15	82	⇓P	P	09 13 52.2	-0.3
	baz=52						
214A	Organ Pipe Nat	52.21	84	⇑P	P	09 13 52.5	-0.5
	baz=52						
W19A	Sanders	52.24	79	⇑P	P	09 13 53.7	+0.5
	baz=52						
SSLB	Suanglung	52.26	261	eP	P	09 13 53.1	-0.3
	comp=Z,18nm,0.8s,mb5.0						
Y17A	Roosevelt	52.27	81	⇓P	P	09 13 53.8	+0.3
	baz=52						
X18A	Snowflake	52.27	80	⇑P	P	09 13 53.5	0.0
	baz=52						
XAN	Xi'an	52.66	280	P	P	09 13 55.4	-0.9
XAN				AP	pP	09 14 08.1	-4.3
XAN				XP	sP	09 14 13.5	-5.9
XAN				PCP	PcP	09 15 07.3	+1.8
XAN				PP	PP	09 15 54.8	-0.9
XAN				SCP	ScP	09 18 59.3	+2.2
XAN				PCS	PcS	09 19 03.8	-0.3
XAN				S	S	09 21 14.4	-4.8
XAN				SCS	ScS	09 23 38.5	-1.7
XAN				SS	SS	09 24 50.1	-7.7
XAN				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
XAN				AMB	AMB		
	comp=Z,107nm,12.0s						
XAN				LR	LR		
	comp=N,127nm,24.5s						
XAN				LR	LR		
	comp=E,442nm,21.8s						
XAN				LR	LR		
	comp=Z,946nm,22.0s						
Y18A	Canyon Day Jun	52.72	81	⇑P	P	09 13 57.1	+0.3
	baz=53						
X19A	St. Johns	52.75	79	⇓P	P	09 13 57.2	+0.3
	baz=53						
117A	Oracle	53.09	82	⇑P	P	09 13 59.5	0.0
	baz=53						
TUC	Tucson	53.24	82	eP	P	09 14 00.3	-0.3
TUC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TUC	Tucson	53.24	82	eP	P	09 14 00.3	-0.3
	comp=Z,6.4nm,0.9s,mb4.5						
ZALV	Zalesovo Beam	53.38	313	P	P	09 14 00.0	-1.3
	comp=Z,4.9nm,0.8s,mb4.5,baz=61,slow=4.6,SNR=4.2						
ZALV				PcP	PcP	09 15 08.3	+0.5
	comp=Z,5.3nm,0.7s,baz=21,slow=5.1,SNR=4.6						
ZALV	Zalesovo Beam	53.38	313	P	P	09 14 00.0	-1.3
ZALV						09 15 08.4	
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
118A	Homack Ranch,	53.52	82	⇑P	P	09 14 02.6	0.0
	baz=53						
SUMG	Summit	53.70	13	eP	P	09 14 04.1	+0.7
	comp=Z,25nm,1.1s,mb5.1						
119A	Ashpeak Ranch,	53.85	81	⇑P	P	09 14 05.0	0.0
	baz=54						
LZH	Lanzhou	54.42	285	⇑P	P	09 14 09.9	+0.7
LZH				AP	pP	09 14 20.0	-5.3
LZH				XP	sP	09 14 24.1	-8.2
LZH				PP	PP	09 16 13.3	+1.8
LZH				SS	SS	09 25 26.1	+0.6
LZH				AMB	AMB		
	comp=Z,41nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,176nm,5.7s						
LZH				LR	LR		
	comp=E,1µm,16.2s						
LZH				LR	LR		
	comp=Z,1µm,17.0s						
GTA	Gaotai	54.65	291	eP	P	09 14 11.1	+0.3
GTA				AP	pP	09 14 23.8	-3.2
GTA				XP	sP	09 14 28.3	-5.6
GTA				PP	PP	09 16 12.4	-1.1
GTA				S	S	09 21 44.6	-1.4
GTA				XS	sS	09 22 07.6	-5.7
GTA				SS	SS	09 25 27.9	-1.0
GTA				AMB	AMB		
	comp=Z,14nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,192nm,5.1s						
GTA				LR	LR		
	comp=N,759nm,15.8s						
GTA				LR	LR		
	comp=E,952nm,16.1s						
GTA				LR	LR		
	comp=Z,1µm,16.7s						
319A	Douglas	54.81	82	⇑P	P	09 14 12.0	0.0
	baz=55						
CBKS	Cedar Bluff	55.63	69	eP	P	09 14 18.0	+0.1
CBKS				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
CBKS	Cedar Bluff	55.63	69	eP	P	09 14 18.0	+0.2
	comp=Z,25nm,0.8s,mb5.3						
KSU1	Kansas State U	57.27	67	eP	P	09 14 29.2	-0.3
	comp=Z,22nm,0.8s,mb5.2						
CD2	Chengdu	57.98	281	P	P	09 14 34.6	0.0
CD2				AP	pP	09 14 47.3	-3.6
CD2				XP	sP	09 14 52.6	-5.3
CD2				PCP	PcP	09 15 26.8	+0.7
CD2				PP	PP	09 16 44.8	+1.5
CD2				S	S	09 22 28.8	-1.4
CD2				XS	sS	09 22 50.3	-7.5
CD2				SS	SS	09 26 21.3	-0.3
CD2				AMB	AMB		
	comp=Z,23nm,0.7s,mb5.3						
CD2				AMB	AMB		
	comp=Z,140nm,5.6s						
CD2				LR	LR		
	comp=N,600nm,16.8s						
CD2				LR	LR		
	comp=Z,720nm,18.9s						
ARCES	ARCESS Array B	58.07	350	P	P	09 14 33.6	-1.1
	comp=Z,6.3nm,0.8s,mb4.7,baz=18,slow=6.7,SNR=3.9						
ARCES	ARCESS Array B	58.07	350	P	P	09 14 33.6	-1.0
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	58.37	313	eP	P	09 14 37.3	+0.3
KURK				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.3						
KURK	Kurchatov	58.37	313	eP	P	09 14 37.2	+0.2
	comp=Z,37nm,1.1s,mb5.3						
WMQ	Urumqi	58.55	302	P	P	09 14 38.9	+0.5
WMQ				XP	sP	09 14 59.3	-2.3
WMQ				PCP	PcP	09 15 28.4	+0.3
WMQ				S	S	09 22 36.8	-0.5
WMQ				XS	sS	09 23 01.0	-3.8
WMQ				SCS	ScS	09 24 21.0	-1.3
WMQ				SS	SS	09 26 31.1	+1.2
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,218nm,3.6s						
WMQ				LR	LR		
	comp=N,1µm,20.0s						
WMQ				LR	LR		
	comp=E,948nm,21.0s						
WMQ				LR	LR		
	comp=Z,2µm,20.0s						
WMOK	Wichita Mounta	58.94	72	eP	P	09 14 41.2	0.0
WMOK				e*PP	pP	09 14 54.6	-3.0
WMOK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
WMOK	Wichita Mounta	58.94	72	eP	P	09 14 41.2	-0.1
	comp=Z,10nm,0.8s,mb4.9						
WMOK				epP	pP	09 14 54.6	-3.0
GYA	Guiyang	59.30	275	P	P	09 14 44.6	+0.8
GYA				AP	pP	09 14 58.9	-1.3
GYA				XP	sP	09 15 04.3	-2.8
GYA				PCP	PcP	09 15 31.6	+0.2
GYA				PP	PP	09 16 57.8	+2.7
GYA				SCP	ScP	09 19 26.3	-0.1
GYA				S	S	09 22 46.4	-1.0
GYA				SS	SS	09 26 41.9	-0.6
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,140nm,5.5s						
GYA				LR	LR		
	comp=N,880nm,19.6s						
GYA				LR	LR		
	comp=E,660nm,18.2s						
GYA				LR	LR		
	comp=Z,890nm,19.0s						
MKAR	Makanchi Array	59.31	308	P	P	09 14 43.0	-0.6
	comp=Z,6.8nm,0.7s,mb4.8,baz=69,slow=15,SNR=12						
MKAR	Makanchi Array	59.31	308	P	P	09 14 43.0	-0.6
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TXAR	Lajitas Array	59.71	80	P	P	09 14 46.1	-0.5
	comp=Z,4.0nm,0.8s,mb4.5,baz=308,slow=5.4,SNR=4.7						
TXAR	Lajitas Array	59.71	80	P	P	09 14 46.1	-0.5
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	60.35	319	P	P	09 14 51.6	+1.0
	comp=Z,221nm,0.6s,SNR=6.6						
BRVK	Borovoye	60.35	319	eP	P	09 14 51.1	+0.5
BRVK				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.3						
BRVK	Borovoye	60.35	319	eP	P	09 14 51.1	+0.5
	comp=Z,14nm,0.6s,mb5.2						
SCHQ	Schefferville	60.77	37	P	P	09 14 54.6	+1.2
	comp=Z,11nm,1.1s,mb4.9,baz=271,slow=7.3,SNR=2.8						
ARU	Arti	62.19	327	eP	P	09 15 03.6	+0.6
ARU				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.2						
ARU	Arti	62.19	327	eP	P	09 15 03.6	+0.6
	comp=Z,15nm,0.7s,mb5.2						
KMI	Kunming	62.71	277	P	P	09 15 09.3	+2.4
KMI				AP	pP	09 15 17.5	-5.9
KMI				XP	sP	09 15 21.6	-8.7
KMI				PP	PP	09 17 29.3	+4.1
KMI				S	S	09 23 31.8	+0.9
KMI				XS	sS	09 23 55.8	-2.9
KMI				SS	SS	09 27 37.6	+1.6
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.8						
KMI				AMB	AMB		
	comp=Z,39nm,3.8s						
KMI				LR	LR		
	comp=N,337nm,18.1s						
KMI				LR	LR		
	comp=E,345nm,16.3s						
KMI				LR	LR		
	comp=Z,260nm,21.8s						
PARMO	Parma	62.88	65	eP	P	09 15 07.8	-0.1
OXF	Oxford	64.60	66	eP	P	09 15 18.6	-0.7
OXF				e*PP	pP	09 15 34.0	-1.8
OXF				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.7						
OXF	Oxford	64.60	66	eP	P	09 15 18.6	-0.7
	comp=Z,73nm,1.0s,mb5.7						
OXF				epP	pP	09 15 34.0	-1.8
TKM2	Tokmak 2	65.40	308	eP	P	09 15 25.5	+1.2
VBMS	Vicksburg	65.61	69	eP	P	09 15 26.4	+0.6
	comp=Z,39nm,0.9s,mb5.4						
AAK	Ala-Archa	66.16	309	eP	P	09 15 30.0	+0.8
AAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
AAK	Ala-Archa	66.16	309	eP	P	09 15 29.9	+0.7
	comp=Z,22nm,1.2s,mb5.1						
LSA	Lhasa	66.51	288	eP	P	09 15 33.2	+1.6
LSA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
LSA	Lhasa	66.51	288	eP	P	09 15 33.2	+1.5
	comp=Z,20nm,0.7s,mb5.3						
AML	Almayashu	66.93	309	eP	P	09 15 35.6	+1.5
NB2	NORSAR Subarra	67.71	354	P	P	09 15 38.2	-0.5
	comp=Z,11nm,0.8s,mb4.9,baz=7.0,slow=6.5						
NOA	NORSAR Array B	67.71	354	P	P	09 15 38.2	-0.5
	comp=Z,10.0nm,0.8s,mb4.9,baz=8.5,slow=6.3,SNR=9.0						
NOA	NORSAR Array B	67.71	354	P	P	09 15 38.3	-0.4
NOA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KONO	Kongsberg	69.19	355	eP	P	09 15 47.7	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KONO				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
KONO	Kongsberg	69.19	355	eP	P	09 15 47.7	-0.3
	comp=Z,21nm,0.9s,mb5.1						
CHTO	Chiang Mai	69.72	275	eP	P	09 15 50.6	-1.3
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	Chiang Mai	69.72	275	eP	P	09 15 50.6	-1.3
	comp=Z,8.2nm,0.9s,mb4.7						
CMAR	Chiang Mai Arr	69.99	275	P	P	09 15 53.0	-0.5
	comp=Z,4.9nm,0.8s,mb4.5,baz=29,slow=6.9,SNR=9.0						
CMAR	Chiang Mai Arr	69.99	275	P	P	09 15 53.0	-0.5
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	Kabul	75.11	307	eP	P	09 16 23.5	-0.2
KBL				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
KBL	Kabul	75.11	307	eP	P	09 16 23.5	-0.2
	comp=Z,25nm,0.9s,mb5.1						
AKASG	Malin Array Be	75.37	341	P	P	09 16 24.5	-0.5
	comp=Z,0.9nm,0.3s,mb4.2,baz=20,slow=5.8,SNR=3.3						
AKASG	Malin Array Be	75.37	341	P	P	09 16 24.5	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	75.37	341	P	P	09 16 24.5	-0.5
KAKA	Kakadu	75.65	228	eP	x	09 16 04.2	
	comp=Z,18nm,0.8s						
CTA	Charters Tower	76.78	212	P	P	09 16 32.1	-1.1
	comp=Z,4.3nm,0.8s,mb4.5,baz=5.1,slow=7.1,SNR=3.6						
CTA	Charters Tower	76.78	212	P	P	09 16 32.1	-1.1
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR08	Bucovina Ar. S	79.08	343	eP	P	09 16 46.1	+0.3
GERES	GERESS Array B	79.58	351	P	P	09 16 47.6	-0.9
	comp=Z,1.1nm,0.7s,mb3.9,baz=39,slow=8.6,SNR=2.8						
GERES	GERESS Array B	79.58	351	P	P	09 16 47.6	-0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WB2	Warramunga Arr	81.17	222	eP	P	09 16 55.3	-2.0
WRA	Warramunga Arr	81.18	222	P	P	09 16 55.2	-2.1
	comp=Z,4.2nm,0.9s,mb4.4,baz=30,slow=5.8						
WRA	Warramunga Arr	81.18	222	P	P	09 16 55.2	-2.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HYB	Hyderabad	83.29	289	iP	P	09 17 08.0	-0.6
HYB	Hyderabad	83.29	289	eP	P	09 17 08.0	-0.6
FITZ	Fitzroy Crossi	83.55	231	eP	P	09 17 08.5	-1.2
	comp=Z,17nm,0.9s,mb5.2						
BR131	Keskin Array S	84.65	334	eP	P	09 17 15.8	+0.6
	comp=Z,3.4nm,0.6s,mb4.7						
BRTR	Keskin Array B	84.65	334	P	P	09 17 15.8	+0.6
	comp=Z,6.8nm,0.7s,mb4.9,baz=60,slow=2.6,SNR=14						
BRTR	Keskin Array B	84.65	334	P	P	09 17 15.8	+0.6
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ASAR	Alice Springs	84.67	221	P	P	09 17 14.1	-1.2
	comp=Z,2.1nm,0.8s,mb4.3,baz=26,slow=4.7,SNR=5.8						
ASAR	Alice Springs	84.67	221	P	P	09 17 14.1	-1.2
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LRS	Lares	89.82	61	eP	P	09 17 41.2	+0.7
CELP	Cerrillos	90.14	60	epP	pP	09 17 57.4	-1.9
ROSC	El Rosal	96.25	74	LR	LR	10 05 18.0	
	comp=Z,93nm,19.7s,baz=199,slow=38						
TORD	Torodi Ar. Bea	115.88	358	PKP	PKPdf	09 23 23.2	-1.0
	comp=Z,0.5nm,0.7s,baz=337,slow=2.6,SNR=3.5						
TORD				PKKPbc	PKKPbc	09 33 53.3	-0.3
	comp=Z,0.6nm,0.9s,baz=226,slow=3.4,SNR=2.9						
TORD				PKKPab	PKKPab	09 34 07.7	+4.4
	comp=Z,1.4nm,0.8s,baz=190,slow=3.3,SNR=3.7						
DBIC	Dimbokro	122.22	5	PKP	PKPdf	09 23 36.2	-0.3
	comp=Z,1.8nm,0.8s,baz=112,slow=16,SNR=3.0						
DBIC	Dimbokro	122.22	5	PKIKP	PKPdf	09 23 36.2	-0.3
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CFAA	Coronel Fontan	127.48	96	PKP	PKPdf	09 23 45.2	-0.7
	comp=Z,0.2nm,0.6s,baz=325,slow=4.5,SNR=3.8						
CFAA	Coronel Fontan	127.48	96	PKP	PKPdf	09 23 45.2	-0.7
BDFB	Brasilia	128.12	65	PKP	PKPdf	09 23 47.3	-0.3
	comp=Z,0.7nm,0.5s,baz=250,slow=25,SNR=2.5						
BDFB	Brasilia	128.12	65	PKIKP	PKPdf	09 23 47.3	-0.3
BDFB				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CPUP	Villa Florida	130.66	82	PKP	PKPdf	09 23 52.1	-0.1
	comp=Z,0.2nm,0.3s,baz=23,slow=5.2,SNR=3.4						
PLCA	Paso Flores	131.92	106	PKP	PKPdf	09 23 54.5	+0.5
	comp=Z,1.2nm,0.8s						
PLCA	Paso Flores	131.92	106	PKIKP	PKPdf	09 23 54.6	+0.5
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TSUM	Tsumeb	145.02	329	ePKPbc	PKPbc	09 24 18.5	+0.4
MAW	Mawson	145.72	217	PKPbc	PKPbc	09 24 18.9	0.0
	comp=Z,4.2nm,0.8s,baz=72,slow=5.0,SNR=2.9						
MAW	Mawson	145.72	217	PKP2	PKPab	09 24 18.9	-0.5
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOSA	Boshof	150.29	310	PKPbc	PKPbc	09 24 32.8	+0.4
	comp=Z,11nm,0.8s,baz=43,slow=2.7,SNR=7.9						
BOSA	Boshof	150.29	310	PKIKP	PKPbc	09 24 32.8	+0.4
BOSA				pmax	pmax		
	comp=Z,11nm,0.8s						

NEIC 17 09:05:09.8, 4617S×17078E, h12km, ML4.2(WEL), After WEL., Off east coast of South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUZ	Tuapeka	0.83	285	P	Pg	09 05 23.4	-2.4
WKZ	Wanaka	1.83	317	P	Pn	09 05 39.5	-1.5
WKZ				S	Sn	09 06 01.4	-2.6
LBZ	Lake Benmore	1.83	347	P	Pn	09 05 38.9	-2.1
WHZ	Wether Hill Ro	1.99	277	P	Pn	09 05 42.0	-1.3
MLZ	Mavora Lakes	2.00	293	P	Pn	09 05 43.0	-0.4
RPZ	Rata Peaks	2.46	5	P	Pn	09 05 48.0	-1.7
MSZ	Milford Sound	2.50	306	P	Pn	09 05 49.3	-1.0
MSZ				S	Sn	09 06 16.8	-3.9
JCZ	Jackson Bay	2.54	325	P	Pn	09 05 50.8	+0.1
DCZ	Deep Cove	2.63	284	P	Pn	09 05 51.3	-0.7
FOZ	Fox Glacier	2.72	343	P	Pn	09 05 53.4	+0.2
MQZ	McQueen's Vall	2.80	29	P	Pn	09 05 53.1	-1.2
WVZ	Waitaha Valley	3.09	359	P	Pn	09 05 58.7	+0.3
KHZ	Kahutara	4.24	29	P	Pn	09 06 13.2	-1.0
THZ	Tophouse	4.66	20	P	Pn	09 06 18.7	-1.3

ISCJB 17 09:05:15.4±0.6, 1340N±006×9098W±004, h33km, Error ellipse: s-maj=8.7km s-min=3.8km az=25.1
CASC 17 09:05:17.7±1.7, 1358N×9080W, h19km±5km, MD3.8, ML3.8
NEIC 17 09:05:19.1, 1337N×9105W, h48km, MD4.5(MEX), After MEX.
MEX 17 09:05:19.0±0.3, 1337N×9106W, h56km±30km, MD4.5
ISC 17 09:05:17.8±0.6, 1349N±006×9090W±004, h35km, n37, σ0.87/34, 5C-8D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.94	18	eP	Pn	09 05 34.0	-0.5
FUG	Fuego 3	0.95	3	⇓eP	Pn	09 05 34.1	-0.6
JAT	Jato	1.09	319	⇑eP	Pn	09 05 37.5	+0.9
NBG	Las Nubes	1.22	26	eP	Pn	09 05 38.6	+0.3
NBG				eS	Sn	09 05 52.3	-1.2
RTR	El Retiro	1.28	72	⇓eP	x	09 05 38.9	
RTR				eS	x	09 05 54.2	
SBLS	San Blas	1.29	74	⇓eP	x	09 05 38.7	
SBLS				eS	x	09 05 54.7	
SNJE	San Jose	1.31	73	⇓iP	x	09 05 39.2	
SNJE				eS	x	09 05 54.8	
RBDL	Robledal	1.33	62	⇓eP	x	09 05 39.3	
BOQS	Boqueron	1.59	81	⇓iP	x	09 05 43.5	
BOQS				eS	x	09 06 03.4	
SNET	Serv Nac Est T	1.63	83	⇑eP	x	09 05 43.7	
SNET				eS	x	09 06 03.0	
MTO2	Montecristo 2	1.75	59	⇓eP	x	09 05 44.5	
MTO2				eS	x	09 06 07.4	
LFU	La Fuente	1.76	81	⇑eP	x	09 05 45.9	
LBRS	Las Brisas	1.82	82	⇑eP	x	09 05 46.6	
THIG		1.93	317	eP	Pn	09 05 48.1	-0.1
THIG				iS	Sn	09 06 10.4	-0.8
MRL	Marmol	1.96	37	eP	Pn	09 05 48.7	+0.2
SNVI	San Vicente	2.01	86	eP	x	09 05 49.4	
SNVI				eS	x	09 06 14.3	
VSM	San Miguel	2.56	91	eP	x	09 05 57.4	
VSM				eS	x	09 06 28.8	
BLLM	Bellamira	2.59	91	eP	x	09 05 57.7	
BLLM				eS	x	09 06 29.0	
CAHU	Cacacuatique	2.63	84	eP	x	09 05 57.1	
CNCH	Conchagua	2.99	94	eP	x	09 06 02.9	
CNCH				eS	x	09 06 39.2	
CCIG	Comitan	3.02	337	eP	Pn	09 06 04.2	+1.1
CCIG				iS	Sn	09 06 39.2	+1.0
PCIG		3.14	315	iP	Pn	09 06 04.5	-0.3
PCIG				iS	Sn	09 06 40.7	-0.5
TGUH	Tegucigalpa,Un	3.57	80	eP	Pn	09 06 09.9	-0.7
TGIG		3.91	327	iP	Pn	09 06 15.5	+0.1
TGIG				iS	Sn	09 07 01.1	+1.0
TEL3	Telica 3	4.06	103	eP	Pn	09 06 17.1	-0.3
MOMN	Momotombo	4.38	104	eP	Pn	09 06 21.8	-0.1
CSAN		4.56	106	eP	Pn	09 06 24.2	-0.1
APYN	Apoyeque	4.61	105	⇓eP	Pn	09 06 24.7	-0.3
APYN				AML	AML	09 07 34.1	
	comp=Z,244nm,0.5s						
TISN	Laguna Tiscapa	4.71	106	⇑eP	Pn	09 06 27.3	+0.9
CMIG	Matias Romero	5.25	313	eP	Pn	09 06 34.3	+0.5
CMIG				iS	Sn	09 07 32.2	-1.0
CMIG	Matias Romero	5.25	313	eP	Pn	09 06 34.3	+0.5
CMIG				iS	Sn	09 07 34.0	+0.8
HUIG	Huatulco	5.53	295	iP	Pn	09 06 36.3	-1.3
HUIG				iS	Sn	09 07 37.5	-2.4
VHO	Vista Hermosa	6.66	303	iP	Pn	09 06 54.2	+1.1
VHO				iS	Sn	09 08 07.3	-0.6
PNIG	Pinotepa	7.56	293	iP	Pn	09 07 06.5	+1.0
PNIG				iS	Sn	09 08 29.1	-0.9
PPM	Popocatepetl	9.26	308	iP	Pn	09 07 29.8	+0.9
PPM				iS	Sn	09 09 14.1	+2.2
PPM	Popocatepetl	9.26	308	iP	Pn	09 07 29.8	+0.9
PPM				iS	Sn	09 08 59.2	-13
CHI2		19.07	116	eP	x	09 06 14.0	

NEIC 17 09:09:23.7, 5074N×17926E, h8km, ML3.6(AEIC), ML4.1(PMR), After AEIC.
ISCJB 17 09:09:32.9±1.5, 519N±03×1797E±01, h60km±13km, mb3.9/6, Error ellipse: s-maj=55.0km s-min=9.2km az=4.9
IDC 17 09:09:32.7±3.8, 5160N×17966E, h49km±30km, mb3.6/6, mb1 3.9/8, mb1mx3.6/25, mbtmp3.7/8, ML3.9/2, Error ellipse: s-maj=70.3km s-min=19.3km az=5.0
ISC 17 09:09:34.2±1.5, 519N±03×1797E±01, h53km±13km, n12, σ0.76/14, mb3.9/6, Rat Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	Adak	2.22	89	P	Pn	09 10 09.2	+0.6
ADK				S	Sn	09 10 45.1	+10
SMY	Shemya	3.56	286	eP	Pn	09 10 27.4	+0.6
FX1	Attu Island--F	4.14	287	P	Pn	09 10 34.0	-0.8
	45nm,0.3s,baz=239,slow=5.8,SNR=12						
FX1				S	Sn	09 11 22.0	0.0
	baz=304,slow=10,SNR=0.9						
PETK	Petropavlovsk-	13.47	284	P	Pn	09 12 42.5	+0.2
	0.1nm,0.3s,baz=89,slow=19,SNR=4.3						
KDAK	Kodiak Island	16.93	59	P	Pn	09 13 25.9	-1.2
	0.9nm,0.3s,baz=180,slow=14,SNR=7.8						
YKA	Yellowknife Ar	35.55	47	P	P	09 16 25.9	+0.2
	0.3nm,0.3s,mb3.6,baz=285,slow=7.2,SNR=9.8						
YKA	Yellowknife Ar	35.55	47	P	P	09 16 25.9	+0.2
SONM	Songino Array	45.60	295	P	P	09 17 48.6	-0.1
	0.7nm,0.7s,mb3.7,baz=64,slow=6.6,SNR=3.3						
PDAR	Pinedale Array	47.03	72	P	P	09 18 00.6	+0.5
	1.9nm,0.8s,mb4.1,baz=330,slow=3.8,SNR=5.0						
MKAR	Makanchi Array	59.00	307	P	P	09 19 27.4	-0.7
	0.8nm,0.4s,mb4.1,baz=46,slow=6.7,SNR=16						
TXAR	Lajitas Array	59.48	80	P	P	09 19 30.8	-0.8
	0.2nm,0.5s,mb3.4,baz=311,slow=5.7,SNR=4.1						
NOA	NORSAR Array B	67.06	354	P	P	09 20 22.9	+1.6
	2.2nm,0.9s,mb4.2,baz=8.5,slow=6.5,SNR=3.5						

NEIC 17 09:11:29.0, 1577N×9382W, h89km, MD4.2(MEX), After MEX.
MEX 17 09:11:29.3±0.7, 1578N×9381W, h88km±10km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		0.58	98	iP	Pn	09 11 43.0	-1.5
PCIG				iS	Sn	09 11 54.5	-1.2
TGIG		1.19	34	iP	Pn	09 11 49.9	-1.2
TGIG				iS	Sn	09 12 05.5	-2.0
SCX	San Cristobal	1.47	50	iP	Pn	09 11 54.7	+0.1
SCX				iS	Sn	09 12 12.7	-1.1
CMIG	Matias Romero	1.66	322	eP	Pn	09 11 57.0	0.0
CMIG				iS	Sn	09 12 16.3	-1.7
CMIG	Matias Romero	1.66	322	eP	Pn	09 11 57.0	0.0
CMIG				iS	Sn	09 12 14.5	-3.4
CCIG	Comitan	1.68	73	iP	Pn	09 11 56.3	-1.0
CCIG				iS	Sn	09 12 15.8	-2.7
CCIG	Comitan	1.68	73	iP	Pn	09 11 56.3	-1.0
CCIG				iS	Sn	09 12 15.7	-2.8
THIG		1.73	120	iP	Pn	09 11 56.6	-1.3
THIG				iS	Sn	09 12 17.1	-2.5
HUIG	Huatulco	2.21	270	iP	Pn	09 12 02.7	-1.5
HUIG				iS	Sn	09 12 28.4	-2.6
VHO	Vista Hermosa	3.08	295	iP	Pn	09 12 15.5	-0.4
VHO				iS	Sn	09 12 51.5	-0.4
PNIG	Pinotepa	4.19	279	iP	Pn	09 12 30.6	-0.3
PNIG				iS	Sn	09 13 16.4	-2.4

NEIC 17 09:15:05.6, 5096N×17959E, h28km, ML3.6(AEIC), After AEIC.
ISCJB 17 09:15:08.0±1.9, 513N±03×17961E±007, h65km±11km, mb3.7/7, Error ellipse: s-maj=46.5km s-min=7.4km az=2.5
IDC 17 09:15:10.0±4.1, 5132N×17959E, h64km±32km, mb3.5/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML3.8/2, Error ellipse: s-maj=55.8km s-min=17.8km az=2.0
ISC 17 09:15:09.1±1.9, 513N±03×17963E±008, h58km±11km, n14, σ0.84/16, mb3.8/7, Rat Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	Adak	2.38	73	P	Pn	09 15 44.8	-0.9
ADK				S	Sn	09 16 15.0	+1.2
SMY	Shemya	3.72	295	P	Pn	09 16 03.6	-0.4
FX1	Attu Island--F	4.31	295	P	Pn	09 16 12.2	+0.2
	44nm,0.3s,baz=142,slow=8.1,SNR=50						
FX1				S	Sn	09 17 01.2	+0.3
	baz=274,slow=20,SNR=1.2						
FX1	Attu Island--F	4.31	295	P	Pn	09 16 12.5	+0.5
PETK	Petropavlovsk-	13.57	286	P	Pn	09 18 18.4	-0.1
	0.1nm,0.3s,baz=88,slow=39,SNR=3.5						
KDAK	Kodiak Island	17.32	57	P	Pn	09 19 04.0	-2.6
	0.9nm,0.3s,baz=334,slow=14,SNR=11						
INK	Inuvik	28.12	35	P	P	09 20 55.8	+0.7
	0.6nm,0.5s,mb3.5,baz=298,slow=12,SNR=6.6						
YKA	Yellowknife Ar	36.03	46	P	P	09 22 04.1	-0.1
	0.5nm,0.4s,mb3.8,baz=282,slow=7.6,SNR=18						
YKA	Yellowknife Ar	36.03	46	P	P	09 22 04.1	-0.1
SONM	Songino Array	45.82	296	P	P	09 23 25.7	+0.8
	0.4nm,0.5s,mb3.6,baz=46,slow=8.5,SNR=3.1						
PDAR	Pinedale Array	47.28	71	P	P	09 23 37.2	+0.8
	1.7nm,0.8s,mb4.0,baz=315,slow=3.7,SNR=11						
MKAR	Makanchi Array	59.33	308	P	P	09 25 04.3	-0.3
	1.0nm,0.6s,mb4.0,baz=41,slow=7.0,SNR=9.6						
TXAR	Lajitas Array	59.65	80	P	P	09 25 07.1	0.0
	0.2nm,0.5s,mb3.4,baz=307,slow=4.7,SNR=3.7						
NOA	NORSAR Array B	67.67	354	P	P	09 25 58.6	-0.8
	1.3nm,0.8s,mb4.0,baz=16,slow=5.0,SNR=3.5						

MOS 17 09:26:31.3±1.1, 3285S×7095W, h33km, mb5.3/24, Error ellipse: s-maj=16.8km s-min=7.8km az=102.3
BJI 17 09:26:34.9, 3290S×71.10W, h62km, mB5.1, Ms4.9, Msz5.0
NEIC 17 09:26:34.9, 3288S×7107W, h62km, mb5.0/42, After GUC.
NEIC Felt [IV] at Puchuncavi, Quilpue, Quintero, Rancagua and Vina del Mar; [III] at Santiago; [II] at Salamanca and San Fernando. Also felt at Limache, Paine and Puente Alto.
GUC 17 09:26:34.9±0.6, 3288S×7107W, h62km±4km, ML5.4
ISCJB 17 09:26:35.6±0.3, 3287S±003×7088W±006, h70km±2km, mb4.9/59, Error ellipse: s-maj=8.3km s-min=5.0km az=165.8
IDC 17 09:26:35.4±0.4, 3285S×7094W, h58km±3km, mb4.5/16, mb1 4.6/19, mb1mx4.6/19, mbtmp4.5/19, MS3.6/10, Ms1 3.6/10, ms1mx3.5/23, Error ellipse: s-maj=15.8km s-min=11.5km az=81.0
DJA 17 09:26:53, 3354S×7008W, h177km, mb4.9/1
ISC 17 09:26:36.6±0.3, 3287S±003×7084W±005, h66km±3km, h59km±2.0km:pP-P, n558, σ0.56/505, mb4.9/59, 179C-166D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.18	233	⇓iP	Pn	09 26 45.0	-1.6
JACH	Jahuel	0.28	49	eP	Pn	09 26 47.1	0.0
PEL	Peldehue	0.31	154	⇑iP	Pn	09 26 46.7	-0.6
PEL				iS	Sn	09 26 55.8	+0.6
PEL				AML	AML	09 26 56.9	
	comp=E,392µm,0.4s						
CLCH	Cerro Calan	0.59	154	⇓iP	Pn	09 26 49.5	-0.4
CLCH				iS	Sn	09 27 00.8	+1.1
CLCH				AML	AML	09 27 01.6	
	comp=N,189µm,0.3s						
SAN	Santiago	0.61	165	⇓iP	Pn	09 26 49.4	-0.7
SAN				iS	Sn	09 27 00.0	0.0
FCH	Farellones	0.65	135	⇓eP	Pn	09 26 51.2	+0.5
FCH				iS	Sn	09 27 03.8	+2.8
FCH				AML	AML	09 27 04.3	
	comp=N,276µm,0.3s						
IHA	Instituto Hidr	0.69	256	⇓iP	Pn	09 26 47.1	-3.9
ANTU	Antumapu	0.72	166	eP	Pn	09 26 50.6	-0.8
ANTU				iS	Sn	09 27 02.5	+0.1
TACH	Talagante	0.79	186	eP	Pn	09 26 50.5	-1.8
PCH	Pirque	0.80	160	⇓iP	Pn	09 26 52.1	-0.3
YECH	El Yeso	1.02	142	⇑iP	Pn	09 26 56.2	+1.1
YECH				iS	Sn	09 27 12.2	+3.3
LNV	Longovilo	1.19	203	eP	Pn	09 26 54.9	-2.4
CACH	El Canelo	1.27	171	⇑iP	Pn	09 26 58.2	0.0
CFAA	Coronel Fontan	2.54	61	P	Pn	09 27 19.4	+4.0
	comp=N,107nm,0.3s,baz=228,slow=10,SNR=856						
CFAA				S	Sn	09 27 51.5	+6.2
	comp=N,46nm,0.3s,baz=230,slow=16,SNR=6.0						
CFAA				LR	LR	09 28 38.2	
	comp=N,289nm,20.6s,baz=324,slow=47						
CFAA	Coronel Fontan	2.54	61	P	Pn	09 27 19.4	+4.0
CFAA				S	Sn	09 27 51.5	+6.2
CFAA				LR	LR	09 28 38.2	
TLL	Tololo Astrono	2.69	1	⇑iP	Pn	09 27 18.4	+0.9
TLL				iS	Sn	09 27 50.3	+1.4
TLL	Tololo Astrono	2.69	1	⇑iP	Pn	09 27 18.4	+0.9
TLL				iS	Sn	09 27 50.3	+1.4
TLL				AML	AML	09 28 02.9	
	comp=N,18µm,0.6s						
PLCA	Paso Flores	7.86	178	P	Pn	09 28 27.4	-0.7
	comp=N,1.9nm,0.3s,baz=341,slow=12,SNR=35						
PLCA				LR	LR	09 32 02.5	
	comp=N,96nm,20.7s,baz=353,slow=42						
TRQA	Tornquist	8.89	128	ePn	Pn	09 28 43.5	+1.2
LVC	Limon Verde	10.36	10	P	Pn	09 28 57.7	-4.6
	comp=N,0.8nm,0.3s,baz=47,slow=0.1,SNR=7.3						
LVC				LR	LR	09 33 07.1	
	comp=N,180nm,21.6s,baz=315,slow=38						
LVC	Limon Verde	10.36	10	ePn	Pn	09 29 02.6	+0.3
LVC				LR	LR	09 33 07.1	
CPUP	Villa Florida	13.44	65	P	Pn	09 29 42.9	-1.4
	comp=N,6.2nm,0.3s,baz=227,slow=11,SNR=28						
CPUP				S	Sn	09 32 10.3	-1.5
	comp=N,1.6nm,0.3s,baz=256,slow=17,SNR=1.6						
CPUP	Villa Florida	13.44	65	eP	Pn	09 29 42.6	-1.6
CPUP				pmax	pmax		
	comp=Z,257nm,0.6s						
CPUP	Villa Florida	13.44	65	ePn	Pn	09 29 42.6	-1.6
	comp=Z,257nm,0.6s						
ARE	Arequipa	16.34	358	eP	Pn	09 30 22.0	+0.2
SIV	San Ignacio	18.99	30	P	Pn	09 30 53.2	-1.0
	comp=Z,0.8nm,0.3s,baz=216,slow=9.7,SNR=72						
EFI	East Falkland	20.98	157	P	P	09 31 14.4	+0.2
	comp=Z,358nm,0.5s,SNR=23						
EFI	East Falkland	20.98	157	eP	P	09 31 14.1	-0.1
EFI				pmax	pmax		
	comp=Z,36nm,0.6s						
EFI	East Falkland	20.98	157	ePn	P	09 31 14.1	-0.1
	comp=Z,36nm,0.6s						
NNA	Nana	21.50	344	P	P	09 31 19.1	-0.9
	comp=Z,16nm,0.9s,mb4.3,baz=193,slow=9.1,SNR=5.5						
NNA				LR	LR	09 37 52.2	
	comp=Z,118nm,21.5s,baz=146,slow=32						
NNA	Nana	21.50	344	eP	P	09 31 20.1	+0.1
	comp=Z,128nm,1.9s,mb4.9						
USHA	Ushuaia	22.03	176	P	P	09 31 25.6	+0.3
	comp=Z,40nm,0.7s,mb4.9,baz=348,slow=6.5,SNR=47						
USHA				LR	LR	09 40 14.9	
	comp=Z,299nm,19.8s,baz=211,slow=37						
ATAH	Atahualpa	26.68	343	P	P	09 32 08.3	-1.2
	comp=Z,6.1nm,0.7s,mb4.2,baz=176,slow=11,SNR=5.0						
ATAH				LR	LR	09 41 08.7	
	comp=Z,102nm,20.4s,baz=301,slow=33						
BDFB	Brasilia	26.87	56	P	P	09 32 11.7	+0.4
	comp=Z,4.1nm,0.5s,mb4.2,baz=214,slow=13,SNR=16						
BDFB				LR	LR	09 43 27.5	
	comp=Z,197nm,21.1s,baz=31,slow=38						
BDFB	Brasilia	26.87	56	P	P	09 32 11.7	+0.4
BDFB				LR	LR	09 43 27.5	
OTAV	Otavalo	33.70	346	eP	P	09 33 12.2	+0.7
	comp=Z,16nm,1.3s,mb4.7						
OTAV				ePcP	PcP	09 35 50.7	+0.6
ROSC	El Rosal	37.66	354	P	P	09 33 48.6	+3.2
	comp=Z,8.8nm,0.7s,mb4.7,baz=272,slow=22,SNR=5.1						
SDV	Santo Domingo	41.52	0	P	P	09 34 16.5	-1.0
	comp=Z,5.3nm,0.8s,mb4.3						
PCRV	Puerto La Cruz	43.21	9	LR	LR	09 52 20.2	
	comp=Z,101nm,21.6s,baz=141,slow=36						
TGUH	Tegucigalpa,Un	49.23	339	eP	P	09 35 17.9	-0.5
	comp=Z,50nm,1.2s,mb5.3						
VNA3	Neumayer Olymp	50.04	158	eP	P	09 35 24.5	+0.5
VNA3				e		09 35 32.8	
VNA3				e	pP	09 35 39.6	-1.2
VNA3				e		09 35 46.0	
VNA3				e		09 35 51.3	
VNA1	Neumayer--Stat	50.33	157	eP	P	09 35 27.1	+0.9
VNA1				e		09 35 35.8	
VNA1				e	pP	09 35 41.1	-1.9
VNA1				e	pP	09 35 47.1	+4.1
VNA1				e		09 35 52.3	
VNA2	Neumayer--Watz	50.67	158	eP	P	09 35 29.5	+0.7
	baz=290,slow=9.0						
VNA2				e		09 35 38.3	
VNA2				e	pP	09 35 44.2	-1.4
VNA2				e		09 35 51.1	
VNA2				e		09 35 56.2	
CELP	Cerrillos	50.81	5	eP	P	09 35 30.2	-0.2
SNAA	Sanae	52.26	158	eP	P	09 35 39.1	-1.5
SNAA				e		09 36 02.2	
SNAA	Sanae	52.26	158	eP	P	09 35 39.3	-1.3
SNAA				pmax	pmax		
	comp=Z,26nm,1.0s						
SNAA	Sanae	52.26	158	eP	P	09 35 39.3	-1.4
	comp=Z,26nm,1.0s,mb5.2						
TEIG	Tepich	55.36	340	eP	P	09 36 03.1	-0.7
	comp=Z,47nm,0.5s,mb5.8						
MAIT	Maitri	56.94	157	eP	P	09 36 11.8	-2.7
MAIT				epP	pP	09 36 27.1	-4.5
NVL	N'lazarevskaya	56.97	157	P	P	09 36 14.5	-0.2
NVL				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1						
KVTX	Kingsville	65.35	334	eP	P	09 37 13.4	+1.5
	comp=Z,44nm,0.8s,mb5.3						
VNDA	Vanda	65.41	191	P	P	09 37 11.9	+0.2
	comp=Z,3.1nm,0.7s,mb4.3,baz=122,slow=5.0,SNR=9.0						
VBMS	Vicksburg	67.34	342	eP	P	09 37 24.4	-0.1
	comp=Z,36nm,0.8s,mb5.3						
NATX	Nacogdoches	68.10	338	eP	P	09 37 29.4	+0.1
	comp=Z,59nm,1.0s,mb5.4						
JCT	Junction City	68.71	333	eP	P	09 37 33.0	-0.1
JCT				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
JCT	Junction City	68.71	333	eP	P	09 37 33.0	-0.1
	comp=Z,15nm,0.6s,mb5.0						
CPCT	Cooper Cave	69.16	348	eP	P	09 37 34.9	-0.9
SWET	Sewanee	69.19	347	eP	P	09 37 35.7	-0.3
TKL	Tuckaleechee C	69.23	349	eP	P	09 37 35.1	-1.2
TXAR	Lajitas Array	69.25	330	P	P	09 37 36.3	-0.2
	comp=Z,12nm,0.6s,mb4.9,baz=153,slow=8.6,SNR=201						
OXF	Oxford	69.25	344	eP	P	09 37 35.4	-1.0
OXF				pmax	pmax		
	comp=Z,87nm,1.0s,mb5.5						
OXF	Oxford	69.25	344	eP	P	09 37 35.4	-1.0
	comp=Z,87nm,1.0s,mb5.5						
UALR	University of	70.25	341	eP	P	09 37 42.7	+0.1

comp=Z,14nm,1.0s,mb4.8
MIAR Mount Ida 70.37 340 *e*P P 09 37 42.6 -0.7
MIAR pmax pmax
comp=Z,23nm,1.1s,mb4.9
MIAR Mount Ida 70.37 340 *e*P P 09 37 42.6 -0.7
comp=Z,23nm,1.1s,mb4.9
WVT Waverly 70.45 345 *e*P P 09 37 43.0 -0.7
JSRW J. Sargeant Re 70.50 354 *e*P P 09 37 44.4 +0.4
GNAR Gosnell 70.79 344 *e*P P 09 37 46.0 +0.2
UTMT University of 70.88 345 *e*P P 09 37 45.3 -1.1
comp=Z,95nm,0.8s,mb5.7
GLAT Glass 70.91 344 *e*P P 09 37 46.5 0.0
PPT Papeete 71.40 261 P P 09 37 50.3 +0.2
comp=Z,27nm,1.0s,mb5.0,baz=103,slow=7.0,SNR=5.0
PPT LR LR 10 00 56.7
comp=Z,212nm,20.1s,baz=58,slow=29
WMOK Wichita Mounta 72.18 336 *e*P P 09 37 52.8 -1.4
WMOK pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
WMOK Wichita Mounta 72.18 336 *e*P P 09 37 52.8 -1.5
comp=Z,8.2nm,0.9s,mb4.6
USIN University of 72.19 346 *e*P P 09 37 53.0 -1.1
SIUC Southern Illin 72.28 345 *e*P P 09 37 53.6 -1.1
comp=Z,19nm,0.8s,mb5.0
FVM French Village 72.81 344 *e*P P 09 37 57.0 -0.8
FVM pmax pmax
comp=Z,34nm,0.8s,mb5.2
FVM French Village 72.81 344 *e*P P 09 37 57.0 -0.9
comp=Z,34nm,0.8s,mb5.2
BLO Bloomington 73.14 347 *e*P P 09 37 58.3 -1.5
BLO pmax pmax
comp=Z,12nm,0.5s,mb5.0
BLO Bloomington 73.14 347 *e*P P 09 37 58.3 -1.4
comp=Z,12nm,0.5s,mb5.0
AMTX Amarillo 73.34 334 *e*P P 09 38 00.8 -0.3
comp=Z,43nm,1.0s,mb5.2
SLM Saint Louis 73.39 344 *e*P P 09 38 00.7 -0.5
LIC Lamto 73.47 71 *e*P P 09 38 02.6 +0.3
comp=Z,32nm,0.6s,mb5.3
319A Douglas 73.50 326 ⇑P P 09 38 02.5 +0.4
baz=74,SNR=16
ACSO Alum Creek Sta 73.59 350 *e*P P 09 38 01.5 -0.9
TIC Toumodi 73.72 71 *e*P P 09 38 04.2 +0.4
comp=Z,13nm,0.2s,mb5.2
KIC Kosan Boka 73.77 71 *e*P P 09 38 04.8 +0.7
comp=Z,107nm,0.8s,mb5.6
DBIC Dimbokro 73.87 71 P P 09 38 05.2 +0.6
comp=Z,11nm,0.7s,mb4.7,baz=210,slow=7.5,SNR=19
DBIC pP pP 09 38 21.5 -1.0
comp=Z,18nm,0.7s,baz=185,slow=7.4,SNR=12
DBIC Dimbokro 73.87 71 *e*P P 09 38 04.9 +0.2
DBIC pmax pmax
comp=Z,17nm,0.6s
DBIC Dimbokro 73.87 71 *e*P P 09 38 04.9 +0.2
comp=Z,17nm,0.6s,mb5.0
318A Bisbee 73.88 326 ⇑P P 09 38 04.5 +0.1
baz=74,SNR=31
MAW Mawson 73.98 163 P P 09 38 04.5 0.0
comp=Z,6.1nm,0.8s,mb4.4,baz=218,slow=6.7,SNR=17
MAW pP pP 09 38 20.9 -1.4
comp=Z,4.9nm,0.7s,baz=220,slow=4.9,SNR=5.7
219A White Tail Can 74.01 327 ⇑P P 09 38 05.6 +0.6
baz=74
218A Dragoon 74.36 326 ⇓P P 09 38 07.1 0.0
baz=74,SNR=19
217A Green Valley 74.56 325 ⇑P P 09 38 08.5 +0.2
baz=75,SNR=19
119A Ashpeak Ranch, 74.67 327 ⇓P P 09 38 09.0 +0.1
baz=75,SNR=6.9
118A Homack Ranch, 74.87 327 ⇑P P 09 38 09.8 -0.3
baz=75,SNR=6.2
TUC Tucson 74.98 326 *e*P P 09 38 10.8 +0.1
TUC pmax pmax
comp=Z,11nm,1.4s,mb4.4
TUC Tucson 74.98 326 *e*P P 09 38 10.8 +0.1
comp=Z,11nm,1.4s,mb4.4
HDIL Hopedale 75.02 346 *e*P P 09 38 09.9 -0.8
216A Three Points, 75.05 325 ⇑P P 09 38 11.5 +0.4
baz=75,SNR=19
Z19A T-Link Ranch, 75.09 327 ⇓P P 09 38 12.1 +0.7
baz=75
117A Oracle 75.18 326 ⇓P P 09 38 11.6 -0.2
baz=75,SNR=7.5
ANMO Albuquerque 75.28 330*c i*P P 09 38 12.5 +0.1
ANMO pmax pmax
comp=Z,22nm,1.7s
116A Eloy 75.63 325 ⇓P P 09 38 14.4 0.0
baz=76,SNR=7.4
Y19A Nutrioso 75.65 328 ⇑P P 09 38 15.3 +0.8
baz=76,SNR=46
Z17A San Carlos Hig 75.65 327 ⇑P P 09 38 15.0 +0.5
baz=76
214A Organ Pipe Nat 75.67 324 ⇑P P 09 38 15.0 +0.3
baz=76,SNR=9.5
Y18A Canyon Day Jun 75.85 327 ⇑P P 09 38 15.6 0.0
baz=76,SNR=7.5
115A Sonoran Desert 75.99 325 ⇓P P 09 38 16.9 +0.4
baz=76,SNR=7.6
X19A St. Johns 76.06 328 ⇓P P 09 38 16.9 0.0
baz=76
Z16A Peralta Trail, 76.14 326 ⇑P P 09 38 17.2 -0.1
baz=76,SNR=5.6
Y17A Roosevelt 76.16 326 ⇓P P 09 38 17.8 +0.5
baz=76,SNR=24
CBKS Cedar Bluff 76.20 337 *e*P P 09 38 17.8 +0.3
CBKS pmax pmax
comp=Z,27nm,0.6s,mb5.2
CBKS Cedar Bluff 76.20 337 *e*P P 09 38 17.8 +0.2
comp=Z,27nm,0.6s,mb5.2
X18A Snowflake 76.44 328 ⇓P P 09 38 19.2 +0.3
baz=77,SNR=7.8
Z15A Gila River Ind 76.44 325 ⇓P P 09 38 18.9 -0.1
baz=77,SNR=5.0
Y16A Circle Bar Ran 76.60 326 ⇓P P 09 38 20.2 +0.3
baz=77,SNR=16
X17A Forest Lakes 76.67 327 ⇓P P 09 38 20.9 +0.6
baz=77,SNR=11
113A Mohawk Valley, 76.80 324 ⇑P P 09 38 21.3 +0.2
baz=77
W18A Petrified Fore 76.84 328 ⇓P P 09 38 21.6 +0.4
baz=77,SNR=5.2
Z14A Wintersburg 76.88 325 ⇓P P 09 38 21.9 +0.4
baz=77
112A Yuma 77.02 323 ⇓P P 09 38 22.7 +0.4
baz=77
X16A Lo Mia Camp, P 77.03 326 ⇓P P 09 38 22.6 +0.3
baz=77,SNR=25
V19A Window Rock 77.03 329 ⇓P P 09 38 22.6 +0.3
baz=77,SNR=8.2
Y15A Casa Rosa Ranc 77.07 326 ⇑P P 09 38 22.4 -0.1
baz=77,SNR=8.2
SCIA State Center 77.20 343 *e*P P 09 38 22.6 -0.5
W17A Winslow 77.24 327 ⇑P P 09 38 24.1 +0.6
baz=78
SDCO Great Sand Dun 77.32 332 *e*P P 09 38 23.8 0.0
comp=Z,11nm,0.7s,mb4.7
Y14A Wickenburg 77.38 325 ⇑P P 09 38 24.3 0.0
baz=78,SNR=10
V18A Ganado 77.42 328 ⇑P P 09 38 24.8 +0.3
baz=78
X15A Humboldt 77.46 326 ⇑P P 09 38 25.0 +0.3
baz=78,SNR=16
JFWS Jewell Farm 77.48 346 *e*P P 09 38 23.7 -0.9
JFWS pmax pmax
comp=Z,32nm,1.0s,mb5.0
JFWS Jewell Farm 77.48 346 *e*P P 09 38 23.7 -0.9
comp=Z,32nm,1.0s,mb5.0
GLA Glamis 77.56 323 ⇑P P 09 38 25.5 +0.2
baz=78
W16A Flagstaff 77.63 327 ⇓P P 09 38 26.3 +0.6
baz=78,SNR=8.3
Y13A Salome 77.68 324 ⇓P P 09 38 26.3 +0.4
baz=78
X14A Yava 77.75 326 ⇓P P 09 38 26.8 +0.4
baz=78,SNR=5.3
DVTC Desert V Tower 77.90 322 ⇑P P 09 38 27.8 +0.6
baz=78
WUAZ Wupatki 77.91 327 ⇑P P 09 38 27.6 +0.4
baz=78
WUAZ Wupatki 77.91 327 *e*P P 09 38 27.8 +0.6
SWSC Sam W. Stewart 77.96 323 ⇓P P 09 38 27.9 +0.4
baz=78
Y12C Blythe 77.97 324 ⇓P P 09 38 27.6 +0.1
baz=78,SNR=12
T19A Beclabito 77.97 330 ⇓P P 09 38 27.5 0.0
baz=78,SNR=14
U18A Rough Rock, Ch 77.99 329 ⇓P P 09 38 27.7 +0.1
baz=78,SNR=12
W15A Williams 78.04 326 ⇓P P 09 38 28.4 +0.5
baz=78,SNR=5.0
MVCO Mesa Verde 78.07 330 ⇑P P 09 38 28.6 +0.5
baz=78
S21A Coal Bank Pass 78.16 331 ⇑P P 09 38 29.3 +0.8
baz=78
MONP Monument Peak 78.24 322 ⇓P P 09 38 29.7 +0.6
baz=78
X13A Yucca 78.31 325 ⇑P P 09 38 29.5 +0.1
baz=78,SNR=16
U16A Tuba City 78.31 328 ⇑P P 09 38 29.7 +0.3
baz=78,SNR=9.2
BC3 Big Chuckw Mtn 78.36 323 ⇓P P 09 38 30.1 +0.4
baz=78
W14A Seligman 78.45 326 ⇑P P 09 38 30.9 +0.7
baz=79
U17A Shonto 78.49 328 ⇑P P 09 38 30.8 +0.4
baz=79,SNR=12
V15A Kaibab Nationa 78.52 327 ⇑P P 09 38 31.1 +0.5
baz=79,SNR=13
T18A Mexican Hat 78.59 329 ⇑P P 09 38 30.6 -0.3
baz=79,SNR=8.4
IRM Iron Mountain 78.61 324 ⇓P P 09 38 31.5 +0.4
baz=79
R21A Cimarron 78.67 331 ⇑P P 09 38 32.0 +0.7
baz=79
W13A Hualapai Mount 78.74 325 ⇓P P 09 38 32.2 +0.4
baz=79,SNR=11
S19A Harvey Farm, M 78.79 330 ⇓P P 09 38 31.8 -0.2
baz=79,SNR=12
V14A Boquillas Ranc 78.81 326 ⇓P P 09 38 32.6 +0.5
baz=79,SNR=11
PFO Pinyon Flat Ob 78.83 323 P P 09 38 33.5 +1.2
comp=Z,100nm,0.9s,mb5.7,SNR=7.4
PFO Pinyon Flat Ob 78.83 323 ⇓P P 09 38 32.8 +0.5
baz=79
PFO Pinyon Flat Ob 78.83 323 *e*P P 09 38 32.5 +0.2
PFO pmax pmax
comp=Z,23nm,1.2s,mb4.9
PFO Pinyon Flat Ob 78.83 323 *e*P P 09 38 32.5 +0.2
comp=Z,23nm,1.2s,mb4.9
T17A Navajo Res., N 78.88 328 ⇑P P 09 38 33.1 +0.6
baz=79,SNR=12
BELC Belle Mtn. 78.90 323 ⇓P P 09 38 33.4 +0.7
baz=79
Q21A Lamborn Mesa, 79.08 332 ⇓P P 09 38 34.0 +0.5
baz=79
U15A North Rim 79.08 327 ⇓P P 09 38 34.1 +0.5
baz=79,SNR=9.5
S18A Hurst Farm, Bl 79.11 329 ⇑P P 09 38 33.9 +0.1
baz=79,SNR=19
SMCO Snowmass 79.13 332 *e*P P 09 38 26.9 -7.0
comp=Z,14nm,0.7s,mb4.9
ISCO Idaho Springs 79.15 333 *e*P P 09 38 34.2 +0.3
ISCO pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
ISCO Idaho Springs 79.15 333 *e*P P 09 38 34.2 +0.3
comp=Z,6.1nm,0.8s,mb4.5
T16A Glen Canyon Da 79.18 328 ⇑P P 09 38 34.4 +0.3
baz=79
MURC Murrieta 79.20 322 ⇓P P 09 38 34.6 +0.2
baz=79
PV04 Paradox Valley 79.24 330 *e*P P 09 38 34.2 -0.2
R19A Curley Farm, L 79.30 330 ⇑P P 09 38 34.6 -0.2
baz=80,SNR=12
LDFC Landfair 79.32 324 *e*P P 09 38 35.9 +1.0
comp=Z,6.6nm,0.6s,mb4.6
GMRC Granite Mounta 79.35 324 ⇓P P 09 38 35.6 +0.5
baz=80
W12A Cal Nev Ari 79.38 325 ⇑P P 09 38 35.3 0.0
baz=80
V13A Grand Canyon W 79.40 326 ⇓P P 09 38 35.4 +0.1
baz=80,SNR=10
S17A Black Ridge (B 79.41 329 ⇓P P 09 38 35.6 +0.2
baz=80,SNR=5.8
Q20A Ridgley Place, 79.47 331 ⇑P P 09 38 36.0 +0.3
baz=80
U14A Mt Trumbull 79.48 326 ⇑P P 09 38 36.4 +0.6
baz=80,SNR=8.9
T15A Red Dirt Ranch 79.61 327 ⇓P P 09 38 37.1 +0.6
baz=80,SNR=12
P21A Newcastle 79.62 332 ⇑P P 09 38 37.1 +0.6
baz=80
R18A Canyonlands Na 79.65 330 ⇓P P 09 38 36.8 +0.1
baz=80
BOSA Boshof 79.71 117 P P 09 38 38.1 +0.6
comp=Z,8.2nm,0.7s,mb4.6,baz=236,slow=4.6,SNR=14
BOSA pP pP 09 38 52.6 -2.8
comp=Z,13nm,0.5s,baz=247,slow=3.4,SNR=12
BOSA Boshof 79.71 117 *e*P P 09 38 37.8 +0.3
BOSA pmax pmax
comp=Z,11nm,0.5s,mb4.9
BOSA Boshof 79.71 117 *e*P P 09 38 37.8 +0.3
comp=Z,11nm,0.5s,mb4.9
V12A Nelson 79.71 325 ⇑P P 09 38 37.0 -0.1
baz=80,SNR=14
HEC Hector,Ludlow 79.73 323 ⇓P P 09 38 37.9 +0.7
baz=80
S16A Weppner Ranch, 79.83 328 ⇑P P 09 38 37.7 +0.1
baz=80
U13A Pakoon Wash 79.84 326 ⇑P P 09 38 37.8 +0.1
baz=80,SNR=6.3
Q19A Hogan Spring (79.87 331 ⇓P P 09 38 37.7 -0.1
baz=80,SNR=9.1
BFSC Mount Baldy St 79.94 322 ⇑P P 09 38 38.6 +0.2
baz=80
T14A Hurricane 79.96 327 ⇑P P 09 38 38.5 +0.1
baz=80,SNR=9.9
P20A De Beque 79.97 331 ⇓P P 09 38 39.0 +0.6
baz=80
TUQ Turquoise Moun 80.00 324 ⇑P P 09 38 38.8 +0.1
baz=80
R17A Hanksville Air 80.03 329 ⇑P P 09 38 38.4 -0.3
baz=80,SNR=12
V11A Goodsprings 80.08 325 ⇓P P 09 38 39.6 +0.5
baz=80
U12A Valley of Fire 80.13 326 ⇓P P 09 38 39.5 +0.2
baz=80,SNR=5.8
MWC Mount Wilson 80.14 322 *e*P P 09 38 39.5 +0.1
S15A Panguitch 80.14 328 ⇓P P 09 38 39.4 0.0
baz=80,SNR=5.8
O21A Pagoda 80.22 332 ⇓P P 09 38 40.3 +0.6
baz=80
R16A Teasdale 80.25 329 ⇑P P 09 38 40.4 +0.5
baz=80
T13A Saint George 80.31 326 ⇑P P 09 38 40.5 +0.2
baz=80,SNR=9.0
P19A Cripple Cowboy 80.32 331 ⇑P P 09 38 40.9 +0.6
baz=81
N22A Wattenberg Ran 80.34 333 ⇑P P 09 38 41.4 +1.1
baz=81
GSC Goldstone 80.34 323 ⇑P P 09 38 40.8 +0.3
baz=80
GSC Goldstone 80.34 323 *e*P P 09 38 41.0 +0.5
Q18A Rafter H Ranch 80.35 330 ⇓P P 09 38 40.3 -0.1
baz=81,SNR=5.7
PHWY Pilot Hill 80.40 334 *e*P P 09 38 40.9 +0.3
comp=Z,6.1nm,0.6s,mb4.6
O20A White River Ci 80.45 332 ⇑P P 09 38 41.4 +0.5
baz=81
SHPR Sheep Range 80.49 325 *e*P P 09 38 41.7 +0.5
SRU San Rafael 80.53 330 ⇓P P 09 38 41.5 +0.1
baz=81
SRU San Rafael 80.53 330 *e*P P 09 38 41.6 +0.3
R15A Junction 80.54 328 ⇑P P 09 38 42.0 +0.6
baz=81
EDW2 Edwards Air Fo 80.61 322 ⇓P P 09 38 41.8 -0.1
baz=81
Q16A Castle Valley 80.64 329 ⇓P P 09 38 42.2 +0.2
baz=81,SNR=7.5
N21A Black Mountain 80.71 333 ⇑P P 09 38 43.3 +1.0
baz=81
S13A Holt Ranch, En 80.74 327 ⇑P P 09 38 43.2 +0.6
baz=81,SNR=12
MSU Marysvale 80.74 328 *e*P P 09 38 42.9 +0.4
OSI Osito Adit 80.78 322 ⇓P P 09 38 43.2 +0.3
baz=81
OSI Osito Adit 80.78 322 *e*P P 09 38 43.6 +0.7
P18A Preston Nutter 80.84 330 ⇑P P 09 38 43.0 -0.1
baz=81,SNR=6.1
M22A Cedar Creek Ra 80.91 334 ⇓P P 09 38 44.1 +0.7
baz=81
P17A Butcher Ranch, 80.92 330 ⇓P P 09 38 43.9 +0.4
baz=81
U10A Ash Meadows, A 80.98 324 ⇓P P 09 38 44.5 +0.6
baz=81
N20A Spence Gulch, 81.06 332 ⇓P P 09 38 44.4 +0.3
baz=81
T11A Corn Creek, Al 81.11 326 ⇑P P 09 38 44.8 +0.3
baz=81,SNR=18
S12A Delamar Landin 81.22 326 ⇑P P 09 38 45.5 +0.3
baz=81
Q15A Fillmore 81.23 328 ⇓P P 09 38 45.3 +0.2
baz=81,SNR=6.1
MPMC Manual Prospec 81.28 323 ⇑P P 09 38 45.5 +0.1
baz=82
R13A O'Grain Ranch, 81.28 327 ⇑P P 09 38 45.6 +0.2
baz=82,SNR=6.0
O18A Roosevelt 81.28 331 ⇑P P 09 38 45.5 +0.2
baz=82,SNR=6.0
FURC Furnace Creek, 81.29 324 ⇑P P 09 38 45.8 +0.3
baz=82
TPNV Topopah Spring 81.37 325 ⇓P P 09 38 46.7 +0.8
baz=82
TPNV Topopah Spring 81.37 325 *e*P P 09 38 46.4 +0.5
TPNV pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
TPNV Topopah Spring 81.37 325 *e*P P 09 38 46.4 +0.5
comp=Z,6.6nm,0.9s,mb4.5
L22A Ellis Ranch, M 81.39 334 ⇑P P 09 38 46.5 +0.6
baz=82
P16A Fountain Green 81.42 329 ⇓P P 09 38 46.6 +0.5
baz=82
ISA Isabella 81.47 323 ⇑P P 09 38 46.8 +0.4
baz=82
ISA Isabella 81.47 323 *e*P P 09 38 47.0 +0.5
ISA pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
ISA Isabella 81.47 323 *e*P P 09 38 47.0 +0.6
comp=Z,5.5nm,0.6s,mb4.6
N19A John Jarvie Ra 81.47 332 ⇓P P 09 38 46.6 +0.2
baz=82
O17A Robinson Place 81.52 330 ⇑P P 09 38 46.8 +0.2
baz=82,SNR=5.6
PKM Peak Mountain 81.58 321 ⇓P P 09 38 47.6 +0.5
baz=82
M20A Sweetwater, Wa 81.59 333 ⇓P P 09 38 47.1 +0.2
baz=82
Q14A Sevier Lake (B 81.62 328 ⇑P P 09 38 47.4 +0.2
baz=82,SNR=7.6
P15A Leamington 81.66 329 ⇓P P 09 38 47.5 +0.1
baz=82,SNR=5.9
L21A Rawlins 81.69 333 ⇑P P 09 38 47.6 +0.2
baz=82
R12A Pony Springs, 81.69 327 ⇓P P 09 38 47.8 +0.2
baz=82,SNR=6.5
N18A Larsen Ranch, 81.74 331 ⇑P P 09 38 48.0 +0.2
baz=82
MPU Maple Canyon 81.75 330 *e*P P 09 38 48.3 +0.5
O16A Springville 81.85 330 ⇓P P 09 38 48.8 +0.4
baz=82
CWC Cottonwood Cre 81.87 323 ⇑P P 09 38 49.0 +0.4
baz=82
NLU North Lily Min 81.89 329 *e*P P 09 38 49.3 +0.7
VES Vestal, Richgr 81.92 322 ⇑P P 09 38 49.1 +0.2
baz=82
Q13A Wheeler Ranch, 81.93 327 ⇓P P 09 38 48.8 0.0
baz=82,SNR=5.8
GRAC Grapevine Rang 81.95 324 ⇓P P 09 38 49.6 +0.6
baz=82
M19A Rock Springs 81.98 332 ⇑P P 09 38 49.1 +0.1
baz=82
SMMC Simmler 81.99 321 ⇓P P 09 38 50.2 +1.0
baz=82
P14A Drum Mountains 82.02 328 ⇓P P 09 38 49.7 +0.4
baz=82,SNR=12
L20A Wamsutter 82.09 333 ⇓P P 09 38 49.6 0.0
baz=82
JLU Jordanelle 82.16 330 *e*P P 09 38 50.4 +0.4
R11A Troy Canyon, C 82.17 326 ⇑P P 09 38 50.5 +0.4
baz=82,SNR=14
N17A Moffit Pass 82.19 331 ⇓P P 09 38 50.2 +0.1
baz=82,SNR=6.8
M18A Lyman 82.28 331 ⇑P P 09 38 50.3 -0.3
baz=82
S10A Tonopah Range, 82.31 325 ⇑P P 09 38 50.6 -0.2
baz=82,SNR=8.5
O15A The Old Anders 82.33 329 ⇑P P 09 38 51.2 +0.4
baz=82
P13A Bates Ranch, G 82.33 328 ⇓P P 09 38 51.1 +0.2
baz=82,SNR=7.7
RCTC Rector, Farmer 82.36 322 ⇓P P 09 38 50.8 -0.4
baz=82
CTU Camp Tracy 82.36 330 *e*P P 09 38 51.9 +0.8
Q12A Willow Creek R 82.37 327 ⇓P P 09 38 51.4 +0.2
baz=83
RSSD Black Hills 82.38 337 *e*P P 09 38 50.7 -0.3
RSSD pmax pmax
comp=Z,16nm,1.1s,mb4.8
RSSD Black Hills 82.38 337 *e*P P 09 38 50.6 -0.4
comp=Z,16nm,1.1s,mb4.8
N16A Rees Ranch, Co 82.39 330 ⇑P P 09 38 51.3 +0.2
baz=83
DUG Dugway 82.41 329 ⇓P P 09 38 51.5 +0.2
baz=83
DUG Dugway 82.41 329 *e*P P 09 38 51.1 -0.2
DUG pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
DUG Dugway 82.41 329 *e*P P 09 38 51.1 -0.2
comp=Z,7.5nm,0.9s,mb4.5
S09A Goldfield 82.45 325 ⇑P P 09 38 51.8 +0.2
baz=83,SNR=11
R10A Warm Springs 82.46 326 ⇓P P 09 38 52.1 +0.5
baz=83,SNR=8.6
EYMN Ely 82.55 346 *e*P P 09 38 51.4 -0.4
M17A Scullys Gap (B 82.56 331 ⇑P P 09 38 52.4 +0.3
baz=83
Q11A Duckwater 82.59 326 ⇓P P 09 38 52.5 +0.2
baz=83,SNR=8.8
L18A Fontenelle, Gr 82.69 332 ⇑P P 09 38 52.4 -0.3
baz=83,SNR=5.7
TPH Tonopah 82.73 325 *e*P P 09 38 53.7 +0.7
TPH pmax pmax
comp=Z,17nm,1.0s,mb4.8
TPH Tonopah 82.73 325 *e*P P 09 38 53.6 +0.6
comp=Z,17nm,1.0s,mb4.8
P12A McGill 82.75 327 ⇓P P 09 38 53.6 +0.5
baz=83
R09A Tonopah 82.79 325 ⇑P P 09 38 53.1 -0.2
baz=83,SNR=8.5
M16A Huntsville 82.83 330 ⇑P P 09 38 53.2 -0.2
baz=83,SNR=7.9
O13A Hicks Ranch, I 82.87 328 ⇑P P 09 38 53.6 -0.1
baz=83,SNR=5.4
TOA0 Torodi Ar. Sit 82.88 69 *e*P P 09 38 54.2 -0.1
TORD Torodi Ar. Bea 82.88 69 P P 09 38 54.8 +0.4
comp=Z,15nm,0.8s,mb4.9,baz=258,slow=4.6,SNR=77
TORD pP pP 09 39 11.2 -1.3
comp=Z,5.7nm,0.7s,baz=279,slow=6.5,SNR=6.3
TORD LR LR 10 17 53.0
comp=Z,196nm,18.2s,baz=330,slow=37
Q10A Clear Creek Ra 82.93 326 ⇓P P 09 38 54.1 +0.1
baz=83,SNR=7.2
K19A Absolon Red Bu 82.99 333 ⇓P P 09 38 53.7 -0.5
baz=83,SNR=11
N14A Grayback Hills 83.11 329 ⇑P P 09 38 54.4 -0.5
baz=83,SNR=7.5
SPUT South Promonto 83.17 330 *e*P P 09 38 55.0 -0.2
L17A Cokeville 83.17 331 ⇓P P 09 38 54.3 -0.9
baz=83,SNR=5.0
MLAC Mammoth Lakes 83.18 324 ⇑P P 09 38 55.9 +0.6
baz=83
BW06 Boulder Array 83.21 332 ⇑P P 09 38 55.6 +0.3
baz=84
PDAR Pinedale Array 83.21 332 P P 09 38 54.7 -0.7
comp=Z,3.3nm,0.7s,mb4.3,baz=140,slow=5.3,SNR=26
PDAR pP pP 09 39 13.2 -0.3
comp=Z,1.5nm,0.8s,baz=131,slow=5.6,SNR=2.6
PDAR PKKPbc PKKPbc 09 57 15.0 -2.3
comp=Z,0.5nm,0.6s,baz=202,slow=0.8,SNR=5.2
K18A Toltan Ranch, 83.29 332 ⇓P P 09 38 55.7 -0.1
baz=84,SNR=14
M15A Larsen Ranch, 83.30 330 ⇑P P 09 38 55.2 -0.6
baz=84,SNR=14
O12A Currie 83.32 328 ⇑P P 09 38 55.9 -0.1
baz=84,SNR=13
L16A Fish Haven 83.33 331 ⇓P P 09 38 55.4 -0.6
baz=84,SNR=7.4
NVAR Mina Array Bea 83.53 324 P P 09 38 57.5 +0.4
comp=Z,9.6nm,0.7s,mb4.7,baz=154,slow=6.1,SNR=49
NVAR pP pP 09 39 13.0 -2.3
comp=Z,1.4nm,0.6s,baz=162,slow=5.6,SNR=3.7
P10A Eureka 83.59 326 ⇑P P 09 38 56.7 -0.7
baz=84,SNR=5.2
O11A Cowboy Ranch, 83.62 327 ⇑P P 09 38 57.6 0.0

baz=84,SNR=13
Q08A Gabbs 83.69 325 ⇓P P 09 38 57.7 -0.2
baz=84,SNR=9.0
HVU Hansel Valley 83.70 330 *e*P P 09 38 57.7 -0.2
M14A Sheep Mountain 83.71 329 ⇑P P 09 38 57.3 -0.6
baz=84,SNR=12
L15A Malad City 83.72 330 ⇑P P 09 38 57.4 -0.6
baz=84,SNR=9.3
K17A Gardner Place, 83.74 332 ⇓P P 09 38 58.0 0.0
baz=84
J18A Kendall Valley 83.77 332 ⇓P P 09 38 57.6 -0.6
baz=84,SNR=12
AHID Auburn Hatcher 83.82 331 *e*P P 09 38 58.0 -0.5
AGMN Agassiz Refuge 83.84 343 *e*P P 09 38 57.5 -1.0
comp=Z,7.9nm,0.7s,mb4.7
P09A Austin 83.85 326 ⇓P P 09 38 58.9 +0.2
baz=84
N12A Clover Valley, 83.92 328 ⇓P P 09 38 58.7 -0.3
baz=84,SNR=6.0
M13A Montello 83.95 329 ⇑P P 09 38 58.8 -0.4
baz=84,SNR=7.8
K16A Soda Springs 84.08 331 ⇑P P 09 38 59.7 -0.1
baz=84,SNR=14
I18A Diamond G Ranc 84.10 333 ⇓P P 09 38 59.9 0.0
baz=84,SNR=10
O10A Cortez Mining, 84.14 327 ⇑P P 09 39 00.9 +0.7
baz=84
J17A Brown Place, J 84.17 332 ⇓P P 09 38 59.9 -0.4
baz=84,SNR=6.2
R06C Coleville 84.17 324 ⇓P P 09 39 01.1 +0.7
baz=84
N11A Elko Archery C 84.21 327 ⇓P P 09 39 00.5 0.0
baz=84
REDW Red Top Meadow 84.22 332 *e*P P 09 38 60.0 -0.6
comp=Z,11nm,1.2s,mb4.6
SNOW Snow King Moun 84.27 332 *e*P P 09 39 00.6 -0.2
M12A Wells 84.33 328 ⇓P P 09 39 00.7 -0.4
baz=84,SNR=7.2
LOHW Long Hollow 84.33 332 *e*P P 09 39 00.7 -0.4
K15A Arbon 84.34 330 ⇓P P 09 39 00.9 -0.2
baz=85
O09A Fish Creek Ran 84.37 326 ⇑P P 09 39 01.9 +0.6
baz=85
TPAW Teton Pass 84.37 332 *e*P P 09 39 00.9 -0.4
comp=Z,5.8nm,0.7s,mb4.5
L13A Double Diamond 84.45 329 ⇑P P 09 39 01.6 -0.2
baz=85,SNR=17
J16A Bone 84.45 331 ⇓P P 09 39 01.5 -0.2
baz=85
N10A Dunphy 84.48 327 ⇓P P 09 39 01.7 -0.3
baz=85
K14A Jones Ranch, D 84.50 330 ⇓P P 09 39 01.2 -0.7
baz=85,SNR=6.0
MOOW Moose Ponds 84.50 332 *e*P P 09 39 01.3 -0.7
DCID1 Drake Creek 84.55 332 *e*P P 09 39 02.4 +0.3
I17A Pilgram Creek 84.58 332 ⇑P P 09 39 02.3 0.0
baz=85,SNR=8.7
IMW Indian Meadow 84.71 332 *e*P P 09 39 02.9 0.0
comp=Z,13nm,1.0s,mb4.8
M11A Holland Ranch, 84.73 328 ⇓P P 09 39 03.0 -0.1
baz=85,SNR=20
J15A Blackfoot 84.89 331 ⇑P P 09 39 03.8 -0.1
baz=85,SNR=8.2
I16A Newdale 84.91 332 ⇑P P 09 39 03.7 -0.3
baz=85,SNR=11
O08A Rochester Mine 84.92 326 ⇓P P 09 39 03.9 -0.2
baz=85,SNR=6.1
L12A House Creek Ra 84.96 329 ⇑P P 09 39 03.8 -0.4
baz=85,SNR=8.2
K13A Stover Farm, H 84.97 330 ⇑P P 09 39 04.4 +0.1
baz=85
H17A Grant Village 84.98 333 ⇓P P 09 39 05.2 +0.9
baz=85
PAHR Pah Rah Range 85.05 325 *e*P P 09 39 05.7 +0.9
RLMT Red Lodge 85.10 334 ⇑P P 09 39 05.0 +0.1
baz=85
RLMT Red Lodge 85.10 334 *e*P P 09 39 04.4 -0.5
comp=Z,4.5nm,0.4s,mb4.8
YFT Old Faithful 85.13 332 *e*P P 09 39 06.9 +1.9
M10A I.L. Ranch, Tu 85.14 327 ⇑P P 09 39 05.4 +0.2
baz=85
O07A Toulon 85.16 325 ⇑P P 09 39 05.6 +0.3
baz=85
J14A Carey 85.28 330 ⇓P P 09 39 06.1 +0.3
baz=86
P06A Stead Airport, 85.28 324 ⇓P P 09 39 06.4 +0.5
baz=86
N08A GE Springer Mi 85.29 326 ⇓P P 09 39 05.2 -0.8
baz=86,SNR=6.8
L11A Cat Creek Ranc 85.30 328 ⇑P P 09 39 05.5 -0.5
baz=86,SNR=12
K12A Draper Farm, C 85.31 329 ⇓P P 09 39 05.8 -0.2
baz=86,SNR=10
G18A Lazy EL Ranch, 85.38 334 ⇑P P 09 39 05.6 -0.7
baz=86,SNR=9.6
I15A Monteview 85.41 331 ⇑P P 09 39 06.3 -0.2
baz=86,SNR=6.6
M09A Marrel Ranch, 85.48 327 ⇑P P 09 39 07.0 +0.1
baz=86
H16A Russell Place, 85.50 332 ⇓P P 09 39 07.3 +0.4
baz=86
L10A Juniper Basin 85.55 328 ⇑P P 09 39 06.9 -0.4
baz=86,SNR=17
J13A Cove Ranch, Pi 85.61 330 ⇓P P 09 39 07.4 -0.1
baz=86,SNR=17
O06A Flanigan 85.62 325 ⇑P P 09 39 07.6 0.0
baz=86
ULM Lac du Bonnet 85.67 344 P P 09 39 06.2 -1.4
comp=Z,8.9nm,0.8s,mb4.7,baz=147,slow=4.0,SNR=13
ULM Lac du Bonnet 85.67 344 P P 09 39 06.2 -1.4
QLMT Earthquake Lak 85.68 332 *e*P P 09 39 09.2 +1.4
N07B Gerlach 85.69 325 ⇑P P 09 39 08.0 0.0
baz=86
I14A Mackay 85.75 331 ⇓P P 09 39 08.3 +0.1
baz=86,SNR=9.0
G17A Pierce Place, 85.83 333 ⇑P P 09 39 09.0 +0.5
baz=86
HLID Hailey 85.85 330 ⇓P P 09 39 08.9 +0.2
baz=86
J12A Stokes Ranch, 85.89 329 ⇑P P 09 39 08.7 -0.2
baz=86,SNR=16
K11A Parker Ranch, 85.91 328 ⇑P P 09 39 09.2 +0.2
baz=86
M08A Happy Creek Ra 85.93 326 ⇓P P 09 39 09.2 +0.1
baz=86
F18A Big Timber 85.93 334 ⇓P P 09 39 08.7 -0.3
baz=86,SNR=17
H15A Lima 85.98 331 ⇑P P 09 39 09.4 +0.1
baz=86,SNR=12
I13A Wildhorse Cree 86.01 330 ⇑P P 09 39 09.7 +0.3
baz=86,SNR=15
L09A Wilkinson Ranc 86.05 327 ⇓P P 09 39 09.7 0.0
baz=86,SNR=5.6
N06A Buffalo Meadow 86.08 325 ⇓P P 09 39 10.0 +0.1
baz=86,SNR=7.4
G16A Moss Hill, Enn 86.16 332 ⇓P P 09 39 09.6 -0.5
baz=86,SNR=6.1
M07A Soldier Meadow 86.25 326 ⇑P P 09 39 10.8 0.0
baz=86
H14A Leadore 86.28 331 ⇑P P 09 39 10.8 0.0
baz=86,SNR=6.0
F17A Fitzpatrick Pl 86.29 333 ⇓P P 09 39 10.7 -0.1
baz=86,SNR=7.4
K10A MacKenzie Ranc 86.29 328 ⇓P P 09 39 11.0 +0.1
baz=86
DGMT Dagmar 86.29 338 ⇑P P 09 39 10.8 +0.1
baz=87
DGMT Dagmar 86.29 338 *e*P P 09 39 10.6 -0.1
comp=Z,31nm,0.9s,mb5.2
MFID Camas Ranch 86.33 329 ⇓P P 09 39 10.5 -0.6
baz=87,SNR=8.1
I12A Atlanta 86.34 330 ⇑P P 09 39 11.1 0.0
baz=87
G15A Dillon 86.38 332 ⇑P P 09 39 11.1 -0.2
baz=87,SNR=12
BOZ Bozeman (W) 86.44 333 ⇑P P 09 39 11.0 -0.5
baz=87
BOZ Bozeman (W) 86.44 333 *e*P P 09 39 10.9 -0.6
L08A Fields 86.49 327 ⇓P P 09 39 11.6 -0.3
baz=87,SNR=6.4
F16A Kennard Place, 86.55 333 ⇑P P 09 39 11.7 -0.4
baz=87,SNR=5.8
E18A Harlowton 86.57 334 ⇓P P 09 39 11.9 -0.2
baz=87
DLMT Dillon 86.58 332 *e*P P 09 39 12.1 -0.1
comp=Z,8.4nm,1.0s,mb4.6
H13A Challis 86.60 331 ⇓P P 09 39 12.5 +0.1
baz=87,SNR=20

K09A Rome 86.61 327 ⇑P P 09 39 12.2 -0.3
baz=87,SNR=7.0
I11A Placerville 86.79 329 ⇑P P 09 39 12.7 -0.6
baz=87,SNR=6.3
L07A Adell 86.82 326 ⇓P P 09 39 13.8 +0.3
baz=87
E17A Martinsdale 86.83 334 ⇑P P 09 39 13.2 -0.2
baz=87
H12A Diamond D Ranc 86.83 330 ⇑P P 09 39 13.7 +0.2
baz=87
LRM Limekiln Ridge 86.91 332 *e*P P 09 39 13.9 +0.1
F15A Butte 86.94 332 ⇑P P 09 39 13.8 -0.2
baz=87,SNR=15
K08A Mann Creek Ran 86.98 327 ⇑P P 09 39 14.2 0.0
baz=87,SNR=6.6
G13A Cobalt 87.02 331 ⇑P P 09 39 14.4 0.0
baz=87,SNR=15
D18A Linhart Farms, 87.06 335 ⇓P P 09 39 14.3 -0.2
baz=87,SNR=11
J09A Fry Pan Ranch, 87.13 328 ⇑P P 09 39 15.0 0.0
baz=87,SNR=6.8
E16A East Helena 87.20 333 ⇑P P 09 39 14.9 -0.3
baz=87
F14A Wisdom 87.26 332 ⇑P P 09 39 15.6 0.0
baz=88,SNR=11
I10A Payette 87.30 329 ⇓P P 09 39 15.5 -0.2
baz=88,SNR=6.5
K07A Rock Creek Ran 87.30 326 ⇓P P 09 39 16.0 +0.2
baz=88,SNR=12
D17A Six Diamond Ra 87.35 334 ⇓P P 09 39 15.8 -0.1
baz=88
SCHQ Schefferville 87.41 2 P P 09 39 15.1 -0.9
comp=Z,15nm,1.1s,mb4.8,baz=185,slow=3.8,SNR=9.6
H11A Donnelly 87.45 330 ⇓P P 09 39 16.3 -0.2
baz=88,SNR=13
J08A Circle Bar Ran 87.47 327 ⇓P P 09 39 16.7 +0.1
baz=88,SNR=29
E15A Deer Lodge 87.48 333 ⇑P P 09 39 16.2 -0.3
baz=88,SNR=5.4
D16A Dana Ranch, Ca 87.56 333 ⇑P P 09 39 16.9 0.0
baz=88,SNR=7.6
I09A Lost Marbles R 87.62 328 ⇓P P 09 39 17.2 -0.1
baz=88,SNR=38
F13A Darby 87.63 331 ⇑P P 09 39 16.8 -0.5
baz=88,SNR=15
H10A Noah's Angus R 87.67 329 ⇑P P 09 39 17.3 -0.2
baz=88,SNR=13
EGMT Eagleton 87.75 335 ⇓P P 09 39 17.2 -0.6
baz=88
EGMT Eagleton 87.75 335 *e*P P 09 39 17.1 -0.7
C17A Wharram Farm, 87.78 334 ⇓P P 09 39 17.5 -0.5
baz=88,SNR=12
E14A Clinton 87.80 332 ⇑P P 09 39 18.0 -0.1
baz=88,SNR=8.0
J07A Hines 87.86 327 ⇑P P 09 39 18.8 +0.3
baz=88
I08A Drewsey 87.94 328 ⇑P P 09 39 18.4 -0.4
baz=88,SNR=8.4
D15A Lincoln 87.94 333 ⇑P P 09 39 18.6 -0.2
baz=88,SNR=9.1
F12A Elk City 87.98 331 ⇓P P 09 39 18.4 -0.5
baz=88,SNR=7.1
B18A Beardsley Farm 88.07 335 ⇓P P 09 39 18.9 -0.4
baz=88,SNR=9.3
E13A Victor 88.10 332 ⇑P P 09 39 19.2 -0.3
baz=88,SNR=14
K05A Summer Lake 88.10 326 ⇑P P 09 39 19.7 +0.1
baz=88
G11A Walters Elk Ra 88.11 330 ⇓P P 09 39 19.3 -0.3
baz=88,SNR=6.4
H09A Durkee 88.13 329 ⇓P P 09 39 19.5 -0.2
baz=88
J06A Christmas Vall 88.16 326 ⇓P P 09 39 19.6 -0.2
baz=88,SNR=6.3
C16A Fuhringer Ranc 88.28 334 ⇓P P 09 39 19.8 -0.5
baz=88,SNR=13
B17A L&G Farms, Che 88.35 335 ⇑P P 09 39 19.7 -1.0
baz=89,SNR=8.1
D14A Greenough 88.36 332 ⇓P P 09 39 20.4 -0.3
baz=89,SNR=6.1
G10A Bishop Farm, J 88.39 329 ⇑P P 09 39 20.6 -0.3
baz=89
F11A Grangeville 88.46 330 ⇑P P 09 39 20.7 -0.5
baz=89
H08A Prairie City 88.46 328 ⇑P P 09 39 21.4 +0.1
baz=89
I07A Izee 88.50 327 ⇓P P 09 39 21.5 +0.1
baz=89,SNR=6.9
A18A Metzger Ranch, 88.54 335 ⇑P P 09 39 20.6 -0.9
baz=89,SNR=6.7
C15A Salmond Ranch, 88.58 333 ⇓P P 09 39 21.2 -0.5
baz=89,SNR=8.4
E12A Beaver Dam Sad 88.64 331 ⇑P P 09 39 21.4 -0.6
baz=89
G09A Cove 88.67 329 ⇑P P 09 39 21.6 -0.6
baz=89,SNR=12
I06A Prineville 88.72 327 ⇓P P 09 39 22.9 +0.4
baz=89
D13A Huson 88.74 332 ⇑P P 09 39 22.5 0.0
baz=89,SNR=5.8
B16A M & M Farms, S 88.78 334 ⇑P P 09 39 21.8 -0.9
baz=89,SNR=8.5
E11A Bogner Ranch, 88.86 330 ⇓P P 09 39 22.3 -0.8
baz=89
A17A Triple J Farms 88.86 335 ⇑P P 09 39 22.2 -0.8
baz=89,SNR=10.0
H07A Lands Inn, Kim 88.92 328 ⇑P P 09 39 23.6 +0.2
baz=89
F10A Beach Ranch, E 88.98 330 ⇓P P 09 39 23.7 +0.1
baz=89
B15A Bradely Ranch, 89.01 334 ⇑P P 09 39 22.7 -1.0
baz=89,SNR=5.6
C14A Swan Lake 89.01 333 ⇓P P 09 39 23.6 -0.2
baz=89
D12A Red Ives Fores 89.06 331 ⇓P P 09 39 23.6 -0.5
baz=89
A16A West Butte Ran 89.19 335 ⇑P P 09 39 23.8 -0.7
baz=89,SNR=16
G08A Pilot Rock 89.19 328 ⇑P P 09 39 24.4 -0.3
baz=89
C13A Hot Springs 89.26 332 ⇑P P 09 39 24.5 -0.5
baz=90,SNR=5.4
E10A Myers Farm, Un 89.33 330 ⇓P P 09 39 24.8 -0.5
baz=90
VIPM Ingram Point 89.34 327 P P 09 39 25.8 +0.4
I05A Bend 89.37 326 ⇓P P 09 39 26.1 +0.5
baz=90
H06A Lindquist Farm 89.38 327 ⇑P P 09 39 26.0 +0.4
baz=90
BSMT Bassoo Peak 89.49 332 P P 09 39 26.0 0.0
G07A Ruggs Ranch, H 89.49 328 ⇓P P 09 39 26.3 +0.2
baz=90
A15A Johnson Ranch, 89.63 334 ⇓P P 09 39 25.7 -0.9
baz=90
C12B Naegeli Ranch, 89.64 332 ⇑P P 09 39 26.4 -0.4
baz=90,SNR=5.3
H05A Madras 89.72 327 ⇑P P 09 39 27.1 -0.1
baz=90
B13A Whitefish 89.79 333 ⇓P P 09 39 27.3 -0.1
baz=90
E09A Wood Farm, Sta 89.80 329 ⇑P P 09 39 26.9 -0.6
baz=90
D10A Wagner Farm, O 89.86 330 ⇑P P 09 39 26.8 -0.9
baz=90
A14A Double T Ranch 89.88 334 ⇑P P 09 39 27.3 -0.5
baz=90
C11A Tepee Creek (N 90.06 331 ⇓P P 09 39 28.1 -0.6
baz=90,SNR=5.6
E08A Dider Farm, El 90.17 329 ⇓P P 09 39 29.3 0.0
baz=90
A13A Flathead Natio 90.22 333 ⇓P P 09 39 29.6 +0.2
baz=90
D09A Jones Farm, Ri 90.30 330 ⇑P P 09 39 29.7 -0.1
baz=90
B12A Libby 90.30 332 ⇓P P 09 39 29.9 +0.2
baz=90
F06A Goldendale 90.37 328 ⇑P P 09 39 30.5 +0.3
baz=91
C10A Spilker Farm, 90.47 331 ⇓P P 09 39 30.2 -0.4
baz=91
D08A Wollman Farm, 90.55 329 ⇓P P 09 39 30.9 -0.1
baz=91
E07A Sunnyside 90.57 329 ⇑P P 09 39 31.3 +0.3
baz=91
A12A Yaak River Ran 90.70 332 ⇓P P 09 39 31.8 +0.2
baz=91
OD2 Odessa Site #2 90.72 330 P P 09 39 31.6 -0.2
C09A Chrisman Ranch 90.86 330 ⇑P P 09 39 31.7 -0.7

baz=91,SNR=5.6
A11A Hall Mountain, 91.00 332 ⇓P P 09 39 32.3 -0.7
baz=91,SNR=11
D07A Quincy 91.11 329 ⇓P P 09 39 34.0 +0.4
baz=91
B09A Rice 91.30 331 ⇓P P 09 39 33.9 -0.5
baz=92
A10A Northport 91.50 331 ⇓P P 09 39 34.7 -0.6
baz=92
C07A Waterville 91.53 329 ⇑P P 09 39 35.3 -0.2
baz=92
B08A Colville Reser 91.74 330 ⇑P P 09 39 35.7 -0.8
baz=92
A09A Danville 91.91 331 ⇑P P 09 39 36.6 -0.7
baz=92
B07A Winthrop 92.15 330 ⇑P P 09 39 37.8 -0.6
baz=92
A08A Turner Farm, O 92.18 330 ⇑P P 09 39 37.7 -0.8
baz=92
A07A Ashnola River, 92.72 330 ⇑P P 09 39 40.8 -0.2
baz=93
ESDC Sonseca Array 95.07 45 pP pP 09 40 07.1 -3.3
comp=Z,0.4nm,0.3s,baz=268,slow=5.0,SNR=1.9
YKA Yellowknife Ar 101.31 341 P Pdif 09 40 17.9 -2.3
comp=Z,0.6nm,0.5s,baz=144,slow=4.5,SNR=34
YKA pP 09 40 34.4
comp=Z,0.4nm,0.6s,baz=146,slow=4.7,SNR=4.1
YKA PP PP 09 44 26.0 -4.0
comp=Z,0.4nm,1.0s,baz=142,slow=6.8,SNR=4.3
YKA PKKPbc PKKPbc 09 56 27.2 -3.3
comp=Z,0.2nm,0.5s,baz=321,slow=3.6,SNR=14
YKA tx tx 09 56 44.2
comp=Z,0.1nm,0.5s,baz=328,slow=3.3,SNR=3.2
YKA Yellowknife Ar 101.31 341 P Pdif 09 40 17.9 -2.3
YKA 09 44 26.1
YKA Yellowknife Ar 101.31 341 P Pdif 09 40 17.9 -2.3
YKA pP 09 40 34.4
YKA PP PP 09 44 26.1 -4.0
YKA PKKPbc PKKPbc 09 56 27.2 -3.3
GERES GERESS Array B 110.65 45 PKiKP PKiKP 09 45 00.6 -0.6
comp=Z,0.4nm,0.5s,baz=119,slow=1.2,SNR=3.8
ASAR Alice Springs 119.03 206 PKP PKPdf 09 45 16.4 -1.8
comp=Z,1.0nm,0.4s,baz=129,slow=1.6,SNR=30
ASAR pPKP pPKPdf 09 45 33.5 -3.8
comp=Z,0.4nm,0.5s,baz=129,slow=1.6,SNR=2.6
ASAR PKKPbc PKKPbc 09 55 31.6 -0.2
comp=Z,0.4nm,0.8s,baz=336,slow=2.5,SNR=4.6
ASAR tx tx 09 55 47.9
comp=Z,0.4nm,0.8s,baz=347,slow=3.3,SNR=4.5
ASAR Alice Springs 119.03 206 PKP PKPdf 09 45 16.4 -1.8
ASAR pPKP pPKPdf 09 45 33.5 -3.8
ASAR PKKPbc PKKPbc 09 55 31.6 -0.2
BRTR Keskin Array B 120.41 60 PKP PKPdf 09 45 20.1 -0.1
comp=Z,1.5nm,0.7s,baz=176,slow=2.9,SNR=5.9
BRTR pPKP pPKPdf 09 45 36.8 -2.5
comp=Z,1.2nm,0.8s,baz=183,slow=2.5,SNR=3.2
WRA Warramunga Arr 122.23 208 PKP PKPdf 09 45 22.9 -1.6
comp=Z,4.6nm,0.6s,baz=157,slow=1.7
WRA pPKP pPKPdf 09 45 39.8 -3.7
WRA PKKPbc PKKPbc 09 55 19.4 -0.4
comp=Z,0.4nm,1.0s,baz=342,slow=4.4,SNR=5.0
WRA tx tx 09 55 36.3
comp=Z,0.3nm,0.6s,baz=341,slow=4.2,SNR=4.5
WRA Warramunga Arr 122.23 208 PKP PKPdf 09 45 22.9 -1.6
WRA pPKP pPKPdf 09 45 39.8 -3.7
WRA PKKPbc PKKPbc 09 55 19.4 -0.4
WRAB Tennant Creek 122.24 208 *i* PKIKP PKPdf 09 45 22.3 -2.2
ARCES ARCESS Array B 122.57 25 PKP PKPdf 09 45 22.6 -0.8
comp=Z,10nm,0.9s,baz=238,slow=3.1,SNR=4.2
OBN Obninsk 125.93 43 *i* PKIKP PKPdf 09 45 28.7 -1.6
OBN pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 127.90 36 *e*PKIKP PKPdf 09 45 32.7 -1.2
KIV Kislovodsk 128.04 57 *e*PKIKP PKPdf 09 45 32.7 -2.0
KIV pmax pmax
comp=Z,12nm,1.1s
ARU Arti 138.24 40 *i* PKIKP PKPdf 09 45 53.3 -0.2
ARU 09 48 41.7
SEY Seymchan 139.53 331 *i* PKIKP PKPdf 09 45 56.7 +1.0
TIXI Tiksi 139.75 350 *i* PKIKP PKPdf 09 45 55.5 -0.4
PETK Petropavlovsk- 140.07 315 PKhKP 09 45 51.2
comp=Z,2.9nm,0.8s,baz=98,slow=7.7,SNR=4.0
PETK Petropavlovsk- 140.07 315 PKP 09 45 51.2
AB31 Akbulak array 140.19 51 PKHKP 09 45 48.7
AB31 pmax pmax
comp=Z,7.0nm,0.8s
POO Poona 145.31 106 *e*P PKPbc 09 46 05.0 -2.2
BRVK Borovoye 145.70 42 *e*PKP2 PKPab 09 46 07.4 -0.4
BVA0 Borovoye Array 145.77 42 *i* PKP2 PKPab 09 46 07.8 -0.3
BVA0 pmax pmax
comp=Z,9.0nm,1.2s
VOSK Vostochnaya 146.21 43 PKP2 PKPab 09 46 08.0 -1.8
VOSK pmax pmax
comp=Z,15nm,0.7s
YAK Yakutsk 147.98 342 *e*PKIKP PKPdf 09 46 11.8 +1.4
YAK pmax pmax
comp=Z,62nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.3s
KK31 Karatay Array 148.12 60 *i* PKP2 PKPbc 09 46 14.1 -0.5
KK31 pmax pmax
comp=Z,6.0nm,0.6s
HYB Hyderabad 148.46 112 *i* PKP PKPbc 09 46 16.0 -0.2
HYB Hyderabad 148.46 112 *e*P PKPbc 09 46 16.0 -0.2
KSM Kuching 148.75 182 *e*PKPbc PKPbc 09 46 15.9 -1.2
EKS2 Erkin-Say 150.56 60 P PKPbc 09 46 21.6 +0.9
SNR=8.9
EKS2 Erkin-Say 150.56 60 *e*PKPdf PKPdf 09 46 16.0 +0.8
AML Almayashu 150.56 61 P PKPbc 09 46 22.0 +1.3
SNR=6.3
AML Almayashu 150.56 61 *e*PKPdf PKPdf 09 46 15.8 +0.6
USP Ospenovka 150.99 59 P PKPbc 09 46 22.3 +0.6
SNR=14
AAK Ala-Archa 151.08 60 P PKPbc 09 46 23.0 +1.1
SNR=16
AAK Ala-Archa 151.08 60 *e*PKPdf PKPdf 09 46 16.9 +0.9
CHMS Chumysh 151.22 59 P PKPbc 09 46 22.8 +0.6
SNR=6.2
KURK Kurchatov 151.37 42 *c i*PKIKP PKPbc 09 46 20.6 -1.7
KURK Kurchatov 151.37 42 *e*PKPbc PKPbc 09 46 22.4 +0.1
NVS Novosibirsk 151.45 32 *i* PKIKP PKPbc 09 46 22.2 -0.1
NVS pmax pmax
comp=Z,54nm,1.0s
NVS pmax pmax
comp=E,22nm,1.2s
TKM2 Tokmak 2 151.84 59 P PKPbc 09 46 24.1 +0.5
SNR=9.3
TKM2 Tokmak 2 151.84 59 *e*PKPdf PKPdf 09 46 17.5 +0.3
ULHL Ulahol 152.42 61 P PKPbc 09 46 25.9 +1.0
SNR=8.4
ZAA0 Zalesovo Array 152.74 32 *e*PKPdf PKPdf 09 46 17.7 -0.4
ZAA0 *e*PKPbc PKPbc 09 46 25.0 -0.3
ZALV Zalesovo Beam 152.74 32 PKP PKPdf 09 46 17.7 -0.4
comp=E,3.0nm,0.7s,baz=264,slow=1.9,SNR=14
ZALV PKPbc PKPbc 09 46 25.4 +0.1
comp=E,37nm,0.6s,baz=299,slow=3.1,SNR=79
ZALV pPKPbc pPKPbc 09 46 42.5 -1.7
comp=E,17nm,0.5s,baz=327,slow=3.2,SNR=9.1
ZALV Zalesovo Beam 152.74 32 PKIKP PKPdf 09 46 17.7 -0.4
ZALV 09 46 25.4
BOD Bodaibo 154.83 354 *e*PKIKP PKPbc 09 46 26.6 -3.0
BOD *e* 09 46 44.2
BOD pmax pmax
comp=Z,3.0nm,0.8s
BOD pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 155.26 48 *e*PKIKP PKPdf 09 46 21.1 -0.8
MK31 *e* 09 46 30.9
MKAR Makanchi Array 155.26 48 PKP PKPdf 09 46 22.0 +0.1
comp=Z,1.7nm,0.7s,baz=340,slow=1.3,SNR=11
MKAR PKPbc PKPdf 09 46 30.6 +8.7
comp=Z,2.5nm,0.7s,baz=301,slow=2.1,SNR=12
MKAR pPKPbc pPKPbc 09 46 47.8 -2.1
comp=Z,3.3nm,0.6s,baz=297,slow=4.2,SNR=9.7
MKAR pPKPab pPKPab 09 47 04.2 -1.6
comp=Z,4.2nm,0.7s,baz=298,slow=2.9,SNR=6.5
MKAR Makanchi Array 155.26 48 PKIKP PKPdf 09 46 22.0 +0.1
MKAR 09 46 30.6
WMQ Urumqi 159.98 51 *e*PKP PKPdf 09 46 26.8 -1.1
CMAR Chiang Mai Arr 162.97 145 PKP PKPdf 09 46 31.5 -0.3
comp=Z,0.8nm,0.3s,baz=250,slow=3.2,SNR=5.4
CMAR pPKP pPKPdf 09 46 49.1 -1.7
comp=Z,0.9nm,0.3s,baz=55,slow=25,SNR=2.1
KSRS Korea Array 163.99 292 PKP PKPdf 09 46 31.1 -1.1

	comp=Z,2.6nm,0.9s,baz=38,slow=0.6,SNR=7.3						
KSRS				PKPab	PKPab	09 47 25.5	-0.1
	comp=Z,2.7nm,1.0s,baz=102,slow=4.1,SNR=4.8						
SONM	**Songino Array**	**164.90**	**7**	PKP	PKPdf	09 46 32.0	-0.6
	comp=Z,0.8nm,0.9s,baz=330,slow=1.6,SNR=4.2						
SONM				PKPab	PKPab	09 47 29.8	+0.7
	comp=Z,1.6nm,0.8s,baz=328,slow=4.5,SNR=7.6						
SONM				PP	PP	09 51 14.6	-0.5
	comp=Z,0.2nm,0.4s,baz=340,slow=3.5,SNR=4.7						
KMI	**Kunming**	**170.46**	**142**	PKP	PKPdf	09 46 36.1	-1.2
BJI	**Beijing**	**170.88**	**324**	PKP	PKPdf	09 46 37.0	0.0
NJ2	**Nanjing**	**171.76**	**267**	*e*PKP	PKPdf	09 46 35.8	-1.9
HHC	**Hu-ho-hao-te**	**171.80**	**347**	*e*PKP	PKPdf	09 46 36.1	-1.4
HHC				PKP2	PKPab	09 48 00.6	+0.8
HHC				PKS		09 50 07.4	
HHC				PP	PP	09 51 52.3	+2.1
HHC				SKS	SKSdf	09 53 27.3	-7.7
HHC				SKKS	SKKSac	09 58 28.1	-3.4
HHC				SS	SS	10 12 49.5	-2.8
HHC				PP	PP		
	comp=Z,76nm,6.0s						
HHC				LR	LR		
	comp=N,64nm,15.5s						
HHC				LR	LR		
	comp=E,101nm,17.8s						
HHC				LR	LR		
	comp=Z,100nm,16.6s						
GYA	**Guiyang**	**173.26**	**161**	*e*PKP	PKPdf	09 46 35.3	-3.3
GYA				PKP2	PKPab	09 48 06.4	-0.2
GYA				PKS		09 50 06.8	
GYA				PP	PP	09 51 58.8	+1.3
GYA				PP	PP		
	comp=Z,120nm,8.7s						
LZH	**Lanzhou**	**174.56**	**52**	*e*PKP	PKPdf	09 46 37.5	-1.2
LZH				*e*PP	PP	09 52 05.4	+0.6
LZH				SKKS	SKKSac	09 58 40.5	-4.8
LZH				*e*SS	SS	10 13 14.6	-6.5
LZH				PP	PP		
	comp=Z,113nm,9.1s						
LZH				LR	LR		
	comp=N,112nm,18.5s						
LZH				LR	LR		
	comp=Z,175nm,20.3s						
CD2	**Chengdu**	**175.01**	**112**	PKP	PKPdf	09 46 36.0	-3.0
XAN	**Xi'an**	**178.81**	**9**	PKP	PKPdf	09 46 37.8	-1.8
XAN				PKP2		09 48 30.8	
XAN				PP	PP	09 52 31.9	+8.1
XAN				SKS	SKSdf	09 53 28.9	-7.9
XAN				SKKS	SKKSac	09 59 00.8	-4.0
XAN				SS	SS	10 13 55.3	-4.0
XAN				LR	LR		
	comp=N,40nm,32.7s						
XAN				LR	LR		
	comp=E,40nm,26.2s						

*NEIC **17** 09:41:37.3, 3270S×7169W, h5km, ML3.1(GUC), After GUC.*

GUC 17 09:41:37.3±0.8**, 3270S**×**7169W, h5**km±4km**, MD4.0, ML3.1, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.33**	**173**	*e*P	Pg	09 41 44.1	+0.4
IHA				*i* S	Sg	09 41 49.1	+1.0
ROCH	**El Roble**	**0.63**	**116**	*e*P	Pg	09 41 50.6	+1.2
JACH	**Jahuel**	**0.93**	**89**	*e*P	Pg	09 41 54.7	-0.4
JACH				*i* S	Sg	09 42 08.5	+1.4
PEL	**Peldehue**	**0.95**	**118**	*e*P	Pg	09 41 55.8	+0.2
PEL				*i* S	Sg	09 42 09.3	+1.3
PEL				AML	AML	09 42 13.5	
	comp=E,2µm,0.3s						
TACH	**Talagante**	**1.14**	**147**	*e*P	Pg	09 41 58.1	-1.1
TACH				*i* S	Sg	09 42 12.6	-1.5
FCH	**Farellones**	**1.33**	**119**	*e*P	Pn	09 42 02.7	+0.1
FCH				*e*S	Sb	09 42 21.0	+0.8
FCH				AML	AML	09 42 25.1	
	comp=E,348nm,0.2s						
PCH	**Pirque**	**1.35**	**133**	*e*P	Pn	09 42 01.9	-0.8
PCH				*i* S	Sb	09 42 21.5	+0.9

*CSEM **17** 09:51:32.8, 2181N×3792E, h30km, ML3.5, After SNSN*

SGS 17 09:51:32.8, 2181N×3792E, h30km, Sudan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHMS		**1.69**	**102**	P	Pn	09 51 58.5	-1.7
SHMS		**1.69**	**102**	P	Pn	09 51 58.5	-1.8
SHMS				S	Sn	09 52 17.0	-3.9
SHBS		**1.83**	**116**	P	Pn	09 52 00.4	-1.8
FDAS		**2.27**	**89**	P	Pn	09 52 07.3	-1.0
FDAS		**2.27**	**89**	P	Pn	09 52 07.3	-0.9
FDAS				S	Sn	09 52 32.7	-2.5
FRAS	**Faraa**	**2.53**	**107**	P	Pn	09 52 11.5	-0.4
FRAS	**Faraa**	**2.53**	**107**	P	Pn	09 52 11.5	-0.4
FRAS				S	Sn	09 52 39.3	-2.5
LTHS	**Al Lith**	**2.78**	**123**	S	Sn	09 52 45.3	-2.7
LTHS	**Al Lith**	**2.78**	**123**	P	Pn	09 52 14.4	-0.9

*IDC **17** 10:29:12.9±3.9, 2321S×70.18W, h56km±31km, mb3.3/2, mb1 3.5/4, mb1mx3.3/18, mbtmp3.3/4, ML3.8/2, Error ellipse: s-maj=51.0km s-min=27.5km az=133.0*

*ISCJB **17** 10:29:13.2±0.8, 2289S±006×7026W±009, h65km±6km, mb3.4/2, Error ellipse: s-maj=15.1km s-min=8.4km az=32.1*

*GUC **17** 10:29:13.1±0.9, 2296S×70.11W, h52km±10km, ML3.3*

ISC 17 10:29:14.1±0.8**, 2288S**±006×**7027W**±009**, h59**km±7km**, n11,** σ**0^{s}78**/18**, mb3.5**/2**, 4C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.28**	**217**	*e*P	**Pn**	**10 29 22.8**	**-1.2**
MECH				*i* S	**Sn**	**10 29 30.3**	**-0.8**
MECH				AML	AML	10 29 31.1	
	comp=E,7µm,0.3s						
CEN1	**Los Morros**	**0.51**	**173**	⇑*i*P	**Pn**	**10 29 26.7**	**+0.5**
CEN1				*i* S	**Sn**	**10 29 36.5**	**+1.7**
CEN1				AML	AML	10 29 37.3	
	comp=E,1µm,0.3s						
MACH	**Maria Elena**	**0.83**	**35**	⇑*i*P	**Pn**	**10 29 29.7**	**-0.3**
MACH				*i* S	**Sn**	**10 29 41.6**	**+0.1**
PB04	**Plate Boundary**	**0.95**	**50**	⇑*i*P	**Pn**	**10 29 26.4**	**-5.0**
PB04				*i* S	**Sn**	**10 29 35.9**	**-8.3**
PB04				AML	AML	10 29 39.0	
	comp=N,4µm,0.2s						
LVC	**Limon Verde**	**1.28**	**78**	P	**Pn**	**10 29 35.6**	**-0.2**
	comp=N,116nm,0.3s,baz=87,slow=0.0,SNR=987						
LVC				S	**Sn**	**10 29 51.7**	**-0.3**
	comp=N,250nm,0.3s,baz=218,slow=0.0,SNR=30						
LVC	**Limon Verde**	**1.28**	**78**	⇓*i*P	**Pn**	**10 29 35.6**	**-0.2**
LVC				*i* S	**Sn**	**10 29 51.6**	**-0.5**
LVC				AML	AML	10 29 52.2	
	comp=N,1µm,0.4s						
PB01	**Plate Boundary**	**1.97**	**22**	⇑*i*P	**Pn**	**10 29 45.7**	**+0.6**
PB01				*i* S	**Sn**	**10 30 09.7**	**+1.0**
PB01				AML	AML	10 30 14.9	
	comp=E,344nm,0.3s						
SIV	**San Ignacio**	**11.05**	**53**	P	**Pn**	**10 31 48.6**	**-0.9**
	comp=E,0.3nm,0.3s,baz=243,slow=14,SNR=4.0						
PLCA	**Paso Flores**	**17.80**	**181**	P	**Pn**	**10 33 12.2**	**-5.5**
	comp=E,0.1nm,0.3s,baz=7.1,slow=8.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**79.00**	**71**	P	**P**	**10 41 11.7**	**-0.6**
	comp=E,0.4nm,0.6s,mb3.5,baz=253,slow=4.3,SNR=15						
YKA	**Yellowknife Ar**	**92.07**	**341**	P	**P**	**10 42 16.8**	**+0.6**
	comp=E,0.1nm,0.6s,mb3.4,baz=139,slow=4.4,SNR=7.1						

*CSEM **17** 10:36:43.6±0.1, 37.19N×28.18E, h12km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.7km az=179.0*

*DDA **17** 10:36:43.3, 3721N×28.15E, h7km±2km, Md2.9*

*ISK **17** 10:36:43.8, 37.19N×28.17E, h13km, MD2.8*

*ISCJB **17** 10:36:44.0±0.6, 3722N±007×28.19E±005, h11km±10km, Error ellipse: s-maj=13.2km s-min=5.0km az=20.2*

ISC 17 10:36:44.3±0.5**, 3722N**±007×**2818E**±005**, h12**km±10km**, n11,** σ**0^{s}92**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**137**	PG	**Pg**	**10 36 47.1**	**-0.3**
MLSB	**Milas**	**0.33**	**283**	PG	**Pg**	**10 36 51.1**	**+0.1**
MLSB				*e*SG	**Sg**	**10 36 56.2**	**+0.7**
TURN	**Turunc**	**0.48**	**136**	*i* P	**Pg**	**10 36 53.0**	**-0.9**
TURN				*i* S	**Sg**	**10 37 00.4**	**+0.1**
BDRM	**Kayabasi**	**0.61**	**255**	*i* P	**Pg**	**10 36 57.0**	**+0.8**
DAT	**Datca**	**0.69**	**225**	*e*PG	**Pg**	**10 36 57.1**	**-0.6**
GCAM	**G?zelcaml?**	**0.89**	**303**	*i* P	**Pg**	**10 37 00.8**	**-0.8**
GCAM				*i* S	**Sg**	**10 37 12.6**	**-0.6**
GOLH	**Golhisar**	**1.10**	**89**	*i* P	**Pg**	**10 37 04.8**	**-0.7**
GOLH				*i* S	**Sg**	**10 37 22.5**	**+2.7**
KULA	**Kula-Manisa**	**1.34**	**16**	*e*PN	**Pn**	**10 37 09.4**	**+0.6**
ELL	**Elmali**	**1.46**	**108**	*e*PN	**Pn**	**10 37 10.5**	**+0.1**
KHL	**Karahalli**	**1.53**	**44**	*e*PN	**Pn**	**10 37 12.2**	**+0.8**
KHAL	**Karahalli**	**1.55**	**42**	*i* P	**Pn**	**10 37 12.6**	**+1.0**
KHAL				*i* S	**Sn**	**10 37 29.8**	**-1.8**

*ISCJB **17** 11:07:03.9±1.1, 4832N±0.10×1543E±0.1, h82km±11km, mb3.5/9, Error ellipse: s-maj=20.6km s-min=7.4km az=136.5*

*MOS **17** 11:07:04.4±1.4, 4831N×15425E, h86km, mb3.9/5, Error ellipse: s-maj=21.1km s-min=10.1km az=56.5*

*IDC **17** 11:07:05.4±3.5, 4830N×154.10E, h75km±33km, mb3.3/9, mb1 3.6/11, mb1mx3.4/25, mbtmp3.3/11, MS3.4/2, Ms1 3.4/2, ms1mx2.7/24, Error ellipse: s-maj=26.2km s-min=17.1km az=139.0*

*NEIC **17** 11:07:06.0±0.8, 4833N×154.17E, h80km±8km, Error ellipse: s-maj=15.8km s-min=6.3km az=136.0*

ISC 17 11:07:05.4±0.9**, 4831N**±009×**1543E**±01**, h79**km±9km**, n31,** σ**1^{s}05**/32**, mb3.5**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.66**	**26**	*e*PN	**Pn**	**11 07 44.0**	**-2.0**
SKR				*e*S	**Sn**	**11 08 17.9**	**+0.7**
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=N,290nm,0.4s						
SKR				smax			
	comp=E,200nm,0.4s						
PEA0B	**Petropavlovsk-**	**5.27**	**23**	*e*Pn	**Pn**	**11 08 22.2**	**+0.7**
PETK	**Petropavlovsk-**	**5.27**	**23**	P	**Pn**	**11 08 22.2**	**+0.7**
	comp=E,1.4nm,0.3s,baz=179,slow=12,SNR=71						
PETK	**Petropavlovsk-**	**5.27**	**23**	P	**Pn**	**11 08 22.2**	**+0.7**
PET	**Petropavlovsk**	**5.47**	**29**	*e*PN	**Pn**	**11 08 29.0**	**+4.8**
PET				*e*S	**Sn**	**11 09 25.1**	**-0.6**
PET				pmax	pmax		
	comp=Z,12nm,0.5s						
PET				smax			
	comp=E,50nm,0.7s						
PET	**Petropavlovsk**	**5.47**	**29**	*e*Pn	**Pn**	**11 08 25.2**	**+0.9**
PET				*e*Sn	**Sn**	**11 09 25.4**	**-0.3**
YSS	**Yuzh-Sakhalins**	**7.92**	**264**	*e*PN	**Pn**	**11 08 57.7**	**+0.1**
ASAJ	**Asahikawa**	**9.13**	**247**	P	**Pn**	**11 09 16.8**	**+2.6**
	comp=E,1.2nm,0.3s,baz=74,slow=16,SNR=8.3						
ASAJ	**Asahikawa**	**9.13**	**247**	PN	**Pn**	**11 09 16.8**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**10.07**	**235**	*e*PN	**Pn**	**11 09 26.4**	**-0.6**
FX1	**Attu Island--F**	**12.82**	**62**	P	**Pn**	**11 10 02.3**	**-2.0**
	comp=Z,1.7nm,0.3s,baz=261,slow=16,SNR=9.6						
FX1				S	**Sn**	**11 12 11.8**	**-13**
	comp=Z,0.7nm,0.3s,baz=193,slow=20,SNR=5.1						
MJAR	**Matsushiro Arr**	**16.67**	**231**	P	**Pn**	**11 10 53.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=3.1						
KSRS	**Korea Array**	**22.05**	**250**	P	**P**	**11 11 52.4**	**-1.1**
	comp=Z,1.9nm,0.6s,mb3.6,baz=44,slow=11,SNR=7.4						
KSRS	**Korea Array**	**22.05**	**250**	P	**P**	**11 11 52.4**	**-1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
SONM	**Songino Array**	**31.60**	**287**	LR	LR	11 27 36.1	
	comp=Z,33nm,18.0s,baz=42,slow=39						
ZALV	**Zalesovo Beam**	**42.37**	**305**	PcP	PcP	11 16 44.2	+1.0
	comp=Z,0.4nm,0.3s,baz=46,slow=4.2,SNR=3.5						
MKAR	**Makanchi Array**	**46.95**	**297**	P	**P**	**11 15 27.0**	**-0.9**
	comp=Z,0.3nm,0.5s,mb3.3,baz=75,slow=9.2,SNR=3.6						
KURK	**Kurchatov**	**47.18**	**303**	P	**P**	**11 15 29.4**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.3,baz=70,slow=8.1,SNR=3.5						
DAV	**Davao City (W)**	**47.77**	**220**	LR	LR	11 34 44.4	
	comp=Z,83nm,21.4s,baz=27,slow=35						
YKA	**Yellowknife Ar**	**49.20**	**38**	P	**P**	**11 15 46.5**	**+1.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=295,slow=7.0,SNR=7.8						
YKA	**Yellowknife Ar**	**49.20**	**38**	P	**P**	**11 15 46.5**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**49.20**	**38**	P	**P**	**11 15 46.5**	**+1.5**
BVAR	**Borovoye Array**	**50.50**	**309**	P	**P**	**11 15 54.5**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=59,slow=7.8,SNR=6.6						
BVAR	**Borovoye Array**	**50.50**	**309**	P	**P**	**11 15 54.5**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.52**	**256**	P	**P**	**11 16 18.7**	**+0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=24,slow=6.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**53.52**	**256**	P	**P**	**11 16 18.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DLH	**Dalhousie**	**59.16**	**286**	*e*P	**P**	**11 16 57.0**	**-0.8**
WRA	**Warramunga Arr**	**70.25**	**200**	P	**P**	**11 18 09.4**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.8,baz=14,slow=6.4,SNR=5.0						
WRA	**Warramunga Arr**	**70.25**	**200**	P	**P**	**11 18 09.4**	**-0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**73.94**	**199**	P	**P**	**11 18 32.2**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.2,baz=11,slow=4.8,SNR=6.3						
TXAR	**Lajitas Array**	**76.04**	**62**	P	**P**	**11 18 45.5**	**+1.4**
	comp=Z,0.4nm,0.7s,mb3.2,baz=299,slow=5.9,SNR=6.3						

*BJI **17** 11:13:30.2, 39.17N×7162E, h10km, mb3.9, ML3.5, Ms3.9*

*IDC **17** 11:13:37.1±0.9, 3921N×7254E, h0km, mb3.8/10, mb1 3.9/15, mb1mx3.8/27, mbtmp3.7/15, ML3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/29, Error ellipse: s-maj=17.2km s-min=15.3km az=18.0*

*MOS **17** 11:13:41.9±2.0, 3956N×7243E, h33km, mb4.2/4, Error ellipse: s-maj=18.3km s-min=8.4km az=76.4*

*NEIC **17** 11:13:42.6±0.8, 3969N×72.14E, h10km, Error ellipse: s-maj=17.6km s-min=9.0km az=136.0*

*ISCJB **17** 11:13:44.2±0.9, 3956N±005×7243E±007, h60km±9km, mb3.6/12, Error ellipse: s-maj=9.0km s-min=8.3km az=17.6*

*NNC **17** 11:13:47.5±3.1, 4007N×7234E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=32.1km s-min=15.5km az=10.0*

ISC 17 11:13:46.0±0.9**, 3960N**±006×**7243E**±006**, h54**km±9km**, n53,** σ**1^{s}43**/62**, mb3.6**/12**, 11C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.70**	**20**	P	**Pn**	**11 14 27.0**	**+0.1**
	SNR=65						
AML	**Almayashu**	**2.70**	**20**	*e*Pn	**Pn**	**11 14 26.8**	**-0.1**
AML				*e*Sn	**Sn**	**11 15 01.4**	**+3.1**
KSH	**Kashi**	**2.74**	**91**	*e*P	**Pn**	**11 14 23.0**	**-4.4**
KSH				Smax			
	comp=N,1µm,0.8s						
KSH				Smax			
	comp=E,1µm,0.9s						
UCH	**Uchtor**	**3.06**	**30**	*e*Pn	**Pn**	**11 14 32.1**	**+0.3**
UCH				*e*Sn	**Sn**	**11 15 05.6**	**-1.6**
EKS2	**Erkin-Say**	**3.22**	**18**	P	**Pn**	**11 14 35.0**	**+1.0**
	SNR=17						
EKS2	**Erkin-Say**	**3.22**	**18**	*e*Pn	**Pn**	**11 14 34.8**	**+0.8**
EKS2				*e*Sn	**Sn**	**11 15 12.3**	**+1.2**
KZA	**Kyzart**	**3.27**	**40**	P	**Pn**	**11 14 33.9**	**-0.8**
	SNR=18						
AAK	**Ala-Archa**	**3.41**	**27**	P	**Pn**	**11 14 36.8**	**+0.3**
	SNR=42						
AAK	**Ala-Archa**	**3.41**	**27**	*e*Pn	**Pn**	**11 14 36.5**	**0.0**
AAK				*e*Sn	**Sn**	**11 15 20.6**	**+4.9**
KBK	**Karagaybulak**	**3.60**	**31**	P	**Pn**	**11 14 39.9**	**+0.8**
	SNR=8.0						
KK31	**Karatay Array**	**3.78**	**338**	⇑Pn	**Pn**	**11 14 44.1**	**+2.4**
	comp=E,12nm,0.5s,baz=147,slow=12,SNR=150						
KK31				⇑Lg		11 15 32.7	
	comp=E,73nm,0.5s,baz=153,slow=23,SNR=13						
CHMS	**Chumysh**	**3.82**	**27**	P	**Pn**	**11 14 42.2**	**0.0**
	SNR=17						
ULHL	**Ulahol**	**3.91**	**46**	P	**Pn**	**11 14 42.3**	**-1.2**
	SNR=18						
USP	**Ospenovka**	**3.98**	**22**	P	**Pn**	**11 14 44.5**	**+0.1**
	SNR=16						
TKM2	**Tokmak 2**	**4.09**	**35**	⇑Pn	**Pn**	**11 14 45.8**	**-0.1**
	comp=E,11nm,0.4s						
TKM2				⇓Lg		11 15 48.2	
	comp=E,124nm,1.1s						
TKM2	**Tokmak 2**	**4.09**	**35**	P	**Pn**	**11 14 45.8**	**-0.1**
	SNR=15						
TKM2	**Tokmak 2**	**4.09**	**35**	*e*Pn	**Pn**	**11 14 45.3**	**-0.6**
KNDC	**Almaty**	**4.97**	**42**	⇓Pn	**Pn**	**11 15 01.4**	**+3.5**
	comp=E,56nm,0.8s						
KNDC				⇑Lg		11 16 14.8	
	comp=E,135nm,0.6s						
KBL	**Kabul**	**5.73**	**209**	*e*PN	**Pn**	**11 15 08.5**	**+0.1**
KBL				*e*		11 16 20.5	
KBL				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBL	**Kabul**	**5.73**	**209**	*e*Pn	**Pn**	**11 15 08.5**	**+0.1**
	comp=Z,9.9nm,0.5s						
KBL				*e*Sn	**Sn**	**11 16 20.5**	**+7.6**
MK31	**Makanchi Array**	**10.17**	**42**	⇑Pn	**Pn**	**11 16 12.5**	**+3.5**
	comp=Z,2.1nm,0.8s,baz=213,slow=14,SNR=8.9						
MK31				⇑Lg		11 18 58.8	
	comp=Z,12nm,1.2s,baz=177,slow=24,SNR=4.1						
MKAR	**Makanchi Array**	**10.17**	**42**	Pn	**Pn**	**11 16 10.2**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=223,slow=14,SNR=8.8						
MKAR				Lg		11 19 00.9	
	comp=Z,0.1nm,0.3s,baz=227,slow=26,SNR=5.1						
KURBB	**Kurchatov Arra**	**11.83**	**19**	⇓Pn	**Pn**	**11 16 35.9**	**+4.2**
	comp=Z,0.2nm,0.7s						
KURBB				⇑Lg		11 19 54.2	
	comp=Z,5.9nm,1.2s						
KURK	**Kurchatov**	**11.94**	**19**	⇑Lg		11 19 59.5	
	comp=Z,7.9nm,0.9s						
KURK	**Kurchatov**	**11.94**	**19**	Pn	**Pn**	**11 16 29.1**	**-4.0**
	comp=Z,0.0nm,0.3s,baz=205,slow=12,SNR=4.3						
KURK				Lg		11 19 55.8	
	comp=Z,0.1nm,0.3s,baz=217,slow=31,SNR=7.3						
AB31	**Akbulak array**	**13.12**	**321**	Pn	**Pn**	**11 16 47.9**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=134,slow=13,SNR=4.6						
AB31				Sn	**Sn**	**11 19 07.3**	**-6.3**
	comp=Z,2.6nm,0.4s,baz=133,slow=24,SNR=5.2						
VOSK	**Vostochnaya**	**13.16**	**356**	⇓Pn	**Pn**	**11 16 45.7**	**-4.2**
	comp=Z,3.0nm,1.1s						
VOSK				⇑Lg		11 20 33.0	
	comp=Z,16nm,1.4s						
BVA0	**Borovoye Array**	**13.50**	**355**	⇓Pn	**Pn**	**11 16 50.5**	**-3.9**
	comp=Z,0.3nm,0.8s,baz=163,slow=11,SNR=3.6						
BVA0				Sn	**Sn**	**11 19 19.9**	**-2.8**
	comp=Z,0.7nm,1.1s,baz=178,slow=26,SNR=4.6						
BVAR	**Borovoye Array**	**13.50**	**355**	Pn	**Pn**	**11 16 51.9**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=152,slow=9.8,SNR=3.8						
BVAR				LR	LR	11 22 50.1	
	comp=Z,61nm,21.3s,baz=30,slow=40						
AKTK	**Aktyubinsk**	**14.84**	**322**	Pn	**Pn**	**11 17 08.7**	**-3.7**
AKTK				Sn	**Sn**	**11 19 55.0**	**-0.4**
AKTO	**Aktyubinsk**	**14.84**	**322**	⇑Pn	**Pn**	**11 17 17.7**	**+5.4**
	comp=Z,1.3nm,0.5s						
AKTO				⇑Sn	**Sn**	**11 19 54.0**	**-1.4**
	comp=Z,0.7nm,0.7s						
AKTO	**Aktyubinsk**	**14.84**	**322**	Pn	**Pn**	**11 17 08.7**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=107,slow=14,SNR=3.2						
AKTO				Sn	**Sn**	**11 19 55.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=6.1						
ZAA0	**Zalesovo Array**	**16.63**	**26**	*e*Pn	**Pn**	**11 17 38.1**	**+3.0**
ZALV	**Zalesovo Beam**	**16.63**	**26**	Pn	**Pn**	**11 17 35.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=213,slow=11,SNR=10						
NVS	**Novosibirsk**	**16.89**	**22**	*e*P	**Pn**	**11 17 38.5**	**+0.2**
GTA	**Gaotai**	**21.11**	**82**	*e*P	**P**	**11 18 23.5**	**-2.4**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb3.9						
ZAK	**Zakamensk**	**24.17**	**53**	*e*	**P**	**11 18 55.7**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.1						
SONM	**Songino Array**	**25.73**	**60**	P	**P**	**11 19 09.7**	**-1.4**
	comp=Z,0.6nm,0.7s,mb3.2,baz=287,slow=7.4,SNR=6.3						
SONM	**Songino Array**	**25.73**	**60**	P	**P**	**11 19 09.7**	**-1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**29.70**	**283**	P	**P**	**11 19 47.9**	**+1.2**
	comp=Z,0.3nm,0.5s,mb3.3,baz=134,slow=37,SNR=2.7						
ARCES	**ARCESS Array B**	**38.74**	**336**	P	**P**	**11 21 06.1**	**+1.6**
	comp=Z,5.6nm,1.0s,mb4.2,baz=114,slow=8.2,SNR=7.0						
ARCES	**ARCESS Array B**	**38.74**	**336**	P	**P**	**11 21 06.1**	**+1.7**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES	**ARCESS Array B**	**38.74**	**336**	P	**P**	**11 21 06.1**	**+1.6**
GERES	**GERESS Array B**	**42.13**	**303**	P	**P**	**11 21 34.3**	**+1.6**
	comp=Z,0.8nm,0.6s,mb3.6,baz=63,slow=5.0,SNR=3.7						
GERES	**GERESS Array B**	**42.13**	**303**	P	**P**	**11 21 34.3**	**+1.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**42.63**	**321**	P	**P**	**11 21 37.6**	**+1.0**
	comp=Z,1.3nm,0.7s,mb3.8,baz=92,slow=8.1,SNR=3.4						
NOA	**NORSAR Array B**	**42.63**	**321**	P	**P**	**11 21 37.6**	**+1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**56.98**	**46**	P	**P**	**11 23 27.2**	**+1.6**
	comp=Z,3.2nm,1.0s,mb4.3,baz=280,slow=2.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**66.93**	**268**	P	**P**	**11 24 32.3**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=58,slow=5.0,SNR=5.7						
YKA	**Yellowknife Ar**	**78.09**	**3**	P	**P**	**11 25 38.9**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=350,slow=5.6,SNR=24						
YKA	**Yellowknife Ar**	**78.09**	**3**	P	**P**	**11 25 38.9**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**82.71**	**123**	P	**P**	**11 26 01.0**	**-2.9**
	comp=Z,0.4nm,0.7s,mb3.6,baz=323,slow=5.0,SNR=7.0						
ASAR	**Alice Springs**	**85.13**	**126**	P	**P**	**11 26 13.2**	**-3.0**
	comp=Z,0.2nm,0.9s,mb3.2,baz=313,slow=4.8,SNR=2.9						

*NEIC **17** 11:25:38.4, 5097N×17956E, h8km, ML3.2(AEIC), After AEIC.*

*ISCJB **17** 11:25:41.9±2.2, 512N±04×1796E±0.1, h53km±15km, mb3.4/4, Error ellipse: s-maj=60.1km s-min=10.7km az=8.0*

*IDC **17** 11:25:44.5±5.1, 5127N×17958E, h61km±44km, mb3.1/4, mb1 3.6/6, mb1mx3.3/26, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=82.8km s-min=25.2km az=8.0*

ISC 17 11:25:43.3±2.1**, 512N**±04×**1797E**±01**, h47**km±15km**, n10,** σ**0^{s}65**/11**, mb3.4**/4**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.38**	**72**	P	**Pn**	**11 26 19.8**	**0.0**
SMY	**Shemya**	**3.76**	**296**	P	**Pn**	**11 26 38.1**	**-0.6**
FX1	**Attu Island--F**	**4.35**	**295**	P	**Pn**	**11 26 46.6**	**-0.1**
	11nm,0.3s,baz=194,slow=6.8,SNR=31						
FX1				S	**Sn**	**11 27 35.8**	**-0.2**
	baz=343,slow=14,SNR=1.6						
PETK	**Petropavlovsk-**	**13.61**	**287**	P	**Pn**	**11 28 54.3**	**+0.9**
	0.1nm,0.3s,baz=98,slow=19,SNR=3.2						
TIXI	**Tiksi**	**30.31**	**331**	*e*P	**P**	**11 31 51.0**	**+1.3**
YKA	**Yellowknife Ar**	**36.05**	**46**	P	**P**	**11 32 39.1**	**-0.6**
	0.2nm,0.5s,mb3.3,baz=281,slow=7.6,SNR=7.3						
PDAR	**Pinedale Array**	**47.28**	**71**	P	**P**	**11 34 12.2**	**+0.4**
	0.7nm,0.6s,mb3.8,baz=303,slow=4.4,SNR=6.9						
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**11 35 39.4**	**-1.0**
	0.3nm,0.5s,mb3.5,baz=66,slow=5.2,SNR=5.0						
MKAR	**Makanchi Array**	**59.38**	**308**	P	**P**	**11 35 39.4**	**-1.0**
TXAR	**Lajitas Array**	**59.64**	**80**	P	**P**	**11 35 42.4**	**-0.1**
	0.1nm,0.5s,mb3.1,baz=321,slow=7.1,SNR=3.4						

*NEIC **17** 11:29:43.7, 3272S×7172W, h33km, ML3.4(GUC), After GUC.*

GUC 17 11:29:43.7±0.7**, 3272S**×**7172W, h33**km±3km**, MD4.1, ML3.4, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.95**	**88**	⇑*i*P	Pn	11 30 00.8	0.0
JACH				*i* S	Sn	11 30 14.2	+1.1
PEL	**Peldehue**	**0.97**	**116**	⇑*e*P	Pn	11 30 01.4	+0.4
PEL				*i* S	Sn	11 30 14.9	+1.4
PEL				AML	AML	11 30 19.1	
	comp=E,4µm,0.3s						
TACH	**Talagante**	**1.14**	**145**	*e*P	Pn	11 30 03.7	+0.4
TACH				*i* S	Sn	11 30 18.9	+1.2
CLCH	**Cerro Calan**	**1.20**	**124**	*e*P	Pn	11 30 04.9	+0.7
CLCH				*i* S	Sn	11 30 21.0	+1.7
CLCH				AML	AML	11 30 27.6	
	comp=E,1µm,0.5s						
LNV	**Longovilo**	**1.26**	**168**	*e*P	Pn	11 30 05.0	+0.1
LNV				*i* S	Sn	11 30 21.2	+0.5
FCH	**Farellones**	**1.34**	**117**	⇓*i*P	Pn	11 30 07.6	+1.4
FCH				*e*S	Sn	11 30 25.7	+2.9
FCH				AML	AML	11 30 29.1	
	comp=E,839nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCH	Pirque	1.35	132	eP	Pn	11 30 07.5	+1.3
PCH				iS	Sn	11 30 25.4	+2.3
YECH	El Yeso	1.66	125	eP	Pn	11 30 12.7	+2.2
YECH				iS	Sn	11 30 34.7	+3.9
LMEL	Las Melosas	1.69	132	eP	Pn	11 30 13.4	+2.5
LMEL				iS	Sn	11 30 36.6	+5.1

IDC 17 11:48:09.3±1.3, 3272S×7158W, h0^{km}, mb4.0/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, ML4.3/2, Error ellipse: s-maj=40.6km s-min=24.4km az=116.0
GUC 17 11:48:13.6±0.8, 3266S×7171W, h9^{km}±6^{km}, MD4.3, ML4.1
NEIC 17 11:48:13.6, 3266S×7171W, h9^{km}, ML4.1(GUC), After GUC.
ISC 17 11:48:12.2±1.1, 3259S±004×7180W±006, h21^{km}±6^{km}, h19^{km}±1.9^{km}:pP-P, n29, σ0.90s/42, mb4.0/2, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.46	163	⇓iP	Pb	11 48 21.5	0.0
IHA				iS	Sb	11 48 27.0	-0.9
ROCH	El Roble	0.77	120	⇑iP	Pb	11 48 27.1	+0.3
JACH	Jahuel	1.02	96	eP	Pb	11 48 31.2	+0.1
PEL	Peldehue	1.09	121	⇑eP	Pn	11 48 32.0	-0.2
PEL				iS	Sb	11 48 45.8	-0.2
PEL				AML	AML	11 48 48.9	
	comp=N,16µm,0.6s						
SAN	Santiago	1.29	132	eP	Pn	11 48 35.0	+0.1
SAN				iS	Sn	11 48 50.4	-1.1
CLCH	Cerro Calan	1.33	128	⇓eP	Pn	11 48 35.8	+0.2
CLCH				iS	Sn	11 48 52.3	-0.3
CLCH				AML	AML	11 48 56.1	
	comp=E,5µm,0.6s						
ANTU	Antumapu	1.38	135	eP	Pn	11 48 36.4	+0.2
ANTU				S	Sn	11 48 53.2	-0.7
ANTU	Antumapu	1.38	135	eP	Pn	11 48 36.4	+0.2
ANTU				iS	Sn	11 48 53.2	-0.7
ANTU				AML	AML	11 48 59.2	
	comp=N,6µm,0.7s						
LNV	Longovilo	1.40	167	⇑iP	Pn	11 48 35.5	-1.0
LNV				iS	Sn	11 48 52.9	-1.5
FCH	Farellones	1.47	121	⇓iP	Pn	11 48 38.1	+0.7
FCH				iS	Sn	11 48 56.4	+0.4
FCH				AML	AML	11 49 00.3	
	comp=N,4µm,0.5s						
PCH	Pirque	1.49	134	eP	Pn	11 48 38.0	+0.3
PCH				iS	Sn	11 48 57.5	+0.9
SJCH	San Jose de Ma	1.60	131	eP	Pn	11 48 40.1	+0.9
SJCH				iS	Sn	11 48 58.8	-0.5
CHCH	Chadas Angostu	1.65	145	eP	Pn	11 48 38.8	-1.1
CHCH				iS	Sn	11 48 59.8	-0.7
CACH	El Canelo	1.82	147	eP	Pn	11 48 43.7	+1.4
CACH				iS	Sn	11 49 06.9	+2.1
LMEL	Las Melosas	1.83	134	eP	Pn	11 48 43.8	+1.3
LMEL				iS	Sn	11 49 06.8	+1.7
LMEL	Las Melosas	1.83	134	eP	Pn	11 48 43.8	+1.3
LMEL				iS	Sn	11 49 06.8	+1.7
LMEL				AML	AML	11 49 10.9	
	comp=N,3µm,0.4s						
PLCA	Paso Flores	8.19	173	Pn	Pn	11 50 09.6	-0.2
	comp=N,0.8nm,0.3s,baz=333,slow=12,SNR=23						
PLCA				Lg		11 52 22.7	
	baz=359,slow=13,SNR=4.3						
PLCA	Paso Flores	8.19	173	Pn	Pn	11 50 09.6	-0.2
PLCA				Lg		11 52 22.7	
CPUP	Villa Florida	14.06	67	Pn	Pn	11 51 30.1	0.0
	comp=N,0.4nm,0.3s,baz=204,slow=10.0,SNR=2.6						
CPUP				Sn	Sn	11 54 03.7	-1.8
	comp=N,0.2nm,0.3s,baz=266,slow=12,SNR=1.8						
CPUP				Lg		11 55 28.3	
	comp=N,0.5nm,0.3s,baz=129,slow=20,SNR=3.2						
CPUP	Villa Florida	14.06	67	Pn	Pn	11 51 30.1	0.0
CPUP				Sn	Sn	11 54 03.7	-1.8
CPUP				Lg		11 55 28.3	
VNA3	Neumayer Olymp	50.59	158	e	P	11 57 09.2	+0.3
VNA3				e	pP	11 57 14.5	-1.0
VNA3				e		11 57 22.0	
VNA3				e		11 57 33.2	
VNA1	Neumayer--Stat	50.89	157	e	P	11 57 12.5	+1.3
VNA1				e	pP	11 57 17.3	-0.5
VNA2	Neumayer--Watz	51.24	158	e	P	11 57 14.0	+0.2
VNA2				e	pP	11 57 18.4	-1.9
VNA2				e		11 57 26.4	
VNA2				e		11 57 37.6	
SNAA	Sanae	52.82	158	e	P	11 57 23.8	-1.8
SNAA				e	pP	11 57 30.9	-1.2
DBIC	Dimbokro	74.54	71	P	P	11 59 49.1	-0.6
	comp=N,1.5nm,0.9s,mb3.9,baz=260,slow=11,SNR=3.0						
TORD	Torodi Ar. Bea	83.54	70	P	P	12 00 39.5	+0.6
	comp=N,1.0nm,0.7s,mb4.0,baz=251,slow=4.3,SNR=5.8						
WRA	Warramunga Arr	122.09	209	PKP	PKPdf	12 07 05.2	-0.5
	comp=N,0.2nm,0.6s,baz=150,slow=1.5,SNR=3.2						
ZALV	Zalesovo Beam	152.92	31	PKPbc	PKPbc	12 08 08.0	+0.8
	comp=N,2.3nm,0.7s,baz=292,slow=3.2,SNR=10						
MKAR	Makanchi Array	155.67	47	PKPab	PKPab	12 08 30.9	+0.4
	comp=N,0.5nm,0.6s,baz=307,slow=2.5,SNR=7.6						

CSEM 17 12:02:47.9, 3987N×3302E, h7^{km}, MD3.0, After ERD
DDA 17 12:02:47.9, 3987N×3302E, h7^{km}±2^{km}, Md3.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	Eldivan	0.69	26	iP	Pg	12 03 01.4	+0.3
ELDT				iS	Sg	12 03 12.7	+2.6
KDHN	Kadinhani	1.52	208	iP	Pn	12 03 16.6	+1.1
KDHN				iS	Sn	12 03 38.2	+2.7
CTKT	Corum	1.54	60	iP	Pn	12 03 16.6	+0.8
CTKT				iS	Sn	12 03 39.0	+2.9
AVNT	Avonos	1.79	127	iP	Pn	12 03 21.9	+2.7
AVNT				iS	Sn	12 03 46.7	+4.5

NEIC 17 12:07:36.0, 4001N×1999E, h10^{km}, MD3.1(ATH), After ATH.
THE 17 12:07:44.7, 3936N×2069E, h0^{km}±2^{km}, ML3.0/5, Error ellipse: s-maj=2.5km s-min=0.8km az=222.0
SKO 17 12:07:44.9, 3937N×2070E, h1^{km}
CSEM 17 12:07:45.0±0.2, 3937N×2067E, h10^{km}, ML3.0/5, Error ellipse: s-maj=7.3km s-min=3.1km az=104.0
ISCJB 17 12:07:45.5±0.5, 3940N±002×2068E±004, h10^{km}, Error ellipse: s-maj=4.2km s-min=3.5km az=7.7
ATH 17 12:07:46.8, 3945N×2074E, h11^{km}±4^{km}, MD3.1/4
ISC 17 12:07:45.3±0.5, 3939N±002×2070E±004, h0^{km}±6^{km}, n20, σ0.97s/33, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.29	25	ePG	Pg	12 07 51.0	+0.2
JAN				eSG	Sg	12 07 54.8	+0.2
JAN	Janina	0.29	25	ePg	Pg	12 07 50.0	-0.8
JAN				eSg	Sg	12 07 54.8	+0.2
IGT	Igoumenitsa	0.31	297	P	Pg	12 07 50.7	-0.6
IGT				S	Sg	12 07 56.1	+0.7
KEK	Kerkira	0.76	295	ePB	Pg	12 08 01.5	+1.6
EVR	Evrytania	0.99	118	ePB	Pg	12 08 05.5	+1.3
THL	Klokotos Trika	1.04	80	P	Pg	12 08 03.5	-1.6
THL				S	Sg	12 08 19.7	+1.1
VLS	Valsamata	1.22	184	P	Pg	12 08 06.5	-2.1
VLS				S	Sg	12 08 24.4	0.0
VLS	Valsamata	1.22	184	P	Pg	12 08 08.3	-0.3
VLS				S	Sg	12 08 24.4	0.0
KZN	Kozani	1.23	42	ePB	Pg	12 08 09.0	+0.1
KFL	Anninata	1.28	177	P	Pg	12 08 08.4	-1.5
KFL				S	Sg	12 08 26.8	+0.3
AGG	Agios Georgios	1.32	106	P	Pg	12 08 08.5	-2.2
AGG				S	Sg	12 08 28.6	+0.8
RLS	Riolos of Patr	1.46	155	P	Pg	12 08 15.2	+1.9
FNA	Florina	1.48	20	P	Pn	12 08 12.9	-0.3
FNA				S	Sb	12 08 33.6	+0.5
LIT	Litokhoron	1.55	62	P	Pn	12 08 13.3	-0.8
LIT				S	Sn	12 08 36.0	+1.1
BIA	Bitola	1.69	16	ePn	Pn	12 08 16.1	0.0
BIA				eSg	Sg	12 08 40.0	+0.3
KRUS	Krusevo	2.02	12	ePn	Pn	12 08 20.6	+0.1
KRUS				eSg	Sg	12 08 48.8	-1.3
KRUS	Krusevo	2.02	12	ePn	Pn	12 08 20.6	+0.1
KRUS				eSg	Sg	12 08 48.9	-1.3
GRG	Griva	2.04	39	P	Pn	12 08 20.6	-0.2
PLG	Polygyros	2.33	64	P	Pn	12 08 24.1	-0.7
SOH	Sokhos	2.49	54	P	Pn	12 08 26.9	-0.1

IDC 17 12:08:51.9±3.1, 525S×10335E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, 1C, Error ellipse: s-maj=139.2km s-min=17.4km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	23.96	350	P	P	12 14 07.5	-0.6
	0.4nm,0.4s,baz=183,slow=10,SNR=7.1						
WRA	Warramunga Arr	33.49	119	P	P	12 15 32.9	-0.4
	0.2nm,0.7s,baz=303,slow=9.1,SNR=4.3						
ASAR	Alice Springs	34.66	125	P	P	12 15 43.4	0.0
	0.2nm,0.3s,baz=299,slow=7.7,SNR=13						
STKA	Stephens Creek	44.51	131	P	P	12 17 05.6	+0.2
	1.6nm,0.8s,baz=310,slow=16,SNR=2.7						
SONM	Songino Array	52.93	3	P	P	12 18 10.7	+0.9
	0.4nm,0.3s,baz=194,slow=4.3,SNR=4.6						
MKAR	Makanchi Array	55.08	342	P	P	12 18 25.9	+0.4
	0.6nm,0.5s,baz=144,slow=8.8,SNR=16						
ZALV	Zalesovo Beam	61.00	348	P	P	12 19 06.3	-0.6
	0.7nm,0.3s,baz=141,slow=5.2,SNR=5.5						
SYO	Syowa Base	75.91	199	⇑eP	P	12 20 32.7	-7.3

JMA 17 12:29:38.1±0.3, 4354N×14778E, h8^{km}, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.49	264	P	Pn	12 30 05.5	+0.3
NEM2				eS	Sn	12 30 25.5	+0.7
JRA	Rausu	1.97	283	P	Pn	12 30 12.4	+0.7
JNK	Nakash	2.23	272	eS	Sn	12 30 42.6	-0.3
JAK	Akkeshi	2.32	257	P	Pn	12 30 17.3	+0.8
JAK				eS	Sn	12 30 46.1	+0.9
JAR	Ashorobuto	2.93	267	P	Pn	12 30 26.4	+1.4
JAR				eS	Sn	12 31 01.6	+1.3
JCH	Churui	3.37	256	P	Pn	12 30 32.5	+1.6
JCH				eS	Sn	12 31 11.7	+0.7
JFR	Furan	3.80	266	eS	Sn	12 31 23.5	+1.7
JNBK	Urakawa-nobuka	3.90	253	P	Pn	12 30 39.2	+0.9

BJI 17 12:46:12.6, 1080S×11340E, h10^{km}, mB5.2, mb5.2, Ms4.8, Msz4.5
GCMT 17 12:46:14.6±0.2, 1090S×11342E, h24^{km}, MW5.3/87, Moment Tensor Solution. s53,c77; s87,c163; Duration: 1.0s Moment tensor: Scale 10^{17}Nm; M_{rr}-0.41±.03; $M_{\theta\theta}$0.94±.02; $M_{\phi\phi}$-0.52±.02; $M_{r\theta}$0.07±.02; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$-0.40±.04; Best double couple: $M_0$0.95100×10^{17} NP1:ϕ_s62.00000°,δ58.00000°,λ-154.00000°. NP2: ϕ_s318.00000°,δ68.00000°,λ-34.00000°. Principal axes: T 1.0090, Plg6.0000°, Azm12.0000°; N -0.1150, Plg50.0000°, Azm109.0000°; P -0.8940, Plg39.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 17 12:46:14.7±0.2, 1076S×11336E, h10^{km}, mb5.4/32 Error ellipse: s-maj=6.7km s-min=4.7km az=56.0
NEIC Felt [II] at Blitar. Also felt at Mataram, Lombok.
DJA 17 12:46:15, 1103S×11325E, h11^{km}, Mw5.4/16
MOS 17 12:46:16.8±1.0, 1064S×11340E, h33^{km}, mb5.4/30, Error ellipse: s-maj=12.7km s-min=6.8km az=110.1
ISCJB 17 12:46:17.8±0.2, 1079S±003×11334E±003, h47^{km}, mb5.3/101, MS4.4/34, Error ellipse: s-maj=4.3km s-min=3.6km az=136.0
IDC 17 12:46:20.1±0.5, 1070S×11340E, h47^{km}±4^{km}, mb4.8/19, mb1 4.8/20, mb1mx4.8/22, mbtmp4.8/20, MS4.5/17, Ms1 4.5/17, ms1mx4.4/23, Error ellipse: s-maj=15.1km s-min=10.0km az=75.0
ISC 17 12:46:19.9±0.2, 1079S±003×11336E±003, h49^{km}, h49^{km}±2.7^{km}:pP-P, n263, σ1.12s/262, mb5.3/101, MS4.4/34, 18C-12D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	2.63	42	P	Pn	12 46 58.2	-1.7
NBBI	Negara	2.70	28	P	Pn	12 47 00.3	-0.6
NBBI				S	Sn	12 47 32.9	+0.5
KRKI	Karangkates	2.76	341	P	Pn	12 47 00.2	-1.5
DNP	Denpasar	2.78	41	P	Pn	12 47 01.4	-0.6
KHKI	Kahang-Kahang	3.27	43	P	Pn	12 47 07.6	-1.1
SJI	Sawahan	3.41	332	P	Pn	12 47 09.1	-1.6
SJI				S	Sn	12 47 48.8	-1.1
KMMI	Kalianget	3.76	9	P	Pn	12 47 15.9	+0.4
UGM	Wanagama	4.00	315	P	Pn	12 47 16.5	-2.2
SMRI	Semarang	4.70	322	P	Pn	12 47 28.2	-0.2
CLJI	Cilicap	5.26	305	P	Pn	12 47 33.4	-2.6
	840nm,0.9s,26nm						
LEM	Lembang	6.90	304	P	Pn	12 47 57.3	-1.3
	584nm,1.1s,3.3nm						
WSI	Waingapu	6.92	81	P	Pn	12 47 57.9	-0.9
	995nm,0.5s,27nm						
BBKI	Banjar Baru	7.42	12	P	Pn	12 48 06.6	+0.9
XMIS	Christmas Isla	7.58	272	eP	Pn	12 48 02.9	-5.0
XMIS				eS	Sn	12 49 17.0	-16
XMIS	Christmas Isla	7.58	272	P	Pn	12 48 03.1	-4.8
	0.0nm,0.6s,0.0nm						
CBJI	Citeko	7.76	303	P	Pn	12 48 07.7	-2.7
DBJI	Dramaga	7.77	302	P	Pn	12 48 09.4	-1.1
PLKI	Palangkaraya	8.52	4	P	Pn	12 48 21.0	+0.2
KAPI	Kappang	8.54	48	Pn	Pn	12 48 18.3	-2.8
	319nm,0.5s,SNR=16						
KAPI	Kappang	8.54	48	P	Pn	12 48 18.1	-3.0
	5.5nm,0.3s,baz=221,slow=5.1,SNR=25						
KAPI				S	Sn	12 49 48.7	-7.4
	15nm,0.3s,baz=90,slow=24,SNR=14						
KAPI				LR	LR	12 52 29.1	
	comp=Z,5µm,18.2s,baz=227,slow=44						
KAPI	Kappang	8.54	48	ePn	Pn	12 48 18.6	-2.5
KAPI				eSn	Sn	12 49 52.5	-3.6
KAPI	Kappang	8.54	48	P	Pn	12 48 18.5	-2.6
BATI	Baumata	10.15	88	P	Pn	12 48 40.9	-2.2
	66nm,0.3s,baz=264,slow=0.7,SNR=56						
BATI				S	Sn	12 50 26.5	-9.1
	45nm,0.3s,baz=15,slow=22,SNR=11						
BATI	Baumata	10.15	88	P	Pn	12 48 41.1	-2.0
	256nm,0.6s,2µm						
KLI	Kotabumi	10.27	304	P	Pn	12 48 43.3	-1.5
KDI	Kendari	11.41	54	P	Pn	12 49 01.6	+1.2
	25nm,1.7s,1µm						
PCI	Palu	11.74	34	P	Pn	12 49 07.1	+2.3
	121nm,1.4s,2µm						
MBWA	Marble Bar	11.99	150	ePn	Pn	12 49 02.0	-6.3
MBWA				eSn	Sn	12 51 01.3	-19
MBWA	Marble Bar	11.99	150	P	Pn	12 49 02.0	-6.3
	189nm,0.8s,2µm						
KSM	Kuching	12.55	346	ePn	Pn	12 49 15.7	-0.2
	32nm,0.8s						
KSM	Kuching	12.55	346	⇓P	Pn	12 49 20.0	+4.1
KSM	Kuching	12.55	346	P	Pn	12 49 16.2	+0.3
	43nm,1.0s,575nm						
KSI	Kapahiang	12.81	303	P	Pn	12 49 16.1	-3.4
	758nm,0.8s,7µm						
SBUM	Sibu	13.20	355	⇑P	Pn	12 49 29.3	+4.5
SBUM	Sibu	13.20	355	P	Pn	12 49 25.1	+0.3
	58nm,0.9s,714nm						
BTM	Bintulu	13.89	359	⇑P	Pn	12 49 37.9	+3.6
FITZ	Fitzroy Crossi	13.94	123	eP	Pn	12 49 28.4	-6.4
	64nm,0.4s						
FITZ				eS	Sn	12 51 52.0	-16
FITZ	Fitzroy Crossi	13.94	123	P	Pn	12 49 29.2	-5.6
	119nm,0.8s						
TSM	Tawau	15.64	17	⇑P	Pn	12 50 03.3	+6.1
MYKOM	Kota Tinggi	15.67	322	⇓P	Pn	12 49 59.1	+1.4
KNA	Kununurra	15.79	110	eP	Pn	12 49 54.4	-4.7
	63nm,0.8s						
KNA				eS	Sn	12 52 35.8	-17
PDSI	Padang	16.14	307	P	Pn	12 49 56.8	-6.8
KGM	Kluang	16.17	321	⇑P	Pn	12 50 05.8	+1.8
AAI	Ambon	16.31	65	P	Pn	12 50 05.9	+0.1
	162nm,0.7s,2µm						
PPI	Padang Panjang	16.47	308	P	Pn	12 50 02.1	-5.7
MYLDM	Lahad Datu	16.66	18	⇑P	Pn	12 50 14.2	+4.0
MYLDM	Lahad Datu	16.66	18	P	Pn	12 50 12.6	+2.4
MNI	Manado	16.67	44	P	Pn	12 50 11.9	+1.6
SDKM	Sandakan	16.76	13	⇓P	Pn	12 50 15.0	+3.6
KKM	Kota Kinabalu	16.96	10	ePn	Pn	12 50 12.3	-1.6
	40nm,0.8s						
KKM	Kota Kinabalu	16.96	10	⇑P	Pn	12 50 16.6	+2.7
KKM	Kota Kinabalu	16.96	10	P	Pn	12 50 12.8	-1.1
LBMI	Labuha	17.30	55	P	Pn	12 50 18.6	+0.5
	177nm,0.7s,1µm						
KDM	Kudat	17.92	11	⇑P	Pn	12 50 29.0	+3.2
TNTI	Ternate	18.05	51	P	Pn	12 50 26.9	-0.5
	245nm,1.0s,4µm						
FRIM	Kepong	18.18	319	⇑P	Pn	12 50 30.0	+1.1
KAKA	Kakadu	18.78	98	eP	x	12 50 14.1	
	60nm,0.9s						
KAKA	Kakadu	18.78	98	P	x	12 50 14.9	
KTGM	Kuala Trenggan	18.97	327	⇓P	Pn	12 50 40.7	+2.2
IPM	Ipoh	19.51	320	⇑P	Pn	12 50 45.4	+0.5
IPM	Ipoh	19.51	320	P	Pn	12 50 44.0	-0.9
	69nm,0.6s,759nm						
PSI	Prapat	19.71	312	P	Pn	12 50 40.6	-6.7
	0.9nm,0.3s,baz=128,slow=7.3,SNR=7.0						
PSI				LR	LR	13 00 15.4	
	comp=Z,3µm,19.3s,baz=129,slow=43						
GSI	Gunungsitoli	19.77	306	P	Pn	12 50 42.0	-6.0
KULM	Kulim	20.37	321	⇑P	P	12 50 53.5	+0.8
KLBR	Kellerberrin	21.10	170	eP	P	12 51 02.4	+2.0
	212nm,1.3s,mb5.3						
KLBR				eS	S	12 54 35.8	-17
MUN	Mundaring	21.25	173	eP	P	12 51 05.3	+3.3
MUN				eS	S	12 54 41.5	-14
DAV	Davao City (W)	21.51	35	P	P	12 51 04.7	-0.2
	100nm,0.3s,mb5.7,baz=340,slow=12,SNR=4.8						
DAV				LR	LR	13 01 23.8	
	comp=Z,1µm,18.1s,MS4.3,baz=206,slow=42						
WRA	Warramunga Arr	22.16	117	P	P	12 51 11.0	-0.8
	34nm,0.8s,mb4.8,baz=289,slow=12,SNR=194						
WRA				S	S	12 55 05.7	-7.8
	12nm,0.7s,baz=293,slow=23,SNR=5.9						
WRA				LR	LR	12 59 50.5	
	comp=Z,1µm,18.1s,MS4.4,baz=305,slow=37						
WRA	Warramunga Arr	22.16	117	P	P	12 51 11.0	-0.9
WRA				S	S	12 55 05.7	-7.8
WRAB	Tennant Creek	22.17	117	P	P	12 51 11.0	-0.9
	451nm,0.8s,mb6.0,SNR=29						
WRAB	Tennant Creek	22.17	117	d iP	P	12 51 11.3	-0.6
WRAB	Tennant Creek	22.17	117	eP	P	12 51 11.0	-1.0
	78nm,1.1s,mb5.0						
WRAB	Tennant Creek	22.17	117	P	P	12 51 11.5	-0.4
WB2	Warramunga Arr	22.17	117	eP	P	12 51 11.1	-0.9
WB2				eS	S	12 55 06.0	-7.7
NWAO	Narrogin (SRO)	22.32	171	P	P	12 51 13.2	-0.2
	26nm,0.7s,mb4.8,baz=18,slow=16,SNR=4.9						
NWAO				S	S	12 55 08.2	-8.1
	30nm,0.3s,baz=171,slow=7.2,SNR=6.1						
NWAO				LR	LR	12 58 50.6	
	comp=Z,706nm,20.4s,MS4.1,baz=206,slow=34						
NWAO	Narrogin (SRO)	22.32	171	eP	P	12 51 12.3	-1.1
ASAR	Alice Springs	23.39	126	P	P	12 51 24.2	-0.4
	30nm,0.8s,mb4.8,baz=303,slow=9.8,SNR=500						
ASAR				S	S	12 55 38.9	+4.8
	32nm,0.8s,baz=300,slow=23,SNR=16						
FORT	Forrest	24.13	148	eP	P	12 51 31.4	+0.1
	175nm,0.7s,mb5.6						
FORT				eS	S	12 55 46.2	+0.3
BAKI	Biak	24.52	69	P	P	12 51 35.3	+0.2
	127nm,0.9s,mb5.4						
NNT	Nongplab	26.88	329	P	P	12 51 58.5	+2.2
NST	Nakhon Sawan	29.37	333	P	P	12 52 18.3	-0.2
	45nm,0.7s,mb5.3						
QIZ	Qiongzhong	29.83	353	P	P	12 52 23.9	+1.3
QIZ				S	S	12 57 15.1	-1.0
QIZ				AMB	AMB		
	comp=Z,62nm,1.4s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,140nm,3.0s						
QIZ				LR	LR		
	comp=N,626nm,15.8s						
QIZ				LR	LR		
	comp=Z,858nm,17.5s,MS4.4						
BDT	Bhumibol Dam	31.26	333	⇑P	P	12 52 36.0	+0.8
	comp=Z,13nm,1.0s,mb4.7						
CMAR	Chiang Mai Arr	32.35	334	P	P	12 52 45.6	+0.8
	comp=Z,22nm,0.8s,mb5.0,baz=169,slow=8.4,SNR=113						
CMAR				LR	LR	13 07 28.5	
	comp=Z,880nm,18.0s,MS4.5,baz=349,slow=39						
CHG	Chiang Mai	32.67	334	⇑P	P	12 52 48.1	+0.5
	comp=Z,26nm,0.6s,mb5.3						
CHTO	Chiang Mai	32.67	334	eP	P	12 52 47.4	-0.2
CHTO				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
CHTO	Chiang Mai	32.67	334	eP	P	12 52 47.4	-0.2
	comp=Z,24nm,1.0s,mb5.1						
CHTO	Chiang Mai	32.67	334	P	P	12 52 48.6	+1.0
CTAO	Charters Tower	32.97	110	eP	P	12 52 48.2	-2.1
CHRT	Chiangrai	33.27	336	⇓P	P	12 52 53.0	+0.2
PMG	Port Moresby	33.30	91	eP	P	12 52 54.4	+1.2
PMG				e*PP	pP	12 53 05.5	-0.6
PMG				pmax	pmax		
	comp=Z,16nm,1.0s						
PMG	Port Moresby	33.30	91	eP	P	12 52 54.4	+1.2
	comp=Z,16nm,1.0s,mb4.9						
PMG				epP	pP	12 53 05.5	-0.6
STKA	Stephens Creek	33.47	133	eP	P	12 52 55.7	+1.2
	comp=Z,28nm,0.8s,mb5.2						
STKA	Stephens Creek	33.47	133	P	P	12 52 55.5	+1.0
	comp=Z,13nm,0.7s,mb5.0,baz=311,slow=8.8,SNR=15						
STKA				pP	pP	12 53 08.5	+1.1
	comp=Z,29nm,0.8s,baz=300,slow=10,SNR=15						
STKA				LR	LR	13 06 29.3	
	comp=Z,2µm,20.5s,MS4.9,baz=297,slow=36						
TPUB	Ta-pu	34.61	12	eP	P	12 53 04.2	-0.2
	comp=Z,53nm,0.9s,mb5.5						
YULB	Yu-li	34.84	13	eP	P	12 53 04.4	-2.0
	comp=Z,21nm,0.8s,mb5.1						
SSLB	Suanglung	35.15	12	eP	P	12 53 08.6	-0.6
	comp=Z,29nm,0.8s,mb5.3						
NACB	Ninganchiao	35.66	13	eP	P	12 53 11.6	-1.9
	comp=Z,37nm,0.6s,mb5.5						
QZH	Quanzhou	35.88	8	P	P	12 53 16.1	+0.8
QZH				S	S	12 58 53.1	+3.2
QZH				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.6						
QZH				LR	LR		
	comp=Z,840nm,17.0s,MS4.6						
YHNB	Yeheng	36.10	12	eP	P	12 53 15.5	-1.7
	comp=Z,50nm,0.8s,mb5.5						
KMI	Kunming	37.16	344	P	P	12 53 28.3	+2.0
KMI				PP	PP	12 54 55.3	+3.5
KMI				S	S	12 59 10.8	+1.3
KMI				SS	SS	13 01 44.5	-10
KMI				AMB	AMB		
	comp=Z,46nm,1.3s,mb5.2						
KMI				AMB	AMB		
	comp=Z,198nm,3.8s						
KMI				LR	LR		
	comp=N,528nm,14.6s,MS4.7						
KMI				LR	LR		
	comp=E,956nm,17.5s,MS4.7						
KMI				LR	LR		
	comp=Z,565nm,16.0s,MS4.5						
GYA	Guiyang	37.59	350	⇑iP	P	12 53 31.8	+2.0
GYA				PP	PP	12 55 00.4	+3.9
GYA				PCP	PcP	12 55 47.6	+0.6
GYA				S	S	12 59 22.8	+6.8
GYA				SCP	ScP	12 59 35.6	+5.2
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,780nm,18.6s,MS4.7						
GYA				LR	LR		
	comp=E,660nm,17.2s,MS4.7						
GYA				LR	LR		
	comp=Z,790nm,18.0s,MS4.6						
WHN	Wuhan	41.10	1	⇓P	P	12 53 59.9	+0.8
WHN				S	S	13 00 09.4	+0.8
WHN				AMB	AMB		
	comp=Z,58nm,0.8s,mb5.3						
WHN				LR	LR		
	comp=Z,635nm,18.7s,MS4.5						
CAL	Calcutta	41.21	324	eP	P	12 53 56.5	-3.7
CAL				ix	x	13 00 25.7	
KOD	Kodaikanal	41.35	299	eP	P	12 54 01.9	+0.4
SHL	Shillong	41.75	330	eP	P	12 54 05.0	+0.5
SHL				ex	x	13 00 16.0	
SSE	Sheshan	42.31	10	P	P	12 54 10.1	+1.1
SSE				AP	pP	12 54 13.6	-8.5
SSE				PCP	PcP	12 56 02.9	+0.9

SSE S **S** **13 00 32.3 +5.8**
SSE XS sS 13 00 38.1 -10
SSE AMB AMB
comp=Z,48nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,81nm,4.0s
SSE LR LR
comp=N,234nm,17.9s,MS4.2
SSE LR LR
comp=E,113nm,17.9s,MS4.2
SSE LR LR
comp=Z,300nm,18.4s,MS4.2
CD2 Chengdu 42.47 348 P **P** **12 54 10.6 +0.3**
CD2 AP pP 12 54 15.1 -8.3
CD2 PP PP 12 55 51.6 +2.0
CD2 PCP PcP 12 56 05.3 +2.8
CD2 PCS PcS 12 59 55.6 +1.0
CD2 S **S** **13 00 30.0 +1.1**
CD2 XS sS 13 00 37.6 -13
CD2 SS SS 13 03 32.3 -7.6
CD2 AMB AMB
comp=Z,100nm,0.7s,mb5.5
CD2 AMB AMB
comp=Z,160nm,4.8s
CD2 LR LR
comp=N,860nm,17.2s
CD2 LR LR
comp=Z,680nm,15.1s,MS4.7
NJ2 Nanjing 42.92 7 *e*P **P** **12 54 14.9 +1.0**
NJ2 AP pP 12 54 19.4 -7.6
NJ2 XP sP 12 54 21.9 -11
NJ2 PP PP 12 55 57.3 +2.9
NJ2 S **S** **13 00 39.0 +3.6**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
NJ2 AMB AMB
comp=Z,70nm,7.5s
NJ2 LR LR
comp=N,610nm,26.9s,MS4.4
NJ2 LR LR
comp=E,270nm,27.2s,MS4.4
NJ2 LR LR
comp=Z,240nm,25.6s,MS4.0
BOK Bokaro 43.62 322 *e*P **P** **12 54 18.8 -0.9**
HYB Hyderabad 44.36 309 *i* P **P** **12 54 24.0 -1.8**
HYB *e*S **S** **13 00 58.0 +1.0**
HYB Hyderabad 44.36 309 *e*P **P** **12 54 24.0 -1.8**
HYB *e*S **S** **13 00 58.0 +1.0**
XAN Xi'an 44.77 355 P **P** **12 54 28.8 0.0**
XAN AP pP 12 54 33.3 -8.7
XAN PP PP 12 56 13.1 -1.1
XAN SCP ScP 13 00 03.8 +5.1
XAN PCS PcS 13 00 06.6 +2.8
XAN S **S** **13 00 59.4 -3.0**
XAN SCS ScS 13 04 21.8 -0.4
XAN AMB AMB
comp=Z,37nm,1.0s,mb5.2
XAN AMB AMB
comp=Z,117nm,7.3s
XAN LR LR
comp=N,124nm,19.5s
XAN LR LR
comp=Z,671nm,17.9s,MS4.6
ODAN Odare 45.12 326 *e*P **P** **12 54 31.5 -0.2**
comp=E,80nm,0.6s,mb5.8
TAPN Taplejung 45.34 327 *e*P **P** **12 54 33.7 +0.3**
comp=Z,84nm,0.6s,mb5.8
LSA Lhasa 45.59 333 P **P** **12 54 36.4 +1.1**
RAMN Ramite 45.63 326 *e*P **P** **12 54 36.1 +0.4**
comp=Z,51nm,0.6s,mb5.6
NGP Nagpur 46.30 313 *e*P **P** **12 54 38.6 -2.5**
NGP AMb AMB 12 54 42.7
comp=Z,36nm,0.8s,mb5.4
JIRN Jiri 46.41 326 *e*P **P** **12 54 42.1 +0.3**
comp=Z,178nm,0.6s,mb6.2
PKI Pulchoki 46.77 325 *e*P **P** **12 54 44.2 -0.5**
PKI Pulchoki 46.77 325 *e*P **P** **12 54 44.4 -0.3**
PKI pmax pmax
comp=Z,30nm,0.6s,mb5.4
PKI Pulchoki 46.77 325 *e*P **P** **12 54 44.4 -0.3**
comp=Z,30nm,0.6s,mb5.4
GUN Gumba 46.77 326 *e*P **P** **12 54 44.8 +0.1**
comp=Z,190nm,0.6s,mb6.2
PKIN Phulchoki 46.78 325 *e*P **P** **12 54 44.4 -0.4**
comp=Z,30nm,0.6s,mb5.4
TIA Tai'an 46.88 4 ⇓P **P** **12 54 45.0 -0.3**
TIA AMB AMB
comp=Z,27nm,1.0s,mb5.1
DMN Daman 46.97 325 *e*P **P** **12 54 46.2 0.0**
comp=Z,86nm,0.5s,mb5.9
KKN Kakani 47.01 325 *e*P **P** **12 54 46.5 -0.1**
LZH Lanzhou 47.47 350 *e*P **P** **12 54 50.3 +0.3**
LZH AP pP 12 55 00.3 -3.0
LZH XP sP 12 55 04.5 -4.5
LZH PP PP 12 56 41.5 -0.3
LZH *e*S **S** **13 01 43.5 +2.4**
LZH XS sS 13 02 00.3 -3.2
LZH *e*SS SS 13 05 06.8 -3.0
LZH AMB AMB
comp=Z,41nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,216nm,8.0s
LZH LR LR
comp=E,598nm,14.5s
LZH LR LR
comp=Z,965nm,16.8s,MS4.8
GKN Gorkha 47.54 325 *e*P **P** **12 54 50.1 -0.5**
comp=Z,60nm,0.4s,mb6.0
KAD Karad 47.73 305 *e*P **P** **12 54 51.2 -1.1**
KOLN Koldanda 47.96 324 *e*P **P** **12 54 53.8 -0.1**
comp=Z,131nm,0.6s,mb6.1
DANN Dangsing 48.30 324 *e*P **P** **12 54 56.4 -0.1**
comp=Z,101nm,0.5s,mb6.1
POO Poona 48.66 306 *e*P **P** **12 54 58.2 -1.3**
POO AMb AMB 12 55 01.9
comp=Z,69nm,0.7s,mb5.8
KSRS Korea Array 49.89 15 P **P** **12 55 08.8 +0.3**
comp=Z,53nm,0.8s,mb5.6,baz=198,slow=7.4,SNR=154
DL2 Dalian 50.03 8 P **P** **12 55 09.1 -0.4**
DL2 *e*S **S** **13 02 21.3 +4.3**
DL2 AMB AMB
comp=Z,40nm,0.6s,mb5.6
DL2 LR LR
comp=N,140nm,15.7s
DL2 LR LR
comp=Z,180nm,15.9s,MS4.2
BJI Beijing 50.63 3 P **P** **12 55 13.8 -0.3**
BJI S **S** **13 02 27.1 +1.7**
BJI AMB AMB
comp=Z,71nm,0.6s,mb5.8
BJI AMB AMB
comp=Z,156nm,3.5s
BJI LR LR
comp=N,327nm,19.4s,MS4.5
BJI LR LR
comp=E,273nm,19.4s,MS4.5
BJI LR LR
comp=Z,271nm,23.0s,MS4.2
BTO Baotou 51.22 357 *e*P **P** **12 55 18.0 -0.5**
HHC Hu-ho-hao-te 51.40 358 *e*P **P** **12 55 20.0 +0.2**
HHC AP pP 12 55 23.8 -9.5
HHC XP sP 12 55 26.3 -13
HHC PCS PcS 13 00 30.3 -1.3
HHC *e*S **S** **13 02 39.6 +3.7**
HHC XS sS 13 02 47.5 -11
HHC SCS ScS 13 05 06.6 +0.6
HHC SS SS 13 06 14.8 +2.2
HHC AMB AMB
comp=Z,23nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,150nm,4.0s
HHC LR LR
comp=N,270nm,19.0s,MS4.4
HHC LR LR
comp=E,120nm,14.3s,MS4.4
HHC LR LR
comp=Z,327nm,16.6s,MS4.4
GTA Gaotai 51.50 347 *e*P **P** **12 55 22.0 +1.4**
GTA AP pP 12 55 26.0 -8.1
GTA XP sP 12 55 29.8 -10
GTA PCP PcP 12 56 36.1 +1.8
GTA PP PP 12 57 21.9 +3.4
GTA S **S** **13 02 45.5 +8.1**
GTA XS sS 13 02 52.8 -7.2
GTA AMB AMB
comp=Z,12nm,0.8s,mb4.9
GTA AMB AMB
comp=Z,110nm,5.1s
GTA LR LR
comp=N,278nm,18.8s,MS4.7
GTA LR LR
comp=E,547nm,19.7s,MS4.7
GTA LR LR
comp=Z,339nm,20.0s,MS4.4
MAJO Matsushiro 52.57 25 *e*P **P** **12 55 27.1 -1.5**
MAJO pmax pmax
comp=Z,31nm,0.6s,mb5.4
MAJO Matsushiro 52.57 25 *e*P **P** **12 55 27.1 -1.6**
comp=Z,31nm,0.6s,mb5.4
MAT Matsushiro 52.57 25 P **P** **12 55 26.4 -2.2**
MAT S **S** **13 02 51.0 -1.1**
MJAR Matsushiro Arr 52.57 25 P **P** **12 55 27.0 -1.6**
comp=Z,19nm,0.6s,mb5.2,baz=204,slow=8.3,SNR=41
MJAR LR LR 13 19 23.8
comp=Z,127nm,18.3s,MS4.0,baz=215,slow=38
AJM Ajmer 52.79 315 *e*P **P** **12 55 29.7 -0.8**
AJM AMb AMB 12 55 31.9
comp=Z,32nm,1.1s,mb5.2
SMLA Simla 54.24 321 *e*P **P** **12 55 40.2 -0.8**
SDNR Sundarnagar 54.62 322 *e*P **P** **12 55 43.9 +0.1**
CN2 Changchun 55.43 11 *e*P **P** **12 55 48.4 -0.9**
CN2 PP PP 12 57 54.1 +0.3
CN2 *e*S **S** **13 03 32.5 +2.0**
CN2 SS SS 13 07 17.6 +1.5
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
CN2 AMB AMB
comp=Z,240nm,6.0s
CN2 LR LR
comp=N,310nm,18.0s,MS4.5
CN2 LR LR
comp=E,190nm,18.0s,MS4.5
CN2 LR LR
comp=Z,170nm,20.0s,MS4.1
THN Thein Dam 56.03 321 *e*P **P** **12 55 51.7 -2.2**
MDJ Mudanjiang 57.07 14 P **P** **12 56 01.0 0.0**
MDJ AP pP 12 56 04.3 -10
MDJ PP PP 12 58 08.0 -0.4
MDJ S **S** **13 03 54.9 +2.7**
MDJ SS SS 13 07 47.0 +5.1
MDJ AMB AMB
comp=Z,91nm,0.6s,mb6.0
MDJ AMB AMB
comp=Z,83nm,3.6s
MDJ LR LR
comp=N,147nm,38.9s
MDJ LR LR
comp=E,160nm,28.2s
MDJ LR LR
comp=Z,183nm,43.0s,MS3.8
DRV Dumont d'Urvil 58.64 168 S **S** **13 04 29.0 +17**
DRV L 13 10 00.0
DRV R 13 14 00.0
ULN Ulaanbaatar 58.66 355⇑ *e*P **P** **12 56 12.0 -0.1**
ULN Ulaanbaatar 58.66 355 *e*P **P** **12 56 12.4 +0.3**
comp=Z,26nm,1.1s,mb5.2
SONM Songino Array 58.69 355 P **P** **12 56 11.9 -0.4**
comp=Z,9.9nm,0.6s,mb5.0,baz=173,slow=8.2,SNR=110
SONM LR LR 13 24 19.1
comp=Z,273nm,20.3s,MS4.4,baz=178,slow=39
WMQ Urumqi 59.15 339⇑ *i*P **P** **12 56 16.3 +0.7**
WMQ AP pP 12 56 20.5 -8.8
WMQ PCP PcP 12 57 04.5 +0.8
WMQ PP PP 12 58 29.3 +2.4
WMQ S **S** **13 04 22.4 +2.9**
WMQ XS sS 13 04 27.9 -14
WMQ SS SS 13 08 17.9 +3.2
WMQ AMB AMB
comp=Z,18nm,1.2s,mb5.0
WMQ AMB AMB
comp=Z,201nm,6.0s
WMQ LR LR
comp=N,348nm,25.0s,MS4.5
WMQ LR LR
comp=E,369nm,28.0s,MS4.5
WMQ LR LR
comp=Z,257nm,19.0s
RPZ Rata Peaks 59.42 135 P **P** **12 56 18.2 +0.6**
comp=Z,31nm,1.0s,mb5.3,baz=356,slow=4.7,SNR=7.2
KLR Kul'dur 61.91 14⇑ *i*P **P** **12 56 30.0 -4.3**
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,80nm,1.8s,mb5.5
HABR Khabarovsk 62.04 16 *e*P **P** **12 56 34.8 -0.4**
HABR *e**SP sP 12 56 46.5 -8.1
HABR *e* 12 57 12.4
HABR *e* 12 58 49.1
HABR *e*S **S** **13 04 58.0 +1.7**
HABR *e**SS sS 13 05 15.3 -4.0
HABR *e* 13 06 21.8
HABR pmax pmax
comp=N,33nm,1.8s
HABR pmax pmax
comp=Z,61nm,1.6s,mb5.5
HABR pmax pmax
comp=E,36nm,1.6s
HABR MLR MLR
comp=Z,135nm,20.0s,MS4.1
TLY Talaya 62.77 353 *e*P **P** **12 56 38.9 -1.1**
TLY pmax pmax
comp=Z,23nm,1.6s,mb5.1
MOY Mondy 63.11 351 *e*P **P** **12 56 43.4 +1.2**
YSS Yuzh-Sakhalins 63.19 22⇑ *e*P **P** **12 56 42.0 -0.9**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 63.19 22 *e*P **P** **12 56 42.2 -0.7**
IRK Irkutsk 63.26 354 *e*P **P** **12 56 43.1 -0.1**
IRK pmax pmax
comp=Z,34nm,2.1s,mb5.1
MK31 Makanchi Array 63.69 337 *i* P **P** **12 56 46.4 +0.2**
MK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
MKAR Makanchi Array 63.69 337 P **P** **12 56 46.3 +0.1**
comp=Z,7.7nm,0.5s,mb5.0,baz=150,slow=7.3,SNR=192
MKAR LR LR 13 30 05.2
comp=Z,246nm,20.8s,MS4.4,baz=149,slow=41
HVS Khovu-Aksy 63.98 346 *e*P **P** **12 56 48.4 +0.4**
HVS pmax pmax
comp=Z,24nm,1.0s,mb5.2
ABPO Ambohimpanom 64.13 254 *e*P **P** **12 56 50.7 +1.0**
ABPO pmax pmax
comp=Z,18nm,0.8s,mb5.2
ABPO Ambohimpanom 64.13 254 *e*P **P** **12 56 50.6 +0.9**
comp=Z,18nm,0.8s,mb5.2
MAW Mawson 65.72 199 *e*P **P** **12 57 00.3 +1.2**
comp=Z,13nm,1.0s,mb4.9
MAW Mawson 65.72 199 P **P** **12 57 00.3 +1.1**
comp=Z,12nm,1.1s,mb4.8,baz=40,slow=6.6,SNR=12
MAW pP pP 12 57 13.2 +0.2
comp=Z,20nm,1.1s,baz=49,slow=8.7,SNR=11
MAW LR LR 13 21 18.6
comp=Z,249nm,18.5s,MS4.5,baz=54,slow=32
MAW Mawson 65.72 199 *e*P **P** **12 57 00.3 +1.2**
MAW pmax pmax
comp=Z,13nm,1.0s
CLNS Chul'man 68.05 7 *e*P **P** **12 57 15.0 +1.0**
CLNS pmax pmax
comp=Z,41nm,1.1s,mb5.4
CLNS pmax pmax
comp=E,14nm,1.0s
CLNS pmax pmax
comp=N,22nm,1.1s
KURK Kurchatov 68.30 337 P **P** **12 57 15.3 -0.4**
comp=N,313nm,0.9s,mb6.3,SNR=33
KURK Kurchatov 68.30 337 P **P** **12 57 15.8 +0.1**
KURK pmax pmax
comp=Z,49nm,0.9s,mb5.5
KURK Kurchatov 68.30 337 *e*P **P** **12 57 15.6 -0.1**
comp=Z,28nm,0.7s,mb5.4
BOD Bodaibo 68.36 0 *e*P **P** **12 57 14.6 -1.4**
BOD pmax pmax
comp=Z,27nm,1.1s,mb5.2
ZAA0 Zalesovo Array 68.88 342 *e*P **P** **12 57 18.8 -0.5**
ZALV Zalesovo Beam 68.88 342 P **P** **12 57 18.6 -0.7**
comp=Z,24nm,0.7s,mb5.2,baz=134,slow=4.3,SNR=108
ZALV S S 13 06 17.8 -1.9
comp=Z,0.4nm,0.5s,baz=141,slow=9.6,SNR=4.2
ZALV LR LR 13 30 33.3
comp=Z,198nm,19.1s,MS4.4,baz=331,slow=39
ZALV Zalesovo Beam 68.88 342 P **P** **12 57 18.6 -0.7**
ZALV S S 13 06 17.8 -1.9
NVS Novosibirsk 70.13 342 *e*P **P** **12 57 26.1 -0.8**
NVS pmax pmax
comp=Z,71nm,1.8s,mb5.3
NVS pmax pmax
comp=N,29nm,1.6s
NVS pmax pmax
comp=E,20nm,1.3s
ABKT Ailbek 70.78 317 P **P** **12 57 32.5 +1.2**
comp=E,155nm,0.8s,mb6.0,SNR=6.0
VNDA Vanda 71.15 170 P **P** **12 57 33.6 +0.6**
comp=E,3.2nm,0.7s,mb4.3,baz=323,slow=8.5,SNR=13
VNDA pP pP 12 57 47.2 +0.2
comp=E,8.2nm,0.8s,baz=289,slow=8.8,SNR=8.0
VNDA LR LR 13 28 17.9
comp=E,351nm,18.3s,MS4.7,baz=223,slow=35
VNDA Vanda 71.15 170 P **P** **12 57 33.6 +0.6**
VNDA *PP pP 12 57 47.2 +0.2
VOSK Vostochnaya 72.91 335 P **P** **12 57 43.3 -0.5**
VOSK pmax pmax
comp=Z,20nm,1.2s,mb4.9
BVA0 Borovoye Array 73.37 335 *i* P **P** **12 57 46.1 -0.4**
BVA0 pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BRVK Borovoye 73.44 335 P **P** **12 57 47.1 +0.2**
comp=Z,83nm,1.3s,mb5.5,SNR=7.5
BRVK Borovoye 73.44 335 P **P** **12 57 46.0 -0.9**
BRVK pmax pmax
comp=Z,41nm,1.5s,mb5.1
YAK Yakutsk 73.70 8 *e*P **P** **12 57 47.8 -0.4**
YAK *e* pP 12 58 01.8 -0.5
YAK *e*S S 13 07 19.4 +4.3
YAK *e* 13 08 09.8
YAK pmax pmax
comp=Z,80nm,1.2s,mb5.5
YAK pmax pmax
comp=N,44nm,1.4s
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=Z,281nm,5.4s
YAK pmax pmax
comp=N,147nm,4.2s
YAK pmax pmax
comp=E,96nm,4.2s
YAK smax
comp=E,156nm,3.8s
YAK smax
comp=N,243nm,4.4s
YAK MLR MLR
comp=Z,187nm,21.0s,MS4.3
YAK MLR MLR
comp=N,129nm,19.0s,MS4.5
YAK MLR MLR
comp=E,184nm,18.0s,MS4.5
YAK Yakutsk 73.70 8 *e*P **P** **12 57 48.5 +0.3**
comp=E,130nm,1.1s,mb5.8
PETK Petropavlovsk- 74.02 26 P **P** **12 57 50.9 +0.7**
comp=E,12nm,0.8s,mb4.8,baz=187,slow=1.1,SNR=20
PETK pP pP 12 58 04.2 -0.2
comp=E,9.8nm,0.9s,baz=100,slow=1.3,SNR=4.9
PETK Petropavlovsk- 74.02 26 P **P** **12 57 50.9 +0.6**
PETK pP pP 12 58 04.2 -0.2
SYO Syowa Base 74.19 201⇓ *e*P **P** **12 57 50.0 -1.1**
SYO Syowa Base 74.19 201⇓ *e*P **P** **12 57 52.9 +1.8**
RDF Al-Radifah 74.72 304 *e*P **P** **12 57 54.7 -0.2**
baz=304
RDF AMb AMB 12 57 58.1
comp=Z,121nm,1.2s,mb5.7,baz=304
NAY Al-Naaiem 75.09 304 *e*P **P** **12 57 56.6 -0.4**
baz=304
NAY AMb AMB 12 57 57.6
comp=Z,26nm,0.9s,mb5.2,baz=304
MIB Mutribah 75.22 305 *e*P **P** **12 57 57.6 -0.2**
baz=305
MIB AMb AMB 12 58 00.8
comp=Z,68nm,1.1s,mb5.5,baz=305
AB31 Akbulak array 75.92 327 P **P** **12 58 00.8 -0.6**
AB31 pmax pmax
comp=Z,29nm,0.6s,mb5.4
AKTO Aktyubinsk 77.62 327 *i* P **P** **12 58 11.2 +0.3**
AKTO pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
SEY Seymchan 79.40 17 *e*P **P** **12 58 20.7 +0.2**
SVE Sverdlovsk 80.10 334⇓ *e*P **P** **12 58 25.7 +1.3**
SVE pmax pmax
comp=Z,27nm,0.9s,mb5.2
ARU Arti 80.79 333 *d i*P **P** **12 58 28.7 +0.6**
ARU *e* 13 01 30.5
ARU *e*S S 13 08 36.9 +4.7
ARU *e*SS SS 13 13 46.6 -0.2
ARU pmax pmax
comp=Z,35nm,1.7s,mb5.0
ARU Arti 80.79 333 *e*P **P** **12 58 28.5 +0.4**
comp=Z,46nm,1.4s,mb5.2
GNI Garni 81.07 314 P **P** **12 58 29.6 -0.3**
comp=Z,2.7nm,0.3s,mb4.7,baz=140,slow=10,SNR=3.3
GNI Garni 81.07 314 *e*P **P** **12 58 28.7 -1.3**
GNI pmax pmax
comp=Z,16nm,1.3s
LSZ Lusaka 82.62 256 *e*P **P** **12 58 39.2 +0.6**
LSZ pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
LSZ Lusaka 82.62 256 *e*P **P** **12 58 39.2 +0.6**
comp=Z,8.9nm,0.6s,mb5.0
TIXI Tiksi 82.90 5 *e*P **P** **12 58 37.5 -1.4**
TIXI pmax pmax
comp=Z,26nm,1.1s,mb5.2
TIXI Tiksi 82.90 5 *e*P **P** **12 58 38.0 -0.8**
comp=Z,21nm,0.8s,mb5.2
BOSA Boshof 83.27 242 P **P** **12 58 42.4 +0.6**
comp=Z,13nm,0.8s,mb5.0,baz=97,slow=6.0,SNR=20
BOSA LR LR 13 27 27.0
comp=Z,439nm,22.0s,MS4.8,baz=108,slow=30
KIV Kislovodsk 83.90 317 *e*P **P** **12 58 45.2 +0.6**
KIV *e*S S 13 09 04.8 +0.2
KIV pmax pmax
comp=Z,18nm,1.1s,mb5.1
SOC Sochi 85.79 316 *e*P **P** **12 58 53.5 -0.6**
SOC *e* 13 02 15.5
SOC *e*PPP 13 04 16.6
SOC *e*S S 13 09 14.9 -8.5
SOC *e*SSS 13 18 34.1
SOC pmax pmax
comp=Z,4.0nm,0.3s,mb5.1
BILL Bilibino 87.10 17 *e*P **P** **12 58 59.6 -0.4**
BILL pmax pmax
comp=Z,12nm,2.4s,mb4.7
VRHR Novokhopersk 87.14 323 *e*P **P** **12 59 01.2 +0.6**
VRHR pmax pmax
comp=Z,30nm,0.8s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.9s
SNAA Sanae 87.76 197 *e*P **P** **12 59 02.6 -0.7**
SNAA *e* 12 59 04.7
SNAA *e* 12 59 09.9
SNAA *e* pP 12 59 15.7 -2.0
SNAA *e* pP 12 59 19.6 +1.9
SNAA Sanae 87.76 197 *e*P **P** **12 59 02.0 -1.3**
SNAA pmax pmax
comp=Z,21nm,1.0s
SNAA Sanae 87.76 197 *e*P **P** **12 59 02.4 -0.9**
comp=Z,13nm,0.8s,mb5.2
VORD Divnogorie 88.48 323 *e*P **P** **12 59 07.5 +0.5**
VORD pmax pmax
comp=Z,20nm,0.8s,mb5.4
VORD pmax pmax
comp=N,9.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 88.64 323 *e*P **P** **12 59 08.0 +0.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.5s
BRTR Keskin Array B 89.03 311 P **P** **12 59 10.6 +0.8**
comp=E,16nm,1.1s,mb5.3,baz=122,slow=4.7,SNR=31
BRTR pP pP 12 59 24.2 -0.1
comp=E,26nm,1.3s,baz=134,slow=5.3,SNR=5.8
BRTR LR LR 13 42 37.3
comp=E,93nm,18.3s,MS4.2,baz=345,slow=38
BRTR Keskin Array B 89.03 311 P **P** **12 59 10.6 +0.8**

BRTR				*PP	pP	12 59 24.2	-0.1
VNA2	**Neumayer--Watz**	**89.40**	**196**	*e*P	**P**	**12 59 12.9**	**+1.9**
	baz=86,slow=3.5						
VNA2				*e*		12 59 14.9	
VNA2				*e*		12 59 18.9	
VNA2				*e*	pP	12 59 26.6	+1.1
VNA2				*e*	pP	12 59 30.2	+4.7
VNA1	**Neumayer--Stat**	**89.80**	**196**	*e*P	**P**	**12 59 15.5**	**+2.6**
VNA1				*e*		12 59 22.0	
VNA1				*e*	pP	12 59 28.6	+1.3
VNA1				*e*	pP	12 59 32.0	+4.7
VNA3	**Neumayer Olymp**	**89.85**	**196**	*e*P	**P**	**12 59 14.1**	**+1.0**
VNA3				*e*		12 59 15.4	
VNA3				*e*		12 59 20.6	
VNA3				*e*	pP	12 59 28.3	+0.7
VNA3				*e*	pP	12 59 31.9	+4.3
MOS	**Moscow**	**90.94**	**327**	*e*P	**P**	**12 59 18.8**	**+0.5**
OBN	**Obninsk**	**91.33**	**326**	⇓*i*P	**P**	**12 59 20.9**	**+0.7**
OBN				pmax	pmax		
	comp=Z,56nm,1.7s,mb5.6						
KLMR	**Klimovskoe**	**91.62**	**332**	*e*P	**P**	**12 59 21.7**	**+0.3**
KLMR				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.5						
PPT	**Papeete**	**93.41**	**108**	*e*PS	PS	13 11 55.2	+0.6
	comp=Z,60nm,26.2s						
PPT	**Papeete**	**93.41**	**108**	*e*LR	LR	13 29 41.5	
	comp=Z,340nm,24.5s						
AKASG	**Malin Array Be**	**94.57**	**321**	P	**P**	**12 59 34.1**	**-1.1**
	comp=Z,0.4nm,0.3s,mb4.3,baz=89,slow=4.3,SNR=11						
AKASG				LR	LR	13 48 35.7	
	comp=Z,166nm,20.6s,MS4.5,baz=75,slow=40						
ARCES	**ARCESS Array B**	**99.27**	**339**	LR	LR	13 50 28.7	
	comp=Z,298nm,19.8s,MS4.8,baz=94,slow=39						
TAOE	**Nuku Hiva Isla**	**104.31**	**102**	*e*LR	LR	13 34 49.2	
	comp=Z,761nm,27.7s						
RKT	**Rikitea**	**105.15**	**118**	*e*LR	LR	13 34 50.4	
	comp=Z,230nm,24.8s						
TORD	**Torodi Ar. Bea**	**113.29**	**280**	PKiKP	PKiKP	13 04 53.6	+0.4
	comp=Z,1.3nm,0.6s,baz=76,slow=1.6,SNR=13						
TORD				pPKiKP		13 05 08.1	
	comp=Z,2.5nm,0.6s,baz=80,slow=1.3,SNR=11						
YKA	**Yellowknife Ar**	**118.04**	**23**	PKP	PKPdf	13 05 01.5	+0.5
	comp=Z,1.7nm,0.5s,baz=325,slow=1.9,SNR=41						
YKA				pPKP	pPKPdf	13 05 15.3	-0.6
	comp=Z,2.2nm,0.6s,baz=308,slow=1.8,SNR=8.4						
DBIC	**Dimbokro**	**118.87**	**272**	PKP	PKPdf	13 05 03.5	-0.5
	comp=Z,1.4nm,0.4s,baz=152,slow=6.3,SNR=5.3						
DBIC				pPKP	pPKPdf	13 05 18.0	-1.0
	comp=Z,4.9nm,0.8s,baz=88,slow=0.6,SNR=5.3						
NVAR	**Mina Array Bea**	**126.42**	**50**	PKP	PKPdf	13 05 20.1	+2.3
	comp=Z,1.9nm,1.0s,baz=238,slow=2.8,SNR=7.1						
NVAR				pPKP	pPKPdf	13 05 33.8	+1.1
	comp=Z,1.7nm,0.8s,baz=241,slow=2.4,SNR=5.8						
PDAR	**Pinedale Array**	**130.97**	**42**	PKP	PKPdf	13 05 27.1	+0.7
	comp=Z,0.5nm,0.8s,baz=107,slow=1.5,SNR=4.5						
RSSD	**Black Hills**	**133.72**	**37**	*e*PKIKP	PKPdf	13 05 32.5	+1.0
ULM	**Lac du Bonnet**	**133.87**	**26**	PKP	PKPdf	13 05 32.1	+0.6
	comp=Z,3.0nm,0.8s,baz=217,slow=0.4,SNR=4.3						
SCHQ	**Schefferville**	**136.06**	**0**	PKP	PKPdf	13 05 36.4	+0.9
	comp=Z,4.1nm,0.9s,baz=213,slow=6.4,SNR=3.6						
ANMO	**Albuquerque**	**136.55**	**50**	*i* PKIKP	PKPdf	13 05 33.9	-3.1
TXAR	**Lajitas Array**	**140.86**	**56**	PKhKP		13 05 39.8	
	comp=Z,1.3nm,0.9s,baz=252,slow=2.1,SNR=12						
TXAR				PKP	PKPdf	13 05 45.8	+0.7
	comp=Z,1.0nm,0.8s,baz=252,slow=1.8,SNR=9.4						
TXAR	**Lajitas Array**	**140.86**	**56**	PKP	PKPdf	13 05 45.8	+0.7
CPUP	**Villa Florida**	**142.01**	**194**	PKP	PKPdf	13 05 47.1	-0.2
	comp=Z,0.3nm,0.3s,baz=291,slow=1.4,SNR=3.4						
JCT	**Junction City**	**143.51**	**53**	*e*PKIKP	PKPdf	13 05 48.8	-1.0
HDIL	**Hopedale**	**144.22**	**30**	*e*PKPdf	PKPdf	13 05 49.9	-0.8
SLM	**Saint Louis**	**145.16**	**33**	*e*PKIKP	PKPdf	13 05 52.2	-0.2
RCBR	**Riachuelo**	**145.23**	**243**	*e*PKPbc	PKPbc	13 05 54.1	+1.1
FVM	**French Village**	**145.53**	**34**	*e*PKIKP	PKPdf	13 05 54.1	+1.0
MIAR	**Mount Ida**	**145.90**	**42**	*e*PKP2	PKPab	13 05 55.3	+0.3
OLIL	**Olney**	**146.21**	**31**	*e*PKPdf	PKPdf	13 05 54.7	+0.5
UALR	**University of**	**146.55**	**40**	*e*PKPbc	PKPbc	13 05 58.6	+2.1
BLO	**Bloomington**	**146.64**	**29**	*e*PKP2	PKPbc	13 05 55.5	-1.0
HKT	**Hockley**	**146.81**	**51**	*e*PKP2	PKPab	13 05 59.3	+0.7
USIN	**University of**	**147.01**	**31**	*e*PKPbc	PKPbc	13 05 58.3	+0.7
ACSO	**Alum Creek Sta**	**147.29**	**23**	*e*PKPbc	PKPbc	13 05 59.1	+0.8
WCI	**Wyandotte Cave**	**147.49**	**30**	*e*PKP2	PKPbc	13 05 58.4	-0.6
BDFB	**Brasilia**	**147.91**	**215**	PKPbc	PKPbc	13 06 02.0	+1.3
	comp=Z,7.9nm,1.0s,baz=141,slow=4.0,SNR=9.0						
WVT	**Waverly**	**148.30**	**34**	*e*PKP2	PKPbc	13 06 01.8	+0.6
OXF	**Oxford**	**148.54**	**38**	*e*PKP2	PKPbc	13 06 02.3	+0.4
SSPA	**Standing Stone**	**148.65**	**17**	*e*PKPbc	PKPbc	13 06 02.4	+0.4
TZTN	**Tazewell**	**150.15**	**28**	*e*PKPbc	PKPbc	13 06 06.1	+0.3
TKL	**Tuckaleechee C**	**150.76**	**29**	*e*PKIKP	PKPbc	13 06 08.2	+0.9
LRAL	**Lakeview Retre**	**151.01**	**37**	*e*PKPbc	PKPbc	13 06 08.8	+0.8

GUC 17 13:00:57.9±0.6**, 2295S**×**7021W, h53**km±4km**, MD3.7, ML3.5, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.27**	**236**	⇓*i*P	Pn	13 01 07.2	+0.1
MECH				*i* S	Sn	13 01 14.0	+0.4
MECH				AML	AML	13 01 15.9	
	comp=N,3μm,0.3s						
CEN1	**Los Morros**	**0.44**	**179**	*e*P	Pn	13 01 11.0	+2.3
CEN1				*i* S	Sn	13 01 21.1	+4.7
CEN1				AML	AML	13 01 21.1	
	comp=E,2μm,0.2s						
PECH	**Pedro de Valdi**	**0.60**	**54**	*i* P	Pn	13 01 11.2	+0.6
PECH				*i* S	Sn	13 01 20.9	+1.2
PECH				AML	AML	13 01 21.4	
	comp=N,18μm,0.2s						
MACH	**Maria Elena**	**0.86**	**29**	⇑*i*P	Pn	13 01 14.8	+0.9
MACH				*i* S	Sn	13 01 27.3	+1.9
PB04	**Plate Boundary**	**0.95**	**44**	⇓*i*P	Pn	13 01 11.3	-3.7
PB04				*i* S	Sn	13 01 21.9	-5.8
PB04				AML	AML	13 01 22.1	
	comp=E,6μm,0.1s						
LVC	**Limon Verde**	**1.24**	**75**	*e*P	Pn	13 01 20.2	+1.3
LVC				*i* S	Sn	13 01 36.8	+2.2
LVC				AML	AML	13 01 37.5	
	comp=N,904nm,0.4s						
PB01	**Plate Boundary**	**2.01**	**19**	*e*P	Pn	13 01 30.5	+1.0
PB01				AML	AML	13 02 15.6	
	comp=E,439nm,0.3s						

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*CSEM **17** 13:04:02.5±0.5, 3850N×3570E, h10km, MD2.8, Error ellipse: s-maj=17.0km s-min=11.2km az=23.0*
*ISCJB **17** 13:04:04.3±1.3, 3842N±009×3565E±007, h16km±16km, Error ellipse: s-maj=14.8km s-min=8.2km az=15.6*
*DDA **17** 13:04:05.0, 3863N×3566E, h7km±6km, Md2.8*
ISC 17 13:04:01.0±2.4**, 3821N**±008×**356E**±02**, h16**km±22km**, n5, σ0.83**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.76**	**52**	*i* P	**Pg**	**13 04 15.1**	**-0.7**
PINB				*i* S	**Sg**	**13 04 26.2**	**+0.4**
AVNT	**Avonos**	**0.84**	**313**	*i* P	**Pb**	**13 04 17.1**	**-0.1**
AVNT				*i* S	**Sb**	**13 04 28.2**	**0.0**
CDAG	**Cicekdag**	**1.73**	**325**	*i* P	**Pn**	**13 04 31.4**	**+1.2**
CDAG				*i* S	**Sn**	**13 04 51.3**	**-0.6**
HWQ	**Hawqa**	**3.93**	**176**	*e*P	**Pn**	**13 05 08.8**	**+8.2**
FKH	**Fakeheh**	**4.01**	**171**	*e*P	**Pn**	**13 05 01.6**	**-0.1**
FKH				*e*S	Px	13 05 06.8	

TRN 17 13:12:34.2, 1578N×**6004W, h3**km**, M3.5**(FDF)**, 2C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	**La Desirade**	**1.11**	**299**	*e*P	Pg	13 12 58.0	+2.5
MVM	**Montagne Vaucl**	**1.47**	**214**	*e*P	Pn	13 13 04.0	+2.5
FDF	**Fort de France**	**1.49**	**226**	⇑*e*P	Pn	13 13 04.8	+3.0
FDF				⇑*e*S	Sn	13 13 26.0	+4.2
BIM	**Bigot**	**1.60**	**218**	*e*P	Pn	13 13 06.0	+2.7
BIM				*e*S	Sn	13 13 28.0	+3.5
LZG	**Guadaloupe-1**	**1.70**	**282**	*e*P	Pn	13 13 07.3	+2.5
LZG				*e*S	Sn	13 13 32.0	+4.9

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*ROM **17** 13:14:02.9±0.5, 4399N×1529E, h10km, Ml3.3/5, Error ellipse: s-maj=8.7km s-min=4.9km az=71.0*
*NEIC **17** 13:14:05.0±0.3, 4402N×1490E, h10km, ML3.3(BRA), ML3.8(PDG), Error ellipse: s-maj=4.5km s-min=3.1km az=20.0*
NEIC Felt at Zadar, Croatia.
*ISCJB **17** 13:14:04.3±0.2, 4407N±001×1497E±002, h10km, Error ellipse: s-maj=2.4km s-min=1.7km az=141.6*
*LDG **17** 13:14:04.0±0.1, 4397N×15.16E, h10km, Ml3.4/7, Error ellipse: s-maj=3.5km s-min=2.1km az=119.0*
*PDG **17** 13:14:04.4±0.6, 4400N×1500E, h6km±3km, ML3.8/10, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
*CSEM **17** 13:14:05.4±0.1, 4409N×1492E, h12km, ML3.5/16, Error ellipse: s-maj=1.3km s-min=1.0km az=41.0*
*VIE **17** 13:14:07.6±0.6, 4423N×15.15E, h6km, mb2.7/13, ML3.1/16, Error ellipse: s-maj=4.0km s-min=3.8km az=83.0*
*PRU **17** 13:14:07.2, 4429N×1487E, h0km*
*BEO **17** 13:14:19.0±1.3, 4545N×1596E, h26km±7km, ML3.7/3*
ISC 17 13:14:04.6±0.5**, 4405N**±001×**1498E**±002**, h2**km±3km**, n124, σ1.23**/203**, 36C-15D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.52**	**352**	⇑*i*Pg	**Pg**	**13 14 14.1**	**-0.5**
NVLJ				Sg	**Sg**	**13 14 22.8**	**+1.4**
AOI	**Ancona**	**1.11**	**244**	Pn	**Pn**	**13 14 27.0**	**-0.1**
AOI	**Ancona**	**1.11**	**244**	Pn	**Pn**	**13 14 27.0**	**-0.1**
BOJS	**Bojanci**	**1.47**	**8**	*i* Pn	**Pn**	**13 14 31.1**	**-0.9**
BOJS				*i* Sn	**Sn**	**13 14 51.6**	**-0.2**
BOJS	**Bojanci**	**1.47**	**8**	*i* Pn	**Pn**	**13 14 31.1**	**-0.9**
BOJS				*i* Sn	**Sn**	**13 14 51.6**	**-0.2**
KNDS	**Knezji Dol**	**1.54**	**344**	*i* Sn	**Sg**	**13 14 56.1**	**+2.1**
SKDS	**Skadanscina**	**1.65**	**336**	*i* Pn	**Pn**	**13 14 34.3**	**-0.2**
SKDS				*i* Sn	**Sg**	**13 14 58.5**	**+0.9**
SNTG	**Esanatoglia**	**1.68**	**243**	Pn	**Pn**	**13 14 35.9**	**+1.1**
	35nm,0.3s						
SNTG	**Esanatoglia**	**1.68**	**243**	Pn	**Pn**	**13 14 35.9**	**+1.1**
	35nm,0.3s						
BLY	**Banja Luka**	**1.73**	**65**	*e*Pg	**Pn**	**13 14 33.6**	**-2.0**
BLY				*e*Sg	**Sn**	**13 14 57.8**	**-0.5**
CEY	**Cerknica**	**1.74**	**347**	⇑*i*Pn	**Pn**	**13 14 36.0**	**+0.3**
CEY				*e*Sn	**Sg**	**13 15 01.0**	**+0.6**
SISC	**Sisak**	**1.74**	**34**	*e*Pn	**Pn**	**13 14 35.3**	**-0.4**
SISC				Sn	**Sn**	**13 14 59.6**	**+1.2**
TERO	**Teramo**	**1.74**	**216**	Pn	**Pn**	**13 14 34.7**	**-1.0**
	177nm,0.8s						
TERO	**Teramo**	**1.74**	**216**	Pn	**Pn**	**13 14 34.7**	**-1.0**
	177nm,0.8s						
VISS	**Visnje**	**1.76**	**357**	*i* Pn	**Pn**	**13 14 36.3**	**+0.2**
VISS				*i* Sn	**Sg**	**13 15 00.9**	**-0.2**
CRES	**Cresnjev**	**1.81**	**11**	⇓*i*Pn	**Pn**	**13 14 37.0**	**+0.3**
CRES				*e*Sn	**Sn**	**13 15 00.9**	**+0.6**
NRCA	**Norcia**	**1.82**	**229**	Pn	**Pn**	**13 14 36.0**	**-0.8**
	31nm,0.4s						
NRCA	**Norcia**	**1.82**	**229**	Pn	**Pn**	**13 14 36.0**	**-0.8**
	31nm,0.4s						
CESI	**CESI - Serrava**	**1.83**	**236**	Pn	**Pn**	**13 14 37.1**	**+0.1**
CESI	**CESI - Serrava**	**1.83**	**236**	Pn	**Pn**	**13 14 37.1**	**+0.1**
PIEI	**Pieia**	**1.84**	**255**	Pn	**Pn**	**13 14 36.9**	**-0.2**
PIEI	**Pieia**	**1.84**	**255**	Pn	**Pn**	**13 14 36.9**	**-0.2**
TRI	**Trieste**	**1.87**	**333**	*e*Pn	**Pn**	**13 14 38.3**	**+0.7**
TRI	**Trieste**	**1.87**	**333**	*e*Pn	**Pn**	**13 14 38.3**	**+0.7**
TRI				*e*S	**Sg**	**13 15 04.9**	**+0.2**
MURB	**Monte Urbino**	**1.94**	**247**	Pn	**Pn**	**13 14 40.4**	**+1.9**
MURB	**Monte Urbino**	**1.94**	**247**	Pn	**Pn**	**13 14 40.4**	**+1.9**
ASS	**Assisi**	**1.95**	**241**	Pn	**Pn**	**13 14 38.8**	**+0.1**
	45nm,0.5s						
ASS	**Assisi**	**1.95**	**241**	Pn	**Pn**	**13 14 38.8**	**+0.1**
	45nm,0.5s						
PDKS	**Podkum**	**2.02**	**0**	*e*Pn	**Pn**	**13 14 40.5**	**+1.0**
PDKS				*i* Sn	**Sg**	**13 15 07.8**	**-1.5**
LJU	**Ljubljana**	**2.02**	**351**	*e*Pn	**Pn**	**13 14 41.0**	**+1.4**
LJU				*e*Sn	**Sn**	**13 15 06.5**	**+1.1**
LJU	**Ljubljana**	**2.02**	**351**	*i* Pn	**Pn**	**13 14 40.1**	**+0.5**
LJU				*e*Sn	**Sn**	**13 15 05.9**	**+0.5**
AQU	**L'Aquila**	**2.05**	**215**	*e*Pn	**Pn**	**13 14 39.0**	**-0.9**
AQU	**L'Aquila**	**2.05**	**215**	*e*Pn	**Pn**	**13 14 39.0**	**-1.0**
FAGN	**Fagnano**	**2.05**	**210**	Pn	**Pn**	**13 14 39.6**	**-0.4**
	410nm,0.5s						
FAGN	**Fagnano**	**2.05**	**210**	Pn	**Pn**	**13 14 39.6**	**-0.4**
	410nm,0.5s						
VOY	**Vojsko**	**2.13**	**339**	*e*Pn	**Pn**	**13 14 41.3**	**+0.2**
VOY				*e*		13 14 44.8	
VOY				*e*Sn	**Sn**	**13 15 13.4**	**+5.3**
STON	**Ston**	**2.31**	**120**	*e*Pn	**Pn**	**13 14 42.3**	**-1.2**
STON				Sn	**Sn**	**13 15 11.4**	**-1.0**
RGNG	**Rignano Grg**	**2.41**	**169**	Pn	**Pn**	**13 14 41.8**	**-3.2**
RGNG	**Rignano Grg**	**2.41**	**169**	Pn	**Pn**	**13 14 41.8**	**-3.2**
MIDA	**Miranda**	**2.46**	**193**	Pn	**Pn**	**13 14 44.1**	**-1.5**
MIDA	**Miranda**	**2.46**	**193**	Pn	**Pn**	**13 14 44.1**	**-1.5**
OBKA	**Obir**	**2.48**	**353**	⇑*e*Pn	**Pn**	**13 14 47.4**	**+1.4**
	SNR=18						
OBKA				⇓*i*Pg	**Pg**	**13 14 51.4**	**-0.8**
OBKA				⇑*i*Sg	**Sg**	**13 15 23.7**	**-0.6**
	153nm,0.5s						
KOGS	**Kog**	**2.56**	**20**	*e*Pn	**Pn**	**13 14 46.6**	**-0.5**
KOGS				*e*Sn	**Sn**	**13 15 17.6**	**-1.2**
PTCC	**Patocco-Chiusa**	**2.62**	**335**	Pn	**Pn**	**13 14 48.5**	**+0.6**
	35nm,0.4s						
PTCC	**Patocco-Chiusa**	**2.62**	**335**	Pn	**Pn**	**13 14 48.5**	**+0.6**
	35nm,0.4s						
SOKA	**Soboth**	**2.63**	**1**	⇑*i*Pn	**Pn**	**13 14 48.2**	**+0.2**
	1.8nm,0.2s						
SOKA				⇑*i*Pg	**Pg**	**13 14 54.3**	**-0.7**
	11nm,0.4s						
SOKA				⇑*i*Sg	**Sg**	**13 15 27.1**	**-2.0**
	49nm,0.7s						
MYKA	**Terra Mystica**	**2.75**	**340**	⇑*i*Pn	**Pn**	**13 14 51.4**	**+1.8**
	0.6nm,0.1s						
MYKA				⇑*i*Pg	**Pg**	**13 14 56.6**	**-0.7**
	2μm,0.0s						
MYKA				⇑*i*Sg	**Sg**	**13 15 33.3**	**+0.5**
	47nm,0.4s						
BRY	**Bratogost**	**2.84**	**113**	⇑*i*Pn	**Pn**	**13 14 51.3**	**+0.5**
BRY				*e*Sn	**Sn**	**13 15 27.0**	**+1.4**
RHK3	**Tenkes**	**2.97**	**50**	*e*Pn	**Pn**	**13 14 49.8**	**-2.8**
RHK3				*e*Sn	**Sn**	**13 15 25.9**	**-2.8**
UPM	**Unac-Piva**	**2.98**	**105**	⇑*i*Pn	**Pn**	**13 14 53.2**	**+0.4**
UPM				*e*Sn	**Sn**	**13 15 30.8**	**+1.8**
HCY	**Herceg Novi**	**3.03**	**121**	⇓*i*Pn	**Pn**	**13 14 52.9**	**-0.6**
HCY				*e*Sn	**Sn**	**13 15 31.2**	**+0.9**
NKY	**Niksic**	**3.18**	**111**	⇑*i*Pn	**Pn**	**13 14 56.2**	**+0.7**
NKY				*e*Sn	**Sn**	**13 15 35.6**	**+1.6**
BBLS	**Lazići**	**3.20**	**92**	*e*Pn	**Pn**	**13 14 55.2**	**-0.7**
BBLS				*e*Sn	**Sn**	**13 15 36.2**	**+1.6**
ABTA	**Abfaltersbach**	**3.21**	**328**	⇑*i*Pn	**Pn**	**13 14 57.5**	**+1.5**
	0.6nm,0.1s						
ABTA				⇓*i*Pg	**Pg**	**13 15 05.2**	**-0.8**
	0.1nm,0.1s						
ABTA				⇑*i*Sn	**Sn**	**13 15 36.9**	**+2.1**
	12nm,0.5s						
ABTA				⇑*i*Sg	**Sg**	**13 15 51.1**	**+3.5**
	51nm,0.6s						
ARSA	**Arzberg**	**3.23**	**7**	⇑*i*Pn	**Pn**	**13 14 56.8**	**+0.7**
	3.8nm,0.3s						
ARSA				⇑*i*Sg	**Sg**	**13 15 48.2**	**0.0**
	14nm,0.4s						
KBA	**Koelnbreinsper**	**3.24**	**340**	⇑*i*Pn	**Pn**	**13 14 57.2**	**+0.9**
KBA				⇑*i*Sg	**Sg**	**13 15 49.7**	**+1.1**
	17nm,0.4s						
KBA	**Koelnbreinsper**	**3.24**	**340**	Pn	**Pn**	**13 14 57.2**	**+0.8**
KBA				Sg	**Sg**	**13 15 49.7**	**+1.0**
	17nm,0.4s						
PLE	**Pljevlja**	**3.28**	**101**	⇓*i*Pn	**Pn**	**13 14 57.8**	**+0.8**
PLE				*e*Sn	**Sn**	**13 15 38.5**	**+1.9**
BUM	**Brajici-Budva**	**3.36**	**120**	⇑*i*Pn	**Pn**	**13 14 57.6**	**-0.4**
BUM				*e*Sn	**Sn**	**13 15 39.3**	**+0.9**
PDG	**Podgorica**	**3.52**	**116**	⇑*i*Pn	**Pn**	**13 15 00.5**	**+0.2**
PDG				*e*Sn	**Sn**	**13 15 42.8**	**+0.3**
TTG	**Podgorica**	**3.52**	**116**	⇑*i*Pn	**Pn**	**13 15 00.5**	**+0.2**
TTG				*e*Sn	**Sn**	**13 15 42.8**	**+0.3**
MAGA	**Magasa**	**3.54**	**301**	Pn	**Pn**	**13 15 00.9**	**+0.4**
	79nm,0.6s						
MAGA	**Magasa**	**3.54**	**301**	Pn	**Pn**	**13 15 00.9**	**+0.4**
	79nm,0.6s						
APPI	**Appiano**	**3.59**	**314**	Pn	**Pn**	**13 15 02.2**	**+1.0**
	50nm,0.5s						
APPI	**Appiano**	**3.59**	**314**	Pn	**Pn**	**13 15 02.2**	**+1.0**
	50nm,0.5s						
MABI	**Malga Bissina**	**3.75**	**304**	Pn	**Pn**	**13 15 04.2**	**+0.9**
	19nm,0.5s						
MABI	**Malga Bissina**	**3.75**	**304**	Pn	**Pn**	**13 15 04.2**	**+0.9**
	19nm,0.5s						
ULC	**Ulcinj**	**3.76**	**122**	⇑*i*Pn	**Pn**	**13 15 03.4**	**-0.1**
ULC				*e*Sn	**Sn**	**13 15 48.8**	**+0.4**
BEY	**Berane**	**3.77**	**106**	⇑*i*Pn	**Pn**	**13 15 04.4**	**+0.7**
IVA	**Berane**	**3.77**	**106**	⇑*i*Pn	**Pn**	**13 15 04.4**	**+0.7**
IVA				*e*Sn	**Sn**	**13 15 49.5**	**+0.9**
SOP	**Sopron**	**3.80**	**16**	⇓*e*Pn	**Pn**	**13 15 03.5**	**-0.6**
SOP				*e*Sn	**Sn**	**13 15 46.7**	**-2.6**
MOA	**Molln**	**3.84**	**353**	⇑*i*Pn	**Pn**	**13 15 05.6**	**+1.0**
	0.2nm,0.1s						
MOA				⇓*i*Sn	**Sn**	**13 15 51.6**	**+1.5**
	18nm,0.4s						
PVY	**Plav**	**3.92**	**110**	⇓*i*Pn	**Pn**	**13 15 06.8**	**+1.0**
PVY				*e*Sn	**Sn**	**13 15 52.9**	**+0.5**
CSNA	**Conrad Observa**	**3.93**	**9**	⇑*i*Pn	**Pn**	**13 15 06.1**	**+0.3**
	4.8nm,0.2s						
CSNA				⇑*i*Sn	**Sn**	**13 15 52.4**	**-0.1**
	17nm,0.5s						
CSNA	**Conrad Observa**	**3.93**	**9**	Pn	**Pn**	**13 15 06.1**	**+0.3**
	4.8nm,0.2s						
CSNA				Sn	**Sn**	**13 15 52.4**	**-0.1**
	17nm,0.5s						
CONA	**Conrad Observa**	**3.93**	**9**	⇑*i*Pn	**Pn**	**13 15 06.1**	**+0.2**
	6.3nm,0.3s						
CONA				⇑*i*Sn	**Sn**	**13 15 52.3**	**-0.2**
	18nm,0.5s						
WTTA	**Wattenberg**	**3.98**	**325**	⇑*i*Pn	**Pn**	**13 15 07.4**	**+0.8**
	3.8nm,0.3s						
WTTA				⇑*i*Sn	**Sn**	**13 15 57.0**	**+3.3**
	10nm,0.4s						
WTTA				⇓*i*Sg	**Sg**	**13 16 15.2**	**+2.9**
	45nm,0.7s						
WATA	**Walderalm**	**4.06**	**325**	⇓*i*Pn	**Pn**	**13 15 10.2**	**+2.6**
	9.6nm,0.3s						
PKSG		**4.11**	**34**	*e*Pn	**Pn**	**13 15 08.2**	**-0.1**
PKSG				*e*Sn	**Sn**	**13 15 55.2**	**-1.8**
SQTA	**Sankt Quirin**	**4.13**	**322**	⇓*i*Pn	**Pn**	**13 15 10.3**	**+1.7**
	4.8nm,0.2s						
FETA	**Feichten**	**4.21**	**316**	⇓*i*Pn	**Pn**	**13 15 12.1**	**+2.4**
	2.3nm,0.3s						
FETA				⇓*i*Sn	**Sn**	**13 16 03.6**	**+4.2**
	6.7nm,0.6s						
MOTA	**Moosalm**	**4.27**	**322**	⇓*i*Pn	**Pn**	**13 15 12.2**	**+1.7**
	12nm,0.4s						
MOTA				⇑*i*Sn	**Sn**	**13 16 03.5**	**+2.6**
	12nm,0.5s						
ZST	**Bratislava**	**4.41**	**19**	*e*	**Pn**	**13 15 16.3**	**+3.9**
ZST				*e*		13 16 02.5	
ZST	**Bratislava**	**4.41**	**19**	*e*P	**Pn**	**13 15 16.3**	**+3.9**
ZST				*e*		13 16 02.5	
BUD	**Budapest**	**4.45**	**38**	*e*Sn	**Sn**	**13 16 05.7**	**+0.3**
PKSN	**Nyarlorinc**	**4.47**	**49**	*e*Sn	**Sn**	**13 16 03.9**	**-1.8**
PGF	**Pioggiola**	**4.61**	**253**	*e*Pn	**Pn**	**13 15 12.8**	**-2.4**
PGF				*e*P		13 15 17.0	
TUE	**Stuetta**	**4.66**	**303**	*e*Pn	**Pn**	**13 15 17.7**	**+1.9**
TUE	**Stuetta**	**4.66**	**303**	*e*Pn	**Pn**	**13 15 17.7**	**+1.9**
DAVA	**Damuels**	**4.82**	**314**	⇑*i*Pn	**Pn**	**13 15 20.6**	**+2.6**
	7.1nm,0.4s						
DAVA				⇑*i*Sn	**Sn**	**13 16 18.4**	**+4.0**
	6.2nm,0.2s						
BOLS	**Boljevac**	**5.04**	**90**	*e*Pn	**Pn**	**13 15 19.7**	**-1.4**
KOLL	**Kolacno**	**5.12**	**26**	*e*PN	**Pn**	**13 15 21.0**	**-1.1**
KOLL				*e*SN	**Sn**	**13 16 18.3**	**-3.4**
PSZ	**Piszkesteto**	**5.17**	**40**	⇓*e*Pn	**Pn**	**13 15 23.7**	**+0.8**
PSZ				*e*Sn	**Sn**	**13 16 19.8**	**-3.3**
KHC	**Kasperske Hory**	**5.18**	**350**	Pn	**Pn**	**13 15 23.4**	**+0.5**
KHC				Sn	**Sn**	**13 16 19.6**	**-3.6**
KHC	**Kasperske Hory**	**5.18**	**350**	*e*PN	**Pn**	**13 15 23.4**	**+0.5**
KHC				*e*x	x	13 15 32.0	
KHC				*e*SN	**Sn**	**13 16 19.6**	**-3.6**
KHC				*e*SG	**Sg**	**13 16 41.7**	**-9.1**
	comp=Z,56nm,1.8s						
KHC	**Kasperske Hory**	**5.18**	**350**	*e*Pn	**Pn**	**13 15 23.4**	**+0.5**
	comp=Z,56nm,1.8s						
KHC				*e*		13 15 32.0	
KHC				*e*Sn	**Sn**	**13 16 19.6**	**-3.6**
KHC				*e*Sg	**Sg**	**13 16 41.7**	**-9.1**
VYHS	**Vyhne**	**5.19**	**30**	*e*Pn	**Pn**	**13 15 22.7**	**-0.5**
	comp=Z,12nm,0.5s						
VYHS				*e*Sn	**Sn**	**13 16 20.0**	**-3.5**
VYHS	**Vyhne**	**5.19**	**30**	*e*Pn	**Pn**	**13 15 22.7**	**-0.5**
	comp=Z,12nm,0.5s						
VYHS				*e*Sn	**Sn**	**13 16 20.0**	**-3.5**
KRUS	**Krusevo**	**5.34**	**118**	*e*Pn	**Pn**	**13 15 24.6**	**-0.6**
KRUS				*e*Sg	**Sn**	**13 16 26.4**	**-0.8**
SBF	**Sospel**	**5.45**	**271**	*e*Pn	**Pn**	**13 15 25.6**	**-1.1**
SBF				*e*Sn	**Sn**	**13 16 24.8**	**-5.1**
	comp=Z,9.0nm,0.4s						
SBF	**Sospel**	**5.45**	**271**	*e*Pn	**Pn**	**13 15 25.6**	**-1.1**
SBF				*e*Sn	**Sn**	**13 16 24.8**	**-5.1**
	comp=Z,4.5nm,0.4s						
KECS	**Kecovo**	**5.85**	**39**	*e*PN	**Pn**	**13 15 32.6**	**+0.3**
KECS				*e*SN	**Sn**	**13 16 36.5**	**-3.4**
KECS	**Kecovo**	**5.85**	**39**	*e*Pn	**Pn**	**13 15 32.6**	**+0.3**
	comp=Z,6.4nm,0.8s						
KECS				*e*Sn	**Sn**	**13 16 36.5**	**-3.4**
MBDF	**Montbardon**	**5.92**	**279**	*e*Pn	**Pn**	**13 15 31.9**	**-1.3**
MBDF				*e*Sn	**Sn**	**13 16 37.5**	**-4.0**
	comp=Z,11nm,0.6s						
MBDF	**Montbardon**	**5.92**	**279**	*e*Pn	**Pn**	**13 15 31.9**	**-1.3**
MBDF				*e*Sn	**Sn**	**13 16 37.5**	**-4.0**
	comp=Z,5.7nm,0.6s						
PRU	**Pruhonice**	**5.95**	**357**	*e*SG	**Sg**	**13 17 08.1**	**-7.5**
	comp=Z,66nm,1.7s						
LPG	**La Plagne**	**6.03**	**287**	*e*Pn	**Pn**	**13 15 33.7**	**-1.0**
LPG				*e*Sn	**Sn**	**13 16 39.6**	**-4.7**
	comp=Z,6.2nm,0.3s						
LPG	**La Plagne**	**6.03**	**287**	*e*Pn	**Pn**	**13 15 33.7**	**-1.0**
LPG				*e*Sn	**Sn**	**13 16 39.6**	**-4.7**
	comp=Z,3.1nm,0.3s						
FRF	**La Foret Royal**	**6.05**	**268**	*e*Pn	**Pn**	**13 15 34.3**	**-0.6**
LPL	**La Plagne**	**6.05**	**287**	*e*Pn	**Pn**	**13 15 34.0**	**-0.9**
LPL				*e*Sn	**Sn**	**13 16 40.5**	**-4.2**
	comp=Z,13nm,0.5s						
LPL	**La Plagne**	**6.05**	**287**	*e*Pn	**Pn**	**13 15 34.0**	**-0.9**
LPL				*e*Sn	**Sn**	**13 16 40.5**	**-4.2**
	comp=Z,6.3nm,0.5s						
LMR	**La Mourre**	**6.18**	**266**	*e*Pn	**Pn**	**13 15 35.2**	**-1.5**
ORIF	**Oris-en-Rattie**	**6.56**	**281**	*e*Pn	**Pn**	**13 15 41.5**	**-0.5**
ORIF				*e*Sn	**Sn**	**13 16 52.6**	**-4.8**
	comp=Z,8.6nm,0.4s						
ORIF	**Oris-en-Rattie**	**6.56**	**281**	*e*Pn	**Pn**	**13 15 41.5**	**-0.5**
ORIF				*e*Sn	**Sn**	**13 16 52.6**	**-4.8**
	comp=Z,4.3nm,0.4s						
CRVS	**Cervenica-Dubn**	**6.61**	**40**	*e*PN	**Pn**	**13 15 43.6**	**+1.0**
CRVS				*e*SN	**Sn**	**13 16 54.6**	**-3.8**
CABF	**La Chapelle**	**6.77**	**295**	*e*Pn	**Pn**	**13 15 43.1**	**-1.7**
HINF	**Hinteralfeld**	**6.80**	**306**	*e*Pn	**Pn**	**13 15 43.4**	**-1.9**
HINF				*e*Sn	**Sn**	**13 16 58.5**	**-4.7**
	comp=Z,4.6nm,0.3s						
BRG	**Berggiesshubel**	**6.87**	**355**	SG	**Sg**	**13 17 37.6**	**-7.3**
	comp=Z,28nm,1.7s						
STHS	**Stebnicka Huta**	**6.88**	**37**	*e*PN	**Pn**	**13 15 47.2**	**+0.8**
STHS				*e*		13 16 26.1	
STHS	**Stebnicka Huta**	**6.88**	**37**	*e*SN	**Sn**	**13 17 02.4**	**-2.8**
STHS	**Stebnicka Huta**	**6.88**	**37**	*e*Pn	**Pn**	**13 15 47.2**	**+0.8**
STHS				*e*		13 16 26.1	
STHS				*e*Sn	**Sn**	**13 17 02.4**	**-2.8**
CDF	**Champ du Feu**	**6.90**	**312**	*e*Pn	**Pn**	**13 15 44.8**	**-1.8**
CDF				*e*Sn	**Sn**	**13 16 59.9**	**-5.6**
	comp=Z,1.7nm,0.3s						
CLL	**Collm**	**7.39**	**350**	*e*Sb	**Sb**	**13 17 33.0**	**-8.8**
CLL				*e*Sg	**Sg**	**13 18 00.0**	**-1.6**
	comp=Z,16nm,1.2s						
VIVF	**Saint-Julien-l**	**7.42**	**280**	*e*Pn	**Pn**	**13 15 52.3**	**-1.4**

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*ISK **17** 13:18:46.5, 3996N×4063E, h10km, MD3.0*
*ISCJB **17** 13:18:48.0±0.7, 4006N±005×4079E±004, h2km±12km, Error ellipse: s-maj=8.9km s-min=5.4km az=9.0*
*CSEM **17** 13:18:47.0±0.2, 3995N×4058E, h20km, MD3.0, Error ellipse: s-maj=7.9km s-min=3.2km az=6.0*
*DDA **17** 13:18:48.5, 4002N×4080E, h7km±5km, Md2.8*
ISC 17 13:18:48.5±0.6**, 4006N**±005×**4078E**±004**, h6**km±10km**, n11, σ1.30**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.22**	**258**	*i* P	**Pg**	**13 18 51.1**	**-1.7**
KOPT				*i* S	**Sg**	**13 18 57.1**	**+1.4**
EZM	**Erzurum**	**0.48**	**109**	PG	**Pg**	**13 18 57.6**	**-0.1**
EZM				*e*SG	**Sg**	**13 19 06.7**	**+2.7**
ERZM	**Erzurum**	**0.48**	**109**	*i* P	**Pg**	**13 18 56.9**	**-0.9**
ERZM				*i* S	**Sg**	**13 19 03.7**	**-0.3**
EZC	**Erzincan**	**0.80**	**247**	*e*PG	**Pg**	**13 19 06.2**	**+2.2**
HOMI	**Horasan**	**0.87**	**91**	*i* P	**Pg**	**13 19 04.8**	**-0.4**
HOMI				*i* S	Sx	13 19 27.3	

GUMT Gumushane 1.07 292 *e*PG Pg 13 19 06.9 -2.2
BNGL BINGOL 1.15 165 *i* P Pg 13 19 08.3 -2.2
BNGL *i* S Sg 13 19 26.1 +0.7
DAGI Agillar 1.33 40 *i* P Pg 13 19 15.1 +1.0
DAGI *i* S Sx 13 19 17.4
ARTV Artvin 1.42 38 *i* P Pn 13 19 15.7 +0.8
BCA Borcka 1.52 25 *e*PN Pn 13 19 16.2 -0.2
AGRB Hanur-Agry 1.77 105 *e*PN Pn 13 19 19.6 -0.2

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*MOS **17** 13:35:09.2±0.8, 5155N×15677E, h133km, mb4.2/17, Error ellipse: s-maj=12.1km s-min=6.8km az=66.9*
*ISCJB **17** 13:35:09.7±0.3, 5157N±003×15672E±004, h137km±2km, mb4.4/49, Error ellipse: s-maj=5.9km s-min=3.0km az=152.5*
*BJI **17** 13:35:09.3, 5141N×157.12E, h158km, mB4.9, mb4.7*
*KRSC **17** 13:35:10.0±0.3, 5149N×157.15E, h129km±19km, ML4.7*
*IDC **17** 13:35:11.4±0.6, 5158N×15689E, h134km±4km, mb3.9/19, mb1 4.2/21, mb1mx4.1/27, mbtmp4.0/21, Error ellipse: s-maj=13.5km s-min=6.7km az=141.0*
*NEIC **17** 13:35:11.4±0.2, 5163N×15677E, mb4.7/25, Error ellipse: s-maj=7.5km s-min=3.7km az=159.0*
ISC 17 13:35:11.1±0.3, **5158N**±003×**15668E**±004, **h130**km±2km, **h136**km±2.5km:**pP-P, n383, σ0.68**/403, **mb4.4**/49, **148C-104D, Kamchatka Peninsula**

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

MIPR Malaya Ipel'ka 0.70 4 *i* P Pn 13 35 31.8 +0.4
MIPR *i* S Sn 13 35 47.3 +0.5
SKR Severo-Kuril's 0.96 202⇑*i*PN Pn 13 35 32.9 -0.7
SKR *e*S Sn 13 35 49.9 -0.8
SKR pmax pmax
comp=N,310nm,0.5s
SKR pmax pmax
comp=E,350nm,0.5s
SKR pmax pmax
comp=Z,2µm,0.5s
SKR pmax pmax
comp=Z,3µm,1.0s
SKR smax
comp=N,4µm,0.5s
SKR smax
comp=E,3µm,0.5s
SKR smax
comp=N,12µm,1.0s
SKR smax
comp=E,8µm,1.0s
GRL Gorelyy 1.30 41 *i* P Pn 13 35 36.8 -0.1
GRL *i* S Sn 13 35 56.6 0.0
RUS Russkaya 1.42 52 *i* P Pn 13 35 36.4 -1.8
RUS *i* S Sn 13 35 56.2 -2.7
PEA0B Petropavlovsk- 1.66 22⇑*i*Pn Pn 13 35 41.1 +0.3
PEA0B S Sn 13 36 05.2 +1.5
PETK Petropavlovsk- 1.66 22 P Pn 13 35 41.1 +0.3
comp=E,91nm,0.3s,baz=171,slow=11,SNR=5933
PETK S Sn 13 36 04.7 +1.1
comp=E,32nm,0.3s,baz=229,slow=26,SNR=10
PETK Petropavlovsk- 1.66 22 P Pn 13 35 41.1 +0.3
PETK S Sn 13 36 04.7 +1.1
PET Petropavlovsk 1.89 39⇓*i*PN Pn 13 35 42.8 -0.8
PET *e*S Sn 13 36 07.7 -0.8
PET pmax pmax
comp=Z,300nm,0.3s
PET pmax pmax
comp=Z,447nm,0.6s
PET smax
comp=N,3µm,1.6s
PET smax
comp=E,5µm,1.8s
PET smax
comp=N,2µm,0.6s
PET Petropavlovsk 1.89 39 *i* P Pn 13 35 42.7 -0.9
PET *i* S Sn 13 36 07.2 -1.3
PET Petropavlovsk 1.89 39 *e*Pn Pn 13 35 42.6 -1.0
AVH Avacha 2.11 36 *i* P Pn 13 35 46.8 +0.5
AVH *i* S Sn 13 36 12.8 -0.5
GNL Ganaly 2.25 19 *i* P Pn 13 35 48.9 +0.8
GNL *i* S Sn 13 36 17.3 +0.8
NLC Nalytchevo 2.28 45 *i* P Pn 13 35 46.5 -1.9
NLC *i* S Sn 13 36 12.9 -4.3
SPN Mys Shipunski 2.55 52 *i* P Pn 13 35 50.1 -1.7
SPN *i* S Sn 13 36 19.1 -4.1
TUMR Tumrok 4.25 28 *i* P Pn 13 36 15.2 +1.2
TUMR *i* S Sn 13 37 03.7 +0.8
KMNR Kamenistaya 4.69 25 *i* P Pn 13 36 21.1 +1.3
KMNR *e*S Sn 13 37 13.1 -0.3
KOZ Kozyrevsk 4.87 22 *i* P Pn 13 36 23.2 +0.9
KOZ *e*S Sn 13 37 16.5 -1.2
KPT Kopyto 4.87 24 *i* P Pn 13 36 22.5 +0.2
KOZR Kozyr 4.88 22 PN Pn 13 36 23.2 +0.8
KOZR S Sn 13 37 16.5 -1.5
BZMR Bezymyannaya 4.92 26 *i* P Pn 13 36 24.1 +1.2
BZMR *i* S Sn 13 37 19.2 +0.4
ZLN Zelenaya 5.07 27 *i* P Pn 13 36 26.6 +1.6
ZLN *i* S Sn 13 37 22.5 -0.1
SRDR Sredinnyy 5.08 19 *i* P Pn 13 36 26.6 +1.6
KRSR Krestovskiy 5.18 25 *e*P Pn 13 36 26.6 +0.1
KRSR *e*S Sn 13 37 23.0 -2.2
KLY Klyuchi 5.29 25 *i* P Pn 13 36 29.5 +1.6
KLY *i* S Sn 13 37 29.0 +1.2
KBTR Krutoberegovo 5.89 36 *i* P Pn 13 36 34.2 -1.7
KBTR *i* S Sn 13 37 36.3 -5.8
FX1 Attu Island--F 10.20 76 P Pn 13 37 31.3 -2.5
comp=N,22nm,0.3s,baz=293,slow=4.1,SNR=49
FX1 S Sn 13 39 18.3 -8.0
comp=N,43nm,0.3s,baz=158,slow=19,SNR=16
YSS Yuzh-Sakhalins 10.21 248⇑*e*PN Pn 13 37 36.5 +2.5
YSS pmax pmax
comp=Z,90nm,1.3s
ASAJ Asahikawa 12.04 237 P Pn 13 38 01.1 +2.9
comp=Z,17nm,0.3s,baz=65,slow=12,SNR=123
ASAJ Asahikawa 12.04 237 PN Pn 13 38 01.2 +3.0
ASAJ pmax pmax
comp=Z,17nm,0.3s
ERM Erimo 13.29 229 *e*PN Pn 13 38 12.1 -2.5
ERM Erimo 13.29 229 *e*Pn Pn 13 38 11.1 -3.4
comp=Z,70nm,0.4s
HABR Khabarovsk 14.24 266 *e*P Pn 13 38 30.0 +3.5
HABR *e*S Sn 13 41 08.7 +5.0
HABR MLR MLR
comp=Z,87nm,7.0s
KLR Kul'dur 16.05 271 *e*P Pn 13 38 47.8 -1.3
BILL Bilibino 17.16 12 *e*P Pn 13 39 02.0 -0.5
BILL pmax pmax
comp=Z,18nm,2.5s
YAK Yakutsk 17.96 316 *e*P Pn 13 39 11.0 -1.2
YAK *e*S S 13 42 29.7 -0.3
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=E,11nm,1.5s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=Z,293nm,5.6s
YAK pmax pmax
comp=N,360nm,6.4s
YAK pmax pmax
comp=E,476nm,5.1s
YAK smax
comp=N,92nm,2.2s
YAK smax
comp=E,110nm,3.1s
YAK Yakutsk 17.96 316 *e*P Pn 13 39 11.5 -0.7
comp=E,25nm,0.6s
MDJ Mudanjiang 19.31 260 P P 13 39 26.1 +0.3
MDJ AMB AMB
comp=Z,8.0nm,0.5s
MDJ AMB AMB
comp=Z,194nm,4.3s
MDJ Mudanjiang 19.31 260 *e*P P 13 39 25.1 -0.7
comp=Z,14nm,0.8s
MAJO Matsushiro 19.97 228⇑*i*P P 13 39 33.9 +1.0
MAJO pmax pmax
comp=Z,42nm,0.6s
MAJO Matsushiro 19.97 228⇑*i*P P 13 39 33.9 +1.0
comp=Z,42nm,0.6s
MAT Matsushiro 19.97 228 P P 13 39 33.7 +0.8
MJAR Matsushiro Arr 19.97 228 P P 13 39 34.1 +1.1
comp=Z,14nm,0.5s,baz=29,slow=7.9,SNR=80
MJAR S S 13 43 16.0 +5.7
comp=Z,0.9nm,0.3s,baz=28,slow=27,SNR=11

CN2 Changchun 22.29 262 *e*P P 13 39 55.3 -2.2
CN2 *e*S S 13 43 45.4 -7.6
CN2 AMB AMB
comp=Z,20nm,0.6s,mb4.7
CN2 AMB AMB
comp=Z,300nm,3.0s
HIA Hailar 23.49 279 *e*P P 13 40 09.1 +0.4
HIA Hailar 23.49 279 *e*P P 13 40 08.8 +0.1
comp=Z,15nm,0.5s,mb4.7
TIXI Tiksi 23.65 338 *e*P P 13 40 09.6 -0.4
TIXI pmax pmax
comp=Z,3.0nm,1.1s,mb3.7
TIXI Tiksi 23.65 338 *e*P P 13 40 09.7 -0.3
comp=Z,20nm,0.8s,mb4.7
KSRS Korea Array 24.70 246 P P 13 40 19.6 -0.2
comp=Z,1.6nm,0.4s,mb3.9,baz=42,slow=9.2,SNR=12
KSRS Korea Array 24.70 246 P P 13 40 19.6 -0.2
KSRS pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
BOD Bodaibo 25.09 301 *e*P P 13 40 23.9 +0.7
BOD *e* pP 13 40 52.0 +1.3
BOD pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
BOD pmax pmax
comp=Z,7.0nm,1.3s,mb4.0
BJI Beijing 30.12 264 P P 13 41 07.8 -0.4
BJI S S 13 45 55.8 -1.4
BJI AMB AMB
comp=Z,7.0nm,0.4s,mb4.7
BJI AMB AMB
comp=Z,129nm,6.2s
BJI LR LR
comp=N,199nm,15.2s
BJI LR LR
comp=E,133nm,15.4s
BJI LR LR
comp=Z,46nm,17.6s
SONM Songino Array 32.21 284 P P 13 41 27.2 +0.8
comp=Z,0.7nm,0.4s,mb3.8,baz=63,slow=8.0,SNR=8.9
SONM PcP PcP 13 44 11.7 -0.1
comp=Z,0.6nm,0.6s,baz=108,slow=2.3,SNR=4.6
SONM Songino Array 32.21 284 P P 13 41 27.2 +0.7
SONM 13 44 11.7
SONM pmax pmax
comp=Z,1.0nm,0.4s
SONM pmax pmax
comp=Z,1.0nm,0.6s
HHC Hu-ho-hao-te 32.52 269 *e*P P 13 41 28.3 -1.0
HHC PP PP 13 42 41.5 -3.6
HHC PCP PcP 13 44 12.0 -0.8
HHC *e*S S 13 46 30.8 -3.8
HHC SCS ScS 13 51 40.1 -3.8
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,100nm,5.2s
HHC LR LR
comp=N,143nm,14.3s
HHC LR LR
comp=E,135nm,15.5s
HHC LR LR
comp=Z,115nm,15.5s
NJ2 Nanjing 33.77 250 *e*P P 13 41 40.8 +0.6
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
EGAK Eagle 33.81 43 *e*P P 13 41 38.2 -1.9
comp=Z,2.8nm,0.7s,mb4.1
INK Inuvik 36.34 36 P P 13 42 01.1 -0.7
comp=Z,2.0nm,0.5s,mb4.0,baz=299,slow=7.4,SNR=20
INK pP pP 13 42 29.2 -1.1
comp=Z,1.3nm,0.8s,baz=308,slow=9.9,SNR=2.2
INK PcP PcP 13 44 22.6 -0.7
comp=Z,1.0nm,0.6s,baz=335,slow=3.2,SNR=4.3
INK Inuvik 36.34 36 P P 13 42 01.1 -0.7
INK *PP pP 13 42 29.3 -1.0
INK 13 44 22.6
INK pmax pmax
comp=Z,2.0nm,0.5s
INK pmax pmax
comp=Z,1.0nm,0.8s
INK pmax pmax
comp=Z,1.0nm,0.6s
HVS Khovu-Aksy 38.24 295 *e*P P 13 42 19.0 +1.0
HVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
XAN Xi'an 38.40 262 P P 13 42 18.3 -1.2
XAN PP PP 13 43 49.3 -0.5
XAN S S 13 48 04.3 -0.3
XAN AMB AMB
comp=Z,2.0nm,0.5s,mb4.0
XAN LR LR
comp=E,21nm,13.7s
XAN LR LR
comp=Z,30nm,25.8s
LZH Lanzhou 40.22 269 *e*P P 13 42 34.0 -0.6
LZH PP PP 13 44 12.3 +2.7
LZH AMB AMB
comp=Z,25nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,128nm,6.7s
LZH LR LR
comp=N,337nm,13.8s
LZH LR LR
comp=Z,485nm,17.6s
DLBC Dease Lake 40.63 51 P P 13 42 37.5 -0.1
comp=Z,2.8nm,0.7s,mb4.0,baz=270,slow=8.1,SNR=6.2
ZALV Zalesovo Beam 41.83 303 P P 13 42 47.0 -0.5
comp=Z,0.5nm,0.4s,mb3.5,baz=51,slow=7.8,SNR=3.2
ZALV pP pP 13 43 18.1 +1.4
comp=Z,2.4nm,0.8s,baz=63,slow=6.8,SNR=5.4
ZALV PcP PcP 13 44 40.5 -0.4
comp=Z,0.8nm,0.5s,baz=78,slow=3.5,SNR=3.7
ZALV Zalesovo Beam 41.83 303 P P 13 42 47.0 -0.6
ZALV *PP pP 13 43 18.1 +1.4
ZALV 13 44 40.5
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
ZALV pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
CD2 Chengdu 43.72 263 P P 13 43 02.6 -0.5
CD2 PCP PcP 13 44 48.6 +0.9
CD2 PCS PcS 13 48 39.8 -0.9
CD2 S S 13 49 21.3 -2.0
CD2 SS SS 13 52 33.3 -10
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
CD2 AMB AMB
comp=Z,130nm,5.5s
GYA Guiyang 45.11 256 P P 13 43 12.3 -1.9
GYA AP pP 13 43 45.9 +2.2
GYA PCP PcP 13 44 51.6 -0.9
GYA SCP ScP 13 48 30.3 -2.4
GYA PCS PcS 13 48 44.8 -1.8
GYA S S 13 49 40.0 -3.5
GYA SCS ScS 13 52 51.9 -5.6
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
WMQ Urumqi 45.48 289 *e*P P 13 43 17.3 +0.4
YKA Yellowknife Ar 45.69 40 P P 13 43 17.7 -0.5
comp=Z,2.7nm,0.6s,mb4.1,baz=298,slow=7.6,SNR=44
YKA pP pP 13 43 48.7 +0.9
comp=Z,0.9nm,0.8s,baz=301,slow=8.0,SNR=2.7
YKA PcP PcP 13 44 53.3 -0.6
comp=Z,0.9nm,0.7s,baz=310,slow=3.6,SNR=9.0
YKA Yellowknife Ar 45.69 40 P P 13 43 17.8 -0.5
YKA pP pP 13 43 48.7 +0.9
YKA PcP PcP 13 44 53.4 -0.5
KURK Kurchatov 46.74 301 *e*P P 13 43 25.7 -1.0
KURK *e**PP pP 13 43 57.5 +1.2
KURK pmax pmax
comp=Z,37nm,1.0s,mb5.0
KURK Kurchatov 46.74 301 *e*P P 13 43 25.7 -1.0
comp=Z,37nm,1.0s,mb5.0
KURK *e*pP pP 13 43 57.5 +1.1
MK31 Makanchi Array 46.91 295 *e*P P 13 43 28.0 0.0
MK31 *e**PP pP 13 43 59.6 +1.9
MKAR Makanchi Array 46.91 295 P P 13 43 27.9 -0.1
comp=Z,1.5nm,0.5s,mb3.9,baz=53,slow=6.5,SNR=35
MKAR pP pP 13 43 59.4 +1.7
comp=Z,5.2nm,0.9s,baz=64,slow=8.5,SNR=13
MKAR Makanchi Array 46.91 295 P P 13 43 28.0 0.0
MKAR *PP pP 13 43 59.4 +1.7
MKAR pmax pmax

comp=Z,2.0nm,0.5s
MKAR pmax pmax
comp=Z,5.0nm,0.9s
KMI Kunming 48.48 258 P P 13 43 40.6 +0.2
KMI AMB AMB
comp=Z,8.0nm,0.6s,mb4.5
BRVK Borovoye 49.71 308 *e*P P 13 43 48.5 -0.9
BRVK *e**PP pP 13 44 20.9 +1.5
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
BRVK Borovoye 49.71 308 *e*P P 13 43 48.5 -0.9
comp=Z,6.9nm,0.8s,mb4.3
BRVK *e*pP pP 13 44 20.9 +1.5
B05A Bryant 49.84 60 ⇓P P 13 43 49.9 -0.5
baz=50
A07A Ashnola River, 50.29 58 ⇑P P 13 43 53.5 -0.3
baz=50
B07A Winthrop 50.78 59 ⇓P P 13 43 57.2 -0.3
baz=50
A08A Turner Farm, O 50.93 58 ⇑P P 13 43 58.3 -0.3
baz=51
B08A Colville Reser 51.26 58 ⇓P P 13 44 00.4 -0.7
baz=51
A09A Danville 51.28 57 ⇓P P 13 44 00.9 -0.3
baz=51
EDM Edmonton 51.35 50 *e*P P 13 44 01.2 -0.5
D07A Quincy 51.62 60 ⇓P P 13 44 03.2 -0.6
baz=51
C08A Higginbotham F 51.76 59 ⇓P P 13 44 04.0 -0.8
baz=52
A10A Northport 51.81 57 ⇓P P 13 44 04.5 -0.7
baz=52
B09A Rice 51.84 58 ⇑P P 13 44 05.0 -0.4
baz=52
E07A Sunnyside 52.08 60 ⇓P P 13 44 06.7 -0.5
baz=52
A11A Hall Mountain, 52.45 56 ⇓P P 13 44 09.7 -0.2
baz=52
F07A Phinny Hill Vi 52.45 61 ⇑P P 13 44 09.8 -0.1
baz=52
E09A Wood Farm, Sta 53.03 59 ⇑P P 13 44 13.7 -0.5
baz=53
F08A Pendleton 53.14 61 ⇑P P 13 44 14.1 -0.9
baz=53
D10A Wagner Farm, O 53.16 58 ⇑P P 13 44 14.1 -1.0
baz=53
C11A Tepee Creek (N 53.20 57 ⇑P P 13 44 14.8 -0.7
baz=53,SNR=5.4
G08A Pilot Rock 53.36 61 ⇓P P 13 44 16.3 -0.4
baz=53
A13A Flathead Natio 53.47 55 ⇓P P 13 44 17.2 -0.2
baz=53
E10A Myers Farm, Un 53.60 59 ⇑P P 13 44 17.6 -0.8
baz=53
D11A Klaveano Farm, 53.66 58 ⇓P P 13 44 17.7 -1.0
baz=53
C12B Naegeli Ranch, 53.69 57 ⇓P P 13 44 18.6 -0.4
baz=53
B13A Whitefish 53.79 56 ⇓P P 13 44 19.4 -0.3
baz=54
AAK Ala-Archa 53.85 295 *e*P P 13 44 20.5 +0.3
AAK *e**PP pP 13 44 52.0 +1.4
AAK pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
AAK Ala-Archa 53.85 295 *e*P P 13 44 20.5 +0.3
comp=Z,2.8nm,0.4s,mb4.3
AAK *e*pP pP 13 44 52.0 +1.3
A14A Double T Ranch 53.95 55 ⇑P P 13 44 20.4 -0.5
baz=54
J06A Christmas Vall 54.00 64 ⇑P P 13 44 21.7 +0.4
baz=54
E11A Bogner Ranch, 54.17 59 ⇓P P 13 44 21.8 -0.7
baz=54
C13A Hot Springs 54.18 56 ⇓P P 13 44 22.3 -0.3
baz=54
EKS2 Erkin-Say 54.23 296 *e*P P 13 44 23.6 +0.6
comp=Z,3.0nm,0.4s,mb4.4
EKS2 *e*pP pP 13 44 55.2 +1.7
A15A Johnson Ranch, 54.30 54 ⇓P P 13 44 22.4 -1.0
baz=54
G10A Bishop Farm, J 54.36 60 ⇑P P 13 44 23.4 -0.5
baz=54
I08A Drewsey 54.46 62 ⇓P P 13 44 24.9 +0.3
baz=54
E12A Beaver Dam Sad 54.47 58 ⇓P P 13 44 24.6 0.0
baz=54
F11A Grangeville 54.50 59 ⇑P P 13 44 24.3 -0.5
baz=54
C14A Swan Lake 54.55 56 ⇓P P 13 44 24.9 -0.3
baz=54
MOD Modoc 54.79 65 *e*P P 13 44 27.2 +0.1
B15A Bradely Ranch, 54.81 55 ⇓P P 13 44 26.4 -0.7
baz=54
K07A Rock Creek Ran 54.87 64 ⇑P P 13 44 27.8 +0.1
baz=55
H10A Noah's Angus R 55.02 61 ⇑P P 13 44 28.6 0.0
baz=55
F12A Elk City 55.06 59 ⇓P P 13 44 28.7 -0.3
baz=55
D14A Greenough 55.12 56 ⇓P P 13 44 28.9 -0.4
baz=55,SNR=6.4
C15A Salmond Ranch, 55.13 55 ⇑P P 13 44 29.2 -0.2
baz=55,SNR=10
B16A M & M Farms, S 55.18 54 ⇑P P 13 44 28.9 -0.8
baz=55
E13A Victor 55.18 57 ⇑P P 13 44 29.9 +0.1
baz=55
L07A Adell 55.26 64 ⇓P P 13 44 31.0 +0.5
baz=55
K08A Mann Creek Ran 55.27 63 ⇓P P 13 44 30.9 +0.4
baz=55
J09A Fry Pan Ranch, 55.27 62 ⇑P P 13 44 30.9 +0.4
baz=55
A17A Triple J Farms 55.34 53 ⇑P P 13 44 29.9 -1.0
baz=55
H11A Donnelly 55.34 60 ⇑P P 13 44 30.4 -0.5
baz=55,SNR=8.4
F13A Darby 55.53 58 ⇓P P 13 44 31.9 -0.4
baz=55
C16A Fuhringer Ranc 55.56 55 ⇑P P 13 44 32.3 -0.2
baz=55
E14A Clinton 55.56 57 ⇓P P 13 44 32.1 -0.4
baz=55,SNR=6.9
D15A Lincoln 55.66 56 ⇑P P 13 44 33.0 -0.2
baz=55
SUMG Summit 55.69 5 *e*P P 13 44 33.0 -0.1
comp=Z,9.8nm,0.9s,mb4.6
L08A Fields 55.70 64 ⇑P P 13 44 34.3 +0.7
baz=55
K09A Rome 55.71 63 ⇑P P 13 44 33.6 -0.1
baz=55
B17A L&G Farms, Che 55.72 54 ⇑P P 13 44 32.5 -1.1
baz=55
M07A Soldier Meadow 55.77 65 ⇑P P 13 44 34.2 +0.2
baz=56,SNR=5.1
A18A Metzger Ranch, 55.78 53 ⇓P P 13 44 33.5 -0.6
baz=56
CMAR Chiang Mai Arr 55.80 256 P P 13 44 35.8 +1.2
comp=Z,0.9nm,0.5s,mb3.8,baz=32,slow=7.6,SNR=7.6
CMAR pP pP 13 45 06.7 +1.5
comp=Z,1.0nm,0.9s,baz=27,slow=5.9,SNR=2.4
CMAR PcP PcP 13 45 32.1 +0.1
comp=Z,1.0nm,0.6s,baz=11,slow=3.8,SNR=4.7
CMAR Chiang Mai Arr 55.80 256 P P 13 44 35.8 +1.2
CMAR *PP pP 13 45 06.7 +1.5
CMAR 13 45 32.1
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR pmax pmax
comp=Z,1.0nm,0.9s
CMAR pmax pmax
comp=Z,1.0nm,0.6s
N06A Buffalo Meadow 55.81 66 ⇑P P 13 44 34.6 +0.2
baz=56
FCC Fort Churchill 55.96 36 *e*P P 13 44 34.2 -0.9
comp=Z,0.1nm,0.4s
E15A Deer Lodge 56.00 57 ⇑P P 13 44 35.2 -0.4
baz=56
G13A Cobalt 56.04 59 ⇑P P 13 44 35.5 -0.4
baz=56
H12A Diamond D Ranc 56.06 59 ⇑P P 13 44 36.4 +0.2
baz=56
K10A MacKenzie Ranc 56.14 62 ⇑P P 13 44 36.8 +0.1
baz=56,SNR=5.3
B18A Beardsley Farm 56.16 53 ⇑P P 13 44 36.2 -0.6
baz=56,SNR=7.8
D16A Dana Ranch, Ca 56.17 55 ⇑P P 13 44 37.4 +0.6
baz=56

C17A	Wharram Farm, baz=56,SNR=5.3	56.17	54	⇓P		P	13 44 36.1	-0.7	
TAPN	Taplejung	56.20	272	*e*P		P	13 44 38.3	+1.0	
N07B	Gerlach baz=56	56.28	65	⇓P		P	13 44 38.2	+0.4	
H13A	Challis baz=56,SNR=6.3	56.38	59	⇑P		P	13 44 37.8	-0.5	
I12A	Atlanta baz=56	56.41	60	⇓P		P	13 44 38.6	0.0	
EGMT	Eagleton baz=56	56.42	54	⇑P		P	13 44 38.1	-0.5	
E16A	East Helena baz=56	56.43	56	⇑P		P	13 44 38.7	+0.1	
F15A	Butte baz=56	56.46	57	⇓P		P	13 44 38.9	-0.1	
D17A	Six Diamond Ra baz=56,SNR=6.4	56.53	55	⇑P		P	13 44 39.0	-0.3	
K11A	Parker Ranch, baz=56	56.60	62	⇓P		P	13 44 40.0	0.0	
M09A	Marrel Ranch, baz=56	56.71	64	⇑P		P	13 44 40.9	+0.2	
O07A	Toulon baz=56	56.75	66	⇑P		P	13 44 41.1	+0.1	
ODAN	Odare	56.75	272	*e*P		P	13 44 42.0	+0.8	
N08A	GE Springer Mi baz=56	56.76	65	⇑P		P	13 44 41.5	+0.4	
J12A	Stokes Ranch, baz=56,SNR=6.7	56.80	61	⇑P		P	13 44 41.6	+0.2	
H14A	Leadore baz=56	56.82	59	⇑P		P	13 44 41.3	-0.2	
L10A	Juniper Basin baz=56	56.82	63	⇑P		P	13 44 41.9	+0.4	
I13A	Wildhorse Cree baz=57,SNR=9.7	56.88	60	⇑P		P	13 44 42.0	+0.1	
E17A	Martinsdale baz=57	56.90	56	⇓P		P	13 44 42.6	+0.6	
G15A	Dillon baz=57	56.92	58	⇓P		P	13 44 42.2	+0.1	
JIRN	Jiri comp=Z,4.9nm,0.5s,mb4.6	56.93	274	*e*P		P	13 44 43.1	+0.6	
GUN	Gumba comp=Z,5.7nm,0.4s,mb4.7	56.94	274	*e*P		P	13 44 43.1	+0.5	
D18A	Linhart Farms, baz=57	56.95	54	⇓P		P	13 44 42.3	-0.1	
HLID	Hailey baz=57	56.96	60	⇑P		P	13 44 42.8	+0.4	
N09A	Rock Creek Ran baz=57	57.05	64	⇑P		P	13 44 43.5	+0.3	
O08A	Rochester Mine baz=57	57.07	65	⇑P		P	13 44 43.5	+0.2	
M10A	I.L. Ranch, Tu baz=57	57.16	63	⇑P		P	13 44 44.7	+0.8	
L11A	Cat Creek Ranc baz=57,SNR=5.7	57.16	62	⇓P		P	13 44 44.2	+0.3	
RAMN	Ramite comp=Z,13nm,0.5s,mb5.0	57.18	273	*e*P		P	13 44 44.2	0.0	
J13A	Cove Ranch, Pi baz=57	57.20	60	⇑P		P	13 44 44.5	+0.4	
H15A	Lima baz=57	57.20	58	⇑P		P	13 44 44.5	+0.3	
I14A	Mackay baz=57,SNR=7.9	57.23	59	⇓P		P	13 44 45.2	+0.8	
G16A	Moss Hill, Enn baz=57	57.23	57	⇓P		P	13 44 44.6	+0.2	
K12A	Draper Farm, C baz=57	57.31	61	⇑P		P	13 44 45.3	+0.4	
E18A	Harlowton baz=57	57.31	55	⇓P		P	13 44 45.3	+0.4	
KKN	Kakani	57.40	275	*e*P		P	13 44 46.4	+0.6	
R06C	Coleville baz=57	57.52	68	⇑P		P	13 44 47.1	+0.6	
L12A	House Creek Ra baz=57	57.58	62	⇓P		P	13 44 47.5	+0.6	
J14A	Carey baz=57,SNR=6.8	57.60	60	⇓P		P	13 44 47.6	+0.6	
DMN	Daman	57.64	275	*e*P		P	13 44 47.6	+0.1	
GKN	Gorkha comp=Z,5.7nm,0.4s,mb4.8	57.65	275	*e*P		P	13 44 47.6	+0.1	
O09A	Fish Creek Ran baz=57	57.70	65	⇓P		P	13 44 48.4	+0.7	
G17A	Pierce Place, baz=57	57.73	56	⇑P		P	13 44 48.5	+0.7	
F18A	Big Timber baz=58,SNR=6.0	57.86	55	⇓P		P	13 44 48.9	+0.2	
H16A	Russell Place, baz=58	57.88	57	⇓P		P	13 44 49.5	+0.6	
DANN	Dangsing comp=Z,9.7nm,0.5s,mb4.8	57.95	276	*e*P		P	13 44 49.6	0.0	
M12A	Wells baz=58	58.13	62	⇓P		P	13 44 51.6	+0.9	
Q08A	Gabbs baz=58	58.17	66	⇑P		P	13 44 51.2	+0.2	
L13A	Double Diamond baz=58	58.20	61	⇑P		P	13 44 51.8	+0.6	
NVAR	Mina Array Bea comp=Z,4.9nm,0.7s,mb4.4,baz=294,slow=7.5,SNR=22	58.25	67	P		P	13 44 51.4	-0.2	
K14A	Jones Ranch, D baz=58,SNR=5.5	58.31	60	⇑P		P	13 44 52.6	+0.6	
I16A	Newdale baz=58	58.31	58	⇑P		P	13 44 52.8	+0.8	
G18A	Lazy EL Ranch, baz=58	58.34	56	⇑P		P	13 44 52.3	+0.2	
H17A	Grant Village baz=58,SNR=6.0	58.44	57	⇑P		P	13 44 54.3	+1.5	
N12A	Clover Valley, baz=58	58.44	63	⇑P		P	13 44 53.9	+1.0	
KOLN	Koldanda	58.46	276	*e*P		P	13 44 51.7	-1.5	
K15A	Arbon baz=58	58.57	60	⇑P		P	13 44 54.8	+1.1	
M13A	Montello baz=58	58.58	62	⇓P		P	13 44 54.0	+0.2	
O11A	Cowboy Ranch, baz=58	58.59	64	⇑P		P	13 44 54.3	+0.4	
RLMT	Red Lodge baz=58	58.62	56	⇓P		P	13 44 54.5	+0.4	
RLMT	Red Lodge comp=Z,9.3nm,1.0s,mb4.6	58.62	56	*e*P		P	13 44 54.2	+0.1	
J16A	Bone baz=58	58.66	59	⇑P		P	13 44 55.2	+0.9	
I17A	Pilgram Creek baz=58	58.77	58	⇓P		P	13 44 56.3	+1.2	
M14A	Sheep Mountain baz=59	58.93	61	⇑P		P	13 44 56.5	+0.3	
K16A	Soda Springs baz=59,SNR=5.6	58.97	59	⇑P		P	13 44 57.8	+1.2	
REDW	Red Top Meadow comp=Z,11nm,1.3s,mb4.5	59.00	58	*e*P		P	13 44 57.5	+0.8	
O12A	Currie baz=59,SNR=6.7	59.01	63	⇓P		P	13 44 57.1	+0.3	
Q10A	Clear Creek Ra baz=59	59.06	65	⇓P		P	13 44 57.8	+0.6	
J17A	Brown Place, J baz=59	59.08	58	⇑P		P	13 44 57.7	+0.5	
R09A	Tonopah baz=59,SNR=7.9	59.08	66	⇑P		P	13 44 57.1	-0.3	
L15A	Malad City baz=59	59.11	60	⇑P		P	13 44 57.6	+0.1	
I18A	Diamond G Ranc baz=59	59.31	57	⇑P		P	13 44 59.6	+0.7	
S09A	Goldfield baz=59	59.35	67	⇓P		P	13 44 59.3	+0.1	
M15A	Larsen Ranch, baz=59,SNR=6.3	59.45	61	⇓P		P	13 44 59.8	0.0	
P12A	McGill baz=59	59.46	64	⇑P		P	13 45 00.2	+0.3	
N14A	Grayback Hills baz=59	59.47	62	⇑P		P	13 45 00.1	+0.2	
R10A	Warm Springs baz=59	59.49	66	⇑P		P	13 45 00.5	+0.3	
J18A	Kendall Valley baz=59	59.55	58	⇑P		P	13 45 00.9	+0.5	
S10A	Tonopah Range, baz=59	59.57	66	⇑P		P	13 45 01.0	+0.2	
GRAC	Grapevine Rang baz=60	59.77	68	⇑P		P	13 45 02.5	+0.4	
Q12A	Willow Creek R baz=60	59.80	64	⇑P		P	13 45 02.5	+0.2	
N15A	Stansbury Isla baz=60	59.80	61	⇓P		P	13 45 02.4	+0.2	
R11A	Troy Canyon, C baz=60,SNR=6.0	59.85	65	⇑P		P	13 45 02.6	0.0	
K18A	Toltan Ranch, baz=60,SNR=5.5	59.93	58	⇓P		P	13 45 03.6	+0.5	
P13A	Bates Ranch, G baz=60	59.97	63	⇑P		P	13 45 03.9	+0.4	
M16A	Huntsville baz=60	60.00	60	⇑P		P	13 45 04.1	+0.5	
ISA	Isabella baz=60	60.05	69	⇓P		P	13 45 03.2	-0.8	
BW06	Boulder Array baz=60	60.10	58	⇓P		P	13 45 04.5	+0.2	
PDAR	Pinedale Array comp=Z,5.8nm,0.7s,mb4.5,baz=326,slow=1.8,SNR=49	60.10	58	P		P	13 45 04.3	+0.1	
PDAR					pP	pP	13 45 34.1	-1.1	
DUG	comp=Z,1.2nm,0.8s,baz=336,slow=4.0,SNR=2.4 Dugway baz=60	60.13	62	⇓P		P	13 45 04.5	0.0	
DUG	Dugway	60.13	62	*e*P		P	13 45 04.5	0.0	
DUG					pmax	pmax			
DUG	comp=Z,3.0nm,0.9s,mb4.1 Dugway comp=Z,3.4nm,0.9s,mb4.2	60.13	62	*e*P		P	13 45 04.5	0.0	
O15A	The Old Anders baz=60,SNR=6.1	60.26	62	⇑P		P	13 45 05.8	+0.4	
Q13A	Wheeler Ranch, baz=60	60.32	64	⇑P		P	13 45 06.1	+0.3	
MPMC	Manual Prospec baz=60	60.35	68	⇓P		P	13 45 06.0	-0.1	
P14A	Drum Mountains baz=60	60.40	63	⇑P		P	13 45 06.9	+0.6	
M17A	Scullys Gap (B baz=60	60.41	60	⇑P		P	13 45 06.5	+0.1	
R12A	Pony Springs, baz=60	60.42	65	⇓P		P	13 45 06.6	+0.1	
FURC	Furnace Creek, baz=60	60.43	68	⇓P		P	13 45 06.7	+0.2	
L18A	Fontenelle, Gr baz=60	60.43	59	⇑P		P	13 45 06.4	-0.1	
K19A	Absolon Red Bu baz=60	60.43	57	⇑P		P	13 45 06.2	-0.3	
TPNV	Topopah Spring baz=60	60.45	67	⇓P		P	13 45 06.6	-0.1	
TPNV	Topopah Spring	60.45	67	*e*P		P	13 45 05.6	-1.1	
TPNV					pmax	pmax			
TPNV	comp=Z,6.0nm,0.8s,mb4.5 Topopah Spring comp=Z,5.5nm,0.8s,mb4.4	60.45	67	*e*P		P	13 45 05.5	-1.1	
N17A	Moffit Pass baz=60	60.69	60	⇑P		P	13 45 07.9	-0.3	
Q14A	Sevier Lake (B baz=60,SNR=5.9	60.71	63	⇓P		P	13 45 08.5	+0.1	
M18A	Lyman baz=60	60.76	59	⇓P		P	13 45 09.1	+0.4	
U10A	Ash Meadows, A baz=60	60.77	67	⇓P		P	13 45 09.4	+0.5	
S12A	Delamar Landin baz=60,SNR=10	60.79	65	⇓P		P	13 45 09.3	+0.4	
T11A	Corn Creek, Al baz=61,SNR=8.9	60.83	66	⇑P		P	13 45 09.3	0.0	
P15A	Leamington baz=61,SNR=5.4	60.85	62	⇑P		P	13 45 09.6	+0.2	
EDW2	Edwards Air Fo baz=61	60.88	70	⇑P		P	13 45 09.6	-0.1	
R13A	O'Grain Ranch, baz=61	60.88	64	⇑P		P	13 45 09.7	+0.1	
SHOC	Shoshone baz=61	61.16	68	⇓P		P	13 45 11.6	+0.1	
P16A	Fountain Green baz=61	61.17	62	⇑P		P	13 45 12.0	+0.4	
Q15A	Fillmore baz=61	61.20	63	⇓P		P	13 45 11.8	+0.1	
L20A	Wasatter baz=61	61.27	58	⇑P		P	13 45 12.3	+0.1	
GSC	Goldstone baz=61	61.28	69	⇑P		P	13 45 11.8	-0.6	
N18A	Larsen Ranch, baz=61	61.29	59	⇓P		P	13 45 12.2	-0.1	
S13A	Holt Ranch, En baz=61	61.37	65	⇓P		P	13 45 13.0	+0.1	
ULM	Lac du Bonnet comp=Z,2.5nm,0.5s,mb4.3,baz=330,slow=8.6,SNR=4.8	61.38	44	P		P	13 45 11.8	-0.9	
O18A	Roosevelt baz=61	61.61	60	⇓P		P	13 45 15.1	+0.7	
N19A	John Jarvie Ra baz=61	61.61	59	⇓P		P	13 45 14.5	0.0	
TUQ	Turquoise Moun baz=61	61.69	68	⇑P		P	13 45 15.2	+0.1	
M20A	Sweetwater, Wa baz=61	61.72	58	⇑P		P	13 45 15.6	+0.4	
T13A	Saint George baz=61	61.73	65	⇓P		P	13 45 16.0	+0.6	
U12A	Valley of Fire baz=62	61.79	66	⇓P		P	13 45 15.8	0.0	
HEC	Hector,Ludlow baz=62	61.89	69	⇓P		P	13 45 16.2	-0.2	
Q16A	Castle Valley baz=62	61.92	62	⇑P		P	13 45 16.6	-0.1	
RSSD	Black Hills	61.99	54	*e*P		P	13 45 16.4	-0.6	
RSSD					pmax	pmax			
RSSD	comp=Z,7.0nm,0.8s,mb4.5 Black Hills comp=Z,7.3nm,0.8s,mb4.6	61.99	54	*e*P		P	13 45 16.4	-0.6	
V12A	Nelson baz=62	62.11	67	⇓P		P	13 45 18.2	+0.3	
U13A	Pakoon Wash baz=62,SNR=6.6	62.13	66	⇓P		P	13 45 18.2	+0.1	
SRU	San Rafael baz=62	62.14	62	⇑P		P	13 45 18.4	+0.3	
N20A	Spence Gulch, baz=62	62.15	59	⇑P		P	13 45 18.5	+0.4	
T14A	Hurricane baz=62	62.17	65	⇑P		P	13 45 18.9	+0.6	
R16A	Teasdale baz=62	62.20	63	⇓P		P	13 45 19.2	+0.7	
MURC	Murrieta baz=62	62.25	70	⇑P		P	13 45 18.5	-0.4	
L22A	Ellis Ranch, M baz=62	62.26	57	⇓P		P	13 45 19.3	+0.5	
GMRC	Granite Mounta baz=62	62.31	68	⇓P		P	13 45 19.1	-0.2	
Q18A	Rafter H Ranch baz=62	62.37	61	⇓P		P	13 45 19.7	+0.2	
V13A	Grand Canyon W baz=62,SNR=6.9	62.52	66	⇑P		P	13 45 20.6	0.0	
R17A	Hanksville Air baz=62,SNR=7.2	62.53	62	⇓P		P	13 45 20.4	-0.3	
S16A	Weppner Ranch, baz=62	62.54	63	⇓P		P	13 45 21.1	+0.4	
U14A	Mt Trumbull baz=62,SNR=6.3	62.57	65	⇓P		P	13 45 21.2	+0.3	
T15A	Red Dirt Ranch baz=62	62.60	64	⇓P		P	13 45 21.5	+0.4	
P19A	Cripple Cowboy baz=62	62.61	60	⇑P		P	13 45 21.0	-0.2	
M22A	Cedar Creek Ra baz=62	62.62	57	⇓P		P	13 45 21.2	0.0	
O20A	White River Ci baz=62	62.66	59	⇑P		P	13 45 21.4	-0.1	
BELC	Belle Mtn. baz=62	62.67	69	⇑P		P	13 45 21.2	-0.4	
PFO	Pinyon Flat Ob baz=62	62.68	70	⇓P		P	13 45 21.1	-0.7	
Q19A	Hogan Spring (baz=63,SNR=14	62.94	61	⇑P		P	13 45 23.0	-0.4	
R18A	Canyonlands Na baz=63,SNR=12	63.01	62	⇑P		P	13 45 23.3	-0.5	
O21A	Pagoda baz=63	63.01	59	⇑P		P	13 45 23.7	-0.1	
P20A	De Beque baz=63	63.03	60	⇓P		P	13 45 23.7	-0.2	
S17A	Black Ridge (B baz=63,SNR=19	63.04	63	⇑P		P	13 45 24.0	0.0	
IRM	Iron Mountain baz=63	63.05	68	⇑P		P	13 45 24.1	0.0	
U15A	North Rim baz=63	63.07	65	⇑P		P	13 45 24.6	+0.4	
W13A	Hualapai Mount baz=63	63.11	67	⇑P		P	13 45 24.3	-0.2	
N22A	Wattenberg Ran baz=63	63.13	58	⇑P		P	13 45 24.6	0.0	
V14A	Boquillas Ranc baz=63,SNR=8.3	63.17	66	⇑P		P	13 45 25.2	+0.3	
BC3	Big Chuckw Mtn baz=63	63.23	69	⇑P		P	13 45 25.0	-0.4	
R19A	Curley Farm, L baz=63	63.42	61	⇑P		P	13 45 26.1	-0.4	
S18A	Hurst Farm, Bl baz=63,SNR=12	63.45	62	⇓P		P	13 45 26.7	0.0	
Q20A	Ridgley Place, baz=63	63.47	60	⇑P		P	13 45 26.7	-0.2	
W14A	Seligman baz=63,SNR=6.0	63.48	66	⇓P		P	13 45 27.3	+0.3	
T17A	Navajo Res., N baz=63	63.49	63	⇑P		P	13 45 26.7	-0.4	
X13A	Yucca baz=63	63.50	67	⇑P		P	13 45 27.6	+0.4	
P21A	Newcastle baz=63	63.52	59	⇓P		P	13 45 26.8	-0.3	
V15A	Kaibab Nationa baz=63,SNR=5.4	63.57	65	⇑P		P	13 45 27.8	+0.3	
Y12C	Blythe baz=63	63.70	68	⇑P		P	13 45 27.9	-0.5	
U17A	Shonto baz=64	63.86	64	⇑P		P	13 45 29.3	-0.1	
S19A	Harvey Farm, M baz=64,SNR=6.3	63.88	62	⇑P		P	13 45 29.4	-0.2	
T18A	Mexican Hat baz=64,SNR=7.4	63.91	63	⇑P		P	13 45 29.0	-0.8	
U16A	Tuba City baz=64	63.92	64	⇑P		P	13 45 30.2	+0.3	
Q21A	Lamborn Mesa, baz=64	63.95	60	⇑P		P	13 45 30.1	+0.1	
GLA	Glamis baz=64	64.03	69	⇑P		P	13 45 30.5	-0.1	
Y13A	Salome baz=64	64.06	68	⇑P		P	13 45 30.6	-0.2	
X14A	Yava baz=64	64.13	67	⇑P		P	13 45 31.4	+0.2	
WUAZ	Wupatki baz=64	64.24	65	⇑P		P	13 45 32.1	+0.2	
R21A	Cimarron baz=64,SNR=7.9	64.30	60	⇑P		P	13 45 32.6	+0.3	
NOA	NORSAR Array B comp=Z,0.4nm,0.4s,mb3.6,baz=15,slow=5.5,SNR=5.0	64.38	342	P		P	13 45 31.4	-1.0	
NOA	NORSAR Array B	64.38	342	P		P	13 45 31.4	-1.0	
U18A	Rough Rock, Ch baz=64	64.43	63	⇓P		P	13 45 33.4	+0.3	
Y14A	Wickenburg baz=64	64.44	67	⇑P		P	13 45 33.3	0.0	
X15A	Humboldt baz=64,SNR=6.0	64.49	66	⇑P		P	13 45 34.0	+0.4	
T19A	Beclabito baz=64	64.60	62	⇓P		P	13 45 34.4	+0.1	
MVCO	Mesa Verde baz=64	64.62	62	⇑P		P	13 45 34.7	+0.4	
MVCO	Mesa Verde comp=Z,4.1nm,0.7s,mb4.4	64.62	62	*e*P		P	13 45 34.7	+0.3	
S21A	Coal Bank Pass baz=64	64.68	61	⇑P		P	13 45 35.2	+0.5	
Y15A	Casa Rosa Ranc baz=64,SNR=5.3	64.82	67	⇑P		P	13 45 35.7	0.0	
X16A	Lo Mia Camp, P baz=65,SNR=5.5	64.99	66	⇑P		P	13 45 37.0	+0.2	
W19A	Sanders baz=65	65.65	64	⇑P		P	13 45 41.4	+0.3	
X18A	Snowflake baz=66	65.76	65	⇓P		P	13 45 42.3	+0.6	
115A	Sonoran Desert baz=66	65.79	68	⇓P		P	13 45 42.1	+0.1	
Y17A	Roosevelt baz=66,SNR=5.4	65.86	66	⇓P		P	13 45 42.5	+0.1	
214A	Organ Pipe Nat baz=66	65.99	69	⇓P		P	13 45 43.0	-0.4	
X19A	St. Johns baz=66,SNR=5.5	66.20	64	⇓P		P	13 45 44.8	+0.2	
Y18A	Canyon Day Jun baz=66	66.26	65	⇑P		P	13 45 45.2	+0.2	
Y19A	Nutrioso baz=66	66.57	65	⇓P		P	13 45 47.8	+0.8	
117A	Oracle baz=66	66.74	67	⇑P		P	13 45 47.8	-0.3	
216A	Three Points, baz=66	66.74	68	⇑P		P	13 45 48.0	-0.1	
Z19A	T-Link Ranch, baz=67	67.05	65	⇓P		P	13 45 50.2	+0.2	
118A	Homack Ranch, baz=67	67.13	66	⇓P		P	13 45 50.9	+0.4	
ANMO	Albuquerque	67.39	62	*e*P		P	13 45 52.2	0.0	
218A	Dragoon baz=67	67.57	67	⇓P		P	13 45 53.3	0.0	
SCHQ	Schefferville comp=Z,2.3nm,0.6s,mb4.1,baz=353,slow=8.1,SNR=4.1	67.94	25	P		P	13 45 54.0	-1.3	
318A	Bisbee baz=68	68.00	67	⇑P		P	13 45 56.2	+0.1	
219A	White Tail Can baz=68	68.01	66	⇑P		P	13 45 56.3	+0.2	
319A	Douglas baz=68	68.45	67	⇓P		P	13 45 59.0	+0.1	
SCIA	State Center comp=Z,57nm,0.6s	68.91	49	*e*P		P	13 46 00.6	-0.9	
TXAR	Lajitas Array comp=Z,6.4nm,0.5s,mb4.7,baz=299,slow=5.1,SNR=169	73.17	64	P		P	13 46 27.2	-0.2	
TXAR					pP	pP	13 46 58.2	-1.3	
TXAR	comp=Z,0.6nm,0.6s,baz=315,slow=3.3,SNR=1.3 Lajitas Array	73.17	64	P		P	13 46 27.2	-0.2	
TXAR					*PP	pP	13 46 58.2	-1.3	
TXAR	comp=Z,6.0nm,0.5s				pmax	pmax			
TXAR	comp=Z,1.0nm,0.6s				pmax	pmax			
TXAR	Lajitas Array	73.17	64	P		P	13 46 27.2	-0.2	
TXAR					pP	pP	13 46 58.2	-1.4	
WRAB	Tennant Creek	73.84	202	*e*P		P	13 46 30.5	-0.7	
WRA	Warramunga Arr comp=Z,3.6nm,0.7s,mb4.2,baz=16,slow=6.2,SNR=32	73.86	202	P		P	13 46 31.2	-0.1	
WRA	Warramunga Arr	73.86	202	P		P	13 46 31.2	-0.1	
WRA					pmax	pmax			
JCT	comp=Z,4.0nm,0.7s Junction City	74.43	61	*e*P		P	13 46 33.4	-1.3	
JCT					pmax	pmax			
JCT	comp=Z,7.0nm,0.8s,mb4.4 Junction City comp=Z,7.0nm,0.8s,mb4.4	74.43	61	*e*P		P	13 46 33.4	-1.3	
MEM	Membach	75.19	341	AP		pP	13 47 11.9	+0.9	
SNF	Seneffe	75.62	342	AP		pP	13 47 14.3	+0.8	
ASAR	Alice Springs comp=Z,2.5nm,0.7s,mb4.0,baz=14,slow=5.8,SNR=45	77.55	201	P		P	13 46 52.7	+0.5	
ASAR	Alice Springs	77.55	201	P		P	13 46 52.7	+0.5	
ASAR					pmax	pmax			
STKA	comp=Z,3.0nm,0.7s Stephens Creek	84.15	193	P		P	13 47 26.8	-0.2	
KEST	comp=Z,2.9nm,0.8s,mb4.0,baz=237,slow=7.8,SNR=4.1 Kesra	88.46	334	P		P	13 47 47.7	-0.7	
DBIC	comp=Z,2.1nm,1.0s,mb3.9,baz=298,slow=5.0,SNR=4.7 Dimbokro	119.85	339	PKP		PKPdf	13 53 45.3	-0.8	
DBIC	comp=Z,2.0nm,0.7s,baz=40,slow=3.8,SNR=4.0 Dimbokro	119.85	339	PKIKP		PKPdf	13 53 45.3	-0.8	
DBIC					pmax	pmax			
CPUP	comp=Z,2.0nm,0.7s Villa Florida	143.99	59	PKP		PKPdf	13 54 28.0	-2.8	
CPUP	comp=Z,2.0nm,0.5s,baz=296,slow=3.6,SNR=12 Villa Florida	143.99	59	PKIKP		PKPdf	13 54 28.0	-2.8	
CPUP					pmax	pmax			
CPUP	comp=Z,2.0nm,0.5s Villa Florida	143.99	59	*e*PKPdf		PKPdf	13 54 28.0	-2.8	
PLCA	Paso Flores comp=Z,9.2nm,0.7s,baz=290,slow=3.1,SNR=25	146.09	90	PKPbc		PKPbc	13 54 34.5	-0.6	
PLCA	Paso Flores	146.09	90	PKP2		PKPab	13 54 34.5	-1.5	
PLCA					pmax	pmax			
SNAA	comp=Z,9.0nm,0.7s Sanae	157.85	197	*e*PKPdf		PKPab	13 55 22.0	-2.2	
VNA2	Neumayer--Watz	159.27	195	*e*PKPdf		PKPab	13 55 30.4	+0.1	
VNA3	Neumayer Olymp	159.32	192	*e*PKPdf		PKPab	13 55 29.1	-1.4	

NEIC ***17*** *13:40:02.0±1.2, 51.08N×17.958E, h56km±9km, mb4.5/10, ML3.8(AEIC), Error ellipse: s-maj=18.5km s-min=6.8km az=173.0*

ISCJB ***17*** *13:40:02.3±1.4, 51.1N±0.1×179.76E±0.07, h74km±11km, mb3.9/19, Error ellipse: s-maj=20.8km s-min=7.3km az=178.2*

IDC ***17*** *13:40:04.2±3.0, 51.11N×17.962E, h81km±25km, mb3.5/13, mb1 3.8/15, mb1mx3.6/27, mbtmp3.5/15, MS3.5/4, Ms1 3.5/4, ms1mx2.9/46, Error ellipse: s-maj=28.3km s-min=13.4km az=179.0*

ISC 17 13:40:04.0±1.3, 51.1N±0.1×179.74E±0.07, h74km±10km, n46, σ0.996/47, mb3.9/19, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ADK	Adak	2.36	70	P			Pn	13 40 40.0	-0.6
ADK				S			Sn	13 41 12.1	+3.5
SMY	Shemya	3.85	297	P			Pn	13 40 55.6	-5.1
FX1	Attu Island--F	4.43	296	P			Pn	13 41 06.5	-2.2
FX1	33nm,0.3s,baz=288,slow=9.1,SNR=34			S			Sn	13 41 59.6	+0.7
FX1	baz=123,slow=12,SNR=2.3 Attu Island--F	4.43	296	P			Pn	13 41 03.3	-5.4
FX1				S			Sn	13 41 59.6	+0.7
SPIA	Saint Paul Isl	8.45	40	P			Pn	13 42 04.3	+0.8
UNV	Unalaska Valle	8.83	67	P			Pn	13 42 08.9	+0.2

PETK	**Petropavlovsk-**	**13.69**	**287**	P	**Pn**	**13 43 14.2**	**-0.3**
	0.2nm,0.3s,baz=96,slow=16,SNR=6.4						
PETK				LR	LR	13 47 43.2	
	comp=Z,122nm,18.5s,baz=336,slow=34						
KDAK	**Kodiak Island**	**17.34**	**57**	P	**Pn**	**13 43 57.3**	**-3.4**
	1.7nm,0.3s,baz=268,slow=4.8,SNR=12						
KDAK	**Kodiak Island**	**17.34**	**57**	*e*P	**Pn**	**13 43 56.9**	**-3.9**
BILL	**Bilibino**	**18.22**	**344**	*e*P	**Pn**	**13 44 11.7**	**+0.3**
	18nm,1.3s						
KTH	**Kantishna Hill**	**19.91**	**40**	*e*P	**Pn**	**13 44 29.9**	**-1.7**
	18nm,1.0s						
BPAW	**Bear Paw Mtn.**	**20.13**	**39**	*e*P	**P**	**13 44 32.6**	**+1.0**
	6.4nm,0.9s						
TRF	**Thorofare Moun**	**20.13**	**41**	*e*P	**P**	**13 44 32.0**	**+0.4**
	19nm,1.1s						
INK	**Inuvik**	**28.20**	**35**	P	**P**	**13 45 49.3**	**+0.2**
	0.4nm,0.5s,mb3.2,baz=270,slow=6.6,SNR=3.4						
JHJ	**Hachijo jima 2**	**34.14**	**254**	LR	LR	13 59 59.8	
	comp=Z,67nm,18.8s,baz=86,slow=35						
YKA	**Yellowknife Ar**	**36.08**	**46**	P	**P**	**13 46 56.4**	**-1.6**
	0.8nm,0.5s,mb3.9,baz=281,slow=7.8,SNR=12						
YKA				PcP	PcP	13 49 23.3	+0.9
	0.2nm,0.7s,baz=292,slow=3.5,SNR=3.4						
YKA				LR	LR	14 03 01.3	
	comp=Z,49nm,19.8s,baz=65,slow=38						
NVAR	**Mina Array Bea**	**44.50**	**82**	P	**P**	**13 48 09.5**	**+1.8**
	0.8nm,0.8s,mb3.5,baz=316,slow=7.7,SNR=2.2						
SONM	**Songino Array**	**45.94**	**296**	P	**P**	**13 48 19.0**	**-0.1**
	0.2nm,0.3s,mb3.3,baz=46,slow=8.5,SNR=4.0						
PDAR	**Pinedale Array**	**47.26**	**71**	P	**P**	**13 48 30.4**	**+0.9**
	2.5nm,0.6s,mb4.1,baz=318,slow=3.4,SNR=16						
SPB4	**Spitsbergen Ar**	**50.57**	**356**	*e*P	**P**	**13 48 53.8**	**-0.6**
ZALV	**Zalesovo Beam**	**53.55**	**313**	P	**P**	**13 49 14.7**	**-2.0**
	0.5nm,0.5s,mb3.8,baz=25,slow=11,SNR=2.6						
ZALV				PcP	PcP	13 50 22.6	+0.2
	0.7nm,0.6s,baz=52,slow=5.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**53.55**	**313**	P	**P**	**13 49 14.7**	**-2.0**
ZALV				PcP	PcP	13 50 22.6	+0.1
MKAR	**Makanchi Array**	**59.48**	**308**	P	**P**	**13 49 56.9**	**-1.9**
	1.1nm,0.6s,mb4.1,baz=51,slow=3.7,SNR=15						
MKAR	**Makanchi Array**	**59.48**	**308**	P	**P**	**13 49 56.9**	**-2.0**
TXAR	**Lajitas Array**	**59.60**	**80**	P	**P**	**13 49 59.2**	**-0.8**
	0.2nm,0.5s,mb3.4,baz=308,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**59.60**	**80**	P	**P**	**13 49 59.2**	**-0.8**
TKM2	**Tokmak 2**	**65.57**	**309**	P	**P**	**13 50 39.9**	**+0.4**
	3.6nm,1.0s,mb4.2						
AAK	**Ala-Archa**	**66.33**	**309**	P	**P**	**13 50 44.8**	**+0.4**
	3.5nm,1.3s,mb4.0						
AKTO	**Aktyubinsk**	**67.37**	**324**	LR	LR	14 22 47.3	
	comp=Z,86nm,18.6s,baz=265,slow=38						
NB2	**NORSAR Subarra**	**67.82**	**354**	P	**P**	**13 50 52.6**	**-0.9**
	comp=Z,1.4nm,0.8s,mb3.8,baz=8.0,slow=6.9						
NOA	**NORSAR Array B**	**67.82**	**354**	P	**P**	**13 50 52.6**	**-0.9**
	comp=Z,2.6nm,0.8s,mb4.1,baz=9.4,slow=6.4,SNR=6.1						
CMAR	**Chiang Mai Arr**	**70.13**	**275**	P	**P**	**13 51 08.1**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.4,baz=27,slow=6.5,SNR=5.4						
TAPN	**Taplejung**	**70.44**	**289**	*e*P	**P**	**13 51 10.8**	**+0.5**
	comp=Z,17nm,1.0s,mb4.8						
ODAN	**Odare**	**70.99**	**289**	*e*P	**P**	**13 51 14.2**	**+0.6**
GUN	**Gumba**	**71.10**	**291**	*e*P	**P**	**13 51 15.0**	**+0.7**
JIRN	**Jiri**	**71.11**	**291**	*e*P	**P**	**13 51 15.2**	**+0.9**
	comp=Z,17nm,0.8s,mb4.9						
RAMN	**Ramite**	**71.39**	**290**	*e*P	**P**	**13 51 16.5**	**+0.4**
KKN	**Kakani**	**71.54**	**291**	*e*P	**P**	**13 51 17.6**	**+0.6**
PKI	**Pulchoki**	**71.63**	**291**	*e*P	**P**	**13 51 18.0**	**+0.5**
GKN	**Gorkha**	**71.76**	**292**	*e*P	**P**	**13 51 18.5**	**+0.2**
	comp=Z,14nm,0.9s,mb4.8						
DMN	**Daman**	**71.78**	**291**	*e*P	**P**	**13 51 19.1**	**+0.7**
DANN	**Dangsing**	**72.01**	**293**	*e*P	**P**	**13 51 20.4**	**+0.6**
	comp=Z,14nm,0.9s,mb4.8						
KOLN	**Koldanda**	**72.54**	**293**	*e*P	**P**	**13 51 23.2**	**+0.3**
AKASG	**Malin Array Be**	**75.51**	**341**	P	**P**	**13 51 39.1**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.6,baz=20,slow=5.7,SNR=4.7						
WRA	**Warramunga Arr**	**81.19**	**223**	P	**P**	**13 52 09.5**	**-1.9**
	comp=Z,0.3nm,0.9s,mb3.1,baz=32,slow=6.4,SNR=2.9						
BRTR	**Keskin Array B**	**84.80**	**334**	P	**P**	**13 52 30.4**	**+0.5**
	comp=Z,0.3nm,0.3s,mb3.7,baz=64,slow=3.7,SNR=4.7						

*ISCJB **17** 13:48:05.7±1.6, 513N±02×17965E±008, h67km±11km, mb3.7/11, Error ellipse: s-maj=36.0km s-min=8.4km az=3.0*

*IDC **17** 13:48:06.3±3.7, 5122N×17966E, h59km±28km, mb3.5/10, mb1 3.7/12, mb1mx3.6/29, mbtmp3.6/12, ML3.9/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/37, Error ellipse: s-maj=45.8km s-min=14.1km az=180.0*

*NEIC **17** 13:48:07.0±1.3, 5132N×17968E, h61km±8km, mb4.0/1, ML3.4(AEIC), Error ellipse: s-maj=31.3km s-min=6.4km az=181.0*

ISC 17 13:48:06.8±1.6**, 513N**±02×**17968E**±008**, h61**km±11km**, n22, σ0.s65**/24**, mb3.8**/11**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.35**	**73**	*e*Pn	**Pn**	**13 48 43.3**	**+0.3**
ADK				S	**Sn**	**13 49 16.7**	**+5.9**
SMY	**Shemya**	**3.75**	**295**	P	**Pn**	**13 49 01.5**	**-0.5**
FX1	**Attu Island--F**	**4.33**	**295**	P	**Pn**	**13 49 09.3**	**-0.7**
	32nm,0.3s,baz=172,slow=8.0,SNR=57						
FX1				S	**Sn**	**13 49 59.6**	**+0.4**
	10nm,0.3s,baz=252,slow=23,SNR=3.6						
FX1	**Attu Island--F**	**4.33**	**295**	P	**Pn**	**13 49 09.4**	**-0.6**
PETK	**Petropavlovsk-**	**13.60**	**286**	P	**Pn**	**13 51 17.7**	**+1.1**
	0.2nm,0.3s,baz=104,slow=15,SNR=4.1						
PETK				LR	LR	13 56 04.6	
	comp=Z,38nm,19.6s,baz=293,slow=35						
PETK	**Petropavlovsk-**	**13.60**	**286**	P	**Pn**	**13 51 17.7**	**+1.1**
PETK				LR	LR	13 56 04.6	
KDAK	**Kodiak Island**	**17.29**	**57**	P	**Pn**	**13 52 03.0**	**-0.7**
	0.8nm,0.3s,baz=354,slow=6.2,SNR=7.7						
INK	**Inuvik**	**28.10**	**35**	P	**P**	**13 53 52.0**	**-0.3**
	0.9nm,0.9s,mb3.4,baz=282,slow=9.3,SNR=2.1						
INK	**Inuvik**	**28.10**	**35**	P	**P**	**13 53 52.0**	**-0.3**
YKA	**Yellowknife Ar**	**36.00**	**46**	P	**P**	**13 55 01.5**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=282,slow=8.0,SNR=6.4						
KSRS	**Korea Array**	**38.68**	**270**	P	**P**	**13 55 23.8**	**-0.5**
	1.1nm,0.8s,mb3.6,baz=66,slow=10.0,SNR=4.1						
SONM	**Songino Array**	**45.84**	**296**	P	**P**	**13 56 22.4**	**0.0**
	0.4nm,0.7s,mb3.5,baz=64,slow=9.8,SNR=3.0						
BW06	**Boulder Array**	**47.25**	**71**	*e*P	**P**	**13 56 34.0**	**+0.5**
	1.3nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**47.26**	**71**	P	**P**	**13 56 33.8**	**+0.2**
	1.5nm,0.6s,mb4.1,baz=306,slow=4.0,SNR=12						
SPB4	**Spitsbergen Ar**	**50.42**	**356**	*e*P	**P**	**13 56 57.7**	**+0.4**
ZALV	**Zalesovo Beam**	**53.41**	**313**	P	**P**	**13 57 18.4**	**-1.4**
	0.3nm,0.3s,mb3.6,baz=33,slow=6.2,SNR=2.3						
KURK	**Kurchatov**	**58.40**	**313**	P	**P**	**13 57 56.5**	**+1.0**
	1.2nm,0.5s,mb4.2,baz=42,slow=6.6,SNR=4.2						
MK31	**Makanchi Array**	**59.35**	**308**	*e*P	**P**	**13 58 01.6**	**-0.6**
MKAR	**Makanchi Array**	**59.35**	**308**	P	**P**	**13 58 01.8**	**-0.4**
	0.7nm,0.5s,mb4.0,baz=48,slow=6.5,SNR=19						
MKAR	**Makanchi Array**	**59.35**	**308**	P	**P**	**13 58 01.8**	**-0.4**
TXAR	**Lajitas Array**	**59.62**	**80**	P	**P**	**13 58 04.4**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=305,slow=4.4,SNR=3.6						
BVAR	**Borovoye Array**	**60.35**	**319**	P	**P**	**13 58 10.0**	**+1.0**
	1.8nm,0.5s,mb4.3,baz=57,slow=6.4,SNR=9.3						

IDC 17 13:54:04.0±6.0**, 1065S**×**1358W, h0**km**, mb3.6**/2**, mb1 3.5**/3**, mb1mx3.4**/18**, mbtmp3.6**/3**, MS3.9**/20**, Ms1 3.9**/20**, ms1mx3.8**/35**, Error ellipse: s-maj=107.6km s-min=39.5km az=28.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**19.28**	**27**	P	Pn	13 58 30.3	-1.0
	0.1nm,0.3s,baz=192,slow=20,SNR=2.5						
DBIC				LR	LR	14 04 03.6	
	comp=Z,220nm,19.5s,baz=196,slow=31						
TORD	**Torodi Ar. Bea**	**28.09**	**33**	P	P	13 59 57.9	+0.3
	0.6nm,0.9s,baz=211,slow=7.6,SNR=3.8						
TORD				LR	LR	14 09 09.4	
	comp=Z,189nm,18.6s,baz=215,slow=32						
TSUM	**Tsumeb**	**31.25**	**109**	LR	LR	14 10 38.4	
	comp=Z,225nm,18.7s,baz=146,slow=32						
BDFB	**Brasilia**	**33.87**	**258**	LR	LR	14 12 27.1	
	comp=Z,151nm,18.8s,baz=114,slow=33						
LBTB	**Lobatse**	**39.77**	**116**	LR	LR	14 14 46.3	
	comp=Z,146nm,20.1s,baz=290,slow=31						
BOSA	**Boshof**	**40.47**	**122**	LR	LR	14 15 00.6	
	comp=Z,151nm,19.5s,baz=308,slow=31						
MDT	**Midelt**	**44.06**	**11**	LR	LR	14 19 27.3	
	comp=Z,204nm,18.9s,baz=154,slow=35						
CPUP	**Villa Florida**	**44.09**	**243**	LR	LR	14 18 15.9	
	comp=Z,172nm,18.1s,baz=116,slow=33						
ESDC	**Sonseca Array**	**50.86**	**10**	LR	LR	14 24 42.2	
	comp=Z,80nm,19.8s,baz=15,slow=36						
VAE	**Valguarnera**	**54.60**	**27**	LR	LR	14 25 23.1	
	comp=Z,142nm,21.4s,baz=266,slow=34						
DAVOX	**Davos/Dischmat**	**60.90**	**18**	LR	LR	14 29 12.2	
	comp=Z,126nm,19.4s,baz=80,slow=35						
NNA	**Nana**	**61.92**	**262**	LR	LR	14 32 01.9	
	comp=Z,136nm,18.4s,baz=149,slow=37						
GERES	**GERESS Array B**	**63.94**	**20**	LR	LR	14 30 51.6	
	comp=Z,78nm,18.8s,baz=26,slow=34						
VRAC	**Vranov**	**65.33**	**21**	LR	LR	14 33 46.4	
	comp=Z,108nm,18.7s,baz=98,slow=36						
BRTR	**Keskin Array B**	**66.55**	**38**	LR	LR	14 35 12.5	
	comp=Z,44nm,18.2s,baz=274,slow=37						
AKASG	**Malin Array Be**	**71.53**	**27**	P	P	14 05 26.6	0.0
	0.2nm,0.3s,baz=228,slow=6.1,SNR=6.5						
HFS	**Hagfors**	**73.84**	**14**	LR	LR	14 36 38.8	
	comp=Z,90nm,18.1s,baz=69,slow=35						
NOA	**NORSAR Array B**	**74.11**	**12**	LR	LR	14 37 33.3	
	comp=Z,66nm,18.1s,baz=25,slow=35						
MAW	**Mawson**	**75.06**	**157**	LR	LR	14 31 02.7	
	comp=Z,72nm,18.2s,baz=199,slow=30						
CMIG	**Matias Romero**	**84.92**	**288**	LR	LR	14 42 32.9	
	comp=Z,86nm,21.4s,baz=204,slow=34						
VNDA	**Vanda**	**91.94**	**179**	LR	LR	14 44 51.7	
	comp=Z,60nm,19.4s,baz=248,slow=33						

GUC 17 14:09:08.6±0.7**, 2326S**×**7064W, h36**km±2km**, MD3.5, ML2.9, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.23**	**48**	⇓*i*P	Pn	14 09 15.0	-0.8
MECH				*i* S	Sn	14 09 20.6	-0.1
MECH				AML	AML	14 09 21.1	
	comp=E,4μm,0.4s						
CEN1	**Los Morros**	**0.42**	**108**	*i* P	Pn	14 09 18.1	0.0
CEN1				*i* S	Sn	14 09 24.4	-0.3
PECH	**Pedro de Valdi**	**1.10**	**53**	⇑*i*P	Pn	14 09 28.3	+0.7
PECH				*i* S	Sn	14 09 43.5	+1.9
PECH				AML	AML	14 09 44.7	
	comp=N,886nm,0.2s						
TOCH	**Tocopilla**	**1.23**	**19**	AML	AML	14 09 49.1	
	comp=E,348nm,0.2s						
PB04	**Plate Boundary**	**1.45**	**47**	*e*P	Pn	14 09 27.5	-4.9
PB04				*i* S	Sn	14 09 41.9	-8.2
PB04				AML	AML	14 09 43.5	
	comp=N,463nm,0.3s						
LVC	**Limon Verde**	**1.71**	**68**	⇓*i*P	Pn	14 09 38.4	+2.5
LVC				*i* S	Sn	14 10 01.0	+4.3
LVC				AML	AML	14 10 03.1	
	comp=N,156nm,0.5s						
PB01	**Plate Boundary**	**2.45**	**26**	AML	AML	14 10 28.8	
	comp=E,72nm,0.6s						

IDC 17 14:09:53.3±7.2**, 2493S**×**17742W, h73**km±51km**, mb3.4**/4**, mb1 3.8**/5**, mb1mx3.6**/16**, mbtmp3.6**/5**, ML2.3**/1**, Error ellipse: s-maj=92.5km s-min=22.4km az=145.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.19**	**27**	P	Pn	14 12 45.6	+1.6
	1.1nm,0.3s,baz=252,slow=20,SNR=2.3						
AFI				S	Sn	14 14 54.8	-3.4
	2.2nm,0.3s,baz=217,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**44.19**	**261**	P	P	14 17 55.1	-0.2
	0.5nm,0.6s,baz=102,slow=8.2,SNR=17						
WRA	**Warramunga Arr**	**44.68**	**266**	P	P	14 17 59.0	-0.3
	0.3nm,0.7s,baz=103,slow=8.1,SNR=4.1						
PETK	**Petropavlovsk-**	**80.67**	**345**	P	P	14 21 58.6	+0.7
	2.4nm,0.6s,baz=131,slow=5.4,SNR=7.2						
PDAR	**Pinedale Array**	**91.82**	**43**	P	P	14 22 53.6	+0.5
	0.3nm,0.6s,baz=202,slow=3.9,SNR=3.4						
NOA	**NORSAR Array B**	**143.43**	**353**	PKP	PKPdf	14 29 16.1	-2.7
	1.6nm,0.8s,baz=9.1,slow=2.3,SNR=3.5						
HFS	**Hagfors**	**143.98**	**351**	PKP	PKPdf	14 29 17.5	-2.3
	2.9nm,0.5s,baz=0.0,slow=1.4,SNR=19						
AKASG	**Malin Array Be**	**147.09**	**328**	PKPbc	PKPbc	14 29 27.5	-0.2
	0.7nm,0.2s,baz=45,slow=4.2,SNR=7.3						

*CSEM **17** 14:16:07.6±0.1, 3654N×2721E, h129km±1km, MD2.9, Error ellipse: s-maj=2.3km s-min=1.8km az=5.0*

*ISCJB **17** 14:16:07.9±0.3, 3651N±003×2715E±003, h127km±3km, mb3.7/4, Error ellipse: s-maj=4.4km s-min=3.3km az=155.0*

*IDC **17** 14:16:08.5±0.9, 3643N×2711E, h126km±12km, mb3.5/4, mb1 3.4/9, mb1mx3.2/27, mbtmp3.4/9, Error ellipse: s-maj=19.7km s-min=9.1km az=162.0*

*NEIC **17** 14:16:09.5±0.6, 3652N×2716E, h134km±8km, MD3.5(ATH), Error ellipse: s-maj=12.8km s-min=9.2km az=184.0*

*THE **17** 14:16:10.8, 3652N×2715E, h134km±4km, Error ellipse: s-maj=4.6km s-min=1.5km az=250.0*

*ISK **17** 14:16:10.1, 3671N×2690E, h104km, MD3.2*

*ATH **17** 14:16:12.4, 3658N×2690E, h56km±14km, MD3.5/4*

*HLW **17** 14:16:15.3, 3594N×2728E, h46km, Mb3.9*

*DDA **17** 14:16:20.9, 3708N×2782E, h16km, Md2.9*

ISC 17 14:16:09.0±0.3**, 3651N**±003×**2715E**±003**, h123**km±4km**, n63, σ0.s97**/91**, mb3.7**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.41**	**58**	*e*PG	**Pn**	**14 16 27.5**	**+0.8**
DAT				*e*SG	**Sn**	**14 16 39.2**	**-0.9**
BDRM	**Kayabasi**	**0.60**	**23**	*i* P	**Pn**	**14 16 28.6**	**+0.7**
BDRM				*i* S	**Sn**	**14 16 39.8**	**-2.3**
BDRM	**Kayabasi**	**0.60**	**23**	*i* P	**Pn**	**14 16 28.5**	**+0.6**
ARG	**Arkhangelos**	**0.84**	**110**	*e*P	**Pn**	**14 16 32.0**	**+2.2**
MLSB	**Milas**	**0.93**	**33**	*e*PG	**Pn**	**14 16 30.9**	**+0.4**
MLSB				*e*SG	**Sn**	**14 16 46.0**	**-0.9**
KARP	**Karpathos**	**0.96**	**179**	*e*P	**Pn**	**14 16 32.2**	**+1.3**
KARP				*e*S	**Sn**	**14 16 46.0**	**-1.5**
KARP	**Karpathos**	**0.96**	**179**	*e*P	**Pn**	**14 16 32.5**	**+1.6**
KARP				*e*S	**Sn**	**14 16 46.0**	**-1.5**
YER	**Yerkesik**	**1.10**	**55**	*e*PN	**Pn**	**14 16 33.7**	**+1.5**
GCAM	**G?zelcaml?**	**1.19**	**3**	*i* P	**Pn**	**14 16 32.9**	**-0.2**
SMG	**Samos**	**1.22**	**348**	*e*P	**Pn**	**14 16 32.9**	**-0.5**
TURN	**Turunc**	**1.22**	**73**	*i* P	**Pn**	**14 16 31.7**	**-1.8**
TURN				*i* S	**Sn**	**14 16 47.1**	**-5.0**
THR1	**Thera Island**	**1.37**	**264**	P	**Pn**	**14 16 35.5**	**+0.5**
THR1				S	**Sn**	**14 16 55.3**	**+0.4**
APE	**Apeiranthos**	**1.41**	**294**	P	**Pn**	**14 16 35.5**	**0.0**
APE				S	**Sn**	**14 16 55.2**	**-0.5**
APE	**Apeiranthos**	**1.41**	**294**	P	**Pn**	**14 16 35.7**	**+0.2**
THR3	**Thira Island,**	**1.41**	**266**	P	**Pn**	**14 16 35.8**	**+0.3**
THR3				S	**Sn**	**14 16 56.3**	**+0.6**
THR4	**Thira Island,**	**1.41**	**268**	P	**Pn**	**14 16 36.2**	**+0.7**
THR4				S	**Sn**	**14 16 55.5**	**-0.2**
THR6	**Thira Island,**	**1.42**	**264**	P	**Pn**	**14 16 36.2**	**+0.6**
THR6				S	**Sn**	**14 16 56.2**	**+0.3**
THR5	**Thira Island,**	**1.45**	**267**	P	**Pn**	**14 16 37.0**	**+1.0**
THR5				S	**Sn**	**14 16 56.7**	**+0.1**
ZKR	**Zakros**	**1.59**	**209**	P	**Pn**	**14 16 38.7**	**+1.1**
ZKR				S	**Sn**	**14 16 58.8**	**-0.6**
NPS	**Neapolis**	**1.76**	**225**	*e*P	**Pn**	**14 16 40.3**	**+0.6**
BLCB	**Balcova**	**1.87**	**357**	*e*PN	**Pn**	**14 16 39.2**	**-1.8**
IZM	**Izmir**	**1.88**	**3**	*e*PN	**Pn**	**14 16 40.4**	**-0.7**
LAST	**Lasithi**	**1.91**	**226**	P	**Pn**	**14 16 42.0**	**+0.5**
LAST				S	**Sn**	**14 17 05.9**	**-0.4**
CHOS	**Chios island**	**2.06**	**335**	P	**Pn**	**14 16 42.8**	**-0.5**
GOLH	**Golhisar**	**2.07**	**69**	*i* P	**Pn**	**14 16 44.9**	**+1.6**
GOLH				*i* S	**Sn**	**14 17 09.9**	**+0.2**
IDI	**Anoyia**	**2.20**	**237**	P	**Pn**	**14 16 45.3**	**+0.3**
	14nm,0.3s,baz=53,slow=14,SNR=50						
IDI				S	**Sn**	**14 17 11.1**	**-1.6**
	32nm,0.3s,baz=0.6,slow=21,SNR=26						
MANT	**Manisa**	**2.27**	**29**	*i* P	**Pn**	**14 16 46.1**	**+0.2**
KULA	**Kula-Manisa**	**2.33**	**31**	*e*PN	**Pn**	**14 16 46.8**	**+0.1**
SIVA	**Sivas**	**2.42**	**233**	P	**Pn**	**14 16 48.9**	**+1.1**
SIVA				S	**Sn**	**14 17 17.6**	**0.0**
KHAL	**Karahalli**	**2.63**	**45**	*i* P	**Pn**	**14 16 50.9**	**+0.5**
KHAL				*i* S	**Sn**	**14 17 21.8**	**-0.7**
KARN	**Karanos**	**2.84**	**248**	P	**Pn**	**14 16 54.3**	**+1.0**
KARN				S	**Sn**	**14 17 26.5**	**-0.9**
GVD	**Gavdhos**	**3.00**	**237**	*e*P	**Pn**	**14 16 57.1**	**+1.8**
GVD	**Gavdhos**	**3.00**	**237**	*e*P	**Pn**	**14 16 57.0**	**+1.7**
DID	**Didima**	**3.28**	**289**	P	**Pn**	**14 16 59.0**	**0.0**
DID				S	**Sn**	**14 17 36.3**	**-1.4**
LTK	**Loutraki**	**3.66**	**296**	P	**Pn**	**14 17 04.2**	**+0.2**
ITM	**Ithomi**	**4.24**	**281**	P	**Pn**	**14 17 12.8**	**+1.1**
PYL	**PYLOS**	**4.36**	**277**	P	**Pn**	**14 17 12.2**	**-1.1**
AGG	**Agios Georgios**	**4.56**	**305**	P	**Pn**	**14 17 16.4**	**+0.4**
RLS	**Riolos of Patr**	**4.78**	**290**	P	**Pn**	**14 17 23.8**	**+4.8**
SLUM		**5.26**	**198**	P	**Pn**	**14 17 25.1**	**-0.4**
SLUM				S	**Sn**	**14 18 15.7**	**-9.3**
HMAT	**Matruh**	**5.41**	**180**	P	**Pn**	**14 17 26.3**	**-1.1**
HMAT				S	**Sn**	**14 18 17.8**	**-11**
VLS	**Valsamata**	**5.48**	**290**	P	**Pn**	**14 17 26.7**	**-1.7**
VLS	**Valsamata**	**5.48**	**290**	P	**Pn**	**14 17 29.3**	**+0.9**
BRTR	**Keskin Array B**	**6.04**	**56**	P	**Pn**	**14 17 37.5**	**+1.6**
	0.3nm,0.3s,baz=227,slow=16,SNR=7.8						
BRTR				S	**Sn**	**14 18 46.0**	**+2.4**
	0.1nm,0.3s,baz=220,slow=25,SNR=3.4						
BRTR	**Keskin Array B**	**6.04**	**56**	P	**Pn**	**14 17 37.5**	**+1.6**
BRTR				S	**Sn**	**14 18 46.0**	**+2.4**
SWA2		**7.39**	**192**	P	**Pn**	**14 17 53.7**	**-0.5**
MMAI	**Mount Meron Ar**	**7.64**	**115**	P	**Pn**	**14 17 57.0**	**-0.6**
	11nm,0.3s,baz=306,slow=11,SNR=26						
MMAI				S	**Sn**	**14 19 21.4**	**-1.0**
	2.9nm,0.3s,baz=324,slow=27,SNR=4.2						
KOT	**Kottamia**	**7.65**	**148**	P	**Pn**	**14 17 57.7**	**-0.1**
KOT				S	**Sn**	**14 19 12.6**	**-10**
HHAG	**Hagoal**	**7.75**	**146**	P	**Pn**	**14 17 58.7**	**-0.4**
HSAF	**As Saff**	**7.81**	**150**	P	**Pn**	**14 17 59.9**	**0.0**
GLL	**Jalalah**	**7.91**	**150**	P	**Pn**	**14 18 01.0**	**-0.2**
SUZ		**8.18**	**143**	P	**Pn**	**14 18 05.2**	**+0.3**
SUZ		**8.18**	**143**	P	**Pn**	**14 18 05.2**	**+0.3**
AWBH		**8.30**	**169**	P	**Pn**	**14 18 06.3**	**-0.3**
ASF	**Jabal al Asfar**	**9.15**	**115**	P	**Pn**	**14 18 19.1**	**+1.2**
	0.8nm,0.3s,baz=202,slow=11,SNR=2.6						
HFRF	**Wahat Farafira**	**9.39**	**174**	P	**Pn**	**14 18 20.9**	**-0.3**
EIL	**Elat**	**9.45**	**134**	P	**Pn**	**14 18 22.6**	**+0.5**
	0.6nm,0.3s,baz=284,slow=4.2,SNR=7.4						
EIL				S	**Sn**	**14 20 04.6**	**-1.9**
	2.0nm,0.3s,baz=319,slow=18,SNR=7.9						
EIL	**Elat**	**9.45**	**134**	P	**Pn**	**14 18 22.6**	**+0.5**
EIL				S	**Sn**	**14 20 04.6**	**-1.9**
TR2		**9.82**	**144**	P	**Pn**	**14 18 28.5**	**+1.5**
TORD	**Torodi Ar. Bea**	**32.59**	**231**	P	**P**	**14 22 28.2**	**-0.6**
	0.7nm,0.3s,mb4.0,baz=33,slow=8.6,SNR=13						
KURK	**Kurchatov**	**39.08**	**52**	P	**P**	**14 23 22.5**	**-1.2**
	0.5nm,0.4s,mb3.7,baz=271,slow=8.7,SNR=4.9						
MKAR	**Makanchi Array**	**41.69**	**58**	P	**P**	**14 23 45.1**	**-0.2**
	0.7nm,0.4s,mb3.7,baz=270,slow=8.5,SNR=20						
ZALV	**Zalesovo Beam**	**42.90**	**47**	P	**P**	**14 23 53.1**	**-1.9**
	0.4nm,0.3s,mb3.6,baz=290,slow=8.7,SNR=3.8						

*IDC **17** 14:29:47.7±0.7, 2333S×7069W, h0km, mb4.3/7, mb1 4.4/9, mb1mx4.2/18, mbtmp4.3/9, ML3.6/3, MS3.6/3, Ms1 3.6/3, ms1mx3.2/22, Error ellipse: s-maj=21.7km s-min=14.2km az=156.0*

*NEIC **17** 14:29:47.7±3.3, 2331S×7073W, h2km±20km, mb4.6/4, ML4.5(GUC), Error ellipse: s-maj=14.3km s-min=8.3km az=93.0*

*BJI **17** 14:29:47.6, 2330S×7070W, h1km, mB5.3, Ms5.1, Msz5.0*

*ISCJB **17** 14:29:49.1±1.1, 2335S±005×7083W±007, h26km±6km, mb4.5/12, MS3.8/2, Error ellipse: s-maj=11.7km s-min=7.4km az=21.8*

*GUC **17** 14:29:51.6±0.5, 2328S×7068W, h36km±1km, MD4.3, ML4.5*

ISC 17 14:29:51.6±0.9**, 2330S**±005×**7069W**±007**, h28**km±5km**, h24**km±.7km**:pP-P, n54, σ0.s97**/47**, mb4.5**/12**, MS3.8**/2**, 4C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.30**	**50**	⇓*i*P	**Pb**	**14 29 58.5**	**-0.3**
MECH				*i* S	**Sb**	**14 30 04.4**	**+0.7**
MECH				AML	AML	14 30 04.7	
	comp=E,145μm,0.6s						
CEN1	**Los Morros**	**0.46**	**102**	⇑*i*P	**Pb**	**14 30 01.0**	**-0.4**
CEN1				*i* S	**Sb**	**14 30 08.0**	**0.0**
TOCH	**Tocopilla**	**1.28**	**21**	AML	AML	14 30 33.4	
	comp=E,14μm,0.2s						
MACH	**Maria Elena**	**1.40**	**38**	*i* P	**Pn**	**14 30 15.3**	**0.0**
MACH				*i* S	**Sn**	**14 30 33.7**	**+0.9**
PB04	**Plate Boundary**	**1.51**	**48**	⇑*i*P	**Pn**	**14 30 10.3**	**-6.6**
PB04				*i* S	**Sn**	**14 30 25.0**	**-11**
PB04				AML	AML	14 30 28.7	
	comp=N,22μm,0.9s						
LVC	**Limon Verde**	**1.78**	**68**	Pn	**Pn**	**14 30 21.9**	**+1.4**
	baz=247,slow=0.0						
LVC				Lg		14 30 44.7	
	comp=N,1μm,0.3s,baz=32,slow=0.0,SNR=43						
LVC	**Limon Verde**	**1.78**	**68**	⇑*e*Pn	**Pn**	**14 30 21.8**	**+1.3**
LVC				*e*Sn	**Sn**	**14 30 44.6**	**+2.4**
LVC	**Limon Verde**	**1.78**	**68**	⇑*i*P	**Pn**	**14 30 22.1**	**+1.6**
LVC				*i* S	**Sn**	**14 30 44.9**	**+2.7**
LVC				AML	AML	14 30 47.8	
	comp=N,6μm,0.3s						
PB01	**Plate Boundary**	**2.51**	**27**	AML	AML	14 31 10.1	
	comp=E,4μm,0.4s						
ARE	**Arequipa**	**6.84**	**354**	*e*P	**Pn**	**14 31 29.0**	**-1.2**
ARE				*e*S	**Sn**	**14 32 39.0**	**-8.1**
CFAA	**Coronel Fontan**	**8.56**	**166**	Pn	**Pn**	**14 31 53.0**	**-0.7**
	comp=E,0.1nm,0.3s,baz=340,slow=15,SNR=8.6						
CFAA				Sn	**Sn**	**14 33 45.8**	**+16**
	comp=E,1.1nm,0.3s,baz=150,slow=16,SNR=11						
CFAA	**Coronel Fontan**	**8.56**	**166**	Pn	**Pn**	**14 31 53.0**	**-0.7**
CFAA				Sn	**Sn**	**14 33 45.8**	**+16**
SIV	**San Ignacio**	**11.61**	**53**	Pn	**Pn**	**14 32 34.0**	**-1.6**
	comp=E,1.4nm,0.3s,baz=258,slow=12,SNR=19						
SIV				Sn	**Sn**	**14 34 42.3**	**-2.1**
	baz=162,slow=18,SNR=1.4						
CPUP	**Villa Florida**	**12.51**	**107**	Pn	**Pn**	**14 32 39.1**	**-8.7**
	comp=E,0.8nm,0.3s,baz=326,slow=14,SNR=6.8						
CPUP	**Villa Florida**	**12.51**	**107**	*e*Pn	**Pn**	**14 32 38.2**	**-10**
	comp=E,19nm,0.7s						
TRQA	**Tornquist**	**16.50**	**155**	*e*P	**Pn**	**14 33 42.0**	**+1.0**
	comp=E,9.1nm,0.8s						
PLCA	**Paso Flores**	**17.39**	**180**	P	**Pn**	**14 33 49.5**	**-2.7**
	comp=E,0.1nm,0.3s,baz=199,slow=8.6,SNR=2.2						
PLCA				LR	LR	14 40 20.2	
	comp=E,149nm,18.8s,baz=6.7,slow=36						
RCBR	**Riachuelo**	**37.73**	**68**	*e*P	**P**	**14 37 05.6**	**+0.3**
	comp=E,15nm,0.8s,mb4.8						
VNA3	**Neumayer Olymp**	**58.92**	**161**	*e*P	**P**	**14 39 48.8**	**+0.9**
VNA3				*e*	pP	14 39 56.1	-0.4
VNA3				*e*		14 40 02.0	
VNA3				*e*		14 40 36.6	
VNA1	**Neumayer--Stat**	**59.16**	**160**	*e*P	**P**	**14 39 49.7**	**+0.2**
VNA1				*e*		14 40 03.1	
VNA2	**Neumayer--Watz**	**59.52**	**160**	*e*P	**P**	**14 39 53.1**	**+1.1**
	baz=300,slow=7.2						
VNA2				*e*	pP	14 39 59.6	-1.0
VNA2				*e*		14 40 05.5	
VNA2				*e*		14 40 39.9	
SNAA	**Sanae**	**61.14**	**160**	*e*P	**P**	**14 40 02.0**	**-1.1**
SNAA				*e*	pP	14 40 09.2	-2.5
SNAA				*e*		14 40 15.9	
SNAA	**Sanae**	**61.14**	**160**	*e*P	**P**	**14 40 01.9**	**-1.2**
	comp=E,3.6nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**61.19**	**327**	P	**P**	**14 40 04.9**	**+1.0**
	comp=E,0.3nm,0.7s,mb3.5,baz=134,slow=8.8,SNR=4.0						
LIC	**Lamto**	**70.47**	**74**	*e*P	**P**	**14 41 03.6**	**-0.5**
	comp=E,21nm,1.3s,mb4.9						
TIC	**Toumodi**	**70.67**	**74**	*e*P	**P**	**14 41 04.8**	**-0.5**
	comp=E,5.9nm,0.2s,mb5.2						
KIC	**Kosan Boka**	**70.79**	**74**	*e*P	**P**	**14 41 05.6**	**-0.4**
	comp=E,26nm,0.7s,mb5.3						
DBIC	**Dimbokro**	**70.83**	**74**	P	**P**	**14 41 06.0**	**-0.2**
	comp=E,4.5nm,0.6s,mb4.6,baz=220,slow=8.2,SNR=10						
DBIC				LR	LR	15 09 52.2	
	comp=E,61nm,18.1s,MS3.9,baz=56,slow=34						
DBIC	**Dimbokro**	**70.83**	**74**	*e*P	**P**	**14 41 05.8**	**-0.5**
	comp=E,7.5nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**74.86**	**331**	P	**P**	**14 41 30.6**	**+1.1**
	comp=E,0.3nm,0.5s,mb3.5,baz=126,slow=4.7,SNR=3.0						
SYO	**Syowa Base**	**75.41**	**160**	⇓*e*P	**P**	**14 41 31.8**	**-0.6**
TOA0	**Torodi Ar. Sit**	**79.51**	**71**	*e*P	**P**	**14 41 55.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P	**P**	**14 41 56.1**	**-0.2**
	comp=E,10.0nm,0.8s,mb4.8,baz=251,slow=5.2,SNR=40						
TSUM	**Tsumeb**	**81.10**	**107**	*e*P	**P**	**14 42 05.4**	**+0.5**
MAW	**Mawson**	**83.08**	**164**	P	**P**	**14 42 15.3**	**+0.9**
	comp=E,3.1nm,0.5s,mb4.6,baz=239,slow=9.5,SNR=9.6						
BOSA	**Boshof**	**84.06**	**118**	P	**P**	**14 42 20.5**	**+0.4**
	comp=E,2.3nm,0.5s,mb4.5,baz=254,slow=22,SNR=5.9						
BOSA	**Boshof**	**84.06**	**118**	P	**P**	**14 42 20.5**	**+0.4**
YKA	**Yellowknife Ar**	**92.33**	**341**	P	**P**	**14 42 59.0**	**+0.2**
	comp=E,0.9nm,0.7s,mb4.2,baz=136,slow=4.4,SNR=23						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	92.33	341	P	P	14 42 59.0	+0.2
KEST	Kesra	95.69	54	LR	LR	15 25 01.1	
	comp=E,21nm,18.4s,MS3.6,baz=297,slow=35						
ASAR	Alice Springs	127.56	209	PKP	PKPdf	14 48 55.5	+0.6
	comp=E,0.6nm,0.6s,baz=134,slow=1.5,SNR=16						
WRA	Warramunga Arr	130.57	212	PKP	PKPdf	14 49 01.7	+1.0
	comp=E,0.7nm,0.8s,baz=156,slow=1.6,SNR=11						
ZAA0	Zalesovo Array	144.27	25	ePKPpre		14 49 22.8	
ZALV	Zalesovo Beam	144.27	25	PKP	PKPdf	14 49 23.7	-1.0
	comp=E,3.2nm,0.8s,baz=287,slow=6.0,SNR=13						
AML	Almayashu	144.97	49	ePKPdf	PKPdf	14 49 27.6	+1.3
AAK	Ala-Archa	145.33	48	ePKP	PKPdf	14 49 28.4	+1.5
TKM2	Tokmak 2	145.96	47	ePKP	PKPdf	14 49 29.8	+1.8
MK31	Makanchi Array	148.05	36	ePKPbc	PKPbc	14 49 34.7	+0.2
MKAR	Makanchi Array	148.05	36	PKP	PKPdf	14 49 32.3	+1.0
	comp=E,4.4nm,0.8s,baz=318,slow=1.9,SNR=23						
MKAR				PKPbc	PKPbc	14 49 35.0	+0.6
	comp=E,4.3nm,0.8s,baz=309,slow=3.3,SNR=24						
WMQ	Urumqi	152.88	36	ePKP	PKPdf	14 49 39.9	+1.0
BJI	Beijing	162.32	342	PKP	PKPdf	14 49 51.0	+0.2
HHC	Hu-ho-hao-te	162.40	354	ePKP	PKPdf	14 49 54.3	+3.5
HHC				PKP2	PKPab	14 50 44.6	+6.4
HHC				PP	PP		
	comp=Z,114nm,5.8s						
HHC				LR	LR		
	comp=N,90nm,16.6s						
HHC				LR	LR		
	comp=E,175nm,15.5s						
HHC				LR	LR		
	comp=Z,142nm,15.5s						
LZH	Lanzhou	166.40	19	ePKP	PKPdf	14 49 55.6	+1.1
LZH				LR	LR		
	comp=N,139nm,18.0s						
LZH				LR	LR		
	comp=Z,198nm,20.5s						
CD2	Chengdu	170.95	32	PKP	PKPdf	14 50 00.3	+2.6

*IDC **17** 14:44:11.0±0.7, 2.33N×129.08E, h0^{km}, mb4.1/13, mb1 4.3/14, mb1mx4.2/18, mbtmp4.2/14, ML3.9/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/30, Error ellipse: s-maj=30.9km s-min=13.8km az=79.0*

*ISCJB **17** 14:44:14.1±1.7, 2.28N±0.06×129.10E±0.08, h33^{km}±16^{km}, mb4.5/37, MS3.9/5, Error ellipse: s-maj=14.6km s-min=8.3km az=150.6*

*MOS **17** 14:44:14.7±0.9, 2.35N×129.02E, h38^{km}, mb4.9/6, Error ellipse: s-maj=22.3km s-min=9.6km az=113.1*

*NEIC **17** 14:44:16.2±0.3, 2.30N×129.03E, h35^{km}, mb4.7/15, Error ellipse: s-maj=8.7km s-min=5.0km az=66.0*

*BJI **17** 14:44:21.2, 3.00N×128.78E, h35^{km}, mB5.0, mb4.6, Ms4.6, Msz4.3*

*DJA **17** 14:44:47, 1.42N×127.15E, h10^{km}, MLv4.0/4*

ISC 17 14:44:17.4±1.5**, 2.25N**±0.06×**129.09E**±0.08**, h46**^{km}±14^{km}**, h36**^{km}±1.3^{km}**:pP-P, n69, σ0^{s}99**/64**, mb4.5**/36**, MS3.9**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.27	230	P	Pn	14 44 55.7	+3.3
MNI	Manado	4.33	259	P	Pn	14 45 20.8	+0.1
AAI	Ambon	5.97	189	P	Px	14 46 08.5	
	50nm,1.0s,0.2nm						
KDI	Kendari	8.94	226	P	Pn	14 46 24.2	+0.2
	49nm,0.8s,1μm0.1nm						
MYLDM	Lahad Datu	10.96	286	P	Pn	14 47 00.5	+8.7
	69nm,1.2s,1μm						
KAPI	Kappang	11.80	232	Pn	Pn	14 47 01.4	-1.7
	0.8nm,0.3s,baz=151,slow=5.5,SNR=3.6						
KAPI				LR	LR	14 51 31.1	
	comp=Z,80nm,19.6s,baz=66,slow=37						
BATI	Baumata	13.50	204	LR	LR	14 53 03.9	
	comp=Z,121nm,19.6s,baz=6.5,slow=39						
BATI	Baumata	13.50	204	P	Px	14 47 42.1	
	18nm,1.0s						
KAKA	Kakadu	15.23	167	eP	x	14 47 24.7	
	5.9nm,0.6s						
SBUM	Sibu	16.86	271	P	Px	14 48 21.9	
	23nm,1.4s						
KSM	Kuching	18.79	268	eP	Pn	14 48 33.4	-0.7
	11nm,0.8s						
KSM	Kuching	18.79	268	P	Pn	14 48 43.5	+9.5
	25nm,1.2s						
GUMO	Guam	19.24	53	LR	LR	14 55 26.7	
	comp=Z,84nm,18.3s,baz=147,slow=35						
KRKI	Karangkates	19.55	238	P	Pn	14 48 52.1	+9.0
	160nm,0.8s						
FITZ	Fitzroy Crossi	20.51	189	eP	P	14 48 51.8	0.0
	6.5nm,0.6s						
COEN	Coen	21.31	139	eP	P	14 49 05.9	+5.4
	6.3nm,0.9s,mb4.0						
PMG	Port Moresby	21.40	123	P	P	14 49 04.2	+2.7
	9.5nm,0.9s,mb4.1,baz=296,slow=8.3,SNR=3.9						
PMG				LR	LR	14 57 05.3	
	comp=Z,66nm,21.2s,MS3.0,baz=283,slow=36						
WRAB	Tennant Creek	22.64	167	eP	P	14 49 14.1	-0.6
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
WRAB	Tennant Creek	22.64	167	eP	P	14 49 14.1	-0.5
	comp=Z,12nm,0.8s,mb4.4						
WRA	Warramunga Arr	22.65	167	P	P	14 49 14.9	+0.2
	comp=Z,3.9nm,0.8s,mb3.9,baz=348,slow=11,SNR=20						
WB2	Warramunga Arr	22.65	167	eP	P	14 49 13.8	-1.0
LEM	Lembang	23.25	247	P	Px	14 49 31.8	
ASAR	Alice Springs	26.18	170	P	P	14 49 48.1	+0.4
	comp=Z,2.3nm,0.9s,mb3.7,baz=342,slow=5.6,SNR=19						
NJ2	Nanjing	31.17	343	eP	P	14 50 33.4	+1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA	Guiyang	32.30	320	P	P	14 50 41.8	-0.3
GYA				AP	pP	14 50 52.8	-1.5
GYA				PP	PP	14 51 51.3	-4.5
GYA				PCP	PcP	14 53 30.3	+0.7
GYA				S	S	14 55 53.9	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				AMB	AMB		
	comp=Z,70nm,4.3s						
CMAR	Chiang Mai Arr	33.65	301	P	P	14 50 54.0	-0.1
	comp=Z,1.2nm,0.7s,mb4.0,baz=118,slow=7.5,SNR=10						
KMI	Kunming	34.09	314	P	P	14 51 00.0	+2.2
KMI				AP	pP	14 51 10.8	+0.8
KMI				XP	sP	14 51 14.6	-0.9
KMI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
KMI				AMB	AMB		
	comp=Z,28nm,4.8s						
KMI				LR	LR		
	comp=N,121nm,15.5s,MS3.8						
KMI				LR	LR		
	comp=E,103nm,19.1s,MS3.8						
KMI				LR	LR		
	comp=Z,85nm,17.1s,MS3.5						
KSRS	Korea Array	35.05	358	P	P	14 51 05.7	-0.2
	comp=Z,2.7nm,0.6s,mb4.3,baz=175,slow=9.4,SNR=12						
MJAR	Matsushiro Arr	35.15	13	P	P	14 51 05.8	-1.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=188,slow=8.7,SNR=4.8						
MAT	Matsushiro	35.15	13	P	P	14 51 02.9	-3.9
STKA	Stephens Creek	35.96	162	eP	P	14 51 14.6	+0.8
	comp=Z,5.6nm,0.7s,mb4.6						
STKA	Stephens Creek	35.96	162	P	P	14 51 14.4	+0.6
	comp=Z,5.6nm,0.7s,mb4.6,baz=333,slow=9.2,SNR=8.1						
CD2	Chengdu	37.23	323	P	P	14 51 24.8	+0.1
CD2				AP	pP	14 51 34.5	-2.5
CD2				XP	sP	14 51 38.4	-4.0
CD2				PP	PP	14 52 52.9	+2.6
CD2				PCP	PcP	14 53 43.8	0.0
CD2				S	S	14 57 11.8	+3.1
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
CD2				AMB	AMB		
	comp=Z,140nm,5.4s						
CD2				LR	LR		
	comp=N,270nm,4.8s						
CD2				LR	LR		
	comp=Z,180nm,5.9s						
LZH	Lanzhou	40.98	328	eP	P	14 51 57.5	+1.6
LZH				AP	pP	14 52 07.3	-1.1
LZH				XP	sP	14 52 11.3	-2.5
LZH				ePP	PP	14 53 36.0	+4.8
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,109nm,5.2s						
LZH				LR	LR		
	comp=N,452nm,13.5s						
LZH				LR	LR		
	comp=Z,678nm,17.8s,MS4.6						
CN2	Changchun	41.50	356	eP	P	14 52 02.4	+2.4
HHC	Hu-ho-hao-te	41.56	340	eP	P	14 52 01.4	+0.8
HHC				AP	pP	14 52 11.4	-1.7
HHC				XP	sP	14 52 15.5	-3.0
HHC				PP	PP	14 53 40.5	+3.1
HHC				PCP	PcP	14 53 58.8	+1.5
HHC				PCS	PcS	14 57 48.8	+0.2
HHC				eS	S	14 58 15.1	+1.7
HHC				SCS	ScS	15 01 59.9	-0.4
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
HHC				AMB	AMB		
	comp=Z,121nm,4.2s						
HHC				LR	LR		
	comp=N,124nm,16.7s,MS4.0						
HHC				LR	LR		
	comp=E,131nm,15.5s,MS4.0						
HHC				LR	LR		
	comp=Z,102nm,15.5s,MS3.8						
SHL	Shillong	42.65	306	eP	P	14 52 09.0	-0.7
LSA	Lhasa	45.18	311	eP	P	14 52 31.0	+1.0
GTA	Gaotai	45.58	328	eP	P	14 52 33.6	+0.6
GTA				AP	pP	14 52 42.9	-2.7
GTA				XP	sP	14 52 46.8	-4.2
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.1						
HABR	Khabarovsk	46.33	5	iP	P	14 52 36.6	-2.1
HABR				e*PP	pP	14 52 46.4	-4.9
HABR				e		14 54 13.1	
HABR				e		14 54 25.7	
HABR				ePPP		14 55 06.7	
HABR				eS	S	14 59 21.5	-1.2
HABR				e*SS	sS	14 59 38.3	-5.4
HABR				e		15 02 29.4	
HABR				pmax	pmax		
	comp=E,19nm,1.5s						
HABR				pmax	pmax		
	comp=N,45nm,2.5s						
HABR				pmax	pmax		
	comp=Z,54nm,2.8s,mb5.0						
HABR				MLR	MLR		
	comp=Z,56nm,16.0s,MS3.6						
HABR				MLR	MLR		
	comp=E,652nm,17.0s,MS4.7						
HABR				MLR	MLR		
	comp=N,246nm,15.0s,MS4.7						
TAPN	Taplejung	46.79	306	eP	P	14 52 42.7	0.0
	comp=N,5.6nm,0.6s,mb4.6						
ODAN	Odare	46.84	305	eP	P	14 52 43.2	0.0
	comp=N,11nm,0.6s,mb5.0						
RAMN	Ramite	47.52	305	eP	P	14 52 48.6	+0.1
	comp=N,11nm,0.6s,mb5.0						
JIRN	Jiri	48.15	306	eP	P	14 52 53.3	0.0
	comp=N,11nm,0.6s,mb5.1						
GUN	Gumba	48.50	306	eP	P	14 52 56.0	0.0
	comp=N,16nm,0.6s,mb5.2						
PKI	Pulchoki	48.74	305	eP	P	14 52 57.4	-0.5
KKN	Kakani	48.94	306	eP	P	14 52 58.3	-1.0
ULN	Ulaanbaatar	49.27	341	eP	P	14 53 01.1	-0.4
ULN	Ulaanbaatar	49.27	341	eP	P	14 53 01.2	-0.3
	comp=N,6.7nm,0.9s,mb4.7						
SONM	Songino Array	49.46	340	P	P	14 53 02.5	-0.5
	comp=N,0.7nm,0.6s,mb3.9,baz=129,slow=4.7,SNR=6.2						
GKN	Gorkha	49.54	306	eP	P	14 53 03.4	-0.6
KOLN	Koldanda	50.30	305	eP	P	14 53 08.8	-0.9
	comp=N,13nm,0.6s,mb5.1						
DANN	Dangsing	50.39	306	eP	P	14 53 09.9	-0.5
	comp=N,18nm,0.6s,mb5.3						
ZAK	Zakamensk	52.71	339	eP	P	14 53 31.3	+4.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WMQ	Urumqi	55.29	324	eP	P	14 53 47.8	+1.5
PETK	Petropavlovsk-	55.94	20	P	P	14 53 50.1	-0.6
	comp=Z,2.9nm,0.6s,mb4.5,baz=155,slow=2.7,SNR=9.0						
HVS	Khovu-Aksy	57.08	334	eP	P	14 53 58.7	-0.2
HVS				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.2						
YAK	Yakutsk	59.64	0	eP	P	14 54 16.7	+0.2
YAK				pmax	pmax		
	comp=Z,29nm,2.2s,mb4.9						
MK31	Makanchi Array	60.11	325	eP	P	14 54 19.7	-0.4
MKAR	Makanchi Array	60.11	325	P	P	14 54 19.8	-0.3
	comp=Z,1.6nm,0.6s,mb4.2,baz=117,slow=8.2,SNR=18						
ZALV	Zalesovo Beam	62.98	332	P	P	14 54 37.7	-1.6
	comp=Z,1.0nm,0.7s,mb4.1,baz=106,slow=8.0,SNR=5.3						
KURK	Kurchatov	64.25	327	eP	P	14 54 47.2	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
KURK	Kurchatov	64.25	327	eP	P	14 54 47.1	-0.7
	comp=Z,6.1nm,0.8s,mb4.7						
NVS	Novosibirsk	64.25	333	eP	pP	14 54 59.8	-1.0
TIXI	Tiksi	69.30	360	eP	P	14 55 19.6	+0.1
TIXI	Tiksi	69.30	360	eP	P	14 55 19.3	-0.3
	comp=Z,2.5nm,0.6s,mb4.3						
VNDA	Vanda	81.68	173	P	P	14 56 30.8	+0.4
	comp=Z,1.7nm,0.8s,mb4.0,baz=279,slow=5.5,SNR=5.6						
ARCES	ARCESS Array B	92.64	340	P	P	14 57 23.0	-1.0
	comp=Z,4.3nm,1.0s,mb4.8,baz=50,slow=8.6,SNR=3.0						
YKA	Yellowknife Ar	99.85	25	P	Pdif	14 57 57.5	+0.6
	comp=Z,0.1nm,0.4s,baz=300,slow=4.0,SNR=2.9						

GUC 17 14:50:39.8±0.5**, 22.98S**×**70.15W, h41**^{km}±1^{km}**, MD3.5, ML2.8, 3C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	0.41	187	⇑iP	Pn	14 50 52.4	+3.0
CEN1				iS	Sn	14 51 01.4	+5.2
TOCH	Tocopilla	0.88	357	⇑iP	Pn	14 50 55.9	+0.2
TOCH				iS	Sn	14 51 08.0	+0.7
TOCH				AML	AML	14 51 09.8	
	comp=N,500nm,0.1s						
PB04	Plate Boundary	0.93	41	⇑iP	Pn	14 50 52.7	-3.7
PB04				iS	Sn	14 51 03.1	-5.5
PB04				AML	AML	14 51 03.8	
	comp=E,640nm,0.1s						
LVC	Limon Verde	1.20	73	iP	Pn	14 51 01.5	+1.5
LVC				iS	Sn	14 51 17.9	+2.8
PB01	Plate Boundary	2.02	18	iP	Pn	14 51 12.9	+1.6
PB01				iS	Sn	14 51 38.0	+2.7
PB01				AML	AML	14 51 43.5	
	comp=E,78nm,0.1s						

*IDC **17** 14:57:03.4±1.2, 1.93N×128.14E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/16, mbtmp3.7/4, Error ellipse: s-maj=63.6km s-min=22.3km az=77.0*

*NEIC **17** 14:57:05.6±0.7, 1.84N×127.88E, h15^{km}, mb4.0/1, Error ellipse: s-maj=45.5km s-min=12.0km az=74.0*

*ISCJB **17** 14:57:06.1±0.9, 1.9N±0.2×127.9E±0.4, h33^{km}, mb3.8/5, Error ellipse: s-maj=57.7km s-min=15.8km az=164.0*

ISC 17 14:57:08.4±0.9**, 1.8N**±0.2×**127.9E**±0.4**, h35**^{km}**, n6, σ0^{s}67**/6**, mb3.8**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	22.53	164	eP	P	15 02 05.3	-0.1
	3.8nm,0.8s,mb3.9						
WRA	Warramunga Arr	22.53	164	P	P	15 02 04.7	-0.7
	2.2nm,0.6s,mb3.8,baz=348,slow=11,SNR=8.9						
ASAR	Alice Springs	26.00	167	P	P	15 02 39.1	+0.9
	0.4nm,0.5s,mb3.2,baz=351,slow=7.6,SNR=8.8						
PETK	Petropavlovsk-	56.77	21	P	P	15 06 48.9	0.0
	5.4nm,1.1s,mb4.5,baz=205,slow=8.5,SNR=4.2						
MK31	Makanchi Array	59.78	325	P	P	15 07 09.9	-0.1
MKAR	Makanchi Array	59.78	325	P	P	15 07 10.0	0.0
	0.3nm,0.3s,mb3.7,baz=119,slow=7.8,SNR=7.4						

IDC 17 15:15:17.2±6.0**, 13.81S**×**177.98W, h308**^{km}±77^{km}**, mb3.0**/4**, mb1 3.4**/5**, mb1mx3.2**/18**, mbtmp3.2**/5**, Error ellipse: s-maj=210.6km s-min=18.4km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	6.02	92	P	Pn	15 16 47.1	+0.1
	11nm,0.3s,baz=338,slow=1.3,SNR=18						
WRA	Warramunga Arr	45.92	256	P	P	15 23 10.4	+0.2
	0.2nm,0.3s,baz=89,slow=8.1,SNR=9.3						
ASAR	Alice Springs	46.42	250	P	P	15 23 13.8	-0.2
	1.5nm,0.5s,baz=85,slow=8.4,SNR=61						
TXAR	Lajitas Array	83.47	58	P	P	15 27 11.1	+0.1
	0.4nm,0.7s,baz=210,slow=7.1,SNR=5.7						
PDAR	Pinedale Array	84.11	44	P	P	15 27 14.4	+0.4
	0.3nm,0.9s,baz=204,slow=2.0,SNR=2.9						

IDC 17 15:19:04.0±2.3**, 18.88S**×**179.31E, h0**^{km}**, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.8**/17**, mbtmp4.1**/4**, ML2.6**/1**, Error ellipse: s-maj=147.5km s-min=32.3km az=155.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.87	61	Pn	Pn	15 21 27.4	+0.1
	2.8nm,0.3s,baz=259,slow=5.2,SNR=4.8						
STKA	Stephens Creek	36.27	242	P	P	15 26 09.5	+0.4
	1.2nm,0.6s,baz=96,slow=10,SNR=5.5						
WRA	Warramunga Arr	42.34	261	P	P	15 27 00.0	0.0
	0.7nm,0.3s,baz=98,slow=7.7,SNR=32						
ASAR	Alice Springs	42.45	255	P	P	15 27 00.5	-0.4
	1.1nm,0.4s,baz=86,slow=8.3,SNR=62						

IDC 17 15:26:51.5±7.7**, 8.05S**×**156.08E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/16**, mbtmp3.7**/3**, Error ellipse: s-maj=129.2km s-min=95.1km az=20.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.14	238	P	P	15 32 09.7	+0.2
	0.7nm,0.8s,baz=66,slow=9.3,SNR=5.0						
ASAR	Alice Springs	26.32	231	P	P	15 32 28.7	-0.5
	0.9nm,0.9s,baz=66,slow=9.9,SNR=7.1						
STKA	Stephens Creek	27.27	208	P	P	15 32 38.4	+0.7
	3.0nm,0.9s,baz=24,slow=12,SNR=3.4						

*ISCJB **17** 15:29:10.9±1.2, 18.92N±0.07×145.5E±0.2, h237^{km}±13^{km}, mb3.6/14, Error ellipse: s-maj=23.7km s-min=10.8km az=175.0*

*IDC **17** 15:29:11.3±1.8, 18.93N×145.63E, h222^{km}±19^{km}, mb3.3/12, mb1 3.6/16, mb1mx3.5/25, mbtmp3.5/16, Error ellipse: s-maj=19.7km s-min=12.2km az=84.0*

*NEIC **17** 15:29:12.5±1.4, 18.97N×145.65E, h239^{km}±14^{km}, mb4.3/2, Error ellipse: s-maj=18.4km s-min=10.7km az=82.0*

ISC 17 15:29:13.0±1.4**, 18.95N**±0.07×**145.6E**±0.2**, h242**^{km}±15^{km}**, n22, σ0^{s}87**/23**, mb3.6**/14**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.37	188	P	Pn	15 30 32.5	-0.7
	6.0nm,0.3s,baz=36,slow=15,SNR=9.0						
GUMO				S	S	15 31 31.3	-5.8
	2.6nm,0.3s,baz=24,slow=22,SNR=2.4						
JHJ	Hachijo jima 2	15.05	341	P	Pn	15 32 34.4	+0.4
	5.1nm,0.3s,baz=54,slow=19,SNR=3.3						
JOW	Kunigami	17.78	299	P	P	15 33 05.2	+1.5
	11nm,0.3s,baz=135,slow=12,SNR=29						
MJAR	Matsushiro Arr	18.70	341	P	P	15 33 12.5	-1.0
	0.8nm,0.3s,baz=169,slow=10,SNR=16						
MAJO	Matsushiro	18.70	341	eP	P	15 33 13.7	+0.1
	8.5nm,0.6s						
MAT	Matsushiro	18.70	341	P	P	15 33 13.6	+0.1
KSRS	Korea Array	24.07	324	P	P	15 34 05.6	-0.7
	1.4nm,0.7s,mb3.7,baz=143,slow=8.6,SNR=5.4						
ASAJ	Asahikawa	25.22	355	P	P	15 34 18.6	+1.9
	6.0nm,0.8s,mb4.3,baz=132,slow=16,SNR=4.7						
PETK	Petropavlovsk-	35.37	13	P	P	15 35 45.7	+0.3
	2.5nm,1.0s,mb3.7,baz=194,slow=7.1,SNR=4.0						
WRA	Warramunga Arr	40.20	197	P	P	15 36 27.1	+1.0
	0.4nm,0.7s,mb2.9,baz=23,slow=8.9,SNR=6.7						
SONM	Songino Array	42.90	321	P	P	15 36 47.5	-0.2
	0.9nm,0.5s,mb3.4,baz=139,slow=9.7,SNR=8.4						
ASAR	Alice Springs	43.86	196	P	P	15 36 55.8	+0.2
	0.3nm,0.9s,mb2.6,baz=21,slow=8.0,SNR=3.3						
CMAR	Chiang Mai Arr	44.10	277	P	P	15 36 58.6	+0.9
	0.6nm,0.6s,mb3.1,baz=71,slow=7.0,SNR=7.5						
ZALV	Zalesovo Beam	57.77	322	P	P	15 38 38.1	-0.6
	0.6nm,0.4s,mb3.5,baz=80,slow=11,SNR=4.1						
MK31	Makanchi Array	58.23	314	eP	P	15 38 41.5	-0.5
MKAR	Makanchi Array	58.23	314	P	P	15 38 42.0	-0.1
	1.2nm,0.6s,mb3.7,baz=88,slow=8.1,SNR=19						
MKAR	Makanchi Array	58.23	314	P	P	15 38 42.0	-0.1
BRVK	Borovoye	66.29	320	eP	P	15 39 33.4	-1.9
	2.1nm,0.6s,mb3.9						
YKA	Yellowknife Ar	77.81	28	P	P	15 40 44.3	+1.1
	0.7nm,0.5s,mb3.5,baz=289,slow=5.5,SNR=12						
ARCES	ARCESS Array B	82.23	342	P	P	15 41 06.4	-0.3
	3.9nm,0.8s,mb4.1,baz=69,slow=9.0,SNR=3.3						
NVAR	Mina Array Bea	83.06	52	P	P	15 41 11.4	-0.2
	0.9nm,0.7s,mb3.6,baz=260,slow=5.9,SNR=5.5						
JOF	Joensuu	83.76	335	ep	P	15 41 13.5	-1.2
	1.5nm,0.3s,mb4.2						

*ISCJB **17** 15:36:34.6±1.0, 37.02N±0.04×3.7E±0.1, h10^{km}, Error ellipse: s-maj=13.9km s-min=5.7km az=177.5*

*CSEM **17** 15:36:34.2±0.2, 36.91N×3.79E, h10^{km}, ML2.9, Error ellipse: s-maj=9.3km s-min=3.3km az=88.0*

*CRAAG **17** 15:36:34.5, 36.88N×3.67E, Ml2.9*

*MDD **17** 15:36:35.9±1.0, 36.94N×3.74E, h0^{km}, mb3.6/4, Error ellipse: s-maj=12.1km s-min=7.0km az=88.0, PRXIMO*

ISC 17 15:36:35.6±1.0**, 36.95N**±0.04×**3.7E**±0.1**, h10**^{km}**, n17, σ1^{s}34**/22**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.25	216	P	Pg	15 36 40.9	+0.1
ABA	Alger-Bouzarea	0.53	253	P	Pg	15 36 45.9	0.0
ADJB	Djebel Djouab	0.82	193	P	Pg	15 36 51.0	-0.4
AKET	Djebel Ketaf	0.92	169	P	Pg	15 36 52.0	-1.4
EMHD	Djebel Mahouad	0.95	218	P	Pg	15 36 55.5	+1.7
EBNR	Beni Rached	1.84	250	P	Pn	15 37 05.5	-1.8
ECHA	Ech Chlef	2.02	247	P	Pg	15 37 20.0	+5.7
ECHF	Ech Chlef	2.04	248	P	Pg	15 37 20.0	+5.4
EIBI	Ibiza	2.77	319	P	Pn	15 37 21.2	+1.2
	0.7nm,0.1s,SNR=7.9						
EIBI				S	Sn	15 37 51.3	-2.1
	8.1nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.77	319	P	Pn	15 37 21.2	+1.2
	0.7nm,0.1s,SNR=7.9						
EIBI				S	Sn	15 37 51.3	-2.1
	8.1nm,0.2s,SNR=7.9						
ETOS	Mallorca	2.89	347	P	Pn	15 37 22.2	+0.5
	1.6nm,0.1s,SNR=7.9						
ETOS	Mallorca	2.89	347	P	Pn	15 37 22.2	+0.6
	1.6nm,0.1s,SNR=7.9						
ETOS				S	Sn	15 37 52.8	-3.6
	2.5nm,0.2s,SNR=9.2						
ETOS				T		15 39 30.9	
	SNR=7.9						
ETOB	Tobarra	4.46	294	P	Pn	15 37 45.7	+2.4
	1.1nm,0.3s,SNR=7.9						
ETOB				S	Sn	15 38 29.9	-5.3
	2.5nm,0.3s,SNR=7.9						
EPOB	Poblet	4.83	336	P	Pn	15 37 48.0	-0.4
	0.4nm,0.2s,SNR=4.0						
EPOB	Poblet	4.83	336	P	Pn	15 37 48.0	-0.4
	0.4nm,0.2s,SNR=4.0						
EPOB				S	Sn	15 38 37.3	-7.1
	0.7nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.52	354	P	Pn	15 37 59.2	+1.4
	1.8nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.52	354	P	Pn	15 37 59.2	+1.4
	1.8nm,0.2s,SNR=7.9						

IDC 17 15:42:41.9±58.0**, 21.28S**×**178.23W, h0**^{km}**, mb4.3**/3**, mb1 4.4**/3**, mb1mx3.9**/16**, mbtmp4.3**/3**, Error ellipse: s-maj=1051.0km s-min=155.4km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.26	245	P	P	15 49 54.6	-1.0
	3.0nm,0.7s,baz=83,slow=11,SNR=6.8						
ASAR	Alice Springs	44.14	258	P	P	15 50 52.5	0.0
	1.9nm,0.6s,baz=92,slow=7.5,SNR=81						
WRA	Warramunga Arr	44.28	263	P	P	15 50 54.3	+0.6
	1.3nm,0.3s,baz=95,slow=8.3,SNR=98						

*ISCJB **17** 16:07:34.5±0.6, 22.86S±0.04×70.31W±0.06, h64^{km}±4^{km},*

mb4.2/2, Error ellipse: s-maj=10.0km s-min=6.6km az=7.6
GUC 17 16:07:34.8±0.9, 2295S×7019W, h52km±6km, ML4.1
IDC 17 16:07:34.8±4.5, 2113S×6929W, h0km, mb4.1/3, mb1 4.0/4, mb1mx3.7/18, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=168.8km s-min=40.1km az=31.0
NEIC 17 16:07:36.2±1.6, 2280S×7022W, h59km±12km, mb4.3/1, Error ellipse: s-maj=26.6km s-min=12.4km az=59.0
ISC 17 16:07:35.6±0.6, 2287S±004×7029W±006, h57km±5km, n18, σ0.86/26, mb4.2/2, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	Mejillones	0.28	211	eP	Pn	16 07 44.0	-1.2
MECH				i S	Sn	16 07 51.1	-1.0
MECH				AML	AML	16 07 59.5	
	comp=E,12µm,0.7s						
CEN1	Los Morros	0.53	171	⇑iP	Pn	16 07 48.0	+0.4
CEN1				i S	Sn	16 07 57.6	+1.3
CEN1				AML	AML	16 07 58.0	
	comp=N,8µm,0.3s						
PECH	Pedro de Valdi	0.63	65	⇑iP	Pn	16 07 48.0	-0.8
PECH				i S	Sn	16 07 57.4	-1.0
PECH				AML	AML	16 07 58.1	
	comp=N,25µm,0.2s						
TOCH	Tocopilla	0.78	6	⇑iP	Pn	16 07 51.0	+0.4
TOCH				i S	Sn	16 08 02.8	+1.3
TOCH				AML	AML	16 08 05.9	
	comp=E,12µm,0.3s						
MACH	Maria Elena	0.83	37	⇓iP	Pn	16 07 51.6	+0.3
MACH				i S	Sn	16 08 03.6	+0.7
PB04	Plate Boundary	0.96	51	⇓iP	Pn	16 07 48.1	-4.8
PB04				i S	Sn	16 07 57.6	-8.1
PB04				AML	AML	16 07 58.1	
	comp=E,18µm,0.5s						
LVC	Limon Verde	1.30	79	ePn	Pn	16 07 57.2	-0.3
LVC				eSn	Sn	16 08 13.6	-0.3
LVC	Limon Verde	1.30	79	eP	Pn	16 07 56.8	-0.7
LVC				i S	Sn	16 08 13.4	-0.4
LVC				AML	AML	16 08 14.4	
	comp=E,5µm,0.2s						
PB01	Plate Boundary	1.96	23	eP	Pn	16 08 07.3	+0.8
PB01				AML	AML	16 08 36.3	
	comp=E,2µm,0.2s						
ARE	Arequipa	6.47	350	eP	Pn	16 09 08.0	-0.3
ARE				eS	Sn	16 10 20.0	-0.8
CPUP	Villa Florida	12.29	109	Pn	Pn	16 10 29.0	+1.2
	comp=E,0.2nm,0.3s,baz=293,slow=13,SNR=2.4						
TRQA	Tornquist	16.74	157	eP	Pn	16 11 26.6	+0.4
DBIC	Dimbokro	70.35	74	P	P	16 18 42.0	-1.8
	comp=E,1.2nm,0.5s,mb4.0,baz=233,slow=5.1,SNR=3.7						
DBIC	Dimbokro	70.35	74	eP	P	16 18 43.5	-0.4
	comp=E,4.3nm,1.1s,mb4.3						
TOA0	Torodi Ar. Sit	79.02	71	eP	P	16 19 33.5	-0.5
TORD	Torodi Ar. Bea	79.02	71	P	P	16 19 33.5	-0.6
	comp=E,2.6nm,0.9s,mb4.2,baz=253,slow=5.7,SNR=12						
YKA	Yellowknife Ar	92.05	341	P	P	16 20 39.1	+1.2
	comp=E,0.3nm,0.6s,baz=145,slow=4.3,SNR=6.1						
MKAR	Makanchi Array	147.49	36	PKPbc	PKPbc	16 27 14.3	+1.1
	comp=E,0.4nm,0.7s,baz=304,slow=3.3,SNR=3.1						

IDC 17 16:08:39.4±17.0, 374S×13151E, h0km, mb4.1/1, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=354.4km s-min=176.0km az=114.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.34	170	Pn	Pn	16 12 29.8	-0.5
	0.1nm,0.3s,baz=350,slow=13,SNR=10						
ASAR	Alice Springs	19.94	174	P	Pn	16 13 13.6	-1.1
	0.2nm,0.3s,baz=348,slow=11,SNR=26						
STKA	Stephens Creek	29.55	162	P	P	16 14 45.7	-0.1
	1.9nm,0.9s,baz=345,slow=12,SNR=2.7						

IDC 17 16:54:55.8±4.5, 677S×12980E, h134km±43km, mb3.7/6, mb1 4.0/9, mb1mx3.8/17, mbtmp3.9/9, Error ellipse: s-maj=50.1km s-min=15.3km az=52.0
ISCJB 17 16:54:57.7±0.6, 706S±004×12963E±005, h182km±7km, mb4.3/13, Error ellipse: s-maj=8.9km s-min=5.1km az=152.6
NEIC 17 16:54:57.2±2.1, 686S×12961E, h149km±21km, mb4.6/7, Error ellipse: s-maj=20.3km s-min=8.2km az=53.0
DJA 17 16:55:00, 682S×12932E, h253km, MLv4.6/7
ISC 17 16:54:58.7±0.6, 708S±004×12962E±006, h173km±7km, n45, σ0.87/49, mb4.3/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	3.42	65	P	Pn	16 56 01.5	+9.3
AAI	Ambon	3.65	337	P	Pn	16 55 54.5	-0.7
MSAI	Masohi	3.77	350	P	Pn	16 55 57.1	+0.4
KAKA	Kakadu	6.25	154	eP	x	16 56 09.4	
	111nm,0.2s						
KAKA				eS	x	16 57 18.5	
BATI	Baumata	6.66	242	P	Pn	16 56 36.4	+2.1
	24nm,0.3s,baz=142,slow=1.0,SNR=47						
BATI				S	Sn	16 57 49.4	-0.2
	30nm,0.3s,baz=25,slow=7.4,SNR=14						
BATI	Baumata	6.66	242	P	Pn	16 56 35.5	+1.2
	50nm,0.6s,939nm0.3nm						
LBMI	Labuha	6.73	342	P	Pn	16 56 35.0	-0.4
	280nm,0.7s,2µm0.9nm						
TNTI	Ternate	8.11	344	P	Pn	16 56 50.8	-2.8
	52nm,0.7s,0.2nm						
BAKI	Biak	8.72	48	P	Pn	16 57 01.6	0.0
FITZ	Fitzroy Crossi	11.62	199	eP	Pn	16 57 39.6	+0.1
	14nm,0.3s						
FITZ				eS	Sn	16 59 40.2	-8.3
FITZ	Fitzroy Crossi	11.62	199	eP	Pn	16 57 39.7	+0.2
FITZ				eS	Sn	16 59 42.2	-6.3
FITZ	Fitzroy Crossi	11.62	199	P	Pn	16 57 40.1	+0.6
	24nm,0.7s						
WRAB	Tennant Creek	13.58	161	eP	Pn	16 58 04.2	-0.3
	13nm,0.3s						
WRAB				eS	Sn	17 00 28.9	-6.5
WRAB	Tennant Creek	13.58	161	P	Pn	16 58 04.5	0.0
WRA	Warramunga Arr	13.59	161	P	Pn	16 58 04.2	-0.4
	2.9nm,0.3s,baz=338,slow=13,SNR=108						
WRA				S	Sn	17 00 31.6	-4.0
	3.3nm,0.3s,baz=333,slow=22,SNR=6.4						
WB2	Warramunga Arr	13.59	161	eP	Pn	16 58 04.2	-0.4
WB2				eS	Sn	17 00 29.0	-6.7
COEN	Coen	14.98	118	P	Pn	16 58 23.0	+1.0
COEN				eS	Sn	17 01 01.2	-7.8
ASAR	Alice Springs	17.00	166	P	Pn	16 58 48.1	+1.7
	2.1nm,0.3s,baz=343,slow=9.5,SNR=234						
ASAR				S	S	17 01 51.7	-2.2
	0.4nm,0.3s,baz=355,slow=29,SNR=3.6						
CTA	Charters Tower	20.68	130	P	P	16 59 26.1	+0.7
	3.0nm,1.0s,baz=294,slow=10.0,SNR=2.8						
STKA	Stephens Creek	27.09	157	eP	P	17 00 28.5	+3.1
	1.2nm,0.3s,mb4.0						
STKA	Stephens Creek	27.09	157	P	P	17 00 28.1	+2.7
	2.0nm,0.4s,mb4.1,baz=329,slow=7.3,SNR=6.2						
STKA	Stephens Creek	27.09	157	eP	P	17 00 28.7	+3.3
CMAR	Chiang Mai Arr	39.49	310	P	P	17 02 12.4	-0.3
	1.2nm,0.6s,mb3.7,baz=137,slow=7.5,SNR=18						
CHTO	Chiang Mai	39.70	311	eP	P	17 02 14.3	-0.2
	1.2nm,0.7s,mb3.6						
ODAN	Odare	53.02	311	eP	P	17 03 57.9	-0.2
TAPN	Taplejung	53.05	312	eP	P	17 03 58.3	0.0
	3.3nm,0.3s,mb4.5						
RAMN	Ramite	53.66	311	eP	P	17 04 03.0	+0.2
	7.9nm,0.4s,mb4.8						
JIRN	Jiri	54.35	311	eP	P	17 04 07.9	+0.2
	2.5nm,0.2s,mb4.5						
GUN	Gumba	54.72	311	eP	P	17 04 10.5	+0.1
	8.1nm,0.5s,mb4.8						
PKI	Pulchoki	54.88	311	eP	P	17 04 11.3	-0.3
GKN	Gorkha	55.69	311	eP	P	17 04 17.2	-0.2
	8.6nm,0.4s,mb5.0						
KOLN	Koldanda	56.36	310	eP	P	17 04 22.1	0.0
	7.0nm,0.5s,mb4.8						
DANN	Dangsing	56.53	311	eP	P	17 04 23.9	+0.6
ULN	Ulaanbaatar	58.22	342	eP	P	17 04 35.4	+0.7
	1.5nm,0.8s,mb3.9						
SONM	Songino Array	58.39	342	P	P	17 04 36.1	+0.2
	0.3nm,0.4s,mb3.5,baz=171,slow=6.2,SNR=4.1						
MK31	Makanchi Array	68.08	327	eP	P	17 05 40.4	+0.7
MKAR	Makanchi Array	68.08	327	P	P	17 05 40.2	+0.5
	2.9nm,0.3s,mb4.4,baz=116,slow=8.1,SNR=47						
MKAR	Makanchi Array	68.08	327	P	P	17 05 40.2	+0.5
ZAA0	Zalesovo Array	71.48	334	eP	P	17 05 58.9	-1.4
ZALV	Zalesovo Beam	71.48	334	P	P	17 05 59.9	-0.4
	1.0nm,0.4s,mb3.9,baz=142,slow=5.7,SNR=7.2						
ZALV	Zalesovo Beam	71.48	334	P	P	17 05 59.9	-0.4
KURK	Kurchatov	72.38	329	eP	P	17 06 05.8	0.0
TXAR	Lajitas Array	125.29	59	PKP	PKPdf	17 13 41.4	+1.9
	0.1nm,0.4s,baz=270,slow=2.7,SNR=3.1						
TORD	Torodi Ar. Bea	128.45	281	PKP	PKPdf	17 13 47.1	+1.1
	0.4nm,0.6s,baz=80,slow=1.3,SNR=2.9						
CPUP	Villa Florida	146.12	169	PKPbc	PKPbc	17 14 21.1	+1.8
	0.2nm,0.3s,baz=225,slow=2.9,SNR=3.9						

IDC 17 17:12:36.8±2.6, 1001S×16180E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.8/4, MS2.8/2, Ms1 2.8/2, ms1mx2.5/28, Error ellipse: s-maj=57.5km s-min=35.4km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.91	287	Pn	Pn	17 13 10.6	0.0
	89nm,0.3s,baz=121,slow=5.4,SNR=37						
PMG	Port Moresby	14.44	271	LR	LR	17 20 38.0	
	comp=Z,54nm,21.4s,baz=110,slow=33						
CTA	Charters Tower	18.03	234	P	Pn	17 16 54.0	+5.1
	0.1nm,0.3s,baz=55,slow=14,SNR=3.8						
CTA				LR	LR	17 22 15.7	
	comp=Z,24nm,18.8s,baz=230,slow=32						
WRA	Warramunga Arr	28.26	246	P	P	17 18 32.1	+0.1
	0.5nm,0.6s,baz=76,slow=9.2,SNR=7.9						
ASAR	Alice Springs	29.87	239	P	P	17 18 46.3	0.0
	0.2nm,0.4s,baz=63,slow=10,SNR=13						
SONM	Songino Array	75.57	325	P	P	17 24 23.9	+0.6
	1.0nm,0.7s,baz=131,slow=5.6,SNR=7.0						
MKAR	Makanchi Array	90.13	318	P	P	17 25 38.5	-0.4
	0.9nm,0.9s,baz=116,slow=6.6,SNR=4.5						

IDC 17 17:25:48.4±35.0, 2055S×17911W, h650km±299km, mb3.2/4, mb1 3.3/4, mb1mx2.9/17, mbtmp3.2/4, Error ellipse: s-maj=332.2km s-min=106.7km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	32.45	265	P	P	17 31 29.1	+0.7
	3.1nm,0.4s,baz=95,slow=12,SNR=18						
STKA	Stephens Creek	36.83	244	P	P	17 32 04.1	-0.4
	1.9nm,0.9s,baz=69,slow=14,SNR=3.7						
ASAR	Alice Springs	43.50	257	P	P	17 32 57.5	+0.2
	3.2nm,0.6s,baz=92,slow=7.5,SNR=110						
ASAR				PcP	PcP	17 34 30.0	-0.1
	0.4nm,0.7s,baz=98,slow=4.6,SNR=4.8						
WB2	Warramunga Arr	43.55	262	eP	P	17 32 57.7	-0.1
WRA	Warramunga Arr	43.56	262	P	P	17 32 57.8	-0.1
	1.6nm,0.3s,baz=96,slow=7.6,SNR=98						
KAKA	Kakadu	46.94	272	eP	x	17 33 03.2	
	2.0nm,0.3s						
KNA	Kununurra	49.60	267	eP	P	17 33 43.8	+0.7
	2.2nm,0.3s						
FITZ	Fitzroy Crossi	51.99	263	eP	P	17 34 00.6	+0.3
	2.2nm,0.6s						

NEIC 17 17:34:12.5, 3272S×7169W, h22km, ML3.1(GUC), After GUC.
GUC 17 17:34:12.5±0.8, 3272S×7169W, h22km±11km, MD3.8, ML3.1, 6C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.31	172	⇑iP	Pb	17 34 19.4	-0.2
IHA				i S	Sb	17 34 24.8	+0.4
ROCH	El Roble	0.63	114	⇑iP	Pb	17 34 24.7	0.0
ROCH				i S	Sb	17 34 34.1	+1.0
JACH	Jahuel	0.93	88	eP	Pb	17 34 29.2	-0.7
JACH				i S	Sb	17 34 41.9	+0.2
PEL	Peldehue	0.95	117	⇑iP	Pb	17 34 29.8	-0.4
PEL				AML	AML	17 34 45.9	
	comp=E,2µm,0.3s						
TACH	Talagante	1.13	146	⇑iP	Pn	17 34 32.0	-1.0
TACH				i S	Sb	17 34 46.8	-0.8
CLCH	Cerro Calan	1.18	125	eP	Pn	17 34 33.2	-0.4
CLCH				i S	Sn	17 34 49.1	0.0
CLCH				AML	AML	17 34 53.6	
	comp=E,542nm,0.6s						
ANTU	Antumapu	1.23	134	eP	Pn	17 34 34.4	+0.1
ANTU				i S	Sn	17 34 50.3	0.0
ANTU	Antumapu	1.23	134	eP	Pn	17 34 34.4	+0.1
ANTU				i S	Sn	17 34 50.3	0.0
ANTU				AML	AML	17 34 56.6	
	comp=N,592nm,0.6s						
FCH	Farellones	1.33	118	⇓iP	Pn	17 34 35.7	+0.1
FCH				i S	Sn	17 34 53.8	+1.2
FCH				AML	AML	17 34 54.1	
	comp=N,888nm,0.2s						
PCH	Pirque	1.34	133	⇓iP	Pn	17 34 36.0	+0.1
CHCH	Chadas Angostu	1.49	145	eP	Pn	17 34 38.4	+0.4
YECH	El Yeso	1.65	126	eP	Pn	17 34 41.3	+1.2
YECH				eS	Sn	17 35 03.1	+2.6
YECH				AML	AML	17 35 07.8	
	comp=N,273nm,0.5s						
CACH	El Canelo	1.67	147	⇓iP	Pn	17 34 41.3	+1.0
LMEL	Las Melosas	1.68	133	⇑iP	Pn	17 34 41.6	+1.0
LMEL				i S	Sn	17 35 03.6	+2.2
LMEL	Las Melosas	1.68	133	⇑iP	Pn	17 34 41.6	+1.0
LMEL				i S	Sn	17 35 03.6	+2.2
LMEL				AML	AML	17 35 06.9	
	comp=N,523nm,0.1s						

KRSC 17 17:47:09.5±1.0, 4966N×15728E, h10km±10km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.64	353	P	Pn	17 47 52.4	+0.3
RUS	Russkaya	2.88	15	eP	Pn	17 47 57.2	+1.8
RUS				eS	Sn	17 48 32.6	+2.5
PET	Petropavlovsk	3.48	14	S	Sn	17 48 47.5	+2.7
AVH	Avacha	3.72	14	P	Pn	17 48 10.0	+3.0
SPN	Mys Shipunski	3.85	25	P	Pn	17 48 12.0	+3.3
SPN				S	Sn	17 48 56.5	+2.6
GNL	Ganaly	4.06	6	eP	Pn	17 48 14.6	+3.0
KBTR	Krutoberegovo	7.36	25	P	Pn	17 48 59.5	+2.6

NIED 17 17:53:00, 3720N×13670E, h5km, Mw3.5 Best double couple: Mo1.89000×10^14 NP1:φs6.00000°, δ66.00000°, λ55.00000°. NP2:φs246.00000°, δ42.00000°, λ142.00000°.
ISCJB 17 17:53:15.7±1.1, 3725N±004×13673E±008, h11km±8km, Error ellipse: s-maj=11.6km s-min=6.5km az=14.7
JMA 17 17:53:16.2, 3724N×13675E, h9km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs29.00000°, δ38.00000°, λ55.00000°. NP2:φs251.00000°, δ60.00000°, λ114.00000°. Principal axes: T Plg66.0000°, Azm206.0000°; N Plg21.0000°, Azm59.0000°; P Plg12.0000°, Azm324.0000°;
JMA Felt III J1.
ISC 17 17:53:15.8±1.1, 3725N±004×13672E±009, h16km±7km, n6, σ0.40/10, 3C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJH	Hakui	0.32	172	⇓P	Pg	17 53 22.6	+0.1
JJH				S	Sg	17 53 27.3	+0.2
JSZ	Suzu	0.55	68	⇑P	Pg	17 53 26.5	-0.2
JSZ				S	Sg	17 53 33.8	-0.2
JHG	Hegura jima	0.62	14	⇑P	Pg	17 53 28.1	0.0
JHG				eS	Sg	17 53 36.7	+0.3
JTT	Ttatey	0.80	142	⇓P	Pb	17 53 31.1	-0.3
JKG	Kaga	1.02	198	⇑P	Pb	17 53 35.0	0.0
MAT	Matsushiro	1.38	120	P	Pn	17 53 39.7	-0.7
MAT				S	Sn	17 53 59.2	+0.8

ISCJB 17 17:53:17.2±0.8, 570S±0.1×239W±04, h10km, mb4.0/5, MS3.2/2, Error ellipse: s-maj=35.8km s-min=11.2km az=153.1
IDC 17 17:53:17.5±1.0, 5701S×2392W, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/15, mbtmp4.0/5, MS3.3/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=38.4km s-min=27.1km az=60.0
NEIC 17 17:53:20.6±6.6, 5701S×2386W, h21km±46km, mb3.8/1, Error ellipse: s-maj=29.5km s-min=14.1km az=53.0
ISC 17 17:53:19.0±0.8, 570S±01×239W±04, h10km, n16, σ0.62/12, mb4.0/5, MS3.2/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.21	160	eP	Pn	17 56 53.6	+0.2
VNA1				e		17 57 02.1	
VNA1				e		17 57 04.1	
VNA3	Neumayer Olymp	15.47	163	eP	Pn	17 56 56.3	-0.5
VNA3				e		17 56 59.2	
VNA3				e		17 57 04.8	
VNA3				e		17 57 06.6	
VNA3				eS	Sn	17 59 34.3	-14
VNA3				e		17 59 41.1	
VNA2	Neumayer--Watz	15.60	160	eP	Pn	17 56 58.2	-0.3
	baz=322,slow=13						
VNA2				e		17 57 01.2	
VNA2				e		17 57 06.8	
VNA2				e		17 57 08.6	
VNA2				eS	Sn	17 59 37.3	-14
VNA2				e		17 59 43.9	
SNAA	Sanae	17.10	157	eP	Pn	17 57 17.3	-0.4
SNAA				e		17 57 19.9	
SNAA				e		17 57 28.8	
SNAA	Sanae	17.10	157	eP	Pn	17 57 18.0	+0.3
	10.0nm,1.3s						
USHA	Ushuaia	24.73	256	LR	LR	18 06 06.7	
	comp=Z,76nm,21.6s,MS3.2,baz=165,slow=31						
QSPA	South Pole Qui	33.21	180	P	P	17 59 56.5	+1.2
	0.4nm,0.5s,mb3.6,baz=204,slow=5.7,SNR=3.9						
CPUP	Villa Florida	38.86	308	P	P	18 00 43.3	-0.9
	2.5nm,0.7s,mb4.0,baz=132,slow=6.3,SNR=7.9						
BOSA	Boshof	44.48	72	LR	LR	18 15 25.6	
	comp=Z,42nm,21.9s,MS3.3,baz=322,slow=30						
LVC	Limon Verde	47.39	297	P	P	18 01 53.7	+0.5
	1.9nm,0.4s,mb4.3,baz=140,slow=5.3,SNR=4.8						
TORD	Torodi Ar. Bea	73.08	26	P	P	18 04 49.5	+0.4
	1.6nm,0.8s,mb4.0,baz=195,slow=6.5,SNR=9.0						
ASAR	Alice Springs	97.45	160	P	P	18 06 52.3	-0.5
	0.3nm,0.8s,mb3.8,baz=193,slow=3.0,SNR=4.3						
YKA	Yellowknife Ar	138.15	316	PKP	PKPdf	18 12 42.1	-0.4
	0.6nm,1.0s,baz=127,slow=1.9,SNR=5.7						
INK	Inuvik	147.75	319	PKPbc	PKPbc	18 13 01.7	-0.5
	0.8nm,0.6s,baz=127,slow=5.1,SNR=4.8						
INK	Inuvik	147.75	319	PKPbc	PKPbc	18 13 01.7	-0.5
SONM	Songino Array	148.96	86	PKPbc	PKPbc	18 13 05.7	-0.3
	0.7nm,0.5s,baz=221,slow=3.0,SNR=5.4						

ISCJB 17 18:22:06.9±2.8, 2768S±006×709W±03, h49km±19km, mb4.2/2, Error ellipse: s-maj=45.3km s-min=9.2km az=175.0
IDC 17 18:22:07.1±6.2, 2764S×7095W, h35km±38km, mb4.1/2, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, ML4.0/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/28, Error ellipse: s-maj=61.9km s-min=21.6km az=85.0
NEIC 17 18:22:08.2±1.8, 2768S×7089W, h46km±12km, Error ellipse: s-maj=27.6km s-min=12.3km az=84.0
ISC 17 18:22:05.7±4.7, 2771S±006×712W±03, h30km±32km, n13, σ0.97/11, mb4.2/2, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	4.65	147	Pn	Pn	18 23 14.5	+0.6
	1.5nm,0.3s,baz=330,slow=11,SNR=79						
CFAA				Sn	Sn	18 24 07.8	+1.0
	1.6nm,0.3s,baz=90,slow=14,SNR=3.2						
LVC	Limon Verde	5.48	23	Pn	Pn	18 23 25.9	+0.5
	2.0nm,0.3s,baz=192,slow=9.1,SNR=52						
LVC				Sn	Sn	18 24 28.4	+1.1
	5.6nm,0.3s,baz=181,slow=19,SNR=3.0						
LVC				Lg		18 24 55.4	
	9.3nm,0.3s,baz=339,slow=23,SNR=11						
LVC	Limon Verde	5.48	23	Pn	Pn	18 23 25.9	+0.5
LVC				Sn	Sn	18 24 28.4	+1.1
LVC				Lg		18 24 55.4	
CPUP	Villa Florida	12.44	87	Pn	Pn	18 24 59.0	-1.7
	0.2nm,0.3s,baz=241,slow=19,SNR=2.0						
CPUP	Villa Florida	12.44	87	Pn	Pn	18 24 59.0	-1.7
PLCA	Paso Flores	13.00	178	LR	LR	18 29 54.3	
	comp=Z,76nm,20.4s,baz=181,slow=36						
SIV	San Ignacio	14.96	41	Pn	Pn	18 25 26.7	-8.5
	0.2nm,0.3s,baz=173,slow=19,SNR=2.8						
BDFB	Brasilia	24.61	66	LR	LR	18 38 12.6	
	comp=Z,35nm,20.8s,baz=212,slow=40						
DBIC	Dimbokro	72.53	73	P	P	18 33 29.3	-0.9
	2.4nm,0.6s,mb4.3,baz=214,slow=9.2,SNR=7.7						
TORD	Torodi Ar. Bea	81.40	70	P	P	18 34 19.4	-0.7
	1.5nm,0.7s,mb4.0,baz=249,slow=4.6,SNR=7.8						
ZAA0	Zalesovo Array	148.42	27	ePKPbc	PKPbc	18 41 49.0	+0.2
ZALV	Zalesovo Beam	148.42	27	PKPbc	PKPbc	18 41 49.0	+0.3
	1.5nm,0.5s,baz=300,slow=3.3,SNR=11						
MKAR	Makanchi Array	151.78	40	PKPbc	PKPbc	18 41 57.1	0.0
	1.0nm,0.7s,baz=322,slow=2.3,SNR=10						
MKAR				PKPab	PKPab	18 42 05.4	-0.7
	0.8nm,0.8s,baz=300,slow=2.4,SNR=4.2						

ATH 17 18:39:54.0, 3578N×2765E, h44km±3km, MD3.3/4
NEIC 17 18:39:54.0, 3578N×2766E, h45km, MD3.3(ATH), After ATH.
CSEM 17 18:39:54.2±0.2, 3591N×2757E, h40km, MD3.2, Error ellipse: s-maj=7.3km s-min=3.8km az=144.0
ISCJB 17 18:39:55.0±0.9, 3598N±006×2736E±008, h21km±15km, Error ellipse: s-maj=11.5km s-min=8.5km az=42.2
DDA 17 18:40:02.5, 3650N×2781E, h7km±3km, Md3.2
THE 17 18:40:17.3, 3636N×2571E, h13km±6km, Error ellipse: s-maj=8.4km s-min=1.6km az=220.0
ISC 17 18:39:55.2±0.9, 3598N±006×2739E±009, h22km±14km, n13, σ0.78/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.47	203	eP	Pb	18 40 05.2	+0.4
ARG	Arkhangelos	0.64	68	eP	Pb	18 40 07.0	-0.7
ARG				eS	Sb	18 40 16.0	-0.3
NISR	Nisiros	0.66	342	eP	Pb	18 40 12.0	+3.9
BDRM	Kayabasi	1.08	2	i P	Pn	18 40 14.8	-0.2
BDRM				i S	Sb	18 40 29.2	+0.3
BDRM	Kayabasi	1.08	2	i P	Pn	18 40 14.8	-0.2
BDRM				i S	Sb	18 40 29.2	+0.3
TURN	Turunc	1.32	47	i P	Pn	18 40 13.8	-4.6
TURN				i S	Sn	18 40 27.7	-7.6
THR1	Thera Island	1.61	285	P	Pn	18 40 21.7	-0.5
THR1				S	Sn	18 40 25.7	-17
NPS	Neapolis	1.61	244	eP	Pn	18 40 22.6	+0.3
NPS	Neapolis	1.61	244	eP	Pn	18 40 22.4	+0.1
THR6	Thira Island,	1.65	284	P	Pn	18 40 22.7	-0.2
THR6				S	Sn	18 40 26.7	-17
THR3	Thira Island,	1.66	285	P	Pn	18 40 22.5	-0.5
THR3				S	Sn	18 40 26.6	-17
THR5	Thira Island,	1.70	285	P	Pn	18 40 23.8	+0.2
THR5				S	Sn	18 40 28.4	-16
GOLH	Golhisar	2.15	54	i P	Pn	18 40 32.0	+2.3
GOLH				i S	Sn	18 41 02.8	+7.0

ISCJB 17 18:47:16.7±0.8, 1405N±007×9210W±004, h50km±11km, mb3.7/2, Error ellipse: s-maj=11.7km s-min=5.0km az=19.9
IDC 17 18:47:17.6±8.8, 1456N×9150W, h43km±66km, mb3.4/2, mb1 3.9/4, mb1mx3.5/20, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=106.7km s-min=59.3km az=37.0
NEIC 17 18:47:18.8, 1401N×9215W, h19km, mb4.1/1, MD4.4(MEX), After MEX.
CASC 17 18:47:19.2±2.0, 1397N×9179W, h13km±13km, MD3.9, mb4.1(NEIC)
MEX 17 18:47:19.1±0.5, 1403N×9216W, h26km±10km, MD4.4
ISC 17 18:47:18.0±0.8, 1408N±007×9206W±004, h39km±14km, n33, σ1.06/39, mb3.7/2, 2D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.47	60	⇓iP	Pn	18 47 29.3	+0.9
THIG		0.85	346	i P	Pn	18 47 32.9	-0.6
THIG				i S	Sn	18 47 44.2	-0.5
FUG	Fuego 3	1.24	73	⇓eP	Pn	18 47 37.7	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PCG	Pacaya	1.44	77	eP	Pn	18 47 41.1	-0.5
PCG				eS	Sn	18 47 57.6	-1.8
IXG	Ixpaco	1.56	86	eP	Pn	18 47 42.7	-0.5
NBG	Las Nubes	1.73	73	eP	Pn	18 47 46.6	+0.9
NBG				eS	Sn	18 48 07.9	+1.3
PCIG		1.97	325	iP	Pn	18 47 48.6	-0.3
PCIG				iS	Sn	18 48 10.9	-1.4
CCIG	Comitan	2.19	358	iP	Pn	18 47 52.7	+0.8
CCIG				iS	Sn	18 48 18.6	+0.8
RTR	El Retiro	2.35	94	eP	x	18 47 53.2	
RTR				eS	x	18 48 21.0	
SBLS	San Blas	2.38	95	eP	x	18 47 53.8	
SBLS				eS	x	18 48 22.1	
SNJE	San Jose	2.39	95	eP	x	18 47 54.0	
SNJE				eS	x	18 48 21.6	
MRL	Marmol	2.49	67	eP	Pn	18 47 55.8	-0.2
SCX	San Cristobal	2.70	348	iP	Pn	18 48 02.5	+3.6
BOQS	Boqueron	2.72	97	eP	x	18 47 58.5	
BOQS				eS	x	18 48 30.2	
TGIG		2.87	339	iP	Pn	18 48 01.0	-0.3
TGIG				iS	Sn	18 48 34.8	+0.2
LFRS	El Faro	2.95	98	eP	x	18 48 02.2	
LFRS				eS	x	18 48 35.0	
SNVI	San Vicente	3.16	98	eP	x	18 48 05.5	
SNVI				eS	x	18 48 40.7	
CMIG	Matias Romero	4.05	318	P	Pn	18 48 17.8	+0.3
	6.7nm,0.3s,baz=129,slow=12,SNR=32						
CMIG				S	Sn	18 49 04.7	+1.1
	11nm,0.3s,baz=63,slow=23,SNR=8.0						
CMIG	Matias Romero	4.05	318	iP	Pn	18 48 16.9	-0.6
CMIG				iS	Sn	18 49 03.7	+0.1
CMIG	Matias Romero	4.05	318	iP	Pn	18 48 16.9	-0.6
CMIG				iS	Sn	18 49 04.1	+0.5
HUIG	Huatulco	4.26	294	iP	Pn	18 48 20.1	-0.3
HUIG				iS	Sn	18 49 06.4	-2.5
VHO	Vista Hermosa	5.40	304	iP	Pn	18 48 38.7	+2.7
VHO				iS	Sn	18 49 36.8	-0.2
PNIG	Pinotepa	6.29	292	iP	Pn	18 48 49.0	+0.7
PNIG				iS	Sn	18 49 58.4	-0.6
PNIG	Pinotepa	6.29	292	iP	Pn	18 48 49.0	+0.7
PNIG				iS	Sn	18 49 59.1	+0.1
UTMO	Huajuapan	6.67	305	iP	Pn	18 48 56.6	+3.1
TPIG	Tehuac#an	6.67	311	iS	Sn	18 50 12.2	+3.8
PPM	Popocatepetl	8.01	309	iP	Pn	18 49 16.9	+4.9
TXAR	Lajitas Array	18.60	327	P	Pn	18 51 31.9	-0.6
	0.1nm,0.3s,baz=154,slow=12,SNR=11						
MIAR	Mount Ida	20.42	356	eP	P	18 51 51.4	-0.4
	4.3nm,0.5s						
NVAR	Mina Array Bea	33.57	321	P	P	18 53 55.1	+0.8
	0.9nm,0.6s,mb3.9,baz=125,slow=8.9,SNR=5.6						
YKA	Yellowknife Ar	50.94	347	P	P	18 56 11.0	-4.2
	0.3nm,0.5s,mb3.5,baz=150,slow=7.4,SNR=6.6						
YKA	Yellowknife Ar	50.94	347	P	P	18 56 11.0	-4.2
CMAR	Chiang Mai Arr	145.90	341	PKPbc	PKPbc	19 06 50.9	-3.2
	1.2nm,0.8s,baz=330,slow=3.7,SNR=12						
CMAR				pPKPbc	pPKPbc	19 07 07.3	+0.8
	0.8nm,0.6s,baz=336,slow=3.4,SNR=6.4						

*ISCJB **17** 18:56:40.7±0.5, 2461N±003×12191E±002, h62^{km}±4^{km}, Error ellipse: s-maj=4.7km s-min=3.1km az=153.4*
*TAP **17** 18:56:40.8, 2462N×12184E, h62^{km}, ML3.3, B*
*JMA **17** 18:56:41.7±0.3, 2509N×122.16E, h41^{km}, M2.3*
ISC 17 18:56:41.2±0.5, **2462N**±003×**12191E**±002, **h60**^{km}±5^{km}, **n44,** σ0^{s}**74**/82, **4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.05	264⇓	iP	Pn	18 56 50.3	+0.2
	baz=151						
TWC				iS	Sn	18 56 57.1	+0.5
	baz=151						
ILA	Ilan	0.21	316	P	Pn	18 56 51.3	+0.6
	baz=329						
ILA				eS	Sn	18 56 58.8	+1.2
	baz=329						
ENA	Nanau	0.24	219⇓	iP	Pn	18 56 50.7	-0.2
	baz=205						
ENA				S	Sn	18 56 58.3	+0.4
	baz=205						
TWE	Neicheng	0.24	296⇓	iP	Pn	18 56 51.0	+0.1
	baz=302						
TWE				iS	Sn	18 56 58.0	+0.1
	baz=302						
ENTT	Nioudou	0.31	275⇓	iP	Pn	18 56 51.2	-0.2
	baz=274						
ENTT				S	Sn	18 56 58.8	0.0
	baz=274						
TWB1	Santiao Chiao	0.40	11	iP	Pn	18 56 52.3	+0.1
	baz=18						
TWB1				S	Sn	18 57 00.3	+0.2
	baz=18						
TWA	Mucha	0.47	321	P	Pn	18 56 52.7	-0.1
	baz=326						
TWA				S	Sn	18 57 01.4	+0.2
	baz=326						
NWF	Wu-fen Shan	0.47	346	P	Pn	18 56 53.1	+0.3
	baz=352						
NWF				S	Sn	18 57 01.7	+0.4
	baz=352						
NSK	Sanguang	0.50	277	P	Pn	18 56 52.6	-0.5
	baz=277						
NSK				S	Sn	18 57 01.2	-0.7
	baz=277						
NNS	Nan Shan	0.52	250	eP	Pn	18 56 53.1	-0.2
	baz=247						
NNS				eS	Sn	18 57 02.0	-0.1
	baz=247						
TAP1	Taipei	0.55	321	P	Pn	18 56 53.4	-0.3
	baz=325						
TAP1				eS	Sn	18 57 02.5	-0.2
	baz=325						
TWD	Chiawan	0.60	208	P	Pn	18 56 53.4	-0.9
	baz=202						
TWD				eS	Sn	18 57 03.0	-0.8
	baz=202						
TWS1	Kuangyinshan	0.66	318	P	Pn	18 56 54.7	-0.2
	baz=321						
TWS1				eS	Sn	18 57 05.2	+0.3
	baz=321						
HWA	Hwalien	0.69	203	eP	Pn	18 56 55.5	+0.2
	baz=198						
TWY	Chenhua	0.71	337	P	Pn	18 56 56.0	+0.4
	baz=341						
TWY				eS	Sn	18 57 06.6	+0.4
	baz=341						
NCU	National Centr	0.74	299	eP	Pn	18 56 55.6	-0.4
	baz=300						
NCU				eS	Sn	18 57 06.7	-0.1
	baz=300						
WHF	Hehuan Shan	0.75	231	eP	Pn	18 56 56.4	+0.4
	baz=228						
WHF				eS	Sn	18 57 06.8	-0.1
	baz=228						
NSTT	Nanjuang	0.82	271	P	Pn	18 56 56.2	-0.7
	baz=270						
NSTT				S	Sn	18 57 07.5	-1.0
	baz=270						
HSN	Hsinchu	0.87	283	eS	Sn	18 57 08.1	-1.5
	baz=285						
ESL	Shilin	0.91	209	eP	Pn	18 56 56.2	-1.8
	baz=205						
ESL				eS	Sn	18 57 09.7	-0.7
	baz=205						
YOJ	Yonaguni jima	1.02	98	P	Pn	18 56 59.5	+0.1
YOJ				eS	Sn	18 57 12.1	-0.9
TWQ1	Liyutan	1.07	256	eP	Pn	18 56 59.8	-0.3
	baz=254						
TWQ1				eS	Sn	18 57 13.0	-1.1
	baz=254						
SMLT	Sun Moon Lake	1.17	232	P	Pn	18 57 02.1	+0.6
	baz=229						
SMLT				eS	Sn	18 57 16.0	-0.6
	baz=229						
TYC	Yuchr	1.19	234	P	Pn	18 57 02.1	+0.4
	baz=231						
TYC				eS	Sn	18 57 17.5	+0.5
	baz=231						
EHY	Hungye	1.23	206	eP	Pn	18 57 01.5	-0.7
	baz=203						
WNT	Mingjian	1.33	237	eP	Pn	18 57 04.2	+0.5
	baz=235						
WNT				eS	Sn	18 57 20.4	0.0
	baz=235						
TWF1	Yuli	1.38	204	eP	Pn	18 57 03.1	-1.0
	baz=201						
TWF1				eS	Sn	18 57 21.1	-0.3
	baz=201						
CHN5	Tsauling	1.51	228	P	Pn	18 57 06.3	+0.3
	baz=226						
CHN5				eS	Sn	18 57 25.5	+0.8
	baz=226						
WGK	Gukeng	1.54	233	eP	Pn	18 57 06.6	+0.2
	baz=231						
WGK				eS	Sn	18 57 25.2	-0.1
	baz=231						
CHKT	Chengkung	1.59	198	eP	Pn	18 57 06.6	-0.4
	baz=196						
CHKT				eS	Sn	18 57 26.6	+0.1
	baz=196						
ELDTW	Lidau	1.64	210	eP	Pn	18 57 06.7	-1.0
	baz=207						
ELDTW				eS	Sn	18 57 28.0	+0.3
	baz=207						
IRIF	Iriomote-Funau	1.69	99	P	Pn	18 57 08.1	-0.2
IRIF				S	Sn	18 57 28.7	-0.2
CHN4	Tsaushan	1.74	224	eP	Pn	18 57 10.1	+1.0
	baz=222						
CHN4				eS	Sn	18 57 31.9	+1.6
	baz=222						
WTP	Ta-pu	1.80	221	eP	Pn	18 57 11.3	+1.3
	baz=219						
WTP				eS	Sn	18 57 33.6	+1.8
	baz=219						
HATJ	Hateruma jima	1.82	107	eS	Sn	18 57 33.3	+1.1
WSF	Szhu	1.82	238	eP	Pn	18 57 10.3	+0.1
	baz=236						
WSF				eS	Sn	18 57 31.7	-0.5
	baz=236						
TWK	Hsinying	1.87	224	eP	Pn	18 57 11.7	+0.9
	baz=222						
TWK				eS	Sn	18 57 35.2	+1.9
	baz=222						
CHN1	Nanshi	1.90	222	eP	Pn	18 57 12.3	+1.0
	baz=220						
CHN1				eS	Sn	18 57 34.5	+0.3
	baz=220						
TWG	Pinlang	1.94	203	eP	Pn	18 57 12.0	+0.2
	baz=201						
TWG				eS	Sn	18 57 33.1	-2.0
	baz=201						
JKRS	Kuro-shima	1.95	101	P	Pn	18 57 12.3	+0.3
JKRS				S	Sn	18 57 36.1	+0.7
JIJ	Ishigaki jima	2.05	97	P	Pn	18 57 13.1	-0.2
JIJ				S	Sn	18 57 36.9	-1.0
ECL	Taimali	2.19	204	eP	Pn	18 57 14.2	-1.1
	baz=202						
SSD	Sandimen	2.20	212	eP	Pn	18 57 16.8	+1.5
	baz=210						
SSD				eS	Sn	18 57 41.5	+0.2
	baz=210						
LAY	Lan-yu	2.58	187	eP	Pn	18 57 19.8	-0.9
	baz=185						

*MOS **17** 20:12:28.8±1.4, 1946S×16931E, h114^{km}, mb5.2/18, Error ellipse: s-maj=12.1km s-min=9.5km az=155.2*
*NOU **17** 20:12:30.7±0.9, 1861S×16864E, h30^{km}, MD3.1, ML4.0*
*SZGRF **17** 20:12:30.8, 2004S×17060E, h141^{km}, Vanuatu Islands*
*BJI **17** 20:12:31.2, 1902S×16939E, h123^{km}, mB5.0, mb4.7*
*NEIC **17** 20:12:33.0±0.2, 1947S×16930E, mb5.2/40, Error ellipse: s-maj=8.0km s-min=5.4km az=149.0*
*GCMT **17** 20:12:33.0±0.2, 1948S×169.18E, h146^{km}±2^{km}, MW5.1/80, Moment Tensor Solution. s47,c63; s80,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.20±.14; $M_{\theta\theta}$-0.58±.15; $M_{\phi\phi}$-1.62±.17; $M_{r\theta}$-0.22±.11; $M_{\theta\phi}$3.62±.17; $M_{\phi r}$-4.60±.11; Best double couple: $M_0$6.17900×10^{16} NP1:ϕ_s282.00000°,δ37.00000°,λ22.00000°. NP2: ϕ_s175.00000°,δ77.00000°,λ125.00000°. Principal axes: T 6.0850, Plg46.0000°, Azm120.0000°; N 0.1900, Plg34.0000°, Azm346.0000°; P -6.2730, Plg24.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **17** 20:12:33.3±0.6, 1948S×16926E, h141^{km}±4^{km}, mb4.7/21, mb1 4.8/23, mb1mx4.7/26, mbtmp4.7/23, MS3.8/15, Ms1 3.8/15, ms1mx3.6/31 Error ellipse: s-maj=11.2km s-min=9.5km az=163.0*
*DJA **17** 20:12:34, 1962S×16934E, h150^{km}, Mw5.3/7*
*ISCJB **17** 20:12:34.1±0.7, 1954S±004×169.17E±004, h159^{km}±7^{km}, mb4.9/66, Error ellipse: s-maj=7.3km s-min=5.4km az=164.1*
*LDG **17** 20:12:35.4±0.1, 1934S×16899E, h160^{km}, Mb4.8/4, Error ellipse: s-maj=13.5km s-min=4.6km az=126.0*
ISC 17 20:12:34.0±0.7, **1946S**±004×**16921E**±004, **h144**^{km}±7^{km}, **h143**^{km}±1.7^{km}**:pP-P, n516,** σ0^{s}**58**/404, **mb4.9**/66, **158C-133D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLUM	Mont Dore	3.69	220	eP	Pn	20 13 29.5	-0.5
PLUM				eS	Sn	20 14 14.2	+1.8
PLUM				AMP		20 14 16.3	
	comp=Z,909nm,5.2s						
LASL	Noumea	3.72	222	eP	Pn	20 13 30.5	+0.1
NOUC	Port Laguerre	3.78	226	eP	Pn	20 13 30.9	-0.3
NOUC				eS	Sn	20 14 14.7	+0.1
NOUC				AMP		20 14 30.4	
	comp=Z,647nm,0.8s						
HNR	Honiara	13.41	317	P	Pn	20 15 40.3	+1.7
	comp=Z,4.6nm,0.3s,baz=194,slow=18,SNR=4.1						
HNR				S	Sn	20 18 05.1	-1.9
	comp=Z,6.8nm,0.3s,baz=180,slow=20,SNR=2.2						
HNR				LR	LR	20 19 05.7	
	comp=Z,147nm,18.8s,baz=143,slow=29						
HNR	Honiara	13.41	317	eP	Pn	20 15 40.8	+2.1
HNR				pmax	pmax		
	comp=Z,122nm,1.0s						
HNR	Honiara	13.41	317	eP	Pn	20 15 40.8	+2.1
	comp=Z,122nm,1.0s						
EIDS	Eidsvold	17.75	247	eP	Pn	20 16 32.7	+0.5
	comp=Z,93nm,0.9s						
AFI	Afiamalu	19.02	76	P	P	20 16 41.1	-3.8
	comp=Z,3.5nm,0.3s,baz=198,slow=5.7,SNR=3.7						
ARMA	Armidale	19.29	232⇓	iP	P	20 16 49.9	+2.2
ARMA				e		20 18 08.6	
ARMA				eS	Sn	20 20 31.9	+4.1
URZ	Urewera	19.95	162	P	P	20 16 54.8	+0.1
	comp=Z,9.4nm,0.3s,baz=332,slow=4.6,SNR=75						
URZ				S	S	20 20 34.8	+3.6
	comp=Z,0.5nm,0.3s,baz=22,slow=19,SNR=7.1						
URZ				LR	LR	20 23 27.2	
	comp=Z,188nm,18.0s,baz=347,slow=33						
CTA	Charters Tower	21.61	264	eP	P	20 17 13.1	+0.5
	comp=Z,14nm,0.8s,mb4.4						
CTA				eS	S	20 21 05.1	+1.8
CTA	Charters Tower	21.61	264	P	P	20 17 13.3	+0.7
	comp=Z,23nm,0.9s,mb4.6,baz=95,slow=12,SNR=26						
CTA				S	S	20 21 05.8	+2.5
	comp=Z,4.9nm,0.9s,baz=263,slow=19,SNR=5.1						
CTA	Charters Tower	21.61	264	eP	P	20 17 13.1	+0.5
CTA				eS	S	20 21 05.1	+1.8
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	Charters Tower	21.61	264	eP	P	20 17 12.8	+0.2
CTAO				pmax	pmax		
	comp=Z,55nm,1.2s,mb4.9						
CTAO	Charters Tower	21.61	264	eP	P	20 17 12.8	+0.2
	comp=Z,55nm,1.2s,mb4.9						
SNZO	South Karori	22.27	169	eP	P	20 17 18.9	-0.5
	comp=Z,361nm,1.4s,mb5.6						
PMG	Port Moresby	23.55	292	P	P	20 17 32.0	+0.6
	comp=Z,106nm,0.8s,mb5.4,baz=96,slow=4.6,SNR=47						
PMG				LR	LR	20 24 53.8	
	comp=Z,310nm,20.5s,baz=221,slow=31						
PMG	Port Moresby	23.55	292	eP	P	20 17 31.7	+0.3
PMG				pmax	pmax		
	comp=Z,87nm,0.8s						
PMG	Port Moresby	23.55	292	eP	P	20 17 31.7	+0.2
	comp=Z,87nm,0.8s,mb5.3						
CAN	Canberra	23.83	224	eP	P	20 17 34.6	+0.8
CAN				pmax	pmax		
	comp=Z,104nm,0.9s,mb5.4						
CAN	Canberra	23.83	224	eP	P	20 17 34.6	+0.8
	comp=Z,104nm,0.9s,mb5.4						
RPZ	Rata Peaks	24.23	177	P	P	20 17 37.3	0.0
	comp=Z,16nm,0.7s,mb4.7,baz=304,slow=2.7,SNR=8.3						
COEN	Coen	25.52	278	eP	P	20 17 49.9	+0.6
	comp=Z,67nm,0.9s,mb5.3						
STKA	Stephens Creek	27.70	238⇓	iP	P	20 18 09.1	+0.4
	comp=Z,43nm,0.8s,mb5.2						
STKA				e		20 18 21.9	
STKA	Stephens Creek	27.70	238	P	P	20 18 09.3	+0.6
	comp=Z,44nm,0.7s,mb5.3,baz=64,slow=8.1,SNR=118						
STKA				ScP	ScP	20 24 49.5	+0.1
	comp=Z,7.3nm,0.9s,baz=44,slow=2.5,SNR=7.0						
STKA				LR	LR	20 29 32.8	
	comp=Z,183nm,18.9s,baz=32,slow=37						
RAR	Rarotonga	29.11	99	LR	LR	20 26 45.9	
	comp=Z,211nm,21.6s,baz=302,slow=29						
MOO	Moorlands	29.52	214	eP	P	20 18 25.2	+0.5
WB2	Warramunga Arr	32.79	263⇓	iP	P	20 18 52.3	-1.3
WB2				epP	pP	20 19 27.1	+2.5
WB2				ePP	PP	20 20 13.6	+2.9
WB2				eS	S	20 23 55.5	-4.7
WRAB	Tennant Creek	32.79	263	P	P	20 18 52.0	-1.7
	comp=Z,233nm,1.1s,mb5.8,SNR=18						
WRAB	Tennant Creek	32.79	263d	iP	P	20 18 52.4	-1.3
WRAB	Tennant Creek	32.79	263	eP	P	20 18 51.8	-1.9
	comp=Z,45nm,1.0s,mb5.2						
WRA	Warramunga Arr	32.80	263	P	P	20 18 52.8	-1.0
	comp=Z,28nm,0.8s,mb5.0,baz=95,slow=8.7,SNR=212						
WRA				S	S	20 23 58.1	-2.3
	comp=Z,1.3nm,0.9s,baz=87,slow=17,SNR=9.1						
WRA				ScP	ScP	20 25 06.8	+0.6
	comp=Z,5.5nm,0.9s,baz=86,slow=4.0,SNR=14						
WRA				LR	LR	20 32 29.0	
	comp=Z,146nm,19.1s,baz=120,slow=36						
WRA	Warramunga Arr	32.80	263	P	P	20 18 52.8	-0.9
WRA				S	S	20 23 58.1	-2.2
ASAR	Alice Springs	33.05	256	P	P	20 18 55.6	-0.3
	comp=Z,126nm,0.8s,mb5.7,baz=84,slow=9.0,SNR=1581						
ASAR				S	S	20 24 01.8	-2.4
	comp=Z,4.7nm,0.9s,baz=86,slow=17,SNR=10						
ASAR				ScP	ScP	20 25 06.5	-0.6
	comp=Z,4.2nm,0.8s,baz=101,slow=3.8,SNR=13						
ASAR	Alice Springs	33.05	256	P	P	20 18 55.6	-0.3
ASAR				S	S	20 24 01.8	-2.3
KAKA	Kakadu	35.91	275⇓	iP	x	20 18 59.4	
	comp=Z,36nm,0.9s						
FORT	Forrest	38.73	245	eP	P	20 19 43.9	-0.3
	comp=Z,73nm,0.7s,mb5.4						
PPT	Papeete	39.06	94	eLR	LR	20 30 40.9	
	comp=Z,512nm,40.2s						
FITZ	Fitzroy Crossi	41.19	264⇓	iP	P	20 20 05.0	+0.3
	comp=Z,150nm,0.8s,mb5.7						
FITZ				epP	pP	20 20 40.5	+3.9
BATI	Baumata	44.87	275	P	P	20 20 35.8	+1.6
	comp=Z,139nm,0.9s,mb5.6,baz=150,slow=1.8,SNR=46						
MBWA	Marble Bar	46.28	259	eP	P	20 20 45.4	0.0
	comp=Z,88nm,0.9s,mb5.4						
NWAO	Narrogin (SRO)	48.09	243	P	P	20 20 58.8	-0.3
	comp=Z,54nm,0.9s,mb5.2,baz=90,slow=7.8,SNR=14						
NWAO				LR	LR	20 42 02.6	
	comp=Z,180nm,18.4s,baz=109,slow=37						
NWAO	Narrogin (SRO)	48.09	243	eP	P	20 20 58.7	-0.4
NWAO				pmax	pmax		
	comp=Z,43nm,1.0s						
NWAO	Narrogin (SRO)	48.09	243	eP	P	20 20 58.7	-0.5
	comp=Z,43nm,1.0s,mb5.0						
KAPI	Kappang	50.23	280	P	P	20 21 15.6	-0.1
	comp=Z,342nm,0.9s,mb6.0,SNR=5.4						
KAPI	Kappang	50.23	280	P	P	20 21 15.2	-0.5
	comp=Z,34nm,0.8s,mb5.0,baz=121,slow=5.1,SNR=14						
KAPI	Kappang	50.23	280	eP	P	20 21 15.2	-0.5
	comp=Z,74nm,1.2s,mb5.2						
VNDA	Vanda	58.21	182	P	P	20 22 12.1	-0.4
	comp=Z,2.6nm,0.7s,mb4.2,baz=351,slow=6.2,SNR=13						
MJAR	Matsushiro Arr	62.94	332	P	P	20 22 44.8	-0.2
	comp=Z,6.3nm,1.1s,mb4.4,baz=166,slow=6.0,SNR=7.9						
MAT	Matsushiro	62.94	332	P	P	20 22 44.6	-0.4
KSRS	Korea Array	68.67	326	LR	LR	20 51 14.9	
	comp=Z,36nm,19.4s,baz=308,slow=34						
NJ2	Nanjing	70.35	316	eP	P	20 23 33.8	+1.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
QSPA	South Pole Qui	70.59	180	P	P	20 23 32.9	0.0
	comp=Z,28nm,0.9s,mb5.0,baz=17,slow=2.0,SNR=57						
QSPA	South Pole Qui	70.59	180	eP	P	20 23 32.4	-0.5
	comp=Z,47nm,1.0s,mb5.2						
PETK	Petropavlovsk-	72.95	353	P	P	20 23 47.3	+0.1
	comp=Z,18nm,0.8s,mb4.9,baz=126,slow=5.5,SNR=27						
PETK				LR	LR	20 50 30.9	
	comp=Z,36nm,20.1s,baz=153,slow=31						
MDJ	Mudanjiang	73.31	332	P	P	20 23 50.4	+0.9
MDJ				AP	pP	20 24 22.9	-2.1
MDJ				PP	PP	20 26 34.8	-0.3
MDJ				S	S	20 33 10.6	+4.3
MDJ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,101nm,3.9s						
MDJ				LR	LR		
	comp=E,22nm,26.3s						
MDJ				LR	LR		
	comp=Z,34nm,19.7s						
HABR	Khabarovsk	74.19	337c	iP	PcP	20 24 06.9	-1.9
HABR				e*SP	sP	20 24 49.4	+3.9
HABR				e		20 26 40.8	
HABR				ePPP		20 28 26.2	
HABR				e		20 33 48.5	
HABR				eSS	SS	20 38 04.9	-0.3
HABR				eSSS		20 41 27.0	
HABR				MLR	MLR		
	comp=Z,29nm,21.0s						
CN2	Changchun	74.64	329	eP	P	20 23 57.4	+0.1
CN2				eAP	pP	20 24 32.1	-0.7
CN2				eS	S	20 33 21.3	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
GYA	Guiyang	75.93	305⇑	iP	P	20 24 05.8	+0.7
GYA				PCP	PcP	20 24 18.6	+1.8
GYA				AP	pP	20 24 40.3	-0.4
GYA				PP	PP	20 27 00.4	+2.8
GYA				S	S	20 33 35.6	-0.6
GYA				SKS		20 33 57.9	
GYA				SS	SS	20 38 35.0	+2.7
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,130nm,5.7s						
GYA				LR	LR		
	comp=N,750nm,20.6s						
GYA				LR	LR		
	comp=E,560nm,19.2s						
GYA				LR	LR		
	comp=Z,690nm,19.0s						
KLR	Kul'dur	76.06	336	eP	P	20 24 02.0	-3.3
BJI	Beijing	77.09	321	P	P	20 24 12.0	+0.7
BJI				S	S	20 33 43.8	-4.6
BJI				AMB	AMB		
	comp=Z,15nm,0.6s,mb4.8						
BJI				AMB	AMB		
	comp=Z,168nm,5.3s						
BJI				LR	LR		
	comp=N,139nm,25.9s						
BJI				LR	LR		
	comp=E,206nm,25.4s						
BJI				LR	LR		
	comp=Z,60nm,23.9s						
MAW	Mawson	78.22	202	P	P	20 24 17.9	+0.7
	comp=Z,8.1nm,1.0s,mb4.3,baz=92,slow=5.5,SNR=8.4						
MAW				LR	LR	20 54 40.0	
	comp=Z,42nm,18.7s,baz=296,slow=32						
MAW	Mawson	78.22	202	eP	P	20 24 17.0	-0.2
MAW				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MAW	Mawson	78.22	202	eP	P	20 24 17.0	-0.2
	comp=Z,5.0nm,1.4s,mb4.0						
XAN	Xi'an	78.24	313	P	P	20 24 18.5	+0.7
XAN				AP	pP	20 24 53.1	-0.6
XAN				XP	sP	20 25 07.4	-1.6
XAN				PP	PP	20 27 13.0	-3.9
XAN				S	S	20 33 56.0	-5.0
XAN				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
XAN				AMB	AMB		
	comp=Z,73nm,4.5s						
KMI	Kunming	78.37	302	P	P	20 24 20.5	+1.8
KMI				PCP	PcP	20 24 27.8	+0.3
KMI				AP	pP	20 24 54.6	0.0
KMI				XP	sP	20 25 09.4	-0.5

KMI PP PP 20 27 21.5 +3.4
KMI S S 20 34 04.3 +1.6
KMI XS sS 20 35 00.6 -4.0
KMI SS SS 20 39 11.9 +2.8
KMI AMB AMB
comp=Z,9.0nm,1.0s,mb4.3
KMI AMB AMB
comp=Z,95nm,4.6s
KMI LR LR
comp=N,105nm,24.3s
KMI LR LR
comp=E,95nm,20.3s
KMI LR LR
comp=Z,71nm,29.7s
CMAR Chiang Mai Arr 78.57 294 P **P 20 24 21.2 +1.2**
comp=Z,5.5nm,0.9s,mb4.2,baz=135,slow=4.4,SNR=34
CMAR pP pP 20 24 56.0 +0.1
comp=Z,4.0nm,1.0s,baz=127,slow=4.0,SNR=4.3
CMAR PKKPbc PKKPbc 20 43 13.8 -1.1
comp=Z,0.5nm,0.8s,baz=318,slow=3.0,SNR=4.7
CMAR LR LR 20 59 07.2
comp=Z,23nm,20.6s,baz=195,slow=36
CHTO Chiang Mai 78.72 295 *e*P **P 20 24 21.0 +0.2**
CHTO *e**PP pP 20 24 57.7 +1.1
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
CHTO Chiang Mai 78.72 295 *e*P **P 20 24 21.0 +0.3**
comp=Z,5.8nm,0.8s,mb4.3
CHTO *epP pP 20 24 57.6 +1.0
CD2 Chengdu 80.35 308 P **P 20 24 31.4 +2.0**
CD2 AP pP 20 25 06.6 +1.2
CD2 PP PP 20 27 38.6 +4.1
CD2 S S 20 34 25.1 +1.7
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,100nm,5.7s
CD2 LR LR
comp=N,180nm,7.7s
CD2 LR LR
comp=Z,110nm,7.7s
HHC Hu-ho-hao-te 80.37 319 *e*P **P 20 24 32.8 +3.6**
HHC *e*S S 20 34 26.5 +3.3
HHC SKS 20 34 33.6
HHC XS sS 20 35 23.4 -2.0
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,80nm,7.6s
HHC LR LR
comp=N,123nm,19.0s
HHC LR LR
comp=E,109nm,17.8s
HHC LR LR
comp=Z,72nm,19.0s
OHAK Old Harbor 82.57 20 *e*P **P 20 24 40.7 +0.3**
LZH Lanzhou 82.86 312 ⇓P **P 20 24 43.6 +1.2**
LZH AP pP 20 25 19.3 +0.7
LZH PP PP 20 27 58.1 +3.1
LZH SKS 20 34 48.0
LZH *e*S S 20 34 49.8 +0.9
LZH SS SS 20 40 10.6 -5.1
LZH AMB AMB
comp=Z,23nm,1.5s,mb4.7
LZH AMB AMB
comp=Z,116nm,8.2s
LZH LR LR
comp=N,227nm,17.0s
LZH LR LR
comp=Z,301nm,19.2s
KDAK Kodiak Island 83.25 19 P **P 20 24 42.9 -1.0**
comp=Z,29nm,0.9s,mb5.0,baz=212,slow=4.5,SNR=8.2
SYO Syowa Base 84.71 196 ⇓*e*P **P 20 24 48.8 -2.5**
SAO San Andreas Ge 85.99 49 *e*P **P 20 24 58.0 -0.2**
SAO pmax pmax
comp=Z,14nm,0.9s,mb4.7
SAO San Andreas Ge 85.99 49 *e*P **P 20 24 58.0 -0.2**
comp=Z,14nm,0.9s,mb4.7
PKM Peak Mountain 86.31 51 ⇓P **P 20 24 60.0 +0.2**
baz=86
SCI San Clemente I 86.42 53 ⇑P **P 20 24 59.9 -0.5**
baz=86
ULN Ulaanbaatar 87.03 323 *e*P **P 20 25 03.1 +0.2**
ULN *e**PP pP 20 25 38.0 -1.4
ULN pmax pmax
comp=Z,13nm,1.2s,mb4.6
ULN Ulaanbaatar 87.03 323 *e*P **P 20 25 03.1 +0.2**
comp=Z,13nm,1.2s,mb4.6
ULN *epP pP 20 25 38.0 -1.4
YAK Yakutsk 87.08 343 *e*P **P 20 25 01.7 -1.1**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.7
ARVC Arvin 87.15 51 ⇑P **P 20 25 03.9 +0.1**
baz=87
GTA Gaotai 87.26 313 *e*P **P 20 25 05.3 +1.0**
GTA AP pP 20 25 40.8 0.0
GTA PP PP 20 28 34.8 +4.1
GTA S S 20 35 32.3 +0.1
GTA XS sS 20 36 33.3 -2.1
GTA SS SS 20 41 22.0 +1.7
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.3
GTA AMB AMB
comp=Z,105nm,6.0s
VES Vestal, Richgr 87.27 51 ⇓P **P 20 25 04.2 -0.2**
baz=87
BILL Bilibino 87.27 359 *e*P **P 20 25 00.6 -3.0**
BILL *e* pP 20 25 39.6 -0.6
BILL pmax pmax
comp=Z,12nm,1.1s,mb4.6
BILL Bilibino 87.27 359 *e*P **P 20 25 02.8 -0.9**
comp=Z,13nm,1.2s,mb4.6
BILL *epP pP 20 25 38.6 -1.6
CMB Columbia Colle 87.32 48 *e*P **P 20 25 04.2 -0.4**
CMB pmax pmax
comp=Z,30nm,0.9s,mb5.1
CMB Columbia Colle 87.32 48 *e*P **P 20 25 04.2 -0.4**
comp=Z,30nm,0.9s,mb5.1
MWC Mount Wilson 87.33 52 *e*P **P 20 25 04.6 -0.1**
MWC pmax pmax
comp=Z,29nm,1.0s,mb5.1
MWC Mount Wilson 87.33 52 *e*P **P 20 25 04.6 -0.1**
comp=Z,29nm,1.0s,mb5.1
SONM Songino Array 87.38 323 P **P 20 25 04.5 -0.1**
comp=Z,4.5nm,0.9s,mb4.3,baz=152,slow=5.4,SNR=31
SONM pP pP 20 25 39.8 -1.4
comp=Z,6.9nm,1.1s,baz=123,slow=3.6,SNR=8.2
SONM PKKPbc PKKPbc 20 42 52.6 -3.4
comp=Z,0.7nm,0.6s,baz=267,slow=3.9,SNR=6.4
YBH Yreka Blue Hor 87.48 44 P **P 20 25 05.5 +0.3**
comp=Z,22nm,0.9s,mb5.0,baz=149,slow=2.2,SNR=28
YBH Yreka Blue Hor 87.48 44 *e*P **P 20 25 05.5 +0.3**
YBH pmax pmax
comp=Z,24nm,1.0s
YBH Yreka Blue Hor 87.48 44 *e*P **P 20 25 05.5 +0.3**
comp=Z,24nm,1.0s,mb5.0
BFSC Mount Baldy St 87.63 53 ⇓P **P 20 25 06.0 -0.1**
baz=88
ISA Isabella 87.64 51 ⇑P **P 20 25 06.4 +0.2**
baz=88
ISA Isabella 87.64 51 *e*P **P 20 25 06.3 +0.1**
ISA pmax pmax
comp=Z,31nm,0.9s,mb5.1
ISA Isabella 87.64 51 *e*P **P 20 25 06.3 +0.1**
comp=Z,31nm,0.9s,mb5.1
EDW2 Edwards Air Fo 87.66 52 ⇓P **P 20 25 06.4 +0.1**
baz=88
MURC Murrieta 87.70 53 ⇑P **P 20 25 06.4 -0.1**
baz=88
HUMO Hull Mountain 87.74 43 *e*P **P 20 25 06.8 +0.3**
comp=Z,32nm,0.9s,mb5.2
LBCM Butte Creek Ri 87.95 45 P **P 20 25 07.7 +0.1**
MONP Monument Peak 88.00 54 ⇑P **P 20 25 08.0 +0.1**
baz=88
BUOR Burton Butte 88.04 44 P **P 20 25 08.4 +0.5**
H02A Toledo 88.10 41 ⇓P **P 20 25 08.2 +0.1**
baz=88
DVTC Desert V Tower 88.15 54 ⇑P **P 20 25 08.7 +0.1**
baz=88
BEKR Beckwourth 88.18 47 ⇑P **P 20 25 09.0 +0.4**
baz=88
I03A Eugene 88.20 42 ⇓P **P 20 25 09.0 +0.4**
baz=88
R06C Coleville 88.20 48 ⇓P **P 20 25 08.9 +0.2**
baz=88
CWC Cottonwood Cre 88.27 50 ⇓P **P 20 25 09.2 +0.1**
baz=88
PFO Pinyon Flat Ob 88.27 54 ⇑P **P 20 25 09.1 -0.1**
baz=88
CHUM Lake Minchumin 88.28 16 *e*P **P 20 25 06.3 -2.2**
comp=Z,11nm,0.9s,mb4.7
WCN Washoe City 88.34 47 ⇑P **P 20 25 09.5 +0.1**
baz=88
P06A Stead Airport, 88.41 47 ⇑P **P 20 25 10.1 +0.4**
baz=88
TIN Tinemaha 88.42 50 ⇓P **P 20 25 10.1 +0.2**
baz=88
TRF Thorofare Moun 88.48 17 *e*P **P 20 25 07.6 -1.8**
comp=Z,14nm,1.0s,mb4.8
SWSC Sam W. Stewart 88.50 54 ⇓P **P 20 25 10.3 0.0**
baz=89
MPMC Manual Prospec 88.53 51 ⇓P **P 20 25 10.6 +0.3**
baz=89
H03A Soap Creek Ran 88.53 41 ⇓P **P 20 25 10.8 +0.7**
baz=89
MAIT Maitri 88.64 187 *e*P **P 20 25 06.3 -4.0**
MAIT *epP PcP 20 25 22.9 +11
O06A Flanigan 88.68 46 ⇓P **P 20 25 11.3 +0.4**
baz=89
GSC Goldstone 88.72 52 ⇓P **P 20 25 11.3 0.0**
baz=89
BELC Belle Mtn. 88.78 53 ⇑P **P 20 25 11.8 +0.2**
baz=89
HEC Hector,Ludlow 88.87 52 ⇑P **P 20 25 11.9 -0.1**
baz=89
N06A Buffalo Meadow 88.94 46 ⇑P **P 20 25 12.3 +0.2**
baz=89
SNAA Sanae 88.94 183 *e*P **P 20 25 08.3 -3.4**
SNAA *e* 20 25 10.6
SNAA *e* pP 20 25 45.5 -2.9
SNAA Sanae 88.94 183 *e*P **P 20 25 08.4 -3.3**
SNAA *e**PP pP 20 25 43.1 -5.3
SNAA pmax pmax
comp=Z,23nm,0.9s
SNAA Sanae 88.94 183 *e*P **P 20 25 08.3 -3.4**
comp=Z,23nm,0.9s,mb5.1
SNAA *epP pP 20 25 43.1 -5.3
NVAR Mina Array Bea 88.97 49 P **P 20 25 12.2 -0.1**
comp=Z,14nm,0.9s,mb4.9,baz=228,slow=7.6,SNR=59
NVAR pP pP 20 25 49.1 +0.1
comp=Z,0.6nm,0.7s,baz=40,slow=37,SNR=1.0
F03A Seaside 88.99 40 ⇑P **P 20 25 12.5 +0.3**
baz=89
GRAC Grapevine Rang 89.02 50 ⇓P **P 20 25 12.8 +0.2**
baz=89
P07A Fallon 89.05 47 ⇑P **P 20 25 13.1 +0.4**
baz=89
BC3 Big Chuckw Mtn 89.05 54 ⇓P **P 20 25 13.0 +0.1**
baz=89
R08A Mina 89.07 49 ⇓P **P 20 25 13.1 +0.3**
baz=89
MCK McKinley 89.08 17 *e*P **P 20 25 10.5 -1.7**
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MCK McKinley 89.08 17 *e*P **P 20 25 10.5 -1.7**
comp=Z,6.8nm,0.8s,mb4.6
K05A Summer Lake 89.14 44 ⇓P **P 20 25 13.5 +0.5**
baz=89,SNR=8.3
MOD Modoc 89.15 45 *e*P **P 20 25 13.1 0.0**
comp=Z,40nm,1.1s,mb5.3
FURC Furnace Creek, 89.17 51 ⇓P **P 20 25 13.5 +0.1**
baz=89
H04A Detroit Lake 89.23 42 ⇑P **P 20 25 13.2 -0.2**
baz=89
E03A Lebam 89.29 40 ⇑P **P 20 25 13.7 +0.1**
baz=89
GLA Glamis 89.29 55 ⇓P **P 20 25 14.2 +0.2**
baz=89
GLA Glamis 89.29 55 *e*P **P 20 25 14.3 +0.3**
GLA pmax pmax
comp=Z,56nm,1.3s,mb5.3
GLA Glamis 89.29 55 *e*P **P 20 25 14.2 +0.3**
comp=Z,56nm,1.3s,mb5.3
G04A Mulino 89.30 41 ⇓P **P 20 25 14.3 +0.5**
baz=89
O07A Toulon 89.33 47 ⇓P **P 20 25 14.0 0.0**
baz=89
GMRC Granite Mounta 89.36 53 ⇑P **P 20 25 14.1 -0.1**
baz=89
SHOC Shoshone 89.36 51 ⇑P **P 20 25 14.1 -0.2**
baz=90
Q08A Gabbs 89.42 48 ⇑P **P 20 25 14.5 0.0**
baz=90
TUQ Turquoise Moun 89.43 52 ⇑P **P 20 25 14.5 0.0**
baz=90
S09A Goldfield 89.43 50 ⇑P **P 20 25 14.6 0.0**
baz=90
IRM Iron Mountain 89.49 53 ⇑P **P 20 25 15.1 +0.2**
baz=90
BOD Bodaibo 89.52 334 *e*P **P 20 25 14.0 -0.5**
BOD pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
VNA3 Neumayer Olymp 89.53 180 *e*P **P 20 25 13.0 -1.5**
VNA3 *e* 20 25 15.2
VNA3 *e* pP 20 25 49.9 -1.3
LPIG La Paz 89.54 64 LR LR 20 59 04.3
comp=Z,77nm,19.4s,baz=217,slow=31
N07B Gerlach 89.54 46 ⇑P **P 20 25 15.1 +0.2**
baz=90,SNR=7.8
I05A Bend 89.56 42 ⇑P **P 20 25 15.3 +0.3**
baz=90
TPH Tonopah 89.58 49 *e*P **P 20 25 15.6 +0.3**
TPH pmax pmax
comp=Z,29nm,1.2s,mb5.1
TPH Tonopah 89.58 49 *e*P **P 20 25 15.6 +0.4**
comp=Z,29nm,1.2s,mb5.1
RVW Rose Valley 89.59 40 P **P 20 25 15.8 +0.7**
M07A Soldier Meadow 89.67 46 ⇑P **P 20 25 15.7 +0.2**
baz=90,SNR=23
P08A Dixie Valley 89.67 47 ⇑P **P 20 25 15.8 +0.2**
baz=90
F04A Amboy 89.68 40 ⇓P **P 20 25 15.4 -0.1**
baz=90,SNR=6.2
R09A Tonopah 89.76 49 ⇓P **P 20 25 16.0 -0.1**
baz=90,SNR=17
Y12C Blythe 89.80 54 ⇑P **P 20 25 16.3 0.0**
baz=90,SNR=6.2
TPNV Topopah Spring 89.81 51 ⇓P **P 20 25 16.4 0.0**
baz=90
TPNV Topopah Spring 89.81 51 *e*P **P 20 25 16.3 -0.1**
TPNV pmax pmax
comp=Z,86nm,1.4s,mb5.5
TPNV Topopah Spring 89.81 51 *e*P **P 20 25 16.3 -0.1**
comp=Z,86nm,1.4s,mb5.5
H05A Madras 89.81 42 ⇑P **P 20 25 16.0 -0.2**
baz=90,SNR=5.2
VNA2 Neumayer--Watz 89.82 181 *e*P **P 20 25 14.8 -1.0**
baz=160,slow=4.2
VNA2 *e* 20 25 16.9
VNA2 *e* pP 20 25 51.9 -0.6
L07A Adell 89.84 45 ⇓P **P 20 25 16.8 +0.4**
baz=90,SNR=24
FL2 Flat Top 2 89.85 40 P **P 20 25 16.9 +0.6**
J06A Christmas Vall 89.86 44 ⇑P **P 20 25 16.3 -0.1**
baz=90,SNR=14
HOOD Mount Hood Mea 89.86 41 *e*P **P 20 25 16.2 -0.1**
comp=Z,26nm,0.8s,mb5.2
LDFC Landfair 89.89 53 *e*P **P 20 25 17.1 +0.3**
comp=Z,18nm,0.6s,mb5.2
LDFC *e* 20 25 25.4
Q09A Carvers 89.94 49 ⇓P **P 20 25 16.9 0.0**
baz=90
V11A Goodsprings 89.96 52 ⇓P **P 20 25 17.0 -0.1**
baz=90,SNR=10
S10A Tonopah Range, 89.97 50 ⇑P **P 20 25 17.0 0.0**
baz=90,SNR=46
113A Mohawk Valley, 89.99 55 ⇓P **P 20 25 17.2 -0.1**
baz=90,SNR=10.0
G05A Wamic 90.04 41 ⇓P **P 20 25 17.0 -0.1**
baz=90
N08A GE Springer Mi 90.11 46 ⇓P **P 20 25 17.7 +0.1**
baz=90,SNR=23
VNA1 Neumayer--Stat 90.11 181 *e*P **P 20 25 16.2 -1.0**
VNA1 *e* 20 25 18.6
VNA1 *e* pP 20 25 51.7 -2.2
CROR Criterion Ridg 90.12 42 P **P 20 25 17.7 +0.1**
VIPM Ingram Point 90.14 42 P **P 20 25 18.2 +0.5**
I06A Prineville 90.14 43 ⇓P **P 20 25 18.0 +0.3**
baz=90,SNR=14
W12A Cal Nev Ari 90.16 53 ⇓P **P 20 25 18.0 0.0**
baz=90
K07A Rock Creek Ran 90.20 44 ⇑P **P 20 25 18.2 +0.2**
baz=90,SNR=14
C04A Brinnon 90.21 39 ⇑P **P 20 25 18.1 +0.2**
baz=90
M08A Happy Creek Ra 90.23 46 ⇑P **P 20 25 18.4 +0.3**
baz=90,SNR=9.5
F05A White Salmon 90.25 41 ⇑P **P 20 25 18.1 -0.1**
baz=90
COLA College 90.26 17 *e*P **P 20 25 15.2 -2.5**
COLA pmax pmax
comp=Z,14nm,0.9s,mb4.9
COLA College 90.26 17 *e*P **P 20 25 15.2 -2.5**
comp=Z,14nm,0.9s,mb4.9
R10A Warm Springs 90.33 49 ⇓P **P 20 25 18.9 +0.1**
baz=90,SNR=10.0
V12A Nelson 90.34 52 ⇑P **P 20 25 18.7 -0.2**
baz=90,SNR=11
Y13A Salome 90.36 54 ⇑P **P 20 25 19.1 +0.1**
baz=90,SNR=11
E05A Randle 90.38 40 ⇓P **P 20 25 18.5 -0.2**
baz=90,SNR=9.2
H06A Lindquist Farm 90.42 42 ⇓P **P 20 25 18.9 -0.1**
baz=90,SNR=22
214A Organ Pipe Nat 90.42 56 ⇑P **P 20 25 19.3 0.0**
baz=90,SNR=17
G06A Carlson Farm, 90.46 42 ⇑P **P 20 25 18.7 -0.4**
baz=91
ZAK Zakamensk 90.46 324 *e*P **P 20 25 16.8 -2.2**
ZAK *e* pP 20 25 54.8 -0.9
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
J07A Hines 90.46 44 ⇓P **P 20 25 19.1 -0.1**
baz=91,SNR=5.2
Q10A Clear Creek Ra 90.48 49 ⇑P **P 20 25 19.4 0.0**
baz=91,SNR=9.9
WVOR Wild Horse Val 90.49 45 *e*P **P 20 25 19.4 0.0**
WVOR pmax pmax
comp=Z,36nm,1.1s,mb5.2
WVOR Wild Horse Val 90.49 45 *e*P **P 20 25 19.4 0.0**
comp=Z,36nm,1.1s,mb5.2
O09A Fish Creek Ran 90.50 47 ⇓P **P 20 25 19.5 0.0**
baz=91,SNR=11
N09A Rock Creek Ran 90.56 47 ⇓P **P 20 25 19.6 -0.1**
baz=91,SNR=8.4
L08A Fields 90.58 45 ⇑P **P 20 25 19.8 +0.1**
baz=91,SNR=24
WPW White Pass 90.58 40 P **P 20 25 19.8 +0.2**
F06A Goldendale 90.61 41 ⇑P **P 20 25 19.9 +0.1**
baz=91,SNR=7.3
I07A Izee 90.66 43 ⇑P **P 20 25 20.2 +0.1**
baz=91,SNR=16
X13A Yucca 90.66 53 ⇓P **P 20 25 20.2 -0.1**
baz=91,SNR=11
T11A Corn Creek, Al 90.68 51 ⇑P **P 20 25 20.4 0.0**
baz=91,SNR=28
K08A Mann Creek Ran 90.72 45 ⇑P **P 20 25 20.6 +0.2**
baz=91,SNR=24
RMW Rattlesnake Mo 90.78 39 P **P 20 25 20.9 +0.3**
W13A Hualapai Mount 90.82 53 ⇑P **P 20 25 21.2 +0.1**
baz=91,SNR=12
H07A Lands Inn, Kim 90.84 43 ⇑P **P 20 25 21.0 0.0**
baz=91
T12A Moapa 90.85 51 ⇑P **P 20 25 21.3 +0.1**
baz=91
M09A Marrel Ranch, 90.85 46 ⇓P **P 20 25 21.3 +0.2**
baz=91,SNR=7.4
E06A Yakima 90.85 40 ⇑P **P 20 25 20.9 0.0**
baz=91,SNR=5.5
A04A Legoe Bay, Lum 90.86 38 ⇓P **P 20 25 21.2 +0.3**
baz=91
U12A Valley of Fire 90.86 52 ⇑P **P 20 25 21.3 +0.1**
baz=91
Z14A Wintersburg 90.86 55 ⇓P **P 20 25 21.5 +0.2**
baz=91
R11A Troy Canyon, C 90.87 49 ⇓P **P 20 25 21.0 -0.2**
baz=91,SNR=15
L09A Wilkinson Ranc 90.96 45 ⇓P **P 20 25 21.5 0.0**
baz=91,SNR=10
C05A Tolt Reservoir 90.96 39 ⇑P **P 20 25 21.4 0.0**
baz=91,SNR=7.1
B05A Bryant 90.99 39 ⇓P **P 20 25 21.7 +0.2**
baz=91,SNR=6.2
J08A Circle Bar Ran 91.00 44 ⇑P **P 20 25 21.8 +0.1**
baz=91,SNR=17
Q11A Duckwater 91.02 49 ⇓P **P 20 25 22.0 0.0**
baz=91,SNR=27
O10A Cortez Mining, 91.03 47 ⇓P **P 20 25 21.9 0.0**
baz=91
Y14A Wickenburg 91.04 54 ⇑P **P 20 25 21.9 -0.2**
baz=91,SNR=5.5
V13A Grand Canyon W 91.04 52 ⇑P **P 20 25 22.0 -0.1**
baz=91,SNR=13
G07A Ruggs Ranch, H 91.08 42 ⇓P **P 20 25 22.0 -0.1**
baz=91,SNR=7.6
S12A Delamar Landin 91.10 50 ⇓P **P 20 25 22.9 +0.5**
baz=91,SNR=30
115A Sonoran Desert 91.16 56 ⇓P **P 20 25 22.9 +0.1**
baz=91,SNR=5.1
F07A Phinny Hill Vi 91.20 41 ⇓P **P 20 25 22.4 -0.2**
baz=91
K09A Rome 91.21 45 ⇑P **P 20 25 22.6 -0.1**
baz=91,SNR=20
U13A Pakoon Wash 91.28 52 ⇑P **P 20 25 23.3 +0.1**
baz=91,SNR=12
X14A Yava 91.33 54 ⇓P **P 20 25 23.8 +0.3**
baz=91,SNR=13
H08A Prairie City 91.39 43 ⇑P **P 20 25 23.2 -0.3**
baz=92
W14A Seligman 91.47 53 ⇑P **P 20 25 24.5 +0.4**
baz=92,SNR=16
B06A Marblemount 91.47 38 ⇑P **P 20 25 23.3 -0.5**
baz=92
J09A Fry Pan Ranch, 91.47 44 ⇑P **P 20 25 23.7 -0.2**
baz=92,SNR=20
COLD Coldfoot 91.50 15 *e*P **P 20 25 22.6 -0.9**
comp=Z,12nm,1.0s,mb4.9
216A Three Points, 91.50 57 ⇑P **P 20 25 24.6 +0.3**
baz=92,SNR=5.3
M10A I.L. Ranch, Tu 91.51 46 ⇓P **P 20 25 24.3 +0.2**
baz=92,SNR=20
116A Eloy 91.52 56 ⇑P **P 20 25 24.5 +0.1**
baz=92
G08A Pilot Rock 91.54 42 ⇓P **P 20 25 24.0 -0.1**
baz=92,SNR=14
O11A Cowboy Ranch, 91.55 48 ⇓P **P 20 25 24.3 0.0**
baz=92,SNR=8.6
E07A Sunnyside 91.55 41 ⇑P **P 20 25 24.2 0.0**
baz=92,SNR=8.6
T13A Saint George 91.56 51 ⇑P **P 20 25 24.6 +0.1**
baz=92,SNR=9.2
Y15A Casa Rosa Ranc 91.56 55 ⇑P **P 20 25 24.5 0.0**
baz=92,SNR=21
R12A Pony Springs, 91.56 50 ⇑P **P 20 25 24.3 -0.2**
baz=92
V14A Boquillas Ranc 91.61 53 ⇓P **P 20 25 25.0 +0.3**
baz=92,SNR=19
A06A Chilliwack 91.75 38 ⇓P **P 20 25 25.0 0.0**
baz=92
I09A Lost Marbles R 91.75 44 ⇑P **P 20 25 24.9 -0.3**
baz=92
D07A Quincy 91.76 40 ⇓P **P 20 25 25.2 +0.1**
baz=92
L10A Juniper Basin 91.79 46 ⇑P **P 20 25 25.4 0.0**
baz=92,SNR=19
P12A McGill 91.81 49 ⇑P **P 20 25 25.6 0.0**
baz=92
S13A Holt Ranch, En 91.81 51 ⇓P **P 20 25 25.7 +0.1**
baz=92,SNR=13
K10A MacKenzie Ranc 91.82 45 ⇑P **P 20 25 25.8 +0.3**
baz=92,SNR=16
X15A Humboldt 91.83 54 ⇓P **P 20 25 26.1 +0.3**
baz=92,SNR=16
U14A Mt Trumbull 91.86 52 ⇑P **P 20 25 26.1 +0.3**
baz=92,SNR=28
F08A Pendleton 91.88 42 ⇑P **P 20 25 25.9 +0.2**
baz=92
217A Green Valley 91.93 57 ⇓P **P 20 25 26.5 +0.2**
baz=92,SNR=14
C07A Waterville 91.94 40 ⇑P **P 20 25 25.4 -0.5**
baz=92
R13A O'Grain Ranch, 91.97 50 ⇑P **P 20 25 26.4 +0.1**
baz=92,SNR=7.3
M11A Holland Ranch, 91.99 47 ⇑P **P 20 25 26.7 +0.4**
baz=92,SNR=6.6
E08A Dider Farm, El 92.01 41 ⇑P **P 20 25 26.1 -0.2**
baz=92
W15A Williams 92.07 53 ⇓P **P 20 25 27.2 +0.3**
baz=92,SNR=9.1
H09A Durkee 92.10 43 ⇓P **P 20 25 26.5 -0.2**
baz=92

EGAK Eagle 92.14 19 *e*P P 20 25 25.0 -1.5
comp=Z,10nm,0.7s,mb5.0
T14A Hurricane 92.18 51 ⇓P P 20 25 27.5 +0.2
baz=92,SNR=8.4
Y16A Circle Bar Ran 92.19 55 ⇑P P 20 25 27.7 +0.3
baz=92,SNR=17
Q13A Wheeler Ranch, 92.23 49 ⇓P P 20 25 27.4 -0.2
baz=92,SNR=5.9
O12A Currie 92.24 48 ⇓P P 20 25 27.6 0.0
baz=92,SNR=6.8
B07A Winthrop 92.25 39 ⇑P P 20 25 27.0 -0.4
baz=92
N12A Clover Valley, 92.27 47 ⇑P P 20 25 27.5 -0.1
baz=92,SNR=7.2
117A Oracle 92.28 56 ⇑P P 20 25 28.1 +0.2
baz=92,SNR=16
G09A Cove 92.28 43 ⇓P P 20 25 27.3 -0.3
baz=92
L11A Cat Creek Ranc 92.31 46 ⇑P P 20 25 27.9 +0.1
baz=92,SNR=11
D08A Wollman Farm, 92.35 41 ⇑P P 20 25 27.6 -0.3
baz=92
A07A Ashnola River, 92.36 38 ⇑P P 20 25 27.7 -0.1
baz=92
K11A Parker Ranch, 92.37 45 ⇑P P 20 25 28.1 0.0
baz=92,SNR=6.2
V15A Kaibab Nationa 92.39 53 ⇓P P 20 25 28.6 +0.3
baz=92,SNR=12
X16A Lo Mia Camp, P 92.42 54 ⇓P P 20 25 29.0 +0.5
baz=92,SNR=21
P13A Bates Ranch, G 92.44 49 ⇑P P 20 25 28.8 +0.3
baz=92,SNR=11
318A Bisbee 92.46 58 ⇑P P 20 25 29.0 +0.2
baz=92,SNR=12
U15A North Rim 92.53 52 ⇑P P 20 25 29.4 +0.4
baz=93,SNR=14
M12A Wells 92.58 47 ⇑P P 20 25 29.3 +0.2
baz=93
E09A Wood Farm, Sta 92.59 41 ⇑P P 20 25 28.8 -0.2
baz=93
W16A Flagstaff 92.60 54 ⇓P P 20 25 30.2 +0.8
baz=93,SNR=7.3
218A Dragoon 92.61 57 ⇓P P 20 25 29.8 +0.4
baz=93,SNR=17
Y17A Roosevelt 92.61 55 ⇑P P 20 25 29.5 +0.1
baz=93,SNR=8.6
H10A Noah's Angus R 92.66 43 ⇓P P 20 25 28.7 -0.6
baz=93
B08A Colville Reser 92.67 39 ⇓P P 20 25 28.8 -0.6
baz=93
T15A Red Dirt Ranch 92.68 52 ⇑P P 20 25 29.7 0.0
baz=93,SNR=7.1
G10A Bishop Farm, J 92.71 43 ⇑P P 20 25 29.2 -0.4
baz=93,SNR=7.6
D09A Jones Farm, Ri 92.72 41 ⇑P P 20 25 29.4 -0.2
baz=93,SNR=6.0
O13A Hicks Ranch, I 92.72 48 ⇓P P 20 25 30.0 +0.3
baz=93
MFID Camas Ranch 92.78 45 ⇓P P 20 25 29.7 -0.2
baz=93,SNR=5.9
Q14A Sevier Lake (B 92.78 50 ⇓P P 20 25 30.0 -0.1
baz=93,SNR=15
L12A House Creek Ra 92.81 46 ⇑P P 20 25 30.1 0.0
baz=93
WUAZ Wupatki 92.88 53 ⇓P P 20 25 31.0 +0.4
baz=93
WUAZ Wupatki 92.88 53 *e*P P 20 25 31.2 +0.6
comp=Z,23nm,1.3s,mb5.2
X17A Forest Lakes 92.88 55 ⇑P P 20 25 31.1 +0.5
baz=93,SNR=7.5
I11A Placerville 92.89 44 ⇓P P 20 25 30.0 -0.4
baz=93
118A Homack Ranch, 92.91 57 ⇑P P 20 25 31.1 +0.3
baz=93,SNR=16
F10A Beach Ranch, E 92.93 42 ⇑P P 20 25 30.0 -0.5
baz=93
S15A Panguitch 92.94 51 ⇓P P 20 25 31.5 +0.7
baz=93
A08A Turner Farm, O 92.97 39 ⇑P P 20 25 30.4 -0.2
baz=93
319A Douglas 93.00 58 ⇑P P 20 25 31.5 +0.2
baz=93,SNR=12
M13A Montello 93.08 47 ⇓P P 20 25 31.2 -0.1
baz=93,SNR=6.6
K12A Draper Farm, C 93.08 46 ⇓P P 20 25 31.0 -0.4
baz=93
P14A Drum Mountains 93.16 49 ⇓P P 20 25 31.5 -0.3
baz=93,SNR=5.7
H11A Donnelly 93.18 44 ⇑P P 20 25 31.4 -0.4
baz=93,SNR=5.1
J12A Stokes Ranch, 93.19 45 ⇑P P 20 25 31.9 0.0
baz=93
219A White Tail Can 93.24 57 ⇓P P 20 25 32.4 0.0
baz=93,SNR=12
Y18A Canyon Day Jun 93.27 55 ⇑P P 20 25 32.7 +0.3
baz=93,SNR=5.6
U16A Tuba City 93.29 53 ⇓P P 20 25 32.7 +0.2
baz=93,SNR=7.1
G11A Walters Elk Ra 93.30 43 ⇑P P 20 25 31.9 -0.4
baz=93,SNR=9.5
T16A Glen Canyon Da 93.32 52 ⇓P P 20 25 32.8 +0.2
baz=93
D10A Wagner Farm, O 93.36 41 ⇓P P 20 25 32.8 +0.3
baz=94
A09A Danville 93.39 39 ⇓P P 20 25 32.4 -0.2
baz=94
I12A Atlanta 93.39 45 ⇓P P 20 25 32.4 -0.3
baz=94
B09A Rice 93.41 40 ⇑P P 20 25 32.9 +0.2
baz=94
119A Ashpeak Ranch, 93.48 57 ⇑P P 20 25 33.3 -0.1
baz=94,SNR=6.3
L13A Double Diamond 93.52 47 ⇓P P 20 25 33.4 +0.1
baz=94
S16A Weppner Ranch, 93.53 51 ⇓P P 20 25 33.4 -0.1
baz=94
DUG Dugway 93.58 49 ⇑P P 20 25 33.4 -0.3
baz=94
F11A Grangeville 93.58 42 ⇓P P 20 25 33.3 -0.2
baz=94
X18A Snowflake 93.60 55 ⇑P P 20 25 34.2 +0.3
baz=94
Z19A T-Link Ranch, 93.70 56 ⇑P P 20 25 35.0 +0.6
baz=94
M14A Sheep Mountain 93.70 47 ⇑P P 20 25 33.9 -0.3
baz=94,SNR=7.4
HLID Hailey 93.78 45 ⇓P P 20 25 34.5 0.0
baz=94
U17A Shonto 93.81 53 ⇑P P 20 25 35.4 +0.6
baz=94
R16A Teasdale 93.82 51 ⇓P P 20 25 35.4 +0.6
baz=94
T17A Navajo Res., N 93.85 52 ⇓P P 20 25 35.4 +0.4
baz=94,SNR=8.7
O15A The Old Anders 93.85 49 ⇑P P 20 25 34.8 -0.2
baz=94
J13A Cove Ranch, Pi 93.87 45 ⇑P P 20 25 35.0 0.0
baz=94,SNR=7.8
H12A Diamond D Ranc 93.88 44 ⇑P P 20 25 34.6 -0.4
baz=94,SNR=12
Y19A Nutrioso 93.94 55 ⇓P P 20 25 36.1 +0.6
baz=94,SNR=7.5
W18A Petrified Fore 93.98 54 ⇓P P 20 25 36.0 +0.3
baz=94
A10A Northport 94.00 39 ⇓P P 20 25 35.6 +0.2
baz=94
N15A Stansbury Isla 94.05 48 ⇓P P 20 25 35.6 -0.3
baz=94
X19A St. Johns 94.08 55 ⇑P P 20 25 36.6 +0.5
baz=94
S17A Black Ridge (B 94.08 52 ⇓P P 20 25 35.8 -0.3
baz=94
F12A Elk City 94.10 43 ⇑P P 20 25 35.6 -0.4
baz=94
I13A Wildhorse Cree 94.11 45 ⇑P P 20 25 36.1 0.0
baz=94,SNR=7.3
E12A Beaver Dam Sad 94.16 42 ⇑P P 20 25 36.8 +0.6
baz=94
K14A Jones Ranch, D 94.22 46 ⇑P P 20 25 36.6 0.0
baz=94
W19A Sanders 94.24 54 ⇓P P 20 25 37.3 +0.4
baz=94
H13A Challis 94.28 44 ⇑P P 20 25 36.6 -0.2
baz=94
Q16A Castle Valley 94.28 50 ⇓P P 20 25 37.5 +0.6
baz=94
J14A Carey 94.28 46 ⇑P P 20 25 37.0 +0.2
baz=94

M15A Larsen Ranch, 94.31 48 ⇓P P 20 25 36.6 -0.5
baz=94
C11A Tepee Creek (N 94.32 41 ⇓P P 20 25 37.2 +0.3
baz=94
U18A Rough Rock, Ch 94.34 53 ⇑P P 20 25 37.4 +0.1
baz=94
R17A Hanksville Air 94.43 51 ⇑P P 20 25 37.5 -0.2
baz=94
B11A Sandpoint 94.49 40 ⇓P P 20 25 37.9 +0.2
baz=95
G13A Cobalt 94.50 44 ⇑P P 20 25 37.6 -0.2
baz=95
O16A Springville 94.51 49 ⇓P P 20 25 37.7 -0.3
baz=95
D12A Red Ives Fores 94.56 42 ⇓P P 20 25 37.4 -0.6
baz=95
L15A Malad City 94.56 47 ⇑P P 20 25 37.7 -0.5
baz=95
I14A Mackay 94.56 45 ⇑P P 20 25 38.2 0.0
baz=95,SNR=9.9
T18A Mexican Hat 94.59 52 ⇓P P 20 25 38.4 0.0
baz=95,SNR=8.5
S18A Hurst Farm, Bl 94.70 52 ⇑P P 20 25 39.0 +0.1
baz=95
F13A Darby 94.70 43 ⇑P P 20 25 37.9 -0.8
baz=95,SNR=8.4
A11A Hall Mountain, 94.71 40 ⇓P P 20 25 39.0 +0.3
baz=95
SRU San Rafael 94.82 50 ⇓P P 20 25 39.2 -0.3
baz=95
H14A Leadore 94.88 44 ⇑P P 20 25 39.2 -0.4
baz=95,SNR=6.0
R18A Canyonlands Na 95.02 51 ⇑P P 20 25 39.9 -0.4
baz=95
J15A Blackfoot 95.05 46 ⇓P P 20 25 40.5 +0.2
baz=95
O17A Robinson Place 95.05 49 ⇓P P 20 25 40.5 +0.1
baz=95,SNR=6.7
Q18A Rafter H Ranch 95.10 50 ⇑P P 20 25 40.5 -0.2
baz=95
F14A Wisdom 95.33 43 ⇓P P 20 25 41.3 -0.3
baz=95
S19A Harvey Farm, M 95.35 52 ⇓P P 20 25 41.4 -0.5
baz=95
H15A Lima 95.36 45 ⇓P P 20 25 41.9 +0.2
baz=96
K16A Soda Springs 95.41 47 ⇓P P 20 25 41.6 -0.5
baz=96
G15A Dillon 95.67 44 ⇓P P 20 25 42.9 -0.3
baz=96
F15A Butte 95.91 43 ⇑P P 20 25 44.0 -0.2
baz=96
M18A Lyman 95.97 48 ⇑P P 20 25 44.0 -0.6
baz=96
HVS Khovu-Aksy 96.23 322 *e*P P 20 25 44.8 -0.7
HVS pmax pmax
comp=Z,29nm,1.3s,mb5.5
H16A Russell Place, 96.32 45 ⇓P P 20 25 46.5 +0.4
baz=96
BOZ Bozeman (W) 96.41 44 ⇑P P 20 25 46.1 -0.4
baz=96
K18A Toltan Ranch, 96.41 47 ⇓P P 20 25 46.4 -0.2
baz=96
ANMO Albuquerque 96.45 55 LR LR 21 02 54.4
comp=Z,56nm,18.8s,baz=67,slow=31
ANMO Albuquerque 96.45 55 *e*P P 20 25 46.3 -0.6
ANMO pmax pmax
comp=Z,4.0nm,1.3s
F16A Kennard Place, 96.46 44 ⇑P P 20 25 47.0 +0.3
baz=97
C15A Salmond Ranch, 96.56 42 ⇑P P 20 25 47.1 0.0
baz=97
E16A East Helena 96.69 43 ⇑P P 20 25 48.5 +0.8
baz=97
R21A Cimarron 96.74 52 ⇓P P 20 25 48.0 -0.2
baz=97
B15A Bradely Ranch, 96.78 41 ⇓P P 20 25 47.3 -0.8
baz=97
PDAR Pinedale Array 96.79 47 P P 20 25 46.7 -1.5
comp=Z,0.9nm,0.7s,mb4.2,baz=253,slow=4.5,SNR=4.1
PDAR LR LR 21 05 03.3
comp=Z,90nm,18.4s,baz=74,slow=33
TXAR Lajitas Array 96.90 61 P P 20 25 48.7 -0.4
comp=Z,1.7nm,0.8s,mb4.4,baz=221,slow=6.0,SNR=20
TXAR LR LR 21 06 34.0
comp=Z,68nm,18.8s,baz=185,slow=34
F17A Fitzpatrick Pl 97.13 44 ⇓P P 20 25 49.9 +0.1
baz=97
WMQ Urumqi 97.34 314 *e*P P 20 25 51.9 +1.2
B16A M & M Farms, S 97.35 41 ⇓P P 20 25 50.8 +0.1
baz=98
YKA Yellowknife Ar 100.88 27 P Pdif 20 26 06.1 -0.4
comp=Z,3.4nm,0.7s,baz=254,slow=4.6,SNR=52
YKA Yellowknife Ar 100.88 27 P Pdif 20 26 06.1 -0.4
MKAR Makanchi Array 101.88 315 P Pdif 20 26 10.3 -0.6
comp=Z,0.5nm,0.8s,baz=108,slow=3.2,SNR=4.0
KURK Kurchatov 105.18 319 *e*P PKiKP 20 30 38.1 -1.0
CPUP Villa Florida 115.87 134 PKP PKPdf 20 30 57.8 -2.4
comp=Z,0.5nm,0.4s,baz=153,slow=2.3,SNR=4.7
ARU Arti 117.40 324 *i* PKIKP PKPdf 20 31 00.4 -1.6
ARU 20 37 37.4
ARCES ARCESS Array B 125.28 345 PKP PKPdf 20 31 15.8 -1.0
comp=Z,4.3nm,0.7s,baz=84,slow=3.0,SNR=12
ARCES ARCESS Array B 125.28 345 PKP PKPdf 20 31 15.8 -1.0
GNI Garni 128.47 306 *i* PKIKP PKPdf 20 31 23.6 -0.2
BDFB Brasilia 129.43 131 PKP PKPdf 20 31 24.6 -1.8
comp=Z,4.3nm,0.8s,baz=153,slow=12,SNR=9.0
OBN Obninsk 129.67 327 ⇓*i* PKIKP PKPdf 20 31 24.9 -0.7
OBN pmax pmax
comp=Z,17nm,1.3s
ASF Jabal al Asfar 135.58 296 PKP PKPdf 20 31 38.2 +0.7
comp=Z,1.8nm,0.7s,baz=52,slow=2.9,SNR=3.9
ASF SKPbc SKPbc 20 34 56.3 +0.8
comp=Z,1.3nm,0.6s,baz=40,slow=2.7,SNR=4.1
NB2 NORSAR Subarra 135.65 345 PKPdf PKPdf 20 31 36.7 0.0
comp=Z,4.8nm,1.4s,baz=31,slow=1.9
NOA NORSAR Array B 135.65 345 PKP PKPdf 20 31 36.9 +0.2
comp=Z,0.8nm,0.8s,baz=20,slow=1.4,SNR=4.9
NOA SKPbc SKPbc 20 34 55.1 +0.4
comp=Z,0.7nm,0.7s,baz=32,slow=2.6,SNR=3.6
AKASG Malin Array Be 135.66 324 PKP PKPdf 20 31 35.6 -1.4
comp=Z,0.9nm,0.5s,baz=62,slow=2.0,SNR=8.8
AKASG SKPbc SKPbc 20 34 54.0 -1.1
comp=Z,5.6nm,0.8s,baz=44,slow=4.0,SNR=20
MMAI Mount Meron Ar 136.75 298 PKP PKPdf 20 31 40.3 +0.7
comp=Z,2.9nm,0.8s,baz=60,slow=3.5,SNR=5.0
MMAI SKPbc SKPbc 20 34 59.7 +0.6
comp=Z,2.4nm,0.7s,baz=90,slow=0.8,SNR=4.0
BRTR Keskin Array B 136.93 308 PKP PKPdf 20 31 40.6 +0.9
comp=Z,0.8nm,0.8s,baz=152,slow=4.3,SNR=3.5
BRTR SKPbc SKPbc 20 34 59.7 +0.4
comp=Z,1.8nm,1.1s,baz=170,slow=2.3,SNR=4.3
LVV L'vov 138.95 326 *e*PKIKP PKPdf 20 31 42.6 -0.5
MLR Muntele Rosu 140.12 319 PKP PKPdf 20 31 45.0 -0.4
comp=Z,3.6nm,0.9s,baz=263,slow=20,SNR=3.8
STHS Stebnicka Huta 140.64 327 *e*PKP PKPdf 20 31 45.3 -0.9
STHS *e* 20 35 09.9
CRVS Cervenica-Dubn 140.84 326 *e*PKP PKPdf 20 31 42.1 -4.5
CRVS *e* 20 31 47.1
KECS Kecovo 141.61 326 *e*PKP PKPdf 20 31 43.6 -4.4
KECS *e* 20 31 49.1
OKC Ostrava-Krasne 141.91 329 *e*SKP SKPbc 20 35 12.3 -0.3
DPC Dobruska-Polom 142.41 331 *e*PKP PKPdf 20 31 44.9 -4.4
DPC *e*SKP 20 35 13.4
UPC Upice 142.44 332 *e*SKP SKPbc 20 35 13.8 0.0
VYHS Vyhne 142.46 327 *e*PKP PKPdf 20 31 47.5 -2.0
VYHS *e* 20 31 56.7
VYHS *e* 20 35 14.1
PVCC Panska Ves 143.05 333 *e*SKP SKPbc 20 35 15.4 +0.1
BRG Berggiesshubel 143.06 334 *e*PKIKP PKPdf 20 31 46.7 -3.8
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG Berggiesshubel 143.06 334 *e*PKPbc PKPdf 20 31 46.7 -3.8
BRG *e*SKPdf SKPdf 20 35 15.2 +3.6
BRG Berggiesshubel 143.06 334 *e*P PKPdf 20 31 46.7 -3.8
comp=Z,7.0nm,1.1s
BRG *e* 20 31 50.2
comp=Z,12nm,1.1s
BRG *i* 20 35 15.7
comp=Z,14nm,1.1s
CLL Collm 143.11 335 *e*PKIKP PKPdf 20 31 47.0 -3.5
CLL *e* 20 32 20.0
CLL Collm 143.11 335 *e*PKPbc PKPdf 20 31 46.1 -4.4
CLL *e*SKPdf SKPdf 20 35 15.2 +3.6
CLL Collm 143.11 335 *e*PKPpre 20 31 47.0
CLL *e*PKPdf PKPdf 20 31 50.0 -0.5
CLL *ex* x 20 32 20.0
CLL *i* SKPbc SKPbc 20 35 14.8 -0.7
comp=Z,12nm,1.2s
FBE Freiberg 143.26 334 *e*PKPbc PKPdf 20 31 48.0 -2.8
FBE *e*SKPdf SKPdf 20 35 15.7 +3.8
PRU Pruhonice 143.46 332 *e*SKP SKPbc 20 35 16.4 0.0
TREC Trest 143.54 331 *e*PKP PKPdf 20 31 47.6 -3.8
CLZ Clausthal 143.68 338 *e*PKPbc PKPdf 20 31 49.4 -2.1
CLZ *e*SKPdf SKPdf 20 35 16.4 +3.8
EKA Eskdalemuir Ar 143.73 353 PKP PKPdf 20 31 49.6 -1.9
comp=Z,2.3nm,0.5s,baz=359,slow=2.8,SNR=13
TANN Tannenbergstha 144.02 335 *e*PKPbc PKPdf 20 31 50.0 -2.2
TANN *ep*PKPbc 20 32 25.6
TANN *e*SKPdf SKPdf 20 35 17.4 +4.2
WERD Werda 144.06 335 *e*PKPbc PKPdf 20 31 50.1 -2.1
WERD *e*SKPdf SKPdf 20 35 17.4 +4.2
GUNZ Gunzen 144.11 335 *e*PKPbc PKPdf 20 31 50.3 -2.0
GUNZ *e*SKPdf SKPdf 20 35 17.7 +4.4
WERN Wernitzgruen 144.15 334 *e*PKPbc PKPdf 20 31 50.6 -1.8
WERN *e*SKPdf SKPdf 20 35 17.9 +4.5
IBBN Ibbenburen 144.16 341 *e*PKPbc PKPdf 20 31 50.1 -2.3
IBBN *e*SKPdf SKPdf 20 35 18.0 +4.7
NKC Novy Kostel 144.16 334 *e*PKP PKPdf 20 31 50.4 -2.0
MOX Moxa 144.18 336 *e*PKP PKPdf 20 31 50.1 -2.3
comp=Z,34nm,1.3s
MOX Moxa 144.18 336 *e*PKIKP PKPdf 20 31 50.1 -2.3
MOX pmax pmax
comp=Z,34nm,1.3s
MOX Moxa 144.18 336 *e*PKPbc PKPdf 20 31 50.1 -2.3
MOX *ep*PKPbc 20 32 27.7
CONA Conrad Observa 144.32 329⇑*i* PKPab PKPdf 20 31 50.6 -2.2
comp=Z,29nm,1.3s
CSNA Conrad Observa 144.32 329⇑*i* PKPab PKPdf 20 31 50.7 -2.1
comp=Z,26nm,1.3s
MANZ Manzenberg 144.49 334 *e*PKPbc PKPdf 20 31 51.5 -1.5
MANZ *e*SKPdf SKPdf 20 35 18.4 +4.4
KHC Kasperske Hory 144.52 332 *e*PKP PKPdf 20 31 51.8 -1.3
KHC *e*SKP 20 35 17.5
ROTZ Rotzenmuhle 144.62 334 *e*PKPbc PKPdf 20 31 52.2 -1.0
ROTZ *ep*PKPbc 20 32 29.7
UBBA Unterbreizbach 144.65 337 *e*PKPbc PKPdf 20 31 51.5 -1.8
UBBA *e*SKPdf SKPdf 20 35 17.9 +3.7
GEC2 GERESS Array S 144.68 332 *e*PKPbc PKPdf 20 31 52.0 -1.4
GERES GERESS Array B 144.68 332 PKP PKPdf 20 31 51.7 -1.7
comp=Z,11nm,0.9s,baz=46,slow=3.9,SNR=44
GERES pPKP pPKPdf 20 32 29.2 -2.6
comp=Z,0.8nm,0.8s,baz=26,slow=2.5,SNR=2.0
GERES SKPbc SKPbc 20 35 18.8 -0.4
comp=Z,2.2nm,0.9s,baz=90,slow=1.3,SNR=6.8
RCBR Riachuelo 144.75 133 *e*PKPbc PKPdf 20 31 51.4 -3.2
WET Wettzell 144.81 333 *e*PKPbc PKPdf 20 31 52.5 -1.1
IDI Anoyia 144.84 304 PKP PKPdf 20 31 52.4 -1.7
comp=Z,7.4nm,0.6s,baz=28,slow=11,SNR=11
ARSA Arzberg 144.95 328⇑*i* PKPdf PKPdf 20 31 53.3 -0.6
comp=Z,29nm,1.2s,SNR=9.1
BUG Bochum--Univer 145.06 340 *e*PKPbc PKPbc 20 31 52.9 -0.8
GRF Grafenberg Arr 145.08 335 *e*PKPbc PKPbc 20 31 53.9 +0.1
GRF *ep*PKPbc 20 32 30.4
KOGS Kog 145.12 327 *i* PKPbc PKPbc 20 31 53.4 -0.6
MOA Molln 145.14 330⇑*i* PKPdf PKPdf 20 31 53.9 -0.3
comp=Z,50nm,1.0s,SNR=11
GROS Grobnik 145.50 327 *e*PKPbc PKPbc 20 31 54.4 -0.9
SOKA Soboth 145.59 328⇑*i* PKPab PKPab 20 31 54.9 -1.0
comp=Z,25nm,1.3s
RJOB Jochberg 145.90 331 *e*PKPbc PKPbc 20 31 55.8 -0.6
BEBN Eben Emael 146.12 341 PKPbc PKPbc 20 31 57.7 +0.8
MEM Membach 146.18 341 PKPbc PKPbc 20 31 56.4 -0.8
MEM APKP 20 32 34.3
FUR Furstenfeldbru 146.25 333 *e*PKPbc PKPbc 20 31 57.1 -0.3
LJU Ljubljana 146.28 328 *i* PKPbc PKPbc 20 31 57.2 -0.4
VOJS Vojsko 146.61 328 *i* PKPbc PKPbc 20 31 57.2 -1.4
STU Stuttgart 146.62 336 *e*PKPbc PKPbc 20 31 58.1 -0.4
WTTA Wattenberg 146.78 332⇑*i* PKPbc PKPbc 20 31 58.5 -0.4
comp=Z,23nm,1.1s
MOTA Moosalm 146.95 332⇑*i* PKPbc PKPbc 20 31 58.7 -0.8
comp=Z,22nm,0.8s
WLF Walferdange 146.96 340 PKPbc PKPbc 20 31 59.5 +0.1
WLF APKP 20 32 37.6
WLF Walferdange 146.96 340 *e*PKPbc PKPbc 20 31 59.4 0.0
GIVF Givet 146.99 341⇑*i* PKP1 PKPbc 20 31 58.5 -1.0
comp=Z,62nm,1.1s
DOU Dourbes 147.07 342 PKPbc PKPbc 20 31 58.8 -0.9
DOU APKPbc 20 32 38.2
BAIF Baives 147.21 342⇑*i* PKP1 PKPbc 20 31 59.1 -1.0
comp=Z,54nm,1.1s
BFO Black Forest 147.31 336 *e*PKPbc PKPbc 20 31 59.5 -0.9
BFO *ep*PKPbc pPKPbc 20 32 37.0 -1.5
FETA Feichten 147.37 332⇑*i* PKPbc PKPbc 20 32 00.3 -0.3
comp=Z,34nm,1.0s,SNR=11
DAVA Damuels 147.53 333⇑*i* PKPbc PKPbc 20 32 00.5 -0.5
comp=Z,32nm,1.1s
CDF Champ du Feu 147.64 337⇑*i* PKP1 PKPbc 20 32 00.2 -1.1
comp=Z,57nm,1.0s
DAVOX Davos/Dischmat 147.92 333 PKPbc PKPbc 20 32 01.9 -0.2
comp=Z,29nm,0.8s,baz=52,slow=1.4,SNR=30
HINF Hinteralfeld 148.29 337 *e*PKP1 PKPbc 20 32 01.8 -1.2
MEZF Maizieres J'vi 148.33 340⇑*i* PKP1 PKPbc 20 32 02.4 -0.7
comp=Z,100nm,1.2s
CABF La Chapelle 149.59 337⇑*i* PKP1 PKPbc 20 32 05.8 -0.5
comp=Z,77nm,1.1s
FLN La Foliniere 149.61 346 *e*PKP1 PKPbc 20 32 04.9 -1.4
comp=Z,121nm,1.3s
LDF La Druitiere 149.69 346 *e*PKP1 PKPbc 20 32 05.0 -1.5
comp=Z,41nm,1.1s
LOR Lormes 149.80 340⇑*i* PKP1 PKPbc 20 32 05.8 -1.0
comp=Z,45nm,1.0s
GRR Gorron 150.05 347 *e*PKP1 PKPbc 20 32 06.2 -1.2
SSF Saint Saulge 150.09 340⇑*i* PKP1 PKPbc 20 32 06.4 -1.1
comp=Z,57nm,1.1s
HYF Humbligny 150.18 341 *e*PKP1 PKPbc 20 32 07.0 -0.7
LPL La Plagne 150.25 335⇑*i* PKP1 PKPbc 20 32 07.5 -0.5
comp=Z,30nm,0.9s
LPG La Plagne 150.25 335⇑*i* PKP1 PKPbc 20 32 07.6 -0.4
comp=Z,37nm,1.0s
SMF Signal de Mont 150.35 339⇑*i* PKP1 PKPbc 20 32 06.8 -1.4
comp=Z,44nm,1.2s
AVF Avril sur Loir 150.38 340 *e*PKP1 PKPbc 20 32 06.7 -1.5
comp=Z,8.7nm,0.9s
SGMF Saint Gilles 150.51 349 *e*PKP1 PKPbc 20 32 06.9 -1.6
comp=Z,90nm,1.2s
ROSF Rostrenen 150.56 350 *e*PKP1 PKPbc 20 32 07.1 -1.5
comp=Z,64nm,1.2s
BGF Bois d'Agland 150.75 341 *e*PKP1 PKPbc 20 32 07.9 -1.2
comp=Z,36nm,1.0s
MBDF Montbardon 150.87 334 *e*PKP1 PKPbc 20 32 08.3 -1.2
comp=Z,26nm,1.0s
QUIF Quistinic 150.95 349 *e*PKP1 PKPbc 20 32 07.7 -1.8
ORIF Oris-en-Rattie 151.08 335⇑*i* PKP1 PKPbc 20 32 09.0 -0.9
comp=Z,33nm,0.8s
TCF Toulx Ste Croi 151.19 341⇑*i* PKP1 PKPbc 20 32 08.8 -1.3
comp=Z,36nm,1.1s
SBF Sospel 151.28 332 *e*PKP1 PKPbc 20 32 09.0 -1.4
comp=Z,70nm,1.1s
PGF Pioggiola 151.55 328 *e*PKP1 PKPbc 20 32 09.9 -1.2
comp=Z,184nm,1.1s
MFF Saint Martin d 151.56 344 *e*PKP1 PKPbc 20 32 09.6 -1.4
comp=Z,23nm,1.0s
VIVF Saint-Julien-l 151.60 337 *e*PKP1 PKPbc 20 32 10.0 -1.1
comp=Z,46nm,1.1s
FRF La Foret Royal 151.87 332 *e*PKP1 PKPbc 20 32 10.4 -1.4
SMRF Simiane la Rot 151.98 334 *e*PKP1 PKPbc 20 32 11.3 -0.7
comp=Z,33nm,0.9s
LMR La Mourre 152.11 332 *e*PKP1 PKPbc 20 32 10.9 -1.4
comp=Z,71nm,1.1s
RJF Les Rejaudoux 152.28 341 *e*PKP1 PKPbc 20 32 11.3 -1.4
comp=Z,16nm,1.0s
CAF Calviac 152.45 340 *e*PKP1 PKPbc 20 32 11.9 -1.2
LASF Ste Croix 152.57 337 *e*PKP1 PKPbc 20 32 12.4 -1.0
comp=Z,14nm,0.8s
LFF La Frestale 152.85 342 *e*PKP1 PKPbc 20 32 12.8 -1.1
comp=Z,13nm,0.8s
LIC Lamto 165.70 204 *e*PKP2 PKPab 20 33 22.1 +0.2
comp=Z,50nm,1.4s
TORD Torodi Ar. Bea 166.47 244 PKP PKPdf 20 32 21.0 -1.9
comp=Z,1.6nm,0.9s,baz=114,slow=1.4,SNR=6.4
TORD PKPab PKPab 20 33 24.8 -0.7
comp=Z,1.2nm,1.0s,baz=116,slow=3.4,SNR=3.2
TORD Torodi Ar. Bea 166.47 244 PKP PKPdf 20 32 21.0 -1.9
TORD PKPab PKPab 20 33 24.8 -0.7

*IDC **17** 21:04:32.9±2.1, 22.15N×92.38E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=74.9km s-min=23.5km az=65.0*
*ISCJB **17** 21:04:38.4±3.2, 22.3N±0.2×92.9E±0.4, h44km±23km, mb3.3/4, Error ellipse: s-maj=77.5km s-min=12.9km az=150.5*
ISC 17 21:04:39.8±3.2**, 22.3N**±0.2×**92.8E**±0.5**, h38**km±23km**, n6, σ1.56**/7**, mb3.3**/4**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.40**	**346**	*e*PN	**Pn**	**21 05 32.0**	**+1.6**
SHL				*e*SN	**Sn**	**21 06 09.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**6.90**	**122**	Pn	**Pn**	**21 06 17.6**	**-0.8**
	0.1nm,0.3s,baz=295,slow=14,SNR=14						
MKAR	**Makanchi Array**	**25.92**	**343**	P	**P**	**21 10 06.2**	**-2.1**
	0.4nm,0.6s,mb3.1,baz=153,slow=9.4,SNR=5.0						
SONM	**Songino Array**	**27.77**	**20**	P	**P**	**21 10 25.8**	**+0.9**
	0.2nm,0.5s,mb3.0,baz=205,slow=6.4,SNR=2.4						
WRA	**Warramunga Arr**	**58.36**	**133**	P	**P**	**21 14 31.7**	**+0.2**
	0.3nm,0.6s,mb3.5,baz=321,slow=7.6,SNR=8.8						
ASAR	**Alice Springs**	**60.68**	**136**	P	**P**	**21 14 48.1**	**+0.6**
	0.4nm,0.6s,mb3.7,baz=318,slow=7.6,SNR=5.6						

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*CSEM **17** 21:42:57.6±0.1, 34.24N×26.51E, h30km, MD3.8, Error ellipse: s-maj=6.3km s-min=2.8km az=68.0*
*ATH **17** 21:42:57.2, 34.34N×26.53E, h28km, MD3.8/3*
*ISCJB **17** 21:42:58.6±0.6, 34.29N±0.04×26.59E±0.09, h33km, Error ellipse: s-maj=10.7km s-min=5.7km az=160.5*
*HLW **17** 21:43:05.4, 33.99N×26.92E, h33km, Mb3.1*
ISC 17 21:43:00.4±0.6**, 34.35N**±0.04×**26.57E**±0.08**, h35**km**, n13, σ1.04**/15**, 3C-5D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**1.21**	**319**	*e*PN	**Pn**	**21 43 19.5**	**-1.2**
NPS				*e*SN	**Sn**	**21 43 35.3**	**-0.6**
KARP	**Karpathos**	**1.29**	**22**	*e*PN	**Pn**	**21 43 21.6**	**-0.3**
KARP				*e*SN	**Sn**	**21 43 39.7**	**+1.8**
ARG	**Arkhangelos**	**2.25**	**34**	*e*PN	**Pn**	**21 43 35.1**	**0.0**
SLUM		**3.07**	**202**	⇓P	**Pn**	**21 43 48.6**	**+2.1**
HMAT	**Matruh**	**3.28**	**172**	P	**Pn**	**21 43 49.1**	**-0.2**
SWA2		**5.18**	**191**	⇑P	**Pn**	**21 44 17.4**	**+1.9**
SWA2				S	**Sn**	**21 45 09.1**	**-4.9**
AWBH		**6.33**	**161**	⇓P	**Pn**	**21 44 30.5**	**-0.8**
HSAF	**As Saff**	**6.34**	**137**	⇓P	**Pn**	**21 44 30.7**	**-0.6**
GLL	**Jalalah**	**6.46**	**136**	⇑P	**Pn**	**21 44 32.0**	**-0.9**
AMAG	**Maghara**	**6.71**	**122**	⇓P	**Pn**	**21 44 36.4**	**-0.1**
RSH		**6.91**	**117**	P	**Pn**	**21 44 38.5**	**-0.7**
SUZ		**6.96**	**129**	⇑P	**Pn**	**21 44 40.4**	**+0.6**
HRSH	**Kfar Ka'horesh**	**7.45**	**100**	⇓P	Px	21 44 38.5	

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*ISCJB **17** 21:47:54.2±0.4, 34.78S±0.07×54.41E±0.10, h10km, mb3.9/10, MS3.3/2, Error ellipse: s-maj=11.3km s-min=10.1km az=3.4*
*IDC **17** 21:47:54.9±0.9, 34.85S×54.39E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/23, mbtmp3.9/8, ML3.8/1, MS3.3/2, Ms1 3.4/2, ms1mx2.9/27, Error ellipse: s-maj=33.7km s-min=23.5km az=48.0*
*NEIC **17** 21:47:55.9±0.3, 34.78S×54.37E, h10km, mb4.0/3, Error ellipse: s-maj=11.8km s-min=8.8km az=218.0*
ISC 17 21:47:56.1±0.4**, 34.76S**±0.07×**54.39E**±0.10**, h10**km**, n35, σ0.87**/30**, mb3.9**/10**, MS3.3**/2**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.35**	**336**	P	**Pn**	**21 51 58.2**	**-0.3**
	0.4nm,0.3s,baz=141,slow=13,SNR=4.3						
BOSA	**Boshof**	**25.49**	**276**	*e*P	**P**	**21 53 24.0**	**-0.6**
LBTB	**Lobatse**	**26.71**	**284**	LR	LR	22 02 42.0	
	comp=Z,36nm,21.1s,MS2.9,baz=338,slow=33						
MAW	**Mawson**	**33.25**	**174**	P	**P**	**21 54 32.7**	**-0.4**
TSUM	**Tsumeb**	**36.05**	**286**	*e*P	**P**	**21 54 57.2**	**-0.6**
	1.2nm,0.7s,mb3.9						
SNAA	**Sanae**	**47.20**	**201**	*e*	**P**	**21 56 27.1**	**-1.4**
SNAA				*e*		21 56 33.4	
SNAA				*e*		21 56 38.0	
SNAA				*e*		21 56 43.9	
VNA2	**Neumayer--Watz**	**48.39**	**203**	*e*	**P**	**21 56 38.8**	**+1.0**
	baz=71,slow=3.1						
VNA2				*e*		21 56 44.1	
VNA2				*e*		21 56 47.7	
VNA2				*e*		21 56 54.4	
VNA1	**Neumayer--Stat**	**48.61**	**203**	*e*	**P**	**21 56 40.2**	**+0.8**
VNA3	**Neumayer Olymp**	**49.19**	**203**	*e*	**P**	**21 56 44.4**	**+0.5**
VNA3				*e*		21 56 49.6	
VNA3				*e*		21 56 53.4	
VNA3				*e*		21 56 59.6	
QSPA	**South Pole Qui**	**55.42**	**180**	P	**P**	**21 57 29.9**	**-0.1**
	0.6nm,0.3s,mb4.0,baz=271,slow=3.7,SNR=6.3						
MBWA	**Marble Bar**	**58.38**	**95**	P	**P**	**21 57 51.0**	**-0.9**
KULM	**Kulim**	**59.01**	**57**	*e*P	**P**	**21 57 55.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**64.72**	**95**	*e*P	**P**	**21 58 35.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**67.77**	**46**	P	**P**	**21 58 55.0**	**+0.9**
	1.1nm,0.8s,mb3.9,baz=240,slow=6.6,SNR=8.0						
CMAR				LR	LR	22 21 43.1	
	comp=Z,37nm,20.1s,MS3.6,baz=53,slow=30						
ASAR	**Alice Springs**	**68.66**	**105**	P	**P**	**21 59 00.7**	**+0.8**
	0.6nm,0.5s,mb3.8,baz=229,slow=5.9,SNR=11						
TORD	**Torodi Ar. Bea**	**69.04**	**304**	P	**P**	**21 59 03.3**	**+1.1**
	1.2nm,0.8s,mb3.9,baz=126,slow=5.4,SNR=6.9						
KBL	**Kabul**	**70.29**	**13**	P	**P**	**21 59 10.7**	**+1.2**
WRA	**Warramunga Arr**	**70.88**	**101**	P	**P**	**21 59 13.8**	**+0.2**
	2.6nm,0.9s,mb4.2,baz=239,slow=5.6,SNR=19						
WB2	**Warramunga Arr**	**70.88**	**101**	*e*P	**P**	**21 59 12.4**	**-1.2**
WRAB	**Tennant Creek**	**70.89**	**101**	*e*P	**P**	**21 59 14.4**	**+0.8**
	3.5nm,0.9s,mb4.3						
LSA	**Lhasa**	**72.90**	**33**	P	**P**	**21 59 26.1**	**+0.8**
DAV	**Davao City (W)**	**78.81**	**73**	*e*P	**P**	**21 59 58.5**	**-1.0**
KIV	**Kislovodsk**	**79.07**	**351**	P	**P**	**21 59 58.1**	**-2.1**
AAK	**Ala-Archa**	**79.19**	**15**	P	**P**	**22 00 01.1**	**+0.2**
CTAO	**Charters Tower**	**80.29**	**108**	P	**P**	**22 00 07.6**	**0.0**
ENH	**Enshi**	**82.94**	**46**	*e*P	**P**	**22 00 20.3**	**-0.9**
	0.6nm,0.6s,mb3.8						
MKAR	**Makanchi Array**	**84.98**	**19**	P	**P**	**22 00 31.5**	**+0.3**
	0.6nm,0.8s,mb3.8,baz=212,slow=5.1,SNR=3.1						
KURK	**Kurchatov**	**87.75**	**15**	P	**P**	**22 00 44.5**	**-0.2**
AKASG	**Malin Array Be**	**87.95**	**344**	P	**P**	**22 00 47.6**	**+2.0**
	0.2nm,0.3s,mb3.8,baz=148,slow=4.1,SNR=2.6						
OBN	**Obninsk**	**90.81**	**350**	P	**P**	**22 00 58.6**	**-0.4**
TLY	**Talaya**	**96.29**	**28**	*e*P	**P**	**22 01 23.4**	**-0.8**
YSS	**Yuzh-Sakhalins**	**113.42**	**48**	PKiKP	PKiKP	22 06 33.1	-0.8
INK	**Inuvik**	**146.11**	**5**	PKPbc	PKPbc	22 07 35.8	+0.5
	1.2nm,0.9s,baz=348,slow=4.3,SNR=2.7						
WVT	**Waverly**	**149.32**	**284**	*e*PKPdf	PKPdf	22 07 41.1	+0.4
WVT				*e*PKPab	PKPab	22 07 50.1	+0.3
YKA	**Yellowknife Ar**	**151.40**	**349**	PKPbc	PKPbc	22 07 48.6	-0.6
	0.4nm,0.9s,baz=14,slow=2.2,SNR=4.9						

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*SSS **17** 22:23:43.7, 14.59N×90.03W, h283km, MD4.9*
*NEIC **17** 22:23:48.7±0.7, 14.34N×90.01W, h256km±7km, mb4.6/19, Error ellipse: s-maj=10.1km s-min=7.2km az=217.0*
*GCG **17** 22:23:48.6, 14.37N×90.00W, h258km, MD4.6*
*BJI **17** 22:23:48.7, 14.30N×90.00W, h255km, mB5.0*
*ISCJB **17** 22:23:48.2±0.3, 14.32N±0.04×90.00W±0.04, h271km±3km, mb4.1/25, Error ellipse: s-maj=9.0km s-min=3.7km az=42.9*
*CASC **17** 22:23:49.5±1.8, 14.08N×89.94W, h253km±6km, MD4.5, ML3.7, mb4.6(NEIC)*
*IDC **17** 22:23:49.8±0.8, 14.44N×89.71W, h269km±7km, mb3.7/14, mb1 3.8/16, mb1mx3.7/24, mbtmp3.7/16, Error ellipse: s-maj=21.2km s-min=9.0km az=58.0*
*INET **17** 22:23:52.8, 12.60N×90.51W, h0km, ML4.0*
ISC 17 22:23:49.0±0.3**, 14.30N**±0.04×**90.00W**±0.04**, h266**km±3km**, n126, σ1.17**/113**, mb4.1**/25**, 21C-14D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBG	**Las Nubes**	**0.44**	**310**	⇑*e*P	**Pn**	**22 24 23.6**	**+0.1**
IXG	**Ixpaco**	**0.46**	**255**	⇓*e*P	**Pn**	**22 24 22.8**	**-0.8**
RTR	**El Retiro**	**0.53**	**139**	⇑*e*P	x	22 24 22.8	
SNJE	**San Jose**	**0.57**	**138**	⇑*e*P	x	22 24 22.9	
SBLS	**San Blas**	**0.58**	**141**	⇓*e*P	x	22 24 23.1	
SBLS				*e*S	x	22 24 49.0	
PCG	**Pacaya**	**0.60**	**279**	⇓*e*P	**Pn**	**22 24 24.1**	**+0.1**
PCG				*e*S	**S**	**22 24 52.0**	**+0.5**
MRL	**Marmol**	**0.82**	**21**	⇓*e*P	**Pn**	**22 24 24.6**	**-0.3**
MRL				*e*S	**S**	**22 24 54.2**	**+1.1**
FUG	**Fuego 3**	**0.83**	**280**	⇑*i*P	**Pn**	**22 24 24.6**	**-0.3**
BOQS	**Boqueron**	**0.89**	**129**	⇑*e*P	x	22 24 24.1	
LBRS	**Las Brisas**	**1.08**	**121**	*e*P	x	22 24 24.8	
LBRS				*e*S	x	22 24 52.6	
LFRS	**El Faro**	**1.13**	**126**	⇓*i*P	x	22 24 25.3	
SNVI	**San Vicente**	**1.32**	**121**	⇓*e*P	x	22 24 26.5	
SNVI				*e*S	x	22 24 55.4	
JAT	**Jato**	**1.59**	**271**	⇑*e*P	**Pn**	**22 24 29.1**	**-0.4**
CAHU	**Cacacuatique**	**1.81**	**107**	⇓*e*P	x	22 24 30.2	
VSM	**San Miguel**	**1.88**	**117**	⇑*e*P	x	22 24 31.1	
BLLM	**Bellamira**	**1.91**	**116**	⇑*e*P	x	22 24 31.1	
CNCH	**Conchagua**	**2.33**	**116**	⇓*e*P	x	22 24 34.9	
TGUH	**Tegucigalpa,Un**	**2.65**	**95**	⇓*i*P	**Pn**	**22 24 38.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**2.65**	**95**	*e*Pn	**Pn**	**22 24 38.1**	**-0.9**
TGUH				*e*S	**S**	**22 25 13.8**	**-4.6**
CCIG	**Comitan**	**2.85**	**314**	*i* P	**Pn**	**22 24 40.6**	**-0.3**
CRIN	**San Cristobal**	**3.28**	**119**	⇑*e*P	**Pn**	**22 24 45.3**	**-0.2**
TEL3	**Telica 3**	**3.52**	**119**	*e*P	**Pn**	**22 24 47.9**	**-0.2**
CNGN	**Cerro Negro**	**3.67**	**119**	⇑*e*P	**Pn**	**22 24 49.1**	**-0.7**
CNGN				*e*S	**S**	**22 25 35.4**	**-2.9**
MIRN	**Miramar**	**3.69**	**120**	⇓*e*P	**Pn**	**22 24 49.8**	**-0.3**
MOMN	**Momotombo**	**3.85**	**119**	⇑*e*P	**Pn**	**22 24 52.4**	**+0.5**
COPN	**Copaltepe**	**3.93**	**122**	⇓*e*P	**Pn**	**22 24 52.4**	**-0.3**
COPN				AML	AML	22 25 44.3	
	comp=Z,900nm,0.3s						
CSAN		**4.07**	**121**	⇑*e*P	**Pn**	**22 24 54.5**	**+0.2**
APYN	**Apoyeque**	**4.10**	**120**	⇑*e*P	**Pn**	**22 24 54.6**	**-0.1**
XAVN	**Gruta Xavier**	**4.17**	**120**	*e*P	**Pn**	**22 24 55.7**	**+0.2**
HUEN		**4.20**	**117**	*e*P	**Pn**	**22 24 55.9**	**0.0**
MGAN	**Managua**	**4.23**	**120**	⇑*e*P	**Pn**	**22 24 56.3**	**0.0**
MGAN				*e*S	**S**	**22 25 46.6**	**-3.3**
MGAN				AML	AML	22 25 50.3	
	comp=N,51nm,0.4s						
CRUN	**El Crucero**	**4.27**	**122**	*e*P	**Pn**	**22 24 57.9**	**+1.1**
TICN	**Ticuantepe**	**4.30**	**121**	⇑*e*P	**Pn**	**22 24 57.8**	**+0.7**
APON	**Apoyo**	**4.50**	**121**	*e*P	**Pn**	**22 25 00.2**	**+0.8**
SSN	**San Juan del S**	**5.02**	**126**	⇑*e*P	**Pn**	**22 25 06.0**	**+0.4**
SSN				*e*S	**S**	**22 26 04.7**	**-2.2**
CONN	**Concepcion**	**5.05**	**122**	⇑*e*P	**Pn**	**22 25 06.6**	**+0.6**
CMIG	**Matias Romero**	**5.46**	**301**	P	**Pn**	**22 25 09.1**	**-1.8**
	comp=N,14nm,0.3s,baz=155,slow=10,SNR=66						
CMIG				S	**S**	**22 26 07.9**	**-8.6**
	comp=N,21nm,0.3s,baz=14,slow=20,SNR=7.2						
CMIG	**Matias Romero**	**5.46**	**301**	*i* P	**Pn**	**22 25 08.4**	**-2.5**
CMIG				*i* S	**S**	**22 26 08.8**	**-7.7**
LIM1	**Limonal**	**5.86**	**127**	*e*S	**S**	**22 26 25.5**	**+0.2**
VCR	**Vista de Mar**	**5.95**	**134**	*e*P	**Pn**	**22 25 17.9**	**+0.9**
VCR				*e*S	**S**	**22 26 26.5**	**-0.9**
HUIG	**Huatulco**	**6.08**	**285**	*i* P	**Pn**	**22 25 16.2**	**-2.3**
HUIG				*i* S	**S**	**22 26 20.4**	**-10**
TEIG	**Tepich**	**6.12**	**15**	*e*Pn	**Pn**	**22 25 16.5**	**-2.5**
TEIG				*e*S	**S**	**22 26 20.9**	**-10**
JCR	**Jicaral**	**6.51**	**132**	⇓*e*P	**Pn**	**22 25 24.7**	**+0.9**
JCR				*e*S	**S**	**22 26 36.4**	**-3.6**
CGA2	**Cerro Gallo 2**	**6.88**	**128**	*e*P	**Pn**	**22 25 29.5**	**+1.0**
PRS1	**Puriscal**	**7.02**	**127**	⇑*e*P	**Pn**	**22 25 31.9**	**+1.6**
VHO	**Vista Hermosa**	**7.05**	**294**	*i* P	**Pn**	**22 25 30.5**	**0.0**
VHO				*i* S	**S**	**22 26 41.3**	**-11**
LAJ	**Bijagual**	**7.24**	**127**	*e*P	**Pn**	**22 25 30.5**	**-2.5**
QCR	**Quepos**	**7.49**	**130**	*e*P	**Pn**	**22 25 38.6**	**+2.6**
URSC	**Urasca**	**7.53**	**125**	⇑*e*P	**Pn**	**22 25 37.7**	**+1.2**
PNIG	**Pinotepa**	**8.11**	**286**	*i* P	**Pn**	**22 25 42.3**	**-1.5**
PNIG				*i* S	**S**	**22 27 08.4**	**-8.2**
BAR1		**8.25**	**127**	⇑*e*P	**Pn**	**22 25 46.4**	**+0.8**
ACR	**Cerro Adams**	**8.73**	**129**	⇑*e*P	**Pn**	**22 25 53.2**	**+1.5**
MGV	**Manicaragua**	**12.28**	**49**	*e*P	**Pn**	**22 26 36.0**	**+0.3**
MTDJ	**Mount Denham**	**12.59**	**70**	*e*P	**Pn**	**22 26 42.4**	**+2.9**
CCCC	**Cccc**	**13.52**	**58**	*e*P	**Pn**	**22 26 57.6**	**+6.8**
LMGC	**Las Mercedes**	**13.67**	**63**	*e*P	**Pn**	**22 26 54.0**	**+1.3**
PAYG	**Puerto Ayora**	**14.88**	**181**	P	**Pn**	**22 27 11.2**	**+3.8**
GTBY	**Guantanamo Bay**	**15.29**	**66**	*e*P	**Pn**	**22 27 12.1**	**-0.1**
DWPF	**Disney**	**15.88**	**29**	*e*P	**Pn**	**22 27 18.3**	**-0.8**
VBMS	**Vicksburg**	**17.84**	**359**	*e*P	**P**	**22 27 39.0**	**0.0**
OTAV	**Otavalo**	**18.05**	**140**	*e*P	**P**	**22 27 44.6**	**+3.3**
	comp=N,10nm,0.8s						
JCT	**Junction City**	**18.46**	**332**	*e*P	**P**	**22 27 46.7**	**+1.1**
	comp=N,9.6nm,1.0s						
SDDR	**Presa de Saban**	**18.52**	**73**	*e*P	**P**	**22 27 47.6**	**+1.3**
	comp=N,26nm,0.9s						
CHI2		**18.67**	**119**	⇓*e*P	x	22 24 45.4	
LRAL	**Lakeview Retre**	**18.85**	**8**	*e*P	**P**	**22 27 50.7**	**+0.9**
	comp=N,82nm,1.8s						
LAPE	**La Pedrera**	**19.28**	**108**	⇓*e*P	x	22 25 14.0	
TXAR	**Lajitas Array**	**19.59**	**322**	P	**P**	**22 27 59.1**	**+1.5**
	comp=N,0.4nm,0.3s,baz=146,slow=11,SNR=20						
TXAR				pP		22 28 43.0	
	comp=N,0.1nm,0.3s,baz=138,slow=13,SNR=4.0						
SDV	**Santo Domingo**	**19.71**	**104**	P	**P**	**22 27 58.5**	**-0.7**
	comp=N,7.6nm,0.3s,baz=334,slow=4.2,SNR=40						
SDV	**Santo Domingo**	**19.71**	**104**	*e*P	**P**	**22 27 58.3**	**-0.9**
	comp=N,27nm,0.5s						
GOGA	**Godfrey**	**19.93**	**16**	*e*P	**P**	**22 28 00.7**	**-0.6**
	comp=N,70nm,1.9s						
OXF	**Oxford**	**20.13**	**1**	*e*P	**P**	**22 28 02.5**	**-0.8**
	comp=N,40nm,1.0s						
MIAR	**Mount Ida**	**20.42**	**352**	*e*P	**P**	**22 28 07.0**	**+0.6**
	comp=N,5.8nm,0.6s						
UALR	**University of**	**20.50**	**354**	*e*P	**P**	**22 28 08.3**	**+1.1**
	comp=N,15nm,0.7s						
SWET	**Sewanee**	**21.15**	**9**	*e*P	**P**	**22 28 13.3**	**-0.6**
WVT	**Waverly**	**21.83**	**5**	*e*P	**P**	**22 28 19.5**	**-0.6**
	comp=N,19nm,1.0s,mb4.4						
WMOK	**Wichita Mounta**	**21.84**	**340**	*e*P	**P**	**22 28 20.8**	**+0.6**
	comp=N,17nm,1.7s,mb4.1						
TKL	**Tuckaleechee C**	**21.99**	**14**	P	**P**	**22 28 21.4**	**-0.1**
	comp=N,13nm,0.6s,mb4.5,baz=182,slow=11,SNR=19						
SJG	**San Juan**	**23.21**	**77**	P	**P**	**22 28 34.9**	**+2.0**
SIUC	**Southern Illin**	**23.33**	**2**	*e*P	**P**	**22 28 34.9**	**+1.2**
	comp=N,28nm,0.8s,mb4.6						
USIN	**University of**	**23.66**	**5**	*e*P	**P**	**22 28 37.5**	**+0.7**
	comp=N,55nm,0.9s,mb4.9						
CCM	**Cathedral Cave**	**23.69**	**358**	*e*P	**P**	**22 28 36.9**	**-0.1**
	comp=N,4.0nm,0.6s,mb3.9						
WCI	**Wyandotte Cave**	**24.06**	**7**	*e*P	**P**	**22 28 40.0**	**-0.4**
	comp=N,13nm,0.6s,mb4.4						
OLIL	**Olney**	**24.40**	**4**	*e*P	**P**	**22 28 42.3**	**-1.1**
	comp=N,4.8nm,0.4s,mb4.2						
ANMO	**Albuquerque**	**25.36**	**327**	*e*P	**P**	**22 28 53.6**	**+1.5**
KSU1	**Kansas State U**	**25.39**	**348**	*e*P	**P**	**22 28 52.9**	**+0.6**
SDCO	**Great Sand Dun**	**27.11**	**332**	P	**P**	**22 29 09.7**	**+1.9**
SADO	**Sadowa**	**31.74**	**15**	P	**P**	**22 29 47.0**	**-1.4**
	comp=N,9.5nm,0.9s,mb4.3,baz=222,slow=8.8,SNR=5.6						
PDAR	**Pinedale Array**	**32.99**	**333**	ScP	ScP	22 35 55.3	+0.2
	comp=N,0.5nm,0.9s,baz=143,slow=7.7,SNR=3.6						
NVAR	**Mina Array Bea**	**34.69**	**319**	P	**P**	**22 30 15.7**	**+1.9**
	comp=N,0.5nm,0.4s,mb3.4,baz=125,slow=6.1,SNR=2.5						
NVAR				pP	pP	22 31 10.3	+3.5
	comp=N,4.1nm,1.0s,baz=134,slow=7.9,SNR=6.1						
NVAR				ScP	ScP	22 36 02.0	+0.7
	comp=N,0.7nm,0.6s,baz=121,slow=3.8,SNR=5.3						
NVAR	**Mina Array Bea**	**34.69**	**319**	P	**P**	**22 30 15.7**	**+1.9**
NVAR				pP	pP	22 31 10.3	+3.4
NVAR				ScP	ScP	22 36 02.0	+0.7
HLID	**Hailey**	**35.88**	**329**	*e*P	**P**	**22 30 25.3**	**+1.3**
	comp=N,0.6nm,0.5s,mb3.4						
ULM	**Lac du Bonnet**	**36.17**	**354**	P	**P**	**22 30 25.1**	**-1.1**
	comp=N,1.3nm,0.6s,mb3.7,baz=173,slow=8.4,SNR=4.5						
BOZ	**Bozeman (W)**	**36.19**	**334**	P	**P**	**22 30 27.9**	**+1.4**
	comp=N,3.1nm,0.7s,mb4.0						
WALA	**Waterton Lakes**	**39.84**	**335**	P	**P**	**22 30 58.7**	**+1.9**
SIV	**San Ignacio**	**41.51**	**135**	P	**P**	**22 31 11.2**	**+0.4**
	comp=N,14nm,0.8s,mb4.2,baz=314,slow=8.7,SNR=77						
LVC	**Limon Verde**	**42.10**	**150**	P	**P**	**22 31 16.6**	**+1.1**
	comp=N,3.9nm,0.3s,mb4.1,baz=259,slow=6.3,SNR=9.4						
SCHQ	**Schefferville**	**44.29**	**19**	P	**P**	**22 31 31.5**	**-1.0**
	comp=N,18nm,0.5s,mb4.6,baz=217,slow=6.6,SNR=72						
SCHQ	**Schefferville**	**44.29**	**19**	*e*P	**P**	**22 31 31.5**	**-1.0**
	comp=N,17nm,0.5s,mb4.5						
FCC	**Fort Churchill**	**44.49**	**357**	*e*P	**P**	**22 31 33.5**	**-0.5**
	comp=N,0.1nm,0.6s						
BDFB	**Brasilia**	**51.06**	**124**	P	**P**	**22 32 23.4**	**-1.5**
	comp=N,0.7nm,0.3s,mb3.4,baz=48,slow=24,SNR=3.9						
YKA	**Yellowknife Ar**	**51.20**	**346**	P	**P**	**22 32 25.2**	**0.0**
	comp=N,1.9nm,0.8s,mb3.5,baz=144,slow=7.7,SNR=24						
YKA				pP	pP	22 33 21.9	-0.4
	comp=N,0.8nm,0.6s,baz=145,slow=7.6,SNR=6.3						
YKA	**Yellowknife Ar**	**51.20**	**346**	P	**P**	**22 32 25.2**	**0.0**
YKA				pP	pP	22 33 21.9	-0.4
CPUP	**Villa Florida**	**51.38**	**142**	P	**P**	**22 32 26.3**	**-0.8**
	comp=N,0.4nm,0.3s,baz=326,slow=8.4,SNR=4.4						
FRB	**Frobisher Bay**	**51.60**	**12**	P	**P**	**22 32 26.8**	**-1.4**
	comp=N,3.0nm,0.4s,mb4.0,baz=222,slow=7.4,SNR=11						
RES	**Resolute Bay**	**60.44**	**359**	P	**P**	**22 33 29.8**	**-0.6**
INK	**Inuvik**	**60.72**	**343**	*e*P	**P**	**22 33 32.0**	**-0.2**
SUMG	**Summit**	**65.44**	**15**	*e*P	**P**	**22 34 03.7**	**+0.5**
	comp=N,2.1nm,0.5s,mb4.0						
ESDC	**Sonseca Array**	**78.01**	**52**	P	**P**	**22 35 16.6**	**-1.8**
	comp=N,0.4nm,0.3s,mb3.6,baz=287,slow=4.7,SNR=6.4						
TIC	**Toumodi**	**83.54**	**85**	*e*P	**P**	**22 35 46.3**	**-1.8**
	comp=N,7.1nm,0.2s						
LIC	**Lamto**	**83.63**	**85**	*e*P	**P**	**22 35 46.7**	**-1.8**
	comp=N,53nm,1.8s,mb5.1						
DBIC	**Dimbokro**	**83.69**	**85**	P	**P**	**22 35 46.6**	**-2.2**
	comp=N,1.5nm,0.3s,mb4.3,baz=253,slow=3.8,SNR=9.9						
KIC	**Kosan Boka**	**83.88**	**85**	*e*P	**P**	**22 35 48.1**	**-1.7**
	comp=N,8.0nm,0.4s,mb4.9						
TORD	**Torodi Ar. Bea**	**88.42**	**77**	P	**P**	**22 36 08.8**	**-3.0**
	comp=N,0.2nm,0.4s,mb3.3,baz=279,slow=3.8,SNR=5.2						
LSZ	**Lusaka**	**120.41**	**99**	*e*PKPdf	PKPdf	22 42 14.2	+4.6
BJI	**Beijing**	**120.71**	**337**	PKP	PKPdf	22 42 12.0	+2.3
BJI				SS	SS	22 59 51.9	+3.4
BJI				LR	LR		
	comp=N,113nm,16.1s						
BJI				LR	LR		
	comp=E,110nm,15.1s						
BJI				LR	LR		
	comp=Z,45nm,17.2s						
HHC	**Hu-ho-hao-te**	**121.61**	**341**	*e*PKP	PKPdf	22 42 14.8	+3.4
HHC				PP	PP	22 43 53.3	+7.1
HHC				PKS		22 45 49.8	
HHC				SKKS	SKKSac	22 50 20.3	+1.0
HHC				SS	SS	23 00 07.3	+7.6
HHC				PP	PP		
	comp=Z,83nm,4.5s						
HHC				LR	LR		
	comp=N,107nm,19.0s						
HHC				LR	LR		
	comp=E,96nm,16.7s						
HHC				LR	LR		
	comp=Z,73nm,14.3s						
WMQ	**Urumqi**	**122.13**	**2**	*e*PKP	PKPdf	22 42 14.9	+2.6
LZH	**Lanzhou**	**128.21**	**346**	*e*PKP	PKPdf	22 42 22.0	-2.2
XAN	**Xi'an**	**128.67**	**340**	PKP	PKPdf	22 42 29.8	+4.7
XAN				PP	PP	22 44 40.4	+7.3
XAN				SKKS	SKKSac	22 51 08.6	+4.2
XAN				SS	SS	23 01 33.8	+5.8
XAN				LR	LR		
	comp=E,20nm,24.2s						
XAN				LR	LR		
	comp=Z,32nm,19.9s						
CD2	**Chengdu**	**133.15**	**344**	PKP	PKPdf	22 42 37.3	+3.6
GYA	**Guiyang**	**136.37**	**338**	*e*PDIF	Pdif	22 39 45.0	-0.6
GYA				PKP	PKPdf	22 42 40.1	+0.3
GYA				XPKP		22 44 07.8	
GYA				PP	PP	22 45 25.4	+3.1
GYA				PP	PP		
	comp=Z,80nm,7.8s						
WRAB	**Tennant Creek**	**137.34**	**256**	PKPdf	PKPdf	22 42 44.8	+3.1
WRA	**Warramunga Arr**	**137.35**	**256**	PKhKP		22 42 32.2	
	comp=Z,0.2nm,0.6s,baz=96,slow=3.1,SNR=7.0						
WRA				PKP	PKPdf	22 42 42.3	+0.5
	comp=Z,0.1nm,0.3s,baz=89,slow=2.8,SNR=5.7						
ASAR	**Alice Springs**	**137.59**	**251**	PKhKP		22 42 30.2	
	comp=Z,0.3nm,0.6s,baz=132,slow=3.9,SNR=2.8						
KMI	**Kunming**	**138.90**	**342**	PKP	PKPdf	22 42 45.4	+0.9
FITZ	**Fitzroy Crossi**	**145.60**	**259**	*e*PKPdf	PKPdf	22 42 59.2	+2.8

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*ISCJB **17** 22:54:47.6±0.5, 3.02S±0.06×99.97E±0.08, h33km, mb4.0/15, Error ellipse: s-maj=12.8km s-min=7.3km az=154.5*
*IDC **17** 22:54:48.9±1.1, 3.04S×100.04E, h25km±3km, mb3.8/10, mb1 3.9/11, mb1mx3.8/23, mbtmp3.8/11, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=41.6km s-min=15.8km az=53.0*
*NEIC **17** 22:54:50.1±0.4, 2.99S×100.09E, h35km, mb4.2/5, Error ellipse: s-maj=13.7km s-min=6.7km az=62.0*
*DJA **17** 22:54:52, 2.75S×99.80E, h30km, MLv4.3/4*
ISC 17 22:54:50.0±0.5**, 3.00S**±0.06×**100.02E**±0.08**, h35**km**, (h24**km±1.6km**:pP-P), n43,** σ**1.00**/39**, mb4.0**/15**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	**Padang**	**2.12**	**12**	P	**Pn**	**22 55 22.6**	**-0.4**
PPI	**Padang Panjang**	**2.55**	**8**	P	**Pn**	**22 55 29.6**	**+0.7**
KSI	**Kapahiang**	**2.65**	**104**	P	**Pn**	**22 55 35.0**	**+4.8**
KSI				S	**Sn**	**22 56 14.4**	**+13**
GSI	**Gunungsitoli**	**4.92**	**330**	P	**Pn**	**22 56 00.7**	**-0.9**
PSI	**Prapat**	**5.86**	**349**	Pn	**Pn**	**22 56 13.1**	**-1.5**
	2.3nm,0.3s,baz=192,slow=9.4,SNR=6.5						
PSI				LR	LR	22 59 06.4	
	comp=Z,254nm,18.7s,baz=70,slow=44						
MYKOM	**Kota Tinggi**	**6.10**	**39**	P	**Pn**	**22 56 19.1**	**+1.3**
KULM	**Kulim**	**8.26**	**4**	*e*Pn	**Pn**	**22 56 47.2**	**-0.2**
BSI	**Banda Aceh**	**9.67**	**331**	P	**Pn**	**22 57 04.7**	**-2.1**
KKM	**Kota Kinabalu**	**18.50**	**61**	*e*P	**Pn**	**22 59 01.9**	**-1.9**
CMAR	**Chiang Mai Arr**	**21.35**	**357**	P	**P**	**22 59 33.0**	**-1.4**
	1.9nm,0.7s,mb3.5,baz=186,slow=9.9,SNR=14						
CHTO	**Chiang Mai**	**21.70**	**357**	P	**P**	**22 59 38.4**	**+0.3**
LSA	**Lhasa**	**33.60**	**346**	*e*P	**P**	**23 01 28.4**	**+1.3**
	1.8nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**37.48**	**119**	P	**P**	**23 01 59.3**	**-1.3**
	0.9nm,0.6s,mb3.8,baz=306,slow=9.4,SNR=12						
WRAB	**Tennant Creek**	**37.48**	**119**	*e*P	**P**	**23 02 01.3**	**+0.6**
	1.0nm,0.6s,mb3.8						
WRAB				*e*	pP	23 02 09.0	-1.9
WB2	**Warramunga Arr**	**37.49**	**119**	*e*P	**P**	**23 02 01.7**	**+1.0**
ASAR	**Alice Springs**	**38.66**	**125**	P	**P**	**23 02 10.6**	**+0.1**
	0.8nm,0.7s,mb3.6,baz=299,slow=8.2,SNR=9.3						
KBL	**Kabul**	**47.35**	**325**	*e*P	**P**	**23 03 19.7**	**-1.0**
STKA	**Stephens Creek**	**48.48**	**131**	*e*P	**P**	**23 03 28.5**	**-0.9**
TKM2	**Tokmak 2**	**50.75**	**337**	*e*P	**P**	**23 03 48.2**	**+1.6**
	3.7nm,0.8s,mb4.4						
SONM	**Songino Array**	**50.93**	**6**	P	**P**	**23 03 49.4**	**+1.6**
	2.7nm,0.7s,mb4.3,baz=186,slow=9.1,SNR=23						
SONM				pP	pP	23 03 56.6	-1.7
	1.8nm,0.7s,baz=189,slow=8.5,SNR=8.9						
SONM				PcP	PcP	23 05 05.0	+1.1
	0.7nm,0.7s,baz=173,slow=3.6,SNR=3.1						
SONM				pPcP		23 05 13.0	
	1.0nm,0.7s,baz=191,slow=4.3,SNR=4.5						
ULN	**Ulaanbaatar**	**51.02**	**6**	*e*P	**P**	**23 03 49.4**	**+0.9**
	1.1nm,0.7s,mb3.9						
EKS2	**Erkin-Say**	**51.27**	**335**	P	**P**	**23 03 50.2**	**-0.3**
	2.7nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**51.99**	**345**	*e*P	**P**	**23 03 56.5**	**+0.8**
MK31				*e*	pP	23 04 04.7	-1.6
MKAR	**Makanchi Array**	**51.99**	**345**	P	**P**	**23 03 56.8**	**+1.0**
	3.7nm,0.7s,mb4.4,baz=149,slow=8.4,SNR=35						
MKAR				pP	pP	23 04 04.6	-1.7
	2.7nm,0.5s,baz=154,slow=8.0,SNR=15						
MJAR	**Matsushiro Arr**	**53.03**	**39**	P	**P**	**23 04 03.3**	**-0.4**
	0.4nm,0.3s,mb3.8,baz=213,slow=8.3,SNR=4.0						
KURK	**Kurchatov**	**56.56**	**344**	P	**P**	**23 04 29.5**	**+0.5**
	1.5nm,0.9s,mb4.0,baz=165,slow=6.9,SNR=7.2						
KURK				pP	pP	23 04 37.0	-2.6
	1.7nm,0.7s,baz=166,slow=7.1,SNR=11						
KURK	**Kurchatov**	**56.56**	**344**	*e*P	**P**	**23 04 28.5**	**-0.5**
KURK				pP	pP	23 04 37.0	-2.6
ZAA0	**Zalesovo Array**	**58.15**	**349**	*e*P	**P**	**23 04 39.4**	**-0.7**
ZAA0				*e*PP	PP	23 06 49.9	+0.7
ZALV	**Zalesovo Beam**	**58.15**	**349**	P	**P**	**23 04 40.7**	**+0.6**
	1.0nm,0.2s,mb4.4,baz=163,slow=5.7,SNR=14						
ZALV				pP	pP	23 04 48.6	-2.2
	0.9nm,0.4s,baz=163,slow=5.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**58.15**	**349**	P	**P**	**23 04 40.7**	**+0.6**
ZALV				pP	pP	23 04 48.6	-2.2
BVAR	**Borovoye Array**	**61.12**	**340**	P	**P**	**23 05 00.6**	**0.0**
	0.4nm,0.6s,mb3.8,baz=141,slow=9.6,SNR=4.1						
BVAR				pP	pP	23 05 07.6	-3.7
	0.6nm,0.6s,baz=148,slow=9.1,SNR=6.0						
BRVK	**Borovoye**	**61.19**	**340**	*e*P	**P**	**23 05 00.8**	**-0.2**
BRVK				*e*PcP	PcP	23 05 43.1	-0.5
CASY	**Casey**	**63.59**	**175**	*e*P	**P**	**23 05 15.6**	**-1.4**
ARU	**Arti**	**68.13**	**337**	*e*P	**P**	**23 05 46.5**	**+0.2**
BRTR	**Keskin Array B**	**74.01**	**313**	P	**P**	**23 06 23.1**	**+0.7**
	0.3nm,0.6s,mb3.4,baz=72,slow=7.2,SNR=2.7						
BRTR				pP	pP	23 06 30.3	-2.9
	1.2nm,0.8s,baz=106,slow=7.8,SNR=4.0						
OBN	**Obninsk**	**77.65**	**328**	P	**P**	**23 06 42.5**	**-0.2**
VNDA	**Vanda**	**81.18**	**169**	*e*P	**P**	**23 07 01.4**	**-0.3**
TOA0	**Torodi Ar. Sit**	**98.78**	**283**	P	**P**	**23 08 28.7**	**+1.8**
DAC	**Darwin (Calif)**	**132.05**	**42**	*e*PKPdf	PKPdf	23 13 60.0	-0.5
TXAR	**Lajitas Array**	**145.47**	**38**	PKPbc	PKPbc	23 14 26.4	+1.2
	2.1nm,0.6s,baz=268,slow=0.7,SNR=24						
TXAR				pPKPbc	pPKPbc	23 14 33.9	-2.7
	2.8nm,0.7s,baz=280,slow=1.2,SNR=16						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	145.47	38	PKPbc	PKPbc	23 14 26.4	+1.2
TXAR				pPKPbc	pPKPbc	23 14 33.9	-2.7
JCT	Junction City	146.85	32	*e*PKP	PKPdf	23 14 29.7	+2.2
LVC	Limon Verde	152.35	202	PKPdf	PKPdf	23 14 37.3	+0.9

*CSEM **17** 23:02:01.5±0.1, 3964N×5378E, h20^{km}, ML3.5/3, Error ellipse: s-maj=4.7km s-min=2.3km az=165.0*
*IDC **17** 23:02:01.1±1.5, 3993N×5346E, h0^{km}, mb3.3/5, mb1 3.5/8, mb1mx3.4/26, mbtmp3.5/8, ML3.5/1, Error ellipse: s-maj=25.1km s-min=10.4km az=153.0*
*MOS **17** 23:02:03.8±1.4, 40.10N×5355E, h33^{km}, mb3.7/2, Error ellipse: s-maj=17.2km s-min=11.7km az=138.8*
*NEIC **17** 23:02:04.2±0.9, 3990N×5353E, h35^{km}, mb3.3/1, Error ellipse: s-maj=18.9km s-min=8.4km az=176.0*
*ISCJB **17** 23:02:05.8±0.9, 4032N±005×5353E±005, h62^{km}±14^{km}, mb3.2/3, Error ellipse: s-maj=9.7km s-min=5.6km az=152.3*
*NNC **17** 23:02:13.8±8.3, 4050N×5500E, h0^{km}, mb3.4, Error ellipse: s-maj=72.2km s-min=43.6km az=30.0*
ISC 17 23:02:06.4±0.8, **4019N**±006×**5364E**±005, **h36**^{km}±14^{km}, **n37**, σ1^s**24**/52, **mb3.2**/3, **2C-3D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIZA	Siyzn	3.72	285	P	Pn	23 03 03.9	+2.6
	SNR=5.3						
PQL	Pirkuli	3.90	280	P	Pn	23 03 05.1	+1.3
	SNR=3.0						
PQL				S	Sn	23 03 53.4	+5.2
GLBA	Clilabad	4.16	258	P	Pn	23 03 06.0	-1.4
	SNR=15						
GLBA				S	Sn	23 03 51.6	-3.1
SEKA	Sheki	5.00	284	P	Pn	23 03 19.8	+0.8
	SNR=3.8						
SEKA				S	Sn	23 04 18.2	+2.7
GANJ	Ganja	5.61	277	P	Pn	23 03 26.1	-1.1
	SNR=3.9						
NAX	Nakhchivan	6.37	263	P	Pn	23 03 38.0	+0.3
	SNR=3.4						
NAX				S	Sn	23 04 48.9	-0.2
GNI	Garni	6.82	273	Pn	Pn	23 03 44.2	+0.4
	0.6nm,0.3s,baz=86,slow=22,SNR=6.1						
GNI				Sn	Sn	23 04 59.0	-1.2
	0.5nm,0.3s,baz=354,slow=18,SNR=1.9						
GNI	Garni	6.82	273	P	Pn	23 03 44.2	+0.3
GNI						23 04 59.0	
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI				smax			
	comp=N,1.0nm,0.3s						
KIV	Kislovodsk	8.97	298	*e*Pn	Pn	23 04 12.8	-0.6
KIV				*e*Sn	Sn	23 05 52.7	-0.4
KIV	Kislovodsk	8.97	298	*e*Pn	Pn	23 04 12.8	-0.6
KIV				*e*Sn	Sn	23 05 52.7	-0.5
AB31	Akbulak array	10.11	24	Pn	Pn	23 04 28.6	-0.3
	comp=N,0.6nm,0.4s,baz=198,slow=13,SNR=42						
AB31				Sn	Sn	23 06 18.7	-2.2
	comp=N,3.6nm,0.2s,baz=190,slow=23,SNR=7.0						
AKTK	Aktyubinsk	10.69	15	Pn	Pn	23 04 38.1	+1.2
AKTK				Sn	Sn	23 06 33.7	-1.6
AKTO	Aktyubinsk	10.69	15	Pn	Pn	23 04 38.1	+1.2
	comp=N,0.4nm,0.3s,baz=200,slow=14,SNR=5.2						
AKTO				Sn	Sn	23 06 33.7	-1.6
	comp=N,1.8nm,0.3s,baz=2.8,slow=21,SNR=8.6						
AKTO	Aktyubinsk	10.69	15	P	Pn	23 04 38.1	+1.2
AKTO						23 06 33.7	
AKTO				smax			
	comp=N,2.0nm,0.3s						
AKTO	Aktyubinsk	10.69	15	Pn	Pn	23 04 38.0	+1.1
	comp=N,0.4nm,0.9s						
AKTO				Sn	Sn	23 06 35.8	+0.5
	comp=N,0.5nm,0.5s						
KK31	Karatay Array	12.95	72	Pn	Pn	23 05 06.9	-0.9
	comp=N,0.3nm,0.4s,baz=121,slow=18,SNR=7.4						
KK31				⇓Sn	Sn	23 07 24.1	-6.4
	comp=N,1.4nm,0.5s,baz=263,slow=24,SNR=6.1						
AML	Almayashu	15.23	76	*e*Pn	Pn	23 05 38.0	-0.6
BR131	Keskin Array S	15.35	275	*e*Pn	Pn	23 05 35.4	-4.8
AAK	Ala-Archa	15.83	74	*e*P	Pn	23 05 46.8	+0.4
TKM2	Tokmak 2	16.65	73	*e*Pn	Pn	23 05 56.1	-0.8
TKM2	Tokmak 2	16.65	73	*e*Pn	Pn	23 05 56.1	-0.7
BRVK	Borovoye	17.16	36	*e*P	Pn	23 06 04.3	+1.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	17.16	36	*e*P	Pn	23 06 04.3	+1.2
	comp=Z,1.0nm,0.5s						
BVA0	Borovoye Array	17.18	36	⇑Pn	Pn	23 06 07.7	+4.3
	comp=Z,0.7nm,1.2s,baz=227,slow=12,SNR=14						
BVA0				⇓Sn	Sn	23 09 07.2	-6.0
	comp=Z,0.3nm,0.7s,baz=226,slow=25,SNR=6.2						
BVAR	Borovoye Array	17.18	36	Pn	Pn	23 06 03.5	+0.1
	comp=Z,0.4nm,0.3s,baz=229,slow=11,SNR=12						
BVAR				Sn	Sn	23 09 07.9	-5.4
	comp=Z,0.2nm,0.3s,baz=226,slow=25,SNR=6.3						
VOSK	Vostochnaya	17.25	38	⇓Pn	Pn	23 06 05.0	+0.6
	comp=Z,1.8nm,1.0s						
VOSK				⇑Sn	Sn	23 09 10.8	-4.2
	comp=Z,1.6nm,0.8s						
AKASG	Malin Array Be	20.01	310	P	P	23 06 36.3	+0.6
	comp=Z,0.7nm,0.3s,baz=102,slow=9.0,SNR=4.7						
AKASG	Malin Array Be	20.01	310	P	P	23 06 36.3	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	20.34	51	P	P	23 06 40.3	+1.0
	comp=Z,0.7nm,0.8s,baz=248,slow=12,SNR=5.0						
MK31	Makanchi Array	21.73	63	*e*P	P	23 06 55.0	+0.7
MK31	Makanchi Array	21.73	63	*e*P	P	23 06 55.0	+0.6
MKAR	Makanchi Array	21.73	63	P	P	23 06 55.3	+1.0
	comp=Z,0.4nm,0.7s,mb2.9,baz=254,slow=10,SNR=6.1						
ZALV	Zalesovo Beam	25.06	46	P	P	23 07 29.9	+2.8
	comp=Z,0.9nm,0.6s,mb3.5,baz=253,slow=9.0,SNR=4.0						
ZALV	Zalesovo Beam	25.06	46	P	P	23 07 29.9	+2.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
LSA	Lhasa	32.27	97	*e*P	P	23 08 30.4	-1.1
LSA	Lhasa	32.27	97	*e*P	P	23 08 30.4	-1.1
TORD	Torodi Ar. Bea	52.76	254	P	P	23 11 15.4	-2.5
	comp=Z,0.3nm,0.8s,mb3.3,baz=43,slow=5.7,SNR=3.9						

MDD 17 23:15:22.8±0.3, **3735N**×**240W**, **h0**^{km}, **mbLg1.9**/16, **3C, Error ellipse: s-maj=3.1km s-min=2.7km az=48.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	0.41	158	Pg	Pg	23 15 30.4	-0.2
	24nm,0.2s,SNR=44						
ENIJ				Lg		23 15 36.0	
	35nm,0.2s,SNR=25						
EBER	Berja	0.60	221	⇑Pg	Pg	23 15 34.1	-0.2
	21nm,0.2s,SNR=18						
EBER				Lg		23 15 41.6	
	54nm,0.3s						
EQES	Quesada	0.69	310	Pg	Pg	23 15 35.7	-0.4
	0.7nm,0.2s,SNR=30						
EQES				Lg		23 15 46.1	
	4.6nm,0.1s						
EQUE	Quentar	0.84	260	Pg	Pg	23 15 37.6	-1.3
	0.5nm,0.0s,SNR=7.9						
EQUE				Lg		23 15 49.7	
	1.9nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	0.93	266	Pg	Pg	23 15 40.1	-0.6
	0.3nm,0.1s,SNR=7.9						
ECOG				Lg		23 15 53.7	
	5.4nm,0.2s,SNR=7.9						
EMUR	La Murta	1.04	62	Pg	Pg	23 15 41.9	-0.9
	16nm,0.3s,SNR=26						
EMUR				Lg		23 15 56.6	
	15nm,0.3s,SNR=47						
EGUA	Guajares	1.06	241	⇑Pg	Pg	23 15 42.1	-1.1
	14nm,0.2s,SNR=18						
EGUA				Lg		23 15 55.8	
	36nm,0.5s,SNR=7.9						
CART	Cartagena	1.14	78	⇑P	Pg	23 15 42.5	-2.1
EVIA	Vianos	1.28	357	Pg	Pg	23 15 44.8	-2.6
	1.9nm,0.2s,SNR=10						
EVIA				Lg		23 16 04.0	
	6.6nm,0.2s,SNR=9.0						
EBAN	Banos Encina	1.36	307	Pg	Pg	23 15 47.5	-1.4
	7.7nm,0.2s,SNR=17						
EBAN				Lg		23 16 06.2	
	14nm,0.2s,SNR=12						
ELOJ	Sierra Loja	1.41	262	Pg	Pg	23 15 47.9	-2.0
	3.4nm,0.3s,SNR=4.0						
ELOJ				Lg		23 16 05.9	
	11nm,0.6s,SNR=4.0						
ETOB	Tobarra	1.46	27	Pg	Pg	23 15 49.8	-0.8
	6.9nm,0.3s,SNR=31						
ETOB				Lg		23 16 09.9	
	7.4nm,0.2s,SNR=8.3						
ELUQ	Luque	1.50	278	Pg	Pg	23 15 50.6	-0.9
	2.5nm,0.2s,SNR=4.0						
ELUQ				Lg		23 16 10.3	
	23nm,0.3s,SNR=7.9						
EADA	Adamuz	1.91	296	Pn	Pn	23 15 55.2	-1.3
	1.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	23 16 19.7	-1.5
	2.0nm,0.2s,SNR=7.9						
EADA				Lg		23 16 23.3	
	2.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.42	278	Pn	Pn	23 16 16.7	-0.6
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	23 16 56.5	-2.0
	0.2nm,0.3s,SNR=7.9						
EMIN				Lg		23 17 10.7	
	1.1nm,0.2s,SNR=7.9						
ETOR	Torete	3.47	4	Pn	Pn	23 16 17.2	-0.9
	0.9nm,0.2s,SNR=7.9						
ETOR				Pg	Pg	23 16 27.4	-2.0
	0.1nm,0.3s,SNR=7.9						
ETOR				Sn	Sn	23 16 56.8	-3.0
	0.5nm,0.1s,SNR=7.9						
ETOR				Lg		23 17 14.4	
	3.0nm,0.4s,SNR=7.9						
GUD	Guadarrama	3.56	338	Lg		23 17 11.1	
	0.6nm,0.2s,SNR=7.9						
PBAR	Barrancos	3.76	284	*e*Pn	Pn	23 16 21.3	-0.8
PBAR				*e*Sn	Sn	23 17 04.2	-2.9
EBAD	Badajoz	3.90	292	Pn	Pn	23 16 21.5	-2.4
	0.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	23 17 06.4	-4.0
	0.4nm,0.1s,SNR=7.9						
EBAD				Lg		23 17 27.0	
	1.1nm,0.4s,SNR=7.9						
EGRO	El Granado	4.05	274	Pn	Pn	23 16 23.9	-2.0
	0.5nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	23 17 11.0	-3.1
	0.1nm,0.4s,SNR=7.9						
PVAQ	Vaqueiros	4.23	272	*e*Pn	Pn	23 16 27.7	-0.8
PVAQ				*e*Sn	Sn	23 17 16.9	-1.7
PVAQ	Vaqueiros	4.23	272	*e*Sn	Sn	23 17 16.9	-1.7
PMRV	Marv??o	4.43	299	*e*Sn	Sn	23 17 20.9	-2.6
PMRV				*e*Sg	Sg	23 17 44.2	-1.0
PMRV				A		23 17 45.9	
	3.2nm,0.4s						

IDC 18 00:15:58.9±4.6, **592S**×**13172E**, **h0**^{km}, **mb3.6**/1, **mb1 3.5**/3, **mb1mx3.4**/14, **mbtmp3.3**/3, **ML3.5**/2, **Error ellipse: s-maj=324.7km s-min=30.9km az=73.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.17	170	Pn	Pn	00 19 20.9	-0.1
	0.2nm,0.3s,baz=350,slow=13,SNR=11						
WRA				Sn	Sn	00 21 54.9	-4.1
	0.2nm,0.3s,baz=349,slow=23,SNR=5.4						
ASAR	Alice Springs	17.77	173	P	Pn	00 20 08.0	+0.2
	0.2nm,0.3s,baz=346,slow=8.9,SNR=8.0						
MKAR	Makanchi Array	68.28	326	P	P	00 27 01.8	+0.1
	0.3nm,0.3s,baz=114,slow=7.4,SNR=11						

*IDC **18** 00:16:54.1±0.8, 2736N×10390E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.9/24, mbtmp3.9/12, ML3.7/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/36, Error ellipse: s-maj=30.4km s-min=16.2km az=63.0*
*MOS **18** 00:16:56.7±1.4, 2730N×10379E, h33^{km}, mb4.2/7, Error ellipse: s-maj=16.7km s-min=10.5km az=106.6*
*BJI **18** 00:16:57.0, 27.15N×10379E, h30^{km}, mB4.8, mb4.5, ML4.2, Ms4.4, Msz3.8*
*ISCJB **18** 00:16:58.1±0.8, 2728N±004×10383E±006, h47^{km}±9^{km}, mb4.1/14, MS3.1/7, Error ellipse: s-maj=9.6km s-min=5.6km az=16.9*
*NEIC **18** 00:16:59.1±0.6, 2734N×10392E, h35^{km}, mb3.9/2, Error ellipse: s-maj=15.0km s-min=11.1km az=67.0*
ISC 18 00:16:59.9±0.6, **2722N**±004×**10389E**±006, **h49**^{km}±8^{km}, **n45**, σ1^s**20**/53, **mb4.1**/14, **MS3.1**/7, **2C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	2.33	206	⇑PG	Pn	00 17 34.8	-1.0
KMI				SG	Sn	00 18 04.1	+0.9
KMI				Smax			
	comp=N,458nm,0.9s						
KMI				Smax			
	comp=E,403nm,1.0s						
KMI				LR	LR		
	comp=N,2μm,7.8s						
KMI				LR	LR		
	comp=E,2μm,7.3s						
KMI				LR	LR		
	comp=Z,1μm,7.1s						
GYA	Guiyang	2.59	106	⇑*i*P	Pn	00 17 40.9	+1.5
GYA				PG	Pn	00 17 48.0	+8.6
GYA				S	Sn	00 18 13.4	+3.7
GYA				SG	Sn	00 18 20.0	+10
GYA				Smax			
	comp=N,1μm,0.7s						
GYA				Smax			
	comp=E,830nm,0.9s						
CD2	Chengdu	3.67	358	P	Pn	00 17 53.8	-0.4
CD2				PG	Pn	00 18 03.3	+9.1
CD2				S	Sn	00 18 36.3	+0.1
CD2				SG	Sn	00 18 50.8	+15
CD2				Smax			
	comp=N,2μm,0.6s						
CD2				Smax			
	comp=E,2μm,0.7s						
CD2				LR	LR		
	comp=N,4μm,5.0s						
CD2				LR	LR		
	comp=Z,640nm,5.1s						
XAN	Xi'an	8.06	31	P	Pn	00 18 53.4	-0.9
XAN				S	Sn	00 20 23.5	-0.5
XAN				LR	LR		
	comp=N,348nm,11.5s						
XAN				LR	LR		
	comp=E,667nm,12.1s						
XAN				LR	LR		
	comp=Z,252nm,15.4s						
LZH	Lanzhou	8.84	360	*e*P	Pn	00 19 05.4	+0.5
LZH				*e*PP		00 19 13.5	
LZH				*e*S	Sn	00 20 44.3	+1.2
LZH				*e*SS		00 21 01.3	
LZH				AMB	AMB		
	comp=Z,25nm,1.1s						
LZH				AMB	AMB		
	comp=Z,132nm,6.8s						
LZH				LR	LR		
	comp=E,746nm,8.7s						
LZH				LR	LR		
	comp=Z,912nm,11.5s						
GZH	Guangzhou	9.50	114	P	Pn	00 19 12.6	-1.5
GZH				S	Sn	00 20 55.8	-3.8
CMAR	Chiang Mai Arr	9.84	209	Pn	Pn	00 19 19.1	+0.3
	comp=Z,0.2nm,0.3s,baz=18,slow=11,SNR=8.3						
CMAR				LR	LR	00 23 34.7	
	comp=Z,109nm,19.4s,baz=0.0,slow=40						
LSA	Lhasa	11.48	285	*e*P	Pn	00 19 38.1	-3.0
GTA	Gaotai	12.62	345	*e*P	Pn	00 20 00.8	+4.2
GTA				AP		00 20 05.0	
GTA				XP		00 20 08.3	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s						
HHC	Hu-ho-hao-te	15.00	23	*e*P	Pn	00 20 30.0	+1.4
HHC				XP	sP	00 20 36.4	-14
HHC				PP		00 20 41.4	
HHC				*e*S	Sn	00 23 14.5	+1.0
HHC				SS		00 23 34.1	
HHC				AMB	AMB		
	comp=Z,18nm,0.7s						
HHC				AMB	AMB		
	comp=Z,76nm,4.5s						
HHC				LR	LR		
	comp=N,214nm,6.2s						
HHC				LR	LR		
	comp=E,161nm,5.1s						
HHC				LR	LR		
	comp=Z,141nm,7.1s						
NACB	Ninganchiao	16.25	97	Pn	Pn	00 20 44.6	-0.2
SONM	Songino Array	20.67	5	P	P	00 21 35.2	-0.3
	comp=Z,1.4nm,0.7s,baz=188,slow=14,SNR=5.3						
SONM				LR	LR	00 30 18.1	
	comp=Z,43nm,20.5s,MS2.8,baz=218,slow=39						
SONM	Songino Array	20.67	5	P	P	00 21 35.2	-0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,43nm,20.5s						
ULN	Ulaanbaatar	20.75	6	*e*P	P	00 21 35.4	-1.0
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	20.75	6	*e*P	P	00 21 35.4	-1.0
	comp=Z,5.9nm,0.9s						
KSRS	Korea Array	22.67	57	P	P	00 21 56.5	-0.5
	comp=Z,1.8nm,0.5s,mb3.8,baz=239,slow=11,SNR=5.2						
KSRS				LR	LR	00 30 06.7	
	comp=Z,38nm,19.7s,MS2.8,baz=218,slow=35						
KSRS	Korea Array	22.67	57	P	P	00 21 56.5	-0.5
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
KSRS				MLR	MLR		
	comp=Z,38nm,19.7s,MS2.8						
ZAK	Zakamensk	23.13	359	*e*P	P	00 21 55.6	-6.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
CN2	Changchun	24.01	41	*e*P	P	00 22 13.9	+3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
PSI	Prapat	24.75	192	LR	LR	00 32 32.0	
	comp=Z,38nm,20.8s,MS2.9,baz=268,slow=38						
MK31	Makanchi Array	25.91	325	*e*P	P	00 22 26.2	-1.0
MKAR	Makanchi Array	25.91	325	P	P	00 22 28.2	+1.0
	comp=Z,3.2nm,0.7s,mb4.0,baz=127,slow=10,SNR=12						
MKAR	Makanchi Array	25.91	325	P	P	00 22 28.2	+1.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	Zalesovo Array	30.17	337	*e*P	P	00 23 03.2	-2.0
ZALV	Zalesovo Beam	30.17	337	P	P	00 23 03.8	-1.4
	comp=Z,2.1nm,0.7s,mb4.0,baz=142,slow=9.5,SNR=8.1						
ZALV				LR	LR	00 36 47.5	
	comp=Z,24nm,18.5s,MS2.9,baz=285,slow=40						
ZALV	Zalesovo Beam	30.17	337	P	P	00 23 03.8	-1.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,24nm,18.5s,MS2.9						
KURK	Kurchatov	30.32	327	P	P	00 23 04.6	-1.9
	comp=Z,0.4nm,0.2s,mb3.7,baz=139,slow=8.6,SNR=3.2						
KURK	Kurchatov	30.32	327	*e*P	P	00 23 09.1	+2.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
KURK	Kurchatov	30.32	327	*e*P	P	00 23 09.1	+2.5
	comp=Z,1.5nm,0.6s,mb3.9						
KBL	Kabul	30.67	292	*e*P	P	00 23 11.8	+2.0
CBIJ	Chichi jima	33.99	81	LR	LR	00 37 56.9	
	comp=Z,43nm,19.7s,MS3.2,baz=156,slow=37						
BVAR	Borovoye Array	35.79	325	P	P	00 23 54.1	0.0
	comp=Z,0.3nm,0.4s,mb3.6,baz=120,slow=8.5,SNR=2.9						
YAK	Yakutsk	38.80	19	*e*P	P	00 24 19.0	-0.6
YAK				pmax	pmax		
	comp=Z,21nm,0.4s,mb5.2						
YAK	Yakutsk	38.80	19	*e*P	P	00 24 19.0	-0.6
	comp=Z,21nm,0.4s,mb5.2						
PETK	Petropavlovsk-	47.16	42	LR	LR	00 45 13.4	
	comp=Z,43nm,20.8s,MS3.4,baz=74,slow=36						
WRA	Warramunga Arr	55.40	145	P	P	00 26 29.9	+0.6
	comp=Z,1.5nm,0.7s,mb4.1,baz=334,slow=8.4,SNR=12						
WRA	Warramunga Arr	55.40	145	P	P	00 26 29.9	+0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	58.31	147	P	P	00 26 53.0	+3.1
	comp=Z,0.6nm,0.5s,mb3.9,baz=330,slow=6.8,SNR=8.2						
ASAR	Alice Springs	58.31	147	P	P	00 26 53.0	+3.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	60.72	337	P	P	00 27 07.6	+1.6
	comp=Z,9.8nm,1.0s,mb4.9,baz=83,slow=7.4,SNR=3.2						
ARCES	ARCESS Array B	60.72	337	P	P	00 27 07.6	+1.7
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIRR	Tirgusor	61.48	308	*e*P	P	00 27 10.4	-1.1
TIRR				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
TIRR	Tirgusor	61.48	308	*e*P	P	00 27 10.4	-1.0
	comp=Z,31nm,1.1s,mb5.3						
NOA	NORSAR Array B	67.83	328	P	P	00 27 52.3	-0.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=85,slow=4.8,SNR=3.0						
NOA				LR	LR	01 01 54.5	
	comp=Z,44nm,18.3s,MS3.7,baz=210,slow=40						
YKA	Yellowknife Ar	85.45	17	P	P	00 29 31.8	-0.2
	comp=Z,0.4nm,0.8s,mb3.6,baz=327,slow=5.0,SNR=9.0						

NDI 18 00:19:01.8±3.5, **2948N**×**8102E**, **h10**^{km}, **ML3.5, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGTI	Lohaghat	0.68	268	*e*P	Pg	00 19 18.2	+3.3
LGTI				*e*S	Sg	00 19 28.4	+4.6
PTH	Pithoragarh	0.71	276	*e*P	Pg	00 19 16.8	+1.4
PTH				*e*S	Sg	00 19 24.8	+0.1
JOSI	Joshimath	1.66	311	*e*P	Pn	00 19 32.5	+1.5
JOSI				*e*S	Sn	00 19 52.1	-0.3
JOSI				AML	AML	00 20 00.3	
	comp=N,452nm,0.4s						
JOSI				AML	AML	00 20 00.9	
	comp=E,578nm,0.6s						
SMLA	Simla	3.72	297	*i* P	Pn	00 20 09.3	+10
SMLA				*i* S	Sn	00 20 54.1	+11
SMLA				*e*x	x	00 21 01.8	
	comp=E,204nm,0.4s						
SMLA				*e*x	x	00 21 07.2	
	comp=N,313nm,0.2s						
KHET	Khetri	4.79	254	*e*S	Sn	00 21 06.2	-3.3

IDC 18 00:34:09.5±1.9, **1755S**×**17754W**, **h0**^{km}, **mb4.0**/4, **mb1 4.1**/4, **mb1mx3.8**/18, **mbtmp3.9**/4, **Error ellipse: s-maj=55.6km s-min=37.7km az=132.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	27.81	198	P	P	00 40 00.4	0.0
	7.5nm,0.8s,baz=23,slow=13,SNR=3.9						
WRA	Warramunga Arr	45.52	259	P	P	00 42 30.5	-0.7
	0.1nm,0.4s,baz=95,slow=7.1,SNR=7.8						
ASAR	Alice Springs	45.69	254	P	P	00 42 33.0	+0.5
	1.2nm,0.5s,baz=89,slow=7.8,SNR=22						
YKA	Yellowknife Ar	93.67	24	P	P	00 47 27.5	0.0
	0.2nm,0.6s,baz=246,slow=4.5,SNR=5.1						

*TEH **18** 01:01:43.9, 28.15N×52.15E, h18^{km}, ML3.6*
*IDC **18** 01:02:20.8±0.9, 2766N×5226E, h0^{km}, mb4.0/16, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.6/31, Error ellipse: s-maj=22.2km s-min=15.4km az=173.0*
*THR **18** 01:02:21.2±0.5, 2763N×5208E, h24^{km}±3^{km}, ML3.7*
*CSEM **18** 01:02:22.0±0.1, 2766N×52.13E, h15^{km}, ML3.7, Error ellipse: s-maj=2.2km s-min=1.7km az=142.0*
*ISCJB **18** 01:02:25.0±0.4, 2774N±003×52.18E±004, h40^{km}±5^{km}, mb3.9/16, Error ellipse: s-maj=5.7km s-min=5.1km az=42.0*
*NEIC **18** 01:02:30.9, 28.15N×52.15E, h18^{km}, MN3.6(TEH), After TEH.*
ISC 18 01:02:26.7±0.4, **2772N**±003×**5219E**±004, **h39**^{km}±5^{km}, **n69**, σ**0**^{s}**90**/73, **mb3.9**/16, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.90	51	*e*Pg	Pn	01 02 40.4	-2.5
GHIR				*e*Sg	Sn	01 02 54.2	-0.4
GHIR				AML	AML	01 02 57.0	
	comp=E,3μm,0.6s						
GHIR				AML	AML	01 02 58.4	
	comp=N,2μm,0.4s						
GHIR	Ghir-Karzin	0.90	51	*e*Pg	Pn	01 02 40.4	-2.4
	SNR=94						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GHIR				*e*Sg	Sn	01 02 54.2	-0.4
	SNR=94						
IMOK	Mouk	1.40	19	Pg	Pn	01 02 49.5	-0.2
IMOK	Mouk	1.40	19	*e*Pg	Pn	01 02 49.6	-0.1
IMOK				*e*		01 03 11.8	
ISRV	Sarvestan	1.84	26	Pn	Pn	01 02 55.4	-0.4
ISRV	Sarvestan	1.84	26	*e*Pn	Pn	01 02 55.5	-0.3
ISRV				*e*		01 03 29.9	
BOQSS		3.12	234	P	Pn	01 03 14.4	+1.0
SLWS		3.23	206	P	Pn	01 03 15.6	+0.7
BNDS	Bandar-Abbas	3.55	94	*e*Pn	Pn	01 03 18.4	-0.8
KFJS		3.79	278	P	Pn	01 03 24.1	+1.5
BTHS		3.86	199	P	Pn	01 03 23.8	+0.3
BANOM	Banah	4.08	115	P	Pn	01 03 26.2	-0.4
	SNR=61						
NAZ	Nazwa, Dubai	4.13	130	P	Pn	01 03 28.2	+0.9
	SNR=15						
ASUD	Al Ashush, Dub	4.18	137	P	Pn	01 03 28.6	+0.7
	SNR=68						
IMEH	Mehriz	4.22	29	*e*Pn	Pn	01 03 29.7	+1.2
IMEH				*e*		01 03 31.1	
FAQ	Al Faqa, Dubai	4.25	133	P	Pn	01 03 29.4	+0.4
	SNR=6.0						
ISAD	Sadrabad	4.37	17	Pn	Pn	01 03 33.1	+2.5
ISAD	Sadrabad	4.37	17	*e*Pn	Pn	01 03 33.2	+2.6
ISAD				*e*		01 04 58.8	
HATD	Hatta, Dubai	4.56	128	P	Pn	01 03 33.4	+0.2
	SNR=9.0						
KRBR	Kerman	4.60	60	*e*Pn	Pn	01 03 33.6	-0.1
KRBR				Sn	Sn	01 04 26.4	+0.7
KRBR				AML	AML	01 04 32.6	
	comp=E,52nm,0.6s						
KRBR				AML	AML	01 04 35.6	
	comp=N,60nm,0.6s						
KRBR	Kerman	4.60	60	*e*Pn	Pn	01 03 33.6	0.0
	SNR=54						
KRBR				Sn	Sn	01 04 26.5	+0.7
	SNR=54						
IBAF	Bafgh	4.85	36	*e*Pn	Pn	01 03 37.6	+0.5
IBAF				*e*		01 03 38.4	
ICHK	Chekchek	4.90	23	Pn	Pn	01 03 38.6	+0.8
ICHK	Chekchek	4.90	23	*e*Pn	Pn	01 03 38.7	+0.9
ICHK				*e*		01 03 43.1	
IPIR	Pirpir	5.07	347	Pn	Pn	01 03 39.9	-0.3
IPIR				*e*Sn	Sn	01 04 31.1	-6.4
IPIR	Pirpir	5.07	347	*e*Pn	Pn	01 03 40.0	-0.2
IPIR				*e*Sn	Sn	01 04 31.1	-6.4
IPIR				*e*		01 04 52.8	
NASN	Na'in	5.09	6	*e*Pn	Pn	01 03 39.7	-0.7
IZEF	Zefreh	5.16	1	*e*Pn	Pn	01 03 41.4	0.0
IZEF				*e*		01 04 06.6	
HRDDS		5.38	208	S	Sn	01 04 42.1	-2.9
HRDDS		5.38	208	P	Pn	01 03 44.6	+0.2
ASYS		6.97	270	P	Pn	01 04 04.9	-1.3
ASAO	Ashtian	7.05	345	*e*Pn	Pn	01 04 06.9	-0.4
LYLS		7.22	220	P	Pn	01 04 08.8	-1.0
IGHG	Ghaleghazi	8.16	325	Pn	Pn	01 04 22.5	-0.1
IGHG	Ghaleghazi	8.16	325	*e*Pn	Pn	01 04 22.6	0.0
IGHG				*e*		01 04 26.0	
IVIS	Veis	8.18	327	*e*Pn	Pn	01 04 22.7	-0.2
IVIS				*e*		01 04 30.2	
SNGE	Sanandaj	8.43	332	*e*Pn	Pn	01 04 24.9	-1.4
ILIN	Lien	8.45	329	*e*Pn	Pn	01 04 26.1	-0.5
ILIN				*e*		01 04 28.6	
EIL	Elat	15.26	281	LR	LR	01 12 57.7	
	comp=N,30nm,20.3s,baz=37,slow=42						
MMAI	Mount Meron Ar	15.42	294	Pn	Pn	01 06 01.0	-0.4
	comp=N,0.8nm,0.3s,baz=104,slow=11,SNR=3.2						
BRTR	Keskin Array B	19.49	313	P	Pn	01 06 50.9	-0.9
	comp=N,0.1nm,0.3s,baz=130,slow=12,SNR=9.8						
AKTK	Aktyubinsk	23.11	10	P	P	01 07 30.3	+1.2
AKTK	Aktyubinsk	23.11	10	P	P	01 07 30.3	+1.2
AKTO	Aktyubinsk	23.11	10	P	P	01 07 30.3	+1.2
	comp=N,1.0nm,0.7s,mb3.4,baz=162,slow=11,SNR=3.6						
IDI	Anoyia	24.42	295	P	P	01 07 42.5	+0.9
	comp=N,5.3nm,0.6s,mb4.1,baz=2.6,slow=3.3,SNR=3.2						
BVAR	Borovoye Array	28.66	23	P	P	01 08 19.8	+0.3
	comp=N,1.1nm,0.8s,mb3.7,baz=222,slow=5.8,SNR=5.9						
AKASG	Malin Array Be	28.82	329	P	P	01 08 20.5	-0.5
	comp=N,0.2nm,0.2s,mb3.4,baz=124,slow=7.4,SNR=3.3						
BUR08	Bucovina Ar. S	28.95	321	*e*P	P	01 08 24.1	+1.9
BUR08	Bucovina Ar. S	28.95	321	*e*P	P	01 08 24.1	+1.9
MK31	Makanchi Array	30.32	43	*e*P	P	01 08 33.7	-0.7
MK31	Makanchi Array	30.32	43	*e*P	P	01 08 33.6	-0.7
MKAR	Makanchi Array	30.32	43	P	P	01 08 33.6	-0.7
	comp=N,0.4nm,0.5s,mb3.4,baz=232,slow=9.5,SNR=9.7						
KURK	Kurchatov	30.47	34	P	P	01 08 34.4	-1.2
	comp=N,1.5nm,0.8s,mb3.8,baz=232,slow=8.8,SNR=9.3						
KURK	Kurchatov	30.47	34	P	P	01 08 34.4	-1.2
ZAA0	Zalesovo Array	35.46	33	*e*P	P	01 09 18.7	-0.4
ZAA0	Zalesovo Array	35.46	33	*e*P	P	01 09 18.7	-0.4
ZALV	Zalesovo Beam	35.46	33	P	P	01 09 19.0	-0.1
	comp=N,3.9nm,0.7s,mb4.5,baz=241,slow=9.7,SNR=16						
HFS	Hagfors	41.60	332	P	P	01 10 10.5	0.0
	comp=N,2.7nm,0.6s,mb4.0,baz=128,slow=12,SNR=8.9						
NB2	NORSAR Subarra	43.12	332	P	P	01 10 22.2	-0.7
	comp=Z,1.8nm,0.8s,mb3.9,baz=124,slow=7.9						
NOA	NORSAR Array B	43.12	332	P	P	01 10 21.6	-1.3
	comp=Z,0.9nm,0.6s,mb3.7,baz=122,slow=8.3,SNR=6.3						
CMAR	Chiang Mai Arr	43.77	92	P	P	01 10 28.1	-0.6
	comp=Z,0.8nm,0.3s,mb3.9,baz=285,slow=9.6,SNR=5.3						
MDT	Midelt	48.83	291	P	P	01 11 09.7	+1.4
	comp=Z,1.7nm,0.8s,mb4.1,baz=94,slow=12,SNR=4.8						
TORD	Torodi Ar. Bea	49.16	263	P	P	01 11 11.1	0.0
	comp=Z,1.7nm,0.8s,mb4.2,baz=53,slow=7.1,SNR=17						
DBIC	Dimbokro	57.84	260	P	P	01 12 15.0	+0.3
	comp=Z,4.0nm,0.7s,mb4.6,baz=49,slow=6.7,SNR=6.1						
SCHQ	Schefferville	82.61	329	LR	LR	01 49 59.2	
	comp=Z,81nm,19.7s,baz=75,slow=35						
YKA	Yellowknife Ar	89.48	354	P	P	01 15 20.1	+0.8
	comp=Z,0.9nm,0.7s,mb4.2,baz=7.2,slow=5.1,SNR=23						
YKA	Yellowknife Ar	89.48	354	P	P	01 15 20.1	+0.7
WRA	Warramunga Arr	92.46	111	P	P	01 15 33.4	-0.5
	comp=Z,0.3nm,0.6s,mb3.8,baz=306,slow=4.1,SNR=7.2						
ASAR	Alice Springs	93.87	115	P	P	01 15 39.7	-0.7
	comp=Z,0.5nm,0.6s,mb4.2,baz=301,slow=4.4,SNR=5.9						

*IDC **18** 01:16:13.8±0.7, 2.62N×126.88E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/19, mbtmp4.2/10, Error ellipse: s-maj=48.3km s-min=14.2km az=66.0*

*ISCJB **18** 01:16:18.6±2.9, 2.66N±0.07×127.00E±0.09, h51km±27km, mb4.4/19, Error ellipse: s-maj=17.1km s-min=8.5km az=147.3*

*NEIC **18** 01:16:21.1±1.1, 2.62N×126.97E, h58km±11km, mb4.6/11, Error ellipse: s-maj=8.2km s-min=4.3km az=59.0*

ISC 18 01:16:21.0±2.0**, 2.62N**±0.07×**126.99E**±0.09**, h56**km±19km**,**
n44, σ0.56/41**, mb4.4**/19**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	11.27	288	*e*Pn	Pn	01 18 59.4	0.0
KAKA	Kakadu	16.16	161	*e*P	x	01 19 47.2	
	6.2nm,0.6s						
KSM	Kuching	16.71	266	Pn	Pn	01 20 11.2	-0.3
FITZ	Fitzroy Crossi	20.63	184	*e*P	P	01 20 57.3	+1.4
	4.2nm,0.6s						
FITZ	Fitzroy Crossi	20.63	184	*e*P	P	01 20 55.9	-0.1
	2.3nm,0.6s						
GUMO	Guam	20.76	57	P	P	01 20 56.9	-0.5
WRAB	Tennant Creek	23.55	162	*e*P	P	01 21 26.3	-0.1
	6.6nm,0.4s,mb4.4						
WRA	Warramunga Arr	23.55	162	P	P	01 21 26.1	-0.4
	6.2nm,0.5s,mb4.3,baz=342,slow=10,SNR=119						
WRA				PcP	PcP	01 25 11.0	+0.3
	0.3nm,0.6s,baz=324,slow=2.1,SNR=5.2						
WB2	Warramunga Arr	23.55	162	*e*P	P	01 21 26.1	-0.4
WB2	Warramunga Arr	23.55	162	*e*P	P	01 21 26.4	-0.2
MBWA	Marble Bar	24.68	196	*e*P	P	01 21 36.0	-0.7
KULM	Kulim	26.41	277	*e*P	P	01 21 52.9	+0.2
ASAR	Alice Springs	26.98	166	P	P	01 21 57.5	0.0
	1.4nm,0.5s,mb3.7,baz=352,slow=7.7,SNR=32						
ASAR				PcP	PcP	01 25 20.1	+1.9
	1.4nm,0.7s,baz=347,slow=2.4,SNR=9.9						
CMAR	Chiang Mai Arr	31.67	302	P	P	01 22 38.6	-0.6
	0.5nm,0.3s,mb3.8,baz=116,slow=9.7,SNR=6.2						
BBOO	Buckleboo	36.27	167	*e*P	P	01 23 19.4	+0.5
	7.5nm,1.6s,mb4.4						
STKA	Stephens Creek	37.00	159	*e*P	P	01 23 25.8	+0.6
	5.6nm,0.8s,mb4.5						
STKA	Stephens Creek	37.00	159	P	P	01 23 26.0	+0.7
	6.4nm,0.8s,mb4.5,baz=325,slow=8.6,SNR=16						
STKA				PcP	PcP	01 25 46.5	+1.1
	1.6nm,0.6s,baz=320,slow=4.0,SNR=5.1						
STKA	Stephens Creek	37.00	159	*e*P	P	01 23 25.9	+0.7
	0.9nm,0.6s,mb3.8						
BJT	Baijiatuau	38.50	347	P	P	01 23 38.7	+0.9
LSA	Lhasa	43.37	312	*e*P	P	01 24 17.2	-0.8
	4.5nm,0.6s,mb4.4						
TAPN	Taplejung	44.89	307	*e*P	P	01 24 30.7	+0.5
RAMN	Ramite	45.60	306	*e*P	P	01 24 36.5	+0.6
JIRN	Jiri	46.24	307	*e*P	P	01 24 41.5	+0.6
	13nm,0.5s,mb5.1						
GUN	Gumba	46.59	307	*e*P	P	01 24 44.0	+0.3
	16nm,0.5s,mb5.2						
PKI	Pulchoki	46.83	306	*e*P	P	01 24 45.1	-0.4
KKN	Kakani	47.02	306	*e*P	P	01 24 47.1	+0.1
DMN	Daman	47.09	306	*e*P	P	01 24 47.7	+0.1
GKN	Gorkha	47.63	306	*e*P	P	01 24 51.5	-0.3
KOLN	Koldanda	48.37	305	*e*P	P	01 24 57.9	+0.4
	18nm,0.6s,mb5.2						
SONM	Songino Array	48.43	342	P	P	01 24 58.1	+0.6
	0.9nm,0.7s,mb3.9,baz=162,slow=7.4,SNR=7.5						
SONM				PcP	PcP	01 26 24.2	+1.1
	1.1nm,0.8s,baz=162,slow=3.5,SNR=5.9						
DANN	Dangsing	48.48	306	*e*P	P	01 24 58.5	+0.2
	26nm,0.6s,mb5.5						
PETK	Petropavlovsk-	56.36	22	P	P	01 25 56.8	+0.6
	3.6nm,0.8s,mb4.5,baz=185,slow=12,SNR=3.5						
MK31	Makanchi Array	58.61	326	*e*P	P	01 26 12.1	-0.1
MKAR	Makanchi Array	58.61	326	P	P	01 26 12.3	+0.1
	1.5nm,0.5s,mb4.2,baz=121,slow=8.5,SNR=33						
ZALV	Zalesovo Beam	61.69	333	P	P	01 26 32.5	-0.7
	0.5nm,0.4s,mb4.0,baz=134,slow=6.4,SNR=3.7						
ZALV	Zalesovo Beam	61.69	333	P	P	01 26 32.5	-0.7
KURK	Kurchatov	62.81	328	*e*P	P	01 26 40.4	-0.3
	3.6nm,0.8s,mb4.5						
BVAR	Borovoye Array	68.39	327	P	P	01 27 16.9	+0.3
	0.9nm,0.6s,mb4.0,baz=154,slow=8.2,SNR=6.2						
BRVK	Borovoye	68.46	327	*e*P	P	01 27 15.7	-1.4
AKTK	Aktyubinsk	74.69	322	P	P	01 27 55.0	+0.4
AKTO	Aktyubinsk	74.69	322	P	P	01 27 55.0	+0.4
	3.4nm,0.6s,mb4.5,baz=107,slow=8.9,SNR=15						
ARU	Arti	76.01	328	*e*P	P	01 28 00.8	-1.3
	2.0nm,0.5s,mb4.3						
TORD	Torodi Ar. Bea	123.51	288	PKP	PKPdf	01 35 13.3	+0.2
	0.5nm,0.7s,baz=43,slow=2.6,SNR=3.6						
TORD	Torodi Ar. Bea	123.51	288	PKP	PKPdf	01 35 13.3	+0.2

*BJI **18** 01:38:46.5, 25.90S×177.44W, h172km, mB5.2, mb4.9*

*MOS **18** 01:38:46.4±1.2, 26.09S×177.61W, h165km, mb4.6/9, Error ellipse: s-maj=12.5km s-min=10.7km az=137.0*

*ISCJB **18** 01:38:47.5±1.0, 26.12S±0.06×177.63W±0.05, h177km±9km, mb4.7/39, Error ellipse: s-maj=11.1km s-min=5.6km az=153.0*

*IDC **18** 01:38:47.6±0.5, 25.94S×177.50W, h169km±3km, mb4.3/15, mb1 4.5/16, mb1mx4.5/17, mbtmp4.3/16, MS3.5/5, Ms1 3.5/5, ms1mx3.2/19, Error ellipse: s-maj=13.2km s-min=10.7km az=163.0*

*BGS **18** 01:38:48.3±2.7, 26.07S×177.55W, h176km, mb4.9(NEIC)*

*NEIC **18** 01:38:48.4±1.4, 26.07S×177.55W, h176km±12km, mb4.9/20, Error ellipse: s-maj=12.9km s-min=8.1km az=162.0*

*DJA **18** 01:39:00, 26.37S×178.54W, h215km, mb5.0/8*

ISC 18 01:38:47.9±1.1**, 26.06S**±0.07×**177.60W**±0.05**, h167**km±10km**,**
h166km±2.9km**:pP-P, n395, σ0.57**/283**, mb4.7**/39**, 97C-105D,**
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.19	185	P	Pn	01 39 36.6	-1.6
	82nm,0.3s,baz=97,slow=19,SNR=3.8						
RAO				S	Sn	01 40 17.8	+0.3
	382nm,0.3s,baz=61,slow=23,SNR=9.1						
RAO				LR	LR	01 40 30.2	
	comp=Z,234nm,21.0s,baz=9.8,slow=31						
RAO	Raoul Island	3.19	185	*e*Pn	Pn	01 39 36.5	-1.7
URZ	Urewera	12.95	199	P	Pn	01 41 47.9	+2.1
	11nm,0.3s,baz=317,slow=1.4,SNR=26						
URZ				S	Sn	01 43 55.1	-14
	6.3nm,0.3s,baz=194,slow=22,SNR=8.9						
AFI	Afiamalu	13.27	25	P	Pn	01 41 41.1	-8.9
	8.7nm,0.3s,baz=19,slow=6.1,SNR=7.8						
AFI				S	Sn	01 43 53.8	-23
	21nm,0.3s,baz=99,slow=23,SNR=7.7						
AFI	Afiamalu	13.27	25	P	Pn	01 41 42.2	-7.8
AFI				pmax	pmax		
	comp=Z,53nm,0.6s						
AFI	Afiamalu	13.27	25	Pn	Pn	01 41 42.2	-7.8
	comp=Z,53nm,0.6s						
DZM	Mont Dzumac	15.10	282	*e*Pn	Pn	01 42 17.8	+4.9
	comp=Z,74nm,0.8s						
RAR	Rarotonga	17.03	77	S	S	01 45 28.7	-16
	comp=Z,1.2nm,0.3s,baz=90,slow=20,SNR=1.9						
RAR				LR	LR	01 47 53.7	
	comp=Z,142nm,19.1s,baz=269,slow=32						
RAR	Rarotonga	17.03	77	P	Pn	01 42 36.3	0.0
RPZ	Rata Peaks	19.88	205	P	P	01 43 01.4	-4.8
	comp=Z,9.4nm,0.8s,baz=279,slow=3.0,SNR=4.2						
RPZ				S	S	01 46 31.6	-9.1
	comp=Z,9.6nm,0.5s,baz=338,slow=22,SNR=7.5						
RPZ	Rata Peaks	19.88	205	P	P	01 43 01.4	-4.8
RPZ				S	S	01 46 31.6	-9.1
HNR	Honiara	26.96	304	LR	LR	01 53 04.5	
	comp=Z,53nm,18.4s,baz=133,slow=32						
PPT	Papeete	27.31	78	LR	LR	01 51 27.3	
	comp=Z,110nm,20.9s,baz=136,slow=28						
ARMA	Armidale	27.41	254	*e*P	P	01 44 20.6	+2.7
EIDS	Eidsvold	28.19	264	*e*P	P	01 44 26.3	+1.4
	comp=Z,37nm,0.7s,mb5.2						
TAU	Tasmania Unive	33.15	231	P	P	01 45 08.4	+0.2
CTA	Charters Tower	33.70	273	*e*P	P	01 45 14.6	+1.3
	comp=Z,38nm,0.6s,mb5.3						
CTA	Charters Tower	33.70	273	P	P	01 45 15.0	+1.7
	comp=Z,52nm,0.7s,mb5.3,baz=100,slow=11,SNR=91						
CTA	Charters Tower	33.70	273	*e*P	P	01 45 14.6	+1.3
CTA				pmax	pmax		
	comp=Z,38nm,0.6s						
CTAO	Charters Tower	33.70	273	*e*P	P	01 45 14.7	+1.4
CTAO				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.3						
CTAO	Charters Tower	33.70	273	*e*P	P	01 45 14.7	+1.4
	comp=Z,50nm,0.7s,mb5.3						
STKA	Stephens Creek	36.01	251	*e*P	P	01 45 33.9	+0.9
	comp=Z,7.6nm,0.5s,mb4.6						
STKA	Stephens Creek	36.01	251	P	P	01 45 33.1	+0.1
	comp=Z,8.6nm,0.5s,mb4.6,baz=95,slow=10.0,SNR=25						
STKA				PcP	PcP	01 47 56.5	+0.7
	comp=Z,2.5nm,0.5s,baz=133,slow=6.9,SNR=3.4						
PMG	Port Moresby	37.26	290	P	P	01 45 42.8	-1.0
	comp=Z,3.6nm,0.4s,mb4.4,baz=266,slow=10,SNR=2.7						
PMG	Port Moresby	37.26	290	P	P	01 45 45.2	+1.4
ASAR	Alice Springs	43.87	262	P	P	01 46 37.7	-0.1
	comp=Z,8.4nm,0.4s,mb4.7,baz=103,slow=8.0,SNR=76						
ASAR				pP	pP	01 47 17.1	+2.6
	comp=Z,7.4nm,1.0s,baz=108,slow=8.1,SNR=3.7						
ASAR				PcP	PcP	01 48 20.6	-0.5
	comp=Z,2.7nm,0.7s,baz=104,slow=4.9,SNR=5.2						
ASAR				S	S	01 52 51.5	-4.9
	comp=Z,1.4nm,0.9s,baz=99,slow=15,SNR=4.1						
WB2	Warramunga Arr	44.45	268	*e*P	P	01 46 41.6	-0.9
WRAB	Tennant Creek	44.45	268	*e*P	P	01 46 41.9	-0.6
WRAB	Tennant Creek	44.45	268	*e*P	P	01 46 41.7	-0.8
	comp=Z,27nm,0.8s,mb4.9						
WRA	Warramunga Arr	44.46	268	P	P	01 46 42.0	-0.6
	comp=Z,29nm,0.4s,mb5.2,baz=104,slow=8.0,SNR=208						
WRA				S	S	01 53 05.6	+0.5
	comp=Z,1.8nm,0.9s,baz=25,slow=37,SNR=25						
FORT	Forrest	47.64	251	*e*P	P	01 47 06.3	-1.0
	comp=Z,68nm,0.5s,mb5.5						
SBA	Scott Base	52.37	184	*e*P	P	01 47 44.3	+2.1
VNDA	Vanda	52.43	186	P	P	01 47 44.1	+1.5
	comp=Z,6.2nm,0.7s,mb4.4,baz=355,slow=7.7,SNR=15						
VNDA	Vanda	52.43	186	*e*P	P	01 47 43.1	+0.4
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VNDA	Vanda	52.43	186	*e*P	P	01 47 43.1	+0.5
	comp=Z,6.1nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	52.85	266	*e*P	P	01 47 46.1	-0.5
	comp=Z,27nm,0.5s,mb5.2						
KLBR	Kellerberrin	56.18	248	*e*P	P	01 48 09.2	-1.3
	comp=Z,14nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	56.35	246	*e*P	P	01 48 11.8	+0.2
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NWAO	Narrogin (SRO)	56.35	246	*e*P	P	01 48 11.8	+0.2
	comp=Z,4.5nm,0.7s,mb4.4						
MBWA	Marble Bar	57.16	261	*e*P	P	01 48 16.4	-1.1
	comp=Z,5.0nm,0.6s,mb4.5						
MUN	Mundaring	57.39	247	*e*P	P	01 48 18.2	-0.8
CASY	Casey	59.14	207	*e*P	P	01 48 30.1	-0.4
CASY	Casey	59.14	207	*e*P	P	01 48 30.0	-0.5
	comp=Z,20nm,0.4s,mb5.3						
MJAR	Matsushiro Arr	74.91	324	P	P	01 50 09.4	-0.9
	comp=Z,1.3nm,0.4s,mb3.9,baz=160,slow=6.2,SNR=6.3						
MAW	Mawson	76.48	200	*e*P	P	01 50 19.4	+0.6
	comp=Z,16nm,0.5s,mb4.9						
MAW	Mawson	76.48	200	P	P	01 50 19.4	+0.6
	comp=Z,16nm,0.5s,mb4.9,baz=135,slow=6.4,SNR=108						
MAW	Mawson	76.48	200	*e*P	P	01 50 19.4	+0.6
MAW				pmax	pmax		
	comp=Z,16nm,0.5s						
YSS	Yuzh-Sakhalins	81.02	334	*e*P	P	01 50 44.4	+0.7
YSS				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.8						
KSRS	Korea Array	81.30	319	P	P	01 50 45.8	+0.3
	comp=Z,0.9nm,0.4s,mb3.7,baz=114,slow=6.0,SNR=3.8						
SYO	Syowa Base	81.40	193	⇓*i*P	P	01 50 43.4	-2.2
SYO	Syowa Base	81.40	193	⇓*e*P	P	01 50 44.8	-0.8
PETK	Petropavlovsk-	81.72	345	P	P	01 50 46.8	-0.5
	comp=Z,2.8nm,0.5s,mb4.2,baz=98,slow=9.5,SNR=11						
SNAA	Sanae	82.46	178	*e*P	P	01 50 48.7	-2.4
MURC	Murrieta	82.53	47	⇑P	P	01 50 52.0	0.0
	baz=82						
VNA3	Neumayer Olymp	82.59	176	*e*P	P	01 50 50.9	-0.9
VNA3				*e*		01 50 55.2	
VNA3				*e*		01 50 58.2	
VNA3				*e*	pP	01 51 33.3	+0.3
MONP	Monument Peak	82.61	48	⇓P	P	01 50 52.5	+0.1
	baz=82						
BFSC	Mount Baldy St	82.62	46	⇑P	P	01 50 52.8	+0.4
	baz=82						
VES	Vestal, Richgr	82.71	44	⇓P	P	01 50 52.8	-0.1
	baz=83						
EDW2	Edwards Air Fo	82.80	46	⇑P	P	01 50 53.2	-0.1
	baz=83						
ISA	Isabella	82.98	45	⇑P	P	01 50 54.2	-0.1
	baz=83						
ISA	Isabella	82.98	45	*e*P	P	01 50 54.6	+0.3
PFO	Pinyon Flat Ob	83.02	47	⇑P	P	01 50 54.7	+0.2
	baz=83						
VNA2	Neumayer--Watz	83.03	177	*e*P	P	01 50 53.8	-0.2
VNA2				*e*		01 50 57.2	
VNA2				*e*		01 51 00.1	
VNA2				*e*	pP	01 51 33.9	-1.4
VNA1	Neumayer--Stat	83.26	176	*e*P	P	01 50 55.0	-0.2
VNA1				*e*		01 50 59.1	
VNA1				*e*		01 51 01.8	
VNA1				*e*	pP	01 51 31.9	-4.6
CMB	Columbia Colle	83.31	42	*e*P	P	01 50 55.4	-0.5
CMB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
CMB	Columbia Colle	83.31	42	*e*P	P	01 50 55.4	-0.5
	comp=Z,4.0nm,0.8s,mb4.2						
BELC	Belle Mtn.	83.56	47	⇓P	P	01 50 57.4	+0.2
	baz=84						
NJ2	Nanjing	83.71	310	*e*P	P	01 50 56.6	-1.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
BC3	Big Chuckw Mtn	83.72	48	⇓P	P	01 50 58.3	+0.3
	baz=84						
GLA	Glamis	83.78	49	⇑P	P	01 50 58.6	+0.2
	baz=84						
GSC	Goldstone	83.83	46	⇓P	P	01 50 58.2	-0.4
	baz=84						
HEC	Hector,Ludlow	83.85	47	⇓P	P	01 50 58.6	-0.1
	baz=84						
MPMC	Manual Prospec	83.85	45	⇑P	P	01 50 58.9	+0.2
	baz=84						
R06C	Coleville	84.19	42	⇓P	P	01 51 00.6	+0.3
	baz=84						
IRM	Iron Mountain	84.22	48	⇓P	P	01 51 01.0	+0.4
	baz=84						
GMRC	Granite Mounta	84.25	47	⇑P	P	01 51 00.8	0.0
	baz=84						
113A	Mohawk Valley,	84.33	49	⇓P	P	01 51 01.5	+0.3
	baz=84						
WCN	Washoe City	84.51	41	⇑P	P	01 51 02.1	+0.2
	baz=84						
GRAC	Grapevine Rang	84.51	44	⇓P	P	01 51 01.8	-0.2
	baz=84						
BEKR	Beckwourth	84.52	41	⇓P	P	01 51 01.9	0.0
	baz=84						
214A	Organ Pipe Nat	84.52	51	⇓P	P	01 51 02.0	-0.1
	baz=84						
LDFC	Landfair	84.80	47	*e*P	P	01 51 04.3	+0.9
U10A	Ash Meadows, A	84.81	45	⇑P	P	01 51 03.9	+0.4
	baz=85						
NVAR	Mina Array Bea	84.83	43	P	P	01 51 02.8	-0.7
	comp=Z,8.2nm,1.0s,mb4.4,baz=223,slow=8.3,SNR=26						
NVAR				pP	pP	01 51 43.6	-1.4
	comp=Z,3.1nm,1.0s,baz=226,slow=8.1,SNR=4.3						
O06A	Flanigan	85.02	41	⇓P	P	01 51 04.4	-0.1
	baz=85						
V11A	Goodsprings	85.04	46	⇑P	P	01 51 04.8	+0.1
	baz=85						
S09A	Goldfield	85.05	44	⇓P	P	01 51 04.8	+0.1
	baz=85						
TPNV	Topopah Spring	85.19	45	⇑P	P	01 51 05.7	+0.3
	baz=85						
TPNV	Topopah Spring	85.19	45	*e*P	P	01 51 05.5	+0.2
PLCA	Paso Flores	85.20	133	P	P	01 51 04.9	-0.7
	comp=Z,4.6nm,0.8s,mb4.2,baz=241,slow=6.5,SNR=10						
PLCA	Paso Flores	85.20	133	*e*P	P	01 51 05.4	-0.2
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PLCA	Paso Flores	85.20	133	*e*P	P	01 51 05.4	-0.2
	comp=Z,3.7nm,0.8s,mb4.2						
Z14A	Wintersburg	85.24	49	⇓P	P	01 51 05.8	+0.1
	baz=85						
MDJ	Mudanjiang	85.27	325	P	P	01 51 05.5	-0.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,78nm,5.7s						
Q08A	Gabbs	85.32	43	⇓P	P	01 51 06.1	+0.1
	baz=85						
115A	Sonoran Desert	85.35	50	⇓P	P	01 51 06.3	0.0
	baz=85						
X13A	Yucca	85.36	48	⇑P	P	01 51 06.7	+0.4
	baz=85						
N06A	Buffalo Meadow	85.39	40	⇑P	P	01 51 06.1	-0.2
	baz=85						
U11A	Corn Creek	85.42	46	⇑P	P	01 51 06.7	+0.1
	baz=85						
HABR	Khabarovsk	85.45	331	*e*P	P	01 51 05.5	-0.9
HABR				*e*		01 54 28.3	
HABR				*e*		02 01 21.0	
HABR				*e**SS	sS	02 03 06.6	+31
HABR				MLR	MLR		
	comp=Z,203nm,19.0s						
R09A	Tonopah	85.46	43	⇑P	P	01 51 06.8	+0.1
	baz=85						
216A	Three Points,	85.49	51	⇑P	P	01 51 06.8	-0.2
	baz=85						
Y14A	Wickenburg	85.53	49	⇑P	P	01 51 06.9	-0.2
	baz=85						
S10A	Tonopah Range,	85.56	44	⇓P	P	01 51 07.0	-0.2
	baz=86						
O07A	Toulon	85.58	41	⇓P	P	01 51 07.1	-0.1
	baz=86						
W13A	Hualapai Mount	85.62	48	⇑P	P	01 51 07.6	+0.1
	baz=86						
116A	Eloy	85.64	51	⇓P	P	01 51 07.8	+0.1
	baz=86						
217A	Green Valley	85.82	52	⇑P	P	01 51 08.6	0.0
	baz=86,SNR=7.1						
X14A	Yava	85.91	48	⇑P	P	01 51 09.4	+0.4
	baz=86						
N07B	Gerlach	85.92	41	⇓P	P	01 51 09.4	+0.5
	baz=86						
R10A	Warm Springs	85.97	44	⇓P	P	01 51 09.6	+0.4
	baz=86						
U12A	Valley of Fire	85.97	46	⇓P	P	01 51 09.2	0.0
	baz=86						
V13A	Grand Canyon W	85.99	47	⇓P	P	01 51 09.1	-0.3
	baz=86						
Y15A	Casa Rosa Ranc	86.00	49	⇑P	P	01 51 09.4	0.0
	baz=86						
T11A	Corn Creek, Al	86.02	45	⇓P	P	01 51 09.3	-0.1
	baz=86						
K05A	Summer Lake	86.08	38	⇓P	P	01 51 09.4	-0.2
	baz=86						
O08A	Rochester Mine	86.09	41	⇓P	P	01 51 09.8	+0.1
	baz=86						

TUC Tucson 86.14 51 *e*P **P 01 51 10.6 +0.4**
TUC pmax pmax
comp=Z,14nm,1.4s,mb4.5
TUC Tucson 86.14 51 *e*P **P 01 51 10.6 +0.4**
comp=Z,14nm,1.4s,mb4.5
M07A Soldier Meadow 86.19 40 ⇑P **P 01 51 10.2 0.0**
baz=86
318A Bisbee 86.22 52 ⇓P **P 01 51 10.4 -0.2**
baz=86,SNR=6.9
W14A Seligman 86.22 48 ⇑P **P 01 51 10.9 +0.4**
baz=86
Z16A Peralta Trail, 86.27 50 ⇓P **P 01 51 11.0 +0.2**
baz=86
117A Oracle 86.31 51 ⇓P **P 01 51 11.3 +0.3**
baz=86,SNR=7.5
U13A Pakoon Wash 86.34 46 ⇓P **P 01 51 11.2 +0.2**
baz=86
X15A Humboldt 86.37 49 ⇑P **P 01 51 11.8 +0.6**
baz=86
N08A GE Springer Mi 86.41 41 ⇓P **P 01 51 11.1 -0.2**
baz=86
V14A Boquillas Ranc 86.44 47 ⇓P **P 01 51 11.7 +0.1**
baz=86
218A Dragoon 86.47 52 ⇑P **P 01 51 12.2 +0.3**
baz=86,SNR=6.0
S12A Delamar Landin 86.47 45 ⇓P **P 01 51 12.5 +0.8**
baz=86
L07A Adell 86.50 39 ⇓P **P 01 51 11.8 +0.1**
baz=86
Y16A Circle Bar Ran 86.54 50 ⇓P **P 01 51 12.4 +0.3**
baz=86,SNR=7.2
319A Douglas 86.69 53 ⇑P **P 01 51 13.3 +0.4**
baz=87
J06A Christmas Vall 86.83 38 ⇑P **P 01 51 14.2 +0.9**
baz=87
U14A Mt Trumbull 86.85 47 ⇓P **P 01 51 14.0 +0.5**
baz=87
X16A Lo Mia Camp, P 86.87 49 ⇓P **P 01 51 13.9 +0.3**
baz=87,SNR=6.2
Y17A Roosevelt 86.87 50 ⇓P **P 01 51 14.1 +0.4**
baz=87
118A Homack Ranch, 86.89 51 ⇓P **P 01 51 14.4 +0.6**
baz=87,SNR=7.3
CN2 Changchun 86.92 323 *e*P **P 01 51 13.8 +0.1**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.6
K07A Rock Creek Ran 86.98 39 ⇑P **P 01 51 14.3 +0.3**
baz=87
219A White Tail Can 87.04 52 ⇑P **P 01 51 15.0 +0.4**
baz=87
S13A Holt Ranch, En 87.09 46 ⇑P **P 01 51 15.4 +0.7**
baz=87
H05A Madras 87.16 37 ⇓P **P 01 51 15.7 +0.9**
baz=87
V15A Kaibab Nationa 87.17 48 ⇑P **P 01 51 15.9 +0.8**
baz=87
L08A Fields 87.17 40 ⇑P **P 01 51 15.1 +0.2**
baz=87
W16A Flagstaff 87.19 49 ⇑P **P 01 51 16.0 +0.8**
baz=87
M09A Marrel Ranch, 87.21 41 ⇓P **P 01 51 15.7 +0.5**
baz=87
X17A Forest Lakes 87.25 50 ⇓P **P 01 51 16.2 +0.6**
baz=87
Q12A Willow Creek R 87.34 44 ⇑P **P 01 51 16.0 +0.2**
baz=87
119A Ashpeak Ranch, 87.43 52 ⇑P **P 01 51 17.1 +0.6**
baz=87
K08A Mann Creek Ran 87.44 39 ⇑P **P 01 51 16.1 -0.1**
baz=87
U15A North Rim 87.44 47 ⇑P **P 01 51 16.9 +0.5**
baz=87,SNR=5.6
L09A Wilkinson Ranc 87.46 40 ⇓P **P 01 51 16.6 +0.3**
baz=87
Y18A Canyon Day Jun 87.48 50 ⇓P **P 01 51 17.4 +0.8**
baz=87,SNR=8.2
O11A Cowboy Ranch, 87.49 43 ⇑P **P 01 51 16.8 +0.3**
baz=87
WUAZ Wupatki 87.53 48 ⇑P **P 01 51 17.4 +0.5**
baz=87
H06A Lindquist Farm 87.70 37 ⇓P **P 01 51 17.3 -0.1**
baz=88
I07A Izee 87.73 38 ⇓P **P 01 51 17.6 +0.1**
baz=88
Q13A Wheeler Ranch, 87.80 44 ⇓P **P 01 51 17.9 -0.1**
baz=88
M10A I.L. Ranch, Tu 87.81 41 ⇑P **P 01 51 18.0 0.0**
baz=88
K09A Rome 87.85 40 ⇑P **P 01 51 18.1 -0.1**
baz=88
H07A Lands Inn, Kim 88.03 37 ⇑P **P 01 51 19.1 +0.2**
baz=88
U16A Tuba City 88.05 48 ⇓P **P 01 51 19.7 +0.4**
baz=88
P13A Bates Ranch, G 88.10 44 ⇓P **P 01 51 19.7 +0.3**
baz=88
Y19A Nutrioso 88.12 51 ⇑P **P 01 51 20.1 +0.4**
baz=88,SNR=5.4
O12A Currie 88.13 43 ⇓P **P 01 51 19.2 -0.3**
baz=88
I08A Drewsey 88.14 38 ⇓P **P 01 51 19.5 +0.1**
baz=88
E05A Randle 88.16 35 ⇑P **P 01 51 19.9 +0.4**
baz=88
L10A Juniper Basin 88.19 41 ⇑P **P 01 51 19.5 -0.3**
baz=88
J09A Fry Pan Ranch, 88.24 39 ⇓P **P 01 51 19.9 -0.1**
baz=88
Q14A Sevier Lake (B 88.29 45 ⇑P **P 01 51 20.7 +0.4**
baz=88
N12A Clover Valley, 88.30 42 ⇓P **P 01 51 20.4 +0.1**
baz=88
X19A St. Johns 88.35 50 ⇑P **P 01 51 21.0 +0.3**
baz=88
K10A MacKenzie Ranc 88.39 40 ⇓P **P 01 51 20.3 -0.4**
baz=88
G07A Ruggs Ranch, H 88.41 37 ⇓P **P 01 51 21.0 +0.3**
baz=88
D05A Enumclaw 88.46 34 ⇓P **P 01 51 22.2 +1.3**
baz=88
E06A Yakima 88.55 35 ⇑P **P 01 51 21.6 +0.3**
baz=88
V18A Ganado 88.61 49 ⇓P **P 01 51 22.0 +0.1**
baz=88
S16A Weppner Ranch, 88.64 46 ⇑P **P 01 51 22.4 +0.4**
baz=88
L11A Cat Creek Ranc 88.67 41 ⇓P **P 01 51 22.0 0.0**
baz=88
T17A Navajo Res., N 88.75 47 ⇑P **P 01 51 22.7 +0.1**
baz=89
P14A Drum Mountains 88.77 44 ⇑P **P 01 51 22.4 -0.1**
baz=89
G08A Pilot Rock 88.80 37 ⇑P **P 01 51 22.4 -0.2**
baz=89,SNR=5.5
Q15A Fillmore 88.86 45 ⇓P **P 01 51 23.2 +0.2**
baz=89
K11A Parker Ranch, 88.88 40 ⇓P **P 01 51 22.7 -0.3**
baz=89
C05A Tolt Reservoir 88.95 34 ⇑P **P 01 51 23.2 0.0**
baz=89
H09A Durkee 89.12 38 ⇓P **P 01 51 24.2 +0.2**
baz=89
B05A Bryant 89.13 33 ⇓P **P 01 51 23.9 -0.1**
baz=89
M13A Montello 89.13 42 ⇑P **P 01 51 23.9 -0.3**
baz=89
E07A Sunnyside 89.14 36 ⇓P **P 01 51 24.1 0.0**
baz=89
F08A Pendleton 89.23 37 ⇓P **P 01 51 24.4 -0.2**
baz=89
DUG Dugway 89.28 44 ⇓P **P 01 51 25.3 +0.4**
baz=89
MFID Camas Ranch 89.39 40 ⇑P **P 01 51 25.1 -0.3**
baz=89
G09A Cove 89.44 38 ⇓P **P 01 51 25.7 +0.2**
baz=89
T18A Mexican Hat 89.44 48 ⇓P **P 01 51 25.8 0.0**
baz=89
K12A Draper Farm, C 89.45 41 ⇑P **P 01 51 26.0 +0.3**
baz=89
D07A Quincy 89.50 35 ⇑P **P 01 51 26.2 +0.5**
baz=89
ETW Entiat 89.58 35 *e*P **P 01 51 26.2 +0.1**
B06A Marblemount 89.60 34 ⇓P **P 01 51 25.9 -0.3**
baz=89
I11A Placerville 89.61 39 ⇓P **P 01 51 26.4 0.0**
baz=90
F09A S2 Ranch, Elgi 89.64 37 ⇓P **P 01 51 26.5 +0.1**
baz=90
GYA Guiyang 89.71 300 P **P 01 51 26.9 -0.4**
GYA PP PP 01 55 04.8 +2.7
GYA S S 02 01 53.3 -12
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,70nm,5.2s
J12A Stokes Ranch, 89.71 40 ⇓P **P 01 51 26.8 0.0**
baz=90
M14A Sheep Mountain 89.72 43 ⇑P **P 01 51 27.0 0.0**
baz=90
TXAR Lajitas Array 89.75 57 P **P 01 51 27.2 -0.2**
comp=Z,1.7nm,0.9s,mb4.0,baz=220,slow=7.6,SNR=16
TXAR pP pP 01 52 08.6 -0.7
comp=Z,0.6nm,0.9s,baz=216,slow=7.7,SNR=2.7
C07A Waterville 89.77 35 ⇓P **P 01 51 26.9 -0.1**
baz=90
G10A Bishop Farm, J 89.81 38 ⇑P **P 01 51 27.0 -0.3**
baz=90
D08A Wollman Farm, 89.96 36 ⇑P **P 01 51 27.9 0.0**
baz=90
E09A Wood Farm, Sta 90.02 36 ⇓P **P 01 51 27.8 -0.4**
baz=90,SNR=5.4
H11A Donnelly 90.07 39 ⇓P **P 01 51 27.9 -0.6**
baz=90,SNR=6.8
BJI Beijing 90.09 315 P **P 01 51 28.9 +0.2**
BJI S S 02 01 54.8 -13
BJI AMB AMB
comp=Z,11nm,0.8s,mb4.8
BJI AMB AMB
comp=Z,73nm,3.2s
BJI LR LR
comp=N,293nm,18.8s
BJI LR LR
comp=E,281nm,18.8s
BJI LR LR
comp=Z,34nm,28.1s
SRU San Rafael 90.11 46 ⇑P **P 01 51 28.8 -0.1**
baz=90
SRU San Rafael 90.11 46 *e*P **P 01 51 29.2 +0.3**
F10A Beach Ranch, E 90.18 37 ⇑P **P 01 51 28.2 -0.8**
baz=90,SNR=5.6
M15A Larsen Ranch, 90.24 43 ⇑P **P 01 51 29.3 -0.1**
baz=90
B07A Winthrop 90.25 34 ⇓P **P 01 51 29.0 -0.2**
baz=90
D09A Jones Farm, Ri 90.28 36 ⇑P **P 01 51 29.3 -0.2**
baz=90
HLID Hailey 90.30 40 ⇓P **P 01 51 29.8 +0.2**
baz=90
J13A Cove Ranch, Pi 90.34 41 ⇑P **P 01 51 30.0 +0.2**
baz=90
G11A Walters Elk Ra 90.35 38 ⇑P **P 01 51 28.9 -0.9**
baz=90,SNR=9.8
Q18A Rafter H Ranch 90.36 46 ⇓P **P 01 51 29.2 -0.8**
baz=90
K14A Jones Ranch, D 90.43 42 ⇑P **P 01 51 30.1 -0.1**
baz=90
A07A Ashnola River, 90.50 34 ⇓P **P 01 51 30.6 +0.3**
baz=90
E10A Myers Farm, Un 90.56 37 ⇑P **P 01 51 29.8 -0.9**
baz=90
B08A Colville Reser 90.58 35 ⇑P **P 01 51 30.4 -0.4**
baz=90
O17A Robson Place 90.59 45 ⇑P **P 01 51 31.2 +0.2**
baz=90
L15A Malad City 90.59 43 ⇑P **P 01 51 30.1 -0.9**
baz=90
ANMO Albuquerque 90.60 51 *e*P **P 01 51 30.8 -0.4**
ANMO pmax pmax
comp=Z,6.0nm,1.5s
ANMO Albuquerque 90.60 51 *e*P **P 01 51 30.6 -0.6**
comp=Z,2.8nm,1.3s,mb4.1
H12A Diamond D Ranc 90.63 39 ⇑P **P 01 51 30.6 -0.5**
baz=90,SNR=8.0
M16A Huntsville 90.66 43 ⇑P **P 01 51 31.2 -0.1**
baz=90
I13A Wildhorse Cree 90.68 40 ⇓P **P 01 51 31.6 +0.2**
baz=90
J14A Carey 90.68 41 ⇑P **P 01 51 31.7 +0.3**
baz=90
C09A Chrisman Ranch 90.77 35 ⇑P **P 01 51 31.6 0.0**
baz=91
D10A Wagner Farm, O 90.83 36 ⇑P **P 01 51 31.4 -0.6**
baz=91
Q19A Hogan Spring (90.85 46 ⇓P **P 01 51 31.7 -0.6**
baz=91
E11A Bogner Ranch, 90.97 37 ⇑P **P 01 51 30.7 -2.0**
baz=91
H13A Challis 90.98 40 ⇑P **P 01 51 32.8 +0.1**
baz=91
A08A Turner Farm, O 90.99 34 ⇓P **P 01 51 32.4 -0.3**
baz=91
I14A Mackay 91.08 41 ⇓P **P 01 51 33.8 +0.6**
baz=91
F12A Elk City 91.13 38 ⇑P **P 01 51 32.8 -0.6**
baz=91,SNR=7.0
L16A Fish Haven 91.18 43 ⇓P **P 01 51 33.2 -0.5**
baz=91
B09A Rice 91.23 35 ⇓P **P 01 51 33.0 -0.8**
baz=91
G13A Cobalt 91.31 39 ⇓P **P 01 51 33.6 -0.7**
baz=91
D11A Klaveano Farm, 91.33 37 ⇓P **P 01 51 33.3 -1.0**
baz=91
M17A Scullys Gap (B 91.35 44 ⇓P **P 01 51 34.1 -0.4**
baz=91
A09A Danville 91.35 34 ⇓P **P 01 51 34.5 +0.1**
baz=91
E12A Beaver Dam Sad 91.36 38 ⇑P **P 01 51 33.6 -0.9**
baz=91
Q20A Ridgley Place, 91.48 47 ⇑P **P 01 51 34.7 -0.5**
baz=91
H14A Leadore 91.53 40 ⇓P **P 01 51 35.1 -0.2**
baz=91
R21A Cimarron 91.66 48 ⇑P **P 01 51 36.1 +0.1**
baz=92
F13A Darby 91.67 39 ⇑P **P 01 51 35.4 -0.5**
baz=92
N18A Larsen Ranch, 91.69 45 ⇓P **P 01 51 35.5 -0.7**
baz=92
XAN Xi'an 91.78 307 P **P 01 51 37.6 +0.9**
XAN PP PP 01 55 20.3 +2.0
XAN S S 02 02 15.8 -7.5
XAN SS SS 02 08 31.8 -3.9
XAN AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
XAN LR LR
comp=E,20nm,27.6s
XAN LR LR
comp=Z,41nm,23.7s
C11A Tepee Creek (N 91.86 36 ⇑P **P 01 51 36.5 -0.2**
baz=92
KMI Kunming 92.18 297 P **P 01 51 38.8 0.0**
KMI PP PP 01 55 24.1 +2.4
KMI S S 02 02 16.0 -11
KMI AMB AMB
comp=Z,8.0nm,0.6s,mb4.9
KMI AMB AMB
comp=Z,90nm,3.6s
KMI LR LR
comp=N,106nm,16.5s
KMI LR LR
comp=E,79nm,18.4s
KMI LR LR
comp=Z,73nm,17.1s
CMAR Chiang Mai Arr 92.30 289 P **P 01 51 40.2 +0.7**
comp=Z,1.9nm,0.3s,mb4.5,baz=142,slow=3.6,SNR=19
CMAR pP pP 01 52 21.5 +0.1
comp=Z,1.0nm,0.3s,baz=123,slow=3.3,SNR=1.7
G15A Dillon 92.36 40 ⇓P **P 01 51 38.9 -0.2**
baz=92,SNR=5.4
J17A Brown Place, J 92.38 42 ⇑P **P 01 51 38.9 -0.4**
baz=92
K18A Toltan Ranch, 92.38 43 ⇓P **P 01 51 39.1 -0.2**
baz=92
CHTO Chiang Mai 92.46 290 *e*P **P 01 51 41.0 +0.8**
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
CHTO Chiang Mai 92.46 290 *e*P **P 01 51 41.0 +0.7**
comp=Z,3.6nm,0.7s,mb4.5
A11A Hall Mountain, 92.49 35 ⇓P **P 01 51 39.5 -0.1**
baz=92
N20A Spence Gulch, 92.51 45 ⇓P **P 01 51 40.1 +0.1**
baz=92
J18A Kendall Valley 92.71 43 ⇓P **P 01 51 40.4 -0.4**
baz=93,SNR=8.3
F15A Butte 92.74 39 ⇑P **P 01 51 40.0 -0.8**
baz=93
BW06 Boulder Array 92.75 43 ⇑P **P 01 51 40.6 -0.4**
baz=93
PDAR Pinedale Array 92.75 43 P **P 01 51 40.1 -0.8**
comp=Z,2.1nm,0.8s,mb4.3,baz=216,slow=3.1,SNR=17
PDAR pP pP 01 52 21.4 -1.6
comp=Z,1.6nm,0.9s,baz=203,slow=2.4,SNR=5.3
G16A Moss Hill, Enn 92.79 40 ⇑P **P 01 51 41.0 -0.1**
baz=93
H16A Russell Place, 92.81 41 ⇑P **P 01 51 41.6 +0.4**
baz=93
A12A Yaak River Ran 92.84 36 ⇓P **P 01 51 41.1 -0.1**
baz=93
I18A Diamond G Ranc 93.11 42 ⇑P **P 01 51 42.2 -0.4**
baz=93
HHC Hu-ho-hao-te 93.48 314 *e*P **P 01 51 44.9 +0.5**
HHC PP PP 01 55 36.0 +4.5
HHC *e*S S 02 02 27.0 -11
HHC SS SS 02 08 56.3 -3.5
HHC AMB AMB
comp=Z,8.0nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,67nm,4.3s
HHC LR LR
comp=N,180nm,20.2s
HHC LR LR
comp=E,177nm,16.6s
HHC LR LR
comp=Z,75nm,15.5s
COLA College 93.54 12 *e*P **P 01 51 42.8 -1.3**
N22A Wattenberg Ran 93.66 46 ⇓P **P 01 51 45.4 +0.2**
baz=94
M22A Cedar Creek Ra 93.88 45 ⇓P **P 01 51 46.4 +0.2**
baz=94
CD2 Chengdu 94.08 302 P **P 01 51 48.6 +1.2**
CD2 PP PP 01 55 41.1 +4.7
CD2 S S 02 02 33.8 -10
CD2 SS SS 02 09 05.6 -3.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,90nm,4.9s
CD2 LR LR
comp=N,240nm,6.0s
CD2 LR LR
comp=Z,160nm,4.9s
NNA Nana 94.25 105 LR LR 02 28 38.7
comp=Z,185nm,18.1s,baz=53,slow=32
BILL Bilibino 94.58 354 P **P 01 51 49.0 +0.2**
BILL pmax pmax
comp=Z,6.0nm,1.4s,mb4.6
LZH Lanzhou 96.41 307 *e*P **P 01 51 59.0 +1.1**
LZH AMB AMB
comp=Z,13nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,57nm,4.2s
YKA Yellowknife Ar 101.39 25 P Pdif 01 52 17.9 -2.2
comp=Z,0.3nm,0.8s,baz=240,slow=3.7,SNR=3.8
YKA PKKPbc PKKPbc 02 08 26.8 -3.2
comp=Z,0.5nm,0.8s,baz=39,slow=2.5,SNR=8.6
WMQ Urumqi 110.79 310 *e*PKP PKiKP 01 56 59.3 -1.5
ZALV Zalesovo Beam 115.00 320 PKP PKiKP 01 57 06.8 -1.6
comp=Z,2.0nm,0.7s,baz=82,slow=0.4,SNR=10.0
ZALV Zalesovo Beam 115.00 320 PKP PKiKP 01 57 06.8 -1.6
MK31 Makanchi Array 115.21 312 *e*PKIKP PKPdf 01 57 07.8 -1.3
MKAR Makanchi Array 115.21 312 PKP PKPdf 01 57 07.4 -1.7
comp=Z,2.2nm,0.7s,baz=145,slow=1.0,SNR=18
MKAR pPKP 01 57 51.3
comp=Z,0.7nm,0.6s,baz=69,slow=3.1,SNR=2.9
MKAR PKKPbc PKKPbc 02 07 44.6 -0.8
comp=Z,0.3nm,0.5s,baz=256,slow=3.9,SNR=6.4
MKAR Makanchi Array 115.21 312 PKIKP PKPdf 01 57 07.4 -1.7
MKAR 01 57 51.3
OPO Ambohidratompo 117.85 229 PKP PKPdf 01 57 14.7 -0.4
comp=Z,3.0nm,0.7s,baz=46,slow=0.3,SNR=7.8
KURK Kurchatov 118.26 315 *i* PKIKP PKPdf 01 57 13.1 -1.8
TKM2 Tokmak 2 119.17 306 *e*PKIKP PKPdf 01 57 15.4 -1.5
AAK Ala-Archa 119.93 306 *e*PKIKP PKPdf 01 57 17.7 -0.6
AML Almayashu 120.44 305 *e*PKPdf PKPdf 01 57 18.9 -0.4
EKS2 Erkin-Say 120.46 306 *e*PKPdf PKPdf 01 57 18.9 -0.4
BOSA Boshof 121.37 204 PKP PKPdf 01 57 21.2 -0.5
comp=Z,5.8nm,0.9s,baz=162,slow=6.3,SNR=6.8
BOSA Boshof 121.37 204 PKP PKPdf 01 57 21.2 -0.5
KBL Kabul 122.75 296 *e*PKIKP PKPdf 01 57 24.0 0.0
BRVK Borovoye 123.56 318 *e*PKIKP PKPdf 01 57 23.3 -1.7
ARU Arti 129.91 323 *i* PKIKP PKPdf 01 57 36.0 -1.0
ARU 01 59 53.0
ARU SS SS 02 16 56.2 -5.9
ARU Arti 129.91 323 *e*PKPdf PKPdf 01 57 37.0 0.0
LSZ Lusaka 131.85 214 PKP PKPdf 01 57 41.2 -0.8
comp=Z,4.1nm,0.8s,baz=167,slow=2.8,SNR=11
TSUM Tsumeb 132.65 200 PKP PKPdf 01 57 44.0 +0.6
comp=Z,2.9nm,0.9s,baz=240,slow=9.0,SNR=3.0
ARCES ARCESS Array B 134.43 349 PKP PKPdf 01 57 43.9 -1.3
comp=Z,4.9nm,0.6s,baz=350,slow=1.5,SNR=5.4
JOF Joensuu 138.50 340 *ep* PKPdf 01 57 53.5 +0.6
comp=Z,4.6nm,0.5s
KAF Kangasniemi 140.56 343 *ep* PKPdf 01 57 57.3 +0.7
comp=Z,3.5nm,0.5s
OBN Obninsk 141.74 329 *i* PKIKP PKPdf 01 57 56.0 -3.0
OBN pmax pmax
comp=Z,4.0nm,0.7s
HAKT HAKKARI 143.34 299 *i* P PKPdf 01 58 05.8 +3.4
DBOC Borcka 144.28 305 *i* P PKPdf 01 58 01.5 -2.4
HOMI Horasan 144.37 303 *i* P pPKPdf 01 58 38.3 -10
NOA NORSAR Array B 144.52 353 PKP PKPdf 01 58 01.5 -2.2
comp=Z,23nm,0.8s,baz=13,slow=2.3,SNR=72
NOA pPKP pPKPdf 01 58 45.5 -2.1
comp=Z,2.3nm,0.8s,baz=15,slow=5.0,SNR=1.9
NAO01 NORSAR Array S 144.75 353 *e*PKPbc PKPdf 01 58 02.6 -1.5
BNGL BINGOL 145.14 301 *i* P PKPbc 01 58 04.9 -0.5
IDID Didziasalis 145.79 335 *e*P PKPdf 01 58 06.3 +0.3
ISAL Salakas 145.83 336 *e*P PKPdf 01 58 06.7 +0.6
KONO Kongsberg 146.06 353 *e*PKP2 PKPab 01 58 06.4 -2.0
AKASG Malin Array Be 147.96 327 PKPbc PKPbc 01 58 11.9 -1.2
comp=Z,7.8nm,0.5s,baz=44,slow=3.9,SNR=35
AKASG pPKPbc pPKPbc 01 58 56.4 -0.2
comp=Z,5.8nm,0.7s,baz=44,slow=3.8,SNR=4.2
AKBB Malin Array Si 147.96 327 *e*PKIKP PKPdf 01 58 10.7 +0.9
KIEV Kiev 147.97 327 *e*PKIKP PKPdf 01 58 11.4 +1.5
KIEV *e* 01 58 14.9
KIEV Kiev 147.97 327 *e*PKPdf PKPdf 01 58 11.4 +1.5
KIEV *e*PKPbc PKPbc 01 58 14.9 +1.7
KIEV *e*PKPab PKPab 01 58 18.3 +2.0
KAC Achnashellach 148.11 8 *e*P PKPbc 01 58 12.4 -0.9
SUW Suwalki 148.11 337 *e*PKP PKPbc 01 58 12.7 -0.7
SUW Suwalki 148.11 337 *e*PKP PKPbc 01 58 12.7 -0.7
GZT Gaziantep 148.21 299 *i* P PKPbc 01 58 13.2 -1.0
KPL Plockton 148.22 8 *e*P PKPbc 01 58 12.6 -1.0
MDO Dochfour 148.28 7 *e*P PKPbc 01 58 12.2 -1.6
ASF Kabal al Asfar 149.34 290 PKPbc PKPbc 01 58 17.1 -0.2
comp=Z,8.2nm,0.8s,baz=340,slow=1.1,SNR=16
EAB Aberfoyle 149.51 7 *e*P PKPbc 01 58 15.7 -1.2
COP Copenhagen 149.51 349 *i* P PKPbc 01 58 16.4 -0.5
comp=Z,9.2nm,0.6s
EBH Black Hill 149.54 7 *e*P PKPbc 01 58 16.1 -0.9
BSD Bornholm Skovb 149.56 346 ⇑ *i*P PKPbc 01 58 16.0 -1.0
comp=Z,8.0nm,0.8s
EAU Auchinoon 149.94 7 *e*P PKPbc 01 58 17.1 -0.8
ESY Stoneypath 149.95 6 *e*P PKPbc 01 58 16.8 -1.1
EBL Broad Law 150.06 6 *e*P PKPbc 01 58 17.1 -1.0
XSO Sourhope Farm 150.40 5 *e*P PKPbc 01 58 17.9 -1.2
EKA Eskdalemuir Ar 150.48 6 PKPbc PKPbc 01 58 17.1 -2.2
comp=Z,2.6nm,0.7s,baz=216,slow=0.7,SNR=6.7
EKA PKPab PKPab 01 58 25.1 -1.3
comp=Z,3.3nm,0.7s,baz=319,slow=2.6,SNR=7.0
MMAI Mount Meron Ar 150.54 291 PKPbc PKPbc 01 58 20.4 +0.3
comp=Z,15nm,0.5s,baz=78,slow=5.5,SNR=62
MMAI PKPab PKPab 01 58 26.5 -0.9
comp=Z,0.8nm,0.3s,baz=93,slow=6.0,SNR=7.1
MMAI pPKPbc pPKPbc 01 59 03.9 +0.1
comp=Z,6.9nm,0.7s,baz=71,slow=3.6,SNR=4.4
BR131 Keskin Array S 150.61 305 *e*PKPdf PKPdf 01 58 16.0 +1.6
BR131 *e*PKPbc PKPbc 01 58 19.5 -0.6
BR131 *e*PKPab PKPab 01 58 27.7 +0.3
BRTR Keskin Array B 150.61 305 PKPbc PKPbc 01 58 19.4 -0.7
comp=Z,8.5nm,0.8s,baz=142,slow=4.5,SNR=28
BRTR PKPab PKPab 01 58 27.8 +0.4
comp=Z,7.8nm,0.7s,baz=110,slow=3.9,SNR=14
GKP Gorka Klasztor 150.65 342 *e*PKP PKPbc 01 58 19.3 -0.4
GKP Gorka Klasztor 150.65 342 *e*PKP PKPbc 01 58 19.3 -0.4
BEL Belsk 150.73 336 *e*PKP PKPbc 01 58 19.7 -0.2
GAL1 Galloway 150.76 8 *e*P PKPbc 01 58 17.7 -2.2
XAL Allendale 151.03 6 *e*P PKPbc 01 58 19.3 -1.2

EIL	Elat	151.05	285	PKPbc	PKPbc	01 58 21.4	+0.1
	comp=Z,16nm,0.7s,baz=34,slow=2.0,SNR=13						
EIL				pPKPbc	pPKPbc	01 59 05.5	+0.4
	comp=Z,11nm,0.9s,baz=15,slow=4.9,SNR=3.5						
EIL	Elat	151.05	285	PKPbc	PKPbc	01 58 21.4	+0.1
EIL				pPKPbc	pPKPbc	01 59 05.5	+0.4
TLCR		151.48	319	⇓iP	PKPbc	01 58 21.5	-0.4
KWP	Kalwaria	151.70	332	ePKP	PKPbc	01 58 22.0	-0.3
KWP	Kalwaria	151.70	332	⇑iP	PKPbc	01 58 22.2	0.0
KWP	Kalwaria	151.70	332	ePKP	PKPbc	01 58 22.0	-0.2
BUR08	Bucovina Ar. S	151.96	326	PKPdf	PKPdf	01 58 18.9	+2.7
BUR08				ePKPbc	PKPbc	01 58 22.7	-0.1
BUR08				ePKPab	PKPab	01 58 34.8	+2.0
BURAR	Bucovina Array	151.97	326	⇑iP	PKPbc	01 58 23.0	+0.1
CSS	Prodhromos	152.00	296	ePKPbc	PKPbc	01 58 22.3	-1.1
CSS				ePKPab	PKPab	01 58 33.8	+0.4
KDHN	Kadinhani	152.10	304	i P	PKPdf	01 58 18.4	+1.6
HARR	Harsova	152.28	319	⇓iP	PKPbc	01 58 23.8	+0.1
OJC	Ojcow	152.41	335	ePKP	PKPbc	01 58 23.2	-0.6
STHS	Stebnicka Huta	152.48	333	ePKIKP	PKPbc	01 58 24.0	0.0
STHS				e		01 58 35.0	
STHS	Stebnicka Huta	152.48	333	ePKP	PKPbc	01 58 24.0	0.0
STHS				e		01 58 35.0	
STHS				e		01 58 57.8	
UZH	Uzhgorod	152.63	331	ePKIKP	PKPdf	01 58 11.7	-5.5
UZH				i		01 58 32.0	
UZH				e		01 59 13.0	
ESKT	Eskisehir	152.71	307	i P	PKPdf	01 58 18.5	+0.9
CRVS	Cervenica-Dubn	152.79	332	ePKP	PKPbc	01 58 24.0	-0.7
CRVS				e		01 58 35.9	
NIE	Niedzica	152.85	334	ePKP	PKPbc	01 58 25.0	+0.2
MLR	Muntele Rosu	152.95	322	PKPbc	PKPbc	01 58 24.0	-1.2
	comp=Z,2.2nm,0.7s,baz=360,slow=10.0,SNR=3.2						
KSP	Ksiaz	153.06	340	ePKP	PKPbc	01 58 25.2	0.0
KSP				e		01 58 37.5	
KSP	Ksiaz	153.06	340	ePKPbc	PKPbc	01 58 25.0	-0.2
KSP				ePKPab	PKPab	01 58 37.4	+0.1
OKC	Ostrava-Krasne	153.32	337	ePKPab	PKPab	01 58 38.6	+0.2
UPC	Upice	153.44	340	ePKPab	PKPab	01 58 39.0	+0.1
DPC	Dobruska-Polom	153.49	340	ePKPab	PKPab	01 58 39.2	+0.1
KECS	Kecovo	153.52	332	ePKP	PKPbc	01 58 25.3	-1.0
KECS				e		01 58 38.6	
CLL	Collm	153.53	345	⇑iPKPbc	PKPbc	01 58 25.5	-0.7
	comp=Z,11nm,0.8s						
CLL				⇓iPKPab	PKPab	01 58 38.5	-0.7
	comp=Z,11nm,0.8s						
CLL				epPKPbc	pPKPbc	01 59 10.0	0.0
CLL				epPKPab	pPKPab	01 59 22.0	+0.5
BRG	Berggiesshubel	153.70	343	ePKIKP	PKPdf	01 58 18.6	0.0
BRG				i		01 58 39.4	
BRG	Berggiesshubel	153.70	343	ePKP	PKPdf	01 58 18.6	-0.1
	comp=Z,4.3nm,1.0s						
BRG				i		01 58 26.1	
	comp=Z,7.5nm,0.6s						
BRG				i		01 58 39.4	
	comp=Z,8.7nm,0.9s						
BRG				e		01 59 10.1	
	comp=Z,5.0nm,1.1s						
DRGR		153.78	327	⇓iP	PKPdf	01 58 23.2	+4.3
PVCC	Panska Ves	153.84	342	ePKPab	PKPab	01 58 40.6	0.0
VYHS	Vyhne	154.18	334	ePKP	PKPab	01 58 41.8	-0.3
PRU	Pruhonice	154.34	342	ePKPab	PKPab	01 58 42.3	-0.4
NKC	Novy Kostel	154.66	345	ePKPab	PKPab	01 58 43.8	-0.3
SMOL	Smolenice	154.69	336	ePKP	PKPab	01 58 44.9	+0.6
GZR	Gura Zlata	154.72	325	⇑iP	PKPdf	01 58 27.8	+7.5
KHC	Kasperske Hory	155.38	342	ePKPab	PKPab	01 58 47.3	+0.1
GRA1	Grafenberg Arr	155.44	346	ePKP	PKPab	01 58 47.5	+0.1
GRF	Grafenberg Arr	155.44	346	ePKP	PKPab	01 58 47.5	+0.1
GERES	GERESS Array B	155.61	342	PKPbc	PKPdf	01 58 29.5	+8.1
	comp=Z,0.5nm,0.5s,baz=48,slow=2.0,SNR=3.8						
GERES				PKPab	PKPab	01 58 47.3	-0.9
	comp=Z,1.0nm,0.7s,baz=25,slow=4.4,SNR=6.3						
WTTA	Wattenberg	157.61	343		PKPab	01 58 58.4	+1.6
DAVA	Damuels	158.01	346	⇑iPKPab	PKPab	01 58 58.2	-0.4
	comp=Z,8.0nm,1.2s						
DAVOX	Davos/Dischmat	158.49	346	PKPab	PKPab	01 58 59.4	-1.3
	comp=Z,1.8nm,0.6s,baz=355,slow=10.0,SNR=4.1						
SSF	Saint Saulge	159.03	358	ePKP2	PKPab	01 59 01.8	-1.2
	comp=Z,9.5nm,0.8s						
LIC	Lamto	159.03	159	ePKP2	PKPab	01 59 03.1	-0.8
	comp=Z,16nm,0.8s						
LIC	Lamto	159.03	159	eP	PKPab	01 59 03.1	-0.8
	comp=Z,25nm,0.8s						
KIC	Kosan Boka	159.25	160	eP	PKPab	01 59 04.2	-0.6
	comp=Z,54nm,0.8s						
SMF	Signal de Mont	159.43	357	ePKP2	PKPab	01 59 03.4	-1.3
	comp=Z,8.2nm,0.8s						
TIC	Toumodi	159.43	159	eP	PKPab	01 59 04.9	-0.7
	comp=Z,70nm,1.0s						
DBIC	Dimbokro	159.51	159	PKP	PKPdf	01 58 25.9	-1.4
	comp=Z,1.4nm,0.7s,baz=315,slow=4.3,SNR=3.6						
DBIC				PKPab	PKPab	01 59 04.3	-1.6
	comp=Z,4.8nm,0.8s,baz=131,slow=6.6,SNR=5.6						
TOA0	Torodi Ar. Sit	167.13	177	ePKPdf	PKPdf	01 58 33.0	-1.3
TORD	Torodi Ar. Bea	167.13	177	PKP	PKPdf	01 58 32.8	-1.6
	comp=Z,2.1nm,0.7s,baz=344,slow=1.0,SNR=15						
TORD				PKPab	PKPab	01 59 38.0	-1.3
	comp=Z,4.4nm,0.9s,baz=174,slow=3.8,SNR=14						
TORD	Torodi Ar. Bea	167.13	177	PKP	PKPdf	01 58 32.8	-1.6
TORD				PKPab	PKPab	01 59 38.0	-1.3
MDT	Midelt	170.91	41	PKP	PKPdf	01 58 35.5	-0.8
	comp=Z,2.8nm,0.9s,baz=351,slow=2.6,SNR=6.0						

*ISCJB **18** 01:51:52.3±0.5,2284S±003×7031W±007,h58km±4km, mb3.8/3,Error ellipse: s-maj=10.6km s-min=4.8km az=8.4*
*GUC **18** 01:51:53.4±0.8,2290S×70.14W,h38km±3km,MD4.2, ML3.8*
*NEIC **18** 01:51:53.4,2290S×70.14W,h38km,mb4.0/2, MD4.2(GUC),After GUC.*
*IDC **18** 01:51:54.8±3.6,2277S×70.17W,h65km±29km,mb3.2/2, mb1 3.4/4,mb1mx3.2/17,mbtmp3.3/4,ML3.5/2,Error ellipse: s-maj=43.2km s-min=20.4km az=117.0*

ISC 18 01:51:53.4±0.5**,2287S**±003×**7028W**±007**,h51**km±5km**,n22, σ0s96**/33**,mb3.8**/3**,2C,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.28	213	eP	Pn	01 52 01.1	-1.3
MECH				iS	Sn	01 52 08.1	-0.8
MECH				AML	AML	01 52 08.8	
	comp=E,20µm,0.5s						
CEN1	Los Morros	0.53	172	eP	Pn	01 52 05.3	+0.3
CEN1				iS	Sn	01 52 15.2	+1.8
TOCH	Tocopilla	0.77	5	eP	Pn	01 52 08.0	-0.1
TOCH				iS	Sn	01 52 19.5	+0.7
TOCH				AML	AML	01 52 21.5	
	comp=E,10µm,0.3s						
ANCH	Antofagasta	0.82	188	⇑iP	Pn	01 52 08.3	-0.4
ANCH				iS	Sn	01 52 19.9	-0.1
MACH	Maria Elena	0.82	36	eP	Pn	01 52 08.1	-0.7
MACH				iS	Sn	01 52 19.5	-0.5
PB04	Plate Boundary	0.95	51	⇑iP	Pn	01 52 05.2	-5.2
PB04				iS	Sn	01 52 14.2	-8.7
PB04				AML	AML	01 52 14.5	
	comp=E,8µm,0.4s						
LVC	Limon Verde	1.29	79	P	Pn	01 52 15.2	+0.2
	comp=E,118nm,0.3s,baz=251,slow=9.0,SNR=1022						
LVC				S	Sn	01 52 31.0	-0.2
	comp=E,391nm,0.3s,baz=43,slow=19,SNR=75						
LVC	Limon Verde	1.29	79	eP	Pn	01 52 15.0	0.0
LVC				eS	Sn	01 52 29.1	-2.1
LVC	Limon Verde	1.29	79	eP	Pn	01 52 14.7	-0.4
LVC				iS	Sn	01 52 30.4	-0.8
LVC				AML	AML	01 52 31.8	
	comp=N,2µm,0.3s						
PB01	Plate Boundary	1.96	22	eP	Pn	01 52 25.6	+1.4
PB01				iS	Sn	01 52 50.3	+2.7
PB01				AML	AML	01 52 55.2	
	comp=E,1µm,0.2s						
ARE	Arequipa	6.47	350	eP	Pn	01 53 26.0	-0.1
ARE				eS	Sn	01 54 38.0	-0.7
CFAA	Coronel Fontan	8.89	169	P	Pn	01 54 01.1	+1.9
	comp=E,0.2nm,0.3s,baz=354,slow=14,SNR=14						
CFAA				S	Sn	01 55 42.5	+4.5
	comp=E,0.1nm,0.3s,baz=252,slow=20,SNR=2.9						
SIV	San Ignacio	11.05	53	P	Pn	01 54 28.9	+0.1
	comp=E,0.6nm,0.3s,baz=237,slow=13,SNR=13						
TRQA	Tornquist	16.73	157	ePn	Pn	01 55 42.9	-1.4
	comp=E,4.2nm,1.0s						
PLCA	Paso Flores	17.82	181	Pn	Pn	01 55 58.1	+0.5
RCBR	Riachuelo	37.22	68	P	P	01 58 59.4	-0.8
	comp=E,5.0nm,0.8s,mb4.4						
HUMP	Col San Antoni	40.99	6	P	P	01 59 32.0	+0.5
TORD	Torodi Ar. Bea	79.01	71	P	P	02 03 52.1	-0.3
	comp=E,0.2nm,0.4s,mb3.4,baz=254,slow=4.2,SNR=5.5						
TORD				pP	pP	02 04 04.5	-2.5
	comp=E,0.2nm,0.4s,baz=257,slow=5.8,SNR=2.1						
TORD	Torodi Ar. Bea	79.01	71	P	P	02 03 52.1	-0.3
TORD				pP	pP	02 04 04.5	-2.6
YKA	Yellowknife Ar	92.05	341	P	P	02 04 56.4	0.0
	comp=E,0.2nm,0.5s,mb3.7,baz=143,slow=4.5,SNR=5.6						
YKA	Yellowknife Ar	92.05	341	P	P	02 04 56.4	0.0
MKAR	Makanchi Array	147.48	36	PKPbc	PKPbc	02 11 28.5	-3.2
	comp=E,0.4nm,0.8s,baz=330,slow=3.8,SNR=2.5						
MKAR				pPKPbc	pPKPbc	02 11 44.6	-2.3
	comp=E,0.3nm,0.5s,baz=336,slow=3.1,SNR=2.2						

GUC 18 01:59:59.6±0.8**,2303S**×**7019W,h45**km±4km**,MD3.5, ML2.3,1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	0.36	181	eP	Pn	02 00 11.6	+2.7
CEN1				iS	Sn	02 00 20.4	+4.8
CEN1				AML	AML	02 00 21.4	
	comp=N,136nm,0.5s						
ANCH	Antofagasta	0.68	197	eP	Pn	02 00 14.9	+2.0
ANCH				iS	Sn	02 00 24.8	+2.3
TOCH	Tocopilla	0.93	359	eP	Pn	02 00 16.9	+0.6
TOCH				iS	Sn	02 00 29.5	+1.0
TOCH				AML	AML	02 00 30.6	
	comp=E,272nm,0.2s						
PB04	Plate Boundary	1.00	41	⇓iP	Pn	02 00 13.7	-3.5
PB04				iS	Sn	02 00 24.2	-5.9
PB04				AML	AML	02 00 25.2	
	comp=N,342nm,0.2s						
LVC	Limon Verde	1.25	71	eP	Pn	02 00 22.3	+1.7
LVC				iS	Sn	02 00 39.0	+2.7
LVC				AML	AML	02 00 40.6	
	comp=N,51nm,0.2s						
PB01	Plate Boundary	2.08	18	eP	Pn	02 00 33.1	+1.1
PB01				iS	Sn	02 00 58.6	+1.9

GUC 18 02:33:11.7±0.8**,2304S**×**7010W,h38**km±7km**,MD4.0, ML3.2,2C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.33	259	⇓iP	Pn	02 33 20.2	0.0
MECH				AML	AML	02 33 30.6	
	comp=N,1µm,0.3s						
CEN1	Los Morros	0.36	195	⇑iP	Pn	02 33 23.0	+2.4
CEN1				iS	Sn	02 33 32.0	+5.3
CEN1				AML	AML	02 33 33.9	
	comp=N,1µm,0.1s						
ANCH	Antofagasta	0.70	204	⇓iP	Pn	02 33 24.9	-0.2
ANCH				iS	Sn	02 33 34.5	-0.2
ANCH				AML	AML	02 33 36.7	
	comp=N,2µm,0.1s						
MACH	Maria Elena	0.90	20	⇑iP	Pn	02 33 28.9	+1.0
MACH				iS	Sn	02 33 41.2	+1.5
TOCH	Tocopilla	0.95	354	eP	Pn	02 33 28.5	0.0
TOCH				iS	Sn	02 33 41.5	+0.6
TOCH				AML	AML	02 33 43.2	
	comp=N,4µm,0.1s						
PB04	Plate Boundary	0.96	36	i P	Pn	02 33 25.5	-3.1
PB04				iS	Sn	02 33 35.9	-5.1
PB04				AML	AML	02 33 36.6	
	comp=N,3µm,0.1s						
LVC	Limon Verde	1.18	69	eP	Pn	02 33 34.0	+2.4
LVC				iS	Sn	02 33 50.4	+4.0
LVC				AML	AML	02 33 52.7	
	comp=N,335nm,0.2s						
CPN1	Cerro Paranal	1.60	190	eP	Pn	02 33 38.0	+0.5
CPN1				iS	Sn	02 33 59.3	+2.4
CPN1				AML	AML	02 34 01.3	
	comp=E,265nm,0.5s						

*SZGRF **18** 03:03:32.9,2354S×17644W,h33km,South of Fiji Islands*
*ISCJB **18** 03:04:23.3±2.2,2062S±008×1783W±0.1,h391km±22km, mb3.8/17,Error ellipse: s-maj=18.8km s-min=10.6km az=25.1*
*NEIC **18** 03:04:25.4±1.7,2075S×178.19W,h406km±18km,mb4.1/9, Error ellipse: s-maj=15.0km s-min=9.8km az=137.0*
*BGS **18** 03:04:25.3±5.2,2075S×178.19W,h400km,mb4.1(NEIC)*
*IDC **18** 03:04:28.8±3.5,2085S×17830W,h448km±36km,mb3.4/11, mb1 3.6/12,mb1mx3.5/18,mbtmp3.4/12,Error ellipse: s-maj=21.2km s-min=15.9km az=115.0*

ISC 18 03:04:25.4±2.2**,2076S**±007×**1782W**±01**,h406**km±23km**, n138,σ0s71**/30**,mb3.8**/17**,14C-8D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNA	Funafuti	12.41	348	Pn	P	03 07 08.9	-0.7
DZM	Mont Dzumac	14.35	262	eP	P	03 07 31.4	+0.8
	8.7nm,0.8s						
URZ	Urewera	17.91	192	P	P	03 08 08.3	-0.2
	0.8nm,0.3s,baz=12,slow=9.3,SNR=5.0						
URZ				S	S	03 11 13.0	-0.1
	0.5nm,0.3s,baz=49,slow=20,SNR=2.9						
CTA	Charters Tower	33.27	265	eP	P	03 10 28.1	+1.0
	2.5nm,0.8s,mb3.6						
CTAO	Charters Tower	33.27	265	eP	P	03 10 28.2	+1.2
	3.6nm,0.7s,mb3.8						
PMG	Port Moresby	35.20	283	P	P	03 10 43.8	+0.2
	8.7nm,0.5s,mb4.3,baz=106,slow=2.8,SNR=5.6						
PMG	Port Moresby	35.20	283	eP	P	03 10 44.1	+0.5
	10nm,0.7s,mb4.3						
COEN	Coen	37.40	274	eP	P	03 11 03.3	+1.4
	3.2nm,0.8s,mb3.7						
STKA	Stephens Creek	37.50	244	P	P	03 11 02.5	-0.1
	2.4nm,1.1s,mb3.5,baz=79,slow=20,SNR=3.3						
STKA				PcP	PcP	03 13 10.1	-0.9
	1.8nm,0.5s,baz=349,slow=5.9,SNR=4.0						
STKA	Stephens Creek	37.50	244	eP	P	03 11 02.5	0.0
STKA				PcP	PcP	03 13 10.1	-0.9
ASAR	Alice Springs	44.26	257	P	P	03 11 56.5	-0.6
	3.1nm,0.8s,mb3.7,baz=86,slow=8.8,SNR=29						
ASAR				PcP	PcP	03 13 31.9	-1.5
	4.2nm,0.6s,baz=104,slow=3.7,SNR=31						
WB2	Warramunga Arr	44.35	262	eP	P	03 11 57.3	-0.5
WRAB	Tennant Creek	44.36	262	eP	P	03 11 57.2	-0.6
WRA	Warramunga Arr	44.37	262	P	P	03 11 56.9	-1.1
	2.8nm,0.8s,mb3.7,baz=93,slow=6.7,SNR=54						
WRA				PcP	PcP	03 13 32.3	-1.5
	2.5nm,0.9s,baz=98,slow=3.4,SNR=9.9						
KAKA	Kakadu	47.78	271	eP	x	03 12 02.7	
	3.7nm,0.6s						
FITZ	Fitzroy Crossi	52.79	263	eP	P	03 13 01.0	-0.3
	4.5nm,1.5s,mb3.5						
MJAR	Matsushiro Arr	70.30	324	P	P	03 14 56.0	-0.4
	1.6nm,0.5s,mb3.8,baz=152,slow=5.8,SNR=6.0						
PETK	Petropavlovsk-	76.47	345	P	P	03 15 31.8	+0.3
	1.8nm,0.6s,mb3.9,baz=128,slow=6.8,SNR=7.3						
MDJ	Mudanjiang	80.61	325	eP	P	03 15 59.5	+5.5
	5.6nm,0.5s,mb4.5						
NVAR	Mina Array Bea	81.35	43	P	P	03 15 59.1	+1.0
	0.2nm,0.4s,mb3.2,baz=223,slow=8.2,SNR=3.7						
TPH	Tonopah	81.85	44	eP	P	03 15 53.1	-7.5
MCK	McKinley	87.26	13	eP	P	03 16 26.2	-0.6
	7.3nm,0.6s,mb4.6						
TXAR	Lajitas Array	87.36	57	P	P	03 16 29.0	+0.9
	0.3nm,0.8s,mb3.1,baz=232,slow=4.4,SNR=3.5						
NEW	Newport	87.70	36	P	P	03 16 23.9	-5.3
ANMO	Albuquerque	87.72	51	eP	P	03 16 21.4	-8.3
COLA	College	88.50	12	eP	P	03 16 32.1	-0.4
	9.9nm,0.6s,mb4.7						
PDAR	Pinedale Array	89.28	43	P	P	03 16 37.2	+0.5
	0.3nm,0.5s,mb3.2,baz=218,slow=5.7,SNR=3.1						
CMAR	Chiang Mai Arr	90.01	290	P	P	03 16 41.1	+0.5
	0.7nm,0.3s,mb4.0,baz=123,slow=3.1,SNR=10						
INK	Inuvik	94.57	15	P	P	03 17 00.8	+0.3
YKA	Yellowknife Ar	96.83	25	P	P	03 17 09.4	-1.4
	0.4nm,0.9s,mb3.6,baz=242,slow=5.3,SNR=6.2						
ZALV	Zalesovo Beam	110.56	321	PKiKP	PKiKP	03 22 07.0	-3.1
	1.1nm,0.6s,baz=195,slow=1.7,SNR=5.7						
MK31	Makanchi Array	111.23	313	PKiKP	PKiKP	03 22 09.4	-2.2
MKAR	Makanchi Array	111.23	313	PKiKP	PKiKP	03 22 09.1	-2.6
	0.6nm,0.4s,baz=122,slow=0.7,SNR=18						
MKAR	Makanchi Array	111.23	313	PKPdf	PKiKP	03 22 09.1	-2.6
KURK	Kurchatov	114.05	317	ePKPdf	PKiKP	03 22 14.1	-2.7
TKM2	Tokmak 2	115.51	309	PKPdf	PKPdf	03 22 16.6	-3.4
ARU	Arti	125.30	325	ePKPdf	PKPdf	03 22 35.9	-2.4
ARCES	ARCESS Array B	129.13	349	PKP	PKPdf	03 22 43.1	-2.2
	2.2nm,0.5s,baz=18,slow=1.9,SNR=6.2						
NB2	NORSAR Subarra	139.21	353	PKP		03 22 54.2	
	comp=Z,0.8nm,0.6s,baz=9.3,slow=3.1						
NOA	NORSAR Array B	139.21	353	PKhKP		03 22 54.9	
	comp=Z,0.9nm,0.8s,baz=17,slow=2.5,SNR=4.9						
NOA				PKP	PKPdf	03 23 04.4	0.0
	comp=Z,0.9nm,0.6s,baz=13,slow=4.0,SNR=3.4						
MVH1	Achvaich	142.62	5	eP	PKPdf	03 23 06.3	-4.3
KAC	Achnashellach	142.94	6	eP	PKPdf	03 23 07.5	-3.6
MCD	Coleburn Disti	143.03	5	eP	PKPdf	03 23 06.6	-4.7
KPL	Plockton	143.06	7	eP	PKPdf	03 23 07.2	-4.1
MDO	Dochfour	143.08	6	eP	PKPdf	03 23 07.9	-3.5
AKASG	Malin Array Be	143.14	331	PKhKP		03 23 07.6	
	comp=Z,15nm,0.5s,baz=43,slow=4.3,SNR=75						
MME1	Meikle Cairn	143.32	4	eP	PKPdf	03 23 07.9	-3.9
COP	Copenhagen	144.22	350	i P	PKPdf	03 23 09.9	-3.5
	comp=Z,10nm,0.9s						
COP	Copenhagen	144.22	350	eP	PKPdf	03 23 09.9	-3.5
BSD	Bornholm Skovb	144.29	347	⇑iP	PKPdf	03 23 11.9	-1.7
	comp=Z,20nm,0.9s						
EAB	Aberfoyle	144.32	6	eP	PKPdf	03 23 12.3	-1.3
EBH	Black Hill	144.34	5	eP	PKPdf	03 23 11.8	-1.8
PGBU	Glenifferbraes	144.68	6	eP	PKPdf	03 23 12.7	-1.5
ESY	Stoneypath	144.74	4	eP	PKPdf	03 23 13.0	-1.3
EAU	Auchinoon	144.74	5	eP	PKPdf	03 23 13.4	-0.9
EBL	Broad Law	144.85	5	eP	PKPdf	03 23 13.5	-1.0
XSO	Sourhope Farm	145.18	4	eP	PKPdf	03 23 14.5	-0.6
GAL1	Galloway	145.59	7	eP	PKPbc	03 23 16.9	0.0
XAL	Allendale	145.81	4	eP	PKPdf	03 23 16.4	+0.2
BSEG	Bad Segeberg	146.24	351	ePKPbc	PKPbc	03 23 18.1	-0.7
KWP	Kalwaria	146.73	335	ePKPbc	PKPbc	03 23 18.8	-1.5
BR131	Keskin Array S	146.86	312	ePKPbc	PKPbc	03 23 19.5	-1.5
BRTR	Keskin Array B	146.86	312	PKPbc	PKPbc	03 23 19.4	-1.6
	comp=Z,4.3nm,0.6s,baz=139,slow=4.6,SNR=21						
TLCR		147.00	324	⇑iP	PKPbc	03 23 20.3	-0.9
LHO	Holmfirth	147.15	4	eP	PKPbc	03 23 19.8	-1.6
BUR08	Bucovina Ar. S	147.17	330	ePKPbc	PKPbc	03 23 21.3	-0.2
BURAR	Bucovina Array	147.18	330	⇑iP	PKPbc	03 23 21.2	-0.4
STHS	Stebnicka Huta	147.47	336	ePKP	PKPbc	03 23 21.9	-0.4
STHS				e		03 23 26.7	
STHS	Stebnicka Huta	147.47	336	eP	PKPbc	03 23 21.9	-0.4
STHS				e		03 23 26.7	
NRDL	Niedersach Rie	147.67	350	ePKPbc	PKPbc	03 23 21.1	-1.6
VRI	Vrincioaia	147.67	327	⇓iP	PKPbc	03 23 22.3	-0.7
TIRR	Tirgusor	147.67	323	⇓iP	PKPdf	03 23 20.3	+0.7
PLOR	Plostina	147.72	327	⇑iP	PKPdf	03 23 20.5	+0.8
HARR	Harsova	147.80	324	⇑iP	PKPbc	03 23 22.5	-0.8
CRVS	Cervenica-Dubn	147.80	335	ePKP	PKPbc	03 23 22.1	-1.1
CRVS				e		03 23 27.0	
CRVS	Cervenica-Dubn	147.80	335	eP	PKPbc	03 23 22.1	-1.1
CRVS				e		03 23 27.0	
KSP	Ksiaz	147.87	343	ePKP	PKPbc	03 23 22.5	-0.8
TRPA	Tarpa	147.98	333	⇓iP	PKPbc	03 23 23.2	-0.5
OKC	Ostrava-Krasne	148.20	340	ePKP	PKPbc	03 23 23.2	-1.0
OKC				ex	x	03 23 28.9	
UPC	Upice	148.25	343	ePKP	PKPbc	03 23 23.2	-1.1
UPC				ex	x	03 23 29.3	
CLZ	Clausthal	148.26	350	ePKPbc	PKPbc	03 23 23.4	-0.9
CLL	Collm	148.26	347	ePKPbc	PKPbc	03 23 23.1	-1.2
CLL	Collm	148.26	347	⇓iPKPbc	PKPbc	03 23 23.3	-1.0
	comp=Z,18nm,0.7s						
CLL				⇑iPKPab	PKPab	03 23 28.2	-0.5
	comp=Z,13nm,1.0s						
CLL	Collm	148.26	347	⇓iP	PKPbc	03 23 23.3	-1.0
CLL				i		03 23 28.2	
DPC	Dobruska-Polom	148.31	342	ePKP	PKPbc	03 23 24.0	-0.4
BRG	Berggiesshubel	148.46	345	ePKPbc	PKPbc	03 23 23.8	-1.0
BRG	Berggiesshubel	148.46	345	i P	PKPbc	03 23 24.0	-0.8
	comp=Z,9.5nm,0.9s						
BRG				i		03 23 29.4	
	comp=Z,7.8nm,0.7s						
KECS	Kecovo	148.52	336	ePKP	PKPbc	03 23 24.3	-0.7
KECS				e		03 23 28.9	
KECS	Kecovo	148.52	336	eP	PKPbc	03 23 24.3	-0.7
KECS				e		03 23 28.9	
FBE	Freiberg	148.55	346	ePKPbc	PKPbc	03 23 24.3	-0.7
MCH1	Michaelchurch	148.60	6	eP	PKPbc	03 23 23.1	-2.0
NEUB	Neuenburg	148.61	348	ePKPbc	PKPbc	03 23 24.5	-0.7
PVCC	Panska Ves	148.62	344	ePKP	PKPbc	03 23 24.3	-0.9
VOIR		148.82	328	⇑iP	PKPbc	03 23 24.9	-1.0
CSS	Prodhromos	148.88	304	ePKPdf	PKPdf	03 23 19.4	-2.5
CSS				ePKPbc	PKPbc	03 23 23.9	-2.5
DRGR		148.94	332	⇑iP	PKPbc	03 23 25.0	-1.1
VYHS	Vyhne	149.12	338	ePKP	PKPbc	03 23 25.8	-0.7
VYHS	Vyhne	149.12	338	eP	PKPbc	03 23 25.8	-0.7
PRU	Pruhonice	149.12	344	ePKP	PKPbc	03 23 25.5	-1.0
PRU				ex	x	03 23 32.5	
VRAC	Vranov	149.16	341	⇓iP	PKPbc	03 23 26.4	-0.2
MOX	Moxa	149.18	348	ePKPbc	PKPbc	03 23 25.3	-1.3
KOLL	Kolacno	149.20	338	ePKP	PKPbc	03 23 26.3	-0.4
KOLL	Kolacno	149.20	338	eP	PKPbc	03 23 26.3	-0.4
PSZ	Piszkesteto	149.21	336	⇑iP	PKPdf	03 23 19.2	-2.8
TANN	Tannenbergstha	149.22	347	ePKPbc	PKPbc	03 23 25.5	-1.2
WERD	Werda	149.22	347	ePKPbc	PKPbc	03 23 25.5	-1.2
GUNZ	Gunzen	149.30	347	ePKPbc	PKPbc	03 23 25.5	-1.4
NKC	Novy Kostel	149.40	347	ePKP	PKPbc	03 23 26.3	-0.8
NKC				ex	x	03 23 33.3	
TREC	Trest	149.50	342	ePKP	PKPbc	03 23 26.4	-1.0
SMOL	Smolenice	149.59	339	ePKP	PKPbc	03 23 26.8	-0.8
SMOL				e		03 23 35.0	
SMOL	Smolenice	149.59	339	eP	PKPbc	03 23 26.8	-0.8
SMOL				e		03 23 35.0	
MANZ	Manzenberg	149.70	347	ePKPbc	PKPbc	03 23 26.8	-1.1
ROTZ	Rotzenmuhle	149.89	346	ePKPbc	PKPbc	03 23 27.5	-0.8
GZR	Gura Zlata	149.96	330	⇓iP	PKPbc	03 23 27.3	-1.3
ZST	Bratislava	149.97	339	ePKP	PKPbc	03 23 27.7	-0.9
ZST	Bratislava	149.97	339	eP	PKPbc	03 23 27.7	-0.9
KHC	Kasperske Hory	150.16	344	ePKP	PKPbc	03 23 27.9	-1.1
KHC				ex	x	03 23 36.8	
GRA1	Grafenberg Arr	150.17	348	ePKPbc	PKPbc	03 23 27.5	-1.5
GRF	Grafenberg Arr	150.17	348	ePKPbc	PKPbc	03 23 27.5	-1.5
BZS	Buzias	150.33	331	⇓iP	PKPbc	03 23 28.1	-1.4
GEC2	GERESS Array S	150.39	344	ePKPbc	PKPbc	03 23 27.6	-1.9
GERES	GERESS Array B	150.39	344	PKPbc	PKPbc	03 23 28.4	-1.1
	comp=Z,4.0nm,0.6s,baz=26,slow=2.2,SNR=23						
GERES				PKPab	PKPab	03 23 37.5	-0.1
	comp=Z,1.4nm,0.6s,baz=46,slow=3.9,SNR=5.5						
CONA	Conrad Observa	150.60	341	⇑iPKPbc	PKPbc	03 23 29.5	-0.6
	comp=Z,7.3nm,0.6s						
CSNA	Conrad Observa	150.60	341	⇑iPKPbc	PKPbc	03 23 29.5	-0.5
	comp=Z,7.4nm,0.6s						
GIVF	Givet	150.62	356	ePKIKP	PKPbc	03 23 28.4	-1.6
	comp=Z,14nm,0.6s						
BAIF	Baives	150.70	357	ePKIKP	PKPbc	03 23 28.6	-1.6
	comp=Z,9.3nm,0.7s						
PKSM	Moragy	151.10	335	⇑iP	PKPdf	03 23 20.0	-5.0
STU	Stuttgart	151.42	350	ePKPbc	PKPbc	03 23 30.5	-1.4
RJOB	Jochberg	151.65	344	ePKPbc	PKPbc	03 23 31.2	-1.2
BFO	Black Forest	151.99	351	ePKPbc	PKPbc	03 23 31.4	-1.8
CDF	Champ du Feu	152.06	352	ePKIKP	PKPbc	03 23 31.5	-1.8
	comp=Z,5.7nm,0.8s						
ABTA	Abfaltersbach	152.64	344	⇑iPKPbc	PKPbc	03 23 32.6	-2.0
	comp=Z,8.2nm,0.6s						
HINF	Hinteralfeld	152.69	353	ePKIKP	PKPbc	03 23 31.9	-2.9
FETA	Feichten	152.81	347	⇑iPKPbc	PKPbc	03 23 33.8	-1.2
	comp=Z,5.8nm,0.8s						
LOR	Lormes	153.50	357	ePKIKP	PKPbc	03 23 34.6	-1.9
ESDC	Sonseca Array	160.51	13	PKPab	PKPab	03 24 21.0	-0.2
	comp=Z,0.5nm,0.8s,baz=351,slow=5.0,SNR=6.2						
TORD	Torodi Ar. Bea	172.43	179	PKP	PKPdf	03 23 44.2	-3.2
	comp=Z,0.4nm,1.0s,baz=297,slow=0.7,SNR=4.1						
TORD	Torodi Ar. Bea	172.43	179	PKP	PKPdf	03 23 44.1	-3.2

IDC 18 03:16:41.3±1.5**,1240N**×**14505E,h0**km**,mb3.6**/4**, mb1 3.8**/4**,mb1mx3.6**/21**,mbtmp3.6**/4**,Error ellipse: s-maj=63.7km s-min=25.8km az=94.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.82	198	P	P	03 23 25.0	-0.4
	1.9nm,0.7s,baz=22,slow=9.8,SNR=15						
ASAR	Alice Springs	37.46	197	P	P	03 23 57.0	+0.4
	0.3nm,0.6s,baz=22,slow=9.6,SNR=8.4						
MKAR	Makanchi Array	62.47	316	P	P	03 27 06.3	-0.1
	0.2nm,0.5s,baz=98,slow=8.6,SNR=3.2						
YKA	Yellowknife Ar	83.83	27	P	P	03 29 12.7	+0.2
	0.1nm,0.4s,baz=285,slow=5.0,SNR=4.5						

*ISCJB **18** 03:23:02.8±3.5,52.1N±05×1770W±02,h107km±26km,*

mb3.3/4, Error ellipse: s-maj=91.5km s-min=16.7km az=172.5
IDC ***18*** *03:23:04.2±4.5, 5202N×17704W, h108km±36km, mb3.1/4, mb1 3.4/7, mb1mx3.1/27, mbtmp3.3/7, Error ellipse: s-maj=88.2km s-min=21.2km az=175.0*
ISC 18 03:23:03.9±3.3**, 521N**±06×**1770W**±02**, h101**km±23km**, n7, σ1s16**/7**, mb3.3**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**6.08**	**282**	P	**Pn**	**03 24 30.7**	**-0.4**
	0.9nm,0.3s,baz=49,slow=20,SNR=3.9						
KDAK	**Kodiak Island**	**15.12**	**58**	P	**Pn**	**03 26 31.4**	**-0.2**
	1.0nm,0.3s,baz=306,slow=15,SNR=10						
PETK	**Petropavlovsk-**	**15.40**	**284**	P	**Pn**	**03 26 36.0**	**+0.7**
	baz=79,slow=15,SNR=2.2						
INK	**Inuvik**	**26.27**	**35**	P	**P**	**03 28 29.7**	**+0.6**
	0.4nm,0.3s,mb3.3,baz=194,slow=4.6,SNR=4.4						
PDAR	**Pinedale Array**	**45.04**	**74**	P	**P**	**03 31 09.2**	**+0.1**
	0.3nm,0.7s,mb3.1,baz=316,slow=6.3,SNR=3.6						
SONM	**Songino Array**	**47.35**	**297**	P	**P**	**03 31 28.0**	**+0.9**
	0.4nm,0.5s,mb3.4,baz=51,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**60.49**	**309**	P	**P**	**03 33 00.9**	**-1.8**
	0.2nm,0.5s,mb3.4,baz=57,slow=5.5,SNR=3.9						

CSEM ***18*** *03:26:16.6, 3927N×28.12E, h7km, MD2.8, After ERD*
DDA 18 03:26:16.6, 3927N×2812E, h7km±3km**, Md2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.43**	**39**	iP	Pg	03 26 25.7	+0.7
DURS				iS	Sg	03 26 31.7	+0.9
AKHS	**Akhisar**	**0.45**	**212**	iP	Pg	03 26 25.7	+0.3
AKHS				iS	Sg	03 26 32.7	+1.4
MANT	**Manisa**	**0.85**	**156**	iP	Pg	03 26 34.1	+1.3
MANT				iS	Sg	03 26 45.0	+1.2
GDZ	**Gediz**	**1.07**	**99**	iP	Pg	03 26 38.0	+0.8
GDZ				iS	Sg	03 26 52.7	+1.6

NEIC ***18*** *03:26:35.9±0.3, 4562N×1538E, h5km, ML3.0(LJU), ML3.1(SZGRF), Error ellipse: s-maj=4.2km s-min=2.9km az=138.0*
NEIC Felt [IV] at Crnomelj, Slovenia.
ISCJB ***18*** *03:26:35.1±0.3, 4566N±002×1548E±002, h0km, Error ellipse: s-maj=2.3km s-min=2.1km az=153.5*
CSEM ***18*** *03:26:36.1±0.1, 4562N×1546E, h1km, ML3.4/10, Error ellipse: s-maj=1.3km s-min=1.0km az=127.0, Mining explosion.*
LJU ***18*** *03:26:36.2, 4565N×1542E, h12km, ML3.0*
PRU ***18*** *03:26:36.2, 4569N×1539E, h0km*
LDG ***18*** *03:26:37.5±0.1, 4571N×1541E, h10km, Ml3.2/8, Error ellipse: s-maj=2.7km s-min=1.3km az=139.0*
VIE ***18*** *03:26:37.8±0.3, 4572N×1542E, h11km±1km, mb3.0/14, ML3.1/16, Error ellipse: s-maj=2.1km s-min=1.3km az=148.0*
SZGRF ***18*** *03:26:38.1, 4563N×1543E, h10km, mb3.1, Northwestern Balkan Peninsula*
ISC 18 03:26:35.3±0.2**, 4564N**±001×**1550E**±002**, h0**km**, n134, σ1s26**/226**, 30C-34D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRES	**Cresnjev**	**0.19**	**350**	⇓iPg	**Pg**	**03 26 40.2**	**+1.2**
CRES				iSg	**Sg**	**03 26 43.2**	**+1.7**
CRES							
	comp=Z,4μm,0.2s						
CRES	**Cresnjev**	**0.19**	**350**	⇓iPg	**Pg**	**03 26 40.3**	**+1.3**
CRES				iSg	**Sg**	**03 26 43.2**	**+1.7**
	comp=Z,4μm,0.2s						
CRES	**Cresnjev**	**0.19**	**350**	⇓iPg	**Pg**	**03 26 40.2**	**+1.2**
CRES				iSg	**Sg**	**03 26 43.2**	**+1.7**
BOJS	**Bojanci**	**0.22**	**233**	⇓iPg	**Pg**	**03 26 40.5**	**+0.9**
BOJS				iSg	**Sg**	**03 26 43.4**	**+0.9**
BOJS							
	comp=Z,3μm,0.1s						
BOJS	**Bojanci**	**0.22**	**233**	⇓iPg	**Pg**	**03 26 40.5**	**+0.9**
BOJS				iSg	**Sg**	**03 26 43.4**	**+1.0**
	comp=Z,3μm,0.1s						
BOJS	**Bojanci**	**0.22**	**233**	⇓iPg	**Pg**	**03 26 40.5**	**+0.9**
BOJS				iSg	**Sg**	**03 26 43.4**	**+0.9**
GCIS	**Gornji Cirnik**	**0.25**	**21**	⇓iPg	**Pg**	**03 26 41.7**	**+1.7**
GCIS				iSg	**Sg**	**03 26 45.6**	**+2.4**
GCIS							
	comp=Z,2μm,0.2s						
GCIS	**Gornji Cirnik**	**0.25**	**21**	⇓iPg	**Pg**	**03 26 41.7**	**+1.7**
	comp=Z,2μm,0.2s						
GCIS				iSg	**Sg**	**03 26 45.6**	**+2.4**
	comp=Z,2μm,0.2s						
GCIS	**Gornji Cirnik**	**0.25**	**21**	⇓iPg	**Pg**	**03 26 41.7**	**+1.7**
GCIS				iSg	**Sg**	**03 26 45.6**	**+2.4**
CESS	**Cesta pri Krsk**	**0.34**	**355**	⇓iPg	**Pg**	**03 26 42.8**	**+1.0**
CESS							
	comp=Z,641nm,0.1s						
CESS	**Cesta pri Krsk**	**0.34**	**355**	⇓iPg	**Pg**	**03 26 42.8**	**+1.0**
	comp=Z,641nm,0.1s						
LEGS	**Legarje**	**0.34**	**337**	iPg	**Pg**	**03 26 42.5**	**+0.7**
LEGS				iSg	**Sg**	**03 26 47.1**	**+1.0**
GOLS	**Golise**	**0.38**	**13**	iPg	**Pg**	**03 26 44.1**	**+1.5**
VISS	**Visnje**	**0.49**	**290**	iPg	**Pg**	**03 26 45.5**	**+0.7**
VISS				iSg	**Sg**	**03 26 51.5**	**+0.2**
VISS							
	comp=Z,415nm,0.1s						
VISS	**Visnje**	**0.49**	**290**	iPg	**Pg**	**03 26 45.5**	**+0.7**
VISS				iSg	**Sg**	**03 26 51.5**	**+0.3**
	comp=Z,415nm,0.1s						
VISS	**Visnje**	**0.49**	**290**	iPg	**Pg**	**03 26 45.5**	**+0.7**
VISS				iSg	**Sg**	**03 26 51.5**	**+0.2**
DOBS	**Dobrina**	**0.51**	**357**	⇓iPg	**Pg**	**03 26 46.5**	**+1.4**
PDKS	**Podkum**	**0.55**	**320**	iPg	**Pg**	**03 26 46.9**	**+1.0**
PDKS				iSg	**Sg**	**03 26 53.4**	**+0.3**
PDKS							
	comp=Z,874nm,0.2s						
PDKS	**Podkum**	**0.55**	**320**	iPg	**Pg**	**03 26 46.9**	**+1.0**
PDKS				iSg	**Sg**	**03 26 53.4**	**+0.3**
SISC	**Sisak**	**0.63**	**105**	ePg	**Pg**	**03 26 50.0**	**+2.5**
SISC				Sg	**Sg**	**03 27 00.1**	**+4.5**
VNDS	**Vrh nad Dolski**	**0.73**	**310**	⇑iPg	**Pg**	**03 26 50.0**	**+0.7**
CEY	**Cerknica**	**0.76**	**278**	⇑iPg	**Pg**	**03 26 50.2**	**+0.2**
CEY							
	comp=Z,218nm,0.2s						
CEY	**Cerknica**	**0.76**	**278**	⇑iPn	**Pn**	**03 26 50.3**	**-3.0**
CEY				eSn	**Sg**	**03 27 00.5**	**+0.7**
LJU	**Ljubljana**	**0.80**	**301**	iPg	**Pg**	**03 26 51.1**	**+0.6**
LJU				eSg	**Sg**	**03 27 01.4**	**+0.5**
LJU	**Ljubljana**	**0.80**	**301**	iPg	**Pg**	**03 26 51.1**	**+0.5**
LJU				eSg	**Sg**	**03 27 01.4**	**+0.5**
LJU				eSn	**Sg**	**03 27 02.5**	**+1.6**
KNDS	**Knezji Dol**	**0.80**	**263**	iPg	**Pg**	**03 26 50.9**	**+0.3**
KNDS				iSg	**Sg**	**03 27 01.3**	**+0.4**
GROS	**Grobnik**	**0.82**	**360**	ePg	**Pg**	**03 26 52.3**	**+1.2**
ZAVS	**Zavodnje**	**0.86**	**337**	iPg	**Pg**	**03 26 52.9**	**+1.0**
KOGS	**Kog**	**0.96**	**32**	⇓iPn	**Pn**	**03 26 55.5**	**-0.6**
KOGS				eSn	**Sn**	**03 27 09.6**	**-0.9**
JAVS	**Javornik**	**1.04**	**285**	iPg	**Pg**	**03 26 55.0**	**-0.3**
SKDS	**Skadanscina**	**1.05**	**266**	iPg	**Pg**	**03 26 54.8**	**-0.6**
SOKA	**Soboth**	**1.09**	**343**	⇓iPg	**Pg**	**03 26 56.8**	**+0.6**
SOKA				⇓iSg	**Sg**	**03 27 10.7**	**+0.3**
	comp=Z,166nm,0.4s						
OBKA	**Obir**	**1.10**	**323**	⇑ePg	**Pg**	**03 26 57.0**	**+0.6**
	SNR=288						
OBKA				⇓iSg	**Sg**	**03 27 11.3**	**+0.7**
NVLJ	**Novalja**	**1.16**	**203**	ePg	**Pg**	**03 26 58.1**	**+0.4**
NVLJ				Sg	**Sg**	**03 27 15.3**	**+2.7**
VOJS	**Vojsko**	**1.20**	**290**	iPg	**Pg**	**03 26 58.2**	**-0.1**
GORS	**Gorjuse**	**1.25**	**303**	iPg	**Pg**	**03 26 59.2**	**-0.1**
CADS	**Cadrg**	**1.37**	**296**	iPg	**Pg**	**03 27 00.9**	**-0.7**
BLY	**Banja Luka**	**1.48**	**126**	⇑iPn	**Pn**	**03 27 04.1**	**+0.9**
BLY				eSn	**Sn**	**03 27 22.9**	**-0.4**
COLI	**Coloredo**	**1.57**	**289**	⇑ePn	**Pn**	**03 27 04.2**	**-0.2**
LSR	**Lussari**	**1.61**	**302**	⇓iPn	**Pn**	**03 27 04.9**	**-0.1**
ARSA	**Arzberg**	**1.61**	**0**	⇑ePn	**Pn**	**03 27 04.9**	**-0.1**
	SNR=48						
ARSA				⇑iSn	**Sn**	**03 27 24.9**	**-1.6**
ARSA	**Arzberg**	**1.61**	**0**	ePg	**Pg**	**03 27 06.9**	**+0.6**
ARSA				eSn	**Sn**	**03 27 24.7**	**-1.8**
MYKA	**Terra Mystica**	**1.63**	**308**	⇓iPn	**Pn**	**03 27 05.6**	**+0.3**
MYKA				⇑iPg	**Pg**	**03 27 07.0**	**+0.4**
MYKA				⇓iSn	**Sn**	**03 27 25.9**	**-1.1**
MYKA				⇑iSg	**Sg**	**03 27 28.1**	**+0.4**
	comp=Z,151nm,0.5s						
MYKA	**Terra Mystica**	**1.63**	**308**	Pg	**Pg**	**03 27 07.0**	**+0.4**
MYKA				Sn	**Sn**	**03 27 25.9**	**-1.1**
MYKA				Sg	**Sg**	**03 27 28.1**	**+0.4**
	comp=Z,151nm,0.5s						
BAD	**Bernadia**	**1.69**	**292**	⇑ePn	**Pn**	**03 27 05.9**	**-0.1**
TLI	**Talmassons**	**1.71**	**280**	⇓iPn	**Pn**	**03 27 06.8**	**+0.5**
BUA	**Buia**	**1.76**	**290**	⇑ePn	**Pn**	**03 27 07.6**	**+0.6**
BOO	**Bordano**	**1.81**	**293**	⇑iPn	**Pn**	**03 27 08.1**	**+0.4**
MPRI	**Monte Prat**	**1.86**	**290**	⇑iPn	**Pn**	**03 27 08.9**	**+0.6**
PLRO	**Paularo**	**1.88**	**300**	ePn	**Pn**	**03 27 09.0**	**+0.4**
RHK3	**Tenkes**	**1.94**	**82**	ePn	**Pn**	**03 27 09.3**	**-0.2**
RHK3				eSn	**Sn**	**03 27 34.3**	**-0.3**
ZOU	**Zoufplan**	**1.99**	**298**	⇓ePn	**Pn**	**03 27 11.0**	**+0.9**
KBA	**Koelnbreinsper**	**2.08**	**315**	⇑iPn	**Pn**	**03 27 11.4**	**0.0**
KBA				ePg	**Pg**	**03 27 15.0**	**-0.1**
	SNR=11						
KBA				⇑iSn	**Sn**	**03 27 37.0**	**-1.0**
KBA				⇓iSg	**Sg**	**03 27 43.6**	**+1.6**
	comp=Z,24nm,0.2s						
KBA	**Koelnbreinsper**	**2.08**	**315**	ePg	**Pg**	**03 27 15.0**	**-0.1**
KBA	**Koelnbreinsper**	**2.08**	**315**	Pg	**Pg**	**03 27 15.0**	**-0.1**
	SNR=11						
KBA				Sn	**Sn**	**03 27 37.0**	**-0.9**
KBA				Sg	**Sg**	**03 27 43.6**	**+1.6**
	comp=Z,24nm,0.2s						
MLNI	**Malnisio**	**2.08**	**285**	⇓ePn	**Pn**	**03 27 11.6**	**+0.1**
CSMI	**Casera Mimoias**	**2.17**	**295**	⇓iPn	**Pn**	**03 27 13.4**	**+0.7**
SOP	**Sopron**	**2.17**	**19**	⇑ePn	**Pn**	**03 27 13.7**	**+1.0**
SOP				eSn	**Sn**	**03 27 41.8**	**+1.5**
CAE	**Caneva**	**2.18**	**281**	⇓iPn	**Pn**	**03 27 12.8**	**0.0**
CONA	**Conrad Observa**	**2.31**	**6**	⇑ePn	**Pn**	**03 27 14.9**	**+0.4**
	SNR=20						
CSNA	**Conrad Observa**	**2.31**	**6**	⇑iPn	**Pn**	**03 27 14.9**	**+0.3**
CSNA				⇓iSn	**Sn**	**03 27 42.5**	**-1.0**
CSNA				⇑iSg	**Sg**	**03 27 52.1**	**+2.8**
	comp=Z,34nm,0.6s						
CSO	**Casso**	**2.31**	**287**	⇓iPn	**Pn**	**03 27 14.4**	**-0.2**
ABTA	**Abfaltersbach**	**2.36**	**299**	⇓ePn	**Pn**	**03 27 15.7**	**+0.5**
	SNR=31						
MOA	**Molln**	**2.37**	**339**	⇑ePn	**Pn**	**03 27 15.9**	**+0.5**
	SNR=20						
MOA				⇑iSn	**Sn**	**03 27 44.6**	**-0.6**
MOA				⇓iSg	**Sg**	**03 27 53.7**	**+2.3**
	comp=Z,19nm,0.5s						
MOA	**Molln**	**2.37**	**339**	ePn	**Pn**	**03 27 16.3**	**+0.9**
MOA				eSn	**Sn**	**03 27 44.9**	**-0.3**
MOA	**Molln**	**2.37**	**339**	Pn	**Pn**	**03 27 15.9**	**+0.5**
	SNR=20						
MOA				Sn	**Sn**	**03 27 44.6**	**-0.6**
MOA				Sg	**Sg**	**03 27 53.7**	**+2.2**
	comp=Z,19nm,0.5s						
MTLO	**Montello**	**2.39**	**275**	ePn	**Pn**	**03 27 16.6**	**+0.9**
VARN	**Col Varnada, M**	**2.40**	**280**	⇑ePn	**Pn**	**03 27 15.4**	**-0.4**
AFL	**Alpe Faloria**	**2.48**	**292**	⇑iPn	**Pn**	**03 27 17.6**	**+0.7**
AFL	**Alpe Faloria**	**2.48**	**292**	iPn	**Pn**	**03 27 17.6**	**+0.7**
CGRP	**Cima Grappa**	**2.60**	**277**	⇓ePn	**Pn**	**03 27 19.3**	**+0.6**
PKSG		**2.66**	**48**	ePn	**Pn**	**03 27 18.9**	**-0.4**
TEOL	**Teolo**	**2.71**	**265**	⇓ePn	**Pn**	**03 27 19.5**	**-0.6**
ZST	**Bratislava**	**2.78**	**23**	ePN	**Pn**	**03 27 21.8**	**+0.7**
ZST				eSG	**Sg**	**03 28 07.1**	**+2.3**
RJOB	**Jochberg**	**2.81**	**319**	ePn	**Pn**	**03 27 22.5**	**+1.1**
BUD	**Budapest**	**3.05**	**51**	⇑eSn	**Sn**	**03 27 59.1**	**-2.9**
WTTA	**Wattenberg**	**3.13**	**303**	⇑iPn	**Pn**	**03 27 26.4**	**+0.5**
	SNR=11						
WTTA				⇑iSn	**Sn**	**03 28 03.2**	**-0.7**
WTTA				⇓iSg	**Sg**	**03 28 18.1**	**+2.3**
	comp=Z,27nm,0.5s						
WTTA	**Wattenberg**	**3.13**	**303**	ePn	**Pn**	**03 27 27.3**	**+1.4**
WTTA				eSn	**Sn**	**03 28 00.3**	**-3.6**
SMOL	**Smolenice**	**3.16**	**24**	ePN	**Pn**	**03 27 26.8**	**+0.5**
SMOL				ePG	**Pg**	**03 27 36.3**	**+0.4**
STON	**Ston**	**3.18**	**150**	ePn	**Pn**	**03 27 29.1**	**+2.5**
WATA	**Walderalm**	**3.20**	**303**	⇑iPn	**Pn**	**03 27 27.2**	**+0.3**
BBLS	**Lazići**	**3.29**	**121**	ePn	**Pn**	**03 27 30.6**	**+2.5**
BBLS				eSn	**Sn**	**03 28 06.1**	**-1.9**
PENC	**Penc**	**3.38**	**49**	eSn	**Sn**	**03 28 09.8**	**-0.2**
GEC2	**GERESS Array S**	**3.44**	**340**	ePn	**Pn**	**03 27 30.1**	**0.0**
GEC2				eSn	**Sn**	**03 28 09.4**	**-2.1**
MOTA	**Moosalm**	**3.49**	**301**	⇑iPn	**Pn**	**03 27 32.1**	**+1.3**
KOLL	**Kolacno**	**3.55**	**33**	ePN	**Pn**	**03 27 32.0**	**+0.4**
KOLL				eSN	**Sn**	**03 28 11.3**	**-2.9**
KOLL				e		03 28 11.3	
KOLL	**Kolacno**	**3.55**	**33**	e	**Pn**	**03 27 32.0**	**+0.4**
FETA	**Feichten**	**3.59**	**294**	⇓iPn	**Pn**	**03 27 33.9**	**+1.8**
VYHS	**Vyhne**	**3.65**	**37**	ePN	**Pn**	**03 27 33.8**	**+0.7**
VYHS				eSN	**Sn**	**03 28 14.0**	**-2.8**
VYHS				e		03 28 40.6	
KHC	**Kasperske Hory**	**3.73**	**340**	ePN	**Pn**	**03 27 34.2**	**+0.1**
KHC				ePG	**Pg**	**03 27 45.5**	**-1.3**
KHC				eSN	**Sn**	**03 28 15.5**	**-3.3**
VRAC	**Vranov**	**3.75**	**11**	ePn	**Pn**	**03 27 34.4**	**+0.1**
VRAC				eSn	**Sn**	**03 28 15.4**	**-3.7**
PSZ	**Piszkesteto**	**3.78**	**51**	⇓ePg	**Pg**	**03 27 51.8**	**+4.0**
DAVA	**Damuels**	**4.22**	**295**	⇑iPn	**Pn**	**03 27 42.1**	**+1.3**
DAVA	**Damuels**	**4.22**	**295**	ePn	**Pn**	**03 27 42.0**	**+1.1**
DAVA				eSn	**Sn**	**03 28 24.9**	**-5.9**
PRU	**Pruhonice**	**4.40**	**352**	ePN	**Pn**	**03 27 43.4**	**+0.1**
PRU				eSN	**Sn**	**03 28 31.6**	**-3.7**
PRU				eSG	**Sg**	**03 28 54.4**	**-2.3**
	comp=Z,18nm,0.6s						
KECS	**Kecovo**	**4.44**	**48**	ePN	**Pn**	**03 27 43.6**	**-0.2**
KECS				ePG	**Pg**	**03 27 58.6**	**-1.7**
KECS				eSN	**Sn**	**03 28 33.5**	**-2.6**
KECS	**Kecovo**	**4.44**	**48**	ePn	**Pn**	**03 27 43.6**	**-0.2**
KECS				ePg	**Pg**	**03 27 58.6**	**-1.7**
KECS				e		03 28 33.5	
PVCC	**Panska Ves**	**4.93**	**353**	ePN	**Pn**	**03 27 51.1**	**+0.5**
NKC	**Novy Kostel**	**5.04**	**337**	ePN	**Pn**	**03 27 51.3**	**-0.7**
NKC				eSG	**Sg**	**03 29 14.5**	**-2.5**
	comp=Z,24nm,0.9s						
TANN	**Tannenbergstha**	**5.20**	**338**	ePn	**Pn**	**03 27 53.7**	**-0.6**
TANN				eSn	**Sn**	**03 28 50.3**	**-4.6**
BRG	**Berggiesshubel**	**5.34**	**349**	PN	**Pn**	**03 27 55.6**	**-0.6**
BRG				PG	**Pg**	**03 28 17.1**	**-0.6**
BRG				SN	**Sn**	**03 28 52.8**	**-5.6**
BRG				SG	**Sg**	**03 29 25.9**	**-0.9**
	comp=Z,9.0nm,0.8s						
BRG	**Berggiesshubel**	**5.34**	**349**	Pn	**Pn**	**03 27 55.6**	**-0.6**
	comp=Z,5.4nm,0.8s						
BRG				Pg	**Pg**	**03 28 17.1**	**-0.6**
BRG				Sn	**Sn**	**03 28 52.8**	**-5.6**
BRG				Sg	**Sg**	**03 29 25.9**	**-0.9**
BFO	**Black Forest**	**5.60**	**301**	ePn	**Pn**	**03 27 59.2**	**-0.6**
BFO				eSn	**Sn**	**03 28 59.1**	**-5.7**
PGF	**Pioggiola**	**5.61**	**239**	ePn	**Pn**	**03 27 58.8**	**-1.1**
MOX	**Moxa**	**5.64**	**334**	ePN	**Pn**	**03 27 59.7**	**-0.7**
MOX				eSN	**Sn**	**03 29 02.0**	**-3.9**
MOX				eSG	**Sg**	**03 29 34.3**	**-2.3**
MOX	**Moxa**	**5.64**	**334**	ePn	**Pn**	**03 27 59.8**	**-0.6**
MOX				eSn	**Sn**	**03 29 02.0**	**-3.9**
CLL	**Collm**	**5.91**	**345**	iSg	**Sg**	**03 29 42.2**	**-2.9**
	comp=Z,27nm,1.1s						
CLL	**Collm**	**5.91**	**345**	iSg	**Sg**	**03 29 42.2**	**-2.9**
SBF	**Sospel**	**6.01**	**256**	ePn	**Pn**	**03 28 03.7**	**-1.8**
SBF				eSn	**Sn**	**03 29 08.8**	**-6.2**
	comp=Z,13nm,0.5s						
SBF	**Sospel**	**6.01**	**256**	ePn	**Pn**	**03 28 03.7**	**-1.8**
SBF				eSn	**Sn**	**03 29 08.8**	**-6.2**
	comp=Z,6.6nm,0.5s						
LPG	**La Plagne**	**6.15**	**272**	eP	**Pn**	**03 28 10.2**	**+2.9**
LPG				eSn	**Sn**	**03 29 11.4**	**-6.9**
	comp=Z,5.3nm,0.4s						
LPG	**La Plagne**	**6.15**	**272**	eP	**Pn**	**03 28 10.2**	**+2.9**
LPG				eSn	**Sn**	**03 29 11.4**	**-6.9**
	comp=Z,2.7nm,0.4s						
LPG	**La Plagne**	**6.15**	**272**	ePn	**Pn**	**03 28 05.4**	**-1.9**
LPG				eP		03 28 10.2	
LPG				eSn	**Sn**	**03 29 11.4**	**-6.9**
LPL	**La Plagne**	**6.16**	**272**	eP	**Pn**	**03 28 10.0**	**+2.5**
LPL				eSn	**Sn**	**03 29 11.1**	**-7.5**
	comp=Z,3.9nm,0.5s						
LPL	**La Plagne**	**6.16**	**272**	ePn	**Pn**	**03 28 05.6**	**-1.9**
LPL				eP		03 28 10.0	
LPL				eSn	**Sn**	**03 29 11.1**	**-7.5**
MBDF	**Montbardon**	**6.24**	**265**	ePn	**Pn**	**03 28 06.8**	**-1.8**
MBDF				eSn	**Sn**	**03 29 13.7**	**-6.9**
	comp=Z,7.8nm,0.5s						
MBDF	**Montbardon**	**6.24**	**265**	ePn	**Pn**	**03 28 06.8**	**-1.8**
MBDF				eSn	**Sn**	**03 29 13.7**	**-6.9**
	comp=Z,3.9nm,0.5s						
CDF	**Champ du Feu**	**6.27**	**299**	ePn	**Pn**	**03 28 07.6**	**-1.4**
CDF				eSn	**Sn**	**03 29 13.3**	**-8.0**
	comp=Z,2.6nm,0.5s						
CDF	**Champ du Feu**	**6.27**	**299**	ePn	**Pn**	**03 28 07.6**	**-1.4**
CDF				eSn	**Sn**	**03 29 13.3**	**-8.0**
	comp=Z,1.3nm,0.5s						
HINF	**Hinteralfeld**	**6.33**	**293**	ePn	**Pn**	**03 28 08.8**	**-1.1**
HINF				eSn	**Sn**	**03 29 15.3**	**-7.6**
	comp=Z,3.7nm,0.4s						
HINF	**Hinteralfeld**	**6.33**	**293**	ePn	**Pn**	**03 28 08.8**	**-1.1**
HINF				eSn	**Sn**	**03 29 15.3**	**-7.6**
	comp=Z,1.9nm,0.4s						
CABF	**La Chapelle**	**6.62**	**282**	ePn	**Pn**	**03 28 11.0**	**-2.8**
FRF	**La Foret Royal**	**6.66**	**255**	ePn	**Pn**	**03 28 12.3**	**-2.0**
ORIF	**Oris-en-Rattie**	**6.83**	**267**	eP	**Pn**	**03 28 19.6**	**+2.9**
ORIF				eSn	**Sn**	**03 29 27.3**	**-7.8**
	comp=Z,4.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**6.83**	**267**	ePn	**Pn**	**03 28 14.4**	**-2.3**
ORIF				eP		03 28 19.6	
ORIF				eSn	**Sn**	**03 29 27.3**	**-7.8**
LMR	**La Mourre**	**6.83**	**254**	ePn	**Pn**	**03 28 15.4**	**-1.3**
SMRF	**Simiane la Rot**	**7.26**	**260**	ePn	**Pn**	**03 28 20.6**	**-1.9**
MEZF	**Maizieres J'vi**	**7.69**	**296**	eSn	**Sn**	**03 29 46.6**	**-10**
	comp=Z,4.8nm,0.6s						
MEZF	**Maizieres J'vi**	**7.69**	**296**	eSn	**Sn**	**03 29 46.6**	**-10**
	comp=Z,2.4nm,0.6s						
SMF	**Signal de Mont**	**8.16**	**281**	ePn	**Pn**	**03 28 32.5**	**-2.5**
LOR	**Lormes**	**8.21**	**286**	ePn	**Pn**	**03 28 33.1**	**-2.5**
LASF	**Ste Croix**	**8.42**	**263**	ePn	**Pn**	**03 28 36.2**	**-2.3**
AVF	**Avril sur Loir**	**8.51**	**282**	ePn	**Pn**	**03 28 37.2**	**-2.5**
BGF	**Bois d'Agland**	**8.85**	**280**	ePn	**Pn**	**03 28 41.8**	**-2.5**

NIED ***18*** *03:35:00, 3700N×13850E, h8km, Mw3.6 Best double couple: Mo2.68000×10^14 NP1:φs191.00000°, δ48.00000°, λ74.00000°. NP2:φs34.00000°, δ45.00000°, λ107.00000°.*
ISCJB ***18*** *03:35:29.7±0.6, 3703N±002×13849E±003, h11km±5km, Error ellipse: s-maj=4.2km s-min=3.7km az=8.3*
JMA ***18*** *03:35:30.0, 3703N×13849E, h12km±2km, M3.3*
JMA Felt III J1.
ISC 18 03:35:29.8±0.4**, 3703N**±002×**13848E**±003**, h17**km±4km**, n14, σ0s59**/28**, 3C-4D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.27**	**285**	⇓P	**Pg**	**03 35 35.4**	**-0.3**
JJN				eS	**Sg**	**03 35 40.0**	**+0.3**
JHK	**Hiroka**	**0.48**	**63**	⇑P	**Pg**	**03 35 39.0**	**-0.4**
JHK				eS	**Sg**	**03 35 45.8**	**-0.1**
JGK	**Kuni**	**0.49**	**165**	⇓P	**Pg**	**03 35 39.6**	**0.0**
JGK				eS	**Sg**	**03 35 46.6**	**+0.5**
JIZZ	**Izumozaki**	**0.53**	**20**	P	**Pg**	**03 35 40.7**	**+0.3**
JIZZ				eS	**Sg**	**03 35 49.5**	**+2.0**
MAT	**Matsushiro**	**0.54**	**204**	P	**Pg**	**03 35 39.9**	**-0.6**
MAT				S	**Sg**	**03 35 47.6**	**-0.1**
MAT	**Matsushiro**	**0.54**	**204**	P	**Pg**	**03 35 40.2**	**-0.3**
MAT				eS	**Sg**	**03 35 47.9**	**+0.2**
JKT	**Katashina**	**0.67**	**113**	⇓P	**Pg**	**03 35 42.4**	**-0.6**
JKT				eS	**Sg**	**03 35 51.4**	**-0.5**
JNG	**Nsakai**	**0.70**	**206**	P	**Pg**	**03 35 43.0**	**-0.5**
JNG				eS	**Sg**	**03 35 53.0**	**+0.3**
JSZ	**Suzu**	**0.98**	**295**	⇓P	**Pb**	**03 35 47.8**	**-0.6**
JSZ				eS	**Sb**	**03 36 01.7**	**+0.6**
JAG	**Ashikaga**	**0.99**	**128**	P	**Pb**	**03 35 48.4**	**-0.1**
JAG				eS	**Sb**	**03 36 01.9**	**+0.7**
JSD	**Sado**	**1.02**	**350**	⇑P	**Pb**	**03 35 48.0**	**-1.0**
JSD				eS	**Sb**	**03 36 02.1**	**0.0**
JNS	**Sasagawa**	**1.03**	**40**	P	**Pb**	**03 35 48.4**	**-0.7**
JNS				eS	**Sb**	**03 36 02.5**	**+0.2**
JFY	**Yanaizu**	**1.04**	**69**	⇑P	**Pb**	**03 35 48.9**	**-0.5**
JFY				eS	**Sb**	**03 36 03.0**	**+0.2**
JRY	**Ryogami san**	**1.07**	**161**	P	**Pb**	**03 35 49.8**	**0.0**
JRY				eS	**Sb**	**03 36 04.3**	**+0.8**

ISCJB ***18*** *03:53:24.5±0.6, 4060N±004×37.12E±004, h10km, Error ellipse: s-maj=5.7km s-min=4.3km az=24.8*
CSEM ***18*** *03:53:24.0±0.1, 4057N×3708E, h2km, MD2.8, Error ellipse: s-maj=2.6km s-min=2.0km az=46.0*
ISK ***18*** *03:53:24.6, 4058N×3707E, h5km, MD3.0*
DDA ***18*** *03:53:26.2, 4064N×3692E, h25km, Md2.8*
ISC 18 03:53:25.0±0.8**, 4062N**±004×**3711E**±004**, h4**km±8km**, n13, σ0s77**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKA	**Tokat**	**0.56**	**239**	iP	**Pg**	**03 53 35.0**	**-0.8**
TOKA				iS	**Sg**	**03 53 42.6**	**-0.6**
SVSK	**Karacayir**	**0.70**	**187**	ePg	**Pg**	**03 53 37.4**	**-1.1**
SVSK				eSg	**Sg**	**03 53 47.4**	**-0.3**
SVSK	**Karacayir**	**0.70**	**187**	ePG	**Pg**	**03 53 37.4**	**-1.2**
SVSK				eSG	**Sg**	**03 53 47.4**	**-0.3**
KVT	**Kavak**	**0.93**	**300**	ePG	**Pg**	**03 53 43.0**	**+0.2**
KVT				eSG	**Sg**	**03 53 55.5**	**+0.6**
YOZ	**Yozgat**	**1.69**	**235**	ePN	**Pn**	**03 53 55.4**	**+0.2**
KEMA	**Kemaliye**	**1.72**	**141**	iP	**Pn**	**03 53 55.2**	**-0.4**
KEMA				iS	**Sg**	**03 54 20.9**	**+0.7**
DIKM	**Dikmen**	**1.74**	**307**	ePN	**Pn**	**03 53 56.1**	**+0.2**
DARE	**Darende-Malaty**	**1.75**	**162**	ePN	**Pg**	**03 54 00.7**	**+2.2**
GUMT	**Gumushane**	**1.81**	**94**	ePN	**Pn**	**03 53 57.5**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.96**	**189**	ePN	**Pg**	**03 54 03.0**	**+0.4**
BNN	**Bunyan**	**2.02**	**209**	ePN	**Pn**	**03 53 59.5**	**-0.2**
MACK	**Trabzon**	**2.04**	**80**	iP	**Pn**	**03 53 59.0**	**-1.1**
MACK				iS	**Sg**	**03 54 30.1**	**-0.6**
KAMT	**Kaman**	**2.89**	**246**	ePN	**Pn**	**03 54 12.2**	**+0.5**

ISCJB ***18*** *04:05:43.6±0.6, 24.12S±005×6698W±007, h190km±8km, mb3.4/3, Error ellipse: s-maj=10.7km s-min=8.8km az=161.1*
IDC ***18*** *04:05:43.5±1.0, 2426S×6689W, h171km±13km, mb3.2/2, mb1 3.2/8, mb1mx3.2/20, mbtmp3.1/8, Error ellipse: s-maj=19.3km s-min=13.1km az=70.0*
GUC ***18*** *04:05:47.0±0.8, 2389S×6746W, h223km±11km, ML4.3*
NEIC ***18*** *04:05:47.0, 2389S×6746W, h223km, mb4.0/3, After GUC.*
ISC 18 04:05:44.5±0.6**, 2413S**±006×**6697W**±007**, h182**km±8km**, n29, σ1s22**/36**, mb3.4**/3**, 4C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.34**	**310**	P	**Pn**	**04 06 27.6**	**+2.2**
	13nm,0.3s,baz=128,slow=7.7,SNR=147						
LVC				S	**Sn**	**04 06 58.2**	**+1.0**
	37nm,0.3s,baz=330,slow=20,SNR=40						
LVC	**Limon Verde**	**2.34**	**310**	⇑eP	**Pn**	**04 06 27.5**	**+2.1**
LVC				iS	**Sn**	**04 06 58.6**	**+1.4**
PB04	**Plate Boundary**	**2.97**	**308**	eP	**Pn**	**04 06 39.6**	**+6.7**
PB04				iS	**Sn**	**04 07 19.2**	**+8.6**
PB04				AML	AML	04 07 25.4	
	comp=N,726nm,0.3s						
CEN1	**Los Morros**	**3.05**	**283**	⇓iP	**Pn**	**04 06 35.8**	**+2.0**
CEN1				iS	**Sn**	**04 07 12.7**	**+0.4**
CEN1				AML	AML	04 07 15.7	
	comp=N,367nm,0.4s						
CPN1	**Cerro Paranal**	**3.17**	**260**	eP	**Pn**	**04 06 35.6**	**+0.2**
CPN1				iS	**Sn**	**04 07 13.4**	**-1.5**
CPN1				AML	AML	04 07 15.7	
	comp=E,276nm,0.5s						
ANCH	**Antofagasta**	**3.18**	**277**	⇑eP	**Pn**	**04 06 36.3**	**+0.9**
ANCH				iS	**Sn**	**04 07 13.8**	**-1.3**
ANCH	**Antofagasta**	**3.18**	**277**	⇑eP	**Pn**	**04 06 36.3**	**+0.9**
ANCH				iS	**Sn**	**04 07 13.8**	**-1.3**
ANCH				AML	AML	04 07 15.5	
	comp=E,570nm,0.4s						
MECH	**Mejillones**	**3.35**	**287**	eP	**Pn**	**04 06 38.4**	**+0.9**
MECH				iS	**Sn**	**04 07 17.5**	**-1.4**
PB01	**Plate Boundary**	**3.85**	**322**	⇑eP	**Pn**	**04 06 44.5**	**+0.6**
PB01				eS	**Sn**	**04 07 28.5**	**-1.7**
PB01				AML	AML	04 07 29.7	
	comp=E,362nm,0.2s						
CFAA	**Coronel Fontan**	**7.53**	**188**	P	**Pn**	**04 07 30.5**	**-1.0**
	comp=E,0.3nm,0.3s,baz=9.4,slow=7.8,SNR=37						
CFAA				S	**Sn**	**04 08 49.6**	**-6.6**
	comp=E,0.2nm,0.3s,baz=256,slow=18,SNR=7.6						
CPUP	**Villa Florida**	**9.00**	**106**	P	**Pn**	**04 07 49.3**	**-1.5**
	comp=E,0.2nm,0.3s,baz=228,slow=13,SNR=2.2						
SIV	**San Ignacio**	**9.81**	**35**	P	**Pn**	**04 08 00.5**	**-1.0**
	comp=E,0.8nm,0.3s,baz=233,slow=9.4,SNR=15						
TRQA	**Tornquist**	**14.52**	**164**	Pn	**Pn**	**04 09 03.5**	**+2.0**
	comp=E,6.5nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**16.83**	**189**	P	**Pn**	**04 09 29.0**	**-0.5**
	comp=E,0.1nm,0.3s,baz=34,slow=11,SNR=2.9						
PLCA	**Paso Flores**	**16.83**	**189**	*e*P	**Pn**	**04 09 29.4**	**0.0**
BDFB	**Brasilia**	**19.70**	**68**	P	**P**	**04 10 00.7**	**+0.6**
	comp=E,0.6nm,0.3s,baz=228,slow=18,SNR=22						
BDFB	**Brasilia**	**19.70**	**68**	*e*P	**P**	**04 09 59.9**	**-0.1**
	comp=E,7.6nm,0.5s						
OTAV	**Otavalo**	**26.66**	**334**	*e*P	**P**	**04 11 03.2**	**-3.4**
	comp=E,1.2nm,0.7s,mb3.6						
PAYG	**Puerto Ayora**	**32.47**	**312**	P	**P**	**04 11 57.6**	**-0.2**
HUMP	**Col San Antoni**	**42.03**	**2**	P	**P**	**04 13 17.8**	**-0.3**
AOPR	**Arecibo Observ**	**42.22**	**0**	P	**P**	**04 13 16.7**	**-2.9**
BBSR	**BB Station**	**56.22**	**2**	*e*P	**P**	**04 15 06.8**	**+1.3**
TORD	**Torodi Ar. Bea**	**76.58**	**69**	P	**P**	**04 17 14.6**	**-0.6**
	comp=E,0.5nm,0.5s,mb3.4,baz=248,slow=4.7,SNR=21						
MAW	**Mawson**	**81.31**	**163**	*e*P	**P**	**04 17 39.7**	**-0.3**
LSZ	**Lusaka**	**88.44**	**106**	*e*P	**P**	**04 18 16.9**	**+0.4**
YKA	**Yellowknife Ar**	**94.25**	**340**	P	**P**	**04 18 43.3**	**+1.1**
	comp=E,0.1nm,0.6s,mb3.2,baz=139,slow=3.7,SNR=4.0						
ZALV	**Zalesovo Beam**	**143.49**	**28**	PKP	PKPdf	04 24 55.5	-1.4
	comp=E,0.3nm,0.3s,baz=235,slow=5.2,SNR=3.9						
MKAR	**Makanchi Array**	**146.60**	**40**	PKPbc	PKPbc	04 25 05.3	+1.0
	comp=E,0.6nm,0.5s,baz=322,slow=3.0,SNR=11						
MKAR	**Makanchi Array**	**146.60**	**40**	PKPbc	PKPbc	04 25 05.3	+1.0

*NEIC **18** 04:33:54.5, 1892N×6465W, h62km, MD3.6(RSPR), After RSPR.*

RSPR 18 04:33:54.5, 1892N×6465W, h62km±8km, MD3.6/8, MD3.6/8, 9C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.63**	**207**⇓	*e*P	Pn	04 34 07.1	-0.9
STVI				*e*S	Sn	04 34 17.6	-0.3
HUMP	**Col San Antoni**	**1.38**	**236**⇑	*e*P	Pn	04 34 16.7	-0.8
HUMP				*e*S	Sn	04 34 33.5	-1.3
SJG	**San Juan**	**1.63**	**241**⇑	*e*P	Pn	04 34 20.1	-0.9
SJG	**San Juan**	**1.63**	**241**⇑	*e*P	Pn	04 34 20.2	-0.8
SJG				*e*S	Sn	04 34 40.4	-0.6
SJG	**San Juan**	**1.63**	**241**⇑	*e*P	Pn	04 34 20.2	-0.8
SJG				*e*S	Sn	04 34 40.4	-0.7
SJG				*e*S	Sn	04 34 40.4	-0.6
SJG	**San Juan**	**1.63**	**241**⇑	*e*P	Pn	04 34 20.1	-0.9
SJG				*e*S	Sn	04 34 40.4	-0.7
CELP	**Cerrillos**	**2.01**	**246**⇑	*e*P	Pn	04 34 25.7	-0.5
CELP				*e*S	Sn	04 34 49.5	-0.7
OBIP	**Obispado Ponce**	**2.05**	**245**⇑	*e*P	Pn	04 34 26.2	-0.4
LSP	**Las Mesas**	**2.43**	**253**⇑	*e*P	Pn	04 34 31.2	-0.6
CRPR	**Cabo Rojo, PR**	**2.50**	**249**⇑	*e*P	Pn	04 34 32.3	-0.5

GUC 18 04:39:58.9±1.0, 2295S×7012W, h25km±15km, MD3.6, ML2.5, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.45**	**190**	*e*P	Pb	04 40 10.9	+2.7
CEN1				*i* S	Sb	04 40 19.5	+4.9
CEN1				AML	AML	04 40 20.0	
	comp=N,318nm,0.3s						
ANCH	**Antofagasta**	**0.78**	**200**	*e*P	Pb	04 40 17.7	+3.9
ANCH				*i* S	Sb	04 40 28.3	+4.4
MACH	**Maria Elena**	**0.82**	**24**	*e*P	Pb	04 40 13.9	-0.6
MACH				*i* S	Sb	04 40 25.2	0.0
TOCH	**Tocopilla**	**0.85**	**355**	*e*P	Pb	04 40 13.5	-1.6
TOCH				*i* S	Sb	04 40 25.2	-0.9
TOCH				AML	AML	04 40 26.6	
	comp=E,812nm,0.2s						
PB04	**Plate Boundary**	**0.90**	**41**	*e*P	Pb	04 40 10.4	-5.4
PB04				*i* S	Sb	04 40 19.5	-7.8
PB04				AML	AML	04 40 22.7	
	comp=E,346nm,0.4s						
LVC	**Limon Verde**	**1.17**	**74**	*e*P	Pn	04 40 19.9	+0.4
LVC				*i* S	Sn	04 40 35.1	+0.4
PB01	**Plate Boundary**	**1.99**	**17**	*e*P	Pn	04 40 30.1	-0.8
PB01				*i* S	Sn	04 40 55.2	+0.2
PB01				AML	AML	04 40 59.2	
	comp=E,84nm,0.3s						

*ISCJB **18** 04:51:02.0±0.5, 504N±004×7786W±006, h10km, mb3.8/11, Error ellipse: s-maj=8.5km s-min=6.3km az=176.1*
*IDC **18** 04:51:02.7±1.0, 499N×7782W, h0km, mb3.7/9, mb1 4.0/11, mb1mx3.8/23, mbtmp3.9/11, ML4.1/2, Error ellipse: s-maj=36.8km s-min=17.3km az=42.0*
*NEIC **18** 04:51:03.3±3.9, 506N×7784W, h5km±26km, mb4.1/2, Error ellipse: s-maj=10.3km s-min=9.8km az=120.0*

ISC 18 04:51:04.0±0.5, 505N±004×7784W±005, h10km, n22, σ1s09/25, mb3.8/11, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**4.54**	**334**	*e*Pn	**Pn**	**04 52 11.4**	**-1.5**
BCIP				*e*Sn	**Sn**	**04 53 05.0**	**-0.8**
OTAV	**Otavalo**	**4.82**	**187**	*e*Pn	**Pn**	**04 52 18.9**	**+2.2**
OTAV				*e*Pg	**Pg**	**04 52 32.0**	**-4.4**
OTAV				*e*Sn	**Sn**	**04 53 11.1**	**-1.6**
SDV	**Santo Domingo**	**8.11**	**62**	Pn	**Pn**	**04 53 03.2**	**+1.3**
	4.7nm,0.3s,baz=257,slow=9.6,SNR=30						
SDV				Sn	**Sn**	**04 54 32.7**	**-1.0**
	1.6nm,0.3s,baz=30,slow=20,SNR=3.0						
PAYG	**Puerto Ayora**	**13.67**	**246**	*e*Pn	**Pn**	**04 54 17.2**	**-0.9**
PCRV	**Puerto La Cruz**	**14.04**	**68**	Pn	**Pn**	**04 54 21.8**	**-1.4**
	0.6nm,0.3s,baz=53,slow=13,SNR=3.5						
AOPR	**Arecibo Observ**	**17.09**	**38**	*e*Pn	**Pn**	**04 55 03.0**	**-0.2**
HUMP	**Col San Antoni**	**17.51**	**41**	*e*Pn	**Pn**	**04 55 08.7**	**+0.2**
SIV	**San Ignacio**	**26.69**	**142**	P	**P**	**04 56 43.7**	**+0.1**
	1.8nm,0.5s,mb3.9,baz=318,slow=9.4,SNR=11						
LVC	**Limon Verde**	**28.85**	**163**	*e*P	**P**	**04 56 57.7**	**-5.1**
	7.2nm,0.4s,mb4.8						
TXAR	**Lajitas Array**	**34.35**	**318**	P	**P**	**04 57 53.0**	**+1.8**
	0.2nm,0.8s,mb3.1,baz=124,slow=10,SNR=2.8						
BDFB	**Brasilia**	**35.98**	**125**	P	**P**	**04 58 04.5**	**-0.9**
	0.4nm,0.3s,mb3.8,baz=234,slow=14,SNR=3.8						
RCBR	**Riachuelo**	**43.25**	**104**	P	**P**	**04 59 06.5**	**+0.5**
PLCA	**Paso Flores**	**46.05**	**172**	*e*P	**P**	**04 59 27.8**	**-0.2**
	1.3nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**46.91**	**328**	P	**P**	**04 59 34.4**	**-0.4**
	0.3nm,0.8s,mb3.3,baz=99,slow=11,SNR=3.0						
ULM	**Lac du Bonnet**	**47.53**	**344**	P	**P**	**04 59 39.6**	**+0.1**
	1.8nm,0.7s,mb4.2,baz=156,slow=5.9,SNR=3.0						
NVAR	**Mina Array Bea**	**49.50**	**318**	P	**P**	**04 59 57.8**	**+2.9**
	0.3nm,0.6s,mb3.5,baz=120,slow=6.3,SNR=3.0						
YKA	**Yellowknife Ar**	**63.39**	**342**	P	**P**	**05 01 33.7**	**+0.3**
	0.8nm,0.7s,mb4.0,baz=134,slow=6.4,SNR=16						
YKA	**Yellowknife Ar**	**63.39**	**342**	P	**P**	**05 01 33.7**	**+0.3**
DBIC	**Dimbokro**	**72.56**	**85**	P	**P**	**05 02 32.6**	**+0.5**
	1.7nm,0.6s,mb4.2,baz=278,slow=11,SNR=3.8						
DBIC	**Dimbokro**	**72.56**	**85**	*e*P	**P**	**05 02 32.8**	**+0.7**
	1.7nm,0.7s,mb4.1						
TORD	**Torodi Ar. Bea**	**78.69**	**78**	P	**P**	**05 03 08.2**	**+1.0**
	0.7nm,0.9s,mb3.6,baz=272,slow=4.6,SNR=8.2						
ASAR	**Alice Springs**	**144.26**	**236**	PKP	PKPdf	05 10 39.5	-1.6
	0.8nm,0.7s,baz=122,slow=3.8,SNR=9.5						

SKHL 18 04:51:34.2±1.3, 5614N×12472E, h19km±4km, mb3.9/4, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLNS	**Chul'man**	**0.70**	**8**	*i* Pg	Pg	04 51 48.8	+0.7
CLNS				pPg		04 51 57.1	
KROS	**Kirovskiy**	**2.14**	**142**	*e*Pn	Pn	04 52 08.0	-0.8
KROS				⇑*i*Pg	Pg	04 52 12.5	-2.8
KROS				AMB	AMB	04 52 13.0	
	27nm,0.4s						
KROS				AMB	AMB	04 52 13.0	
	23nm,0.4s						
KROS				AMB	AMB	04 52 13.0	
	55nm,0.4s						
KROS				pPg		04 52 17.5	
KROS				*e*Sn	Sn	04 52 34.3	-0.5
KROS				*e*Sg	Sg	04 52 41.1	-2.0
KROS				A		04 52 44.1	
	210nm,0.5s						
KROS				A		04 52 44.1	
	130nm,0.5s						
KROS				A		04 52 44.1	
	150nm,0.5s						
BMKR	**Bomnak**	**2.75**	**120**	*e*Pn	Pn	04 52 16.9	-0.3
BMKR				*e*Pg	Pg	04 52 24.0	-2.9
BMKR				AMB	AMB	04 52 24.6	
	8.0nm,0.4s						
BMKR				AMB	AMB	04 52 24.6	
	12nm,0.4s						
BMKR				AMB	AMB	04 52 24.6	
	16nm,0.4s						
BMKR				*e*Sg	Sg	04 53 00.5	-2.1
BMKR				A		04 53 06.3	
	74nm,0.4s						
BMKR				A		04 53 06.3	
	81nm,0.4s						
BMKR				A		04 53 06.3	
	28nm,0.4s						
ZEA	**Zeya**	**2.81**	**148**	*e*Pg	Pg	04 52 26.0	-2.1
ZEA				AMB	AMB	04 52 27.6	
	25nm,0.3s						
ZEA				*e*Sg	Sg	04 53 02.5	-2.1
ZEA				A		04 53 05.7	
	110nm,0.5s						
TUP	**Tupik**	**3.22**	**240**	*e*P	Pn	04 52 25.5	+1.8
TUP				*e*Pg	Pg	04 52 32.7	-3.2
TUP				*e*Sg	Sg	04 53 15.5	-2.1
YASR	**Yasnyy**	**3.42**	**145**	*e*Pn	Pn	04 52 26.8	+0.3
YASR				*e*Pg	Pg	04 52 36.3	-3.5
YASR				AMB	AMB	04 52 37.3	
	7.0nm,0.5s						
YASR				*e*Sg	Sg	04 53 20.6	-3.5
YASR				A		04 53 29.4	
	40nm,0.6s						
EKMR	**Ekimchan**	**5.69**	**119**	*e*Pg	Pn	04 53 15.9	+18
EKMR				*e*Sg	Sn	04 54 31.4	+29
EKMR				A		04 54 45.5	
	12nm,0.5s						
EKMR				A		04 54 45.5	
	5.0nm,0.5s						

IDC 18 05:13:11.2±10.0, 227N×9591E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, Error ellipse: s-maj=218.7km s-min=117.2km az=144.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.36**	**10**	Pn	Pn	05 17 02.5	+0.1
	baz=189,slow=12,SNR=4.5						
MKAR	**Makanchi Array**	**45.90**	**347**	P	P	05 21 35.5	-0.1
	0.5nm,0.4s,baz=156,slow=8.8,SNR=13						
SONM	**Songino Array**	**46.28**	**10**	P	P	05 21 38.6	+0.1
	0.5nm,0.7s,baz=187,slow=9.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**52.31**	**352**	P	P	05 22 24.4	-0.1
	0.4nm,0.3s,baz=162,slow=5.6,SNR=2.9						

*IDC **18** 05:56:13.9±0.5, 3055N×6979E, h0km, mb4.6/25, mb1 4.7/26, mb1mx4.7/28, mbtmp4.6/26, ML4.4/1, MS4.4/33, Ms1 4.4/33, ms1mx4.4/40, Error ellipse: s-maj=15.1km s-min=11.8km az=10.0*
*DJA **18** 05:56:14, 3070N×6890E, h11km, Mw5.6/5*
*ISCJB **18** 05:56:15.8±0.1, 3055N±002×6990E±002, h25km, mb4.9/141, MS4.5/70, Error ellipse: s-maj=3.2km s-min=2.1km az=10.5*
*GCMT **18** 05:56:17.7±0.3, 3048N×7002E, h13km±1km, MW4.9/69, Moment Tensor Solution. s26,c34; s69,c116; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.05±.09; Mθθ1.61±.10; Mφφ-1.56±.10; Mrθ0.91±.27; Mθφ-2.52±.10; Mφr0.07±.22; Best double couple: M0 3.11200×10^16 NP1:φs164.00000°, δ73.00000°, λ3.00000°. NP2: φs74.00000°, δ88.00000°, λ163.00000°. Principal axes: T 3.1850, Plg13.0000°, Azm28.0000°; N -0.1460, Plg73.0000°, Azm245.0000°; P -3.0400, Plg10.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **18** 05:56:17.7±0.2, 3058N×6994E, mb5.0/74 Error ellipse: s-maj=6.1km s-min=4.1km az=17.0*
*MOS **18** 05:56:18.2±1.1, 3075N×6980E, h33km, mb5.2/82, MS4.4/33, Error ellipse: s-maj=5.8km s-min=3.7km az=118.0*
*BJI **18** 05:56:20.3, 3093N×70.15E, h26km, mB5.0, mb5.0, Ms4.9, Msz4.6*
*SZGRF **18** 05:56:20.9, 30.11N×6929E, h33km, mb5.1, MS4.3, Pakistan*

ISC 18 05:56:18.1±0.1, 3056N±002×6992E±002, h27km, h27km±.9km: pP-P, n471, σ1s32/493, mb4.9/141, MS4.5/70, 34C-11D, Pakistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBDP	**Sheikh Budin**	**1.90**	**23**	⇓P	**Pn**	**05 56 50.5**	**+1.8**
SARP	**Sargodha**	**2.72**	**59**	P	**Pn**	**05 57 01.3**	**+1.2**
CEP	**Cherat**	**3.67**	**27**	⇑P	**Pn**	**05 57 14.8**	**+1.7**
CEP				S	**Sn**	**05 58 00.0**	**+4.5**
JASL	**Jaisalmer**	**3.72**	**166**	*e*P	**Pn**	**05 57 13.5**	**-0.3**
KBL	**Kabul**	**4.04**	**350**	*e*P	**Pn**	**05 57 19.7**	**+1.5**
CHCP	**Chirah Chowk**	**4.20**	**42**	P	**Pn**	**05 57 23.0**	**+2.7**
JMU	**Jammu**	**4.76**	**62**	*e*P	**Pn**	**05 57 30.5**	**+2.4**
JMU				*e*x	x	05 58 31.5	
THN	**Thein Dam**	**5.30**	**68**	*e*P	**Pn**	**05 57 36.6**	**+1.2**
THN				*e*x	x	05 59 17.5	
DLH	**Dalhousie**	**5.53**	**67**	*e*P	**Pn**	**05 57 43.0**	**+4.4**
DLH				*e*S	**Sn**	**05 58 45.0**	**+3.6**
BHK	**Bhakra**	**5.65**	**80**	*e*P	**Pn**	**05 57 43.6**	**+3.4**
BHK				*e*x	x	05 59 09.8	
KHET	**Khetri**	**5.71**	**114**	*e*P	**Pn**	**05 57 40.8**	**-0.3**
KHET				*e*S	**Sn**	**05 58 44.4**	**-1.4**
AJM	**Ajmer**	**5.81**	**133**	*e*P	**Pn**	**05 57 42.7**	**+0.1**
AJM				*e*x	**Sn**	**05 58 50.0**	**+1.7**
AJM				AML	AML	05 59 31.6	
	comp=E,1μm,0.8s						
AJM				AML	AML	05 59 33.8	
	comp=N,722nm,0.8s						
KKR	**Kurukshetra**	**6.00**	**94**	*e*P	**Pn**	**05 57 46.0**	**+0.9**
SDNR	**Sundarnagar**	**6.13**	**79**	*e*P	**Pn**	**05 57 49.4**	**+2.6**
SDNR				*e*x	**Sn**	**05 58 59.0**	**+2.9**
KUDL	**Kundal**	**6.22**	**111**	*e*x	x	05 59 29.6	
SMLA	**Simla**	**6.26**	**83**	*i* P	**Pn**	**05 57 51.6**	**+2.9**
SMLA				*i* x	x	05 59 03.7	
SMLA				*e*x	x	05 59 09.5	
	comp=N,3μm,0.3s						
SMLA				*e*x	x	05 59 11.8	
	comp=E,3μm,0.4s						
BHGR	**Bahadurgarh**	**6.39**	**105**	*e*S	**Sn**	**05 59 00.2**	**-2.3**
AYAN	**Aya Nagar**	**6.61**	**106**	*e*P	**Pn**	**05 57 53.8**	**+0.2**
AYAN				*e*S	**Sn**	**05 59 05.5**	**-2.6**
AYAN				AML	AML	05 59 54.3	
	comp=Z,419nm,0.7s						
NDI	**New Delhi**	**6.62**	**105**	*e*x	x	05 57 52.5	
NDI				*e*x	x	05 59 10.0	
SONA	**Sohna**	**6.66**	**108**	*e*P	**Pn**	**05 57 55.1**	**+0.9**
SONA				*e*S	**Sn**	**05 59 07.2**	**-2.1**
DDI	**Dehra Dun**	**7.03**	**90**	*e*x	**Pn**	**05 57 56.6**	**-2.7**
DDI				*e*x	x	05 59 37.0	
KLP	**Kalpa**	**7.22**	**80**	*e*P	**Pn**	**05 58 04.0**	**+2.2**
KLP				*e*S	**Sn**	**05 59 20.8**	**-2.1**
KLP				AML	AML	06 00 23.3	
	comp=N,4μm,1.0s						
KLP				AML	AML	06 00 24.9	
	comp=E,7μm,0.6s						
BHJ	**Bhuj**	**7.28**	**182**	*e*P	**Pn**	**05 58 01.4**	**-1.3**
BHJ				*e*S	**Sn**	**05 59 18.5**	**-5.9**
KALG	**Kalgarh**	**7.73**	**96**	*e*x	x	05 57 58.8	
KALG				*e*S	**Sn**	**05 59 32.1**	**-3.6**
KALG				AML	AML	06 00 29.3	
	comp=E,1μm,0.4s						
AGRA	**Agra**	**7.78**	**113**	*e*x	**Pn**	**05 58 04.6**	**-4.9**
JOSI	**Joshimath**	**8.31**	**88**	*e*P	**Pn**	**05 58 18.0**	**+1.1**
JOSI				*e*S	**Sn**	**05 59 45.8**	**-4.1**
JOSI				AML	AML	06 01 03.6	
	comp=E,4μm,1.0s						
JOSI				AML	AML	06 01 04.1	
	comp=N,4μm,1.1s						
PTH	**Pithoragarh**	**8.98**	**94**	*e*P	**Pn**	**05 58 26.1**	**0.0**
PTH				*e*x	x	06 00 15.1	
LGTI	**Lohaghat**	**9.03**	**94**	*e*S	**Sn**	**06 00 00.0**	**-7.4**
BHPL	**Bhopal**	**9.90**	**136**	*e*P	**Pn**	**05 58 37.3**	**-1.3**
BHPL				*e*S	**Sn**	**06 00 24.1**	**-4.7**
BHPL				AML	AML	06 01 42.3	
	comp=E,212nm,0.7s						
BHPL				AML	AML	06 01 43.6	
	comp=N,180nm,0.6s						
KSH	**Kashi**	**10.22**	**27**	P	**Pn**	**05 58 44.9**	**+1.9**
KSH				AP		05 58 50.9	
KSH				PP		05 58 53.3	
KSH				S	**Sn**	**06 00 37.0**	**+0.3**
KSH				XS		06 00 45.3	
JBP	**Jabalpur**	**11.61**	**127**	*e*x	**Pn**	**05 58 59.2**	**-2.9**
JBP				*e*S	**Sn**	**06 01 04.6**	**-6.2**
AKL	**Akola**	**11.71**	**145**	*e*P	**Pn**	**05 59 03.1**	**-0.3**
AKL				*e*S	**Sn**	**06 01 02.0**	**-11**
ALBI	**Allahabad**	**11.74**	**114**	*e*x	**Pn**	**05 59 01.0**	**-2.8**
ALBI				*e*S	**Sn**	**06 01 08.0**	**-6.0**
AML	**Almayashu**	**11.94**	**14**	P	**Pn**	**05 59 05.5**	**-1.0**
	SNR=122						
AML	**Almayashu**	**11.94**	**14**	*e*Pn	**Pn**	**05 59 05.3**	**-1.2**
	comp=N,4.3nm,0.8s						
AML				*e*Sn	**Sn**	**06 01 12.8**	**-6.1**
UCH	**Uchtor**	**12.22**	**16**	P	**Pn**	**05 59 09.7**	**-0.6**
	SNR=16						
UCH	**Uchtor**	**12.22**	**16**	*e*Pn	**Pn**	**05 59 09.3**	**-0.9**
	comp=N,91nm,1.0s						
VAN	**Vannovskaya**	**12.23**	**310**⇑	*i*P	**Pn**	**05 59 09.3**	**-1.2**
DANN	**Dangsing**	**12.26**	**97**	*e*P	**Pn**	**05 59 09.0**	**-2.0**
	comp=N,711nm,0.8s						
KZA	**Kyzart**	**12.27**	**19**	P	**Pn**	**05 59 10.0**	**-1.0**
	SNR=110						
KOLN	**Koldanda**	**12.28**	**100**	*e*P	**Pn**	**05 59 09.2**	**-2.0**
	comp=N,522nm,0.8s						
NGP	**Nagpur**	**12.46**	**137**	*e*x	**Pn**	**05 59 09.7**	**-4.0**
NGP				*e*S	**Sn**	**06 01 25.3**	**-6.3**
EKS2	**Erkin-Say**	**12.47**	**13**	P	**Pn**	**05 59 12.5**	**-1.2**
	SNR=30						
EKS2	**Erkin-Say**	**12.47**	**13**	*e*Pn	**Pn**	**05 59 12.4**	**-1.3**
	comp=N,92nm,0.9s						
EKS2				*e*Sn	**Sn**	**06 01 30.6**	**-1.1**
POO	**Poona**	**12.49**	**162**	*e*P	**Pn**	**05 59 12.1**	**-2.0**
KK31	**Karatay Array**	**12.53**	**2**	*i* P	**Pn**	**05 59 12.6**	**-2.0**
KK31				pmax	pmax		
	comp=Z,12nm,0.3s						
AAK	**Ala-Archa**	**12.60**	**16**	Pn	**Pn**	**05 59 14.1**	**-1.4**
	comp=Z,872nm,0.7s,SNR=54						
AAK	**Ala-Archa**	**12.60**	**16**	P	**Pn**	**05 59 14.9**	**-0.6**
	SNR=46						
AAK	**Ala-Archa**	**12.60**	**16**	*e*P	**Pn**	**05 59 14.4**	**-1.1**
AAK				*e*		06 01 32.2	
AAK				pmax	pmax		
	comp=Z,28nm,0.8s						
AAK	**Ala-Archa**	**12.60**	**16**	P	**Pn**	**05 59 14.7**	**-0.8**
	SNR=58						
AAK	**Ala-Archa**	**12.60**	**16**	*e*Pn	**Pn**	**05 59 14.4**	**-1.1**
	comp=Z,28nm,0.8s						
AAK				*e*Sn	**Sn**	**06 01 32.1**	**-2.7**
ULHL	**Ulahol**	**12.72**	**22**	P	**Pn**	**05 59 16.8**	**-0.4**
	SNR=18						
KBK	**Karagaybulak**	**12.73**	**17**	P	**Pn**	**05 59 16.9**	**-0.4**
	SNR=20						
FRU	**Bishkek**	**12.82**	**16**⇑	*i*P	**Pn**	**05 59 17.0**	**-1.4**
FRU				pmax	pmax		
	comp=Z,110nm,1.8s						
FRU				MLR	MLR		
	comp=Z,5μm,17.0s						
BANOM	**Banah**	**12.86**	**252**	⇑P	**Pn**	**05 59 19.8**	**+0.7**
	SNR=5.2						
SMDO	**Samad**	**12.96**	**238**	⇑P	**Pn**	**05 59 20.8**	**+0.3**
	SNR=5.5						
CHMS	**Chumysh**	**13.01**	**16**	P	**Pn**	**05 59 19.6**	**-1.4**
	SNR=22						
GKN	**Gorkha**	**13.10**	**98**	*e*P	**Pn**	**05 59 19.8**	**-2.6**
	comp=Z,259nm,0.7s						
GKN				*e*S	**Sn**	**06 01 42.2**	**-5.0**
TKM2	**Tokmak 2**	**13.15**	**19**	*e*P	**Pn**	**05 59 21.1**	**-1.9**
TKM2				pmax	pmax		
	comp=Z,61nm,0.8s						
TKM2	**Tokmak 2**	**13.15**	**19**	P	**Pn**	**05 59 21.6**	**-1.4**
	SNR=73						
TKM2	**Tokmak 2**	**13.15**	**19**	*e*Pn	**Pn**	**05 59 21.1**	**-1.9**
	comp=Z,61nm,0.8s						
USP	**Ospenovka**	**13.20**	**15**	P	**Pn**	**05 59 21.3**	**-2.4**
	SNR=21						
JMDO	**Jabal Madar**	**13.35**	**235**	⇑P	**Pn**	**05 59 26.3**	**+0.5**
	SNR=9.6						
LATR	**Latur**	**13.51**	**152**	*e*x	x	05 59 38.0	
DMN	**Daman**	**13.61**	**99**	*e*P	**Pn**	**05 59 26.6**	**-2.7**
	comp=Z,190nm,0.8s						
KKN	**Kakani**	**13.70**	**98**	*e*P	**Pn**	**05 59 27.4**	**-3.3**
	comp=Z,208nm,0.7s						
KKN	**Kakani**	**13.70**	**98**	*e*P	**Pn**	**05 59 27.4**	**-3.3**
KKN				pmax	pmax		
	comp=Z,208nm,0.7s						
BSY	**Bisya**	**13.77**	**239**	⇓P	**Pn**	**05 59 31.9**	**+0.3**
	SNR=14						
AAA	**Alma-Ata**	**13.87**	**22**	*i* P	**Pn**	**05 59 30.8**	**-2.1**
AAA				*e*S	**Sn**	**06 02 06.0**	**+0.1**
AAA				pmax	pmax		
	comp=Z,600nm,4.5s						
AAA				smax			
	comp=E,400nm,6.2s						
AAA				MLR	MLR		
	comp=Z,4μm,11.0s						
PKI	**Pulchoki**	**13.87**	**99**	*e*P	**Pn**	**05 59 29.5**	**-3.5**
	comp=Z,154nm,0.8s						
PKI				*e*S	**Sn**	**06 02 00.7**	**-5.4**
PKI	**Pulchoki**	**13.87**	**99**	*e*P	**Pn**	**05 59 29.5**	**-3.5**
PKI				pmax	pmax		
	comp=Z,154nm,0.8s						
GUN	**Gumba**	**14.19**	**97**	*e*P	**Pn**	**05 59 33.6**	**-3.6**
	comp=Z,757nm,0.8s						
JIRN	**Jiri**	**14.52**	**97**	*e*P	**Pn**	**05 59 38.0**	**-3.7**
	comp=Z,553nm,0.9s						
RAMN	**Ramite**	**15.07**	**100**	*e*P	**Pn**	**05 59 44.7**	**-4.5**
	comp=Z,378nm,0.8s						
HYB	**Hyderabad**	**15.27**	**147**	*e*P	**Pn**	**05 59 51.0**	**-0.8**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**15.27**	**147**	*i* P	**Pn**	**05 59 51.0**	**-0.8**
	comp=Z,50nm,1.0s						
HYB				*e*S	**Sn**	**06 02 45.5**	**+5.3**
HYB				LR	LR	06 06 00.0	
	comp=Z,6.8nm,14.0s						
HYB	**Hyderabad**	**15.27**	**147**	*e*P	**Pn**	**05 59 51.0**	**-0.8**
	comp=Z,50nm,1.0s						
HYB				*e*S	Sn	06 03 08.0	+28
HYB				*e*		06 06 00.0	
ODAN	**Odare**	**15.77**	**99**	*e*P	**Pn**	**05 59 53.9**	**-4.4**
	comp=Z,231nm,0.7s						
TAPN	**Taplejung**	**15.90**	**97**	*e*P	**Pn**	**05 59 56.2**	**-3.8**
	comp=Z,314nm,0.9s						
BWNR	**Bhubaneshwar**	**17.60**	**122**	*e*x	x	06 03 28.7	
MNGI	**Mangalore**	**18.11**	**164**	*e*x	x	05 59 37.9	
MNGI				*e*x	x	06 04 02.7	
CAL	**Calcutta**	**18.29**	**111**	*e*P	**Pn**	**06 00 30.4**	**+0.4**
CAL				*e*x	x	06 03 55.1	
LSA	**Lhasa**	**18.39**	**87**	P	**Pn**	**06 00 31.6**	**+0.5**
LSA				S	**Sn**	**06 03 50.0**	**-5.8**
LSA				LR	LR		
	comp=N,2μm,13.2s						
LSA				LR	LR		
	comp=E,2μm,12.5s						
LSA				LR	LR		
	comp=Z,2μm,14.7s						
LSA	**Lhasa**	**18.39**	**87**	*e*P	**Pn**	**06 00 34.2**	**+3.1**
LSA				*e*S	**Sn**	**06 03 52.9**	**-2.9**
LSA				pmax	pmax		
	comp=Z,75nm,0.9s						
LSA	**Lhasa**	**18.39**	**87**	*e*P	**Pn**	**06 00 34.2**	**+3.0**
	comp=Z,75nm,0.9s						
LSA				*e*S	**Sn**	**06 03 52.9**	**-3.0**
MKAR	**Makanchi Array**	**18.83**	**27**	P	**Pn**	**06 00 34.6**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=200,slow=10,SNR=70						
MKAR				LR	LR	06 08 53.1	
	comp=Z,2μm,18.6s,baz=215,slow=40						
MKAR	**Makanchi Array**	**18.83**	**27**	*i* P	**Pn**	**06 00 34.5**	**-1.9**
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
UMR	**Umm Al-Rimmam**	**19.24**	**273**	*e*P	**Pn**	**06 00 39.9**	**-1.5**
	baz=272						
UMR				AMb	AMB	06 00 53.9	
	comp=Z,182nm,1.2s,baz=272						
KBD	**Kabd**	**19.32**	**272**	*e*P	**Pn**	**06 00 40.8**	**-1.6**
	baz=270						
KBD				AMb	AMB	06 00 56.0	
	comp=Z,129nm,1.4s,baz=270						
WMQ	**Urumqi**	**19.34**	**42**	P	**Pn**	**06 00 42.4**	**0.0**
WMQ				AP	pP	06 00 49.8	+1.3
WMQ				PP		06 01 00.8	
WMQ				S	**Sn**	**06 04 12.8**	**-5.7**
WMQ				XS	sS	06 04 22.9	-7.2
WMQ				SS		06 04 38.3	

WMQ AMB AMB
comp=Z,37nm,1.4s
WMQ AMB AMB
comp=Z,382nm,3.0s
WMQ LR LR
comp=N,4μm,18.0s
WMQ LR LR
comp=E,2μm,14.0s
WMQ LR LR
comp=Z,3μm,18.0s
MIB Mutribah 19.53 274 *e*P **Pn 06 00 43.5 -1.4**
baz=272
MIB AMb AMB 06 00 53.0
comp=Z,145nm,0.9s,baz=272
NAY Al-Naaiem 19.70 272 *e*P **Pn 06 00 44.9 -2.0**
baz=271
NAY AMb AMB 06 00 55.6
comp=Z,130nm,1.3s,baz=271
SHL Shillong 20.00 99 *e*P **Pn 06 00 49.0 -1.5**
SHL *ex* x 06 04 22.0
AGT Agartala 20.09 104 *i* x **P 06 00 47.0 -2.6**
AGT *i* x x 06 01 21.0
AB31 Akbulak array 20.15 341 P **P 06 00 49.8 -0.3**
AB31 pmax pmax
comp=Z,27nm,0.7s
KURK Kurchatov 21.16 15 P **P 06 01 00.8 -0.2**
comp=Z,390nm,0.9s,mb5.7,SNR=36
KURK Kurchatov 21.16 15 P **P 06 01 00.4 -0.6**
SNR=37
KURK Kurchatov 21.16 15 P **P 06 00 59.0 -2.1**
comp=Z,12nm,0.7s,mb4.4,baz=209,slow=9.3,SNR=20
KURK LR LR 06 10 07.7
comp=Z,3μm,18.2s,MS4.7,baz=205,slow=40
KURK Kurchatov 21.16 15 P **P 06 00 59.0 -2.0**
KURK pmax pmax
comp=Z,12nm,0.7s,mb4.3
KURK MLR MLR
comp=Z,3μm,18.2s,MS4.7
KURK Kurchatov 21.16 15 *e*P **P 06 00 59.9 -1.1**
comp=Z,77nm,1.0s,mb5.0
KOD Kodaikanal 21.41 159 *e*P **P 06 01 03.8 -0.2**
KOD *ex* x 06 05 05.9
MAK Makhachkala 21.73 311 *e*P **P 06 01 05.5 -1.7**
MAK *e* 06 01 27.6
MAK *e*S **S 06 05 03.7 -2.6**
MAK *e*SS 06 05 32.5
MAK pmax pmax
comp=Z,518nm,1.4s,mb5.8
AKTK Aktyubinsk 21.77 339 P **P 06 01 06.7 -0.8**
AKTK LR LR 06 11 04.8
AKTO Aktyubinsk 21.77 339 P **P 06 01 06.7 -0.8**
comp=Z,11nm,0.8s,mb4.3,baz=165,slow=7.3,SNR=22
AKTO LR LR 06 11 04.8
comp=Z,1μm,18.2s,MS4.4,baz=150,slow=41
AKTO Aktyubinsk 21.77 339 P **P 06 01 06.7 -0.8**
AKTO pmax pmax
comp=Z,11nm,0.8s,mb4.3
AKTO MLR MLR
comp=Z,1μm,18.2s,MS4.4
BHD Baghdad 21.83 284 *e*P **P 06 01 09.5 +1.1**
BHD *e*S **S 06 05 12.0 +3.7**
IMP Imphal 22.02 99 *ex* **P 06 01 15.0 +4.6**
IMP *ex* x 06 05 48.0
VOSK Vostochnaya 22.16 2 P **P 06 01 11.0 -0.7**
VOSK pmax pmax
comp=Z,86nm,1.2s,mb5.1
BVA0 Borovoye Array 22.45 1 *i* P **P 06 01 14.0 -0.8**
BVA0 pmax pmax
comp=Z,26nm,1.6s,mb4.4
BVAR Borovoye Array 22.45 1 P **P 06 01 14.2 -0.6**
comp=Z,30nm,0.8s,mb4.8,baz=169,slow=11,SNR=44
BVAR LR LR 06 11 05.8
comp=Z,726nm,19.7s,MS4.1,baz=186,slow=40
BVAR Borovoye Array 22.45 1 P **P 06 01 14.2 -0.6**
BVAR pmax pmax
comp=Z,30nm,0.8s
BVAR MLR MLR
comp=Z,726nm,19.7s
BRVK Borovoye 22.49 1 P **P 06 01 15.1 -0.1**
comp=Z,499nm,0.8s,mb6.0,SNR=19
BRVK Borovoye 22.49 1 P **P 06 01 15.2 0.0**
SNR=48
BRVK Borovoye 22.49 1 *e*P **P 06 01 14.6 -0.6**
BRVK pmax pmax
comp=Z,130nm,0.9s,mb5.4
BRVK Borovoye 22.49 1 *e*P **P 06 01 14.6 -0.5**
comp=Z,130nm,0.9s,mb5.4
DGRG David-gareji 22.56 306 P **P 06 01 17.1 +1.0**
GNI Garni 22.59 302 ⇓P **P 06 01 17.8 +1.4**
SNR=10
GNI Garni 22.59 302 P **P 06 01 17.9 +1.5**
comp=Z,65nm,0.9s,mb5.0,baz=1.0,slow=2.2,SNR=15
GNI LR LR 06 12 04.3
comp=Z,623nm,18.7s,MS4.1,baz=108,slow=42
GNI Garni 22.59 302⇑ *i*P **P 06 01 18.1 +1.7**
GNI pmax pmax
comp=Z,180nm,1.5s
GNI MLR MLR
comp=Z,500nm,14.0s
GNI Garni 22.59 302 *e*P **P 06 01 18.3 +1.9**
comp=Z,167nm,1.1s,mb5.4
HAKT HAKKARI 22.77 295 *i* P **P 06 01 26.5 +8.2**
TRD Trivandrum 22.90 162⇑ *ex* **P 06 01 22.0 +2.1**
TRD *e*S **S 06 05 31.0 +2.7**
MTA Mtatsminda 23.06 306 P **P 06 01 24.4 +3.1**
TBLG Delisi 23.11 306 *e*P **P 06 01 24.3 +2.4**
TBLG Delisi 23.11 306 P **P 06 01 24.3 +2.5**
GOR Gori 23.64 306 P **P 06 01 29.8 +2.7**
DIGO Kars 23.67 302 *i* P **P 06 01 30.7 +3.2**
HOMI Horasan 24.66 300 *i* P **P 06 01 38.8 +2.3**
BEST Besiri 24.73 295 *i* P **P 06 01 41.9 +4.7**
DAGI Agillar 24.92 303 *i* P **P 06 01 40.5 +1.6**
DDEM Demirkent 24.99 302 *i* P **P 06 01 42.0 +2.5**
ERZM Erzurum 25.03 300 *i* P **P 06 01 45.5 +5.6**
MARD Mardin 25.03 293 *i* P **P 06 01 43.2 +3.3**
KIV Kislovodsk 25.33 309 *e*P **P 06 01 42.8 +0.2**
KIV *e*S **S 06 06 08.1 +1.0**
KIV pmax pmax
comp=Z,31nm,0.9s,mb4.8
KIV MLR MLR
comp=Z,451nm,14.0s,MS4.1
KIV Kislovodsk 25.33 309 *e*P **P 06 01 43.0 +0.4**
comp=Z,36nm,0.9s,mb4.9
KOPT Kop Dagi 25.71 300 *i* P sP 06 02 01.3 +4.2
ZAA0 Zalesovo Array 25.74 20 *e*P **P 06 01 45.9 -0.3**
ZALV Zalesovo Beam 25.74 20 P **P 06 01 46.1 -0.1**
comp=Z,57nm,0.8s,mb5.2,baz=211,slow=8.3,SNR=153
ZALV LR LR 06 13 20.2
comp=Z,902nm,20.1s,MS4.3,baz=96,slow=40
ZALV Zalesovo Beam 25.74 20 P **P 06 01 46.1 -0.1**
ZALV pmax pmax
comp=Z,57nm,0.8s,mb5.2
ZALV MLR MLR
comp=Z,902nm,20.1s,MS4.3
GTA Gaotai 25.95 62 P **P 06 01 50.8 +2.6**
GTA AP pP 06 01 56.3 +0.3
GTA XP sP 06 01 59.5 +0.2
GTA S **S 06 06 22.5 +5.5**
GTA XS sS 06 06 31.8 +1.9
GTA AMB AMB
comp=Z,21nm,1.3s,mb4.5
GTA AMB AMB
comp=Z,98nm,5.7s
GTA LR LR
comp=N,3μm,19.8s
GTA LR LR
comp=E,605nm,13.8s
GTA LR LR
comp=Z,848nm,15.6s,MS4.4
NVS Novosibirsk 26.08 18 *e*P **P 06 01 49.2 0.0**
NVS pmax pmax
comp=Z,134nm,1.8s,mb5.2
NVS pmax pmax
comp=N,116nm,1.5s
SVE Sverdlovsk 27.05 349⇑ *e*P **P 06 01 57.4 -0.6**
SVE pmax pmax
comp=Z,45nm,1.2s,mb4.9
SVE MLR MLR
comp=Z,2μm,14.0s,MS4.8
ARU Arti 27.07 346 *d i*P **P 06 01 59.1 +1.0**
ARU *e* 06 02 39.1
ARU *e*S **S 06 06 35.8 +1.5**
ARU *e*SS 06 07 43.4
ARU pmax pmax
comp=Z,80nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,1μm,17.0s,MS4.5
ARU Arti 27.07 346 *e*P **P 06 01 58.6 +0.4**
comp=Z,52nm,0.9s,mb5.1
KEMA Kemaliye 27.09 297 *i* P **P 06 02 06.5 +8.0**
HVS Khovu-Aksy 27.11 34 *e*P **P 06 01 59.8 +1.2**
HVS pmax pmax
comp=Z,139nm,1.6s,mb5.2
SOC Sochi 27.22 307 *e*P **P 06 01 59.5 -0.1**
SOC *e* 06 02 46.0
SOC *e*S **S 06 06 36.9 0.0**
SOC *e*SS 06 07 41.5
SOC pmax pmax
comp=Z,45nm,0.9s,mb5.0
SOC MLR MLR
comp=Z,763nm,17.0s,MS4.3
AKCD Akcadag 27.40 295 *i* P **P 06 02 08.1 +6.8**
GZT Gaziantep 27.59 293 *i* P **P 06 02 06.6 +3.6**
ASF Jabal al Asfar 28.18 282 P **P 06 02 08.9 +0.6**
comp=Z,3.9nm,1.0s,mb4.0,baz=6.0,slow=11,SNR=5.1
ASF LR LR 06 15 12.0
comp=Z,754nm,18.3s,MS4.3,baz=124,slow=40
ASF Jabal al Asfar 28.18 282 P **P 06 02 08.9 +0.5**
ASF pmax pmax
comp=Z,4.0nm,1.0s
ASF MLR MLR
comp=Z,754nm,18.3s
CHG Chiang Mai 28.76 107⇑ P **P 06 02 14.8 +1.1**
comp=Z,37nm,0.9s,mb5.1
CHTO Chiang Mai 28.76 107⇑ P **P 06 02 13.1 -0.5**
SNR=11
CHTO Chiang Mai 28.76 107 *e*P **P 06 02 14.8 +1.1**
CHTO pmax pmax
comp=Z,31nm,0.9s,mb5.0
CHTO Chiang Mai 28.76 107 *e*P **P 06 02 14.8 +1.1**
comp=Z,31nm,0.9s,mb5.0
LZH Lanzhou 28.79 70 *e*P **P 06 02 16.8 +3.1**
LZH AP pP 06 02 25.0 +3.4
LZH XP sP 06 02 28.9 +4.1
LZH PP PP 06 03 10.0 -8.9
LZH S **S 06 07 02.5 +0.7**
LZH XS sS 06 07 19.0 +4.3
LZH SS SS 06 08 30.0 -34
LZH AMB AMB
comp=Z,58nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,140nm,4.0s
LZH LR LR
comp=N,1μm,12.1s
LZH LR LR
comp=Z,2μm,13.6s,MS4.8
CMAR Chiang Mai Arr 28.94 108 P **P 06 02 14.9 -0.3**
comp=Z,9.6nm,0.9s,mb4.5,baz=300,slow=8.3,SNR=31
CMAR LR LR 06 15 50.3
comp=Z,343nm,18.6s,MS4.0,baz=298,slow=40
CMAR Chiang Mai Arr 28.94 108 P **P 06 02 14.9 -0.3**
CMAR pmax pmax
comp=Z,10.0nm,0.9s
CMAR MLR MLR
comp=Z,343nm,18.6s
CHRT Chiangrai 28.96 105 P **P 06 02 17.0 +1.6**
CD2 Chengdu 29.03 81 P **P 06 02 17.4 +1.5**
CD2 AP pP 06 02 21.8 -2.0
CD2 PP PP 06 03 11.3 -1.0
CD2 PCP PcP 06 05 26.0 +2.1
CD2 S **S 06 07 06.8 +1.1**
CD2 XS sS 06 07 13.9 -4.7
CD2 SS SS 06 08 35.4 -34
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,120nm,4.5s
CD2 LR LR
comp=N,2μm,11.4s
CD2 LR LR
comp=Z,1μm,13.2s,MS4.7
ANN Anapa 29.16 308 *e*P **P 06 02 16.2 -0.7**
ANN *e*S **S 06 07 06.0 -1.4**
ANN pmax pmax
comp=Z,32nm,1.0s,mb5.0
ANN MLR MLR
comp=E,832nm,14.0s
ANN MLR MLR
comp=Z,791nm,14.0s,MS4.5
MMAI Mount Meron Ar 29.36 284 LR LR 06 15 57.8
comp=Z,1μm,18.0s,MS4.6,baz=60,slow=40
KMI Kunming 29.46 92 P **P 06 02 22.1 +2.3**
KMI AP pP 06 02 27.0 -0.6
KMI PP PP 06 03 20.3 -6.2
KMI S **S 06 07 16.3 +3.7**
KMI XS sS 06 07 24.8 -0.7
KMI AMB AMB
comp=Z,25nm,1.2s,mb4.8
KMI AMB AMB
comp=Z,87nm,3.5s
KMI LR LR
comp=N,2μm,17.8s,MS4.7
KMI LR LR
comp=E,525nm,17.0s,MS4.7
KMI LR LR
comp=Z,637nm,14.6s,MS4.4
AVNT Avonos 29.84 296 *i* P **P 06 02 22.1 -1.0**
BR131 Keskin Array S 30.87 297 *e*P **P 06 02 28.7 -3.4**
comp=Z,1.1nm,0.5s,mb3.9
BRTR Keskin Array B 30.87 297 P **P 06 02 31.7 -0.4**
comp=Z,2.7nm,0.7s,mb4.2,baz=110,slow=8.5,SNR=10
BRTR LR LR 06 16 33.3
comp=Z,596nm,19.1s,MS4.3,baz=101,slow=40
BRTR Keskin Array B 30.87 297 P **P 06 02 31.7 -0.4**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR MLR MLR
comp=Z,596nm,19.1s
MOY Mondy 31.14 38 *e*P **P 06 02 37.7 +3.3**
SIM Simferopol' 31.46 307 *e*P **P 06 02 41.1 +3.8**
SIM pmax pmax
comp=Z,18nm,0.9s,mb4.9
ZAK Zakamensk 31.81 42⇑ *i*P **P 06 02 42.5 +2.3**
ZAK *e* 06 03 47.4
ZAK pmax pmax
comp=Z,16nm,1.0s,mb4.8
GYA Guiyang 32.46 88 P **P 06 02 50.1 +3.9**
GYA AP pP 06 02 56.8 +2.7
GYA PP PP 06 03 59.4 -0.4
GYA PCP PcP 06 05 35.8 +2.7
GYA S **S 06 08 03.9 +4.4**
GYA XS sS 06 08 13.4 +1.0
GYA SCP ScP 06 09 19.6 +4.5
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.7s
GYA LR LR
comp=N,790nm,17.6s,MS4.6
GYA LR LR
comp=E,580nm,17.2s,MS4.6
GYA LR LR
comp=Z,650nm,17.0s,MS4.4
TLY Talaya 32.59 40 *e*P **P 06 02 48.7 +1.6**
TLY pmax pmax
comp=Z,33nm,1.6s,mb5.0
TLY Talaya 32.59 40 *e*P **P 06 02 49.9 +2.8**
comp=Z,15nm,0.9s,mb4.9
SONM Songino Array 32.74 48 P **P 06 02 50.7 +2.2**
comp=Z,9.9nm,0.8s,mb4.8,baz=249,slow=8.7,SNR=47
SONM LR LR 06 18 39.9
comp=Z,2μm,19.4s,MS4.7,baz=75,slow=41
SONM Songino Array 32.74 48 P **P 06 02 50.7 +2.2**
SONM pmax pmax
comp=Z,10.0nm,0.8s
SONM MLR MLR
comp=Z,2μm,19.4s
XAN Xi'an 33.02 74 P **P 06 02 50.6 -0.5**
XAN AP pP 06 02 58.3 -0.6
XAN PP PP 06 04 05.1 -0.8
XAN PCP PcP 06 05 39.4 +4.9
XAN S **S 06 08 08.9 +0.8**
XAN SCP ScP 06 09 22.0 +5.1
XAN PCS PcS 06 09 24.3 +4.4
XAN SCS ScS 06 13 18.4 +1.2
XAN AMB AMB
comp=Z,13nm,1.0s,mb4.8
XAN AMB AMB
comp=Z,104nm,5.6s
XAN LR LR
comp=N,2μm,20.2s,MS4.8
XAN LR LR
comp=E,786nm,20.7s,MS4.8
XAN LR LR
comp=Z,1μm,17.0s,MS4.7
ULN Ulaanbaatar 33.17 48 *e*P **P 06 02 53.2 +1.0**
ULN Ulaanbaatar 33.17 48 *e*P **P 06 02 55.0 +2.8**
comp=Z,11nm,1.0s,mb4.7
IRK Irkutsk 33.20 39 *e*P **P 06 02 55.0 +2.6**
IRK pmax pmax
comp=Z,67nm,1.4s,mb5.4
ISP Isparta 33.21 293 *e*P **P 06 02 54.4 +1.7**
ISP pmax pmax
comp=Z,18nm,1.3s,mb4.8
ISP MLR MLR
comp=Z,700nm,16.0s,MS4.5
BTO Baotou 33.87 62 *e*P **P 06 03 00.4 +2.0**
MOS Moscow 33.94 327 *e*P **P 06 02 58.0 -0.8**
MOS MLR MLR
comp=Z,900nm,19.0s,MS4.5
GOLH Golhisar 33.96 292 *i* P **P 06 02 59.6 +0.3**
OBN Obninsk 34.10 326 P **P 06 03 00.0 -0.2**
OBN *e*PP pP 06 03 07.4 -0.7
OBN *e* 06 03 15.1
OBN 06 04 16.0
OBN SS SS 06 10 31.0 -21
OBN pmax pmax
comp=Z,80nm,2.2s,mb5.3
OBN MLR MLR
comp=Z,2μm,17.0s,MS4.9
HHC Hu-ho-hao-te 35.06 61 *e*P **P 06 03 11.4 +2.7**
HHC AP pP 06 03 16.9 +0.3
HHC XP sP 06 03 20.3 +0.5
HHC PP PP 06 04 29.8 +1.4
HHC PCP PcP 06 05 44.3 +4.1
HHC *e*S **S 06 08 41.8 +2.4**
HHC XS sS 06 08 51.3 -1.2
HHC SCS ScS 06 13 29.8 +2.1
HHC AMB AMB
comp=Z,14nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,98nm,4.5s
HHC LR LR
comp=N,812nm,15.5s,MS4.6
HHC LR LR
comp=E,432nm,16.6s,MS4.6
HHC LR LR
comp=Z,649nm,16.6s,MS4.5
TIRR Tirgusor 35.34 305⇑ *i*P **P 06 03 10.9 -0.2**
TIRR Tirgusor 35.34 305⇑ P **P 06 03 10.9 -0.2**
AKASG Malin Array Be 36.26 315 P **P 06 03 17.7 -1.2**
comp=Z,8.8nm,0.7s,mb4.8,baz=101,slow=7.2,SNR=29
AKASG ScP ScP 06 09 30.4 +2.2
comp=Z,0.3nm,0.4s,baz=96,slow=0.9,SNR=3.4
AKASG LR LR 06 21 29.4
comp=Z,859nm,20.2s,MS4.5,baz=85,slow=42
AKASG Malin Array Be 36.26 315 P **P 06 03 17.7 -1.2**
AKASG ScP ScP 06 09 30.4 +2.2
AKASG LR LR 06 21 29.4
AKBB Malin Array Si 36.26 315 *e*P **P 06 03 18.3 -0.6**
AKBB *e*PP pP 06 03 26.0 -0.8
KIEV Kiev 36.27 315 *e*P **P 06 03 17.6 -1.3**
KIEV *e*PP pP 06 03 25.9 -1.0
KIEV pmax pmax
comp=Z,34nm,1.0s,mb5.2
KIEV Kiev 36.27 315 *e*P **P 06 03 17.6 -1.3**
comp=Z,34nm,1.0s,mb5.2
KIEV *ep*P pP 06 03 25.9 -0.9
KLMR Klimovskoe 36.36 335 *e*P **P 06 03 19.3 -0.3**
KLMR pmax pmax
comp=Z,29nm,1.2s,mb5.1
VRI Vrincioaia 36.74 307⇑ *i*P **P 06 03 23.9 +0.9**
VRI Vrincioaia 36.74 307⇑ P **P 06 03 23.9 +0.8**
PLOR Plostina 36.79 307⇑ *i*P **P 06 03 24.2 +0.7**
APE Apeiranthos 37.18 292 *e*P **P 06 03 28.7 +1.8**
APE pmax pmax
comp=Z,83nm,1.8s,mb5.3
APE MLR MLR
comp=Z,800nm,18.0s,MS4.5
QIZ Qiongzhong 37.84 98 P **P 06 03 34.9 +2.3**
QIZ S **S 06 09 25.9 +3.6**
QIZ LR LR
comp=N,485nm,19.1s
QIZ LR LR
comp=Z,412nm,18.6s,MS4.3
VOIR 37.84 306⇑ *i*P **P 06 03 32.5 +0.1**
VOIR 37.84 306⇑ P **P 06 03 32.5 +0.1**
BURAR Bucovina Array 38.06 309⇑ *i*P **P 06 03 34.5 +0.3**
BURAR Bucovina Array 38.06 309⇑ P **P 06 03 34.5 +0.3**
WHN Wuhan 38.08 78 P **P 06 03 36.5 +1.9**
WHN S **S 06 09 21.9 -3.9**
WHN LR LR
comp=N,4μm,22.3s,MS5.2
WHN LR LR
comp=E,2μm,27.2s,MS5.2
WHN LR LR
comp=Z,2μm,17.0s
BUR08 Bucovina Ar. S 38.08 310 *e*P **P 06 03 34.0 -0.4**
KULM Kulim 38.31 125 *e*P **P 06 03 37.4 +0.8**
comp=Z,32nm,1.0s,mb5.0
BJT Baijiatuau 38.55 63 *e*P **P 06 03 41.6 +3.2**
BJT pmax pmax
comp=Z,22nm,0.7s
BJT Baijiatuau 38.55 63 *e*P **P 06 03 41.5 +3.1**
comp=Z,22nm,0.7s,mb5.0
BJI Beijing 38.55 63 P **P 06 03 41.4 +2.9**
BJI S **S 06 09 33.0 +0.2**
BJI AMB AMB
comp=Z,25nm,0.9s,mb4.9
BJI AMB AMB
comp=Z,175nm,3.2s
BJI LR LR
comp=N,2μm,23.5s,MS4.8
BJI LR LR
comp=E,274nm,20.7s,MS4.8
BJI LR LR
comp=Z,417nm,27.3s
PSI Prapat 38.91 130 LR LR 06 20 59.6
comp=Z,1μm,20.6s,MS4.7,baz=295,slow=38
IDID Didziasalis 39.23 322 *e*P **P 06 03 45.1 +1.2**
IIGN Ignalina 39.52 322 *e*P **P 06 03 46.5 +0.3**
DRSR 39.63 308⇑ *i*P **P 06 03 47.5 +0.2**
DRGR 39.63 308⇑ P **P 06 03 47.5 +0.2**
ISAL Salakas 39.65 322 *e*P **P 06 03 49.3 +1.9**
TRPA Tarpa 39.92 310⇓ *i*P **P 06 03 49.9 +0.1**
KWP Kalwaria 40.06 312 *e*P **P 06 03 50.8 -0.1**
KWP *e*PP pP 06 03 58.9 0.0
KWP pmax pmax
comp=Z,44nm,1.0s,mb5.1
KWP Kalwaria 40.06 312⇑ *i*P **P 06 03 51.2 +0.3**
KWP Kalwaria 40.06 312 *e*P **P 06 03 50.8 -0.1**
comp=Z,44nm,1.0s,mb5.1
KWP *ep*P pP 06 03 58.9 0.0
UZH Uzhgorod 40.16 311 *c i*P **P 06 03 53.0 +1.2**
UZH *e* pP 06 04 00.3 +0.6
UZH *e*S **S 06 09 57.0 +0.3**
BZS Buzias 40.26 306⇓ *i*P **P 06 03 53.1 +0.5**
BZS Buzias 40.26 306⇓ P **P 06 03 53.1 +0.5**
BOD Bodaibo 40.63 35 *e*P **P 06 03 55.9 +0.4**
BOD pmax pmax
comp=Z,12nm,1.1s,mb4.4
JOF Joensuu 40.69 334 *ep* **P 06 03 55.3 -0.6**
comp=Z,12nm,0.6s,mb4.7
JOF Joensuu 40.69 334 *e*P **P 06 03 55.3 -0.6**
JOF pmax pmax
comp=Z,12nm,0.6s,mb4.7
CRVS Cervenica-Dubn 40.75 311 *e*P **P 06 03 56.4 -0.2**
CRVS *e* pP 06 04 04.0 -0.6
CRVS pmax pmax
comp=Z,14nm,0.9s,mb4.6
CRVS MLR MLR
comp=Z,200nm,19.3s,MS4.0
CRVS Cervenica-Dubn 40.75 311 *e*P **P 06 03 56.4 -0.2**
CRVS *ep*P pP 06 04 04.0 -0.6
CRVS Cervenica-Dubn 40.75 311 *e*P **P 06 03 56.4 -0.2**
comp=Z,14nm,0.9s,mb4.6
CRVS *e* pP 06 04 04.0 -0.6
CRVS LR LR
comp=Z,200nm,19.3s,MS4.0
SUW Suwalki 40.77 319 *e*P **P 06 03 57.6 +0.9**
SUW *e*PP pP 06 04 04.0 -0.7
SUW pmax pmax
comp=Z,101nm,1.3s,mb5.3
SUW Suwalki 40.77 319 *e*P **P 06 03 57.6 +0.9**

comp=Z,100nm,1.3s,mb5.3
SUW ep P pP 06 04 04.0 -0.7
STHS Stebnicka Huta 40.97 312 eP pP 06 04 08.5 +2.1
STHS Stebnicka Huta 40.97 312 epP pP 06 04 08.5 +2.1
KECS Kecovo 41.33 310 eP **P** **06 03 58.8 -2.6**
KECS e 06 04 08.9
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KECS Kecovo 41.33 310 eP **P** **06 03 58.8 -2.6**
comp=Z,3.1nm,0.7s,mb4.0
KECS e 06 04 08.9
NIE Niedzica 41.57 311 eP **P** **06 04 04.0 +0.7**
NIE e pP 06 04 11.9 +0.6
PSZ Piszkesteto 41.66 309⇑ *i*P **P** **06 04 05.0 +0.9**
PSZ Piszkesteto 41.66 309 eP **P** **06 04 04.2 +0.1**
comp=Z,34nm,1.0s,mb4.9
HIA Hailar 41.69 49 eP **P** **06 04 07.0 +2.7**
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 41.69 49 eP **P** **06 04 07.0 +2.7**
comp=Z,8.8nm,0.8s,mb4.4
OJC Ojcow 42.01 313 eP **P** **06 04 05.8 -1.2**
KAF Kangasniemi 42.26 331 ep **P** **06 04 08.0 -0.8**
comp=Z,9.4nm,0.6s,mb4.6,baz=117,slow=8.1
KAF Kangasniemi 42.26 331 eP **P** **06 04 08.0 -0.8**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
PKSM Moragy 42.38 307⇓ *i*P **P** **06 04 12.3 +2.3**
PKSM Moragy 42.38 307 ⇓P **P** **06 04 12.3 +2.4**
VYHS Vyhne 42.42 310 eP **P** **06 04 10.4 +0.1**
VYHS e pP 06 04 18.9 +0.6
VYHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
VYHS Vyhne 42.42 310 eP **P** **06 04 10.4 +0.1**
comp=Z,5.3nm,1.1s,mb4.1
VYHS e pP 06 04 18.9 +0.6
KOLL Kolacno 42.72 310 eP **P** **06 04 12.6 -0.1**
KOLL epP pP 06 04 20.4 -0.3
OKC Ostrava-Krasne 43.02 312 eP **P** **06 04 15.2 +0.1**
ZST Bratislava 43.55 309 eP **P** **06 04 17.7 -1.7**
ZST e 06 04 27.7
ZST pmax pmax
comp=Z,17nm,0.8s,mb4.8
ZST MLR MLR
comp=Z,200nm,19.8s,MS4.0
ZST Bratislava 43.55 309 eP **P** **06 04 17.7 -1.7**
ZST epP pP 06 04 27.7 +0.2
ZST Bratislava 43.55 309 eP **P** **06 04 17.7 -1.7**
comp=Z,17nm,0.8s,mb4.8
ZST e 06 04 27.7
ZST LR LR
comp=Z,200nm,19.8s,MS4.0
SSE Sheshan 43.70 76 P **P** **06 04 22.3 +1.4**
SSE AP pP 06 04 31.4 +2.4
SSE PP PP 06 06 03.3 +0.5
SSE S **S** **06 10 49.9 +0.4**
SSE XS sS 06 11 05.8 +3.1
SSE SCS ScS 06 14 19.6 +0.9
SSE AMB AMB
comp=Z,30nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,78nm,5.3s
SSE LR LR
comp=N,1µm,18.4s,MS4.9
SSE LR LR
comp=E,360nm,18.4s,MS4.9
SSE LR LR
comp=Z,314nm,15.5s,MS4.3
DPC Dobruska-Polom 44.24 312 eP **P** **06 04 25.3 +0.3**
DPC epP pP 06 04 32.3 -0.7
DPC AMS AMS 06 26 00.0
comp=Z,300nm,16.9s
KSP Ksiaz 44.31 313 eP **P** **06 04 26.8 +1.3**
UPC Upice 44.45 313 eP **P** **06 04 24.8 -1.9**
UPC epP pP 06 04 35.0 +0.3
ARSA Arzberg 44.56 308⇑ *i*P **P** **06 04 28.8 +1.2**
comp=Z,16nm,0.9s,mb4.8
TREC Trest 44.69 311 eP **P** **06 04 28.3 -0.3**
TREC epP pP 06 04 34.4 -2.2
PRU Pruhonice 45.35 312 eP **P** **06 04 33.6 -0.2**
PRU epP pP 06 04 41.5 -0.4
PRU AMS AMS 06 27 30.0
comp=Z,400nm,15.9s
PVCC Panska Ves 45.38 312 eP **P** **06 04 35.2 +1.2**
CN2 Changchun 45.38 57 eP **P** **06 04 36.0 +1.8**
CN2 eAP pP 06 04 44.0 +1.8
CN2 eS **S** **06 11 14.4 +0.9**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,600nm,14.0s,MS4.8
CN2 LR LR
comp=E,600nm,14.0s,MS4.8
CN2 LR LR
comp=Z,700nm,16.0s,MS4.7
MOA Molin 45.43 309⇑ *i*P **P** **06 04 34.6 +0.1**
comp=Z,24nm,1.0s,mb5.0
BRG Berggiesshubel 45.80 313 *i* P **P** **06 04 37.4 +0.1**
BRG e pP 06 04 45.0 -0.4
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BRG MLR MLR
comp=N,266nm,20.0s,MS4.4
BRG MLR MLR
comp=E,269nm,15.4s,MS4.4
BRG MLR MLR
comp=Z,346nm,18.6s,MS4.3
BRG Berggiesshubel 45.80 313 eP **P** **06 04 37.4 +0.1**
comp=Z,13nm,1.0s,mb4.8
BRG Berggiesshubel 45.80 313 *i* P **P** **06 04 37.4 +0.1**
comp=Z,8.5nm,0.8s,mb4.7
BRG e pP 06 04 45.0 -0.4
comp=Z,13nm,1.0s
BRG
comp=N,444nm,20.0s
BRG
comp=E,449nm,15.4s
BRG
comp=Z,578nm,18.6s
BRG Berggiesshubel 45.80 313 *i* P **P** **06 04 37.4 +0.1**
comp=Z,5.1nm,0.8s,mb4.5
BRG e pP 06 04 45.0 -0.4
BRG LR LR
comp=Z,350nm,18.6s,MS4.3
GEC2 GERESS Array S 45.84 310 eP **P** **06 04 37.0 -0.7**
GEC2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GEC2 GERESS Array S 45.84 310 eP **P** **06 04 37.0 -0.7**
comp=Z,10.0nm,1.0s,mb4.7
GERES GERESS Array B 45.84 310 P **P** **06 04 36.9 -0.8**
comp=Z,3.4nm,0.8s,mb4.3,baz=99,slow=6.9,SNR=16
GERES LR LR 06 25 02.9
comp=Z,255nm,21.6s,MS4.1,baz=195,slow=38
GERES GERESS Array B 45.84 310 P **P** **06 04 36.9 -0.8**
GERES pmax pmax
comp=Z,3.0nm,0.8s
GERES MLR MLR
comp=Z,255nm,21.6s
KHC Kasperske Hory 45.93 310 eP **P** **06 04 33.1 -5.3**
KHC e pP 06 04 39.4 -7.1
KHC e 06 04 46.5
KHC Kasperske Hory 45.93 310 eP **P** **06 04 39.4 +1.0**
KHC epP pP 06 04 46.5 0.0
KHC Kasperske Hory 45.93 310 eP **P** **06 04 37.8 -0.6**
comp=Z,4.2nm,1.0s,mb4.3
KHC epP pP 06 04 45.5 -1.0
CLNS Chul'man 46.00 39 eP **P** **06 04 37.0 -1.8**
CLNS pmax pmax
comp=Z,24nm,0.7s,mb5.2
CLNS pmax pmax
comp=E,20nm,0.8s
CLNS pmax pmax
comp=N,5.0nm,0.7s
CLNS MLR MLR
comp=Z,847nm,16.0s,MS4.8
CLNS MLR MLR
comp=E,302nm,20.0s,MS4.5
CLNS MLR MLR
comp=N,395nm,15.0s,MS4.5
KBA Koelnbreinsper 46.05 308⇑ *i*P **P** **06 04 41.2 +1.8**
comp=N,15nm,1.0s,mb4.9

ARCES ARCESS Array B 46.35 340 P **P** **06 04 42.1 +0.7**
comp=N,6.2nm,0.7s,mb4.7,baz=125,slow=7.6,SNR=7.5
ARCES LR LR 06 27 54.0
comp=N,397nm,19.3s,MS4.4,baz=36,slow=41
ARCES ARCESS Array B 46.35 340 P **P** **06 04 42.1 +0.7**
ARCES pmax pmax
comp=Z,6.0nm,0.7s
ARCES MLR MLR
comp=Z,397nm,19.3s
CLL Collm 46.42 313 eP **P** **06 04 42.3 +0.1**
comp=Z,10.0nm,1.1s,mb4.7
CLL Collm 46.42 313 eP **P** **06 04 42.0 -0.2**
CLL epP pP 06 04 50.0 -0.3
CLL LmH 06 24 00.0
comp=N,400nm,20.5s
CLL LmH 06 24 00.0
comp=E,300nm,22.0s
CLL Collm 46.42 313 eP **P** **06 04 42.0 -0.2**
CLL e pP 06 04 50.0 -0.3
CLL LR LR
comp=Z,500nm,17.3s,MS4.5
TANN Tannenbergstha 46.71 312 eP **P** **06 04 45.2 +0.7**
comp=Z,12nm,1.2s,mb4.7
NKC Novy Kostel 46.71 312 eP **P** **06 04 46.3 +1.8**
NKC epP pP 06 04 52.5 -0.1
NKC AMS AMS 06 28 20.0
comp=Z,400nm,16.1s
NKC Novy Kostel 46.71 312 eP **P** **06 04 46.3 +1.8**
NKC e pP 06 04 52.5 -0.1
ROTZ Rotzenmuhle 46.85 311 eP **P** **06 04 45.8 +0.2**
comp=Z,14nm,1.0s,mb4.8
MANZ Manzenberg 46.92 312 eP **P** **06 04 46.3 +0.1**
comp=Z,30nm,1.1s,mb5.1
MOX Moxa 47.26 312 eP **P** **06 04 50.1 +1.3**
comp=Z,22nm,1.5s,mb4.9
MOX e pP 06 04 56.8 -0.1
MOX
comp=Z,300nm,17.0s
MOX Moxa 47.26 312 eP **P** **06 04 50.1 +1.3**
MOX e pP 06 04 56.8 -0.1
MOX pmax pmax
comp=Z,22nm,1.5s,mb4.9
MOX MLR MLR
comp=Z,300nm,17.0s,MS4.3
MOX Moxa 47.26 312 eP **P** **06 04 48.9 +0.1**
GRA1 Grafenberg Arr 47.49 311 eP **P** **06 04 51.3 +0.7**
comp=Z,29nm,0.8s,mb5.3
GRA1 epP pP 06 04 58.7 0.0
GRA1 LR LR
comp=Z,300nm,19.4s,MS4.3
GRF Grafenberg Arr 47.49 311 eP **P** **06 04 51.3 +0.7**
GRF e*PP pP 06 04 58.7 0.0
GRF pmax pmax
comp=Z,29nm,0.8s,mb5.3
GRF MLR MLR
comp=Z,300nm,19.4s,MS4.3
GRF Grafenberg Arr 47.49 311 eP **P** **06 04 51.3 +0.7**
GRF e*PP pP 06 04 58.7 0.0
GRF pmax pmax
comp=Z,29nm,0.8s,mb5.3
GRF MLR MLR
comp=Z,300nm,19.4s,MS4.3
GRF Grafenberg Arr 47.49 311 eP **P** **06 04 51.3 +0.7**
comp=Z,29nm,0.8s,mb5.3
GRF epP pP 06 04 58.7 0.0
GRF eL 06 28 37.0
comp=Z,333nm,19.4s
FETA Feichten 47.84 308⇑ *i*P **P** **06 04 52.6 -0.8**
comp=Z,15nm,1.3s,mb4.9
KSRS Korea Array 47.93 65 P **P** **06 04 54.8 +0.5**
comp=Z,9.2nm,0.7s,mb4.9,baz=266,slow=7.7,SNR=28
KSRS LR LR 06 26 57.8
comp=Z,268nm,20.1s,MS4.2,baz=280,slow=38
KSRS Korea Array 47.93 65 P **P** **06 04 54.8 +0.6**
KSRS pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KSRS MLR MLR
comp=Z,268nm,20.1s,MS4.2
CLZ Clausthal 48.09 314 eP **P** **06 04 54.7 -0.5**
CLZ pmax pmax
comp=Z,34nm,1.1s,mb5.3
CLZ Clausthal 48.09 314 eP **P** **06 04 54.7 -0.5**
comp=Z,34nm,1.1s,mb5.3
BSEG Bad Segeberg 48.24 317 eP **P** **06 04 56.6 +0.3**
BSEG pmax pmax
comp=Z,27nm,1.1s,mb5.2
BSEG Bad Segeberg 48.24 317 eP **P** **06 04 56.6 +0.3**
comp=Z,27nm,1.1s,mb5.2
NRDL Niedersach Rie 48.28 315 eP **P** **06 04 56.4 -0.3**
comp=Z,23nm,1.1s,mb5.1
MDJ Mudanjiang 48.31 56 P **P** **06 04 57.9 +0.9**
MDJ AP pP 06 05 04.5 -0.6
MDJ XP sP 06 05 06.8 -1.5
MDJ PCP PcP 06 06 24.5 +0.9
MDJ PP PP 06 06 51.8 +2.3
MDJ SCP ScP 06 10 16.8 +0.3
MDJ PCS PcS 06 10 19.8 +0.5
MDJ S **S** **06 11 54.9 -0.4**
MDJ SCS ScS 06 14 49.9 +1.8
MDJ AMB AMB
comp=Z,12nm,1.5s,mb4.7
MDJ AMB AMB
comp=Z,114nm,4.2s
MDJ LR LR
comp=N,133nm,19.1s,MS4.5
MDJ LR LR
comp=E,428nm,18.1s,MS4.5
MDJ LR LR
comp=Z,531nm,19.1s,MS4.5
MDJ Mudanjiang 48.31 56 eP **P** **06 04 57.3 +0.2**
comp=Z,12nm,0.8s,mb5.0
DAVA Damuels 48.41 308⇓ *i*P **P** **06 04 56.9 -0.8**
comp=Z,28nm,1.2s,mb5.2
NB2 NORSAR Subarra 48.70 326 P **P** **06 04 58.3 -1.5**
comp=Z,7.3nm,0.9s,mb4.7,baz=104,slow=7.9
NOA NORSAR Array B 48.70 326 P **P** **06 04 58.5 -1.3**
comp=Z,2.1nm,0.6s,mb4.3,baz=103,slow=7.8,SNR=8.7
NOA LR LR 06 28 47.5
comp=Z,1µm,19.4s,MS4.9,baz=105,slow=40
NOA NORSAR Array B 48.70 326 P **P** **06 04 58.5 -1.3**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA MLR MLR
comp=Z,1µm,19.4s
YAK Yakutsk 49.39 32 eP **P** **06 05 04.5 -0.6**
YAK pmax pmax
comp=Z,43nm,0.8s,mb5.5
YAK Yakutsk 49.39 32 eP **P** **06 05 05.7 +0.6**
comp=Z,64nm,0.8s,mb5.7
BFO Black Forest 49.41 309 eP **P** **06 05 05.8 +0.4**
BFO pmax pmax
comp=Z,18nm,1.2s,mb5.0
BFO Black Forest 49.41 309 eP **P** **06 05 05.8 +0.4**
comp=Z,18nm,1.2s,mb5.0
KLR Kul'dur 49.54 49 eP **P** **06 05 03.4 -3.0**
KLR MLR MLR
comp=E,900nm,13.5s
KLR MLR MLR
comp=Z,2µm,13.5s,MS5.3
IBBN Ibbenburen 49.71 315 eP **P** **06 05 07.9 +0.2**
comp=Z,39nm,0.9s,mb5.4
KKM Kota Kinabalu 49.79 110 eP **P** **06 05 13.9 +5.2**
comp=Z,15nm,0.6s,mb5.2
CDF Champ du Feu 50.11 310 eP **P** **06 05 09.3 -1.4**
comp=Z,22nm,1.0s,mb4.8
CDF Champ du Feu 50.11 310 eP **P** **06 05 09.3 -1.4**
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.8
CDF Champ du Feu 50.11 310 eP **P** **06 05 09.3 -1.4**
comp=Z,11nm,1.0s,mb4.8
ECH Echery 50.20 309 eP **P** **06 05 12.0 +0.6**
ECH e*PP pP 06 05 18.6 -0.9
ECH pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
ECH Echery 50.20 309 eP **P** **06 05 12.0 +0.6**
comp=Z,9.9nm,1.1s,mb4.8
ECH epP pP 06 05 18.6 -0.9
KEST Kesra 50.29 293 P **P** **06 05 12.5 +0.2**
comp=Z,2.3nm,0.8s,mb4.2,baz=78,slow=9.9,SNR=4.1
KEST LR LR 06 31 21.7
comp=Z,74nm,20.3s,MS3.7,baz=343,slow=42
HINF Hinteralfeld 50.43 309 eP **P** **06 05 11.6 -1.6**
LPG La Plagne 50.69 306 eP **P** **06 05 14.3 -0.9**
comp=Z,30nm,1.0s,mb4.9
LPG La Plagne 50.69 306 eP **P** **06 05 14.3 -0.9**
LPG pmax pmax
comp=Z,15nm,1.0s,mb4.9
LPG La Plagne 50.69 306 eP **P** **06 05 14.3 -0.9**
comp=Z,15nm,1.0s,mb4.9
LPL La Plagne 50.70 306 eP **P** **06 05 14.4 -0.9**
comp=Z,26nm,0.9s,mb4.8
LPL La Plagne 50.70 306 eP **P** **06 05 14.4 -0.9**
LPL pmax pmax
comp=Z,13nm,0.9s,mb4.9
LPL La Plagne 50.70 306 eP **P** **06 05 14.4 -0.9**
comp=Z,13nm,0.9s,mb4.8
MBDF Montbardon 50.76 305 eP **P** **06 05 15.6 -0.1**
comp=Z,19nm,0.8s,mb4.8
MBDF Montbardon 50.76 305 eP **P** **06 05 15.6 -0.1**
MBDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MBDF Montbardon 50.76 305 eP **P** **06 05 15.6 -0.1**
comp=Z,9.7nm,0.8s,mb4.8
WLF Walferdange 50.78 311 P **P** **06 05 16.2 +0.4**
comp=Z,20nm,2.3s,mb4.6
WLF Walferdange 50.78 311 eP **P** **06 05 15.8 0.0**
comp=Z,22nm,1.3s,mb4.9
MEM Membach 50.83 312 P **P** **06 05 17.4 +1.3**
CABF La Chapelle 51.04 307 eP **P** **06 05 17.3 -0.5**
comp=Z,105nm,1.3s,mb5.3
CABF La Chapelle 51.04 307 eP **P** **06 05 17.3 -0.5**
CABF pmax pmax
comp=Z,53nm,1.3s,mb5.3
CABF La Chapelle 51.04 307 eP **P** **06 05 17.3 -0.5**
comp=Z,53nm,1.3s,mb5.3
BCLA Clavier 51.29 312 P **P** **06 05 20.3 +0.7**
comp=Z,12nm,2.1s,mb4.5
MEZF Maizieres J'vi 51.58 310 eP **P** **06 05 21.1 -0.7**
GIVF Givet 51.62 312 eP **P** **06 05 21.1 -0.9**
comp=Z,46nm,1.0s,mb5.0
GIVF Givet 51.62 312 eP **P** **06 05 21.1 -0.9**
GIVF pmax pmax
comp=Z,23nm,1.0s,mb5.1
GIVF Givet 51.62 312 eP **P** **06 05 21.1 -0.9**
comp=Z,23nm,1.0s,mb5.1
TIXI Tiksi 51.63 20⇑ *i*P **P** **06 05 21.7 -0.1**
TIXI pmax pmax
comp=Z,16nm,0.8s,mb5.0
TIXI MLR MLR
comp=Z,400nm,16.0s,MS4.5
TIXI Tiksi 51.63 20 eP **P** **06 05 21.6 -0.2**
comp=Z,19nm,0.9s,mb5.0
HABR Khabarovsk 51.76 50 eP **P** **06 05 22.8 -0.4**
HABR e*PP pP 06 05 32.8 +1.5
HABR e 06 07 20.1
HABR *i* PPP 06 08 20.7
HABR eS **S** **06 12 41.6 -1.7**
HABR e*SS sS 06 12 58.5 +1.7
HABR eSSS 06 17 57.2
HABR pmax pmax
comp=E,39nm,2.0s
HABR pmax pmax
comp=Z,62nm,1.6s,mb5.3
HABR pmax pmax
comp=N,21nm,1.2s
HABR MLR MLR
comp=Z,780nm,17.0s,MS4.8
DOU Dourbes 51.76 312 P **P** **06 05 23.6 +0.4**
comp=Z,12nm,1.9s,mb4.5
SNF Seneffe 51.94 312 P **P** **06 05 26.2 +1.8**
comp=Z,15nm,2.1s,mb4.5
BAIF Baives 52.01 312 eP **P** **06 05 24.9 -0.1**
comp=Z,36nm,1.0s,mb5.0
BAIF Baives 52.01 312 eP **P** **06 05 24.9 -0.1**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.0
BAIF Baives 52.01 312 eP **P** **06 05 24.9 -0.1**
comp=Z,18nm,1.0s,mb5.0
VIVF Saint-Julien-l 52.23 305 eP **P** **06 05 25.6 -1.1**
comp=Z,43nm,1.2s,mb5.0
VIVF Saint-Julien-l 52.23 305 eP **P** **06 05 25.6 -1.1**
VIVF pmax pmax
comp=Z,21nm,1.2s,mb4.9
VIVF Saint-Julien-l 52.23 305 eP **P** **06 05 25.6 -1.1**
comp=Z,21nm,1.2s,mb5.0
SSB Saint Sauveur 52.27 306 eP **P** **06 05 25.3 -1.7**
SSB pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SSB Saint Sauveur 52.27 306 eP **P** **06 05 25.3 -1.7**
comp=Z,10nm,0.8s,mb4.8
LOR Lormes 52.50 308 eP **P** **06 05 27.3 -1.4**
comp=Z,27nm,1.1s,mb4.8
LOR eMLR MLR
comp=Z,303nm,19.8s,MS4.0
LOR Lormes 52.50 308 eP **P** **06 05 27.3 -1.4**
LOR pmax pmax
comp=Z,13nm,1.1s,mb4.8
LOR MLR MLR
comp=Z,300nm,19.8s,MS4.3
LOR Lormes 52.50 308 eP **P** **06 05 27.3 -1.4**
comp=Z,13nm,1.1s,mb4.8
LOR LR LR
comp=Z,300nm,19.8s,MS4.3
SMF Signal de Mont 52.58 308 eP **P** **06 05 28.3 -1.0**
comp=Z,46nm,0.9s,mb5.1
SMF Signal de Mont 52.58 308 eP **P** **06 05 28.3 -1.0**
SMF pmax pmax
comp=Z,23nm,0.9s,mb5.1
SMF Signal de Mont 52.58 308 eP **P** **06 05 28.3 -1.0**
comp=Z,23nm,0.9s,mb5.1
SSF Saint Saulge 52.76 308 eP **P** **06 05 29.5 -1.1**
comp=Z,41nm,0.9s,mb5.0
SSF Saint Saulge 52.76 308 eP **P** **06 05 29.5 -1.1**
SSF pmax pmax
comp=Z,20nm,0.9s,mb5.0
SSF Saint Saulge 52.76 308 eP **P** **06 05 29.5 -1.1**
comp=Z,20nm,0.9s,mb5.0
AVF Avril sur Loir 52.90 308 eP **P** **06 05 30.4 -1.2**
comp=Z,24nm,1.0s,mb4.8
AVF Avril sur Loir 52.90 308 eP **P** **06 05 30.4 -1.2**
AVF pmax pmax
comp=Z,12nm,1.0s,mb4.8
AVF Avril sur Loir 52.90 308 eP **P** **06 05 30.4 -1.2**
comp=Z,12nm,1.0s,mb4.8
SPITS Spitsbergen Ar 53.08 348 LR LR 06 30 26.0
comp=Z,343nm,18.3s,MS4.4,baz=320,slow=39
SPB4 Spitsbergen Ar 53.09 348 eP **P** **06 05 28.7 -3.9**
BGF Bois d'Agland 53.27 308 eP **P** **06 05 33.6 -0.8**
HYF Humbligny 53.32 308 eP **P** **06 05 34.3 -0.4**
TCF Toulx Ste Croi 53.74 307 eP **P** **06 05 37.1 -0.8**
comp=Z,43nm,1.2s,mb4.9
TCF Toulx Ste Croi 53.74 307 eP **P** **06 05 37.1 -0.8**
TCF pmax pmax
comp=Z,22nm,1.3s,mb4.9
TCF Toulx Ste Croi 53.74 307 eP **P** **06 05 37.1 -0.8**
comp=Z,22nm,1.3s,mb4.9
CAF Calviac 54.05 306 eP **P** **06 05 39.5 -0.6**
comp=Z,26nm,1.0s,mb4.8
CAF Calviac 54.05 306 eP **P** **06 05 39.5 -0.6**
CAF pmax pmax
comp=Z,13nm,1.0s,mb4.8
CAF Calviac 54.05 306 eP **P** **06 05 39.5 -0.6**
comp=Z,13nm,1.0s,mb4.8
RJF Les Rejaudoux 54.37 306 eP **P** **06 05 42.2 -0.3**
RJF eMLR MLR
comp=Z,296nm,20.0s,MS4.0
RJF Les Rejaudoux 54.37 306 eP **P** **06 05 42.2 -0.3**
RJF LR LR
comp=Z,300nm,20.0s,MS4.4
LFF La Frestale 54.98 306 eP **P** **06 05 46.0 -0.9**
comp=Z,40nm,1.1s,mb5.1
LFF La Frestale 54.98 306 eP **P** **06 05 46.0 -0.9**
LFF pmax pmax
comp=Z,20nm,1.1s,mb5.1
LFF La Frestale 54.98 306 eP **P** **06 05 46.0 -0.9**
comp=Z,20nm,1.1s,mb5.1
LDF La Druitiere 54.98 310 eP **P** **06 05 45.7 -1.1**
FLN La Foliniere 55.20 311 eP **P** **06 05 47.1 -1.3**
FLN eMLR MLR
comp=Z,416nm,17.8s,MS4.3
FLN La Foliniere 55.20 311 eP **P** **06 05 47.1 -1.3**
FLN LR LR
comp=Z,420nm,17.8s,MS4.6
MFF Saint Martin d 55.31 308 eP **P** **06 05 48.0 -1.2**
comp=Z,11nm,0.8s,mb4.6
MFF Saint Martin d 55.31 308 eP **P** **06 05 48.0 -1.2**
MFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MFF Saint Martin d 55.31 308 eP **P** **06 05 48.0 -1.2**
comp=Z,5.3nm,0.8s,mb4.6
GRR Gorron 55.50 310 eP **P** **06 05 49.4 -1.2**
MAT Matsushiro 56.16 64 P **P** **06 05 58.4 +2.9**

MJAR	Matsushiro Arr	56.16	64	P	P	06 05 56.7	+1.1
	comp=Z,2.2nm,0.6s,mb4.3,baz=291,slow=11,SNR=6.4						
MJAR				LR	LR	06 32 43.5	
	comp=Z,356nm,18.2s,MS4.5,baz=255,slow=39						
MJAR	Matsushiro Arr	56.16	64	P	P	06 05 56.7	+1.2
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR				MLR	MLR		
	comp=Z,356nm,18.2s						
SGMF	Saint Gilles	56.64	310	*e*P	P	06 05 58.0	-0.7
ROSF	Rostrenen	57.10	310	*e*P	P	06 06 01.0	-1.0
QUIF	Quistinic	57.10	310	*e*P	P	06 06 01.5	-0.5
	comp=Z,52nm,1.1s,mb5.2						
QUIF	Quistinic	57.10	310	*e*P	P	06 06 01.5	-0.5
QUIF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
QUIF	Quistinic	57.10	310	*e*P	P	06 06 01.5	-0.5
	comp=Z,26nm,1.1s,mb5.2						
YSS	Yuzh-Sakhalins	57.12	51⇑	*e*P	P	06 06 03.3	+1.1
YSS				*e*		06 06 15.3	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
YSS				pmax	pmax		
	comp=E,800nm,18.0s						
YSS				pmax	pmax		
	comp=Z,1µm,18.0s						
YSS	Yuzh-Sakhalins	57.12	51	*e*P	P	06 06 03.3	+1.2
	comp=Z,30nm,0.8s,mb5.4						
TAM	Tamanrasset	57.39	279	*e*P	P	06 06 04.1	-0.3
TAM				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
TAM	Tamanrasset	57.39	279	*e*P	P	06 06 04.1	-0.3
	comp=Z,8.9nm,1.1s,mb4.7						
ESDC	Sonseca Array	59.57	301	P	P	06 06 18.2	-1.2
	comp=Z,1.8nm,0.6s,mb4.3,baz=57,slow=7.7,SNR=6.3						
ESDC				LR	LR	06 36 27.2	
	comp=Z,120nm,18.2s,MS4.1,baz=40,slow=41						
SEY	Seymchan	59.90	32	*e*P	P	06 06 22.3	+1.1
DAG	Danmarks Havn	60.19	345⇑	*i*P	P	06 06 13.6	-9.4
DAG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
DAG	Danmarks Havn	60.19	345⇑	*i*P	P	06 06 13.6	-9.4
	comp=Z,10nm,0.8s,mb4.9						
LSZ	Lusaka	60.73	227	*e*P	P	06 06 30.4	+2.9
LSZ				pmax	pmax		
	comp=Z,23nm,1.6s,mb5.1						
LSZ	Lusaka	60.73	227	*e*P	P	06 06 30.4	+2.8
	comp=Z,23nm,1.6s,mb5.1						
MTE	Manteigas	61.99	302	*e*P	P	06 06 37.5	+1.6
PBAR	Barrancos	62.30	300	*e*P	P	06 06 38.3	+0.3
EVO	Evora	62.92	301	*e*P	P	06 06 41.8	-0.3
	comp=Z,24nm,1.1s,mb5.0						
EVO				*e*MLR	MLR		
	comp=Z,175nm,18.8s,MS4.0						
EVO	Evora	62.92	301	*e*P	P	06 06 41.7	-0.4
BILL	Bilibino	64.36	24⇓	*e*P	P	06 06 52.3	+1.2
BILL				*e**SP	sP	06 07 02.7	+0.2
BILL				*e*S	S	06 15 23.8	-3.5
BILL				SS	SS	06 19 32.0	-4.6
BILL				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.1						
BILL	Bilibino	64.36	24	*e*P	P	06 06 51.6	+0.5
	comp=Z,8.1nm,0.9s,mb4.8						
TOA0	Torodi Ar. Sit	64.78	271	*e*P	P	06 06 53.4	-1.3
TORD	Torodi Ar. Bea	64.78	271	P	P	06 06 53.5	-1.2
	comp=Z,9.3nm,0.9s,mb4.8,baz=58,slow=5.0,SNR=32						
TORD				LR	LR	06 39 00.1	
	comp=Z,369nm,18.2s,MS4.6,baz=70,slow=40						
PETK	Petropavlovsk-	64.93	42	P	P	06 06 54.9	-0.2
	comp=Z,4.2nm,0.7s,mb4.6,baz=305,slow=0.6,SNR=5.8						
PETK				LR	LR	06 38 18.3	
	comp=Z,720nm,18.6s,MS4.9,baz=290,slow=39						
PETK	Petropavlovsk-	64.93	42	P	P	06 06 54.9	-0.2
PETK				LR	LR	06 38 18.3	
SUMG	Summit	66.39	342	*e*P	P	06 07 04.8	+0.7
	comp=Z,15nm,0.7s,mb5.1						
LBTB	Lobatse	69.68	223	*e*P	P	06 07 26.7	+1.3
LBTB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
LBTB	Lobatse	69.68	223	*e*P	P	06 07 26.6	+1.2
	comp=Z,13nm,0.9s,mb4.9						
BOSA	Boshof	72.63	220	P	P	06 07 43.0	-0.2
	comp=Z,8.0nm,0.9s,mb4.6,baz=44,slow=7.4,SNR=8.3						
BOSA				LR	LR	06 39 00.6	
	comp=Z,175nm,19.0s,MS4.3,baz=32,slow=35						
DBIC	Dimbokro	73.53	268	P	P	06 07 46.8	-2.2
	comp=Z,13nm,1.1s,mb4.8,baz=36,slow=7.9,SNR=6.1						
DBIC				LR	LR	06 44 03.2	
	comp=Z,333nm,19.7s,MS4.6,baz=39,slow=39						
DBIC	Dimbokro	73.53	268	P	P	06 07 46.8	-2.2
DBIC				pmax	pmax		
	comp=Z,13nm,1.1s						
DBIC				MLR	MLR		
	comp=Z,333nm,19.7s						
KIC	Kosan Boka	73.59	268	*e*PKP1	P	06 07 50.2	+0.9
	comp=Z,93nm,1.2s,mb5.6						
TIC	Toumodi	73.69	268	*e*PKP1	P	06 07 49.4	-0.5
	comp=Z,48nm,0.8s,mb5.5						
LIC	Lamto	73.90	268	*e*P	P	06 07 49.2	-2.0
	comp=Z,40nm,1.1s,mb5.0						
LIC				*e*MLR	MLR		
	comp=Z,282nm,17.0s,MS4.3						
LIC	Lamto	73.90	268	*e*PKP1	P	06 07 49.6	-1.6
	comp=Z,47nm,1.1s,mb5.3						
LIC	Lamto	73.90	268	*e*P	P	06 07 49.2	-2.0
	comp=Z,20nm,1.1s,mb5.0						
LIC				LR	LR		
	comp=Z,140nm,17.0s,MS4.3						
COLD	Coldfoot	77.93	15	*e*P	P	06 08 13.7	+0.5
	comp=Z,15nm,1.0s,mb4.9						
COLD				*e*pP	pP	06 08 24.7	+3.0
WRA	Warramunga Arr	79.70	120	P	P	06 08 24.0	+0.4
	comp=Z,7.9nm,1.0s,mb4.6,baz=321,slow=5.0,SNR=21						
WRA				LR	LR	06 50 14.0	
	comp=Z,99nm,18.2s,MS4.2,baz=95,slow=41						
WRAB	Tennant Creek	79.70	120	P	P	06 08 26.1	+2.5
	comp=Z,123nm,0.8s,mb5.9,SNR=5.5						
WRAB	Tennant Creek	79.70	120	*e*P	P	06 08 26.0	+2.4
WRAB				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
WRAB	Tennant Creek	79.70	120	*e*P	P	06 08 26.0	+2.3
	comp=Z,13nm,0.8s,mb4.9						
INK	Inuvik	79.90	9	*e*P	P	06 08 24.2	+0.2
INK				pmax	pmax		
	comp=Z,13nm,0.9s						
INK	Inuvik	79.90	9	*e*P	P	06 08 24.2	+0.2
	comp=Z,13nm,0.9s,mb4.9						
BPAW	Bear Paw Mtn.	80.32	17	*e*P	P	06 08 26.6	+0.2
	comp=Z,9.7nm,1.0s,mb4.7						
COLA	College	80.43	15	*e*P	P	06 08 27.0	+0.1
COLA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
COLA	College	80.43	15	*e*P	P	06 08 27.0	+0.1
	comp=Z,15nm,0.9s,mb4.9						
MCK	McKinley	81.14	16	*e*P	P	06 08 30.6	-0.1
MCK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
MCK	McKinley	81.14	16	*e*P	P	06 08 30.6	-0.1
	comp=Z,18nm,1.2s,mb4.9						
ASAR	Alice Springs	81.67	124	P	P	06 08 34.4	+0.3
	comp=Z,5.9nm,1.0s,mb4.5,baz=311,slow=5.5,SNR=17						
ASAR	Alice Springs	81.67	124	P	P	06 08 34.4	+0.3
ASAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EGAK	Eagle	81.92	13	*e*P	P	06 08 34.2	-0.6
	comp=Z,11nm,1.1s,mb4.7						
PAX	Paxson	82.61	15	*e*P	P	06 08 38.1	-0.4
PAX				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
PAX	Paxson	82.61	15	*e*P	P	06 08 38.1	-0.4
	comp=Z,17nm,1.1s,mb5.0						
DAWY	Dawson	82.90	13	*e*P	P	06 08 40.0	0.0
PMG	Port Moresby	83.92	105	P	P	06 08 48.0	+1.9
	comp=Z,12nm,0.8s,mb5.1,baz=260,slow=6.1						
PMG	Port Moresby	83.92	105	*e*P	P	06 08 48.8	+2.7
PMG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PMG	Port Moresby	83.92	105	*e*P	P	06 08 49.1	+3.0
	comp=Z,13nm,0.9s,mb5.1						
SCHQ	Schefferville	87.19	337	LR	LR	06 48 32.8	
	comp=Z,276nm,19.1s,MS4.7,baz=65,slow=36						
YKA	Yellowknife Ar	87.21	2	P	P	06 09 01.7	+0.1
	comp=Z,5.7nm,0.8s,mb4.8,baz=348,slow=4.8,SNR=82						
YKA				LR	LR	06 51 06.4	
	comp=Z,100nm,20.9s,MS4.2,baz=85,slow=38						
YKA	Yellowknife Ar	87.21	2	P	P	06 09 01.7	+0.1
YKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA				MLR	MLR		
	comp=Z,100nm,20.9s						
CTAO	Charters Tower	88.92	114	*e*P	P	06 09 12.7	+2.3
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
CTAO	Charters Tower	88.92	114	*e*P	P	06 09 12.7	+2.2
	comp=Z,5.3nm,0.8s,mb4.9						
DLBC	Dease Lake	89.79	10	LR	LR	06 50 09.6	
	comp=Z,215nm,20.9s,MS4.6,baz=302,slow=36						
FCC	Fort Churchill	90.03	352	*e*P	P	06 09 15.7	+0.7
	comp=Z,0.5nm,1.1s,mb3.8						
STKA	Stephens Creek	92.01	126	P	P	06 09 28.1	+3.6
	comp=Z,1.6nm,0.9s,mb4.3,baz=305,slow=15,SNR=3.2						
STKA				LR	LR	06 50 06.3	
	comp=Z,270nm,20.5s,MS4.7,baz=112,slow=35						
FFC	Flin Flon	94.78	355	*e*P	P	06 09 37.4	+0.3
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
FFC	Flin Flon	94.78	355	*e*P	P	06 09 37.4	+0.4
	comp=Z,7.9nm,1.0s,mb5.1						
BBB	Bella Bella	96.11	11	LR	LR	06 53 30.1	
	comp=Z,240nm,19.2s,MS4.7,baz=188,slow=36						
MAW	Mawson	98.00	183	LR	LR	06 47 52.0	
	comp=Z,151nm,19.8s,MS4.5,baz=233,slow=32						
ULM	Lac du Bonnet	98.57	351	P	P	06 09 53.1	-1.2
	comp=Z,2.7nm,0.8s,mb4.8,baz=333,slow=4.5,SNR=3.0						
ULM				LR	LR	06 54 10.6	
	comp=Z,252nm,20.5s,MS4.7,baz=30,slow=35						
PDAR	Pinedale Array	107.04	360	PKiKP	PKiKP	06 14 41.8	+0.2
	comp=Z,0.7nm,0.7s,baz=84,slow=2.0,SNR=5.0						
NVAR	Mina Array Bea	110.94	7	PKiKP	PKiKP	06 14 50.5	+1.5
	comp=Z,1.0nm,0.7s,baz=304,slow=1.7,SNR=5.8						
VNA2	Neumayer--Watz	114.55	201	*e*PKPdf	PKiKP	06 14 55.5	+0.8
	baz=358,slow=5.2						
VNA2				*e*		06 14 57.6	
VNA2				*e*		06 15 00.8	
VNA1	Neumayer--Stat	114.71	201	*e*PKPdf	PKiKP	06 14 56.0	+1.0
VNA1				*e*		06 14 58.3	
VNA3	Neumayer Olymp	115.35	201	*e*PKPdf	PKPdf	06 14 56.9	+0.7
VNA3				*e*		06 14 58.4	
VNA3				*e*		06 15 01.9	
TXAR	Lajitas Array	120.13	354	PKP	PKPdf	06 15 07.8	+0.9
	comp=Z,1.0nm,0.9s,baz=188,slow=0.9,SNR=7.4						
TXAR	Lajitas Array	120.13	354	PKIKP	PKPdf	06 15 07.8	+0.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CPUP	Villa Florida	133.76	262	PKP	PKPdf	06 15 32.4	-0.4
	comp=Z,0.4nm,0.4s,baz=189,slow=5.4,SNR=3.6						
OTAV	Otavalo	137.09	310	*e*PKPdf	PKPdf	06 15 43.2	+3.8
CFAA	Coronel Fontan	144.30	257	PKP	PKPdf	06 15 50.9	-0.9
	comp=Z,0.5nm,0.9s,baz=83,slow=5.5,SNR=8.6						
CFAA	Coronel Fontan	144.30	257	PKP	PKPdf	06 15 50.9	-0.9
PLCA	Paso Flores	146.55	241	PKPbc	PKPbc	06 15 58.0	+1.1
	comp=Z,3.2nm,0.8s,baz=114,slow=6.9,SNR=7.3						
PLCA	Paso Flores	146.55	241	*e*PKPab	PKPab	06 15 59.3	+1.3

IDC 18 06:01:34.0±3.9, 456S×14062E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.7/13, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=138.8km s-min=32.7km az=89.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	16.46	201	*e*P	Pn	06 05 21.2	-5.3
WRA	Warramunga Arr	16.46	201	Pn	Pn	06 05 27.7	+1.2
	0.4nm,0.3s,baz=22,slow=12,SNR=5.6						
WRA				Sn	Sn	06 08 11.7	-18
	0.3nm,0.3s,baz=17,slow=22,SNR=4.5						
FITZ	Fitzroy Crossi	19.89	226	*e*P	Pn	06 06 03.7	-5.0
	3.5nm,0.6s						
ASAR	Alice Springs	20.07	198	P	P	06 06 08.6	-0.4
	2.4nm,0.6s,baz=29,slow=10,SNR=44						
MKAR	Makanchi Array	72.41	322	P	P	06 13 02.2	+0.2
	0.4nm,0.6s,baz=109,slow=6.1,SNR=6.1						

IDC 18 06:10:39.1±1.2, 201N×12595E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/26, mbtmp4.0/9, Error ellipse: s-maj=181.2km s-min=15.1km az=67.0
ISCJB 18 06:10:42.0±0.7, 2.1N±02×126.1E±05, h33km, mb4.1/10, Error ellipse: s-maj=72.3km s-min=9.8km az=159.0
NEIC 18 06:10:43.7±0.6, 222N×12655E, h35km, mb4.2/4, Error ellipse: s-maj=54.6km s-min=7.9km az=70.0
ISC 18 06:10:43.9±0.8, 22N±02×1264E±05, h35km, n16, σ0s63/17, mb4.1/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.15	182	*e*P	P	06 15 15.0	-0.2
	6.5nm,0.9s						
FITZ	Fitzroy Crossi	20.15	182	*e*P	P	06 15 16.1	+0.9
	8.3nm,1.2s						
WRAB	Tennant Creek	23.30	161	*e*P	P	06 15 48.6	-0.3
	8.1nm,0.4s,mb4.5						
WRA	Warramunga Arr	23.30	161	P	P	06 15 48.4	-0.6
	7.9nm,0.4s,mb4.5,baz=340,slow=11,SNR=71						
WB2	Warramunga Arr	23.31	161	*e*P	P	06 15 48.7	-0.3
WB2				*e*S	S	06 19 53.3	-5.8
ASAR	Alice Springs	26.69	165	P	P	06 16 20.0	+0.1
	0.7nm,0.3s,mb3.7,baz=342,slow=7.6,SNR=16						
ASAR				PcP	PcP	06 19 44.0	+0.9
	0.3nm,0.5s,baz=354,slow=2.0,SNR=4.3						
STKA	Stephens Creek	36.79	158	*e*P	P	06 17 49.1	+0.6
	4.4nm,1.0s,mb4.2						
STKA	Stephens Creek	36.79	158	P	P	06 17 49.1	+0.6
	4.5nm,0.8s,mb4.3,baz=329,slow=8.8,SNR=6.9						
STKA	Stephens Creek	36.79	158	*e*P	P	06 17 48.6	+0.1
	1.2nm,0.9s,mb3.7						
SONM	Songino Array	48.68	342	P	P	06 19 25.9	+1.3
	0.6nm,0.8s,mb3.7,baz=141,slow=9.3,SNR=3.1						
MKAR	Makanchi Array	58.66	326	P	P	06 20 37.5	-0.3
	0.8nm,0.3s,mb4.2,baz=120,slow=7.3,SNR=29						
ZALV	Zalesovo Beam	61.84	334	P	P	06 20 58.3	-1.0
	0.4nm,0.4s,mb3.9,baz=144,slow=7.6,SNR=3.5						
KURK	Kurchatov	62.89	328	P	P	06 21 06.4	0.0
	1.3nm,0.4s,mb4.5,baz=130,slow=7.0,SNR=11						
KURK	Kurchatov	62.89	328	*e*P	P	06 21 06.0	-0.4
	3.0nm,0.5s,mb4.7						
BVAR	Borovoye Array	68.46	327	P	P	06 21 42.3	-0.1
	0.6nm,0.4s,mb4.0,baz=116,slow=5.3,SNR=3.5						
VNDA	Vanda	81.92	173	P	P	06 23 00.1	+0.8
	1.2nm,0.7s,mb3.9,baz=326,slow=10,SNR=4.1						

CSEM 18 06:11:57.6±0.1, 3201N×6.16W, h5km, ML3.9/9, Error ellipse: s-maj=2.8km s-min=2.3km az=132.0
CNRM 18 06:11:58.5, 3198N×6.12W, h0km, MD3.8
NEIC 18 06:11:58.5, 3221N×625W, h0km, MG4.1(MDD), After MDD.
ISCJB 18 06:11:59.1±0.4, 3243N±002×636W±004, h10km, Error ellipse: s-maj=5.1km s-min=3.0km az=18.5
MDD 18 06:11:59.8±0.7, 3209N×624W, h20km±3km, mb4.1/11, Error ellipse: s-maj=7.1km s-min=5.1km az=145.0, PRXIMO
INMG 18 06:11:59.7±0.9, 3232N×6.17W, h0km, ML2.8, Error ellipse: s-maj=5.1km s-min=4.2km az=74.0
ISC 18 06:12:00.4±0.5, 3237N±002×633W±004, h10km, n55, σ1s14/103, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZC	Tazercounte	0.26	211	*i* P	Pg	06 12 04.0	-1.6
TZC	Tazercounte	0.26	211	P	Pg	06 12 04.0	-1.6
TZC				S	Sg	06 12 10.0	+0.8
KIB	El Ksiba	0.32	50	*i* P	Pg	06 12 10.0	+3.2
KIB	El Ksiba	0.32	50	P	Pg	06 12 10.0	+3.2
KIB				S	Sg	06 12 18.0	+6.9
CZD	Col de Zad	1.27	58	*i* P	Pn	06 12 23.0	-1.2
CZD				*i* S	Sb	06 12 43.0	+2.2
AVE	Averroes	1.30	316	P	Pn	06 12 26.3	+1.7
AVE				S	Sb	06 12 48.6	+7.0
MIF	Mishlifen	1.39	42	*i* P	Pn	06 12 26.5	+0.7
MIF				*i* S	Sn	06 12 48.0	+3.7
IFR	Ifrane	1.53	41	P	Pn	06 12 26.7	-1.0
IFR				S	Sn	06 12 51.2	+3.6
RTC	Rabat Centre	1.67	345	*i* P	Pn	06 12 34.0	+4.3
RTC				*i* S	Sn	06 13 00.0	+8.8
ZFT	Errachidia	1.71	101	*i* P	Pn	06 12 26.0	-4.2
ZFT				*i* S	Sn	06 12 46.0	-6.1
OUK	Oukaimeden	1.75	229	*i* P	Pn	06 12 28.0	-2.7
OUK				*i* S	Sn	06 12 50.0	-3.0
CIA	Chichaoua	2.21	249	*i* P	Pn	06 12 36.0	-1.2
CIA				*i* S	Sn	06 13 04.0	-0.6
TZK	Tazeka	2.48	46	*e*P	Pn	06 12 42.0	+1.1
TZK				*i* S	Sn	06 13 13.0	+1.7
ECEU	Ceuta	3.61	12	P	Pn	06 12 59.0	+2.7
	1.8nm,0.2s,SNR=4.0						
ECEU	Ceuta	3.61	12	P	Pn	06 12 59.0	+2.7
	1.8nm,0.2s,SNR=4.0						
ECEU				S	Sn	06 13 38.4	-0.5
	2.6nm,0.3s,SNR=4.0						
EMIJ	Mijas	4.38	17	P	Pn	06 13 07.4	+0.5
	2.4nm,0.4s,SNR=7.9						
EMIJ	Mijas	4.38	17	P	Pn	06 13 07.5	+0.6
	2.4nm,0.4s,SNR=7.9						
EMIJ				S	Sn	06 13 57.7	-0.2
	7.2nm,0.5s,SNR=7.9						
ESPR	Espera	4.50	5	P	Pn	06 13 09.4	+0.8
ESPR	Espera	4.50	5	S	Sn	06 14 00.3	-0.8
	1.8nm,0.2s,SNR=4.0						
ESPR	Espera	4.50	5	P	Pn	06 13 09.4	+0.8
ESPR				S	Sn	06 14 00.3	-0.8
EGUA	Guajares	5.00	26	P	Pn	06 13 14.6	-0.9
	2.5nm,0.2s,SNR=7.9						
EGUA				S	Sn	06 14 11.2	-2.2
	6.7nm,0.4s,SNR=7.9						
PBDV	Barranco-do-Ve	5.04	345	*e*Pn	Pn	06 13 16.6	+0.7
PBDV				*e*Sn	Sn	06 14 14.3	+0.1
PBDV				A		06 14 21.5	
	7.2nm,0.3s						
PBDV	Barranco-do-Ve	5.04	345	*e*Pn	Pn	06 13 16.6	+0.7
PBDV				*e*Sn	Sn	06 14 14.3	+0.1
	7.2nm,0.3s						
PVAQ	Vaqueiros	5.15	348	*e*Pn	Pn	06 13 18.3	+0.8
PVAQ				*e*Sn	Sn	06 14 17.3	+0.3
PVAQ				A		06 14 19.3	
	7.9nm,0.2s						
PVAQ	Vaqueiros	5.15	348	*e*Pn	Pn	06 13 18.3	+0.8
PVAQ				*e*Sn	Sn	06 14 17.3	+0.3
	7.9nm,0.2s						
PFVI	Vila Bisbo	5.18	337	*e*Pn	Pn	06 13 18.7	+0.8
PFVI				*e*Sn	Sn	06 14 18.4	+0.8
PFVI				A		06 14 25.9	
	8.9nm,0.1s						
PFVI	Vila Bisbo	5.18	337	*e*Pn	Pn	06 13 18.7	+0.8
PFVI				*e*Sn	Sn	06 14 18.4	+0.8
	8.9nm,0.1s						
EGRO	El Granado	5.24	350	P	Pn	06 13 19.6	+0.9
	2.9nm,0.1s,SNR=16						
EGRO				S	Sn	06 14 19.0	-0.2
	10nm,0.2s,SNR=7.9						
MORF	Marmelete	5.28	339	*e*Pn	Pn	06 13 20.1	+0.8
MORF				*e*Sn	Sn	06 14 21.1	+0.9
MORF				A		06 14 28.7	
	14nm,0.2s						
MORF	Marmelete	5.28	339	*e*Pn	Pn	06 13 20.1	+0.8
MORF				*e*Sn	Sn	06 14 21.1	+0.9
	14nm,0.2s						
EBER	Berja	5.33	31	P	Pn	06 13 20.1	+0.1
	1.9nm,0.4s,SNR=7.9						
EBER				S	Sn	06 14 19.0	-2.5
	8.4nm,0.7s,SNR=7.9						
EMIN	Mina Concepcio	5.39	357	P	Pn	06 13 21.5	+0.7
	1.2nm,0.2s,SNR=11						
EMIN				S	Sn	06 14 21.5	-1.5
	1.5nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	5.52	340	*e*Pn	Pn	06 13 23.6	+0.9
PTEO				*e*Sn	Sn	06 14 26.8	+0.6
PTEO				A		06 14 34.0	
	7.3nm,0.2s						
PTEO	Sao Teotonio	5.52	340	*e*Pn	Pn	06 13 23.6	+0.9
PTEO				*e*Sn	Sn	06 14 26.8	+0.6
	7.3nm,0.2s						
PBEJ	Beja	5.78	348	*e*Pn	Pn	06 13 27.2	+1.0
PBEJ				*e*Sn	Sn	06 14 32.8	+0.3
PBEJ				A		06 14 35.8	
	6.3nm,0.2s						
PBEJ	Beja	5.78	348	*e*Pn	Pn	06 13 27.2	+1.0
PBEJ				*e*Sn	Sn	06 14 32.8	+0.3
	6.3nm,0.2s						
PBAR	Barrancos	5.82	354	*e*Pn	Pn	06 13 27.4	+0.7
PBAR				*e*Sn	Sn	06 14 33.5	0.0
PBAR				A		06 14 36.2	
	5.5nm,0.4s						
PBAR	Barrancos	5.82	354	*e*Pn	Pn	06 13 27.4	+0.7
PBAR				*e*Sn	Sn	06 14 33.5	0.0
	5.5nm,0.4s						
EADA	Adamuz	5.96	13	P	Pn	06 13 28.3	-0.3
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	06 14 35.5	-1.4
	3.8nm,0.3s,SNR=7.9						
EQES	Quesada	6.04	25	P	Pn	06 13 29.8	0.0
EQES				S	Sn	06 14 38.0	-0.9
EBAN	Banos Encina	6.14	19	P	Pn	06 13 31.1	0.0
	0.5nm,0.1s,SNR=7.9						
EBAN				S	Sn	06 14 40.2	-1.3
	1.4nm,0.2s,SNR=7.9						
EVO	Evora	6.30	348	*e*Pn	Pn	06 13 34.2	+0.9
EVO				*e*Sn	Sn	06 14 44.5	-0.8
EVO				A		06 14 48.9	
	6.9nm,0.1s						
EVO	Evora	6.30	348	*e*Pn	Pn	06 13 34.2	+0.9
EVO				*e*Sn	Sn	06 14 44.5	-0.8
	6.9nm,0.1s						
MOE	Montemor	6.36	346	*e*Pn	Pn	06 13 36.3	+2.2
MOE				*e*Sn	Sn	06 14 47.7	+1.0
EBAD	Badajoz	6.40	355	P	Pn	06 13 34.9	+0.3
	2.4nm,0.1s,SNR=18						
EBAD				S	Sn	06 14 46.5	-1.2
	6.2nm,0.3s,SNR=7.9						
PESTR	Estremoz	6.56	351	*e*Pn	Pn	06 13 37.3	+0.4
PESTR				*e*Sn	Sn	06 14 51.7	-0.1
PMAFR	Mafra	7.00	341	*e*Pn	Pn	06 13 44.3	+1.4
PMAFR				*e*Sn	Sn	06 15 03.0	+0.6
PMRV	Marv??o	7.10	353	*e*Pn	Pn	06 13 44.9	+0.7
PMRV				*e*Sn	Sn	06 15 03.8	-1.1
PMRV				A		06 15 08.5	
	2.6nm,0.2s						
PMRV	Marv??o	7.10	353	*e*Pn	Pn	06 13 44.9	+0.7
PMRV				*e*Sn	Sn	06 15 03.8	-1.1
	2.6nm,0.2s						
PCBR	Castelo Branco	7.51	353	*e*Pn	Pn	06 13 50.6	+0.7
PCBR				*e*Sn	Sn	06 15 13.9	-1.2
ESDC	Sonseca Array	7.54	14	P	Pn	06 13 50.0	-0.2
	1.0nm,0.2s,baz=195,slow=12,SNR=7.9						
ESDC				S	Sn	06 15 11.4	-4.3
	1.6nm,0.3s,baz=196,slow=23,SNR=7.9						
MTE	Manteigas	8.07	353	*e*Pn	Pn	06 13 56.9	-0.7
MTE				*e*Sn	Sn	06 15 27.3	-1.6
MVO	Moncorvo	8.79	357	*e*Pn	Pn	06 14 08.5	+1.0
MVO				*e*Sn	Sn	06 15 45.0	-1.7
ETOR	Torete	9.11	21	P	Pn	06 14 11.7	-0.1
	2.4nm,0.3s,SNR=7.9						
ECAL	Calabor	9.56	358	P	Pn	06 14 17.7	-0.3
	1.8nm,0.4s,SNR=7.9						
ECAL				S	Sn	06 16 02.0	-3.4
	1.4nm,0.3s,SNR=7.9						

IDC 18 07:01:53.1±1.2, 1702N×14823E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/24, mbtmp4.0/10, ML4.0/1, Error ellipse: s-maj=36.9km s-min=19.4km az=95.0
NEIC 18 07:01:58.7±0.9, 1696N×14810E, h35km, mb4.1/2, Error ellipse: s-maj=26.6km s-min=11.7km az=97.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.58	223	Pn	Pn	07 03 04.2	-1.2
	6.5nm,0.3s,baz=18,slow=19,SNR=2.9						
GUMO				Sn	Sn	07 03 56.9	-0.5
	19nm,0.3s,baz=35,slow=18,SNR=4.3						
WRAB	Tennant Creek	39.07	201	*e*P	P	07 09 23.0	+0.4
	1.2nm,0.6s						
WRA	Warramunga Arr	39.09	201	P	P	07 09 23.1	+0.4
	1.2nm,0.6s,baz=25,slow=9.1,SNR=16						
ASAR	Alice Springs	42.70	199	P	P	07 09 52.9	+0.6
	0.2nm,0.6s,baz=18,slow=9.3,SNR=4.2						
SONM	Songino Array	45.92	321	P	P	07 10 18.9	+1.0
	0.5nm,0.5s,baz=129,slow=6.9,SNR=2.6						
CMAR	Chiang Mai Arr	46.73	280	P	P	07 10 26.0	+1.2
	0.8nm,0.3s,baz=65,slow=6.2,SNR=4.8						
ZALV	Zalesovo Beam	60.77	323	P	P	07 12 06.4	-0.5
	1.4nm,0.6s,baz=95,slow=7.4,SNR=7.0						
MKAR	Makanchi Array	61.30	314	P	P	07 12 09.4	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.5nm,0.8s,baz=81,slow=7.6,SNR=3.7						
KURK	**Kurchatov**	**64.08**	**319**	P	P	07 12 29.8	+0.7
	4.4nm,0.7s,baz=97,slow=7.0,SNR=14						
KURK	**Kurchatov**	**64.08**	**319**	*e*P	P	07 12 29.6	+0.5
	2.9nm,0.8s						
BVAR	**Borovoye Array**	**69.26**	**321**	P	P	07 13 02.2	+0.1
	2.6nm,0.6s,baz=89,slow=7.3,SNR=12						
YKA	**Yellowknife Ar**	**78.44**	**28**	P	P	07 13 55.1	-0.6
	0.5nm,0.6s,baz=283,slow=5.6,SNR=9.9						

*ISCJB **18** 07:10:29.5±0.9, 3487N±006×13726E±007, h39km±18km, Error ellipse: s-maj=10.4km s-min=8.3km az=139.3*
*JMA **18** 07:10:29.2, 3492N×13729E, h36km, M2.6*
ISC 18 07:10:29.6±0.9**, 3485N**±006×**13726E**±007**, h41**km±16km**, n7, σ0§70**/12**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.24**	**204**	P	**Pn**	**07 10 37.1**	**-0.3**
JAA				S	**Sn**	**07 10 42.9**	**+0.1**
JIE	**Ise**	**0.65**	**225**	P	**Pn**	**07 10 42.4**	**0.0**
JIE				*e*S	**Sn**	**07 10 51.8**	**+0.3**
TK04	**Tokai 4**	**0.69**	**132**	P	**Pn**	**07 10 42.9**	**0.0**
TSUJ	**Tsu 2**	**0.71**	**259**	P	**Pn**	**07 10 43.2**	**0.0**
TSUJ				S	**Sn**	**07 10 53.4**	**+0.5**
SHZ3	**Shizuoka 3**	**0.81**	**74**	P	**Pn**	**07 10 43.4**	**-1.2**
JGM	**Miyama**	**0.96**	**332**	P	**Pn**	**07 10 46.0**	**-0.6**
JGM				*e*S	**Sn**	**07 10 58.1**	**-0.9**
MAT	**Matsushiro**	**1.86**	**24**	P	**Pn**	**07 10 59.3**	**+0.4**
MAT				S	**Sn**	**07 11 22.9**	**+1.7**

*NEIC **18** 07:31:53.1, 1877N×6831W, h120km, MD3.5(RSPR), After RSPR.*
RSPR 18 07:31:53.1, 1877N×6831W, h119km±1km**, MD3.5**/7**, MD3.5**/7**, 7C, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.26**	**196**⇑	*e*P	Pn	07 32 12.2	+2.4
PCDR	**Punta Cana, DR**	**0.26**	**196**	*e*S	Sn	07 32 27.7	+5.3
IMO	**Isla Mona**	**0.75**	**150**	*e*S	Sn	07 32 27.8	0.0
LSP	**Las Mesas**	**1.30**	**117**⇑	*e*P	Pn	07 32 17.5	-0.7
LSP				*e*S	Sn	07 32 37.2	-0.1
CRPR	**Cabo Rojo, PR**	**1.36**	**123**⇑	*e*P	Pn	07 32 18.6	-0.4
CRPR				*e*S	Sn	07 32 38.3	-0.2
GBPR	**Guanica, Bosqu**	**1.57**	**120**	*e*S	Sn	07 32 42.4	-0.3
OBIP	**Obispado Ponce**	**1.77**	**114**⇑	*e*P	Pn	07 32 23.9	+0.2
OBIP				*e*S	Sn	07 32 47.3	+0.3
CELP	**Cerrillos**	**1.78**	**112**⇑	*e*P	Pn	07 32 23.9	+0.1
CELP				*e*S	Sn	07 32 47.7	+0.4
HUMP	**Col San Antoni**	**2.41**	**104**⇑	*e*P	Pn	07 32 31.6	-0.1
HUMP				*e*S	Sn	07 33 01.6	+0.2
STVI	**Saint Thomas**	**3.21**	**97**⇑	*e*P	Pn	07 32 42.0	-0.1
STVI				*e*S	Sn	07 33 20.6	+0.6

*HLW **18** 07:47:22.8, 3654N×27.16E, h33km, Mb3.7*
*ISCJB **18** 07:47:27.2±1.6, 362N±0.1×275E±0.1, h116km±20km, Error ellipse: s-maj=22.7km s-min=12.9km az=141.8*
*CSEM **18** 07:47:31.4±0.6, 36.19N×2779E, h30km, MD2.8, Error ellipse: s-maj=26.1km s-min=12.5km az=135.0*
*DDA **18** 07:47:31.9, 3653N×2782E, h6km±3km, Md2.8*
*ATH **18** 07:47:34.2, 36.16N×2751E, h34km, MD3.3/4*
ISC 18 07:47:28.7±1.8**, 362N**±01×**276E**±01**, h107**km±23km**, n15, σ1§30**/19**, 2C-4D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**92**	*e*PN	**Pn**	**07 47 45.2**	**+0.3**
ARG	**Arkhangelos**	**0.46**	**92**	*e*P	**Pn**	**07 47 45.0**	**+0.1**
KARP	**Karpathos**	**0.76**	**206**	*e*PN	**Pn**	**07 47 48.2**	**+0.9**
BDRM	**Kayabasi**	**0.83**	**353**	*e*P	**Pn**	**07 47 48.9**	**+0.9**
BDRM				*i* S	**Sn**	**07 48 01.8**	**-0.6**
TURN	**Turunc**	**1.05**	**52**	*i* P	**Pn**	**07 47 47.4**	**-2.7**
TURN				*i* S	**Sn**	**07 47 59.6**	**-6.8**
SMG	**Samos**	**1.58**	**339**	*e*PB	**Pn**	**07 48 02.9**	**+6.6**
NPS	**Neapolis**	**1.86**	**239**	*e*PN	**Pn**	**07 48 04.0**	**+4.2**
NPS	**Neapolis**	**1.86**	**239**	*e*P	**Pn**	**07 48 02.5**	**+2.7**
GOLH	**Golhisar**	**1.89**	**58**	*i* P	**Pn**	**07 48 01.5**	**+1.3**
GOLH				*i* S	**Sn**	**07 48 23.5**	**-0.6**
SLUM		**5.12**	**203**	⇓P	**Pn**	**07 48 39.5**	**-3.7**
HMAT	**Matruh**	**5.14**	**184**	⇓P	**Pn**	**07 48 41.8**	**-1.6**
SWA2		**7.20**	**195**	⇑P	**Pn**	**07 49 09.4**	**-1.9**
SWA2				S	**Sn**	**07 50 27.1**	**-4.4**
HHAG	**Hagoal**	**7.33**	**147**	⇓P	**Pn**	**07 49 14.2**	**+1.1**
GLL	**Jalalah**	**7.50**	**151**	⇓P	**Pn**	**07 49 16.2**	**+0.8**
HFRF	**Wahat Farafira**	**9.08**	**176**	⇑P	**Pn**	**07 49 37.2**	**+0.2**

*HLW **18** 08:28:31.7, 3456N×2570E, h33km, Mb3.9*
*CSEM **18** 08:28:32.3±0.1, 3440N×2572E, h80km, ML3.9, Error ellipse: s-maj=3.7km s-min=1.5km az=48.0*
*ISCJB **18** 08:28:34.2±0.4, 3437N±003×2607E±004, h50km±8km, mb3.5/6, Error ellipse: s-maj=6.8km s-min=3.4km az=141.4*
*ATH **18** 08:28:34.2, 3447N×2547E, h89km±2km*
*IDC **18** 08:28:34.9±1.6, 3432N×2563E, h45km±15km, mb3.4/6, mb1 3.5/12, mb1mx3.4/26, mbtmp3.4/12, ML3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.1/40, Error ellipse: s-maj=21.8km s-min=11.4km az=37.0*
*NEIC **18** 08:28:34.1, 3446N×2546E, h88km, MG3.5(ATH), After ATH.*
*GII **18** 08:28:42.7±0.0, 3397N×2665E, h0km, mb4.2/2, ML4.0/2*
*THE **18** 08:29:04.0, 3630N×2526E, h4km±13km, Error ellipse: s-maj=13.7km s-min=2.2km az=232.0*
ISC 18 08:28:35.4±0.4**, 3438N**±003×**2596E**±004**, h46**km±8km**, n64, σ1§45**/84**, mb3.5**/6**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.87**	**333**	P	**Pn**	**08 28 49.4**	**-1.9**
NPS	**Neapolis**	**0.92**	**342**	*e*P	**Pn**	**08 28 51.6**	**-0.4**
NPS				*e*S	**Sn**	**08 29 04.9**	**+0.8**
NPS	**Neapolis**	**0.92**	**342**	*e*P	**Pn**	**08 28 51.2**	**-0.8**
NPS				*e*S	**Sn**	**08 29 04.9**	**+0.8**
IDI	**Anoyia**	**1.26**	**316**	P	**Pn**	**08 28 53.9**	**-2.6**
	54nm,0.3s,baz=144,slow=17,SNR=148						
IDI				S	**Sn**	**08 29 09.4**	**-3.0**
	103nm,0.3s,baz=270,slow=20,SNR=13						
KARP	**Karpathos**	**1.52**	**40**	*e*P	**Pn**	**08 29 04.4**	**+4.2**
GVD	**Gavdhos**	**1.61**	**287**	*e*P	**Pn**	**08 28 57.0**	**-4.3**
THR6	**Thira Island,**	**2.02**	**347**	P	**Pn**	**08 29 06.7**	**-0.3**
THR1	**Thera Island**	**2.02**	**349**	P	**Pn**	**08 29 07.7**	**+0.7**
THR3	**Thira Island,**	**2.07**	**347**	P	**Pn**	**08 29 07.1**	**-0.6**
THR5	**Thira Island,**	**2.09**	**346**	P	**Pn**	**08 29 07.0**	**-0.9**
ARG	**Arkhangelos**	**2.55**	**43**	*e*P	**Pn**	**08 29 18.2**	**+4.0**
APE	**Apeiranthos**	**2.70**	**353**	*e*P	**Pn**	**08 29 16.0**	**-0.3**
APE	**Apeiranthos**	**2.70**	**353**	*e*P	**Pn**	**08 29 16.5**	**+0.2**
SLUM		**2.95**	**192**	P	**Pn**	**08 29 18.1**	**-1.6**
TURN	**Turunc**	**3.29**	**40**	*i* P	**Pn**	**08 29 22.7**	**-1.6**
VLI	**Veliai**	**3.39**	**314**	*e*P	**Pn**	**08 29 21.5**	**-4.3**
VLI	**Veliai**	**3.39**	**314**	*e*P	**Pn**	**08 29 21.0**	**-4.8**
HMAT	**Matruh**	**3.42**	**163**	P	**Pn**	**08 29 26.1**	**-0.1**
HMAT				S	**Sn**	**08 30 05.5**	**+0.1**
HMAT	**Matruh**	**3.42**	**163**	P	**Pn**	**08 29 26.0**	**-0.2**
HMAT				S	**Sn**	**08 30 05.5**	**+0.1**
GOLH	**Golhisar**	**4.08**	**45**	*i* P	**Pn**	**08 29 38.5**	**+3.2**
ITM	**Ithomi**	**4.30**	**312**	*e*P	**Pn**	**08 29 34.5**	**-3.8**
KHAL	**Karahalli**	**4.89**	**35**	*i* P	**Pn**	**08 29 48.0**	**+1.6**
SWA2		**5.14**	**185**	P	**Pn**	**08 29 48.7**	**-1.1**
HMYD	**Mayadein**	**6.15**	**137**	P	**Pn**	**08 30 04.5**	**+0.8**
AANS		**6.15**	**130**	P	**Pn**	**08 30 04.5**	**+0.9**
AYT	**Al ‘Ayyat**	**6.42**	**135**	P	**Pn**	**08 30 08.6**	**+1.2**
AWBH		**6.55**	**157**	P	**Pn**	**08 30 09.7**	**+0.6**
KOT	**Kottamia**	**6.67**	**130**	P	**Pn**	**08 30 11.8**	**+1.0**
KOT				S	**Sn**	**08 31 25.0**	**-0.5**
HSAF	**As Saff**	**6.72**	**133**	P	**Pn**	**08 30 12.6**	**+1.1**
HHAG	**Hagoal**	**6.83**	**129**	P	**Pn**	**08 30 14.0**	**+1.1**
HHAG				S	**Sn**	**08 31 28.7**	**-0.6**
GLL	**Jalalah**	**6.84**	**133**	P	**Pn**	**08 30 14.2**	**+1.1**
GLL				S	**Sn**	**08 31 29.1**	**-0.6**
AMAG	**Maghara**	**7.17**	**119**	P	**Pn**	**08 30 18.4**	**+0.8**
RSH		**7.38**	**115**	P	**Pn**	**08 30 21.6**	**+1.0**
SUZ		**7.38**	**126**	P	**Pn**	**08 30 21.6**	**+1.1**
ZAF		**7.57**	**130**	P	**Pn**	**08 30 24.2**	**+1.1**
ZNM		**7.71**	**128**	P	**Pn**	**08 30 26.2**	**+1.1**
ZNM				S	**Sn**	**08 31 50.1**	**-1.0**
KZIT	**Kziot**	**7.91**	**114**	Pn	**Pn**	**08 30 29.6**	**+1.7**
KZIT				Sn	**Sn**	**08 31 53.8**	**-2.3**
HRSH	**Kfar Ka’horesh**	**7.96**	**100**	P	**Pn**	**08 30 21.6**	**-6.9**
MMAI	**Mount Meron Ar**	**7.99**	**97**	P	**Pn**	**08 30 32.5**	**+3.7**
	2.6nm,0.3s,baz=288,slow=12,SNR=5.8						
MMAI				S	**Sn**	**08 31 59.1**	**+1.3**
	7.2nm,0.3s,baz=279,slow=27,SNR=9.2						
RTMI	**Retamim**	**8.07**	**112**	Sn	**Sn**	**08 31 57.8**	**-2.2**
HNKL	**Nakhl**	**8.12**	**121**	P	**Pn**	**08 30 31.8**	**+1.1**
HNKL				S	**Sn**	**08 31 59.9**	**-1.2**
BRTR	**Keskin Array B**	**8.13**	**47**	P	**Pn**	**08 30 33.6**	**+2.9**
	0.1nm,0.3s,baz=212,slow=14,SNR=2.6						
MMLI	**Mount Malkishu**	**8.15**	**101**	Sn	**Sn**	**08 32 00.6**	**-1.1**
KSDI	**Kefar Szold**	**8.16**	**96**	Sn	**Sn**	**08 32 01.3**	**-0.8**
HMDT	**Nahal Hemdat**	**8.28**	**102**	Sn	**Sn**	**08 32 03.4**	**-1.7**
DSI	**Dead Sea**	**8.40**	**107**	Pn	**Pn**	**08 30 36.4**	**+2.0**
DSI				Sn	**Sn**	**08 32 06.0**	**-1.9**
MZDA	**Masada**	**8.48**	**109**	Pn	**Pn**	**08 30 37.6**	**+1.9**
MZDA				Sn	**Sn**	**08 32 08.3**	**-1.7**
KRMI	**Paran Flat**	**8.55**	**117**	Pn	**Pn**	**08 30 38.0**	**+1.4**
KRMI				Sn	**Sn**	**08 32 08.3**	**-3.5**
PRNI	**Paran**	**8.64**	**115**	Pn	**Pn**	**08 30 39.5**	**+1.7**
PRNI				Sn	**Sn**	**08 32 11.3**	**-2.7**
ZFRI	**Zfri**	**8.67**	**114**	Sn	**Sn**	**08 32 12.2**	**-2.5**
HRFI	**Mount Harif**	**8.83**	**117**	Pn	**Pn**	**08 30 42.3**	**+2.0**
HRFI				Sn	**Sn**	**08 32 15.6**	**-2.8**
MBRI	**Mt Berech**	**8.87**	**119**	Pn	**Pn**	**08 30 42.3**	**+1.4**
MBRI				Sn	**Sn**	**08 32 16.7**	**-2.7**
EIL	**Elat**	**8.96**	**119**	P	**Pn**	**08 30 43.3**	**+1.1**
	1.0nm,0.3s,baz=323,slow=7.7,SNR=13						
EIL				S	**Sn**	**08 32 19.5**	**-2.3**
	3.1nm,0.3s,baz=336,slow=12,SNR=6.9						
EIL	**Elat**	**8.96**	**119**	Pn	**Pn**	**08 30 43.6**	**+1.4**
HDK1	**Dakhla**	**9.30**	**160**	P	**Pn**	**08 30 47.8**	**+0.9**
ASF	**Jabal al Asfar**	**9.42**	**100**	P	**Pn**	**08 30 52.4**	**+4.0**
	0.3nm,0.3s,baz=135,slow=3.9,SNR=3.7						
ASF				S	**Sn**	**08 32 32.5**	**-0.5**
	0.5nm,0.3s,baz=324,slow=19,SNR=4.1						
AKASG	**Malin Array Be**	**16.48**	**7**	P	**Pn**	**08 32 22.8**	**-0.4**
	0.9nm,0.3s,baz=202,slow=11,SNR=4.1						
GERES	**GERESS Array B**	**17.08**	**331**	P	**Pn**	**08 32 29.8**	**-0.8**
	baz=145,slow=12,SNR=2.2						
HFS	**Hagfors**	**26.98**	**346**	P	**P**	**08 34 13.0**	**+0.4**
	2.2nm,0.9s,mb3.7,baz=146,slow=13,SNR=3.0						
TORD	**Torodi Ar. Bea**	**30.51**	**232**	P	**P**	**08 34 41.9**	**-2.5**
	0.6nm,0.5s,mb3.7,baz=31,slow=8.8,SNR=8.7						
TORD				LR	LR	08 48 26.7	
	comp=Z,29nm,20.9s,baz=10.0,slow=39						
MKAR	**Makanchi Array**	**43.66**	**56**	P	**P**	**08 36 37.5**	**+2.1**
	1.0nm,0.5s,mb3.8,baz=270,slow=6.8,SNR=18						
ZALV	**Zalesovo Beam**	**45.07**	**46**	P	**P**	**08 36 46.9**	**+0.3**
	0.5nm,0.4s,mb3.7,baz=269,slow=8.4,SNR=3.2						
SONM	**Songino Array**	**59.47**	**50**	P	**P**	**08 38 35.5**	**+1.9**
	0.2nm,0.6s,mb3.4,baz=273,slow=5.6,SNR=3.0						
YKA	**Yellowknife Ar**	**78.39**	**342**	P	**P**	**08 40 29.7**	**-1.0**
	0.1nm,0.5s,mb3.0,baz=29,slow=5.0,SNR=6.7						

*ISCJB **18** 08:30:00.3±1.4, 2503N±008×12354E±005, h23km±12km, mb3.8/7, MS3.2/4, Error ellipse: s-maj=14.2km s-min=7.6km az=0.9*
*JMA **18** 08:30:00.2±0.3, 2505N×12354E, h23km±4km, M4.2*
*NIED **18** 08:30:00, 2500N×12350E, h5km, Mw4.0 Best double couple: Mo1.32000×10^15 NP1:ϕs69.00000°, δ48.00000°, λ-100.00000°. NP2:ϕs264.00000°, δ43.00000°, λ-79.00000°.*
*IDC **18** 08:30:17.9±5.7, 2491N×12320E, h171km±57km, mb3.4/7, mb1 3.6/8, mb1mx3.4/21, mbtmp3.4/8, MS3.2/6, Ms1 3.2/6, ms1mx3.0/17, Error ellipse: s-maj=27.4km s-min=14.8km az=72.0*
ISC 18 08:29:59.6±1.4**, 2504N**±007×**12356E**±005**, h7**km±10km**, n16, σ0§40**/18**, mb3.8**/7**, MS3.2**/4**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.72**	**167**	P	**Pg**	**08 30 13.7**	**+0.2**
YOJ	**Yonaguni jima**	**0.76**	**221**	P	**Pg**	**08 30 14.3**	**0.0**
YOJ				S	**Sg**	**08 30 24.2**	**0.0**
JIJ	**Ishigaki jima**	**0.86**	**142**	P	**Pg**	**08 30 15.8**	**-0.4**
JIJ				*e*S	**Sg**	**08 30 26.9**	**-0.5**
JKRS	**Kuro-shima**	**0.90**	**153**	P	**Pg**	**08 30 17.0**	**+0.1**
JKRS				*e*S	**Sg**	**08 30 29.1**	**+0.5**
HATJ	**Hateruma jima**	**1.01**	**167**	P	**Pg**	**08 30 18.6**	**-0.4**
HATJ				*e*S	**Sg**	**08 30 32.4**	**+0.4**
JTJ	**Tarama**	**1.12**	**111**	P	**Pg**	**08 30 20.8**	**-0.2**
JTJ				*e*S	**Sg**	**08 30 35.8**	**+0.3**
KSRS	**Korea Array**	**12.92**	**16**	P	Px	08 33 19.4	
	0.1nm,0.3s,baz=186,slow=12,SNR=4.1						
KSRS				LR	LR	08 37 54.9	
	comp=Z,71nm,19.2s,baz=175,slow=35						
MJAR	**Matsushiro Arr**	**17.00**	**44**	LR	LR	08 40 28.3	
	comp=Z,51nm,18.6s,baz=270,slow=35						
CMAR	**Chiang Mai Arr**	**23.76**	**259**	P	**P**	**08 35 12.5**	**-0.4**
	5.1nm,0.3s,mb4.4,baz=64,slow=6.1,SNR=4.3						
SONM	**Songino Array**	**26.49**	**334**	P	**P**	**08 35 37.6**	**+0.2**
	0.6nm,0.8s,mb3.2,baz=153,slow=9.7,SNR=4.3						
SONM				LR	LR	08 46 49.6	
	comp=Z,67nm,18.7s,MS3.2,baz=219,slow=38						
PETK	**Petropavlovsk-**	**37.96**	**33**	LR	LR	08 54 16.2	
	comp=Z,30nm,18.1s,MS3.1,baz=84,slow=38						
MKAR	**Makanchi Array**	**39.26**	**314**	P	**P**	**08 37 29.6**	**+0.9**
	1.3nm,0.8s,mb3.7,baz=104,slow=8.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**40.73**	**325**	P	**P**	**08 37 40.1**	**-0.8**
	0.9nm,0.5s,mb3.7,baz=131,slow=7.9,SNR=4.8						
ZALV				LR	LR	08 56 05.3	
	comp=Z,36nm,18.4s,MS3.3,baz=88,slow=38						
WRA	**Warramunga Arr**	**45.93**	**166**	P	**P**	**08 38 22.8**	**-0.3**
	2.2nm,0.7s,mb4.2,baz=348,slow=8.7,SNR=20						
WRA				LR	LR	08 57 39.6	
	comp=Z,19nm,21.4s,MS3.0,baz=15,slow=36						
ASAR	**Alice Springs**	**49.45**	**167**	P	**P**	**08 38 50.4**	**-0.1**
	0.6nm,0.6s,mb3.8,baz=349,slow=7.8,SNR=13						
YKA	**Yellowknife Ar**	**81.33**	**24**	P	**P**	**08 42 17.0**	**+0.5**
	0.4nm,0.8s,mb3.4,baz=306,slow=5.1,SNR=7.2						

*NIED **18** 09:16:00, 3390N×13950E, h140km, Mw4.0 Best double couple: Mo1.05000×10^15 NP1:ϕs170.00000°, δ74.00000°, λ101.00000°. NP2:ϕs315.00000°, δ19.00000°, λ56.00000°.*
*ISCJB **18** 09:16:49.8±0.4, 3383N±004×13944E±006, h160km±3km, mb3.7/13, Error ellipse: s-maj=7.8km s-min=6.5km az=157.6*
*NEIC **18** 09:16:50.9±1.1, 3380N×13922E, h155km±9km, mb3.9/1, Error ellipse: s-maj=14.2km s-min=11.8km az=85.0*
*JMA **18** 09:16:51.3±0.2, 3390N×13951E, h149km±2km, M3.8*
*IDC **18** 09:16:51.1±0.4, 3377N×13932E, h154km±3km, mb3.5/12, mb1 3.7/14, mb1mx3.6/24, mbtmp3.5/14, Error ellipse: s-maj=17.4km s-min=7.5km az=74.0*
ISC 18 09:16:51.0±0.4**, 3384N**±004×**13942E**±006**, h155**km±3km**, n40, σ0§80**/49**, mb3.7**/13**, 6C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMY	**Miyakejima3**	**0.24**	**18**	P	**Pn**	**09 17 11.7**	**-0.2**
JKO	**Kozu shima**	**0.42**	**326**	⇑P	**Pn**	**09 17 12.3**	**-0.2**
NJJJ	**Nii jima 2**	**0.57**	**348**	P	**Pn**	**09 17 13.3**	**+0.1**
JHJ	**Hachijo jima 2**	**0.78**	**157**	P	**Pn**	**09 17 14.8**	**+0.3**
	219nm,0.3s,baz=316,slow=4.5,SNR=93						
JHJ				S	**Sn**	**09 17 33.0**	**+0.6**
	282nm,0.3s,baz=338,slow=22,SNR=18						
JHJ2	**Mitsune**	**0.80**	**155**	P	**Pn**	**09 17 14.9**	**+0.3**
JIM2	**Oshima 3**	**0.88**	**0**	P	**Pn**	**09 17 14.9**	**-0.3**
JIM2				S	**Sn**	**09 17 32.6**	**-1.2**
JIZS	**Izushimoda**	**0.99**	**333**	⇑P	**Pn**	**09 17 16.0**	**-0.1**
BSO3	**Boso 3**	**1.32**	**43**	P	**Pn**	**09 17 18.4**	**-0.6**
BSO3				*e*S	**Sn**	**09 17 41.2**	**+0.6**
TK04	**Tokai 4**	**1.40**	**293**	⇑P	**Pn**	**09 17 20.5**	**+0.7**
JOD2	**Odawara 2**	**1.45**	**349**	⇑P	**Pn**	**09 17 20.4**	**+0.1**
JOD2				S	**Sn**	**09 17 42.9**	**0.0**
BSO1	**Boso 1**	**1.52**	**57**	P	**Pn**	**09 17 20.0**	**-1.1**
BSO1				*e*S	**Sn**	**09 17 44.3**	**+0.1**
TK01	**Tokai 1**	**1.53**	**268**	P	**Pn**	**09 17 21.3**	**+0.1**
SHZ3	**Shizuoka 3**	**1.58**	**321**	⇑P	**Pn**	**09 17 22.3**	**+0.6**
JRY	**Ryogami san**	**2.22**	**349**	⇓P	**Pn**	**09 17 29.2**	**+0.3**
JRY				*e*S	**Sn**	**09 17 58.1**	**0.0**
JIE	**Ise**	**2.32**	**285**	⇑P	**Pn**	**09 17 30.6**	**+0.5**
JIE				S	**Sn**	**09 18 00.5**	**+0.2**
JAG	**Ashikaga**	**2.58**	**1**	⇓P	**Pn**	**09 17 32.2**	**-1.1**
JAG				S	**Sn**	**09 18 05.1**	**-0.9**
MJAR	**Matsushiro Arr**	**2.88**	**340**	P	**Pn**	**09 17 37.1**	**+0.2**
	6.7nm,0.3s,baz=159,slow=10,SNR=26						
MJAR				S	**Sn**	**09 18 13.7**	**+1.2**
	7.9nm,0.3s,baz=161,slow=20,SNR=11						
MAJO	**Matsushiro**	**2.88**	**340**	*e*P	**Pn**	**09 17 36.5**	**-0.4**
MAT	**Matsushiro**	**2.88**	**340**	P	**Pn**	**09 17 37.0**	**+0.1**
MAT				S	**Sn**	**09 18 13.8**	**+1.3**
CBIJ	**Chichi jima**	**7.13**	**160**	P	**Pn**	**09 18 28.9**	**-3.9**
	5.8nm,0.3s,baz=290,slow=16,SNR=18						
CBIJ				S	**Sn**	**09 19 44.5**	**-8.2**
	4.1nm,0.3s,baz=80,slow=19,SNR=3.7						
KSRS	**Korea Array**	**10.03**	**294**	P	**Pn**	**09 19 10.6**	**-0.6**
	0.1nm,0.3s,baz=112,slow=14,SNR=6.8						
ASAJ	**Asahikawa**	**10.56**	**13**	P	**Pn**	**09 19 14.8**	**-3.3**
	1.5nm,0.3s,baz=201,slow=15,SNR=6.9						
HIA	**Hailar**	**21.23**	**322**	P	**P**	**09 21 22.2**	**-2.2**
PETK	**Petropavlovsk-**	**23.26**	**29**	P	**P**	**09 21 45.5**	**+1.1**
	1.5nm,0.8s,mb3.5,baz=243,slow=6.8,SNR=8.3						
SONM	**Songino Array**	**28.39**	**309**	P	**P**	**09 22 30.7**	**+0.1**
	0.4nm,0.5s,mb3.4,baz=116,slow=5.0,SNR=3.6						
MKAR	**Makanchi Array**	**44.52**	**305**	P	**P**	**09 24 46.9**	**0.0**
	0.6nm,0.5s,mb3.5,baz=88,slow=9.5,SNR=5.5						
KURK	**Kurchatov**	**46.69**	**310**	*e*P	**P**	**09 25 02.6**	**-1.3**
	2.3nm,0.7s,mb3.9						
KDAK	**Kodiak Island**	**50.57**	**40**	P	**P**	**09 25 34.0**	**+0.5**
	8.9nm,1.0s,mb4.3,baz=311,slow=19,SNR=8.5						
WRA	**Warramunga Arr**	**53.70**	**186**	P	**P**	**09 25 55.9**	**-1.0**
	1.6nm,0.5s,mb4.0,baz=0.5,slow=7.4,SNR=61						
WRA				PcP	PcP	09 27 01.7	+0.7
	0.5nm,0.4s,baz=0.4,slow=4.3,SNR=3.7						
ASAR	**Alice Springs**	**57.42**	**186**	P	**P**	**09 26 23.1**	**-0.2**
	1.0nm,0.7s,mb3.7,baz=14,slow=12,SNR=15						
ASAR				PcP	PcP	09 27 16.6	+1.2
	0.5nm,0.6s,baz=0.3,slow=3.9,SNR=4.9						
STKA	**Stephens Creek**	**65.39**	**178**	P	**P**	**09 27 16.7**	**-0.1**
	1.8nm,0.5s,mb4.2,baz=351,slow=6.6,SNR=4.7						
STKA	**Stephens Creek**	**65.39**	**178**	P	**P**	**09 27 16.7**	**-0.1**
YKA	**Yellowknife Ar**	**67.39**	**29**	P	**P**	**09 27 29.6**	**+0.5**
	0.2nm,0.5s,mb3.2,baz=302,slow=6.1,SNR=6.7						
AKASG	**Malin Array Be**	**75.82**	**322**	P	**P**	**09 28 18.9**	**-0.9**
	0.6nm,0.4s,mb3.6,baz=52,slow=6.2,SNR=4.6						
PDAR	**Pinedale Array**	**81.08**	**44**	P	**P**	**09 28 50.1**	**+1.3**
	0.4nm,0.5s,mb3.3,baz=59,slow=0.7,SNR=4.8						
GERES	**GERESS Array B**	**84.55**	**327**	P	**P**	**09 29 07.3**	**+0.8**
	0.4nm,0.4s,mb3.5,baz=41,slow=9.1,SNR=2.4						
TXAR	**Lajitas Array**	**93.37**	**51**	P	**P**	**09 29 50.2**	**+1.5**
	1.3nm,0.8s,mb4.1,baz=305,slow=2.4,SNR=22						
TXAR	**Lajitas Array**	**93.37**	**51**	P	**P**	**09 29 50.2**	**+1.5**
TORD	**Torodi Ar. Bea**	**118.34**	**312**	PKP	PKPdf	09 35 19.3	-1.3
	0.2nm,0.5s,baz=25,slow=1.0,SNR=4.9						
TORD	**Torodi Ar. Bea**	**118.34**	**312**	PKP	PKPdf	09 35 19.3	-1.3

IDC 18 09:16:53.8±1.1**, 017S**×**12541E, h0**km**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.7**/18**, mbtmp3.7**/5**, ML3.7**/1**, MS3.1**/3**, Ms1 3.2**/3**, ms1mx2.6**/27**, Error ellipse: s-maj=51.2km s-min=21.0km az=71.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.42**	**230**	Pn	Pn	09 18 43.5	+0.1
	1.2nm,0.3s,baz=51,slow=14,SNR=4.4						
WRA	**Warramunga Arr**	**21.51**	**157**	P	P	09 21 43.9	-0.5
	1.7nm,0.6s,baz=335,slow=12,SNR=12						
ASAR	**Alice Springs**	**24.77**	**161**	P	P	09 22 18.1	+0.8
	0.4nm,0.5s,baz=337,slow=9.2,SNR=10						
CBIJ	**Chichi jima**	**31.55**	**29**	LR	LR	09 34 57.5	
	comp=Z,43nm,18.4s,baz=163,slow=34						
CMAR	**Chiang Mai Arr**	**31.92**	**307**	LR	LR	09 35 47.0	
	comp=Z,16nm,18.4s,baz=130,slow=36						
SONM	**Songino Array**	**50.60**	**343**	P	P	09 25 54.4	0.0
	1.0nm,0.7s,baz=158,slow=5.9,SNR=5.8						
SONM				LR	LR	09 47 30.8	
	comp=Z,27nm,18.1s,baz=211,slow=36						
MKAR	**Makanchi Array**	**60.04**	**327**	P	P	09 27 02.9	+0.3
	1.6nm,0.7s,baz=111,slow=6.6,SNR=9.1						
TORD	**Torodi Ar. Bea**	**122.78**	**285**	PKP	PKPdf	09 35 52.2	-0.7
	0.5nm,0.9s,baz=101,slow=0.6,SNR=2.5						

*DDA **18** 09:22:19.9, 3940N×2626E, h7km±3km, Md3.2*
*ISCJB **18** 09:22:20.7±0.5, 3943N±002×2626E±003, h6km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=157.5*
*CSEM **18** 09:22:20.3±0.1, 3943N×2624E, h8km, ML3.4/2, Error ellipse: s-maj=1.3km s-min=1.0km az=44.0*
*ISK **18** 09:22:20.5, 3944N×2626E, h7km, MD3.3*
*THE **18** 09:22:21.5, 3941N×2625E, h9km±1km, ML3.4/2, Error ellipse: s-maj=1.7km s-min=0.6km az=222.0*
ISC 18 09:22:21.1±0.4**, 3943N**±002×**2626E**±003**, h7**km±3km**, n38, σ0§78**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.18**	**177**	P	**Pg**	**09 22 25.0**	**+0.3**
PRK				S	**Sg**	**09 22 28.0**	**+0.8**
AYVA	**Ayvalik**	**0.35**	**109**	*i* P	**Pg**	**09 22 27.9**	**-0.1**
EZN	**Ezine**	**0.40**	**7**	PG	**Pg**	**09 22 28.6**	**-0.3**
BOZC	**Bozcaada**	**0.45**	**339**	*i* P	**Pg**	**09 22 29.9**	**+0.2**
BOZC				*i* S	**Sg**	**09 22 36.4**	**+0.8**
GADA	**Gvkgeada**	**0.81**	**340**	*e*PG	**Pg**	**09 22 36.3**	**-0.4**
LIA	**Limnos Island**	**0.95**	**300**	P	**Pg**	**09 22 39.6**	**+0.2**
LIA				S	**Sg**	**09 22 53.0**	**+1.2**
LPK	**Lapseki**	**1.02**	**22**	*e*PG	**Pg**	**09 22 40.0**	**-0.7**
LPK				*e*SG	**Sg**	**09 22 54.5**	**+0.5**
LOS	**Limnos**	**1.04**	**300**	P	**Pg**	**09 22 41.4**	**+0.3**
URLA	**Izmir**	**1.10**	**166**	*i* P	**Pg**	**09 22 40.8**	**-1.3**
URLA				*i* S	**Sg**	**09 22 55.1**	**-1.2**
BLCB	**Balcova**	**1.21**	**149**	*e*PN	**Pn**	**09 22 43.9**	**-0.4**
BLCB	**Balcova**	**1.21**	**149**	P	**Pb**	**09 22 43.6**	**-0.6**
BLCB	**Balcova**	**1.21**	**149**	*e*Pn	**Pn**	**09 22 43.9**	**-0.4**
BALB	**Balikesir**	**1.27**	**80**	*e*PN	**Pn**	**09 22 45.1**	**-0.1**
BALB				*e*SN	**Sn**	**09 23 03.2**	**+0.7**
IZM	**Izmir**	**1.29**	**142**	*e*PN	**Pn**	**09 22 45.8**	**+0.4**
IZM				*e*SN	**Sn**	**09 23 04.1**	**+1.2**
ENEZ	**Enez**	**1.31**	**357**	*e*PN	**Pn**	**09 22 45.4**	**-0.3**
ENEZ				*e*SN	**Sn**	**09 23 03.7**	**+0.2**
AKS	**Akhisar**	**1.33**	**114**	*e*PN	**Pn**	**09 22 45.9**	**0.0**
AKHS	**Akhisar**	**1.33**	**114**	*i* P	**Pn**	**09 22 45.1**	**-0.8**
AKHS				*i* S	**Sb**	**09 23 02.3**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.45**	**29**	*e*PN	**Pn**	**09 22 46.8**	**-0.8**
SART	**Tekirdag**	**1.45**	**29**	*i* P	**Pn**	**09 22 47.0**	**-0.6**
SART				*i* S	**Sn**	**09 23 04.9**	**-1.9**
ALN	**Alexandroupoli**	**1.48**	**354**	P	**Pn**	**09 22 47.4**	**-0.6**
ALN				S	**Sn**	**09 23 07.4**	**-0.2**
EDC	**Edincik**	**1.54**	**53**	*e*PN	**Pn**	**09 22 49.0**	**+0.1**
BNT	**Bandirma**	**1.58**	**53**	*e*PN	**Pn**	**09 22 49.3**	**-0.1**
KCT	**Karacabey**	**1.82**	**62**	*e*PN	**Pn**	**09 22 52.0**	**-0.7**
DST	**Dursunbey**	**1.84**	**84**	*e*PN	**Pn**	**09 22 53.4**	**+0.4**
TKR	**Tekirdag**	**1.84**	**32**	*e*PN	**Pn**	**09 22 53.2**	**+0.1**
AOS	**Alonnisos**	**1.86**	**263**	P	**Pn**	**09 22 52.5**	**-0.8**
GCAM	**G?zelcaml?**	**1.88**	**156**	*i* P	**Pn**	**09 22 54.0**	**+0.4**
GCAM				*i* S	**Sn**	**09 23 19.8**	**+2.2**
OUR	**Ouranopolis**	**1.97**	**298**	P	**Pn**	**09 22 54.6**	**-0.2**
PAIG	**Paliouri**	**2.05**	**285**	P	**Pn**	**09 22 55.0**	**-0.9**
PAIG				S	**Sn**	**09 23 22.1**	**+0.4**
KULA	**Kula-Manisa**	**2.08**	**115**	*e*PN	**Pn**	**09 22 57.0**	**+0.7**
SLVT	**Silivri**	**2.34**	**39**	*e*PN	**Pn**	**09 23 00.3**	**+0.5**
APE	**Apeiranthos**	**2.42**	**194**	P	**Pn**	**09 22 59.5**	**-1.5**
EDRB	**Edirne**	**2.45**	**9**	*e*PN	**Pn**	**09 23 01.8**	**+0.5**
GEMT	**Gemlik**	**2.47**	**65**	*e*PN	**Pn**	**09 23 02.2**	**+0.6**
GDZ	**Gediz**	**2.52**	**97**	*i* P	**Pn**	**09 23 07.2**	**+4.8**
GDZ				*i* S	**Sn**	**09 23 39.1**	**+5.7**
ADVT	**Abdulvahap**	**2.86**	**68**	*e*PN	**Pn**	**09 23 07.9**	**+0.9**
ALT	**Altintas**	**3.01**	**96**	*e*PN	**Pn**	**09 23 10.0**	**+0.8**
GULT	**Gulveren**	**3.42**	**72**	*e*PN	**Pn**	**09 23 16.0**	**+1.3**

GUC 18 09:43:21.4±0.5**, 2339S**×**7048W, h30**km±2km**, MD3.5, ML3.1, 3C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.25**	**90**⇑	*i*P	Pb	09 43 27.7	-0.6
CEN1				*i* S	Sb	09 43 32.3	-0.6
CEN1				AML	AML	09 43 32.6	
	comp=E,4μm,0.4s						
MECH	**Mejillones**	**0.29**	**5**⇓	*i*P	Pb	09 43 28.6	-0.1
MECH				*e*S	Sb	09 43 33.3	-0.3
MECH				AML	AML	09 43 35.4	
	comp=E,3μm,0.4s						
ANCH	**Antofagasta**	**0.29**	**168**⇑	*i*P	Pb	09 43 28.2	-0.6
ANCH				*i* S	Sb	09 43 33.3	-0.5
ANCH				AML	AML	09 43 33.8	
	comp=N,10μm,0.1s						
CPN1	**Cerro Paranal**	**1.23**	**177**	*e*P	Pn	09 43 42.0	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPN1				iS	Sn	09 43 58.4	+0.3
CPN1				AML	AML	09 44 02.0	
	comp=E,878nm,0.3s						
TOCH	**Tocopilla**	**1.32**	**11**	⇑iP	Pn	09 43 44.1	+0.4
TOCH				iS	Sn	09 44 01.5	+1.2
TOCH				AML	AML	09 44 04.2	
	comp=E,503nm,0.3s						
MACH	**Maria Elena**	**1.36**	**29**	iP	Pn	09 43 45.2	+0.9
MACH				iS	Sn	09 44 03.5	+2.1
PB04	**Plate Boundary**	**1.45**	**39**	eP	Pn	09 43 40.6	-4.9
PB04				iS	Sn	09 43 55.6	-7.8
LVC	**Limon Verde**	**1.64**	**62**	eP	Pn	09 43 50.1	+2.0
LVC				eS	Sn	09 44 11.6	+3.5
LVC				AML	AML	09 44 14.3	
	comp=N,190nm,0.3s						
PB01	**Plate Boundary**	**2.51**	**22**	AML	AML	09 44 45.9	
	comp=E,126nm,0.4s						

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*ATH **18** 09:51:34.7, 3939N×2627E, h20km±1km, MD3.7/6*
*DDA **18** 09:51:34.5, 3940N×2627E, h26km±1km, Md3.6*
*ISK **18** 09:51:34.8, 3942N×2628E, h12km, MD3.5*
*NEIC **18** 09:51:34.8, 3938N×2626E, h20km, MD3.7(ATH), After ATH.*
*ISCJB **18** 09:51:34.7±0.6, 3942N±002×2623E±003, h9km±4km, Error ellipse: s-maj=4.7km s-min=2.9km az=146.4*
*CSEM **18** 09:51:35.0±0.1, 3943N×2626E, h15km, MD3.7, Error ellipse: s-maj=1.5km s-min=1.1km az=65.0*
*SOF **18** 09:51:37.9, 3964N×2623E, h17km, MD3.0*
*SKO **18** 09:51:40.8, 3941N×2572E, h0km*
ISC 18 09:51:35.7±0.4, **3941N**±002×**2625E**±003, **h11**km±3km, **n80**, σ0s**80**/93, **5C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.16**	**174**	ePB	**Pg**	**09 51 39.5**	**+0.2**
PRK				eSB	**Sg**	**09 51 42.2**	**+0.4**
PRK	**Paraskevi**	**0.16**	**174**	ePb	**Pg**	**09 51 39.7**	**+0.4**
PRK				eSb	**Sg**	**09 51 42.1**	**+0.3**
AYVA	**Ayvalik**	**0.35**	**106**	iP	**Pg**	**09 51 42.6**	**-0.1**
AYVA				iS	**Sg**	**09 51 47.9**	**+0.4**
EZN	**Ezine**	**0.42**	**8**	PG	**Pg**	**09 51 43.8**	**-0.2**
EZN				eSG	**Sg**	**09 51 49.5**	**-0.1**
BOZC	**Bozcaada**	**0.46**	**341**	iP	**Pg**	**09 51 44.6**	**-0.2**
GADA	**Gvkgeada**	**0.83**	**341**	ePG	**Pg**	**09 51 50.9**	**-0.8**
LIA	**Limnos Island**	**0.96**	**301**	ePN	**Pn**	**09 51 53.7**	**-1.4**
LIA				eSN	**Sn**	**09 52 06.9**	**-1.9**
LIA	**Limnos Island**	**0.96**	**301**	ePn	**Pn**	**09 51 54.1**	**-1.0**
LIA				eSn	**Sn**	**09 52 06.9**	**-1.9**
LPK	**Lapseki**	**1.04**	**22**	ePG	**Pg**	**09 51 54.7**	**-1.0**
LPK				eSG	**Sg**	**09 52 09.3**	**0.0**
URLA	**Izmir**	**1.08**	**165**	iP	**Pb**	**09 51 55.4**	**-1.1**
URLA				iS	**Sg**	**09 52 11.2**	**+0.7**
BLCB	**Balcova**	**1.19**	**149**	ePN	**Pn**	**09 51 58.3**	**-0.1**
BLCB				eSN	**Sn**	**09 52 14.9**	**+0.3**
BALB	**Balikesir**	**1.28**	**79**	ePN	**Pn**	**09 51 58.9**	**-0.7**
IZM	**Izmir**	**1.28**	**142**	ePN	**Pn**	**09 51 58.7**	**-0.8**
IZM				eSN	**Sn**	**09 52 16.8**	**+0.1**
AKS	**Akhisar**	**1.32**	**113**	ePN	**Pn**	**09 52 00.1**	**-0.1**
AKHS	**Akhisar**	**1.32**	**113**	iP	**Pn**	**09 51 59.4**	**-0.7**
AKHS				iS	**Sb**	**09 52 16.7**	**-0.9**
ENEZ	**Enez**	**1.33**	**357**	ePN	**Pn**	**09 52 00.5**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.46**	**29**	ePN	**Pn**	**09 52 00.5**	**-1.5**
SART	**Tekirdag**	**1.47**	**29**	iP	**Pn**	**09 52 02.0**	**-0.1**
EDC	**Edincik**	**1.56**	**52**	ePN	**Pn**	**09 52 03.2**	**-0.1**
BNT	**Bandirma**	**1.59**	**53**	ePN	**Pn**	**09 52 02.8**	**-1.1**
SMG	**Samos**	**1.76**	**165**	ePN	**Pn**	**09 52 06.1**	**0.0**
SMG	**Samos**	**1.76**	**165**	ePn	**Pn**	**09 52 06.3**	**+0.2**
RDO	**Rodhopi**	**1.82**	**343**	ePN	**Pn**	**09 52 07.0**	**0.0**
KCT	**Karacabey**	**1.83**	**61**	ePN	**Pn**	**09 52 05.9**	**-1.2**
DST	**Dursunbey**	**1.85**	**83**	ePN	**Pn**	**09 52 06.8**	**-0.6**
TKR	**Tekirdag**	**1.86**	**31**	ePN	**Pn**	**09 52 07.2**	**-0.4**
GCAM	**G?zelcaml?**	**1.87**	**155**	iP	**Pn**	**09 52 07.1**	**-0.6**
MANT	**Manisa**	**2.02**	**116**	iP	**Pn**	**09 52 08.9**	**-0.8**
MANT				iS	**Sn**	**09 52 38.5**	**+3.6**
KULA	**Kula-Manisa**	**2.08**	**115**	ePN	**Pn**	**09 52 10.2**	**-0.3**
KDZ	**Kurdzhali**	**2.33**	**344**	P	**Pn**	**09 52 14.0**	**0.0**
SLVT	**Silivri**	**2.36**	**39**	ePN	**Pn**	**09 52 14.2**	**-0.2**
PLG	**Polygyros**	**2.36**	**295**	ePB	**Pb**	**09 52 15.0**	**-3.3**
APE	**Apeiranthos**	**2.40**	**194**	ePN	**Pn**	**09 52 14.9**	**-0.1**
APE	**Apeiranthos**	**2.40**	**194**	ePn	**Pn**	**09 52 14.4**	**-0.6**
APE	**Apeiranthos**	**2.40**	**194**	⇑iP	**Pn**	**09 52 14.1**	**-0.9**
CTT	**Catalca**	**2.41**	**43**	ePN	**Pn**	**09 52 14.4**	**-0.6**
MLSB	**Milas**	**2.43**	**150**	ePN	**Pn**	**09 52 15.4**	**+0.1**
EDRB	**Edirne**	**2.46**	**9**	ePN	**Pn**	**09 52 15.3**	**-0.5**
GEMT	**Gemlik**	**2.48**	**65**	ePN	**Pn**	**09 52 16.0**	**-0.1**
CTKS	**Kestanelik-??a**	**2.51**	**43**	ePN	**Pn**	**09 52 15.8**	**-0.7**
RZN	**Rozhen**	**2.56**	**333**	P	**Pn**	**09 52 17.4**	**+0.2**
CTYL	**Yal??k??y-??at**	**2.58**	**36**	ePN	**Pn**	**09 52 17.5**	**+0.1**
BGKT	**Bogazkoy**	**2.62**	**47**	ePN	**Pn**	**09 52 17.3**	**-0.6**
ISK	**Istanbul-Kandi**	**2.71**	**51**	ePN	**Pn**	**09 52 19.2**	**-0.1**
KHL	**Karahalli**	**2.77**	**112**	ePN	**Pn**	**09 52 20.3**	**+0.2**
YER	**Yerkesik**	**2.78**	**144**	ePN	**Pn**	**09 52 20.2**	**+0.1**
KLYT	**Kilyos**	**2.82**	**48**	ePN	**Pn**	**09 52 20.9**	**+0.1**
ADVT	**Abdulvahap**	**2.87**	**68**	ePN	**Pn**	**09 52 21.6**	**+0.2**
DAT	**Datca**	**2.87**	**158**	ePN	**Pn**	**09 52 21.1**	**-0.3**
CAVI	**Cavuskoy**	**2.88**	**73**	ePN	**Pn**	**09 52 22.0**	**+0.5**
MMB	**Musomiste**	**2.91**	**319**	P	**Pn**	**09 52 21.6**	**-0.3**
HRT	**Hereke**	**2.98**	**61**	ePN	**Pn**	**09 52 23.5**	**+0.6**
ALT	**Altintas**	**3.02**	**95**	ePN	**Pn**	**09 52 23.4**	**-0.1**
SILT	**Sile**	**3.12**	**55**	ePN	**Pn**	**09 52 25.6**	**+0.7**
GPA	**Golpazari**	**3.25**	**73**	ePN	**Pn**	**09 52 26.9**	**+0.3**
VAY	**Valandovo**	**3.40**	**305**	ePn	**Pn**	**09 52 30.0**	**+1.3**
VAY	**Valandovo**	**3.40**	**305**	ePn	**Pn**	**09 52 30.1**	**+1.4**
VAY				eSg	**Sg**	**09 53 18.7**	**-6.2**
GULT	**Gulveren**	**3.43**	**71**	ePN	**Pn**	**09 52 30.1**	**+0.9**
KKB	**Krupnik**	**3.44**	**317**	P	**Pn**	**09 52 30.0**	**+0.7**
SHUT	**Suhut-Afyon**	**3.46**	**103**	ePN	**Pn**	**09 52 30.0**	**+0.5**
ESKT	**Eskisehir**	**3.56**	**87**	ePN	**Pn**	**09 52 31.3**	**+0.4**
PRD	**Provadia**	**3.89**	**12**	eP	**Pg**	**09 52 50.2**	**+0.1**
VTS	**Vitosha**	**3.93**	**325**	P	**Pn**	**09 52 37.0**	**+1.1**
KRUS	**Krusevo**	**4.29**	**299**	ePn	**Pn**	**09 52 41.5**	**+0.5**
KRUS	**Krusevo**	**4.29**	**299**	ePn	**Pn**	**09 52 41.5**	**+0.6**
KIZT	**Kizilcal**	**4.41**	**95**	ePN	**Pn**	**09 52 44.0**	**+1.5**
BARS	**Barje**	**4.78**	**317**	ePn	**Pn**	**09 52 48.4**	**+0.8**
BR131	**Keskin Array S**	**5.72**	**84**	eP	**Pn**	**09 53 01.5**	**+1.0**
	2.9nm,0.2s						
BR131	**Keskin Array S**	**5.72**	**84**	eP	**Pn**	**09 53 01.5**	**+1.0**
	2.9nm,0.2s						
VOIR		**6.09**	**352**	⇓iP	**Pn**	**09 53 05.9**	**+0.3**
VOIR		**6.09**	**352**	⇓P	**Pn**	**09 53 05.9**	**+0.2**
PLOR	**Plostina**	**6.45**	**2**	⇓iP	**Pn**	**09 53 12.8**	**+2.3**
VRI	**Vrincioaia**	**6.46**	**3**	⇑iP	**Pn**	**09 53 12.9**	**+2.1**
VRI	**Vrincioaia**	**6.46**	**3**	⇑P	**Pn**	**09 53 12.9**	**+2.2**
GZR	**Gura Zlata**	**6.51**	**338**	⇑iP	**Pn**	**09 53 11.6**	**+0.2**
GZR	**Gura Zlata**	**6.51**	**338**	⇑P	**Pn**	**09 53 11.6**	**+0.2**
DRGR		**7.82**	**342**	⇓iP	**Pn**	**09 53 34.1**	**+4.7**
DRGR		**7.82**	**342**	P	**Pn**	**09 53 34.1**	**+4.8**
BURAR	**Bucovina Array**	**8.24**	**355**	⇓iP	**Pn**	**09 53 37.6**	**+2.5**
BURAR	**Bucovina Array**	**8.24**	**355**	P	**Pn**	**09 53 37.6**	**+2.5**

GUC 18 09:55:30.9±0.8, **2305S**×**7024W**, **h48**km±10km, **MD3.5**, **ML2.6, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.34**	**174**	eP	Pn	09 55 42.9	+2.7
CEN1				iS	Sn	09 55 51.3	+4.5
ANCH	**Antofagasta**	**0.65**	**194**	eP	Pn	09 55 44.1	+0.2
ANCH				iS	Sn	09 55 53.7	+0.4
ANCH				AML	AML	09 55 55.1	
	comp=N,339nm,0.1s						
TOCH	**Tocopilla**	**0.96**	**2**	eP	Pn	09 55 48.7	+0.7
TOCH				iS	Sn	09 56 01.3	+0.8
TOCH				AML	AML	09 56 02.4	
	comp=E,412nm,0.4s						
PB04	**Plate Boundary**	**1.05**	**42**	⇓iP	Pn	09 55 45.7	-3.5
PB04				iS	Sn	09 55 56.5	-6.2
PB04				AML	AML	09 55 58.4	
	comp=E,482nm,0.3s						
LVC	**Limon Verde**	**1.30**	**71**	eP	Pn	09 55 54.2	+1.6
LVC				iS	Sn	09 56 11.1	+2.2
PB01	**Plate Boundary**	**2.12**	**19**	eP	Pn	09 56 01.5	-2.3
PB01				iS	Sn	09 56 23.9	-5.1

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*ISCJB **18** 09:56:15.3±0.7, 3696N±005×2938E±005, h11km±7km, Error ellipse: s-maj=7.9km s-min=6.5km az=171.1*
*CSEM **18** 09:56:15.1±0.1, 3699N×2940E, h10km, MD2.8, Error ellipse: s-maj=5.1km s-min=2.8km az=20.0*
*DDA **18** 09:56:15.6, 3705N×2941E, h6km±1km, Md2.8*
*ISK **18** 09:56:15.1, 3679N×2932E, h8km, MD2.8*
ISC 18 09:56:15.7±0.7, **3697N**±005×**2940E**±005, **h15**km±6km, **n6**, σ0s**54**/11, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.30**	**26**	iP	**Pg**	**09 56 20.6**	**-1.5**
GOLH				iS	**Sg**	**09 56 27.0**	**+0.6**
ELL	**Elmali**	**0.46**	**118**	ePG	**Pg**	**09 56 25.4**	**+0.4**
ELL				eSG	**Sg**	**09 56 31.3**	**0.0**
TURN	**Turunc**	**0.64**	**262**	iP	**Pg**	**09 56 28.7**	**+0.3**
YER	**Yerkesik**	**0.91**	**281**	ePG	**Pg**	**09 56 33.1**	**-0.2**
YER				eSG	**Sg**	**09 56 45.5**	**+0.2**
KHAL	**Karahalli**	**1.40**	**3**	iP	**Pn**	**09 56 40.8**	**+0.1**
KHAL				iS	**Sn**	**09 56 59.3**	**+0.3**
DAT	**Datca**	**1.48**	**261**	ePN	**Pn**	**09 56 41.4**	**-0.4**
DAT				eSN	**Sn**	**09 57 00.8**	**0.0**

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*NIED **18** 10:11:00, 31.10N×131.80E, h29km, Mw4.0 Best double couple: M0 1.23000×10^15 NP1:φs22.00000°, δ64.00000°, λ84.00000°. NP2:φs216.00000°, δ27.00000°, λ102.00000°.*
*ISCJB **18** 10:11:56.8±1.6, 31.10N±006×1317E±02, h56km±10km, mb3.6/3, Error ellipse: s-maj=24.8km s-min=8.2km az=14.8*
*JMA **18** 10:11:56.0±0.2, 3107N×13181E, h32km±2km, M3.6*
*IDC **18** 10:11:59.8±2.3, 3140N×13035E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/23, mbtmp3.6/6, ML2.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/41, Error ellipse: s-maj=89.0km s-min=20.4km az=68.0*
ISC 18 10:11:57.6±1.6, **3111N**±006×**1317E**±02, **h47**km±11km, **n15**, σ0s**64**/17, **mb3.6**/3, **6C-1D, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.58**	**316**	⇓P	**Pn**	**10 12 08.7**	**-0.6**
JNAR				eS	**Sn**	**10 12 18.0**	**-0.2**
JTSR	**Tashiro 2**	**0.70**	**275**	⇑P	**Pn**	**10 12 10.2**	**-0.8**
JTSR				S	**Sn**	**10 12 21.3**	**+0.3**
JTN	**Tanegashima 3**	**0.79**	**235**	⇑P	**Pn**	**10 12 11.6**	**-0.7**
JTN				S	**Sn**	**10 12 23.4**	**+0.2**
JTZ	**Takazaki**	**0.96**	**325**	⇑P	**Pn**	**10 12 14.5**	**-0.2**
JTZ				eS	**Sn**	**10 12 28.0**	**+0.7**
JTSN	**Tsuno**	**1.15**	**350**	⇑P	**Pn**	**10 12 17.1**	**-0.1**
JTSN				eS	**Sn**	**10 12 32.4**	**+0.5**
JSU	**Suzuyama**	**1.17**	**290**	⇑P	**Pn**	**10 12 17.3**	**-0.1**
JZO	**Okuchi**	**1.41**	**317**	⇑P	**Pn**	**10 12 20.9**	**+0.1**
JIU2	**Izumi 2**	**1.63**	**332**	P	**Pn**	**10 12 24.3**	**+0.5**
JOW	**Kunigami**	**5.23**	**216**	Pn	**Pn**	**10 13 14.9**	**+1.7**
	0.6nm,0.3s,baz=96,slow=18,SNR=3.1						
SONM	**Songino Array**	**25.55**	**318**	P	**P**	**10 17 22.6**	**+0.8**
	1.7nm,0.9s,mb3.6,baz=120,slow=8.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**40.45**	**318**	LR	LR	10 36 07.0	
	comp=Z,25nm,18.4s,baz=76,slow=37						
MKAR	**Makanchi Array**	**40.83**	**307**	P	**P**	**10 19 34.1**	**-0.3**
	0.2nm,0.5s,mb3.0,baz=88,slow=7.9,SNR=5.2						
BVAR	**Borovoye Array**	**48.84**	**315**	P	**P**	**10 20 37.2**	**-0.9**
	1.3nm,0.5s,mb4.2,baz=106,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**50.82**	**177**	P	pP	10 21 05.2	-1.1
	0.8nm,0.9s,baz=349,slow=7.8,SNR=4.2						
ASAR	**Alice Springs**	**54.50**	**178**	P	pP	10 21 31.6	-2.1
	0.8nm,1.0s,baz=350,slow=5.1,SNR=4.5						

JMA 18 10:12:17.1±0.2, **3101N**×**13185E**, **h32**km±3km, **M3.6**, **Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.71**	**316**	P	Pn	10 12 30.7	-0.3
JNAR				S	Sb	10 12 40.1	-0.6
JTSR	**Tashiro 2**	**0.81**	**281**	P	Pn	10 12 32.5	+0.2
JTSR				S	Sn	10 12 42.9	-0.3
JTN	**Tanegashima 3**	**0.83**	**245**	S	Sn	10 12 43.6	0.0
JSU	**Suzuyama**	**1.29**	**293**	P	Pn	10 12 39.5	+0.6
JSU				S	Sn	10 12 56.4	+1.3
JZO	**Okuchi**	**1.55**	**317**	P	Pn	10 12 43.4	+0.9

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*ISCJB **18** 10:32:30.7±1.0, 553S±02×1257W±03, h10km, mb4.1/5, MS4.1/13, Error ellipse: s-maj=31.9km s-min=20.2km az=145.0*
*IDC **18** 10:32:30.5±1.4, 5530S×12552W, h0km, mb4.0/4, mb1 4.3/4, mb1mx4.0/14, mbtmp4.0/4, MS4.1/13, Ms1 4.1/13, ms1mx3.9/17, Error ellipse: s-maj=52.9km s-min=34.4km az=105.0*
*NEIC **18** 10:32:32.1±1.0, 5531S×12550W, h10km, mb4.5/1, Error ellipse: s-maj=38.5km s-min=25.5km az=102.0*
ISC 18 10:32:32.3±1.0, **552S**±02×**1257W**±03, **h10**km, **n27**, σ0s**51**/10, **mb4.1**/5, **MS4.1**/13, **1C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**32.03**	**113**	LR	LR	10 48 16.3	
	comp=Z,278nm,19.4s,MS4.0,baz=218,slow=30						
RKT	**Rikitea**	**32.79**	**344**	eT		11 13 40.3	
	4.3nm,0.3s						
QSPA	**South Pole Qui**	**34.96**	**180**	P	**P**	**10 39 23.2**	**-0.6**
	1.0nm,0.2s,mb4.3,baz=78,slow=5.0,SNR=2.9						
PLCA	**Paso Flores**	**38.60**	**92**	LR	LR	10 52 05.1	
	comp=Z,165nm,21.4s,MS3.8,baz=227,slow=30						
RPZ	**Rata Peaks**	**41.29**	**259**	LR	LR	10 52 47.0	
	comp=Z,416nm,20.2s,MS4.3,baz=160,slow=29						
URZ	**Urewera**	**41.43**	**270**	LR	LR	10 53 50.7	
	comp=Z,183nm,18.4s,MS4.0,baz=133,slow=31						
PPT	**Papeete**	**41.78**	**325**	eS	**S**	**10 46 49.4**	**+10**
	65nm,26.0s						
PPT				eLQ		10 49 55.9	
	344nm,27.0s						
PPT				eLR	LR	10 52 02.0	
	742nm,25.5s						
PPT	**Papeete**	**41.78**	**325**	LR	LR	10 52 28.0	
	comp=Z,392nm,19.6s,MS4.3,baz=159,slow=29						
RAR	**Rarotonga**	**42.47**	**309**	LR	LR	10 54 21.6	
	comp=Z,122nm,18.4s,MS3.8,baz=139,slow=31						
VAH	**Vaihoa**	**43.35**	**328**	eT		11 27 00.4	
	124nm,0.3s						
PMOR	**Pomariorio Ree**	**43.65**	**328**	eT		11 27 23.3	
	6.8nm,0.3s						
VNA3	**Neumayer Olymp**	**46.05**	**156**	e	**P**	**10 40 54.6**	**-0.8**
VNA3				e	pP	10 40 57.0	-1.5
VNA3				e		10 41 02.9	
VNA1	**Neumayer--Stat**	**46.79**	**156**	e	**P**	**10 41 02.3**	**+1.0**
VNA1				e		10 41 09.7	
VNA2	**Neumayer--Watz**	**46.80**	**157**	e	**P**	**10 41 01.4**	**+0.1**
	baz=223,slow=7.0						
VNA2				e	pP	10 41 03.2	-1.2
VNA2				e		10 41 09.7	
TAOE	**Nuku Hiva Isla**	**47.65**	**341**	eLR	LR	10 54 39.6	
	2μm,27.3s						
AFI	**Afiamalu**	**54.43**	**301**	LR	LR	11 00 49.7	
	comp=Z,67nm,18.6s,MS3.7,baz=104,slow=31						
SYO	**Syowa Base**	**55.62**	**174**	⇑eP	**P**	**10 42 07.6**	**+0.1**
CPUP	**Villa Florida**	**56.56**	**89**	LR	LR	11 03 12.3	
	comp=Z,320nm,19.2s,MS4.4,baz=214,slow=33						
MAW	**Mawson**	**57.33**	**184**	LR	LR	11 03 53.8	
	comp=Z,195nm,20.8s,MS4.2,baz=165,slow=33						
STKA	**Stephens Creek**	**65.94**	**249**	LR	LR	11 05 19.5	
	comp=Z,133nm,19.6s,MS4.2,baz=206,slow=30						
BDFB	**Brasilia**	**70.28**	**89**	LR	LR	11 11 27.3	
	comp=Z,130nm,18.6s,MS4.2,baz=11,slow=33						
ASAR	**Alice Springs**	**76.57**	**248**	P	**P**	**10 44 23.1**	**+0.4**
	1.9nm,1.1s,mb4.0,baz=143,slow=5.7,SNR=10						
WRA	**Warramunga Arr**	**79.36**	**251**	P	**P**	**10 44 38.0**	**-0.3**
	2.8nm,1.1s,mb4.1,baz=150,slow=5.7,SNR=9.8						
WRA				LR	LR	11 16 07.6	
	comp=Z,80nm,18.5s,MS4.1,baz=145,slow=33						
WRAB	**Tennant Creek**	**79.36**	**251**	eP	**P**	**10 44 38.4**	**+0.1**
	6.5nm,1.1s,mb4.5						
TXAR	**Lajitas Array**	**86.31**	**19**	P	**P**	**10 45 13.7**	**-0.2**
	0.3nm,0.9s,mb3.5,baz=169,slow=6.4,SNR=2.9						
PDAR	**Pinedale Array**	**98.57**	**12**	LR	LR	11 22 18.9	
	comp=Z,89nm,18.1s,MS4.3,baz=356,slow=30						
SONM	**Songino Array**	**147.44**	**279**	PKPbc	PKPbc	10 52 16.7	+1.5
	1.4nm,1.0s,baz=138,slow=3.2,SNR=5.1						

IDC 18 10:50:21.7±33.0, **2538S**×**17998W**, **h619**km±323km, **mb2.7**/3, **mb1 2.9**/3, **mb1mx2.7**/15, **mbtmp2.7**/3, **Error ellipse: s-maj=280.1km s-min=121.9km az=110.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.53**	**273**	P	P	10 55 56.2	+0.6
	1.6nm,0.4s,baz=111,slow=9.1,SNR=4.0						
ASAR	**Alice Springs**	**41.83**	**262**	P	P	10 57 19.1	-0.5
	0.4nm,0.5s,baz=89,slow=7.0,SNR=17						
WRA	**Warramunga Arr**	**42.34**	**268**	P	P	10 57 23.7	0.0
	0.5nm,0.5s,baz=104,slow=7.8,SNR=8.1						
NB2	**NORSAR Subarra**	**143.54**	**351**	PKP	PKPdf	11 08 43.8	-2.8
	comp=Z,0.8nm,0.6s,baz=9.3,slow=3.3						
NOA	**NORSAR Array B**	**143.54**	**351**	PKP	PKPdf	11 08 44.2	-2.4
	comp=Z,1.1nm,0.7s,baz=13,slow=2.4,SNR=4.6						
AKASG	**Malin Array Be**	**146.21**	**326**	PKPbc	PKPbc	11 08 54.0	+0.2
	comp=Z,0.5nm,0.5s,baz=46,slow=4.0,SNR=3.3						

MOS 18 10:55:54.2±1.4, **4313N**×**4847E**, **h33**km, **mb3.8**/1, **2D, Error ellipse: s-maj=30.7km s-min=15.5km az=51.8, Caspian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNSR	**Manas**	**0.69**	**232**	PG	Pn	10 56 10.0	+2.3
MNSR				eS	Sb	10 56 13.2	-4.0
KRNR	**Karanay**	**1.18**	**256**	⇓iPG	Pn	10 56 14.0	-0.4
KRNR				pmax	pmax		
	comp=Z,29nm,0.2s						
DBC	**Dubki**	**1.20**	**265**	ePG	Pn	10 56 15.0	+0.3
DBC				eS	Sn	10 56 30.0	+0.2
UNCR	**Uncukul**	**1.29**	**252**	ePG	Pn	10 56 14.8	-1.1
UNCR				pmax	pmax		
	comp=Z,26nm,0.3s						
KMKR	**Kumukh**	**1.42**	**226**	⇓iPG	Pn	10 56 19.0	+1.4
KMKR				pmax	pmax		
	comp=Z,418nm,0.2s						
KSMR	**Kasumkent**	**1.55**	**189**	iPG	Pn	10 56 20.0	+0.6
KSMR				pmax	pmax		
	comp=Z,107nm,0.2s						
AKT	**Akhty**	**1.74**	**199**	iPN	Pn	10 56 21.0	-1.0
AKT				pmax	pmax		
	comp=Z,73nm,0.2s						

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*KISR **18** 11:35:07.1, 2741N×5594E, h2km, ML3.7*
*ISCJB **18** 11:35:08.9±0.5, 2687N±004×5591E±005, h10km, Error ellipse: s-maj=6.2km s-min=5.4km az=159.4*
*CSEM **18** 11:35:08.9±0.1, 2696N×5586E, h2km, ML3.1, Error ellipse: s-maj=2.9km s-min=2.5km az=161.0*
*THR **18** 11:35:15.7±0.4, 2733N×56.12E, h22km±2km, ML3.1*
ISC 18 11:35:10.6±0.6, **2686N**±004×**5599E**±005, **h10**km, **n19**, σ0s**96**/27, **Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.56**	**17**	ePg	**Pg**	**11 35 19.9**	**-1.5**
BNDS				AML	AML	11 35 34.1	
	comp=E,3μm,0.3s						
BANOM	**Banah**	**0.97**	**163**	P	**Pg**	**11 35 25.6**	**-3.7**
	SNR=494						
NAZ	**Nazwa, Dubai**	**1.89**	**189**	P	**Pn**	**11 35 43.8**	**+0.9**
HATD	**Hatta, Dubai**	**2.03**	**176**	P	**Pn**	**11 35 42.5**	**-2.3**
	SNR=31						
FAQ	**Al Faqa, Dubai**	**2.14**	**190**	P	**Pn**	**11 35 46.3**	**0.0**
	SNR=21						
ASUD	**Al Ashush, Dub**	**2.30**	**195**	P	**Pn**	**11 35 49.5**	**+0.9**
GHIR	**Ghir-Karzin**	**3.02**	**299**	ePn	**Pg**	**11 36 03.5**	**-5.0**
GHIR				AML	AML	11 37 08.7	
	comp=N,77nm,0.6s						
GHIR				AML	AML	11 37 15.6	
	comp=E,68nm,0.5s						
KRBR	**Kerman**	**3.18**	**12**	ePn	**Pn**	**11 36 00.2**	**-0.4**
KRBR				eSg	**Sn**	**11 36 38.6**	**-0.1**
KRBR				AML	AML	11 36 50.9	
	comp=E,71nm,0.5s						
KRBR				AML	AML	11 36 55.6	
	comp=N,65nm,0.6s						
KRBR	**Kerman**	**3.18**	**12**	ePn	**Pn**	**11 36 00.2**	**-0.5**
	SNR=54						
KRBR				eSg	**Sn**	**11 36 38.6**	**-0.1**
	SNR=91						
ZHSF	**Zahedan**	**5.03**	**56**	ePn	**Pn**	**11 36 27.7**	**+1.6**
NASN	**Na'in**	**6.53**	**336**	ePn	**Pn**	**11 36 48.1**	**+1.4**
RDF	**Al-Radifah**	**7.75**	**287**	eP	**Pn**	**11 37 03.7**	**+0.3**
RDF				eS	**Sn**	**11 38 31.4**	**+0.2**
	comp=N,13nm,0.4s						
RDF	**Al-Radifah**	**7.75**	**287**	eP	**Pn**	**11 37 03.7**	**+0.3**
	baz=283						
RDF				eS	**Sn**	**11 38 31.4**	**+0.2**
	baz=283						
RDF				AML	AML	11 38 34.6	
	comp=Z,13nm,0.4s,baz=283						
UMR	**Umm Al-Rimmam**	**7.78**	**292**	eP	**Pn**	**11 37 03.5**	**-0.3**
UMR				eS	**Sn**	**11 38 30.9**	**-1.0**
	comp=Z,13nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.78**	**292**	eP	**Pn**	**11 37 03.5**	**-0.3**
	baz=288						
UMR				eS	**Sn**	**11 38 30.9**	**-1.0**
	baz=288						
UMR				AML	AML	11 38 33.2	
	comp=Z,13nm,0.3s,baz=288						
NAY	**Al-Naaiem**	**8.09**	**289**	eP	**Pn**	**11 37 08.6**	**+0.5**
NAY				eS	**Sn**	**11 38 39.7**	**+0.1**
NAY	**Al-Naaiem**	**8.09**	**289**	eP	**Pn**	**11 37 08.6**	**+0.5**
	baz=285						
NAY				eS	**Sn**	**11 38 39.7**	**+0.1**
	baz=285						
NAY				AML	AML	11 38 45.5	
	comp=Z,5.0nm,0.5s,baz=285						
MIB	**Mutribah**	**8.17**	**293**	eP	**Pn**	**11 37 09.2**	**0.0**
WHFO	**Wadi Hawf**	**9.13**	**193**	P	**Pn**	**11 37 22.1**	**-0.4**
	SNR=5.9						

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*ISCJB **18** 11:41:35.7±0.9, 529S±0.1×219E±03, h10km, mb4.1/6, MS3.6/7, Error ellipse: s-maj=26.4km s-min=17.5km az=23.8*
*IDC **18** 11:41:35.4±0.8, 5296S×2201E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/15, mbtmp4.1/5, MS3.6/7, Ms1 3.6/7, ms1mx3.4/20, Error ellipse: s-maj=50.1km s-min=25.4km az=61.0*
*NEIC **18** 11:41:36.2±0.7, 5288S×2186E, h10km, mb4.6/1, Error ellipse: s-maj=30.0km s-min=20.1km az=86.0*
ISC 18 11:41:37.5±1.0, **529S**±01×**221E**±03, **h10**km, **n23**, σ0s**70**/11, **mb4.1**/6, **MS3.6**/7, **1C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**18.09**	**160**	⇑eP	**Pn**	**11 45 45.0**	**-3.5**
SYO	**Syowa Base**	**18.09**	**160**	⇓eP	**Pn**	**11 45 51.2**	**+2.7**
SNAA	**Sanae**	**21.75**	**201**	eP	**P**	**11 46 27.8**	**-0.8**
	26nm,1.1s,mb4.6						
VNA2	**Neumayer--Watz**	**22.33**	**205**	e	**P**	**11 46 35.3**	**+0.5**
VNA2				e		11 46 38.0	
VNA2				e		11 46 40.6	
VNA2				e		11 46 45.0	
VNA1	**Neumayer--Stat**	**22.39**	**206**	e	**P**	**11 46 35.8**	**+0.3**
VNA1				e		11 46 38.7	
VNA1				e		11 46 42.2	
VNA3	**Neumayer Olymp**	**23.11**	**206**	e	**P**	**11 46 42.9**	**-0.2**
VNA3				e		11 46 45.4	
VNA3				e		11 46 48.0	
VNA3				e		11 46 51.9	
MAW	**Mawson**	**24.37**	**143**	LR	LR	11 54 26.7	
	comp=Z,62nm,18.6s,MS3.1,baz=58,slow=32						
BOSA	**Boshof**	**24.42**	**7**	LR	LR	11 55 08.8	
	comp=Z,154nm,18.3s,MS3.5,baz=171,slow=33						
QSPA	**South Pole Qui**	**37.28**	**180**	P	**P**	**11 48 49.0**	**+0.1**
	2.6nm,0.6s,mb4.2,baz=232,slow=3.3,SNR=12						
VNDA	**Vanda**	**47.43**	**169**	LR	LR	12 08 13.0	
	comp=Z,78nm,20.2s,MS3.7,baz=184,slow=34						
PLCA	**Paso Flores**	**60.25**	**241**	LR	LR	12 12 40.1	
	comp=Z,55nm,18.4s,MS3.7,baz=142,slow=31						
CPUP	**Villa Florida**	**63.20**	**261**	LR	LR	12 15 27.2	
	comp=Z,41nm,18.5s,MS3.6,baz=293,slow=32						
DBIC	**Dimbokro**	**63.64**	**330**	LR	LR	12 12 33.6	
	comp=Z,46nm,20.1s,MS3.7,baz=98,slow=29						
TORD	**Torodi Ar. Bea**	**68.12**	**339**	P	**P**	**11 52 37.6**	**+0.2**
	1.2nm,1.1s,mb3.8,baz=175,slow=7.6,SNR=6.1						
STKA	**Stephens Creek**	**80.51**	**131**	P	**P**	**11 53 49.9**	**+0.2**
	1.7nm,0.8s,mb4.0,baz=225,slow=2.9,SNR=3.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	83.59	121	P	P	11 54 05.7	-0.2
	0.7nm,0.9s,mb3.8,baz=212,slow=4.1,SNR=5.2						
WRA	Warramunga Arr	86.88	119	P	P	11 54 22.0	-0.4
	1.3nm,1.2s,mb4.0,baz=206,slow=3.6,SNR=4.2						
CMAR	Chiang Mai Arr	96.88	69	LR	LR	12 32 20.2	
	comp=Z,16nm,18.5s,MS3.5,baz=190,slow=31						
TIXI	Tiksi	144.13	31	eP	PKPdf	12 01 09.7	-2.0
PDAR	Pinedale Array	146.59	272	PKPbc	PKPbc	12 01 17.8	-0.6
	0.8nm,0.9s,baz=116,slow=6.1,SNR=4.3						
NVAR	Mina Array Bea	149.20	258	PKPbc	PKPbc	12 01 23.3	-2.2
	0.5nm,0.5s,baz=98,slow=1.8,SNR=3.9						
YKA	Yellowknife Ar	155.44	310	PKP	PKPdf	12 01 26.2	-3.4
	0.2nm,0.9s,baz=76,slow=2.1,SNR=4.4						
YKA				PKPbc	PKPdf	12 01 38.0	+8.4
	0.3nm,0.8s,baz=77,slow=2.2,SNR=4.6						
YKA				PKPab	PKPab	12 01 55.3	-0.1
	1.0nm,0.8s,baz=92,slow=4.8,SNR=18						
YKA	Yellowknife Ar	155.44	310	PKP	PKPdf	12 01 26.2	-3.4
YKA				PKPbc	PKPdf	12 01 38.0	+8.4
YKA				PKPab	PKPab	12 01 55.4	-0.1

*CSEM **18** 11:49:42.4, 36.38N×6.40E, h0km, ML3.7, After ALG*

CRAAG 18 11:49:42.4, 36.38N×6.40E, Ml3.7, Northern Algeria

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CASM	Ain Smara	0.14	150	P	Pg	11 49 46.0	+0.9
CKFL	Kef-Lekhel	0.26	86	P	Pg	11 49 56.0	+8.7
CTEI	Djebel Teioual	0.32	180	P	Pg	11 49 52.0	+3.5
DFRA	Djebel Bou Aff	0.46	291	P	Pg	11 49 51.0	-0.1
CAEH	'Ain El Ouahch	0.54	42	P	Pg	11 49 56.0	+3.3
SET	Setif	0.83	258	P	Pg	11 50 02.0	+3.7
CMAH	Djebel Manchou	0.85	73	P	Pg	11 50 01.0	+2.2
ABSA	Djebel Ababsia	0.87	97	P	Pg	11 50 02.0	+2.8

*ISCJB **18** 12:12:25.0±4.9, 0.2S±0.2×122.8E±0.2, h110km±49km, mb3.4/6, Error ellipse: s-maj=40.4km s-min=19.0km az=141.3*

*IDC **18** 12:12:26.0±5.5, 0.18S×122.83E, h108km±52km, mb3.3/6, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=43.3km s-min=16.1km az=54.0*

ISC 18 12:12:26.2±4.2**, 0.2S**±0.2×**122.8E**±0.2**, h108**km±43km**, n7,** σ**0.84**/8**, mb3.4**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	5.68	213	P	Pn	12 13 48.5	+0.2
	baz=41,slow=11						
KAPI				S	Sn	12 14 52.0	-0.3
	3.7nm,0.3s,baz=85,slow=18,SNR=6.4						
WRA	Warramunga Arr	22.64	151	P	P	12 17 18.5	-0.1
	0.4nm,0.5s,mb3.0,baz=333,slow=10,SNR=11						
PSI	Prapat	24.06	277	P	P	12 17 31.9	+0.1
	0.9nm,0.5s,mb3.4,baz=23,slow=15,SNR=4.2						
ASAR	Alice Springs	25.70	156	P	P	12 17 46.9	+0.4
	0.2nm,0.5s,mb2.8,baz=330,slow=8.2,SNR=9.1						
ASAR				PcP	PcP	12 21 13.4	-0.9
	0.2nm,0.5s,baz=337,slow=2.4,SNR=5.5						
CMAR	Chiang Mai Arr	29.89	310	P	P	12 18 25.1	+1.1
	1.0nm,0.7s,mb3.5,baz=127,slow=6.4,SNR=7.9						
SONM	Songino Array	49.92	346	P	P	12 21 08.7	-0.2
	0.2nm,0.3s,mb3.5,baz=161,slow=9.2,SNR=3.1						
MKAR	Makanchi Array	58.68	328	P	P	12 22 11.3	-1.1
	1.2nm,0.3s,mb4.4,baz=129,slow=8.6,SNR=47						

*HLW **18** 12:26:11.6, 29.74N×37.24E, h7km, Mb2.8*

*CSEM **18** 12:26:15.9±1.6, 29.86N×36.75E, h6km, ML2.8, Error ellipse: s-maj=42.5km s-min=4.3km az=121.0*

*SGS **18** 12:26:16.4, 30.34N×36.33E, h6km*

*ISCJB **18** 12:26:20.7±0.7, 29.87N±0.03×36.22E±0.05, h0km, Error ellipse: s-maj=6.1km s-min=4.1km az=164.3*

*GII **18** 12:26:20.9±0.9, 29.89N×36.13E, h0km, ML2.1/4, EXPLOSION*

ISC 18 12:26:21.0±0.7**, 29.86N**±0.03×**36.25E**±0.05**, h0**km**, n24,** σ**1.03**/33**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.05	263	Pg	Pg	12 26 40.8	-0.4
HRFI	Mount Harif	1.07	280	Pg	Pg	12 26 40.5	-1.0
HRFI				Sg	Sg	12 26 55.8	+0.5
EIL	Elat	1.15	261	Pg	Pg	12 26 42.4	-0.6
EIL				Sg	Sg	12 26 59.2	+1.3
ZFRI	Zfri	1.16	307	Pg	Pg	12 26 41.8	-1.4
ZFRI				Sg	Sg	12 26 58.8	+0.6
MBRI	Mt Berech	1.17	267	Pg	Pg	12 26 42.4	-0.9
PRNI	Paran	1.19	295	Pg	Pg	12 26 42.5	-1.3
JLOS		1.30	211	P	Pg	12 26 45.2	-0.8
KRMI	Paran Flat	1.35	281	Pg	Pg	12 26 45.7	-1.2
KRMI				Sg	Sg	12 27 04.5	+0.2
MZDA	Masada	1.64	332	Pn	Pn	12 26 50.5	-0.5
MZDA				Sn	Sn	12 27 13.4	+0.7
TBKS	Tabuk	1.66	171	S	Sn	12 27 15.7	+2.5
TBKS	Tabuk	1.66	171	P	Pn	12 26 50.4	-0.8
BDAS	Al Bad'	1.75	216	S	Sn	12 27 17.4	+1.9
BDAS	Al Bad'	1.75	216	P	Pn	12 26 51.2	-1.3
YTIR	Yattir	1.79	327	Pn	Pn	12 26 52.5	-0.6
DSI	Dead Sea	1.86	336	Pn	Pn	12 26 54.0	0.0
DSI				Sn	Sn	12 27 19.8	+1.5
KZIT	Kziot	1.91	303	Pn	Pn	12 26 55.1	+0.3
KZIT				Sn	Sn	12 27 19.3	-0.2
HNKL	Nakhl	1.98	273	P	Pn	12 26 56.7	+1.0
HNKL	Nakhl	1.98	273	P	Pn	12 26 56.7	+1.1
	209nm,0.2s						
HKAT	Jabal Katrina	2.38	237	P	Pn	12 27 00.4	-0.9
HKAT				S	Sn	12 27 36.0	+4.8
HMDT	Nahal Hemdat	2.46	346	Pn	Pn	12 27 03.2	+0.9
TR2		2.66	237	P	Pn	12 27 04.0	-1.0
TR2				S	Sn	12 27 42.4	+4.5
AMAG	Maghara	2.75	287	P	Pn	12 27 07.5	+1.2
AMAG	Maghara	2.75	287	P	Pn	12 27 07.4	+1.1
SUZ		2.97	270	P	Pn	12 27 10.7	+1.3

*IDC **18** 12:26:34.0±2.8, 30.65N×69.16E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/25, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=95.1km s-min=31.4km az=78.0*

*NEIC **18** 12:26:34.0±2.8, 30.37N×69.94E, h10km, Error ellipse: s-maj=47.1km s-min=11.7km az=45.0*

ISC 18 12:26:33.9±2.7**, 30.4N**±0.2×**69.9E**±0.3**, h10**km**, n12,** σ**0.92**/12**, mb3.4**/4**, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	12.13	14	eP	Pn	12 29 25.6	-1.1
	3.7nm,0.4s						
DANN	Dangsing	12.25	96	eP	Pn	12 29 29.3	+0.8
	13nm,0.7s						
KOLN	Koldanda	12.26	99	eP	Pn	12 29 29.4	+0.9
	8.4nm,0.7s						
GKN	Gorkha	13.09	97	eP	Pn	12 29 39.5	-0.4
	7.1nm,0.4s						
GUN	Gumba	14.18	96	eP	Pn	12 29 53.3	-1.5
	16nm,0.4s						
JIRN	Jiri	14.50	97	eP	Pn	12 29 59.0	-0.2
MKAR	Makanchi Array	19.01	27	P	Pn	12 30 57.0	+0.6
	0.0nm,0.3s,baz=220,slow=10,SNR=3.1						
BVAR	Borovoye Array	22.64	1	P	P	12 31 34.6	-0.4
	0.7nm,0.6s,mb3.3,baz=163,slow=12,SNR=3.6						
ZALV	Zalesovo Beam	25.92	20	P	P	12 32 07.8	+1.8
	0.6nm,0.5s,mb3.4,baz=212,slow=10,SNR=4.4						
WRA	Warramunga Arr	79.61	120	P	P	12 38 47.6	+5.9
	0.4nm,1.0s,mb3.3,baz=316,slow=5.8,SNR=2.9						
YKA	Yellowknife Ar	87.40	2	P	P	12 39 20.6	-0.4
	0.1nm,0.4s,mb3.4,baz=349,slow=5.0,SNR=4.4						
YKA	Yellowknife Ar	87.40	2	P	P	12 39 20.6	-0.4

IDC 18 12:32:27.4±57.0**, 16.72S**×**175.52W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/17**, mbtmp3.8**/3**, Error ellipse: s-maj=1072.0km s-min=184.5km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.61	241	P	P	12 40 17.8	+0.4
	1.1nm,0.8s,baz=81,slow=12,SNR=3.7						
WRA	Warramunga Arr	47.57	258	P	P	12 41 05.0	-0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=4.8						
ASAR	Alice Springs	47.77	253	P	P	12 41 06.3	-0.3
	1.0nm,0.4s,baz=88,slow=8.4,SNR=17						

*IDC **18** 12:39:28.8±1.7, 32.54S×72.19W, h0km, mb4.0/2, mb1 3.8/6, mb1mx3.7/17, mbtmp3.7/6, ML3.9/4, Error ellipse: s-maj=45.0km s-min=30.7km az=131.0*

*ISCJB **18** 12:39:30.0±1.2, 32.6S±0.1×72.4W±0.1, h33km, mb3.7/2, Error ellipse: s-maj=19.9km s-min=10.5km az=40.6*

*NEIC **18** 12:39:32.6±6.6, 32.60S×72.11W, h25km±44km, Error ellipse: s-maj=39.1km s-min=12.7km az=113.0*

ISC 18 12:39:32.1±1.2**, 32.5S**±0.1×**72.4W**±0.1**, h35**km**, n13,** σ**0.97**/11**, mb3.7**/2**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	3.62	77	Pn	Pn	12 40 24.8	-0.9
	1.6nm,0.3s,baz=243,slow=10.0,SNR=42						
CFAA				Sn	Sn	12 41 08.5	+1.2
	2.2nm,0.3s,baz=89,slow=17,SNR=4.3						
PLCA	Paso Flores	8.33	170	Pn	Pn	12 41 30.1	-0.3
	0.6nm,0.3s,baz=333,slow=10,SNR=19						
TRQA	Tornquist	10.13	126	eP	Pn	12 41 53.1	-2.0
CPUP	Villa Florida	14.48	69	Pn	Pn	12 42 54.6	+0.2
	0.4nm,0.3s,baz=124,slow=3.0,SNR=3.1						
CPUP	Villa Florida	14.48	69	P	Pn	12 42 54.5	0.0
	4.0nm,0.4s						
SIV	San Ignacio	19.38	35	P	Pn	12 43 55.4	-0.9
	0.1nm,0.3s,baz=209,slow=13,SNR=3.4						
BDFB	Brasilia	27.76	59	P	P	12 45 17.4	-0.3
	2.1nm,0.8s,mb3.8,baz=128,slow=23,SNR=3.2						
VNA3	Neumayer Olymp	50.84	158	e	P	12 48 29.7	+0.9
VNA3				e		12 48 34.9	
VNA3				e	pP	12 48 42.0	+2.7
VNA2	Neumayer--Watz	51.49	158	e	P	12 48 34.6	+0.9
	baz=289,slow=9.3						
VNA2				e		12 48 40.2	
VNA2				e	pP	12 48 47.5	+3.3
TORD	Torodi Ar. Bea	83.97	70	P	P	12 52 00.0	+1.0
	0.4nm,0.8s,mb3.6,baz=234,slow=0.9,SNR=5.1						
ZALV	Zalesovo Beam	153.10	30	PKPbc	PKPbc	12 59 28.4	+3.0
	1.4nm,0.6s,baz=298,slow=3.2,SNR=7.0						
ZALV	Zalesovo Beam	153.10	30	PKPbc	PKPbc	12 59 28.4	+3.0
MKAR	Makanchi Array	155.97	46	PKPab	PKPab	12 59 51.4	+1.9
	0.3nm,0.5s,baz=291,slow=3.5,SNR=5.3						

*MOS **18** 12:41:09.3±1.2, 11.41N×87.69W, h33km, mb5.1/17, Error ellipse: s-maj=17.0km s-min=6.0km az=113.9*

*IDC **18** 12:41:09.3±0.7, 11.38N×87.68W, h23km±4km, mb4.3/23, mb1 4.5/25, mb1mx4.4/29, mbtmp4.3/25, ML4.0/2, MS3.9/18, Ms1 3.9/18, ms1mx3.8/26, Error ellipse: s-maj=18.6km s-min=9.7km az=56.0*

*CASC **18** 12:41:10.1±1.5, 11.30N×87.98W, h34km±8km, MD4.5, ML4.3, mb5.0(NEIC)*

*ISCJB **18** 12:41:11.5±0.5, 11.35N±0.03×87.81W±0.03, h52km±4km, mb4.8/67, MS4.2/24, Error ellipse: s-maj=6.4km s-min=3.3km az=44.5*

*GCMT **18** 12:41:12.4±0.3, 11.19N×88.12W, h12km, MW4.9/57, Moment Tensor Solution. s41,c48; s57,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.34±.14; $M_{\theta\theta}$3.25±.10; $M_{\phi\phi}$-0.91±.18; $M_{r\theta}$-0.79±.31; $M_{\theta\phi}$-1.07±.10; $M_{\phi r}$0.24±.44; Best double couple: $M_0$3.03900×10^{16} NP1:ϕ_s281.00000°, δ37.00000°, λ-93.00000°. NP2: ϕ_s106.00000°, δ53.00000°, λ-87.00000°. Principal axes: T 3.6220, Plg8.0000°, Azm194.0000°; N -1.1670, Plg2.0000°, Azm284.0000°; P -2.4550, Plg82.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 12:41:12.4±0.7, 11.36N×87.74W, h50km±6km, mb5.0/44 Error ellipse: s-maj=7.4km s-min=4.7km az=47.0*

*BJI **18** 12:41:12.4, 11.40N×87.70W, h50km, mB5.4, Ms5.4, Msz5.0*

ISC 18 12:41:13.3±0.4**, 11.41N**±0.03×**87.75W**±0.03**, h49**km±4km**, h29**km±2.1km**: pP-P, n535,** σ**0.79**/497**, mb4.8**/67**, MS4.2**/24**, 167C-177D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.37	56	⇓eP	Pn	12 41 35.9	-0.1
MIRN	Miramar	1.44	45	⇓eP	Pn	12 41 36.8	-0.2
CRIN	San Cristobal	1.45	28	⇑eP	Pn	12 41 36.8	-0.4
TEL3	Telica 3	1.45	37	⇑eP	Pn	12 41 36.8	-0.4
CNGN	Cerro Negro	1.49	43	eP	Pn	12 41 37.2	-0.5
CNGN				⇑eP		12 41 37.4	
CNGN				eS	Sn	12 41 59.9	+3.8
CSAN		1.51	59	⇓eP	Pn	12 41 37.9	-0.1
MOMN	Momotombo	1.54	50	⇑eP	Pn	12 41 38.4	0.0
XAVN	Gruta Xavier	1.57	62	⇓eP	Pn	12 41 38.9	+0.1
APYN	Apoyeque	1.59	59	eP	Pn	12 41 39.0	-0.1
APYN				AML	AML	12 42 22.3	
	comp=Z,3μm,0.3s						
TICN	Ticuantepe	1.61	67	⇑eP	Pn	12 41 40.0	+0.7
TISN	Laguna Tiscapa	1.62	63	⇑eP	Pn	12 41 39.5	+0.1
MGAN	Managua	1.64	63	⇓eP	Pn	12 41 39.8	0.0
MGAN				⇓eP		12 41 40.3	
WILN	Americas 2	1.70	64	⇓eP	Pn	12 41 40.5	0.0
WILN				eS	Sn	12 42 05.4	+4.2
APON	Apoyo	1.72	73	⇓eP	Pn	12 41 41.4	+0.5
HUEN		1.80	59	⇑eP	Pn	12 41 41.9	0.0
HUEN				eS	Sn	12 42 08.0	+4.5
CNCH	Conchagua	1.85	357	⇓eP	x	12 41 41.4	
CNCH				AML	x	12 42 11.6	
	comp=Z,5μm,0.6s						
SSN	San Juan del S	1.86	93	⇓eP	Pn	12 41 42.4	-0.3
VSM	San Miguel	2.07	346	⇑eP	x	12 41 43.6	
BLLM	Bellamira	2.07	347	eP	x	12 41 43.5	
CONN	Concepcion	2.09	86	⇓eP	Pn	12 41 46.1	+0.2
CAHU	Cacacuatique	2.39	349	⇑eP	x	12 41 48.5	
CAHU				eS	x	12 42 18.8	
SNVI	San Vicente	2.43	334	⇓eP	x	12 41 47.9	
VCR	Vista de Mar	2.44	121	⇓eP	Pn	12 41 48.5	-2.3
LIM1	Limonal	2.55	106	⇑eP	Pn	12 41 52.6	+0.3
2RIO	Dos Rios de Up	2.62	109	eP	Pn	12 41 51.1	-2.1
LBRS	Las Brisas	2.64	331	eP	x	12 41 50.4	
LBRS				eS	x	12 42 22.6	
CUI	Cuipilapa	2.65	106	eP	Pn	12 41 52.8	-0.8
TGUH	Tegucigalpa,Un	2.67	10	⇑eP	Pn	12 41 53.2	-0.6
TGUH				eS	Sn	12 42 26.1	+1.1
TGUH	Tegucigalpa,Un	2.67	10	ePn	Pn	12 41 53.3	-0.6
LFU	La Fuente	2.68	330	eP	x	12 41 51.4	
BOQS	Boqueron	2.75	327	⇑eP	x	12 41 52.0	
BOQS				eS	x	12 42 24.4	
JCR	Jicaral	3.02	121	⇓eP	Pn	12 41 57.7	-0.9
JCR				eS	Sn	12 42 35.1	+1.4
SBLS	San Blas	3.03	323	eP	x	12 41 55.6	
SNJE	San Jose	3.04	324	eP	x	12 41 56.0	
RTR	El Retiro	3.09	323	eP	x	12 41 56.7	
FORC	Fortuna	3.17	107	⇑eP	Pn	12 42 00.3	-0.3
FORC				eS	Sn	12 42 41.0	+3.8
CGA2	Cerro Gallo 2	3.51	113	eP	Pn	12 42 05.4	0.0
CGA2				eS	Sn	12 42 46.2	+0.5
PRS1	Puriscal	3.66	112	⇓eP	Pn	12 42 07.7	+0.2
LAJ	Bijagual	3.88	113	⇓eP	Pn	12 42 05.3	-5.2
SJS	Escuela Geolog	3.91	112	⇓eP	Pn	12 42 11.6	+0.7
QCR	Quepos	4.04	119	⇑eP	Pn	12 42 12.0	-0.7
QCR				eS	Sn	12 43 00.4	+1.7
URSC	Urasca	4.21	112	⇑eP	Pn	12 42 16.3	+1.3
BUS	Buena Vista	4.34	115	⇑iP	Pn	12 42 17.6	+0.8
BAR1		4.87	116	⇓eP	Pn	12 42 24.2	+0.1
BAR1				eS	Sn	12 43 21.3	+2.1
ACR	Cerro Adams	5.28	121	⇑eP	Pn	12 42 29.9	+0.2
ACR				eS	Sn	12 43 30.6	+1.3
CCIG	Comitan	6.45	319	iP	Pn	12 42 45.1	-0.7
BCIP	Isla Barro Col	8.10	105	ePn	Pn	12 43 08.7	+0.3
TEIG	Tepich	8.78	357	eP	Pn	12 43 19.5	+1.8
TEIG	Tepich	8.78	357	ePn	Pn	12 43 18.9	+1.3
CMIG	Matias Romero	8.93	310	Pn	Pn	12 43 16.8	-3.0
	comp=Z,4.7nm,0.3s,baz=129,slow=11,SNR=49						
CMIG				Sn	Sn	12 44 50.9	-8.1
	comp=Z,0.7nm,0.3s,baz=108,slow=20,SNR=2.7						
CMIG	Matias Romero	8.93	310	iP	Pn	12 43 16.1	-3.7
HUIG	Huatulco	9.21	299	eP	Pn	12 43 19.3	-4.3
VHO	Vista Hermosa	10.37	304	eP	Pn	12 43 36.1	-3.4
PNIG	Pinotepa	11.22	297	iP	Pn	12 43 47.9	-3.3
PAYG	Puerto Ayora	12.27	192	ePn	Pn	12 44 04.5	-1.0
	comp=Z,82nm,1.1s						
PPM	Popocatepetl	12.96	307	iP	Pn	12 44 15.1	+0.2
PLIG	Platanillo	13.31	303	eP	Pn	12 44 16.9	-2.7
IIO	Organos	13.34	309	iP	Pn	12 44 18.8	-1.2
CAIG	El Cayaco	13.36	296	eP	Pn	12 44 16.2	-4.2
ZIIG	Zihuatanejo	14.63	296	iP	Pn	12 44 35.6	-1.9
MOIG	Morelia	15.33	304	iP	Pn	12 44 47.0	+0.4
CHI2		15.41	115	⇑eP	x	12 41 35.9	
LAPE	La Pedrera	16.40	102	⇓eP	x	12 41 48.7	
SDV	Santo Domingo	17.03	97	Pn	Pn	12 45 06.2	-2.0
	comp=Z,0.2nm,0.3s,baz=257,slow=18,SNR=2.4						
SDV	Santo Domingo	17.03	97	Pn	Pn	12 45 06.2	-2.0
SDV				ePn	Pn	12 45 10.5	+2.3
ZAIG	Zacatecas	18.10	311	iP	Pn	12 45 20.3	-0.9
HKT	Hockley	19.92	339	eP	Pn	12 45 40.6	-2.4
HKT				pmax	pmax		
	comp=Z,156nm,1.7s						
HKT	Hockley	19.92	339	eP	Pn	12 45 40.6	-2.4
	comp=Z,156nm,1.7s						
ATAH	Atahualpa	20.52	153	P	P	12 45 48.2	+0.6
	comp=Z,4.1nm,0.6s,baz=308,slow=18,SNR=3.3						
ATAH				LR	LR	12 52 49.7	
	comp=Z,556nm,20.3s,MS3.9,baz=94,slow=34						
VBMS	Vicksburg	20.86	353	ePn	P	12 45 52.8	+1.6
	comp=Z,89nm,0.9s						
NATX	Nacogdoches	21.23	344	eP	P	12 45 55.2	+0.1
	comp=Z,111nm,1.1s,mb5.1						
CELP	Cerrillos	21.50	70	eP	P	12 46 00.9	+2.7
LRAL	Lakeview Retre	21.53	2	eP	P	12 45 59.4	+1.0
	comp=Z,34nm,0.9s,mb4.8						
JCT	Junction City	22.03	331	eP	P	12 46 01.8	-1.9
JCT				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.8						
JCT	Junction City	22.03	331	eP	P	12 46 01.8	-1.9
	comp=Z,31nm,0.8s,mb4.8						
GOGA	Godfrey	22.25	9	eP	P	12 46 06.3	+0.3
GOGA				pmax	pmax		
	comp=Z,34nm,0.7s,mb4.9						
GOGA	Godfrey	22.25	9	eP	P	12 46 06.2	+0.3
	comp=Z,34nm,0.7s,mb4.9						
NHSC	New Hope	22.68	17	eP	P	12 46 12.7	+2.1
	comp=Z,101nm,1.0s,mb5.2						
PCRV	Puerto La Cruz	22.74	91	P	P	12 46 10.8	-0.6
	comp=Z,17nm,0.7s,mb4.6,baz=265,slow=3.4,SNR=4.3						
OXF	Oxford	23.05	356	eP	P	12 46 13.3	-1.1
OXF				pmax	pmax		
	comp=Z,132nm,1.3s,mb5.2						
OXF	Oxford	23.05	356	eP	P	12 46 13.2	-1.2
	comp=Z,132nm,1.3s,mb5.2						
TXAR	Lajitas Array	23.20	323	P	P	12 46 14.4	-1.8
	comp=Z,11nm,0.8s,mb4.3,baz=138,slow=8.7,SNR=113						
TXAR				PcP	PcP	12 50 03.3	+0.4
	comp=Z,2.1nm,1.0s,baz=158,slow=3.6,SNR=4.5						
TXAR				S	S	12 50 24.2	0.0
	comp=Z,1.0nm,0.9s,baz=154,slow=11,SNR=4.1						
TXAR				LR	LR	12 56 40.1	
	comp=Z,120nm,19.5s,MS3.4,baz=125,slow=40						
TXAR	Lajitas Array	23.20	323	P	P	12 46 14.4	-1.7
TXAR						12 50 03.3	
TXAR				S	S	12 50 24.2	0.0
TXAR	Lajitas Array	23.20	323	P	P	12 46 14.4	-1.7
TXAR				PcP	PcP	12 50 03.3	+0.4
TXAR				S	S	12 50 24.2	-0.1
TXAR				LR	LR	12 56 40.1	
UALR	University of	23.63	351	eP	P	12 46 19.8	-0.3
	comp=Z,33nm,0.8s,mb4.8						
MIAR	Mount Ida	23.63	348	eP	P	12 46 19.0	-1.1
MIAR				pmax	pmax		
	comp=Z,92nm,0.8s,mb5.3						
MIAR	Mount Ida	23.63	348	eP	P	12 46 19.0	-1.1
	comp=Z,92nm,0.8s,mb5.3						
SWET	Sewanee	23.75	4	eP	P	12 46 21.0	-0.1
CPCT	Cooper Cave	24.11	6	eP	P	12 46 24.6	+0.2
TKL	Tuckaleechee C	24.41	8	P	P	12 46 26.9	-0.2
	comp=Z,43nm,1.1s,mb4.8,baz=189,slow=10.0,SNR=17						
TKL	Tuckaleechee C	24.41	8	eP	P	12 46 26.8	-0.3
LPIG	La Paz	24.87	304	P	P	12 46 31.8	+0.4
	comp=Z,11nm,0.5s,mb4.7,baz=171,slow=10,SNR=4.3						
LPIG				LR	LR	12 56 49.5	
	comp=Z,243nm,18.5s,MS3.7,baz=218,slow=38						
WMOK	Wichita Mounta	25.30	338	eP	P	12 46 33.7	-1.6
TZTN	Tazewell	25.31	8	eP	P	12 46 35.0	-0.3
	comp=Z,44nm,1.3s,mb4.8						
AMTX	Amarillo	26.58	334	eP	P	12 46 46.1	-0.8
CCM	Cathedral Cave	26.72	354	eP	P	12 46 45.2	-2.8
WCI	Wyandotte Cave	26.74	3	eP	P	12 46 46.2	-2.0
WCI				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
WCI	Wyandotte Cave	26.74	3	eP	P	12 46 46.2	-2.0
	comp=Z,17nm,0.8s,mb4.6						
319A	Douglas	28.12	318	⇑P	P	12 47 01.3	+0.6
	baz=28,SNR=19						
219A	White Tail Can	28.51	319	⇓P	P	12 47 04.7	+0.5
	baz=28,SNR=18						
318A	Bisbee	28.63	318	⇓P	P	12 47 05.2	-0.1
	baz=29,SNR=24						
LENM	Lemitar	28.65	325	eP	P	12 47 09.3	+3.9
KSU1	Kansas State U	28.68	346	eP	P	12 47 04.0	-1.6
ANMO	Albuquerque	28.96	327	P	P	12 47 08.1	0.0
	comp=Z,1.4nm,0.8s,mb3.8,baz=164,slow=9.9,SNR=5.2						
218A	Dragoon	29.00	318	⇑P	P	12 47 09.0	+0.5
	baz=29						
119A	Ashpeak Ranch,	29.05	320	⇑P	P	12 47 09.6	+0.7
	baz=29,SNR=7.6						
CBKS	Cedar Bluff	29.31	341	eP	P	12 47 10.7	-0.5
217A	Green Valley	29.39	317	⇑P	P	12 47 12.3	+0.3
	baz=29,SNR=12						
Z18A	Geronimo	29.72	320	⇑P	P	12 47 15.9	+1.0
	baz=30						
Y19A	Nutrioso	29.83	322	⇓P	P	12 47 16.7	+0.9
	baz=30,SNR=8.6						
117A	Oracle	29.84	318	⇑P	P	12 47 16.1	+0.1
	baz=30,SNR=8.8						
216A	Three Points,	29.96	317	⇑P	P	12 47 16.9	-0.1
	baz=30,SNR=7.6						
Z17A	San Carlos Hig	30.13	320	⇓P	P	12 47 19.2	+0.7
	baz=30						
X19A	St. Johns	30.17	323	⇓P	P	12 47 19.1	+0.1
	baz=30,SNR=9.0						
Y18A	Canyon Day Jun	30.18	321	⇓P	P	12 47 19.2	+0.2
	baz=30,SNR=11						
116A	Eloy	30.46	317	⇑P	P	12 47 21.3	-0.2
	baz=30,SNR=5.6						
Y17A	Roosevelt	30.63	320	⇑P	P	12 47 23.5	+0.5
	baz=31						
X18A	Snowflake	30.64	322	⇓P	P	12 47 23.8	+0.7
	baz=31,SNR=5.6						
W19A	Sanders	30.71	324	⇑P	P	12 47 24.7	+1.0
	baz=31,SNR=6.6						
SCIA	State Center	30.75	352	eP	P	12 47 22.7	-1.2
Z16A	Peralta Trail,	30.77	319	⇓P	P	12 47 24.5	+0.3
	baz=31						
214A	Organ Pipe Nat	30.85	315	⇑P	P	12 47 24.9	0.0
	baz=31,SNR=11						
115A	Sonoran Desert	30.90	317	⇓P	P	12 47 25.4	+0.1
	baz=31,SNR=5.1						
W18A	Petrified Fore	30.92	323	⇓P	P	12 47 26.0	+0.5
	baz=31						
X17A	Forest Lakes	31.03	321	⇑P	P	12 47 27.5	+1.1
	baz=31,SNR=9.1						
Y16A	Circle Bar Ran	31.15	320	⇑P	P	12 47 28.1	+0.5
	baz=31,SNR=11						
V18A	Ganado	31.45	324	⇓P	P	12 47 30.8	+0.7
	baz=32,SNR=5.4						
W17A	Winslow	31.47	322	⇓P	P	12 47 31.3	+1.0
	baz=32						
X16A	Lo Mia Camp, P	31.48	320	⇑P	P	12 47 31.6	+1.2
	baz=32,SNR=28						
Y15A	Casa Rosa Ranc	31.74	319	⇑P	P	12 47 33.1	+0.4
	baz=32,SNR=7.3						
T19A	Beclabito	31.75	326	⇓P	P	12 47 33.2	+0.5
	baz=32						
MVCO	Mesa Verde	31.75	327	⇓P	P	12 47 32.3	-0.4
	baz=32						
MVCO	Mesa Verde	31.75	327	eP	P	12 47 33.0	+0.3
Z14A	Wintersburg	31.78	317	⇑P	P	12 47 33.5	+0.4
	baz=32,SNR=6.8						
U18A	Rough Rock, Ch	31.91	325	⇑P	P	12 47 34.4	+0.2
	baz=32						
113A	Mohawk Valley,	31.98	316	⇓P	P	12 47 34.8	0.0
	baz=32,SNR=11						
W16A	Flagstaff	31.98	321	⇓P	P	12 47 35.4	+0.6
	baz=32,SNR=15						
OGNE	Ogallala	31.99	339	eP	P	12 47 34.0	-0.9
	comp=Z,14nm,0.7s,mb4.9						
X15A	Humboldt	32.02	320	⇑P	P	12 47 35.7	+0.5
	baz=32,SNR=11						
WUAZ	Wupatki	32.16	322	⇓P	P	12 47 37.0	+0.6
	baz=32						
WUAZ	Wupatki	32.16	322	eP	P	12 47 37.0	+0.6
	comp=Z,34nm,1.0s,mb5.1						

Y14A	Wickenburg	32.17	318	⇓P	P	12 47 36.9	+0.3
	baz=32,SNR=13						
ISCO	Idaho Springs	32.41	334	*e*P	P	12 47 37.6	-0.9
ISCO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
ISCO	Idaho Springs	32.41	334	*e*P	P	12 47 37.6	-0.8
	comp=Z,11nm,1.0s,mb4.6						
112A	Yuma	32.41	315	⇓P	P	12 47 38.3	-0.3
	baz=32						
X14A	Yava	32.43	319	⇑P	P	12 47 39.4	+0.6
	baz=32,SNR=10						
T18A	Mexican Hat	32.43	326	⇓P	P	12 47 39.5	+0.8
	baz=32,SNR=8.5						
U16A	Tuba City	32.45	323	⇑P	P	12 47 39.4	+0.5
	baz=32,SNR=13						
S19A	Harvey Farm, M	32.48	327	⇓P	P	12 47 39.1	-0.1
	baz=32,SNR=7.3						
W15A	Williams	32.49	321	⇓P	P	12 47 40.2	+0.9
	baz=32,SNR=6.0						
U17A	Shonto	32.49	324	⇑P	P	12 47 40.0	+0.7
	baz=32,SNR=7.4						
Y13A	Salome	32.64	317	⇓P	P	12 47 40.8	+0.2
	baz=33,SNR=6.1						
PV04	Paradox Valley	32.85	328	*e*P	P	12 47 42.6	+0.2
V15A	Kaibab Nationa	32.85	322	⇑P	P	12 47 43.2	+0.7
	baz=33,SNR=24						
T17A	Navajo Res., N	32.85	325	⇓P	P	12 47 43.4	+1.0
	baz=33,SNR=21						
GLA	Glamis	32.87	315	⇑P	P	12 47 42.8	+0.1
	baz=33						
GLA	Glamis	32.87	315	*e*P	P	12 47 43.2	+0.5
S18A	Hurst Farm, Bl	32.90	326	⇑P	P	12 47 42.7	-0.1
	baz=33,SNR=9.5						
R19A	Curley Farm, L	32.95	328	⇓P	P	12 47 43.6	+0.3
	baz=33						
W14A	Seligman	33.02	320	⇓P	P	12 47 44.6	+0.7
	baz=33,SNR=16						
Y12C	Blythe	33.07	317	⇓P	P	12 47 44.5	+0.2
	baz=33,SNR=7.3						
ECSD	EROS,Sioux Fal	33.11	348	*e*P	P	12 47 42.6	-1.9
	comp=Z,28nm,1.2s,mb5.1						
X13A	Yucca	33.11	318	⇓P	P	12 47 44.8	+0.1
	baz=33,SNR=16						
T16A	Glen Canyon Da	33.24	324	⇑P	P	12 47 46.0	+0.2
	baz=33,SNR=6.5						
V14A	Boquillas Ranc	33.30	321	⇑P	P	12 47 47.2	+0.8
	baz=33,SNR=25						
S17A	Black Ridge (B	33.30	326	⇓P	P	12 47 47.1	+0.7
	baz=33						
U15A	North Rim	33.33	322	⇑P	P	12 47 47.2	+0.6
	baz=33,SNR=22						
R18A	Canyonlands Na	33.36	327	⇑P	P	12 47 46.8	-0.1
	baz=33,SNR=6.1						
Q19A	Hogan Spring (	33.46	329	⇑P	P	12 47 47.4	-0.3
	baz=34,SNR=5.9						
W13A	Hualapai Mount	33.46	319	⇓P	P	12 47 48.1	+0.4
	baz=34,SNR=37						
SWSC	Sam W. Stewart	33.48	314	⇓P	P	12 47 48.1	+0.1
	baz=34						
O21A	Pagoda	33.57	332	⇑P	P	12 47 49.3	+0.6
	baz=34						
N22A	Wattenberg Ran	33.59	334	⇓P	P	12 47 49.2	+0.3
	baz=34,SNR=11						
BC3	Big Chuckw Mtn	33.64	316	⇓P	P	12 47 49.6	+0.2
	baz=34						
IRM	Iron Mountain	33.73	317	⇑P	P	12 47 50.3	+0.2
	baz=34						
T15A	Red Dirt Ranch	33.78	323	⇓P	P	12 47 50.8	+0.3
	baz=34,SNR=14						
S16A	Weppner Ranch,	33.81	325	⇓P	P	12 47 51.0	+0.2
	baz=34,SNR=17						
R17A	Hanksville Air	33.82	327	⇓P	P	12 47 51.0	+0.2
	baz=34,SNR=9.3						
U14A	Mt Trumbull	33.86	322	⇓P	P	12 47 51.9	+0.7
	baz=34,SNR=24						
O20A	White River Ci	33.87	331	⇓P	P	12 47 51.4	+0.2
	baz=34,SNR=6.6						
MONP	Monument Peak	33.90	314	⇑P	P	12 47 51.8	+0.2
	baz=34						
V13A	Grand Canyon W	33.99	320	⇓P	P	12 47 53.0	+0.7
	baz=34						
Q18A	Rafter H Ranch	34.01	328	⇓P	P	12 47 52.7	+0.2
	baz=34,SNR=9.9						
N21A	Black Mountain	34.03	333	⇓P	P	12 47 53.1	+0.5
	baz=34,SNR=6.8						
SADO	Sadowa	34.05	11	P	P	12 47 51.6	-1.1
	comp=Z,9.2nm,0.9s,mb4.7,baz=235,slow=8.4,SNR=3.9						
R16A	Teasdale	34.14	326	⇓P	P	12 47 54.0	+0.4
	baz=34,SNR=17						
M22A	Cedar Creek Ra	34.15	334	⇑P	P	12 47 53.6	-0.1
	baz=34						
BELC	Belle Mtn.	34.21	316	⇑P	P	12 47 54.9	+0.6
	baz=34						
S15A	Panguitch	34.22	324	⇑P	P	12 47 54.8	+0.6
	baz=34,SNR=17						
T14A	Hurricane	34.22	323	⇓P	P	12 47 54.6	+0.2
	baz=34,SNR=24						
SRU	San Rafael	34.22	328	⇑P	P	12 47 54.5	+0.2
	baz=34						
SRU	San Rafael	34.22	328	*e*P	P	12 47 54.5	+0.2
LDFC	Landfair	34.24	318	*e*P	P	12 47 55.8	+1.3
PFO	Pinyon Flat Ob	34.31	315	P	P	12 47 55.4	+0.2
	comp=Z,4.7nm,1.0s,mb4.4,baz=116,slow=6.6,SNR=7.3						
PFO	Pinyon Flat Ob	34.31	315	⇑P	P	12 47 56.0	+0.9
	baz=34						
U13A	Pakoon Wash	34.34	321	⇓P	P	12 47 55.8	+0.4
	baz=34,SNR=18						
Q16A	Castle Valley	34.43	327	⇑P	P	12 47 56.6	+0.5
	baz=34						
N20A	Spence Gulch,	34.43	332	⇑P	P	12 47 56.1	0.0
	baz=34,SNR=12						
GMRC	Granite Mounta	34.43	317	⇑P	P	12 47 56.5	+0.3
	baz=34						
P18A	Preston Nutter	34.46	329	⇑P	P	12 47 56.8	+0.4
	baz=34,SNR=8.3						
V12A	Nelson	34.47	319	⇓P	P	12 47 57.2	+0.7
	baz=34,SNR=28						
R15A	Junction	34.54	325	⇑P	P	12 47 57.6	+0.6
	baz=35,SNR=8.2						
L22A	Ellis Ranch, M	34.60	335	⇑P	P	12 47 57.9	+0.3
	baz=35						
P17A	Butcher Ranch,	34.60	328	⇓P	P	12 47 57.6	0.0
	baz=35						
MSU	Marysvale	34.69	325	*e*P	P	12 47 59.9	+1.5
T13A	Saint George	34.69	322	⇑P	P	12 47 59.3	+0.8
	baz=35,SNR=6.3						
U12A	Valley of Fire	34.71	320	⇑P	P	12 47 58.7	+0.2
	baz=35						
O18A	Roosevelt	34.82	329	⇓P	P	12 47 59.8	+0.3
	baz=35						
MURC	Murrieta	34.83	314	⇓P	P	12 48 00.6	+0.9
	baz=35						
N19A	John Jarvie Ra	34.90	331	⇓P	P	12 47 59.4	-0.8
	baz=35,SNR=10						
V11A	Goodsprings	34.91	319	⇑P	P	12 48 00.4	+0.1
	baz=35,SNR=8.6						
HEC	Hector,Ludlow	34.91	317	⇑P	P	12 48 00.9	+0.5
	baz=35						
M20A	Sweetwater, Wa	34.92	333	⇓P	P	12 48 00.1	-0.2
	baz=35						
L21A	Rawlins	34.94	334	⇑P	P	12 48 00.2	-0.3
	baz=35,SNR=24						
S13A	Holt Ranch, En	35.03	322	⇑P	P	12 48 02.4	+1.1
	baz=35,SNR=27						
O17A	Robinson Place	35.14	329	⇑P	P	12 48 02.3	+0.1
	baz=35,SNR=8.6						
SHPR	Sheep Range	35.14	320	*e*P	P	12 48 03.6	+1.3
Q15A	Fillmore	35.14	326	⇓P	P	12 48 02.5	+0.2
	baz=35						
N18A	Larsen Ranch,	35.20	331	⇑P	P	12 48 03.0	+0.2
	baz=35						
L20A	Wamsutter	35.40	333	⇑P	P	12 48 04.2	-0.2
	baz=36,SNR=7.3						
R13A	O'Grain Ranch,	35.49	323	⇓P	P	12 48 06.3	+1.0
	baz=36,SNR=16						
BFSC	Mount Baldy St	35.49	315	⇑P	P	12 48 05.3	0.0
	baz=36						
RSSD	Black Hills	35.49	340	*e*P	P	12 48 05.3	+0.1
RSSD				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
RSSD	Black Hills	35.49	340	*e*P	P	12 48 05.3	+0.1
	comp=Z,11nm,0.8s,mb4.8						
P15A	Leamington	35.49	326	⇓P	P	12 48 05.3	0.0
	baz=36						
SHOC	Shoshone	35.50	318	⇓P	P	12 48 05.6	+0.2
	baz=36						
GSC	Goldstone	35.50	317	⇑P	P	12 48 05.6	+0.2
	baz=36						
O16A	Springville	35.54	328	⇑P	P	12 48 05.5	-0.2
	baz=36,SNR=7.6						
DAU	Daniels Canyon	35.56	328	*e*P	P	12 48 06.7	+0.8
Q14A	Sevier Lake (B	35.64	325	⇑P	P	12 48 07.1	+0.6
	baz=36,SNR=13						
T11A	Corn Creek, Al	35.64	321	⇑P	P	12 48 07.0	+0.4
	baz=36,SNR=7.3						
S12A	Delamar Landin	35.64	322	⇓P	P	12 48 07.6	+1.0
	baz=36,SNR=10						
M18A	Lyman	35.74	331	⇑P	P	12 48 07.6	+0.2
	baz=36						
N17A	Moffit Pass	35.75	329	⇑P	P	12 48 07.8	+0.4
	baz=36						
U10A	Ash Meadows, A	35.84	319	⇓P	P	12 48 08.8	+0.5
	baz=36,SNR=15						
K20A	Yellowstone Ra	35.92	334	⇑P	P	12 48 08.5	-0.4
	baz=36						
P14A	Drum Mountains	35.94	326	⇓P	P	12 48 09.5	+0.4
	baz=36,SNR=12						
R12A	Pony Springs,	35.97	323	⇓P	P	12 48 10.5	+1.1
	baz=36,SNR=16						
N16A	Rees Ranch, Co	36.01	329	⇓P	P	12 48 10.2	+0.5
	baz=36						
Q13A	Wheeler Ranch,	36.04	324	⇑P	P	12 48 10.4	+0.4
	baz=36,SNR=12						
M17A	Scullys Gap (B	36.06	330	⇓P	P	12 48 10.0	-0.2
	baz=36						
EDW2	Edwards Air Fo	36.07	315	⇓P	P	12 48 10.3	0.0
	baz=36						
O15A	The Old Anders	36.10	327	⇑P	P	12 48 10.2	-0.3
	baz=36						
TPNV	Topopah Spring	36.10	320	⇑P	P	12 48 11.6	+1.0
	baz=36						
TPNV	Topopah Spring	36.10	320	*e*P	P	12 48 12.3	+1.7
TPNV				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
TPNV	Topopah Spring	36.10	320	*e*P	P	12 48 12.2	+1.7
	comp=Z,31nm,1.1s,mb5.2						
L18A	Fontenelle, Gr	36.11	331	⇑P	P	12 48 10.0	-0.5
	baz=36,SNR=9.2						
FURC	Furnace Creek,	36.21	318	⇑P	P	12 48 11.5	0.0
	baz=36						
DUG	Dugway	36.23	327	⇓P	P	12 48 11.7	+0.2
	baz=36						
K19A	Absolon Red Bu	36.28	333	⇓P	P	12 48 11.1	-0.8
	baz=36,SNR=17						
P13A	Bates Ranch, G	36.38	325	⇓P	P	12 48 13.3	+0.5
	baz=36,SNR=15						
MPMC	Manual Prospec	36.39	317	⇓P	P	12 48 13.2	+0.2
	baz=36						
M16A	Huntsville	36.42	329	⇑P	P	12 48 12.7	-0.5
	baz=36						
BW06	Boulder Array	36.55	333	⇑P	P	12 48 13.7	-0.6
	baz=37						
PDAR	Pinedale Array	36.55	333	P	P	12 48 12.8	-1.4
	comp=Z,3.1nm,0.9s,mb4.2,baz=135,slow=9.7,SNR=22						
PDAR				PcP	PcP	12 50 36.5	-0.4
	comp=Z,3.1nm,1.1s,baz=160,slow=4.7,SNR=6.2						
PDAR				LR	LR	13 07 30.3	
	comp=Z,116nm,18.6s,MS3.7,baz=276,slow=43						
R11A	Troy Canyon, C	36.56	322	⇑P	P	12 48 15.1	+0.6
	baz=37,SNR=18						
Q12A	Willow Creek R	36.57	323	⇑P	P	12 48 15.0	+0.5
	baz=37,SNR=7.0						
L17A	Cokeville	36.64	331	⇑P	P	12 48 14.5	-0.5
	baz=37,SNR=7.2						
K18A	Toltan Ranch,	36.67	332	⇑P	P	12 48 15.6	+0.4
	baz=37,SNR=20						
ARVC	Arvin	36.78	315	⇓P	P	12 48 16.5	+0.1
	baz=37						
O13A	Hicks Ranch, I	36.82	326	⇑P	P	12 48 17.5	+0.9
	baz=37						
ISA	Isabella	36.83	316	⇑P	P	12 48 17.5	+0.8
	baz=37						
L16A	Fish Haven	36.85	330	⇑P	P	12 48 16.4	-0.4
	baz=37						
GRAC	Grapevine Rang	36.85	319	⇑P	P	12 48 17.9	+0.9
	baz=37						
N14A	Grayback Hills	36.89	327	⇓P	P	12 48 17.4	+0.2
	baz=37,SNR=11						
S10A	Tonopah Range,	36.92	321	⇓P	P	12 48 18.9	+1.4
	baz=37,SNR=35						
Q11A	Duckwater	36.92	323	⇓P	P	12 48 18.2	+0.6
	baz=37,SNR=15						
M15A	Larsen Ranch,	36.95	329	⇑P	P	12 48 17.3	-0.4
	baz=37,SNR=13						
R10A	Warm Springs	36.96	321	⇓P	P	12 48 19.3	+1.5
	baz=37,SNR=16						
CWC	Cottonwood Cre	37.00	317	⇓P	P	12 48 18.4	+0.2
	baz=37						
J18A	Kendall Valley	37.11	333	⇓P	P	12 48 18.7	-0.3
	baz=37,SNR=28						
K17A	Gardner Place,	37.16	331	⇑P	P	12 48 18.8	-0.6
	baz=37,SNR=7.3						
S09A	Goldfield	37.19	320	⇓P	P	12 48 20.6	+0.8
	baz=37,SNR=28						
L15A	Malad City	37.31	329	⇓P	P	12 48 19.8	-1.0
	baz=37,SNR=14						
O12A	Currie	37.34	325	⇑P	P	12 48 21.5	+0.5
	baz=37						
VES	Vestal, Richgr	37.34	316	⇓P	P	12 48 22.0	+0.9
	baz=37						
Q10A	Clear Creek Ra	37.36	322	⇑P	P	12 48 22.7	+1.5
	baz=37,SNR=14						
AGMN	Agassiz Refuge	37.39	351	*e*P	P	12 48 19.4	-2.0
	comp=Z,23nm,0.9s,mb5.0						
TPH	Tonopah	37.40	320	*e*P	P	12 48 22.5	+0.9
TPH				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.2						
TPH	Tonopah	37.40	320	*e*P	P	12 48 22.5	+0.9
	comp=Z,52nm,1.3s,mb5.2						
I18A	Diamond G Ranc	37.41	333	⇓P	P	12 48 21.6	+0.1
	baz=38,SNR=22						
R09A	Tonopah	37.41	321	⇓P	P	12 48 22.3	+0.7
	baz=37,SNR=34						
M14A	Sheep Mountain	37.44	328	⇑P	P	12 48 22.0	+0.1
	baz=38,SNR=28						
P11A	Circle Ranch,	37.44	323	⇓P	P	12 48 22.9	+1.0
	baz=38						
J17A	Brown Place, J	37.54	332	⇓P	P	12 48 22.8	+0.1
	baz=38,SNR=28						
REDW	Red Top Meadow	37.60	332	*e*P	P	12 48 22.9	-0.3
	comp=Z,92nm,1.4s,mb5.3						
SNOW	Snow King Moun	37.64	332	*e*P	P	12 48 23.6	+0.1
	comp=Z,44nm,1.0s,mb5.1						
LOHW	Long Hollow	37.69	333	*e*P	P	12 48 23.8	-0.1
	comp=Z,41nm,1.4s,mb5.0						
RCTC	Rector, Farmer	37.70	316	⇓P	P	12 48 24.5	+0.4
	baz=38						
TPAW	Teton Pass	37.75	332	*e*P	P	12 48 24.3	-0.1
	comp=Z,39nm,1.3s,mb5.0						
O11A	Cowboy Ranch,	37.77	324	⇓P	P	12 48 25.1	+0.5
	baz=38						
M13A	Montello	37.78	327	⇓P	P	12 48 24.5	-0.2
	baz=38,SNR=7.7						
RRI2	Red Ridge	37.81	332	*e*P	P	12 48 24.6	-0.3
	comp=Z,31nm,1.3s,mb4.9						
Q09A	Carvers	37.84	321	⇓P	P	12 48 26.8	+1.5
	baz=38						
MOOW	Moose Ponds	37.86	333	*e*P	P	12 48 25.1	-0.3
	comp=Z,9.2nm,0.9s,mb4.5						
K15A	Arbon	37.89	330	⇓P	P	12 48 25.4	-0.2
	baz=38,SNR=9.2						
N12A	Clover Valley,	37.90	326	⇓P	P	12 48 25.9	+0.1
	baz=38,SNR=12						
I17A	Pilgram Creek	37.91	333	⇓P	P	12 48 26.2	+0.4
	baz=38,SNR=9.7						
ELK	Elko	37.94	325	P	P	12 48 26.5	+0.4
	comp=Z,5.0nm,0.9s,mb4.2,baz=139,slow=7.5,SNR=13						
ELK	Elko	37.94	325	P	P	12 48 26.5	+0.4
IMW	Indian Meadow	38.06	332	*e*P	P	12 48 26.7	-0.4
	comp=Z,12nm,0.9s,mb4.6						
K14A	Jones Ranch, D	38.11	329	⇓P	P	12 48 26.6	-0.8
	baz=38,SNR=18						
R08A	Mina	38.12	320	⇑P	P	12 48 29.1	+1.4
	baz=38,SNR=9.0						
MLAC	Mammoth Lakes	38.17	318	⇑P	P	12 48 29.1	+1.0
	baz=38						
L13A	Double Diamond	38.17	328	⇑P	P	12 48 28.0	0.0
	baz=38						
M12A	Wells	38.22	326	⇓P	P	12 48 29.1	+0.7
	baz=38						
P09A	Austin	38.26	322	⇓P	P	12 48 29.5	+0.6
	baz=38						
N11A	Elko Archery C	38.27	325	⇓P	P	12 48 29.3	+0.5
	baz=38,SNR=9.5						
H17A	Grant Village	38.29	333	⇑P	P	12 48 29.3	+0.3
	baz=38						
I16A	Newdale	38.29	332	⇑P	P	12 48 28.9	-0.1
	baz=38,SNR=6.6						
NVAR	Mina Array Bea	38.30	320	P	P	12 48 30.8	+1.6
	comp=Z,45nm,0.8s,mb5.2,baz=138,slow=7.5,SNR=188						
NVAR				PcP	PcP	12 50 43.3	+0.9
	comp=Z,3.4nm,0.7s,baz=142,slow=4.4,SNR=6.4						
RLMT	Red Lodge	38.31	335	⇓P	P	12 48 28.8	-0.4
	baz=38						
RLMT	Red Lodge	38.31	335	*e*P	P	12 48 28.6	-0.6
	comp=Z,26nm,0.8s,mb5.0						
Q08A	Gabbs	38.32	321	⇑P	P	12 48 30.4	+1.1
	baz=38,SNR=24						
O10A	Cortez Mining,	38.36	324	⇓P	P	12 48 30.3	+0.7
	baz=38						
J15A	Blackfoot	38.38	331	⇑P	P	12 48 29.2	-0.5
	baz=38,SNR=13						
G18A	Lazy EL Ranch,	38.60	335	⇑P	P	12 48 30.8	-0.7
	baz=39,SNR=19						
K13A	Stover Farm, H	38.65	328	⇑P	P	12 48 31.5	-0.5
	baz=39						
O09A	Fish Creek Ran	38.69	323	⇓P	P	12 48 32.9	+0.5
	baz=39,SNR=11						
M11A	Holland Ranch,	38.71	326	⇑P	P	12 48 32.9	+0.4
	baz=39,SNR=7.0						
L12A	House Creek Ra	38.78	327	⇓P	P	12 48 32.8	-0.3
	baz=39						
H16A	Russell Place,	38.83	333	⇓P	P	12 48 33.9	+0.4
	baz=39,SNR=12						
J14A	Carey	38.85	330	⇓P	P	12 48 33.6	-0.1
	baz=39,SNR=13						
I15A	Monteview	38.85	331	⇑P	P	12 48 34.2	+0.5
	baz=39						
BMN	Battle Mountai	38.87	323	*e*P	P	12 48 34.6	+0.7
BMN				pmax	pmax		
	comp=Z,61nm,1.6s,mb5.1						
BMN	Battle Mountai	38.87	323	*e*P	P	12 48 34.6	+0.7
	comp=Z,61nm,1.6s,mb5.1						
K12A	Draper Farm, C	39.06	328	⇓P	P	12 48 35.0	-0.5
	baz=39,SNR=7.7						
R06C	Coleville	39.08	319	⇑P	P	12 48 37.1	+1.4
	baz=39,SNR=14						
G17A	Pierce Place,	39.09	334	⇓P	P	12 48 36.9	+1.2
	baz=39,SNR=24						
F18A	Big Timber	39.14	336	⇓P	P	12 48 35.8	-0.2
	baz=39,SNR=23						
M10A	I.L. Ranch, Tu	39.19	325	⇓P	P	12 48 36.9	+0.4
	baz=39						
L11A	Cat Creek Ranc	39.19	326	⇑P	P	12 48 36.5	-0.1
	baz=39,SNR=6.8						
J13A	Cove Ranch, Pi	39.23	329	⇓P	P	12 48 36.7	-0.2
	baz=39,SNR=8.1						
I14A	Mackay	39.26	330	⇑P	P	12 48 37.6	+0.5
	baz=39,SNR=17						
ULM	Lac du Bonnet	39.30	352	P	P	12 48 35.0	-2.3
	comp=Z,18nm,0.9s,mb4.8,baz=175,slow=8.4,SNR=19						
ULM				pP	pP	12 48 43.4	-7.0
	comp=Z,14nm,1.0s,baz=172,slow=9.8,SNR=6.1						
ULM				PcP	PcP	12 50 45.0	-0.3
	comp=Z,7.3nm,0.9s,baz=201,slow=3.3,SNR=4.9						
ULM				LR	LR	13 07 27.8	
	comp=Z,188nm,21.2s,MS3.9,baz=159,slow=40						
ULM	Lac du Bonnet	39.30	352	P	P	12 48 35.0	-2.3
ULM				pP	pP	12 48 43.4	-7.0
ULM				PcP	PcP	12 50 45.0	-0.3
ULM				LR	LR	13 07 27.8	
N09A	Rock Creek Ran	39.32	324	⇓P	P	12 48 37.9	+0.3
	baz=39,SNR=8.6						
P07A	Fallon	39.32	321	⇑P	P	12 48 38.6	+0.8
	baz=39						
O08A	Rochester Mine	39.34	322	⇓P	P	12 48 38.3	+0.5
	baz=39,SNR=7.3						
H15A	Lima	39.40	332	⇓P	P	12 48 38.9	+0.6
	baz=39,SNR=39						
DGMT	Dagmar	39.42	343	⇓P	P	12 48 37.7	-0.6
	baz=40						
DGMT	Dagmar	39.42	343	*e*P	P	12 48 37.3	-1.0
	comp=Z,67nm,0.9s,mb5.4						
HLID	Hailey	39.47	329	⇓P	P	12 48 38.4	-0.5
	baz=40						
G16A	Moss Hill, Enn	39.48	333	⇑P	P	12 48 39.3	+0.3
	baz=40,SNR=15						
L10A	Juniper Basin	39.52	326	⇑P	P	12 48 39.0	-0.3
	baz=40						
F17A	Fitzpatrick Pl	39.52	335	⇓P	P	12 48 39.4	+0.1
	baz=40,SNR=25						
I13A	Wildhorse Cree	39.58	330	⇑P	P	12 48 40.0	+0.2
	baz=40,SNR=25						
J12A	Stokes Ranch,	39.60	328	⇓P	P	12 48 39.9	0.0
	baz=40,SNR=9.2						
N08A	GE Springer Mi	39.63	323	⇑P	P	12 48 40.4	+0.2
	baz=40,SNR=5.9						
O07A	Toulon	39.69	322	⇑P	P	12 48 41.4	+0.6
	baz=40,SNR=6.5						
WCN	Washoe City	39.73	320	⇑P	P	12 48 42.4	+1.3
	baz=40						
BOZ	Bozeman (W)	39.73	334	⇑P	P	12 48 40.9	-0.2
	baz=40						
BOZ	Bozeman (W)	39.73	334	*e*P	P	12 48 40.1	-0.9
BOZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
BOZ	Bozeman (W)	39.73	334	*e*P	P	12 48 40.1	-0.9
	comp=Z,20nm,1.1s,mb4.8						
H14A	Leadore	39.74	331	⇓P	P	12 48 41.3	+0.2
	baz=40,SNR=26						
G15A	Dillon	39.74	332	⇓P	P	12 48 41.5	+0.4
	baz=40,SNR=15						
E18A	Harlowton	39.75	336	⇓P	P	12 48 41.0	-0.2
	baz=40,SNR=12						
K11A	Parker Ranch,	39.76	327	⇓P	P	12 48 41.0	-0.3
	baz=40						
F16A	Kennard Place,	39.84	334	⇑P	P	12 48 42.1	+0.2
	baz=40,SNR=14						
DLMT	Dillon	39.94	333	*e*P	P	12 48 42.9	+0.2
	comp=Z,41nm,1.2s,mb5.0						
P06A	Stead Airport,	40.03	320	⇑P	P	12 48 44.8	+1.2
	baz=40,SNR=6.4						
E17A	Martinsdale	40.05	335	⇓P	P	12 48 43.6	-0.1
	baz=40,SNR=14						
MFID	Camas Ranch	40.09	328	⇑P	P	12 48 44.7	+0.6
	baz=40,SNR=8.6						
H13A	Challis	40.12	330	⇑P	P	12 48 44.5	+0.2
	baz=40,SNR=28						
L09A	Wilkinson Ranc	40.15	325	⇑P	P	12 48 45.0	+0.5
	baz=40						
M08A	Happy Creek Ra	40.19	324	⇑P	P	12 48 45.7	+0.8
	baz=40						
D18A	Linhart Farms,	40.23	337	⇑P	P	12 48 45.0	-0.1
	baz=40,SNR=37						
F15A	Butte	40.27	333	⇓P	P	12 48 45.4	-0.1
	baz=40,SNR=28						
O06A	Flanigan	40.28	321	⇓P	P	12 48 46.1	+0.5
	baz=40,SNR=19						
H12A	Diamond D Ranc	40.41	330	⇑P	P	12 48 46.4	-0.2
	baz=40,SNR=13						
BEKR	Beckwourth	40.43	320	⇓P	P	12 48 48.0	+1.1
	baz=40						
E16A	East Helena	40.45	334	⇑P	P	12 48 46.8	-0.1
	baz=40,SNR=34						
G13A	Cobalt	40.50	331	⇑P	P	12 48 46.5	-0.9
	baz=40,SNR=8.4						
I11A	Placerville	40.51	328	⇑P	P	12 48 47.4	-0.1
	baz=40,SNR=28						
D17A	Six Diamond Ra	40.54	336	⇓P	P	12 48 47.5	-0.2
	baz=41						
M07A	Soldier Meadow	40.62	323	⇓P	P	12 48 48.2	-0.2
	baz=41						
K09A	Rome	40.63	326	⇓P	P	12 48 48.5	0.0
	baz=41,SNR=13						
F14A	Wisdom	40.64	332	⇓P	P	12 48 48.6	0.0
	baz=41						
L08A	Fields	40.65	324	⇑P	P	12 48 48.0	-0.6
	baz=41						
E15A	Deer Lodge	40.78	334	⇑P	P	12 48 49.2	-0.5
	baz=41,SNR=17						
D16A	Dana Ranch, Ca	40.79	335	⇑P	P	12 48 49.6	-0.2
	baz=41						
EGMT	Eagleton	40.89	337	⇑P	P	12 48 49.7	-0.9
	baz=41						
EGMT	Eagleton	40.89	337	*e*P	P	12 48 49.7	-0.9
	comp=Z,34nm,1.0s,mb4.9						
C17A	Wharram Farm,	40.96	336	⇑P	P	12 48 50.7	-0.4
	baz=41,SNR=34						
F13A	Darby	41.06	332	⇓P	P	12 48 51.3	-0.7
	baz=41,SNR=18						
I10A	Payette	41.07	328	⇑P	P	12 48 51.5	-0.6
	baz=41						
J09A	Fry Pan Ranch,	41.07	326	⇑P	P	12 48 51.8	-0.3
	baz=41,SNR=16						

K08A Mann Creek Ran 41.08 325 ⇓P P **12 48 52.4 +0.3**
baz=41,SNR=19
H11A Donnelly 41.09 329 ⇓P P **12 48 51.5 -0.8**
baz=41,SNR=18
L07A Adell 41.11 324 ⇑P P **12 48 52.9 +0.5**
baz=41
E14A Clinton 41.15 333 ⇓P P **12 48 52.1 -0.7**
baz=41,SNR=12
B18A Beardsley Farm 41.21 338 ⇓P P **12 48 52.9 -0.3**
baz=41,SNR=9.9
D15A Lincoln 41.21 334 ⇑P P **12 48 53.0 -0.3**
baz=41,SNR=24
K07A Rock Creek Ran 41.48 324 ⇑P P **12 48 55.2 -0.3**
baz=42,SNR=8.3
I09A Lost Marbles R 41.48 327 ⇑P P **12 48 55.1 -0.4**
baz=42,SNR=8.2
E13A Victor 41.49 332 ⇓P P **12 48 55.0 -0.4**
baz=42,SNR=20
C16A Fuhringer Ranc 41.49 336 ⇓P P **12 48 55.3 -0.2**
baz=42,SNR=9.1
B17A L&G Farms, Che 41.51 337 ⇓P P **12 48 55.1 -0.5**
baz=42,SNR=12
D14A Greenough 41.67 333 ⇓P P **12 48 56.2 -0.8**
baz=42,SNR=6.5
MSO Missoula 41.67 333 *eP* P **12 48 56.4 -0.6**
comp=Z,38nm,1.3s,mb4.9
A18A Metzger Ranch, 41.67 338 ⇓P P **12 48 56.3 -0.6**
baz=42
G11A Walters Elk Ra 41.71 330 ⇓P P **12 48 56.6 -0.8**
baz=42,SNR=14
C15A Salmond Ranch, 41.82 335 ⇑P P **12 48 58.5 +0.3**
baz=42,SNR=19
I08A Drewsey 41.89 326 ⇓P P **12 48 58.3 -0.5**
baz=42
H09A Durkee 41.91 328 ⇓P P **12 48 58.3 -0.7**
baz=42
A17A Triple J Farms 42.01 337 ⇓P P **12 48 59.3 -0.4**
baz=42,SNR=19
G10A Bishop Farm, J 42.07 329 ⇑P P **12 48 59.3 -0.9**
baz=42,SNR=6.1
D13A Huson 42.10 333 ⇑P P **12 48 59.9 -0.6**
baz=42,SNR=11
B15A Bradely Ranch, 42.23 335 ⇑P P **12 49 00.8 -0.7**
baz=42,SNR=12
H08A Prairie City 42.35 327 ⇑P P **12 49 01.8 -0.8**
baz=42
A16A West Butte Ran 42.35 337 ⇑P P **12 49 01.9 -0.7**
baz=42,SNR=8.8
E11A Bogner Ranch, 42.37 331 ⇑P P **12 49 01.2 -1.5**
baz=42,SNR=12
G09A Cove 42.39 328 ⇑P P **12 49 02.1 -0.8**
baz=42
I07A Izee 42.51 326 ⇓P P **12 49 03.6 -0.3**
baz=42
B14A Marquette Ranc 42.56 335 ⇓P P **12 49 03.7 -0.5**
baz=43,SNR=9.3
C13A Hot Springs 42.59 333 ⇓P P **12 49 03.8 -0.7**
baz=43,SNR=5.5
F10A Beach Ranch, E 42.59 330 ⇑P P **12 49 03.7 -0.8**
baz=43,SNR=14
F09A S2 Ranch, Elgi 42.75 329 ⇓P P **12 49 05.4 -0.4**
baz=43,SNR=5.4
A15A Johnson Ranch, 42.83 336 ⇑P P **12 49 05.8 -0.6**
baz=43,SNR=27
E10A Myers Farm, Un 42.90 330 ⇓P P **12 49 06.2 -0.8**
baz=43
D11A Klaveano Farm, 42.93 331 ⇑P P **12 49 06.4 -0.8**
baz=43
B13A Whitefish 43.08 334 ⇓P P **12 49 07.8 -0.6**
baz=43,SNR=8.2
A14A Double T Ranch 43.10 335 ⇓P P **12 49 08.4 -0.2**
baz=43,SNR=31
F08A Pendleton 43.26 328 ⇑P P **12 49 09.2 -0.7**
baz=43
D10A Wagner Farm, O 43.38 331 ⇑P P **12 49 09.8 -1.1**
baz=43,SNR=12
E09A Wood Farm, Sta 43.43 329 ⇓P P **12 49 10.7 -0.5**
baz=44
B12A Libby 43.64 333 ⇓P P **12 49 12.5 -0.4**
baz=44,SNR=10.0
D09A Jones Farm, Ri 43.89 330 ⇓P P **12 49 14.3 -0.6**
baz=44,SNR=7.2
B11A Sandpoint 43.96 333 ⇑P P **12 49 15.3 -0.2**
baz=44,SNR=9.7
A12A Yaak River Ran 44.01 334 ⇓P P **12 49 15.8 -0.1**
baz=44,SNR=8.5
D08A Wollman Farm, 44.19 329 ⇑P P **12 49 16.8 -0.5**
baz=44,SNR=11
F06A Goldendale 44.29 327 ⇓P P **12 49 18.0 -0.3**
baz=44
E07A Sunnyside 44.33 328 ⇓P P **12 49 18.4 -0.1**
baz=44,SNR=7.3
A11A Hall Mountain, 44.34 333 ⇑P P **12 49 18.5 0.0**
baz=44,SNR=19
C09A Chrisman Ranch 44.39 331 ⇓P P **12 49 18.8 -0.1**
baz=44
FFC Flin Flon 44.65 348 *eP* P **12 49 19.4 -1.5**
FFC pmax pmax
comp=Z,36nm,1.6s,mb5.0
FFC Flin Flon 44.65 348 *eP* P **12 49 19.4 -1.5**
comp=Z,36nm,1.6s,mb5.0
C08A Higginbotham F 44.75 330 ⇓P P **12 49 21.8 0.0**
baz=45
B09A Rice 44.77 331 ⇑P P **12 49 21.6 -0.3**
baz=45,SNR=14
A10A Northport 44.90 332 ⇓P P **12 49 22.4 -0.5**
baz=45
C07A Waterville 45.19 329 ⇑P P **12 49 25.7 +0.3**
baz=45,SNR=6.8
B08A Colville Reser 45.29 331 ⇑P P **12 49 25.4 -0.7**
baz=45,SNR=6.6
E05A Randle 45.32 327 ⇑P P **12 49 26.8 +0.4**
baz=45
A09A Danville 45.37 332 ⇓P P **12 49 26.3 -0.4**
baz=45,SNR=16
A08A Turner Farm, O 45.67 331 ⇑P P **12 49 28.7 -0.5**
baz=46,SNR=5.7
C06A Tall Timber Ra 45.76 329 ⇓P P **12 49 29.9 +0.1**
baz=46
D05A Enumclaw 45.84 328 ⇓P P **12 49 30.7 +0.2**
baz=46
A07A Ashnola River, 46.27 331 ⇑P P **12 49 33.8 0.0**
baz=46,SNR=7.3
SCHQ Schefferville 46.35 17 P P **12 49 32.5 -1.8**
comp=Z,21nm,1.2s,mb5.0,baz=221,slow=5.0,SNR=12
SCHQ PcP PcP 12 51 09.3 +0.5
comp=Z,11nm,0.9s,baz=264,slow=3.5,SNR=4.0
SCHQ LR LR 13 09 54.4
comp=Z,333nm,18.0s,MS4.3,baz=293,slow=37
SCHQ Schefferville 46.35 17 P P **12 49 32.5 -1.8**
SCHQ PcP PcP 12 51 09.3 +0.5
SCHQ LR LR 13 09 54.4
B06A Marblemount 46.45 329 ⇑P P **12 49 34.5 -0.8**
baz=46
EDM Edmonton 46.47 339 *eP* P **12 49 33.8 -1.5**
B05A Bryant 46.59 329 ⇓P P **12 49 35.3 -1.0**
baz=47
CFAA Coronel Fontan 46.68 157 P P **12 49 34.9 -2.4**
comp=Z,0.4nm,0.7s,baz=360,slow=5.7,SNR=5.1
CFAA PcP PcP 12 51 09.1 -1.2
comp=Z,0.1nm,0.3s,baz=307,slow=2.9,SNR=3.3
C04A Brinnon 46.70 328 ⇑P P **12 49 36.5 -0.7**
baz=47
A05A Maple Falls 47.07 330 ⇑P P **12 49 39.6 -0.5**
baz=47
BDFB Brasilia 47.64 124 P P **12 49 42.2 -2.7**
comp=Z,3.7nm,0.7s,mb4.5,baz=177,slow=21,SNR=7.0
BDFB LR LR 13 12 02.5
comp=Z,93nm,19.4s,MS3.8,baz=292,slow=39
CPUP Villa Florida 47.77 142 P P **12 49 43.8 -2.1**
comp=Z,0.4nm,0.3s,mb3.9,baz=320,slow=12,SNR=3.0
CPUP pP pP 12 49 52.1 -7.1
comp=Z,1.2nm,0.7s,baz=326,slow=6.9,SNR=2.9
CPUP PcP PcP 12 51 13.6 -0.7
comp=Z,2.1nm,0.8s,baz=287,slow=11,SNR=2.4
CPUP LR LR 13 10 52.0
comp=Z,162nm,18.2s,MS4.0,baz=310,slow=37
CPUP Villa Florida 47.77 142 P P **12 49 43.8 -2.0**
CPUP *PP pP 12 49 52.1 -7.1
CPUP 12 51 13.6
PLCA Paso Flores 54.27 164 P P **12 50 32.9 -1.4**
comp=Z,6.4nm,0.9s,mb4.5,baz=345,slow=8.2,SNR=12
PLCA pP pP 12 50 40.6 -7.3
comp=Z,7.7nm,0.8s,baz=337,slow=9.7,SNR=13
PLCA Paso Flores 54.27 164 *eP* P **12 50 32.7 -1.6**
PLCA pmax pmax
comp=Z,9.0nm,0.9s
PLCA Paso Flores 54.27 164 *eP* P **12 50 32.6 -1.7**
comp=Z,9.2nm,0.9s,mb4.7
YKA Yellowknife Ar 54.53 345 P P **12 50 34.3 -1.7**
comp=Z,5.4nm,0.8s,mb4.7,baz=138,slow=7.7,SNR=126
YKA PcP PcP 12 51 38.6 -0.1
comp=Z,3.2nm,0.7s,baz=143,slow=4.2,SNR=22
YKA LR LR 13 13 56.8
comp=Z,69nm,20.6s,MS3.7,baz=145,slow=36
YKA Yellowknife Ar 54.53 345 P P **12 50 34.4 -1.6**
YKA 12 51 38.7
DLBC Dease Lake 56.72 335 *eP* P **12 50 52.4 +0.7**
RKT Rikitea 57.57 233 *eT* 13 52 33.7
comp=Z,2.2nm,0.2s
RES Resolute Bay 63.38 358 *eP* P **12 51 35.5 -1.7**
RES pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
RES Resolute Bay 63.38 358 *eP* P **12 51 35.5 -1.7**
comp=Z,6.3nm,0.7s,mb4.8
INK Inuvik 64.10 343 *eP* P **12 51 40.7 -1.3**
INK pmax pmax
comp=Z,22nm,1.1s
INK Inuvik 64.10 343 *eP* P **12 51 40.7 -1.3**
comp=Z,22nm,1.1s,mb5.1
EGAK Eagle 64.66 338 *eP* P **12 51 44.7 -0.9**
comp=Z,12nm,1.3s,mb4.8
PAX Paxson 65.54 335 *eP* P **12 51 49.8 -1.6**
PAX pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
PAX Paxson 65.54 335 *eP* P **12 51 49.8 -1.6**
comp=Z,9.6nm,0.6s,mb5.0
COLA College 67.27 336 *i* P P **12 52 02.5 0.0**
PPT Papeete 67.50 246 *e*LR LR 13 12 11.1
comp=Z,181nm,27.0s
PPT Papeete 67.50 246 LR LR 13 13 00.4
comp=Z,154nm,19.4s,MS4.2,baz=84,slow=28
KTH Kantishna Hill 68.04 334 *eP* P **12 52 07.1 -0.3**
COLD Coldfoot 69.05 338 *eP* P **12 52 14.4 +0.9**
comp=Z,40nm,1.2s,mb5.2
TNA Tin City 75.62 335 *eP* P **12 52 53.3 +0.5**
comp=Z,28nm,1.1s,mb5.1
ESDC Sonseca Array 78.06 52 P P **12 53 06.2 -0.9**
comp=Z,2.0nm,0.7s,mb4.2,baz=289,slow=6.3,SNR=6.7
ESDC LR LR 13 20 02.8
comp=Z,90nm,19.5s,MS4.1,baz=275,slow=30
MDT Midelt 78.19 59 P P **12 53 07.9 0.0**
comp=Z,2.5nm,1.0s,mb4.1,baz=292,slow=5.0,SNR=4.8
TIC Toumodi 81.61 85 *eP* P **12 53 26.4 -0.4**
comp=Z,139nm,1.2s,mb5.8
LIC Lamto 81.68 85 *eP* P **12 53 26.7 -0.5**
comp=Z,79nm,1.0s,mb5.6
DBIC Dimbokro 81.77 85 P P **12 53 27.4 -0.2**
comp=Z,9.5nm,0.9s,mb4.7,baz=297,slow=4.0,SNR=7.1
DBIC LR LR 13 28 06.1
comp=Z,64nm,19.2s,MS4.0,baz=282,slow=34
KIC Kosan Boka 81.94 85 *eP* P **12 53 28.2 -0.3**
comp=Z,112nm,1.1s,mb5.7
NOA NORSAR Array B 84.41 29 P P **12 53 40.2 -0.1**
comp=Z,1.1nm,0.7s,mb4.1,baz=287,slow=4.7,SNR=3.3
NOA LR LR 13 26 28.4
comp=Z,82nm,21.6s,MS4.1,baz=180,slow=32
NOA NORSAR Array B 84.41 29 P P **12 53 40.2 -0.2**
NOA LR LR 13 26 28.4
BILL Bilibino 85.38 339κ *iP* P **12 53 45.1 +0.1**
BILL *e* pP 12 53 55.5 -3.9
BILL pmax pmax
comp=Z,58nm,1.4s,mb5.5
BILL Bilibino 85.38 339 *eP* P **12 53 44.8 -0.2**
comp=Z,103nm,1.6s,mb5.7
TORD Torodi Ar. Bea 86.92 77 P P **12 53 52.4 -1.3**
comp=Z,1.7nm,0.9s,mb4.3,baz=257,slow=3.6,SNR=7.3
TORD LR LR 13 28 42.1
comp=Z,41nm,19.2s,MS3.8,baz=295,slow=33
ARCES ARCESS Array B 87.26 19 P P **12 53 54.5 +0.3**
comp=Z,2.5nm,0.7s,mb4.6,baz=305,slow=4.3,SNR=4.9
ARCES LR LR 13 37 18.7
comp=Z,83nm,18.1s,MS4.2,baz=132,slow=39
TAM Tamanrasset 88.62 67 *eP* P **12 54 03.4 +1.7**
TAM pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
TAM Tamanrasset 88.62 67 *eP* P **12 54 03.4 +1.6**
comp=Z,4.6nm,1.0s,mb4.8
GERES GERESS Array B 88.91 40 P P **12 54 03.0 +0.4**
comp=Z,0.2nm,0.3s,mb4.0,baz=268,slow=3.7,SNR=5.1
GERES LR LR 13 28 17.3
comp=Z,99nm,19.7s,MS4.2,baz=279,slow=32
GERES GERESS Array B 88.91 40 P P **12 54 03.0 +0.4**
GERES LR LR 13 28 17.3
KEST Kesra 89.10 54 LR LR 13 30 00.3
comp=Z,33nm,18.8s,MS3.8,baz=288,slow=33
VNA3 Neumayer Olymp 96.92 161 *eP* P **12 54 37.1 -1.7**
VNA3 *e* 12 54 44.8
AKASG Malin Array Be 97.53 35 LR LR 13 33 50.5
comp=Z,97nm,20.1s,MS4.3,baz=310,slow=32
VNA2 Neumayer--Watz 97.56 161 *eP* P **12 54 40.0 -1.8**
VNA2 *e* 12 54 47.8
SNAA Sanae 99.15 161 *i* P P **12 54 42.8 -6.0**
ULN Ulaanbaatar 119.54 349 *i* PKIKP PKPdf 12 59 57.3 -0.4
SONM Songino Array 119.69 349 PKP PKPdf 12 59 57.2 -0.8
comp=Z,1.9nm,0.8s,baz=355,slow=2.2,SNR=14
MAW Mawson 120.59 167 PKP PKPdf 12 59 56.8 -2.3
comp=Z,1.2nm,0.8s,baz=203,slow=7.7,SNR=3.8
KSRS Korea Array 120.99 327 PKP PKPdf 12 59 60.0 -0.9
comp=Z,2.2nm,0.8s,baz=357,slow=1.9,SNR=6.6
MKAR Makanchi Array 121.38 8 PKP PKPdf 13 00 00.1 -1.2
comp=Z,0.6nm,0.8s,baz=270,slow=1.2,SNR=4.4
MKAR Makanchi Array 121.38 8 PKP PKPdf 13 00 00.1 -1.2
BJI Beijing 124.20 338 PKP PKPdf 13 00 02.0 -4.9
BJI SS SS 13 18 40.4 +2.5
BJI LR LR
comp=N,150nm,23.9s,MS4.7
BJI LR LR
comp=E,149nm,25.4s,MS4.7
BJI LR LR
comp=Z,79nm,31.4s
WMQ Urumqi 124.88 4 *e*PKP PKPdf 13 00 10.3 +2.2
WMQ LR LR
comp=N,69nm,30.0s,MS4.3
WMQ LR LR
comp=E,76nm,28.0s,MS4.3
WMQ LR LR
comp=Z,114nm,36.0s
HHC Hu-ho-hao-te 125.02 342 *e*PKP PKPdf 13 00 06.0 -2.5
HHC PP PP 13 01 57.1 +0.8
HHC PKS 13 03 41.0
HHC SKS SKSdf 13 07 12.8 -3.7
HHC SKKS SKKSac 13 08 45.3 -6.5
HHC LR LR
comp=N,219nm,16.6s,MS5.1
HHC LR LR
comp=E,219nm,15.5s,MS5.1
HHC LR LR
comp=Z,394nm,15.5s,MS5.2
GTA Gaotai 128.95 352 PKP PKPdf 13 00 16.3 +0.3
GTA PP PP 13 02 22.9 +0.8
GTA PKS 13 03 51.0
GTA SKKS SKKSac 13 09 17.3 +0.7
GTA SS SS 13 19 36.1 -0.6
GTA PP PP
comp=Z,168nm,9.0s
GTA LR LR
comp=N,125nm,11.7s,MS4.9
GTA LR LR
comp=E,88nm,12.6s,MS4.9
GTA LR LR
comp=Z,158nm,14.1s,MS4.8
NJ2 Nanjing 129.84 330 *e*PKP PKPdf 13 00 15.4 -2.5
STKA Stephens Creek 130.30 238 PKP PKPdf 13 00 17.7 -1.1
comp=Z,2.7nm,0.8s,baz=332,slow=3.5,SNR=5.3
STKA Stephens Creek 130.30 238 PKP PKPdf 13 00 17.7 -1.1
LZH Lanzhou 131.51 347 *e*PKP PKPdf 13 00 18.5 -2.5
LZH PP PP 13 02 40.8 +2.0
XAN Xi'an 132.10 341 PKP PKPdf 13 00 24.3 +2.1
XAN PP PP 13 02 48.8 +6.0
XAN SS SS 13 20 22.3 +6.7
XAN LR LR
comp=N,50nm,26.9s,MS4.4
XAN LR LR
comp=E,97nm,25.8s,MS4.4
XAN LR LR
comp=Z,285nm,21.3s,MS5.0
CD2 Chengdu 136.50 346 PKP PKPdf 13 00 32.6 +2.1
CD2 PP PP 13 03 15.4 +4.8
CD2 PKS 13 04 06.5
CD2 SS SS 13 21 15.4 +7.0
CD2 PP PP
comp=Z,180nm,4.2s
CD2 LR LR
comp=N,320nm,16.2s
CD2 LR LR
comp=Z,370nm,22.8s
ASAR Alice Springs 138.61 247 PKhKP 13 00 26.2
comp=Z,0.7nm,0.8s,baz=93,slow=3.2,SNR=5.6
ASAR PKP PKPdf 13 00 33.5 -1.1
comp=Z,1.9nm,0.8s,baz=100,slow=2.0,SNR=15
ASAR SKPab 13 04 29.0
comp=Z,1.2nm,0.9s,baz=118,slow=2.6,SNR=7.7
ASAR Alice Springs 138.61 247 PKP PKPdf 13 00 33.5 -1.1
ASAR SKPab 13 04 29.0
WRAB Tennant Creek 138.69 253 *i* PKIKP PKPdf 13 00 33.8 -0.9
WRA Warramunga Arr 138.69 253 PKhKP 13 00 27.2
comp=Z,0.7nm,0.8s,baz=94,slow=1.4,SNR=7.1
WRA PKP PKPdf 13 00 33.5 -1.3
comp=Z,3.5nm,0.8s,baz=92,slow=1.4,SNR=26
WRA SKPab 13 04 30.3
comp=Z,0.3nm,0.7s,baz=95,slow=2.4,SNR=6.5
WRA Warramunga Arr 138.69 253 PKP PKPdf 13 00 33.5 -1.3
WRA SKPab 13 04 30.3
GYA Guiyang 139.84 340 PDIF Pdif 12 57 50.4 +0.2
GYA PKP PKPdf 13 00 38.3 +1.6
GYA PP PP 13 03 37.9 +6.5
GYA PKS 13 04 13.5
GYA PP PP
comp=Z,120nm,8.4s
GYA LR LR
comp=N,190nm,22.6s,MS5.0
GYA LR LR
comp=E,180nm,20.2s,MS5.0
GYA LR LR
comp=Z,150nm,20.0s,MS4.7
KMI Kunming 142.28 344 PKP PKPdf 13 00 38.8 -2.4
POO Poona 145.15 32 *eP* PKPbc 13 00 44.0 -1.9
FITZ Fitzroy Crossi 147.07 254 *e*PKP PKPdf 13 00 49.9 +0.3
comp=Z,32nm,0.9s
CHRT Chiangrai 148.04 347 ⇓P PKPbc 13 00 53.5 -0.8
comp=Z,118nm,1.0s
HYB Hyderabad 148.32 26 *i* PKP PKPbc 13 00 54.5 -0.6
HYB Hyderabad 148.32 26 *eP* PKPbc 13 00 54.5 -0.6
CHG Chiang Mai 149.25 348 ⇓P PKPbc 13 00 56.7 -0.8
comp=Z,24nm,1.0s
CMAR Chiang Mai Arr 149.60 347 PKP PKPdf 13 00 53.3 -0.4
comp=Z,15nm,1.0s,baz=298,slow=1.7,SNR=22
CMAR PKPbc PKPbc 13 00 58.2 -0.1
comp=Z,20nm,0.9s,baz=326,slow=2.2,SNR=26
MUN Mundaring 149.89 223 *e*PKP PKPbc 13 00 57.1 -1.6
BLDU Ballidu 150.35 226 *e*PKP PKPbc 13 00 57.9 -1.9
comp=Z,5.7nm,1.0s
MEEK Meekatharra 150.93 235 *e*PKP PKPbc 13 00 59.3 -2.0
comp=Z,17nm,1.1s
MBWA Marble Bar 151.94 246 *e*PKP PKPbc 13 01 01.2 -2.6
NST Nakhon Sawan 151.98 344 P PKPdf 13 00 55.3 -2.2

IDC 18 13:02:14.4±16.0, 048S×12426E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=309.7km s-min=242.2km az=34.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.72**	**154**	P		P		13 07 07.7	+0.4
	0.6nm,0.3s,baz=335,slow=8.5,SNR=26								
ASAR	**Alice Springs**	**24.88**	**159**	P		P		13 07 38.0	-0.9
	0.6nm,0.5s,baz=331,slow=8.1,SNR=25								
STKA	**Stephens Creek**	**35.27**	**154**	P		P		13 09 12.0	+1.0
	0.9nm,0.7s,baz=324,slow=8.7,SNR=3.3								

*IDC **18** 13:36:53.5±3.2, 360S×149.27E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.9/16, mbtmp3.9/7, ML2.4/1, MS4.1/8, Ms1 4.1/8, ms1mx3.7/23, Error ellipse: s-maj=100.6km s-min=22.0km az=99.0*

*ISCJB **18** 13:36:56.3±0.9, 366S±0.09×149.3E±0.02, h33km, mb4.3/6, MS4.1/6, Error ellipse: s-maj=23.1km s-min=12.3km az=1.7*

*GCMT **18** 13:36:59.4±0.2, 345S×149.41E, h16km±1km, MW5.0/91, Moment Tensor Solution. s39,c52; s91,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.19±.13; $M_{\theta\theta}$1.55±.11; $M_{\phi\phi}$-1.74±.12; $M_{r\theta}$-1.16±.32; $M_{\theta\phi}$4.01±.10; $M_{\phi r}$0.15±.30; Best double couple: $M_0$4.49100×10^{16} NP1:ϕ_s191.00000°,δ75.00000°,λ178.00000°. NP2: ϕ_s281.00000°,δ88.00000°,λ15.00000°. Principal axes: T 4.4250, Plg12.0000°, Azm147.0000°; N 0.1350, Plg75.0000°, Azm288.0000°; P -4.5570, Plg9.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 13:36:59.4±2.7, 371S×149.35E, h47km±23km, mb4.6/3 Error ellipse: s-maj=19.4km s-min=17.0km az=62.0*

ISC 18 13:36:59.2±3.7, 37S.02×1493E±0.2, h44km±34km, n21, σ0°64/13, mb4.3/6, MS4.1/6, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.06**	**201**	Pn		Pn		**13 38 26.2**	**-0.2**
	0.6nm,0.3s,baz=21,slow=7.4,SNR=2.3								
PMG				Sn		Sn		**13 39 43.3**	**+8.8**
	baz=36,slow=19,SNR=2.0								
PMG				LR		LR		13 40 58.4	
	comp=Z,2μm,20.4s,baz=17,slow=40								
PMG	**Port Moresby**	**6.06**	**201**	P		Pn		**13 38 26.4**	**0.0**
PMG				Sn		Sn		**13 39 43.3**	**+8.7**
PMG				LR		LR		13 40 58.4	
GUMO	**Guam**	**17.75**	**346**	LR		LR		13 46 25.7	
	comp=Z,538nm,19.7s,baz=163,slow=32								
WRAB	**Tennant Creek**	**21.77**	**221**	*eP*		P		**13 41 47.3**	**-0.1**
	23nm,0.9s,mb4.6								
WRA	**Warramunga Arr**	**21.78**	**221**	P		P		**13 41 47.8**	**+0.3**
	0nm,0.9s,mb4.2,baz=42,slow=8.9,SNR=24								
DZM	**Mont Dzumac**	**24.67**	**139**	*eP*		P		**13 42 16.0**	**-0.1**
	29nm,1.5s,mb4.6								
ASAR	**Alice Springs**	**24.82**	**216**	P		P		**13 42 17.7**	**+0.2**
	2.6nm,0.7s,mb3.9,baz=53,slow=7.9,SNR=17								
FITZ	**Fitzroy Crossi**	**27.26**	**237**	*eP*		P		**13 42 39.5**	**-0.1**
	14nm,1.0s,mb4.5								
STKA	**Stephens Creek**	**28.95**	**194**	LR		LR		13 55 51.3	
	comp=Z,373nm,19.4s,MS4.0,baz=17,slow=39								
CBIJ	**Chichi jima**	**31.39**	**348**	LR		LR		13 54 17.2	
	comp=Z,503nm,21.0s,MS4.2,baz=333,slow=33								
JOW	**Kunigami**	**36.55**	**327**	LR		LR		13 55 31.0	
	comp=Z,467nm,19.7s,MS4.3,baz=107,slow=31								
MJAR	**Matsushiro Arr**	**41.37**	**346**	LR		LR		13 58 56.9	
	comp=Z,266nm,21.5s,MS4.1,baz=165,slow=32								
RAR	**Rarotonga**	**52.38**	**114**	LR		LR		14 02 51.3	
	comp=Z,109nm,20.4s,MS3.9,baz=273,slow=30								
CMAR	**Chiang Mai Arr**	**54.29**	**296**	P		P		**13 46 20.9**	**-0.7**
	1.0nm,0.8s,mb3.8,baz=123,slow=5.9,SNR=5.9								
PETK	**Petropavlovsk-**	**57.04**	**6**	LR		LR		14 11 47.8	
	comp=Z,140nm,18.2s,MS4.1,baz=185,slow=37								
PPT	**Papeete**	**61.34**	**108**	*e*LR		LR		14 05 48.4	
	161nm,26.5s								
SONM	**Songino Array**	**63.59**	**329**	P		P		**13 47 26.7**	**+1.2**
	0.4nm,0.6s,baz=127,slow=4.5,SNR=3.2								
MKAR	**Makanchi Array**	**77.25**	**320**	P		P		**13 48 49.5**	**+0.6**
	0.5nm,0.7s,baz=114,slow=6.5,SNR=4.9								
ZALV	**Zalesovo Beam**	**78.35**	**327**	P		P		**13 48 53.5**	**-1.3**
	0.3nm,0.3s,baz=123,slow=10,SNR=2.5								
TOA0	**Torodi Ar. Sit**	**146.69**	**288**	*e*PKPbc		PKPbc		13 56 37.2	-0.1
TORD	**Torodi Ar. Bea**	**146.69**	**288**	PKPbc		PKPbc		13 56 37.5	+0.2
	1.8nm,0.9s,baz=63,slow=3.1,SNR=7.4								

IDC 18 13:39:47.8±5.2, 271S×14171E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=213.9km s-min=25.5km az=92.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.58**	**202**	P		Pn		13 44 06.2	-0.5
	0.3nm,0.3s,baz=27,slow=12,SNR=9.2								
ASAR	**Alice Springs**	**22.16**	**199**	P		P		13 44 45.6	+0.2
	0.9nm,0.7s,baz=28,slow=10,SNR=4.7								
MKAR	**Makanchi Array**	**71.64**	**321**	P		P		13 51 11.5	+0.2
	1.4nm,0.9s,baz=107,slow=7.7,SNR=7.2								
ZALV	**Zalesovo Beam**	**73.46**	**329**	P		P		13 51 21.6	-0.3
	0.3nm,0.3s,baz=128,slow=9.3,SNR=3.0								
KURK	**Kurchatov**	**75.45**	**324**	P		P		13 51 33.9	+0.3
	0.4nm,0.2s,baz=106,slow=5.9,SNR=3.1								
BVAR	**Borovoye Array**	**81.04**	**325**	P		P		13 52 04.8	+0.3
	0.6nm,0.7s,baz=123,slow=7.7,SNR=3.8								
TORD	**Torodi Ar. Bea**	**139.13**	**287**	PKP		PKPdf		13 59 18.5	+0.8
	0.5nm,0.8s,baz=64,slow=3.4,SNR=2.8								

ISCJB **18** *13:51:50.5±0.8, 30.35N±0.09×69.85E±0.06, h10^{km}, mb3.7/8, Error ellipse: s-maj=13.6km s-min=6.4km az=17.5*
IDC **18** *13:51:52.6±2.1, 30.61N×69.67E, h0^{km}, mb3.6/8, mb1 3.6/9, mb1mx3.5/27, mbtmp3.6/9, ML3.4/1, MS4.5/1, Ms1 4.5/1, ms1mx2.8/35, Error ellipse: s-maj=49.3km s-min=29.5km az=146.0*
NEIC **18** *13:51:53.9±6.4, 30.48N×69.96E, h15^{km}±40^{km}, mb4.0/1, Error ellipse: s-maj=26.2km s-min=10.7km az=48.0*
ISC 18 13:51:51.1±2.8**, 30.29N**±0.10×**69.70E**±0.08**, h7**^{km}±16^{km}**, n25,** $\sigma 1^{s}46$/26**, mb3.7**/8**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	4.27	353	ePn	Pn	13 52 58.5	+1.9
SDNR	Sundarnagar	6.36	77	eP	Pn	13 53 29.6	+4.2
SDNR				eS	Sg	13 55 17.0	+1.5
SMLA	Simla	6.49	81	i P	Pn	13 53 29.0	+2.0
SMLA				i S	Sn	13 54 42.1	+0.8
SMLA				ex	x	13 54 44.6	
	comp=E,230nm,0.3s						
SMLA				ex	x	13 54 46.4	
	comp=N,277nm,0.3s						
AML	Almayashu	12.25	14	ePn	Pn	13 54 43.7	-2.2
	comp=N,5.7nm,0.5s						
KOLN	Koldanda	12.42	98	eP	Pn	13 54 49.3	+0.9
DANN	Dangsing	12.42	95	eP	Pn	13 54 48.2	-0.3
GKN	Gorkha	13.25	96	eP	Pn	13 54 59.1	-0.7
	comp=N,10nm,0.5s						
KKN	Kakani	13.86	97	eP	Pn	13 55 07.8	-0.3
GUN	Gumba	14.35	96	eP	Pn	13 55 12.7	-2.0
JIRN	Jiri	14.67	96	eP	Pn	13 55 17.8	-1.4
	comp=N,8.8nm,0.4s						
RAMN	Ramite	15.21	98	eP	Pn	13 55 25.3	-1.2
MKAR	Makanchi Array	19.16	27	P	Pn	13 56 12.5	-3.3
	comp=N,0.1nm,0.3s,baz=214,slow=13,SNR=9.0						
MKAR	Makanchi Array	19.16	27	P	Pn	13 56 12.5	-3.3
KURK	Kurchatov	21.47	16	P	P	13 56 37.1	-3.0
	comp=N,1.3nm,0.7s,mb3.4,baz=207,slow=9.9,SNR=5.7						
AKTK	Aktyubinsk	21.95	340	P	P	13 56 45.1	-0.2
AKTO	Aktyubinsk	21.95	340	P	P	13 56 45.1	-0.2
	comp=N,0.9nm,0.8s,baz=152,slow=15,SNR=2.5						
BVAR	Borovoye Array	22.72	1	P	P	13 56 53.1	-0.4
	comp=N,0.8nm,0.5s,mb3.4,baz=174,slow=12,SNR=6.4						
ZAA0	Zalesovo Array	26.05	21	eP	P	13 57 26.7	+1.7
ZALV	Zalesovo Beam	26.05	21	P	P	13 57 25.4	+0.4
	comp=N,1.6nm,0.4s,mb3.9,baz=214,slow=9.3,SNR=7.9						
SONM	Songino Array	33.06	48	P	P	13 58 30.0	+2.8
	comp=N,0.5nm,0.8s,mb3.5,baz=270,slow=8.6,SNR=4.0						
ULN	Ulaanbaatar	33.49	48	P	P	13 58 28.7	-2.3
	comp=N,0.8nm,0.4s,mb4.0						
DAV	Davao City (W)	57.12	102	LR	LR	14 26 00.2	
	comp=N,402nm,20.0s,baz=42,slow=36						
TORD	Torodi Ar. Bea	64.60	271	P	P	14 02 31.8	+2.1
	comp=N,0.3nm,0.6s,mb3.5,baz=45,slow=7.4,SNR=2.9						
PETK	Petropavlovsk-	65.25	42	P	P	14 02 33.3	-0.1
	comp=N,1.9nm,0.8s,mb4.2,baz=265,slow=5.6,SNR=3.5						
YKA	Yellowknife Ar	87.48	2	P	P	14 04 40.6	+1.4
	comp=N,0.2nm,0.5s,mb3.6,baz=350,slow=5.0,SNR=7.0						

ISCJB **18** *13:57:04.6±0.5, 3.58S±0.06×149.49E±0.09, h33^{km}, mb4.1/16, MS3.8/5, Error ellipse: s-maj=13.4km s-min=8.0km az=7.9*
BJI **18** *13:57:04.9, 3.71S×149.88E, h65^{km}, mB5.4, mb4.5*
NEIC **18** *13:57:07.5±2.1, 3.62S×149.47E, h44^{km}±21^{km}, mb4.7/5, Error ellipse: s-maj=16.9km s-min=12.5km az=141.0*
GCMT **18** *13:57:07.5±0.3, 3.49S×149.41E, h19^{km}±1^{km}, MW4.9/79, Moment Tensor Solution. s21,c25; s79,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.46±.14; $M_{\theta\theta}$0.49±.11; $M_{\phi\phi}$-0.95±.12; $M_{r\theta}$-0.64±.26; $M_{\theta\phi}$3.05±.10; $M_{\phi r}$0.09±.22; Best double couple: $M_0$3.20400×10^{16} NP1:ϕ_s187.00000°, δ78.00000°, λ178.00000°. NP2: ϕ_s277.00000°, δ88.00000°, λ12.00000°. Principal axes: T 2.9860, Plg10.0000°, Azm142.0000°; N 0.4380, Plg78.0000°, Azm288.0000°; P -3.4230, Plg7.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC **18** *13:57:08.2±3.3, 3.66S×149.58E, h53^{km}±31^{km}, mb3.8/10, mb1 3.9/11, mb1mx3.8/18, mbtmp3.8/11, ML2.5/1, MS3.9/8, Ms1 3.9/8, ms1mx3.6/37 Error ellipse: s-maj=42.0km s-min=14.3km az=111.0*
ISC 18 13:57:07.1±1.8**, 3.56S**±0.08×**149.51E**±0.10**, h39**^{km}±18^{km}**, n30,** $\sigma 1^{s}13$/26**, mb4.1**/16**, MS3.8**/5**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.25	202	P	Pn	13 58 38.7	+1.8
	0.8nm,0.3s,baz=12,slow=17,SNR=3.4						
PMG				S	Sn	13 59 48.3	+1.1
	0.4nm,0.3s,baz=308,slow=17,SNR=2.8						
PMG				LR	LR	14 01 07.5	
	comp=Z,2μm,20.8s,baz=12,slow=39						
PMG	Port Moresby	6.25	202	eP	Pn	13 58 38.2	+1.3
PMG				S	Sn	13 59 48.3	+1.1
PMG				LR	LR	14 01 07.5	
HNR	Honiara	11.90	120	P	Pn	13 59 53.1	-1.1
CTA	Charters Tower	16.73	191	LR	LR	14 06 45.4	
	comp=Z,295nm,20.0s,baz=16,slow=35						
GUMO	Guam	17.65	345	LR	LR	14 06 23.9	
	comp=Z,506nm,21.8s,baz=187,slow=31						
KAKA	Kakadu	19.17	241	eP	x	14 13 25.9	
	15nm,0.9s						
EIDS	Eidsvold	21.73	176	eP	P	14 01 56.2	+1.1
WRAB	Tennant Creek	21.98	221	eP	P	14 01 56.1	-1.8
	35nm,0.9s,mb4.8						
WB2	Warramunga Arr	21.99	221	eP	P	14 01 56.1	-1.8
WB2				eS	S	14 05 59.6	+1.0
WRA	Warramunga Arr	22.00	221	P	P	14 01 56.5	-1.5
	18nm,0.8s,mb4.5,baz=42,slow=11,SNR=40						
WRA				S	S	14 05 59.0	+0.2
	1.3nm,1.1s,baz=47,slow=17,SNR=4.7						
WRA				LR	LR	14 11 09.1	
	comp=Z,602nm,19.1s,MS4.0,baz=55,slow=38						
DZM	Mont Dzumac	24.67	140	eP	P	14 02 26.1	+1.7
	8.1nm,0.8s,mb4.3						
ASAR	Alice Springs	25.03	216	P	P	14 02 27.4	-0.3
	7.7nm,0.9s,mb4.2,baz=51,slow=8.5,SNR=33						
DAV	Davao City (W)	26.11	294	LR	LR	14 10 41.9	
	comp=Z,171nm,21.4s,MS3.5,baz=25,slow=31						
FITZ	Fitzroy Crossi	27.48	237	eP	P	14 02 50.9	+1.1
	37nm,0.8s,mb5.0						
FITZ				eS	S	14 07 32.0	+3.9
STKA	Stephens Creek	29.13	194	P	P	14 03 02.3	-2.1
	1.1nm,0.9s,mb3.6,baz=56,slow=7.3,SNR=3.8						
STKA				LR	LR	14 15 49.7	
	comp=Z,350nm,18.8s,MS4.0,baz=15,slow=39						
KAPI	Kappang	29.70	266	LR	LR	14 16 23.0	
	comp=Z,119nm,18.5s,MS3.5,baz=97,slow=39						
CBIJ	Chichi jima	31.29	347	LR	LR	14 14 25.5	
	comp=Z,293nm,20.4s,MS3.9,baz=148,slow=33						
MEEK	Meekatharra	37.42	229	eP	P	14 04 15.3	-1.4
	12nm,0.8s,mb4.8						
CMAR	Chiang Mai Arr	54.38	296	P	P	14 06 31.5	+1.0
	2.2nm,0.8s,mb4.1,baz=112,slow=5.7,SNR=12						
PPT	Papeete	61.23	108	eLR	LR	14 25 46.5	
	139nm,26.5s						
GTA	Gaotai	62.54	318	eP	P	14 07 27.8	+0.8
GTA				AMB	AMB		
	comp=Z,2.0nm,1.2s,mb4.1						
SONM	Songino Array	63.56	329	P	P	14 07 34.2	+0.6
	comp=Z,0.7nm,0.9s,mb3.7,baz=160,slow=3.9,SNR=4.6						
MKAR	Makanchi Array	77.25	319	P	P	14 08 57.0	-0.3
	comp=Z,0.9nm,0.9s,mb3.7,baz=85,slow=6.1,SNR=6.3						
ZALV	Zalesovo Beam	78.32	327	P	P	14 09 02.8	-0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=76,slow=6.3,SNR=4.5						
KURK	Kurchatov	80.79	323	P	P	14 09 16.8	+0.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=105,slow=4.7,SNR=3.6						
BVAR	Borovoye Array	86.30	324	P	P	14 09 44.4	-0.4
	comp=Z,0.8nm,0.7s,mb4.1,baz=107,slow=5.0,SNR=6.5						
BRVK	Borovoye	86.36	324	P	P	14 09 45.0	-0.1
	comp=Z,1.3nm,0.9s,mb4.2						
YKA	Yellowknife Ar	95.87	28	P	P	14 10 29.9	+0.6
	comp=Z,0.2nm,0.7s,mb3.7,baz=273,slow=4.9,SNR=7.7						
TOA0	Torodi Ar. Sit	146.80	289	ePKPbc	PKPbc	14 16 46.1	0.0
TORD	Torodi Ar. Bea	146.80	289	PKPbc	PKPbc	14 16 46.3	+0.2
	comp=Z,2.9nm,0.9s,baz=51,slow=3.4,SNR=9.5						

ISCJB **18** *14:07:53.1±0.5, 0.24N±0.05×122.33E±0.05, h187^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=9.4km s-min=7.2km az=135.6*
IDC **18** *14:07:54.2±0.8, 0.23N×122.26E, h182^{km}±8^{km}, mb3.5/10, mb1 3.6/11, mb1mx3.5/22, mbtmp3.5/11, Error ellipse: s-maj=28.4km s-min=9.7km az=62.0*
NEIC **18** *14:07:54.3±0.3, 0.21N×122.26E, mb4.7/18, Error ellipse: s-maj=13.6km s-min=4.7km az=64.0*
DJA **18** *14:07:56, 0.13N×122.46E, h30^{km}, MLv4.2/5*
ISC 18 14:07:54.0±0.5**, 0.24N**±0.05×**122.34E**±0.05**, h179**^{km}±6^{km}**, h184**^{km}±1.9^{km}**:pP-P, n45,** $\sigma 0^{s}72$/45**, mb4.4**/26**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	Palu	2.74	246	P	Pn	14 08 38.4	-1.2
PCI				S	Sn	14 09 16.0	+1.1
MNI	Manado	2.78	64	P	Pn	14 08 40.1	+0.1
KDI	Kendari	4.17	176	P	Pn	14 08 57.9	+0.5
TNTI	Ternate	5.06	84	P	Pn	14 09 08.6	-0.2
LBMI	Labuha	5.24	100	P	Pn	14 09 10.7	-0.4
KAPI	Kappang	5.82	206	P	Pn	14 09 18.2	-0.5
	6.4nm,0.3s,baz=31,slow=4.3,SNR=25						
KAPI	Kappang	5.82	206	eP	Pn	14 09 18.1	-0.6
KKM	Kota Kinabalu	8.40	313	eP	Pn	14 09 52.6	-0.1
KSM	Kuching	12.09	276	eP	Pn	14 10 46.2	+5.4
FITZ	Fitzroy Crossi	18.51	170	eP	P	14 11 57.2	+0.3
	6.0nm,0.4s						
MBWA	Marble Bar	21.42	187	eP	P	14 12 27.2	-0.8
WRA	Warramunga Arr	23.25	150	P	P	14 12 46.0	+0.4
	3.3nm,0.8s,mb3.8,baz=328,slow=10,SNR=41						
WRA				pP		14 13 19.2	
	1.2nm,0.9s,baz=326,slow=10,SNR=1.6						
WRA				PcP	PcP	14 16 27.0	-1.0
	0.3nm,0.8s,baz=345,slow=2.9,SNR=3.5						
WB2	Warramunga Arr	23.25	150	eP	P	14 12 45.5	-0.1
WB2	Warramunga Arr	23.25	150	eP	P	14 12 45.8	+0.2
PSI	Prapat	23.54	276	P	P	14 12 47.4	-0.9
	3.7nm,0.5s,mb4.1,baz=113,slow=8.3,SNR=6.8						
ASAR	Alice Springs	26.28	155	P	P	14 13 13.2	+0.2
	1.2nm,0.6s,mb3.7,baz=344,slow=14,SNR=50						
ASAR				pP	pP	14 13 49.5	-0.1
	1.5nm,0.9s,baz=344,slow=14,SNR=2.6						
ASAR				PcP	PcP	14 16 34.2	-0.5
	0.6nm,0.3s,baz=346,slow=2.2,SNR=10						
MEEK	Meekatharra	26.96	187	eP	P	14 13 18.1	-0.9
	6.6nm,0.5s,mb4.5						
CMAR	Chiang Mai Arr	29.25	310	P	P	14 13 40.2	+0.8
	0.5nm,0.4s,mb3.6,baz=140,slow=7.4,SNR=6.2						
CHTO	Chiang Mai	29.46	310	eP	P	14 13 40.4	-0.9
	2.4nm,0.8s,mb4.0						
MORW	Morawa	29.75	191	eP	P	14 13 43.1	-0.7
	24nm,1.4s,mb4.7						
STKA	Stephens Creek	36.77	152	eP	P	14 14 45.2	+0.7
	1.6nm,0.4s,mb4.0						
STKA	Stephens Creek	36.77	152	P	P	14 14 45.4	+0.9
	2.3nm,0.4s,mb4.2,baz=322,slow=8.5,SNR=14						
STKA	Stephens Creek	36.77	152	eP	P	14 14 45.1	+0.6
CMSA	Cobar Meteorol	38.58	147	eP	P	14 15 01.1	+1.5
	16nm,2.0s,mb4.3						
LSA	Lhasa	41.73	317	eP	P	14 15 27.5	+1.9
	5.1nm,0.5s,mb4.4						
ODAN	Odare	42.77	311	eP	P	14 15 34.5	+0.4
	8.8nm,0.4s,mb4.7						
TAPN	Taplejung	42.79	312	eP	P	14 15 34.7	+0.5
	13nm,0.5s,mb4.8						
RAMN	Ramite	43.41	311	eP	P	14 15 39.9	+0.7
	34nm,0.7s,mb5.1						
JIRN	Jiri	44.10	311	eP	P	14 15 45.2	+0.5
	22nm,0.4s,mb5.1						
GUN	Gumba	44.46	311	eP	P	14 15 47.9	+0.3
	32nm,0.5s,mb5.2						
PKI	Pulchoki	44.64	311	eP	P	14 15 49.1	+0.1
KKN	Kakani	44.85	311	eP	P	14 15 50.8	+0.1
DMN	Daman	44.89	310	eP	P	14 15 51.2	+0.2
	17nm,0.7s,mb4.8						
GKN	Gorkha	45.45	311	eP	P	14 15 55.4	+0.1
	28nm,0.6s,mb5.1						
KOLN	Koldanda	46.12	310	eP	P	14 16 00.9	+0.3
	35nm,0.6s,mb5.2						
DANN	Dangsing	46.29	311	eP	P	14 16 02.2	+0.3
	60nm,0.5s,mb5.4						
ULN	Ulaanbaatar	49.26	346	eP	P	14 16 24.4	0.0
	1.8nm,0.6s,mb3.9						
SONM	Songino Array	49.39	346	P	P	14 16 25.6	+0.2
	1.8nm,0.6s,mb3.9,baz=165,slow=8.9,SNR=10						
MKAR	Makanchi Array	58.06	329	P	P	14 17 28.4	0.0
	1.0nm,0.3s,mb4.1,baz=121,slow=9.3,SNR=41						
MKAR				pP	pP	14 18 10.3	+0.7
	0.3nm,0.5s,baz=128,slow=6.6,SNR=1.5						
KBL	Kabul	60.28	310	eP	P	14 17 42.9	-1.0
	5.8nm,0.6s,mb4.6						
ZALV	Zalesovo Beam	61.83	336	P	P	14 17 52.6	-1.2
	0.4nm,0.3s,mb3.7,baz=145,slow=6.3,SNR=3.4						
KURK	Kurchatov	62.44	330	P	P	14 17 57.3	-0.7
	1.0nm,0.6s,mb3.9,baz=134,slow=6.9,SNR=9.3						
KURK				pP	pP	14 18 40.1	+0.3
	0.8nm,0.9s,baz=122,slow=6.7,SNR=3.3						
KURK	Kurchatov	62.44	330	eP	P	14 17 56.4	-1.6
	1.7nm,0.5s,mb4.1						
KURK				pP	pP	14 18 40.1	+0.3
BVAR	Borovoye Array	67.94	329	P	P	14 18 32.3	-1.1
	0.5nm,0.5s,mb3.5,baz=128,slow=11,SNR=4.6						
TORD	Torodi Ar. Bea	119.70	285	PKP	PKPdf	14 26 21.8	-1.9
	0.4nm,0.8s,baz=52,slow=1.1,SNR=2.9						

ISCJB **18** *14:08:42.8±0.7, 40.0N±0.2×40.82E±0.07, h14^{km}±6^{km}, Error ellipse: s-maj=26.3km s-min=5.1km az=15.0*
CSEM **18** *14:08:42.6±0.0, 40.05N×40.77E, h10^{km}, MD2.9, Error ellipse: s-maj=0.7km s-min=0.4km az=5.0*
DDA **18** *14:08:42.7, 39.97N×40.85E, h7^{km}±1^{km}, Md3.1*
ISK **18** *14:08:42.5, 40.02N×40.80E, h10^{km}, MD2.9*
ISC 18 14:08:43.3±0.7**, 40.0N**±0.2×**40.82E**±0.06**, h14**^{km}±7^{km}**, n8,** $\sigma 0^{s}72$/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.25	272	i P	Pg	14 08 48.5	-0.1
KOPT				i S	Sg	14 08 52.7	+0.5
EZM	Erzurum	0.43	104	ePG	Pg	14 08 51.0	-0.8
EZM				eSG	Sg	14 08 59.1	+1.5
ERZM	Erzurum	0.43	104	i P	Pg	14 08 50.5	-1.4
EZC	Erzincan	0.82	252	ePN	Pg	14 09 05.1	+6.0
GUMT	Gumushane	1.12	294	ePN	Pn	14 09 04.3	-0.3
GUMT				eSN	Sn	14 09 19.9	+0.1
BCA	Borcka	1.56	23	ePN	Pn	14 09 10.8	+0.2
TUTA	Tutak	1.65	111	i P	Pn	14 09 11.6	-0.3
TUTA				i S	Sg	14 09 36.5	0.0
AGRB	Hanur-Agry	1.73	104	ePN	Pn	14 09 13.7	+0.7

IDC 18 14:10:10.7±5.2**, 3.90S**×**148.46E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.5**/15**, mbtmp3.7**/2**, Error ellipse: s-maj=208.4km s-min=52.6km az=109.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	21.06	220	eP	P	14 15 01.2	+4.6
WRA	Warramunga Arr	21.07	220	P	P	14 14 56.6	-0.1
	1.4nm,0.9s,baz=44,slow=11,SNR=4.4						
ASAR	Alice Springs	24.17	214	P	P	14 15 29.0	+0.2
	3.2nm,1.0s,baz=51,slow=7.8,SNR=5.0						
FITZ	Fitzroy Crossi	26.43	236	eP	P	14 15 51.1	+1.6
	8.8nm,0.9s						
TORD	Torodi Ar. Bea	145.91	288	PKPbc	PKPbc	14 29 52.6	-0.8
	0.5nm,0.6s,baz=62,slow=4.8,SNR=3.4						

IDC **18** *14:12:55.7±1.9, 3.54S×149.29E, h0^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.8/16, mbtmp3.7/8, MS4.3/21, Ms1 4.3/21, ms1mx4.1/32, Error ellipse: s-maj=63.1km s-min=24.6km az=105.0*
ISCJB **18** *14:12:59.5±1.4, 3.6S±0.1×149.2E±0.3, h33^{km}, mb3.9/10, MS4.3/18, Error ellipse: s-maj=43.7km s-min=13.6km az=18.6*
NEIC **18** *14:13:00.9±1.1, 3.61S×149.29E, h35^{km}, mb4.5/2, Error ellipse: s-maj=35.2km s-min=10.7km az=110.0*
GCMT **18** *14:13:00.9±0.2, 3.40S×149.19E, h15^{km}±1^{km}, MW5.0/87, Moment Tensor Solution. s33,c44; s87,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.08±.13; $M_{\theta\theta}$1.86±.12; $M_{\phi\phi}$-1.95±.12; $M_{r\theta}$-0.45±.38; $M_{\theta\phi}$4.16±.11; $M_{\phi r}$0.13±.35; Best double couple: $M_0$4.59900×10^{16} NP1:ϕ_s192.00000°, δ84.00000°, λ-180.00000°. NP2: ϕ_s102.00000°, δ90.00000°, λ-6.00000°. Principal axes: T 4.5520, Plg4.0000°, Azm147.0000°; N 0.0880, Plg84.0000°, Azm280.0000°; P -4.6470, Plg4.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 18 14:12:57.0±3.8**, 3.6S**±0.1×**149.3E**±0.3**, h8**^{km}±25^{km}**, n34,** $\sigma 0^{s}65$/18**, mb3.9**/10**, MS4.3**/18**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.16	200	LR	LR	14 17 01.1	
	comp=Z,2μm,21.8s,baz=12,slow=40						
CTA	Charters Tower	16.67	190	LR	LR	14 23 15.1	
	comp=Z,392nm,18.9s,baz=9.0,slow=37						
GUMO	Guam	17.63	346	LR	LR	14 22 17.5	
	comp=Z,928nm,21.6s,baz=343,slow=32						
WRAB	Tennant Creek	21.84	221	eP	P	14 17 49.7	-0.4
	17nm,0.9s,mb4.5						
WB2	Warramunga Arr	21.85	221	eP	P	14 17 49.9	-0.2
WB2				eS	S	14 21 51.1	-0.8
WB2	Warramunga Arr	21.85	221	eP	P	14 17 49.7	-0.4
WB2				eS	S	14 21 51.1	-0.8
WRA	Warramunga Arr	21.86	221	P	P	14 17 50.3	+0.1
	9.8nm,0.9s,mb4.2,baz=41,slow=11,SNR=14						
WRA				LR	LR	14 27 01.1	
	comp=Z,808nm,19.2s,MS4.2,baz=55,slow=39						
ASAR	Alice Springs	24.90	215	P	P	14 18 20.8	+0.3
	3.0nm,0.9s,mb3.8,baz=47,slow=7.9,SNR=11						
FITZ	Fitzroy Crossi	27.31	236	eP	P	14 18 43.1	+0.7
	21nm,0.9s,mb4.7						
FITZ				eS	S	14 23 23.0	+0.7
FITZ	Fitzroy Crossi	27.31	236	eP	P	14 18 43.2	+0.9
	12nm,0.9s,mb4.4						
FITZ				eS	S	14 23 23.0	+0.7
STKA	Stephens Creek	29.06	194	LR	LR	14 32 05.3	
	comp=Z,471nm,18.2s,MS4.1,baz=15,slow=40						
CBIJ	Chichi jima	31.27	348	LR	LR	14 30 19.0	
	comp=Z,508nm,19.3s,MS4.2,baz=143,slow=33						
JHJ	Hachijo jima 2	37.61	347	LR	LR	14 33 34.5	
	comp=Z,274nm,20.6s,MS4.0,baz=116,slow=33						
AFI	Afiamalu	39.73	107	LR	LR	14 33 17.5	
	comp=Z,194nm,19.1s,MS4.0,baz=99,slow=31						
MJAR	Matsushiro Arr	41.25	346	LR	LR	14 34 59.4	
	comp=Z,433nm,19.8s,MS4.3,baz=170,slow=32						
URZ	Urewera	42.83	147	LR	LR	14 36 00.8	
	comp=Z,593nm,19.7s,MS4.5,baz=122,slow=32						
RPZ	Rata Peaks	44.35	157	LR	LR	14 35 52.0	
	comp=Z,779nm,19.8s,MS4.6,baz=342,slow=31						
KSRS	Korea Array	45.42	336	LR	LR	14 38 48.8	
	comp=Z,251nm,19.9s,MS4.2,baz=141,slow=34						
ASAJ	Asahikawa	47.87	353	LR	LR	14 39 59.2	
	comp=Z,301nm,20.3s,MS4.3,baz=124,slow=34						
RAR	Rarotonga	52.44	114	LR	LR	14 40 05.0	
	comp=Z,336nm,18.5s,MS4.4,baz=276,slow=31						
CMAR	Chiang Mai Arr	54.23	296	P	P	14 22 24.2	+0.6
	0.9nm,0.7s,mb3.8,baz=112,slow=5.6,SNR=5.6						
CMAR				LR	LR	14 44 29.8	
	comp=Z,99nm,18.7s,MS3.9,baz=292,slow=35						
PETK	Petropavlovsk-	56.93	6	LR	LR	14 48 01.1	
	comp=Z,156nm,18.6s,MS4.1,baz=186,slow=37						
PPT	Papeete	61.40	108	LR	LR	14 45 23.7	
	comp=Z,151nm,19.6s,MS4.2,baz=275,slow=32						
SONM	Songino Array	63.48	329	P	P	14 23 28.3	+0.8
	0.4nm,0.6s,mb3.7,baz=134,slow=5.6,SNR=2.7						
MKAR	Makanchi Array	77.15	320	P	P	14 24 50.1	-1.1
	0.9nm,1.0s,mb3.6,baz=131,slow=5.9,SNR=3.5						
ZALV	Zalesovo Beam	78.24	327	P	P	14 24 56.1	-1.0
	0.2nm,0.3s,mb3.6,baz=150,slow=6.7,SNR=3.1						
KURK	Kurchatov	80.69	323	P	P	14 25 10.3	-0.2
	0.1nm,0.2s,mb3.3,baz=107,slow=4.5,SNR=2.5						
MAW	Mawson	85.35	203	LR	LR	15 01 55.9	
	comp=Z,204nm,21.1s,MS4.5,baz=80,slow=34						
DLBC	Dease Lake	88.14	31	LR	LR	15 00 57.0	
	comp=Z,208nm,18.0s,MS4.6,baz=248,slow=33						
BBB	Bella Bella	88.25	38	LR	LR	15 00 03.9	
	comp=Z,222nm,18.8s,MS4.6,baz=285,slow=32						
AKTO	Aktyubinsk	93.57	320	LR	LR	15 07 52.7	
	comp=Z,204nm,19.6s,MS4.6,baz=76,slow=35						
YKA	Yellowknife Ar	95.98	28	P	P	14 26 24.9	+0.6
	0.1nm,0.5s,mb3.5,baz=259,slow=4.6,SNR=2.8						
YKA	Yellowknife Ar	95.98	28	P	P	14 26 24.9	+0.6
TORD	Torodi Ar. Bea	146.63	288	PKPbc	PKPbc	14 32 39.8	-0.5
	1.6nm,1.0s,baz=64,slow=3.0,SNR=5.6						

IDC **18** *14:35:18.7±0.7, 51.65N×174.46W, h0^{km}, mb4.2/26, mb1 4.4/28, mb1mx4.3/33, mbtmp4.2/28, ML4.1/2, MS4.3/2, Ms1 4.3/2, ms1mx3.0/37, Error ellipse: s-maj=22.0km s-min=11.8km az=173.0*
BJI **18** *14:35:22.3, 51.80N×173.75W, h57^{km}, mB5.1, mb4.6, Ms4.6, Msz4.3*
MOS **18** *14:35:22.5±0.9, 51.63N×174.35W, h33^{km}, mb4.8/28, Error ellipse: s-maj=12.9km s-min=6.8km az=90.0*
ISCJB **18** *14:35:24.0±0.8, 51.65N±0.08×174.37W±0.05, h45^{km}±5^{km}, mb4.6/66, MS4.1/4, Error ellipse: s-maj=14.3km s-min=4.6km az=169.0*
NEIC **18** *14:35:25.8±0.7, 51.58N×174.39W, h51^{km}±4^{km}, mb4.7/39, ML4.2(AEIC), Error ellipse: s-maj=9.7km s-min=4.1km az=168.0*
SZGRF **18** *14:35:26.2, 50.91N×175.56E, h33^{km}, mb4.9, Rat Islands, Aleutian Islands, United States*
ISC 18 14:35:26.1±0.8**, 51.70N**±0.08×**174.39W**±0.05**, h47**^{km}±5^{km}**, n192,** $\sigma 0^{s}86$/193**, mb4.6**/66**, MS4.1**/4**, 5C-3D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	Adak	1.44	278	P	Pn	14 35 48.5	-1.1
ADK				S	Sn	14 36 07.5	+0.2
NIKO	Nikolski	3.63	67	P	Pn	14 36 19.2	-0.4
NIKO				S	Sn	14 36 59.6	-1.5
OKCE	Okmok Cone E	4.17	63	P	Pn	14 36 28.0	+0.9
UNV	Unalaska Valle	5.25	63	P	Pn	14 36 42.2	+0.4
AKUT	Akutan	5.75	62	ePn	Pn	14 36 50.4	+1.6
SPIA	Saint Paul Isl	5.99	22	P	Pn	14 36 56.2	+4.1
FALS	False Pass	7.30	60	P	Pn	14 37 10.8	+0.8
FX1	Attu Island--F	7.72	284	Pn	Pn	14 37 16.1	+0.3
	6.7nm,0.3s,baz=164,slow=11,SNR=8.2						
FX1				Sn	Sn	14 38 41.0	-0.8
	2.3nm,0.3s,baz=76,slow=19,SNR=2.2						
FX1	Attu Island--F	7.72	284	P	Pn	14 37 16.1	+0.3
FX1						14 38 41.1	
FX1				pmax	pmax		
	comp=Z,7.0nm,0.3s						
FX1				smax			
	comp=N,2.0nm,0.3s						
FX1	Attu Island--F	7.72	284	P	Pn	14 37 15.7	-0.1
SDPT	Sand Point	9.05	61	eP	Pn	14 37 33.4	-0.6
KDAK	Kodiak Island	13.95	56	Pn	Pn	14 38 39.6	-1.2
	comp=N,1.2nm,0.3s,baz=301,slow=5.9,SNR=3.1						
KDAK	Kodiak Island	13.95	56	eP	Pn	14 38 47.4	+6.6
SVW2	Sparrevohn	13.98	40	eP	Pn	14 38 44.6	+3.5
SEW	Seward	16.23	49	eP	Pn	14 39 08.1	-2.4
FIB	Fire Island	16.30	45	eP	Pn	14 39 12.7	+1.3
PPLA	Purkeypile	16.31	38	P	Pn	14 39 13.0	+1.5
	comp=N,54nm,1.4s						
RC01	Rabbit Creek A	16.47	46	eP	Pn	14 39 13.6	+0.1
PETK	Petropavlovsk-	17.05	286	P	Pn	14 39 19.1	-1.7
	comp=N,0.4nm,0.3s,baz=87,slow=15,SNR=14						
KTH	Kantishna Hill	17.15	37	eP	Pn	14 39 23.8	+1.8
	comp=N,37nm,1.3s						
TRF	Thorofare Moun	17.34	38	eP	Pn	14 39 25.8	+1.5
	comp=N,5.4nm,0.4s						
BPAW	Bear Paw Mtn.	17.43	36	eP	Pn	14 39 26.9	+1.4
	comp=N,11nm,0.8s						
MCK	McKinley	18.00	38	eP	Pn	14 39 31.9	-0.6
MCK				pmax	pmax		
	comp=Z,13nm,0.9s						
MCK	McKinley	18.00	38	eP	Pn	14 39 31.9	-0.6
	comp=Z,14nm,0.9s						
BILL	Bilibino	18.89	337	eP	Pn	14 39 44.6	+1.5
BILL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BILL	Bilibino	18.89	337	eP	Pn	14 39 43.8	+0.7
	comp=Z,4.3nm,0.6s						
COLA	College	19.00	36	P	Pn	14 39 42.6	-1.8
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
COLA	College	19.00	36	P	Pn	14 39 42.6	-1.9
	comp=Z,6.6nm,0.8s						
PAX	Paxson	19.06	43	eP	Pn	14 39 43.9	-1.4
PAX				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PAX	Paxson	19.06	43	eP	Pn	14 39 43.9	-1.4
	comp=Z,5.9nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
COLD	**Coldfoot**	**19.61**	**28**	*e*P	**Pn**	**14 39 50.5**	**-1.2**
	comp=Z,8.5nm,0.7s						
MENT	**Mentasta**	**19.79**	**44**	*e*P	**Pn**	**14 39 53.7**	**-0.3**
EGAK	**Eagle**	**21.52**	**40**	*e*P	**P**	**14 40 10.0**	**-0.7**
	comp=Z,34nm,0.6s,mb5.0						
DAWY	**Dawson**	**22.00**	**42**	*e*P	**P**	**14 40 15.2**	**-0.7**
INK	**Inuvik**	**25.63**	**34**	P	**P**	**14 40 50.2**	**-0.5**
	comp=Z,4.7nm,0.7s,mb4.2,baz=243,slow=10,SNR=40						
INK				PcP	PcP	14 44 19.8	-0.3
	comp=Z,0.8nm,0.6s,baz=300,slow=3.0,SNR=5.4						
INK	**Inuvik**	**25.63**	**34**	P	**P**	**14 40 50.2**	**-0.5**
INK						14 44 19.8	
INK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**25.63**	**34**	*e*P	**P**	**14 40 50.1**	**-0.5**
	comp=Z,3.5nm,0.6s,mb4.1						
DLBC	**Dease Lake**	**25.87**	**57**	P	**P**	**14 40 54.0**	**+1.1**
	comp=Z,3.5nm,0.7s,mb4.0,baz=339,slow=17,SNR=5.5						
YKA	**Yellowknife Ar**	**33.00**	**47**	P	**P**	**14 41 54.8**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.6,baz=287,slow=8.3,SNR=7.1						
YKA				PcP	PcP	14 44 38.4	-0.4
	comp=Z,0.7nm,0.5s,baz=287,slow=3.0,SNR=10						
YKA				ScP	ScP	14 48 23.6	+4.7
	comp=Z,0.4nm,0.7s,baz=291,slow=3.2,SNR=6.2						
YKA	**Yellowknife Ar**	**33.00**	**47**	P	**P**	**14 41 54.8**	**-1.3**
YKA						14 44 38.4	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**33.00**	**47**	P	**P**	**14 41 54.9**	**-1.3**
YKA				PcP	PcP	14 44 38.4	-0.4
YKA				ScP	ScP	14 48 23.6	+4.7
EDM	**Edmonton**	**36.23**	**63**	*e*P	**P**	**14 42 24.5**	**+0.4**
CN2	**Changchun**	**40.17**	**283**	*e*P	**P**	**14 42 57.8**	**+0.4**
NVAR	**Mina Array Bea**	**40.78**	**86**	P	**P**	**14 43 03.4**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=296,slow=8.3,SNR=4.0						
NVAR	**Mina Array Bea**	**40.78**	**86**	P	**P**	**14 43 03.4**	**+1.0**
ELK	**Elko**	**41.29**	**81**	P	**P**	**14 43 07.0**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.6,baz=294,slow=11,SNR=4.6						
ELK	**Elko**	**41.29**	**81**	P	**P**	**14 43 07.0**	**+0.4**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	**Korea Array**	**42.38**	**274**	P	**P**	**14 43 15.7**	**+0.2**
	comp=Z,1.5nm,0.9s,mb3.6,baz=62,slow=7.2,SNR=5.5						
KSRS	**Korea Array**	**42.38**	**274**	P	**P**	**14 43 15.7**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
PDAR	**Pinedale Array**	**43.58**	**75**	P	**P**	**14 43 25.2**	**+0.1**
	comp=Z,1.6nm,0.6s,mb3.9,baz=306,slow=3.3,SNR=12						
ULM	**Lac du Bonnet**	**47.18**	**59**	P	**P**	**14 43 53.0**	**-0.6**
	comp=Z,3.7nm,0.4s,mb4.7,baz=310,slow=7.1,SNR=6.1						
SONM	**Songino Array**	**48.94**	**299**	P	**P**	**14 44 07.2**	**0.0**
	comp=Z,0.5nm,0.3s,mb4.0,baz=51,slow=9.3,SNR=5.3						
SONM				PcP	PcP	14 45 29.7	-1.0
	comp=Z,0.6nm,0.5s,baz=67,slow=2.3,SNR=4.4						
SONM				ScP	ScP	14 49 24.8	+3.1
	comp=Z,0.2nm,0.4s,baz=47,slow=5.1,SNR=2.9						
SONM	**Songino Array**	**48.94**	**299**	P	**P**	**14 44 07.2**	**0.0**
SONM						14 45 29.7	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAK	**Zakamensk**	**49.12**	**303**	*e*P	**P**	**14 44 03.9**	**-4.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
SPB4	**Spitsbergen Ar**	**50.22**	**357**	*e*P	**P**	**14 44 16.5**	**0.0**
HHC	**Hu-ho-hao-te**	**50.23**	**288**	*e*P	**P**	**14 44 16.5**	**-0.6**
HHC				AP	pP	14 44 28.9	-1.0
HHC				PCP	PcP	14 45 36.0	+0.4
HHC				PP	PP	14 46 12.9	+0.5
HHC				PCS	PcS	14 49 31.5	-1.1
HHC				S	**S**	**14 51 22.3**	**-3.4**
HHC				SCS	ScS	14 54 00.8	-3.1
HHC				SS	SS	14 54 52.6	-6.5
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,406nm,9.2s						
HHC				LR	LR		
	comp=N,108nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=E,206nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=Z,106nm,19.0s,MS3.9						
ZALV	**Zalesovo Beam**	**55.77**	**315**	P	**P**	**14 44 57.0**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.8,baz=48,slow=8.6,SNR=2.0						
ZALV				PcP	PcP	14 45 56.4	+0.1
	comp=Z,2.3nm,0.8s,baz=46,slow=4.3,SNR=9.3						
ZALV	**Zalesovo Beam**	**55.77**	**315**	P	**P**	**14 44 57.0**	**-0.7**
ZALV						14 45 56.4	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**55.77**	**315**	P	**P**	**14 44 57.0**	**-0.7**
ZALV				PcP	PcP	14 45 56.4	+0.1
TXAR	**Lajitas Array**	**55.88**	**85**	P	**P**	**14 44 58.2**	**-0.7**
	comp=Z,0.6nm,0.7s,mb3.7,baz=300,slow=4.3,SNR=8.2						
TXAR				LR	LR	15 05 24.2	
	comp=Z,194nm,21.5s,MS4.2,baz=170,slow=32						
XAN	**Xi'an**	**56.28**	**284**	P	**P**	**14 45 00.8**	**-0.9**
XAN				PP	PP	14 47 06.3	-0.8
XAN				S	**S**	**14 52 47.9**	**-0.2**
XAN				SS	SS	14 56 36.3	+1.4
XAN				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.6						
XAN				LR	LR		
	comp=Z,39nm,20.9s,MS3.5						
KEV	**Kevo**	**57.85**	**351**	*e*p	**P**	**14 45 11.2**	**-1.0**
	comp=Z,2.1nm,0.4s,mb4.5						
KEV	**Kevo**	**57.85**	**351**	*e*P	**P**	**14 45 11.2**	**-1.0**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
LZH	**Lanzhou**	**57.91**	**289**	*e*P	**P**	**14 45 14.3**	**+1.1**
LZH				AP	pP	14 45 27.0	+0.8
LZH				XP	sP	14 45 32.5	+0.9
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,67nm,4.2s						
SCHQ	**Schefferville**	**58.00**	**41**	P	**P**	**14 45 12.8**	**-0.7**
	comp=Z,9.6nm,1.2s,mb4.7,baz=21,slow=7.9,SNR=5.4						
SCHQ	**Schefferville**	**58.00**	**41**	P	**P**	**14 45 12.8**	**-0.7**
ARCES	**ARCESS Array B**	**58.20**	**352**	P	**P**	**14 45 13.9**	**-0.7**
	comp=Z,3.8nm,0.5s,mb4.7,baz=23,slow=8.2,SNR=22						
ARCES				PcP	PcP	14 46 05.0	-0.5
	comp=Z,5.5nm,0.7s,baz=10,slow=4.3,SNR=7.3						
ARCES	**ARCESS Array B**	**58.20**	**352**	P	**P**	**14 45 14.0**	**-0.7**
ARCES						14 46 05.1	
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SADO	**Sadowa**	**59.41**	**55**	P	**P**	**14 45 23.0**	**-0.5**
	comp=Z,3.8nm,0.4s,mb4.8,baz=349,slow=5.2,SNR=4.6						
KURK	**Kurchatov**	**60.75**	**316**	*e*P	**P**	**14 45 32.6**	**+0.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
KURK	**Kurchatov**	**60.75**	**316**	*e*P	**P**	**14 45 32.6**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.5						
WMQ	**Urumqi**	**61.44**	**305**	*e*P	**P**	**14 45 39.9**	**+2.6**
CD2	**Chengdu**	**61.58**	**285**	P	**P**	**14 45 39.5**	**+1.1**
MKAR	**Makanchi Array**	**61.95**	**311**	P	**P**	**14 45 39.4**	**-1.3**
	comp=Z,1.2nm,0.5s,mb4.3,baz=46,slow=5.9,SNR=20						
MKAR	**Makanchi Array**	**61.95**	**311**	P	**P**	**14 45 39.4**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**61.95**	**311**	P	**P**	**14 45 39.4**	**-1.3**
GYA	**Guiyang**	**63.01**	**279**	P	**P**	**14 45 49.3**	**+1.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.9						
JOF	**Joensuu**	**63.94**	**347**	*e*p	**P**	**14 45 52.3**	**-1.3**
	comp=Z,1.6nm,0.3s,mb4.5						
JOF	**Joensuu**	**63.94**	**347**	*e*P	**P**	**14 45 52.3**	**-1.3**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
KAF	**Kangasniemi**	**65.35**	**349**	*e*p	**P**	**14 46 01.5**	**-1.3**
	comp=Z,2.0nm,0.4s,mb4.5,baz=12,slow=6.0						
KAF	**Kangasniemi**	**65.35**	**349**	*e*P	**P**	**14 46 01.5**	**-1.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
KMI	**Kunming**	**66.39**	**281**	P	**P**	**14 46 09.3**	**-0.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
NB2	**NORSAR Subarra**	**67.52**	**357**	P	**P**	**14 46 16.2**	**-0.5**
	comp=Z,2.6nm,0.5s,mb4.5,baz=5.8,slow=6.5						
NOA	**NORSAR Array B**	**67.52**	**357**	P	**P**	**14 46 16.5**	**-0.2**
	comp=Z,3.2nm,0.5s,mb4.6,baz=6.2,slow=6.5,SNR=16						
NOA	**NORSAR Array B**	**67.52**	**357**	P	**P**	**14 46 16.5**	**-0.2**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AAK	**Ala-Archa**	**68.73**	**312**	*e*P	**P**	**14 46 24.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
AAK	**Ala-Archa**	**68.73**	**312**	*e*P	**P**	**14 46 24.9**	**+0.3**
	comp=Z,1.6nm,0.4s,mb4.3						
AKTK	**Aktyubinsk**	**68.96**	**327**	P	**P**	**14 46 25.4**	**-0.5**
AKTO	**Aktyubinsk**	**68.96**	**327**	P	**P**	**14 46 25.4**	**-0.5**
	comp=Z,2.8nm,0.5s,mb4.5,baz=53,slow=8.7,SNR=7.3						
AKTO	**Aktyubinsk**	**68.96**	**327**	P	**P**	**14 46 25.4**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LSA	**Lhasa**	**69.89**	**293**	*e*P	**P**	**14 46 33.6**	**+1.6**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
LSA	**Lhasa**	**69.89**	**293**	*e*P	**P**	**14 46 33.6**	**+1.6**
	comp=Z,8.3nm,0.6s,mb4.8						
EKA	**Eskdalemuir Ar**	**73.08**	**5**	P	**P**	**14 46 50.5**	**-0.3**
	comp=Z,2.3nm,0.6s,mb4.3,baz=360,slow=4.7,SNR=8.8						
EKA	**Eskdalemuir Ar**	**73.08**	**5**	P	**P**	**14 46 50.5**	**-0.3**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TAPN	**Taplejung**	**73.64**	**293**	*e*P	**P**	**14 46 55.2**	**+0.7**
	comp=Z,25nm,0.7s,mb5.3						
CMAR	**Chiang Mai Arr**	**73.70**	**279**	P	**P**	**14 46 55.4**	**+0.4**
	comp=Z,1.2nm,0.5s,mb4.1,baz=25,slow=7.2,SNR=13						
CMAR	**Chiang Mai Arr**	**73.70**	**279**	P	**P**	**14 46 55.4**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GUN	**Gumba**	**74.25**	**295**	*e*P	**P**	**14 46 58.9**	**+0.8**
	comp=Z,41nm,0.4s,mb5.7						
JIRN	**Jiri**	**74.27**	**295**	*e*P	**P**	**14 46 59.1**	**+0.9**
	comp=Z,47nm,0.5s,mb5.7						
RAMN	**Ramite**	**74.58**	**294**	*e*P	**P**	**14 47 00.5**	**+0.5**
	comp=Z,44nm,0.6s,mb5.6						
KKN	**Kakani**	**74.68**	**295**	*e*P	**P**	**14 47 01.0**	**+0.4**
	comp=Z,18nm,0.7s,mb5.1						
KKN	**Kakani**	**74.68**	**295**	*e*P	**P**	**14 47 01.0**	**+0.4**
KKN				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
PKI	**Pulchoki**	**74.78**	**295**	*e*P	**P**	**14 47 01.5**	**+0.3**
GKN	**Gorkha**	**74.88**	**296**	*e*P	**P**	**14 47 01.9**	**+0.2**
	comp=Z,24nm,0.5s,mb5.4						
DMN	**Daman**	**74.92**	**295**	*e*P	**P**	**14 47 02.5**	**+0.5**
DANN	**Dangsing**	**75.10**	**297**	*e*P	**P**	**14 47 03.7**	**+0.7**
KOLN	**Koldanda**	**75.64**	**297**	*e*P	**P**	**14 47 06.3**	**+0.2**
	comp=Z,16nm,0.6s,mb5.1						
AKASG	**Malin Array Be**	**76.02**	**345**	P	**P**	**14 47 06.7**	**-1.2**
	comp=Z,4.7nm,0.4s,mb4.8,baz=16,slow=6.0,SNR=16						
AKASG	**Malin Array Be**	**76.02**	**345**	P	**P**	**14 47 06.7**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKASG	**Malin Array Be**	**76.02**	**345**	P	**P**	**14 47 06.7**	**-1.2**
CLZ	**Clausthal**	**76.75**	**357**	*e*P	**P**	**14 47 12.4**	**+0.4**
CLZ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
CLZ	**Clausthal**	**76.75**	**357**	*e*P	**P**	**14 47 12.4**	**+0.4**
	comp=Z,11nm,0.8s,mb4.8						
CLL	**Collm**	**77.17**	**355**	*e*P	**P**	**14 47 14.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CLL	**Collm**	**77.17**	**355**	*e*P	**P**	**14 47 14.0**	**-0.4**
	comp=Z,6.0nm,0.8s,mb4.6						
BRG	**Berggiesshubel**	**77.56**	**355**	*i* P	**P**	**14 47 16.4**	**-0.1**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRG	**Berggiesshubel**	**77.56**	**355**	*i* P	**P**	**14 47 16.4**	**-0.1**
	comp=Z,4.7nm,0.8s,mb4.5						
MOX	**Moxa**	**77.90**	**356**	*e*P	**P**	**14 47 18.8**	**+0.3**
MOX	**Moxa**	**77.90**	**356**	*e*P	**P**	**14 47 18.5**	**0.0**
	comp=Z,10.0nm,1.0s,mb4.7						
GIVF	**Givet**	**78.57**	**1**	*e*P	**P**	**14 47 22.2**	**0.0**
BAIF	**Baives**	**78.61**	**1**	*e*P	**P**	**14 47 22.4**	**0.0**
GRA1	**Grafenberg Arr**	**78.87**	**356**	*e*P	**P**	**14 47 24.6**	**+0.8**
	comp=Z,8.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**78.87**	**356**	*e*P	**P**	**14 47 24.6**	**+0.8**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**78.87**	**356**	*e*P	**P**	**14 47 24.6**	**+0.8**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**78.87**	**356**	*e*P	**P**	**14 47 24.6**	**+0.8**
	comp=Z,8.0nm,1.1s,mb4.6						
KHC	**Kasperske Hory**	**79.31**	**355**	*e*P	**P**	**14 47 26.5**	**+0.2**
GERES	**GERESS Array B**	**79.59**	**355**	P	**P**	**14 47 28.0**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.0,baz=28,slow=6.0,SNR=9.7						
GERES				LR	LR	15 26 11.6	
	comp=Z,231nm,18.4s,MS4.5,baz=299,slow=38						
GERES	**GERESS Array B**	**79.59**	**355**	P	**P**	**14 47 28.0**	**+0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES				MLR	MLR		
	comp=Z,231nm,18.4s						
BUR08	**Bucovina Ar. S**	**79.62**	**347**	*e*P	**P**	**14 47 27.9**	**-0.1**
BURAR	**Bucovina Array**	**79.64**	**347**	⇑*i*P	**P**	**14 47 28.1**	**0.0**
BURAR	**Bucovina Array**	**79.64**	**347**	⇑P	**P**	**14 47 28.1**	**+0.1**
LDF	**La Druitiere**	**79.96**	**4**	*e*P	**P**	**14 47 29.2**	**-0.6**
	comp=Z,24nm,0.7s,mb4.9						
GRR	**Gorron**	**80.13**	**4**	*e*P	**P**	**14 47 30.4**	**-0.3**
SGMF	**Saint Gilles**	**80.18**	**6**	*e*P	**P**	**14 47 30.7**	**-0.3**
	comp=Z,16nm,0.6s,mb4.8						
CDF	**Champ du Feu**	**80.25**	**359**	*e*P	**P**	**14 47 31.4**	**0.0**
	comp=Z,12nm,0.6s,mb4.7						
CDF	**Champ du Feu**	**80.25**	**359**	*e*P	**P**	**14 47 31.4**	**0.0**
CDF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CDF	**Champ du Feu**	**80.25**	**359**	*e*P	**P**	**14 47 31.4**	**0.0**
	comp=Z,5.9nm,0.6s,mb4.7						
ECH	**Echery**	**80.45**	**359**	*e*P	**P**	**14 47 32.6**	**+0.2**
ECH				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
ECH	**Echery**	**80.45**	**359**	*e*P	**P**	**14 47 32.6**	**+0.2**
	comp=Z,20nm,1.5s,mb4.8						
QUIF	**Quistinic**	**80.47**	**6**	*e*P	**P**	**14 47 32.0**	**-0.6**
HAU	**Haudompre**	**80.67**	**359**	*e*P	**P**	**14 47 33.6**	**0.0**
DRGR		**80.79**	**348**	⇓*i*P	**P**	**14 47 34.2**	**-0.1**
DRGR		**80.79**	**348**	⇑P	**P**	**14 47 34.1**	**-0.1**
HINF	**Hinteralfeld**	**80.85**	**359**	*e*P	**P**	**14 47 34.4**	**-0.2**
	comp=Z,11nm,0.6s,mb4.7						
HINF	**Hinteralfeld**	**80.85**	**359**	*e*P	**P**	**14 47 34.4**	**-0.2**
HINF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
HINF	**Hinteralfeld**	**80.85**	**359**	*e*P	**P**	**14 47 34.4**	**-0.2**
	comp=Z,5.7nm,0.6s,mb4.7						
LOR	**Lormes**	**81.40**	**1**	*e*P	**P**	**14 47 37.5**	**0.0**
	comp=Z,24nm,0.7s,mb4.9						
SSF	**Saint Saulge**	**81.60**	**1**	*e*P	**P**	**14 47 38.6**	**0.0**
	comp=Z,23nm,0.6s,mb5.0						
SSF	**Saint Saulge**	**81.60**	**1**	*e*P	**P**	**14 47 38.6**	**0.0**
SSF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
SSF	**Saint Saulge**	**81.60**	**1**	*e*P	**P**	**14 47 38.6**	**0.0**
	comp=Z,12nm,0.6s,mb5.0						
MLR	**Muntele Rosu**	**81.61**	**346**	P	**P**	**14 47 40.1**	**+1.4**
	comp=Z,2.1nm,0.5s,mb4.3,baz=169,slow=5.2,SNR=4.4						
MLR	**Muntele Rosu**	**81.61**	**346**	P	**P**	**14 47 40.1**	**+1.5**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DAVOX	**Davos/Dischmat**	**81.83**	**357**	P	**P**	**14 47 40.6**	**+0.8**
	comp=Z,2.6nm,0.5s,mb4.4,baz=343,slow=14,SNR=3.9						
AVF	**Avril sur Loir**	**81.87**	**2**	*e*P	**P**	**14 47 39.9**	**-0.1**
	comp=Z,18nm,0.6s,mb4.9						
AVF	**Avril sur Loir**	**81.87**	**2**	*e*P	**P**	**14 47 39.9**	**-0.1**
AVF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
AVF	**Avril sur Loir**	**81.87**	**2**	*e*P	**P**	**14 47 39.9**	**-0.1**
	comp=Z,8.9nm,0.6s,mb4.9						
MFF	**Saint Martin d**	**81.95**	**4**	*e*P	**P**	**14 47 40.5**	**+0.1**
	comp=Z,38nm,0.9s,mb5.0						
MFF	**Saint Martin d**	**81.95**	**4**	*e*P	**P**	**14 47 40.5**	**+0.1**
MFF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
MFF	**Saint Martin d**	**81.95**	**4**	*e*P	**P**	**14 47 40.5**	**+0.1**
	comp=Z,19nm,0.9s,mb5.0						
SMF	**Signal de Mont**	**82.02**	**1**	*e*P	**P**	**14 47 40.7**	**-0.1**
	comp=Z,46nm,0.9s,mb5.1						
SMF	**Signal de Mont**	**82.02**	**1**	*e*P	**P**	**14 47 40.7**	**-0.1**
SMF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
SMF	**Signal de Mont**	**82.02**	**1**	*e*P	**P**	**14 47 40.7**	**-0.1**
	comp=Z,23nm,0.9s,mb5.1						
CABF	**La Chapelle**	**82.06**	**360**	*e*P	**P**	**14 47 41.5**	**+0.5**
	comp=Z,11nm,0.6s,mb4.7						
CABF	**La Chapelle**	**82.06**	**360**	*e*P	**P**	**14 47 41.5**	**+0.5**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CABF	**La Chapelle**	**82.06**	**360**	*e*P	**P**	**14 47 41.5**	**+0.5**
	comp=Z,5.7nm,0.6s,mb4.7						
BGF	**Bois d'Agland**	**82.09**	**2**	*e*P	**P**	**14 47 41.1**	**0.0**
GZR	**Gura Zlata**	**82.16**	**348**	⇓*i*P	**P**	**14 47 41.6**	**+0.1**
GZR	**Gura Zlata**	**82.16**	**348**	⇑P	**P**	**14 47 41.6**	**+0.1**
TIRR	**Tirgusor**	**82.21**	**344**	⇓*i*P	**P**	**14 47 42.7**	**+0.9**
TIRR	**Tirgusor**	**82.21**	**344**	⇑P	**P**	**14 47 42.6**	**+0.8**
TCF	**Toulx Ste Croi**	**82.34**	**2**	*e*P	**P**	**14 47 42.4**	**-0.1**
	comp=Z,20nm,0.8s,mb4.8						
TCF	**Toulx Ste Croi**	**82.34**	**2**	*e*P	**P**	**14 47 42.4**	**-0.1**
TCF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
TCF	**Toulx Ste Croi**	**82.34**	**2**	*e*P	**P**	**14 47 42.4**	**-0.1**
	comp=Z,10nm,0.8s,mb4.8						
RJF	**Les Rejaudoux**	**83.31**	**3**	*e*P	**P**	**14 47 47.2**	**-0.3**
	comp=Z,11nm,0.7s,mb4.7						
RJF	**Les Rejaudoux**	**83.31**	**3**	*e*P	**P**	**14 47 47.2**	**-0.3**
RJF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
RJF	**Les Rejaudoux**	**83.31**	**3**	*e*P	**P**	**14 47 47.2**	**-0.3**
	comp=Z,5.6nm,0.7s,mb4.7						
LFF	**La Frestale**	**83.65**	**3**	*e*P	**P**	**14 47 49.4**	**+0.2**
CAF	**Calviac**	**83.70**	**3**	*e*P	**P**	**14 47 49.7**	**+0.2**
VIVF	**Saint-Julien-l**	**83.82**	**1**	*e*P	**P**	**14 47 50.6**	**+0.5**
MBDF	**Montbardon**	**83.94**	**359**	*e*P	**P**	**14 47 51.8**	**+1.0**
WRA	**Warramunga Arr**	**84.21**	**228**	P	**P**	**14 47 50.1**	**-2.2**
	comp=Z,0.3nm,0.7s,mb3.6,baz=31,slow=5.7,SNR=4.2						
SMRF	**Simiane la Rot**	**84.70**	**0**	*e*P	**P**	**14 47 54.9**	**+0.3**
	comp=Z,23nm,0.9s,mb5.0						
SMRF	**Simiane la Rot**	**84.70**	**0**	*e*P	**P**	**14 47 54.9**	**+0.3**
	comp=Z,23nm,0.9s,mb5.3						
FRF	**La Foret Royal**	**85.11**	**359**	*e*P	**P**	**14 47 56.9**	**+0.2**
MTLF	**Montolieu**	**85.29**	**2**	*e*P	**P**	**14 47 58.0**	**+0.4**
	comp=Z,6.6nm,0.7s,mb4.6						
ETSF	**Etsaut**	**85.63**	**5**	*e*P	**P**	**14 47 59.8**	**+0.5**
	comp=Z,16nm,0.8s,mb5.0						
ASAR	**Alice Springs**	**87.64**	**226**	P	**P**	**14 48 07.8**	**-1.3**
	comp=Z,0.6nm,0.8s,mb3.9,baz=32,slow=5.1,SNR=5.2						
ASAR	**Alice Springs**	**87.64**	**226**	P	**P**	**14 48 07.9**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**88.62**	**7**	P	**P**	**14 48 11.9**	**-1.9**
	comp=Z,0.3nm,0.3s,mb4.1,baz=330,slow=2.8,SNR=4.9						
TSUM	**Tsumeb**	**146.22**	**339**	*e*PKPbc	PKPbc	14 55 01.1	-0.1
LBTB	**Lobatse**	**149.29**	**323**	*e*PKP2	PKPbc	14 55 09.3	-0.1
BOSA	**Boshof**	**152.65**	**320**	PKPbc	PKPbc	14 55 16.6	-0.5
	comp=Z,3.4nm,0.6s,baz=35,slow=3.0,SNR=12						
BOSA				PKPab	PKPab	14 55 27.1	-0.7
	comp=Z,5.0nm,0.6s,baz=25,slow=7.4,SNR=7.7						
BOSA	**Boshof**	**152.65**	**320**	*e*PKPbc	PKPbc	14 55 16.7	-0.4

NOU ***18*** *14:37:34.5±3.4, 2544S×16738E, h10km, MD3.0, ML4.1*
ISCJB ***18*** *14:37:36.9±2.5, 207S±0.1×1696E±0.1, h87km±18km, mb4.1/12, Error ellipse: s-maj=24.6km s-min=20.8km az=173.0*
NEIC ***18*** *14:37:36.2±2.5, 2059S×16965E, h71km±19km, mb4.4/5, Error ellipse: s-maj=21.6km s-min=18.4km az=145.0*
IDC ***18*** *14:37:37.3±13.0, 2069S×16964E, h80km±108km, mb3.9/7, mb1 4.1/7, mb1mx3.9/14, mbtmp3.9/7, MS3.4/1, Ms1 3.4/1, ms1mx2.8/16, Error ellipse: s-maj=50.3km s-min=37.2km az=98.0*
ISC 18 14:37:37.5±2.5**, 208S**±01×**1696E**±01**, h79**km±18km**, h94**km±5.2km**:pP-P, n27,** σ0ˢ**69**/26**, mb4.1**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LASL	**Noumea**	**3.22**	**242**	*e*S	**Sn**	**14 39 02.8**	**-0.3**
DZM	**Mont Dzumac**	**3.24**	**246**	*e*P	**Pn**	**14 38 26.0**	**0.0**
DZM				*e*S	**Sn**	**14 39 03.1**	**-0.4**
DZM				AMP		14 39 06.2	
	comp=Z,1µm,1.1s						
DZM	**Mont Dzumac**	**3.24**	**246**	*e*Pn	**Pn**	**14 38 25.9**	**-0.1**
DZM				*e*Sn	**Sn**	**14 39 03.2**	**-0.3**
NOUC	**Port Laguerre**	**3.37**	**246**	*e*P	**Pn**	**14 38 28.2**	**+0.4**
NOUC				*e*S	**Sn**	**14 39 06.9**	**+0.2**
NOUC				AMP		14 39 07.2	
	comp=Z,58nm,7.7s						
CMSA	**Cobar Meteorol**	**23.96**	**239**	*e*P	**P**	**14 42 45.7**	**+1.2**
	comp=Z,10nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**27.38**	**240**	*e*P	**P**	**14 43 16.6**	**+1.2**
	comp=Z,4.9nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**27.38**	**240**	P	**P**	**14 43 16.6**	**+1.2**
	comp=Z,6.5nm,0.6s,mb4.3,baz=83,slow=8.5,SNR=30						
STKA				PcP	PcP	14 46 32.6	-0.1
	comp=Z,1.9nm,0.9s,baz=63,slow=6.8,SNR=3.3						
STKA	**Stephens Creek**	**27.38**	**240**	*e*P	**P**	**14 43 16.6**	**+1.3**
BBOO	**Buckleboo**	**32.14**	**241**	*e*P	**P**	**14 43 58.2**	**+0.7**
	comp=Z,4.2nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	**33.04**	**265**	*e*P	**P**	**14 44 05.0**	**-0.5**
WRAB	**Tennant Creek**	**33.04**	**265**	*e*P	**P**	**14 44 05.2**	**-0.4**
	comp=Z,0.9nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**33.05**	**265**	P	**P**	**14 44 04.2**	**-1.4**
	comp=Z,0.5nm,0.3s,mb3.8,baz=99,slow=7.9,SNR=6.1						
WRA				PcP	PcP	14 46 46.6	-1.1
	comp=Z,0.4nm,0.6s,baz=98,slow=3.1,SNR=5.0						
ASAR	**Alice Springs**	**33.14**	**258**	P	**P**	**14 44 06.1**	**-0.3**
	comp=Z,3.0nm,0.6s,mb4.3,baz=93,slow=8.8,SNR=36						
ASAR				pP	pP	14 44 24.4	-0.6
	comp=Z,1.3nm,0.5s,baz=87,slow=9.1,SNR=9.0						
ASAR				PcP	PcP	14 46 46.8	-1.1
	comp=Z,0.6nm,0.6s,baz=106,slow=3.7,SNR=4.7						
PPT	**Papeete**	**38.60**	**92**	LR	LR	14 57 03.3	
	comp=Z,52nm,18.6s,baz=234,slow=30						
FITZ	**Fitzroy Crossi**	**41.47**	**266**	*e*P	**P**	**14 45 17.0**	**+0.1**
	comp=Z,12nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**41.47**	**266**	*e*P	**P**	**14 45 17.1**	**+0.3**
	comp=Z,6.4nm,0.6s,mb4.6						
QSPA	**South Pole Qui**	**69.31**	**180**	*e*P	**P**	**14 48 36.2**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.3						
MAW	**Mawson**	**77.17**	**202**	P	**P**	**14 49 22.6**	**+0.3**
	comp=Z,2.6nm,0.9s,mb3.9,baz=139,slow=5.8,SNR=3.6						
CMAR	**Chiang Mai Arr**	**79.45**	**294**	P	**P**	**14 49 36.8**	**+1.1**
	comp=Z,1.8nm,0.8s,mb4.0,baz=134,slow=4.1,SNR=10.0						
VNA3	**Neumayer Olymp**	**88.25**	**180**	*e*	**P**	**14 50 18.4**	**-1.1**
VNA3				*e*		14 50 21.7	
VNA3				*e*		14 50 44.9	
VNA2	**Neumayer--Watz**	**88.55**	**181**	*e*	**P**	**14 50 20.3**	**-0.6**
	baz=193,slow=4.3						
VNA2				*e*		14 50 23.4	
VNA2				*e*	pP	14 50 46.0	+3.6
SONM	**Songino Array**	**88.64**	**323**	P	**P**	**14 50 21.1**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=115,slow=3.4,SNR=5.5						
VNA1	**Neumayer--Stat**	**88.83**	**181**	*e*	**P**	**14 50 21.8**	**-0.5**
VNA1				*e*		14 50 25.1	
VNA1				*e*	pP	14 50 47.7	+3.9
NVAR	**Mina Array Bea**	**89.53**	**48**	P	**P**	**14 50 26.4**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.8,baz=210,slow=7.0,SNR=3.3						
EKA	**Eskdalemuir Ar**	**145.05**	**353**	PKP	PKPdf	14 57 02.7	-2.6
	comp=Z,1.6nm,0.5s,baz=347,slow=2.4,SNR=8.8						
GERES	**GERESS Array B**	**145.99**	**331**	PKPbc	PKPbc	14 57 07.0	-1.0
	comp=Z,0.7nm,0.5s,baz=35,slow=3.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	**166.20**	**239**	PKPab	PKPab	14 58 34.5	-0.9
	comp=Z,0.3nm,0.6s,baz=129,slow=3.4,SNR=3.2						

HLW ***18*** *14:45:48.9, 3455N×2574E, h33km, Mb3.9*
ISCJB ***18*** *14:45:49.9±0.2, 3431N±002×2575E±002, h58km±4km, mb4.0/15, Error ellipse: s-maj=3.6km s-min=2.3km az=145.3*
CSEM ***18*** *14:45:49.7±0.1, 3432N×2574E, h60km, mb4.2/4, Error ellipse: s-maj=1.6km s-min=1.0km az=52.0*
ATH ***18*** *14:45:51.6, 3450N×2553E, h93km±2km*
IDC ***18*** *14:45:51.1±2.2, 3440N×2562E, h34km±16km, mb3.8/11, mb1 3.9/20, mb1mx3.8/31, mbtmp3.8/20, ML4.0/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/35, Error ellipse: s-maj=19.6km s-min=14.4km az=16.0*
THE ***18*** *14:45:51.8, 3434N×2559E, h65km±2km, ML4.6/1, Error ellipse: s-maj=2.7km s-min=1.2km az=74.0*
NEIC ***18*** *14:45:51.3±0.6, 3429N×2556E, h44km±5km, mb4.1/11, Error ellipse: s-maj=8.0km s-min=4.2km az=188.0*
GII ***18*** *14:46:00.2±0.0, 3408N×2642E, h30km, mb4.2/5, ML4.0/5, Mw4.0/5*
ISC 18 14:45:51.3±0.2**, 3433N**±002×**2565E**±002**, h46**km±4km**, n179,** σ0ˢ**97**/217**, mb3.9**/14**, 3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.84**	**350**	P	**Pn**	**14 46 06.7**	**-0.2**
LAST				S	**Sn**	**14 46 18.8**	**+0.6**
ZKR	**Zakros**	**0.92**	**30**	P	**Pn**	**14 46 08.3**	**+0.5**
ZKR				S	**Sn**	**14 46 21.9**	**+2.0**
NPS	**Neapolis**	**0.94**	**358**	*e*P	**Pn**	**14 46 09.0**	**+0.9**
NPS				*e*S	**Sn**	**14 46 22.2**	**+1.8**
NPS	**Neapolis**	**0.94**	**358**	*e*P	**Pn**	**14 46 08.6**	**+0.5**
NPS				*e*S	**Sn**	**14 46 22.2**	**+1.8**
SIVA	**Sivas**	**0.98**	**315**	P	**Pn**	**14 46 08.8**	**+0.1**
SIVA				S	**Sn**	**14 46 21.9**	**+0.5**
IDI	**Anoyia**	**1.15**	**327**	Pg	**Pn**	**14 46 11.2**	**+0.3**
	73nm,0.3s,baz=142,slow=16,SNR=298						
GVD	**Gavdhos**	**1.39**	**292**	*e*P	**Pn**	**14 46 15.0**	**+0.8**
VAM	**Vamos**	**1.61**	**313**	*e*P	**Pn**	**14 46 17.9**	**+0.6**
VAM	**Vamos**	**1.61**	**313**	*e*P	**Pn**	**14 46 18.0**	**+0.7**
KARP	**Karpathos**	**1.74**	**45**	*e*P	**Pn**	**14 46 21.4**	**+2.3**
KARP	**Karpathos**	**1.74**	**45**	*e*P	**Pn**	**14 46 21.5**	**+2.4**
THR6	**Thira Island,**	**2.04**	**354**	P	**Pn**	**14 46 23.5**	**+0.4**
THR6				S	**Sn**	**14 46 48.0**	**+0.7**
THR1	**Thera Island**	**2.05**	**356**	P	**Pn**	**14 46 23.2**	**-0.1**
THR1				S	**Sn**	**14 46 48.1**	**+0.5**
THR3	**Thira Island,**	**2.09**	**354**	P	**Pn**	**14 46 23.9**	**+0.1**
THR3				S	**Sn**	**14 46 48.8**	**+0.2**
THR5	**Thira Island,**	**2.10**	**353**	P	**Pn**	**14 46 24.0**	**0.0**
THR5				S	**Sn**	**14 46 49.6**	**+0.7**
THR4	**Thira Island,**	**2.14**	**355**	P	**Pn**	**14 46 24.9**	**+0.4**
LTBQ	**Tobruq**	**2.69**	**213**	*i* P	**Pn**	**14 46 33.9**	**+1.8**
	68nm,0.6s,SNR=24						
LTBQ				*e*S	**Sn**	**14 47 03.9**	**+0.5**
	129nm,0.4s,SNR=24						
APE	**Apeiranthos**	**2.74**	**358**	P	**Pn**	**14 46 32.6**	**-0.2**
APE				S	**Sn**	**14 47 03.8**	**-0.8**
APE	**Apeiranthos**	**2.74**	**358**	*e*P	**Pn**	**14 46 33.1**	**+0.3**
APE	**Apeiranthos**	**2.74**	**358**	⇓*i*P	**Pn**	**14 46 33.5**	**+0.7**
APE	**Apeiranthos**	**2.74**	**358**	*e*P	**Pn**	**14 46 33.4**	**+0.6**
ARG	**Arkhangelos**	**2.77**	**46**	*e*P	**Pn**	**14 46 35.0**	**+1.8**
SLUM		**2.85**	**188**	⇓P	**Pn**	**14 46 35.2**	**+0.9**
SLUM		**2.85**	**188**	P	**Pn**	**14 46 35.2**	**+0.9**
DAT	**Datca**	**2.87**	**33**	*e*P	**Pn**	**14 46 35.7**	**+1.2**
BDRM	**Kayabasi**	**3.10**	**28**	*i* P	**Pn**	**14 46 37.8**	**+0.1**
VLI	**Veliai**	**3.25**	**318**	*e*P	**Pn**	**14 46 39.1**	**-0.7**
VLI	**Veliai**	**3.25**	**318**	*e*P	**Pn**	**14 46 39.0**	**-0.8**
MLSB	**Milas**	**3.43**	**30**	*e*P	**Pn**	**14 46 41.5**	**-0.8**
HMAT	**Matruh**	**3.44**	**159**	⇓P	**Pn**	**14 46 43.0**	**+0.5**
HMAT				S	**Sn**	**14 47 22.1**	**0.0**
TURN	**Turunc**	**3.50**	**43**	*i* P	**Pn**	**14 46 39.9**	**-3.3**
SMG	**Samos**	**3.51**	**16**	*e*P	**Pn**	**14 46 43.5**	**+0.2**
SMG	**Samos**	**3.51**	**16**	*e*P	**Pn**	**14 46 43.0**	**-0.3**
YER	**Yerkesik**	**3.53**	**37**	*e*P	**Pn**	**14 46 44.5**	**+0.9**
GCAM	**G?zelcaml?**	**3.60**	**20**	*i* P	**Pn**	**14 46 38.2**	**-6.4**
DID	**Didima**	**3.73**	**329**	P	**Pn**	**14 46 45.9**	**-0.5**
DID				S	**Sn**	**14 47 27.7**	**-1.3**
CHOS	**Chios island**	**4.07**	**4**	P	**Pn**	**14 46 50.6**	**-0.4**
CHOS				S	**Sn**	**14 47 36.3**	**-1.0**
PYL	**PYLOS**	**4.09**	**310**	P	**Pn**	**14 46 49.9**	**-1.4**
PYL				S	**Sn**	**14 47 36.0**	**-1.8**
URLA	**Izmir**	**4.10**	**10**	*i* P	**Pn**	**14 46 41.6**	**-10**
ITM	**Ithomi**	**4.16**	**314**	P	**Pn**	**14 46 52.1**	**-0.1**
BLCB	**Balcova**	**4.20**	**15**	*e*P	**Pn**	**14 46 53.0**	**+0.1**
BLCB	**Balcova**	**4.20**	**15**	P	**Pn**	**14 46 53.2**	**+0.3**
ELL	**Elmali**	**4.23**	**54**	*e*P	**Pn**	**14 46 53.7**	**+0.5**
LTK	**Loutraki**	**4.28**	**330**	P	**Pn**	**14 46 53.4**	**-0.5**
LTK				S	**Sn**	**14 47 41.2**	**-1.4**
GOLH	**Golhisar**	**4.31**	**46**	*i* P	**Pn**	**14 46 55.1**	**+0.8**
MANT	**Manisa**	**4.77**	**29**	*i* P	**Pn**	**14 47 01.8**	**+1.1**
LKR	**Lokris**	**4.82**	**334**	P	**Pn**	**14 47 01.1**	**-0.2**
KULA	**Kula-Manisa**	**4.83**	**29**	*e*P	**Pn**	**14 47 02.2**	**+0.7**
AKHS	**Akhisar**	**4.87**	**20**	*i* P	**Pn**	**14 47 01.5**	**-0.4**
KHL	**Karahalli**	**5.07**	**37**	*e*P	**Pn**	**14 47 04.0**	**-0.7**
SWA2		**5.07**	**182**	P	**Pn**	**14 47 06.0**	**+1.3**
BCK	**Bucak**	**5.08**	**51**	*e*P	**Pn**	**14 47 06.4**	**+1.5**
KHAL	**Karahalli**	**5.09**	**36**	*i* P	**Pn**	**14 47 05.1**	**+0.1**
ISP	**Isparta**	**5.27**	**47**	P	**Pn**	**14 47 07.3**	**-0.2**
ISP				S	**Sn**	**14 48 06.3**	**-0.7**
EVR	**Evrytania**	**5.53**	**327**	*e*P	**Pn**	**14 47 11.0**	**0.0**
GDZ	**Gediz**	**5.66**	**32**	*i* P	**Pn**	**14 47 14.2**	**+1.4**
LJBD	**Adjabya**	**5.72**	**235**	*i* P	**Pn**	**14 47 14.2**	**+0.5**
	128nm,2.1s,SNR=23						
SHUT	**Suhut-Afyon**	**5.78**	**42**	*e*P	**Pn**	**14 47 14.7**	**+0.2**
ALT	**Altintas**	**5.92**	**36**	*e*P	**Pn**	**14 47 16.8**	**+0.3**
LEF	**Lefka**	**6.01**	**80**	*e*P	**Pn**	**14 47 16.3**	**-1.4**
HMYD	**Mayadein**	**6.29**	**135**	P	**Pn**	**14 47 21.3**	**-0.2**
AANS		**6.31**	**128**	P	**Pn**	**14 47 21.2**	**-0.6**
AANS				S	**Sn**	**14 48 28.9**	**-3.8**
CSS	**Prodhromos**	**6.36**	**82**	*e*P	**Pn**	**14 47 20.1**	**-2.4**
	22nm,0.6s						
CSS	**Prodhromos**	**6.36**	**82**	*e*P	**Pn**	**14 47 20.1**	**-2.4**
	22nm,0.6s						
CSS				*e*S	**Sn**	**14 48 27.4**	**-6.4**
SQR		**6.46**	**132**	P	**Pn**	**14 47 23.8**	**-0.1**
SQR				S	**Sn**	**14 48 32.8**	**-3.5**
KONT	**Konya--Tatoy**	**6.52**	**54**	*e*P	**Pn**	**14 47 24.8**	**+0.2**
LFK	**Lefkose**	**6.55**	**79**	*e*P	**Pn**	**14 47 25.3**	**+0.1**
AYT	**Al 'Ayyat**	**6.56**	**133**	P	**Pn**	**14 47 25.0**	**-0.2**
AWBH		**6.60**	**154**	P	**Pn**	**14 47 26.4**	**+0.6**
ESKT	**Eskisehir**	**6.65**	**37**	*e*P	**Pn**	**14 47 26.5**	**+0.1**
LADK	**Ladik-KONYA**	**6.66**	**53**	*e*P	**Pn**	**14 47 26.3**	**-0.2**
KDHN	**Kadinhani**	**6.69**	**49**	*i* P	**Pn**	**14 47 26.4**	**-0.5**
KIZT	**Kizilcal**	**6.76**	**46**	*e*P	**Pn**	**14 47 28.2**	**+0.3**
KOT	**Kottamia**	**6.83**	**128**	P	**Pn**	**14 47 28.6**	**-0.3**
KOT				S	**Sn**	**14 48 41.5**	**-3.9**
IKL	**Isikli**	**6.84**	**72**	*e*P	**Pn**	**14 47 28.7**	**-0.4**
HSAF	**As Saff**	**6.87**	**131**	P	**Pn**	**14 47 29.3**	**-0.2**
GLL	**Jalalah**	**6.99**	**131**	P	**Pn**	**14 47 31.0**	**-0.2**
HHAG	**Hagoal**	**6.99**	**127**	P	**Pn**	**14 47 30.9**	**-0.2**
HHAG				S	**Sn**	**14 48 45.0**	**-4.3**
EREN	**Erenkoy**	**7.10**	**78**	*e*P	**Pn**	**14 47 34.6**	**+2.0**
GULT	**Gulveren**	**7.22**	**31**	*e*P	**Pn**	**14 47 34.6**	**+0.4**
AMAG	**Maghara**	**7.37**	**118**	P	**Pn**	**14 47 34.7**	**-1.6**
VAY	**Valandovo**	**7.40**	**342**	*e*Pn	**Pn**	**14 47 43.1**	**+6.5**
VAY				*e*Sn	**Sn**	**14 48 50.7**	**-8.5**
HFRF	**Wahat Farafira**	**7.51**	**162**	P	**Pn**	**14 47 39.0**	**+0.7**
SUZ		**7.56**	**124**	P	**Pn**	**14 47 38.4**	**-0.5**
RSH		**7.59**	**114**	P	**Pn**	**14 47 38.0**	**-1.3**
MERS	**Mersin**	**7.66**	**68**	*e*P	**Pn**	**14 47 39.5**	**-0.7**
ZAF		**7.73**	**129**	P	**Pn**	**14 47 41.2**	**0.0**
KRUS	**Krusevo**	**7.84**	**335**	*e*Pn	**Pn**	**14 47 42.2**	**-0.6**
KRUS	**Krusevo**	**7.84**	**335**	*e*Pn	**Pn**	**14 47 42.2**	**-0.5**
KRUS				*e*Sn	Px	14 48 47.6	
ZNM		**7.88**	**127**	P	**Pn**	**14 47 43.2**	**-0.1**
OFRI	**'Ofer**	**7.98**	**100**	Pn	**Pn**	**14 47 44.4**	**-0.3**
HNTI	**Hanita**	**8.03**	**96**	Sn	**Sn**	**14 49 09.4**	**-5.5**
KZIT	**Kziot**	**8.13**	**112**	Pn	**Pn**	**14 47 46.0**	**-0.8**
KZIT				Sn	**Sn**	**14 49 10.3**	**-6.9**
SLTI	**Sal'it**	**8.13**	**102**	Pn	**Pn**	**14 47 46.7**	**0.0**
SLTI				Sn	**Sn**	**14 49 11.3**	**-6.0**
KARA	**Karaisali**	**8.18**	**66**	*e*P	**Pn**	**14 47 46.5**	**-0.9**
HRSH	**Kfar Ka'horesh**	**8.20**	**99**	P	**Pn**	**14 47 38.0**	**-10**
MMB2	**Mount Meron ar**	**8.23**	**96**	Pn	**Pn**	**14 47 47.9**	**-0.2**
MMAI	**Mount Meron Ar**	**8.23**	**96**	Pn	**Pn**	**14 47 47.2**	**-1.0**
	4.9nm,0.3s,baz=297,slow=13,SNR=10						
MMAI				Sn	**Sn**	**14 49 17.4**	**-2.4**
	33nm,0.3s,baz=282,slow=25,SNR=19						
RTMI	**Retamim**	**8.29**	**111**	Pn	**Pn**	**14 47 48.9**	**0.0**
RTMI				Sn	**Sn**	**14 49 14.7**	**-6.4**
HNKL	**Nakhl**	**8.31**	**120**	P	**Pn**	**14 47 48.6**	**-0.7**
HNKL				S	**Sn**	**14 49 16.0**	**-5.7**
BRTR	**Keskin Array B**	**8.36**	**48**	Pn	**Pn**	**14 47 51.4**	**+1.6**
	0.2nm,0.3s,baz=225,slow=14,SNR=5.9						
BRTR				Sn	**Sn**	**14 49 20.7**	**-2.0**
	0.4nm,0.3s,baz=216,slow=26,SNR=4.6						
MMLI	**Mount Malkishu**	**8.39**	**100**	Pn	**Pn**	**14 47 49.8**	**-0.4**
MMLI				Sn	**Sn**	**14 49 17.2**	**-6.3**
KSDI	**Kefar Szold**	**8.41**	**95**	Sn	**Sn**	**14 49 17.6**	**-6.6**
YTIR	**Yattir**	**8.49**	**108**	Pn	**Pn**	**14 47 52.0**	**+0.3**
RCY	**Rachaya**	**8.49**	**93**	*e*Pn	**Pn**	**14 47 51.0**	**-0.7**
HWQ	**Hawqa**	**8.52**	**87**	*e*Pn	**Pn**	**14 47 51.2**	**-0.9**
HMDT	**Nahal Hemdat**	**8.52**	**101**	Pn	**Pn**	**14 47 52.0**	**-0.2**
HMDT				Sn	**Sn**	**14 49 21.0**	**-5.9**
TIP	**Timpagrande**	**8.62**	**307**	*e*P	**Pn**	**14 47 51.5**	**-2.0**
	22nm,0.9s						
DSI	**Dead Sea**	**8.63**	**106**	Pn	**Pn**	**14 47 52.9**	**-0.6**
DSI				Sn	**Sn**	**14 49 23.6**	**-5.9**
MZDA	**Masada**	**8.71**	**108**	Pn	**Pn**	**14 47 54.5**	**-0.2**
MZDA				Sn	**Sn**	**14 49 25.0**	**-6.5**
KRMI	**Paran Flat**	**8.76**	**116**	Sn	**Sn**	**14 49 25.5**	**-7.2**
HTY	**Hatay**	**8.77**	**75**	*e*P	**Pn**	**14 47 53.7**	**-1.7**
CEL	**Celeste**	**8.80**	**299**	*e*P	**Pn**	**14 47 54.6**	**-1.2**
	18nm,0.6s						
KOZT	**Kozan**	**8.84**	**66**	*e*P	**Pn**	**14 47 55.2**	**-1.2**
PRNI	**Paran**	**8.85**	**114**	Pn	**Pn**	**14 47 56.9**	**+0.3**
PRNI				Sn	**Sn**	**14 49 28.6**	**-6.4**
ZFRI	**Zfri**	**8.88**	**112**	Sn	**Sn**	**14 49 29.0**	**-6.8**
HRFI	**Mount Harif**	**9.03**	**116**	Pn	**Pn**	**14 47 59.8**	**+0.7**
HRFI				Sn	**Sn**	**14 49 32.6**	**-6.7**
MBRI	**Mt Berech**	**9.06**	**117**	Pn	**Pn**	**14 47 59.8**	**+0.2**
MBRI				Sn	**Sn**	**14 49 34.0**	**-6.3**
TR2		**9.09**	**128**	P	**Pn**	**14 47 59.2**	**-0.8**
EIL	**Elat**	**9.16**	**118**	Pn	**Pn**	**14 48 00.8**	**-0.1**
	1.6nm,0.3s,baz=338,slow=13,SNR=21						
EIL				Sn	**Sn**	**14 49 36.4**	**-6.1**
	7.5nm,0.3s,baz=296,slow=13,SNR=7.5						
EIL	**Elat**	**9.16**	**118**	Pn	**Pn**	**14 48 00.8**	**-0.1**
EIL				Sn	**Sn**	**14 49 36.4**	**-6.1**
EIL	**Elat**	**9.16**	**118**	Pn	**Pn**	**14 48 00.9**	**0.0**
HDK1	**Dakhla**	**9.34**	**159**	P	**Pn**	**14 48 04.8**	**+1.4**
ASF	**Jabal al Asfar**	**9.66**	**100**	Pn	**Pn**	**14 48 07.3**	**-0.4**
	0.7nm,0.3s,baz=165,slow=14,SNR=7.3						
ASF				Sn	**Sn**	**14 49 50.2**	**-4.7**
	2.4nm,0.3s,baz=290,slow=18,SNR=6.5						
CUC	**Castrocucco**	**9.67**	**309**	*e*P	**Pn**	**14 48 06.2**	**-1.6**
	29nm,0.6s						
AKRG	**Al Kharijah**	**9.74**	**153**	P	**Pn**	**14 48 09.7**	**+0.8**
GTR	**Jabal at Tayr**	**9.76**	**153**	P	**Pn**	**14 48 10.2**	**+1.0**
GTR	**Jabal at Tayr**	**9.76**	**153**	P	**Pn**	**14 48 10.1**	**+1.0**
HHRG	**Al Ghardaqah**	**9.82**	**134**	P	**Pn**	**14 48 10.2**	**+0.3**
MLR	**Muntele Rosu**	**11.15**	**1**	Pn	**Pn**	**14 48 30.0**	**+2.0**
	0.3nm,0.3s,baz=270,slow=20,SNR=2.4						
KIV	**Kislovodsk**	**16.32**	**49**	*e*P	**Pn**	**14 49 40.9**	**+3.8**
	21nm,0.8s						
VRAC	**Vranov**	**16.40**	**339**	Pn	**Pn**	**14 49 38.4**	**+0.3**
	0.2nm,0.3s,baz=209,slow=4.9,SNR=3.5						
KIEV	**Kiev**	**16.56**	**8**	*e*P	**Pn**	**14 49 41.5**	**+1.4**
	10nm,0.9s						
KIEV	**Kiev**	**16.56**	**8**	*e*P	**Pn**	**14 49 41.5**	**+1.4**
	10nm,0.9s						
AKASG	**Malin Array Be**	**16.57**	**8**	Pn	**Pn**	**14 49 40.9**	**+0.7**
	1.6nm,0.3s,baz=201,slow=11,SNR=5.7						
GERES	**GERESS Array B**	**17.01**	**332**	Pn	**Pn**	**14 49 46.0**	**+0.3**
	0.2nm,0.3s,baz=143,slow=12,SNR=7.5						
DAVOX	**Davos/Dischmat**	**17.23**	**321**	P	**Pn**	**14 49 49.8**	**+1.2**
	0.6nm,0.3s,baz=130,slow=11,SNR=4.2						
KHC	**Kasperske Hory**	**17.29**	**332**	*e*P	**Pn**	**14 49 49.0**	**-0.2**
KHC				*e*x	x	14 50 00.0	
KHC				*e*		14 50 00.0	
KHC	**Kasperske Hory**	**17.29**	**332**	*e*	**Pn**	**14 49 49.0**	**-0.2**
MBDF	**Montbardon**	**17.85**	**311**	*e*P	**Pn**	**14 49 57.2**	**+1.1**
LPL	**La Plagne**	**18.27**	**313**	*e*P	**Pn**	**14 50 00.3**	**-0.9**
MIB	**Mutribah**	**18.92**	**98**	*e*P	**Pn**	**14 50 10.5**	**+1.3**
	baz=98						
MIB				AMb	AMB	14 50 19.2	
	comp=Z,15nm,1.1s,baz=98						
NAY	**Al-Naaiem**	**19.03**	**99**	*e*P	**Pn**	**14 50 12.5**	**+1.9**
	baz=100						
NAY				AMb	AMB	14 50 17.5	
	comp=Z,15nm,0.6s,baz=100						
CABF	**La Chapelle**	**19.23**	**315**	*e*P	**Pn**	**14 50 10.7**	**-2.1**
	comp=Z,16nm,0.9s						
CABF	**La Chapelle**	**19.23**	**315**	*e*P	**Pn**	**14 50 10.7**	**-2.1**
	comp=Z,7.9nm,0.9s						
UMR	**Umm Al-Rimmam**	**19.31**	**98**	*e*P	**Pn**	**14 50 15.1**	**+1.1**
	baz=98						
UMR				AMb	AMB	14 50 29.9	
	comp=Z,43nm,0.9s,baz=98						
HINF	**Hinteralfeld**	**19.49**	**319**	*e*P	**Pn**	**14 50 14.0**	**-1.9**
	comp=Z,4.0nm,0.4s						
HINF	**Hinteralfeld**	**19.49**	**319**	*e*P	**Pn**	**14 50 14.0**	**-1.9**
	comp=Z,2.0nm,0.4s						
CDF	**Champ du Feu**	**19.63**	**321**	*e*P	**Pn**	**14 50 16.3**	**-1.3**
	comp=Z,5.9nm,0.5s						
CDF	**Champ du Feu**	**19.63**	**321**	*e*P	**Pn**	**14 50 16.3**	**-1.3**
	comp=Z,3.0nm,0.5s						
HAU	**Haudompre**	**19.87**	**319**	*e*P	**Pn**	**14 50 18.7**	**-1.7**
	comp=Z,9.3nm,0.4s						
HAU	**Haudompre**	**19.87**	**319**	*e*P	**Pn**	**14 50 18.7**	**-1.7**
	comp=Z,4.7nm,0.4s						
SMF	**Signal de Mont**	**20.58**	**313**	*e*P	**P**	**14 50 26.3**	**+0.2**
	comp=Z,30nm,1.3s						
SMF	**Signal de Mont**	**20.58**	**313**	*e*P	**P**	**14 50 26.3**	**+0.2**
	comp=Z,15nm,1.3s						
AVF	**Avril sur Loir**	**20.94**	**313**	*e*P	**P**	**14 50 30.3**	**+0.2**
	comp=Z,17nm,1.0s						
AVF	**Avril sur Loir**	**20.94**	**313**	*e*P	**P**	**14 50 30.3**	**+0.2**
	comp=Z,8.6nm,1.0s						
RJF	**Les Rejaudoux**	**21.46**	**308**	*e*P	**P**	**14 50 35.4**	**-0.2**
	comp=Z,98nm,1.6s,mb4.6						
RJF	**Les Rejaudoux**	**21.46**	**308**	*e*P	**P**	**14 50 35.4**	**-0.2**
	comp=Z,49nm,1.6s,mb4.6						
ETSF	**Etsaut**	**22.13**	**301**	*e*P	**P**	**14 50 41.9**	**-0.9**
BAIF	**Baives**	**22.23**	**321**	*e*P	**P**	**14 50 43.5**	**-0.3**
	comp=Z,18nm,0.5s,mb4.5						
BAIF	**Baives**	**22.23**	**321**	*e*P	**P**	**14 50 43.5**	**-0.3**
	comp=Z,9.1nm,0.5s,mb4.5						
LDF	**La Druitiere**	**23.86**	**314**	*e*P	**P**	**14 50 59.1**	**-1.1**
	comp=Z,5.0nm,0.4s,mb4.0						
LDF	**La Druitiere**	**23.86**	**314**	*e*P	**P**	**14 50 59.1**	**-1.1**
	comp=Z,2.5nm,0.4s,mb4.0						
FLN	**La Foliniere**	**24.15**	**315**	*e*P	**P**	**14 51 02.0**	**-0.8**
MDT	**Midelt**	**25.22**	**275**	LR	LR	15 04 58.2	
	comp=Z,38nm,18.8s,baz=256,slow=46						
QUIF	**Quistinic**	**25.43**	**311**	*e*P	**P**	**14 51 13.7**	**-0.8**
HFS	**Hagfors**	**26.98**	**347**	P	**P**	**14 51 28.0**	**-0.4**
	comp=Z,1.3nm,0.7s,mb3.5,baz=104,slow=4.6,SNR=2.8						
NOA	**NORSAR Array B**	**28.31**	**345**	P	**P**	**14 51 41.3**	**+1.1**
	comp=Z,0.4nm,0.7s,mb3.2,baz=151,slow=9.2,SNR=2.7						
AKTK	**Aktyubinsk**	**28.53**	**46**	P	**P**	**14 51 43.2**	**+0.9**
AKTO	**Aktyubinsk**	**28.53**	**46**	P	**P**	**14 51 43.2**	**+0.9**
	comp=Z,1.3nm,0.6s,mb3.9,baz=243,slow=10,SNR=4.9						
EKA	**Eskdalemuir Ar**	**28.95**	**325**	P	**P**	**14 51 45.7**	**-0.3**
	comp=Z,2.8nm,1.0s,mb4.0,baz=118,slow=9.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**30.28**	**232**	P	**P**	**14 52 00.1**	**+1.9**
	comp=Z,1.1nm,0.5s,mb3.8,baz=30,slow=8.6,SNR=18						
ARCES	**ARCESS Array B**	**35.26**	**360**	P	**P**	**14 52 40.1**	**-1.0**
	comp=Z,0.8nm,0.5s,mb3.9,baz=182,slow=9.9,SNR=6.9						
MKAR	**Makanchi Array**	**43.90**	**56**	P	**P**	**14 53 55.1**	**+1.9**
	comp=Z,3.8nm,0.6s,mb4.3,baz=269,slow=7.2,SNR=39						
ZALV	**Zalesovo Beam**	**45.29**	**46**	P	**P**	**14 54 05.0**	**+0.7**
	comp=Z,0.7nm,0.3s,mb3.9,baz=270,slow=7.7,SNR=3.4						
SONM	**Songino Array**	**59.70**	**50**	P	**P**	**14 55 52.2**	**+1.3**
	comp=Z,0.3nm,0.4s,mb3.6,baz=288,slow=10.0,SNR=3.3						
SCHQ	**Schefferville**	**64.08**	**320**	P	**P**	**14 56 21.0**	**+0.8**
	comp=Z,5.9nm,1.0s,mb4.6,baz=76,slow=5.1,SNR=4.6						
YKA	**Yellowknife Ar**	**78.37**	**342**	P	**P**	**14 57 47.0**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=27,slow=5.8,SNR=7.2						
YKA	**Yellowknife Ar**	**78.37**	**342**	P	**P**	**14 57 47.0**	**+0.6**

ISCJB ***18*** *15:06:35.8±0.3, 4829N±002×130W±002, h7km, Error ellipse: s-maj=3.2km s-min=1.9km az=25.2*

NEIC ***18*** *15:06:38.6, 4838N×138W, h7km, ML2.9(LDG), After LDG.*

CSEM ***18*** *15:06:38.1±0.1, 4845N×139W, h12km, ML2.9/13, Error ellipse: s-maj=1.9km s-min=1.0km az=22.0*

LDG ***18*** *15:06:38.6±0.1, 4838N×138W, h7km, Md2.9/3, Ml2.9/13, Error ellipse: s-maj=1.3km s-min=0.7km az=5.0*

BGS ***18*** *15:06:39.8±0.3, 4846N×140W, h7km±999km, ML1.9*

ISC 18 15:06:37.5±0.3**, 4836N**±002×**135W**±002**, h18**km±2km**, n77,** σ**0.81**/172**, 6C, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRR	**Gorron**	**0.33**	**85**	*e*Pg	**Pg**	**15 06 45.9**	**+1.3**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**15 06 50.3**	**+1.0**
	191nm,0.2s						
GRR	**Gorron**	**0.33**	**85**	*e*Pg	**Pg**	**15 06 45.9**	**+1.3**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**15 06 50.3**	**+1.0**
	95nm,0.2s						
FLN	**La Foliniere**	**0.70**	**55**	*e*Pg	**Pg**	**15 06 52.1**	**+0.7**
	baz=238						
FLN				*e*Sg	**Sg**	**15 07 00.7**	**-0.1**
	43nm,0.2s,baz=236,SNR=1.0						
FLN	**La Foliniere**	**0.70**	**55**	*e*Pg	**Pg**	**15 06 52.1**	**+0.7**
	baz=238						
FLN				*e*Sg	**Sg**	**15 07 00.7**	**-0.1**
	21nm,0.2s,baz=236,SNR=1.0						
SGMF	**Saint Gilles**	**0.81**	**263**	*e*Pn	**Pn**	**15 06 54.8**	**+0.8**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**15 07 03.8**	**-0.3**
	36nm,0.2s,SNR=1.0						
SGMF				*e*Sn	**Sn**	**15 07 06.0**	**+0.4**
SGMF	**Saint Gilles**	**0.81**	**263**	*e*Pn	**Pn**	**15 06 54.8**	**+0.8**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**15 07 03.8**	**-0.3**
	18nm,0.2s,SNR=1.0						
SGMF				*e*Sn	**Sn**	**15 07 06.0**	**+0.4**
SGMF	**Saint Gilles**	**0.81**	**263**	*e*Pg	**Pg**	**15 06 53.6**	**+0.2**
SGMF				*e*Pn	**Pn**	**15 06 54.8**	**+0.8**
SGMF				*e*Sg	**Sg**	**15 07 03.8**	**-0.3**
SGMF				*e*Sn	**Sn**	**15 07 06.0**	**+0.4**
LDF	**La Druitiere**	**0.85**	**74**	*e*Pg	**Pg**	**15 06 55.2**	**+1.1**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**15 07 06.1**	**+0.7**
	35nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**0.85**	**74**	*e*Pg	**Pg**	**15 06 55.2**	**+1.1**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**15 07 06.1**	**+0.7**
	18nm,0.2s,SNR=1.0						
JQE	**Queens East**	**0.96**	**332**	⇑*i*P	**Pb**	**15 06 55.5**	**-0.1**
JRS	**Jersey**	**0.97**	**330**	P	**Pb**	**15 06 55.6**	**-0.1**
JRS				S	**Sb**	**15 07 07.0**	**-1.2**
JRS				AML	AML	15 07 07.8	
	39nm,0.1s						
JRS	**Jersey**	**0.97**	**330**	*e*P	**Pb**	**15 06 55.6**	**-0.1**
JRS				*e*S	**Sb**	**15 07 07.0**	**-1.2**
JRS				AML	AML	15 07 07.8	
	comp=E,39nm,0.1s						
JSA	**Saint Aubin**	**0.99**	**327**	P	**Pb**	**15 06 56.1**	**-0.1**
JSA				S	**Sb**	**15 07 07.8**	**-1.0**
JSA				S	**Sb**	**15 07 08.1**	**-0.8**
JSA				AML	AML	15 07 09.6	
	comp=E,31nm,0.2s						
JSA				AML	AML	15 07 10.1	
	comp=E,43nm,0.3s						
JSA	**Saint Aubin**	**0.99**	**327**	⇑*i*P	**Pb**	**15 06 56.1**	**-0.1**
JSA				⇑*i*P		15 06 56.1	
JSA				*e*S	**Sb**	**15 07 07.8**	**-1.0**
JSA				*e*S	**Sb**	**15 07 08.1**	**-0.8**
JSA				AML	AML	15 07 09.6	
	comp=N,31nm,0.2s						
JSA				AML	AML	15 07 10.1	
	comp=E,43nm,0.3s						
JSA	**Saint Aubin**	**0.99**	**327**	⇑*i*P	**Pb**	**15 06 56.1**	**-0.1**
JSA				*e*S	**Sb**	**15 07 08.1**	**-0.8**
JLP	**Les Platons**	**1.01**	**331**	P	**Pb**	**15 06 56.5**	**-0.1**
JLP				S	**Sb**	**15 07 08.8**	**-0.7**
JLP	**Les Platons**	**1.01**	**331**	⇑*i*P	**Pb**	**15 06 56.5**	**-0.1**
JLP				*e*S	**Sb**	**15 07 08.8**	**-0.7**
JLP	**Les Platons**	**1.01**	**331**	⇑*i*P	**Pb**	**15 06 56.5**	**-0.1**
JLP				*e*S	**Sb**	**15 07 08.8**	**-0.8**
JVM	**Valle D.L. Mar**	**1.03**	**327**	*e*P	**Pb**	**15 06 56.7**	**-0.1**
ROSF	**Rostrenen**	**1.28**	**270**	*e*Pg	**Pg**	**15 07 02.0**	**-0.3**
ROSF				*e*Sg	**Sg**	**15 07 18.2**	**-0.8**
	comp=E,13nm,0.2s,SNR=1.0						
ROSF	**Rostrenen**	**1.28**	**270**	*e*Pg	**Pg**	**15 07 02.0**	**-0.3**
ROSF				*e*Sg	**Sg**	**15 07 18.2**	**-0.8**
	comp=E,6.7nm,0.2s,SNR=1.0						
ROSF	**Rostrenen**	**1.28**	**270**	*e*Pn	**Pn**	**15 07 00.9**	**+0.4**
ROSF				*e*Pg	**Pg**	**15 07 02.0**	**-0.3**
ROSF				*e*Sg	**Sg**	**15 07 18.2**	**-0.8**
QUIF	**Quistinic**	**1.29**	**251**	*e*Pg	**Pg**	**15 07 02.7**	**+0.2**
QUIF				*e*Sn	**Sn**	**15 07 17.4**	**-0.1**
QUIF				*e*Sg	**Sg**	**15 07 19.0**	**-0.3**
	comp=E,49nm,0.2s,SNR=1.0						
QUIF	**Quistinic**	**1.29**	**251**	*e*Pg	**Pg**	**15 07 02.7**	**+0.2**
QUIF				*e*Sn	**Sn**	**15 07 17.4**	**-0.1**
QUIF				*e*Sg	**Sg**	**15 07 19.0**	**-0.3**
	comp=E,24nm,0.2s,SNR=1.0						
QUIF	**Quistinic**	**1.29**	**251**	*e*Pn	**Pn**	**15 07 01.5**	**+0.8**
QUIF				*e*Pg	**Pg**	**15 07 02.7**	**+0.2**
QUIF				*e*Sn	**Sn**	**15 07 17.4**	**-0.1**
QUIF				*e*Sg	**Sg**	**15 07 19.0**	**-0.3**
MFF	**Saint Martin d**	**1.94**	**155**	*e*Pg	**Pg**	**15 07 15.2**	**+0.4**
MFF				*e*Sn	**Sn**	**15 07 34.0**	**+0.6**
MFF				*e*Sg	**Sg**	**15 07 41.0**	**+1.1**
	comp=E,15nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**1.94**	**155**	*e*Pg	**Pg**	**15 07 15.2**	**+0.4**
MFF				*e*Sn	**Sn**	**15 07 34.0**	**+0.6**
MFF				*e*Sg	**Sg**	**15 07 41.0**	**+1.1**
	comp=E,7.7nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**1.94**	**155**	*e*Pn	**Pn**	**15 07 09.6**	**+0.1**
MFF				*e*Pg	**Pg**	**15 07 15.2**	**+0.4**
MFF				*e*Sn	**Sn**	**15 07 34.0**	**+0.6**
MFF				*e*Sg	**Sg**	**15 07 41.0**	**+1.1**
HYF	**Humbligny**	**2.90**	**111**	*e*Pn	**Pn**	**15 07 23.4**	**+0.6**
HYF				*e*Pg	**Pg**	**15 07 32.7**	**-0.5**
TCF	**Toulx Ste Croi**	**3.19**	**129**	*e*Pg	**Pg**	**15 07 37.8**	**-0.8**
TCF				*e*Sg	**Sg**	**15 08 20.3**	**+0.4**
	comp=E,3.7nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.19**	**129**	*e*Pg	**Pg**	**15 07 37.8**	**-0.8**
TCF				*e*Sg	**Sg**	**15 08 20.3**	**+0.4**
	comp=E,1.9nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.19**	**129**	*e*Pn	**Pn**	**15 07 27.7**	**+1.0**
TCF				*e*Pg	**Pg**	**15 07 37.8**	**-0.8**
TCF				*e*Sg	**Sg**	**15 08 20.3**	**+0.4**
BGF	**Bois d'Agland**	**3.37**	**121**	*e*Pg	**Pg**	**15 07 41.6**	**-0.5**
BGF				*e*Sn	**Sn**	**15 08 08.0**	**-0.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**15 08 25.2**	**-0.5**
	comp=E,20nm,0.5s						
BGF	**Bois d'Agland**	**3.37**	**121**	*e*Pg	**Pg**	**15 07 41.6**	**-0.5**
BGF				*e*Sn	**Sn**	**15 08 08.0**	**-0.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**15 08 25.2**	**-0.5**
	comp=E,9.9nm,0.5s						
BGF	**Bois d'Agland**	**3.37**	**121**	*e*P	**Pn**	**15 07 33.2**	**+4.0**
BGF				*e*Pg	**Pg**	**15 07 41.6**	**-0.5**
BGF				*e*Sn	**Sn**	**15 08 08.0**	**-0.7**
BGF				*e*Sg	**Sg**	**15 08 25.2**	**-0.5**
SSF	**Saint Saulge**	**3.53**	**110**	*e*Pg	**Pg**	**15 07 44.5**	**-0.6**
SSF				*e*Sn	**Sn**	**15 08 12.2**	**-0.4**
SSF				*e*Sg	**Sg**	**15 08 28.8**	**-2.0**
	comp=E,6.5nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**3.53**	**110**	*e*Pg	**Pg**	**15 07 44.5**	**-0.6**
SSF				*e*Sn	**Sn**	**15 08 12.2**	**-0.4**
SSF				*e*Sg	**Sg**	**15 08 28.8**	**-2.0**
	comp=E,3.2nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**3.53**	**110**	*e*Pn	**Pn**	**15 07 32.4**	**+1.0**
SSF				*e*P		15 07 35.7	
SSF				*e*Pg	**Pg**	**15 07 44.5**	**-0.6**
SSF				*e*Sn	**Sn**	**15 08 12.2**	**-0.4**
SSF				*e*Sg	**Sg**	**15 08 28.8**	**-2.0**
AVF	**Avril sur Loir**	**3.55**	**114**	*e*Pn	**Pn**	**15 07 33.3**	**+1.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**15 08 12.5**	**-0.7**
AVF				*e*Sg	**Sg**	**15 08 30.8**	**-0.7**
	comp=E,2.5nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**3.55**	**114**	*e*Pn	**Pn**	**15 07 33.3**	**+1.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**15 08 12.5**	**-0.7**
AVF				*e*Sg	**Sg**	**15 08 30.8**	**-0.7**
	comp=E,1.2nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**3.63**	**146**	*e*Pg	**Pg**	**15 07 46.4**	**-0.7**
RJF				*e*Sn	**Sn**	**15 08 14.6**	**-0.6**
RJF				*e*Sg	**Sg**	**15 08 33.9**	**-0.3**
	comp=E,6.8nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**3.63**	**146**	*e*Pg	**Pg**	**15 07 46.4**	**-0.7**
RJF				*e*Sn	**Sn**	**15 08 14.6**	**-0.6**
RJF				*e*Sg	**Sg**	**15 08 33.9**	**-0.3**
	comp=E,3.4nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**3.63**	**146**	*e*Pn	**Pn**	**15 07 33.6**	**+0.7**
RJF				*e*Pg	**Pg**	**15 07 46.4**	**-0.7**
RJF				*e*Sn	**Sn**	**15 08 14.6**	**-0.6**
RJF				*e*Sg	**Sg**	**15 08 33.9**	**-0.3**
LOR	**Lormes**	**3.68**	**105**	*e*Pn	**Pn**	**15 07 34.3**	**+0.9**
	baz=289						
LOR	**Lormes**	**3.68**	**105**	*e*Pg	**Pg**	**15 07 47.0**	**-0.9**
	baz=285						
LOR				*e*Sn	**Sn**	**15 08 15.4**	**-0.9**
LOR				*e*Sg	**Sg**	**15 08 34.9**	**-0.7**
	comp=E,4.7nm,0.4s,baz=284,SNR=1.0						
LOR	**Lormes**	**3.68**	**105**	*e*Pg	**Pg**	**15 07 47.0**	**-0.9**
	baz=285						
LOR				*e*Sn	**Sn**	**15 08 15.4**	**-0.9**
LOR				*e*Sg	**Sg**	**15 08 34.9**	**-0.7**
	comp=E,2.3nm,0.4s,baz=284,SNR=1.0						
LOR	**Lormes**	**3.68**	**105**	*e*Pn	**Pn**	**15 07 34.3**	**+0.9**
LOR				*e*Pg	**Pg**	**15 07 47.0**	**-0.9**
LOR				*e*Sn	**Sn**	**15 08 15.4**	**-0.9**
LOR				*e*Sg	**Sg**	**15 08 34.9**	**-0.7**
LFF	**La Frestale**	**3.71**	**156**	*e*Sg	**Sg**	**15 08 35.9**	**-0.8**
	comp=E,17nm,0.2s						
LFF	**La Frestale**	**3.71**	**156**	*e*Sg	**Sg**	**15 08 35.9**	**-0.8**
	comp=E,8.6nm,0.2s						
BAIF	**Baives**	**4.02**	**63**	*e*Pn	**Pn**	**15 07 39.8**	**+1.6**
	SNR=1.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BAIF				eSn	Sn	15 08 23.4	-1.4
CAF	Calviac	4.16	144	eSg	Sg	15 08 50.4	-0.7
	comp=E,3.7nm,0.3s						
CAF	Calviac	4.16	144	eSg	Sg	15 08 50.4	-0.7
	comp=E,1.9nm,0.3s						
CABF	La Chapelle	5.34	106	ePn	Pn	15 07 58.0	+1.8

MAN 18 15:37:37, 9.46N×125.35E, h24km, mb4.1, ML2.9, MS2.6, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.35	24	⇓eP	Pb	15 37 45.6	+0.9
SCPH				eS	Sb	15 37 55.8	+5.8
BUTP	Butuan	0.56	151	eP	Pb	15 37 50.1	+2.0
MSLP	Maasin	0.82	324	eP	Pb	15 37 53.5	+0.8
MSLP				eS	Sb	15 38 05.9	+2.5
PLP	Palo	1.73	348	⇓iP	Pn	15 38 01.6	-4.1
PLP				eS	Sn	15 38 23.2	-3.8
GUIM	Jordan	2.95	293	eP	Pn	15 38 23.7	+1.2

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*ISCJB **18** 15:41:54.3±0.6, 20.1S±0.1×66.7E±0.2, h10km, mb4.2/17, MS3.7/9, Error ellipse: s-maj=20.6km s-min=14.3km az=168.7*
*IDC **18** 15:41:54.5±0.7, 20.12S×66.64E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.1/22, mbtmp4.1/11, MS3.6/9, Ms1 3.6/9, ms1mx3.4/29, Error ellipse: s-maj=26.1km s-min=19.2km az=78.0*
*BJI **18** 15:41:54.0, 20.10S×66.60E, h10km, mB5.3, mb4.8*
*NEIC **18** 15:41:56.0±0.4, 20.12S×66.60E, h10km, mb4.5/2, Error ellipse: s-maj=14.9km s-min=10.9km az=81.0*
*MOS **18** 15:41:58.2±0.7, 20.16S×66.76E, h33km, mb4.5/4, Error ellipse: s-maj=28.8km s-min=22.3km az=80.1*
ISC 18 15:41:56.3±0.6, **20.1S**±0.1×**66.6E**±0.2, **h10**km, **n33**, σ**0.61**/26, **mb4.2**/17, **MS3.7**/9, **4C, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	38.48	249	LR	LR	16 01 54.5	
	comp=Z,89nm,18.9s,MS3.6,baz=14,slow=31						
MAW	Mawson	47.53	182	P	P	15 50 32.0	+0.6
	0.8nm,0.6s,mb3.9,baz=353,slow=11,SNR=2.1						
MAW				LR	LR	16 05 19.6	
	comp=Z,54nm,21.1s,MS3.5,baz=182,slow=30						
CMAR	Chiang Mai Arr	49.74	42	P	P	15 50 49.6	+0.6
	2.4nm,1.0s,mb4.2,baz=235,slow=8.3,SNR=17						
CMAR				LR	LR	16 08 20.1	
	comp=Z,77nm,20.1s,MS3.7,baz=162,slow=32						
CMAR	Chiang Mai Arr	49.74	42	⇑eP	P	15 50 49.9	+0.9
ASAR	Alice Springs	61.99	107	P	P	15 52 16.4	-0.7
	2.2nm,1.0s,mb4.3,baz=252,slow=6.5,SNR=16						
ASAR				PcP	PcP	15 52 57.8	+0.2
	1.7nm,1.3s,baz=243,slow=3.7,SNR=4.2						
AAK	Ala-Archa	62.86	7	⇑eP	P	15 52 22.3	0.0
AAK				pmax	pmax		
	comp=Z,4.0nm,1.9s,mb4.2						
WRA	Warramunga Arr	63.16	103	P	P	15 52 24.4	-0.5
	comp=Z,3.3nm,1.0s,mb4.4,baz=261,slow=6.4,SNR=17						
WRAB	Tennant Creek	63.17	103	eP	P	15 52 25.1	+0.1
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.6						
WRAB	Tennant Creek	63.17	103	eP	P	15 52 25.1	+0.2
	comp=Z,6.2nm,1.1s,mb4.7						
GNI	Garni	63.35	341	⇑eP	P	15 52 26.8	+1.2
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GTA	Gaotai	66.86	27	eP	P	15 52 49.3	+0.9
GTA				AP	pP	15 52 53.5	+1.8
GTA				XP	sP	15 52 56.9	+4.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.3						
STKA	Stephens Creek	67.21	117	LR	LR	16 17 49.9	
	comp=Z,66nm,18.3s,MS3.9,baz=204,slow=32						
MK31	Makanchi Array	68.09	12	eP	P	15 52 56.1	+0.1
MKAR	Makanchi Array	68.09	12	P	P	15 52 55.4	-0.6
	comp=Z,1.9nm,1.0s,mb4.1,baz=189,slow=7.1,SNR=8.9						
MKAR				LR	LR	16 21 26.5	
	comp=Z,29nm,18.6s,MS3.5,baz=90,slow=35						
QSPA	South Pole Qui	69.98	180	P	P	15 53 07.5	+0.1
	comp=Z,1.1nm,0.2s,mb4.4,baz=256,slow=9.2,SNR=4.5						
QSPA	South Pole Qui	69.98	180	P	P	15 53 07.5	+0.1
KURK	Kurchatov	71.32	8	⇑eP	P	15 53 15.0	-0.8
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
TORD	Torodi Ar. Bea	71.92	292	P	P	15 53 19.6	-0.8
	comp=Z,1.1nm,1.1s,mb3.7,baz=106,slow=5.1,SNR=3.7						
TORD				LR	LR	16 23 10.6	
	comp=Z,47nm,19.0s,MS3.8,baz=250,slow=34						
NJ2	Nanjing	72.04	45	eP	P	15 53 20.4	-0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
ZAA0	Zalesovo Array	75.41	11	eP	P	15 53 39.0	-1.0
ZALV	Zalesovo Beam	75.41	11	P	P	15 53 39.5	-0.4
	comp=Z,2.2nm,0.7s,mb4.2,baz=222,slow=4.0,SNR=14						
ZALV				LR	LR	16 27 29.2	
	comp=Z,15nm,18.8s,MS3.3,baz=73,slow=36						
SONM	Songino Array	76.47	26	P	P	15 53 46.8	+0.7
	comp=Z,2.5nm,0.9s,mb4.1,baz=232,slow=5.4,SNR=14						
ULN	Ulaanbaatar	76.77	27	eP	P	15 53 48.0	+0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
ULN	Ulaanbaatar	76.77	27	eP	P	15 53 48.0	+0.2
	comp=Z,2.3nm,1.0s,mb4.1						
AKASG	Malin Array Be	77.84	337	P	P	15 53 53.8	0.0
	comp=Z,0.5nm,0.5s,mb3.7,baz=145,slow=4.7,SNR=7.4						
AKASG	Malin Array Be	77.84	337	iP	P	15 53 54.0	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	Korea Array	81.24	45	LR	LR	16 31 04.6	
	comp=Z,48nm,18.4s,MS3.9,baz=2.0,slow=36						
MJAR	Matsushiro Arr	87.91	50	P	P	15 54 46.6	+0.2
	comp=Z,2.8nm,1.0s,mb4.5,baz=232,slow=5.2,SNR=4.4						
MJAR				LR	LR	16 34 57.3	
	comp=Z,62nm,18.5s,MS4.0,baz=270,slow=36						
MJAR	Matsushiro Arr	87.91	50	P	P	15 54 46.6	+0.2
MJAR				LR	LR	16 34 57.3	
YKA	Yellowknife Ar	137.66	1	PKP	PKPdf	16 01 20.7	+0.6
	comp=Z,0.7nm,0.9s,baz=358,slow=2.3,SNR=6.5						
YKA	Yellowknife Ar	137.66	1	PKP	PKPdf	16 01 20.7	+0.5
ULM	Lac du Bonnet	146.89	339	PKPbc	PKPbc	16 01 38.0	-0.8
	comp=Z,3.4nm,0.7s,baz=87,slow=4.5,SNR=4.1						
ULM	Lac du Bonnet	146.89	339	PKPbc	PKPbc	16 01 38.0	-0.8

IDC 18 16:07:09.5±3.7, **16.80S×175.39W, h227**km±43km, **mb3.4**/3, **mb1 3.5**/4, **mb1mx3.2**/17, **mbtmp3.4**/4, **Error ellipse: s-maj=133.9km s-min=36.6km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.52	51	P	Pn	16 08 20.5	+1.9
	5.4nm,0.3s,baz=317,slow=19,SNR=8.9						
AFI				S	S	16 09 13.0	-0.4
	8.8nm,0.3s,baz=52,slow=21,SNR=12						
STKA	Stephens Creek	41.68	241	P	P	16 14 35.9	-0.3
	1.2nm,0.7s,baz=72,slow=9.6,SNR=3.1						
WRA	Warramunga Arr	47.67	258	P	P	16 15 23.5	0.0
	0.6nm,0.5s,baz=97,slow=7.0,SNR=16						
WRA				PcP	PcP	16 16 49.9	+0.6
	0.2nm,0.6s,baz=83,slow=3.5,SNR=3.0						
ASAR	Alice Springs	47.86	253	P	P	16 15 24.8	-0.2
	3.2nm,0.6s,baz=88,slow=8.4,SNR=98						
ASAR				PcP	PcP	16 16 49.4	-0.5
	0.2nm,0.5s,baz=106,slow=3.7,SNR=5.5						

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*ISCJB **18** 16:10:43.6±1.6, 16.3S±0.2×177.6W±0.2, h388km±17km, mb3.5/10, Error ellipse: s-maj=39.3km s-min=15.5km az=147.9*
*NEIC **18** 16:10:44.8±1.3, 16.26S×177.54W, h394km±14km, mb3.7/2, Error ellipse: s-maj=30.6km s-min=13.4km az=146.0*
*IDC **18** 16:10:45.2±2.0, 16.19S×177.59W, h393km±21km, mb3.2/8, mb1 3.6/9, mb1mx3.4/17, mbtmp3.3/9, Error ellipse: s-maj=49.7km s-min=12.8km az=150.0*
ISC 18 16:10:44.6±1.6, **16.3S**±0.2×**177.6W**±0.2, **h385**km±17km, **n22**, σ**0.56**/15, **mb3.5**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.07	68	P	Pn	16 12 17.3	-0.3
	8.7nm,0.3s,baz=83,slow=1.4,SNR=9.6						
AFI	Afiamalu	6.07	68	eP	Pn	16 12 17.3	-0.3
STKA	Stephens Creek	40.13	240	P	P	16 17 45.9	+1.0
	0.6nm,0.6s,mb3.1,baz=83,slow=14,SNR=3.3						
STKA	Stephens Creek	40.13	240	P	P	16 17 45.9	+1.0
WRA	Warramunga Arr	45.73	258	P	P	16 18 29.2	-0.3
	0.2nm,0.3s,mb2.9,baz=90,slow=7.0,SNR=16						
WRA				PcP	PcP	16 19 59.5	-0.4
	0.3nm,0.5s,baz=88,slow=3.5,SNR=5.0						
ASAR	Alice Springs	46.02	253	P	P	16 18 31.8	+0.1
	2.3nm,0.5s,mb3.8,baz=88,slow=7.9,SNR=55						
ASAR				PcP	PcP	16 20 00.2	-0.6
	0.3nm,0.6s,baz=99,slow=4.0,SNR=4.1						
ASAR				S	S	16 24 46.6	-0.8
	0.2nm,0.9s,baz=85,slow=16,SNR=3.3						
PETK	Petropavlovsk-	72.31	345	P	P	16 21 29.1	0.0
	2.2nm,0.7s,mb3.8,baz=112,slow=8.7,SNR=6.4						
QSPA	South Pole Qui	73.78	180	eP	P	16 21 36.7	-0.6
	0.8nm,0.6s,mb3.5						
NVAR	Mina Array Bea	77.69	44	P	P	16 22 00.1	+0.2
	0.6nm,0.5s,mb3.5,baz=224,slow=8.3,SNR=4.6						
HLID	Hailey	82.87	41	eP	P	16 22 27.3	+0.2
	1.8nm,0.8s,mb3.9						
TXAR	Lajitas Array	84.45	57	P	P	16 22 36.3	+1.0
	1.2nm,0.9s,mb3.6,baz=227,slow=5.0,SNR=9.8						
PDAR	Pinedale Array	85.62	43	P	P	16 22 40.6	-0.2
	0.3nm,0.5s,mb3.3,baz=218,slow=5.7,SNR=2.8						
YKA	Yellowknife Ar	92.52	24	P	P	16 23 11.7	-0.9
	0.4nm,0.6s,mb3.5,baz=243,slow=4.4,SNR=12						
YKA	Yellowknife Ar	92.52	24	P	P	16 23 11.7	-0.9
MKAR	Makanchi Array	108.56	314	PKiKP	PKiKP	16 28 26.3	-1.8
	0.2nm,0.5s,baz=133,slow=0.8,SNR=3.6						
BVAR	Borovoye Array	116.07	321	PKP	PKPdf	16 28 40.9	-1.3
	0.3nm,0.6s,baz=60,slow=5.7,SNR=2.7						
ARCES	ARCESS Array B	124.84	350	PKP	PKPdf	16 28 57.0	-1.7
	5.1nm,1.0s,baz=3.8,slow=2.7,SNR=4.5						
BR131	Keskin Array S	144.16	317	ePKPbc	PKPdf	16 29 34.4	-1.0
BRTR	Keskin Array B	144.16	317	PKP	PKPdf	16 29 34.6	-0.8
	1.4nm,0.6s,baz=116,slow=2.9,SNR=6.3						
MMAI	Mount Meron Ar	145.88	305	PKPbc	PKPbc	16 29 40.4	+0.4
	1.3nm,0.4s,baz=90,slow=5.8,SNR=7.5						
GERES	GERESS Array B	146.22	347	PKPbc	PKPdf	16 29 37.6	-1.0
	0.8nm,0.7s,baz=356,slow=2.9,SNR=5.1						
DAVOX	Davos/Dischmat	148.95	350	PKPbc	PKPbc	16 29 47.3	-0.4
	2.2nm,0.5s,baz=4.9,slow=19,SNR=3.8						

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*ISCJB **18** 16:12:28.7±1.1, 20.5S±0.2×66.1E±0.3, h10km, mb3.6/6, Error ellipse: s-maj=37.4km s-min=24.3km az=6.3*
*IDC **18** 16:12:30.9±4.2, 20.28S×66.42E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/21, mbtmp3.6/6, MS3.1/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=123.1km s-min=31.7km az=59.0*
ISC 18 16:12:30.8±1.1, **20.5S**±0.2×**66.1E**±0.3, **h10**km, **n9**, σ**0.58**/8, **mb3.6**/6, **Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	Tsumeb	45.52	263	LR	LR	16 38 26.3	
	comp=Z,23nm,19.3s,baz=336,slow=34						
CMAR	Chiang Mai Arr	50.35	42	P	P	16 21 27.0	-1.2
	0.2nm,0.6s,mb3.3,baz=236,slow=6.4,SNR=3.2						
ASAR	Alice Springs	62.37	107	P	P	16 22 54.3	+0.2
	0.4nm,0.8s,mb3.6,baz=262,slow=6.5,SNR=6.5						
WRA	Warramunga Arr	63.57	103	P	P	16 23 02.4	+0.2
	0.7nm,1.0s,mb3.6,baz=263,slow=4.7,SNR=4.4						
VNA2	Neumayer--Watz	65.40	200	e	P	16 23 12.9	-0.3
	baz=198,slow=4.4						
VNA2				e	pP	16 23 15.6	-0.9
VNA3	Neumayer Olymp	66.18	200	e	P	16 23 10.6	-7.6
VNA3				e	pP	16 23 13.4	-8.1
MKAR	Makanchi Array	68.55	12	P	P	16 23 33.4	0.0
	1.1nm,1.0s,mb3.7,baz=187,slow=12,SNR=4.6						
ZALV	Zalesovo Beam	75.87	11	P	P	16 24 17.2	+0.1
	0.5nm,0.4s,mb3.8,baz=208,slow=4.9,SNR=3.9						
SONM	Songino Array	77.02	27	P	P	16 24 24.6	+0.9
	0.4nm,0.9s,mb3.3,baz=228,slow=3.7,SNR=4.1						

IDC 18 16:33:30.4±13.0, **20.22S×66.64E, h0**km, **mb3.6**/5, **mb1 3.7**/5, **mb1mx3.5**/22, **mbtmp3.6**/5, **MS3.3**/3, **Ms1 3.3**/3, **ms1mx2.9**/27, **Error ellipse: s-maj=444.9km s-min=34.6km az=55.0, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	38.44	249	LR	LR	16 52 56.7	
	comp=Z,28nm,19.2s,baz=326,slow=30						
PSI	Prapat	39.08	58	LR	LR	16 52 30.7	
	comp=Z,56nm,19.1s,baz=14,slow=29						
CMAR	Chiang Mai Arr	49.81	42	LR	LR	16 59 31.6	
	comp=Z,33nm,18.4s,baz=55,slow=31						
ASAR	Alice Springs	61.97	107	P	P	16 43 53.0	+0.4
	0.3nm,0.8s,baz=278,slow=6.4,SNR=6.4						
WRA	Warramunga Arr	63.15	103	P	P	16 44 00.0	-0.5
	0.6nm,0.9s,baz=255,slow=5.5,SNR=4.2						
KURK	Kurchatov	71.41	8	P	P	16 44 51.4	-0.8
	0.4nm,0.7s,baz=205,slow=7.0,SNR=2.6						
ZALV	Zalesovo Beam	75.51	11	P	P	16 45 16.1	-0.2
	0.3nm,0.3s,baz=193,slow=5.8,SNR=3.8						
SONM	Songino Array	76.56	26	P	P	16 45 23.2	+0.9
	0.6nm,0.8s,baz=224,slow=3.7,SNR=4.6						

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*ISK **18** 16:36:05.5, 35.44N×26.54E, h8km, MD3.6*
*IDC **18** 16:36:06.5±1.5, 35.55N×26.69E, h0km, mb3.7/3, mb1 3.5/5, mb1mx3.3/22, mbtmp3.5/5, ML3.1/2, MS4.2/1, Ms1 4.2/1, ms1mx2.4/35, Error ellipse: s-maj=61.6km s-min=12.1km az=165.0*
*CSEM **18** 16:36:08.7±0.1, 35.52N×26.68E, h20km, MD3.5, Error ellipse: s-maj=2.5km s-min=2.1km az=143.0*
*NEIC **18** 16:36:08.9, 35.68N×26.66E, h22km, MD3.5(ATH), After ATH.*
*ATH **18** 16:36:08.9, 35.68N×26.66E, h22km±1km, MD3.5/4*
*ISCJB **18** 16:36:09.7±0.6, 35.52N±0.04×26.70E±0.03, h30km±7km, mb3.6/3, Error ellipse: s-maj=7.5km s-min=3.9km az=166.7*
*THE **18** 16:36:10.0, 35.62N×26.57E, h0km±1km, Error ellipse: s-maj=3.4km s-min=0.9km az=111.0*
*DDA **18** 16:36:14.1, 35.81N×27.47E, h3km, Md3.2*
ISC 18 16:36:08.9±0.7, **35.56N**±0.04×**26.64E**±0.03, **h10**km±6km, **n35**, σ**1.04**/52, **mb3.6**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.42	91	ePB	Pg	16 36 17.8	+0.6
KARP				eSB	Sg	16 36 24.5	+1.7
ZKR	Zakros	0.56	218	P	Pg	16 36 20.8	+1.0
NPS	Neapolis	0.89	251	ePN	Pn	16 36 26.7	-0.8
LAST	Lasithi	1.03	248	P	Pb	16 36 29.3	+0.4
THR1	Thera Island	1.26	311	P	Pn	16 36 32.2	-0.4
THR1				S	Sb	16 36 49.4	+0.4
THR6	Thira Island,	1.29	309	P	Pn	16 36 32.5	-0.5
THR6				S	Sb	16 36 50.4	+0.6
THR3	Thira Island,	1.32	311	P	Pn	16 36 32.5	-0.9
THR3				S	Sb	16 36 50.5	-0.2
THR4	Thira Island,	1.35	312	P	Pn	16 36 33.8	-0.1
THR4				S	Sb	16 36 51.3	-0.4
THR5	Thira Island,	1.36	310	P	Pn	16 36 33.3	-0.6
THR5				S	Sb	16 36 51.8	0.0
ARG	Arkhangelos	1.37	61	ePN	Pn	16 36 33.9	-0.2
DAT	Datca	1.39	33	ePN	Pn	16 36 33.4	-1.0
DAT				eSN	Sn	16 36 55.2	+2.3
IDI	Anoyia	1.46	260	Pg	Pg	16 36 34.4	-2.5
	8.0nm,0.3s,baz=70,slow=12,SNR=82						
IDI				Lg		16 36 53.5	
	40nm,0.3s,baz=354,slow=15,SNR=13						
SIVA	Sivas	1.59	251	P	Pn	16 36 38.1	+0.9
SIVA				S	Sn	16 36 59.4	+1.6
BDRM	Kayabasi	1.64	23	iP	Pn	16 36 38.5	+0.7
BDRM				iS	Sn	16 37 03.4	+4.4
APE	Apeiranthos	1.76	330	P	Pn	16 36 38.7	-0.7
APE				S	Sn	16 37 01.8	0.0
APE	Apeiranthos	1.76	330	ePn	Pn	16 36 38.9	-0.5
APE				S	Sn	16 37 01.8	0.0
YER	Yerkesik	2.06	40	ePN	Pn	16 36 44.0	+0.4
YER				eSN	Sn	16 37 10.8	+1.5
TURN	Turunc	2.06	50	iP	Pn	16 36 38.1	-5.4
TURN				iS	Sn	16 37 04.2	-5.2
KARN	Karanos	2.23	267	P	Pn	16 36 45.4	-0.5
KARN				S	Sn	16 37 14.4	+0.9
CHOS	Chios island	2.86	351	P	Pn	16 36 54.3	-0.3
CHOS				S	Sn	16 37 30.6	+1.4
GOLH	Golhisar	2.89	54	iP	Pn	16 36 56.1	+1.0
GOLH				iS	Sg	16 37 39.1	-2.6
ELL	Elmali	2.90	65	ePN	Pn	16 36 55.8	+0.6
DID	Didima	3.36	306	P	Pn	16 37 01.8	+0.3
DID				S	Sn	16 37 41.0	-0.5
KULA	Kula-Manisa	3.36	28	ePN	Pn	16 37 02.4	+0.9
KHAL	Karahalli	3.62	38	iP	Pn	16 37 04.4	-0.6
KHAL				iS	Sn	16 37 46.6	-1.2
BCK	Bucak	3.70	58	ePN	Pn	16 37 06.6	+0.4
PYL	PYLOS	4.18	290	P	Pn	16 37 13.8	+1.0
ALT	Altintas	4.45	37	ePN	Pn	16 37 17.1	+0.6
KIZT	Kizilcal	5.33	50	ePN	Pn	16 37 29.4	+0.7
BRTR	Keskin Array B	6.94	51	Pn	Pn	16 37 49.2	-1.4
	0.1nm,0.3s,baz=236,slow=13,SNR=3.0						
MMAI	Mount Meron Ar	7.68	107	Pn	Pn	16 37 58.7	-2.2
	0.7nm,0.3s,baz=310,slow=12,SNR=4.9						
KURK	Kurchatov	39.99	51	P	P	16 43 41.8	-1.8
	0.7nm,0.6s,mb3.6,baz=277,slow=8.2,SNR=7.0						
JMIC	Jan Mayen	40.06	343	LR	LR	17 01 59.2	
	comp=Z,313nm,18.1s,baz=282,slow=39						
MKAR	Makanchi Array	42.54	57	P	P	16 44 03.9	-0.8
	0.7nm,0.5s,mb3.6,baz=270,slow=8.4,SNR=13						
ZALV	Zalesovo Beam	43.85	46	P	P	16 44 13.4	-1.7
	0.6nm,0.6s,mb3.5,baz=260,slow=7.2,SNR=3.2						

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*ISCJB **18** 16:37:25.5±0.4, 15.12N±0.03×61.11W±0.08, h150km±3km, mb3.5/6, Error ellipse: s-maj=13.5km s-min=3.9km az=166.9*
*IDC **18** 16:37:25.8±0.6, 15.07N×61.24W, h139km±4km, mb3.3/6, mb1 3.5/6, mb1mx3.3/19, mbtmp3.3/6, Error ellipse: s-maj=20.2km s-min=5.7km az=82.0*
*TRN **18** 16:37:26.1, 15.12N×61.08W, h139km, MD3.6, M3.0(FDF)*
TRN Felt I,II in Martinique.
*NEIC **18** 16:37:26.1, 15.11N×61.07W, h138km, MD3.6(TRN), After TRN.*
ISC 18 16:37:26.6±0.4, **15.11N**±0.03×**61.13W**±0.08, **h146**km±3km, **n44**, σ**0.82**/71, **mb3.5**/6, **2C-12D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLPL	La Plaine	0.24	333	eP	Pn	16 37 46.5	-0.1
DLPL				eS	Sn	16 38 01.7	-0.1
DFBT	Forest Bistro	0.25	301	⇓eP	Pn	16 37 47.1	+0.5
DFBT				eS	Sn	16 38 02.7	+1.0
DFBT	Forest Bistro	0.25	301	⇓eP	Pn	16 37 47.1	+0.5
DFBT				eS	Sn	16 38 03.9	+2.2
DPMT	Pointe Michel	0.28	302	⇓eP	Pn	16 37 47.5	+0.9
DPMT				eS	Sn	16 38 00.6	-1.3
DPMT	Pointe Michel	0.28	302	⇓eP	Pn	16 37 47.5	+0.9
DPMT				eS	Sn	16 38 04.5	+2.7
FDF	Fort de France	0.38	183	⇓eP	Pn	16 37 46.9	-0.1
FDF				⇓eS	Sn	16 38 02.0	-0.5
FDF	Fort de France	0.38	183	ePn	Pn	16 37 46.8	-0.2
FDF				eSn	Sn	16 38 01.8	-0.8
DWS	Wesley	0.48	339	eP	Pn	16 37 48.1	+0.6
DWS				eS	Sn	16 38 03.1	-0.4
DWS	Wesley	0.48	339	eP	Pn	16 37 48.6	+1.1
DWS				eS	Sn	16 38 03.1	-0.4
BIM	Bigot	0.59	174	eP	Pn	16 37 47.0	-1.1
BIM				eS	Sn	16 38 04.0	-0.5
MVM	Montagne Vaucl	0.60	157	⇓eP	Pn	16 37 47.8	-0.4
MVM				⇓eS	Sn	16 38 03.0	-1.5
MGG	Marie-Galante	0.82	348	⇓iP	Pn	16 37 49.5	-0.1
TBG	Guadaloupe-3	0.89	326	⇓iP	Pn	16 37 50.1	0.0
HMG	Houelmont	1.02	328	⇓eP	Pn	16 37 51.6	+0.3
HMG				⇓eS	Sn	16 38 10.0	-0.1
DOG	Dongo Capester	1.03	333	eP	Pn	16 37 51.4	+0.1
SLW	Petit Monier	1.10	170	⇑eP	Pn	16 37 51.2	-0.8
SLW				⇑eS	Sn	16 38 10.8	-0.5
LZG	Guadaloupe-1	1.20	329	eP	Pn	16 37 53.1	+0.3
SLB	Belfond	1.28	176	eP	Pn	16 37 54.8	+1.1
SLB				eS	Sn	16 38 14.1	-0.3
SLB	Belfond	1.28	176	eP	Pn	16 37 54.8	+1.1
SLB				eS	Sn	16 38 15.8	+1.5
MCLT	Moule a Chique	1.41	172	eP	Pn	16 37 54.2	-0.8
MCLT				eS	Sn	16 38 15.0	-1.7
SSV	Crater Summit	1.78	182	eP	Pn	16 37 59.1	+0.2
SSV				eS	Sn	16 38 24.7	+0.9
SVV	Soufriere Volc	1.79	183	eP	Pn	16 38 00.3	+1.2
SVV				eS	Sn	16 38 25.8	+1.8
BHS	Barnard House	1.81	180	eP	Pn	16 37 59.2	-0.2
BHS				eS	Sn	16 38 24.3	-0.1
BHS	Barnard House	1.81	180	eP	Pn	16 37 59.2	-0.2
BHS				eS	Sn	16 38 26.2	+1.8
SVB	Belmont	1.83	184	eP	Pn	16 37 59.2	-0.5
SVB				eS	Sn	16 38 24.5	-0.4
FCV	Fort Charlotte	1.95	183	eP	Pn	16 38 01.7	+0.7
FCV				eS	Sn	16 38 27.9	+0.6
FCV	Fort Charlotte	1.95	183	eP	Pn	16 38 01.7	+0.7
FCV				eS	Sn	16 38 28.5	+1.2
BBGH	Gun Hill	2.48	142	ePn	Pn	16 38 07.9	+0.5
ANWB	Willy Bob	2.62	346	ePn	Pn	16 38 07.9	-1.1
GRCU	Cariacou	2.64	187	eP	Pn	16 38 09.8	+0.3
GRCU				eS	Sn	16 38 41.4	-1.0
SKI	Saint Kitts	2.69	325	eP	Pn	16 38 10.2	+0.2
SKI				eS	Sn	16 38 43.4	0.0
GRW	Mount Saint Ca	2.98	190	eP	Pn	16 38 14.4	+0.8
GRW				eS	Sn	16 38 49.3	-0.7
GRGR	Grenville	3.00	190	ePn	Pn	16 38 13.7	-0.3
TOSP	Speyside	3.83	171	eP	Pn	16 38 24.8	+0.1
TOSP				eS	Sn	16 39 08.2	-1.5
TPR	Prospect	3.92	175	eP	Pn	16 38 26.8	+1.0
TRN	Trinidad (W)	4.45	183	eP	Pn	16 38 28.8	-4.0
SDDR	Presa de Saban	10.45	293	ePn	Pn	16 39 52.1	-0.5
TXAR	Lajitas Array	41.60	297	P	P	16 45 00.1	-0.3
	0.1nm,0.4s,mb2.8,baz=115,slow=7.1,SNR=4.2						
ULM	Lac du Bonnet	44.91	329	P	P	16 45 25.6	-1.0
	1.2nm,0.4s,mb3.9,baz=166,slow=12,SNR=2.6						
PDAR	Pinedale Array	49.66	314	P	P	16 46 03.5	0.0
	0.4nm,0.5s,mb3.4,baz=117,slow=10,SNR=5.7						
DBIC	Dimbokro	55.77	92	P	P	16 46 49.6	+0.8
	2.0nm,1.0s,mb3.9,baz=328,slow=9.5,SNR=2.6						
YKA	Yellowknife Ar	60.24	335	P	P	16 47 18.4	-0.6
	0.3nm,0.4s,mb3.4,baz=104,slow=7.5,SNR=7.7						
YKA	Yellowknife Ar	60.24	335	P	P	16 47 18.4	-0.6
TORD	Torodi Ar. Bea	60.78	83	P	P	16 47 24.1	+0.5
	0.7nm,0.6s,mb3.7,baz=288,slow=6.5,SNR=8.4						

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*ISCJB **18** 16:47:56.1±1.9, 23.6S±0.1×180.0W±0.2, h523km±34km, mb4.1/10, Error ellipse: s-maj=24.2km s-min=20.6km az=29.5*
*IDC **18** 16:47:56.2±2.3, 23.55S×179.88W, h516km±20km, mb3.5/5, mb1 3.7/7, mb1mx3.3/17, mbtmp3.6/7, Error ellipse: s-maj=40.7km s-min=25.0km az=144.0*
*NEIC **18** 16:47:57.1±1.0, 23.60S×179.85W, h534km±15km, mb4.4/7, Error ellipse: s-maj=16.3km s-min=12.4km az=141.0*
ISC 18 16:47:56.6±1.5, **23.6S**±0.1×**180.0W**±0.2, **h514**km±29km, **n19**, σ**0.61**/17, **mb4.1**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	12.37	40	P	P	16 50 38.9	-0.2
	1.4nm,0.3s,baz=172,slow=22,SNR=6.1						
URZ	Urewera	14.83	189	P	P	16 51 04.8	+0.2
	2.2nm,0.3s,baz=191,slow=10,SNR=11						
EIDS	Eidsvold	26.39	260	eP	P	16 52 52.4	+0.8
CTA	Charters Tower	31.50	270	eP	P	16 53 37.0	+0.8
	12nm,0.4s,mb4.8						
CTAO	Charters Tower	31.50	270	eP	P	16 53 36.9	+0.8
	14nm,0.4s,mb4.9						
PMG	Port Moresby	34.42	289	P	P	16 54 01.2	+0.3
	12nm,0.9s,mb4.4,baz=165,slow=16,SNR=3.5						
PMG	Port Moresby	34.42	289	eP	P	16 54 01.3	+0.3
	15nm,1.0s,mb4.5						
STKA	Stephens Creek	34.86	248	eP	P	16 54 04.9	+0.5
	1.7nm,0.4s,mb3.9						
STKA	Stephens Creek	34.86	248	P	P	16 54 05.1	+0.7
	2.0nm,0.4s,mb4.0,baz=84,slow=9.8,SNR=18						
BBOO	Buckleboo	39.59	247	eP	P	16 54 42.7	-0.5
	1.1nm,0.2s,mb4.0						
ASAR	Alice Springs	42.11	260	P	P	16 55 03.5	0.0
	4.4nm,0.6s,mb4.2,baz=95,slow=7.4,SNR=141						
ASAR				ScP	ScP	16 59 47.8	0.0
	0.4nm,0.9s,baz=92,slow=4.6,SNR=4.0						
WB2	Warramunga Arr	42.45	266	eP	P	16 55 05.5	-0.6
WRAB	Tennant Creek	42.45	266	eP	P	16 55 05.3	-0.9
	1.9nm,0.4s,mb4.0						
WRA	Warramunga Arr	42.46	266	P	P	16 55 05.6	-0.6
	6.0nm,0.4s,mb4.4,baz=102,slow=8.3,SNR=282						
WRA				ScP	ScP	16 59 48.8	-0.4

0.5nm,1.0s,baz=89,slow=4.9,SNR=3.7
FORT Forrest 46.44 249 *e*P **P 16 55 36.1 -0.8**
12nm,0.5s,mb4.7
QSPA South Pole Qui 66.48 180 *e*P **P 16 57 54.2 0.0**
0.8nm,0.6s,mb3.4
CMAR Chiang Mai Arr 89.45 290 P **P 16 59 59.8 +0.9**
0.1nm,0.4s,mb3.0,baz=139,slow=4.1,SNR=5.4
AKASG Malin Array Be 144.73 328 PKP PKPdf 17 06 32.1 -2.2
0.7nm,0.4s,baz=46,slow=4.0,SNR=7.2
BRTR Keskin Array B 147.42 308 PKPbc PKPbc 17 06 40.8 -1.8
0.7nm,0.6s,baz=157,slow=4.1,SNR=2.3

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*MOS **18** 17:12:09.5±1.1, 578N×12678E, h33km, mb5.0/25, Error ellipse: s-maj=13.0km s-min=6.5km az=113.2*
*BJI **18** 17:12:11.6, 505N×12691E, h98km, mB4.9, mb4.7*
*MAN **18** 17:12:11, 536N×12688E, h73km, mb5.2, ML4.2, MS4.4*
*ISCJB **18** 17:12:16.5±0.4, 578N±003×12689E±004, h96km±3km, mb4.8/95, Error ellipse: s-maj=7.0km s-min=3.9km az=165.2*
*IDC **18** 17:12:16.8±1.3, 582N×12691E, h81km±10km, mb4.3/19, mb1 4.4/20, mb1mx4.4/22, mbtmp4.3/20, MS3.3/10, Ms1 3.3/10, ms1mx3.2/23, Error ellipse: s-maj=17.6km s-min=9.0km az=70.0*
*NEIC **18** 17:12:18.5±0.8, 575N×12677E, h99km±7km, mb4.8/55, Error ellipse: s-maj=7.3km s-min=4.3km az=70.0*
*DJA **18** 17:12:19, 565N×12703E, h91km, MLv5.2/4*
ISC 18 17:12:18.0±0.4**, 578N**±002×**12687E**±004**, h93**km±3km**, h102**km±2.9km**:pP-P, n221, σ1s08**/225**, mb4.8**/95**, 18C-12D, Mindanao**

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

MATI Mati 1.31 332 *e*P **Pn 17 12 39.5 -2.0**
DAV Davao City (W) 1.81 315 P **Pn 17 12 47.0 -0.9**
315nm,0.3s,baz=181,slow=0.8,SNR=70
DAV S **Sn 17 13 09.4 -1.2**
694nm,0.3s,baz=115,slow=23,SNR=21
DAV LR LR 17 13 36.9
comp=Z,787nm,20.7s,baz=110,slow=44
DAV Davao City (W) 1.81 315 *e*Pn **Pn 17 12 47.0 -0.9**
DMPH Davao City--Mi 1.87 314 ⇓*i*P **Pn 17 12 47.2 -1.4**
DMPH *i* S **Sn 17 13 12.0 0.0**
BUKP Musuan 2.75 319 *e*P **Pn 17 12 59.1 -1.1**
BUTP Butuan 3.40 339 *e*P **Pn 17 13 09.6 +0.6**
BUTP *e*S **Sn 17 13 54.4 +6.0**
PAGZ Pagadian 4.02 301 *e*P **Pn 17 13 16.1 -1.4**
SCPH Surigao 4.20 341⇑*e*P **Pn 17 13 19.5 -0.3**
MSLP Maasin 4.76 335 *e*P **Pn 17 13 26.6 -0.8**
MNI Manado 4.76 205 P **Pn 17 13 27.2 -0.3**
MNI S **Sn 17 14 16.9 -4.6**
TBP Tagbilaran 4.89 323 *e*P **Pn 17 13 28.7 -0.5**
TNTI Ternate 5.00 174 P **Pn 17 13 31.3 +0.5**
TNTI S **Sn 17 14 28.0 +0.6**
LLP Lapu-Lapu 5.34 328 *e*P **Pn 17 13 34.9 -0.5**
LLP *e*S **Sn 17 14 23.4 -12**
PLP Palo 5.66 341⇑*e*P **Pn 17 13 42.0 +2.3**
OCLP Ormoc 5.69 337 *e*P **Pn 17 13 40.8 +0.7**
LBMI Labuha 6.41 174 P **Pn 17 13 51.3 +1.4**
GUIM Jordan 6.41 319 *e*P **Pn 17 13 50.0 +0.2**
RCP Roxas 7.04 325 *e*P **Pn 17 13 59.1 +0.7**
CUYO Cuyo Island 7.67 311 *e*P **Pn 17 14 08.6 +1.5**
OTRP Odiongan 8.10 324 *e*P **Pn 17 14 14.1 +1.2**
PVCP Virac 8.21 341 *e*P **Pn 17 14 15.0 +0.6**
MYLDM Lahad Datu 8.35 266 ⇑P **Pn 17 14 17.5 +1.1**
BUSP Coron 9.03 314 *e*P **Pn 17 14 25.8 +0.2**
TSM Tawau 9.08 261 ⇑P **Pn 17 14 28.6 +2.2**
ENPP El Nido 9.12 307 *e*P **Pn 17 14 25.8 -1.1**
SDKM Sandakan 9.63 270 ⇓P **Pn 17 14 35.9 +2.2**
KDM Kudat 10.04 277 ⇓P **Pn 17 14 43.4 +4.1**
KDI Kendari 10.56 204 P **Pn 17 14 45.3 -1.2**
KKM Kota Kinabalu 10.60 272 *e*Pn **Pn 17 14 48.2 +1.2**
KKM Kota Kinabalu 10.60 272 ⇑P **Pn 17 14 48.4 +1.4**
KAPI Kappang 12.87 214 P **Pn 17 15 16.0 -1.5**
1.3nm,0.3s,baz=15,slow=6.6,SNR=6.8
KAPI LR LR 17 21 03.6
comp=Z,123nm,18.8s,baz=357,slow=41
KAPI Kappang 12.87 214 P **Pn 17 15 16.0 -1.5**
KAPI LR LR 17 21 03.6
BTM Bintulu 13.98 260 ⇑P **Pn 17 15 32.1 0.0**
SBUM Sibu 14.98 258 ⇓P **Pn 17 15 46.9 +2.0**
KSM Kuching 17.07 256 *e*P **Pn 17 16 11.4 +0.4**
26nm,0.8s
KSM Kuching 17.07 256 ⇑P **Pn 17 16 12.2 +1.2**
SSLB Suanglung 18.78 343 *e*P **Pn 17 16 29.6 -1.9**
14nm,0.6s
GUMO Guam 19.35 65 LR LR 17 23 24.5
comp=Z,88nm,21.4s,baz=43,slow=35
YHNB Yeheng 19.50 345 *e*P **Pn 17 16 38.2 -1.9**
67nm,1.1s
QIZ Qiongzhong 21.18 310 P **P 17 16 57.3 +1.3**
QIZ Qiongzhong 21.18 310 P **P 17 16 57.2 +1.2**
29nm,1.0s,mb4.6
MYKOM Kota Tinggi 23.30 261 ⇓P **P 17 17 20.6 +2.6**
KTGM Kuala Trenggan 23.63 270 ⇑P **P 17 17 22.0 +1.1**
FITZ Fitzroy Crossi 23.76 183 *e*P **P 17 17 17.3 -4.7**
11nm,0.6s,mb4.4
KGM Kluang 23.79 262 ⇑P **P 17 17 23.3 +0.9**
PMG Port Moresby 25.23 127 LR LR 17 29 07.9
comp=Z,52nm,18.3s,baz=111,slow=40
FRIM Kepong 25.29 265 ⇓P **P 17 17 37.3 +1.3**
CBIJ Chichi jima 25.73 33 P **P 17 17 38.0 -1.9**
76nm,0.5s,mb5.4,baz=254,slow=3.4,SNR=18
CBIJ LR LR 17 25 29.7
comp=Z,76nm,21.9s,baz=347,slow=31
KULM Kulim 26.10 270 P **P 17 17 38.6 -4.8**
19nm,1.2s,mb4.4
WRAB Tennant Creek 26.59 164 *e*P **P 17 17 47.0 -0.7**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb4.5
WRAB Tennant Creek 26.59 164 *e*P **P 17 17 47.0 -0.7**
comp=Z,14nm,0.8s,mb4.5
WRA Warramunga Arr 26.60 164 P **P 17 17 46.2 -1.5**
comp=Z,2.0nm,0.3s,mb4.1,baz=335,slow=11,SNR=43
WRA PcP PcP 17 21 10.9 +1.0
comp=Z,1.1nm,0.5s,baz=343,slow=2.3,SNR=3.2
WRA ScP ScP 17 24 44.1 +2.4
comp=Z,2.1nm,0.8s,baz=340,slow=3.4,SNR=9.6
WRA Warramunga Arr 26.60 164 P **P 17 17 46.2 -1.5**
WRA 17 21 10.9
WB2 Warramunga Arr 26.60 164 *e*P **P 17 17 47.3 -0.5**
NJ2 Nanjing 27.19 345 *e*P **P 17 17 55.8 +2.9**
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.3
WHN Wuhan 27.30 336 P **P 17 17 55.0 +1.1**
MBWA Marble Bar 27.68 194 *e*P **P 17 17 56.9 -0.4**
comp=Z,14nm,1.0s,mb4.4
PSI Prapat 28.02 265 P **P 17 17 57.3 -3.3**
comp=Z,3.6nm,0.3s,mb4.3,baz=161,slow=5.6,SNR=6.5
PSI LR LR 17 29 21.0
comp=Z,65nm,21.9s,baz=15,slow=36
GYA Guiyang 28.19 319 P **P 17 18 02.9 +1.0**
GYA AP pP 17 18 25.9 +2.9
GYA XP sP 17 18 40.0 +6.2
GYA PP PP 17 18 58.8 -8.5
GYA PCP PcP 17 21 14.3 +0.6
GYA S **S 17 22 40.8 0.0**
GYA XS sS 17 23 20.9 +3.5
GYA SCP ScP 17 24 44.8 -1.6
GYA SCS ScS 17 28 35.6 -3.8
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
GYA AMB AMB
comp=Z,90nm,4.3s
CHRT Chiangrai 29.82 300 P **P 17 18 17.0 +0.5**
CMAR Chiang Mai Arr 30.01 297 P **P 17 18 17.4 -0.8**
comp=Z,3.0nm,0.7s,mb4.1,baz=114,slow=7.2,SNR=28
CMAR PcP PcP 17 21 19.5 +1.1
comp=Z,1.5nm,0.8s,baz=137,slow=1.3,SNR=10.0
CMAR ScP ScP 17 24 55.1 +2.8
comp=Z,1.5nm,0.9s,baz=116,slow=1.6,SNR=11
CMAR LR LR 17 29 03.6
comp=Z,65nm,21.1s,baz=130,slow=34
CMAR Chiang Mai Arr 30.01 297 P **P 17 18 17.4 -0.8**
CMAR 17 21 19.5
CMAR 17 24 55.2
CMAR Chiang Mai Arr 30.01 297 P **P 17 18 17.4 -0.8**
CMAR PcP PcP 17 21 19.5 +1.1
CMAR ScP ScP 17 24 55.1 +2.8
CMAR LR LR 17 29 03.6
CM31 Chiang Mai Arr 30.01 297 *e*P **P 17 18 18.0 -0.1**
comp=Z,3.1nm,0.6s,mb4.1

ASAR Alice Springs 30.06 167 P **P 17 18 18.8 +0.3**
comp=Z,1.2nm,0.5s,mb3.8,baz=339,slow=7.0,SNR=38
ASAR PcP PcP 17 21 19.4 +1.0
comp=Z,3.2nm,0.5s,baz=351,slow=2.2,SNR=19
ASAR ScP ScP 17 24 55.0 +2.6
comp=Z,1.5nm,0.7s,baz=348,slow=2.9,SNR=9.9
KMI Kunming 30.07 312 P **P 17 18 19.1 +0.5**
KMI AP pP 17 18 46.3 +6.5
KMI XP sP 17 18 57.9 +7.3
KMI PP PP 17 19 24.5 -3.7
KMI S **S 17 23 10.8 +0.3**
KMI XS sS 17 23 51.8 +4.7
KMI SS SS 17 24 57.3 -25
KMI AMB AMB
comp=Z,9.0nm,0.9s,mb4.4
KMI AMB AMB
comp=Z,73nm,3.9s
KMI LR LR
comp=N,92nm,15.0s
KMI LR LR
comp=E,117nm,16.8s
KMI LR LR
comp=Z,139nm,27.6s
CHG Chiang Mai 30.14 298 PG **P 17 18 18.7 -0.6**
comp=Z,6.8nm,0.7s,mb4.4
CHTO Chiang Mai 30.14 298 *e*P **P 17 18 17.7 -1.6**
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
CHTO Chiang Mai 30.14 298 *e*P **P 17 18 17.7 -1.6**
comp=Z,4.3nm,0.6s,mb4.3
KSRS Korea Array 31.54 2 P **P 17 18 31.4 +0.1**
comp=Z,1.0nm,0.6s,mb3.7,baz=180,slow=9.9,SNR=5.3
KSRS LR LR 17 29 59.0
comp=Z,56nm,20.3s,baz=5.8,slow=34
CTA Charters Tower 32.01 144 *e*P **P 17 18 35.1 -0.6**
comp=Z,3.3nm,0.6s,mb4.2
CTA Charters Tower 32.01 144 *e*P **P 17 18 35.1 -0.6**
CTA pmax pmax
comp=Z,3.0nm,0.6s
CTAO Charters Tower 32.01 144 *e*P **P 17 18 35.4 -0.3**
CTAO pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
CTAO Charters Tower 32.01 144 *e*P **P 17 18 35.4 -0.3**
comp=Z,4.6nm,0.7s,mb4.3
MJAR Matsushiro Arr 32.33 17 P **P 17 18 39.3 +1.0**
comp=Z,1.2nm,0.6s,mb3.8,baz=187,slow=7.6,SNR=4.6
MJAR LR LR 17 30 46.3
comp=Z,50nm,20.7s,baz=210,slow=34
XAN Xi'an 32.67 332 P **P 17 18 41.1 -0.3**
XAN AP pP 17 19 04.9 +2.3
XAN XP sP 17 19 18.5 +5.1
XAN PP PP 17 19 58.3 +1.3
XAN S **S 17 23 52.6 +1.8**
XAN AMB AMB
comp=Z,9.0nm,0.9s,mb4.6
XAN AMB AMB
comp=Z,68nm,4.9s
XAN LR LR
comp=N,34nm,29.6s
XAN LR LR
comp=E,45nm,27.2s
XAN LR LR
comp=Z,94nm,27.7s
CD2 Chengdu 33.10 322 P **P 17 18 46.5 +1.3**
CD2 AP pP 17 19 08.6 +2.2
CD2 XP sP 17 19 20.3 +3.0
CD2 PP PP 17 20 00.5 -1.3
CD2 PCP PcP 17 21 27.8 +1.3
CD2 S **S 17 23 57.4 -0.2**
CD2 XS sS 17 24 36.0 +1.6
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
CD2 AMB AMB
comp=Z,140nm,4.7s
CD2 LR LR
comp=N,170nm,5.5s
CD2 LR LR
comp=Z,170nm,5.5s
BJT Baijiatuau 35.42 346 *e*P **P 17 19 06.8 +1.8**
BJT pmax pmax
comp=Z,82nm,0.8s
BJT Baijiatuau 35.42 346 *e*P **P 17 19 06.8 +1.8**
comp=Z,82nm,0.8s,mb5.6
BJI Beijing 35.44 346 P **P 17 19 07.0 +1.8**
BJI XP sP 17 19 41.6 +4.2
BJI S **S 17 24 35.4 +2.0**
BJI AMB AMB
comp=Z,73nm,0.8s,mb5.6
FORT Forrest 36.37 178 *e*P **P 17 19 13.7 +0.4**
comp=Z,27nm,0.6s,mb5.3
LZH Lanzhou 36.83 328 ⇓P **P 17 19 18.0 +0.9**
LZH AP pP 17 19 41.5 +2.8
LZH XP sP 17 19 52.5 +3.1
LZH PP PP 17 20 46.5 +3.7
LZH PCP PcP 17 21 38.4 +1.1
LZH *e*S **S 17 24 55.0 +0.3**
LZH XS sS 17 25 35.0 +3.1
LZH AMB AMB
comp=Z,56nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,110nm,4.4s
HHC Hu-ho-hao-te 37.51 341 *e*P **P 17 19 24.9 +2.1**
HHC AP pP 17 19 47.6 +3.2
HHC XP sP 17 19 59.1 +3.9
HHC PP PP 17 20 57.0 +6.8
HHC PCP PcP 17 21 41.0 +1.7
HHC *e*S **S 17 25 05.9 +1.0**
HHC PCS PcS 17 25 28.3 +0.5
HHC XS sS 17 25 45.1 +2.9
HHC SCS ScS 17 29 25.3 -1.4
HHC AMB AMB
comp=Z,19nm,1.0s,mb4.9
HHC AMB AMB
comp=Z,90nm,5.7s
HHC LR LR
comp=N,208nm,14.3s
HHC LR LR
comp=E,104nm,15.5s
CN2 Changchun 37.88 358 *e*P **P 17 19 29.1 +3.2**
KLBR Kellerberrin 38.17 193 *e*P **P 17 19 28.6 +0.1**
comp=E,14nm,0.8s,mb4.8
MDJ Mudanjiang 38.75 3 P **P 17 19 34.8 +1.6**
MDJ AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,90nm,4.4s
SHL Shillong 38.81 304 *e*P **P 17 19 34.0 0.0**
MUN Mundaring 38.90 194 *e*P **P 17 19 35.6 +1.0**
NWAO Narrogin (SRO) 39.57 193 P **P 17 19 39.6 -0.5**
comp=Z,24nm,0.9s,mb5.0,baz=14,slow=8.2,SNR=8.3
NWAO Narrogin (SRO) 39.57 193 *e*P **P 17 19 39.6 -0.5**
NWAO pmax pmax
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 39.57 193 *e*P **P 17 19 39.6 -0.6**
comp=Z,22nm,0.9s,mb5.0
STKA Stephens Creek 40.00 160 *e*P **P 17 19 44.3 +0.6**
comp=Z,5.8nm,0.7s,mb4.5
STKA Stephens Creek 40.00 160 P **P 17 19 44.7 +1.0**
comp=Z,8.2nm,0.8s,mb4.6,baz=334,slow=8.1,SNR=21
STKA PcP PcP 17 21 48.0 +0.8
comp=Z,1.9nm,0.5s,baz=349,slow=9.6,SNR=4.2
STKA LR LR 17 35 48.2
comp=Z,52nm,19.6s,baz=214,slow=35
LSA Lhasa 41.22 310 *e*P **P 17 19 54.6 +0.7**
LSA *e* 17 21 52.7
LSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
LSA Lhasa 41.22 310 *e*P **P 17 19 54.6 +0.7**
comp=Z,2.9nm,0.7s,mb4.2
LSA *e*PcP PcP 17 21 52.7 +1.4
GTA Gaotai 41.43 328 P **P 17 19 56.1 +0.7**
GTA AP pP 17 20 18.3 +1.0
GTA XP sP 17 20 30.5 +2.5
GTA PCP PcP 17 21 54.4 +2.6
GTA S **S 17 26 04.0 +0.3**
GTA XS sS 17 26 43.5 +2.1
GTA AMB AMB
comp=Z,17nm,0.8s,mb4.9
GTA AMB AMB
comp=Z,76nm,6.0s
GTA LR LR
comp=N,104nm,11.7s
GTA LR LR
comp=E,93nm,12.9s
GTA LR LR

comp=Z,73nm,12.0s
TAPN Taplejung 42.95 304 *e*P **P 17 20 07.7 -0.3**
comp=Z,19nm,0.7s,mb4.9
ODAN Odare 43.03 304 *e*P **P 17 20 08.3 -0.3**
comp=Z,35nm,0.7s,mb5.2
ARMA Armidale 43.11 148 *e*P **P 17 20 09.4 +0.2**
YSS Yuzh-Sakhalins 43.24 16 *e*P **P 17 20 10.6 +0.6**
YSS pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
YSS Yuzh-Sakhalins 43.24 16 *e*P **P 17 20 10.6 +0.6**
comp=Z,9.8nm,0.6s,mb4.7
BOK Bokaro 43.27 299 *e*P **P 17 20 10.5 -0.1**
BOK AMb AMB 17 20 14.0
comp=Z,11nm,1.6s,mb4.3
KLR Kul'dur 43.49 5 *e*P **P 17 20 08.7 -3.3**
RAMN Ramite 43.71 303 *e*P **P 17 20 13.9 -0.3**
comp=Z,37nm,0.7s,mb5.2
HIA Hailar 43.75 353 P **P 17 20 17.0 +3.0**
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 43.75 353 P **P 17 20 17.0 +3.0**
comp=Z,7.0nm,0.8s,mb4.4
JIRN Jiri 44.31 304 *e*P **P 17 20 18.9 0.0**
comp=Z,50nm,0.8s,mb5.3
GUN Gumba 44.66 304 *e*P **P 17 20 21.5 -0.2**
comp=Z,50nm,0.8s,mb5.3
PKI Pulchoki 44.93 304 *e*P **P 17 20 24.0 +0.2**
comp=Z,19nm,0.7s,mb4.9
PKI Pulchoki 44.93 304 *e*P **P 17 20 24.0 +0.2**
PKI pmax pmax
comp=Z,19nm,0.7s,mb4.9
KKN Kakani 45.11 304 *e*P **P 17 20 24.3 -1.0**
comp=Z,28nm,0.8s,mb5.0
KKN Kakani 45.11 304 *e*P **P 17 20 24.3 -1.0**
KKN pmax pmax
comp=Z,28nm,0.8s,mb5.0
DMN Daman 45.19 304 *e*P **P 17 20 25.2 -0.7**
comp=Z,30nm,0.9s,mb5.0
ULN Ulaanbaatar 45.23 341⇑*e*P **P 17 20 25.5 -0.3**
ULN Ulaanbaatar 45.23 341 *e*P **P 17 20 26.0 +0.2**
comp=Z,10nm,0.9s,mb4.5
SONM Songino Array 45.41 341 P **P 17 20 26.9 -0.4**
comp=Z,5.9nm,0.8s,mb4.4,baz=155,slow=7.5,SNR=35
SONM PcP PcP 17 22 05.4 +0.4
comp=Z,0.8nm,0.6s,baz=183,slow=3.6,SNR=3.2
GKN Gorkha 45.72 304 *e*P **P 17 20 29.2 -0.9**
comp=Z,8.8nm,0.5s,mb4.7
KOLN Koldanda 46.50 303 *e*P **P 17 20 35.5 -0.7**
comp=Z,76nm,0.7s,mb5.5
DANN Dangsing 46.57 304 *e*P **P 17 20 36.2 -0.5**
comp=Z,77nm,0.7s,mb5.5
ZAK Zakamensk 48.65 340 *e*P **P 17 20 47.6 -4.8**
ZAK *e* 17 22 13.2
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
TLY Talaya 49.64 341 P **P 17 21 01.3 +1.3**
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TLY Talaya 49.64 341 P **P 17 21 01.3 +1.3**
comp=Z,5.4nm,0.7s,mb4.6
BHPL Bhopal 50.63 295 *e*P **P 17 21 07.3 -0.7**
BHPL AMb AMB 17 21 08.6
comp=Z,28nm,0.4s,mb5.6
JOSI Joshimath 50.76 305 *e*P **P 17 21 08.7 -0.1**
JOSI AMb AMB 17 21 09.9
comp=Z,125nm,0.7s
WMQ Urumqi 51.14 324 *e*P **P 17 21 12.5 +1.1**
WMQ AMB AMB
comp=Z,11nm,1.2s,mb4.8
WMQ AMB AMB
comp=Z,103nm,5.6s
WMQ LR LR
comp=N,147nm,20.0s
WMQ LR LR
comp=E,45nm,20.0s
WMQ LR LR
comp=Z,49nm,18.0s
SONA Sohna 52.13 301 *e*P **P 17 21 17.2 -1.8**
SONA AMb AMB 17 21 18.7
comp=Z,38nm,0.5s,mb5.7
AYAN Aya Nagar 52.16 302 *e*P **P 17 21 17.1 -2.2**
AYAN AMb AMB 17 21 18.6
comp=Z,16nm,0.5s,mb5.3
KUDL Kundal 52.61 301 *e*P **P 17 21 21.2 -1.5**
KUDL AMb AMB 17 21 22.7
comp=Z,36nm,0.9s,mb5.4
KKR Kurukshetra 52.83 303 *e*P **P 17 21 23.6 -0.6**
KKR AMb AMB 17 21 41.8
comp=Z,91nm,0.1s
BOD Bodaibo 52.87 351 *e*P **P 17 21 22.3 -1.7**
BOD pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
KHET Khetri 53.17 301 *e*P **P 17 21 25.5 -1.3**
KHET AMb AMB 17 21 26.9
comp=Z,26nm,0.8s,mb5.3
PETK Petropavlovsk- 53.49 23 P **P 17 21 28.6 0.0**
comp=Z,3.7nm,0.6s,mb4.6,baz=190,slow=2.6,SNR=9.3
PET Petropavlovsk 53.80 23 P **P 17 21 32.7 +1.8**
PET pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
PET Petropavlovsk 53.80 23 P **P 17 21 32.7 +1.8**
comp=Z,7.4nm,0.7s,mb4.8
AJM Ajmer 53.80 299 *e*P **P 17 21 30.3 -1.1**
AJM AMb AMB 17 21 31.9
comp=Z,21nm,0.8s,mb5.2
MKAR Makanchi Array 55.97 324 P **P 17 21 46.4 -0.2**
comp=Z,9.4nm,0.7s,mb5.0,baz=127,slow=7.9,SNR=112
MKAR PcP PcP 17 22 43.9 -0.2
comp=Z,7.1nm,0.7s,baz=111,slow=3.8,SNR=12
MKAR LR LR 17 46 51.3
comp=Z,30nm,20.9s,baz=165,slow=37
MKAR Makanchi Array 55.97 324 P **P 17 21 46.4 -0.3**
MKAR 17 22 43.9
MKAR Makanchi Array 55.97 324 P **P 17 21 46.4 -0.2**
MKAR PcP PcP 17 22 43.9 -0.2
MKAR LR LR 17 46 51.4
YAK Yakutsk 56.16 2 *e*P **P 17 21 47.9 +0.1**
YAK pmax pmax
comp=Z,14nm,0.8s,mb5.0
YAK Yakutsk 56.16 2 *e*P **P 17 21 48.1 +0.4**
comp=Z,9.7nm,0.5s,mb5.1
KZA Kyzart 58.22 317 P **P 17 22 03.5 +0.9**
SNR=7.5
TKM2 Tokmak 2 58.32 318 *e*P **P 17 22 02.8 -0.5**
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
TKM2 Tokmak 2 58.32 318 P **P 17 22 03.4 +0.1**
SNR=6.0
TKM2 Tokmak 2 58.32 318 *e*P **P 17 22 02.8 -0.6**
comp=Z,2.7nm,0.6s,mb4.5
KBK Karagaybulak 58.65 317 P **P 17 22 06.3 +0.7**
SNR=7.6
UCH Uchtor 58.78 317 P **P 17 22 07.6 +1.1**
ZAA0 Zalesovo Array 58.84 332 *e*P **P 17 22 05.7 -1.0**
ZALV Zalesovo Beam 58.84 332 P **P 17 22 05.9 -0.8**
comp=Z,7.7nm,0.7s,mb4.8,baz=116,slow=6.8,SNR=35
AAK Ala-Archa 58.95 317 *e*P **P 17 22 07.7 0.0**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
AAK Ala-Archa 58.95 317 *e*P **P 17 22 07.7 0.0**
comp=Z,2.3nm,0.8s,mb4.3
USP Ospenovka 59.20 318 P **P 17 22 09.2 -0.1**
SNR=9.8
AML Almayashu 59.30 316 P **P 17 22 11.0 +0.9**
SNR=7.0
AML Almayashu 59.30 316 *e*P **P 17 22 09.7 -0.4**
comp=Z,7.4nm,0.8s,mb4.8
AML *e*PcP PcP 17 22 58.1 +0.8
EKS2 Erkin-Say 59.45 317 P **P 17 22 11.7 +0.6**
SNR=8.2
EKS2 Erkin-Say 59.45 317 *e*P **P 17 22 11.2 +0.1**
comp=Z,6.1nm,0.8s,mb4.7
KURK Kurchatov 60.10 327 P **P 17 22 15.1 -0.3**
comp=Z,32nm,0.7s,mb5.5,baz=124,slow=6.6,SNR=169
KURK Kurchatov 60.10 327⇑*e*P **P 17 22 15.1 -0.3**
KURK pmax pmax
comp=Z,40nm,0.7s,mb5.6
KURK Kurchatov 60.10 327 *e*P **P 17 22 15.4 0.0**
comp=Z,39nm,0.6s,mb5.6
NVS Novosibirsk 60.12 333 *i* P **P 17 22 14.8 -0.7**
NVS pmax pmax
comp=Z,18nm,1.1s,mb5.0
NVS pmax pmax
comp=N,12nm,1.1s
NVS pmax pmax
comp=E,9.0nm,1.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBL	Kabul	60.41	307	eP	P	17 22 17.1	-0.8
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
KBL	Kabul	60.41	307	eP	P	17 22 17.1	-0.8
	comp=Z,8.1nm,0.8s,mb4.8						
BVAR	Borovoye Array	65.69	326	P	P	17 22 52.6	+0.1
	comp=Z,16nm,0.7s,mb5.0,baz=129,slow=9.2,SNR=119						
BRVK	Borovoye	65.76	326	eP	P	17 22 53.1	+0.2
BRVK				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.1						
BRVK	Borovoye	65.76	326	eP	P	17 22 53.1	+0.1
	comp=Z,28nm,0.8s,mb5.1						
TIXI	Tiksi	65.80	1	eP	P	17 22 52.0	-0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TIXI	Tiksi	65.80	1	eP	P	17 22 52.0	-0.8
	comp=Z,3.2nm,0.6s,mb4.3						
BILL	Bilibino	67.55	15	P	P	17 23 03.0	-1.0
BILL				*PP	pP	17 23 27.0	-0.7
UNV	Unalaska Valle	71.67	35	P	P	17 23 30.5	+0.9
	comp=Z,11nm,0.7s,mb4.8						
SVE	Sverdlovsk	72.30	328	⇑eP	P	17 23 33.7	+0.4
SVE				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.1						
ARU	Arti	73.29	327	eP	P	17 23 38.2	-1.0
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
ARU	Arti	73.29	327	eP	P	17 23 38.2	-1.0
	comp=Z,9.7nm,0.6s,mb4.8						
UMR	Umm Al-Rimmam	77.75	299	eP	P	17 24 03.7	-1.5
	baz=299						
UMR				AMb	AMB	17 24 07.3	
	comp=Z,37nm,1.4s,mb4.9,baz=299						
RDF	Al-Radifah	77.89	298	eP	P	17 24 04.6	-1.5
	baz=298						
RDF				AMb	AMB	17 24 11.3	
	comp=Z,39nm,1.5s,mb4.9,baz=298						
MIB	Mutribah	78.07	299	eP	P	17 24 05.7	-1.4
	baz=299						
MIB				AMb	AMB	17 24 06.9	
	comp=Z,42nm,0.9s,mb5.2,baz=299						
NAY	Al-Naaiem	78.16	299	eP	P	17 24 05.9	-1.6
	baz=299						
NAY				AMb	AMB	17 24 06.8	
	comp=Z,13nm,0.9s,mb4.7,baz=299						
BPAW	Bear Paw Mtn.	81.39	26	eP	P	17 24 24.7	+0.4
	comp=Z,11nm,0.8s,mb4.7						
COLD	Coldfoot	81.96	23	eP	P	17 24 28.9	+1.8
	comp=Z,9.3nm,0.7s,mb4.7						
PMR	Palmer	82.09	29	eP	P	17 24 27.6	-0.4
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
PMR	Palmer	82.09	29	eP	P	17 24 27.6	-0.4
	comp=Z,9.9nm,0.7s,mb4.8						
MCK	McKinley	82.28	27	eP	P	17 24 29.1	+0.2
MCK				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.0						
MCK	McKinley	82.28	27	eP	P	17 24 29.1	+0.2
	comp=Z,16nm,0.7s,mb5.0						
COLA	College	82.79	25	eP	P	17 24 31.0	-0.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
COLA	College	82.79	25	eP	P	17 24 31.0	-0.6
	comp=Z,5.0nm,0.8s,mb4.4						
VNDA	Vanda	85.43	173	P	P	17 24 44.9	+0.2
	comp=Z,4.2nm,0.8s,mb4.4,baz=290,slow=6.7,SNR=7.6						
VNDA	Vanda	85.43	173	eP	P	17 24 44.6	-0.1
VNDA				pmax	pmax		
	comp=Z,26nm,1.7s						
VNDA	Vanda	85.43	173	eP	P	17 24 44.6	-0.1
	comp=Z,26nm,1.7s,mb4.9						
OBN	Obninsk	85.47	325	⇓eP	P	17 24 45.5	+0.1
OBN				pmax	pmax		
	comp=Z,90nm,1.8s,mb5.4						
OBN	Obninsk	85.47	325	eP	P	17 24 45.2	-0.2
	comp=Z,15nm,0.4s,mb5.3						
ANN	Anapa	85.57	314	eP	P	17 24 43.9	-2.2
ANN				eS	S	17 35 04.0	-6.4
ANN				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.5						
JOF	Joensuu	87.43	333	ep	P	17 24 55.1	+0.3
	comp=Z,2.0nm,0.4s,mb4.4						
INK	Inuvik	88.22	22	eP	P	17 24 58.1	-0.3
INK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
INK	Inuvik	88.22	22	eP	P	17 24 58.1	-0.3
	comp=Z,2.5nm,0.8s,mb4.3						
ARCES	ARCESS Array B	88.58	340	P	P	17 24 58.5	-1.6
	comp=Z,3.7nm,0.7s,mb4.5,baz=72,slow=4.0,SNR=14						
BR131	Keskin Array S	88.83	310	eP	P	17 25 00.2	-1.7
	comp=Z,3.0nm,0.8s,mb4.4						
BRTR	Keskin Array B	88.83	310	P	P	17 25 00.8	-1.2
	comp=Z,3.3nm,0.8s,mb4.4,baz=119,slow=2.5,SNR=12						
BRTR	Keskin Array B	88.83	310	i P	P	17 25 01.0	-0.9
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KAF	Kangasniemi	89.85	332	ep	P	17 25 06.7	+0.5
	comp=Z,1.1nm,0.4s,mb4.3						
KAF	Kangasniemi	89.85	332	eP	P	17 25 06.7	+0.5
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
AKASG	Malin Array Be	90.40	321	P	P	17 25 08.1	-0.9
	comp=Z,3.0nm,0.7s,mb4.5,baz=70,slow=4.3,SNR=11						
TLCR		91.59	316	⇓iP	P	17 25 15.3	+0.6
TLCR		91.59	316	⇑P	P	17 25 15.3	+0.6
HARR	Harsova	92.30	315	⇓iP	P	17 25 18.0	+0.1
HARR	Harsova	92.30	315	⇑P	P	17 25 18.0	+0.1
BURAR	Bucovina Array	93.57	318	⇓iP	P	17 25 25.6	+1.9
BURAR	Bucovina Array	93.57	318	⇑P	P	17 25 25.6	+1.9
BUR08	Bucovina Ar. S	93.57	318	eP	P	17 25 21.5	-2.2
DRGR		95.42	318	⇑iP	P	17 25 33.0	+0.8
DRGR		95.42	318	⇑P	P	17 25 33.0	+0.8
NB2	NORSAR Subarra	97.02	334	P	P	17 25 38.4	-0.8
	comp=Z,2.7nm,0.7s,mb4.8,baz=65,slow=4.6						
NOA	NORSAR Array B	97.02	334	P	P	17 25 38.3	-0.9
	comp=Z,2.9nm,0.7s,mb4.8,baz=66,slow=4.7,SNR=9.4						
YKA	Yellowknife Ar	97.58	24	P	P	17 25 41.9	+0.2
	comp=Z,0.5nm,0.6s,mb4.2,baz=302,slow=4.6,SNR=11						
YKA				PKKPbc	PKKPbc	17 42 17.2	-3.1
	comp=Z,0.3nm,0.6s,baz=116,slow=2.3,SNR=6.1						
PKSM	Moragy	98.28	318	⇓iP	P	17 25 45.8	+0.6
PKSM	Moragy	98.28	318	⇑P	P	17 25 45.8	+0.6
GERES	GERESS Array B	100.57	322	P	Pdif	17 25 54.9	-0.3
	comp=Z,1.0nm,0.8s,baz=64,slow=6.1,SNR=6.0						
PDAR	Pinedale Array	109.72	41	PKKPbc	PKKPab	17 41 51.4	-3.8
	comp=Z,0.5nm,0.7s,baz=114,slow=6.6,SNR=5.3						
SCHQ	Schefferville	118.53	9	PKP	PKPdf	17 30 56.4	+1.5
	comp=Z,4.1nm,0.8s,baz=211,slow=5.9,SNR=2.9						
TXAR	Lajitas Array	120.23	51	PKP	PKPdf	17 30 59.9	+1.0
	comp=Z,0.4nm,0.8s,baz=258,slow=4.5,SNR=3.4						
TXAR				PKKPbc	PKKPbc	17 41 08.1	+1.0
	comp=Z,0.4nm,0.7s,baz=122,slow=6.6,SNR=6.0						
TORD	Torodi Ar. Bea	122.39	289	PKP	PKPdf	17 31 03.7	+0.3
	comp=Z,4.0nm,0.7s,baz=41,slow=2.0,SNR=24						
TORD	Torodi Ar. Bea	122.39	289	PKP	PKPdf	17 31 03.7	+0.3
TRQA	Tornquist	146.88	167	ePKPbc	PKPbc	17 31 50.6	+0.6
CPUP	Villa Florida	159.18	169	PKPab	PKPab	17 32 44.5	+1.3
	comp=Z,2.5nm,0.8s,baz=179,slow=3.7,SNR=7.2						

MEX 18 17:51:43.4±0.4, 1807N×10094W, h56km±31km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.69	228	i P	Pn	17 51 55.7	-1.6
ZIIG				i S	Sn	17 52 05.6	-1.7
CAIG	El Cayaco	1.20	148	eP	Pn	17 52 02.8	-1.2
CAIG				i S	Sn	17 52 17.0	-2.3
UTMO	Huajuapan	2.99	94	i P	Pn	17 52 26.7	-1.7
UTMO				i S	Sn	17 53 02.0	-1.0
PNIG	Pinotepa	3.16	121	i P	Pn	17 52 29.1	-1.6
PNIG				i S	Sn	17 53 05.6	-1.6

*IDC **18** 18:17:41.1±1.8, 520S×15262E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.7/17, mbtmp3.7/8, ML2.5/1, MS3.1/2, Ms1 3.0/2, ms1mx2.7/22, Error ellipse: s-maj=58.4km s-min=19.9km az=121.0*
*ISCJB **18** 18:17:43.8±0.7, 53S±0.1×15269E±0.09, h33km, mb3.7/6, Error ellipse: s-maj=16.4km s-min=10.9km az=141.4*
*NEIC **18** 18:17:44.3±4.6, 526S×15264E, h22km±35km, mb3.9/1, Error ellipse: s-maj=19.6km s-min=9.4km az=161.0*
ISC 18 18:17:42.9±7.2, 52S±01×1527E±01, h12km±47km, n15, σ0.32/15, mb3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.86	232	Pn	Pn	18 19 24.1	+0.8
	0.5nm,0.3s,baz=78,slow=5.2,SNR=4.2						
PMG				Sn	Sn	18 20 41.9	+0.5
	1.3nm,0.3s,baz=133,slow=19,SNR=6.2						
PMG	Port Moresby	6.86	232	ePn	Pn	18 19 23.1	-0.3
PMG				Pn	Pn	18 19 24.1	+0.8
PMG				eSn	Sn	18 20 36.1	-5.3
HNR	Honiara	8.35	120	Pn	Pn	18 19 44.0	+0.1
	83nm,1.2s						
CTA	Charters Tower	16.04	202	LR	LR	18 26 48.2	
	comp=Z,78nm,18.8s,baz=239,slow=34						
WRAB	Tennant Creek	23.05	229	eP	P	18 22 47.9	-0.4
	2.9nm,0.8s,mb3.8						
WRA	Warramunga Arr	23.06	229	P	P	18 22 48.3	-0.1
	0.9nm,0.7s,baz=53,slow=10.0,SNR=9.5						
ASAR	Alice Springs	25.75	223	P	P	18 23 13.2	-0.4
	0.8nm,0.8s,baz=59,slow=8.5,SNR=10						
STKA	Stephens Creek	28.47	200	LR	LR	18 35 39.6	
	comp=Z,28nm,18.5s,baz=24,slow=38						
CMAR	Chiang Mai Arr	57.93	295	P	P	18 27 35.6	+0.1
	0.4nm,0.9s,mb3.5,baz=91,slow=4.8,SNR=4.3						
PETK	Petropavlovsk-	58.26	4	P	P	18 27 37.3	+0.1
	1.8nm,0.8s,mb4.1,baz=162,slow=7.7,SNR=6.4						
SONM	Songino Array	66.60	328	P	P	18 28 33.0	-0.1
	0.3nm,0.6s,mb3.5,baz=130,slow=6.6,SNR=3.0						
MKAR	Makanchi Array	80.55	319	P	P	18 29 55.0	-0.2
	0.8nm,1.0s,mb3.6,baz=123,slow=4.5,SNR=4.0						
YKA	Yellowknife Ar	95.86	28	P	P	18 31 09.5	+0.4
	0.1nm,0.5s,mb3.5,baz=271,slow=4.6,SNR=4.6						
YKA	Yellowknife Ar	95.86	28	P	P	18 31 09.5	+0.4
TORD	Torodi Ar. Bea	150.30	287	PKPbc	PKPbc	18 37 34.9	-0.3
	0.9nm,0.8s,baz=66,slow=3.0,SNR=2.5						

*JMA **18** 18:18:08.9±0.1, 3024N×139.11E, h476km, M3.8*
*NEIC **18** 18:18:09.9±1.4, 30.17N×13853E, h415km±25km, mb3.7/3, Error ellipse: s-maj=49.5km s-min=12.8km az=67.0*
*ISCJB **18** 18:18:10.0±0.5, 3030N±007×1390E±02, h454km±9km, mb3.5/9, Error ellipse: s-maj=24.6km s-min=8.3km az=161.1*
*IDC **18** 18:18:10.6±0.8, 30.18N×13878E, h427km±17km, mb2.9/6, mb1 3.1/10, mb1mx2.9/24, mbtmp3.1/10, Error ellipse: s-maj=44.2km s-min=9.6km az=68.0*
ISC 18 18:18:11.2±0.5, 3032N±007×1391E±02, h448km±9km, n26, σ1.10/31, mb3.5/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.85	12	P	P	18 19 18.3	+1.5
JHJ	Hachijo jima 2	2.85	11	P	P	18 19 17.9	+1.1
	39nm,0.3s,baz=66,slow=23,SNR=14						
JHJ				S	S	18 20 09.9	-0.4
	6.2nm,0.3s,baz=70,slow=18,SNR=2.0						
CBIJ	Chichi jima	4.20	139	P	P	18 19 27.6	-0.4
	33nm,0.3s,baz=282,slow=23,SNR=32						
CBIJ				S	S	18 20 28.1	-2.3
	30nm,0.3s,baz=292,slow=23,SNR=21						
CBIJ	Chichi jima	4.20	139	P	P	18 19 27.6	-0.4
CBIJ				eS	S	18 20 28.8	-1.6
JWZ	Kozaga	4.31	319	P	P	18 19 28.8	0.0
JIE	Ise	4.54	334	P	P	18 19 32.3	+1.4
BSO1	Boso 1	4.60	20	P	P	18 19 32.9	+1.4
JOD2	Odawara 2	4.93	360	P	P	18 19 35.2	+0.6
JNY	Yasuok	5.13	349	P	P	18 19 38.5	+1.9
JHU	Hanno	5.52	1	P	P	18 19 40.6	+0.2
JHU				eS	S	18 20 51.0	-2.3
JRY	Ryogami san	5.69	358	P	P	18 19 43.0	+1.0
JYT	Yasato	5.96	8	P	P	18 19 45.0	+0.1
JYT				eS	S	18 20 59.4	-2.1
JAG	Ashikaga	6.10	3	P	P	18 19 46.0	-0.2
MJAR	Matsushiro Arr	6.25	353	P	P	18 19 47.8	0.0
	1.0nm,0.3s,baz=171,slow=11,SNR=11						
MAJO	Matsushiro	6.25	353	ePn	P	18 19 45.8	-2.1
	21nm,1.0s						
JHO	Hitachi	6.39	11	P	P	18 19 50.0	+0.7
KSRS	Korea Array	11.70	310	P	P	18 20 45.9	-0.7
	0.7nm,0.3s,baz=127,slow=10.0,SNR=20						
SONM	Songino Array	30.53	314	P	P	18 23 45.9	-0.2
	0.4nm,0.5s,mb3.1,baz=125,slow=9.1,SNR=4.7						
ZALV	Zalesovo Beam	45.29	318	P	P	18 25 46.8	-0.3
	0.7nm,0.4s,mb3.4,baz=76,slow=9.2,SNR=3.2						
MKAR	Makanchi Array	46.36	307	P	P	18 25 54.6	-0.7
	0.3nm,0.5s,mb3.0,baz=73,slow=10,SNR=5.2						
WRA	Warramunga Arr	50.18	186	P	P	18 26 23.9	-0.4
	1.2nm,0.4s,mb3.6,baz=2.0,slow=7.7,SNR=35						
WRA				PcP	PcP	18 27 36.9	+1.1
	0.2nm,0.4s,baz=358,slow=4.2,SNR=3.2						
UCH	Uchtor	52.28	302	P	P	18 26 38.3	-1.1
	2.8nm,0.8s,mb3.6						
AML	Almayashu	52.89	302	eP	P	18 26 42.8	-1.1
	1.6nm,0.5s,mb3.6						
ASAR	Alice Springs	53.91	186	P	P	18 26 51.8	+0.5
	0.6nm,0.5s,mb3.1,baz=20,slow=11,SNR=22						
STKA	Stephens Creek	61.90	178	P	P	18 27 46.6	+1.0
	1.0nm,0.8s,mb3.3,baz=319,slow=15,SNR=3.4						
ARCES	ARCESS Array B	69.61	340	P	P	18 28 35.1	+1.5
	7.8nm,1.1s,mb4.2,baz=70,slow=8.3,SNR=7.1						

IDC 18 19:15:23.8±45.0, 1559S×17409W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/16, mbtmp4.0/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/20, Error ellipse: s-maj=859.5km s-min=184.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.36	240	P	P	19 23 27.9	-0.1
	0.5nm,0.3s,baz=75,slow=12,SNR=3.0						
WRA	Warramunga Arr	49.15	257	P	P	19 24 13.7	-0.1
	0.4nm,0.5s,baz=93,slow=7.1,SNR=8.2						
WRA				LR	LR	19 43 27.5	
	comp=Z,138nm,20.1s,baz=355,slow=34						
ASAR	Alice Springs	49.42	252	P	P	19 24 15.8	0.0
	3.4nm,0.6s,baz=88,slow=8.3,SNR=51						

*ISK **18** 19:33:59.3, 3706N×3462E, h7km, MD3.3*
*DDA **18** 19:33:59.7, 37.11N×3461E, h7km±6km, Md3.2*
*CSEM **18** 19:33:59.3±0.1, 3707N×3461E, h5km, MD3.3, Error ellipse: s-maj=2.3km s-min=2.0km az=148.0*
*ISCJB **18** 19:34:00.1±0.4, 3705N±003×3460E±004, h10km, Error ellipse: s-maj=5.0km s-min=3.9km az=139.3*
ISC 18 19:34:00.0±0.6, 3706N±003×3459E±004, h3km±5km, n30, σ0.79/38, 1D, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MERS	Mersin	0.20	196	ePG	Pg	19 34 04.1	+0.2
MERS				eSG	Sg	19 34 07.6	+1.1
GULE	Gulek	0.27	33	i P	Px	19 33 43.7	
GULE				i S	Sx	19 33 47.9	
GULE	Gulek	0.27	33	i P	Px	19 33 43.8	
GULE				i S	Sx	19 33 47.9	
GULE	Gulek	0.27	33	⇓iP	Px	19 33 43.7	
GULE				i S	Sx	19 33 47.6	
KARA	Karaisali	0.42	61	ePG	Pg	19 34 07.6	-0.5
KARA				eSG	Sg	19 34 14.2	+0.5
BSTP	Nigde	0.97	337	eP	Pg	19 34 19.0	+0.3
NIG	Nigde	1.05	1	ePG	Pg	19 34 19.6	-0.5
KOZT	Kozan	1.07	67	ePG	Pg	19 34 19.6	-1.0
KOZT				eSG	Sg	19 34 34.5	0.0
IKL	Isikli	1.10	222	ePN	Pn	19 34 20.6	-1.6
COBT	Iskenderun	1.44	111	eP	Pn	19 34 26.8	-0.2
COBT				eS	Sb	19 34 47.5	+1.3
ANDN	Andirin	1.49	69	i P	Pn	19 34 28.0	+0.4
ANDN				i S	Sn	19 34 49.1	+1.4
ANDN	Andirin	1.49	69	eP	Pn	19 34 26.6	-1.1
ANDN				eS	Sn	19 34 47.7	+0.1
ANDN	Andirin	1.49	69	eP	Pn	19 34 26.6	-1.1
ANDN				eS	Sn	19 34 47.7	+0.1
HTY	Hatay	1.56	126	ePN	Pn	19 34 27.3	-1.3
AVNT	Avonos	1.73	7	i P	Pn	19 34 31.6	+0.6
AVNT				i S	Sn	19 34 54.4	+0.9
AVNT	Avonos	1.73	7	i P	Pn	19 34 31.2	+0.3
AVNT				i S	Sn	19 34 54.0	+0.4
AVNT	Avonos	1.73	7	i P	Pn	19 34 31.2	+0.2
AVNT				i S	Sn	19 34 54.0	+0.5
KMRS	Kahramanmaras	1.89	76	ePN	Pn	19 34 32.8	-0.4
KONT	Konya--Tatoy	1.98	297	ePN	Pn	19 34 34.8	+0.4
BNN	Bunyan	2.05	29	ePN	Pn	19 34 34.5	-0.8
GAZ	Gaziantep	2.10	86	ePN	Pn	19 34 35.0	-1.0
LADK	Ladik-KONYA	2.10	303	ePN	Pn	19 34 35.4	-0.6
PINB	Pinarbasi	2.16	41	i P	Pn	19 34 38.2	+1.3
PINB				i S	Sn	19 35 13.2	+9.1
SARI	SarD1z-Kayseri	2.32	45	ePN	Pn	19 34 34.4	-4.7
CSS	Prodhromos	2.33	206	ePN	Pn	19 34 39.4	+0.2
KAMT	Kaman	2.41	344	ePN	Pn	19 34 40.3	0.0
YOZ	Yozgat	2.64	12	ePN	Pn	19 34 43.5	0.0
KIZT	Kizilcal	2.81	311	ePN	Pn	19 34 46.6	+0.8
DARE	Darende-Malaty	3.16	52	ePN	Pn	19 34 44.6	-6.0
SVSK	Karacayir	3.42	33	ePN	Pn	19 34 54.9	+0.7

*ISCJB **18** 19:35:02.8±0.5, 745S±006×13236E±008, h33km, mb4.1/11, MS3.5/3, Error ellipse: s-maj=11.6km s-min=7.5km az=162.1*
*NEIC **18** 19:35:05.3±0.4, 741S×13239E, h35km, mb4.3/6, Error ellipse: s-maj=11.1km s-min=7.1km az=71.0*
*IDC **18** 19:35:08.4±0.8, 723S×13246E, h57km±7km, mb3.7/6, mb1 3.9/8, mb1mx3.7/13, mbtmp3.8/8, MS3.4/5, Ms1 3.4/5, ms1mx3.0/20, Error ellipse: s-maj=41.8km s-min=15.8km az=60.0*
ISC 18 19:35:05.3±0.5, 743S±005×13236E±008, h35km, n34, σ1.12/28, mb4.1/11, MS3.5/3, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	5.25	179	eP	x	19 35 25.2	
	286nm,0.6s						
KAKA				eS	x	19 36 23.3	
COEN	Coen	12.45	122	ePn	Pn	19 37 59.6	-0.4
	10nm,0.5s						
COEN				eSn	Sx	19 40 09.1	
FITZ	Fitzroy Crossi	12.46	211	eP	Pn	19 37 59.9	-0.3
	39nm,0.7s						
FITZ				eS	Sx	19 40 10.4	
FITZ	Fitzroy Crossi	12.46	211	eP	Pn	19 37 59.9	-0.3
	39nm,0.7s						
FITZ				eSn	Sx	19 40 07.2	
WRAB	Tennant Creek	12.57	171	ePn	Pn	19 38 00.7	-1.0
	34nm,0.6s						
WRAB				eSn	Sx	19 40 14.3	
WRA	Warramunga Arr	12.58	171	P	Pn	19 38 01.1	-0.7
	5.9nm,0.3s,baz=354,slow=13,SNR=206						
WRA				S	Sx	19 40 15.6	
	5.6nm,0.3s,baz=354,slow=22,SNR=11						
WB2	Warramunga Arr	12.58	171	eP	Pn	19 38 00.6	-1.3
WB2				eS	Sx	19 40 14.2	
KAPI	Kappang	12.76	280	LR	LR	19 43 29.3	
	comp=Z,73nm,20.8s,baz=252,slow=39						
PMG	Port Moresby	14.77	99	P	Pn	19 38 32.1	+0.3
	2.8nm,0.3s,baz=328,slow=4.5,SNR=9.7						
PMG				LR	LR	19 44 05.6	
	comp=Z,108nm,18.5s,baz=14,slow=36						
PMG	Port Moresby	14.77	99	ePn	Pn	19 38 31.3	-0.5
	40nm,0.9s						
PMG				eSn	Sx	19 40 54.3	
ASAR	Alice Springs	16.21	175	P	Pn	19 38 50.5	0.0
	4.0nm,0.3s,baz=353,slow=8.3,SNR=120						
ASAR				S	Sx	19 41 44.1	
	2.0nm,0.3s,baz=357,slow=26,SNR=7.2						
MBWA	Marble Bar	18.31	221	ePn	Pn	19 39 16.7	+0.1
MBWA				eSn	Sx	19 42 27.8	
CTA	Charters Tower	18.43	134	eP	Pn	19 39 21.0	+2.9
	6.2nm,0.9s						
CTA	Charters Tower	18.43	134	P	Pn	19 39 20.0	+1.9
	0.4nm,0.3s,baz=324,slow=13,SNR=6.4						
CTAO	Charters Tower	18.43	134	ePn	Pn	19 39 19.2	+1.1
FORT	Forrest	23.57	189	eP	P	19 40 15.3	+2.4
	39nm,0.5s,mb5.1						
STKA	Stephens Creek	25.80	162	eP	P	19 40 35.7	+2.5
	6.0nm,0.6s,mb4.3						
STKA				eS	Sx	19 45 21.3	
STKA	Stephens Creek	25.80	162	P	P	19 40 34.9	+1.7
	3.4nm,0.7s,mb4.0,baz=319,slow=11,SNR=8.4						
STKA				pP	pP	19 40 49.5	+6.4
	8.6nm,0.6s,baz=324,slow=12,SNR=9.9						
STKA				LR	LR	19 51 44.9	
	comp=Z,103nm,18.6s,MS3.4,baz=17,slow=38						
STKA	Stephens Creek	25.80	162	eP	P	19 40 34.1	+1.0
STKA				eS	Sx	19 45 21.3	
KLBR	Kellerberrin	27.63	208	eP	P	19 40 52.0	+2.3
	6.9nm,0.6s,mb4.5						
NWAO	Narrogin (SRO)	28.99	207	LR	LR	19 54 01.7	
	comp=Z,166nm,18.1s,MS3.7,baz=314,slow=39						
NWAO	Narrogin (SRO)	28.99	207	P	P	19 40 59.6	-2.2
JHJ	Hachijo jima 2	40.94	10	LR	LR	19 57 22.7	
	comp=Z,62nm,19.2s,MS3.5,baz=158,slow=33						
CMAR	Chiang Mai Arr	41.82	308	P	P	19 42 51.3	-0.6
	0.2nm,0.6s,mb3.0,baz=142,slow=8.2,SNR=4.2						
LSA	Lhasa	54.14	315	eP	P	19 44 28.0	+0.8
	2.3nm,0.7s,mb4.2						
ULN	Ulaanbaatar	59.42	340	eP	P	19 45 03.6	-0.7
	1.7nm,0.7s,mb4.2						
SONM	Songino Array	59.62	340	P	P	19 45 04.5	-1.2
	0.5nm,0.8s,mb3.6,baz=126,slow=4.1,SNR=4.1						
PETK	Petropavlovsk-	64.03	17	P	P	19 45 34.8	-0.4
	2.8nm,0.7s,mb4.4,baz=195,slow=8.5,SNR=3.7						
MK31	Makanchi Array	69.88	326	eP	P	19 46 12.9	+0.3
MKAR	Makanchi Array	69.88	326	P	P	19 46 13.2	+0.6
	0.9nm,0.4s,mb4.0,baz=116,slow=7.3,SNR=22						
MKAR				pP	pP	19 46 29.0	+5.6
	0.9nm,0.4s,baz=114,slow=8.8,SNR=6.1						
EKS2	Erkin-Say	72.87	319	P	P	19 46 31.8	+1.0
	1.6nm,0.9s,mb4.0						
ZALV	Zalesovo Beam	73.02	333	P	P	19 46 30.8	-0.6
	1.6nm,0.6s,mb4.1,baz=122,slow=5.4,SNR=8.6						
TORD	Torodi Ar. Bea	131.19	281	PKP	PKPdf	19 54 15.5	+0.9
	0.5nm,0.7s,baz=103,slow=4.6,SNR=4.2						
TORD				pPKP	pPKPdf	19 54 31.6	+5.5
	0.8nm,0.8s,baz=51,slow=1.8,SNR=4.1						
CPUP	Villa Florida	145.15	165	PKPbc	PKPbc	19 54 41.2	+1.8
	0.7nm,0.4s,baz=148,slow=3.3,SNR=7.3						

*ISCJB **18** 19:39:52.8±0.3, 4936N±002×675E±003, h0km, Error ellipse: s-maj=2.7km s-min=2.3km az=31.6*
*BGR **18** 19:39:54.7±0.3, 4935N×683E, h1km, ML1.9/3, Error ellipse: s-maj=4.4km s-min=4.4km az=67.0*
*LDG **18** 19:39:54.5±0.1, 4939N×677E, h1km, Md2.4/1, Ml2.5/10, Error ellipse: s-maj=1.2km s-min=1.2km az=74.0, Suspected Mining induced.*
*CSEM **18** 19:39:54.6±0.0, 4938N×677E, h2km, ML2.4/9, Error ellipse: s-maj=0.9km s-min=0.8km az=94.0*
*NEIC **18** 19:39:54.6, 4936N×681E, h1km, ML2.2(STR), ML2.5(LDG), After STR.*
ISC 18 19:39:53.8±0.3, 4937N±002×676E±003, h0km, n46, σ0.84/83, Germany

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.39	30	ePg	Pg	19 40 01.8	+0.5
	SNR=12						
RUP	Ruppelstein	0.39	30	Pg	Pg	19 40 01.8	+0.6
	SNR=12						
RUP				Sg	Sg	19 40 06.8	+0.5
WLF	Walferdange	0.50	307	ePg	Pg	19 40 05.2	+1.8
	SNR=4.7						
WLF				eSg	Sg	19 40 11.1	+1.3
	SNR=5.1						
ABH	Alteburg	0.72	44	ePg	Pg	19 40 08.2	+0.5
	SNR=3.0						
ABH	Alteburg	0.72	44	Pg	Pg	19 40 08.2	+0.5
	SNR=3.0						
ABH				Sg	Sg	19 40 18.8	+1.7
ABH	Alteburg	0.72	44	Pg	Pg	19 40 08.0	+0.3
ABH				Sg	Sg	19 40 18.8	+1.7
LANF	Langenberg	0.79	119	Pg	Pg	19 40 09.4	+0.6
CDF	Champ du Feu	1.01	160	ePn	Pn	19 40 14.2	-1.0
CDF				eSg	Sg	19 40 27.6	+1.3
	6.7nm,0.2s						
CDF	Champ du Feu	1.01	160	ePn	Pn	19 40 14.2	-1.0
CDF				eSg	Sg	19 40 27.6	+1.3
	3.3nm,0.2s						
CDF	Champ du Feu	1.01	160	ePg	Pg	19 40 13.7	+0.5
CDF				ePn	Pn	19 40 14.2	-1.0
CDF				eSg	Sg	19 40 27.6	+1.3
RFYF	Reffroy	1.12	230	ePg	Pg	19 40 15.9	+0.6
	baz=50						
RFYF				eSg	Sg	19 40 30.0	+0.1
	12nm,0.2s						
RFYF	Reffroy	1.12	230	ePg	Pg	19 40 15.9	+0.6
RFYF				eSg	Sg	19 40 30.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	6.2nm,0.2s						
ECH	Echery	1.18	167	ePg	Pg	19 40 17.3	+0.9
	SNR=3.9						
ECH	Echery	1.18	167	Pg	Pg	19 40 17.2	+0.8
ECH				Sg	Sg	19 40 32.7	+1.0
THEF	They Montfort	1.25	205	ePg	Pg	19 40 18.3	+0.5
	SNR=6.4						
THEF	They Montfort	1.25	205	Pg	Pg	19 40 18.2	+0.4
THEF				Sg	Sg	19 40 35.1	+1.2
TOD	Tromm	1.35	79	Pg	Pg	19 40 18.9	-0.8
TOD				Sg	Sg	19 40 37.3	+0.1
TNS	Taunus Mts	1.39	51	ePg	Pg	19 40 19.5	-0.9
	SNR=3.9						
TNS				eSg	Sg	19 40 38.3	-0.1
	SNR=2.6						
HAU	Haudompre	1.39	192	ePg	Pg	19 40 20.7	+0.3
HAU				eSg	Sg	19 40 39.2	+0.8
	7.0nm,0.2s						
HAU	Haudompre	1.39	192	ePg	Pg	19 40 20.7	+0.3
HAU				eSg	Sg	19 40 39.2	+0.8
	3.5nm,0.2s						
HAU	Haudompre	1.39	192	ePn	Pn	19 40 19.5	-0.9
HAU				ePg	Pg	19 40 20.7	+0.3
HAU				eSg	Sg	19 40 39.2	+0.8
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	19 40 21.4	+0.4
	baz=56						
MEZF				eSg	Sg	19 40 40.0	+0.5
	2.8nm,0.2s						
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	19 40 21.4	+0.4
MEZF				eSg	Sg	19 40 40.0	+0.5
	1.4nm,0.2s						
GIVF	Givet	1.46	301	ePg	Pg	19 40 21.5	-0.3
GIVF				eSg	Sg	19 40 40.7	0.0
	8.5nm,0.3s						
GIVF	Givet	1.46	301	ePg	Pg	19 40 21.5	-0.3
GIVF				eSg	Sg	19 40 40.7	0.0
	4.2nm,0.3s						
BFO	Black Forest	1.47	134	ePg	Pg	19 40 21.2	-0.6
	SNR=2.4						
BFO				eSg	Sg	19 40 38.8	-2.1
	SNR=4.5						
BFO	Black Forest	1.47	134	ePn	Pn	19 40 20.4	-1.0
BFO	Black Forest	1.47	134	Pg	Pg	19 40 21.2	-0.7
	SNR=2.4						
BFO				eSn	Sn	19 40 40.6	-0.7
BFO	Black Forest	1.47	134	ePn	Pn	19 40 20.4	-1.0
BFO				eSn	Sn	19 40 40.6	-0.6
MOF	Molkenrain	1.54	171	ePg	Pg	19 40 23.7	+0.4
	SNR=8.3						
MOF	Molkenrain	1.54	171	Pg	Pg	19 40 23.7	+0.5
	SNR=8.3						
MOF				Sg	Sg	19 40 43.8	+0.7
MOF	Molkenrain	1.54	171	Pg	Pg	19 40 23.4	+0.2
MOF				Sg	Sg	19 40 43.8	+0.7
HINF	Hinteralfeld	1.55	178	ePg	Pg	19 40 23.5	0.0
HINF				eSg	Sg	19 40 43.9	+0.3
	13nm,0.2s						
HINF	Hinteralfeld	1.55	178	ePg	Pg	19 40 23.5	0.0
HINF				eSg	Sg	19 40 43.9	+0.3
	6.4nm,0.2s						
SFTF	Sexfontaines	1.63	225	ePn	Pn	19 40 23.3	-0.4
SFTF				eSg	Sg	19 40 46.2	+0.1
	6.6nm,0.4s						
SFTF	Sexfontaines	1.63	225	ePn	Pn	19 40 23.3	-0.4
SFTF				eSg	Sg	19 40 46.2	+0.1
	3.3nm,0.4s						
BAIF	Baives	1.80	294	ePg	Pg	19 40 28.0	-0.3
BAIF				eSg	Sg	19 40 50.4	-1.2
	5.4nm,0.3s						
BAIF	Baives	1.80	294	ePg	Pg	19 40 28.0	-0.3
BAIF				eSg	Sg	19 40 50.4	-1.2
	2.7nm,0.3s						
BAIF	Baives	1.80	294	ePn	Pn	19 40 24.9	-1.1
BAIF				ePg	Pg	19 40 28.0	-0.3
BAIF				eSg	Sg	19 40 50.4	-1.2
CABF	La Chapelle	2.79	190	ePg	Pg	19 40 47.1	-0.2
LOR	Lormes	2.86	224	ePn	Pn	19 40 39.9	-0.7
	baz=47						
LOR				eSg	Sg	19 41 24.6	-1.0
	1.4nm,0.2s						
LOR	Lormes	2.86	224	ePn	Pn	19 40 39.9	-0.7
LOR				eSg	Sg	19 41 24.6	-1.0
	0.7nm,0.2s						
SSF	Saint Saulge	3.17	225	ePn	Pn	19 40 44.0	-0.9
SMF	Signal de Mont	3.36	217	ePn	Pn	19 40 46.2	-1.2
AVF	Avril sur Loir	3.44	223	ePn	Pn	19 40 47.4	-1.3
GEC2	GERESS Array S	4.59	94	ePn	Pn	19 41 04.5	+0.1
	SNR=3.2						

IDC 18 19:41:57.1±6.1**,873S**×**15746E,h0**^{km}**,mb3.8**/4**,mb1 4.0**/4**, mb1mx3.8**/16**,mbtmp3.8**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.7**/22**,Error ellipse: s-maj=158.5km s-min=43.4km az=115.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.98	241	P	P	19 47 22.3	-0.3
	3.1nm,1.0s,baz=66,slow=9.1,SNR=2.6						
KSRS	Korea Array	53.62	331	LR	LR	20 12 05.2	
	comp=Z,28nm,18.5s,baz=141,slow=34						
CMAR	Chiang Mai Arr	63.73	295	P	P	19 52 31.9	+0.8
	1.5nm,1.0s,baz=100,slow=4.4,SNR=6.5						
SONM	Songino Array	72.11	327	P	P	19 53 23.6	+0.3
	0.4nm,0.6s,baz=135,slow=6.8,SNR=3.9						
MKAR	Makanchi Array	86.31	318	P	P	19 54 40.3	-0.7
	0.4nm,0.7s,baz=98,slow=4.9,SNR=4.3						

*LDG **18** 19:47:18.7±0.4,3939N×1546E,h280^{km},Mb4.1/26,Error ellipse: s-maj=18.6km s-min=6.9km az=22.0*
*CSEM **18** 19:47:22.6±0.1,3946N×1520E,h310^{km},mb4.0/37,Error ellipse: s-maj=3.1km s-min=2.1km az=106.0*
*ROM **18** 19:47:22.6±0.5,3945N×1534E,h312^{km}±7^{km},Ml3.6/21, Error ellipse: s-maj=9.0km s-min=4.1km az=97.0*
*ISCJB **18** 19:47:23.9±0.3,3957N±003×1510E±004,h304^{km}±3^{km}, mb3.5/9,Error ellipse: s-maj=5.1km s-min=4.8km az=135.3*
*IDC **18** 19:47:24.9±1.0,3968N×1499E,h302^{km}±12^{km},mb3.2/9, mb1 3.4/18,mb1mx3.3/30,mbtmp3.2/18,Error ellipse: s-maj=13.9km s-min=12.7km az=82.0*
*NEIC **18** 19:47:25.0±0.4,3961N×1509E,h300^{km}±4^{km},mb4.0/37, Error ellipse: s-maj=6.4km s-min=4.7km az=179.0*
ISC 18 19:47:24.9±0.3**,3957N**±003×**1510E**±004**,h297**^{km}±3^{km}**, n204,**σ**1§28**/215**,mb3.5**/9**,19C-42D,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BULG	Bulgheria - Ca	0.55	23⇓	iPg	Pn	19 48 04.2	+1.1
BULG	Bulgheria - Ca	0.55	23⇓	iPg	Pn	19 48 04.2	+1.1
MGR	Morigerati	0.66	31	Pg	Pn	19 48 04.1	+0.6
	129nm,0.9s						
MGR	Morigerati	0.66	31	Pg	Pn	19 48 04.1	+0.6
	129nm,0.9s						
CUC	Castrocucco	0.69	52⇓	iPg	Pn	19 48 03.9	+0.3
	157nm,0.9s						
CUC				eS	S	19 48 31.3	-3.0
CUC	Castrocucco	0.69	52	ePn	Pn	19 48 03.4	-0.2
CUC				eS	S	19 48 31.3	-3.0
CUC	Castrocucco	0.69	52⇓	iPg	Pn	19 48 03.9	+0.3
	157nm,0.9s						
MTSN	Montesano sull	0.85	35	Pg	Pn	19 48 04.8	+0.7
MTSN	Montesano sull	0.85	35	Pg	Pn	19 48 04.8	+0.7
CARO	Carolei	0.92	110⇓	iPg	Pn	19 48 03.8	-0.7
CARO				Sg	S	19 48 33.7	-2.3
CARO	Carolei	0.92	110⇓	iPg	Pn	19 48 03.8	-0.7
CARO				Sg	S	19 48 33.7	-2.3
	256nm,0.4s						
MCEL	Monticello	0.93	35	Pg	Pn	19 48 05.7	+1.3
	99nm,0.3s						
MCEL	Monticello	0.93	35	Pg	Pn	19 48 05.7	+1.3
	99nm,0.3s						
SCHR	S. Chirico Rap	0.98	50⇓	iPg	Pn	19 48 05.6	+0.9
SCHR	S. Chirico Rap	0.98	50⇓	iPg	Pn	19 48 05.6	+0.9
SCHR				Sg	S	19 48 38.4	+2.1
	78nm,0.8s						
SGO	Sicignano	1.00	9⇓	iPg	Pn	19 48 06.0	+1.2
	89nm,0.6s						
SGO	Sicignano	1.00	9⇓	iPg	Pn	19 48 06.0	+1.2
	89nm,0.6s						
SLNA	Salina	1.03	192	Pg	Pn	19 48 05.6	+0.5
	150nm,0.3s						
SLNA	Salina	1.03	192	Pg	Pn	19 48 05.6	+0.5
	150nm,0.3s						
JOPP	Joppolo	1.14	147⇓	iPg	Pn	19 48 04.9	-0.7
	92nm,0.4s						
JOPP	Joppolo	1.14	147⇓	iPg	Pn	19 48 04.9	-0.7
	92nm,0.4s						
ORI	Oriolo Calabro	1.15	64	Pg	Pn	19 48 06.3	+0.8
	329nm,0.4s						
ORI	Oriolo Calabro	1.15	64	Pg	Pn	19 48 06.3	+0.8
	329nm,0.4s						
VPL	Vulcano Piano	1.19	185	Pg	Pn	19 48 06.5	+0.6
	391nm,0.5s						
VPL	Vulcano Piano	1.19	185	Pg	Pn	19 48 06.5	+0.6
	391nm,0.5s						
MRLC	Muro Lucano	1.22	14	Pg	Pn	19 48 07.0	+1.1
MRLC	Muro Lucano	1.22	14	Pg	Pn	19 48 07.0	+1.1
GRI	Girifalco	1.27	126	Pg	Pn	19 48 06.0	-0.3
GRI	Girifalco	1.27	126	Pg	Pn	19 48 06.0	-0.3
CSSN	Cassano Irpino	1.29	357	Pg	Pn	19 48 07.6	+1.3
	21nm,0.4s						
CSSN	Cassano Irpino	1.29	357	Pg	Pn	19 48 07.6	+1.3
	21nm,0.4s						
MILZ	Milazzo	1.30	176⇓	iPg	Pn	19 48 06.3	-0.2
MILZ	Milazzo	1.30	176⇓	iPg	Pn	19 48 06.3	-0.2
SERS	Sersale	1.34	113⇓	iPg	Pn	19 48 06.5	-0.2
SERS	Sersale	1.34	113⇓	iPg	Pn	19 48 06.5	-0.2
SERS				Sg	S	19 48 38.0	-1.9
	128nm,0.5s						
TIP	Timpagrande	1.34	106⇓	iPn	Pn	19 48 06.5	-0.2
TIP				eSn	S	19 48 32.6	-7.3
TIP	Timpagrande	1.34	106⇓	iPg	Pn	19 48 06.7	0.0
TIP				Sg	S	19 48 38.1	-1.8
	155nm,0.8s						
MSRU	Castanea	1.34	166⇓	iPg	Pn	19 48 05.9	-0.9
MSRU	Castanea	1.34	166⇓	iPg	Pn	19 48 05.9	-0.9
MSRU				Sg	S	19 48 38.3	-1.8
	305nm,0.6s						
CEL	Celeste	1.45	155	Pg	Pn	19 48 06.1	-1.3
	129nm,0.3s						
CEL	Celeste	1.45	155	ePn	Pn	19 48 06.0	-1.4
CEL				eSn	S	19 48 37.0	-4.3
CEL	Celeste	1.45	155	Pg	Pn	19 48 06.1	-1.3
	129nm,0.3s						
PLAC	Placanica	1.53	137⇓	iPg	Pn	19 48 07.2	-0.7
	39nm,0.3s						
PLAC	Placanica	1.53	137⇓	iPg	Pn	19 48 07.2	-0.7
	39nm,0.3s						
MTTG	Motta San Giov	1.63	163⇓	iPg	Pn	19 48 08.2	-0.5
	263nm,0.6s						
MTTG	Motta San Giov	1.63	163⇓	iPg	Pn	19 48 08.2	-0.5
	263nm,0.6s						
MMME	Mongiuffi-Meli	1.64	176	Pg	Pn	19 48 08.8	+0.1
	187nm,0.3s						
MMME	Mongiuffi-Meli	1.64	176	Pg	Pn	19 48 08.8	+0.1
	187nm,0.3s						
LTRZ	Laterza	1.67	51⇓	iPg	Pn	19 48 08.1	-0.7
LTRZ	Laterza	1.67	51⇓	iPg	Pn	19 48 08.1	-0.7
LTRZ				Sg	S	19 48 41.6	-2.1
	168nm,0.7s						
SG1	Sgolgore (BA)	1.75	43	eP	Pn	19 48 08.7	-0.6
GIB	Gibilmanna	1.79	208⇓	iPg	Pn	19 48 10.2	+0.4
	86nm,0.4s						
GIB	Gibilmanna	1.79	208⇓	iPg	Pn	19 48 10.2	+0.4
	86nm,0.4s						
CSLB	Castelbuono	1.82	207⇓	iPg	Pn	19 48 10.3	+0.3
	98nm,0.6s						
CSLB	Castelbuono	1.82	207⇓	iPg	Pn	19 48 10.3	+0.3
	98nm,0.6s						
GALF	Gagliano Caste	1.90	193	Pg	Pn	19 48 11.5	+0.9
GALF	Gagliano Caste	1.90	193	Pg	Pn	19 48 11.5	+0.9
ECNV	Catenanuova	2.00	189	Pg	Pn	19 48 12.7	+1.3
	178nm,0.4s						
ECNV	Catenanuova	2.00	189	Pg	Pn	19 48 12.7	+1.3
	178nm,0.4s						
VAE	Valguarnera	2.16	195	P	Pn	19 48 13.1	+0.4
	7.4nm,0.3s,baz=262,slow=20,SNR=9.3						
PE1	Pezze di Greco	2.16	55	eP	Pn	19 48 12.3	-0.3
AGST	Augusta-Monte	2.31	178	Pg	Pn	19 48 12.9	-1.1
	89nm,0.7s						
AGST	Augusta-Monte	2.31	178	Pg	Pn	19 48 12.9	-1.1
	89nm,0.7s						
HVZN	Vizzini	2.41	187⇓	iPg	Pn	19 48 14.7	-0.2
	338nm,0.4s						
HVZN	Vizzini	2.41	187⇓	iPg	Pn	19 48 14.7	-0.2
	338nm,0.4s						
SSY	Sortino	2.41	181⇓	iPg	Pn	19 48 14.2	-0.7
	294nm,0.2s						
SSY	Sortino	2.41	181⇓	iPg	Pn	19 48 14.2	-0.7
	294nm,0.2s						
HMDC	Modica	2.62	186⇓	iPg	Pn	19 48 16.6	-0.2
	719nm,2.2s						
HMDC	Modica	2.62	186⇓	iPg	Pn	19 48 16.6	-0.2
	719nm,2.2s						
BOJS	Bojanci	5.93	1	iPn	Pn	19 48 53.8	+0.7
KEST	Kesra	5.96	232	P	Pn	19 48 54.7	+1.1
	0.6nm,0.3s,baz=351,slow=4.1,SNR=38						
VISS	Visnje	6.23	358	iPn	Pn	19 48 57.4	+0.7
JAVS	Javornik	6.37	353	iPn	Pn	19 48 58.4	+0.1
PERS	Pernice	7.06	0	iPn	Pn	19 49 12.4	+5.6
PKSM	Moragy	7.13	20	⇑P	Pn	19 49 07.3	-0.2
PKSM	Moragy	7.13	20⇓	iP	Pn	19 49 07.3	-0.2
PKSM	Moragy	7.13	20	⇑P	Pn	19 49 07.3	-0.3
BZS	Buzias	7.72	36	⇑P	Pn	19 49 12.9	-1.9
BZS	Buzias	7.72	36⇓	iP	Pn	19 49 12.9	-1.9
BZS	Buzias	7.72	36	⇑P	Pn	19 49 12.9	-1.9
MBDF	Montbardon	8.05	312	eP	Pn	19 49 18.8	-0.1
	38nm,0.8s						
MBDF	Montbardon	8.05	312	eP	Pn	19 49 18.8	-0.1
	19nm,0.8s						
TUE	Stuetta	8.08	330	ePn	Pn	19 49 19.6	+0.3
	19nm,0.6s						
WTTA	Wattenberg	8.09	343⇑	iPn	Pn	19 49 22.2	+2.9
	11nm,0.3s						
FETA	Feichten	8.10	338⇑	iPn	Pn	19 49 21.8	+2.3
	11nm,0.8s						
GZR	Gura Zlata	8.12	42	⇑P	Pn	19 49 19.0	-0.7
GZR	Gura Zlata	8.12	42⇓	iP	Pn	19 49 19.0	-0.7
GZR	Gura Zlata	8.12	42	⇑P	Pn	19 49 19.0	-0.8
DAVOX	Davos/Dischmat	8.15	334	P	Pn	19 49 20.7	+0.6
	1.5nm,0.3s,baz=165,slow=14,SNR=12						
WATA	Walderalm	8.17	343⇑	iPn	Pn	19 49 22.6	+2.3
	36nm,0.5s						
MOTA	Moosalm	8.30	341⇑	iPn	Pn	19 49 23.0	+1.2
	11nm,0.7s						
MOA	Molln	8.30	356⇑	iPn	Pn	19 49 22.5	+0.6
	1.6nm,0.4s						
BNI	Bardonecchia	8.30	314	ePn	Pn	19 49 24.0	+2.0
LPG	La Plagne	8.55	317	eP	Pn	19 49 25.5	+0.6
	29nm,0.7s						
LPG	La Plagne	8.55	317	eP	Pn	19 49 25.5	+0.6
	14nm,0.7s						
LPL	La Plagne	8.57	317	eP	Pn	19 49 25.0	-0.2
	24nm,0.7s						
LPL	La Plagne	8.57	317	eP	Pn	19 49 25.0	-0.2
	12nm,0.7s						
DAVA	Damuels	8.60	336⇑	iPn	Pn	19 49 26.5	+1.0
	5.0nm,0.3s						
ORIF	Oris-en-Rattie	8.68	311	eP	Pn	19 49 27.1	+0.5
	9.0nm,0.5s						
ORIF	Oris-en-Rattie	8.68	311	eP	Pn	19 49 27.1	+0.5
	4.5nm,0.5s						
RSL	Roselend	8.74	317	eP	Pn	19 49 29.2	+1.9
IDI	Anoyia	8.88	116	P	Pn	19 49 31.1	+1.9
	1.2nm,0.3s,baz=281,slow=12,SNR=6.3						
DRGR		9.11	35⇑	iP	Pn	19 49 31.1	-0.7
DRGR		9.11	35	⇑P	Pn	19 49 31.1	-0.7
GERES	GERESS Array B	9.33	354	P	Pn	19 49 34.0	-0.5
	0.3nm,0.3s,baz=186,slow=11,SNR=9.3						
VIVF	Saint-Julien-l	9.37	308	eP	Pn	19 49 33.8	-1.2
	14nm,0.6s						
VOIR		9.39	48⇓	iP	Pn	19 49 37.0	+1.6
VOIR		9.39	48	⇑P	Pn	19 49 37.0	+1.6
LASF	Ste Croix	9.52	302	eP	Pn	19 49 36.6	-0.4
KHC	Kasperske Hory	9.62	354	eP	Pn	19 49 36.0	-2.1
CABF	La Chapelle	9.64	320	eP	Pn	19 49 37.4	-1.0
	38nm,0.6s						
FELD	Feldberg im Sc	9.76	331	eP	Pn	19 49 39.2	-0.6
MLR	Muntele Rosu	9.95	50	P	Pn	19 49 44.0	+1.8
	2.2nm,0.3s,baz=279,slow=6.3,SNR=11						
BFO	Black Forest	10.02	333	ePn	Pn	19 49 43.0	-0.1
	4.9nm,0.6s						
MOF	Molkenrain	10.08	328	eP	Pn	19 49 43.2	-0.6
HINF	Hinteralfeld	10.17	327	eP	Pn	19 49 44.1	-0.8
	13nm,0.4s						
HINF	Hinteralfeld	10.17	327	eP	Pn	19 49 44.1	-0.8
	6.4nm,0.4s						
LBL	Lubilhac	10.43	307	eP	Pn	19 49 50.9	+2.8
CDF	Champ du Feu	10.48	330	eP	Pn	19 49 48.2	-0.4
	5.8nm,0.4s						
CDF	Champ du Feu	10.48	330	eP	Pn	19 49 48.2	-0.4
	2.9nm,0.4s						
GRA1	Grafenberg Arr	10.49	346	eP	Pn	19 49 48.3	-0.5
	9.0nm,0.7s						
GRF	Grafenberg Arr	10.49	346	eP	Pn	19 49 48.3	-0.5
	comp=Z,9.0nm,0.7s						
HAU	Haudompre	10.54	326	eP	Pn	19 49 48.8	-0.6
	comp=Z,12nm,0.3s						
HAU	Haudompre	10.54	326	eP	Pn	19 49 48.8	-0.6
	comp=Z,6.0nm,0.3s						
PLOR	Plostina	10.56	50⇓	iP	Pn	19 49 51.9	+2.2
PLDF	La Plantade	10.58	311	eP	Pn	19 49 49.4	-0.6
VRI	Vrincioaia	10.61	50⇑	iP	Pn	19 49 52.8	+2.5
HARR	Harsova	10.81	58⇓	iP	Pn	19 49 57.0	+4.2
HARR	Harsova	10.81	58	⇑P	Pn	19 49 57.0	+4.2
EPOB	Poblet	10.84	284	P	Pn	19 49 56.2	+3.1
	comp=Z,2.8nm,0.5s						
SMF	Signal de Mont	10.85	314	eP	Pn	19 49 51.6	-1.6
	comp=Z,9.7nm,0.4s						
SMF	Signal de Mont	10.85	314	eP	Pn	19 49 51.6	-1.6
	comp=Z,4.8nm,0.4s						
BURAR	Bucovina Array	10.88	39⇑	iP	Pn	19 49 55.0	+1.5
BURAR	Bucovina Array	10.88	39	⇑P	Pn	19 49 55.0	+1.5
BUR08	Bucovina Ar. S	10.89	39	ePn	Pn	19 49 55.0	+1.3
AGO	Saint Agoulin	10.92	310	eP	Pn	19 49 54.0	0.0
TIRR	Tirgusor	11.04	59	eP	Pn	19 49 58.8	+3.2
	comp=Z,6.1nm,0.6s						
AVF	Avril sur Loir	11.20	314	eP	Pn	19 49 56.2	-1.3
	comp=Z,6.9nm,0.5s						
AVF	Avril sur Loir	11.20	314	eP	Pn	19 49 56.2	-1.3
	comp=Z,3.5nm,0.5s						
LOR	Lormes	11.22	317	eP	Pn	19 49 56.1	-1.6
	comp=Z,9.7nm,0.8s						
LOR	Lormes	11.22	317	eP	Pn	19 49 56.1	-1.6
	comp=Z,4.8nm,0.8s						
SSF	Saint Saulge	11.28	315	eP	Pn	19 49 57.2	-1.3
	comp=Z,7.1nm,0.5s						
SSF	Saint Saulge	11.28	315	eP	Pn	19 49 57.2	-1.3
	comp=Z,3.5nm,0.5s						
BRG	Berggiesshubel	11.33	356	iP	Pn	19 49 59.9	+0.8
	comp=Z,2.8nm,0.7s						
BRG				i		19 50 02.6	
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	11.33	356	iP	Pn	19 49 59.9	+0.8
	comp=Z,1.7nm,0.7s						
BRG				i		19 50 02.6	
MOX	Moxa	11.34	349	eP	Pn	19 50 00.2	+1.0
BGF	Bois d'Agland	11.36	312	eP	Pn	19 49 58.6	-0.8
	comp=Z,23nm,0.6s						
BGF	Bois d'Agland	11.36	312	eP	Pn	19 49 58.6	-0.8
	comp=Z,12nm,0.6s						
ERTA	Horta de San J	11.37	282	P	Pn	19 50 01.4	+1.7
	comp=Z,1.2nm,0.3s						
MEZF	Maizieres J'vi	11.48	324	eP	Pn	19 49 59.4	-1.5
	comp=Z,21nm,0.5s						
MEZF	Maizieres J'vi	11.48	324	eP	Pn	19 49 59.4	-1.5
	comp=Z,21nm,0.5s						
RJF	Les Rejaudoux	11.55	304	eP	Pn	19 50 01.2	-0.6
	comp=Z,3.8nm,0.4s						
RJF	Les Rejaudoux	11.55	304	eP	Pn	19 50 01.2	-0.6
	comp=Z,1.9nm,0.4s						
TCF	Toulx Ste Croi	11.59	310	eP	Pn	19 50 02.6	+0.4
	comp=Z,19nm,1.0s						
TCF	Toulx Ste Croi	11.59	310	eP	Pn	19 50 02.6	+0.4
	comp=Z,9.6nm,1.0s						
EBIE	Bielsa	11.70	290	P	Pn	19 50 06.6	+2.8
	comp=Z,7.4nm,0.7s						
CLL	Collm	11.83	354	iP	Pn	19 50 06.1	+1.0
	comp=Z,6.0nm,0.7s						
LFF	La Frestale	11.91	301	eP	Pn	19 50 05.7	-0.5
	comp=Z,30nm,0.9s						
LFF	La Frestale	11.91	301	eP	Pn	19 50 05.7	-0.5
	comp=Z,15nm,0.9s						
ESAC	San Caprasio	12.03	285	P	Pn	19 50 09.5	+1.9
	comp=Z,13nm,0.5s						
ETSF	Etsaut	12.25	291	eP	Pn	19 50 09.9	-0.5
	comp=Z,12nm,0.5s						
ETSF	Etsaut	12.25	291	eP	Pn	19 50 09.9	-0.5
	comp=Z,6.2nm,0.5s						
GIVF	Givet	12.79	329	eP	Pn	19 50 16.4	-0.4
ELIZ	Elizondo	13.00	291	P	Pn	19 50 20.6	+1.2
	comp=Z,3.5nm,0.3s						
ELIZ	Elizondo	13.00	291	P	Pn	19 50 20.6	+1.2
	comp=Z,3.5nm,0.3s						
BAIF	Baives	13.01	327	eP	Pn	19 50 18.3	-1.2
	comp=Z,4.0nm,0.4s						
BAIF	Baives	13.01	327	eP	Pn	19 50 18.3	-1.2
	comp=Z,2.0nm,0.4s						
ETOR	Torete	13.18	281	P	Pn	19 50 22.5	+0.9
	comp=Z,6.2nm,0.3s						
ETOR	Torete	13.18	281	P	Pn	19 50 22.6	+0.9
	comp=Z,6.2nm,0.3s						
ECRI	Cripan	13.63	289	P	Pn	19 50 29.9	+2.9
	comp=Z,1.5nm,0.2s						
LDF	La Druitiere	14.16	315	eP	Pn	19 50 32.1	-1.1
	comp=Z,22nm,0.7s						
LDF	La Druitiere	14.16	315	eP	Pn	19 50 32.1	-1.1
	comp=Z,11nm,0.7s						
FLN	La Foliniere	14.45	315	eP	Pn	19 50 34.6	-2.1
GRR	Gorron	14.46	313	eP	Pn	19 50 35.6	-1.2
	comp=Z,11nm,0.7s						
GRR	Gorron	14.46	313	eP	Pn	19 50 35.6	-1.2
	comp=Z,5.5nm,0.7s						
ESDC	Sonseca Array	14.70	276	P	Pn	19 50 37.6	-2.1
	comp=Z,0.2nm,0.3s,baz=69,slow=11,SNR=2.9						
AKASG	Malin Array Be	14.91	37	P	Pn	19 50 41.8	-0.2
	comp=Z,2.9nm,0.3s,baz=229,slow=11,SNR=23						
SGMF	Saint Gilles	15.38	310	eP	Pn	19 50 45.1	-2.5
EADA	Adamuz	15.40	271	P	Pn	19 50 50.4	+2.4
	comp=Z,0.9nm,0.3s						
QUIF	Quistinic	15.59	308	eP	Pn	19 50 47.7	-2.4
ROSF	Rostrenen	15.84	310	eP	Pn	19 50 50.3	-2.7
	comp=Z,16nm,0.6s						
ROSF	Rostrenen	15.84	310	eP	Pn	19 50 50.3	-2.7
	comp=Z,8.3nm,0.6s						
EJIF	Jimena Fronter	16.51	266	P	P	19 50 57.6	-0.9
	comp=Z,3.2nm,0.4s						
EJIF	Jimena Fronter	16.51	266	P	P	19 50 57.6	-0.9
	comp=Z,3.2nm,0.4s						
EMIN	Mina Concepcio	17.10	271	P	P	19 51 07.6	+2.7
	comp=Z,3.4nm,0.4s						
EBAD	Badajoz	17.17	274	P	P	19 51 07.4	+1.8
	comp=Z,1.8nm,0.4s						
EBAD	Badajoz	17.17	274	P	P	19 51 07.4	+1.8
	comp=Z,1.8nm,0.4s						
EGRO	El Granado	17.78	271	P	P	19 51 14.2	+2.0
	comp=Z,1.0nm,0.3s						
EGRO	El Granado	17.78	271	P	P	19 51 14.2	+2.0
	comp=Z,1.0nm,0.3s						
EKA	Eskdalemuir Ar	19.93	328	P	P	19 51 32.5	-2.4
	comp=Z,1.4nm,0.3s,baz=144,slow=11,SNR=28						
HFS	Hagfors	20.60	358	P	P	19 51 39.4	-2.5
	comp=Z,1.8nm,0.3s,baz=174,slow=10,SNR=16						
NB2	NORSAR Subarra	21.63	355	P	P	19 51 49.4	-1.9
	comp=Z,1.4nm,0.6s,mb3.5,baz=167,slow=10						
NOA	NORSAR Array B	21.63	355	P	P	19 51 49.2	-2.1
	comp=Z,0.9nm,0.6s,mb3.3,baz=170,slow=10,SNR=7.6						
NOA	NORSAR Array B	21.63	355	P	P	19 51 49.2	-2.1
KAF	Kangasniemi	23.58	13	ep	P	19 52 08.2	-0.9
	comp=Z,0.6nm,0.3s,mb3.4						
TORD	Torodi Ar. Bea	28.86	208	P	P	19 52 56.3	-0.3
	comp=Z,0.2nm,0.5s,mb2.8,baz=15,slow=9.4,SNR=5.8						
ARCES	ARCESS Array B	30.54	7	P	P	19 53 09.1	-1.6
	comp=Z,3.6nm,0.9s,mb3.9,baz=195,slow=8.6,SNR=19						
MKAR	Makanchi Array	48.17	58	P	P	19 55 35.3	-0.3
	comp=Z,0.7nm,0.3s,mb3.4,baz=284,slow=7.3,SNR=26						
SCHQ	Schefferville	54.53	315	P	P	19 56 20.9	-1.5
	comp=Z,6.9nm,1.0s,mb4.0,baz=66,slow=11,SNR=6.8						
YKA	Yellowknife Ar	70.57	338	P	P	19 58 07.3	-0.2
	comp=Z,0.6nm,0.5s,mb3.5,baz=39,slow=5.4,SNR=17						
YKA	Yellowknife Ar	70.57	338	P	P	19 58 07.3	-0.3
YKA	Yellowknife Ar	70.57	338	P	P	19 58 07.3	-0.3
CMAR	Chiang Mai Arr	73.84	79	P	P	19 58 27.2	-0.4
	comp=Z,0.3nm,0.6s,mb3.1,baz=300,slow=7.2,SNR=3.4						
PDAR	Pinedale Array	83.94	322	P	P	19 59 22.2	+0.4
	comp=Z,0.5nm,0.5s,mb3.6,baz=62,slow=6.7,SNR=9.4						

*NEIC **18** 19:49:37.0,3702N×3456E,h8^{km},mb3.9/2,ML3.3(ISK), After ISK.*
*CSEM **18** 19:49:38.3±0.1,3707N×3460E,h5^{km},MD3.5,Error ellipse: s-maj=2.1km s-min=1.5km az=114.0*
*ISK **18** 19:49:38.4,3707N×3457E,h8^{km},MD3.5*

*ISCJB **18** 19:49:38.2±0.6,3704N±002×3452E±003,h4km±5km, mb3.8/2,Error ellipse: s-maj=4.6km s-min=3.8km az=18.7*
*DDA **18** 19:49:38.0,3707N×3453E,h5km±2km,Md3.1*
*IDC **18** 19:49:39.2±1.6,3707N×3473E,h0km,mb3.6/1,mb1 3.6/6, mb1mx3.4/24,mbtmp3.6/6,ML3.6/5,Error ellipse: s-maj=31.0km s-min=14.0km az=78.0*
ISC 18 19:49:39.4±0.5,**3704N**±002×**3456E**±003,**h8**km±4km,**n48**, σ1s**03**/59,**mb3.8**/2,**1D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MERS	Mersin	0.17	189	PG	Pg	19 49 43.4	+0.5
MERS				eSG	Sg	19 49 46.9	+1.7
KARA	Karaisali	0.46	61	PG	Pg	19 49 47.2	-1.0
KARA				eSG	Sg	19 49 53.6	-0.6
BSTP	Nigde	0.98	339	i P	Pg	19 49 58.3	+0.1
BSTP				i S	Sg	19 50 14.6	+3.7
IKL	Isikli	1.06	222	ePN	Pn	19 49 59.0	-1.6
NIG	Nigde	1.07	2	ePG	Pg	19 49 58.9	-1.1
NIG				eSG	Sg	19 50 13.4	-0.5
KOZT	Kozan	1.11	66	PN	Pn	19 49 59.4	-1.8
KOZT				eSN	Sn	19 50 15.3	-1.3
ANDN	Andirin	1.53	69	i P	Pn	19 50 07.7	+0.8
ANDN				i S	Sn	19 50 28.9	+1.9
EREN	Erenkoy	1.54	192	ePN	Pn	19 50 06.6	-0.4
HTY	Hatay	1.57	125	ePN	Pn	19 50 07.1	-0.4
AVNT	Avonos	1.76	8	i P	Pn	19 50 10.4	+0.3
AVNT				i S	Sn	19 50 34.3	+1.7
KMRS	Kahramanmaras	1.93	75	ePN	Pn	19 50 12.0	-0.4
LFK	Lefkose	1.94	206	ePN	Pn	19 50 12.8	+0.2
KONT	Konya--Tatoy	1.97	298	ePN	Pn	19 50 13.6	+0.6
BNN	Bunyan	2.08	29	ePN	Pn	19 50 14.7	+0.2
LADK	Ladik-KONYA	2.09	304	ePN	Pn	19 50 13.8	-0.9
GAZ	Gaziantep	2.13	86	ePN	Pn	19 50 15.2	0.0
PINB	Pinarbasi	2.19	41	i P	Pn	19 50 18.0	+1.9
PINB				i S	Sn	19 50 47.2	+3.7
LEF	Lefka	2.34	216	ePN	Pn	19 50 18.5	+0.4
SARI	SarD1z-Kayseri	2.36	45	ePN	Pn	19 50 13.8	-4.6
KAMT	Kaman	2.42	344	ePN	Pn	19 50 20.0	+0.7
YOZ	Yozgat	2.67	13	ePN	Pn	19 50 23.0	+0.3
BR131	Keskin Array S	2.78	345	ePn	Pn	19 50 23.8	-0.4
BR131	Keskin Array S	2.78	345	ePn	Pn	19 50 23.8	-0.3
BRTR	Keskin Array B	2.78	345	Pn	Pn	19 50 24.1	0.0
	0.7nm,0.3s,baz=157,slow=29,SNR=11						
BRTR				Pg	Pg	19 50 31.4	-1.2
	1.9nm,0.3s,baz=165,slow=17,SNR=32						
BRTR				Lg		19 51 07.9	
	2.5nm,0.3s,baz=164,slow=30,SNR=8.8						
BRTR	Keskin Array B	2.78	345	Pg	Pg	19 50 31.4	-1.2
BRTR	Keskin Array B	2.78	345	Pn	Pn	19 50 24.1	0.0
BRTR				Pg	Pg	19 50 31.4	-1.2
BRTR				Lg		19 51 07.9	
KIZT	Kizilcal	2.80	312	ePN	Pn	19 50 24.0	-0.5
HWQ	Hawqa	2.98	157	ePn	Pn	19 50 26.9	+0.1
FKH	Fakeheh	3.17	151	ePn	Pn	19 50 30.2	+0.6
DARE	Darende-Malaty	3.20	52	ePN	Pn	19 50 24.2	-5.7
BHL	Bhannes	3.25	164	ePn	Pn	19 50 30.1	-0.6
BHL	Bhannes	3.25	164	ePn	Pn	19 50 30.0	-0.7
ISP	Isparta	3.32	285	⇓iP	Pg	19 50 43.3	+0.3
ISP	Isparta	3.32	285	P	Pn	19 50 31.5	-0.1
MYA	Malataya	3.33	66	ePN	Pn	19 50 31.9	+0.1
URFA	Urfa	3.43	82	ePN	Pn	19 50 33.8	+0.7
SVSK	Karacayir	3.46	33	ePN	Pn	19 50 34.2	+0.8
ESKT	Eskisehir	3.83	311	ePN	Pn	19 50 38.9	+0.3
MMAI	Mount Meron Ar	4.07	170	Pn	Pn	19 50 41.8	-0.1
	15nm,0.3s,baz=350,slow=14,SNR=103						
MMAI				Sn	Sn	19 51 27.9	-1.9
	3.7nm,0.3s,baz=355,slow=29,SNR=3.8						
ASF	Jabal al Asfar	5.22	158	Pn	Pn	19 50 58.8	+1.1
	1.0nm,0.3s,baz=225,slow=11,SNR=12						
EIL	Elat	7.36	177	Pn	Pn	19 51 27.0	0.0
	0.7nm,0.3s,baz=333,slow=14,SNR=3.8						
EIL	Elat	7.36	177	Pn	Pn	19 51 27.0	0.0
IDI	Anoyia	8.01	260	Pn	Pn	19 51 38.1	+2.0
	1.2nm,0.3s,baz=52,slow=17,SNR=5.2						
PSZ	Piszkesteto	15.31	320	P	Pn	19 53 14.0	-1.7
	4.1nm,0.9s						
GERES	GERESS Array B	19.23	314	P	Pn	19 54 04.7	0.0
	0.1nm,0.3s,baz=114,slow=9.0,SNR=3.3						
KURK	Kurchatov	34.06	52	P	P	19 56 18.4	-5.5
	2.7nm,1.1s,mb4.1						
TOA0	Torodi Ar. Sit	37.79	240	P	P	19 56 53.6	-2.6
TORD	Torodi Ar. Bea	37.79	240	P	P	19 57 00.1	+3.9
	0.9nm,1.1s,mb3.4,baz=50,slow=7.7,SNR=3.0						

*IDC **18** 19:56:58.9±1.3,3582N×7111E,h0km,mb3.7/4,mb1 3.8/5, mb1mx3.4/23,mbtmp3.6/5,ML2.7/1,Error ellipse: s-maj=33.8km s-min=28.5km az=132.0*
*ISCJB **18** 19:57:10.8±0.5,3619N±003×7147E±006,h104km±9km, mb3.6/4,Error ellipse: s-maj=7.9km s-min=4.3km az=166.5*
*NEIC **18** 19:57:11.1±0.7,3612N×7140E,h99km±9km,mb3.6/4, Error ellipse: s-maj=9.6km s-min=5.5km az=66.0*
ISC 18 19:57:12.1±0.5,**3617N**±003×**7143E**±006,**h108**km±7km, **n42**,σ1s**13**/50,**mb3.6**/4,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.53	231	ePn	Pn	19 57 50.8	-1.1
KBL				eSn	Sn	19 58 22.7	+0.3
THN	Thein Dam	5.14	135	eP	Pn	19 58 28.5	+1.7
THN				eS	Sn	19 59 26.2	+1.2
DLH	Dalhousie	5.21	133	eS	Sn	19 59 29.0	+2.4
AML	Almayashu	6.21	16	P	Pn	19 58 41.8	+0.5
	SNR=57						
AML	Almayashu	6.21	16	ePn	Pn	19 58 41.5	+0.3
	35nm,0.4s						
AML				eSn	Sn	19 59 50.0	-0.8
UCH	Uchtor	6.51	21	Pn	Pn	19 58 43.8	-1.5
UCH				eSn	Sn	19 59 56.4	-1.7
SDNR	Sundarnagar	6.55	134	ex	Pn	19 58 44.0	-1.9
SDNR				eS	Sn	19 59 58.4	-0.7
KZA	Kyzart	6.61	26	P	Pn	19 58 47.5	+0.9
	SNR=15						
EKS2	Erkin-Say	6.74	15	P	Pn	19 58 48.8	+0.4
	SNR=18						
EKS2	Erkin-Say	6.74	15	ePn	Pn	19 58 48.2	-0.1
	11nm,0.3s						
EKS2				eSn	Sn	20 00 00.3	-3.3
AAK	Ala-Archa	6.88	19	P	Pn	19 58 51.2	+0.9
	SNR=16						
AAK	Ala-Archa	6.88	19	ePn	Pn	19 58 51.2	+0.9
	13nm,0.3s						
AAK				eSn	Sn	20 00 07.2	+0.2
SMLA	Simla	6.94	135	i P	Pn	19 58 52.8	+1.7
SMLA				eS	Sn	20 00 06.9	-1.6
SMLA				ex	x	20 00 11.3	
	comp=N,400nm,0.4s						
SMLA				ex	x	20 00 11.9	
	comp=E,432nm,0.4s						
KBK	Karagaybulak	7.03	22	P	Pn	19 58 57.2	+4.8
	SNR=5.6						
ULHL	Ulahol	7.13	30	P	Pn	19 58 55.5	+1.8
	SNR=7.1						
CHMS	Chumysh	7.29	20	P	Pn	19 58 56.5	+0.6
	SNR=7.3						
TKM2	Tokmak 2	7.48	24	P	Pn	19 58 59.2	+0.8
	SNR=15						
TKM2	Tokmak 2	7.48	24	ePn	Pn	19 58 59.1	+0.7
	comp=E,8.5nm,0.4s						
TKM2				e		19 59 19.5	
USP	Ospenovka	7.48	18	P	Pn	19 58 58.3	-0.1
	SNR=13						
KHET	Khetri	8.88	154	eS	Sn	20 00 50.1	-5.7
KHET				AML	AML	20 00 53.1	
	comp=N,16nm,0.2s						
KHET				AML	AML	20 00 53.2	
	comp=E,18nm,0.2s						
KUDL	Kundal	9.07	150	eS	Sn	20 00 55.6	-4.9
KUDL				AML	AML	20 01 01.1	
	comp=E,14nm,0.4s						
KUDL				AML	AML	20 01 03.2	
	comp=N,9.4nm,0.2s						
DANN	Dangsing	13.02	123	eP	Pn	20 00 12.2	-0.7
	comp=N,4.4nm,0.3s						
MK31	Makanchi Array	13.37	34	ePn	Pn	20 00 21.2	+3.9
MKAR	Makanchi Array	13.37	34	Pn	Pn	20 00 17.4	+0.1
	comp=N,0.0nm,0.3s,baz=218,slow=15,SNR=3.0						
MKAR	Makanchi Array	13.37	34	Pn	Pn	20 00 17.4	+0.1
GKN	Gorkha	13.83	122	eP	Pn	20 00 23.1	-0.4
	comp=N,9.2nm,0.6s						
DMN	Daman	14.40	122	eP	Pn	20 00 31.0	+0.1
KKN	Kakani	14.41	122	eP	Pn	20 00 30.3	-0.6
PKI	Pulchoki	14.64	122	eP	Pn	20 00 33.9	+0.1
GUN	Gumba	14.75	120	eP	Pn	20 00 34.4	-0.9
JIRN	Jiri	15.12	120	eP	Pn	20 00 39.1	-0.9
	comp=N,11nm,0.5s						
KURK	Kurchatov	15.44	17	P	Pn	20 00 38.0	-5.7
	comp=N,2.2nm,0.9s						
RAMN	Ramite	15.85	121	eP	Pn	20 00 48.5	-0.5
TAPN	Taplejung	16.39	118	eP	Pn	20 00 55.8	+0.1
BRVK	Borovoye	16.91	358	ePn	Pn	20 01 00.1	-1.8
	comp=N,2.3nm,0.7s						
ZAA0	Zalesovo Array	20.08	24	eP	P	20 01 37.5	+0.7
ZALV	Zalesovo Beam	20.08	24	P	P	20 01 36.9	+0.2
	comp=N,1.5nm,0.3s,baz=208,slow=9.4,SNR=10.0						
ARU	Arti	22.06	341	P	P	20 01 58.6	+0.8
	comp=N,3.2nm,0.8s,mb3.7						
ARCES	ARCESS Array B	41.59	338	P	P	20 04 50.6	+1.8
	comp=N,2.1nm,0.8s,mb3.9,baz=115,slow=8.1,SNR=5.8						
NAO01	NORSAR Array S	45.00	323	P	P	20 05 22.1	+5.8
TORD	Torodi Ar. Bea	66.05	269	P	P	20 07 45.9	-1.7
	comp=N,0.6nm,0.5s,mb3.7,baz=47,slow=6.1,SNR=7.3						
WRA	Warramunga Arr	81.52	122	P	P	20 09 18.9	+1.2
	comp=N,0.3nm,0.6s,mb3.3,baz=329,slow=5.0,SNR=4.9						

*ISCJB **18** 20:41:35.5±1.5,413N±0.1×642E±0.1,h10km,Error ellipse: s-maj=18.0km s-min=11.4km az=21.9*
*CSEM **18** 20:41:35.2±1.5,4104N×6397E,h10km±5km,mb3.4,Error ellipse: s-maj=15.4km s-min=5.1km az=15.0,After NNC*
*IDC **18** 20:41:37.7±3.1,4130N×6382E,h0km,mb3.3/1,mb1 3.4/5, mb1mx3.2/25,mbtmp3.4/5,ML3.3/4,Error ellipse: s-maj=62.5km s-min=23.8km az=160.0*
ISC 18 20:41:36.3±1.5,**411N**±01×**641E**±01,**h10**km,**n11**,σ1s**40**/10, **Northwestern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.14	65	Pn	Pn	20 42 54.4	+1.2
	1.1nm,0.7s,SNR=8.2						
KK31	Karatay Array	5.14	65	Pg	Pg	20 43 11.2	-3.5
	1.3nm,0.5s,baz=247,SNR=4.7						
KK31				Sn	Sn	20 43 55.9	+3.4
	0.7nm,0.3s						
KK31				Lg		20 44 23.7	
	7.0nm,0.5s,SNR=11						
AB01	Akbulak array	8.65	341	Pn	Pn	20 43 41.0	-0.4
	0.8nm,0.9s						
AB01	Akbulak array	8.65	341	Pg	Px	20 44 12.7	
	0.8nm,0.7s						
AB01				Lg		20 46 12.8	
	4.1nm,0.8s						
AB31	Akbulak array	8.65	341	Sn	Sn	20 45 20.0	+1.1
	0.2nm,0.1s,SNR=2.7						
TKM2	Tokmak 2	8.72	74	Lg		20 46 18.3	
	3.1nm,0.8s						
BVAR	Borovoye Array	12.64	17	Pn	Pn	20 44 33.9	-2.1
	0.1nm,0.3s,baz=206,slow=16,SNR=2.8						
KURK	Kurchatov	13.89	41	Pn	Pn	20 44 50.9	-2.1
	0.1nm,0.3s,baz=238,slow=13,SNR=3.0						
MKAR	Makanchi Array	14.24	60	Pn	Pn	20 44 57.4	-0.5
	0.1nm,0.3s,baz=250,slow=15,SNR=4.7						
ZALV	Zalesovo Beam	18.87	40	P	Pn	20 45 57.7	+0.8
	0.2nm,0.3s,baz=237,slow=12,SNR=5.8						
BRTR	Keskin Array B	23.21	277	P	P	20 46 43.8	+0.5
	0.7nm,0.9s,baz=67,slow=11,SNR=3.8						

*NEIC **18** 20:50:40.7,1841N×10167W,h40km,MD4.0(MEX),After MEX.*
MEX 18 20:50:40.7±0.9,**1841N**×**10167W**,**h40**km±23km,**MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.82	166	i P	Pn	20 50 53.4	-2.4
ZIIG				i S	Sn	20 51 05.3	-1.4
MOIG	Morelia	1.34	20	i P	Pn	20 51 01.1	-1.8
MOIG				i S	Sn	20 51 18.1	-1.4
MMIG	Aquila	1.60	266	eP	Pn	20 51 05.5	-0.9
MMIG				i S	Sn	20 51 24.2	-1.6
CAIG	El Cayaco	1.90	135	eP	Pn	20 51 09.4	-1.3
CAIG				i S	Sn	20 51 31.7	-1.8
PPM	Popocatepetl	2.96	77	eP	Pn	20 51 23.7	-1.5
PPM				i S	Sn	20 51 58.7	-0.7
PNIG	Pinotepa	3.93	120	i P	Pn	20 51 39.0	+0.4
PNIG				i S	Sn	20 52 21.4	-2.1

*IDC **18** 21:01:32.6±2.9,2067S×17564W,h0km,mb4.3/4, mb1 4.4/4,mb1mx3.9/17,mbtmp4.3/4,Error ellipse: s-maj=143.4km s-min=47.4km az=153.0*
NEIC 18 21:01:37.4±1.1,**2069S**×**17562W**,**h35**km,**mb4.2**/3,**Error ellipse: s-maj=38.4km s-min=21.9km az=158.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EIDS	Eidsvold	30.95	255	eP	P	21 07 53.2	+1.9
	2.3nm,0.5s						
CTA	Charters Tower	35.69	264	P	P	21 08 33.9	+1.2
	3.3nm,0.3s,baz=88,slow=11,SNR=6.0						
CTAO	Charters Tower	35.69	264	eP	P	21 08 33.3	+0.6
	3.1nm,0.4s						
PMG	Port Moresby	37.56	282	P	P	21 08 48.1	-0.6
TAU	Tasmania Unive	38.07	226	P	P	21 08 52.7	0.0
STKA	Stephens Creek	39.72	245	P	P	21 09 07.7	+1.0
	0.8nm,0.5s,baz=96,slow=10,SNR=3.5						
STKA	Stephens Creek	39.72	245	eP	P	21 09 06.7	+0.1
	0.2nm,0.5s						
ASAR	Alice Springs	46.65	257	P	P	21 10 02.8	+0.1
	3.3nm,0.5s,baz=94,slow=7.9,SNR=70						
ASAR				PcP	PcP	21 11 35.8	-0.5
	0.5nm,0.7s,baz=102,slow=3.6,SNR=4.1						
WB2	Warramunga Arr	46.77	262	eP	P	21 10 02.7	-1.0
WRAB	Tennant Creek	46.77	262	eP	P	21 10 02.7	-1.0
	1.8nm,0.4s						
WRA	Warramunga Arr	46.78	262	P	P	21 10 02.9	-0.9
	1.8nm,0.5s,baz=97,slow=8.4,SNR=18						
FITZ	Fitzroy Crossi	55.21	262	eP	P	21 11 06.4	-0.8
	0.7nm,0.5s						
MBWA	Marble Bar	59.99	257	eP	P	21 11 39.9	-0.9
	1.1nm,0.5s						
AKASG	Malin Array Be	144.23	333	PKP	PKPdf	21 21 09.7	+0.3
	1.2nm,0.4s,baz=43,slow=4.0,SNR=8.8						
BRTR	Keskin Array B	148.60	314	PKPbc	PKPab	21 21 22.1	-2.4
	0.6nm,0.6s,baz=102,slow=5.9,SNR=3.6						
TOA0	Torodi Ar. Sit	172.07	161	ePKPdf	PKPdf	21 21 43.3	-0.1

*IDC **18** 21:19:29.0±1.3,3622N×14236E,h0km,mb3.6/5, mb1 3.8/8,mb1mx3.5/25,mbtmp3.7/8,ML3.5/2,Error ellipse: s-maj=27.7km s-min=25.0km az=88.0*
*ISCJB **18** 21:19:29.9±1.7,3628N±004×14238E±005,h24km±13km, mb3.7/8,Error ellipse: s-maj=7.7km s-min=6.6km az=140.6*
*NEIC **18** 21:19:30.0±4.5,3622N×14238E,h12km±28km,mb3.9/3, Error ellipse: s-maj=10.3km s-min=8.1km az=96.0*
*MOS **18** 21:19:30.5±0.9,3629N×14250E,h33km,mb4.1/5,Error ellipse: s-maj=15.6km s-min=10.3km az=116.5*
*JMA **18** 21:19:32.1±0.2,3631N×14224E,h67km,M3.0*
ISC 18 21:19:30.1±2.1,**3624N**±004×**14233E**±005,**h12**km±14km, **n47**,σ0s**98**/52,**mb3.7**/8,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.31	246	P	Pn	21 19 54.3	+0.1
CHOJ				eS	Sb	21 20 11.3	-0.1
JHO	Hitachi	1.47	285	P	Pn	21 19 55.5	-0.9
ONAJ	Iwakimizuishiy	1.51	305	P	Pn	21 19 55.9	-1.0
JFK	Kawauchi	1.63	314	P	Pn	21 19 57.5	-1.1
JYT	Yasato	1.73	270	P	Pn	21 19 59.3	-0.7
JYT				eS	Sn	21 20 19.9	-2.1
BSO1	Boso 1	1.93	215	P	Pn	21 20 03.3	+0.6
JMM	Marumori	2.04	323	P	Pn	21 20 03.2	-1.1
BSO4	Boso 4	2.05	233	P	Pn	21 20 05.6	+1.3
JFT	Otama	2.05	309	P	Pn	21 20 04.5	+0.1
BSO3	Boso 3	2.06	227	P	Pn	21 20 05.3	+0.7
MJAR	Matsushiro Arr	3.34	276	Pn	Pn	21 20 22.1	-0.1
	2.1nm,0.3s,baz=98,slow=9.3,SNR=18						
MJAR	Matsushiro Arr	3.34	276	P	Pn	21 20 22.1	-0.1
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	Matsushiro	3.34	276	ePn	Pn	21 20 23.2	+1.0
MAJO				Sn	Sn	21 21 02.1	+0.3
MAT	Matsushiro	3.34	276	P	Pn	21 20 23.2	+1.0
MAT				S	Sn	21 21 02.1	+0.3
JHJ	Hachijo jima 2	3.75	215	Pn	Pn	21 20 27.4	-0.4
	comp=Z,16nm,0.3s,baz=64,slow=18,SNR=6.6						
JHJ				Sn	Sn	21 21 08.6	-3.3
	comp=Z,22nm,0.3s,baz=272,slow=18,SNR=4.5						
ASAJ	Asahikawa	7.88	1	Pn	Pn	21 21 23.7	-0.7
	comp=Z,0.5nm,0.3s,baz=83,slow=20,SNR=5.0						
ASAJ	Asahikawa	7.88	1	P	Pn	21 21 23.7	-0.7
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CBIJ	Chichi jima	9.11	181	Pn	Pn	21 21 38.3	-3.2
	comp=Z,3.0nm,0.3s,baz=90,slow=18,SNR=2.7						
YSS	Yuzh-Sakhalins	10.71	2	eP	Pn	21 22 03.5	+0.2
KS15	Wonju Array Si	11.64	280	Pn	Pn	21 22 16.9	+0.8
BJT	Baijiatuau	20.90	288	P	P	21 24 14.0	+1.7
GUMO	Guam	22.66	174	eP	P	21 24 30.6	-0.7
YAK	Yakutsk	27.01	347	P	P	21 25 10.1	-1.6
ENH	Enshi	28.02	267	eP	P	21 25 19.3	-1.8
ULN	Ulaanbaatar	28.42	305	eP	P	21 25 25.5	+1.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ULN	Ulaanbaatar	28.42	305	eP	P	21 25 25.5	+1.1
	comp=Z,0.8nm,0.6s,mb3.5						
SONM	Songino Array	28.85	305	P	P	21 25 29.1	+0.9
	comp=Z,1.0nm,0.7s,mb3.6,baz=109,slow=7.7,SNR=9.4						
SONM	Songino Array	28.85	305	P	P	21 25 29.1	+0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BILL	Bilibino	34.59	16	P	P	21 26 17.9	-0.5
BILL	Bilibino	34.59	16	P	P	21 26 17.9	-0.5
ZALV	Zalesovo Beam	43.00	313	P	P	21 27 30.1	+1.0
	comp=Z,0.3nm,0.3s,mb3.5,baz=123,slow=5.3,SNR=2.9						
LSA	Lhasa	43.03	277	P	P	21 27 30.3	+0.7
MKAR	Makanchi Array	45.17	303	P	P	21 27 48.0	+1.4
	comp=Z,1.1nm,0.6s,mb3.8,baz=93,slow=9.4,SNR=11						
MKAR	Makanchi Array	45.17	303	P	P	21 27 48.1	+1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PMG	Port Moresby	45.62	173	eP	P	21 27 50.4	0.0
KURK	Kurchatov	47.01	309	eP	P	21 28 00.8	-0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KURK	Kurchatov	47.01	309	eP	P	21 28 00.8	-0.2
	comp=Z,1.0nm,0.6s,mb3.9						
PMR	Palmer	48.83	36	P	P	21 28 14.6	-0.3
COLA	College	49.36	32	P	P	21 28 19.3	+0.3
AAK	Ala-Archa	51.52	299	P	P	21 28 37.1	+1.4
BRVK	Borovoye	51.71	313	P	P	21 28 35.6	-1.3
WRAB	Tennant Creek	56.37	189	eP	P	21 29 10.6	-0.6
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
WRAB	Tennant Creek	56.37	189	eP	P	21 29 10.6	-0.6
	comp=Z,1.2nm,0.8s,mb4.0						
WB2	Warramunga Arr	56.38	189	eP	P	21 29 11.2	-0.1
WRA	Warramunga Arr	56.38	189	P	P	21 29 11.9	+0.6
	comp=Z,0.2nm,0.7s,mb3.2,baz=7.8,slow=7.4,SNR=3.9						
NVAR	Mina Array Bea	74.87	53	P	P	21 31 11.9	+1.2
	comp=Z,0.3nm,0.3s,mb3.7,baz=285,slow=5.7,SNR=5.0						
TAU	Tasmania Unive	78.90	176	P	P	21 31 33.0	+0.1

JMA 18 21:30:17.1±0.3,**3003N**×**14294E**,**h51**km,**M3.9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.00	193	P	Pn	21 31 03.3	+1.2
CBIJ				S	Sn	21 31 37.8	+1.0
JHHJ	Haha-jima-NKT	3.45	191	P	Pn	21 31 10.1	+1.7
JHJ2	Mitsune	4.07	320	P	Pn	21 31 19.0	+2.2
JHJ2				eS	Sn	21 32 04.3	+1.2
BSO2	Boso 2	5.06	339	S	Sn	21 32 29.8	+2.4
BSO3	Boso 3	5.18	337	P	Pn	21 31 32.8	+0.7
JHU	Hanno	6.57	333	eS	Sn	21 33 05.0	+0.4
JHO	Hitachi	6.86	344	P	Pn	21 31 56.6	+1.6
JRY	Ryogami san	6.87	331	P	Pn	21 31 57.6	+2.5
JRY				S	Sn	21 33 12.8	+0.9

*NEIC **18** 21:50:15.6,3191N×11575W,h6km,ML3.9(PAS), ML3.9(ECX),After ECX.*
NEIC Felt [IV] at El Cajon; [III] at La Mesa, Lakeside and Poway; [II] at Chula Vista and San Diego, California. Also felt at Alpine, Campo, Escondido, Ramona, Santee, Spring Valley and Winchester.
ECX 18 21:50:15.6±0.8,**3191N**×**11575W**,**h6**km±3km,**MD3.7, ML3.9,7C-2D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDX	Rancho Dowling	0.17	278	⇓eP	Pg	21 50 18.9	-0.2
CPBX	Cerro Prieto	0.63	37	⇑eP	Pg	21 50 26.5	-1.3
CPBX				eS	Sg	21 50 35.2	-0.7
RMX	La Rumorosa	0.74	338	⇑eP	Pg	21 50 29.3	-0.7
RMX				eS	Sg	21 50 38.8	-0.8
ECNX	Esteban Cantu	0.77	251	⇑eP	Pg	21 50 29.1	-1.2
ECNX				eS	Sg	21 50 39.1	-1.1
ENX	Ensenada	0.78	268	⇑eP	Pg	21 50 29.4	-1.2
ENX				eS	Sg	21 50 39.4	-1.3
ENX				⇓e		21 50 40.0	
	comp=E,7μm,0.4s						
ENX				⇑e		21 50 40.2	
	comp=N,5μm,0.4s						
PBX	Punta Banda	0.85	259	⇑eP	Pg	21 50 30.6	-1.2
PBX				eS	Sg	21 50 42.1	-0.7
PBX				e		21 50 46.8	
	comp=N,4μm,0.7s						
CBX	Cerro Bola	0.87	298	⇑eP	Pg	21 50 31.2	-1.2
CBX				eS	Sg	21 50 42.9	-0.8
GLA	Glamis	1.38	34	ePn	Pn	21 50 39.1	-2.3
GLA				eS	Sb	21 50 57.6	-2.1
PFO	Pinyon Flat Ob	1.80	341	ePn	Pn	21 50 45.2	-1.9
PFO				eSg	Sg	21 51 11.4	-1.9
SNCC	San Nicolas Is	3.46	294	ePn	Pn	21 51 09.4	-0.5
SNCC				Sn	Sn	21 51 54.5	+3.3
GSC	Goldstone	3.50	346	ePn	Pn	21 51 10.4	-0.1
GSC				ePg	Pg	21 51 22.4	-0.2
GSC				eSn	Sn	21 51 52.2	+0.1
GSC				eSg	Sg	21 52 07.0	-0.9
TUC	Tucson	4.23	83	ePn	Pn	21 51 19.4	-1.2
TUC				ePg	Pg	21 51 36.5	-0.2
TUC				eSn	Sn	21 52 08.6	-1.8
TUC				Sg	Sg	21 52 31.7	+0.2
ISA	Isabella	4.38	330	ePn	Pn	21 51 22.4	-0.2
ISA				Sn	Sn	21 52 12.7	-1.2
TPNV	Topopah Spring	5.04	355	eSn	Sn	21 52 30.8	+0.5
WUAZ	Wupatki	5.12	44	ePg	Pg	21 51 56.4	+2.6
WUAZ				eSn	Sn	21 52 34.8	+2.5
WUAZ				Sg	Sg	21 53 02.4	+2.3
SAO	San Andreas Ge	6.76	317	ePn	Pn	21 51 55.3	0.0
SAO				Sn	Sn	21 53 14.8	+2.3
CMB	Columbia Colle	7.20	329	ePn	Pn	21 52 02.1	+0.7
MVCO	Mesa Verde	7.98	47	ePn	Pn	21 52 12.9	+0.8
	comp=N,7.8nm,0.7s						
MVCO				eSn	Sn	21 53 42.8	+0.2

*ISCJB **18** 21:59:57.5±0.3,4734N±002×1064E±002,h1km±3km, Error ellipse: s-maj=2.9km s-min=2.0km az=160.7*
*ZUR **18** 21:59:58.5,4728N×1069E,h4km,ML2.1/4*
*CSEM **18** 21:59:59.4±0.1,4722N×1074E,h10km,ML2.9/12,Error ellipse: s-maj=2.3km s-min=1.3km az=172.0*
*PRU **18** 21:59:59.4,4724N×1078E,h0km*
*VIE **18** 21:59:59.0±0.1,4727N×1070E,h7km±2km,mb1.9/11, ML2.4/14,Error ellipse: s-maj=0.9km s-min=0.7km az=167.0 3 km NW of Imst*
*BGR **18** 22:00:00.1±0.5,4721N×1068E,h5km,ML2.7/9,Error ellipse: s-maj=6.7km s-min=3.3km az=15.0*
*LDG **18** 22:00:00.3±0.1,4731N×1071E,h10km,Ml2.8/8,Error ellipse: s-maj=2.0km s-min=1.9km az=144.0*
*NEIC **18** 22:00:00.3,4721N×1060E,h2km,ML2.2(ZUR), ML2.8(LDG),After ZUR.*
ISC 18 21:59:59.1±0.2,**4730N**±002×**1069E**±002,**h6**km±2km,**n82**, σ1s**06**/147,**8C-11D,Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RETA	Reutte	0.20	15	ePg	Pg	22 00 03.3	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	52nm,0.3s,SNR=134						
RETA				⇑iSg	Sg	22 00 06.7	+1.0
	114nm,0.3s						
RETA	**Reutte**	**0.20**	**15**	Pg	**Pg**	**22 00 03.3**	**+0.3**
	52nm,0.3s,SNR=134						
RETA				Sg	**Sg**	**22 00 06.7**	**+1.0**
	114nm,0.3s						
FETA	**Feichten**	**0.28**	**174**	ePg	**Pg**	**22 00 04.5**	**0.0**
	19nm,0.1s,SNR=114						
FETA				⇓iSg	**Sg**	**22 00 08.0**	**-0.1**
	44nm,0.2s						
MOTA	**Moosalm**	**0.29**	**80**	ePg	**Pg**	**22 00 04.6**	**-0.1**
	50nm,0.3s,SNR=131						
MOTA				⇓iSg	**Sg**	**22 00 09.4**	**+0.9**
	131nm,0.4s						
OBER	**Oberstdorf**	**0.29**	**293**	⇓iPg	**Pg**	**22 00 05.4**	**+0.7**
SQTA	**Sankt Quirin**	**0.36**	**102**	⇓iPg	**Pg**	**22 00 05.9**	**-0.3**
DAVA	**Damuels**	**0.55**	**269**	ePg	**Pg**	**22 00 10.0**	**+0.4**
	SNR=22						
DAVA	**Damuels**	**0.55**	**269**	ePg	**Pg**	**22 00 10.0**	**+0.4**
	26nm,0.3s,SNR=33						
DAVA				⇓iSg	**Sg**	**22 00 18.2**	**+1.4**
	91nm,0.4s						
DAVA	**Damuels**	**0.55**	**269**	Pg	**Pg**	**22 00 10.0**	**+0.4**
	26nm,0.3s,SNR=33						
DAVA				Sg	**Sg**	**22 00 18.2**	**+1.4**
	91nm,0.4s						
WATA	**Walderalm**	**0.61**	**86**	⇑ePg	**Pg**	**22 00 10.2**	**-0.6**
	3.4nm,0.3s,SNR=10						
WATA				⇑iSg	**Sg**	**22 00 18.9**	**+0.2**
	30nm,0.5s						
WTTA	**Wattenberg**	**0.65**	**93**	ePg	**Pg**	**22 00 11.2**	**-0.3**
	SNR=11						
WTTA				eSg	**Sg**	**22 00 20.5**	**+0.5**
	SNR=4.8						
WTTA	**Wattenberg**	**0.65**	**93**	ePg	**Pg**	**22 00 11.3**	**-0.3**
	8.2nm,0.2s,SNR=17						
WTTA				⇑iSg	**Sg**	**22 00 20.9**	**+1.0**
	41nm,0.4s						
WTTA	**Wattenberg**	**0.65**	**93**	Pg	**Pg**	**22 00 11.3**	**-0.2**
	8.2nm,0.2s,SNR=17						
WTTA				Sg	**Sg**	**22 00 20.5**	**+0.5**
	SNR=4.8						
FUORN	**Ofenpass-Fuorn**	**0.74**	**203**	ePg	**Pg**	**22 00 13.0**	**-0.2**
	112nm,0.6s						
SCE	**Schlegeis**	**0.74**	**110**	⇑iPg	**Pg**	**22 00 12.7**	**-0.7**
DAVOX	**Davos/Dischmat**	**0.76**	**227**	⇓iPg	**Pg**	**22 00 13.3**	**-0.3**
	121nm,0.4s						
DAVOX				eSg	**Sg**	**22 00 24.0**	**+0.6**
	121nm,0.4s						
FUR	**Furstenfeldbru**	**0.96**	**24**	ePg	**Pg**	**22 00 19.8**	**+2.3**
	SNR=8.7						
FUR				eSg	**Sg**	**22 00 33.9**	**+4.1**
	SNR=12						
FUR	**Furstenfeldbru**	**0.96**	**24**	Pg	**Pg**	**22 00 19.8**	**+2.3**
	SNR=8.7						
FUR				Sg	**Sg**	**22 00 33.9**	**+4.0**
	SNR=12						
BERNI	**Berninapass**	**0.99**	**208**	ePg	**Pg**	**22 00 17.6**	**-0.5**
	67nm,0.7s						
WILA	**Wila**	**1.22**	**276**	ePg	**Pg**	**22 00 23.6**	**+1.2**
	718nm,0.7s						
TUE	**Stuetta**	**1.23**	**229**	eP	**Pg**	**22 00 22.3**	**-0.4**
TUE				eS	**Sg**	**22 00 40.5**	**+1.8**
TUE	**Stuetta**	**1.23**	**229**	eP	**Pg**	**22 00 22.3**	**-0.4**
TUE				eS	**Sg**	**22 00 40.5**	**+1.8**
ABTA	**Abfaltersbach**	**1.36**	**113**	⇑ePn	**Pn**	**22 00 24.3**	**-0.3**
	SNR=12						
ABTA				⇓iPg	**Pg**	**22 00 25.1**	**-0.2**
	5.8nm,0.3s						
ABTA				⇓iSg	**Sg**	**22 00 43.4**	**+0.5**
	40nm,0.5s						
KBA	**Koelnbreinsper**	**1.83**	**96**	ePg	**Pg**	**22 00 34.6**	**+0.5**
	SNR=10						
KBA				eSg	**Sg**	**22 00 59.3**	**+1.6**
	SNR=3.9						
KBA	**Koelnbreinsper**	**1.83**	**96**	⇑ePn	**Pn**	**22 00 31.0**	**0.0**
	SNR=18						
KBA				⇓iPg	**Pg**	**22 00 33.9**	**-0.2**
	8.6nm,0.3s						
KBA				⇓iSg	**Sg**	**22 00 59.3**	**+1.5**
	20nm,0.5s						
BFO	**Black Forest**	**1.90**	**304**	ePn	**Pn**	**22 00 33.5**	**+1.5**
	SNR=1.4						
BFO				eSg	**Sg**	**22 01 01.0**	**+1.0**
	SNR=5.6						
BFO	**Black Forest**	**1.90**	**304**	Pn	**Pn**	**22 00 33.5**	**+1.6**
	SNR=1.4						
BFO				eSn	**Sn**	**22 01 00.6**	**+4.5**
BFO				Sg	**Sg**	**22 01 01.0**	**+1.0**
	SNR=5.6						
BFO	**Black Forest**	**1.90**	**304**	ePn	**Pn**	**22 00 34.1**	**+2.2**
BFO				eSn	**Sn**	**22 01 00.6**	**+4.5**
WET	**Wettzell**	**2.36**	**38**	ePn	**Pn**	**22 00 38.9**	**+0.6**
	SNR=9.1						
WET				eSn	**Sn**	**22 01 08.6**	**+1.0**
	SNR=2.2						
GORS	**Gorjuse**	**2.48**	**112**	ePn	**Pn**	**22 00 44.5**	**+4.6**
GORS				eSn	**Sn**	**22 01 19.7**	**+9.3**
GORS							
	comp=Z,58nm,1.4s						
GORS	**Gorjuse**	**2.48**	**112**	ePn	**Pn**	**22 00 44.5**	**+4.6**
GORS				eSn	**Sn**	**22 01 19.7**	**+9.3**
MOA	**Molln**	**2.49**	**76**	⇑iPg	**Pg**	**22 00 45.2**	**-1.5**
	comp=Z,1.9nm,0.3s						
MOA				⇓iSg	**Sg**	**22 01 19.9**	**+1.0**
	comp=Z,7.0nm,0.4s						
MOA	**Molln**	**2.49**	**76**	Pg	**Pg**	**22 00 45.2**	**-1.5**
	comp=Z,1.9nm,0.3s						
MOA				Sg	**Sg**	**22 01 19.2**	**+0.3**
	SNR=3.5						
VOY	**Vojsko**	**2.54**	**119**	e(Pn)	**Pn**	**22 00 44.2**	**+3.3**
VOY				e(Sn)	**Sn**	**22 01 17.8**	**+5.7**
GEC2	**GERESS Array S**	**2.55**	**51**	ePn	**Pn**	**22 00 42.3**	**+1.4**
GEC2	**GERESS Array S**	**2.55**	**51**	ePg	**Pg**	**22 00 52.0**	**+4.1**
GEC2	**GERESS Array S**	**2.55**	**51**	ePn	**Pn**	**22 00 42.3**	**+1.4**
GEC2				ePg	**Pg**	**22 00 52.0**	**+4.1**
GEC2				eSn	**Sn**	**22 01 18.5**	**+6.3**
CDF	**Champ du Feu**	**2.55**	**297**	ePg	**Pg**	**22 00 48.0**	**0.0**
CDF				eSg	**Sg**	**22 01 21.2**	**+0.1**
	comp=Z,28nm,0.5s						
CDF	**Champ du Feu**	**2.55**	**297**	ePg	**Pg**	**22 00 48.0**	**0.0**
CDF				eSg	**Sg**	**22 01 21.2**	**+0.1**
	comp=Z,14nm,0.5s						
CDF	**Champ du Feu**	**2.55**	**297**	ePn	**Pn**	**22 00 40.3**	**-0.7**
CDF				ePg	**Pg**	**22 00 48.0**	**0.0**
CDF				eSg	**Sg**	**22 01 21.2**	**+0.1**
HINF	**Hinteralfeld**	**2.65**	**283**	eP	**Pn**	**22 00 44.3**	**+2.0**
HINF	**Hinteralfeld**	**2.65**	**283**	ePg	**Pg**	**22 00 50.1**	**+0.3**
HINF				eSg	**Sg**	**22 01 23.8**	**-0.3**
	comp=Z,12nm,0.4s						
HINF	**Hinteralfeld**	**2.65**	**283**	eP	**Pn**	**22 00 44.3**	**+2.0**
HINF	**Hinteralfeld**	**2.65**	**283**	ePg	**Pg**	**22 00 50.1**	**+0.3**
HINF				eSg	**Sg**	**22 01 23.8**	**-0.3**
	comp=Z,6.2nm,0.4s						
HINF	**Hinteralfeld**	**2.65**	**283**	ePn	**Pn**	**22 00 41.4**	**-0.9**
HINF				eP		22 00 44.3	
HINF				ePg	**Pg**	**22 00 50.1**	**+0.3**
HINF				eSg	**Sg**	**22 01 23.8**	**-0.3**
KHC	**Kasperske Hory**	**2.67**	**45**	ePN	**Pn**	**22 00 43.3**	**+0.8**
KHC				ePG	**Pg**	**22 00 48.2**	**-2.0**
KHC				eSN	**Sn**	**22 01 16.6**	**+1.5**
KHC				eSG	**Sg**	**22 01 24.1**	**-0.6**
	comp=Z,20nm,0.8s						
HAU	**Haudompre**	**3.02**	**285**	ePg	**Pg**	**22 00 56.4**	**-0.5**
HAU				eSg	**Sg**	**22 01 35.1**	**-0.9**
	comp=Z,14nm,0.4s						
HAU	**Haudompre**	**3.02**	**285**	ePg	**Pg**	**22 00 56.4**	**-0.5**
HAU				eSg	**Sg**	**22 01 35.1**	**-0.9**
	comp=Z,6.8nm,0.4s						
HAU	**Haudompre**	**3.02**	**285**	ePn	**Pn**	**22 00 46.5**	**-0.9**
HAU				eP		22 00 49.7	
HAU				ePg	**Pg**	**22 00 56.4**	**-0.5**
HAU				eSg	**Sg**	**22 01 35.1**	**-0.9**
NKC	**Novy Kostel**	**3.16**	**21**	ePG	**Pg**	**22 00 56.8**	**-2.9**
NKC				eSN	**Sn**	**22 01 28.3**	**+0.9**
NKC				eSG	**Sg**	**22 01 39.9**	**-0.7**
	comp=Z,12nm,0.6s						
CABF	**La Chapelle**	**3.22**	**259**	ePn	**Pn**	**22 00 49.4**	**-0.8**
CABF				eP		22 00 52.4	
CABF				ePg	**Pg**	**22 00 59.9**	**-0.9**
GUNZ	**Gunzen**	**3.26**	**19**	eSn	**Sn**	**22 01 28.6**	**-1.1**
	SNR=2.2						
GUNZ				eSg	**Sg**	**22 01 44.1**	**+0.4**
	SNR=3.8						
LPG	**La Plagne**	**3.26**	**238**	eP	**Pn**	**22 00 53.7**	**+3.0**
LPG				eSg	**Sg**	**22 01 44.0**	**+0.1**
	comp=Z,12nm,0.7s						
LPG	**La Plagne**	**3.26**	**238**	eSg	**Sg**	**22 01 44.0**	**+0.1**
	comp=Z,6.1nm,0.7s						
LPG	**La Plagne**	**3.26**	**238**	ePn	**Pn**	**22 00 50.3**	**-0.4**
LPG				eP		22 00 53.7	
LPG				eSg	**Sg**	**22 01 44.0**	**+0.1**
LPL	**La Plagne**	**3.26**	**238**	eP	**Pn**	**22 00 53.6**	**+2.9**
LPL				eSg	**Sg**	**22 01 43.3**	**-0.6**
	comp=Z,6.7nm,0.7s						
LPL	**La Plagne**	**3.26**	**238**	eSg	**Sg**	**22 01 43.3**	**-0.6**
	comp=Z,3.3nm,0.7s						
LPL	**La Plagne**	**3.26**	**238**	ePn	**Pn**	**22 00 50.2**	**-0.5**
LPL				eP		22 00 53.6	
LPL				eSg	**Sg**	**22 01 43.3**	**-0.6**
TNS	**Taunus Mts**	**3.28**	**334**	eSn	**Sn**	**22 01 29.5**	**-0.8**
	SNR=1.8						
MOX	**Moxa**	**3.41**	**10**	eSn	**Sn**	**22 01 33.1**	**-0.3**
	SNR=2.4						
MOX				eSg	**Sg**	**22 01 51.4**	**+2.9**
MOX	**Moxa**	**3.41**	**10**	eSN	**Sn**	**22 01 32.9**	**-0.5**
MOX				eSG	**Sg**	**22 01 51.4**	**+2.9**
PRU	**Pruhonice**	**3.71**	**42**	eSG	**Sg**	**22 01 56.8**	**-1.5**
	comp=Z,5.0nm,0.5s						
MBDF	**Montbardon**	**3.75**	**228**	ePn	**Pn**	**22 00 56.7**	**-0.7**
TREC	**Trest**	**3.78**	**56**	eSN	**Sn**	**22 01 42.7**	**+0.2**
TREC				eSG	**Sg**	**22 01 57.8**	**-2.6**
	comp=Z,17nm,0.7s						
SFTF	**Sexfontaines**	**3.92**	**285**	ePg	**Pg**	**22 01 12.6**	**-1.5**
SFTF				eSg	**Sg**	**22 02 03.5**	**-1.3**
	comp=Z,5.5nm,0.4s						
SFTF	**Sexfontaines**	**3.92**	**285**	ePg	**Pg**	**22 01 12.6**	**-1.5**
SFTF				eSg	**Sg**	**22 02 03.5**	**-1.3**
	comp=Z,2.8nm,0.4s						
SFTF	**Sexfontaines**	**3.92**	**285**	ePn	**Pn**	**22 00 58.7**	**-1.0**
SFTF				ePg	**Pg**	**22 01 12.6**	**-1.5**
SFTF				eSg	**Sg**	**22 02 03.5**	**-1.3**
MEZF	**Maizieres J'vi**	**3.98**	**290**	ePn	**Pn**	**22 00 59.4**	**-1.2**
ORIF	**Oris-en-Rattie**	**4.10**	**236**	ePn	**Pn**	**22 01 01.8**	**-0.5**
ORIF				eP		22 01 05.0	
BRG	**Berggiesshubel**	**4.17**	**30**	SG	**Sg**	**22 02 12.1**	**-0.9**
	comp=Z,3.0nm,0.7s						
BRG	**Berggiesshubel**	**4.17**	**30**	e	**Pg**	**22 01 20.1**	**+1.1**
CLL	**Collm**	**4.29**	**20**	ePg	**Pg**	**22 01 25.0**	**+3.7**
CLL				eSb	**Sb**	**22 02 06.0**	**-0.9**
CLL				eSg	**Sg**	**22 02 19.0**	**+2.2**
	comp=Z,11nm,1.1s						
VRAC	**Vranov**	**4.43**	**61**	eSg	**Sg**	**22 02 19.5**	**-1.7**
LOR	**Lormes**	**4.65**	**272**	ePn	**Pn**	**22 01 09.2**	**-0.6**
FRF	**La Foret Royal**	**4.69**	**219**	ePn	**Pn**	**22 01 09.5**	**-0.9**
FRF				eP		22 01 13.5	
DPC	**Dobruska-Polom**	**4.82**	**49**	eSN	**Sn**	**22 02 08.1**	**0.0**
DPC				eSG	**Sg**	**22 02 31.5**	**-2.2**
	comp=Z,8.6nm,0.8s						
VIVF	**Saint-Julien-l**	**4.84**	**242**	ePn	**Pn**	**22 01 12.9**	**+0.4**
SMRF	**Simiane la Rot**	**4.88**	**229**	ePn	**Pn**	**22 01 12.1**	**-0.9**
SMRF				eP		22 01 15.4	
SSF	**Saint Saulge**	**4.90**	**270**	ePn	**Pn**	**22 01 13.1**	**-0.2**
AVF	**Avril sur Loir**	**5.04**	**267**	eP	**Pn**	**22 01 16.7**	**+1.6**
BGF	**Bois d'Agland**	**5.42**	**265**	eP	**Pn**	**22 01 21.7**	**+1.3**
TCF	**Toulx Ste Croi**	**5.91**	**263**	ePn	**Pn**	**22 01 26.8**	**-0.3**

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*ISCJB **18** 22:08:25.1±1.3, 21.1S±0.1×178.95W±0.09, h595km±18km, mb4.0/18, Error ellipse: s-maj=16.8km s-min=12.9km az=2.5*
*IDC **18** 22:08:26.6±2.8, 21.10S×178.98W, h590km±30km, mb3.4/9, mb1 3.6/10, mb1mx3.4/17, mbtmp3.4/10, Error ellipse: s-maj=22.3km s-min=17.7km az=68.0*
*NEIC **18** 22:08:26.3±1.0, 21.17S×178.90W, h599km±13km, mb4.2/14, Error ellipse: s-maj=12.4km s-min=9.2km az=185.0*
ISC 18 22:08:26.3±1.4, **21.2S**±0.1×**178.91W**±0.09, **h596**km±18km, **n39**, σ0s84/34, **mb4.0**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.11**	**174**	eP	**P**	**22 10 26.9**	**+0.5**
URZ	**Urewera**	**17.39**	**191**	P	**P**	**22 11 55.8**	**-0.4**
	3.2nm,0.3s,baz=228,slow=6.4,SNR=11						
RAR	**Rarotonga**	**17.84**	**94**	eP	**P**	**22 11 59.5**	**-1.2**
	48nm,1.1s						
HNR	**Honiara**	**23.46**	**297**	P	**P**	**22 12 51.2**	**0.0**
CTA	**Charters Tower**	**32.59**	**266**	eP	**P**	**22 14 10.8**	**+0.4**
	5.0nm,0.3s,mb4.6						
CTAO	**Charters Tower**	**32.59**	**266**	eP	**P**	**22 14 10.4**	**+0.1**
	6.5nm,0.3s,mb4.7						
PMG	**Port Moresby**	**34.67**	**284**	P	**P**	**22 14 28.4**	**+0.5**
	5.1nm,0.7s,mb4.3,baz=84,slow=4.6,SNR=5.1						
PMG	**Port Moresby**	**34.67**	**284**	eP	**P**	**22 14 27.7**	**-0.2**
	7.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**36.74**	**245**	eP	**P**	**22 14 44.9**	**+0.2**
	1.2nm,0.7s,mb3.5						
STKA	**Stephens Creek**	**36.74**	**245**	P	**P**	**22 14 45.3**	**+0.6**
	1.1nm,0.5s,mb3.6,baz=156,slow=21,SNR=4.8						
COEN	**Coen**	**36.79**	**275**	eP	**P**	**22 14 45.7**	**+0.4**
	4.1nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**43.55**	**258**	P	**P**	**22 15 39.0**	**+0.1**
	5.3nm,0.6s,mb4.2,baz=96,slow=7.7,SNR=64						
ASAR				ScP	ScP	22 20 09.1	+0.6
	0.6nm,0.7s,baz=114,slow=4.5,SNR=4.6						
WB2	**Warramunga Arr**	**43.66**	**263**	eP	**P**	**22 15 39.2**	**-0.7**
WRAB	**Tennant Creek**	**43.66**	**263**	eP	**P**	**22 15 39.1**	**-0.8**
	4.1nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**43.67**	**263**	P	**P**	**22 15 39.4**	**-0.5**
	2.9nm,0.3s,mb4.3,baz=97,slow=7.6,SNR=66						
FITZ	**Fitzroy Crossi**	**52.10**	**263**	eP	**P**	**22 16 42.4**	**-0.2**
	2.3nm,0.3s,mb4.0						
MBWA	**Marble Bar**	**56.88**	**258**	eP	**P**	**22 17 15.6**	**-0.4**
	3.4nm,0.5s,mb3.8						
VNDA	**Vanda**	**57.18**	**185**	P	**P**	**22 17 19.6**	**+2.6**
	0.9nm,0.5s,mb3.3,baz=10,slow=6.1,SNR=7.5						
VNDA	**Vanda**	**57.18**	**185**	eP	**P**	**22 17 19.3**	**+2.3**
	1.0nm,0.5s,mb3.3						
MJAR	**Matsushiro Arr**	**70.24**	**324**	P	**P**	**22 18 41.4**	**+0.8**
	1.4nm,0.4s,mb3.7,baz=155,slow=5.6,SNR=5.2						
MAJO	**Matsushiro**	**70.25**	**324**	eP	**P**	**22 18 39.1**	**-1.4**
KSM	**Kuching**	**72.67**	**279**	eP	**P**	**22 18 55.2**	**0.0**
	7.6nm,0.5s,mb4.5						
PETK	**Petropavlovsk-**	**76.69**	**346**	P	**P**	**22 19 18.0**	**+1.3**
	3.5nm,0.7s,mb3.9,baz=107,slow=9.9,SNR=4.5						
COCO	**West Island**	**80.41**	**261**	eP	**P**	**22 19 37.9**	**+0.4**
MDJ	**Mudanjiang**	**80.58**	**325**	P	**P**	**22 19 37.0**	**-0.5**
MAW	**Mawson**	**80.66**	**200**	eP	**P**	**22 19 37.0**	**-0.7**
	1.0nm,0.4s,mb3.6						
HOOD	**Mount Hood Mea**	**84.15**	**37**	P	**P**	**22 19 56.7**	**+1.2**
	20nm,0.5s,mb4.9						
PMR	**Palmer**	**85.86**	**14**	P	**P**	**22 20 02.6**	**-0.7**
SNAA	**Sanae**	**87.37**	**179**	eP	**P**	**22 20 09.1**	**-1.4**
	0.7nm,0.5s,mb3.6						
TXAR	**Lajitas Array**	**88.12**	**58**	P	**P**	**22 20 15.1**	**+0.3**
	0.5nm,0.8s,mb3.3,baz=248,slow=3.4,SNR=4.6						
VNA1	**Neumayer--Stat**	**88.20**	**177**	e	**P**	**22 20 17.8**	**+3.4**
CMAR	**Chiang Mai Arr**	**89.54**	**290**	P	**P**	**22 20 22.1**	**+0.6**
	0.6nm,0.3s,mb3.9,baz=115,slow=3.0,SNR=8.7						
CHTO	**Chiang Mai**	**89.67**	**290**	P	**P**	**22 20 22.4**	**+0.2**
YAK	**Yakutsk**	**92.41**	**338**	P	**P**	**22 20 33.8**	**0.0**
ARCES	**ARCESS Array B**	**129.41**	**349**	PKP	PKPdf	22 26 27.4	+0.1
	2.4nm,0.8s,baz=98,slow=2.6,SNR=4.0						
AKASG	**Malin Array Be**	**143.17**	**330**	PKP	PKPdf	22 26 51.1	-2.0
	2.8nm,0.4s,baz=42,slow=4.2,SNR=25						
BRTR	**Keskin Array B**	**146.64**	**311**	PKPbc	PKPbc	22 27 02.6	+0.4
	0.8nm,0.6s,baz=150,slow=5.0,SNR=5.3						
GERES	**GERESS Array B**	**150.59**	**343**	PKPbc	PKPbc	22 27 12.3	+0.7
	0.5nm,0.5s,baz=29,slow=2.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	**172.01**	**184**	PKPab	PKPab	22 28 56.3	+0.9
	0.4nm,0.8s,baz=169,slow=3.9,SNR=3.4						

IDC 18 22:16:49.1±4.8, **8.02S**×**119.85E**, **h218**km±54km, **mb2.9**/3, **mb1 3.0**/4, **mb1mx2.9**/17, **mbtmp2.8**/4, **Error ellipse: s-maj=118.5km s-min=16.1km az=49.0, Flores region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.37**	**132**	P	P	22 20 47.6	-0.2
	0.3nm,0.3s,baz=303,slow=12,SNR=22						
WRA				S	S	22 24 06.6	+0.5
	0.1nm,0.3s,baz=306,slow=24,SNR=4.5						
ASAR	**Alice Springs**	**20.58**	**141**	P	P	22 21 11.3	-0.1
	0.6nm,0.4s,baz=314,slow=9.6,SNR=13						
STKA	**Stephens Creek**	**31.19**	**143**	P	P	22 22 48.7	+0.8
	0.4nm,0.4s,baz=315,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**63.98**	**332**	P	P	22 26 58.9	-0.1
	0.4nm,1.1s,baz=144,slow=6.1,SNR=4.1						

IDC 18 22:30:39.5±2.0, **6.95S**×**129.09E**, **h0**km, **mb3.9**/1, **mb1 3.7**/3, **mb1mx3.4**/15, **mbtmp3.5**/3, **ML3.5**/2, **Error ellipse: s-maj=129.4km s-min=31.1km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.88**	**159**	Pn	Pn	22 33 58.6	+0.9
	0.3nm,0.3s,baz=338,slow=10,SNR=11						
WRA				Sn	Sn	22 36 18.4	-14
	0.8nm,0.3s,baz=333,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.25**	**165**	P	Pn	22 34 41.3	-0.7
	0.1nm,0.3s,baz=337,slow=9.0,SNR=3.7						
ASAR				S	Sn	22 37 41.1	-14
	0.3nm,0.3s,baz=345,slow=25,SNR=6.8						
MKAR	**Makanchi Array**	**67.69**	**327**	P	P	22 41 38.8	+0.1
	0.6nm,0.4s,baz=121,slow=7.8,SNR=20						

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*IDC **18** 22:53:09.0±0.9, 34.59N×73.15E, h0km, mb3.9/11, mb1 4.1/15, mb1mx3.9/27, mbtmp4.0/15, ML4.0/4, Error ellipse: s-maj=23.9km s-min=17.5km az=54.0*
*NDI **18** 22:53:11.4±2.4, 34.78N×72.80E, h37km, ML3.8, mb3.8(NEIC)*
*ISCJB **18** 22:53:11.2±1.2, 34.62N±0.03×73.39E±0.04, h26km±10km, mb3.8/13, Error ellipse: s-maj=5.9km s-min=4.3km az=153.9*
*MOS **18** 22:53:11.7±1.3, 34.58N×73.34E, h29km, mb4.3/9, Error ellipse: s-maj=12.3km s-min=7.4km az=90.4*
*BJI **18** 22:53:13.5, 34.80N×73.02E, h54km, mb3.7, ML3.4*
*NEIC **18** 22:53:14.2±0.7, 34.52N×73.34E, h37km±7km, mb3.8/4, Error ellipse: s-maj=10.6km s-min=5.0km az=58.0*
ISC 18 22:53:13.6±1.5, **34.58N**±0.03×**73.29E**±0.04, **h29**km±12km, **n73**, σ1s37/83, **mb3.8**/13, **1C**, **Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.92**	**181**	P	**Pn**	**22 53 29.5**	**-1.0**
CEP	**Cherat**	**1.37**	**237**	⇑P	**Pn**	**22 53 35.7**	**-1.0**
CEP				S	**Sn**	**22 53 57.0**	**+3.2**
JMU	**Jammu**	**2.30**	**144**	ex	x	22 53 58.5	
JMU				eS	**Sn**	**22 54 23.0**	**+6.3**
THN	**Thein Dam**	**2.95**	**136**	eP	**Pn**	**22 54 01.3**	**+2.8**
THN				ex	x	22 54 44.8	
DLH	**Dalhousie**	**3.03**	**132**	eP	**Pn**	**22 54 02.0**	**+2.5**
DLH				eS	**Sn**	**22 54 41.0**	**+6.3**
SBDP	**Sheikh Budin**	**3.08**	**223**	P	**Pn**	**22 54 02.0**	**+1.8**
KBL	**Kabul**	**3.50**	**271**	ePn	**Pn**	**22 54 08.1**	**+2.1**
KBL				eSn	**Sn**	**22 54 45.9**	**-0.6**
BHK	**Bhakra**	**4.11**	**139**	ex	x	22 55 22.8	
SDNR	**Sundarnagar**	**4.36**	**134**	eP	**Pn**	**22 54 21.4**	**+3.6**
SDNR				eS	**Sn**	**22 55 10.0**	**+2.3**
SMLA	**Simla**	**4.75**	**135**	i P	**Pn**	**22 54 26.1**	**+3.0**
SMLA				eS	**Sn**	**22 55 19.6**	**+2.4**
SMLA				ex	x	22 55 23.3	
	comp=N,708nm,0.3s						
SMLA				ex	x	22 55 25.2	
	comp=E,1μm,0.3s						
DDI	**Dehra Dun**	**5.86**	**135**	ex	**Pn**	**22 54 33.0**	**-5.4**
KHET	**Khetri**	**6.84**	**161**	eS	**Sn**	**22 56 06.6**	**-2.1**
SONA	**Sohna**	**7.10**	**152**	eS	**Sn**	**22 56 14.6**	**-0.5**
SONA				AML	AML	22 57 02.3	
	comp=N,11nm,0.2s						
SONA				AML	AML	22 57 03.3	
	comp=E,27nm,0.4s						
AML	**Almayashu**	**7.54**	**2**	ePn	**Pn**	**22 55 03.8**	**+2.3**
	comp=E,20nm,0.4s						
AML				eSn	**Sn**	**22 56 15.3**	**-11**
UCH	**Uchtor**	**7.69**	**7**	ePn	**Pn**	**22 55 03.1**	**-0.5**
	comp=E,6.1nm,0.8s						
UCH				eSn	**Sn**	**22 56 26.0**	**-3.7**
EKS2	**Erkin-Say**	**8.08**	**3**	ePn	**Pn**	**22 55 11.5**	**+2.7**
	comp=E,5.5nm,0.6s						
EKS2				eSn	**Sn**	**22 56 35.4**	**-3.7**
AAK	**Ala-Archa**	**8.09**	**6**	eP	**Pn**	**22 55 12.4**	**+3.4**
AAK				e		22 56 40.5	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	**Ala-Archa**	**8.09**	**6**	ePn	**Pn**	**22 55 12.4**	**+3.4**
	comp=Z,4.0nm,0.6s						
AAK				eSn	**Sn**	**22 56 40.5**	**+1.0**
TKM2	**Tokmak 2**	**8.52**	**12**	eP	**Pn**	**22 55 17.4**	**+2.5**
TKM2				e		22 56 50.2	
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.4s						
TKM2	**Tokmak 2**	**8.52**	**12**	ePn	**Pn**	**22 55 17.4**	**+2.5**
	comp=Z,5.2nm,0.4s						
TKM2				eSn	**Sn**	**22 56 50.2**	**+0.2**
DANN	**Dangsing**	**10.89**	**122**	eP	**Pn**	**22 55 46.7**	**-0.7**
	comp=Z,16nm,0.2s						
KOLN	**Koldanda**	**11.14**	**125**	eP	**Pn**	**22 55 50.8**	**0.0**
	comp=Z,9.0nm,0.3s						
KOLN				eS	**Sn**	**22 57 49.5**	**-4.9**
GKN	**Gorkha**	**11.71**	**121**	eP	**Pn**	**22 55 57.8**	**-0.9**
	comp=Z,14nm,0.2s						
DMN	**Daman**	**12.28**	**121**	eP	**Pn**	**22 56 05.8**	**-0.7**
	comp=Z,9.6nm,0.2s						
KKN	**Kakani**	**12.30**	**120**	eP	**Pn**	**22 56 06.2**	**-0.5**
	comp=Z,18nm,0.4s						
KKN	**Kakani**	**12.30**	**120**	eP	**Pn**	**22 56 06.2**	**-0.5**
KKN				pmax	pmax		
	comp=Z,18nm,0.4s						
PKI	**Pulchoki**	**12.52**	**121**	eP	**Pn**	**22 56 09.1**	**-0.6**
	comp=Z,11nm,0.2s						
PKI	**Pulchoki**	**12.52**	**121**	eP	**Pn**	**22 56 09.1**	**-0.6**
PKI				pmax	pmax		
	comp=Z,11nm,0.2s						
GUN	**Gumba**	**12.66**	**118**	eP	**Pn**	**22 56 10.3**	**-1.3**
	comp=Z,15nm,0.4s						
JIRN	**Jiri**	**13.03**	**118**	eP	**Pn**	**22 56 15.8**	**-0.8**
	comp=Z,44nm,0.3s						
RAMN	**Ramite**	**13.74**	**120**	eP	**Pn**	**22 56 24.7**	**-1.6**
	comp=Z,11nm,0.3s						
MK31	**Makanchi Array**	**13.97**	**26**	eP	**Pn**	**22 56 29.7**	**+0.3**
MKAR	**Makanchi Array**	**13.97**	**26**	Pn	**Pn**	**22 56 28.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=207,slow=13,SNR=7.2						
TAPN	**Taplejung**	**14.31**	**116**	eP	**Pn**	**22 56 32.1**	**-2.1**
	comp=Z,9.3nm,0.2s						
ODAN	**Odare**	**14.36**	**119**	eP	**Pn**	**22 56 33.3**	**-1.5**
	comp=Z,10nm,0.4s						
KURK	**Kurchatov**	**16.59**	**12**	Pn	**Pn**	**22 56 59.3**	**-4.5**
	comp=Z,0.4nm,0.3s,baz=200,slow=10,SNR=2.1						
KURK	**Kurchatov**	**16.59**	**12**	eP	**Pn**	**22 57 05.0**	**+1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**16.59**	**12**	ePn	**Pn**	**22 57 05.0**	**+1.2**
	comp=Z,3.1nm,0.8s						
BVAR	**Borovoye Array**	**18.55**	**354**	P	**Pn**	**22 57 26.2**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=161,slow=9.6,SNR=29						
BVAR	**Borovoye Array**	**18.55**	**354**	P	**Pn**	**22 57 26.2**	**-1.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.59**	**354**	eP	**Pn**	**22 57 28.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**18.59**	**354**	eP	**Pn**	**22 57 28.4**	**-0.2**
	comp=Z,3.7nm,0.6s						
AKTK	**Aktyubinsk**	**19.37**	**329**	P	**Pn**	**22 57 36.7**	**-1.3**
AKTO	**Aktyubinsk**	**19.37**	**329**	P	**Pn**	**22 57 36.7**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=134,slow=11,SNR=25						
AKTO	**Aktyubinsk**	**19.37**	**329**	P	**Pn**	**22 57 36.7**	**-1.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAA0	**Zalesovo Array**	**21.00**	**19**	eP	**P**	**22 57 53.4**	**-1.0**
ZALV	**Zalesovo Beam**	**21.00**	**19**	P	**P**	**22 57 53.7**	**-0.7**
	comp=Z,13nm,0.5s,baz=214,slow=11,SNR=69						
ZALV	**Zalesovo Beam**	**21.00**	**19**	P	**P**	**22 57 53.7**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,13nm,0.5s						
ZALV	**Zalesovo Beam**	**21.00**	**19**	P	**P**	**22 57 53.7**	**-0.7**
NVS	**Novosibirsk**	**21.41**	**16**	eP	**P**	**22 57 57.3**	**-1.5**
GTA	**Gaotai**	**21.70**	**69**	eP	**P**	**22 58 03.8**	**+1.8**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.8						
CMAR	**Chiang Mai Arr**	**27.90**	**119**	P	**P**	**22 59 02.6**	**+1.5**
	comp=Z,0.6nm,0.3s,mb3.6,baz=301,slow=9.0,SNR=3.7						
CMAR	**Chiang Mai Arr**	**27.90**	**119**	P	**P**	**22 59 02.7**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**27.98**	**52**	P	**P**	**22 59 02.6**	**+1.1**
	comp=Z,0.2nm,0.3s,mb3.2,baz=251,slow=9.2,SNR=4.0						
ULN	**Ulaanbaatar**	**28.41**	**52**	P	**P**	**22 59 05.2**	**-0.2**
PSZ	**Piszkesteto**	**41.49**	**305**	eP	**P**	**23 00 57.9**	**+0.1**
PSZ				pmax	pmax		

comp=Z,2.0nm,0.8s,mb3.8
PSZ Piszkesteto 41.49 305 *e*P **P** 23 00 57.9 **0.0**
comp=Z,2.2nm,0.8s,mb3.8
ARCES ARCESS Array B 43.62 338 P **P** 23 01 14.8 **-0.1**
comp=Z,1.9nm,0.7s,mb4.0,baz=114,slow=6.6,SNR=7.9
ARCES **ARCESS Array B 43.62 338** P **P** 23 01 14.8 **0.0**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 47.03 324 P **P** 23 01 41.2 **-0.8**
comp=Z,0.3nm,0.4s,mb3.5,baz=110,slow=6.5,SNR=2.9
MJAR Matsushiro Arr 51.94 68 P **P** 23 02 20.2 **+0.5**
comp=Z,0.8nm,0.3s,mb4.1,baz=304,slow=4.6,SNR=4.2
MJAR Matsushiro Arr 51.94 68 P **P** 23 02 20.3 **+0.6**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
TORD Torodi Ar. Bea 67.57 271 P **P** 23 04 06.6 **-1.0**
comp=Z,0.5nm,0.5s,mb3.8,baz=43,slow=5.8,SNR=7.7
INK Inuvik 75.48 10 P **P** 23 04 54.5 **+0.1**
comp=Z,1.6nm,1.1s,mb3.9,baz=25,slow=5.5,SNR=3.7
INK Inuvik 75.48 10 P **P** 23 04 54.5 **+0.1**
INK pmax pmax
comp=Z,2.0nm,1.1s
WRA Warramunga Arr 79.39 123 P **P** 23 05 17.6 **+0.6**
comp=Z,0.8nm,0.5s,mb3.9,baz=326,slow=5.6,SNR=24
WRA Warramunga Arr 79.39 123 P **P** 23 05 17.6 **+0.6**
WRA pmax pmax
comp=Z,1.0nm,0.5s
WRAB Tennant Creek 79.39 123 *e*P **P** 23 05 15.7 **-1.3**
WRAB pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
WRAB Tennant Creek 79.39 123 *e*P **P** 23 05 15.7 **-1.3**
comp=Z,1.1nm,0.4s,mb4.1
ASAR Alice Springs 81.63 126 P **P** 23 05 29.6 **+0.7**
comp=Z,0.8nm,0.7s,mb3.8,baz=310,slow=6.3,SNR=9.3
ASAR Alice Springs 81.63 126 P **P** 23 05 29.6 **+0.7**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 83.05 4 P **P** 23 05 35.8 **-0.1**
comp=Z,0.4nm,0.7s,mb3.5,baz=344,slow=5.3,SNR=7.1
YKA Yellowknife Ar 83.05 4 P **P** 23 05 35.8 **-0.1**

ISCJB ***18*** *22:58:25.2±0.3, 2322N±002×12149E±002, h19km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=27.0*
TAP ***18*** *22:58:25.9, 2326N×12136E, h18km, ML3.6, C*
NEIC ***18*** *22:58:25.4±1.4, 2323N×12143E, h10km, Error ellipse: s-maj=16.9km s-min=7.8km az=115.0*
JMA ***18*** *22:58:27.2±0.3, 2305N×12163E, h69km, M2.9*
ISC 18 22:58:25.2±0.3, 2323N±001×12147E±002, h16km±2km, n59, σ0981/109, 6C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.16**	**215**	*e*P			**Pg**	**22 58 30.6**	**+1.2**
CHKT	baz=170			*i* S			**Sg**	**22 58 34.3**	**+2.2**
TWF1	**Yuli**	**0.20**	**308**	⇑*i*P			**Pg**	**22 58 30.1**	**+0.2**
TWF1	baz=320			*i* S			**Sg**	**22 58 33.5**	**+0.4**
YULB	**Yu-li**	**0.22**	**316**	*e*P			**Pg**	**22 58 30.1**	**-0.3**
YULB	baz=320			*e*S			**Sg**	**22 58 34.1**	**+0.3**
EHY	**Hungye**	**0.30**	**334**	⇑*i*P			**Pg**	**22 58 32.0**	**+0.2**
EHY	baz=339			*i* S			**Sg**	**22 58 36.4**	**+0.3**
ELDTW	**Lidau**	**0.41**	**264**	*i* P			**Pg**	**22 58 32.9**	**-0.7**
ELDTW	baz=256			*e*S			**Sg**	**22 58 37.9**	**-1.5**
TWG	**Pinlang**	**0.55**	**222**	*e*P			**Pg**	**22 58 35.4**	**-0.7**
TWG	baz=212			*e*S			**Sg**	**22 58 43.1**	**-0.3**
TWG	**Pinlang**	**0.55**	**222**	⇓*i*P			**Pg**	**22 58 35.6**	**-0.4**
TWG	baz=212			*e*S			**Sg**	**22 58 43.4**	**0.0**
TTN	**Taitung**	**0.56**	**212**	⇓P			**Pg**	**22 58 37.0**	**+0.8**
TTN	baz=203			*e*S			**Sg**	**22 58 46.6**	**+2.8**
ESL	**Shilin**	**0.58**	**357**	*e*P			**Pg**	**22 58 36.1**	**-0.6**
ESL	baz=356			*e*S			**Sg**	**22 58 44.5**	**-0.1**
SSLB	**Suanglung**	**0.73**	**320**	*e*P			**Pg**	**22 58 38.5**	**-1.0**
SSLB				*e*S			**Sg**	**22 58 47.1**	**-2.0**
HWA	**Hwalien**	**0.75**	**10**	*e*P			**Pg**	**22 58 40.5**	**+0.5**
TPUB	**Ta-pu**	**0.77**	**275**	*e*P			**Pb**	**22 58 40.0**	**-0.4**
TPUB				*e*S			**Sg**	**22 58 49.2**	**-1.3**
WTP	**Ta-pu**	**0.78**	**271**	⇑P			**Pb**	**22 58 40.1**	**-0.4**
WTP	baz=267			S			**Sb**	**22 58 50.6**	**-0.3**
ECL	**Taimali**	**0.79**	**217**	*e*P			**Pb**	**22 58 38.7**	**-1.8**
CHN5	**Tsauling**	**0.81**	**297**	⇑*i*P			**Pb**	**22 58 40.9**	**-0.1**
CHN5	baz=288			*i* S			**Sb**	**22 58 51.7**	**0.0**
CHN4	**Tsaushan**	**0.81**	**279**	P			**Pb**	**22 58 40.7**	**-0.3**
CHN4	baz=275			*e*S			**Sb**	**22 58 52.0**	**+0.3**
SMLT	**Sun Moon Lake**	**0.83**	**321**	P			**Pb**	**22 58 40.6**	**-0.7**
SMLT	baz=328			S			**Sb**	**22 58 51.1**	**-1.2**
TWD	**Chiawan**	**0.85**	**8**	P			**Pb**	**22 58 41.2**	**-0.5**
TWD	baz=4.0			*e*S			**Sb**	**22 58 53.3**	**+0.3**
CHN1	**Nanshi**	**0.86**	**267**	P			**Pb**	**22 58 41.8**	**-0.1**
CHN1	baz=263			*i* S			**Sb**	**22 58 53.9**	**+0.7**
TYC	**Yuchr**	**0.87**	**320**	⇑P			**Pb**	**22 58 41.4**	**-0.6**
TYC	baz=333			*e*S			**Sb**	**22 58 53.7**	**+0.1**
TWK	**Hsinying**	**0.90**	**272**	*e*P			**Pb**	**22 58 42.2**	**-0.3**
TWK	baz=268			*e*S			**Sb**	**22 58 54.8**	**+0.5**
SSD	**Sandimen**	**0.91**	**238**	*e*P			**Pb**	**22 58 41.5**	**-1.1**
SSD	baz=230			*e*S			**Sb**	**22 58 53.7**	**-0.8**
WHF	**Hehuan Shan**	**0.93**	**349**	*e*P			**Pb**	**22 58 42.4**	**-0.6**
WHF	baz=353			*e*S			**Sb**	**22 58 55.1**	**0.0**
NACB	**Ninganchiao**	**0.95**	**7**	*e*P			**Pb**	**22 58 43.9**	**+0.6**
NACB				*e*S			**Sb**	**22 58 57.6**	**+2.0**
WGK	**Gukeng**	**0.95**	**299**	*e*P			**Pb**	**22 58 43.0**	**-0.3**
WGK	baz=297			*e*S			**Sb**	**22 58 56.1**	**+0.5**
CHN2	**Minshiung**	**0.96**	**288**	*e*P			**Pb**	**22 58 43.1**	**-0.4**
CHN2	baz=286			*e*S			**Sb**	**22 58 56.3**	**+0.3**
WNT	**Mingjian**	**0.96**	**312**	*e*P			**Pb**	**22 58 43.7**	**+0.1**
WNT	baz=312			*e*S			**Sb**	**22 58 56.6**	**+0.5**
CHY	**Chiayi**	**0.99**	**286**	P			**Pb**	**22 58 44.3**	**+0.2**
CHY	baz=283			*e*S			**Sb**	**22 58 57.5**	**+0.5**
CHN3	**Shinhua**	**1.02**	**262**	*e*P			**Pb**	**22 58 45.7**	**+1.0**
CHN3	baz=266			*e*S			**Sb**	**22 59 00.3**	**+2.4**
SGLT	**Jiouru**	**1.03**	**241**	*e*P			**Pb**	**22 58 45.2**	**+0.5**
TWM1	**Shoushan**	**1.04**	**247**	*e*P			**Pb**	**22 58 45.8**	**+0.8**
TWT	**Tachien**	**1.05**	**345**	*e*P			**Pb**	**22 58 44.3**	**-0.8**
TWT	baz=347			*e*S			**Sb**	**22 58 58.7**	**0.0**
TAI1	**Yung-k'ang**	**1.16**	**261**	*e*P			**Pn**	**22 58 46.6**	**-0.1**
TAI1	baz=266			*e*S			**Sb**	**22 59 02.1**	**+0.5**
SCZT	**Fangliau**	**1.16**	**223**	*e*P			**Pn**	**22 58 46.2**	**-0.6**
TCU	**Taichung**	**1.17**	**322**	*e*P			**Pn**	**22 58 47.0**	**+0.1**
TCU	baz=321			*e*S			**Sb**	**22 59 01.6**	**-0.4**
SCLT	**Jiali**	**1.17**	**268**	*e*P			**Pn**	**22 58 46.4**	**-0.6**
SCLT	baz=263			*e*S			**Sb**	**22 59 03.4**	**+1.3**
LAY	**Lan-yu**	**1.19**	**176**	⇑P			**Pn**	**22 58 45.5**	**-1.7**
LAY	baz=164			*e*S			**Sb**	**22 59 00.8**	**-1.8**
NNS	**Nan Shan**	**1.21**	**356**	*e*P			**Pn**	**22 58 47.1**	**-0.4**
NNS	baz=12			*e*S			**Sb**	**22 59 02.7**	**-0.4**
WSF	**Szhu**	**1.21**	**290**	*e*P			**Pn**	**22 58 47.0**	**-0.6**
WSF	baz=287			*e*S			**Sb**	**22 59 03.4**	**+0.1**
ENA	**Nanau**	**1.22**	**12**	*e*P			**Pn**	**22 58 46.5**	**-1.1**
ENA	baz=3.0			*e*S			**Sb**	**22 59 03.6**	**+0.1**
TWQ1	**Liyutan**	**1.28**	**330**	*e*P			**Pn**	**22 58 49.1**	**+0.6**
TWQ1	baz=331			*e*S			**Sb**	**22 59 05.1**	**-0.1**
TWP	**Hsiaoliuchiu**	**1.35**	**229**	*e*P			**Pn**	**22 58 50.9**	**+1.5**
ENTT	**Nioudou**	**1.41**	**4**	*e*P			**Pn**	**22 58 50.0**	**-0.2**
TWC	**Suao**	**1.42**	**14**	*e*P			**Pn**	**22 58 50.3**	**-0.1**
TWC	baz=7.0			*e*S			**Sn**	**22 59 10.0**	**+1.3**
TWK1	**Hengchun**	**1.42**	**206**	*e*P			**Pn**	**22 58 50.3**	**-0.1**
TWK1	baz=196			*e*S			**Sn**	**22 59 09.7**	**+0.9**
YHNB	**Yeheng**	**1.44**	**357**	*e*Pn			**Pn**	**22 58 51.8**	**+1.2**
YHNB				*e*Sn			**Sn**	**22 59 10.4**	**+1.2**
NSK	**Sanguang**	**1.44**	**356**	*e*P			**Pn**	**22 58 50.7**	**0.0**
NSK	baz=14			*e*S			**Sn**	**22 59 08.9**	**-0.4**
NSTT	**Nanjuang**	**1.46**	**343**	*e*P			**Pn**	**22 58 50.6**	**-0.3**
TWE	**Neicheng**	**1.50**	**7**	*e*P			**Pn**	**22 58 51.4**	**-0.1**
TWE	baz=10.0			*e*S			**Sn**	**22 59 10.2**	**-0.4**
PNG	**Penghu**	**1.79**	**281**	*e*P			**Pn**	**22 58 55.0**	**-0.5**
PNG	baz=261			*e*S			**Sn**	**22 59 17.4**	**-0.4**
TWB1	**Santiao Chiao**	**1.83**	**15**	*e*P			**Pn**	**22 58 56.5**	**+0.4**
TWB1	baz=5.0			*e*S			**Sn**	**22 59 19.0**	**0.0**
NWF	**Wu-fen Shan**	**1.85**	**9**	*e*P			**Pn**	**22 58 56.8**	**+0.4**
NWF	baz=11			*e*S			**Sn**	**22 59 21.1**	**+1.6**
YOJ	**Yonaguni jima**	**1.87**	**49**	P			**Pn**	**22 58 58.0**	**+1.4**
YOJ				*e*S			**Sn**	**22 59 20.1**	**+0.1**
HATJ	**Hateruma jima**	**2.30**	**69**	P			**Pn**	**22 59 02.4**	**-0.1**
HATJ				*e*S			**Sn**	**22 59 29.5**	**-1.0**
IRIF	**Iriomote-Funau**	**2.35**	**62**	P			**Pn**	**22 59 03.7**	**+0.5**
IRIF				*e*S			**Sn**	**22 59 31.9**	**+0.2**
JKRS	**Kuro-shima**	**2.54**	**66**	P			**Pn**	**22 59 06.3**	**+0.5**
JKRS				*e*S			**Sn**	**22 59 35.9**	**-0.5**
JIJ	**Ishigaki jima**	**2.70**	**65**	P			**Pn**	**22 59 08.4**	**+0.4**
JIJ				*e*S			**Sn**	**22 59 39.0**	**-1.4**
KNM	**Kinmen**	**3.02**	**294**	*e*P			**Pn**	**22 59 12.0**	**-0.4**
JTJ	**Tarama**	**3.28**	**64**	P			**Pn**	**22 59 16.2**	**+0.2**
JTJ				*e*S			**Sn**	**22 59 55.0**	**+0.4**

DJA ***18*** *23:33:48, 1033S×16187E, h10km, mb4.8/7*
IDC ***18*** *23:33:49.4±0.8, 990S×16090E, h0km, mb4.4/13, mb1 4.6/14, mb1mx4.5/18, mbtmp4.4/14, ML4.4/1, MS3.8/10, Ms1 3.8/10, ms1mx3.5/26, Error ellipse: s-maj=29.5km s-min=16.9km az=111.0*
MOS ***18*** *23:33:53.1±0.9, 986S×16080E, h33km, mb4.7/9, Error ellipse: s-maj=11.5km s-min=10.3km az=87.8*
BJI ***18*** *23:33:53.9, 977S×16113E, h42km, mB5.0, mb4.8, Ms5.1, Msz4.7*
ISCJB ***18*** *23:33:55.5±1.2, 996S±006×16084E±007, h54km±10km, mb4.7/42, MS4.0/14, Error ellipse: s-maj=11.1km s-min=9.3km az=179.4*
NEIC ***18*** *23:33:56.1±1.2, 990S×16085E, h43km±11km, mb4.8/20, Error ellipse: s-maj=8.9km s-min=7.9km az=93.0*
ISC 18 23:33:56.8±1.0, 998S±004×16093E±006, h52km±8km, h52km±2.7km: pP-P, n96, σ1912/94, mb4.7/42, MS4.0/14, 4C, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.11**	**299**	*e*P			**Pn**	**23 34 14.1**	**-2.0**
HNR				*e*S			**Sn**	**23 34 31.8**	**+1.4**
DZM	**Mont Dzumac**	**13.13**	**157**	*e*P			**Pn**	**23 36 59.6**	**-1.0**
DZM	**Mont Dzumac**	**13.13**	**157**	*e*Pn			**Pn**	**23 37 00.0**	**-0.6**
DZM	42nm,1.4s					Sn	**Sn**	**23 39 23.6**	**-1.7**
PMG	**Port Moresby**	**13.59**	**271**	Pn			**Pn**	**23 37 09.1**	**+2.3**
PMG	0.6nm,0.3s,baz=90,slow=9.1,SNR=6.5								
PMG	**Port Moresby**	**13.59**	**271**	*e*Pn			**Pn**	**23 37 10.6**	**+3.7**
CTA	**Charters Tower**	**17.36**	**233**	*e*P			**Pn**	**23 37 55.0**	**-0.5**
CTA	21nm,0.7s **Charters Tower**	**17.36**	**233**	P			**Pn**	**23 37 55.1**	**-0.4**
CTA	0.9nm,0.3s,baz=59,slow=13,SNR=22 **Charters Tower**	**17.36**	**233**	*e*P			**Pn**	**23 37 55.0**	**-0.5**
CTA						pmax	pmax		
CTAO	comp=Z,21nm,0.7s **Charters Tower**	**17.36**	**233**	*e*P			**Pn**	**23 37 55.1**	**-0.4**
CTAO						pmax	pmax		
CTAO	comp=Z,34nm,0.8s **Charters Tower**	**17.36**	**233**	*e*P			**Pn**	**23 37 55.1**	**-0.3**
COEN	comp=Z,34nm,0.8s **Coen**	**17.81**	**255**	*e*P			**Pn**	**23 38 01.3**	**+0.2**
EIDS	comp=Z,14nm,0.8s **Eidsvold**	**17.93**	**210**	*e*P			**Pn**	**23 38 03.9**	**+1.4**
EIDS	**Eidsvold**	**17.93**	**210**	*e*Pn			**Pn**	**23 38 03.3**	**+0.8**
EIDS						Sn	**Sn**	**23 41 24.4**	**+2.7**
WRAB	**Tennant Creek**	**27.48**	**246**	*e*P			**P**	**23 39 36.2**	**-2.1**
WRAB	**Tennant Creek**	**27.48**	**246**	*e*P			**P**	**23 39 37.5**	**-0.8**
WB2	comp=Z,20nm,1.1s,mb4.6 **Warramunga Arr**	**27.48**	**246**	*e*P			**P**	**23 39 38.1**	**-0.2**
WRA	**Warramunga Arr**	**27.49**	**246**	P			**P**	**23 39 37.7**	**-0.7**
WRA	comp=Z,4.3nm,0.6s,mb4.2,baz=74,slow=9.3,SNR=50 **Warramunga Arr**	**27.49**	**246**	*i* P			**P**	**23 39 37.4**	**-1.0**
WRA						pmax	pmax		
RAO	comp=Z,4.0nm,0.6s **Raoul Island**	**27.56**	**137**	P			**P**	**23 39 41.4**	**+2.5**
STKA	**Stephens Creek**	**28.20**	**217**	P			**P**	**23 39 44.9**	**+0.3**
STKA	comp=Z,7.1nm,0.9s,mb4.3,baz=28,slow=11,SNR=12					LR	LR	23 49 57.3	
STKA	comp=Z,141nm,21.6s,MS3.5,baz=198,slow=34 **Stephens Creek**	**28.20**	**217**	*e*P			**P**	**23 39 48.2**	**+3.6**
STKA	comp=Z,3.7nm,0.6s,mb4.2					LR	LR	23 49 57.3	
GUMO	**Guam**	**28.33**	**325**	P			**P**	**23 39 45.1**	**-0.8**
ASAR	**Alice Springs**	**29.15**	**239**	P			**P**	**23 39 51.9**	**-1.3**
URZ	comp=Z,1.7nm,0.8s,mb3.9,baz=70,slow=8.8,SNR=16 **Urewera**	**31.68**	**155**	LR			LR	23 49 42.7	
FITZ	comp=Z,100nm,20.3s,MS3.5,baz=260,slow=30 **Fitzroy Crossi**	**35.12**	**253**	*e*P			**P**	**23 40 45.1**	**-0.5**
DAV	comp=Z,13nm,0.7s,mb5.0 **Davao City (W)**	**39.07**	**294**	P			**P**	**23 41 19.3**	**+0.1**
MBWA	**Marble Bar**	**41.09**	**249**	*e*P			**P**	**23 41 35.4**	**-0.5**
NWAO	comp=Z,29nm,1.4s,mb4.7 **Narrogin (SRO)**	**46.20**	**234**	P			**P**	**23 42 20.9**	**+4.2**
NWAO	comp=Z,6.1nm,0.8s,mb4.6,baz=73,slow=7.8,SNR=3.9 **Narrogin (SRO)**	**46.20**	**234**	*e*P			**P**	**23 42 17.2**	**+0.5**
NWAO	comp=Z,5.0nm,0.7s					pmax	pmax		
NWAO	**Narrogin (SRO)**	**46.20**	**234**	*e*P			**P**	**23 42 17.2**	**+0.5**
KKM	comp=Z,4.8nm,0.7s,mb4.5 **Kota Kinabalu**	**47.30**	**288**	*e*P			**P**	**23 42 25.6**	**0.0**
PPT	comp=Z,7.9nm,0.6s,mb4.8 **Papeete**	**48.55**	**105**	*e*LR			LR	23 56 20.0	
PPT	comp=Z,191nm,22.8s **Papeete**	**48.55**	**105**	LR			LR	23 58 27.4	
MJAR	comp=Z,214nm,20.2s,MS4.1,baz=296,slow=30 **Matsushiro Arr**	**50.98**	**336**	P			**P**	**23 42 50.6**	**-2.6**
MAJO	comp=Z,1.6nm,0.6s,mb4.2,baz=168,slow=9.2,SNR=4.0 **Matsushiro**	**50.98**	**336**	P			**P**	**23 42 52.4**	**-0.9**
NACB	**Ninganchiao**	**51.26**	**312**	*e*P			**P**	**23 42 56.3**	**+0.6**
YHNB	comp=Z,14nm,0.8s,mb5.0 **Yeheng**	**51.72**	**312**	*e*P			**P**	**23 42 58.1**	**-1.0**
KSRS	comp=Z,37nm,1.0s,mb5.3 **Korea Array**	**56.42**	**329**	P			**P**	**23 43 32.6**	**-0.4**
KSRS	comp=Z,1.9nm,0.7s,mb4.3,baz=136,slow=7.2,SNR=6.1					LR	LR	00 05 20.2	
NJ2	comp=Z,51nm,18.6s,MS3.6,baz=356,slow=34 **Nanjing**	**58.00**	**318**	*e*P			**P**	**23 43 47.5**	**+3.1**
NJ2						AMB	AMB		
MDJ	comp=Z,20nm,1.0s,mb5.1 **Mudanjiang**	**61.29**	**335**	P			**P**	**23 44 07.9**	**+1.1**
MDJ						AP	pP	23 44 21.5	+0.3
MDJ						XP	sP	23 44 27.9	+0.7
MDJ						PCP	PcP	23 44 49.6	+0.8
MDJ						PP	PP	23 46 23.6	+1.2
MDJ						SCP	ScP	23 48 47.3	+1.1
MDJ						PCS	PcS	23 48 53.3	+1.8
MDJ						S	**S**	**23 52 24.9**	**+1.7**
MDJ						SCS	ScS	23 53 55.0	+1.4
MDJ	comp=Z,9.0nm,1.5s,mb4.7					AMB	AMB		
MDJ	comp=Z,54nm,5.0s					AMB	AMB		
CN2	**Changchun**	**62.48**	**332**	⇑P			**P**	**23 44 14.8**	**0.0**
CN2	comp=Z,10.0nm,0.8s,mb5.0					AMB	AMB		
PETK	**Petropavlovsk-**	**62.90**	**358**	P			**P**	**23 44 17.6**	**+0.3**
PETK	comp=Z,6.9nm,0.9s,mb4.8,baz=150,slow=4.9,SNR=5.7					LR	LR	00 06 26.2	
PSI	comp=Z,69nm,21.6s,MS3.8,baz=325,slow=31 **Prapat**	**63.03**	**278**	LR			LR	00 12 21.4	
GYA	comp=Z,60nm,18.8s,MS3.8,baz=15,slow=37 **Guiyang**	**63.93**	**306**	P			**P**	**23 44 24.8**	**0.0**
GYA						AP	pP	23 44 39.5	+0.2
GYA						XP	sP	23 44 45.3	+0.1
GYA						PCP	PcP	23 45 00.4	+0.4
GYA						PP	PP	23 46 47.0	+1.0
GYA						SCP		23 48 56.6	
GYA						S	**S**	**23 52 54.8**	**-2.2**
GYA						XS	sS	23 53 20.4	-1.0
GYA						SS	SS	23 57 05.0	-1.6
GYA	comp=Z,10.0nm,1.0s,mb4.8					AMB	AMB		
GYA	comp=Z,90nm,4.8s					AMB	AMB		
GYA	comp=N,490nm,19.6s,MS4.9					LR	LR		
GYA	comp=E,480nm,18.2s,MS4.9					LR	LR		
GYA	comp=Z,450nm,15.0s,MS4.8					LR	LR		
KLR	**Kul'dur**	**64.30**	**339**	*e*P			**P**	**23 44 22.2**	**-4.4**
BJT	**Baijiatuao**	**64.73**	**323**	*e*P			**P**	**23 44 28.6**	**-1.1**
BJT	comp=Z,8.0nm,0.3s					pmax	pmax		
BJT	**Baijiatuao**	**64.73**	**323**	*e*P			**P**	**23 44 28.6**	**-1.1**
BJI	comp=Z,7.6nm,0.3s,mb5.2 **Beijing**	**64.74**	**323**	P			**P**	**23 44 30.6**	**+0.8**
BJI	comp=Z,9.0nm,0.6s,mb5.0					AMB	AMB		
XAN	**Xi'an**	**65.95**	**314**	P			**P**	**23 44 36.6**	**-1.1**
XAN						AP	pP	23 44 50.3	-2.0
XAN						XP	sP	23 44 56.9	-1.3
XAN						PP	PP	23 47 02.1	-1.5
XAN						S	S	23 53 21.0	-0.5
XAN						SS	SS	23 57 37.0	-0.7
XAN	comp=Z,9.0nm,0.9s,mb4.8					AMB	AMB		
XAN	comp=Z,68nm,4.9s					AMB	AMB		
XAN	comp=Z,53nm,20.9s,MS3.7					LR	LR		
KMI	**Kunming**	**66.55**	**303**	P			**P**	**23 44 43.5**	**+1.8**
KMI	comp=Z,5.0nm,0.6s,mb4.7					AMB	AMB		
CMAR	**Chiang Mai Arr**	**67.36**	**295**	P			**P**	**23 44 47.0**	**0.0**
CMAR	comp=Z,1.0nm,0.6s,mb4.0,baz=117,slow=4.5,SNR=6.5					LR	LR	00 11 12.4	
CHTO	comp=Z,39nm,18.1s,MS3.7,baz=308,slow=33 **Chiang Mai**	**67.48**	**295**	P			**P**	**23 44 47.9**	**+0.2**
VNDA	**Vanda**	**67.52**	**180**	P			**P**	**23 44 47.8**	**+0.8**
VNDA	comp=Z,1.9nm,0.9s,mb4.1,baz=315,slow=3.6,SNR=3.8					LR	LR	00 08 53.9	
HHC	comp=Z,36nm,20.5s,MS3.6,baz=252,slow=31 **Hu-ho-hao-te**	**68.01**	**322**	*e*P			**P**	**23 44 51.8**	**+1.1**
HHC						AP	pP	23 45 08.4	+3.1
HHC						PP	PP	23 47 24.0	+2.6
HHC						SCP		23 49 14.3	
HHC						*e*S	S	23 53 45.3	-0.8
HHC						SCS	ScS	23 54 40.9	-4.5
HHC						SS	SS	23 58 09.3	-0.1
HHC	comp=Z,9.0nm,0.9s,mb4.8					AMB	AMB		
HHC	comp=Z,89nm,4.6s					AMB	AMB		
HHC	comp=N,60nm,16.7s,MS4.2					LR	LR		
HHC	comp=E,126nm,21.4s,MS4.2					LR	LR		
HHC	comp=Z,113nm,15.5s					LR	LR		
CD2	**Chengdu**	**68.22**	**309**	P			**P**	**23 44 52.3**	**+0.1**
CD2						AP	pP	23 45 08.3	+1.4
CD2						XP	sP	23 45 13.5	+0.7
CD2						PP	PP	23 47 28.1	+4.6
CD2						S	S	23 53 50.8	+1.8
CD2						XS	sS	23 54 12.6	-1.1
CD2						SS	SS	23 58 15.5	+2.4
CD2	comp=Z,20nm,0.6s,mb5.3					AMB	AMB		
CD2	comp=Z,150nm,4.9s					AMB	AMB		
CD2	comp=N,270nm,5.1s					LR	LR		
CD2	comp=Z,200nm,5.4s					LR	LR		
HIA	**Hailar**	**69.18**	**333**	*e*P			**P**	**23 44 57.2**	**-0.5**
HIA	**Hailar**	**69.18**	**333**	*e*P			**P**	**23 44 57.9**	**+0.2**
LZH	**Lanzhou**	**70.57**	**314**	*e*P			**P**	**23 45 11.4**	**+4.8**
LZH						*e*S	S	23 54 18.0	+1.5
LZH						AMB	AMB		
LZH	comp=Z,18nm,1.2s,mb4.9					AMB	AMB		
LZH	comp=Z,90nm,5.1s					LR	LR		
LZH	comp=E,263nm,15.8s					LR	LR		
SEY	comp=Z,400nm,16.9s,MS4.7 **Seymchan**	**72.99**	**356**	⇑*e*P			**P**	**23 45 20.1**	**-0.5**
ULN	**Ulaanbaatar**	**74.71**	**326**	*e*P			**P**	**23 45 31.6**	**+0.7**
ULN	comp=Z,9.0nm,1.0s,mb4.7					pmax	pmax		
ULN	**Ulaanbaatar**	**74.71**	**326**	*e*P			**P**	**23 45 31.6**	**+0.7**
GTA	comp=Z,8.5nm,1.0s,mb4.6 **Gaotai**	**74.94**	**315**	*e*P			**P**	**23 45 32.0**	**-0.5**
GTA						AP	pP	23 45 45.8	-1.6
GTA						XP	sP	23 45 50.8	-2.4
GTA						AMB	AMB		
SONM	comp=Z,2.0nm,1.0s,mb4.0 **Songino Array**	**75.06**	**325**	P			**P**	**23 45 33.4**	**+0.4**
YAK	comp=Z,5.2nm,0.7s,mb4.6,baz=136,slow=5.2,SNR=42 **Yakutsk**	**75.81**	**345**	*e*P			**P**	**23 45 33.8**	**-3.1**
YAK	comp=N,5.0nm,1.3s					pmax	pmax		
YAK	comp=Z,16nm,0.9s,mb5.0					pmax	pmax		
YAK	**Yakutsk**	**75.81**	**345**	*e*P			**P**	**23 45 36.0**	**-0.9**
LSA	comp=Z,24nm,0.5s,mb5.4 **Lhasa**	**77.80**	**303**	*e*P			**P**	**23 45 49.4**	**+0.5**
LSA	comp=Z,1.0nm,0.4s,mb4.1					pmax	pmax		
LSA	**Lhasa**	**77.80**	**303**	*e*P			**P**	**23 45 49.4**	**+0.5**
BILL	comp=Z,1.1nm,0.4s,mb4.1 **Bilibino**	**77.92**	**2**	⇑*e*P			**P**	**23 45 49.0**	**+0.3**
BILL				*e*				23 45 55.0	
BILL	comp=Z,22nm,1.1s,mb5.0					pmax	pmax		
BILL	**Bilibino**	**77.92**	**2**	*e*P			**P**	**23 45 48.9**	**+0.2**

	comp=Z,19nm,1.1s,mb4.9						
ZAK	**Zakamensk**	**78.16**	**326**	*e*P	**P**	**23 45 50.0**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TLY	**Talaya**	**78.66**	**328**	*e*P	**P**	**23 45 53.3**	**+0.2**
TLY				*e*		23 46 00.4	
SVW2	**Sparrevohn**	**78.66**	**20**	*e*P	**P**	**23 45 54.5**	**+1.5**
PMR	**Palmer**	**81.26**	**22**	*e*P	**P**	**23 46 07.7**	**+0.7**
PMR				*e*		23 46 14.7	
PALK	**Pallekele**	**81.71**	**279**	*e*P	**P**	**23 46 10.4**	**0.0**
MCK	**McKinley**	**82.72**	**20**	*e*P	**P**	**23 46 14.5**	**-0.1**
MCK				*e*		23 46 20.8	
MCK				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
MCK	**McKinley**	**82.72**	**20**	*e*P	**P**	**23 46 14.5**	**-0.1**
	comp=Z,22nm,1.1s,mb5.1						
MCK				*e*PcP	PcP	23 46 20.8	+1.4
COLA	**College**	**83.82**	**20**	P	**P**	**23 46 19.0**	**-1.2**
HVS	**Khovu-Aksy**	**83.89**	**324**	*i* P	**P**	**23 46 20.2**	**-0.7**
MAW	**Mawson**	**83.91**	**202**	P	**P**	**23 46 20.7**	**-0.1**
	comp=Z,4.9nm,0.7s,mb4.8,baz=91,slow=7.4,SNR=10						
MAW				LR	LR	00 18 08.7	
	comp=Z,51nm,19.6s,MS3.9,baz=278,slow=32						
MAW	**Mawson**	**83.91**	**202**	*e*P	**P**	**23 46 20.4**	**-0.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MAW	**Mawson**	**83.91**	**202**	*e*P	**P**	**23 46 20.4**	**-0.4**
	comp=Z,3.8nm,1.2s,mb4.4						
TIXI	**Tiksi**	**84.20**	**350**	⇑*e*P	**P**	**23 46 21.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.4s,mb4.5						
WMQ	**Urumqi**	**85.02**	**316**	*e*P	**P**	**23 46 28.6**	**+1.8**
EGAK	**Eagle**	**86.07**	**21**	*e*P	**P**	**23 46 32.8**	**+1.3**
	comp=Z,13nm,1.0s,mb5.1						
DAWY	**Dawson**	**86.33**	**22**	*e*P	**P**	**23 46 34.4**	**+1.5**
NVAR	**Mina Array Bea**	**89.00**	**51**	P	**P**	**23 46 47.5**	**+1.2**
	comp=Z,1.6nm,0.8s,mb4.4,baz=233,slow=6.2,SNR=5.7						
MK31	**Makanchi Array**	**89.53**	**318**	*e*P	**P**	**23 46 48.2**	**-0.3**
MK31				*e*	pP	23 47 00.1	-3.6
ZALV	**Zalesovo Beam**	**89.95**	**325**	P	**P**	**23 46 48.2**	**-2.0**
	comp=Z,0.7nm,0.5s,mb4.2,baz=70,slow=8.5,SNR=4.1						
KURK	**Kurchatov**	**92.82**	**321**	*i* P	**P**	**23 47 01.1**	**-2.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,2.1s,mb4.7						
KURK	**Kurchatov**	**92.82**	**321**	*e*P	**P**	**23 47 02.1**	**-1.6**
HLID	**Hailey**	**92.96**	**46**	*e*P	**P**	**23 47 06.1**	**+1.6**
	comp=Z,68nm,2.7s,mb5.6						
EKS2	**Erkin-Say**	**94.60**	**312**	P	**P**	**23 47 11.0**	**-1.1**
YKA	**Yellowknife Ar**	**96.23**	**28**	P	**P**	**23 47 17.8**	**-1.2**
	comp=Z,0.9nm,0.7s,mb4.3,baz=257,slow=4.8,SNR=17						
TXAR	**Lajitas Array**	**99.50**	**62**	LR	LR	00 23 39.6	
	comp=Z,138nm,19.1s,MS4.5,baz=30,slow=30						
KEST	**Kesra**	**143.61**	**319**	PKP	PKPdf	23 53 25.2	-1.0
	comp=Z,1.8nm,1.0s,baz=309,slow=3.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	**159.41**	**281**	PKP	PKPdf	23 53 49.9	-0.6
	comp=Z,0.4nm,0.8s,baz=123,slow=1.4,SNR=2.7						
TORD				PKPab	PKPab	23 54 29.3	+0.9
	comp=Z,1.0nm,1.2s,baz=73,slow=4.5,SNR=2.9						

*IDC **18** 23:38:03.7±1.5, 0.28S×96.77E, h0km, mb4.0/7, mb1 4.2/9, mb1mx3.9/22, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=53.2km s-min=18.8km az=62.0*
*NEIC **18** 23:38:10.8±0.4, 0.19N×97.58E, h35km, mb4.3/4, Error ellipse: s-maj=14.4km s-min=8.0km az=49.0*
*DJA **18** 23:38:13, 0.04N×97.16E, h55km, MLv4.1/4*
*ISCJB **18** 23:38:14.1±1.5, 0.09N±0.09×97.3E±0.1, h85km±11km, mb4.0/10, Error ellipse: s-maj=21.2km s-min=7.8km az=141.3*

ISC 18 23:38:12.9±1.7**, 0.03S**±0.09×**97.2E**±0.1**, h59**km±14km**, n38, σ1s28**/37**, mb4.1**/10**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.38**	**16**	P	**Pn**	**23 38 34.8**	**-1.2**
GSI				S	**Sn**	**23 38 54.7**	**+1.4**
PPI	**Padang Panjang**	**3.24**	**97**	P	**Pn**	**23 39 02.0**	**+0.7**
PPI				S	**Sn**	**23 39 40.2**	**+1.6**
PSI	**Prapat**	**3.31**	**32**	Pn	**Pn**	**23 39 01.6**	**-0.7**
	1.3nm,0.3s,baz=45,slow=17,SNR=6.4						
PDSI	**Padang**	**3.39**	**105**	P	**Pn**	**23 39 02.2**	**-1.1**
BSI	**Banda Aceh**	**5.81**	**341**	P	**Pn**	**23 39 33.9**	**-2.6**
IPM	**Ipoh**	**5.90**	**40**	P	**Pn**	**23 39 39.5**	**+1.8**
	32nm,0.8s,0.1nm						
KSI	**Kapahiang**	**6.49**	**124**	P	**Pn**	**23 39 51.1**	**+5.3**
PALK	**Pallekele**	**17.97**	**294**	P	Px	23 42 21.9	
CMAR	**Chiang Mai Arr**	**18.45**	**5**	P	**Pn**	**23 42 24.6**	**0.0**
	0.6nm,0.3s,baz=195,slow=12,SNR=18						
CHTO	**Chiang Mai**	**18.81**	**5**	P	**Pn**	**23 42 25.0**	**-3.8**
KKM	**Kota Kinabalu**	**19.93**	**72**	*e*P	**Pn**	**23 42 41.3**	**-0.9**
	20nm,0.9s						
LSA	**Lhasa**	**30.12**	**349**	P	**P**	**23 44 16.9**	**-0.2**
YHNB	**Yeheng**	**33.93**	**42**	P	**P**	**23 44 46.4**	**-4.3**
WRA	**Warramunga Arr**	**41.41**	**121**	P	**P**	**23 45 53.2**	**-0.6**
	0.5nm,0.8s,mb3.2,baz=306,slow=8.9,SNR=4.0						
WRAB	**Tennant Creek**	**41.41**	**121**	P	**P**	**23 45 52.6**	**-1.3**
WB2	**Warramunga Arr**	**41.42**	**121**	*e*P	**P**	**23 45 47.4**	**-6.5**
ASAR	**Alice Springs**	**42.67**	**126**	P	**P**	**23 46 04.3**	**+0.2**
	0.7nm,0.6s,mb3.5,baz=298,slow=7.4,SNR=6.3						
KBL	**Kabul**	**43.32**	**325**	P	**P**	**23 46 10.1**	**+1.0**
UCH	**Uchtor**	**46.77**	**337**	*e*P	**P**	**23 46 38.8**	**+2.4**
	2.0nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**46.95**	**338**	*e*P	**P**	**23 46 38.0**	**+0.2**
	1.9nm,0.8s,mb4.1						
AAK	**Ala-Archa**	**47.12**	**337**	*e*P	**P**	**23 46 39.6**	**+0.5**
	8.3nm,2.0s,mb4.3						
SONM	**Songino Array**	**48.34**	**8**	P	**P**	**23 46 49.8**	**+1.2**
	1.3nm,0.9s,mb4.0,baz=183,slow=9.7,SNR=2.7						
MKAR	**Makanchi Array**	**48.43**	**346**	P	**P**	**23 46 48.2**	**-1.0**
	2.4nm,0.6s,mb4.4,baz=164,slow=9.0,SNR=29						
MKAR	**Makanchi Array**	**48.43**	**346**	P	**P**	**23 46 48.2**	**-1.0**
GUMO	**Guam**	**49.12**	**72**	P	**P**	**23 46 52.0**	**-3.1**
STKA	**Stephens Creek**	**52.55**	**131**	P	**P**	**23 47 21.2**	**+0.6**
	1.4nm,0.6s,mb4.0,baz=311,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**52.55**	**131**	P	**P**	**23 47 19.3**	**-1.3**
MDJ	**Mudanjiang**	**52.94**	**29**	P	**P**	**23 47 20.9**	**-2.4**
ZAA0	**Zalesovo Array**	**54.76**	**351**	*e*P	**P**	**23 47 36.5**	**+0.2**
ZALV	**Zalesovo Beam**	**54.76**	**351**	P	**P**	**23 47 36.6**	**+0.2**
	5.2nm,0.7s,mb4.7,baz=182,slow=6.1,SNR=17						
BRVK	**Borovoye**	**57.47**	**341**	P	**P**	**23 47 54.0**	**-1.6**
KIV	**Kislovodsk**	**65.23**	**320**	*e*P	**P**	**23 48 49.9**	**+1.5**
MALT	**Malatya**	**65.94**	**313**	P	**P**	**23 48 54.0**	**+1.0**
MAW	**Mawson**	**71.52**	**193**	P	**P**	**23 49 29.2**	**+2.1**
ARCES	**ARCESS Array B**	**83.68**	**340**	P	**P**	**23 50 34.4**	**-0.5**
	3.7nm,0.9s,mb4.5,baz=17,slow=1.3,SNR=4.4						
ARCES	**ARCESS Array B**	**83.68**	**340**	P	**P**	**23 50 34.4**	**-0.5**
TXAR	**Lajitas Array**	**144.71**	**33**	PKPbc	PKPdf	23 57 42.7	-1.1
	1.1nm,0.8s,baz=293,slow=1.4,SNR=14						
TXAR	**Lajitas Array**	**144.71**	**33**	PKPbc	PKPdf	23 57 42.7	-1.1

NEIC 18 23:55:42.4±0.6**, 33.33S**×**179.48W, h346**km±10km**, mb4.2**/6**, Error ellipse: s-maj=13.8km s-min=7.7km az=136.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.60**	**202**	P	Pn	23 56 56.9	-0.4
PUZ	**Puketiti**	**5.08**	**201**	P	Pn	23 57 02.7	+0.1
PUZ				S	S	23 58 02.2	-5.3
MWZ	**Matawai**	**5.56**	**205**	P	Pn	23 57 07.8	-0.1
MWZ				S	S	23 58 12.3	-4.9
URZ	**Urewera**	**5.65**	**208**	P	Pn	23 57 09.1	+0.2
KNZ	**Kokohu**	**6.13**	**201**	P	Pn	23 57 14.1	-0.3
BKZ	**Black Stump Fm**	**6.67**	**208**	P	Pn	23 57 20.9	+0.2
NGZ	**Ngauruhoe**	**7.06**	**213**	P	Pn	23 57 26.8	+1.6
MOVZ	**Moawhango**	**7.18**	**211**	P	Pn	23 57 26.7	0.0
WNVZ	**Wahianoa**	**7.19**	**212**	P	Pn	23 57 27.1	+0.4
TSZ	**Takapari Road**	**7.65**	**207**	P	Pn	23 57 32.5	+0.3
WAZ	**Wanganui**	**7.81**	**213**	P	Pn	23 57 34.9	+0.9
BFZ	**Birch Farm**	**8.10**	**204**	P	Pn	23 57 38.1	+0.7
MRZ	**Mangatainoka R**	**8.32**	**207**	P	Pn	23 57 39.7	-0.4
KIW	**Kapiti Island**	**8.75**	**209**	P	Pn	23 57 44.9	-0.4
MTW	**Mount Morrison**	**8.78**	**206**	P	Pn	23 57 45.8	+0.2
CAW	**Cannon Point**	**8.90**	**208**	P	Pn	23 57 46.4	-0.6
PAWZ	**Paruwai Farm**	**9.00**	**205**	P	Pn	23 57 48.7	+0.5
MSWZ	**Moikau Station**	**9.10**	**206**	P	Pn	23 57 49.8	+0.4
MRW	**Makara Radio**	**9.15**	**209**	P	Pn	23 57 49.8	-0.2
SNZO	**South Karori**	**9.21**	**208**	P	Pn	23 57 50.3	-0.5
TCW	**Tory Channel**	**9.31**	**210**	P	Pn	23 57 51.5	-0.4
NNZ	**Nelson**	**9.71**	**214**	P	Pn	23 57 55.8	-0.9
QRZ	**Quartz Range**	**9.83**	**218**	P	Pn	23 57 57.5	-0.7
BSWZ	**Blackbirch Sta**	**9.89**	**210**	P	Pn	23 57 58.9	0.0
THZ	**Tophouse**	**10.36**	**213**	P	Pn	23 58 04.6	+0.1
KHZ	**Kahutara**	**10.62**	**209**	P	Pn	23 58 07.8	+0.3
MQZ	**McQueen's Vall**	**12.05**	**208**	P	Pn	23 58 25.3	+0.7
AFI	**Afiamalu**	**20.56**	**22**	P	P	23 59 55.7	-0.1
RAR	**Rarotonga**	**21.23**	**60**	*e*P	P	00 00 02.0	+0.1
	35nm,0.9s						
EIDS	**Eidsvold**	**26.79**	**279**	*e*P	P	00 00 52.8	+0.8
	1.5nm,0.6s						
TAU	**Tasmania Unive**	**27.66**	**240**	*e*P	P	00 00 59.2	-0.3
	10nm,0.9s						
HNR	**Honiara**	**30.41**	**317**	*e*P	P	00 01 24.1	+0.2
	25nm,0.5s						
STKA	**Stephens Creek**	**32.70**	**262**	*e*P	P	00 01 43.0	-0.6
	2.8nm,2.0s						
PMG	**Port Moresby**	**38.85**	**300**	P	P	00 02 35.4	-0.1
WB2	**Warramunga Arr**	**43.04**	**276**	*e*P	P	00 03 16.3	+7.0
WRAB	**Tennant Creek**	**43.04**	**276**	*e*P	P	00 03 16.3	+7.0
	1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.17**	**273**	P	P	00 04 20.2	+8.7

*NIED **19** 00:02:00, 36.50N×141.10E, h38km, Mw3.5 Best double couple: Mo2.20000×10^14 NP1:φs16.00000°, δ79.00000°, λ95.00000°. NP2:φs171.00000°, δ12.00000°, λ65.00000°.*
*JMA **19** 00:02:25.5±0.1, 36.46N×141.08E, h46km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs203.00000°, δ11.00000°, λ90.00000°. NP2:φs23.00000°, δ79.00000°, λ90.00000°. Principal axes: T Plg56.0000°, Azm293.0000°; N Plg0.0000°, Azm23.0000°; P Plg34.0000°, Azm113.0000°;*
JMA Felt II J1.

ISC 19 00:02:24.9±1.9**, 36.46N**±0.07×**141.1E**±0.1**, h28**km±7km**, n10, σ0s56**/16**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.48**	**289**	⇓P	**Pb**	**00 02 35.6**	**+0.6**
JHO				S	**Sb**	**00 02 42.6**	**+0.8**
ONAJ	**Iwakimizuishiy**	**0.70**	**337**	⇓P	**Pb**	**00 02 38.5**	**-0.1**
ONAJ				S	**Sb**	**00 02 47.5**	**-0.4**
JYT	**Yasato**	**0.80**	**254**	⇓P	**Pb**	**00 02 39.8**	**-0.4**
JYT				S	**Sb**	**00 02 49.4**	**-1.2**
JFK	**Kawauchi**	**0.93**	**347**	⇓P	**Pn**	**00 02 41.5**	**-0.6**
JFT	**Otama**	**1.24**	**329**	P	**Pn**	**00 02 46.9**	**+0.5**
JFT				S	**Sn**	**00 03 02.3**	**+0.2**
JAG	**Ashikaga**	**1.36**	**269**	P	**Pn**	**00 02 47.8**	**-0.2**
JMM	**Marumori**	**1.43**	**349**	P	**Pn**	**00 02 48.9**	**-0.1**
JMM				S	**Sn**	**00 03 06.3**	**-0.6**
JFY	**Yanaizu**	**1.49**	**310**	P	**Pn**	**00 02 50.3**	**+0.5**
JKT	**Katashina**	**1.55**	**282**	⇓P	**Pn**	**00 02 51.2**	**+0.6**
MAT	**Matsushiro**	**2.36**	**273**	P	**Pn**	**00 03 02.6**	**+0.8**
MAT				*e*S	**Sn**	**00 03 29.5**	**-0.4**

GUC 19 00:07:15.2±0.9**, 23.00S**×**70.20W, h47**km±2km**, MD3.5, ML2.5, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.39**	**180**	⇓*i*P	Pn	00 07 27.9	+2.9
CEN1				*i* S	Sn	00 07 37.0	+5.1
CEN1				AML	AML	00 07 37.8	
	comp=N,145nm,0.4s						
PECH	**Pedro de Valdi**	**0.63**	**50**	*e*P	Pn	00 07 28.5	+0.6
PECH				*i* S	Sn	00 07 38.3	+1.3
PECH				AML	AML	00 07 39.0	
	comp=E,774nm,0.2s						
ANCH	**Antofagasta**	**0.71**	**196**	*e*P	Pn	00 07 28.4	-0.6
ANCH				*i* S	Sn	00 07 39.8	+0.9
ANCH				AML	AML	00 07 41.9	
	comp=N,340nm,0.1s						
TOCH	**Tocopilla**	**0.90**	**360**	*e*P	Pn	00 07 32.0	+0.4
TOCH				*i* S	Sn	00 07 44.6	+1.1
TOCH				AML	AML	00 07 46.8	
	comp=N,326nm,0.1s						
PB04	**Plate Boundary**	**0.98**	**42**	⇓*i*P	Pn	00 07 29.1	-3.5
PB04				*i* S	Sn	00 07 39.1	-6.3
PB04				AML	AML	00 07 40.4	
	comp=N,299nm,0.5s						
LVC	**Limon Verde**	**1.25**	**72**	⇑*e*P	Pn	00 07 37.5	+1.3
LVC				*i* S	Sn	00 07 54.3	+2.4
PB01	**Plate Boundary**	**2.06**	**19**	*e*P	Pn	00 07 45.7	-1.6

GUC 19 00:23:24.7±0.8**, 23.01S**×**70.17W, h46**km±2km**, MD3.7, ML3.0, 1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.27**	**250**	*e*P	Pn	00 23 32.9	-0.2
MECH				*i* S	Sn	00 23 39.7	+0.7
CEN1	**Los Morros**	**0.38**	**184**	*e*P	Pn	00 23 36.5	+2.2
CEN1				*i* S	Sn	00 23 46.0	+5.0
PECH	**Pedro de Valdi**	**0.62**	**48**	*e*P	Pn	00 23 37.9	+0.7
PECH				*i* S	Sn	00 23 47.5	+1.4
PECH				AML	AML	00 23 48.1	
	comp=E,4μm,0.1s						
ANCH	**Antofagasta**	**0.70**	**198**	*e*P	Pn	00 23 38.3	0.0
ANCH				*i* S	Sn	00 23 47.3	-0.9
MACH	**Maria Elena**	**0.90**	**25**	*e*P	Pn	00 23 41.6	+0.7
MACH				*i* S	Sn	00 23 54.2	+1.4
TOCH	**Tocopilla**	**0.91**	**358**	⇓*i*P	Pn	00 23 41.4	+0.3
TOCH				*i* S	Sn	00 23 54.5	+1.3
TOCH				AML	AML	00 23 56.6	
	comp=E,590nm,0.1s						
PB04	**Plate Boundary**	**0.98**	**41**	*e*P	Pn	00 23 38.3	-3.7
PB04				*i* S	Sn	00 23 48.4	-6.3
PB04				AML	AML	00 23 49.9	
	comp=N,444nm,0.1s						
LVC	**Limon Verde**	**1.23**	**71**	*e*P	Pn	00 23 47.0	+1.5
LVC				*i* S	Sn	00 24 03.6	+2.7
PB01	**Plate Boundary**	**2.06**	**18**	*e*P	Pn	00 23 58.2	+1.3
PB01				*e*S	Sn	00 24 23.2	+1.9
PB01				AML	AML	00 24 30.5	
	comp=N,106nm,0.2s						

*IDC **19** 00:44:01.6±3.6, 43.68N×126.69W, h0km, mb3.0/2, mb1 3.6/6, mb1mx3.4/24, mbtmp3.2/6, ML3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.8/11, Error ellipse: s-maj=53.5km s-min=22.4km az=63.0*
*NEIC **19** 00:44:04.5±1.8, 43.55N×126.73W, h10km, ML3.2, Error ellipse: s-maj=21.5km s-min=5.2km az=79.0*

ISC 19 00:44:02.0±0.9**, 43.50N**±0.04×**127.02W**±0.09**, h10**km**, n83, σ0s79**/89**, 18C-15D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I02A	**Mapleton**	**2.36**	**77**	⇓P	**Pn**	**00 44 39.0**	**-1.8**
	baz=3.0						
RNO	**Roman Nose**	**2.41**	**79**	P	**Pn**	**00 44 39.9**	**-1.5**
H02A	**Toledo**	**2.47**	**61**	⇓P	**Pn**	**00 44 40.9**	**-1.4**
	baz=3.1						
H02A				⇓S	**Sn**	**00 45 12.9**	**+0.4**
	baz=3.1						
I03A	**Eugene**	**2.75**	**79**	⇑P	**Pn**	**00 44 44.8**	**-1.3**
	baz=3.4						
I03A				⇑S	**Sn**	**00 45 19.3**	**-0.1**
	baz=3.4						
HSO	**Harness Mounta**	**2.86**	**88**	P	**Pn**	**00 44 46.0**	**-1.6**
HEBO	**Mount Hebo**	**2.90**	**53**	*e*Pn	**Pn**	**00 44 47.4**	**-0.8**
H03A	**Soap Creek Ran**	**2.93**	**65**	⇑P	**Pn**	**00 44 47.3**	**-1.3**
	baz=3.6						
HUMO	**Hull Mountain**	**3.11**	**105**	*e*Pn	**Pn**	**00 44 49.8**	**-1.3**
HUMO				*e*Sn	**Sn**	**00 45 25.5**	**-2.7**
BBOR	**Butler Butte**	**3.23**	**99**	P	**Pn**	**00 44 51.7**	**-1.1**
G03A	**Yamhill**	**3.23**	**55**	⇓P	**Pn**	**00 44 51.9**	**-0.9**
	baz=3.9						
KMOR	**Kings Mountain**	**3.30**	**49**	P	**Pn**	**00 44 52.7**	**-1.0**
F03A	**Seaside**	**3.46**	**44**	⇑P	**Pn**	**00 44 55.1**	**-0.8**
	baz=4.1						
F03A				⇑S	**Sn**	**00 45 37.2**	**+0.3**
	baz=4.1						
IRO	**Indian Ridge**	**3.49**	**80**	P	**Pn**	**00 44 55.9**	**-0.4**
SSOR	**Sweet Springs**	**3.55**	**66**	P	**Pn**	**00 44 57.4**	**+0.3**
NLO	**Nicolai Mounta**	**3.62**	**43**	P	**Pn**	**00 44 57.8**	**-0.3**
FRIS	**Frissel Point**	**3.63**	**77**	P	**Pn**	**00 44 58.2**	**0.0**
YBH	**Yreka Blue Hor**	**3.64**	**118**	Pn	**Pn**	**00 44 57.8**	**-0.5**
	1.3nm,0.3s,baz=300,slow=11,SNR=17						
YBH				Sn	**Sn**	**00 45 42.0**	**+0.7**
	0.5nm,0.3s,baz=88,slow=16,SNR=4.0						
G04A	**Mulino**	**3.67**	**61**	⇓P	**Pn**	**00 44 58.7**	**-0.1**
	baz=4.3,SNR=21						
H04A	**Detroit Lake**	**3.67**	**70**	⇑P	**Pn**	**00 44 58.6**	**-0.2**
	baz=4.3,SNR=108						
WIFE	**Three Sisters-**	**3.81**	**80**	P	**Pn**	**00 45 00.7**	**0.0**
BKCOR	**Black Crater**	**3.93**	**76**	P	**Pn**	**00 45 02.5**	**+0.1**
BMW	**Boistfort Moun**	**4.01**	**41**	P	**Pn**	**00 45 02.5**	**-1.0**
RVW	**Rose Valley**	**4.03**	**47**	P	**Pn**	**00 45 03.5**	**-0.2**
F04A	**Amboy**	**4.08**	**52**	⇓P	**Pn**	**00 45 04.4**	**0.0**
	baz=4.7						
TDH	**Tom, Dick, Har**	**4.15**	**63**	P	**Pn**	**00 45 05.8**	**+0.4**
LVP	**Lakeview Peak**	**4.16**	**50**	P	**Pn**	**00 45 05.8**	**+0.2**
MTMW	**Mount Mitchell**	**4.25**	**52**	P	**Pn**	**00 45 06.9**	**+0.1**
HOOD	**Mount Hood Mea**	**4.25**	**63**	*e*Pn	**Pn**	**00 45 06.3**	**-0.4**
HOOD				*e*Sn	**Sn**	**00 45 58.6**	**+2.2**
FL2	**Flat Top 2**	**4.27**	**49**	P	**Pn**	**00 45 07.4**	**+0.3**
D03A	**Wishkah Elem.**	**4.28**	**31**	⇑P	**Pn**	**00 45 06.6**	**-0.5**
	baz=4.9						
H05A	**Madras**	**4.33**	**73**	⇓P	**Pn**	**00 45 07.4**	**-0.4**
	baz=5.0,SNR=18						
SHW	**Mount Saint He**	**4.33**	**50**	P	**Pn**	**00 45 08.5**	**+0.6**
E04A	**Onalaska**	**4.34**	**43**	⇓P	**Pn**	**00 45 07.4**	**-0.6**
	baz=5.0						
ERK	**Elk Rock**	**4.35**	**48**	P	**Pn**	**00 45 08.0**	**0.0**
TDL	**Tradedollar La**	**4.44**	**48**	P	**Pn**	**00 45 09.6**	**+0.2**
KOSW	**Kosmos**	**4.52**	**47**	P	**Pn**	**00 45 11.0**	**+0.5**
LMW	**Ladd Mountain**	**4.61**	**45**	P	**Pn**	**00 45 11.8**	**+0.2**
F05A	**White Salmon**	**4.62**	**57**	⇑P	**Pn**	**00 45 12.0**	**+0.1**
	baz=5.3,SNR=10						
D04A	**Dobbs Creek Ra**	**4.67**	**38**	⇑P	**Pn**	**00 45 12.5**	**-0.1**
	baz=5.3						
VIPM	**Ingram Point**	**4.72**	**76**	P	**Pn**	**00 45 13.1**	**-0.2**
GHW	**Garrison Hill**	**4.87**	**42**	P	**Pn**	**00 45 15.2**	**-0.1**
G06A	**Carlson Farm,**	**4.89**	**67**	⇓P	**Pn**	**00 45 15.0**	**-0.6**
	baz=5.5,SNR=22						
GLK	**Glacier Lake**	**4.90**	**50**	P	**Pn**	**00 45 16.4**	**+0.7**
LON	**Longmire**	**4.91**	**47**	P	**Pn**	**00 45 16.3**	**+0.5**
REMR	**Mount Rainier-**	**4.94**	**46**	P	**Pn**	**00 45 16.8**	**+0.6**
H06A	**Lindquist Farm**	**4.97**	**73**	⇑P	**Pn**	**00 45 16.5**	**-0.1**
	baz=5.6,SNR=68						
F06A	**Goldendale**	**4.99**	**61**	⇑P	**Pn**	**00 45 16.9**	**0.0**
	baz=5.6,SNR=5.7						
HDW	**Hoodsport**	**4.99**	**32**	P	**Pn**	**00 45 16.2**	**-0.7**
RCS	**Mount Rainier-**	**5.03**	**46**	P	**Pn**	**00 45 18.0**	**+0.5**
GL2	**New Goldendale**	**5.05**	**59**	P	**Pn**	**00 45 18.1**	**+0.4**
FMW	**Mount Fremont**	**5.10**	**46**	P	**Pn**	**00 45 18.9**	**+0.5**
D05A	**Enumclaw**	**5.11**	**42**	⇑P	**Pn**	**00 45 19.2**	**+0.6**
	baz=5.7						
E06A	**Yakima**	**5.25**	**53**	⇑P	**Pn**	**00 45 20.9**	**+0.4**
	baz=5.9						
H07A	**Lands Inn, Kim**	**5.48**	**76**	⇓P	**Pn**	**00 45 23.7**	**0.0**
	baz=6.1,SNR=27						
G07A	**Ruggs Ranch, H**	**5.55**	**69**	⇑P	**Pn**	**00 45 24.6**	**0.0**
	baz=6.2,SNR=21						
C05A	**Tolt Reservoir**	**5.62**	**40**	⇑P	**Pn**	**00 45 25.6**	**+0.1**
	baz=6.2						
EBG	**Ellensburg**	**5.69**	**51**	P	**Pn**	**00 45 27.3**	**+0.8**
TBM	**Table Mountain**	**5.82**	**49**	P	**Pn**	**00 45 29.4**	**+1.0**
JCW	**Jim Creek**	**5.88**	**35**	P	**Pn**	**00 45 29.1**	**-0.1**
RSW	**Rattlesnake Hi**	**6.01**	**59**	*e*Pn	**Pn**	**00 45 31.5**	**+0.6**
G08A	**Pilot Rock**	**6.04**	**70**	⇓P	**Pn**	**00 45 31.2**	**-0.2**
	baz=6.7,SNR=18						
HAWA	**Hanford**	**6.05**	**59**	*e*Pn	**Pn**	**00 45 31.1**	**-0.3**
H08A	**Prairie City**	**6.10**	**78**	⇓P	**Pn**	**00 45 32.0**	**-0.3**
	baz=6.7,SNR=17						
WRW	**Wenatchee Ridg**	**6.12**	**42**	P	**Pn**	**00 45 32.7**	**+0.3**
ETW	**Entiat**	**6.23**	**47**	*e*Pn	**Pn**	**00 45 34.6**	**+0.7**
RPW	**Rockport**	**6.26**	**36**	*e*Pn	**Pn**	**00 45 34.3**	**0.0**
RPW				*e*Sn	**Sn**	**00 46 45.8**	**0.0**
C07A	**Waterville**	**6.43**	**47**	⇑P	**Pn**	**00 45 36.8**	**+0.2**
	baz=7.1						
A05A	**Maple Falls**	**6.47**	**30**	⇑P	**Pn**	**00 45 37.7**	**+0.4**
	baz=7.0						
H09A	**Durkee**	**6.83**	**77**	⇓P	**Pn**	**00 45 42.0**	**-0.3**
	baz=7.4						
G09A	**Cove**	**6.85**	**72**	⇓P	**Pn**	**00 45 42.1**	**-0.3**
	baz=7.5,SNR=7.1						
B07A	**Winthrop**	**6.90**	**42**	⇓P	**Pn**	**00 45 42.9**	**-0.3**
	baz=7.5						
OD2	**Odessa Site #2**	**7.02**	**53**	*e*Pn	**Pn**	**00 45 45.0**	**+0.3**
CMB	**Columbia Colle**	**7.42**	**135**	*e*Pn	**Pn**	**00 45 52.7**	**+2.3**
H11A	**Donnelly**	**8.01**	**78**	⇑P	**Pn**	**00 45 58.8**	**+0.4**
	baz=8.6,SNR=6.5						
NVAR	**Mina Array Bea**	**8.31**	**125**	Pn	**Pn**	**00 46 03.4**	**+0.8**
	baz=308,slow=13,SNR=2.1						
NEW	**Newport**	**8.38**	**52**	*e*Pn	**Pn**	**00 46 03.7**	**+0.2**
	3.6nm,0.4s						
ELK	**Elko**	**9.18**	**103**	Pn	**Pn**	**00 46 15.8**	**+1.4**
	0.1nm,0.3s,baz=135,slow=17,SNR=3.3						
DLMT	**Dillon**	**10.48**	**75**	*e*Pn	**Pn**	**00 46 34.1**	**+1.8**
WALA	**Waterton Lakes**	**10.63**	**54**	*e*Pn	**Pn**	**00 46 36.1**	**+1.8**
PDAR	**Pinedale Array**	**12.78**	**87**	Pn	**Pn**	**00 47 05.0**	**+1.4**
	0.0nm,0.3s,baz=277,slow=12,SNR=7.4						
YKA	**Yellowknife Ar**	**20.37**	**17**	P	**P**	**00 48 37.2**	**-1.2**
	0.8nm,0.6s,baz=203,slow=11,SNR=12						
TXAR	**Lajitas Array**	**23.41**	**119**	P	**P**	**00 49 12.7**	**+1.5**
	0.5nm,1.0s,baz=308,slow=8.7,SNR=2.2						
INK	**Inuvik**	**25.10**	**354**	LR	LR	00 58 24.0	
	comp=Z,77nm,18.1s,baz=358,slow=35						

GUC 19 00:55:09.6±1.1**, 23.03S**×**70.14W, h52**km±8km**, MD3.6, ML2.7, 1C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.30**	**255**	*e*P	Pn	00 55 18.5	-0.3
MECH				*i* S	Sn	00 55 25.8	+0.4
MECH				AML	AML	00 55 26.9	
	comp=E,433nm,0.3s						
CEN1	**Los Morros**	**0.37**	**189**	⇓*i*P	Pn	00 55 22.3	+2.8
CEN1				*i* S	Sn	00 55 31.5	+4.9
CEN1				AML	AML	00 55 31.8	
	comp=N,544nm,0.2s						
PECH	**Pedro de Valdi**	**0.60**	**45**	⇑*i*P	Pn	00 55 23.1	+0.9
PECH				*i* S	Sn	00 55 32.6	+1.3
PECH				AML	AML	00 55 33.6	
	comp=N,1μm,0.3s						
ANCH	**Antofagasta**	**0.70**	**201**	*e*P	Pn	00 55 24.7	+1.3
ANCH				*i* S	Sn	00 55 34.9	+1.5
MACH	**Maria Elena**	**0.90**	**23**	*e*P	Pn	00 55 26.7	+0.7
MACH				*i* S	Sn	00 55 39.1	+1.1
TOCH	**Tocopilla**	**0.93**	**356**	*e*P	Pn	00 55 26.7	+0.3
TOCH				*i* S	Sn	00 55 39.7	+0.9
TOCH				AML	AML	00 55 40.6	
	comp=E,899nm,0.2s						
PB04	**Plate Boundary**	**0.97**	**38**	*e*P	Pn	00 55 23.3	-3.6
PB04				*i* S	Sn	00 55 33.8	-5.8
PB04				AML	AML	00 55 35.4	
	comp=N,596nm,0.2s						
LVC	**Limon Verde**	**1.20**	**70**	*e*P	Pn	00 55 32.7	+2.6
LVC				*i* S	Sn	00 55 48.5	+3.2

*ISCJB **19** 01:09:02.4±1.0, 43.3S±0.1×39.4E±0.3, h10km, mb4.0/5, MS3.5/5, Error ellipse: s-maj=32.5km s-min=13.9km az=163.4*
*NEIC **19** 01:09:04.0±0.8, 43.42S×39.34E, h10km, mb4.2/3, Error ellipse: s-maj=39.0km s-min=17.1km az=58.0*
*IDC **19** 01:09:04.4±3.4, 43.52S×38.67E, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.7/17, mbtmp3.9/4, ML4.0/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=123.9km s-min=44.4km az=77.0*

ISC 19 01:09:04.3±1.0**, 43.3S**±0.1×**39.5E**±0.3**, h10**km**, n21, σ1s10**/12**, mb4.0**/5**, MS3.5**/5**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**18.59**	**317**	P	**Pn**	**01 13 19.8**	**-1.9**
	0.3nm,0.3s,baz=157,slow=11,SNR=7.3						
BOSA				LR	LR	01 18 54.5	
	comp=Z,193nm,18.3s,baz=152,slow=32						
LBTB	**Lobatse**	**21.50**	**324**	*e*P	**P**	**01 13 53.3**	**+0.1**
	5.2nm,0.7s,mb4.0						
MAW	**Mawson**	**27.39**	**161**	LR	LR	01 22 39.8	
	comp=Z,123nm,21.3s,MS3.5,baz=298,slow=30						
LSZ	**Lusaka**	**29.55**	**337**	LR	LR	01 25 02.9	
	comp=Z,154nm,19.2s,MS3.6,baz=14,slow=32						
LSZ	**Lusaka**	**29.55**	**337**	*e*P	**P**	**01 15 09.9**	**+0.8**
	2.8nm,0.8s,mb4.0						
TSUM	**Tsumeb**	**30.27**	**316**	LR	LR	01 27 31.3	
	comp=Z,74nm,18.5s,MS3.4,baz=88,slow=37						
VNA2	**Neumayer--Watz**	**35.96**	**204**	*e*	**P**	**01 16 05.4**	**+0.8**
	baz=48,slow=9.2						
VNA2				*e*		01 16 13.1	
VNA3	**Neumayer Olymp**	**36.77**	**204**	*e*	**P**	**01 16 12.0**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNA3				e		01 16 19.5	
VNDA	Vanda	54.42	167	LR	LR	01 39 04.5	
	comp=Z,52nm,19.2s,MS3.6,baz=290,slow=33						
DBIC	Dimbokro	63.90	309	P	P	01 19 37.5	+0.1
	1.7nm,0.6s,mb4.2,baz=126,slow=10,SNR=5.5						
DBIC				LR	LR	01 43 23.8	
	comp=Z,45nm,19.0s,MS3.7,baz=118,slow=32						
DBIC	Dimbokro	63.90	309	eP	P	01 19 37.8	+0.4
	3.9nm,0.8s,mb4.5						
DBIC				LR	LR	01 43 23.8	
TOA0	Torodi Ar. Sit	65.94	319	eP	P	01 19 51.9	+1.4
TORD	Torodi Ar. Bea	65.94	319	P	P	01 19 51.2	+0.6
	1.2nm,0.8s,mb4.0,baz=152,slow=6.3,SNR=6.5						
TORD	Torodi Ar. Bea	65.94	319	P	P	01 19 51.2	+0.6
STKA	Stephens Creek	76.78	121	eP	P	01 20 55.0	-1.1
CPUP	Villa Florida	77.07	246	P	P	01 20 55.8	-2.0
	0.3nm,0.4s,mb3.6,baz=129,slow=5.7,SNR=3.0						
WMOK	Wichita Mounta	146.74	269	ePKPbc	PKPbc	01 28 46.8	+0.6
TXAR	Lajitas Array	147.47	257	PKPbc	PKPbc	01 28 48.4	0.0
	1.9nm,0.8s,baz=134,slow=6.4,SNR=22						
TXAR	Lajitas Array	147.47	257	PKPbc	PKPbc	01 28 48.4	0.0
ULM	Lac du Bonnet	149.02	299	PKPbc	PKPbc	01 28 50.9	-0.9
	2.5nm,0.6s,baz=86,slow=1.4,SNR=3.6						
ULM	Lac du Bonnet	149.02	299	PKPbc	PKPbc	01 28 50.9	-0.9

*VIE **19** 01:18:43.6±0.7, 4354N×1806E, h10^{km}, mb2.8/3, ML1.9/3, Error ellipse: s-maj=14.1km s-min=5.1km az=44.0*
*CSEM **19** 01:18:43.3±0.2, 4342N×1745E, h5^{km}, ML3.3, Error ellipse: s-maj=6.8km s-min=2.7km az=45.0*
*BEO **19** 01:18:43.6, 4336N×1738E, h6^{km}, ML2.6/1*
*ISCJB **19** 01:18:44.5±0.3, 4340N±002×1753E±003, h10^{km}, Error ellipse: s-maj=4.4km s-min=2.0km az=135.5*
*NEIC **19** 01:18:45.0, 4337N×1756E, h0^{km}, ML2.7(PDG), ML3.3(ZAG), After PDG.*
*PDG **19** 01:18:45.0±0.3, 4337N×1756E, h0^{km}±11^{km}, ML2.7/10, Error ellipse: s-maj=1.3km s-min=1.9km az=0.0*
ISC 19 01:18:44.5±0.8, **4338N**±003×**1746E**±004, **h1**^{km}±6^{km}, **n28**, σ1^{s}**13**/54, **7C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.54	161	ePg	Pg	01 18 53.9	-1.0
STON				Sg	Sg	01 19 03.0	+1.2
BRY	Bratogost	0.93	121	⇓iPg	Pg	01 19 00.4	-1.9
BRY				eSg	Sg	01 19 14.5	+0.2
TREB	Trebinje	0.93	135	ePg	Pg	01 19 00.7	-1.7
TREB				eSg	Sg	01 19 15.3	+0.8
UPM	Unac-Piva	1.07	99	⇓iPg	Pg	01 19 03.1	-2.0
UPM				eSg	Sg	01 19 19.3	+0.3
HCY	Herceg Novi	1.21	140	⇓iPg	Pn	01 19 05.7	-2.8
HCY				eSg	Sg	01 19 24.5	+1.2
NKY	Niksic	1.26	116	⇓iPg	Pn	01 19 06.9	-2.4
NKY				eSg	Sg	01 19 25.9	+0.8
BLY	Banja Luka	1.38	352	ePg	Pn	01 19 09.1	-1.8
BLY				eSg	Sg	01 19 29.6	+0.8
PLE	Pljevlja	1.41	92	⇓iPg	Pn	01 19 09.7	-1.7
PLE				eSg	Sg	01 19 30.8	+0.9
BBLS	Lazići	1.49	70	ePg	Pn	01 19 10.8	-1.7
BBLS				eSg	Sg	01 19 32.1	-0.4
BUM	Brajici-Budva	1.51	135	⇑iPg	Pn	01 19 12.3	-0.5
BUM				eSg	Sg	01 19 34.6	+1.5
PDG	Podgorica	1.63	125	⇓iPg	Pn	01 19 13.9	-0.5
PDG				eSg	Sg	01 19 38.2	+1.3
TTG	Podgorica	1.63	125	⇓iPg	Pn	01 19 13.9	-0.5
TTG				eSg	Sg	01 19 38.2	+1.3
BEY	Berane	1.86	105	⇑iPn	Pn	01 19 18.3	+0.8
BEY				eSn	Sg	01 19 44.4	+0.2
IVA	Berane	1.86	105	⇑iPn	Pn	01 19 18.3	+0.8
IVA				eSn	Sg	01 19 44.4	+0.2
ULC	Ulcinj	1.94	136	⇑iPn	Pn	01 19 19.7	+1.1
ULC				eSn	Sg	01 19 47.0	+0.2
PVY	Plav	2.01	112	⇑iPn	Pn	01 19 20.5	+1.0
PVY				eSn	Sg	01 19 48.2	-0.7
NVLJ	Novalja	2.21	303	ePn	Pn	01 19 22.0	-0.4
NVLJ				Sn	Sn	01 19 51.4	+1.1
FRGS	Fruska Gora	2.45	43	ePn	Pn	01 19 25.7	+0.1
FRGS				eSg	Sg	01 20 04.9	+1.7
BOJS	Bojanci	2.64	324	i Pn	Pn	01 19 28.2	-0.1
BOJS				i Sn	Sn	01 20 02.5	+1.5
PKSM	Moragy	2.95	16	ePn	Pn	01 19 31.2	-1.3
VISS	Visnje	3.06	323	i Pn	Pn	01 19 33.0	-1.0
VISS				i Sn	Sn	01 20 12.6	+1.3
SKDS	Skadanscina	3.28	312	i Pn	Pn	01 19 36.5	-0.5
SKDS				i Sn	Sn	01 20 17.6	+0.9
SKDS	Skadanscina	3.28	312	i Pn	Pn	01 19 36.5	-0.5
SKDS				i Sn	Sn	01 20 17.5	+0.8
KRUS	Krusevo	3.46	124	ePn	Pn	01 19 39.5	+0.1
KRUS				eSn	Sn	01 20 21.6	+0.6
KRUS	Krusevo	3.46	124	ePn	Pn	01 19 39.6	+0.2
KRUS				eSn	Sn	01 20 21.7	+0.7
SOKA	Soboth	3.72	333	⇓iPn	Pn	01 19 42.3	-0.7
SOKA				⇑iSn	Sn	01 20 27.4	0.0
OBKA	Obir	3.75	328	⇓iPn	Pn	01 19 43.5	+0.1
OBKA				⇓iSn	Sn	01 20 29.9	+1.7
ARSA	Arzberg	4.10	341	⇑iPn	Pn	01 19 47.3	-1.0

*PLV **19** 01:37:41.3±0.9, 2251N×10350E, h12^{km}±7^{km}, MD3.9*
BJI 19 01:36:35.2, 2334N×10302E, h15^{km}, ML3.7, Yunnan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.79	352	PG	Pg	01 37 11.0	+1.3
KMI				SG	Sg	01 37 35.3	+2.3
KMI				Smax			
	comp=N,242nm,1.0s						
KMI				Smax			
	comp=E,288nm,0.8s						
KMI				LR	LR		
	comp=N,476nm,3.8s						
KMI				LR	LR		
	comp=E,996nm,4.5s						
HNV	Hanoi	3.44	131	ePn	Pn	01 38 22.6	+54
HNV				ePg	Pg	01 38 31.1	+50
HNV				eSg	Sg	01 39 04.5	+39
MTZV	Met	3.55	119	ePn	Pn	01 38 25.7	+56
MTZV				ePg	Pg	01 38 35.4	+52
MTZV				eSg	Sg	01 39 11.9	+42
DSV	Doi Son	3.88	134	ePn	Pn	01 38 28.6	+54
DSV				ePg	Pg	01 38 38.2	+49
DSV				eSg	Sg	01 39 17.5	+38
GYA	Guiyang	4.54	46	P	Pn	01 37 42.0	-1.4
GYA				PG	Pg	01 37 57.9	-4.2
GYA				S	Sn	01 38 30.5	-5.3
GYA				SG	Sg	01 38 49.8	-11
GYA				Smax			
	comp=N,110nm,0.8s						
GYA				Smax			
	comp=E,100nm,0.8s						
CHRT	Chiangrai	4.58	222	P	Pg	01 38 02.0	-1.0
	comp=E,368nm,0.6s						
CHG	Chiang Mai	5.90	221	PG	Pg	01 38 41.0	+13
CHG				SG	Sg	01 39 46.8	+2.3

IDC 19 01:39:43.7±2.1, **455N×12567E, h0^{km}, mb3.5**/4, **mb1 3.6**/4, **mb1mx3.5**/18, **mbtmp3.5**/4, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.6**/28, **Error ellipse: s-maj=204.3km s-min=25.8km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.78	161	P	P	01 45 16.4	-0.1
	0.4nm,0.4s,baz=339,slow=10,SNR=6.7						
CBIJ	Chichi jima	27.41	33	LR	LR	01 54 53.1	
	comp=Z,38nm,19.3s,baz=99,slow=33						
ASAR	Alice Springs	29.17	164	P	P	01 45 47.2	+0.3
	0.4nm,0.5s,baz=347,slow=7.7,SNR=8.2						
STKA	Stephens Creek	39.27	158	P	P	01 47 14.1	-0.1
	0.8nm,0.6s,baz=348,slow=9.3,SNR=2.8						
SONM	Songino Array	46.20	342	LR	LR	02 10 46.2	
	comp=Z,58nm,18.4s,baz=131,slow=40						
MKAR	Makanchi Array	56.29	325	P	P	01 49 26.1	0.0
	0.1nm,0.4s,baz=123,slow=8.0,SNR=5.0						

*ISCJB **19** 01:54:29.9±0.3, 2330N±002×12202E±002, h33^{km}, Error ellipse: s-maj=3.5km s-min=2.4km az=145.3*
*TAP **19** 01:54:30.5, 2333N×12196E, h40^{km}, ML3.3, C*
*JMA **19** 01:54:30.7±0.3, 2332N×12208E, h59^{km}, M2.8*
ISC 19 01:54:30.4±0.3, **2330N**±002×**12201E**±002, **h35**^{km}, **n41**, σ1^{s}**04**/70, **1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.62	251	i P	Pn	01 54 41.6	-1.2
	baz=242						
CHKT				S	Sn	01 54 49.5	-2.0
	baz=242						
TWF1	Yuli	0.65	274	⇑iP	Pn	01 54 42.3	-0.8
	baz=265						
TWF1				eS	Sn	01 54 51.2	-1.1
	baz=265						
EHY	Hungye	0.66	288	i P	Pn	01 54 42.3	-0.9
	baz=287						
EHY				S	Sn	01 54 51.6	-0.8
	baz=287						
ESL	Shilin	0.73	314	⇓iP	Pn	01 54 43.0	-1.3
	baz=319						
ESL				S	Sn	01 54 52.0	-2.2
	baz=319						
TWD	Chiawan	0.86	334	P	Pn	01 54 45.0	-1.0
	baz=336						
TWD				eS	Sn	01 54 56.0	-1.4
	baz=336						
ELDTW	Lidau	0.92	263	P	Pn	01 54 46.0	-0.8
	baz=261						
ELDTW				eS	Sn	01 54 56.9	-1.9
	baz=261						
TTN	Taitung	0.96	236	eP	Pn	01 54 46.6	-0.8
	baz=232						
TTN				eS	Sn	01 54 59.8	-0.1
	baz=232						
TWG	Pinlang	0.98	241	P	Pn	01 54 47.0	-0.7
	baz=250						
TWG				eS	Sn	01 54 59.4	-1.1
	baz=250						
WHF	Hehuan Shan	1.08	321	⇓iP	Pn	01 54 48.7	-0.4
	baz=311						
WHF				eS	Sn	01 55 02.0	-0.7
	baz=311						
ENA	Nanau	1.15	348	⇓iP	Pn	01 54 49.6	-0.3
	baz=349						
ENA				eS	Sn	01 55 03.7	-0.8
	baz=349						
SMLT	Sun Moon Lake	1.17	300	eP	Pn	01 54 50.1	-0.1
	baz=306						
SMLT				eS	Sn	01 55 04.5	-0.4
	baz=306						
ECL	Taimali	1.20	234	P	Pn	01 54 49.8	-0.9
	baz=232						
ECL				eS	Sn	01 55 04.0	-1.7
	baz=232						
TYC	Yuchr	1.21	300	eP	Pn	01 54 51.1	+0.2
	baz=307						
TYC				eS	Sn	01 55 06.0	-0.1
	baz=307						
TWT	Tachien	1.21	321	eP	Pn	01 54 50.9	0.0
	baz=314						
TWT				eS	Sn	01 55 05.5	-0.6
	baz=314						
CHN5	Tsauling	1.25	284	P	Pn	01 54 52.7	+1.3
	baz=283						
CHN5				eS	Sn	01 55 08.9	+1.8
	baz=283						
NNS	Nan Shan	1.27	333	eP	Pn	01 54 51.7	0.0
	baz=334						
NNS				eS	Sn	01 55 06.8	-0.8
	baz=334						
WTP	Ta-pu	1.28	268	P	Pn	01 54 52.9	+1.1
	baz=266						
WTP				eS	Sn	01 55 09.5	+1.8
	baz=266						
CHN4	Tsaushan	1.30	272	eP	Pn	01 54 53.4	+1.3
	baz=271						
CHN4				eS	Sn	01 55 10.2	+2.0
	baz=271						
TWC	Suao	1.31	354	P	Pn	01 54 52.7	+0.5
	baz=355						
TWC				eS	Sn	01 55 08.5	+0.1
	baz=355						
LAY	Lan-yu	1.33	199	eP	Pn	01 54 52.4	-0.1
	baz=188						
CHN1	Nanshi	1.36	265	P	Pn	01 54 54.5	+1.6
	baz=263						
TAW	Tawu	1.39	228	eP	Pn	01 54 54.2	+0.9
	baz=233						
ENTT	Nioudou	1.39	343	P	Pn	01 54 53.8	+0.4
	baz=344						
ENTT				S	Sn	01 55 10.8	+0.3
	baz=344						
TWK	Hsinying	1.40	269	eP	Pn	01 54 54.9	+1.5
	baz=267						
YOJ	Yonaguni jima	1.48	38	P	Pn	01 54 54.7	+0.2
YOJ				eS	Sn	01 55 12.3	-0.3
TCU	Taichung	1.48	305	eP	Pn	01 54 56.9	+2.3
	baz=305						
TCU				eS	Sn	01 55 15.4	+2.7
	baz=305						
NSK	Sanguang	1.49	337	eP	Pn	01 54 54.6	-0.1
	baz=338						
NSK				S	Sn	01 55 13.2	+0.2
	baz=338						
TWM1	Shoushan	1.53	252	eP	Pn	01 54 57.7	+2.4
	baz=250						
TWQ1	Liyutan	1.54	313	eP	Pn	01 54 56.9	+1.5
	baz=314						
SCZT	Fangliau	1.58	234	eP	Pn	01 54 56.4	+0.5
	baz=228						
NSTT	Nanjuang	1.61	325	eP	Pn	01 54 57.2	+0.9
	baz=312						
TWB1	Santiao Chiao	1.70	359	eP	Pn	01 54 57.8	+0.2
	baz=1.0						
HEN	Hengchun	1.74	222	eP	Pn	01 55 01.0	+2.8
	baz=213						
TWK1	Hengchun	1.75	220	eP	Pn	01 54 57.6	-0.7
	baz=217						
TWK1				S	Sn	01 55 18.9	-0.4
	baz=217						
NWF	Wu-fen Shan	1.77	353	eP	Pn	01 54 60.0	+1.4
	baz=354						
NWF				eS	Sn	01 55 20.4	+0.5
	baz=354						
HATJ	Hateruma jima	1.81	65	P	Pn	01 54 59.2	+0.1
HATJ				eS	Sn	01 55 20.4	-0.5
IRIF	Iriomote-Funau	1.88	57	P	Pn	01 55 00.3	+0.2
IRIF				eS	Sn	01 55 22.9	+0.2
JKRS	Kuro-shima	2.06	63	P	Pn	01 55 02.9	+0.4
JKRS				eS	Sn	01 55 26.6	-0.4
JIJ	Ishigaki jima	2.22	61	P	Pn	01 55 04.6	-0.2
JIJ				eS	Sn	01 55 30.1	-1.0
PNG	Penghu	2.27	277	eP	Pn	01 55 06.2	+0.8
	baz=276						
JTJ	Tarama	2.80	61	P	Pn	01 55 13.0	+0.2

*LDG **19** 01:57:19.6±0.2, 1894N×6476W, h10^{km}, Mb5.1/24, Ms4.4/9, Error ellipse: s-maj=10.4km s-min=4.5km az=95.0*
*BJI **19** 01:57:20.0, 1920N×6460W, h8^{km}, mB5.6, Ms5.3, Msz5.0*
*MOS **19** 01:57:21.4±1.4, 1925N×6483W, h21^{km}, mb5.2/51, MS4.6/16, Error ellipse: s-maj=6.1km s-min=5.3km az=101.8*
*TRN **19** 01:57:21.9, 1916N×6467W, h26^{km}, MD5.0*
*ISCJB **19** 01:57:23.0±0.5, 1921N±003×6466W±002, h36^{km}±5^{km}, mb5.0/137, MS4.6/52, Error ellipse: s-maj=5.0km s-min=2.4km az=13.5*
*NEIC **19** 01:57:24.0, 1920N×6465W, h8^{km}, mb5.2/111, MD5.4(RSPR), After RSPR.*
NEIC Felt [IV] on Saint Thomas and [III] on Saint John. Felt [III] at San Juan and [II] at Mayaguez, Puerto Rico. Felt at Bayamon, Caguas, Carolina, Cidra, Corozal, Culebra, Fajardo, Guaynabo, Luquillo, Trujillo Alto and Utuado, Puerto Rico. Also felt at Philipsburg, Sint Maarten.
*GCMT **19** 01:57:24.0±0.1, 1939N×6472W, h21^{km}, MW5.3/96, Moment Tensor Solution. s68,c115; s96,c175; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.92±.02; $M_{\theta\theta}$-0.78±.01; $M_{\phi\phi}$-0.14±.02; $M_{r\theta}$-0.48±.03; $M_{\theta\phi}$0.36±.01; $M_{\phi r}$0.20±.03; Best double couple: $M_0$1.06300×10^{17} NP1:ϕ_s115.00000°, δ30.00000°, λ91.00000°. NP2:ϕ_s293.00000°, δ60.00000°, λ89.00000°. Principal axes: T 1.0560, Plg75.0000°, Azm201.0000°; N 0.0150, Plg1.0000°, Azm294.0000°; P -1.0710, Plg15.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **19** 01:57:24.5±1.6, 1916N×6467W, h44^{km}±14^{km}, mb4.3/33, mb1 4.4/35, mb1mx4.4/38, mbtmp4.3/35, ML4.7/2, MS4.6/31, Ms1 4.6/31, ms1mx4.4/39 Error ellipse: s-maj=10.8km s-min=9.2km az=67.0*
*RSPR **19** 01:57:24.4, 1910N×6470W, h39^{km}±27^{km}, Mw5.4*
RSPR Felt V MM.
*SZGRF **19** 01:57:29.3, 1914N×6423W, h33^{km}, mb4.9, MS4.4, Virgin Islands*
ISC 19 01:57:23.2±0.7, **1921N**±002×**6468W**±002, **h23**^{km}±5^{km}, **n745**, σ0^{s}**93**/750, **mb5.0**/136, **MS4.6**/52, **173C-195D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.57	145	⇑iP	Pb	01 57 34.3	-0.4
ABV	Anegada	0.57	145	⇑eP	Pb	01 57 34.2	-0.4
ABV	Anegada	0.57	145	⇑eP	Pb	01 57 34.2	-0.4
ABV	Anegada	0.57	145	⇑iP	Pb	01 57 34.3	-0.4
TBVI	Tortola	0.79	176	⇑iP	Pb	01 57 37.4	-0.9
TBVI	Tortola	0.79	176	⇑iP	Pb	01 57 37.4	-0.8
TBVI	Tortola	0.79	176	⇑iP	Pb	01 57 37.4	-0.8
TBVI	Tortola	0.79	176	⇑iP	Pb	01 57 37.4	-0.8
STVI	Saint Thomas	0.89	197	⇓eP	Pb	01 57 39.1	-0.8
STVI	Saint Thomas	0.89	197	⇓eP	Pb	01 57 39.1	-0.8
STVI				eS	Sb	01 57 51.2	-0.2
STVI				eS	Sb	01 57 51.5	+0.1
STVI	Saint Thomas	0.89	197	⇓eP	Pb	01 57 39.1	-0.8
STVI				eSn	Sn	01 57 54.9	+2.4
CDVI	St. Croix	1.45	183	⇓eP	Pn	01 57 48.6	+0.5
CDVI				eS	Sn	01 58 07.2	+0.9
HUMP	Col San Antoni	1.53	227	⇑iP	Pn	01 57 48.8	-0.4
HUMP	Col San Antoni	1.53	227	⇓iP	Pn	01 57 48.8	-0.4
HUMP				⇑eS	Sn	01 58 08.6	+0.2
HUMP				eS	Sn	01 58 09.2	+0.8
HUMP	Col San Antoni	1.53	227	⇓iP	Pn	01 57 48.8	-0.4
HUMP				eSn	Sn	01 58 08.4	0.0
SJG	San Juan	1.77	232	⇓iP	Pn	01 57 51.9	-0.6
SJG	San Juan	1.77	232	⇓iP	Pn	01 57 51.9	-0.6
SJG	San Juan	1.77	232	⇑iP	Pn	01 57 51.9	-0.6
SJG	San Juan	1.77	232	⇓iP	Pn	01 57 51.9	-0.6
SJG				⇑eS	Sn	01 58 14.4	+0.2
SJG				eS	Sn	01 58 14.7	+0.5
SJG	San Juan	1.77	232	⇓iP	Pn	01 57 51.9	-0.6
SJG				eS	Sn	01 58 14.1	-0.2
SMRT	St. Maarten	1.91	127	⇓eP	Pn	01 57 53.8	-0.5
SMRT				eS	Sn	01 58 16.2	-1.4
SABA	Saba	2.08	139	⇑eP	Pn	01 57 56.4	-0.4
CELP	Cerrillos	2.12	238	⇓iP	Pn	01 57 57.1	-0.2
CELP	Cerrillos	2.12	238	⇓iP	Pn	01 57 57.1	-0.2
CELP	Cerrillos	2.12	238	⇑iP	Pn	01 57 57.6	+0.3
OBIP	Obispado Ponce	2.16	238	eS	Sn	01 58 23.6	-0.3
OBIP	Obispado Ponce	2.16	238	⇓iP	Pn	01 57 57.7	-0.2
OBIP				⇑eS	Sn	01 58 23.6	-0.3
OBIP	Obispado Ponce	2.16	238	⇓iP	Pn	01 57 57.6	-0.2
OBIP				eS	Sn	01 58 23.6	-0.3
ICM	Isla Caja Muer	2.18	234	⇓iP	Pn	01 57 58.4	+0.2
ICM				⇑eS	Sn	01 58 23.9	-0.5
ICM				eS	Sn	01 58 26.5	+2.1
LRS	Lares	2.24	246	⇓iP	Pn	01 57 58.4	-0.5
LRS	Lares	2.24	246	⇓iP	Pn	01 57 58.4	-0.6
LRS	Lares	2.24	246	⇓iP	Pn	01 57 58.4	-0.5
SEUS	St. Eustatius	2.34	136	⇑eP	Pn	01 57 59.7	-0.7
GBPR	Guanica, Bosqu	2.42	240	⇓eP	Pn	01 58 02.0	+0.6
GBPR	Guanica, Bosqu	2.42	240	⇓iP	Pn	01 58 02.0	+0.6
GBPR	Guanica, Bosqu	2.42	240	⇓iP	Pn	01 58 02.3	+0.9
GBPR	Guanica, Bosqu	2.42	240	⇓iP	Pn	01 58 02.5	+1.1
GBPR				eS	Sn	01 58 29.4	-0.9
GBPR				eS	Sn	01 58 30.9	+0.6
LSP	Las Mesas	2.50	246	⇑eP	Pn	01 58 02.3	-0.3
LSP	Las Mesas	2.50	246	⇓iP	Pn	01 58 02.5	0.0
MPR	Mayaguez	2.53	247	⇑eP	Pn	01 58 02.8	-0.2
MPR	Mayaguez	2.53	247	eS	Sn	01 58 33.9	+0.8
MPR	Mayaguez	2.53	247	⇑iP	Pn	01 58 02.8	-0.2
MPR	Mayaguez	2.53	247	eS	Sn	01 58 34.5	+1.4
MPR	Mayaguez	2.53	247	⇑iP	Pn	01 58 02.8	-0.2
MPR				eS	Sn	01 58 33.9	+0.8
MPR				eS	Sn	01 58 34.5	+1.4
MPR	Mayaguez	2.53	247	⇑eP	Pn	01 58 02.8	-0.2
MPR				eS	Sn	01 58 33.9	+0.8
CRPR	Cabo Rojo, PR	2.59	243	⇓eP	Pn	01 58 03.8	0.0
CRPR	Cabo Rojo, PR	2.59	243	⇓iP	Pn	01 58 03.9	+0.1
CRPR				eS	Sn	01 58 35.1	+0.4
CRPR				eS	Sn	01 58 37.1	+2.4
CRPR				eS	Sn	01 58 37.8	+3.1
CRPR	Cabo Rojo, PR	2.59	243	⇓eP	Pn	01 58 03.8	0.0
CRPR				eS	Sn	01 58 37.1	+2.4
SKI	Saint Kitts	2.62	135	eP	Pn	01 58 03.5	-0.6
SKI				eS	Sn	01 58 27.6	-7.6
ANWB	Willy Bob	3.14	119	ePn	Pn	01 58 08.3	-3.0
ANWB				eSn	Sn	01 58 42.3	-5.9
IMO	Isla Mona	3.25	251	⇑eP	Pn	01 58 14.0	+1.2
IMO	Isla Mona	3.25	251	eS	Sn	01 58 51.5	+0.7
IMO	Isla Mona	3.25	251	⇑eP	Pn	01 58 14.1	+1.2
IMO	Isla Mona	3.25	251	⇑eP	Pn	01 58 14.1	+1.3
IMO	Isla Mona	3.25	251	⇑eP	Pn	01 58 14.7	+1.9
IMO				eS	Sn	01 58 51.5	+0.7
IMO	Isla Mona	3.25	251	⇑eP	Pn	01 58 14.1	+1.2
IMO				eS	Sn	01 58 51.5	+0.7
BPA	Boggy Peak	3.44	128	eP	Pn	01 58 14.4	-1.0
BPA				eS	Sn	01 58 53.6	-1.8
BPA	Boggy Peak	3.44	128	eP	Pn	01 58 14.3	-1.1
BPA				eS	Sn	01 58 53.6	-1.8
PCDR	Punta Cana, DR	3.57	260	⇑eP	Pn	01 58 16.9	-0.4
LZG	Guadaloupe-1	4.12	137	eP	Pn	01 58 24.9	+0.1
LZG				eS	Sn	01 59 15.0	+2.8
SCG	Saint Claude	4.26	137	eP	Pn	01 58 27.1	+0.4
HMG	Houelmont	4.28	138	eP	Pn	01 58 27.5	+0.4
DOG	Dongo Capester	4.30	137	eP	Pn	01 58 27.5	+0.3
TBG	Guadaloupe-3	4.42	139	eP	Pn	01 58 29.1	+0.3
DEG	La Desirade	4.49	129	eP	Pn	01 58 28.5	-1.4
MGG	Marie-Galante	4.58	135	eP	Pn	01 58 30.9	-0.2
DWS	Wesley	4.84	138	eP	Pn	01 58 35.5	+0.8
DWS				eS	Sn	01 59 26.6	-3.5
DWS	Wesley	4.84	138	eP	Pn	01 58 36.9	+2.2
DWS				eS	Sn	01 59 31.0	+0.9
DWS				eS	Sn	01 59 31.5	+1.4
MDN	Morne-Daniel	4.98	140	eP	Pn	01 58 36.4	-0.2
DBCT	Belle View Cho	5.04	140	eP	Pn	01 58 36.4	-1.1
DBCT	Belle View Cho	5.04	140	eP	Pn	01 58 33.3	-4.2
DLPL	La Plaine	5.06	139	eP	Pn	01 58 39.1	+1.4
DLPL				eS	Sn	01 59 23.7	-12
DFBT	Forest Bistro	5.06	141	eP	Pn	01 58 38.2	+0.4
DFBT	Forest Bistro	5.06	141	e	Pn	01 58 39.9	+2.2
DSHT	Scott's Head	5.07	141	eP	Pn	01 58 38.7	+0.8
DSTT	Stowe	5.09	140	eP	Pn	01 58 38.5	+0.3
FDF	Fort de France	5.58	142	eP	Pn	01 58 45.0	+0.1
FDF				pmax	pmax		
	comp=Z,338nm,0.7s						
FDF	Fort de France	5.58	142	eP	Pn	01 58 45.6	+0.6
FDF	Fort de France	5.58	142	ePn	Pn	01 58 45.0	+0.1
	comp=Z,338nm,0.7s						
BIM	Bigot	5.80	143	eP	Pn	01 58 48.5	+0.6
SDDR	Presa de Saban	6.25	269	⇑iP	Pn	01 58 54.1	0.0
SDDR	Presa de Saban	6.25	269	⇓eP	Pn	01 58 54.8	+0.7
SDDR				eS	Sn	02 00 06.2	+1.3
SDDR	Presa de Saban	6.25	269	⇑iP	Pn	01 58 54.1	0.0
SDDR				eS	Sn	02 00 06.2	+1.3
MCLT	Moule a Chique	6.54	146	eP	Pn	01 58 58.8	+0.8
SVV	Soufriere Volc	6.73	150	eP	Pn	01 59 01.6	+0.9
SVV	Soufriere Volc	6.73	150	eP	Pn	01 59 02.2	+1.5
SVB	Belmont	6.75	150	eP	Pn	01 59 01.1	+0.1
FCV	Fort Charlotte	6.86	151	eP	Pn	01 59 03.0	+0.5
FCV	Fort Charlotte	6.86	151	eP	Pn	01 59 04.3	+1.8
GRW	Mount Saint Ca	7.58	157	eP	Pn	01 59 12.9	+0.5
GRW	Mount Saint Ca	7.58	157	eP	Px	01 59 29.0	
TPR	Prospect	8.82	154	eP	Pn	01 59 29.2	-0.1
TPR	Prospect	8.82	154	eP	Pn	01 59 34.0	+4.6
TOSP	Speyside	8.82	152	eP	Pn	01 59 32.4	+3.0
TCE	Chacachacare	8.92	161	eP	Pn	01 59 30.8	+0.1
TCE	Chacachacare	8.92	161	eP	Pn	01 59 35.0	+4.2
PCRV	Puerto La Cruz	8.98	180	P	Pn	01 59 31.9	+0.4
	comp=Z,9.0nm,0.3s,baz=355,slow=6.9,SNR=23						
PCRV				S	Sn	02 01 10.0	-2.0
	comp=Z,6.2nm,0.3s,baz=186,slow=11,SNR=2.9						
PCRV				LR	LR	02 03 02.2	
	comp=Z,5μm,18.4s,baz=358,slow=38						
TRN	Trinidad (W)	9.08	159	eP	Pn	01 59 31.9	-1.0
TRN	Trinidad (W)	9.08	159	eP	Pn	01 59 35.9	+2.9

TBH Brigand Hill 9.35 158 *e*P **Pn** 01 59 36.1 -0.5
TBH *e*S **Sn** 02 01 19.4 -1.7
TBH Brigand Hill 9.35 158 *e*P **Pn** 01 59 38.9 +2.2
TBH *e*S **Sn** 02 01 03.6 -17
SDV Santo Domingo 11.77 210 P **Pn** 02 00 11.1 +1.3
comp=Z,4.1nm,0.3s,baz=61,slow=8.0,SNR=28
SDV S **Sn** 02 02 18.5 -2.0
comp=Z,3.3nm,0.3s,baz=7.3,slow=15,SNR=2.2
SDV LR LR 02 05 04.9
comp=Z,6µm,18.5s,baz=36,slow=39
SDV Santo Domingo 11.77 210 *e*Pn **Pn** 02 00 10.7 +0.9
comp=Z,176nm,0.8s
SDV *e*Sn **Sn** 02 02 19.1 -1.5
BBSR BB Station 13.11 360 *e*Pn **Pn** 02 00 21.6 -6.5
comp=Z,88nm,0.8s
BBSR *e*Sn **Sn** 02 02 35.8 -17
DWPF Disney 17.71 303 *e*Pn **Pn** 02 01 28.2 -0.2
comp=Z,142nm,0.7s
DWPF *e*Sn **Sn** 02 04 33.0 -12
BCIP Isla Barro Col 17.75 238 *e*Pn **Pn** 02 01 29.2 +0.3
comp=Z,72nm,0.8s
NHSC New Hope 19.59 318 *e*P **Pn** 02 01 51.7 +0.5
comp=Z,199nm,0.6s
NHSC *e*S **Sn** 02 05 14.8 -16
CNNC Cliffs of the 19.79 326 P **Pn** 02 01 52.3 -1.3
comp=Z,137nm,0.4s
CNNC *e*Sn Sn 02 05 11.2 -24
CBN Corbin 21.92 332 *e*P **P** 02 02 16.3 +1.3
comp=Z,223nm,0.4s,mb6.0
CBN *e*S **S** 02 06 05.9 -10
GOGA Godfrey 21.94 314 *e*P **P** 02 02 14.6 -0.7
GOGA *e*S **S** 02 06 08.0 -8.5
GOGA pmax pmax
comp=Z,60nm,0.6s,mb5.2
GOGA Godfrey 21.94 314 *e*P **P** 02 02 14.6 -0.7
comp=Z,60nm,0.6s,mb5.2
GOGA *e*S **S** 02 06 08.0 -8.6
TEIG Tepich 22.24 277 *e*P **P** 02 02 17.9 -0.6
comp=Z,163nm,1.3s,mb5.3
TGUH Tegucigalpa,Un 22.24 260 *e*P **P** 02 02 18.6 0.0
comp=Z,83nm,0.8s,mb5.2
BLA Blacksburg 22.62 326 *e*P **P** 02 02 22.2 -0.2
BLA *e*S **S** 02 06 20.6 -8.9
BLA pmax pmax
comp=Z,264nm,0.8s,mb5.7
BLA Blacksburg 22.62 326 *e*P **P** 02 02 22.2 -0.2
comp=Z,264nm,0.8s,mb5.7
BLA *e* 02 02 37.5
BLA *e*S **S** 02 06 20.6 -8.9
OTAV Otavalo 23.19 217 *e*P **P** 02 02 27.9 -0.8
comp=Z,71nm,0.8s,mb5.2
OTAV *e*S **S** 02 06 29.3 -10
BRAL Brewton 23.38 305 *e*P **P** 02 02 30.6 +0.1
comp=Z,160nm,0.9s,mb5.5
TKL Tuckaleechee C 23.51 318 P **P** 02 02 30.0 -1.7
comp=Z,1.4nm,0.6s,baz=180,slow=20,SNR=5.0
TKL Tuckaleechee C 23.51 318 *e*P **P** 02 02 31.6 -0.2
TKL *e* 02 02 48.9
TKL *e*S **S** 02 06 41.0 -3.0
TZTN Tazewell 23.94 320 *e*P **P** 02 02 34.7 -1.0
comp=Z,60nm,0.7s,mb5.1
TZTN *e*S **S** 02 06 42.9 -8.0
SSPA Standing Stone 24.18 335 *e*P **P** 02 02 36.7 -1.1
comp=Z,60nm,0.7s,mb5.1
SSPA *e*S **S** 02 06 52.8 -2.0
MCWV Mont Chateau 24.22 331 *e*P **P** 02 02 38.8 +0.6
comp=Z,166nm,1.0s,mb5.4
MCWV *e* 02 02 59.3
MCWV *e*S **S** 02 06 57.4 +1.9
LRAL Lakeview Retre 24.25 309 *e*P **P** 02 02 37.6 -0.9
comp=Z,23nm,0.5s,mb4.9
LRAL *e*S **S** 02 06 56.5 +0.4
BINY Binghamton 24.85 340 *e*P **P** 02 02 43.8 -0.2
comp=Z,50nm,0.6s,mb5.2
BINY *e*S **S** 02 07 15.1 +10
LBNH Lisbon 25.69 348 *e*P **P** 02 02 51.4 -0.1
LBNH pmax pmax
comp=Z,30nm,0.5s,mb5.1
LBNH MLR MLR
comp=Z,3µm,20.0s,MS4.7
LBNH Lisbon 25.69 348 *e*P **P** 02 02 51.4 -0.1
comp=Z,30nm,0.5s,mb5.1
LBNH *e* 02 03 18.3
LBNH LR LR
comp=Z,3µm,20.0s,MS4.7
ACSO Alum Creek Sta 26.20 327 *e*P **P** 02 02 55.6 -0.7
comp=Z,146nm,0.9s,mb5.5
ERPA Erie 26.28 334 *e*P **P** 02 02 57.4 +0.4
comp=Z,137nm,0.8s,mb5.5
ERPA *e* 02 03 25.3
WVT Waverly 26.44 314 *e*P **P** 02 02 57.2 -1.2
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
WVT MLR MLR
comp=Z,2µm,20.0s,MS4.6
WVT Waverly 26.44 314 *e*P **P** 02 02 57.2 -1.2
comp=Z,5.1nm,0.8s,mb4.1
WVT *e* 02 03 28.6
WVT LR LR
comp=Z,2µm,20.0s,MS4.6
VBMS Vicksburg 26.56 304 *e*P **P** 02 02 59.9 +0.3
comp=Z,137nm,1.2s,mb5.4
WCI Wyandotte Cave 26.69 320 *e*P **P** 02 03 00.4 -0.3
WCI *e*S **S** 02 07 37.7 +2.9
WCI pmax pmax
comp=Z,25nm,0.6s,mb4.9
WCI MLR MLR
comp=Z,1µm,20.0s,MS4.5
WCI Wyandotte Cave 26.69 320 *e*P **P** 02 03 00.4 -0.3
comp=Z,25nm,0.6s,mb4.9
WCI *e*S **S** 02 07 37.6 +2.8
WCI LR LR
comp=Z,1µm,20.0s,MS4.5
OXF Oxford 26.72 310 *e*P **P** 02 02 59.2 -1.8
OXF pmax pmax
comp=Z,115nm,0.8s,mb5.5
OXF Oxford 26.72 310 *e*P **P** 02 02 59.2 -1.7
comp=Z,115nm,0.8s,mb5.5
OXF *e* 02 03 32.7
USIN University of 27.39 318 *e*P **P** 02 03 06.2 -0.8
comp=Z,62nm,0.6s,mb5.3
AAM Ann Arbor 28.09 329 *e*P **P** 02 03 12.2 -0.9
AAM pmax pmax
comp=Z,48nm,0.9s,mb5.1
AAM Ann Arbor 28.09 329 *e*P **P** 02 03 12.2 -0.9
comp=Z,48nm,0.9s,mb5.1
AAM *e* 02 03 52.6
OLIL Olney 28.12 319 *e*P **P** 02 03 13.4 0.0
comp=Z,64nm,0.6s,mb5.4
OLIL *e* 02 03 51.1
SADO Sadowa 28.20 338 P **P** 02 03 11.8 -2.3
comp=Z,4.5nm,0.8s,mb4.1,baz=190,slow=9.5,SNR=2.5
SADO LR LR 02 14 17.1
comp=Z,2µm,18.2s,MS4.7,baz=157,slow=36
SADO Sadowa 28.20 338 P **P** 02 03 11.8 -2.3
SADO LR LR 02 14 17.1
SIUC Southern Illin 28.24 316 *e*P **P** 02 03 14.6 0.0
comp=Z,41nm,0.8s,mb5.1
CMIG Matias Romero 28.76 271 P **P** 02 03 15.5 -3.9
comp=Z,4.1nm,0.9s,mb4.2,baz=66,slow=9.4,SNR=4.6
CMIG Matias Romero 28.76 271 P **P** 02 03 15.5 -3.9
UALR University of 29.00 308 *e*P **P** 02 03 21.8 +0.5
comp=Z,68nm,1.5s,mb5.2
FVM French Village 29.19 315 *e*P **P** 02 03 22.2 -0.8
FVM pmax pmax
comp=Z,11nm,0.8s,mb4.6
FVM French Village 29.19 315 *e*P **P** 02 03 22.2 -0.8
comp=Z,11nm,0.8s,mb4.6
FVM *e* 02 04 06.4
ATAH Atahualpa 29.34 209 P **P** 02 03 23.2 -1.3
comp=Z,3.8nm,0.6s,mb4.3,baz=115,slow=17,SNR=2.9
NATX Nacogdoches 29.71 301 *e*P **P** 02 03 27.9 +0.2
comp=Z,193nm,1.4s,mb5.6
NATX LR LR
comp=Z,3µm,20.0s,MS4.8
CCM Cathedral Cave 29.77 315 *e*P **P** 02 03 26.4 -1.8
CCM pmax pmax
comp=Z,27nm,0.8s,mb5.0
CCM Cathedral Cave 29.77 315 *e*P **P** 02 03 26.4 -1.8
comp=Z,27nm,0.8s,mb5.0
CCM *e* 02 04 14.3
HDIL Hopedale 29.96 321 *e*P **P** 02 03 29.2 -0.6
comp=Z,18nm,0.8s,mb4.8
HDIL *e* 02 04 16.0
GLMI Grayling 30.47 331 *e*P **P** 02 03 34.0 -0.3
comp=Z,63nm,0.7s,mb5.5
GLMI *e* 02 04 22.1
NNA Nana 33.23 202 *e*P **P** 02 03 56.8 -2.0
comp=Z,25nm,0.6s,mb5.3
JCT Junction City 33.66 296 *e*P **P** 02 04 01.2 -1.3
JCT pmax pmax
comp=Z,28nm,1.1s,mb5.1
JCT Junction City 33.66 296 *e*P **P** 02 04 01.2 -1.3
comp=Z,28nm,1.1s,mb5.1
WMOK Wichita Mounta 33.91 304 *e*P **P** 02 04 03.1 -1.5
WMOK pmax pmax
comp=Z,54nm,1.4s,mb5.3
WMOK Wichita Mounta 33.91 304 *e*P **P** 02 04 03.1 -1.5
comp=Z,54nm,1.4s,mb5.3
KSU1 Kansas State U 33.96 313 *e*P **P** 02 04 03.5 -1.5
comp=Z,10nm,0.6s,mb4.9
SIV San Ignacio 35.15 174 P **P** 02 04 13.4 -2.0
comp=Z,36nm,0.9s,mb5.3,baz=16,slow=9.8,SNR=89
SCHQ Schefferville 35.60 358 P **P** 02 04 17.8 -1.2
comp=Z,10.0nm,0.9s,mb4.8,baz=164,slow=7.4,SNR=4.4
SCHQ LR LR 02 16 34.1
comp=Z,1µm,18.8s,MS4.7,baz=74,slow=32
EYMN Ely 35.99 329 *e*P **P** 02 04 21.9 -0.5
comp=Z,23nm,1.0s,mb5.1
CBKS Cedar Bluff 36.05 310 *e*P **P** 02 04 22.4 -0.6
CBKS pmax pmax
comp=Z,36nm,0.8s,mb5.3
CBKS Cedar Bluff 36.05 310 *e*P **P** 02 04 22.4 -0.6
comp=Z,36nm,0.8s,mb5.4
AMTX Amarillo 36.23 303 *e*P **P** 02 04 23.9 -0.7
comp=Z,120nm,1.3s,mb5.7
ECSD EROS,Sioux Fal 36.23 320 *e*P **P** 02 04 23.0 -1.5
comp=Z,12nm,0.8s,mb4.9
TXAR Lajitas Array 36.80 293 P **P** 02 04 29.2 -0.2
comp=Z,6.3nm,0.7s,mb4.5,baz=108,slow=8.8,SNR=73
TXAR PcP PcP 02 06 50.9 -0.6
comp=Z,5.6nm,0.9s,baz=114,slow=6.0,SNR=3.8
TXAR ScP ScP 02 10 30.0 -7.0
comp=Z,0.2nm,0.8s,baz=53,slow=4.8,SNR=3.5
TXAR Lajitas Array 36.80 293 P **P** 02 04 29.3 -0.2
TXAR 02 06 50.9
TXAR Lajitas Array 36.80 293 P **P** 02 04 29.2 -0.2
TXAR PcP PcP 02 06 50.9 -0.6
TXAR ScP ScP 02 10 30.0 -7.0
RCBR Riachuelo 37.71 128 *e*P **P** 02 04 36.5 -0.9
comp=Z,18nm,0.9s,mb4.8
BDFB Brasilia 38.31 154 P **P** 02 04 41.5 -0.9
comp=Z,9.0nm,0.9s,mb4.5,baz=323,slow=14,SNR=17
BDFB LR LR 02 21 37.7
comp=Z,490nm,18.7s,MS4.3,baz=357,slow=38
ULM Lac du Bonnet 39.68 329 P **P** 02 04 51.0 -2.4
comp=Z,8.1nm,0.7s,mb4.6,baz=121,slow=6.6,SNR=12
ULM LR LR 02 19 49.5
comp=Z,1µm,18.5s,MS4.8,baz=140,slow=34
SDCO Great Sand Dun 39.98 306 *e*P **P** 02 04 56.0 -0.1
comp=Z,38nm,0.9s,mb5.1
ANMO Albuquerque 40.06 302 P **P** 02 04 55.6 -1.3
comp=Z,11nm,0.8s,mb4.7,baz=108,slow=8.4,SNR=43
ANMO PcP PcP 02 07 01.9 +0.4
comp=Z,6.5nm,0.9s,baz=129,slow=7.7,SNR=3.2
ANMO Albuquerque 40.06 302 *e*P **P** 02 04 56.9 0.0
ANMO *e* 02 07 01.0
ANMO pmax pmax
comp=Z,22nm,1.0s
ANMO Albuquerque 40.06 302 *e*P **P** 02 04 56.9 0.0
comp=Z,22nm,1.0s,mb4.8
ANMO *e*PcP PcP 02 07 01.0 -0.5
Y22D IRIS PASSCAL I 40.26 300 ⇓P **P** 02 04 59.2 +0.6
baz=40
RSSD Black Hills 41.14 316 *e*P **P** 02 05 05.4 -0.3
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
RSSD Black Hills 41.14 316 *e*P **P** 02 05 05.4 -0.3
comp=Z,4.2nm,0.8s,mb4.1
N22A Wattenberg Ran 41.59 310 ⇓P **P** 02 05 09.9 +0.5
baz=42
R21A Cimarron 41.71 307 ⇓P **P** 02 05 10.9 +0.5
baz=42,SNR=39
LVC Limon Verde 41.77 186 P **P** 02 05 07.7 -3.2
comp=Z,8.9nm,0.6s,mb4.6,baz=354,slow=5.6,SNR=7.0
LVC Limon Verde 41.77 186 *e*P **P** 02 05 07.6 -3.4
comp=Z,11nm,0.6s,mb4.7
319A Douglas 41.85 296 ⇑P **P** 02 05 11.7 +0.1
baz=42,SNR=6.4
M22A Cedar Creek Ra 41.89 311 ⇓P **P** 02 05 12.2 +0.4
baz=42,SNR=13
219A White Tail Can 41.90 297 ⇑P **P** 02 05 12.4 +0.4
baz=42,SNR=12
L22A Ellis Ranch, M 41.98 312 ⇓P **P** 02 05 13.4 +0.8
baz=42
119A Ashpeak Ranch, 42.03 298 ⇓P **P** 02 05 13.4 +0.3
baz=42
Z19A T-Link Ranch, 42.07 299 ⇑P **P** 02 05 14.1 +0.6
baz=42
O21A Pagoda 42.15 309 ⇓P **P** 02 05 14.1 0.0
baz=42,SNR=10
Y19A Nutrioso 42.16 300 ⇑P **P** 02 05 14.5 +0.4
baz=42,SNR=15
MVCO Mesa Verde 42.16 305 ⇑P **P** 02 05 13.9 -0.2
baz=42
X19A St. Johns 42.26 300 ⇓P **P** 02 05 15.3 +0.3
baz=42,SNR=14
N21A Black Mountain 42.35 310 ⇓P **P** 02 05 16.1 +0.4
baz=42,SNR=7.4
Q20A Ridgley Place, 42.42 307 ⇓P **P** 02 05 16.3 +0.1
baz=42,SNR=36
W19A Sanders 42.45 301 ⇓P **P** 02 05 16.9 +0.3
baz=42,SNR=6.8
318A Bisbee 42.46 296 ⇑P **P** 02 05 17.0 +0.3
baz=42,SNR=11
T19A Beclabito 42.49 304 ⇑P **P** 02 05 17.0 +0.1
baz=42,SNR=34
218A Dragoon 42.56 297 ⇑P **P** 02 05 18.5 +1.1
baz=43,SNR=14
118A Homack Ranch, 42.57 298 ⇑P **P** 02 05 18.1 +0.6
baz=43,SNR=14
L21A Rawlins 42.62 312 ⇓P **P** 02 05 17.8 0.0
baz=43,SNR=14
O20A White River Ci 42.70 309 ⇑P **P** 02 05 19.0 +0.5
baz=43
W18A Petrified Fore 42.73 301 ⇓P **P** 02 05 19.1 +0.3
baz=43,SNR=6.9
Y18A Canyon Day Jun 42.77 299 ⇑P **P** 02 05 19.4 +0.3
baz=43,SNR=12
S19A Harvey Farm, M 42.77 305 ⇑P **P** 02 05 19.0 -0.1
baz=43,SNR=15
X18A Snowflake 42.81 300 ⇓P **P** 02 05 19.9 +0.4
baz=43,SNR=21
N20A Spence Gulch, 42.91 310 ⇓P **P** 02 05 20.2 0.0
baz=43,SNR=6.5
R19A Curley Farm, L 42.99 306 ⇓P **P** 02 05 20.8 -0.1
baz=43,SNR=6.4
V18A Ganado 42.99 302 ⇓P **P** 02 05 20.6 -0.3
baz=43,SNR=10
M20A Sweetwater, Wa 43.05 311 ⇑P **P** 02 05 21.4 +0.1
baz=43,SNR=5.6
U18A Rough Rock, Ch 43.07 303 ⇑P **P** 02 05 21.4 -0.1
baz=43,SNR=9.1
P19A Cripple Cowboy 43.11 308 ⇓P **P** 02 05 21.9 +0.1
baz=43
Q19A Hogan Spring (43.15 307 ⇓P **P** 02 05 21.5 -0.7
baz=43,SNR=14
217A Green Valley 43.19 296 ⇑P **P** 02 05 23.0 +0.4
baz=43,SNR=17
117A Oracle 43.21 297 ⇑P **P** 02 05 23.2 +0.5
baz=43,SNR=24
TUC Tucson 43.22 297 *e*P **P** 02 05 22.7 -0.1
TUC pmax pmax
comp=Z,29nm,1.4s,mb4.8
TUC Tucson 43.22 297 *e*P **P** 02 05 22.7 -0.1
comp=Z,29nm,1.4s,mb4.8
T18A Mexican Hat 43.22 304 ⇑P **P** 02 05 22.3 -0.4
baz=43,SNR=43
L20A Wamsutter 43.32 311 ⇑P **P** 02 05 23.9 +0.5
baz=43,SNR=14
S18A Hurst Farm, Bl 43.43 305 ⇓P **P** 02 05 24.7 +0.3
baz=43,SNR=31
Y17A Roosevelt 43.43 299 ⇑P **P** 02 05 25.2 +0.7
baz=43,SNR=21
X17A Forest Lakes 43.48 300 ⇓P **P** 02 05 25.5 +0.6
baz=44,SNR=10
R18A Canyonlands Na 43.50 306 ⇑P **P** 02 05 24.6 -0.3
baz=44,SNR=26
K20A Yellowstone Ra 43.52 312 ⇑P **P** 02 05 25.3 +0.2
baz=44,SNR=12
N19A John Jarvie Ra 43.59 310 ⇑P **P** 02 05 25.3 -0.4
baz=44,SNR=18
U17A Shonto 43.73 303 ⇑P **P** 02 05 27.0 +0.1
baz=44
216A Three Points, 43.76 296 ⇑P **P** 02 05 27.1 -0.1
baz=44
Q18A Rafter H Ranch 43.85 307 ⇓P **P** 02 05 27.4 -0.3
baz=44,SNR=14
Z16A Peralta Trail, 43.87 298 ⇓P **P** 02 05 28.5 +0.5
baz=44,SNR=13
T17A Navajo Res., N 43.92 304 ⇑P **P** 02 05 28.5 +0.1
baz=44,SNR=11
K19A Absolon Red Bu 43.93 312 ⇓P **P** 02 05 28.1 -0.3
baz=44,SNR=19
Y16A Circle Bar Ran 43.98 299 ⇑P **P** 02 05 29.2 +0.4
baz=44,SNR=18
N18A Larsen Ranch, 43.98 310 ⇑P **P** 02 05 28.8 0.0
baz=44
X16A Lo Mia Camp, P 44.02 300 ⇑P **P** 02 05 29.7 +0.5
baz=44,SNR=14
116A Eloy 44.02 297 ⇓P **P** 02 05 29.5 +0.3
baz=44
U16A Tuba City 44.02 302 ⇑P **P** 02 05 29.6 +0.3
baz=44
O18A Roosevelt 44.04 308 ⇑P **P** 02 05 29.0 -0.3
baz=44,SNR=8.0
S17A Black Ridge (B 44.04 305 ⇑P **P** 02 05 29.5 +0.1
baz=44,SNR=29
P18A Preston Nutter 44.05 308 ⇑P **P** 02 05 29.4 0.0
baz=44,SNR=16
WUAZ Wupatki 44.12 301 ⇓P **P** 02 05 30.4 +0.4
baz=44
WUAZ Wupatki 44.12 301 *e*P **P** 02 05 30.3 +0.3
comp=Z,40nm,1.1s,mb5.1
WUAZ *e*PcP PcP 02 07 15.2 +0.2
R17A Hanksville Air 44.13 306 ⇑P **P** 02 05 29.8 -0.2
baz=44,SNR=19
SRU San Rafael 44.14 307 ⇓P **P** 02 05 29.9 -0.2
baz=44
W16A Flagstaff 44.18 301 ⇑P **P** 02 05 31.0 +0.5
baz=44,SNR=19
M18A Lyman 44.39 310 ⇑P **P** 02 05 31.9 -0.1
baz=44,SNR=7.2
P17A Butcher Ranch, 44.39 307 ⇑P **P** 02 05 32.3 +0.2
baz=44,SNR=17
PDAR Pinedale Array 44.41 312 P **P** 02 05 31.6 -0.6
comp=Z,19nm,0.8s,mb4.9,baz=114,slow=7.4,SNR=146
PDAR PcP PcP 02 07 15.2 -0.6
comp=Z,4.2nm,0.9s,baz=119,slow=5.4,SNR=4.3
PDAR ScP ScP 02 11 03.4 -3.2
comp=Z,1.3nm,1.0s,baz=128,slow=5.8,SNR=2.5
PDAR LR LR 02 23 48.9
comp=Z,818nm,19.8s,MS4.7,baz=121,slow=36
PDAR Pinedale Array 44.41 312 P **P** 02 05 31.6 -0.6
PDAR PcP PcP 02 07 15.2 -0.6
PDAR ScP ScP 02 11 03.4 -3.2
PDAR LR LR 02 23 48.9
BW06 Boulder Array 44.41 312 ⇓P **P** 02 05 32.7 +0.4
baz=44
115A Sonoran Desert 44.47 297 ⇑P **P** 02 05 33.4 +0.6
baz=44,SNR=11
T16A Glen Canyon Da 44.47 304 ⇑P **P** 02 05 33.4 +0.6
baz=44
Z15A Gila River Ind 44.47 298 ⇑P **P** 02 05 33.2 +0.3
baz=44
L18A Fontenelle, Gr 44.50 311 ⇓P **P** 02 05 33.0 0.0
baz=44,SNR=21
O17A Robinson Place 44.56 308 ⇑P **P** 02 05 33.8 +0.3
baz=45,SNR=41
FRB Frobisher Bay 44.59 358 P **P** 02 05 31.6 -1.7
comp=Z,11nm,0.7s,mb4.8,baz=168,slow=8.3,SNR=29
Q16A Castle Valley 44.59 306 ⇑P **P** 02 05 34.5 +0.8
baz=45,SNR=8.0
X15A Humboldt 44.68 300 ⇑P **P** 02 05 35.0 +0.5
baz=45,SNR=17
S16A Weppner Ranch, 44.68 305 ⇓P **P** 02 05 34.5 +0.1
baz=45,SNR=13
Y15A Casa Rosa Ranc 44.69 299 ⇓P **P** 02 05 34.8 +0.2
baz=45,SNR=20
R16A Teasdale 44.70 305 ⇓P **P** 02 05 34.5 -0.1
baz=45,SNR=7.6
K18A Toltan Ranch, 44.71 312 ⇑P **P** 02 05 34.9 +0.3
baz=45,SNR=19
W15A Williams 44.79 301 ⇑P **P** 02 05 36.0 +0.6
baz=45
V15A Kaibab Nationa 44.81 302 ⇓P **P** 02 05 36.0 +0.5
baz=45,SNR=10
N17A Moffit Pass 44.82 309 ⇑P **P** 02 05 35.3 -0.1
baz=45,SNR=5.5
M17A Scullys Gap (B 44.83 310 ⇑P **P** 02 05 36.0 +0.4
baz=45,SNR=13
J18A Kendall Valley 44.87 313 ⇓P **P** 02 05 36.2 +0.3
baz=45,SNR=30
I18A Diamond G Ranc 44.88 313 ⇑P **P** 02 05 36.4 +0.5
baz=45
214A Organ Pipe Nat 44.90 296 ⇓P **P** 02 05 36.3 0.0
baz=45,SNR=8.3
FCC Fort Churchill 44.92 339 *e*P **P** 02 05 34.0 -2.0
FCC pmax pmax
comp=Z,1.0nm,1.0s
FCC Fort Churchill 44.92 339 *e*P **P** 02 05 34.0 -2.0
comp=Z,0.5nm,1.0s
RLMT Red Lodge 44.98 315 ⇓P **P** 02 05 36.8 +0.1
baz=45
RLMT Red Lodge 44.98 315 *e*P **P** 02 05 36.7 0.0
comp=Z,55nm,1.3s,mb5.2
U15A North Rim 45.00 303 ⇓P **P** 02 05 37.3 +0.3
baz=45,SNR=12
P16A Fountain Green 45.11 307 ⇓P **P** 02 05 38.2 +0.3
baz=45
O16A Springville 45.13 308 ⇑P **P** 02 05 37.8 -0.2
baz=45,SNR=13
Z14A Wintersburg 45.13 298 ⇓P **P** 02 05 38.5 +0.3
baz=45,SNR=6.6
L17A Cokeville 45.15 311 ⇓P **P** 02 05 38.1 0.0
baz=45,SNR=16
T15A Red Dirt Ranch 45.17 303 ⇓P **P** 02 05 38.4 +0.1
baz=45,SNR=5.4
X14A Yava 45.21 300 ⇓P **P** 02 05 39.2 +0.5
baz=45,SNR=9.3
G18A Lazy EL Ranch, 45.24 315 ⇓P **P** 02 05 38.9 +0.1
baz=45
Y14A Wickenburg 45.24 299 ⇑P **P** 02 05 39.1 +0.1
baz=45,SNR=19
N16A Rees Ranch, Co 45.25 309 ⇓P **P** 02 05 38.9 0.0
baz=45,SNR=10
S15A Panguitch 45.27 304 ⇑P **P** 02 05 39.2 +0.1
baz=45,SNR=13
R15A Junction 45.30 305 ⇓P **P** 02 05 39.5 +0.1
baz=45,SNR=8.6
K17A Gardner Place, 45.37 312 ⇓P **P** 02 05 40.1 +0.3
baz=45,SNR=19
FFC Flin Flon 45.38 330 *e*P **P** 02 05 37.2 -2.5
FFC pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
FFC Flin Flon 45.38 330 *e*P **P** 02 05 37.2 -2.5
comp=Z,8.1nm,1.0s,mb4.5
J17A Brown Place, J 45.40 312 ⇓P **P** 02 05 40.7 +0.7
baz=45,SNR=30
W14A Seligman 45.46 301 ⇓P **P** 02 05 41.4 +0.7
baz=46,SNR=10
I17A Pilgram Creek 45.47 313 ⇑P **P** 02 05 40.9 +0.3
baz=46,SNR=13
M16A Huntsville 45.49 309 ⇓P **P** 02 05 40.4 -0.4
baz=46,SNR=42
REDW Red Top Meadow 45.49 312 *e*P **P** 02 05 40.9 +0.1
comp=Z,97nm,1.4s,mb5.4
AHID Auburn Hatcher 45.50 312 *e*P **P** 02 05 40.8 0.0
comp=Z,1µm,1.2s
L16A Fish Haven 45.53 310 ⇓P **P** 02 05 41.2 +0.1
baz=46,SNR=45
Q15A Fillmore 45.53 306 ⇑P **P** 02 05 41.2 0.0
baz=46,SNR=9.4
V14A Boquillas Ranc 45.53 301 ⇑P **P** 02 05 42.1 +0.9
baz=46,SNR=15
MOOW Moose Ponds 45.53 313 *e*P **P** 02 05 40.7 -0.4
comp=Z,24nm,1.0s,mb5.1
F18A Big Timber 45.54 316 ⇓P **P** 02 05 41.2 0.0
baz=46,SNR=16
P15A Leamington 45.57 307 ⇑P **P** 02 05 41.4 -0.1
baz=46,SNR=8.1
TPAW Teton Pass 45.60 313 *e*P **P** 02 05 41.9 +0.2
comp=Z,30nm,1.0s,mb5.2
U14A Mt Trumbull 45.70 302 ⇓P **P** 02 05 43.1 +0.5
baz=46,SNR=11
T14A Hurricane 45.73 303 ⇑P **P** 02 05 42.6 -0.2
baz=46,SNR=6.6
113A Mohawk Valley, 45.77 297 ⇓P **P** 02 05 43.1 -0.1
baz=46
DCID1 Drake Creek 45.79 313 *e*P **P** 02 05 44.0 +0.8
comp=Z,37nm,0.9s,mb5.3
RRI2 Red Ridge 45.82 312 *e*P **P** 02 05 43.2 -0.2

comp=Z,16nm,0.8s,mb5.0
CPUP Villa Florida 45.82 171 P **P 02 05 40.5 -3.1**
comp=Z,10.0nm,0.6s,mb4.9,baz=338,slow=7.4,SNR=32
CPUP LR LR 02 25 50.0
comp=Z,473nm,18.2s,MS4.5,baz=336,slow=37
CPUP Villa Florida 45.82 171 *eP* **P 02 05 40.2 -3.3**
CPUP pmax pmax
comp=Z,82nm,0.7s
CPUP Villa Florida 45.82 171 *eP* **P 02 05 40.2 -3.3**
comp=Z,82nm,0.7s,mb5.8
K16A Soda Springs 45.86 312 ⇓P **P 02 05 44.0 +0.3**
baz=46,SNR=32
O15A The Old Anders 45.87 308 ⇑P **P 02 05 43.9 0.0**
baz=46
E18A Harlowton 45.91 317 ⇓P **P 02 05 43.8 -0.2**
baz=46,SNR=11
Y13A Salome 45.91 299 ⇑P **P 02 05 44.7 +0.4**
baz=46,SNR=12
X13A Yucca 45.99 300 ⇑P **P 02 05 45.1 +0.2**
baz=46,SNR=8.6
G17A Pierce Place, 46.02 315 ⇑P **P 02 05 45.2 +0.2**
baz=46
N15A Stansbury Isla 46.04 309 ⇑P **P 02 05 45.4 +0.2**
baz=46,SNR=12
D18A Linhart Farms, 46.06 318 ⇑P **P 02 05 45.6 +0.3**
baz=46
I16A Newdale 46.08 313 ⇓P **P 02 05 46.0 +0.5**
baz=46,SNR=7.7
W13A Hualapai Mount 46.10 301 ⇓P **P 02 05 46.1 +0.3**
baz=46,SNR=12
DUG Dugway 46.11 308 ⇓P **P 02 05 45.9 +0.2**
baz=46
DUG Dugway 46.11 308 *eP* **P 02 05 45.6 -0.1**
DUG pmax pmax
comp=Z,54nm,1.4s,mb5.3
DUG Dugway 46.11 308 *eP* **P 02 05 45.6 -0.1**
comp=Z,54nm,1.4s,mb5.3
M15A Larsen Ranch, 46.13 309 ⇑P **P 02 05 45.4 -0.4**
baz=46,SNR=31
F17A Fitzpatrick Pl 46.16 316 ⇓P **P 02 05 46.8 +0.8**
baz=46,SNR=7.3
H16A Russell Place, 46.17 314 ⇓P **P 02 05 47.2 +1.1**
baz=46,SNR=13
P14A Drum Mountains 46.17 307 ⇑P **P 02 05 46.6 +0.4**
baz=46,SNR=21
L15A Malad City 46.21 310 ⇑P **P 02 05 46.3 -0.3**
baz=46,SNR=54
Q14A Sevier Lake (B 46.21 306 ⇑P **P 02 05 47.1 +0.5**
baz=46,SNR=24
V13A Grand Canyon W 46.27 302 ⇓P **P 02 05 47.7 +0.6**
baz=46,SNR=19
U13A Pakoon Wash 46.33 302 ⇑P **P 02 05 48.2 +0.6**
baz=46,SNR=6.9
EGMT Eagleton 46.34 319 ⇓P **P 02 05 47.5 +0.1**
baz=46
T13A Saint George 46.37 303 ⇓P **P 02 05 48.6 +0.8**
baz=46,SNR=5.1
S13A Holt Ranch, En 46.42 304 ⇓P **P 02 05 48.4 +0.2**
baz=46,SNR=14
112A Yuma 46.44 297 ⇓P **P 02 05 49.1 +0.6**
baz=46
E17A Martinsdale 46.48 317 ⇑P **P 02 05 48.6 0.0**
baz=46,SNR=5.7
K15A Arbon 46.49 311 ⇓P **P 02 05 48.8 +0.1**
baz=46,SNR=7.4
B18A Beardsley Farm 46.50 319 ⇓P **P 02 05 48.9 +0.2**
baz=46
N14A Grayback Hills 46.53 308 ⇑P **P 02 05 49.1 0.0**
baz=46,SNR=61
R13A O'Grain Ranch, 46.60 305 ⇓P **P 02 05 50.0 +0.3**
baz=47,SNR=14
D17A Six Diamond Ra 46.61 317 ⇓P **P 02 05 49.8 +0.3**
baz=47,SNR=5.5
J15A Blackfoot 46.61 312 ⇑P **P 02 05 50.1 +0.5**
baz=47,SNR=11
CAM4 Nova Friburgo 46.62 151 *eP* **P 02 05 48.1 -1.8**
CAM4 *i* 02 05 51.0
CAM4 *i* 02 05 58.5
CAM4 *i* 02 06 10.0
CAM4 *i* 02 06 17.4
GLA Glamis 46.68 298 ⇓P **P 02 05 50.6 +0.3**
baz=47
GLA Glamis 46.68 298 *eP* **P 02 05 51.3 +1.0**
GLA pmax pmax
comp=Z,64nm,1.6s,mb5.3
GLA Glamis 46.68 298 *eP* **P 02 05 51.3 +1.0**
comp=Z,64nm,1.6s,mb5.3
G16A Moss Hill, Enn 46.71 315 ⇑P **P 02 05 50.2 -0.2**
baz=47,SNR=9.9
BOZ Bozeman (W) 46.72 315 ⇑P **P 02 05 50.3 -0.1**
baz=47
A18A Metzger Ranch, 46.74 320 ⇓P **P 02 05 49.9 -0.6**
baz=47,SNR=12
F16A Kennard Place, 46.76 315 ⇑P **P 02 05 51.2 +0.5**
baz=47
Q13A Wheeler Ranch, 46.78 306 ⇑P **P 02 05 51.2 +0.2**
baz=47,SNR=5.7
U12A Valley of Fire 46.79 302 ⇓P **P 02 05 51.4 +0.2**
baz=47
M14A Sheep Mountain 46.79 309 ⇑P **P 02 05 51.0 -0.1**
baz=47,SNR=33
I15A Monteview 46.81 313 ⇓P **P 02 05 52.5 +1.3**
baz=47,SNR=15
C17A Wharram Farm, 46.83 318 ⇓P **P 02 05 51.3 +0.1**
baz=47,SNR=13
P13A Bates Ranch, G 46.87 306 ⇓P **P 02 05 52.3 +0.6**
baz=47,SNR=48
K14A Jones Ranch, D 46.92 311 ⇓P **P 02 05 52.0 0.0**
baz=47,SNR=38
W12A Cal Nev Ari 46.92 301 ⇑P **P 02 05 52.9 +0.7**
baz=47
LCCM Lewis and Clar 46.95 315 P **P 02 05 52.4 +0.2**
V12A Nelson 46.95 301 ⇑P **P 02 05 52.7 +0.2**
baz=47,SNR=11
O13A Hicks Ranch, I 46.97 307 ⇑P **P 02 05 52.5 0.0**
baz=47,SNR=6.6
IRM Iron Mountain 47.04 299 ⇓P **P 02 05 53.6 +0.5**
baz=47
LDFC Landfair 47.09 300 *eP* **P 02 05 54.9 +1.4**
comp=Z,77nm,1.1s,mb5.5
H15A Lima 47.09 314 ⇓P **P 02 05 54.2 +0.8**
baz=47,SNR=12
D16A Dana Ranch, Ca 47.12 317 ⇓P **P 02 05 54.1 +0.5**
baz=47
R12A Pony Springs, 47.12 305 ⇓P **P 02 05 54.0 +0.3**
baz=47,SNR=9.8
G15A Dillon 47.15 314 ⇓P **P 02 05 54.5 +0.7**
baz=47,SNR=14
S12A Delamar Landin 47.20 304 ⇓P **P 02 05 54.6 +0.3**
baz=47,SNR=12
BC3 Big Chuckw Mtn 47.25 298 ⇓P **P 02 05 54.7 -0.1**
baz=47
A17A Triple J Farms 47.27 320 ⇑P **P 02 05 53.9 -0.8**
baz=47,SNR=6.7
MCMT McKenzie Canyo 47.30 314 P **P 02 05 56.5 +1.5**
J14A Carey 47.35 312 ⇓P **P 02 05 56.0 +0.6**
baz=47,SNR=37
F15A Butte 47.35 315 ⇑P **P 02 05 55.7 +0.3**
baz=47,SNR=6.4
M13A Montello 47.36 309 ⇓P **P 02 05 55.4 -0.1**
baz=47,SNR=30
L13A Double Diamond 47.36 310 ⇓P **P 02 05 55.4 -0.1**
baz=47,SNR=10
Q12A Willow Creek R 47.41 306 ⇓P **P 02 05 56.3 +0.3**
baz=47,SNR=22
V11A Goodsprings 47.44 301 ⇓P **P 02 05 56.7 +0.5**
baz=47
T11A Corn Creek, Al 47.44 303 ⇑P **P 02 05 56.5 +0.3**
baz=47,SNR=7.5
I14A Mackay 47.46 312 ⇑P **P 02 05 56.3 0.0**
baz=48,SNR=21
SWSC Sam W. Stewart 47.48 297 ⇓P **P 02 05 57.1 +0.5**
baz=48
C16A Fuhringer Ranc 47.51 318 ⇓P **P 02 05 56.4 -0.2**
baz=48,SNR=8.7
GMRC Granite Mounta 47.51 300 ⇓P **P 02 05 56.8 -0.1**
baz=48
O12A Currie 47.57 307 ⇓P **P 02 05 57.3 +0.1**
baz=48,SNR=8.7
H14A Leadore 47.59 313 ⇑P **P 02 05 58.0 +0.8**
baz=48,SNR=13
K13A Stover Farm, H 47.59 311 ⇓P **P 02 05 57.5 +0.2**
baz=48,SNR=36
E15A Deer Lodge 47.63 316 ⇓P **P 02 05 57.9 +0.3**
baz=48
B16A M & M Farms, S 47.70 319 ⇓P **P 02 05 57.3 -0.7**
baz=48,SNR=9.7
D15A Lincoln 47.75 317 ⇑P **P 02 05 58.3 -0.1**
baz=48,SNR=7.9
TUQ Turquoise Moun 47.79 301 ⇓P **P 02 05 59.4 +0.4**
baz=48
A16A West Butte Ran 47.82 319 ⇓P **P 02 05 58.8 -0.2**
baz=48,SNR=10
J13A Cove Ranch, Pi 47.84 312 ⇑P **P 02 05 59.4 +0.2**
baz=48,SNR=29
R11A Troy Canyon, C 47.89 305 ⇑P **P 02 06 00.1 +0.4**
baz=48,SNR=24
N12A Clover Valley, 47.90 308 ⇓P **P 02 05 59.6 -0.1**
baz=48,SNR=6.0
I13A Wildhorse Cree 47.92 312 ⇑P **P 02 06 00.3 +0.5**
baz=48,SNR=21
M12A Wells 47.92 309 ⇑P **P 02 06 00.2 +0.3**
baz=48,SNR=41
F14A Wisdom 47.93 315 ⇑P **P 02 06 00.3 +0.4**
baz=48,SNR=6.4
MONP Monument Peak 48.00 297 ⇑P **P 02 06 01.8 +1.1**
baz=48
Q11A Duckwater 48.02 305 ⇑P **P 02 06 00.7 0.0**
baz=48,SNR=18
ELK Elko 48.03 308 P **P 02 06 01.1 +0.4**
comp=Z,21nm,1.1s,mb5.1,baz=93,slow=5.5,SNR=55
ELK Elko 48.03 308 *eP* **P 02 06 00.6 -0.1**
ELK pmax pmax
comp=Z,51nm,1.3s
ELK Elko 48.03 308 *eP* **P 02 06 00.6 -0.1**
comp=Z,51nm,1.3s,mb5.4
HLID Hailey 48.05 312 ⇓P **P 02 06 01.5 +0.7**
baz=48
HLID Hailey 48.05 312 *eP* **P 02 06 01.2 +0.4**
comp=Z,31nm,1.2s,mb5.2
C15A Salmond Ranch, 48.05 318 ⇓P **P 02 06 00.7 0.0**
baz=48,SNR=21
HEC Hector,Ludlow 48.07 300 ⇑P **P 02 06 02.1 +0.9**
baz=48
PFO Pinyon Flat Ob 48.08 298 P **P 02 06 01.1 -0.1**
comp=Z,2.5nm,0.8s,mb4.3,baz=280,slow=2.5,SNR=5.6
PFO PcP PcP 02 07 29.0 +0.1
comp=Z,5.5nm,0.7s,baz=101,slow=5.2,SNR=5.5
PFO Pinyon Flat Ob 48.08 298 *eP* **P 02 06 02.2 +1.0**
PFO pmax pmax
comp=Z,25nm,1.4s,mb5.0
PFO Pinyon Flat Ob 48.08 298 *eP* **P 02 06 02.2 +1.0**
comp=Z,25nm,1.4s,mb5.0
L12A House Creek Ra 48.15 310 ⇑P **P 02 06 01.6 -0.1**
baz=48,SNR=12
K12A Draper Farm, C 48.18 310 ⇑P **P 02 06 02.0 +0.2**
baz=48,SNR=21
H13A Challis 48.19 313 ⇓P **P 02 06 01.9 0.0**
baz=48,SNR=14
E14A Clinton 48.19 316 ⇑P **P 02 06 02.1 +0.2**
baz=48
B15A Bradely Ranch, 48.20 318 ⇑P **P 02 06 01.7 -0.2**
baz=48,SNR=7.2
P11A Circle Ranch, 48.21 306 ⇓P **P 02 06 02.7 +0.6**
baz=48
TPNV Topopah Spring 48.22 303 ⇑P **P 02 06 03.2 +1.0**
baz=48
TPNV Topopah Spring 48.22 303 *eP* **P 02 06 02.9 +0.6**
TPNV pmax pmax
comp=Z,24nm,1.0s,mb5.2
TPNV Topopah Spring 48.22 303 *eP* **P 02 06 02.9 +0.7**
comp=Z,24nm,1.0s,mb5.2
U10A Ash Meadows, A 48.22 302 ⇑P **P 02 06 02.9 +0.6**
baz=48,SNR=13
O11A Cowboy Ranch, 48.23 307 ⇓P **P 02 06 02.6 +0.3**
baz=48,SNR=61
G13A Cobalt 48.31 314 ⇓P **P 02 06 03.2 +0.4**
baz=48
D14A Greenough 48.40 317 ⇑P **P 02 06 03.2 -0.3**
baz=48
N11A Elko Archery C 48.41 308 ⇑P **P 02 06 03.3 -0.4**
baz=48,SNR=5.7
R10A Warm Springs 48.44 304 ⇓P **P 02 06 04.5 +0.6**
baz=48,SNR=13
J12A Stokes Ranch, 48.45 311 ⇓P **P 02 06 04.0 +0.1**
baz=48,SNR=18
GSC Goldstone 48.50 300 ⇑P **P 02 06 05.2 +0.8**
baz=48
GSC Goldstone 48.50 300 *eP* **P 02 06 05.1 +0.7**
GSC pmax pmax
comp=Z,31nm,1.2s,mb5.2
GSC Goldstone 48.50 300 *eP* **P 02 06 05.1 +0.7**
comp=Z,31nm,1.2s,mb5.2
A15A Johnson Ranch, 48.53 319 ⇓P **P 02 06 04.0 -0.5**
baz=49,SNR=9.8
F13A Darby 48.57 315 ⇓P **P 02 06 05.0 +0.2**
baz=49,SNR=7.4
M11A Holland Ranch, 48.57 309 ⇓P **P 02 06 05.4 +0.5**
baz=49,SNR=33
Q10A Clear Creek Ra 48.59 305 ⇑P **P 02 06 05.2 +0.2**
baz=49,SNR=11
H12A Diamond D Ranc 48.60 313 ⇓P **P 02 06 05.2 +0.1**
baz=49
S10A Tonopah Range, 48.62 304 ⇑P **P 02 06 06.0 +0.7**
baz=49,SNR=38
SFJD Kangerlussuaq 48.63 7 P **P 02 06 04.1 -0.8**
comp=Z,6.5nm,0.7s,mb4.8,baz=195,slow=6.7,SNR=3.5
FURC Furnace Creek, 48.65 302 ⇓P **P 02 06 06.2 +0.6**
baz=49
E13A Victor 48.66 316 ⇑P **P 02 06 05.8 +0.3**
baz=49,SNR=13
L11A Cat Creek Ranc 48.69 310 ⇓P **P 02 06 05.8 0.0**
baz=49,SNR=26
MURC Murrieta 48.70 298 ⇓P **P 02 06 06.1 +0.1**
baz=49
O10A Cortez Mining, 48.90 307 ⇓P **P 02 06 07.7 +0.3**
baz=49
A14A Double T Ranch 48.96 319 ⇑P **P 02 06 06.8 -1.0**
baz=49,SNR=6.4
N10A Dunphy 48.97 308 ⇓P **P 02 06 08.0 0.0**
baz=49,SNR=6.0
MFID Camas Ranch 49.01 311 ⇑P **P 02 06 08.2 -0.1**
baz=49,SNR=18
K11A Parker Ranch, 49.02 310 ⇑P **P 02 06 08.2 -0.1**
baz=49,SNR=7.2
D13A Huson 49.03 316 ⇓P **P 02 06 07.6 -0.7**
baz=49,SNR=7.1
R09A Tonah 49.03 304 ⇓P **P 02 06 08.6 +0.1**
baz=49,SNR=19
S09A Goldfield 49.09 304 ⇓P **P 02 06 08.9 0.0**
baz=49,SNR=20
GRAC Grapevine Rang 49.12 303 ⇓P **P 02 06 09.5 +0.3**
baz=49
MPMC Manual Prospec 49.12 301 ⇓P **P 02 06 09.5 +0.3**
baz=49
TPH Tonopah 49.13 304 *eP* **P 02 06 09.3 +0.1**
TPH pmax pmax
comp=Z,45nm,1.4s,mb5.3
TPH Tonopah 49.13 304 *eP* **P 02 06 09.3 +0.1**
comp=Z,45nm,1.4s,mb5.3
M10A I.L. Ranch, Tu 49.14 309 ⇑P **P 02 06 09.6 +0.4**
baz=49,SNR=8.6
L10A Juniper Basin 49.20 309 ⇑P **P 02 06 09.7 0.0**
baz=49,SNR=38
P09A Austin 49.26 306 ⇓P **P 02 06 10.5 +0.3**
baz=49,SNR=5.5
C13A Hot Springs 49.28 317 ⇑P **P 02 06 10.0 -0.2**
baz=49,SNR=8.4
O09A Fish Creek Ran 49.40 307 ⇑P **P 02 06 11.2 -0.1**
baz=49,SNR=20
B13A Whitefish 49.42 318 ⇑P **P 02 06 10.7 -0.6**
baz=50
EDW2 Edwards Air Fo 49.43 300 ⇓P **P 02 06 12.0 +0.4**
baz=49
H11A Donnelly 49.44 313 ⇑P **P 02 06 10.9 -0.5**
baz=50,SNR=6.4
BMN Battle Mountai 49.46 307 *eP* **P 02 06 11.6 -0.1**
BMN pmax pmax
comp=Z,55nm,1.3s,mb5.4
BMN Battle Mountai 49.46 307 *eP* **P 02 06 11.6 -0.1**
comp=Z,55nm,1.3s,mb5.4
BSMT Bassoo Peak 49.47 317 P **P 02 06 11.5 -0.1**
A13A Flathead Natio 49.56 319 ⇓P **P 02 06 12.0 -0.4**
baz=50
K10A MacKenzie Ranc 49.62 310 ⇑P **P 02 06 12.8 -0.1**
baz=50,SNR=22
J10A Berg Farm, Mel 49.68 311 ⇑P **P 02 06 13.3 -0.1**
baz=50,SNR=11
N09A Rock Creek Ran 49.76 308 ⇓P **P 02 06 13.9 -0.1**
baz=50,SNR=20
Q08A Gabbs 49.78 305 ⇑P **P 02 06 14.3 +0.1**
baz=50,SNR=5.8
G11A Walters Elk Ra 49.78 314 ⇓P **P 02 06 13.7 -0.4**
baz=50,SNR=5.3
M09A Marrel Ranch, 49.80 308 ⇑P **P 02 06 14.0 -0.3**
baz=50,SNR=7.3
F11A Grangeville 49.83 314 ⇓P **P 02 06 14.4 0.0**
baz=50,SNR=14
ISA Isabella 49.88 301 ⇑P **P 02 06 15.3 +0.3**
baz=50
H10A Noah's Angus R 49.92 313 ⇑P **P 02 06 14.5 -0.7**
baz=50
E11A Bogner Ranch, 49.98 315 ⇑P **P 02 06 15.0 -0.6**
baz=50,SNR=19
NVAR Mina Array Bea 50.02 304 P **P 02 06 16.3 +0.3**
comp=Z,7.5nm,0.8s,mb4.8,baz=95,slow=6.4,SNR=48
NVAR ScP ScP 02 11 25.2 -5.0
comp=Z,0.3nm,0.5s,baz=108,slow=5.9,SNR=2.5
NVAR Mina Array Bea 50.02 304 P **P 02 06 16.3 +0.3**
NVAR ScP ScP 02 11 25.2 -5.0
L09A Wilkinson Ranc 50.06 309 ⇑P **P 02 06 16.2 0.0**
baz=50,SNR=19
O08A Rochester Mine 50.15 307 ⇑P **P 02 06 16.6 -0.3**
baz=50,SNR=16
B12A Libby 50.16 318 ⇓P **P 02 06 16.6 -0.3**
baz=50
N08A GE Springer Mi 50.20 307 ⇓P **P 02 06 17.1 -0.3**
baz=50,SNR=51
K09A Rome 50.23 310 ⇑P **P 02 06 17.5 0.0**
baz=50,SNR=31
D11A Klaveano Farm, 50.25 316 ⇑P **P 02 06 17.2 -0.3**
baz=50,SNR=12
G10A Bishop Farm, J 50.34 313 ⇓P **P 02 06 17.9 -0.4**
baz=50,SNR=6.6
A12A Yaak River Ran 50.34 318 ⇓P **P 02 06 18.1 -0.2**
baz=50
MLAC Mammoth Lakes 50.35 303 ⇓P **P 02 06 18.7 +0.2**
baz=50
J09A Fry Pan Ranch, 50.37 311 ⇑P **P 02 06 18.1 -0.5**
baz=50,SNR=7.0
VES Vestal, Richgr 50.39 301 ⇓P **P 02 06 19.0 +0.1**
baz=50
I09A Lost Marbles R 50.49 312 ⇑P **P 02 06 19.0 -0.5**
baz=50
M08A Happy Creek Ra 50.49 308 ⇓P **P 02 06 19.6 +0.1**
baz=50,SNR=13
RCTC Rector, Farmer 50.55 302 ⇓P **P 02 06 20.3 +0.2**
baz=50
H09A Durkee 50.58 312 ⇓P **P 02 06 19.8 -0.3**
baz=51
L08A Fields 50.59 309 ⇑P **P 02 06 20.0 -0.3**
baz=51,SNR=29
B11A Sandpoint 50.65 317 ⇑P **P 02 06 20.0 -0.6**
baz=51,SNR=9.7
O07A Toulon 50.67 307 ⇑P **P 02 06 20.4 -0.6**
baz=51,SNR=23
K08A Mann Creek Ran 50.78 310 ⇓P **P 02 06 21.6 -0.1**
baz=51
G09A Cove 50.79 313 ⇓P **P 02 06 21.4 -0.3**
baz=51,SNR=5.4
A11A Hall Mountain, 50.80 318 ⇑P **P 02 06 21.7 0.0**
baz=51
N07B Gerlach 50.83 307 ⇓P **P 02 06 21.8 -0.3**
baz=51,SNR=19
D10A Wagner Farm, O 50.87 316 ⇓P **P 02 06 22.2 -0.1**
baz=51,SNR=8.1
J08A Circle Bar Ran 50.89 311 ⇑P **P 02 06 22.1 -0.4**
baz=51,SNR=13
R06C Coleville 50.92 304 ⇓P **P 02 06 23.0 +0.2**
baz=51,SNR=7.6
I08A Drewsey 51.06 311 ⇑P **P 02 06 23.9 +0.1**
baz=51
M07A Soldier Meadow 51.07 308 ⇑P **P 02 06 23.8 -0.1**
baz=51,SNR=20
NEW Newport 51.09 317 *eP* **P 02 06 22.2 -1.7**
NEW pmax pmax
comp=Z,37nm,1.0s
NEW Newport 51.09 317 *eP* **P 02 06 22.2 -1.7**
comp=Z,37nm,1.0s,mb5.3
SMMC Simmler 51.10 300 ⇓P **P 02 06 24.8 +0.6**
baz=51
H08A Prairie City 51.25 312 ⇓P **P 02 06 25.2 0.0**
baz=51,SNR=14
E09A Wood Farm, Sta 51.32 315 ⇓P **P 02 06 25.6 0.0**
baz=51
K07A Rock Creek Ran 51.33 310 ⇓P **P 02 06 25.9 +0.1**
baz=51
O06A Flanigan 51.40 306 ⇓P **P 02 06 26.1 -0.2**
baz=51
N06A Buffalo Meadow 51.48 307 ⇓P **P 02 06 26.5 -0.5**
baz=52,SNR=16
A10A Northport 51.56 318 ⇓P **P 02 06 26.9 -0.6**
baz=52
F08A Pendleton 51.59 314 ⇓P **P 02 06 27.3 -0.4**
baz=52
G08A Pilot Rock 51.61 313 ⇓P **P 02 06 27.9 0.0**
baz=52
I07A Izee 51.76 311 ⇑P **P 02 06 28.5 -0.5**
baz=52,SNR=10
BEKR Beckwourth 51.77 306 ⇓P **P 02 06 28.6 -0.5**
baz=52
B09A Rice 51.79 317 ⇓P **P 02 06 28.7 -0.5**
baz=52
H07A Lands Inn, Kim 51.89 312 ⇑P **P 02 06 29.8 -0.2**
baz=52,SNR=5.8
OD2 Odessa Site #2 51.90 316 P **P 02 06 29.5 -0.6**
D08A Wollman Farm, 51.96 315 ⇑P **P 02 06 30.2 -0.3**
baz=52
J06A Christmas Vall 52.08 310 ⇓P **P 02 06 30.9 -0.5**
baz=52
G07A Ruggs Ranch, H 52.09 313 ⇑P **P 02 06 31.1 -0.3**
baz=52
A09A Danville 52.21 318 ⇑P **P 02 06 31.4 -0.8**
baz=52,SNR=6.0
C08A Higginbotham F 52.21 316 ⇓P **P 02 06 31.6 -0.8**
baz=52,SNR=6.2
I06A Prineville 52.23 311 ⇑P **P 02 06 32.7 +0.1**
baz=52,SNR=7.6
H06A Lindquist Farm 52.46 312 ⇓P **P 02 06 33.8 -0.4**
baz=52
E07A Sunnyside 52.48 314 ⇓P **P 02 06 33.9 -0.4**
baz=52
FCH Farellones 52.51 186 ⇓*eP* **P 02 06 33.5 -1.1**
B08A Colville Reser 52.54 317 ⇑P **P 02 06 33.6 -1.1**
baz=53
A08A Turner Farm, O 52.64 317 ⇑P **P 02 06 34.8 -0.7**
baz=53,SNR=5.3
D07A Quincy 52.69 315 ⇑P **P 02 06 35.4 -0.5**
baz=53
G06A Carlson Farm, 52.76 313 ⇑P **P 02 06 36.7 +0.3**
baz=53
F06A Goldendale 52.95 313 ⇓P **P 02 06 37.9 0.0**
baz=53
B07A Winthrop 53.07 317 ⇓P **P 02 06 38.4 -0.3**
baz=53
A07A Ashnola River, 53.38 317 ⇓P **P 02 06 40.4 -0.5**
baz=53,SNR=6.9
F05A White Salmon 53.44 313 ⇓P **P 02 06 41.7 +0.3**
baz=54
BUOR Burton Butte 53.47 309 P **P 02 06 42.0 +0.3**
YBH Yreka Blue Hor 53.75 308 P **P 02 06 42.5 -1.3**
comp=Z,17nm,0.8s,mb5.0,baz=63,slow=3.4,SNR=24
BORG Borgarnes 53.83 21 LR LR 02 25 19.7
comp=Z,448nm,18.4s,MS4.6,baz=293,slow=31
MDT Midelt 55.01 63 P **P 02 06 52.6 -0.5**
comp=Z,9.6nm,1.2s,mb4.7,baz=263,slow=6.8,SNR=8.4
MDT LR LR 02 28 04.8
comp=Z,692nm,18.1s,MS4.8,baz=259,slow=33
YKA Yellowknife Ar 55.10 334 P **P 02 06 51.1 -2.1**
comp=Z,7.9nm,0.7s,mb4.9,baz=111,slow=7.6,SNR=127
YKA LR LR 02 30 49.0
comp=Z,443nm,18.2s,MS4.6,baz=130,slow=36
SUMG Summit 55.45 9 *eP* **P 02 06 55.4 -0.2**
comp=Z,59nm,1.1s,mb5.5
ESDC Sonseca Array 55.62 55 P **P 02 06 55.5 -1.9**
comp=Z,1.7nm,0.7s,mb4.2,baz=274,slow=7.5,SNR=8.0
ESDC LR LR 02 25 26.8
comp=Z,379nm,18.7s,MS4.5,baz=220,slow=30
ROSF Rostrenen 56.95 44 *eP* **P 02 07 09.3 +2.6**
TRQA Tornquist 57.01 177 *eP* **P 02 07 06.3 -0.8**
comp=Z,8.0nm,1.0s,mb4.7
RES Resolute Bay 57.84 351 P **P 02 07 10.9 -1.7**
comp=Z,2.4nm,0.7s,mb4.3,baz=164,slow=10,SNR=7.0
RES Resolute Bay 57.84 351 *eP* **P 02 07 10.0 -2.6**
RES pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
RES Resolute Bay 57.84 351 *eP* **P 02 07 10.0 -2.6**
comp=Z,5.5nm,0.7s,mb4.7
EKA Eskdalemuir Ar 58.28 36 P **P 02 07 14.9 -1.0**
comp=Z,3.3nm,1.0s,mb4.3,baz=274,slow=8.2,SNR=4.0
ETSF Etsaut 58.34 51 *eP* **P 02 07 19.3 +2.7**
GRR Gorron 58.56 45 *eP* **P 02 07 20.3 +2.3**
comp=Z,34nm,0.9s,mb5.1
GRR Gorron 58.56 45 *eP* **P 02 07 20.3 +2.3**

GRR pmax pmax
comp=Z,17nm,0.9s,mb5.1
GRR Gorron 58.56 45 *e*P **P 02 07 20.3 +2.3**
comp=Z,17nm,0.9s,mb5.1
FLN La Foliniere 58.85 44 *e*P **P 02 07 22.5 +2.5**
comp=Z,29nm,0.8s,mb5.0
FLN *e*MLR MLR
comp=Z,298nm,19.5s,MS4.1
FLN La Foliniere 58.85 44 *e*P **P 02 07 22.5 +2.5**
FLN pmax pmax
comp=Z,15nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,300nm,19.5s,MS4.4
FLN La Foliniere 58.85 44 *e*P **P 02 07 22.5 +2.5**
comp=Z,15nm,0.8s,mb5.1
FLN LR LR
comp=Z,300nm,19.5s,MS4.4
MFF Saint Martin d 58.87 47 *e*P **P 02 07 22.4 +2.2**
EPF Esparros 59.01 51 *e*P **P 02 07 20.1 -1.1**
comp=Z,35nm,1.1s,mb5.0
EPF Esparros 59.01 51 *e*P **P 02 07 20.1 -1.1**
EPF pmax pmax
comp=Z,17nm,1.1s,mb5.0
EPF Esparros 59.01 51 *e*P **P 02 07 20.1 -1.1**
comp=Z,17nm,1.1s,mb5.0
LDF La Druitiere 59.07 44 *e*P **P 02 07 24.0 +2.4**
comp=Z,22nm,0.8s,mb4.9
LDF La Druitiere 59.07 44 *e*P **P 02 07 24.0 +2.4**
LDF pmax pmax
comp=Z,11nm,0.8s,mb4.9
LDF La Druitiere 59.07 44 *e*P **P 02 07 24.0 +2.4**
comp=Z,11nm,0.8s,mb4.9
TIC Toumodi 59.22 94 *e*P **P 02 07 22.1 -1.1**
comp=Z,116nm,1.1s,mb5.8
LIC Lamto 59.34 94 *e*P **P 02 07 22.9 -1.1**
comp=Z,52nm,1.0s,mb5.5
LIC Lamto 59.34 94⇑*i*P **P 02 07 23.1 -0.9**
LIC *e*MLR MLR
comp=Z,642nm,17.0s,MS4.5
LIC Lamto 59.34 94⇑*i*P **P 02 07 23.1 -0.9**
comp=Z,19nm,1.0s,mb5.1
LIC LR LR
comp=Z,320nm,17.0s,MS4.5
DBIC Dimbokro 59.36 94 P **P 02 07 23.4 -0.8**
comp=Z,17nm,0.9s,mb5.1,baz=278,slow=6.5,SNR=24
DBIC LR LR 02 31 11.1
comp=Z,615nm,18.1s,MS4.8,baz=262,slow=34
DBIC Dimbokro 59.36 94 *e*P **P 02 07 23.1 -1.1**
DBIC pmax pmax
comp=Z,18nm,0.9s
DBIC Dimbokro 59.36 94 *e*P **P 02 07 23.1 -1.1**
comp=Z,18nm,0.9s,mb5.1
LFF La Frestale 59.38 49 *e*P **P 02 07 26.3 +2.5**
KIC Kosan Boka 59.57 94 *e*P **P 02 07 24.7 -0.9**
comp=Z,95nm,1.1s,mb5.7
RJF Les Rejaudoux 59.95 48 *e*P **P 02 07 30.0 +2.3**
RJF *e*MLR MLR
comp=Z,363nm,18.5s,MS4.2
RJF Les Rejaudoux 59.95 48 *e*P **P 02 07 30.0 +2.3**
RJF LR LR
comp=Z,360nm,18.5s,MS4.5
CAF Calviac 60.32 49 *e*P **P 02 07 32.8 +2.6**
comp=Z,51nm,1.3s,mb5.1
CAF Calviac 60.32 49 *e*P **P 02 07 32.8 +2.6**
CAF pmax pmax
comp=Z,26nm,1.3s,mb5.1
CAF Calviac 60.32 49 *e*P **P 02 07 32.8 +2.6**
comp=Z,26nm,1.3s,mb5.1
MTLF Montolieu 60.39 51 *e*P **P 02 07 33.0 +2.3**
TCF Toulx Ste Croi 60.48 47 *e*P **P 02 07 33.5 +2.2**
comp=Z,27nm,1.0s,mb4.9
TCF Toulx Ste Croi 60.48 47 *e*P **P 02 07 33.5 +2.2**
TCF pmax pmax
comp=Z,13nm,1.0s,mb4.9
TCF Toulx Ste Croi 60.48 47 *e*P **P 02 07 33.5 +2.2**
comp=Z,13nm,1.0s,mb4.9
BGF Bois d'Agland 60.93 47 *e*P **P 02 07 36.8 +2.4**
AVF Avril sur Loir 61.28 47 *e*P **P 02 07 39.5 +2.7**
comp=Z,27nm,1.1s,mb5.0
AVF Avril sur Loir 61.28 47 *e*P **P 02 07 39.5 +2.7**
AVF pmax pmax
comp=Z,14nm,1.1s,mb5.0
AVF Avril sur Loir 61.28 47 *e*P **P 02 07 39.5 +2.7**
comp=Z,14nm,1.1s,mb5.0
SSF Saint Saulge 61.40 46 *e*P **P 02 07 39.5 +1.9**
comp=Z,24nm,1.2s,mb4.9
SSF Saint Saulge 61.40 46 *e*P **P 02 07 39.5 +1.9**
SSF pmax pmax
comp=Z,12nm,1.2s,mb4.9
SSF Saint Saulge 61.40 46 *e*P **P 02 07 39.5 +1.9**
comp=Z,12nm,1.2s,mb4.9
LASF Ste Croix 61.58 50 *e*P **P 02 07 40.7 +1.8**
comp=Z,32nm,1.2s,mb5.0
SMF Signal de Mont 61.62 47 *e*P **P 02 07 42.0 +3.0**
comp=Z,36nm,1.2s,mb5.1
SMF Signal de Mont 61.62 47 *e*P **P 02 07 42.0 +3.0**
SMF pmax pmax
comp=Z,18nm,1.2s,mb5.1
SMF Signal de Mont 61.62 47 *e*P **P 02 07 42.0 +3.0**
comp=Z,18nm,1.2s,mb5.1
LOR Lormes 61.65 46 *e*P **P 02 07 42.0 +2.8**
comp=Z,16nm,0.8s,mb4.9
LOR *e*MLR MLR
comp=Z,477nm,18.8s,MS4.4
LOR Lormes 61.65 46 *e*P **P 02 07 42.0 +2.8**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,480nm,18.8s,MS4.7
LOR Lormes 61.65 46 *e*P **P 02 07 42.0 +2.8**
comp=Z,7.8nm,0.8s,mb4.9
LOR LR LR
comp=Z,480nm,18.8s,MS4.7
BAIF Baives 62.01 43 *e*P **P 02 07 43.9 +2.3**
comp=Z,32nm,1.2s,mb5.0
BAIF Baives 62.01 43 *e*P **P 02 07 43.9 +2.3**
BAIF pmax pmax
comp=Z,16nm,1.2s,mb5.0
BAIF Baives 62.01 43 *e*P **P 02 07 43.9 +2.3**
comp=Z,16nm,1.2s,mb5.0
VIVF Saint-Julien-l 62.17 49 *e*P **P 02 07 45.8 +3.0**
comp=Z,48nm,1.2s,mb5.2
VIVF Saint-Julien-l 62.17 49 *e*P **P 02 07 45.8 +3.0**
VIVF pmax pmax
comp=Z,24nm,1.2s,mb5.2
VIVF Saint-Julien-l 62.17 49 *e*P **P 02 07 45.8 +3.0**
comp=Z,24nm,1.2s,mb5.2
GIVF Givet 62.40 43 *e*P **P 02 07 46.2 +1.9**
MEZF Maizieres J'vi 62.49 45 *e*P **P 02 07 47.2 +2.3**
comp=Z,53nm,1.0s,mb5.3
MEZF Maizieres J'vi 62.49 45 *e*P **P 02 07 47.2 +2.3**
comp=Z,53nm,1.0s,mb5.6
SMRF Simiane la Rot 62.82 50 *e*P **P 02 07 49.3 +2.1**
ORIF Oris-en-Rattie 63.03 49 *e*P **P 02 07 50.9 +2.4**
comp=Z,46nm,1.4s,mb5.1
ORIF *e*MLR MLR
comp=Z,312nm,21.5s,MS4.2
ORIF Oris-en-Rattie 63.03 49 *e*P **P 02 07 50.9 +2.4**
ORIF pmax pmax
comp=Z,23nm,1.4s,mb5.1
ORIF Oris-en-Rattie 63.03 49 *e*P **P 02 07 50.9 +2.4**
comp=Z,23nm,1.4s,mb5.1
CABF La Chapelle 63.16 47 *e*P **P 02 07 52.2 +2.8**
HAU Haudompre 63.35 45 *e*P **P 02 07 53.3 +2.7**
HAU *e*MLR MLR
comp=Z,386nm,19.0s,MS4.3
HAU Haudompre 63.35 45 *e*P **P 02 07 53.3 +2.7**
HAU LR LR
comp=Z,390nm,19.0s,MS4.6
ALE Alert 63.38 0 P **P 02 07 48.0 -2.3**
comp=Z,214nm,0.9s,mb6.3,SNR=5.8
LMR La Mourre 63.52 51 *e*P **P 02 07 53.8 +2.0**
FRF La Foret Royal 63.61 50 *e*P **P 02 07 54.3 +1.9**
comp=Z,47nm,1.2s,mb5.1
FRF La Foret Royal 63.61 50 *e*P **P 02 07 54.3 +1.9**
FRF pmax pmax
comp=Z,24nm,1.2s,mb5.1
FRF La Foret Royal 63.61 50 *e*P **P 02 07 54.3 +1.9**
comp=Z,24nm,1.2s,mb5.1
LPL La Plagne 63.62 48 *e*P **P 02 07 55.3 +2.9**
comp=Z,24nm,1.2s,mb4.8
LPL La Plagne 63.62 48 *e*P **P 02 07 55.3 +2.9**
LPL pmax pmax
comp=Z,12nm,1.2s,mb4.8
LPL La Plagne 63.62 48 *e*P **P 02 07 55.3 +2.9**
comp=Z,12nm,1.2s,mb4.8
LPG La Plagne 63.63 48 *e*P **P 02 07 55.3 +2.8**
comp=Z,28nm,1.2s,mb4.9
LPG La Plagne 63.63 48 *e*P **P 02 07 55.3 +2.8**
LPG pmax pmax
comp=Z,14nm,1.2s,mb4.9
LPG La Plagne 63.63 48 *e*P **P 02 07 55.3 +2.8**
comp=Z,14nm,1.2s,mb4.9
MBDF Montbardon 63.66 49 *e*P **P 02 07 55.3 +2.6**
comp=Z,70nm,1.5s,mb5.2
MBDF Montbardon 63.66 49 *e*P **P 02 07 55.3 +2.6**
MBDF pmax pmax
comp=Z,35nm,1.5s,mb5.2
MBDF Montbardon 63.66 49 *e*P **P 02 07 55.3 +2.6**
comp=Z,35nm,1.5s,mb5.2
HINF Hinteralfeld 63.69 45 *e*P **P 02 07 55.7 +2.9**
TOA0 Torodi Ar. Sit 63.72 84 *e*P **P 02 07 52.0 -1.6**
TORD Torodi Ar. Bea 63.72 84 P **P 02 07 52.2 -1.3**
comp=Z,7.0nm,0.9s,mb4.7,baz=279,slow=6.2,SNR=24
TORD LR LR 02 34 40.0
comp=Z,937nm,18.6s,MS5.0,baz=275,slow=35
TORD Torodi Ar. Bea 63.72 84 P **P 02 07 52.2 -1.3**
TORD LR LR 02 34 40.0
CDF Champ du Feu 63.97 45 *e*P **P 02 07 57.7 +3.0**
SBF Sospel 64.17 50 *e*P **P 02 07 57.7 +1.6**
INK Inuvik 64.51 337 *e*P **P 02 07 55.5 -2.4**
INK pmax pmax
comp=Z,38nm,1.2s
INK Inuvik 64.51 337 *e*P **P 02 07 55.5 -2.4**
comp=Z,38nm,1.2s,mb5.3
TAM Tamanrasset 65.08 73 *e*P **P 02 08 03.1 +0.7**
TAM pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
TAM Tamanrasset 65.08 73 *e*P **P 02 08 03.1 +0.7**
comp=Z,8.5nm,1.0s,mb4.7
DAVOX Davos/Dischmat 65.77 47 LR LR 02 33 48.2
comp=Z,260nm,19.2s,MS4.5,baz=284,slow=33
DAWY Dawson 66.22 332 *e*P **P 02 08 07.7 -1.3**
KEST Kesra 66.31 59 P **P 02 08 09.8 -0.3**
comp=Z,2.8nm,0.9s,mb4.3,baz=272,slow=3.6,SNR=9.5
KEST LR LR 02 31 56.2
comp=Z,183nm,21.4s,MS4.3,baz=257,slow=31
FETA Feichten 66.34 46⇓*i*P **P 02 08 13.4 +3.3**
comp=Z,18nm,1.1s,mb5.0
GRA1 Grafenberg Arr 66.54 43 *e*P **P 02 08 14.2 +2.9**
comp=Z,9.0nm,1.2s,mb4.7
GRA1 LR LR
comp=Z,300nm,22.0s,MS4.5
GRF Grafenberg Arr 66.54 43 *e*P **P 02 08 14.2 +2.9**
GRF pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
GRF MLR MLR
comp=Z,300nm,22.0s,MS4.5
GRF Grafenberg Arr 66.54 43 *e*P **P 02 08 14.2 +2.9**
comp=Z,9.0nm,1.2s,mb4.7
GRF *e*L 02 30 55.7
comp=Z,255nm,22.0s
NB2 NORSAR Subarra 66.56 31 P **P 02 08 13.6 +2.3**
comp=Z,8.8nm,1.1s,mb4.7,baz=269,slow=6.9
NOA NORSAR Array B 66.56 31 P **P 02 08 10.0 -1.3**
comp=Z,0.7nm,0.8s,mb3.7,baz=311,slow=24,SNR=2.3
NOA LR LR 02 34 29.9
comp=Z,530nm,18.8s,MS4.8,baz=275,slow=33
EGAK Eagle 67.04 333 *e*P **P 02 08 12.6 -1.6**
comp=Z,15nm,1.0s,mb5.0
NKC Novy Kostel 67.30 43 *e*P pP 02 08 24.1 +0.6
NKC *ex* x 02 08 31.8
NKC AMS AMS 02 39 00.0
comp=Z,500nm,19.6s
NKC Novy Kostel 67.30 43 *e*P pP 02 08 24.1 +0.6
NKC *e* 02 08 31.8
CLL Collm 67.60 42 *e*P pP 02 08 26.0 +0.7
CLL *e* 02 08 33.0
CLL *e*S S 02 17 08.0 -5.6
CLL MLR MLR
comp=Z,400nm,21.2s,MS4.6
CLL Collm 67.60 42 *e*P **P 02 08 21.0 +3.0**
CLL *ex* x 02 08 33.0
CLL *ex* x 02 08 43.0
CLL *e*S S 02 17 13.0 -0.6
CLL *e*PPS 02 17 47.0
CLL *e*SS SS 02 21 48.0 +14
CLL *ex* x 02 23 06.0
CLL *e*SSS 02 24 54.0
CLL Lm 02 32 00.0
comp=Z,400nm,21.2s
MENT Mentasta 68.10 331 *e*P **P 02 08 20.1 -0.8**
KHC Kasperske Hory 68.11 44 *e*P pP 02 08 28.7 +0.1
KHC *ex* x 02 08 37.4
KHC AMS AMS 02 43 20.0
comp=Z,500nm,20.3s
GERES GERESS Array B 68.21 44 P **P 02 08 20.3 -1.6**
comp=Z,1.2nm,0.6s,mb4.1,baz=270,slow=4.0,SNR=5.9
GERES LR LR 02 34 20.9
comp=Z,279nm,20.2s,MS4.5,baz=28,slow=32
BRG Berggiesshubel 68.22 42 *e*P **P 02 08 21.4 -0.5**
BRG *e* 02 08 30.5
BRG S S 02 17 24.0 +3.0
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
BRG pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BRG MLR MLR
comp=N,195nm,19.4s,MS4.5
BRG MLR MLR
comp=E,192nm,21.2s,MS4.5
BRG MLR MLR
comp=Z,264nm,25.8s,MS4.3
BRG Berggiesshubel 68.22 42 *e*P **P 02 08 21.4 -0.5**
comp=Z,2.3nm,1.0s,mb4.2
BRG *e* 02 08 30.5
comp=Z,6.2nm,1.3s
BRG *e* 02 08 37.8
comp=Z,7.2nm,1.0s
BRG S S 02 17 24.0 +3.0
BRG
comp=N,326nm,19.4s
BRG
comp=E,321nm,21.2s
BRG
comp=Z,441nm,25.8s
BRG Berggiesshubel 68.22 42 *e*P **P 02 08 21.4 -0.5**
comp=Z,1.4nm,1.0s,mb4.0
BRG *e* 02 08 30.5
BRG *e* 02 08 37.8
BRG S S 02 17 24.0 +3.0
BRG LR LR
comp=Z,260nm,25.8s,MS4.3
PRU Pruhonice 68.67 43 *e*P **P 02 08 28.0 +3.3**
PRU *ex* x 02 08 40.4
PRU AMS AMS 02 39 50.0
comp=Z,500nm,16.2s
TREC Trest 69.34 44 *e*P **P 02 08 35.4 +6.5**
TREC AMS AMS 02 41 20.0
comp=Z,500nm,16.9s
SPITS Spitsbergen Ar 69.50 13 P **P 02 08 26.8 -2.7**
comp=Z,10.0nm,1.0s,mb4.7,baz=254,slow=14,SNR=2.0
SPITS LR LR 02 37 55.1
comp=Z,614nm,18.7s,MS4.9,baz=185,slow=35
DPC Dobruska-Polom 69.77 42 *e*P **P 02 08 34.0 +2.4**
COLA College 69.90 333 *e*P **P 02 08 29.7 -2.4**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
COLA College 69.90 333 *e*P **P 02 08 29.7 -2.4**
comp=Z,9.3nm,0.8s,mb4.8
VRAC Vranov 70.06 43 LR LR 02 32 50.9
comp=Z,205nm,21.9s,MS4.3,baz=296,slow=30
VAE Valguarnera 70.10 56 LR LR 02 32 52.8
comp=Z,383nm,20.6s,MS4.6,baz=203,slow=30
MCK McKinley 70.43 332 *e*P **P 02 08 33.2 -2.2**
MCK pmax pmax
comp=Z,16nm,1.2s,mb4.8
MCK McKinley 70.43 332 *e*P **P 02 08 33.2 -2.2**
comp=Z,16nm,1.2s,mb4.8
COLD Coldfoot 70.74 336 *e*P **P 02 08 35.5 -1.7**
comp=Z,14nm,1.3s,mb4.7
TRF Thorofare Moun 71.06 332 *e*P **P 02 08 37.8 -1.4**
comp=Z,24nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 71.31 332 *e*P **P 02 08 38.7 -2.0**
comp=Z,29nm,1.1s,mb5.1
KTH Kantishna Hill 71.33 332 *e*P **P 02 08 39.5 -1.3**
comp=Z,32nm,1.0s,mb5.2
TIP Timpagrande 71.63 54 *e*P **P 02 08 42.1 -1.0**
comp=Z,39nm,1.6s,mb5.1
PKSM Moragy 71.84 47⇓*i*P **P 02 08 43.5 -0.8**
PKSM Moragy 71.84 47⇑P **P 02 08 43.5 -0.8**
CHUM Lake Minchumin 71.91 332 *e*P **P 02 08 42.3 -2.0**
comp=Z,17nm,0.9s,mb5.0
ARCES ARCESS Array B 72.24 22 P **P 02 08 44.8 -1.5**
comp=Z,12nm,1.0s,mb4.8,baz=357,slow=6.2,SNR=5.0
ARCES LR LR 02 35 28.1
comp=Z,322nm,18.0s,MS4.6,baz=264,slow=32
ARCES ARCESS Array B 72.24 22 P **P 02 08 44.8 -1.5**
ARCES LR LR 02 35 28.1
PSZ Piszkesteto 72.42 45 *e*P **P 02 08 47.0 -0.7**
PSZ pmax pmax
comp=Z,15nm,1.3s,mb4.8
PSZ Piszkesteto 72.42 45 *e*P **P 02 08 47.0 -0.7**
comp=Z,15nm,1.3s,mb4.8
SVW2 Sparrevohn 73.83 330 *e*P **P 02 08 53.4 -2.3**
UZH Uzhgorod 73.87 44 *e*P **P 02 08 50.5 -5.8**
UZH *e* 02 09 09.5
KWP Kalwaria 73.95 43⇓P **P 02 08 57.4 +0.7**
KWP Kalwaria 73.95 43⇓*i*P **P 02 08 57.3 +0.6**
KWP Kalwaria 73.95 43⇑P **P 02 08 57.4 +0.6**
TRPA Tarpa 74.13 44⇑*i*P **P 02 08 55.9 -1.9**
DRGR 74.51 45⇓*i*P **P 02 08 59.0 -1.0**
DRGR 74.51 45⇑P **P 02 08 59.0 -1.0**
BURAR Bucovina Array 76.00 44⇓*i*P **P 02 09 08.0 -0.6**
BURAR Bucovina Array 76.00 44⇑P **P 02 09 08.0 -0.6**
MLR Muntele Rosu 76.99 46 LR LR 02 37 14.0
comp=Z,227nm,20.9s,MS4.5,baz=110,slow=31
AKASG Malin Array Be 77.79 40 P **P 02 09 16.0 -2.7**
comp=Z,0.8nm,0.6s,baz=287,slow=4.3,SNR=3.7
AKASG LR LR 02 38 45.8
comp=Z,568nm,21.5s,MS4.9,baz=295,slow=32
IDI Anoyia 78.82 56 LR LR 02 39 26.0
comp=Z,117nm,21.0s,MS4.2,baz=287,slow=32
OBN Obninsk 80.69 35 P **P 02 09 29.2 -5.2**
comp=Z,289nm,0.4s,SNR=5.3
OBN Obninsk 80.69 35 *e*P **P 02 09 37.9 +3.5**
OBN pmax pmax
comp=Z,18nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.8
PMSA Palmer Station 83.71 180 *e*P **P 02 09 48.7 -1.1**
comp=Z,19nm,1.1s,mb5.1
BR131 Keskin Array S 84.11 50 *e*P **P 02 09 52.1 -0.4**
comp=Z,3.8nm,0.8s,mb4.6
BRTR Keskin Array B 84.11 50 P **P 02 09 51.9 -0.6**
comp=Z,2.2nm,0.8s,mb4.3,baz=271,slow=3.8,SNR=9.9
BRTR LR LR 02 41 53.1
comp=Z,101nm,21.5s,MS4.2,baz=132,slow=32
BILL Bilibino 85.47 343 *e*P **P 02 09 56.3 -2.5**
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.8
BILL Bilibino 85.47 343 *e*P **P 02 09 57.3 -1.5**
comp=Z,30nm,1.4s,mb5.2
MMAI Mount Meron Ar 87.81 56 LR LR 02 47 10.7
comp=Z,74nm,19.5s,MS4.1,baz=310,slow=34
MALT Malatya 88.09 50 *e*P **P 02 10 11.1 -1.1**
MALT pmax pmax
comp=Z,1.0nm,0.5s,mb4.3
MALT Malatya 88.09 50 *e*P **P 02 10 11.1 -1.1**
comp=Z,1.1nm,0.5s,mb4.3
EIL Elat 88.66 59 P **P 02 10 14.6 -0.5**
comp=Z,7.0nm,1.0s,mb5.0,baz=315,slow=5.7,SNR=3.4
TIXI Tiksi 88.91 356 *e*P **P 02 10 13.5 -1.9**
TIXI pmax pmax
comp=Z,21nm,1.4s,mb5.3
TIXI Tiksi 88.91 356 *e*P **P 02 10 13.4 -1.9**
comp=Z,21nm,1.4s,mb5.3
TSUM Tsumeb 89.24 111 *e*P **P 02 10 16.2 -1.7**
comp=Z,9.7nm,1.3s,mb5.0
PPT Papeete 91.03 252 *e*LR LR 02 39 39.7
comp=Z,327nm,25.5s
PPT Papeete 91.03 252 LR LR 02 42 45.8
comp=Z,249nm,18.8s,MS4.7,baz=82,slow=30
FX1 Attu Island--F 92.56 329 LR LR 02 56 05.1
comp=Z,400nm,18.8s,MS4.9,baz=237,slow=38
VNA1 Neumayer--Stat 97.70 164 *e*P **P 02 10 55.9 +0.2**
VNA1 *e* pP 02 11 00.9 -2.3
VNA1 *e* 02 11 07.2
VNA1 *e* 02 11 12.3
VNA3 Neumayer Olymp 97.70 164 *e*P **P 02 10 54.9 -0.8**
VNA3 *e* pP 02 11 00.0 -3.2
VNA3 *e* 02 11 06.2
VNA3 *e* 02 11 11.8
VNA2 Neumayer--Watz 98.10 164 *e*P **P 02 10 56.7 -0.7**
baz=323,slow=7.9
VNA2 *e* 02 11 01.3
VNA2 *e* 02 11 07.2
VNA2 *e* 02 11 12.8
BOSA Boshof 98.91 117 LR LR 02 50 05.1
comp=Z,147nm,19.7s,MS4.5,baz=290,slow=32
PETK Petropavlovsk- 99.21 336 LR LR 02 58 10.2
comp=Z,380nm,18.7s,MS4.9,baz=248,slow=37
SNAA Sanae 99.73 164 *e*P Pdif 02 11 03.9 -1.4
SNAA *e* 02 11 08.8
SNAA *e* 02 11 15.2
SNAA *e* 02 11 20.8
SNAA Sanae 99.73 164 *e*P Pdif 02 11 03.9 -1.4
SNAA pmax pmax
comp=Z,8.0nm,1.1s
SNAA Sanae 99.73 164 *e*Pdif Pdif 02 11 03.9 -1.4
comp=Z,7.6nm,1.1s
MKAR Makanchi Array 107.87 23 PKKPbc PKKPbc 02 26 59.5 -3.6
comp=Z,1.0nm,0.8s,baz=145,slow=3.5,SNR=7.5
WMQ Urumqi 112.36 21 *e*PDIF Pdif 02 12 02.0 +0.5
WMQ PKP PKiKP 02 15 56.8 -0.7
WMQ PP PP 02 16 47.4 +5.4
WMQ PKS 02 19 32.3
WMQ SKKS SKKSac 02 23 37.0 -7.2
WMQ S Sdif 02 24 18.8 -4.1
WMQ SS SS 02 32 22.0 +2.2
WMQ LR LR
comp=N,198nm,21.0s,MS4.8
WMQ LR LR
comp=E,123nm,20.0s,MS4.8
WMQ LR LR
comp=Z,148nm,21.0s,MS4.5
SONM Songino Array 112.79 7 PKKPbc PKKPbc 02 26 52.2 +4.9
comp=Z,1.0nm,0.8s,baz=169,slow=4.0,SNR=6.8
MDJ Mudanjiang 115.17 349 PKP PKiKP 02 15 59.3 -3.6
HHC Hu-ho-hao-te 120.16 3 *e*PKP PKPdf 02 16 10.9 -1.7
HHC PP PP 02 17 38.4 +2.1
HHC PKS 02 19 45.6
HHC SKS SKSdf 02 23 18.0 -5.4
HHC PP PP
comp=Z,110nm,5.1s
HHC LR LR
comp=N,321nm,17.8s,MS5.1
HHC LR LR
comp=E,233nm,16.7s,MS5.1
HHC LR LR
comp=Z,354nm,17.8s,MS5.0
BJI Beijing 121.06 359 PKP PKPdf 02 16 12.0 -2.3
BJI LR LR
comp=N,169nm,25.4s,MS4.8
BJI LR LR
comp=E,195nm,25.1s,MS4.8
BJI LR LR
comp=Z,198nm,27.8s,MS4.6
MAW Mawson 121.52 159 PKP PKPdf 02 16 13.1 -1.1
comp=Z,2.5nm,0.5s,baz=213,slow=3.3,SNR=8.6
LZH Lanzhou 123.95 11 *e*PKP PKPdf 02 16 18.3 -1.7
LZH PP PP 02 18 06.3 +4.1
LZH PP PP
comp=Z,150nm,4.2s
LZH LR LR
comp=N,411nm,16.9s
LZH LR LR
comp=Z,720nm,18.9s,MS5.4
XAN Xi'an 126.70 7 PKP PKPdf 02 16 24.0 -1.3
XAN PP PP 02 18 24.5 +4.0
XAN SKS SKSdf 02 23 30.8 -5.3
XAN SKKS SKKSac 02 25 12.5 -6.2
XAN SS SS 02 35 24.9 +0.7
XAN LR LR
comp=N,106nm,17.9s,MS4.7
XAN LR LR
comp=E,92nm,19.6s,MS4.7
XAN LR LR
comp=Z,325nm,19.6s,MS5.0
NJ2 Nanjing 128.93 356 *e*PKP PKPdf 02 16 28.6 -1.0
CD2 Chengdu 128.95 13 PKP PKPdf 02 16 28.1 -1.6
CD2 PP PP 02 18 38.4 +3.0
CD2 SKS SKSdf 02 23 34.5 -5.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CD2				PP	PP		
	comp=Z,70nm,6.5s						
CD2				LR	LR		
	comp=N,320nm,19.6s						
CD2				LR	LR		
	comp=Z,330nm,21.4s,MS5.0						
GYA	**Guiyang**	**133.84**	**11**	PDIF	Pdif	02 13 35.4	-1.5
GYA				PKP	PKPdf	02 16 35.8	-3.3
GYA				PP	PP	02 19 10.4	+3.5
GYA				PKS		02 20 13.8	
GYA				SKS	SKSdf	02 23 43.0	-6.3
GYA				SS	SS	02 36 56.0	+4.0
GYA				LR	LR		
	comp=N,290nm,20.6s,MS5.0						
GYA				LR	LR		
	comp=E,180nm,21.2s,MS5.0						
GYA				LR	LR		
	comp=Z,250nm,22.0s,MS4.9						
KMI	**Kunming**	**134.27**	**16**	PKP	PKPdf	02 16 37.6	-2.3
CMAR	**Chiang Mai Arr**	**139.26**	**24**	PKP	PKPdf	02 16 48.0	-1.4
	comp=Z,1.1nm,0.3s,baz=328,slow=2.3,SNR=9.1						
QIZ	**Qiongzhong**	**141.63**	**8**	PKP	PKPdf	02 16 49.8	-3.8
QIZ				PP	PP	02 20 00.3	+4.9
QIZ				SS	SS	02 38 28.3	+4.0
QIZ				LR	LR		
	comp=E,276nm,19.5s						
QIZ				LR	LR		
	comp=Z,380nm,18.9s,MS5.2						
MOO	**Moorlands**	**144.48**	**222**	*e*P	PKPdf	02 16 56.8	-1.1
ARMA	**Armidale**	**145.34**	**244**	*e*P	PKPbc	02 16 59.5	-0.1
CNB	**Canberra Magne**	**145.95**	**235**	*e*P	PKPdf	02 17 00.9	+0.3
CAN	**Canberra**	**146.23**	**235**	*e*PKP2	PKPab	02 17 01.0	-1.9
PMG	**Port Moresby**	**147.70**	**283**	*e*PKP2	PKPab	02 17 07.0	-2.3
TOO	**Toolangi**	**147.96**	**229**	*e*P	PKPdf	02 17 04.0	+0.1
CTA	**Charters Tower**	**150.87**	**263**	*e*P	PKPdf	02 17 08.4	-0.7
	comp=Z,17nm,0.9s						
CTAO	**Charters Tower**	**150.87**	**263**	*e*PKIKP	PKPdf	02 17 08.2	-0.9
CTAO				*e*		02 17 13.4	
COEN	**Coen**	**152.82**	**277**	*e*PKPbc	PKPbc	02 17 18.7	-0.6
PSI	**Prapat**	**152.83**	**38**	PKP	PKPdf	02 17 11.2	-1.1
	comp=Z,3.4nm,0.6s,baz=341,slow=23,SNR=2.6						
PSI				PKPbc	PKPbc	02 17 16.9	-2.5
	comp=Z,2.8nm,0.3s,baz=308,slow=9.2,SNR=5.1						
STKA	**Stephens Creek**	**153.22**	**237**	*e*P	PKPdf	02 17 11.4	-0.9
	comp=Z,10.0nm,0.9s						
STKA	**Stephens Creek**	**153.22**	**237**	PKP	PKPdf	02 17 11.1	-1.2
	comp=Z,3.7nm,1.0s,baz=164,slow=0.6,SNR=4.8						
STKA				PKPbc	PKPbc	02 17 17.4	-2.4
	comp=Z,8.2nm,0.9s,baz=84,slow=1.1,SNR=14						
WB2	**Warramunga Arr**	**162.05**	**264**	*e*P	PKPdf	02 17 21.8	-1.7
WRAB	**Tennant Creek**	**162.05**	**265**	*e*PKIKP	PKPdf	02 17 21.2	-2.3
WRAB				*e*		02 18 08.7	
WRA	**Warramunga Arr**	**162.06**	**264**	PKP	PKPdf	02 17 22.0	-1.6
	comp=Z,5.6nm,1.0s,baz=55,slow=0.8,SNR=40						
WRA				PKPab	PKPab	02 18 07.9	-2.2
	comp=Z,4.7nm,0.7s,baz=83,slow=4.2,SNR=19						
ASAR	**Alice Springs**	**162.14**	**252**	PKP	PKPdf	02 17 21.9	-1.7
	comp=Z,3.6nm,0.9s,baz=114,slow=1.1,SNR=26						
ASAR				PKPab	PKPab	02 18 09.2	-1.2
	comp=Z,6.0nm,0.8s,baz=109,slow=4.4,SNR=18						
FORT	**Forrest**	**163.70**	**223**	*e*P	PKPab	02 18 15.1	-1.7
	comp=Z,23nm,1.0s						
FORT	**Forrest**	**163.70**	**223**	*e*PKPdf	PKPdf	02 17 23.1	-1.8
FORT				*e*PKPab	PKPab	02 18 14.5	-2.3
FITZ	**Fitzroy Crossi**	**170.16**	**275**	*e*P	PKPdf	02 17 28.3	-1.7
	comp=Z,12nm,1.2s						

RSPR ***19*** *02:04:47.4, 1924N×6456W, h43km±13km, MD3.6/8, MD3.6/8*

NEIC ***19*** *02:04:47.4, 1924N×6456W, h43km, MD3.6(RSPR), After RSPR.*

ISC 19 02:04:46.8±1.7**, 192N**±02×**6454W**±010**, h49**km±44km**, n12, σ0ˢ75**/22**, 11C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.50**	**157**	⇑*e*P	**Pn**	**02 04 57.9**	**-0.3**
ABV				*e*S	**Sn**	**02 05 06.7**	**+0.5**
TBVI	**Tortola**	**0.78**	**185**	⇑*e*P	**Pn**	**02 05 00.8**	**-0.8**
TBVI				*e*S	**Sn**	**02 05 12.7**	**+0.4**
TBVI	**Tortola**	**0.78**	**185**	⇑*e*P	**Pn**	**02 05 00.8**	**-0.8**
TBVI				*e*S	**Sn**	**02 05 12.1**	**-0.2**
STVI	**Saint Thomas**	**0.93**	**205**	⇑*e*P	**Pn**	**02 05 02.4**	**-1.1**
STVI				*e*S	**Sn**	**02 05 15.3**	**-0.6**
CDVI	**St. Croix**	**1.45**	**188**	⇑*e*P	**Pn**	**02 05 12.1**	**+1.4**
CDVI				*e*S	**Sn**	**02 05 33.4**	**+4.8**
CDVI	**St. Croix**	**1.45**	**188**	⇑*e*P	**Pn**	**02 05 12.1**	**+1.4**
CDVI				*e*S	**Sn**	**02 05 33.0**	**+4.5**
HUMP	**Col San Antoni**	**1.62**	**230**	⇑*e*P	**Pn**	**02 05 11.9**	**-1.2**
HUMP				*e*S	**Sn**	**02 05 33.0**	**+0.2**
SJG	**San Juan**	**1.87**	**235**	⇑*e*P	**Pn**	**02 05 16.6**	**+0.2**
SJG				*e*S	**Sn**	**02 05 38.9**	**+0.1**
CELP	**Cerrillos**	**2.23**	**240**	⇑*e*P	**Pn**	**02 05 20.9**	**-0.4**
CELP				*e*S	**Sn**	**02 05 48.4**	**+0.7**
OBIP	**Obispado Ponce**	**2.27**	**240**	*e*S	**Sn**	**02 05 47.4**	**-1.2**
ICM	**Isla Caja Muer**	**2.28**	**236**	⇑*e*P	**Pn**	**02 05 22.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.71**	**245**	⇑*e*P	**Pn**	**02 05 28.5**	**+0.6**
CRPR				*e*S	**Sn**	**02 06 00.1**	**+0.7**

TRN ***19*** *02:08:07.5, 19.11N×6475W, h8km*

NEIC ***19*** *02:08:10.2, 1930N×6461W, h24km, MD3.9(RSPR), After RSPR.*

RSPR ***19*** *02:08:10.2, 1930N×6461W, h24km±31km*

ISC 19 02:08:08.1±1.8**, 1928N**±008×**6473W**±008**, h10**km±9km**, n12, σ0ˢ42**/18**, 12C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.66**	**145**	⇑*e*P	**Pg**	**02 08 21.5**	**+0.5**
ABV				*e*S	**Sg**	**02 08 29.1**	**-0.6**
ABV	**Anegada**	**0.66**	**145**	⇑*e*P	**Pg**	**02 08 21.5**	**+0.5**
ABV				*e*S	**Sg**	**02 08 29.9**	**+0.2**
TBVI	**Tortola**	**0.86**	**173**	⇑*e*P	**Pg**	**02 08 24.2**	**-0.6**
TBVI				*e*S	**Sg**	**02 08 35.9**	**-0.2**
STVI	**Saint Thomas**	**0.94**	**193**	⇑*e*P	**Pg**	**02 08 26.1**	**-0.2**
STVI				*e*S	**Sg**	**02 08 39.2**	**+0.6**
CDVI	**St. Croix**	**1.52**	**181**	⇑*e*P	**Pn**	**02 08 35.2**	**-0.1**
CDVI				*e*S	**Sn**	**02 08 55.5**	**+0.3**
HUMP	**Col San Antoni**	**1.55**	**223**	⇑*e*P	**Pn**	**02 08 35.4**	**-0.4**
HUMP				*e*S	**Sn**	**02 08 55.5**	**-0.4**
SJG	**San Juan**	**1.77**	**229**	⇑*e*P	**Pn**	**02 08 38.4**	**-0.5**
SJG	**San Juan**	**1.77**	**229**	⇑*e*P	**Pn**	**02 08 38.1**	**-0.8**
SJG	**San Juan**	**1.77**	**229**	⇑*e*P	**Pn**	**02 08 38.6**	**-0.3**
CELP	**Cerrillos**	**2.12**	**236**	⇑*e*P	**Pn**	**02 08 44.2**	**+0.6**
OBIP	**Obispado Ponce**	**2.16**	**236**	⇑*e*P	**Pn**	**02 08 44.3**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.58**	**241**	⇑*e*P	**Pn**	**02 08 50.4**	**+0.4**

IDC 19 02:17:34.8±2.0**, 2233S**×**17972W, h0**km**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.9**/15**, mbtmp4.0**/4**, Error ellipse: s-maj=136.9km s-min=30.9km az=158.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.56**	**246**	P	P	02 24 32.8	-1.1
	1.0nm,0.5s,baz=90,slow=12,SNR=6.3						
ASAR	**Alice Springs**	**42.56**	**259**	P	P	02 25 32.1	-0.5
	0.7nm,0.4s,baz=90,slow=8.1,SNR=5.1						
WRA	**Warramunga Arr**	**42.79**	**264**	P	P	02 25 35.5	+1.0
	1.9nm,0.3s,baz=98,slow=8.3,SNR=21						
TXAR	**Lajitas Array**	**89.39**	**58**	P	P	02 30 33.7	0.0
	0.3nm,0.7s,baz=205,slow=5.5,SNR=5.1						
BRTR	**Keskin Array B**	**146.81**	**309**	PKPbc	PKPbc	02 37 18.9	-0.2
	0.6nm,1.0s,baz=83,slow=3.5,SNR=3.7						

RSPR 19 02:42:45.3, 1933N×**6467W, h35**km±14km**, MD2.8**/4**, MD2.8**/4**, 9C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.68**	**152**	⇑*e*P	Pn	02 42 58.1	-0.3
ABV	**Anegada**	**0.68**	**152**	*e*S	Sn	02 43 06.2	-1.5
ABV	**Anegada**	**0.68**	**152**	⇑*e*P	Pn	02 42 56.9	-1.5
ABV	**Anegada**	**0.68**	**152**	⇑*e*P	Pn	02 42 56.9	-1.5
ABV				*e*S	Sn	02 43 06.2	-1.5
TBVI	**Tortola**	**0.91**	**177**	⇑*e*P	Pn	02 43 00.6	-1.0
TBVI				*e*S	Sn	02 43 11.7	-1.8
STVI	**Saint Thomas**	**1.01**	**195**	*e*S	Sn	02 43 14.9	-1.0
STVI	**Saint Thomas**	**1.01**	**195**	⇓*e*P	Pn	02 43 02.6	-0.4
STVI	**Saint Thomas**	**1.01**	**195**	⇑*e*P	Pn	02 43 01.8	-1.1
STVI	**Saint Thomas**	**1.01**	**195**	*e*S	Sn	02 43 15.0	-0.9
STVI	**Saint Thomas**	**1.01**	**195**	⇑*e*P	Pn	02 43 01.8	-1.1
STVI				*e*S	Sn	02 43 15.3	-0.6
HUMP	**Col San Antoni**	**1.62**	**224**	⇑*e*P	Pn	02 43 11.2	-0.2
HUMP	**Col San Antoni**	**1.62**	**224**	*e*S	Sn	02 43 30.4	-0.7
HUMP	**Col San Antoni**	**1.62**	**224**	⇑*e*P	Pn	02 43 10.3	-1.1
HUMP	**Col San Antoni**	**1.62**	**224**	*e*S	Sn	02 43 29.6	-1.5
HUMP	**Col San Antoni**	**1.62**	**224**	⇑*e*P	Pn	02 43 10.3	-1.1
HUMP				*e*S	Sn	02 43 29.6	-1.5

RSPR 19 02:43:53.7, 1915N×**6460W, h64**km±9km**, 7C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.48**	**149**	⇑*e*P	Pn	02 44 05.7	-0.2
ABV	**Anegada**	**0.48**	**149**	*e*S	Sn	02 44 13.8	-0.8
ABV	**Anegada**	**0.48**	**149**	⇑*e*P	Pn	02 44 05.8	0.0
ABV	**Anegada**	**0.48**	**149**	⇑*e*P	Pn	02 44 05.8	0.0
ABV				*e*S	Sn	02 44 13.7	-0.9
ABV				*e*S	Sn	02 44 13.8	-0.8
TBVI	**Tortola**	**0.72**	**181**	*e*S	Sn	02 44 19.0	-0.4
TBVI	**Tortola**	**0.72**	**181**	⇑*e*P	Pn	02 44 09.4	+0.9
TBVI				*e*S	Sn	02 44 19.0	-0.3
TBVI	**Tortola**	**0.72**	**181**	⇑*e*P	Pn	02 44 09.4	+0.9
TBVI				*e*S	Sn	02 44 19.0	-0.4
TBVI				*e*S	Sn	02 44 19.2	-0.2
STVI	**Saint Thomas**	**0.86**	**203**	*e*S	Sn	02 44 21.8	-0.5
STVI	**Saint Thomas**	**0.86**	**203**	⇓*e*P	Pn	02 44 08.8	-1.3
STVI	**Saint Thomas**	**0.86**	**203**	⇑*e*P	Pn	02 44 11.2	+1.0
STVI	**Saint Thomas**	**0.86**	**203**	*e*S	Sn	02 44 21.9	-0.3
STVI	**Saint Thomas**	**0.86**	**203**	⇑*e*P	Pn	02 44 11.2	+1.0
STVI				*e*S	Sn	02 44 21.8	-0.5
STVI				*e*S	Sn	02 44 21.9	-0.3
HUMP	**Col San Antoni**	**1.55**	**230**	*e*S	Sn	02 44 37.8	-0.6
HUMP	**Col San Antoni**	**1.55**	**230**	*e*S	Sn	02 44 37.8	-0.6

NIED ***19*** *02:44:00, 4430N×14720E, h119km, Mw4.2 Best double couple: M₀2.23000×10¹⁵ NP1:φs281.00000°, δ74.00000°, λ-104.00000°. NP2:φs144.00000°, δ21.00000°, λ-49.00000°.*

SZGRF ***19*** *02:44:16.5, 44.15N×147.13E, h33km, mb4.9, Kuril Islands, Russia*

MOS ***19*** *02:44:24.9±1.0, 4455N×14737E, h120km, mb4.4/40, Error ellipse: s-maj=10.0km s-min=6.1km az=97.1*

ISCJB ***19*** *02:44:25.1±0.4, 4455N±004×14741E±006, h120km±3km, mb4.4/67, Error ellipse: s-maj=7.6km s-min=4.9km az=43.0*

SKHL ***19*** *02:44:25.7±2.5, 4460N×14762E, h108km±12km, mb5.1/5, msh5.9/1*

NEIC ***19*** *02:44:27.1±0.7, 4455N×14724E, h127km±6km, mb4.5/35, Error ellipse: s-maj=7.9km s-min=5.5km az=148.0*

IDC ***19*** *02:44:27.2±0.7, 4460N×14722E, h126km±6km, mb3.9/21, mb1 4.0/26, mb1mx4.0/30, mbtmp3.9/26, Error ellipse: s-maj=13.1km s-min=9.8km az=145.0*

JMA ***19*** *02:44:28.9±0.4, 4428N×14724E, h118km±4km, M4.2*

ISC 19 02:44:26.3±0.4**, 4455N**±004×**14738E**±006**, h118**km±3km**, h127**km±4.4km**: pP-P, n216, σ1ˢ02**/226**, mb4.4**/67**, 29C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.77**	**26**	*e*PN	**Pn**	**02 44 43.5**	**-2.5**
KUR				*e*S	**Sn**	**02 44 59.0**	**-2.0**
KUR				pmax	pmax		
	comp=N,690nm,0.4s						
KUR				pmax	pmax		
	comp=E,820nm,0.4s						
KUR				pmax	pmax		
	comp=Z,3µm,0.4s						
KUR				smax			
	comp=N,2µm,0.5s						
KUR				smax			
	comp=E,4µm,0.5s						
KUR				smax			
	comp=N,5µm,1.0s						
KUR	**Kuril'sk**	**0.77**	**26**	*e*P	**Pn**	**02 44 43.5**	**-2.5**
KUR				AMB	AMB	02 44 44.0	
	comp=N,693nm,0.4s						
KUR				AMB	AMB	02 44 44.0	
	comp=N,815nm,0.4s						
KUR				AMB	AMB	02 44 44.0	
	comp=N,3µm,0.4s						
KUR				*e*S	**Sn**	**02 44 59.0**	**-2.0**
KUR				A		02 44 59.8	
	comp=N,12µm,1.0s						
KUR				A		02 45 01.0	
	comp=N,2µm,0.5s						
KUR				A		02 45 01.0	
	comp=N,4µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**245**	⇑*i*PN	**Pn**	**02 44 50.9**	**+0.6**
YUK				*i* S	**Sn**	**02 45 08.5**	**0.0**
YUK				pmax	pmax		
	comp=N,550nm,0.5s						
YUK				pmax	pmax		
	comp=E,1µm,0.5s						
YUK				pmax	pmax		
	comp=Z,4µm,0.5s						
YUK				smax			
	comp=N,8µm,0.5s						
YUK				smax			
	comp=E,4µm,0.5s						
YUK				smax			
	comp=N,25µm,1.0s						
YUK				smax			
	comp=E,10µm,1.0s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**245**	⇑*i*P	**Pn**	**02 44 50.9**	**+0.6**
YUK				AMB	AMB	02 44 51.5	
	comp=E,550nm,0.5s						
YUK				AMB	AMB	02 44 51.5	
	comp=E,1µm,0.5s						
YUK				AMB	AMB	02 44 51.5	
	comp=E,4µm,0.5s						
YUK				*i* S	**Sn**	**02 45 08.5**	**0.0**
YUK				A		02 45 09.2	
	comp=E,8µm,0.5s						
YUK				A		02 45 09.2	
	comp=E,4µm,0.5s						
YUK				A		02 45 09.5	
	comp=E,25µm,1.0s						
YUK				A		02 45 09.5	
	comp=E,10µm,1.0s						
NEM2	**Nemuro 2**	**1.67**	**226**	P	**Pn**	**02 44 55.3**	**-0.4**
NEM2				*e*S	**Sn**	**02 45 15.4**	**-2.6**
JRA	**Rausu**	**1.74**	**250**	P	**Pn**	**02 44 57.1**	**+0.7**
JNK	**Nakash**	**2.15**	**244**	P	**Pn**	**02 45 02.1**	**+0.6**
JAK	**Akkeshi**	**2.49**	**232**	P	**Pn**	**02 45 05.6**	**-0.3**
JAK				*e*S	**Sn**	**02 45 33.8**	**-2.4**
JTKR	**Abashiri--Toko**	**2.56**	**258**	P	**Pn**	**02 45 07.6**	**+0.8**
JAR	**Ashorobuto**	**2.90**	**246**	P	**Pn**	**02 45 12.1**	**+1.0**
JMP	**Maruseppu**	**2.94**	**261**	P	**Pn**	**02 45 12.5**	**+0.8**
JOB	**Onbets**	**3.05**	**239**	P	**Pn**	**02 45 13.6**	**+0.4**
JOB				*e*S	**Sn**	**02 45 47.7**	**-1.7**
JKK2	**Kamakawa 2**	**3.40**	**260**	P	**Pn**	**02 45 19.1**	**+1.3**
ASAJ	**Asahikawa**	**3.46**	**265**	P	**Pn**	**02 45 20.1**	**+1.6**
	comp=E,16nm,0.3s,baz=77,slow=20,SNR=53						
ASAJ				S	**Sn**	**02 46 01.4**	**+2.3**
	baz=40,slow=30,SNR=2.8						
ASAJ	**Asahikawa**	**3.46**	**265**	P	**Pn**	**02 45 20.0**	**+1.4**
ASAJ	**Asahikawa**	**3.46**	**265**	PN	**Pn**	**02 45 20.2**	**+1.6**
ASAJ				S	**Sn**	**02 46 01.4**	**+2.4**
ASAJ				pmax	pmax		
	comp=Z,16nm,0.3s						
JCH	**Churui**	**3.50**	**238**	P	**Pn**	**02 45 18.9**	**-0.2**
JCH				*e*S	**Sn**	**02 45 56.8**	**-3.2**
JFR	**Furan**	**3.73**	**250**	P	**Pn**	**02 45 23.5**	**+1.3**
JWK2	**Keihoku**	**3.97**	**283**	P	**Pn**	**02 45 28.0**	**+2.6**
ERM	**Erimo**	**3.99**	**232**	*e*Pn	**Pn**	**02 45 26.0**	**+0.4**
ERM				*e*Sn	**Sn**	**02 46 06.3**	**-5.3**
YSS	**Yuzh-Sakhalins**	**4.04**	**308**	⇑*e*PN	**Pn**	**02 45 27.6**	**+1.4**
YSS				*e*S	**Sn**	**02 46 13.1**	**+0.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=E,40nm,1.0s						
YSS				smax			
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.04**	**308**	⇑*e*P	**Pn**	**02 45 27.6**	**+1.4**
YSS				AMB	AMB	02 45 30.5	
	comp=E,40nm,1.0s						
YSS				AMB	AMB	02 45 30.5	
	comp=E,50nm,0.9s						
YSS				*e*S	**Sn**	**02 46 13.1**	**+0.4**
YSS				A		02 46 14.2	
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.04**	**308**	*e*Pn	**Pn**	**02 45 27.4**	**+1.1**
JNBK	**Urakawa-nobuka**	**4.06**	**238**	P	**Pn**	**02 45 25.6**	**-1.0**
JHR	**Hokuryu**	**4.15**	**261**	P	**Pn**	**02 45 29.9**	**+2.1**
JEW	**Eniwo**	**4.63**	**250**	P	**Pn**	**02 45 35.3**	**+1.1**
UGL	**Uglegorsk**	**5.82**	**323**	*e*P	**Pn**	**02 45 53.0**	**+2.8**
UGL				AMB	AMB	02 45 55.5	
	comp=E,96nm,0.8s						
TYV	**Tymovskoe**	**7.08**	**335**	*e*P	**Pn**	**02 46 05.0**	**-2.2**
TYV				AMB	AMB	02 46 07.1	
	comp=E,29nm,1.0s						
TYV				*e*S	**Sn**	**02 47 25.1**	**-0.9**
TYV				A		02 47 25.1	
	comp=E,52nm,1.2s						
HABR	**Khabarovsk**	**9.37**	**299**	*e*PN	**Pn**	**02 46 42.1**	**+3.9**
HABR				*e*S	**Sn**	**02 48 28.0**	**+6.5**
HABR				MLR	MLR		
	comp=Z,172nm,7.0s						
MJAR	**Matsushiro Arr**	**10.61**	**224**	P	**Pn**	**02 46 53.1**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=31,slow=13,SNR=8.6						
MJAR	**Matsushiro Arr**	**10.61**	**224**	*e*PN	**Pn**	**02 46 53.3**	**-1.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**10.93**	**35**	P	**Pn**	**02 46 59.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=176,slow=9.3,SNR=12						
KSRS	**Korea Array**	**16.29**	**251**	P	**Pn**	**02 48 06.9**	**-1.2**
	baz=49,slow=13,SNR=2.9						
SEY	**Seymchan**	**18.65**	**7**	⇑*i*P	**P**	**02 48 33.5**	**-1.0**
FX1	**Attu Island--F**	**18.86**	**55**	P	**P**	**02 48 39.7**	**+2.7**
	comp=Z,8.1nm,0.3s,baz=292,slow=4.8,SNR=13						
FX1	**Attu Island--F**	**18.86**	**55**	P	**P**	**02 48 39.7**	**+2.7**
FX1				pmax	pmax		
	comp=Z,8.0nm,0.3s						
FX1	**Attu Island--F**	**18.86**	**55**	P	**P**	**02 48 39.7**	**+2.7**
YAK	**Yakutsk**	**20.34**	**336**	⇑*e*P	**P**	**02 48 51.4**	**-1.4**
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
BOD	**Bodaibo**	**24.48**	**315**	*e*P	**P**	**02 49 30.1**	**-3.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**27.89**	**291**	*i* P	**P**	**02 50 06.5**	**+1.8**
SONM	**Songino Array**	**28.33**	**291**	P	**P**	**02 50 08.3**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.3,baz=80,slow=8.3,SNR=3.3						
SONM				pP	pP	02 50 35.7	+1.3
	comp=Z,2.4nm,0.8s,baz=84,slow=8.4,SNR=6.8						
SONM	**Songino Array**	**28.33**	**291**	P	**P**	**02 50 08.3**	**-0.4**
SONM				*PP	pP	02 50 35.7	+1.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**28.62**	**348**	*e*P	**P**	**02 50 10.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.8						
TNA	**Tin City**	**32.09**	**33**	*e*P	**P**	**02 50 42.2**	**+0.6**
	comp=Z,14nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**38.59**	**48**	P	**P**	**02 51 37.5**	**+0.2**
	comp=Z,9.0nm,0.5s,mb4.8,baz=265,slow=4.2,SNR=12						
KDAK	**Kodiak Island**	**38.59**	**48**	P	**P**	**02 51 37.5**	**+0.2**
KTH	**Kantishna Hill**	**39.02**	**39**	*e*P	**P**	**02 51 42.4**	**+1.6**
	comp=Z,30nm,1.3s,mb5.0						
COLD	**Coldfoot**	**39.39**	**33**	*e*P	**P**	**02 51 44.0**	**+0.2**
	comp=Z,7.3nm,0.8s,mb4.6						
MCK	**McKinley**	**39.90**	**38**	*e*P	**P**	**02 51 48.9**	**+0.8**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
MCK	**McKinley**	**39.90**	**38**	*e*P	**P**	**02 51 48.9**	**+0.8**
	comp=Z,6.6nm,0.7s,mb4.6						
COLA	**College**	**40.33**	**37**	*e*P	**P**	**02 51 52.8**	**+1.1**
COLA				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.9						
COLA	**College**	**40.33**	**37**	*e*P	**P**	**02 51 52.8**	**+1.1**
	comp=Z,14nm,0.7s,mb4.9						
ZALV	**Zalesovo Beam**	**40.66**	**306**	P	**P**	**02 51 53.2**	**-1.3**
	comp=Z,1.0nm,0.3s,mb4.1,baz=84,slow=7.6,SNR=4.6						
ZALV				PcP	PcP	02 53 54.0	+0.1
	comp=Z,1.0nm,0.5s,baz=56,slow=2.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**40.66**	**306**	P	**P**	**02 51 53.2**	**-1.3**
ZALV						02 53 54.0	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
ZALV	**Zalesovo Beam**	**40.66**	**306**	P	**P**	**02 51 53.2**	**-1.3**
ZALV				PcP	PcP	02 53 54.0	+0.1
EGAK	**Eagle**	**43.19**	**36**	*e*P	**P**	**02 52 15.4**	**+0.5**
	comp=Z,6.7nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**44.37**	**297**	*e*P	**P**	**02 52 24.4**	**-0.2**
MKAR	**Makanchi Array**	**44.37**	**297**	P	**P**	**02 52 24.6**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=76,slow=8.5,SNR=28						
MKAR	**Makanchi Array**	**44.37**	**297**	P	**P**	**02 52 24.6**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**45.23**	**303**	P	**P**	**02 52 30.6**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.2,baz=75,slow=8.7,SNR=19						
KURK				PcP	PcP	02 54 09.6	+0.3
	comp=Z,0.5nm,0.5s,baz=51,slow=5.0,SNR=2.7						
KURK	**Kurchatov**	**45.23**	**303**	P	**P**	**02 52 30.7**	**-0.6**
KURK						02 54 09.6	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
KURK	**Kurchatov**	**45.23**	**303**	*e*P	**P**	**02 52 29.9**	**-1.4**
	comp=Z,2.7nm,0.6s,mb4.2						
INK	**Inuvik**	**45.63**	**31**	P	**P**	**02 52 35.1**	**+0.9**
	comp=Z,10nm,0.4s,mb5.0,baz=293,slow=6.2,SNR=123						
INK	**Inuvik**	**45.63**	**31**	P	**P**	**02 52 35.2**	**+0.9**
INK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
INK	**Inuvik**	**45.63**	**31**	*e*P	**P**	**02 52 34.5**	**+0.3**
	comp=Z,10.0nm,0.4s,mb4.9						
TKM2	**Tokmak 2**	**50.32**	**295**	*e*P	**P**	**02 53 10.8**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**50.32**	**295**	*e*P	**P**	**02 53 10.8**	**+0.1**
	comp=Z,3.6nm,1.0s,mb4.3						
ARU	**Arti**	**53.88**	**317**	P	**P**	**02 53 35.1**	**-1.7**
ARU	**Arti**	**53.88**	**317**	*e*P	**P**	**02 53 34.6**	**-2.2**
	comp=Z,3.4nm,0.5s,mb4.6						
RES	**Resolute Bay**	**54.16**	**17**	P	**P**	**02 53 37.7**	**-0.9**
	comp=Z,4.1nm,0.3s,mb4.9,baz=315,slow=7.1,SNR=9.7						
RES	**Resolute Bay**	**54.16**	**17**	P	**P**	**02 53 37.7**	**-0.9**
RES				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
RES	**Resolute Bay**	**54.16**	**17**	*e*P	**P**	**02 53 37.1**	**-1.5**
	comp=Z,14nm,1.1s,mb4.9						
YKA	**Yellowknife Ar**	**55.05**	**34**	P	**P**	**02 53 45.9**	**+0.8**
	comp=Z,2.1nm,0.4s,mb4.5,baz=301,slow=6.8,SNR=58						
YKA	**Yellowknife Ar**	**55.05**	**34**	P	**P**	**02 53 45.9**	**+0.7**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	**Yellowknife Ar**	**55.05**	**34**	P	**P**	**02 53 45.9**	**+0.8**
KEV	**Kevo**	**58.03**	**339**	*e*p	**P**	**02 54 04.2**	**-2.0**
	comp=Z,1.4nm,0.3s,mb4.5						
KEV	**Kevo**	**58.03**	**339**	*e*P	**P**	**02 54 04.2**	**-2.0**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**58.56**	**340**	P	**P**	**02 54 08.3**	**-1.6**
	comp=Z,4.7nm,0.8s,mb4.5,baz=47,slow=7.9,SNR=13						
ARCES	**ARCESS Array B**	**58.56**	**340**	P	**P**	**02 54 08.3**	**-1.6**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JOF	**Joensuu**	**61.46**	**332**	*e*p	**P**	**02 54 27.6**	**-2.1**
	comp=Z,1.0nm,0.3s,mb4.3						
JOF	**Joensuu**	**61.46**	**332**	*e*P	**P**	**02 54 27.6**	**-2.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KAF	**Kangasniemi**	**63.68**	**333**	*e*p	**P**	**02 54 42.1**	**-2.4**
	comp=Z,1.0nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**63.68**	**333**	*e*P	**P**	**02 54 42.1**	**-2.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
FFC	**Flin Flon**	**64.96**	**37**	*e*P	**P**	**02 54 53.5**	**+0.6**
FFC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
FFC	**Flin Flon**	**64.96**	**37**	*e*P	**P**	**02 54 53.5**	**+0.6**
	comp=Z,3.4nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**65.26**	**194**	*e*P	**P**	**02 54 54.5**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**65.26**	**194**	*e*P	**P**	**02 54 54.5**	**-0.7**
	comp=Z,6.9nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**65.27**	**194**	P	**P**	**02 54 55.0**	**-0.2**
	comp=Z,5.7nm,0.8s,mb4.5,baz=12,slow=6.8,SNR=48						
WRA	**Warramunga Arr**	**65.27**	**194**	P	**P**	**02 54 55.0**	**-0.3**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVAR	**Mina Array Bea**	**67.02**	**58**	P	**P**	**02 55 06.7**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.7,baz=296,slow=6.7,SNR=6.0						
NVAR				pP	pP	02 55 38.8	+3.3
	comp=Z,1.3nm,0.8s,baz=276,slow=7.5,SNR=4.9						
NB2	**NORSAR Subarra**	**68.92**	**339**	P	**P**	**02 55 16.1**	**-1.8**
	comp=Z,5.1nm,1.1s,mb4.3,baz=31,slow=6.2						
NOA	**NORSAR Array B**	**68.92**	**339**	P	**P**	**02 55 16.6**	**-1.3**
	comp=Z,2.7nm,0.7s,mb4.2,baz=33,slow=6.1,SNR=14						
NOA	**NORSAR Array B**	**68.92**	**339**	P	**P**	**02 55 16.6**	**-1.3**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**68.99**	**193**	P	**P**	**02 55 19.3**	**+0.6**
	comp=Z,1.7nm,0.7s,mb4.0,baz=11,slow=5.2,SNR=23						
ASAR	**Alice Springs**	**68.99**	**193**	P	**P**	**02 55 19.3**	**+0.6**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDAR	**Pinedale Array**	**69.27**	**50**	P	**P**	**02 55 21.9**	**+1.5**
	comp=Z,0.7nm,0.8s,mb3.5,baz=289,slow=1.3,SNR=6.5						
PDAR				pP	pP	02 55 50.9	+1.3
	comp=Z,1.5nm,0.9s,baz=323,slow=2.2,SNR=6.1						
KIV	**Kislovodsk**	**69.36**	**312**	*e*P	**P**	**02 55 21.7**	**+0.8**
KIV				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
KIV	**Kislovodsk**	**69.36**	**312**	*e*P	**P**	**02 55 21.5**	**+0.6**
	comp=Z,18nm,0.7s,mb5.0						
ULM	**Lac du Bonnet**	**70.77**	**37**	P	**P**	**02 55 29.6**	**+0.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=211,slow=5.9,SNR=3.7						
AKASG	**Malin Array Be**	**71.04**	**324**	P	**P**	**02 55 30.1**	**-0.9**
	comp=Z,1.5nm,0.4s,mb4.2,baz=36,slow=5.6,SNR=8.8						
AKASG	**Malin Array Be**	**71.04**	**324**	P	**P**	**02 55 30.1**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KWP	**Kalwaria**	**74.54**	**326**	⇓*i*P	**P**	**02 55 52.3**	**+0.6**
KWP	**Kalwaria**	**74.54**	**326**	⇑P	**P**	**02 55 52.3**	**+0.6**
BUR08	**Bucovina Ar. S**	**75.08**	**324**	*e*P	**P**	**02 55 54.7**	**-0.1**
BURAR	**Bucovina Array**	**75.09**	**324**	⇑*i*P	**P**	**02 55 55.0**	**+0.1**
BURAR	**Bucovina Array**	**75.09**	**324**	⇑P	**P**	**02 55 55.0**	**0.0**
STHS	**Stebnicka Huta**	**75.29**	**327**	*i* P	**P**	**02 55 56.7**	**+0.7**
STHS				*e*		02 47 21.8	
TLCR		**75.38**	**320**	⇑*i*P	**P**	**02 55 56.8**	**+0.2**
TLCR		**75.38**	**320**	⇑P	**P**	**02 55 56.8**	**+0.1**
VRI	**Vrincioaia**	**75.80**	**322**	⇑*i*P	**P**	**02 55 59.7**	**+0.7**
VRI	**Vrincioaia**	**75.80**	**322**	⇑P	**P**	**02 55 59.7**	**+0.7**
TRPA	**Tarpa**	**75.80**	**325**	⇓*i*P	**P**	**02 55 59.7**	**+0.7**
STKA	**Stephens Creek**	**76.24**	**185**	P	**P**	**02 56 01.9**	**+0.5**
	comp=Z,1.6nm,0.7s,mb3.9,baz=356,slow=5.1,SNR=7.3						
STKA	**Stephens Creek**	**76.24**	**185**	P	**P**	**02 56 01.9**	**+0.5**
UPC	**Upice**	**76.33**	**330**	*e*P	**P**	**02 56 02.1**	**+0.2**
DPC	**Dobruska-Polom**	**76.36**	**330**	*e*P	**P**	**02 56 02.5**	**+0.4**
NRDL	**Niedersach Rie**	**76.58**	**335**	*e*P	**P**	**02 56 03.1**	**-0.2**
	comp=Z,30nm,2.0s,mb4.7						
CLL	**Collm**	**76.69**	**333**	⇑*i*P	**P**	**02 56 03.4**	**-0.5**
CLL				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
CLL	**Collm**	**76.69**	**333**	*e*P	**P**	**02 56 03.3**	**-0.6**
	comp=Z,14nm,0.6s,mb4.9						
CLL	**Collm**	**76.69**	**333**	⇑*i*P	**P**	**02 56 03.4**	**-0.5**
	comp=Z,14nm,0.7s,mb4.8						
CLL	**Collm**	**76.69**	**333**	⇑*i*P	**P**	**02 56 03.4**	**-0.5**
	comp=Z,14nm,0.7s,mb4.8						
BRG	**Berggiesshubel**	**76.74**	**332**	*e*P	**P**	**02 56 03.7**	**-0.5**
	comp=Z,2.0nm,0.5s,mb4.1						
DRGR		**76.80**	**325**	⇑*i*P	**P**	**02 56 05.4**	**+0.8**
DRGR		**76.80**	**325**	⇑P	**P**	**02 56 05.4**	**+0.8**
SCHQ	**Schefferville**	**76.81**	**20**	P	**P**	**02 56 05.2**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.2,baz=311,slow=9.3,SNR=5.2						
PVCC	**Panska Ves**	**76.82**	**331**	*e*P	**P**	**02 56 04.1**	**-0.6**
VOIR		**76.87**	**322**	⇑*i*P	**P**	**02 56 06.3**	**+1.2**
VOIR		**76.87**	**322**	⇑P	**P**	**02 56 06.3**	**+1.3**
FBE	**Freiberg**	**76.90**	**332**	*e*P	**P**	**02 56 05.2**	**+0.1**
	comp=Z,10.0nm,0.9s,mb4.5						
VYHS	**Vyhne**	**76.96**	**328**	*i* P	**P**	**02 56 05.9**	**+0.4**
PSZ	**Piszkesteto**	**77.02**	**327**	⇑*i*P	**P**	**02 56 07.0**	**+1.1**
PSZ	**Piszkesteto**	**77.02**	**327**	*e*P	**P**	**02 56 06.1**	**+0.2**
	comp=Z,4.9nm,0.8s,mb4.3						
KOLL	**Kolacno**	**77.06**	**328**	*e*P	**P**	**02 56 05.9**	**-0.1**
CLZ	**Clausthal**	**77.07**	**334**	*e*P	**P**	**02 56 06.3**	**+0.3**
CLZ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CLZ	**Clausthal**	**77.07**	**334**	*e*P	**P**	**02 56 06.3**	**+0.3**
	comp=Z,10.0nm,0.8s,mb4.6						
BR131	**Keskin Array S**	**77.12**	**314**	*e*P	**P**	**02 56 07.4**	**+0.8**
	comp=Z,0.9nm,0.7s,mb3.6						
BRTR	**Keskin Array B**	**77.12**	**314**	P	**P**	**02 56 07.0**	**+0.4**
	comp=Z,0.8nm,0.8s,mb3.5,baz=100,slow=1.5,SNR=3.7						
BRTR	**Keskin Array B**	**77.12**	**314**	P	**P**	**02 56 07.0**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PRU	**Pruhonice**	**77.29**	**331**	*e*P	**P**	**02 56 07.5**	**+0.2**
IBBN	**Ibbenburen**	**77.45**	**336**	*e*P	**P**	**02 56 08.2**	**0.0**
	comp=Z,14nm,0.9s,mb4.7						
SMOL	**Smolenice**	**77.48**	**329**	*i* P	**P**	**02 56 09.1**	**+0.7**
SMOL	**Smolenice**	**77.48**	**329**	*e*P	**P**	**02 56 09.1**	**+0.7**
MOX	**Moxa**	**77.71**	**333**	*e*P	**P**	**02 56 09.5**	**-0.1**
	comp=Z,4.0nm,0.6s,mb4.3						
GUNZ	**Gunzen**	**77.72**	**332**	*e*P	**P**	**02 56 09.6**	**-0.1**
	comp=Z,7.0nm,0.8s,mb4.4						
WERN	**Wernitzgruen**	**77.77**	**332**	*e*P	**P**	**02 56 10.0**	**+0.1**
	comp=Z,7.0nm,0.6s,mb4.6						
UBBA	**Unterbreizbach**	**78.07**	**334**	*e*P	**P**	**02 56 11.6**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.3						
ROTZ	**Rotzenmuhle**	**78.27**	**332**	*e*P	**P**	**02 56 12.9**	**+0.2**
	comp=Z,5.0nm,1.2s,mb4.1						
KHC	**Kasperske Hory**	**78.35**	**331**	⇑*e*P	**P**	**02 56 13.8**	**+0.6**
KHC	**Kasperske Hory**	**78.35**	**331**	*e*P	**P**	**02 56 13.5**	**+0.3**
GEC2	**GERESS Array S**	**78.55**	**331**	*e*P	**P**	**02 56 14.3**	**0.0**
GEC2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
GEC2	**GERESS Array S**	**78.55**	**331**	*e*P	**P**	**02 56 14.3**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.3						
GERES	**GERESS Array B**	**78.55**	**331**	P	**P**	**02 56 14.2**	**0.0**
	comp=Z,2.1nm,0.4s,mb4.3,baz=37,slow=5.6,SNR=28						
GERES	**GERESS Array B**	**78.55**	**331**	P	**P**	**02 56 14.2**	**-0.1**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CONA	**Conrad Observa**	**78.55**	**329**	⇑*i*P	**P**	**02 56 15.3**	**+1.0**
	comp=Z,4.2nm,0.6s,mb4.4						
CSNA	**Conrad Observa**	**78.55**	**329**	⇑*i*P	**P**	**02 56 15.0**	**+0.7**
	comp=Z,4.3nm,0.6s,mb4.4						
WET	**Wettzell**	**78.58**	**331**	*e*P	**P**	**02 56 15.0**	**+0.6**
WET				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
WET	**Wettzell**	**78.58**	**331**	*e*P	**P**	**02 56 15.0**	**+0.6**
	comp=Z,11nm,1.0s,mb4.6						
GRA1	**Grafenberg Arr**	**78.66**	**333**	*e*P	**P**	**02 56 15.3**	**+0.4**
	comp=Z,15nm,0.7s,mb4.9						
GRF	**Grafenberg Arr**	**78.66**	**333**	*e*P	**P**	**02 56 15.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
GRF	**Grafenberg Arr**	**78.66**	**333**	*e*P	**P**	**02 56 15.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
GRF	**Grafenberg Arr**	**78.66**	**333**	*e*P	**P**	**02 56 15.3**	**+0.4**
	comp=Z,15nm,0.7s,mb4.9						
PKSM	**Moragy**	**78.91**	**327**	⇑*i*P	**P**	**02 56 16.3**	**0.0**
PKSM	**Moragy**	**78.91**	**327**	⇑P	**P**	**02 56 16.3**	**0.0**
TNS	**Taunus Mts**	**79.08**	**335**	*e*P	**P**	**02 56 17.3**	**+0.1**
TNS				pmax	pmax		
	comp=Z,34nm,1.6s,mb4.9						
TNS	**Taunus Mts**	**79.08**	**335**	*e*P	**P**	**02 56 17.3**	**+0.1**
	comp=Z,34nm,1.6s,mb4.9						
MOA	**Molln**	**79.19**	**330**	⇑*i*P	**P**	**02 56 18.6**	**+0.8**
	comp=Z,3.5nm,0.8s,mb4.2						
KBA	**Koelnbreinsper**	**80.18**	**330**	⇑*i*P	**P**	**02 56 24.7**	**+1.5**
	comp=Z,12nm,1.1s,mb4.7						
BAIF	**Baives**	**80.47**	**337**	*e*P	**P**	**02 56 22.8**	**-1.9**
	comp=Z,8.1nm,0.6s,mb4.4						
BAIF	**Baives**	**80.47**	**337**	*e*P	**P**	**02 56 22.8**	**-1.9**
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
BAIF	**Baives**	**80.47**	**337**	*e*P	**P**	**02 56 22.8**	**-1.9**
	comp=Z,4.1nm,0.6s,mb4.4						
MOTA	**Moosalm**	**80.73**	**332**	⇑*i*P	**P**	**02 56 27.2**	**+1.1**
	comp=Z,12nm,1.2s,mb4.6						
BFO	**Black Forest**	**80.78**	**334**	*e*P	**P**	**02 56 26.4**	**0.0**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
BFO	**Black Forest**	**80.78**	**334**	*e*P	**P**	**02 56 26.4**	**0.0**
	comp=Z,6.0nm,1.2s,mb4.3						
CDF	**Champ du Feu**	**81.04**	**334**	*e*P	**P**	**02 56 27.2**	**-0.5**
	comp=Z,10nm,0.9s,mb4.4						
CDF	**Champ du Feu**	**81.04**	**334**	*e*P	**P**	**02 56 27.2**	**-0.5**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
CDF	**Champ du Feu**	**81.04**	**334**	*e*P	**P**	**02 56 27.2**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**82.07**	**56**	P	**P**	**02 56 34.0**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=289,slow=4.1,SNR=7.6						
TXAR	**Lajitas Array**	**82.07**	**56**	*e*P	**P**	**02 56 36.3**	**+2.8**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**82.07**	**56**	P	**P**	**02 56 34.0**	**+0.5**
FLN	**La Foliniere**	**82.91**	**339**	*e*P	**P**	**02 56 36.8**	**-0.7**
	comp=Z,10nm,0.5s,mb4.6						
FLN	**La Foliniere**	**82.91**	**339**	*e*P	**P**	**02 56 36.8**	**-0.7**
FLN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
FLN	**La Foliniere**	**82.91**	**339**	*e*P	**P**	**02 56 36.8**	**-0.7**
	comp=Z,5.3nm,0.5s,mb4.6						
LDF	**La Druitiere**	**82.97**	**339**	*e*P	**P**	**02 56 36.6**	**-1.2**
CABF	**La Chapelle**	**83.01**	**334**	*e*P	**P**	**02 56 36.7**	**-1.4**
LOR	**Lormes**	**83.09**	**336**	*e*P	**P**	**02 56 37.8**	**-0.7**
GRR	**Gorron**	**83.35**	**339**	*e*P	**P**	**02 56 39.4**	**-0.4**
	comp=Z,9.7nm,0.4s,mb4.7						
GRR	**Gorron**	**83.35**	**339**	*e*P	**P**	**02 56 39.4**	**-0.4**
GRR				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
GRR	**Gorron**	**83.35**	**339**	*e*P	**P**	**02 56 39.4**	**-0.4**
	comp=Z,4.8nm,0.4s,mb4.7						
SSF	**Saint Saulge**	**83.38**	**336**	*e*P	**P**	**02 56 39.2**	**-0.8**
SMF	**Signal de Mont**	**83.66**	**336**	*e*P	**P**	**02 56 40.8**	**-0.6**
	comp=Z,5.4nm,0.5s,mb4.3						
SMF	**Signal de Mont**	**83.66**	**336**	*e*P	**P**	**02 56 40.8**	**-0.6**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
SMF	**Signal de Mont**	**83.66**	**336**	*e*P	**P**	**02 56 40.8**	**-0.6**
	comp=Z,2.7nm,0.5s,mb4.3						
AVF	**Avril sur Loir**	**83.67**	**336**	*e*P	**P**	**02 56 40.9**	**-0.5**
	comp=Z,3.9nm,0.5s,mb4.2						
AVF	**Avril sur Loir**	**83.67**	**336**	*e*P	**P**	**02 56 40.9**	**-0.5**
AVF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
AVF	**Avril sur Loir**	**83.67**	**336**	*e*P	**P**	**02 56 40.9**	**-0.5**
	comp=Z,2.0nm,0.5s,mb4.2						
LPL	**La Plagne**	**83.78**	**333**	*e*P	**P**	**02 56 41.1**	**-0.9**
LPG	**La Plagne**	**83.79**	**333**	*e*P	**P**	**02 56 42.0**	**-0.1**
ROSF	**Rostrenen**	**83.98**	**341**	*e*P	**P**	**02 56 42.9**	**-0.1**
BGF	**Bois d’Agland**	**84.03**	**336**	*e*P	**P**	**02 56 42.5**	**-0.8**
MBDF	**Montbardon**	**84.47**	**333**	*e*P	**P**	**02 56 44.5**	**-1.0**
	comp=Z,12nm,1.0s,mb4.4						
MBDF	**Montbardon**	**84.47**	**333**	*e*P	**P**	**02 56 44.5**	**-1.0**
MBDF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
MBDF	**Montbardon**	**84.47**	**333**	*e*P	**P**	**02 56 44.5**	**-1.0**
	comp=Z,5.9nm,1.0s,mb4.4						
ORIF	**Oris-en-Rattie**	**84.59**	**334**	*e*P	**P**	**02 56 46.2**	**+0.1**
	comp=Z,11nm,0.9s,mb4.5						
ORIF	**Oris-en-Rattie**	**84.59**	**334**	*e*P	**P**	**02 56 46.2**	**+0.1**
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ORIF	**Oris-en-Rattie**	**84.59**	**334**	*e*P	**P**	**02 56 46.2**	**+0.1**
	comp=Z,5.3nm,0.9s,mb4.5						
MFF	**Saint Martin d**	**84.81**	**338**	*e*P	**P**	**02 56 46.8**	**-0.4**
	comp=Z,7.8nm,0.7s,mb4.5						
MFF	**Saint Martin d**	**84.81**	**338**	*e*P	**P**	**02 56 46.8**	**-0.4**
MFF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MFF	**Saint Martin d**	**84.81**	**338**	*e*P	**P**	**02 56 46.8**	**-0.4**
	comp=Z,3.9nm,0.7s,mb4.5						
VIVF	**Saint-Julien-l**	**85.02**	**334**	*e*P	**P**	**02 56 47.8**	**-0.5**
CAF	**Calviac**	**85.74**	**336**	*e*P	**P**	**02 56 51.9**	**0.0**
LFF	**La Frestale**	**86.10**	**337**	*e*P	**P**	**02 56 53.7**	**0.0**
TORD	**Torodi Ar. Bea**	**114.67**	**323**	PKP	PKiKP	03 02 51.0	-2.0
	comp=Z,0.1nm,0.3s,baz=6.6,slow=2.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**114.67**	**323**	PKP	PKiKP	03 02 51.0	-2.0
VNA2	**Neumayer--Watz**	**150.80**	**197**	*e*PKPdf	PKPbc	03 04 04.0	+0.7
	baz=98,slow=1.2						
VNA2				*e*		03 04 05.5	
VNA2				*e*		03 04 10.0	
VNA3	**Neumayer Olymp**	**150.99**	**195**	*e*PKPdf	PKPbc	03 04 03.8	+0.1
VNA3				*e*		03 04 05.9	
VNA3				*e*		03 04 09.9	
VNA1	**Neumayer--Stat**	**151.19**	**197**	*e*PKPdf	PKPbc	03 04 03.5	-0.7
VNA1				*e*		03 04 05.9	
VNA1				*e*		03 04 09.5	

RSPR 19 02:44:33.9, 1924N×6468W, h34km±14km**, MD2.4**/3**, 9C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.60**	**147**	*e*S	Sb	02 44 53.1	-1.4
ABV	**Anegada**	**0.60**	**147**	⇑*e*P	Pn	02 44 44.5	-1.4
ABV	**Anegada**	**0.60**	**147**	⇑*e*P	Pn	02 44 44.5	-1.4
ABV				*e*S	Sb	02 44 53.1	-1.4
ABV				*e*S	Sb	02 44 53.7	-0.8
TBVI	**Tortola**	**0.82**	**176**	⇑*e*P	Pn	02 44 46.8	-2.2
TBVI	**Tortola**	**0.82**	**176**	⇑*e*P	Pn	02 44 47.4	-1.6
TBVI	**Tortola**	**0.82**	**176**	⇑*e*P	Pn	02 44 47.4	-1.6
TBVI				*e*S	Sn	02 44 58.0	-1.9
TBVI				*e*S	Sn	02 44 58.6	-1.3
STVI	**Saint Thomas**	**0.92**	**196**	⇑*e*P	Pn	02 44 49.1	-1.3
STVI	**Saint Thomas**	**0.92**	**196**	*e*S	Sn	02 45 00.5	-1.9
STVI	**Saint Thomas**	**0.92**	**196**	⇑*e*P	Pn	02 44 49.1	-1.3
STVI	**Saint Thomas**	**0.92**	**196**	*e*S	Sn	02 45 01.1	-1.2
STVI	**Saint Thomas**	**0.92**	**196**	⇑*e*P	Pn	02 44 49.8	-0.5
STVI	**Saint Thomas**	**0.92**	**196**	⇑*e*P	Pn	02 44 49.9	-0.4
STVI				*e*S	Sn	02 45 00.5	-1.9
STVI				*e*S	Sn	02 45 01.9	-0.4
HUMP	**Col San Antoni**	**1.55**	**226**	⇓*e*P	Pn	02 44 58.2	-0.9
HUMP				*e*S	Sn	02 45 16.8	-1.3

ISCJB ***19*** *02:45:37.9±0.4, 4461N±002×2044E±003, h1km±4km, Error ellipse: s-maj=3.5km s-min=2.9km az=166.8*
NEIC ***19*** *02:45:39.5, 4462N×2042E, h8km, ML2.8(BUC), After BUC.*
CSEM ***19*** *02:45:39.2±0.1, 4460N×2047E, h5km, ML2.9, Error ellipse: s-maj=1.7km s-min=1.3km az=89.0*
BEO ***19*** *02:45:39.4±0.2, 4462N×2047E, h10km±2km, ML2.9/12*
SKO ***19*** *02:45:41.3, 4435N×1996E, h0km*
ISC 19 02:45:39.3±0.4**, 4460N**±002×**2045E**±003**, h7**km±3km**, n44,** σ**1.04**/68**, 16C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEO	**Beograd**	**0.21**	**5**	*e*Pg	**Pg**	**02 45 43.8**	**+0.4**
BEO				*e*Sg	**Sg**	**02 45 47.3**	**+1.1**
SVIS	**Svilajnac**	**0.65**	**121**	⇑*i*Pg	**Pg**	**02 45 52.0**	**+0.3**
SVIS				*e*Sg	**Sg**	**02 46 01.6**	**+1.5**
FRGS	**Fruska Gora**	**0.72**	**321**	⇑*i*Pg	**Pg**	**02 45 52.5**	**-0.6**
FRGS				*e*Sg	**Sg**	**02 46 02.7**	**+0.3**
GRUS	**Gruza**	**0.74**	**165**	⇑*i*Pg	**Pg**	**02 45 53.4**	**-0.1**
GRUS				*e*Sg	**Sg**	**02 46 04.0**	**+0.9**
BBLS	**Lazići**	**1.05**	**226**	⇓*i*Pg	**Pg**	**02 45 59.4**	**-0.1**
BBLS				*e*Sg	**Sg**	**02 46 13.9**	**+0.8**
TIM	**Timisoara**	**1.26**	**25**	S	**Sg**	**02 46 21.0**	**+1.3**
BZS	**Buzias**	**1.31**	**39**	⇓*i*Pg	**Pg**	**02 46 03.1**	**-1.3**
BZS				*e*Sg	**Sg**	**02 46 20.4**	**-0.9**
BZS	**Buzias**	**1.31**	**39**	⇓*i*Pg	**Pg**	**02 46 03.1**	**-1.3**
BZS				S	**Sb**	**02 46 22.5**	**+1.4**
BZS	**Buzias**	**1.31**	**39**	⇓P	**Pn**	**02 46 03.1**	**-0.8**
BZS				S	**Sb**	**02 46 22.5**	**+1.4**
BOLS	**Boljevac**	**1.33**	**125**	⇑*i*Pg	**Pg**	**02 46 03.4**	**-1.4**
BOLS				*e*Sg	**Sg**	**02 46 20.9**	**-1.2**
SJES	**Sjenica**	**1.39**	**195**	*e*Pg	**Pg**	**02 46 03.2**	**-2.6**
SJES				*e*Sg	**Sg**	**02 46 23.6**	**-0.2**
DJES	**Djerdap**	**1.48**	**87**	*e*Sg	**Sg**	**02 46 25.1**	**-1.7**
GZR	**Gura Zlata**	**1.83**	**64**	⇑*i*P	**Pn**	**02 46 11.1**	**0.0**
GZR	**Gura Zlata**	**1.83**	**64**	⇑P	**Pn**	**02 46 11.2**	**+0.1**
BARS	**Barje**	**2.04**	**151**	*e*Pn	**Pn**	**02 46 13.5**	**-0.5**
BARS				*e*Sg	**Sg**	**02 46 45.3**	**+0.4**
PKSM	**Moragy**	**2.05**	**322**	*e*Pn	**Pn**	**02 46 13.0**	**-1.1**
PKSM				S	**Sn**	**02 46 41.0**	**+1.1**
PKSM	**Moragy**	**2.05**	**322**	⇑*i*P	**Pn**	**02 46 13.0**	**-1.1**
PKSM	**Moragy**	**2.05**	**322**	⇑P	**Pn**	**02 46 13.0**	**-1.1**
PKSM				S	**Sn**	**02 46 41.0**	**+1.1**
DEV	**Deva**	**2.15**	**53**	⇓P	**Pn**	**02 46 16.4**	**+0.9**
DEV				S	**Sn**	**02 46 43.1**	**+0.6**
DEV	**Deva**	**2.15**	**53**	⇓*i*P	**Pn**	**02 46 16.4**	**+0.9**
DEV	**Deva**	**2.15**	**53**	⇓P	**Pn**	**02 46 16.4**	**+0.8**
DEV				S	**Sn**	**02 46 43.1**	**+0.6**
BLY	**Banja Luka**	**2.33**	**275**	*e*Pn	**Pn**	**02 46 18.2**	**+0.2**
BLY				*e*Sg	**Sg**	**02 46 54.7**	**+0.5**
TREB	**Trebinje**	**2.42**	**220**	*e*Pn	**Pn**	**02 46 20.6**	**+1.4**
TREB				*e*Sg	**Sg**	**02 46 55.9**	**-1.2**
DRGR		**2.70**	**35**	⇑*i*P	**Pn**	**02 46 22.4**	**-0.6**
DRGR		**2.70**	**35**	S	**Sn**	**02 46 53.4**	**-2.5**
DRGR		**2.70**	**35**	⇑P	**Pn**	**02 46 22.4**	**-0.7**
BUD	**Budapest**	**3.05**	**341**	⇑*e*Pn	**Pn**	**02 46 27.4**	**-0.4**
BUD				*e*Sg	**Sg**	**02 47 17.9**	**+0.8**
PKSG		**3.13**	**334**	⇓*e*Pn	**Pn**	**02 46 28.4**	**-0.6**
PKSG				*e*Sn	**Sn**	**02 47 04.2**	**-2.4**
MDB	**Medias**	**3.17**	**60**	S	**Sn**	**02 47 08.2**	**+0.7**
KRUS	**Krusevo**	**3.29**	**169**	*e*Pn	**Pn**	**02 46 31.8**	**+0.7**
KRUS				*e*Sn	**Sn**	**02 47 14.1**	**+3.7**
PENC	**Penc**	**3.29**	**346**	⇑*e*Pn	**Pn**	**02 46 31.0**	**-0.1**
PENC				*e*Sn	**Sn**	**02 47 08.0**	**-2.4**
PSZ	**Piszkesteto**	**3.34**	**354**	⇑*i*P	**Pn**	**02 46 31.3**	**-0.5**
PSZ	**Piszkesteto**	**3.34**	**354**	⇑P	**Pn**	**02 46 31.3**	**-0.5**
VOIR		**3.37**	**74**	⇓*i*P	**Pn**	**02 46 33.7**	**+1.5**
VOIR		**3.37**	**74**	⇓P	**Pn**	**02 46 33.7**	**+1.5**
BIA	**Bitola**	**3.64**	**170**	*e*Pn	**Pn**	**02 46 36.3**	**+0.3**
BIA	**Bitola**	**3.64**	**170**	*e*Pn	**Pn**	**02 46 36.4**	**+0.4**
KECS	**Kecovo**	**3.88**	**0**	*e*PN	**Pn**	**02 46 39.5**	**+0.3**
KECS				*e*SG	**Sg**	**02 47 51.3**	**+7.5**
VYHS	**Vyhne**	**4.05**	**345**	*i* PN	**Pn**	**02 46 42.2**	**+0.7**
VYHS				*e*SN	**Sn**	**02 47 23.3**	**-5.8**
VYHS	**Vyhne**	**4.05**	**345**	*i* Pn	**Pn**	**02 46 42.2**	**+0.7**
VYHS				*e*Sn	**Sn**	**02 47 23.3**	**-5.8**
KOLL	**Kolacno**	**4.22**	**341**	*i* Pn	**Pn**	**02 46 44.4**	**+0.5**
BURAR	**Bucovina Array**	**4.48**	**46**	⇑*i*P	**Pn**	**02 46 48.4**	**+0.9**
BURAR	**Bucovina Array**	**4.48**	**46**	⇑P	**Pn**	**02 46 48.4**	**+1.0**
STHS	**Stebnicka Huta**	**4.84**	**6**	*e*SN	**Sn**	**02 47 39.0**	**-10**

TRN ***19*** *02:48:49.9, 19.19N×6470W, h28km, MD4.7, M4.2(RSPR)*
TRN Felt in British V.I.
ISCJB ***19*** *02:48:50.7±0.7, 1925N±005×6466W±003, h42km±8km, mb4.2/18, MS4.0/4, Error ellipse: s-maj=8.6km s-min=3.9km az=5.9*
RSPR ***19*** *02:48:52.1, 19.19N×6470W, h6km±3km, MD4.2/14, MD4.2/14*
NEIC ***19*** *02:48:52.1, 19.19N×6470W, h6km, mb4.5/11, MD4.2(RSPR), After RSPR.*
NEIC Felt in the British Virgin Islands.
BJI ***19*** *02:48:52.1, 1920N×6470W, h5km, Ms5.0, Msz4.8*
IDC ***19*** *02:48:54.0±4.2, 1920N×6462W, h58km±40km, mb3.7/10, mb1 3.9/12, mb1mx3.7/24, mbtmp3.8/12, ML4.4/2, MS3.7/3, Ms1 3.7/3, ms1mx3.1/40, Error ellipse: s-maj=27.4km s-min=14.3km az=48.0*
ISC 19 02:48:51.6±0.9**, 1920N**±004×**6468W**±003**, h26**km±7km**, n65,** σ**0.98**/70**, mb4.2**/18**, MS4.0**/4**, 15C-8D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.57**	**145**	⇑*e*P	**Pb**	**02 49 02.6**	**-0.3**
TBVI	**Tortola**	**0.78**	**176**	⇑*e*P	**Pb**	**02 49 05.6**	**-0.9**
STVI	**Saint Thomas**	**0.88**	**197**	⇓*e*P	**Pb**	**02 49 07.3**	**-0.9**
STVI				*e*S	**Sb**	**02 49 20.2**	**+0.6**
STVI	**Saint Thomas**	**0.88**	**197**	⇓*e*P	**Pb**	**02 49 07.3**	**-0.9**
STVI				*e*S	**Sb**	**02 49 20.0**	**+0.4**
CDVI	**St. Croix**	**1.44**	**183**	⇑*e*P	**Pn**	**02 49 16.9**	**+0.9**
CDVI				*e*S	**Sn**	**02 49 35.7**	**+1.7**
HUMP	**Col San Antoni**	**1.53**	**227**	⇓*e*P	**Pn**	**02 49 16.4**	**-0.8**
HUMP				*e*S	**Sn**	**02 49 36.2**	**0.0**
SJG	**San Juan**	**1.77**	**233**	⇓*e*P	**Pn**	**02 49 19.7**	**-0.8**
SJG	**San Juan**	**1.77**	**233**	⇓*e*P	**Pn**	**02 49 19.7**	**-0.8**
SJG	**San Juan**	**1.77**	**233**	⇑*e*P	**Pn**	**02 49 19.8**	**-0.6**
SJG				*e*S	**Sn**	**02 49 41.1**	**-1.0**
SMRT	**St. Maarten**	**1.90**	**127**	⇑*e*P	**Pn**	**02 49 22.6**	**+0.3**
SABA	**Saba**	**2.08**	**139**	⇑*e*P	**Pn**	**02 49 24.8**	**+0.1**
CELP	**Cerrillos**	**2.12**	**239**	⇓*e*P	**Pn**	**02 49 25.0**	**-0.4**
CELP				*e*S	**Sn**	**02 49 50.6**	**-0.2**
OBIP	**Obispado Ponce**	**2.16**	**238**	⇓*e*P	**Pn**	**02 49 25.5**	**-0.4**
OBIP				*e*S	**Sn**	**02 49 50.8**	**-1.0**
ICM	**Isla Caja Muer**	**2.18**	**234**	⇑*e*P	**Pn**	**02 49 26.3**	**+0.2**
ICM				*e*S	**Sn**	**02 49 52.4**	**+0.1**
LRS	**Lares**	**2.24**	**247**	⇑*e*P	**Pn**	**02 49 26.4**	**-0.6**
SEUS	**St. Eustatius**	**2.34**	**136**	⇑*e*P	**Pn**	**02 49 28.6**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.42**	**240**	⇑*e*P	**Pn**	**02 49 29.8**	**+0.4**
GBPR				*e*S	**Sn**	**02 49 57.4**	**-0.8**
LSP	**Las Mesas**	**2.50**	**246**	⇑*e*P	**Pn**	**02 49 30.2**	**-0.3**
MPR	**Mayaguez**	**2.53**	**248**	⇑*e*P	**Pn**	**02 49 31.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.59**	**243**	⇓*e*P	**Pn**	**02 49 31.6**	**-0.3**
CRPR				*e*S	**Sn**	**02 50 02.2**	**-0.3**
ANWB	**Willy Bob**	**3.14**	**119**	*e*Pn	**Pn**	**02 49 45.0**	**+5.7**
IMO	**Isla Mona**	**3.25**	**251**	⇑*e*P	**Pn**	**02 49 40.9**	**0.0**
BPA	**Boggy Peak**	**3.43**	**128**	*e*P	**Pn**	**02 49 42.4**	**-0.9**
BPA				*e*S	**Sn**	**02 50 22.7**	**-0.5**
PCDR	**Punta Cana, DR**	**3.58**	**260**	⇑*e*P	**Pn**	**02 49 44.9**	**-0.4**
LZG	**Guadaloupe-1**	**4.11**	**137**	*e*P	**Pn**	**02 49 53.1**	**+0.4**
BCG	**Bois Riant Cap**	**4.25**	**136**	*e*P	**Pn**	**02 49 55.0**	**+0.4**
SCG	**Saint Claude**	**4.25**	**137**	*e*P	**Pn**	**02 49 55.4**	**+0.7**
HMG	**Houelmont**	**4.27**	**138**	*e*P	**Pn**	**02 49 55.4**	**+0.4**
TBG	**Guadaloupe-3**	**4.41**	**139**	*e*P	**Pn**	**02 49 57.3**	**+0.5**
MGG	**Marie-Galante**	**4.57**	**135**	*e*P	**Pn**	**02 49 59.1**	**0.0**
FDF	**Fort de France**	**5.57**	**142**	*e*Pn	**Pn**	**02 50 13.3**	**+0.5**
	66nm,0.6s						
SDDR	**Presa de Saban**	**6.26**	**269**	⇑*e*P	**Pn**	**02 50 22.8**	**+0.6**
SDDR				*e*S	**Sn**	**02 51 34.4**	**+1.5**
PCRV	**Puerto La Cruz**	**8.97**	**180**	P	**Pn**	**02 51 00.7**	**+1.2**
	3.0nm,0.3s,baz=238,slow=1.2,SNR=9.4						
SDV	**Santo Domingo**	**11.76**	**210**	P	**Pn**	**02 51 40.0**	**+2.2**
	3.7nm,0.3s,baz=44,slow=10.0,SNR=16						
SDV				LR	LR	02 56 38.0	
	comp=Z,290nm,18.9s,baz=145,slow=39						
SDV	**Santo Domingo**	**11.76**	**210**	*e*Pn	**Pn**	**02 51 40.1**	**+2.3**
	24nm,0.7s						
DWPF	**Disney**	**17.71**	**303**	*e*Pn	**Pn**	**02 52 56.4**	**-0.1**
NHSC	**New Hope**	**19.60**	**318**	*e*P	**Pn**	**02 53 23.1**	**+3.8**
	16nm,0.5s						
CNNC	**Cliffs of the**	**19.80**	**326**	*e*P	**Pn**	**02 53 26.5**	**+4.8**
	19nm,0.4s						
GOGA	**Godfrey**	**21.95**	**314**	*e*P	**P**	**02 53 49.5**	**+6.2**
	6.1nm,0.6s,mb4.2						
OTAV	**Otavalo**	**23.18**	**217**	*e*P	**P**	**02 53 57.6**	**+1.1**
	8.0nm,0.7s,mb4.3						
TKL	**Tuckaleechee C**	**23.51**	**318**	LR	LR	03 02 09.9	
	comp=Z,149nm,19.9s,MS3.5,baz=249,slow=34						
LRAL	**Lakeview Retre**	**24.26**	**309**	*e*P	**P**	**02 54 09.4**	**+2.9**
	3.8nm,0.8s,mb3.9						
MET	**Memphis--Engin**	**27.40**	**311**	*e*P	**P**	**02 54 40.8**	**+5.8**
	239nm,0.6s						
NNA	**Nana**	**33.23**	**202**	*e*P	**P**	**02 55 27.8**	**+1.1**
	8.5nm,0.7s,mb4.8						
SIV	**San Ignacio**	**35.15**	**174**	P	**P**	**02 55 41.7**	**-1.5**
	5.3nm,0.8s,mb4.5,baz=7.6,slow=9.4,SNR=24						
CBKS	**Cedar Bluff**	**36.06**	**310**	*e*P	**P**	**02 55 56.9**	**+5.9**
	10.0nm,0.9s,mb4.8						
TXAR	**Lajitas Array**	**36.80**	**293**	P	**P**	**02 55 57.3**	**-0.2**
	1.4nm,0.7s,mb3.9,baz=114,slow=9.0,SNR=7.5						
RCBR	**Riachuelo**	**37.70**	**128**	*e*P	**P**	**02 56 11.6**	**+6.4**
	26nm,1.3s,mb4.8						
BDFB	**Brasilia**	**38.30**	**154**	P	**P**	**02 56 09.6**	**-0.6**
	1.4nm,0.7s,mb3.8,baz=293,slow=22,SNR=5.0						
PDAR	**Pinedale Array**	**44.42**	**312**	P	**P**	**02 57 00.2**	**+0.1**
	1.2nm,0.6s,mb3.8,baz=103,slow=8.9,SNR=10						
TPAW	**Teton Pass**	**45.61**	**313**	*e*P	**P**	**02 57 12.6**	**+2.9**
	2.7nm,0.7s,mb4.3						
CPUP	**Villa Florida**	**45.81**	**171**	P	**P**	**02 57 09.4**	**-1.9**
	1.4nm,0.5s,mb4.2,baz=330,slow=7.0,SNR=8.0						
CPUP	**Villa Florida**	**45.81**	**171**	*e*P	**P**	**02 57 08.5**	**-2.8**
	8.6nm,0.6s,mb4.9						
TPNV	**Topopah Spring**	**48.23**	**303**	*e*P	**P**	**02 57 35.7**	**+5.5**
	2.8nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**50.02**	**304**	P	**P**	**02 57 44.0**	**+0.1**
	0.8nm,0.6s,mb3.9,baz=100,slow=6.8,SNR=5.4						
YKA	**Yellowknife Ar**	**55.11**	**334**	P	**P**	**02 58 18.9**	**-2.3**
	0.8nm,0.6s,mb3.9,baz=110,slow=7.5,SNR=11						
DBIC	**Dimbokro**	**59.36**	**94**	P	**P**	**02 58 50.3**	**-1.7**
	3.1nm,0.7s,mb4.4,baz=301,slow=12,SNR=7.0						
TORD	**Torodi Ar. Bea**	**63.71**	**84**	P	**P**	**02 59 20.4**	**-1.0**
	0.6nm,0.7s,mb3.8,baz=279,slow=7.4,SNR=6.6						
TORD				LR	LR	03 24 30.5	
	comp=Z,65nm,18.9s,MS3.8,baz=280,slow=34						
INK	**Inuvik**	**64.52**	**337**	P	**P**	**02 59 23.2**	**-2.6**
	2.0nm,1.1s,mb4.1,baz=269,slow=1.8,SNR=4.6						
HHC	**Hu-ho-hao-te**	**120.16**	**3**	*e*PKP	PKPdf	03 07 44.4	+4.0
HHC				PP	PP	03 09 13.0	+8.8
HHC				PKS		03 11 19.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HHC				SKS	SKSdf	03 14 50.6	-0.4
HHC				SKKS	SKKSac	03 16 01.1	-2.8
HHC				SS	SS	03 25 33.5	+4.7
HHC				LR	LR		
	comp=N,140nm,15.5s,MS4.8						
HHC				LR	LR		
	comp=E,103nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=Z,123nm,19.0s,MS4.6						
BJI	Beijing	121.07	359	PKP	PKPdf	03 07 45.0	+2.8
LZH	Lanzhou	123.95	11	ePKP	PKPdf	03 07 46.5	-1.4
LZH				XPKP		03 07 53.6	
XAN	Xi'an	126.71	7	PKP	PKPdf	03 07 57.1	+3.9
XAN				PP	PP	03 09 56.4	+8.0
XAN				SKS	SKSdf	03 15 07.6	+4.0
XAN				SKKS	SKKSac	03 16 48.4	+2.1
XAN				SS	SS	03 26 58.3	+6.4
XAN				LR	LR		
	comp=N,32nm,22.8s						
XAN				LR	LR		
	comp=E,25nm,16.9s						
XAN				LR	LR		
	comp=Z,56nm,25.7s,MS4.1						
CD2	Chengdu	128.96	13	PKP	PKPdf	03 08 02.9	+5.3
ASAR	Alice Springs	162.14	252	PKPab	PKPab	03 09 36.3	-1.9
	comp=Z,0.6nm,0.8s,baz=93,slow=4.2,SNR=5.3						

*TRN **19** 03:01:06.1, 1906N×6472W, h12km*
*NEIC **19** 03:01:07.3, 1905N×6446W, h71km, MD3.5(RSPR), After RSPR.*
*RSPR **19** 03:01:07.3, 1905N×6446W, h71km±1km, MD3.5/11, MD3.5/11*
ISC 19 03:01:07.5±1.7**, 192N**±02×**645W**±01**, h48**km±40km**, n13, σ0.65s**/18**, 6C-7D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.49	156⇑	eP	Pn	03 01 18.2	-0.3
ABV				eS	Sn	03 01 27.0	+0.7
TBVI	Tortola	0.76	185⇑	eP	Pn	03 01 21.3	-0.7
TBVI				eS	Sn	03 01 31.9	-0.5
STVI	Saint Thomas	0.91	206⇑	eP	Pn	03 01 23.3	-0.7
STVI				eS	Sn	03 01 35.6	-0.4
CDVI	St. Croix	1.43	189⇑	eP	Pn	03 01 32.7	+1.6
HUMP	Col San Antoni	1.61	231⇑	eP	Pn	03 01 32.7	-0.7
HUMP				eS	Sn	03 01 53.5	+0.3
SJG	San Juan	1.86	235⇓	eP	Pn	03 01 36.7	-0.2
SJG	San Juan	1.86	235⇓	eP	Pn	03 01 36.7	-0.2
SJG	San Juan	1.86	235⇑	eP	Pn	03 01 36.8	-0.1
SJG				eS	Sn	03 01 59.6	+0.5
CELP	Cerrillos	2.22	241⇓	eP	Pn	03 01 42.1	+0.3
OBIP	Obispado Ponce	2.26	240⇓	eP	Pn	03 01 42.1	-0.3
LRS	Lares	2.35	248⇓	eP	Pn	03 01 44.1	+0.4
LRS	Lares	2.35	248⇓	eP	Pn	03 01 44.8	+1.2
CRPR	Cabo Rojo, PR	2.70	245⇓	eP	Pn	03 01 47.9	-0.5

*IDC **19** 03:07:50.6±1.1, 407S×103.14E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.8/21, mbtmp3.8/10, MS3.4/3, Ms1 3.4/3, ms1mx3.1/28, Error ellipse: s-maj=61.1km s-min=15.3km az=55.0*
*NEIC **19** 03:07:56.3±0.6, 399S×10329E, h35km, mb4.2/4, Error ellipse: s-maj=32.1km s-min=8.3km az=53.0*
*ISCJB **19** 03:07:57.5±1.6, 39S±0.1×1034E±0.1, h64km±13km, mb3.9/13, Error ellipse: s-maj=25.7km s-min=11.3km az=39.4*
*DJA **19** 03:08:01, 394S×10264E, h10km, MLv4.6/7*
ISC 19 03:07:58.9±1.5**, 39S**±01×**1034E**±01**, h57**km±12km**, n30, σ0.64s**/22**, mb3.9**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSI	Kapahiang	0.85	289	P	Pn	03 08 05.3	-10
PPBI	Pangkal Pinang	3.25	57	P	Pn	03 08 47.1	-0.3
SBJI	Serang	3.49	129	P	Px	03 09 04.7	
RGRI	Rengat	3.71	343	P	Px	03 09 06.3	
PDSI	Padang	4.19	316	P	Pn	03 09 00.0	-0.3
DBJI	Dramaga	4.24	128	P	Px	03 09 12.3	
TPI	Tanjungpandan	4.41	75	P	Px	03 09 20.6	
	33nm,0.8s,1μm0.6nm						
PPI	Padang Panjang	4.57	319	P	Pn	03 09 06.0	+0.5
MYKOM	Kota Tinggi	5.70	5	P	Pn	03 09 21.1	+0.1
PSI	Prapat	8.04	326	LR	LR	03 13 32.4	
	comp=Z,167nm,19.0s,baz=334,slow=43						
KAPI	Kappang	16.34	94	LR	LR	03 18 25.8	
	comp=Z,119nm,20.0s,baz=132,slow=38						
CMAR	Chiang Mai Arr	22.67	349	P	P	03 12 55.0	-0.5
	2.8nm,0.9s,mb3.7,baz=181,slow=9.1,SNR=15						
CMAR				LR	LR	03 23 24.3	
	comp=Z,116nm,19.7s,baz=0.0,slow=41						
WRA	Warramunga Arr	34.10	120	P	P	03 14 37.2	-1.1
	1.3nm,0.9s,mb3.9,baz=292,slow=10,SNR=5.9						
WRA				PcP	PcP	03 17 14.7	-0.1
	0.4nm,0.3s,baz=307,slow=1.4,SNR=6.5						
WRA	Warramunga Arr	34.10	120	P	P	03 14 37.2	-1.1
WRA				PcP	PcP	03 17 14.7	-0.1
WRAB	Tennant Creek	34.10	120	eP	P	03 14 38.5	+0.1
	2.0nm,0.7s,mb4.2						
ASAR	Alice Springs	35.39	127	P	P	03 14 49.7	+0.4
	2.0nm,0.7s,mb4.2,baz=299,slow=8.1,SNR=30						
ASAR				PcP	PcP	03 17 18.6	+0.1
	0.5nm,0.8s,baz=290,slow=2.4,SNR=4.1						
STKA	Stephens Creek	45.35	132	P	P	03 16 12.4	+0.8
	2.2nm,0.5s,mb4.2,baz=303,slow=6.7,SNR=11						
SONM	Songino Array	51.61	3	P	P	03 17 01.0	+1.6
	0.9nm,0.9s,mb3.7,baz=186,slow=7.6,SNR=3.6						
TKM2	Tokmak 2	52.98	335	eP	P	03 17 09.6	-0.1
	1.8nm,0.7s,mb4.1						
EKS2	Erkin-Say	53.57	333	eP	P	03 17 14.7	+0.7
	1.6nm,0.7s,mb4.1						
MK31	Makanchi Array	53.84	342	eP	P	03 17 15.7	-0.2
MKAR	Makanchi Array	53.84	342	P	P	03 17 15.3	-0.6
	0.4nm,0.7s,mb3.5,baz=162,slow=7.1,SNR=3.9						
KURK	Kurchatov	58.44	342	P	P	03 17 47.6	-1.0
	0.2nm,0.2s,mb3.7,baz=156,slow=6.6,SNR=2.0						
KURK	Kurchatov	58.44	342	eP	P	03 17 48.5	-0.2
	1.2nm,0.7s,mb4.0						
ZALV	Zalesovo Beam	59.73	347	P	P	03 17 57.2	-0.2
	0.6nm,0.4s,mb4.0,baz=117,slow=5.0,SNR=2.5						
ZALV	Zalesovo Beam	59.73	347	P	P	03 17 57.2	-0.2
BVAR	Borovoye Array	63.18	338	P	P	03 18 21.2	+0.4
	0.4nm,0.5s,mb3.9,baz=138,slow=5.2,SNR=3.3						
BRTR	Keskin Array B	77.12	312	P	P	03 19 45.5	-0.9
	0.6nm,0.7s,mb3.6,baz=121,slow=9.2,SNR=4.8						
CPUP	Villa Florida	144.60	211	PKP	PKPdf	03 27 30.4	+0.6
	3.5nm,0.9s,baz=90,slow=3.1,SNR=7.9						
CPUP	Villa Florida	144.60	211	PKP	PKPdf	03 27 30.4	+0.6

*ISCJB **19** 03:14:23.8±0.9, 1931N±006×6457W±003, h33km±9km, mb4.0/14, Error ellipse: s-maj=9.4km s-min=5.3km az=6.9*
*NEIC **19** 03:14:24.6, 1940N×6457W, h39km, mb4.6/3, MD4.0(RSPR), After RSPR.*
NEIC Felt on Saint John and Saint Thomas.
*RSPR **19** 03:14:24.6, 1940N×6457W, h39km±11km, MD4.0/10, MD4.0/10*
*IDC **19** 03:14:27.8±3.6, 19.15N×6463W, h53km±33km, mb3.7/13, mb1 3.9/15, mb1mx3.7/26, mbtmp3.8/15, ML4.3/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/37, Error ellipse: s-maj=23.7km s-min=13.5km az=43.0*
ISC 19 03:14:24.7±1.1**, 1926N**±004×**6460W**±003**, h25**km±8km**, n50, σ0.83s**/58**, mb4.0**/14**, 10C-3D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.59	154⇑	iP	Pb	03 14 36.7	+0.3
TBVI	Tortola	0.84	181⇓	eP	Pb	03 14 39.7	-1.0
STVI	Saint Thomas	0.96	200⇑	eP	Pn	03 14 41.8	-0.9
STVI				eS	Sb	03 14 56.4	+1.3
CDVI	St. Croix	1.51	186⇓	eP	Pn	03 14 50.7	+0.5
CDVI				eS	Sn	03 15 09.7	+0.8
HUMP	Col San Antoni	1.62	227⇓	eP	Pn	03 14 50.7	-1.1
HUMP				eS	Sn	03 15 12.4	+0.6
SJG	San Juan	1.86	232⇑	eP	Pn	03 14 54.1	-0.9
SJG				eS	Sn	03 15 17.6	-0.1
SJG	San Juan	1.86	232⇑	eP	Pn	03 14 54.5	-0.4
SJG				eS	Sn	03 15 17.3	-0.4
CELP	Cerrillos	2.22	238⇑	eP	Pn	03 14 59.3	-0.5
OBIP	Obispado Ponce	2.25	238⇑	eP	Pn	03 14 59.9	-0.5
OBIP				eS	Sn	03 15 27.0	-0.4
ICM	Isla Caja Muer	2.27	234⇑	eP	Pn	03 15 00.6	0.0
ICM				eS	Sn	03 15 28.6	+0.7
LRS	Lares	2.33	246⇑	eP	Pn	03 15 00.7	-0.8
GBPR	Guanica, Bosqu	2.51	240	eS	Sn	03 15 34.1	+0.3
GBPR	Guanica, Bosqu	2.51	240⇑	eP	Pn	03 15 04.3	+0.4
LSP	Las Mesas	2.59	246⇑	eP	Pn	03 15 04.9	-0.2
MPR	Mayaguez	2.62	247	ePn	Pn	03 15 04.8	-0.7
CRPR	Cabo Rojo, PR	2.69	243⇑	eP	Pn	03 15 06.1	-0.2
CRPR				eS	Sn	03 15 37.9	-0.1
BPA	Boggy Peak	3.41	130	eP	Pn	03 15 15.6	-0.7
BPA				eS	Sn	03 15 55.2	-0.8
BPA	Boggy Peak	3.41	130	eP	Pn	03 15 15.6	-0.7
BPA				eS	Sn	03 15 55.2	-0.8
LZG	Guadaloupe-1	4.11	139	eP	Pn	03 15 26.8	+0.9
MGG	Marie-Galante	4.57	136	eP	Pn	03 15 33.1	+0.9
SDDR	Presa de Saban	6.33	269	ePn	Pn	03 15 56.8	+0.4
	62nm,0.6s						
SDDR				eSn	Sn	03 17 04.0	-3.9
GRGR	Grenville	7.63	158	ePn	Pn	03 16 20.9	+6.5
PCRV	Puerto La Cruz	9.03	180	P	Pn	03 16 33.9	+0.4
	2.3nm,0.3s,baz=1.3,slow=2.7,SNR=8.8						
PCRV				S	Sn	03 18 03.3	-11
	baz=235,slow=22,SNR=1.7						
PCRV				LR	LR	03 20 18.3	
	comp=Z,150nm,19.8s,baz=252,slow=39						
SDV	Santo Domingo	11.85	210	P	Pn	03 17 14.2	+2.0
	2.4nm,0.3s,baz=63,slow=5.4,SNR=15						
SDV				S	Sn	03 19 15.8	-8.0
	0.3nm,0.3s,baz=81,slow=14,SNR=2.6						
SDV				LR	LR	03 22 02.5	
	comp=Z,184nm,18.8s,baz=331,slow=39						
SDV	Santo Domingo	11.85	210	ePn	Pn	03 17 11.2	-1.1
	21nm,0.8s						
SDV				S	Sn	03 19 15.8	-8.0
SDV				LR	LR	03 22 02.5	
NHSC	New Hope	19.60	318	ePn	Pn	03 18 58.8	+6.2
	18nm,0.4s						
GOGA	Godfrey	21.96	314	eP	sP	03 19 29.0	+2.2
BLA	Blacksburg	22.62	326	eP	sP	03 19 39.3	+5.5
OTAV	Otavalo	23.28	217	eP	P	03 19 31.7	+0.9
	6.8nm,0.8s,mb4.1						
OTAV				ePcP	PcP	03 23 27.5	+10
TKL	Tuckaleechee C	23.52	318	eP	sP	03 19 45.0	+1.7
SSPA	Standing Stone	24.16	335	eP	sP	03 19 52.2	+2.8
SIV	San Ignacio	35.20	174	P	P	03 21 15.3	-1.7
	1.7nm,0.5s,mb4.2,baz=15,slow=8.5,SNR=10						
TXAR	Lajitas Array	36.84	293	P	P	03 21 31.5	+0.5
	1.0nm,0.9s,mb3.7,baz=112,slow=11,SNR=6.3						
TXAR				PcP	PcP	03 23 53.1	+0.4
	0.9nm,0.9s,baz=106,slow=4.0,SNR=5.1						
TXAR	Lajitas Array	36.84	293	P	P	03 21 31.5	+0.5
TXAR				PcP	PcP	03 23 53.1	+0.4
BDFB	Brasilia	38.33	154	P	P	03 21 43.9	+0.3
	0.5nm,0.5s,mb3.5,baz=333,slow=27,SNR=2.0						
BDFB				LR	LR	03 38 52.9	
	comp=Z,40nm,18.1s,baz=93,slow=38						
ANMO	Albuquerque	40.10	302	P	P	03 21 59.6	+1.3
	1.3nm,0.7s,mb3.8,baz=96,slow=8.6,SNR=4.5						
PDAR	Pinedale Array	44.43	312	P	P	03 22 34.6	+1.2
	3.6nm,0.9s,mb4.1,baz=110,slow=8.6,SNR=8.4						
PDAR				PcP	PcP	03 24 17.3	+0.4
	1.1nm,1.0s,baz=101,slow=4.7,SNR=4.5						
CPUP	Villa Florida	45.87	171	P	P	03 22 43.3	-1.7
	1.1nm,0.6s,mb4.0,baz=357,slow=9.4,SNR=6.3						
CPUP	Villa Florida	45.87	171	eP	P	03 22 43.1	-1.9
	5.5nm,0.6s,mb4.7						
ELK	Elko	48.06	308	P	P	03 23 02.2	+0.1
	1.9nm,1.0s,mb4.1,baz=272,slow=20,SNR=4.6						
ELK	Elko	48.06	308	P	P	03 23 02.2	+0.1
NVAR	Mina Array Bea	50.05	304	P	P	03 23 18.4	+1.1
	1.1nm,0.7s,mb4.0,baz=89,slow=7.2,SNR=5.4						
YBH	Yreka Blue Hor	53.77	308	P	P	03 23 44.2	-0.8
	0.8nm,0.4s,mb4.0,baz=103,slow=9.9,SNR=3.7						
YKA	Yellowknife Ar	55.09	334	P	P	03 23 53.2	-1.0
	1.1nm,0.7s,mb4.0,baz=110,slow=7.4,SNR=17						
YKA	Yellowknife Ar	55.09	334	P	P	03 23 53.2	-1.0
DBIC	Dimbokro	59.29	94	P	P	03 24 25.6	+0.8
	3.4nm,0.8s,mb4.4,baz=275,slow=6.6,SNR=4.8						
TORD	Torodi Ar. Bea	63.63	85	P	P	03 24 53.8	-0.4
	0.5nm,0.7s,mb3.7,baz=267,slow=4.1,SNR=6.1						
KEST	Kesra	66.22	59	P	P	03 25 11.4	+0.7
	1.2nm,0.9s,mb3.9,baz=104,slow=4.2,SNR=2.8						
WRA	Warramunga Arr	162.14	265	PKP	PKPdf	03 34 23.5	-1.2
	0.8nm,0.9s,baz=50,slow=0.6,SNR=5.9						
WRA				PKPab	PKPab	03 35 09.9	-1.6
	0.5nm,0.6s,baz=78,slow=5.0,SNR=5.8						
ASAR	Alice Springs	162.23	252	PKP	PKPdf	03 34 23.8	-0.9
	0.4nm,0.9s,baz=163,slow=2.7,SNR=4.2						
ASAR				PKPab	PKPab	03 35 10.7	-1.1
	0.3nm,0.7s,baz=120,slow=4.7,SNR=6.5						

*IDC **19** 03:16:45.7±2.3, 1971N×10954W, h0km, mb3.8/6, mb1 4.1/11, mb1mx4.0/22, mbtmp3.9/11, ML3.5/5, MS3.7/11, Ms1 3.7/11, ms1mx3.5/32, Error ellipse: s-maj=57.8km s-min=18.7km az=55.0*
*NEIC **19** 03:16:47.8±0.9, 1970N×10948W, h10km, mb4.2/13, Error ellipse: s-maj=16.4km s-min=8.4km az=224.0*
*ISCJB **19** 03:16:48.5±5.2, 198N±0.1×1094W±0.1, h24km±35km, mb4.0/11, MS3.8/7, Error ellipse: s-maj=30.7km s-min=11.6km az=39.0*
ISC 19 03:16:53.1±2.2**, 198N**±01×**1094W**±01**, h47**km±16km**, n37, σ0.61s**/30**, mb4.0**/11**, MS3.8**/7**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	4.36	348	Pn	Pn	03 17 52.8	-3.9
	16nm,0.3s,baz=163,slow=5.8,SNR=7.5						
LPIG				LR	LR	03 19 18.4	
	comp=Z,1μm,19.6s,baz=194,slow=34						
TXAR	Lajitas Array	10.79	28	Pn	Pn	03 19 25.3	+0.3
	0.1nm,0.3s,baz=199,slow=11,SNR=38						
TUC	Tucson	12.51	354	ePn	Pn	03 19 48.9	+0.5
	60nm,1.8s						
JCT	Junction City	13.68	37	ePn	Pn	03 20 04.6	+0.1
	6.7nm,0.8s						
CMIG	Matias Romero	13.99	99	Pn	Pn	03 20 09.0	+0.2
	0.1nm,0.3s,baz=293,slow=12,SNR=3.7						
CMIG				LR	LR	03 25 05.9	
	comp=Z,376nm,20.6s,baz=268,slow=35						
CMIG	Matias Romero	13.99	99	Pn	Pn	03 20 09.0	+0.2
CMIG				LR	LR	03 25 06.0	
GLA	Glamis	14.06	341	ePn	Pn	03 20 09.1	-0.4
	30nm,1.3s						
PFO	Pinyon Flat Ob	15.12	337	Pn	Pn	03 20 22.2	-1.4
	0.1nm,0.3s,baz=163,slow=12,SNR=4.0						
PFO				LR	LR	03 25 23.0	
	comp=Z,510nm,20.4s,baz=102,slow=34						
ANMO	Albuquerque	15.29	9	Pn	Pn	03 20 26.3	+0.5
	0.1nm,0.3s,baz=193,slow=15,SNR=2.8						
ANMO				LR	LR	03 26 45.2	
	comp=Z,62nm,21.6s,baz=354,slow=39						
ANMO	Albuquerque	15.29	9	ePn	Pn	03 20 25.9	+0.1
	36nm,2.1s						
ANMO				LR	LR	03 26 45.2	
LDFC	Landfair	16.03	343	ePn	Pn	03 20 35.7	+0.3
	42nm,1.4s						
AMTX	Amarillo	16.47	23	ePn	Pn	03 20 40.0	-0.9
WMOK	Wichita Mounta	17.56	30	eP	Pn	03 20 53.6	-0.9
	3.4nm,0.8s						
TPNV	Topopah Spring	18.10	342	eP	Pn	03 21 01.7	+0.7
	86nm,1.9s						
SDCO	Great Sand Dun	18.18	10	eP	Pn	03 21 02.4	+0.5
	16nm,1.5s						
NVAR	Mina Array Bea	20.11	339	P	P	03 21 23.6	+0.7
	7.1nm,1.0s,baz=160,slow=11,SNR=21						
DUG	Dugway	20.53	352	eP	P	03 21 28.1	+0.7
	30nm,1.5s						
ELK	Elko	21.46	348	P	P	03 21 36.7	-0.8
	2.3nm,1.1s,mb3.4,baz=169,slow=11,SNR=6.9						
ELK				LR	LR	03 28 56.6	
	comp=Z,167nm,19.0s,MS3.5,baz=91,slow=34						
ELK	Elko	21.46	348	eP	P	03 21 37.8	+0.3
	9.4nm,1.7s,mb3.8						
ELK				LR	LR	03 28 56.6	
PDAR	Pinedale Array	22.88	360	P	P	03 21 52.5	-0.1
	0.9nm,1.0s,mb3.2,baz=167,slow=9.1,SNR=3.7						
SNOW	Snow King Moun	23.61	357	eP	P	03 22 00.0	+0.3
	6.2nm,1.0s,mb4.0						
TPAW	Teton Pass	23.64	357	eP	P	03 22 00.2	+0.2
	7.0nm,1.2s,mb4.0						
LOHW	Long Hollow	23.75	358	eP	P	03 22 00.9	-0.1
	68nm,2.6s,mb4.6						
WVOR	Wild Horse Val	23.87	343	eP	P	03 22 02.8	+0.6
	15nm,1.5s,mb4.2						
HLID	Hailey	24.05	351	eP	P	03 22 04.2	+0.4
	11nm,1.7s,mb4.0						
YBH	Yreka Blue Hor	24.61	335	LR	LR	03 31 21.8	
	comp=Z,196nm,18.8s,MS3.6,baz=158,slow=36						
SADO	Sadowa	35.30	38	LR	LR	03 37 45.4	
	comp=Z,181nm,20.7s,MS3.8,baz=269,slow=36						
SDV	Santo Domingo	38.96	101	P	P	03 24 15.4	+0.4
	4.2nm,0.6s,mb4.3,baz=310,slow=9.6,SNR=7.3						
YKA	Yellowknife Ar	42.80	356	P	P	03 24 44.7	-1.2
	1.1nm,0.9s,mb3.6,baz=172,slow=7.8,SNR=12						
YKA				LR	LR	03 43 16.1	
	comp=Z,93nm,18.8s,MS3.7,baz=210,slow=37						
YKA	Yellowknife Ar	42.80	356	P	P	03 24 44.7	-1.2
YKA				LR	LR	03 43 16.1	
RKT	Rikitea	49.46	212	eT		04 18 37.1	
	2.8nm,0.3s						
INK	Inuvik	50.79	349	eP	P	03 25 47.9	-0.3
	3.7nm,1.0s,mb4.3						
PPT	Papeete	54.22	229	eLR	LR	03 41 51.5	
	158nm,25.2s						
PPT	Papeete	54.22	229	LR	LR	03 44 16.1	
	comp=Z,72nm,18.1s,MS3.8,baz=78,slow=31						
SIV	San Ignacio	59.31	123	P	P	03 26 50.1	-0.4
	0.4nm,0.4s,mb3.8,baz=270,slow=7.1,SNR=3.6						
CPUP	Villa Florida	68.21	130	LR	LR	03 56 12.1	
	comp=Z,49nm,19.8s,MS3.7,baz=132,slow=35						
JHJ	Hachijo jima 2	95.63	308	LR	LR	04 02 19.2	
	comp=Z,131nm,21.1s,MS4.4,baz=190,slow=29						

IDC 19 03:39:10.9±2.6**, 612S**×**12984E, h0**km**, mb3.5**/1**, mb1 3.7**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, ML3.9**/2**, Error ellipse: s-maj=181.2km s-min=31.9km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.42	163	Pn	Pn	03 42 36.2	-0.2
	0.5nm,0.3s,baz=345,slow=13,SNR=34						
WRA				Sn	Sn	03 45 05.0	-12
	0.8nm,0.3s,baz=344,slow=21,SNR=11						
ASAR	Alice Springs	17.88	168	P	Pn	03 43 21.4	+0.2
	0.4nm,0.3s,baz=350,slow=12,SNR=15						
ASAR				S	Sn	03 46 27.4	-14
	0.1nm,0.3s,baz=353,slow=27,SNR=3.5						
MKAR	Makanchi Array	67.41	327	P	P	03 50 08.3	+0.1
	0.3nm,0.6s,baz=122,slow=7.2,SNR=4.1						

*IDC **19** 03:43:30.9±1.7, 1848N×12127E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=150.8km s-min=24.1km az=65.0*
*ISCJB **19** 03:43:36.9±0.8, 1864N±005×12078E±008, h33km, mb3.4/4, Error ellipse: s-maj=11.1km s-min=7.4km az=167.2*
*MAN **19** 03:43:37, 1854N×12093E, h10km, mb4.4, ML3.2, MS3.1*
MAN INTENSITY II - PASUQUIN, ILOCOS NORTE.
ISC 19 03:43:38.0±1.1**, 1858N**±007×**12082E**±008**, h32**km±8km**, n12, σ1.02s**/15**, mb3.4**/4**, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.32	217⇓	iP	Pb	03 43 45.2	-0.7
PIP				eS	Sb	03 43 51.3	0.0
APYP	Conner	0.82	150	eP	Pn	03 43 52.7	-0.6
APYP				eS	Sb	03 44 05.3	+0.7
ABRA	Dolores	0.93	186	eP	Pn	03 43 54.3	-0.5
ABRA				eS	Sn	03 44 06.4	-0.6
SGCP	Mt. Cagua	1.21	106	eP	Pn	03 43 58.1	-0.6
CAUP	Cauayan	1.89	149	eP	Pn	03 44 10.2	+2.2
PALP	Palanan	2.15	134	eP	Pn	03 44 09.3	-2.3
BOLP	Bolinao	2.35	202	eP	Pn	03 44 18.7	+4.3
BALP	Baler	2.91	165	eP	Pn	03 44 23.6	+1.5
SONM	Songino Array	31.47	341	P	P	03 49 56.6	+0.1
	0.2nm,0.4s,mb3.3,baz=156,slow=7.4,SNR=2.3						
WRA	Warramunga Arr	40.51	160	P	P	03 51 09.9	-4.3
	0.2nm,0.5s,mb3.0,baz=344,slow=8.9,SNR=5.4						
MKAR	Makanchi Array	42.27	320	P	P	03 51 28.6	+0.3
	0.4nm,0.6s,mb3.2,baz=121,slow=9.1,SNR=6.5						
KURK	Kurchatov	46.28	324	P	P	03 52 00.7	+0.3
	0.9nm,0.3s,mb4.2,baz=122,slow=8.8,SNR=5.2						

*BJI **19** 03:50:45.0, 4.13S×13868E, h80km, mB5.1, mb5.0, Ms4.9, Msz4.6*
*MOS **19** 03:50:49.3±0.9, 370S×138.11E, h78km, mb4.8/9, Error ellipse: s-maj=13.3km s-min=7.0km az=104.5*
*ISCJB **19** 03:50:50.1±0.8, 372S±003×13822E±005, h84km±8km, mb4.7/56, Error ellipse: s-maj=8.2km s-min=5.3km az=161.9*
*DJA **19** 03:50:51, 373S×13833E, h60km, Mw5.2/4*
*NEIC **19** 03:50:51.4±1.1, 370S×13820E, h80km±11km, mb4.9/30, Error ellipse: s-maj=6.8km s-min=5.8km az=64.0*
*IDC **19** 03:50:54.0±0.7, 373S×13822E, h105km±6km, mb4.3/15, mb1 4.4/18, mb1mx4.4/19, mbtmp4.4/18, MS3.6/6, Ms1 3.6/6, ms1mx3.2/17, Error ellipse: s-maj=18.8km s-min=8.5km az=88.0*
ISC 19 03:50:51.5±0.7**, 371S**±003×**13823E**±005**, h80**km±7km**, h78**km±3.0km**:pP-P, n129, σ0.97s**/135**, mb4.7**/56**, 3C-4D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.74	64	P	Pn	03 51 33.3	-0.1
BAKI	Biak	3.28	320	P	Pn	03 51 40.4	-0.2
MMPI	Merauke	5.19	156	P	Pn	03 52 10.5	+3.8
MMPI				S	Sn	03 53 05.8	+0.5
AAI	Ambon	10.01	270	P	Pn	03 53 17.3	+4.7
	165nm,0.5s,8μm						
PMG	Port Moresby	10.52	123	P	Pn	03 53 20.5	+1.0
	11nm,0.3s,baz=319,slow=4.7,SNR=69						
PMG				S	Sn	03 55 11.1	-4.6
	3.5nm,0.3s,baz=212,slow=22,SNR=3.7						
PMG	Port Moresby	10.52	123⇑	eP	Pn	03 53 21.4	+1.9
PMG	Port Moresby	10.52	123	ePn	Pn	03 53 21.0	+1.5
PMG	Port Moresby	10.52	123	P	Pn	03 53 21.7	+2.2
COEN	Coen	11.29	155	ePn	Pn	03 53 29.5	-0.6
	68nm,0.5s						
COEN				eSn	Sn	03 55 28.2	-6.2
COEN	Coen	11.29	155	P	Pn	03 53 29.9	-0.1
	51nm,0.7s,659nm						
WRAB	Tennant Creek	16.56	193	eP	Pn	03 54 37.6	-1.3
WRAB				e		03 57 30.6	
WRAB				pmax	pmax		
	comp=Z,128nm,0.7s						
WRAB	Tennant Creek	16.56	193	ePn	Pn	03 54 37.6	-1.3
	comp=Z,128nm,0.7s						
WRAB				eSn	Sn	03 57 30.6	-12
WRAB	Tennant Creek	16.56	193	P	Pn	03 54 37.7	-1.2
	comp=Z,226nm,0.8s,comp=Z,1μm						
WB2	Warramunga Arr	16.57	193	eP	Pn	03 54 37.0	-2.0
WB2				eS	S	03 57 26.0	-23
WRA	Warramunga Arr	16.57	193	P	Pn	03 54 37.6	-1.4
	comp=Z,11nm,0.3s,baz=6.5,slow=12,SNR=73						
WRA				S	S	03 57 30.6	-19
	comp=Z,6.1nm,0.3s,baz=12,slow=22,SNR=17						
CTA	Charters Tower	18.06	155	eP	Pn	03 54 55.6	-1.7
	comp=Z,78nm,1.4s						
CTA				eS	S	03 58 10.2	-9.0
CTA	Charters Tower	18.06	155	P	Pn	03 54 57.3	0.0
	comp=Z,5.3nm,0.3s,baz=331,slow=13,SNR=33						
CTA				LR	LR	04 01 03.4	
	comp=Z,126nm,20.7s,baz=51,slow=34						
CTA	Charters Tower	18.06	155	eP	Pn	03 54 55.6	-1.7
CTA				eS	S	03 58 10.2	-9.0
CTA				pmax	pmax		
	comp=Z,78nm,1.4s						
CTAO	Charters Tower	18.06	155	eP	Pn	03 54 57.4	+0.1
CTAO				pmax	pmax		
	comp=Z,122nm,1.2s						
CTAO	Charters Tower	18.06	155	eP	Pn	03 54 57.4	+0.1
	comp=Z,122nm,1.2s						
CTAO	Charters Tower	18.06	155	P	Pn	03 54 59.4	+2.1
KAPI	Kappang	18.47	265	P	Pn	03 55 01.9	-0.4
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=2.3						
FITZ	Fitzroy Crossi	18.88	220	eP	Pn	03 55 06.7	-0.4
	comp=Z,27nm,0.3s						
FITZ				eS	S	03 58 24.8	-11
FITZ	Fitzroy Crossi	18.88	220	P	Pn	03 55 08.5	+1.4
	comp=Z,97nm,0.9s,comp=Z,923nm						
ASAR	Alice Springs	20.28	192	P	P	03 55 22.0	+1.2
	comp=Z,100nm,0.6s,baz=20,slow=11,SNR=819						
ASAR				S	S	03 59 03.6	-0.3

comp=Z,68nm,0.9s,baz=9.5,slow=16,SNR=14
HNR Honiara 22.31 106 *e*P **P** 03 55 44.0 +1.3
HNR pmax pmax
comp=Z,137nm,1.0s,mb5.2
HNR Honiara 22.31 106 *e*P **P** 03 55 44.0 +1.4
comp=Z,137nm,1.0s,mb5.2
KKM Kota Kinabalu 24.02 294 *e*P **P** 03 55 59.8 +0.5
comp=Z,17nm,0.6s,mb4.5
EIDS Eidsvold 24.83 151 *e*P **P** 03 56 07.9 +1.4
comp=Z,67nm,0.9s,mb5.1
MBWA Marble Bar 24.99 225 *e*P **P** 03 56 08.1 +0.2
comp=Z,20nm,0.8s,mb4.6
KRKI Karangkates 26.01 259 P **P** 03 56 18.2 +0.9
comp=Z,225nm,1.1s,mb5.5
STKA Stephens Creek 28.20 174 *e*P **P** 03 56 35.8 -0.9
comp=Z,4.2nm,0.6s,mb4.2
STKA Stephens Creek 28.20 174 P **P** 03 56 35.9 -0.9
comp=Z,3.0nm,0.4s,mb4.2,baz=342,slow=8.0,SNR=14
STKA LR LR 04 08 59.5
comp=Z,157nm,18.2s,baz=26,slow=38
FORT Forrest 28.59 199 *e*P **P** 03 56 39.6 -0.6
comp=Z,10nm,0.6s,mb4.6
ARMA Armidale 29.43 156 *e*P **P** 03 56 50.0 +2.3
CNB Canberra Magne 33.10 163 *e*P **P** 03 57 21.1 +1.2
KLBR Kellerberrin 33.77 212 *e*P **P** 03 57 25.0 -0.8
comp=Z,3.5nm,0.4s,mb4.5
TOO Toolangi 34.35 170 *e*P **P** 03 57 31.1 +0.4
NWAO Narrogin (SRO) 35.08 212 P **P** 03 57 35.2 -1.8
comp=Z,6.7nm,1.0s,mb4.4,baz=66,slow=4.6,SNR=3.8
NWAO pP pP 03 57 59.5 +3.6
comp=Z,7.4nm,0.7s,baz=57,slow=7.1,SNR=3.4
PPI Padang Panjang 37.94 274 P **P** 03 58 02.0 +0.3
MJAR Matsushiro Arr 40.04 360 P **P** 03 58 17.7 -1.2
comp=Z,4.1nm,0.6s,mb4.4,baz=176,slow=8.5,SNR=14
MAJO Matsushiro 40.04 360 *e*P **P** 03 58 17.2 -1.7
MAJO pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
MAJO Matsushiro 40.04 360 *e*P **P** 03 58 17.2 -1.7
comp=Z,9.2nm,0.7s,mb4.7
MAT Matsushiro 40.04 360 P **P** 03 58 17.3 -1.6
KSRS Korea Array 42.06 348 P **P** 03 58 35.0 -0.4
comp=Z,8.3nm,0.7s,mb4.5,baz=161,slow=9.3,SNR=21
KSRS LR LR 04 14 13.4
comp=Z,48nm,18.0s,baz=23,slow=33
GYA Guiyang 42.80 316⇓ *i*P **P** 03 58 42.1 +0.5
GYA AP pP 03 59 00.4 -0.5
GYA XP sP 03 59 09.5 -0.5
GYA PP PP 04 00 24.6 +2.2
GYA SCP ScP 04 04 13.8 -2.0
GYA PCS PcS 04 04 22.8 -1.3
GYA S S **04 04 59.0 -1.1**
GYA SCS ScS 04 08 33.1 -2.1
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
GYA AMB AMB
comp=Z,430nm,6.0s
GYA LR LR
comp=N,440nm,18.5s
GYA LR LR
comp=E,330nm,17.7s
GYA LR LR
comp=Z,430nm,18.6s
CHRT Chiangrai 44.45 303⇑P **P** 03 58 55.5 +0.5
CMAR Chiang Mai Arr 44.52 301 P **P** 03 58 56.0 +0.4
comp=Z,10nm,0.7s,mb4.7,baz=123,slow=6.2,SNR=42
CHTO Chiang Mai 44.68 301 *e*P **P** 03 58 57.0 +0.2
CHTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CHTO Chiang Mai 44.68 301 *e*P **P** 03 58 57.0 +0.2
comp=Z,10nm,0.8s,mb4.6
KMI Kunming 44.81 312 P **P** 03 58 59.0 +1.2
KMI AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
XAN Xi'an 46.62 326 P **P** 03 59 11.6 -0.3
XAN AP pP 03 59 30.3 -1.1
XAN XP sP 03 59 38.5 -2.0
XAN PP PP 04 01 03.1 +0.3
XAN S **S** **04 05 57.8 +2.6**
XAN AMB AMB
comp=Z,8.0nm,0.7s,mb4.6
CD2 Chengdu 47.60 319 P **P** 03 59 20.9 +1.3
CD2 AP pP 03 59 39.6 +0.4
CD2 XP sP 03 59 48.4 +0.2
CD2 PCP PcP 04 00 49.9 +1.6
CD2 PP PP 04 01 12.9 +1.0
CD2 PCS PcS 04 04 44.1 +0.2
CD2 S **S** **04 06 10.3 +1.0**
CD2 XS sS 04 06 41.9 -0.8
CD2 SS SS 04 09 32.6 -5.9
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
CD2 AMB AMB
comp=Z,40nm,6.3s
CD2 LR LR
comp=N,220nm,5.2s
CD2 LR LR
comp=Z,180nm,5.1s
BJI Beijing 48.02 337 P **P** 03 59 22.4 -0.2
BJI S **S** **04 06 18.1 +3.2**
BJI AMB AMB
comp=Z,15nm,0.5s,mb5.1
BJI AMB AMB
comp=Z,136nm,4.6s
BJI LR LR
comp=N,114nm,26.3s
BJI LR LR
comp=E,157nm,25.9s
BJI LR LR
comp=Z,83nm,28.9s
CN2 Changchun 48.67 348 *e*P **P** 03 59 30.4 +2.8
CN2 *e*AP pP 03 59 49.3 +2.1
CN2 *e*S **S** **04 06 26.6 +2.6**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,400nm,16.0s
MDJ Mudanjiang 48.73 352 P **P** 03 59 27.9 -0.1
MDJ AP pP 03 59 45.4 -2.2
MDJ XP sP 03 59 53.9 -2.8
MDJ AMB AMB
comp=Z,15nm,1.3s,mb4.8
MDJ AMB AMB
comp=Z,56nm,5.2s
YSS Yuzh-Sakhalins 50.60 4 *i*P **P** 03 59 41.8 -0.4
YSS pmax pmax
comp=Z,32nm,0.6s,mb5.5
YSS Yuzh-Sakhalins 50.60 4 *e*P **P** 03 59 40.8 -1.4
comp=Z,39nm,0.6s,mb5.6
HHC Hu-ho-hao-te 50.60 334 *e*P **P** 03 59 42.5 +0.2
HHC AP pP 04 00 01.3 -0.8
HHC XP sP 04 00 10.1 -1.0
HHC PCP PcP 04 00 58.4 -0.6
HHC PP PP 04 01 39.6 +0.5
HHC SCP ScP 04 04 47.4 -0.7
HHC *e*S **S** **04 06 49.5 -1.5**
HHC SCS ScS 04 09 22.3 -3.4
HHC SS SS 04 10 21.4 -5.0
HHC AMB AMB
comp=Z,24nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,125nm,4.8s
HHC LR LR
comp=N,151nm,17.8s
HHC LR LR
comp=E,119nm,15.5s
HHC LR LR
comp=Z,127nm,16.7s
LZH Lanzhou 50.99 324 *e*P **P** 03 59 45.9 +0.5
LZH AP pP 04 00 04.5 -0.6
LZH XP sP 04 00 12.5 -1.6
LZH AMB AMB
comp=Z,29nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,120nm,4.8s
HABR Khabarovsk 52.04 357 *e*P **P** 03 59 51.2 -1.7
HABR *e*S **S** **04 07 08.3 -2.2**
HABR *e* 04 09 30.4
HABR *e*SS SS 04 10 47.7 -1.1
HABR MLR MLR
comp=Z,44nm,17.0s
KLR Kul'dur 53.02 355 *e*P **P** 03 59 56.0 -4.2
SHL Shillong 53.51 306 *e*P **P** 04 00 04.5 +0.3
GTA Gaotai 55.59 324 *e*P **P** 04 00 20.4 +1.4
GTA AP pP 04 00 39.8 +0.7
GTA XP sP 04 00 47.8 -0.2
GTA AMB AMB
comp=Z,5.0nm,1.3s,mb4.4
TAPN Taplejung 57.65 306 *e*P **P** 04 00 34.3 +0.4
ODAN Odare 57.72 305 *e*P **P** 04 00 34.7 +0.4
ULN Ulaanbaatar 58.17 336⇓ *i*P **P** 04 00 37.8 +0.7
ULN Ulaanbaatar 58.17 336 *e*P **P** 04 00 37.9 +0.8
comp=Z,7.5nm,0.5s,mb5.0
RAMN Ramite 58.40 305 *e*P **P** 04 00 39.5 +0.4
comp=Z,16nm,0.8s,mb5.1
SONM Songino Array 58.41 335 P **P** 04 00 39.2 +0.4
comp=Z,3.6nm,0.6s,mb4.6,baz=155,slow=7.5,SNR=15
SONM PcP PcP 04 01 28.2 -0.6
comp=Z,2.0nm,0.6s,baz=151,slow=4.5,SNR=5.6
SONM LR LR 04 23 02.7
comp=Z,75nm,20.2s,baz=289,slow=33
SONM Songino Array 58.41 335 P **P** 04 00 39.2 +0.4
SONM 04 01 28.2
PETK Petropavlovsk- 58.94 14 P **P** 04 00 43.0 +0.7
comp=Z,14nm,0.7s,mb5.2,baz=160,slow=6.2,SNR=24
PETK LR LR 04 26 06.5
comp=Z,54nm,19.1s,baz=170,slow=36
PETK Petropavlovsk- 58.94 14 P **P** 04 00 43.0 +0.7
PETK LR LR 04 26 06.5
JIRN Jiri 59.01 305 *e*P **P** 04 00 43.8 +0.4
comp=Z,14nm,0.7s,mb5.1
GUN Gumba 59.36 305 *e*P **P** 04 00 45.9 +0.1
comp=Z,18nm,0.7s,mb5.2
PKI Pulchoki 59.62 305 *e*P **P** 04 00 47.7 +0.2
KKN Kakani 59.80 305 *e*P **P** 04 00 49.0 +0.2
DMN Daman 59.88 305 *e*P **P** 04 00 49.4 +0.1
comp=Z,30nm,1.0s,mb5.3
GKN Gorkha 60.41 305 *e*P **P** 04 00 52.9 -0.1
comp=Z,30nm,0.8s,mb5.4
KOLN Koldanda 61.17 304 *e*P **P** 04 00 58.3 +0.1
comp=Z,31nm,0.9s,mb5.3
DANN Dangsing 61.26 305 *e*P **P** 04 00 58.8 +0.1
comp=Z,23nm,0.8s,mb5.2
ZAK Zakamensk 61.68 335 *e*P **P** 04 01 01.3 +0.2
ZAK pmax pmax
comp=Z,12nm,1.3s,mb4.8
TLY Talaya 62.53 337 *e*P **P** 04 01 07.6 +0.8
TLY pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MOY Mondy 63.60 335 *e*P **P** 04 01 14.6 +0.7
BOD Bodaibo 64.36 346 *e*P **P** 04 01 18.1 -0.6
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
WMQ Urumqi 65.49 322 *e*P **P** 04 01 28.3 +1.9
MKAR Makanchi Array 70.28 323 P **P** 04 01 56.0 -0.4
comp=Z,3.2nm,0.6s,mb4.3,baz=102,slow=8.4,SNR=61
ZAA0 Zalesovo Array 72.55 330 *e*P **P** 04 02 08.9 -1.0
ZALV Zalesovo Beam 72.55 330 P **P** 04 02 08.9 -1.0
comp=Z,5.3nm,0.6s,mb4.6,baz=112,slow=6.2,SNR=24
TKM2 Tokmak 2 72.94 317 *e*P **P** 04 02 12.4 0.0
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
TKM2 Tokmak 2 72.94 317 *e*P **P** 04 02 12.4 0.0
comp=Z,2.2nm,0.6s,mb4.2
AAK Ala-Archa 73.59 316⇑ *e*P **P** 04 02 16.0 -0.2
AAK pmax pmax
comp=Z,4.0nm,1.7s,mb3.9
AAK Ala-Archa 73.59 316 *e*P **P** 04 02 16.8 +0.5
NVS Novosibirsk 73.81 330 *i*P **P** 04 02 16.5 -0.8
NVS pmax pmax
comp=Z,26nm,1.6s,mb4.7
NVS pmax pmax
comp=N,8.0nm,1.0s
NVS pmax pmax
comp=E,10.0nm,1.0s
AML Almayashu 73.96 316 *e*P **P** 04 02 19.1 +0.7
comp=E,9.7nm,0.8s,mb4.6
EKS2 Erkin-Say 74.09 316 *e*P **P** 04 02 19.2 0.0
comp=E,1.3nm,0.6s,mb3.8
KURK Kurchatov 74.25 325 P **P** 04 02 19.5 -0.4
comp=E,4.5nm,1.0s,mb4.1,baz=110,slow=5.0,SNR=21
KURK pP pP 04 02 47.5 +6.5
comp=E,2.9nm,0.8s,baz=113,slow=2.2,SNR=5.0
VNDA Vanda 74.83 175 P **P** 04 02 22.4 -0.4
comp=E,1.5nm,0.5s,mb4.0,baz=326,slow=6.0,SNR=14
VNDA LR LR 04 33 14.7
comp=E,53nm,18.1s,baz=357,slow=34
VNDA Vanda 74.83 175 *e*P **P** 04 02 22.5 -0.4
VNDA pmax pmax
comp=Z,3.0nm,0.9s
VNDA Vanda 74.83 175 *e*P **P** 04 02 22.4 -0.4
comp=Z,3.0nm,0.9s,mb4.0
KBL Kabul 75.14 307 *e*P **P** 04 02 24.3 -1.1
KBL *e**PP pP 04 02 52.2 +5.8
KBL pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KBL Kabul 75.14 307 *e*P **P** 04 02 24.3 -1.1
comp=Z,2.0nm,0.6s,mb4.0
KBL *e*pP pP 04 02 52.2 +5.8
TIXI Tiksi 75.47 357⇓ *e*P **P** 04 02 25.6 -0.9
TIXI pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
TIXI Tiksi 75.47 357 *e*P **P** 04 02 25.2 -1.3
BRVK Borovoye 79.92 325 *e*P **P** 04 02 51.7 0.0
MAW Mawson 81.02 202 P **P** 04 02 57.3 0.0
comp=Z,3.7nm,0.9s,mb4.2,baz=106,slow=19,SNR=3.7
MAW pP pP 04 03 24.6 +6.0
comp=Z,5.7nm,1.0s,baz=90,slow=7.6,SNR=3.6
KDAK Kodiak Island 82.20 30 P **P** 04 03 03.8 +0.1
comp=Z,11nm,0.6s,mb4.9,baz=235,slow=4.6,SNR=9.7
RC01 Rabbit Creek A 84.64 28 *e*P **P** 04 03 15.2 -0.9
comp=Z,27nm,0.9s,mb5.2
PMR Palmer 85.07 27 *e*P **P** 04 03 17.9 -0.4
MCK McKinley 85.78 25 *e*P **P** 04 03 20.8 -1.0
MCK pmax pmax
comp=Z,20nm,0.8s,mb5.1
MCK McKinley 85.78 25 *e*P **P** 04 03 20.8 -1.0
comp=Z,20nm,0.8s,mb5.1
COLA College 86.57 24 *e*P **P** 04 03 25.5 -0.1
COLA College 86.57 24 *e*P **P** 04 03 24.9 -0.7
comp=Z,2.8nm,0.7s,mb4.3
ARU Arti 87.36 327 *d i*P **P** 04 03 27.4 -2.2
ARU *e* 04 06 52.6
ARU S S 04 13 44.9 -19
ARU SS SS 04 19 46.0 -3.9
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.8
ARU Arti 87.36 327 *e*P **P** 04 03 28.1 -1.5
EGAK Eagle 89.33 25 *e*P **P** 04 03 39.3 +0.5
DAWY Dawson 89.97 26 *e*P **P** 04 03 42.2 +0.4
HYT Haines Junctio 90.41 29 *e*P **P** 04 03 44.9 +1.0
INK Inuvik 92.77 22 P **P** 04 03 53.0 -1.6
comp=Z,1.7nm,0.9s,mb4.4,baz=270,slow=5.1,SNR=6.0
YKA Yellowknife Ar 101.17 27 P Pdif 04 04 32.0 -1.0
comp=Z,0.3nm,0.7s,baz=289,slow=5.1,SNR=5.3
ARCES ARCESS Array B 101.29 341 P Pdif 04 04 31.4 -2.1
comp=Z,5.6nm,0.9s,baz=81,slow=5.8,SNR=10
TXAR Lajitas Array 116.22 59 PKP PKPdf 04 09 25.8 -0.6
comp=Z,0.4nm,0.8s,baz=213,slow=0.8,SNR=4.4
TXAR Lajitas Array 116.22 59 PKP PKPdf 04 09 25.8 -0.6
TKL Tuckaleechee C 129.88 45 PKP PKPdf 04 09 52.4 0.0
comp=Z,2.7nm,0.6s,baz=150,slow=2.9,SNR=4.9
TORD Torodi Ar. Bea 136.06 285 PKhKP 04 09 58.8
comp=Z,0.6nm,0.8s,baz=66,slow=2.7,SNR=5.3
TORD PKP PKPdf 04 10 03.4 -1.2
comp=Z,0.8nm,0.6s,baz=50,slow=2.1,SNR=16
TORD pPKP pPKPdf 04 10 31.3 +4.3
comp=Z,1.0nm,0.7s,baz=66,slow=1.9,SNR=4.4
TORD Torodi Ar. Bea 136.06 285 PKP PKPdf 04 09 58.8 -5.8
TORD PKP PKPdf 04 10 03.4 -1.2
TORD pPKP pPKPdf 04 10 31.3 +4.2
DBIC Dimbokro 143.12 276 PKhKP 04 10 13.2
comp=Z,1.3nm,0.5s,baz=26,slow=4.7,SNR=7.8
CPUP Villa Florida 146.56 154 PKPbc PKPbc 04 10 24.5 -0.1
comp=Z,0.4nm,0.4s,baz=6.5,slow=6.0,SNR=3.5
CPUP Villa Florida 146.56 154 PKPbc PKPbc 04 10 24.5 -0.1

*IDC **19** 03:51:20.8±1.1, 1905N×6457W, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.6/6, Error ellipse: s-maj=43.2km s-min=22.9km az=36.0*
*TRN **19** 03:51:25.5, 1909N×6472W, h24km*
*ISCJB **19** 03:51:26.0±0.9, 1925N±007×6469W±003, h42km±12km, mb3.6/6, Error ellipse: s-maj=11.7km s-min=4.5km az=4.8*

*NEIC **19** 03:51:27.4, 19.18N×6471W, h6km, MD3.7(RSPR), After RSPR.*
*RSPR **19** 03:51:27.4, 19.18N×6471W, h6km±1km, MD3.7/16, MD3.7/16*

ISC 19 03:51:26.4±1.1, 1921N±005×6470W±003, h25km±7km, n31, σ0s77/45, mb3.6/6, 15C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ABV	**Anegada**	**0.59**	**144**⇓	*e*P		**Pb**	**03 51 37.7**	**-0.4**
TBVI	**Tortola**	**0.80**	**174**⇑	*e*P		**Pb**	**03 51 40.6**	**-1.0**
TBVI				*e*S		**Sb**	**03 51 52.1**	**+0.2**
STVI	**Saint Thomas**	**0.89**	**196**⇑	*e*P		**Pb**	**03 51 42.8**	**-0.5**
STVI				*e*S		**Sb**	**03 51 54.9**	**+0.2**
CDVI	**St. Croix**	**1.46**	**183**⇑	*e*P		**Pn**	**03 51 52.1**	**+1.0**
CDVI	**St. Croix**	**1.46**	**183**⇑	*e*P		**Pn**	**03 51 52.6**	**+1.5**
HUMP	**Col San Antoni**	**1.53**	**226**⇓	*e*P		**Pn**	**03 51 51.5**	**-0.5**
HUMP				*e*S		**Sn**	**03 52 10.6**	**-0.5**
SJG	**San Juan**	**1.76**	**232**⇑	*e*P		**Pn**	**03 51 54.8**	**-0.4**
SJG				*e*S		**Sn**	**03 52 16.5**	**-0.4**
SJG	**San Juan**	**1.76**	**232**⇑	*e*P		**Pn**	**03 51 54.8**	**-0.4**
SJG	**San Juan**	**1.76**	**232**⇑	*e*P		**Pn**	**03 51 54.9**	**-0.4**
SJG				*e*S		**Sn**	**03 52 16.5**	**-0.4**
SJG				*e*S		**Sn**	**03 52 16.6**	**-0.3**
SMRT	**St. Maarten**	**1.93**	**127**⇑	*e*P		**Pn**	**03 51 57.6**	**+0.1**
SMRT				*e*S		**Sn**	**03 52 21.2**	**+0.3**
SABA	**Saba**	**2.10**	**139**⇑	*e*P		**Pn**	**03 52 00.3**	**+0.4**
CELP	**Cerrillos**	**2.11**	**238**⇑	*e*P		**Pn**	**03 52 00.1**	**0.0**
CELP				*e*S		**Sn**	**03 52 25.3**	**-0.2**
OBIP	**Obispado Ponce**	**2.15**	**238**⇓	*e*P		**Pn**	**03 52 00.5**	**-0.1**
OBIP				*e*S		**Sn**	**03 52 26.4**	**-0.1**
OBIP	**Obispado Ponce**	**2.15**	**238**⇓	*e*P		**Pn**	**03 52 00.5**	**-0.1**
OBIP				*e*S		**Sn**	**03 52 26.0**	**-0.5**
ICM	**Isla Caja Muer**	**2.17**	**233**⇑	*e*P		**Pn**	**03 52 00.8**	**-0.1**
ICM				*e*S		**Sn**	**03 52 26.5**	**-0.5**
LRS	**Lares**	**2.23**	**246**⇓	*e*P		**Pn**	**03 52 01.8**	**+0.1**
LRS				*e*S		**Sn**	**03 52 28.3**	**-0.2**
GBPR	**Guanica, Bosqu**	**2.41**	**240**⇑	*e*P		**Pn**	**03 52 03.8**	**-0.4**
LSP	**Las Mesas**	**2.49**	**246**⇑	*e*P		**Pn**	**03 52 05.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.58**	**243**⇑	*e*P		**Pn**	**03 52 06.8**	**+0.2**
CRPR				*e*S		**Sn**	**03 52 37.5**	**+0.3**
BPA	**Boggy Peak**	**3.46**	**128**	*e*S		**Sn**	**03 52 57.9**	**-0.8**
PCDR	**Punta Cana, DR**	**3.56**	**259**⇑	*e*P		**Pn**	**03 52 19.7**	**-0.3**
LZG	**Guadaloupe-1**	**4.13**	**137**	*e*P		**Pn**	**03 52 29.1**	**+1.2**
HMG	**Houelmont**	**4.30**	**138**	*e*P		**Pn**	**03 52 31.4**	**+1.2**
SDDR	**Presa de Saban** 44nm,0.6s	**6.24**	**269**	*e*Pn		**Pn**	**03 52 57.6**	**+0.8**
SDDR				*e*Sn		**Sn**	**03 54 08.3**	**+1.0**
SDV	**Santo Domingo** 8.6nm,0.6s	**11.77**	**210**	*e*Pn		**Pn**	**03 54 15.6**	**+2.9**
TXAR	**Lajitas Array** 0.6nm,0.7s,mb3.5,baz=109,slow=11,SNR=3.5	**36.78**	**293**	P		**P**	**03 58 32.5**	**+0.4**
PDAR	**Pinedale Array** 1.0nm,0.6s,mb3.7,baz=116,slow=8.1,SNR=7.7	**44.39**	**312**	P		**P**	**03 59 35.5**	**+0.6**
CPUP	**Villa Florida** 0.4nm,0.4s,mb3.7,baz=356,slow=7.9,SNR=3.6	**45.83**	**171**	P		**P**	**03 59 42.5**	**-3.9**
NVAR	**Mina Array Bea** 0.3nm,0.5s,mb3.6,baz=87,slow=9.2,SNR=3.1	**49.99**	**304**	P		**P**	**04 00 19.1**	**+0.4**
YKA	**Yellowknife Ar** 0.6nm,0.8s,mb3.7,baz=111,slow=7.6,SNR=6.8	**55.09**	**334**	P		**P**	**04 00 54.0**	**-1.9**
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,mb3.4,baz=281,slow=6.6,SNR=3.6	**63.73**	**84**	P		**P**	**04 01 54.8**	**-1.7**

*TRN **19** 03:57:13.1, 19.12N×6471W, h28km*
*NEIC **19** 03:57:15.3, 19.19N×6467W, h46km, MD3.5(RSPR), After RSPR.*
*RSPR **19** 03:57:15.3, 19.19N×6467W, h46km±3km, MD3.5/12, MD3.5/12*

ISC 19 03:57:14.5±1.3, 192N±01×6468W±006, h35km±51km, n20, σ0s41/35, 17C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ABV	**Anegada**	**0.57**	**145**⇑	*e*P		**Pn**	**03 57 26.1**	**0.0**
ABV				*e*S		**Sn**	**03 57 34.4**	**+0.1**
TBVI	**Tortola**	**0.78**	**176**⇑	*e*P		**Pn**	**03 57 28.1**	**-1.0**
TBVI	**Tortola**	**0.78**	**176**⇑	*e*P		**Pn**	**03 57 28.9**	**-0.2**
TBVI				*e*S		**Sn**	**03 57 39.4**	**-0.2**
TBVI	**Tortola**	**0.78**	**176**⇑	*e*P		**Pn**	**03 57 28.1**	**-1.0**
TBVI				*e*S		**Sn**	**03 57 39.4**	**-0.2**
STVI	**Saint Thomas**	**0.89**	**197**⇓	*e*P		**Pn**	**03 57 29.8**	**-0.7**
STVI				*e*S		**Sn**	**03 57 42.6**	**+0.5**
STVI	**Saint Thomas**	**0.89**	**197**⇓	*e*P		**Pn**	**03 57 29.8**	**-0.7**
STVI				*e*S		**Sn**	**03 57 42.1**	**0.0**
CDVI	**St. Croix**	**1.44**	**183**⇑	*e*P		**Pn**	**03 57 39.3**	**+1.2**
HUMP	**Col San Antoni**	**1.53**	**227**⇑	*e*P		**Pn**	**03 57 39.2**	**-0.2**
HUMP				*e*S		**Sn**	**03 57 57.6**	**-0.4**
SJG	**San Juan**	**1.77**	**232**⇑	*e*P		**Pn**	**03 57 42.3**	**-0.3**
SJG				*e*S		**Sn**	**03 58 03.7**	**-0.2**
SJG	**San Juan**	**1.77**	**232**⇑	*e*P		**Pn**	**03 57 42.3**	**-0.3**
SJG	**San Juan**	**1.77**	**232**⇑	*e*P		**Pn**	**03 57 42.7**	**+0.1**
SJG				*e*S		**Sn**	**03 58 03.7**	**-0.2**
SABA	**Saba**	**2.08**	**139**⇑	*e*P		**Pn**	**03 57 46.8**	**-0.1**
CELP	**Cerrillos**	**2.12**	**238**⇑	*e*P		**Pn**	**03 57 47.6**	**0.0**
CELP				*e*S		**Sn**	**03 58 13.0**	**+0.4**
CELP	**Cerrillos**	**2.12**	**238**⇑	*e*P		**Pn**	**03 57 47.6**	**0.0**
CELP				*e*S		**Sn**	**03 58 13.4**	**+0.7**
OBIP	**Obispado Ponce**	**2.16**	**238**⇑	*e*P		**Pn**	**03 57 48.1**	**0.0**
OBIP	**Obispado Ponce**	**2.16**	**238**⇑	*e*P		**Pn**	**03 57 48.6**	**+0.6**
OBIP				*e*S		**Sn**	**03 58 13.2**	**-0.4**
OBIP	**Obispado Ponce**	**2.16**	**238**⇑	*e*P		**Pn**	**03 57 48.1**	**0.0**
OBIP				*e*S		**Sn**	**03 58 13.2**	**-0.4**
LRS	**Lares**	**2.24**	**247**⇓	*e*P		**Pn**	**03 57 49.2**	**+0.1**
LRS				*e*S		**Sn**	**03 58 15.7**	**0.0**
LSP	**Las Mesas**	**2.50**	**246**⇑	*e*P		**Pn**	**03 57 52.5**	**-0.2**
LSP				*e*S		**Sn**	**03 58 22.2**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.59**	**243**⇑	*e*P		**Pn**	**03 57 54.2**	**+0.2**
CRPR				*e*S		**Sn**	**03 58 24.4**	**+0.1**

GUC 19 04:01:51.3±0.5, 2337S×7033W, h31km±5km, MD3.6, ML2.1,1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.12**	**98**	*e*P		Pb	04 01 57.6	+0.7
CEN1				*i* S		Sb	04 02 01.9	+1.2
CEN1				AML		AML	04 02 02.7	
	comp=E,178nm,0.1s							
MECH	**Mejillones**	**0.29**	**338**⇓	*i*P		Pb	04 01 58.2	-0.5
ANCH	**Antofagasta**	**0.32**	**194**	*e*P		Pb	04 01 58.2	-0.8
ANCH				*i* S		Sb	04 02 03.9	-0.5
CPN1	**Cerro Paranal**	**1.25**	**183**	*e*P		Pn	04 02 12.0	-0.6
CPN1				*i* S		Sn	04 02 29.1	+0.7
CPN1				AML		AML	04 02 34.9	
	comp=E,90nm,0.2s							
PB04	**Plate Boundary**	**1.35**	**35**	*e*P		Pn	04 02 10.6	-3.4
PB04				*i* S		Sn	04 02 25.3	-5.5
PB04				AML		AML	04 02 35.9	
	comp=N,113nm,0.4s							
LVC	**Limon Verde**	**1.51**	**60**	*e*P		Pn	04 02 21.4	+5.2
LVC				*i* S		Sn	04 02 44.4	+10

*ISCJB **19** 04:02:10.8±1.1, 192N±0.1×6459W±007, h56km±22km, Error ellipse: s-maj=19.4km s-min=9.3km az=164.1*
*TRN **19** 04:02:10.4, 1908N×6456W, h62km*
*NEIC **19** 04:02:12.3, 19.16N×6457W, h55km, MD3.6(RSPR), After RSPR.*
*RSPR **19** 04:02:12.3, 19.16N×6457W, h55km±2km, MD3.6/15, MD3.6/15*

ISC 19 04:02:12.0±1.1, 191N±01×6457W±006, h58km±19km, n20, σ0s51/35, 17C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ABV	**Anegada**	**0.46**	**151**⇓	*e*P		**Pn**	**04 02 23.0**	**-0.3**
ABV				*e*S		**Sn**	**04 02 31.7**	**+0.2**
TBVI	**Tortola**	**0.71**	**184**⇑	*e*P		**Pn**	**04 02 26.0**	**-0.3**
TBVI				*e*S		**Sn**	**04 02 37.1**	**+0.4**
STVI	**Saint Thomas**	**0.86**	**205**⇑	*e*P		**Pn**	**04 02 27.6**	**-0.5**
STVI				*e*S		**Sn**	**04 02 40.0**	**0.0**
CDVI	**St. Croix**	**1.39**	**188**⇑	*e*P		**Pn**	**04 02 37.1**	**+2.1**
HUMP	**Col San Antoni**	**1.57**	**231**⇓	*e*P		**Pn**	**04 02 37.1**	**-0.4**
HUMP				*e*S		**Sn**	**04 02 56.4**	**-0.3**
SJG	**San Juan**	**1.81**	**236**⇑	*e*P		**Pn**	**04 02 40.4**	**-0.4**
SJG				*e*S		**Sn**	**04 03 02.7**	**-0.1**
SJG	**San Juan**	**1.81**	**236**⇑	*e*P		**Pn**	**04 02 40.4**	**-0.4**
SJG	**San Juan**	**1.81**	**236**⇑	*e*P		**Pn**	**04 02 40.9**	**0.0**
SJG				*e*S		**Sn**	**04 03 02.3**	**-0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJG				eS	**Sn**	**04 03 02.7**	**-0.1**
SJG	**San Juan**	**1.81**	**236**	⇑eP	**Pn**	**04 02 40.9**	**0.0**
SJG				eS	**Sn**	**04 03 02.3**	**-0.4**
SABA	**Saba**	**1.96**	**140**	⇑eP	**Pn**	**04 02 42.5**	**-0.3**
CELP	**Cerrillos**	**2.18**	**241**	⇑eP	**Pn**	**04 02 45.7**	**-0.2**
CELP				eS	**Sn**	**04 03 11.5**	**-0.3**
OBIP	**Obispado Ponce**	**2.22**	**241**	⇑eP	**Pn**	**04 02 46.2**	**-0.2**
OBIP				eS	**Sn**	**04 03 12.3**	**-0.3**
ICM	**Isla Caja Muer**	**2.23**	**237**	⇑eP	**Pn**	**04 02 46.4**	**-0.1**
ICM				eS	**Sn**	**04 03 12.9**	**0.0**
LRS	**Lares**	**2.32**	**249**	⇑eP	**Pn**	**04 02 47.5**	**-0.2**
LRS				eS	**Sn**	**04 03 15.1**	**0.0**
LRS	**Lares**	**2.32**	**249**	⇑eP	**Pn**	**04 02 47.5**	**-0.2**
LRS				eS	**Sn**	**04 03 15.9**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.48**	**243**	⇑eP	**Pn**	**04 02 50.0**	**+0.1**
GBPR	**Guanica, Bosqu**	**2.48**	**243**	⇑eP	**Pn**	**04 02 50.3**	**+0.4**
LSP	**Las Mesas**	**2.57**	**249**	⇑eP	**Pn**	**04 02 50.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.66**	**245**	⇑eP	**Pn**	**04 02 52.3**	**-0.1**
CRPR				eS	**Sn**	**04 03 23.5**	**0.0**
SDDR	**Presa de Saban**	**6.36**	**270**	ePn	**Pn**	**04 03 43.2**	**+0.1**
	19nm,0.7s						
SDDR				eSn	**Sn**	**04 04 55.4**	**+1.0**

*JMA **19** 04:05:53.3±0.3, 23.32N×122.18E, h55km*
TAP 19 04:05:51.7, 23.34N×121.98E, h34km, ML3.2, 3C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.62**	**248**	⇑iP	Pn	04 06 02.8	-1.2
	baz=240						
CHKT				eS	Sn	04 06 10.9	-1.8
	baz=240						
EHY	**Hungye**	**0.63**	**286**	eP	Pn	04 06 03.5	-0.7
	baz=285						
EHY				eS	Sn	04 06 12.4	-0.7
	baz=285						
TWF1	**Yuli**	**0.63**	**272**	⇑iP	Pn	04 06 03.6	-0.6
	baz=263						
TWF1				S	Sn	04 06 12.8	-0.3
	baz=263						
ESL	**Shilin**	**0.69**	**313**	⇓iP	Pn	04 06 04.3	-0.8
	baz=321						
ESL				S	Sn	04 06 13.0	-1.6
	baz=321						
HWA	**Hwalien**	**0.73**	**332**	eP	Pn	04 06 04.8	-0.8
	baz=331						
TWD	**Chiawan**	**0.82**	**334**	i P	Pn	04 06 06.3	-0.6
	baz=334						
TWD				eS	Sn	04 06 16.9	-0.9
	baz=334						
ELDTW	**Lidau**	**0.90**	**261**	⇑iP	Pn	04 06 07.3	-0.6
	baz=261						
TWG	**Pinlang**	**0.98**	**239**	eP	Pn	04 06 08.5	-0.6
	baz=233						
TWG				eS	Sn	04 06 20.8	-1.0
	baz=233						
WHF	**Hehuan Shan**	**1.04**	**321**	i P	Pn	04 06 09.8	-0.1
	baz=320						
WHF				eS	Sn	04 06 23.2	-0.1
	baz=320						
ENA	**Nanau**	**1.11**	**348**	eP	Pn	04 06 10.7	-0.1
	baz=348						
ENA				eS	Sn	04 06 25.0	0.0
	baz=348						
SMLT	**Sun Moon Lake**	**1.13**	**299**	eP	Pn	04 06 11.6	+0.5
	baz=298						
SMLT				eS	Sn	04 06 26.2	+0.7
	baz=298						
TYC	**Yuchr**	**1.18**	**299**	eP	Pn	04 06 12.4	+0.6
	baz=307						
TYC				eS	Sn	04 06 27.8	+1.2
	baz=307						
ECL	**Taimali**	**1.20**	**232**	eP	Pn	04 06 11.0	-1.0
	baz=232						
CHN5	**Tsauling**	**1.23**	**283**	P	Pn	04 06 14.0	+1.5
	baz=281						
CHN5				S	Sn	04 06 30.0	+2.2
	baz=281						
NNS	**Nan Shan**	**1.23**	**333**	P	Pn	04 06 13.0	+0.5
	baz=332						
NNS				eS	Sn	04 06 28.1	+0.1
	baz=332						
WTP	**Ta-pu**	**1.26**	**266**	i P	Pn	04 06 14.2	+1.3
	baz=260						
WTP				eS	Sn	04 06 30.6	+1.9
	baz=260						
TWC	**Suao**	**1.27**	**354**	P	Pn	04 06 13.7	+0.6
	baz=354						
TWC				eS	Sn	04 06 29.6	+0.6
	baz=354						
CHN4	**Tsaushan**	**1.28**	**271**	eP	Pn	04 06 14.4	+1.3
	baz=270						
CHN4				eS	Sn	04 06 31.9	+2.8
	baz=270						
CHN1	**Nanshi**	**1.35**	**264**	i P	Pn	04 06 15.8	+1.7
	baz=263						
CHN1				i S	Sn	04 06 33.6	+2.8
	baz=263						
LAY	**Lan-yu**	**1.35**	**197**	eP	Pn	04 06 14.8	+0.7
	baz=188						
ENTT	**Nioudou**	**1.35**	**344**	eP	Pn	04 06 14.9	+0.7
	baz=343						
ENTT				eS	Sn	04 06 31.8	+0.8
	baz=343						
TWK	**Hsinying**	**1.38**	**267**	eP	Pn	04 06 15.8	+1.3
	baz=267						
TWK				eS	Sn	04 06 34.3	+2.7
	baz=267						
TWE	**Neicheng**	**1.41**	**348**	eP	Pn	04 06 15.9	+0.9
	baz=339						
TCU	**Taichung**	**1.45**	**304**	eP	Pn	04 06 17.6	+2.1
	baz=304						
NSK	**Sanguang**	**1.45**	**337**	P	Pn	04 06 15.8	+0.3
	baz=336						
NSK				eS	Sn	04 06 34.0	+0.6
	baz=336						
YOJ	**Yonaguni jima**	**1.46**	**40**	P	Pn	04 06 16.7	+1.0
YOJ				eS	Sn	04 06 33.0	-0.6
TWQ1	**Liyutan**	**1.50**	**313**	eP	Pn	04 06 17.9	+1.8
	baz=312						
NSTT	**Nanjuang**	**1.57**	**325**	eP	Pn	04 06 18.7	+1.6
	baz=310						
SCZT	**Fangliau**	**1.58**	**233**	eP	Pn	04 06 18.8	+1.5
	baz=228						
SCZT				eS	Sn	04 06 38.7	+2.1
	baz=228						
NWF	**Wu-fen Shan**	**1.74**	**354**	eP	Pn	04 06 21.3	+1.9
	baz=354						
HATJ	**Hateruma jima**	**1.82**	**66**	P	Pn	04 06 20.5	0.0
HATJ				eS	Sn	04 06 41.0	-1.4
IRIF	**Iriomote-Funau**	**1.88**	**58**	P	Pn	04 06 21.9	+0.5
IRIF				eS	Sn	04 06 43.5	-0.5
JKRS	**Kuro-shima**	**2.06**	**64**	P	Pn	04 06 24.2	+0.3
JKRS				eS	Sn	04 06 48.1	-0.3
JIJ	**Ishigaki jima**	**2.23**	**62**	P	Pn	04 06 26.4	+0.2
JIJ				eS	Sn	04 06 51.4	-1.1
JTJ	**Tarama**	**2.81**	**62**	P	Pn	04 06 34.4	+0.3
JTJ				eS	Sn	04 07 06.7	-0.1

*TRN **19** 04:07:56.0, 19.12N×64.75W, h7km*
*NEIC **19** 04:07:57.6, 19.12N×64.46W, h77km, MD3.5(RSPR), After RSPR.*
*RSPR **19** 04:07:57.6, 19.12N×64.46W, h77km±2km, MD3.5/11, MD3.5/11*
ISC 19 04:07:57.4±1.5**, 19.2N**±0.2×**64.5W**±0.1**, h60**km±33km**, n14, σ0.50**/23**, 11C-3D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.54**	**162**	⇓eP	**Pn**	**04 08 10.0**	**+0.2**
ABV	**Anegada**	**0.54**	**162**	⇓eP	**Pn**	**04 08 10.1**	**+0.3**
ABV				eS	**Sn**	**04 08 19.3**	**+0.5**
TBVI	**Tortola**	**0.83**	**187**	⇑eP	**Pn**	**04 08 12.9**	**-0.3**
TBVI				eS	**Sn**	**04 08 24.2**	**-0.7**
STVI	**Saint Thomas**	**0.98**	**205**	⇑eP	**Pn**	**04 08 14.4**	**-0.7**
STVI				eS	**Sn**	**04 08 28.2**	**-0.1**
CDVI	**St. Croix**	**1.50**	**189**	⇑eP	**Pn**	**04 08 23.4**	**+1.3**
HUMP	**Col San Antoni**	**1.68**	**229**	⇑eP	**Pn**	**04 08 24.0**	**-0.4**
HUMP				eS	**Sn**	**04 08 45.0**	**+0.1**
SJG	**San Juan**	**1.92**	**234**	⇓eP	**Pn**	**04 08 27.2**	**-0.5**
SJG				eS	**Sn**	**04 08 50.7**	**-0.1**
CELP	**Cerrillos**	**2.28**	**240**	⇑eP	**Pn**	**04 08 32.4**	**-0.2**
CELP				eS	**Sn**	**04 08 59.4**	**-0.1**
OBIP	**Obispado Ponce**	**2.32**	**239**	⇑eP	**Pn**	**04 08 32.9**	**-0.2**
OBIP				eS	**Sn**	**04 09 00.7**	**+0.2**
LRS	**Lares**	**2.40**	**247**	⇑eP	**Pn**	**04 08 34.4**	**+0.1**
LSP	**Las Mesas**	**2.66**	**247**	⇑eP	**Pn**	**04 08 37.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.75**	**244**	⇑eP	**Pn**	**04 08 39.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.75**	**244**	⇑eP	**Pn**	**04 08 39.1**	**0.0**
CRPR				eS	**Sn**	**04 09 12.3**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.75**	**244**	⇑eP	**Pn**	**04 08 39.0**	**-0.1**
CRPR				eS	**Sn**	**04 09 12.0**	**+0.8**

*ISCJB **19** 04:23:19.8±0.8, 21.09S±0.07×68.7W±0.1, h113km±10km, mb3.5/3, Error ellipse: s-maj=19.8km s-min=9.3km az=160.8*
*GUC **19** 04:23:21.0±0.8, 21.27S×68.65W, h102km±15km, MD4.0, ML4.1*
*IDC **19** 04:23:23.5±3.3, 20.72S×68.40W, h117km±8km, mb3.3/4, mb1 3.5/4, mb1mx3.4/15, mbtmp3.3/4, Error ellipse: s-maj=134.9km s-min=26.3km az=16.0*
*NEIC **19** 04:23:23.1±1.0, 21.50S×68.54W, h138km±12km, MD4.0(GUC), Error ellipse: s-maj=27.2km s-min=17.0km az=49.0*
ISC 19 04:23:21.1±0.8**, 21.12S**±0.06×**68.7W**±0.1**, h109**km±10km**, n15, σ0.84**/19**, mb3.5**/3**, 1C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.76**	**276**	⇓iP	**Pn**	**04 23 40.1**	**+0.2**
PB01				i S	**Sn**	**04 23 54.3**	**+0.3**
PB01				AML	AML	04 23 56.5	
	comp=E,7μm,0.2s						
PB04	**Plate Boundary**	**1.36**	**213**	eP	**Pn**	**04 23 51.1**	**+4.8**
PB04				i S	**Sn**	**04 24 14.0**	**+8.6**
PB04				AML	AML	04 24 17.8	
	comp=N,2μm,0.2s						
MACH	**Maria Elena**	**1.47**	**223**	eP	**Pn**	**04 23 46.8**	**-0.6**
MACH				i S	**Sn**	**04 24 06.8**	**-0.7**
LVC	**Limon Verde**	**1.50**	**188**	ePn	**Pn**	**04 23 48.4**	**+0.5**
LVC				eSn	**Sn**	**04 24 08.3**	**+0.1**
TOCH	**Tocopilla**	**1.72**	**235**	eP	**Pn**	**04 23 50.0**	**-0.5**
TOCH				i S	**Sn**	**04 24 11.8**	**-1.1**
TOCH				AML	AML	04 24 14.2	
	comp=E,3μm,0.4s						
MECH	**Mejillones**	**2.57**	**219**	eP	**Pn**	**04 24 01.0**	**-0.4**
MECH				AML	AML	04 24 44.8	
	comp=E,721nm,0.1s						
CEN1	**Los Morros**	**2.66**	**212**	⇑eP	**Pn**	**04 24 04.5**	**+1.9**
ANCH	**Antofagasta**	**3.01**	**212**	eP	**Pn**	**04 24 10.3**	**+3.1**
ARE	**Arequipa**	**5.34**	**330**	eP	**Pn**	**04 24 47.0**	**+8.4**
ARE				eS	**Sn**	**04 25 39.0**	**0.0**
BDFB	**Brasilia**	**20.35**	**78**	P	**P**	**04 27 48.1**	**-0.7**
	comp=E,1.1nm,0.5s,baz=240,slow=16,SNR=9.0						
TXAR	**Lajitas Array**	**60.44**	**325**	P	**P**	**04 33 19.9**	**+0.6**
	comp=E,0.1nm,0.5s,mb3.1,baz=155,slow=9.0,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.03**	**70**	P	**P**	**04 35 01.7**	**-0.8**
	comp=E,0.7nm,0.5s,mb3.6,baz=248,slow=5.5,SNR=27						
TORD				pP	pP	04 35 30.6	+0.3
	comp=E,0.7nm,0.8s,baz=246,slow=5.5,SNR=2.1						
YKA	**Yellowknife Ar**	**90.90**	**341**	P	**P**	**04 36 12.1**	**+0.2**
	comp=E,0.5nm,0.7s,mb3.8,baz=132,slow=4.6,SNR=12						
YKA				pP	pP	04 36 42.3	+1.9
	comp=E,0.6nm,0.9s,baz=135,slow=4.3,SNR=4.6						
MKAR	**Makanchi Array**	**145.20**	**36**	PKP	PKPdf	04 42 46.2	+0.5
	comp=E,2.1nm,0.6s,baz=321,slow=3.4,SNR=18						
MKAR				pPKP	pPKPdf	04 43 18.6	+3.0
	comp=E,1.1nm,0.8s,baz=304,slow=2.8,SNR=4.1						
MKAR	**Makanchi Array**	**145.20**	**36**	PKP	PKPdf	04 42 46.2	+0.5
MKAR				pPKP	pPKPdf	04 43 18.6	+3.0

*IDC **19** 04:23:17.9±2.9, 5.90S×145.28E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=94.3km s-min=31.4km az=91.0*
*ISCJB **19** 04:23:34.7±3.5, 6.2S±0.2×144.7E±0.2, h141km±38km, mb3.4/2, Error ellipse: s-maj=46.9km s-min=29.6km az=42.9*
*NEIC **19** 04:23:35.6±3.0, 6.21S×144.73E, h135km±34km, mb3.8/1, Error ellipse: s-maj=40.2km s-min=21.3km az=119.0*
ISC 19 04:23:35.4±3.5**, 6.2S**±0.2×**144.7E**±0.2**, h131**km±38km**, n8, σ0.23**/9**, mb3.4**/2**, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.00**	**143**	ePn	**Pn**	**04 24 35.2**	**0.0**
PMG				eSn	**Sn**	**04 25 30.2**	**+8.6**
COEN	**Coen**	**7.84**	**191**	ePn	**Pn**	**04 25 31.7**	**+4.9**
WRAB	**Tennant Creek**	**16.95**	**215**	eP	**Pn**	**04 27 24.8**	**+0.1**
	4.1nm,0.7s						
WRA	**Warramunga Arr**	**16.96**	**215**	P	**Pn**	**04 27 24.5**	**-0.3**
	0.7nm,0.3s,baz=38,slow=12,SNR=15						
ASAR	**Alice Springs**	**20.23**	**210**	P	**P**	**04 28 00.6**	**+0.4**
	0.9nm,0.6s,baz=37,slow=9.9,SNR=11						
STKA	**Stephens Creek**	**25.70**	**186**	P	**P**	**04 28 53.2**	**-0.1**
	0.8nm,0.5s,mb3.6,baz=5.7,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**76.21**	**321**	P	**P**	**04 35 09.3**	**0.0**
	0.4nm,0.7s,mb3.2,baz=102,slow=6.4,SNR=3.8						
MKAR	**Makanchi Array**	**76.21**	**321**	P	**P**	**04 35 09.3**	**0.0**

MAN 19 04:26:05, 9.15N×125.99E, h25km, mb5.1, ML4.0, MS4.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.41**	**244**	eP	Pb	04 26 15.7	+2.1
SCPH	**Surigao**	**0.80**	**322**	⇓eP	Pb	04 26 18.6	-1.7
MSLP	**Maasin**	**1.49**	**311**	eP	Pn	04 26 30.4	+0.2
BUKP	**Musuan**	**1.56**	**216**	eP	Pn	04 26 31.8	+0.7
TBP	**Tagbilaran**	**2.17**	**285**	eP	Pn	04 26 41.1	+1.5

*TRN **19** 04:37:00.7, 19.03N×64.72W, h20km*
*NEIC **19** 04:37:02.3, 19.10N×64.58W, h54km, MD3.5(RSPR), After RSPR.*
*RSPR **19** 04:37:02.3, 19.10N×64.58W, h54km±3km, MD3.5/11, MD3.5/11*
ISC 19 04:37:01.0±1.6**, 19.16N**±0.07×**64.8W**±0.1**, h12**km±15km**, n17, σ0.37**/30**, 15C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.58**	**137**	⇓eP	**Pg**	**04 37 12.1**	**-0.1**
ABV				eS	**Sg**	**04 37 20.3**	**+0.4**
TBVI	**Tortola**	**0.75**	**170**	⇑eP	**Pg**	**04 37 15.1**	**-0.3**
TBVI				eS	**Sg**	**04 37 25.2**	**0.0**
TBVI	**Tortola**	**0.75**	**170**	⇑eP	**Pg**	**04 37 15.1**	**-0.3**
TBVI				eS	**Sg**	**04 37 25.2**	**0.0**
STVI	**Saint Thomas**	**0.82**	**194**	⇑eP	**Pb**	**04 37 16.9**	**-0.4**
STVI				eS	**Sb**	**04 37 28.8**	**+0.5**
CDVI	**St. Croix**	**1.40**	**181**	⇑eP	**Pn**	**04 37 26.2**	**-0.1**
HUMP	**Col San Antoni**	**1.45**	**226**	⇑eP	**Pn**	**04 37 26.7**	**-0.4**
HUMP				eS	**Sn**	**04 37 45.3**	**-0.8**
SJG	**San Juan**	**1.69**	**232**	⇑eP	**Pn**	**04 37 30.0**	**-0.3**
SJG				eS	**Sn**	**04 37 51.6**	**-0.3**
SJG	**San Juan**	**1.69**	**232**	⇑eP	**Pn**	**04 37 30.3**	**0.0**
SJG	**San Juan**	**1.69**	**232**	⇑eP	**Pn**	**04 37 30.4**	**+0.1**
SJG				eS	**Sn**	**04 37 51.3**	**-0.6**
SJG				eS	**Sn**	**04 37 51.6**	**-0.3**
CELP	**Cerrillos**	**2.04**	**239**	⇑eP	**Pn**	**04 37 35.0**	**-0.3**
CELP				eS	**Sn**	**04 38 00.8**	**+0.2**
OBIP	**Obispado Ponce**	**2.08**	**238**	⇑eP	**Pn**	**04 37 35.5**	**-0.2**
OBIP				eS	**Sn**	**04 38 01.7**	**0.0**
ICM	**Isla Caja Muer**	**2.10**	**234**	⇑eP	**Pn**	**04 37 36.2**	**+0.2**
LRS	**Lares**	**2.17**	**247**	⇑eP	**Pn**	**04 37 36.9**	**0.0**
LSP	**Las Mesas**	**2.42**	**247**	⇑eP	**Pn**	**04 37 41.0**	**+0.6**
LSP	**Las Mesas**	**2.42**	**247**	⇑eP	**Pn**	**04 37 41.5**	**+1.1**
LSP				eS	**Sn**	**04 38 10.6**	**+0.5**
LSP	**Las Mesas**	**2.42**	**247**	⇑eP	**Pn**	**04 37 41.0**	**+0.6**
LSP				eS	**Sn**	**04 38 10.6**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.52**	**243**	⇓eP	**Pn**	**04 37 41.8**	**+0.1**
CRPR				eS	**Sn**	**04 38 12.7**	**+0.4**

*TRN **19** 04:41:53.8, 19.06N×64.76W, h13km*
*NEIC **19** 04:41:56.0, 19.23N×64.63W, h15km, MD3.5(RSPR), After RSPR.*
*RSPR **19** 04:41:56.0, 19.23N×64.63W, h15km±31km, MD3.5/13, MD3.5/13*
ISC 19 04:41:54.7±1.4**, 19.20N**±0.07×**64.74W**±0.07**, h12**km±8km**, n17, σ0.40**/30**, 16C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.61**	**140**	eS	**Sg**	**04 42 14.9**	**+0.4**
ABV	**Anegada**	**0.61**	**140**	⇑eP	**Pg**	**04 42 06.3**	**-0.2**
ABV	**Anegada**	**0.61**	**140**	⇑eP	**Pg**	**04 42 06.3**	**-0.2**
ABV				eS	**Sg**	**04 42 14.9**	**+0.4**
TBVI	**Tortola**	**0.79**	**171**	⇑iP	**Pg**	**04 42 09.4**	**-0.5**
TBVI				eS	**Sg**	**04 42 20.7**	**+0.5**
STVI	**Saint Thomas**	**0.86**	**193**	⇑eP	**Pg**	**04 42 10.9**	**-0.5**
STVI				eS	**Sg**	**04 42 22.9**	**+0.1**
CDVI	**St. Croix**	**1.44**	**181**	⇑eP	**Pn**	**04 42 20.7**	**+0.2**
CDVI				eS	**Sn**	**04 42 39.1**	**-0.2**
HUMP	**Col San Antoni**	**1.48**	**225**	⇑eP	**Pn**	**04 42 20.6**	**-0.5**
HUMP				eS	**Sn**	**04 42 40.0**	**-0.5**
SJG	**San Juan**	**1.72**	**231**	⇑eP	**Pn**	**04 42 23.7**	**-0.6**
SJG	**San Juan**	**1.72**	**231**	⇑eP	**Pn**	**04 42 23.7**	**-0.6**
SJG				eS	**Sn**	**04 42 46.5**	**+0.4**
SJG	**San Juan**	**1.72**	**231**	⇑eP	**Pn**	**04 42 23.7**	**-0.6**
SJG				eS	**Sn**	**04 42 45.8**	**-0.4**
SJG				eS	**Sn**	**04 42 46.5**	**+0.4**
SJG	**San Juan**	**1.72**	**231**	⇑eP	**Pn**	**04 42 23.7**	**-0.6**
SJG				eS	**Sn**	**04 42 45.8**	**-0.4**
CELP	**Cerrillos**	**2.07**	**238**	⇑eP	**Pn**	**04 42 29.0**	**-0.2**
CELP				eS	**Sn**	**04 42 54.5**	**-0.3**
OBIP	**Obispado Ponce**	**2.11**	**237**	⇑eP	**Pn**	**04 42 29.9**	**+0.2**
ICM	**Isla Caja Muer**	**2.13**	**233**	⇑eP	**Pn**	**04 42 30.6**	**+0.6**
ICM				eS	**Sn**	**04 42 56.3**	**-0.1**
LRS	**Lares**	**2.19**	**246**	⇑eP	**Pn**	**04 42 30.8**	**0.0**
LSP	**Las Mesas**	**2.44**	**246**	⇑eP	**Pn**	**04 42 35.0**	**+0.6**
LSP				eS	**Sn**	**04 43 04.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.54**	**243**	⇑eP	**Pn**	**04 42 35.7**	**+0.1**
CRPR				eS	**Sn**	**04 43 07.2**	**+0.7**

*IDC **19** 04:57:48.3±6.6, 30.90S×69.93W, h78km±53km, mb3.5/4, mb1 3.6/5, mb1mx3.4/16, mbtmp3.5/5, ML4.3/1, Error ellipse: s-maj=45.0km s-min=34.7km az=75.0*
*ISCJB **19** 04:57:49.9±0.5, 30.89S±0.04×70.6W±0.2, h122km±6km, mb3.5/4, Error ellipse: s-maj=32.3km s-min=6.0km az=175.2*
*NEIC **19** 04:57:50.4, 30.90S×70.80W, h112km, MD4.1(GUC), After GUC.*
*GUC **19** 04:57:50.4±0.5, 30.90S×70.80W, h112km±4km, MD4.1, ML4.1*
ISC 19 04:57:50.7±0.6**, 30.88S**±0.04×**70.7W**±0.2**, h120**km±6km**, h118**km±.3km**:pP-P, n29, σ0.63**/39**, mb3.5**/4**, 9C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.48**	**304**	⇑iP	**Pn**	**04 58 09.4**	**+0.9**
TLL	**Tololo Astrono**	**0.72**	**355**	⇑iP	**Pn**	**04 58 10.1**	**0.0**
TLL				i S	**Sn**	**04 58 24.9**	**+0.1**
TLL	**Tololo Astrono**	**0.72**	**355**	⇑iP	**Pn**	**04 58 10.1**	**0.0**
TLL				i S	**Sn**	**04 58 24.9**	**+0.1**
TLL				AML	AML	04 58 26.6	
	comp=N,6μm,0.3s						
JACH	**Jahuel**	**1.80**	**176**	eP	**Pn**	**04 58 21.7**	**0.0**
JACH				i S	**Sn**	**04 58 44.6**	**-0.6**
ROCH	**El Roble**	**2.10**	**186**	⇑iP	**Pn**	**04 58 25.4**	**+0.1**
ROCH				i S	**Sn**	**04 58 51.7**	**-0.1**
PEL	**Peldehue**	**2.25**	**179**	⇑eP	**Pn**	**04 58 26.9**	**-0.4**
PEL				i S	**Sn**	**04 58 54.9**	**-0.5**
PEL				AML	AML	04 58 57.0	
	comp=E,2μm,0.3s						
FCH	**Farellones**	**2.47**	**171**	⇑eP	**Pn**	**04 58 30.3**	**+0.3**
FCH				i S	**Sn**	**04 59 01.0**	**+0.8**
FCH				AML	AML	04 59 04.1	
	comp=N,984nm,0.2s						
CLCH	**Cerro Calan**	**2.51**	**176**	eP	**Pn**	**04 58 30.7**	**+0.1**
CLCH				i S	**Sn**	**04 59 00.8**	**-0.5**
CLCH				AML	AML	04 59 10.8	
	comp=E,812nm,0.5s						
ANTU	**Antumapu**	**2.68**	**178**	eP	**Pn**	**04 58 32.6**	**-0.1**
ANTU				i S	**Sn**	**04 59 04.5**	**-0.7**
ANTU	**Antumapu**	**2.68**	**178**	eP	**Pn**	**04 58 32.6**	**-0.1**
ANTU				i S	**Sn**	**04 59 04.5**	**-0.7**
ANTU				AML	AML	04 59 08.2	
	comp=E,629nm,0.4s						
PCH	**Pirque**	**2.74**	**176**	⇑iP	**Pn**	**04 58 33.6**	**+0.1**
PCH				i S	**Sn**	**04 59 06.2**	**-0.3**
TACH	**Talagante**	**2.77**	**183**	⇓eP	**Pn**	**04 58 33.4**	**-0.5**
SJCH	**San Jose de Ma**	**2.77**	**173**	eP	**Pn**	**04 58 33.9**	**0.0**
YECH	**El Yeso**	**2.83**	**169**	eP	**Pn**	**04 58 35.0**	**+0.3**
YECH				i S	**Sn**	**04 59 09.6**	**+0.9**
YECH				AML	AML	04 59 18.2	
	comp=N,363nm,0.1s						
LMEL	**Las Melosas**	**2.99**	**171**	⇑eP	**Pn**	**04 58 36.9**	**0.0**
LMEL				S	**Sn**	**04 59 13.2**	**+0.8**
LMEL	**Las Melosas**	**2.99**	**171**	⇑eP	**Pn**	**04 58 36.9**	**0.0**
LMEL				i S	**Sn**	**04 59 13.2**	**+0.8**
LMEL				AML	AML	04 59 15.8	
	comp=N,796nm,0.4s						
LNV	**Longovilo**	**3.12**	**190**	eP	**Pn**	**04 58 37.4**	**-1.0**
CPUP	**Villa Florida**	**12.62**	**72**	P	**Pn**	**05 00 35.9**	**-10**
	comp=N,0.4nm,0.3s,baz=231,slow=12,SNR=4.5						
VNA3	**Neumayer Olymp**	**51.84**	**159**	e	**P**	**05 06 46.6**	**+0.5**
VNA3				e		05 06 52.1	
VNA3				e	pP	05 07 14.3	+0.1
VNA2	**Neumayer--Watz**	**52.47**	**158**	e	**P**	**05 06 51.5**	**+0.8**
	baz=290,slow=8.8						
VNA2				e		05 06 57.9	
VNA2				e	pP	05 07 19.1	+0.2
SNAA	**Sanae**	**54.07**	**159**	e	**P**	**05 07 02.9**	**+0.5**
SNAA				e		05 07 08.5	
TXAR	**Lajitas Array**	**67.59**	**329**	P	**P**	**05 08 39.0**	**+4.6**
	comp=N,0.2nm,0.7s,mb3.1,baz=163,slow=6.3,SNR=2.6						
DBIC	**Dimbokro**	**73.14**	**71**	P	**P**	**05 09 07.0**	**-1.5**
	comp=N,1.4nm,0.8s,mb3.8,baz=201,slow=8.6,SNR=4.9						
MAW	**Mawson**	**75.85**	**163**	P	**P**	**05 09 24.4**	**+1.1**
	comp=N,2.7nm,0.8s,mb4.0,baz=222,slow=10,SNR=3.2						
TORD	**Torodi Ar. Bea**	**82.11**	**70**	P	**P**	**05 09 57.1**	**-1.1**
	comp=N,0.2nm,0.5s,mb3.2,baz=240,slow=5.8,SNR=9.1						
TORD				pP	pP	05 10 27.0	-1.7
	comp=N,0.6nm,0.8s,baz=249,slow=4.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**82.11**	**70**	P	**P**	**05 09 57.1**	**-1.1**
TORD				pP	pP	05 10 27.0	-1.7
ZALV	**Zalesovo Beam**	**151.00**	**30**	PKPbc	PKPbc	05 17 30.8	+1.9
	comp=N,4.8nm,0.5s,baz=292,slow=3.1,SNR=16						
ZALV				pPKPbc	pPKPbc	05 18 00.3	-0.8
	comp=N,2.8nm,0.6s,baz=301,slow=2.9,SNR=4.6						
MKAR	**Makanchi Array**	**153.84**	**45**	PKPbc	PKPbc	05 17 36.7	+1.2
	comp=N,0.4nm,0.5s,baz=277,slow=2.2,SNR=7.2						
MKAR	**Makanchi Array**	**153.84**	**45**	PKPbc	PKPbc	05 17 36.7	+1.2

*ISCJB **19** 05:05:03.7±1.4, 33.13N±0.04×73.57E±0.06, h0km±8km, mb3.7/5, Error ellipse: s-maj=10.6km s-min=4.2km az=141.5*
*IDC **19** 05:05:04.3±2.8, 32.94N×73.76E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/26, mbtmp3.6/9, ML3.1/2, Error ellipse: s-maj=61.4km s-min=26.7km az=135.0*
*MOS **19** 05:05:04.3±3.1, 32.90N×73.80E, h33km, mb3.8/4, Error ellipse: s-maj=18.1km s-min=11.3km az=107.1*
*NDI **19** 05:05:05.2±3.8, 33.52N×73.55E, h10km, ML3.4*
*NEIC **19** 05:05:07.5±0.6, 33.17N×73.80E, h10km, Error ellipse: s-maj=12.9km s-min=5.3km az=223.0*
*NNC **19** 05:05:14.3±4.3, 33.13N×73.39E, h77km±43km, mb3.4, Error ellipse: s-maj=44.7km s-min=34.2km az=101.0*
ISC 19 05:05:07.3±1.5**, 33.16N**±0.05×**73.65E**±0.06**, h8**km±9km**, n37, σ1.28**/47**, mb3.6**/5**, 5C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**1.88**	**112**	eP	**Pb**	**05 05 41.3**	**-0.6**
THN				eS	**Sg**	**05 06 08.6**	**+0.8**
DLH	**Dalhousie**	**2.04**	**107**	eP	**Pb**	**05 05 45.0**	**+0.4**
DLH				eSB	**Sg**	**05 06 14.0**	**+1.1**
SDNR	**Sundarnagar**	**3.26**	**120**	eP	**Pn**	**05 06 00.0**	**+1.4**
SDNR				ex	**Sb**	**05 06 44.0**	**-1.2**
SMLA	**Simla**	**3.60**	**123**	i P	**Pn**	**05 06 04.8**	**+1.4**
SMLA				i S	**Sn**	**05 06 47.5**	**+1.4**
SMLA				i S	**Sn**	**05 06 47.7**	**+1.6**
SMLA				ex	x	05 06 58.7	
	comp=E,628nm,0.3s						
SMLA				ex	x	05 06 58.9	
	comp=N,570nm,0.3s						
KBL	**Kabul**	**4.08**	**291**	eP	**Pn**	**05 06 12.2**	**+2.3**
KLP	**Kalpa**	**4.21**	**111**	eP	**Pn**	**05 06 11.9**	**+0.1**

KLP				*e*S	**Sn**	05 07 01.8	+0.6
KLP				AML	AML	05 07 27.8	
	comp=N,173nm,0.6s						
KLP				AML	AML	05 07 34.0	
	comp=E,217nm,0.7s						
KUDL	**Kundal**	**5.56**	**153**	*ex*	**Pn**	05 06 27.8	-2.6
KUDL				*e*S	**Sn**	05 07 36.1	+1.6
KUDL				AML	AML	05 08 02.8	
	comp=E,22nm,0.9s						
KUDL				AML	AML	05 08 04.1	
	comp=N,14nm,0.2s						
SONA	**Sohna**	**5.72**	**148**	*e*P	**Pb**	05 06 49.7	+2.4
SONA				*e*S	**Sb**	05 07 56.8	+0.9
SONA				AML	AML	05 08 10.5	
	comp=E,30nm,0.5s						
SONA				AML	AML	05 08 13.2	
	comp=N,16nm,0.4s						
AAK	**Ala-Archa**	**9.48**	**4**	*e*P	**Pn**	05 07 23.4	-0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	**Ala-Archa**	**9.48**	**4**	*e*Pn	**Pn**	05 07 23.4	-0.7
	comp=Z,2.2nm,0.6s						
TKM2	**Tokmak 2**	**9.86**	**8**	⇑Pn	**Pn**	05 07 34.4	+5.1
	comp=Z,2.4nm,0.7s						
TKM2				⇑Sn	**Sn**	05 09 25.3	+5.2
	comp=Z,4.1nm,0.8s						
DANN	**Dangsing**	**9.93**	**116**	*e*P	**Pn**	05 07 29.3	-0.9
	comp=Z,4.6nm,0.2s						
KOLN	**Koldanda**	**10.12**	**119**	*e*P	**Pn**	05 07 31.5	-1.4
	comp=Z,5.7nm,0.3s						
KK31	**Karatay Array**	**10.23**	**347**	⇓Pn	**Pn**	05 07 37.6	+3.3
	comp=Z,1.4nm,0.4s,baz=168,slow=12,SNR=30						
KK31				⇑Sn	**Sn**	05 09 30.8	+1.7
	comp=Z,1.1nm,0.6s,baz=165,slow=22,SNR=4.7						
GKN	**Gorkha**	**10.77**	**116**	*e*P	**Pn**	05 07 40.9	-0.8
DMN	**Daman**	**11.33**	**116**	*e*P	**Pn**	05 07 47.7	-1.7
KKN	**Kakani**	**11.37**	**115**	*e*P	**Pn**	05 07 49.3	-0.6
PKI	**Pulchoki**	**11.58**	**116**	*e*P	**Pn**	05 07 50.7	-2.1
GUN	**Gumba**	**11.76**	**113**	*e*P	**Pn**	05 07 54.8	-0.6
	comp=Z,6.2nm,0.3s						
JIRN	**Jiri**	**12.13**	**114**	*e*P	**Pn**	05 07 59.0	-1.3
	comp=Z,7.7nm,0.3s						
MKAR	**Makanchi Array**	**15.13**	**23**	Pn	**Pn**	05 08 41.8	+0.7
	comp=Z,0.1nm,0.3s,baz=198,slow=11,SNR=4.1						
KURK	**Kurchatov**	**17.92**	**10**	P	**Pn**	05 09 14.8	-1.9
	comp=Z,0.0nm,0.3s,baz=198,slow=12,SNR=3.8						
AB09	**Akbulak array**	**19.07**	**332**	⇑P	**Pn**	05 09 29.4	-1.3
	comp=Z,2.5nm,1.1s						
BVAR	**Borovoye Array**	**19.99**	**354**	P	**P**	05 09 40.9	+0.9
	comp=Z,0.7nm,0.4s,baz=157,slow=7.8,SNR=4.5						
BVAR	**Borovoye Array**	**19.99**	**354**	P	**P**	05 09 40.9	+0.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTK	**Aktyubinsk**	**20.75**	**331**	P	**P**	05 09 48.0	-0.3
AKTO	**Aktyubinsk**	**20.75**	**331**	⇑P	**P**	05 09 47.8	-0.5
	comp=Z,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**20.75**	**331**	P	**P**	05 09 48.0	-0.3
	comp=Z,2.4nm,0.4s,baz=139,slow=12,SNR=8.8						
AKTO	**Aktyubinsk**	**20.75**	**331**	P	**P**	05 09 48.0	-0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**22.25**	**18**	P	**P**	05 10 05.2	+1.0
	comp=Z,0.8nm,0.3s,mb3.6,baz=207,slow=9.3,SNR=4.3						
ZALV	**Zalesovo Beam**	**22.25**	**18**	P	**P**	05 10 05.3	+1.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
BRTR	**Keskin Array B**	**32.65**	**293**	P	**P**	05 11 41.5	+1.8
	comp=Z,0.8nm,0.6s,mb3.8,baz=104,slow=9.0,SNR=4.9						
BRTR	**Keskin Array B**	**32.65**	**293**	P	**P**	05 11 41.5	+1.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**48.36**	**325**	P	**P**	05 13 48.8	-0.3
	comp=Z,0.5nm,0.4s,mb3.9,baz=103,slow=6.9						
NOA	**NORSAR Array B**	**48.36**	**325**	P	**P**	05 13 48.9	-0.3
	comp=Z,0.4nm,0.7s,mb3.6,baz=99,slow=7.6,SNR=4.2						
TORD	**Torodi Ar. Bea**	**67.91**	**272**	P	**P**	05 16 05.2	-1.5
	comp=Z,0.4nm,0.6s,mb3.6,baz=47,slow=6.6,SNR=8.6						
YKA	**Yellowknife Ar**	**84.45**	**4**	P	**P**	05 17 39.7	-0.4
	comp=Z,0.1nm,0.6s,mb3.1,baz=347,slow=5.1,SNR=3.5						

*ISCJB **19** 05:17:56.7±1.2,3387N±005×3521E±008,h6km±6km, Error ellipse: s-maj=11.6km s-min=7.1km az=28.8*
*GII **19** 05:17:56.7±1.1,3392N×3529E,h10km±2km,MD2.2/4*
*CSEM **19** 05:17:59.4,3386N×3533E,h21km,ML2.8,After GRAL*
*GRAL **19** 05:17:59.4±0.3,3386N×3533E,h21km±6km,MD2.8*

ISC 19 05:17:57.0±1.4,3389N±005×3520E±008,h8km±6km,n16, σ0§63/23,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BHL	**Bhannes**	**0.37**	**87**	*e*P		**Pg**	**05 18 05.2**	**+0.9**
BHL				*e*S		**Sg**	**05 18 09.6**	**+0.3**
RCY	**Rachaya**	**0.65**	**128**	*e*P		**Pg**	**05 18 09.6**	**0.0**
RCY				*e*S		**Sg**	**05 18 17.1**	**-0.9**
RCY	**Rachaya**	**0.65**	**128**	*e*P		**Pg**	**05 18 17.1**	**0.0**
RCY				*e*S		**Sg**	**05 18 17.1**	**-1.0**
HWQ	**Hawqa**	**0.73**	**58**	*e*P		**Pg**	**05 18 11.2**	**+0.2**
HWQ	**Hawqa**	**0.73**	**58**	*e*P		**Pg**	**05 18 11.2**	**+0.1**
KSDI	**Kefar Szold**	**0.79**	**151**	Pg		**Pg**	**05 18 12.2**	**0.0**
KSDI				Sg		**Sg**	**05 18 21.8**	**-0.8**
MMC7	**Mount Meron ar**	**0.88**	**170**	Pg		**Pg**	**05 18 14.1**	**+0.2**
MMB3	**Mount Meron ar**	**0.88**	**169**	Pg		**Pg**	**05 18 14.1**	**+0.2**
MMA1	**Mount Meron ar**	**0.88**	**169**	Pg		**Pg**	**05 18 14.1**	**+0.1**
MMA0B	**Mount Meron ar**	**0.89**	**169**	Pg		**Pg**	**05 18 14.1**	**0.0**
BLGI	**Bet Lehem HaGe**	**1.15**	**181**	Sg		**Sg**	**05 18 34.9**	**+0.8**
OFRI	**'Ofer**	**1.28**	**188**	Pn		**Pn**	**05 18 20.0**	**-1.1**
MMLI	**Mount Malkishu**	**1.46**	**173**	Pn		**Pn**	**05 18 23.1**	**-0.5**
SLTI	**Sal'it**	**1.65**	**185**	Pn		**Pn**	**05 18 26.0**	**-0.3**
SLTI				Sn		**Sn**	**05 18 47.8**	**+0.2**
HMDT	**Nahal Hemdat**	**1.65**	**171**	Pn		**Pn**	**05 18 25.6**	**-0.7**
HMDT				Sn		**Sn**	**05 18 48.1**	**+0.4**
DSI	**Dead Sea**	**2.32**	**176**	Pn		**Pn**	**05 18 35.0**	**-0.4**
DSI				Sn		**Sn**	**05 19 05.7**	**+1.6**

CASC 19 05:20:04.6±2.0,1226N×8785W,h76km±40km,MD3.7, ML2.7,1C-3D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	**San Cristobal**	**0.90**	**61**	*e*P		Pn	05 20 22.4	+0.2
CNCH	**Conchagua**	**1.01**	**1**	*e*P		x	05 20 24.4	
CNCH				*e*S		x	05 20 38.4	
TEL3	**Telica 3**	**1.03**	**73**	⇓*e*P		Pn	05 20 24.5	+0.7
MIRN	**Miramar**	**1.13**	**81**	⇓*e*P		Pn	05 20 24.9	-0.1
CNGN	**Cerro Negro**	**1.15**	**78**	*e*P		Pn	05 20 24.5	-0.8
VSM	**San Miguel**	**1.23**	**341**	*e*P		x	05 20 26.7	
VSM				*e*S		x	05 20 45.2	
BLLM	**Bellamira**	**1.23**	**342**	*e*P		x	05 20 25.8	
BLLM				*e*S		x	05 20 42.8	
COPN	**Copaltepe**	**1.24**	**94**	⇓*e*P		Pn	05 20 26.1	-0.2
COPN				*e*S		Sn	05 20 42.9	+0.2
COPN				AML		AML	05 20 43.4	
	comp=Z,101nm,0.6s							
MOMN	**Momotombo**	**1.29**	**83**	*e*P		Pn	05 20 27.6	+0.5
CSAN		**1.40**	**93**	*e*P		Pn	05 20 28.5	0.0
APYN	**Apoyeque**	**1.47**	**91**	⇑*e*P		Pn	05 20 29.7	+0.3
MGAN	**Managua**	**1.57**	**94**	*e*P		Pn	05 20 30.9	+0.2
HUEN		**1.64**	**87**	*e*P		Pn	05 20 30.8	-0.9
HUEN				*e*S		Sn	05 20 52.2	+0.1
SNVI	**San Vicente**	**1.65**	**325**	*e*P		x	05 20 32.6	
SNVI				*e*S		x	05 20 53.1	
LBRS	**Las Brisas**	**1.87**	**322**	*e*P		x	05 20 34.8	
CHI2		**15.87**	**117**	*e*P		x	05 20 23.0	

*TRN **19** 05:54:02.5, 1908N×6476W, h12km*
*RSPR **19** 05:54:04.4, 1924N×6464W, h9km±13km, MD3.4/8, MD3.4/8*
*NEIC **19** 05:54:04.4, 1924N×6464W, h9km, MD3.3(RSPR), After RSPR.*

ISC 19 05:54:02.9±1.6,1924N±007×6475W±007,h11km±8km,n13, σ0§39/23,8C-3D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ABV	**Anegada**	**0.64**	**142**	⇑*e*P		**Pg**	**05 54 15.4**	**0.0**
ABV				*e*S		**Sg**	**05 54 24.7**	**+0.9**
TBVI	**Tortola**	**0.83**	**171**	⇑*e*P		**Pg**	**05 54 18.2**	**-0.6**
TBVI				*e*S		**Sg**	**05 54 29.4**	**-0.3**
STVI	**Saint Thomas**	**0.90**	**192**	⇑*e*P		**Pg**	**05 54 19.9**	**-0.4**
STVI				*e*S		**Sg**	**05 54 32.4**	**+0.4**
STVI	**Saint Thomas**	**0.90**	**192**	⇑*e*P		**Pg**	**05 54 19.9**	**-0.4**
STVI				*e*S		**Sg**	**05 54 32.4**	**+0.4**
CDVI	**St. Croix**	**1.48**	**181**	⇑*e*P		**Pn**	**05 54 29.4**	**0.0**
CDVI				*e*S		**Sn**	**05 54 48.3**	**-0.5**
HUMP	**Col San Antoni**	**1.51**	**224**	⇑*e*P		**Pn**	**05 54 29.6**	**-0.3**
HUMP				*e*S		**Sn**	**05 54 49.2**	**-0.3**
SJG	**San Juan**	**1.74**	**230**	⇓*e*P		**Pn**	**05 54 33.2**	**+0.1**
SJG				*e*S		**Sn**	**05 54 55.4**	**+0.2**
SJG				*e*S		**Sn**	**05 54 55.6**	**+0.4**
CELP	**Cerrillos**	**2.08**	**237**	⇑*e*P		**Pn**	**05 54 38.1**	**+0.3**
CELP				*e*S		**Sn**	**05 55 04.4**	**+0.6**
OBIP	**Obispado Ponce**	**2.12**	**236**	*e*S		**Sn**	**05 55 04.9**	**+0.1**
OBIP	**Obispado Ponce**	**2.12**	**236**	*e*S		**Sn**	**05 55 04.9**	**+0.1**
LRS	**Lares**	**2.20**	**245**	⇓*e*P		**Pn**	**05 54 39.0**	**-0.3**
LRS	**Lares**	**2.20**	**245**	⇓*e*P		**Pn**	**05 54 39.4**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.55**	**242**	⇑*e*P		**Pn**	**05 54 44.2**	**-0.1**
CRPR				*e*S		**Sn**	**05 55 15.4**	**+0.1**

*BJI **19** 06:12:18.7,967S×12451E,h39km,mB5.1,mb5.0,Ms4.7, Msz4.4*
*ISCJB **19** 06:12:18.7±1.2,931S±004×12444E±006,h19km±8km, mb5.2/74,MS4.3/31,Error ellipse: s-maj=10.5km s-min=4.9km az=152.3*
*MOS **19** 06:12:22.5±1.7,910S×12400E,h33km,mb5.3/26, MS4.2/6,Error ellipse: s-maj=12.0km s-min=5.9km az=118.8*
*IDC **19** 06:12:22.5±1.6,910S×12404E,h19km±8km,mb4.9/19, mb1 4.9/19,mb1mx4.9/20,mbtmp4.9/19,MS4.3/15, Ms1 4.3/15,ms1mx4.3/24,Error ellipse: s-maj=15.5km s-min=10.0km az=57.0*
*AUST **19** 06:12:24,960S×12390E,h10km,ML5.3*
*GCMT **19** 06:12:25.0±0.2,927S×124.14E,h28km±1km,MW5.3/86, Moment Tensor Solution. s53,c68; s86,c134; Duration: 1§0 Moment tensor: Scale 10¹⁷Nm; Mrr=0.47±.03; Mθθ=0.58±.02; Mϕϕ 1.05±.03; Mrθ 0.15±.04; Mθϕ=0.45±.02; Mϕr=0.00±.04; Best double couple: M₀0.96900×10¹⁷ NP1:ϕ₁208.00000°,δ71.00000°,λ=-18.00000°. NP2: ϕ₂304.00000°,δ73.00000°,λ=-160.00000°. Principal axes: T 1.1680, Plg1.0000°, Azm75.0000°; N -0.3970, Plg64.0000°, Azm343.0000°; P -0.7700, Plg26.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **19** 06:12:25.0±1.1,919S×12395E,h39km±9km,mb5.4/30, MS4.3/7 Error ellipse: s-maj=8.8km s-min=5.0km az=54.0*
*DJA **19** 06:12:27,966S×12422E,h47km,Mw5.4/7*

ISC 19 06:12:20.3±1.4,924S±004×12406E±005,h6km±8km,n241, σ1§26/199,mb5.2/74,MS4.3/31,19C-8D,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KAPI	**Kappang**	**5.99**	**314**	Pn		**Pn**	**06 13 52.1**	**+2.6**
	1µm,0.6s,SNR=28							
KAPI	**Kappang**	**5.99**	**314**	Pn		**Pn**	**06 13 52.4**	**+2.9**
	13nm,0.3s,baz=160,slow=9.5,SNR=64							
KAPI				Sn		**Sn**	**06 15 07.5**	**+9.1**
	baz=229,slow=20,SNR=1.7							
KAPI	**Kappang**	**5.99**	**314**	*e*Pn		**Pn**	**06 13 52.0**	**+2.4**
KAKA	**Kakadu**	**8.92**	**114**	*e*P		x	06 13 28.9	
	619nm,0.9s							
KAKA				*e*S		x	06 15 03.5	
FITZ	**Fitzroy Crossi**	**8.95**	**170**	*e*P		**Pn**	**06 14 27.6**	**-2.5**
	330nm,0.4s							
FITZ				*e*S		**Sn**	**06 16 03.1**	**-8.2**
MBWA	**Marble Bar**	**12.57**	**199**	*e*Pn		**Pn**	**06 15 20.1**	**+0.4**
MBWA				*e*Sn		**Sn**	**06 17 31.2**	**-9.0**
WRA	**Warramunga Arr**	**14.56**	**138**	Pn		**Pn**	**06 15 41.5**	**-5.5**
	9.1nm,0.3s,baz=311,slow=14,SNR=120							
WRA				Sn		**Sn**	**06 18 13.6**	**-15**
	6.9nm,0.3s,baz=315,slow=22,SNR=22							
WRA				LR		LR	06 21 22.6	
	comp=Z,885nm,21.0s,baz=315,slow=37							
WRAB	**Tennant Creek**	**14.56**	**138**	Pn		**Pn**	**06 15 42.0**	**-5.0**
	780nm,0.7s,SNR=62							
WRAB	**Tennant Creek**	**14.56**	**138**	*e*P		**Pn**	**06 15 41.8**	**-5.2**
WRAB				pmax		pmax		
	comp=Z,126nm,0.8s							
WRAB	**Tennant Creek**	**14.56**	**138**	*e*Pn		**Pn**	**06 15 41.8**	**-5.2**
	comp=Z,126nm,0.8s							
WRAB				*e*Sn		**Sn**	**06 18 11.7**	**-17**
WB2	**Warramunga Arr**	**14.57**	**138**	*e*P		**Pn**	**06 15 41.8**	**-5.3**
WB2				*e*S		**Sn**	**06 18 10.9**	**-18**
TSM	**Tawau**	**14.79**	**335**	⇑P		**Pn**	**06 15 53.5**	**+3.4**
DAV	**Davao City (W)**	**16.27**	**5**	LR		LR	06 22 30.7	
	comp=Z,922nm,20.6s,baz=174,slow=38							
SDKM	**Sandakan**	**16.28**	**335**	⇑P		**Pn**	**06 16 16.3**	**+6.5**
BTM	**Bintulu**	**16.50**	**318**	⇓P		**Pn**	**06 16 18.6**	**+6.1**
SBUM	**Sibu**	**16.55**	**314**	P		**Pn**	**06 16 18.1**	**+4.9**
KKM	**Kota Kinabalu**	**17.07**	**332**	⇓P		**Pn**	**06 16 23.7**	**+3.9**
ASAR	**Alice Springs**	**17.16**	**148**	P		**Pn**	**06 16 17.2**	**-3.6**
	comp=Z,7.1nm,0.3s,baz=321,slow=12,SNR=163							
ASAR				S		**Sn**	**06 19 20.2**	**-12**
	comp=Z,3.0nm,0.3s,baz=313,slow=20,SNR=7.9							
ASAR				ScP		ScP	06 24 37.9	-3.1
	baz=328,slow=1.6,SNR=5.1							
KSM	**Kuching**	**17.34**	**307**	⇑P		**Pn**	**06 16 27.8**	**+4.6**
KDM	**Kudat**	**17.59**	**336**	⇑P		**Pn**	**06 16 27.8**	**+1.6**
XMIS	**Christmas Isla**	**18.18**	**265**	*e*P		**Pn**	**06 16 32.2**	**-1.3**
COEN	**Coen**	**19.30**	**106**	*e*P		**Pn**	**06 16 46.6**	**-0.6**
	comp=Z,162nm,1.1s							
FORT	**Forrest**	**21.76**	**171**	*e*P		**P**	**06 17 12.3**	**-0.4**
	comp=Z,196nm,0.8s,mb5.6							
PMG	**Port Moresby**	**22.80**	**92**	P		**P**	**06 17 25.8**	**+1.9**
	comp=Z,134nm,1.0s,mb5.3,baz=277,slow=6.5,SNR=19							
PMG	**Port Moresby**	**22.80**	**92**	⇑*e*P		**P**	**06 17 26.1**	**+2.1**
PMG	**Port Moresby**	**22.80**	**92**	*e*P		**P**	**06 17 26.3**	**+2.4**
	comp=Z,138nm,0.9s,mb5.4							
MYKOM	**Kota Tinggi**	**22.92**	**298**	⇓P		**P**	**06 17 26.5**	**+1.3**
KLBR	**Kellerberrin**	**23.00**	**194**	*e*P		**P**	**06 17 25.1**	**-0.9**
	comp=Z,76nm,0.9s,mb5.1							
KGM	**Kluang**	**23.49**	**297**	⇓P		**P**	**06 17 31.8**	**+0.4**
MUN	**Mundaring**	**23.77**	**197**	*e*P		**P**	**06 17 33.0**	**-0.8**
CTA	**Charters Tower**	**24.00**	**119**	*e*P		**P**	**06 17 37.0**	**+1.0**
	comp=Z,68nm,0.9s,mb5.1							
CTA	**Charters Tower**	**24.00**	**119**	P		**P**	**06 17 36.8**	**+0.9**
	comp=Z,92nm,1.0s,mb5.2,baz=291,slow=12,SNR=24							
CTA				S		**S**	**06 21 54.0**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=349,slow=16,SNR=1.8							
CTA				ScP		ScP	06 24 56.2	-1.2
	comp=Z,33nm,1.0s,baz=227,slow=10,SNR=4.3							
CTA				LR		LR	06 27 35.7	
	comp=Z,1µm,19.9s,MS4.3,baz=296,slow=38							
CTA	**Charters Tower**	**24.00**	**119**	*e*P		**P**	**06 17 37.0**	**+1.0**
CTA				pmax		pmax		
	comp=Z,68nm,0.9s							
CTAO	**Charters Tower**	**24.00**	**119**	*e*P		**P**	**06 17 37.3**	**+1.3**
CTAO				pmax		pmax		
	comp=Z,144nm,1.1s,mb5.3							
CTAO	**Charters Tower**	**24.00**	**119**	*e*P		**P**	**06 17 37.3**	**+1.4**
	comp=Z,144nm,1.1s,mb5.3							
NWAO	**Narrogin (SRO)**	**24.41**	**194**	P		**P**	**06 17 39.1**	**-0.4**
	comp=Z,26nm,0.7s,mb4.8,baz=23,slow=10,SNR=21							
NWAO				LR		LR	06 28 53.7	
	comp=Z,2µm,18.6s,MS4.5,baz=210,slow=40							
NWAO	**Narrogin (SRO)**	**24.41**	**194**	*e*P		**P**	**06 17 39.0**	**-0.5**
NWAO				pmax		pmax		
	comp=Z,35nm,0.9s							
NWAO				MLR		MLR		
	comp=Z,1µm,20.0s							
NWAO	**Narrogin (SRO)**	**24.41**	**194**	*e*P		**P**	**06 17 39.0**	**-0.5**
	comp=Z,35nm,0.9s,mb4.8							
NWAO				LR		LR		
	comp=Z,1µm,20.0s,MS4.3							
KTGM	**Kuala Trenggan**	**25.38**	**304**	⇓P		**P**	**06 17 49.8**	**+1.2**
IPM	**Ipoh**	**26.70**	**300**	⇑P		**P**	**06 18 02.6**	**+2.0**
PSI	**Prapat**	**27.76**	**294**	P		**P**	**06 18 08.8**	**-1.2**
	comp=Z,12nm,0.8s,mb4.6,baz=144,slow=6.2,SNR=8.5							
STKA	**Stephens Creek**	**27.79**	**147**	*e*P		**P**	**06 18 11.1**	**+0.9**
	comp=Z,48nm,0.8s,mb5.2							
STKA	**Stephens Creek**	**27.79**	**147**	P		**P**	**06 18 10.8**	**+0.6**
	comp=Z,59nm,0.9s,mb5.2,baz=314,slow=8.6,SNR=57							
STKA				LR		LR	06 31 36.9	
	comp=Z,845nm,18.1s,MS4.4,baz=316,slow=41							
ADE	**Adelaide**	**28.91**	**155**	P		**P**	**06 18 21.9**	**+1.8**
QIZ	**Qiongzhong**	**31.39**	**334**	P		**P**	**06 18 43.1**	**+0.9**
QIZ				S		**S**	**06 23 52.3**	**+2.1**
QIZ				LR		LR		
	comp=N,343nm,19.2s,MS4.2							
QIZ				LR		LR		
	comp=E,338nm,15.4s,MS4.2							
QIZ				LR		LR		
	comp=Z,418nm,25.2s							
ARMA	**Armidale**	**33.25**	**133**	*e*P		**P**	**06 19 01.1**	**+2.6**
TOO	**Toolangi**	**34.21**	**149**	⇑*i*P		**P**	**06 19 09.5**	**+2.8**
CNB	**Canberra Magne**	**34.75**	**142**	*e*P		**P**	**06 19 13.7**	**+2.2**
BDT	**Bhumibol Dam**	**36.13**	**317**	P		**P**	**06 19 24.0**	**+0.5**
	comp=Z,18nm,0.7s,mb5.1							
CMAR	**Chiang Mai Arr**	**37.03**	**318**	P		**P**	**06 19 31.6**	**+0.4**
	comp=Z,22nm,0.7s,mb5.1,baz=144,slow=6.9,SNR=67							
CMAR				PcP		PcP	06 21 52.6	+0.5
	comp=Z,2.1nm,0.4s,baz=144,slow=2.7,SNR=4.7							
CMAR				ScP		ScP	06 25 38.2	-1.7
	comp=Z,2.9nm,0.6s,baz=170,slow=2.8,SNR=12							
CMAR				LR		LR	06 34 42.2	
	comp=Z,535nm,21.6s,MS4.3,baz=146,slow=36							
CMAR	**Chiang Mai Arr**	**37.03**	**318**	P		**P**	**06 19 31.6**	**+0.4**
CMAR							06 21 52.7	
CHG	**Chiang Mai**	**37.29**	**318**	⇑P		**P**	**06 19 34.2**	**+0.9**
	comp=Z,29nm,0.8s,mb5.2							
CHTO	**Chiang Mai**	**37.29**	**318**	P		**P**	**06 19 34.6**	**+1.3**
	SNR=8.5							
CHTO	**Chiang Mai**	**37.29**	**318**	*e*P		**P**	**06 19 34.2**	**+0.9**
CHTO				pmax		pmax		
	comp=Z,23nm,0.9s,mb5.0							
CHTO				MLR		MLR		
	comp=Z,433nm,19.0s,MS4.3							
CHTO	**Chiang Mai**	**37.29**	**318**	*e*P		**P**	**06 19 34.2**	**+0.9**
	comp=Z,22nm,0.9s,mb5.0							
CHTO				LR		LR		
	comp=Z,433nm,19.0s,MS4.3							
CHRT	**Chiangrai**	**37.52**	**321**	⇑P		**P**	**06 19 36.5**	**+1.2**
	comp=Z,290nm,0.5s,mb6.3							
TAU	**Tasmania Unive**	**39.24**	**153**	*e*P		**P**	**06 19 52.3**	**+2.8**
TAU				pmax		pmax		
	comp=Z,138nm,1.4s,mb5.5							
TAU	**Tasmania Unive**	**39.24**	**153**	*e*P		**P**	**06 19 52.3**	**+2.8**
	comp=Z,138nm,1.4s,mb5.5							
GYA	**Guiyang**	**39.30**	**335**	⇓*i*P		**P**	**06 19 51.1**	**+0.9**
GYA				PP		PP	06 21 26.3	+5.9
GYA				PCP		PcP	06 21 58.8	-0.3
GYA				S		**S**	**06 25 53.3**	**+1.7**
GYA				SS		SS	06 28 40.6	-4.6
GYA				SCS		ScS	06 29 56.6	-3.6
GYA				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
GYA				AMB		AMB		
	comp=Z,330nm,7.0s							
GYA				LR		LR		
	comp=N,450nm,17.0s,MS4.6							
GYA				LR		LR		
	comp=E,520nm,16.3s,MS4.6							
GYA				LR		LR		
	comp=Z,460nm,17.4s,MS4.4							
KMI	**Kunming**	**39.97**	**329**	P		**P**	**06 19 58.9**	**+3.1**
KMI				PP		PP	06 21 35.3	+7.5
KMI				S		**S**	**06 26 04.3**	**+2.5**
KMI				SS		SS	06 28 54.8	-4.0
KMI				AMB		AMB		
	comp=Z,11nm,0.8s,mb4.6							
KMI				AMB		AMB		
	comp=Z,139nm,3.4s							
KMI				LR		LR		
	comp=N,346nm,17.5s,MS4.4							
KMI				LR		LR		
	comp=E,334nm,15.1s,MS4.4							
KMI				LR		LR		
	comp=Z,412nm,25.0s							
NJ2	**Nanjing**	**41.35**	**353**	*e*P		**P**	**06 20 07.8**	**+0.7**
NJ2				AMB		AMB		
	comp=Z,20nm,0.6s,mb4.9							
CD2	**Chengdu**	**44.41**	**335**	⇑*i*P		**P**	**06 20 31.8**	**-0.2**
CD2				PCP		PcP	06 22 15.3	-0.5
CD2				PCS		PcS	06 26 07.4	-1.7
CD2				S		**S**	**06 27 06.8**	**-0.4**
CD2				SS		SS	06 30 18.5	-7.8
CD2				AMB		AMB		
	comp=Z,20nm,0.9s,mb4.8							
CD2				AMB		AMB		
	comp=Z,150nm,5.4s							
CD2				LR		LR		
	comp=N,450nm,17.8s							
CD2				LR		LR		
	comp=Z,320nm,21.0s,MS4.2							
XAN	**Xi'an**	**45.37**	**342**	P		**P**	**06 20 38.1**	**-1.5**
XAN				PP		PP	06 22 22.9	-3.0
XAN				S		**S**	**06 27 11.3**	**-10**
XAN				SCS		ScS	06 30 32.8	-4.4
XAN				AMB		AMB		
	comp=Z,9.0nm,0.9s,mb4.6							
XA

HYB	Hyderabad	52.19	300	*e*P		P	06 21 30.0	-2.3		
GUN	Gumba	52.23	316	*e*P		P	06 21 32.1	-0.3		
	comp=Z,152nm,0.8s,mb6.0									
PKI	Pulchoki	52.34	316	*e*P		P	06 21 32.5	-0.7		
	comp=Z,62nm,0.6s,mb5.7									
PKI	Pulchoki	52.34	316	*e*P		P	06 21 32.5	-0.7		
PKI				pmax	pmax					
	comp=Z,62nm,0.6s,mb5.7									
KKN	Kakani	52.56	316	*e*P		P	06 21 34.3	-0.6		
DMN	Daman	52.57	315	*e*P		P	06 21 34.4	-0.6		
	comp=Z,118nm,1.0s,mb5.8									
CN2	Changchun	52.80	1	*e*P		P	06 21 39.4	+3.1		
CN2				*e*AP		pP	06 21 44.8	+6.5		
CN2				*e*S		S	06 29 07.0	+1.9		
CN2				AMB	AMB					
	comp=Z,10.0nm,0.7s,mb4.8									
CN2				AMB	AMB					
	comp=Z,200nm,4.0s									
CN2				LR	LR					
	comp=N,400nm,19.0s,MS4.6									
CN2				LR	LR					
	comp=E,300nm,19.0s,MS4.6									
CN2				LR	LR					
	comp=Z,600nm,21.0s,MS4.6									
GKN	Gorkha	53.14	315	*e*P		P	06 21 38.5	-0.7		
RPZ	Rata Peaks	53.27	139	P		P	06 21 41.0	+1.1		
	comp=Z,117nm,0.9s,mb5.8,baz=5.4,slow=5.1									
GTA	Gaotai	53.38	337	*e*P		P	06 21 41.4	+0.7		
GTA				PCP	PcP		06 22 48.5	+0.5		
GTA				S	S		06 29 11.3	-1.9		
GTA				SS	SS		06 32 48.6	-4.9		
GTA				AMB	AMB					
	comp=Z,10.0nm,1.4s,mb4.5									
GTA				AMB	AMB					
	comp=Z,188nm,6.0s									
GTA				LR	LR					
	comp=N,244nm,19.8s,MS4.4									
GTA				LR	LR					
	comp=E,273nm,20.7s,MS4.4									
GTA				LR	LR					
	comp=Z,196nm,17.4s,MS4.2									
KOLN	Koldanda	53.72	314	*e*P		P	06 21 42.8	-0.7		
	comp=Z,113nm,0.8s,mb5.9									
MDJ	Mudanjiang	53.83	5	P		P	06 21 44.1	+0.2		
MDJ				PCS	PcS		06 26 48.8	+0.2		
MDJ				S	S		06 29 19.9	+0.8		
MDJ				AMB	AMB					
	comp=Z,48nm,1.0s,mb5.4									
MDJ				AMB	AMB					
	comp=Z,62nm,3.5s									
MDJ				LR	LR					
	comp=N,30nm,21.9s									
MDJ				LR	LR					
	comp=E,268nm,43.7s									
MDJ				LR	LR					
	comp=Z,80nm,21.9s,MS3.7									
MDJ	Mudanjiang	53.83	5	*e*P		P	06 21 43.2	-0.7		
	comp=Z,64nm,0.9s,mb5.5									
MDJ				LR	LR					
	comp=Z,167nm,20.0s,MS4.1									
DANN	Dangsing	53.96	315	*e*P		P	06 21 44.6	-0.6		
	comp=Z,197nm,0.6s,mb6.2									
URZ	Urewera	55.56	130	P		P	06 21 57.6	+0.8		
	baz=270,slow=6.1									
DRV	Dumont d'Urvil	58.38	173	S		S	06 30 25.0	+6.0		
DRV				SS	SS		06 34 06.0	-5.1		
DRV				L			06 38 00.0			
DRV				R			06 41 00.0			
KLR	Kul'dur	58.60	6	*e*P		P	06 22 12.3	-5.6		
ULN	Ulaanbaatar	58.81	347	P		P	06 22 18.9	-0.5		
	SNR=6.2									
ULN	Ulaanbaatar	58.81	347	*i* P		P	06 22 18.3	-1.1		
ULN	Ulaanbaatar	58.81	347	*e*P		P	06 22 20.0	+0.5		
	comp=Z,10nm,0.9s,mb4.9									
SONM	Songino Array	58.94	346	P		P	06 22 19.8	-0.5		
	comp=Z,8.7nm,0.8s,mb4.8,baz=162,slow=8.6,SNR=40									
SONM				ScP	ScP		06 27 09.5	-1.3		
	comp=Z,0.5nm,0.8s,baz=141,slow=5.2,SNR=3.6									
MIR	Mirnyy	61.01	194	*i* P		P	06 22 36.0	+1.7		
MIR				pmax	pmax					
	comp=Z,100nm,1.0s,mb5.9									
THN	Thein Dam	61.98	314	*e*P		P	06 22 38.4	-3.0		
ZAK	Zakamensk	62.07	345	*e*P		P	06 22 40.0	-1.6		
ZAK				pmax	pmax					
	comp=Z,6.0nm,1.2s,mb4.6									
WMQ	Urumqi	62.26	331	*e*P		P	06 22 46.3	+3.2		
WMQ				PP	PP		06 25 05.5	+5.3		
WMQ				S	S		06 31 09.9	+0.4		
WMQ				AMB	AMB					
	comp=Z,15nm,1.1s,mb5.0									
WMQ				AMB	AMB					
	comp=Z,146nm,6.0s									
WMQ				LR	LR					
	comp=N,221nm,23.0s,MS4.5									
WMQ				LR	LR					
	comp=E,322nm,28.0s,MS4.5									
WMQ				LR	LR					
	comp=Z,205nm,24.0s,MS4.2									
TLY	Talaya	63.17	346	*e*P		P	06 22 49.9	+0.9		
TLY				pmax	pmax					
	comp=Z,6.0nm,0.8s,mb4.8									
TLY				MLR	MLR					
	comp=Z,102nm,21.0s,MS4.0									
MOY	Mondy	63.84	344	*e*P		P	06 22 53.7	+0.3		
HVS	Khovu-Aksy	65.61	340	*e*P		P	06 23 04.7	-0.3		
CLNS	Chul'man	65.84	1	*e*P		P	06 23 05.6	-0.7		
CLNS				pmax	pmax					
	comp=Z,24nm,1.4s,mb5.0									
CLNS				pmax	pmax					
	comp=N,14nm,1.6s									
CLNS				pmax	pmax					
	comp=E,5.0nm,0.9s									
KSH	Kashi	65.85	321	P		P	06 23 08.1	+1.3		
KSH				PCP	PcP		06 23 39.0	+1.2		
KSH				PP	PP		06 25 34.8	+2.9		
KSH				PCS			06 27 41.8			
KSH				S	S		06 31 52.1	-2.2		
KSH				SCS	ScS		06 32 59.3	-4.2		
KSH				SS	SS		06 36 08.8	-0.5		
KSH				AMB	AMB					
	comp=Z,373nm,2.5s,mb6.0									
KSH				LR	LR					
	comp=Z,661nm,7.5s									
MK31	Makanchi Array	67.04	330	*e*P		P	06 23 13.7	-0.5		
MKAR	Makanchi Array	67.04	330	P		P	06 23 13.2	-1.0		
	comp=Z,18nm,0.7s,mb5.2,baz=130,slow=7.4,SNR=102									
MKAR				LR	LR		06 54 57.2			
	comp=Z,171nm,21.4s,MS4.2,baz=235,slow=38									
BOD	Bodaibo	67.32	354	*e*P		P	06 23 15.6	-0.2		
BOD				pmax	pmax					
	comp=Z,20nm,1.1s,mb5.1									
KZA	Kyzart	67.82	323	P		P	06 23 20.1	+0.9		
	SNR=12									
KBL	Kabul	67.84	313	*e*P		P	06 23 18.6	-0.9		
KBL				pmax	pmax					
	comp=Z,24nm,0.7s,mb5.3									
KBL	Kabul	67.84	313	*e*P		P	06 23 18.6	-1.0		
	comp=Z,24nm,0.7s,mb5.3									
TKM2	Tokmak 2	68.12	324	*i* P		P	06 23 21.5	+0.4		
TKM2				pmax	pmax					
	comp=Z,13nm,0.7s,mb5.1									
TKM2	Tokmak 2	68.12	324	P		P	06 23 21.5	+0.4		
	SNR=13									
KBK	Karagaybulak	68.34	323	P		P	06 23 23.3	+0.7		
	SNR=12									
PEA0B	Petropavlovsk-	68.39	21	*e*P		P	06 23 22.8	+0.2		
PETK	Petropavlovsk-	68.39	21	P		P	06 23 22.4	-0.2		
	comp=Z,8.5nm,0.8s,mb4.8,baz=209,slow=1.9,SNR=24									
AAK	Ala-Archa	68.60	323	P		P	06 23 24.0	-0.1		
	comp=Z,130nm,0.8s,mb5.9,SNR=14									
AAK	Ala-Archa	68.60	323	P		P	06 23 24.5	+0.4		
	SNR=8.7									
AAK	Ala-Archa	68.60	323	*i* P		P	06 23 23.4	-0.7		
AAK				pmax	pmax					
	comp=Z,23nm,1.7s,mb4.8									
AAK	Ala-Archa	68.60	323	P		P	06 23 24.1	0.0		
	SNR=15									
AAK	Ala-Archa	68.60	323	*e*P		P	06 23 24.0	-0.2		
	comp=Z,21nm,0.9s,mb5.1									
AML	Almayashu	68.78	322	P		P	06 23 25.5	+0.2		
	SNR=17									
USP	Ospenovka	68.97	323	P		P	06 23 26.0	-0.5		
	SNR=24									
EKS2	Erkin-Say	69.04	323	P		P	06 23 28.3	+1.4		
	SNR=13									
MAW	Mawson	70.76	201	*e*P		P	06 23 38.2	+1.1		
	comp=Z,24nm,0.6s,mb5.3									
MAW	Mawson	70.76	201	P		P	06 23 37.9	+0.8		
	comp=Z,33nm,0.8s,mb5.3,baz=56,slow=7.2,SNR=48									
MAW				LR	LR		06 49 31.0			
	comp=Z,350nm,21.8s,MS4.6,baz=58,slow=31									
MAW	Mawson	70.76	201	*e*P		P	06 23 38.2	+1.1		
MAW				pmax	pmax					
	comp=Z,24nm,0.6s									
VNDA	Vanda	71.02	172	P		P	06 23 38.9	+0.4		
	comp=Z,8.5nm,1.0s,mb4.6,baz=326,slow=4.4,SNR=21									
VNDA				LR	LR		06 55 45.8			
	comp=Z,375nm,18.8s,MS4.7,baz=323,slow=37									
VNDA	Vanda	71.02	172	*e*P		P	06 23 38.2	-0.3		
VNDA				pmax	pmax					
	comp=Z,7.0nm,0.8s									
VNDA	Vanda	71.02	172	*e*P		P	06 23 38.2	-0.3		
	comp=Z,6.6nm,0.8s,mb4.6									
ZAA0	Zalesovo Array	71.13	337	*e*P		P	06 23 38.5	-1.0		
ZALV	Zalesovo Beam	71.13	337	P		P	06 23 37.4	-2.1		
	comp=Z,6.3nm,0.4s,mb4.9,baz=134,slow=4.3,SNR=42									
ZALV				LR	LR		07 00 45.8			
	comp=Z,74nm,18.3s,MS4.0,baz=85,slow=41									
YAK	Yakutsk	71.18	3	*e*P		P	06 23 37.4	-2.2		
YAK				pmax	pmax					
	comp=Z,30nm,0.9s,mb5.2									
YAK				pmax	pmax					
	comp=N,16nm,1.1s									
YAK				pmax	pmax					
	comp=E,4.0nm,1.0s									
KK31	Karatay Array	71.27	322	*i* P		P	06 23 39.3	-1.3		
KK31				pmax	pmax					
	comp=Z,5.0nm,0.8s,mb4.5									
KURK	Kurchatov	71.50	331	P		P	06 23 40.3	-1.5		
	comp=Z,108nm,0.6s,mb6.0,SNR=10									
KURK	Kurchatov	71.50	331	P		P	06 23 41.0	-0.8		
	SNR=7.2									
KURK	Kurchatov	71.50	331	P		P	06 23 39.7	-2.1		
	comp=Z,6.5nm,0.6s,mb4.8,baz=143,slow=5.0,SNR=23									
KURK	Kurchatov	71.50	331	*e*P		P	06 23 40.6	-1.2		
KURK				pmax	pmax					
	comp=Z,38nm,2.0s,mb5.0									
KURK	Kurchatov	71.50	331	*e*P		P	06 23 40.5	-1.3		
	comp=Z,28nm,1.2s,mb5.1									
SBA	Scott Base	71.97	171	*e*P		P	06 23 44.4	+0.1		
SBA				pmax	pmax					
	comp=Z,14nm,0.8s,mb4.9									
SBA	Scott Base	71.97	171	*e*P		P	06 23 44.4	+0.2		
	comp=Z,14nm,0.8s,mb5.0									
BIDO	Bidbid	72.17	298	P		P	06 23 46.7	+0.3		
	SNR=7.5									
NVS	Novosibirsk	72.42	337	*e*P		P	06 23 44.6	-2.6		
NVS				*i*			06 33 03.2			
NVS				pmax	pmax					
	comp=N,10.0nm,1.6s									
NVS				pmax	pmax					
	comp=Z,14nm,1.6s,mb4.6									
NVS				pmax	pmax					
	comp=E,12nm,1.3s									
WHFO	Wadi Hawf	74.44	292	P		P	06 23 59.3	-0.7		
	SNR=6.2									
ABPO	Ambohimpanom	74.67	253	*e*P		P	06 24 03.0	+1.7		
ABPO				pmax	pmax					
	comp=Z,16nm,0.8s,mb5.0									
ABPO				MLR	MLR					
	comp=Z,138nm,20.1s,MS4.2									
ABPO	Ambohimpanom	74.67	253	*e*P		P	06 24 03.0	+1.7		
	comp=Z,16nm,0.8s,mb5.0									
ABPO				LR	LR					
	comp=Z,138nm,20.1s,MS4.2									
OPO	Ambohidratompo	74.74	253	P		P	06 24 03.4	+1.6		
	comp=Z,19nm,0.7s,mb5.2,baz=90,slow=3.6,SNR=64									
SEY	Seymchan	75.18	13	*e*P		P	06 24 02.9	-0.3		
BVA0	Borovoye Array	76.92	330	*i* P		P	06 24 12.4	-1.0		
BVA0				pmax	pmax					
	comp=Z,4.0nm,1.3s,mb4.2									
BRVK	Borovoye	77.00	330	P		P	06 24 14.0	+0.2		
	SNR=7.3									
BRVK	Borovoye	77.00	330	P		P	06 24 13.7	-0.1		
BRVK				pmax	pmax					
	comp=Z,33nm,1.3s,mb5.1									
BRVK	Borovoye	77.00	330	*e*P		P	06 24 13.5	-0.3		
SYO	Syowa Base	79.45	201	*e*P		P	06 24 26.2	-1.0		
SYO	Syowa Base	79.45	201	*e*P		P	06 24 30.5	+3.3		
TIXI	Tiksi	80.77	2	*e*P		P	06 24 32.7	-1.5		
TIXI				pmax	pmax					
	comp=Z,22nm,1.4s,mb4.9									
TIXI	Tiksi	80.77	2	*e*P		P	06 24 32.6	-1.6		
AKTK	Aktyubinsk	82.31	324	P		P	06 24 42.1	-0.6		
AKTO	Aktyubinsk	82.31	324	P		P	06 24 42.1	-0.6		
	baz=112,slow=19									
RDF	Al-Radifah	82.81	301	*e*P		P	06 24 44.9	-1.0		
	baz=301									
RDF				AMb	AMB		06 24 46.5			
	comp=Z,90nm,1.2s,mb5.7,baz=301									
UMR	Umm Al-Rimmam	82.83	301	*e*P		P	06 24 45.0	-1.0		
	baz=301									
UMR				AMb	AMB		06 24 47.1			
	comp=Z,39nm,1.5s,mb5.2,baz=301									
NAY	Al-Naaiem	83.15	301	*e*P		P	06 24 46.5	-1.1		
	baz=301									
NAY				AMb	AMB		06 24 48.1			
	comp=Z,43nm,0.9s,mb5.5,baz=301									
MIB	Mutribah	83.21	302	*e*P		P	06 24 46.9	-1.0		
	baz=302									
MIB				AMb	AMB		06 24 48.5			
	comp=Z,66nm,1.1s,mb5.6,baz=302									
SVE	Sverdlovsk	83.70	330	*e*P		P	06 24 48.9	-0.9		
SVE				*e*			06 27 59.0			
SVE				*e*PPP			06 29 55.1			
SVE				pmax	pmax					
	comp=Z,32nm,1.1s,mb5.4									
PPT	Papeete	83.83	107	*e*SS		SS	06 40 42.6	-0.6		
	comp=Z,133nm,29.8s									
PPT	Papeete	83.83	107	*e*LR		LR	06 51 20.0			
	comp=Z,301nm,29.0s									
PPT	Papeete	83.83	107	LR		LR	06 58 47.1			
	comp=Z,188nm,19.7s,MS4.5,baz=267,slow=33									
ARU	Arti	84.56	329	*c i* P		P	06 24 52.9	-1.3		
ARU				*e*			06 28 04.5			
ARU				*e*S		S	06 35 09.5	-12		
ARU				SS		SS	06 40 45.4	-7.1		
ARU				pmax	pmax					
	comp=Z,19nm,1.2s,mb5.1									
ARU	Arti	84.56	329	*e*P		P	06 24 53.3	-0.9		
ARU				LR	LR					
	comp=Z,212nm,20.0s,MS4.5									
KIV	Kislovodsk	90.19	314	*e*P		P	06 25 14.7	-7.0		
KIV				pmax	pmax					
	comp=Z,9.0nm,1.0s,mb5.0									
SNAA	Sanae	92.08	195	*e*P		P	06 25 31.2	+1.2		
SNAA				*e*			06 25 38.7			
SNAA				*e*			06 25 43.7			
SNAA				*e*			06 25 47.6			
SNAA	Sanae	92.08	195	*e*P		P	06 25 30.6	+0.6		
SNAA				pmax	pmax					
	comp=Z,20nm,0.8s									
SNAA	Sanae	92.08	195	*e*P		P	06 25 30.6	+0.6		
	comp=Z,20nm,0.8s,mb5.5									
LSZ	Lusaka	93.19	254	*e*P		P	06 25 36.9	+0.6		
LSZ				pmax	pmax					
	comp=Z,14nm,0.9s,mb5.4									
LSZ				MLR	MLR					
	comp=Z,192nm,19.0s,MS4.6									
LSZ	Lusaka	93.19	254	*e*P		P	06 25 36.9	+0.6		
	comp=Z,14nm,0.9s,mb5.4									
LSZ				LR	LR					
	comp=Z,192nm,19.0s,MS4.6									
BOSA	Boshof	93.26	240	P		P	06 25 37.3	+0.9		
	comp=Z,4.2nm,0.8s,mb4.9,baz=82,slow=8.1,SNR=6.1									
VNA2	Neumayer--Watz	93.69	194	*e*P		P	06 25 39.3	+1.8		
VNA2				*e*			06 25 43.3			
VNA2				*e*			06 25 46.3			
VNA2				*e*			06 25 51.4			
VNA2				*e*			06 25 55.5			
VNA3	Neumayer Olymp	94.01	194	*e*P		P	06 25 36.3	-2.6		
VNA3				*e*		pP	06 25 40.1	-0.9		
VNA3				*e*			06 25 44.0			
VNA3				*e*			06 25 52.1			
VNA1	Neumayer--Stat	94.08	194	*e*P		P	06 25 40.8	+1.5		
VNA1				*e*			06 25 48.1			
VNA1				*e*			06 25 52.4			
KDAK	Kodiak Island	94.21	32	LR		LR	07 00 01.2			
	comp=Z,844nm,21.8s,MS5.2,baz=245,slow=30									
OBN	Obninsk	96.06	325	*e*P		P	06 25 46.5	-2.1		
OBN				pmax	pmax					
	comp=Z,38nm,1.9s,mb5.5									
BRTR	Keskin Array B	96.15	309	P		P	06 25 47.4	-1.9		
	comp=Z,3.7nm,1.1s,mb4.7,baz=131,slow=4.0,SNR=6.3									
BRTR				LR	LR		07 13 41.5			
	comp=Z,80nm,21.4s,MS4.2,baz=251,slow=38									
BRTR	Keskin Array B	96.15	309	*i* P		P	06 25 48.0	-1.3		
BRTR				pmax	pmax					
	comp=Z,4.0nm,1.1s									
AKASG	Malin Array Be	100.13	320	P		Pdif	06 26 04.8	-2.1		
	comp=Z,0.3nm,0.3s,baz=82,slow=4.3,SNR=5.1									
AKASG				PP	PP		06 30 13.9	+1.4		
	comp=Z,0.2nm,0.2s,baz=74,slow=7.9,SNR=4.2									
GERES	GERESS Array B	110.28	319	PKiKP	PKiKP		06 30 53.4	+0.1		
	comp=Z,0.2nm,0.3s,baz=79,slow=5.1,SNR=5.4									
RES	Resolute Bay	110.96	10	PKiKP	PKiKP		06 30 54.8	+0.9		
	comp=Z,2.5nm,0.5s,baz=268,slow=2.8,SNR=14									
YKA	Yellowknife Ar	112.31	25	PKiKP	PKiKP		06 30 55.9	-0.9		
	comp=Z,0.4nm,0.5s,baz=298,slow=1.7,SNR=13									
YKA				SKP			06 34 29.8			
	comp=Z,0.4nm,0.7s,baz=298,slow=2.0,SNR=6.1									
YKA	Yellowknife Ar	112.31	25	PKPdf	PKiKP		06 30 55.9	-0.8		
YKA				SKP			06 34 29.8			
DAVOX	Davos/Dischmat	113.19	317	PKiKP	PKiKP		06 30 58.4	-0.5		
	comp=Z,1.4nm,0.5s,baz=35,slow=12,SNR=4.2									
CDF	Champ du Feu	114.54	319	*e*PKP1	PKiKP		06 30 59.8	-1.6		
MEM	Membach	114.75	322	PKP	PKiKP		06 31 01.8	0.0		
HINF	Hinteralfeld	114.96	319	*e*PKP1	PKiKP		06 31 00.7	-1.6		
BCLA	Clavier	115.24	322	PKP	PKiKP		06 31 03.1	+0.4		
HAU	Haudompre	115.24	319	*e*PKP1	PKiKP		06 31 00.7	-2.1		
KEST	Kesra	115.37	305	PKP	PKPdf		06 31 04.2	+0.7		
	comp=Z,1.4nm,0.9s,baz=179,slow=19,SNR=4.3									
LPG	La Plagne	115.59	316	*e*PKP1	PKiKP		06 31 02.5	-1.1		
LPL	La Plagne	115.59	316	*e*PKP1	PKiKP		06 31 01.9	-1.7		
GIVF	Givet	115.62	321	*e*PKP1	PKiKP		06 31 01.8	-1.7		
CABF	La Chapelle	115.77	317	*e*PKP1	PKiKP		06 31 03.3	-0.6		
	comp=Z,26nm,1.0s									
DOU	Dourbes	115.77	321	PKP	PKPdf		06 31 03.8	0.0		
LOR	Lormes	117.06	319	*e*PKP1	PKPdf		06 31 04.4	-1.9		
SMF	Signal de Mont	117.25	318	*e*PKP1	PKPdf		06 31 04.1	-2.6		
NVAR	Mina Array Bea	117.28	52	PKP	PKPdf		06 31 08.3	+1.2		
	comp=Z,0.8nm,0.6s,baz=241,slow=2.0,SNR=7.8									
NVAR	Mina Array Bea	117.28	52	PKP	PKPdf		06 31 08.3	+1.2		
SSF	Saint Saulge	117.35	318	*e*PKP1	PKPdf		06 31 06.0	-0.9		
	comp=Z,28nm,1.1s									
AVF	Avril sur Loir	117.53	318	*e*PKP1	PKPdf		06 31 06.0	-1.3		
	comp=Z,20nm,1.1s									
BGF	Bois d'Agland	117.93	318	*e*PKP1	PKPdf		06 31 06.4	-1.6		
	comp=Z,21nm,0.8s									
EKA	Eskdalemuir Ar	118.17	329	PKP	PKPdf		06 31 09.7	+1.4		
	comp=Z,0.9nm,0.8s,baz=64,slow=5.7,SNR=4.1									
TCF	Toulx Ste Croi	118.43	318	*e*PKP1	PKPdf		06 31 07.3	-1.7		
CAF	Calviac	118.93	316	*e*PKP1	PKPdf		06 31 08.1	-1.9		
	comp=Z,29nm,1.2s									
HLID	Hailey	119.00	45	*e*PKPdf	PKPdf		06 31 11.0	+0.8		
RJF	Les Rejaudoux	119.19	317	*e*PKP1	PKPdf		06 31 08.3	-2.2		
LFF	La Frestale	119.83	317	*e*PKP1	PKPdf		06 31 10.3	-1.4		
MFF	Saint Martin d	119.88	319	*e*PKP1	PKPdf		06 31 09.8	-2.0		
	comp=Z,19nm,0.8s									
PDAR	Pinedale Array	122.62	45	PKP	PKPdf		06 31 17.3	+0.1		
	comp=Z,1.1nm,0.7s,baz=294,slow=1.8,SNR=8.6									
PDAR				PKKPbc	PKKPbc		06 41 13.3	+1.4		
	comp=Z,0.4nm,0.6s,baz=117,slow=5.3,SNR=4.0									
FCC	Fort Churchill	122.73	22	*e*PKIKP	PKPdf		06 31 15.8	-1.1		
TOA0	Torodi Ar. Sit	123.42	280	*e*PKPdf	PKPdf		06 31 19.2	-0.3		
TORD	Torodi Ar. Bea	123.42	280	PKP	PKPdf		06 31 19.5	0.0		
	comp=Z,7.7nm,0.7s,baz=54,slow=1.9,SNR=50									
ESDC	Sonseca Array	124.80	312	PKP	PKPdf		06 31 21.8	+0.3		
	comp=Z,1.4nm,0.7s,baz=30,slow=3.0,SNR=5.4									
ESDC	Sonseca Array	124.80	312	PKP	PKPdf		06 31 21.8	+0.3		
MDT	Midelt	127.26	304	PKP	PKPdf		06 31 26.9	+0.5		
	comp=Z,3.8nm,0.9s,baz=160,slow=4.6,SNR=3.6									
ULM	Lac du Bonnet	127.46	31	PKP	PKPdf		06 31 25.8	-0.5		
	comp=Z,2.6nm,0.6s,baz=224,slow=4.3,SNR=3.4									
KIC	Kosan Boka	129.23	271	*e*PKIKP	PKPdf		06 31 31.4	+0.7		
	comp=Z,38nm,0.8s									
DBIC	Dimbokro	129.37	271	PKP	PKPdf		06 31 31.1	+0.2		
	comp=Z,7.8nm,0.7s,baz=79,slow=2.7,SNR=16									
DBIC				SKPbc			06 34 50.7			
	comp=Z,3.0nm,0.9s,baz=68,slow=5.4,SNR=3.7									
DBIC	Dimbokro	129.37	271	*e*PKPdf	PKPdf		06 31 30.9	-0.1		
LIC	Lamto	129.49	270	*e*PKIKP	PKPdf		06 31 31.3	+0.1		
	comp=Z,31nm,0.8s									
LIC	Lamto	129.49	270	*e*PKIKP	PKPdf		06 31 31.1	-0.1		
	comp=Z,19nm,0.8s			

EKA Eskdalemuir Ar 150.28 67 PKPbc PKPbc 06 34 09.6 +0.6
2.9nm,0.8s,baz=262,slow=2.5,SNR=7.2
GERES GERESS Array B 157.14 90 PKP PKPdf 06 34 13.6 -0.1
0.2nm,0.5s,baz=267,slow=1.7,SNR=2.4
MKAR Makanchi Array 158.08 262 PKPab PKPab 06 34 48.7 0.0
1.1nm,0.9s,baz=134,slow=5.2,SNR=4.1

MOS ***19*** *06:29:17.7±2.6,3440N×7350E,h33km,mb4.1/6,Error ellipse: s-maj=15.6km s-min=11.2km az=106.3*
IDC ***19*** *06:29:17.7±0.8,3444N×7349E,h0km,mb3.9/9, mb1 4.1/12,mb1mx3.9/25,mbtmp3.9/12,ML3.7/3,Error ellipse: s-maj=25.5km s-min=17.9km az=51.0*
NEIC ***19*** *06:29:20.1±0.5,3451N×7366E,h10km,Error ellipse: s-maj=12.9km s-min=6.3km az=45.0*
ISCJB ***19*** *06:29:20.1±0.7,3455N±004×7357E±006,h30km±7km, mb3.7/8,Error ellipse: s-maj=9.7km s-min=4.3km az=137.4*
NDI ***19*** *06:29:21.2±2.4,3449N×7330E,h10km,ML3.8*
NNC ***19*** *06:29:29.8±3.1,3487N×7344E,h78km±31km,mb3.4, mpv3.9,Error ellipse: s-maj=28.7km s-min=22.5km az=118.0*
ISC 19 06:29:20.0±1.6,3453N±004×7351E±005,h13km±11km, n47,σ1♮30/58,mb3.7/8,2C-3D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.15**	**147**	***e*P**			**Pb**	**06 29 58.0**	**-0.8**
JMU				***e*S**			**Sb**	**06 30 27.0**	**+1.6**
THN	**Thein Dam**	**2.79**	**138**	***e*P**			**Pb**	**06 30 07.6**	**-2.1**
THN				***e*SB**			**Sb**	**06 30 46.2**	**+2.4**
DLH	**Dalhousie**	**2.85**	**133**	***e*P**			**Pb**	**06 30 10.0**	**-0.8**
DLH				***ex***			**Sb**	**06 30 45.0**	**-0.6**
KBL	**Kabul**	**3.69**	**271**	***e*Pn**			**Pb**	**06 30 21.6**	**-3.5**
KBL				***e*Sn**			**Sb**	**06 31 09.4**	**-0.2**
SDNR	**Sundarnagar**	**4.19**	**135**	***e*P**			**Pn**	**06 30 26.0**	**+2.3**
SDNR				***e*S**			**Sn**	**06 31 13.0**	**+0.5**
SMLA	**Simla**	**4.58**	**137**	***i*P**			**Pn**	**06 30 32.0**	**+3.0**
SMLA				***i*S**			**Sn**	**06 31 23.8**	**+1.7**
SMLA				***ex***		x		06 31 26.9	
	comp=N,942nm,0.4s								
SMLA				***ex***		x		06 31 28.3	
	comp=E,619nm,0.3s								
DDI	**Dehra Dun**	**5.69**	**136**	***e*PB**			**Pb**	**06 31 01.0**	**+1.8**
SONA	**Sohna**	**6.97**	**153**	***e*P**			**Pn**	**06 31 02.6**	**+0.8**
SONA				***e*S**			**Sn**	**06 32 17.9**	**-3.0**
SONA						AML	AML	06 33 10.6	
	comp=N,19nm,0.7s								
SONA						AML	AML	06 33 11.5	
	comp=E,30nm,0.7s								
TKM2	**Tokmak 2**	**8.53**	**10**	**⇑P**			**Pn**	**06 31 26.4**	**+3.3**
	comp=E,1.0nm,0.4s								
TKM2				**⇓S**			**Sn**	**06 32 58.0**	**-1.3**
	comp=E,2.8nm,0.5s								
KK31	**Karatay Array**	**8.87**	**346**	P			**Pn**	**06 31 30.6**	**+2.8**
	comp=E,5.9nm,0.5s,baz=166,slow=13,SNR=66								
KK31				**⇓S**			**Sn**	**06 33 06.3**	**-1.3**
	comp=E,5.0nm,0.7s,baz=163,slow=21,SNR=7.3								
DANN	**Dangsing**	**10.70**	**122**	***e*P**			**Pn**	**06 31 54.0**	**+1.0**
	comp=E,14nm,0.3s								
KOLN	**Koldanda**	**10.96**	**125**	***e*P**			**Pn**	**06 31 57.5**	**+1.0**
GKN	**Gorkha**	**11.53**	**121**	***e*P**			**Pn**	**06 32 03.7**	**-0.6**
	comp=E,15nm,0.3s								
GKN				***e*S**			**Sn**	**06 34 05.6**	**-7.3**
DMN	**Daman**	**12.10**	**122**	***e*P**			**Pn**	**06 32 11.2**	**-0.9**
KKN	**Kakani**	**12.11**	**121**	***e*P**			**Pn**	**06 32 11.4**	**-0.8**
PKI	**Pulchoki**	**12.33**	**121**	***e*P**			**Pn**	**06 32 14.7**	**-0.6**
	comp=E,11nm,0.4s								
PKI	**Pulchoki**	**12.33**	**121**	***e*P**			**Pn**	**06 32 14.7**	**-0.6**
PKI						pmax	pmax		
	comp=Z,11nm,0.4s								
GUN	**Gumba**	**12.47**	**119**	***e*P**			**Pn**	**06 32 16.2**	**-1.0**
	comp=Z,11nm,0.4s								
JIRN	**Jiri**	**12.84**	**119**	***e*P**			**Pn**	**06 32 21.0**	**-1.2**
	comp=Z,23nm,0.4s								
RAMN	**Ramite**	**13.55**	**120**	***e*P**			**Pn**	**06 32 30.1**	**-1.8**
	comp=Z,12nm,0.5s								
MK31	**Makanchi Array**	**13.93**	**26**	***e*P**			**Pn**	**06 32 37.7**	**+0.7**
MKAR	**Makanchi Array**	**13.93**	**26**	Pn			**Pn**	**06 32 37.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=207,slow=13,SNR=5.0								
TAPN	**Taplejung**	**14.12**	**117**	***e*P**			**Pn**	**06 32 37.1**	**-2.7**
	comp=Z,8.5nm,0.3s								
TAPN				***e*S**			**Sn**	**06 35 07.0**	**-9.4**
ODAN	**Odare**	**14.17**	**119**	***e*P**			**Pn**	**06 32 37.8**	**-2.6**
AB09	**Akbulak array**	**17.82**	**330**	**⇑P**			**Pn**	**06 33 28.2**	**+0.7**
	comp=Z,1.0nm,0.7s								
BVAR	**Borovoye Array**	**18.62**	**354**	P			**Pn**	**06 33 37.8**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=167,slow=11,SNR=7.0								
BVAR	**Borovoye Array**	**18.62**	**354**	P			**Pn**	**06 33 37.8**	**+0.5**
BVAR						pmax	pmax		
	comp=Z,1.0nm,0.3s								
AKTK	**Aktyubinsk**	**19.51**	**329**	P			**Pn**	**06 33 48.5**	**+0.4**
AKTO	**Aktyubinsk**	**19.51**	**329**	**⇓P**			**Pn**	**06 33 47.3**	**-0.8**
	comp=Z,0.7nm,0.7s								
AKTO	**Aktyubinsk**	**19.51**	**329**	P			**Pn**	**06 33 48.5**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=131,slow=11,SNR=14								
AKTO	**Aktyubinsk**	**19.51**	**329**	P			**Pn**	**06 33 48.5**	**+0.5**
AKTO						pmax	pmax		
	comp=Z,1.0nm,0.3s								
ZALV	**Zalesovo Beam**	**20.98**	**19**	P			**P**	**06 34 02.6**	**-0.1**
	comp=Z,2.9nm,0.4s,baz=216,slow=10,SNR=9.9								
CMAR	**Chiang Mai Arr**	**27.71**	**119**	P			**P**	**06 35 08.7**	**+0.5**
	comp=Z,1.1nm,0.3s,mb3.9,baz=312,slow=9.6,SNR=4.8								
CMAR	**Chiang Mai Arr**	**27.71**	**119**	P			**P**	**06 35 08.7**	**+0.6**
CMAR						pmax	pmax		
	comp=Z,1.0nm,0.3s								
SONM	**Songino Array**	**27.86**	**52**	P			**P**	**06 35 10.6**	**+1.4**
	comp=Z,0.6nm,0.8s,mb3.3,baz=251,slow=4.5,SNR=3.5								
SONM	**Songino Array**	**27.86**	**52**	P			**P**	**06 35 10.6**	**+1.4**
SONM						pmax	pmax		
	comp=Z,1.0nm,0.8s								
ARCES	**ARCESS Array B**	**43.74**	**338**	P			**P**	**06 37 25.1**	**+0.5**
	comp=Z,3.9nm,0.9s,mb4.1,baz=112,slow=8.8,SNR=3.9								
ARCES	**ARCESS Array B**	**43.74**	**338**	P			**P**	**06 37 25.1**	**+0.5**
ARCES						pmax	pmax		
	comp=Z,4.0nm,0.9s								
NOA	**NORSAR Array B**	**47.18**	**324**	P			**P**	**06 37 51.5**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=96,slow=7.6,SNR=3.5								
NOA	**NORSAR Array B**	**47.18**	**324**	P			**P**	**06 37 51.6**	**-0.3**
NOA						pmax	pmax		
	comp=Z,1.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.76**	**271**	P			**P**	**06 40 17.6**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=48,slow=4.6,SNR=14								
WRA	**Warramunga Arr**	**79.21**	**123**	P			**P**	**06 41 24.2**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=325,slow=5.0,SNR=3.8								
ASAR	**Alice Springs**	**81.45**	**126**	P			**P**	**06 41 36.4**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=307,slow=5.5,SNR=11								
ASAR	**Alice Springs**	**81.45**	**126**	P			**P**	**06 41 36.4**	**-0.5**
ASAR						pmax	pmax		
	comp=Z,1.0nm,0.6s								
YKA	**Yellowknife Ar**	**83.09**	**4**	P			**P**	**06 41 44.9**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=347,slow=5.2,SNR=16								
YKA	**Yellowknife Ar**	**83.09**	**4**	P			**P**	**06 41 44.9**	**-0.1**
YKA						pmax	pmax		
	comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**83.09**	**4**	P			**P**	**06 41 44.9**	**-0.1**

BGS ***19*** *06:47:56.8±2.3,5060N×179.24W,h10km±999km,mb5.2*
IDC ***19*** *06:47:57.3±0.6,5135N×179.93E,h0km,mb4.4/22, mb1 4.6/23,mb1mx4.6/27,mbtmp4.4/23,ML5.0/1,MS4.0/11, Ms1 4.0/11,ms1mx3.6/35,Error ellipse: s-maj=20.1km s-min=12.2km az=165.0*
MOS ***19*** *06:47:57.3±4.7,5130N×17990E,h33km,mb4.9/48,Error ellipse: s-maj=15.6km s-min=11.2km az=106.3*
BJI ***19*** *06:47:59.5,51.10N×180.00E,h6km,mb5.1,mb4.8,Ms4.9, Msz4.3*
NEIC ***19*** *06:47:59.6,5109N×180.00E,h6km,mb5.0/78, ML4.7(AEIC),After AEIC.*
ISCJB ***19*** *06:48:03.1±0.8,5129N±006×17997E±003,h39km±5km, mb4.8/117,MS4.0/21,Error ellipse: s-maj=9.4km s-min=2.8km az=8.1*
ISC 19 06:48:06.2±0.7,5136N±006×17997E±003,h49km±5km, h42km±3.7km:pP-P,n595,σ0♮73/592,mb4.8/117,MS4.0/21, 163C-143D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.15**	**75**	P			**Pn**	**06 48 36.8**	**-2.7**
ADK				S			**Sn**	**06 49 06.1**	**+1.2**
ATKA	**Atka Island**	**3.72**	**75**	P			**Pn**	**06 48 58.1**	**-2.9**
ATKA				S			**Sn**	**06 49 45.7**	**+2.3**
SMY	**Shemya**	**3.88**	**293**	***e*P**			**Pn**	**06 49 04.1**	**+1.0**
FX1	**Attu Island--F**	**4.46**	**293**	Pn			**Pn**	**06 49 11.8**	**+0.6**
	34nm,0.3s,baz=245,slow=23,SNR=77								
FX1						Sn	**Sn**	**06 50 03.8**	**+2.0**
	13nm,0.3s,baz=74,slow=19,SNR=1.9								
FX1	**Attu Island--F**	**4.46**	**293**	P			**Pn**	**06 49 11.8**	**+0.6**
FX1								06 50 03.8	
FX1						pmax	pmax		
	comp=Z,34nm,0.3s								
FX1						smax			
	comp=N,13nm,0.3s								
FX1	**Attu Island--F**	**4.46**	**293**	P			**Pn**	**06 49 10.0**	**-1.1**
NIKO	**Nikolski**	**7.06**	**72**	P			**Pn**	**06 49 45.2**	**-1.6**
SPIA	**Saint Paul Isl**	**8.16**	**41**	P			**Pn**	**06 50 03.2**	**+1.3**
UNV	**Unalaska Valle**	**8.60**	**68**	P			**Pn**	**06 50 07.2**	**-0.7**
AKUT	**Akutan**	**9.08**	**67**	***e*P**			**Pn**	**06 50 13.5**	**-0.9**
	comp=N,116nm,1.4s								
SDPT	**Sand Point**	**12.33**	**63**	***e*P**			**Pn**	**06 50 58.1**	**-0.7**
	comp=N,48nm,0.6s								
CHGN	**Chignik**	**13.66**	**60**	***e*P**			**Pn**	**06 51 16.0**	**-1.0**
PETK	**Petropavlovsk-**	**13.75**	**286**	Pn			**Pn**	**06 51 17.1**	**-1.1**
	baz=86,slow=22,SNR=3.0								
PETK						LR	LR	06 56 25.8	
	comp=N,226nm,18.2s,baz=318,slow=37								
OHAK	**Old Harbor**	**16.61**	**59**	***e*P**			**Pn**	**06 51 50.9**	**-4.4**
	comp=N,14nm,0.4s								
SVW2	**Sparrevohn**	**16.62**	**45**	***e*P**			**Pn**	**06 51 56.7**	**+1.3**
KDAK	**Kodiak Island**	**17.08**	**57**	P			**Pn**	**06 51 56.6**	**-4.5**
	comp=N,4.8nm,0.3s,baz=280,slow=7.6,SNR=18								
KDAK	**Kodiak Island**	**17.08**	**57**	***e*P**			**Pn**	**06 51 58.2**	**-2.9**
KDAK						pmax	pmax		
	comp=Z,541nm,2.4s								
KDAK	**Kodiak Island**	**17.08**	**57**	***e*Pn**			**Pn**	**06 51 58.2**	**-3.0**
	comp=Z,541nm,2.4s								
BILL	**Bilibino**	**18.02**	**343**	***e*P**			**Pn**	**06 52 14.7**	**+2.1**
BILL						pmax	pmax		
	comp=Z,28nm,1.1s								
BILL						MLR	MLR		
	comp=Z,200nm,16.0s								
BILL	**Bilibino**	**18.02**	**343**	***e*P**			**Pn**	**06 52 11.1**	**-1.5**
	comp=Z,38nm,1.2s								
PMR	**Palmer**	**19.70**	**47**	***e*P**			**Pn**	**06 52 33.8**	**+1.0**
PMR						pmax	pmax		
	comp=Z,1.0nm,0.7s								
PMR	**Palmer**	**19.70**	**47**	***e*P**			**Pn**	**06 52 33.8**	**+1.0**
	comp=Z,0.9nm,0.7s								
COLA	**College**	**21.40**	**39**	***e*P**			**P**	**06 52 48.5**	**-0.9**
COLA						pmax	pmax		
	comp=Z,14nm,0.8s,mb4.3								
COLA	**College**	**21.40**	**39**	***e*P**			**P**	**06 52 48.5**	**-0.9**
	comp=Z,14nm,0.8s,mb4.3								
MENT	**Mentasta**	**22.50**	**45**	***e*P**			**P**	**06 53 01.5**	**+0.4**
EGAK	**Eagle**	**24.07**	**41**	***e*P**			**P**	**06 53 14.7**	**-1.7**
	comp=Z,44nm,0.9s,mb4.9								
DAWY	**Dawson**	**24.65**	**43**	***e*P**			**P**	**06 53 20.9**	**-0.8**
HYT	**Haines Junctio**	**25.11**	**51**	***e*P**			**P**	**06 53 25.5**	**-0.4**
INK	**Inuvik**	**27.92**	**35**	P			**P**	**06 53 49.2**	**-1.9**
	comp=Z,2.8nm,0.6s,mb4.0,baz=242,slow=6.3,SNR=15								
INK						PcP	PcP	06 57 03.3	-2.0
	comp=Z,2.2nm,0.7s,baz=216,slow=2.9,SNR=5.2								
INK						LR	LR	07 06 18.1	
	comp=Z,230nm,18.2s,MS3.8,baz=158,slow=39								
INK	**Inuvik**	**27.92**	**35**	P			**P**	**06 53 49.2**	**-2.0**
INK								06 57 03.3	
INK						pmax	pmax		
	comp=Z,3.0nm,0.6s								
INK						pmax	pmax		
	comp=Z,2.0nm,0.7s								
INK						MLR	MLR		
	comp=Z,230nm,18.2s								
INK	**Inuvik**	**27.92**	**35**	***e*P**			**P**	**06 53 51.4**	**+0.2**
HABR	**Khabarovsk**	**28.73**	**282**	***e*P**			**P**	**06 53 56.7**	**-1.8**
HABR				***e**PP			pP	06 54 06.2	-4.9
HABR				***e**SP			sP	06 54 10.4	-6.5
HABR				***e*PPP**				06 54 56.4	
HABR				***e***				06 57 06.1	
HABR				***e*S**			**S**	**06 58 44.3**	**+0.1**
HABR				***e**SS			sS	06 59 00.9	-4.5
HABR				***e***				07 04 38.6	
HABR						MLR	MLR		
	comp=Z,29nm,14.0s,MS3.0								
HABR						MLR	MLR		
	comp=Z,60nm,16.0s								
DLBC	**Dease Lake**	**29.01**	**56**	P			**P**	**06 53 59.1**	**-1.9**
	comp=Z,1.9nm,0.8s,mb3.9,baz=247,slow=7.7,SNR=5.1								
DLBC						LR	LR	07 04 02.4	
	comp=Z,301nm,20.7s,MS3.9,baz=258,slow=33								
KLR	**Kul'dur**	**30.44**	**285**	***e*P**			**P**	**06 54 08.0**	**-5.7**
MJAR	**Matsushiro Arr**	**33.02**	**260**	LR			LR	07 06 02.4	
	comp=Z,114nm,19.0s,MS3.6,baz=50,slow=33								
MDJ	**Mudanjiang**	**33.81**	**279**	P			**P**	**06 54 41.8**	**-1.5**
MDJ				AP			pP	06 54 52.6	-3.4
MDJ				XP			sP	06 54 57.8	-4.0
MDJ				S			**S**	**07 00 01.3**	**-2.4**
MDJ				XS			sS	07 00 20.8	-4.2
MDJ				SCP			ScP	07 01 02.8	+1.1
MDJ				PCS			PcS	07 01 07.4	+0.2
MDJ				AMB			AMB		
	comp=Z,7.0nm,1.4s,mb4.4								
MDJ						AMB	AMB		
	comp=Z,61nm,4.0s								
MDJ						LR	LR		
	comp=Z,112nm,24.3s,MS3.5								
YKA	**Yellowknife Ar**	**35.80**	**46**	P			**P**	**06 54 57.2**	**-3.0**
	comp=Z,9.7nm,0.6s,mb4.9,baz=280,slow=7.8,SNR=97								
YKA						PcP	PcP	06 57 24.6	-2.1
	comp=Z,2.2nm,0.8s,baz=289,slow=3.0,SNR=14								
YKA						ScP	ScP	07 01 10.1	+1.6
	comp=Z,0.3nm,0.8s,baz=287,slow=3.3,SNR=4.1								
YKA						LR	LR	07 11 27.3	
	comp=Z,234nm,18.1s,MS4.0,baz=140,slow=39								
YKA	**Yellowknife Ar**	**35.80**	**46**	P			**P**	**06 54 57.2**	**-3.1**
YKA								06 57 24.6	
YKA						pmax	pmax		
	comp=Z,10.0nm,0.6s								
YKA						pmax	pmax		
	comp=Z,2.0nm,0.8s								
YKA						MLR	MLR		
	comp=Z,234nm,18.1s								
YKA	**Yellowknife Ar**	**35.80**	**46**	P			**P**	**06 54 57.2**	**-3.0**
YKA						PcP	PcP	06 57 24.6	-2.1
YKA						ScP	ScP	07 01 10.2	+1.6
YKA						LR	LR	07 11 27.3	
A05A	**Maple Falls**	**36.35**	**70**	**⇑P**			**P**	**06 55 05.5**	**+0.4**
	baz=36								
C04A	**Brinnon**	**36.41**	**73**	**⇓P**			**P**	**06 55 06.4**	**+0.8**
	baz=36								
B05A	**Bryant**	**36.68**	**71**	**⇓P**			**P**	**06 55 08.4**	**+0.5**
	baz=36,SNR=7.1								
CN2	**Changchun**	**36.79**	**280**	***e*P**			**P**	**06 55 10.4**	**+1.5**
JCW	**Jim Creek**	**36.81**	**71**	***e*P**			**P**	**06 55 10.1**	**+1.1**
B06A	**Marblemount**	**36.92**	**71**	**⇑P**			**P**	**06 55 10.2**	**+0.3**
	baz=37								
E04A	**Onalaska**	**37.09**	**74**	**⇓P**			**P**	**06 55 12.5**	**+1.1**
	baz=37								
C05A	**Tolt Reservoir**	**37.18**	**72**	**⇑P**			**P**	**06 55 12.7**	**+0.5**
	baz=37,SNR=5.2								
D05A	**Enumclaw**	**37.24**	**73**	**⇓P**			**P**	**06 55 13.6**	**+0.9**
	baz=37								
A07A	**Ashnola River,**	**37.33**	**69**	**⇓P**			**P**	**06 55 13.8**	**+0.4**
	baz=37,SNR=6.8								
BOD	**Bodaibo**	**37.37**	**306**	***e*P**			**P**	**06 55 10.7**	**-2.9**
BOD						pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9								
HIA	**Hailar**	**37.58**	**291**	**⇑*e*P**			**P**	**06 55 14.6**	**-0.9**
F04A	**Amboy**	**37.60**	**75**	**⇑P**			**P**	**06 55 16.3**	**+0.6**
	baz=37								
B07A	**Winthrop**	**37.76**	**70**	**⇑P**			**P**	**06 55 17.2**	**+0.1**
	baz=38,SNR=8.2								
G04A	**Mulino**	**37.93**	**76**	**⇑P**			**P**	**06 55 18.7**	**+0.2**
	baz=38								
A08A	**Turner Farm, O**	**38.03**	**69**	**⇑P**			**P**	**06 55 19.4**	**+0.1**
	baz=38,SNR=5.1								
ETW	**Entiat**	**38.03**	**71**	***e*P**			**P**	**06 55 19.5**	**+0.1**
C07A	**Waterville**	**38.15**	**71**	**⇑P**			**P**	**06 55 20.5**	**+0.1**
	baz=38,SNR=10								
E06A	**Yakima**	**38.16**	**73**	**⇓P**			**P**	**06 55 21.2**	**+0.7**
	baz=38								
F05A	**White Salmon**	**38.20**	**75**	**⇓P**			**P**	**06 55 20.9**	**+0.1**
	baz=38								
B08A	**Colville Reser**	**38.27**	**70**	**⇑P**			**P**	**06 55 21.2**	**-0.1**
	baz=38,SNR=7.2								
H04A	**Detroit Lake**	**38.37**	**77**	**⇑P**			**P**	**06 55 22.7**	**+0.5**
	baz=38								
A09A	**Danville**	**38.42**	**69**	**⇓P**			**P**	**06 55 22.7**	**+0.1**
	baz=38,SNR=5.0								
D07A	**Quincy**	**38.45**	**72**	**⇑P**			**P**	**06 55 23.2**	**+0.3**
	baz=38,SNR=5.8								
G05A	**Wamic**	**38.61**	**75**	**⇑P**			**P**	**06 55 25.0**	**+0.7**
	baz=38								
F06A	**Goldendale**	**38.67**	**74**	**⇑P**			**P**	**06 55 25.3**	**+0.6**
	baz=38								
C08A	**Higginbotham F**	**38.71**	**71**	**⇓P**			**P**	**06 55 24.7**	**-0.4**
	baz=38								
E07A	**Sunnyside**	**38.83**	**73**	**⇑P**			**P**	**06 55 25.9**	**-0.2**
	baz=39								
KSRS	**Korea Array**	**38.87**	**270**	P			**P**	**06 55 24.9**	**-1.6**
	comp=Z,2.6nm,0.8s,mb4.0,baz=55,slow=8.9,SNR=8.1								
KSRS	**Korea Array**	**38.87**	**270**	P			**P**	**06 55 24.9**	**-1.6**
KSRS						pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1								
B09A	**Rice**	**38.93**	**69**	**⇓P**			**P**	**06 55 26.6**	**-0.3**
	baz=39								
A10A	**Northport**	**39.02**	**68**	**⇓P**			**P**	**06 55 27.6**	**0.0**
	baz=39								
OD2	**Odessa Site #2**	**39.10**	**71**	***e*P**			**P**	**06 55 28.4**	**+0.1**
HAWA	**Hanford**	**39.10**	**73**	***e*P**			**P**	**06 55 29.3**	**+0.9**
	comp=Z,22nm,1.0s,mb4.8								
F07A	**Phinny Hill Vi**	**39.12**	**74**	**⇑P**			**P**	**06 55 28.8**	**+0.3**
	baz=39								
D08A	**Wollman Farm,**	**39.14**	**72**	**⇑P**			**P**	**06 55 28.5**	**-0.2**
	baz=39,SNR=8.2								
C09A	**Chrisman Ranch**	**39.16**	**70**	**⇓P**			**P**	**06 55 28.8**	**0.0**
	baz=39								
E08A	**Dider Farm, El**	**39.34**	**72**	**⇓P**			**P**	**06 55 30.7**	**+0.3**
	baz=39								
H06A	**Lindquist Farm**	**39.47**	**75**	**⇓P**			**P**	**06 55 31.8**	**+0.3**
	baz=39								
EDM	**Edmonton**	**39.49**	**60**	***e*P**			**P**	**06 55 31.0**	**-0.5**
D09A	**Jones Farm, Ri**	**39.50**	**71**	**⇑P**			**P**	**06 55 31.6**	**0.0**
	baz=39,SNR=5.0								
B10A	**Chitwood Farm,**	**39.53**	**69**	**⇓P**			**P**	**06 55 31.8**	**-0.2**
	baz=39								
G07A	**Ruggs Ranch, H**	**39.60**	**74**	**⇑P**			**P**	**06 55 32.7**	**+0.2**
	baz=39								
NEW	**Newport**	**39.61**	**69**	***e*P**			**P**	**06 55 32.1**	**-0.5**
NEW						pmax	pmax		
	comp=Z,13nm,0.8s								
NEW	**Newport**	**39.61**	**69**	***e*P**			**P**	**06 55 32.1**	**-0.5**
	comp=Z,13nm,0.8s,mb4.7								
C10A	**Spilker Farm,**	**39.72**	**70**	**⇓P**			**P**	**06 55 33.4**	**0.0**
	baz=39								
A11A	**Hall Mountain,**	**39.72**	**68**	**⇑P**			**P**	**06 55 33.7**	**+0.2**
	baz=39								
F08A	**Pendleton**	**39.86**	**73**	**⇑P**			**P**	**06 55 34.7**	**+0.1**
	baz=40								
E09A	**Wood Farm, Sta**	**39.87**	**72**	**⇑P**			**P**	**06 55 35.0**	**+0.2**
	baz=40								
I06A	**Prineville**	**39.97**	**76**	**⇑P**			**P**	**06 55 35.8**	**+0.2**
	baz=40								
B11A	**Sandpoint**	**39.97**	**68**	**⇑P**			**P**	**06 55 35.2**	**-0.3**
	baz=40								
G08A	**Pilot Rock**	**40.01**	**74**	**⇓P**			**P**	**06 55 36.0**	**+0.1**
	baz=40								
RES	**Resolute Bay**	**40.08**	**24**	P			**P**	**06 55 35.0**	**-1.1**
	comp=Z,4.2nm,0.4s,mb4.6,baz=283,slow=6.4,SNR=24								
RES	**Resolute Bay**	**40.08**	**24**	P			**P**	**06 55 35.0**	**-1.1**
RES						pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5								
D10A	**Wagner Farm, O**	**40.12**	**71**	**⇑P**			**P**	**06 55 36.4**	**-0.4**
	baz=40,SNR=12								
A12A	**Yaak River Ran**	**40.14**	**67**	**⇑P**			**P**	**06 55 36.9**	**0.0**
	baz=40								
I07A	**Izee**	**40.32**	**76**	**⇑P**			**P**	**06 55 38.7**	**+0.2**
	baz=40,SNR=5.8								
J06A	**Christmas Vall**	**40.38**	**77**	**⇑P**			**P**	**06 55 39.2**	**+0.2**
	baz=40								
B12A	**Libby**	**40.41**	**68**	**⇓P**			**P**	**06 55 38.9**	**-0.3**
	baz=40								
F09A	**S2 Ranch, Elgi**	**40.43**	**73**	**⇑P**			**P**	**06 55 39.4**	**+0.1**
	baz=40,SNR=5.7								
E10A	**Myers Farm, Un**	**40.50**	**71**	**⇓P**			**P**	**06 55 39.7**	**-0.3**
	baz=40,SNR=14								
H08A	**Prairie City**	**40.59**	**75**	**⇑P

B16A **M & M Farms, S** 42.67 66 ⇑P P 06 55 56.6 -1.1
baz=42
E14A **Clinton** 42.67 69 ⇓P P 06 55 57.7 -0.1
baz=42,SNR=15
H12A **Diamond D Ranc** 42.87 73 ⇑P P 06 55 58.9 -0.5
baz=43,SNR=7.2
PAHR **Pah Rah Range** 42.88 81 eP P 06 56 00.6 +1.1
comp=Z,12nm,1.0s,mb4.6
D15A **Lincoln** 42.91 68 ⇑P P 06 55 59.3 -0.3
baz=43,SNR=12
MFID **Camas Ranch** 42.92 74 ⇑P P 06 55 59.4 -0.3
baz=43
O07A **Toulon** 42.92 80 ⇓P P 06 55 60.0 +0.2
baz=43
G13A **Cobalt** 42.95 71 ⇑P P 06 55 59.5 -0.5
baz=43,SNR=20
C16A **Fuhringer Ranc** 42.97 67 ⇓P P 06 55 59.1 -0.9
baz=43,SNR=7.5
A17A **Triple J Farms** 42.98 65 ⇓P P 06 55 59.3 -0.8
baz=43,SNR=14
N08A **GE Springer Mi** 43.02 79 ⇓P P 06 56 00.6 0.0
baz=43
M09A **Marrel Ranch,** 43.06 78 ⇓P P 06 56 01.4 +0.4
baz=43
F14A **Wisdom** 43.07 70 ⇑P P 06 56 00.6 -0.3
baz=43,SNR=9.3
K11A **Parker Ranch,** 43.16 75 ⇑P P 06 56 02.0 +0.3
baz=43
E15A **Deer Lodge** 43.17 69 ⇓P P 06 56 01.3 -0.5
baz=43,SNR=14
H13A **Challis** 43.22 72 ⇑P P 06 56 02.1 -0.1
baz=43
L10A **Juniper Basin** 43.28 76 ⇑P P 06 56 02.4 -0.3
baz=43,SNR=7.9
O08A **Rochester Mine** 43.29 80 ⇓P P 06 56 02.6 -0.2
baz=43
N09A **Rock Creek Ran** 43.35 79 ⇑P P 06 56 03.3 0.0
baz=43
J12A **Stokes Ranch,** 43.45 74 ⇓P P 06 56 04.2 +0.2
baz=43,SNR=5.3
A18A **Metzger Ranch,** 43.47 64 ⇓P P 06 56 03.2 -0.9
baz=43
D16A **Dana Ranch, Ca** 43.48 68 ⇓P P 06 56 03.8 -0.5
baz=43
HRY **Holter Researc** 43.49 68 eP P 06 56 02.2 -2.1
M10A **I.L. Ranch, Tu** 43.56 77 ⇑P P 06 56 05.4 +0.4
baz=43,SNR=6.2
WAKR **Walker** 43.57 83 eP P 06 56 09.3 +4.2
F15A **Butte** 43.57 70 ⇓P P 06 56 04.6 -0.3
baz=43,SNR=8.1
LRM **Limekiln Ridge** 43.60 70 eP P 06 56 05.3 +0.1
I13A **Wildhorse Cree** 43.67 73 ⇑P P 06 56 05.6 -0.2
baz=43,SNR=15
L11A **Cat Creek Ranc** 43.67 76 ⇑P P 06 56 06.1 +0.3
baz=43,SNR=14
E16A **East Helena** 43.67 68 ⇑P P 06 56 05.5 -0.3
baz=43,SNR=5.4
HLID **Hailey** 43.69 73 eP P 06 56 06.3 +0.3
comp=Z,8.4nm,0.8s,mb4.5
H14A **Leadore** 43.72 72 ⇓P P 06 56 06.1 -0.1
baz=43,SNR=14
DLMT **Dillon** 43.77 70 eP P 06 56 06.5 -0.1
comp=Z,6.3nm,0.8s,mb4.4
B18A **Beardsley Farm** 43.78 65 ⇑P P 06 56 06.1 -0.6
baz=44,SNR=5.2
BMN **Battle Mountai** 43.78 79 eP P 06 56 07.9 +1.1
BMN pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
BMN **Battle Mountai** 43.78 79 eP P 06 56 07.9 +1.1
comp=Z,6.1nm,0.6s,mb4.5
D17A **Six Diamond Ra** 43.92 67 ⇑P P 06 56 07.4 -0.3
baz=44
K12A **Draper Farm, C** 43.92 75 ⇓P P 06 56 08.1 +0.3
baz=44,SNR=8.8
J13A **Cove Ranch, Pi** 43.92 74 ⇓P P 06 56 08.0 +0.2
baz=44,SNR=18
G15A **Dillon** 43.94 70 ⇓P P 06 56 07.8 -0.2
baz=44,SNR=19
O09A **Fish Creek Ran** 43.96 79 ⇑P P 06 56 08.2 0.0
baz=44
EGMT **Eagleton** 43.99 65 eP P 06 56 08.0 -0.3
comp=Z,13nm,0.8s,mb4.7
I14A **Mackay** 44.06 72 ⇓P P 06 56 08.9 0.0
baz=44,SNR=16
M11A **Holland Ranch,** 44.07 77 ⇑P P 06 56 09.6 +0.5
baz=44,SNR=7.3
F16A **Kennard Place,** 44.11 69 ⇑P P 06 56 09.3 0.0
baz=44,SNR=9.8
L12A **House Creek Ra** 44.13 75 ⇑P P 06 56 09.8 +0.3
baz=44,SNR=15
H15A **Lima** 44.15 71 ⇑P P 06 56 09.6 -0.1
baz=44,SNR=14
BOZ **Bozeman (W)** 44.18 69 eP P 06 56 10.2 +0.3
BOZ pmax pmax
comp=Z,30nm,0.7s,mb5.1
BOZ **Bozeman (W)** 44.18 69 eP P 06 56 10.2 +0.3
comp=Z,30nm,0.7s,mb5.1
E17A **Martinsdale** 44.19 68 ⇑P P 06 56 10.1 +0.2
baz=44,SNR=11
Q08A **Gabbs** 44.29 81 ⇓P P 06 56 11.1 +0.3
baz=44,SNR=6.7
O10A **Cortez Mining,** 44.31 79 ⇑P P 06 56 11.3 +0.3
baz=44
G16A **Moss Hill, Enn** 44.31 70 ⇓P P 06 56 10.7 -0.2
baz=44,SNR=8.9
NVAR **Mina Array Bea** 44.32 82 P P 06 56 10.1 -1.0
comp=Z,4.3nm,0.8s,mb4.2,baz=289,slow=7.2,SNR=20
NVAR **Mina Array Bea** 44.32 82 P P 06 56 10.1 -1.0
P09A **Austin** 44.36 80 ⇓P P 06 56 11.7 +0.3
baz=44
J14A **Carey** 44.36 73 ⇓P P 06 56 12.1 +0.8
baz=44,SNR=7.7
D18A **Linhart Farms,** 44.40 67 ⇑P P 06 56 12.0 +0.4
baz=44,SNR=5.4
K13A **Stover Farm, H** 44.40 74 ⇑P P 06 56 12.1 +0.4
baz=44
N11A **Elko Archery C** 44.47 77 ⇓P P 06 56 12.6 +0.4
baz=44
F17A **Fitzpatrick Pl** 44.61 69 ⇓P P 06 56 13.4 +0.2
baz=44,SNR=16
M12A **Wells** 44.62 76 ⇓P P 06 56 13.7 +0.3
baz=44,SNR=8.0
BJI **Beijing** 44.62 281 P P 06 56 13.3 -0.2
BJI S S 07 02 45.0 -0.9
BJI SS SS 07 06 07.3 +0.5
BJI AMB AMB
comp=Z,15nm,0.6s,mb5.0
BJI AMB AMB
comp=Z,119nm,5.5s
BJI LR LR
comp=N,162nm,25.3s,MS4.0
BJI LR LR
comp=E,168nm,24.7s,MS4.0
BJI LR LR
comp=Z,98nm,21.6s,MS3.7
E18A **Harlowton** 44.68 67 ⇑P P 06 56 14.4 +0.5
baz=44,SNR=13
P10A **Eureka** 44.73 79 ⇑P P 06 56 14.8 +0.4
baz=44
QLMT **Earthquake Lak** 44.75 70 eP P 06 56 14.8 +0.3
L13A **Double Diamond** 44.81 75 ⇓P P 06 56 15.6 +0.6
baz=44,SNR=7.5
ELK **Elko** 44.81 77 eP P 06 56 15.7 +0.7
ELK pmax pmax
comp=Z,10.0nm,0.9s
ELK **Elko** 44.81 77 eP P 06 56 15.7 +0.7
comp=Z,9.7nm,0.9s,mb4.6
MTUM **Tungsten Hills** 44.82 83 eP P 06 56 16.0 +0.9
N12A **Clover Valley,** 44.87 77 ⇑P P 06 56 16.2 +0.8
baz=45,SNR=11
G17A **Pierce Place,** 44.88 69 ⇑P P 06 56 15.9 +0.4
baz=45,SNR=11
O11A **Cowboy Ranch,** 44.92 78 ⇑P P 06 56 16.3 +0.4
baz=45
H16A **Russell Place,** 44.93 70 ⇓P P 06 56 16.1 +0.3
baz=45,SNR=14
J15A **Blackfoot** 44.97 72 ⇓P P 06 56 16.6 +0.4
baz=45
M13A **Montello** 45.10 76 ⇓P P 06 56 17.6 +0.3
baz=45,SNR=10.0
F18A **Big Timber** 45.16 68 ⇑P P 06 56 17.6 -0.1
baz=45,SNR=7.5
R09A **Tonopah** 45.20 81 ⇓P P 06 56 18.7 +0.7
baz=45,SNR=23
TPH **Tonopah** 45.21 82 eP P 06 56 18.3 +0.2
TPH pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
TPH **Tonopah** 45.21 82 eP P 06 56 18.3 +0.2
comp=Z,8.1nm,0.8s,mb4.6
Q10A **Clear Creek Ra** 45.26 80 ⇑P P 06 56 19.3 +0.8
baz=45,SNR=6.2
I16A **Newdale** 45.26 71 ⇓P P 06 56 19.1 +0.6
baz=45,SNR=12
YNR **Norris Junctio** 45.26 70 eP P 06 56 19.5 +1.0
YFT **Old Faithful** 45.32 70 eP P 06 56 20.7 +1.8
K15A **Arbon** 45.32 73 ⇓P P 06 56 19.7 +0.8
baz=45,SNR=5.2
O12A **Currie** 45.40 77 ⇑P P 06 56 20.0 +0.4
baz=45,SNR=16
TLY **Talaya** 45.42 302 eP P 06 56 21.0 +1.3
TLY e 07 02 59.6
TLY pmax pmax
TLY MLR MLR
comp=Z,192nm,18.0s,MS4.1
S09A **Goldfield** 45.42 82 ⇑P P 06 56 19.9 0.0
baz=45
VES **Vestal, Richgr** 45.45 85 ⇓P P 06 56 19.5 -0.6
baz=45
H17A **Grant Village** 45.50 70 ⇑P P 06 56 21.5 +1.1
baz=45,SNR=13
M14A **Sheep Mountain** 45.52 75 ⇓P P 06 56 20.8 +0.3
baz=45
IMW **Indian Meadow** 45.57 71 eP P 06 56 21.9 +0.9
comp=Z,13nm,0.9s,mb4.8
G18A **Lazy EL Ranch,** 45.58 69 ⇑P P 06 56 21.0 0.0
baz=45
ULN **Ulaanbaatar** 45.58 296 eP P 06 56 21.6 +0.7
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ULN **Ulaanbaatar** 45.58 296 eP P 06 56 21.6 +0.7
comp=Z,4.5nm,0.8s,mb4.5
R10A **Warm Springs** 45.65 81 ⇓P P 06 56 21.8 +0.2
baz=45
RRI2 **Red Ridge** 45.66 72 eP P 06 56 22.4 +0.7
comp=Z,13nm,0.9s,mb4.9
S10A **Tonopah Range,** 45.69 81 ⇓P P 06 56 22.5 +0.5
baz=46,SNR=11
CWC **Cottonwood Cre** 45.70 84 ⇓P P 06 56 22.2 +0.2
baz=46
HVU **Hansel Valley** 45.70 75 eP P 06 56 22.7 +0.7
HVU pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
HVU **Hansel Valley** 45.70 75 eP P 06 56 22.7 +0.7
comp=Z,7.2nm,0.8s,mb4.7
Q11A **Duckwater** 45.70 80 ⇑P P 06 56 22.6 +0.5
baz=46
MOOW **Moose Ponds** 45.77 71 eP P 06 56 23.1 +0.6
comp=Z,4.5nm,0.9s,mb4.4
I17A **Pilgram Creek** 45.77 71 ⇓P P 06 56 23.2 +0.6
baz=46
P12A **McGill** 45.78 78 ⇑P P 06 56 23.1 +0.4
baz=46
GRAC **Grapevine Rang** 45.78 83 ⇑P P 06 56 23.1 +0.3
baz=46
K16A **Soda Springs** 45.80 73 ⇓P P 06 56 24.3 +1.5
baz=46,SNR=17
TPAW **Teton Pass** 45.80 71 eP P 06 56 23.8 +1.0
comp=Z,38nm,1.8s,mb5.0
L15A **Malad City** 45.80 74 ⇑P P 06 56 23.5 +0.6
baz=46
RLMT **Red Lodge** 45.86 69 eP P 06 56 21.9 -1.3
comp=Z,38nm,0.8s,mb5.4
REDW **Red Top Meadow** 45.93 72 eP P 06 56 24.8 +1.0
comp=Z,11nm,1.0s,mb4.8
SNOW **Snow King Moun** 45.93 71 eP P 06 56 24.8 +1.1
comp=Z,57nm,2.1s,mb5.1
LOHW **Long Hollow** 45.93 71 eP P 06 56 24.6 +0.7
comp=Z,144nm,2.8s,mb5.4
ISA **Isabella** 45.95 85 ⇓P P 06 56 23.4 -0.6
baz=46
O13A **Hicks Ranch, I** 45.95 77 ⇓P P 06 56 23.9 -0.1
baz=46
SONM **Songino Array** 45.96 296 P P 06 56 22.5 -1.5
comp=Z,2.9nm,0.7s,mb4.3,baz=66,slow=7.8,SNR=22
SONM PcP PcP 06 57 58.5 -1.5
comp=Z,1.0nm,0.7s,baz=65,slow=2.0,SNR=4.2
SONM LR LR 07 17 26.1
comp=Z,317nm,18.1s,MS4.3,baz=47,slow=38
SONM **Songino Array** 45.96 296 P P 06 56 22.5 -1.5
SONM 06 57 58.5
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,317nm,18.1s
N14A **Grayback Hills** 46.00 76 ⇑P P 06 56 24.7 +0.3
baz=46,SNR=5.6
J17A **Brown Place, J** 46.01 72 ⇑P P 06 56 25.0 +0.5
baz=46,SNR=6.9
R11A **Troy Canyon, C** 46.05 80 ⇓P P 06 56 25.0 +0.2
baz=46,SNR=15
M15A **Larsen Ranch,** 46.09 75 ⇑P P 06 56 25.2 +0.1
baz=46,SNR=6.6
Q12A **Willow Creek R** 46.09 79 ⇓P P 06 56 25.2 0.0
baz=46
AHID **Auburn Hatcher** 46.13 72 eP P 06 56 25.7 +0.3
comp=Z,10nm,1.0s,mb4.7
SPUT **South Promonto** 46.18 75 eP P 06 56 26.9 +1.2
SPUT epP pP 06 56 31.7 -7.1
K17A **Gardner Place,** 46.24 72 ⇓P P 06 56 26.2 -0.1
baz=46
ZAK **Zakamensk** 46.30 300 eP P 06 56 25.2 -1.4
ZAK pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
MPMC **Manual Prospec** 46.30 84 ⇓P P 06 56 26.9 +0.1
baz=46
P13A **Bates Ranch, G** 46.34 78 ⇓P P 06 56 27.2 +0.2
baz=46,SNR=7.5
I18A **Diamond G Ranc** 46.35 71 ⇓P P 06 56 27.5 +0.4
baz=46,SNR=9.3
L16A **Fish Haven** 46.37 73 ⇑P P 06 56 27.4 +0.1
baz=46
N15A **Stansbury Isla** 46.38 75 ⇑P P 06 56 27.4 0.0
baz=46,SNR=6.0
FURC **Furnace Creek,** 46.44 83 ⇑P P 06 56 28.3 +0.4
baz=46
J18A **Kendall Valley** 46.51 71 ⇓P P 06 56 28.6 +0.3
baz=46,SNR=13
FCC **Fort Churchill** 46.53 46 eP P 06 56 27.4 -0.9
FCC pmax pmax
comp=Z,2.0nm,2.0s,mb3.7
FCC **Fort Churchill** 46.53 46 eP P 06 56 27.4 -0.8
comp=Z,1.7nm,2.0s,mb3.6
DUG **Dugway** 46.62 76 eP P 06 56 30.0 +0.7
DUG pmax pmax
comp=Z,27nm,1.2s,mb5.0
DUG **Dugway** 46.62 76 eP P 06 56 30.0 +0.7
comp=Z,27nm,1.2s,mb5.1
Q13A **Wheeler Ranch,** 46.64 78 ⇓P P 06 56 29.8 +0.4
baz=46,SNR=7.3
L17A **Cokeville** 46.66 73 ⇑P P 06 56 29.7 +0.1
baz=46
M16A **Huntsville** 46.67 74 ⇓P P 06 56 29.8 +0.1
baz=46,SNR=11
R12A **Pony Springs,** 46.67 80 ⇑P P 06 56 29.7 0.0
baz=46,SNR=6.4
O15A **The Old Anders** 46.78 76 ⇑P P 06 56 30.9 +0.4
baz=46
K18A **Toltan Ranch,** 46.84 72 ⇑P P 06 56 31.3 +0.4
baz=46,SNR=13
P14A **Drum Mountains** 46.84 77 ⇓P P 06 56 31.0 0.0
baz=47,SNR=11
HHC **Hu-ho-hao-te** 46.95 285 eP P 06 56 32.6 +0.8
HHC AP pP 06 56 44.6 -0.4
HHC PCP PcP 06 58 05.8 +2.2
HHC PP PP 06 58 19.8 -2.7
HHC PCS PcS 07 01 58.8 +0.2
HHC eS S 07 03 18.3 -1.1
HHC XS sS 07 03 39.6 -1.8
HHC SCS ScS 07 06 20.9 -0.7
HHC AMB AMB
comp=Z,15nm,1.0s,mb4.9
HHC AMB AMB
comp=Z,169nm,4.7s
HHC LR LR
comp=N,135nm,15.5s,MS4.2
HHC LR LR
comp=E,113nm,14.3s,MS4.2
HHC LR LR
comp=Z,177nm,16.6s,MS4.1
S12A **Delamar Landin** 46.97 80 ⇓P P 06 56 32.3 +0.3
baz=47,SNR=16
T11A **Corn Creek, Al** 46.97 81 ⇓P P 06 56 32.2 +0.2
baz=47,SNR=16
N16A **Rees Ranch, Co** 47.04 75 ⇓P P 06 56 32.6 0.0
baz=47
BW06 **Boulder Array** 47.05 71 eP P 06 56 30.4 -2.1
comp=Z,22nm,0.8s,mb5.2
PDAR **Pinedale Array** 47.05 71 P P 06 56 30.6 -2.0
comp=Z,21nm,0.7s,mb5.2,baz=316,slow=4.1,SNR=85
Q14A **Sevier Lake (B** 47.08 78 ⇑P P 06 56 33.0 +0.2
baz=47,SNR=14
R13A **O'Grain Ranch,** 47.15 79 ⇑P P 06 56 33.6 +0.2
baz=47
M17A **Scullys Gap (B** 47.15 74 ⇑P P 06 56 33.2 -0.2
baz=47
SHOC **Shoshone** 47.16 83 ⇑P P 06 56 33.6 +0.1
baz=47
JLU **Jordanelle** 47.20 75 eP P 06 56 34.7 +0.8
GSC **Goldstone** 47.22 84 ⇓P P 06 56 33.5 -0.4
baz=47
GSC **Goldstone** 47.22 84 eP P 06 56 33.8 -0.2
GSC pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GSC **Goldstone** 47.22 84 eP P 06 56 33.8 -0.2
comp=Z,10nm,0.7s,mb4.9
NLU **North Lily Min** 47.22 76 eP P 06 56 34.9 +1.0
L18A **Fontenelle, Gr** 47.26 73 ⇑P P 06 56 34.5 +0.3
baz=47
N17A **Moffit Pass** 47.37 74 ⇓P P 06 56 35.3 +0.1
baz=47
O16A **Springville** 47.41 75 ⇓P P 06 56 35.5 0.0
baz=47
K19A **Absolon Red Bu** 47.44 71 ⇑P P 06 56 34.8 -0.7
baz=47
MPU **Maple Canyon** 47.45 76 eP P 06 56 36.7 +1.0
comp=Z,47nm,2.1s,mb5.0
MPU epP pP 06 56 41.7 -7.2
M18A **Lyman** 47.54 73 ⇑P P 06 56 36.2 -0.2
baz=47
S13A **Holt Ranch, En** 47.59 80 ⇓P P 06 56 37.3 +0.4
baz=47,SNR=13
Q15A **Fillmore** 47.62 77 ⇓P P 06 56 37.1 0.0
baz=47,SNR=8.3
P16A **Fountain Green** 47.68 76 ⇑P P 06 56 37.8 +0.3
baz=47
HEC **Hector,Ludlow** 47.82 84 ⇑P P 06 56 38.8 +0.2
baz=48
K20A **Yellowstone Ra** 47.83 71 ⇑P P 06 56 37.9 -0.7
baz=48,SNR=6.7
O17A **Robinson Place** 47.88 75 ⇓P P 06 56 39.2 +0.1
baz=48
U12A **Valley of Fire** 47.90 81 ⇓P P 06 56 39.4 +0.2
baz=48
T13A **Saint George** 47.92 80 ⇑P P 06 56 39.4 0.0
baz=48
M19A **Rock Springs** 48.04 73 ⇓P P 06 56 40.4 +0.1
baz=48
NJ2 **Nanjing** 48.04 271 eP P 06 56 43.8 +3.4
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
MSU **Marysvale** 48.05 78 eP P 06 56 41.7 +1.3
N18A **Larsen Ranch,** 48.05 73 ⇓P P 06 56 40.4 0.0
baz=48
MURC **Murrieta** 48.08 86 ⇑P P 06 56 40.2 -0.5
baz=48
TMUT **Trail Mountain** 48.15 76 eP P 06 56 42.5 +1.3
V12A **Nelson** 48.16 82 ⇑P P 06 56 41.1 -0.2
baz=48
R15A **Junction** 48.17 78 ⇑P P 06 56 41.8 +0.4
baz=48
L20A **Wamsutter** 48.23 72 ⇓P P 06 56 41.1 -0.6
baz=48
U13A **Pakoon Wash** 48.27 81 ⇑P P 06 56 42.5 +0.4
baz=48,SNR=8.3
GMRC **Granite Mounta** 48.27 84 ⇑P P 06 56 41.7 -0.5
baz=48
O18A **Roosevelt** 48.28 74 ⇓P P 06 56 42.6 +0.4
baz=48
P17A **Butcher Ranch,** 48.33 76 ⇑P P 06 56 42.7 +0.2
baz=48
N19A **John Jarvie Ra** 48.40 73 ⇑P P 06 56 42.7 -0.3
baz=48
T14A **Hurricane** 48.40 80 ⇑P P 06 56 43.2 0.0
baz=48
Q16A **Castle Valley** 48.41 77 ⇑P P 06 56 42.9 -0.2
baz=48
LDFC **Landfair** 48.42 83 eP P 06 56 43.0 -0.3
comp=Z,16nm,1.0s,mb5.0
S15A **Panguitch** 48.46 79 ⇓P P 06 56 44.2 +0.7
baz=48
P18A **Preston Nutter** 48.53 75 ⇓P P 06 56 44.5 +0.4
baz=48,SNR=12
PFO **Pinyon Flat Ob** 48.54 86 ⇓P P 06 56 44.0 -0.2
baz=48
109C **Camp Elliot, M** 48.61 87 ⇑P P 06 56 44.4 -0.4
baz=48
R16A **Teasdale** 48.62 77 ⇑P P 06 56 45.3 +0.5
baz=48,SNR=8.0
V13A **Grand Canyon W** 48.62 82 ⇓P P 06 56 44.9 +0.1
baz=48
M20A **Sweetwater, Wa** 48.63 72 ⇓P P 06 56 44.9 +0.1
baz=48
SRU **San Rafael** 48.68 76 eP P 06 56 45.7 +0.4
SRU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SRU **San Rafael** 48.68 76 eP P 06 56 45.7 +0.5
comp=Z,9.1nm,0.8s,mb4.9
U14A **Mt Trumbull** 48.75 81 ⇑P P 06 56 46.0 +0.2
baz=48
L21A **Rawlins** 48.83 71 ⇑P P 06 56 46.1 -0.2
baz=48,SNR=10
T15A **Red Dirt Ranch** 48.86 79 ⇑P P 06 56 46.8 +0.2
baz=49
S16A **Weppner Ranch,** 48.90 78 ⇓P P 06 56 47.0 0.0
baz=49,SNR=6.3
Q18A **Rafter H Ranch** 48.93 76 ⇓P P 06 56 47.0 -0.1
baz=49,SNR=7.3
N20A **Spence Gulch,** 48.98 73 ⇑P P 06 56 47.7 +0.1
baz=49
IRM **Iron Mountain** 48.99 84 ⇓P P 06 56 47.3 -0.4
baz=49
R17A **Hanksville Air** 49.00 77 ⇑P P 06 56 47.5 -0.2
baz=49,SNR=11
MONP **Monument Peak** 49.04 86 ⇑P P 06 56 47.5 -0.6
baz=49
BC3 **Big Chuckw Mtn** 49.14 85 ⇑P P 06 56 47.4 -1.4
baz=49
W13A **Hualapai Mount** 49.17 82 ⇓P P 06 56 47.8 -1.2
baz=49
P19A **Cripple Cowboy** 49.29 74 ⇓P P 06 56 49.6 -0.3
baz=49
U15A **North Rim** 49.30 80 ⇓P P 06 56 50.4 +0.4
baz=49,SNR=16
V14A **Boquillas Ranc** 49.30 81 ⇓P P 06 56 50.0 -0.1
baz=49
O20A **White River Ci** 49.43 73 ⇑P P 06 56 50.7 -0.2
baz=49,SNR=7.9
S17A **Black Ridge (B** 49.44 78 ⇓P P 06 56 51.5 +0.4
baz=49,SNR=26
N21A **Black Mountain** 49.47 72 ⇓P P 06 56 51.2 -0.1
baz=49
R18A **Canyonlands Na** 49.52 76 ⇓P P 06 56 51.0 -0.7
baz=49
X13A **Yucca** 49.53 83 ⇓P P 06 56 51.4 -0.4
baz=49
Q19A **Hogan Spring (** 49.55 75 ⇑P P 06 56 51.9 0.0
baz=49,SNR=9.7
W14A **Seligman** 49.59 82 ⇓P P 06 56 52.1 -0.2
baz=49
M22A **Cedar Creek Ra** 49.63 71 ⇑P P 06 56 52.2 -0.2
baz=49
Y12C **Blythe** 49.66 84 ⇓P P 06 56 52.5 -0.3
baz=49
V15A **Kaibab Nationa** 49.76 80 ⇑P P 06 56 53.7 +0.2
baz=50,SNR=14
O21A **Pagoda** 49.84 73 ⇓P P 06 56 53.9 -0.2
baz=50
T17A **Navajo Res., N** 49.85 78 ⇑P P 06 56 54.1 -0.1
baz=50,SNR=11
S18A **Hurst Farm, Bl** 49.90 77 ⇓P P 06 56 54.4 -0.2
baz=50,SNR=22
GLA **Glamis** 49.93 85 ⇓P P 06 56 54.4 -0.4
baz=50
R19A **Curley Farm, L** 49.97 76 ⇓P P 06 56 55.2 +0.2
baz=50
N22A **Wattenberg Ran** 50.08 72 ⇑P P 06 56 55.9 0.0
baz=50,SNR=6.4
PV04 **Paradox Valley** 50.12 76 eP P 06 56 56.4 +0.2
W15A **Williams** 50.12 81 ⇓P P 06 56 56.2 -0.1
baz=50

Q20A Ridgley Place, 50.13 75 ⇓P P 06 56 55.8 -0.5
baz=50,SNR=5.5
U17A Shonto 50.19 79 ⇓P P 06 56 56.3 -0.4
baz=50
U16A Tuba City 50.20 79 ⇑P P 06 56 56.4 -0.4
baz=50
X14A Yava 50.20 82 ⇑P P 06 56 56.6 -0.3
baz=50
T18A Mexican Hat 50.33 78 ⇓P P 06 56 57.4 -0.4
baz=50,SNR=9.6
ULM Lac du Bonnet 50.34 56 P P 06 56 56.4 -1.3
comp=Z,2.0nm,0.6s,mb4.3,baz=315,slow=8.1,SNR=3.0
ULM LR LR 07 19 41.9
comp=Z,255nm,18.5s,MS4.3,baz=301,slow=38
PHWY Pilot Hill 50.37 71 *e*P P 06 56 57.9 -0.1
comp=Z,4.4nm,0.8s,mb4.5
S19A Harvey Farm, M 50.39 76 ⇑P P 06 56 57.8 -0.5
baz=50,SNR=10.0
112A Yuma 50.43 85 ⇑P P 06 56 58.4 -0.3
baz=50
WUAZ Wupatki 50.45 80 *e*P P 06 56 59.3 +0.5
comp=Z,8.8nm,0.8s,mb4.8
Y14A Wickenburg 50.48 83 ⇑P P 06 56 58.3 -0.7
baz=50
X15A Humboldt 50.59 82 ⇑P P 06 56 59.3 -0.5
baz=50,SNR=7.4
W16A Flagstaff 50.63 81 ⇓P P 06 56 59.7 -0.4
baz=50
SMCO Snowmass 50.79 74 *e*P P 06 56 53.9 -7.3
comp=Z,33nm,2.0s,mb4.9
U18A Rough Rock, Ch 50.79 78 ⇑P P 06 57 01.0 -0.3
baz=50
Y15A Casa Rosa Ranc 50.88 82 ⇑P P 06 57 01.6 -0.4
baz=51
Z14A Wintersburg 50.90 83 ⇑P P 06 57 02.0 -0.2
baz=51
R21A Cimarron 50.95 75 ⇑P P 06 57 02.6 0.0
baz=51
T19A Beclabito 51.05 77 ⇑P P 06 57 03.4 +0.2
baz=51,SNR=21
MVCO Mesa Verde 51.12 77 *e*P P 06 57 03.9 +0.1
comp=Z,216nm,3.0s
X16A Lo Mia Camp, P 51.13 81 ⇓P P 06 57 04.0 +0.1
baz=51,SNR=7.1
ISCO Idaho Springs 51.21 72 *e*P P 06 57 05.4 +1.0
ISCO pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ISCO Idaho Springs 51.21 72 *e*P P 06 57 05.4 +1.0
comp=Z,8.7nm,1.1s,mb4.6
V18A Ganado 51.21 79 ⇑P P 06 57 04.3 -0.2
baz=51,SNR=5.2
Y16A Circle Bar Ran 51.47 82 ⇓P P 06 57 06.1 -0.3
baz=51,SNR=8.5
X17A Forest Lakes 51.58 81 ⇓P P 06 57 07.6 +0.3
baz=51
V19A Window Rock 51.76 78 ⇓P P 06 57 08.5 -0.1
baz=52
115A Sonoran Desert 51.79 84 ⇑P P 06 57 08.5 -0.3
baz=52,SNR=6.5
Z16A Peralta Trail, 51.85 82 ⇓P P 06 57 08.9 -0.4
baz=52
214A Organ Pipe Nat 51.92 85 ⇓P P 06 57 09.3 -0.5
baz=52
X18A Snowflake 51.98 80 ⇑P P 06 57 10.1 -0.2
baz=52
Y17A Roosevelt 51.98 82 ⇓P P 06 57 10.1 -0.2
baz=52,SNR=9.0
Y18A Canyon Day Jun 52.43 81 ⇑P P 06 57 13.5 0.0
baz=52,SNR=6.4
X19A St. Johns 52.46 80 ⇓P P 06 57 13.7 0.0
baz=52
Z17A San Carlos Hig 52.48 82 ⇓P P 06 57 13.9 0.0
baz=52
SDCO Great Sand Dun 52.59 74 *e*P P 06 57 15.3 +0.6
comp=Z,4.0nm,0.9s,mb4.3
117A Oracle 52.80 83 ⇑P P 06 57 16.2 -0.1
baz=53
XAN Xi'an 52.91 280 P P 06 57 15.3 -1.8
XAN AP pP 06 57 28.5 -1.9
XAN PP PP 06 59 16.5 -0.2
XAN S **S 07 04 42.9 +0.4**
XAN SS SS 07 08 23.4 +1.9
XAN AMB AMB
comp=Z,3.0nm,0.7s,mb4.3
XAN LR LR
comp=Z,80nm,23.3s,MS3.7
TUC Tucson 52.95 83 *e*P P 06 57 17.0 -0.4
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TUC Tucson 52.95 83 *e*P P 06 57 17.0 -0.4
comp=Z,4.0nm,1.0s,mb4.3
118A Homack Ranch, 53.23 82 ⇓P P 06 57 19.4 -0.1
baz=53
217A Green Valley 53.29 83 ⇑P P 06 57 19.8 -0.1
baz=53
ZALV Zalesovo Beam 53.48 313 P P 06 57 17.7 -3.3
comp=Z,1.6nm,0.4s,mb4.3,baz=57,slow=6.2,SNR=7.7
ZALV PcP PcP 06 58 26.6 -0.8
comp=Z,2.4nm,0.7s,baz=41,slow=2.9,SNR=5.5
ZALV LR LR 07 21 00.9
comp=Z,93nm,20.1s,MS3.8,baz=92,slow=37
ZALV Zalesovo Beam 53.48 313 P P 06 57 17.7 -3.3
ZALV 06 58 26.6
ZALV pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ZALV pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ZALV MLR MLR
comp=Z,93nm,20.1s,MS3.8
119A Ashpeak Ranch, 53.56 81 ⇑P P 06 57 21.5 -0.4
baz=53
218A Dragoon 53.63 83 ⇓P P 06 57 22.2 -0.3
baz=53
NVS Novosibirsk 53.63 314 *i* P P 06 57 21.7 -0.4
NVS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
NVS pmax pmax
comp=N,2.0nm,0.7s
NVS pmax pmax
comp=E,5.0nm,0.8s
ANMO Albuquerque 53.85 77 *e*P P 06 57 24.3 +0.3
ANMO *e**PP pP 06 57 41.9 +4.6
ANMO pmax pmax
comp=Z,57nm,2.9s
ANMO Albuquerque 53.85 77 *e*P P 06 57 24.3 +0.3
comp=Z,57nm,2.9s,mb5.0
ANMO *e*pP pP 06 57 41.9 +4.5
318A Bisbee 54.03 83 ⇓P P 06 57 24.9 -0.5
baz=54
219A White Tail Can 54.11 82 ⇓P P 06 57 25.3 -0.6
baz=54
319A Douglas 54.52 83 ⇓P P 06 57 28.8 -0.1
baz=54
LZH Lanzhou 54.65 285 *e*P P 06 57 30.5 +0.7
LZH AP pP 06 57 43.5 +0.3
LZH PP PP 06 59 33.5 +1.2
LZH XS sS 07 05 25.0 -3.4
LZH AMB AMB
comp=Z,18nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,140nm,5.1s
LZH LR LR
comp=N,580nm,15.2s
LZH LR LR
comp=Z,812nm,16.5s,MS4.9
GTA Gaotai 54.86 291 *e*P P 06 57 32.0 +0.8
GTA AP pP 06 57 44.1 -0.5
GTA PP PP 06 59 35.8 +1.7
GTA S **S 07 05 05.3 -3.4**
GTA XS sS 07 05 25.0 -6.1
GTA AMB AMB
comp=Z,8.0nm,1.1s,mb4.7
GTA AMB AMB
comp=Z,86nm,5.7s
GTA LR LR
comp=N,115nm,15.0s,MS4.3
GTA LR LR
comp=E,129nm,13.2s,MS4.3
GTA LR LR
comp=Z,199nm,13.5s,MS4.4
CBKS Cedar Bluff 55.33 69 *e*P P 06 57 34.8 +0.1
CBKS pmax pmax
comp=Z,39nm,0.8s,mb5.5
CBKS Cedar Bluff 55.33 69 *e*P P 06 57 34.8 +0.2
comp=Z,39nm,0.8s,mb5.5
KSU1 Kansas State U 56.96 67 *e*P P 06 57 45.6 -0.7
comp=Z,26nm,0.8s,mb5.3

ARCES ARCESS Array B 57.98 350 P P 06 57 51.5 -1.5
comp=Z,10nm,0.8s,mb4.9,baz=31,slow=8.8,SNR=24
ARCES ARCESS Array B 57.98 350 P P 06 57 51.5 -1.5
ARCES pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 58.22 281 P P 06 57 57.3 +2.0
CD2 PcP PcP 06 58 48.6 +2.4
CD2 PP PP 07 00 07.3 +3.0
CD2 PcS PcS 07 02 48.5 +0.7
CD2 S **S 07 05 53.3 -0.2**
CD2 SS SS 07 09 46.5 +1.2
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,130nm,7.1s
CD2 LR LR
comp=N,280nm,8.3s
CD2 LR LR
comp=Z,160nm,7.1s
KURK Kurchatov 58.47 313 *e*P P 06 57 57.1 +0.4
KURK pmax pmax
comp=Z,23nm,1.0s,mb5.2
KURK Kurchatov 58.47 313 *e*P P 06 57 57.0 +0.3
comp=Z,23nm,1.0s,mb5.2
WMOK Wichita Mounta 58.64 72 *e*P P 06 57 58.2 +0.1
WMOK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
WMOK Wichita Mounta 58.64 72 *e*P P 06 57 58.2 0.0
comp=Z,9.8nm,1.0s,mb4.8
WMQ Urumqi 58.70 302 P P 06 57 59.3 +0.9
WMQ LR LR
comp=N,178nm,26.0s,MS4.2
WMQ LR LR
comp=E,160nm,28.0s,MS4.2
WMQ LR LR
comp=Z,179nm,19.5s
TXAR Lajitas Array 59.42 80 P P 06 58 01.0 -2.6
comp=Z,2.9nm,0.8s,mb4.3,baz=297,slow=5.0,SNR=24
TXAR Lajitas Array 59.42 80 P P 06 58 01.0 -2.6
TXAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 59.44 308 P P 06 58 00.8 -2.7
comp=Z,4.2nm,0.6s,mb4.6,baz=54,slow=6.9,SNR=32
MKAR Makanchi Array 59.44 308 P P 06 58 00.8 -2.7
MKAR pmax pmax
comp=Z,4.0nm,0.6s
GYA Guiyang 59.56 275 *e*P P 06 58 09.6 +5.0
GYA AP pP 06 58 18.3 +0.2
GYA PCP PcP 06 58 53.9 +2.4
GYA PP PP 07 00 23.4 +7.2
GYA SCP ScP 07 02 52.0 +3.9
GYA PCS PcS 07 02 55.8 +2.0
GYA S **S 07 06 10.5 -0.4**
GYA SS SS 07 10 09.4 +3.0
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,480nm,19.0s,MS4.8
GYA LR LR
comp=E,420nm,18.3s,MS4.8
GYA LR LR
comp=Z,560nm,19.4s,MS4.7
HDIL Hopedale 60.10 61 *e*P P 06 58 08.0 -0.2
comp=Z,21nm,0.7s,mb5.3
BRVK Borovoye 60.42 319 *e*P P 06 58 10.4 +0.3
BRVK pmax pmax
comp=Z,13nm,0.8s,mb5.0
BRVK Borovoye 60.42 319 *e*P P 06 58 10.4 +0.3
comp=Z,13nm,0.8s,mb5.0
SCHQ Schefferville 60.49 38 P P 06 58 08.1 -2.5
comp=Z,8.5nm,0.9s,mb4.8,baz=335,slow=8.6,SNR=4.1
JCT Junction City 60.98 77 *e*P P 06 58 13.5 -0.8
JCT pmax pmax
comp=Z,25nm,1.8s,mb5.0
JCT Junction City 60.98 77 *e*P P 06 58 13.5 -0.8
comp=Z,25nm,1.8s,mb5.0
FVM French Village 61.26 64 *e*P P 06 58 14.8 -1.2
FVM pmax pmax
comp=Z,149nm,3.0s
FVM French Village 61.26 64 *e*P P 06 58 14.8 -1.3
comp=Z,148nm,3.0s
MIAR Mount Ida 61.85 69 *e*P P 06 58 19.3 -0.8
MIAR pmax pmax
comp=Z,19nm,1.0s,mb5.2
MIAR Mount Ida 61.85 69 *e*P P 06 58 19.3 -0.8
comp=Z,19nm,1.0s,mb5.2
OLIL Olney 62.04 62 *e*P P 06 58 21.6 +0.3
comp=Z,24nm,1.0s,mb5.3
PARMO Parma 62.57 65 *e*P P 06 58 23.6 -1.3
KMI Kunming 62.96 277 P P 06 58 31.8 +4.2
KMI AMB AMB
comp=Z,9.0nm,0.5s,mb5.2
JOF Joensuu 63.41 345 *e*p P 06 58 29.1 -0.9
comp=Z,6.9nm,0.7s,mb4.9
JOF Joensuu 63.41 345 *e*P P 06 58 29.1 -0.9
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
WVT Waverly 64.03 64 *e*P P 06 58 34.3 -0.3
WVT pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
WVT Waverly 64.03 64 *e*P P 06 58 34.3 -0.3
comp=Z,9.0nm,0.9s,mb4.8
OXF Oxford 64.29 66 *e*P P 06 58 35.6 -0.7
OXF pmax pmax
comp=Z,93nm,1.1s,mb5.7
OXF Oxford 64.29 66 *e*P P 06 58 35.6 -0.7
comp=Z,93nm,1.1s,mb5.7
KAF Kangasniemi 64.95 347 *e*p P 06 58 38.8 -1.3
comp=Z,7.7nm,0.7s,mb4.8,baz=14,slow=5.8
KAF Kangasniemi 64.95 347 *e*P P 06 58 38.8 -1.3
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
TKM2 Tokmak 2 65.53 309 P P 06 58 45.5 +1.4
SNR=14
SWET Sewanee 65.76 64 *e*P P 06 58 45.6 -0.2
USP Ospenovka 65.80 309 P P 06 58 47.4 +1.4
SNR=21
KBK Karagaybulak 66.04 309 P P 06 58 48.9 +1.4
SNR=10.0
AAK Ala-Archa 66.28 309⇓ *e*P P 06 58 49.1 +0.1
AAK pmax pmax
comp=Z,13nm,1.2s,mb4.8
AAK Ala-Archa 66.28 309 P P 06 58 50.4 +1.4
SNR=9.4
AAK Ala-Archa 66.28 309 *e*P P 06 58 47.9 -1.1
comp=Z,16nm,0.8s,mb5.1
KZA Kyzart 66.33 308 P P 06 58 51.2 +1.9
SNR=7.9
CPCT Cooper Cave 66.38 62 *e*P P 06 58 49.0 -0.8
EKS2 Erkin-Say 66.61 309 P P 06 58 52.7 +1.6
SNR=9.2
LRAL Lakeview Retre 66.75 66 *e*P P 06 58 51.0 -1.1
comp=Z,7.8nm,0.8s,mb4.8
AML Almayashu 67.05 309 P P 06 58 56.1 +2.1
SNR=9.0
NB2 NORSAR Subarra 67.59 354 P P 06 58 56.9 -0.1
comp=Z,15nm,0.8s,mb5.1,baz=6.8,slow=6.5
NOA NORSAR Array B 67.59 354 P P 06 58 55.0 -2.1
comp=Z,9.7nm,0.8s,mb4.9,baz=8.5,slow=6.3,SNR=24
NOA NORSAR Array B 67.59 354 P P 06 58 55.0 -2.0
NOA pmax pmax
comp=Z,10.0nm,0.8s
KONO Kongsberg 69.07 355⇓ *e*P P 06 59 06.9 +0.6
OBN Obninsk 69.61 339 *i* P P 06 59 10.5 +0.8
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,100nm,21.0s,MS4.0
CMAR Chiang Mai Arr 70.25 275 P P 06 59 11.6 -2.5
comp=Z,2.5nm,0.7s,mb4.3,baz=24,slow=7.0,SNR=11
CMAR Chiang Mai Arr 70.25 275⇑ *e*P P 06 59 13.8 -0.4
TAPN Taplejung 70.49 289 *e*P P 06 59 15.9 +0.4
comp=Z,39nm,0.9s,mb5.3
ODAN Odare 71.04 289 *e*P P 06 59 19.1 +0.2
GUN Gumba 71.15 291 *e*P P 06 59 20.5 +1.0
comp=Z,45nm,0.8s,mb5.4
JIRN Jiri 71.15 291 *e*P P 06 59 20.7 +1.1
comp=Z,32nm,0.8s,mb5.3
MCD Coleburn Disti 71.39 2⇑ *e*P P 06 59 20.7 +0.2
RAMN Ramite 71.44 290 *e*P P 06 59 21.4 +0.1
MDO Dochfour 71.50 2 *e*P P 06 59 21.6 +0.4
KPL Plockton 71.57 3 *e*P P 06 59 21.4 -0.2
KPL AMb AMB 06 59 31.2
comp=Z,26nm,1.6s,mb4.9

KKN Kakani 71.59 291 *e*P P 06 59 22.8 +0.6
comp=Z,18nm,0.6s,mb5.2
KKN Kakani 71.59 291 *e*P P 06 59 22.8 +0.6
KKN pmax pmax
comp=Z,18nm,0.6s,mb5.2
PKI Pulchoki 71.68 291 *e*P P 06 59 23.2 +0.5
comp=Z,13nm,0.7s,mb5.0
PKI Pulchoki 71.68 291 *e*P P 06 59 23.2 +0.5
PKI pmax pmax
comp=Z,13nm,0.7s,mb5.0
PMOR Pomariorio Ree 71.78 147 *e*T 08 17 38.8
comp=Z,5.2nm,0.3s
GKN Gorkha 71.80 292 *e*P P 06 59 23.9 +0.4
DMN Daman 71.82 291 *e*P P 06 59 24.5 +0.9
comp=Z,20nm,0.8s,mb5.1
KAR1 Arisaig 71.98 3 *e*P P 06 59 24.2 +0.1
DANN Dangsing 72.05 293 *e*P P 06 59 25.7 +0.7
comp=Z,34nm,0.8s,mb5.3
KOLN Koldanda 72.58 293 *e*P P 06 59 28.4 +0.3
comp=Z,13nm,0.8s,mb4.9
EBH Black Hill 72.72 2⇑ *e*P P 06 59 28.6 +0.2
EAB Aberfoyle 72.76 3⇑ *e*P P 06 59 29.1 +0.4
ESY Stoneypath 73.07 2⇑ *e*P P 06 59 30.6 0.0
XSO Sourhope Farm 73.50 1⇑ *e*P P 06 59 33.4 +0.3
PPT Papeete 73.63 150 *e*LR LR 07 22 10.0
comp=Z,104nm,23.8s
PPT Papeete 73.63 150 *e*T 08 19 56.8
comp=Z,3.9nm,0.3s
PPT Papeete 73.63 150 LR LR 07 27 24.8
comp=Z,108nm,19.2s,MS4.2,baz=284,slow=32
ESK Eskdalemuir 73.66 2 *e*P P 06 59 34.0 -0.1
ESK AMb AMB 06 59 34.5
comp=Z,42nm,1.1s,mb5.3
XAL Allendale 74.13 1 *e*P P 06 59 36.9 +0.1
KBL Kabul 75.24 307 *e*P P 06 59 43.6 0.0
KBL pmax pmax
comp=Z,24nm,0.9s,mb5.1
KBL Kabul 75.24 307 *e*P P 06 59 43.6 0.0
comp=Z,24nm,0.9s,mb5.1
AKASG Malin Array Be 75.32 341 P P 06 59 41.0 -2.8
comp=Z,0.8nm,0.3s,mb4.1,baz=20,slow=5.5,SNR=9.9
AKASG Malin Array Be 75.32 341 *i* P P 06 59 43.0 -0.8
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 75.32 341 P P 06 59 41.0 -2.8
KIEV Kiev 75.33 341 *e*P P 06 59 43.4 -0.4
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIEV Kiev 75.33 341 *e*P P 06 59 43.4 -0.5
comp=Z,3.9nm,0.8s,mb4.4
MCH1 Michaelchurch 76.99 2 *e*P P 06 59 53.2 0.0
MCH1 AMb AMB 07 00 03.6
comp=Z,44nm,1.7s,mb5.1
CLL Collm 77.11 352 *e*P P 06 59 53.0 -0.9
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 77.11 352 *e*(P) P 06 59 53.0 -0.9
comp=Z,4.0nm,0.7s,mb4.5
STHS Stebnicka Huta 77.97 346 *e*P P 06 59 59.2 +0.4
STHS Stebnicka Huta 77.97 346 *e*P P 06 59 59.1 +0.3
STHS Stebnicka Huta 77.97 346 *e*P P 06 59 59.2 +0.4
MEM Membach 78.28 356 P P 07 00 00.1 -0.4
CRVS Cervenica-Dubn 78.44 346 *e*P P 07 00 01.6 +0.3
BCLA Clavier 78.50 357 P P 07 00 01.9 +0.2
comp=Z,20nm,2.7s,mb4.6
GIVF Givet 78.83 357 *e*P P 07 00 03.7 +0.2
DOU Dourbes 78.85 357 P P 07 00 03.8 +0.3
comp=Z,18nm,3.4s
BAIF Baives 78.89 357 *e*P P 07 00 04.2 +0.4
comp=Z,20nm,0.9s,mb4.8
BAIF Baives 78.89 357 *e*P P 07 00 04.2 +0.4
BAIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BAIF Baives 78.89 357 *e*P P 07 00 04.2 +0.4
comp=Z,10nm,0.9s,mb4.8
BUR08 Bucovina Ar. S 79.03 343 *e*P P 07 00 05.0 +0.4
KHC Kasperske Hory 79.22 351⇑ *e*P P 07 00 05.6 0.0
KHC Kasperske Hory 79.22 351 *e*P P 07 00 06.0 +0.4
WLF Walferdange 79.22 356 P P 07 00 05.9 +0.3
GERES GERESS Array B 79.49 351 P P 07 00 05.1 -1.9
comp=Z,1.3nm,0.5s,mb4.1,baz=24,slow=6.1,SNR=13
GERES GERESS Array B 79.49 351 P P 07 00 05.1 -2.0
GERES pmax pmax
comp=Z,1.0nm,0.5s
FLN La Foliniere 80.26 0 *e*P P 07 00 11.2 0.0
comp=Z,39nm,1.1s,mb5.0
FLN La Foliniere 80.26 0 *e*P P 07 00 11.2 0.0
FLN pmax pmax
comp=Z,19nm,1.1s,mb4.9
FLN La Foliniere 80.26 0 *e*P P 07 00 11.2 0.0
comp=Z,19nm,1.1s,mb5.0
CDF Champ du Feu 80.41 355 *e*P P 07 00 12.0 -0.1
comp=Z,9.5nm,0.8s,mb4.5
CDF Champ du Feu 80.41 355 *e*P P 07 00 12.0 -0.1
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 80.41 355 *e*P P 07 00 12.0 -0.1
comp=Z,4.8nm,0.8s,mb4.5
LDF La Druitiere 80.43 0 *e*P P 07 00 12.0 -0.2
comp=Z,23nm,0.8s,mb4.9
LDF La Druitiere 80.43 0 *e*P P 07 00 12.0 -0.2
LDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
LDF La Druitiere 80.43 0 *e*P P 07 00 12.0 -0.2
comp=Z,12nm,0.8s,mb4.9
GRR Gorron 80.63 1 *e*P P 07 00 13.4 +0.2
comp=Z,26nm,0.9s,mb4.9
GRR Gorron 80.63 1 *e*P P 07 00 13.4 +0.2
GRR pmax pmax
comp=Z,13nm,0.9s,mb4.9
GRR Gorron 80.63 1 *e*P P 07 00 13.4 +0.2
comp=Z,13nm,0.9s,mb4.9
ROSF Rostrenen 80.64 2 *e*P P 07 00 13.6 +0.3
SGMF Saint Gilles 80.74 2 *e*P P 07 00 14.1 +0.2
comp=Z,57nm,0.9s,mb5.2
SGMF Saint Gilles 80.74 2 *e*P P 07 00 14.1 +0.2
SGMF pmax pmax
comp=Z,29nm,0.9s,mb5.2
SGMF Saint Gilles 80.74 2 *e*P P 07 00 14.1 +0.2
comp=Z,28nm,0.9s,mb5.2
HAU Haudompre 80.86 356 *e*P P 07 00 14.4 -0.1
QUIF Quistinic 81.07 2 *e*P P 07 00 15.8 +0.2
KBA Koelnbreinsper 81.27 351⇓ *i*pP P 07 00 17.6 +0.9
comp=Z,18nm,0.6s,mb5.2
WRA Warramunga Arr 81.47 223 P P 07 00 15.4 -2.6
comp=Z,0.3nm,0.4s,mb3.6,baz=36,slow=6.3,SNR=2.1
FETA Feichten 81.56 353⇓ *i*pP P 07 00 19.1 +0.9
comp=Z,12nm,1.2s,mb4.7
LOR Lormes 81.70 357 *e*P P 07 00 19.0 +0.1
AVF Avril sur Loir 82.19 358 *e*P P 07 00 21.5 0.0
SMF Signal de Mont 82.32 357 *e*P P 07 00 22.2 0.0
MFF Saint Martin d 82.42 0 *e*P P 07 00 21.8 -0.9
BGF Bois d'Agland 82.43 358 *e*P P 07 00 22.8 0.0
TCF Toulx Ste Croi 82.71 358 *e*P P 07 00 24.5 +0.2
LPG La Plagne 83.35 355 *e*P P 07 00 27.7 +0.1
comp=Z,22nm,1.2s,mb4.8
LPG La Plagne 83.35 355 *e*P P 07 00 27.7 +0.1
LPG pmax pmax
comp=Z,11nm,1.2s,mb4.8
LPG La Plagne 83.35 355 *e*P P 07 00 27.7 +0.1
comp=Z,11nm,1.2s,mb4.8
RJF Les Rejaudoux 83.71 359 *e*P P 07 00 29.5 +0.1
MBDF Montbardon 84.11 355 *e*P P 07 00 31.1 -0.4
comp=Z,20nm,1.1s,mb4.9
MBDF Montbardon 84.11 355 *e*P P 07 00 31.1 -0.4
MBDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
MBDF Montbardon 84.11 355 *e*P P 07 00 31.1 -0.4
comp=Z,9.9nm,1.1s,mb4.8
BR131 Keskin Array S 84.64 335 *e*P P 07 00 34.0 -0.2
BRTR Keskin Array B 84.64 335 P P 07 00 32.5 -1.8
comp=Z,2.7nm,0.9s,mb4.4,baz=44,slow=3.5,SNR=10.0
BRTR Keskin Array B 84.64 335⇑ *e*P P 07 00 34.4 +0.1
SMRF Simiane la Rot 84.92 356 *e*P P 07 00 36.9 +1.3
ASAR Alice Springs 84.96 222 P P 07 00 34.0 -1.8
comp=Z,0.9nm,0.9s,mb3.9,baz=34,slow=5.0,SNR=7.8
ASAR Alice Springs 84.96 222 P P 07 00 34.0 -1.8
ASAR pmax pmax
comp=Z,1.0nm,0.9s
MTLF Montolieu 85.66 358 *e*P P 07 00 39.5 +0.2
STKA Stephens Creek 89.50 212 P P 07 00 55.9 -1.7
comp=Z,1.2nm,0.8s,mb4.3,baz=352,slow=7.1,SNR=3.1
STKA LR LR 07 35 53.3
comp=Z,103nm,19.3s,MS4.3,baz=24,slow=32
LRS Lares 89.51 61 *e*P P 07 00 59.3 +1.1

CELP	**Cerrillos**	**89.83**	**61**	*e*P	**P**	07 01 04.7	**+5.0**
RPN	**Rapa Nui**	**99.70**	**121**	LR	LR	07 39 42.1	
	comp=Z,51nm,21.4s,MS4.0,baz=318,slow=31						
TORD	**Torodi Ar. Bea**	**115.75**	**358**	PKP	PKPdf	07 06 41.8	-1.5
	comp=Z,0.7nm,0.8s,baz=351,slow=2.2,SNR=7.5						
DBIC	**Dimbokro**	**122.05**	**6**	PKP	PKPdf	07 06 53.9	-1.5
	comp=Z,2.6nm,1.0s,baz=15,slow=11,SNR=3.7						
DBIC	**Dimbokro**	**122.05**	**6**	PKIKP	PKPdf	07 06 53.9	-1.5
DBIC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DBIC	**Dimbokro**	**122.05**	**6**	PKP	PKPdf	07 06 53.9	-1.5
CPUP	**Villa Florida**	**130.37**	**82**	PKP	PKPdf	07 07 09.7	-1.1
	comp=Z,0.3nm,0.3s,baz=314,slow=2.5,SNR=3.9						
BOSA	**Boshof**	**150.41**	**310**	PKPbc	PKPbc	07 07 51.7	-0.1
	comp=Z,7.4nm,0.7s,baz=117,slow=2.2,SNR=11						
BOSA	**Boshof**	**150.41**	**310**	PKIKP	PKPdf	07 07 51.7	+5.2
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOSA	**Boshof**	**150.41**	**310**	*e*PKPbc	PKPbc	07 07 51.8	-0.1

IDC 19 06:53:56.7±3.4, 1561S×17425W, h49km±29km, mb3.6/4, mb1 3.9/5, mb1mx3.6/17, mbtmp3.7/5, ML1.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=204.4km s-min=20.1km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.93**	**55**	P		Pn	06 54 42.0	+1.3
	4.4nm,0.3s,baz=256,slow=19,SNR=4.0							
AFI				S		Sn	06 55 15.1	+0.4
	8.7nm,0.3s,baz=198,slow=22,SNR=4.1							
AFI				LR		LR	06 55 21.3	
	comp=Z,247nm,21.1s,baz=102,slow=29							
STKA	**Stephens Creek**	**43.23**	**240**	P		P	07 01 52.5	-0.7
	1.7nm,0.8s,baz=73,slow=9.4,SNR=3.6							
ASAR	**Alice Springs**	**49.27**	**252**	P		P	07 02 41.1	+0.2
	1.8nm,0.7s,baz=86,slow=8.3,SNR=23							
TXAR	**Lajitas Array**	**81.41**	**56**	P		P	07 06 09.3	+0.6
	0.5nm,0.9s,baz=232,slow=6.2,SNR=4.6							
PDAR	**Pinedale Array**	**82.97**	**42**	P		P	07 06 16.8	+0.2
	0.9nm,0.9s,baz=228,slow=3.6,SNR=7.3							

MAN 19 07:06:04, 1279N×12052E, h26km, mb3.5, ML2.2, MS1.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.67**	**119**	*e*P		Pb	07 06 17.5	+0.4
SJMP				*e*S		Sb	07 06 27.3	+1.4
PGP	**Puerto Galera**	**0.82**	**31⇑**	*e*P		Pb	07 06 19.1	-0.6
BUSP	**Coron**	**0.84**	**202**	*e*P		Pb	07 06 20.2	+0.2
BUSP				*e*S		Sb	07 06 32.4	+1.4
LUBP	**Lubang**	**0.98**	**344**	*e*P		Pn	07 06 21.9	-0.1
OTRP	**Odiongan**	**1.52**	**106**	*e*P		Pn	07 06 32.1	+2.5

IDC 19 07:29:34.1±1.1, 3131S×17762W, h0km, mb4.3/6, mb1 4.5/8, mb1mx4.2/18, mbtmp4.3/8, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/21, Error ellipse: s-maj=27.9km s-min=21.0km az=102.0
NEIC 19 07:29:35.8±1.3, 3136S×17766W, h10km, mb4.4/2, Error ellipse: s-maj=27.7km s-min=13.0km az=95.0
ISCJB 19 07:29:37.7±0.7, 3140S±006×1778W±0.1, h33km, mb4.3/8, MS3.3/2, Error ellipse: s-maj=17.8km s-min=8.4km az=3.2
ISC 19 07:29:39.6±0.7, 3137S±006×1777W±0.1, h35km, (h41km±1.6km:pP-P), n17, σ0$96/17, mb4.3/8, MS3.3/2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.12**	**355**	Pn		**Pn**	**07 30 10.6**	**-1.9**
	159nm,0.3s,baz=84,slow=20,SNR=6.7							
RAO				Sn		**Sn**	**07 30 38.0**	**+0.4**
	240nm,0.3s,baz=91,slow=21,SNR=3.9							
URZ	**Urewera**	**8.09**	**210**	Pn		**Pn**	**07 31 32.3**	**-2.1**
	1.9nm,0.3s,baz=67,slow=14,SNR=7.4							
URZ				Sn		**Sn**	**07 32 58.0**	**-6.6**
	4.8nm,0.3s,baz=140,slow=22,SNR=10							
CTA	**Charters Tower**	**34.21**	**280**	P		**P**	**07 36 22.9**	**+0.9**
	3.9nm,0.7s,mb4.5,baz=112,slow=10.0,SNR=4.8							
CTA				LR		LR	07 48 40.1	
	comp=Z,57nm,18.8s,MS3.3,baz=230,slow=33							
CTAO	**Charters Tower**	**34.21**	**280**	P		**P**	**07 36 23.0**	**+1.0**
STKA	**Stephens Creek**	**34.51**	**258**	P		**P**	**07 36 25.8**	**+1.3**
	3.4nm,0.8s,mb4.3,baz=100,slow=9.2,SNR=9.3							
STKA				LR		LR	07 49 11.6	
	comp=Z,66nm,21.6s,MS3.3,baz=24,slow=34							
STKA	**Stephens Creek**	**34.51**	**258**	P		**P**	**07 36 25.8**	**+1.3**
STKA				LR		LR	07 49 11.6	
ASAR	**Alice Springs**	**43.31**	**268**	P		**P**	**07 37 38.6**	**+0.3**
	2.8nm,0.6s,mb4.2,baz=103,slow=7.2,SNR=47							
ASAR				PcP		PcP	07 39 25.9	-0.9
	0.4nm,0.5s,baz=113,slow=3.9,SNR=4.2							
WRAB	**Tennant Creek**	**44.38**	**273**	*e*P		**P**	**07 37 46.7**	**-0.1**
	7.5nm,0.9s,mb4.4							
WRA	**Warramunga Arr**	**44.39**	**273**	P		**P**	**07 37 46.6**	**-0.3**
	5.0nm,0.7s,mb4.4,baz=114,slow=7.8,SNR=13							
WRA				PcP		PcP	07 39 30.3	-0.1
	0.5nm,0.6s,baz=124,slow=3.2,SNR=2.9							
FITZ	**Fitzroy Crossi**	**52.61**	**270**	*e*P		**P**	**07 38 49.7**	**-0.5**
	2.1nm,0.6s,mb4.2							
QSPA	**South Pole Qui**	**58.74**	**180**	P		**P**	**07 39 34.7**	**+1.4**
	3.7nm,1.0s,mb4.4,baz=40,slow=2.6,SNR=7.3							
VNA3	**Neumayer Olymp**	**77.33**	**176**	*e*		**P**	**07 41 29.4**	**-0.7**
VNA3				*e*		pP	07 41 42.0	+1.0
VNA3				*e*			07 41 45.6	
VNA2	**Neumayer--Watz**	**77.76**	**177**	*e*		**P**	**07 41 32.8**	**+0.3**
	baz=175,slow=4.8							
VNA2				*e*		pP	07 41 43.9	+0.4
VNA2				*e*			07 41 46.9	
VNA1	**Neumayer--Stat**	**77.99**	**176**	*e*		**P**	**07 41 34.2**	**+0.4**
VNA1				*e*		pP	07 41 46.1	+1.3
NVAR	**Mina Array Bea**	**88.78**	**43**	P		**P**	**07 42 29.7**	**+0.2**
	0.3nm,0.7s,mb3.8,baz=215,slow=7.6,SNR=4.4							
KURK	**Kurchatov**	**121.89**	**313**	PKP	PKPdf		07 48 29.5	-0.1
	0.6nm,0.7s,baz=103,slow=1.9,SNR=3.4							
AKASG	**Malin Array Be**	**152.22**	**322**	PKPbc	PKPbc		07 49 30.8	-0.2
	2.1nm,0.8s,baz=50,slow=2.1,SNR=4.8							

IDC 19 07:39:53.8±1.0, 4726N×15693E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.5/8, ML3.2/1, Error ellipse: s-maj=27.2km s-min=23.8km az=144.0
ISCJB 19 07:39:55.7±4.4, 4739N±008×1568E±0.2, h22km±31km, mb3.6/7, Error ellipse: s-maj=22.6km s-min=12.7km az=2.4
MOS 19 07:39:55.9±1.8, 4735N×15677E, h25km, mb4.0/3, Error ellipse: s-maj=44.8km s-min=18.1km az=91.4
ISC 19 07:39:59.6±3.1, 474N±01×1568E±02, h35km±26km, n12, σ0$99/14, mb3.6/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.37**	**352**	*e*PN		**Pn**	**07 40 45.5**	**-4.2**
SKR				*e*S		**Sn**	**07 41 26.0**	**-2.5**
SKR				pmax	pmax			
	comp=Z,70nm,0.4s							
SKR				smax				
	comp=N,140nm,0.2s							
SKR				smax				
	comp=E,260nm,0.2s							
PETK	**Petropavlovsk-**	**5.79**	**5**	Pn		**Pn**	**07 41 22.1**	**-0.8**
	comp=E,0.6nm,0.3s,baz=195,slow=13,SNR=6.4							
PETK				Sn		**Sn**	**07 42 28.9**	**+0.8**
	comp=E,1.1nm,0.3s,baz=245,slow=13,SNR=5.7							
PET	**Petropavlovsk**	**5.80**	**11**	*e*PN		**Pn**	**07 41 24.7**	**+1.6**
YKA	**Yellowknife Ar**	**48.90**	**38**	P		**P**	**07 48 41.2**	**-0.2**
	comp=E,0.1nm,0.5s,mb3.1,baz=296,slow=7.0,SNR=3.7							
MKAR	**Makanchi Array**	**48.91**	**299**	P		**P**	**07 48 41.8**	**0.0**
	comp=E,0.5nm,0.7s,mb3.7,baz=54,slow=9.2,SNR=3.9							
MKAR	**Makanchi Array**	**48.91**	**299**	P		**P**	**07 48 41.8**	**0.0**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**49.14**	**305**	P		**P**	**07 48 44.0**	**+0.5**
	comp=Z,1.2nm,0.7s,mb4.0,baz=68,slow=8.6,SNR=8.0							
KURK	**Kurchatov**	**49.14**	**305**	P		**P**	**07 48 44.0**	**+0.5**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb4.0							
BVAR	**Borovoye Array**	**52.43**	**310**	P		**P**	**07 49 09.1**	**+0.9**
	comp=Z,0.5nm,0.5s,mb3.7,baz=67,slow=8.0,SNR=3.4							
PDAR	**Pinedale Array**	**62.32**	**56**	P		**P**	**07 50 18.1**	**+0.1**
	comp=Z,0.5nm,0.9s,mb3.7,baz=331,slow=3.5,SNR=4.3							
ASAR	**Alice Springs**	**73.65**	**202**	P		**P**	**07 51 28.5**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.6,baz=27,slow=6.3,SNR=2.8							
TXAR	**Lajitas Array**	**74.96**	**63**	P		**P**	**07 51 36.6**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.5,baz=311,slow=4.3,SNR=6.0							

IDC 19 08:31:14.3±3.1, 043N×12370E, h207km±31km, mb3.5/8, mb1 3.6/9, mb1mx3.5/19, mbtmp3.5/9, Error ellipse: s-maj=32.9km s-min=11.6km az=68.0
NEIC 19 08:31:14.9±2.1, 038N×12366E, h217km±22km, mb4.4/3, Error ellipse: s-maj=24.8km s-min=8.5km az=67.0
ISCJB 19 08:31:15.5±2.1, 033N±008×1235E±02, h241km±21km, mb3.9/11, Error ellipse: s-maj=30.8km s-min=10.6km az=165.1
ISC 19 08:31:15.1±2.9, 04N±01×1236E±02, h218km±32km, n16, σ0$42/16, mb3.9/11, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.61**	**216**	P		**Pn**	**08 32 50.6**	**+0.1**
	1.0nm,0.3s,baz=91,slow=19,SNR=6.2							
FITZ	**Fitzroy Crossi**	**18.46**	**174**	*e*P		**P**	**08 35 14.5**	**-0.3**
	5.6nm,0.7s							
FITZ				*e*S		**S**	**08 38 28.4**	**-5.7**
WRAB	**Tennant Creek**	**22.74**	**153**	*e*P		**P**	**08 35 58.7**	**0.0**
	13nm,0.6s,mb4.6							
WRA	**Warramunga Arr**	**22.75**	**153**	P		**P**	**08 35 58.9**	**+0.1**
	11nm,0.5s,mb4.7,baz=333,slow=10,SNR=66							
WB2	**Warramunga Arr**	**22.75**	**153**	*e*P		**P**	**08 35 58.8**	**0.0**
ASAR	**Alice Springs**	**25.89**	**158**	P		**P**	**08 36 27.6**	**+0.4**
	1.2nm,0.6s,mb3.7,baz=347,slow=16,SNR=24							
ASAR				PcP		PcP	08 39 51.0	+0.7
	0.6nm,0.4s,baz=352,slow=2.1,SNR=7.8							
MEEK	**Meekatharra**	**27.28**	**190**	*e*P		**P**	**08 36 38.9**	**-0.7**
	4.7nm,0.6s,mb4.3							
BBOO	**Buckleboo**	**35.02**	**162**	*e*P		**P**	**08 37 47.0**	**-0.1**
	1.4nm,0.3s,mb4.0							
STKA	**Stephens Creek**	**36.30**	**154**	*e*P		**P**	**08 37 58.5**	**+0.5**
	1.1nm,0.4s,mb3.7							
STKA	**Stephens Creek**	**36.30**	**154**	P		**P**	**08 37 58.6**	**+0.6**
	1.3nm,0.4s,mb3.8,baz=342,slow=8.6,SNR=9.8							
STKA				PcP		PcP	08 40 18.4	+0.4
	0.8nm,0.5s,baz=331,slow=4.4,SNR=2.9							
MJAR	**Matsushiro Arr**	**38.44**	**19**	P		**P**	**08 38 15.1**	**-0.8**
	0.6nm,0.4s,mb3.4,baz=202,slow=8.0,SNR=3.1							
SONM	**Songino Array**	**49.59**	**345**	P		**P**	**08 39 44.7**	**+0.5**
	0.5nm,0.4s,mb3.2,baz=161,slow=11,SNR=4.0							
MKAR	**Makanchi Array**	**58.64**	**328**	P		**P**	**08 40 50.0**	**+0.5**
	0.5nm,0.3s,mb3.5,baz=125,slow=8.7,SNR=12							
ZALV	**Zalesovo Beam**	**62.24**	**335**	P		**P**	**08 41 13.7**	**0.0**
	0.7nm,0.4s,mb3.6,baz=135,slow=7.0,SNR=4.2							
KURK	**Kurchatov**	**62.98**	**330**	P		**P**	**08 41 18.2**	**-0.4**
	0.6nm,0.4s,mb3.5,baz=134,slow=6.3,SNR=5.6							
TORD	**Torodi Ar. Bea**	**120.93**	**286**	PKP	PKPdf		08 49 41.8	-0.7
	0.3nm,0.5s,baz=58,slow=2.3,SNR=5.4							

NEIC 19 08:37:20.1, 1769N×10141W, h40km, MD3.8(MEX), After MEX.
MEX 19 08:37:20.0±0.7, 1768N×10140W, h41km±7km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.09**	**222**	*i* P		Pn	08 37 25.3	-1.4
ZIIG				*i* S		Sn	08 37 29.8	-1.6
ZIIG	**Zihuatanejo**	**0.09**	**222**	*i* P		Pn	08 37 25.3	-1.5
ZIIG				*i* S		Sn	08 37 29.8	-1.6
CAIG	**El Cayaco**	**1.25**	**120**	*i* P		Pn	08 37 38.6	-2.4
CAIG				*i* S		Sn	08 37 55.1	-1.5
MMIG	**Aquila**	**1.95**	**289**	*e*P		Pn	08 37 49.7	-0.9
MMIG				*i* S		Sn	08 38 11.9	-1.9
MOIG	**Morelia**	**2.00**	**6**	*i* P		Pn	08 37 50.1	-1.3
MOIG				*i* S		Sn	08 38 12.6	-2.5
MZVM		**2.55**	**54**	*i* P		Pn	08 37 58.5	-0.4
MZVM				*i* S		Sn	08 38 26.4	-2.3
PPM	**Popocatepetl**	**2.98**	**62**	*i* P		Pn	08 38 05.7	+0.9
PPM				*i* S		Sn	08 38 37.4	-1.7
PNIG	**Pinotepa**	**3.38**	**112**	*i* P		Pn	08 38 07.9	-2.4
PNIG				*i* S		Sn	08 38 49.4	+0.2

ISCJB 19 08:42:34.2±1.2, 5354N±008×879E±0.1, h10km, Error ellipse: s-maj=11.5km s-min=10.1km az=159.7
IDC 19 08:42:35.0±2.1, 5360N×8797E, h0km, mb1 3.5/4, mb1mx3.2/27, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=19.5km s-min=13.5km az=44.0
NNC 19 08:42:40.1±2.4, 5340N×8749E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=18.9km s-min=15.5km az=12.0
ISC 19 08:42:36.2±1.2, 5366N±007×879E±01, h10km, n8, σ1$10/14, 4C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.82**	**280**	Pn		**Pn**	**08 43 07.9**	**+0.4**
	7.5nm,0.3s,baz=99,slow=15,SNR=51							
ZALV				Lg			08 43 33.9	
	15nm,0.3s,baz=98,slow=32,SNR=18							
KURK	**Kurchatov**	**6.39**	**246**	⇑Pn		**Pn**	**08 44 11.2**	**+0.8**
	4.4nm,0.8s							
KURK				⇓Sn		**Sn**	**08 45 24.5**	**+1.2**
	3.8nm,0.5s							
KURK				⇑Lg			08 45 53.0	
	12nm,0.7s							
KURK	**Kurchatov**	**6.39**	**246**	Pn		**Pn**	**08 44 12.4**	**+2.0**
	0.5nm,0.3s,baz=62,slow=14,SNR=49							
KURK				Sn		**Sn**	**08 45 28.2**	**+4.9**
	0.2nm,0.3s,baz=60,slow=24,SNR=5.2							
KURK				Lg			08 46 00.9	
	0.2nm,0.3s,baz=60,slow=32,SNR=7.4							
KURBB	**Kurchatov Arra**	**6.49**	**246**	⇓Pn		**Pn**	**08 44 12.4**	**+0.7**
	1.5nm,0.7s							
KURBB				⇓Sn		**Sn**	**08 45 24.2**	**-1.5**
	1.5nm,0.5s							
KURBB				⇑Lg			08 45 56.7	
	4.0nm,0.9s							
MK31	**Makanchi Array**	**7.74**	**210**	⇓Pn		**Pn**	**08 44 29.9**	**+1.1**
	0.4nm,0.3s,baz=29,slow=13,SNR=39							
MK31				⇓Sn		**Sn**	**08 45 55.3**	**-1.1**
	3.0nm,0.8s,baz=29,slow=24,SNR=5.9							
MK31				⇑Lg			08 46 34.9	
	2.7nm,0.6s,baz=31,slow=31,SNR=3.8							
MKAR	**Makanchi Array**	**7.74**	**210**	Pn		**Pn**	**08 44 29.9**	**+1.2**
	0.6nm,0.3s,baz=27,slow=13,SNR=32							
MKAR				Sn		**Sn**	**08 45 56.3**	**-0.1**
	0.4nm,0.3s,baz=29,slow=26,SNR=7.8							
MKAR				Lg			08 46 37.1	
	0.3nm,0.3s,baz=26,slow=31,SNR=5.9							
BVAR	**Borovoye Array**	**10.46**	**274**	Pn		**Pn**	**08 45 06.3**	**+0.2**
	0.4nm,0.3s,baz=77,slow=14,SNR=4.0							
BVAR				Sn		**Sn**	**08 47 01.8**	**-1.5**
	0.6nm,0.3s,baz=77,slow=21,SNR=4.5							
SONM	**Songino Array**	**13.09**	**109**	Pn		**Pn**	**08 45 40.5**	**-1.5**
	0.1nm,0.3s,baz=302,slow=13,SNR=2.7							

IDC 19 08:51:21.6±0.9, 0905×13343E, h0km, mb4.2/8, mb1 4.4/11, mb1mx4.1/22, mbtmp4.3/11, ML4.2/2, Error ellipse: s-maj=46.3km s-min=16.7km az=65.0
NEIC 19 08:51:25.3±3.8, 0905×13350E, h25km±26km, mb4.4/5, Error ellipse: s-maj=14.7km s-min=9.2km az=218.0
ISCJB 19 08:51:26.1±1.0, 0925±007×13376E±005, h50km±11km, mb4.2/8, Error ellipse: s-maj=11.6km s-min=9.0km az=12.9
DJA 19 08:51:27, 109S×13389E, h15km, MLv5.1/3
ISC 19 08:51:27.5±1.0, 093S±008×13377E±006, h45km±10km, n29, σ1$06/29, mb4.2/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BAKI	**Biak**	**2.35**	**96**	P		**Pn**	**08 52 02.4**	**-1.2**
BAKI				S		**Sn**	**08 52 32.1**	**+0.8**
SWI	**Sorong**	**2.51**	**271**	P		**Pn**	**08 52 05.9**	**+0.1**
SWI				S		**Sn**	**08 52 45.1**	**+10**
AAI	**Ambon**	**6.21**	**244**	P		**Pn**	**08 52 58.3**	**+1.7**
	148nm,0.6s,2µm0.7nm							
KAKA	**Kakadu**	**11.78**	**186**	*e*P		x	08 53 13.2	
	31nm,0.5s							
KAKA	**Kakadu**	**11.78**	**186**	P		x	08 53 13.0	
KAPI	**Kappang**	**14.57**	**254**	Pn		**Pn**	**08 54 46.0**	**-5.0**
	baz=38,slow=19,SNR=1.8							
PMG	**Port Moresby**	**15.76**	**123**	Pn		**Pn**	**08 55 09.7**	**+3.2**
	1.0nm,0.3s,baz=333,slow=4.0,SNR=5.8							
PMG	**Port Moresby**	**15.76**	**123**	P		**Pn**	**08 55 12.9**	**+6.4**
COEN	**Coen**	**15.94**	**145**	P		**Pn**	**08 55 07.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**18.84**	**205**	*e*P		**Pn**	**08 55 44.2**	**-0.4**
	18nm,0.6s							
WRAB	**Tennant Creek**	**18.89**	**178**	*e*P		**Pn**	**08 55 44.0**	**-1.3**
	13nm,0.6s							
WRA	**Warramunga Arr**	**18.90**	**178**	P		**Pn**	**08 55 44.5**	**-0.8**
	1.5nm,0.3s,baz=360,slow=12,SNR=66							
WRA				S		**S**	**08 59 11.2**	**-5.8**
	0.5nm,0.3s,baz=350,slow=24,SNR=5.2							
WB2	**Warramunga Arr**	**18.91**	**178**	*e*P		**Pn**	**08 55 44.5**	**-0.9**
ASAR	**Alice Springs**	**22.60**	**180**	P		**P**	**08 56 24.9**	**+0.6**
	8.1nm,0.6s,mb4.3,baz=3.7,slow=12,SNR=160							
ASAR				S		**S**	**09 00 28.8**	**-0.6**
	0.2nm,0.6s,baz=241,slow=22,SNR=2.9							
CTA	**Charters Tower**	**22.62**	**148**	*e*P		**P**	**08 56 27.3**	**+2.7**
	9.0nm,0.7s,mb4.3							
CTA	**Charters Tower**	**22.62**	**148**	P		**P**	**08 56 27.4**	**+2.8**
	13nm,0.8s,mb4.4,baz=325,slow=10,SNR=14							
CTAO	**Charters Tower**	**22.62**	**148**	*e*P		**P**	**08 56 25.3**	**+0.7**
	15nm,1.1s,mb4.3							
MBWA	**Marble Bar**	**24.33**	**213**	*e*P		**P**	**08 56 40.9**	**-0.2**
STKA	**Stephens Creek**	**31.66**	**167**	*e*P		**P**	**08 57 46.5**	**0.0**
	1.7nm,0.5s,mb4.1							
STKA	**Stephens Creek**	**31.66**	**167**	P		**P**	**08 57 46.5**	**0.0**
	1.2nm,0.4s,mb4.1,baz=345,slow=7.5,SNR=8.8							
ARMA	**Armidale**	**33.88**	**152**	*e*P		**P**	**08 58 07.3**	**+1.3**
MKAR	**Makanchi Array**	**65.41**	**324**	P		**P**	**09 02 05.9**	**+0.4**
	0.6nm,0.6s,mb3.8,baz=109,slow=9.1,SNR=5.3							
KURK	**Kurchatov**	**69.46**	**326**	P		**P**	**09 02 30.1**	**-0.9**
	1.0nm,0.7s,mb3.9,baz=123,slow=6.1,SNR=4.9							
BVAR	**Borovoye Array**	**75.06**	**326**	P		**P**	**09 03 03.1**	**-1.3**
	0.6nm,0.6s,mb3.7,baz=116,slow=6.5,SNR=2.7							
VNDA	**Vanda**	**78.02**	**174**	P		**P**	**09 03 21.9**	**+1.2**
	2.9nm,0.7s,mb4.3,baz=327,slow=7.1,SNR=16							
VNDA	**Vanda**	**78.02**	**174**	*e*P		**P**	**09 03 22.3**	**+1.6**
QSPA	**South Pole Qui**	**89.01**	**180**	P		**P**	**09 04 17.6**	**+0.6**
	3.2nm,0.7s,mb4.8,baz=7.7,slow=0.9,SNR=9.8							
TORD	**Torodi Ar. Bea**	**131.02**	**287**	PKP	PKPdf		09 10 35.6	+0.4
	0.5nm,0.9s,baz=72,slow=1.9,SNR=2.6							
CPUP	**Villa Florida**	**150.86**	**159**	PKPbc	PKPbc		09 11 17.1	+1.2
	1.7nm,0.6s,baz=195,slow=1.3,SNR=8.2							

IDC 19 09:07:20.5±1.7, 262N×12810E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=59.1km s-min=25.3km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.27**	**228**	Pn		Pn	09 10 05.0	+1.9
	0.8nm,0.3s,baz=62,slow=17,SNR=4.1							
WRA	**Warramunga Arr**	**23.24**	**165**	P		P	09 12 29.7	+0.1
	2.1nm,0.7s,baz=340,slow=10,SNR=18							
ASAR	**Alice Springs**	**26.73**	**168**	P		P	09 13 01.4	-0.5
	0.3nm,0.7s,baz=356,slow=8.2,SNR=9.4							
STKA	**Stephens Creek**	**36.62**	**161**	P		P	09 14 28.7	0.0
	1.7nm,0.7s,baz=324,slow=8.1,SNR=7.7							
MKAR	**Makanchi Array**	**59.24**	**325**	P		P	09 17 23.8	0.0
	0.2nm,0.5s,baz=106,slow=7.7,SNR=4.2							

NEIC 19 09:29:04.7, 1964N×6435W, h67km, MD3.6(RSPR), After RSPR.
RSPR 19 09:29:04.7, 1964N×6435W, h67km±32km, MD3.6/6, MD3.6/6, 7C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.91**	**179⇑**	*e*P		Pn	09 29 21.2	-0.7
TBVI	**Tortola**	**1.25**	**192⇑**	*e*P		Pn	09 29 24.6	-1.6
TBVI				*e*S		Sn	09 29 42.5	+0.2
STVI	**Saint Thomas**	**1.41**	**204⇑**	*e*P		Pn	09 29 26.6	-1.8
HUMP	**Col San Antoni**	**2.06**	**224⇑**	*e*P		Pn	09 29 36.3	-0.8
HUMP				*e*S		Sn	09 30 00.8	-1.0
SJG	**San Juan**	**2.28**	**228**	*e*S		Sn	09 30 07.4	+0.2
SJG	**San Juan**	**2.28**	**228**	*e*S		Sn	09 30 07.4	+0.2
CELP	**Cerrillos**	**2.62**	**234⇑**	*e*P		Pn	09 29 44.9	+0.2
CELP				*e*S		Sn	09 30 14.7	-0.8
ICM	**Isla Caja Muer**	**2.69**	**230⇑**	*e*P		Pn	09 29 46.0	+0.3
CRPR	**Cabo Rojo, PR**	**3.08**	**238⇑**	*e*P		Pn	09 29 51.0	0.0
CRPR				*e*S		Sn	09 30 25.8	-0.8

INET 19 09:30:18.4, 51.12N×179.76E, h0km, mb6.2, MS6.3
BGS 19 09:30:19.6±1.9, 5049N×177.07W, h10km, mb6.2, MS6.9
*IDC 19 09:30:22.4±0.3, 5143N×179.43W, h0km, mb5.8/39, mb1 5.9/40, mb1mx5.9/40, mbtmp5.8/40, ML5.3/2, MS6

OKFG	**Magazine Ridge**	**7.39**	**70**	P		**Pn**		**09 32 16.4**	**+2.7**
SPIA	**Saint Paul Isl**	**7.94**	**40**	P		**Pn**		**09 32 25.3**	**+4.1**
UNV	**Unalaska Valle**	**8.30**	**68**	P		**Pn**		**09 32 28.5**	**+2.3**
AKGG	**Akutan Green G**	**8.67**	**66**	P		**Pn**		**09 32 34.4**	**+3.1**
AKLV	**Akutan Long Va**	**8.69**	**66**	P		**Pn**		**09 32 34.2**	**+2.7**
AKUT	**Akutan**	**8.79**	**66**	P		**Pn**		**09 32 36.0**	**+3.2**
AKUT				*e*Sn		**Sn**		**09 34 19.2**	**+8.7**
FALS	**False Pass**	**10.29**	**64**	*e*Pn		**Pn**		**09 32 55.4**	**+2.1**
SDPT	**Sand Point**	**12.04**	**63**	*e*Pn		**Pn**		**09 33 17.0**	**-0.4**
SDPT				*e*Sn		**Sn**		**09 35 30.3**	**+0.1**
CHGN	**Chignik**	**13.38**	**60**	*e*P		**Pn**		**09 33 36.2**	**+0.6**
CHGN				*e*Sn		**Sn**		**09 36 02.2**	**-0.6**
PET	**Petropavlovsk**	**13.47**	**285**	⇑ *i*P		**Pn**		**09 33 38.1**	**+1.3**
PET				*e*S		**Sn**		**09 36 09.8**	**+4.8**
PET				pmax	pmax				
	comp=Z,28µm,12.7s								
PET				pmax	pmax				
	comp=Z,520nm,0.9s								
PET				smax					
	comp=N,315nm,0.7s								
PET				MLR	MLR				
	comp=Z,147µm,19.0s								
PET				MLR	MLR				
	comp=Z,109µm,19.0s								
PET	**Petropavlovsk**	**13.47**	**285**	*e*Pn		**Pn**		**09 33 38.1**	**+1.3**
PET				*e*Sn		Sn		09 36 35.9	+31
PEA0B	**Petropavlovsk-**	**14.04**	**286**	*e*Pn		**Pn**		**09 33 46.0**	**+1.4**
PEA0B				*e*Sn		**Sn**		**09 36 24.8**	**+5.9**
PETK	**Petropavlovsk-**	**14.04**	**286**	Pn		**Pn**		**09 33 44.7**	**+0.1**
	comp=Z,3.0nm,0.3s,baz=83,slow=16,SNR=80								
PETK				LR	LR			09 38 59.5	
	comp=Z,95µm,20.8s,baz=336,slow=37								
SKR	**Severo-Kuril's**	**15.32**	**277**	⇑ *i*P		**Pn**		**09 34 02.0**	**+0.3**
SKR				*e*S		**S**		**09 36 53.0**	**-12**
SKR				pmax	pmax				
	comp=E,400nm,1.0s								
SKR				pmax	pmax				
	comp=Z,2µm,1.0s								
SKR				pmax	pmax				
	comp=N,160nm,0.9s								
SKR				smax					
	comp=E,310nm,0.5s								
SKR				smax					
	comp=N,1.0nm,1.0s								
SKR				MLR	MLR				
	comp=N,85µm,20.0s								
SKR				MLR	MLR				
	comp=E,76µm,16.0s								
SKR				MLR	MLR				
	comp=Z,53µm,16.0s								
OHAK	**Old Harbor**	**16.33**	**59**	*e*P		**Pn**		**09 34 11.4**	**-3.3**
	comp=Z,59nm,0.6s								
SVW2	**Sparrevohn**	**16.38**	**44**	*e*P		**Pn**		**09 34 18.8**	**+3.5**
KDAK	**Kodiak Island**	**16.80**	**57**	Pn		**Pn**		**09 34 18.0**	**-2.6**
	comp=Z,7µm,0.6s								
KDAK	**Kodiak Island**	**16.80**	**57**	Pn		**Pn**		**09 34 17.6**	**-3.0**
	comp=Z,47nm,0.3s,baz=263,slow=5.7,SNR=177								
KDAK				Sn		**Sn**		**09 37 22.9**	**-3.1**
	comp=Z,12nm,0.3s,baz=348,slow=20,SNR=5.9								
KDAK	**Kodiak Island**	**16.80**	**57**	*e*P		**Pn**		**09 34 18.7**	**-1.9**
KDAK				pmax	pmax				
	comp=Z,1µm,0.5s								
KDAK	**Kodiak Island**	**16.80**	**57**	*e*Pn		**Pn**		**09 34 18.7**	**-1.9**
	comp=Z,1µm,0.5s								
KDAK				*e*Sn		Sn		09 37 51.6	+26
RSO	**Redoubt South**	**17.42**	**48**	*e*Pn		**Pn**		**09 34 30.8**	**+2.5**
BILL	**Bilibino**	**18.07**	**343**	*c i*P		**Pn**		**09 34 39.4**	**+3.1**
BILL				pmax	pmax				
	comp=Z,18µm,3.8s								
BILL				pmax	pmax				
	comp=Z,4µm,1.6s								
BILL				MLR	MLR				
	comp=Z,612µm,18.0s								
BILL	**Bilibino**	**18.07**	**343**	*e*Pn		**Pn**		**09 34 39.6**	**+3.3**
	comp=Z,5µm,1.4s								
BILL				*e*Sn		**Sn**		**09 37 56.4**	**-0.2**
SEY	**Seymchan**	**18.92**	**318**	*i* P		**Pn**		**09 34 47.6**	**+1.0**
SEY	**Seymchan**	**18.92**	**318**	*i* P		**Pn**		**09 34 47.7**	**+1.1**
PMR	**Palmer**	**19.45**	**47**	*e*P		**Pn**		**09 34 50.8**	**-2.2**
PMR				*e*S		**S**		**09 38 25.9**	**-3.3**
PMR				pmax	pmax				
	comp=Z,16nm,0.5s								
PMR	**Palmer**	**19.45**	**47**	*e*P		**Pn**		**09 34 50.8**	**-2.2**
	comp=Z,16nm,0.5s								
PMR				*e*Pn		**Pn**		**09 34 54.0**	**+1.0**
PMR				*e*S		**S**		**09 38 25.9**	**-3.4**
MID	**Middleton Isla**	**20.30**	**54**	*e*P		**P**		**09 35 02.8**	**+1.9**
MID				pmax	pmax				
	comp=Z,1µm,1.2s								
MID				MLR	MLR				
	comp=Z,1032µm,18.0s,MS7.2								
MID	**Middleton Isla**	**20.30**	**54**	*e*P		**P**		**09 35 02.8**	**+1.9**
	comp=Z,1µm,1.2s								
MID				LR	LR				
	comp=Z,1032µm,18.0s,MS7.2								
COLA	**College**	**21.18**	**38**	*e*P		**P**		**09 35 09.2**	**-1.1**
COLA				*e*S		**S**		**09 38 59.5**	**-4.0**
COLA				pmax	pmax				
	comp=Z,871nm,0.9s,mb6.1								
COLA				MLR	MLR				
	comp=Z,121µm,22.0s,MS6.2								
COLA	**College**	**21.18**	**38**	*e*P		**P**		**09 35 09.2**	**-1.1**
	comp=Z,871nm,0.9s,mb6.1								
COLA				*e*S		**S**		**09 38 59.5**	**-4.1**
COLA				LR	LR				
	comp=Z,121µm,22.0s,MS6.2								
MENT	**Mentasta**	**22.26**	**45**	*e*P		**P**		**09 35 21.6**	**-0.2**
MIDW	**Midway**	**23.21**	**175**	*e*P		**P**		**09 35 30.0**	**-2.2**
	comp=Z,2µm,1.2s,mb6.5								
MIDW				*e*S		**S**		**09 39 42.1**	**+0.9**
MIDW				LR	LR				
	comp=Z,523µm,20.0s,MS7.0								
EGAK	**Eagle**	**23.84**	**41**	*e*P		**P**		**09 35 36.7**	**-1.1**
	comp=Z,2µm,0.8s,mb6.5								
EGAK				*e*S		**S**		**09 39 49.4**	**-1.5**
EGAK				LR	LR				
	comp=Z,921µm,19.0s,MS7.3								
YUK	**Yuzh-Kuril'sk**	**24.24**	**266**	⇓ *i*P		**P**		**09 35 43.0**	**+1.3**
YUK				*i*				09 36 15.0	
YUK				*i* PPP				09 36 31.0	
YUK				*i*				09 39 20.0	
YUK				*i* SS				09 41 11.0	
YUK				pmax	pmax				
	comp=N,20µm,3.5s								
YUK				pmax	pmax				
	comp=E,42µm,3.5s								
YUK				pmax	pmax				
	comp=N,2µm,1.0s								
YUK				pmax	pmax				
	comp=E,2µm,1.0s								
YUK				pmax	pmax				
	comp=Z,3µm,1.0s,mb6.7								
YUK				pmax	pmax				
	comp=N,28µm,5.0s								
YUK				pmax	pmax				
	comp=E,38µm,6.0s								
DAWY	**Dawson**	**24.41**	**43**	*e*P		**P**		**09 35 42.4**	**-0.7**
DAWY				*e*S		**S**		**09 40 09.3**	**+9.2**
HYT	**Haines Junctio**	**24.84**	**51**	*e*P		**P**		**09 35 47.1**	**+0.1**
YSS	**Yuzh-Sakhalins**	**24.86**	**275**	*α i*P		**P**		**09 35 48.0**	**+0.7**
YSS				*e*				09 36 24.0	
YSS				*e*PPP				09 36 40.0	
YSS				*e*S		**S**		**09 40 05.0**	**-2.6**
YSS				*e*				09 46 45.6	
YSS				pmax	pmax				
	comp=N,250nm,1.0s								
YSS				pmax	pmax				
	comp=E,680nm,1.0s								
YSS				pmax	pmax				
	comp=Z,2µm,1.0s,mb6.6								
YSS				pmax	pmax				
	comp=N,17µm,9.0s								
YSS				pmax	pmax				
	comp=E,26µm,9.0s								
YSS				pmax	pmax				
	comp=Z,30µm,9.0s								
YSS				smax					
	comp=N,59µm,16.0s								
YSS				MLR	MLR				
	comp=Z,194µm,20.0s,MS6.6								
YSS				MLR	MLR				
	comp=N,76µm,14.0s								
YSS				MLR	MLR				
	comp=E,129µm,21.0s								
YSS	**Yuzh-Sakhalins**	**24.86**	**275**	*e*P		**P**		**09 35 48.6**	**+1.3**
	comp=E,2µm,1.0s,mb6.5								
YSS				*e*PcP	PcP			09 39 25.3	+3.0
YSS				LR	LR				
	comp=Z,13µm,20.0s								
SKAG	**Skagway**	**25.91**	**55**	*e*P		**P**		**09 35 55.8**	**-0.9**
	comp=Z,1µm,1.8s,mb6.1								
SKAG				LR	LR				
	comp=Z,646µm,20.0s,MS7.2								
SIT	**Sitka**	**26.08**	**60**	*e*P		**P**		**09 35 57.1**	**-1.2**
SIT				*e*S		**S**		**09 40 32.5**	**+5.7**
SIT				pmax	pmax				
	comp=Z,69nm,0.7s,mb5.3								
SIT				MLR	MLR				
	comp=Z,436µm,17.0s,MS7.1								
SIT	**Sitka**	**26.08**	**60**	*e*P		**P**		**09 35 57.1**	**-1.2**
	comp=Z,69nm,0.7s,mb5.3								
SIT				*e*S		**S**		**09 40 32.5**	**+5.7**
SIT				LR	LR				
	comp=Z,436µm,17.0s,MS7.1								
ASAJ	**Asahikawa**	**26.24**	**269**	P		**P**		**09 35 59.4**	**-0.5**
	comp=Z,767nm,1.0s,mb6.2,baz=64,slow=7.7,SNR=109								
ASAJ				ScP	ScP			09 43 05.5	+3.3
	comp=Z,69nm,1.0s,baz=285,slow=8.1,SNR=3.6								
ASAJ				LR	LR			09 44 47.7	
	comp=Z,136µm,19.4s,MS6.5,baz=75,slow=33								
ASAJ	**Asahikawa**	**26.24**	**269**	P		**P**		**09 35 59.4**	**-0.5**
ASAJ				pmax	pmax				
	comp=N,69nm,1.0s								
ASAJ				pmax	pmax				
	comp=Z,767nm,1.0s								
ASAJ				MLR	MLR				
	comp=Z,136µm,19.4s								
ERM	**Erimo**	**26.99**	**264**	P		**P**		**09 36 09.7**	**+3.1**
	comp=Z,2µm,0.9s,mb6.7,SNR=15								
ERM	**Erimo**	**26.99**	**264**	*e*P		**P**		**09 36 07.1**	**+0.5**
ERM				pmax	pmax				
	comp=Z,779nm,1.2s,mb6.1								
ERM				MLR	MLR				
	comp=Z,131µm,22.0s,MS6.5								
ERM	**Erimo**	**26.99**	**264**	*e*P		**P**		**09 36 07.1**	**+0.5**
	comp=Z,780nm,1.2s,mb6.1								
ERM				*e*S		**S**		**09 40 58.6**	**+17**
ERM				*e*ScP		ScP		09 43 08.7	+4.2
ERM				LR		LR			
	comp=Z,131µm,22.0s,MS6.5								
CRAG	**Craig**	**27.54**	**63**	*e*P		**P**		**09 36 10.8**	**-0.7**
	comp=Z,135nm,0.9s,mb5.6								
CRAG				LR	LR				
	comp=Z,384µm,22.0s,MS6.9								
INK	**Inuvik**	**27.71**	**35**	P		**P**		**09 36 12.3**	**-0.5**
	comp=Z,21nm,0.3s,mb5.2,baz=242,slow=9.6,SNR=84								
INK				PcP	PcP			09 39 29.0	+0.4
	comp=Z,92nm,0.8s,baz=249,slow=2.5,SNR=5.0								
INK				ScP	ScP			09 43 07.7	+1.5
	comp=Z,94nm,0.9s,baz=107,slow=3.1,SNR=7.7								
INK	**Inuvik**	**27.71**	**35**	*e*P		**P**		**09 36 12.2**	**-0.6**
	comp=Z,320nm,0.9s,mb6.0								
INK				*e*PcP	PcP			09 39 29.7	+1.0
INK				*e*ScP	ScP			09 43 08.0	+1.8
WRAK	**Wrangell Islan**	**27.80**	**61**	*e*P		**P**		**09 36 13.9**	**+0.2**
	comp=Z,381nm,1.1s,mb5.9								
WRAK				LR	LR				
	comp=Z,389µm,19.0s,MS7.0								
VIB	**Van Inlet**	**28.38**	**68**	P		**P**		**09 36 21.8**	**+2.8**
	SNR=166								
DIB	**Dawson Inlet,**	**28.43**	**68**	P		**P**		**09 36 20.9**	**+1.5**
	SNR=334								
DLBC	**Dease Lake**	**28.73**	**56**	P		**P**		**09 36 21.3**	**-0.7**
	comp=Z,37nm,1.0s,mb5.0,baz=283,slow=9.4,SNR=22								
DLBC	**Dease Lake**	**28.73**	**56**	*e*P		**P**		**09 36 22.3**	**+0.2**
HABR	**Khabarovsk**	**29.02**	**282**	*c i*P		**P**		**09 36 25.3**	**+0.6**
HABR				*e**PP		pP		09 36 39.9	+5.0
HABR				*e*				09 37 19.8	
HABR				*e*				09 39 31.0	
HABR				*e*S		**S**		**09 41 13.4**	**+0.2**
HABR				*e*SS		SS		09 42 43.6	-33
HABR				*e*				09 47 01.6	
HABR				pmax	pmax				
	comp=Z,1µm,1.8s,mb6.4								
HABR				MLR	MLR				
	comp=Z,69µm,16.0s,MS6.4								
HABR				MLR	MLR				
	comp=N,42µm,13.0s								
HABR				MLR	MLR				
	comp=E,98µm,20.0s								
YAK	**Yakutsk**	**29.06**	**311**	*c i*P		**P**		**09 36 24.0**	**-0.9**
YAK				*e**PP		pP		09 36 43.6	+8.5
YAK				*e*				09 37 21.1	
YAK				*e*				09 39 34.7	
YAK				*e*S		**S**		**09 41 06.0**	**-7.6**
YAK				*e*SS		SS		09 43 12.0	-5.2
YAK				*e*				09 47 09.1	
YAK				pmax	pmax				
	comp=Z,515nm,0.9s,mb6.3								
YAK				pmax	pmax				
	comp=E,273nm,1.2s								
YAK				pmax	pmax				
	comp=N,73nm,1.0s								
YAK				pmax	pmax				
	comp=Z,1µm,1.5s,mb6.5								
YAK	**Yakutsk**	**29.06**	**311**	*e*P		**P**		**09 36 24.7**	**-0.2**
	comp=Z,571nm,0.9s,mb6.3								
YAK				LR	LR				
	comp=Z,154µm,19.0s,MS6.6								
TIXI	**Tiksi**	**30.39**	**331**	*c i*P		**P**		**09 36 36.4**	**-0.2**
TIXI				pmax	pmax				
	comp=Z,30nm,0.8s,mb5.1								
TIXI	**Tiksi**	**30.39**	**331**	*e*P		**P**		**09 36 36.2**	**-0.4**
	comp=Z,186nm,1.0s,mb5.8								
TIXI				*e*S		**S**		**09 41 46.5**	**+12**
TIXI				LR	LR				
	comp=Z,162µm,19.0s,MS6.7								
KLR	**Kul'dur**	**30.73**	**285**	⇓ *i*P		**P**		**09 36 36.0**	**-3.8**
KLR				*e*SSS				09 43 29.5	
KLR				pmax	pmax				
	comp=N,3µm,10.0s								
KLR				pmax	pmax				
	comp=E,9µm,10.0s								
KLR				pmax	pmax				
	comp=Z,17µm,10.0s								
BBB	**Bella Bella**	**31.27**	**68**	LR		LR		09 45 31.0	
	comp=Z,30µm,21.3s,MS5.9,baz=290,slow=29								
CLNS	**Chul'man**	**32.24**	**302**	*e*P		**P**		**09 36 51.8**	**-1.2**
CLNS				*e**PP		pP		09 37 01.2	-2.1
CLNS				*e*				09 39 38.9	
CLNS				*e*S		**S**		**09 41 58.8**	**-4.6**
CLNS				*e*SS		SS		09 44 01.1	-21
CLNS				pmax	pmax				
	comp=Z,394nm,1.5s,mb6.0								
CLNS				pmax	pmax				
	comp=E,242nm,1.4s								
CLNS				pmax	pmax				
	comp=N,116nm,1.1s								
CLNS				smax					
	comp=N,5µm,14.4s								
CLNS				MLR	MLR				
	comp=N,74µm,16.0s,MS6.6								
CLNS				MLR	MLR				
	comp=Z,90µm,18.0s,MS6.5								
CLNS				MLR	MLR				
	comp=E,79µm,18.0s,MS6.6								
NRGR	**Nerungri**	**32.37**	**302**	*i* P		**P**		**09 36 55.4**	**+1.2**
MJAR	**Matsushiro Arr**	**33.33**	**260**	P		**P**		**09 37 03.0**	**+0.2**
	comp=E,94nm,1.0s,mb5.7,baz=51,slow=6.0,SNR=121								
MJAR				PcP	PcP			09 39 45.8	+1.9
	comp=E,44nm,0.8s,baz=80,slow=1.5,SNR=7.3								
MJAR				ScP	ScP			09 43 27.5	+2.3
	comp=E,36nm,1.2s,baz=26,slow=1.0,SNR=6.3								
MJAR				LR	LR			09 49 31.6	
	comp=E,118µm,19.8s,MS6.6,baz=65,slow=34								
MJAR	**Matsushiro Arr**	**33.33**	**260**	P		**P**		**09 37 03.0**	**+0.3**
MJAR								09 39 45.8	
MJAR				MLR	MLR				
	comp=Z,118µm,19.8s								
MAJO	**Matsushiro**	**33.33**	**260**	*e*P		**P**		**09 37 03.2**	**+0.5**
	comp=Z,500nm,1.0s,mb6.4								
MAJO				*e*S		**S**		**09 42 24.3**	**+3.5**
MAJO				LR	LR				
	comp=Z,164µm,22.0s,MS6.7								
MAT	**Matsushiro**	**33.33**	**260**	P		**P**		**09 37 02.9**	**+0.1**
MAT				S		**S**		**09 42 19.4**	**-1.4**
MDJ	**Mudanjiang**	**34.11**	**279**	P		**P**		**09 37 09.5**	**0.0**
MDJ				AP		pP		09 37 22.4	+2.6
MDJ				S		**S**		**09 42 31.5**	**-1.3**
MDJ				SCP		ScP		09 43 27.0	-0.8
MDJ				PCS		PcS		09 43 32.8	+0.8
MDJ				AMB		AMB			
	comp=Z,247nm,1.2s,mb6.0								
MDJ				AMB		AMB			
	comp=Z,10µm,9.7s								
MDJ				LR	LR				
	comp=N,198µm,43.7s,MS6.6								
MDJ				LR	LR				
	comp=E,96µm,40.4s,MS6.6								
MDJ				LR	LR				
	comp=Z,180µm,34.6s								
MDJ	**Mudanjiang**	**34.11**	**279**	*e*P		**P**		**09 37 08.7**	**-0.8**
	comp=Z,278nm,0.8s,mb6.2								
MDJ				*e*pP		pP		09 37 18.6	-1.2
MDJ				*e*PP		PP		09 38 29.9	+3.0
MDJ				LR	LR				
	comp=Z,132µm,21.0s,MS6.6								
KIP	**Kipapa**	**34.31**	**143**	⇑ *e*P		**P**		**09 37 13.1**	**+1.8**
KIP	**Kipapa**	**34.31**	**143**	*e*P		**P**		**09 37 12.0**	**+0.7**
	comp=Z,960nm,1.0s,mb6.7								
KIP				*e*S		**S**		**09 42 32.0**	**-4.1**
KIP				LR	LR				
	comp=Z,517µm,20.0s,MS7.3								
HON	**Honolulu**	**34.40**	**143**	*e*P		**P**		**09 37 12.6**	**+0.5**
JHJ	**Hachijo jima 2**	**34.66**	**254**	LR		LR		09 48 53.7	
	comp=Z,76µm,21.9s,MS6.4,baz=60,slow=32								
C03A	**Quillayute Air**	**35.04**	**74**	⇑ P		**P**		**09 37 19.1**	**+1.7**
	baz=35,SNR=14								
C03A				⇓ S		**S**		**09 42 52.4**	**+5.5**
	baz=35								
OBC	**Olympics--Boni**	**35.29**	**73**	P		**P**		**09 37 21.1**	**+1.5**
OOW	**Octopus West**	**35.36**	**74**	P		**P**		**09 37 21.7**	**+1.5**
PGC	**Sidney**	**35.39**	**72**	*e*P		**P**		**09 37 21.1**	**+0.6**
	comp=Z,220nm,2.0s,mb5.7								
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**		**09 37 20.8**	**-0.8**
	comp=Z,150nm,0.7s,mb6.1,baz=282,slow=8.1,SNR=324								
YKA				PcP	PcP			09 39 50.8	+1.0
	comp=Z,70nm,0.8s,baz=290,slow=3.1,SNR=7.0								
YKA				ScP	ScP			09 43 33.1	+0.4
	comp=Z,123nm,1.0s,baz=289,slow=3.1,SNR=16								
YKA				LR	LR			09 54 10.0	
	comp=Z,250µm,19.2s,MS7.0,baz=165,slow=40								
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**		**09 37 20.8**	**-0.9**
YKA								09 39 50.8	
YKA				pmax	pmax				
	comp=Z,150nm,0.7s								
YKA				MLR	MLR				
	comp=Z,250µm,19.2s								
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**		**09 37 20.8**	**-0.8**
YKA				PcP		PcP		09 39 50.9	+1.0
YKA				ScP		ScP		09 43 33.1	+0.4
YKA				LR		LR		09 54 10.0	
VGZ	**Gonzales**	**35.57**	**72**	P		**P**		**09 37 22.4**	**+0.4**
B04A	**Port Angeles**	**35.63**	**73**	⇓ P		**P**		**09 37 23.8**	**+1.3**
	baz=35,SNR=27								
B04A				⇓ S		**S**		**09 42 60.0**	**+4.0**
	baz=35								
NLWA	**Neilton Lookou**	**35.71**	**74**	*e*P		**P**		**09 37 24.4**	**+1.2**
	comp=Z,1µm,1.2s,mb6.8								
NLWA				*e*pP		pP		09 37 34.3	+0.7
NLWA				*e*S		**S**		**09 42 55.7**	**-1.6**
NLWA				LR	LR				
	comp=Z,557µm,22.0s,MS7.3								
MCW	**Mount Constitu**	**35.75**	**71**	P		**P**		**09 37 24.4**	**+0.9**
A04A	**Legoe Bay, Lum**	**35.80**	**71**	⇓ P		**P**		**09 37 24.9**	**+0.9**
	baz=36,SNR=23								
A04A				⇓ S		**S**		**09 43 02.2**	**+3.5**
	baz=36								
D03A	**Wishkah Elem.**	**35.90**	**74**	⇓ P		**P**		**09 37 26.4**	**+1.6**
	baz=36,SNR=21								
D03A				⇑ S		**S**		**09 43 04.6**	**+4.5**
	baz=36								
A05A	**Maple Falls**	**36.05**	**71**	⇑ P		**P**		**09 37 26.3**	**+0.3**
	baz=36,SNR=118								
A05A				⇓ S		**S**		**09 43 04.6**	**+2.1**
	baz=36								
C04A	**Brinnon**	**36.10**	**73**	⇑ P		**P**		**09 37 27.2**	**+0.7**
	baz=36								
C04A				⇑ S		**S**		**09 43 05.6**	**+2.3**
	baz=36								
MBW	**Mount Baker**	**36.26**	**71**	P		**P**		**09 37 28.4**	**+0.6**
E03A	**Lebam**	**36.30**	**75**	⇑ P		**P**		**09 37 28.7**	**+0.4**
	baz=36,SNR=37								
E03A				⇓ S		**S**		**09 43 09.3**	**+3.1**
	baz=36								
A06A	**Chilliwack**	**36.36**	**70**	⇓ P		**P**		**09 37 29.0**	**+0.2**
	baz=36,SNR=58								
A06A				⇑ S		**S**		**09 43 08.0**	**+0.8**
	baz=36								
B05A	**Bryant**	**36.37**	**72**	⇑ P		**P**		**09 37 29.3**	**+0.5**
	baz=36,SNR=270								
B05A				⇓ S		**S**		**09 43 08.4**	**+1.0**
	baz=36								
D04A	**Dobbs Creek Ra**	**36.48**	**74**	⇑ P		**P**		**09 37 31.1**	**+1.3**
	baz=36,SNR=33								
D04A				⇑ S		**S**		**09 43 13.7**	**+4.6**
	baz=36								
JCW	**Jim Creek**	**36.50**	**72**	P		**P**		**09 37 30.6**	**+0.7**
F03A	**Seaside**	**36.60**	**76**	⇓ P		**P**		**09 37 31.2**	**+0.5**
	baz=36,SNR=24								
F03A				⇑ S		**S**		**09 43 14.7**	**+3.8**
	baz=36								
B06A	**Marblemount**	**36.62**	**71**	⇑ P		**P**		**09 37 31.1**	**+0.1**
	baz=36,SNR=57								
B06A				⇑ S		**S**		**09 43 11.7**	**+0.6**
	baz=36								
RPW	**Rockport**	**36.63**	**71**	*e*P		**P**		**09 37 30.7**	**-0.4**
POHA	**Pohakuloa**	**36.78**	**140**	*e*P		**P**		**09 37 32.8**	**+0.2**
	comp=Z,968nm,1.0s,mb6.6								
POHA				*e*S		**S**		**09 43 16.4**	**+2.3**
POHA				LR	LR				
	comp=Z,656µm,22.0s,MS7.4								
E04A	**Onalaska**	**36.78**	**75**	⇓ P		**P**		**09 37 33.6**	**+1.3**
	baz=37,SNR=88								
E04A				⇓ S		**S**		**09 43 17.8**	**+4.1**
	baz=37								
HEBO	**Mount Hebo**	**36.84**	**77**	*e*P		**P**		**09 37 32.6**	**-0.2**
	comp=Z,3µm,1.4s,mb6.9								
C05A	**Tolt Reservoir**	**36.88**	**72**	⇓ P		**P**		**09 37 33.8**	**+0.6**
	baz=37,SNR=127								
C05A				⇓ S		**S**		**09 43 16.5**	**+1.4**
	baz=37								
D05A	**Enumclaw**	**36.94**	**73**	⇑ P		**P**		**09 37 34.8**	**+1.1**
	baz=37,SNR=172								
D05A				⇑ S		**S**		**09 43 19.0**	**+3.0**
	baz=37								
H02A	**To

comp=Z,349µm,21.0s,MS7.1
WPW White Pass 37.44 74 P **P 09 37 38.6 +0.7**
B07A Winthrop 37.45 70 ⇑P **P 09 37 38.2 +0.2**
baz=37,SNR=224
BOD Bodaibo 37.59 306 *e*P **P 09 37 38.4 -0.7**
BOD pmax pmax
comp=Z,657nm,0.9s,mb6.4
G04A Mulino 37.62 76 ⇓P **P 09 37 40.3 +0.8**
baz=37,SNR=119
CBIJ Chichi jima 37.67 245 LR LR 09 51 07.9
comp=Z,85µm,21.8s,MS6.5,baz=39,slow=33
LTY Liberty 37.69 72 P **P 09 37 40.4 +0.3**
KEBM Edson Butte 37.70 81 *e*P **P 09 37 43.1 +2.9**
A08A Turner Farm, O 37.73 69 ⇑P **P 09 37 40.1 -0.2**
baz=38,SNR=184
ETW Entiat 37.73 72 *e*P **P 09 37 40.8 +0.5**
I03A Eugene 37.77 79 ⇓P **P 09 37 41.7 +1.0**
baz=38,SNR=29
TBM Table Mountain 37.78 73 P **P 09 37 41.2 +0.5**
HIA Hailar 37.85 291 *e*P **P 09 37 41.1 -0.3**
HIA *e* 09 39 13.6
HIA *e*S **S 09 43 28.6 -1.2**
HIA pmax pmax
comp=Z,568nm,0.8s
HIA MLR MLR
comp=Z,90µm,20.0s
HIA Hailar 37.85 291 *e*P **P 09 37 41.1 -0.2**
comp=Z,568nm,0.8s,mb6.3
HIA *e*PP PP 09 39 13.6 +5.6
HIA *e*S **S 09 43 28.6 -1.2**
HIA LR LR
comp=Z,90µm,20.0s,MS6.6
C07A Waterville 37.85 72 ⇓P **P 09 37 41.5 +0.1**
baz=38,SNR=219
E06A Yakima 37.86 74 ⇑P **P 09 37 41.9 +0.5**
baz=38,SNR=73
F05A White Salmon 37.89 75 ⇑P **P 09 37 42.5 +0.8**
baz=38,SNR=43
EBG Ellensburg 37.92 73 P **P 09 37 42.8 +0.7**
B08A Colville Reser 37.97 70 ⇑P **P 09 37 42.5 +0.2**
baz=38,SNR=290
HOOD Mount Hood Mea 38.06 76 *e*P **P 09 37 44.0 +0.9**
comp=Z,8µm,2.0s,mb7.1
HOOD *e*pP pP 09 37 52.3 -1.3
H04A Detroit Lake 38.06 77 ⇓P **P 09 37 43.8 +0.6**
baz=38,SNR=217
A09A Danville 38.12 69 ⇓P **P 09 37 44.0 +0.4**
baz=38,SNR=179
D07A Quincy 38.14 72 ⇑P **P 09 37 44.2 +0.3**
baz=38,SNR=190
G05A Wamic 38.30 76 ⇓P **P 09 37 45.5 +0.3**
baz=38,SNR=55
F06A Goldendale 38.36 75 ⇑P **P 09 37 46.5 +0.8**
baz=38,SNR=134
C08A Higginbotham F 38.41 71 ⇓P **P 09 37 46.1 +0.1**
baz=38,SNR=73
E07A Sunnyside 38.52 73 ⇑P **P 09 37 47.5 +0.5**
baz=38,SNR=134
B09A Rice 38.63 70 ⇑P **P 09 37 48.1 +0.2**
baz=38,SNR=119
H05A Madras 38.67 76 ⇓P **P 09 37 48.9 +0.7**
baz=38,SNR=90
HUMO Hull Mountain 38.70 80 *e*P **P 09 37 49.6 +1.1**
comp=Z,961nm,1.6s,mb6.3
HUMO LR LR
comp=Z,550µm,22.0s,MS7.3
A10A Northport 38.71 68 ⇑P **P 09 37 48.8 +0.2**
baz=38
G06A Carlson Farm, 38.72 75 ⇑P **P 09 37 49.4 +0.6**
baz=38,SNR=61
RSW Rattlesnake Hi 38.76 73 *e*P **P 09 37 49.7 +0.6**
OD2 Odessa Site #2 38.80 71 *e*P **P 09 37 49.2 -0.1**
HAWA Hanford 38.80 73 *e*P **P 09 37 49.7 +0.3**
comp=Z,10µm,2.3s,mb7.1
HAWA *e*pP pP 09 37 58.4 -1.4
HAWA *e*S **S 09 43 35.1 -9.1**
HAWA LR LR
comp=Z,385µm,22.0s,MS7.2
F07A Phinny Hill Vi 38.81 74 ⇑P **P 09 37 50.2 +0.7**
baz=39,SNR=170
D08A Wollman Farm, 38.84 72 ⇓P **P 09 37 49.7 +0.1**
baz=39,SNR=237
C09A Chrisman Ranch 38.86 70 ⇓P **P 09 37 49.7 -0.1**
baz=39,SNR=150
I05A Bend 38.90 77 ⇓P **P 09 37 51.1 +0.9**
baz=39,SNR=194
E08A Dider Farm, El 39.03 73 ⇓P **P 09 37 51.7 +0.3**
baz=39,SNR=218
H06A Lindquist Farm 39.16 76 ⇑P **P 09 37 52.8 +0.4**
baz=39,SNR=138
KSRS Korea Array 39.18 270 P **P 09 37 53.5 +0.9**
comp=Z,275nm,1.0s,mb6.0,baz=58,slow=7.2,SNR=164
KSRS PcP PcP 09 40 03.2 +1.9
comp=Z,56nm,0.9s,baz=46,slow=2.3,SNR=6.3
KSRS S **S 09 43 54.1 +4.0**
comp=Z,2.6nm,0.9s,baz=51,slow=17,SNR=3.4
KSRS LR LR 09 53 43.7
comp=Z,32µm,18.9s,MS6.2,baz=62,slow=36
KSRS Korea Array 39.18 270 P **P 09 37 53.6 +1.0**
KSRS 09 40 03.3
KSRS S **S 09 43 54.1 +4.0**
KSRS pmax pmax
comp=Z,275nm,1.0s,mb5.9
KSRS smax
comp=N,3.0nm,1.0s
KSRS MLR MLR
comp=Z,32µm,18.9s,MS6.2
KHMM Horse Mountain 39.19 83 *e*P **P 09 37 55.9 +3.2**
D09A Jones Farm, Ri 39.20 71 ⇓P **P 09 37 52.5 -0.2**
baz=39,SNR=147
EDM Edmonton 39.21 60 *e*P **P 09 37 51.9 -0.8**
B10A Chitwood Farm, 39.23 69 ⇑P **P 09 37 53.0 0.0**
baz=39,SNR=50
G07A Ruggs Ranch, H 39.29 75 ⇓P **P 09 37 53.6 +0.1**
baz=39,SNR=70
NEW Newport 39.31 69 *e*P **P 09 37 53.5 -0.1**
comp=Z,2µm,1.5s,mb6.6
NEW LR LR
comp=Z,282µm,22.0s,MS7.0
SNY Shenyang 39.32 279 ⇑P **P 09 37 54.4 +0.6**
SNY S **S 09 43 50.8 -1.3**
SNY XS sS 09 44 08.3 -1.1
SNY AMB AMB
comp=Z,690nm,3.5s
SNY AMB AMB
comp=Z,19µm,7.7s
SNY LR LR
comp=N,68µm,17.9s,MS6.6
SNY LR LR
comp=E,54µm,18.0s,MS6.6
SNY LR LR
comp=Z,95µm,20.4s,MS6.6
YBH Yreka Blue Hor 39.34 81 P **P 09 37 53.7 -0.2**
comp=Z,426nm,1.0s,mb6.1,baz=276,slow=3.0,SNR=46
YBH S **S 09 43 56.6 +4.3**
comp=Z,47nm,1.1s,baz=49,slow=1.6,SNR=5.2
YBH LR LR 09 52 20.1
comp=Z,280µm,20.4s,MS7.1,baz=302,slow=34
YBH Yreka Blue Hor 39.34 81 P **P 09 37 53.7 -0.2**
YBH S **S 09 43 56.6 +4.2**
YBH pmax pmax
comp=Z,426nm,1.0s
YBH smax
comp=N,47nm,1.1s
YBH Yreka Blue Hor 39.34 81 *e*P **P 09 37 54.9 +1.0**
comp=N,505nm,0.9s,mb6.2
YBH LR LR
comp=Z,274µm,21.0s,MS7.1
C10A Spilker Farm, 39.42 70 ⇓P **P 09 37 54.3 -0.2**
baz=39,SNR=87
A11A Hall Mountain, 39.42 68 ⇑P **P 09 37 55.0 +0.5**
baz=39,SNR=184
F08A Pendleton 39.55 73 ⇓P **P 09 37 56.1 +0.5**
baz=39,SNR=156
E09A Wood Farm, Sta 39.57 72 ⇓P **P 09 37 55.6 -0.2**
baz=39,SNR=373
I06A Prineville 39.66 77 ⇑P **P 09 37 57.2 +0.6**
baz=40,SNR=130
B11A Sandpoint 39.67 69 ⇓P **P 09 37 56.5 -0.1**
baz=39,SNR=89
G08A Pilot Rock 39.71 74 ⇑P **P 09 37 56.9 0.0**
baz=40,SNR=171
LNOR Lincton Mounta 39.81 73 *e*P **P 09 37 52.1 -5.7**
D10A Wagner Farm, O 39.81 71 ⇑P **P 09 37 57.3 -0.5**
baz=40,SNR=197
A12A Yaak River Ran 39.84 68 ⇑P **P 09 37 58.0 0.0**
baz=40,SNR=64

RES Resolute Bay 39.92 24 P **P 09 37 57.7 -0.7**
comp=Z,58nm,0.6s,mb5.5,baz=264,slow=9.8,SNR=34
RES PcP PcP 09 40 04.3 +1.2
comp=Z,60nm,0.6s,baz=0.0,slow=0.0,SNR=3.1
RES ScP ScP 09 43 49.8 +0.8
comp=Z,280nm,1.2s,baz=302,slow=4.2,SNR=9.8
RES Resolute Bay 39.92 24 P **P 09 37 57.7 -0.7**
RES 09 40 04.3
RES 09 43 49.8
RES pmax pmax
comp=Z,58nm,0.6s,mb5.5
RES pmax pmax
comp=N,280nm,1.2s
RES Resolute Bay 39.92 24 *e*P **P 09 37 58.0 -0.4**
comp=N,699nm,1.6s,mb6.1
RES *e*pP pP 09 38 04.6 -4.2
RES *e*S **S 09 44 00.2 -0.2**
I07A Izee 40.02 76 ⇑P **P 09 38 00.2 +0.6**
baz=40,SNR=283
J06A Christmas Vall 40.07 78 ⇑P **P 09 38 00.9 +0.9**
baz=40,SNR=286
WDC Whiskeytown Da 40.10 83 *e*P **P 09 38 01.4 +1.2**
comp=N,358nm,1.0s,mb6.0
WDC LR LR
comp=Z,152µm,19.0s,MS6.9
B12A Libby 40.10 68 ⇑P **P 09 38 00.6 +0.3**
baz=40,SNR=24
F09A S2 Ranch, Elgi 40.12 73 ⇓P **P 09 38 00.7 +0.3**
baz=40,SNR=341
CIT Chita 40.13 298 *e*P **P 09 38 01.2 +0.8**
CIT *e* pP 09 38 11.3 +0.5
E10A Myers Farm, Un 40.20 72 ⇑P **P 09 38 01.1 0.0**
baz=40,SNR=264
H08A Prairie City 40.29 75 ⇓P **P 09 38 02.0 +0.2**
baz=40,SNR=151
D11A Klaveano Farm, 40.37 70 ⇑P **P 09 38 01.6 -0.9**
baz=40,SNR=213
F10A Beach Ranch, E 40.39 72 ⇓P **P 09 38 02.7 +0.1**
baz=40
G09A Cove 40.42 74 ⇑P **P 09 38 03.1 +0.2**
baz=40,SNR=239
J07A Hines 40.52 77 ⇓P **P 09 38 04.3 +0.6**
baz=40,SNR=198
C12B Naegeli Ranch, 40.55 69 ⇑P **P 09 38 04.0 +0.1**
baz=40,SNR=14
A13A Flathead Natio 40.56 67 ⇑P **P 09 38 03.7 -0.3**
baz=40
I08A Drewsey 40.68 76 ⇓P **P 09 38 05.4 +0.4**
baz=40,SNR=440
HOPS Hopland 40.70 85 *e*P **P 09 38 05.0 -0.3**
comp=Z,684nm,1.2s,mb6.2
HOPS LR LR
comp=Z,370µm,21.0s,MS7.2
MOD Modoc 40.73 79 *e*P **P 09 38 06.2 +0.8**
MOD *e*S **S 09 44 11.2 -2.0**
MOD LR LR
comp=Z,447µm,21.0s,MS7.3
WALA Waterton Lakes 40.79 67 *e*P **P 09 38 05.5 -0.4**
comp=Z,20nm,1.0s
E11A Bogner Ranch, 40.80 71 ⇑P **P 09 38 05.3 -0.7**
baz=41,SNR=135
B13A Whitefish 40.80 68 ⇑P **P 09 38 05.8 -0.2**
baz=41,SNR=128
G10A Bishop Farm, J 40.81 73 ⇑P **P 09 38 06.3 +0.2**
baz=41,SNR=724
H09A Durkee 40.82 74 ⇑P **P 09 38 06.4 +0.2**
baz=41,SNR=43
BSMT Basco Peak 40.88 69 *e*P **P 09 38 06.6 0.0**
K07A Rock Creek Ran 40.93 78 ⇑P **P 09 38 08.3 +1.1**
baz=41,SNR=378
BMO Blue Mountains 40.93 74 *e*P **P 09 38 07.3 +0.2**
comp=Z,4µm,2.1s,mb6.7
BMO LR LR
comp=Z,386µm,22.0s,MS7.2
J08A Circle Bar Ran 41.03 76 ⇑P **P 09 38 08.5 +0.5**
baz=41,SNR=334
F11A Grangeville 41.08 72 ⇑P **P 09 38 07.7 -0.6**
baz=41,SNR=307
C13A Hot Springs 41.09 69 ⇑P **P 09 38 08.2 -0.2**
baz=41,SNR=182
A14A Double T Ranch 41.11 66 ⇓P **P 09 38 08.1 -0.5**
baz=41,SNR=283
I09A Lost Marbles R 41.14 75 ⇑P **P 09 38 08.9 +0.1**
baz=41,SNR=135
JTMT Jette 41.22 68 *e*P **P 09 38 09.3 -0.2**
G11A Walters Elk Ra 41.27 73 ⇓P **P 09 38 09.6 -0.2**
baz=41,SNR=489
YBMT Yellow Bay 41.32 68 *e*P **P 09 38 10.1 -0.2**
MCCM Marconi Confer 41.33 86 *e*P **P 09 38 10.7 +0.3**
comp=Z,750nm,1.6s,mb6.1
MCCM LR LR
comp=Z,227µm,22.0s,MS7.0
K08A Mann Creek Ran 41.38 77 ⇓P **P 09 38 11.5 +0.7**
baz=41,SNR=366
H10A Noah's Angus R 41.41 74 ⇓P **P 09 38 11.0 -0.1**
baz=41,SNR=441
WVOR Wild Horse Val 41.45 78 *e*P **P 09 38 11.8 +0.4**
WVOR pmax pmax
comp=Z,68nm,0.4s,mb5.6
WVOR MLR MLR
comp=Z,368µm,21.0s,MS7.2
WVOR Wild Horse Val 41.45 78 *e*P **P 09 38 11.8 +0.4**
comp=Z,68nm,0.4s,mb5.6
WVOR LR LR
comp=Z,368µm,21.0s,MS7.2
D13A Huson 41.45 69 ⇑P **P 09 38 10.7 -0.7**
baz=41,SNR=186
J09A Fry Pan Ranch, 41.48 76 ⇑P **P 09 38 12.1 +0.5**
baz=41,SNR=402
OHCM Honcut 41.48 83 *e*P **P 09 38 11.4 -0.3**
B14A Marquette Ranc 41.50 67 ⇓P **P 09 38 11.3 -0.5**
baz=41,SNR=132
A15A Johnson Ranch, 41.50 66 ⇑P **P 09 38 10.5 -1.2**
baz=41,SNR=137
SWMT Swartz Lake 41.51 69 *e*P **P 09 38 11.4 -0.4**
I10A Payette 41.65 75 ⇑P **P 09 38 13.4 +0.4**
baz=41,SNR=100
N06A Buffalo Meadow 41.68 81 ⇑P **P 09 38 14.2 +0.9**
baz=42,SNR=381
M07A Soldier Meadow 41.72 79 ⇑P **P 09 38 14.5 +0.9**
baz=42,SNR=299
L08A Fields 41.77 78 ⇑P **P 09 38 14.5 +0.5**
baz=42,SNR=313
H11A Donnelly 41.79 73 ⇑P **P 09 38 13.9 -0.2**
baz=42,SNR=288
BEKR Beckwourth 41.87 82 ⇑P **P 09 38 15.1 +0.3**
baz=42
MSO Missoula 41.89 69 *e*P **P 09 38 14.6 -0.4**
comp=Z,452nm,0.9s,mb6.1
MSO LR LR
comp=Z,103µm,22.0s,MS6.7
B15A Bradely Ranch, 41.93 67 ⇑P **P 09 38 14.2 -1.1**
baz=42,SNR=256
SLMT Seeley Lake 41.94 69 *e*P **P 09 38 14.9 -0.5**
E13A Victor 41.95 70 ⇑P **P 09 38 15.0 -0.4**
baz=41,SNR=263
SAC San Andreas 41.96 86 *e*P **P 09 38 19.0 +3.4**
D14A Greenough 42.02 69 ⇑P **P 09 38 15.4 -0.6**
baz=42,SNR=731
J10A Berg Farm, Mel 42.03 75 ⇓P **P 09 38 16.0 -0.2**
baz=42,SNR=87
A16A West Butte Ran 42.17 66 ⇓P **P 09 38 15.8 -1.4**
baz=42,SNR=224
M08A Happy Creek Ra 42.17 79 ⇓P **P 09 38 17.8 +0.5**
baz=42,SNR=126
C15A Salmond Ranch, 42.18 68 ⇓P **P 09 38 17.1 -0.2**
baz=42,SNR=733
N07B Gerlach 42.19 80 ⇓P **P 09 38 17.8 +0.3**
baz=42,SNR=273
F13A Darby 42.21 71 ⇑P **P 09 38 17.7 +0.1**
baz=42,SNR=301
DL2 Dalian 42.23 277 ⇑*i*P **P 09 38 17.6 -0.2**
DL2 AP pP 09 38 30.8 +2.5
DL2 S **S 09 44 36.6 +1.1**
DL2 AMB AMB
comp=Z,220nm,1.0s,mb5.7
DL2 AMB AMB
comp=Z,6µm,8.8s
DL2 LR LR
comp=N,31µm,21.3s
DL2 LR LR
comp=Z,53µm,34.5s
CHMT Chamberlain Mo 42.25 69 *e*P **P 09 38 17.2 -0.7**
P06A Stead Airport, 42.27 82 ⇑P **P 09 38 18.6 +0.5**
baz=42,SNR=77
L09A Wilkinson Ranc 42.28 78 ⇑P **P 09 38 18.1 0.0**
baz=42,SNR=320

K10A MacKenzie Ranc 42.33 76 ⇑P **P 09 38 19.1 +0.5**
baz=42,SNR=796
E14A Clinton 42.37 70 ⇑P **P 09 38 18.4 -0.4**
baz=42,SNR=345
B16A M & M Farms, S 42.38 66 ⇑P **P 09 38 17.7 -1.1**
baz=42,SNR=30
PAHR Pah Rah Range 42.57 82 *e*P **P 09 38 21.1 +0.6**
comp=Z,882nm,1.3s,mb6.3
H12A Diamond D Ranc 42.57 73 ⇑P **P 09 38 20.0 -0.5**
baz=42,SNR=268
WCN Washoe City 42.58 82 ⇑P **P 09 38 21.1 +0.5**
baz=42
MFID Camas Ranch 42.61 75 ⇑P **P 09 38 20.9 0.0**
baz=42,SNR=170
O07A Toulon 42.61 81 ⇑P **P 09 38 21.4 +0.6**
baz=42,SNR=383
D15A Lincoln 42.61 68 ⇑P **P 09 38 20.1 -0.7**
baz=42,SNR=312
G13A Cobalt 42.64 72 ⇓P **P 09 38 20.8 -0.3**
baz=42,SNR=867
C16A Fuhringer Ranc 42.67 67 ⇓P **P 09 38 20.6 -0.6**
baz=42,SNR=219
A17A Triple J Farms 42.68 65 ⇓P **P 09 38 20.3 -1.0**
baz=42,SNR=324
ALE Alert 42.69 10 P **P 09 38 21.0 0.0**
comp=Z,2µm,0.7s,mb6.9,SNR=58
N08A GE Springer Mi 42.71 79 ⇑P **P 09 38 22.1 +0.4**
baz=42,SNR=226
M09A Marrel Ranch, 42.75 78 ⇓P **P 09 38 22.5 +0.5**
baz=42,SNR=129
F14A Wisdom 42.77 70 ⇑P **P 09 38 21.9 -0.2**
baz=42,SNR=349
K11A Parker Ranch, 42.85 76 ⇓P **P 09 38 23.0 +0.2**
baz=43,SNR=310
E15A Deer Lodge 42.87 69 ⇑P **P 09 38 22.3 -0.6**
baz=43,SNR=508
H13A Challis 42.92 72 ⇑P **P 09 38 23.1 -0.3**
baz=43,SNR=140
CMB Columbia Colle 42.95 84 *e*P **P 09 38 23.7 0.0**
CMB *e*S **S 09 44 46.4 +0.2**
CMB MLR MLR
comp=Z,319µm,22.0s,MS7.2
P07A Fallon 42.97 81 ⇓P **P 09 38 24.1 +0.2**
baz=43
L10A Juniper Basin 42.98 77 ⇓P **P 09 38 24.3 +0.5**
baz=43,SNR=487
O08A Rochester Mine 42.98 80 ⇓P **P 09 38 24.7 +0.8**
baz=43,SNR=124
N09A Rock Creek Ran 43.04 79 ⇑P **P 09 38 24.7 +0.4**
baz=43,SNR=208
SAO San Andreas Ge 43.08 86 *e*P **P 09 38 24.9 +0.2**
SAO MLR MLR
comp=Z,224µm,19.0s,MS7.1
J12A Stokes Ranch, 43.14 75 ⇓P **P 09 38 25.4 +0.3**
baz=43,SNR=335
D16A Dana Ranch, Ca 43.18 68 ⇑P **P 09 38 25.0 -0.5**
baz=43,SNR=70
HRY Holter Researc 43.19 68 *e*P **P 09 38 23.6 -1.8**
R06C Coleville 43.24 83 ⇓P **P 09 38 26.6 +0.6**
baz=43,SNR=60
M10A I.L. Ranch, Tu 43.25 78 ⇑P **P 09 38 26.4 +0.3**
baz=43,SNR=173
WAKR Walker 43.26 83 *e*P **P 09 38 26.6 +0.5**
F15A Butte 43.27 70 ⇓P **P 09 38 25.3 -0.8**
baz=43,SNR=177
LRM Limekiln Ridge 43.30 70 *e*P **P 09 38 26.0 -0.4**
C17A Wharram Farm, 43.32 67 ⇓P **P 09 38 25.7 -0.9**
baz=43,SNR=110
I13A Wildhorse Cree 43.36 73 ⇑P **P 09 38 26.9 0.0**
baz=43,SNR=701
L11A Cat Creek Ranc 43.36 76 ⇑P **P 09 38 27.4 +0.4**
baz=43,SNR=973
E16A East Helena 43.37 69 ⇑P **P 09 38 26.9 -0.1**
baz=43,SNR=207
HLID Hailey 43.38 74 *e*P **P 09 38 27.3 +0.3**
comp=Z,877nm,1.0s,mb6.4
HLID *e*S **S 09 44 52.0 -0.3**
HLID LR LR
comp=Z,304µm,21.0s,MS7.2
Q07A Schurz 43.38 82 ⇑P **P 09 38 27.3 +0.1**
baz=43,SNR=26
H14A Leadore 43.42 72 ⇑P **P 09 38 27.3 0.0**
baz=43,SNR=586
DLMT Dillon 43.47 71 *e*P **P 09 38 27.1 -0.6**
comp=Z,2µm,1.9s,mb6.5
DLMT *e*S **S 09 44 57.0 +3.5**
BMN Battle Mountai 43.47 79 *e*P **P 09 38 28.3 +0.4**
comp=Z,1µm,1.4s,mb6.4
BMN LR LR
comp=Z,361µm,22.0s,MS7.2
B18A Beardsley Farm 43.49 65 ⇑P **P 09 38 27.2 -0.7**
baz=43,SNR=148
K12A Draper Farm, C 43.61 75 ⇑P **P 09 38 29.6 +0.7**
baz=43,SNR=534
J13A Cove Ranch, Pi 43.62 74 ⇓P **P 09 38 29.2 +0.3**
baz=43,SNR=660
D17A Six Diamond Ra 43.62 67 ⇓P **P 09 38 28.5 -0.5**
baz=43
G15A Dillon 43.64 71 ⇓P **P 09 38 28.7 -0.4**
baz=43,SNR=630
O09A Fish Creek Ran 43.65 80 ⇑P **P 09 38 29.7 +0.4**
baz=43,SNR=198
EGMT Eagleton 43.69 66 *e*P **P 09 38 28.6 -1.0**
comp=Z,618nm,0.8s,mb6.4
EGMT LR LR
comp=Z,177µm,22.0s,MS6.9
N10A Dunphy 43.74 78 ⇓P **P 09 38 30.4 +0.4**
baz=44,SNR=54
I14A Mackay 43.75 73 ⇑P **P 09 38 30.4 +0.4**
baz=44,SNR=360
M11A Holland Ranch, 43.76 77 ⇓P **P 09 38 30.8 +0.6**
baz=44,SNR=386
F16A Kennard Place, 43.81 70 ⇑P **P 09 38 30.1 -0.3**
baz=44,SNR=135
L12A House Creek Ra 43.82 76 ⇑P **P 09 38 31.2 +0.5**
baz=44,SNR=1000
H15A Lima 43.85 71 ⇑P **P 09 38 30.9 +0.1**
baz=44,SNR=516
BOZ Bozeman (W) 43.88 70 *e*P **P 09 38 31.0 0.0**
comp=Z,347nm,0.8s,mb6.1
BOZ *e*S **S 09 44 59.4 -0.2**
BOZ LR LR
comp=Z,106µm,19.0s,MS6.8
E17A Martinsdale 43.89 68 ⇑P **P 09 38 31.1 0.0**
baz=44,SNR=345
Q08A Gabbs 43.98 82 ⇑P **P 09 38 32.1 +0.2**
baz=44,SNR=280
O10A Cortez Mining, 44.00 79 ⇑P **P 09 38 32.7 +0.6**
baz=44,SNR=49
G16A Moss Hill, Enn 44.01 70 ⇓P **P 09 38 31.8 -0.3**
baz=44,SNR=779
NVAR Mina Array Bea 44.01 82 P **P 09 38 30.8 -1.4**
comp=Z,54nm,0.9s,mb5.3,baz=293,slow=5.5,SNR=150
NVAR ScP ScP 09 44 10.1 +4.2
comp=Z,69nm,1.0s,baz=292,slow=5.5,SNR=4.5
P09A Austin 44.05 80 ⇑P **P 09 38 33.1 +0.7**
baz=44,SNR=239
J14A Carey 44.05 74 ⇑P **P 09 38 32.8 +0.4**
baz=44,SNR=486
K13A Stover Farm, H 44.10 75 ⇓P **P 09 38 32.9 0.0**
baz=44,SNR=165
D18A Linhart Farms, 44.11 67 ⇑P **P 09 38 32.7 -0.1**
baz=44,SNR=180
N11A Elko Archery C 44.16 78 ⇑P **P 09 38 33.7 +0.3**
baz=44,SNR=108
MLAC Mammoth Lakes 44.17 84 ⇓P **P 09 38 33.8 +0.3**
baz=44
R08A Mina 44.18 82 ⇑P **P 09 38 33.8 +0.2**
baz=44,SNR=26
I15A Monteview 44.29 72 ⇓P **P 09 38 34.4 +0.1**
baz=44,SNR=115
M12A Wells 44.31 77 ⇑P **P 09 38 34.8 +0.3**
baz=44,SNR=437
F17A Fitzpatrick Pl 44.31 69 ⇓P **P 09 38 34.2 -0.2**
baz=44,SNR=360
E18A Harlowton 44.38 68 ⇓P **P 09 38 35.0 0.0**
baz=44,SNR=339
P10A Eureka 44.42 80 ⇑P **P 09 38 35.9 +0.4**
baz=44,SNR=114
QLMT Earthquake Lak 44.45 71 *e*P **P 09 38 35.4 -0.2**
Q09A Carvers 44.46 81 ⇓P **P 09 38 36.3 +0.6**
baz=44,SNR=49
ELK Elko 44.51 78 *e*P **P 09 38 36.4 +0.3**
comp=Z,653nm,1.1s,mb6.4
ELK *e*S **S 09 45 04.8 -3.9**
ELK LR LR
comp=Z,320µm,21.0s,MS7.2
FFC Flin Flon 44.51 54 P **P 09 38 34.5 -1.4**

comp=Z,338nm,0.6s,mb6.3,SNR=14
FFC Flin Flon 44.51 54 *e*P P 09 38 34.2 -1.7
comp=Z,53nm,0.7s,mb5.5
FFC *e* 09 40 18.5
FFC *e*ScP ScP 09 44 08.7 +1.0
FFC LR LR
comp=Z,371µm,22.0s,MS7.3
L13A Double Diamond 44.51 75 ⇑P P 09 38 36.4 +0.3
baz=44,SNR=596
MTUM Tungsten Hills 44.51 84 *e*P P 09 38 36.8 +0.6
N12A Clover Valley, 44.56 77 ⇑P P 09 38 36.9 +0.3
baz=44,SNR=708
G17A Pierce Place, 44.58 70 ⇓P P 09 38 36.6 -0.1
baz=44,SNR=484
O11A Cowboy Ranch, 44.61 79 ⇑P P 09 38 37.2 +0.2
baz=44,SNR=106
H16A Russell Place, 44.63 71 ⇓P P 09 38 37.0 -0.1
baz=44,SNR=940
J15A Blackfoot 44.66 73 ⇓P P 09 38 38.0 +0.7
baz=44,SNR=278
K14A Jones Ranch, D 44.70 74 ⇑P P 09 38 37.7 0.0
baz=44,SNR=147
RCTC Rector, Farmer 44.74 85 ⇓P P 09 38 37.7 -0.4
baz=45
M13A Montello 44.80 76 ⇑P P 09 38 38.7 +0.3
baz=45,SNR=165
F18A Big Timber 44.86 68 ⇓P P 09 38 38.6 -0.2
baz=45,SNR=225
R09A Tonopah 44.89 82 ⇓P P 09 38 39.3 +0.1
baz=45,SNR=627
TPH Tonopah 44.90 82 *e*P P 09 38 39.6 +0.3
TPH *e**PP pP 09 38 47.4 -2.5
TPH *e*S **S** **09 45 16.0 +1.5**
TPH pmax pmax
comp=Z,462nm,0.9s,mb6.3
TPH MLR MLR
comp=Z,227µm,21.0s,MS7.1
TPH Tonopah 44.90 82 *e*P P 09 38 39.6 +0.3
comp=Z,462nm,0.9s,mb6.3
TPH *e*pP pP 09 38 47.4 -2.5
TPH *e*S **S** **09 45 15.9 +1.5**
TPH LR LR
comp=Z,227µm,21.0s,MS7.1
P11A Circle Ranch, 44.90 79 ⇑P P 09 38 39.8 +0.5
baz=45,SNR=127
TIN Tinemaha 44.91 84 ⇑P P 09 38 39.4 0.0
baz=45
SMMC Simmler 44.91 87 ⇑P P 09 38 38.6 -0.7
baz=45
BJI Beijing 44.92 282 P P 09 38 39.8 +0.4
BJI S **S** **09 45 13.3 -1.5**
BJI AMB AMB
comp=Z,382nm,1.0s,mb6.2
BJI AMB AMB
comp=Z,19µm,7.8s
BJI LR LR
comp=N,66µm,20.9s,MS6.7
BJI LR LR
comp=E,77µm,23.7s,MS6.7
BJI LR LR
comp=Z,152µm,37.6s
BJT Baijiatuau 44.94 282 *e*P P 09 38 40.1 +0.5
BJT pmax pmax
comp=Z,738nm,1.0s
BJT MLR MLR
comp=Z,78µm,20.0s
BJT Baijiatuau 44.94 282 *e*P P 09 38 40.1 +0.5
comp=Z,738nm,1.0s,mb6.5
BJT LR LR
comp=Z,78µm,20.0s,MS6.6
Q10A Clear Creek Ra 44.95 81 ⇓P P 09 38 39.9 +0.3
baz=45,SNR=619
I16A Newdale 44.95 72 ⇓P P 09 38 40.0 +0.3
baz=45,SNR=172
YNR Norris Junctio 44.96 70 *e*P P 09 38 40.4 +0.7
K15A Arbon 45.01 74 ⇑P P 09 38 40.9 +0.7
baz=45,SNR=464
YFT Old Faithful 45.01 71 *e*P P 09 38 41.4 +1.3
IRK Irkutsk 45.04 302 ⇑*i*P P 09 38 40.3 +0.1
IRK *e* pP 09 38 49.3 -1.5
IRK *e* 09 48 33.2
IRK pmax pmax
comp=Z,1µm,12.0s
O12A Currie 45.09 78 ⇓P P 09 38 40.8 0.0
baz=45,SNR=725
S09A Goldfield 45.11 82 ⇑P P 09 38 40.7 -0.3
baz=45,SNR=158
VES Vestal, Richgr 45.14 86 ⇓P P 09 38 40.4 -0.8
baz=45
H17A Grant Village 45.20 71 ⇓P P 09 38 42.2 +0.6
baz=45,SNR=370
M14A Sheep Mountain 45.21 76 ⇓P P 09 38 42.0 +0.3
baz=45,SNR=289
IMW Indian Meadow 45.27 71 *e*P P 09 38 42.5 +0.3
comp=Z,608nm,0.9s,mb6.4
PKM Peak Mountain 45.29 87 ⇓P P 09 38 42.7 +0.3
baz=45
DCID1 Drake Creek 45.29 72 *e*P P 09 38 43.0 +0.6
comp=Z,410nm,0.8s,mb6.3
R10A Warm Springs 45.34 81 ⇓P P 09 38 42.8 0.0
baz=45,SNR=378
RRI2 Red Ridge 45.35 72 *e*P P 09 38 43.5 +0.7
comp=Z,541nm,0.7s,mb6.5
RRI2 *e*S **S** **09 45 20.7 -0.3**
S10A Tonopah Range, 45.38 82 ⇓P P 09 38 43.1 -0.1
baz=45,SNR=461
CWC Cottonwood Cre 45.38 84 ⇓P P 09 38 43.6 +0.4
baz=45
HVU Hansel Valley 45.39 75 *e*P P 09 38 43.6 +0.4
Q11A Duckwater 45.39 80 ⇑P P 09 38 43.5 +0.3
baz=45,SNR=357
MOOW Moose Ponds 45.47 71 *e*P P 09 38 43.9 +0.2
comp=Z,240nm,1.0s,mb6.0
I17A Pilgram Creek 45.47 71 ⇓P P 09 38 44.4 +0.7
baz=45,SNR=205
P12A McGill 45.47 79 ⇑P P 09 38 44.4 +0.6
baz=45
GRAC Grapevine Rang 45.47 83 ⇓P P 09 38 44.4 +0.5
baz=45
K16A Soda Springs 45.49 73 ⇑P P 09 38 44.6 +0.7
baz=45,SNR=485
TPAW Teton Pass 45.49 72 *e*P P 09 38 44.3 +0.4
comp=Z,258nm,0.8s,mb6.1
TPAW *e*S **S** **09 45 23.2 +0.2**
L15A Malad City 45.50 74 ⇑P P 09 38 44.1 +0.1
baz=45,SNR=233
RLMT Red Lodge 45.56 69 *e*P P 09 38 44.6 +0.2
comp=Z,1µm,1.0s,mb6.8
RLMT LR LR
comp=Z,104µm,19.0s,MS6.8
REDW Red Top Meadow 45.63 72 *e*P P 09 38 45.1 +0.1
comp=Z,802nm,1.0s,mb6.6
REDW *e*S **S** **09 45 25.9 +1.1**
SNOW Snow King Moun 45.63 72 *e*P P 09 38 44.9 0.0
comp=Z,316nm,0.9s,mb6.2
LOHW Long Hollow 45.63 71 *e*P P 09 38 45.1 +0.1
comp=Z,328nm,0.9s,mb6.3
ISA Isabella 45.63 85 ⇓P P 09 38 45.2 +0.1
baz=46
ISA Isabella 45.63 85 *e*P P 09 38 44.7 -0.5
ISA *e*S **S** **09 45 18.7 -6.5**
O13A Hicks Ranch, I 45.64 77 ⇓P P 09 38 45.3 +0.2
baz=45,SNR=147
SBC Santa Barbara 45.65 88 ⇓P P 09 38 45.5 +0.3
baz=46
TLY Talaya 45.66 302 P P 09 38 46.5 +1.3
comp=Z,4µm,1.3s,mb7.2
TLY Talaya 45.66 302 P P 09 38 46.2 +1.0
SNR=543
TLY Talaya 45.66 302 *c i*P P 09 38 45.9 +0.7
TLY *e*S **S** **09 45 24.9 -0.3**
TLY *e*SS SS 09 48 42.6 -6.6
TLY pmax pmax
comp=Z,912nm,1.1s,mb6.6
TLY MLR MLR
comp=Z,82µm,18.0s,MS6.7
TLY Talaya 45.66 302 *e*P P 09 38 45.9 +0.7
TLY *e*S **S** **09 45 37.5 +12**
TLY LR LR
comp=Z,92µm,19.0s,MS6.7
N14A Grayback Hills 45.69 76 ⇑P P 09 38 45.8 +0.3
baz=46,SNR=607
J17A Brown Place, J 45.71 72 ⇓P P 09 38 45.8 +0.2
baz=46,SNR=255
R11A Troy Canyon, C 45.74 81 ⇓P P 09 38 45.9 -0.1
baz=46,SNR=798
ARVC Arvin 45.76 86 ⇓P P 09 38 46.1 0.0
baz=46
M15A Larsen Ranch, 45.78 75 ⇓P P 09 38 46.1 -0.1
baz=46,SNR=488
Q12A Willow Creek R 45.78 79 ⇑P P 09 38 46.4 +0.1
baz=46,SNR=163
DAC Darwin (Calif) 45.79 84 PFAKE 09 39 00.0 +14
DAC LR LR
comp=Z,266µm,19.0s,MS7.2
AHID Auburn Hatcher 45.82 73 *e*P P 09 38 46.9 +0.3
comp=Z,530nm,0.9s,mb6.5
AHID LR LR
comp=Z,398µm,22.0s,MS7.3
ULN Ulaanbaatar 45.84 296 P P 09 38 47.7 +1.1
SNR=356
ULN Ulaanbaatar 45.84 296 *c i*P P 09 38 47.3 +0.7
ULN Ulaanbaatar 45.84 296 ⇑*i*P P 09 38 47.4 +0.8
ULN *e*ScP ScP 09 44 16.1 +2.8
ULN LR LR
comp=Z,74µm,22.0s,MS6.6
SPUT South Promonto 45.87 75 *e*P P 09 38 47.3 +0.3
K17A Gardner Place, 45.94 73 ⇑P P 09 38 47.1 -0.4
baz=46,SNR=191
BSC Santa Cruz Isl 45.99 88 ⇑P P 09 38 47.8 -0.2
baz=46
MPMC Manual Prospec 45.99 84 ⇑P P 09 38 48.0 +0.1
baz=46
P13A Bates Ranch, G 46.03 78 ⇓P P 09 38 48.3 +0.1
baz=46,SNR=173
I18A Diamond G Ranc 46.04 71 ⇓P P 09 38 48.1 -0.2
baz=46,SNR=279
L16A Fish Haven 46.06 74 ⇑P P 09 38 48.8 +0.3
baz=46,SNR=57
N15A Stansbury Isla 46.08 76 ⇓P P 09 38 48.8 +0.3
baz=46,SNR=432
JOW Kunigami 46.12 258 LR LR 09 54 51.1
comp=Z,44µm,22.0s,MS6.4,baz=65,slow=32
FURC Furnace Creek, 46.13 83 ⇓P P 09 38 49.0 0.0
baz=46
OSI Osito Adit 46.16 87 ⇓P P 09 38 49.3 0.0
baz=46
OSI Osito Adit 46.16 87 *e*P P 09 38 49.2 0.0
OSI *e*S **S** **09 45 33.7 +1.0**
TPNV Topopah Spring 46.20 82 *e*P P 09 38 49.5 -0.1
TPNV pmax pmax
comp=Z,626nm,0.9s,mb6.5
TPNV MLR MLR
comp=Z,321µm,22.0s,MS7.2
TPNV Topopah Spring 46.20 82 *e*P P 09 38 49.5 -0.2
comp=Z,626nm,0.9s,mb6.5
TPNV LR LR
comp=Z,321µm,22.0s,MS7.2
J18A Kendall Valley 46.21 72 ⇑P P 09 38 49.5 -0.1
baz=46,SNR=678
SONM Songino Array 46.22 296 P P 09 38 50.1 +0.5
comp=Z,393nm,1.0s,mb6.3,baz=58,slow=7.4,SNR=242
SONM ScP ScP 09 44 17.7 +2.7
comp=Z,50nm,0.8s,baz=46,slow=3.4,SNR=6.5
SONM LR LR 09 59 00.1
comp=Z,57µm,19.8s,MS6.5,baz=60,slow=37
SONM Songino Array 46.22 296 P P 09 38 50.1 +0.5
SONM pmax pmax
comp=Z,393nm,1.0s
SONM pmax pmax
comp=N,50nm,0.8s
SONM MLR MLR
comp=Z,57µm,19.8s
LRMC Laurel Mountai 46.24 85 ⇓P P 09 38 49.5 -0.4
baz=46
BLG Laguna Peak 46.27 88 ⇑P P 09 38 50.1 -0.1
baz=46
FCC Fort Churchill 46.28 46 *e*P P 09 38 48.7 -1.3
comp=Z,8.5nm,1.1s
FCC *e*ScP ScP 09 44 15.7 +0.7
DUG Dugway 46.31 77 *e*P P 09 38 50.6 +0.2
comp=Z,1µm,1.0s,mb6.9
DUG LR LR
comp=Z,234µm,20.0s,MS7.1
Q13A Wheeler Ranch, 46.33 79 ⇓P P 09 38 50.7 +0.1
baz=46,SNR=146
L17A Cokeville 46.35 73 ⇑P P 09 38 50.7 0.0
baz=46,SNR=180
R12A Pony Springs, 46.36 80 ⇑P P 09 38 50.5 -0.4
baz=46,SNR=427
M16A Huntsville 46.36 75 ⇑P P 09 38 50.5 -0.3
baz=46,SNR=740
EDW2 Edwards Air Fo 46.44 86 ⇓P P 09 38 51.3 -0.2
baz=46
NOQ North Oquirrh 46.46 76 *e*P P 09 38 52.0 +0.4
O15A The Old Anders 46.47 76 ⇑P P 09 38 51.7 0.0
baz=46,SNR=215
U10A Ash Meadows, A 46.49 83 ⇓P P 09 38 52.0 +0.1
baz=46,SNR=57
P14A Drum Mountains 46.53 77 ⇓P P 09 38 52.1 -0.1
baz=46,SNR=383
K18A Toltan Ranch, 46.53 72 ⇑P P 09 38 52.6 +0.4
baz=46,SNR=678
ZAK Zakamensk 46.55 301 ⇓*i*P P 09 38 52.9 +0.8
ZAK pmax pmax
comp=Z,989nm,1.3s,mb6.6
SNCC San Nicolas Is 46.55 89 ⇑P P 09 38 52.1 -0.3
baz=46
SNCC San Nicolas Is 46.55 89 *e*P P 09 38 55.3 +2.9
comp=Z,499nm,1.1s,mb6.4
DGMT Dagmar 46.59 62 *e*P P 09 38 51.3 -1.2
comp=Z,486nm,1.1s,mb6.3
DGMT *e*S **S** **09 45 37.7 -0.9**
DGMT LR LR
comp=Z,257µm,19.0s,MS7.2
DECC Green Verdugo 46.64 87 ⇓P P 09 38 52.4 -0.7
baz=46
S12A Delamar Landin 46.66 81 ⇓P P 09 38 53.3 +0.2
baz=46,SNR=284
T11A Corn Creek, Al 46.66 81 ⇓P P 09 38 52.9 -0.3
baz=46,SNR=895
CTU Camp Tracy 46.66 75 *e*P P 09 38 54.4 +1.2
TIA Tai'an 46.70 277 ⇑P P 09 38 53.4 -0.1
TIA AP pP 09 39 02.0 -2.2
TIA XP sP 09 39 04.0 -4.5
TIA S **S** **09 45 43.0 +2.5**
TIA AMB AMB
comp=Z,184nm,0.6s,mb6.2
TIA AMB AMB
comp=Z,6µm,9.0s
TIA LR LR
comp=E,46µm,15.0s,MS6.5
TIA LR LR
comp=N,18µm,17.6s,MS6.5
N16A Rees Ranch, Co 46.73 75 ⇓P P 09 38 53.7 0.0
baz=46,SNR=113
BW06 Boulder Array 46.74 72 *e*P P 09 38 53.7 -0.1
comp=N,954nm,0.8s,mb6.8
BW06 LR LR
comp=Z,286µm,21.0s,MS7.2
PDAR Pinedale Array 46.74 72 P P 09 38 53.7 -0.1
comp=Z,1µm,1.1s,mb6.8,baz=300,slow=3.5,SNR=527
PDAR S **S** **09 45 39.6 -1.3**
comp=Z,9.8nm,1.1s,baz=277,slow=7.2,SNR=1.7
PDAR LR LR 09 56 11.8
comp=Z,244µm,21.1s,MS7.1,baz=306,slow=33
Q14A Sevier Lake (B 46.77 78 ⇑P P 09 38 54.5 +0.5
baz=47,SNR=439
PASC Pasadena Art C 46.78 87 *e*P P 09 38 53.6 -0.5
MWC Mount Wilson 46.83 87 *e*P P 09 38 54.7 +0.2
MWC Mount Wilson 46.83 87 *e*P P 09 38 54.2 -0.3
R13A O'Grain Ranch, 46.84 80 ⇓P P 09 38 54.7 +0.1
baz=47,SNR=316
M17A Scullys Gap (B 46.85 74 ⇑P P 09 38 54.2 -0.4
baz=47,SNR=132
SHOC Shoshone 46.85 84 ⇑P P 09 38 54.3 -0.5
baz=47
JLU Jordanelle 46.90 75 *e*P P 09 38 55.2 +0.2
GSC Goldstone 46.91 85 ⇓P P 09 38 55.0 -0.2
baz=47
GSC Goldstone 46.91 85 *e*P P 09 38 54.9 -0.3
comp=Z,453nm,1.0s,mb6.4
NLU North Lily Min 46.91 76 *e*P P 09 38 55.5 +0.4
L18A Fontenelle, Gr 46.96 73 ⇓P P 09 38 55.0 -0.4
baz=47,SNR=316
FMP Fort Macarthur 47.01 87 ⇑P P 09 38 55.4 -0.6
baz=47
P15A Leamington 47.02 77 ⇑P P 09 38 56.3 +0.3
baz=47,SNR=272
RRX Edison Barstow 47.06 85 ⇓P P 09 38 56.1 -0.3
baz=47
N17A Moffit Pass 47.06 75 ⇓P P 09 38 56.4 +0.1
baz=47,SNR=257
BFSC Mount Baldy St 47.07 86 ⇑P P 09 38 55.9 -0.5
baz=47
MOY Mondy 47.07 303 *e*P P 09 38 57.2 +1.0
MOY pmax pmax
comp=Z,226nm,2.2s,mb5.7
U11A Corn Creek 47.07 82 ⇓P P 09 38 56.5 +0.1
baz=47,SNR=42
O16A Springville 47.11 76 ⇓P P 09 38 56.9 +0.3
baz=47,SNR=499
DAU Daniels Canyon 47.13 75 *e*P P 09 38 57.6 +0.8
K19A Absolon Red Bu 47.13 71 ⇑P P 09 38 56.0 -0.8
baz=47,SNR=964
MPU Maple Canyon 47.14 76 *e*P P 09 38 57.2 +0.2
SHPR Sheep Range 47.16 82 *e*P P 09 38 56.8 -0.3
M18A Lyman 47.23 74 ⇑P P 09 38 57.2 -0.4
baz=47,SNR=229
HHC Hu-ho-hao-te 47.24 285 *e*P P 09 38 58.8 +1.1
HHC PCP PcP 09 40 30.6 +2.1
HHC PP PP 09 40 49.4 +0.8
HHC SCP ScP 09 44 18.0 -1.3
HHC PCS PcS 09 44 24.4 +0.8
HHC *e*S **S** **09 45 45.3 -2.8**
HHC SCS ScS 09 48 44.8 -3.7
HHC SS SS 09 49 05.1 -10
HHC AMB AMB
comp=Z,402nm,1.8s,mb6.0
HHC AMB AMB
comp=Z,19µm,5.5s
HHC LR LR
comp=N,74µm,16.7s,MS6.8
HHC LR LR
comp=E,51µm,15.5s,MS6.8
HHC LR LR
comp=Z,92µm,20.2s,MS6.7
S13A Holt Ranch, En 47.28 80 ⇓P P 09 38 58.2 +0.1
baz=47,SNR=669
T12A Moapa 47.30 82 ⇓P P 09 38 58.1 -0.1
baz=47,SNR=11
Q15A Fillmore 47.31 78 ⇓P P 09 38 58.1 -0.2
baz=47,SNR=201
SCI San Clemente I 47.34 88 ⇓P P 09 38 58.2 -0.3
baz=47
R14A James Farms, M 47.35 79 ⇑P P 09 38 58.8 +0.2
baz=47,SNR=48
GUMO Guam 47.37 230 P P 09 38 57.4 -1.5
comp=Z,282nm,0.8s,mb6.2,baz=333,slow=5.9,SNR=2.4
GUMO LR LR 09 57 39.1
comp=Z,57µm,19.9s,MS6.5,baz=35,slow=34
GUMO Guam 47.37 230 *e*P P 09 38 57.4 -1.5
comp=Z,403nm,0.9s,mb6.3
GUMO LR LR
comp=Z,56µm,20.0s,MS6.5
TUQ Turquoise Moun 47.37 84 ⇓P P 09 38 58.7 -0.1
baz=47
P16A Fountain Green 47.38 77 ⇑P P 09 38 59.3 +0.5
baz=47,SNR=18
V11A Goodsprings 47.42 83 ⇓P P 09 38 58.9 -0.2
baz=47
HEC Hector,Ludlow 47.51 85 ⇑P P 09 38 59.4 -0.5
baz=47
BBRC Big Bear Sol-O 47.51 86 ⇑P P 09 38 59.1 -0.8
baz=47
K20A Yellowstone Ra 47.53 71 ⇑P P 09 38 59.1 -0.8
baz=47,SNR=354
SSE Sheshan 47.54 268 P P 09 39 00.4 +0.3
SSE S **S** **09 45 51.0 -1.5**
SSE SS SS 09 49 17.9 -2.5
SSE AMB AMB
comp=Z,392nm,1.0s,mb6.4
SSE AMB AMB
comp=Z,20µm,12.0s
SSE LR LR
comp=N,56µm,24.8s,MS6.5
SSE LR LR
comp=E,24µm,24.8s,MS6.5
SSE LR LR
comp=Z,63µm,25.0s,MS6.5
O17A Robinson Place 47.58 75 ⇑P P 09 39 00.7 +0.4
baz=47,SNR=192
U12A Valley of Fire 47.59 82 ⇓P P 09 39 00.4 -0.1
baz=47,SNR=122
T13A Saint George 47.61 81 ⇑P P 09 39 00.4 -0.2
baz=47
MVU Marysvale 47.72 78 PFAKE 09 39 10.0 +8.6
MVU LR LR
comp=Z,341µm,22.0s,MS7.3
M19A Rock Springs 47.73 73 ⇓P P 09 39 00.8 -0.7
baz=48,SNR=129
MSU Marysvale 47.74 78 *e*P P 09 39 02.0 +0.4
N18A Larsen Ranch, 47.74 74 ⇑P P 09 39 01.1 -0.5
baz=48,SNR=272
MURC Murrieta 47.77 87 ⇑P P 09 39 01.2 -0.7
baz=48
TMUT Trail Mountain 47.84 77 *e*P P 09 39 02.8 +0.5
V12A Nelson 47.85 83 ⇓P P 09 39 02.5 0.0
baz=48,SNR=84
R15A Junction 47.87 78 ⇑P P 09 39 02.8 +0.2
baz=48,SNR=157
L20A Wamsutter 47.92 72 ⇓P P 09 39 02.4 -0.6
baz=48,SNR=194
U13A Pakoon Wash 47.96 81 ⇓P P 09 39 03.2 -0.1
baz=48,SNR=380
GMRC Granite Mounta 47.96 84 ⇓P P 09 39 03.1 -0.2
baz=48
O18A Roosevelt 47.98 75 ⇑P P 09 39 03.8 +0.4
baz=48,SNR=306
P17A Butcher Ranch, 48.02 76 ⇓P P 09 39 04.1 +0.4
baz=48,SNR=228
T14A Hurricane 48.09 80 ⇓P P 09 39 04.5 +0.1
baz=48,SNR=575
N19A John Jarvie Ra 48.09 74 ⇑P P 09 39 03.9 -0.4
baz=48,SNR=373
Q16A Castle Valley 48.10 77 ⇓P P 09 39 04.8 +0.4
baz=48,SNR=232
LDFC Landfair 48.11 84 *e*P P 09 39 03.8 -0.7
comp=Z,471nm,0.8s,mb6.6
W12A Cal Nev Ari 48.11 83 ⇑P P 09 39 04.4 -0.1
baz=48
S15A Panguitch 48.15 79 ⇑P P 09 39 05.1 +0.3
baz=48,SNR=272
P18A Preston Nutter 48.22 76 ⇓P P 09 39 05.8 +0.5
baz=48,SNR=117
PFO Pinyon Flat Ob 48.23 86 P P 09 39 06.5 +1.0
comp=Z,965nm,1.9s,mb6.5,SNR=28
PFO Pinyon Flat Ob 48.23 86 P P 09 39 04.3 -1.2
comp=Z,80nm,1.1s,mb5.7,baz=327,slow=9.4,SNR=5.7
PFO S **S** **09 46 02.2 -0.1**
comp=Z,4.1nm,0.9s,baz=84,slow=22,SNR=2.8
PFO LR LR 09 55 17.6
comp=Z,166µm,20.2s,MS7.0,baz=296,slow=31
PFO Pinyon Flat Ob 48.23 86 ⇑P P 09 39 05.0 -0.4
baz=48
PFO Pinyon Flat Ob 48.23 86 P P 09 39 04.3 -1.2
PFO S **S** **09 46 02.2 -0.1**
PFO pmax pmax
comp=Z,80nm,1.1s,mb5.7
PFO smax
comp=N,4.0nm,0.9s
BELC Belle Mtn. 48.26 85 ⇑P P 09 39 05.0 -0.7
baz=48
109C Camp Elliot, M 48.30 87 ⇓P P 09 39 05.5 -0.5
baz=48,SNR=39
R16A Teasdale 48.31 78 ⇓P P 09 39 06.4 +0.4
baz=48,SNR=419
V13A Grand Canyon W 48.31 82 ⇑P P 09 39 05.8 -0.2
baz=48,SNR=174
BTO Baotou 48.32 286 *e*P P 09 39 06.9 +0.9
BTO AMB AMB
comp=Z,210nm,2.0s,mb5.8
M20A Sweetwater, Wa 48.32 72 ⇑P P 09 39 06.5 +0.4
baz=48,SNR=302
NJ2 Nanjing 48.35 271 *e*P P 09 39 07.1 +0.7
NJ2 PP PP 09 41 00.6 +1.7
NJ2 AMB AMB
comp=Z,1µm,1.0s,mb6.8
NJ2 AMB AMB
comp=Z,9µm,7.9s
NJ2 LR LR
comp=N,32µm,19.9s
NJ2 LR LR
comp=E,71µm,25.4s
NJ2 LR LR
comp=Z,34µm,25.4s
SRU San Rafael 48.38 76 *e*P P 09 39 06.7 +0.2
U14A Mt Trumbull 48.44 81 ⇓P P 09 39 06.7 -0.3
baz=48,SNR=297
L21A Rawlins 48.52 71 ⇑P P 09 39 07.2 -0.3
baz=48,SNR=256

T15A	**Red Dirt Ranch**	**48.55**	**80**	⇓P		**P**		**09 39 08.0**	**+0.1**
	baz=48,SNR=475									
S16A	**Weppner Ranch,**	**48.59**	**78**	⇑P		**P**		**09 39 08.6**	**+0.5**
	baz=48,SNR=240									
Q18A	**Rafter H Ranch**	**48.62**	**76**	⇓P		**P**		**09 39 07.9**	**-0.5**
	baz=48,SNR=424									
N20A	**Spence Gulch,**	**48.68**	**73**	⇑P		**P**		**09 39 08.9**	**+0.1**
	baz=48,SNR=216									
IRM	**Iron Mountain**	**48.68**	**85**	⇓P		**P**		**09 39 08.5**	**-0.4**
	baz=48									
R17A	**Hanksville Air**	**48.69**	**77**	⇓P		**P**		**09 39 08.8**	**-0.2**
	baz=48,SNR=492									
MONP	**Monument Peak**	**48.73**	**87**	⇓P		**P**		**09 39 09.0**	**-0.3**
	baz=49									
RWWY	**Rawlins**	**48.78**	**72**	*e*P		**P**		**09 39 09.1**	**-0.5**
	comp=Z,593nm,1.0s,mb6.6									
BC3	**Big Chuckw Mtn**	**48.83**	**85**	⇑P		**P**		**09 39 09.5**	**-0.6**
	baz=49									
W13A	**Hualapai Mount**	**48.86**	**83**	⇑P		**P**		**09 39 10.1**	**-0.2**
	baz=49,SNR=162									
P19A	**Cripple Cowboy**	**48.99**	**75**	⇓P		**P**		**09 39 11.0**	**-0.1**
	baz=49,SNR=604									
U15A	**North Rim**	**48.99**	**80**	⇑P		**P**		**09 39 11.6**	**+0.4**
	baz=49,SNR=884									
V14A	**Boquillas Ranc**	**48.99**	**82**	⇑P		**P**		**09 39 11.2**	**-0.1**
	baz=49,SNR=265									
L22A	**Ellis Ranch, M**	**49.04**	**71**	⇓P		**P**		**09 39 11.9**	**+0.4**
	baz=49									
DVTC	**Desert V Tower**	**49.09**	**87**	⇑P		**P**		**09 39 11.5**	**-0.5**
	baz=49									
SWSC	**Sam W. Stewart**	**49.09**	**86**	⇓P		**P**		**09 39 11.3**	**-0.8**
	baz=49									
T16A	**Glen Canyon Da**	**49.11**	**79**	⇓P		**P**		**09 39 11.3**	**-0.9**
	baz=49,SNR=71									
O20A	**White River Ci**	**49.12**	**74**	⇓P		**P**		**09 39 12.0**	**-0.2**
	baz=49,SNR=443									
S17A	**Black Ridge (B**	**49.13**	**78**	⇓P		**P**		**09 39 12.1**	**-0.2**
	baz=49,SNR=505									
N21A	**Black Mountain**	**49.17**	**73**	⇓P		**P**		**09 39 12.4**	**-0.2**
	baz=49,SNR=198									
RSSD	**Black Hills**	**49.18**	**67**	*e*P		**P**		**09 39 11.8**	**-0.8**
	comp=Z,220nm,0.8s,mb6.2									
RSSD				LR		LR				
	comp=Z,132µm,21.0s,MS6.9									
R18A	**Canyonlands Na**	**49.21**	**77**	⇑P		**P**		**09 39 12.1**	**-0.8**
	baz=49,SNR=441									
X13A	**Yucca**	**49.22**	**83**	⇑P		**P**		**09 39 12.4**	**-0.6**
	baz=49,SNR=120									
Q19A	**Hogan Spring (**	**49.24**	**76**	⇓P		**P**		**09 39 12.4**	**-0.7**
	baz=49,SNR=1000									
W14A	**Seligman**	**49.28**	**82**	⇑P		**P**		**09 39 13.3**	**-0.2**
	baz=49,SNR=109									
M22A	**Cedar Creek Ra**	**49.32**	**71**	⇓P		**P**		**09 39 13.0**	**-0.7**
	baz=49,SNR=324									
Y12C	**Blythe**	**49.34**	**85**	⇓P		**P**		**09 39 13.3**	**-0.7**
	baz=49,SNR=201									
V15A	**Kaibab Nationa**	**49.45**	**81**	⇓P		**P**		**09 39 15.1**	**+0.3**
	baz=49,SNR=896									
O21A	**Pagoda**	**49.53**	**73**	⇑P		**P**		**09 39 14.9**	**-0.4**
	baz=49,SNR=160									
T17A	**Navajo Res., N**	**49.54**	**79**	⇑P		**P**		**09 39 14.5**	**-0.9**
	baz=49,SNR=259									
S18A	**Hurst Farm, Bl**	**49.59**	**77**	⇑P		**P**		**09 39 15.4**	**-0.4**
	baz=49,SNR=721									
GLA	**Glamis**	**49.62**	**85**	⇑P		**P**		**09 39 15.7**	**-0.4**
	baz=49									
GLA	**Glamis**	**49.62**	**85**	*e*P		**P**		**09 39 15.4**	**-0.7**
GLA				pmax		pmax				
	comp=Z,218nm,0.7s,mb6.3									
GLA	**Glamis**	**49.62**	**85**	*e*P		**P**		**09 39 15.4**	**-0.7**
	comp=Z,218nm,0.7s,mb6.3									
R19A	**Curley Farm, L**	**49.66**	**76**	⇓P		**P**		**09 39 15.7**	**-0.6**
	baz=49,SNR=228									
Y13A	**Salome**	**49.74**	**84**	⇓P		**P**		**09 39 16.6**	**-0.4**
	baz=50,SNR=39									
KBS	**Kingsbay**	**49.76**	**357**	*e*P		**P**		**09 39 17.2**	**+0.6**
KBS	**Kingsbay**	**49.76**	**357**	*e*P		**P**		**09 39 17.5**	**+0.9**
	comp=Z,997nm,0.8s,mb6.9									
KBS				LR		LR				
	comp=Z,87µm,19.0s,MS6.8									
N22A	**Wattenberg Ran**	**49.78**	**72**	⇑P		**P**		**09 39 17.0**	**-0.2**
	baz=50,SNR=163									
PV04	**Paradox Valley**	**49.81**	**76**	*e*P		**P**		**09 39 17.3**	**-0.2**
W15A	**Williams**	**49.81**	**82**	⇑P		**P**		**09 39 17.7**	**+0.2**
	baz=50,SNR=167									
Q20A	**Ridgley Place,**	**49.83**	**75**	⇓P		**P**		**09 39 16.8**	**-0.8**
	baz=50,SNR=304									
U17A	**Shonto**	**49.88**	**79**	⇑P		**P**		**09 39 17.6**	**-0.4**
	baz=50,SNR=36									
U16A	**Tuba City**	**49.89**	**80**	⇓P		**P**		**09 39 17.8**	**-0.3**
	baz=50,SNR=272									
X14A	**Yava**	**49.89**	**83**	⇓P		**P**		**09 39 17.8**	**-0.3**
	baz=50,SNR=171									
T18A	**Mexican Hat**	**50.02**	**78**	⇓P		**P**		**09 39 18.3**	**-0.8**
	baz=50,SNR=260									
ULM	**Lac du Bonnet**	**50.06**	**56**	P		**P**		**09 39 17.4**	**-1.8**
	comp=Z,23nm,0.5s,mb5.5,baz=304,slow=7.8,SNR=26									
ULM				S		**S**		**09 46 29.1**	**+1.6**
	comp=Z,12nm,0.9s,baz=260,slow=14,SNR=2.0									
ULM				LR		LR		10 00 45.7		
	comp=Z,203µm,21.5s,MS7.1,baz=310,slow=36									
ULM	**Lac du Bonnet**	**50.06**	**56**	*e*P		**P**		**09 39 17.6**	**-1.6**
	comp=Z,368nm,1.4s,mb6.2									
ULM				LR		LR				
	comp=Z,367µm,22.0s,MS7.3									
PHWY	**Pilot Hill**	**50.06**	**71**	*e*P		**P**		**09 39 18.9**	**-0.5**
	comp=Z,395nm,1.2s,mb6.3									
S19A	**Harvey Farm, M**	**50.08**	**77**	⇓P		**P**		**09 39 19.2**	**-0.3**
	baz=50,SNR=493									
112A	**Yuma**	**50.12**	**86**	⇓P		**P**		**09 39 19.3**	**-0.6**
	baz=50,SNR=64									
WUAZ	**Wupatki**	**50.14**	**81**	*e*P		**P**		**09 39 20.3**	**+0.2**
	comp=Z,414nm,0.9s,mb6.5									
WUAZ				*e*S		**S**		**09 46 29.1**	**0.0**
WUAZ				LR		LR				
	comp=Z,205µm,20.0s,MS7.1									
Y14A	**Wickenburg**	**50.17**	**83**	⇓P		**P**		**09 39 19.5**	**-0.8**
	baz=50,SNR=141									
TARA	**Tarawa**	**50.27**	**190**	P		**P**		**09 39 21.1**	**0.0**
	comp=Z,947nm,1.4s,mb6.6									
TARA				LR		LR				
	comp=Z,189µm,21.0s,MS7.1									
X15A	**Humboldt**	**50.28**	**82**	⇓P		**P**		**09 39 20.9**	**-0.2**
	baz=50,SNR=124									
W16A	**Flagstaff**	**50.32**	**81**	⇑P		**P**		**09 39 21.5**	**+0.2**
	baz=50,SNR=254									
SPB4	**Spitsbergen Ar**	**50.32**	**356**	*e*P		**P**		**09 39 20.4**	**-0.4**
SPITS	**Spitsbergen Ar**	**50.32**	**356**	P		**P**		**09 39 20.9**	**0.0**
	comp=Z,297nm,0.6s,mb6.5,baz=58,slow=4.8,SNR=32									
SPITS				LR		LR		10 02 13.4		
	comp=Z,54µm,18.4s,MS6.6,baz=100,slow=38									
SPITS	**Spitsbergen Ar**	**50.32**	**356**	P		**P**		**09 39 20.9**	**0.0**
SPITS				pmax		pmax				
	comp=Z,297nm,0.6s									
SPITS				MLR		MLR				
	comp=Z,54µm,18.5s									
113A	**Mohawk Valley,**	**50.47**	**85**	⇓P		**P**		**09 39 21.7**	**-0.8**
	baz=50,SNR=43									
SMCO	**Snowmass**	**50.48**	**74**	*e*P		**P**		**09 39 14.3**	**-8.3**
U18A	**Rough Rock, Ch**	**50.48**	**79**	⇓P		**P**		**09 39 21.8**	**-0.8**
	baz=50,SNR=149									
Y15A	**Casa Rosa Ranc**	**50.57**	**83**	⇑P		**P**		**09 39 23.2**	**-0.2**
	baz=50,SNR=182									
Z14A	**Wintersburg**	**50.59**	**84**	⇓P		**P**		**09 39 22.9**	**-0.5**
	baz=50,SNR=41									
R21A	**Cimarron**	**50.65**	**75**	⇓P		**P**		**09 39 23.4**	**-0.4**
	baz=50,SNR=472									
T19A	**Beclabito**	**50.74**	**78**	⇓P		**P**		**09 39 24.1**	**-0.4**
	baz=50,SNR=343									
MVCO	**Mesa Verde**	**50.81**	**77**	*e*P		**P**		**09 39 24.8**	**-0.3**
	comp=Z,206nm,0.6s,mb6.2									
MVCO				LR		LR				
	comp=Z,320µm,21.0s,MS7.3									
X16A	**Lo Mia Camp, P**	**50.82**	**82**	⇓P		**P**		**09 39 25.0**	**-0.2**
	baz=51,SNR=263									
W17A	**Winslow**	**50.84**	**81**	⇑P		**P**		**09 39 25.1**	**-0.2**
	baz=51,SNR=50									
V18A	**Ganado**	**50.90**	**79**	⇓P		**P**		**09 39 25.7**	**-0.1**
	baz=51,SNR=413									
ISCO	**Idaho Springs**	**50.91**	**73**	*e*P		**P**		**09 39 26.0**	**+0.2**
	comp=Z,374nm,0.9s,mb6.3									
ISCO				LR		LR				
	comp=Z,287µm,21.0s,MS7.3									
Z15A	**Gila River Ind**	**51.12**	**83**	⇓P		**P**		**09 39 27.1**	**-0.4**
	baz=51,SNR=45									
Y16A	**Circle Bar Ran**	**51.15**	**82**	⇓P		**P**		**09 39 27.6**	**-0.1**
	baz=51,SNR=129									
AGMN	**Agassiz Refuge**	**51.22**	**58**	*e*P		**P**		**09 39 26.1**	**-1.9**
	comp=Z,852nm,1.5s,mb6.5									
AGMN				LR		LR				
	comp=Z,147µm,19.0s,MS7.0									
X17A	**Forest Lakes**	**51.27**	**81**	⇑P		**P**		**09 39 29.0**	**+0.4**
	baz=51,SNR=69									
W18A	**Petrified Fore**	**51.41**	**80**	⇑P		**P**		**09 39 29.6**	**0.0**
	baz=51,SNR=87									
V19A	**Window Rock**	**51.45**	**79**	⇑P		**P**		**09 39 29.8**	**0.0**
	baz=51,SNR=40									
115A	**Sonoran Desert**	**51.48**	**84**	⇓P		**P**		**09 39 30.1**	**0.0**
	baz=51,SNR=149									
HSP	**Hornsund**	**51.51**	**356**	*e*P		**P**		**09 39 31.9**	**+2.1**
DAG	**Danmarks Havn**	**51.52**	**6**	⇑*e*P		**P**		**09 39 28.0**	**-1.9**
DAG				pmax		pmax				
	comp=Z,420nm,1.3s,mb6.2									
DAG	**Danmarks Havn**	**51.52**	**6**	⇑*i*P		**P**		**09 39 28.0**	**-1.9**
	comp=Z,419nm,1.3s,mb6.2									
DAG	**Danmarks Havn**	**51.52**	**6**	⇑*e*P		**P**		**09 39 28.0**	**-1.9**
	comp=Z,419nm,1.3s,mb6.2									
Z16A	**Peralta Trail,**	**51.55**	**83**	⇓P		**P**		**09 39 30.5**	**-0.2**
	baz=51,SNR=25									
214A	**Organ Pipe Nat**	**51.61**	**85**	⇓P		**P**		**09 39 30.7**	**-0.5**
	baz=51,SNR=161									
W19A	**Sanders**	**51.63**	**80**	⇑P		**P**		**09 39 31.5**	**+0.2**
	baz=51,SNR=34									
TATO	**Taipei**	**51.66**	**263**		PFAKE			09 39 40.0	+8.4
TATO				LR		LR				
	comp=Z,108µm,21.0s,MS6.8									
X18A	**Snowflake**	**51.67**	**81**	⇓P		**P**		**09 39 31.7**	**+0.1**
	baz=52,SNR=128									
Y17A	**Roosevelt**	**51.67**	**82**	⇑P		**P**		**09 39 31.6**	**+0.1**
	baz=52,SNR=196									
116A	**Eloy**	**51.90**	**84**	⇓P		**P**		**09 39 32.6**	**-0.6**
	baz=52,SNR=73									
Y18A	**Canyon Day Jun**	**52.12**	**81**	⇑P		**P**		**09 39 35.4**	**+0.5**
	baz=52,SNR=332									
X19A	**St. Johns**	**52.15**	**80**	⇑P		**P**		**09 39 35.1**	**0.0**
	baz=52,SNR=224									
Z17A	**San Carlos Hig**	**52.17**	**82**	⇓P		**P**		**09 39 35.2**	**-0.1**
	baz=52,SNR=115									
WHN	**Wuhan**	**52.19**	**273**	⇑P		**P**		**09 39 35.0**	**-0.5**
WHN				S		**S**		**09 46 54.8**	**-2.7**
WHN				LR		LR				
	comp=N,41µm,13.7s,MS6.9									
WHN				LR		LR				
	comp=E,74µm,16.1s,MS6.9									
WHN				LR		LR				
	comp=Z,197µm,31.4s									
SDCO	**Great Sand Dun**	**52.29**	**74**	*e*P		**P**		**09 39 36.2**	**+0.1**
	comp=Z,396nm,1.0s,mb6.3									
SDCO				LR		LR				
	comp=Z,227µm,22.0s,MS7.2									
OGNE	**Ogallala**	**52.30**	**69**	*e*P		**P**		**09 39 36.2**	**0.0**
	comp=Z,9µm,1.9s,mb7.4									
OGNE				LR		LR				
	comp=Z,86µm,20.0s,MS6.8									
216A	**Three Points,**	**52.43**	**84**	⇓P		**P**		**09 39 36.2**	**-1.0**
	baz=52,SNR=32									
Y19A	**Nutrioso**	**52.48**	**81**	⇑P		**P**		**09 39 37.7**	**+0.1**
	baz=52,SNR=249									
117A	**Oracle**	**52.49**	**83**	⇓P		**P**		**09 39 37.1**	**-0.5**
	baz=52,SNR=199									
XMAS	**Kiritimati**	**52.57**	**152**	*e*P		**P**		**09 39 38.5**	**+0.1**
	comp=Z,677nm,1.1s,mb6.5									
XMAS				*e*S		**S**		**09 47 00.1**	**-2.7**
XMAS				LR		LR				
	comp=Z,271µm,20.0s,MS7.3									
Z18A	**Geronimo**	**52.58**	**82**	⇓P		**P**		**09 39 38.3**	**-0.1**
	baz=52,SNR=9.4									
TUC	**Tucson**	**52.64**	**83**	*e*P		**P**		**09 39 38.2**	**-0.6**
TUC				pmax		pmax				
	comp=Z,245nm,0.8s,mb6.2									
TUC				MLR		MLR				
	comp=Z,96µm,20.0s,MS6.8									
TUC	**Tucson**	**52.64**	**83**	*e*P		**P**		**09 39 38.2**	**-0.6**
	comp=Z,281nm,0.8s,mb6.2									
TUC				LR		LR				
	comp=Z,110µm,20.0s,MS6.9									
Z19A	**T-Link Ranch,**	**52.92**	**81**	⇑P		**P**		**09 39 41.0**	**+0.2**
	baz=53,SNR=40									
118A	**Homack Ranch,**	**52.92**	**82**	⇓P		**P**		**09 39 40.6**	**-0.3**
	baz=53									
217A	**Green Valley**	**52.98**	**84**	⇓P		**P**		**09 39 41.2**	**-0.1**
	baz=53,SNR=99									
XAN	**Xi'an**	**53.20**	**280**	P		**P**		**09 39 42.3**	**-0.6**
XAN				AP		pP		09 39 57.5	+3.8
XAN				PP		PP		09 41 46.6	+3.7
XAN				SCS		ScS		09 49 22.9	-6.5
XAN				AMB		AMB				
	comp=Z,244nm,1.9s,mb5.8									
XAN				LR		LR				
	comp=N,19µm,20.6s,MS6.5									
XAN				LR		LR				
	comp=E,39µm,23.0s,MS6.5									
XAN				LR		LR				
	comp=Z,91µm,24.0s,MS6.8									
119A	**Ashpeak Ranch,**	**53.25**	**82**	⇓P		**P**		**09 39 43.3**	**+0.1**
	baz=53,SNR=75									
218A	**Dragoon**	**53.33**	**83**	⇓P		**P**		**09 39 43.4**	**-0.4**
	baz=53,SNR=64									
SUMG	**Summit**	**53.39**	**14**	*e*P		**P**		**09 39 44.2**	**+0.5**
QZH	**Quanzhou**	**53.49**	**265**	⇑*i*P		**P**		**09 39 45.3**	**+0.2**
QZH				S		**S**		**09 47 19.0**	**+3.8**
QZH				AMB		AMB				
	comp=Z,2µm,1.2s,mb6.8									
QZH				AMB		AMB				
	comp=Z,15µm,3.9s									
QZH				LR		LR				
	comp=N,67µm,16.9s,MS6.8									
QZH				LR		LR				
	comp=E,30µm,17.5s,MS6.8									
QZH				LR		LR				
	comp=Z,108µm,23.4s									
ANMO	**Albuquerque**	**53.54**	**78**	S		**S**		**09 47 18.1**	**+2.4**
	comp=Z,12nm,1.2s,baz=319,slow=9.3,SNR=2.2									
ANMO	**Albuquerque**	**53.54**	**78**	*c i*P		**P**		**09 39 45.4**	**0.0**
ANMO				pmax		pmax				
	comp=Z,102nm,1.4s									
ANMO	**Albuquerque**	**53.54**	**78**	*e*P		**P**		**09 39 44.9**	**-0.4**
	comp=Z,197nm,1.2s,mb5.9									
ANMO				LR		LR				
	comp=Z,291µm,22.0s,MS7.3									
ECSD	**EROS,Sioux Fal**	**53.64**	**63**	*e*P		**P**		**09 39 44.1**	**-1.9**
ZAA0	**Zalesovo Array**	**53.68**	**313**	*e*P		**P**		**09 39 45.1**	**-1.0**
ZAA0				*e*PcP		PcP		09 40 52.5	+0.5
ZALV	**Zalesovo Beam**	**53.68**	**313**	P		**P**		**09 39 46.3**	**+0.2**
	comp=Z,22nm,0.6s,mb5.3,baz=49,slow=7.0,SNR=44									
ZALV				PcP		PcP		09 40 54.4	+2.5
	comp=Z,156nm,0.9s,baz=45,slow=4.6,SNR=9.6									
ZALV				LR		LR		10 04 34.9		
	comp=Z,75µm,18.6s,MS6.8,baz=49,slow=38									
ZALV				PKPPKP				10 10 00.4		
	comp=Z,1.0nm,0.5s,baz=76,slow=0.6,SNR=4.0									
ZALV	**Zalesovo Beam**	**53.68**	**313**	P		**P**		**09 39 46.3**	**+0.2**
ZALV								09 40 54.4		
ZALV				MLR		MLR				
	comp=Z,75µm,18.6s,MS6.8									
ZALV	**Zalesovo Beam**	**53.68**	**313**	P		**P**		**09 39 46.3**	**+0.2**
ZALV				PcP		PcP		09 40 54.4	+2.5
ZALV				LR		LR		10 04 34.9		
ZALV				P'P'				10 10 00.4		
318A	**Bisbee**	**53.72**	**83**	⇑P		**P**		**09 39 46.5**	**-0.2**
	baz=54,SNR=194									
EYMN	**Ely**	**53.74**	**56**	*e*P		**P**		**09 39 45.1**	**-1.5**
	comp=Z,646nm,1.3s,mb6.4									
EYMN				LR		LR				
	comp=Z,150µm,22.0s,MS7.0									
LENM	**Lemitar**	**53.75**	**79**	*e*P		**P**		**09 39 47.1**	**+0.3**
BJO	**Bjornoya**	**53.75**	**354**	*e*P		**P**		**09 39 45.8**	**-0.6**
BJO				AMb		AMB		09 40 01.0		
	comp=Z,892nm,1.2s,mb6.6									
BJO				*e*S		**S**		**09 47 24.4**	**+6.7**
BJO				AMS		AMS		10 08 30.1		
	comp=Z,57µm,17.4s,MS6.7									
219A	**White Tail Can**	**53.80**	**82**	⇑P		**P**		**09 39 46.9**	**-0.4**
	baz=54,SNR=107									
NVS	**Novosibirsk**	**53.83**	**315**	*i* P		**P**		**09 39 45.9**	**-1.3**
NVS				pmax		pmax				
	comp=Z,238nm,1.3s,mb6.0									
NVS				pmax		pmax				
	comp=N,286nm,1.9s									
NVS				pmax		pmax				
	comp=E,228nm,1.2s									
Y22D	**IRIS PASSCAL I**	**53.84**	**79**	⇑P		**P**		**09 39 47.9**	**+0.3**
	baz=54,SNR=12									
LPM	**Los Pinos Moun**	**53.86**	**78**	*e*P		**P**		**09 39 47.9**	**+0.2**
319A	**Douglas**	**54.21**	**83**	⇑P		**P**		**09 39 49.9**	**-0.4**
	baz=54,SNR=149									
LZH	**Lanzhou**	**54.93**	**286**	⇑P		**P**		**09 39 58.8**	**+3.3**
LZH				PCP		PcP		09 40 59.3	+2.2
LZH				PP		PP		09 42 03.8	+5.4
LZH				SCP		ScP		09 44 50.8	-1.8
LZH				PCS		PcS		09 44 57.8	+0.9
LZH				S		**S**		**09 47 33.3**	**-1.2**
LZH				SCS		ScS		09 49 39.8	-1.8
LZH				SS		SS		09 51 16.8	-1.0
LZH				AMB		AMB				
	comp=Z,2µm,1.2s,mb7.0									
LZH				AMB		AMB				
	comp=Z,10µm,4.6s									
LZH				LR		LR				
	comp=E,112µm,16.5s									
LZH				LR		LR				
	comp=Z,133µm,17.0s,MS7.1									
CBKS	**Cedar Bluff**	**55.02**	**70**	*e*P		**P**		**09 39 55.9**	**-0.2**
CBKS				pmax		pmax				
	comp=Z,1µm,0.9s,mb7.0									
CBKS				MLR		MLR				
	comp=Z,106µm,22.0s,MS6.9									
CBKS	**Cedar Bluff**	**55.02**	**70**	*e*P		**P**		**09 39 55.9**	**-0.2**
	comp=Z,1µm,0.9s,mb7.0									
CBKS				LR		LR				
	comp=Z,106µm,22.0s,MS6.9									
GTA	**Gaotai**	**55.13**	**291**	⇑*i*P		**P**		**09 39 57.8**	**+0.9**
GTA				PP		PP		09 42 04.0	+3.9
GTA				S		**S**		**09 47 38.1**	**+1.1**
GTA				SCS		ScS		09 49 43.5	+0.6
GTA				SS		SS		09 51 22.6	+1.9
GTA				AMB		AMB				
	comp=Z,275nm,1.2s,mb6.2									
GTA				LR		LR				
	comp=N,80µm,16.2s,MS7.0									
GTA				LR		LR				
	comp=E,73µm,16.5s,MS7.0									
GTA				LR		LR				
	comp=Z,86µm,16.2s,MS6.9									
SFJD	**Kangerlussuaq**	**55.80**	**22**	*e*P		**P**		**09 40 00.4**	**-0.9**
SFJD				pmax		pmax				
	comp=Z,501nm,1.4s,mb6.3									
SFJD				MLR		MLR				
	comp=Z,81µm,20.0s,MS6.8									
SFJD	**Kangerlussuaq**	**55.80**	**22**	*e*P		**P**		**09 40 00.4**	**-0.9**
	comp=Z,501nm,1.4s,mb6.3									
SFJD				LR		LR				
	comp=Z,81µm,20.0s,MS6.8									
AMTX	**Amarillo**	**56.49**	**75**	*e*P		**P**		**09 40 06.1**	**-0.6**
	comp=Z,1µm,1.3s,mb6.7									
AMTX				LR		LR				
	comp=Z,189µm,20.0s,MS7.2									
KSU1	**Kansas State U**	**56.66**	**68**	*e*P		**P**		**09 40 06.6**	**-1.2**
KSU1				LR		LR				
	comp=Z,167µm,19.0s,MS7.2									
GDL2	**Guadalupe Moun**	**56.68**	**79**	*e*P		**P**		**09 40 07.8**	**-0.2**
SCIA	**State Center**	**56.73**	**63**	*e*P		**P**		**09 40 07.3**	**-0.9**
	comp=Z,238nm,0.6s,mb6.4									
SCIA				LR		LR				
	comp=Z,187µm,20.0s,MS7.2									
APYP	**Conner**	**57.12**	**257**	*e*P		**P**		**09 40 11.9**	**+0.6**
CAUP	**Cauayan**	**57.47**	**256**	*e*P		**P**		**09 40 15.2**	**+1.5**
ABRA	**Dolores**	**57.60**	**257**	*e*P		**P**		**09 40 15.8**	**+1.0**
KEV	**Kevo**	**57.61**	**349**	*e*P		**P**		**09 40 14.9**	**+0.8**
	comp=Z,45nm,2.0s,mb5.2									
KEV				LR		LR				
	comp=Z,87µm,19.0s,MS6.9									
JFWS	**Jewell Farm**	**57.69**	**60**	*e*P		**P**		**09 40 13.2**	**-1.8**
JFWS				pmax		pmax				
	comp=Z,324nm,0.8s,mb6.4									
JFWS				MLR		MLR				
	comp=Z,259µm,19.0s,MS7.4									
JFWS	**Jewell Farm**	**57.69**	**60**	*e*P		**P**		**09 40 13.2**	**-1.8**
	comp=Z,324nm,0.8s,mb6.4									
JFWS				LR		LR				
	comp=Z,259µm,19.0s,MS7.4									
JMIC	**Jan Mayen**	**57.75**	**3**	*e*S		**S**		**09 48 19.8**	**+8.9**
ARCES	**ARCESS Array B**	**57.99**	**350**	P		**P**		**09 40 16.1**	**-0.7**
	comp=Z,77nm,0.7s,mb5.8,baz=29,slow=8.6,SNR=53									
ARCES				PKPPKP				10 09 57.2		
	comp=Z,8.6nm,0.9s,baz=264,slow=3.7,SNR=5.0									
ARCES	**ARCESS Array B**	**57.99**	**350**	P		**P**		**09 40 16.

comp=N,196µm,33.0s,MS7.2
WMQ LR LR
comp=E,202µm,32.0s,MS7.2
WMQ LR LR
comp=Z,88µm,26.0s
BOLP Bolinao 59.06 257 *e*P **P 09 40 25.0 +0.1**
TXAR Lajitas Array 59.11 81 P **P 09 40 24.1 -1.0**
comp=Z,25nm,0.6s,mb5.4,baz=300,slow=2.6,SNR=187
TXAR LR LR 10 06 30.3
comp=Z,110µm,18.4s,MS7.0,baz=25,slow=37
TXAR PKPPKP 10 09 59.4
comp=Z,2.7nm,1.0s,baz=144,slow=8.8,SNR=4.5
GLMI Grayling 59.38 55 *e*P **P 09 40 26.2 -0.6**
comp=Z,1µm,1.1s,mb6.8
GLMI LR LR
comp=Z,173µm,22.0s,MS7.1
GQP Guinayangan 59.45 253⇓*e*P **P 09 40 27.7 +0.1**
SCZP Santa Cruz 59.53 257 *e*P **P 09 40 28.6 +0.4**
MKAR Makanchi Array 59.66 308 P **P 09 40 28.3 -0.4**
comp=Z,49nm,0.4s,mb5.9,baz=45,slow=6.4,SNR=360
MKAR LR LR 10 09 44.9
comp=Z,45µm,20.5s,MS6.6,baz=35,slow=40
MKAR PKPPKP 10 09 50.0
comp=Z,2.7nm,0.9s,baz=162,slow=1.0,SNR=4.1
MKAR Makanchi Array 59.66 308 *i* P **P 09 40 28.2 -0.5**
MKAR pmax pmax
comp=Z,49nm,0.4s
MKAR Makanchi Array 59.66 308 P **P 09 40 28.3 -0.4**
MKAR LR LR 10 09 44.9
MKAR P'P' 10 09 50.0
FUNA Funafuti 59.69 181 *e*P **P 09 40 29.9 +0.8**
comp=Z,1µm,1.8s,mb6.7
FUNA LR LR
comp=Z,162µm,21.0s,MS7.1
AUQP San Andres 59.77 252 *e*P **P 09 40 32.9 +3.1**
HDIL Hopedale 59.82 62 *e*P **P 09 40 28.7 -1.1**
comp=Z,60nm,0.7s,mb5.7
HDIL LR LR
comp=Z,268µm,19.0s,MS7.4
GYA Guiyang 59.86 275⇑*i*P **P 09 40 28.9 -1.4**
GYA PCP PcP 09 41 16.1 -0.5
GYA PP PP 09 42 44.9 +2.5
GYA SCP ScP 09 45 13.4 -1.1
GYA PCS PcS 09 45 20.8 +1.9
GYA S **S 09 48 38.1 -1.3**
GYA SS SS 09 52 37.9 +2.3
GYA AMB AMB
comp=Z,270nm,1.0s,mb6.2
GYA AMB AMB
comp=Z,10µm,9.0s
GYA LR LR
comp=N,26µm,21.8s,MS6.6
GYA LR LR
comp=E,42µm,22.4s,MS6.6
GYA LR LR
comp=Z,38µm,21.8s,MS6.5
PLP Palo 60.11 249⇓*e*P **P 09 40 32.5 +0.4**
SCHQ Schefferville 60.27 38 P **P 09 40 32.0 -0.7**
comp=Z,376nm,0.9s,mb6.4,baz=325,slow=7.0,SNR=83
SCHQ LR LR 10 08 45.8
comp=Z,319µm,19.1s,MS7.5,baz=317,slow=38
SCHQ Schefferville 60.27 38 *e*P **P 09 40 31.9 -0.9**
comp=Z,574nm,1.1s,mb6.5
SCHQ LR LR
comp=Z,383µm,19.0s,MS7.6
CCM Cathedral Cave 60.45 65 *e*P **P 09 40 32.2 -2.0**
CCM pmax pmax
comp=Z,1µm,1.5s,mb6.8
CCM MLR MLR
comp=Z,97µm,19.0s,MS7.0
CCM Cathedral Cave 60.45 65 *e*P **P 09 40 32.2 -2.0**
comp=Z,1µm,1.5s,mb6.8
CCM LR LR
comp=Z,97µm,19.0s,MS7.0
STEI Steigen 60.48 354 *e*P **P 09 40 34.0 0.0**
BRVK Borovoye 60.59 319 P **P 09 40 34.5 -0.5**
comp=Z,2µm,1.4s,mb7.0,SNR=48
BRVK Borovoye 60.59 319 *e*P **P 09 40 34.6 -0.4**
BRVK pmax pmax
comp=Z,250nm,1.0s,mb6.3
BRVK MLR MLR
comp=Z,122µm,19.0s,MS7.1
BRVK Borovoye 60.59 319 *e*P **P 09 40 34.6 -0.4**
comp=Z,250nm,1.0s,mb6.3
BRVK LR LR
comp=Z,122µm,19.0s,MS7.1
SLM Saint Louis 60.62 64 *e*P **P 09 40 34.1 -1.3**
SLM pmax pmax
comp=Z,676nm,0.9s,mb6.8
SLM Saint Louis 60.62 64 *e*P **P 09 40 34.1 -1.3**
comp=Z,676nm,0.9s,mb6.8
PGP Puerto Galera 60.66 254⇓*i*P **P 09 40 37.1 +1.2**
JCT Junction City 60.68 77 *e*P **P 09 40 34.4 -1.5**
comp=Z,622nm,1.1s,mb6.7
JCT LR LR
comp=Z,350µm,22.0s,MS7.5
LUBP Lubang 60.90 255 *e*P **P 09 40 37.8 +0.2**
OTRP Odiongan 60.91 252 *e*P **P 09 40 38.1 +0.4**
SCPH Surigao 60.92 247⇓*e*P **P 09 40 38.0 +0.3**
FVM French Village 60.96 65 *e*P **P 09 40 36.0 -1.7**
FVM pmax pmax
comp=Z,3µm,1.8s,mb7.1
FVM French Village 60.96 65 *e*P **P 09 40 36.0 -1.7**
comp=Z,3µm,1.8s,mb7.1
MSLP Maasin 61.01 248 *e*P **P 09 40 37.1 -1.1**
RCP Roxas 61.11 251⇓*e*P **P 09 40 39.7 +0.7**
SVE Sverdlovsk 61.33 327⇓*e*P **P 09 40 40.1 +0.2**
SVE *e*S **S 09 48 59.6 +2.2**
SVE *e*SSS 09 55 43.1
SVE pmax pmax
comp=Z,359nm,1.6s,mb6.2
SVE MLR MLR
comp=Z,146µm,17.0s,MS7.2
SJMP San Jose 61.37 253 *e*P **P 09 40 42.1 +1.3**
BUTP Butuan 61.50 247 *e*P **P 09 40 42.9 +1.2**
MIAR Mount Ida 61.55 69 *e*P **P 09 40 41.2 -0.6**
MIAR pmax pmax
comp=Z,1µm,1.1s,mb6.9
MIAR MLR MLR
comp=Z,148µm,20.0s,MS7.1
MIAR Mount Ida 61.55 69 *e*P **P 09 40 41.2 -0.5**
comp=Z,1µm,1.1s,mb6.9
MIAR LR LR
comp=Z,148µm,20.0s,MS7.1
AAM Ann Arbor 61.64 57 *e*P **P 09 40 41.5 -0.7**
AAM pmax pmax
comp=Z,371nm,1.0s,mb6.5
AAM MLR MLR
comp=Z,199µm,19.0s,MS7.3
AAM Ann Arbor 61.64 57 *e*P **P 09 40 41.5 -0.7**
comp=Z,371nm,1.0s,mb6.5
AAM LR LR
comp=Z,199µm,19.0s,MS7.3
OLIL Olney 61.74 63 *e*P **P 09 40 42.0 -1.0**
comp=Z,897nm,0.8s,mb7.0
OLIL *e*S **S 09 49 01.0 -2.2**
MAIG Mazatlaan 61.80 88 *e*P **P 09 40 42.0 -1.5**
SIUC Southern Illin 61.83 64 *e*P **P 09 40 42.4 -1.2**
comp=Z,508nm,0.8s,mb6.7
TBP Tagbilaran 61.94 249 *e*P **P 09 40 42.9 -1.7**
GUIM Jordan 61.95 251 *e*P **P 09 40 45.1 +0.4**
KONS Konsvik 62.04 354 *e*P **P 09 40 45.5 +1.0**
KONS AMb AMB 09 40 55.2
comp=Z,428nm,2.2s,mb6.2
UALR University of 62.11 68 *e*P **P 09 40 45.3 -0.2**
comp=Z,567nm,1.1s,mb6.6
FLOS Flostrand 62.18 354 *e*P **P 09 40 46.5 +1.0**
MOR8 Moi Rana 62.27 354 *e*P **P 09 40 44.7 -1.4**
BUSP Coron 62.28 254 *e*P **P 09 40 47.9 +1.0**
BLO Bloomington 62.31 61 *e*P **P 09 40 45.5 -1.3**
BLO pmax pmax
comp=Z,494nm,0.6s,mb6.8
BLO Bloomington 62.31 61 *e*P **P 09 40 45.5 -1.3**
comp=Z,494nm,0.6s,mb6.8
ARU Arti 62.34 328 P **P 09 40 46.7 0.0**
comp=Z,955nm,0.8s,mb7.0,SNR=7.6
ARU Arti 62.34 328*e i*P **P 09 40 46.3 -0.4**
ARU *e* 09 41 24.1
ARU *e* 09 43 03.3
ARU *e*PPP 09 44 35.5
ARU *e*S **S 09 49 10.6 +0.4**
ARU 09 50 39.2
ARU *e*SSS 09 56 02.6
ARU pmax pmax
comp=Z,73nm,0.6s,mb6.0
ARU pmax pmax
comp=Z,15µm,14.1s
ARU MLR MLR
comp=Z,98µm,18.0s,MS7.0
ARU Arti 62.34 328⇑*i*P **P 09 40 46.8 +0.1**
ARU LR LR
comp=Z,86µm,19.0s,MS6.9
PVMO Portageville 62.48 65 *e*P **P 09 40 47.1 -0.8**
comp=Z,1µm,0.9s,mb7.1
USIN University of 62.53 63 *e*P **P 09 40 47.3 -1.0**
comp=Z,1µm,0.9s,mb7.1
CUYO Cuyo Island 62.70 252 *e*P **P 09 40 51.2 +1.5**
BUKP Musuan 62.71 247 *e*P **P 09 40 49.1 -0.6**
NATX Nacogdoches 62.88 72 *e*P **P 09 40 50.3 -0.3**
comp=Z,1µm,1.3s,mb6.8
NATX LR LR
comp=Z,324µm,22.0s,MS7.5
BORG Borgarnes 62.96 10 *e*P **P 09 40 51.0 +0.3**
BORG pmax pmax
comp=Z,435nm,1.4s
BORG MLR MLR
comp=Z,74µm,19.0s
BORG Borgarnes 62.96 10 *e*P **P 09 40 51.0 +0.2**
comp=Z,435nm,1.4s,mb6.4
BORG LR LR
comp=Z,74µm,19.0s,MS6.9
DAV Davao City (W) 63.07 246 LR LR 10 03 41.9
comp=Z,117µm,21.5s,MS7.0,baz=237,slow=32
DAV Davao City (W) 63.07 246⇑*e*P **P 09 40 48.1 -4.0**
DAV Davao City (W) 63.07 246 PFAKE 09 41 00.0 +7.9
DAV LR LR
comp=Z,115µm,21.0s,MS7.0
WCI Wyandotte Cave 63.10 62 *e*P **P 09 40 51.1 -1.0**
WCI pmax pmax
comp=Z,702nm,0.8s,mb6.8
WCI MLR MLR
comp=Z,150µm,19.0s,MS7.2
WCI Wyandotte Cave 63.10 62 *e*P **P 09 40 51.1 -0.9**
comp=Z,702nm,0.8s,mb6.8
WCI LR LR
comp=Z,150µm,19.0s,MS7.2
HNR Honiara 63.13 203 *e*P **P 09 40 51.3 -1.1**
HNR *e*S **S 09 49 20.6 -0.2**
HNR pmax pmax
comp=Z,629nm,1.0s,mb6.7
HNR MLR MLR
comp=Z,103µm,20.0s,MS7.0
HNR Honiara 63.13 203 *e*P **P 09 40 51.3 -1.0**
comp=Z,629nm,1.0s,mb6.7
HNR *e*S **S 09 49 20.6 -0.3**
HNR LR LR
comp=Z,103µm,20.0s,MS7.0
MET Memphis--Engin 63.26 67 *e*P **P 09 40 52.6 -0.6**
comp=Z,1µm,0.6s,mb7.2
MET *e*S **S 09 49 19.3 -3.0**
KMI Kunming 63.27 277⇑*i*P **P 09 40 53.3 0.0**
KMI PP PP 09 43 17.4 +4.9
KMI S **S 09 49 20.4 -2.2**
KMI SKS 09 50 44.3
KMI AMB AMB
comp=Z,304nm,1.8s,mb6.1
KMI AMB AMB
comp=Z,12µm,8.6s
KMI LR LR
comp=N,37µm,20.8s,MS6.7
KMI LR LR
comp=E,46µm,24.9s,MS6.7
KMI LR LR
comp=Z,70µm,29.3s,MS6.7
QIZ Qiongzhong 63.30 267 P **P 09 40 54.4 +0.8**
QIZ AP pP 09 41 08.3 +3.7
QIZ PP PP 09 43 13.3 +0.4
QIZ S **S 09 49 23.0 -0.2**
QIZ SS SS 09 53 31.3 +1.5
QIZ AMB AMB
comp=Z,241nm,1.6s,mb6.1
QIZ AMB AMB
comp=Z,12µm,13.0s
QIZ LR LR
comp=N,31µm,20.8s
QIZ LR LR
comp=Z,42µm,22.9s,MS6.5
QIZ Qiongzhong 63.30 267 *e*P **P 09 40 54.1 +0.5**
comp=Z,745nm,1.6s,mb6.6
QIZ LR LR
comp=Z,46µm,22.0s,MS6.6
ENPP El Nido 63.38 254 *e*P **P 09 40 55.0 +0.8**
JOF Joensuu 63.46 345 *e*p **P 09 40 52.9 -1.1**
comp=Z,306nm,0.8s,mb6.5
JOF Joensuu 63.46 345 *e*P **P 09 40 52.9 -1.1**
JOF pmax pmax
comp=Z,306nm,0.8s,mb6.5
HKT Hockley 63.46 75 *e*P **P 09 40 54.4 -0.2**
HKT pmax pmax
comp=Z,920nm,1.4s,mb6.7
HKT MLR MLR
comp=Z,220µm,22.0s,MS7.3
HKT Hockley 63.46 75 *e*P **P 09 40 54.4 -0.2**
comp=Z,920nm,1.4s,mb6.7
HKT LR LR
comp=Z,220µm,22.0s,MS7.3
ACSO Alum Creek Sta 63.47 58 *e*P **P 09 40 53.1 -1.4**
comp=Z,9µm,0.8s
ACSO *e*S **S 09 49 27.1 +2.4**
ACSO LR LR
comp=Z,155µm,20.0s,MS7.2
ERPA Erie 63.67 55 *e*P **P 09 40 55.0 -0.8**
comp=Z,608nm,1.0s,mb6.6
ERPA LR LR
comp=Z,196µm,19.0s,MS7.3
WVT Waverly 63.74 64 *e*P **P 09 40 55.6 -0.7**
WVT pmax pmax
comp=Z,429nm,0.9s,mb6.5
WVT MLR MLR
comp=Z,180µm,19.0s,MS7.3
WVT Waverly 63.74 64 *e*P **P 09 40 55.6 -0.7**
comp=Z,429nm,0.9s,mb6.5
WVT LR LR
comp=Z,180µm,19.0s,MS7.3
KLMR Klimovskoe 63.80 340⇑*i*P **P 09 40 55.5 -0.8**
KLMR *e*S **S 09 49 21.0 -7.3**
KLMR pmax pmax
comp=Z,591nm,1.0s,mb6.6
KVTX Kingsville 63.94 78 *e*P **P 09 40 58.1 +0.4**
comp=Z,850nm,1.2s,mb6.7
KVTX *e*S **S 09 49 33.5 +2.6**
KVTX LR LR
comp=Z,152µm,21.0s,MS7.2
OXF Oxford 64.00 67 *e*P **P 09 40 57.3 -0.7**
OXF pmax pmax
comp=Z,434nm,0.7s,mb6.6
OXF MLR MLR
comp=Z,97µm,19.0s,MS7.0
OXF Oxford 64.00 67 *e*P **P 09 40 57.3 -0.7**
comp=Z,434nm,0.7s,mb6.6
OXF LR LR
comp=Z,97µm,19.0s,MS7.0
NSS Namsos 64.06 354 *e*P **P 09 40 56.9 -1.0**
NSS AMb AMB 09 41 09.9
comp=Z,394nm,2.0s,mb6.1
NSS *e*S **S 09 49 31.4 0.0**
NSS AMS AMS 10 18 47.9
comp=Z,42µm,19.6s,MS6.6
ZAIG Zacatecas 64.51 85 *e*P **P 09 40 56.6 -4.9**
LONY Lake Ozonia 64.52 50 *e*P **P 09 40 58.7 -2.6**
comp=Z,72nm,0.7s,mb5.8
LONY LR LR
comp=Z,221µm,19.0s,MS7.4
AAA Alma-Ata 64.82 308 *i* P **P 09 41 04.1 +0.8**
AAA *e*S **S 09 49 38.5 -2.9**
AAA pmax pmax
comp=Z,15µm,13.3s
AAA smax
comp=E,20µm,18.2s
AAA MLR MLR
comp=Z,80µm,18.0s,MS7.0
AAA Alma-Ata 64.82 308 *e*P **P 09 41 03.8 +0.5**
PPR Puerto Princes 64.92 253⇓*i*P **P 09 41 06.3 +2.0**
KAF Kangasniemi 64.99 347 *e*p **P 09 41 02.7 -1.4**
comp=Z,274nm,0.8s,mb6.3,baz=14,slow=5.8
KAF Kangasniemi 64.99 347 *e*P **P 09 41 02.7 -1.4**
KAF pmax pmax
comp=Z,274nm,0.8s,mb6.3
VBMS Vicksburg 65.00 69 *e*P **P 09 41 04.2 -0.4**
comp=Z,2µm,1.4s,mb7.0
VBMS LR LR
comp=Z,121µm,20.0s,MS7.1
CJM Chamela 65.38 89 *i* P **P 09 41 05.3 -1.9**
AFI Afiamalu 65.38 172 P **P 09 41 08.4 +1.4**
comp=Z,54nm,1.0s,mb5.5,baz=68,slow=21,SNR=2.3
AFI S S 09 49 47.3 -1.4
comp=Z,49nm,1.0s,baz=360,slow=21,SNR=2.1
AFI LR LR 10 04 05.2
comp=Z,157µm,20.5s,MS7.2,baz=347,slow=31
AFI Afiamalu 65.38 172 P **P 09 41 08.4 +1.3**
AFI S S 09 49 47.3 -1.3
AFI pmax pmax
comp=Z,54nm,1.0s,mb5.5
AFI smax
comp=N,49nm,1.0s
AFI Afiamalu 65.38 172 P **P 09 41 08.4 +1.4**
AFI S S 09 49 47.3 -1.4
AFI LR LR 10 04 05.2
MCWV Mont Chateau 65.54 57 *e*P **P 09 41 07.1 -0.9**
comp=N,223nm,0.7s,mb6.3
MCWV LR LR
comp=Z,315µm,19.0s,MS7.5
BINY Binghamton 65.64 52 *e*P **P 09 41 07.3 -1.3**
comp=Z,1µm,1.2s,mb6.8
BINY LR LR
comp=Z,143µm,19.0s,MS7.2
FINES FINESS Array B 65.66 347 P **P 09 41 07.0 -1.4**
TKM2 Tokmak 2 65.75 309 P **P 09 41 09.6 +0.3**
SNR=118
TKM2 Tokmak 2 65.75 309 *i* P **P 09 41 09.8 +0.5**
TZTN Tazewell 65.83 61 *e*P **P 09 41 09.3 -0.6**
comp=Z,199nm,0.9s,mb6.1
TZTN *e*S S 09 49 52.3 -1.7
SSPA Standing Stone 65.83 55 *e*P **P 09 41 08.9 -1.0**
comp=Z,147nm,0.6s,mb6.2
SSPA LR LR
comp=Z,220µm,19.0s,MS7.4
SFJM Santa Fe 65.90 87 *e*P **P 09 41 09.1 -1.5**
ULHL Ulahol 65.93 308 P **P 09 41 11.0 +0.5**
SNR=35
USP Ospenovka 66.02 310 P **P 09 41 12.7 +1.7**
SNR=207
LBNH Lisbon 66.07 49 *e*P **P 09 41 09.5 -1.8**
LBNH pmax pmax
comp=Z,191nm,0.8s,mb6.2
LBNH MLR MLR
comp=Z,170µm,21.0s,MS7.2
LBNH Lisbon 66.07 49 *e*P **P 09 41 09.5 -1.8**
comp=Z,191nm,0.8s,mb6.2
LBNH LR LR
comp=Z,170µm,21.0s,MS7.2
CHMS Chumysh 66.10 309 P **P 09 41 13.2 +1.7**
SNR=68
MOL Molde 66.24 356 *e*P **P 09 41 11.5 -0.6**
MOL AMb AMB 09 41 23.3
comp=Z,322nm,1.9s,mb6.0
MOL *e*S S 09 49 59.0 +0.8
MOL AMS AMS 10 16 29.9
comp=Z,62µm,24.8s,MS6.7
BATP Bataraza 66.25 254 *e*P **P 09 41 12.9 0.0**
KBK Karagaybulak 66.26 309 P **P 09 41 13.8 +1.2**
SNR=61
FRU Bishkek 66.29 309⇑*i*P **P 09 41 06.0 -6.8**
FRU pmax pmax
comp=Z,3µm,1.8s,mb7.0
FRU pmax pmax
comp=Z,16µm,9.0s
TKL Tuckaleechee C 66.35 62 *e*P **P 09 41 12.4 -0.9**
LRAL Lakeview Retre 66.45 66 *e*P **P 09 41 12.5 -1.4**
comp=Z,355nm,0.7s,mb6.5
LRAL LR LR
comp=Z,123µm,22.0s,MS7.1
AAK Ala-Archa 66.50 309 P **P 09 41 14.4 +0.3**
comp=Z,2µm,1.3s,mb7.0,SNR=82
AAK Ala-Archa 66.50 309 P **P 09 41 14.9 +0.8**
SNR=449
AAK Ala-Archa 66.50 309 P **P 09 41 14.6 +0.5**
SNR=130
AAK Ala-Archa 66.50 309⇑*i*P **P 09 41 14.2 +0.1**
AAK LR LR
comp=Z,55µm,19.0s,MS6.8
PKME Peaks-Kenny Pk 66.50 46 *e*P **P 09 41 12.5 -1.6**
comp=Z,464nm,1.3s,mb6.3
PKME LR LR
comp=Z,188µm,19.0s,MS7.3
KZA Kyzart 66.55 308 P **P 09 41 15.4 +1.0**
SNR=87
DOMB Dombas 66.70 356 *e*P **P 09 41 14.6 -0.5**
DOMB AMb AMB 09 41 25.9
comp=Z,318nm,2.5s,mb5.9
UCH Uchtor 66.79 309 P **P 09 41 17.5 +1.5**
SNR=21
EKS2 Erkin-Say 66.82 310 P **P 09 41 18.0 +1.8**
SNR=25
LSA Lhasa 67.00 289 P **P 09 41 19.3 +1.8**
LSA AP pP 09 41 28.8 +0.3
LSA XP sP 09 41 32.3 -0.4
LSA PCP PcP 09 41 44.3 -1.4
LSA PP PP 09 43 50.8 +5.8
LSA S S 09 50 12.6 +4.3
LSA AMB AMB
comp=Z,370nm,1.2s,mb6.3
LSA LR LR
comp=N,16µm,19.0s,MS6.7
LSA LR LR
comp=E,40µm,17.7s,MS6.7
LSA LR LR
comp=Z,58µm,17.1s,MS6.9
LSA Lhasa 67.00 289 *e*P **P 09 41 19.3 +1.8**
LSA pmax pmax
comp=Z,446nm,0.7s,mb6.6
LSA MLR MLR
comp=Z,50µm,22.0s,MS6.7
LSA Lhasa 67.00 289 *e*P **P 09 41 19.3 +1.8**
comp=Z,446nm,0.7s,mb6.6
LSA LR LR
comp=Z,50µm,22.0s,MS6.7
BLA Blacksburg 67.04 59 *e*P **P 09 41 16.8 -0.8**
BLA *e*S S 09 50 07.6 -1.0
BLA pmax pmax
comp=Z,200nm,0.7s,mb6.3
BLA MLR MLR
comp=Z,188µm,20.0s,MS7.3
BLA Blacksburg 67.04 59 *e*P **P 09 41 16.8 -0.9**
comp=Z,200nm,0.7s,mb6.3
BLA *e*S S 09 50 07.6 -1.0
BLA LR LR
comp=Z,188µm,20.0s,MS7.3
PMG Port Moresby 67.04 216 P **P 09 41 17.3 -0.5**
comp=Z,20nm,0.7s,mb5.3,baz=12,slow=6.8,SNR=15
PMG S S 09 50 07.5 -1.4
comp=Z,1.5nm,0.3s,baz=181,slow=22,SNR=3.8
PMG LR LR 10 05 06.1
comp=Z,92µm,21.8s,MS7.0,baz=40,slow=31
PMG Port Moresby 67.04 216 P **P 09 41 17.3 -0.5**
PMG S S 09 50 07.5 -1.4
PMG pmax pmax
comp=Z,20nm,0.7s
PMG smax
comp=N,2.0nm,0.3s
PMG Port Moresby 67.04 216 *e*P **P 09 41 16.5 -1.3**
comp=N,121nm,0.9s,mb5.9
PMG *e*S S 09 49 52.1 -17
PMG LR LR
comp=Z,88µm,22.0s,MS6.9
AML Almayashu 67.26 309 P **P 09 41 21.3 +2.3**
SNR=9.6
AKTK Aktyubinsk 67.40 324 *i* P **P 09 41 18.9 -0.8**
AKTO Aktyubinsk 67.40 324 S S 09 50 10.9 -1.6
comp=Z,5.4nm,1.0s,baz=286,slow=6.6,SNR=2.2
AKTO Aktyubinsk 67.40 324 *i* P **P 09 41 18.8 -0.9**
AKTO pmax pmax
comp=Z,38nm,1.2s,mb5.3
NB2 NORSAR Subarra 67.58 354 P **P 09 41 20.4 -0.3**
comp=Z,381nm,1.0s,mb6.4,baz=7.6,slow=6.5
NB2 NORSAR Subarra 67.58 354 P **P 09 41 22.0 +1.3**
NOA NORSAR Array B 67.58 354 P **P 09 41 20.3 -0.4**
comp=Z,167nm,0.8s,mb6.1,baz=7.4,slow=6.3,SNR=251
NOA PKP2bc 10 09 42.2
comp=Z,7.6nm,0.9s,baz=172,slow=3.5,SNR=8.4
NOA LR LR 10 12 24.8
comp=Z,33µm,20.6s,MS6.5,baz=355,slow=37
NOA NORSAR Array B 67.58 354 P **P 09 41 20.3 -0.4**
NOA ⇑*e* 10 09 42.2
NOA LR LR 10 12 24.8
AB31 Akbulak array 67.64 322 P **P 09 41 20.6 -0.7**
AB31 pmax pmax
comp=Z,69nm,0.6s,mb5.9

MOIG **Morelia** 67.66 86 *i* P P 09 41 20.2 -1.6
HYA **Hoyanger** 67.69 357 *e*P P 09 41 23.4 +2.1
HYA AMb AMB 09 41 35.6
comp=Z,326nm,1.8s,mb6.0
NAO01 **NORSAR Array S** 67.80 355 *e*P P 09 41 21.3 -0.8
comp=Z,116nm,0.8s,mb6.0
NAO01 LR LR
comp=Z,52µm,19.0s,MS6.8
SUE **Sulen** 67.84 358 *e*P P 09 41 22.6 +0.3
BRAL **Brewton** 67.89 68 *e*P P 09 41 22.3 -0.8
comp=Z,991nm,0.9s,mb6.8
BRAL LR LR
comp=Z,138µm,20.0s,MS7.2
CBN **Corbin** 67.91 56 *e*P P 09 41 22.1 -1.0
comp=Z,358nm,1.1s,mb6.3
CBN *e*S S 09 50 12.2 -6.9
CBN LR LR
comp=Z,243µm,19.0s,MS7.5
KK31 **Karatay Array** 68.03 312 *i* P P 09 41 23.0 -0.8
KK31 pmax pmax
comp=Z,2µm,1.6s,mb6.8
KK31 **Karatay Array** 68.03 312 *i* P P 09 41 23.1 -0.7
KSH **Kashi** 68.12 306 P P 09 41 26.3 +1.9
KSH PP PP 09 43 58.8 +4.4
KSH SCP 09 45 49.3
KSH PCS 09 45 55.3
KSH S S 09 50 19.3 -2.2
KSH SCS ScS 09 51 16.3 -4.3
KSH SS SS 09 54 43.8 +0.3
KSH AMB AMB
comp=Z,2µm,1.2s,mb7.1
KSH AMB AMB
comp=Z,23µm,4.8s
KSH LR LR
comp=Z,166µm,15.7s,MS7.4
GOGA **Godfrey** 68.18 64 *e*P P 09 41 23.6 -1.3
GOGA pmax pmax
comp=Z,672nm,1.1s,mb6.6
GOGA MLR MLR
comp=Z,186µm,19.0s,MS7.3
GOGA **Godfrey** 68.18 64 *e*P P 09 41 23.6 -1.2
comp=Z,672nm,1.1s,mb6.6
GOGA LR LR
comp=Z,186µm,19.0s,MS7.3
HFA0 **Hagfors New Ar** 68.30 353 P P 09 41 24.0 -1.2
KDM **Kudat** 68.31 253 ⇓P P 09 41 27.2 +1.2
ASK **Askoy** 68.41 357 *e*P P 09 41 25.0 -0.9
RUND **Rundenannen** 68.47 357 *e*P P 09 41 28.8 +2.5
RUND AMb AMB 09 41 39.4
comp=Z,235nm,1.4s,mb6.0
BER **Bergen** 68.50 357 *e*P P 09 41 23.0 -3.5
BER AMb AMB 09 41 37.6
comp=Z,182nm,2.4s,mb5.6
BER *e*S S 09 50 25.4 0.0
EGD **Espegrend** 68.62 357 *e*P P 09 41 26.7 -0.5
WAL1 **Walls** 68.69 1 *e*P P 09 41 27.0 -0.6
MYLDM **Lahad Datu** 68.70 251 ⇑P P 09 41 29.2 +0.9
LRW **Lerwick** 68.81 1⇑*e*P P 09 41 28.5 +0.1
LRW AMb AMB 09 41 36.1
comp=Z,340nm,1.4s,mb6.1
LRW *e* 09 50 32.3
LRW AMS AMS 10 19 45.5
comp=Z,69µm,19.8s,MS6.9
MOS **Moscow** 68.87 339*c* *i* P P 09 41 29.1 +0.3
MOS *e* 09 41 50.6
MOS *e*PPP 09 45 42.6
MOS *e*S S 09 50 26.0 -3.9
MOS *e* 09 51 24.5
MOS pmax pmax
comp=Z,5µm,2.0s,mb7.1
MOS pmax pmax
comp=Z,2µm,1.6s,mb6.7
MOS MLR MLR
comp=N,183µm,17.0s,MS7.4
MOS MLR MLR
comp=Z,182µm,17.0s,MS7.4
MOS MLR MLR
comp=E,58µm,17.0s,MS7.4
IMP **Imphal** 68.94 284 *e*P P 09 41 30.0 +0.3
IMP *ex* x 09 46 32.0
TAOE **Nuku Hiva Isla** 68.94 138 *e*P P 09 41 30.7 +0.9
comp=E,2µm,1.1s,mb6.9
TAOE *e*S S 09 50 30.1 -1.6
comp=E,1265µm,27.3s
TAOE **Nuku Hiva Isla** 68.94 138 *e*LR LR 10 02 16.7
comp=E,2331µm,22.8s,baz=342
CHRT **Chiangrai** 68.97 276 ⇑P P 09 41 30.0 0.0
comp=E,2µm,0.9s,mb7.0
ZIIG **Zihuatanejo** 69.03 88 *i* P P 09 41 27.0 -3.4
KONO **Kongsberg** 69.06 355 *e*P P 09 41 28.8 -1.2
KONO AMb AMB 09 41 41.2
comp=Z,369nm,0.6s,mb6.5
KONO *e*S S 09 50 34.1 +2.0
KONO AMS AMS 10 17 59.7
comp=Z,55µm,24.5s,MS6.7
KONO **Kongsberg** 69.06 355 *e*P P 09 41 29.6 -0.4
KONO pmax pmax
comp=Z,257nm,0.8s,mb6.2
KONO MLR MLR
comp=Z,74µm,22.0s,MS6.9
KONO **Kongsberg** 69.06 355 *e*P P 09 41 29.6 -0.3
comp=Z,257nm,0.8s,mb6.2
KONO LR LR
comp=Z,74µm,22.0s,MS6.9
SDKM **Sandakan** 69.11 252 ⇑P P 09 41 31.4 +0.5
PBVM **Pinon** 69.15 85 *i* P P 09 41 31.8 +0.7
UBT **Ubonrachathani** 69.17 268 ⇓P P 09 41 31.0 -0.2
UNM **Universidad Na** 69.17 85 *i* P P 09 41 29.4 -1.9
IIO **Organos** 69.26 84 *i* P P 09 41 30.8 -1.0
KKM **Kota Kinabalu** 69.38 253 ⇓P P 09 41 33.4 +0.8
BLS5 **Blasjo** 69.43 357 *e*P P 09 41 33.1 +0.9
BLS5 AMb AMB 09 41 44.0
comp=Z,101nm,1.3s,mb5.6
SHL **Shillong** 69.60 286⇑*i*P P 09 41 34.0 +0.2
SHL *i* S S 09 50 41.5 +2.1
PLIG **Platanillo** 69.67 86 *i* P P 09 41 31.4 -2.9
OBN **Obninsk** 69.69 339 P P 09 41 34.7 +0.8
comp=Z,5µm,1.3s,mb7.3,SNR=21
OBN **Obninsk** 69.69 339*c* *i* P P 09 41 33.1 -0.8
OBN *i* 09 44 16.1
OBN *i* S S 09 50 43.0 +3.5
OBN pmax pmax
comp=Z,616nm,1.1s,mb6.5
OBN MLR MLR
comp=Z,148µm,16.0s,MS7.3
OBN **Obninsk** 69.69 339⇑*i*P P 09 41 33.2 -0.7
OBN LR LR
comp=Z,125µm,19.0s,MS7.2
PPM **Popocatepetl** 69.72 85 *i* P P 09 41 34.4 -0.2
KKTK **Khon Kaen** 69.72 271 P P 09 41 34.0 -0.6
comp=Z,2µm,0.5s,mb7.3
TSM **Tawau** 69.78 251 ⇑P P 09 41 35.9 +0.8
CNNC **Cliffs of the** 69.87 59 *e*P P 09 41 34.8 -0.6
comp=Z,762nm,1.3s,mb6.5
CNNC LR LR
comp=Z,253µm,20.0s,MS7.5
STAV **Stavanger** 69.94 357 *e*P P 09 41 36.3 +0.9
STAV AMb AMB 09 41 48.4
comp=Z,275nm,2.3s,mb5.8
CAIG **El Cayaco** 70.20 87 *i* P P 09 41 34.8 -2.9
NHSC **New Hope** 70.23 62 *e*P P 09 41 37.5 -0.1
comp=Z,3µm,1.3s,mb7.0
NHSC LR LR
comp=Z,293µm,19.0s,MS7.5
CHG **Chiang Mai** 70.28 276 ⇑P P 09 41 37.8 -0.3
comp=Z,253nm,1.3s,mb6.0
CHTO **Chiang Mai** 70.28 276 P P 09 41 37.7 -0.4
SNR=151
CHTO **Chiang Mai** 70.28 276 *e*P P 09 41 37.4 -0.7
CHTO pmax pmax
comp=Z,267nm,1.1s,mb6.1
CHTO MLR MLR
comp=Z,30µm,20.0s,MS6.5
CHTO **Chiang Mai** 70.28 276 *e*P P 09 41 37.4 -0.7
comp=Z,267nm,1.1s,mb6.1
CHTO LR LR
comp=Z,30µm,20.0s,MS6.5
ORE **Reay** 70.36 2⇑*e*P P 09 41 38.5 +0.6
SNART **Snartemo** 70.49 356 *e*P P 09 41 38.6 -0.1
SNART AMb AMB 09 41 49.8
comp=Z,178nm,2.0s,mb5.7
RSC **Scourie** 70.52 3⇑*e*P P 09 41 38.9 -0.1
TURI **Tura** 70.55 287 *ex* x 09 42 27.0
CM31 **Chiang Mai Arr** 70.55 275 *e*P P 09 41 39.4 -0.4
comp=Z,140nm,1.0s,mb5.8
CM31 LR LR
comp=Z,25µm,19.0s,MS6.5
CMAR **Chiang Mai Arr** 70.55 275 P P 09 41 39.4 -0.3
comp=Z,136nm,0.9s,mb5.9,baz=27,slow=7.4,SNR=149
CMAR PKP2bc 10 09 34.6
comp=Z,1.2nm,0.3s,baz=235,slow=4.3,SNR=7.4
CMAR LR LR 10 15 09.7
comp=Z,32µm,18.6s,MS6.6,baz=223,slow=38
CMAR **Chiang Mai Arr** 70.55 275 P P 09 41 39.4 -0.3
CMAR ⇑*e* 10 09 34.6
CMAR LR LR 10 15 09.7
LVIG **Laguna Verde** 70.60 83 *i* P P 09 41 35.7 -4.4
MLA1 **Latheron** 70.61 2 *e*P P 09 41 39.0 -0.5
TAPN **Taplejung** 70.77 290 *e*P P 09 41 40.6 -0.4
RRH **Rhenigidale** 70.89 4⇑*e*P P 09 41 40.8 -0.4
MVH1 **Achvaich** 70.97 3⇑*e*P P 09 41 41.4 -0.3
RRR **Rubha Reidh** 70.99 4⇑*e*P P 09 41 41.6 -0.2
AGT **Agartala** 71.23 285 *i* x x 09 41 41.0
AGT *i* x x 09 41 55.0
ISAL **Salakas** 71.29 345 *e*P P 09 41 43.1 -0.5
ISAL *e*SS SS 09 55 37.0 +5.7
ODAN **Odare** 71.32 290 *e*P P 09 41 43.9 -0.4
MCD **Coleburn Disti** 71.34 2⇑*e*P P 09 41 43.7 -0.2
KSK **Scoval** 71.34 4⇑*e*P P 09 41 43.9 0.0
KAC **Achnashellach** 71.36 3⇑*e*P P 09 41 43.9 -0.2
GUN **Gumba** 71.42 291 *e*P P 09 41 44.8 -0.1
BDT **Bhumibol Dam** 71.42 274 P P 09 41 45.0 0.0
comp=Z,82nm,1.0s,mb5.6
JIRN **Jiri** 71.43 291 *e*P P 09 41 45.0 0.0
IDID **Didziasalis** 71.43 345 *e*P P 09 41 44.0 -0.5
MDO **Dochfour** 71.45 3⇑*e*P P 09 41 44.4 -0.2
KPL **Plockton** 71.51 3⇑*e*P P 09 41 44.9 -0.1
KPL AMb AMB 09 41 52.7
comp=Z,310nm,2.2s,mb5.9
KPL *e* 09 51 04.8
KPL AMS AMS 10 20 20.9
comp=Z,54µm,19.1s,MS6.8
MME1 **Meikle Cairn** 71.61 2⇑*e*P P 09 41 44.8 -0.7
PMOR **Pomariorio Ree** 71.65 148 *e*P P 09 41 46.9 +0.7
comp=Z,558nm,1.2s,mb6.3
RAMN **Ramite** 71.72 290 *e*P P 09 41 46.2 -0.5
KKN **Kakani** 71.86 292 *e*P P 09 41 47.2 -0.4
comp=Z,751nm,0.5s,mb6.9
KKN **Kakani** 71.86 292 *e*P P 09 41 47.2 -0.4
KKN pmax pmax
comp=Z,751nm,0.5s,mb6.9
NST **Nakhon Sawan** 71.90 273 P P 09 41 48.0 +0.1
KAR1 **Arisaig** 71.92 4⇑*e*P P 09 41 47.4 -0.1
PKI **Pulchoki** 71.95 292 *e*P P 09 41 47.6 -0.5
comp=Z,906nm,0.7s,mb6.8
PKI **Pulchoki** 71.95 292 *e*P P 09 41 47.6 -0.5
PKI pmax pmax
comp=Z,906nm,0.7s,mb6.8
VAH **Vaihoa** 71.95 148 *e*P P 09 41 48.7 +0.7
comp=Z,520nm,1.2s,mb6.3
MNK **Minsk** 72.03 344*ce*P P 09 41 48.0 -0.1
MNK *e**PP pP 09 42 10.0 +11
MNK *e* 09 44 24.0
MNK *e*PPP 09 46 12.0
MNK *e*S S 09 51 05.0 -1.7
MNK S S 09 51 14.0 +7.3
MNK pmax pmax
comp=Z,22µm,8.0s
MNK MLR MLR
comp=E,80µm,20.0s,MS7.2
MNK MLR MLR
comp=N,103µm,18.0s,MS7.2
MNK MLR MLR
comp=Z,180µm,18.0s,MS7.4
PNIG **Pinotepa** 72.04 86 *i* P P 09 41 48.1 -0.6
GKN **Gorkha** 72.07 292 *e*P P 09 41 48.4 -0.4
comp=Z,1µm,0.8s,mb7.0
VRHR **Novokhopersk** 72.09 334 *e*P P 09 41 47.3 -1.2
VRHR *e**PP pP 09 41 57.8 -1.9
VRHR *e**SP sP 09 42 02.7 -1.2
VRHR *e*PPP 09 46 10.4
VRHR *e*S S 09 51 04.4 -3.2
VRHR pmax pmax
comp=Z,180nm,1.0s,mb6.0
VRHR pmax pmax
comp=N,150nm,1.2s
VRHR pmax pmax
comp=E,50nm,0.7s
VRHR smax
comp=N,4µm,11.3s
VRHR smax
comp=Z,1µm,11.2s
VRHR smax
comp=E,550nm,10.2s
DMN **Daman** 72.10 292 *e*P P 09 41 48.8 -0.2
comp=E,2µm,1.2s,mb7.0
DANN **Dangsing** 72.32 293 *e*P P 09 41 49.9 -0.4
comp=E,1µm,0.8s,mb7.0
VHO **Vista Hermosa** 72.39 85 *i* P P 09 41 49.5 -1.4
VSR **Storozhevoye** 72.63 336 *e*P P 09 41 50.8 -1.0
VSR *e**PP pP 09 42 01.3 -1.6
VSR *e**SP sP 09 42 04.5 -2.6
VSR *e* 09 44 38.1
VSR *e*PPP 09 46 17.6
VSR *e*S S 09 51 11.6 -2.2
VSR pmax pmax
comp=Z,120nm,1.3s,mb5.7
VSR pmax pmax
comp=N,180nm,1.1s
VSR pmax pmax
comp=E,120nm,1.2s
VSR pmax pmax
comp=Z,2µm,16.1s
VSR pmax pmax
comp=N,2µm,16.7s
VSR pmax pmax
comp=E,2µm,21.5s
VSR smax
comp=N,2µm,9.8s
VSR smax
comp=Z,450nm,11.4s
VSR smax
comp=E,970nm,12.9s
EBH **Black Hill** 72.67 2⇑*e*P P 09 41 51.5 -0.4
EAB **Aberfoyle** 72.71 3⇑*e*P P 09 41 52.1 0.0
COEN **Coen** 72.72 218 *e*P P 09 41 51.3 -1.4
comp=E,181nm,1.1s,mb5.9
COP **Copenhagen** 72.82 353⇑*i*P P 09 41 53.1 +0.3
COP *i* S S 09 51 18.3 +2.5
COP pmax pmax
comp=Z,140nm,0.9s,mb5.9
COP MLR MLR
comp=Z,36µm,19.0s,MS6.7
COP **Copenhagen** 72.82 353⇑*i*P P 09 41 53.1 +0.3
comp=Z,145nm,0.9s,mb5.9
COP *i* S S 09 51 17.5 +1.7
COP *i* S S 09 51 18.3 +2.5
COP
comp=Z,36µm,19.0s
VORD **Divnogorie** 72.83 335 *e*P P 09 41 52.0 -1.0
VORD *e**PP pP 09 42 02.6 -1.5
VORD *e**SP sP 09 42 06.3 -2.0
VORD *e* 09 44 36.9
VORD *e*PPP 09 46 20.0
VORD *e*S S 09 51 13.7 -2.3
VORD pmax pmax
comp=Z,270nm,1.1s,mb6.1
VORD pmax pmax
comp=N,320nm,0.9s
VORD pmax pmax
comp=E,150nm,0.9s
VORD pmax pmax
comp=Z,7µm,13.8s
VORD pmax pmax
comp=N,4µm,14.9s
VORD pmax pmax
comp=E,2µm,14.5s
VORD smax
comp=N,3µm,11.6s
VORD smax
comp=Z,460nm,11.1s
VORD smax
comp=E,1µm,9.4s
KOLN **Koldanda** 72.85 293 *e*P P 09 41 52.8 -0.7
comp=E,1µm,1.0s,mb6.8
EDI **Edinburgh** 73.00 2⇑*e*P P 09 41 54.5 +0.6
EDI AMb AMB 09 42 06.3
comp=Z,393nm,1.7s,mb6.1
EDI *e* 09 51 14.1
EDI AMS AMS 10 22 01.5
comp=Z,54µm,19.9s,MS6.8
ESY **Stoneypath** 73.02 2⇑*e*P P 09 41 53.5 -0.5
EAU **Auchinoon** 73.08 2⇑*e*P P 09 41 54.3 -0.1
PGBU **Glenifferbraes** 73.08 3 P P 09 41 54.1 -0.2
PGBU AMb AMB 09 42 01.0
comp=Z,557nm,2.2s,mb6.1
PGBU 09 51 21.7
PGBU AMS AMS 10 20 57.2
comp=Z,56µm,21.5s
PGBU **Glenifferbraes** 73.08 3⇑*e*P P 09 41 54.1 -0.2
PGBU AMb AMB 09 42 01.0
comp=Z,557nm,2.2s,mb6.1
PGBU *e* 09 51 21.7
PGBU AMS AMS 10 20 57.2
comp=Z,56µm,21.5s,MS6.8
TUIG **Tuzandepetl** 73.11 82 *i* P P 09 41 55.0 -0.1
EBL **Broad Law** 73.16 2⇑*e*P P 09 41 54.0 -0.8
BSD **Bornholm Skovb** 73.18 351⇑*i*P P 09 41 54.1 -0.8
BSD *i* S S 09 51 20.7 +0.9
BSD pmax pmax
comp=Z,240nm,0.8s,mb6.2
BSD MLR MLR
comp=Z,64µm,18.0s,MS7.0
BSD **Bornholm Skovb** 73.18 351⇑*i*P P 09 41 54.1 -0.8
comp=Z,240nm,0.8s,mb6.2
BSD *i* S S 09 51 20.7 +0.9
BSD
comp=Z,64µm,18.0s
BSD **Bornholm Skovb** 73.18 351⇑*i*P P 09 41 54.1 -0.8
comp=Z,240nm,0.8s,mb6.2
BSD *i* S S 09 51 20.7 +0.9
SUW **Suwalki** 73.25 346 *e*P P 09 41 57.6 +2.2
SUW *e*S SKSac 09 51 47.2 -11
SUW *e*SS SS 09 56 41.6 +40
SUW LMZ 10 21 21.4
comp=Z,90µm,17.9s
SUW **Suwalki** 73.25 346 *e*P P 09 41 54.3 -1.1
SUW pmax pmax
comp=Z,329nm,0.8s,mb6.3
SUW **Suwalki** 73.25 346 *e*P P 09 41 54.3 -1.1
comp=Z,330nm,0.8s,mb6.3
SUW **Suwalki** 73.25 346 *e*S SKSac 09 51 47.3 -11
SUW **Suwalki** 73.25 346 *e*SS SS 09 56 41.6 +40
DWPF **Disney** 73.30 66 *e*P P 09 41 56.0 -0.1
comp=Z,404nm,0.8s,mb6.4
DWPF LR LR
comp=Z,82nm,19.0s,MS7.0
PTH **Pithoragarh** 73.42 297 *e*P P 09 41 56.9 +0.1
PTH *e*S S 09 51 25.2 +1.8
DLH **Dalhousie** 73.45 301 *e*P P 09 41 58.0 +1.0
DLH *ex* x 09 42 11.0
XSO **Sourhope Farm** 73.45 2⇑*e*P P 09 41 56.1 -0.4
LGTI **Lohaghat** 73.48 296 *e*P P 09 41 58.5 +1.3
PPT **Papeete** 73.50 150 *e*P P 09 41 57.9 +0.7
comp=Z,235nm,1.6s,mb5.9
PPT *e*S S 09 51 23.9 -0.3
comp=Z,227µm,28.8s
PPT *e*SS SS 09 56 08.4 +0.5
comp=Z,88µm,26.2s
PPT *e*LR LR 10 04 15.8
comp=Z,609µm,28.8s,baz=344
PPT **Papeete** 73.50 150 P P 09 41 55.0 -2.2
comp=Z,20nm,0.9s,mb5.1,baz=243,slow=7.2,SNR=3.0
PPT LR LR 10 09 00.9
comp=Z,118µm,20.2s,MS7.2,baz=320,slow=32
PPT **Papeete** 73.50 150 P P 09 41 55.0 -2.2
PPT LR LR 10 09 00.9
BTM **Bintulu** 73.51 254 ⇑P P 09 41 57.7 +0.2
CMIG **Matias Romero** 73.53 83 *i* P P 09 41 56.8 -0.8
TIAR **Tiarei** 73.57 150 *e*P P 09 41 58.3 +0.7
comp=Z,3µm,1.1s,mb7.1
PAE **Paea** 73.59 150 *e*P P 09 41 58.3 +0.6
comp=Z,2µm,1.2s,mb6.8
PAE **Paea** 73.59 150 *e*P P 09 41 58.3 +0.6
PAE pmax pmax
comp=Z,2µm,1.2s,mb6.8
ESK **Eskdalemuir** 73.61 2 P P 09 41 58.8 +1.3
comp=Z,1µm,0.9s,mb6.8,SNR=11
ESK **Eskdalemuir** 73.61 2⇑*e*P P 09 41 57.3 -0.2
ESK AMb AMB 09 42 05.2
comp=Z,333nm,2.2s,mb5.9
ESK *e* 09 51 08.7
ESK AMS AMS 10 21 41.8
comp=Z,62µm,21.6s,MS6.9
ESK **Eskdalemuir** 73.61 2 *e*P P 09 41 57.4 -0.1
ESK pmax pmax
comp=Z,211nm,0.9s,mb6.1
ESK MLR MLR
comp=Z,71µm,22.0s,MS6.9
ESK **Eskdalemuir** 73.61 2 *e*P P 09 41 57.4 -0.1
comp=Z,211nm,0.9s,mb6.1
ESK LR LR
comp=Z,71µm,22.0s,MS6.9
THN **Thein Dam** 73.67 302 *e*P P 09 41 57.1 -1.1
THN *ex* x 09 46 50.7
SDNR **Sundarnagar** 73.72 300 *e*P P 09 41 59.0 +0.5
HUIG **Huatulco** 73.77 85 *i* P P 09 41 58.8 -0.2
TVO **Taravao** 73.81 150 *e*P P 09 41 59.8 +0.8
comp=Z,2µm,1.2s,mb6.8
TVO **Taravao** 73.81 150 *e*P P 09 41 59.8 +0.8
TVO pmax pmax
comp=Z,2µm,1.2s,mb6.8
RGN **Rugen** 73.88 352 *e*P P 09 42 00.3 +1.2
comp=Z,2µm,1.4s,mb6.8
RGN *e*S S 09 51 32.1 +4.3
RGN **Rugen** 73.88 352 *e*P P 09 41 59.5 +0.4
comp=Z,602nm,0.7s,mb6.6
SMLA **Simla** 73.89 300 *i* P P 09 42 00.4 +0.8
SMLA AMb AMB 09 42 10.4
comp=Z,4µm,2.1s,mb7.0
CAL **Calcutta** 74.01 286 *e*P P 09 41 58.2 -2.2
CAL *e*S S 09 51 33.3 +3.1
GAL1 **Galloway** 74.02 3⇑*e*P P 09 41 59.3 -0.6
GAL1 AMb AMB 09 42 07.5
comp=Z,378nm,1.8s,mb6.0
GAL1 *e* 09 51 33.9
GAL1 AMS AMS 10 23 10.4
comp=Z,73µm,19.9s,MS7.0
DDI **Dehra Dun** 74.03 299 *e*P P 09 41 59.0 -1.4
XAL **Allendale** 74.09 2⇑*e*P P 09 41 59.4 -0.9
DZM **Mont Dzumac** 74.18 194 *e*P P 09 42 00.8 -0.2
NOUC **Port Laguerre** 74.23 194 *e*P P 09 42 01.5 +0.1
MEH **Mehetia** 74.27 149 *e*P P 09 42 02.4 +0.7
comp=Z,2µm,1.3s,mb6.9
RAR **Rarotonga** 74.35 161 P P 09 42 01.2 -0.9
comp=Z,27nm,1.1s,mb5.1,baz=337,slow=8.1,SNR=2.9
RAR **Rarotonga** 74.35 161 P P 09 42 01.2 -0.9
RAR LR LR
comp=Z,242µm,20.0s,MS7.5
BOK **Bokaro** 74.52 289 *e*P P 09 42 03.6 +0.3
BOK AMb AMB 09 42 09.4
comp=Z,552nm,1.2s,mb6.4
GMM **Mts of Mourne** 74.60 4⇑*e*P P 09 42 02.3 -1.0
HLG **Helgoland** 74.61 355 *e*P P 09 42 04.8 +1.5
comp=Z,1µm,1.3s,mb6.6
HLG *e*S S 09 51 39.2 +3.3
SBUM **Sibu** 74.63 254 ⇓P P 09 42 04.9 +0.8
BSEG **Bad Segeberg** 74.72 354 *e*P P 09 42 05.2 +1.3
BSEG *e*S S 09 51 41.5 +4.4
BSEG pmax pmax
comp=Z,681nm,1.1s,mb6.5
BSEG **Bad Segeberg** 74.72 354 *e*P P 09 42 05.2 +1.3
comp=Z,681nm,1.1s,mb6.5
BSEG *e*S S 09 51 41.5 +4.4
WIM **Isle of Man** 74.74 3⇑*e*P P 09 42 03.4 -0.7
GKP **Gorka Klasztor** 74.76 350 *e*P P 09 42 04.7 +0.5
GKP *e*PcP PcP 09 42 14.2 -4.0
GKP *e*S S 09 51 31.5 -6.1
GKP *e*SS SS 09 57 08.0 +44
GKP LMZ 10 18 17.0
comp=Z,71µm,22.6s
GKP **Gorka Klasztor** 74.76 350 *e*P P 09 42 04.7 +0.5
GKP *e*PcP PcP 09 42 14.2 -4.0
GKP *e*S S 09 51 31.5 -6.1
GKP LR LR
comp=Z,71µm,22.6s,MS6.9
GKP **Gorka Klasztor** 74.76 350 *e*SS SS 09 57 08.0 +44
HPK **Haverah Park** 75.00 1⇑*e*P P 09 42 05.0 -0.6
HPK AMb AMB 09 42 10.9
comp=Z,410nm,1.3s,mb6.2
HPK *e* 09 51 20.6
HPK AMS AMS 10 24 43.6
comp=Z,60µm,20.4s,MS6.9
LDU **Leeds Universi** 75.16 1 *e*P P 09 42 07.7 +1.2
TEIG **Tepich** 75.23 76 *e*P P 09 42 06.5 -0.9

TEIG	**Tepich**	**75.23**	**76**	*e*P		**P**	**09 42 06.9**	**-0.6**
	comp=Z,1μm,1.6s,mb6.5								
TEIG				LR		LR			
	comp=Z,68μm,21.0s,MS6.9								
WAR	**Warsaw**	**75.29**	**347**	*e*P		**P**	**09 42 09.4**	**+2.2**
WAR				*e*S		SKSac	09 52 14.6	+1.1
WAR				*e*SS		SS	09 57 16.6	+44
WAR				LMZ			10 19 57.6	
	comp=Z,83μm,21.6s								
WAR	**Warsaw**	**75.29**	**347**	*e*P		**P**	**09 42 09.4**	**+2.1**
WAR				*e*S		SKSac	09 52 14.6	+1.1
WAR				MLR		MLR			
	comp=Z,83μm,21.6s,MS7.0								
WAR	**Warsaw**	**75.29**	**347**	*e*P		**P**	**09 42 09.4**	**+2.1**
WAR				*e*S		SKSac	09 52 14.6	+1.1
WAR				*e*SS		SS	09 57 16.6	+44
WAR				LR		LR			
	comp=Z,83μm,21.6s,MS7.0								
AKASG	**Malin Array Be**	**75.39**	**342**	P		**P**	**09 42 07.2**	**-0.7**
	comp=Z,300nm,0.8s,mb6.3,baz=21,slow=6.4,SNR=77								
AKASG				S		S	09 51 44.7	0.0	
	comp=Z,3.5nm,0.7s,baz=14,slow=11,SNR=4.9								
AKASG				PKPPKP			10 09 23.6		
	comp=Z,0.3nm,0.4s,baz=228,slow=1.3,SNR=6.3								
AKASG				LR		LR	10 20 21.6		
	comp=Z,58μm,18.1s,MS6.9,baz=20,slow=40								
AKASG	**Malin Array Be**	**75.39**	**342**	P		**P**	**09 42 07.2**	**-0.7**
AKASG				S		S	09 51 44.7	0.0	
AKASG				pmax		pmax			
	comp=Z,300nm,0.8s								
AKASG				smax					
	comp=N,4.0nm,0.7s								
AKASG				MLR		MLR			
	comp=Z,58μm,18.1s								
AKASG	**Malin Array Be**	**75.39**	**342**	P		**P**	**09 42 07.2**	**-0.7**
AKASG				S		S	09 51 44.7	0.0	
AKASG				P'P'			10 09 23.6		
AKASG				LR		LR	10 20 21.6		
AKBB	**Malin Array Si**	**75.39**	**342**	*e*P		**P**	**09 42 07.1**	**-0.8**
KIEV	**Kiev**	**75.40**	**342**	*e*P		**P**	**09 42 07.2**	**-0.7**
KIEV				pmax		pmax			
	comp=Z,538nm,0.6s,mb6.7								
KIEV				MLR		MLR			
	comp=Z,66μm,20.0s,MS6.9								
KIEV	**Kiev**	**75.40**	**342**	*e*P		**P**	**09 42 07.2**	**-0.8**
	comp=Z,538nm,0.6s,mb6.7								
KIEV				*e*S		S	09 51 54.0	+9.2	
KIEV				LR		LR			
	comp=Z,66μm,20.0s,MS6.9								
LHO	**Holmfirth**	**75.41**	**1⇑**	*e*P		**P**	**09 42 07.5**	**-0.5**
KBL	**Kabul**	**75.46**	**307**	*e*P		**P**	**09 42 07.8**	**-0.8**
KBL				pmax		pmax			
	comp=Z,701nm,1.0s,mb6.5								
KBL	**Kabul**	**75.46**	**307**	*e*P		**P**	**09 42 07.8**	**-0.8**
	comp=Z,701nm,1.0s,mb6.5								
WME	**Myndd Eilian**	**75.50**	**3⇑**	*e*P		**P**	**09 42 07.5**	**-1.0**
DLF	**Lyons Farm**	**75.51**	**4**	*e*P		**P**	**09 42 07.6**	**-1.0**
DSB	**Dublin**	**75.57**	**4⇑**	*e*P		**P**	**09 42 07.2**	**-1.7**
DSB	**Dublin**	**75.57**	**4**	*e*P		**P**	**09 42 07.8**	**-1.1**
	comp=Z,259nm,0.9s,mb6.2								
WLF1	**Llynfaes**	**75.61**	**3**	AMb		AMB	09 42 21.0		
	comp=Z,408nm,1.7s,mb6.1								
WLF1	**Llynfaes**	**75.61**	**3**	AMb		AMB	09 42 21.0		
	comp=Z,408nm,1.7s,mb6.1								
YRC	**Rhoscolyn**	**75.64**	**3⇑**	*e*P		**P**	**09 42 07.6**	**-1.7**
WPM1	**Penmaenmawr**	**75.65**	**3⇑**	*e*P		**P**	**09 42 08.5**	**-0.8**
KBI1	**Birley Grange**	**75.71**	**1⇑**	*e*P		**P**	**09 42 09.2**	**-0.5**
BEL	**Belsk**	**75.72**	**347**	*e*P		**P**	**09 42 09.8**	**+0.1**
BEL				*e*S		S	09 51 48.7	+0.4
ALBI	**Allahabad**	**75.76**	**293**	*ex*		**P**	**09 42 08.0**	**-2.4**
YLL	**Llanberis**	**75.76**	**3⇑**	*e*P		**P**	**09 42 09.4**	**-0.6**
CCIG	**Comitan**	**75.85**	**82**	*i* P		**P**	**09 42 09.2**	**-1.8**
STNC	**Stoke**	**75.86**	**2**	P		**P**	**09 42 10.5**	**0.0**
STNC				AMb		AMB	09 42 18.4		
	comp=Z,532nm,1.9s,mb6.2								
STNC	**Stoke**	**75.86**	**2⇑**	*e*P		**P**	**09 42 10.5**	**0.0**
STNC				AMb		AMB	09 42 18.4		
	comp=Z,532nm,1.9s,mb6.2								
RUE	**Ruedersdorf**	**75.89**	**352**	*e*P		**P**	**09 42 11.4**	**+0.7**
	comp=Z,561nm,1.2s,mb6.4								
RUE				*e*S		S	09 51 52.9	+2.7	
RUE	**Ruedersdorf**	**75.89**	**352**	*e*P		**P**	**09 42 10.5**	**-0.2**
	comp=Z,1μm,1.4s,mb6.6								
YRE	**Yr Eifl**	**75.91**	**3⇑**	*e*P		**P**	**09 42 10.2**	**-0.6**
KWE	**Weaver Farm**	**75.94**	**1⇑**	*e*P		**P**	**09 42 10.7**	**-0.3**
SBD1	**Bryn Du**	**76.02**	**2⇑**	*e*P		**P**	**09 42 12.4**	**+0.9**
WIT	**Witteveen**	**76.03**	**356⇑**	*e*P		**P**	**09 42 12.5**	**+1.0**
ABA1	**Baconsthorpe**	**76.09**	**360**	*e*P		**P**	**09 42 12.4**	**+0.5**
NRDL	**Niedersach Rie**	**76.16**	**354**	*e*P		**P**	**09 42 13.0**	**+0.7**
	comp=Z,555nm,1.3s,mb6.3								
NRDL				*e*S		S	09 51 56.4	+3.2	
CWF	**Charnwood Fore**	**76.23**	**1⇑**	*e*P		**P**	**09 42 12.1**	**-0.5**
CWF				AMb		AMB	09 42 19.4		
	comp=Z,471nm,1.8s,mb6.1								
CWF				*e*			09 51 33.7		
CWF				AMS		AMS	10 23 50.6		
	comp=Z,64μm,20.7s,MS6.9								
KAPI	**Kappang**	**76.25**	**243**	P		**P**	**09 42 13.8**	**+0.5**
	comp=Z,1μm,1.0s,mb6.7,SNR=19								
KAPI	**Kappang**	**76.25**	**243**	P		**P**	**09 42 10.8**	**-2.5**
	comp=Z,98nm,1.0s,mb5.7,baz=16,slow=3.6,SNR=17								
KAPI				LR		LR	10 13 23.0		
	comp=Z,17μm,20.6s,MS6.3,baz=241,slow=34								
KAPI	**Kappang**	**76.25**	**243**	*e*P		**P**	**09 42 11.9**	**-1.4**
	comp=Z,395nm,1.2s,mb6.2								
KAPI				LR		LR			
	comp=Z,17μm,21.0s,MS6.3								
IBBN	**Ibbenburen**	**76.49**	**355**	*e*P		**P**	**09 42 15.3**	**+1.2**
	comp=Z,2μm,1.5s,mb6.8								
IBBN				*e*S		S	09 52 00.4	+3.6	
KSM	**Kuching**	**76.56**	**255**	⇑P		**P**	**09 42 15.8**	**+0.7**
VAL	**Valentia**	**76.64**	**7⇑**	*e*P		**P**	**09 42 13.8**	**-1.2**
CLZ	**Clausthal**	**76.80**	**354**	*e*P		**P**	**09 42 17.1**	**+1.2**
CLZ				*e*S		S	09 52 04.2	+4.0	
CLZ				pmax		pmax			
	comp=Z,1μm,1.5s,mb6.6								
CLZ	**Clausthal**	**76.80**	**354**	*e*P		**P**	**09 42 17.1**	**+1.2**
	comp=Z,1μm,1.5s,mb6.6								
CLZ				*e*S		S	09 52 04.2	+4.0	
WTSB	**Winterswijk**	**76.87**	**356⇑**	*e*P		**P**	**09 42 16.0**	**-0.2**
	comp=Z,391nm,1.0s,mb6.3								
MCH1	**Michaelchurch**	**76.94**	**2⇑**	*e*P		**P**	**09 42 15.7**	**-1.0**
MCH1				AMb		AMB	09 42 27.3		
	comp=Z,473nm,1.6s,mb6.2								
MCH1				*e*			09 51 25.3		
MCH1				AMS		AMS	10 26 15.4		
	comp=Z,56μm,18.9s,MS6.9								
CLL	**Collm**	**77.12**	**352**	*e*P		**P**	**09 42 17.0**	**-0.7**
CLL				*i* *PP		pP	09 42 31.7	+2.8	
CLL				*e*S		SKSac	09 52 19.0	-8.1	
CLL				MLR		MLR			
	comp=Z,51μm,21.4s,MS6.8								
CLL	**Collm**	**77.12**	**352**	*e*P		**P**	**09 42 17.9**	**+0.2**
	comp=Z,258nm,1.2s,mb6.0								
CLL				*e*S		S	09 52 05.6	+1.9	
CLL	**Collm**	**77.12**	**352**	*e*P		**P**	**09 42 17.0**	**-0.7**
CLL				*e*Plp			09 42 18.0		
	comp=Z,19μm,25.8s								
CLL				*i* x		x	09 42 20.1		
	comp=Z,259nm,1.2s								
CLL				*i* x		x	09 42 25.7		
CLL				*i* sP		sP	09 42 31.7	-1.4	
	comp=Z,249nm,0.9s								
CLL				*e*PP		PP	09 45 28.0	+17	
	comp=Z,8μm,22.6s								
CLL				*e*PPP			09 47 07.0		
CLL				*e*S		S	09 52 10.0	+6.3	
CLL				*e*PS			09 52 54.0		
CLL				*e*(PPS)			09 53 00.0		
CLL				*e*SS		SS	09 57 22.0	+22	
CLL				*e*(SSSS)			10 02 30.0		
CLL				*e*PKPPKPdf			10 09 25.0		
CLL				Lm			10 21 00.0		
	comp=N,52μm,21.0s								
CLL				Lm			10 21 00.0		
	comp=E,56μm,19.2s								
CLL				Lm			10 21 00.0		
	comp=Z,51μm,21.4s								
CLL	**Collm**	**77.12**	**352**	*e*P		**P**	**09 42 17.0**	**-0.7**
CLL				*i* pP		pP	09 42 31.7	+2.8	
CLL				*e*PP		PP	09 45 28.0	+17	
CLL				*e*S		SKSac	09 52 19.0	-8.1	
CLL				*e*SS		SS	09 57 22.0	+22	
CLL				*e*P'P'			10 09 25.0		
CLL				LR		LR			
	comp=Z,51μm,21.4s,MS6.8								
LVV	**L'vov**	**77.18**	**345⇓**	*i*P		**P**	**09 42 18.1**	**0.0**
LVV				*e*			09 45 20.9		
LVV				*e*			09 46 59.3		
LVV				*e*S		S	09 52 04.9	+0.5	
LVV				*e*			09 52 37.7		
CTA	**Charters Tower**	**77.24**	**213⇑**	*i*P		**P**	**09 42 17.6**	**-1.0**
	comp=Z,139nm,0.9s,mb5.9								
CTA				*e*S		S	09 52 04.4	-1.2	
CTA	**Charters Tower**	**77.24**	**213**	P		**P**	**09 42 17.8**	**-0.9**
	comp=Z,77nm,0.9s,mb5.6,baz=17,slow=6.6,SNR=38								
CTA				LR		LR	10 11 26.9		
	comp=Z,78μm,21.9s,MS7.0,baz=21,slow=32								
CTA	**Charters Tower**	**77.24**	**213⇑**	*i*P		**P**	**09 42 17.6**	**-1.0**
CTA				*e*S		S	09 52 04.4	-1.2	
CTA				pmax		pmax			
	comp=Z,139nm,0.9s								
CTAO	**Charters Tower**	**77.24**	**213**	*e*P		**P**	**09 42 17.6**	**-1.0**
CTAO				pmax		pmax			
	comp=Z,186nm,0.9s,mb6.0								
CTAO				MLR		MLR			
	comp=Z,76μm,22.0s,MS7.0								
CTAO	**Charters Tower**	**77.24**	**213**	*e*P		**P**	**09 42 17.6**	**-1.0**
	comp=Z,186nm,0.9s,mb6.0								
CTAO				*e*S		S	09 51 52.2	-13	
CTAO				LR		LR			
	comp=Z,76μm,22.0s,MS7.0								
KSP	**Ksiaz**	**77.25**	**350**	*e*P		**P**	**09 42 18.5**	**0.0**
KSP				*e*PcP		PcP	09 42 25.2	-3.8	
KSP				*e*S		S	09 52 16.4	+11	
KSP				*e*SS		SS	09 57 22.3	+20	
KSP				LMZ			10 22 28.2		
	comp=Z,121μm,21.4s								
KSP	**Ksiaz**	**77.25**	**350⇑**	*e*P		**P**	**09 42 18.0**	**-0.5**
KSP				*e*			09 45 09.0		
KSP				*e*PPP			09 46 59.0		
KSP				*e*S		S	09 52 03.5	-1.7	
KSP				*e*			09 52 27.0		
KSP				*e*SS		SS	09 57 00.0	-2.1	
KSP	**Ksiaz**	**77.25**	**350⇑**	*e*P		**P**	**09 42 18.0**	**-0.5**
KSP				*i* pP		pP	09 42 21.3	-8.4	
KSP				*e*PP		PP	09 45 09.0	-2.9	
KSP				*e*PPP			09 46 59.0		
KSP				*e*S		S	09 52 03.5	-1.7	
KSP				*e*SKS			09 52 27.0		
KSP				*e*SS		SS	09 57 00.0	-2.1	
KSP				LR		LR			
	comp=Z,145μm,20.8s,MS7.3								
HGH	**Gray Hill**	**77.30**	**2⇑**	*e*P		**P**	**09 42 18.4**	**-0.3**
BUG	**Bochum--Univer**	**77.38**	**356**	*e*P		**P**	**09 42 19.8**	**+0.7**
	comp=Z,491nm,1.3s,mb6.3								
BUG				*e*S		S	09 52 10.3	+3.8	
OJC	**Ojcow**	**77.43**	**347**	*e*P		**P**	**09 42 19.2**	**-0.3**
OJC				*e*PcP		PcP	09 42 28.1	-1.7	
OJC				*e*pP		PP	09 45 21.5	+8.1	
OJC				*e*S		S	09 52 03.0	-4.1	
OJC				*e*SS		SS	09 57 03.0	-1.8	
OJC				L			10 22 39.9		
	comp=Z,78nm,20.8s								
OJC	**Ojcow**	**77.43**	**347**	*e*P		**P**	**09 42 19.2**	**-0.3**
OJC				*e*		pP	09 42 28.1	-2.6	
OJC				*e*			09 45 21.5		
OJC				*e*S		S	09 52 03.0	-4.1	
OJC				*e*SS		SS	09 57 03.0	-1.8	
SWN1	**Swindon**	**77.45**	**1**	P		**P**	**09 42 17.3**	**-2.2**
SWN1				AMb		AMB	09 42 28.4		
	comp=Z,2μm,1.5s,mb6.7								
SWN1							09 51 45.6		
SWN1				AMS		AMS	10 25 45.2		
	comp=Z,60μm,18.9s								
SWN1	**Swindon**	**77.45**	**1⇑**	*e*P		**P**	**09 42 17.3**	**-2.2**
SWN1				AMb		AMB	09 42 28.4		
	comp=Z,2μm,1.5s,mb6.7								
SWN1				*e*			09 51 45.6		
SWN1				AMS		AMS	10 25 45.2		
	comp=Z,60μm,18.9s,MS6.9								
BRG	**Berggiesshubel**	**77.47**	**351**	*e*P		**P**	**09 42 20.0**	**+0.4**
	comp=Z,374nm,1.4s,mb6.1								
BRG				*e*S		S	09 52 09.5	+2.0	
BRG	**Berggiesshubel**	**77.47**	**351⇑**	*i*P		**P**	**09 42 19.0**	**-0.7**
	comp=Z,58nm,0.9s,mb5.5								
BRG				*i*			09 42 22.4		
	comp=Z,332nm,1.3s								
BRG				PP		PP	09 45 30.0	+16	
BRG				S		SKSac	09 52 24.0	-5.6	
BRG				SS		SS	09 57 30.0	+25	
BRG				*e*PKPPKP			10 09 26.5		
	comp=Z,16nm,1.1s								
BRG									
	comp=N,41μm,22.6s								
BRG									
	comp=E,35μm,18.6s								
BRG									
	comp=Z,59μm,21.3s								
BRG	**Berggiesshubel**	**77.47**	**351⇑**	*i*P		**P**	**09 42 19.0**	**-0.7**
	comp=Z,35nm,0.9s,mb5.3								
BRG				PP		PP	09 45 30.0	+16	
BRG				S		SKSac	09 52 24.0	-5.6	
BRG				SS		SS	09 57 30.0	+25	
BRG				*e*P'P'			10 09 26.5		
BRG				LR		LR			
	comp=Z,35μm,21.3s,MS6.7								
FBE	**Freiberg**	**77.47**	**352**	*e*P		**P**	**09 42 20.5**	**+0.8**
	comp=Z,487nm,1.2s,mb6.3								
MAK	**Makhachkala**	**77.53**	**327**	*i* P		**P**	**09 42 19.8**	**-0.4**
MAK				*i*		pP	09 42 31.8	+0.4	
MAK				*i*			09 45 23.8		
MAK				*e*PPP			09 47 13.3		
MAK				*i* S		S	09 52 08.5	0.0	
MAK				*i*			09 52 46.9		
MAK				pmax		pmax			
	comp=E,307nm,1.4s								
MAK				pmax		pmax			
	comp=N,737nm,2.0s								
MAK				pmax		pmax			
	comp=Z,705nm,1.6s,mb6.3								
MAK				pmax		pmax			
	comp=Z,9μm,7.3s								
MAK				MLR		MLR			
	comp=N,128μm,17.0s,MS7.6								
MAK				MLR		MLR			
	comp=Z,165μm,18.0s,MS7.4								
MAK				MLR		MLR			
	comp=E,222μm,19.0s,MS7.6								
KWP	**Kalwaria**	**77.58**	**345**	*e*P		**P**	**09 42 20.9**	**+0.7**
KWP				*e*S		SKSac	09 52 21.3	-9.2	
KWP				*e*SS		SS	09 57 28.6	+22	
KWP				LMZ			10 23 27.6		
	comp=E,134μm,19.2s								
KWP	**Kalwaria**	**77.58**	**345**	*e*P		**P**	**09 42 19.9**	**-0.4**
KWP				pmax		pmax			
	comp=Z,2μm,0.8s,mb7.0								
KWP				MLR		MLR			
	comp=Z,112μm,20.0s,MS7.2								
KWP	**Kalwaria**	**77.58**	**345⇑**	*i*P		**P**	**09 42 21.0**	**+0.7**
KWP	**Kalwaria**	**77.58**	**345**	*e*P		**P**	**09 42 19.9**	**-0.4**
	comp=Z,2μm,0.8s,mb7.0								
KWP				LR		LR			
	comp=Z,112μm,20.0s,MS7.2								
KWP	**Kalwaria**	**77.58**	**345**	*e*S		SKSac	09 52 21.3	-9.2	
KWP	**Kalwaria**	**77.58**	**345**	*e*SS		SS	09 57 28.6	+22	
UPC	**Upice**	**77.61**	**350⇑**	*i*P		**P**	**09 42 20.2**	**-0.3**
WOL	**Wolverton**	**77.66**	**1⇑**	*e*P		**P**	**09 42 20.0**	**-0.7**
DPC	**Dobruska-Polom**	**77.74**	**350⇑**	*i*P		**P**	**09 42 21.3**	**+0.1**
DPC				*e*S		S	09 52 09.6	-0.8	
DPC				*ex*		x	09 52 23.3		
DPC				AMS		AMS	10 23 40.0		
	comp=Z,83μm,17.2s								
PVCC	**Panska Ves**	**77.75**	**351⇑**	*i*P		**P**	**09 42 21.0**	**-0.2**
PVCC				*e*S		S	09 52 08.6	-1.9	
PVCC				*e*			09 52 25.6		
PVCC				MLR		MLR			
	comp=Z,83μm,17.9s,MS7.1								
PVCC	**Panska Ves**	**77.75**	**351⇑**	*i*P		**P**	**09 42 21.0**	**-0.2**
PVCC				*e*S		S	09 52 08.6	-1.9	
PVCC				*ex*		x	09 52 25.2		
PVCC				AMS		AMS	10 23 10.0		
	comp=Z,83μm,17.9s								
PVCC	**Panska Ves**	**77.75**	**351⇑**	*i*P		**P**	**09 42 21.0**	**-0.2**
PVCC				*e*S		S	09 52 08.6	-1.9	
PVCC				*e*			09 52 25.2		
PVCC				*e*			09 52 25.6		
PVCC				LR		LR			
	comp=Z,83μm,17.9s,MS7.1								
ABKT	**Ailbek**	**77.76**	**317**	P		**P**	**09 42 21.2**	**-0.3**
	comp=Z,1μm,0.9s,mb6.8,SNR=22								
RAC	**Raciborz**	**77.78**	**348**	*e*P		**P**	**09 42 22.0**	**+0.6**
RAC				*e*			09 45 17.3		
RAC				*e*S		S	09 52 09.1	-1.8	
RAC				MLR		MLR			
	comp=Z,90μm,18.0s,MS7.1								
UBBA	**Unterbreizbach**	**77.84**	**354**	*e*P		**P**	**09 42 22.4**	**+0.7**
	comp=Z,574nm,1.6s,mb6.2								
UBBA				*e*S		S	09 52 14.8	+3.3	
TFO1	**Folkestone**	**77.86**	**360**	P		**P**	**09 42 21.8**	**0.0**
TFO1				AMb		AMB	09 42 30.6		
	comp=Z,1μm,1.5s,mb6.6								
TFO1							09 51 56.5		
TFO1				AMS		AMS	10 25 26.2		
	comp=Z,66μm,21.1s								
TFO1	**Folkestone**	**77.86**	**360⇑**	*e*P		**P**	**09 42 21.8**	**0.0**
TFO1				AMb		AMB	09 42 30.6		
	comp=Z,1μm,1.5s,mb6.6								
TFO1				*e*			09 51 56.5		
TFO1				AMS		AMS	10 25 26.2		
	comp=Z,66μm,21.1s,MS6.9								
MOX	**Moxa**	**77.89**	**353**	*e*P		**P**	**09 42 21.7**	**-0.3**
	comp=Z,482nm,1.3s,mb6.3								
MOX				*e*			09 47 15.1		
MOX									
	comp=Z,44μm,19.0s								
MOX	**Moxa**	**77.89**	**353**	*e*P		**P**	**09 42 21.7**	**-0.3**
MOX				*e*			09 47 15.1		
MOX				pmax		pmax			
	comp=Z,482nm,1.3s,mb6.3								
MOX				MLR		MLR			
	comp=Z,44μm,19.0s,MS6.8								
MOX	**Moxa**	**77.89**	**353**	*e*P		**P**	**09 42 22.7**	**+0.7**
	comp=Z,348nm,1.2s,mb6.2								
MOX				*e*S		S	09 52 15.9	+3.8	
HTL	**Hartland**	**77.90**	**3**	P		**P**	**09 42 21.9**	**-0.2**
HTL				AMb		AMB	09 42 33.6		
	comp=Z,358nm,1.6s,mb6.0								
HTL							09 51 58.2		
HTL				AMS		AMS	10 24 25.7		
	comp=Z,78μm,19.8s								
HTL	**Hartland**	**77.90**	**3⇑**	*e*P		**P**	**09 42 21.9**	**-0.2**
HTL				AMb		AMB	09 42 33.6		
	comp=Z,358nm,1.6s,mb6.0								
HTL				*e*			09 51 58.2		
HTL				AMS		AMS	10 24 25.7		
	comp=Z,78μm,19.8s,MS7.0								
KTGM	**Kuala Trenggan**	**77.95**	**263**	⇑P		**P**	**09 42 23.4**	**+0.5**
STHS	**Stebnicka Huta**	**78.01**	**346**	*e*P		**P**	**09 42 23.6**	**+0.9**
STHS				*e*			09 42 31.1		
STHS				pmax		pmax			
	comp=Z,314nm,0.9s,mb6.2								
STHS	**Stebnicka Huta**	**78.01**	**346**	*e*P		**P**	**09 42 23.6**	**+0.9**
	comp=Z,314nm,0.9s,mb6.2								
STHS				*e*			09 42 31.1		
OKC	**Ostrava-Krasne**	**78.02**	**348⇑**	*i*P		**P**	**09 42 22.5**	**-0.3**
OKC				AMS		AMS	10 22 30.0		
	comp=Z,69μm,17.1s								
WERD	**Werda**	**78.03**	**352**	*e*P		**P**	**09 42 23.6**	**+0.8**
	comp=Z,254nm,1.2s,mb6.0								
TANN	**Tannenbergstha**	**78.05**	**352**	*e*P		**P**	**09 42 23.8**	**+0.9**
	comp=Z,345nm,1.5s,mb6.1								
TANN				*e*S		S	09 52 16.9	+3.1	
BEBN	**Eben Emael**	**78.09**	**357**	P		**P**	**09 42 23.0**	**-0.1**
	comp=Z,126nm,1.4s,mb5.7								
SNG	**Songkhla**	**78.09**	**267**	P		**P**	**09 42 26.0**	**+2.3**
	comp=Z,280nm,0.8s,mb6.2								
HGN	**Heimansgroeve**	**78.11**	**356⇑**	*e*P		**P**	**09 42 23.1**	**-0.1**
	comp=Z,542nm,0.9s,mb6.5								
HGN	**Heimansgroeve**	**78.11**	**356**	*e*S		S	09 52 14.3	-0.2	
HGN	**Heimansgroeve**	**78.11**	**356**	*e*SS		SS	09 57 24.1	+9.1	
GUNZ	**Gunzen**	**78.11**	**352**	*e*P		**P**	**09 42 24.1**	**+0.8**
	comp=Z,283nm,1.1s,mb6.1								
UCC	**Uccle**	**78.13**	**357**	P		**P**	**09 42 23.2**	**-0.2**
	comp=Z,328nm,1.8s,mb6.0								
NIE	**Niedzica**	**78.14**	**347**	*e*P		**P**	**09 42 23.7**	**+0.3**
NIE				*i* PcP		PcP	09 42 32.3	-0.6	
WERN	**Wernitzgruen**	**78.19**	**352**	*e*P		**P**	**09 42 24.6**	**+0.9**
	comp=Z,440nm,1.1s,mb6.3								
KIV	**Kislovodsk**	**78.22**	**330**	P		**P**	**09 42 24.9**	**+0.9**
	comp=Z,1μm,1.2s,mb6.8,SNR=24								
KIV	**Kislovodsk**	**78.22**	**330**	P		**P**	**09 42 24.2**	**+0.2**
	SNR=57								
KIV	**Kislovodsk**	**78.22**	**330***c*	*i*P		**P**	**09 42 23.9**	**-0.1**
KIV				*e*			09 45 23.4		
KIV				*e*PPP			09 47 13.6		
KIV				*e*S		S	09 52 15.7	-0.2	
KIV				*e*SS		SS	09 57 18.5	+1.4	
KIV				pmax		pmax			
	comp=Z,269nm,1.2s,mb6.0								
KIV				pmax		pmax			
	comp=Z,3μm,6.0s								
KIV				MLR		MLR			
	comp=Z,54μm,20.0s,MS6.9								
KIV	**Kislovodsk**	**78.22**	**330**	*e*P		**P**	**09 42 23.8**	**-0.2**
KIV				*e*S		S	09 52 25.3	+9.4	
KIV				LR		LR			
	comp=Z,55μm,20.0s,MS6.9								
NKC	**Novy Kostel**	**78.23**	**352⇑**	*i*P		**P**	**09 42 23.8**	**-0.1**
NKC				*e*S		S	09 52 13.9	-1.9	
NKC				*ex*		x	09 52 29.6		
NKC				AMS		AMS	10 25 00.0		
	comp=Z,61μm,18.0s								
NKC	**Novy Kostel**	**78.23**	**352⇑**	*i*P		**P**	**09 42 23.8**	**-0.1**
NKC				*e*S		S

comp=Z,19µm,21.8s,MS6.4,baz=4,5,slow=35
VRAC Vranov 78.73 349⇑ *i*P P 09 42 27.2 +0.5
VRAC Vranov 78.73 349 P P 09 42 26.2 -0.5
GIVF Givet 78.81 357 *e*P P 09 42 27.1 0.0
comp=Z,529nm,0.9s,mb6.2
GIVF Givet 78.81 357 *e*P P 09 42 27.1 0.0
GIVF pmax pmax
comp=Z,265nm,0.9s,mb6.2
GIVF Givet 78.81 357 *e*P P 09 42 27.1 0.0
comp=Z,264nm,0.9s,mb6.2
DOU Dourbes 78.82 357 P P 09 42 27.2 0.0
comp=Z,242nm,1.6s,mb5.9
TREC Trest 78.87 350⇑ *i*P P 09 42 27.0 -0.4
TREC *e*S S 09 52 23.4 +0.8
TREC *e*SKS 09 52 37.5
TREC AMS AMS 10 24 40.0
comp=Z,95µm,18.5s
BAIF Baives 78.87 358 *e*P P 09 42 27.6 +0.2
comp=Z,1µm,1.0s,mb6.4
BAIF Baives 78.87 358 *e*P P 09 42 27.6 +0.2
BAIF pmax pmax
comp=Z,564nm,1.0s,mb6.5
BAIF Baives 78.87 358 *e*P P 09 42 27.6 +0.2
comp=Z,564nm,1.0s,mb6.5
GRA1 Grafenberg Arr 78.87 353 *e*P P 09 42 28.6 +1.1
comp=Z,685nm,1.2s,mb6.5
GRA1 *e*S S 09 52 26.4 +3.8
GRA1 *e*SS SS 09 57 59.1 +33
GRA1 *e*P'P' 10 09 24.7
GRA1 LR LR
comp=Z,55µm,18.2s,MS6.9
GRF Grafenberg Arr 78.87 353 *e*P P 09 42 28.6 +1.1
GRF *e*S S 09 52 26.4 +3.8
GRF pmax pmax
comp=Z,685nm,1.2s,mb6.5
GRF Grafenberg Arr 78.87 353 *e*P P 09 42 28.6 +1.1
GRF *e*S S 09 52 26.4 +3.8
GRF pmax pmax
comp=Z,685nm,1.2s,mb6.5
GRF Grafenberg Arr 78.87 353 *e*P P 09 42 28.6 +1.1
comp=Z,685nm,1.2s,mb6.5
GRF *e*S S 09 52 26.4 +3.8
GRF *e*SS SS 09 57 59.1 +33
GRF *e*PKPPKPdf 10 09 24.7
GRF *e*L 10 25 23.5
comp=Z,55µm,18.2s
GRF Grafenberg Arr 78.87 353 *e*P P 09 42 28.6 +1.1
comp=Z,685nm,1.2s,mb6.5
GRF *e*S S 09 52 26.4 +3.8
GRF *e*SS SS 09 57 59.1 +33
GRFO Grafenberg 78.87 353 *e*S S 09 52 25.9 +3.3
AJM Ajmer 78.90 299 *e*P P 09 42 27.8 -0.2
AJM AMb AMB 09 42 38.5
comp=Z,2µm,1.6s,mb6.7
AJM *ex* x 09 52 22.1
BBSR BB Station 78.90 51 *e*P P 09 42 27.5 -0.4
comp=Z,181nm,0.9s,mb6.0
BBSR LR LR
comp=Z,113µm,19.0s,MS7.2
ABH Alteburg 78.92 355 *e*P P 09 42 28.9 +1.2
ANN Anapa 78.99 334*c* *i*P P 09 42 27.1 -1.1
ANN *i* *PP pP 09 42 45.4 +6.0
ANN *i* 09 45 29.4
ANN *i* S S 09 52 20.0 -4.0
ANN *e*SS SS 09 57 36.5 +8.0
ANN pmax pmax
comp=N,79nm,1.4s
ANN pmax pmax
comp=E,61nm,1.4s
ANN pmax pmax
comp=Z,199nm,1.4s,mb5.8
ANN pmax pmax
comp=N,2µm,9.1s
ANN pmax pmax
comp=E,506nm,9.1s
ANN pmax pmax
comp=Z,6µm,9.1s
ANN Anapa 78.99 334⇑ *i*P P 09 42 26.7 -1.5
KIS Kishinev 79.00 341*b* *i*P P 09 42 27.0 -1.2
KIS *e* pP 09 42 37.0 -2.4
KIS *i* 09 42 45.0
KIS *e* 09 45 25.0
KIS *e*PPP 09 47 14.0
KIS *e*S S 09 52 21.0 -3.0
KIS *e*PS 09 52 46.0
KIS pmax pmax
comp=N,960nm,1.5s
KIS pmax pmax
comp=Z,1µm,1.5s,mb6.7
KIS pmax pmax
comp=E,660nm,1.7s
KIS pmax pmax
comp=Z,10µm,10.0s
KIS smax
comp=N,8µm,11.0s
KIS smax
comp=E,5µm,11.0s
KIS Kishinev 79.00 341⇑ *i*P P 09 42 27.0 -1.2
comp=E,10µm,10.0s
KIS Kishinev 79.00 341 *e*PcP PcP 09 42 37.0 +0.3
KIS Kishinev 79.00 341 *e*PP PP 09 45 25.0 -1.5
KIS Kishinev 79.00 341 *e*PPP 09 47 14.0
KIS *e*S S 09 52 21.0 -3.0
comp=E,5µm,11.0s
KIS Kishinev 79.00 341 *i* PS 09 52 46.0
KIS *e*SS SS 09 57 50.0 +22
KIS *e*SSS 10 01 28.0
KIS LRM 10 22 36.0
comp=E,181µm,18.0s
KIS Kishinev 79.00 341⇑ *i*P P 09 42 30.2 +2.0
KIS Kishinev 79.00 341⇑ P P 09 42 30.2 +2.0
KECS Kecovo 79.03 347 *e*P P 09 42 28.5 +0.1
KECS *e* 09 42 35.9
KECS pmax pmax
comp=Z,220nm,1.0s,mb6.0
KECS Kecovo 79.03 347 *e*P P 09 42 28.5 +0.1
KECS *e*PCP PcP 09 42 31.5 -5.3
KECS *e*pP pP 09 42 35.9 -3.7
KECS Kecovo 79.03 347 *e*P P 09 42 28.5 +0.1
comp=Z,220nm,1.0s,mb6.0
KECS *e* 09 42 35.9
TRPA Tarpa 79.06 345⇑ *i*P P 09 42 29.3 +0.8
IAS Iasi 79.06 342⇑ *i*P P 09 42 30.3 +1.7
IAS Iasi 79.06 342 P P 09 42 31.6 +3.0
BUR08 Bucovina Ar. S 79.08 343 *e*P P 09 42 29.0 +0.3
BURAR Bucovina Array 79.10 343⇓ *i*P P 09 42 29.6 +0.8
BURAR Bucovina Array 79.10 343 P P 09 42 29.1 +0.4
RUP Ruppelstein 79.12 356 *e*P P 09 42 28.6 -0.2
TOD Tromm 79.12 354 *e*P P 09 42 28.6 -0.2
WLF Walferdange 79.20 356 P P 09 42 29.7 +0.4
comp=Z,310nm,1.8s,mb5.9
WLF Walferdange 79.20 356 *e*P P 09 42 29.6 +0.4
WLF *e* 09 45 29.6
WLF pmax pmax
comp=Z,297nm,1.0s,mb6.2
WLF MLR MLR
comp=Z,99µm,19.0s,MS7.2
WLF Walferdange 79.20 356 *e*P P 09 42 30.4 +1.2
comp=Z,324nm,1.1s,mb6.2
WLF *e*S S 09 52 30.6 +4.5
WLF Walferdange 79.20 356 *e*P P 09 42 29.6 +0.3
comp=Z,297nm,1.0s,mb6.2
WLF *e*PP PP 09 45 29.6 +1.5
WLF LR LR
comp=Z,99µm,19.0s,MS7.2
KHC Kasperske Hory 79.22 351⇑ *i*P P 09 42 29.4 0.0
KHC *ex* x 09 42 34.5
KHC *e*S S 09 52 26.0 -0.4
KHC *e*SKS 09 52 41.1
KHC AMS AMS 10 28 20.0
comp=Z,61µm,17.2s
KOLL Kolacno 79.23 348 *e*P P 09 42 29.6 +0.2
VYHS Vyhne 79.25 348 *i*P P 09 42 29.7 +0.1
VYHS *e* 09 42 32.8
VYHS *e*S S 09 52 35.4 +8.7
VYHS pmax pmax
comp=Z,201nm,1.2s,mb5.9
VYHS Vyhne 79.25 348 *i*P P 09 42 29.7 +0.1
VYHS *e*PCP PcP 09 42 32.8 -4.9
VYHS *e*S S 09 52 35.4 +8.7
VYHS Vyhne 79.25 348 *i*P P 09 42 29.7 +0.1
comp=Z,201nm,1.2s,mb5.9
VYHS *e*S S 09 52 35.4 +8.7
VYHS LR LR
comp=Z,32µm,18.5s,MS6.7
WET Wettzell 79.28 352 *e*P P 09 42 30.6 +0.9
WET *e*S S 09 52 30.4 +3.4
WET pmax pmax
comp=Z,322nm,1.5s,mb6.0
WET Wettzell 79.28 352 *e*P P 09 42 30.6 +0.9
comp=Z,322nm,1.5s,mb6.0
WET *e*S S 09 52 30.4 +3.4
BMR Baia Mare 79.35 344⇓ *i*P P 09 42 31.6 +1.7
BMR Baia Mare 79.35 344 P P 09 42 30.8 +0.7
SMOL Smolenice 79.41 349 *e*P P 09 42 31.9 +1.5
KTD Kalmit 79.45 355 *e*P P 09 42 30.5 -0.1
SOC Sochi 79.46 332*c* *i*P P 09 42 30.2 -0.6
SOC *e* 09 42 36.4
SOC *e**PP pP 09 42 44.6 +2.6
SOC *e* 09 45 31.2
SOC *e*S S 09 52 24.1 -5.0
SOC *e*SS SS 09 57 36.6 +1.0
SOC pmax pmax
comp=Z,6µm,1.0s,mb7.4
GEC2 GERESS Array S 79.50 351 *e*P P 09 42 31.6 +0.7
GEC2 *e*S S 09 52 32.9 +3.6
GEC2 pmax pmax
comp=Z,256nm,1.4s,mb6.0
GEC2 GERESS Array S 79.50 351 *e*P P 09 42 31.6 +0.7
comp=Z,256nm,1.4s,mb6.0
GEC2 *e*S S 09 52 32.9 +3.6
GERES GERESS Array B 79.50 351 P P 09 42 30.6 -0.3
comp=Z,66nm,0.8s,mb5.6,baz=24,slow=5.4,SNR=170
GERES GERESS Array B 79.50 351 P P 09 42 30.6 -0.3
GERES pmax pmax
comp=Z,66nm,0.8s
BOQS Boqueron 79.56 81 *e*P P 09 42 31.6 -0.1
PSZ Piszkesteto 79.67 347⇑ *e*P P 09 42 32.7 +0.9
PSZ Piszkesteto 79.67 347⇑ *i*P P 09 42 32.5 +0.7
PSZ Piszkesteto 79.67 347 P P 09 42 32.5 +0.7
JLP Les Platons 79.72 2⇑ *e*P P 09 42 31.5 -0.5
SIM Simferopol' 79.72 336*c* *i*P P 09 42 29.0 -3.2
SIM *e*S S 09 52 27.0 -4.8
SIM pmax pmax
comp=Z,217nm,1.0s,mb6.0
SIM MLR MLR
comp=Z,77µm,16.1s,MS7.1
SIM Simferopol' 79.72 336⇑ *i*P P 09 42 28.9 -3.3
JVM Valle D.L. Mar 79.74 2⇑ *e*P P 09 42 31.9 -0.3
JQE Queens East 79.76 2⇑ *e*P P 09 42 32.0 -0.3
JRS Jersey 79.77 2 *e*P P 09 42 32.1 -0.2
ZST Bratislava 79.77 349 *e*P P 09 42 33.0 +0.6
ZST *e*PCP PcP 09 42 36.4 -3.6
ZST *e*S S 09 52 34.9 +2.7
ZST Bratislava 79.77 349 *e*P P 09 42 33.0 +0.6
comp=Z,267nm,0.9s,mb6.2
ZST *e* 09 42 36.4
ZST *e*S S 09 52 34.9 +2.7
ZST LR LR
comp=Z,68µm,18.7s,MS7.0
JSA Saint Aubin 79.77 2 P P 09 42 31.7 -0.7
JSA AMb AMB 09 42 39.0
comp=Z,963nm,1.3s,mb6.6
JSA Saint Aubin 79.77 2⇑ *e*P P 09 42 31.7 -0.7
JSA AMb AMB 09 42 39.0
comp=Z,963nm,1.3s,mb6.6
LANF Langenberg 79.80 355 *e*P P 09 42 32.5 0.0
BHPL Bhopal 79.87 294 *e*P P 09 42 32.9 -0.5
BHPL AMb AMB 09 42 46.6
comp=Z,2µm,1.7s,mb6.7
BHPL *e*S S 09 52 36.7 +2.6
IPM Ipoh 79.92 265⇓ *i*P P 09 42 33.7 -0.1
STU Stuttgart 79.93 354 *e*P P 09 42 33.1 -0.1
STU pmax pmax
comp=Z,389nm,1.0s,mb6.3
STU Stuttgart 79.93 354 *e*P P 09 42 33.8 +0.6
comp=Z,314nm,1.0s,mb6.2
STU *e*S S 09 52 39.4 +5.5
STU Stuttgart 79.93 354 *e*P P 09 42 33.1 -0.2
comp=Z,389nm,1.0s,mb6.3
CONA Conrad Observa 80.18 350 *i* P P 09 42 35.0 +0.4
comp=Z,440nm,1.1s,mb6.3,SNR=96
CSNA Conrad Observa 80.18 350⇑ *i*P P 09 42 35.0 +0.4
comp=Z,426nm,1.1s,mb6.3
STR Strasbourg 80.20 355 *e*P P 09 42 35.0 +0.3
FLN La Foliniere 80.22 1 *e*P P 09 42 34.3 -0.5
comp=Z,993nm,1.0s,mb6.4,baz=2.1
FLN *e*MLR MLR
comp=Z,109µm,20.0s,MS6.9
FLN La Foliniere 80.22 1 *e*P P 09 42 34.3 -0.5
FLN pmax pmax
comp=Z,496nm,1.0s,mb6.4
FLN MLR MLR
comp=Z,109µm,20.0s,MS7.2
FLN La Foliniere 80.22 1 *e*P P 09 42 34.3 -0.5
comp=Z,496nm,1.0s,mb6.4
FLN LR LR
comp=Z,109µm,20.0s,MS7.2
BUD Budapest 80.22 347⇑ *e*P P 09 42 35.5 +0.7
MYKOM Kota Tinggi 80.26 261⇓ P P 09 42 35.2 -0.3
RAO Raoul Island 80.31 179 LR LR 10 13 41.2
comp=Z,159µm,20.4s,MS7.3,baz=15,slow=32
RAO Raoul Island 80.31 179 PFAKE 09 42 40.0 +4.7
RAO LR LR
comp=Z,159µm,20.0s,MS7.4
DRGR 80.33 345⇓ *i*P P 09 42 36.0 +0.6
DRGR 80.33 345 P P 09 42 36.1 +0.7
SOP Sopron 80.34 349⇑ *e*P P 09 42 36.3 +0.9
FUR Furstenfeldbru 80.38 353 *e*P P 09 42 36.5 +0.8
FUR *e*S S 09 52 43.7 +5.0
FUR pmax pmax
comp=Z,444nm,1.1s,mb6.3
FUR Furstenfeldbru 80.38 353 *e*P P 09 42 36.5 +0.8
comp=Z,444nm,1.1s,mb6.3
FUR *e*S S 09 52 43.7 +5.0
LDF La Druitiere 80.39 0 *e*P P 09 42 35.1 -0.6
comp=Z,906nm,0.9s,mb6.4
LDF La Druitiere 80.39 0 *e*P P 09 42 35.1 -0.6
LDF pmax pmax
comp=Z,453nm,0.9s,mb6.4
LDF La Druitiere 80.39 0 *e*P P 09 42 35.1 -0.6
comp=Z,453nm,0.9s,mb6.4
CDF Champ du Feu 80.40 355 *e*P P 09 42 35.5 -0.3
comp=Z,413nm,0.9s,mb6.1
CDF Champ du Feu 80.40 355 *e*P P 09 42 35.5 -0.3
CDF pmax pmax
comp=Z,207nm,0.9s,mb6.1
CDF Champ du Feu 80.40 355 *e*P P 09 42 35.5 -0.3
comp=Z,207nm,0.9s,mb6.1
MEZF Maizieres J'vi 80.40 357 *e*P P 09 42 35.8 0.0
comp=Z,1µm,1.2s,mb6.4,baz=2.9
MEZF Maizieres J'vi 80.40 357 *e*P P 09 42 35.8 0.0
comp=Z,1µm,1.2s,mb6.7
KGM Kluang 80.41 261⇑ P P 09 42 36.0 -0.4
BFO Black Forest 80.42 355 P P 09 42 36.9 +1.0
comp=Z,1µm,0.9s,mb6.8,SNR=25
BFO Black Forest 80.42 355 *e*P P 09 42 36.5 +0.6
BFO *e*S S 09 52 43.6 +4.5
BFO pmax pmax
comp=Z,328nm,1.4s,mb6.1
BFO Black Forest 80.42 355 *e*P P 09 42 36.5 +0.6
comp=Z,328nm,1.4s,mb6.1
BFO *e*S S 09 52 43.6 +4.5
MOA Molln 80.43 351 *i* P P 09 42 35.8 -0.1
comp=Z,204nm,1.6s,mb5.8,SNR=37
VRI Vrincioaia 80.50 342⇑ *i*P P 09 42 37.3 +0.9
VRI Vrincioaia 80.50 342⇑ P P 09 42 37.3 +1.0
PLOR Plostina 80.53 342 P P 09 42 38.9 +2.4
PLOR Plostina 80.53 342⇓ *i*P P 09 42 38.2 +1.7
TGUH Tegucigalpa,Un 80.56 79 *e*P P 09 42 37.0 -0.1
TGUH Tegucigalpa,Un 80.56 79 *e*P P 09 42 37.6 +0.5
comp=Z,2µm,1.4s,mb6.9
TGUH LR LR
comp=Z,76µm,20.0s,MS7.0
NGP Nagpur 80.57 292⇑ *i*P P 09 42 35.3 -1.8
NGP *ex* x 09 42 42.8
comp=Z,1µm,1.1s
NGP *e*S S 09 52 39.2 -2.3
GRR Gorron 80.59 1 *e*P P 09 42 36.5 -0.3
comp=Z,1µm,0.9s,mb6.5
GRR Gorron 80.59 1 *e*P P 09 42 36.5 -0.3
GRR pmax pmax
comp=Z,559nm,0.9s,mb6.5
GRR Gorron 80.59 1 *e*P P 09 42 36.5 -0.3
comp=Z,559nm,0.9s,mb6.5
ROSF Rostrenen 80.59 3 *e*P P 09 42 36.6 -0.2
comp=Z,949nm,1.2s,mb6.3
ROSF Rostrenen 80.59 3 *e*P P 09 42 36.6 -0.2
ROSF pmax pmax
comp=Z,474nm,1.2s,mb6.3
ROSF Rostrenen 80.59 3 *e*P P 09 42 36.6 -0.2
comp=Z,474nm,1.2s,mb6.3
ECH Echery 80.60 355 *e*P P 09 42 36.5 -0.4
SPAK Spaichingen-Ko 80.62 354 *e*P P 09 42 36.7 -0.3
LIBD Limburg 80.64 355 *e*P P 09 42 36.8 -0.3
THEF They Montfort 80.64 356 *e*P P 09 42 36.7 -0.4
MDB Medias 80.68 343⇑ *i*P P 09 42 38.4 +1.1
MDB Medias 80.68 343 P P 09 42 38.5 +1.2
RJOB Jochberg 80.68 352 *e*P P 09 42 38.1 +0.8
comp=Z,219nm,0.8s,mb6.1
RJOB *e*S S 09 52 47.0 +5.2
EIDS Eidsvold 80.69 207 *e*P P 09 42 36.9 -0.6
comp=Z,146nm,1.1s,mb5.8
SGMF Saint Gilles 80.69 2 *e*P P 09 42 37.2 -0.2
comp=Z,841nm,0.9s,mb6.4
SGMF Saint Gilles 80.69 2 *e*P P 09 42 37.2 -0.2
SGMF pmax pmax
comp=Z,421nm,0.9s,mb6.4
SGMF Saint Gilles 80.69 2 *e*P P 09 42 37.2 -0.2
comp=Z,421nm,0.9s,mb6.4
VIS Vishakhapatnam 80.70 287 *e*P P 09 42 37.9 +0.1
VIS AMb AMB 09 42 45.0
comp=Z,440nm,1.2s,mb6.3
VIS *ex* x 09 52 35.7
VIS *i* x x 09 52 55.3
TLCR 80.72 340⇓ *i*P P 09 42 38.4 +0.8
TLCR 80.72 340⇑ P P 09 42 38.4 +0.8
HAU Haudompre 80.85 356 *e*P P 09 42 37.9 -0.3
comp=Z,505nm,1.1s,mb6.1
HAU *e*MLR MLR
comp=Z,96µm,20.5s,MS6.8
HAU Haudompre 80.85 356 *e*P P 09 42 37.9 -0.3
HAU pmax pmax
comp=Z,252nm,1.1s,mb6.1
HAU MLR MLR
comp=Z,96µm,20.5s,MS7.1
HAU Haudompre 80.85 356 *e*P P 09 42 37.9 -0.3
comp=Z,252nm,1.1s,mb6.1
HAU LR LR
comp=Z,96µm,20.5s,MS7.1
ARSA Arzberg 80.88 350⇑ *i*P P 09 42 38.8 +0.4
comp=Z,263nm,1.0s,mb6.1,SNR=73
FELD Feldberg im Sc 80.89 355 *e*P P 09 42 38.0 -0.4
DBOC Borcka 80.91 330⇑ *i*P P 09 42 38.3 -0.3
DBOC Borcka 80.91 330 *i* P SKSac 09 52 52.7 -1.6
MOF Molkenrain 80.97 355 *e*P P 09 42 38.1 -0.7
ARTV Artvin 80.97 330⇑ *i*P P 09 42 39.4 +0.4
ARTV Artvin 80.97 330 *i* P ScS 09 53 05.8 +2.3
GNI Garni 80.98 327*c* *i*P P 09 42 39.6 +0.6
GNI pmax pmax
comp=Z,497nm,1.6s
GNI Garni 80.98 327⇑ *i*P P 09 42 39.7 +0.7
GNI LR LR
comp=Z,96µm,19.0s,MS7.2
HINF Hinteralfeld 81.01 356 *e*P P 09 42 38.5 -0.6
comp=Z,402nm,1.1s,mb6.0
HINF Hinteralfeld 81.01 356 *e*P P 09 42 38.5 -0.6
HINF pmax pmax
comp=Z,201nm,1.1s,mb6.0
HINF Hinteralfeld 81.01 356 *e*P P 09 42 38.5 -0.6
comp=Z,201nm,1.1s,mb6.0
MLR Muntele Rosu 81.01 342 S S 09 52 45.9 +0.5
comp=Z,3.8nm,0.7s,baz=86,slow=9.7,SNR=2.0
QUIF Quistinic 81.02 2 *e*P P 09 42 38.7 -0.4
comp=Z,713nm,0.9s,mb6.3
QUIF Quistinic 81.02 2 *e*P P 09 42 38.7 -0.4
QUIF pmax pmax
comp=Z,356nm,0.9s,mb6.3
QUIF Quistinic 81.02 2 *e*P P 09 42 38.7 -0.4
comp=Z,356nm,0.9s,mb6.3
DAGI Agillar 81.07 330⇑ *i*P P 09 42 39.8 +0.3
DAGI Agillar 81.07 330 *i* P ScS 09 53 07.6 +3.2
RETA Reutte 81.10 353 *i* P P 09 42 39.5 0.0
comp=Z,462nm,1.2s,mb6.3,SNR=29
DEV Deva 81.18 344⇑ *i*P P 09 42 43.2 +3.2
DEV Deva 81.18 344 ⇑P P 09 42 43.1 +3.1
WATA Walderalm 81.18 352⇑ *i*P P 09 42 40.2 +0.2
comp=Z,350nm,0.8s,mb6.3,SNR=64
DIGO Kars 81.20 328⇑ *i*P P 09 42 41.2 +1.0
MOTA Moosalm 81.21 353⇑ *i*P P 09 42 40.2 +0.1
comp=Z,392nm,1.0s,mb6.3,SNR=105
VOIR 81.23 343⇓ *i*P P 09 42 41.5 +1.2
VOIR 81.23 343 P P 09 42 41.2 +0.9
WTTA Wattenberg 81.25 352 *i* P P 09 42 40.7 +0.4
comp=Z,766nm,1.1s,mb6.5,SNR=91
ISR Istrita 81.25 342⇑ *i*P P 09 42 41.8 +1.4
KBA Koelnbreinsper 81.28 351 *i* P P 09 42 41.3 +0.8
comp=Z,1µm,0.9s,mb6.9,SNR=210
DDEM Demirkent 81.29 330⇑ *i*P P 09 42 41.1 +0.4
DDEM Demirkent 81.29 330 *i* P ScS 09 53 16.3 +10
BBS Basel-Blauen 81.33 355 *e*P P 09 42 40.4 -0.4
DAVA Damuels 81.36 354⇑ *i*P P 09 42 40.9 0.0
comp=Z,424nm,1.4s,mb6.2,SNR=49
HARR Harsova 81.38 341⇓ *i*P P 09 42 41.7 +0.6
HARR Harsova 81.38 341 P P 09 42 43.1 +2.0
LOMF Lomont 81.48 356 *e*P P 09 42 41.5 0.0
SOKA Soboth 81.50 350⇑ *i*P P 09 42 41.9 +0.3
comp=Z,1µm,1.1s,mb6.8
TIRR Tirgusor 81.50 340⇓ *i*P P 09 42 41.6 -0.1
TIRR Tirgusor 81.50 340 P P 09 42 44.4 +2.7
PKSM Moragy 81.52 347⇑ *i*P P 09 42 41.3 -0.5
PKSM Moragy 81.52 347 P P 09 42 41.6 -0.1
PERS Pernice 81.53 350 *i* P P 09 42 41.9 0.0
PERS *e* 09 52 18.7
FETA Feichten 81.56 353 *i* P P 09 42 42.2 +0.2
comp=Z,368nm,1.1s,mb6.2,SNR=159
KOGS Kog 81.59 349 *i* P P 09 42 42.2 0.0
KOGS *e* 09 44 24.2
TIM Timisoara 81.60 345⇓ *i*P P 09 42 45.0 +2.8
TIM Timisoara 81.60 345 P P 09 42 43.9 +1.7
BZS Buzias 81.66 345⇑ *i*P P 09 42 42.6 +0.1
BZS Buzias 81.66 345 P P 09 42 43.0 +0.5
LOR Lormes 81.67 358 *e*P P 09 42 42.3 -0.3
comp=Z,1µm,1.3s,mb6.3,baz=8.2
LOR *e*MLR MLR
comp=Z,114µm,19.8s,MS6.9
LOR Lormes 81.67 358 *e*P P 09 42 42.3 -0.3
LOR pmax pmax
comp=Z,503nm,1.3s,mb6.3
LOR MLR MLR
comp=Z,114µm,19.8s,MS7.2
LOR Lormes 81.67 358 *e*P P 09 42 42.3 -0.3
comp=Z,503nm,1.3s,mb6.3
LOR LR LR
comp=Z,114µm,19.8s,MS7.2
GZR Gura Zlata 81.68 344⇓ *i*P P 09 42 43.4 +0.8
GZR Gura Zlata 81.68 344 P P 09 42 42.9 +0.2
ABTA Abfaltersbach 81.69 352⇑ *i*P P 09 42 42.6 -0.1
comp=Z,602nm,1.5s,mb6.3,SNR=126
WRAB Tennant Creek 81.69 223 P P 09 42 41.0 -1.9
comp=Z,1µm,1.1s,mb6.7,SNR=52
WRAB Tennant Creek 81.69 223 *e*P P 09 42 41.2 -1.7
WRAB pmax pmax
comp=Z,208nm,1.0s,mb6.0
WRAB MLR MLR
comp=Z,60µm,20.0s,MS7.0
WRAB Tennant Creek 81.69 223 *e*P P 09 42 41.2 -1.7
comp=Z,208nm,1.0s,mb6.0
WRAB LR LR
comp=Z,60µm,20.0s,MS7.0
MYKA Terra Mystica 81.70 351⇑ *i*P P 09 42 42.4 -0.3
comp=Z,459nm,1.6s,mb6.2
HYF Humbligny 81.70 359 *e*P P 09 42 42.8 +0.1
WB2 Warramunga Arr 81.70 223⇑ *i*P P 09 42 41.2 -1.7
WB2 *e*S S 09 52 48.4 -4.4
WRA Warramunga Arr 81.71 223 P P 09 42 41.2 -1.7
comp=Z,71nm,0.8s,mb5.7,baz=36,slow=5.9,SNR=144
WRA S S 09 52 58.9 +6.0
comp=Z,3.2nm,1.2s,baz=345,slow=7.1,SNR=4.6
WRA LR LR 10 19 34.6
comp=Z,48µm,19.0s,MS6.9,baz=40,slow=36
WRA Warramunga Arr 81.71 223 P P **09 42 41.2 -1.8**
WRA S S 09 52 58.9 +6.0
WRA pmax pmax
comp=Z,71nm,0.8s
WRA smax
comp=N,3.0nm,1.2s
WRA MLR MLR
comp=Z,48µm,19.0s
SEST Monte Rota 81.71 352 P P 09 42 42.9 +0.1
comp=Z,890nm,1.0s,mb6.7
OBKA Obir 81.72 350⇑ *i*P P 09 42 43.0 +0.1
comp=Z,744nm,0.9s,mb6.6,SNR=86
CRIN San Cristobal 81.74 80 *e*P P 09 42 42.0 -1.3

FVI Forni Avoltri 81.81 351 P P 09 42 42.5 -0.8
MACK Trabzon 81.86 331⇑ iP P 09 42 43.3 -0.4
MACK Trabzon 81.86 331 i P ScS 09 53 18.1 +7.2
DYDN Diyadin 81.88 328⇑ iP P 09 42 45.0 +1.2
DYDN Diyadin 81.88 328 i P 09 53 46.9
SSF Saint Saulge 81.89 358 eP P 09 42 43.5 -0.2
comp=Z,524nm,1.1s,mb6.1
SSF Saint Saulge 81.89 358 eP P 09 42 43.5 -0.2
SSF pmax pmax
comp=Z,262nm,1.1s,mb6.1
SSF Saint Saulge 81.89 358 eP P 09 42 43.5 -0.2
comp=Z,262nm,1.1s,mb6.1
HOMI Horasan 82.01 329⇑ iP P 09 42 45.3 +0.8
HOMI Horasan 82.01 329 i P SKSac 09 53 19.8 +18
APPI Appiano 82.06 353 P P 09 42 44.2 -0.4
CADS Cadrg 82.08 351 i P P 09 42 43.7 -1.0
GMNA Gemona 82.09 351 P P 09 42 44.3 -0.5
comp=Z,2µm,0.8s,mb7.1
AKL Akola 82.09 293 eP P 09 42 46.7 +1.5
AKL AMb AMB 09 42 52.2
comp=Z,1µm,1.5s,mb6.6
BUC1 Bucharest 82.10 342⇓ iP P 09 42 46.8 +1.9
BUC1 Bucharest 82.10 342 P P 09 42 47.0 +2.2
CNGN Cerro Negro 82.11 80 eP P 09 42 47.3 +2.0
CNGN ePg SKSac 09 53 02.0 -1.1
BRMO Bormio 82.13 353 P P 09 42 44.9 -0.1
AVF Avril sur Loir 82.16 358 eP P 09 42 44.8 -0.3
comp=Z,456nm,0.9s,mb6.1
AVF Avril sur Loir 82.16 358 eP P 09 42 44.8 -0.3
AVF pmax pmax
comp=Z,228nm,0.9s,mb6.1
AVF Avril sur Loir 82.16 358 eP P 09 42 44.8 -0.3
comp=Z,228nm,0.9s,mb6.1
LJU Ljubljana 82.18 350 i P P 09 42 44.8 -0.5
LJU e 09 46 01.6
LJU e 09 52 54.0
LJU eSS SS 09 58 26.4 +10
LJU Ljubljana 82.18 350 i P P 09 42 44.8 -0.5
LJU e 09 44 27.0
LJU ePP PP 09 46 01.6 +8.7
LJU e 09 47 59.1
LJU e 09 52 15.6
LJU e 09 52 54.0
LJU eSS SS 09 58 26.4 +10
TUE Stuetta 82.21 354 eP P 09 42 45.8 +0.4
comp=Z,494nm,0.9s,mb6.4
TUE LR LR
comp=Z,55µm,20.0s,MS6.9
CABF La Chapelle 82.25 356 eP P 09 42 45.6 0.0
comp=Z,544nm,1.0s,mb6.2
CABF La Chapelle 82.25 356 eP P 09 42 45.6 0.0
comp=Z,272nm,1.0s,mb6.1
VOY Vojsko 82.26 351 eP P 09 42 45.2 -0.5
VOY e 09 42 46.4
MOMN Momotombo 82.28 80 eP P 09 42 44.8 -1.4
SMF Signal de Mont 82.30 358 eP P 09 42 45.5 -0.3
comp=Z,996nm,0.9s,mb6.4
SMF Signal de Mont 82.30 358 eP P 09 42 45.5 -0.3
comp=Z,498nm,0.9s,mb6.4
TUTA Tutak 82.30 328⇑ iP P 09 42 47.0 +1.0
MFF Saint Martin d 82.38 0 eP P 09 42 46.1 -0.2
comp=Z,623nm,1.0s,mb6.2
MFF Saint Martin d 82.38 0 eP P 09 42 46.1 -0.2
comp=Z,312nm,1.0s,mb6.2
BGF Bois d'Agland 82.40 358 eP P 09 42 46.1 -0.3
comp=Z,445nm,1.0s,mb6.0
BGF Bois d'Agland 82.40 358 eP P 09 42 46.1 -0.3
comp=Z,223nm,1.0s,mb6.0
CTI Castel Tesino 82.46 352 P P 09 42 47.9 +1.2
comp=Z,219nm,0.9s,mb6.1
KOPT Kop Dagi 82.48 330⇑ iP P 09 42 48.4 +1.5
PSI Prapat 82.54 265 P P 09 42 46.8 -0.8
comp=Z,375nm,1.0s,mb6.4,baz=344,slow=2.0,SNR=78
CRAR CRAIOVA 82.54 343⇓ iP P 09 42 51.3 +4.1
SISC Sisak 82.54 349 P P 09 42 45.5 -1.6
SISC Sisak 82.54 349 i P P 09 42 45.5 -1.6
TRI Trieste 82.59 351 eP P 09 42 46.8 -0.7
comp=Z,240nm,0.9s,mb6.2
TRI LR LR
comp=Z,56µm,21.0s,MS6.9
BOJS Bojanci 82.64 350 i P P 09 42 47.4 -0.3
BOJS e 09 44 28.8
MGAN Managua 82.66 80 eP P 09 42 46.3 -1.9
TCF Toulx Ste Croi 82.68 359 eP P 09 42 47.5 -0.4
comp=Z,444nm,0.9s,mb6.2
TCF Toulx Ste Croi 82.68 359 eP P 09 42 47.5 -0.4
comp=Z,222nm,0.9s,mb6.2
OG05 Jujurieux 82.85 356 eP P 09 42 48.8 +0.1
VAI Varese 82.85 354 P P 09 42 48.4 -0.4
AGO Saint Agoulin 82.90 358 eP P 09 42 50.3 +1.3
PLDF La Plantade 82.97 358 eP P 09 42 50.8 +1.4
ORO Oropa 83.14 355 P P 09 42 50.8 +0.6
comp=Z,230nm,1.0s,mb6.2
RSL Roselend 83.15 356 eP P 09 42 50.8 +0.5
MTDJ Mount Denham 83.20 69 eP P 09 42 50.9 -0.1
comp=Z,2µm,1.5s,mb6.8
PYM Petit Puy Mans 83.21 358 eP P 09 42 51.7 +1.1
VERF Verneugheol 83.22 359 eP P 09 42 50.6 -0.1
BBJ Bamboo Saint A 83.23 69⇑ iP P 09 42 53.4 +2.2
BNGL BINGOL 83.25 329⇑ iP P 09 42 52.0 +1.0
TATV Tatvan 83.29 328⇑ iP P 09 42 52.2 +1.0
LPL La Plagne 83.31 356 eP P 09 42 52.0 +0.8
comp=Z,376nm,1.0s,mb6.1
LPL La Plagne 83.31 356 eP P 09 42 52.0 +0.8
comp=Z,188nm,1.0s,mb6.1
LPG La Plagne 83.33 356 eP P 09 42 52.2 +0.9
comp=Z,449nm,0.9s,mb6.2
LPG La Plagne 83.33 356 eP P 09 42 52.2 +0.9
comp=Z,224nm,0.9s,mb6.2
LSD Lago del Serru 83.35 355 P P 09 42 51.6 +0.2
TOKA Tokat 83.40 333⇑ iP P 09 42 52.3 +0.6
COLF Collangettes 83.42 358 eP P 09 42 51.9 +0.2
BNJ Bonny Gate 83.46 69⇑ eP P 09 42 52.3 0.0
FRNF Fournols 83.58 359 eP P 09 42 52.7 +0.2
NVLJ Novalja 83.61 350 P P 09 42 52.6 -0.1
NVLJ Novalja 83.61 350 i P P 09 42 52.6 -0.1
GRN Grenoble 83.63 356 eP P 09 42 53.4 +0.6
SSB Saint Sauveur 83.64 357 eP P 09 42 52.9 +0.1
GDM Grand'Maison 83.66 356 eP P 09 42 53.7 +0.8
RSP Reno Superiore 83.66 355 P P 09 42 52.8 -0.1
comp=Z,509nm,1.1s,mb6.6
HAKT HAKKARI 83.66 327⇑ iP P 09 43 00.4 +7.3
HAKT HAKKARI 83.66 327 i P ScS 09 53 43.4 +18
RJF Les Rejaudoux 83.67 359 eP P 09 42 52.6 -0.4
comp=Z,2µm,1.5s,mb6.8
RJF eMLR MLR
comp=Z,135µm,21.5s,MS7.0
RJF Les Rejaudoux 83.67 359 eP P 09 42 52.6 -0.4
comp=Z,760nm,1.5s,mb6.6
RJF LR LR
comp=Z,135µm,21.5s,MS7.3
LBL Lubilhac 83.72 358 eP P 09 42 54.4 +1.1
STH Stony Hill 83.74 69⇑ eP P 09 42 53.7 0.0
HYB Hyderabad 83.77 290 i P P 09 42 53.5 -0.4
comp=Z,575nm,1.0s,mb6.7
HYB ePP PP 09 46 10.0 +3.1
HYB eS S 09 53 12.0 -2.4
HYB eScS ScS 09 53 26.0 -1.2
HYB eSS SS 09 58 46.0 +4.6
HYB LR LR 10 23 00.0
comp=Z,66nm,16.0s
HYB Hyderabad 83.77 290 eP P 09 42 53.5 -0.4
comp=Z,575nm,1.0s,mb6.7
HYB eS S 09 53 12.0 -2.4
BNI Bardonecchia 83.78 356 eP P 09 42 53.8 +0.2
comp=Z,1µm,1.4s,mb6.8
BNI LR LR
comp=Z,54µm,21.0s,MS6.9
KEMA Kemaliye 83.78 331⇑ iP P 09 42 54.2 +0.5
RAVA Ravarino 83.78 352 P P 09 42 56.2 +2.6
comp=Z,3µm,2.0s,mb7.1
GWJ Greenwich 83.79 69⇑ eP P 09 42 54.0 0.0
JMB Yambol 83.79 341 P P 09 42 52.6 -1.1
PCJ Portland Cotta 83.80 69⇑ eP P 09 42 53.5 -0.5
HOJ Hope 83.83 69⇑ eP P 09 42 54.0 -0.2
BOB Bobbio (Coli) 83.90 354 P P 09 42 54.7 +0.5
comp=Z,793nm,0.7s,mb7.0
CMJ Castle Mountai 83.95 69⇑ eP P 09 42 55.4 +0.6
ORIF Oris-en-Rattie 83.95 356 eP P 09 42 55.1 +0.7
comp=Z,1µm,1.2s,mb6.5
ORIF eMLR MLR
comp=Z,83µm,21.2s,MS6.8
ORIF Oris-en-Rattie 83.95 356 eP P 09 42 55.1 +0.7
comp=Z,504nm,1.2s,mb6.5

OG22 Abries 84.00 355 eP P 09 42 55.6 +0.9
LFF La Frestale 84.04 360 eP P 09 42 54.8 -0.1
comp=Z,1µm,1.0s,mb6.7
LFF La Frestale 84.04 360 eP P 09 42 54.8 -0.1
comp=Z,570nm,1.0s,mb6.7
CAF Calviac 84.05 359 eP P 09 42 55.0 +0.1
comp=Z,1µm,1.3s,mb6.6
CAF Calviac 84.05 359 eP P 09 42 55.0 +0.1
comp=Z,633nm,1.3s,mb6.6
VIVF Saint-Julien-l 84.06 357 eP P 09 42 55.1 +0.1
comp=Z,543nm,1.1s,mb6.3
VIVF Saint-Julien-l 84.06 357 eP P 09 42 55.1 +0.1
comp=Z,271nm,1.1s,mb6.3
MBDF Montbardon 84.10 355 eP P 09 42 55.6 +0.4
comp=Z,696nm,0.9s,mb6.5
MBDF Montbardon 84.10 355 eP P 09 42 55.6 +0.4
comp=Z,348nm,0.9s,mb6.5
FITZ Fitzroy Crossi 84.11 231⇑ iP P 09 42 54.6 -0.9
comp=Z,426nm,0.8s,mb6.6
FITZ eS S 09 53 10.7 -6.7
LATR Latur 84.16 292 eP P 09 42 55.0 -0.9
ERBM Eremo 84.18 353 P P 09 42 56.5 +0.9
comp=Z,1µm,1.2s,mb6.8
GSCL Gusciola 84.23 353 P P 09 42 57.1 +1.2
comp=Z,636nm,1.1s,mb6.7
PLE Pljevlja 84.23 346⇑ iP P 09 42 56.5 +0.6
OCF Saint Nazaire 84.31 357 eP P 09 42 56.9 +0.6
OG26 St.-Nazaire-De 84.31 357 eP P 09 42 56.9 +0.6
VTS Vitosha 84.32 349 P P 09 43 01.0 +4.6
SURF Saint Ours 84.34 355 eP P 09 42 57.6 +1.2
UPM Unac-Piva 84.43 347⇑ iP P 09 42 56.2 -0.7
VLC Villacollemand 84.44 353 eP P 09 42 56.6 -0.3
comp=Z,527nm,1.1s,mb6.6
VLC LR LR
comp=Z,56µm,20.0s,MS6.9
PESA Pesaro 84.44 351 P P 09 42 58.7 +1.8
SEI Scarperia 84.46 352 P P 09 42 58.6 +1.6
comp=Z,2µm,1.0s,mb7.3
RSM Repubblica di 84.48 351 P P 09 42 57.9 +0.7
OG25 Le Caire 84.49 356 eP P 09 42 57.8 +0.6
DIYA Diyarbakir 84.51 330⇑ iP P 09 42 58.1 +0.7
PLD Plovdiv 84.52 342 P P 09 42 56.0 -1.4
VMG Vicchio 84.54 352 P P 09 42 59.0 +1.6
comp=Z,848nm,1.1s,mb6.8
SFI Santa Sofia 84.57 352 P P 09 42 58.4 +0.8
comp=Z,1µm,1.0s,mb6.9
VCR Vista de Mar 84.60 81 eP P 09 42 58.5 +0.3
IVA Berane 84.60 346⇑ iP P 09 42 57.4 -0.4
CDAG Cicekdag 84.63 334⇑ iP P 09 42 58.0 0.0
CDAG Cicekdag 84.63 334 i P ScS 09 53 53.9 +20
ELBA Catalca 84.66 339⇑ iP P 09 42 58.0 -0.1
ELBA Catalca 84.66 339 i P SKSac 09 53 27.7 +8.5
MALT Malatya 84.68 331 PFAKE 09 43 10.0 +12
MALT LR LR
comp=Z,56µm,19.0s,MS7.0
FSSB Fossombrone 84.69 351 P P 09 42 58.7 +0.5
comp=Z,520nm,0.9s,mb6.7
BR131 Keskin Array S 84.73 335 eP P 09 42 58.0 -0.5
comp=Z,146nm,0.8s,mb6.2
BR131 LR LR
comp=Z,23µm,21.0s,MS6.5
BRTR Keskin Array B 84.73 335 P P 09 42 58.2 -0.3
comp=Z,175nm,0.9s,mb6.2,baz=40,slow=2.6,SNR=70
BRTR PKPPKP
comp=Z,3.8nm,0.9s,baz=175,slow=3.5,SNR=6.1
BRTR LR LR 10 27 27.6
comp=Z,27µm,21.7s,MS6.6,baz=172,slow=40
AOI Ancona 84.75 350 P P 09 42 59.2 +0.7
BRY Bratogost 84.78 347⇑ iP P 09 42 57.8 -0.8
TOUF Mont Tournerai 84.79 355 eP P 09 42 59.0 +0.3
AUTN L'Aution 84.80 355 eP P 09 42 59.8 +1.1
NKY Niksic 84.80 346⇑ iP P 09 42 58.0 -0.8
SAOF Saorge 84.80 355 eP P 09 42 58.3 -0.4
CRE Caprese Michel 84.84 352 P P 09 42 59.0 0.0
AKCD Akcadag 84.85 331⇓ iP P 09 43 00.1 +1.0
MARD Mardin 84.86 329⇑ iP P 09 42 59.9 +0.7
MARD Mardin 84.86 329 i P ScS 09 53 41.6 +6.1
PII Pisa 84.86 353 P P 09 42 58.7 -0.4
comp=Z,742nm,1.0s,mb6.8
PVY Plav 84.86 346⇑ iP P 09 42 58.9 -0.2
LASF Ste Croix 84.86 358 eP P 09 42 59.2 +0.1
comp=Z,518nm,1.1s,mb6.3
PIEI Pieia 84.87 351 P P 09 42 59.3 +0.2
comp=Z,551nm,1.1s,mb6.6
STOF St-Etienne Org 84.87 356 eP P 09 42 59.6 +0.5
LUCF Luceram 84.90 355 eP P 09 42 59.1 -0.2
SMRF Simiane la Rot 84.90 356 eP P 09 43 00.0 +0.7
comp=Z,1µm,1.0s,mb6.7
SMRF Simiane la Rot 84.90 356 eP P 09 43 00.0 +0.7
comp=Z,1µm,1.0s,mb7.0
MSL Mosul 84.91 327 eP P 09 42 59.0 -0.4
MSL ePP PP 09 46 23.0 +7.5
MSL ePSP 09 47 24.0
MSL ePPP 09 48 09.0
MSL eSKS 09 53 21.0
MSL eS S 09 53 37.0 +12
MVIF Mont Vial 84.91 355 eP P 09 42 59.6 +0.3
BADI Badiali 84.92 351 P P 09 42 59.8 +0.4
comp=Z,668nm,1.0s,mb6.7
STON Ston 84.92 347 P P 09 42 58.2 -1.2
STON Ston 84.92 347 i P P 09 42 58.2 -1.2
SBF Sospel 84.93 355 eP P 09 42 59.1 -0.3
comp=Z,2µm,1.0s,mb6.9
SBF Sospel 84.93 355 eP P 09 42 59.1 -0.3
comp=Z,1µm,1.0s,mb6.9
FORC Fortuna 84.93 80 eP P 09 43 00.2 +0.4
PINB Pinarbasi 84.95 333⇑ iP P 09 43 00.1 +0.5
PINB Pinarbasi 84.95 333 i P ScS 09 53 41.6 +5.4
CING Cingoli 84.96 351 P P 09 43 00.1 +0.5
VILF Villemus 85.02 356 eP P 09 43 00.6 +0.7
CALN Calern 85.07 355 eP P 09 43 00.2 +0.1
PRAF Pradon 85.09 357 eP P 09 43 00.8 +0.6
SNTG Esanatoglia 85.11 351 P P 09 43 01.0 +0.7
comp=Z,276nm,0.5s,mb6.6
TTG Podgorica 85.13 346⇑ iP P 09 43 00.0 -0.4
JCR Jicaral 85.13 80 eP P 09 43 00.6 -0.2
MURB Monte Urbino 85.14 351 P P 09 43 00.9 +0.4
ASAR Alice Springs 85.19 222 P P 09 42 59.8 -1.0
comp=Z,99nm,0.9s,mb5.9,baz=23,slow=4.7,SNR=252
ASAR PKKPbc PKKPbc 10 01 06.8 +1.2
comp=Z,3.7nm,0.9s,baz=192,slow=2.1,SNR=5.0
HCY Herceg Novi 85.23 347⇑ iP P 09 43 00.1 -0.8
SKO Skopje 85.23 344 P P 09 43 01.3 +0.3
SKO Skopje 85.23 344 eP P 09 42 59.9 -1.0
comp=Z,2µm,2.0s,mb6.8
SKO Skopje 85.23 344 eP SKSac 09 53 25.9 +3.1
TAVF Tavernes 85.24 356 eP P 09 43 01.4 +0.4
TREF Trevaresse 85.26 356 eP P 09 43 02.0 +0.9
FRF La Foret Royal 85.27 355 eP P 09 43 00.8 -0.3
comp=Z,996nm,1.1s,mb6.6
FRF La Foret Royal 85.27 355 eP P 09 43 00.8 -0.3
FRF pmax pmax
comp=Z,498nm,1.1s,mb6.6
FRF La Foret Royal 85.27 355 eP P 09 43 00.8 -0.3
comp=Z,498nm,1.1s,mb6.6
RDO Rodhopi 85.28 341 eP P 09 43 00.9 -0.3
AVNT Avonos 85.29 334 eP P 09 43 00.9 -0.4
BUM Brajici-Budva 85.31 346⇑ iP P 09 43 01.5 +0.2
ASS Assisi 85.33 351 P P 09 43 02.3 +0.9
ARMA Armidale 85.33 205⇑ iP P 09 43 01.6 +0.3
ARMA eS S 09 53 26.3 -2.7
SART Tekirdag 85.37 340⇑ iP P 09 43 01.7 0.0
SART Tekirdag 85.37 340 i P ScS 09 53 37.3 -2.4
STIP Stip 85.38 344 P P 09 43 02.9 +1.2
STIP Stip 85.38 344 eP P 09 43 00.9 -0.8
comp=Z,81nm,1.6s,mb5.6
BORA Eskisehir 85.40 337⇑ iP P 09 43 01.6 -0.2
BORA Eskisehir 85.40 337 i P ScS 09 53 45.1 +5.2
NVR Nevrokopi 85.41 343 eP P 09 43 01.0 -0.8
ALN Alexandroupoli 85.41 341 P P 09 43 00.2 -1.7
EPON Pontenova 85.42 6 P P 09 43 02.1 +0.2
comp=Z,191nm,1.0s,mb6.2
ATAB Bozova 85.50 331⇑ iP P 09 43 03.2 +0.8
ATAB Bozova 85.50 331 i P ScS 09 53 43.4 +2.5
GELF Grande-Etoile 85.50 356 eP P 09 43 02.6 +0.3
LMR La Mourre 85.50 356 eP P 09 43 02.1 -0.2
comp=Z,934nm,1.2s,mb6.6
LMR La Mourre 85.50 356 eP P 09 43 02.1 -0.2
LMR pmax pmax
comp=Z,467nm,1.2s,mb6.6
LMR La Mourre 85.50 356 eP P 09 43 02.1 -0.2
comp=Z,467nm,1.2s,mb6.6
NRCA Norcia 85.51 351 P P 09 43 02.8 +0.5
EARI Arriondas 85.55 4 P P 09 43 01.8 -0.7

comp=Z,53nm,0.6s,mb6.0
BERF Bertagne 85.56 356 eP P 09 43 03.1 +0.5
ULC Ulcinj 85.59 346⇑ iP P 09 43 02.3 -0.4
POO Poona 85.63 294 eP P 09 43 02.9 -0.3
POO AMb AMB 09 43 16.6
comp=Z,1µm,1.7s,mb6.8
POO ex x 09 53 32.6
MTLF Montolieu 85.63 359 eP P 09 43 03.0 +0.1
comp=Z,643nm,1.1s,mb6.5
MTLF Montolieu 85.63 359 eP P 09 43 03.0 +0.1
MTLF pmax pmax
comp=Z,322nm,1.1s,mb6.5
MTLF Montolieu 85.63 359 eP P 09 43 03.0 +0.1
comp=Z,322nm,1.1s,mb6.5
VAY Valandovo 85.67 343 P P 09 43 02.2 -0.9
VAY Valandovo 85.67 343 eP P 09 43 01.0 -2.1
comp=Z,310nm,1.1s,mb6.5
VAY Valandovo 85.67 343 eP ScS 09 53 35.9 -6.3
EMAZ Mazaricos 85.68 7 P P 09 43 04.2 +1.1
comp=Z,67nm,1.3s,mb5.8
ELAN Lanestosa 85.69 3 P P 09 43 03.6 +0.4
comp=Z,220nm,0.7s,mb6.5
OSSF Osses 85.72 1 eP P 09 43 03.9 +0.6
LAJ Bijagual 85.73 80 eP P 09 43 03.1 -0.7
EALK Alkurruntz 85.75 1 P P 09 43 03.9 +0.4
comp=Z,56nm,0.5s,mb6.0
ORDF Ordiarp 85.76 1 eP P 09 43 03.7 +0.1
KNT Kendrikon 85.77 343 P P 09 43 03.4 -0.2
STS Santiago 85.77 7 P P 09 43 03.8 +0.2
comp=Z,19nm,1.5s,mb5.1
ELIZ Elizondo 85.80 1 P P 09 43 04.5 +0.7
ELIZ pmax pmax
comp=Z,33nm,0.6s,mb5.7
ELIZ Elizondo 85.80 1 P P 09 43 04.5 +0.7
comp=Z,33nm,0.6s,mb5.7
ATE Arette 85.89 1 eP P 09 43 03.9 -0.3
REYF Montagne du Re 85.91 1 eP P 09 43 04.8 +0.5
BOM Bombay 85.92 295 ex x 09 42 53.7
BOM ex x 09 43 01.4
comp=Z,2µm,1.6s
BOM eS S 09 53 27.8 -7.9
LABF Labassere 85.94 0 eP P 09 43 05.8 +1.4
LARF Larrau 85.94 1 eP P 09 43 05.0 +0.6
AQU L'Aquila 85.95 350 eP P 09 43 04.6 +0.1
AQU pmax pmax
comp=Z,992nm,1.0s,mb7.0
AQU MLR MLR
comp=Z,79µm,19.0s,MS7.1
AQU L'Aquila 85.95 350⇓ iP P 09 43 05.2 +0.7
AQU L'Aquila 85.95 350 eP P 09 43 04.6 +0.1
comp=Z,762nm,1.0s,mb6.9
AQU LR LR
comp=Z,61µm,19.0s,MS7.0
EPF Esparros 85.95 0 eP P 09 43 03.8 -0.7
comp=Z,213nm,0.9s,mb6.1
EPF Esparros 85.95 0 eP P 09 43 03.8 -0.7
EPF pmax pmax
comp=Z,107nm,0.9s,mb6.1
EPF Esparros 85.95 0 eP P 09 43 03.8 -0.7
comp=Z,106nm,0.9s,mb6.1
URSC Urasca 85.97 79 eP P 09 43 02.7 -2.3
ANDN Andirin 85.98 332⇑ iP P 09 43 05.1 +0.3
ANDN Andirin 85.98 332 i P ScS 09 53 50.4 +5.5
MNS Montasola 85.99 351 P P 09 43 03.6 -1.1
comp=Z,807nm,1.4s,mb6.8
SOH Sokhos 86.01 343 P P 09 43 01.9 -3.0
MLS Moulis 86.02 360 eP P 09 43 05.0 +0.1
LRDF Laroque-de-Fa 86.03 358 eP P 09 43 05.6 +0.7
QCR Quepos 86.05 80 eP P 09 43 05.0 -0.4
GRG Griva 86.05 344 P P 09 43 04.2 -0.9
FIAM Fiamignano 86.07 351 P P 09 43 05.2 +0.1
comp=Z,890nm,1.0s,mb7.0
ETSF Etsaut 86.08 1 eP P 09 43 05.4 +0.2
comp=Z,522nm,0.8s,mb6.5
ETSF Etsaut 86.08 1 eP P 09 43 05.4 +0.2
ETSF pmax pmax
comp=Z,261nm,0.8s,mb6.5
ETSF Etsaut 86.08 1 eP P 09 43 05.4 +0.2
comp=Z,261nm,0.8s,mb6.5
TIR Tirane 86.10 345 PFAKE 09 43 20.0 +15
TIR LR LR
comp=Z,47µm,19.0s,MS6.9
VIEF Viey 86.10 0 eP P 09 43 05.6 +0.4
MELF Melles 86.11 360 eP P 09 43 08.3 +3.0
DURS Dursunbey 86.13 339 i P ScS 09 53 50.4 +4.4
PGF Pioggiola 86.14 354 eP P 09 43 05.2 -0.3
comp=Z,2µm,1.0s,mb7.0
PGF Pioggiola 86.14 354 eP P 09 43 05.2 -0.3
PGF pmax pmax
comp=Z,948nm,1.0s,mb7.0
PGF Pioggiola 86.14 354 eP P 09 43 05.2 -0.3
comp=Z,948nm,1.0s,mb7.0
RESF Ens 86.17 0 eP P 09 43 06.4 +0.8
BIA Bitola 86.18 344 P P 09 43 05.4 -0.3
BIA Bitola 86.18 344 eP P 09 43 02.5 -3.2
SDDR Presa de Saban 86.19 64 eP P 09 43 05.7 -0.4
comp=Z,192nm,0.9s,mb6.3
SDDR LR LR
comp=Z,95µm,19.0s,MS7.2
CARF Carcanieres 86.26 359 eP P 09 43 05.8 -0.2
KDHN Kadinhani 86.27 336⇑ iP P 09 43 05.5 -0.6
KDHN Kadinhani 86.27 336 i P ScS 09 53 53.9 +6.7
THE Thessaloniki 86.27 343 P P 09 43 03.4 -2.7
HORT Hortiatis 86.28 343 P P 09 43 05.1 -1.1
PTQR Pietraquaria 86.28 350 P P 09 43 06.3 +0.1
EBIE Bielsa 86.30 0 P P 09 43 06.8 +0.5
comp=Z,63nm,0.7s,mb6.0
FGMS Monte Sant'Ang 86.30 348 P P 09 43 05.2 -1.0
comp=Z,1µm,1.4s,mb7.0
FG2 Serracapriola 86.30 349 P P 09 43 08.9 +2.7
ECRI Cripan 86.34 2 P P 09 43 06.9 +0.5
ECRI pmax pmax
comp=Z,20nm,0.5s,mb5.6
ECRI Cripan 86.34 2 P P 09 43 06.9 +0.5
comp=Z,20nm,0.5s,mb5.6
MTCE Montecelio 86.35 351 P P 09 43 05.3 -1.2
ERUA La Rua 86.36 6 P P 09 43 06.6 +0.1
ERUA pmax pmax
comp=Z,28nm,0.6s,mb5.7
ERUA La Rua 86.36 6 P P 09 43 06.6 +0.1
comp=Z,28nm,0.6s,mb5.7
OUR Ouranopolis 86.36 342 P P 09 43 05.7 -0.9
RGNG Rignano Grg 86.38 349 P P 09 43 09.7 +3.1
BOLV Bolvadin 86.38 337⇑ iP P 09 43 06.5 -0.2
BOLV Bolvadin 86.38 337 i P ScS 09 53 53.9 +5.8
TOLF Tolfa 86.38 351 P P 09 43 06.2 -0.4
GDZ Gediz 86.38 338⇑ iP P 09 43 06.2 -0.5
GDZ Gediz 86.38 338 i P ScS 09 53 52.1 +4.0
CERT Cerreto 86.40 351 P P 09 43 06.0 -0.7
FNA Florina 86.40 344 P P 09 43 05.3 -1.5
FILF Fillols 86.41 358 eP P 09 43 07.1 +0.3
KAD Karad 86.41 293 eP P 09 43 05.7 -1.4
KAD i P 09 43 06.5
KAD AMb AMB 09 43 15.3
comp=Z,736nm,1.1s,mb6.8
VVLD Villa Vallelon 86.41 350 P P 09 43 06.3 -0.5
BOZC Bozcaada 86.42 341⇑ iP P 09 43 06.0 -1.0
BOZC Bozcaada 86.42 341 i P ScS 09 53 47.8 -0.7
PLG Polygyros 86.43 343 P P 09 43 05.8 -1.1
PLG Polygyros 86.43 343 eP P 09 43 05.4 -1.5
EJON La Jonquera 86.51 358 P P 09 43 09.4 +2.2
comp=Z,21nm,1.0s,mb5.3
KUZU Kuzuini 86.51 331⇑ iP P 09 43 07.5 +0.1
KUZU Kuzuini 86.51 331 i P ScS 09 53 50.4 +1.1
RNI2 Rionero Sannit 86.52 350 P P 09 43 07.1 -0.2
comp=Z,4µm,2.2s,mb7.2
LOS Limnos 86.53 341 P P 09 43 05.7 -1.7
SDI San Donato 86.55 350 P P 09 43 06.8 -0.7
comp=Z,331nm,0.8s,mb6.6
LIA Limnos Island 86.55 341 P P 09 43 06.4 -1.1
LIA Limnos Island 86.55 341 eP P 09 43 05.4 -2.1
VALF Valcebollere 86.57 359 eP P 09 43 08.9 +1.3
BAR1 86.72 79 eP P 09 43 08.2 -0.5
FG5 Orsara di Pugl 86.80 349 P P 09 43 09.5 +0.8
comp=Z,2µm,2.0s,mb6.9
SGG Gregorio Mates 86.80 350 P P 09 43 08.2 -0.5
comp=Z,683nm,1.4s,mb6.7
PAIG Paliouri 86.82 342 P P 09 43 06.6 -2.2
ELOB Lobios 86.82 6 P P 09 43 09.9 +1.1
comp=Z,55nm,0.8s,mb5.8
ECAL Calabor 86.83 5 P P 09 43 09.1 +0.3
comp=Z,64nm,0.6s,mb6.0
LIT Litokhoron 86.87 343 P P 09 43 06.6 -2.5
PSB1 Pescosannita 86.91 349 P P 09 43 08.8 -0.5

PRK Paraskevi 86.95 340 P **P** 09 43 07.3 -2.2
PRK Paraskevi 86.95 340 *e*P **P** 09 43 08.9 -0.6
PBRG Braganca 86.97 5 *e*P **P** 09 43 09.1 -0.4
comp=Z,223nm,1.7s,mb6.1
AKHS Akhisar 86.97 339⇑ *i*P **P** 09 43 08.5 -1.1
AKHS Akhisar 86.97 339 *i* P ScS 09 53 51.3 -1.7
PCAB Cabril 86.98 6 *e*P **P** 09 43 10.5 +0.9
comp=Z,130nm,1.1s,mb6.1
PCAB A pP 09 43 21.1 +0.2
comp=Z,220nm,1.4s
MRB1 Monte Rocchett 86.99 349 P **P** 09 43 08.6 -1.0
OSPF L'Ospedale 87.01 353 *e*P **P** 09 43 09.6 -0.1
KHAL Karahalli 87.06 338⇑ *i*P **P** 09 43 09.4 -0.7
KHAL Karahalli 87.06 338 *i* P ScS 09 53 52.1 -1.6
TKTP Tekketepe 87.17 337 *i* P ScS 09 53 53.9 -0.8
CSSN Cassano Irpino 87.25 349 P **P** 09 43 10.7 -0.2
comp=Z,114nm,0.6s,mb6.3
ESAC San Caprasio 87.26 1 P **P** 09 43 11.6 +0.7
comp=Z,206nm,0.8s,mb6.4
ACR Cerro Adams 87.26 80 *e*P **P** 09 43 11.9 +0.6
LTRZ Laterza 87.27 348 P **P** 09 43 10.2 -0.8
comp=Z,985nm,2.9s,mb6.5
BHD Baghdad 87.28 324 *i* P **P** 09 43 12.0 +0.8
BHD *i* PP PP 09 46 32.0 -2.7
BHD *i* SKS 09 53 38.0
BHD *i* S S 09 53 52.0 +3.5
ISP Isparta 87.31 337⇓ *i*P **P** 09 43 11.3 0.0
ISP Isparta 87.31 337 P **P** 09 43 10.1 -1.2
ISP LR LR
comp=Z,48µm,22.0s,MS6.9
PVRL Vila Real 87.43 6 *e*P **P** 09 43 11.6 -0.2
comp=Z,104nm,0.9s,mb6.1
PVRL A 09 43 16.1
comp=Z,228nm,1.3s
XOR Xorichti 87.45 343 P **P** 09 43 10.2 -1.7
THL Klokotos Trika 87.47 343 P **P** 09 43 09.6 -2.4
THL Klokotos Trika 87.47 343 *e*P **P** 09 43 10.1 -1.9
NEO Neokhori 87.50 343 *e*P **P** 09 43 11.1 -1.1
PTO Porto 87.50 7 *e*P **P** 09 43 11.9 -0.2
SGO Sicignano 87.51 349 P **P** 09 43 13.6 +1.4
comp=Z,1µm,2.1s,mb6.7
AOS Alonnisos 87.51 342 P **P** 09 43 11.8 -0.4
MVO Moncorvo 87.59 6 *e*P **P** 09 43 12.0 -0.5
comp=Z,255nm,1.1s,mb6.4
MVO Moncorvo 87.59 6 *e*PP PP 09 46 49.6 +13
MVO *e*S S 09 53 53.6 +2.4
MVO *e*P 09 55 27.4
MVO *e*SS SS 10 00 03.5 +28
MVO *e*LQ 10 06 47.4
MVO *e*LR LR 10 12 27.4
comp=Z,57µm,20.0s
JAN Janina 87.59 344 *e*P **P** 09 43 11.9 -0.7
BLCB Balcova 87.61 339 P **P** 09 43 13.8 +1.1
EPOB Poblet 87.63 360 P **P** 09 43 13.5 +0.8
comp=Z,81nm,0.8s,mb6.0
PTCN Pitcairn Islan 87.65 136 PFAKE 09 43 20.0 +7.2
PTCN LR LR
comp=Z,337µm,20.0s,MS7.8
KEK Kerkira 87.70 345 *e*P **P** 09 43 10.7 -2.4
URLA Izmir 87.73 340⇑ *i*P **P** 09 43 12.1 -1.2
URLA Izmir 87.73 340 *i* P ScS 09 53 58.2 -1.0
IGT Igoumenitsa 87.79 345 P **P** 09 43 16.0 +2.4
CHOS Chios island 87.82 340 P **P** 09 43 11.4 -2.3
ORI Oriolo Calabro 87.85 348 P **P** 09 43 15.4 +1.6
comp=Z,511nm,0.8s,mb6.8
AGG Agios Georgios 87.94 343 P **P** 09 43 12.1 -2.2
CUC Castrocucco 88.00 348 *e*P **P** 09 43 13.5 -1.0
comp=Z,140nm,0.8s,mb6.2
CUC *e*S S 09 53 54.8 -0.4
CUC LR LR
comp=Z,52µm,20.0s,MS6.9
ERTA Horta de San J 88.03 0 P **P** 09 43 15.4 +0.8
comp=Z,20nm,0.8s,mb5.4
GOA Goa 88.06 292 *e*P **P** 09 43 15.1 0.0
GOA AMb AMB 09 43 22.8
comp=Z,419nm,0.9s,mb6.7
GOA *i* S SKSac 09 53 40.3 -0.6
GOLH Golhisar 88.12 337⇑ *i*P **P** 09 43 14.7 -0.5
ETOR Torete 88.14 2 P **P** 09 43 14.7 -0.4
ETOR pmax pmax
comp=Z,34nm,0.6s,mb5.8
ETOR Torete 88.14 2 P **P** 09 43 14.7 -0.4
comp=Z,34nm,0.6s,mb5.8
EVR Evrytania 88.14 343 *e*P **P** 09 43 14.4 -0.8
LKR Lokris 88.18 343 P **P** 09 43 12.8 -2.6
LKR Lokris 88.18 343 *e*P **P** 09 43 12.0 -3.4
GCAM G?zelcaml? 88.22 339⇑ *i*P **P** 09 43 13.6 -2.1
GUD Guadarrama 88.25 4 P **P** 09 43 15.5 -0.2
GUD pmax pmax
comp=Z,148nm,1.0s,mb6.2
GUD Guadarrama 88.25 4 P **P** 09 43 15.5 -0.1
comp=Z,148nm,1.0s,mb6.2
SMG Samos 88.31 339 *e*P **P** 09 43 14.3 -1.7
MTE Manteigas 88.31 6 *e*P **P** 09 43 15.8 -0.2
comp=Z,259nm,1.2s,mb6.3
MTE Manteigas 88.31 6 *e*PP PP 09 46 58.6 +16
MTE *e*S S 09 53 50.8 -7.3
MTE *e*P 09 55 31.2
MTE *e*SS SS 10 00 04.6 +18
MTE *e*LR LR 10 12 38.5
comp=Z,58µm,18.9s
MTE Manteigas 88.31 6 *e*P **P** 09 43 15.2 -0.8
comp=Z,228nm,0.9s,mb6.4
MTE LR LR
comp=Z,57µm,19.0s,MS7.0
PDA Ponta Delgada 88.32 20 *e*LR LR 10 12 48.0
CMLA Cha da Macela 88.34 20 *e*P **P** 09 43 13.6 -2.6
CMLA Cha da Macela 88.34 20 *e*PP PP 09 46 36.7 -6.3
CMLA *e*S SKSac 09 52 52.6 -49
CMLA *e*LQ 10 06 46.3
CMLA *e*LR LR 10 12 38.0
CMLA Cha da Macela 88.34 20 PFAKE 09 43 30.0 +14
CMLA LR LR
comp=Z,67µm,19.0s,MS7.1
EMOS Mosqueruela 88.61 1 P **P** 09 43 19.2 +1.7
comp=Z,45nm,0.7s,mb5.9
TIP Timpagrande 88.68 347 *e*P **P** 09 43 16.9 -0.8
comp=Z,144nm,0.9s,mb6.3
TIP LR LR
comp=Z,45µm,20.0s,MS6.9
TURN Turunc 88.70 338⇑ *i*P **P** 09 43 17.7 -0.1
TURN Turunc 88.70 338 *i* P ScS 09 54 20.1 +13
ATH Athens Observa 88.70 342 *e*P **P** 09 43 16.0 -1.9
LTK Loutraki 88.80 342 P **P** 09 43 16.1 -2.2
XMIS Christmas Isla 88.82 252 *e*P **P** 09 43 17.6 -1.1
comp=Z,366nm,1.2s,mb6.6
XMIS *e*PP PP 09 46 44.8 -3.4
PCBR Castelo Branco 88.88 6 *e*P **P** 09 43 17.7 -1.0
comp=Z,240nm,1.2s,mb6.4
BCIP Isla Barro Col 88.90 77 *e*P **P** 09 43 17.0 -2.1
BCIP Isla Barro Col 88.90 77 *e*P **P** 09 43 18.2 -1.0
comp=Z,525nm,1.4s,mb6.7
BCIP LR LR
comp=Z,43µm,20.0s,MS6.9
RLS Riolos of Patr 89.04 344 *e*P **P** 09 43 18.1 -1.4
PHNC Paralimni 89.05 333 P **P** 09 43 22.9 +3.3
VLS Valsamata 89.07 344 P **P** 09 43 17.8 -1.8
VLS Valsamata 89.07 344 *e*P **P** 09 43 18.3 -1.3
KFL Anninata 89.11 344 P **P** 09 43 19.3 -0.5
MAMC Mammari 89.12 334 P **P** 09 43 22.5 +2.6
HWQ Hawqa 89.17 331 *e*P **P** 09 43 19.1 -1.0
ETOS Mallorca 89.19 358 P **P** 09 43 21.5 +1.4
comp=Z,38nm,0.9s,mb5.7
APE Apeiranthos 89.20 340 P **P** 09 43 17.1 -3.1
ESDC Sonseca Array 89.22 3 P **P** 09 43 18.4 -1.9
comp=Z,1.8nm,0.4s,mb4.8,baz=348,slow=4.3,SNR=8.3
ESDC PKPPKP 10 09 03.7
comp=Z,2.0nm,0.7s,baz=188,slow=1.3,SNR=4.5
ESDC Sonseca Array 89.22 3 P **P** 09 43 18.4 -1.9
ESDC P'P' 10 09 03.7
ESLA Sonseca Array 89.22 3 *e*P **P** 09 43 19.7 -0.6
comp=Z,65nm,1.2s,mb5.8
ESLA LR LR
comp=Z,398µm,22.0s,MS7.8
MIB Mutribah 89.24 321 *e*P **P** 09 43 19.7 -0.8
baz=321
MIB AMb AMB 09 43 31.3
comp=Z,543nm,1.1s,mb6.8,baz=321
DID Didima 89.25 342 P **P** 09 43 15.1 -5.3
CSS Prodhromos 89.29 334 P **P** 09 43 22.1 +1.4
PMRV Marv??o 89.29 6 *e*P **P** 09 43 19.5 -1.1
comp=Z,293nm,1.3s,mb6.5
PMRV Marv??o 89.29 6 *e*PP PP 09 46 58.0 +7.5
PMRV *e*S S 09 53 58.1 -9.3
PMRV *e*P 09 55 36.4
PMRV *e*SS SS 10 00 30.6 +30
PMRV *e*LQ 10 07 21.3
PMRV *e*LR LR 10 13 13.3
comp=Z,58µm,18.9s
ALFC Alevga 89.31 334 P **P** 09 43 21.2 +0.4
comp=Z,4.1nm,0.7s,mb4.9
CRPR Cabo Rojo, PR 89.31 62 *e*P **P** 09 43 20.3 -0.7
comp=Z,212nm,1.3s,mb6.3
UMR Umm Al-Rimmam 89.31 320 *e*P **P** 09 43 19.7 -1.2
baz=320
UMR AMb AMB 09 43 31.5
comp=Z,379nm,1.1s,mb6.6,baz=320
URZ Urewera 89.33 183 P **P** 09 43 19.2 -1.2
comp=Z,52nm,1.1s,mb5.8,baz=352,slow=12,SNR=3.4
PAB San Pablo 89.34 4 *e*P **P** 09 43 20.9 +0.1
PAB pmax pmax
comp=Z,177nm,1.4s,mb6.2
PAB MLR MLR
comp=Z,63µm,19.0s,MS7.1
PAB San Pablo 89.34 4 *e*P **P** 09 43 20.9 +0.1
comp=Z,177nm,1.4s,mb6.2
PAB LR LR
comp=Z,63µm,19.0s,MS7.1
ECHE Chera 89.38 1 P **P** 09 43 22.4 +1.4
ECHE pmax pmax
comp=Z,68nm,1.0s,mb5.9
ECHE Chera 89.38 1 P **P** 09 43 22.4 +1.4
comp=Z,68nm,1.0s,mb5.9
MNGI Mangalore 89.50 290 *i* P **P** 09 43 20.6 -1.4
MNGI AMb AMB 09 43 24.3
comp=Z,292nm,2.0s,mb6.3
MNGI *i* S SKSac 09 53 47.2 -2.3
BHL Bhannes 89.60 331 *e*P **P** 09 43 21.2 -0.9
SZAC Souni-Zanaja 89.61 334 P **P** 09 43 23.1 +0.9
PPCY Paphos 89.63 334 P **P** 09 43 22.2 -0.1
MBWA Marble Bar 89.65 235 *e*P **P** 09 43 20.6 -1.7
comp=Z,247nm,1.2s,mb6.4
MBWA LR LR
comp=Z,35µm,20.0s,MS6.8
KBD Kabd 89.66 320 *e*P **P** 09 43 21.3 -1.2
baz=320
KBD AMb AMB 09 43 35.2
comp=Z,266nm,1.3s,mb6.4,baz=320
STKA Stephens Creek 89.69 212 *e*S SKSac 09 53 44.6 -4.9
STKA Stephens Creek 89.69 212 P **P** 09 43 21.9 -0.4
comp=Z,160nm,0.8s,mb6.4,baz=355,slow=6.5,SNR=104
STKA S SKSac 09 53 55.1 +5.5
comp=Z,1.0nm,0.3s,baz=354,slow=22,SNR=2.3
STKA LR LR 10 21 37.2
comp=Z,111µm,19.7s,MS7.3,baz=15,slow=34
STKA Stephens Creek 89.69 212⇑ *i*P **P** 09 43 21.8 -0.5
comp=Z,182nm,1.0s,mb6.4
STKA *e*S SKSac 09 53 44.6 -4.9
CEL Celeste 89.70 348 *e*P **P** 09 43 19.9 -2.7
comp=Z,140nm,0.8s,mb6.3
CEL *e*PP PP 09 46 53.8 0.0
CEL LR LR
comp=Z,41µm,19.0s,MS6.9
ICM Isla Caja Muer 89.73 61 *e*P **P** 09 43 22.6 -0.4
SCLL Scilla 89.73 348 P **P** 09 43 22.4 -0.3
SJG San Juan 89.75 61 *e*P **P** 09 43 22.7 -0.4
SJG pmax pmax
comp=Z,806nm,1.2s
SJG MLR MLR
comp=Z,181µm,22.0s
SJG San Juan 89.75 61 *e*P **P** 09 43 21.6 -1.4
SJG San Juan 89.75 61 *e*P **P** 09 43 22.7 -0.4
comp=Z,806nm,1.2s,mb6.9
SJG LR LR
comp=Z,181µm,22.0s,MS7.5
NAY Al-Naaiem 89.77 320 *e*P **P** 09 43 21.7 -1.3
baz=321
NAY AMb AMB 09 43 33.6
comp=Z,235nm,1.0s,mb6.5,baz=321
ITM Ithomi 89.81 343 *e*P **P** 09 43 19.3 -3.8
PESTR Estremoz 89.84 6 *e*P **P** 09 43 22.5 -0.7
comp=Z,278nm,1.8s,mb6.3
PESTR Estremoz 89.84 6 *e*PP PP 09 46 58.5 +3.7
PESTR *e*S S 09 54 08.5 -4.0
PESTR *e*P 09 55 39.5
PESTR *e*SS SS 10 00 42.2 +34
PESTR *e*LQ 10 07 19.1
PESTR *e*LR LR 10 13 29.6
comp=Z,49µm,16.3s
LIS Lisbon 89.87 8 *e*P **P** 09 43 22.9 -0.4
LIS *e*S SKSac 09 53 48.6 -2.5
LIS *e*S SKSac 09 53 48.7 -2.4
LIS AMS AMS 10 28 06.2
comp=Z,80µm,18.4s,MS7.2
LIS Lisbon 89.87 8 *e*P **P** 09 43 22.9 -0.4
LIS *e*S SKSac 09 53 48.6 -2.5
LIS A 10 28 06.2
comp=Z,80µm,18.4s
RDF Al-Radifah 89.94 320 *e*P **P** 09 43 22.5 -1.3
baz=320
RDF AMb AMB 09 43 36.5
comp=Z,625nm,1.2s,mb6.8,baz=320
RCY Rachaya 89.94 331 *e*P **P** 09 43 23.0 -0.8
QRN Al-Qurain 89.95 320 *e*P **P** 09 43 22.5 -1.4
baz=320
QRN AMb AMB 09 43 35.4
comp=Z,509nm,2.0s,mb6.5,baz=320
EIBI Ibiza 89.95 359 P **P** 09 43 25.7 +2.0
comp=Z,105nm,1.9s,mb5.8
EBAD Badajoz 89.98 6 P **P** 09 43 23.4 -0.5
comp=Z,62nm,0.9s,mb5.9
PAYG Puerto Ayora 90.05 91 *e*P **P** 09 43 25.2 +0.7
comp=Z,801nm,1.4s,mb6.9
PAYG *e*pP pP 09 43 30.4 -5.5
PAYG LR LR
comp=Z,70µm,20.0s,MS7.1
KOD Kodaikanal 90.06 286 *e*P **P** 09 43 25.3 +0.7
KOD AMb AMB 09 43 41.2
comp=Z,229nm,2.4s,mb6.1
PYL PYLOS 90.12 343 P **P** 09 43 21.9 -2.6
EVO Evora 90.14 7 *e*P **P** 09 43 24.2 -0.4
comp=Z,346nm,1.4s,mb6.2
EVO *e*MLR MLR
comp=Z,92µm,20.8s,MS6.9
EVO Evora 90.14 7 *e*P **P** 09 43 25.4 +0.8
comp=Z,214nm,1.6s,mb6.2
EBEN Beniarda 90.27 1 P **P** 09 43 28.6 +3.4
comp=Z,45nm,0.8s,mb5.8
EVIA Vianos 90.30 2 P **P** 09 43 25.3 -0.1
EVIA pmax pmax
comp=Z,68nm,0.8s,mb6.0
EVIA Vianos 90.30 2 P **P** 09 43 25.3 -0.1
comp=Z,68nm,0.8s,mb6.0
ETOB Tobarra 90.32 2 P **P** 09 43 25.6 +0.2
comp=Z,93nm,0.8s,mb6.2
KSHT Keshet 90.41 331 P **P** 09 43 28.3 +2.3
PALK Pallekele 90.42 282 P **P** 09 43 28.1 +1.8
comp=Z,274nm,1.7s,mb6.3,SNR=6.5
PALK Pallekele 90.42 282 *e*P **P** 09 43 26.1 -0.2
PALK pmax pmax
comp=Z,435nm,1.7s,mb6.5
PALK Pallekele 90.42 282 *e*P **P** 09 43 26.1 -0.2
comp=Z,436nm,1.7s,mb6.5
MMAI Mount Meron Ar 90.50 331 LR LR 10 31 22.9
comp=Z,38µm,18.2s,MS6.9,baz=25,slow=40
PBAR Barrancos 90.56 6 *e*P **P** 09 43 25.8 -0.8
comp=Z,472nm,1.2s,mb6.7
PBAR Barrancos 90.56 6 *e*PP PP 09 47 05.4 +4.8
PBAR *e*S S 09 54 09.3 -10
PBAR *e*P 09 55 46.8
PBAR *e*SS SS 10 00 52.1 +33
PBAR *e*LQ 10 07 10.4
PBAR *e*LR LR 10 13 29.3
comp=Z,43µm,17.8s
CNB Canberra Magne 90.56 205 *e*P **P** 09 43 26.3 +0.1
CNB *e*S S 09 54 22.0 +3.3
PBEJ Beja 90.65 7 *e*P **P** 09 43 26.6 -0.4
comp=Z,197nm,1.4s,mb6.2
EADA Adamuz 90.70 4 P **P** 09 43 27.1 -0.1
comp=Z,81nm,0.8s,mb6.1
EBAN Banos Encina 90.74 3 P **P** 09 43 28.8 +1.4
EBAN pmax pmax
comp=Z,53nm,0.8s,mb5.9
EBAN Banos Encina 90.74 3 P **P** 09 43 28.8 +1.5
comp=Z,53nm,0.8s,mb5.9
ASF Jabal al Asfar 90.83 330 P **P** 09 43 25.7 -2.2
comp=Z,19nm,0.8s,mb5.5,baz=254,slow=8.1,SNR=1.6
ASF LR LR 10 31 56.7
comp=Z,32µm,18.8s,MS6.8,baz=12,slow=41
EMIN Mina Concepcio 90.99 6 P **P** 09 43 27.9 -0.6
comp=Z,97nm,0.9s,mb6.1
OFRI 'Ofer 91.00 331 P **P** 09 43 28.0 -0.7
MMLI Mount Malkishu 91.04 331 P **P** 09 43 28.9 0.0
IDI Anoyia 91.05 340 LR LR 10 30 41.8
comp=Z,51µm,18.6s,MS7.0,baz=174,slow=40
PTEO Sao Teotonio 91.06 7 *e*P **P** 09 43 28.8 -0.1
comp=Z,460nm,1.5s,mb6.6
EQES Quesada 91.12 3 P **P** 09 43 32.0 +2.8
comp=Z,34nm,1.2s,mb5.6
KARN Karanos 91.15 341 P **P** 09 43 25.9 -3.4
EGRO El Granado 91.17 6 P **P** 09 43 30.3 +0.9
comp=Z,82nm,1.0s,mb6.0
HMDT Nahal Hemdat 91.18 331 P **P** 09 43 28.6 -0.9
PVAQ Vaqueiros 91.28 7 *e*P **P** 09 43 29.8 -0.1
comp=Z,251nm,2.1s,mb6.2
PVAQ Vaqueiros 91.28 7 *e*PP PP 09 47 10.5 +4.2
PVAQ *e*S SKSac 09 54 09.7 +10
PVAQ *e*P 09 56 06.9
PVAQ *e*SS SS 10 00 58.4 +29
PVAQ *e*LQ 10 07 32.7
PVAQ *e*LR LR 10 13 56.2
comp=Z,83µm,19.6s
MORF Marmelete 91.31 7 *e*PP PP 09 47 12.6 +6.1
MORF *e*S S 09 54 21.5 -4.5
MORF *e*P 09 56 08.6
MORF *e*SS SS 10 00 54.3 +25
MORF *e*LQ 10 07 54.1
MORF *e*LR LR 10 14 45.0
comp=Z,89µm,20.7s
ELUQ Luque 91.32 4 P **P** 09 43 32.7 +2.6
ELUQ pmax pmax
comp=Z,25nm,0.7s,mb5.7
ELUQ Luque 91.32 4 P **P** 09 43 32.7 +2.6
comp=Z,25nm,0.7s,mb5.7
SLTI Sal'it 91.34 331 P **P** 09 43 30.0 -0.3
CART Cartagena 91.38 1 *e*P **P** 09 43 29.6 -0.7
comp=Z,128nm,0.8s,mb6.3
PBDV Barranco-do-Ve 91.43 7 *e*P **P** 09 43 30.6 0.0
comp=Z,469nm,1.6s,mb6.6
PBDV Barranco-do-Ve 91.43 7 *e*PP PP 09 47 14.1 +6.6
PBDV *e*S SKSac 09 54 13.1 +13
PBDV *e*P 09 55 58.8
PBDV *e*SS SS 10 00 49.2 +18
PBDV *e*LQ 10 07 20.7
PBDV *e*LR LR 10 13 58.0
comp=Z,94µm,21.4s
ECOG Cogollos-Vega 91.63 3 P **P** 09 43 33.0 +1.5
ECOG pmax pmax
comp=Z,62nm,1.4s,mb5.8
ECOG Cogollos-Vega 91.63 3 P **P** 09 43 33.0 +1.4
comp=Z,62nm,1.4s,mb5.8
TRD Trivandrum 91.73 286 *e*P **P** 09 43 33.6 +1.3
TRD *e*x x 09 53 53.7
ELOJ Sierra Loja 91.73 4 P **P** 09 43 33.8 +1.8
ELOJ pmax pmax
comp=Z,39nm,0.7s,mb5.8
ELOJ Sierra Loja 91.73 4 P **P** 09 43 33.8 +1.8
comp=Z,39nm,0.7s,mb5.8
DSI Dead Sea 91.86 331 P **P** 09 43 32.3 -0.4
ERON Agron 91.88 3 P **P** 09 43 33.5 +0.8
comp=Z,27nm,0.6s,mb5.8
ESPR Espera 91.93 5 P **P** 09 43 34.5 +1.6
comp=Z,81nm,0.7s,mb6.2
ENIJ Nijar 91.97 2 P **P** 09 43 33.0 -0.1
comp=Z,8.6nm,0.6s,mb5.3
EBER Berja 92.03 3 P **P** 09 43 33.4 0.0
comp=Z,0.2nm,1.3s
EGUA Guajares 92.07 3 P **P** 09 43 33.7 +0.1
EGUA pmax pmax
comp=Z,313nm,0.8s,mb6.7
EGUA Guajares 92.07 3 P **P** 09 43 33.6 +0.1
comp=Z,313nm,0.8s,mb6.7
MZDA Masada 92.10 331 P **P** 09 43 33.2 -0.6
YTIR Yattir 92.13 331 P **P** 09 43 33.8 -0.2
WDD Wield Dalam 92.23 349 PFAKE 09 43 40.0 +5.6
WDD LR LR
comp=Z,41µm,20.0s,MS6.9
EMIJ Mijas 92.29 4 P **P** 09 43 35.3 +0.7
comp=Z,135nm,0.8s,mb6.3
DFRA Djebel Bou Aff 92.30 356 P **P** 09 43 35.0 +0.3
SFS San Fernando 92.31 5 PFAKE 09 43 40.0 +5.3
SFS LR LR
comp=Z,102µm,20.0s,MS7.3
EJIF Jimena Fronter 92.37 5 P **P** 09 43 36.0 +1.0
EJIF pmax pmax
comp=Z,96nm,1.0s,mb6.1
EJIF Jimena Fronter 92.37 5 P **P** 09 43 36.0 +1.0
comp=Z,96nm,1.0s,mb6.1
ANWB Willy Bob 92.46 58 *e*P **P** 09 43 34.7 -1.0
comp=Z,2µm,2.0s,mb7.0
ANWB *e*pP pP 09 43 45.3 -1.8
SNZO South Karori 92.47 184 PFAKE 09 43 40.0 +5.1
SNZO LR LR
comp=Z,96µm,20.0s,MS7.2
RTMI Retamim 92.55 331 P **P** 09 43 35.3 -0.6
CASM Ain Smara 92.55 355 P **P** 09 43 39.0 +3.2
SET Setif 92.67 356 P **P** 09 43 40.0 +3.6
EBNR Beni Rached 92.68 359 P **P** 09 43 38.0 +1.6
EMHD Djebel Mahouad 92.75 358 P **P** 09 43 40.9 +4.2
ECHA Ech Chlef 92.82 359 P **P** 09 43 38.2 +1.1
KEST Kesra 92.89 353 P **P** 09 43 36.7 -0.7
comp=Z,32nm,1.0s,mb5.7,baz=282,slow=2.0,SNR=33
OKGL Djebel Kef Gue 92.94 360 P **P** 09 43 43.0 +5.4
BPA Boggy Peak 92.94 58 *e* **P** 09 43 36.6 -1.3
BPA Boggy Peak 92.94 58 *e* SKSac 09 54 04.8 -4.3
RMNI Mount Ramon 92.95 331 P **P** 09 43 35.6 -2.2
EANR 'Ain N'Sour 93.02 359 P **P** 09 43 38.5 +0.5
PRNI Paran 93.11 331 P **P** 09 43 38.6 +0.1
USTO Oran 93.23 1 P **P** 09 43 47.0 +8.0
HRFI Mount Harif 93.39 330 P **P** 09 43 40.4 +0.6
OJBR Djebel Berber 93.39 0 P **P** 09 43 40.5 +0.8
ADE Adelaide 93.49 213 P **P** 09 43 40.6 +0.8
ETRT Tiaret 93.58 359 P **P** 09 43 42.0 +1.4
ODJA Bouhanifia 93.64 1 P **P** 09 43 39.0 -1.9
ODZI Dziouia 93.67 1 P **P** 09 43 39.0 -2.0
OLHC Oulhaca 93.71 2 P **P** 09 43 40.3 +1.8
TOO Toolangi 93.75 207 *e*P **P** 09 43 42.0 +1.1
TOO *e*S SKSac 09 54 11.9 -0.3
EIL Elat 93.76 330 P **P** 09 43 40.2 -1.3
comp=Z,33nm,1.1s,mb5.7,baz=6.4,slow=4.9,SNR=9.3
EIL LR LR 10 35 13.3
comp=Z,56µm,18.9s,MS7.0,baz=31,slow=42
EIL Elat 93.76 330 P **P** 09 43 41.7 +0.2
FORT Forrest 93.89 223 *e*P **P** 09 43 42.0 +0.2
comp=Z,114nm,0.7s,mb6.4
FORT *e*S S 09 54 29.7 -19
SDV Santo Domingo 94.64 70 *e*P **P** 09 43 45.1 -0.7
SDV Santo Domingo 94.64 70 *e*P **P** 09 43 45.4 -0.4
comp=Z,77nm,0.8s,mb6.2
SDV LR LR
comp=Z,23µm,20.0s,MS6.6
RPZ Rata Peaks 95.08 187 P **P** 09 43 48.0 +1.1
comp=Z,10nm,0.8s,mb5.3,baz=0.0,slow=5.1,SNR=5.0
FDF Fort de France 95.23 59 *e*P **P** 09 43 50.9 +2.4
BIM Bigot 95.45 59 *e*P **P** 09 43 50.9 +1.4
COCO West Island 95.48 257 P **P** 09 43 49.9 +0.4
COCO pmax pmax
comp=Z,284nm,1.4s,mb6.5
COCO MLR MLR
comp=Z,10µm,22.0s,MS6.2
COCO West Island 95.48 257 P **P** 09 43 49.9 +0.5
comp=Z,284nm,1.4s,mb6.5
COCO LR LR
comp=Z,10µm,22.0s,MS6.2
SLB Belfond 96.04 59 *e* **P** 09 43 52.9 +0.7
CHI2 96.16 75 *e*P x 09 42 43.2
SVV Soufriere Volc 96.37 60 *e* **P** 09 43 56.6 +3.0
SSV Crater Summit 96.37 60 *e* **P** 09 43 55.2 +1.6
FCV Fort Charlotte 96.48 60 *e* **P** 09 43 55.0 +0.9
OTAV Otavalo 96.73 81 *e*P **P** 09 43 55.5 +0.2
comp=Z,41nm,1.0s,mb5.8
OTAV LR LR
comp=Z,23µm,20.0s,MS6.7
GRGR Grenville 97.11 61 PFAKE 09 44 10.0 +13
GRGR LR LR
comp=Z,90µm,20.0s,MS7.2
BBGH Gun Hill 97.40 58 PFAKE 09 44 10.0 +12
BBGH LR LR
comp=Z,155µm,22.0s,MS7.5
TCE Chacachacare 98.24 61 *e*P **P** 09 44 03.5 +1.4
TAU Tasmania Unive 98.24 204 PFAKE 09 44 10.0 +8.8
TAU LR LR
comp=Z,37µm,20.0s,MS6.9
TPR Prospect 98.37 60 *e*P **P** 09 44 03.3 +0.6

TRN	**Trinidad (W)**	**98.47**	**61**	*e*P		**P**		**09 44 02.9**	**-0.2**
TPP	**Pointe-a-Pierr**	**98.72**	**61**	*e*P		**P**		**09 44 03.6**	**-0.6**
TBH	**Brigand Hill**	**98.79**	**61**	*e*P		**P**		**09 44 06.8**	**+2.3**
KLBR	**Kellerberrin**	**99.28**	**230**	*e*P		**P**		**09 44 06.0**	**-0.2**
	comp=Z,31nm,0.9s,mb5.8								
KLBR				*e*S		SKSac		09 54 39.0	-2.3
RPN	**Rapa Nui**	**99.46**	**122**	P		**P**		**09 44 07.4**	**+0.3**
	comp=Z,9.7nm,0.5s,mb5.6,baz=215,slow=12,SNR=1.9								
RPN	**Rapa Nui**	**99.46**	**122**	P		**P**		**09 44 07.4**	**+0.3**
RPN				LR		LR			
	comp=Z,72μm,22.0s,MS7.1								
NWAO	**Narrogin (SRO)**	**100.62**	**230**	P		Pdif		09 44 10.5	-2.1
	comp=Z,28nm,0.9s,baz=43,slow=3.5,SNR=14								
NWAO	**Narrogin (SRO)**	**100.62**	**230**	*e*P		Pdif		09 44 10.9	-1.7
NWAO				*e*				09 48 16.1	
NWAO				pmax		pmax			
	comp=Z,30nm,1.0s								
NWAO				MLR		MLR			
	comp=Z,30μm,21.0s								
NWAO	**Narrogin (SRO)**	**100.62**	**230**	*e*Pdif		Pdif		09 44 10.9	-1.7
	comp=Z,30nm,1.0s								
NWAO				*e*PP		PP		09 48 16.1	-3.9
NWAO				LR		LR			
	comp=Z,30μm,21.0s,MS6.8								
NNA	**Nana**	**107.19**	**88**	PFAKE				09 49 00.0	+9.2
NNA				LR		LR			
	comp=Z,56μm,21.0s,MS7.1								
MSEY	**Mahe Island**	**114.90**	**296**	PFAKE				09 49 20.0	+15
MSEY				LR		LR			
	comp=Z,20μm,19.0s,MS6.7								
TOA0	**Torodi Ar. Sit**	**115.72**	**359**	*e*PKPdf		PKPdf		09 49 06.1	-0.9
TORD	**Torodi Ar. Bea**	**115.72**	**359**	PKP		PKPdf		09 49 06.3	-0.7
	comp=Z,25nm,0.7s,baz=350,slow=2.0,SNR=69								
TORD				PP		PP		09 50 08.7	-0.3
	comp=Z,18nm,0.8s,baz=12,slow=4.7,SNR=4.5								
TORD				PKKPbc		PKKPbc		09 59 38.1	+0.9
	comp=Z,7.2nm,0.8s,baz=174,slow=2.2,SNR=14								
TORD	**Torodi Ar. Bea**	**115.72**	**359**	PKP		PKPdf		09 49 06.3	-0.7
TORD				PP		PP		09 50 08.7	-0.3
TORD				PKKPbc		PKKPbc		09 59 38.1	+0.9
LVC	**Limon Verde**	**120.13**	**89**	*e*PKPdf		PKPdf		09 49 13.7	-1.5
LVC				LR		LR			
	comp=Z,58μm,22.0s,MS7.2								
DRV	**Dumont d'Urvil**	**121.67**	**198**	Pdif		Pdif		09 45 47.0	+0.8
DRV	**Dumont d'Urvil**	**121.67**	**198**	PP		PP		09 50 55.0	+4.2
DRV				SKS		SKSdf		09 56 18.0	-7.1
DRV				SKKS		SKKSac		09 57 49.0	+3.5
DRV				SP		SP		10 00 44.0	+5.5
DRV				SS		SS		10 07 29.0	+4.9
DRV				L				10 21 00.0	
DRV				R				10 29 00.0	
DBIC	**Dimbokro**	**121.98**	**6**	PKP		PKPdf		09 49 18.0	-1.1
	comp=Z,62nm,0.7s,baz=348,slow=2.8,SNR=114								
DBIC	**Dimbokro**	**121.98**	**6**	PKIKP		PKPdf		09 49 18.0	-1.1
DBIC				pmax		pmax			
	comp=Z,62nm,0.7s								
DBIC	**Dimbokro**	**121.98**	**6**	*e*PKPdf		PKPdf		09 49 18.1	-1.0
DBIC				LR		LR			
	comp=Z,75μm,19.0s,MS7.4								
TIC	**Toumodi**	**122.00**	**6**	*e*PKIKP		PKPdf		09 49 17.9	-1.3
	comp=Z,160nm,0.3s								
KIC	**Kosan Boka**	**122.30**	**6**	*e*PKIKP		PKPdf		09 49 18.5	-1.2
	comp=Z,392nm,0.7s								
LIC	**Lamto**	**122.41**	**6**	*e*PKIKP		PKPdf		09 49 18.6	-1.4
	comp=Z,302nm,0.7s								
LIC	**Lamto**	**122.41**	**6**	*e*PKIKP		PKPdf		09 49 18.7	-1.3
	comp=Z,180nm,0.7s								
LIC				*e*MLR		MLR			
	comp=Z,111μm,19.8s,MS7.2								
LIC	**Lamto**	**122.41**	**6**	*e*PKPdf		PKPdf		09 49 18.7	-1.3
LIC				LR		LR			
	comp=Z,56μm,19.8s,MS7.2								
LCO	**Las Campanas**	**123.59**	**96**	PFAKE				09 49 30.0	+8.3
LCO				LR		LR			
	comp=Z,103μm,20.0s,MS7.5								
TLL	**Tololo Astrono**	**124.33**	**97**	*e*P		PKPdf		09 49 22.2	-0.8
RCBR	**Riachuelo**	**125.49**	**46**	*e*PKPdf		PKPdf		09 49 25.2	-0.6
RCBR				LR		LR			
	comp=Z,65μm,19.0s,MS7.3								
CLCH	**Cerro Calan**	**126.70**	**99**	*e*P		PKPdf		09 49 26.8	-0.7
FCH	**Farellones**	**126.81**	**99**	*e*P		PKPdf		09 49 27.3	-0.4
BDFB	**Brasilia**	**127.51**	**65**	PKP		PKPdf		09 49 30.0	+0.4
	comp=Z,9.2nm,0.7s,baz=284,slow=1.9,SNR=15								
BDFB	**Brasilia**	**127.51**	**65**	PKP		PKPdf		09 49 30.0	+0.4
BDFB				LR		LR			
	comp=Z,56μm,21.0s,MS7.2								
CASY	**Casey**	**128.74**	**209**	*e*P		PKPdf		09 49 31.3	+1.0
VNDA	**Vanda**	**129.17**	**185**	PKP		PKPdf		09 49 31.3	+0.4
	comp=Z,5.6nm,1.0s,baz=308,slow=2.0,SNR=10.0								
VNDA	**Vanda**	**129.17**	**185**	*e*PKPdf		PKPdf		09 49 30.5	-0.4
VNDA				LR		LR			
	comp=Z,26μm,20.0s,MS6.9								
SBA	**Scott Base**	**129.26**	**184**	*e*PKIKP		PKPdf		09 49 31.1	0.0
SBA				MLR		MLR			
	comp=Z,60μm,21.0s,MS7.3								
CPUP	**Villa Florida**	**130.05**	**83**	PKP		PKPdf		09 49 34.1	0.0
	comp=Z,6.0nm,0.6s,baz=322,slow=2.6,SNR=12								
CPUP				SKPbc				09 52 56.5	
	comp=Z,39nm,0.9s,baz=306,slow=3.5,SNR=6.6								
CPUP	**Villa Florida**	**130.05**	**83**	PKIKP		PKPdf		09 49 34.1	0.0
CPUP				pmax		pmax			
	comp=Z,6.0nm,0.6s								
CPUP				pmax		pmax			
	comp=N,39nm,0.9s								
CPUP	**Villa Florida**	**130.05**	**83**	*e*PKPdf		PKPdf		09 49 34.2	+0.1
CPUP				LR		LR			
	comp=Z,7μm,22.0s,MS6.3								
OPO	**Ambohidratompo**	**130.85**	**294**	PKP		PKPdf		09 49 35.2	-0.6
	baz=39,slow=1.7								
OPO				SKPbc		SKPbc		09 52 59.6	+2.7
	comp=Z,31nm,0.8s,baz=31,slow=3.4,SNR=13								
ABPO	**Ambohimpanom**	**131.18**	**294**	*e*PKIKP		PKPdf		09 49 38.1	+1.7
ABPO				MLR		MLR			
	comp=Z,15μm,19.0s,MS6.7								
COYC	**Coyhaique**	**133.38**	**113**	*e*P		PKPdf		09 49 39.3	-0.5
MIR	**Mirnyy**	**134.68**	**214**	*ce*PKIKP		PKPdf		09 49 39.0	-2.5
MIR				*i*				09 49 51.0	
MIR				pmax		pmax			
	comp=Z,300nm,5.0s								
MIR				pmax		pmax			
	comp=Z,3μm,8.0s								
TRQA	**Tornquist**	**135.01**	**98**	*e*PKPdf		PKPdf		09 49 43.2	+0.1
TRQA				LR		LR			
	comp=Z,60μm,20.0s,MS7.3								
LPA	**La Plata**	**135.55**	**92**	*ce*PKP		PKPdf		09 49 44.0	-0.2
LPA				*e*PP		PP		09 52 22.0	-0.3
LPA				*e*SKP				09 53 13.0	
LPA									
	comp=Z,99μm,21.0s								
CAM4	**Nova Friburgo**	**135.95**	**65**	⇑*i*P		PKPdf		09 49 42.0	-3.3
CAM4				*i*				09 49 44.2	
CAM4				*i*				09 49 48.9	
LSZ	**Lusaka**	**137.67**	**318**	*e*PKPdf		PKPdf		09 49 48.8	+0.2
LSZ				LR		LR			
	comp=Z,35μm,20.0s,MS7.1								
QSPA	**South Pole Qui**	**141.15**	**180**	PFAKE				09 50 00.0	+6.9
QSPA				LR		LR			
	comp=Z,43μm,21.0s,MS7.2								
SHEL	**Horse Pasture**	**144.30**	**10**	*e*PKIKP		PKPdf		09 50 00.4	-0.2
SHEL				MLR		MLR			
	comp=Z,35μm,19.0s,MS7.1								
EFI	**East Falkland**	**144.44**	**114**	*e*PKIKP		PKPdf		09 49 56.8	-2.9
EFI				MLR		MLR			
	comp=Z,114μm,19.0s,MS7.7								
PMSA	**Palmer Station**	**145.06**	**138**	PKPbc		PKPbc		09 49 58.8	-1.1
	comp=Z,80nm,1.0s,baz=237,slow=2.6,SNR=12								
PMSA	**Palmer Station**	**145.06**	**138**	*e*PKPbc		PKPbc		09 49 59.6	-0.3
PMSA				LR		LR			
	comp=Z,165μm,21.0s,MS7.8								
TSUM	**Tsumeb**	**145.15**	**331**	PKPbc		PKPbc		09 50 01.1	-0.5
	baz=1.7,slow=4.7								
TSUM	**Tsumeb**	**145.15**	**331**	*e*PKPbc		PKPbc		09 50 02.2	+0.7
TSUM				LR		LR			
	comp=Z,65μm,20.0s,MS7.4								
MAW	**Mawson**	**146.22**	**218**	*e*P		PKPdf		09 50 03.0	+0.7
	comp=Z,112nm,0.8s								
MAW	**Mawson**	**146.22**	**218**	PKPbc		PKPbc		09 50 02.6	-0.8
	comp=Z,118nm,0.8s,baz=81,slow=5.1,SNR=63								
MAW	**Mawson**	**146.22**	**218**	PKP2		PKPab		09 50 02.6	-1.6
MAW				pmax		pmax			
	comp=Z,118nm,0.8s								
LBTB	**Lobatse**	**147.39**	**314**	*e*PKP2		PKPbc		09 50 07.4	-0.7
LBTB				MLR		MLR			
	comp=Z,63μm,20.0s,MS7.4								
BOSA	**Boshof**	**150.62**	**311**	PKP		PKPdf		09 50 11.5	+0.8
	comp=Z,112nm,0.7s,baz=27,slow=2.3,SNR=85								
BOSA				PKPbc		PKPbc		09 50 16.4	+0.3
	comp=Z,392nm,0.9s,baz=29,slow=2.5,SNR=119								
BOSA	**Boshof**	**150.62**	**311**	PKP		PKPdf		09 50 11.5	+0.8
BOSA				PKPbc		PKPbc		09 50 16.4	+0.3
BOSA				*e*PKPbc		PKPbc		09 50 16.9	+0.7
BOSA				LR		LR			
	comp=Z,71μm,20.0s,MS7.5								
SYO	**Syowa Base**	**154.45**	**212**	⇓*e*P		PKPdf		09 50 09.8	-5.3
SYO	**Syowa Base**	**154.45**	**212**	⇑*i*P		PKPdf		09 50 13.4	-1.7
SUR	**Sutherland**	**155.84**	**314**	*e*PKPdf		PKPdf		09 50 16.9	-1.3
SUR				LR		LR			
	comp=Z,92μm,22.0s,MS7.6								
VNA3	**Neumayer Olymp**	**159.56**	**171**	*e*PKPdf		PKPdf		09 50 18.9	-2.6
VNA3				*e*				09 50 27.4	
VNA3				*e*				09 50 37.6	
VNA3				*e*				09 50 59.4	
VNA3				*e*				09 51 12.4	
SNAA	**Sanae**	**159.60**	**177**	*e*PKPdf		PKPdf		09 50 18.2	-3.4
SNAA				*e*				09 50 28.1	
SNAA				*e*				09 50 36.3	
SNAA				*e*				09 50 59.7	
SNAA				*e*				09 51 11.7	
SNAA	**Sanae**	**159.60**	**177**	*e*PKPdf		PKPdf		09 50 20.4	-1.2
NVL	**N'lazarevskaya**	**159.87**	**191**	*c i*PKIKP		PKPdf		09 50 20.5	-1.4
NVL				pmax		pmax			
	comp=Z,109nm,1.9s								
MAIT	**Maitri**	**159.88**	**191**	*e*PKPdif		PKPdf		09 50 17.1	-4.8
VNA2	**Neumayer--Watz**	**160.08**	**172**	*e*PKPdf		PKPdf		09 50 20.0	-2.1
	baz=300,slow=1.4								
VNA2				*e*				09 50 29.6	
VNA2				*e*				09 50 38.6	
VNA2				*e*				09 51 01.8	
VNA2				*e*				09 51 14.6	
VNA1	**Neumayer--Stat**	**160.27**	**171**	*e*PKPdf		PKPdf		09 50 20.7	-1.6
VNA1				*e*				09 50 29.6	
VNA1				*e*				09 50 38.9	
VNA1				*e*				09 51 01.3	
VNA1				*e*				09 51 15.4	
TRIS	**Tristan da Cun**	**163.04**	**37**	PFAKE				09 50 40.0	+14
TRIS				LR		LR			
	comp=Z,63μm,20.0s								

NEIC ***19*** *09:32:42.4,3775S×17675E,h0km,ML4.1(WEL),After WEL.*
NEIC Felt [IV] at Edgecumbe, Kawerau and Whakatane. Also felt in the Lake Rotomahana area.
ISCJB ***19*** *09:32:43.2±0.6,3776S±004×17678E±005,h19km±5km, Error ellipse: s-maj=6.7km s-min=6.3km az=20.2*

ISC 19 09:32:43.1±0.7,3774S±004×17679E±005,h12km±4km, n30,σ0≤91/31,1C,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.27**	**201**	P	**Pg**	**09 32 48.4**	**-0.3**
MARZ				S	**Sg**	**09 32 51.8**	**-0.6**
EDRZ	**Edgecumbe**	**0.37**	**187**	P	**Pg**	**09 32 50.2**	**-0.4**
EDRZ				S	**Sg**	**09 32 55.0**	**-0.6**
WIZ	**White Island**	**0.38**	**57**	P	**Pg**	**09 32 51.8**	**+1.2**
LIRZ	**Lichensteins R**	**0.42**	**230**	P	**Pg**	**09 32 51.9**	**+0.5**
TGRZ	**Tauranga**	**0.42**	**271**	P	**Pg**	**09 32 52.5**	**+1.0**
MKRZ	**Makatiti**	**0.48**	**213**	P	**Pg**	**09 32 53.1**	**+0.6**
KARZ	**Kaharoa**	**0.52**	**237**	P	**Pg**	**09 32 53.7**	**+0.4**
URZ	**Urewera**	**0.58**	**155**	P	**Pg**	**09 32 53.6**	**-0.8**
UTU	**Utuhina**	**0.65**	**227**	P	**Pg**	**09 32 56.2**	**+0.5**
MWZ	**Matawai**	**0.83**	**136**	⇑P	**Pg**	**09 32 58.6**	**-0.6**
TOZ	**Tahuroa Road**	**1.02**	**270**	P	**Pb**	**09 33 01.8**	**-0.9**
PUZ	**Puketiti**	**1.21**	**107**	P	**Pn**	**09 33 05.8**	**+0.1**
MXZ	**Matakaoa Point**	**1.21**	**82**	P	**Pn**	**09 33 05.7**	**-0.1**
KUZ	**Kuaotunu**	**1.31**	**319**	P	**Pn**	**09 33 05.6**	**-1.5**
MKAZ	**Moumakai**	**1.44**	**295**	P	**Pn**	**09 33 07.9**	**-1.0**
BKZ	**Black Stump Fm**	**1.45**	**189**	P	**Pn**	**09 33 07.8**	**-1.3**
KNZ	**Kokohu**	**1.46**	**152**	P	**Pn**	**09 33 09.6**	**+0.4**
OTAZ	**Otara**	**1.68**	**297**	P	**Pn**	**09 33 12.1**	**-0.2**
HIZ	**Hauiti**	**1.71**	**242**	P	**Pn**	**09 33 12.0**	**-0.7**
WNVZ	**Wahianoa**	**1.85**	**210**	P	**Pn**	**09 33 17.3**	**+2.8**
MOVZ	**Moawhango**	**1.86**	**206**	P	**Pn**	**09 33 16.3**	**+1.6**
TSZ	**Takapari Road**	**2.41**	**195**	P	**Pn**	**09 33 22.6**	**+0.3**
WAZ	**Wanganui**	**2.46**	**214**	P	**Pn**	**09 33 25.6**	**+2.6**
WCZ	**Waipu Caves**	**2.66**	**312**	P	**Pn**	**09 33 25.5**	**-0.2**
BFZ	**Birch Farm**	**2.97**	**188**	P	**Pn**	**09 33 28.9**	**-1.1**
MRZ	**Mangatainoka R**	**3.07**	**198**	P	**Pn**	**09 33 31.1**	**-0.3**
KAKA	**Kakadu**	**46.65**	**290**	*e*P	x	09 41 11.3	
	397nm,0.9s						
VNA3	**Neumayer Olymp**	**71.23**	**178**	*e*	**P**	**09 44 01.5**	**+0.1**
VNA3				*e*	pP	09 44 06.0	+0.6
VNA2	**Neumayer--Watz**	**71.60**	**179**	*e*	**P**	**09 44 04.5**	**+0.8**
	baz=178,slow=4.7						
VNA2				*e*	pP	09 44 08.8	+1.1
VNA1	**Neumayer--Stat**	**71.86**	**178**	*e*	**P**	**09 44 05.4**	**+0.1**

IDC ***19*** *09:35:13.9±0.6,5107N×179.16W,h0km,mb5.2/30, mb1 5.3/32,mb1mx5.2/35,mbtmp5.2/32,ML5.4/1,MS7.1/3, Ms1 7.1/3,ms1mx5.8/52,Error ellipse: s-maj=18.8km s-min=12.0km az=162.0*
BJI ***19*** *09:35:14.5,5100N×179.30W,h15km,mb5.4*
NEIC ***19*** *09:35:16.5±0.4,5102N×179.35W,mb5.6/51,ML5.5(AEIC), Error ellipse: s-maj=11.1km s-min=5.0km az=171.0*
MOS ***19*** *09:35:19.3±0.8,5123N×179.27W,h40km,mb5.7/61,Error ellipse: s-maj=12.8km s-min=5.7km az=100.3*
ISCJB ***19*** *09:35:20.0±0.8,5110N±007×17922W±004,h51km±5km, mb5.4/97,Error ellipse: s-maj=12.2km s-min=4.5km az=176.1*

ISC 19 09:35:22.2±0.7,5109N±007×17920W±004,h59km±4km, n282,σ0≤88/277,mb5.4/97,14C-9D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.77**	**62**	P	**Pn**	**09 35 49.8**	**-0.6**
ADK				S	**Sn**	**09 36 12.8**	**+1.1**
ADK	**Adak**	**1.77**	**62**	P	**Pn**	**09 35 49.9**	**-0.5**
ADK				S	**Sn**	**09 36 12.9**	**+1.2**
ATKA	**Atka Island**	**3.31**	**68**	P	**Pn**	**09 36 11.1**	**-0.4**
ATKA				S	**Sn**	**09 36 50.4**	**+0.8**
SMY	**Shemya**	**4.46**	**294**	P	**Pn**	**09 36 25.7**	**-1.5**
SMY				S	**Sn**	**09 37 18.3**	**+0.5**
FX1	**Attu Island--F**	**5.05**	**294**	Pn	**Pn**	**09 36 33.4**	**-1.8**
	77nm,0.3s,baz=104,slow=19,SNR=2.5						
FX1				Sn	**Sn**	**09 37 34.7**	**+2.5**
	80nm,0.3s,baz=289,slow=18,SNR=2.0						
FX1	**Attu Island--F**	**5.05**	**294**	P	**Pn**	**09 36 33.4**	**-1.9**
FX1						09 37 34.7	
FX1				pmax	pmax		
	comp=Z,77nm,0.3s						
FX1				smax			
	comp=N,80nm,0.3s						
FX1	**Attu Island--F**	**5.05**	**294**	P	**Pn**	**09 36 32.5**	**-2.7**
NIKO	**Nikolski**	**6.66**	**69**	P	**Pn**	**09 36 57.4**	**+0.1**
OKFG	**Magazine Ridge**	**7.31**	**67**	P	**Pn**	**09 37 07.0**	**+0.9**
SPIA	**Saint Paul Isl**	**8.05**	**37**	P	**Pn**	**09 37 16.7**	**+0.4**
UNV	**Unalaska Valle**	**8.23**	**65**	P	**Pn**	**09 37 19.2**	**+0.4**
AKUT	**Akutan**	**8.72**	**64**	P	**Pn**	**09 37 26.3**	**+0.8**
PET	**Petropavlovsk**	**13.76**	**287**	*e*P	**Pn**	**09 38 33.4**	**-0.7**
PET				*e*S	**Sn**	**09 41 05.0**	**0.0**
PET				pmax	pmax		
	comp=Z,65nm,1.0s						
PET				smax			
	comp=N,31nm,0.7s						
PET				MLR	MLR		
	comp=Z,77um,16.0s						
PETK	**Petropavlovsk-**	**14.33**	**287**	Pn	**Pn**	**09 38 40.2**	**-1.4**
	baz=93,slow=13,SNR=2.0						
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**09 39 08.3**	**-4.8**
	comp=Z,15nm,0.3s,baz=295,slow=11,SNR=6.2						
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**09 39 08.3**	**-4.8**
BILL	**Bilibino**	**18.44**	**343**	*e*P	**Pn**	**09 39 29.7**	**-3.4**
BILL				pmax	pmax		
	comp=Z,206nm,1.6s						
YSS	**Yuzh-Sakhalins**	**25.10**	**276**	*i*P	**P**	**09 40 42.8**	**+1.7**
YSS	**Yuzh-Sakhalins**	**25.10**	**276**	*i*P	**P**	**09 40 42.9**	**+1.8**
ASAJ	**Asahikawa**	**26.45**	**270**	P	**P**	**09 40 53.6**	**+0.2**
	comp=Z,44nm,1.1s,mb4.9,baz=45,slow=16,SNR=2.1						
ASAJ	**Asahikawa**	**26.45**	**270**	P	**P**	**09 40 53.6**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,44nm,1.1s						
INK	**Inuvik**	**27.84**	**35**	P	**P**	**09 41 04.7**	**-0.9**
	comp=Z,40nm,1.0s,mb5.0,baz=329,slow=5.9,SNR=3.2						
INK	**Inuvik**	**27.84**	**35**	P	**P**	**09 41 04.7**	**-0.9**
INK				pmax	pmax		
	comp=Z,40nm,1.0s						
BBB	**Bella Bella**	**31.20**	**68**	P	**P**	**09 41 33.6**	**-1.8**
	comp=Z,31nm,0.8s,mb5.2,baz=252,slow=12,SNR=3.0						
MJAR	**Matsushiro Arr**	**33.49**	**261**	P	**P**	**09 41 52.8**	**-2.9**
	comp=Z,2.6nm,0.8s,baz=15,slow=36,SNR=2.1						
MJAR	**Matsushiro Arr**	**33.49**	**261**	P	**P**	**09 41 52.8**	**-2.9**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**35.62**	**46**	P	**P**	**09 42 12.9**	**-0.8**
	comp=Z,29nm,0.7s,mb5.3,baz=283,slow=7.6,SNR=6.3						
YKA	**Yellowknife Ar**	**35.62**	**46**	P	**P**	**09 42 12.9**	**-0.8**
YKA				pmax	pmax		
	comp=Z,29nm,0.7s						
YKA	**Yellowknife Ar**	**35.62**	**46**	P	**P**	**09 42 12.9**	**-0.8**
CBIJ	**Chichi jima**	**37.73**	**245**	P	**P**	**09 42 32.4**	**+0.3**
	comp=Z,70nm,0.7s,mb5.5,baz=288,slow=20,SNR=3.5						
BOD	**Bodaibo**	**37.95**	**307**	*e*P	**P**	**09 42 31.9**	**-1.7**
BOD				pmax	pmax		
	comp=Z,126nm,1.0s,mb5.6						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**09 42 46.1**	**+0.2**
	comp=Z,27nm,0.9s,mb5.0,baz=57,slow=7.9,SNR=5.6						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**09 42 46.2**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.0						
NVAR	**Mina Array Bea**	**43.84**	**82**	P	**P**	**09 43 23.4**	**+1.2**
	comp=Z,7.3nm,0.7s,mb4.5,baz=297,slow=6.0,SNR=2.5						
ULN	**Ulaanbaatar**	**46.17**	**296**	*i* P	**P**	**09 43 40.2**	**-0.4**
SONM	**Songino Array**	**46.55**	**297**	P	**P**	**09 43 43.5**	**-0.1**
	comp=Z,50nm,1.2s,mb5.3,baz=58,slow=5.0,SNR=8.3						
PDAR	**Pinedale Array**	**46.64**	**72**	P	**P**	**09 43 44.8**	**+0.4**
	comp=Z,64nm,0.8s,mb5.6,baz=315,slow=3.3,SNR=7.5						
NJ2	**Nanjing**	**48.57**	**272**	*e*P	**P**	**09 44 03.3**	**+3.8**
NJ2					AMB	AMB	
	comp=Z,60nm,1.0s,mb5.6						
KBS	**Kingsbay**	**50.08**	**357**	*e*P	**P**	**09 44 11.3**	**+0.9**
KBS				pmax	pmax		
	comp=Z,78nm,0.7s,mb5.8						
KBS	**Kingsbay**	**50.08**	**357**	*e*P	**P**	**09 44 11.3**	**+0.9**
	comp=Z,78nm,0.7s,mb5.8						
KBS				*e*pP	pP	09 44 15.9	-10
SPB4	**Spitsbergen Ar**	**50.65**	**356**	*e*P	**P**	**09 44 14.7**	**0.0**
SPB4				*e*pP	pP	09 44 19.6	-10
SPITS	**Spitsbergen Ar**	**50.65**	**356**	P	**P**	**09 44 14.9**	**+0.1**
	comp=Z,39nm,0.4s,mb5.6,baz=72,slow=6.3,SNR=50						
SPITS	**Spitsbergen Ar**	**50.65**	**356**	P	**P**	**09 44 14.9**	**+0.2**
SPITS				pmax	pmax		
	comp=Z,39nm,0.4s						
ECSD	**EROS,Sioux Fal**	**53.59**	**63**	*e*P	**P**	**09 44 36.8**	**-0.2**
	comp=Z,117nm,1.6s,mb5.6						
ZALV	**Zalesovo Beam**	**54.05**	**313**	P	**P**	**09 44 38.4**	**-1.8**
	comp=Z,17nm,0.9s,mb5.0,baz=31,slow=6.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**54.05**	**313**	P	**P**	**09 44 38.4**	**-1.8**
ZALV				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
ARCES	**ARCESS Array B**	**58.34**	**350**	P	**P**	**09 45 09.5**	**-1.0**
	comp=Z,39nm,0.8s,mb5.5,baz=2.9,slow=5.4,SNR=6.7						
ARCES	**ARCESS Array B**	**58.34**	**350**	P	**P**	**09 45 09.5**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,39nm,0.8s						
ARCES	**ARCESS Array B**	**58.34**	**350**	P	**P**	**09 45 09.5**	**-1.0**
LVZ	**Lovozero**	**58.66**	**346**	⇑*e*P	**P**	**09 45 10.9**	**-1.9**
LVZ				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.8						
LVZ	**Lovozero**	**58.66**	**346**	⇑*e*P	**P**	**09 45 10.0**	**-2.8**
TXAR	**Lajitas Array**	**58.95**	**81**	P	**P**	**09 45 13.4**	**-1.9**
	comp=Z,7.9nm,0.8s,mb4.8,baz=308,slow=4.4,SNR=7.5						
TXAR	**Lajitas Array**	**58.95**	**81**	P	**P**	**09 45 13.4**	**-1.9**
TXAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**59.04**	**314**	P	**P**	**09 45 14.5**	**-1.1**
	comp=Z,37nm,0.7s,mb5.5,baz=42,slow=6.6,SNR=4.4						
KURK	**Kurchatov**	**59.04**	**314**	⇓*e*P	**P**	**09 45 15.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,69nm

KSP **Ksiaz** 77.60 350 *eP* P 09 47 12.2 +0.6
OJC **Ojcow** 77.78 348 *eP* P 09 47 12.9 +0.3
BRG **Berggiesshubel** 77.81 352 *i P* P 09 47 12.6 -0.1
BRG pmax pmax
comp=Z,18nm,0.8s,mb5.0
BRG **Berggiesshubel** 77.81 352 *i P* P 09 47 12.6 -0.2
comp=Z,31nm,0.8s,mb5.3
KWP **Kalwaria** 77.93 346 *eP* P 09 47 14.6 +1.2
KWP **Kalwaria** 77.93 346 ‖ *iP* P 09 47 14.3 +0.9
KWP **Kalwaria** 77.93 346 *eP* P 09 47 14.6 +1.2
UPC **Upice** 77.96 350 *eP* P 09 47 13.9 +0.3
DPC **Dobruska-Polom** 78.08 350 *eP* P 09 47 14.6 +0.4
PVCC **Panska Ves** 78.09 351 *eP* P 09 47 14.3 0.0
STHS **Stebnicka Huta** 78.36 347 *eP* P 09 47 16.9 +1.1
STHS pmax pmax
comp=Z,59nm,0.9s,mb5.5
STHS **Stebnicka Huta** 78.36 347 *eP* P 09 47 16.9 +1.1
comp=Z,59nm,0.9s,mb5.5
OKC **Ostrava-Krasne** 78.37 349 *eP* P 09 47 16.2 +0.3
NKC **Novy Kostel** 78.57 352 *eP* P 09 47 17.6 +0.6
MEM **Membach** 78.59 357 P P 09 47 14.5 -2.5
comp=Z,49nm,1.1s,mb5.3
PRU **Pruhonice** 78.63 351 *eP* P 09 47 17.6 +0.4
KOLS **Kolonicke sedl** 78.68 346 *eP* P 09 47 18.3 +0.7
KOLS pmax pmax
comp=Z,2.0nm,1.1s
KOLS **Kolonicke sedl** 78.68 346 *eP* P 09 47 18.2 +0.6
KOLS **Kolonicke sedl** 78.68 346 *eP* P 09 47 18.3 +0.7
comp=Z,1.9nm,1.1s
SNF **Seneffe** 78.74 358 P P 09 47 15.7 -2.2
comp=Z,25nm,1.8s,mb4.8
BCLA **Clavier** 78.80 357 P P 09 47 18.8 +0.6
comp=Z,30nm,1.0s,mb5.2
CRVS **Cervenica-Dubn** 78.83 346 *eP* P 09 47 18.2 -0.2
CRVS pmax pmax
comp=Z,41nm,0.8s,mb5.4
CRVS **Cervenica-Dubn** 78.83 346 *eP* P 09 47 18.2 -0.2
comp=Z,41nm,0.8s,mb5.4
CRVS *eS* S 09 56 58.1 -13
VRAC **Vranov** 79.08 350 P P 09 47 19.2 -0.5
comp=Z,37nm,0.8s,mb5.3,baz=13,slow=6.2,SNR=5.5
VRAC **Vranov** 79.08 350 P P 09 47 19.2 -0.5
VRAC pmax pmax
comp=Z,37nm,0.9s
VRAC **Vranov** 79.08 350 ‖ *iP* P 09 47 20.7 +1.0
GIVF **Givet** 79.13 357 *eP* P 09 47 19.6 -0.4
comp=Z,68nm,0.9s,mb5.3
GIVF **Givet** 79.13 357 *eP* P 09 47 19.6 -0.4
GIVF pmax pmax
comp=Z,34nm,0.9s,mb5.3
GIVF **Givet** 79.13 357 *eP* P 09 47 19.6 -0.4
comp=Z,34nm,0.9s,mb5.3
DOU **Dourbes** 79.15 358 P P 09 47 18.0 -2.1
comp=Z,27nm,1.1s,mb5.1
BAIF **Baives** 79.19 358 *eP* P 09 47 20.2 -0.2
comp=Z,126nm,0.9s,mb5.5
BAIF **Baives** 79.19 358 *eP* P 09 47 20.2 -0.2
BAIF pmax pmax
comp=Z,63nm,0.9s,mb5.5
BAIF **Baives** 79.19 358 *eP* P 09 47 20.2 -0.2
comp=Z,63nm,0.9s,mb5.5
TREC **Trest** 79.22 350 *eP* P 09 47 20.1 -0.4
KECS **Kecovo** 79.39 347 *eP* P 09 47 21.9 +0.5
KECS pmax pmax
comp=Z,31nm,0.8s,mb5.3
KECS **Kecovo** 79.39 347 *eP* P 09 47 21.9 +0.5
comp=Z,31nm,0.8s,mb5.3
TRPA **Tarpa** 79.42 345 ‖ *iP* P 09 47 23.2 +1.6
BURAR **Bucovina Array** 79.47 343 ‖ *iP* P 09 47 23.4 +1.5
WLF **Walferdange** 79.53 356 P P 09 47 19.6 -2.6
comp=Z,44nm,2.3s,mb5.0
KHC **Kasperske Hory** 79.57 352 ⇑ *eP* P 09 47 22.5 +0.1
KHC **Kasperske Hory** 79.57 352 *eP* P 09 47 23.1 +0.7
KOLL **Kolacno** 79.58 348 *eP* P 09 47 23.0 +0.5
KOLL **Kolacno** 79.58 348 *eP* P 09 47 23.1 +0.6
VYHS **Vyhne** 79.60 348 *i P* P 09 47 23.2 +0.6
VYHS pmax pmax
comp=Z,25nm,0.9s,mb5.1
VYHS **Vyhne** 79.60 348 *i P* P 09 47 23.2 +0.6
comp=Z,25nm,0.9s,mb5.1
VYHS *eS* S 09 57 06.5 -13
SMOL **Smolenice** 79.76 349 *eP* P 09 47 24.7 +1.2
SOC **Sochi** 79.84 332 *eP* P 09 47 22.9 -1.1
SOC *e* 09 47 29.6
SOC *eS* S 09 57 22.2 -0.1
SOC pmax pmax
comp=Z,1μm,0.8s
SOC MLR MLR
comp=Z,2243μm,18.0s
GERES **GERESS Array B** 79.84 351 P P 09 47 23.6 -0.3
comp=Z,12nm,0.6s,mb5.0,baz=25,slow=5.4,SNR=27
GERES LR LR 10 25 05.8
comp=Z,70μm,18.2s,baz=0.9,slow=38
GERES **GERESS Array B** 79.84 351 P P 09 47 23.6 -0.3
GERES pmax pmax
comp=Z,12nm,0.6s
GERES MLR MLR
comp=Z,70μm,18.2s
PSZ **Piszkesteto** 80.02 347 ⇑ *iP* P 09 47 26.4 +1.5
ZST **Bratislava** 80.11 349 *eP* P 09 47 26.0 +0.6
ZST pmax pmax
comp=Z,51nm,0.9s,mb5.5
ZST **Bratislava** 80.11 349 *eP* P 09 47 26.0 +0.6
comp=Z,51nm,0.9s,mb5.5
ZST *eS* S 09 57 11.4 -14
FLN **La Foliniere** 80.53 1 *eP* P 09 47 26.9 -0.7
comp=Z,118nm,0.9s,mb5.5
FLN **La Foliniere** 80.53 1 *eP* P 09 47 26.9 -0.7
FLN pmax pmax
comp=Z,59nm,0.9s,mb5.5
FLN **La Foliniere** 80.53 1 *eP* P 09 47 26.9 -0.7
comp=Z,59nm,0.9s,mb5.5
DRGR 80.69 345 ‖ *iP* P 09 47 28.8 +0.3
LDF **La Druitiere** 80.70 1 *eP* P 09 47 27.7 -0.8
comp=Z,108nm,0.8s,mb5.5
LDF **La Druitiere** 80.70 1 *eP* P 09 47 27.7 -0.8
LDF pmax pmax
comp=Z,54nm,0.8s,mb5.5
LDF **La Druitiere** 80.70 1 *eP* P 09 47 27.7 -0.8
comp=Z,54nm,0.8s,mb5.5
MEZF **Maizieres J'vi** 80.73 357 *eP* P 09 47 28.5 -0.2
comp=Z,119nm,1.0s,mb5.5
MEZF **Maizieres J'vi** 80.73 357 *eP* P 09 47 28.5 -0.2
comp=Z,119nm,1.0s,mb5.8
CDF **Champ du Feu** 80.73 356 *eP* P 09 47 28.2 -0.5
comp=Z,57nm,1.0s,mb5.2
CDF **Champ du Feu** 80.73 356 *eP* P 09 47 28.2 -0.5
CDF pmax pmax
comp=Z,29nm,1.0s,mb5.2
CDF **Champ du Feu** 80.73 356 *eP* P 09 47 28.2 -0.5
comp=Z,29nm,1.0s,mb5.2
VRI **Vrincioaia** 80.86 342 ⇑ *iP* P 09 47 31.0 +1.6
PLOR **Plostina** 80.89 342 ⇑ *iP* P 09 47 31.2 +1.6
GRR **Gorron** 80.90 1 *eP* P 09 47 29.0 -0.6
comp=Z,120nm,0.8s,mb5.6
GRR **Gorron** 80.90 1 *eP* P 09 47 29.0 -0.6
GRR pmax pmax
comp=Z,60nm,0.8s,mb5.6
GRR **Gorron** 80.90 1 *eP* P 09 47 29.0 -0.6
comp=Z,60nm,0.8s,mb5.6
ROSF **Rostrenen** 80.90 3 *eP* P 09 47 29.1 -0.5
comp=Z,59nm,0.9s,mb5.2
ROSF **Rostrenen** 80.90 3 *eP* P 09 47 29.1 -0.5
ROSF pmax pmax
comp=Z,30nm,0.9s,mb5.2
ROSF **Rostrenen** 80.90 3 *eP* P 09 47 29.1 -0.5
comp=Z,30nm,0.9s,mb5.2
SGMF **Saint Gilles** 81.00 2 *eP* P 09 47 29.7 -0.4
comp=Z,86nm,0.7s,mb5.5
SGMF **Saint Gilles** 81.00 2 *eP* P 09 47 29.7 -0.4
SGMF pmax pmax
comp=Z,43nm,0.7s,mb5.5
SGMF **Saint Gilles** 81.00 2 *eP* P 09 47 29.7 -0.4
comp=Z,43nm,0.7s,mb5.5
HAU **Haudompre** 81.18 356 *eP* P 09 47 30.5 -0.6
comp=Z,71nm,1.0s,mb5.3
HAU **Haudompre** 81.18 356 *eP* P 09 47 30.5 -0.6
HAU pmax pmax
comp=Z,35nm,1.0s,mb5.2
HAU **Haudompre** 81.18 356 *eP* P 09 47 30.5 -0.6
comp=Z,35nm,1.0s,mb5.2
QUIF **Quistinic** 81.32 3 *eP* P 09 47 31.3 -0.5
comp=Z,139nm,1.1s,mb5.5
QUIF **Quistinic** 81.32 3 *eP* P 09 47 31.3 -0.5
QUIF pmax pmax
comp=Z,70nm,1.1s,mb5.5
QUIF **Quistinic** 81.32 3 *eP* P 09 47 31.3 -0.5
comp=Z,70nm,1.1s,mb5.5
HINF **Hinteralfeld** 81.34 356 *eP* P 09 47 31.1 -0.8
comp=Z,64nm,1.1s,mb5.2
HINF **Hinteralfeld** 81.34 356 *eP* P 09 47 31.1 -0.8
HINF pmax pmax
comp=Z,32nm,1.1s,mb5.2
HINF **Hinteralfeld** 81.34 356 *eP* P 09 47 31.1 -0.8
comp=Z,32nm,1.1s,mb5.2
MLR **Muntele Rosu** 81.38 342 P P 09 47 33.5 +1.3
comp=Z,59nm,0.6s,mb5.7,baz=216,slow=2.4,SNR=28
MLR **Muntele Rosu** 81.38 342 P P 09 47 33.5 +1.3
MLR pmax pmax
comp=Z,59nm,0.6s
VOIR 81.60 343 ⇑ *iP* P 09 47 35.3 +2.0
WRA **Warramunga Arr** 81.63 224 P P 09 47 32.8 -0.9
comp=Z,3.3nm,0.7s,mb4.4,baz=34,slow=5.8,SNR=4.7
WRA **Warramunga Arr** 81.63 224 P P 09 47 32.8 -0.9
WRA pmax pmax
comp=Z,3.0nm,0.7s
WRA **Warramunga Arr** 81.63 224 P P 09 47 32.8 -0.9
PKSM **Moragy** 81.87 348 ‖ *iP* P 09 47 35.1 +0.4
TIRR **Tirgusor** 81.87 340 ‖ *iP* P 09 47 34.6 -0.2
LOR **Lormes** 81.99 358 *eP* P 09 47 34.9 -0.5
comp=Z,172nm,1.4s,mb5.5
LOR **Lormes** 81.99 358 *eP* P 09 47 34.9 -0.5
LOR pmax pmax
comp=Z,86nm,1.4s,mb5.5
LOR **Lormes** 81.99 358 *eP* P 09 47 34.9 -0.5
comp=Z,86nm,1.4s,mb5.5
BZS **Buzias** 82.01 345 ⇑ *iP* P 09 47 35.0 -0.5
HYF **Humbligny** 82.02 359 *eP* P 09 47 35.4 -0.1
GZR **Gura Zlata** 82.04 345 ‖ *iP* P 09 47 36.4 +0.7
DAVOX **Davos/Dischmat** 82.20 354 P P 09 47 36.8 +0.3
comp=Z,26nm,0.8s,mb5.2,baz=350,slow=11,SNR=6.1
SSF **Saint Saulge** 82.21 358 *eP* P 09 47 36.1 -0.4
comp=Z,95nm,1.1s,mb5.3
SSF **Saint Saulge** 82.21 358 *eP* P 09 47 36.1 -0.4
SSF pmax pmax
comp=Z,48nm,1.1s,mb5.3
SSF **Saint Saulge** 82.21 358 *eP* P 09 47 36.1 -0.4
comp=Z,48nm,1.1s,mb5.3
AVF **Avril sur Loir** 82.48 358 *eP* P 09 47 37.4 -0.5
comp=Z,82nm,1.0s,mb5.3
AVF **Avril sur Loir** 82.48 358 *eP* P 09 47 37.4 -0.5
AVF pmax pmax
comp=Z,41nm,1.0s,mb5.3
AVF **Avril sur Loir** 82.48 358 *eP* P 09 47 37.4 -0.5
comp=Z,41nm,1.0s,mb5.3
CABF **La Chapelle** 82.58 356 *eP* P 09 47 38.3 -0.2
comp=Z,74nm,1.1s,mb5.3
CABF **La Chapelle** 82.58 356 *eP* P 09 47 38.3 -0.2
CABF pmax pmax
comp=Z,37nm,1.1s,mb5.3
CABF **La Chapelle** 82.58 356 *eP* P 09 47 38.3 -0.2
comp=Z,37nm,1.1s,mb5.3
SMF **Signal de Mont** 82.62 358 *eP* P 09 47 38.2 -0.4
comp=Z,124nm,1.0s,mb5.6
SMF **Signal de Mont** 82.62 358 *eP* P 09 47 38.2 -0.4
SMF pmax pmax
comp=Z,62nm,1.0s,mb5.6
SMF **Signal de Mont** 82.62 358 *eP* P 09 47 38.2 -0.4
comp=Z,62nm,1.0s,mb5.6
MFF **Saint Martin d** 82.69 1 *eP* P 09 47 38.7 -0.3
comp=Z,64nm,0.8s,mb5.4
MFF **Saint Martin d** 82.69 1 *eP* P 09 47 38.7 -0.3
MFF pmax pmax
comp=Z,32nm,0.8s,mb5.4
MFF **Saint Martin d** 82.69 1 *eP* P 09 47 38.7 -0.3
comp=Z,32nm,0.8s,mb5.4
BGF **Bois d'Agland** 82.72 359 *eP* P 09 47 38.8 -0.4
comp=Z,43nm,0.9s,mb5.2
BGF **Bois d'Agland** 82.72 359 *eP* P 09 47 38.8 -0.4
BGF pmax pmax
comp=Z,22nm,0.9s,mb5.2
BGF **Bois d'Agland** 82.72 359 *eP* P 09 47 38.8 -0.4
comp=Z,22nm,0.9s,mb5.2
TCF **Toulx Ste Croi** 83.00 359 *eP* P 09 47 40.2 -0.5
comp=Z,49nm,0.9s,mb5.2
TCF **Toulx Ste Croi** 83.00 359 *eP* P 09 47 40.2 -0.5
TCF pmax pmax
comp=Z,24nm,0.9s,mb5.2
TCF **Toulx Ste Croi** 83.00 359 *eP* P 09 47 40.2 -0.5
comp=Z,24nm,0.9s,mb5.2
LPL **La Plagne** 83.64 356 *eP* P 09 47 44.6 +0.6
LPG **La Plagne** 83.66 356 *eP* P 09 47 44.8 +0.7
RJF **Les Rejaudoux** 83.99 359 *eP* P 09 47 45.2 -0.5
comp=Z,103nm,1.3s,mb5.5
RJF **Les Rejaudoux** 83.99 359 *eP* P 09 47 45.2 -0.5
RJF pmax pmax
comp=Z,51nm,1.3s,mb5.5
RJF **Les Rejaudoux** 83.99 359 *eP* P 09 47 45.2 -0.5
comp=Z,52nm,1.3s,mb5.5
HYB **Hyderabad** 84.08 290 *i P* P 09 47 46.5 -0.1
comp=Z,114nm,1.2s,mb5.9
ORIF **Oris-en-Rattie** 84.28 356 *eP* P 09 47 47.6 +0.4
comp=Z,48nm,1.0s,mb5.3
ORIF **Oris-en-Rattie** 84.28 356 *eP* P 09 47 47.6 +0.4
ORIF pmax pmax
comp=Z,24nm,1.0s,mb5.3
ORIF **Oris-en-Rattie** 84.28 356 *eP* P 09 47 47.6 +0.4
comp=Z,24nm,1.0s,mb5.3
LFF **La Frestale** 84.36 0 *eP* P 09 47 47.4 -0.2
comp=Z,126nm,1.0s,mb5.7
LFF **La Frestale** 84.36 0 *eP* P 09 47 47.4 -0.2
LFF pmax pmax
comp=Z,63nm,1.0s,mb5.7
LFF **La Frestale** 84.36 0 *eP* P 09 47 47.4 -0.2
comp=Z,63nm,1.0s,mb5.7
CAF **Calviac** 84.37 359 *eP* P 09 47 47.6 -0.1
comp=Z,85nm,1.2s,mb5.5
CAF **Calviac** 84.37 359 *eP* P 09 47 47.6 -0.1
CAF pmax pmax
comp=Z,42nm,1.2s,mb5.4
CAF **Calviac** 84.37 359 *eP* P 09 47 47.6 -0.1
comp=Z,42nm,1.2s,mb5.5
VIVF **Saint-Julien-l** 84.38 357 *eP* P 09 47 47.7 0.0
comp=Z,45nm,0.9s,mb5.3
VIVF **Saint-Julien-l** 84.38 357 *eP* P 09 47 47.7 0.0
VIVF pmax pmax
comp=Z,23nm,0.9s,mb5.3
VIVF **Saint-Julien-l** 84.38 357 *eP* P 09 47 47.7 0.0
comp=Z,22nm,0.9s,mb5.3
MBDF **Montbardon** 84.43 356 *eP* P 09 47 48.4 +0.4
comp=Z,79nm,1.0s,mb5.5
MBDF **Montbardon** 84.43 356 *eP* P 09 47 48.4 +0.4
MBDF pmax pmax
comp=Z,40nm,1.0s,mb5.5
MBDF **Montbardon** 84.43 356 *eP* P 09 47 48.4 +0.4
comp=Z,40nm,1.0s,mb5.5
ASAR **Alice Springs** 85.10 222 P P 09 47 51.5 0.0
comp=Z,4.4nm,0.7s,mb4.7,baz=35,slow=5.0,SNR=5.4
ASAR **Alice Springs** 85.10 222 P P 09 47 51.5 +0.1
ASAR pmax pmax
comp=Z,4.0nm,0.7s
BRTR **Keskin Array B** 85.11 335 P P 09 47 51.8 +0.3
comp=Z,31nm,0.8s,mb5.5,baz=21,slow=2.3,SNR=9.4
BRTR **Keskin Array B** 85.11 335 ⇑ *eP* P 09 47 51.7 +0.2
LASF **Ste Croix** 85.18 358 *eP* P 09 47 51.6 -0.2
comp=Z,88nm,1.3s,mb5.4
SMRF **Simiane la Rot** 85.23 357 *eP* P 09 47 52.6 +0.6
comp=Z,114nm,1.1s,mb5.6
SMRF **Simiane la Rot** 85.23 357 *eP* P 09 47 52.6 +0.6
comp=Z,114nm,1.1s,mb5.9
SBF **Sospel** 85.26 355 *eP* P 09 47 51.7 -0.5
comp=Z,168nm,0.9s,mb5.8
SBF **Sospel** 85.26 355 *eP* P 09 47 51.7 -0.5
SBF pmax pmax
comp=Z,84nm,0.9s,mb5.9
SBF **Sospel** 85.26 355 *eP* P 09 47 51.7 -0.5
comp=Z,84nm,0.9s,mb5.9
FRF **La Foret Royal** 85.60 356 *eP* P 09 47 53.3 -0.6
comp=Z,67nm,0.9s,mb5.6
FRF **La Foret Royal** 85.60 356 *eP* P 09 47 53.3 -0.6
FRF pmax pmax
comp=Z,34nm,0.9s,mb5.6
FRF **La Foret Royal** 85.60 356 *eP* P 09 47 53.3 -0.6
comp=Z,34nm,0.9s,mb5.6
LMR **La Mourre** 85.83 356 *eP* P 09 47 54.7 -0.3
comp=Z,69nm,1.0s,mb5.5
LMR **La Mourre** 85.83 356 *eP* P 09 47 54.7 -0.3
LMR pmax pmax
comp=Z,35nm,1.0s,mb5.5
LMR **La Mourre** 85.83 356 *eP* P 09 47 54.7 -0.3
comp=Z,35nm,1.0s,mb5.5
MTLF **Montolieu** 85.91 359 *eP* P 09 47 55.4 -0.1
comp=Z,45nm,0.9s,mb5.4
MTLF **Montolieu** 85.95 359 *eP* P 09 47 55.5 -0.1
MTLF pmax pmax
comp=Z,22nm,0.9s,mb5.4
MTLF **Montolieu** 85.95 359 *eP* P 09 47 55.5 -0.1
comp=Z,22nm,0.9s,mb5.4
EPF **Esparros** 86.27 0 *eP* P 09 47 56.3 -0.9
comp=Z,38nm,1.0s,mb5.3
EPF **Esparros** 86.27 0 *eP* P 09 47 56.3 -0.9
EPF pmax pmax
comp=Z,19nm,1.0s,mb5.3
EPF **Esparros** 86.27 0 *eP* P 09 47 56.3 -0.9
comp=Z,19nm,1.0s,mb5.3
ETSF **Etsaut** 86.39 1 *eP* P 09 47 58.0 +0.2
comp=Z,39nm,0.7s,mb5.4
ETSF **Etsaut** 86.39 1 *eP* P 09 47 58.0 +0.2
ETSF pmax pmax
comp=Z,20nm,0.7s,mb5.5
ETSF **Etsaut** 86.39 1 *eP* P 09 47 58.0 +0.2
comp=Z,20nm,0.7s,mb5.5
PGF **Pioggiola** 86.47 354 *eP* P 09 47 57.9 -0.3
comp=Z,133nm,0.8s,mb5.9
PGF **Pioggiola** 86.47 354 *eP* P 09 47 57.9 -0.3
PGF pmax pmax
comp=Z,66nm,0.8s,mb5.9
PGF **Pioggiola** 86.47 354 *eP* P 09 47 57.9 -0.3
comp=Z,66nm,0.8s,mb5.9
URZ **Urewera** 89.03 183 LR LR 10 18 05.5
comp=Z,121μm,21.2s,baz=152,slow=29
ESDC **Sonseca Array** 89.52 4 P P 09 48 12.8 +0.1
comp=Z,5.4nm,0.7s,mb5.0,baz=352,slow=4.1,SNR=3.9
STKA **Stephens Creek** 89.54 213 P P 09 48 12.9 +0.2
comp=Z,14nm,1.0s,mb5.2,baz=320,slow=14,SNR=3.3
MMAI **Mount Meron Ar** 90.88 331 P P 09 48 18.5 -0.7
comp=Z,7.0nm,0.8s,mb5.1,baz=335,slow=6.4,SNR=5.9
VAE **Valguarnera** 91.00 349 LR LR 10 32 26.0
comp=Z,113μm,18.5s,baz=110,slow=38
MDT **Midelt** 96.33 5 P P 09 48 44.3 +0.1
comp=Z,6.7nm,0.8s,mb5.1,baz=33,slow=4.4,SNR=5.0
TORD **Torodi Ar. Bea** 116.04 359 PKP PKPdf 09 53 58.1 -0.5
comp=Z,3.3nm,0.9s,baz=339,slow=2.6,SNR=2.7
TORD PKKPbc PKKPbc 10 04 16.6 -10
comp=Z,9.7nm,1.1s,baz=200,slow=0.9,SNR=3.6
DBIC **Dimbokro** 122.27 7 PKP PKPdf 09 54 10.0 -0.7
comp=Z,3.2nm,0.4s,baz=320,slow=5.0,SNR=4.0
DBIC **Dimbokro** 122.27 7 PKIKP PKPdf 09 54 10.0 -0.6
DBIC pmax pmax
comp=Z,3.0nm,0.4s
TSUM **Tsumeb** 145.53 331 PKPbc PKPbc 09 54 54.0 +0.3
comp=Z,94nm,1.0s,baz=25,slow=3.4,SNR=7.5
TSUM **Tsumeb** 145.53 331 PKPbc PKPbc 09 54 54.0 +0.3
MAW **Mawson** 146.10 217 PKPbc PKPbc 09 54 53.4 -0.7
comp=Z,18nm,0.9s,baz=124,slow=5.3,SNR=4.1
MAW **Mawson** 146.10 217 PKP2 PKPbc 09 54 53.4 -0.7
MAW pmax pmax
comp=Z,18nm,0.9s
BOSA **Boshof** 150.99 311 PKPbc PKPbc 09 55 09.0 +1.0
comp=Z,20nm,0.8s,baz=97,slow=2.3,SNR=6.4
BOSA **Boshof** 150.99 311 PKIKP PKPbc 09 55 09.0 +1.0
BOSA pmax pmax
comp=Z,20nm,0.8s
BOSA **Boshof** 150.99 311 PKPbc PKPbc 09 55 09.0 +1.0

IDC 19 09:39:17.2±0.9, 5112N×17946W, h0km, mb4.4/14, mb1 4.6/15, mb1mx4.4/28, mbtmp4.4/15, ML3.9/1, Error ellipse: s-maj=25.1km s-min=20.1km az=173.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.5nm,0.3s,baz=96,slow=5.8,SNR=4.3	**14.16**	**287**	P n	P n	09 42 37.1	-1.8
YKA	**Yellowknife Ar** 2.7nm,0.5s,baz=281,slow=7.7,SNR=5.5	**35.72**	**46**	P	P	09 46 15.6	-1.3
PDAR	**Pinedale Array** 8.0nm,0.8s,baz=320,slow=3.5,SNR=4.3	**46.79**	**72**	P	P	09 47 48.3	+0.1
SPITS	**Spitsbergen Ar** 3.7nm,0.5s,baz=37,slow=4.9,SNR=4.4	**50.61**	**356**	P	P	09 48 16.8	-0.2
KURK	**Kurchatov** 4.4nm,1.0s,baz=20,slow=7.9,SNR=2.6	**58.90**	**313**	P	P	09 49 19.2	+1.6
TXAR	**Lajitas Array** 1.5nm,0.7s,baz=336,slow=4.2,SNR=3.0	**59.11**	**81**	P	P	09 49 21.1	+1.8
MKAR	**Makanchi Array** 1.4nm,0.6s,baz=55,slow=7.6,SNR=5.3	**59.87**	**308**	P	P	09 49 24.8	+0.5
BVAR	**Borovoye Array** 12nm,1.1s,baz=29,slow=3.3,SNR=3.0	**60.82**	**319**	P	P	09 49 32.3	+1.7
NOA	**NORSAR Array B** 1.4nm,0.9s,baz=343,slow=6.4,SNR=2.4	**67.87**	**354**	P	P	09 50 16.5	-0.2
AKASG	**Malin Array Be** 1.4nm,0.5s,baz=21,slow=6.0,SNR=5.1	**75.67**	**342**	P	P	09 51 03.9	0.0
GERES	**GERESS Array B** 1.0nm,0.5s,baz=23,slow=5.5,SNR=3.7	**79.78**	**351**	P	P	09 51 26.6	-0.2
MLR	**Muntele Rosu** 3.8nm,0.5s,baz=342,slow=3.2,SNR=4.3	**81.30**	**342**	P	P	09 51 34.4	-0.6
WRA	**Warramunga Arr** 1.0nm,0.8s,baz=332,slow=7.1,SNR=2.4	**81.53**	**223**	P	P	09 51 37.0	+0.6
ASAR	**Alice Springs** 1.4nm,0.9s,baz=358,slow=5.0,SNR=2.8	**85.01**	**222**	P	P	09 51 52.8	-1.5
BRTR	**Keskin Array B** 2.0nm,0.7s,baz=36,slow=3.2,SNR=3.2	**85.01**	**335**	P	P	09 51 53.8	-0.4

*IDC **19** 09:40:16.2±1.4, 5122N×17930W, h0km, mb4.4/17, mb1 4.6/18, mb1mx4.5/30, mbtmp4.5/18, ML4.5/1, Error ellipse: s-maj=40.6km s-min=17.4km az=177.0*
*NEIC **19** 09:40:19.7, 5095N×17930W, h14km, ML4.1(AEIC), After AEIC.*
*ISCJB **19** 09:40:23.5±1.6, 513N±0.02×17930W±0.09, h65km±9km, mb4.3/15, Error ellipse: s-maj=39.2km s-min=8.5km az=176.1*

ISC 19 09:40:24.5±1.6, 513N±0.02×17927W±0.09, h60km±9km, n26, σ0.70/26, mb4.4/15, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.73**	**68**	P	P n	**09 40 51.3**	**-0.9**
ADK				S	S n	**09 41 14.8**	**+1.6**
SMY	**Shemya**	**4.36**	**292**	P	P n	**09 41 27.4**	**-0.6**
FX1	**Attu Island--F** 12nm,0.3s,baz=77,slow=18,SNR=3.7	**4.94**	**292**	P n	P n	**09 41 36.4**	**+0.3**
FX1				S n	S n	**09 42 39.9**	**+8.0**
	0.5nm,0.3s,baz=113,slow=22,SNR=1.6						
PETK	**Petropavlovsk-** baz=58,slow=12,SNR=2.4	**14.24**	**286**	P n	P n	**09 43 43.1**	**+0.4**
KDAK	**Kodiak Island** 1.9nm,0.3s,baz=286,slow=9.2,SNR=4.7	**16.73**	**57**	P n	P n	**09 44 13.2**	**-1.4**
INK	**Inuvik** 6.1nm,0.9s,mb4.2,baz=157,slow=15,SNR=3.6	**27.73**	**35**	P	P	**09 46 06.0**	**-0.7**
YKA	**Yellowknife Ar** 1.5nm,0.5s,mb4.2,baz=281,slow=7.1,SNR=6.4	**35.53**	**46**	P	P	**09 47 15.1**	**0.0**
KSRS	**Korea Array** 2.0nm,0.8s,mb3.9,baz=58,slow=8.8,SNR=3.8	**39.35**	**271**	P	P	**09 47 47.6**	**-0.1**
DLMT	**Dillon**	**43.35**	**71**	*eP*	P	**09 48 29.3**	**+8.9**
SONM	**Songino Array** 2.9nm,0.8s,mb4.3,baz=56,slow=8.8,SNR=5.3	**46.44**	**296**	P	P	**09 48 45.1**	**+0.2**
PDAR	**Pinedale Array** 5.1nm,0.8s,mb4.5,baz=292,slow=4.8,SNR=4.5	**46.63**	**72**	P	P	**09 48 47.0**	**+0.5**
SPITS	**Spitsbergen Ar** 3.8nm,0.4s,mb4.8,baz=65,slow=6.9,SNR=15	**50.47**	**356**	P	P	**09 49 15.0**	**-0.6**
ARCES	**ARCESS Array B** 8.0nm,1.0s,mb4.7,baz=33,slow=6.9,SNR=4.3	**58.16**	**350**	P	P	**09 50 11.1**	**-0.2**
KURK	**Kurchatov** 8.0nm,0.5s,baz=43,slow=6.5,SNR=6.4	**58.89**	**313**	P	P	**09 50 17.6**	**+0.8**
TXAR	**Lajitas Array** 1.0nm,0.8s,mb3.9,baz=302,slow=5.1,SNR=3.8	**58.96**	**81**	P	P	**09 50 17.2**	**-0.4**
MKAR	**Makanchi Array** 5.2nm,0.7s,mb4.7,baz=45,slow=6.5,SNR=8.4	**59.88**	**308**	P	P	**09 50 23.6**	**0.0**
BVAR	**Borovoye Array** 7.2nm,1.1s,mb4.7,baz=76,slow=7.6,SNR=5.1	**60.79**	**320**	P	P	**09 50 30.5**	**+0.7**
AKTK	**Aktyubinsk**	**67.61**	**324**	P	P	**09 51 13.8**	**-0.6**
AKTO	**Aktyubinsk** 5.8nm,1.0s,mb4.5,baz=60,slow=8.1,SNR=4.6	**67.61**	**324**	P	P	**09 51 13.8**	**-0.6**
NOA	**NORSAR Array B** 2.0nm,0.8s,mb4.2,baz=7.3,slow=6.3,SNR=3.6	**67.74**	**355**	P	P	**09 51 15.4**	**+0.4**
AKASG	**Malin Array Be** 8.7nm,0.3s,baz=20,slow=6.7,SNR=19	**75.57**	**342**	P	P	**09 52 02.3**	**0.0**
GERES	**GERESS Array B** 1.4nm,0.5s,mb4.1,baz=28,slow=6.0,SNR=4.0	**79.66**	**351**	P	P	**09 52 24.4**	**-0.6**
MLR	**Muntele Rosu** 5.3nm,0.6s,mb4.7,baz=8.1,slow=7.1,SNR=4.4	**81.20**	**342**	P	P	**09 52 34.8**	**+1.5**
BRTR	**Keskin Array B** 1.9nm,0.7s,mb4.3,baz=42,slow=2.0,SNR=3.1	**84.93**	**335**	P	P	**09 52 53.0**	**+0.3**
DBIC	**Dimbokro** 2.1nm,0.9s,baz=143,slow=5.1,SNR=3.5	**122.10**	**7**	PKP	PKPdf	09 59 11.2	-1.2
TSUM	**Tsumeb** 6.9nm,0.9s,baz=27,slow=4.5,SNR=3.5	**145.35**	**331**	PKPbc	PKPbc	09 59 56.3	+0.9

IDC ***19*** *09:44:14.3±0.4,5104N×179.23W,h0km,mb5.1/41, mb1 5.2/42,mb1mx5.1/44,mbtmp5.1/42,ML5.3/1,Error ellipse: s-maj=13.7km s-min=8.9km az=167.0*

SZGRF ***19*** *09:44:17.9,5082N×178.82E,h33km,mb5.5,Rat Islands, Aleutian Islands, United States*

BJI ***19*** *09:44:19.0,5110N×179.30W,h47km,mB6.3,mb5.4,Ms6.0, Msz5.5*

ISCJB ***19*** *09:44:19.9±0.1,5107N±003×179.25W±002,h48km, mb5.4/283,MS6.0/7,Error ellipse: s-maj=5.0km s-min=1.7km az=7.6*

MOS ***19*** *09:44:19.8±0.8,5107N×179.23W,h49km,mb5.6/122, Error ellipse: s-maj=6.6km s-min=4.1km az=96.7*

NEIC ***19*** *09:44:21.2±0.1,5108N×179.25W,mb5.4/168, ML5.2(AEIC),Error ellipse: s-maj=4.0km s-min=1.8km az=183.0*

ISC 19 09:44:21.9±0.1,5113N±003×17926W±002,h50km, h50km±1.4km:pP-P,n1047,σ0§65/1030,mb5.4/283,MS6.0/7, 304C-185D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.78**	**64**	P	**Pn**	**09 44 48.9**	**-1.3**
ADK				S	**Sn**	**09 45 11.9**	**+0.3**
ADK	**Adak**	**1.78**	**64**	P	**Pn**	**09 44 49.0**	**-1.2**
ADK				S	**Sn**	**09 45 11.9**	**+0.3**
GSTR	**Great Sitkin T**	**2.22**	**63**	*e*Pn	**Pn**	**09 44 55.6**	**-0.5**
ATKA	**Atka Island**	**3.33**	**69**	P	**Pn**	**09 45 10.3**	**-1.2**
ATKA				S	**Sn**	**09 45 50.3**	**+0.6**
SMY	**Shemya**	**4.41**	**294**	*e*P	**Pn**	**09 45 27.9**	**+1.7**
SMY	**Shemya**	**4.41**	**294**	P	**Pn**	**09 45 27.2**	**+1.0**
FX1	**Attu Island--F**	**5.00**	**293**	Pn	**Pn**	**09 45 34.6**	**+0.3**
	59nm,0.3s,baz=280,slow=3.1,SNR=25						
FX1				Sn	**Sn**	**09 46 42.6**	**+12**
	51nm,0.3s,baz=84,slow=20,SNR=9.0						
FX1	**Attu Island--F**	**5.00**	**293**	P	**Pn**	**09 45 34.8**	**+0.5**
NIKO	**Nikolski**	**6.68**	**70**	P	**Pn**	**09 45 56.0**	**-1.3**
OKCE	**Okmok Cone E**	**7.18**	**67**	P	**Pn**	**09 46 05.1**	**+0.8**
OKCD	**Okmok Cone D**	**7.22**	**67**	P	**Pn**	**09 46 05.5**	**+0.9**
SPIA	**Saint Paul Isl**	**8.04**	**38**	P	**Pn**	**09 46 17.9**	**+2.0**
UNV	**Unalaska Valle**	**8.25**	**66**	P	**Pn**	**09 46 18.8**	**0.0**
AKUT	**Akutan**	**8.74**	**65**	*e*Pn	**Pn**	**09 46 23.9**	**-1.6**
FALS	**False Pass**	**10.25**	**63**	*e*Pn	**Pn**	**09 46 45.2**	**-1.0**
SDPT	**Sand Point**	**12.01**	**62**	*e*Pn	**Pn**	**09 47 07.4**	**-2.7**
SDPT				*e*Sn	**Sn**	**09 49 20.1**	**-2.4**
CHGN	**Chignik**	**13.36**	**59**	*e*Pn	**Pn**	**09 47 26.3**	**-2.3**
PET	**Petropavlovsk**	**13.71**	**287**	*e*P	**Pn**	**09 47 39.5**	**+6.2**
PET				*e*S	**Sn**	**09 50 08.3**	**+4.4**
PET				smax			
	comp=N,29nm,0.6s						
PET				MLR	MLR		
	comp=Z,56μm,15.0s						
PET	**Petropavlovsk**	**13.71**	**287**	*e*P	**Pn**	**09 47 41.0**	**+7.7**
PEA0B	**Petropavlovsk-**	**14.28**	**287**	*e*P	**Pn**	**09 47 44.3**	**+3.2**
PEA0B				*e*S	**Sn**	**09 50 11.1**	**-6.7**
PETK	**Petropavlovsk-**	**14.28**	**287**	Pn	**Pn**	**09 47 41.1**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=86,slow=20,SNR=6.7						
SKR	**Severo-Kuril's**	**15.52**	**278**	P	**Pn**	**09 48 01.2**	**+3.9**
SKR				*e*S	**S**	**09 50 54.0**	**-7.4**
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				pmax	pmax		
	comp=N,220nm,1.0s						
SKR				pmax	pmax		
	comp=E,180nm,1.0s						
SKR				smax			
	comp=N,220nm,1.0s						
SKR				smax			
	comp=E,180nm,1.0s						
OHAK	**Old Harbor**	**16.32**	**58**	*e*P	**Pn**	**09 48 04.3**	**-3.0**
	comp=E,137nm,0.5s						
SVW2	**Sparrevohn**	**16.45**	**44**	*e*P	**Pn**	**09 48 09.6**	**+0.6**
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**09 48 08.0**	**-5.4**
	comp=E,579nm,0.5s,SNR=22						
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**09 48 08.4**	**-5.0**
	comp=E,9.8nm,0.3s,baz=261,slow=8.1,SNR=24						
KDAK	**Kodiak Island**	**16.80**	**56**	*e*P	**Pn**	**09 48 08.9**	**-4.5**
KDAK				pmax	pmax		
	comp=Z,213nm,1.4s						
KDAK	**Kodiak Island**	**16.80**	**56**	*e*Pn	**Pn**	**09 48 08.9**	**-4.5**
	comp=Z,213nm,1.4s						
RSO	**Redoubt South**	**17.47**	**47**	*e*P	**Pn**	**09 48 22.4**	**+0.8**
BILL	**Bilibino**	**18.38**	**343**	*e*P	**Pn**	**09 48 33.3**	**+0.6**
BILL				pmax	pmax		
	comp=Z,206nm,1.8s						
SEY	**Seymchan**	**19.24**	**319↑**	*e*P	**Pn**	**09 48 44.1**	**+1.1**
PMR	**Palmer**	**19.51**	**46**	*e*P	**Pn**	**09 48 44.8**	**-1.5**
COLA	**College**	**21.29**	**38↑**	*e*P	**P**	**09 49 02.7**	**-1.1**
COLA	**College**	**21.29**	**38**	*e*P	**P**	**09 49 03.3**	**-0.5**
	comp=Z,120nm,1.0s,mb5.2						
MENT	**Mentasta**	**22.33**	**44**	*e*P	**P**	**09 49 14.9**	**0.0**
EGAK	**Eagle**	**23.93**	**41**	*e*P	**P**	**09 49 29.6**	**-1.1**
	comp=Z,260nm,1.0s,mb5.6						
DAWY	**Dawson**	**24.48**	**43**	*e*P	**P**	**09 49 34.5**	**-1.4**
HYT	**Haines Junctio**	**24.88**	**51**	*e*P	**P**	**09 49 38.8**	**-0.7**
YSS	**Yuzh-Sakhalins**	**25.05**	**275↑**	*e*P	**P**	**09 49 41.3**	**+0.1**
YSS				*e*	pP	09 49 54.0	0.0
YSS				*e*		09 49 59.9	
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,130nm,1.0s						
YSS				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.5						
YSS	**Yuzh-Sakhalins**	**25.05**	**275**	*e*P	**P**	**09 49 41.7**	**+0.4**
	comp=Z,129nm,0.9s,mb5.5						
SKAG	**Skagway**	**25.93**	**54**	*e*P	**P**	**09 49 47.9**	**-1.1**
	comp=Z,7.8nm,0.6s,mb4.4						
ASAJ	**Asahikawa**	**26.41**	**270**	P	**P**	**09 49 52.1**	**-1.4**
	comp=Z,52nm,1.1s,mb5.0,baz=29,slow=3.8,SNR=7.0						
ASAJ	**Asahikawa**	**26.41**	**270**	P	**P**	**09 49 52.2**	**-1.4**
ASAJ				pmax	pmax		
	comp=Z,52nm,1.1s						
ERM	**Erimo**	**27.14**	**265**	*e*P	**P**	**09 50 00.2**	**+0.1**
ERM				pmax	pmax		
	comp=Z,36nm,1.1s,mb4.8						
ERM	**Erimo**	**27.14**	**265**	*e*P	**P**	**09 50 00.2**	**+0.1**
	comp=Z,36nm,1.1s,mb4.8						
INK	**Inuvik**	**27.83**	**35**	P	**P**	**09 50 04.7**	**-1.3**
	comp=Z,37nm,1.0s,mb5.0,baz=263,slow=12,SNR=7.5						
INK	**Inuvik**	**27.83**	**35**	P	**P**	**09 50 04.7**	**-1.3**
INK				pmax	pmax		
	comp=Z,37nm,1.0s						
INK	**Inuvik**	**27.83**	**35**	*e*P	**P**	**09 50 05.2**	**-0.8**
	comp=Z,43nm,1.0s,mb5.0						
DLBC	**Dease Lake**	**28.74**	**56**	P	**P**	**09 50 13.8**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.2,baz=276,slow=2.1,SNR=5.2						
HABR	**Khabarovsk**	**29.25**	**283**	*e*P	**P**	**09 50 18.4**	**-0.4**
HABR				*e**PP	pP	09 50 33.4	+1.7
HABR				*e*		10 00 54.2	
HABR				MLR	MLR		
	comp=Z,22μm,15.0s,MS5.9						
YAK	**Yakutsk**	**29.37**	**312↓**	*e*P	**P**	**09 50 19.2**	**-0.5**
YAK				pmax	pmax		
	comp=Z,155nm,2.0s,mb5.4						
YAK	**Yakutsk**	**29.37**	**312↓**	*e*P	**P**	**09 50 19.3**	**-0.4**
	comp=Z,4.1nm,0.8s,mb4.2						
TIXI	**Tiksi**	**30.71**	**331**	*i* P	**P**	**09 50 31.0**	**-0.5**
KLR	**Kul'dur**	**30.97**	**286↓**	*i* P	**P**	**09 50 30.2**	**-3.8**
KLR				pmax	pmax		
	comp=E,160nm,1.4s						
KLR				pmax	pmax		
	comp=Z,200nm,1.4s,mb5.8						
BBB	**Bella Bella**	**31.21**	**68**	P	**P**	**09 50 36.9**	**+0.7**
	comp=Z,59nm,1.0s,mb5.4,baz=293,slow=8.7,SNR=6.2						
MAJO	**Matsushiro**	**33.46**	**261**	*e*P	**P**	**09 50 55.9**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.2						
MAJO	**Matsushiro**	**33.46**	**261**	*e*P	**P**	**09 50 55.9**	**-0.1**
	comp=Z,37nm,1.1s,mb5.2						
MAT	**Matsushiro**	**33.46**	**261**	P	**P**	**09 50 55.5**	**-0.5**
MJAR	**Matsushiro Arr**	**33.46**	**261**	P	**P**	**09 50 55.8**	**-0.2**
	comp=Z,7.5nm,0.9s,mb4.6,baz=48,slow=7.6,SNR=12						
MJAR	**Matsushiro Arr**	**33.46**	**261**	P	**P**	**09 50 55.8**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDJ	**Mudanjiang**	**34.33**	**280**	P	**P**	**09 51 01.8**	**-1.6**
MDJ				AP	pP	09 51 15.0	-1.5
MDJ				XP	sP	09 51 21.0	-1.4
MDJ				AMB	AMB		
	comp=Z,26nm,1.0s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,78μm,21.9s						
MDJ				LR	LR		
	comp=N,35μm,14.7s,MS6.4						
MDJ				LR	LR		
	comp=E,40μm,17.4s,MS6.4						
MDJ				LR	LR		
	comp=Z,35μm,18.0s,MS6.1						
MDJ	**Mudanjiang**	**34.33**	**280**	*e*P	**P**	**09 51 02.3**	**-1.1**
	comp=Z,18nm,0.8s,mb5.0						
B04A	**Port Angeles**	**35.54**	**73**	↑P	**P**	**09 51 14.8**	**+1.0**
	baz=35						
YKA	**Yellowknife Ar**	**35.61**	**46**	P	**P**	**09 51 13.1**	**-1.2**
	comp=Z,32nm,0.7s,mb5.4,baz=280,slow=8.1,SNR=57						
YKA	**Yellowknife Ar**	**35.61**	**46**	P	**P**	**09 51 13.1**	**-1.2**
YKA				pmax	pmax		
	comp=Z,32nm,0.7s						
NLWA	**Neilton Lookou**	**35.62**	**74**	*e*P	**P**	**09 51 15.7**	**+1.2**
	comp=Z,79nm,1.0s,mb5.6						
D03A	**Wishkah Elem.**	**35.80**	**74**	↓P	**P**	**09 51 18.0**	**+1.9**
	baz=36						
A05A	**Maple Falls**	**35.97**	**70**	↓P	**P**	**09 51 17.7**	**+0.2**
	baz=36,SNR=14						
C04A	**Brinnon**	**36.01**	**73**	↑P	**P**	**09 51 19.1**	**+1.3**
	baz=36						
E03A	**Lebam**	**36.20**	**75**	↑P	**P**	**09 51 20.9**	**+1.4**
	baz=36						
A06A	**Chilliwack**	**36.29**	**70**	↑P	**P**	**09 51 20.6**	**+0.4**
	baz=36,SNR=7.9						
B05A	**Bryant**	**36.29**	**72**	↓P	**P**	**09 51 21.0**	**+0.7**
	baz=36,SNR=14						
D04A	**Dobbs Creek Ra**	**36.39**	**74**	↓P	**P**	**09 51 22.7**	**+1.6**
	baz=36						
JCW	**Jim Creek**	**36.42**	**72**	*e*P	**P**	**09 51 22.1**	**+0.7**
B06A	**Marblemount**	**36.54**	**71**	↓P	**P**	**09 51 22.8**	**+0.5**
	baz=36						
RPW	**Rockport**	**36.56**	**71**	*e*P	**P**	**09 51 22.4**	**0.0**
E04A	**Onalaska**	**36.69**	**74**	↓P	**P**	**09 51 24.6**	**+1.0**
	baz=36,SNR=9.7						
C05A	**Tolt Reservoir**	**36.79**	**72**	↑P	**P**	**09 51 25.0**	**+0.5**
	baz=37,SNR=13						
D05A	**Enumclaw**	**36.85**	**73**	↓P	**P**	**09 51 26.1**	**+1.1**
	baz=37,SNR=19						
A07A	**Ashnola River,**	**36.96**	**70**	↑P	**P**	**09 51 26.3**	**+0.4**
	baz=37,SNR=22						
FL2	**Flat Top 2**	**37.10**	**75**	P	**P**	**09 51 28.2**	**+1.0**
LON	**Longmire**	**37.16**	**74**	*e*P	**P**	**09 51 28.3**	**+0.6**
LON				pmax	pmax		
	comp=Z,23nm,0.6s,mb5.2						
LON	**Longmire**	**37.16**	**74**	*e*P	**P**	**09 51 28.2**	**+0.6**
	comp=Z,23nm,0.6s,mb5.2						
F04A	**Amboy**	**37.19**	**75**	↑P	**P**	**09 51 28.7**	**+0.8**
	baz=37,SNR=11						
H03A	**Soap Creek Ran**	**37.28**	**77**	↓P	**P**	**09 51 29.6**	**+1.0**
	baz=37						
CN2	**Changchun**	**37.31**	**281**	*e*P	**P**	**09 51 28.4**	**-0.6**
CN2				*e*XP	sP	09 51 47.3	-0.7
CN2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
CN2				LR	LR		
	comp=N,29μm,15.0s,MS6.3						
CN2				LR	LR		
	comp=E,24μm,15.0s,MS6.3						
CN2				LR	LR		
	comp=Z,37μm,17.0s,MS6.2						
COR	**Corvallis**	**37.32**	**78**	*e*P	**P**	**09 51 30.6**	**+1.6**
COR				pmax	pmax		
	comp=Z,650nm,2.0s,mb6.1						
B07A	**Winthrop**	**37.38**	**70**	↑P	**P**	**09 51 29.8**	**+0.3**
	baz=37,SNR=17						
NLW	**Nelson Butte**	**37.42**	**71**	P	**P**	**09 51 30.5**	**+0.7**
G04A	**Mulino**	**37.51**	**76**	↓P	**P**	**09 51 31.6**	**+0.9**
	baz=37,SNR=8.3						
ETW	**Entiat**	**37.65**	**72**	*e*P	**P**	**09 51 32.3**	**+0.5**
A08A	**Turner Farm, O**	**37.66**	**69**	↓P	**P**	**09 51 32.0**	**+0.1**
	baz=38,SNR=14						
TBM	**Table Mountain**	**37.69**	**72**	P	**P**	**09 51 32.8**	**+0.7**
CBIJ	**Chichi jima**	**37.72**	**245**	P	**P**	**09 51 31.9**	**-0.6**
	comp=Z,72nm,0.7s,mb5.5,baz=311,slow=20,SNR=3.6						
E06A	**Yakima**	**37.77**	**73**	↑P	**P**	**09 51 33.4**	**+0.6**
	baz=38,SNR=8.8						
C07A	**Waterville**	**37.77**	**71**	↑P	**P**	**09 51 32.8**	**+0.1**
	baz=38,SNR=16						
F05A	**White Salmon**	**37.80**	**75**	↓P	**P**	**09 51 33.7**	**+0.6**
	baz=38						
WTV	**Waterville**	**37.83**	**71**	P	**P**	**09 51 33.4**	**+0.1**
EBG	**Ellensburg**	**37.84**	**73**	P	**P**	**09 51 34.1**	**+0.8**
B08A	**Colville Reser**	**37.89**	**70**	↑P	**P**	**09 51 34.2**	**+0.4**
	baz=38,SNR=20						
BOD	**Bodaibo**	**37.90**	**307**	*e*P	**P**	**09 51 33.3**	**-0.4**
BOD				pmax	pmax		
	comp=Z,147nm,0.9s,mb5.7						
H04A	**Detroit Lake**	**37.95**	**77**	↑P	**P**	**09 51 35.4**	**+1.1**
	baz=38,SNR=10						
HOOD	**Mount Hood Mea**	**37.96**	**76**	*e*P	**P**	**09 51 35.4**	**+1.0**
	comp=Z,98nm,1.2s,mb5.4						
A09A	**Danville**	**38.05**	**69**	↑P	**P**	**09 51 35.4**	**+0.3**
	baz=38,SNR=20						
D07A	**Quincy**	**38.06**	**72**	↓P	**P**	**09 51 35.7**	**+0.4**
	baz=38,SNR=12						
HIA	**Hailar**	**38.11**	**292**	*e*P	**P**	**09 51 34.9**	**-0.7**
HIA				pmax	pmax		
	comp=Z,41nm,1.0s						
HIA	**Hailar**	**38.11**	**292**	*e*P	**P**	**09 51 34.9**	**-0.7**
	comp=Z,41nm,1.0s,mb5.1						
MXC	**Moxie City**	**38.16**	**73**	P	**P**	**09 51 36.7**	**+0.6**
G05A	**Wamic**	**38.20**	**76**	↑P	**P**	**09 51 37.0**	**+0.5**
	baz=38,SNR=6.1						
F06A	**Goldendale**	**38.27**	**74**	↑P	**P**	**09 51 37.1**	**+0.1**
	baz=38,SNR=12						
C08A	**Higginbotham F**	**38.33**	**71**	↓P	**P**	**09 51 37.7**	**+0.2**
	baz=38						
E07A	**Sunnyside**	**38.44**	**73**	↓P	**P**	**09 51 38.7**	**+0.3**
	baz=38,SNR=8.0						
H05A	**Madras**	**38.56**	**76**	↑P	**P**	**09 51 39.9**	**+0.4**
	baz=38,SNR=5.1						
B09A	**Rice**	**38.56**	**69**	↓P	**P**	**09 51 39.4**	**0.0**
	baz=38,SNR=16						
HUMO	**Hull Mountain**	**38.57**	**80**	*e*P	**P**	**09 51 40.3**	**+0.7**
	comp=Z,60nm,1.5s,mb5.1						
G06A	**Carlson Farm,**	**38.62**	**75**	↓P	**P**	**09 51 40.6**	**+0.6**
	baz=38						
A10A	**Northport**	**38.65**	**68**	↑P	**P**	**09 51 40.6**	**+0.5**
	baz=38						
RSW	**Rattlesnake Hi**	**38.67**	**73**	P	**P**	**09 51 41.3**	**+0.9**
HAWA	**Hanford**	**38.71**	**73**	*e*P	**P**	**09 51 41.2**	**+0.5**
	comp=Z,92nm,1.0s,mb5.5						
OD2	**Odessa Site #2**	**38.72**	**71**	P	**P**	**09 51 40.7**	**-0.1**
F07A	**Phinny Hill Vi**	**38.72**	**74**	↑P	**P**	**09 51 41.3**	**+0.5**
	baz=38,SNR=15						
WRD	**Warden**	**38.74**	**72**	P	**P**	**09 51 40.6**	**-0.4**
D08A	**Wollman Farm,**	**38.75**	**72**	↑P	**P**	**09 51 40.9**	**-0.2**
	baz=39,SNR=11						
C09A	**Chrisman Ranch**	**38.78**	**70**	↑P	**P**	**09 51 41.3**	**0.0**
	baz=39,SNR=12						
I05A	**Bend**	**38.79**	**77**	↓P	**P**	**09 51 41.9**	**+0.6**
	baz=39,SNR=10						
E08A	**Dider Farm, El**	**38.95**	**73**	↑P	**P**	**09 51 43.1**	**+0.4**
	baz=39,SNR=12						
ET3	**Eltopia**	**38.98**	**72**	P	**P**	**09 51 43.2**	**+0.3**
H06A	**Lindquist Farm**	**39.06**	**76**	↓P	**P**	**09 51 44.1**	**+0.4**
	baz=39,SNR=6.1						
D09A	**Jones Farm, Ri**	**39.12**	**71**	↓P	**P**	**09 51 44.1**	**0.0**
	baz=39,SNR=7.4						
B10A	**Chitwood Farm,**	**39.16**	**69**	↓P	**P**	**09 51 44.6**	**+0.1**
	baz=39,SNR=12						
EDM	**Edmonton**	**39.19**	**60**	*e*P	**P**	**09 51 44.3**	**-0.3**
G07A	**Ruggs Ranch, H**	**39.19**	**75**	↑P	**P**	**09 51 45.0**	**+0.2**
	baz=39						
YBH	**Yreka Blue Hor**	**39.20**	**81**	P	**P**	**09 51 45.5**	**+0.7**
	comp=Z,14nm,0.8s,mb4.8,baz=291,slow=3.1,SNR=14						
YBH	**Yreka Blue Hor**	**39.20**	**81**	P	**P**	**09 51 45.5**	**+0.6**
YBH				pmax	pmax		
	comp=Z,14nm,0.8s						
YBH	**Yreka Blue Hor**	**39.20**	**81**	*e*P	**P**	**09 51 46.1**	**+1.2**
	comp=Z,319nm,2.6s,mb5.6						
NEW	**Newport**	**39.24**	**69**	P	**P**	**09 51 45.1**	**0.0**
NEW				pmax	pmax		
	comp=Z,74nm,1.0s						
NEW	**Newport**	**39.24**	**69**	*e*P	**P**	**09 51 45.1**	**0.0**
	comp=Z,137nm,1.3s,mb5.5						
C10A	**Spilker Farm,**	**39.34**	**70**	↑P	**P**	**09 51 46.1**	**+0.1**
	baz=39,SNR=12						
KSRS	**Korea Array**	**39.35**	**271**	P	**P**	**09 51 46.6**	**+0.4**
	comp=Z,30nm,0.8s,mb5.0,baz=57,slow=8.1,SNR=77						
KSRS				PcP	PcP	09 53 53.8	0.0
	comp=Z,2.7nm,0.8s,baz=52,slow=1.1,SNR=5.1						
KSRS	**Korea Array**	**39.35**	**271**	P	**P**	**09 51 46.6**	**+0.4**
KSRS						09 53 53.8	
KSRS				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
A11A	**Hall Mountain,**	**39.36**	**68**	↓P	**P**	**09 51 46.7**	**+0.6**
	baz=39,SNR=34						
F08A	**Pendleton**	**39.46**	**73**	↓P	**P**	**09 51 47.5**	**+0.5**
	baz=39,SNR=11						
E09A	**Wood Farm, Sta**	**39.48**	**72**	↓P	**P**	**09 51 47.1**	**-0.1**
	baz=39,SNR=14						
I06A	**Prineville**	**39.55**	**77**	↑P	**P**	**09 51 47.8**	**0.0**
	baz=39						
B11A	**Sandpoint**	**39.60**	**68**	↑P	**P**	**09 51 48.1**	**0.0**
	baz=39,SNR=17						
G08A	**Pilot Rock**	**39.61**	**74**	↓P	**P**	**09 51 48.5**	**+0.2**
	baz=39,SNR=11						
LNOR	**Lincton Mounta**	**39.72**	**73**	*e*P	**P**	**09 51 49.3**	**+0.1**
D10A	**Wagner Farm, O**	**39.73**	**71**	↓P	**P**	**09 51 49.0**	**-0.2**
	baz=40,SNR=14						
A12A	**Yaak River Ran**	**39.78**	**67**	↑P	**P**	**09 51 50.1**	**+0.4**
	baz=40,SNR=16						
I07A	**Izee**	**39.91**	**76**	↑P	**P**	**09 51 51.4**	**+0.6**
	baz=40,SNR=9.8						
J06A	**Christmas Vall**	**39.95**	**78**	↑P	**P**	**09 51 51.8**	**+0.7**
	baz=40,SNR=14						
WDC	**Whiskeytown Da**	**39.96**	**83**	*e*P	**P**	**09 51 51.4**	**+0.2**
WDC				pmax	pmax		
	comp=Z,351nm,3.0s						
WDC	**Whiskeytown Da**	**39.96**	**83**	*e*P	**P**	**09 51 51.4**	**+0.2**
	comp=Z,351nm,3.0s						
F09A	**S2 Ranch, Elgi**	**40.03**	**73**	↓P	**P**	**09 51 52.0**	**+0.3**
	baz=40,SNR=19						
B12A	**Libby**	**40.04**	**68**	↓P	**P**	**09 51 52.1**	**+0.3**
	baz=40,SNR=8.1						
RES	**Resolute Bay**	**40.09**	**24**	P	**P**	**09 51 51.8**	**-0.1**
	comp=Z,10nm,0.9s,mb4.5,baz=306,slow=8.3,SNR=4.9						
RES	**Resolute Bay**	**40.09**	**24**	P	**P**	**09 51 51.8**	**-0.1**
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
E10A	**Myers Farm, Un**	**40.12**	**71**	↑P	**P**	**09 51 52.3**	**-0.1**
	baz=40,SNR=18						
H08A	**Prairie City**	**40.19**	**75**	↑P	**P**	**09 51 53.3**	**+0.2**
	baz=40						
D11A	**Klaveano Farm,**	**40.30**	**70**	↑P	**P**	**09 51 53.0**	**-0.9**
	baz=40,SNR=11						
F10A	**Beach Ranch, E**	**40.31**	**72**	↑P	**P**	**09 51 53.9**	**-0.1**
	baz=40						
G09A	**Cove**	**40.33**	**73**	↑P	**P**	**09 51 54.3**	**+0.1**
	baz=40,SNR=11						
J07A	**Hines**	**40.41**	**77**	↑P	**P**	**09 51 55.8**	**+0.9**
	baz=40,SNR=8.7						
C12B	**Naegeli Ranch,**	**40.48**	**69**	↑P	**P**	**09 51 55.4**	**0.0**
	baz=40,SNR=23						
A13A	**Flathead Natio**	**40.50**	**67**	↑P	**P**	**09 51 55.5**	**-0.1**
	baz=40						
I08A	**Drewsey**	**40.57**	**76**	↑P	**P**	**09 51 56.5**	**+0.3**
	baz=40,SNR=13						
MOD	**Modoc**	**40.60**	**79**	*e*P	**P**	**09 51 56.5**	**+0.1**
	comp=Z,26nm,0.9s,mb4.9						
E11A	**Bogner Ranch,**	**40.72**	**71**	↑P	**P**	**09 51 56.9**	**-0.5**
	baz=40						
G10A	**Bishop Farm, J**	**40.72**	**73**	↑P	**P**	**09 51 57.6**	**+0.2**
	baz=40,SNR=36						
H09A	**Durkee**	**40.72**	**74**	↑P	**P**	**09 51 57.8**	**+0.3**
	baz=40,SNR=7.9						
WALA	**Waterton Lakes**	**40.73**	**66**	*e*P	**P**	**09 51 57.5**	**0.0**
	comp=Z,3.4nm,1.0s,mb3.9						
B13A	**Whitefish**	**40.74**	**68**	↑P	**P**	**09 51 57.5**	**-0.1**
	baz=40,SNR=9.2						
BSMT	**Bassoo Peak**	**40.81**	**68**	P	**P**	**09 51 58.2**	**+0.1**
K07A	**Rock Creek Ran**	**40.82**	**78**	↓P	**P**	**09 51 59.2**	**+0.9**
	baz=41,SNR=24						
BMO	**Blue Mountains**	**40.84**	**74**	P	**P**	**09 52 00.0**	**+1.6**
BMO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.9						
BMO	**Blue Mountains**	**40.84**	**74**	*e*P	**P**	**09 51 58.9**	**+0.5**
	comp=Z,27nm,0.9s,mb4.9						
J08A	**Circle Bar Ran**	**40.93**	**76**	↑P	**P**	**09 51 59.9**	**+0.8**
	baz=41,SNR=9.1						
F11A	**Grangeville**	**40.99**	**72**	↓P	**P**	**09 51 58.9**	**-0.7**
	baz=41,SNR=14						
C13A	**Hot Springs**	**41.02**	**69**	↓P	**P**	**09 51 59.6**	**-0.3**
	baz=41,SNR=15						
I09A	**Lost Marbles R**	**41.04**	**75**	↑P	**P**	**09 52 00.2**	**+0.1**
	baz=41						
A14A	**Double T Ranch**	**41.06**	**66**	↑P	**P**	**09 52 00.0**	**-0.1**
	baz=41,SNR=27						
JTMT	**Jette**	**41.16**	**68**	*e*P	**P**	**09 52 01.0**	**0.0**
G11A	**Walters Elk Ra**	**41.18**	**72**	↓P	**P**	**09 52 01.2**	**0.0**
	baz=41,SNR=12						
YBMT	**Yellow Bay**	**41.26**	**68**	*e*P	**P**	**09 52 01.8**	**0.0**
K08A	**Mann Creek Ran**	**41.26**	**77**	↑P	**P**	**09 52 02.2**	**+0.3**
	baz=41,SNR=7.9						
H10A	**

N08A **GE Springer Mi** 42.58 79 ⇓P P 09 52 13.0 +0.3
baz=42,SNR=5.3
C16A **Fuhringer Ranc** 42.61 67 ⇑P P 09 52 12.6 -0.2
baz=42,SNR=34
A17A **Triple J Farms** 42.63 65 ⇑P P 09 52 12.5 -0.5
baz=42,SNR=33
M09A **Marrel Ranch,** 42.64 78 ⇓P P 09 52 13.4 +0.3
baz=42,SNR=7.8
F14A **Wisdom** 42.69 70 ⇓P P 09 52 13.4 -0.1
baz=42,SNR=10
K11A **Parker Ranch,** 42.74 76 ⇓P P 09 52 14.2 +0.2
baz=43,SNR=11
E15A **Deer Lodge** 42.80 69 ⇓P P 09 52 14.0 -0.4
baz=43,SNR=12
CMB **Columbia Colle** 42.81 84 eP P 09 52 14.1 -0.4
CMB pmax pmax
comp=Z,160nm,2.4s,mb5.3
CMB **Columbia Colle** 42.81 84 eP P 09 52 14.4 -0.2
comp=Z,161nm,2.5s,mb5.3
H13A **Challis** 42.83 72 ⇓P P 09 52 14.6 -0.1
baz=43,SNR=8.3
O08A **Rochester Mine** 42.86 80 ⇑P P 09 52 15.3 +0.4
baz=43,SNR=5.8
L10A **Juniper Basin** 42.87 77 ⇓P P 09 52 15.6 +0.6
baz=43,SNR=12
ALE **Alert** 42.92 10 P P 09 52 14.6 -0.4
comp=Z,206nm,0.7s,mb6.0,SNR=11
N09A **Rock Creek Ran** 42.92 79 ⇓P P 09 52 15.5 +0.1
baz=43,SNR=11
SAO **San Andreas Ge** 42.92 86 P P 09 52 15.5 0.0
SAO pmax pmax
comp=Z,37nm,1.4s,mb4.9
SAO **San Andreas Ge** 42.92 86 P P 09 52 15.5 0.0
comp=Z,37nm,1.4s,mb4.9
J12A **Stokes Ranch,** 43.05 74 ⇑P P 09 52 16.4 0.0
baz=43,SNR=10
R06C **Coleville** 43.10 83 ⇓P P 09 52 17.1 +0.2
baz=43,SNR=7.4
WAKR **Walker** 43.12 83 eP P 09 52 18.0 +1.0
D16A **Dana Ranch, Ca** 43.12 68 ⇓P P 09 52 16.5 -0.5
baz=43,SNR=5.1
HRY **Holter Researc** 43.12 68 eP P 09 52 16.9 -0.1
A18A **Metzger Ranch,** 43.13 65 ⇓P P 09 52 16.0 -1.0
baz=43
M10A **I.L. Ranch, Tu** 43.14 77 ⇑P P 09 52 17.6 +0.4
baz=43,SNR=8.1
F15A **Butte** 43.20 70 ⇓P P 09 52 17.2 -0.4
baz=43,SNR=5.2
LRM **Limekiln Ridge** 43.23 70 eP P 09 52 17.9 0.0
L11A **Cat Creek Ranc** 43.26 76 ⇑P P 09 52 18.5 +0.4
baz=43,SNR=21
C17A **Wharram Farm,** 43.27 67 ⇓P P 09 52 17.6 -0.5
baz=43,SNR=18
I13A **Wildhorse Cree** 43.27 73 ⇓P P 09 52 18.4 +0.2
baz=43,SNR=24
HLID **Hailey** 43.29 74 eP P 09 52 18.5 +0.1
comp=Z,45nm,1.0s,mb5.2
E16A **East Helena** 43.31 68 ⇓P P 09 52 18.3 -0.2
baz=43,SNR=11
H14A **Leadore** 43.34 72 ⇑P P 09 52 18.6 -0.1
baz=43,SNR=20
BMN **Battle Mountai** 43.35 79 P P 09 52 19.3 +0.4
BMN pmax pmax
comp=Z,14nm,0.6s,mb4.9
BMN **Battle Mountai** 43.35 79 eP P 09 52 19.3 +0.4
comp=Z,15nm,0.7s,mb4.8
DLMT **Dillon** 43.39 70 eP P 09 52 18.9 -0.3
comp=Z,53nm,1.4s,mb5.1
B18A **Beardsley Farm** 43.44 65 ⇑P P 09 52 19.1 -0.4
baz=43,SNR=23
K12A **Draper Farm, C** 43.51 75 ⇑P P 09 52 20.4 +0.2
baz=43,SNR=35
J13A **Cove Ranch, Pi** 43.52 74 ⇑P P 09 52 20.1 -0.2
baz=43,SNR=24
O09A **Fish Creek Ran** 43.52 79 ⇑P P 09 52 20.5 +0.2
baz=43,SNR=6.8
D17A **Six Diamond Ra** 43.56 67 ⇑P P 09 52 20.3 -0.2
baz=43
G15A **Dillon** 43.56 71 ⇑P P 09 52 20.1 -0.4
baz=43,SNR=16
EGMT **Eagleton** 43.64 66 eP P 09 52 20.6 -0.6
comp=Z,76nm,0.8s,mb5.5
M11A **Holland Ranch,** 43.65 77 ⇑P P 09 52 21.8 +0.5
baz=44,SNR=10
I14A **Mackay** 43.66 73 ⇑P P 09 52 21.7 +0.3
baz=44,SNR=15
L12A **House Creek Ra** 43.72 76 ⇓P P 09 52 22.3 +0.5
baz=44,SNR=30
F16A **Kennard Place,** 43.74 69 ⇓P P 09 52 22.0 +0.1
baz=44,SNR=11
H15A **Lima** 43.77 71 ⇓P P 09 52 22.1 -0.1
baz=44,SNR=20
BOZ **Bozeman (W)** 43.81 70 eP P 09 52 22.7 +0.2
BOZ pmax pmax
comp=Z,46nm,0.8s,mb5.3
BOZ **Bozeman (W)** 43.81 70 eP P 09 52 22.7 +0.2
comp=Z,46nm,0.8s,mb5.3
E17A **Martinsdale** 43.83 68 ⇑P P 09 52 22.4 -0.2
baz=44,SNR=11
Q08A **Gabbs** 43.84 81 ⇓P P 09 52 22.8 -0.1
baz=44,SNR=12
NVAR **Mina Array Bea** 43.87 82 P P 09 52 23.4 +0.3
comp=Z,9.5nm,0.8s,mb4.6,baz=290,slow=7.8,SNR=16
NVAR **Mina Array Bea** 43.87 82 P P 09 52 23.4 +0.3
O10A **Cortez Mining,** 43.88 79 ⇓P P 09 52 23.2 +0.1
baz=44,SNR=8.3
P09A **Austin** 43.92 80 ⇓P P 09 52 23.7 +0.2
baz=44
G16A **Moss Hill, Enn** 43.93 70 ⇓P P 09 52 23.2 -0.3
baz=44,SNR=22
J14A **Carey** 43.96 73 ⇓P P 09 52 24.3 +0.5
baz=44,SNR=13
K13A **Stover Farm, H** 44.00 75 ⇑P P 09 52 24.8 +0.7
baz=44,SNR=7.2
MLAC **Mammoth Lakes** 44.02 83 ⇑P P 09 52 25.3 +1.0
baz=44
R08A **Mina** 44.04 82 ⇑P P 09 52 25.4 +0.9
baz=44
N11A **Elko Archery C** 44.04 78 ⇓P P 09 52 25.1 +0.7
baz=44
D18A **Linhart Farms,** 44.05 67 ⇓P P 09 52 24.8 +0.4
baz=44,SNR=29
M12A **Wells** 44.20 77 ⇑P P 09 52 26.3 +0.6
baz=44,SNR=12
I15A **Monteview** 44.20 72 ⇑P P 09 52 26.0 +0.3
baz=44,SNR=6.3
F17A **Fitzpatrick Pl** 44.24 69 ⇑P P 09 52 26.0 +0.1
baz=44,SNR=7.5
P10A **Eureka** 44.30 80 ⇑P P 09 52 27.0 +0.5
baz=44
E18A **Harlowton** 44.32 68 ⇑P P 09 52 27.0 +0.4
baz=44,SNR=20
Q09A **Carvers** 44.33 81 ⇑P P 09 52 27.5 +0.8
baz=44
MTUM **Tungsten Hills** 44.37 84 eP P 09 52 27.8 +0.7
QLMT **Earthquake Lak** 44.37 70 eP P 09 52 27.3 +0.3
ELK **Elko** 44.39 78 eP P 09 52 23.0 -4.2
ELK pmax pmax
comp=Z,29nm,0.9s
ELK **Elko** 44.39 78 eP P 09 52 27.4 +0.2
comp=Z,16nm,0.7s,mb4.8
L13A **Double Diamond** 44.40 75 ⇓P P 09 52 27.9 +0.6
baz=44,SNR=13
N12A **Clover Valley,** 44.45 77 ⇓P P 09 52 28.3 +0.5
baz=44,SNR=20
O11A **Cowboy Ranch,** 44.49 78 ⇑P P 09 52 28.3 +0.2
baz=44,SNR=9.4
G17A **Pierce Place,** 44.51 69 ⇓P P 09 52 28.3 +0.2
baz=44
H16A **Russell Place,** 44.55 70 ⇑P P 09 52 28.6 +0.1
baz=44,SNR=26
J15A **Blackfoot** 44.57 73 ⇑P P 09 52 29.2 +0.5
baz=44,SNR=12
RCTC **Rector, Farmer** 44.59 85 ⇓P P 09 52 28.9 0.0
baz=44
K14A **Jones Ranch, D** 44.61 74 ⇓P P 09 52 29.4 +0.4
baz=44
M13A **Montello** 44.69 76 ⇑P P 09 52 29.7 +0.1
baz=44,SNR=16
SMMC **Simmler** 44.75 87 ⇓P P 09 52 30.6 +0.5
baz=45
R09A **Tonopah** 44.76 82 ⇓P P 09 52 29.8 -0.3
baz=45,SNR=19
TIN **Tinemaha** 44.76 84 ⇓P P 09 52 30.6 +0.3
baz=45
TPH **Tonopah** 44.76 82 P P 09 52 30.5 +0.3
TPH pmax pmax
comp=Z,19nm,0.7s,mb5.0
TPH **Tonopah** 44.76 82 eP P 09 52 30.5 +0.3
comp=Z,19nm,0.7s,mb5.0
P11A **Circle Ranch,** 44.78 79 ⇑P P 09 52 30.6 +0.2
baz=45
F18A **Big Timber** 44.80 68 ⇓P P 09 52 30.4 0.0
baz=45,SNR=8.6
Q10A **Clear Creek Ra** 44.82 80 ⇑P P 09 52 30.9 +0.2
baz=45,SNR=15
I16A **Newdale** 44.87 72 ⇑P P 09 52 31.3 +0.2
baz=45,SNR=12
YNR **Norris Junctio** 44.88 70 eP P 09 52 32.2 +1.1
K15A **Arbon** 44.92 74 ⇓P P 09 52 32.0 +0.5
baz=45,SNR=27
YFT **Old Faithful** 44.94 71 eP P 09 52 33.1 +1.6
S09A **Goldfield** 44.98 82 ⇓P P 09 52 32.0 +0.1
baz=45
O12A **Currie** 44.98 78 ⇑P P 09 52 32.0 0.0
baz=45,SNR=20
VES **Vestal, Richgr** 44.98 86 ⇑P P 09 52 31.6 -0.4
baz=45
M14A **Sheep Mountain** 45.11 75 ⇑P P 09 52 33.4 +0.5
baz=45,SNR=8.4
H17A **Grant Village** 45.12 70 ⇓P P 09 52 34.4 +1.3
baz=45,SNR=14
PKM **Peak Mountain** 45.12 87 ⇑P P 09 52 33.8 +0.7
baz=45
BJI **Beijing** 45.14 282 P P 09 52 33.3 +0.1
BJI AMB AMB
comp=Z,46nm,0.9s,mb5.3
BJT **Baijiatuau** 45.16 282 eP P 09 52 33.8 +0.4
BJT pmax pmax
comp=Z,39nm,0.8s
BJT **Baijiatuau** 45.16 282 eP P 09 52 33.8 +0.4
comp=Z,39nm,0.8s,mb5.3
IMW **Indian Meadow** 45.19 71 eP P 09 52 34.3 +0.8
comp=Z,34nm,0.9s,mb5.2
R10A **Warm Springs** 45.20 81 ⇓P P 09 52 33.6 -0.1
baz=45,SNR=9.1
G18A **Lazy EL Ranch,** 45.21 69 ⇓P P 09 52 33.5 -0.2
baz=45
DCID1 **Drake Creek** 45.21 72 eP P 09 52 34.6 +0.8
comp=Z,30nm,0.9s,mb5.1
CWC **Cottonwood Cre** 45.24 84 ⇑P P 09 52 34.3 +0.3
baz=45
S10A **Tonopah Range,** 45.25 82 ⇓P P 09 52 34.2 +0.2
baz=45,SNR=11
Q11A **Duckwater** 45.27 80 ⇑P P 09 52 34.4 +0.1
baz=45
RRI2 **Red Ridge** 45.27 72 eP P 09 52 35.3 +1.1
comp=Z,62nm,1.1s,mb5.3
HVU **Hansel Valley** 45.29 75 eP P 09 52 34.9 +0.5
HVU pmax pmax
comp=Z,30nm,0.7s,mb5.2
HVU **Hansel Valley** 45.29 75 eP P 09 52 34.9 +0.5
comp=Z,30nm,0.7s,mb5.2
IRK **Irkutsk** 45.33 303 eP P 09 52 34.2 -0.4
IRK pmax pmax
comp=Z,168nm,1.2s,mb5.8
GRAC **Grapevine Rang** 45.33 83 ⇓P P 09 52 35.2 +0.4
baz=45
P12A **McGill** 45.35 79 ⇓P P 09 52 35.2 +0.3
baz=45
MOOW **Moose Ponds** 45.39 71 eP P 09 52 35.7 +0.5
comp=Z,16nm,1.0s,mb4.8
I17A **Pilgram Creek** 45.39 71 ⇓P P 09 52 35.2 +0.1
baz=45,SNR=7.5
L15A **Malad City** 45.40 74 ⇑P P 09 52 35.7 +0.4
baz=45,SNR=15
K16A **Soda Springs** 45.40 73 ⇑P P 09 52 36.8 +1.5
baz=45,SNR=52
TPAW **Teton Pass** 45.41 72 eP P 09 52 35.4 +0.1
comp=Z,21nm,0.9s,mb5.0
ISA **Isabella** 45.48 85 ⇓P P 09 52 35.5 -0.5
baz=45
ISA **Isabella** 45.48 85 eP P 09 52 35.0 -1.0
ISA pmax pmax
comp=Z,37nm,1.2s,mb5.1
ISA **Isabella** 45.48 85 eP P 09 52 35.0 -0.9
comp=Z,37nm,1.3s,mb5.1
RLMT **Red Lodge** 45.49 69 eP P 09 52 36.3 +0.4
comp=Z,135nm,1.1s,mb5.7
O13A **Hicks Ranch, I** 45.53 77 ⇑P P 09 52 36.1 -0.2
baz=45,SNR=6.6
REDW **Red Top Meadow** 45.54 72 eP P 09 52 36.6 +0.3
comp=Z,34nm,1.2s,mb5.2
SNOW **Snow King Moun** 45.54 72 eP P 09 52 37.9 +1.6
comp=Z,26nm,1.0s,mb5.1
LOHW **Long Hollow** 45.55 71 eP P 09 52 37.0 +0.6
comp=Z,104nm,2.0s,mb5.4
N14A **Grayback Hills** 45.59 76 ⇑P P 09 52 36.7 0.0
baz=45,SNR=13
ARVC **Arvin** 45.60 86 ⇓P P 09 52 36.6 -0.3
baz=45
R11A **Troy Canyon, C** 45.61 80 ⇓P P 09 52 36.7 -0.2
baz=45,SNR=5.3
J17A **Brown Place, J** 45.63 72 ⇑P P 09 52 37.1 +0.1
baz=45,SNR=5.8
Q12A **Willow Creek R** 45.66 79 ⇑P P 09 52 37.7 +0.3
baz=46,SNR=12
M15A **Larsen Ranch,** 45.68 75 ⇑P P 09 52 37.7 +0.2
baz=46,SNR=11
AHID **Auburn Hatcher** 45.74 73 eP P 09 52 38.6 +0.7
comp=Z,34nm,0.9s,mb5.3
SPUT **South Promonto** 45.77 75 eP P 09 52 38.8 +0.6
MPMC **Manual Prospec** 45.85 84 ⇓P P 09 52 38.8 -0.1
baz=46
K17A **Gardner Place,** 45.85 73 ⇓P P 09 52 39.0 +0.1
baz=46,SNR=6.4
P13A **Bates Ranch, G** 45.91 78 ⇑P P 09 52 39.5 +0.2
baz=46,SNR=14
TLY **Talaya** 45.95 302 P P 09 52 40.7 +1.2
comp=Z,475nm,0.8s,mb6.5,SNR=11
TLY **Talaya** 45.95 302 eP P 09 52 40.1 +0.6
TLY pmax pmax
comp=Z,75nm,0.9s,mb5.6
TLY **Talaya** 45.95 302 ⇓eP P 09 52 39.7 +0.2
I18A **Diamond G Ranc** 45.97 71 ⇓P P 09 52 40.0 +0.3
baz=46,SNR=9.0
L16A **Fish Haven** 45.97 74 ⇑P P 09 52 40.1 +0.3
baz=46
N15A **Stansbury Isla** 45.97 76 ⇑P P 09 52 40.0 +0.2
baz=46,SNR=22
FURC **Furnace Creek,** 45.98 83 ⇑P P 09 52 39.6 -0.3
baz=46
OSI **Osito Adit** 46.00 87 ⇑P P 09 52 39.9 -0.2
baz=46
OSI **Osito Adit** 46.00 87 eP P 09 52 40.2 +0.1
comp=Z,30nm,0.8s,mb5.3
BLG **Laguna Peak** 46.11 87 ⇓P P 09 52 41.1 +0.1
baz=46
ULN **Ulaanbaatar** 46.11 296 eP P 09 52 41.4 +0.6
ULN pmax pmax
comp=Z,39nm,0.8s,mb5.4
ULN **Ulaanbaatar** 46.11 296 eP P 09 52 41.4 +0.7
comp=Z,39nm,0.8s,mb5.4
J18A **Kendall Valley** 46.13 72 ⇓P P 09 52 41.0 0.0
baz=46,SNR=21
DUG **Dugway** 46.21 77 P P 09 52 41.8 +0.2
DUG pmax pmax
comp=Z,72nm,1.0s,mb5.6
DUG **Dugway** 46.21 77 eP P 09 52 41.8 +0.1
comp=Z,52nm,0.8s,mb5.5
Q13A **Wheeler Ranch,** 46.21 79 ⇑P P 09 52 41.9 +0.2
baz=46,SNR=9.1
R12A **Pony Springs,** 46.23 80 ⇑P P 09 52 42.0 +0.1
baz=46,SNR=12
L17A **Cokeville** 46.26 73 ⇑P P 09 52 42.3 +0.3
baz=46,SNR=5.6
M16A **Huntsville** 46.26 75 ⇓P P 09 52 41.8 -0.3
baz=46,SNR=29
EDW2 **Edwards Air Fo** 46.29 86 ⇑P P 09 52 42.0 -0.3
baz=46
U10A **Ash Meadows, A** 46.35 83 ⇑P P 09 52 42.9 +0.1
baz=46,SNR=6.2
NOQ **North Oquirrh** 46.36 76 eP P 09 52 43.4 +0.6
comp=Z,52nm,0.9s,mb5.5
O15A **The Old Anders** 46.37 76 ⇓P P 09 52 42.6 -0.3
baz=46
P14A **Drum Mountains** 46.41 77 ⇑P P 09 52 43.5 +0.3
baz=46,SNR=16
K18A **Toltan Ranch,** 46.45 72 ⇑P P 09 52 44.1 +0.6
baz=46,SNR=24
SONM **Songino Array** 46.50 297 P P 09 52 44.6 +0.8
comp=Z,25nm,0.8s,mb5.2,baz=57,slow=9.2,SNR=44
SONM PcP PcP 09 54 17.9 +0.4
comp=Z,11nm,0.7s,baz=72,slow=2.6,SNR=6.0
SONM **Songino Array** 46.50 297 P P 09 52 44.6 +0.8
SONM 09 54 17.9
SONM pmax pmax
comp=Z,25nm,0.8s
SONM pmax pmax
comp=Z,11nm,0.7s
T11A **Corn Creek, Al** 46.52 81 ⇑P P 09 52 44.3 +0.2
baz=46,SNR=20
S12A **Delamar Landin** 46.53 81 ⇓P P 09 52 44.4 +0.3
baz=46,SNR=16
DGMT **Dagmar** 46.55 62 eP P 09 52 43.6 -0.6
comp=Z,32nm,1.0s,mb5.2
N16A **Rees Ranch, Co** 46.63 75 ⇓P P 09 52 44.9 0.0
baz=46
Q14A **Sevier Lake (B** 46.65 78 ⇓P P 09 52 44.8 -0.3
baz=46,SNR=17
BW06 **Boulder Array** 46.66 72 eP P 09 52 45.0 -0.2
comp=Z,93nm,1.0s,mb5.7
PDAR **Pinedale Array** 46.66 72 P P 09 52 44.9 -0.3
comp=Z,76nm,0.9s,mb5.6,baz=305,slow=4.2,SNR=94
MWC **Mount Wilson** 46.67 87 P P 09 52 45.2 -0.1
MWC pmax pmax
comp=Z,61nm,1.2s,mb5.4
MWC **Mount Wilson** 46.67 87 eP P 09 52 45.2 -0.1
comp=Z,33nm,0.9s,mb5.3
SHOC **Shoshone** 46.71 84 ⇑P P 09 52 45.2 -0.4
baz=46
R13A **O'Grain Ranch,** 46.72 80 ⇑P P 09 52 45.6 0.0
baz=46
M17A **Scullys Gap (B** 46.75 74 ⇓P P 09 52 45.5 -0.4
baz=47,SNR=13
GSC **Goldstone** 46.76 85 ⇓P P 09 52 45.7 -0.4
baz=47
GSC **Goldstone** 46.76 85 P P 09 52 45.7 -0.3
GSC pmax pmax
comp=Z,18nm,0.7s,mb5.1
GSC **Goldstone** 46.76 85 eP P 09 52 45.7 -0.3
comp=Z,22nm,0.8s,mb5.1
JLU **Jordanelle** 46.80 75 eP P 09 52 46.8 +0.5
NLU **North Lily Min** 46.80 76 eP P 09 52 47.1 +0.8
ZAK **Zakamensk** 46.84 301 eP P 09 52 46.7 +0.3
ZAK pmax pmax
comp=Z,94nm,1.3s,mb5.6
L18A **Fontenelle, Gr** 46.87 73 ⇓P P 09 52 46.7 -0.1
baz=47,SNR=20
BFSC **Mount Baldy St** 46.91 86 ⇑P P 09 52 46.8 -0.4
baz=47
P15A **Leamington** 46.91 77 ⇓P P 09 52 47.0 -0.1
baz=47,SNR=14
U11A **Corn Creek** 46.94 82 ⇓P P 09 52 47.3 -0.1
baz=47
N17A **Moffit Pass** 46.97 75 ⇓P P 09 52 47.3 -0.3
baz=47
O16A **Springville** 47.00 76 ⇓P P 09 52 47.7 -0.1
baz=47,SNR=21
DAU **Daniels Canyon** 47.03 75 eP P 09 52 49.1 +1.0
MPU **Maple Canyon** 47.04 76 eP P 09 52 49.0 +0.9
comp=Z,210nm,2.3s,mb5.7
K19A **Absolon Red Bu** 47.05 71 ⇓P P 09 52 47.8 -0.4
baz=47,SNR=37
M18A **Lyman** 47.14 74 ⇑P P 09 52 48.7 -0.2
baz=47,SNR=13
S13A **Holt Ranch, En** 47.16 80 ⇑P P 09 52 49.1 0.0
baz=47,SNR=17
Q15A **Fillmore** 47.20 78 ⇑P P 09 52 49.4 0.0
baz=47,SNR=12
P16A **Fountain Green** 47.27 76 ⇓P P 09 52 49.9 0.0
baz=48
V11A **Goodsprings** 47.28 83 ⇓P P 09 52 50.0 0.0
baz=47,SNR=12
HEC **Hector,Ludlow** 47.36 85 ⇑P P 09 52 50.5 -0.2
baz=47
MOY **Mondy** 47.36 304 eP P 09 52 49.8 -0.7
K20A **Yellowstone Ra** 47.45 71 ⇑P P 09 52 50.9 -0.4
baz=47
U12A **Valley of Fire** 47.46 82 ⇑P P 09 52 51.4 -0.1
baz=47,SNR=9.7
O17A **Robinson Place** 47.48 75 ⇑P P 09 52 51.9 +0.3
baz=47
HHC **Hu-ho-hao-te** 47.48 286 eP P 09 52 51.8 +0.2
HHC AP pP 09 53 04.0 -1.1
HHC XP sP 09 53 09.3 -1.6
HHC PP PP 09 54 42.0 -1.0
HHC AMB AMB
comp=Z,40nm,1.2s,mb5.2
HHC AMB AMB
comp=Z,4μm,5.9s
T13A **Saint George** 47.48 81 ⇑P P 09 52 51.5 -0.1
baz=47,SNR=12
MURC **Murrieta** 47.61 87 ⇓P P 09 52 52.2 -0.5
baz=48
MSU **Marysvale** 47.62 78 eP P 09 52 54.2 +1.5
M19A **Rock Springs** 47.65 73 ⇑P P 09 52 52.6 -0.2
baz=47,SNR=11
N18A **Larsen Ranch,** 47.65 74 ⇓P P 09 52 52.3 -0.6
baz=48,SNR=9.0
V12A **Nelson** 47.71 83 ⇓P P 09 52 53.4 0.0
baz=48
TMUT **Trail Mountain** 47.73 77 eP P 09 52 54.7 +1.2
R15A **Junction** 47.75 78 ⇑P P 09 52 53.5 -0.2
baz=48,SNR=9.0
GMRC **Granite Mounta** 47.81 84 ⇑P P 09 52 53.8 -0.4
baz=48
U13A **Pakoon Wash** 47.83 81 ⇓P P 09 52 53.8 -0.5
baz=48,SNR=11
L20A **Wamsutter** 47.84 72 ⇓P P 09 52 53.7 -0.6
baz=48,SNR=7.3
O18A **Roosevelt** 47.88 75 ⇓P P 09 52 54.9 +0.2
baz=48
P17A **Butcher Ranch,** 47.91 76 ⇑P P 09 52 55.2 +0.2
baz=48,SNR=11
LDFC **Landfair** 47.97 84 eP P 09 52 54.7 -0.7
comp=Z,30nm,0.7s,mb5.4
T14A **Hurricane** 47.97 80 ⇓P P 09 52 55.4 0.0
baz=48,SNR=10.0
W12A **Cal Nev Ari** 47.97 83 ⇓P P 09 52 55.3 -0.1
baz=48
Q16A **Castle Valley** 47.99 77 ⇓P P 09 52 55.6 0.0
baz=48,SNR=14
N19A **John Jarvie Ra** 48.00 74 ⇑P P 09 52 55.5 -0.1
baz=48,SNR=16
S15A **Panguitch** 48.03 79 ⇑P P 09 52 55.9 +0.1
baz=48
PFO **Pinyon Flat Ob** 48.08 86 P P 09 52 55.2 -1.0
comp=Z,8.3nm,1.0s,mb4.7,baz=325,slow=5.6,SNR=6.6
PFO **Pinyon Flat Ob** 48.08 86 ⇓P P 09 52 55.8 -0.4
baz=48
PFO **Pinyon Flat Ob** 48.08 86 P P 09 52 55.2 -1.1
PFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
PFO **Pinyon Flat Ob** 48.08 86 eP P 09 52 55.5 -0.8
comp=Z,1.5nm,0.7s,mb4.1
BELC **Belle Mtn.** 48.11 85 ⇑P P 09 52 56.2 -0.3
baz=48
P18A **Preston Nutter** 48.12 76 ⇑P P 09 52 56.9 +0.4
baz=48,SNR=10
109C **Camp Elliot, M** 48.14 87 ⇑P P 09 52 56.3 -0.5
baz=48
V13A **Grand Canyon W** 48.17 82 ⇑P P 09 52 56.8 -0.2
baz=48,SNR=8.6
R16A **Teasdale** 48.19 78 ⇓P P 09 52 57.3 +0.2
baz=48,SNR=18
M20A **Sweetwater, Wa** 48.24 72 ⇓P P 09 52 57.3 -0.1
baz=48,SNR=17
SRU **San Rafael** 48.27 76 eP P 09 52 57.9 +0.2
SRU pmax pmax
comp=Z,27nm,0.7s,mb5.4
SRU **San Rafael** 48.27 76 eP P 09 52 57.9 +0.2
comp=Z,27nm,0.7s,mb5.4
U14A **Mt Trumbull** 48.31 81 ⇓P P 09 52 57.8 -0.2
baz=48
T15A **Red Dirt Ranch** 48.43 80 ⇓P P 09 52 58.9 0.0
baz=48,SNR=14
L21A **Rawlins** 48.44 71 ⇑P P 09 52 58.5 -0.5
baz=48,SNR=17
S16A **Weppner Ranch,** 48.47 78 ⇓P P 09 52 59.3 +0.1
baz=48,SNR=15
Q18A **Rafter H Ranch** 48.51 76 ⇓P P 09 52 59.6 0.0
baz=48,SNR=11
NJ2 **Nanjing** 48.53 272 eP P 09 53 04.1 +4.3
NJ2 AMB AMB
comp=Z,50nm,0.8s,mb5.6
IRM **Iron Mountain** 48.54 85 ⇓P P 09 52 59.8 -0.1
baz=48
MONP **Monument Peak** 48.57 87 ⇑P P 09 52 59.8 -0.3
baz=48
R17A **Hanksville Air** 48.58 77 ⇑P P 09 53 00.0 -0.1
baz=48,SNR=11
N20A **Spence Gulch,** 48.59 73 ⇑P P 09 53 00.3 +0.2
baz=48,SNR=12

BC3 **Big Chuckw Mtn** 48.68 85 ⇑P P 09 53 00.2 -0.7
baz=48
RWWY **Rawlins** 48.70 72 eP P 09 53 00.7 -0.3
comp=Z,58nm,1.0s,mb5.6
W13A **Hualapai Mount** 48.72 83 ⇑P P 09 53 00.7 -0.5
baz=48,SNR=8.4
U15A **North Rim** 48.86 80 ⇓P P 09 53 02.3 0.0
baz=49,SNR=18
V14A **Boquillas Ranc** 48.86 82 ⇑P P 09 53 02.0 -0.3
baz=49,SNR=11
P19A **Cripple Cowboy** 48.89 75 ⇓P P 09 53 02.4 0.0
baz=49,SNR=27
DVTC **Desert V Tower** 48.93 87 ⇑P P 09 53 02.6 -0.3
baz=49
SWSC **Sam W. Stewart** 48.93 86 ⇑P P 09 53 02.2 -0.6
baz=49
L22A **Ellis Ranch, M** 48.96 71 ⇑P P 09 53 02.7 -0.3
baz=49
S17A **Black Ridge (B** 49.02 78 ⇓P P 09 53 03.3 -0.2
baz=49,SNR=30
O20A **White River Ci** 49.03 74 ⇑P P 09 53 03.3 -0.2
baz=49,SNR=18
X13A **Yucca** 49.08 83 ⇓P P 09 53 03.2 -0.8
baz=49,SNR=7.7
N21A **Black Mountain** 49.08 73 ⇑P P 09 53 03.6 -0.3
baz=49,SNR=13
R18A **Canyonlands Na** 49.10 77 ⇑P P 09 53 03.6 -0.5
baz=49,SNR=13
RSSD **Black Hills** 49.12 67 eP P 09 53 03.7 -0.4
comp=Z,36nm,1.0s,mb5.4
Q19A **Hogan Spring (** 49.13 76 ⇑P P 09 53 03.7 -0.6
baz=49,SNR=27
W14A **Seligman** 49.15 82 ⇓P P 09 53 04.2 -0.3
baz=49,SNR=6.7
Y12C **Blythe** 49.20 85 ⇓P P 09 53 04.3 -0.6
baz=49,SNR=11
M22A **Cedar Creek Ra** 49.24 71 ⇓P P 09 53 05.1 0.0
baz=49,SNR=10
V15A **Kaibab Nationa** 49.32 81 ⇓P P 09 53 05.7 -0.1
baz=49,SNR=19
T17A **Navajo Res., N** 49.42 79 ⇓P P 09 53 06.2 -0.3
baz=49,SNR=8.9
O21A **Pagoda** 49.45 73 ⇓P P 09 53 06.6 -0.1
baz=49,SNR=8.5
GLA **Glamis** 49.47 85 ⇑P P 09 53 06.4 -0.5
baz=49
GLA **Glamis** 49.47 85 eP P 09 53 06.3 -0.6
GLA pmax pmax
comp=Z,38nm,1.0s,mb5.4
GLA **Glamis** 49.47 85 eP P 09 53 06.2 -0.7
comp=Z,38nm,1.0s,mb5.4
S18A **Hurst Farm, Bl** 49.48 77 ⇑P P 09 53 06.8 -0.2
baz=49,SNR=25
R19A **Curley Farm, L** 49.55 76 ⇓P P 09 53 07.2 -0.4
baz=49,SNR=13
Y13A **Salome** 49.59 84 ⇓P P 09 53 07.3 -0.6
baz=49,SNR=9.4
W15A **Williams** 49.68 81 ⇓P P 09 53 08.3 -0.2
baz=50,SNR=6.9
N22A **Wattenberg Ran** 49.70 72 ⇑P P 09 53 08.5 -0.1
baz=50,SNR=9.5
PV04 **Paradox Valley** 49.70 76 eP P 09 53 08.6 -0.1
Q20A **Ridgley Place,** 49.73 75 ⇓P P 09 53 08.2 -0.6
baz=50,SNR=9.6
X14A **Yava** 49.75 83 ⇑P P 09 53 08.7 -0.4
baz=50,SNR=13
U17A **Shonto** 49.76 79 ⇓P P 09 53 08.6 -0.5
baz=50
U16A **Tuba City** 49.76 80 ⇑P P 09 53 08.9 -0.2
baz=50
T18A **Mexican Hat** 49.90 78 ⇑P P 09 53 09.5 -0.7
baz=50,SNR=12
112A **Yuma** 49.96 86 ⇑P P 09 53 10.1 -0.7
baz=50,SNR=9.1
S19A **Harvey Farm, M** 49.97 77 ⇓P P 09 53 10.4 -0.3
baz=50,SNR=21
PHWY **Pilot Hill** 49.98 71 eP P 09 53 11.0 +0.2
WUAZ **Wupatki** 50.01 81 eP P 09 53 10.8 -0.2
comp=Z,11nm,0.7s,mb5.0
Y14A **Wickenburg** 50.02 83 ⇓P P 09 53 10.6 -0.6
baz=50,SNR=11
KBS **Kingsbay** 50.03 357 eP P 09 53 15.8 +5.1
ULM **Lac du Bonnet** 50.06 56 P P 09 53 09.9 -1.3
comp=Z,12nm,1.0s,mb4.9,baz=292,slow=6.1,SNR=3.0
X15A **Humboldt** 50.15 82 ⇓P P 09 53 11.8 -0.3
baz=50,SNR=7.4
W16A **Flagstaff** 50.19 81 ⇓P P 09 53 12.3 -0.1
baz=50,SNR=12
113A **Mohawk Valley,** 50.32 85 ⇑P P 09 53 12.9 -0.6
baz=50
U18A **Rough Rock, Ch** 50.36 79 ⇑P P 09 53 13.2 -0.5
baz=50
SMCO **Snowmass** 50.39 74 eP P 09 53 06.5 -7.4
comp=Z,11nm,0.6s,mb5.1
Y15A **Casa Rosa Ranc** 50.44 83 ⇑P P 09 53 13.5 -0.8
baz=50,SNR=7.2
Z14A **Wintersburg** 50.44 84 ⇓P P 09 53 13.9 -0.5
baz=50
R21A **Cimarron** 50.55 75 ⇑P P 09 53 14.8 -0.3
baz=50,SNR=17
SPB4 **Spitsbergen Ar** 50.60 356 eP P 09 53 14.5 -0.4
SPITS **Spitsbergen Ar** 50.60 356 P P 09 53 14.5 -0.5
comp=Z,43nm,0.5s,mb5.6,baz=15,slow=8.1,SNR=91
SPITS **Spitsbergen Ar** 50.60 356 P P 09 53 14.5 -0.5
SPITS pmax pmax
comp=Z,43nm,0.5s
T19A **Beclabito** 50.62 78 ⇑P P 09 53 15.5 -0.2
baz=50,SNR=31
X16A **Lo Mia Camp, P** 50.69 82 ⇓P P 09 53 15.9 -0.3
baz=50,SNR=11
MVCO **Mesa Verde** 50.70 77 eP P 09 53 16.2 -0.1
comp=Z,31nm,1.0s,mb5.2
W17A **Winslow** 50.71 81 ⇑P P 09 53 16.2 -0.1
baz=50
V18A **Ganado** 50.78 79 ⇑P P 09 53 16.5 -0.4
baz=51,SNR=9.6
ISCO **Idaho Springs** 50.82 72 eP P 09 53 17.6 +0.5
ISCO pmax pmax
comp=Z,45nm,1.2s,mb5.3
ISCO **Idaho Springs** 50.82 72 eP P 09 53 17.6 +0.5
comp=Z,45nm,1.2s,mb5.3
Z15A **Gila River Ind** 50.98 83 ⇑P P 09 53 17.9 -0.5
baz=51
Y16A **Circle Bar Ran** 51.02 82 ⇓P P 09 53 18.4 -0.3
baz=51,SNR=9.4
X17A **Forest Lakes** 51.14 81 ⇑P P 09 53 19.6 +0.1
baz=51
AGMN **Agassiz Refuge** 51.22 58 eP P 09 53 18.3 -1.6
comp=Z,7.6nm,0.7s,mb4.7
W18A **Petrified Fore** 51.29 80 ⇑P P 09 53 20.5 -0.2
baz=51
V19A **Window Rock** 51.33 79 ⇓P P 09 53 20.8 -0.1
baz=51
115A **Sonoran Desert** 51.33 84 ⇑P P 09 53 20.8 -0.2
baz=51,SNR=16
Z16A **Peralta Trail,** 51.41 83 ⇓P P 09 53 21.2 -0.4
baz=51,SNR=9.3
214A **Organ Pipe Nat** 51.46 85 ⇓P P 09 53 21.4 -0.7
baz=51,SNR=16
Y17A **Roosevelt** 51.53 82 ⇑P P 09 53 22.1 -0.4
baz=51,SNR=12
X18A **Snowflake** 51.54 81 ⇑P P 09 53 22.4 -0.2
baz=51,SNR=7.8
116A **Eloy** 51.75 84 ⇑P P 09 53 23.7 -0.5
baz=52,SNR=6.5
Y18A **Canyon Day Jun** 51.98 81 ⇑P P 09 53 25.6 -0.3
baz=52,SNR=10
X19A **St. Johns** 52.02 80 ⇑P P 09 53 25.8 -0.3
baz=52,SNR=8.3
Z17A **San Carlos Hig** 52.03 82 ⇑P P 09 53 26.1 -0.1
baz=52,SNR=9.3
SDCO **Great Sand Dun** 52.19 74 eP P 09 53 27.9 +0.5
OGNE **Ogallala** 52.23 69 eP P 09 53 27.9 +0.3
216A **Three Points,** 52.28 84 ⇓P P 09 53 27.7 -0.4
baz=52
117A **Oracle** 52.35 83 ⇑P P 09 53 28.5 -0.1
baz=52,SNR=11
Y19A **Nutrioso** 52.35 81 ⇑P P 09 53 28.7 +0.1
baz=52
WHN **Wuhan** 52.38 274 ⇓P P 09 53 28.0 -0.9
WHN AP pP 09 53 42.8 +0.2
WHN AMB AMB
comp=Z,86nm,0.9s,mb5.7
Z18A **Geronimo** 52.44 82 ⇓P P 09 53 28.9 -0.4
baz=52
TUC **Tucson** 52.50 83 eP P 09 53 29.1 -0.6
118A **Homack Ranch,** 52.78 82 ⇓P P 09 53 31.2 -0.6
baz=53,SNR=15

Z19A **T-Link Ranch,** 52.79 81 ⇑P P 09 53 31.7 -0.2
baz=53
217A **Green Valley** 52.84 84 ⇓P P 09 53 31.5 -0.7
baz=53
119A **Ashpeak Ranch,** 53.12 82 ⇓P P 09 53 33.7 -0.5
baz=53,SNR=9.7
218A **Dragoon** 53.18 83 ⇓P P 09 53 34.3 -0.5
baz=53,SNR=9.9
XAN **Xi'an** 53.42 281 P P 09 53 35.5 -1.0
XAN AP pP 09 53 50.3 +0.1
XAN PP PP 09 55 37.3 +0.3
XAN AMB AMB
comp=Z,21nm,1.1s,mb5.0
XAN LR LR
comp=N,10μm,16.8s,MS6.2
XAN LR LR
comp=E,18μm,20.2s,MS6.2
XAN LR LR
comp=Z,30μm,16.2s,MS6.4
ANMO **Albuquerque** 53.42 78 P P 09 53 35.3 -1.2
comp=Z,14nm,1.3s,mb4.8,baz=312,slow=9.7,SNR=6.8
ANMO **Albuquerque** 53.42 78⇓ eP P 09 53 35.7 -0.8
ANMO **Albuquerque** 53.42 78 eP P 09 53 36.5 +0.1
comp=Z,32nm,1.5s,mb5.0
318A **Bisbee** 53.58 83 ⇑P P 09 53 37.3 -0.4
baz=53,SNR=10
SUMG **Summit** 53.61 14 eP P 09 53 37.5 +0.2
comp=Z,50nm,0.9s,mb5.4
LENM **Lemitar** 53.63 79 eP P 09 53 39.3 +1.3
219A **White Tail Can** 53.66 82 ⇑P P 09 53 37.8 -0.5
baz=54,SNR=8.4
LPM **Los Pinos Moun** 53.74 78 eP P 09 53 39.3 +0.4
EYMN **Ely** 53.75 56 eP P 09 53 37.4 -1.3
comp=Z,33nm,0.9s,mb5.3
ZALV **Zalesovo Beam** 53.99 313 P P 09 53 40.0 -0.4
comp=Z,6.6nm,0.7s,mb4.7,baz=42,slow=7.6,SNR=8.6
ZALV PcP PcP 09 54 46.0 +1.1
comp=Z,17nm,0.8s,baz=24,slow=5.2,SNR=7.8
ZALV **Zalesovo Beam** 53.99 313 P P 09 53 40.0 -0.4
ZALV 09 54 46.0
ZALV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ZALV pmax pmax
comp=Z,17nm,0.8s,mb5.0
ZALV **Zalesovo Beam** 53.99 313 P P 09 53 40.0 -0.4
ZALV PcP PcP 09 54 46.0 +1.0
319A **Douglas** 54.07 83 ⇑P P 09 53 41.0 -0.2
baz=54,SNR=9.8
NVS **Novosibirsk** 54.14 315 i P P 09 53 40.1 -1.3
CBKS **Cedar Bluff** 54.95 70 P P 09 53 47.7 +0.1
CBKS pmax pmax
comp=Z,130nm,1.0s,mb5.9
CBKS **Cedar Bluff** 54.95 70 eP P 09 53 47.7 +0.1
comp=Z,128nm,1.0s,mb5.9
LZH **Lanzhou** 55.18 286 eP P 09 53 50.0 +0.8
LZH AP pP 09 54 03.8 +0.8
LZH XP sP 09 54 09.3 +0.6
LZH AMB AMB
comp=Z,56nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,229nm,4.5s
GTA **Gaotai** 55.39 292 P P 09 53 51.3 +0.6
GTA AP pP 09 54 03.8 -0.7
GTA XP sP 09 54 09.4 -0.8
GTA PCP PcP 09 54 51.3 +0.7
GTA AMB AMB
comp=Z,54nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,5μm,8.1s
AMTX **Amarillo** 56.39 75 eP P 09 54 00.1 +2.2
KSU1 **Kansas State U** 56.60 68 eP P 09 53 58.7 -0.6
SCIA **State Center** 56.69 63 eP P 09 53 59.3 -0.7
comp=Z,58nm,0.6s,mb5.8
JFWS **Jewell Farm** 57.67 60 eP P 09 54 05.8 -1.0
comp=Z,150nm,1.4s,mb5.8
WMOK **Wichita Mounta** 58.24 73 eP P 09 54 10.7 -0.3
WMOK pmax pmax
comp=Z,13nm,0.7s,mb5.1
WMOK **Wichita Mounta** 58.24 73 eP P 09 54 10.7 -0.3
comp=Z,13nm,0.7s,mb5.1
ARCES **ARCESS Array B** 58.29 350 P P 09 54 10.2 -0.6
comp=Z,24nm,0.7s,mb5.4,baz=21,slow=7.9,SNR=33
ARCES **ARCESS Array B** 58.29 350 P P 09 54 10.2 -0.6
ARCES pmax pmax
comp=Z,24nm,0.7s
ARE0 **ARCESS Array S** 58.29 350 eP P 09 54 10.4 -0.3
LPIG **La Paz** 58.52 90 P P 09 54 11.8 -1.2
comp=Z,14nm,0.5s,mb5.2,baz=273,slow=5.1,SNR=4.6
LVZ **Lovozero** 58.61 346 P P 09 54 12.3 -0.7
comp=Z,474nm,0.7s,mb6.6,SNR=5.3
LVZ **Lovozero** 58.61 346⇓ eP P 09 54 11.5 -1.5
CD2 **Chengdu** 58.74 282 P P 09 54 16.8 +2.3
CD2 AP pP 09 54 29.4 +1.0
CD2 XP sP 09 54 34.8 +0.7
CD2 PCP PcP 09 55 06.3 +2.5
CD2 PP PP 09 56 28.3 +3.8
CD2 AMB AMB
comp=Z,20nm,1.5s,mb4.9
CD2 LR LR
comp=N,3μm,20.4s
CD2 LR LR
comp=Z,3μm,16.6s,MS5.5
TXAR **Lajitas Array** 58.98 81 P P 09 54 15.2 -0.9
comp=Z,7.9nm,0.7s,mb4.9,baz=307,slow=5.5,SNR=71
TXAR **Lajitas Array** 58.98 81 P P 09 54 15.2 -1.0
TXAR pmax pmax
comp=Z,8.0nm,0.7s
KURK **Kurchatov** 58.98 314 P P 09 54 15.8 -0.1
comp=Z,687nm,0.7s,mb6.8,SNR=12
KURK **Kurchatov** 58.98 314 P P 09 54 16.4 +0.5
comp=Z,83nm,0.6s,mb5.9,baz=43,slow=6.6,SNR=73
KURK **Kurchatov** 58.98 314 dP P 09 54 15.4 -0.5
KURK pmax pmax
comp=Z,70nm,0.7s,mb5.8
APA **Apatity** 59.10 346 ⇓P P 09 54 15.4 -1.1
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA MLR MLR
comp=Z,34μm,15.0s,MS6.6
WMQ **Urumqi** 59.23 303 ⇑P P 09 54 18.5 +0.8
WMQ AMB AMB
comp=Z,116nm,1.0s,mb5.9
WMQ AMB AMB
comp=Z,6μm,9.0s
GLMI **Grayling** 59.39 56 eP P 09 54 18.7 -0.1
comp=Z,99nm,0.7s,mb6.0
HDIL **Hopedale** 59.79 62 eP P 09 54 20.9 -0.7
comp=Z,82nm,0.6s,mb5.9
MKAR **Makanchi Array** 59.96 308 P P 09 54 22.4 -0.3
comp=Z,49nm,0.8s,mb5.6,baz=50,slow=5.5,SNR=118
MKAR **Makanchi Array** 59.96 308 P P 09 54 22.3 -0.4
MKAR pmax pmax
comp=Z,49nm,0.8s
GYA **Guiyang** 60.06 276 ⇓P P 09 54 25.3 +1.6
GYA AP pP 09 54 39.0 +1.4
GYA XP sP 09 54 45.3 +2.0
GYA PCP PcP 09 55 11.3 +2.1
GYA PP PP 09 56 40.3 +4.0
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,3μm,12.3s
GYA LR LR
comp=N,780nm,18.1s,MS5.1
GYA LR LR
comp=E,830nm,17.6s,MS5.1
GYA LR LR
comp=Z,730nm,18.3s,MS4.8
SCHQ **Schefferville** 60.38 38 P P 09 54 24.6 -0.8
comp=Z,44nm,1.0s,mb5.5,baz=323,slow=7.8,SNR=13
CCM **Cathedral Cave** 60.40 65 eP P 09 54 23.6 -2.2
comp=Z,52nm,1.3s,mb5.4
JCT **Junction City** 60.56 77 eP P 09 54 25.4 -1.7
JCT pmax pmax
comp=Z,24nm,0.8s,mb5.4
JCT **Junction City** 60.56 77 eP P 09 54 25.4 -1.6
comp=Z,24nm,0.8s,mb5.4
BVAR **Borovoye Array** 60.89 320 P P 09 54 28.3 -0.6
comp=Z,19nm,0.6s,mb5.4,baz=47,slow=6.2,SNR=24
BVAR PcP PcP 09 55 12.2 +0.2
comp=Z,20nm,0.7s,baz=64,slow=3.1,SNR=9.4
BVAR **Borovoye Array** 60.89 320 P P 09 54 28.3 -0.6
BVAR 09 55 12.2
BVAR pmax pmax
comp=Z,19nm,0.6s
BVAR pmax pmax

comp=Z,20nm,0.7s
BRVK **Borovoye** 60.91 320 P P 09 54 28.7 -0.4
comp=Z,215nm,1.2s,mb6.2,SNR=7.6
BRVK **Borovoye** 60.91 320 eP P 09 54 28.7 -0.4
comp=Z,46nm,1.0s,mb5.6
FVM **French Village** 60.92 65 eP P 09 54 28.5 -0.9
SVE **Sverdlovsk** 61.65 327 eP P 09 54 27.1 -6.9
SVE pmax pmax
comp=Z,34nm,1.2s,mb5.3
OLIL **Olney** 61.71 63 eP P 09 54 33.9 -0.9
comp=Z,202nm,1.0s,mb6.2
UALR **University of** 62.05 69 eP P 09 54 36.4 -0.6
comp=Z,34nm,1.2s,mb5.4
PARMO **Parma** 62.22 65 eP P 09 54 37.7 -0.5
BLO **Bloomington** 62.28 61 eP P 09 54 37.8 -0.7
BLO pmax pmax
comp=Z,51nm,0.7s,mb5.8
BLO **Bloomington** 62.28 61 eP P 09 54 37.8 -0.7
comp=Z,50nm,0.7s,mb5.8
USIN **University of** 62.49 63 eP P 09 54 39.8 -0.2
comp=Z,122nm,0.7s,mb6.1
ARU **Arti** 62.66 328⇑ eP P 09 54 40.2 -0.6
WCI **Wyandotte Cave** 63.07 62 eP P 09 54 43.3 -0.5
WCI pmax pmax
comp=Z,113nm,0.9s,mb6.0
WCI **Wyandotte Cave** 63.07 62 eP P 09 54 43.3 -0.5
comp=Z,113nm,0.9s,mb6.0
HKT **Hockley** 63.36 75 eP P 09 54 45.3 -0.6
HKT pmax pmax
comp=Z,15nm,0.9s,mb5.1
HKT **Hockley** 63.36 75 eP P 09 54 45.3 -0.5
comp=Z,15nm,0.9s,mb5.1
KMI **Kunming** 63.47 278 P P 09 54 49.1 +2.5
KMI AMB AMB
comp=Z,14nm,0.8s,mb5.1
JOF **Joensuu** 63.76 345 ep P 09 54 46.6 -1.4
comp=Z,44nm,0.6s,mb5.7
JOF **Joensuu** 63.76 345 eP P 09 54 46.6 -1.4
JOF pmax pmax
comp=Z,44nm,0.6s,mb5.7
OXF **Oxford** 63.94 67 eP P 09 54 48.7 -0.9
OXF pmax pmax
comp=Z,191nm,1.1s,mb6.0
OXF **Oxford** 63.94 67 eP P 09 54 48.7 -0.9
comp=Z,192nm,1.1s,mb6.0
KLMR **Klimovskoe** 64.11 340 eP P 09 54 49.5 -0.8
KLMR pmax pmax
comp=Z,123nm,1.2s,mb5.8
KAF **Kangasniemi** 65.29 347 ep P 09 54 56.4 -1.5
comp=Z,39nm,0.7s,mb5.5,baz=14,slow=5.9
KAF **Kangasniemi** 65.29 347 eP P 09 54 56.4 -1.5
KAF pmax pmax
comp=Z,39nm,0.7s,mb5.5
SSPA **Standing Stone** 65.85 55 eP P 09 55 01.2 -0.7
comp=Z,10nm,0.6s,mb5.0
TKM2 **Tokmak 2** 66.05 309 P P 09 55 04.7 +1.6
SNR=23
TKM2 **Tokmak 2** 66.05 309 i P P 09 55 04.2 +1.1
ULHL **Ulahol** 66.23 308 P P 09 55 06.3 +2.0
SNR=11
TKL **Tuckaleechee C** 66.32 62 eP P 09 55 04.6 -0.4
USP **Ospenovka** 66.32 310 P P 09 55 05.3 +0.4
SNR=46
LRAL **Lakeview Retre** 66.39 66 eP P 09 55 04.8 -0.8
comp=Z,32nm,0.9s,mb5.3
CHMS **Chumysh** 66.40 310 P P 09 55 06.3 +0.9
SNR=15
KBK **Karagaybulak** 66.56 309 P P 09 55 08.1 +1.7
SNR=20
AAK **Ala-Archa** 66.80 310 P P 09 55 08.4 +0.4
comp=Z,496nm,0.7s,mb6.7,SNR=20
AAK **Ala-Archa** 66.80 310 eP P 09 55 08.5 +0.5
AAK pmax pmax
comp=Z,57nm,0.8s,mb5.7
AAK **Ala-Archa** 66.80 310 P P 09 55 08.8 +0.8
SNR=28
AAK **Ala-Archa** 66.80 310 eP P 09 55 08.4 +0.5
comp=Z,57nm,0.8s,mb5.7
KZA **Kyzart** 66.85 309 P P 09 55 10.4 +2.1
SNR=12
BLA **Blacksburg** 67.03 59 eP P 09 55 09.1 -0.4
BLA pmax pmax
comp=Z,26nm,0.8s,mb5.3
BLA **Blacksburg** 67.03 59 eP P 09 55 09.1 -0.4
comp=Z,26nm,0.8s,mb5.3
EKS2 **Erkin-Say** 67.13 310 P P 09 55 10.8 +0.8
SNR=32
LSA **Lhasa** 67.25 289 P P 09 55 13.0 +2.0
LSA **Lhasa** 67.25 289 eP P 09 55 12.8 +1.8
LSA pmax pmax
comp=Z,41nm,0.8s,mb5.5
LSA **Lhasa** 67.25 289 eP P 09 55 12.8 +1.7
comp=Z,41nm,0.8s,mb5.5
AML **Almayashu** 67.57 310 P P 09 55 14.3 +1.5
SNR=39
AKTK **Aktyubinsk** 67.72 324 P P 09 55 13.6 -0.1
AKTO **Aktyubinsk** 67.72 324 P P 09 55 13.6 -0.1
comp=Z,14nm,0.6s,mb5.2,baz=55,slow=8.0,SNR=37
AKTO **Aktyubinsk** 67.72 324 P P 09 55 13.6 0.0
AKTO pmax pmax
comp=Z,14nm,0.6s,mb5.2
BRAL **Brewton** 67.83 68 eP P 09 55 13.8 -0.9
comp=Z,146nm,1.1s,mb5.9
NB2 **NORSAR Subarra** 67.87 355 P P 09 55 13.6 -0.8
comp=Z,83nm,1.2s,mb5.6,baz=6.6,slow=6.5
NOA **NORSAR Array B** 67.87 355 P P 09 55 13.9 -0.4
comp=Z,13nm,0.7s,mb5.1,baz=6.8,slow=6.2,SNR=42
NOA **NORSAR Array B** 67.87 355 P P 09 55 13.9 -0.5
NOA pmax pmax
comp=Z,13nm,0.7s
AB31 **Akbulak array** 67.96 323 P P 09 55 14.5 -0.7
AB31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
NAO01 **NORSAR Array S** 68.08 355 eP P 09 55 14.9 -0.8
comp=Z,6.2nm,0.6s,mb4.8
GOGA **Godfrey** 68.14 64 eP P 09 55 15.7 -0.8
GOGA pmax pmax
comp=Z,83nm,1.0s,mb5.7
GOGA **Godfrey** 68.14 64 eP P 09 55 15.8 -0.7
comp=Z,83nm,1.0s,mb5.7
GOGA epP pP 09 55 30.1 -0.6
KK31 **Karatay Array** 68.34 312 i P P 09 55 17.5 -0.1
KSH **Kashi** 68.42 306 P P 09 55 20.3 +2.1
KSH AP pP 09 55 33.8 +1.5
KSH XP sP 09 55 38.8 +0.8
KSH PCP PcP 09 55 45.6 +2.3
KSH PP PP 09 57 53.8 +4.7
KSH AMB AMB
comp=Z,550nm,1.1s,mb6.5
KSH AMB AMB
comp=Z,7μm,7.8s
VSU **Vasula** 68.72 346⇓ eP P 09 55 18.8 -1.0
VSU pmax pmax
comp=Z,152nm,0.9s,mb5.9
VSU **Vasula** 68.72 346⇓ eP P 09 55 18.9 -0.9
MOS **Moscow** 69.19 339 eP P 09 55 22.0 -0.7
MOS pmax pmax
comp=Z,250nm,0.8s,mb6.2
KONO **Kongsberg** 69.34 355⇓ eP P 09 55 23.0 -0.6
CNNC **Cliffs of the** 69.86 59 eP P 09 55 27.3 +0.1
comp=Z,20nm,0.5s,mb5.3
OBN **Obninsk** 70.00 339 P P 09 55 27.0 -0.7
comp=Z,1μm,0.8s,mb6.8,SNR=6.1
OBN **Obninsk** 70.00 339⇑ eP P 09 55 27.2 -0.5
OBN e pP 09 55 42.2 +0.3
OBN pmax pmax
comp=Z,208nm,1.1s,mb6.0
OBN **Obninsk** 70.00 339 eP P 09 55 27.4 -0.3
comp=Z,121nm,0.8s,mb5.9
NHSC **New Hope** 70.20 62 eP P 09 55 29.8 +0.5
comp=Z,199nm,1.0s,mb6.0
CHTO **Chiang Mai** 70.48 276 eP P 09 55 30.3 -0.9
CHTO e*PP pP 09 55 43.5 -1.9
CHTO pmax pmax
comp=Z,15nm,0.9s,mb4.9
CHTO **Chiang Mai** 70.48 276 eP P 09 55 30.3 -0.9
comp=Z,15nm,0.9s,mb4.9
CHTO epP pP 09 55 43.5 -2.0
CM31 **Chiang Mai Arr** 70.75 276 eP P 09 55 32.6 -0.2
comp=Z,3.4nm,0.4s,mb4.6
CMAR **Chiang Mai Arr** 70.75 276 P P 09 55 32.6 -0.2
comp=Z,7.2nm,0.6s,mb4.8,baz=27,slow=6.7,SNR=28
CMAR **Chiang Mai Arr** 70.75 276 P P 09 55 32.7 -0.1
CMAR pmax pmax
comp=Z,7.0nm,0.6s
GUN **Gumba** 71.68 292 eP P 09 55 39.5 +1.1

comp=Z,289nm,0.5s,mb6.5
JIRN Jiri 71.69 291 *e*P P 09 55 39.5 +1.1
comp=Z,270nm,0.7s,mb6.3
KKN Kakani 72.12 292 *e*P P 09 55 41.9 +0.9
comp=Z,197nm,0.6s,mb6.2
KKN Kakani 72.12 292 *e*P P 09 55 41.9 +0.9
KKN pmax pmax
comp=Z,197nm,0.6s,mb6.2
PKI Pulchoki 72.21 292 *e*P P 09 55 42.3 +0.8
comp=Z,116nm,0.7s,mb5.9
PKI Pulchoki 72.21 292 *e*P P 09 55 42.3 +0.8
PKI pmax pmax
comp=Z,116nm,0.7s,mb5.9
MNK Minsk 72.33 344 *e*P P 09 55 40.0 -1.8
GKN Gorkha 72.34 293 *e*P P 09 55 42.9 +0.6
comp=Z,115nm,0.6s,mb6.0
DMN Daman 72.36 292 *e*P P 09 55 43.3 +0.9
comp=Z,138nm,0.8s,mb5.9
DANN Dangsing 72.58 294 *e*P P 09 55 44.5 +0.7
comp=Z,176nm,0.7s,mb6.1
KOLN Koldanda 73.11 293 *e*P P 09 55 47.4 +0.5
comp=Z,120nm,1.0s,mb5.8
SUW Suwalki 73.55 346 *e*P P 09 55 48.1 -1.0
SUW Suwalki 73.55 346 *e*P P 09 55 48.1 -1.0
PTH Pithoragarh 73.70 297 *e*P P 09 55 49.9 -0.4
PTH *ex* x 09 58 39.9
THN Thein Dam 73.96 302 *e*P P 09 55 51.7 -0.1
RGN Rugen 74.17 352 *e*P P 09 55 53.0 +0.4
comp=Z,185nm,0.8s,mb6.1
SMLA Simla 74.18 300 *e*P P 09 55 53.1 0.0
SMLA AMb AMB 09 55 56.0
comp=Z,213nm,1.2s,mb5.9
BOK Bokaro 74.77 289 *e*P P 09 55 56.9 +0.3
BOK AMb AMB 09 55 58.3
comp=Z,56nm,1.1s,mb5.4
HLG Helgoland 74.89 356 *e*P P 09 55 57.2 +0.4
comp=Z,137nm,1.2s,mb5.8
BSEG Bad Segeberg 75.00 354 *e*P P 09 55 57.8 +0.3
BSEG pmax pmax
comp=Z,110nm,0.9s,mb5.8
BSEG Bad Segeberg 75.00 354 *e*P P 09 55 57.8 +0.3
comp=Z,110nm,0.9s,mb5.8
GKP Gorka Klasztor 75.05 350 *e*P P 09 55 57.7 -0.1
GKP Gorka Klasztor 75.05 350 *e*P P 09 55 57.7 -0.1
AKASG Malin Array Be 75.69 342 P P 09 56 01.0 -0.5
comp=Z,154nm,0.6s,mb6.1,baz=20,slow=6.6,SNR=100
AKASG Malin Array Be 75.69 342 P P 09 56 01.0 -0.5
AKASG pmax pmax
comp=Z,154nm,0.6s
AKASG Malin Array Be 75.69 342 P P 09 56 01.0 -0.5
AKBB Malin Array Si 75.69 342 *e*P P 09 56 01.0 -0.5
KIEV Kiev 75.70 342 *e*P P 09 56 00.9 -0.7
KIEV pmax pmax
comp=Z,140nm,0.6s,mb6.1
KIEV Kiev 75.70 342 *e*P P 09 56 01.1 -0.5
comp=Z,145nm,0.6s,mb6.1
KBL Kabul 75.76 308 *e*P P 09 56 02.1 -0.1
KBL pmax pmax
comp=Z,140nm,0.9s,mb5.9
KBL Kabul 75.76 308 *e*P P 09 56 02.1 -0.1
comp=Z,140nm,0.9s,mb5.9
ALBI Allahabad 76.02 293 *e*P P 09 56 01.5 -2.3
RUE Ruedersdorf 76.18 352 *e*P P 09 56 03.8 -0.4
comp=Z,66nm,0.9s,mb5.6
NRDL Niedersach Rie 76.45 354 *e*P P 09 56 05.5 -0.3
comp=Z,56nm,1.0s,mb5.5
IBBN Ibbenburen 76.77 356 *e*P P 09 56 07.9 +0.3
comp=Z,145nm,1.0s,mb5.9
CLZ Clausthal 77.08 354 *e*P P 09 56 09.4 +0.1
CLZ pmax pmax
comp=Z,78nm,1.0s,mb5.6
CLZ Clausthal 77.08 354 *e*P P 09 56 09.4 +0.1
comp=Z,78nm,1.0s,mb5.6
CTA Charters Tower 77.11 213 P P 09 56 08.7 -1.1
comp=Z,13nm,0.9s,mb4.9,baz=54,slow=5.0,SNR=9.5
CTA Charters Tower 77.11 213 P P 09 56 08.7 -1.1
CTA pmax pmax
comp=Z,13nm,0.9s
CTAO Charters Tower 77.11 213 *e*P P 09 56 08.5 -1.3
CTAO pmax pmax
comp=Z,13nm,1.0s,mb4.8
CTAO Charters Tower 77.11 213 *e*P P 09 56 08.5 -1.3
comp=Z,13nm,1.0s,mb4.8
WTSB Winterswijk 77.15 356⇑ *e*P P 09 56 09.3 -0.4
comp=Z,50nm,1.1s,mb5.4
CLL Collm 77.41 352⇑ *i*P P 09 56 10.6 -0.6
CLL *i* 09 56 14.8
CLL pmax pmax
comp=Z,34nm,1.0s,mb5.2
CLL Collm 77.41 352 *e*P P 09 56 10.2 -1.0
comp=Z,30nm,0.8s,mb5.3
CLL Collm 77.41 352⇑ *i*P P 09 56 10.6 -0.6
comp=Z,34nm,1.0s,mb5.2
CLL *i* x x 09 56 14.8
CLL *e*PcP PcP 09 56 21.0 -0.5
KSP Ksiaz 77.55 350 *e*P P 09 56 11.7 -0.3
KSP Ksiaz 77.55 350 *e*P P 09 56 11.3 -0.7
BUG Bochum--Univer 77.66 356 *e*P P 09 56 12.2 -0.4
comp=Z,37nm,0.6s,mb5.5
OJC Ojcow 77.73 348 *e*P P 09 56 12.8 -0.2
BRG Berggiesshubel 77.76 351 *e*P P 09 56 12.4 -0.7
comp=Z,30nm,0.8s,mb5.3
FBE Freiberg 77.76 352 *e*P P 09 56 12.8 -0.4
comp=Z,52nm,1.0s,mb5.4
KWP Kalwaria 77.88 346 *e*P P 09 56 14.5 +0.6
KWP Kalwaria 77.88 346⇓ *i*P P 09 56 14.6 +0.8
KWP Kalwaria 77.88 346 *e*P P 09 56 14.5 +0.7
UPC Upice 77.91 350 *e*P P 09 56 13.7 -0.3
DPC Dobruska-Polom 78.03 350 *e*P P 09 56 14.8 +0.1
PVCC Panska Ves 78.04 351 *e*P P 09 56 14.6 -0.1
UBBA Unterbreizbach 78.12 354 *e*P P 09 56 14.8 -0.4
comp=Z,43nm,1.5s,mb5.2
MOX Moxa 78.18 353 *e*P P 09 56 15.2 -0.3
comp=Z,67nm,1.4s,mb5.4
MOX Moxa 78.18 353 *e*P P 09 56 15.2 -0.3
MOX pmax pmax
comp=Z,67nm,1.4s,mb5.4
MOX Moxa 78.18 353 *e*P P 09 56 15.0 -0.5
comp=Z,38nm,0.9s,mb5.3
STHS Stebnicka Huta 78.31 346 *e*P P 09 56 16.9 +0.7
STHS pmax pmax
comp=Z,50nm,0.8s,mb5.5
STHS Stebnicka Huta 78.31 346 *e*P P 09 56 16.9 +0.7
comp=Z,50nm,0.8s,mb5.5
STHS *e*PP PP 09 59 07.4 -5.4
OKC Ostrava-Krasne 78.32 349 *e*P P 09 56 16.3 0.0
WERD Werda 78.32 352 *e*P P 09 56 15.9 -0.4
comp=Z,24nm,1.1s,mb5.0
TANN Tannenbergstha 78.34 352 *e*P P 09 56 15.9 -0.5
comp=Z,31nm,1.5s,mb5.0
BEBN Eben Emael 78.36 357 P P 09 56 16.4 -0.1
HGN Heimansgroeve 78.39 357⇑ *e*P P 09 56 16.3 -0.3
comp=Z,85nm,1.0s,mb5.6
UCC Uccle 78.40 358 P P 09 56 16.8 +0.1
GUNZ Gunzen 78.40 352 *e*P P 09 56 16.2 -0.5
comp=Z,27nm,0.9s,mb5.2
WERN Wernitzgruen 78.47 352 *e*P P 09 56 16.9 -0.2
comp=Z,64nm,1.0s,mb5.5
NKC Novy Kostel 78.52 352 *e*P P 09 56 17.5 +0.1
MEM Membach 78.54 357 P P 09 56 17.4 -0.1
comp=Z,52nm,1.2s,mb5.3
KIV Kislovodsk 78.54 330 *e*P P 09 56 17.4 -0.2
KIV pmax pmax
comp=Z,44nm,1.1s,mb5.3
KIV Kislovodsk 78.54 330 *e*P P 09 56 17.6 0.0
comp=Z,51nm,1.1s,mb5.4
PRU Pruhonice 78.58 351 *e*P P 09 56 17.2 -0.5
PRU *ex* x 09 56 21.9
MENF Mencas 78.68 359 *e*P P 09 56 18.2 -0.1
SNF Seneffe 78.69 358 P P 09 56 18.3 0.0
comp=Z,29nm,1.3s,mb5.0
BCLA Clavier 78.75 357 P P 09 56 18.5 -0.2
comp=Z,32nm,1.3s,mb5.1
CRVS Cervenica-Dubn 78.78 346 *i*P P 09 56 19.2 +0.4
CRVS pmax pmax
comp=Z,45nm,0.9s,mb5.4
CRVS Cervenica-Dubn 78.78 346 *i*P P 09 56 19.2 +0.4
comp=Z,44nm,0.9s,mb5.4
CRVS *e*PP PP 09 59 09.0 -7.7
MANZ Manzenberg 78.80 353 *e*P P 09 56 18.6 -0.3
comp=Z,24nm,1.1s,mb5.0
TNS Taunus Mts 78.81 355 *e*P P 09 56 18.6 -0.4
TNS pmax pmax
comp=Z,40nm,0.8s,mb5.4
TNS Taunus Mts 78.81 355 *e*P P 09 56 18.6 -0.4
comp=Z,40nm,0.8s,mb5.4

UZH Uzhgorod 78.92 346 *d*/P P 09 56 18.7 -0.9
UZH *i* pP 09 56 28.0 -6.0
UZH *e* 09 56 42.5
ROTZ Rotzenmuhle 79.01 352 *e*P P 09 56 20.1 +0.1
comp=Z,39nm,1.2s,mb5.2
VRAC Vranov 79.03 350 P P 09 56 20.4 +0.2
comp=Z,40nm,0.9s,mb5.3,baz=19,slow=5.6,SNR=20
VRAC Vranov 79.03 350 P P 09 56 20.4 +0.2
VRAC pmax pmax
comp=Z,40nm,0.9s
VRAC Vranov 79.03 350⇓ *i*P P 09 56 20.6 +0.4
GIVF Givet 79.09 357⇑ *i*P P 09 56 20.4 -0.1
comp=Z,85nm,1.0s,mb5.3
GIVF Givet 79.09 357⇑ *i*P P 09 56 20.4 -0.1
GIVF pmax pmax
comp=Z,42nm,1.0s,mb5.3
GIVF Givet 79.09 357⇑ *i*P P 09 56 20.4 -0.1
comp=Z,42nm,1.0s,mb5.3
DOU Dourbes 79.10 357 P P 09 56 20.2 -0.4
BAIF Baives 79.15 358⇑ *i*P P 09 56 20.9 +0.1
comp=Z,140nm,0.9s,mb5.6
BAIF Baives 79.15 358⇑ *i*P P 09 56 20.9 +0.1
BAIF pmax pmax
comp=Z,70nm,0.9s,mb5.6
BAIF Baives 79.15 358⇑ *i*P P 09 56 20.9 +0.1
comp=Z,70nm,0.9s,mb5.6
GRA1 Grafenberg Arr 79.16 353 *e*P P 09 56 20.9 0.0
comp=Z,62nm,0.9s,mb5.5
GRF Grafenberg Arr 79.16 353 *e*P P 09 56 20.9 0.0
GRF pmax pmax
comp=Z,62nm,0.9s,mb5.5
GRF Grafenberg Arr 79.16 353 *e*P P 09 56 20.9 0.0
GRF pmax pmax
comp=Z,62nm,0.9s,mb5.5
GRF Grafenberg Arr 79.16 353 *e*P P 09 56 20.9 0.0
comp=Z,62nm,0.9s,mb5.5
TREC Trest 79.16 350 *e*P P 09 56 20.7 -0.2
TREC *ex* x 09 56 24.3
AJM Ajmer 79.18 299 *e*P P 09 56 20.8 -0.6
AJM AMb AMB 09 56 38.0
comp=Z,62nm,1.2s,mb5.4
ABH Altenburg 79.20 356 *e*P P 09 56 20.9 -0.2
KIS Kishinev 79.31 341 *e*P P 09 56 21.0 -0.7
KIS *e* pP 09 56 35.0 -1.2
KIS pmax pmax
comp=Z,250nm,1.3s,mb6.0
KIS Kishinev 79.31 341 *e*UNK 09 56 21.0
KIS XM 09 56 22.0
comp=Z,300nm,1.3s
KECS Kecovo 79.33 347 *e*P P 09 56 21.9 +0.1
KECS *e* pP 09 56 34.6 -1.7
KECS pmax pmax
comp=Z,39nm,1.0s,mb5.3
KECS Kecovo 79.33 347 *e*P P 09 56 21.9 +0.1
KECS *e*pP pP 09 56 34.6 -1.7
KECS *e*PP PP 09 59 12.0 -9.3
KECS Kecovo 79.33 347 *e*P P 09 56 21.9 +0.1
comp=Z,38nm,1.0s,mb5.3
KECS *e* pP 09 56 34.6 -1.7
KECS *e*PP PP 09 59 12.0 -9.3
TRPA Tarpa 79.36 345⇓ *i*P P 09 56 22.5 +0.5
BUR08 Bucovina Ar. S 79.39 343 *e*P P 09 56 22.7 +0.5
RUP Ruppelstein 79.40 356 *e*P P 09 56 22.2 0.0
TOD Tromm 79.41 355 *e*P P 09 56 22.2 0.0
BURAR Bucovina Array 79.41 343⇓ *i*P P 09 56 23.0 +0.7
WLF Walferdange 79.48 356 P P 09 56 22.4 -0.2
WLF Walferdange 79.48 356 P P 09 56 23.0 +0.4
WLF pmax pmax
comp=Z,42nm,1.0s,mb5.3
WLF Walferdange 79.48 356 *e*P P 09 56 22.9 +0.3
comp=Z,41nm,0.9s,mb5.4
WLF Walferdange 79.48 356 *e*P P 09 56 22.7 +0.1
comp=Z,42nm,1.0s,mb5.3
KHC Kasperske Hory 79.52 351 *e*P P 09 56 22.8 0.0
KHC *ex* x 09 56 27.5
KOLL Kolacno 79.52 348 *e*P P 09 56 23.2 +0.3
KOLL *e*PP PP 09 59 13.4 -10
KOLL Kolacno 79.52 348 *e*P P 09 56 23.2 +0.3
KOLL *e*PP PP 09 59 13.4 -10
VYHS Vyhne 79.55 348 *i*P P 09 56 23.2 +0.2
VYHS pmax pmax
comp=Z,25nm,1.1s,mb5.1
VYHS Vyhne 79.55 348 *i*P P 09 56 23.2 +0.2
comp=Z,25nm,1.1s,mb5.1
VYHS *e*PP PP 09 59 12.4 -11
WET Wettzell 79.57 352 *e*P P 09 56 23.0 -0.1
WET pmax pmax
comp=Z,18nm,0.9s,mb5.0
WET Wettzell 79.57 352 *e*P P 09 56 23.0 -0.1
comp=Z,18nm,0.9s,mb5.0
BMR Baia Mare 79.65 345 P P 09 56 24.8 +1.2
SMOL Smolenice 79.71 349 *e*P P 09 56 24.6 +0.7
SMOL *e*PP PP 09 59 14.8 -10
SOC Sochi 79.78 332 *e*P P 09 56 22.9 -1.5
SOC pmax pmax
comp=Z,1µm,0.8s,mb6.8
GEC2 GERESS Array S 79.79 351 *e*P P 09 56 23.6 -0.7
GEC2 pmax pmax
comp=Z,29nm,0.9s,mb5.2
GEC2 GERESS Array S 79.79 351 *e*P P 09 56 23.6 -0.7
comp=Z,29nm,0.9s,mb5.2
GERES GERESS Array B 79.79 351 P P 09 56 24.4 +0.1
comp=Z,12nm,0.6s,mb5.0,baz=26,slow=5.2,SNR=48
GERES GERESS Array B 79.79 351 P P 09 56 24.4 +0.1
GERES pmax pmax
comp=Z,12nm,0.6s
PSZ Piszkesteto 79.97 347⇓ *i*P P 09 56 26.3 +1.0
PSZ Piszkesteto 79.97 347 P P 09 56 26.2 +0.9
ZST Bratislava 80.06 349 *e*P P 09 56 26.6 +0.8
ZST pmax pmax
comp=Z,44nm,0.9s,mb5.4
ZST Bratislava 80.06 349 *e*P P 09 56 26.6 +0.8
comp=Z,44nm,0.9s,mb5.4
ZST *e*PP PP 09 59 16.4 -11
LANF Langenberg 80.09 355 *e*P P 09 56 25.9 0.0
BHPL Bhopal 80.14 295 *e*P P 09 56 26.2 -0.5
BHPL AMb AMB 09 56 28.0
comp=Z,85nm,0.9s,mb5.7
STU Stuttgart 80.22 354 *e*P P 09 56 26.3 -0.3
comp=Z,29nm,0.7s,mb5.3
TGUH Tegucigalpa,Un 80.43 80 *e*P P 09 56 29.2 +0.9
comp=Z,130nm,1.2s,mb5.7
CONA Conrad Observa 80.47 350 *i*P P 09 56 28.5 +0.5
comp=Z,53nm,1.3s,mb5.3,SNR=17
CSNA Conrad Observ 80.47 350⇑ *i*P P 09 56 28.5 +0.5
comp=Z,50nm,1.2s,mb5.3
FLN La Foliniere 80.48 1⇑ *i*P P 09 56 27.7 -0.4
comp=Z,126nm,1.0s,mb5.5
FLN La Foliniere 80.48 1⇑ *i*P P 09 56 27.7 -0.4
FLN pmax pmax
comp=Z,63nm,1.0s,mb5.5
FLN La Foliniere 80.48 1⇑ *i*P P 09 56 27.7 -0.4
comp=Z,63nm,1.0s,mb5.5
DRGR 80.64 345⇓ *i*P P 09 56 29.4 +0.5
DRGR 80.64 345 P P 09 56 29.3 +0.3
LDF La Druitiere 80.65 1⇑ *i*P P 09 56 28.4 -0.6
comp=Z,117nm,0.9s,mb5.5
LDF La Druitiere 80.65 1⇑ *i*P P 09 56 28.4 -0.6
LDF pmax pmax
comp=Z,59nm,0.9s,mb5.5
LDF La Druitiere 80.65 1⇑ *i*P P 09 56 28.4 -0.6
comp=Z,59nm,0.9s,mb5.5
FUR Furstenfeldbru 80.67 353 *e*P P 09 56 28.9 -0.2
FUR pmax pmax
comp=Z,73nm,1.1s,mb5.5
FUR Furstenfeldbru 80.67 353 *e*P P 09 56 28.9 -0.2
comp=Z,73nm,1.1s,mb5.5
CDF Champ du Feu 80.68 356⇑ *i*P P 09 56 28.9 -0.2
comp=Z,50nm,1.0s,mb5.1
CDF Champ du Feu 80.68 356⇑ *i*P P 09 56 28.9 -0.2
CDF pmax pmax
comp=Z,25nm,1.0s,mb5.1
CDF Champ du Feu 80.68 356⇑ *i*P P 09 56 28.9 -0.2
comp=Z,25nm,1.0s,mb5.1
MEZF Maizieres J'vi 80.68 357⇑ *i*P P 09 56 29.2 +0.1
comp=Z,151nm,1.0s,mb5.6
MEZF Maizieres J'vi 80.68 357⇑ *i*P P 09 56 29.2 +0.1
comp=Z,151nm,1.0s,mb5.9
BFO Black Forest 80.71 355 *e*P P 09 56 29.0 -0.3
BFO pmax pmax
comp=Z,25nm,1.0s,mb5.1
BFO Black Forest 80.71 355 *e*P P 09 56 29.0 -0.3
comp=Z,25nm,1.0s,mb5.1
MOA Molln 80.72 351⇑ *i*P P 09 56 29.2 -0.2
comp=Z,9.9nm,0.8s,mb4.8

VRI Vrincioaia 80.81 342⇓ *i*P P 09 56 30.5 +0.6
NGP Nagpur 80.83 292 *e*P P 09 56 28.1 -2.3
NGP AMb AMB 09 56 31.7
comp=Z,88nm,2.7s,mb5.2
PLOR Plostina 80.84 342⇓ *i*P P 09 56 30.7 +0.7
ROSF Rostrenen 80.85 3⇑ *i*P P 09 56 29.9 -0.1
comp=Z,228nm,1.4s,mb5.6
ROSF Rostrenen 80.85 3⇑ *i*P P 09 56 29.9 -0.1
ROSF pmax pmax
comp=Z,114nm,1.4s,mb5.6
ROSF Rostrenen 80.85 3⇑ *i*P P 09 56 29.9 -0.1
comp=Z,114nm,1.4s,mb5.6
ECH Echery 80.88 356 *e*P P 09 56 30.0 -0.2
SPAK Spaichingen-Ko 80.91 355 *e*P P 09 56 30.4 +0.1
THEF They Montfort 80.92 356 *e*P P 09 56 30.4 0.0
SGMF Saint Gilles 80.95 2⇑ *i*P P 09 56 30.5 -0.1
comp=Z,110nm,0.8s,mb5.6
SGMF Saint Gilles 80.95 2⇑ *i*P P 09 56 30.5 -0.1
SGMF pmax pmax
comp=Z,55nm,0.8s,mb5.5
SGMF Saint Gilles 80.95 2⇑ *i*P P 09 56 30.5 -0.1
comp=Z,55nm,0.8s,mb5.5
RJOB Jochberg 80.97 352 *e*P P 09 56 30.7 0.0
comp=Z,32nm,0.8s,mb5.3
TLCR 81.03 340⇓ *i*P P 09 56 31.7 +0.6
HAU Haudompre 81.13 356⇑ *i*P P 09 56 31.3 -0.2
comp=Z,54nm,0.9s,mb5.2
HAU Haudompre 81.13 356⇑ *i*P P 09 56 31.3 -0.2
HAU pmax pmax
comp=Z,27nm,0.9s,mb5.2
HAU Haudompre 81.13 356⇑ *i*P P 09 56 31.3 -0.2
comp=Z,27nm,0.9s,mb5.2
ARSA Arzberg 81.18 350⇑ *i*P P 09 56 32.4 +0.6
comp=Z,28nm,0.8s,mb5.2,SNR=6.8
MOF Molkenrain 81.25 356 *e*P P 09 56 31.9 -0.2
QUIF Quistinic 81.28 3⇑ *i*P P 09 56 32.2 -0.1
comp=Z,71nm,1.0s,mb5.3
QUIF Quistinic 81.28 3⇑ *i*P P 09 56 32.2 -0.1
QUIF pmax pmax
comp=Z,36nm,1.0s,mb5.3
QUIF Quistinic 81.28 3⇑ *i*P P 09 56 32.2 -0.1
comp=Z,36nm,1.0s,mb5.2
HINF Hinteralfeld 81.29 356⇑ *i*P P 09 56 32.0 -0.4
comp=Z,37nm,1.0s,mb5.0
HINF Hinteralfeld 81.29 356⇑ *i*P P 09 56 32.0 -0.4
HINF pmax pmax
comp=Z,19nm,1.0s,mb5.0
HINF Hinteralfeld 81.29 356⇑ *i*P P 09 56 32.0 -0.4
comp=Z,18nm,1.0s,mb5.0
GNI Garni 81.30 327 P P 09 56 33.9 +1.3
comp=Z,5.7nm,0.4s,mb4.9,baz=351,slow=19,SNR=4.4
GNI Garni 81.30 327 *i*P P 09 56 34.0 +1.4
GNI pmax pmax
comp=Z,15nm,0.7s
GNI Garni 81.30 327 P P 09 56 33.9 +1.3
MLR Muntele Rosu 81.32 342 P P 09 56 33.8 +1.2
comp=Z,66nm,0.7s,mb5.7,baz=115,slow=1.4,SNR=53
MLR Muntele Rosu 81.32 342 P P 09 56 33.8 +1.2
MLR pmax pmax
comp=Z,67nm,0.7s
WATA Walderalm 81.47 353⇑ *i*P P 09 56 33.7 +0.3
comp=Z,60nm,1.1s,mb5.5
MOTA Moosalm 81.50 353⇑ *i*P P 09 56 33.6 +0.1
comp=Z,56nm,1.2s,mb5.4
WTTA Wattenberg 81.54 353⇑ *i*P P 09 56 34.1 +0.4
comp=Z,80nm,1.2s,mb5.5,SNR=13
VOIR 81.54 343⇑ *i*P P 09 56 35.0 +1.2
VOIR 81.54 343 P P 09 56 35.1 +1.3
KBA Koelnbreinsper 81.57 351⇑ *i*P P 09 56 34.8 +0.9
comp=Z,131nm,0.8s,mb5.9,SNR=26
WRAB Tennant Creek 81.62 224⇑ *e*P P 09 56 32.5 -1.8
WRAB Tennant Creek 81.62 224 *e*P P 09 56 32.4 -1.9
WRAB *e*pP pP 09 56 46.3 -2.6
WB2 Warramunga Arr 81.63 224 *e*P P 09 56 32.4 -2.0
WB2 Warramunga Arr 81.63 224 *e*P pP 09 56 45.7 -3.2
WRA Warramunga Arr 81.63 224 P P 09 56 32.6 -1.8
comp=Z,7.0nm,0.7s,mb4.7,baz=32,slow=6.0,SNR=18
WRA Warramunga Arr 81.63 224 P P 09 56 32.6 -1.8
WRA pmax pmax
comp=Z,7.0nm,0.7s
HARR Harsova 81.69 341⇓ *i*P P 09 56 35.1 +0.5
LOMF Lomont 81.76 356 *e*P P 09 56 35.0 +0.1
SOKA Soboth 81.80 350⇓ *i*P P 09 56 35.4 +0.3
comp=Z,99nm,1.1s,mb5.7
PKSM Moragy 81.81 348⇑ *i*P P 09 56 35.0 -0.2
PKSM Moragy 81.81 348 P P 09 56 34.9 -0.3
TIRR Tirgusor 81.81 340⇓ *i*P P 09 56 35.8 +0.6
PERS Pernice 81.83 350 *e*P P 09 56 35.4 +0.2
FETA Feichten 81.85 353⇓ *i*P P 09 56 35.7 +0.3
comp=Z,48nm,1.1s,mb5.4
KOGS Kog 81.89 349 *e*P P 09 56 35.4 -0.1
LOR Lormes 81.95 358⇑ *i*P P 09 56 35.7 -0.1
comp=Z,100nm,1.2s,mb5.3
LOR Lormes 81.95 358⇑ *i*P P 09 56 35.7 -0.1
LOR pmax pmax
comp=Z,50nm,1.2s,mb5.3
LOR Lormes 81.95 358⇑ *i*P P 09 56 35.7 -0.1
comp=Z,50nm,1.2s,mb5.3
BZS Buzias 81.96 345⇑ *i*P P 09 56 36.0 +0.1
BZS Buzias 81.96 345 P P 09 56 36.2 +0.2
HYF Humbligny 81.97 359⇑ *i*P P 09 56 36.1 +0.1
ABTA Abfaltersbach 81.98 352⇑ *i*P P 09 56 36.1 0.0
comp=Z,48nm,1.1s,mb5.4,SNR=10
GZR Gura Zlata 81.98 345⇓ *i*P P 09 56 36.8 +0.7
GZR Gura Zlata 81.98 345 P P 09 56 36.5 +0.4
OBKA Obir 82.02 350⇑ *i*P P 09 56 36.3 +0.1
comp=Z,54nm,0.8s,mb5.5,SNR=26
DAVOX Davos/Dischmat 82.15 354 P P 09 56 37.8 +0.9
comp=Z,17nm,0.6s,mb5.2,baz=352,slow=6.3,SNR=20
SSF Saint Saulge 82.16 358⇑ *i*P P 09 56 36.9 -0.1
comp=Z,67nm,1.0s,mb5.2
SSF Saint Saulge 82.16 358⇑ *i*P P 09 56 36.9 -0.1
SSF pmax pmax
comp=Z,33nm,1.0s,mb5.2
SSF Saint Saulge 82.16 358⇑ *i*P P 09 56 36.9 -0.1
comp=Z,33nm,1.0s,mb5.2
AKL Akola 82.36 293 *e*P P 09 56 38.4 -0.1
AKL AMb AMB 09 56 39.4
comp=Z,55nm,1.9s,mb5.2
AVF Avril sur Loir 82.43 358⇑ *i*P P 09 56 38.3 -0.1
comp=Z,92nm,1.1s,mb5.3
AVF Avril sur Loir 82.43 358⇑ *i*P P 09 56 38.3 -0.1
AVF pmax pmax
comp=Z,46nm,1.1s,mb5.3
AVF Avril sur Loir 82.43 358⇑ *i*P P 09 56 38.3 -0.1
comp=Z,46nm,1.1s,mb5.3
TUE Stuetta 82.50 354 *e*P P 09 56 39.2 +0.5
comp=Z,28nm,0.8s,mb5.2
CABF La Chapelle 82.53 356⇑ *i*P P 09 56 39.1 +0.2
comp=Z,86nm,1.1s,mb5.4
CABF La Chapelle 82.53 356⇑ *i*P P 09 56 39.1 +0.2
CABF pmax pmax
comp=Z,43nm,1.1s,mb5.4
CABF La Chapelle 82.53 356⇑ *i*P P 09 56 39.1 +0.2
comp=Z,43nm,1.1s,mb5.4
SMF Signal de Mont 82.57 358⇑ *i*P P 09 56 38.9 -0.2
comp=Z,123nm,1.0s,mb5.6
SMF Signal de Mont 82.57 358⇑ *i*P P 09 56 38.9 -0.2
SMF pmax pmax
comp=Z,62nm,1.0s,mb5.6
SMF Signal de Mont 82.57 358⇑ *i*P P 09 56 38.9 -0.2
comp=Z,62nm,1.0s,mb5.6
MFF Saint Martin d 82.65 1⇑ *i*P P 09 56 39.5 0.0
comp=Z,76nm,0.9s,mb5.4
MFF Saint Martin d 82.65 1⇑ *i*P P 09 56 39.5 0.0
MFF pmax pmax
comp=Z,38nm,0.9s,mb5.4
MFF Saint Martin d 82.65 1⇑ *i*P P 09 56 39.5 0.0
comp=Z,38nm,0.9s,mb5.4
BGF Bois d'Agland 82.68 359⇑ *i*P P 09 56 39.6 -0.1
comp=Z,84nm,1.2s,mb5.4
BGF Bois d'Agland 82.68 359⇑ *i*P P 09 56 39.6 -0.1
BGF pmax pmax
comp=Z,42nm,1.2s,mb5.3
BGF Bois d'Agland 82.68 359⇑ *i*P P 09 56 39.6 -0.1
comp=Z,42nm,1.2s,mb5.3
PSI Prapat 82.69 265 P P 09 56 39.2 -1.0
comp=Z,42nm,0.9s,mb5.5,baz=20,slow=3.6,SNR=20
PSI Prapat 82.69 265 P P 09 56 39.3 -0.9
PSI pmax pmax
comp=Z,42nm,0.9s,mb5.5
BOJS Bojanci 82.93 350 *e*P P 09 56 41.0 -0.1
TCF Toulx Ste Croi 82.95 359⇑ *i*P P 09 56 41.0 -0.1
comp=Z,49nm,1.0s,mb5.2
TCF Toulx Ste Croi 82.95 359⇑ *i*P P 09 56 41.0 -0.1
TCF pmax pmax

	comp=Z,24nm,1.0s,mb5.2									
TCF	**Toulx Ste Croi**	**82.95**	**359**	⇑	*i*P		**P**	**09 56 41.0**	**-0.1**
	comp=Z,24nm,1.0s,mb5.2									
AGO	**Saint Agoulin**	**83.18**	**358**		*e*P		**P**	**09 56 42.8**	**+0.5**
PLDF	**La Plantade**	**83.25**	**358**		*e*P		**P**	**09 56 43.3**	**+0.6**
PYM	**Petit Puy Mans**	**83.48**	**358**		*e*P		**P**	**09 56 44.2**	**+0.4**
LPL	**La Plagne**	**83.59**	**356**	⇑	*i*P		**P**	**09 56 45.4**	**+1.0**
LPG	**La Plagne**	**83.61**	**356**	⇑	*i*P		**P**	**09 56 45.7**	**+1.2**
	comp=Z,46nm,1.1s,mb5.2									
LPG	**La Plagne**	**83.61**	**356**	⇑	*i*P		**P**	**09 56 45.7**	**+1.2**
LPG						pmax	pmax			
	comp=Z,23nm,1.1s,mb5.2									
LPG	**La Plagne**	**83.61**	**356**	⇑	*i*P		**P**	**09 56 45.7**	**+1.2**
	comp=Z,23nm,1.1s,mb5.2									
RJF	**Les Rejaudoux**	**83.94**	**359**	⇑	*i*P		**P**	**09 56 45.9**	**-0.3**
	comp=Z,76nm,1.1s,mb5.4									
RJF	**Les Rejaudoux**	**83.94**	**359**	⇑	*i*P		**P**	**09 56 45.9**	**-0.3**
RJF						pmax	pmax			
	comp=Z,38nm,1.1s,mb5.4									
RJF	**Les Rejaudoux**	**83.94**	**359**	⇑	*i*P		**P**	**09 56 45.9**	**-0.3**
	comp=Z,38nm,1.1s,mb5.4									
LBL	**Lubilhac**	**83.99**	**358**		*e*P		**P**	**09 56 46.8**	**+0.3**
HYB	**Hyderabad**	**84.03**	**290**		*e*P		**P**	**09 56 46.5**	**-0.6**
HYB						pmax	pmax			
	comp=Z,80nm,1.0s,mb5.8									
HYB	**Hyderabad**	**84.03**	**290**		*i* P		**P**	**09 56 46.5**	**-0.6**
	comp=Z,80nm,1.0s,mb5.8									
HYB					*e*		pP	09 57 01.0	-0.6
HYB					*e*			09 57 46.0		
HYB	**Hyderabad**	**84.03**	**290**		*e*P		**P**	**09 56 46.5**	**-0.6**
	comp=Z,80nm,1.0s,mb5.8									
FITZ	**Fitzroy Crossi**	**84.08**	**232**		*e*P		**P**	**09 56 46.4**	**-0.7**
	comp=Z,74nm,0.9s,mb5.8									
FITZ	**Fitzroy Crossi**	**84.08**	**232**		*e*P		pP	09 56 58.1	-3.6
	comp=Z,72nm,0.9s									
ORIF	**Oris-en-Rattie**	**84.23**	**356**	⇑	*i*P		**P**	**09 56 48.4**	**+0.7**
	comp=Z,77nm,1.2s,mb5.4									
ORIF	**Oris-en-Rattie**	**84.23**	**356**	⇑	*i*P		**P**	**09 56 48.4**	**+0.7**
ORIF						pmax	pmax			
	comp=Z,38nm,1.2s,mb5.4									
ORIF	**Oris-en-Rattie**	**84.23**	**356**	⇑	*i*P		**P**	**09 56 48.4**	**+0.7**
	comp=Z,38nm,1.2s,mb5.4									
LFF	**La Frestale**	**84.31**	**0**	⇑	*i*P		**P**	**09 56 48.2**	**+0.1**
	comp=Z,112nm,1.0s,mb5.7									
LFF	**La Frestale**	**84.31**	**0**	⇑	*i*P		**P**	**09 56 48.2**	**+0.1**
LFF						pmax	pmax			
	comp=Z,56nm,1.0s,mb5.7									
LFF	**La Frestale**	**84.31**	**0**	⇑	*i*P		**P**	**09 56 48.2**	**+0.1**
	comp=Z,56nm,1.0s,mb5.7									
CAF	**Calviac**	**84.32**	**359**	⇑	*i*P		**P**	**09 56 48.3**	**+0.2**
	comp=Z,109nm,1.2s,mb5.6									
CAF	**Calviac**	**84.32**	**359**	⇑	*i*P		**P**	**09 56 48.3**	**+0.2**
CAF						pmax	pmax			
	comp=Z,55nm,1.2s,mb5.6									
CAF	**Calviac**	**84.32**	**359**	⇑	*i*P		**P**	**09 56 48.3**	**+0.2**
	comp=Z,55nm,1.2s,mb5.6									
VIVF	**Saint-Julien-l**	**84.33**	**357**	⇑	*i*P		**P**	**09 56 48.5**	**+0.3**
	comp=Z,42nm,1.0s,mb5.2									
VIVF	**Saint-Julien-l**	**84.33**	**357**	⇑	*i*P		**P**	**09 56 48.5**	**+0.3**
VIVF						pmax	pmax			
	comp=Z,21nm,1.0s,mb5.2									
VIVF	**Saint-Julien-l**	**84.33**	**357**	⇑	*i*P		**P**	**09 56 48.5**	**+0.3**
	comp=Z,21nm,1.0s,mb5.2									
MBDF	**Montbardon**	**84.38**	**356**	⇑	*i*P		**P**	**09 56 49.2**	**+0.7**
	comp=Z,56nm,1.0s,mb5.4									
MBDF	**Montbardon**	**84.38**	**356**	⇑	*i*P		**P**	**09 56 49.2**	**+0.7**
MBDF						pmax	pmax			
	comp=Z,28nm,1.0s,mb5.3									
MBDF	**Montbardon**	**84.38**	**356**	⇑	*i*P		**P**	**09 56 49.2**	**+0.7**
	comp=Z,28nm,1.0s,mb5.3									
OG25	**Le Caire**	**84.77**	**356**		*e*P		**P**	**09 56 51.1**	**+0.7**
BR131	**Keskin Array S**	**85.05**	**335**		*e*P		**P**	**09 56 52.0**	**+0.1**
	comp=Z,23nm,0.8s,mb5.4									
BRTR	**Keskin Array B**	**85.05**	**335**		P		**P**	**09 56 52.2**	**+0.3**
	comp=Z,26nm,0.8s,mb5.4,baz=53,slow=2.9,SNR=57									
BRTR	**Keskin Array B**	**85.05**	**335**		*i* P		**P**	**09 56 52.2**	**+0.3**
BRTR						pmax	pmax			
	comp=Z,26nm,0.8s									
TOUF	**Mont Tournerai**	**85.07**	**355**		*e*P		**P**	**09 56 52.4**	**+0.5**
SAOF	**Saorge**	**85.08**	**355**		*e*P		**P**	**09 56 51.9**	**-0.1**
ASAR	**Alice Springs**	**85.11**	**222**		P		**P**	**09 56 51.1**	**-1.1**
	comp=Z,7.1nm,0.8s,mb4.8,baz=29,slow=5.0,SNR=21									
ASAR	**Alice Springs**	**85.11**	**222**		P		**P**	**09 56 51.1**	**-1.1**
ASAR						pmax	pmax			
	comp=Z,7.0nm,0.8s									
LASF	**Ste Croix**	**85.14**	**358**		*e*P		**P**	**09 56 52.5**	**+0.2**
	comp=Z,48nm,1.0s,mb5.3									
STOF	**St-Etienne Org**	**85.15**	**356**		*e*P		**P**	**09 56 52.9**	**+0.6**
SMRF	**Simiane la Rot**	**85.18**	**356**	⇑	*i*P		**P**	**09 56 53.3**	**+0.8**
	comp=Z,97nm,1.0s,mb5.6									
SMRF	**Simiane la Rot**	**85.18**	**356**	⇑	*i*P		**P**	**09 56 53.3**	**+0.8**
	comp=Z,97nm,1.0s,mb5.6									
LUCF	**Luceram**	**85.19**	**355**		*e*P		**P**	**09 56 50.9**	**-1.6**
MVIF	**Mont Vial**	**85.19**	**355**		*e*P		**P**	**09 56 52.7**	**+0.2**
SBF	**Sospel**	**85.21**	**355**	⇑	*i*P		**P**	**09 56 52.5**	**-0.1**
	comp=Z,141nm,0.9s,mb5.8									
SBF	**Sospel**	**85.21**	**355**	⇑	*i*P		**P**	**09 56 52.5**	**-0.1**
SBF						pmax	pmax			
	comp=Z,70nm,0.9s,mb5.8									
SBF	**Sospel**	**85.21**	**355**	⇑	*i*P		**P**	**09 56 52.5**	**-0.1**
	comp=Z,70nm,0.9s,mb5.8									
VILF	**Villemus**	**85.30**	**356**		*e*P		**P**	**09 56 54.0**	**+0.9**
REVF	**Revere**	**85.34**	**355**		*e*P		**P**	**09 56 52.4**	**-0.9**
CALN	**Calern**	**85.35**	**356**		*e*P		**P**	**09 56 53.5**	**+0.2**
PRAF	**Pradon**	**85.37**	**357**		*e*P		**P**	**09 56 53.6**	**+0.2**
TAVF	**Tavernes**	**85.52**	**356**		*e*P		**P**	**09 56 54.7**	**+0.5**
FRF	**La Foret Royal**	**85.55**	**356**	⇑	*i*P		**P**	**09 56 54.2**	**-0.1**
	comp=Z,60nm,0.9s,mb5.5									
FRF	**La Foret Royal**	**85.55**	**356**	⇑	*i*P		**P**	**09 56 54.2**	**-0.1**
FRF						pmax	pmax			
	comp=Z,30nm,0.9s,mb5.5									
FRF	**La Foret Royal**	**85.55**	**356**	⇑	*i*P		**P**	**09 56 54.2**	**-0.1**
	comp=Z,30nm,0.9s,mb5.5									
GELF	**Grande-Etoile**	**85.78**	**357**		*e*P		**P**	**09 56 54.2**	**+0.7**
LMR	**La Mourre**	**85.78**	**356**	⇑	*i*P		**P**	**09 56 55.5**	**0.0**
	comp=Z,88nm,1.0s,mb5.6									
LMR	**La Mourre**	**85.78**	**356**	⇑	*i*P		**P**	**09 56 55.5**	**0.0**
LMR						pmax	pmax			
	comp=Z,44nm,1.0s,mb5.6									
LMR	**La Mourre**	**85.78**	**356**	⇑	*i*P		**P**	**09 56 55.5**	**0.0**
	comp=Z,44nm,1.0s,mb5.7									
BERF	**Bertagne**	**85.84**	**356**		*e*P		**P**	**09 56 56.2**	**+0.4**
POO	**Poona**	**85.90**	**294**		*e*P		**P**	**09 56 56.1**	**-0.4**
POO						AMb	AMB	09 56 57.7		
	comp=Z,106nm,0.8s,mb6.1									
MTLF	**Montolieu**	**85.90**	**359**		*e*P		**P**	**09 56 56.3**	**+0.2**
	comp=Z,58nm,1.1s,mb5.4									
MTLF	**Montolieu**	**85.90**	**359**		*e*P		**P**	**09 56 56.3**	**+0.2**
MTLF						pmax	pmax			
	comp=Z,29nm,1.1s,mb5.4									
MTLF	**Montolieu**	**85.90**	**359**		*e*P		**P**	**09 56 56.3**	**+0.2**
	comp=Z,29nm,1.1s,mb5.4									
VAY	**Valandovo**	**85.98**	**344**		*e*P		**P**	**09 56 56.2**	**-0.3**
EPF	**Esparros**	**86.22**	**0**		*e*P		**P**	**09 56 57.1**	**-0.6**
	comp=Z,25nm,0.9s,mb5.2									
EPF	**Esparros**	**86.22**	**0**		*e*P		**P**	**09 56 57.1**	**-0.6**
EPF						pmax	pmax			
	comp=Z,13nm,0.9s,mb5.2									
EPF	**Esparros**	**86.22**	**0**		*e*P		**P**	**09 56 57.1**	**-0.6**
	comp=Z,13nm,0.9s,mb5.2									
AQU	**L'Aquila**	**86.25**	**351**		P		**P**	**09 56 58.5**	**+0.7**
AQU						pmax	pmax			
	comp=Z,65nm,0.9s,mb5.9									
AQU	**L'Aquila**	**86.25**	**351**		*e*P		**P**	**09 56 58.9**	**+1.1**
	comp=Z,65nm,0.8s,mb5.9									
ETSF	**Etsaut**	**86.34**	**1**		*e*P		**P**	**09 56 58.8**	**+0.5**
	comp=Z,35nm,0.8s,mb5.3									
ETSF	**Etsaut**	**86.34**	**1**		*e*P		**P**	**09 56 58.8**	**+0.5**
ETSF						pmax	pmax			
	comp=Z,17nm,0.8s,mb5.3									
ETSF	**Etsaut**	**86.34**	**1**		*e*P		**P**	**09 56 58.8**	**+0.5**
	comp=Z,17nm,0.8s,mb5.3									
PGF	**Pioggiola**	**86.42**	**354**	⇑	*i*P		**P**	**09 56 58.7**	**0.0**
	comp=Z,102nm,0.8s,mb5.8									
PGF	**Pioggiola**	**86.42**	**354**	⇑	*i*P		**P**	**09 56 58.7**	**0.0**
PGF						pmax	pmax			
	comp=Z,51nm,0.8s,mb5.8									
PGF	**Pioggiola**	**86.42**	**354**	⇑	*i*P		**P**	**09 56 58.7**	**0.0**
	comp=Z,51nm,0.8s,mb5.8									
KAD	**Karad**	**86.67**	**293**		*e*P		**P**	**09 56 59.3**	**-1.0**
KAD						AMb	AMB	09 57 01.1		
	comp=Z,59nm,1.0s,mb5.8									
ISP	**Isparta**	**87.63**	**337**		*e*P		**P**	**09 57 03.7**	**-0.9**
ISP						pmax	pmax			
	comp=Z,45nm,1.4s,mb5.5									
ISP	**Isparta**	**87.63**	**337**	⇑	*i*P		**P**	**09 57 04.4**	**-0.2**
	comp=Z,45nm,1.4s,mb5.5									
MVO	**Moncorvo**	**87.83**	**6**		*e*P		**P**	**09 57 05.9**	**+0.4**
PCBR	**Castelo Branco**	**89.12**	**6**		*e*P		**P**	**09 57 10.9**	**-0.7**
ESDC	**Sonseca Array**	**89.48**	**4**		P		**P**	**09 57 10.6**	**-2.7**
	comp=Z,3.6nm,0.7s,mb4.8,baz=359,slow=4.4,SNR=10									
ESDC	**Sonseca Array**	**89.48**	**4**		P		**P**	**09 57 10.6**	**-2.7**
STKA	**Stephens Creek**	**89.56**	**212**		*e*P		**P**	**09 57 12.7**	**-0.8**
	comp=Z,15nm,0.9s,mb5.3									
STKA	**Stephens Creek**	**89.56**	**212**		*e*P		pP	09 57 27.3	-0.8
	comp=Z,17nm,0.8s									
STKA	**Stephens Creek**	**89.56**	**212**		P		**P**	**09 57 13.1**	**-0.3**
	comp=Z,18nm,0.9s,mb5.4,baz=356,slow=7.3,SNR=17									
MIB	**Mutribah**	**89.56**	**321**		*e*P		**P**	**09 57 13.7**	**-0.1**
	baz=321									
MIB						AMb	AMB	09 57 14.5		
	comp=Z,119nm,0.9s,mb6.2,baz=321									
UMR	**Umm Al-Rimmam**	**89.63**	**320**		*e*P		**P**	**09 57 14.1**	**-0.1**
	baz=321									
UMR						AMb	AMB	09 57 14.7		
	comp=Z,63nm,0.9s,mb6.0,baz=321									
MBWA	**Marble Bar**	**89.63**	**235**		*e*P		**P**	**09 57 12.5**	**-1.6**
	comp=Z,15nm,0.8s,mb5.4									
MBWA						*e*pP	pP	09 57 25.9	-2.9
KBD	**Kabd**	**89.97**	**320**		*e*P		**P**	**09 57 15.3**	**-0.5**
	baz=320									
KBD						AMb	AMB	09 57 16.4		
	comp=Z,73nm,1.2s,mb5.9,baz=320									
NAY	**Al-Naaiem**	**90.09**	**321**		*e*P		**P**	**09 57 15.8**	**-0.5**
	baz=321									
NAY						AMb	AMB	09 57 16.8		
	comp=Z,42nm,1.0s,mb5.7,baz=321									
RDF	**Al-Radifah**	**90.25**	**320**		*e*P		**P**	**09 57 17.0**	**-0.1**
	baz=320									
RDF						AMb	AMB	09 57 17.8		
	comp=Z,104nm,0.9s,mb6.2,baz=320									
EVO	**Evora**	**90.38**	**7**		*e*P		**P**	**09 57 17.4**	**-0.2**
PBAR	**Barrancos**	**90.81**	**6**		*e*P		**P**	**09 57 18.4**	**-1.1**
MMAI	**Mount Meron Ar**	**90.82**	**331**		P		**P**	**09 57 19.7**	**0.0**
	comp=Z,1.1nm,0.3s,mb4.7,baz=7.6,slow=4.4,SNR=4.8									
ASF	**Jabal al Asfar**	**91.14**	**330**		P		**P**	**09 57 21.7**	**+0.5**
	comp=Z,4.6nm,0.8s,mb4.8,baz=222,slow=5.0,SNR=8.4									
ASF	**Jabal al Asfar**	**91.14**	**330**		P		**P**	**09 57 21.7**	**+0.5**
ASF						pmax	pmax			
	comp=Z,5.0nm,0.9s									
PBDV	**Barranco-do-Ve**	**91.67**	**7**		*e*P		**P**	**09 57 23.3**	**-0.2**
MDT	**Midelt**	**96.28**	**5**		P		**P**	**09 57 45.0**	**+0.2**
	comp=Z,4.7nm,0.8s,mb5.0,baz=344,slow=4.2,SNR=6.8									
TORD	**Torodi Ar. Bea**	**115.99**	**359**		PKP		PKPdf	10 02 57.8	-1.5
	comp=Z,2.2nm,0.8s,baz=342,slow=2.5,SNR=4.5									
TORD						PKKPbc	PKKPbc	10 13 28.5	+0.5	
	comp=Z,2.3nm,0.9s,baz=181,slow=1.9,SNR=4.9									
LVC	**Limon Verde**	**119.95**	**89**		*e*Pdif		Pdif	09 59 27.2	-3.1	
DBIC	**Dimbokro**	**122.23**	**7**		PKP		PKPdf	10 03 10.7	-0.6	
	comp=Z,11nm,0.9s,baz=183,slow=4.1,SNR=9.5									
DBIC	**Dimbokro**	**122.23**	**7**		PKIKP		PKPdf	10 03 10.7	-0.6	
DBIC						pmax	pmax			
	comp=Z,11nm,0.9s									
CPUP	**Villa Florida**	**129.91**	**83**		PKP		PKPdf	10 03 24.1	-1.4	
	comp=Z,4.1nm,0.8s,baz=302,slow=3.1,SNR=3.5									
CPUP	**Villa Florida**	**129.91**	**83**		PKIKP		PKPdf	10 03 24.2	-1.4	
CPUP						pmax	pmax			
	comp=Z,4.0nm,0.8s									
OPO	**Ambohidratompo**	**131.12**	**294**		PKP		PKPdf	10 03 27.7	-0.4	
	comp=Z,1.6nm,0.7s,baz=73,slow=4.3,SNR=3.1									
QSPA	**South Pole Qui**	**140.88**	**180**		PKP		PKPdf	10 03 44.5	+0.1	
	comp=Z,8.8nm,0.9s,baz=48,slow=1.8,SNR=4.2									
PMSA	**Palmer Station**	**144.75**	**139**		PKP		PKPdf	10 03 50.5	-1.1	
	comp=Z,74nm,1.3s,baz=11,slow=21,SNR=3.7									
PMSA	**Palmer Station**	**144.75**	**138**		PKP		PKPdf	10 03 50.5	-1.1	
TSUM	**Tsumeb**	**145.47**	**331**		PKPbc		PKPbc	10 03 54.8	+0.4	
	comp=Z,87nm,1.0s,baz=353,slow=5.5,SNR=74									
TSUM	**Tsumeb**	**145.47**	**331**		*e*PKPbc		PKPbc	10 03 54.6	+0.3	
MAW	**Mawson**	**146.11**	**217**		PKPbc		PKPbc	10 03 53.6	-1.3	
	comp=Z,23nm,1.0s,baz=76,slow=5.2,SNR=12									
MAW	**Mawson**	**146.11**	**217**		PKP2		PKPbc	10 03 53.6	-1.3	
MAW						pmax	pmax			
	comp=Z,23nm,1.0s									
MAW	**Mawson**	**146.11**	**217**		*e*PKPbc		PKPbc	10 03 53.8	-1.1	
LBTB	**Lobatse**	**147.70**	**314**		PKP2		PKPbc	10 04 00.4	-0.3	
LBTB	**Lobatse**	**147.70**	**314**		*e*PKPbc		PKPbc	10 04 00.8	+0.1	
BOSA	**Boshof**	**150.93**	**311**		PKPbc		PKPbc	10 04 08.3	-0.3	
	comp=Z,27nm,0.8s,baz=40,slow=1.5,SNR=28									
BOSA	**Boshof**	**150.93**	**311**		PKIKP		PKPbc	10 04 08.4	-0.3	
BOSA						pmax	pmax			
	comp=Z,27nm,0.9s									
VNA3	**Neumayer Olymp**	**159.27**	**170**		*e*PKPdf		PKPab	10 04 49.1	-1.5	
VNA2	**Neumayer--Watz**	**159.79**	**172**		*e*PKPdf		PKPab	10 04 51.9	-0.9	

BJI ***19*** *09:46:45.7, 51.50N×179.60W, h13km, mB5.7, mb5.2, Ms5.9, Msz5.5*

NEIC ***19*** *09:46:48.5±0.2, 51.10N×179.29W, h30km, mb5.3/118, ML5.2(AEIC), Error ellipse: s-maj=5.3km s-min=2.3km az=3.0*

MOS ***19*** *09:46:49.0±0.8, 51.08N×179.22W, h49km, mb5.3/82, Error ellipse: s-maj=8.6km s-min=5.3km az=90.8*

ISCJB ***19*** *09:46:53.0±0.2, 51.15N±0.04×179.22W±0.03, h80km, mb5.1/200, Error ellipse: s-maj=6.2km s-min=2.1km az=8.2*

IDC ***19*** *09:46:54.0±0.3, 51.10N×179.22W, h81km±2km, mb4.6/36, mb1 4.8/36, mb1mx4.7/39, mbtmp4.6/36, Error ellipse: s-maj=11.1km s-min=7.5km az=168.0*

SZGRF ***19*** *09:46:59.0, 51.63N×179.66E, h79km, mb5.1, Rat Islands, Aleutian Islands, United States*

ISC 19 09:46:54.9±0.2, 5120N±004×17923W±003, h82km, h82km±.7km: pP-P, n919, σ0.9=60/768, mb5.1/200, 240C-165D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.73**	**66**	P	**Pn**	**09 47 18.3**	**-4.9**
ADK				S	**Sn**	**09 47 41.2**	**-3.6**
ADK	**Adak**	**1.73**	**66**	P	**Pn**	**09 47 18.4**	**-4.9**
ADK				S	**Sn**	**09 47 41.2**	**-3.5**
ATKA	**Atka Island**	**3.29**	**70**	P	**Pn**	**09 47 40.2**	**-3.9**
ATKA				S	**Sn**	**09 48 19.3**	**-2.8**
FX1	**Attu Island--F**	**4.99**	**293**	P	**Pn**	**09 48 04.1**	**-3.1**
	128nm,0.3s,baz=276,slow=21,SNR=7.2						
FX1	**Attu Island--F**	**4.99**	**293**	P	**Pn**	**09 48 04.1**	**-3.1**
FX1				pmax	pmax		
	comp=Z,128nm,0.3s						
FX1	**Attu Island--F**	**4.99**	**293**	P	**Pn**	**09 48 04.1**	**-3.1**
NIKO	**Nikolski**	**6.64**	**70**	P	**Pn**	**09 48 26.4**	**-3.3**
SPIA	**Saint Paul Isl**	**7.98**	**38**	P	**Pn**	**09 48 47.3**	**-0.6**
UNV	**Unalaska Valle**	**8.21**	**66**	P	**Pn**	**09 48 48.0**	**-3.0**
CHGN	**Chignik**	**13.31**	**59**	Pn		09 50 17.7	
PET	**Petropavlovsk**	**13.71**	**286**	*e*P	**Pn**	**09 50 07.3**	**+1.9**
PET				pmax	pmax		
	comp=Z,23nm,0.7s						
PET				MLR	MLR		
	comp=Z,61μm,18.0s						
PET	**Petropavlovsk**	**13.71**	**286**	*e*Pn		09 50 17.9	
PETK	**Petropavlovsk-**	**14.28**	**287**	P	**Pn**	**09 50 11.2**	**-1.7**
	baz=91,slow=16,SNR=2.3						
OHAK	**Old Harbor**	**16.27**	**58**	*e*Pn	**Pn**	**09 50 35.1**	**-3.0**
SVW2	**Sparrevohn**	**16.39**	**44**	*e*P	**Pn**	**09 50 40.2**	**+0.6**
KDAK	**Kodiak Island**	**16.75**	**56**	P	**Pn**	**09 50 38.3**	**-5.7**
	comp=Z,7.7nm,0.3s,baz=264,slow=5.6,SNR=9.8						
KDAK	**Kodiak Island**	**16.75**	**56**	*e*P	**Pn**	**09 50 38.0**	**-6.0**
KDAK				pmax	pmax		
	comp=Z,55nm,0.8s						
KDAK	**Kodiak Island**	**16.75**	**56**	*e*Pn	**Pn**	**09 50 38.0**	**-6.0**
	comp=Z,55nm,0.8s						
BILL	**Bilibino**	**18.32**	**343**	*e*P	**Pn**	**09 51 03.0**	**-0.1**
BILL				pmax	pmax		
	comp=Z,61nm,1.3s						
BILL	**Bilibino**	**18.32**	**343**	*i* P	pP	09 51 24.4	+6.2
SEY	**Seymchan**	**19.20**	**319**	*i* P	pP	09 51 35.7	+7.7
COLA	**College**	**21.22**	**38**	*i* P	**P**	**09 51 40.8**	**+7.2**
EGAK	**Eagle**	**23.86**	**41**	*e*P	**P**	**09 51 58.9**	**-1.3**
	comp=Z,116nm,1.1s,mb5.1						
DAWY	**Dawson**	**24.43**	**43**	*e*P	**P**	**09 52 04.2**	**-1.1**
DAWY	**Dawson**	**24.43**	**43**	*e*P	pP	09 52 24.8	+0.9
HYT	**Haines Junctio**	**24.82**	**51**	*e*P	**P**	**09 52 08.3**	**-0.6**
YSS	**Yuzh-Sakhalins**	**25.07**	**275**	*e*P	**P**	**09 52 11.2**	**-0.2**
	comp=Z,90nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**25.07**	**275**	*e*P	pP	09 52 32.0	+2.0
ASAJ	**Asahikawa**	**26.43**	**270**	P	**P**	**09 52 22.6**	**-1.1**
	comp=Z,26nm,0.8s,mb4.7,baz=60,slow=5.7,SNR=4.8						
ASAJ					pP	09 52 41.9	-0.5
	comp=Z,102nm,1.2s,baz=62,slow=7.1,SNR=5.1						
ASAJ	**Asahikawa**	**26.43**	**270**	P	**P**	**09 52 22.7**	**-1.0**
ASAJ				*PP	pP	09 52 41.9	-0.5
ASAJ				pmax	pmax		
	comp=Z,26nm,0.8s						
ASAJ				pmax	pmax		
	comp=Z,102nm,1.2s						
ERM	**Erimo**	**27.16**	**265**	⇓	*e*P	pP	09 52 49.1	+0.1
INK	**Inuvik**	**27.77**	**35**		P	**P**	**09 52 34.5**	**-0.9**
	comp=Z,10nm,0.7s,mb4.5,baz=273,slow=14,SNR=6.0							
INK					pP	pP	09 52 55.4	+1.2
	comp=Z,14nm,0.8s,baz=265,slow=14,SNR=3.1							
INK	**Inuvik**	**27.77**	**35**		P	**P**	**09 52 34.5**	**-0.9**
INK					*PP	pP	09 52 55.4	+1.2
INK					pmax	pmax		
	comp=Z,10.0nm,0.7s							
INK					pmax	pmax		
	comp=Z,14nm,0.8s							
INK	**Inuvik**	**27.77**	**35**		P	**P**	**09 52 34.5**	**-0.9**
INK					pP	pP	09 52 55.4	+1.2
INK	**Inuvik**	**27.77**	**35**		*e*P	pP	09 52 56.4	+2.2
	comp=Z,23nm,0.9s							
YAK	**Yakutsk**	**29.34**	**312**		*e*P	pP	09 53 08.9	+0.6
	comp=Z,67nm,1.0s							
TIXI	**Tiksi**	**30.66**	**331**		*i* P	pP	09 53 26.3	+6.3
KLR	**Kul'dur**	**30.97**	**286**	⇓	*i*P	**P**	**09 52 58.6**	**-5.3**
KLR					pmax	pmax		
	comp=E,120nm,1.4s							
KLR					pmax	pmax		
	comp=Z,200nm,1.4s,mb5.7							
BBB	**Bella Bella**	**31.17**	**68**		P	**P**	**09 53 05.5**	**-0.1**
	comp=Z,21nm,0.8s,mb4.9,baz=121,slow=4.7,SNR=3.7							
BBB					pP	pP	09 53 24.6	0.0
	comp=Z,46nm,0.9s,baz=324,slow=6.2,SNR=4.0							
CLNS	**Chul'man**	**32.51**	**302**		*e*P	pP	09 53 31.5	-4.9
CLNS					pmax	pmax		
	comp=Z,32nm,1.0s,mb5.1							
CLNS					pmax	pmax		
	comp=N,20nm,1.2s							
CLNS					pmax	pmax		
	comp=E,18nm,1.1s							
MJAR	**Matsushiro Arr**	**33.49**	**261**		P	**P**	**09 53 25.2**	**-0.9**
	comp=E,4.3nm,0.7s,mb4.4,baz=50,slow=7.8,SNR=6.5							
MJAR					pP	pP	09 53 45.0	-0.1
	comp=E,13nm,1.1s,baz=49,slow=7.3,SNR=7.2							
MJAR	**Matsushiro Arr**	**33.49**	**261**		P	**P**	**09 53 25.2**	**-0.9**
MJAR					*PP	pP	09 53 45.1	-0.1
MJAR					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MJAR					pmax	pmax		
	comp=Z,13nm,1.1s							
MAJO	**Matsushiro**	**33

E08A **Dider Farm, El** 38.91 73 ⇑P P 09 54 12.2 +0.1
baz=39
H06A **Lindquist Farm** 39.03 76 ⇑P P 09 54 13.3 +0.1
baz=39
D09A **Jones Farm, Ri** 39.08 71 ⇑P P 09 54 13.5 -0.1
baz=39
B10A **Chitwood Farm,** 39.12 69 ⇓P P 09 54 14.2 +0.2
baz=39
EDM **Edmonton** 39.14 60 eP P 09 54 13.2 -0.8
EDM e pP 09 54 34.3 +0.9
EDM **Edmonton** 39.14 60 eP P 09 54 13.2 -0.9
EDM **Edmonton** 39.14 60 eP pP 09 54 34.1 +0.7
G07A **Ruggs Ranch, H** 39.16 75 ⇑P P 09 54 14.4 +0.2
baz=39
YBH **Yreka Blue Hor** 39.18 81 P P 09 54 14.9 +0.4
comp=Z,6.1nm,0.7s,mb4.5,baz=322,slow=2.4,SNR=3.0
YBH pP pP 09 54 34.9 +1.0
comp=Z,12nm,0.8s,baz=330,slow=8.9,SNR=3.4
YBH **Yreka Blue Hor** 39.18 81 P P 09 54 14.9 +0.4
YBH *PP pP 09 54 34.9 +1.0
YBH pmax pmax
comp=Z,6.0nm,0.7s
YBH pmax pmax
comp=Z,13nm,0.8s
NEW **Newport** 39.20 69 eP P 09 54 14.3 -0.3
NEW pmax pmax
comp=Z,50nm,1.1s
NEW **Newport** 39.20 69 eP P 09 54 14.3 -0.3
comp=Z,50nm,1.1s,mb5.3
C10A **Spilker Farm,** 39.30 70 ⇑P P 09 54 15.4 0.0
baz=39
A11A **Hall Mountain,** 39.32 68 ⇑P P 09 54 16.0 +0.5
baz=39,SNR=8.7
KSRS **Korea Array** 39.37 271 P P 09 54 16.0 -0.1
comp=Z,21nm,0.8s,mb5.0,baz=56,slow=8.3,SNR=20
KSRS pP pP 09 54 35.8 +0.2
comp=Z,20nm,0.8s,baz=59,slow=7.9,SNR=11
KSRS **Korea Array** 39.37 271 P P 09 54 16.0 -0.1
KSRS *PP pP 09 54 35.8 +0.2
KSRS pmax pmax
comp=Z,21nm,0.8s,mb5.0
KSRS pmax pmax
comp=Z,20nm,0.8s,mb5.0
F08A **Pendleton** 39.43 73 ⇑P P 09 54 16.8 +0.3
baz=39
E09A **Wood Farm, Sta** 39.45 72 ⇑P P 09 54 16.6 -0.1
baz=39
B11A **Sandpoint** 39.56 69 ⇑P P 09 54 17.6 0.0
baz=39,SNR=6.3
G08A **Pilot Rock** 39.58 74 ⇓P P 09 54 17.8 0.0
baz=39
D10A **Wagner Farm, O** 39.70 71 ⇓P P 09 54 18.2 -0.5
baz=40,SNR=5.4
A12A **Yaak River Ran** 39.74 67 ⇑P P 09 54 19.0 -0.1
baz=40
I07A **Izee** 39.88 76 ⇑P P 09 54 20.4 +0.2
baz=40,SNR=5.1
J06A **Christmas Vall** 39.92 78 ⇓P P 09 54 21.1 +0.4
baz=40
F09A **S2 Ranch, Elgi** 40.00 73 ⇓P P 09 54 21.4 +0.2
baz=40,SNR=6.1
B12A **Libby** 40.00 68 ⇓P P 09 54 21.7 +0.5
baz=40
E10A **Myers Farm, Un** 40.08 72 ⇓P P 09 54 21.7 -0.2
baz=40,SNR=7.8
D11A **Klaveano Farm,** 40.26 70 ⇑P P 09 54 22.5 -0.9
baz=40,SNR=6.1
G09A **Cove** 40.30 74 ⇓P P 09 54 23.6 -0.1
baz=40
J07A **Hines** 40.38 77 ⇑P P 09 54 24.9 +0.5
baz=40
C12B **Naegeli Ranch,** 40.44 69 ⇑P P 09 54 24.7 -0.2
baz=40,SNR=8.4
A13A **Flathead Natio** 40.46 67 ⇓P P 09 54 25.2 +0.1
baz=40
I08A **Drewsey** 40.54 76 ⇓P P 09 54 26.1 +0.4
baz=40
MOD **Modoc** 40.57 79 eP P 09 54 26.3 +0.3
comp=Z,10nm,0.6s,mb4.8
E11A **Bogner Ranch,** 40.68 71 ⇓P P 09 54 26.6 -0.3
baz=40
G10A **Bishop Farm, J** 40.69 73 ⇑P P 09 54 27.1 +0.2
baz=40,SNR=8.8
H09A **Durkee** 40.69 74 ⇑P P 09 54 26.7 -0.2
baz=40
WALA **Waterton Lakes** 40.69 66 eP P 09 54 26.8 -0.1
comp=Z,2.3nm,1.0s,mb4.0
WALA **Waterton Lakes** 40.69 66 eP pP 09 54 47.5 +1.0
comp=Z,3.0nm,1.1s
B13A **Whitefish** 40.70 68 ⇑P P 09 54 26.6 -0.4
baz=40
BSMT **Bassoo Peak** 40.77 69 P P 09 54 27.7 +0.1
K07A **Rock Creek Ran** 40.79 78 ⇑P P 09 54 28.4 +0.6
baz=41,SNR=6.9
BMO **Blue Mountains** 40.80 74 eP pP 09 54 50.5 +3.1
BMO **Blue Mountains** 40.80 74 eP P 09 54 28.2 +0.3
comp=Z,16nm,1.1s,mb4.8
J08A **Circle Bar Ran** 40.90 76 ⇑P P 09 54 28.5 -0.2
baz=41
F11A **Grangeville** 40.96 72 ⇑P P 09 54 29.1 -0.1
baz=41
C13A **Hot Springs** 40.98 69 ⇑P P 09 54 29.3 0.0
baz=41
I09A **Lost Marbles R** 41.01 75 ⇑P P 09 54 29.5 -0.1
baz=41
A14A **Double T Ranch** 41.02 66 ⇓P P 09 54 29.6 0.0
baz=41,SNR=9.0
JTMT **Jette** 41.12 68 eP P 09 54 30.6 +0.2
G11A **Walters Elk Ra** 41.14 73 ⇓P P 09 54 30.1 -0.6
baz=41
YBMT **Yellow Bay** 41.22 68 eP P 09 54 31.2 -0.1
K08A **Mann Creek Ran** 41.23 77 ⇓P P 09 54 31.9 +0.4
baz=41
H10A **Noah's Angus R** 41.28 74 ⇓P P 09 54 31.5 -0.3
baz=41,SNR=7.7
WVOR **Wild Horse Val** 41.30 78 eP P 09 54 31.8 -0.2
WVOR pmax pmax
comp=Z,12nm,0.7s,mb4.8
WVOR **Wild Horse Val** 41.30 78 eP P 09 54 31.8 -0.2
comp=Z,12nm,0.7s,mb4.8
J09A **Fry Pan Ranch,** 41.34 76 ⇑P P 09 54 32.5 +0.2
baz=41
D13A **Huson** 41.34 69 ⇓P P 09 54 31.9 -0.4
baz=41
B14A **Marquette Ranc** 41.40 67 ⇑P P 09 54 32.6 -0.1
baz=41,SNR=5.1
SWMT **Swartz Lake** 41.40 69 eP P 09 54 32.8 0.0
A15A **Johnson Ranch,** 41.41 66 ⇓P P 09 54 32.2 -0.6
baz=41
I10A **Payette** 41.52 75 ⇓P P 09 54 34.0 +0.2
baz=41,SNR=5.8
N06A **Buffalo Meadow** 41.52 81 ⇓P P 09 54 34.1 +0.3
baz=41
M07A **Soldier Meadow** 41.56 79 ⇑P P 09 54 34.7 +0.5
baz=41,SNR=6.3
L08A **Fields** 41.62 78 ⇑P P 09 54 34.0 -0.6
baz=42
H11A **Donnelly** 41.66 73 ⇓P P 09 54 34.5 -0.4
baz=42
BEKR **Beckwourth** 41.71 82 ⇑P P 09 54 35.1 -0.2
baz=42
MSO **Missoula** 41.78 69 eP P 09 54 35.5 -0.4
comp=Z,140nm,2.0s,mb5.3
SLMT **Seeley Lake** 41.84 69 eP P 09 54 36.2 -0.1
B15A **Bradely Ranch,** 41.84 67 ⇓P P 09 54 35.8 -0.5
baz=42,SNR=7.5
E13A **Victor** 41.84 70 ⇓P P 09 54 36.1 -0.3
baz=42
J10A **Berg Farm, Mel** 41.90 75 ⇑P P 09 54 36.9 +0.1
baz=42
D14A **Greenough** 41.91 69 ⇑P P 09 54 36.7 -0.3
baz=42,SNR=12
M08A **Happy Creek Ra** 42.02 79 ⇑P P 09 54 38.5 +0.7
baz=42
N07B **Gerlach** 42.04 80 ⇑P P 09 54 38.2 +0.2
baz=42
A16A **West Butte Ran** 42.08 65 ⇑P P 09 54 37.5 -0.7
baz=42,SNR=9.0
C15A **Salmond Ranch,** 42.08 67 ⇓P P 09 54 38.3 0.0
baz=42,SNR=16
F13A **Darby** 42.09 71 ⇑P P 09 54 38.5 +0.1
baz=42,SNR=5.6
P06A **Stead Airport,** 42.10 82 ⇑P P 09 54 38.7 +0.2
baz=42
L09A **Wilkinson Ranc** 42.13 78 ⇑P P 09 54 39.5 +0.7
baz=42
CHMT **Chamberlain Mo** 42.15 69 eP P 09 54 38.6 -0.2

K10A **MacKenzie Ranc** 42.20 76 ⇑P P 09 54 39.6 +0.3
baz=42
E14A **Clinton** 42.26 70 ⇓P P 09 54 39.4 -0.4
baz=42,SNR=5.5
B16A **M & M Farms, S** 42.28 66 ⇑P P 09 54 39.1 -0.9
baz=42,SNR=5.4
WCN **Washoe City** 42.41 82 ⇓P P 09 54 41.4 +0.3
baz=42
H12A **Diamond D Ranc** 42.44 73 ⇓P P 09 54 41.1 -0.2
baz=42
O07A **Toulon** 42.45 81 ⇑P P 09 54 41.5 0.0
baz=42
MFID **Camas Ranch** 42.48 75 ⇑P P 09 54 41.4 -0.2
baz=42
D15A **Lincoln** 42.51 68 ⇑P P 09 54 41.8 0.0
baz=42
G13A **Cobalt** 42.52 72 ⇑P P 09 54 41.5 -0.4
baz=42,SNR=6.0
N08A **GE Springer Mi** 42.55 79 ⇑P P 09 54 42.2 -0.1
baz=42
C16A **Fuhringer Ranc** 42.57 67 ⇓P P 09 54 41.9 -0.4
baz=42,SNR=9.1
A17A **Triple J Farms** 42.59 65 ⇑P P 09 54 41.6 -0.8
baz=42,SNR=12
M09A **Marrel Ranch,** 42.61 78 ⇑P P 09 54 42.8 +0.2
baz=42
F14A **Wisdom** 42.65 70 ⇓P P 09 54 43.1 +0.1
baz=42
K11A **Parker Ranch,** 42.71 76 ⇑P P 09 54 43.5 +0.1
baz=42
E15A **Deer Lodge** 42.76 69 ⇑P P 09 54 43.6 -0.3
baz=43
H13A **Challis** 42.80 72 ⇓P P 09 54 44.4 +0.2
baz=43
O08A **Rochester Mine** 42.83 80 ⇑P P 09 54 44.7 +0.3
baz=43
L10A **Juniper Basin** 42.83 77 ⇑P P 09 54 44.8 +0.3
baz=43
N09A **Rock Creek Ran** 42.89 79 ⇓P P 09 54 45.6 +0.7
baz=43
J12A **Stokes Ranch,** 43.01 75 ⇑P P 09 54 46.0 +0.1
baz=43,SNR=5.8
R06C **Coleville** 43.07 83 ⇑P P 09 54 46.5 0.0
baz=43
D16A **Dana Ranch, Ca** 43.08 68 ⇑P P 09 54 46.0 -0.4
baz=43
HRY **Holter Researc** 43.09 68 eP P 09 54 46.4 0.0
A18A **Metzger Ranch,** 43.09 65 ⇑P P 09 54 46.1 -0.3
baz=43
M10A **I.L. Ranch, Tu** 43.11 78 ⇓P P 09 54 47.0 +0.3
baz=43
F15A **Butte** 43.16 70 ⇑P P 09 54 46.5 -0.5
baz=43
L11A **Cat Creek Ranc** 43.22 76 ⇓P P 09 54 47.6 -0.1
baz=43,SNR=6.1
C17A **Wharram Farm,** 43.22 67 ⇑P P 09 54 47.1 -0.5
baz=43,SNR=7.8
I13A **Wildhorse Cree** 43.24 73 ⇑P P 09 54 47.8 +0.1
baz=43,SNR=7.1
HLID **Hailey** 43.25 74 eP P 09 54 48.2 +0.4
comp=Z,25nm,0.8s,mb5.0
E16A **East Helena** 43.27 69 ⇓P P 09 54 47.8 -0.1
baz=43
H14A **Leadore** 43.30 72 ⇑P P 09 54 48.0 -0.1
baz=43,SNR=6.7
B18A **Beardsley Farm** 43.40 65 ⇓P P 09 54 48.5 -0.5
baz=43,SNR=7.2
K12A **Draper Farm, C** 43.48 75 ⇑P P 09 54 49.7 +0.1
baz=43,SNR=11
J13A **Cove Ranch, Pi** 43.49 74 ⇑P P 09 54 49.7 0.0
baz=43,SNR=10
O09A **Fish Creek Ran** 43.49 80 ⇑P P 09 54 50.4 +0.6
baz=43
D17A **Six Diamond Ra** 43.52 67 ⇓P P 09 54 50.1 +0.1
baz=43
G15A **Dillon** 43.52 71 ⇑P P 09 54 49.9 -0.1
baz=43
EGMT **Eagleton** 43.60 66 eP P 09 54 49.7 -0.8
comp=Z,94nm,0.9s,mb5.5
EGMT epP pP 09 55 10.1 -0.2
I14A **Mackay** 43.63 73 ⇑P P 09 54 50.9 +0.1
baz=44,SNR=6.9
L12A **House Creek Ra** 43.69 76 ⇓P P 09 54 51.4 +0.1
baz=44,SNR=8.9
F16A **Kennard Place,** 43.70 69 ⇓P P 09 54 50.8 -0.6
baz=44,SNR=7.8
H15A **Lima** 43.73 71 ⇓P P 09 54 51.6 0.0
baz=44,SNR=5.7
BOZ **Bozeman (W)** 43.77 70 eP P 09 54 52.0 0.0
BOZ pmax pmax
comp=Z,32nm,0.8s,mb5.1
BOZ **Bozeman (W)** 43.77 70 eP P 09 54 52.0 0.0
comp=Z,32nm,0.8s,mb5.1
E17A **Martinsdale** 43.79 68 ⇑P P 09 54 52.2 +0.1
baz=44,SNR=5.2
Q08A **Gabbs** 43.81 82 ⇓P P 09 54 52.6 +0.2
baz=44
NVAR **Mina Array Bea** 43.84 82 P P 09 54 52.8 +0.2
comp=Z,5.5nm,0.8s,mb4.4,baz=288,slow=7.2,SNR=3.8
NVAR pP pP 09 55 13.4 +1.0
comp=Z,6.5nm,0.8s,baz=290,slow=8.5,SNR=3.8
O10A **Cortez Mining,** 43.85 79 ⇑P P 09 54 53.0 +0.3
baz=44
P09A **Austin** 43.89 80 ⇑P P 09 54 53.2 +0.2
baz=44
G16A **Moss Hill, Enn** 43.90 70 ⇓P P 09 54 52.6 -0.4
baz=44,SNR=7.4
J14A **Carey** 43.93 74 ⇑P P 09 54 53.6 +0.3
baz=44
K13A **Stover Farm, H** 43.97 75 ⇑P P 09 54 53.9 +0.3
baz=44
D18A **Linhart Farms,** 44.01 67 ⇑P P 09 54 54.5 +0.6
baz=44,SNR=9.9
M12A **Wells** 44.17 77 ⇓P P 09 54 55.8 +0.6
baz=44
I15A **Monteview** 44.17 72 ⇓P P 09 54 55.4 +0.2
baz=44
F17A **Fitzpatrick Pl** 44.20 69 ⇑P P 09 54 55.2 -0.2
baz=44,SNR=6.2
E18A **Harlowton** 44.28 68 ⇓P P 09 54 56.2 +0.1
baz=44,SNR=7.4
Q09A **Carvers** 44.30 81 ⇓P P 09 54 56.5 +0.2
baz=44
QLMT **Earthquake Lak** 44.34 71 eP P 09 54 56.2 -0.3
MTUM **Tungsten Hills** 44.34 84 eP P 09 54 57.1 +0.5
ELK **Elko** 44.36 78 eP P 09 54 57.1 +0.4
ELK pmax pmax
comp=Z,26nm,0.8s
ELK **Elko** 44.36 78 eP P 09 54 57.1 +0.4
comp=Z,26nm,0.8s,mb5.0
L13A **Double Diamond** 44.37 75 ⇓P P 09 54 57.3 +0.5
baz=44
N12A **Clover Valley,** 44.42 77 ⇓P P 09 54 57.3 +0.1
baz=44,SNR=6.5
O11A **Cowboy Ranch,** 44.47 79 ⇓P P 09 54 58.0 +0.5
baz=44
H16A **Russell Place,** 44.51 71 ⇓P P 09 54 58.0 +0.1
baz=44,SNR=9.2
J15A **Blackfoot** 44.54 73 ⇓P P 09 54 58.8 +0.7
baz=44
RCTC **Rector, Farmer** 44.57 85 ⇓P P 09 54 58.5 +0.1
baz=44
K14A **Jones Ranch, D** 44.58 74 ⇑P P 09 54 59.5 +1.1
baz=44
M13A **Montello** 44.66 76 ⇓P P 09 54 59.6 +0.5
baz=44
R09A **Tonopah** 44.73 82 ⇓P P 09 54 59.9 +0.2
baz=45,SNR=10
TIN **Timemaha** 44.74 84 ⇑P P 09 54 60.0 +0.2
baz=45
F18A **Big Timber** 44.76 68 ⇑P P 09 55 00.2 +0.4
baz=45
Q10A **Clear Creek Ra** 44.79 81 ⇑P P 09 55 00.6 +0.5
baz=45
I16A **Newdale** 44.84 72 ⇑P P 09 55 00.7 +0.3
baz=45,SNR=6.1
YNR **Norris Junctio** 44.84 70 eP P 09 55 01.0 +0.5
K15A **Arbon** 44.88 74 ⇓P P 09 55 01.6 +0.7
baz=45,SNR=11
YFT **Old Faithful** 44.90 71 eP P 09 55 01.9 +0.9
O12A **Currie** 44.95 78 ⇓P P 09 55 01.6 +0.2
baz=45,SNR=9.4
S09A **Goldfield** 44.95 82 ⇓P P 09 55 01.7 +0.2
baz=45
VES **Vestal, Richgr** 44.96 86 ⇓P P 09 55 01.2 -0.4
baz=45
M14A **Sheep Mountain** 45.07 76 ⇓P P 09 55 02.9 +0.5
baz=45

H17A **Grant Village** 45.09 71 ⇓P P 09 55 04.0 +1.5
baz=45,SNR=9.6
BJI **Beijing** 45.15 282 P P 09 55 02.4 -0.6
IMW **Indian Meadow** 45.15 71 eP P 09 55 03.2 +0.3
comp=Z,24nm,0.9s,mb4.9
G18A **Lazy EL Ranch,** 45.17 69 ⇑P P 09 55 02.9 -0.2
baz=45
R10A **Warm Springs** 45.18 81 ⇓P P 09 55 03.4 +0.1
baz=45
S10A **Tonopah Range,** 45.22 82 ⇓P P 09 55 03.7 +0.1
baz=45
RRI2 **Red Ridge** 45.23 72 eP P 09 55 04.5 +0.8
comp=Z,38nm,0.9s,mb5.1
Q11A **Duckwater** 45.24 80 ⇓P P 09 55 03.6 -0.1
baz=45
HVU **Hansel Valley** 45.26 75 eP P 09 55 04.0 +0.1
HVU pmax pmax
comp=Z,28nm,0.8s,mb5.0
HVU **Hansel Valley** 45.26 75 eP P 09 55 04.0 +0.1
comp=Z,28nm,0.8s,mb5.0
GRAC **Grapevine Rang** 45.31 83 ⇑P P 09 55 04.6 +0.3
baz=45
P12A **McGill** 45.32 79 ⇑P P 09 55 04.9 +0.5
baz=45
I17A **Pilgram Creek** 45.35 71 ⇓P P 09 55 05.2 +0.6
baz=45
L15A **Malad City** 45.37 74 ⇑P P 09 55 05.6 +0.9
baz=45,SNR=6.2
K16A **Soda Springs** 45.37 73 ⇑P P 09 55 06.1 +1.4
baz=45,SNR=7.9
RLMT **Red Lodge** 45.45 69 eP P 09 55 05.9 +0.6
comp=Z,84nm,0.9s,mb5.5
ISA **Isabella** 45.46 85 ⇑P P 09 55 04.9 -0.6
baz=45
ISA **Isabella** 45.46 85 eP P 09 55 04.0 -1.5
ISA pmax pmax
comp=Z,18nm,0.9s,mb4.8
ISA **Isabella** 45.46 85 eP P 09 55 04.0 -1.5
comp=Z,18nm,0.9s,mb4.8
O13A **Hicks Ranch, I** 45.50 77 ⇓P P 09 55 05.4 -0.4
baz=45
N14A **Grayback Hills** 45.55 76 ⇑P P 09 55 06.2 0.0
baz=45
R11A **Troy Canyon, C** 45.59 81 ⇓P P 09 55 06.8 +0.4
baz=45
J17A **Brown Place, J** 45.59 72 ⇓P P 09 55 07.0 +0.5
baz=45
Q12A **Willow Creek R** 45.63 79 ⇑P P 09 55 07.2 +0.4
baz=46
M15A **Larsen Ranch,** 45.65 75 ⇑P P 09 55 07.4 +0.5
baz=46
MPMC **Manual Prospec** 45.82 84 ⇓P P 09 55 08.5 +0.1
baz=46
P13A **Bates Ranch, G** 45.88 78 ⇓P P 09 55 09.3 +0.5
baz=46,SNR=6.4
I18A **Diamond G Ranc** 45.93 71 ⇑P P 09 55 09.9 +0.8
baz=46,SNR=5.7
TLY **Talaya** 45.93 302 P pP 09 55 30.3 +1.4
comp=Z,60nm,1.0s
L16A **Fish Haven** 45.94 74 ⇑P P 09 55 09.6 +0.4
baz=46
N15A **Stansbury Isla** 45.94 76 ⇓P P 09 55 09.6 +0.4
baz=46
FURC **Furnace Creek,** 45.96 83 ⇓P P 09 55 09.3 -0.1
baz=46
J18A **Kendall Valley** 46.09 72 ⇓P P 09 55 10.5 +0.1
baz=46,SNR=5.6
ULN **Ulaanbaatar** 46.10 296 eP pP 09 55 31.7 +1.4
comp=Z,27nm,0.8s
DUG **Dugway** 46.17 77 eP P 09 55 11.8 +0.7
DUG pmax pmax
comp=Z,94nm,1.2s,mb5.4
DUG **Dugway** 46.17 77 eP P 09 55 11.8 +0.7
comp=Z,94nm,1.2s,mb5.4
Q13A **Wheeler Ranch,** 46.18 79 ⇓P P 09 55 11.6 +0.4
baz=46
R12A **Pony Springs,** 46.20 80 ⇑P P 09 55 11.6 +0.2
baz=46
M16A **Huntsville** 46.23 75 ⇑P P 09 55 11.9 +0.4
baz=46,SNR=8.2
EDW2 **Edwards Air Fo** 46.26 86 ⇑P P 09 55 11.5 -0.4
baz=46
NOQ **North Oquirrh** 46.32 76 eP P 09 55 12.0 -0.2
comp=Z,39nm,0.8s,mb5.2
O15A **The Old Anders** 46.33 76 ⇑P P 09 55 12.7 +0.4
baz=46
P14A **Drum Mountains** 46.38 78 ⇑P P 09 55 13.4 +0.6
baz=46,SNR=6.5
K18A **Toltan Ranch,** 46.41 72 ⇓P P 09 55 13.2 +0.3
baz=46,SNR=6.6
SONM **Songino Array** 46.49 297 P P 09 55 13.8 +0.4
comp=Z,9.9nm,0.6s,mb4.7,baz=76,slow=5.6,SNR=10
SONM pP pP 09 55 34.0 +0.7
comp=Z,29nm,1.0s,baz=57,slow=7.6,SNR=8.9
SONM **Songino Array** 46.49 297 P P 09 55 13.8 +0.4
SONM *PP pP 09 55 34.0 +0.7
SONM pmax pmax
comp=Z,10.0nm,0.6s
SONM pmax pmax
comp=Z,29nm,1.0s
T11A **Corn Creek, Al** 46.50 81 ⇓P P 09 55 13.8 +0.1
baz=46,SNR=5.2
S12A **Delamar Landin** 46.50 81 ⇓P P 09 55 14.1 +0.4
baz=46
N16A **Rees Ranch, Co** 46.60 75 ⇑P P 09 55 15.1 +0.6
baz=46
Q14A **Sevier Lake (B** 46.62 78 ⇓P P 09 55 15.4 +0.8
baz=46,SNR=7.0
BW06 **Boulder Array** 46.62 72 eP P 09 55 14.4 -0.2
comp=Z,81nm,0.9s,mb5.5
PDAR **Pinedale Array** 46.62 72 P P 09 55 14.2 -0.3
comp=Z,33nm,0.8s,mb5.1,baz=304,slow=3.9,SNR=11
PDAR pP pP 09 55 34.8 +0.3
comp=Z,69nm,0.8s,baz=316,slow=2.2,SNR=11
MWC **Mount Wilson** 46.65 87 eP P 09 55 14.7 -0.2
MWC pmax pmax
comp=Z,41nm,1.1s,mb5.1
SHOC **Shoshone** 46.68 84 ⇓P P 09 55 15.0 -0.1
baz=46
M17A **Scullys Gap (B** 46.72 74 ⇓P P 09 55 15.4 0.0
baz=46
GSC **Goldstone** 46.73 85 ⇓P P 09 55 15.3 -0.2
baz=47
GSC **Goldstone** 46.73 85 eP P 09 55 14.8 -0.7
GSC pmax pmax
comp=Z,23nm,1.0s,mb4.9
GSC **Goldstone** 46.73 85 eP P 09 55 14.8 -0.7
comp=Z,23nm,1.0s,mb4.9
NLU **North Lily Min** 46.77 76 eP P 09 55 15.7 0.0
NLU epP pP 09 55 40.5 +4.9
ZAK **Zakamensk** 46.82 301 eP P 09 55 16.1 +0.1
ZAK e pP 09 55 37.4 +1.5
ZAK e 09 57 09.0
ZAK pmax pmax
comp=Z,36nm,1.3s,mb4.9
L18A **Fontenelle, Gr** 46.83 73 ⇑P P 09 55 16.1 -0.1
baz=47,SNR=5.9
P15A **Leamington** 46.88 77 ⇓P P 09 55 17.1 +0.5
baz=47
BFSC **Mount Baldy St** 46.89 86 ⇓P P 09 55 16.8 0.0
baz=47
N17A **Moffit Pass** 46.93 75 ⇑P P 09 55 17.7 +0.7
baz=47
O16A **Springville** 46.97 76 ⇑P P 09 55 17.9 +0.6
baz=47,SNR=11
DAU **Daniels Canyon** 46.99 75 eP P 09 55 18.2 +0.7
MPU **Maple Canyon** 47.01 76 eP P 09 55 17.7 +0.1
comp=Z,20nm,0.8s,mb4.9
K19A **Absolon Red Bu** 47.01 71 ⇓P P 09 55 17.0 -0.6
baz=47,SNR=14
M18A **Lyman** 47.11 74 ⇓P P 09 55 18.4 0.0
baz=47,SNR=7.5
S13A **Holt Ranch, En** 47.13 80 ⇑P P 09 55 18.6 0.0
baz=47
Q15A **Fillmore** 47.17 78 ⇑P P 09 55 19.3 +0.4
baz=47
V11A **Goodsprings** 47.25 83 ⇓P P 09 55 19.2 -0.3
baz=47
HEC **Hector,Ludlow** 47.34 85 ⇑P P 09 55 20.0 -0.2
baz=47
K20A **Yellowstone Ra** 47.41 71 ⇓P P 09 55 20.5 -0.2
baz=47
U12A **Valley of Fire** 47.43 82 ⇑P P 09 55 21.2 +0.3
baz=47
O17A **Robinson Place** 47.44 75 ⇑P P 09 55 21.3 +0.3
baz=47
HHC **Hu-ho-hao-te** 47.48 286 eP P 09 55 21.3 +0.1
HHC PCP PcP 09 56 52.1 +1.9

HHC PP PP 09 57 12.3 -0.7
HHC PCS PcS 10 00 45.6 0.0
HHC *eS* **S** **10 02 07.4 -2.2**
HHC SS SS 10 05 28.3 -10
HHC AMB AMB
comp=Z,63nm,1.0s,mb5.3
MURC Murrieta 47.59 87 ⇓P **P 09 55 21.9 -0.3**
baz=48
M19A Rock Springs 47.61 73 ⇓P **P 09 55 22.1 -0.2**
baz=47
N18A Larsen Ranch, 47.62 74 ⇑P **P 09 55 22.2 -0.1**
baz=47
V12A Nelson 47.69 83 ⇓P **P 09 55 22.7 -0.2**
baz=48
TMUT Trail Mountain 47.70 77 *e*P **P 09 55 23.4 +0.4**
R15A Junction 47.72 78 ⇓P **P 09 55 23.2 0.0**
baz=48
GMRC Granite Mounta 47.79 84 ⇑P **P 09 55 23.4 -0.3**
baz=48
U13A Pakoon Wash 47.80 81 ⇓P **P 09 55 23.5 -0.3**
baz=48
L20A Wamsutter 47.80 72 ⇓P **P 09 55 23.7 -0.1**
baz=48
O18A Roosevelt 47.84 75 ⇓P **P 09 55 24.5 +0.4**
baz=48
P17A Butcher Ranch, 47.88 76 ⇓P **P 09 55 25.2 +0.8**
baz=48
T14A Hurricane 47.94 80 ⇓P **P 09 55 25.3 +0.4**
baz=48
W12A Cal Nev Ari 47.95 83 ⇓P **P 09 55 25.0 +0.1**
baz=48
Q16A Castle Valley 47.96 77 ⇓P **P 09 55 25.7 +0.7**
baz=48
N19A John Jarvie Ra 47.97 74 ⇓P **P 09 55 24.9 -0.1**
baz=48,SNR=6.3
S15A Panguitch 48.00 79 ⇑P **P 09 55 26.0 +0.7**
baz=48
PFO Pinyon Flat Ob 48.05 86 P **P 09 55 24.8 -1.0**
comp=Z,6.0nm,1.0s,mb4.4,baz=308,slow=4.5,SNR=3.8
PFO Pinyon Flat Ob 48.05 86 ⇑P **P 09 55 25.4 -0.3**
baz=48
PFO Pinyon Flat Ob 48.05 86 P **P 09 55 24.8 -1.0**
PFO pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
BELC Belle Mtn. 48.08 85 ⇓P **P 09 55 25.6 -0.4**
baz=48
109C Camp Elliot, M 48.12 87 ⇓P **P 09 55 25.9 -0.4**
baz=48
V13A Grand Canyon W 48.15 82 ⇑P **P 09 55 26.5 +0.1**
baz=48
R16A Teasdale 48.16 78 ⇓P **P 09 55 27.2 +0.7**
baz=48,SNR=6.1
M20A Sweetwater, Wa 48.20 72 ⇑P **P 09 55 27.4 +0.6**
baz=48
SRU San Rafael 48.24 76 *e*P **P 09 55 26.6 -0.5**
SRU pmax pmax
comp=Z,30nm,0.7s,mb5.2
SRU San Rafael 48.24 76 *e*P **P 09 55 26.6 -0.5**
comp=Z,30nm,0.7s,mb5.2
U14A Mt Trumbull 48.28 81 ⇑P **P 09 55 28.2 +0.7**
baz=48
T15A Red Dirt Ranch 48.40 80 ⇑P **P 09 55 28.3 -0.1**
baz=48,SNR=5.6
L21A Rawlins 48.41 71 ⇑P **P 09 55 28.2 -0.2**
baz=48,SNR=8.6
S16A Weppner Ranch, 48.44 79 ⇓P **P 09 55 29.3 +0.6**
baz=48
Q18A Rafter H Ranch 48.48 76 ⇓P **P 09 55 29.3 +0.3**
baz=48
IRM Iron Mountain 48.51 85 ⇑P **P 09 55 29.7 +0.4**
baz=48
MONP Monument Peak 48.55 87 ⇓P **P 09 55 29.4 -0.2**
baz=48
R17A Hanksville Air 48.55 77 ⇓P **P 09 55 29.9 +0.3**
baz=48
N20A Spence Gulch, 48.55 73 ⇓P **P 09 55 29.5 -0.1**
baz=48
BC3 Big Chuckw Mtn 48.65 85 ⇓P **P 09 55 29.6 -0.8**
baz=48
W13A Hualapai Mount 48.69 83 ⇑P **P 09 55 30.1 -0.5**
baz=48
U15A North Rim 48.83 80 ⇑P **P 09 55 31.8 +0.1**
baz=49
V14A Boquillas Ranc 48.83 82 ⇓P **P 09 55 31.6 -0.2**
baz=49
P19A Cripple Cowboy 48.85 75 ⇑P **P 09 55 32.3 +0.4**
baz=49,SNR=8.1
SWSC Sam W. Stewart 48.91 86 ⇓P **P 09 55 31.5 -0.9**
baz=49
L22A Ellis Ranch, M 48.92 71 ⇑P **P 09 55 32.7 +0.3**
baz=49
S17A Black Ridge (B 48.99 78 ⇑P **P 09 55 33.3 +0.4**
baz=49,SNR=8.2
O20A White River Ci 48.99 74 ⇑P **P 09 55 32.7 -0.2**
baz=49,SNR=8.6
N21A Black Mountain 49.05 73 ⇓P **P 09 55 32.8 -0.5**
baz=49
X13A Yucca 49.05 83 ⇑P **P 09 55 32.7 -0.8**
baz=49
R18A Canyonlands Na 49.07 77 ⇑P **P 09 55 33.4 -0.2**
baz=49,SNR=5.2
RSSD Black Hills 49.08 67 *e*P **P 09 55 32.8 -0.7**
RSSD pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
RSSD Black Hills 49.08 67 *e*P **P 09 55 32.8 -0.7**
comp=Z,8.7nm,0.7s,mb4.8
Q19A Hogan Spring (49.10 76 ⇑P **P 09 55 33.5 -0.3**
baz=49
W14A Seligman 49.12 82 ⇓P **P 09 55 33.5 -0.4**
baz=49
Y12C Blythe 49.17 85 ⇑P **P 09 55 33.8 -0.5**
baz=49,SNR=5.1
V15A Kaibab Nationa 49.29 81 ⇓P **P 09 55 34.7 -0.5**
baz=49
T17A Navajo Res., N 49.39 79 ⇑P **P 09 55 35.4 -0.5**
baz=49
O21A Pagoda 49.41 73 ⇓P **P 09 55 35.9 -0.2**
baz=49,SNR=7.2
GLA Glamis 49.44 86 ⇑P **P 09 55 35.9 -0.5**
baz=49
GLA Glamis 49.44 86 *e*P **P 09 55 36.1 -0.3**
GLA pmax pmax
comp=Z,22nm,0.9s,mb5.1
GLA Glamis 49.44 86 *e*P **P 09 55 36.0 -0.4**
comp=Z,22nm,0.8s,mb5.1
GLA Glamis 49.44 86 *e*P pP 09 55 57.1 +0.6
comp=Z,16nm,0.8s
S18A Hurst Farm, BI 49.45 77 ⇓P **P 09 55 36.4 0.0**
baz=49,SNR=7.9
R19A Curley Farm, L 49.52 76 ⇑P **P 09 55 36.8 -0.2**
baz=49,SNR=5.7
Y13A Salome 49.57 84 ⇑P **P 09 55 36.7 -0.6**
baz=49
W15A Williams 49.65 82 ⇑P **P 09 55 37.5 -0.5**
baz=50
N22A Wattenberg Ran 49.66 72 ⇑P **P 09 55 37.6 -0.4**
baz=50
PV04 Paradox Valley 49.67 76 *e*P **P 09 55 38.0 -0.1**
Q20A Ridgley Place, 49.69 75 ⇓P **P 09 55 37.6 -0.6**
baz=50
X14A Yava 49.72 83 ⇑P **P 09 55 38.1 -0.4**
baz=50,SNR=5.8
U17A Shonto 49.73 79 ⇑P **P 09 55 38.0 -0.5**
baz=50
U16A Tuba City 49.73 80 ⇑P **P 09 55 38.7 +0.1**
baz=50
T18A Mexican Hat 49.87 78 ⇑P **P 09 55 39.2 -0.4**
baz=50
S19A Harvey Farm, M 49.94 77 ⇓P **P 09 55 40.1 0.0**
baz=50,SNR=6.6
112A Yuma 49.94 86 ⇓P **P 09 55 40.1 -0.1**
baz=50
KBS Kingsbay 49.97 357 *e*P **P 09 55 39.5 -0.3**
KBS pmax pmax
comp=Z,57nm,0.7s,mb5.6
KBS Kingsbay 49.97 357 *e*P **P 09 55 39.5 -0.4**
comp=Z,57nm,0.7s,mb5.6
WUAZ Wupatki 49.98 81 *e*P **P 09 55 40.7 +0.2**
comp=Z,30nm,1.0s,mb5.2
Y14A Wickenburg 50.00 83 ⇑P **P 09 55 40.3 -0.4**
baz=50
X15A Humboldt 50.12 82 ⇓P **P 09 55 41.7 +0.1**
baz=50
W16A Flagstaff 50.16 81 ⇑P **P 09 55 42.1 +0.2**
baz=50
U18A Rough Rock, Ch 50.33 79 ⇓P **P 09 55 43.4 +0.2**
baz=50
Y15A Casa Rosa Ranc 50.41 83 ⇓P **P 09 55 43.7 0.0**
baz=50
Z14A Wintersburg 50.42 84 ⇓P **P 09 55 43.6 -0.2**
baz=50
R21A Cimarron 50.51 75 ⇑P **P 09 55 44.7 +0.2**
baz=50
SPB4 Spitsbergen Ar 50.54 356 *e*P **P 09 55 43.5 -0.6**
SPITS Spitsbergen Ar 50.54 356 P **P 09 55 43.7 -0.5**
comp=Z,46nm,0.5s,mb5.8,baz=49,slow=5.9,SNR=13
SPITS pP pP 09 56 05.1 +0.9
comp=Z,20nm,0.5s,baz=59,slow=7.5,SNR=4.0
SPITS Spitsbergen Ar 50.54 356 P **P 09 55 43.7 -0.4**
SPITS *PP pP 09 56 05.1 +0.8
SPITS pmax pmax
comp=Z,46nm,0.5s
SPITS pmax pmax
comp=Z,20nm,0.5s
T19A Beclabito 50.59 78 ⇑P **P 09 55 45.1 0.0**
baz=50,SNR=9.7
X16A Lo Mia Camp, P 50.66 82 ⇓P **P 09 55 45.5 -0.1**
baz=50,SNR=5.7
V18A Ganado 50.75 79 ⇑P **P 09 55 46.7 +0.4**
baz=51
ISCO Idaho Springs 50.78 73 *e*P **P 09 55 46.7 +0.2**
ISCO pmax pmax
comp=Z,27nm,1.2s,mb5.2
ISCO Idaho Springs 50.78 73 *e*P **P 09 55 46.7 +0.2**
comp=Z,27nm,1.2s,mb5.2
Y16A Circle Bar Ran 50.99 82 ⇓P **P 09 55 48.4 +0.3**
baz=51
X17A Forest Lakes 51.11 81 ⇑P **P 09 55 49.5 +0.5**
baz=51
115A Sonoran Desert 51.31 84 ⇓P **P 09 55 50.3 -0.2**
baz=51,SNR=7.0
Z16A Peralta Trail, 51.38 83 ⇓P **P 09 55 50.6 -0.5**
baz=51
214A Organ Pipe Nat 51.44 85 ⇓P **P 09 55 50.7 -0.8**
baz=51,SNR=5.2
W19A Sanders 51.48 80 ⇑P **P 09 55 51.4 -0.3**
baz=51
Y17A Roosevelt 51.51 82 ⇑P **P 09 55 51.8 -0.2**
baz=51,SNR=6.7
X18A Snowflake 51.51 81 ⇑P **P 09 55 51.8 -0.2**
baz=51
116A Eloy 51.73 84 ⇑P **P 09 55 53.1 -0.6**
baz=52
Y18A Canyon Day Jun 51.96 81 ⇑P **P 09 55 55.1 -0.2**
baz=52
X19A St. Johns 51.99 80 ⇓P **P 09 55 55.4 -0.2**
baz=52,SNR=5.2
Z17A San Carlos Hig 52.01 82 ⇓P **P 09 55 55.9 +0.2**
baz=52
SDCO Great Sand Dun 52.16 75 *e*P **P 09 55 57.3 +0.5**
comp=Z,26nm,1.2s,mb5.1
OGNE Ogallala 52.19 69 *e*P **P 09 55 57.2 +0.2**
comp=Z,170nm,1.6s,mb5.8
216A Three Points, 52.26 84 ⇑P **P 09 55 57.6 +0.1**
baz=52
117A Oracle 52.32 83 ⇑P **P 09 55 57.9 -0.2**
baz=52,SNR=5.1
Y19A Nutrioso 52.32 81 ⇑P **P 09 55 58.2 +0.2**
baz=52
WHN Wuhan 52.40 274 P pP 09 56 17.1 -1.8
Z18A Geronimo 52.42 82 ⇓P **P 09 55 58.9 +0.2**
baz=52
TUC Tucson 52.47 83 *e*P **P 09 55 58.7 -0.4**
118A Homack Ranch, 52.76 82 ⇓P **P 09 56 01.3 +0.1**
baz=53,SNR=7.4
Z19A T-Link Ranch, 52.76 81 ⇓P **P 09 56 01.3 +0.1**
baz=53
217A Green Valley 52.81 84 ⇓P **P 09 56 01.3 -0.4**
baz=53
119A Ashpeak Ranch, 53.09 82 ⇓P **P 09 56 03.4 -0.3**
baz=53
ANMO Albuquerque 53.39 78 P **P 09 56 04.8 -1.1**
comp=Z,4.9nm,0.9s,mb4.5,baz=314,slow=11,SNR=3.4
ANMO Albuquerque 53.39 78 *i*P **P 09 56 04.4 -1.5**
XAN Xi'an 53.43 281 P **P 09 56 05.1 -1.1**
XAN PP PP 09 58 06.4 -0.7
XAN S **S** **10 03 32.4 +0.2**
XAN AMB AMB
comp=Z,12nm,1.1s,mb4.8
XAN LR LR
comp=N,8μm,23.0s
XAN LR LR
comp=E,11μm,23.0s
XAN LR LR
comp=Z,17μm,21.1s
SUMG Summit 53.54 14 *e*P **P 09 56 06.5 +0.1**
comp=Z,59nm,1.0s,mb5.6
SUMG Summit 53.54 14 *e*P pP 09 56 27.3 +0.5
comp=Z,62nm,1.0s
318A Bisbee 53.56 83 ⇑P **P 09 56 06.5 -0.6**
baz=53
219A White Tail Can 53.63 82 ⇑P **P 09 56 07.4 -0.3**
baz=54
ZALV Zalesovo Beam 53.96 313 P **P 09 56 08.3 -1.4**
comp=Z,3.1nm,0.6s,mb4.5,baz=69,slow=4.8,SNR=2.5
ZALV pP pP 09 56 31.0 +0.9
comp=Z,6.2nm,0.7s,baz=52,slow=7.2,SNR=3.9
ZALV Zalesovo Beam 53.96 313 P **P 09 56 08.3 -1.4**
ZALV *PP pP 09 56 31.0 +0.9
ZALV pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ZALV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ZALV Zalesovo Beam 53.96 313 P **P 09 56 08.3 -1.4**
ZALV pP pP 09 56 31.0 +0.9
319A Douglas 54.04 83 ⇑P **P 09 56 10.7 0.0**
baz=54,SNR=5.1
CBKS Cedar Bluff 54.91 70 *e*P **P 09 56 16.6 -0.3**
CBKS pmax pmax
comp=Z,71nm,0.9s,mb5.7
CBKS Cedar Bluff 54.91 70 *e*P **P 09 56 16.6 -0.2**
comp=Z,71nm,0.9s,mb5.7
LZH Lanzhou 55.17 286 *e*P **P 09 56 19.4 +0.6**
LZH AMB AMB
comp=Z,39nm,1.1s,mb5.3
LZH AMB AMB
comp=Z,180nm,4.5s
LZH Lanzhou 55.17 286 ⇑P pP 09 56 40.3 +1.1
LZH AP pP 09 56 54.3 +15
LZH AMB AMB
comp=Z,119nm,1.3s,mb5.8
LZH AMB AMB
comp=Z,400nm,4.5s
GTA Gaotai 55.38 292 P **P 09 56 20.4 +0.2**
GTA PP PP 09 58 28.0 +3.6
GTA S **S** **10 03 58.8 +0.5**
GTA AMB AMB
comp=Z,35nm,1.2s,mb5.3
GTA AMB AMB
comp=Z,2μm,7.2s
KSU1 Kansas State U 56.56 68 *e*P **P 09 56 27.9 -0.7**
comp=Z,64nm,1.0s,mb5.6
SCIA State Center 56.65 63 *e*P **P 09 56 28.4 -0.8**
comp=Z,16nm,0.7s,mb5.2
SCIA epP pP 09 56 48.7 -1.0
JFWS Jewell Farm 57.62 60 *e*P **P 09 56 34.6 -1.5**
comp=Z,49nm,1.0s,mb5.5
JFWS epP pP 09 56 55.4 -1.3
WMOK Wichita Mounta 58.21 73 *e*P **P 09 56 39.5 -0.8**
comp=Z,15nm,1.0s,mb5.0
ARCES ARCESS Array B 58.23 350 P **P 09 56 38.6 -1.3**
comp=Z,8.0nm,0.6s,mb4.9,baz=28,slow=7.4,SNR=8.7
ARCES pP pP 09 57 00.2 -0.3
comp=Z,21nm,0.8s,baz=12,slow=8.1,SNR=5.5
ARCES ARCESS Array B 58.23 350 P **P 09 56 38.6 -1.3**
ARCES pP pP 09 57 00.2 -0.3
LPIG La Paz 58.51 90 P **P 09 56 40.1 -2.4**
comp=Z,14nm,0.6s,mb5.2,baz=343,slow=11,SNR=3.2
LVZ Lovozero 58.55 346 *e*P pP 09 57 02.0 -0.8
CD2 Chengdu 58.75 282 P **P 09 56 45.4 +1.3**
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,110nm,9.3s
CD2 LR LR
comp=N,2μm,18.0s
CD2 LR LR
comp=Z,3μm,15.5s
CD2 Chengdu 58.75 282 P pP 09 57 05.3 +0.6
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
TXAR Lajitas Array 58.95 81 P **P 09 56 44.6 -0.9**
comp=Z,6.6nm,0.7s,mb4.8,baz=310,slow=5.4,SNR=9.2
TXAR pP pP 09 57 05.0 -1.2
comp=Z,6.9nm,0.8s,baz=308,slow=4.7,SNR=3.8
KURK Kurchatov 58.95 313 P **P 09 56 45.9 +0.6**
comp=Z,33nm,0.6s,mb5.5,baz=43,slow=6.7,SNR=14
KURK pP pP 09 57 07.0 +1.1
comp=Z,45nm,0.6s,baz=43,slow=6.5,SNR=11
KURK Kurchatov 58.95 313 ⇓*e*P pP 09 57 05.9 0.0
WMQ Urumqi 59.21 303 P **P 09 56 47.5 +0.4**
WMQ AMB AMB
comp=Z,95nm,1.2s,mb5.7
WMQ AMB AMB
comp=Z,5μm,10.0s
GLMI Grayling 59.34 56 *e*P **P 09 56 47.7 -0.3**
comp=Z,72nm,0.8s,mb5.8
HDIL Hopedale 59.74 62 *e*P **P 09 56 50.1 -0.7**
HDIL *e*pP pP 09 57 10.6 -0.9
MKAR Makanchi Array 59.94 308 P **P 09 56 51.6 -0.4**
comp=Z,18nm,0.6s,mb5.3,baz=47,slow=6.7,SNR=16
MKAR pP pP 09 57 12.6 -0.2
comp=Z,31nm,0.8s,baz=51,slow=5.8,SNR=9.1
GYA Guiyang 60.07 276 ⇓*i*P **P 09 56 55.3 +2.0**
GYA PCP PcP 09 57 40.4 +2.0
GYA PP PP 09 59 10.3 +4.0
GYA PCS PcS 10 01 40.0 -0.9
GYA S **S** **10 05 00.3 +0.4**
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,890nm,9.0s
SCHQ Schefferville 60.32 38 P **P 09 56 54.1 -0.4**
comp=Z,16nm,0.7s,mb5.2,baz=327,slow=7.2,SNR=5.5
SCHQ pP pP 09 57 14.6 -0.6
comp=Z,26nm,0.9s,baz=334,slow=6.9,SNR=6.2
BVAR Borovoye Array 60.85 320 P **P 09 56 58.2 0.0**
comp=Z,6.8nm,0.6s,mb4.8,baz=52,slow=6.9,SNR=4.6
BVAR pP pP 09 57 19.6 +0.7
comp=Z,14nm,0.7s,baz=51,slow=7.5,SNR=7.5
BVAR PKKP 10 17 48.6
comp=Z,1.8nm,0.6s,baz=138,slow=7.1,SNR=3.8
BRVK Borovoye 60.87 320 ⇑*e*P pP 09 57 19.6 +0.5
MIAR Mount Ida 61.44 70 *e*P **P 09 57 02.0 -0.5**
MIAR *e*PP pP 09 57 23.6 +0.3
MIAR pmax pmax
comp=Z,31nm,1.1s,mb5.2
MIAR Mount Ida 61.44 70 *e*P **P 09 57 02.0 -0.5**
comp=Z,31nm,1.1s,mb5.3
MIAR *e*pP pP 09 57 23.6 +0.4
OLIL Olney 61.67 63 *e*P **P 09 57 03.4 -0.6**
comp=Z,97nm,1.0s,mb5.8
SIUC Southern Illin 61.75 64 *e*P **P 09 57 03.8 -0.6**
comp=Z,26nm,0.7s,mb5.4
BLO Bloomington 62.24 61 *e*P **P 09 57 07.2 -0.5**
BLO *e* pP 09 57 27.7 -0.8
BLO Bloomington 62.24 61 *e*P **P 09 57 07.0 -0.7**
comp=Z,24nm,0.7s,mb5.3
BLO Bloomington 62.24 61 *e*P pP 09 57 27.7 -0.9
comp=Z,81nm,0.9s
USIN University of 62.45 63 *e*P **P 09 57 09.0 -0.2**
comp=Z,147nm,1.1s,mb5.9
ARU Arti 62.62 328 ⇑*e*P pP 09 57 31.7 +0.9
WCI Wyandotte Cave 63.03 62 *e*P **P 09 57 12.4 -0.6**
WCI *e*PP pP 09 57 32.9 -1.0
WCI pmax pmax
comp=Z,74nm,0.9s,mb5.6
WCI Wyandotte Cave 63.03 62 *e*P **P 09 57 12.4 -0.6**
comp=Z,74nm,0.9s,mb5.6
WCI *e*pP pP 09 57 32.9 -1.0
HKT Hockley 63.33 75 *e*P **P 09 57 15.2 +0.1**
HKT *e* pP 09 57 38.8 +2.8
HKT pmax pmax
comp=Z,27nm,1.4s,mb5.0
HKT Hockley 63.33 75 *e*P **P 09 57 14.9 -0.2**
comp=Z,27nm,1.4s,mb5.0
ACSO Alum Creek Sta 63.41 58 *e*P **P 09 57 15.7 +0.2**
comp=Z,316nm,2.3s,mb5.8
ACSO *e*pP pP 09 57 36.3 -0.1
KMI Kunming 63.48 278 P **P 09 57 15.8 -0.4**
KMI AMB AMB
comp=Z,24nm,1.2s,mb5.0
JOF Joensuu 63.70 345 *e*p **P 09 57 15.9 -1.2**
comp=Z,14nm,0.6s,mb5.0
JOF Joensuu 63.70 345 *e*p pP 09 57 36.6 -1.4
comp=Z,23nm,0.7s
JOF Joensuu 63.70 345 *e*P **P 09 57 15.9 -1.2**
JOF pmax pmax
comp=Z,14nm,0.6s,mb5.0
ALLY Alegheny Colle 63.89 56 *e*P **P 09 57 18.3 -0.3**
comp=Z,48nm,0.9s,mb5.3
ALLY *e*pP pP 09 57 38.9 -0.6
KLMR Klimovskoe 64.06 340 *e*P pP 09 57 39.1 -1.2
KLMR pmax pmax
comp=Z,136nm,1.4s,mb5.6
KAF Kangasniemi 65.23 347 *e*p **P 09 57 25.4 -1.6**
comp=Z,16nm,0.6s,mb5.0
KAF Kangasniemi 65.23 347 *e*p pP 09 57 46.8 -1.2
comp=Z,32nm,0.8s
KAF Kangasniemi 65.23 347 *e*P **P 09 57 25.4 -1.6**
KAF pmax pmax
comp=Z,17nm,0.6s,mb5.0
SWET Sewanee 65.38 64 *e*P **P 09 57 28.0 -0.5**
TZTN Tazewell 65.76 62 *e*P **P 09 57 30.7 -0.1**
comp=Z,66nm,1.1s,mb5.4
CPCT Cooper Cave 66.01 63 *e*P **P 09 57 31.8 -0.7**
TKM2 Tokmak 2 66.02 309 P pP 09 57 54.7 +1.2
SNR=8.5
TKL Tuckaleechee C 66.28 62 *e*P **P 09 57 33.6 -0.6**
TKL *e*PP pP 09 57 55.2 0.0
USP Ospenovka 66.29 310 P pP 09 57 56.2 +1.0
SNR=8.9
LRAL Lakeview Retre 66.35 66 *e*P **P 09 57 33.7 -1.0**
LRAL *e*pP pP 09 57 56.6 +0.8
CHMS Chumysh 66.37 310 P pP 09 57 56.5 +0.8
SNR=7.4
KBK Karagaybulak 66.54 309 P pP 09 57 57.7 +0.9
SNR=9.8
AAK Ala-Archa 66.77 310 *e*P **P 09 57 38.3 +1.1**
AAK *e*PP pP 09 57 59.0 +0.7
AAK pmax pmax
comp=Z,19nm,0.6s,mb5.1
AAK Ala-Archa 66.77 310 P pP 09 57 59.6 +1.3
SNR=6.1
AAK Ala-Archa 66.77 310 *e*P **P 09 57 38.3 +1.0**
comp=Z,19nm,0.6s,mb5.1
AAK *e*pP pP 09 57 59.0 +0.7
AAK Ala-Archa 66.77 310 *i*P pP 09 57 58.9 +0.6
EKS2 Erkin-Say 67.10 310 P pP 09 58 01.1 +0.7
SNR=5.5
LSA Lhasa 67.25 289 *e*P **P 09 57 42.2 +1.8**
LSA *e* pP 09 58 02.7 +1.2
LSA pmax pmax
comp=Z,13nm,0.6s,mb4.9
LSA Lhasa 67.25 289 *e*P **P 09 57 42.1 +1.6**
comp=Z,13nm,0.6s,mb5.0
PAL Palisades 67.53 52 *e*pP pP 09 58 02.1 -1.0
AML Almayashu 67.54 310 P **P 09 57 44.0 +1.9**
SNR=8.0
AKTK Aktyubinsk 67.68 324 P **P 09 57 42.5 -0.3**
AKTK pP pP 09 58 02.9 -1.0
AKTO Aktyubinsk 67.68 324 P **P 09 57 42.5 -0.3**
comp=Z,5.0nm,0.5s,mb4.6,baz=71,slow=10,SNR=6.6
AKTO pP pP 09 58 02.9 -1.0
comp=Z,7.7nm,0.5s,baz=58,slow=8.4,SNR=6.8
AKTO Aktyubinsk 67.68 324 P **P 09 57 42.5 -0.3**
AKTO *PP pP 09 58 02.9 -1.0
AKTO pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
AKTO pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
NB2 NORSAR Subarra 67.80 355 P **P 09 57 42.9 -0.5**
comp=Z,0.8nm,0.6s,mb3.7,baz=7.1,slow=5.9
NOA NORSAR Array B 67.80 355 P **P 09 57 43.1 -0.3**
comp=Z,3.8nm,0.6s,mb4.4,baz=340,slow=4.6,SNR=11
NOA pP pP 09 58 04.0 -0.6
comp=Z,26nm,1.0s,baz=7.2,slow=6.4,SNR=9.5
NOA NORSAR Array B 67.80 355 P **P 09 57 43.1 -0.3**
NOA *PP pP 09 58 04.0 -0.5
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA pmax pmax
comp=Z,26nm,1.0s
GOGA Godfrey 68.09 64 *e*P **P 09 57 45.2 -0.5**
GOGA *e* 09 57 58.7
GOGA pmax pmax
comp=Z,63nm,1.0s,mb5.4
GOGA Godfrey 68.09 64 *e*P **P 09 57 45.2 -0.5**
comp=Z,63nm,1.0s,mb5.4
KSH Kashi 68.39 306 P pP 09 58 10.1 +1.5
KSH PCP PcP 09 58 28.6 +16

KSH SKS 10 08 02.4
KSH SCS ScS 10 08 05.5 +26
VSU Vasula 68.66 346⇓ *e*P pP 09 58 09.2 -0.8
KONO Kongsberg 69.28 355 *e*P **P** **09 57 52.2 -0.4**
KONO *e**PP pP 09 58 14.9 +1.1
KONO pmax pmax
comp=Z,52nm,1.0s,mb5.3
KONO Kongsberg 69.28 355 *e*P **P** **09 57 52.2 -0.4**
comp=Z,52nm,1.0s,mb5.3
KONO epP pP 09 58 14.9 +1.1
OBN Obninsk 69.94 339 *e*P **P** **09 57 55.7 -1.1**
OBN pmax pmax
comp=Z,65nm,1.1s,mb5.4
OBN Obninsk 69.94 339⇑ *e*P pP 09 58 17.1 -0.9
NHSC New Hope 70.16 62 *e*P **P** **09 57 59.2 +0.8**
comp=Z,139nm,1.0s,mb5.7
NHSC epP pP 09 58 19.5 -0.2
CHTO Chiang Mai 70.50 276 *e*P **P** **09 57 59.9 -0.8**
CHTO *e* pP 09 58 20.8 -1.1
CHTO Chiang Mai 70.50 276 *e*P **P** **09 58 00.3 -0.4**
comp=Z,9.0nm,1.0s,mb4.5
CHTO Chiang Mai 70.50 276 *e*P pP 09 58 20.8 -1.1
comp=Z,17nm,1.2s
CMAR Chiang Mai Arr 70.76 276 P **P** **09 58 01.7 -0.7**
comp=Z,2.8nm,0.4s,mb4.5,baz=27,slow=7.2,SNR=7.6
CMAR pP pP 09 58 22.2 -1.4
comp=Z,3.1nm,0.4s,baz=28,slow=6.6,SNR=4.0
CMAR Chiang Mai Arr 70.76 276 P **P** **09 58 01.7 -0.6**
CMAR *PP pP 09 58 22.2 -1.4
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CMAR pmax pmax
comp=Z,3.0nm,0.4s
TAPN Taplejung 71.02 290 *e*P **P** **09 58 04.7 +0.9**
comp=Z,138nm,0.9s,mb5.8
ODAN Odare 71.57 290 *e*P **P** **09 58 07.5 +0.4**
comp=Z,54nm,0.7s,mb5.5
GUN Gumba 71.67 292 *e*P **P** **09 58 08.6 +0.9**
comp=Z,168nm,0.6s,mb6.0
JIRN Jiri 71.68 291 *e*P **P** **09 58 08.9 +1.1**
comp=Z,148nm,0.7s,mb5.9
RAMN Ramite 71.97 291 *e*P **P** **09 58 10.2 +0.7**
comp=Z,164nm,0.7s,mb6.0
KKN Kakani 72.11 292 *e*P **P** **09 58 11.2 +0.8**
comp=Z,80nm,0.6s,mb5.7
KKN Kakani 72.11 292 *e*P **P** **09 58 11.2 +0.8**
KKN pmax pmax
comp=Z,80nm,0.6s,mb5.7
PKI Pulchoki 72.20 292 *e*P **P** **09 58 11.4 +0.5**
comp=Z,59nm,0.5s,mb5.6
PKI Pulchoki 72.20 292 *e*P **P** **09 58 11.4 +0.5**
PKI pmax pmax
comp=Z,59nm,0.5s,mb5.7
MNK Minsk 72.27 344 *e*P pP 09 58 30.0 -2.2
GKN Gorkha 72.33 293 *e*P **P** **09 58 12.1 +0.5**
comp=Z,58nm,0.5s,mb5.6
DMN Daman 72.35 292 *e*P **P** **09 58 12.5 +0.7**
comp=Z,69nm,0.9s,mb5.5
DANN Dangsing 72.57 294 *e*P **P** **09 58 13.8 +0.7**
comp=Z,99nm,0.8s,mb5.7
KOLN Koldanda 73.10 293 *e*P **P** **09 58 16.4 +0.2**
comp=Z,35nm,0.7s,mb5.3
SUW Suwalki 73.50 346 *e*P **P** **09 58 17.0 -1.1**
SUW pmax pmax
comp=Z,46nm,0.4s,mb5.7
SUW Suwalki 73.50 346 *e*P **P** **09 58 17.0 -1.1**
comp=Z,46nm,0.4s,mb5.7
RGN Rugen 74.11 352 *e*P **P** **09 58 21.8 +0.2**
comp=Z,89nm,0.6s,mb5.7
BSEG Bad Segeberg 74.94 354 *e*P **P** **09 58 26.6 +0.1**
BSEG *e**PP pP 09 58 47.8 -0.1
BSEG pmax pmax
comp=Z,36nm,0.9s,mb5.1
BSEG Bad Segeberg 74.94 354 *e*P **P** **09 58 26.6 +0.1**
comp=Z,36nm,0.9s,mb5.1
BSEG epP pP 09 58 47.8 -0.1
AKASG Malin Array Be 75.64 342 P **P** **09 58 30.1 -0.4**
comp=Z,38nm,0.4s,mb5.5,baz=20,slow=6.6,SNR=26
AKASG pP pP 09 58 50.0 -2.0
comp=Z,21nm,0.4s,baz=20,slow=6.2,SNR=13
AKASG Malin Array Be 75.64 342 P **P** **09 58 30.1 -0.4**
AKASG *PP pP 09 58 50.0 -2.0
AKASG pmax pmax
comp=Z,38nm,0.4s
AKASG pmax pmax
comp=Z,21nm,0.4s
AKBB Malin Array Si 75.64 342 *e*P **P** **09 58 30.1 -0.4**
KIEV Kiev 75.65 342 *e*P **P** **09 58 30.1 -0.5**
comp=Z,60nm,0.5s,mb5.6
KBL Kabul 75.74 308 *e*P **P** **09 58 31.5 +0.1**
KBL *e**PP pP 09 58 51.9 -1.0
KBL pmax pmax
comp=Z,30nm,0.6s,mb5.2
KBL Kabul 75.74 308 *e*P **P** **09 58 31.5 +0.1**
comp=Z,30nm,0.6s,mb5.2
KBL epP pP 09 58 51.9 -1.0
RUE Ruedersdorf 76.12 352 *e*P **P** **09 58 32.9 -0.3**
comp=Z,29nm,0.7s,mb5.1
KAKA Kakadu 76.22 229 *e*P x 09 58 22.0
comp=Z,136nm,0.4s
NRDL Niedersach Rie 76.39 354 *e*P **P** **09 58 34.4 -0.4**
comp=Z,19nm,1.0s,mb4.8
IBBN Ibbenburen 76.70 356 *e*P **P** **09 58 36.7 +0.1**
comp=Z,37nm,0.7s,mb5.2
IBBN epP pP 09 58 57.7 -0.4
CLZ Clausthal 77.02 354 *e*P **P** **09 58 38.6 +0.3**
CLZ pmax pmax
comp=Z,26nm,0.8s,mb5.0
CLZ Clausthal 77.02 354 *e*P **P** **09 58 38.6 +0.3**
comp=Z,26nm,0.8s,mb5.0
WTSB Winterswijk 77.09 356 *e*P pP 09 58 59.4 -0.9
comp=Z,51nm,1.2s
CTA Charters Tower 77.18 213 P **P** **09 58 37.6 -1.9**
comp=Z,9.4nm,0.9s,mb4.5,baz=5.2,slow=6.4,SNR=4.7
CTA Charters Tower 77.18 213 P **P** **09 58 37.6 -1.9**
CTA pmax pmax
comp=Z,9.0nm,0.9s
CTAO Charters Tower 77.18 213 *e*P **P** **09 58 38.1 -1.4**
CTAO pmax pmax
comp=Z,65nm,1.7s,mb5.1
CTAO Charters Tower 77.18 213 *e*P **P** **09 58 38.1 -1.4**
comp=Z,65nm,1.8s,mb5.1
CLL Collm 77.35 352 *e*P **P** **09 58 39.4 -0.8**
comp=Z,14nm,0.7s,mb4.8
CLL Collm 77.35 352⇑ *i*P **P** **09 58 39.5 -0.7**
comp=Z,14nm,0.7s,mb4.8
CLL *i* sP sP 09 58 53.8 -17
comp=Z,8.0nm,0.8s
CLL *i* pPcP pP 09 59 00.3 -1.4
comp=Z,17nm,1.0s
CLL Collm 77.35 352⇑ *i*P pP 09 59 01.9 +0.2
comp=Z,29nm,0.9s
CLL *es*P sP 09 59 14.0 +3.4
CLL *e*(sPcP) 09 59 26.0
CLL Collm 77.35 352⇑ *i*P pP 09 59 01.9 +0.2
comp=Z,29nm,0.9s
CLL *e* 09 59 14.0
KSP Ksiaz 77.49 350 *e*P **P** **09 58 39.6 -1.4**
KSP *e**PP pP 09 59 01.2 -1.3
BUG Bochum--Univer 77.59 356 *e*P **P** **09 58 41.1 -0.4**
comp=Z,14nm,0.6s,mb4.9
BUG epP pP 09 59 02.1 -1.0
BRG Berggiesshubel 77.69 352 *i* P **P** **09 58 41.6 -0.5**
BRG pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
BRG Berggiesshubel 77.69 352 *e*P **P** **09 58 41.4 -0.7**
comp=Z,10.0nm,0.8s,mb4.6
BRG epP pP 09 59 02.5 -1.2
BRG Berggiesshubel 77.69 352 *i* P **P** **09 58 41.6 -0.6**
comp=Z,9.7nm,0.8s,mb4.6
BRG Berggiesshubel 77.69 352 *e*P pP 09 59 02.7 -1.0
comp=Z,27nm,1.0s
BRG *e* 09 59 27.3
comp=Z,20nm,1.1s
FBE Freiberg 77.70 352 *e*P **P** **09 58 41.9 -0.3**
comp=Z,19nm,1.1s,mb4.7
FBE epP pP 09 59 02.5 -1.2
UPC Upice 77.85 350 *e*P **P** **09 58 42.8 -0.2**
UPC Upice 77.85 350 *e*P pP 09 59 03.8 -0.7
DPC Dobruska-Polom 77.97 350 *e*P **P** **09 58 43.6 -0.1**
DPC Dobruska-Polom 77.97 350 *e*P pP 09 59 04.8 -0.4
PVCC Panska Ves 77.98 351 *e*P **P** **09 58 43.7 0.0**
PVCC Panska Ves 77.98 351 *e*P pP 09 59 04.5 -0.8
MOX Moxa 78.12 353 *e*P pP 09 59 05.3 -0.8
comp=Z,38nm,1.2s
MOX Moxa 78.12 353 *e*P **P** **09 58 44.1 -0.4**
comp=Z,11nm,0.8s,mb4.6
MOX *e*pP pP 09 59 05.0 -1.1
STHS Stebnicka Huta 78.25 347 *e*P **P** **09 58 45.8 +0.6**
STHS Stebnicka Huta 78.25 347 *e* **P** **09 58 45.8 +0.6**
OKC Ostrava-Krasne 78.26 349 *e*P **P** **09 58 44.4 -0.9**
OKC Ostrava-Krasne 78.26 349 *e*P pP 09 59 06.2 -0.7
WERD Werda 78.26 352 *e*P **P** **09 58 45.0 -0.3**
comp=Z,10.0nm,1.1s,mb4.5
WERD epP pP 09 59 05.6 -1.2
TANN Tannenbergstha 78.28 352 *e*P **P** **09 58 45.2 -0.2**
comp=Z,5.0nm,1.0s,mb4.2
BEBN Eben Emael 78.30 357 P **P** **09 58 45.7 +0.3**
BEBN AP pP 09 59 06.5 -0.5
HGN Heimansgroeve 78.32 357 *e*P **P** **09 58 45.7 +0.1**
comp=Z,15nm,0.7s,mb4.8
HGN Heimansgroeve 78.32 357 *e*P pP 09 59 05.4 -1.8
comp=Z,50nm,0.8s
GUNZ Gunzen 78.34 352 *e*P **P** **09 58 45.5 -0.2**
comp=Z,9.0nm,0.8s,mb4.5
WERN Wernitzgruen 78.41 352 *e*P **P** **09 58 46.0 -0.1**
comp=Z,20nm,0.8s,mb4.9
WERN epP pP 09 59 07.1 -0.6
NKC Novy Kostel 78.46 352 *e*P **P** **09 58 45.5 -0.9**
NKC Novy Kostel 78.46 352 *e*P pP 09 59 07.3 -0.7
MEM Membach 78.47 357 P **P** **09 58 46.7 +0.3**
comp=Z,34nm,1.4s,mb4.9
MEM AP pP 09 59 06.8 -1.3
MEM XP sP 09 59 15.5 -1.5
KIV Kislovodsk 78.50 331⇑ *e*P pP 09 59 07.3 -1.0
PRU Pruhonice 78.51 351 *e*P **P** **09 58 46.2 -0.5**
PRU Pruhonice 78.51 351 *e*P pP 09 59 07.4 -0.9
SNF Seneffe 78.63 358 P **P** **09 58 47.6 +0.3**
comp=Z,18nm,1.2s,mb4.8
SNF AP pP 09 59 08.4 -0.5
SNF XP sP 09 59 16.6 -1.2
BCLA Clavier 78.69 357 P **P** **09 58 47.9 +0.3**
comp=Z,21nm,1.2s,mb4.8
BCLA AP pP 09 59 08.6 -0.6
CRVS Cervenica-Dubn 78.72 346 *e*P **P** **09 58 47.8 0.0**
CRVS *e* SKSac 10 09 15.5 +20
CRVS Cervenica-Dubn 78.72 346 *e* **P** **09 58 47.8 0.0**
MANZ Manzenberg 78.73 353 *e*P **P** **09 58 47.5 -0.4**
comp=Z,6.0nm,0.8s,mb4.5
TNS Taunus Mts 78.75 355 *e*P **P** **09 58 47.7 -0.3**
TNS *e**PP pP 09 59 08.8 -0.8
TNS pmax pmax
comp=Z,14nm,0.7s,mb4.9
TNS Taunus Mts 78.75 355 *e*P **P** **09 58 47.7 -0.3**
comp=Z,14nm,0.7s,mb4.9
TNS epP pP 09 59 08.8 -0.8
ROTZ Rotzenmuhle 78.94 352 *e*P **P** **09 58 49.1 +0.1**
comp=Z,8.0nm,0.9s,mb4.5
ROTZ epP pP 09 59 09.6 -1.0
VRAC Vranov 78.97 350 P **P** **09 58 49.7 +0.5**
comp=Z,14nm,0.7s,mb4.9,baz=350,slow=6.2,SNR=7.2
VRAC pP pP 09 59 09.1 -1.6
comp=Z,30nm,0.9s,baz=16,slow=4.8,SNR=7.1
VRAC Vranov 78.97 350⇓ *i*P **P** **09 58 49.3 +0.1**
VRAC Vranov 78.97 350⇓ P **P** **09 58 49.2 +0.1**
GIVF Givet 79.02 357⇑ *i*P **P** **09 58 49.5 +0.1**
comp=Z,20nm,0.6s,mb4.8
GIVF Givet 79.02 357 *e*P pP 09 59 10.3 -0.8
comp=Z,71nm,0.9s
GIVF Givet 79.02 357⇑ *i*P **P** **09 58 49.5 +0.1**
GIVF pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
GIVF Givet 79.02 357⇑ *i*P **P** **09 58 49.5 +0.1**
comp=Z,10nm,0.6s,mb4.8
GIVF Givet 79.02 357 *e*P pP 09 59 10.3 -0.8
comp=Z,35nm,0.9s
DOU Dourbes 79.03 357 P **P** **09 58 49.7 +0.2**
comp=Z,20nm,1.1s,mb4.9
DOU AP pP 09 59 10.6 -0.5
DOU XP sP 09 59 20.6 +0.6
BAIF Baives 79.08 358⇑ *i*P **P** **09 58 50.1 +0.3**
comp=Z,31nm,0.6s,mb5.0
BAIF Baives 79.08 358 *e*P pP 09 59 11.0 -0.4
comp=Z,113nm,1.0s
BAIF Baives 79.08 358⇑ *i*P **P** **09 58 50.1 +0.3**
BAIF pmax pmax
comp=Z,16nm,0.6s,mb5.0
BAIF Baives 79.08 358⇑ *i*P **P** **09 58 50.1 +0.3**
comp=Z,16nm,0.6s,mb5.0
BAIF Baives 79.08 358 *e*P pP 09 59 11.0 -0.4
comp=Z,56nm,1.0s
GRA1 Grafenberg Arr 79.10 353 *e*P **P** **09 58 50.0 +0.1**
comp=Z,22nm,0.8s,mb5.0
GRA1 epP pP 09 59 10.8 -0.7
GRF Grafenberg Arr 79.10 353 *e*P **P** **09 58 50.0 +0.1**
GRF *e**PP pP 09 59 10.8 -0.7
GRF pmax pmax
comp=Z,22nm,0.8s,mb5.0
GRF Grafenberg Arr 79.10 353 *e*P **P** **09 58 50.0 +0.1**
GRF *e**PP pP 09 59 10.8 -0.7
GRF pmax pmax
comp=Z,22nm,0.8s,mb5.0
GRF Grafenberg Arr 79.10 353 *e*P **P** **09 58 50.0 +0.1**
comp=Z,22nm,0.8s,mb5.0
GRF epP pP 09 59 10.8 -0.7
TREC Trest 79.10 350 *e*P **P** **09 58 49.7 -0.2**
TREC Trest 79.10 350 *e*P pP 09 59 11.1 -0.4
KIS Kishinev 79.25 341 *e*P pP 09 59 10.0 -2.4
KIS pmax pmax
comp=Z,250nm,1.5s,mb5.8
KIS Kishinev 79.25 341 *e*UNK pP 09 59 10.0 -2.4
KIS XM 09 59 12.0
comp=Z,300nm,1.5s
KECS Kecovo 79.27 347 *e*P **P** **09 58 50.9 0.0**
KECS *e*S SKSac 10 09 17.2 +18
KECS Kecovo 79.27 347 *e* **P** **09 58 50.9 0.0**
TRPA Tarpa 79.31 345⇓ *i*P **P** **09 58 51.9 +0.9**
BUR08 Bucovina Ar. S 79.33 343 *e*P **P** **09 58 51.6 +0.5**
BUR08 epP pP 09 59 12.8 +0.1
BURAR Bucovina Array 79.35 343⇓ *i*P **P** **09 58 52.2 +0.9**
BURAR Bucovina Array 79.35 343 ⇓P **P** **09 58 52.2 +0.9**
WLF Walferdange 79.41 356 *e*P **P** **09 58 51.8 +0.2**
comp=Z,15nm,0.8s,mb4.9
WLF epP pP 09 59 12.5 -0.7
KHC Kasperske Hory 79.45 351 *e*P **P** **09 58 52.0 +0.2**
KHC Kasperske Hory 79.45 351 *e*P pP 09 59 13.1 -0.4
KOLL Kolacno 79.46 348 *e*P **P** **09 58 52.5 +0.6**
KOLL Kolacno 79.46 348 *e* **P** **09 58 52.5 +0.6**
VYHS Vyhne 79.49 348 *e*P **P** **09 58 52.0 0.0**
VYHS *e*S SKSac 10 09 18.5 +18
VYHS Vyhne 79.49 348 *e* **P** **09 58 52.0 0.0**
WET Wettzell 79.50 352 *e*P **P** **09 58 52.0 -0.1**
WET pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
WET Wettzell 79.50 352 *e*P **P** **09 58 52.0 -0.1**
comp=Z,8.0nm,1.0s,mb4.5
SMOL Smolenice 79.65 349 *e*P **P** **09 58 53.4 +0.5**
SMOL Smolenice 79.65 349 *e* **P** **09 58 53.4 +0.5**
GEC2 GERESS Array S 79.73 351 *e*P **P** **09 58 53.0 -0.3**
GEC2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
GEC2 GERESS Array S 79.73 351 *e*P **P** **09 58 53.0 -0.3**
comp=Z,10.0nm,0.7s,mb4.8
GERES GERESS Array B 79.73 351 P **P** **09 58 53.4 +0.1**
comp=Z,6.0nm,0.6s,mb4.6,baz=26,slow=5.2,SNR=20
GERES pP pP 09 59 14.2 -0.8
comp=Z,7.0nm,0.7s,baz=32,slow=5.2,SNR=8.2
GERES GERESS Array B 79.73 351 P **P** **09 58 53.4 +0.1**
GERES *PP pP 09 59 14.2 -0.7
GERES pmax pmax
comp=Z,6.0nm,0.6s
GERES pmax pmax
comp=Z,7.0nm,0.7s
PSZ Piszkesteto 79.91 347⇓ *i*P **P** **09 58 55.5 +1.2**
PSZ Piszkesteto 79.91 347⇓ P **P** **09 58 55.5 +1.1**
ZST Bratislava 80.00 349 *e*P **P** **09 58 55.4 +0.6**
ZST Bratislava 80.00 349 *e* **P** **09 58 55.4 +0.6**
STU Stuttgart 80.15 354 *e*P **P** **09 58 55.2 -0.4**
comp=Z,14nm,0.7s,mb4.9
TGUH Tegucigalpa,Un 80.40 80 *e*P **P** **09 58 58.3 +0.9**
comp=Z,189nm,1.6s,mb5.7
CONA Conrad Observa 80.41 350⇑ *i*P **P** **09 58 57.6 +0.6**
comp=Z,13nm,0.7s,mb4.9
CSNA Conrad Observa 80.41 350⇑ *i*P **P** **09 58 57.7 +0.7**
comp=Z,13nm,0.7s,mb4.9
FLN La Foliniere 80.42 1⇑ *i*P **P** **09 58 56.7 -0.3**
comp=Z,34nm,0.8s,mb4.9
FLN La Foliniere 80.42 1 *e*P pP 09 59 17.7 -1.0
comp=Z,127nm,1.1s
FLN La Foliniere 80.42 1⇑ *i*P **P** **09 58 56.7 -0.3**
FLN pmax pmax
comp=Z,17nm,0.8s,mb4.9
FLN La Foliniere 80.42 1⇑ *i*P **P** **09 58 56.7 -0.3**
comp=Z,17nm,0.8s,mb4.9
FLN La Foliniere 80.42 1 *e*P pP 09 59 17.7 -1.0
comp=Z,64nm,1.1s
DRGR 80.58 345⇑ *i*P **P** **09 58 58.5 +0.6**
DRGR 80.58 345 ⇑P **P** **09 58 58.5 +0.6**
LDF La Druitiere 80.59 1⇑ *i*P **P** **09 58 57.6 -0.3**
comp=Z,44nm,0.7s,mb5.1
LDF La Druitiere 80.59 1 *e*P pP 09 59 18.5 -1.1
comp=Z,84nm,1.0s
LDF La Druitiere 80.59 1⇑ *i*P **P** **09 58 57.6 -0.3**
LDF pmax pmax
comp=Z,22nm,0.7s,mb5.1
LDF La Druitiere 80.59 1⇑ *i*P **P** **09 58 57.6 -0.3**
comp=Z,22nm,0.7s,mb5.1
LDF La Druitiere 80.59 1 *e*P pP 09 59 18.5 -1.1
comp=Z,42nm,1.0s
CDF Champ du Feu 80.61 356 *e*P **P** **09 58 58.0 -0.1**
comp=Z,13nm,0.7s,mb4.6
CDF Champ du Feu 80.61 356 *e*P pP 09 59 19.0 -0.8
comp=Z,36nm,1.0s
CDF Champ du Feu 80.61 356 *e*P **P** **09 58 58.0 -0.1**
CDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
CDF Champ du Feu 80.61 356 *e*P **P** **09 58 58.0 -0.1**
comp=Z,6.6nm,0.7s,mb4.6
CDF Champ du Feu 80.61 356 *e*P pP 09 59 19.0 -0.8
comp=Z,18nm,1.0s
MEZF Maizieres J'vi 80.61 357 *e*P **P** **09 58 58.3 +0.2**
comp=Z,30nm,0.7s,mb4.9
MEZF Maizieres J'vi 80.61 357 *e*P pP 09 59 19.3 -0.5
comp=Z,110nm,1.1s
MEZF Maizieres J'vi 80.61 357 *e*P **P** **09 58 58.3 +0.2**
comp=Z,30nm,0.7s,mb5.2
MEZF Maizieres J'vi 80.61 357 *e*P pP 09 59 19.3 -0.5
comp=Z,110nm,1.1s
BFO Black Forest 80.64 355 *e*P **P** **09 58 57.9 -0.3**
BFO *e**PP pP 09 59 18.5 -1.4
BFO pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
BFO Black Forest 80.64 355 *e*P **P** **09 58 57.9 -0.3**
comp=Z,8.0nm,0.8s,mb4.6
BFO epP pP 09 59 18.5 -1.4
VRI Vrincioaia 80.75 342⇓ *i*P **P** **09 58 59.5 +0.6**
VRI Vrincioaia 80.75 342 ⇓P **P** **09 58 59.5 +0.7**
PLOR Plostina 80.78 342⇓ *i*P **P** **09 58 59.7 +0.7**
GRR Gorron 80.79 1⇑ *i*P **P** **09 58 59.0 0.0**
comp=Z,60nm,0.8s,mb5.2
GRR Gorron 80.79 1 *e*P pP 09 59 19.8 -0.9
comp=Z,156nm,1.0s
GRR Gorron 80.79 1⇑ *i*P **P** **09 58 59.0 0.0**
GRR pmax pmax
comp=Z,30nm,0.8s,mb5.2
GRR Gorron 80.79 1⇑ *i*P **P** **09 58 59.0 0.0**
comp=Z,30nm,0.8s,mb5.2
GRR Gorron 80.79 1 *e*P pP 09 59 19.8 -0.9
comp=Z,78nm,1.0s
ROSF Rostrenen 80.79 3⇑ *i*P **P** **09 58 59.0 0.0**
comp=Z,20nm,0.7s,mb4.7
ROSF Rostrenen 80.79 3 *e*P pP 09 59 20.0 -0.7
comp=Z,177nm,1.4s
ROSF Rostrenen 80.79 3⇑ *i*P **P** **09 58 59.0 0.0**
ROSF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ROSF Rostrenen 80.79 3⇑ *i*P **P** **09 58 59.0 0.0**
comp=Z,9.8nm,0.7s,mb4.8
ROSF Rostrenen 80.79 3 *e*P pP 09 59 20.0 -0.7
comp=Z,89nm,1.4s
SGMF Saint Gilles 80.89 2⇑ *i*P **P** **09 58 59.6 0.0**
comp=Z,55nm,0.7s,mb5.2
SGMF Saint Gilles 80.89 2 *e*P pP 09 59 20.5 -0.7
comp=Z,75nm,0.9s
SGMF Saint Gilles 80.89 2⇑ *i*P **P** **09 58 59.6 0.0**
SGMF pmax pmax
comp=Z,27nm,0.7s,mb5.2
SGMF Saint Gilles 80.89 2⇑ *i*P **P** **09 58 59.6 0.0**
comp=Z,27nm,0.7s,mb5.2
SGMF Saint Gilles 80.89 2 *e*P pP 09 59 20.5 -0.7
comp=Z,38nm,0.9s
RJOB Jochberg 80.91 352 *e*P **P** **09 58 59.5 -0.2**
comp=Z,13nm,0.7s,mb4.9
TLCR 80.98 340⇑ *i*P **P** **09 59 00.7 +0.6**
TLCR 80.98 340 ⇑P **P** **09 59 00.7 +0.6**
HAU Haudompre 81.06 356 *e*P **P** **09 59 00.4 -0.1**
HAU Haudompre 81.06 356 *e*P pP 09 59 21.4 -0.8
comp=Z,44nm,1.0s
HAU Haudompre 81.06 356 *e*P pP 09 59 21.4 -0.8
comp=Z,22nm,1.0s
QUIF Quistinic 81.21 3 *e*P **P** **09 59 01.1 -0.2**
comp=Z,161nm,1.4s,mb5.3
QUIF Quistinic 81.21 3 *e*P pP 09 59 22.2 -0.8
comp=Z,68nm,1.0s
QUIF Quistinic 81.21 3 *e*P **P** **09 59 01.1 -0.2**
QUIF pmax pmax
comp=Z,81nm,1.4s,mb5.4
QUIF Quistinic 81.21 3 *e*P **P** **09 59 01.1 -0.2**
comp=Z,81nm,1.4s,mb5.4
QUIF Quistinic 81.21 3 *e*P pP 09 59 22.2 -0.8
comp=Z,34nm,1.0s
HINF Hinteralfeld 81.23 356 *e*P **P** **09 59 01.1 -0.3**
HINF Hinteralfeld 81.23 356 *e*P pP 09 59 22.0 -1.1
comp=Z,38nm,1.0s
HINF Hinteralfeld 81.23 356 *e*P pP 09 59 22.0 -1.1
comp=Z,19nm,1.0s
MLR Muntele Rosu 81.27 342 P **P** **09 59 03.3 +1.7**
comp=Z,25nm,0.6s,mb5.2,baz=246,slow=2.1,SNR=13
MLR pP pP 09 59 22.4 -1.0
comp=Z,42nm,0.8s,baz=119,slow=5.3,SNR=6.0
MLR Muntele Rosu 81.27 342 P **P** **09 59 03.3 +1.7**
MLR *PP pP 09 59 22.4 -0.9
MLR pmax pmax
comp=Z,25nm,0.6s
MLR pmax pmax
comp=Z,42nm,0.8s
WTTA Wattenberg 81.48 353⇑ *i*P **P** **09 59 03.2 +0.5**
comp=Z,23nm,0.7s,mb5.1
VOIR 81.48 343⇑ *i*P **P** **09 59 04.0 +1.2**
VOIR 81.48 343 ⇑P **P** **09 59 04.0 +1.2**
KBA Koelnbreinsper 81.51 351⇑ *i*P **P** **09 59 03.9 +1.1**
comp=Z,54nm,0.7s,mb5.5
DAVA Damuels 81.59 354⇑ *i*pP pP 09 59 14.1 -11
comp=Z,39nm,0.5s,SNR=11
HARR Harsova 81.64 341⇑ *i*P **P** **09 59 04.3 +0.7**
HARR Harsova 81.64 341 ⇑P **P** **09 59 04.3 +0.8**
WRAB Tennant Creek 81.68 224 *e*P **P** **09 59 02.1 -1.9**
WRAB *e* pP 09 59 24.2 -1.5
WRAB pmax pmax
comp=Z,26nm,1.5s,mb4.8
WRAB Tennant Creek 81.68 224 *e*P **P** **09 59 02.0 -2.0**
comp=Z,26nm,1.5s,mb4.8
WRA Warramunga Arr 81.69 224 P **P** **09 59 02.2 -1.8**
comp=Z,6.8nm,0.7s,mb4.6,baz=32,slow=6.0,SNR=11
WRA pP pP 09 59 23.7 -2.1
comp=Z,6.1nm,0.8s,baz=34,slow=5.8,SNR=4.7
WRA Warramunga Arr 81.69 224 P **P** **09 59 02.2 -1.8**
WRA *PP pP 09 59 23.7 -2.1
WRA pmax pmax
comp=Z,7.0nm,0.7s
WRA pmax pmax
comp=Z,6.0nm,0.8s
SOKA Soboth 81.73 350⇑ *i*P **P** **09 59 04.6 +0.6**
comp=Z,41nm,1.3s,mb5.1
PKSM Moragy 81.75 348⇑ *i*P **P** **09 59 04.4 +0.2**
PKSM Moragy 81.75 348 ⇑P **P** **09 59 04.4 +0.3**
TIRR Tirgusor 81.76 340⇓ *i*P **P** **09 59 04.7 +0.5**
TIRR Tirgusor 81.76 340 ⇓P **P** **09 59 04.7 +0.5**
FETA Feichten 81.79 353⇑ *i*P **P** **09 59 04.7 +0.3**
comp=Z,10nm,0.7s,mb4.8
LOR Lormes 81.88 358 *e*P **P** **09 59 04.8 0.0**
comp=Z,22nm,0.8s,mb4.8
LOR Lormes 81.88 358 *e*P pP 09 59 25.7 -0.8
comp=Z,66nm,1.2s
LOR Lormes 81.88 358 *e*P **P** **09 59 04.8 0.0**
LOR pmax pmax
comp=Z,11nm,0.8s,mb4.7
LOR Lormes 81.88 358 *e*P **P** **09 59 04.8 0.0**
comp=Z,11nm,0.8s,mb4.7
LOR Lormes 81.88 358 *e*P pP 09 59 25.7 -0.8
comp=Z,33nm,1.2s
BZS Buzias 81.90 345⇑ *i*P **P** **09 59 05.0 +0.1**
BZS Buzias 81.90 345 ⇑P **P** **09 59 05.0 +0.1**
GZR Gura Zlata 81.93 345⇓ *i*P **P** **09 59 05.8 +0.7**
GZR Gura Zlata 81.93 345 ⇓P **P** **09 59 05.8 +0.7**
DAVOX Davos/Dischmat 82.09 354 P **P** **09 59 06.1 +0.2**

comp=Z,6.2nm,0.5s,mb4.7,baz=77,slow=2.9,SNR=5.7
SSF Saint Saulge 82.09 358 ⇑*iP* **P 09 59 05.9 0.0**
comp=Z,20nm,0.8s,mb4.7
SSF Saint Saulge 82.09 358 *eP* pP 09 59 26.9 -0.8
comp=Z,57nm,1.1s
SSF Saint Saulge 82.09 358 ⇑*iP* **P 09 59 05.9 0.0**
SSF pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SSF Saint Saulge 82.09 358 ⇑*iP* **P 09 59 05.9 0.0**
comp=Z,10nm,0.8s,mb4.7
SSF Saint Saulge 82.09 358 *eP* pP 09 59 26.9 -0.8
comp=Z,29nm,1.1s
AVF Avril sur Loir 82.37 358 ⇑*iP* **P 09 59 07.4 0.0**
AVF Avril sur Loir 82.37 358 *eP* pP 09 59 28.3 -0.8
comp=Z,45nm,1.0s
AVF Avril sur Loir 82.37 358 *eP* pP 09 59 28.3 -0.8
comp=Z,23nm,1.0s
TUE Stuetta 82.43 354 *eP* **P 09 59 08.1 +0.4**
comp=Z,7.1nm,0.7s,mb4.6
CABF La Chapelle 82.47 356 *eP* **P 09 59 08.2 +0.3**
comp=Z,41nm,1.1s,mb4.9
CABF La Chapelle 82.47 356 *eP* pP 09 59 29.2 -0.4
comp=Z,44nm,0.9s
CABF La Chapelle 82.47 356 *eP* **P 09 59 08.2 +0.3**
CABF pmax pmax
comp=Z,21nm,1.1s,mb4.9
CABF La Chapelle 82.47 356 *eP* **P 09 59 08.2 +0.3**
comp=Z,21nm,1.1s,mb4.9
CABF La Chapelle 82.47 356 *eP* pP 09 59 29.2 -0.4
comp=Z,22nm,0.9s
SMF Signal de Mont 82.50 358 ⇑*iP* **P 09 59 08.1 0.0**
comp=Z,28nm,0.7s,mb4.9
SMF Signal de Mont 82.50 358 *eP* pP 09 59 29.0 -0.8
comp=Z,88nm,1.0s
SMF Signal de Mont 82.50 358 ⇑*iP* **P 09 59 08.1 0.0**
SMF pmax pmax
comp=Z,14nm,0.7s,mb4.9
SMF Signal de Mont 82.50 358 ⇑*iP* **P 09 59 08.1 0.0**
comp=Z,14nm,0.7s,mb4.9
SMF Signal de Mont 82.50 358 *eP* pP 09 59 29.0 -0.8
comp=Z,44nm,1.0s
MFF Saint Martin d 82.58 1 ⇑*iP* **P 09 59 08.6 +0.1**
comp=Z,29nm,0.9s,mb4.8
MFF Saint Martin d 82.58 1 *eP* pP 09 59 29.5 -0.7
comp=Z,50nm,0.9s
MFF Saint Martin d 82.58 1 ⇑*iP* **P 09 59 08.6 +0.1**
MFF pmax pmax
comp=Z,15nm,0.9s,mb4.8
MFF Saint Martin d 82.58 1 ⇑*iP* **P 09 59 08.6 +0.1**
comp=Z,15nm,0.9s,mb4.8
MFF Saint Martin d 82.58 1 *eP* pP 09 59 29.5 -0.7
comp=Z,25nm,0.9s
BGF Bois d'Agland 82.61 359 ⇑*iP* **P 09 59 08.7 +0.1**
comp=Z,21nm,0.7s,mb4.8
BGF Bois d'Agland 82.61 359 *eP* pP 09 59 29.6 -0.8
comp=Z,49nm,1.1s
BGF Bois d'Agland 82.61 359 ⇑*iP* **P 09 59 08.7 +0.1**
BGF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BGF Bois d'Agland 82.61 359 ⇑*iP* **P 09 59 08.7 +0.1**
comp=Z,10nm,0.7s,mb4.8
BGF Bois d'Agland 82.61 359 *eP* pP 09 59 29.6 -0.8
comp=Z,25nm,1.1s
PSI Prapat 82.71 265 P **P 09 59 09.1 -0.5**
comp=Z,18nm,0.7s,mb5.0,baz=25,slow=5.2,SNR=8.2
PSI pP pP 09 59 29.8 -1.6
comp=Z,25nm,0.9s,baz=266,slow=1.3,SNR=6.6
PSI Prapat 82.71 265 P **P 09 59 09.1 -0.5**
PSI *PP pP 09 59 29.8 -1.6
PSI pmax pmax
comp=Z,18nm,0.7s,mb5.0
PSI pmax pmax
comp=Z,25nm,0.9s,mb5.0
PSI Prapat 82.71 265 P **P 09 59 09.1 -0.5**
PSI pP pP 09 59 29.8 -1.6
TCF Toulx Ste Croi 82.89 359 ⇑*iP* **P 09 59 10.0 -0.1**
comp=Z,20nm,0.8s,mb4.7
TCF Toulx Ste Croi 82.89 359 *eP* pP 09 59 31.0 -0.9
comp=Z,41nm,1.0s
TCF Toulx Ste Croi 82.89 359 ⇑*iP* **P 09 59 10.0 -0.1**
TCF pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
TCF Toulx Ste Croi 82.89 359 ⇑*iP* **P 09 59 10.0 -0.1**
comp=Z,10nm,0.8s,mb4.7
TCF Toulx Ste Croi 82.89 359 *eP* pP 09 59 31.0 -0.9
comp=Z,21nm,1.0s
LPL La Plagne 83.53 356 *eP* **P 09 59 14.5 +1.1**
LPL La Plagne 83.53 356 *eP* pP 09 59 35.5 +0.3
LPG La Plagne 83.55 356 *eP* **P 09 59 14.8 +1.3**
comp=Z,15nm,0.8s,mb4.6
LPG La Plagne 83.55 356 *eP* pP 09 59 35.8 +0.5
comp=Z,44nm,1.1s
LPG La Plagne 83.55 356 *eP* **P 09 59 14.8 +1.3**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
LPG La Plagne 83.55 356 *eP* **P 09 59 14.8 +1.3**
comp=Z,7.4nm,0.8s,mb4.6
LPG La Plagne 83.55 356 *eP* pP 09 59 35.8 +0.5
comp=Z,22nm,1.1s
RJF Les Rejaudoux 83.88 359 *eP* **P 09 59 15.5 +0.3**
comp=Z,15nm,0.7s,mb4.6
RJF Les Rejaudoux 83.88 359 *eP* pP 09 59 36.1 -0.9
comp=Z,107nm,1.4s
RJF Les Rejaudoux 83.88 359 *eP* **P 09 59 15.5 +0.3**
RJF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
RJF Les Rejaudoux 83.88 359 *eP* **P 09 59 15.5 +0.3**
comp=Z,7.4nm,0.7s,mb4.6
RJF Les Rejaudoux 83.88 359 *eP* pP 09 59 36.1 -0.9
comp=Z,53nm,1.4s
BNI Bardonecchia 84.00 356 *eP* **P 09 59 17.5 +1.7**
BNI pmax pmax
comp=Z,39nm,1.1s,mb5.2
BNI Bardonecchia 84.00 356 *eP* **P 09 59 17.5 +1.7**
comp=Z,38nm,1.1s,mb5.1
HYB Hyderabad 84.02 290 *i P* **P 09 59 16.0 -0.3**
HYB Hyderabad 84.02 290 *i P* pP 09 59 36.5 -1.7
HYB Hyderabad 84.02 290 *eP* **P 09 59 16.0 -0.3**
FITZ Fitzroy Crossi 84.14 232 *eP* **P 09 59 16.0 -0.7**
comp=Z,50nm,0.6s,mb5.5
ORIF Oris-en-Rattie 84.17 356 ⇑*iP* **P 09 59 17.4 +0.8**
comp=Z,8.8nm,0.6s,mb4.5
ORIF Oris-en-Rattie 84.17 356 *eP* pP 09 59 38.4 -0.1
comp=Z,43nm,0.9s
ORIF Oris-en-Rattie 84.17 356 ⇑*iP* **P 09 59 17.4 +0.8**
ORIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 84.17 356 ⇑*iP* **P 09 59 17.4 +0.8**
comp=Z,4.4nm,0.6s,mb4.5
ORIF Oris-en-Rattie 84.17 356 *eP* pP 09 59 38.4 -0.1
comp=Z,21nm,0.9s
LFF La Frestale 84.25 0 *eP* **P 09 59 17.3 +0.2**
LFF La Frestale 84.25 0 *eP* pP 09 59 38.2 -0.7
comp=Z,232nm,1.4s
LFF La Frestale 84.25 0 *eP* pP 09 59 38.2 -0.7
comp=Z,116nm,1.4s
CAF Calviac 84.25 359 ⇑*iP* **P 09 59 17.4 +0.3**
comp=Z,23nm,0.9s,mb4.7
CAF Calviac 84.25 359 *eP* pP 09 59 38.4 -0.5
comp=Z,61nm,1.0s
CAF Calviac 84.25 359 ⇑*iP* **P 09 59 17.4 +0.3**
CAF pmax pmax
comp=Z,12nm,0.9s,mb4.7
CAF Calviac 84.25 359 ⇑*iP* **P 09 59 17.4 +0.3**
comp=Z,12nm,0.9s,mb4.7
CAF Calviac 84.25 359 *eP* pP 09 59 38.4 -0.5
comp=Z,30nm,1.0s
VIVF Saint-Julien-l 84.27 357 ⇑*iP* **P 09 59 17.6 +0.4**
comp=Z,12nm,0.8s,mb4.5
VIVF Saint-Julien-l 84.27 357 *eP* pP 09 59 38.5 -0.5
comp=Z,52nm,1.1s
VIVF Saint-Julien-l 84.27 357 ⇑*iP* **P 09 59 17.6 +0.4**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 84.27 357 ⇑*iP* **P 09 59 17.6 +0.4**
comp=Z,6.2nm,0.8s,mb4.5
VIVF Saint-Julien-l 84.27 357 *eP* pP 09 59 38.5 -0.5
comp=Z,26nm,1.1s
MBDF Montbardon 84.32 356 ⇑*iP* **P 09 59 18.3 +0.9**
comp=Z,19nm,0.7s,mb4.7
MBDF Montbardon 84.32 356 *eP* pP 09 59 39.2 0.0
comp=Z,36nm,0.9s
MBDF Montbardon 84.32 356 ⇑*iP* **P 09 59 18.3 +0.9**
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MBDF Montbardon 84.32 356 ⇑*iP* **P 09 59 18.3 +0.9**
comp=Z,9.7nm,0.7s,mb4.7
MBDF Montbardon 84.32 356 *eP* pP 09 59 39.2 0.0
comp=Z,18nm,0.9s
BR131 Keskin Array S 85.00 335 *eP* **P 09 59 21.3 +0.4**
comp=Z,5.7nm,0.6s,mb4.7
BR131 epP pP 09 59 42.2 -0.6
BRTR Keskin Array B 85.00 335 P **P 09 59 21.3 +0.4**
comp=Z,10nm,0.7s,mb4.8,baz=59,slow=2.7,SNR=14
BRTR pP pP 09 59 42.1 -0.7
comp=Z,17nm,0.8s,baz=56,slow=2.9,SNR=10
BRTR Keskin Array B 85.00 335 P **P 09 59 21.3 +0.4**
BRTR *PP pP 09 59 42.1 -0.7
BRTR pmax pmax
comp=Z,10.0nm,0.7s
BRTR pmax pmax
comp=Z,17nm,0.8s
LASF Ste Croix 85.07 358 ⇑*iP* **P 09 59 21.6 +0.4**
comp=Z,15nm,0.9s,mb4.6
LASF Ste Croix 85.07 358 *eP* pP 09 59 42.7 -0.4
comp=Z,26nm,0.9s
SMRF Simiane la Rot 85.12 357 *eP* **P 09 59 22.4 +0.9**
comp=Z,48nm,1.0s,mb5.1
SMRF Simiane la Rot 85.12 357 *eP* pP 09 59 43.5 +0.2
comp=Z,110nm,1.1s
SMRF Simiane la Rot 85.12 357 *eP* **P 09 59 22.4 +0.9**
comp=Z,48nm,1.0s,mb5.4
SMRF Simiane la Rot 85.12 357 *eP* pP 09 59 43.5 +0.2
comp=Z,110nm,1.1s
SBF Sospel 85.15 355 *eP* **P 09 59 21.5 -0.1**
comp=Z,77nm,1.0s,mb5.3
SBF Sospel 85.15 355 *eP* pP 09 59 42.5 -1.0
comp=Z,109nm,1.0s
SBF Sospel 85.15 355 *eP* **P 09 59 21.5 -0.1**
SBF pmax pmax
comp=Z,38nm,1.0s,mb5.3
SBF Sospel 85.15 355 *eP* **P 09 59 21.5 -0.1**
comp=Z,38nm,1.0s,mb5.3
SBF Sospel 85.15 355 *eP* pP 09 59 42.5 -1.0
comp=Z,54nm,1.0s
ASAR Alice Springs 85.17 222 P **P 09 59 20.7 -1.1**
comp=Z,7.4nm,0.8s,mb4.7,baz=29,slow=4.9,SNR=11
ASAR pP pP 09 59 41.9 -1.8
comp=Z,8.2nm,1.0s,baz=32,slow=4.3,SNR=6.1
ASAR Alice Springs 85.17 222 P **P 09 59 20.7 -1.1**
ASAR *PP pP 09 59 41.9 -1.8
ASAR pmax pmax
comp=Z,7.0nm,0.8s
ASAR pmax pmax
comp=Z,8.0nm,1.0s
SKO Skopje 85.48 345 *eP* **P 09 59 24.1 +0.9**
FRF La Foret Royal 85.49 356 *eP* **P 09 59 23.1 -0.2**
comp=Z,41nm,0.9s,mb5.0
FRF La Foret Royal 85.49 356 *eP* pP 09 59 44.2 -1.0
comp=Z,74nm,1.1s
FRF La Foret Royal 85.49 356 *eP* **P 09 59 23.1 -0.2**
FRF pmax pmax
comp=Z,20nm,0.9s,mb5.0
FRF La Foret Royal 85.49 356 *eP* **P 09 59 23.1 -0.2**
comp=Z,20nm,0.9s,mb5.1
FRF La Foret Royal 85.49 356 *eP* pP 09 59 44.2 -1.0
comp=Z,37nm,1.1s
LMR La Mourre 85.72 356 *eP* **P 09 59 24.6 +0.1**
comp=Z,22nm,0.7s,mb4.9
LMR La Mourre 85.72 356 *eP* pP 09 59 45.6 -0.7
comp=Z,71nm,1.2s
LMR La Mourre 85.72 356 *eP* **P 09 59 24.6 +0.1**
LMR pmax pmax
comp=Z,11nm,0.7s,mb4.9
LMR La Mourre 85.72 356 *eP* **P 09 59 24.6 +0.1**
comp=Z,11nm,0.7s,mb4.9
LMR La Mourre 85.72 356 *eP* pP 09 59 45.6 -0.7
comp=Z,36nm,1.2s
MTLF Montolieu 85.84 359 *eP* **P 09 59 25.4 +0.4**
comp=Z,14nm,0.8s,mb4.6
MTLF Montolieu 85.84 359 *eP* pP 09 59 46.2 -0.7
comp=Z,106nm,1.4s
MTLF Montolieu 85.84 359 *eP* **P 09 59 25.4 +0.4**
MTLF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MTLF Montolieu 85.84 359 *eP* **P 09 59 25.4 +0.4**
comp=Z,7.2nm,0.8s,mb4.7
MTLF Montolieu 85.84 359 *eP* pP 09 59 46.2 -0.7
comp=Z,53nm,1.4s
VAY Valandovo 85.92 344 *eP* **P 09 59 24.4 -1.1**
EPF Esparros 86.15 0 *eP* **P 09 59 26.2 -0.4**
comp=Z,29nm,1.0s,mb4.9
EPF Esparros 86.15 0 *eP* pP 09 59 47.1 -1.4
comp=Z,24nm,0.9s
EPF Esparros 86.15 0 *eP* **P 09 59 26.2 -0.4**
EPF pmax pmax
comp=Z,15nm,1.0s,mb4.9
EPF Esparros 86.15 0 *eP* **P 09 59 26.2 -0.4**
comp=Z,14nm,1.0s,mb4.9
EPF Esparros 86.15 0 *eP* pP 09 59 47.1 -1.4
comp=Z,12nm,0.9s
ETSF Etsaut 86.28 1 *eP* **P 09 59 27.9 +0.7**
comp=Z,23nm,0.7s,mb4.9
ETSF Etsaut 86.28 1 *eP* pP 09 59 48.8 -0.3
comp=Z,30nm,0.7s
ETSF Etsaut 86.28 1 *eP* **P 09 59 27.9 +0.7**
ETSF pmax pmax
comp=Z,11nm,0.7s,mb4.9
ETSF Etsaut 86.28 1 *eP* **P 09 59 27.9 +0.7**
comp=Z,11nm,0.7s,mb4.9
ETSF Etsaut 86.28 1 *eP* pP 09 59 48.8 -0.3
comp=Z,15nm,0.7s
PGF Pioggiola 86.36 354 *eP* pP 09 59 48.6 -0.9
comp=Z,80nm,0.9s
PGF Pioggiola 86.36 354 *eP* pP 09 59 48.6 -0.9
comp=Z,40nm,0.9s
LRS Lares 89.15 61 *eP* **P 09 59 41.8 +0.5**
ESDC Sonseca Array 89.41 4 P **P 09 59 41.8 -0.5**
comp=Z,2.6nm,0.6s,mb4.4,baz=352,slow=6.7,SNR=5.7
ESDC pP pP 10 00 02.5 -1.8
comp=Z,3.7nm,0.6s,baz=3.9,slow=4.2,SNR=4.7
ESDC Sonseca Array 89.41 4 P **P 09 59 41.8 -0.5**
ESDC pP pP 10 00 02.5 -1.8
OBIP Obispado Ponce 89.49 61 *eP* **P 09 59 44.1 +1.2**
OBIP epP pP 10 00 05.8 +0.9
MIB Mutribah 89.52 321 *eP* **P 09 59 42.4 -0.5**
baz=323
MIB AMb AMb 09 59 43.7
comp=Z,41nm,0.8s,mb5.6,baz=323
STKA Stephens Creek 89.62 213 *eP* **P 09 59 42.6 -0.4**
comp=Z,14nm,0.9s,mb5.1
STKA Stephens Creek 89.62 213 P **P 09 59 42.9 -0.2**
comp=Z,16nm,0.8s,mb5.2,baz=355,slow=5.2,SNR=12
STKA pP pP 10 00 03.4 -1.7
comp=Z,17nm,1.0s,baz=0.2,slow=6.6,SNR=5.4
NAY Al-Naaiem 90.05 321 *eP* **P 09 59 44.8 -0.6**
baz=322
NAY AMb AMb 09 59 46.4
comp=Z,16nm,0.9s,mb5.2,baz=322
RDF Al-Radifah 90.21 320 *eP* **P 09 59 45.6 -0.5**
baz=322
RDF AMb AMb 09 59 51.8
comp=Z,45nm,1.5s,mb5.4,baz=322
KLBR Kellerberrin 99.30 230 *eP* **P 10 00 30.5 +3.2**
comp=Z,14nm,0.9s,mb5.5
TORD Torodi Ar. Bea 115.92 359 PKP PKPdf 10 05 27.8 -0.4
comp=Z,1.0nm,0.8s,baz=359,slow=0.9,SNR=3.9
TORD pPKP pPKPdf 10 05 48.3 -2.8
comp=Z,1.9nm,0.8s,baz=351,slow=2.6,SNR=2.0
DBIC Dimbokro 122.16 7 PKP PKPdf 10 05 39.4 -0.9
comp=Z,1.4nm,0.5s,baz=84,slow=20,SNR=4.7
DBIC Dimbokro 122.16 7 PKIKP PKPdf 10 05 39.4 -0.9
DBIC pmax pmax
comp=Z,1.0nm,0.5s
SBA Scott Base 129.07 184 P Pdif 10 02 47.9 +7.8
CPUP Villa Florida 129.89 83 PKP PKPdf 10 05 54.1 -0.5
comp=Z,0.4nm,0.4s,baz=300,slow=2.9,SNR=3.8
CPUP pPKP pPKPdf 10 06 15.6 -2.0
comp=Z,1.4nm,0.6s,baz=312,slow=2.0,SNR=3.2
CPUP Villa Florida 129.89 83 PKIKP PKPdf 10 05 54.1 -0.5
CPUP 10 06 15.6
CPUP pmax pmax
comp=Z,1.0nm,0.6s
PMSA Palmer Station 144.78 138 PKP PKPdf 10 06 18.7 -2.0
comp=Z,8.4nm,0.6s,baz=184,slow=9.7,SNR=4.1
PMSA Palmer Station 144.78 138 PKP PKPdf 10 06 18.7 -2.0
TSUM Tsumeb 145.42 331 PKPbc PKPbc 10 06 24.0 +0.7
comp=Z,21nm,0.6s,baz=349,slow=5.3,SNR=19
TSUM pPKPbc pPKPbc 10 06 44.8 -1.1
comp=Z,54nm,1.0s,baz=4.9,slow=5.7,SNR=10
TSUM Tsumeb 145.42 331 *e*PKPbc PKPbc 10 06 23.7 +0.4
MAW Mawson 146.17 217 PKPbc PKPbc 10 06 23.4 -0.7
comp=Z,11nm,0.6s,baz=90,slow=3.7,SNR=10
MAW pPKPbc pPKPbc 10 06 44.8 -2.0
comp=Z,17nm,0.9s,baz=74,slow=7.0,SNR=5.0
MAW Mawson 146.17 217 PKP2 PKPab 10 06 23.4 -1.6
MAW pmax pmax
comp=Z,11nm,0.6s
MAW pmax pmax
comp=Z,17nm,0.9s
MAW Mawson 146.17 217 *e*PKPbc PKPbc 10 06 23.3 -0.9
LBTB Lobatse 147.67 315 *e*PKP2 PKPab 10 06 30.8 -1.3
LBTB Lobatse 147.67 315 *e*PKPbc PKPbc 10 06 30.4 +0.8
BOSA Boshof 150.90 311 PKPbc PKPbc 10 06 37.8 +0.1
comp=Z,8.0nm,0.5s,baz=124,slow=4.8,SNR=6.1
BOSA pPKPbc pPKPbc 10 06 59.3 -1.2
comp=Z,16nm,0.8s,baz=55,slow=2.9,SNR=4.7
BOSA Boshof 150.90 311 PKIKP PKPbc 10 06 37.8 +0.2
BOSA 10 06 59.3
BOSA pmax pmax
comp=Z,8.0nm,0.5s
BOSA pmax pmax
comp=Z,16nm,0.8s
VNA3 Neumayer Olymp 159.33 170 *e*PKPdf PKPdf 10 06 40.1 -1.9
VNA3 *e* 10 07 16.5
SNAA Sanae 159.39 177 *e*PKPdf PKPab 10 07 18.2 -2.1
VNA2 Neumayer--Watz 159.85 172 *e*PKPdf PKPdf 10 06 40.5 -2.1
VNA2 *e* 10 07 03.3
VNA2 *e* 10 07 16.7
VNA1 Neumayer--Stat 160.04 171 *e*PKPdf PKPab 10 07 16.8 -6.3

*IDC **19** 09:55:00.9±0.9,5129N×17927W,h0km,mb4.4/21, mb1 4.6/22,mb1mx4.5/29,mbtmp4.4/22,ML4.4/1,Error ellipse: s-maj=27.0km s-min=13.5km az=172.0*
*ISCJB **19** 09:55:06.0±1.0,511.1N±0.1×17922W±006,h50km±7km, mb4.6/46,Error ellipse: s-maj=18.8km s-min=6.1km az=171.5*
*BJI **19** 09:55:05.2,51.10N×17920W,h30km,mB4.8,mb4.8,Ms5.0, Ms2.4.7*
*NEIC **19** 09:55:05.2±0.5,511.1N×17925W,h30km,mb4.9/19, ML4.2(AEIC),Error ellipse: s-maj=14.9km s-min=5.5km az=173.0*

ISC 19 09:55:08.1±0.9,512N±01×17921W±006,h52km±7km, h33km±5.3km:pP-P,n81,σ0s82/80,mb4.6/46,4C-1D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.73**	**65**	P	**Pn**	**09 55 34.9**	**-0.8**
ADK				S	**Sn**	**09 55 57.5**	**+0.9**
ATKA	**Atka Island**	**3.28**	**70**	P	**Pn**	**09 55 55.8**	**-1.2**
ATKA				S	**Sn**	**09 56 35.8**	**+1.1**
SMY	**Shemya**	**4.42**	**293**	P	**Pn**	**09 56 12.9**	**+0.4**
FX1	**Attu Island--F**	**5.00**	**293**	Pn	**Pn**	**09 56 20.1**	**-0.4**
	25nm,0.3s,baz=220,slow=5.9,SNR=8.8						
FX1				Sn	**Sn**	**09 57 26.2**	**+9.2**
	9.1nm,0.3s,baz=65,slow=19,SNR=3.4						
FX1	**Attu Island--F**	**5.00**	**293**	P	**Pn**	**09 56 20.7**	**+0.1**
NIKO	**Nikolski**	**6.63**	**70**	P	**Pn**	**09 56 42.5**	**-0.4**
UNV	**Unalaska Valle**	**8.20**	**66**	P	**Pn**	**09 57 04.2**	**0.0**
PETK	**Petropavlovsk-**	**14.30**	**287**	Pn	**Pn**	**09 58 26.1**	**-1.2**
	0.2nm,0.3s,baz=115,slow=18,SNR=3.0						
SVW2	**Sparrevohn**	**16.39**	**44**	*e*Pn	**Pn**	**09 58 55.5**	**+1.1**
KDAK	**Kodiak Island**	**16.75**	**56**	Pn	**Pn**	**09 58 54.5**	**-4.3**
	1.4nm,0.9s,baz=296,slow=12,SNR=6.7						
BILL	**Bilibino**	**18.34**	**343**	*e*P	**Pn**	**09 59 20.0**	**+1.8**
	1.9nm,0.6s						
MENT	**Mentasta**	**22.27**	**44**	*e*P	**P**	**09 59 59.5**	**-0.8**
EGAK	**Eagle**	**23.87**	**41**	*e*P	**P**	**10 00 14.9**	**-1.3**
	15nm,0.9s,mb4.4						
INK	**Inuvik**	**27.77**	**35**	P	**P**	**10 00 52.2**	**+0.8**
	4.4nm,0.9s,mb4.1,baz=175,slow=18,SNR=5.1						
INK	**Inuvik**	**27.77**	**35**	P	**P**	**10 00 52.2**	**+0.8**
MJAR	**Matsushiro Arr**	**33.50**	**261**	P	**P**	**10 01 41.0**	**-1.3**
	0.9nm,0.6s,mb3.9,baz=56,slow=6.9,SNR=3.3						
YKA	**Yellowknife Ar**	**35.55**	**46**	P	**P**	**10 01 58.9**	**-0.8**
	3.8nm,0.8s,mb4.4,baz=282,slow=8.1,SNR=12						
YKA	**Yellowknife Ar**	**35.55**	**46**	P	**P**	**10 01 58.9**	**-0.8**
KSRS	**Korea Array**	**39.38**	**271**	P	**P**	**10 02 32.2**	**-0.2**
	4.3nm,1.0s,mb4.2,baz=55,slow=8.4,SNR=9.5						
NVAR	**Mina Array Bea**	**43.83**	**82**	P	**P**	**10 03 09.3**	**+0.6**
	1.1nm,0.9s,mb3.6,baz=294,slow=6.8,SNR=3.8						
BJI	**Beijing**	**45.16**	**282**	P	**P**	**10 03 20.3**	**+0.9**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.5						
DUG	**Dugway**	**46.17**	**77**	*e*P	**P**	**10 03 28.3**	**+1.0**
	comp=Z,4.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**46.50**	**297**	P	**P**	**10 03 29.9**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.3,baz=56,slow=8.3,SNR=9.1						
SONM				PcP	PcP	10 05 01.8	-1.6
	comp=Z,1.2nm,0.9s,baz=57,slow=2.5,SNR=3.7						
PDAR	**Pinedale Array**	**46.62**	**72**	P	**P**	**10 03 31.1**	**+0.3**
	comp=Z,6.4nm,0.9s,mb4.5,baz=306,slow=2.2,SNR=21						
SPB4	**Spitsbergen Ar**	**50.55**	**356**	*e*P	**P**	**10 04 00.3**	**-0.2**
SPITS	**Spitsbergen Ar**	**50.55**	**356**	P	**P**	**10 03 59.8**	**-0.8**
	comp=Z,4.2nm,0.4s,mb4.7,baz=72,slow=6.3,SNR=18						
XAN	**Xi'an**	**53.44**	**281**	P	**P**	**10 04 23.3**	**+0.7**
XAN				AP	pP	10 04 32.8	-3.9
XAN				PP	PP	10 06 24.0	+0.8
XAN				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3						
ZALV	**Zalesovo Beam**	**53.98**	**313**	P	**P**	**10 04 24.9**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=38,slow=8.8,SNR=2.7						
LZH	**Lanzhou**	**55.19**	**286**	*e*P	**P**	**10 04 35.8**	**+0.5**
LZH				AP	pP	10 04 45.3	-4.2
LZH				XP	sP	10 04 48.4	-7.0
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,57nm,4.2s						
GTA	**Gaotai**	**55.40**	**292**	*e*P	**P**	**10 04 36.6**	**-0.1**
GTA				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
ARCES	**ARCESS Array B**	**58.24**	**350**	P	**P**	**10 04 55.5**	**-0.9**
	comp=Z,4.0nm,0.7s,mb4.6,baz=27,slow=8.2,SNR=6.4						
TXAR	**Lajitas Array**	**58.94**	**81**	P	**P**	**10 05 01.1**	**-0.7**
	comp=Z,0.9nm,0.8s,mb3.9,baz=305,slow=4.0,SNR=8.3						
KURK	**Kurchatov**	**58.97**	**314**	P	**P**	**10 05 02.1**	**+0.3**
	comp=Z,10nm,0.5s,mb5.1,baz=43,slow=6.5,SNR=35						
MKAR	**Makanchi Array**	**59.95**	**308**	P	**P**	**10 05 07.7**	**-0.9**
	comp=Z,4.4nm,0.6s,mb4.7,baz=50,slow=6.3,SNR=49						
GYA	**Guiyang**	**60.09**	**276**	P	**P**	**10 05 11.3**	**+1.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
SCHQ	**Schefferville**	**60.32**	**38**	P	**P**	**10 05 09.6**	**-1.3**
	comp=Z,9.7nm,1.0s,mb4.8,baz=354,slow=5.5,SNR=3.6						
KMI	**Kunming**	**63.50**	**278**	P	**P**	**10 05 34.8**	**+2.1**
KMI				AP	pP	10 05 48.8	+1.6
KMI				XP	sP	10 05 53.4	+0.3
KMI				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.9						
AAK	**Ala-Archa**	**66.79**	**310**	*e*P	**P**	**10 05 54.3**	**+0.5**
	comp=Z,7.7nm,0.9s,mb4.7						
NB2	**NORSAR Subarra**	**67.82**	**355**	P	**P**	**10 05 59.0**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=7.5,slow=6.5						
NOA	**NORSAR Array B**	**67.82**	**355**	P	**P**	**10 05 59.5**	**-0.5**
	comp=Z,2.1nm,0.9s,mb4.2,baz=8.7,slow=6.4,SNR=7.6						
CMAR	**Chiang Mai Arr**	**70.78**	**276**	P	**P**	**10 06 18.6**	**-0.4**
	comp=Z,1.3nm,0.3s,mb4.3,baz=64,slow=6.7,SNR=5.9						
TAPN	**Taplejung**	**71.03**	**290**	*e*P	**P**	**10 06 20.6**	**+0.2**
	comp=Z,26nm,0.7s,mb5.3						
ODAN	**Odare**	**71.59**	**290**	*e*P	**P**	**10 06 24.0**	**+0.2**
	comp=Z,28nm,0.7s,mb5.3						
GUN	**Gumba**	**71.69**	**292**	*e*P	**P**	**10 06 24.7**	**+0.3**
	comp=Z,45nm,0.4s,mb5.7						
JIRN	**Jiri**	**71.69**	**291**	*e*P	**P**	**10 06 24.6**	**+0.2**
	comp=Z,30nm,0.8s,mb5.3						
RAMN	**Ramite**	**71.98**	**291**	*e*P	**P**	**10 06 25.7**	**-0.5**
KKN	**Kakani**	**72.13**	**292**	*e*P	**P**	**10 06 27.1**	**+0.1**
	comp=Z,38nm,0.7s,mb5.4						
GKN	**Gorkha**	**72.34**	**293**	*e*P	**P**	**10 06 28.2**	**-0.1**
	comp=Z,16nm,0.5s,mb5.2						
DMN	**Daman**	**72.37**	**292**	*e*P	**P**	**10 06 28.9**	**+0.5**
DANN	**Dangsing**	**72.59**	**294**	*e*P	**P**	**10 06 30.0**	**+0.2**
	comp=Z,28nm,0.7s,mb5.3						
KOLN	**Koldanda**	**73.12**	**293**	*e*P	**P**	**10 06 32.7**	**-0.2**
	comp=Z,9.9nm,0.6s,mb4.9						
AKASG	**Malin Array Be**	**75.66**	**342**	P	**P**	**10 06 46.4**	**-0.9**
	comp=Z,10nm,0.3s,mb5.2,baz=20,slow=6.7,SNR=25						
AKBB	**Malin Array Si**	**75.66**	**342**	*e*P	**P**	**10 06 46.5**	**-0.8**
KIEV	**Kiev**	**75.67**	**342**	*e*P	**P**	**10 06 46.4**	**-0.9**
	comp=Z,12nm,0.6s,mb5.0						
KBL	**Kabul**	**75.75**	**308**	*e*P	**P**	**10 06 47.6**	**-0.5**
	comp=Z,14nm,0.9s,mb4.9						
STHS	**Stebnicka Huta**	**78.27**	**347**	*e*P	**P**	**10 07 02.3**	**+0.4**
STHS				*e*		10 07 06.2	
STHS	**Stebnicka Huta**	**78.27**	**347**	*e*P	**P**	**10 07 02.3**	**+0.4**

comp=Z,4.6nm,0.8s,mb4.5
KOLS Kolonicke sedl 78.58 346 *e*P **P** **10 07 05.6 +1.9**
comp=Z,2.2nm,1.3s,mb3.9
CRVS Cervenica-Dubn 78.74 346 *e*P **P** **10 07 04.6 +0.1**
CRVS Cervenica-Dubn 78.74 346 *e*P **P** **10 07 04.7 +0.2**
comp=Z,7.4nm,0.9s,mb4.6
KECS Kecovo 79.29 347 *e*P **P** **10 07 06.3 -1.3**
KECS Kecovo 79.29 347 *e*P **P** **10 07 06.3 -1.3**
comp=Z,3.6nm,0.7s,mb4.4
TRPA Tarpa 79.32 345⇑*i*P **P** **10 07 08.2 +0.5**
BUR08 Bucovina Ar. S 79.34 343 *e*P **P** **10 07 08.3 +0.4**
BURAR Bucovina Array 79.37 343⇓*i*P **P** **10 07 08.4 +0.4**
KHC Kasperske Hory 79.47 351 *e*P **P** **10 07 08.0 -0.5**
VYHS Vyhne 79.51 348 *e*P **P** **10 07 08.5 -0.2**
VYHS *e*pP pP 10 07 16.2 -7.4
VYHS Vyhne 79.51 348 *e*P **P** **10 07 08.5 -0.2**
comp=Z,3.3nm,1.1s,mb4.2
VYHS *e* 10 07 16.3
GERES GERESS Array B 79.74 351 P **P** **10 07 09.5 -0.5**
comp=Z,1.5nm,0.6s,mb4.1,baz=28,slow=6.0,SNR=8.7
ZST Bratislava 80.02 349 *e*P **P** **10 07 12.2 +0.7**
comp=Z,6.9nm,0.5s,mb4.8
DRGR 80.59 345⇑*i*P **P** **10 07 14.8 +0.2**
MLR Muntele Rosu 81.28 342 P **P** **10 07 19.8 +1.5**
comp=Z,5.7nm,0.6s,mb4.7,baz=263,slow=4.7,SNR=6.4
VOIR 81.50 343⇑*i*P **P** **10 07 20.5 +1.0**
GZR Gura Zlata 81.94 345⇑*i*P **P** **10 07 22.3 +0.5**
DAVOX Davos/Dischmat 82.10 354 P **P** **10 07 21.7 -0.9**
comp=Z,3.1nm,0.7s,mb4.3,baz=4.6,slow=14,SNR=3.1
BR131 Keskin Array S 85.02 335 *e*P **P** **10 07 37.8 +0.1**
comp=Z,1.5nm,0.8s,mb4.2
BRTR Keskin Array B 85.02 335 P **P** **10 07 37.6 -0.1**
comp=Z,2.8nm,0.8s,mb4.5,baz=44,slow=3.4,SNR=10
TSUM Tsumeb 145.44 331 PKPbc PKPbc 10 14 40.2 0.0
comp=Z,8.5nm,0.8s,baz=343,slow=5.0,SNR=12
MAW Mawson 146.17 217 PKPbc PKPab 10 14 43.2 +1.4
comp=Z,3.5nm,1.1s,baz=64,slow=16,SNR=2.4
LBTB Lobatse 147.69 315 *e*PKPdf PKPdf 10 14 43.9 +0.1
BOSA Boshof 150.91 311 PKPbc PKPbc 10 14 53.8 -0.8
comp=Z,4.3nm,1.0s,baz=53,slow=7.4,SNR=3.9

IDC ***19*** *09:56:29.8±0.8, 2.95S×139.18E, h0km, mb4.5/10, mb1 4.7/12, mb1mx4.6/15, mbtmp4.5/12, ML4.4/2, Error ellipse: s-maj=35.2km s-min=11.6km az=87.0*
DJA ***19*** *09:56:35, 2.60S×139.94E, h68km, mb5.3/6*
ISCJB ***19*** *09:56:36.7±1.9, 3.08S±0.06×139.1E±0.1, h68km±19km, mb4.4/13, Error ellipse: s-maj=18.1km s-min=9.4km az=7.7*
NEIC ***19*** *09:56:36.1±1.8, 2.99S×139.11E, h45km±17km, mb4.8/4, Error ellipse: s-maj=15.1km s-min=11.6km az=86.0*
ISC 19 09:56:37.3±1.8, 3.03S±0.08×139.1E±0.1, h55km±19km, n36, σ1.9s02/31, mb4.5/13, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MMPI	**Merauke**	**5.55**	**167**	P		**Pn**	**09 57 59.4**	**+2.0**
	2μm,0.7s,9.1nm							
PMG	**Port Moresby**	**10.21**	**129**	Pn		**Pn**	**09 59 01.2**	**0.0**
	1.1nm,0.3s,baz=309,slow=9.3,SNR=11							
PMG	**Port Moresby**	**10.21**	**129**	P		**Pn**	**09 59 03.3**	**+2.1**
COEN	**Coen**	**11.58**	**160**	*e*Pn		**Pn**	**09 59 18.7**	**-1.2**
	250nm,2.1s							
COEN	**Coen**	**11.58**	**160**	P		**Pn**	**09 59 19.5**	**-0.4**
	29nm,1.0s							
LBMI	**Labuha**	**11.83**	**281**	P		**Pn**	**09 59 30.4**	**+6.9**
	165nm,1.1s							
KDI	**Kendari**	**16.48**	**266**	P		Px	10 00 40.7	
WRAB	**Tennant Creek**	**17.43**	**195**	*e*Pn		**Pn**	**10 00 35.3**	**-1.4**
	51nm,0.7s							
WRAB				*e*Sn		**Sn**	**10 03 44.3**	**-5.7**
WB2	**Warramunga Arr**	**17.43**	**195**	*e*P		**Pn**	**10 00 35.8**	**-1.0**
WRA	**Warramunga Arr**	**17.44**	**195**	P		**Pn**	**10 00 35.8**	**-1.0**
	2.3nm,0.3s,baz=17,slow=13,SNR=16							
WRA				S		**Sn**	**10 03 44.9**	**-5.4**
	0.5nm,0.3s,baz=13,slow=22,SNR=7.1							
CTA	**Charters Tower**	**18.33**	**158**	P		**Pn**	**10 00 47.2**	**-0.6**
	0.4nm,0.3s,baz=334,slow=11,SNR=3.0							
CTA	**Charters Tower**	**18.33**	**158**	P		**Pn**	**10 00 47.2**	**-0.6**
PCI	**Palu**	**19.37**	**276**	P		**Pn**	**10 01 05.5**	**+5.2**
	182nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.96**	**220**	*e*P		**Pn**	**10 01 06.8**	**-0.4**
	43nm,0.6s							
ASAR	**Alice Springs**	**21.12**	**193**	P		**P**	**10 01 18.3**	**+0.7**
	25nm,0.8s,mb4.6,baz=24,slow=9.5,SNR=33							
ASAR				S		**S**	**10 05 14.8**	**+5.2**
	6.8nm,0.8s,baz=12,slow=26,SNR=5.2							
BBKI	**Banjar Baru**	**24.22**	**268**	P		**P**	**10 01 54.5**	**+5.3**
	120nm,1.2s,mb5.2							
EIDS	**Eidsvold**	**25.02**	**154**	*e*P		**P**	**10 01 56.0**	**-0.4**
	19nm,0.7s,mb4.7							
STKA	**Stephens Creek**	**28.79**	**176**	P		**P**	**10 02 30.9**	**+0.8**
	4.6nm,0.7s,mb4.3,baz=348,slow=8.6,SNR=3.6							
PPI	**Padang Panjang**	**38.77**	**273**	P		**P**	**10 03 59.2**	**+2.3**
KSRS	**Korea Array**	**41.60**	**347**	P		**P**	**10 04 19.1**	**-0.8**
	1.8nm,0.8s,mb3.8,baz=160,slow=8.7,SNR=6.4							
CMAR	**Chiang Mai Arr**	**44.93**	**300**	P		**P**	**10 04 48.1**	**+0.9**
	5.6nm,0.7s,mb4.5,baz=119,slow=6.5,SNR=16							
PETK	**Petropavlovsk-**	**58.08**	**13**	P		**P**	**10 06 24.1**	**-0.7**
	3.9nm,0.6s,mb4.6,baz=150,slow=4.6,SNR=3.7							
SONM	**Songino Array**	**58.17**	**335**	P		**P**	**10 06 25.6**	**0.0**
	0.6nm,0.6s,mb3.8,baz=156,slow=7.5,SNR=4.9							
MKAR	**Makanchi Array**	**70.28**	**322**	P		**P**	**10 07 45.3**	**+0.4**
	3.3nm,0.6s,mb4.5,baz=100,slow=8.1,SNR=17							
ZALV	**Zalesovo Beam**	**72.41**	**330**	P		**P**	**10 07 56.0**	**-1.6**
	1.5nm,0.5s,mb4.2,baz=113,slow=4.5,SNR=4.8							
ZALV	**Zalesovo Beam**	**72.41**	**330**	P		**P**	**10 07 56.0**	**-1.6**
VNDA	**Vanda**	**75.43**	**175**	P		**P**	**10 08 15.3**	**+0.4**
	7.7nm,0.8s,mb4.7,baz=316,slow=6.1,SNR=18							
KBL	**Kabul**	**75.43**	**307**	*e*P		**P**	**10 08 15.7**	**0.0**
	4.8nm,0.8s,mb4.5							
QSPA	**South Pole Qui**	**86.92**	**180**	P		**P**	**10 09 16.6**	**+0.8**
	6.7nm,0.6s,mb5.0,baz=317,slow=1.6,SNR=7.0							
TORD	**Torodi Ar. Bea**	**136.72**	**286**	PKP		PKPdf	10 15 53.8	-0.8
	1.4nm,0.8s,baz=81,slow=1.3,SNR=3.7							
TORD	**Torodi Ar. Bea**	**136.72**	**286**	PKP		PKPdf	10 15 53.8	-0.8
KIC	**Kosan Boka**	**143.82**	**277**	*e*PKP1		PKPdf	10 16 05.3	-2.3
	81nm,0.8s							
DBIC	**Dimbokro**	**143.91**	**277**	PKP		PKPdf	10 16 05.7	-2.1
	19nm,0.7s,baz=86,slow=3.6,SNR=36							
TIC	**Toumodi**	**144.08**	**277**	*e*PKP1		PKPdf	10 16 06.1	-1.9
	82nm,0.9s							
LIC	**Lamto**	**144.11**	**276**	*e*PKP1		PKPdf	10 16 06.1	-2.0
	78nm,1.2s							
CPUP	**Villa Florida**	**146.76**	**152**	PKPbc		PKPab	10 16 14.8	-0.4
	0.5nm,0.4s,baz=169,slow=10,SNR=2.3							

IDC ***19*** *10:00:56.8±0.5, 51.12N×179.27W, h0km, mb4.6/29, mb1 4.7/31, mb1mx4.7/33, mbtmp4.6/31, ML4.2/2, Error ellipse: s-maj=17.7km s-min=10.7km az=162.0*
BJI ***19*** *10:01:00.0, 51.10N×179.40W, h35km, mB4.9, mb5.1, Ms5.5, Msz5.5*
NEIC ***19*** *10:01:01.6±0.2, 51.10N×179.36W, h30km, mb5.1/109, ML4.7(AEIC), Error ellipse: s-maj=5.6km s-min=2.4km az=180.0*
ISCJB ***19*** *10:01:01.9±0.6, 51.10N±0.04×179.33W±0.03, h45km±5km, mb5.0/168, MS5.3/3, Error ellipse: s-maj=7.2km s-min=2.5km az=6.1*
MOS ***19*** *10:01:01.7±0.8, 51.12N×179.30W, h43km, mb5.2/83, Error ellipse: s-maj=8.2km s-min=5.1km az=97.8*
SZGRF ***19*** *10:01:04.3, 51.22N×179.93W, h33km, mb5.2, Andreanof Islands, Aleutian Islands, United States*
ISC 19 10:01:04.4±0.6, 51.17N±0.04×179.32W±0.03, h50km±4km, h55km±1.7km; pP-P, n650, σ0.6s66/648, mb5.0/168, MS5.3/3, 127C-122D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ADK	**Adak**	**1.79**	**66**	P		**Pn**	**10 01 31.5**	**-1.3**
ADK				S		**Sn**	**10 01 54.4**	**0.0**
ADK	**Adak**	**1.79**	**66**	*e*Pn		**Pn**	**10 01 32.1**	**-0.7**
ADK				*e*Sn		**Sn**	**10 01 53.9**	**-0.5**
ADK				S		**Sn**	**10 01 54.4**	**+0.1**
GSTR	**Great Sitkin T**	**2.23**	**64**	*e*Pn		**Pn**	**10 01 38.5**	**-0.3**
GSTR				*e*Sn		**Sn**	**10 02 04.7**	**-0.4**
ATKA	**Atka Island**	**3.35**	**70**	P		**Pn**	**10 01 53.0**	**-1.1**
ATKA				S		**Sn**	**10 02 33.3**	**+0.7**
SMY	**Shemya**	**4.36**	**294**	*e*P		**Pn**	**10 02 08.8**	**+0.8**
SMY	**Shemya**	**4.36**	**294**	P		**Pn**	**10 02 08.3**	**+0.3**
FX1	**Attu Island--F**	**4.95**	**293**	Pn		**Pn**	**10 02 14.6**	**-1.5**
	17nm,0.3s,baz=158,slow=6.1,SNR=21							
FX1				Sn		**Sn**	**10 03 13.6**	**+1.7**
	10nm,0.3s,baz=100,slow=19,SNR=3.2							
FX1	**Attu Island--F**	**4.95**	**293**	P		**Pn**	**10 02 14.6**	**-1.5**
FX1							10 03 13.6	
FX1				pmax		pmax		
	comp=Z,17nm,0.3s							
FX1				smax				
	comp=N,10.0nm,0.3s							
FX1	**Attu Island--F**	**4.95**	**293**	P		**Pn**	**10 02 17.8**	**+1.7**
FX1				Sn		**Sn**	**10 03 13.6**	**+1.7**
NIKO	**Nikolski**	**6.70**	**70**	P		**Pn**	**10 02 39.5**	**-0.5**
OKCD	**Okmok Cone D**	**7.23**	**67**	P		**Pn**	**10 02 49.2**	**+1.9**
SPIA	**Saint Paul Isl**	**8.03**	**38**	P		**Pn**	**10 03 01.1**	**+2.9**
UNV	**Unalaska Valle**	**8.26**	**66**	P		**Pn**	**10 03 01.6**	**+0.2**
SDPT	**Sand Point**	**12.02**	**62**	*e*Pn		**Pn**	**10 03 51.3**	**-1.5**
CHGN	**Chignik**	**13.37**	**59**	*e*Pn		**Pn**	**10 04 12.7**	**+1.5**
PET	**Petropavlovsk**	**13.66**	**286**	*e*P		**Pn**	**10 04 19.7**	**+4.5**
PET				pmax		pmax		
	comp=Z,15nm,0.8s							
PETK	**Petropavlovsk-**	**14.24**	**287**	Pn		**Pn**	**10 04 21.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=92,slow=19,SNR=3.9							
PETK				Sn		**Sn**	**10 06 56.9**	**-2.3**
	baz=66,slow=14,SNR=2.0							
OHAK	**Old Harbor**	**16.33**	**58**	*e*Pn		**Pn**	**10 04 48.5**	**-1.4**
OHAK				*e*Sn		**Sn**	**10 07 50.6**	**+0.7**
SVW2	**Sparrevohn**	**16.45**	**44**	*e*Pn		**Pn**	**10 04 52.7**	**+1.3**
KDAK	**Kodiak Island**	**16.81**	**56**	Pn		**Pn**	**10 04 51.0**	**-4.9**
	comp=Z,235nm,0.7s,SNR=6.0							
KDAK	**Kodiak Island**	**16.81**	**56**	Pn		**Pn**	**10 04 51.5**	**-4.4**
	comp=Z,3.3nm,0.3s,baz=275,slow=8.6,SNR=14							
KDAK				Sn		**Sn**	**10 07 59.6**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=151,slow=10,SNR=3.3							
KDAK	**Kodiak Island**	**16.81**	**56**	*e*P		**Pn**	**10 04 51.9**	**-4.0**
KDAK				*e*			10 08 01.8	
KDAK				pmax		pmax		
	comp=Z,291nm,2.0s							
KDAK	**Kodiak Island**	**16.81**	**56**	*e*Pn		**Pn**	**10 04 51.9**	**-4.1**
	comp=Z,291nm,2.0s							
KDAK				*e*Sn		**Sn**	**10 08 01.8**	**+0.3**
RSO	**Redoubt South**	**17.47**	**48**	*e*P		**Pn**	**10 05 05.0**	**+0.9**
BILL	**Bilibino**	**18.33**	**343**	*i* P		**Pn**	**10 05 15.6**	**+1.0**
BILL				pmax		pmax		
	comp=Z,48nm,1.2s							
BILL	**Bilibino**	**18.33**	**343**	*e*Pn		**Pn**	**10 05 15.6**	**+1.0**
	comp=Z,157nm,1.5s							
SEY	**Seymchan**	**19.19**	**319**	⇓*e*P		**Pn**	**10 05 26.5**	**+1.6**
PMR	**Palmer**	**19.51**	**46**	*e*P		**Pn**	**10 05 28.9**	**+0.2**
PMR				pmax		pmax		
	comp=Z,210nm,2.5s							
PMR	**Palmer**	**19.51**	**46**	*e*Pn		**Pn**	**10 05 28.9**	**+0.2**
	comp=Z,206nm,2.6s							
COLA	**College**	**21.27**	**38**	⇓*e*P		**P**	**10 05 45.5**	**-0.7**
COLA	**College**	**21.27**	**38**	*e*P		**P**	**10 05 46.1**	**-0.1**
	comp=Z,43nm,0.8s,mb4.8							
MENT	**Mentasta**	**22.32**	**45**	*e*P		**P**	**10 05 56.8**	**-0.5**
EGAK	**Eagle**	**23.92**	**41**	*e*P		**P**	**10 06 12.1**	**-1.1**
	comp=Z,82nm,1.0s,mb5.1							
DAWY	**Dawson**	**24.48**	**43**	*e*P		**P**	**10 06 17.5**	**-0.8**
HYT	**Haines Junctio**	**24.88**	**51**	*e*P		**P**	**10 06 20.1**	**-1.9**
YSS	**Yuzh-Sakhalins**	**25.02**	**275**	⇓*e*P		**P**	**10 06 23.5**	**+0.1**
YSS				*e*		pP	10 06 38.1	+2.0
YSS				pmax		pmax		
	comp=E,60nm,1.0s							
YSS				pmax		pmax		
	comp=Z,40nm,1.0s,mb4.9							
YSS	**Yuzh-Sakhalins**	**25.02**	**275**	*e*P		**P**	**10 06 24.2**	**+0.8**
	comp=Z,29nm,0.8s,mb4.8							
ASAJ	**Asahikawa**	**26.38**	**270**	P		**P**	**10 06 35.0**	**-0.7**
	comp=Z,11nm,0.9s,mb4.4,baz=116,slow=17,SNR=2.8							
ASAJ	**Asahikawa**	**26.38**	**270**	P		**P**	**10 06 35.1**	**-0.7**
ASAJ				pmax		pmax		
	comp=Z,11nm,0.9s							
INK	**Inuvik**	**27.82**	**35**	P		**P**	**10 06 47.6**	**-0.8**
	comp=Z,13nm,1.0s,mb4.5,baz=263,slow=4.4,SNR=13							
INK	**Inuvik**	**27.82**	**35**	*e*P		**P**	**10 06 47.0**	**-1.4**
INK				pmax		pmax		
	comp=Z,14nm,0.9s							
INK	**Inuvik**	**27.82**	**35**	*e*P		**P**	**10 06 47.0**	**-1.3**
	comp=Z,14nm,0.9s,mb4.6							
HABR	**Khabarovsk**	**29.20**	**283**	*e*P		**P**	**10 07 00.0**	**-0.9**
HABR				*e**PP		pP	10 07 14.7	+0.9
HABR				*e*			10 07 56.4	
HABR				*e*			10 10 04.7	
HABR				*e*S		**S**	**10 11 49.7**	**0.0**
HABR				*e*SS		SS	10 13 22.7	-32
HABR				*e*			10 17 35.5	
HABR				pmax		pmax		
	comp=E,12nm,1.2s							
HABR				pmax		pmax		
	comp=Z,30nm,1.6s,mb4.8							
HABR				pmax		pmax		
	comp=N,13nm,1.8s							
YAK	**Yakutsk**	**29.31**	**312**	⇓*e*P		**P**	**10 07 01.4**	**-0.3**
YAK				pmax		pmax		
	comp=Z,41nm,1.6s,mb4.9							
YAK	**Yakutsk**	**29.31**	**312**	*e*P		**P**	**10 07 00.1**	**-1.6**
	comp=Z,12nm,0.5s,mb4.9							
KLR	**Kul'dur**	**30.93**	**286**	*e*P		**P**	**10 07 12.7**	**-3.4**
KLR				pmax		pmax		
	comp=E,62nm,1.6s							
KLR				pmax		pmax		
	comp=Z,90nm,1.6s,mb5.3							
MJAR	**Matsushiro Arr**	**33.43**	**261**	P		**P**	**10 07 37.6**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=55,slow=7.0,SNR=6.2							
MJAR	**Matsushiro Arr**	**33.43**	**261**	P		**P**	**10 07 37.7**	**-0.5**
MJAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
MAJO	**Matsushiro**	**33.43**	**261**	*e*P		**P**	**10 07 35.3**	**-2.9**
MAT	**Matsushiro**	**33.43**	**261**	P		**P**	**10 07 37.0**	**-1.2**
MDJ	**Mudanjiang**	**34.29**	**279**	P		**P**	**10 07 43.3**	**-2.3**
MDJ				AP		pP	10 07 56.3	-2.2
MDJ				XP		sP	10 08 02.3	-2.1
MDJ				AMB		AMB		
	comp=Z,21μm,13.4s							
MDJ	**Mudanjiang**	**34.29**	**279**	*e*P		**P**	**10 07 44.6**	**-1.0**
	comp=Z,6.0nm,0.9s,mb4.5							
JHJ	**Hachijo jima 2**	**34.73**	**255**	P		**P**	**10 07 47.5**	**-2.1**
	comp=Z,86nm,0.9s,mb5.7,baz=78,slow=20,SNR=3.3							
YKA	**Yellowknife Ar**	**35.61**	**46**	P		**P**	**10 07 55.8**	**-0.9**
	comp=Z,9.5nm,0.7s,mb4.8,baz=282,slow=8.0,SNR=87							
YKA				PcP		PcP	10 10 24.1	-0.1
	comp=Z,0.8nm,0.6s,baz=292,slow=3.4,SNR=5.0							
YKA	**Yellowknife Ar**	**35.61**	**46**	P		**P**	**10 07 55.8**	**-0.9**
YKA							10 10 24.1	
YKA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
YKA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**35.61**	**46**	P		**P**	**10 07 55.8**	**-0.9**
YKA				PcP		PcP	10 10 24.1	-0.1
A05A	**Maple Falls**	**35.99**	**70**	⇑P		**P**	**10 08 00.5**	**+0.4**
	baz=36							
C04A	**Brinnon**	**36.03**	**73**	⇑P		**P**	**10 08 00.7**	**+0.1**
	baz=36							
A06A	**Chilliwack**	**36.31**	**70**	⇑P		**P**	**10 08 03.2**	**+0.3**
	baz=36							
B05A	**Bryant**	**36.31**	**72**	⇓P		**P**	**10 08 03.2**	**+0.2**
	baz=36							
C05A	**Tolt Reservoir**	**36.81**	**72**	⇑P		**P**	**10 08 07.7**	**+0.5**
	baz=37							
D05A	**Enumclaw**	**36.87**	**73**	⇑P		**P**	**10 08 08.4**	**+0.8**
	baz=37							
A07A	**Ashnola River,**	**36.98**	**70**	⇓P		**P**	**10 08 09.0**	**+0.4**
	baz=37,SNR=13							
LON	**Longmire**	**37.19**	**74**	*e*P		**P**	**10 08 11.3**	**+0.9**
LON				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.6							
LON	**Longmire**	**37.19**	**74**	*e*P		**P**	**10 08 11.3**	**+1.0**
	comp=Z,8.4nm,0.8s,mb4.6							
F04A	**Amboy**	**37.21**	**75**	⇑P		**P**	**10 08 11.1**	**+0.5**
	baz=37							
CN2	**Changchun**	**37.27**	**281**	*e*P		**P**	**10 08 13.8**	**+2.7**
B07A	**Winthrop**	**37.40**	**70**	⇓P		**P**	**10 08 12.3**	**+0.2**
	baz=37,SNR=7.7							
ETW	**Entiat**	**37.67**	**72**	*e*P		**P**	**10 08 15.2**	**+0.7**
A08A	**Turner Farm, O**	**37.68**	**69**	⇑P		**P**	**10 08 14.3**	**-0.2**
	baz=37,SNR=8.4							
C07A	**Waterville**	**37.79**	**71**	⇓P		**P**	**10 08 15.4**	**0.0**
	baz=38							
BOD	**Bodaibo**	**37.84**	**307**	*e*P		**P**	**10 08 15.2**	**-0.6**
BOD				pmax		pmax		
	comp=Z,47nm,0.9s,mb5.2							
B08A	**Colville Reser**	**37.91**	**70**	⇓P		**P**	**10 08 16.3**	**-0.2**
	baz=38,SNR=11							
H04A	**Detroit Lake**	**37.98**	**77**	⇑P		**P**	**10 08 17.5**	**+0.4**
	baz=38							
HIA	**Hailar**	**38.06**	**292**	⇓*e*P		**P**	**10 08 17.4**	**-0.3**
HIA	**Hailar**	**38.06**	**292**	*e*P		**P**	**10 08 17.0**	**-0.7**
	comp=Z,28nm,1.2s,mb4.9							
HIA				*e*pP		pP	10 08 32.5	+1.7
A09A	**Danville**	**38.07**	**69**	⇓P		**P**	**10 08 17.9**	**+0.2**
	baz=38							
D07A	**Quincy**	**38.08**	**72**	⇓P		**P**	**10 08 17.5**	**-0.4**
	baz=38,SNR=6.4							
C08A	**Higginbotham F**	**38.35**	**71**	⇑P		**P**	**10 08 20.2**	**+0.1**
	baz=38							
E07A	**Sunnyside**	**38.46**	**73**	⇓P		**P**	**10 08 21.4**	**+0.3**
	baz=38							
B09A	**Rice**	**38.58**	**69**	⇑P		**P**	**10 08 22.0**	**-0.1**
	baz=38,SNR=6.2							
G06A	**Carlson Farm,**	**38.65**	**75**	⇑P		**P**	**10 08 22.9**	**+0.3**
	baz=38							
A10A	**Northport**	**38.67**	**68**	⇓P		**P**	**10 08 22.7**	**-0.1**
	baz=38							
RSW	**Rattlesnake Hi**	**38.70**	**73**	*e*P		**P**	**10 08 23.9**	**+0.8**
HAWA	**Hanford**	**38.73**	**73**	*e*P		**P**	**10 08 23.5**	**+0.1**
	comp=Z,22nm,1.0s,mb4.8							
OD2	**Odessa Site #2**	**38.74**	**71**	*e*P		**P**	**10 08 23.5**	**+0.1**
F07A	**Phinny Hill Vi**	**38.74**	**74**	⇑P		**P**	**10 08 23.5**	**0.0**
	baz=38							
D08A	**Wollman Farm,**	**38.77**	**72**	⇑P		**P**	**10 08 23.5**	**-0.2**
	baz=38							
C09A	**Chrisman Ranch**	**38.80**	**70**	⇑P		**P**	**10 08 23.9**	**-0.1**
	baz=39							
E08A	**Dider Farm, El**	**38.97**	**73**	⇑P		**P**	**10 08 24.9**	**-0.4**
	baz=39,SNR=6.0							
H06A	**Lindquist Farm**	**39.09**	**76**	⇑P		**P**	**10 08 26.4**	**0.0**
	baz=39							
D09A	**Jones Farm, Ri**	**39.14**	**71**	⇑P		**P**	**10 08 26.6**	**-0.2**
	baz=39							
B10A	**Chitwood Farm,**	**39.18**	**69**	⇑P		**P**	**10 08 26.6**	**-0.5**
	baz=39							
EDM	**Edmonton**	**39.20**	**60**	*e*P		**P**	**10 08 26.8**	**-0.4**
EDM	**Edmonton**	**39.20**	**60**	*e*P		**P**	**10 08 26.6**	**-0.5**
G07A	**Ruggs Ranch, H**	**39.22**	**75**	⇓P		**P**	**10 08 27.3**	**-0.1**
	baz=39							
YBH	**Yreka Blue Hor**	**39.23**	**81**	P		**P**	**10 08 27.1**	**-0.5**
	comp=Z,2.2nm,0.9s,mb3.9,baz=22,slow=5.4,SNR=3.1							
YBH	**Yreka Blue Hor**	**39.23**	**81**	P		**P**	**10 08 27.1**	**-0.5**
YBH				pmax		pmax		
	comp=Z,2.0nm,0.9s							
NEW	**Newport**	**39.26**	**69**	P		**P**	**10 08 27.6**	**-0.2**
NEW				pmax		pmax		
	comp=Z,28nm,1.1s							
NEW	**Newport**	**39.26**	**69**	*e*P		**P**	**10 08 27.6**	**-0.2**
	comp=Z,25nm,1.1s,mb4.8							
NEW				*e*pP		pP	10 08 42.5	+1.7
KSRS	**Korea Array**	**39.32**	**271**	P		**P**	**10 08 28.9**	**+0.5**
	comp=Z,8.7nm,0.8s,mb4.5,baz=58,slow=8.5,SNR=25							
KSRS	**Korea Array**	**39.32**	**271**	P		**P**	**10 08 28.9**	**+0.5**
KSRS				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.5							
C10A	**Spilker Farm,**	**39.36**	**70**	⇓P		**P**	**10 08 28.4**	**-0.2**
	baz=39							
A11A	**Hall Mountain,**	**39.38**	**68**	⇓P		**P**	**10 08 28.6**	**-0.1**
	baz=39,SNR=16							
F08A	**Pendleton**	**39.49**	**73**	⇑P		**P**	**10 08 29.9**	**+0.2**
	baz=39							
E09A	**Wood Farm, Sta**	**39.51**	**72**	⇑P		**P**	**10 08 30.0**	**+0.2**
	baz=39							
B11A	**Sandpoint**	**39.62**	**68**	⇓P		**P**	**10 08 30.8**	**0.0**
	baz=39,SNR=5.2							
G08A	**Pilot Rock**	**39.63**	**74**	⇑P		**P**	**10 08 30.8**	**-0.1**
	baz=39							
D10A	**Wagner Farm, O**	**39.76**	**71**	⇑P		**P**	**10 08 31.2**	**-0.7**
	baz=40,SNR=5.2							
A12A	**Yaak River Ran**	**39.80**	**67**	⇑P		**P**	**10 08 32.1**	**-0.1**
	baz=40							
I07A	**Izee**	**39.93**	**76**	⇓P		**P**	**10 08 33.7**	**+0.3**
	baz=40							
F09A	**S2 Ranch, Elgi**	**40.05**	**73**	⇓P		**P**	**10 08 34.6**	**+0.2**
	baz=40							
RES	**Resolute Bay**	**40.07**	**24**	P		**P**	**10 08 34.1**	**0.0**
	comp=Z,3.2nm,1.0s,mb4.0,baz=282,slow=8.4,SNR=4.4							
RES				PcP		PcP	10 10 37.8	-0.1
	comp=Z,5.4nm,0.7s,baz=294,sl

E14A **Clinton** 42.32 70 ⇑P P 10 08 52.6 -0.4
baz=42,SNR=7.4
B16A **M & M Farms, S** 42.34 66 ⇓P P 10 08 52.5 -0.6
baz=42
PAHR **Pah Rah Range** 42.46 81 eP P 10 08 55.1 +0.9
comp=Z,17nm,1.1s,mb4.6
WCN **Washoe City** 42.47 82 ⇓P P 10 08 54.8 +0.5
baz=42
H12A **Diamond D Ranc** 42.50 73 ⇓P P 10 08 53.9 -0.6
baz=42,SNR=6.4
O07A **Toulon** 42.51 81 ⇓P P 10 08 55.0 +0.4
baz=42
MFID **Camas Ranch** 42.53 75 ⇓P P 10 08 54.6 -0.2
baz=42
D15A **Lincoln** 42.57 68 ⇑P P 10 08 54.6 -0.4
baz=42,SNR=9.6
G13A **Cobalt** 42.58 72 ⇑P P 10 08 54.7 -0.5
baz=42,SNR=18
N08A **GE Springer Mi** 42.61 79 ⇑P P 10 08 55.4 0.0
baz=42
C16A **Fuhringer Ranc** 42.63 67 ⇑P P 10 08 55.1 -0.3
baz=42,SNR=18
A17A **Triple J Farms** 42.65 65 ⇓P P 10 08 54.8 -0.9
baz=42,SNR=21
F14A **Wisdom** 42.71 70 ⇑P P 10 08 56.4 +0.2
baz=42,SNR=5.9
E15A **Deer Lodge** 42.82 69 ⇑P P 10 08 56.5 -0.5
baz=43,SNR=9.2
H13A **Challis** 42.85 72 ⇓P P 10 08 57.0 -0.3
baz=43
O08A **Rochester Mine** 42.88 80 ⇓P P 10 08 58.7 +1.1
baz=43,SNR=7.7
ALE **Alert** 42.88 10 P P 10 08 57.6 +0.4
comp=Z,61nm,0.5s,mb5.6,SNR=5.1
L10A **Juniper Basin** 42.89 77 ⇓P P 10 08 57.9 +0.3
baz=43
J12A **Stokes Ranch,** 43.07 74 ⇓P P 10 08 59.3 +0.2
baz=43,SNR=6.0
R06C **Coleville** 43.13 83 ⇑P P 10 09 00.2 +0.5
baz=43
D16A **Dana Ranch, Ca** 43.14 68 ⇓P P 10 08 59.4 -0.2
baz=43,SNR=5.8
HRY **Holter Researc** 43.14 68 eP P 10 08 59.7 0.0
A18A **Metzger Ranch,** 43.15 65 ⇓P P 10 08 59.0 -0.6
baz=43
F15A **Butte** 43.22 70 ⇓P P 10 08 59.9 -0.4
baz=43
L11A **Cat Creek Ranc** 43.28 76 ⇑P P 10 09 00.9 +0.1
baz=43,SNR=11
C17A **Wharram Farm,** 43.28 67 ⇑P P 10 09 00.6 -0.2
baz=43,SNR=11
I13A **Wildhorse Cree** 43.29 73 ⇑P P 10 09 00.8 -0.1
baz=43,SNR=19
HLID **Hailey** 43.31 74 eP P 10 09 01.1 +0.1
comp=Z,17nm,1.3s,mb4.6
E16A **East Helena** 43.33 69 ⇓P P 10 09 00.8 -0.3
baz=43,SNR=6.8
H14A **Leadore** 43.36 72 ⇑P P 10 09 01.2 -0.2
baz=43,SNR=13
BMN **Battle Mountai** 43.38 79 eP P 10 09 02.5 +0.9
BMN pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
BMN **Battle Mountai** 43.38 79 eP P 10 09 02.5 +0.9
comp=Z,5.8nm,0.8s,mb4.4
B18A **Beardsley Farm** 43.45 65 ⇑P P 10 09 01.8 -0.4
baz=43,SNR=11
K12A **Draper Farm, C** 43.53 75 ⇑P P 10 09 02.6 -0.3
baz=43,SNR=15
J13A **Cove Ranch, Pi** 43.55 74 ⇓P P 10 09 02.8 -0.2
baz=43,SNR=18
O09A **Fish Creek Ran** 43.55 79 ⇑P P 10 09 03.4 +0.3
baz=43
D17A **Six Diamond Ra** 43.58 67 ⇓P P 10 09 02.9 -0.2
baz=43
G15A **Dillon** 43.58 71 ⇓P P 10 09 02.9 -0.3
baz=43,SNR=11
EGMT **Eagleton** 43.66 66 eP P 10 09 02.9 -0.9
comp=Z,23nm,0.8s,mb5.0
EGMT epP pP 10 09 17.4 +0.3
I14A **Mackay** 43.69 73 ⇓P P 10 09 04.0 -0.1
baz=44,SNR=9.6
L12A **House Creek Ra** 43.74 76 ⇑P P 10 09 04.9 +0.4
baz=44,SNR=19
F16A **Kennard Place,** 43.76 69 ⇑P P 10 09 04.2 -0.4
baz=44,SNR=7.2
H15A **Lima** 43.79 71 ⇓P P 10 09 05.3 +0.4
baz=44,SNR=9.3
E17A **Martinsdale** 43.84 68 ⇓P P 10 09 05.0 -0.3
baz=44,SNR=12
Q08A **Gabbs** 43.87 81 ⇑P P 10 09 06.0 +0.4
baz=44
NVAR **Mina Array Bea** 43.90 82 P P 10 09 05.5 -0.3
comp=Z,2.8nm,0.8s,mb4.0,baz=288,slow=8.2,SNR=13
G16A **Moss Hill, Enn** 43.95 70 ⇑P P 10 09 05.9 -0.3
baz=44,SNR=6.7
J14A **Carey** 43.98 73 ⇓P P 10 09 06.8 +0.3
baz=44,SNR=11
K13A **Stover Farm, H** 44.02 75 ⇓P P 10 09 07.1 +0.3
baz=44
D18A **Linhart Farms,** 44.07 67 ⇓P P 10 09 07.2 +0.2
baz=44,SNR=17
M12A **Wells** 44.22 77 ⇑P P 10 09 09.0 +0.6
baz=44
I15A **Monteview** 44.23 72 ⇑P P 10 09 08.7 +0.3
baz=44
F17A **Fitzpatrick Pl** 44.26 69 ⇓P P 10 09 08.8 +0.2
baz=44,SNR=6.9
E18A **Harlowton** 44.34 68 ⇑P P 10 09 09.6 +0.3
baz=44,SNR=12
QLMT **Earthquake Lak** 44.39 70 eP P 10 09 09.7 0.0
MTUM **Tungsten Hills** 44.40 84 eP P 10 09 10.4 +0.6
ELK **Elko** 44.42 78 eP P 10 09 10.0 0.0
ELK pmax pmax
comp=Z,166nm,2.6s
ELK **Elko** 44.42 78 eP P 10 09 10.0 0.0
comp=Z,166nm,2.6s,mb5.3
L13A **Double Diamond** 44.43 75 ⇑P P 10 09 10.2 +0.2
baz=44,SNR=9.0
N12A **Clover Valley,** 44.48 77 ⇑P P 10 09 10.7 +0.3
baz=44
O11A **Cowboy Ranch,** 44.52 78 ⇑P P 10 09 11.2 +0.4
baz=44
G17A **Pierce Place,** 44.53 69 ⇓P P 10 09 11.0 +0.2
baz=44
H16A **Russell Place,** 44.57 70 ⇓P P 10 09 11.1 0.0
baz=44,SNR=12
J15A **Blackfoot** 44.59 73 ⇓P P 10 09 11.6 +0.3
baz=44
K14A **Jones Ranch, D** 44.63 74 ⇓P P 10 09 12.0 +0.3
baz=44
M13A **Montello** 44.72 76 ⇑P P 10 09 12.6 +0.2
baz=44
R09A **Tonopah** 44.78 82 ⇓P P 10 09 13.4 +0.5
baz=45,SNR=12
TPH **Tonopah** 44.79 82 eP P 10 09 13.3 +0.3
TPH pmax pmax
comp=Z,25nm,1.2s,mb4.9
TPH **Tonopah** 44.79 82 eP P 10 09 13.3 +0.3
comp=Z,25nm,1.2s,mb4.9
F18A **Big Timber** 44.81 68 ⇑P P 10 09 12.6 -0.4
baz=45,SNR=5.5
Q10A **Clear Creek Ra** 44.84 80 ⇓P P 10 09 13.9 +0.5
baz=45
I16A **Newdale** 44.89 72 ⇑P P 10 09 14.0 +0.3
baz=45,SNR=6.3
YNR **Norris Junctio** 44.90 70 eP P 10 09 14.7 +0.9
K15A **Arbon** 44.94 74 ⇓P P 10 09 14.8 +0.7
baz=45,SNR=9.5
YFT **Old Faithful** 44.96 71 eP P 10 09 15.2 +1.0
O12A **Currie** 45.00 78 ⇑P P 10 09 14.9 +0.3
baz=45
S09A **Goldfield** 45.01 82 ⇑P P 10 09 15.2 +0.5
baz=45
BJI **Beijing** 45.10 282 P P 10 09 15.0 -0.4
BJI AMB AMB
comp=Z,29nm,0.8s,mb5.2
BJT **Baijiatuau** 45.12 282 eP P 10 09 15.8 +0.3
BJT pmax pmax
comp=Z,17nm,0.5s
BJT **Baijiatuau** 45.12 282 eP P 10 09 15.8 +0.3
comp=Z,17nm,0.5s,mb5.1
M14A **Sheep Mountain** 45.13 75 ⇑P P 10 09 15.8 +0.2
baz=45
H17A **Grant Village** 45.14 70 ⇓P P 10 09 16.2 +0.5
baz=45,SNR=6.7
IMW **Indian Meadow** 45.21 71 eP P 10 09 16.3 +0.1
comp=Z,91nm,2.3s,mb5.2
G18A **Lazy EL Ranch,** 45.23 69 ⇓P P 10 09 16.3 -0.1
baz=45
R10A **Warm Springs** 45.23 81 ⇓P P 10 09 16.7 +0.2
baz=45
S10A **Tonopah Range,** 45.27 82 ⇓P P 10 09 17.1 +0.3
baz=45
IRK **Irkutsk** 45.28 303 eP P 10 09 16.5 -0.2
IRK pmax pmax
comp=Z,52nm,1.1s,mb5.3
RRI2 **Red Ridge** 45.29 72 eP P 10 09 17.9 +1.0
comp=Z,118nm,2.2s,mb5.3
Q11A **Duckwater** 45.30 80 ⇓P P 10 09 16.8 -0.2
baz=45
HVU **Hansel Valley** 45.32 75 eP P 10 09 17.5 +0.4
HVU pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
HVU **Hansel Valley** 45.32 75 eP P 10 09 17.5 +0.4
comp=Z,8.6nm,0.7s,mb4.7
GRAC **Grapevine Rang** 45.36 83 ⇑P P 10 09 18.0 +0.5
baz=45
P12A **McGill** 45.38 79 ⇓P P 10 09 17.9 +0.3
baz=45
MOOW **Moose Ponds** 45.41 71 eP P 10 09 17.8 +0.1
comp=Z,42nm,1.8s,mb5.0
I17A **Pilgram Creek** 45.41 71 ⇑P P 10 09 17.9 +0.1
baz=45
L15A **Malad City** 45.42 74 ⇓P P 10 09 18.6 +0.7
baz=45,SNR=8.5
K16A **Soda Springs** 45.43 73 ⇓P P 10 09 18.6 +0.7
baz=45,SNR=20
TPAW **Teton Pass** 45.43 72 eP P 10 09 20.0 +2.0
comp=Z,105nm,2.4s,mb5.2
RLMT **Red Ledge** 45.51 69 eP P 10 09 18.7 +0.1
comp=Z,24nm,0.9s,mb5.1
RLMT epP pP 10 09 33.4 +1.5
ISA **Isabella** 45.51 85 ⇓P P 10 09 18.1 -0.6
baz=45
ISA **Isabella** 45.51 85 eP P 10 09 17.2 -1.5
ISA pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
ISA **Isabella** 45.51 85 eP P 10 09 17.2 -1.5
comp=Z,4.3nm,1.0s,mb4.3
REDW **Red Top Meadow** 45.56 72 eP P 10 09 19.5 +0.5
comp=Z,45nm,1.8s,mb5.1
SNOW **Snow King Moun** 45.56 72 eP P 10 09 19.6 +0.6
comp=Z,75nm,2.0s,mb5.3
LOHW **Long Hollow** 45.57 71 eP P 10 09 19.5 +0.4
comp=Z,187nm,2.8s,mb5.5
N14A **Grayback Hills** 45.61 76 ⇓P P 10 09 19.7 +0.2
baz=45,SNR=5.9
R11A **Troy Canyon, C** 45.64 80 ⇑P P 10 09 19.4 -0.3
baz=45
J17A **Brown Place, J** 45.65 72 ⇓P P 10 09 20.1 +0.4
baz=45
Q12A **Willow Creek R** 45.69 79 ⇓P P 10 09 20.1 +0.1
baz=46
M15A **Larsen Ranch,** 45.70 75 ⇓P P 10 09 20.3 +0.2
baz=46,SNR=9.6
SPUT **South Promonto** 45.79 75 eP P 10 09 21.0 +0.2
TLY **Talaya** 45.90 302 P P 10 09 22.0 +0.4
comp=Z,137nm,0.9s,mb5.9,SNR=7.6
TLY **Talaya** 45.90 302 eP P 10 09 22.5 +0.9
TLY pmax pmax
comp=Z,25nm,1.0s,mb5.1
TLY **Talaya** 45.90 302 eP P 10 09 22.2 +0.6
comp=Z,22nm,0.9s,mb5.1
P13A **Bates Ranch, G** 45.94 78 ⇓P P 10 09 22.6 +0.5
baz=46,SNR=5.5
I18A **Diamond G Ranc** 45.99 71 ⇑P P 10 09 22.6 +0.2
baz=46,SNR=6.5
N15A **Stansbury Isla** 46.00 76 ⇑P P 10 09 22.7 +0.2
baz=46,SNR=8.2
FURC **Furnace Creek,** 46.01 83 ⇓P P 10 09 22.7 +0.1
baz=46
ULN **Ulaanbaatar** 46.06 296 eP P 10 09 23.2 +0.3
ULN pmax pmax
comp=Z,13nm,0.8s,mb4.9
ULN **Ulaanbaatar** 46.06 296 eP P 10 09 23.2 +0.3
comp=Z,4.5nm,0.8s,mb4.5
J18A **Kendall Valley** 46.15 72 ⇑P P 10 09 23.3 -0.4
baz=46,SNR=10
DUG **Dugway** 46.23 77 P P 10 09 23.7 -0.6
DUG pmax pmax
comp=Z,18nm,1.0s,mb5.0
DUG **Dugway** 46.23 77 eP P 10 09 24.3 0.0
comp=Z,31nm,1.3s,mb5.1
DUG epP pP 10 09 40.9 +3.2
Q13A **Wheeler Ranch,** 46.24 79 ⇓P P 10 09 24.7 +0.3
baz=46
R12A **Pony Springs,** 46.26 80 ⇓P P 10 09 24.8 +0.2
baz=46
L17A **Cokeville** 46.28 73 ⇑P P 10 09 24.9 +0.2
baz=46
M16A **Huntsville** 46.29 75 ⇓P P 10 09 24.8 +0.1
baz=46,SNR=16
P14A **Drum Mountains** 46.44 77 ⇓P P 10 09 26.2 +0.3
baz=46,SNR=5.9
SONM **Songino Array** 46.45 297 P P 10 09 26.6 +0.7
comp=Z,8.5nm,0.8s,mb4.8,baz=58,slow=9.3,SNR=43
SONM PcP PcP 10 10 59.6 -0.2
comp=Z,4.1nm,0.8s,baz=69,slow=2.5,SNR=4.3
SONM **Songino Array** 46.45 297 P P 10 09 26.6 +0.7
SONM 10 10 59.6
SONM pmax pmax
comp=Z,9.0nm,0.8s
SONM pmax pmax
comp=Z,4.0nm,0.8s
K18A **Toltan Ranch,** 46.47 72 ⇑P P 10 09 25.9 -0.2
baz=46,SNR=12
T11A **Corn Creek, Al** 46.55 81 ⇑P P 10 09 26.5 -0.4
baz=46,SNR=9.2
S12A **Delamar Landin** 46.56 81 ⇑P P 10 09 27.0 +0.1
baz=46
N16A **Rees Ranch, Co** 46.66 75 ⇑P P 10 09 27.6 0.0
baz=46
Q14A **Sevier Lake (B** 46.68 78 ⇑P P 10 09 28.4 +0.5
baz=46
BW06 **Boulder Array** 46.68 72 eP P 10 09 27.5 -0.3
comp=Z,17nm,0.8s,mb5.0
PDAR **Pinedale Array** 46.68 72 P P 10 09 27.9 0.0
comp=Z,24nm,1.0s,mb5.1,baz=305,slow=4.5,SNR=63
SHOC **Shoshone** 46.74 84 ⇓P P 10 09 28.6 +0.2
baz=46
R13A **O'Grin Ranch,** 46.75 80 ⇑P P 10 09 28.6 +0.2
baz=46
M17A **Scullys Gap (B** 46.78 74 ⇑P P 10 09 28.8 +0.2
baz=46
ZAK **Zakamensk** 46.78 301 eP P 10 09 28.5 0.0
ZAK pmax pmax
comp=Z,31nm,1.3s,mb5.1
GSC **Goldstone** 46.79 85 ⇓P P 10 09 28.9 +0.1
baz=47
GSC **Goldstone** 46.79 85 eP P 10 09 26.2 -2.6
GSC pmax pmax
comp=Z,21nm,1.2s,mb4.9
GSC **Goldstone** 46.79 85 eP P 10 09 26.2 -2.5
comp=Z,21nm,1.2s,mb4.9
JLU **Jordanelle** 46.82 75 eP P 10 09 28.9 0.0
L18A **Fontenelle, Gr** 46.89 73 ⇓P P 10 09 29.4 -0.1
baz=47,SNR=11
N17A **Moffit Pass** 46.99 75 ⇑P P 10 09 30.5 +0.2
baz=47
O16A **Springville** 47.03 76 ⇓P P 10 09 30.8 +0.2
baz=47
MPU **Maple Canyon** 47.06 76 eP P 10 09 30.7 -0.1
comp=Z,34nm,1.5s,mb5.1
K19A **Absolon Red Bu** 47.07 71 ⇑P P 10 09 30.7 -0.1
baz=47,SNR=16
M18A **Lyman** 47.16 74 ⇓P P 10 09 31.4 -0.2
baz=47
S13A **Holt Ranch, En** 47.19 80 ⇑P P 10 09 32.5 +0.7
baz=47,SNR=6.8
V11A **Goodsprings** 47.31 83 ⇑P P 10 09 33.2 +0.4
baz=47,SNR=5.6
MOY **Mondy** 47.31 304 eP P 10 09 33.5 +0.9
HHC **Hu-ho-hao-te** 47.44 286 eP P 10 09 34.3 +0.6
HHC AP pP 10 09 46.9 -0.2
HHC XP sP 10 09 53.1 +0.2
HHC PCP PcP 10 11 04.8 +1.4
HHC PP PP 10 11 25.0 -0.1
HHC AMB AMB
comp=Z,29nm,1.0s,mb5.2
HHC LR LR
comp=N,3μm,16.7s,MS5.8
HHC LR LR
comp=E,8μm,16.6s,MS5.8
HHC LR LR
comp=Z,7μm,16.6s,MS5.7
K20A **Yellowstone Ra** 47.47 71 ⇑P P 10 09 33.1 -0.9
baz=47
U12A **Valley of Fire** 47.49 82 ⇑P P 10 09 34.4 +0.3
baz=47
T13A **Saint George** 47.51 81 ⇓P P 10 09 34.7 +0.4
baz=47
MSU **Marysvale** 47.65 78 eP P 10 09 34.7 -0.7
M19A **Rock Springs** 47.67 73 ⇓P P 10 09 35.8 +0.3
baz=47
N18A **Larsen Ranch,** 47.67 74 ⇑P P 10 09 35.6 +0.1
baz=47
V12A **Nelson** 47.74 83 ⇓P P 10 09 36.0 -0.2
baz=48
TMUT **Trail Mountain** 47.76 77 eP P 10 09 37.3 +1.1
GMRC **Granite Mounta** 47.84 84 ⇑P P 10 09 36.6 -0.4
baz=48
U13A **Pakoon Wash** 47.85 81 ⇑P P 10 09 37.3 +0.3
baz=48,SNR=6.6
L20A **Wamsutter** 47.86 72 ⇑P P 10 09 36.9 -0.1
baz=48
O18A **Roosevelt** 47.90 75 ⇑P P 10 09 37.2 -0.2
baz=48
P17A **Butcher Ranch,** 47.94 76 ⇓P P 10 09 37.6 0.0
baz=48
T14A **Hurricane** 47.99 80 ⇓P P 10 09 37.8 -0.3
baz=48
LDFC **Landfair** 48.00 84 eP P 10 09 36.7 -1.4
comp=Z,3.6nm,0.5s,mb4.7
Q16A **Castle Valley** 48.02 77 ⇓P P 10 09 38.2 0.0
baz=48
N19A **John Jarvie Ra** 48.02 74 ⇓P P 10 09 37.8 -0.4
baz=48,SNR=8.8
P18A **Preston Nutter** 48.15 76 ⇓P P 10 09 39.2 0.0
baz=48
V13A **Grand Canyon W** 48.20 82 ⇓P P 10 09 39.8 0.0
baz=48
R16A **Teasdale** 48.22 78 ⇓P P 10 09 40.1 +0.3
baz=48
M20A **Sweetwater, Wa** 48.26 72 ⇓P P 10 09 39.9 -0.2
baz=48,SNR=6.4
SRU **San Rafael** 48.29 76 eP P 10 09 40.3 -0.1
SRU pmax pmax
comp=Z,16nm,1.0s,mb5.0
SRU **San Rafael** 48.29 76 eP P 10 09 40.3 -0.1
comp=Z,16nm,1.0s,mb5.0
T15A **Red Dirt Ranch** 48.46 80 ⇑P P 10 09 41.7 +0.1
baz=48
L21A **Rawlins** 48.46 71 ⇓P P 10 09 41.4 -0.3
baz=48
NJ2 **Nanjing** 48.49 272 eP P 10 09 45.3 +3.3
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
S16A **Weppner Ranch,** 48.50 78 ⇓P P 10 09 42.5 +0.6
baz=48
Q18A **Rafter H Ranch** 48.54 76 ⇓P P 10 09 42.5 +0.2
baz=48
MONP **Monument Peak** 48.60 87 ⇓P P 10 09 43.3 +0.4
baz=48
R17A **Hanksville Air** 48.61 77 ⇑P P 10 09 43.1 +0.3
baz=48
N20A **Spence Gulch,** 48.61 73 ⇓P P 10 09 43.0 +0.2
baz=48
W13A **Hualapai Mount** 48.75 83 ⇑P P 10 09 44.1 +0.2
baz=49
U15A **North Rim** 48.89 80 ⇑P P 10 09 44.7 -0.3
baz=49
V14A **Boquillas Ranc** 48.89 82 ⇓P P 10 09 45.2 +0.2
baz=49
P19A **Cripple Cowboy** 48.91 75 ⇑P P 10 09 45.4 +0.3
baz=49,SNR=8.5
S17A **Black Ridge (B** 49.04 78 ⇑P P 10 09 46.3 +0.2
baz=49,SNR=6.0
O20A **White River Ci** 49.05 74 ⇑P P 10 09 46.1 -0.1
baz=49,SNR=7.2
N21A **Black Mountain** 49.10 73 ⇑P P 10 09 46.1 -0.5
baz=49
X13A **Yucca** 49.11 83 ⇑P P 10 09 46.2 -0.5
baz=49
R18A **Canyonlands Na** 49.13 77 ⇑P P 10 09 47.1 +0.3
baz=49,SNR=6.4
RSSD **Black Hills** 49.14 67 eP P 10 09 46.2 -0.6
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RSSD **Black Hills** 49.14 67 eP P 10 09 46.2 -0.6
comp=Z,5.9nm,0.8s,mb4.7
W14A **Seligman** 49.17 82 ⇑P P 10 09 46.6 -0.6
baz=49
Y12C **Blythe** 49.23 85 ⇑P P 10 09 47.1 -0.5
baz=49
M22A **Cedar Creek Ra** 49.26 71 ⇓P P 10 09 47.4 -0.4
baz=49,SNR=5.7
O21A **Pagoda** 49.47 73 ⇓P P 10 09 49.1 -0.2
baz=49
GLA **Glamis** 49.50 85 ⇓P P 10 09 50.1 +0.4
baz=49
GLA **Glamis** 49.50 85 eP P 10 09 50.2 +0.5
GLA pmax pmax
comp=Z,28nm,1.3s,mb5.1
GLA **Glamis** 49.50 85 eP P 10 09 50.2 +0.5
comp=Z,28nm,1.3s,mb5.1
N22A **Wattenberg Ran** 49.72 72 ⇑P P 10 09 50.6 -0.6
baz=50
X14A **Yava** 49.78 83 ⇑P P 10 09 51.5 -0.3
baz=50
T18A **Mexican Hat** 49.93 78 ⇓P P 10 09 52.7 -0.2
baz=50
S19A **Harvey Farm, M** 50.00 77 ⇑P P 10 09 54.2 +0.8
baz=50
ULM **Lac du Bonnet** 50.07 56 P P 10 09 51.7 -2.0
comp=Z,3.6nm,0.7s,mb4.5,baz=221,slow=3.9,SNR=3.4
ULM **Lac du Bonnet** 50.07 56 P P 10 09 51.7 -2.1
SPB4 **Spitsbergen Ar** 50.56 356 eP P 10 09 56.0 -1.1
SPITS **Spitsbergen Ar** 50.56 356 P P 10 09 56.2 -1.0
comp=Z,11nm,0.5s,mb5.1,baz=56,slow=7.3,SNR=33
SPITS **Spitsbergen Ar** 50.56 356 P P 10 09 56.2 -0.9
SPITS pmax pmax
comp=Z,11nm,0.5s
R21A **Cimarron** 50.57 75 ⇓P P 10 09 58.5 +0.7
baz=50
ISCO **Idaho Springs** 50.84 72 eP P 10 10 00.2 +0.4
ISCO pmax pmax
comp=Z,43nm,1.7s,mb5.1
ISCO **Idaho Springs** 50.84 72 eP P 10 10 00.2 +0.5
comp=Z,43nm,1.7s,mb5.1
115A **Sonoran Desert** 51.36 84 ⇑P P 10 10 04.1 +0.4
baz=51
Y17A **Roosevelt** 51.56 82 ⇓P P 10 10 04.6 -0.7
baz=51
SDCO **Great Sand Dun** 52.21 74 eP P 10 10 09.3 -0.8
comp=Z,11nm,1.0s,mb4.7
XAN **Xi'an** 53.38 281 P P 10 10 17.3 -1.4
XAN AP pP 10 10 32.0 -0.3
XAN PP PP 10 12 18.9 -0.2
XAN AMB AMB
comp=Z,8.0nm,1.0s,mb4.6
XAN LR LR
comp=N,1μm,19.6s,MS5.2
XAN LR LR
comp=E,2μm,23.7s,MS5.2
XAN LR LR
comp=Z,5μm,20.6s,MS5.6
ANMO **Albuquerque** 53.45 78 *i* P P 10 10 19.4 +0.2
ANMO pmax pmax
comp=Z,12nm,1.3s
SUMG **Summit** 53.58 14 eP P 10 10 15.8 -3.8
comp=Z,46nm,1.2s,mb5.3
EYMN **Ely** 53.75 56 eP P 10 10 20.7 -0.5
comp=Z,67nm,1.6s,mb5.3
ZALV **Zalesovo Beam** 53.94 313 P P 10 10 22.0 -0.5
comp=Z,2.7nm,0.7s,mb4.3,baz=60,slow=7.0,SNR=3.7
ZALV PcP PcP 10 11 28.6 +1.3
comp=Z,3.0nm,0.7s,baz=25,slow=4.9,SNR=3.9
ZALV **Zalesovo Beam** 53.94 313 P P 10 10 22.0 -0.5
ZALV 10 11 28.6
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
LZH **Lanzhou** 55.13 286 eP P 10 10 31.4 0.0
LZH AP pP 10 10 44.1 -1.0
LZH XP sP 10 10 48.8 -2.0
LZH AMB AMB
comp=Z,70nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,354nm,5.0s
ARCES **ARCESS Array B** 58.24 350 P P 10 10 52.4 -0.6
comp=Z,12nm,0.8s,mb4.9,baz=21,slow=7.5,SNR=8.1

ARCES ARCESS Array B 58.24 350 P **P** 10 10 52.4 -0.6
ARCES pmax pmax
comp=Z,12nm,0.9s
ARE0 ARCESS Array S 58.24 350 *eP* **P** 10 10 52.7 -0.3
LVZ Lovozero 58.56 346 *i* P **P** 10 10 53.6 -1.6
LVZ pmax pmax
comp=Z,211nm,2.7s,mb5.7
KURK Kurchatov 58.93 313 P **P** 10 10 58.9 +0.9
comp=Z,201nm,0.6s,mb6.3,SNR=7.8
KURK Kurchatov 58.93 313⇓ *eP* **P** 10 10 57.7 -0.3
KURK pmax pmax
comp=Z,28nm,1.0s,mb5.2
TXAR Lajitas Array 59.01 81 P **P** 10 10 58.4 -0.5
comp=Z,1.7nm,0.5s,mb4.3,baz=307,slow=6.2,SNR=31
TXAR Lajitas Array 59.01 81 P **P** 10 10 58.4 -0.5
TXAR pmax pmax
comp=Z,2.0nm,0.5s
WMQ Urumqi 59.18 303 *eP* **P** 10 11 00.6 +0.7
HDIL Hopedale 59.80 62 *eP* **P** 10 11 03.5 -0.7
comp=Z,20nm,0.6s,mb5.3
MKAR Makanchi Array 59.91 308 P **P** 10 11 04.5 -0.4
comp=Z,14nm,0.7s,mb5.1,baz=50,slow=5.9,SNR=43
MKAR Makanchi Array 59.91 308 P **P** 10 11 04.5 -0.3
MKAR pmax pmax
comp=Z,14nm,0.7s
GYA Guiyang 60.02 276⇓ *i* P **P** 10 11 07.3 +1.4
GYA AP pP 10 11 20.4 +0.7
GYA PCP PcP 10 11 51.8 +0.3
GYA PP PP 10 13 20.8 +2.3
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,2µm,12.3s
GYA LR LR
comp=N,580nm,18.8s,MS4.8
GYA LR LR
comp=E,430nm,17.9s,MS4.8
GYA LR LR
comp=Z,530nm,18.4s,MS4.7
SCHQ Schefferville 60.37 38 P **P** 10 11 07.3 -0.5
comp=Z,18nm,1.0s,mb5.0,baz=301,slow=8.1,SNR=3.0
SCHQ Schefferville 60.37 38 P **P** 10 11 07.3 -0.5
USIN University of 62.51 63 *eP* **P** 10 11 22.3 -0.2
comp=Z,40nm,0.8s,mb5.6
ARU Arti 62.61 328 *eP* **P** 10 11 22.4 -0.5
ARU S **S** 10 19 47.9 +1.0
KMI Kunming 63.43 278 P **P** 10 11 31.0 +2.1
KMI AMB AMB
comp=Z,7.0nm,0.9s,mb4.8
JOF Joensuu 63.72 345 *ep* **P** 10 11 28.9 -1.2
comp=Z,18nm,0.8s,mb5.2
JOF Joensuu 63.72 345 *eP* **P** 10 11 28.9 -1.2
JOF pmax pmax
comp=Z,18nm,0.8s,mb5.2
KAF Kangasniemi 65.24 347 *ep* **P** 10 11 38.7 -1.4
comp=Z,18nm,1.0s,mb5.0
KAF Kangasniemi 65.24 347 *eP* **P** 10 11 38.7 -1.4
KAF pmax pmax
comp=Z,18nm,1.0s,mb5.1
SWET Sewanee 65.44 64 *eP* **P** 10 11 41.1 -0.7
TZTN Tazewell 65.82 61 *eP* **P** 10 11 43.9 -0.4
comp=Z,34nm,1.3s,mb5.2
TKM2 Tokmak 2 66.00 309 P **P** 10 11 46.7 +1.4
SNR=9.4
CPCT Cooper Cave 66.07 63 *eP* **P** 10 11 45.0 -0.8
USP Ospenovka 66.27 310 P **P** 10 11 48.0 +0.9
SNR=11
AAK Ala-Archa 66.75 310 P **P** 10 11 51.6 +1.5
comp=Z,151nm,0.7s,mb6.1,SNR=5.1
AAK Ala-Archa 66.75 310 *eP* **P** 10 11 50.7 +0.6
AAK pmax pmax
comp=Z,13nm,0.8s,mb5.0
AAK Ala-Archa 66.75 310 P **P** 10 11 51.6 +1.5
SNR=6.6
AAK Ala-Archa 66.75 310 *eP* **P** 10 11 50.7 +0.6
comp=Z,13nm,0.8s,mb5.0
BLA Blacksburg 67.04 59 *eP* **P** 10 11 50.9 -1.1
BLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BLA Blacksburg 67.04 59 *eP* **P** 10 11 50.9 -1.2
comp=Z,10nm,0.9s,mb4.8
EKS2 Erkin-Say 67.08 310 P **P** 10 11 53.6 +1.4
SNR=9.8
AML Almayashu 67.52 310 P **P** 10 11 57.3 +2.3
SNR=7.1
NB2 NORSAR Subarra 67.82 354 P **P** 10 11 56.1 -0.5
comp=Z,2.0nm,0.6s,mb4.3,baz=6.7,slow=6.2
NOA NORSAR Array B 67.82 354 P **P** 10 11 55.8 -0.8
comp=Z,10nm,1.0s,mb4.8,baz=7.7,slow=6.3,SNR=13
NOA NORSAR Array B 67.82 354 P **P** 10 11 55.8 -0.8
NOA pmax pmax
comp=Z,10.0nm,1.0s
GOGA Godfrey 68.15 64 *eP* **P** 10 11 57.9 -1.2
GOGA *e**PP pP 10 12 13.9 +0.7
GOGA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GOGA Godfrey 68.15 64 *eP* **P** 10 11 57.9 -1.2
comp=Z,20nm,1.0s,mb5.1
GOGA *e*pP pP 10 12 13.9 +0.7
KSH Kashi 68.36 306 *eP* **P** 10 12 02.3 +1.9
KSH AP pP 10 12 15.3 +0.9
KSH XP sP 10 12 20.3 +0.3
KSH PCP PcP 10 12 28.4 +2.8
KSH SCP 10 16 26.3
KSH PCS 10 16 31.4
KSH S S 10 20 57.8 +0.1
KSH XS sS 10 21 19.6 -1.6
KSH SCS ScS 10 21 54.4 -1.1
KSH SS SS 10 25 22.4 +1.5
KSH AMB AMB
comp=Z,302nm,1.2s,mb6.2
KSH AMB AMB
comp=Z,32µm,14.7s
VSU Vasula 68.67 346⇓ *eP* **P** 10 12 01.7 -0.3
VSU pmax pmax
comp=Z,47nm,0.9s,mb5.4
KONO Kongsberg 69.30 355 *i* P **P** 10 12 04.8 -1.0
OBN Obninsk 69.95 339 *eP* **P** 10 12 09.6 -0.3
OBN *e* 10 12 32.4
OBN pmax pmax
comp=Z,63nm,1.0s,mb5.5
OBN Obninsk 69.95 339 *eP* **P** 10 12 09.4 -0.5
comp=Z,35nm,0.7s,mb5.4
CMAR Chiang Mai Arr 70.71 276 P **P** 10 12 14.8 -0.4
comp=Z,2.6nm,0.8s,mb4.2,baz=22,slow=7.0,SNR=9.1
CMAR PKiKP PKiKP 10 18 25.9 +1.4
comp=Z,1.2nm,0.3s,baz=28,slow=4.1,SNR=5.3
CMAR Chiang Mai Arr 70.71 276 P **P** 10 12 14.8 -0.3
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
TAPN Taplejung 70.97 290 *eP* **P** 10 12 16.9 +0.3
ODAN Odare 71.53 290 *eP* **P** 10 12 20.0 0.0
GUN Gumba 71.63 292 *eP* **P** 10 12 21.6 +1.0
JIRN Jiri 71.64 291 *eP* **P** 10 12 21.6 +1.0
comp=Z,62nm,0.6s,mb5.7
RAMN Ramite 71.93 291 *eP* **P** 10 12 22.9 +0.5
comp=Z,116nm,0.9s,mb5.8
KKN Kakani 72.07 292 *eP* **P** 10 12 24.0 +0.8
comp=Z,57nm,0.8s,mb5.6
KKN Kakani 72.07 292 *eP* **P** 10 12 24.0 +0.8
KKN pmax pmax
comp=Z,57nm,0.8s,mb5.5
PKI Pulchoki 72.16 292 *eP* **P** 10 12 24.3 +0.5
GKN Gorkha 72.29 293 *eP* **P** 10 12 24.9 +0.4
comp=Z,40nm,0.8s,mb5.4
DMN Daman 72.31 292 *eP* **P** 10 12 25.3 +0.6
comp=Z,42nm,0.9s,mb5.4
DANN Dangsing 72.54 293 *eP* **P** 10 12 26.5 +0.5
comp=Z,71nm,0.7s,mb5.7
KOLN Koldanda 73.06 293 *eP* **P** 10 12 29.4 +0.3
comp=Z,27nm,0.9s,mb5.2
BSEG Bad Segeberg 74.96 354 *eP* **P** 10 12 39.8 +0.1
BSEG pmax pmax
comp=Z,33nm,0.9s,mb5.3
BSEG Bad Segeberg 74.96 354 *eP* **P** 10 12 39.8 +0.1
comp=Z,33nm,0.9s,mb5.3
AKASG Malin Array Be 75.65 342 P **P** 10 12 43.2 -0.6
comp=Z,30nm,0.5s,mb5.5,baz=20,slow=6.2,SNR=42
AKASG Malin Array Be 75.65 342 P **P** 10 12 43.2 -0.5
AKASG pmax pmax
comp=Z,30nm,0.5s
AKASG Malin Array Be 75.65 342 P **P** 10 12 43.2 -0.6
KIEV Kiev 75.66 342 *eP* **P** 10 12 43.1 -0.7
KIEV pmax pmax
comp=Z,25nm,0.5s,mb5.4
KIEV Kiev 75.66 342 *eP* **P** 10 12 43.1 -0.7
comp=Z,25nm,0.5s,mb5.4
NRDL Niedersach Rie 76.41 354 *eP* **P** 10 12 47.9 -0.1
comp=Z,24nm,1.0s,mb5.1
IBBN Ibbenburen 76.72 356 *eP* **P** 10 12 50.1 +0.3
comp=Z,42nm,0.8s,mb5.4
CLZ Clausthal 77.04 354 *eP* **P** 10 12 51.9 +0.3
CLZ pmax pmax
comp=Z,28nm,1.0s,mb5.2
CLZ Clausthal 77.04 354 *eP* **P** 10 12 51.9 +0.3
comp=Z,28nm,1.0s,mb5.2
WTSB Winterswijk 77.11 356 *eP* **P** 10 12 52.1 +0.1
comp=Z,29nm,0.9s,mb5.2
CLL Collm 77.36 352⇑ *iP* **P** 10 12 52.6 -0.8
CLL *i* *PP pP 10 13 08.0 +0.3
CLL pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
CLL Collm 77.36 352 *eP* **P** 10 12 52.7 -0.7
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 77.36 352⇑ *iP* **P** 10 12 52.6 -0.8
comp=Z,9.0nm,0.7s,mb4.8
CLL *i* sP sP 10 13 08.0 -5.3
KSP Ksiaz 77.50 350 *eP* **P** 10 12 53.6 -0.6
OJC Ojcow 77.68 348 *eP* **P** 10 12 55.1 -0.1
BRG Berggiesshubel 77.71 351 *i* P **P** 10 12 55.0 -0.4
BRG pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BRG Berggiesshubel 77.71 351 *eP* **P** 10 12 54.6 -0.8
comp=Z,11nm,0.8s,mb4.8
BRG Berggiesshubel 77.71 351 *i* P **P** 10 12 55.0 -0.4
comp=Z,11nm,0.8s,mb4.8
UPC Upice 77.86 350 *eP* **P** 10 12 56.7 +0.5
DPC Dobruska-Polom 77.98 350 *eP* **P** 10 12 57.4 +0.5
MOX Moxa 78.14 353 *eP* **P** 10 12 57.8 +0.1
comp=Z,6.0nm,0.6s,mb4.7
MOX Moxa 78.14 353 *eP* **P** 10 12 57.8 +0.1
MOX pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
MOX Moxa 78.14 353 *eP* **P** 10 12 57.4 -0.3
comp=Z,12nm,1.0s,mb4.8
STHS Stebnicka Huta 78.26 346 *eP* **P** 10 12 59.1 +0.6
STHS pmax pmax
comp=Z,18nm,0.9s,mb5.0
STHS Stebnicka Huta 78.26 346 *eP* **P** 10 12 59.1 +0.6
comp=Z,18nm,0.9s,mb5.0
OKC Ostrava-Krasne 78.27 349 *eP* **P** 10 12 58.9 +0.4
TANN Tannenbergstha 78.30 352 *eP* **P** 10 12 58.4 -0.2
comp=Z,42nm,1.8s,mb5.1
HGN Heimansgroeve 78.34 357 *eP* **P** 10 12 59.0 +0.1
comp=Z,34nm,0.5s,mb5.5
NKC Novy Kostel 78.48 352 *eP* **P** 10 12 59.9 +0.3
KIV Kislovodsk 78.49 330 *eP* **P** 10 13 00.1 +0.3
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.8
KIV Kislovodsk 78.49 330 *eP* **P** 10 12 59.7 -0.1
comp=Z,6.8nm,0.7s,mb4.7
MEM Membach 78.50 357 P **P** 10 13 00.2 +0.5
comp=Z,15nm,1.1s,mb4.8
PRU Pruhonice 78.53 351 *eP* **P** 10 12 59.9 0.0
SNF Seneffe 78.65 358 P **P** 10 13 00.9 +0.3
BCLA Clavier 78.71 357 P **P** 10 13 00.8 -0.2
CRVS Cervenica-Dubn 78.73 346 *eP* **P** 10 13 01.5 +0.4
CRVS pmax pmax
comp=Z,16nm,0.9s,mb5.0
CRVS Cervenica-Dubn 78.73 346 *eP* **P** 10 13 01.5 +0.4
comp=Z,16nm,0.9s,mb4.9
MANZ Manzenberg 78.75 353 *eP* **P** 10 13 00.7 -0.5
comp=Z,10.0nm,1.1s,mb4.7
TNS Taunus Mts 78.77 355 *eP* **P** 10 13 00.7 -0.5
TNS pmax pmax
comp=Z,15nm,0.9s,mb4.9
TNS Taunus Mts 78.77 355 *eP* **P** 10 13 00.7 -0.5
comp=Z,15nm,0.9s,mb4.9
UZH Uzhgorod 78.87 346 *d iP* **P** 10 13 01.0 -0.8
UZH *i* pP 10 13 14.3 -1.8
ROTZ Rotzenmuhle 78.96 352 *eP* **P** 10 13 02.3 0.0
comp=Z,20nm,1.3s,mb4.9
VRAC Vranov 78.98 349 P **P** 10 13 02.2 -0.2
comp=Z,18nm,0.9s,mb5.0,baz=26,slow=5.6,SNR=7.5
VRAC Vranov 78.98 349 P **P** 10 13 02.2 -0.2
VRAC pmax pmax
comp=Z,18nm,0.9s
VRAC Vranov 78.98 349⇓ *iP* **P** 10 13 02.9 +0.5
GIVF Givet 79.04 357 *eP* **P** 10 13 02.5 -0.2
comp=Z,53nm,1.2s,mb5.0
GIVF Givet 79.04 357 *eP* **P** 10 13 02.5 -0.2
GIVF pmax pmax
comp=Z,27nm,1.2s,mb5.0
GIVF Givet 79.04 357 *eP* **P** 10 13 02.5 -0.2
comp=Z,27nm,1.2s,mb5.0
DOU Dourbes 79.06 357 P **P** 10 13 02.6 -0.2
comp=Z,11nm,1.7s,mb4.5
BAIF Baives 79.10 358 *eP* **P** 10 13 03.1 0.0
comp=Z,61nm,1.0s,mb5.2
BAIF Baives 79.10 358 *eP* **P** 10 13 03.1 0.0
BAIF pmax pmax
comp=Z,30nm,1.0s,mb5.2
BAIF Baives 79.10 358 *eP* **P** 10 13 03.1 0.0
comp=Z,30nm,1.0s,mb5.2
GRA1 Grafenberg Arr 79.11 353 *eP* **P** 10 13 03.4 +0.3
comp=Z,51nm,1.4s,mb5.3
GRF Grafenberg Arr 79.11 353 *eP* **P** 10 13 03.4 +0.3
GRF pmax pmax
comp=Z,51nm,1.4s,mb5.3
GRF Grafenberg Arr 79.11 353 *eP* **P** 10 13 03.4 +0.3
GRF pmax pmax
comp=Z,51nm,1.4s,mb5.3
GRF Grafenberg Arr 79.11 353 *eP* **P** 10 13 03.4 +0.3
comp=Z,51nm,1.4s,mb5.3
KECS Kecovo 79.29 347 *eP* **P** 10 13 04.4 +0.3
KECS pmax pmax
comp=Z,12nm,1.0s,mb4.8
KECS Kecovo 79.29 347 *eP* **P** 10 13 04.4 +0.3
comp=Z,12nm,1.0s,mb4.8
TRPA Tarpa 79.32 345⇓ *iP* **P** 10 13 05.0 +0.7
BUR08 Bucovina Ar. S 79.34 343 *eP* **P** 10 13 05.1 +0.7
BURAR Bucovina Array 79.36 343⇑ *iP* **P** 10 13 05.0 +0.5
WLF Walferdange 79.44 356 P **P** 10 13 05.2 +0.3
WLF Walferdange 79.44 356 *eP* **P** 10 13 05.4 +0.5
comp=Z,20nm,1.0s,mb5.0
KHC Kasperske Hory 79.47 351⇓ *eP* **P** 10 13 04.6 -0.5
KHC Kasperske Hory 79.47 351 *eP* **P** 10 13 05.5 +0.4
KHC *e*pP pP 10 13 08.8 -11
KOLL Kolacno 79.48 348 *eP* **P** 10 13 05.2 +0.1
VYHS Vyhne 79.50 348 *eP* **P** 10 13 05.3 0.0
VYHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
VYHS Vyhne 79.50 348 *eP* **P** 10 13 05.3 0.0
comp=Z,8.3nm,1.1s,mb4.6
WET Wettzell 79.52 352 *eP* **P** 10 13 05.4 0.0
WET pmax pmax
comp=Z,21nm,1.4s,mb4.9
WET Wettzell 79.52 352 *eP* **P** 10 13 05.4 0.0
comp=Z,21nm,1.4s,mb4.9
SOC Sochi 79.73 332 *eP* **P** 10 13 06.4 -0.2
SOC pmax pmax
comp=Z,434nm,0.7s
GEC2 GERESS Array S 79.74 351 *eP* **P** 10 13 06.0 -0.6
GEC2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
GEC2 GERESS Array S 79.74 351 *eP* **P** 10 13 06.0 -0.6
comp=Z,9.0nm,0.9s,mb4.7
GERES GERESS Array B 79.74 351 P **P** 10 13 06.2 -0.4
comp=Z,4.0nm,0.6s,mb4.5,baz=24,slow=5.4,SNR=30
GERES GERESS Array B 79.74 351 P **P** 10 13 06.2 -0.4
GERES pmax pmax
comp=Z,4.0nm,0.6s
PSZ Piszkesteto 79.92 347 *eP* **P** 10 13 08.0 +0.4
PSZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
PSZ Piszkesteto 79.92 347⇑ *iP* **P** 10 13 08.9 +1.3
PSZ Piszkesteto 79.92 347 *eP* **P** 10 13 08.0 +0.4
comp=Z,22nm,1.0s,mb5.0
ZST Bratislava 80.02 349 *eP* **P** 10 13 08.6 +0.5
ZST pmax pmax
comp=Z,22nm,1.0s,mb5.0
ZST Bratislava 80.02 349 *eP* **P** 10 13 08.6 +0.5
comp=Z,22nm,1.0s,mb5.0
CONA Conrad Observa 80.42 350⇑ *iP* **P** 10 13 10.8 +0.6
comp=Z,22nm,1.3s,mb4.9
CSNA Conrad Observa 80.42 350⇑ *iP* **P** 10 13 10.8 +0.5
comp=Z,22nm,1.3s,mb4.9
FLN La Foliniere 80.44 1 *eP* **P** 10 13 09.8 -0.5
comp=Z,55nm,1.0s,mb5.1
FLN La Foliniere 80.44 1 *eP* **P** 10 13 09.8 -0.5
FLN pmax pmax
comp=Z,28nm,1.0s,mb5.2
FLN La Foliniere 80.44 1 *eP* **P** 10 13 09.8 -0.5
comp=Z,28nm,1.0s,mb5.1
DRGR 80.59 345⇓ *iP* **P** 10 13 11.6 +0.4
LDF La Druitiere 80.61 1 *eP* **P** 10 13 10.6 -0.7
comp=Z,40nm,0.9s,mb5.0
LDF La Druitiere 80.61 1 *eP* **P** 10 13 10.6 -0.7
LDF pmax pmax
comp=Z,20nm,0.9s,mb5.0
LDF La Druitiere 80.61 1 *eP* **P** 10 13 10.6 -0.7
comp=Z,20nm,0.9s,mb5.0
CDF Champ du Feu 80.64 356 *eP* **P** 10 13 11.1 -0.3
comp=Z,15nm,0.8s,mb4.6
CDF Champ du Feu 80.64 356 *eP* **P** 10 13 11.1 -0.3
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CDF Champ du Feu 80.64 356 *eP* **P** 10 13 11.1 -0.3
comp=Z,7.4nm,0.8s,mb4.7
MEZF Maizieres J'vi 80.64 357 *eP* **P** 10 13 11.4 0.0
VRI Vrincioaia 80.76 342⇑ *iP* **P** 10 13 13.0 +0.9
PLOR Plostina 80.79 342⇑ *iP* **P** 10 13 13.1 +0.8
GRR Gorron 80.81 1 *eP* **P** 10 13 12.0 -0.3
comp=Z,33nm,0.8s,mb5.0
GRR Gorron 80.81 1 *eP* **P** 10 13 12.0 -0.3
GRR pmax pmax
comp=Z,16nm,0.8s,mb5.0
GRR Gorron 80.81 1 *eP* **P** 10 13 12.0 -0.3
comp=Z,16nm,0.8s,mb5.0
ROSF Rostrenen 80.81 3 *eP* **P** 10 13 12.1 -0.3
SGMF Saint Gilles 80.92 2 *eP* **P** 10 13 12.7 -0.2
RJOB Jochberg 80.92 352 *eP* **P** 10 13 11.3 -1.6
comp=Z,13nm,0.9s,mb4.9
HAU Haudompre 81.08 356 *eP* **P** 10 13 13.4 -0.4
HINF Hinteralfeld 81.25 356 *eP* **P** 10 13 14.1 -0.6
VOIR 81.49 343⇓ *iP* **P** 10 13 17.2 +1.2
KBA Koelnbreinsper 81.53 351 *i* P **P** 10 13 17.2 +1.1
comp=Z,46nm,0.7s,mb5.5,SNR=10
WRA Warramunga Arr 81.64 223 P **P** 10 13 14.9 -2.0
comp=Z,1.6nm,0.6s,mb4.1,baz=33,slow=6.1,SNR=13
WRA Warramunga Arr 81.64 223 P **P** 10 13 14.9 -2.0
WRA pmax pmax
comp=Z,2.0nm,0.6s
SOKA Soboth 81.75 350⇑ *iP* **P** 10 13 17.8 +0.5
comp=Z,37nm,1.2s,mb5.2
TIRR Tirgusor 81.77 340⇑ *iP* **P** 10 13 18.0 +0.5
FETA Feichten 81.81 353⇑ *iP* **P** 10 13 18.6 +1.0
comp=Z,18nm,1.1s,mb4.9,SNR=6.7
LOR Lormes 81.90 358 *eP* **P** 10 13 17.9 -0.2
comp=Z,26nm,1.0s,mb4.8
LOR Lormes 81.90 358 *eP* **P** 10 13 17.9 -0.2
LOR pmax pmax
comp=Z,13nm,1.0s,mb4.8
LOR Lormes 81.90 358 *eP* **P** 10 13 17.9 -0.2
comp=Z,13nm,1.0s,mb4.8
BZS Buzias 81.91 345⇑ *iP* **P** 10 13 18.4 +0.2
GROS Grobnik 81.91 350 *i* P **P** 10 13 18.1 -0.1
ABTA Abfaltersbach 81.93 352⇑ *iP* **P** 10 13 18.4 +0.1
comp=Z,18nm,1.1s,mb4.9,SNR=6.2
GZR Gura Zlata 81.94 344⇓ *iP* **P** 10 13 19.1 +0.8
DAVOX Davos/Dischmat 82.11 354 P **P** 10 13 18.4 -0.8
comp=Z,7.7nm,0.8s,mb4.7,baz=7.9,slow=13,SNR=6.9
SSF Saint Saulge 82.12 358 *eP* **P** 10 13 19.0 -0.3
comp=Z,12nm,0.8s,mb4.6
SSF Saint Saulge 82.12 358 *eP* **P** 10 13 19.0 -0.3
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SSF Saint Saulge 82.12 358 *eP* **P** 10 13 19.0 -0.3
comp=Z,6.0nm,0.8s,mb4.6
CADS Cadrg 82.33 351 *i* P **P** 10 13 19.4 -1.0
AVF Avril sur Loir 82.39 358 *eP* **P** 10 13 20.4 -0.3
comp=Z,48nm,1.2s,mb5.0
AVF Avril sur Loir 82.39 358 *eP* **P** 10 13 20.4 -0.3
AVF pmax pmax
comp=Z,24nm,1.2s,mb5.0
AVF Avril sur Loir 82.39 358 *eP* **P** 10 13 20.4 -0.3
comp=Z,24nm,1.2s,mb5.0
TUE Stuetta 82.45 354 *eP* **P** 10 13 21.4 +0.4
comp=Z,14nm,0.9s,mb4.9
CABF La Chapelle 82.49 356 *eP* **P** 10 13 20.3 -0.9
comp=Z,34nm,1.2s,mb4.8
CABF La Chapelle 82.49 356 *eP* **P** 10 13 20.3 -0.9
CABF pmax pmax
comp=Z,17nm,1.2s,mb4.8
CABF La Chapelle 82.49 356 *eP* **P** 10 13 20.3 -0.9
comp=Z,17nm,1.2s,mb4.8
SMF Signal de Mont 82.53 358 *eP* **P** 10 13 21.1 -0.3
comp=Z,44nm,1.1s,mb5.1
SMF Signal de Mont 82.53 358 *eP* **P** 10 13 21.1 -0.3
SMF pmax pmax
comp=Z,22nm,1.1s,mb5.1
SMF Signal de Mont 82.53 358 *eP* **P** 10 13 21.1 -0.3
comp=Z,22nm,1.1s,mb5.1
MFF Saint Martin d 82.61 1 *eP* **P** 10 13 21.6 -0.2
comp=Z,47nm,0.9s,mb5.2
MFF Saint Martin d 82.61 1 *eP* **P** 10 13 21.6 -0.2
MFF pmax pmax
comp=Z,24nm,0.9s,mb5.2
MFF Saint Martin d 82.61 1 *eP* **P** 10 13 21.6 -0.2
comp=Z,24nm,0.9s,mb5.2
BGF Bois d'Agland 82.64 358 *eP* **P** 10 13 21.8 -0.2
BOJS Bojanci 82.89 350 *i* P **P** 10 13 19.6 -3.7
TCF Toulx Ste Croi 82.91 359 *eP* **P** 10 13 23.0 -0.4
comp=Z,32nm,1.1s,mb5.0
TCF Toulx Ste Croi 82.91 359 *eP* **P** 10 13 23.0 -0.4
TCF pmax pmax
comp=Z,16nm,1.1s,mb5.0
TCF Toulx Ste Croi 82.91 359 *eP* **P** 10 13 23.0 -0.4
comp=Z,16nm,1.1s,mb5.0
LPL La Plagne 83.55 356 *eP* **P** 10 13 27.4 +0.7
LPG La Plagne 83.57 356 *eP* **P** 10 13 27.8 +1.0
RJF Les Rejaudoux 83.90 359 *eP* **P** 10 13 28.4 -0.1
HYB Hyderabad 83.98 290 *i* P **P** 10 13 29.0 -0.4
BNI Bardonecchia 84.02 356 *eP* **P** 10 13 30.2 +1.1
BNI pmax pmax
comp=Z,11nm,0.8s,mb5.0
BNI Bardonecchia 84.02 356 *eP* **P** 10 13 30.2 +1.1
comp=Z,11nm,0.8s,mb5.0
FITZ Fitzroy Crossi 84.08 232 *eP* **P** 10 13 28.7 -0.9
comp=Z,17nm,0.6s,mb5.3
ORIF Oris-en-Rattie 84.19 356 *eP* **P** 10 13 30.5 +0.5
comp=Z,22nm,1.0s,mb5.0
ORIF Oris-en-Rattie 84.19 356 *eP* **P** 10 13 30.5 +0.5
ORIF pmax pmax
comp=Z,11nm,1.0s,mb4.9
ORIF Oris-en-Rattie 84.19 356 *eP* **P** 10 13 30.5 +0.5
comp=Z,11nm,1.0s,mb4.9
LFF La Frestale 84.27 360 *eP* **P** 10 13 30.3 -0.1
CAF Calviac 84.28 359 *eP* **P** 10 13 30.4 0.0
comp=Z,58nm,1.2s,mb5.3
CAF Calviac 84.28 359 *eP* **P** 10 13 30.4 0.0
CAF pmax pmax
comp=Z,29nm,1.2s,mb5.3
CAF Calviac 84.28 359 *eP* **P** 10 13 30.4 0.0
comp=Z,29nm,1.2s,mb5.3
VIVF Saint-Julien-l 84.29 357 *eP* **P** 10 13 30.4 -0.1
comp=Z,12nm,0.8s,mb4.7
VIVF Saint-Julien-l 84.29 357 *eP* **P** 10 13 30.4 -0.1
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 84.29 357 *eP* **P** 10 13 30.4 -0.1
comp=Z,5.8nm,0.8s,mb4.8
MBDF Montbardon 84.34 356 *eP* **P** 10 13 31.3 +0.6
comp=Z,22nm,0.9s,mb5.0
MBDF Montbardon 84.34 356 *eP* **P** 10 13 31.3 +0.6
MBDF pmax pmax
comp=Z,11nm,0.9s,mb5.0
MBDF Montbardon 84.34 356 *eP* **P** 10 13 31.3 +0.6
comp=Z,11nm,0.9s,mb5.0
BR131 Keskin Array S 85.00 335 *eP* **P** 10 13 34.6 +0.4
comp=Z,6.2nm,0.7s,mb4.8
BRTR Keskin Array B 85.00 335 P **P** 10 13 34.5 +0.3
comp=Z,8.1nm,0.8s,mb4.9,baz=57,slow=3.1,SNR=25
BRTR Keskin Array B 85.00 335 P **P** 10 13 34.5 +0.3
BRTR pmax pmax
comp=Z,8.0nm,0.8s
LASF Ste Croix 85.09 358 *eP* **P** 10 13 34.6 0.0
comp=Z,38nm,1.3s,mb5.1
ASAR Alice Springs 85.11 222 P **P** 10 13 33.6 -1.1
comp=Z,1.8nm,0.8s,mb4.3,baz=25,slow=5.7,SNR=10
ASAR Alice Springs 85.11 222 P **P** 10 13 33.6 -1.1
ASAR pmax pmax
comp=Z,2.0nm,0.8s
SMRF Simiane la Rot 85.14 356 *eP* **P** 10 13 35.6 +0.8
comp=Z,29nm,0.9s,mb5.1
SMRF Simiane la Rot 85.14 356 *eP* **P** 10 13 35.6 +0.8

comp=Z,29nm,0.9s,mb5.4
SBF Sospel 85.17 355 *e*P P **10 13 34.6 -0.3**
comp=Z,70nm,1.0s,mb5.4
SBF Sospel 85.17 355 *e*P P **10 13 34.6 -0.3**
SBF pmax pmax
comp=Z,35nm,1.0s,mb5.4
SBF Sospel 85.17 355 *e*P P **10 13 34.6 -0.3**
comp=Z,35nm,1.0s,mb5.4
FRF La Foret Royal 85.51 356 *e*P P **10 13 36.3 -0.3**
comp=Z,42nm,1.1s,mb5.3
FRF La Foret Royal 85.51 356 *e*P P **10 13 36.3 -0.3**
FRF pmax pmax
comp=Z,21nm,1.1s,mb5.3
FRF La Foret Royal 85.51 356 *e*P P **10 13 36.3 -0.3**
comp=Z,21nm,1.1s,mb5.3
LMR La Mourre 85.74 356 *e*P P **10 13 37.6 -0.2**
comp=Z,25nm,1.0s,mb5.1
LMR La Mourre 85.74 356 *e*P P **10 13 37.6 -0.2**
LMR pmax pmax
comp=Z,13nm,1.0s,mb5.1
LMR La Mourre 85.74 356 *e*P P **10 13 37.6 -0.2**
comp=Z,12nm,1.0s,mb5.1
MTLF Montolieu 85.86 359 *e*P P **10 13 38.5 +0.1**
comp=Z,43nm,1.3s,mb5.2
MTLF Montolieu 85.86 359 *e*P P **10 13 38.5 +0.1**
MTLF pmax pmax
comp=Z,22nm,1.3s,mb5.2
MTLF Montolieu 85.86 359 *e*P P **10 13 38.5 +0.1**
comp=Z,22nm,1.3s,mb5.2
EPF Esparros 86.18 0 *e*P P **10 13 39.2 -0.8**
comp=Z,16nm,0.9s,mb5.0
EPF Esparros 86.18 0 *e*P P **10 13 39.2 -0.8**
EPF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
EPF Esparros 86.18 0 *e*P P **10 13 39.2 -0.8**
comp=Z,8.1nm,0.9s,mb5.0
ETSF Etsaut 86.31 1 *e*P P **10 13 40.9 +0.3**
comp=Z,34nm,1.2s,mb5.2
ETSF Etsaut 86.31 1 *e*P P **10 13 40.9 +0.3**
ETSF pmax pmax
comp=Z,17nm,1.2s,mb5.2
ETSF Etsaut 86.31 1 *e*P P **10 13 40.9 +0.3**
comp=Z,17nm,1.2s,mb5.2
PGF Pioggiola 86.38 354 *e*P P **10 13 40.7 -0.3**
comp=Z,70nm,1.0s,mb5.5
PGF Pioggiola 86.38 354 *e*P P **10 13 40.7 -0.3**
PGF pmax pmax
comp=Z,35nm,1.0s,mb5.5
PGF Pioggiola 86.38 354 *e*P P **10 13 40.7 -0.3**
comp=Z,35nm,1.0s,mb5.5
ESDC Sonseca Array 89.44 4 P P **10 13 54.8 -0.8**
comp=Z,0.7nm,0.5s,mb4.3,baz=359,slow=5.6,SNR=2.9
STKA Stephens Creek 89.58 212 P P **10 13 55.6 -0.5**
comp=Z,5.1nm,1.0s,mb4.8,baz=311,slow=4.0,SNR=4.1
DFRA Djebel Bou Aff 92.54 356 P P **10 14 09.0 -1.1**
TORD Torodi Ar. Bea 115.95 359 PKP PKPdf 10 19 40.6 -1.1
comp=Z,0.3nm,0.5s,baz=346,slow=2.8,SNR=3.9
TORD PKKPab PKKPab 10 30 21.4 +1.1
comp=Z,0.8nm,0.8s,baz=174,slow=4.0,SNR=3.6
TORD Torodi Ar. Bea 115.95 359 PKP PKPdf 10 19 40.6 -1.1
TORD PKKPab PKKPab 10 30 21.4 +1.1
DBIC Dimbokro 122.19 7 PKP PKPdf 10 19 53.4 -0.4
comp=Z,0.7nm,0.3s,baz=308,slow=2.2,SNR=5.1
DBIC Dimbokro 122.19 7 PKIKP PKPdf 10 19 53.4 -0.4
DBIC pmax pmax
comp=Z,1.0nm,0.3s
CPUP Villa Florida 129.94 83 PKP PKPdf 10 20 07.3 -0.9
comp=Z,0.3nm,0.3s,baz=280,slow=6.1,SNR=3.6
QSPA South Pole Qui 140.92 180 PKP PKPdf 10 20 27.5 +0.5
comp=Z,1.6nm,0.5s,baz=44,slow=1.2,SNR=3.4
TSUM Tsumeb 145.41 331 PKPbc PKPbc 10 20 36.9 +0.3
comp=Z,27nm,0.9s,baz=356,slow=5.4,SNR=38
TSUM Tsumeb 145.41 331 *e*PKPbc PKPbc 10 20 37.1 +0.4
MAW Mawson 146.12 217 PKPbc PKPbc 10 20 36.3 -1.1
comp=Z,2.8nm,0.6s,baz=118,slow=20,SNR=3.5
MAW Mawson 146.12 217 PKP2 PKPab 10 20 36.3 -1.9
MAW pmax pmax
comp=Z,3.0nm,0.6s
BOSA Boshof 150.87 311 PKPbc PKPbc 10 20 51.0 0.0
comp=Z,8.4nm,0.8s,baz=38,slow=1.9,SNR=12
BOSA PKPab PKPab 10 20 59.3 +0.9
comp=Z,7.0nm,0.9s,baz=40,slow=3.1,SNR=7.2
BOSA Boshof 150.87 311 PKIKP PKPbc 10 20 51.0 0.0
BOSA 10 20 59.3
BOSA pmax pmax
comp=Z,8.0nm,0.8s
BOSA pmax pmax
comp=Z,7.0nm,0.9s
VNA3 Neumayer Olymp 159.31 171 *e*PKPdf PKPdf 10 21 08.1 +13
VNA3 *e* 10 21 38.8
VNA3 *e* 10 21 45.5
VNA3 *e* 10 21 51.3
SNAA Sanae 159.37 177 *e*PKPdf PKPdf 10 21 08.5 +13
SNAA *e* 10 21 38.8
SNAA *e* 10 21 45.4
SNAA *e* 10 21 50.3
VNA2 Neumayer--Watz 159.83 172 *e*PKPdf PKPdf 10 21 08.4 +12
baz=358,slow=1.8
VNA2 *e* 10 21 40.2
VNA2 *e* 10 21 47.4
VNA2 *e* 10 21 53.5

IDC ***19*** *10:05:30.2±0.6, 5109N×17936W, h0km, mb4.4/23, mb1 4.6/24, mb1mx4.5/29, mbtmp4.4/24, Error ellipse: s-maj=20.3km s-min=12.7km az=169.0*
BJI ***19*** *10:05:32.1, 5110N×17930W, h30km, mB5.0, mb4.9, Ms4.9*
ISCJB ***19*** *10:05:35.5±0.8, 5110N±006×17932W±003, h44km±6km, mb4.8/109, Error ellipse: s-maj=9.5km s-min=3.0km az=8.4*
MOS ***19*** *10:05:35.2±0.8, 5107N×17939W, h44km, mb5.0/56, Error ellipse: s-maj=10.4km s-min=6.0km az=99.1*
NEIC ***19*** *10:05:35.1±0.3, 5108N×17935W, h30km, mb4.9/56, ML4.7(AEIC), Error ellipse: s-maj=7.9km s-min=3.4km az=178.0*
SZGRF ***19*** *10:05:39.2, 5145N×17994W, h33km, mb5.0, Andreanof Islands, Aleutian Islands, United States*
ISC 19 10:05:38.1±0.7, 5118N±006×17931W±003, h51km±5km, h46km±1.4km; pP-P, n481, c0s69/480, mb4.8/109, 118C-107D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.79**	**66**	P	**Pn**	**10 06 05.4**	**-1.1**
ADK				S	**Sn**	**10 06 28.7**	**+0.7**
ATKA	**Atka Island**	**3.35**	**70**	P	**Pn**	**10 06 26.8**	**-1.1**
SMY	**Shemya**	**4.36**	**293**	P	**Pn**	**10 06 41.7**	**-0.1**
FX1	**Attu Island--F**	**4.95**	**293**	Pn	**Pn**	**10 06 49.5**	**-0.3**
	7.9nm,0.3s,baz=130,slow=15,SNR=6.3						
FX1				Sn	**Sn**	**10 07 57.0**	**+11**
	13nm,0.3s,baz=281,slow=22,SNR=4.3						
NIKO	**Nikolski**	**6.69**	**70**	P	**Pn**	**10 07 13.4**	**-0.3**
SPIA	**Saint Paul Isl**	**8.02**	**38**	P	**Pn**	**10 07 33.8**	**+1.9**
UNV	**Unalaska Valle**	**8.26**	**66**	P	**Pn**	**10 07 35.5**	**+0.3**
PET	**Petropavlovsk**	**13.66**	**286**	*i* P	**Pn**	**10 08 43.6**	**-5.3**
PETK	**Petropavlovsk-**	**14.24**	**287**	Pn	**Pn**	**10 08 55.7**	**-0.9**
	0.3nm,0.3s,baz=101,slow=18,SNR=3.1						
OHAK	**Old Harbor**	**16.32**	**58**	*e*Pn	**Pn**	**10 09 19.5**	**-4.0**
SVW2	**Sparrevohn**	**16.44**	**44**	*e*P	**Pn**	**10 09 26.6**	**+1.6**
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**10 09 25.3**	**-4.3**
	4.0nm,0.3s,baz=276,slow=7.7,SNR=13						
KDAK	**Kodiak Island**	**16.80**	**56**	*e*P	**Pn**	**10 09 26.4**	**-3.2**
KDAK				pmax	pmax		
	comp=Z,13nm,0.4s						
KDAK	**Kodiak Island**	**16.80**	**56**	*e*Pn	**Pn**	**10 09 26.4**	**-3.1**
	comp=Z,13nm,0.4s						
BILL	**Bilibino**	**18.33**	**343**	*e*P	**Pn**	**10 09 49.1**	**+0.9**
BILL				pmax	pmax		
	comp=Z,32nm,1.2s						
BILL	**Bilibino**	**18.33**	**343**	*e*Pn	**Pn**	**10 09 48.0**	**-0.2**
	comp=Z,102nm,1.4s						
COLA	**College**	**21.27**	**38**	*e*P	**P**	**10 10 20.4**	**+0.6**
COLA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
COLA	**College**	**21.27**	**38**	*e*Pn	**P**	**10 10 20.4**	**+0.6**
	comp=Z,20nm,0.8s,mb4.5						
MENT	**Mentasta**	**22.32**	**45**	*e*P	**P**	**10 10 31.7**	**+0.8**
EGAK	**Eagle**	**23.91**	**41**	*e*P	**P**	**10 10 45.7**	**-1.1**
	comp=Z,43nm,1.0s,mb4.8						
DAWY	**Dawson**	**24.47**	**43**	*e*P	**P**	**10 10 50.6**	**-1.3**
YSS	**Yuzh-Sakhalins**	**25.02**	**275**	*e*P	**P**	**10 10 55.5**	**-1.5**
YSS				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.7						
INK	**Inuvik**	**27.81**	**35**	P	**P**	**10 11 21.0**	**-1.0**
	comp=Z,5.7nm,0.8s,mb4.2,baz=264,slow=10,SNR=4.9						
INK	**Inuvik**	**27.81**	**35**	P	**P**	**10 11 21.0**	**-1.0**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	**Inuvik**	**27.81**	**35**	P	**P**	**10 11 21.0**	**-1.0**
YAK	**Yakutsk**	**29.31**	**312**	*e*P	**P**	**10 11 34.0**	**-1.4**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
KLR	**Kul'dur**	**30.93**	**286**	*e*P	**P**	**10 11 45.0**	**-4.8**
KLR				pmax	pmax		
	comp=E,64nm,1.8s						
KLR				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.2						
MDJ	**Mudanjiang**	**34.29**	**279**	P	**P**	**10 12 20.3**	**+1.1**
MDJ				AP	pP	10 12 31.3	-1.1
MDJ				XP	sP	10 12 36.3	-2.1
MDJ				S	**S**	**10 17 43.1**	**+0.5**
MDJ				XS	sS	10 18 03.8	-1.0
MDJ				SCP	ScP	10 18 38.4	+3.5
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,11μm,14.1s						
YKA	**Yellowknife Ar**	**35.60**	**46**	P	**P**	**10 12 29.4**	**-0.9**
	comp=Z,6.5nm,0.7s,mb4.7,baz=281,slow=7.9,SNR=38						
YKA				ScP	ScP	10 18 42.2	+2.9
	comp=Z,0.8nm,0.9s,baz=296,slow=3.1,SNR=6.8						
YKA	**Yellowknife Ar**	**35.60**	**46**	P	**P**	**10 12 29.4**	**-0.9**
YKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YKA				pmax	pmax		
	comp=N,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**35.60**	**46**	P	**P**	**10 12 29.4**	**-0.9**
YKA				ScP	ScP	10 18 42.2	+2.9
A05A	**Maple Falls**	**35.99**	**70**	⇓P	**P**	**10 12 33.8**	**0.0**
	baz=36						
B05A	**Bryant**	**36.31**	**72**	⇓P	**P**	**10 12 37.0**	**+0.5**
	baz=36						
C05A	**Tolt Reservoir**	**36.81**	**72**	⇓P	**P**	**10 12 41.1**	**+0.3**
	baz=37						
D05A	**Enumclaw**	**36.87**	**73**	⇓P	**P**	**10 12 42.3**	**+1.1**
	baz=37						
A07A	**Ashnola River,**	**36.98**	**70**	⇑P	**P**	**10 12 42.6**	**+0.5**
	baz=37						
LON	**Longmire**	**37.18**	**74**	*e*P	**P**	**10 12 44.9**	**+0.9**
LON				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
LON	**Longmire**	**37.18**	**74**	*e*P	**P**	**10 12 44.9**	**+1.0**
	comp=Z,8.1nm,0.7s,mb4.7						
F04A	**Amboy**	**37.21**	**75**	⇓P	**P**	**10 12 44.7**	**+0.5**
	baz=37						
CN2	**Changchun**	**37.27**	**281**	*e*P	**P**	**10 12 47.8**	**+3.1**
B07A	**Winthrop**	**37.40**	**70**	⇑P	**P**	**10 12 45.9**	**+0.1**
	baz=37						
A08A	**Turner Farm, O**	**37.67**	**69**	⇓P	**P**	**10 12 48.0**	**-0.1**
	baz=37						
C07A	**Waterville**	**37.79**	**71**	⇑P	**P**	**10 12 49.3**	**+0.3**
	baz=38						
BOD	**Bodaibo**	**37.84**	**307**	*e*P	**P**	**10 12 47.9**	**-1.5**
BOD				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.0						
B08A	**Colville Reser**	**37.91**	**70**	⇓P	**P**	**10 12 49.7**	**-0.4**
	baz=38						
H04A	**Detroit Lake**	**37.98**	**77**	⇓P	**P**	**10 12 51.6**	**+0.9**
	baz=38						
HIA	**Hailar**	**38.06**	**292**	*e*P	**P**	**10 12 49.0**	**-2.4**
A09A	**Danville**	**38.07**	**69**	⇓P	**P**	**10 12 51.7**	**+0.3**
	baz=38						
D07A	**Quincy**	**38.08**	**72**	⇑P	**P**	**10 12 51.8**	**+0.3**
	baz=38						
B09A	**Rice**	**38.58**	**69**	⇓P	**P**	**10 12 55.9**	**+0.2**
	baz=38						
A10A	**Northport**	**38.66**	**68**	⇓P	**P**	**10 12 56.7**	**+0.3**
	baz=38						
HAWA	**Hanford**	**38.73**	**73**	*e*P	**P**	**10 12 57.5**	**+0.5**
	comp=Z,16nm,1.4s,mb4.6						
F07A	**Phinny Hill Vi**	**38.74**	**74**	⇓P	**P**	**10 12 56.9**	**-0.2**
	baz=38						
D08A	**Wollman Farm,**	**38.77**	**72**	⇑P	**P**	**10 12 57.2**	**-0.1**
	baz=38						
C09A	**Chrisman Ranch**	**38.80**	**70**	⇓P	**P**	**10 12 57.1**	**-0.4**
	baz=39						
E08A	**Dider Farm, El**	**38.97**	**73**	⇓P	**P**	**10 12 58.7**	**-0.2**
	baz=39						
YBH	**Yreka Blue Hor**	**39.23**	**81**	P	**P**	**10 13 01.6**	**+0.4**
	comp=Z,2.7nm,0.8s,mb4.0,baz=220,slow=7.9,SNR=2.3						
YBH	**Yreka Blue Hor**	**39.23**	**81**	P	**P**	**10 13 01.6**	**+0.4**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEW	**Newport**	**39.26**	**69**	*e*P	**P**	**10 13 01.0**	**-0.4**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEW	**Newport**	**39.26**	**69**	*e*P	**P**	**10 13 01.0**	**-0.3**
	comp=Z,6.4nm,0.7s,mb4.5						
KSRS	**Korea Array**	**39.32**	**271**	P	**P**	**10 13 01.4**	**-0.6**
	comp=Z,3.6nm,0.8s,mb4.1,baz=52,slow=8.7,SNR=9.3						
KSRS	**Korea Array**	**39.32**	**271**	P	**P**	**10 13 01.4**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
A11A	**Hall Mountain,**	**39.37**	**68**	⇓P	**P**	**10 13 01.9**	**-0.5**
	baz=39,SNR=7.1						
E09A	**Wood Farm, Sta**	**39.50**	**72**	⇑P	**P**	**10 13 03.6**	**+0.1**
	baz=39						
B11A	**Sandpoint**	**39.62**	**68**	⇓P	**P**	**10 13 04.8**	**+0.4**
	baz=39						
G08A	**Pilot Rock**	**39.63**	**74**	⇑P	**P**	**10 13 04.7**	**+0.2**
	baz=39						
D10A	**Wagner Farm, O**	**39.75**	**71**	⇑P	**P**	**10 13 05.1**	**-0.4**
	baz=40						
A12A	**Yaak River Ran**	**39.80**	**67**	⇓P	**P**	**10 13 05.7**	**-0.1**
	baz=40						
I07A	**Izee**	**39.93**	**76**	⇑P	**P**	**10 13 07.3**	**+0.2**
	baz=40						
J06A	**Christmas Vall**	**39.98**	**78**	⇓P	**P**	**10 13 07.8**	**+0.4**
	baz=40						
F09A	**S2 Ranch, Elgi**	**40.05**	**73**	⇓P	**P**	**10 13 08.4**	**+0.4**
	baz=40						
RES	**Resolute Bay**	**40.06**	**24**	P	**P**	**10 13 07.8**	**+0.1**
	comp=Z,2.0nm,0.9s,mb3.9,baz=280,slow=11,SNR=3.5						
RES	**Resolute Bay**	**40.06**	**24**	P	**P**	**10 13 07.8**	**0.0**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
RES	**Resolute Bay**	**40.06**	**24**	P	**P**	**10 13 07.8**	**+0.1**
H08A	**Prairie City**	**40.21**	**75**	⇑P	**P**	**10 13 09.6**	**+0.3**
	baz=40						
D11A	**Klaveano Farm,**	**40.31**	**70**	⇓P	**P**	**10 13 09.4**	**-0.8**
	baz=40						
F10A	**Beach Ranch, E**	**40.32**	**72**	⇓P	**P**	**10 13 10.3**	**0.0**
	baz=40						
G09A	**Cove**	**40.35**	**73**	⇑P	**P**	**10 13 10.3**	**-0.2**
	baz=40						
C12B	**Naegeli Ranch,**	**40.49**	**69**	⇑P	**P**	**10 13 11.7**	**0.0**
	baz=40						
A13A	**Flathead Natio**	**40.52**	**67**	⇑P	**P**	**10 13 11.5**	**-0.3**
	baz=40						
I08A	**Drewsey**	**40.59**	**76**	⇑P	**P**	**10 13 12.8**	**+0.3**
	baz=40						
E11A	**Bogner Ranch,**	**40.74**	**71**	⇑P	**P**	**10 13 12.9**	**-0.8**
	baz=40						
G10A	**Bishop Farm, J**	**40.74**	**73**	⇓P	**P**	**10 13 13.7**	**0.0**
	baz=40						
H09A	**Durkee**	**40.74**	**74**	⇑P	**P**	**10 13 13.8**	**0.0**
	baz=40						
B13A	**Whitefish**	**40.76**	**68**	⇑P	**P**	**10 13 13.2**	**-0.6**
	baz=40						
K07A	**Rock Creek Ran**	**40.84**	**78**	⇓P	**P**	**10 13 14.8**	**+0.3**
	baz=41						
BMO	**Blue Mountains**	**40.86**	**74**	*e*P	**P**	**10 13 15.6**	**+0.9**
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
BMO	**Blue Mountains**	**40.86**	**74**	*e*P	**P**	**10 13 15.6**	**+0.9**
	comp=Z,5.5nm,1.0s,mb4.1						
J08A	**Circle Bar Ran**	**40.95**	**76**	⇓P	**P**	**10 13 16.3**	**+0.9**
	baz=41						
F11A	**Grangeville**	**41.01**	**72**	⇓P	**P**	**10 13 15.8**	**-0.2**
	baz=41						
C13A	**Hot Springs**	**41.04**	**69**	⇓P	**P**	**10 13 15.9**	**-0.2**
	baz=41						
I09A	**Lost Marbles R**	**41.06**	**75**	⇑P	**P**	**10 13 16.0**	**-0.4**
	baz=41						
A14A	**Double T Ranch**	**41.07**	**66**	⇑P	**P**	**10 13 15.8**	**-0.5**
	baz=41,SNR=8.3						
G11A	**Walters Elk Ra**	**41.20**	**72**	⇑P	**P**	**10 13 16.3**	**-1.1**
	baz=41						
K08A	**Mann Creek Ran**	**41.29**	**77**	⇓P	**P**	**10 13 16.9**	**-1.4**
	baz=41						
H10A	**Noah's Angus R**	**41.34**	**74**	⇑P	**P**	**10 13 18.1**	**-0.5**
	baz=41						
WVOR	**Wild Horse Val**	**41.36**	**78**	*e*P	**P**	**10 13 19.4**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
WVOR	**Wild Horse Val**	**41.36**	**78**	*e*P	**P**	**10 13 19.4**	**+0.6**
	comp=Z,5.9nm,0.7s,mb4.3						
J09A	**Fry Pan Ranch,**	**41.40**	**76**	⇓P	**P**	**10 13 18.6**	**-0.5**
	baz=41						
A15A	**Johnson Ranch,**	**41.46**	**66**	⇑P	**P**	**10 13 18.6**	**-1.1**
	baz=41						
N06A	**Buffalo Meadow**	**41.57**	**81**	⇑P	**P**	**10 13 21.0**	**+0.4**
	baz=41						
I10A	**Payette**	**41.57**	**74**	⇓P	**P**	**10 13 20.7**	**+0.2**
	baz=41						
M07A	**Soldier Meadow**	**41.62**	**79**	⇓P	**P**	**10 13 21.5**	**+0.6**
	baz=41						
L08A	**Fields**	**41.67**	**78**	⇓P	**P**	**10 13 21.2**	**-0.2**
	baz=42						
H11A	**Donnelly**	**41.72**	**73**	⇑P	**P**	**10 13 20.9**	**-0.9**
	baz=42						
B15A	**Bradely Ranch,**	**41.89**	**67**	⇑P	**P**	**10 13 22.4**	**-0.7**
	baz=42,SNR=11						
E13A	**Victor**	**41.89**	**70**	⇓P	**P**	**10 13 22.6**	**-0.6**
	baz=42						
D14A	**Greenough**	**41.97**	**69**	⇓P	**P**	**10 13 23.2**	**-0.5**
	baz=42,SNR=6.8						
M08A	**Happy Creek Ra**	**42.07**	**79**	⇑P	**P**	**10 13 24.0**	**-0.7**
	baz=42						
A16A	**West Butte Ran**	**42.13**	**65**	⇑P	**P**	**10 13 23.7**	**-1.3**
	baz=42,SNR=8.5						
C15A	**Salmond Ranch,**	**42.14**	**67**	⇑P	**P**	**10 13 25.1**	**0.0**
	baz=42,SNR=13						
F13A	**Darby**	**42.15**	**71**	⇑P	**P**	**10 13 25.1**	**-0.2**
	baz=42						
K10A	**MacKenzie Ranc**	**42.25**	**76**	⇓P	**P**	**10 13 28.0**	**+2.0**
	baz=42,SNR=8.7						
E14A	**Clinton**	**42.32**	**70**	⇑P	**P**	**10 13 26.4**	**-0.2**
	baz=42						
B16A	**M & M Farms, S**	**42.34**	**66**	⇑P	**P**	**10 13 25.7**	**-1.1**
	baz=42,SNR=5.4						
WCN	**Washoe City**	**42.47**	**82**	⇓P	**P**	**10 13 27.5**	**-0.5**
	baz=42						
H12A	**Diamond D Ranc**	**42.50**	**73**	⇓P	**P**	**10 13 27.5**	**-0.6**
	baz=42						
O07A	**Toulon**	**42.51**	**81**	⇓P	**P**	**10 13 28.8**	**+0.6**
	baz=42						
D15A	**Lincoln**	**42.56**	**68**	⇑P	**P**	**10 13 28.5**	**-0.1**
	baz=42						
G13A	**Cobalt**	**42.58**	**72**	⇓P	**P**	**10 13 28.7**	**0.0**
	baz=42						
N08A	**GE Springer Mi**	**42.61**	**79**	⇓P	**P**	**10 13 29.6**	**+0.6**
	baz=42						
C16A	**Fuhringer Ranc**	**42.62**	**67**	⇓P	**P**	**10 13 28.3**	**-0.8**
	baz=42,SNR=11						
A17A	**Triple J Farms**	**42.65**	**65**	⇑P	**P**	**10 13 28.1**	**-1.1**
	baz=42,SNR=11						
F14A	**Wisdom**	**42.71**	**70**	⇓P	**P**	**10 13 29.3**	**-0.5**
	baz=42						
E15A	**Deer Lodge**	**42.81**	**69**	⇓P	**P**	**10 13 30.1**	**-0.5**
	baz=43						
L10A	**Juniper Basin**	**42.89**	**77**	⇑P	**P**	**10 13 31.4**	**+0.1**
	baz=43						
J12A	**Stokes Ranch,**	**43.07**	**74**	⇓P	**P**	**10 13 31.9**	**-0.8**
	baz=43						
D16A	**Dana Ranch, Ca**	**43.14**	**68**	⇑P	**P**	**10 13 32.9**	**-0.3**
	baz=43						
A18A	**Metzger Ranch,**	**43.14**	**65**	⇓P	**P**	**10 13 32.2**	**-1.1**
	baz=43						
F15A	**Butte**	**43.21**	**70**	⇑P	**P**	**10 13 33.0**	**-0.8**
	baz=43						
L11A	**Cat Creek Ranc**	**43.28**	**76**	⇑P	**P**	**10 13 35.2**	**+0.8**
	baz=43,SNR=8.3						
C17A	**Wharram Farm,**	**43.28**	**67**	⇑P	**P**	**10 13 33.6**	**-0.8**
	baz=43,SNR=5.1						
I13A	**Wildhorse Cree**	**43.29**	**73**	⇓P	**P**	**10 13 34.7**	**+0.2**
	baz=43						
HLID	**Hailey**	**43.31**	**74**	*e*P	**P**	**10 13 34.9**	**+0.3**
	comp=Z,5.8nm,0.8s,mb4.4						
E16A	**East Helena**	**43.32**	**69**	⇑P	**P**	**10 13 34.5**	**-0.3**
	baz=43						
H14A	**Leadore**	**43.35**	**72**	⇓P	**P**	**10 13 35.0**	**0.0**
	baz=43						
B18A	**Beardsley Farm**	**43.45**	**65**	⇑P	**P**	**10 13 35.6**	**-0.1**
	baz=43						
K12A	**Draper Farm, C**	**43.53**	**75**	⇓P	**P**	**10 13 38.7**	**+2.3**
	baz=43,SNR=10						
J13A	**Cove Ranch, Pi**	**43.54**	**74**	⇑P	**P**	**10 13 37.2**	**+0.6**
	baz=43,SNR=10						
D17A	**Six Diamond Ra**	**43.57**	**67**	⇓P	**P**	**10 13 36.2**	**-0.5**
	baz=43						
G15A	**Dillon**	**43.58**	**71**	⇓P	**P**	**10 13 36.4**	**-0.5**
	baz=43						
EGMT	**Eagleton**	**43.66**	**66**	*e*P	**P**	**10 13 36.8**	**-0.6**
	comp=Z,17nm,0.9s,mb4.8						
I14A	**Mackay**	**43.68**	**73**	⇓P	**P**	**10 13 37.8**	**+0.1**
	baz=43,SNR=5.4						
L12A	**House Creek Ra**	**43.74**	**76**	⇑P	**P**	**10 13 40.2**	**+2.1**
	baz=44,SNR=14						
F16A	**Kennard Place,**	**43.75**	**69**	⇑P	**P**	**10 13 37.6**	**-0.6**
	baz=44						
H15A	**Lima**	**43.78**	**71**	⇑P	**P**	**10 13 38.3**	**-0.2**
	baz=44						
E17A	**Martinsdale**	**43.84**	**68**	⇑P	**P**	**10 13 38.9**	**0.0**
	baz=44						
Q08A	**Gabbs**	**43.87**	**81**	⇑P	**P**	**10 13 39.5**	**+0.3**
	baz=44						
NVAR	**Mina Array Bea**	**43.90**	**82**	P	**P**	**10 13 40.1**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.7,baz=285,slow=8.1,SNR=4.3						
G16A	**Moss Hill, Enn**	**43.95**	**70**	⇑P	**P**	**10 13 39.3**	**-0.5**
	baz=44,SNR=5.1						
J14A	**Carey**	**43.98**	**73**	⇑P	**P**	**10 13 40.1**	**0.0**
	baz=44						
K13A	**Stover Farm, H**	**44.02**	**75**	⇑P	**P**	**10 13 40.8**	**+0.4**
	baz=44						
D18A	**Linhart Farms,**	**44.06**	**67**	⇑P	**P**	**10 13 41.0**	**+0.3**
	baz=44,SNR=8.4						
F17A	**Fitzpatrick Pl**	**44.26**	**69**	⇑P	**P**	**10 13 42.1**	**-0.1**
	baz=44						
E18A	**Harlowton**	**44.34**	**68**	⇓P	**P**	**10 13 42.7**	**-0.2**
	baz=44,SNR=5.3						
L13A	**Double Diamond**	**44.42**	**75**	⇓P	**P**	**10 13 44.1**	**+0.4**
	baz=44						
N12A	**Clover Valley,**	**44.47**	**77**	⇑P	**P**	**10 13 44.2**	**+0.1**
	baz=44						
O11A	**Cowboy Ranch,**	**44.52**	**79**	⇓P	**P**	**10 13 44.6**	**+0.2**
	baz=44						
G17A	**Pierce Place,**	**44.53**	**69**	⇑P	**P**	**10 13 44.0**	**-0.4**
	baz=44						
H16A	**Russell Place,**	**44.57**	**70**	⇑P	**P**	**10 13 44.4**	**-0.3**
	baz=44						
**J15

comp=Z,14nm,0.8s,mb4.9
N14A Grayback Hills 45.61 76 ⇓P **P 10 13 54.6 +1.6**
baz=45,SNR=5.6
R11A Troy Canyon, C 45.64 80 ⇑P **P 10 13 53.3 0.0**
baz=45
J17A Brown Place, J 45.64 72 ⇓P **P 10 13 54.0 +0.7**
baz=45
M15A Larsen Ranch, 45.70 75 ⇑P **P 10 13 54.2 +0.4**
baz=46
TLY Talaya 45.90 302 *e*P **P 10 13 55.2 0.0**
TLY pmax pmax
comp=Z,14nm,1.1s,mb4.8
I18A Diamond G Ranc 45.98 71 ⇓P **P 10 13 56.3 +0.3**
baz=46
N15A Stansbury Isla 45.99 76 ⇑P **P 10 13 56.9 +0.8**
baz=46
ULN Ulaanbaatar 46.06 296 *e*P **P 10 13 56.3 -0.2**
ULN Ulaanbaatar 46.06 296 *e*P **P 10 13 56.9 +0.3**
TPNV Topopah Spring 46.09 82 *e*P **P 10 13 56.5 -0.4**
TPNV pmax pmax
comp=Z,11nm,0.9s,mb4.8
TPNV Topopah Spring 46.09 82 *e*P **P 10 13 56.5 -0.5**
comp=Z,11nm,0.9s,mb4.8
DUG Dugway 46.23 77 *e*P **P 10 13 58.1 +0.2**
DUG pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
DUG Dugway 46.23 77 *e*P **P 10 13 58.0 +0.1**
comp=Z,6.1nm,0.6s,mb4.7
R12A Pony Springs, 46.26 80 ⇑P **P 10 13 58.9 +0.7**
baz=46
M16A Huntsville 46.28 75 ⇓P **P 10 13 59.1 +0.8**
baz=46
P14A Drum Mountains 46.44 77 ⇓P **P 10 13 59.9 +0.4**
baz=46
SONM Songino Array 46.45 297 P **P 10 14 00.1 +0.6**
comp=Z,4.5nm,0.8s,mb4.4,baz=56,slow=8.7,SNR=13
SONM PcP PcP 10 15 33.0 -0.4
comp=Z,2.3nm,0.9s,baz=68,slow=3.1,SNR=3.9
SONM Songino Array 46.45 297 P **P 10 14 00.1 +0.5**
SONM 10 15 33.0
SONM pmax pmax
comp=Z,5.0nm,0.9s
SONM pmax pmax
comp=Z,2.0nm,0.9s
K18A Toltan Ranch, 46.46 72 ⇓P **P 10 14 00.3 +0.6**
baz=46
T11A Corn Creek, Al 46.55 81 ⇑P **P 10 14 00.1 -0.4**
baz=46,SNR=6.2
S12A Delamar Landin 46.55 81 ⇓P **P 10 14 00.6 +0.1**
baz=46
N16A Rees Ranch, Co 46.65 75 ⇓P **P 10 14 01.9 +0.7**
baz=46
Q14A Sevier Lake (B 46.67 78 ⇑P **P 10 14 02.0 +0.5**
baz=46
PDAR Pinedale Array 46.68 72 P **P 10 14 01.5 +0.1**
comp=Z,9.8nm,0.7s,mb4.8,baz=306,slow=4.3,SNR=21
SHOC Shoshone 46.73 84 ⇑P **P 10 14 02.2 +0.3**
baz=46
R13A O'Grain Ranch, 46.74 80 ⇑P **P 10 14 02.3 +0.3**
baz=46
M17A Scullys Gap (B 46.77 74 ⇓P **P 10 14 02.4 +0.3**
baz=46
ZAK Zakamensk 46.78 301 *e*P **P 10 14 01.2 -0.9**
ZAK pmax pmax
comp=Z,17nm,1.3s,mb4.8
GSC Goldstone 46.79 85 ⇓P **P 10 14 02.1 -0.2**
baz=47
L18A Fontenelle, Gr 46.89 73 ⇓P **P 10 14 02.8 -0.3**
baz=47
N17A Moffit Pass 46.99 75 ⇑P **P 10 14 03.6 -0.2**
baz=47
K19A Absolon Red Bu 47.07 71 ⇓P **P 10 14 03.9 -0.6**
baz=47,SNR=8.7
M18A Lyman 47.16 74 ⇓P **P 10 14 05.3 +0.1**
baz=47
S13A Holt Ranch, En 47.18 80 ⇑P **P 10 14 05.8 +0.3**
baz=47
V11A Goodsprings 47.30 83 ⇓P **P 10 14 07.4 +1.0**
baz=47
MOY Mondy 47.31 304 *e*P **P 10 14 06.8 +0.6**
HHC Hu-ho-hao-te 47.44 286 *e*P **P 10 14 06.9 -0.5**
HHC AP pP 10 14 19.3 -1.7
HHC XP sP 10 14 24.6 -2.3
HHC PP PP 10 15 57.3 -1.4
HHC PCS PcS 10 19 31.9 -0.4
HHC *e*S **S 10 20 55.3 -2.5**
HHC XS sS 10 21 17.8 -2.9
HHC SCS ScS 10 23 54.5 -1.8
HHC SS SS 10 24 17.5 -8.1
HHC AMB AMB
comp=Z,18nm,0.7s,mb5.1
K20A Yellowstone Ra 47.47 71 ⇑P **P 10 14 06.9 -0.7**
baz=47
T13A Saint George 47.51 81 ⇓P **P 10 14 08.6 +0.6**
baz=47
N18A Larsen Ranch, 47.67 74 ⇓P **P 10 14 09.3 +0.1**
baz=47
R15A Junction 47.77 78 ⇑P **P 10 14 10.6 +0.7**
baz=48
U13A Pakoon Wash 47.85 81 ⇑P **P 10 14 11.2 +0.5**
baz=48
O18A Roosevelt 47.90 75 ⇓P **P 10 14 12.0 +1.0**
baz=48
P17A Butcher Ranch, 47.94 76 ⇑P **P 10 14 12.3 +1.1**
baz=48
T14A Hurricane 47.99 80 ⇑P **P 10 14 12.3 +0.6**
baz=48
Q16A Castle Valley 48.01 77 ⇓P **P 10 14 12.1 +0.2**
baz=48
N19A John Jarvie Ra 48.02 74 ⇑P **P 10 14 12.4 +0.5**
baz=48
S15A Panguitch 48.05 79 ⇑P **P 10 14 12.6 +0.4**
baz=48
P18A Preston Nutter 48.14 76 ⇑P **P 10 14 13.5 +0.7**
baz=48
V13A Grand Canyon W 48.20 82 ⇑P **P 10 14 13.5 +0.2**
baz=48
M20A Sweetwater, Wa 48.26 72 ⇓P **P 10 14 13.5 -0.2**
baz=48
U14A Mt Trumbull 48.34 81 ⇑P **P 10 14 14.5 +0.1**
baz=48
T15A Red Dirt Ranch 48.45 80 ⇑P **P 10 14 14.9 -0.4**
baz=48
L21A Rawlins 48.46 71 ⇑P **P 10 14 14.3 -0.9**
baz=48
S16A Weppner Ranch, 48.49 78 ⇑P **P 10 14 15.3 -0.3**
baz=48
NJ2 Nanjing 48.50 272 *e*P **P 10 14 19.3 +3.6**
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.6
Q18A Rafter H Ranch 48.53 76 ⇓P **P 10 14 15.8 0.0**
baz=48
R17A Hanksville Air 48.60 77 ⇑P **P 10 14 15.7 -0.7**
baz=48
N20A Spence Gulch, 48.61 73 ⇑P **P 10 14 16.5 +0.1**
baz=48
U15A North Rim 48.88 80 ⇓P **P 10 14 18.8 +0.2**
baz=49
V14A Boquillas Ranc 48.89 82 ⇓P **P 10 14 18.9 +0.3**
baz=49
P19A Cripple Cowboy 48.91 75 ⇑P **P 10 14 18.9 +0.2**
baz=49,SNR=10
S17A Black Ridge (B 49.04 78 ⇓P **P 10 14 19.7 -0.1**
baz=49
O20A White River Ci 49.05 74 ⇑P **P 10 14 19.9 +0.1**
baz=49,SNR=8.5
N21A Black Mountain 49.10 73 ⇓P **P 10 14 20.4 +0.2**
baz=49
R18A Canyonlands Na 49.12 77 ⇑P **P 10 14 20.0 -0.4**
baz=49
Q19A Hogan Spring (49.16 76 ⇑P **P 10 14 20.0 -0.7**
baz=49,SNR=10
W14A Seligman 49.17 82 ⇓P **P 10 14 20.2 -0.6**
baz=49
Y12C Blythe 49.23 85 ⇓P **P 10 14 20.9 -0.3**
baz=49
M22A Cedar Creek Ra 49.26 71 ⇑P **P 10 14 21.0 -0.4**
baz=49
V15A Kaibab Nationa 49.35 81 ⇓P **P 10 14 22.0 -0.1**
baz=49
T17A Navajo Res., N 49.44 79 ⇓P **P 10 14 22.5 -0.3**
baz=49
S18A Hurst Farm, Bl 49.50 77 ⇑P **P 10 14 22.9 -0.3**
baz=49,SNR=5.3
R19A Curley Farm, L 49.57 76 ⇓P **P 10 14 24.0 +0.2**
baz=49
N22A Wattenberg Ran 49.71 72 ⇑P **P 10 14 24.6 -0.3**
baz=50
Q20A Ridgley Place, 49.75 75 ⇓P **P 10 14 25.1 -0.1**
baz=50
X14A Yava 49.77 83 ⇑P **P 10 14 25.2 -0.2**
baz=50
U17A Shonto 49.78 79 ⇓P **P 10 14 26.0 +0.6**
baz=50
T18A Mexican Hat 49.93 78 ⇓P **P 10 14 26.2 -0.3**
baz=50
Y14A Wickenburg 50.05 83 ⇓P **P 10 14 27.4 -0.1**
baz=50
X15A Humboldt 50.17 82 ⇓P **P 10 14 28.1 -0.3**
baz=50
W16A Flagstaff 50.21 81 ⇓P **P 10 14 29.0 +0.3**
baz=50
U18A Rough Rock, Ch 50.39 79 ⇓P **P 10 14 29.3 -0.7**
baz=50
Y15A Casa Rosa Ranc 50.46 83 ⇑P **P 10 14 30.6 0.0**
baz=50
SPITS Spitsbergen Ar 50.55 356 P **P 10 14 30.2 -0.6**
comp=Z,9.8nm,0.6s,mb4.9,baz=52,slow=7.6,SNR=14
SPITS Spitsbergen Ar 50.55 356 P **P 10 14 30.2 -0.5**
SPITS pmax pmax
comp=Z,10.0nm,0.6s
R21A Cimarron 50.57 75 ⇑P **P 10 14 32.0 +0.7**
baz=50
T19A Beclabito 50.65 78 ⇑P **P 10 14 31.5 -0.5**
baz=50,SNR=9.5
X16A Lo Mia Camp, P 50.71 82 ⇓P **P 10 14 32.8 +0.3**
baz=50
V18A Ganado 50.81 79 ⇓P **P 10 14 32.9 -0.3**
baz=51
Y16A Circle Bar Ran 51.04 82 ⇑P **P 10 14 36.1 +1.1**
baz=51
115A Sonoran Desert 51.36 84 ⇑P **P 10 14 37.3 -0.1**
baz=51
Z16A Peralta Trail, 51.43 83 ⇑P **P 10 14 37.9 0.0**
baz=51
214A Organ Pipe Nat 51.49 85 ⇑P **P 10 14 38.1 -0.3**
baz=51
Y17A Roosevelt 51.56 82 ⇑P **P 10 14 37.5 -1.4**
baz=51
X18A Snowflake 51.57 81 ⇑P **P 10 14 38.1 -0.8**
baz=51
116A Eloy 51.78 84 ⇓P **P 10 14 39.2 -1.3**
baz=52
Y18A Canyon Day Jun 52.01 81 ⇑P **P 10 14 41.9 -0.3**
baz=52
X19A St. Johns 52.04 80 ⇓P **P 10 14 42.5 0.0**
baz=52
117A Oracle 52.38 83 ⇓P **P 10 14 45.1 +0.1**
baz=52
118A Homack Ranch, 52.81 82 ⇑P **P 10 14 47.9 -0.3**
baz=53
XAN Xi'an 53.38 281 P **P 10 14 51.4 -0.9**
XAN AP pP 10 15 04.8 -1.4
XAN PP PP 10 16 53.8 +1.0
XAN S **S 10 22 22.1 +1.5**
XAN SS SS 10 26 03.6 +3.0
XAN AMB AMB
comp=Z,10.0nm,1.5s,mb4.5
ANMO Albuquerque 53.45 78 *e*P **P 10 14 53.9 +1.1**
318A Bisbee 53.61 83 ⇑P **P 10 14 53.5 -0.6**
baz=53
ECSD EROS,Sioux Fal 53.61 63 *e*P **P 10 14 52.2 -1.7**
comp=Z,3.9nm,0.8s,mb4.4
219A White Tail Can 53.69 82 ⇓P **P 10 14 54.0 -0.6**
baz=54
ZALV Zalesovo Beam 53.94 313 P **P 10 14 55.1 -1.0**
comp=Z,1.1nm,0.5s,mb4.1,baz=45,slow=7.9,SNR=3.8
ZALV PcP PcP 10 16 01.1 +0.3
comp=Z,2.6nm,0.7s,baz=34,slow=5.6,SNR=5.1
ZALV Zalesovo Beam 53.94 313 P **P 10 14 55.1 -1.0**
ZALV 10 16 01.2
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
LZH Lanzhou 55.13 286 *e*P **P 10 15 05.9 +0.9**
LZH AP pP 10 15 18.8 -0.1
LZH AMB AMB
comp=Z,40nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,153nm,4.2s
GTA Gaotai 55.34 292 *e*P **P 10 15 06.6 +0.1**
GTA AP pP 10 15 18.8 -1.6
GTA XP sP 10 15 25.3 -0.9
GTA S **S 10 22 45.8 -1.0**
GTA XS sS 10 23 07.6 -2.5
GTA SS SS 10 26 29.8 -1.5
GTA AMB AMB
comp=Z,14nm,1.3s,mb4.8
ARCES ARCESS Array B 58.24 350 P **P 10 15 25.3 -1.2**
comp=Z,7.5nm,0.8s,mb4.8,baz=26,slow=8.6,SNR=5.7
ARCES ARCESS Array B 58.24 350 P **P 10 15 25.3 -1.3**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
CD2 Chengdu 58.70 282 P **P 10 15 32.8 +2.4**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
KURK Kurchatov 58.93 313 P **P 10 15 31.7 +0.1**
comp=Z,11nm,0.6s,mb5.0,baz=43,slow=6.5,SNR=12
KURK Kurchatov 58.93 313 *e*P **P 10 15 31.8 +0.2**
KURK pmax pmax
comp=Z,14nm,0.9s,mb5.0
TXAR Lajitas Array 59.00 81 P **P 10 15 31.7 -0.8**
comp=Z,1.3nm,0.7s,mb4.1,baz=310,slow=4.8,SNR=13
TXAR Lajitas Array 59.00 81 P **P 10 15 31.7 -0.8**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 59.00 81 P **P 10 15 31.7 -0.8**
WMQ Urumqi 59.18 303 *e*P **P 10 15 33.8 +0.3**
WMQ AMB AMB
comp=Z,3.0nm,1.1s,mb4.2
HDIL Hopedale 59.80 62 *e*P **P 10 15 36.8 -1.0**
comp=Z,18nm,0.6s,mb5.3
MKAR Makanchi Array 59.91 308 P **P 10 15 37.7 -0.8**
comp=Z,9.4nm,0.8s,mb4.9,baz=57,slow=6.9,SNR=25
MKAR Makanchi Array 59.91 308 P **P 10 15 37.7 -0.8**
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 59.91 308 P **P 10 15 37.7 -0.8**
GYA Guiyang 60.02 276 ⇓*i*P **P 10 15 40.9 +1.4**
GYA PP PP 10 17 55.9 +3.8
GYA PCS PcS 10 20 26.3 -1.3
GYA S **S 10 23 47.0 -1.4**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,110nm,5.3s
GYA LR LR
comp=N,480nm,19.8s
GYA LR LR
comp=E,330nm,18.9s
SCHQ Schefferville 60.36 38 P **P 10 15 40.8 -0.6**
comp=E,9.0nm,0.9s,mb4.8,baz=332,slow=9.6,SNR=4.6
JCT Junction City 60.59 77 *e*P **P 10 15 45.6 +2.3**
JCT pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
JCT Junction City 60.59 77 *e*P **P 10 15 45.6 +2.3**
comp=Z,7.8nm,0.9s,mb4.8
ARU Arti 62.61 328 *e*P **P 10 15 58.7 +2.2**
ARU pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
KMI Kunming 63.44 278 P **P 10 16 03.3 +0.8**
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb4.8
TKM2 Tokmak 2 66.00 309 P **P 10 16 19.7 +0.8**
SNR=11
USP Ospenovka 66.27 310 P **P 10 16 21.8 +1.1**
SNR=13
TKL Tuckaleechee C 66.33 62 *e*P **P 10 16 20.9 -0.3**
KBK Karagaybulak 66.51 309 P **P 10 16 23.3 +1.0**
SNR=6.5
AAK Ala-Archa 66.75 310 ⇓*i*P **P 10 16 23.9 +0.2**
AAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
AAK Ala-Archa 66.75 310 P **P 10 16 24.9 +1.1**
SNR=8.2
AAK Ala-Archa 66.75 310 *e*P **P 10 16 24.0 +0.3**
comp=Z,11nm,0.9s,mb4.9
KZA Kyzart 66.80 309 P **P 10 16 25.2 +1.1**
SNR=5.3
EKS2 Erkin-Say 67.07 310 P **P 10 16 27.2 +1.4**
SNR=5.6
AML Almayashu 67.52 310 P **P 10 16 30.2 +1.6**
SNR=8.1
NB2 NORSAR Subarra 67.82 354 P **P 10 16 29.1 -1.1**
comp=Z,2.8nm,0.9s,mb4.3,baz=9.0,slow=6.5
NOA NORSAR Array B 67.82 354 P **P 10 16 29.8 -0.4**
comp=Z,6.7nm,0.9s,mb4.7,baz=7.1,slow=6.3,SNR=9.1
NOA NORSAR Array B 67.82 354 P **P 10 16 29.8 -0.4**
NOA pmax pmax
comp=Z,7.0nm,0.9s
GOGA Godfrey 68.15 64 *e*P **P 10 16 31.8 -0.9**
GOGA pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GOGA Godfrey 68.15 64 *e*P **P 10 16 31.8 -1.0**
comp=Z,8.4nm,0.8s,mb4.8
OBN Obninsk 69.94 339 *e*P **P 10 16 42.3 -1.2**
OBN pmax pmax
comp=Z,43nm,1.1s,mb5.3
CMAR Chiang Mai Arr 70.71 276 P **P 10 16 48.0 -0.7**
comp=Z,1.2nm,0.3s,mb4.2,baz=28,slow=7.6,SNR=7.6
CMAR Chiang Mai Arr 70.71 276 P **P 10 16 48.0 -0.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
TAPN Taplejung 70.97 290 *e*P **P 10 16 50.6 +0.4**
comp=Z,70nm,1.1s,mb5.5
ODAN Odare 71.53 290 *e*P **P 10 16 53.7 +0.1**
comp=Z,22nm,0.9s,mb5.1
GUN Gumba 71.63 292 *e*P **P 10 16 54.6 +0.4**
comp=Z,57nm,0.7s,mb5.6
JIRN Jiri 71.64 291 *e*P **P 10 16 54.6 +0.4**
comp=Z,38nm,0.7s,mb5.4
RAMN Ramite 71.93 291 *e*P **P 10 16 56.0 0.0**
comp=Z,61nm,0.9s,mb5.5
KKN Kakani 72.07 292 *e*P **P 10 16 57.3 +0.4**
GKN Gorkha 72.29 293 *e*P **P 10 16 58.1 0.0**
DMN Daman 72.31 292 *e*P **P 10 16 58.9 +0.6**
DANN Dangsing 72.54 293 *e*P **P 10 16 59.8 +0.2**
comp=Z,34nm,0.8s,mb5.3
KOLN Koldanda 73.06 293 *e*P **P 10 17 02.6 -0.2**
BSEG Bad Segeberg 74.95 354 *e*P **P 10 17 13.7 +0.4**
BSEG pmax pmax
comp=Z,26nm,0.9s,mb5.2
BSEG Bad Segeberg 74.95 354 *e*P **P 10 17 13.7 +0.4**
comp=Z,26nm,0.9s,mb5.2
AKASG Malin Array Be 75.64 342 P **P 10 17 16.6 -0.7**
comp=Z,7.1nm,0.4s,mb5.0,baz=20,slow=5.9,SNR=32
AKASG Malin Array Be 75.64 342 P **P 10 17 16.6 -0.7**
AKASG pmax pmax
comp=Z,7.0nm,0.4s
KIEV Kiev 75.65 342 *e*P **P 10 17 16.6 -0.8**
KIEV pmax pmax
comp=Z,35nm,1.0s,mb5.2
KIEV Kiev 75.65 342 *e*P **P 10 17 16.6 -0.8**
comp=Z,35nm,1.0s,mb5.2
NRDL Niedersach Rie 76.40 354 *e*P **P 10 17 21.6 0.0**
comp=Z,18nm,1.2s,mb4.9
IBBN Ibbenburen 76.72 356 *e*P **P 10 17 23.7 +0.3**
comp=Z,31nm,0.9s,mb5.2
CLZ Clausthal 77.03 354 *e*P **P 10 17 25.5 +0.3**
CLZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
CLZ Clausthal 77.03 354 *e*P **P 10 17 25.5 +0.3**
comp=Z,22nm,1.0s,mb5.0
CLL Collm 77.36 352 *i*P **P 10 17 26.2 -0.8**
CLL *i* 10 17 33.0
CLL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CLL Collm 77.36 352 *i*P **P 10 17 26.2 -0.8**
comp=Z,7.0nm,0.9s,mb4.6
CLL *i* 10 17 33.0
BRG Berggiesshubel 77.71 351 *i*P **P 10 17 28.3 -0.7**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BRG Berggiesshubel 77.71 351 *i*P **P 10 17 28.3 -0.6**
comp=Z,9.0nm,1.0s,mb4.7
DPC Dobruska-Polom 77.98 350 *e*P **P 10 17 30.9 +0.4**
STHS Stebnicka Huta 78.26 346 *e*P **P 10 17 32.6 +0.5**
STHS pmax pmax
comp=Z,11nm,0.8s,mb4.8
STHS Stebnicka Huta 78.26 346 *e*P **P 10 17 32.6 +0.5**
comp=Z,11nm,0.8s,mb4.8
HGN Heimansgroeve 78.34 357 *e*P **P 10 17 32.6 +0.1**
comp=Z,15nm,1.0s,mb4.9
NKC Novy Kostel 78.47 352 *e*P **P 10 17 33.3 +0.1**
KIV Kislovodsk 78.49 330 *e*P **P 10 17 32.8 -0.6**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
MEM Membach 78.49 357 P **P 10 17 33.8 +0.5**
PRU Pruhonice 78.53 351 *e*P **P 10 17 33.4 -0.1**
SNF Seneffe 78.65 358 P **P 10 17 34.2 0.0**
comp=Z,9.3nm,1.5s,mb4.5
BCLA Clavier 78.71 357 P **P 10 17 34.3 -0.2**
CRVS Cervenica-Dubn 78.73 346 *e*P **P 10 17 34.9 +0.2**
CRVS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CRVS Cervenica-Dubn 78.73 346 *e*P **P 10 17 34.9 +0.2**
comp=Z,8.8nm,0.8s,mb4.7
MANZ Manzenberg 78.75 353 *e*P **P 10 17 34.5 -0.2**
comp=Z,7.0nm,1.1s,mb4.5
ROTZ Rotzenmuhle 78.96 352 *e*P **P 10 17 35.9 0.0**
comp=Z,8.0nm,1.0s,mb4.6
VRAC Vranov 78.98 349 ⇓*i*P **P 10 17 36.2 +0.2**
GIVF Givet 79.04 357 *e*P **P 10 17 36.1 -0.2**
DOU Dourbes 79.05 357 P **P 10 17 36.3 -0.1**
BAIF Baives 79.10 358 *e*P **P 10 17 36.7 0.0**
comp=Z,34nm,1.0s,mb4.9
BAIF Baives 79.10 358 *e*P **P 10 17 36.7 0.0**
BAIF pmax pmax
comp=Z,17nm,1.0s,mb4.9
BAIF Baives 79.10 358 *e*P **P 10 17 36.7 0.0**
comp=Z,17nm,1.0s,mb4.9
GRA1 Grafenberg Arr 79.11 353 *e*P **P 10 17 37.0 +0.3**
comp=Z,17nm,0.7s,mb5.1
GRF Grafenberg Arr 79.11 353 *e*P **P 10 17 37.0 +0.3**
GRF pmax pmax
comp=Z,17nm,0.7s,mb5.1
GRF Grafenberg Arr 79.11 353 *e*P **P 10 17 37.0 +0.3**
GRF pmax pmax
comp=Z,17nm,0.7s,mb5.1
GRF Grafenberg Arr 79.11 353 *e*P **P 10 17 37.0 +0.3**
comp=Z,17nm,0.7s,mb5.1
KECS Kecovo 79.28 347 *e*P **P 10 17 37.8 +0.1**
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KECS Kecovo 79.28 347 *e*P **P 10 17 37.8 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
BUR08 Bucovina Ar. S 79.33 343 *e*P **P 10 17 38.3 +0.3**
BURAR Bucovina Array 79.36 343 ⇓*i*P **P 10 17 38.5 +0.4**
KHC Kasperske Hory 79.47 351 *i*P **P 10 17 38.6 -0.1**
KHC Kasperske Hory 79.47 351 *e*P **P 10 17 38.7 0.0**
KOLL Kolacno 79.47 348 *e*P **P 10 17 39.4 +0.7**
VYHS Vyhne 79.50 348 *e*P **P 10 17 39.1 +0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
VYHS Vyhne 79.50 348 *e*P **P 10 17 39.0 +0.1**
VYHS Vyhne 79.50 348 *e*P **P 10 17 39.1 +0.2**
comp=Z,6.1nm,1.0s,mb4.5
GEC2 GERESS Array S 79.74 351 *e*P **P 10 17 40.0 -0.2**
GEC2 pmax pmax
comp=Z,12nm,1.5s,mb4.6
GEC2 GERESS Array S 79.74 351 *e*P **P 10 17 40.0 -0.2**
comp=Z,12nm,1.5s,mb4.6
GERES GERESS Array B 79.74 351 P **P 10 17 39.8 -0.4**
comp=Z,2.3nm,0.6s,mb4.3,baz=23,slow=5.3,SNR=14
GERES GERESS Array B 79.74 351 P **P 10 17 39.8 -0.4**
GERES pmax pmax
comp=Z,2.0nm,0.6s
ZST Bratislava 80.01 349 *e*P **P 10 17 42.1 +0.4**
ZST pmax pmax
comp=Z,21nm,0.6s,mb5.2
ZST Bratislava 80.01 349 *e*P **P 10 17 42.1 +0.4**
comp=Z,21nm,0.6s,mb5.2
CONA Conrad Observa 80.42 350 ⇑*i*P **P 10 17 44.2 +0.4**
comp=Z,9.5nm,0.9s,mb4.7
CSNA Conrad Observa 80.42 350 ⇑*i*P **P 10 17 44.2 +0.4**
comp=Z,8.4nm,0.8s,mb4.7
FLN La Foliniere 80.44 1 *e*P **P 10 17 43.4 -0.5**
comp=Z,70nm,1.2s,mb5.2
FLN La Foliniere 80.44 1 *e*P **P 10 17 43.4 -0.5**
FLN pmax pmax
comp=Z,35nm,1.2s,mb5.2
FLN La Foliniere 80.44 1 *e*P **P 10 17 43.4 -0.5**
comp=Z,35nm,1.2s,mb5.2
DRGR 80.59 345 ⇓*i*P **P 10 17 45.0 +0.2**
LDF La Druitiere 80.61 1 *e*P **P 10 17 44.1 -0.8**
comp=Z,44nm,1.1s,mb5.0
LDF La Druitiere 80.61 1 *e*P **P 10 17 44.1 -0.8**
LDF pmax pmax
comp=Z,22nm,1.1s,mb5.0

LDF	**La Druitiere**	**80.61**	**1**	*eP*		**P**	**10 17 44.1**	**-0.8**
	comp=Z,22nm,1.1s,mb5.0								
MEZF	**Maizieres J'vi**	**80.63**	**357**	*eP*		**P**	**10 17 45.0**	**0.0**
GRR	**Gorron**	**80.81**	**1**	*eP*		**P**	**10 17 45.6**	**-0.3**
	comp=Z,34nm,1.0s,mb4.9								
GRR	**Gorron**	**80.81**	**1**	*eP*		**P**	**10 17 45.6**	**-0.3**
GRR				pmax	pmax				
	comp=Z,17nm,1.0s,mb4.9								
GRR	**Gorron**	**80.81**	**1**	*eP*		**P**	**10 17 45.6**	**-0.3**
	comp=Z,17nm,1.0s,mb4.9								
ROSF	**Rostrenen**	**80.81**	**3**	*eP*		**P**	**10 17 45.6**	**-0.3**
	comp=Z,146nm,1.5s,mb5.4								
ROSF	**Rostrenen**	**80.81**	**3**	*eP*		**P**	**10 17 45.6**	**-0.3**
ROSF				pmax	pmax				
	comp=Z,73nm,1.5s,mb5.4								
ROSF	**Rostrenen**	**80.81**	**3**	*eP*		**P**	**10 17 45.6**	**-0.3**
	comp=Z,73nm,1.5s,mb5.4								
SGMF	**Saint Gilles**	**80.91**	**2**	*eP*		**P**	**10 17 46.3**	**-0.2**
	comp=Z,21nm,0.7s,mb4.9								
SGMF	**Saint Gilles**	**80.91**	**2**	*eP*		**P**	**10 17 46.3**	**-0.2**
SGMF				pmax	pmax				
	comp=Z,10.0nm,0.7s,mb4.8								
SGMF	**Saint Gilles**	**80.91**	**2**	*eP*		**P**	**10 17 46.3**	**-0.2**
	comp=Z,10nm,0.7s,mb4.9								
RJOB	**Jochberg**	**80.92**	**352**	*eP*		**P**	**10 17 46.8**	**+0.3**
	comp=Z,7.0nm,0.9s,mb4.6								
QUIF	**Quistinic**	**81.23**	**3**	*eP*		**P**	**10 17 48.0**	**-0.2**
	comp=Z,46nm,1.0s,mb5.0								
QUIF	**Quistinic**	**81.23**	**3**	*eP*		**P**	**10 17 48.0**	**-0.2**
QUIF				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.1								
QUIF	**Quistinic**	**81.23**	**3**	*eP*		**P**	**10 17 48.0**	**-0.2**
	comp=Z,23nm,1.0s,mb5.1								
HINF	**Hinteralfeld**	**81.25**	**356**	*eP*		**P**	**10 17 47.2**	**-1.1**
VOIR		**81.49**	**343**	⇑*iP*		**P**	**10 17 50.7**	**+1.1**
WTTA	**Wattenberg**	**81.49**	**352**	⇑*iP*		**P**	**10 17 49.5**	**0.0**
	comp=Z,13nm,0.7s,mb5.0								
KBA	**Koelnbreinsper**	**81.52**	**351**	⇑*iP*		**P**	**10 17 50.7**	**+0.9**
	comp=Z,29nm,0.8s,mb5.3								
WRA	**Warramunga Arr**	**81.64**	**223**	P		**P**	**10 17 48.2**	**-2.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=32,slow=5.8,SNR=4.5								
WRA	**Warramunga Arr**	**81.64**	**223**	P		**P**	**10 17 48.2**	**-2.4**
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
SOKA	**Soboth**	**81.75**	**350**	⇑*iP*		**P**	**10 17 51.3**	**+0.4**
	comp=Z,23nm,1.1s,mb5.0								
FETA	**Feichten**	**81.80**	**353**	⇑*iP*		**P**	**10 17 51.4**	**+0.1**
	comp=Z,10nm,1.0s,mb4.7								
LOR	**Lormes**	**81.90**	**358**	*eP*		**P**	**10 17 51.5**	**-0.2**
	comp=Z,11nm,0.9s,mb4.5								
LOR	**Lormes**	**81.90**	**358**	*eP*		**P**	**10 17 51.5**	**-0.2**
LOR				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.4								
LOR	**Lormes**	**81.90**	**358**	*eP*		**P**	**10 17 51.5**	**-0.2**
	comp=Z,5.3nm,0.9s,mb4.5								
BZS	**Buzias**	**81.91**	**345**	⇓*iP*		**P**	**10 17 51.8**	**0.0**
GZR	**Gura Zlata**	**81.93**	**344**	⇓*iP*		**P**	**10 17 52.4**	**+0.5**
SSF	**Saint Saulge**	**82.11**	**358**	*eP*		**P**	**10 17 52.5**	**-0.4**
	comp=Z,18nm,1.1s,mb4.6								
SSF	**Saint Saulge**	**82.11**	**358**	*eP*		**P**	**10 17 52.5**	**-0.4**
SSF				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.7								
SSF	**Saint Saulge**	**82.11**	**358**	*eP*		**P**	**10 17 52.5**	**-0.4**
	comp=Z,8.8nm,1.0s,mb4.6								
AVF	**Avril sur Loir**	**82.39**	**358**	*eP*		**P**	**10 17 54.0**	**-0.3**
	comp=Z,19nm,1.2s,mb4.6								
AVF	**Avril sur Loir**	**82.39**	**358**	*eP*		**P**	**10 17 54.0**	**-0.3**
AVF				pmax	pmax				
	comp=Z,10.0nm,1.2s,mb4.6								
AVF	**Avril sur Loir**	**82.39**	**358**	*eP*		**P**	**10 17 54.0**	**-0.3**
	comp=Z,9.5nm,1.2s,mb4.6								
CABF	**La Chapelle**	**82.48**	**356**	*eP*		**P**	**10 17 54.8**	**0.0**
	comp=Z,15nm,0.9s,mb4.6								
CABF	**La Chapelle**	**82.48**	**356**	*eP*		**P**	**10 17 54.8**	**0.0**
CABF				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.7								
CABF	**La Chapelle**	**82.48**	**356**	*eP*		**P**	**10 17 54.8**	**0.0**
	comp=Z,7.7nm,0.9s,mb4.6								
SMF	**Signal de Mont**	**82.52**	**358**	*eP*		**P**	**10 17 54.7**	**-0.3**
	comp=Z,26nm,1.1s,mb4.9								
SMF	**Signal de Mont**	**82.52**	**358**	*eP*		**P**	**10 17 54.7**	**-0.3**
SMF				pmax	pmax				
	comp=Z,13nm,1.1s,mb4.9								
SMF	**Signal de Mont**	**82.52**	**358**	*eP*		**P**	**10 17 54.7**	**-0.3**
	comp=Z,13nm,1.1s,mb4.9								
MFF	**Saint Martin d**	**82.60**	**1**	*eP*		**P**	**10 17 55.4**	**0.0**
	comp=Z,17nm,1.0s,mb4.7								
MFF	**Saint Martin d**	**82.60**	**1**	*eP*		**P**	**10 17 55.4**	**0.0**
MFF				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.8								
MFF	**Saint Martin d**	**82.60**	**1**	*eP*		**P**	**10 17 55.4**	**0.0**
	comp=Z,8.7nm,1.0s,mb4.7								
BGF	**Bois d'Agland**	**82.63**	**358**	*eP*		**P**	**10 17 55.3**	**-0.3**
TCF	**Toulx Ste Croi**	**82.91**	**359**	*eP*		**P**	**10 17 56.6**	**-0.4**
LPG	**La Plagne**	**83.57**	**356**	*eP*		**P**	**10 18 01.5**	**+1.1**
RJF	**Les Rejaudoux**	**83.90**	**359**	*eP*		**P**	**10 18 01.8**	**-0.3**
ORIF	**Oris-en-Rattie**	**84.18**	**356**	*eP*		**P**	**10 18 03.9**	**+0.3**
	comp=Z,24nm,1.2s,mb4.9								
ORIF	**Oris-en-Rattie**	**84.18**	**356**	*eP*		**P**	**10 18 03.9**	**+0.3**
ORIF				pmax	pmax				
	comp=Z,12nm,1.2s,mb4.9								
ORIF	**Oris-en-Rattie**	**84.18**	**356**	*eP*		**P**	**10 18 03.9**	**+0.3**
	comp=Z,12nm,1.2s,mb4.9								
LFF	**La Frestale**	**84.27**	**360**	*eP*		**P**	**10 18 03.9**	**-0.1**
	comp=Z,43nm,1.0s,mb5.2								
LFF	**La Frestale**	**84.27**	**360**	*eP*		**P**	**10 18 03.9**	**-0.1**
LFF				pmax	pmax				
	comp=Z,22nm,1.0s,mb5.2								
LFF	**La Frestale**	**84.27**	**360**	*eP*		**P**	**10 18 03.9**	**-0.1**
	comp=Z,22nm,1.0s,mb5.2								
CAF	**Calviac**	**84.27**	**359**	*eP*		**P**	**10 18 04.2**	**+0.2**
VIVF	**Saint-Julien-l**	**84.29**	**357**	*eP*		**P**	**10 18 04.2**	**+0.1**
	comp=Z,16nm,1.0s,mb4.8								
VIVF	**Saint-Julien-l**	**84.29**	**357**	*eP*		**P**	**10 18 04.2**	**+0.1**
VIVF				pmax	pmax				
	comp=Z,8.0nm,1.0s,mb4.8								
VIVF	**Saint-Julien-l**	**84.29**	**357**	*eP*		**P**	**10 18 04.2**	**+0.1**
	comp=Z,8.1nm,1.0s,mb4.8								
MBDF	**Montbardon**	**84.33**	**356**	*eP*		**P**	**10 18 04.9**	**+0.6**
BRTR	**Keskin Array B**	**85.00**	**335**	P		**P**	**10 18 07.7**	**-0.1**
	comp=Z,5.4nm,0.8s,mb4.7,baz=60,slow=3.4,SNR=19								
BRTR	**Keskin Array B**	**85.00**	**335**	*i P*		**P**	**10 18 07.6**	**-0.2**
BRTR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
LASF	**Ste Croix**	**85.09**	**358**	*eP*		**P**	**10 18 08.3**	**+0.1**
ASAR	**Alice Springs**	**85.12**	**222**	P		**P**	**10 18 06.5**	**-1.9**
	comp=Z,0.8nm,0.8s,mb3.9,baz=24,slow=5.2,SNR=4.3								
ASAR	**Alice Springs**	**85.12**	**222**	P		**P**	**10 18 06.5**	**-1.9**
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.9s								
SMRF	**Simiane la Rot**	**85.14**	**356**	*eP*		**P**	**10 18 09.0**	**+0.6**
	comp=Z,36nm,1.2s,mb5.1								
SMRF	**Simiane la Rot**	**85.14**	**356**	*eP*		**P**	**10 18 09.0**	**+0.6**
	comp=Z,36nm,1.2s,mb5.4								
SBF	**Sospel**	**85.16**	**355**	*eP*		**P**	**10 18 08.2**	**-0.3**
	comp=Z,85nm,1.2s,mb5.5								
SBF	**Sospel**	**85.16**	**355**	*eP*		**P**	**10 18 08.2**	**-0.3**
SBF				pmax	pmax				
	comp=Z,43nm,1.2s,mb5.5								
SBF	**Sospel**	**85.16**	**355**	*eP*		**P**	**10 18 08.2**	**-0.3**
	comp=Z,43nm,1.2s,mb5.5								
LMR	**La Mourre**	**85.74**	**356**	*eP*		**P**	**10 18 11.2**	**-0.2**
MTLF	**Montolieu**	**85.86**	**359**	*eP*		**P**	**10 18 12.1**	**+0.1**
ETSF	**Etsaut**	**86.30**	**1**	*eP*		**P**	**10 18 14.6**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.6								
ETSF	**Etsaut**	**86.30**	**1**	*eP*		**P**	**10 18 14.6**	**+0.4**
ETSF				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.7								
ETSF	**Etsaut**	**86.30**	**1**	*eP*		**P**	**10 18 14.6**	**+0.4**
	comp=Z,2.8nm,0.6s,mb4.7								
STKA	**Stephens Creek**	**89.58**	**212**	P		**P**	**10 18 28.9**	**-0.8**
	comp=Z,2.4nm,1.0s,mb4.5,baz=8.1,slow=7.1,SNR=2.9								
STKA	**Stephens Creek**	**89.58**	**212**	P		**P**	**10 18 28.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**115.94**	**359**	PKP	PKPdf		**10 24 16.1**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=350,slow=1.0,SNR=2.5								
TORD				PKKPab	PKKPab		**10 34 58.3**	**+4.4**
	comp=Z,0.8nm,0.8s,baz=188,slow=4.2,SNR=3.7								
CPUP	**Villa Florida**	**129.94**	**83**	PKP	PKPdf		**10 24 40.6**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=11,slow=5.4,SNR=3.5								
TSUM	**Tsumeb**	**145.41**	**331**	PKPbc	PKPbc		**10 25 10.3**	**0.0**
	comp=Z,16nm,0.9s,baz=359,slow=5.4,SNR=21								
BOSA	**Boshof**	**150.87**	**311**	PKPbc	PKPbc		**10 25 24.3**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=23,slow=2.8,SNR=5.8								
BOSA	**Boshof**	**150.87**	**311**	PKIKP	PKPbc		**10 25 24.3**	**-0.3**
BOSA				pmax	pmax				
	comp=Z,6.0nm,0.9s								
BOSA	**Boshof**	**150.87**	**311**	PKPbc	PKPbc		**10 25 24.3**	**-0.4**
VNA3	**Neumayer Olymp**	**159.32**	**171**	*e*PKPdf	PKPab		**10 26 17.7**	**+11**
VNA3				*e*			**10 26 21.2**		
VNA2	**Neumayer--Watz**	**159.84**	**172**	*e*PKPdf	PKPab		**10 26 20.1**	**+11**
	baz=134,slow=1.8								
VNA2				*e*			**10 26 23.1**		

IDC 19 10:15:01.5±3.2, 5089N×17934W, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.8/4, mbtmp3.7/4, Error ellipse: s-maj=100.2km s-min=31.1km az=5.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**14.31**	**288**	Pn	Pn	**10 18 21.0**	**-4.1**
	0.1nm,0.3s,baz=84,slow=10,SNR=6.0						
PETK				Sn	Sn	**10 21 03.2**	**-1.1**
	0.1nm,0.3s,baz=105,slow=20,SNR=5.4						
YKA	**Yellowknife Ar**	**35.82**	**46**	P	P	**10 22 02.1**	**0.0**
	0.3nm,0.6s,baz=282,slow=7.8,SNR=7.7						
TXAR	**Lajitas Array**	**59.07**	**81**	P	P	**10 25 03.6**	**+0.3**
	0.2nm,0.8s,baz=324,slow=5.9,SNR=2.8						
MKAR	**Makanchi Array**	**60.08**	**308**	P	P	**10 25 10.2**	**+0.2**
	0.6nm,0.4s,baz=52,slow=6.3,SNR=14						
AKASG	**Malin Array Be**	**75.91**	**342**	P	P	**10 26 49.1**	**-0.4**
	0.8nm,0.3s,baz=18,slow=5.5,SNR=3.6						

IDC 19 10:18:26.6±8.4, 3633N×7105E, h243km±71km, mb2.8/3, mb1 3.0/7, mb1mx2.9/26, mbtmp3.0/7, 2C, Error ellipse: s-maj=77.8km s-min=33.7km az=150.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.78**	**357**	⇑Pn	Pn	**10 20 04.6**	**+0.4**
	2.7nm,0.3s,baz=180,slow=12,SNR=58						
KK31				⇑Sn	S	**10 21 15.7**	**-6.7**
	0.5nm,0.3s,baz=184,slow=26,SNR=4.3						
MKAR	**Makanchi Array**	**13.40**	**35**	P	Pn	**10 21 27.9**	**+0.4**
	0.2nm,0.3s,baz=214,slow=10.0,SNR=8.0						
KURK	**Kurchatov**	**15.38**	**18**	P	Pn	**10 21 49.4**	**-1.9**
	0.1nm,0.3s,baz=211,slow=11,SNR=8.0						
BVAR	**Borovoye Array**	**16.70**	**359**	P	P	**10 22 05.2**	**0.0**
	0.8nm,0.3s,baz=165,slow=10,SNR=9.1						
AKTO	**Aktyubinsk**	**16.95**	**330**	P	P	**10 22 08.1**	**+0.2**
	0.5nm,0.3s,baz=136,slow=9.7,SNR=13						
ZALV	**Zalesovo Beam**	**20.05**	**24**	P	P	**10 22 41.2**	**-0.1**
	0.7nm,0.4s,baz=220,slow=11,SNR=3.1						
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P	P	**10 28 45.8**	**0.0**
	0.2nm,0.3s,baz=46,slow=6.4,SNR=5.9						
YKA	**Yellowknife Ar**	**81.42**	**3**	P	P	**10 30 16.1**	**+0.2**
	0.1nm,0.4s,baz=352,slow=5.6,SNR=4.1						

*IDC **19** 10:21:25.3±2.1, 5108N×179.17W, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.9/26, mbtmp3.9/11, ML4.3/1, Error ellipse: s-maj=61.9km s-min=19.7km az=4.0*

*NEIC **19** 10:21:30.8±1.8, 5115N×179.08W, h30km, ML3.4(AEIC), Error ellipse: s-maj=50.9km s-min=12.3km az=181.0*

*ISCJB **19** 10:21:33.6±2.2, 2.513N±0.03×179.1W±0.01, h70km±12km, mb3.9/11, Error ellipse: s-maj=50.2km s-min=10.6km az=177.0*

ISC 19 10:21:35.0±2.1, 513N±0.03×17904W±0.10, h65km±11km, n19, σ0s99/21, mb4.0/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.58**	**67**	P	**Pn**	**10 21 60.0**	**-0.9**
ADK				S	**Sn**	**10 22 21.4**	**+1.1**
FX1	**Attu Island--F**	**5.06**	**291**	Pn	**Pn**	**10 22 47.5**	**-0.8**
	2.9nm,0.3s,baz=169,slow=5.2,SNR=3.3						
FX1				Sn	**Sn**	**10 23 53.5**	**+8.2**
	2.8nm,0.3s,baz=90,slow=20,SNR=3.3						
PETK	**Petropavlovsk-**	**14.37**	**286**	Pn	**Pn**	**10 24 56.2**	**+1.4**
	0.1nm,0.3s,baz=133,slow=12,SNR=2.7						
KDAK	**Kodiak Island**	**16.59**	**57**	Pn	**Pn**	**10 25 21.6**	**-1.5**
	1.1nm,0.3s,baz=305,slow=12,SNR=6.6						
YKA	**Yellowknife Ar**	**35.39**	**46**	P	**P**	**10 28 24.1**	**0.0**
	0.8nm,0.8s,mb3.7,baz=282,slow=8.3,SNR=10						
YKA	**Yellowknife Ar**	**35.39**	**46**	P	**P**	**10 28 24.1**	**0.0**
RLMT	**Red Lodge**	**45.30**	**69**	*eP*	**P**	**10 29 48.4**	**+2.3**
	3.6nm,0.6s,mb4.4						
PDAR	**Pinedale Array**	**46.47**	**72**	P	**P**	**10 29 55.8**	**+0.5**
	1.8nm,0.9s,mb4.0,baz=310,slow=3.7,SNR=11						
SONM	**Songino Array**	**46.55**	**297**	P	**P**	**10 29 56.1**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=52,slow=9.3,SNR=3.4						
SPITS	**Spitsbergen Ar**	**50.46**	**356**	P	**P**	**10 30 25.6**	**+0.3**
	4.1nm,0.6s,mb4.7,baz=38,slow=9.8,SNR=5.4						
TXAR	**Lajitas Array**	**58.81**	**81**	P	**P**	**10 31 25.7**	**-0.9**
	0.3nm,0.7s,mb3.4,baz=305,slow=4.4,SNR=4.8						
TXAR	**Lajitas Array**	**58.81**	**81**	P	**P**	**10 31 25.7**	**-0.9**
KURK	**Kurchatov**	**58.97**	**314**	P	**P**	**10 31 28.2**	**+0.9**
	1.7nm,0.7s,mb4.2,baz=42,slow=6.6,SNR=6.9						
MKAR	**Makanchi Array**	**59.97**	**308**	P	**P**	**10 31 32.9**	**-1.3**
	0.4nm,0.5s,mb3.7,baz=47,slow=6.3,SNR=6.5						
MKAR	**Makanchi Array**	**59.97**	**308**	P	**P**	**10 31 32.9**	**-1.3**
AKASG	**Malin Array Be**	**75.58**	**342**	P	**P**	**10 33 12.3**	**0.0**
	1.8nm,0.3s,mb4.4,baz=19,slow=5.6,SNR=6.7						
AKASG	**Malin Array Be**	**75.58**	**342**	P	**P**	**10 33 12.3**	**0.0**
GERES	**GERESS Array B**	**79.64**	**351**	P	**P**	**10 33 34.1**	**-0.9**
	0.3nm,0.3s,mb3.7,baz=3.4,slow=6.7,SNR=3.9						
BRTR	**Keskin Array B**	**84.95**	**335**	P	**P**	**10 34 03.1**	**+0.3**
	0.3nm,0.4s,mb3.8,baz=29,slow=3.3,SNR=3.7						

*IDC **19** 10:22:43.2±2.6, 5070N×179.36W, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.8/25, mbtmp4.0/7, Error ellipse: s-maj=74.0km s-min=24.9km az=10.0*

*ISCJB **19** 10:22:47.8±3.4, 508N±0.03×179.3W±0.02, h42km±24km, mb4.0/7, Error ellipse: s-maj=43.6km s-min=22.9km az=175.8*

*NEIC **19** 10:22:48.4, 5102N×179.29W, h7km, ML3.4(AEIC), After AEIC.*

ISC 19 10:22:49.4±3.5, 509N±0.03×1793W±0.02, h35km±26km, n10, σ0s89/11, mb4.0/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.94**	**57**	P	**Pn**	**10 23 19.5**	**-0.3**
ADK				S	**Sn**	**10 23 42.9**	**0.0**
ATKA	**Atka Island**	**3.46**	**65**	P	**Pn**	**10 23 41.0**	**+0.3**
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**10 29 43.5**	**-1.5**
	0.8nm,0.5s,mb3.9,baz=282,slow=7.8,SNR=19						
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**10 29 43.5**	**-1.5**
PDAR	**Pinedale Array**	**46.77**	**71**	P	**P**	**10 31 15.6**	**+0.5**
	1.6nm,0.7s,mb4.1,baz=308,slow=3.3,SNR=7.2						
SPITS	**Spitsbergen Ar**	**50.89**	**356**	P	**P**	**10 31 48.0**	**+1.9**
	23nm,1.1s,mb5.0,baz=54,slow=9.9,SNR=6.2						
TXAR	**Lajitas Array**	**59.05**	**81**	P	**P**	**10 32 46.0**	**+0.3**
	0.1nm,0.5s,mb3.1,baz=307,slow=3.3,SNR=2.8						
KURK	**Kurchatov**	**59.16**	**314**	P	**P**	**10 32 46.9**	**+0.7**
	0.4nm,0.3s,mb3.9,baz=41,slow=6.5,SNR=2.1						
MKAR	**Makanchi Array**	**60.12**	**308**	P	**P**	**10 32 52.0**	**-0.9**
	0.7nm,0.6s,mb3.9,baz=45,slow=6.8,SNR=5.7						
AKASG	**Malin Array Be**	**75.96**	**342**	P	**P**	**10 34 31.3**	**-0.9**
	1.5nm,0.4s,mb4.3,baz=20,slow=6.5,SNR=4.2						

*IDC **19** 10:24:08.2±0.6, 5112N×179.06W, h0km, mb4.4/23, mb1 4.5/24, mb1mx4.5/29, mbtmp4.4/24, ML4.6/1, Error ellipse: s-maj=19.4km s-min=13.2km az=168.0*

*NEIC **19** 10:24:13.2±0.3, 5112N×179.08W, h30km, mb5.3/27, ML5.1(AEIC), Error ellipse: s-maj=10.7km s-min=4.1km az=171.0*

*ISCJB **19** 10:24:14.6±1.0, 5116N±0.009×178.96W±0.06, h54km±7km, mb4.8/51, Error ellipse: s-maj=14.8km s-min=5.7km az=177.2*

*MOS **19** 10:24:14.3±1.0, 5116N×178.94W, h54km, mb4.7/21, Error ellipse: s-maj=11.7km s-min=8.4km az=104.2*

ISC 19 10:24:16.6±0.9, 5115N±0.009×17895W±0.06, h56km±7km, n145, σ0s91/138, mb4.8/51, 10C-5D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.59**	**62**	P	**Pn**	**10 24 41.2**	**-1.1**
ATKA	**Atka Island**	**3.14**	**69**	P	**Pn**	**10 25 02.9**	**-0.6**
SMY	**Shemya**	**4.58**	**293**	P	**Pn**	**10 25 23.5**	**+0.3**
FX1	**Attu Island--F**	**5.17**	**293**	Pn	**Pn**	**10 25 30.9**	**-0.4**
	31nm,0.3s,baz=241,slow=3.2,SNR=14						
FX1	**Attu Island--F**	**5.17**	**293**	P	**Pn**	**10 25 30.9**	**-0.4**
FX1				pmax	pmax		
	comp=Z,31nm,0.3s						
FX1	**Attu Island--F**	**5.17**	**293**	P	**Pn**	**10 25 31.2**	**-0.1**
NIKO	**Nikolski**	**6.49**	**70**	P	**Pn**	**10 25 49.1**	**-0.2**
SPIA	**Saint Paul Isl**	**7.90**	**37**	P	**Pn**	**10 26 11.1**	**+2.5**
UNV	**Unalaska Valle**	**8.06**	**66**	P	**Pn**	**10 26 11.3**	**+0.6**
SDPT	**Sand Point**	**11.82**	**62**	*eP*	**Pn**	**10 27 00.8**	**-1.4**
	comp=Z,41nm,0.6s						
PET	**Petropavlovsk**	**13.89**	**286**	*eP*	**Pn**	**10 27 38.6**	**+8.3**
PET				pmax	pmax		
	comp=Z,15nm,0.8s						
PET				MLR	MLR		
	comp=Z,19um,16.0s						
PETK	**Petropavlovsk-**	**14.46**	**287**	Pn	**Pn**	**10 27 40.9**	**+3.0**
	comp=Z,0.7nm,0.3s,baz=87,slow=13,SNR=14						
OHAK	**Old Harbor**	**16.14**	**58**	*eP*	**Pn**	**10 27 55.6**	**-3.8**
	comp=Z,17nm,1.0s						
SVW2	**Sparrevohn**	**16.30**	**43**	*eP*	**Pn**	**10 28 02.9**	**+1.5**
KDAK	**Kodiak Island**	**16.63**	**56**	Pn	**Pn**	**10 28 02.4**	**-3.1**
	comp=Z,2.3nm,0.3s,baz=256,slow=5.5,SNR=8.4						
BILL	**Bilibino**	**18.42**	**342**	*eP*	**Pn**	**10 28 28.8**	**+1.4**
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL	**Bilibino**	**18.42**	**342**	*eP*	**Pn**	**10 28 23.4**	**-4.0**
	comp=Z,155nm,1.1s						
COLA	**College**	**21.15**	**38**	*eP*	**P**	**10 28 56.7**	**+0.3**
COLA				pmax	pmax		
	comp=Z,112nm,0.8s,mb5.2						
COLA	**College**	**21.15**	**38**	*eP*	**P**	**10 28 56.7**	**+0.3**
	comp=Z,112nm,0.8s,mb5.2						
MENT	**Mentasta**	**22.17**	**44**	*eP*	**P**	**10 29 08.5**	**+1.1**
EGAK	**Eagle**	**23.78**	**41**	*eP*	**P**	**10 29 22.3**	**-1.2**
	comp=Z,126nm,0.6s,mb5.5						
DAWY	**Dawson**	**24.34**	**43**	*eP*	**P**	**10 29 27.7**	**-0.8**
YSS	**Yuzh-Sakhalins**	**25.25**	**276**	*eP*	**P**	**10 29 37.1**	**+0.1**
YSS				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.6						
YSS	**Yuzh-Sakhalins**	**25.25**	**276**	*eP*	**P**	**10 29 37.1**	**+0.1**
	comp=Z,19nm,0.9s,mb4.6						
INK	**Inuvik**	**27.70**	**35**	P	**P**	**10 29 58.2**	**-0.7**
	comp=Z,1.8nm,0.4s,mb4.0,baz=270,slow=5.8,SNR=12						
INK	**Inuvik**	**27.70**	**35**	P	**P**	**10 29 58.2**	**-0.7**
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	**Inuvik**	**27.70**	**35**	P	**P**	**10 29 58.2**	**-0.7**
	comp=Z,1.4nm,0.8s						
KLR	**Kul'dur**	**31.16**	**286**	*eP*	**P**	**10 30 24.7**	**-5.0**
YKA	**Yellowknife Ar**	**35.46**	**46**	P	**P**	**10 31 06.3**	**-0.6**
	comp=Z,4.4nm,0.6s,mb4.6,baz=281,slow=7.5,SNR=53						
YKA	**Yellowknife Ar**	**35.46**	**46**	P	**P**	**10 31 06.3**	**-0.6**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOD	**Bodaibo**	**38.04**	**307**	*eP*	**P**	**10 31 26.8**	**-2.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
HIA	**Hailar**	**38.29**	**292**	*eP*	**P**	**10 31 29.7**	**-1.4**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
HIA	**Hailar**	**38.29**	**292**	*eP*	**P**	**10 31 29.7**	**-1.4**
	comp=Z,3.9nm,0.3s,mb4.6						
HAWA	**Hanford**	**38.52**	**73**	*eP*	**P**	**10 31 33.6**	**+0.5**
	comp=Z,42nm,0.7s,mb5.3						
NEW	**Newport**	**39.05**	**69**	*eP*	**P**	**10 31 37.8**	**+0.3**
NEW				pmax	pmax		
	comp=Z,65nm,0.9s						
NEW	**Newport**	**39.05**	**69**

	comp=Z,10nm,0.9s,mb4.8							
EKS2	**Erkin-Say**	**67.27**	**310**	P		**P**	**10 35 05.8**	**+1.0**
	SNR=11							
LSA	**Lhasa**	**67.43**	**290**	*e*P		**P**	**10 35 07.5**	**+1.4**
LSA				pmax	pmax			
	comp=Z,24nm,0.7s,mb5.3							
LSA	**Lhasa**	**67.43**	**290**	*e*P		**P**	**10 35 07.5**	**+1.5**
	comp=Z,24nm,0.7s,mb5.3							
AML	**Almayashu**	**67.71**	**310**	P		**P**	**10 35 09.1**	**+1.5**
	SNR=5.6							
AKTK	**Aktyubinsk**	**67.82**	**325**	P		**P**	**10 35 07.5**	**-0.7**
AKTO	**Aktyubinsk**	**67.82**	**325**	P		**P**	**10 35 07.5**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.3,baz=57,slow=7.6,SNR=9.1							
AKTO	**Aktyubinsk**	**67.82**	**325**	P		**P**	**10 35 07.5**	**-0.7**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.1							
NB2	**NORSAR Subarra**	**67.86**	**355**	P		**P**	**10 35 07.5**	**-0.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=7.2,slow=6.5							
NOA	**NORSAR Array B**	**67.86**	**355**	P		**P**	**10 35 07.6**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.2,baz=6.0,slow=6.2,SNR=9.6							
NOA	**NORSAR Array B**	**67.86**	**355**	P		**P**	**10 35 07.6**	**-0.7**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**70.94**	**276**	P		**P**	**10 35 26.9**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.0,baz=28,slow=6.4,SNR=7.2							
CMAR	**Chiang Mai Arr**	**70.94**	**276**	P		**P**	**10 35 26.9**	**-1.0**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
TAPN	**Taplejung**	**71.20**	**290**	*e*P		**P**	**10 35 29.9**	**+0.5**
ODAN	**Odare**	**71.75**	**290**	*e*P		**P**	**10 35 32.8**	**+0.1**
	comp=Z,9.1nm,0.4s,mb5.0							
GUN	**Gumba**	**71.86**	**292**	*e*P		**P**	**10 35 34.1**	**+0.8**
	comp=Z,67nm,0.5s,mb5.9							
JIRN	**Jiri**	**71.86**	**292**	*e*P		**P**	**10 35 33.4**	**0.0**
RAMN	**Ramite**	**72.15**	**291**	*e*P		**P**	**10 35 35.4**	**+0.3**
KKN	**Kakani**	**72.30**	**292**	*e*P		**P**	**10 35 36.2**	**+0.2**
	comp=Z,22nm,0.4s,mb5.4							
KKN	**Kakani**	**72.30**	**292**	*e*P		**P**	**10 35 36.2**	**+0.2**
KKN				pmax	pmax			
	comp=Z,22nm,0.4s,mb5.4							
PKI	**Pulchoki**	**72.39**	**292**	*e*P		**P**	**10 35 36.9**	**+0.4**
	comp=Z,14nm,0.5s,mb5.2							
PKI	**Pulchoki**	**72.39**	**292**	*e*P		**P**	**10 35 36.9**	**+0.4**
PKI				pmax	pmax			
	comp=Z,14nm,0.5s,mb5.2							
GKN	**Gorkha**	**72.51**	**293**	*e*P		**P**	**10 35 37.4**	**+0.2**
	comp=Z,21nm,0.5s,mb5.3							
DMN	**Daman**	**72.53**	**292**	*e*P		**P**	**10 35 38.0**	**+0.6**
DANN	**Dangsing**	**72.76**	**294**	*e*P		**P**	**10 35 39.2**	**+0.5**
	comp=Z,30nm,0.6s,mb5.4							
KOLN	**Koldanda**	**73.29**	**293**	*e*P		**P**	**10 35 42.0**	**+0.2**
AKASG	**Malin Array Be**	**75.74**	**342**	P		**P**	**10 35 54.7**	**-1.0**
	comp=Z,10nm,0.5s,mb5.1,baz=21,slow=6.2,SNR=26							
AKASG	**Malin Array Be**	**75.74**	**342**	P		**P**	**10 35 54.7**	**-1.0**
AKASG				pmax	pmax			
	comp=Z,10.0nm,0.5s							
AKASG	**Malin Array Be**	**75.74**	**342**	P		**P**	**10 35 54.7**	**-1.0**
KIEV	**Kiev**	**75.75**	**342**	*e*P		**P**	**10 35 54.6**	**-1.1**
KIEV				pmax	pmax			
	comp=Z,27nm,1.0s,mb5.1							
KIEV	**Kiev**	**75.75**	**342**	*e*P		**P**	**10 35 54.6**	**-1.1**
	comp=Z,27nm,1.0s,mb5.1							
KAKA	**Kakadu**	**76.32**	**229**	*e*P		x	10 35 17.2	
	comp=Z,16nm,0.8s							
STHS	**Stebnicka Huta**	**78.34**	**347**	*e*P		**P**	**10 36 11.1**	**+0.8**
CRVS	**Cervenica-Dubn**	**78.81**	**346**	*e*P		**P**	**10 36 13.2**	**+0.3**
KECS	**Kecovo**	**79.36**	**347**	*e*P		**P**	**10 36 14.3**	**-1.6**
BURAR	**Bucovina Array**	**79.45**	**344**	⇓*i*P		**P**	**10 36 16.8**	**+0.4**
KHC	**Kasperske Hory**	**79.53**	**352**	*e*P		**P**	**10 36 16.5**	**-0.3**
GERES	**GERESS Array B**	**79.80**	**352**	P		**P**	**10 36 18.0**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.1,baz=32,slow=5.6,SNR=11							
GERES	**GERESS Array B**	**79.80**	**352**	P		**P**	**10 36 18.0**	**-0.3**
GERES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
DRGR		**80.67**	**345**	⇓*i*P		**P**	**10 36 23.0**	**0.0**
VRI	**Vrincioaia**	**80.85**	**342**	⇑*i*P		**P**	**10 36 24.6**	**+0.6**
VRI	**Vrincioaia**	**80.85**	**342**	⇑P		**P**	**10 36 24.6**	**+0.6**
PLOR	**Plostina**	**80.88**	**342**	⇑*i*P		**P**	**10 36 24.8**	**+0.7**
TLCR		**81.08**	**341**	⇓*i*P		**P**	**10 36 23.7**	**-1.5**
TLCR		**81.08**	**341**	⇑P		**P**	**10 36 23.7**	**-1.5**
VOIR		**81.58**	**343**	*i*P		**P**	**10 36 28.9**	**+1.0**
VOIR		**81.58**	**343**	⇑P		**P**	**10 36 28.9**	**+1.1**
WRA	**Warramunga Arr**	**81.78**	**224**	P		**P**	**10 36 27.5**	**-1.6**
	comp=Z,0.9nm,0.7s,mb3.8,baz=30,slow=5.6,SNR=11							
WRA	**Warramunga Arr**	**81.78**	**224**	P		**P**	**10 36 27.5**	**-1.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TIRR	**Tirgusor**	**81.86**	**341**	⇓*i*P		**P**	**10 36 29.0**	**-0.4**
TIRR	**Tirgusor**	**81.86**	**341**	⇑P		**P**	**10 36 29.0**	**-0.3**
BZS	**Buzias**	**81.99**	**346**	⇑*i*P		**P**	**10 36 29.7**	**-0.3**
BZS	**Buzias**	**81.99**	**346**	⇑P		**P**	**10 36 29.7**	**-0.3**
GZR	**Gura Zlata**	**82.02**	**345**	⇓*i*P		**P**	**10 36 30.6**	**+0.4**
GZR	**Gura Zlata**	**82.02**	**345**	⇑P		**P**	**10 36 30.6**	**+0.5**
BR131	**Keskin Array S**	**85.12**	**335**	*e*P		**P**	**10 36 46.4**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.6							
BRTR	**Keskin Array B**	**85.12**	**335**	P		**P**	**10 36 46.0**	**-0.1**
	comp=Z,4.9nm,0.8s,mb4.7,baz=63,slow=2.9,SNR=24							
BRTR	**Keskin Array B**	**85.12**	**335**	P		**P**	**10 36 46.0**	**-0.1**
BRTR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ASAR	**Alice Springs**	**85.26**	**222**	P		**P**	**10 36 46.0**	**-0.8**
	comp=Z,1.2nm,0.9s,mb4.0,baz=24,slow=5.5,SNR=12							
ASAR	**Alice Springs**	**85.26**	**222**	P		**P**	**10 36 46.0**	**-0.8**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ESDC	**Sonseca Array**	**89.45**	**4**	P		**P**	**10 37 06.2**	**-0.9**
	comp=Z,0.3nm,0.3s,mb4.1,baz=8.0,slow=5.0,SNR=3.5							
STKA	**Stephens Creek**	**89.68**	**213**	P		**P**	**10 37 07.0**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.4,baz=340,slow=5.6,SNR=4.1							
TORD	**Torodi Ar. Bea**	**115.97**	**359**	PKP	PKPdf		10 42 51.9	-1.2
	comp=Z,0.3nm,0.6s,baz=348,slow=1.8,SNR=3.6							
DBIC	**Dimbokro**	**122.19**	**7**	PKP	PKPdf		10 43 04.6	-0.5
	comp=Z,1.0nm,0.4s,baz=105,slow=0.7,SNR=7.5							
DBIC	**Dimbokro**	**122.19**	**7**	PKIKP	PKPdf		10 43 04.6	-0.5
DBIC				pmax	pmax			
	comp=Z,1.0nm,0.4s							
TSUM	**Tsumeb**	**145.54**	**332**	*e*PKPbc	PKPbc		10 43 48.9	+0.4
BOSA	**Boshof**	**151.06**	**312**	PKPbc	PKPbc		10 44 02.8	-0.1
	comp=Z,3.2nm,0.8s,baz=37,slow=8.1,SNR=5.8							
BOSA	**Boshof**	**151.06**	**312**	PKIKP	PKPbc		10 44 02.8	0.0
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.8s							

IDC ***19*** *10:24:28.5±0.5,5128N×17948W,h0km,mb5.0/36, mb1 5.1/37,mb1mx5.1/38,mbtmp5.0/37,ML5.5/1, Error ellipse: s-maj=15.7km s-min=9.2km az=169.0*

SZGRF ***19*** *10:24:30.5,5077N×17945E,h33km,mb5.6,Rat Islands, Aleutian Islands, United States*

BJI ***19*** *10:24:32.8,5139N×17995W,h30km,mB5.8,mb5.3,Ms5.8, Msz5.7*

NEIC ***19*** *10:24:33.7±0.2,5135N×17949W,h30km,mb5.5/166, ML5.3(AEIC),Error ellipse: s-maj=5.2km s-min=2.0km az=187.0*

ISCJB ***19*** *10:24:33.0±0.1,5133N±004×17949W±002,h36km, mb5.4/278,MS5.6/11,Error ellipse: s-maj=5.4km s-min=1.7km az=8.2*

MOS ***19*** *10:24:33.8±0.9,5131N×17944W,h46km,mb5.6/111, Error ellipse: s-maj=6.6km s-min=4.2km az=94.2*

ISC 19 10:24:35.2±0.2,5139N±004×17951W±002,h39km, h39km±1.4km:pP-P,n1015,○0968/1012,mb5.4/278, MS5.6/11,303C-183D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.83**	**73**	P	**Pn**	**10 25 01.9**	**-2.2**
ADK				S	**Sn**	**10 25 25.6**	**-0.4**
ATKA	**Atka Island**	**3.40**	**74**	P	**Pn**	**10 25 24.6**	**-1.1**
ATKA				S	**Sn**	**10 26 04.7**	**+0.1**
SMY	**Shemya**	**4.17**	**291**	P	**Pn**	**10 25 38.8**	**+2.6**
SMY				S	**Sn**	**10 26 28.5**	**+4.9**
FX1	**Attu Island--F**	**4.76**	**291**	Pn	**Pn**	**10 25 45.8**	**+1.4**
	116nm,0.3s,baz=164,slow=3.1,SNR=19						
FX1				Sn	**Sn**	**10 26 42.3**	**+4.2**
	42nm,0.3s,baz=285,slow=20,SNR=2.4						
FX1	**Attu Island--F**	**4.76**	**291**	P	**Pn**	**10 25 45.8**	**+1.5**
FX1						10 26 42.3	
FX1				pmax	pmax		
	comp=Z,116nm,0.3s						
FX1				smax			
	comp=N,42nm,0.3s						
FX1	**Attu Island--F**	**4.76**	**291**	P	**Pn**	**10 25 45.9**	**+1.6**
NIKO	**Nikolski**	**6.74**	**72**	P	**Pn**	**10 26 11.3**	**-0.2**

SPIA	**Saint Paul Isl**	**7.93**	**39**	P		**Pn**	**10 26 30.8**	**+2.9**
UNV	**Unalaska Valle**	**8.29**	**68**	P		**Pn**	**10 26 33.3**	**+0.6**
AKGG	**Akutan Green G**	**8.66**	**66**	P		**Pn**	**10 26 39.2**	**+1.4**
AKUT	**Akutan**	**8.77**	**66**	*e*Pn		**Pn**	**10 26 42.0**	**+2.7**
FALS	**False Pass**	**10.27**	**64**	*e*Pn		**Pn**	**10 27 01.5**	**+1.6**
SDPT	**Sand Point**	**12.03**	**63**	*e*Pn		**Pn**	**10 27 22.9**	**-1.0**
CHGN	**Chignik**	**13.37**	**60**	*e*Pn		**Pn**	**10 27 39.5**	**-2.6**
PET	**Petropavlovsk**	**13.49**	**286**	*e*P		**Pn**	**10 27 45.4**	**+1.6**
PET	**Petropavlovsk**	**13.49**	**286**	*e*P		**Pn**	**10 27 45.4**	**+1.6**
PETK	**Petropavlovsk-**	**14.06**	**286**	Pn		**Pn**	**10 27 55.0**	**+3.4**
	comp=N,1.4nm,0.3s,baz=93,slow=17,SNR=9.6							
PETK				Sn		**Sn**	**10 30 27.4**	**+1.3**
	comp=N,0.3nm,0.3s,baz=112,slow=19,SNR=2.5							
SKR	**Severo-Kuril's**	**15.34**	**277**	*e*P		**Pn**	**10 28 11.5**	**+2.9**
SKR				*e*			10 30 56.2	
OHAK	**Old Harbor**	**16.32**	**59**	*e*Pn		**Pn**	**10 28 18.0**	**-3.1**
KDAK	**Kodiak Island**	**16.79**	**57**	Pn		**Pn**	**10 28 26.0**	**-1.1**
	comp=N,942nm,0.5s,SNR=7.2							
KDAK	**Kodiak Island**	**16.79**	**57**	Pn		**Pn**	**10 28 25.3**	**-1.8**
	comp=N,16nm,0.3s,baz=252,slow=6.4,SNR=38							
KDAK				Sn		**Sn**	**10 31 28.5**	**-3.8**
	comp=N,2.2nm,0.3s,baz=330,slow=20,SNR=7.0							
KDAK	**Kodiak Island**	**16.79**	**57**	*e*P		**Pn**	**10 28 24.7**	**-2.4**
KDAK				pmax	pmax			
	comp=Z,1μm,2.4s							
KDAK	**Kodiak Island**	**16.79**	**57**	*e*Pn		**Pn**	**10 28 24.6**	**-2.4**
	comp=Z,1μm,2.4s							
BILL	**Bilibino**	**18.09**	**343**	⇑*i*P		**Pn**	**10 28 44.9**	**+1.8**
BILL				pmax	pmax			
	comp=Z,160nm,1.6s							
BILL	**Bilibino**	**18.09**	**343**	⇑*i*P		**Pn**	**10 28 44.0**	**+0.9**
SEY	**Seymchan**	**18.94**	**318**	*e*P		**Pn**	**10 28 54.7**	**+1.3**
SEY	**Seymchan**	**18.94**	**318**	*e*P		**Pn**	**10 28 54.7**	**+1.3**
PMR	**Palmer**	**19.44**	**47**	*e*Pn		**Pn**	**10 28 58.5**	**-1.0**
	comp=Z,80nm,0.6s							
COLA	**College**	**21.18**	**38**	*e*P		**P**	**10 29 18.0**	**+1.2**
HYT	**Haines Junctio**	**24.83**	**51**	*e*P		**P**	**10 29 52.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	**24.88**	**275**	⇑*e*P		**P**	**10 29 54.0**	**+0.1**
YSS				*e*			10 30 12.0	
YSS				pmax	pmax			
	comp=N,40nm,1.0s							
YSS				pmax	pmax			
	comp=Z,100nm,1.0s,mb5.3							
YSS				pmax	pmax			
	comp=E,50nm,0.9s							
YSS	**Yuzh-Sakhalins**	**24.88**	**275**	*i*P		**P**	**10 29 54.6**	**+0.7**
ASAJ	**Asahikawa**	**26.26**	**269**	P		**P**	**10 30 06.5**	**-0.1**
	comp=E,30nm,0.8s,mb4.8,baz=65,slow=11,SNR=7.8							
ASAJ	**Asahikawa**	**26.26**	**269**	P		**P**	**10 30 06.5**	**0.0**
ASAJ				pmax	pmax			
	comp=Z,30nm,0.8s							
INK	**Inuvik**	**27.71**	**35**	P		**P**	**10 30 19.0**	**-0.3**
	comp=Z,30nm,0.9s,mb4.9,baz=240,slow=9.8,SNR=15							
INK				PcP		PcP		
	comp=Z,12nm,1.0s,baz=182,slow=4.4,SNR=3.6						10 33 34.3	-0.7
INK				ScP		ScP	10 37 13.9	+1.6
	comp=Z,4.4nm,0.9s,baz=0.0,slow=0.0,SNR=16							
INK	**Inuvik**	**27.71**	**35**	P		**P**	**10 30 19.0**	**-0.2**
INK							10 33 34.3	
INK				pmax	pmax			
	comp=Z,30nm,0.9s							
INK				pmax	pmax			
	comp=Z,12nm,1.0s							
INK				pmax	pmax			
	comp=N,4.0nm,0.9s							
INK	**Inuvik**	**27.71**	**35**	P		**P**	**10 30 19.0**	**-0.3**
INK				PcP	PcP		10 33 34.3	-0.7
INK				ScP	ScP		10 37 13.9	+1.6
INK				*e*ScP	ScP		10 37 14.5	+2.2
DLBC	**Dease Lake**	**28.72**	**56**	P		**P**	**10 30 28.8**	**+0.4**
	comp=N,4.6nm,0.8s,mb4.2,baz=307,slow=6.2,SNR=5.4							
HABR	**Khabarovsk**	**29.04**	**282**	*e*P		**P**	**10 30 30.0**	**-1.3**
HABR				*e**PP	pP		10 30 41.4	-0.8
HABR				*e**SP	sP		10 30 48.7	+1.8
HABR				*e*S	**S**		**10 35 19.1**	**-0.7**
HABR				*e**SS	sS		10 35 41.3	+3.5
HABR				*e*SS	SS		10 36 47.6	-36
HABR				pmax	pmax			
	comp=Z,72nm,2.1s,mb5.0							
HABR				pmax	pmax			
	comp=N,24nm,1.6s							
HABR				pmax	pmax			
	comp=E,29nm,1.2s							
HABR				MLR	MLR			
	comp=Z,6μm,15.0s,MS5.3							
YAK	**Yakutsk**	**29.08**	**311**	*i*P		**P**	**10 30 30.2**	**-1.3**
TIXI	**Tiksi**	**30.41**	**331**	*e*P		**P**	**10 30 42.7**	**-0.5**
TIXI				*e*			10 37 20.0	
KLR	**Kul'dur**	**30.75**	**285**	*e*P		**P**	**10 30 42.0**	**-4.4**
KLR				pmax	pmax			
	comp=E,140nm,1.8s							
KLR				pmax	pmax			
	comp=Z,200nm,1.8s,mb5.7							
BBB	**Bella Bella**	**31.26**	**68**	P		**P**	**10 30 48.0**	**-2.8**
	comp=Z,23nm,0.8s,mb5.0,baz=297,slow=14,SNR=2.2							
MJAR	**Matsushiro Arr**	**33.35**	**260**	P		**P**	**10 31 08.8**	**-0.6**
	comp=Z,4.7nm,0.8s,mb4.5,baz=51,slow=7.6,SNR=13							
MJAR				PcP		PcP	10 33 49.8	-0.6
	comp=Z,3.5nm,0.8s,baz=108,slow=0.6,SNR=7.2							
MJAR				ScP		ScP	10 37 31.5	+0.1
	comp=Z,2.0nm,0.9s,baz=62,slow=3.0,SNR=4.7							
MJAR	**Matsushiro Arr**	**33.35**	**260**	P		**P**	**10 31 08.8**	**-0.5**
MJAR							10 33 49.8	
MJAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
MJAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MJAR				pmax	pmax			
	comp=N,2.0nm,0.9s							
MAJO	**Matsushiro**	**33.35**	**260**	*e*P		**P**	**10 31 09.5**	**+0.2**
MAJO				pmax	pmax			
	comp=Z,21nm,1.0s,mb5.0							
MAJO	**Matsushiro**	**33.35**	**260**	*e*P		**P**	**10 31 09.5**	**+0.1**
	comp=Z,20nm,1.0s,mb5.0							
MAT	**Matsushiro**	**33.35**	**260**	P		**P**	**10 31 08.8**	**-0.5**
MDJ	**Mudanjiang**	**34.13**	**279**	P		**P**	**10 31 14.9**	**-1.2**
MDJ				AP	pP		10 31 23.6	-3.4
MDJ				XP	sP		10 31 27.6	-4.1
MDJ				S	**S**		**10 36 37.8**	**-1.5**
MDJ				XS	sS		10 36 53.1	-4.4
MDJ				SCS	ScS		10 41 36.0	-0.1
MDJ				AMB	AMB			
	comp=Z,20nm,1.2s,mb4.9							
MDJ				AMB	AMB			
	comp=Z,10μm,8.1s							
MDJ				LR	LR			
	comp=N,8μm,15.6s,MS5.8							
MDJ				LR	LR			
	comp=E,10μm,16.2s,MS5.8							
MDJ				LR	LR			
	comp=Z,13μm,17.1s,MS5.7							
MDJ	**Mudanjiang**	**34.13**	**279**	*e*P		**P**	**10 31 14.9**	**-1.2**
	comp=Z,15nm,0.9s,mb4.9							
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**	**10 31 27.6**	**-0.4**
	comp=Z,48nm,0.7s,mb5.5,baz=282,slow=8.2,SNR=70							
YKA				PcP		PcP	10 33 55.9	-0.3
	comp=Z,9.2nm,0.9s,baz=289,slow=2.7,SNR=12							
YKA				ScP		ScP	10 37 38.7	0.0
	comp=Z,3.7nm,0.9s,baz=291,slow=3.2,SNR=9.6							
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**	**10 31 27.6**	**-0.4**
YKA							10 33 55.9	
YKA				pmax	pmax			
	comp=Z,49nm,0.7s							
YKA				pmax	pmax			
	comp=Z,9.0nm,0.9s							
YKA				pmax	pmax			
	comp=N,4.0nm,0.9s							
YKA	**Yellowknife Ar**	**35.55**	**46**	P		**P**	**10 31 27.6**	**-0.4**
YKA				PcP	PcP		10 33 55.9	-0.3
YKA				ScP	ScP		10 37 38.7	0.0
B04A	**Port Angeles**	**35.61**	**73**	⇑P		**P**	**10 31 29.9**	**+1.1**
	baz=35							
NLWA	**Neilton Lookou**	**35.70**	**74**	*e*P		**P**	**10 31 30.2**	**+0.7**
	comp=N,60nm,1.1s,mb5.4							
A05A	**Maple Falls**	**36.03**	**71**	⇓P		**P**	**10 31 32.8**	**+0.4**
	baz=36,SNR=11							
C04A	**Brinnon**	**36.09**	**73**	⇓P		**P**	**10 31 33.9**	**+1.1**
	baz=36							
E03A	**Lebam**	**36.28**	**75**	⇑P		**P**	**10 31 35.4**	**+0.9**
	baz=36,SNR=11							
A06A	**Chilliwack**	**36.35**	**70**	⇓P		**P**	**10 31 35.1**	**0.0**
	baz=36,SNR=6.1							
B05A	**Bryant**	**36.36**	**72**	⇑P		**P**	**10 31 36.0**	**+0.8**
	baz=36,SNR=18							
D04A	**Dobbs Creek Ra**	**36.47**	**74**	⇓P		**P**	**10 31 36.7**	**+0.6**

	baz=36							
JCW	**Jim Creek**	**36.49**	**72**	*e*P		**P**	**10 31 37.2**	**+0.9**
F03A	**Seaside**	**36.58**	**76**	⇓P		**P**	**10 31 38.5**	**+1.4**
	baz=36							
B06A	**Marblemount**	**36.61**	**71**	⇑P		**P**	**10 31 37.3**	**0.0**
	baz=36,SNR=6.0							
RPW	**Rockport**	**36.62**	**71**	*e*P		**P**	**10 31 38.0**	**+0.6**
E04A	**Onalaska**	**36.77**	**75**	⇑P		**P**	**10 31 40.0**	**+1.4**
	baz=37,SNR=10							
C05A	**Tolt Reservoir**	**36.86**	**72**	⇑P		**P**	**10 31 40.0**	**+0.6**
	baz=37,SNR=9.3							
D05A	**Enumclaw**	**36.92**	**73**	⇓P		**P**	**10 31 40.9**	**+1.0**
	baz=37,SNR=10.0							
A07A	**Ashnola River,**	**37.02**	**70**	⇓P		**P**	**10 31 41.1**	**+0.4**
	baz=37,SNR=17							
G03A	**Yamhill**	**37.06**	**77**	⇑P		**P**	**10 31 42.0**	**+0.9**
	baz=37,SNR=5.7							
CN2	**Changchun**	**37.11**	**280**	⇑P		**P**	**10 31 40.8**	**-0.8**
CN2				*e*S		**S**	**10 37 24.0**	**-0.9**
CN2				AMB	AMB			
	comp=Z,20nm,1.0s,mb4.9							
CN2				AMB	AMB			
	comp=Z,200nm,5.0s							
CN2				LR	LR			
	comp=N,7μm,15.0s,MS5.9							
CN2				LR	LR			
	comp=E,12μm,15.0s,MS5.9							
CN2				LR	LR			
	comp=Z,8μm,17.0s,MS5.6							
WRW	**Wenatchee Ridg**	**37.27**	**72**	P		**P**	**10 31 43.8**	**+0.9**
F04A	**Amboy**	**37.27**	**75**	⇑P		**P**	**10 31 43.6**	**+0.6**
	baz=37,SNR=18							
H03A	**Soap Creek Ran**	**37.38**	**78**	⇑P		**P**	**10 31 45.0**	**+1.2**
	baz=37							
I02A	**Mapleton**	**37.39**	**79**	⇑P		**P**	**10 31 45.3**	**+1.3**
	baz=37							
COR	**Corvallis**	**37.41**	**78**	*e*P		**P**	**10 31 45.0**	**+0.8**
COR				pmax	pmax			
	comp=Z,87nm,0.8s,mb5.6							
COR	**Corvallis**	**37.41**	**78**	*e*P		**P**	**10 31 45.0**	**+0.8**
	comp=Z,87nm,0.8s,mb5.6							
B07A	**Winthrop**	**37.44**	**70**	⇓P		**P**	**10 31 44.5**	**+0.1**
	baz=37,SNR=17							
NLW	**Nelson Butte**	**37.49**	**71**	P		**P**	**10 31 45.4**	**+0.7**
G04A	**Mulino**	**37.60**	**76**	⇑P		**P**	**10 31 46.5**	**+0.8**
	baz=37,SNR=18							
A08A	**Turner Farm, O**	**37.71**	**69**	⇑P		**P**	**10 31 46.6**	**0.0**
	baz=38,SNR=12							
ETW	**Entiat**	**37.72**	**72**	P		**P**	**10 31 47.3**	**+0.6**
I03A	**Eugene**	**37.75**	**79**	⇑P		**P**	**10 31 47.6**	**+0.6**
	baz=38							
TBM	**Table Mountain**	**37.77**	**73**	P		**P**	**10 31 47.6**	**+0.5**
SSOR	**Sweet Springs**	**37.79**	**77**	P		**P**	**10 31 48.8**	**+1.4**
C07A	**Waterville**	**37.84**	**72**	⇑P		**P**	**10 31 47.8**	**+0.2**
	baz=38,SNR=16							
E06A	**Yakima**	**37.84**	**74**	⇓P		**P**	**10 31 47.7**	**0.0**
	baz=38,SNR=6.6							
HIA	**Hailar**	**37.87**	**291**	⇑*i*P		**P**	**10 31 47.5**	**-0.5**
F05A	**White Salmon**	**37.88**	**75**	⇑P		**P**	**10 31 47.8**	**-0.3**
	baz=38							
WTV	**Waterville**	**37.90**	**71**	P		**P**	**10 31 48.3**	**+0.1**
B08A	**Colville Reser**	**37.95**	**70**	⇑P		**P**	**10 31 48.8**	**+0.1**
	baz=38,SNR=21							
HOOD	**Mount Hood Mea**	**38.05**	**76**	*e*P		**P**	**10 31 50.8**	**+1.3**
	comp=Z,73nm,0.8s,mb5.5							
H04A	**Detroit Lake**	**38.05**	**77**	⇓P		**P**	**10 31 50.0**	**+0.5**
	baz=38,SNR=15							
A09A	**Danville**	**38.10**	**69**	⇓P		**P**	**10 31 50.0**	**+0.1**
	baz=38,SNR=15							
D07A	**Quincy**	**38.13**	**72**	⇑P		**P**	**10 31 50.1**	**-0.1**
	baz=38,SNR=11							
VFP	**Flag Point**	**38.16**	**76**	P		**P**	**10 31 51.4**	**+0.9**
EPH	**Ephrata**	**38.27**	**72**	P		**P**	**10 31 51.5**	**+0.1**
G05A	**Wamic**	**38.29**	**76**	⇑P		**P**	**10 31 52.3**	**+0.7**
	baz=38,SNR=9.8

comp=Z,25nm,1.0s,mb4.9
WDC Whiskeytown Da 40.08 83 *e*P **P 10 32 07.2 +0.6**
comp=Z,25nm,1.0s,mb4.9
B12A Libby 40.09 68 ⇓P **P 10 32 06.5 -0.1**
baz=40,SNR=8.5
F09A S2 Ranch, Elgi 40.10 73 ⇓P **P 10 32 06.8 +0.1**
baz=40,SNR=10
H08A Prairie City 40.27 75 ⇓P **P 10 32 07.9 -0.2**
baz=40,SNR=9.1
D11A Klaveano Farm, 40.36 70 ⇓P **P 10 32 08.0 -0.8**
baz=40,SNR=24
F10A Beach Ranch, E 40.38 72 ⇓P **P 10 32 08.7 -0.2**
baz=40,SNR=11
G09A Cove 40.41 74 ⇑P **P 10 32 09.0 -0.2**
baz=40,SNR=14
J07A Hines 40.50 77 ⇓P **P 10 32 10.5 +0.5**
baz=40,SNR=14
C12B Naegeli Ranch, 40.53 69 ⇓P **P 10 32 10.3 +0.1**
baz=40,SNR=9.0
I08A Drewsey 40.66 76 ⇓P **P 10 32 11.5 +0.2**
baz=40,SNR=24
MOD Modoc 40.71 79 *e*P **P 10 32 12.5 +0.7**
comp=Z,41nm,0.8s,mb5.1
WALA Waterton Lakes 40.77 67 *e*P **P 10 32 12.1 -0.1**
comp=Z,1.4nm,0.9s
E11A Bogner Ranch, 40.78 71 ⇓P **P 10 32 11.3 -1.0**
baz=41,SNR=12
B13A Whitefish 40.79 68 ⇓P **P 10 32 12.0 -0.4**
baz=41,SNR=13
G10A Bishop Farm, J 40.80 73 ⇓P **P 10 32 12.4 0.0**
baz=41,SNR=20
H09A Durkee 40.80 74 ⇑P **P 10 32 12.6 +0.2**
baz=41,SNR=14
BSMT Bassoo Peak 40.86 69 P **P 10 32 13.2 +0.2**
K07A Rock Creek Ran 40.91 78 ⇓P **P 10 32 13.6 +0.1**
baz=41,SNR=14
BMO Blue Mountains 40.92 74 *e*P **P 10 32 13.2 -0.2**
BMO pmax pmax
comp=Z,31nm,0.8s,mb5.0
BMO Blue Mountains 40.92 74 *e*P **P 10 32 13.2 -0.2**
comp=Z,31nm,0.8s,mb5.0
J08A Circle Bar Ran 41.02 76 ⇑P **P 10 32 14.4 +0.1**
baz=41,SNR=16
F11A Grangeville 41.06 72 ⇓P **P 10 32 14.1 -0.5**
baz=41,SNR=14
C13A Hot Springs 41.07 69 ⇑P **P 10 32 14.3 -0.3**
baz=41,SNR=23
A14A Double T Ranch 41.10 66 ⇑P **P 10 32 14.3 -0.5**
baz=41,SNR=26
I09A Lost Marbles R 41.13 75 ⇓P **P 10 32 15.1 -0.1**
baz=41,SNR=20
JTMT Jette 41.21 68 *e*P **P 10 32 15.8 0.0**
G11A Walters Elk Ra 41.25 73 ⇓P **P 10 32 16.0 -0.1**
baz=41,SNR=10
YBMT Yellow Bay 41.31 68 *e*P **P 10 32 16.6 0.0**
K08A Mann Creek Ran 41.36 77 ⇑P **P 10 32 17.2 +0.1**
baz=41,SNR=16
H10A Noah's Angus R 41.40 74 ⇓P **P 10 32 17.0 -0.3**
baz=41,SNR=15
J09A Fry Pan Ranch, 41.46 76 ⇓P **P 10 32 18.2 +0.3**
baz=41,SNR=32
OHCM Honcut 41.47 83 *e*P **P 10 32 17.9 -0.1**
B14A Marquette Ranc 41.49 67 ⇓P **P 10 32 18.0 0.0**
baz=41,SNR=16
A15A Johnson Ranch, 41.49 66 ⇓P **P 10 32 17.2 -0.9**
baz=41,SNR=12
SWMT Swartz Lake 41.49 69 *e*P **P 10 32 17.9 -0.2**
I10A Payette 41.63 75 ⇑P **P 10 32 20.1 +0.8**
baz=41,SNR=32
N06A Buffalo Meadow 41.66 81 ⇑P **P 10 32 20.1 +0.6**
baz=42,SNR=24
M07A Soldier Meadow 41.70 79 ⇓P **P 10 32 21.0 +1.2**
baz=42,SNR=30
L08A Fields 41.75 78 ⇓P **P 10 32 21.1 +0.9**
baz=42,SNR=16
H11A Donnelly 41.77 73 ⇑P **P 10 32 20.6 +0.1**
baz=42,SNR=25
BEKR Beckwourth 41.85 82 ⇓P **P 10 32 21.6 +0.5**
baz=42
B15A Bradely Ranch, 41.92 67 ⇓P **P 10 32 20.8 -0.8**
baz=42,SNR=20
SLMT Seeley Lake 41.93 69 *e*P **P 10 32 21.3 -0.4**
E13A Victor 41.94 70 ⇓P **P 10 32 21.3 -0.4**
baz=42,SNR=32
D14A Greenough 42.00 69 ⇑P **P 10 32 21.8 -0.5**
baz=42,SNR=40
J10A Berg Farm, Mel 42.02 75 ⇓P **P 10 32 22.3 -0.2**
baz=42,SNR=17
M08A Happy Creek Ra 42.15 79 ⇑P **P 10 32 24.3 +0.8**
baz=42,SNR=19
A16A West Butte Ran 42.15 66 ⇑P **P 10 32 22.3 -1.2**
baz=42,SNR=14
C15A Salmond Ranch, 42.17 68 ⇓P **P 10 32 23.6 0.0**
baz=42,SNR=21
N07B Gerlach 42.17 80 ⇓P **P 10 32 24.6 +0.8**
baz=42,SNR=26
F13A Darby 42.20 71 ⇓P **P 10 32 23.8 -0.1**
baz=42,SNR=15
CHMT Chamberlain Mo 42.24 69 *e*P **P 10 32 23.7 -0.5**
P06A Stead Airport, 42.25 82 ⇓P **P 10 32 25.4 +1.0**
baz=42,SNR=5.5
L09A Wilkinson Ranc 42.26 78 ⇑P **P 10 32 24.8 +0.4**
baz=42,SNR=21
K10A MacKenzie Ranc 42.32 76 ⇑P **P 10 32 25.5 +0.6**
baz=42,SNR=36
E14A Clinton 42.36 70 ⇓P **P 10 32 25.2 0.0**
baz=42,SNR=20
PAHR Pah Rah Range 42.55 82 *e*P **P 10 32 27.7 +0.8**
comp=Z,59nm,1.0s,mb5.3
H12A Diamond D Ranc 42.55 73 ⇑P **P 10 32 26.3 -0.5**
baz=42,SNR=16
WCN Washoe City 42.56 82 ⇑P **P 10 32 26.9 0.0**
baz=42
MFID Camas Ranch 42.59 75 ⇓P **P 10 32 26.9 -0.2**
baz=42,SNR=21
O07A Toulon 42.59 81 ⇓P **P 10 32 27.9 +0.7**
baz=42,SNR=25
D15A Lincoln 42.60 68 ⇑P **P 10 32 26.6 -0.5**
baz=42,SNR=27
G13A Cobalt 42.63 72 ⇑P **P 10 32 27.0 -0.4**
baz=42,SNR=19
C16A Fuhringer Ranc 42.65 67 ⇓P **P 10 32 26.9 -0.6**
baz=42,SNR=19
A17A Triple J Farms 42.67 65 ⇓P **P 10 32 26.7 -0.9**
baz=42,SNR=17
N08A GE Springer Mi 42.69 79 ⇓P **P 10 32 28.4 +0.4**
baz=42,SNR=19
ALE Alert 42.69 10 P **P 10 32 28.0 +0.5**
comp=Z,212nm,0.8s,mb5.9,SNR=11
M09A Marrel Ranch, 42.74 78 ⇓P **P 10 32 28.8 +0.5**
baz=43,SNR=16
F14A Wisdom 42.75 70 ⇑P **P 10 32 28.1 -0.3**
baz=42,SNR=22
K11A Parker Ranch, 42.83 76 ⇓P **P 10 32 29.1 +0.1**
baz=43,SNR=19
E15A Deer Lodge 42.85 69 ⇓P **P 10 32 29.0 -0.2**
baz=43,SNR=38
H13A Challis 42.90 72 ⇓P **P 10 32 29.1 -0.5**
baz=43,SNR=12
CMB Columbia Colle 42.94 84 *e*P **P 10 32 30.5 +0.5**
CMB pmax pmax
comp=Z,14nm,0.9s,mb4.7
CMB Columbia Colle 42.94 84 *e*P **P 10 32 30.5 +0.5**
comp=Z,14nm,0.9s,mb4.7
P07A Fallon 42.96 81 ⇓P **P 10 32 31.0 +0.8**
baz=43
L10A Juniper Basin 42.96 77 ⇑P **P 10 32 30.4 +0.3**
baz=43,SNR=25
O08A Rochester Mine 42.96 80 ⇑P **P 10 32 30.9 +0.7**
baz=43,SNR=27
N09A Rock Creek Ran 43.02 79 ⇓P **P 10 32 31.4 +0.8**
baz=43,SNR=20
J12A Stokes Ranch, 43.13 75 ⇑P **P 10 32 32.1 +0.6**
baz=43,SNR=23
A18A Metzger Ranch, 43.16 65 ⇓P **P 10 32 30.6 -1.1**
baz=43
D16A Dana Ranch, Ca 43.17 68 ⇓P **P 10 32 31.5 -0.3**
baz=43,SNR=15
HRY Holter Researc 43.17 68 *e*P **P 10 32 31.7 -0.1**
R06C Coleville 43.22 83 ⇑P **P 10 32 32.8 +0.5**
baz=43,SNR=16
M10A I.L. Ranch, Tu 43.24 78 ⇓P **P 10 32 32.8 +0.5**
baz=43,SNR=16
WAKR Walker 43.24 83 *e*P **P 10 32 33.2 +0.8**
F15A Butte 43.25 70 ⇓P **P 10 32 32.1 -0.3**
baz=43,SNR=24
LRM Limekiln Ridge 43.29 70 *e*P **P 10 32 32.5 -0.3**
C17A Wharram Farm, 43.31 67 ⇑P **P 10 32 32.2 -0.7**
baz=43,SNR=12
L11A Cat Creek Ranc 43.34 76 ⇑P **P 10 32 33.5 +0.3**
baz=43,SNR=24
I13A Wildhorse Cree 43.35 73 ⇑P **P 10 32 33.6 +0.4**
baz=43,SNR=28
E16A East Helena 43.36 69 ⇑P **P 10 32 33.2 -0.1**
baz=43,SNR=28
Q07A Schurz 43.37 82 ⇓P **P 10 32 34.1 +0.6**
baz=43
H14A Leadore 43.40 72 ⇓P **P 10 32 33.9 +0.2**
baz=43,SNR=14
DLMT Dillon 43.45 71 *e*P **P 10 32 33.7 -0.3**
comp=Z,32nm,1.0s,mb5.0
DLMT *e*ScP ScP 10 38 12.4 +2.8
BMN Battle Mountai 43.46 79 *e*P **P 10 32 35.0 +0.9**
BMN pmax pmax
comp=Z,85nm,1.4s,mb5.3
BMN Battle Mountai 43.46 79 *e*P **P 10 32 35.0 +0.8**
comp=Z,85nm,1.4s,mb5.3
B18A Beardsley Farm 43.47 65 ⇓P **P 10 32 33.6 -0.6**
baz=43,SNR=15
K12A Draper Farm, C 43.59 75 ⇓P **P 10 32 35.6 +0.4**
baz=43,SNR=26
MCMT McKenzie Canyo 43.60 71 P **P 10 32 35.2 0.0**
J13A Cove Ranch, Pi 43.60 74 ⇑P **P 10 32 35.6 +0.4**
baz=43,SNR=36
D17A Six Diamond Ra 43.60 67 ⇓P **P 10 32 35.1 -0.2**
baz=43,SNR=14
G15A Dillon 43.62 71 ⇑P **P 10 32 35.1 -0.3**
baz=43,SNR=30
O09A Fish Creek Ran 43.63 80 ⇓P **P 10 32 36.1 +0.5**
baz=44,SNR=22
EGMT Eagleton 43.68 66 *e*P **P 10 32 35.3 -0.6**
comp=Z,80nm,0.9s,mb5.5
N10A Dunphy 43.73 78 ⇑P **P 10 32 36.6 +0.3**
baz=44
I14A Mackay 43.74 73 ⇓P **P 10 32 36.6 +0.2**
baz=44,SNR=27
M11A Holland Ranch, 43.75 77 ⇑P **P 10 32 37.1 +0.6**
baz=44,SNR=17
F16A Kennard Place, 43.79 70 ⇓P **P 10 32 36.6 -0.2**
baz=44,SNR=25
L12A House Creek Ra 43.80 76 ⇑P **P 10 32 37.9 +0.9**
baz=44,SNR=37
H15A Lima 43.83 71 ⇑P **P 10 32 37.1 -0.1**
baz=44,SNR=18
E17A Martinsdale 43.88 68 ⇑P **P 10 32 37.6 +0.1**
baz=44,SNR=36
Q08A Gabbs 43.96 82 ⇑P **P 10 32 39.2 +1.0**
baz=44,SNR=25
O10A Cortez Mining, 43.98 79 ⇑P **P 10 32 39.0 +0.6**
baz=44,SNR=12
NVAR Mina Array Bea 43.99 82 P **P 10 32 38.3 -0.2**
comp=Z,34nm,0.9s,mb5.1,baz=294,slow=6.8,SNR=30
NVAR PcP PcP 10 34 24.3 +0.7
comp=Z,3.3nm,0.8s,baz=310,slow=4.6,SNR=2.7
NVAR ScP ScP 10 38 11.6 -0.4
comp=Z,1.3nm,0.8s,baz=286,slow=3.8,SNR=3.9
G16A Moss Hill, Enn 43.99 70 ⇑P **P 10 32 38.1 -0.3**
baz=44,SNR=30
P09A Austin 44.03 80 ⇓P **P 10 32 39.6 +0.8**
baz=44,SNR=14
J14A Carey 44.04 74 ⇑P **P 10 32 39.6 +0.9**
baz=44,SNR=35
K13A Stover Farm, H 44.08 75 ⇑P **P 10 32 39.5 +0.4**
baz=44,SNR=14
D18A Linhart Farms, 44.09 67 ⇑P **P 10 32 39.5 +0.3**
baz=44,SNR=15
N11A Elko Archery C 44.14 78 ⇑P **P 10 32 40.2 +0.6**
baz=44,SNR=21
I15A Monteview 44.27 72 ⇓P **P 10 32 40.7 +0.1**
baz=44,SNR=10
M12A Wells 44.29 77 ⇑P **P 10 32 41.5 +0.7**
baz=44,SNR=23
F17A Fitzpatrick Pl 44.29 69 ⇑P **P 10 32 41.0 +0.2**
baz=44,SNR=37
E18A Harlowton 44.37 68 ⇓P **P 10 32 41.8 +0.5**
baz=44,SNR=21
P10A Eureka 44.41 80 ⇑P **P 10 32 42.9 +1.2**
baz=44,SNR=12
QLMT Earthquake Lak 44.44 71 *e*P **P 10 32 41.9 0.0**
Q09A Carvers 44.44 81 ⇑P **P 10 32 43.0 +0.9**
baz=44,SNR=13
ELK Elko 44.49 78 *e*P **P 10 32 42.8 +0.4**
ELK pmax pmax
comp=Z,52nm,0.9s
ELK Elko 44.49 78 *e*P **P 10 32 42.8 +0.3**
comp=Z,52nm,0.8s,mb5.3
L13A Double Diamond 44.49 75 ⇓P **P 10 32 43.2 +0.8**
baz=44,SNR=26
MTUM Tungsten Hills 44.49 84 *e*P **P 10 32 43.3 +0.8**
FFC Flin Flon 44.50 54 *e*P **P 10 32 40.7 -1.6**
FFC pmax pmax
comp=Z,113nm,2.3s,mb5.2
FFC Flin Flon 44.50 54 *e*P **P 10 32 40.7 -1.6**
comp=Z,113nm,2.3s,mb5.2
N12A Clover Valley, 44.55 77 ⇓P **P 10 32 43.7 +0.8**
baz=44,SNR=17
G17A Pierce Place, 44.57 70 ⇑P **P 10 32 43.8 +0.8**
baz=44,SNR=32
O11A Cowboy Ranch, 44.60 79 ⇓P **P 10 32 44.0 +0.8**
baz=44,SNR=21
H16A Russell Place, 44.61 71 ⇓P **P 10 32 43.5 +0.2**
baz=44,SNR=32
J15A Blackfoot 44.65 73 ⇓P **P 10 32 44.2 +0.6**
baz=44,SNR=16
K14A Jones Ranch, D 44.69 74 ⇑P **P 10 32 44.0 0.0**
baz=44,SNR=14
RCTC Rector, Farmer 44.73 85 ⇓P **P 10 32 44.5 +0.1**
baz=45
M13A Montello 44.78 76 ⇓P **P 10 32 44.9 +0.2**
baz=45,SNR=29
F18A Big Timber 44.84 68 ⇓P **P 10 32 45.3 +0.1**
baz=45,SNR=28
R09A Tonopah 44.87 82 ⇓P **P 10 32 45.7 +0.2**
baz=45,SNR=28
TPH Tonopah 44.88 82 *e*P **P 10 32 46.7 +1.1**
TPH pmax pmax
comp=Z,55nm,0.9s,mb5.4
TPH Tonopah 44.88 82 *e*P **P 10 32 46.7 +1.1**
comp=Z,54nm,0.8s,mb5.4
P11A Circle Ranch, 44.88 79 ⇑P **P 10 32 46.0 +0.4**
baz=45,SNR=14
TIN Tinemaha 44.89 84 ⇑P **P 10 32 46.3 +0.7**
baz=45
Q10A Clear Creek Ra 44.93 81 ⇑P **P 10 32 46.8 +0.8**
baz=45,SNR=29
BJI Beijing 44.94 282 P **P 10 32 45.8 -0.2**
BJI AMB AMB
comp=Z,46nm,0.9s,mb5.3
I16A Newdale 44.94 72 ⇓P **P 10 32 46.2 +0.2**
baz=45,SNR=17
YNR Norris Junctio 44.94 70 *e*P **P 10 32 47.2 +1.2**
K15A Arbon 45.00 74 ⇑P **P 10 32 47.2 +0.7**
baz=45,SNR=27
YFT Old Faithful 45.00 71 *e*P **P 10 32 48.1 +1.7**
IRK Irkutsk 45.06 302 *e*P **P 10 32 46.5 -0.3**
IRK pmax pmax
comp=Z,84nm,1.2s,mb5.5
O12A Currie 45.07 78 ⇓P **P 10 32 47.3 +0.2**
baz=45,SNR=24
S09A Goldfield 45.09 82 ⇑P **P 10 32 47.9 +0.6**
baz=45,SNR=26
VES Vestal, Richgr 45.12 86 ⇓P **P 10 32 47.0 -0.5**
baz=45
H17A Grant Village 45.18 71 ⇓P **P 10 32 49.1 +1.2**
baz=45,SNR=25
M14A Sheep Mountain 45.19 76 ⇓P **P 10 32 48.3 +0.3**
baz=45,SNR=20
IMW Indian Meadow 45.25 71 *e*P **P 10 32 49.1 +0.6**
comp=Z,38nm,0.9s,mb5.2
G18A Lazy EL Ranch, 45.26 69 ⇓P **P 10 32 48.1 -0.4**
baz=45,SNR=7.7
PKM Peak Mountain 45.27 87 ⇑P **P 10 32 49.2 +0.5**
baz=45
DCID1 Drake Creek 45.28 72 *e*P **P 10 32 49.6 +1.0**
comp=Z,22nm,0.8s,mb5.0
R10A Warm Springs 45.32 81 ⇓P **P 10 32 49.5 +0.5**
baz=45,SNR=26
RRI2 Red Ridge 45.34 72 *e*P **P 10 32 49.5 +0.4**
comp=Z,42nm,0.8s,mb5.3
S10A Tonopah Range, 45.36 82 ⇑P **P 10 32 50.2 +0.8**
baz=45,SNR=24
CWC Cottonwood Cre 45.37 84 ⇑P **P 10 32 49.8 +0.3**
baz=45
Q11A Duckwater 45.38 80 ⇓P **P 10 32 50.2 +0.7**
baz=45,SNR=16
MOOW Moose Ponds 45.45 71 *e*P **P 10 32 50.2 +0.2**
comp=Z,64nm,1.6s,mb5.2
I17A Pilgram Creek 45.45 71 ⇑P **P 10 32 50.8 +0.8**
baz=45,SNR=10
P12A McGill 45.45 79 ⇓P **P 10 32 50.6 +0.5**
baz=45
GRAC Grapevine Rang 45.46 83 ⇓P **P 10 32 50.3 +0.2**
baz=45
K16A Soda Springs 45.48 73 ⇓P **P 10 32 51.2 +1.0**
baz=45,SNR=16
TPAW Teton Pass 45.48 72 *e*P **P 10 32 50.9 +0.7**
comp=Z,32nm,0.8s,mb5.2
L15A Malad City 45.48 74 ⇑P **P 10 32 50.4 +0.1**
baz=45,SNR=16
REDW Red Top Meadow 45.61 72 *e*P **P 10 32 51.8 +0.5**
comp=Z,106nm,1.7s,mb5.5
SNOW Snow King Moun 45.61 72 *e*P **P 10 32 52.3 +1.0**
comp=Z,26nm,0.9s,mb5.2
LOHW Long Hollow 45.61 71 *e*P **P 10 32 51.5 +0.2**
comp=Z,19nm,0.8s,mb5.1
ISA Isabella 45.62 85 ⇑P **P 10 32 50.9 -0.5**
baz=46
ISA Isabella 45.62 85 *e*P **P 10 32 50.9 -0.5**
ISA pmax pmax
comp=Z,15nm,1.1s,mb4.8
ISA Isabella 45.62 85 *e*P **P 10 32 50.9 -0.6**
comp=Z,15nm,1.1s,mb4.8
O13A Hicks Ranch, I 45.62 77 ⇓P **P 10 32 51.3 -0.2**
baz=45,SNR=11
N14A Grayback Hills 45.68 76 ⇑P **P 10 32 52.3 +0.4**
baz=46,SNR=23
TLY Talaya 45.69 302 P **P 10 32 52.4 +0.6**
comp=Z,248nm,0.8s,mb6.2,SNR=7.8
TLY Talaya 45.69 302 P **P 10 32 52.7 +1.0**
SNR=14
TLY Talaya 45.69 302 *e*P **P 10 32 52.3 +0.5**
TLY pmax pmax
comp=Z,44nm,1.0s,mb5.3
TLY Talaya 45.69 302 ⇑*i*P **P 10 32 52.5 +0.7**
J17A Brown Place, J 45.69 72 ⇑P **P 10 32 52.3 +0.3**
baz=46,SNR=13
R11A Troy Canyon, C 45.72 81 ⇓P **P 10 32 52.7 +0.4**
baz=46,SNR=39
M15A Larsen Ranch, 45.76 75 ⇓P **P 10 32 52.7 +0.1**
baz=46,SNR=29
Q12A Willow Creek R 45.77 79 ⇑P **P 10 32 53.2 +0.6**
baz=46,SNR=12
AHID Auburn Hatcher 45.81 73 *e*P **P 10 32 53.6 +0.7**
comp=Z,36nm,1.0s,mb5.2
SPUT South Promonto 45.85 75 *e*P **P 10 32 53.6 +0.4**
ULN Ulaanbaatar 45.86 296 P **P 10 32 54.2 +1.0**
SNR=9.5
ULN Ulaanbaatar 45.86 296 *e*P **P 10 32 53.8 +0.6**
ULN pmax pmax
comp=Z,24nm,0.8s,mb5.2
ULN Ulaanbaatar 45.86 296 *i*P **P 10 32 53.8 +0.6**
K17A Gardner Place, 45.92 73 ⇑P **P 10 32 53.6 -0.2**
baz=46,SNR=15
MPMC Manual Prospec 45.98 84 ⇓P **P 10 32 54.5 +0.2**
baz=46
P13A Bates Ranch, G 46.01 78 ⇑P **P 10 32 54.9 +0.4**
baz=46,SNR=13
I18A Diamond G Ranc 46.03 71 ⇓P **P 10 32 54.9 +0.3**
baz=46,SNR=18
L16A Fish Haven 46.05 74 ⇑P **P 10 32 54.8 0.0**
baz=46,SNR=12
N15A Stansbury Isla 46.06 76 ⇓P **P 10 32 54.8 -0.1**
baz=46,SNR=29
FURC Furnace Creek, 46.11 83 ⇑P **P 10 32 55.5 +0.2**
baz=46
OSI Osito Adit 46.14 87 ⇑P **P 10 32 55.8 +0.3**
baz=46
OSI Osito Adit 46.14 87 *e*P **P 10 32 55.4 -0.1**
comp=Z,24nm,0.9s,mb5.1
J18A Kendall Valley 46.19 72 ⇓P **P 10 32 55.8 -0.1**
baz=46,SNR=12
LRMC Laurel Mountai 46.23 85 ⇑P **P 10 32 55.7 -0.5**
baz=46
SONM Songino Array 46.25 296 P **P 10 32 57.1 +0.8**
comp=Z,16nm,0.7s,mb5.0,baz=53,slow=9.9,SNR=44
SONM PcP PcP 10 34 30.9 -0.3
comp=Z,6.2nm,0.8s,baz=64,slow=3.3,SNR=4.1
SONM ScP ScP 10 38 22.1 +1.1
comp=Z,4.7nm,1.0s,baz=72,slow=1.7,SNR=7.2
SONM Songino Array 46.25 296 P **P 10 32 57.1 +0.9**
SONM 10 34 30.9
SONM pmax pmax
comp=Z,16nm,0.7s
SONM pmax pmax
comp=Z,6.0nm,0.8s
SONM pmax pmax
comp=N,5.0nm,1.0s
FCC Fort Churchill 46.27 46 *e*P **P 10 32 55.3 -1.0**
FCC pmax pmax
comp=Z,1.0nm,0.9s
FCC Fort Churchill 46.27 46 *e*P **P 10 32 55.3 -1.0**
comp=Z,0.8nm,0.9s
Q13A Wheeler Ranch, 46.31 79 ⇓P **P 10 32 57.0 +0.1**
baz=46,SNR=21
L17A Cokeville 46.34 73 ⇑P **P 10 32 57.1 +0.1**
baz=46,SNR=24
R12A Pony Springs, 46.34 80 ⇓P **P 10 32 57.4 +0.3**
baz=46,SNR=28
M16A Huntsville 46.34 75 ⇓P **P 10 32 57.0 -0.1**
baz=46,SNR=22
EDW2 Edwards Air Fo 46.42 86 ⇓P **P 10 32 57.3 -0.5**
baz=46
NOQ North Oquirrh 46.45 76 *e*P **P 10 32 58.5 +0.6**
comp=Z,75nm,0.8s,mb5.7
U10A Ash Meadows, A 46.47 83 ⇓P **P 10 32 58.5 +0.4**
baz=46,SNR=7.1
P14A Drum Mountains 46.51 78 ⇑P **P 10 32 58.4 0.0**
baz=46,SNR=26
K18A Toltan Ranch, 46.52 72 ⇓P **P 10 32 58.4 -0.1**
baz=46,SNR=25
DGMT Dagmar 46.57 62 *e*P **P 10 32 58.2 -0.6**
comp=Z,37nm,1.0s,mb5.3
S12A Delamar Landin 46.64 81 ⇓P **P 10 32 59.7 +0.2**
baz=46,SNR=22
T11A Corn Creek, Al 46.64 81 ⇓P **P 10 33 00.2 +0.7**
baz=46,SNR=42
CTU Camp Tracy 46.65 75 *e*P **P 10 32 58.8 -0.6**
comp=Z,2nm,1.1s,mb5.5
N16A Rees Ranch, Co 46.72 75 ⇑P **P 10 33 00.4 +0.4**
baz=46,SNR=12
PDAR Pinedale Array 46.73 72 P **P 10 33 00.1 0.0**
comp=Z,75nm,0.7s,mb5.7,baz=297,slow=3.6,SNR=81
PDAR ScP ScP 10 38 24.6 +1.4
comp=Z,0.5nm,0.8s,baz=286,slow=3.4,SNR=2.7
Q14A Sevier Lake (B 46.75 78 ⇑P **P 10 33 00.8 +0.5**
baz=47,SNR=28
MWC Mount Wilson 46.81 87 *e*P **P 10 33 00.8 0.0**
MWC pmax pmax
comp=Z,31nm,1.1s,mb5.2
MWC Mount Wilson 46.81 87 *e*P **P 10 33 00.8 0.0**
comp=Z,32nm,1.1s,mb5.2
R13A O'Grain Ranch, 46.83 80 ⇓P **P 10 33 01.1 +0.2**
baz=47,SNR=31
M17A Scullys Gap (B 46.83 74 ⇓P **P 10 33 01.0 +0.1**
baz=47,SNR=14
SHOC Shoshone 46.83 84 ⇑P **P 10 33 01.6 +0.6**
baz=47
JLU Jordanelle 46.88 75 *e*P **P 10 33 01.8 +0.5**
GSC Goldstone 46.89 85 ⇓P **P 10 33 01.4 -0.1**
baz=47
GSC Goldstone 46.89 85 *e*P **P 10 33 01.4 0.0**
GSC pmax pmax
comp=Z,53nm,1.0s,mb5.4
GSC Goldstone 46.89 85 *e*P **P 10 33 01.4 0.0**
comp=Z,53nm,0.9s,mb5.5
NLU North Lily Min 46.90 76 *e*P **P 10 33 01.8 +0.4**
L18A Fontenelle, Gr 46.94 73 ⇓P **P 10 33 01.5 -0.3**
baz=47,SNR=28
P15A Leamington 47.01 77 ⇓P **P 10 33 02.2 0.0**
baz=47,SNR=20
BFSC Mount Baldy St 47.05 86 ⇓P **P 10 33 02.5 -0.2**
baz=47
N17A Moffit Pass 47.05 75 ⇓P **P 10 33 02.4 -0.2**
baz=47,SNR=15
U11A Corn Creek 47.06 82 ⇑P **P 10 33 03.1 +0.4**
baz=47
MOY Mondy 47.09 303 *e*P **P 10 33 03.2 +0.4**
MOY pmax pmax
comp=Z,7.0nm,2.3s,mb4.2
O16A Springville 47.09 76 ⇓P **P 10 33 03.1 +0.2**
baz=47,SNR=25
DAU Daniels Canyon 47.11 75 *e*P **P 10 33 03.7 +0.6**
K19A Absolon Red Bu 47.12 71 ⇓P **P 10 33 02.7 -0.4**
baz=47,SNR=16

MPU **Maple Canyon** 47.13 76 *e*P P 10 33 03.6 +0.4
comp=Z,30nm,0.8s,mb5.3
SHPR **Sheep Range** 47.14 82 *e*P P 10 33 03.8 +0.4
M18A **Lyman** 47.22 74 ⇑P P 10 33 03.7 -0.3
baz=47,SNR=38
HHC **Hu-ho-hao-te** 47.26 285 *e*P P 10 33 04.8 +0.5
HHC AP pP 10 33 14.6 -0.9
HHC XP sP 10 33 18.4 -1.8
HHC PP PP 10 34 55.3 0.0
HHC PCS PcS 10 38 30.3 +0.2
HHC *e*S S 10 39 54.6 +0.1
HHC XS sS 10 40 11.5 -1.7
HHC SCS ScS 10 42 53.3 -1.4
HHC SS SS 10 43 15.1 -6.7
HHC AMB AMB
comp=Z,35nm,1.0s,mb5.2
HHC LR LR
comp=N,3µm,17.8s,MS5.5
HHC LR LR
comp=E,4µm,17.8s,MS5.5
HHC LR LR
comp=Z,4µm,20.2s,MS5.3
S13A **Holt Ranch, En** 47.27 80 ⇓P P 10 33 04.7 +0.3
baz=47,SNR=42
T12A **Moapa** 47.28 82 ⇓P P 10 33 04.8 +0.3
baz=47,SNR=6.7
Q15A **Fillmore** 47.30 78 ⇑P P 10 33 04.7 +0.1
baz=47,SNR=25
TUQ **Turquoise Moun** 47.35 84 ⇓P P 10 33 04.7 -0.3
baz=47
P16A **Fountain Green** 47.36 77 ⇑P P 10 33 05.1 +0.1
baz=47,SNR=7.5
V11A **Goodsprings** 47.40 83 ⇑P P 10 33 05.4 0.0
baz=47,SNR=21
HEC **Hector,Ludlow** 47.49 85 ⇑P P 10 33 06.0 -0.2
baz=47
K20A **Yellowstone Ra** 47.52 71 ⇑P P 10 33 05.6 -0.6
baz=47
O17A **Robinson Place** 47.56 75 ⇓P P 10 33 07.3 +0.7
baz=47,SNR=12
U12A **Valley of Fire** 47.58 82 ⇑P P 10 33 06.9 +0.1
baz=47,SNR=11
T13A **Saint George** 47.59 81 ⇑P P 10 33 07.3 +0.4
baz=47,SNR=30
M19A **Rock Springs** 47.72 73 ⇓P P 10 33 07.7 -0.2
baz=48,SNR=8.9
MSU **Marysvale** 47.72 78 *e*P P 10 33 08.8 +0.9
N18A **Larsen Ranch,** 47.73 74 ⇑P P 10 33 07.6 -0.3
baz=48,SNR=17
MURC **Murrieta** 47.75 87 ⇑P P 10 33 07.7 -0.4
baz=48
TMUT **Trail Mountain** 47.83 77 *e*P P 10 33 09.5 +0.8
V12A **Nelson** 47.83 83 ⇓P P 10 33 08.7 -0.1
baz=48,SNR=7.0
R15A **Junction** 47.85 78 ⇓P P 10 33 08.9 0.0
baz=48,SNR=18
L20A **Wamsutter** 47.91 72 ⇓P P 10 33 08.9 -0.3
baz=48,SNR=20
U13A **Pakoon Wash** 47.94 81 ⇓P P 10 33 10.3 +0.7
baz=48,SNR=37
GMRC **Granite Mounta** 47.94 84 ⇑P P 10 33 09.4 -0.2
baz=48
O18A **Roosevelt** 47.96 75 ⇑P P 10 33 10.2 +0.5
baz=48,SNR=19
P17A **Butcher Ranch,** 48.00 76 ⇓P P 10 33 10.1 +0.1
baz=48,SNR=18
T14A **Hurricane** 48.08 80 ⇑P P 10 33 10.8 +0.2
baz=48,SNR=37
N19A **John Jarvie Ra** 48.08 74 ⇑P P 10 33 10.2 -0.4
baz=48,SNR=17
Q16A **Castle Valley** 48.08 77 ⇓P P 10 33 10.8 +0.1
baz=48,SNR=27
LDFC **Landfair** 48.09 84 *e*P P 10 33 09.8 -1.0
S15A **Panguitch** 48.13 79 ⇑P P 10 33 11.4 +0.4
baz=48,SNR=25
P18A **Preston Nutter** 48.21 76 ⇓P P 10 33 11.5 -0.1
baz=48,SNR=22
PFO **Pinyon Flat Ob** 48.21 86 P P 10 33 10.8 -0.9
comp=Z,7.2nm,1.0s,mb4.7,baz=338,slow=2.6,SNR=6.1
PFO **Pinyon Flat Ob** 48.21 86 ⇓P P 10 33 11.6 -0.1
baz=48
PFO **Pinyon Flat Ob** 48.21 86 P P 10 33 10.9 -0.8
PFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
PFO **Pinyon Flat Ob** 48.21 86 *e*P P 10 33 11.3 -0.4
comp=Z,19nm,1.3s,mb5.0
BELC **Belle Mtn.** 48.24 85 ⇑P P 10 33 11.4 -0.5
baz=48
109C **Camp Elliot, M** 48.28 87 ⇑P P 10 33 11.4 -0.9
baz=48
R16A **Teasdale** 48.29 78 ⇓P P 10 33 13.1 +0.9
baz=48,SNR=35
V13A **Grand Canyon W** 48.29 82 ⇓P P 10 33 12.6 +0.2
baz=48,SNR=22
M20A **Sweetwater, Wa** 48.31 72 ⇓P P 10 33 12.4 +0.1
baz=48,SNR=23
NJ2 **Nanjing** 48.37 271 *e*P P 10 33 14.3 +1.3
NJ2 AP pP 10 33 24.1 -0.2
NJ2 PP PP 10 35 07.0 +1.4
NJ2 S **S** 10 40 11.0 +0.6
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
NJ2 AMB AMB
comp=Z,170nm,7.2s
NJ2 LR LR
comp=N,2µm,24.4s,MS5.1
NJ2 LR LR
comp=E,1µm,25.4s,MS5.1
NJ2 LR LR
comp=Z,4µm,25.2s,MS5.3
U14A **Mt Trumbull** 48.42 81 ⇑P P 10 33 14.2 +0.8
baz=48,SNR=38
L21A **Rawlins** 48.51 71 ⇑P P 10 33 13.8 -0.1
baz=48,SNR=14
T15A **Red Dirt Ranch** 48.53 80 ⇑P P 10 33 14.8 +0.7
baz=48,SNR=41
S16A **Weppner Ranch,** 48.57 79 ⇓P P 10 33 15.3 +0.9
baz=48,SNR=26
Q18A **Rafter H Ranch** 48.60 76 ⇓P P 10 33 14.5 -0.2
baz=48,SNR=22
N20A **Spence Gulch,** 48.66 73 ⇑P P 10 33 15.2 +0.1
baz=48,SNR=7.4
IRM **Iron Mountain** 48.67 85 ⇓P P 10 33 14.6 -0.6
baz=48
R17A **Hanksville Air** 48.68 77 ⇓P P 10 33 15.2 0.0
baz=48,SNR=23
MONP **Monument Peak** 48.71 87 ⇓P P 10 33 15.0 -0.6
baz=49
RWWY **Rawlins** 48.77 72 *e*P P 10 33 14.8 -1.1
comp=Z,40nm,0.9s,mb5.5
BC3 **Big Chuckw Mtn** 48.81 85 ⇑P P 10 33 15.6 -0.8
baz=49
W13A **Hualapai Mount** 48.84 83 ⇑P P 10 33 16.1 -0.5
baz=49,SNR=30
U15A **North Rim** 48.97 80 ⇑P P 10 33 18.1 +0.6
baz=49,SNR=34
P19A **Cripple Cowboy** 48.97 75 ⇓P P 10 33 17.8 +0.3
baz=49,SNR=27
V14A **Boquillas Ranc** 48.98 82 ⇑P P 10 33 17.8 +0.2
baz=49,SNR=26
L22A **Ellis Ranch, M** 49.02 71 ⇓P P 10 33 17.3 -0.6
baz=49
DVTC **Desert V Tower** 49.07 87 ⇑P P 10 33 17.2 -1.1
baz=49
SWSC **Sam W. Stewart** 49.07 86 ⇑P P 10 33 17.4 -1.0
baz=49
T16A **Glen Canyon Da** 49.10 79 ⇑P P 10 33 17.7 -0.8
baz=49,SNR=7.0
O20A **White River Ci** 49.11 74 ⇓P P 10 33 18.3 -0.3
baz=49,SNR=24
S17A **Black Ridge (B** 49.12 78 ⇓P P 10 33 18.6 0.0
baz=49,SNR=38
N21A **Black Mountain** 49.15 73 ⇑P P 10 33 18.6 -0.3
baz=49,SNR=18
RSSD **Black Hills** 49.16 67 *e*P P 10 33 18.1 -0.8
RSSD pmax pmax
comp=Z,34nm,1.0s,mb5.3
RSSD **Black Hills** 49.16 67 *e*P P 10 33 18.3 -0.6
comp=Z,39nm,1.1s,mb5.3
R18A **Canyonlands Na** 49.20 77 ⇑P P 10 33 18.3 -0.9
baz=49
X13A **Yucca** 49.20 83 ⇑P P 10 33 18.9 -0.5
baz=49,SNR=11
Q19A **Hogan Spring (** 49.22 76 ⇑P P 10 33 19.2 -0.2
baz=49,SNR=36
W14A **Seligman** 49.26 82 ⇑P P 10 33 20.0 +0.3
baz=49,SNR=21
M22A **Cedar Creek Ra** 49.31 72 ⇓P P 10 33 19.4 -0.7
baz=49,SNR=11
Y12C **Blythe** 49.33 85 ⇓P P 10 33 20.4 +0.1
baz=49,SNR=19
V15A **Kaibab Nationa** 49.43 81 ⇓P P 10 33 21.5 +0.5
baz=49,SNR=43
O21A **Pagoda** 49.52 73 ⇓P P 10 33 21.4 -0.3
baz=49,SNR=16
T17A **Navajo Res., N** 49.52 79 ⇑P P 10 33 21.2 -0.5
baz=49,SNR=18
S18A **Hurst Farm, Bl** 49.58 77 ⇑P P 10 33 22.0 -0.1
baz=49
GLA **Glamis** 49.60 85 ⇓P P 10 33 21.9 -0.5
baz=49
GLA **Glamis** 49.60 85 *e*P P 10 33 22.2 -0.2
GLA pmax pmax
comp=Z,30nm,0.9s,mb5.3
GLA **Glamis** 49.60 85 *e*P P 10 33 22.2 -0.2
comp=Z,30nm,0.9s,mb5.3
R19A **Curley Farm, L** 49.64 76 ⇓P P 10 33 22.3 -0.3
baz=49,SNR=25
N22A **Wattenberg Ran** 49.76 72 ⇑P P 10 33 23.1 -0.4
baz=50,SNR=16
KBS **Kingsbay** 49.77 357 *e*P P 10 33 24.2 +1.1
KBS pmax pmax
comp=Z,101nm,1.3s,mb5.7
KBS **Kingsbay** 49.77 357 *e*P P 10 33 24.3 +1.2
W15A **Williams** 49.79 82 ⇓P P 10 33 23.8 0.0
baz=50,SNR=25
Q20A **Ridgley Place,** 49.81 75 ⇑P P 10 33 23.1 -0.8
baz=50,SNR=24
U17A **Shonto** 49.86 79 ⇓P P 10 33 24.0 -0.3
baz=50,SNR=15
U16A **Tuba City** 49.87 80 ⇓P P 10 33 24.4 +0.1
baz=50,SNR=9.4
X14A **Yava** 49.87 83 ⇓P P 10 33 24.2 -0.2
baz=50,SNR=26
T18A **Mexican Hat** 50.00 78 ⇑P P 10 33 25.0 -0.4
baz=50,SNR=32
PHWY **Pilot Hill** 50.05 71 *e*P P 10 33 25.1 -0.6
comp=Z,141nm,2.3s,mb5.6
ULM **Lac du Bonnet** 50.05 56 P P 10 33 24.1 -1.5
comp=Z,6.8nm,0.7s,mb4.8,baz=301,slow=8.3,SNR=9.5
S19A **Harvey Farm, M** 50.06 77 ⇑P P 10 33 25.6 -0.3
baz=50,SNR=30
112A **Yuma** 50.10 86 ⇓P P 10 33 25.8 -0.4
baz=50,SNR=5.4
WUAZ **Wupatki** 50.12 81 *e*P P 10 33 26.0 -0.4
comp=Z,63nm,0.9s,mb5.7
Y14A **Wickenburg** 50.15 83 ⇑P P 10 33 25.8 -0.7
baz=50,SNR=14
X15A **Humboldt** 50.27 82 ⇓P P 10 33 27.0 -0.4
baz=50,SNR=26
W16A **Flagstaff** 50.30 81 ⇑P P 10 33 28.2 +0.5
baz=50,SNR=24
SPB4 **Spitsbergen Ar** 50.33 356 *e*P P 10 33 27.8 +0.4
SPITS **Spitsbergen Ar** 50.34 356 P P 10 33 27.5 +0.2
comp=Z,48nm,0.7s,mb5.7,baz=329,slow=6.8,SNR=21
SPITS **Spitsbergen Ar** 50.34 356 P P 10 33 27.5 +0.1
SPITS pmax pmax
comp=Z,48nm,0.7s
113A **Mohawk Valley,** 50.45 85 ⇑P P 10 33 28.2 -0.6
baz=50
U18A **Rough Rock, Ch** 50.47 79 ⇓P P 10 33 28.4 -0.5
baz=50,SNR=22
SMCO **Symass** 50.47 74 *e*P P 10 33 20.8 -8.1
comp=Z,21nm,0.7s,mb5.3
Y15A **Casa Rosa Ranc** 50.56 83 ⇓P P 10 33 29.5 -0.1
baz=50,SNR=24
Z14A **Wintersburg** 50.57 84 ⇓P P 10 33 29.2 -0.5
baz=50,SNR=5.1
R21A **Cimarron** 50.63 75 ⇑P P 10 33 29.7 -0.5
baz=50,SNR=17
T19A **Beclabito** 50.72 78 ⇓P P 10 33 30.2 -0.6
baz=50,SNR=43
MVCO **Mesa Verde** 50.80 77 *e*P P 10 33 31.1 -0.3
comp=Z,58nm,1.2s,mb5.4
X16A **Lo Mia Camp, P** 50.80 82 ⇑P P 10 33 31.5 0.0
baz=51,SNR=32
W17A **Winslow** 50.82 81 ⇓P P 10 33 31.2 -0.4
baz=51
V18A **Ganado** 50.89 79 ⇑P P 10 33 32.3 +0.2
baz=51,SNR=26
ISCO **Idaho Springs** 50.89 73 *e*P P 10 33 32.8 +0.7
ISCO pmax pmax
comp=Z,25nm,1.0s,mb5.1
ISCO **Idaho Springs** 50.89 73 *e*P P 10 33 32.8 +0.8
comp=Z,25nm,0.9s,mb5.2
Z15A **Gila River Ind** 51.11 83 ⇑P P 10 33 33.1 -0.7
baz=51
Y16A **Circle Bar Ran** 51.14 82 ⇑P P 10 33 34.4 +0.4
baz=51,SNR=20
AGMN **Agassiz Refuge** 51.21 58 *e*P P 10 33 33.0 -1.3
comp=Z,37nm,1.3s,mb5.2
X17A **Forest Lakes** 51.25 81 ⇓P P 10 33 34.6 -0.3
baz=51
W18A **Petrified Fore** 51.40 80 ⇓P P 10 33 35.5 -0.4
baz=51
V19A **Window Rock** 51.43 79 ⇑P P 10 33 36.1 -0.1
baz=51,SNR=8.5
115A **Sonoran Desert** 51.46 84 ⇓P P 10 33 36.2 -0.2
baz=51,SNR=21
Z16A **Peralta Trail,** 51.53 83 ⇓P P 10 33 36.3 -0.6
baz=51,SNR=19
DAG **Danmarks Havn** 51.53 6 ⇓*i*P P 10 33 35.7 -0.7
DAG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
DAG **Danmarks Havn** 51.53 6 ⇓*i*P P 10 33 35.7 -0.7
comp=Z,9.6nm,0.7s,mb4.8
214A **Organ Pipe Nat** 51.60 85 ⇓P P 10 33 36.8 -0.6
baz=51,SNR=14
W19A **Sanders** 51.62 80 ⇓P P 10 33 37.0 -0.6
baz=51
X18A **Snowflake** 51.65 81 ⇑P P 10 33 37.3 -0.5
baz=52,SNR=25
Y17A **Roosevelt** 51.65 82 ⇑P P 10 33 37.0 -0.8
baz=52,SNR=22
116A **Eloy** 51.88 84 ⇑P P 10 33 38.9 -0.7
baz=52
Y18A **Canyon Day Jun** 52.10 81 ⇓P P 10 33 40.8 -0.4
baz=52,SNR=32
X19A **St. Johns** 52.13 80 ⇑P P 10 33 41.2 -0.2
baz=52,SNR=27
Z17A **San Carlos Hig** 52.15 82 ⇓P P 10 33 41.2 -0.3
baz=52,SNR=13
WHN **Wuhan** 52.21 273 P P 10 33 38.5 -3.6
SDCO **Great Sand Dun** 52.27 74 *e*P P 10 33 42.6 +0.3
comp=Z,28nm,0.9s,mb5.2
216A **Three Points,** 52.41 84 ⇑P P 10 33 42.7 -0.8
baz=52
Y19A **Nutrioso** 52.46 81 ⇓P P 10 33 43.8 0.0
baz=52,SNR=18
117A **Oracle** 52.47 83 ⇓P P 10 33 43.5 -0.4
baz=52,SNR=22
Z18A **Geronimo** 52.56 82 ⇑P P 10 33 44.4 -0.2
baz=52,SNR=18
TUC **Tucson** 52.62 83 *e*P P 10 33 44.6 -0.4
TUC pmax pmax
comp=Z,19nm,0.9s,mb5.0
TUC **Tucson** 52.62 83 *e*P P 10 33 44.6 -0.4
comp=Z,20nm,0.9s,mb5.0
Z19A **T-Link Ranch,** 52.90 81 ⇑P P 10 33 46.5 -0.6
baz=53
118A **Homack Ranch,** 52.90 82 ⇓P P 10 33 46.8 -0.3
baz=53
217A **Green Valley** 52.96 84 ⇑P P 10 33 47.1 -0.5
baz=53,SNR=9.8
XAN **Xi'an** 53.22 280 P P 10 33 48.8 -0.7
XAN AP pP 10 33 58.3 -2.6
XAN PP PP 10 35 49.3 -0.2
XAN S **S** 10 41 17.9 +0.3
XAN AMB AMB
comp=Z,16nm,1.1s,mb4.9
XAN LR LR
comp=N,1µm,23.2s,MS5.4
XAN LR LR
comp=E,3µm,18.4s,MS5.4
XAN LR LR
comp=Z,7µm,24.0s
119A **Ashpeak Ranch,** 53.23 82 ⇑P P 10 33 49.3 -0.2
baz=53,SNR=19
218A **Dragoon** 53.31 83 ⇑P P 10 33 49.6 -0.5
baz=53,SNR=21
SUMG **Summit** 53.40 14 *e*P P 10 33 50.3 +0.1
comp=Z,60nm,0.9s,mb5.5
ANMO **Albuquerque** 53.52 78 *e*P P 10 33 51.4 -0.3
ANMO pmax pmax
comp=Z,14nm,1.0s
ANMO **Albuquerque** 53.52 78 *e*P P 10 33 51.4 -0.3
comp=Z,14nm,1.0s,mb4.8
ECSD **EROS,Sioux Fal** 53.63 63 *e*P P 10 33 50.5 -1.7
comp=Z,20nm,0.9s,mb5.0
ZAA0 **Zalesovo Array** 53.70 313 *e*P P 10 33 52.4 -0.3
ZALV **Zalesovo Beam** 53.70 313 P P 10 33 52.4 -0.3
comp=Z,3.6nm,0.7s,mb4.4,baz=28,slow=6.7,SNR=7.4
ZALV PcP PcP 10 34 58.4 0.0
comp=Z,22nm,0.8s,baz=25,slow=4.9,SNR=21
ZALV **Zalesovo Beam** 53.70 313 P P 10 33 52.4 -0.3
ZALV 10 34 58.4
ZALV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ZALV pmax pmax
comp=Z,22nm,0.8s,mb5.1
ZALV **Zalesovo Beam** 53.70 313 P P 10 33 52.4 -0.3
ZALV PcP PcP 10 34 58.4 0.0
318A **Bisbee** 53.71 83 ⇓P P 10 33 52.0 -1.0
baz=54,SNR=14
LENM **Lemitar** 53.73 79 *e*P P 10 33 53.5 +0.3
EYMN **Ely** 53.73 56 *e*P P 10 33 52.1 -0.9
comp=Z,40nm,0.9s,mb5.3
219A **White Tail Can** 53.78 82 ⇓P P 10 33 52.9 -0.7
baz=54,SNR=16
Y22D **IRIS PASSCAL I** 53.82 79 ⇑P P 10 33 53.3 -0.6
baz=54,SNR=7.0
LPM **Los Pinos Moun** 53.84 78 *e*P P 10 33 54.6 +0.6
NVS **Novosibirsk** 53.85 315 *e*P P 10 33 53.0 -0.7
319A **Douglas** 54.19 83 ⇑P P 10 33 56.1 -0.5
baz=54,SNR=19
LZH **Lanzhou** 54.96 286 *e*P P 10 34 02.8 +0.7
LZH AP pP 10 34 14.4 +0.9
LZH AMB AMB
comp=Z,59nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,250nm,4.5s
CBKS **Cedar Bluff** 55.01 70 *e*P P 10 34 02.4 0.0
CBKS pmax pmax
comp=Z,340nm,1.5s,mb6.2
CBKS **Cedar Bluff** 55.01 70 *e*P P 10 34 02.4 -0.1
comp=Z,340nm,1.5s,mb6.2
GTA **Gaotai** 55.15 291 P P 10 34 03.9 +0.5
GTA AP pP 10 34 15.8 +0.9
GTA S **S** 10 41 44.8 +1.3
GTA SCS ScS 10 43 48.3 -0.8
GTA AMB AMB
comp=Z,49nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,2µm,7.8s
GTA LR LR
comp=Z,7µm,15.9s,MS5.8
AMTX **Amarillo** 56.47 75 *e*P P 10 34 12.9 -0.1
comp=Z,35nm,0.9s,mb5.4
KSU1 **Kansas State U** 56.65 68 *e*P P 10 34 13.1 -1.0
comp=Z,137nm,0.8s,mb6.0
GDL2 **Guadalupe Moun** 56.67 79 *e*P P 10 34 14.3 -0.1
SCIA **State Center** 56.71 63 *e*P P 10 34 14.1 -0.5
comp=Z,41nm,0.8s,mb5.5
JFWS **Jewell Farm** 57.68 60 *e*P P 10 34 20.1 -1.3
JFWS pmax pmax
comp=Z,57nm,0.9s,mb5.6
JFWS **Jewell Farm** 57.68 60 *e*P P 10 34 20.1 -1.3
comp=Z,57nm,0.8s,mb5.7
ARCES **ARCESS Array B** 58.01 350 P P 10 34 22.6 -0.6
comp=Z,7.7nm,0.7s,mb4.9,baz=27,slow=7.3,SNR=8.9
ARCES **ARCESS Array B** 58.01 350 P P 10 34 22.6 -0.7
ARCES pmax pmax
comp=Z,8.0nm,0.7s
WMOK **Wichita Mounta** 58.32 73 *e*P P 10 34 25.6 -0.4
WMOK pmax pmax
comp=Z,25nm,0.9s,mb5.2
WMOK **Wichita Mounta** 58.32 73 *e*P P 10 34 25.6 -0.4
comp=Z,25nm,0.8s,mb5.3
CD2 **Chengdu** 58.54 281 P P 10 34 27.1 -0.5
CD2 AP pP 10 34 39.8 +0.7
CD2 PCP PcP 10 35 17.3 -0.3
CD2 PP PP 10 36 38.4 +1.3
CD2 PCS PcS 10 39 17.8 -1.5
CD2 S **S** 10 42 24.9 -3.5
CD2 SS SS 10 46 19.0 -1.9
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
CD2 LR LR
comp=N,7µm,18.7s
CD2 LR LR
comp=Z,5µm,16.6s,MS5.7
KURK **Kurchatov** 58.69 313 P P 10 34 27.1 -1.2
comp=Z,235nm,0.9s,mb6.2,SNR=8.2
KURK **Kurchatov** 58.69 313 ⇓P P 10 34 28.1 -0.3
SNR=8.7
KURK **Kurchatov** 58.69 313 P P 10 34 29.1 +0.7
comp=Z,26nm,0.8s,mb5.3,baz=44,slow=6.8,SNR=36
KURK **Kurchatov** 58.69 313 *e*P P 10 34 27.5 -0.8
KURK pmax pmax
comp=Z,34nm,0.9s,mb5.4
KURK **Kurchatov** 58.69 313 *e*P P 10 34 28.3 0.0
APA **Apatity** 58.82 346 ⇑*e*P P 10 34 28.8 -0.1
APA pmax pmax
comp=Z,97nm,1.4s,mb5.6
WMQ **Urumqi** 58.96 302 ⇑*i*P P 10 34 31.0 +0.7
WMQ PCP PcP 10 35 19.8 +0.7
WMQ AMB AMB
comp=Z,53nm,1.0s,mb5.5
WMQ LR LR
comp=N,8µm,20.0s,MS5.9
WMQ LR LR
comp=E,4µm,22.0s,MS5.9
WMQ LR LR
comp=Z,6µm,20.0s,MS5.7
TXAR **Lajitas Array** 59.09 81 P P 10 34 30.5 -0.9
comp=Z,28nm,0.8s,mb5.3,baz=301,slow=4.8,SNR=30
TXAR **Lajitas Array** 59.09 81 P P 10 34 30.5 -0.9
TXAR pmax pmax
comp=Z,28nm,0.8s
MKAR **Makanchi Array** 59.68 308 P P 10 34 35.1 -0.1
comp=Z,19nm,0.6s,mb5.3,baz=58,slow=7.3,SNR=66
MKAR **Makanchi Array** 59.68 308 P P 10 34 35.1 -0.1
MKAR pmax pmax
comp=Z,19nm,0.6s
HDIL **Hopedale** 59.80 62 *e*P P 10 34 35.3 -0.9
comp=Z,144nm,0.8s,mb6.0
GYA **Guiyang** 59.88 276 ⇓*i*P P 10 34 36.9 0.0
GYA AP pP 10 34 47.8 -0.7
GYA XP sP 10 34 52.0 -1.0
GYA PCP PcP 10 35 22.8 -0.2
GYA PP PP 10 36 51.0 +2.0
GYA SCP ScP 10 39 20.3 -0.3
GYA PCS PcS 10 39 23.1 -2.3
GYA S **S** 10 42 42.0 -3.9
GYA SS SS 10 46 40.4 -1.7
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,760nm,9.0s
GYA LR LR
comp=N,3µm,20.8s,MS5.7
GYA LR LR
comp=E,4µm,18.9s,MS5.7
GYA LR LR
comp=Z,5µm,17.4s,MS5.7
SCHQ **Schefferville** 60.27 38 P P 10 34 38.2 -1.0
comp=Z,79nm,0.8s,mb5.8,baz=324,slow=7.5,SNR=39
SCHQ **Schefferville** 60.27 38 P P 10 34 38.2 -1.0
CCM **Cathedral Cave** 60.44 65 *e*P P 10 34 38.9 -1.6
CCM pmax pmax
comp=Z,27nm,0.8s,mb5.3
CCM **Cathedral Cave** 60.44 65 *e*P P 10 34 38.9 -1.6
comp=Z,27nm,0.8s,mb5.3
BVAR **Borovoye Array** 60.59 319 P P 10 34 40.8 -0.6
comp=Z,7.9nm,0.4s,mb5.2,baz=44,slow=7.2,SNR=33
BVAR **Borovoye Array** 60.59 319 P P 10 34 40.8 -0.6
BVAR pmax pmax
comp=Z,8.0nm,0.4s
SLM **Saint Louis** 60.60 64 *e*P P 10 34 39.8 -1.9
SLM pmax pmax
comp=Z,81nm,0.8s,mb5.9
SLM **Saint Louis** 60.60 64 P P 10 34 40.5 -1.2
SLM pmax pmax
comp=Z,67nm,0.7s,mb5.9
SLM **Saint Louis** 60.60 64 *e*P P 10 34 39.8 -1.9
comp=Z,81nm,0.8s,mb5.9
BRVK **Borovoye** 60.61 319 P P 10 34 42.3 +0.8
SNR=8.6
BRVK **Borovoye** 60.61 319 ⇑*e*P P 10 34 42.5 +1.0
JCT **Junction City** 60.66 77 *e*P P 10 34 41.1 -1.1
JCT pmax pmax

comp=Z,29nm,0.9s,mb5.4
JCT **Junction City 60.66 77** *e*P P **10 34 41.1 -1.0**
comp=Z,29nm,0.9s,mb5.4
FVM **French Village 60.95 65** P P **10 34 42.4 -1.6**
FVM pmax pmax
comp=Z,48nm,0.9s,mb5.6
FVM **French Village 60.95 65** *e*P P **10 34 42.9 -1.1**
comp=Z,63nm,0.8s,mb5.8
MIAR **Mount Ida 61.54 69** *e*P P **10 34 47.4 -0.7**
MIAR pmax pmax
comp=Z,57nm,1.0s,mb5.7
MIAR **Mount Ida 61.54 69** *e*P P **10 34 47.4 -0.6**
comp=Z,57nm,1.0s,mb5.7
OLIL **Olney 61.73 63** *e*P P **10 34 48.6 -0.7**
comp=Z,177nm,0.9s,mb6.2
SIUC **Southern Illin 61.82 64** *e*P P **10 34 48.9 -1.0**
comp=Z,90nm,0.8s,mb6.0
UALR **University of 62.10 68** *e*P P **10 34 51.4 -0.4**
comp=Z,96nm,1.5s,mb5.7
PARMO **Parma 62.26 65** *e*P P **10 34 52.4 -0.5**
BLO **Bloomington 62.30 61** *e*P P **10 34 51.6 -1.5**
BLO pmax pmax
comp=Z,86nm,0.8s,mb5.9
BLO **Bloomington 62.30 61** *e*P P **10 34 51.6 -1.5**
comp=Z,86nm,0.8s,mb5.9
ARU **Arti 62.36 328**⇑ *i*P P **10 34 52.4 -0.8**
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
ARU **Arti 62.36 328**⇑ *i*P P **10 34 52.5 -0.7**
USIN **University of 62.52 63** *e*P P **10 34 53.9 -0.6**
comp=Z,235nm,0.9s,mb6.3
GNAR **Gosnell 62.60 66** *e*P P **10 34 54.8 -0.4**
comp=Z,1µm,1.1s,mb6.9
GLAT **Glass 62.80 65** *e*P P **10 34 56.4 -0.1**
WCI **Wyandotte Cave 63.09 62** P P **10 34 57.0 -1.4**
WCI pmax pmax
comp=Z,88nm,0.9s,mb5.9
WCI **Wyandotte Cave 63.09 62** *e*P P **10 34 57.1 -1.3**
comp=Z,87nm,0.9s,mb5.9
KMI **Kunming 63.29 277** P P **10 35 00.8 +0.9**
KMI AP pP 10 35 12.5 +1.0
KMI S **S** **10 43 27.9 -1.1**
KMI AMB AMB
comp=Z,13nm,1.0s,mb5.0
KMI LR LR
comp=N,5µm,14.4s,MS6.0
KMI LR LR
comp=E,6µm,14.4s,MS6.0
KMI LR LR
comp=Z,7µm,17.3s,MS5.9
HKT **Hockley 63.45 75** *e*P P **10 35 00.7 -0.2**
HKT pmax pmax
comp=Z,53nm,1.5s,mb5.5
HKT **Hockley 63.45 75** *e*P P **10 35 00.7 -0.2**
comp=Z,53nm,1.5s,mb5.5
ACSO **Alum Creek Sta 63.46 58** *e*P P **10 34 60.0 -0.8**
comp=Z,35nm,0.8s,mb5.5
JOF **Joensuu 63.47 345** *e*p P **10 34 59.2 -1.3**
comp=Z,17nm,0.8s,mb5.2
JOF **Joensuu 63.47 345** *e*P P **10 34 59.2 -1.3**
JOF pmax pmax
comp=Z,17nm,0.8s,mb5.2
ERPA **Erie 63.66 55** *e*P P **10 35 01.9 -0.2**
comp=Z,72nm,0.8s,mb5.8
WVT **Waverly 63.73 64** *e*P P **10 35 02.1 -0.5**
WVT pmax pmax
comp=Z,74nm,0.9s,mb5.7
WVT **Waverly 63.73 64** *e*P P **10 35 02.1 -0.5**
comp=Z,74nm,0.9s,mb5.7
KLMR **Klimovskoe 63.82 340** P P **10 35 01.9 -0.9**
KLMR pmax pmax
comp=Z,81nm,1.7s,mb5.5
OXF **Oxford 63.98 67** *e*P P **10 35 03.6 -0.7**
OXF pmax pmax
comp=Z,377nm,1.1s,mb6.3
OXF **Oxford 63.98 67** *e*P P **10 35 03.6 -0.7**
comp=Z,377nm,1.1s,mb6.3
LONY **Lake Ozonia 64.52 50** *e*P P **10 35 05.6 -2.0**
comp=Z,20nm,0.9s,mb5.2
VBMS **Vicksburg 64.98 69** *e*P P **10 35 10.7 -0.2**
comp=Z,75nm,1.1s,mb5.6
KAF **Kangasniemi 65.00 347** *e*p P **10 35 09.2 -1.4**
comp=Z,21nm,1.0s,mb5.1
KAF **Kangasniemi 65.00 347** *e*P P **10 35 09.2 -1.4**
KAF pmax pmax
comp=Z,21nm,1.0s,mb5.1
SWET **Sewanee 65.45 64** *e*P P **10 35 12.9 -1.0**
MCWV **Mont Chateau 65.53 57** *e*P P **10 35 13.6 -0.8**
comp=Z,47nm,0.9s,mb5.5
BINY **Binghamton 65.63 52** *e*P P **10 35 14.2 -0.7**
comp=Z,81nm,0.9s,mb5.8
MDV **Middlebury 65.65 49** *e*P P **10 35 13.2 -1.8**
TZTN **Tazewell 65.82 61** *e*P P **10 35 15.9 -0.4**
comp=Z,56nm,1.0s,mb5.5
SSPA **Standing Stone 65.83 55** *e*P P **10 35 15.4 -0.8**
comp=Z,50nm,0.9s,mb5.5
ACCN **Adirondack Com 65.88 50** *e*P P **10 35 15.1 -1.4**
comp=Z,53nm,0.9s,mb5.6
LBNH **Lisbon 66.06 49** *e*P P **10 35 16.6 -1.1**
LBNH pmax pmax
comp=Z,45nm,0.9s,mb5.5
LBNH **Lisbon 66.06 49** *e*P P **10 35 16.6 -1.1**
comp=Z,45nm,0.8s,mb5.5
CPCT **Cooper Cave 66.08 63** *e*P P **10 35 16.7 -1.2**
CHMS **Chumysh 66.12 309** P P **10 35 19.3 +1.2**
SNR=5.3
HNH **Hanover 66.29 49** *e*P P **10 35 18.2 -1.0**
TRY **Troy 66.37 51** *e*P P **10 35 18.6 -1.0**
LRAL **Lakeview Retre 66.44 66** *e*P P **10 35 18.9 -1.3**
comp=Z,44nm,0.9s,mb5.5
PKME **Peaks-Kenny Pk 66.49 46** *e*P P **10 35 19.4 -1.1**
comp=Z,40nm,0.9s,mb5.4
AAK **Ala-Archa 66.52 309** ⇑P P **10 35 21.2 +0.5**
SNR=9.7
AAK **Ala-Archa 66.52 309** *e*P P **10 35 21.2 +0.6**
AAK pmax pmax
comp=Z,13nm,0.9s,mb5.0
AAK **Ala-Archa 66.52 309** *e*P P **10 35 21.8 +1.2**
KZA **Kyzart 66.57 308** P P **10 35 22.9 +1.9**
SNR=5.4
LSA **Lhasa 67.02 289** P P **10 35 25.4 +1.4**
MVL **Millersville 67.08 54** *e*P P **10 35 23.3 -1.0**
comp=Z,33nm,0.8s,mb5.4
AKTK **Aktyubinsk 67.42 324** P P **10 35 25.4 -0.9**
AKTO **Aktyubinsk 67.42 324** P P **10 35 25.4 -0.9**
comp=Z,12nm,0.9s,mb4.9,baz=12,slow=4.4,SNR=22
AKTO **Aktyubinsk 67.42 324** P P **10 35 25.4 -0.8**
AKTO pmax pmax
comp=Z,12nm,0.9s,mb4.9
PAL **Palisades 67.55 52** *e*P P **10 35 26.2 -1.0**
PAL pmax pmax
comp=Z,63nm,0.8s,mb5.7
PAL **Palisades 67.55 52** *e*P P **10 35 26.2 -1.1**
comp=Z,62nm,0.8s,mb5.7
NB2 **NORSAR Subarra 67.59 354** P P **10 35 26.7 -0.5**
comp=Z,28nm,0.8s,mb5.3,baz=8.0,slow=6.5
NOA **NORSAR Array B 67.59 354** P P **10 35 26.9 -0.3**
comp=Z,25nm,0.8s,mb5.3,baz=7.0,slow=6.3,SNR=36
NOA **NORSAR Array B 67.59 354** P P **10 35 26.9 -0.3**
NOA pmax pmax
comp=Z,25nm,0.8s
EMMW **East Machias 67.75 46** *e*P P **10 35 27.4 -1.0**
NAO01 **NORSAR Array S 67.81 355** *e*P P **10 35 28.3 -0.2**
BRAL **Brewton 67.88 68** *e*P P **10 35 29.1 -0.4**
comp=Z,98nm,0.9s,mb5.8
KSH **Kashi 68.14 306** P P **10 35 32.8 +1.9**
KSH AP pP 10 35 43.3 +0.6
KSH PCP PcP 10 35 58.1 +1.4
KSH PP PP 10 38 05.5 +4.4
KSH SCP 10 39 56.6
KSH PCS 10 40 01.8
KSH S S 10 44 28.8 +1.0
KSH SCS ScS 10 45 24.5 -2.3
KSH SS SS 10 48 52.6 +2.5
KSH AMB AMB
comp=Z,153nm,0.8s,mb6.1
KSH AMB AMB
comp=Z,6µm,9.6s
GOGA **Godfrey 68.16 64** *e*P P **10 35 30.0 -1.2**
GOGA pmax pmax
comp=Z,70nm,1.0s,mb5.7
GOGA **Godfrey 68.16 64** *e*P P **10 35 30.0 -1.2**
comp=Z,70nm,1.0s,mb5.6
VSU **Vasula 68.43 346**⇑ *i*P P **10 35 32.0 -0.5**
VSU pmax pmax
comp=Z,94nm,1.3s,mb5.7
comp=Z,54nm,0.9s,mb5.5
PRU **Pruhonice 78.30 351** *e*P P **10 36 30.5 -0.2**
MENF **Mencas 78.42 359** *e*P P **10 36 31.5 +0.1**
SNF **Seneffe 78.43 358** P P **10 36 31.4 0.0**
comp=Z,36nm,1.2s,mb5.2
BCLA **Clavier 78.49 357** P P **10 36 31.7 -0.1**
comp=Z,42nm,1.2s,mb5.2
CRVS **Cervenica-Dubn 78.49 346** *e*P P **10 36 32.2 +0.4**
CRVS pmax pmax
comp=Z,32nm,0.9s,mb5.2
CRVS **Cervenica-Dubn 78.49 346** *e*P P **10 36 32.2 +0.4**
comp=Z,32nm,0.9s,mb5.2
MANZ **Manzenberg 78.52 352** *e*P P **10 36 31.6 -0.3**
comp=Z,28nm,1.0s,mb5.2
TNS **Taunus Mts 78.54 355** *e*P P **10 36 31.9 -0.1**
TNS pmax pmax
comp=Z,52nm,0.9s,mb5.5
TNS **Taunus Mts 78.54 355** *e*P P **10 36 31.9 -0.1**
comp=Z,52nm,0.9s,mb5.5
UZH **Uzhgorod 78.63 345** *d i*P P **10 36 32.3 -0.2**
UZH *i* pP 10 36 44.7 +0.2
UZH *i* 10 36 49.0
ROTZ **Rotzenmuhle 78.73 352** *e*P P **10 36 33.2 +0.1**
comp=Z,34nm,1.1s,mb5.2
VRAC **Vranov 78.75 349**⇑ *i*P P **10 36 33.6 +0.4**
VRAC **Vranov 78.75 349** P P **10 36 33.6 +0.4**
GIVF **Givet 78.82 357**⇑ *i*P P **10 36 33.5 -0.1**
comp=Z,101nm,1.0s,mb5.4
GIVF **Givet 78.82 357**⇑ *i*P P **10 36 33.5 -0.1**
GIVF pmax pmax
comp=Z,50nm,1.0s,mb5.4
GIVF **Givet 78.82 357**⇑ *i*P P **10 36 33.5 -0.1**
comp=Z,50nm,1.0s,mb5.4
DOU **Dourbes 78.83 357** P P **10 36 33.7 +0.1**
comp=Z,34nm,1.3s,mb5.1
BAIF **Baives 78.88 358**⇑ *i*P P **10 36 34.0 +0.1**
comp=Z,167nm,0.9s,mb5.7
BAIF **Baives 78.88 358**⇑ *i*P P **10 36 34.0 +0.1**
BAIF pmax pmax
comp=Z,84nm,0.9s,mb5.7
BAIF **Baives 78.88 358**⇑ *i*P P **10 36 34.0 +0.1**
comp=Z,84nm,0.9s,mb5.7
TREC **Trest 78.88 350** *e*P P **10 36 33.7 -0.2**
GRA1 **Grafenberg Arr 78.88 353** *e*P P **10 36 34.1 +0.2**
comp=Z,90nm,1.0s,mb5.7
GRF **Grafenberg Arr 78.88 353** *e*P P **10 36 34.1 +0.2**
GRF pmax pmax
comp=Z,90nm,1.0s,mb5.7
GRF **Grafenberg Arr 78.88 353** *e*P P **10 36 34.1 +0.2**
GRF pmax pmax
comp=Z,90nm,1.0s,mb5.7
GRF **Grafenberg Arr 78.88 353** *e*P P **10 36 34.1 +0.2**
comp=Z,90nm,1.0s,mb5.7
AJM **Ajmer 78.92 299** *e*P P **10 36 34.0 -0.5**
AJM AMb AMB 10 36 35.4
comp=Z,86nm,1.0s,mb5.7
ABH **Alteburg 78.93 355** *e*P P **10 36 33.7 -0.5**
ANN **Anapa 79.01 334** *e*P P **10 36 34.7 0.0**
ANN pmax pmax
comp=Z,54nm,1.1s,mb5.4
KIS **Kishinev 79.01 341** *e*P P **10 36 34.0 -0.7**
KIS *e* 10 36 55.0
KIS **Kishinev 79.01 341** *e*UNK P **10 36 34.0 -0.7**
KECS **Kecovo 79.05 347** *i*P P **10 36 34.9 +0.1**
KECS pmax pmax
comp=Z,32nm,0.9s,mb5.2
KECS **Kecovo 79.05 347** *i*P P **10 36 34.9 +0.1**
comp=Z,32nm,0.9s,mb5.2
RUP **Ruppelstein 79.13 356** *e*P P **10 36 35.4 +0.1**
TOD **Tromm 79.14 355** *e*P P **10 36 35.4 +0.1**
WLF **Walferdange 79.21 356** P P **10 36 35.6 -0.1**
comp=Z,28nm,1.0s,mb5.1
WLF **Walferdange 79.21 356** *e*P P **10 36 35.9 +0.2**
comp=Z,49nm,0.9s,mb5.4
KHC **Kasperske Hory 79.24 351** *e*P P **10 36 36.1 +0.2**
KHC *ex* x 10 36 44.0
KHC **Kasperske Hory 79.24 351**⇑ *i*P P **10 36 35.8 -0.1**
KHC *e* 10 36 44.0
KOLL **Kolacno 79.24 348** *e*P P **10 36 36.0 +0.1**
KOLL **Kolacno 79.24 348** *e*P P **10 36 36.1 +0.2**
VYHS **Vyhne 79.27 348** *i*P P **10 36 36.2 +0.2**
VYHS pmax pmax
comp=Z,24nm,1.0s,mb5.1
VYHS **Vyhne 79.27 348** *i*P P **10 36 36.2 +0.2**
comp=Z,24nm,1.0s,mb5.1
WET **Wettzell 79.29 352** *e*P P **10 36 35.8 -0.3**
WET pmax pmax
comp=Z,26nm,1.1s,mb5.1
WET **Wettzell 79.29 352** *e*P P **10 36 35.8 -0.3**
comp=Z,26nm,1.1s,mb5.1
BMR **Baia Mare 79.36 344** P P **10 36 37.6 +1.0**
SMOL **Smolenice 79.43 349** *e*P P **10 36 37.8 +0.9**
GEC2 **GERESS Array S 79.51 351** *e*P P **10 36 37.1 -0.2**
GEC2 pmax pmax
comp=Z,22nm,0.8s,mb5.1
GEC2 **GERESS Array S 79.51 351** *e*P P **10 36 37.1 -0.2**
comp=Z,22nm,0.8s,mb5.1
GERES **GERESS Array B 79.51 351** P P **10 36 37.2 -0.2**
comp=Z,15nm,0.8s,mb5.0,baz=33,slow=5.1,SNR=69
GERES **GERESS Array B 79.51 351** P P **10 36 37.2 -0.1**
GERES pmax pmax
comp=Z,15nm,0.8s
PSZ **Piszkesteto 79.68 347** *e*P P **10 36 39.0 +0.7**
PSZ pmax pmax
comp=Z,61nm,1.1s,mb5.4
PSZ **Piszkesteto 79.68 347**⇓ *i*P P **10 36 39.3 +1.0**
PSZ **Piszkesteto 79.68 347** P P **10 36 39.1 +0.8**
ZST **Bratislava 79.78 349** *e*P P **10 36 39.7 +0.9**
ZST pmax pmax
comp=Z,54nm,0.9s,mb5.5
ZST **Bratislava 79.78 349** *e*P P **10 36 39.7 +0.9**
comp=Z,54nm,0.9s,mb5.5
LANF **Langenberg 79.82 355** *e*P P **10 36 39.1 +0.1**
BHPL **Bhopal 79.89 294** *e*P P **10 36 39.2 -0.7**
BHPL AMb AMB 10 36 42.0
comp=Z,131nm,1.4s,mb5.7
STU **Stuttgart 79.94 354** *e*P P **10 36 39.3 -0.4**
comp=Z,50nm,1.0s,mb5.4
CONA **Conrad Observa 80.19 350** *i*P P **10 36 41.5 +0.5**
comp=Z,45nm,0.9s,mb5.4,SNR=25
CSNA **Conrad Observa 80.19 350**⇑ *i*P P **10 36 41.6 +0.6**
comp=Z,48nm,1.0s,mb5.4
FLN **La Foliniere 80.23 1**⇑ *i*P P **10 36 40.8 -0.4**
comp=Z,182nm,1.0s,mb5.7
FLN **La Foliniere 80.23 1**⇑ *i*P P **10 36 40.8 -0.4**
FLN pmax pmax
comp=Z,91nm,1.0s,mb5.7
FLN **La Foliniere 80.23 1**⇑ *i*P P **10 36 40.8 -0.4**
comp=Z,91nm,1.0s,mb5.6
DRGR **80.35 345** P P **10 36 42.3 +0.4**
FUR **Furstenfeldbru 80.40 353** *e*P P **10 36 41.9 -0.2**
FUR pmax pmax
comp=Z,72nm,1.1s,mb5.5
FUR **Furstenfeldbru 80.40 353** *e*P P **10 36 41.9 -0.2**
comp=Z,72nm,1.1s,mb5.5
LDF **La Druitiere 80.40 0**⇑ *i*P P **10 36 41.6 -0.5**
comp=Z,122nm,0.8s,mb5.6
LDF **La Druitiere 80.40 0**⇑ *i*P P **10 36 41.6 -0.5**
LDF pmax pmax
comp=Z,61nm,0.8s,mb5.6
LDF **La Druitiere 80.40 0**⇑ *i*P P **10 36 41.6 -0.5**
comp=Z,61nm,0.8s,mb5.6
CDF **Champ du Feu 80.41 355**⇑ *i*P P **10 36 42.0 -0.2**
comp=Z,36nm,0.8s,mb5.0
CDF **Champ du Feu 80.41 355**⇑ *i*P P **10 36 42.0 -0.2**
CDF pmax pmax
comp=Z,18nm,0.8s,mb5.0
CDF **Champ du Feu 80.41 355**⇑ *i*P P **10 36 42.0 -0.2**
comp=Z,18nm,0.8s,mb5.0
MEZF **Maizieres J'vi 80.41 357**⇑ *i*P P **10 36 42.3 +0.1**
comp=Z,159nm,1.0s,mb5.6
MEZF **Maizieres J'vi 80.41 357**⇑ *i*P P **10 36 42.3 +0.1**
comp=Z,159nm,1.0s,mb5.9
BFO **Black Forest 80.44 355** P P **10 36 42.9 +0.5**
comp=Z,163nm,1.0s,mb5.9,SNR=7.3
BFO **Black Forest 80.44 355** P P **10 36 42.2 -0.2**
BFO pmax pmax
comp=Z,46nm,1.3s,mb5.2
BFO **Black Forest 80.44 355** *e*P P **10 36 42.0 -0.4**
comp=Z,30nm,1.0s,mb5.2
MOA **Molln 80.44 351**⇑ *i*P P **10 36 42.3 -0.1**
comp=Z,11nm,0.8s,mb4.8,SNR=5.6
TGUH **Tegucigalpa,Un 80.54 79** *e*P P **10 36 44.4 +1.0**
comp=Z,80nm,1.2s,mb5.5
NGP **Nagpur 80.59 292** *e*P P **10 36 42.7 -1.0**
NGP AMb AMB 10 36 43.1
comp=Z,54nm,0.9s,mb5.5
VSU **Vasula 68.43 346**⇑ *i*P P **10 35 32.1 -0.4**
IMP **Imphal 68.96 284** *e*P P **10 35 36.0 -0.3**
KONO **Kongsberg 69.07 355**⇑ *i*P P **10 35 36.4 0.0**
SHL **Shillong 69.62 286**⇑ *i*P P **10 35 40.0 -0.4**
OBN **Obninsk 69.70 339** *e*P P **10 35 39.8 -0.6**
OBN *e* 10 36 04.0
OBN pmax pmax
comp=Z,103nm,1.6s,mb5.5
OBN **Obninsk 69.70 339** *e*P P **10 35 39.9 -0.5**
NHSC **New Hope 70.22 62** *e*P P **10 35 44.2 +0.3**
comp=Z,192nm,0.9s,mb6.0
CHTO **Chiang Mai 70.30 276** *e*P P **10 35 43.5 -1.1**
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CHTO **Chiang Mai 70.30 276** *e*P P **10 35 43.5 -1.1**
comp=Z,7.6nm,0.9s,mb4.6
CMAR **Chiang Mai Arr 70.57 275** P P **10 35 45.4 -0.9**
comp=Z,4.9nm,0.8s,mb4.5,baz=26,slow=6.8,SNR=24
CMAR **Chiang Mai Arr 70.57 275** P P **10 35 45.4 -0.9**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
TAPN **Taplejung 70.79 290** *e*P P **10 35 48.1 +0.6**
comp=Z,246nm,0.9s,mb6.2
ODAN **Odare 71.34 290** *e*P P **10 35 51.2 +0.3**
comp=Z,86nm,0.9s,mb5.7
GUN **Gumba 71.44 291** *e*P P **10 35 52.3 +0.9**
comp=Z,324nm,0.8s,mb6.3
JIRN **Jiri 71.45 291** *e*P P **10 35 52.6 +1.1**
comp=Z,202nm,0.8s,mb6.1
RAMN **Ramite 71.74 290** *e*P P **10 35 53.7 +0.5**
comp=Z,292nm,0.9s,mb6.2
KKN **Kakani 71.88 292** *e*P P **10 35 54.8 +0.7**
comp=Z,135nm,0.7s,mb6.0
KKN **Kakani 71.88 292** *e*P P **10 35 54.8 +0.7**
KKN pmax pmax
comp=Z,135nm,0.7s,mb6.0
PKI **Pulchoki 71.97 292** *e*P P **10 35 55.0 +0.4**
comp=Z,107nm,0.8s,mb5.8
PKI **Pulchoki 71.97 292** *e*P P **10 35 55.0 +0.4**
PKI pmax pmax
comp=Z,107nm,0.8s,mb5.8
GKN **Gorkha 72.09 292** *e*P P **10 35 55.8 +0.4**
DMN **Daman 72.12 292** *e*P P **10 35 56.1 +0.6**
comp=Z,107nm,0.9s,mb5.8
DANN **Dangsing 72.34 293** *e*P P **10 35 57.6 +0.8**
comp=Z,164nm,0.8s,mb6.0
COP **Copenhagen 72.84 353** *i*P P **10 36 00.1 +0.8**
COP pmax pmax
comp=Z,39nm,0.9s,mb5.3
COP **Copenhagen 72.84 353** *i*P P **10 36 00.1 +0.8**
comp=Z,39nm,0.9s,mb5.3
KOLN **Kolganda 72.87 293** *e*P P **10 36 00.4 +0.4**
comp=Z,66nm,0.9s,mb5.6
BSD **Bornholm Skovb 73.19 351** *i*P P **10 36 00.8 -0.6**
BSD pmax pmax
comp=Z,30nm,0.8s,mb5.3
BSD **Bornholm Skovb 73.19 351** *i*P P **10 36 00.8 -0.6**
comp=Z,30nm,0.8s,mb5.3
SUW **Suwalki 73.27 346** *e*P P **10 36 01.6 -0.3**
SUW **Suwalki 73.27 346** *e*P P **10 36 01.2 -0.7**
SUW **Suwalki 73.27 346** *e*P P **10 36 01.6 -0.3**
ESK **Eskdalemuir 73.62 2** *e*P P **10 36 04.0 +0.1**
ESK pmax pmax
comp=Z,35nm,1.0s,mb5.2
ESK **Eskdalemuir 73.62 2** *e*P P **10 36 04.0 0.0**
comp=Z,35nm,1.0s,mb5.2
THN **Thein Dam 73.69 302** *e*P P **10 36 03.9 -0.9**
RGN **Rugen 73.89 352** *e*P P **10 36 05.9 +0.4**
comp=Z,208nm,0.9s,mb6.1
SMLA **Simla 73.92 300** *e*P P **10 36 06.1 0.0**
SMLA AMb AMB 10 36 07.4
comp=Z,195nm,1.2s,mb5.9
DDI **Dehra Dun 74.05 299** *ex* x 10 36 01.5
BOK **Bokaro 74.54 289** *e*P P **10 36 08.9 -0.9**
BOK AMb AMB 10 36 11.7
comp=Z,38nm,0.3s,mb5.7
HLG **Helgoland 74.62 356** *e*P P **10 36 10.3 +0.5**
comp=Z,142nm,1.0s,mb5.8
BSEG **Bad Segeberg 74.73 354** *e*P P **10 36 10.8 +0.4**
BSEG pmax pmax
comp=Z,119nm,0.9s,mb5.8
BSEG **Bad Segeberg 74.73 354** *e*P P **10 36 10.8 +0.4**
comp=Z,119nm,0.9s,mb5.8
GKP **Gonka Klasztor 74.77 350** *e*P P **10 36 10.1 -0.6**
AKASG **Malin Array Be 75.40 342** P P **10 36 13.7 -0.6**
comp=Z,14nm,0.5s,mb5.2,baz=19,slow=5.7,SNR=58
AKASG **Malin Array Be 75.40 342** P P **10 36 13.7 -0.7**
AKASG pmax pmax
comp=Z,14nm,0.5s
KIEV **Kiev 75.41 342** *e*P P **10 36 13.7 -0.7**
KIEV pmax pmax
comp=Z,70nm,1.0s,mb5.5
RUE **Ruedersdorf 75.90 352** *e*P P **10 36 16.9 -0.3**
comp=Z,57nm,0.9s,mb5.5
WIT **Witteveen 76.04 356** *e*P P **10 36 19.2 +1.2**
NRDL **Niedersach Rie 76.18 354** *e*P P **10 36 18.5 -0.2**
comp=Z,73nm,1.0s,mb5.6
IBBN **Ibbenburen 76.50 355** *e*P P **10 36 20.9 +0.3**
comp=Z,163nm,0.9s,mb6.0
CLZ **Clausthal 76.81 354** *e*P P **10 36 22.7 +0.4**
CLZ pmax pmax
comp=Z,94nm,0.9s,mb5.7
CLZ **Clausthal 76.81 354** *e*P P **10 36 22.7 +0.4**
comp=Z,94nm,0.9s,mb5.7
WTSB **Wierderswijk 76.88 356**⇑ *e*P P **10 36 22.7 0.0**
comp=Z,71nm,1.0s,mb5.5
CLL **Collm 77.13 352**⇑ *i*P P **10 36 23.7 -0.5**
CLL pmax pmax
comp=Z,34nm,0.9s,mb5.3
CLL **Collm 77.13 352** *e*P P **10 36 23.4 -0.8**
comp=Z,34nm,0.9s,mb5.3
CLL **Collm 77.13 352**⇑ *i*P P **10 36 23.7 -0.5**
comp=Z,34nm,0.9s,mb5.3
CLL *ex* x 10 36 54.0
LVV **L'vov 77.19 345** *e*P P **10 36 24.1 -0.4**
KSP **Ksiaz 77.27 350** *e*P P **10 36 24.5 -0.4**
KSP **Ksiaz 77.27 350**⇑ *e*P P **10 36 24.3 -0.6**
BUG **Bochum--Univer 77.39 356** *e*P P **10 36 25.3 -0.3**
comp=Z,44nm,0.8s,mb5.4
OJC **Ojcow 77.45 347** *e*P P **10 36 25.8 -0.1**
BRG **Berggiesshubel 77.48 351**⇑ *i*P P **10 36 25.6 -0.5**
BRG pmax pmax
comp=Z,18nm,1.0s,mb5.0
BRG **Berggiesshubel 77.48 351** *e*P P **10 36 25.5 -0.6**
comp=Z,31nm,0.9s,mb5.2
BRG **Berggiesshubel 77.48 351**⇑ *i*P P **10 36 25.6 -0.5**
comp=Z,30nm,0.9s,mb5.2
FBE **Freiberg 77.48 352** *e*P P **10 36 26.0 -0.1**
comp=Z,59nm,1.1s,mb5.4
KWP **Kalwaria 77.59 345** *e*P P **10 36 27.4 +0.6**
KWP **Kalwaria 77.59 345** *e*P P **10 36 27.4 +0.6**
UPC **Upice 77.63 350** *e*P P **10 36 27.0 0.0**
DPC **Dobruska-Polom 77.75 350** *e*P P **10 36 28.0 +0.4**
PVCC **Panska Ves 77.76 351** *e*P P **10 36 27.9 +0.2**
UBBA **Unterbreizbach 77.85 354** *e*P P **10 36 28.0 -0.2**
comp=Z,64nm,1.7s,mb5.3
MOX **Moxa 77.91 353** *e*P P **10 36 28.2 -0.3**
comp=Z,51nm,1.1s,mb5.4
MOX **Moxa 77.91 353** *e*P P **10 36 28.2 -0.3**
MOX pmax pmax
comp=Z,51nm,1.1s,mb5.4
STHS **Stebnicka Huta 78.02 346** *i*P P **10 36 30.0 +0.8**
STHS pmax pmax
comp=Z,44nm,1.0s,mb5.3
STHS **Stebnicka Huta 78.02 346** *i*P P **10 36 30.0 +0.8**
comp=Z,44nm,1.0s,mb5.3
OKC **Ostrava-Krasne 78.04 348** *e*P P **10 36 29.3 +0.1**
WERD **Werda 78.05 352** *e*P P **10 36 29.1 -0.2**
comp=Z,29nm,1.1s,mb5.1
TANN **Tannenbergstha 78.07 352** *e*P P **10 36 29.3 -0.1**
comp=Z,33nm,1.4s,mb5.1
BEBN **Eben Emael 78.10 357** P P **10 36 29.9 +0.4**
comp=Z,20nm,0.9s,mb5.0
HGN **Heimansgroeve 78.12 356**⇑ *e*P P **10 36 29.7 +0.1**
comp=Z,105nm,1.1s,mb5.7
GUNZ **Gunzen 78.13 352** *e*P P **10 36 29.6 -0.1**
comp=Z,32nm,1.0s,mb5.2
UCC **Uccle 78.14 357** P P **10 36 29.5 -0.3**
comp=Z,28nm,0.9s,mb5.2
WERN **Wernitzgruen 78.20 352** *e*P P **10 36 30.1 0.0**
comp=Z,64nm,0.9s,mb5.5
KIV **Kislovodsk 78.24 330** *e*P P **10 36 29.7 -0.8**
KIV pmax pmax
comp=Z,17nm,1.2s,mb4.8
NKC **Novy Kostel 78.25 352** *e*P P **10 36 30.5 +0.1**
MEM **Membach 78.27 356** P P **10 36 28.3 -2.3**

comp=Z,48nm,1.3s,mb5.2
GRR Gorron 80.60 1⇑iP P 10 36 42.9 -0.3
comp=Z,190nm,0.9s,mb5.7
GRR Gorron 80.60 1⇑iP P 10 36 42.9 -0.3
GRR pmax pmax
comp=Z,95nm,0.9s,mb5.7
GRR Gorron 80.60 1⇑iP P 10 36 42.9 -0.3
comp=Z,95nm,0.9s,mb5.7
ROSF Rostrenen 80.60 3⇑iP P 10 36 43.2 -0.1
comp=Z,111nm,1.2s,mb5.4
ROSF Rostrenen 80.60 3⇑iP P 10 36 43.2 -0.1
ROSF pmax pmax
comp=Z,55nm,1.2s,mb5.4
ROSF Rostrenen 80.60 3⇑iP P 10 36 43.2 -0.1
comp=Z,55nm,1.2s,mb5.4
ECH Echery 80.61 355 *eP* **P 10 36 43.0 -0.3**
SPAK Spaichingen-Ko 80.64 354 *eP* **P 10 36 43.4 0.0**
THEF They Montfort 80.65 356 *eP* **P 10 36 43.4 -0.1**
RJOB Joohberg 80.69 352 *eP* **P 10 36 43.6 -0.1**
comp=Z,37nm,0.8s,mb5.4
SGMF Saint Gilles 80.70 2⇑iP P 10 36 43.7 -0.1
comp=Z,159nm,0.8s,mb5.7
SGMF Saint Gilles 80.70 2⇑iP P 10 36 43.7 -0.1
SGMF pmax pmax
comp=Z,80nm,0.8s,mb5.7
SGMF Saint Gilles 80.70 2⇑iP P 10 36 43.7 -0.1
comp=Z,80nm,0.8s,mb5.7
VIS Vishakhapatnam 80.72 287 *eP* **P 10 36 42.8 -1.6**
ARSA Arzberg 80.90 350 *iP* **P 10 36 45.4 +0.5**
comp=Z,41nm,1.0s,mb5.3,SNR=12
FELD Feldberg im Sc 80.91 355 *eP* **P 10 36 44.5 -0.4**
MOF Molkenrain 80.98 355 *eP* **P 10 36 44.9 -0.4**
GNI Garni 81.00 327 P **P 10 36 46.7 +1.2**
comp=Z,5.1nm,0.3s,mb4.9,baz=353,slow=15,SNR=4.1
GNI Garni 81.00 327 *eP* **P 10 36 46.8 +1.3**
HINF Hinteralfeld 81.03 356⇑iP P 10 36 45.0 -0.5
comp=Z,28nm,0.9s,mb4.9
HINF Hinteralfeld 81.03 356⇑iP P 10 36 45.0 -0.5
HINF pmax pmax
comp=Z,14nm,0.9s,mb4.9
HINF Hinteralfeld 81.03 356⇑iP P 10 36 45.0 -0.5
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 81.03 2⇑iP P 10 36 45.3 -0.2
comp=Z,204nm,1.2s,mb5.6
QUIF Quistinic 81.03 2⇑iP P 10 36 45.3 -0.2
QUIF pmax pmax
comp=Z,102nm,1.2s,mb5.6
QUIF Quistinic 81.03 2⇑iP P 10 36 45.3 -0.2
comp=Z,102nm,1.2s,mb5.6
WATA Walderalm 81.20 352⇑iP P 10 36 46.6 +0.2
comp=Z,58nm,0.9s,mb5.5,SNR=10
MOTA Moosalm 81.23 353⇑iP P 10 36 46.7 +0.1
comp=Z,51nm,1.1s,mb5.4,SNR=11
WTTA Wattenberg 81.26 352 *iP* **P 10 36 47.3 +0.5**
comp=Z,84nm,0.9s,mb5.7,SNR=19
KBA Koelnbreinsper 81.29 351 *iP* **P 10 36 47.8 +0.8**
comp=Z,184nm,0.8s,mb6.0,SNR=38
LOMF Lomont 81.49 356 *eP* **P 10 36 48.0 0.0**
SOKA Soboth 81.52 350⇑iP P 10 36 48.5 +0.4
comp=Z,100nm,1.0s,mb5.7
PKSM Moragy 81.53 347⇑iP P 10 36 48.0 -0.2
PKSM Moragy 81.53 347 P **P 10 36 47.8 -0.4**
PERS Pernice 81.55 350 *eP* **P 10 36 48.5 +0.1**
FETA Feichten 81.58 353 *iP* **P 10 36 48.8 +0.4**
comp=Z,58nm,1.0s,mb5.5,SNR=25
BZS Buzias 81.67 345 P **P 10 36 49.1 +0.1**
LOR Lormes 81.68 358⇑iP P 10 36 48.8 -0.2
comp=Z,100nm,1.1s,mb5.4
LOR Lormes 81.68 358⇑iP P 10 36 48.8 -0.2
LOR pmax pmax
comp=Z,50nm,1.1s,mb5.4
LOR Lormes 81.68 358⇑iP P 10 36 48.8 -0.2
comp=Z,50nm,1.1s,mb5.4
ABTA Abfaltersbach 81.70 352⇑iP P 10 36 49.1 0.0
comp=Z,62nm,1.0s,mb5.5,SNR=13
WRAB Tennant Creek 81.70 223 *eP* **P 10 36 46.4 -2.9**
WRAB Tennant Creek 81.70 223 *eP* **P 10 36 47.1 -2.2**
comp=Z,10.0nm,1.0s,mb4.7
HYF Humbligny 81.71 359⇑iP P 10 36 49.3 +0.2
MYKA Terra Mystica 81.71 351⇑iP P 10 36 48.9 -0.3
comp=Z,28nm,1.0s,mb5.2
WRA Warramunga Arr 81.71 223 P **P 10 36 46.9 -2.5**
comp=Z,4.7nm,0.8s,mb4.5,baz=34,slow=6.2,SNR=29
WRA Warramunga Arr 81.71 223 P **P 10 36 46.9 -2.5**
WRA pmax pmax
comp=Z,5.0nm,0.8s
OBKA Obir 81.73 350⇑iP P 10 36 49.6 +0.3
comp=Z,81nm,0.9s,mb5.6
SSF Saint Saulge 81.90 358⇑iP P 10 36 49.9 -0.2
comp=Z,92nm,1.1s,mb5.3
SSF Saint Saulge 81.90 358⇑iP P 10 36 49.9 -0.2
SSF pmax pmax
comp=Z,46nm,1.1s,mb5.3
SSF Saint Saulge 81.90 358⇑iP P 10 36 49.9 -0.2
comp=Z,46nm,1.1s,mb5.3
CADS Cadrg 82.10 351 *eP* **P 10 36 50.2 -1.0**
AKL Akola 82.12 293 *eP* **P 10 36 51.5 -0.2**
AKL AMb AMB 10 36 52.2
comp=Z,34nm,3.3s
AVF Avril sur Loir 82.17 358⇑iP P 10 36 51.3 -0.3
comp=Z,89nm,1.0s,mb5.3
AVF Avril sur Loir 82.17 358⇑iP P 10 36 51.3 -0.3
AVF pmax pmax
comp=Z,45nm,1.0s,mb5.3
AVF Avril sur Loir 82.17 358⇑iP P 10 36 51.3 -0.3
comp=Z,44nm,1.0s,mb5.3
CABF La Chapelle 82.26 356⇑iP P 10 36 52.2 +0.1
comp=Z,102nm,1.1s,mb5.4
CABF La Chapelle 82.26 356⇑iP P 10 36 52.2 +0.1
CABF pmax pmax
comp=Z,51nm,1.1s,mb5.4
CABF La Chapelle 82.26 356⇑iP P 10 36 52.2 +0.1
comp=Z,51nm,1.1s,mb5.4
SMF Signal de Mont 82.31 358⇑iP P 10 36 52.0 -0.3
comp=Z,155nm,1.1s,mb5.6
SMF Signal de Mont 82.31 358⇑iP P 10 36 52.0 -0.3
SMF pmax pmax
comp=Z,78nm,1.1s,mb5.5
SMF Signal de Mont 82.31 358⇑iP P 10 36 52.0 -0.3
comp=Z,78nm,1.1s,mb5.5
MFF Saint Martin d 82.39 0⇑iP P 10 36 52.6 -0.1
comp=Z,104nm,0.9s,mb5.7
MFF Saint Martin d 82.39 0⇑iP P 10 36 52.6 -0.1
MFF pmax pmax
comp=Z,52nm,0.9s,mb5.5
MFF Saint Martin d 82.39 0⇑iP P 10 36 52.6 -0.1
comp=Z,52nm,0.9s,mb5.5
BGF Bois d'Agland 82.42 358⇑iP P 10 36 52.7 -0.2
comp=Z,73nm,1.0s,mb5.2
BGF Bois d'Agland 82.42 358⇑iP P 10 36 52.7 -0.2
BGF pmax pmax
comp=Z,36nm,1.0s,mb5.3
BGF Bois d'Agland 82.42 358⇑iP P 10 36 52.7 -0.2
comp=Z,36nm,1.0s,mb5.3
BOJS Bojanci 82.65 350 *iP* **P 10 36 53.9 -0.2**
TCF Toulx Ste Croi 82.69 359⇑iP P 10 36 54.0 -0.3
comp=Z,58nm,0.9s,mb5.3
TCF Toulx Ste Croi 82.69 359⇑iP P 10 36 54.0 -0.3
TCF pmax pmax
comp=Z,29nm,0.9s,mb5.3
TCF Toulx Ste Croi 82.69 359⇑iP P 10 36 54.0 -0.3
comp=Z,29nm,0.9s,mb5.3
OG05 Jujurieux 82.86 357 *eP* **P 10 36 55.2 0.0**
AGO Saint Agoulin 82.92 358 *eP* **P 10 36 56.9 +1.4**
PLDF La Plantade 82.99 358 *eP* **P 10 36 57.4 +1.6**
PYM Petit Puy Mans 83.22 358 *eP* **P 10 36 58.3 +1.3**
LPL La Plagne 83.33 356⇑iP P 10 36 58.5 +0.9
comp=Z,25nm,0.9s,mb4.9
LPL La Plagne 83.33 356⇑iP P 10 36 58.5 +0.9
LPL pmax pmax
comp=Z,12nm,0.9s,mb4.9
LPL La Plagne 83.33 356⇑iP P 10 36 58.5 +0.9
comp=Z,12nm,0.9s,mb4.9
LPG La Plagne 83.34 356⇑iP P 10 36 58.7 +1.0
comp=Z,68nm,1.2s,mb5.2
LPG La Plagne 83.34 356⇑iP P 10 36 58.7 +1.0
LPG pmax pmax
comp=Z,34nm,1.2s,mb5.2
LPG La Plagne 83.34 356⇑iP P 10 36 58.7 +1.0
comp=Z,34nm,1.2s,mb5.2
RJF Les Rejaudoux 83.69 359⇑iP P 10 36 59.0 -0.5
comp=Z,157nm,1.4s,mb5.7
RJF Les Rejaudoux 83.69 359⇑iP P 10 36 59.0 -0.5
RJF pmax pmax
comp=Z,79nm,1.4s,mb5.7
RJF Les Rejaudoux 83.69 359⇑iP P 10 36 59.0 -0.5
comp=Z,79nm,1.4s,mb5.7
BNI Bardonecchia 83.79 356 *eP* **P 10 37 01.2 +1.2**
BNI pmax pmax
comp=Z,51nm,0.9s,mb5.7
BNI Bardonecchia 83.79 356 *eP* **P 10 37 01.2 +1.2**
comp=Z,51nm,0.9s,mb5.7
HYB Hyderabad 83.80 290 *eP* **P 10 36 59.5 -0.9**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.7
HYB Hyderabad 83.80 290 *iP* **P 10 36 59.5 -0.9**
comp=Z,60nm,1.0s,mb5.7
HYB *e* pP 10 37 11.5 -1.0
HYB Hyderabad 83.80 290 *eP* **P 10 36 59.5 -0.9**
comp=Z,60nm,1.0s,mb5.7
ORIF Oris-en-Rattie 83.96 356⇑iP P 10 37 01.4 +0.5
comp=Z,85nm,1.1s,mb5.5
ORIF Oris-en-Rattie 83.96 356⇑iP P 10 37 01.4 +0.5
ORIF pmax pmax
comp=Z,42nm,1.1s,mb5.5
ORIF Oris-en-Rattie 83.96 356⇑iP P 10 37 01.4 +0.5
comp=Z,42nm,1.1s,mb5.5
OG22 Abries 84.01 355 *eP* **P 10 37 02.3 +1.2**
LFF La Frestale 84.05 360⇑iP P 10 37 01.3 0.0
comp=Z,134nm,0.9s,mb5.8
LFF La Frestale 84.05 360⇑iP P 10 37 01.3 0.0
LFF pmax pmax
comp=Z,67nm,0.9s,mb5.8
LFF La Frestale 84.05 360⇑iP P 10 37 01.3 0.0
comp=Z,67nm,0.9s,mb5.8
CAF Calviac 84.06 359⇑iP P 10 37 01.4 0.0
comp=Z,109nm,1.0s,mb5.6
CAF Calviac 84.06 359⇑iP P 10 37 01.4 0.0
CAF pmax pmax
comp=Z,54nm,1.0s,mb5.6
CAF Calviac 84.06 359⇑iP P 10 37 01.4 0.0
comp=Z,54nm,1.0s,mb5.6
VIVF Saint-Julien-l 84.07 357⇑iP P 10 37 01.6 +0.2
comp=Z,59nm,0.9s,mb5.4
VIVF Saint-Julien-l 84.07 357⇑iP P 10 37 01.6 +0.2
VIVF pmax pmax
comp=Z,29nm,0.9s,mb5.4
VIVF Saint-Julien-l 84.07 357⇑iP P 10 37 01.6 +0.2
comp=Z,29nm,0.9s,mb5.4
MBDF Montbardon 84.11 356⇑iP P 10 37 02.2 +0.6
comp=Z,68nm,0.9s,mb5.5
MBDF Montbardon 84.11 356⇑iP P 10 37 02.2 +0.6
MBDF pmax pmax
comp=Z,34nm,0.9s,mb5.5
MBDF Montbardon 84.11 356⇑iP P 10 37 02.2 +0.6
comp=Z,34nm,0.9s,mb5.5
FITZ Fitzroy Crossi 84.12 231 *eP* **P 10 37 00.6 -1.3**
comp=Z,26nm,0.6s,mb5.5
OG25 Le Caire 84.50 356 *eP* **P 10 37 04.2 +0.6**
BR131 Keskin Array S 84.75 335 *eP* **P 10 37 05.0 0.0**
BRTR Keskin Array B 84.75 335 P **P 10 37 04.6 -0.4**
comp=Z,15nm,0.8s,mb5.2,baz=55,slow=3.0,SNR=36
BRTR Keskin Array B 84.75 335 P **P 10 37 04.6 -0.4**
BRTR pmax pmax
comp=Z,15nm,0.8s
TOUF Mont Tournerai 84.80 355 *eP* **P 10 37 05.5 +0.4**
AUTN L'Aution 84.81 355 *eP* **P 10 37 05.5 +0.3**
SAOF Saorge 84.81 355 *eP* **P 10 37 04.8 -0.4**
LASF Ste Croix 84.87 358⇑iP P 10 37 05.6 +0.1
comp=Z,37nm,0.9s,mb5.2
LUCF Luceram 84.92 355 *eP* **P 10 37 05.7 0.0**
SMRF Simiane la Rot 84.92 356⇑iP P 10 37 06.4 +0.7
comp=Z,131nm,1.0s,mb5.7
SMRF Simiane la Rot 84.92 356⇑iP P 10 37 06.4 +0.7
comp=Z,131nm,1.0s,mb6.0
MVIF Mont Vial 84.92 355 *eP* **P 10 37 05.8 +0.1**
SBF Sospel 84.94 355⇑iP P 10 37 05.5 -0.3
comp=Z,195nm,0.9s,mb5.9
SBF Sospel 84.94 355⇑iP P 10 37 05.5 -0.3
SBF pmax pmax
comp=Z,98nm,0.9s,mb5.9
SBF Sospel 84.94 355⇑iP P 10 37 05.5 -0.3
comp=Z,98nm,0.9s,mb5.9
VILF Villemus 85.03 356 *eP* **P 10 37 07.2 +0.9**
REVF Revere 85.07 355 *eP* **P 10 37 07.2 +0.7**
CALN Calern 85.08 355 *eP* **P 10 37 06.5 0.0**
PRAF Pradon 85.10 357 *eP* **P 10 37 07.2 +0.5**
ASAR Alice Springs 85.19 222 P **P 10 37 05.7 -1.5**
comp=Z,4.9nm,0.8s,mb4.7,baz=27,slow=4.9,SNR=32
ASAR Alice Springs 85.19 222 P **P 10 37 05.7 -1.5**
ASAR pmax pmax
comp=Z,5.0nm,0.8s
SKO Skopje 85.25 344 *eP* **P 10 37 07.9 +0.5**
TAVF Tavernes 85.25 356 *eP* **P 10 37 07.6 +0.2**
TREF Trevaresse 85.27 356 *eP* **P 10 37 08.2 +0.7**
FRF La Foret Royal 85.28 356⇑iP P 10 37 07.3 -0.3
comp=Z,99nm,1.0s,mb5.6
FRF La Foret Royal 85.28 356⇑iP P 10 37 07.3 -0.3
FRF pmax pmax
comp=Z,49nm,1.0s,mb5.6
FRF La Foret Royal 85.28 356⇑iP P 10 37 07.3 -0.3
comp=Z,49nm,1.0s,mb5.6
GELF Grande-Etoile 85.51 356 *eP* **P 10 37 09.2 +0.5**
LMR La Mourre 85.52 356⇑iP P 10 37 08.6 -0.1
comp=Z,82nm,0.9s,mb5.7
LMR La Mourre 85.52 356⇑iP P 10 37 08.6 -0.1
LMR pmax pmax
comp=Z,41nm,0.9s,mb5.7
LMR La Mourre 85.52 356⇑iP P 10 37 08.6 -0.1
comp=Z,41nm,0.9s,mb5.7
BERF Bertagne 85.57 356 *eP* **P 10 37 09.4 +0.4**
MTLF Montolieu 85.64 359⇑iP P 10 37 09.4 +0.1
comp=Z,50nm,0.9s,mb5.4
MTLF Montolieu 85.64 359⇑iP P 10 37 09.4 +0.1
MTLF pmax pmax
comp=Z,25nm,0.9s,mb5.4
MTLF Montolieu 85.64 359⇑iP P 10 37 09.4 +0.1
comp=Z,25nm,0.9s,mb5.4
POO Poona 85.65 294 *eP* **P 10 37 09.2 -0.5**
POO AMb AMB 10 37 10.4
comp=Z,61nm,0.6s,mb6.0
VAY Valandovo 85.69 344 *eP* **P 10 37 09.9 +0.3**
EPF Esparros 85.96 0 *eP* **P 10 37 10.1 -0.8**
AQU L'Aquila 85.97 350 *eP* **P 10 37 11.7 +0.7**
AQU pmax pmax
comp=Z,63nm,1.0s,mb5.8
AQU L'Aquila 85.97 350 *eP* **P 10 37 11.7 +0.7**
comp=Z,63nm,1.0s,mb5.8
ETSF Etsaut 86.09 1⇑iP P 10 37 11.9 +0.3
comp=Z,66nm,0.8s,mb5.6
ETSF Etsaut 86.09 1⇑iP P 10 37 11.9 +0.3
ETSF pmax pmax
comp=Z,33nm,0.8s,mb5.6
ETSF Etsaut 86.09 1⇑iP P 10 37 11.9 +0.3
comp=Z,33nm,0.8s,mb5.6
PGF Pioggiola 86.15 354⇑iP P 10 37 11.7 -0.2
comp=Z,213nm,1.0s,mb6.0
PGF Pioggiola 86.15 354⇑iP P 10 37 11.7 -0.2
PGF pmax pmax
comp=Z,107nm,1.0s,mb6.0
PGF Pioggiola 86.15 354⇑iP P 10 37 11.7 -0.2
comp=Z,107nm,1.0s,mb6.0
SDDR Presa de Saban 86.18 64 *eP* **P 10 37 12.0 -0.4**
comp=Z,40nm,1.0s,mb5.6
KAD Karad 86.43 293 *eP* **P 10 37 12.9 -0.7**
KAD AMb AMB 10 37 14.3
comp=Z,41nm,0.7s,mb5.8
PBRG Braganca 86.97 5 *eP* **P 10 37 15.7 -0.2**
PVRL Vila Real 87.44 6 *eP* **P 10 37 17.9 -0.3**
MVO Moncorvo 87.59 6 *eP* **P 10 37 18.5 -0.4**
GOA Goa 88.08 292 *eP* **P 10 37 22.1 +0.5**
GOA AMb AMB 10 38 33.6
comp=Z,166nm,1.8s,mb6.0
MTE Manteigas 88.32 6 *eP* **P 10 37 21.8 -0.6**
LRS Lares 89.21 61 *eP* **P 10 37 27.0 0.0**
ESDC Sonseca Array 89.23 3 P **P 10 37 25.7 -1.0**
comp=Z,8.2nm,0.8s,mb5.1,baz=357,slow=4.1,SNR=19
PMRV Marv??o 89.30 6 *eP* **P 10 37 26.9 -0.1**
OBIP Obispado Ponce 89.55 61 *eP* **P 10 37 28.6 +0.1**
STKA Stephens Creek 89.69 212 *eP* **P 10 37 27.7 -1.0**
comp=Z,13nm,1.1s,mb5.2
STKA Stephens Creek 89.69 212 P **P 10 37 27.9 -0.8**
comp=Z,10nm,0.8s,mb5.2,baz=346,slow=5.4,SNR=20
PESTR Estremoz 89.84 6 *eP* **P 10 37 28.4 -1.2**
HUMP Col San Antoni 89.88 61 *eP* **P 10 37 30.0 0.0**
comp=Z,54nm,1.1s,mb5.8
MMAI Mount Meron Ar 90.52 331 P **P 10 37 32.2 -0.7**
comp=Z,2.6nm,0.7s,mb4.7,baz=13,slow=7.7,SNR=5.0
PBAR Barrancos 90.57 6 *eP* **P 10 37 32.2 -0.8**
comp=Z,90nm,1.8s,mb5.8
PBEJ Beja 90.66 7 *eP* **P 10 37 33.3 -0.1**
CDVI St. Croix 90.79 60 *eP* **P 10 37 34.1 -0.2**
ASF Jabal al Asfar 90.84 330 P **P 10 37 33.6 -0.8**
comp=Z,4.9nm,0.9s,mb4.8,baz=315,slow=4.8,SNR=10
ASF Jabal al Asfar 90.84 330 P **P 10 37 33.6 -0.8**
ASF pmax pmax
comp=Z,5.0nm,0.9s
KEST Kesra 92.90 353 P **P 10 37 43.1 -0.7**
comp=Z,2.7nm,0.9s,mb4.7,baz=6.0,slow=4.5,SNR=5.0
TORD Torodi Ar. Bea 115.73 359 PKP PKPdf 10 43 11.6 -1.8
comp=Z,2.7nm,0.8s,baz=342,slow=2.5,SNR=12
TORD PKKPbc PKKPbc 10 53 42.1 -1.3
comp=Z,0.9nm,0.7s,baz=180,slow=2.4,SNR=5.4
DBIC Dimbokro 121.99 6 PKP PKPdf 10 43 24.5 -1.0
comp=Z,11nm,0.8s,baz=331,slow=2.6,SNR=35
DBIC Dimbokro 121.99 6 PKIKP PKPdf 10 43 24.5 -1.0
DBIC pmax pmax
comp=Z,11nm,0.8s
TIC Toumodi 122.00 6 *e*PKP1 PKPdf 10 43 23.7 -1.8
comp=Z,32nm,0.3s
KIC Kosan Boka 122.31 6 *e*PKP1 PKPdf 10 43 24.7 -1.4
comp=Z,88nm,1.0s
LIC Lamto 122.42 7 *e*PKP1 PKPdf 10 43 24.8 -1.5
comp=Z,48nm,0.9s
LIC Lamto 122.42 7 *e*PKIKP PKPdf 10 43 24.9 -1.4
comp=Z,33nm,0.9s
BDFB Brasilia 127.50 65 PKP PKPdf 10 43 34.5 -1.4
comp=Z,0.5nm,0.3s,baz=360,slow=24,SNR=3.2
BDFB Brasilia 127.50 65 PKIKP PKPdf 10 43 34.5 -1.4
BDFB pmax pmax
comp=Z,1.0nm,0.3s
CPUP Villa Florida 130.04 83 PKP PKPdf 10 43 39.7 -0.7
comp=Z,2.2nm,0.8s,baz=268,slow=1.5,SNR=5.3
CPUP Villa Florida 130.04 83 PKIKP PKPdf 10 43 39.7 -0.7
CPUP pmax pmax
comp=Z,2.0nm,0.8s
TRQA Tornquist 134.99 98 *e*PKPdf PKPdf 10 43 48.7 -0.7
LBTB Lobatse 147.41 314 PKP2 PKPab 10 44 14.8 -1.7
LBTB Lobatse 147.41 314 *e*PKPbc PKPbc 10 44 15.1 +0.6
BOSA Boshof 150.64 311 PKPbc PKPbc 10 44 22.6 +0.1
comp=Z,18nm,0.6s,baz=14,slow=2.0,SNR=20
BOSA PKPab PKPab 10 44 30.2 +0.7
comp=Z,20nm,0.7s,baz=88,slow=3.7,SNR=14
VNA3 Neumayer Olymp 159.55 171 *e*PKPdf PKPdf 10 44 25.3 -2.6
VNA3 *e* 10 44 33.6
VNA3 *e* 10 44 42.0
VNA3 *e* 10 45 21.1
VNA2 Neumayer--Watz 160.06 172 *e*PKPdf PKPdf 10 44 26.5 -2.0
baz=336,slow=0.5
VNA2 *e* 10 44 34.9
VNA2 *e* 10 44 43.3
VNA2 *e* 10 45 07.1
VNA2 *e* 10 45 21.9
VNA1 Neumayer--Stat 160.25 171 *e*PKPdf PKPab 10 45 20.9 +11

IDC ***19*** *10:31:40.6±0.8,5111N×179.19W,h0km,mb4.1/20, mb1 4.2/21,mb1mx4.2/29,mbtmp4.1/21,MS4.9/1, Ms1 4.9/1,ms1mx3.7/45,Error ellipse: s-maj=24.1km s-min=14.5km az=174.0*

NEIC ***19*** *10:31:45.3±0.6,5107N×17925W,h30km,ML3.9(AEIC), Error ellipse: s-maj=15.7km s-min=6.6km az=178.0*

ISCJB ***19*** *10:31:46.7±1.1,512N±0.1×17921W±008,h58km±9km, mb4.1/21,Error ellipse: s-maj=21.7km s-min=8.0km az=176.0*

ISC 19 10:31:48.1±1.1,511N±01×17919W±008,h54km±8km,n37, σ0s88/38,mb4.1/21,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.74**	**63**	P	**Pn**	**10 32 15.6**	**-0.2**
ADK				S	**Sn**	**10 32 38.2**	**+1.3**
ATKA	**Atka Island**	**3.29**	**69**	P	**Pn**	**10 32 36.4**	**-0.6**
SMY	**Shemya**	**4.46**	**294**	P	**Pn**	**10 32 51.9**	**-1.1**
FX1	**Attu Island--F**	**5.04**	**293**	Pn	**Pn**	**10 33 01.0**	**0.0**
	3.6nm,0.3s,baz=232,slow=2.4,SNR=6.8						
FX1				Sn	**Sn**	**10 34 08.7**	**+11**
	3.3nm,0.3s,baz=108,slow=20,SNR=3.7						
FX1				LR	LR	10 34 20.0	
	comp=Z,12μm,18.9s,baz=148,slow=32						
FX1	**Attu Island--F**	**5.04**	**293**	P	**Pn**	**10 32 59.3**	**-1.7**
NIKO	**Nikolski**	**6.64**	**70**	P	**Pn**	**10 33 22.9**	**0.0**
PETK	**Petropavlovsk-**	**14.33**	**287**	Pn	**Pn**	**10 35 09.7**	**+2.0**
	0.1nm,0.3s,baz=108,slow=23,SNR=4.3						
KDAK	**Kodiak Island**	**16.77**	**56**	Pn	**Pn**	**10 35 34.5**	**-4.3**
	1.8nm,0.3s,baz=285,slow=9.5,SNR=8.6						
DAWY	**Dawson**	**24.46**	**43**	*e*P	**P**	**10 37 00.6**	**-0.8**
INK	**Inuvik**	**27.81**	**35**	P	**P**	**10 37 29.7**	**-1.8**
	2.1nm,0.8s,mb3.8,baz=246,slow=7.7,SNR=3.2						
YKA	**Yellowknife Ar**	**35.59**	**46**	P	**P**	**10 38 39.5**	**-0.3**
	2.1nm,0.7s,mb4.2,baz=283,slow=7.6,SNR=11						
YKA	**Yellowknife Ar**	**35.59**	**46**	P	**P**	**10 38 39.5**	**-0.3**
KSRS	**Korea Array**	**39.40**	**271**	P	**P**	**10 39 13.5**	**+1.2**
	1.8nm,1.0s,mb3.8,baz=57,slow=8.9,SNR=4.6						
NVAR	**Mina Array Bea**	**43.83**	**82**	P	**P**	**10 39 50.0**	**+1.5**
	0.6nm,0.7s,mb3.5,baz=311,slow=7.6,SNR=2.5						
RLMT	**Red Lodge**	**45.45**	**69**	*e*P	**P**	**10 39 57.6**	**-3.7**
	5.0nm,0.6s,mb4.5						
SONM	**Songino Array**	**46.54**	**297**	P	**P**	**10 40 10.8**	**+0.9**
	0.9nm,0.6s,mb3.9,baz=58,slow=9.8,SNR=3.7						
PDAR	**Pinedale Array**	**46.62**	**72**	P	**P**	**10 40 11.7**	**+1.1**
	4.5nm,0.9s,mb4.4,baz=306,slow=3.1,SNR=20						
SPB4	**Spitsbergen Ar**	**50.61**	**356**	*e*P	**P**	**10 40 40.9**	**+0.1**
SPITS	**Spitsbergen Ar**	**50.61**	**356**	P	**P**	**10 40 40.9**	**+0.1**
	26nm,1.1s,mb5.1,baz=51,slow=6.2,SNR=12						
ZALV	**Zalesovo Beam**	**54.03**	**313**	P	**P**	**10 41 06.3**	**0.0**
	0.3nm,0.3s,mb3.7,baz=52,slow=12,SNR=2.1						
ARCES	**ARCESS Array B**	**58.30**	**350**	P	**P**	**10 41 36.0**	**-0.6**
	3.6nm,0.8s,mb4.4,baz=13,slow=8.6,SNR=3.6						
TXAR	**Lajitas Array**	**58.93**	**81**	P	**P**	**10 41 41.5**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=309,slow=6.1,SNR=9.1						
TXAR	**Lajitas Array**	**58.93**	**81**	P	**P**	**10 41 41.5**	**-0.1**
KURK	**Kurchatov**	**59.02**	**314**	P	**P**	**10 41 42.8**	**+0.9**
	3.7nm,0.6s,mb4.6,baz=42,slow=6.8,SNR=8.3						
MKAR	**Makanchi Array**	**60.00**	**308**	P	**P**	**10 41 48.6**	**-0.1**
	1.2nm,0.6s,mb4.1,baz=51,slow=6.6,SNR=19						
SCHQ	**Scheffervill e**	**60.36**	**38**	P	**P**	**10 41 50.7**	**-0.2**
	8.3nm,1.1s,mb4.7,baz=5.7,slow=10,SNR=2.3						
BVAR	**Borovoye Array**	**60.93**	**320**	P	**P**	**10 41 55.1**	**+0.3**
	0.8nm,0.3s,mb4.3,baz=63,slow=6.8,SNR=5.4						
AKTK	**Aktyubinsk**	**67.75**	**324**	P	**P**	**10 42 39.4**	**-0.1**
AKTO	**Aktyubinsk**	**67.75**	**324**	P	**P**	**10 42 39.4**	**-0.1**
	0.9nm,0.6s,mb4.0,baz=40,slow=12,SNR=4.4						
NOA	**NORSAR Array B**	**67.88**	**355**	P	**P**	**10 42 39.7**	**-0.4**
	1.3nm,0.9s,mb4.0,baz=8.1,slow=6.4,SNR=5.5						
NOA	**NORSAR Array B**	**67.88**	**355**	P	**P**	**10 42 39.7**	**-0.4**
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**10 43 27.2**	**0.0**
	6.4nm,0.3s,mb5.0,baz=20,slow=6.6,SNR=17						
WRA	**Warramunga Arr**	**81.66**	**224**	P	**P**	**10 43 58.9**	**-1.3**
	0.3nm,0.6s,mb3.4,baz=32,slow=5.9,SNR=4.4						
WRA	**Warramunga Arr**	**81.66**	**224**	P	**P**	**10 43 58.9**	**-1.3**
BRTR	**Keskin Array B**	**85.08**	**335**	P	**P**	**10 44 18.4**	**+0.6**
	1.3nm,0.8s,mb4.1,baz=98,slow=2.5,SNR=4.9						
ASAR	**Alice Springs**	**85.13**	**222**	P	**P**	**10 44 17.4**	**-0.6**
	0.1nm,0.5s,mb3.2,baz=26,slow=5.5,SNR=4.3						
BOSA	**Boshof**	**150.97**	**311**	PKPbc	PKPbc	10 51 35.8	+1.4
	1.6nm,0.7s,baz=45,slow=5.7,SNR=3.1						
BOSA				PKPab	PKPab	10 51 42.6	+0.7
	2.0nm,0.8s,baz=308,slow=0.8,SNR=3.6						

NNC ***19*** *10:43:47.7±13.0,3776N×72.13E,h173km±174km,mb2.6, mpv3.5,Error ellipse: s-maj=134.1km s-min=62.6km az=1.0*

ISC 19 10:43:50.3±2.6,379N±02×723E±02,h218km±33km,n11, σ0s79/13,3C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.36**	**14**	P	**Pn**	**10 44 57.0**	**0.0**
	SNR=104						
UCH	**Uchtor**	**4.64**	**21**	P	**S**	**10 45 58.0**	**+1.7**
	SNR=5.8						
EKS2	**Erkin-Say**	**4.89**	**13**	P	**Pn**	**10 45 03.6**	**+0.1**
	SNR=13						
AAK	**Ala-Archa**	**5.02**	**19**	P	**Pn**	**10 45 05.7**	**+0.4**
	SNR=14						
KBK	**Karagaybulak**	**5.17**	**23**	P	**Pn**	**10 45 08.2**	**+1.1**
	SNR=7.7						
ULHL	**Ulahol**	**5.30**	**34**	P	**Pn**	**10 45 07.8**	**-1.0**
	SNR=7.8						
KK31	**Karatay Array**	**5.36**	**346**	Pn	**Pn**	**10 45 08.8**	**-0.8**
	1.1nm,0.4s,baz=164,slow=13,SNR=26						
KK31				⇑Sn	**S**	**10 46 12.2**	**-0.3**
	4.5nm,0.3s,baz=172,slow=24,SNR=7.1						
TKM2	**Tokmak 2**	**5.61**	**26**	⇑Pn	**Pn**	**10 45 12.1**	**-0.6**
	9.4nm,0.8s						

TKM2 ⇑Sn S 10 46 17.0 -1.3
2.0nm,0.7s
TKM2 Tokmak 2 5.61 26 P Pn 10 45 12.9 +0.1
SNR=5.6
AB09 Akbulak array 14.43 326 ⇓P Pn 10 47 04.8 +0.3
0.9nm,0.5s
AKTO Aktyubinsk 16.13 325 ⇓P P 10 47 24.3 +0.1
0.6nm,0.7s

NEIC ***19*** *10:56:37.5±0.3,5109N×17989E,h30km,mb4.9/36, ML4.6(AEIC),Error ellipse: s-maj=10.8km s-min=4.3km az=176.0*
BJI ***19*** *10:56:37.4,51.10N×179.90E,h30km,mB5.2,mb4.6,Ms5.3, Msz5.3*
ISCJB ***19*** *10:56:39.3±0.8,5126N±.006×17998W±.003,h53km±.6km, mb4.7/72,MS5.1/4,Error ellipse: s-maj=10.1km s-min=3.1km az=6.9*
MOS ***19*** *10:56:39.0±0.9,5123N×179.97W,h54km,mb4.8/37,Error ellipse: s-maj=11.4km s-min=7.0km az=106.7*
IDC ***19*** *10:56:40.4±2.6,5121N×179.99W,h55km±.22km,mb4.1/22, mb1 4.2/24,mb1mx4.2/30,mbtmp4.1/24,ML3.7/2,Error ellipse: s-maj=19.9km s-min=11.5km az=176.0*
ISC 19 10:56:41.9±0.7,5134N±.007×17997W±.003,h59km±.5km, n482,σ0.58/482,mb4.7/72,MS5.1/4,156C-149D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**2.12**	**74**	P	**Pn**	**10 57 13.5**	**-1.4**
ADK				S	**Sn**	**10 57 40.1**	**+0.1**
ATKA	**Atka Island**	**3.69**	**74**	P	**Pn**	**10 57 35.5**	**-0.8**
SMY	**Shemya**	**3.92**	**293**	P	**Pn**	**10 57 39.6**	**+0.2**
FX1	**Attu Island--F**	**4.51**	**293**	P	**Pn**	**10 57 46.9**	**-0.6**
	27nm,0.3s,baz=86,slow=8.9,SNR=30						
FX1				S	**Sn**	**10 58 45.8**	**+7.3**
	14nm,0.3s,baz=246,slow=20,SNR=5.1						
FX1	**Attu Island--F**	**4.51**	**293**	P	**Pn**	**10 57 46.9**	**-0.6**
FX1				S	**Sn**	**10 58 45.8**	**+7.3**
FX1				pmax	pmax		
	comp=Z,27nm,0.3s						
FX1				smax			
	comp=N,15nm,0.3s						
NIKO	**Nikolski**	**7.03**	**72**	P	**Pn**	**10 58 21.3**	**-0.8**
OKCE	**Okmok Cone E**	**7.52**	**69**	P	**Pn**	**10 58 29.7**	**+1.0**
OKCD	**Okmok Cone D**	**7.55**	**69**	P	**Pn**	**10 58 29.5**	**+0.3**
SPIA	**Saint Paul Isl**	**8.16**	**40**	P	**Pn**	**10 58 38.7**	**+1.3**
UNV	**Unalaska Valle**	**8.57**	**68**	P	**Pn**	**10 58 43.3**	**+0.2**
AKUT	**Akutan**	**9.06**	**66**	*e*Pn	**Pn**	**10 58 50.4**	**+0.6**
PETK	**Petropavlovsk-**	**13.79**	**286**	P	**Pn**	**10 59 54.6**	**+0.3**
	comp=N,0.1nm,0.3s,baz=98,slow=17,SNR=3.4						
SVW2	**Sparrevohn**	**16.61**	**45**	*e*P	**Pn**	**11 00 33.1**	**+2.7**
KDAK	**Kodiak Island**	**17.06**	**57**	P	**Pn**	**11 00 31.5**	**-4.5**
	comp=N,2.1nm,0.3s,baz=166,slow=1.5,SNR=22						
KDAK				S	**S**	**11 03 42.9**	**-8.6**
	comp=N,0.1nm,0.3s,baz=0.0,slow=20,SNR=2.4						
BILL	**Bilibino**	**18.05**	**343**	⇑*i*P	**Pn**	**11 00 49.3**	**+1.2**
BILL				pmax	pmax		
	comp=Z,26nm,1.3s						
BILL	**Bilibino**	**18.05**	**343**	*e*P	**Pn**	**11 00 49.7**	**+1.6**
	comp=Z,102nm,1.8s						
COLA	**College**	**21.40**	**38**	⇑*e*P	**P**	**11 01 18.1**	**-6.1**
COLA	**College**	**21.40**	**38**	*e*P	**P**	**11 01 18.0**	**-6.3**
	comp=Z,17nm,1.0s,mb4.3						
MENT	**Mentasta**	**22.49**	**45**	*e*P	**P**	**11 01 35.4**	**-0.5**
EGAK	**Eagle**	**24.06**	**41**	*e*P	**P**	**11 01 50.4**	**-0.7**
	comp=Z,32nm,0.9s,mb4.8						
YSS	**Yuzh-Sakhalins**	**24.59**	**274**	*i*P	**P**	**11 01 55.7**	**-0.4**
YSS				pmax	pmax		
	comp=Z,37nm,1.7s,mb4.6						
INK	**Inuvik**	**27.91**	**35**	P	**P**	**11 02 25.9**	**+0.1**
	comp=Z,1.7nm,0.5s,mb4.0,baz=241,slow=6.3,SNR=11						
INK				PcP	PcP	11 05 39.4	-0.3
	comp=Z,2.4nm,1.1s,baz=241,slow=0.1,SNR=4.2						
INK	**Inuvik**	**27.91**	**35**	P	**P**	**11 02 26.0**	**+0.2**
INK						11 05 39.4	
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HABR	**Khabarovsk**	**28.77**	**282**	*e*P	**P**	**11 02 32.7**	**-0.9**
HABR				*e*		11 03 26.8	
HABR				MLR	MLR		
	comp=Z,2μm,13.0s,MS4.9						
YAK	**Yakutsk**	**28.89**	**311**	⇑*e*P	**P**	**11 02 34.1**	**-0.5**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
KLR	**Kul'dur**	**30.48**	**285**	*e*P	**P**	**11 02 43.8**	**-5.0**
MDJ	**Mudanjiang**	**33.86**	**279**	P	**P**	**11 03 18.8**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.2						
YKA	**Yellowknife Ar**	**35.79**	**46**	P	**P**	**11 03 34.0**	**-0.8**
	comp=Z,8.6nm,0.8s,mb4.7,baz=282,slow=8.3,SNR=98						
YKA				PcP	PcP	11 06 01.3	+0.2
	comp=Z,1.5nm,0.8s,baz=289,slow=2.9,SNR=12						
YKA				ScP	ScP	11 09 41.6	-0.3
	comp=Z,0.4nm,0.9s,baz=287,slow=3.1,SNR=3.6						
YKA	**Yellowknife Ar**	**35.79**	**46**	P	**P**	**11 03 34.0**	**-0.8**
YKA						11 06 01.3	
YKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**35.79**	**46**	P	**P**	**11 03 34.0**	**-0.8**
YKA				PcP	PcP	11 06 01.4	+0.2
YKA				ScP	ScP	11 09 41.6	-0.3
A05A	**Maple Falls**	**36.32**	**70**	⇑P	**P**	**11 03 40.2**	**+0.7**
	baz=36						
C04A	**Brinnon**	**36.38**	**73**	⇓P	**P**	**11 03 40.8**	**+0.8**
	baz=36						
A06A	**Chilliwack**	**36.64**	**70**	⇑P	**P**	**11 03 43.0**	**+0.7**
	baz=36						
B05A	**Bryant**	**36.65**	**71**	⇓P	**P**	**11 03 43.0**	**+0.6**
	baz=36,SNR=5.8						
CN2	**Changchun**	**36.84**	**280**	*e*P	**P**	**11 03 49.8**	**+5.8**
E04A	**Onalaska**	**37.06**	**74**	⇓P	**P**	**11 03 46.1**	**+0.3**
	baz=37						
C05A	**Tolt Reservoir**	**37.15**	**72**	⇓P	**P**	**11 03 47.2**	**+0.5**
	baz=37						
D05A	**Enumclaw**	**37.21**	**73**	⇓P	**P**	**11 03 48.1**	**+1.0**
	baz=37,SNR=5.4						
A07A	**Ashnola River,**	**37.30**	**69**	⇑P	**P**	**11 03 48.0**	**+0.1**
	baz=37,SNR=5.9						
BOD	**Bodaibo**	**37.41**	**306**	*e*P	**P**	**11 03 47.2**	**-1.5**
BOD				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
F04A	**Amboy**	**37.56**	**75**	⇑P	**P**	**11 03 50.6**	**+0.5**
	baz=37						
HIA	**Hailar**	**37.62**	**291**	⇓*e*P	**P**	**11 03 49.7**	**-0.8**
HIA	**Hailar**	**37.62**	**291**	*e*P	**P**	**11 03 48.9**	**-1.7**
	comp=Z,4.8nm,0.3s,mb4.7						
B07A	**Winthrop**	**37.73**	**70**	⇓P	**P**	**11 03 51.4**	**-0.1**
	baz=38,SNR=7.0						
G04A	**Mulino**	**37.89**	**76**	⇑P	**P**	**11 03 53.5**	**+0.6**
	baz=38						
A08A	**Turner Farm, O**	**38.00**	**69**	⇑P	**P**	**11 03 53.9**	**+0.2**
	baz=38						
C07A	**Waterville**	**38.12**	**71**	⇑P	**P**	**11 03 54.9**	**+0.1**
	baz=38,SNR=6.6						
F05A	**White Salmon**	**38.17**	**75**	⇓P	**P**	**11 03 55.9**	**+0.7**
	baz=38						
B08A	**Colville Reser**	**38.24**	**70**	⇓P	**P**	**11 03 55.9**	**+0.1**
	baz=38,SNR=8.9						
H04A	**Detroit Lake**	**38.34**	**77**	⇑P	**P**	**11 03 57.6**	**+1.0**
	baz=38						
A09A	**Danville**	**38.39**	**69**	⇑P	**P**	**11 03 57.0**	**0.0**
	baz=38						
D07A	**Quincy**	**38.42**	**72**	⇓P	**P**	**11 03 57.3**	**0.0**
	baz=38,SNR=5.7						
G05A	**Wamic**	**38.58**	**75**	⇑P	**P**	**11 03 59.5**	**+0.8**
	baz=38						
F06A	**Goldendale**	**38.64**	**74**	⇓P	**P**	**11 03 59.4**	**+0.2**
	baz=38						
C08A	**Higginbotham F**	**38.68**	**71**	⇓P	**P**	**11 03 59.4**	**-0.1**
	baz=38						
E07A	**Sunnyside**	**38.80**	**73**	⇓P	**P**	**11 04 00.9**	**+0.5**
	baz=39						
B09A	**Rice**	**38.91**	**69**	⇓P	**P**	**11 04 01.3**	**0.0**
	baz=39						
KSRS	**Korea Array**	**38.91**	**270**	P	**P**	**11 04 01.1**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.0,baz=68,slow=7.5,SNR=5.9						
KSRS	**Korea Array**	**38.91**	**270**	P	**P**	**11 04 01.1**	**-0.4**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
H05A	**Madras**	**38.94**	**76**	⇓P	**P**	**11 04 02.1**	**+0.4**
	baz=39						
A10A	**Northport**	**38.99**	**68**	⇑P	**P**	**11 04 02.0**	**0.0**
	baz=39						
G06A	**Carlson Farm,**	**39.00**	**75**	⇓P	**P**	**11 04 02.4**	**+0.3**
	baz=39						
HAWA	**Hanford**	**39.08**	**73**	*e*P	**P**	**11 04 03.1**	**+0.3**
	comp=Z,15nm,1.0s,mb4.7						
F07A	**Phinny Hill Vi**	**39.09**	**74**	⇑P	**P**	**11 04 03.4**	**+0.5**
	baz=39						
D08A	**Wollman Farm,**	**39.11**	**72**	⇓P	**P**	**11 04 02.8**	**-0.3**
	baz=39,SNR=5.2						
C09A	**Chrisman Ranch**	**39.13**	**70**	⇓P	**P**	**11 04 03.1**	**-0.2**
	baz=39,SNR=6.2						
I05A	**Bend**	**39.17**	**77**	⇓P	**P**	**11 04 04.4**	**+0.8**
	baz=39						
E08A	**Dider Farm, El**	**39.31**	**72**	⇑P	**P**	**11 04 04.8**	**0.0**
	baz=39,SNR=6.4						
H06A	**Lindquist Farm**	**39.44**	**75**	⇑P	**P**	**11 04 06.4**	**+0.5**
	baz=39						
D09A	**Jones Farm, Ri**	**39.47**	**71**	⇑P	**P**	**11 04 06.0**	**-0.1**
	baz=39						
B10A	**Chitwood Farm,**	**39.51**	**69**	⇑P	**P**	**11 04 06.4**	**0.0**
	baz=39						
G07A	**Ruggs Ranch, H**	**39.57**	**74**	⇓P	**P**	**11 04 07.2**	**+0.3**
	baz=39						
C10A	**Spilker Farm,**	**39.69**	**70**	⇑P	**P**	**11 04 07.7**	**-0.2**
	baz=40						
A11A	**Hall Mountain,**	**39.69**	**68**	⇓P	**P**	**11 04 08.0**	**+0.1**
	baz=40						
F08A	**Pendleton**	**39.83**	**73**	⇑P	**P**	**11 04 09.5**	**+0.4**
	baz=40						
E09A	**Wood Farm, Sta**	**39.84**	**72**	⇓P	**P**	**11 04 09.0**	**-0.2**
	baz=40,SNR=6.9						
I06A	**Prineville**	**39.94**	**76**	⇓P	**P**	**11 04 10.4**	**+0.4**
	baz=40						
B11A	**Sandpoint**	**39.94**	**68**	⇑P	**P**	**11 04 09.8**	**-0.2**
	baz=40						
G08A	**Pilot Rock**	**39.98**	**74**	⇓P	**P**	**11 04 09.7**	**-0.6**
	baz=40						
D10A	**Wagner Farm, O**	**40.09**	**71**	⇓P	**P**	**11 04 10.6**	**-0.6**
	baz=40,SNR=11						
A12A	**Yaak River Ran**	**40.12**	**67**	⇓P	**P**	**11 04 11.1**	**-0.3**
	baz=40						
I07A	**Izee**	**40.29**	**76**	⇑P	**P**	**11 04 13.4**	**+0.5**
	baz=40,SNR=5.3						
C11A	**Tepee Creek (N**	**40.30**	**69**	⇑P	**P**	**11 04 12.8**	**-0.2**
	baz=40						
J06A	**Christmas Vall**	**40.34**	**77**	⇑P	**P**	**11 04 14.0**	**+0.6**
	baz=40						
F09A	**S2 Ranch, Elgi**	**40.40**	**73**	⇑P	**P**	**11 04 13.9**	**+0.1**
	baz=40						
H08A	**Prairie City**	**40.56**	**75**	⇓P	**P**	**11 04 15.2**	**0.0**
	baz=40						
D11A	**Klaveano Farm,**	**40.65**	**70**	⇑P	**P**	**11 04 15.0**	**-0.8**
	baz=40,SNR=9.7						
F10A	**Beach Ranch, E**	**40.67**	**72**	⇑P	**P**	**11 04 15.8**	**-0.2**
	baz=40						
G09A	**Cove**	**40.70**	**73**	⇑P	**P**	**11 04 16.0**	**-0.3**
	baz=40						
J07A	**Hines**	**40.79**	**77**	⇑P	**P**	**11 04 17.8**	**+0.8**
	baz=41						
C12B	**Naegeli Ranch,**	**40.82**	**69**	⇑P	**P**	**11 04 16.8**	**-0.4**
	baz=41,SNR=11						
I08A	**Drewsey**	**40.95**	**76**	⇓P	**P**	**11 04 18.8**	**+0.4**
	baz=41,SNR=5.9						
B13A	**Whitefish**	**41.08**	**67**	⇓P	**P**	**11 04 18.3**	**-1.0**
	baz=41						
E11A	**Bogner Ranch,**	**41.08**	**71**	⇑P	**P**	**11 04 18.7**	**-0.6**
	baz=41						
G10A	**Bishop Farm, J**	**41.09**	**73**	⇓P	**P**	**11 04 19.4**	**-0.1**
	baz=41,SNR=13						
K07A	**Rock Creek Ran**	**41.21**	**77**	⇓P	**P**	**11 04 21.0**	**+0.6**
	baz=41,SNR=7.2						
J08A	**Circle Bar Ran**	**41.31**	**76**	⇓P	**P**	**11 04 21.9**	**+0.6**
	baz=41						
F11A	**Grangeville**	**41.35**	**72**	⇑P	**P**	**11 04 21.0**	**-0.6**
	baz=41,SNR=5.7						
C13A	**Hot Springs**	**41.36**	**68**	⇓P	**P**	**11 04 21.1**	**-0.5**
	baz=41,SNR=6.2						
A14A	**Double T Ranch**	**41.38**	**66**	⇓P	**P**	**11 04 21.3**	**-0.5**
	baz=41,SNR=5.5						
I09A	**Lost Marbles R**	**41.42**	**75**	⇑P	**P**	**11 04 22.3**	**+0.1**
	baz=41						
L07A	**Adell**	**41.53**	**78**	⇓P	**P**	**11 04 23.3**	**+0.2**
	baz=41						
G11A	**Walters Elk Ra**	**41.54**	**72**	⇓P	**P**	**11 04 22.9**	**-0.3**
	baz=41,SNR=8.0						
K08A	**Mann Creek Ran**	**41.65**	**77**	⇑P	**P**	**11 04 24.8**	**+0.7**
	baz=42						
H10A	**Noah's Angus R**	**41.69**	**74**	⇓P	**P**	**11 04 24.4**	**+0.1**
	baz=42,SNR=6.0						
D13A	**Huson**	**41.73**	**69**	⇑P	**P**	**11 04 24.3**	**-0.4**
	baz=42						
WVOR	**Wild Horse Val**	**41.73**	**77**	*e*P	**P**	**11 04 24.9**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
WVOR	**Wild Horse Val**	**41.73**	**77**	*e*P	**P**	**11 04 24.9**	**+0.2**
	comp=Z,8.1nm,0.8s,mb4.4						
J09A	**Fry Pan Ranch,**	**41.76**	**76**	⇑P	**P**	**11 04 25.1**	**+0.1**
	baz=42,SNR=6.6						
B14A	**Marquette Ranc**	**41.77**	**67**	⇓P	**P**	**11 04 24.2**	**-0.8**
	baz=42,SNR=5.3						
A15A	**Johnson Ranch,**	**41.77**	**66**	⇑P	**P**	**11 04 24.1**	**-1.0**
	baz=42						
I10A	**Payette**	**41.93**	**74**	⇓P	**P**	**11 04 26.6**	**+0.2**
	baz=42						
N06A	**Buffalo Meadow**	**41.95**	**80**	⇑P	**P**	**11 04 27.6**	**+1.0**
	baz=42						
M07A	**Soldier Meadow**	**41.99**	**79**	⇑P	**P**	**11 04 27.7**	**+0.7**
	baz=42,SNR=9.2						
L08A	**Fields**	**42.04**	**78**	⇓P	**P**	**11 04 27.9**	**+0.6**
	baz=42						
H11A	**Donnelly**	**42.07**	**73**	⇓P	**P**	**11 04 27.6**	**+0.1**
	baz=42						
BEKR	**Beckwourth**	**42.14**	**82**	⇑P	**P**	**11 04 28.3**	**+0.2**
	baz=42						
B15A	**Bradely Ranch,**	**42.21**	**67**	⇓P	**P**	**11 04 27.8**	**-0.8**
	baz=42,SNR=11						
E13A	**Victor**	**42.22**	**70**	⇓P	**P**	**11 04 28.4**	**-0.3**
	baz=42,SNR=15						
D14A	**Greenough**	**42.29**	**69**	⇑P	**P**	**11 04 28.6**	**-0.7**
	baz=42,SNR=17						
O06A	**Flanigan**	**42.30**	**81**	⇓P	**P**	**11 04 29.2**	**-0.2**
	baz=42						
J10A	**Berg Farm, Mel**	**42.31**	**75**	⇑P	**P**	**11 04 29.6**	**+0.1**
	baz=42						
A16A	**Wet Butte Ran**	**42.44**	**65**	⇑P	**P**	**11 04 29.4**	**-1.1**
	baz=42,SNR=8.3						
M08A	**Happy Creek Ra**	**42.45**	**78**	⇑P	**P**	**11 04 31.4**	**+0.8**
	baz=42						
C15A	**Salmond Ranch,**	**42.45**	**67**	⇑P	**P**	**11 04 30.4**	**-0.2**
	baz=42						
F13A	**Darby**	**42.48**	**71**	⇑P	**P**	**11 04 30.6**	**-0.3**
	baz=42,SNR=10						
I11A	**Placerville**	**42.53**	**74**	⇑P	**P**	**11 04 31.0**	**-0.2**
	baz=42						
L09A	**Wilkinson Ranc**	**42.55**	**77**	⇓P	**P**	**11 04 32.2**	**+0.7**
	baz=42						
K10A	**MacKenzie Ranc**	**42.61**	**76**	⇓P	**P**	**11 04 32.2**	**+0.3**
	baz=42,SNR=12						
B16A	**M & M Farms, S**	**42.65**	**66**	⇓P	**P**	**11 04 31.0**	**-1.1**
	baz=42,SNR=6.2						
E14A	**Clinton**	**42.65**	**69**	⇓P	**P**	**11 04 31.8**	**-0.4**
	baz=42,SNR=8.2						
H12A	**Diamond D Ranc**	**42.84**	**73**	⇓P	**P**	**11 04 33.7**	**-0.1**
	baz=43						
D15A	**Lincoln**	**42.89**	**68**	⇑P	**P**	**11 04 33.6**	**-0.5**
	baz=43,SNR=8.8						
MFID	**Camas Ranch**	**42.89**	**74**	⇓P	**P**	**11 04 34.3**	**+0.2**
	baz=43						
O07A	**Toulon**	**42.89**	**80**	⇑P	**P**	**11 04 35.0**	**+0.8**
	baz=43						
G13A	**Cobalt**	**42.92**	**72**	⇑P	**P**	**11 04 34.4**	**0.0**
	baz=43,SNR=17						
C16A	**Fuhringer Ranc**	**42.94**	**67**	⇓P	**P**	**11 04 34.1**	**-0.4**
	baz=43,SNR=7.1						
A17A	**Triple J Farms**	**42.95**	**65**	⇑P	**P**	**11 04 33.7**	**-0.9**
	baz=43						
N08A	**GE Springer Mi**	**42.98**	**79**	⇑P	**P**	**11 04 35.0**	**0.0**
	baz=43						
M09A	**Marrel Ranch,**	**43.03**	**78**	⇑P	**P**	**11 04 35.5**	**+0.2**
	baz=43						
F14A	**Wisdom**	**43.04**	**70**	⇑P	**P**	**11 04 35.4**	**0.0**
	baz=43,SNR=9.5						
I12A	**Atlanta**	**43.09**	**74**	P	**P**	**11 04 35.7**	**-0.1**
	baz=43						
K11A	**Parker Ranch,**	**43.12**	**75**	⇓P	**P**	**11 04 35.9**	**-0.1**
	baz=43						
E15A	**Deer Lodge**	**43.14**	**69**	⇓P	**P**	**11 04 35.7**	**-0.5**
	baz=43,SNR=14						
H13A	**Challis**	**43.19**	**72**	⇑P	**P**	**11 04 36.3**	**-0.3**
	baz=43						
B17A	**L&G Farms, Che**	**43.23**	**66**	⇓P	**P**	**11 04 36.2**	**-0.6**
	baz=43						
L10A	**Juniper Basin**	**43.25**	**76**	⇑P	**P**	**11 04 37.2**	**+0.1**
	baz=43,SNR=7.0						
O08A	**Rochester Mine**	**43.26**	**80**	⇓P	**P**	**11 04 37.8**	**+0.6**
	baz=43						
N09A	**Rock Creek Ran**	**43.32**	**79**	⇓P	**P**	**11 04 37.9**	**+0.2**
	baz=43						
J12A	**Stokes Ranch,**	**43.42**	**74**	⇑P	**P**	**11 04 38.7**	**+0.2**
	baz=43,SNR=5.6						
A18A	**Metzger Ranch,**	**43.45**	**64**	⇑P	**P**	**11 04 37.1**	**-1.5**
	baz=43						
D16A	**Dana Ranch, Ca**	**43.46**	**68**	⇑P	**P**	**11 04 38.1**	**-0.6**
	baz=43						
R06C	**Coleville**	**43.51**	**83**	⇓P	**P**	**11 04 39.9**	**+0.6**
	baz=43						
M10A	**I.L. Ranch, Tu**	**43.53**	**77**	⇓P	**P**	**11 04 39.8**	**+0.5**
	baz=43,SNR=5.4						
F15A	**Butte**	**43.54**	**70**	⇑P	**P**	**11 04 39.0**	**-0.4**
	baz=43,SNR=5.9						
C17A	**Wharram Farm,**	**43.59**	**66**	⇓P	**P**	**11 04 38.4**	**-1.4**
	baz=43						
I13A	**Wildhorse Cree**	**43.64**	**73**	⇓P	**P**	**11 04 39.8**	**-0.4**
	baz=43,SNR=9.9						
L11A	**Cat Creek Ranc**	**43.64**	**76**	⇓P	**P**	**11 04 40.3**	**+0.1**
	baz=43,SNR=11						
E16A	**East Helena**	**43.65**	**68**	⇓P	**P**	**11 04 39.9**	**-0.3**
	baz=44,SNR=7.4						
HLID	**Hailey**	**43.66**	**73**	*e*P	**P**	**11 04 40.9**	**+0.6**
	comp=Z,12nm,1.0s,mb4.6						
H14A	**Leadore**	**43.69**	**72**	⇓P	**P**	**11 04 40.2**	**-0.4**
	baz=44,SNR=15						
B18A	**Beardsley Farm**	**43.76**	**65**	⇓P	**P**	**11 04 40.2**	**-0.9**
	baz=44,SNR=6.0						
K12A	**Draper Farm, C**	**43.88**	**75**	⇓P	**P**	**11 04 42.3**	**+0.1**
	baz=44,SNR=9.1						
D17A	**Six Diamond Ra**	**43.89**	**67**	⇑P	**P**	**11 04 41.4**	**-0.7**
	baz=44						
J13A	**Cove Ranch, Pi**	**43.89**	**74**	⇑P	**P**	**11 04 42.3**	**0.0**
	baz=44,SNR=11						
G15A	**Dillon**	**43.91**	**70**	⇓P	**P**	**11 04 42.1**	**-0.3**
	baz=44,SNR=16						
O09A	**Fish Creek Ran**	**43.92**	**79**	⇑P	**P**	**11 04 42.9**	**+0.4**
	baz=44						
I14A	**Mackay**	**44.03**	**72**	⇓P	**P**	**11 04 43.4**	**0.0**
	baz=44,SNR=13						
M11A	**Holland Ranch,**	**44.04**	**77**	⇓P	**P**	**11 04 44.0**	**+0.5**
	baz=44,SNR=6.4						
F16A	**Kennard Place,**	**44.08**	**69**	⇓P	**P**	**11 04 43.3**	**-0.4**
	baz=44,SNR=7.0						
L12A	**House Creek Ra**	**44.10**	**76**	⇓P	**P**	**11 04 44.5**	**+0.5**
	baz=44,SNR=13						
H15A	**Lima**	**44.12**	**71**	⇑P	**P**	**11 04 43.9**	**-0.2**
	baz=44,SNR=7.8						
E17A	**Martinsdale**	**44.16**	**68**	⇑P	**P**	**11 04 44.1**	**-0.3**
	baz=44,SNR=12						
Q08A	**Gabbs**	**44.25**	**81**	⇑P	**P**	**11 04 45.4**	**+0.2**
	baz=44						
O10A	**Cortez Mining,**	**44.28**	**79**	⇓P	**P**	**11 04 45.8**	**+0.4**
	baz=44						
G16A	**Moss Hill, Enn**	**44.28**	**70**	⇑P	**P**	**11 04 45.0**	**-0.3**
	baz=44,SNR=15						
NVAR	**Mina Array Bea**	**44.28**	**82**	P	**P**	**11 04 45.7**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.1,baz=298,slow=7.8,SNR=12						
P09A	**Austin**	**44.33**	**80**	⇑P	**P**	**11 04 46.5**	**+0.7**
	baz=44						
J14A	**Carey**	**44.33**	**73**	⇑P	**P**	**11 04 45.8**	**+0.1**
	baz=44,SNR=6.7						
K13A	**Stover Farm, H**	**44.37**	**74**	⇑P	**P**	**11 04 46.5**	**+0.4**
	baz=44						
D18A	**Linhart Farms,**	**44.38**	**67**	⇓P	**P**	**11 04 45.7**	**-0.3**
	baz=44						
N11A	**Elko Archery C**	**44.43**	**78**	⇓P	**P**	**11 04 47.3**	**+0.7**
	baz=44						
I15A	**Monteview**	**44.56**	**72**	⇑P	**P**	**11 04 47.7**	**+0.1**
	baz=44						
F17A	**Fitzpatrick Pl**	**44.58**	**69**	⇑P	**P**	**11 04 47.6**	**-0.1**
	baz=44,SNR=14						
M12A	**Wells**	**44.58**	**76**	⇓P	**P**	**11 04 48.4**	**+0.6**
	baz=44,SNR=5.6						
E18A	**Harlowton**	**44.65**	**67**	⇓P	**P**	**11 04 47.9**	**-0.4**
	baz=44,SNR=11						
BJI	**Beijing**	**44.66**	**281**	P	**P**	**11 04 49.1**	**+0.6**
BJI				AMB	AMB		
	comp=Z,14nm,0.4s,mb5.1						
ELK	**Elko**	**44.78**	**77**	*e*P	**P**	**11 04 50.0**	**+0.6**
ELK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ELK	**Elko**	**44.78**	**77**	*e*P	**P**	**11 04 50.0**	**+0.6**
	comp=Z,7.6nm,0.9s,mb4.5						
L13A	**Double Diamond**	**44.78**	**75**	⇓P	**P**	**11 04 49.7**	**+0.3**
	baz=45,SNR=8.8						
N12A	**Clover Valley,**	**44.84**	**77**	⇑P	**P**	**11 04 50.3**	**+0.5**
	baz=45,SNR=8.8						
G17A	**Pierce Place,**	**44.86**	**69**	⇑P	**P**	**11 04 49.8**	**-0.1**
	baz=45,SNR=13						
O11A	**Cowboy Ranch,**	**44.89**	**78**	⇑P	**P**	**11 04 50.8**	**+0.6**
	baz=45						
H16A	**Russell Place,**	**44.90**	**70**	⇑P	**P**	**11 04 50.1**	**-0.2**
	ba

comp=Z,1.2nm,0.8s,baz=58,slow=1.6,SNR=3.9
SONM Songino Array 46.01 296 P **P** 11 04 59.6 +0.6
SONM 11 06 34.3
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM pmax pmax
comp=Z,1.0nm,0.8s
R11A Troy Canyon, C 46.02 80 ⇓P **P** 11 04 59.3 +0.2
baz=46,SNR=12
M15A Larsen Ranch, 46.05 75 ⇑P **P** 11 04 59.1 -0.3
baz=46,SNR=6.7
Q12A Willow Creek R 46.06 79 ⇓P **P** 11 04 59.9 +0.4
baz=46
K17A Gardner Place, 46.22 72 ⇓P **P** 11 05 00.4 -0.3
baz=46
MPMC Manual Prospec 46.27 84 ⇓P **P** 11 05 01.0 -0.2
baz=46
P13A Bates Ranch, G 46.31 78 ⇓P **P** 11 05 01.3 -0.2
baz=46,SNR=7.3
I18A Diamond G Ranc 46.32 71 ⇓P **P** 11 05 02.0 +0.6
baz=46,SNR=8.0
ZAK Zakamensk 46.35 301 *e*P **P** 11 04 58.8 -2.8
ZAK *e* 11 06 34.6
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
N15A Stansbury Isla 46.35 75 ⇓P **P** 11 05 01.6 -0.1
baz=46,SNR=7.1
FURC Furnace Creek, 46.40 83 ⇓P **P** 11 05 02.2 0.0
baz=46
J18A Kendall Valley 46.48 71 ⇑P **P** 11 05 02.6 -0.1
baz=46,SNR=12
DUG Dugway 46.59 76 *e*P **P** 11 05 03.7 0.0
DUG pmax pmax
comp=Z,25nm,1.3s,mb5.0
DUG Dugway 46.59 76 *e*P **P** 11 05 03.6 0.0
comp=Z,25nm,1.3s,mb5.0
Q13A Wheeler Ranch, 46.61 78 ⇓P **P** 11 05 04.2 +0.4
baz=46,SNR=6.0
R12A Pony Springs, 46.63 80 ⇑P **P** 11 05 04.1 +0.1
baz=46,SNR=5.6
M16A Huntsville 46.64 74 ⇓P **P** 11 05 03.8 -0.2
baz=46,SNR=6.7
EDW2 Edwards Air Fo 46.72 86 ⇓P **P** 11 05 04.4 -0.3
baz=46
U10A Ash Meadows, A 46.76 83 ⇓P **P** 11 05 05.3 +0.3
baz=47
P14A Drum Mountains 46.80 77 ⇓P **P** 11 05 05.6 +0.2
baz=47,SNR=9.4
K18A Toltan Ranch, 46.81 72 ⇑P **P** 11 05 05.2 -0.1
baz=47,SNR=13
MOY Mondy 46.88 303 *e*P **P** 11 05 06.4 +0.7
S12A Delamar Landin 46.93 80 ⇑P **P** 11 05 06.6 +0.2
baz=47
T11A Corn Creek, Al 46.93 81 ⇓P **P** 11 05 06.5 +0.2
baz=47,SNR=12
PDAR Pinedale Array 47.02 72 P **P** 11 05 06.8 -0.1
comp=Z,17nm,0.8s,mb5.0,baz=305,slow=3.8,SNR=112
Q14A Sevier Lake (B 47.05 78 ⇑P **P** 11 05 07.9 +0.7
baz=47
R13A O'Grain Ranch, 47.12 79 ⇑P **P** 11 05 08.2 +0.4
baz=47
M17A Scullys Gap (B 47.12 74 ⇑P **P** 11 05 07.6 -0.2
baz=47
GSC Goldstone 47.18 84 ⇓P **P** 11 05 08.3 0.0
baz=47
L18A Fontenelle, Gr 47.23 73 ⇑P **P** 11 05 08.7 +0.1
baz=47,SNR=5.5
P15A Leamington 47.30 77 ⇑P **P** 11 05 08.9 -0.3
baz=47
N17A Moffit Pass 47.34 74 ⇓P **P** 11 05 09.2 -0.3
baz=47
O16A Springville 47.38 75 ⇓P **P** 11 05 09.8 -0.1
baz=47
K19A Absolon Red Bu 47.41 71 ⇓P **P** 11 05 09.5 -0.5
baz=47,SNR=21
M18A Lyman 47.51 73 ⇑P **P** 11 05 09.9 -0.9
baz=47
S13A Holt Ranch, En 47.56 80 ⇓P **P** 11 05 11.5 +0.3
baz=47,SNR=11
Q15A Fillmore 47.59 77 ⇑P **P** 11 05 11.3 -0.2
baz=47
V11A Goodsprings 47.69 83 ⇑P **P** 11 05 11.4 -0.9
baz=48
HEC Hector,Ludlow 47.78 84 ⇑P **P** 11 05 12.7 -0.3
baz=48
K20A Yellowstone Ra 47.80 71 ⇑P **P** 11 05 12.3 -0.8
baz=48,SNR=8.6
O17A Robinson Place 47.85 75 ⇑P **P** 11 05 13.2 -0.2
baz=48
U12A Valley of Fire 47.87 81 ⇓P **P** 11 05 13.5 -0.1
baz=48
T13A Saint George 47.89 80 ⇓P **P** 11 05 14.1 +0.3
baz=48
N18A Larsen Ranch, 48.02 74 ⇓P **P** 11 05 14.4 -0.4
baz=48
NJ2 Nanjing 48.08 271 *e*P **P** 11 05 19.0 +3.7
NJ2 AMB AMB
comp=Z,30nm,0.5s,mb5.6
R15A Junction 48.14 78 ⇑P **P** 11 05 16.2 +0.5
baz=48
L20A Wamsutter 48.20 72 ⇓P **P** 11 05 15.7 -0.3
baz=48
GMRC Granite Mounta 48.23 84 ⇑P **P** 11 05 16.0 -0.5
baz=48
U13A Pakoon Wash 48.23 81 ⇑P **P** 11 05 16.9 +0.4
baz=48
O18A Roosevelt 48.25 74 ⇑P **P** 11 05 16.7 +0.2
baz=48
P17A Butcher Ranch, 48.30 76 ⇓P **P** 11 05 16.8 -0.1
baz=48
N19A John Jarvie Ra 48.37 73 ⇓P **P** 11 05 16.9 -0.6
baz=48
T14A Hurricane 48.37 80 ⇑P **P** 11 05 18.1 +0.6
baz=48,SNR=5.2
Q16A Castle Valley 48.38 77 ⇑P **P** 11 05 16.9 -0.7
baz=48
S15A Panguitch 48.42 79 ⇓P **P** 11 05 18.4 +0.5
baz=48
P18A Preston Nutter 48.50 75 ⇑P **P** 11 05 18.2 -0.3
baz=48
R16A Teasdale 48.58 78 ⇑P **P** 11 05 19.5 +0.4
baz=48,SNR=7.5
V13A Grand Canyon W 48.58 82 ⇑P **P** 11 05 19.4 +0.2
baz=48
M20A Sweetwater, Wa 48.60 72 ⇑P **P** 11 05 18.8 -0.4
baz=48
U14A Mt Trumbull 48.72 81 ⇑P **P** 11 05 20.3 +0.1
baz=48
L21A Rawlins 48.80 71 ⇑P **P** 11 05 20.4 -0.3
baz=49,SNR=9.0
T15A Red Dirt Ranch 48.83 79 ⇑P **P** 11 05 21.1 0.0
baz=49,SNR=5.0
S16A Weppner Ranch, 48.87 78 ⇓P **P** 11 05 21.6 +0.3
baz=49,SNR=7.8
Q18A Rafter H Ranch 48.89 76 ⇓P **P** 11 05 21.2 -0.3
baz=49,SNR=6.9
N20A Spence Gulch, 48.95 73 ⇓P **P** 11 05 21.8 -0.1
baz=49
IRM Iron Mountain 48.96 84 ⇑P **P** 11 05 21.6 -0.5
baz=49
R17A Hanksville Air 48.97 77 ⇓P **P** 11 05 22.2 +0.1
baz=49,SNR=8.5
MONP Monument Peak 49.01 86 ⇑P **P** 11 05 22.5 +0.1
baz=49
W13A Hualapai Mount 49.13 82 ⇑P **P** 11 05 22.9 -0.5
baz=49
P19A Cripple Cowboy 49.26 74 ⇑P **P** 11 05 24.2 -0.2
baz=49,SNR=9.4
U15A North Rim 49.26 80 ⇑P **P** 11 05 24.6 +0.3
baz=49,SNR=7.6
V14A Boquillas Ranc 49.27 81 ⇓P **P** 11 05 24.6 +0.1
baz=49
O20A White River Ci 49.40 74 ⇑P **P** 11 05 24.8 -0.5
baz=49
S17A Black Ridge (B 49.41 78 ⇑P **P** 11 05 25.4 0.0
baz=49,SNR=14
N21A Black Mountain 49.44 72 ⇑P **P** 11 05 25.4 -0.2
baz=49
RSSD Black Hills 49.45 67 *e*P **P** 11 05 25.0 -0.7
RSSD pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
RSSD Black Hills 49.45 67 *e*P **P** 11 05 25.0 -0.7
comp=Z,4.3nm,1.1s,mb4.4
R18A Canyonlands Na 49.49 76 ⇑P **P** 11 05 25.5 -0.5
baz=49
X13A Yucca 49.50 83 ⇓P **P** 11 05 25.9 -0.3
baz=49
Q19A Hogan Spring (49.52 75 ⇑P **P** 11 05 25.8 -0.5
baz=49
W14A Seligman 49.56 82 ⇑P **P** 11 05 26.6 0.0
baz=49
M22A Cedar Creek Ra 49.60 71 ⇓P **P** 11 05 26.1 -0.7
baz=49,SNR=7.4
Y12C Blythe 49.62 84 ⇓P **P** 11 05 26.9 -0.2
baz=49
V15A Kaibab Nationa 49.73 80 ⇓P **P** 11 05 28.3 +0.4
baz=50,SNR=12
O21A Pagoda 49.81 73 ⇑P **P** 11 05 27.5 -1.0
baz=50
T17A Navajo Res., N 49.81 78 ⇓P **P** 11 05 28.5 0.0
baz=50
S18A Hurst Farm, Bl 49.87 77 ⇑P **P** 11 05 28.8 -0.1
baz=50,SNR=11
GLA Glamis 49.89 85 ⇓P **P** 11 05 28.7 -0.5
baz=50
R19A Curley Farm, L 49.93 76 ⇓P **P** 11 05 28.9 -0.6
baz=50
Y13A Salome 50.01 84 ⇑P **P** 11 05 29.8 -0.3
baz=50
N22A Wattenberg Ran 50.05 72 ⇓P **P** 11 05 30.0 -0.3
baz=50
W15A Williams 50.09 81 ⇓P **P** 11 05 30.7 +0.1
baz=50
Q20A Ridgley Place, 50.10 75 ⇑P **P** 11 05 30.2 -0.5
baz=50
U16A Tuba City 50.16 79 ⇓P **P** 11 05 31.3 +0.1
baz=50
X14A Yava 50.16 82 ⇑P **P** 11 05 31.1 -0.1
baz=50
T18A Mexican Hat 50.30 78 ⇓P **P** 11 05 31.8 -0.3
baz=50,SNR=11
ULM Lac du Bonnet 50.32 56 P **P** 11 05 30.7 -1.4
comp=Z,4.1nm,0.9s,mb4.5,baz=263,slow=4.5,SNR=3.2
S19A Harvey Farm, M 50.36 77 ⇓P **P** 11 05 32.8 +0.2
baz=50,SNR=8.3
SPITS Spitsbergen Ar 50.36 356 P **P** 11 05 31.7 -0.5
comp=Z,1.8nm,0.3s,mb4.5,baz=72,slow=8.6,SNR=18
SPITS Spitsbergen Ar 50.36 356 P **P** 11 05 31.7 -0.5
SPITS pmax pmax
comp=Z,2.0nm,0.3s
Y14A Wickenburg 50.44 83 ⇓P **P** 11 05 33.1 -0.2
baz=50
X15A Humboldt 50.56 82 ⇑P **P** 11 05 34.3 +0.1
baz=50
W16A Flagstaff 50.60 81 ⇓P **P** 11 05 34.2 -0.2
baz=50
U18A Rough Rock, Ch 50.76 78 ⇑P **P** 11 05 35.4 -0.3
baz=51
Y15A Casa Rosa Ranc 50.85 82 ⇓P **P** 11 05 36.4 0.0
baz=51
R21A Cimarron 50.92 75 ⇓P **P** 11 05 37.2 +0.3
baz=51
T19A Beclabito 51.01 77 ⇑P **P** 11 05 37.5 0.0
baz=51,SNR=15
X16A Lo Mia Camp, P 51.10 81 ⇓P **P** 11 05 38.4 +0.1
baz=51
V18A Ganado 51.18 79 ⇑P **P** 11 05 38.8 0.0
baz=51
Y16A Circle Bar Ran 51.43 82 ⇑P **P** 11 05 40.8 0.0
baz=51
V19A Window Rock 51.72 78 ⇓P **P** 11 05 42.9 0.0
baz=52
115A Sonoran Desert 51.75 84 ⇓P **P** 11 05 43.5 +0.4
baz=52
214A Organ Pipe Nat 51.89 85 ⇑P **P** 11 05 44.3 +0.1
baz=52
W19A Sanders 51.91 79 ⇓P **P** 11 05 44.4 +0.1
baz=52
Y17A Roosevelt 51.95 82 ⇓P **P** 11 05 44.1 -0.5
baz=52
X18A Snowflake 51.95 80 ⇑P **P** 11 05 44.5 -0.1
baz=52
Y18A Canyon Day Jun 52.39 81 ⇑P **P** 11 05 47.7 -0.2
baz=52
X19A St. Johns 52.42 80 ⇓P **P** 11 05 48.1 -0.1
baz=52
Z17A San Carlos Hig 52.44 82 ⇓P **P** 11 05 48.2 0.0
baz=52
SDCO Great Sand Dun 52.56 74 *e*P **P** 11 05 49.3 +0.2
comp=Z,9.8nm,1.3s,mb4.6
216A Three Points, 52.70 84 ⇑P **P** 11 05 50.0 -0.2
baz=52
Y19A Nutrioso 52.76 80 ⇓P **P** 11 05 50.3 -0.3
baz=53
117A Oracle 52.77 83 ⇓P **P** 11 05 50.9 +0.2
baz=53
TUC Tucson 52.91 83 *e*P **P** 11 05 50.4 -1.4
TUC pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
TUC Tucson 52.91 83 *e*P **P** 11 05 50.4 -1.4
comp=Z,2.0nm,0.8s,mb4.1
XAN Xi'an 52.95 280 P **P** 11 05 52.3 +0.3
XAN AP pP 11 06 04.3 -3.3
XAN PP PP 11 07 52.6 +0.8
XAN S **S** **11 13 19.5 +2.7**
XAN SS SS 11 17 00.3 +4.3
XAN AMB AMB
comp=Z,3.0nm,1.0s,mb4.2
XAN LR LR
comp=N,453nm,20.7s,MS5.1
XAN LR LR
comp=E,2µm,19.8s,MS5.1
XAN LR LR
comp=Z,3µm,23.9s,MS5.3
118A Homack Ranch, 53.20 82 ⇑P **P** 11 05 53.4 -0.4
baz=53
217A Green Valley 53.26 83 ⇑P **P** 11 05 54.3 0.0
baz=53
ZALV Zalesovo Beam 53.52 313 P **P** 11 05 55.3 -0.7
comp=Z,1.0nm,0.4s,mb4.1,baz=46,slow=8.5,SNR=6.7
ZALV PcP PcP 11 07 01.2 -0.8
comp=Z,1.1nm,0.5s,baz=56,slow=3.7,SNR=4.3
ZALV Zalesovo Beam 53.52 313 P **P** 11 05 55.3 -0.6
ZALV 11 07 01.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
119A Ashpeak Ranch, 53.52 81 ⇑P **P** 11 05 56.1 -0.1
baz=53
218A Dragoon 53.60 83 ⇑P **P** 11 05 57.0 +0.2
baz=53
NVS Novosibirsk 53.68 315 *e*P **P** 11 05 54.2 -2.8
ANMO Albuquerque 53.81 77 *i* P **P** 11 05 51.9 -6.4
318A Bisbee 54.00 83 ⇑P **P** 11 05 59.7 -0.1
baz=54
219A White Tail Can 54.07 82 ⇓P **P** 11 06 00.5 +0.2
baz=54
319A Douglas 54.48 83 ⇑P **P** 11 06 03.2 -0.1
baz=54
GTA Gaotai 54.90 291 *e*P **P** 11 06 06.1 -0.1
GTA AP pP 11 06 18.3 -3.5
GTA XP sP 11 06 24.3 -4.2
GTA S **S** **11 13 43.3 +0.3**
GTA XS sS 11 14 06.0 -3.4
GTA SS SS 11 17 26.8 +0.2
GTA AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
GTA LR LR
comp=N,4µm,16.8s,MS5.7
GTA LR LR
comp=E,4µm,15.6s,MS5.7
GTA LR LR
comp=Z,5µm,16.2s,MS5.7
CBKS Cedar Bluff 55.30 69 *e*P **P** 11 06 09.1 +0.1
CBKS pmax pmax
comp=Z,47nm,1.1s,mb5.4
CBKS Cedar Bluff 55.30 69 *e*P **P** 11 06 09.1 +0.1
comp=Z,47nm,1.1s,mb5.4
ARCES ARCESS Array B 58.00 350 P **P** 11 06 26.7 -1.0
comp=Z,10nm,1.0s,mb4.8,baz=27,slow=8.2,SNR=8.3
ARCES ARCESS Array B 58.00 350 P **P** 11 06 26.7 -1.1
ARCES pmax pmax
comp=Z,10.0nm,1.0s
LVZ Lovozero 58.30 345 *i* P **P** 11 06 28.4 -1.4
KURK Kurchatov 58.52 313 P **P** 11 06 32.1 +0.5
comp=Z,16nm,0.8s,mb5.1,baz=43,slow=6.6,SNR=20
KURK Kurchatov 58.52 313 ⇑ *e*P **P** 11 06 31.3 -0.3
KURK pmax pmax
comp=Z,35nm,1.4s,mb5.2
TXAR Lajitas Array 59.38 80 P **P** 11 06 37.1 -0.8
comp=Z,2.1nm,0.9s,mb4.2,baz=295,slow=4.4,SNR=16
TXAR Lajitas Array 59.38 80 P **P** 11 06 37.2 -0.7
TXAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 59.48 308 P **P** 11 06 37.5 -0.9
comp=Z,4.5nm,0.7s,mb4.6,baz=56,slow=7.4,SNR=36
MKAR Makanchi Array 59.48 308 P **P** 11 06 37.5 -0.9
MKAR pmax pmax
comp=Z,5.0nm,0.7s
GYA Guiyang 59.60 275 P **P** 11 06 40.3 +0.8
GYA PCP PcP 11 07 29.0 +2.8
GYA SCP ScP 11 11 23.0 +1.4
GYA XS sS 11 15 06.8 -5.0
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA LR LR
comp=N,460nm,19.8s,MS4.7
GYA LR LR
comp=E,330nm,18.9s,MS4.7
GYA LR LR
comp=Z,430nm,19.4s,MS4.6
BVAR Borovoye Array 60.44 319 P **P** 11 06 44.4 -0.5
comp=Z,4.8nm,0.5s,mb4.8,baz=53,slow=7.6,SNR=26
BVAR Borovoye Array 60.44 319 P **P** 11 06 44.4 -0.4
BVAR pmax pmax
comp=Z,5.0nm,0.5s
KMI Kunming 63.01 277 P **P** 11 07 06.1 +3.6
KMI AMB AMB
comp=Z,12nm,1.4s,mb4.8
JOF Joensuu 63.44 345 *e*p **P** 11 07 03.6 -1.2
comp=Z,5.2nm,0.7s,mb4.8
JOF Joensuu 63.44 345 *e*P **P** 11 07 03.6 -1.2
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
KAF Kangasniemi 64.98 347 *e*p **P** 11 07 13.5 -1.4
comp=Z,5.0nm,0.7s,mb4.7
KAF Kangasniemi 64.98 347 *e*P **P** 11 07 13.5 -1.4
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
TKM2 Tokmak 2 65.57 309 P **P** 11 07 20.1 +1.1
SNR=12
USP Ospenovka 65.85 310 P **P** 11 07 21.5 +0.7
SNR=24
KBK Karagaybulak 66.09 309 P **P** 11 07 23.0 +0.7
SNR=9.8
AAK Ala-Archa 66.32 309 ⇑ *e*P **P** 11 07 23.6 -0.3
AAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
AAK Ala-Archa 66.32 309 P **P** 11 07 24.5 +0.6
SNR=12
AAK Ala-Archa 66.32 309 *e*P **P** 11 07 24.3 +0.5
comp=Z,32nm,1.4s,mb5.2
KZA Kyzart 66.37 308 P **P** 11 07 21.9 -2.3
SNR=7.8
EKS2 Erkin-Say 66.65 310 P **P** 11 07 26.7 +0.8
SNR=16
AML Almayashu 67.09 309 P **P** 11 07 30.2 +1.4
SNR=12
AKTK Aktyubinsk 67.29 324 P **P** 11 07 30.0 +0.1
AKTO Aktyubinsk 67.29 324 P **P** 11 07 30.0 +0.1
comp=Z,2.3nm,0.8s,mb4.3,baz=60,slow=6.8,SNR=6.1
AKTO Aktyubinsk 67.29 324 P **P** 11 07 30.0 +0.1
AKTO pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
NB2 NORSAR Subarra 67.61 354 P **P** 11 07 31.3 -0.4
comp=Z,15nm,0.9s,mb5.0,baz=7.3,slow=6.5
NOA NORSAR Array B 67.61 354 P **P** 11 07 31.6 -0.1
comp=Z,9.7nm,0.9s,mb4.8,baz=8.4,slow=6.3,SNR=17
NOA NORSAR Array B 67.61 354 P **P** 11 07 31.7 0.0
NOA pmax pmax
comp=Z,10.0nm,0.9s
KONO Kongsberg 69.10 355 ⇓ *e*P **P** 11 07 41.3 +0.3
CMAR Chiang Mai Arr 70.29 275 P **P** 11 07 47.7 -1.3
comp=Z,1.3nm,0.5s,mb4.1,baz=26,slow=6.8,SNR=12
CMAR Chiang Mai Arr 70.29 275 *i* P **P** 11 07 48.4 -0.6
CMAR pmax pmax
comp=Z,1.0nm,0.5s
TAPN Taplejung 70.53 290 *e*P **P** 11 07 50.6 +0.2
comp=Z,68nm,1.3s,mb5.4
ODAN Odare 71.09 289 *e*P **P** 11 07 53.9 +0.2
GUN Gumba 71.19 291 *e*P **P** 11 07 54.8 +0.5
comp=Z,33nm,0.8s,mb5.3
JIRN Jiri 71.19 291 *e*P **P** 11 07 54.6 +0.2
comp=Z,35nm,0.8s,mb5.3
RAMN Ramite 71.48 290 *e*P **P** 11 07 56.2 +0.1
comp=Z,42nm,0.9s,mb5.3
KKN Kakani 71.63 292 *e*P **P** 11 07 57.5 +0.5
comp=Z,17nm,0.8s,mb5.1
KKN Kakani 71.63 292 *e*P **P** 11 07 57.5 +0.5
KKN pmax pmax
comp=Z,17nm,0.8s,mb5.0
PKI Pulchoki 71.72 291 *e*P **P** 11 07 57.8 +0.3
GKN Gorkha 71.84 292 *e*P **P** 11 07 58.4 +0.1
DMN Daman 71.87 292 *e*P **P** 11 07 59.0 +0.6
comp=Z,15nm,0.9s,mb4.9
DANN Dangsing 72.09 293 *e*P **P** 11 08 00.1 +0.3
comp=Z,32nm,0.9s,mb5.3
KOLN Koldanda 72.62 293 *e*P **P** 11 08 03.1 +0.2
comp=Z,12nm,0.8s,mb4.9
AKASG Malin Array Be 75.36 341 P **P** 11 08 17.6 -0.9
comp=Z,2.7nm,0.6s,mb4.3,baz=21,slow=5.9,SNR=12
AKASG Malin Array Be 75.36 341 *i* P **P** 11 08 17.8 -0.7
AKASG pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 77.14 352 *e*P **P** 11 08 28.0 -0.6
BAIF Baives 78.92 357 *e*P **P** 11 08 38.8 +0.3
comp=Z,30nm,1.0s,mb4.9
BAIF Baives 78.92 357 *e*P **P** 11 08 38.8 +0.3
BAIF pmax pmax
comp=Z,15nm,1.0s,mb4.9
BAIF Baives 78.92 357 *e*P **P** 11 08 38.8 +0.3
comp=Z,15nm,1.0s,mb4.9
BUR08 Bucovina Ar. S 79.06 343 *e*P **P** 11 08 39.6 +0.3
KHC Kasperske Hory 79.24 351 ⇓ *e*P **P** 11 08 39.7 -0.5
GERES GERESS Array B 79.51 351 P **P** 11 08 41.7 -0.1
comp=Z,18nm,0.9s,mb4.0,baz=19,slow=6.2,SNR=8.9
GERES GERESS Array B 79.51 351 P **P** 11 08 41.7 0.0
GERES pmax pmax
comp=Z,2.0nm,0.9s
FLN La Foliniere 80.28 0 *e*P **P** 11 08 45.7 -0.2
comp=Z,28nm,1.0s,mb4.9
FLN La Foliniere 80.28 0 *e*P **P** 11 08 45.7 -0.2
FLN pmax pmax
comp=Z,14nm,1.0s,mb4.8
FLN La Foliniere 80.28 0 *e*P **P** 11 08 45.7 -0.2
comp=Z,14nm,1.0s,mb4.9
CDF Champ du Feu 80.44 355 *e*P **P** 11 08 46.6 -0.1
MEZF Maizieres J'vi 80.45 357 *e*P **P** 11 08 47.1 +0.3
LDF La Druitiere 80.45 0 *e*P **P** 11 08 46.4 -0.4
comp=Z,41nm,1.2s,mb4.9
LDF La Druitiere 80.45 0 *e*P **P** 11 08 46.4 -0.4
LDF pmax pmax
comp=Z,21nm,1.2s,mb4.9
LDF La Druitiere 80.45 0 *e*P **P** 11 08 46.4 -0.4
comp=Z,20nm,1.2s,mb4.9
GRR Gorron 80.65 1 *e*P **P** 11 08 47.9 0.0
ROSF Rostrenen 80.66 2 *e*P **P** 11 08 48.1 +0.2
SGMF Saint Gilles 80.76 2 *e*P **P** 11 08 48.7 +0.2
QUIF Quistinic 81.09 2 *e*P **P** 11 08 50.5 +0.3
MOTA Moosalm 81.24 352 ⇑ *i*P **P** 11 08 51.9 +0.9
comp=Z,5.5nm,0.9s,mb4.5
KBA Koelnbreinsper 81.30 351 ⇑ *i*P **P** 11 08 52.1 +0.8
comp=Z,12nm,0.7s,mb4.9
WRA Warramunga Arr 81.48 223 P **P** 11 08 49.8 -2.7
comp=Z,0.6nm,0.7s,mb3.6,baz=32,slow=6.2,SNR=5.8
WRA Warramunga Arr 81.48 223 P **P** 11 08 49.8 -2.7
WRA pmax pmax
comp=Z,1.0nm,0.7s
FETA Feichten 81.59 353 ⇓ *i*P **P** 11 08 53.2 +0.3
comp=Z,7.6nm,1.0s,mb4.6
SSF Saint Saulge 81.94 358 *e*P **P** 11 08 54.9 +0.2
comp=Z,6.1nm,0.9s,mb4.2
SSF Saint Saulge 81.94 358 *e*P **P** 11 08 54.9 +0.2
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
SSF Saint Saulge 81.94 358 *e*P **P** 11 08 54.9 +0.2
comp=Z,3.0nm,0.9s,mb4.2
AVF Avril sur Loir 82.21 358 *e*P **P** 11 08 56.1 0.0
comp=Z,29nm,1.2s,mb4.8
AVF Avril sur Loir 82.21 358 *e*P **P** 11 08 56.1 0.0
AVF pmax pmax
comp=Z,14nm,1.2s,mb4.8
AVF Avril sur Loir 82.21 358 *e*P **P** 11 08 56.1 0.0
comp=Z,14nm,1.2s,mb4.8
SMF Signal de Mont 82.34 357 *e*P **P** 11 08 57.0 +0.2
comp=Z,10nm,0.8s,mb4.5
SMF Signal de Mont 82.34 357 *e*P **P** 11 08 57.0 +0.2
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SMF Signal de Mont 82.34 357 *e*P **P** 11 08 57.0 +0.2

comp=Z,5.3nm,0.8s,mb4.5
MFF Saint Martin d 82.44 0 *eP* **P 11 08 57.4 +0.1**
LPG La Plagne 83.37 355 *eP* **P 11 09 03.4 +1.2**
RJF Les Rejaudoux 83.73 359 *eP* **P 11 09 04.0 0.0**
ORIF Oris-en-Rattie 83.99 356 *eP* **P 11 09 06.1 +0.7**
VIVF Saint-Julien-l 84.10 357 *eP* **P 11 09 06.3 +0.4**
comp=Z,18nm,1.1s,mb4.8
VIVF Saint-Julien-l 84.10 357 *eP* **P 11 09 06.3 +0.4**
VIVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
VIVF Saint-Julien-l 84.10 357 *eP* **P 11 09 06.3 +0.4**
comp=Z,8.9nm,1.1s,mb4.8
MBDF Montbardon 84.14 355 *eP* **P 11 09 06.9 +0.8**
comp=Z,20nm,1.1s,mb4.9
MBDF Montbardon 84.14 355 *eP* **P 11 09 06.9 +0.8**
MBDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
MBDF Montbardon 84.14 355 *eP* **P 11 09 06.9 +0.8**
comp=Z,10.0nm,1.1s,mb4.9
BR131 Keskin Array S 84.67 335 *eP* **P 11 09 09.2 +0.2**
comp=Z,1.3nm,0.7s,mb4.2
BRTR Keskin Array B 84.67 335 P **P 11 09 09.1 +0.2**
comp=Z,2.4nm,0.9s,mb4.3,baz=42,slow=2.6,SNR=8.3
BRTR Keskin Array B 84.67 335 P **P 11 09 09.1 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
LASF Ste Croix 84.91 357 *eP* **P 11 09 10.4 +0.4**
SMRF Simiane la Rot 84.94 356 *eP* **P 11 09 11.1 +0.9**
SBF Sospel 84.96 355 *eP* **P 11 09 10.3 0.0**
comp=Z,64nm,1.2s,mb5.3
SBF Sospel 84.96 355 *eP* **P 11 09 10.3 0.0**
SBF pmax pmax
comp=Z,32nm,1.2s,mb5.3
SBF Sospel 84.96 355 *eP* **P 11 09 10.3 0.0**
comp=Z,32nm,1.2s,mb5.3
ASAR Alice Springs 84.97 222 P **P 11 09 08.2 -2.2**
comp=Z,0.7nm,0.8s,mb3.8,baz=28,slow=5.4,SNR=6.6
ASAR Alice Springs 84.97 222 P **P 11 09 08.2 -2.2**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
LMR La Mourre 85.54 355 *eP* **P 11 09 13.2 0.0**
comp=Z,26nm,1.0s,mb5.1
LMR La Mourre 85.54 355 *eP* **P 11 09 13.2 0.0**
LMR pmax pmax
comp=Z,13nm,1.0s,mb5.1
LMR La Mourre 85.54 355 *eP* **P 11 09 13.2 0.0**
comp=Z,13nm,1.0s,mb5.1
MTLF Montolieu 85.68 358 *eP* **P 11 09 14.3 +0.4**
comp=Z,10nm,1.0s,mb4.7
MTLF Montolieu 85.68 358 *eP* **P 11 09 14.3 +0.4**
MTLF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
MTLF Montolieu 85.68 358 *eP* **P 11 09 14.3 +0.4**
comp=Z,5.3nm,1.0s,mb4.7
EPF Esparros 86.01 360 *eP* **P 11 09 15.2 -0.3**
ETSF Etsaut 86.14 0 *eP* **P 11 09 16.9 +0.7**
TORD Torodi Ar. Bea 115.77 358 PKP PKPdf 11 15 15.7 -2.0
comp=Z,0.3nm,0.5s,baz=342,slow=2.7,SNR=3.4
CPUP Villa Florida 130.33 82 PKP PKPdf 11 15 44.8 -0.3
comp=Z,0.2nm,0.3s,baz=33,slow=16,SNR=2.8
TSUM Tsumeb 145.07 330 PKPbc PKPbc 11 16 12.7 +0.8
comp=Z,12nm,1.0s,baz=359,slow=4.4,SNR=6.9
TSUM Tsumeb 145.07 330 PKPbc PKPbc 11 16 12.7 +0.8
BOSA Boshof 150.45 311 PKPbc PKPbc 11 16 26.0 -0.4
comp=Z,5.0nm,0.7s,baz=30,slow=0.4,SNR=9.1
BOSA PKPab PKPab 11 16 30.9 -2.1
comp=Z,4.1nm,0.8s,baz=356,slow=7.8,SNR=3.7
BOSA Boshof 150.45 311 PKIKP PKPbc 11 16 26.0 -0.4
BOSA 11 16 30.9
BOSA pmax pmax
comp=Z,5.0nm,0.7s
BOSA pmax pmax
comp=Z,4.0nm,0.9s

*IDC **19** 11:08:44.4±1.0,51.00N×179.25W,h0km,mb3.6/9, mb1 3.9/10,mb1mx3.7/25,mbtmp3.7/10,ML4.1/1,Error ellipse: s-maj=33.5km s-min=19.2km az=164.0*
*NEIC **19** 11:08:49.2±0.7,50.91N×179.11W,h30km, mb4.0/1, ML3.6(AEIC),Error ellipse: s-maj=20.1km s-min=7.8km az=173.0*
*ISCJB **19** 11:08:50.8±1.5,51.1N±02×179.19W±009,h60km±11km, mb3.7/10,Error ellipse: s-maj=28.6km s-min=8.6km az=172.8*

ISC 19 11:08:52.0±1.4,**510N**±02×**17916W**±009,**h56**km±11km,**n21, σ0°76/23,mb3.7**/10,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.77**	**60**	P	**Pn**	**11 09 19.4**	**-0.8**
ADK				S	**Sn**	**11 09 42.7**	**+1.3**
ATKA	**Atka Island**	**3.31**	**67**	P	**Pn**	**11 09 41.0**	**-0.2**
SMY	**Shemya**	**4.51**	**295**	P	**Pn**	**11 09 58.0**	**+0.3**
FX1	**Attu Island--F**	**5.10**	**294**	Pn	**Pn**	**11 10 06.5**	**+0.8**
	7.0nm,0.3s,baz=173,slow=23,SNR=15						
FX1				Sn	**Sn**	**11 11 09.2**	**+6.1**
	4.0nm,0.3s,baz=270,slow=20,SNR=2.5						
FX1	**Attu Island--F**	**5.10**	**294**	P	**Pn**	**11 10 04.6**	**-1.1**
PETK	**Petropavlovsk-**	**14.37**	**287**	Pn	**Pn**	**11 12 12.1**	**-0.1**
	0.2nm,0.3s,baz=104,slow=18,SNR=6.1						
KDAK	**Kodiak Island**	**16.80**	**56**	Pn	**Pn**	**11 12 41.8**	**-1.4**
	0.6nm,0.3s,baz=37,slow=20,SNR=3.9						
EGAK	**Eagle**	**23.95**	**41**	*eP*	**P**	**11 14 00.3**	**-0.3**
	1.4nm,0.3s,mb3.9						
INK	**Inuvik**	**27.87**	**35**	P	**P**	**11 14 35.7**	**-0.2**
	0.9nm,0.8s,mb3.5,baz=241,slow=9.6,SNR=3.4						
YKA	**Yellowknife Ar**	**35.63**	**46**	P	**P**	**11 15 43.4**	**-0.5**
	0.5nm,0.3s,mb3.9,baz=283,slow=7.7,SNR=16						
YKA	**Yellowknife Ar**	**35.63**	**46**	P	**P**	**11 15 43.4**	**-0.5**
SONM	**Songino Array**	**46.60**	**297**	P	**P**	**11 17 15.5**	**+1.4**
	0.4nm,0.6s,mb3.5,baz=39,slow=9.3,SNR=3.4						
PDAR	**Pinedale Array**	**46.63**	**72**	P	**P**	**11 17 15.8**	**+1.4**
	1.1nm,0.6s,mb4.0,baz=323,slow=2.9,SNR=12						
TXAR	**Lajitas Array**	**58.93**	**81**	P	**P**	**11 18 45.7**	**+0.4**
	0.2nm,0.4s,mb3.5,baz=296,slow=6.0,SNR=5.2						
TXAR	**Lajitas Array**	**58.93**	**81**	P	**P**	**11 18 45.7**	**+0.4**
MKAR	**Makanchi Array**	**60.07**	**308**	P	**P**	**11 18 52.7**	**-0.2**
	0.3nm,0.4s,mb3.7,baz=45,slow=8.0,SNR=7.9						
MKAR	**Makanchi Array**	**60.07**	**308**	P	**P**	**11 18 52.7**	**-0.2**
AKASG	**Malin Array Be**	**75.81**	**342**	P	**P**	**11 20 31.2**	**-0.4**
	1.3nm,0.4s,mb4.3,baz=20,slow=6.5,SNR=7.7						
AKASG	**Malin Array Be**	**75.81**	**342**	P	**P**	**11 20 31.2**	**-0.4**
WRA	**Warramunga Arr**	**81.61**	**224**	P	**P**	**11 21 03.1**	**-0.6**
	0.3nm,0.6s,mb3.4,baz=33,slow=5.8,SNR=3.9						
ASAR	**Alice Springs**	**85.08**	**222**	P	**P**	**11 21 21.7**	**+0.2**
	0.3nm,0.9s,mb3.4,baz=22,slow=5.6,SNR=2.9						

IDC 19 11:13:26.3±1.8,**1871S×6545E,h0km,mb3.8/5,mb1 4.0/5, mb1mx3.7/21,mbtmp3.8/5,Error ellipse: s-maj=62.5km s-min=29.3km az=41.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**49.46**	**44**	P	P	11 22 19.7	+1.2
	1.3nm,0.3s,baz=210,slow=6.3,SNR=3.5						
ASAR	**Alice Springs**	**63.48**	**108**	P	P	11 23 58.3	-0.4
	0.6nm,0.8s,baz=272,slow=6.1,SNR=8.7						
WRA	**Warramunga Arr**	**64.58**	**104**	P	P	11 24 06.1	+0.2
	1.0nm,0.9s,baz=266,slow=5.6,SNR=7.1						
ZALV	**Zalesovo Beam**	**74.25**	**12**	P	P	11 25 03.1	-1.8
	0.5nm,0.3s,baz=221,slow=5.7,SNR=4.0						
AKASG	**Malin Array Be**	**76.10**	**337**	P	P	11 25 15.7	+0.1
	0.2nm,0.3s,baz=136,slow=5.1,SNR=3.3						
YKA	**Yellowknife Ar**	**136.26**	**0**	PKP	PKPdf	11 32 50.4	+1.1
	0.2nm,0.8s,baz=337,slow=1.4,SNR=3.9						
TXAR	**Lajitas Array**	**165.50**	**319**	PKPab	PKPab	11 34 32.2	+0.6
	0.2nm,0.8s,baz=59,slow=4.8,SNR=3.5						

*IDC **19** 11:15:18.5±0.6,51.14N×178.72W,h0km,mb4.2/20, mb1 4.4/23,mb1mx4.3/28,mbtmp4.2/23,ML3.7/3,Error ellipse: s-maj=19.3km s-min=11.2km az=174.0*
*BJI **19** 11:15:21.3,51.10N×178.90W,h30km,mB5.0,mb4.8,Ms5.5, Msz5.3*
*NEIC **19** 11:15:23.4±0.5,51.11N×178.92W,h30km,mb4.8/19, ML4.4(AEIC),Error ellipse: s-maj=13.2km s-min=5.8km az=170.0*
*MOS **19** 11:15:23.9±0.9,51.25N×178.88W,h48km,mb4.8/21,Error ellipse: s-maj=12.7km s-min=8.6km az=103.8*
*ISCJB **19** 11:15:24.8±0.8,51.23N±0.06×178.93W±0.03,h51km±6km, mb4.7/59,MS5.3/3,Error ellipse: s-maj=10.7km s-min=3.3km az=5.7*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.52**	**67**	P	**Pn**	**11 15 49.5**	**-2.4**
ADK				S	**Sn**	**11 16 09.8**	**-0.8**
ATKA	**Atka Island**	**3.08**	**71**	P	**Pn**	**11 16 12.1**	**-1.0**
ATKA				S	**Sn**	**11 16 50.7**	**+2.0**
SMY	**Shemya**	**4.54**	**291**	P	**Pn**	**11 16 33.6**	**+0.5**
FX1	**Attu Island--F**	**5.12**	**291**	Pn	**Pn**	**11 16 39.2**	**-1.9**
	5.3nm,0.3s,baz=303,slow=9.2,SNR=22						
FX1				Sn	**Sn**	**11 17 43.6**	**+4.7**
	13nm,0.3s,baz=341,slow=23,SNR=6.1						
FX1	**Attu Island--F**	**5.12**	**291**	P	**Pn**	**11 16 39.2**	**-2.0**
FX1						11 17 43.7	
FX1				pmax	pmax		
	comp=Z,5.0nm,0.3s						
FX1				smax			
	comp=N,13nm,0.3s						
FX1	**Attu Island--F**	**5.12**	**291**	P	**Pn**	**11 16 41.1**	**-0.1**
NIKO	**Nikolski**	**6.43**	**71**	P	**Pn**	**11 16 58.9**	**-0.1**
OKCD	**Okmok Cone D**	**6.96**	**68**	P	**Pn**	**11 17 07.2**	**+0.9**
SPIA	**Saint Paul Isl**	**7.78**	**37**	P	**Pn**	**11 17 19.5**	**+2.0**
UNV	**Unalaska Valle**	**7.99**	**67**	P	**Pn**	**11 17 20.6**	**+0.2**
PETK	**Petropavlovsk-**	**14.43**	**286**	Pn	**Pn**	**11 18 47.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=88,slow=18,SNR=2.6						
KDAK	**Kodiak Island**	**16.54**	**57**	Pn	**Pn**	**11 19 10.4**	**-4.5**
	comp=N,2.5nm,0.3s,baz=254,slow=7.3,SNR=14						
KDAK				Sn	**Sn**	**11 22 12.0**	**-5.3**
	comp=N,0.1nm,0.3s,baz=144,slow=19,SNR=2.4						
KDAK	**Kodiak Island**	**16.54**	**57**	Pn	**Pn**	**11 19 10.4**	**-4.5**
KDAK				Sn	**Sn**	**11 22 12.0**	**-5.3**
BILL	**Bilibino**	**18.28**	**342**	*i* P	**Pn**	**11 19 39.0**	**+2.7**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BILL	**Bilibino**	**18.28**	**342**	*eP*	**Pn**	**11 19 38.2**	**+1.9**
	comp=Z,10nm,1.0s						
COLA	**College**	**21.02**	**38**	*i*eP	**P**	**11 20 06.3**	**+0.6**
COLA	**College**	**21.02**	**38**	*eP*	**P**	**11 20 05.9**	**+0.1**
	comp=Z,7.4nm,0.8s,mb4.1						
EGAK	**Eagle**	**23.66**	**41**	*eP*	**P**	**11 20 31.8**	**-1.3**
	comp=Z,8.5nm,0.6s,mb4.3						
YSS	**Yuzh-Sakhalins**	**25.25**	**275**	*i*eP	**P**	**11 20 48.5**	**+0.9**
INK	**Inuvik**	**27.57**	**35**	P	**P**	**11 21 07.5**	**-0.8**
	comp=Z,0.7nm,0.3s,mb3.8,baz=271,slow=4.8,SNR=15						
INK				PcP	PcP	11 24 23.8	-0.7
	comp=Z,1.6nm,0.8s,baz=286,slow=2.2,SNR=4.9						
INK	**Inuvik**	**27.57**	**35**	P	**P**	**11 21 07.5**	**-0.8**
INK						11 24 23.8	
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**33.69**	**261**	P	**P**	**11 22 02.0**	**-0.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=50,slow=9.3,SNR=3.4						
MJAR	**Matsushiro Arr**	**33.69**	**261**	P	**P**	**11 22 02.0**	**-0.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MDJ	**Mudanjiang**	**34.50**	**279**	P	**P**	**11 22 07.3**	**-2.3**
MDJ				AMB	AMB		
	comp=Z,6.0nm,2.2s,mb4.1						
YKA	**Yellowknife Ar**	**35.35**	**46**	P	**P**	**11 22 15.7**	**-0.9**
	comp=Z,2.5nm,0.6s,mb4.3,baz=282,slow=7.3,SNR=51						
YKA				PcP	PcP	11 24 45.8	+0.3
	comp=Z,0.4nm,0.5s,baz=284,slow=3.1,SNR=6.9						
YKA	**Yellowknife Ar**	**35.35**	**46**	P	**P**	**11 22 15.7**	**-0.9**
YKA						11 24 45.8	
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**35.35**	**46**	P	**P**	**11 22 15.7**	**-0.9**
YKA				PcP	PcP	11 24 45.8	+0.3
A05A	**Maple Falls**	**35.72**	**71**	⇓P	**P**	**11 22 20.0**	**0.0**
	baz=36						
B05A	**Bryant**	**36.04**	**72**	⇓P	**P**	**11 22 23.2**	**+0.5**
	baz=36						
B06A	**Marblemount**	**36.29**	**71**	⇓P	**P**	**11 22 24.7**	**-0.1**
	baz=36						
E04A	**Onalaska**	**36.44**	**75**	⇑P	**P**	**11 22 27.2**	**+1.0**
	baz=36						
C05A	**Tolt Reservoir**	**36.55**	**73**	⇓P	**P**	**11 22 28.0**	**+0.9**
	baz=36						
D05A	**Enumclaw**	**36.60**	**73**	⇑P	**P**	**11 22 28.1**	**+0.6**
	baz=36						
A07A	**Ashnola River,**	**36.71**	**70**	⇓P	**P**	**11 22 29.1**	**+0.7**
	baz=37						
F04A	**Amboy**	**36.95**	**76**	⇓P	**P**	**11 22 30.9**	**+0.4**
	baz=37						
E05A	**Randle**	**37.04**	**74**	⇓P	**P**	**11 22 31.8**	**+0.5**
	baz=37						
B07A	**Winthrop**	**37.13**	**71**	⇓P	**P**	**11 22 32.7**	**+0.7**
	baz=37						
G04A	**Mulino**	**37.27**	**77**	⇑P	**P**	**11 22 33.2**	**0.0**
	baz=37						
A08A	**Turner Farm, O**	**37.40**	**69**	⇓P	**P**	**11 22 34.9**	**+0.6**
	baz=37						
E06A	**Yakima**	**37.52**	**74**	⇑P	**P**	**11 22 35.9**	**+0.6**
	baz=37						
C07A	**Waterville**	**37.52**	**72**	⇑P	**P**	**11 22 35.8**	**+0.5**
	baz=37						
B08A	**Colville Reser**	**37.64**	**70**	⇓P	**P**	**11 22 36.4**	**+0.1**
	baz=38						
A09A	**Danville**	**37.80**	**69**	⇑P	**P**	**11 22 38.1**	**+0.4**
	baz=38						
D07A	**Quincy**	**37.81**	**72**	⇑P	**P**	**11 22 38.1**	**+0.3**
	baz=38						
G05A	**Wamic**	**37.96**	**76**	⇓P	**P**	**11 22 39.6**	**+0.6**
	baz=38						
F06A	**Goldendale**	**38.02**	**75**	⇓P	**P**	**11 22 40.0**	**+0.4**
	baz=38						
C08A	**Higginbotham F**	**38.08**	**71**	⇓P	**P**	**11 22 40.5**	**+0.5**
	baz=38						
E07A	**Sunnyside**	**38.19**	**73**	⇑P	**P**	**11 22 41.2**	**+0.3**
	baz=38						
HIA	**Hailar**	**38.24**	**292**	*i*eP	**P**	**11 22 40.5**	**-0.8**
HIA	**Hailar**	**38.24**	**292**	*eP*	**P**	**11 22 40.4**	**-0.9**
	comp=Z,2.4nm,0.4s,mb4.3						
B09A	**Rice**	**38.31**	**70**	⇑P	**P**	**11 22 42.3**	**+0.3**
	baz=38						
H05A	**Madras**	**38.32**	**77**	⇑P	**P**	**11 22 42.3**	**+0.2**
	baz=38						
A10A	**Northport**	**38.40**	**69**	⇓P	**P**	**11 22 42.7**	**+0.1**
	baz=38						
F07A	**Phinny Hill Vi**	**38.47**	**74**	⇑P	**P**	**11 22 43.5**	**+0.2**
	baz=38						
D08A	**Wollman Farm,**	**38.50**	**72**	⇑P	**P**	**11 22 43.6**	**0.0**
	baz=38						
C09A	**Chrisman Ranch**	**38.53**	**71**	⇑P	**P**	**11 22 43.4**	**-0.4**
	baz=38						
E08A	**Dider Farm, El**	**38.70**	**73**	⇓P	**P**	**11 22 45.5**	**+0.3**
	baz=39						
H06A	**Lindquist Farm**	**38.82**	**76**	⇓P	**P**	**11 22 46.4**	**+0.1**
	baz=39						
A11A	**Hall Mountain,**	**39.10**	**68**	⇓P	**P**	**11 22 48.5**	**-0.1**
	baz=39,SNR=6.5						
E09A	**Wood Farm, Sta**	**39.24**	**72**	⇑P	**P**	**11 22 49.7**	**0.0**
	baz=39						
G08A	**Pilot Rock**	**39.37**	**74**	⇓P	**P**	**11 22 50.9**	**+0.1**
	baz=39						
D10A	**Wagner Farm, O**	**39.48**	**71**	⇑P	**P**	**11 22 50.9**	**-0.9**
	baz=39,SNR=6.2						
A12A	**Yaak River Ran**	**39.53**	**68**	⇑P	**P**	**11 22 52.5**	**+0.4**
	baz=39						
KSRS	**Korea Array**	**39.56**	**271**	P	**P**	**11 22 52.0**	**-0.5**
	comp=Z,1.8nm,0.8s,mb3.9,baz=58,slow=8.3,SNR=5.8						
KSRS	**Korea Array**	**39.56**	**271**	P	**P**	**11 22 52.0**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
I07A	**Izee**	**39.67**	**76**	⇑P	**P**	**11 22 53.7**	**+0.4**
	baz=40						
C11A	**Tepee Creek (N**	**39.70**	**70**	⇑P	**P**	**11 22 53.0**	**-0.5**
	baz=40						
F09A	**S2 Ranch, Elgi**	**39.78**	**73**	⇓P	**P**	**11 22 54.7**	**+0.4**
	baz=40,SNR=5.2						
D11A	**Klaveano Farm,**	**40.05**	**71**	⇑P	**P**	**11 22 55.5**	**-0.9**
	baz=40						
F10A	**Beach Ranch, E**	**40.06**	**73**	⇑P	**P**	**11 22 56.6**	**0.0**
	baz=40						
G09A	**Cove**	**40.09**	**74**	⇑P	**P**	**11 22 56.7**	**-0.1**
	baz=40						
J07A	**Hines**	**40.17**	**77**	⇓P	**P**	**11 22 57.0**	**-0.4**
	baz=40						
C12B	**Naegeli Ranch,**	**40.23**	**69**	⇑P	**P**	**11 22 57.3**	**-0.6**
	baz=40						
A13A	**Flathead Natio**	**40.25**	**67**	⇑P	**P**	**11 22 57.8**	**-0.3**
	baz=40						
I08A	**Drewsey**	**40.33**	**76**	⇑P	**P**	**11 22 58.0**	**-0.8**
	baz=40						
G10A	**Bishop Farm, J**	**40.48**	**73**	⇓P	**P**	**11 22 59.5**	**-0.5**
	baz=40,SNR=12						
H09A	**Durkee**	**40.48**	**75**	⇓P	**P**	**11 23 00.1**	**+0.1**
	baz=40						
B13A	**Whitefish**	**40.49**	**68**	⇓P	**P**	**11 23 00.1**	**0.0**
	baz=40						
K07A	**Rock Creek Ran**	**40.58**	**78**	⇑P	**P**	**11 23 01.4**	**+0.5**
	baz=40						
J08A	**Circle Bar Ran**	**40.69**	**77**	⇑P	**P**	**11 23 02.1**	**+0.3**
	baz=41						
F11A	**Grangeville**	**40.74**	**72**	⇑P	**P**	**11 23 01.8**	**-0.4**
	baz=41						
C13A	**Hot Springs**	**40.77**	**69**	⇓P	**P**	**11 23 02.2**	**-0.2**
	baz=41						
I09A	**Lost Marbles R**	**40.80**	**76**	⇓P	**P**	**11 23 02.4**	**-0.3**
	baz=41						
A14A	**Double T Ranch**	**40.80**	**67**	⇑P	**P**	**11 23 02.0**	**-0.6**
	baz=41,SNR=8.2						
L07A	**Adell**	**40.90**	**79**	⇓P	**P**	**11 23 03.5**	**-0.1**
	baz=41						
G11A	**Walters Elk Ra**	**40.93**	**73**	⇓P	**P**	**11 23 03.8**	**+0.1**
	baz=41						
K08A	**Mann Creek Ran**	**41.03**	**78**	⇓P	**P**	**11 23 04.9**	**+0.3**
	baz=41						
H10A	**Noah's Angus R**	**41.07**	**74**	⇓P	**P**	**11 23 04.6**	**-0.4**
	baz=41,SNR=5.7						
D13A	**Huson**	**41.13**	**70**	⇓P	**P**	**11 23 04.8**	**-0.6**
	baz=41						
J09A	**Fry Pan Ranch,**	**41.13**	**76**	⇓P	**P**	**11 23 05.5**	**+0.1**
	baz=41						
B14A	**Marquette Ranc**	**41.19**	**67**	⇓P	**P**	**11 23 05.4**	**-0.5**
	baz=41						
A15A	**Johnson Ranch,**	**41.20**	**66**	⇓P	**P**	**11 23 05.2**	**-0.7**
	baz=41						
I10A	**Payette**	**41.31**	**75**	⇑P	**P**	**11 23 07.0**	**+0.1**
	baz=41						
M07A	**Soldier Meadow**	**41.36**	**80**	⇓P	**P**	**11 23 07.5**	**+0.2**
	baz=41						
L08A	**Fields**	**41.41**	**78**	⇑P	**P**	**11 23 08.0**	**+0.3**
	baz=41						
H11A	**Donnelly**	**41.45**	**74**	⇑P	**P**	**11 23 07.3**	**-0.8**
	baz=41						
B15A	**Bradely Ranch,**	**41.62**	**67**	⇓P	**P**	**11 23 08.7**	**-0.7**
	baz=42						
E13A	**Victor**	**41.63**	**70**	⇑P	**P**	**11 23 09.1**	**-0.3**
	baz=42						
D14A	**Greenough**	**41.70**	**69**	⇓P	**P**	**11 23 09.3**	**-0.7**
	baz=42,SNR=8.5						
A16A	**West Butte Ran**	**41.86**	**66**	⇓P	**P**	**11 23 10.8**	**-0.5**
	baz=42						
C15A	**Salmond Ranch,**	**41.87**	**68**	⇓P	**P**	**11 23 11.5**	**+0.1**
	baz=42,SNR=13						
F13A	**Darby**	**41.88**	**71**	⇑P	**P**	**11 23 11.4**	**-0.2**
	baz=42						
I11A	**Placerville**	**41.92**	**75**	⇑P	**P**	**11 23 11.3**	**-0.5**
	baz=42						
K10A	**MacKenzie Ranc**	**41.99**	**76**	⇑P	**P**	**11 23 12.4**	**0.0**
	baz=42						
E14A	**Clinton**	**42.05**	**70**	⇑P	**P**	**11 23 13.1**	**+0.2**
	baz=42						
H12A	**Diamond D Ranc**	**42.23**	**73**	⇑P	**P**	**11 23 13.8**	**-0.6**
	baz=42,SNR=5.0						
MFID	**Camas Ranch**	**42.27**	**75**	⇓P	**P**	**11 23 14.6**	**-0.1**
	baz=42						
D15A	**Lincoln**	**42.30**	**69**	⇓P	**P**	**11 23 14.6**	**-0.3**
	baz=42						
G13A	**Cobalt**	**42.31**	**72**	⇓P	**P**	**11 23 14.8**	**-0.3**
	baz=42						
C16A	**Fuhringer Ranc**	**42.35**	**67**	⇓P	**P**	**11 23 14.8**	**-0.6**
	baz=42,SNR=6.0						
A17A	**Triple J Farms**	**42.38**	**65**	⇓P	**P**	**11 23 14.5**	**-1.0**
	baz=42,SNR=8.5						
M09A	**Marrel Ranch,**	**42.40**	**79**	⇑P	**P**	**11 23 15.8**	**-0.1**
	baz=42						
F14A	**Wisdom**	**42.44**	**71**	⇓P	**P**	**11 23 15.7**	**-0.4**
	baz=42						
I12A	**Atlanta**	**42.48**	**74**	P	**P**	**11 23 16.2**	**-0.3**
	baz=42						
K11A	**Parker Ranch,**	**42.50**	**76**	⇑P	**P**	**11 23 16.6**	**0.0**
	baz=42						
E15A	**Deer Lodge**	**42.55**	**69**	⇑P	**P**	**11 23 16.5**	**-0.4**
	baz=42						
H13A	**Challis**	**42.59**	**73**	⇓P	**P**	**11 23 17.2**	**-0.1**
	baz=42						
L10A	**Juniper Basin**	**42.63**	**77**	⇑P	**P**	**11 23 17.8**	**+0.1**
	baz=42						
B17A	**L&G Farms, Che**	**42.65**	**66**	⇓P	**P**	**11 23 17.3**	**-0.4**
	baz=43						
N09A	**Rock Creek Ran**	**42.69**	**79**	⇓P	**P**	**11 23 18.7**	**+0.6**
	baz=43						
J12A	**Stokes Ranch,**	**42.80**	**75**	⇓P	**P**	**11 23 19.1**	**+0.1**
	baz=43						
D16A	**Dana Ranch, Ca**	**42.87**	**68**	⇑P	**P**	**11 23 19.4**	**-0.1**
	baz=43						
F15A	**Butte**	**42.95**	**70**	⇑P	**P**	**11 23 20.2**	**0.0**
	baz=43						
C17A	**Wharram Farm,**	**43.01**	**67**	⇓P	**P**	**11 23 20.2**	**-0.5**
	baz=43						
L11A	**Cat Creek Ranc**	**43.02**	**77**	⇑P	**P**	**11 23 20.4**	**-0.3**
	baz=43,SNR=6.0						
I13A	**Wildhorse Cree**	**43.02**	**73**	⇓P	**P**	**11 23 21.1**	**+0.3**
	baz=43,SNR=10						
HLID	**Hailey**	**43.04**	**74**	*eP*	**P**	**11 23 21.3**	**+0.3**
	comp=Z,4.6nm,0.9s,mb4.2						
H14A	**Leadore**	**43.09**	**72**	⇓P	**P**	**11 23 21.0**	**-0.4**
	baz=43						
B18A	**Beardsley Farm**	**43.18**	**66**	⇓P	**P**	**11 23 21.6**	**-0.5**
	baz=43						
K12A	**Draper Farm, C**	**43.27**	**75**	⇑P	**P**	**11 23 22.8**	**0.0**
	baz=43						
J13A	**Cove Ranch, Pi**	**43.28**	**74**	⇑P	**P**	**11 23 22.8**	**0.0**
	baz=43,SNR=14						
D17A	**Six Diamond Ra**	**43.30**	**68**	⇑P	**P**	**11 23 23.1**	**0.0**
	baz=43						
G15A	**Dillon**	**43.31**	**71**	⇑P	**P**	**11 23 22.5**	**-0.6**
	baz=43						
M11A	**Holland Ranch,**	**43.41**	**77**	⇓P	**P**	**11 23 24.3**	**+0.

M14A	**Sheep Mountain**	44.87	76	⇓P		P		11 23 35.9	+0.3
	baz=45								
H17A	**Grant Village**	44.87	71	⇑P		P		11 23 36.8	+1.1
	baz=45								
S10A	**Tonopah Range,**	45.02	82	⇓P		P		11 23 38.2	+1.4
	baz=45								
Q11A	**Duckwater**	45.04	80	⇓P		P		11 23 37.6	+0.5
	baz=45								
P12A	**McGill**	45.12	79	⇑P		P		11 23 38.6	+1.0
	baz=45								
L15A	**Malad City**	45.16	75	⇑P		P		11 23 38.7	+0.8
	baz=45								
K16A	**Soda Springs**	45.16	73	⇓P		P		11 23 39.0	+1.1
	baz=45,SNR=9.3								
O13A	**Hicks Ranch, I**	45.29	78	⇑P		P		11 23 39.1	+0.1
	baz=45								
BJI	**Beijing**	45.31	282	P		P		11 23 38.3	-0.9
BJI				S		S		11 30 14.5	-1.0
BJI				AMB		AMB			
	comp=Z,9.0nm,0.4s,mb5.0								
BJI				LR		LR			
	comp=N,4μm,18.6s,MS5.5								
BJI				LR		LR			
	comp=E,3μm,18.2s,MS5.5								
BJI				LR		LR			
	comp=Z,4μm,20.6s,MS5.3								
N14A	**Grayback Hills**	45.35	76	⇑P		P		11 23 39.3	-0.1
	baz=45								
R11A	**Troy Canyon, C**	45.38	81	⇑P		P		11 23 40.5	+0.7
	baz=45								
M15A	**Larsen Ranch,**	45.44	75	⇓P		P		11 23 40.3	+0.2
	baz=45								
P13A	**Bates Ranch, G**	45.68	79	⇓P		P		11 23 42.5	+0.5
	baz=46								
I18A	**Diamond G Ranc**	45.72	71	⇑P		P		11 23 43.0	+0.6
	baz=46								
L16A	**Fish Haven**	45.73	74	⇑P		P		11 23 42.9	+0.5
	baz=46								
N15A	**Stansbury Isla**	45.73	76	⇑P		P		11 23 42.7	+0.2
	baz=46								
J18A	**Kendall Valley**	45.88	72	⇑P		P		11 23 43.8	+0.2
	baz=46,SNR=5.9								
Q13A	**Wheeler Ranch,**	45.98	79	⇑P		P		11 23 45.1	+0.6
	baz=46								
R12A	**Pony Springs,**	46.00	80	⇑P		P		11 23 44.6	-0.1
	baz=46								
L17A	**Cokeville**	46.01	74	⇓P		P		11 23 44.5	-0.2
	baz=46								
M16A	**Huntsville**	46.02	75	⇑P		P		11 23 44.1	-0.6
	baz=46,SNR=8.1								
P14A	**Drum Mountains**	46.18	78	⇑P		P		11 23 46.2	+0.2
	baz=46								
K18A	**Toltan Ranch,**	46.20	73	⇑P		P		11 23 46.4	+0.3
	baz=46,SNR=10								
ULN	**Ulaanbaatar**	46.22	296	⇑eP		P		11 23 46.6	+0.4
ULN	**Ulaanbaatar**	46.22	296	eP		P		11 23 46.7	+0.4
	comp=Z,7.8nm,0.9s,mb4.6								
T11A	**Corn Creek, Al**	46.30	82	⇑P		P		11 23 47.2	+0.2
	baz=46								
S12A	**Delamar Landin**	46.30	81	⇓P		P		11 23 47.1	+0.1
	baz=46								
N16A	**Rees Ranch, Co**	46.39	75	⇑P		P		11 23 47.4	-0.2
	baz=46								
PDAR	**Pinedale Array**	46.41	72	P		P		11 23 47.6	-0.2
	comp=Z,14nm,0.9s,mb4.9,baz=306,slow=3.5,SNR=80								
Q14A	**Sevier Lake (B**	46.42	79	⇓P		P		11 23 48.0	+0.1
	baz=46								
R13A	**O'Grain Ranch,**	46.49	80	⇑P		P		11 23 48.4	-0.1
	baz=46								
M17A	**Scullys Gap (B**	46.51	74	⇓P		P		11 23 48.6	0.0
	baz=46								
SONM	**Songino Array**	46.61	297	P		P		11 23 49.9	+0.7
	comp=Z,4.5nm,0.8s,mb4.5,baz=60,slow=8.2,SNR=34								
SONM	**Songino Array**	46.61	297	P		P		11 23 49.9	+0.6
SONM				pmax		pmax			
	comp=Z,5.0nm,0.8s								
L18A	**Fontenelle, Gr**	46.62	73	⇓P		P		11 23 49.0	-0.5
	baz=46,SNR=6.3								
N17A	**Moffit Pass**	46.72	75	⇓P		P		11 23 50.0	-0.2
	baz=47								
K19A	**Absolon Red Bu**	46.80	72	⇓P		P		11 23 50.2	-0.6
	baz=47,SNR=20								
M18A	**Lyman**	46.90	74	⇑P		P		11 23 51.1	-0.5
	baz=47								
ZAK	**Zakamensk**	46.92	301	eP		P		11 23 49.6	-2.1
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.3s,mb4.2								
S13A	**Holt Ranch, En**	46.93	80	⇑P		P		11 23 52.3	+0.4
	baz=47								
Q15A	**Fillmore**	46.96	78	⇑P		P		11 23 52.2	0.0
	baz=47								
K20A	**Yellowstone Ra**	47.20	71	⇑P		P		11 23 53.3	-0.7
	baz=47,SNR=6.3								
M19A	**Rock Springs**	47.40	73	⇓P		P		11 23 54.7	-0.9
	baz=47								
N18A	**Larsen Ranch,**	47.41	74	⇓P		P		11 23 55.2	-0.3
	baz=47								
L20A	**Wamsutter**	47.59	72	⇑P		P		11 23 56.7	-0.3
	baz=48								
U13A	**Pakoon Wash**	47.60	82	⇓P		P		11 23 56.9	-0.2
	baz=48								
O18A	**Roosevelt**	47.63	75	⇑P		P		11 23 56.9	-0.4
	baz=48								
N19A	**John Jarvie Ra**	47.76	74	⇓P		P		11 23 58.1	-0.2
	baz=48,SNR=5.4								
109C	**Camp Elliot, M**	47.93	88	⇑P		P		11 23 59.4	-0.3
	baz=48								
R16A	**Teasdale**	47.95	78	⇑P		P		11 24 00.4	+0.6
	baz=48								
M20A	**Sweetwater, Wa**	47.99	73	⇑P		P		11 24 00.2	+0.1
	baz=48,SNR=6.1								
L21A	**Rawlins**	48.19	72	⇑P		P		11 24 01.1	-0.6
	baz=48								
T15A	**Red Dirt Ranch**	48.20	80	⇑P		P		11 24 01.9	+0.2
	baz=48								
S16A	**Weppner Ranch,**	48.24	79	⇓P		P		11 24 02.2	+0.1
	baz=48								
Q18A	**Rafter H Ranch**	48.27	76	⇓P		P		11 24 02.1	-0.2
	baz=48								
N20A	**Spence Gulch,**	48.34	73	⇓P		P		11 24 03.3	+0.5
	baz=48,SNR=5.1								
R17A	**Hanksville Air**	48.34	78	⇑P		P		11 24 02.9	+0.1
	baz=48								
MONP	**Monument Peak**	48.36	87	⇓P		P		11 24 03.2	+0.2
	baz=48								
U15A	**North Rim**	48.63	81	⇓P		P		11 24 05.4	+0.4
	baz=48								
V14A	**Boquillas Ranc**	48.63	82	⇑P		P		11 24 05.3	+0.2
	baz=48								
P19A	**Cripple Cowboy**	48.65	75	⇑P		P		11 24 05.8	+0.6
	baz=48,SNR=12								
L22A	**Ellis Ranch, M**	48.71	71	⇑P		P		11 24 05.7	0.0
	baz=49								
NJ2	**Nanjing**	48.73	272	eP		P		11 24 07.3	+1.4
NJ2				AMB		AMB			
	comp=Z,30nm,0.7s,mb5.4								
S17A	**Black Ridge (B**	48.78	78	⇑P		P		11 24 06.4	+0.2
	baz=49,SNR=8.3								
O20A	**White River Ci**	48.78	74	⇓P		P		11 24 05.7	-0.5
	baz=49,SNR=6.0								
N21A	**Black Mountain**	48.83	73	⇑P		P		11 24 06.4	-0.2
	baz=49,SNR=7.6								
R18A	**Canyonlands Na**	48.87	77	⇓P		P		11 24 06.7	-0.2
	baz=49								
M22A	**Cedar Creek Ra**	48.99	72	⇓P		P		11 24 07.3	-0.6
	baz=49								
V15A	**Kaibab Nationa**	49.09	81	⇓P		P		11 24 10.1	+1.5
	baz=49,SNR=6.0								
T17A	**Navajo Res., N**	49.18	79	⇓P		P		11 24 09.5	+0.2
	baz=49								
O21A	**Pagoda**	49.20	74	⇑P		P		11 24 09.3	-0.1
	baz=49								
S18A	**Hurst Farm, BI**	49.24	78	⇓P		P		11 24 09.8	0.0
	baz=49,SNR=7.4								
N22A	**Wattenberg Ran**	49.45	72	⇓P		P		11 24 11.0	-0.3
	baz=49								
Q20A	**Ridgley Place,**	49.48	75	⇓P		P		11 24 11.0	-0.6
	baz=49								
U17A	**Shonto**	49.52	79	⇓P		P		11 24 11.2	-0.8
	baz=49								
T18A	**Mexican Hat**	49.67	78	⇑P		P		11 24 13.0	-0.1
	baz=50								
S19A	**Harvey Farm, M**	49.73	77	⇓P		P		11 24 13.3	-0.2
	baz=50								
X15A	**Humboldt**	49.92	83	⇑P		P		11 24 15.1	+0.2
	baz=50								
Q21A	**Lamborn Mesa,**	50.00	75	⇑P		P		11 24 15.2	-0.2
	baz=50								
U18A	**Rough Rock, Ch**	50.13	79	⇑P		P		11 24 16.4	-0.1
	baz=50								
Y15A	**Casa Rosa Nanc**	50.21	83	⇓P		P		11 24 17.0	-0.2
	baz=50								
R21A	**Cimarron**	50.30	75	⇑P		P		11 24 17.6	-0.2
	baz=50								
T19A	**Beclabito**	50.38	78	⇑P		P		11 24 18.6	+0.1
	baz=50								
SPITS	**Spitsbergen Ar**	50.45	356	P		P		11 24 17.9	-0.5
	comp=Z,5.2nm,0.6s,mb4.7,baz=57,slow=7.2,SNR=13								
SPITS	**Spitsbergen Ar**	50.45	356	P		P		11 24 17.9	-0.5
SPITS				pmax		pmax			
	comp=Z,5.0nm,0.6s								
X16A	**Lo Mia Camp, P**	50.46	82	⇑P		P		11 24 19.0	0.0
	baz=50								
V18A	**Ganado**	50.55	80	⇓P		P		11 24 20.4	+0.7
	baz=50								
115A	**Sonoran Desert**	51.11	84	⇑P		P		11 24 24.2	+0.3
	baz=51								
214A	**Organ Pipe Nat**	51.24	85	⇑P		P		11 24 25.5	+0.5
	baz=51								
118A	**Homack Ranch,**	52.56	83	⇑P		P		11 24 34.7	0.0
	baz=52								
ANMO	**Albuquerque**	53.19	78	⇑eP		P		11 24 39.3	0.0
XAN	**Xi'an**	53.59	281	P		P		11 24 40.4	-1.9
XAN				PP		PP		11 26 42.1	-1.1
XAN				S		S		11 32 13.8	+2.3
XAN				AMB		AMB			
	comp=Z,2.0nm,0.7s,mb4.2								
XAN				LR		LR			
	comp=N,453nm,20.7s,MS5.1								
XAN				LR		LR			
	comp=E,2μm,24.4s,MS5.1								
XAN				LR		LR			
	comp=Z,5μm,30.2s								
ZALV	**Zalesovo Beam**	54.02	313	P		P		11 24 45.6	+0.4
	comp=Z,0.3nm,0.3s,mb3.7,baz=33,slow=11,SNR=2.9								
ZALV				PcP		PcP		11 25 50.0	+0.4
	comp=Z,3.3nm,0.7s,baz=35,slow=5.4,SNR=12								
ZALV	**Zalesovo Beam**	54.02	313	P		P		11 24 45.6	+0.4
ZALV								11 25 50.0	
ZALV				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
LZH	**Lanzhou**	55.33	286	eP		P		11 24 55.8	+0.9
LZH				AMB		AMB			
	comp=Z,19nm,1.5s,mb4.9								
LZH				AMB		AMB			
	comp=Z,85nm,4.2s								
GTA	**Gaotai**	55.52	292	eP		P		11 24 56.6	+0.4
GTA				S		S		11 32 35.8	-1.4
GTA				AMB		AMB			
	comp=Z,8.0nm,0.7s,mb4.9								
GTA				LR		LR			
	comp=N,3μm,19.5s,MS5.5								
GTA				LR		LR			
	comp=E,3μm,17.1s,MS5.5								
GTA				LR		LR			
	comp=Z,4μm,20.1s,MS5.5								
ARCES	**ARCESS Array B**	58.16	350	P		P		11 25 13.7	-0.7
	comp=Z,10.0nm,1.0s,mb4.8,baz=19,slow=7.7,SNR=5.6								
ARCES	**ARCESS Array B**	58.16	350	P		P		11 25 13.7	-0.7
ARCES				pmax		pmax			
	comp=Z,10.0nm,1.0s								
TXAR	**Lajitas Array**	58.75	81	P		P		11 25 18.2	-0.9
	comp=Z,1.1nm,0.7s,mb4.0,baz=310,slow=5.3,SNR=11								
TXAR	**Lajitas Array**	58.75	81	P		P		11 25 18.2	-0.9
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
KURK	**Kurchatov**	59.02	314	⇑eP		P		11 25 20.1	-0.6
KURK				pmax		pmax			
	comp=Z,5.0nm,1.3s,mb4.4								
MKAR	**Makanchi Array**	60.02	308	P		P		11 25 27.0	-0.7
	comp=Z,2.0nm,0.4s,mb4.5,baz=51,slow=6.2,SNR=40								
MKAR	**Makanchi Array**	60.02	308	P		P		11 25 27.0	-0.6
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.4s								
GYA	**Guiyang**	60.25	276	P		P		11 25 30.0	+0.5
GYA				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb4.8								
JOF	**Joensuu**	63.65	345	ep		P		11 25 50.6	-1.2
	comp=Z,5.8nm,0.6s,mb4.8								
JOF	**Joensuu**	63.65	345	eP		P		11 25 50.6	-1.2
JOF				pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.8								
KMI	**Kunming**	63.66	278	P		P		11 25 54.8	+2.4
KMI				AMB		AMB			
	comp=Z,7.0nm,0.7s,mb4.8								
KAF	**Kangasniemi**	65.17	347	ep		P		11 26 00.7	-1.0
	comp=Z,5.4nm,0.6s,mb4.8								
KAF	**Kangasniemi**	65.17	347	eP		P		11 26 00.7	-1.0
KAF				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.7								
AAK	**Ala-Archa**	66.85	310	⇑eP		P		11 26 14.2	+1.4
AAK				pmax		pmax			
	comp=Z,2.0nm,0.7s,mb4.3								
NB2	**NORSAR Subarra**	67.72	355	P		P		11 26 17.2	-0.8
	comp=Z,1.6nm,0.8s,mb4.1,baz=6.4,slow=6.5								
NOA	**NORSAR Array B**	67.72	355	P		P		11 26 17.4	-0.6
	comp=Z,1.8nm,0.7s,mb4.2,baz=6.9,slow=6.3,SNR=6.8								
NOA	**NORSAR Array B**	67.72	355	P		P		11 26 17.4	-0.6
NOA				pmax		pmax			
	comp=Z,2.0nm,0.7s								
NOA	**NORSAR Array B**	67.72	355	P		P		11 26 17.4	-0.6
OBN	**Obninsk**	69.91	339	eP		P		11 26 31.8	+0.1
OBN				pmax		pmax			
	comp=Z,28nm,1.2s,mb5.1								
CMAR	**Chiang Mai Arr**	70.94	276	P		P		11 26 38.1	-0.4
	comp=Z,1.1nm,0.4s,mb4.1,baz=27,slow=6.5,SNR=9.8								
CMAR	**Chiang Mai Arr**	70.94	276	P		P		11 26 38.2	-0.3
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
TAPN	**Taplejung**	71.16	290	eP		P		11 26 40.6	+0.8
	comp=Z,28nm,0.9s,mb5.2								
GUN	**Gumba**	71.81	292	eP		P		11 26 44.6	+0.9
	comp=Z,26nm,0.3s,mb5.6								
JIRN	**Jiri**	71.81	292	eP		P		11 26 45.0	+1.3
RAMN	**Ramite**	72.11	291	eP		P		11 26 46.1	+0.6
	comp=Z,20nm,0.6s,mb5.2								
KKN	**Kakani**	72.25	292	eP		P		11 26 46.5	+0.2
GKN	**Gorkha**	72.46	293	eP		P		11 26 47.9	+0.3
DMN	**Daman**	72.48	292	eP		P		11 26 48.7	+1.0
DANN	**Dangsing**	72.70	294	eP		P		11 26 50.1	+1.1
	comp=Z,48nm,0.8s,mb5.5								
KOLN	**Koldanda**	73.23	293	eP		P		11 26 53.2	+1.0
	comp=Z,19nm,0.9s,mb5.0								
AKASG	**Malin Array Be**	75.60	342	P		P		11 27 04.8	-0.7
	comp=Z,6.6nm,0.5s,mb4.8,baz=21,slow=6.1,SNR=20								
AKASG	**Malin Array Be**	75.60	342	P		P		11 27 04.8	-0.7
AKASG				pmax		pmax			
	comp=Z,7.0nm,0.5s								
CLL	**Collm**	77.27	352	eP		P		11 27 14.0	-0.9
KIV	**Kislovodsk**	78.50	331	eP		P		11 27 23.6	+1.7
KIV				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.6								
GIVF	**Givet**	78.92	358	eP		P		11 27 23.9	-0.2
BAIF	**Baives**	78.98	358	eP		P		11 27 24.4	0.0
	comp=Z,24nm,1.0s,mb4.8								
BAIF	**Baives**	78.98	358	eP		P		11 27 24.4	0.0
BAIF				pmax		pmax			
	comp=Z,12nm,1.0s,mb4.8								
BAIF	**Baives**	78.98	358	eP		P		11 27 24.4	0.0
	comp=Z,12nm,1.0s,mb4.8								
ANN	**Anapa**	79.24	335	eP		P		11 27 32.3	+6.4
ANN				pmax		pmax			
	comp=Z,63nm,1.1s,mb5.5								
BUR08	**Bucovina Ar. S**	79.28	344	eP		P		11 27 26.5	+0.4
BURAR	**Bucovina Array**	79.31	344	⇑iP		P		11 27 26.2	0.0
KHC	**Kasperske Hory**	79.38	352	eP		P		11 27 22.0	-4.6
GERES	**GERESS Array B**	79.65	352	P		P		11 27 28.0	-0.1
	comp=Z,1.2nm,0.5s,mb4.1,baz=22,slow=6.2,SNR=13								
GERES	**GERESS Array B**	79.65	352	P		P		11 27 28.0	-0.1
GERES				pmax		pmax			
	comp=Z,1.0nm,0.5s								
FLN	**La Foliniere**	80.31	1	eP		P		11 27 31.3	-0.4
LDF	**La Druitiere**	80.48	1	eP		P		11 27 32.0	-0.6
MEZF	**Maizieres J'vi**	80.52	357	eP		P		11 27 32.7	-0.1
CDF	**Champ du Feu**	80.53	356	eP		P		11 27 32.3	-0.5
DRGR		80.53	345	⇓iP		P		11 27 33.0	+0.1
ROSF	**Rostrenen**	80.67	3	eP		P		11 27 33.3	-0.3
	comp=Z,80nm,1.2s,mb5.2								
ROSF	**Rostrenen**	80.67	3	eP		P		11 27 33.3	-0.3
ROSF				pmax		pmax			
	comp=Z,40nm,1.2s,mb5.2								
ROSF	**Rostrenen**	80.67	3	eP		P		11 27 33.3	-0.3
	comp=Z,40nm,1.2s,mb5.2								
GRR	**Gorron**	80.68	1	eP		P		11 27 33.3	-0.3
SGMF	**Saint Gilles**	80.78	2	eP		P		11 27 34.0	-0.2
	comp=Z,22nm,0.7s,mb4.9								
SGMF	**Saint Gilles**	80.78	2	eP		P		11 27 34.0	-0.2
SGMF				pmax		pmax			
	comp=Z,11nm,0.7s,mb4.9								
SGMF	**Saint Gilles**	80.78	2	eP		P		11 27 34.0	-0.2
	comp=Z,11nm,0.7s,mb4.9								
HINF	**Hinteralfeld**	81.14	356	eP		P		11 27 35.4	-0.7
KBA	**Koelnbreinsper**	81.43	352	⇑iP		P		11 27 38.3	+0.6
	comp=Z,11nm,0.6s,mb5.0								
VOIR		81.44	343	⇑iP		P		11 27 38.7	+1.0
SOKA	**Soboth**	81.66	350	⇑iP		P		11 27 39.6	+0.7
	comp=Z,17nm,1.2s,mb4.8								
TIRR	**Tirgusor**	81.72	341	⇑iP		P		11 27 39.9	+0.6
GZR	**Gura Zlata**	81.88	345	⇓iP		P		11 27 40.4	+0.4
WRA	**Warramunga Arr**	81.90	224	P		P		11 27 38.6	-1.7
	comp=Z,0.3nm,0.6s,baz=32,slow=6.1,SNR=5.7								
SSF	**Saint Saulge**	82.00	358	eP		P		11 27 40.4	-0.2
AVF	**Avril sur Loir**	82.27	358	eP		P		11 27 41.7	-0.4
CABF	**La Chapelle**	82.37	357	eP		P		11 27 43.0	+0.4
SMF	**Signal de Mont**	82.41	358	eP		P		11 27 42.5	-0.3
	comp=Z,20nm,1.0s,mb4.7								
MFF	**Saint Martin d**	82.47	1	eP		P		11 27 43.0	-0.1
TCF	**Toulx Ste Croi**	82.79	359	eP		P		11 27 44.4	-0.4
	comp=Z,32nm,1.3s,mb4.9								
TCF	**Toulx Ste Croi**	82.79	359	eP		P		11 27 44.4	-0.4
TCF				pmax		pmax			
	comp=Z,16nm,1.3s,mb4.9								
TCF	**Toulx Ste Croi**	82.79	359	eP		P		11 27 44.4	-0.4
	comp=Z,16nm,1.3s,mb4.9								
LPL	**La Plagne**	83.44	356	eP		P		11 27 48.8	+0.6
LPG	**La Plagne**	83.46	356	eP		P		11 27 49.0	+0.7
RJF	**Les Rejaudoux**	83.78	360	eP		P		11 27 49.2	-0.7
ORIF	**Oris-en-Rattie**	84.07	357	eP		P		11 27 52.1	+0.7
	comp=Z,6.4nm,0.7s,mb4.5								
ORIF	**Oris-en-Rattie**	84.07	357	eP		P		11 27 52.1	+0.7
ORIF				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.5								
ORIF	**Oris-en-Rattie**	84.07	357	eP		P		11 27 52.1	+0.7
	comp=Z,3.2nm,0.7s,mb4.6								
LFF	**La Frestale**	84.14	0	eP		P		11 27 51.7	-0.1
	comp=Z,27nm,0.8s,mb5.1								
VIVF	**Saint-Julien-l**	84.17	357	eP		P		11 27 52.0	+0.1
MBDF	**Montbardon**	84.23	356	eP		P		11 27 52.6	+0.4
	comp=Z,8.6nm,0.7s,mb4.7								
LASF	**Ste Croix**	84.97	358	eP		P		11 27 56.2	+0.2
BR131	**Keskin Array S**	84.98	335	eP		P		11 27 56.1	0.0
	comp=Z,3.0nm,0.7s,mb4.5								
BRTR	**Keskin Array B**	84.98	335	P		P		11 27 56.2	+0.1
	comp=Z,5.1nm,0.7s,mb4.8,baz=40,slow=3.0,SNR=25								
BRTR	**Keskin Array B**	84.98	335	P		P		11 27 56.2	+0.1
BRTR				pmax		pmax			
	comp=Z,5.0nm,0.7s								
SMRF	**Simiane la Rot**	85.02	357	eP		P		11 27 56.9	+0.7
	comp=Z,14nm,0.8s,mb4.8								
SBF	**Sospel**	85.06	355	eP		P		11 27 56.0	-0.4
	comp=Z,36nm,0.9s,mb5.2								
ASAR	**Alice Springs**	85.37	222	P		P		11 27 56.9	-1.1
	comp=Z,0.8nm,0.8s,mb3.9,baz=26,slow=5.1,SNR=10								
ASAR	**Alice Springs**	85.37	222	P		P		11 27 56.9	-1.1
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
FRF	**La Foret Royal**	85.40	356	eP		P		11 27 57.9	-0.2
LMR	**La Mourre**	85.63	356	eP		P		11 27 59.0	-0.3
	comp=Z,12nm,0.7s,mb4.9								
MTLF	**Montolieu**	85.73	359	eP		P		11 27 59.9	+0.1
EPF	**Esparros**	86.05	1	eP		P		11 28 00.7	-0.6
ETSF	**Etsaut**	86.17	1	eP		P		11 28 02.3	+0.4
	comp=Z,6.8nm,0.6s,mb4.7								
ETSF	**Etsaut**	86.17	1	eP		P		11 28 02.3	+0.4
ETSF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.7								
ETSF	**Etsaut**	86.17	1	eP		P		11 28 02.3	+0.4
	comp=Z,3.4nm,0.6s,mb4.8								
PGF	**Pioggiola**	86.28	354	eP		P		11 28 02.3	-0.2
	comp=Z,26nm,0.7s,mb5.3								
PGF	**Pioggiola**	86.28	354	eP		P		11 28 02.3	-0.2
PGF				pmax		pmax			
	comp=Z,13nm,0.7s,mb5.3								
PGF	**Pioggiola**	86.28	354	eP		P		11 28 02.3	-0.2
	comp=Z,13nm,0.7s,mb5.3								
STKA	**Stephens Creek**	89.81	213	P		P		11 28 18.9	-0.3
	comp=Z,1.7nm,0.7s,mb4.5,baz=15,slow=10,SNR=5.2								
STKA	**Stephens Creek**	89.81	213	P		P		11 28 18.9	-0.3
TORD	**Torodi Ar. Bea**	115.82	359	PKP	PKPdf			11 34 02.9	-0.6
	comp=Z,0.2nm,0.5s,baz=8.3,slow=1.1,

TXAR	**Lajitas Array**	**59.12 81**	P	**P**	**11 40 08.7**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=298,slow=4.6,SNR=9.7					
MKAR	**Makanchi Array**	**59.89 308**	P	**P**	**11 40 13.2**	**-0.4**
	comp=Z,2.8nm,0.5s,mb4.5,baz=48,slow=5.7,SNR=35					
NB2	**NORSAR Subarra**	**67.92 354**	P	**P**	**11 41 05.2**	**-0.9**
	comp=Z,2.2nm,0.7s,mb4.3,baz=6.5,slow=6.2					
NOA	**NORSAR Array B**	**67.92 354**	P	**P**	**11 41 05.6**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=6.4,slow=6.1,SNR=6.3					
NOA	**NORSAR Array B**	**67.92 354**	P	**P**	**11 41 05.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**70.62 276**	P	**P**	**11 41 23.9**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.8,baz=30,slow=7.1,SNR=6.6					
AKASG	**Malin Array Be**	**75.71 342**	P	**P**	**11 41 52.1**	**-0.8**
	comp=Z,3.7nm,0.6s,mb4.5,baz=21,slow=5.8,SNR=8.0					
BUR08	**Bucovina Ar. S**	**79.41 343**	*e*P	**P**	**11 42 13.9**	**+0.3**
BURAR	**Bucovina Array**	**79.43 343** ⇑	*i*P	**P**	**11 42 14.0**	**+0.2**
DRGR		**80.66 345** ⇓	*i*P	**P**	**11 42 20.6**	**+0.2**
GZR	**Gura Zlata**	**82.01 344** ⇑	*i*P	**P**	**11 42 27.7**	**+0.1**
BRTR	**Keskin Array B**	**85.05 335**	P	**P**	**11 42 42.3**	**-1.0**
	comp=Z,1.1nm,0.8s,mb4.0,baz=20,slow=3.3,SNR=5.7					
BOSA	**Boshof**	**150.87 311**	PKPbc	PKPbc	11 49 59.1	-0.7
	comp=Z,3.0nm,1.1s,baz=120,slow=8.1,SNR=2.1					

*IDC **19** 11:31:22.9±1.5, 3702N×142.13E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.7/25, mbtmp3.7/9, ML4.0/3, Error ellipse: s-maj=34.7km s-min=21.0km az=152.0*
*ISCJB **19** 11:31:25.3±0.7, 3700N±004×142.11E±005, h33km, mb3.5/6, Error ellipse: s-maj=6.2km s-min=5.5km az=39.0*
*NEIC **19** 11:31:25.3, 3702N×142.07E, h45km, MG4.0(JMA), After JMA.*
*JMA **19** 11:31:25.3±0.2, 3702N×142.06E, h45km, M4.0*
ISC 19 11:31:27.3±0.6, 3700N±004×14201E±006, h35km, n24, σ1§08/36, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.97 276**	P	**Pn**	**11 31 43.2**	**-1.2**
ONAJ			*e*S	**Sn**	**11 31 56.1**	**-0.9**
JFK	**Kawauchi**	**0.98 292**	P	**Pn**	**11 31 43.1**	**-1.4**
JFK			*e*S	**Sn**	**11 31 55.8**	**-1.3**
JHO	**Hitachi**	**1.22 252**	P	**Pn**	**11 31 46.6**	**-1.2**
JHO			*e*S	**Sn**	**11 32 02.2**	**-0.9**
JMM	**Marumori**	**1.30 312**	P	**Pn**	**11 31 47.9**	**-1.0**
JMM			*e*S	**Sn**	**11 32 04.0**	**-1.0**
JFT	**Otama**	**1.43 292**	P	**Pn**	**11 31 50.8**	**+0.1**
JFT			*e*S	**Sn**	**11 32 08.7**	**+0.4**
JIO	**Ouri**	**1.54 340**	P	**Pn**	**11 31 50.7**	**-1.6**
JIO			*e*S	**Sn**	**11 32 09.2**	**-1.8**
JOU	**Okura**	**1.73 322**	P	**Pn**	**11 31 54.8**	**0.0**
JOU			*e*S	**Sn**	**11 32 16.7**	**+1.0**
JFY	**Yanaizu**	**1.88 283**	P	**Pn**	**11 31 57.8**	**+0.9**
JFY			*e*S	**Sn**	**11 32 21.7**	**+2.2**
JYS	**Shirataka**	**1.96 309**	P	**Pn**	**11 31 58.7**	**+0.6**
JYS			*e*S	**Sn**	**11 32 23.6**	**+2.1**
JMK	**Ichinoseki**	**2.04 342**	P	**Pn**	**11 31 58.4**	**-0.8**
JAG	**Ashikaga**	**2.13 255**	P	**Pn**	**11 32 00.3**	**-0.1**
JYK	**Kaneyama**	**2.31 326**	P	**Pn**	**11 32 02.8**	**-0.1**
MJAR	**Matsushiro Arr**	**3.08 263**	Pn	**Pn**	**11 32 14.2**	**+0.8**
	16nm,0.3s,baz=91,slow=15,SNR=98					
MJAR			Sn	**Sn**	**11 32 54.0**	**+4.9**
	6.0nm,0.3s,baz=75,slow=14,SNR=5.7					
MAJO	**Matsushiro**	**3.09 263**	*e*Pn	**Pn**	**11 32 14.8**	**+1.3**
MAT	**Matsushiro**	**3.09 263**	P	**Pn**	**11 32 14.8**	**+1.3**
MAT			*e*S	**Sn**	**11 32 53.4**	**+4.3**
JHJ	**Hachijo jima 2**	**4.28 206**	Pn	**Pn**	**11 32 30.0**	**+0.1**
	48nm,0.3s,baz=258,slow=12,SNR=16					
JHJ			Sn	**Sn**	**11 33 17.2**	**-1.4**
	42nm,0.3s,baz=254,slow=20,SNR=7.3					
ASAJ	**Asahikawa**	**7.12 3**	Pn	**Pn**	**11 33 08.0**	**-0.9**
	1.7nm,0.3s,baz=198,slow=13,SNR=8.9					
SONM	**Songino Array**	**28.20 304**	P	**P**	**11 37 17.7**	**+1.2**
	0.5nm,0.7s,mb3.3,baz=95,slow=6.9,SNR=6.7					
ZALV	**Zalesovo Beam**	**42.29 312**	P	**P**	**11 39 18.4**	**+1.3**
	0.4nm,0.5s,mb3.3,baz=140,slow=5.8,SNR=4.1					
MKAR	**Makanchi Array**	**44.54 302**	P	**P**	**11 39 36.2**	**+0.8**
	0.9nm,0.7s,mb3.7,baz=84,slow=8.8,SNR=7.8					
MKAR	**Makanchi Array**	**44.54 302**	P	**P**	**11 39 36.2**	**+0.8**
INK	**Inuvik**	**54.20 27**	P	**P**	**11 40 49.5**	**+0.7**
	0.4nm,0.5s,mb3.6,baz=255,slow=4.4,SNR=3.9					
YKA	**Yellowknife Ar**	**63.60 30**	P	**P**	**11 41 54.7**	**+0.6**
	0.1nm,0.5s,mb3.1,baz=292,slow=3.3,SNR=3.2					
TXAR	**Lajitas Array**	**89.76 53**	P	**P**	**11 44 22.7**	**+0.4**
	0.4nm,1.0s,mb3.7,baz=334,slow=8.0,SNR=2.9					

*BJI **19** 11:34:54.8, 678S×155.85E, h37km, mB5.7, mb5.2, Ms5.8, Msz5.6*
*MOS **19** 11:34:54.8±0.9, 687S×155.73E, h33km, mb5.6/46, MS5.6/7, Error ellipse: s-maj=7.8km s-min=6.2km az=105.2*
*ISCJB **19** 11:34:55.4±0.2, 695S±003×155.80E±004, h45km, mb5.5/100, MS5.8/203, Error ellipse: s-maj=5.1km s-min=4.4km az=6.1*
*NEIC **19** 11:34:57.0±0.1, 695S×155.78E, mb5.7/38, MS5.9/191, Error ellipse: s-maj=4.6km s-min=3.4km az=116.0*
*IDC **19** 11:34:56.8±0.3, 702S×155.76E, h44km±2km, mb5.0/28, mb1 5.0/28, mb1mx5.0/28, mbtmp4.9/28, MS5.0/2, Ms1 5.0/2, ms1mx4.4/35, Error ellipse: s-maj=11.5km s-min=9.5km az=85.0*
*DJA **19** 11:35:15, 732S×154.97E, h151km, mb5.4/6*
ISC 19 11:34:57.4±0.2, 697S±003×15580E±004, h47km, h47km±1.4km:pP-P, n598, σ0§89/248, mb5.5/100, MS5.8/203, 71C-25D, Bougainville - Solomon Islands region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
HNR	**Honiara**	**4.78 121**	*e*P	**Pn**	**11 36 09.5**	**+2.6**
PMG	**Port Moresby**	**8.89 254**	P	**Pn**	**11 37 05.6**	**+2.3**
	22nm,0.3s,baz=76,slow=6.7,SNR=42					
PMG			S	**Sn**	**11 38 47.6**	**+5.5**
	10.0nm,0.3s,baz=349,slow=20,SNR=6.0					
PMG			LR	LR	11 40 11.1	
	comp=Z,12μm,21.3s,baz=56,slow=36					
PMG	**Port Moresby**	**8.89 254**	P	**Pn**	**11 37 05.6**	**+2.3**
PMG			S	**Sn**	**11 38 47.6**	**+5.5**
PMG			pmax	pmax		
	comp=Z,22nm,0.3s					
PMG			smax			
	comp=N,10.0nm,0.3s					
PMG			MLR	MLR		
	comp=Z,12μm,21.3s					
PMG	**Port Moresby**	**8.89 254**	*e*Pn	**Pn**	**11 37 06.0**	**+2.7**
COEN	**Coen**	**14.22 240**	*e*Pn	**Pn**	**11 38 17.4**	**+1.3**
	comp=Z,103nm,0.9s					
CTA	**Charters Tower**	**15.99 214**	*e*P	**Pn**	**11 38 41.0**	**+1.7**
	comp=Z,91nm,1.1s					
CTA	**Charters Tower**	**15.99 214**	P	**Pn**	**11 38 41.3**	**+2.0**
	comp=Z,2.6nm,0.3s,baz=33,slow=14,SNR=58					
CTA			S	**S**	**11 41 46.0**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=183,slow=17,SNR=2.3					
CTA	**Charters Tower**	**15.99 214**	P	**Pn**	**11 38 41.3**	**+2.0**
CTA			S	**S**	**11 41 46.0**	**-1.6**
CTA			pmax	pmax		
	comp=Z,3.0nm,0.3s					
CTA			smax			
	comp=N,1.0nm,0.3s					
CTAO	**Charters Tower**	**15.99 214**	*e*P	**Pn**	**11 38 40.4**	**+1.1**
CTAO			pmax	pmax		
	comp=Z,210nm,1.2s					
CTAO	**Charters Tower**	**15.99 214**	*e*Pn	**Pn**	**11 38 40.4**	**+1.2**
	comp=Z,212nm,1.2s					
NOUC	**Port Laguerre**	**18.14 147**	*e*P	**Pn**	**11 39 06.1**	**+0.1**
DZM	**Mont Dzumac**	**18.19 147**	*e*P	**Pn**	**11 39 06.7**	**+0.1**
EIDS	**Eidsvold**	**18.84 193**	*e*Pn	**Pn**	**11 39 14.9**	**+0.4**
	comp=Z,200nm,1.6s					
TARA	**Tarawa**	**18.98 65**	*e*Pn	**Pn**	**11 39 15.9**	**-0.4**
	comp=Z,1μm,1.4s					
KWAJ	**Kwajalein Atol**	**19.60 37**	*e*Pn	**Pn**	**11 39 23.1**	**-0.5**
	comp=Z,356nm,1.0s					
GUMO	**Guam**	**23.13 332**	LR	LR	11 47 40.5	
	comp=Z,3μm,19.9s,MS4.8,baz=131,slow=33					
GUMO	**Guam**	**23.13 332**	PFAKE		11 40 10.0	+10
GUMO			LR	LR		
	comp=Z,3μm,21.0s,MS4.8					
FUNA	**Funafuti**	**23.24 95**	PFAKE		11 40 10.0	+9.0
FUNA			LR	LR		
	comp=Z,6μm,22.0s,MS5.0					
ARMA	**Armidale**	**23.65 189** ⇑	*i*P	**P**	**11 40 04.3**	**-0.3**
ARMA			*e*PCP	PcP	11 43 48.7	+0.4
ARMA			*e*S	**S**	**11 44 17.7**	**+1.7**
WRAB	**Tennant Creek**	**24.48 236**	P	**P**	**11 40 12.0**	**-0.3**
	comp=Z,619nm,1.3s,mb5.9,SNR=39					
WRAB	**Tennant Creek**	**24.48 236**	*c*P	**P**	**11 40 12.7**	**+0.4**
WRAB	**Tennant Creek**	**24.48 236**	*e*P	**P**	**11 40 12.5**	**+0.2**
	comp=Z,302nm,1.5s,mb5.5					
WRAB			LR	LR		
	comp=Z,12μm,22.0s,MS5.3					
WB2	**Warramunga Arr**	**24.48 236** ⇑	*i*P	**P**	**11 40 12.7**	**+0.4**
WB2			*e*PCP	PcP	11 43 50.1	-0.2
WB2			*e*S	**S**	**11 44 30.5**	**+0.9**
WB2			*e*PCS	PcS	11 47 29.0	-1.4
WB2			*e*SCS	ScS	11 51 12.8	-0.5
WB2			*e*		11 51 36.1	
WRA	**Warramunga Arr**	**24.49 236**	P	**P**	**11 40 11.2**	**-1.2**
	comp=Z,63nm,0.9s,mb5.0,baz=62,slow=9.5,SNR=112					
WRA			PcP	PcP	11 43 50.1	-0.1
	comp=Z,26nm,0.9s,baz=59,slow=1.9,SNR=13					
WRA			pPcP		11 44 03.2	
	comp=Z,15nm,0.9s,baz=62,slow=2.1,SNR=7.5					
WRA			S	**S**	**11 44 29.0**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=20,slow=7.0,SNR=3.0					
WRA			ScP	ScP	11 47 25.2	-0.2
	comp=Z,1.3nm,0.5s,baz=63,slow=3.7,SNR=5.6					
WRA			PKiKP	PKiKP	11 51 30.4	-2.2
	comp=Z,0.8nm,0.4s,baz=2.9,slow=1.7,SNR=14					
WRA			pPKiKP		11 51 44.2	
	comp=Z,1.2nm,0.6s,baz=310,slow=0.8,SNR=5.2					
WRA	**Warramunga Arr**	**24.49 236**	P	**P**	**11 40 11.2**	**-1.2**
WRA					11 43 50.1	
WRA			S	**S**	**11 44 29.0**	**-0.8**
WRA			pmax	pmax		
	comp=Z,63nm,0.9s					
WRA			pmax	pmax		
	comp=Z,26nm,1.0s					
WRA			pmax	pmax		
	comp=Z,15nm,0.9s					
WRA			smax			
	comp=N,2.0nm,0.9s					
WRA			pmax	pmax		
	comp=N,1.0nm,0.5s					
WRA			pmax	pmax		
	comp=Z,1.0nm,0.4s					
WRA	**Warramunga Arr**	**24.49 236**	P	**P**	**11 40 11.2**	**-1.2**
WRA			PcP	PcP	11 43 50.1	-0.1
WRA			pPcP		11 44 03.2	
WRA			S	**S**	**11 44 29.0**	**-0.8**
WRA			ScP	ScP	11 47 25.2	-0.2
ASAR	**Alice Springs**	**26.79 229**	P	**P**	**11 40 32.8**	**-0.4**
	comp=Z,17nm,0.7s,mb4.7,baz=60,slow=9.2,SNR=251					
ASAR			PcP	PcP	11 43 55.5	+0.1
	comp=Z,9.8nm,0.5s,baz=70,slow=2.8,SNR=10.0					
ASAR			pPcP		11 44 08.4	
	comp=Z,10nm,0.7s,baz=60,slow=3.3,SNR=6.3					
ASAR			ScP	ScP	11 47 31.4	-0.6
	comp=Z,4.5nm,0.9s,baz=44,slow=2.8,SNR=6.1					
ASAR			PKiKP	PKiKP	11 51 31.7	-2.1
	comp=Z,1.1nm,0.8s,baz=146,slow=2.4,SNR=5.7					
ASAR			pPKiKP		11 51 45.0	
	comp=Z,1.2nm,1.0s,baz=158,slow=0.8,SNR=3.7					
ASAR	**Alice Springs**	**26.79 229**	P	**P**	**11 40 32.8**	**-0.4**
ASAR					11 43 55.6	
ASAR			pmax	pmax		
	comp=Z,17nm,0.7s					
ASAR			pmax	pmax		
	comp=Z,10.0nm,0.5s					
ASAR			pmax	pmax		
	comp=Z,10.0nm,0.7s					
ASAR			pmax	pmax		
	comp=N,5.0nm,0.9s					
ASAR			pmax	pmax		
	comp=Z,1.0nm,0.8s					
STKA	**Stephens Creek**	**28.10 206** ⇑	*i*P	**P**	**11 40 44.0**	**-0.9**
	comp=Z,33nm,0.9s,mb5.0					
STKA			ePCP	PcP	11 43 58.0	-0.5
STKA			eSCP	ScP	11 47 34.9	-0.9
STKA	**Stephens Creek**	**28.10 206**	P	**P**	**11 40 44.2**	**-0.7**
	comp=Z,21nm,1.0s,mb4.8,baz=18,slow=10,SNR=24					
STKA			PcP	PcP	11 43 58.1	-0.4
	comp=Z,13nm,0.7s,baz=30,slow=1.6,SNR=4.7					
STKA			ScP	ScP	11 47 34.5	-1.3
	comp=Z,8.4nm,0.9s,baz=16,slow=7.8,SNR=4.8					
STKA			PKiKP	PKiKP	11 51 32.5	-1.9
	comp=Z,2.2nm,0.9s,baz=349,slow=8.8,SNR=3.9					
CNB	**Canberra Magne**	**28.82 191**	*e*P	**P**	**11 40 50.1**	**-1.1**
FITZ	**Fitzroy Crossi**	**31.39 247** ⇑	*i*P	**P**	**11 41 13.9**	**-0.3**
	comp=Z,266nm,0.8s,mb6.1					
FITZ			*e*	pP	11 41 24.9	-1.6
TOO	**Toolangi**	**31.87 196**	*e*P	**P**	**11 41 18.1**	**0.0**
TOO			*e*PCP	PcP	11 44 08.0	-0.1
AFI	**Afiamalu**	**32.60 105**	P	**P**	**11 41 24.1**	**-0.8**
	comp=Z,186nm,1.0s,mb6.0,baz=48,slow=4.4,SNR=8.1					
AFI	**Afiamalu**	**32.60 105**	P	**P**	**11 41 24.8**	**0.0**
AFI			pmax	pmax		
	comp=Z,260nm,1.1s,mb6.1					
AFI	**Afiamalu**	**32.60 105**	P	**P**	**11 41 24.1**	**-0.8**
AFI			LR	LR		
	comp=Z,4μm,20.0s,MS5.2					
DAV	**Davao City (W)**	**33.21 294**	PFAKE		11 41 40.0	+10
DAV			LR	LR		
	comp=Z,5μm,22.0s,MS5.2					
RAO	**Raoul Island**	**33.24 135**	PFAKE		11 41 40.0	+10
RAO			LR	LR		
	comp=Z,5μm,21.0s,MS5.2					
FORT	**Forrest**	**35.16 224** ⇑	*i*P	**P**	**11 41 46.2**	**-0.7**
	comp=Z,140nm,0.6s,mb6.1					
KAPI	**Kappang**	**35.90 271**	P	**P**	**11 41 52.9**	**-0.5**
	comp=Z,786nm,0.9s,mb6.6,SNR=8.8					
KAPI	**Kappang**	**35.90 271** ⇓	P	**P**	**11 41 53.5**	**+0.1**
	SNR=8.9					
KAPI	**Kappang**	**35.90 271**	*e*P	**P**	**11 41 52.9**	**-0.6**
	comp=Z,1μm,2.2s,mb6.4					
KAPI			LR	LR		
	comp=Z,7μm,21.0s,MS5.4					
MOO	**Moorlands**	**36.14 191**	*e*P	**P**	**11 41 56.2**	**+1.1**
TAU	**Tasmania Unive**	**36.57 190**	*e*P	**P**	**11 41 59.2**	**+0.4**
TAU			*e*PP	pP	11 42 16.4	+5.2
TAU			pmax	pmax		
	comp=Z,76nm,1.0s,mb5.5					
TAU			MLR	MLR		
	comp=Z,16μm,21.0s,MS5.8					
TAU	**Tasmania Unive**	**36.57 190**	*e*P	**P**	**11 41 59.2**	**+0.4**
	comp=Z,76nm,1.0s,mb5.5					
TAU			epP	pP	11 42 16.4	+5.2
TAU			LR	LR		
	comp=Z,16μm,21.0s,MS5.8					
URZ	**Urewera**	**36.64 151**	P	**P**	**11 41 59.1**	**-0.4**
	comp=Z,16nm,0.3s,mb5.2,baz=269,slow=2.5,SNR=14					
MBWA	**Marble Bar**	**37.60 244**	P	**P**	**11 42 07.9**	**0.0**
	SNR=8.2					
MBWA	**Marble Bar**	**37.60 244**	*e*P	**P**	**11 42 07.3**	**-0.6**
	comp=Z,78nm,0.8s,mb5.5					
MBWA			LR	LR		
	comp=Z,20μm,20.0s,MS5.9					
SNZO	**South Karori**	**38.12 157**	PFAKE		11 42 20.0	+8.1
SNZO			LR	LR		
	comp=Z,11μm,20.0s,MS5.7					
RPZ	**Rata Peaks**	**38.97 162**	P	**P**	**11 42 18.3**	**-0.7**
	comp=Z,112nm,0.9s,mb5.6,baz=342,slow=1.9,SNR=28					
TSM	**Tawau**	**39.47 285** ⇑	P	**P**	**11 42 24.6**	**+0.9**
KKM	**Kota Kinabalu**	**41.56 287** ⇑	P	**P**	**11 42 41.7**	**+0.8**
KLBR	**Kellerberrin**	**43.11 230** ⇑	*i*P	**P**	**11 42 52.3**	**-1.0**
	comp=Z,67nm,0.5s,mb5.6					
MIDW	**Midway**	**43.53 35**	PFAKE		11 43 10.0	+13
MIDW			LR	LR		
	comp=Z,6μm,20.0s,MS5.5					
BTM	**Bintulu**	**43.81 282** ⇑	P	**P**	**11 43 00.2**	**+1.0**
NWAO	**Narrogin (SRO)**	**44.11 229**	P	**P**	**11 43 01.7**	**+0.3**
	SNR=5.4					
NWAO	**Narrogin (SRO)**	**44.11 229**	*e*P	**P**	**11 43 00.7**	**-0.7**
	comp=Z,78nm,1.2s,mb5.3					
NWAO			LR	LR		
	comp=Z,10μm,20.0s,MS5.7					
MUN	**Mundaring**	**44.47 231** ⇑	*i*P	**P**	**11 43 03.8**	**-0.4**
MUN			*e*PCP	PcP	11 44 46.3	-0.9
SBUM	**Sibu**	**44.49 281** ⇑	P	**P**	**11 43 05.6**	**+1.0**
RAR	**Rarotonga**	**45.19 113**	P	**P**	**11 43 10.0**	**-0.1**
	comp=Z,28nm,0.7s,mb5.2,baz=244,slow=6.0,SNR=3.0					
RAR	**Rarotonga**	**45.19 113**	P	**P**	**11 43 10.0**	**-0.1**
RAR			LR	LR		
	comp=Z,5μm,21.0s,MS5.5					
TATO	**Taipei**	**46.09 315**	PFAKE		11 43 30.0	+13
TATO			LR	LR		
	comp=Z,6μm,22.0s,MS5.5					
KSM	**Kuching**	**46.16 279** ⇓	P	**P**	**11 43 18.4**	**+0.5**
MJAR	**Matsushiro Arr**	**46.32 340**	P	**P**	**11 43 18.1**	**-0.7**
	comp=Z,5.6nm,0.7s,mb4.6,baz=169,slow=8.9,SNR=14					
MJAR			PcP	PcP	11 44 52.8	-0.6
	comp=Z,5.6nm,0.7s,baz=159,slow=3.2,SNR=4.8					
MJAR			pPcP		11 45 06.5	
	comp=Z,4.5nm,0.7s,baz=164,slow=4.2,SNR=4.1					
MJAR	**Matsushiro Arr**	**46.32 340**	P	**P**	**11 43 18.1**	**-0.6**
MJAR					11 44 52.8	
MJAR					11 45 06.5	
MJAR			pmax	pmax		
	comp=Z,6.0nm,0.7s					
MJAR			pmax	pmax		
	comp=Z,6.0nm,0.7s					
MJAR			pmax	pmax		
	comp=Z,5.0nm,0.7s					
MAJO	**Matsushiro**	**46.32 340**	*e*P	**P**	**11 43 18.5**	**-0.2**
	comp=Z,21nm,0.8s,mb5.1					
MAJO			LR	LR		
	comp=Z,3μm,20.0s,MS5.3					
MAT	**Matsushiro**	**46.32 340**	P	**P**	**11 43 17.8**	**-0.9**
XMAS	**Kiritimati**	**47.52 81**	PFAKE		11 43 40.0	+12
XMAS			LR	LR		
	comp=Z,7μm,19.0s,MS5.6					
ERM	**Erimo**	**50.10 348**	PFAKE		11 44 00.0	+12
ERM			LR	LR		
	comp=Z,3μm,21.0s,MS5.3					
KSRS	**Korea Array**	**51.29 332**	P	**P**	**11 43 57.0**	**+0.2**
	comp=Z,15nm,0.9s,mb4.9,baz=148,slow=7.4,SNR=26					
KSRS			pP	pP	11 44 09.1	-0.7
	comp=Z,12nm,0.7s,baz=146,slow=7.7,SNR=13					
KSRS			PcP	PcP	11 45 11.5	+0.1
	comp=Z,3.1nm,1.0s,baz=159,slow=5.9,SNR=4.4					
KSRS			pPcP		11 45 24.9	
	comp=Z,2.6nm,0.6s,baz=138,slow=4.5,SNR=3.5					
KSRS	**Korea Array**	**51.29 332**	P	**P**	**11 43 57.1**	**+0.2**
KSRS			*PP	pP	11 44 09.1	-0.7
KSRS					11 45 11.5	
KSRS			pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9					
KSRS			pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9					
KSRS			pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2					
KSRS			pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4					
QIZ	**Qiongzhong**	**52.13 301**	PFAKE		11 44 20.0	+17
QIZ			LR	LR		
	comp=Z,7μm,20.0s,MS5.7					
ASAJ	**Asahikawa**	**52.23 348**	P	**P**	**11 44 05.3**	**+1.6**
	comp=Z,23nm,0.6s,mb5.3,baz=230,slow=11,SNR=20					
ASAJ	**Asahikawa**	**52.23 348**	P	**P**	**11 44 05.4**	**+1.7**
ASAJ			pmax	pmax		
	comp=Z,23nm,0.6s					
MYKOM	**Kota Tinggi**	**52.56 278** ⇑	P	**P**	**11 44 07.0**	**+0.1**
KGM	**Kluang**	**53.13 278** ⇓	P	**P**	**11 44 11.4**	**+0.4**
KIP	**Kipapa**	**53.38 57**	PFAKE		11 44 20.0	+7.4
KIP			LR	LR		
	comp=Z,6μm,20.0s,MS5.7					
KTGM	**Kuala Trenggan**	**53.96 282** ⇓	P	**P**	**11 44 17.5**	**+0.4**
PPT	**Papeete**	**54.24 107**	P	**P**	**11 44 19.9**	**+0.9**
	comp=Z,34nm,0.6s,mb5.5,baz=276,slow=4.0,SNR=7.7					
PPT	**Papeete**	**54.24 107**	P	**P**	**11 44 19.9**	**+0.9**
PPT			pmax	pmax		
	comp=Z,34nm,0.6s					
WHN	**Wuhan**	**54.48 315**	P	**P**	**11 44 21.0**	**+0.5**
POHA	**Pohakuloa**	**54.76 60**	PFAKE		11 44 40.0	+17
POHA			LR	LR		
	comp=Z,5μm,21.0s,MS5.6					
YSS	**Yuzh-Sakhalins**	**54.92 349** ⇑	*e*P	**P**	**11 44 24.0**	**+0.6**
YSS			*e*	pP	11 44 36.6	+0.2
YSS			pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6					
YSS			pmax	pmax		
	comp=N,50nm,0.9s					
YSS	**Yuzh-Sakhalins**	**54.92 349** ⇑	*i*P	**P**	**11 44 24.4**	**+1.0**
YSS			LR	LR		
	comp=Z,980nm,20.0s,MS4.9					
IPM	**Ipoh**	**55.84 280** ⇑	P	**P**	**11 44 31.0**	**+0.3**
MDJ	**Mudanjiang**	**56.51 338**	P	**P**	**11 44 35.4**	**+0.6**
MDJ			SCP	ScP	11 49 23.0	-3.9
MDJ			PCS	PcS	11 49 31.8	+0.2
MDJ			S	**S**	**11 52 21.3**	**-1.6**
MDJ			AMB	AMB		
	comp=Z,23nm,1.2s,mb5.1					
MDJ			AMB	AMB		
	comp=Z,3μm,9.1s					
MDJ			LR	LR		
	comp=N,5μm,23.7s					
MDJ			LR	LR		
	comp=E,4μm,29.1s					
MDJ			LR	LR		
	comp=Z,5μm,26.0s,MS5.5					
MDJ	**Mudanjiang**	**56.51 338**	*e*P	**P**	**11 44 35.5**	**+0.7**
	comp=Z,54nm,1.3s,mb5.4					
MDJ			epP	pP	11 44 48.3	+0.4
MDJ			LR	LR		
	comp=Z,6μm,21.0s,MS5.7					
CN2	**Changchun**	**57.51 334** ⇑	P	**P**	**11 44 41.9**	**0.0**
CN2			*e*S	**S**	**11 52 33.5**	**-2.6**
CN2			AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0					
CN2			AMB	AMB		
	comp=Z,200nm,6.0s					
CN2			LR	LR		
	comp=N,3μm,22.0s,MS5.5					
CN2			LR	LR		
	comp=E,3μm,22.0s,MS5.5					
CN2			LR	LR		
	comp=Z,4μm,24.0s,MS5.5					
GYA	**Guiyang**	**58.07 307** ⇑	*i*P	**P**	**11 44 46.9**	**+0.7**
GYA			PCP	PcP	11 45 39.3	+1.6
GYA			PP	PP	11 46 56.9	+1.5
GYA			SCP	ScP	11 49 27.6	-6.6
GYA			PCS	PcS	11 49 37.8	-1.5
GYA			AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9					
GYA			AMB	AMB		
	comp=Z,780nm,8.0s					
GYA			LR	LR		
	comp=N,4μm,21.2s,MS5.6					
GYA			LR	LR		
	comp=E,3μm,22.1s,MS5.6					
GYA			LR	LR		
	comp=Z,3μm,16.8s					
HABR	**Khabarovsk**	**58.14 344**	*e*P	**P**	**11 44 46

comp=Z,142nm,0.6s,mb6.2
KLR Kul'dur 59.78 342 *e*P **P 11 44 54.1 -3.5**
KLR pmax pmax
comp=E,33nm,1.4s
KLR pmax pmax
comp=Z,62nm,1.4s,mb5.5
PET Petropavlovsk 59.81 2 *e*P **P 11 44 58.0 +0.3**
PET pmax pmax
comp=Z,18nm,0.6s,mb5.3
PET Petropavlovsk 59.81 2 *e*P **P 11 44 57.9 +0.2**
comp=Z,13nm,0.7s,mb5.1
PET LR LR
comp=Z,4µm,22.0s,MS5.5
PEA0B Petropavlovsk- 59.87 1 *e*P **P 11 44 58.5 +0.4**
PEA0B *e*pP pP 11 45 13.4 +2.0
PETK Petropavlovsk- 59.87 1 P **P 11 44 59.0 +0.9**
comp=Z,20nm,0.8s,mb5.2,baz=158,slow=6.8,SNR=19
PETK pP pP 11 45 12.1 +0.8
comp=Z,33nm,1.0s,baz=144,slow=2.8,SNR=9.3
PETK PKP2bc 12 14 33.1
comp=Z,5.0nm,0.9s,baz=315,slow=0.6,SNR=4.8
PETK Petropavlovsk- 59.87 1 P **P 11 44 59.0 +0.9**
PETK *PP pP 11 45 12.1 +0.8
PETK Petropavlovsk- 59.87 1 P **P 11 44 59.0 +0.9**
PETK pP pP 11 45 12.1 +0.8
PETK ⇑*e* 12 14 33.1
XAN Xi'an 60.24 316 P **P 11 45 00.6 -0.5**
XAN PP PP 11 47 15.8 +1.3
XAN S **S 11 53 11.3 -0.6**
XAN AMB AMB
comp=Z,18nm,0.9s,mb5.1
XAN LR LR
comp=N,1µm,20.7s,MS5.3
XAN LR LR
comp=E,3µm,25.5s,MS5.3
XAN LR LR
comp=Z,6µm,24.7s,MS5.7
KMI Kunming 60.66 304 P **P 11 45 06.3 +2.1**
KMI PP PP 11 47 23.1 +4.7
KMI S **S 11 53 15.0 -2.6**
KMI AMB AMB
comp=Z,23nm,1.3s,mb5.2
KMI AMB AMB
comp=Z,1µm,9.2s
KMI LR LR
comp=N,6µm,18.1s,MS5.9
KMI LR LR
comp=E,5µm,16.5s,MS5.9
KMI LR LR
comp=Z,8µm,18.8s,MS5.9
BDT Bhumibol Dam 61.05 294 P **P 11 45 07.0 +0.1**
comp=Z,22nm,0.8s,mb5.3
CHRT Chiangrai 61.21 297 ⇑P **P 11 45 09.0 +1.0**
comp=Z,710nm,1.0s,mb6.8
FX1 Attu Island--F 61.42 12 P **P 11 45 08.3 -0.4**
comp=Z,21nm,0.8s,mb5.3,baz=135,slow=2.9,SNR=3.1
FX1 Attu Island--F 61.42 12 P **P 11 45 08.3 -0.4**
FX1 pmax pmax
comp=Z,21nm,0.8s
FX1 Attu Island--F 61.42 12 P **P 11 45 08.3 -0.5**
CM31 Chiang Mai Arr 61.49 295 PFAKE 11 45 20.0 +10
CM31 LR LR
comp=Z,5µm,19.0s,MS5.7
CMAR Chiang Mai Arr 61.49 295 P **P 11 45 10.3 +0.4**
comp=Z,30nm,0.8s,mb5.5,baz=121,slow=5.3,SNR=152
CMAR pP pP 11 45 23.1 0.0
comp=Z,101nm,1.0s,baz=114,slow=4.9,SNR=28
CMAR PKP2bc 12 14 24.1
comp=Z,0.6nm,0.3s,baz=282,slow=4.3,SNR=3.9
CMAR Chiang Mai Arr 61.49 295 P **P 11 45 10.3 +0.4**
CMAR *PP pP 11 45 23.2 +0.1
CMAR pmax pmax
comp=Z,30nm,0.8s
CMAR pmax pmax
comp=Z,101nm,1.0s
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 61.49 295⇑*e*P **P 11 45 10.8 +0.9**
CHG Chiang Mai 61.61 296 ⇑P **P 11 45 11.2 +0.5**
comp=Z,148nm,1.1s,mb6.0
CHTO Chiang Mai 61.61 296 ⇑P **P 11 45 11.1 +0.5**
SNR=70
CHTO Chiang Mai 61.61 296 *e*P **P 11 45 10.2 -0.4**
comp=Z,278nm,1.4s,mb6.2
CHTO LR LR
comp=Z,5µm,20.0s,MS5.6
CD2 Chengdu 62.40 310 P **P 11 45 15.5 -0.3**
CD2 PCP PcP 11 45 53.4 -1.6
CD2 PP PP 11 47 35.3 +1.7
CD2 S **S 11 53 35.5 -4.0**
CD2 AMB AMB
comp=Z,90nm,0.7s,mb6.0
CD2 AMB AMB
comp=Z,2µm,11.6s
CD2 LR LR
comp=N,5µm,20.2s
CD2 LR LR
comp=Z,6µm,20.2s,MS5.7
HHC Hu-ho-hao-te 62.55 323 *e*P **P 11 45 16.5 0.0**
HHC PP PP 11 47 36.1 +1.4
HHC PCS PcS 11 49 55.3 -3.3
HHC *e*S **S 11 53 36.9 -4.0**
HHC SCS ScS 11 54 57.6 -7.5
HHC AMB AMB
comp=Z,20nm,1.2s,mb5.1
HHC AMB AMB
comp=Z,3µm,6.3s
HHC LR LR
comp=N,3µm,19.0s,MS5.6
HHC LR LR
comp=E,3µm,16.6s,MS5.6
HHC LR LR
comp=Z,2µm,21.4s,MS5.3
ADK Adak 63.18 19 PFAKE 11 45 30.0 +9.5
ADK LR LR
comp=Z,5µm,21.0s,MS5.7
BTO Baotou 63.32 322 *e*P **P 11 45 21.3 -0.4**
HIA Hailar 64.24 335⇑*i*P **P 11 45 28.1 +0.6**
HIA LR LR
comp=Z,7µm,22.0s,MS5.8
LZH Lanzhou 64.86 315 *e*P **P 11 45 33.1 +1.2**
LZH AMB AMB
comp=Z,90nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,399nm,5.0s
LZH LR LR
comp=E,3µm,14.7s
LZH LR LR
comp=Z,7µm,20.0s
CASY Casey 66.86 198 *e*P **P 11 45 43.6 -0.7**
CASY LR LR
comp=Z,3µm,19.0s,MS5.6
IMP Imphal 67.96 300 *e*P **P 11 45 52.0 +0.1**
NRGR Nerungri 68.34 342 *e*P **P 11 45 55.4 +1.7**
NRGR S S 11 54 48.8 -2.4
NRGR smax
comp=N,45nm,0.5s
CLNS Chul'man 68.44 342 *e*P **P 11 45 55.2 +0.9**
CLNS *e**PP pP 11 46 05.4 -2.3
CLNS *e* 11 46 17.9
CLNS *e* 11 48 20.6
CLNS *e*PPP 11 50 02.0
CLNS *e*S S 11 54 53.2 +0.8
CLNS pmax pmax
comp=N,14nm,1.1s
CLNS pmax pmax
comp=Z,26nm,1.0s,mb5.2
CLNS pmax pmax
comp=E,11nm,1.2s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS pmax pmax
comp=N,4.0nm,1.0s
CLNS smax
comp=E,1µm,15.4s
CLNS smax
comp=N,1µm,12.3s
CLNS MLR MLR
comp=Z,2µm,14.0s,MS5.4
CLNS MLR MLR
comp=N,1µm,16.0s,MS5.3
CLNS MLR MLR
comp=E,887nm,19.0s,MS5.3
GTA Gaotai 69.27 317 *e*P **P 11 46 00.3 +0.5**
GTA S S 11 55 02.8 0.0
GTA AMB AMB
comp=Z,12nm,1.3s,mb4.7
GTA AMB AMB
comp=Z,1µm,8.4s
GTA LR LR
comp=N,4µm,20.1s,MS5.8
GTA LR LR
comp=E,4µm,19.8s,MS5.8
GTA LR LR
comp=Z,8µm,20.4s,MS6.0
ULN Ulaanbaatar 69.41 327 P **P 11 46 02.0 +1.5**
SNR=32
ULN Ulaanbaatar 69.41 327⇑*i*P **P 11 46 01.8 +1.3**
ULN LR LR
comp=Z,10µm,20.0s,MS6.1
SONM Songino Array 69.75 327 P **P 11 46 03.5 +1.0**
comp=Z,62nm,0.9s,mb5.5,baz=133,slow=6.0,SNR=303
SONM pP pP 11 46 15.8 -0.2
comp=Z,26nm,0.7s,baz=132,slow=6.6,SNR=10
SONM PKPPKP 12 14 07.8
comp=Z,6.4nm,1.1s,baz=288,slow=3.2,SNR=20
SONM Songino Array 69.75 327 P **P 11 46 03.5 +0.9**
SONM *PP pP 11 46 15.8 -0.2
SONM pmax pmax
comp=Z,62nm,0.9s
SONM pmax pmax
comp=Z,27nm,0.7s
SONM pmax pmax
comp=Z,6.0nm,1.2s
SEY Seymchan 69.75 358⇑*i*P **P 11 46 02.4 +0.2**
SHL Shillong 69.97 300⇑*i*x x 11 46 00.5
VNDA Vanda 70.59 179 P **P 11 46 07.3 +0.1**
comp=Z,16nm,0.9s,mb5.0,baz=334,slow=6.3,SNR=35
VNDA Vanda 70.59 179 P **P 11 46 07.3 +0.1**
VNDA LR LR
comp=Z,3µm,21.0s,MS5.5
SBA Scott Base 71.08 178 PFAKE 11 46 20.0 +10
SBA LR LR
comp=Z,2µm,19.0s,MS5.5
YAK Yakutsk 71.70 347 *e*P **P 11 46 25.1 +11**
YAK pmax pmax
comp=Z,36nm,0.9s,mb5.3
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK Yakutsk 71.70 347⇑*i*P **P 11 46 14.5 +0.3**
YAK LR LR
comp=Z,8µm,22.0s,MS6.0
LSA Lhasa 71.92 304 P **P 11 46 17.0 +0.8**
LSA Lhasa 71.92 304 *e*P **P 11 46 17.1 +0.9**
LSA pmax pmax
comp=Z,33nm,0.8s,mb5.3
LSA MLR MLR
comp=Z,8µm,21.0s,MS6.0
LSA Lhasa 71.92 304 *e*P **P 11 46 17.1 +1.0**
comp=Z,33nm,0.8s,mb5.3
LSA LR LR
comp=Z,8µm,21.0s,MS6.0
PTCN Pitcairn Islan 72.70 114 PFAKE 11 46 30.0 +9.0
PTCN LR LR
comp=Z,5µm,20.0s,MS5.8
BOD Bodaibo 72.89 338 *e*P **P 11 46 20.2 -1.1**
BOD *e* pP 11 46 34.2 -0.6
BOD pmax pmax
comp=Z,22nm,1.0s,mb5.0
BOD pmax pmax
comp=Z,28nm,1.3s,mb5.0
ZAK Zakamensk 72.89 328⇓*i*P **P 11 46 21.5 0.0**
ZAK pmax pmax
comp=Z,44nm,1.1s,mb5.3
MIR Mirnyy 73.01 202⇑*i*P **P 11 46 22.5 +0.5**
MIR *i* 11 46 43.0
MIR pmax pmax
comp=Z,400nm,1.4s,mb6.2
TLY Talaya 73.45 329 P **P 11 46 25.6 +0.8**
comp=Z,200nm,1.1s,mb6.0,SNR=11
TLY Talaya 73.45 329 P **P 11 46 25.6 +0.8**
SNR=11
TLY Talaya 73.45 329 *e*P **P 11 46 25.3 +0.5**
TLY *e*S S 11 55 59.8 +9.1
TLY pmax pmax
comp=Z,36nm,1.0s,mb5.3
TLY Talaya 73.45 329⇑*i*P **P 11 46 25.4 +0.6**
TLY LR LR
comp=Z,12µm,20.0s,MS6.2
TAPN Taplejung 74.07 301 *e*P **P 11 46 29.3 +0.3**
comp=Z,166nm,1.1s,mb5.9
ODAN Odare 74.20 300 *e*P **P 11 46 30.1 +0.3**
comp=Z,205nm,0.9s,mb6.1
BOK Bokaro 74.69 297 *e*P **P 11 46 31.9 -0.8**
BOK AMb AMB 11 46 36.9
comp=Z,70nm,1.2s,mb5.5
MOY Mondy 74.81 328 *e*P **P 11 46 32.5 -0.2**
MOY pmax pmax
comp=Z,6.0nm,1.7s
RAMN Ramite 74.91 300 *e*P **P 11 46 33.9 +0.1**
comp=Z,21nm,0.5s,mb5.3
BILL Bilibino 75.20 4*c i*P **P 11 46 35.0 +0.4**
BILL *i* pP 11 46 47.4 -0.8
BILL pmax pmax
comp=Z,79nm,1.0s,mb5.6
BILL Bilibino 75.20 4⇑*i*P **P 11 46 35.1 +0.5**
BILL LR LR
comp=Z,7µm,22.0s,MS5.9
JIRN Jiri 75.45 301 *e*P **P 11 46 37.4 +0.4**
comp=Z,116nm,0.8s,mb5.8
VIS Vishakhapatnam 75.61 290 *e*P **P 11 46 38.0 0.0**
VIS AMb AMB 11 46 40.0
comp=Z,93nm,0.8s,mb5.8
GUN Gumba 75.79 301 *e*P **P 11 46 39.2 +0.3**
comp=Z,232nm,0.8s,mb6.2
PKI Pulchoki 76.10 301 *e*P **P 11 46 40.7 +0.1**
comp=Z,122nm,1.1s,mb5.8
PKI Pulchoki 76.10 301 *e*P **P 11 46 40.7 +0.1**
PKI pmax pmax
comp=Z,122nm,1.1s,mb5.7
PALK Pallekele 76.22 279 *e*P **P 11 46 41.8 +0.2**
PALK pmax pmax
comp=Z,197nm,1.4s,mb5.8
PALK Pallekele 76.22 279 *e*P **P 11 46 41.8 +0.1**
comp=Z,197nm,1.4s,mb5.8
KKN Kakani 76.27 301 *e*P **P 11 46 42.0 +0.4**
comp=Z,129nm,0.8s,mb5.9
KKN Kakani 76.27 301 *e*P **P 11 46 42.0 +0.4**
KKN pmax pmax
comp=Z,129nm,0.8s,mb5.9
DMN Daman 76.37 300 *e*P **P 11 46 42.6 +0.4**
comp=Z,145nm,0.8s,mb6.0
KDAK Kodiak Island 76.80 26 P **P 11 46 43.5 -0.4**
comp=Z,11nm,0.8s,mb4.8,baz=111,slow=3.8,SNR=3.6
KDAK Kodiak Island 76.80 26 P **P 11 46 43.5 -0.4**
KDAK LR LR
comp=Z,6µm,21.0s,MS5.9
GKN Gorkha 76.87 301 *e*P **P 11 46 44.9 -0.1**
comp=Z,139nm,0.8s,mb6.0
SVW2 Sparrevohn 77.67 22 *e*P **P 11 46 48.6 -0.2**
KOLN Koldanda 77.70 300 *e*P **P 11 46 49.4 -0.3**
comp=Z,120nm,0.7s,mb5.9
DANN Dangsing 77.71 301 *e*P **P 11 46 49.4 -0.3**
comp=Z,115nm,0.8s,mb5.8
WMQ Urumqi 79.35 317 P **P 11 46 58.6 +0.2**
WMQ AMB AMB
comp=Z,19nm,1.5s,mb4.8
WMQ AMB AMB
comp=Z,3µm,14.0s
KOD Kodaikanal 79.84 282 *e*P **P 11 47 01.5 -0.2**
KOD AMb AMB 11 47 04.1
comp=Z,110nm,0.5s,mb6.0
HYB Hyderabad 80.01 289 *e*P **P 11 47 02.0 -0.6**
HYB *e* pP 11 47 14.5 -1.7
HYB pmax pmax
comp=Z,115nm,1.0s,mb5.8
HYB Hyderabad 80.01 289 *i* P **P 11 47 02.0 -0.6**
comp=Z,115nm,1.0s,mb5.8
HYB *e* pP 11 47 14.5 -1.7
HYB Hyderabad 80.01 289 *e*P **P 11 47 02.0 -0.6**
comp=Z,115nm,1.0s,mb5.8
HYB *e* pP 11 47 14.5 -1.7
TRD Trivandrum 80.08 280 *e*P **P 11 47 02.0 -1.0**
TRD AMb AMB 11 47 07.3
comp=Z,121nm,1.4s,mb5.6
NGP Nagpur 80.26 293 *e*P **P 11 47 02.2 -1.6**
NGP AMb AMB 11 47 16.2
comp=Z,166nm,1.8s,mb5.7
TIXI Tiksi 80.44 352⇑*i*P **P 11 47 02.7 -1.0**
TIXI pmax pmax
comp=Z,21nm,1.7s,mb4.8
TIXI Tiksi 80.44 352 P **P 11 47 03.4 -0.3**
TIXI pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
TIXI Tiksi 80.44 352⇑*i*P **P 11 47 02.8 -0.9**
TIXI LR LR
comp=Z,10µm,21.0s,MS6.2
PMR Palmer 80.45 23 *e*P **P 11 47 03.9 0.0**
PMR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
PMR Palmer 80.45 23 *e*P **P 11 47 03.9 0.0**
comp=Z,10nm,0.8s,mb4.8
PTH Pithoragarh 81.01 301 *e*P **P 11 47 06.9 -0.8**
AKL Akola 82.04 292 *e*P **P 11 47 12.4 -0.9**
AKL AMb AMB 11 47 13.8
comp=Z,146nm,1.9s,mb5.6
COLA College 82.77 21⇑*e*P **P 11 47 14.8 -1.3**
COLA College 82.77 21 *e*P **P 11 47 14.6 -1.5**
comp=Z,27nm,0.9s,mb5.3
COLA LR LR
comp=Z,7µm,21.0s,MS6.0
QSPA South Pole Qui 83.01 180 PFAKE 11 47 30.0 +13
QSPA LR LR
comp=Z,3µm,20.0s,MS5.6
DDI Dehra Dun 83.01 302 *ex* x 11 47 13.5
MENT Mentasta 83.31 24 *e*P **P 11 47 19.4 +0.5**
MKAR Makanchi Array 83.91 319 P **P 11 47 22.2 -0.2**
comp=Z,66nm,0.7s,mb5.9,baz=102,slow=5.6,SNR=336
MKAR pP pP 11 47 37.0 +0.8
comp=Z,21nm,0.8s,baz=97,slow=6.5,SNR=5.0
MKAR Makanchi Array 83.91 319 P **P 11 47 22.2 -0.2**
MKAR *PP pP 11 47 37.0 +0.8
MKAR pmax pmax
comp=Z,66nm,0.7s
MKAR pmax pmax
comp=Z,21nm,0.8s
MKAR Makanchi Array 83.91 319⇑*e*P **P 11 47 22.2 -0.2**
SMLA Simla 83.93 302 *i* P **P 11 47 22.7 -0.1**
SMLA AMb AMB 11 47 25.4
comp=Z,135nm,1.2s,mb6.0
KAD Karad 84.11 288 *e*P **P 11 47 22.9 -1.1**
KAD *i* P 11 47 23.4
KAD AMb AMB 11 47 25.0
comp=Z,236nm,1.0s,mb6.3
GOA Goa 84.17 286 *e*P **P 11 47 24.7 +0.3**
GOA AMb AMB 11 47 26.8
comp=Z,108nm,1.6s,mb5.7
ZALV Zalesovo Beam 84.60 326 P **P 11 47 24.7 -1.1**
comp=Z,22nm,0.7s,mb5.4,baz=106,slow=5.4,SNR=92
ZALV pP pP 11 47 39.2 -0.4
comp=Z,10nm,0.5s,baz=118,slow=5.4,SNR=8.3
ZALV Zalesovo Beam 84.60 326 P **P 11 47 24.7 -1.0**
ZALV *PP pP 11 47 39.2 -0.3
ZALV pmax pmax
comp=Z,22nm,0.7s,mb5.4
ZALV pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
ZALV Zalesovo Beam 84.60 326 P **P 11 47 24.7 -1.1**
ZALV pP pP 11 47 39.2 -0.4
POO Poona 84.61 289 *e*P **P 11 47 25.6 -1.0**
POO AMb AMB 11 47 29.4
comp=Z,146nm,1.3s,mb5.9
MAW Mawson 84.73 203 *e*P **P 11 47 25.7 -0.5**
comp=Z,32nm,0.8s,mb5.5
MAW Mawson 84.73 203 P **P 11 47 26.0 -0.2**
comp=Z,44nm,0.9s,mb5.6,baz=88,slow=6.2,SNR=41
MAW pP pP 11 47 39.0 -0.9
comp=Z,36nm,0.9s,baz=76,slow=6.9,SNR=5.0
MAW Mawson 84.73 203 P **P 11 47 26.0 -0.2**
MAW *PP pP 11 47 39.0 -1.0
MAW pmax pmax
comp=Z,44nm,0.9s
MAW pmax pmax
comp=Z,36nm,0.9s
HYT Haines Junctio 84.99 27 *e*P **P 11 47 27.9 +0.4**
EGAK Eagle 85.19 23 *e*P **P 11 47 28.2 -0.3**
comp=Z,21nm,0.9s,mb5.3
EGAK LR LR
comp=Z,6µm,22.0s,MS5.9
AJM Ajmer 85.22 297 *e*P **P 11 47 28.9 -0.6**
AJM AMb AMB 11 47 30.4
comp=Z,194nm,0.8s,mb6.3
THN Thein Dam 85.40 303 *e*P **P 11 47 27.9 -2.3**
DAWY Dawson 85.55 24 *e*P **P 11 47 31.1 +0.8**
NVS Novosibirsk 85.77 326 *e*P **P 11 47 29.9 -1.7**
NVS *e*S S 11 57 53.0 -7.8
NVS pmax pmax
comp=Z,127nm,2.3s,mb5.7
NVS pmax pmax
comp=N,23nm,1.8s
NVS pmax pmax
comp=E,47nm,1.8s
NVS smax
comp=E,34nm,2.7s
NVS smax
comp=N,20nm,2.1s
WRAK Wrangell Islan 85.89 32 PFAKE 11 47 40.0 +7.9
WRAK LR LR
comp=Z,7µm,20.0s,MS6.0
KSH Kashi 86.60 310 P **P 11 47 37.4 +1.4**
KSH PP PP 11 51 03.8 +5.2
KSH SKS 11 57 55.5
KSH S S 11 58 07.9 -1.7
KSH AMB AMB
comp=Z,3µm,9.9s
KSH LR LR
comp=N,9µm,17.7s,MS6.5
KSH LR LR
comp=E,15µm,16.0s,MS6.5
KSH LR LR
comp=Z,6µm,15.8s,MS6.1
KURK Kurchatov 87.31 322 P **P 11 47 38.5 -0.7**
comp=Z,125nm,0.6s,mb6.3,SNR=21
KURK Kurchatov 87.31 322 P **P 11 47 38.7 -0.5**
SNR=15
KURK Kurchatov 87.31 322 P **P 11 47 38.4 -0.8**
comp=Z,9.9nm,0.7s,mb5.2,baz=95,slow=5.4,SNR=66
KURK pP pP 11 47 51.5 -1.5
comp=Z,8.3nm,0.7s,baz=95,slow=5.0,SNR=8.3
KURK Kurchatov 87.31 322 P **P 11 47 38.4 -0.8**
KURK *PP pP 11 47 51.5 -1.5
KURK pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
KURK Kurchatov 87.31 322⇑*i*P **P 11 47 38.4 -0.8**
KURK LR LR
comp=Z,13µm,20.0s,MS6.3
MCCM Marconi Confer 87.48 51 PFAKE 11 47 50.0 +10
MCCM LR LR
comp=Z,5µm,19.0s,MS5.9
HOPS Hopland 87.49 50 PFAKE 11 47 50.0 +10
HOPS LR LR
comp=Z,5µm,20.0s,MS5.9
TKM2 Tokmak 2 87.57 314 P **P 11 47 40.5 -0.2**
SNR=19
TKM2 Tokmak 2 87.57 314 *i* P **P 11 47 40.4 -0.3**
NIL Nilore 87.65 304 PFAKE 11 47 50.0 +8.7
NIL LR LR
comp=Z,129nm,22.0s,MS4.3
KZA Kyzart 87.66 313 P **P 11 47 42.8 +1.7**
SNR=17
DLBC Dease Lake 87.71 30 P **P 11 47 41.5 +0.6**
comp=Z,13nm,1.1s,mb5.1,baz=234,slow=10.0,SNR=10
DLBC pP pP 11 47 54.5 -0.3
comp=Z,16nm,1.0s,baz=226,slow=12,SNR=6.8
WDC Whiskeytown Da 88.19 49 PFAKE 11 47 50.0 +6.3
WDC LR LR
comp=Z,4µm,19.0s,MS5.8
CHMS Chumysh 88.20 314 P **P 11 47 43.3 -0.4**
SNR=15
HUMO Hull Mountain 88.27 47 PFAKE 11 47 50.0 +6.0
HUMO LR LR
comp=Z,4µm,20.0s,MS5.8
YBH Yreka Blue Hor 88.28 48 P **P 11 47 45.8 +1.7**
comp=Z,3.7nm,0.9s,mb4.6,baz=270,slow=7.1,SNR=2.4
YBH Yreka Blue Hor 88.28 48 P **P 11 47 45.8 +1.7**
YBH LR LR
comp=Z,4µm,20.0s,MS5.8
AAK Ala-Archa 88.31 313 P **P 11 47 44.0 -0.2**
comp=Z,115nm,0.7s,mb6.2,SNR=14
AAK Ala-Archa 88.31 313 P **P 11 47 44.9 +0.7**
SNR=16
AAK Ala-Archa 88.31 313⇑*i*P **P 11 47 44.5 +0.3**

AAK LR LR
comp=Z,12µm,19.0s,MS6.3
SAO San Andreas Ge 88.36 53 PFAKE 11 48 00.0 +15
SAO LR LR
comp=Z,4µm,21.0s,MS5.8
COR Corvallis 88.40 45 PFAKE 11 48 00.0 +15
COR LR LR
comp=Z,5µm,19.0s,MS6.0
USP Ospenovka 88.43 314 P **P** **11 47 44.5 -0.2**
SNR=17
NLWA Neilton Lookou 88.58 42 PFAKE 11 48 00.0 +15
NLWA LR LR
comp=Z,6µm,21.0s,MS6.0
AML Almayashu 88.80 313 P **P** **11 47 47.2 +0.7**
SNR=28
EKS2 Erkin-Say 88.84 313 P **P** **11 47 46.8 +0.2**
SNR=11
CMB Columbia Colle 89.40 52 PFAKE 11 48 00.0 +11
CMB LR LR
comp=Z,4µm,20.0s,MS5.8
INK Inuvik 89.42 21 P **P** **11 47 48.2 -0.6**
comp=Z,14nm,1.0s,mb5.3,baz=243,slow=5.3,SNR=31
INK pP pP 11 48 00.9 -1.8
comp=Z,6.1nm,0.6s,baz=244,slow=5.9,SNR=7.3
INK PKKP PKKPbc 12 05 17.4 -10
comp=Z,0.9nm,0.8s,baz=98,slow=4.0,SNR=3.6
INK Inuvik 89.42 21 P **P** **11 47 48.2 -0.6**
INK *PP pP 11 48 00.9 -1.8
INK pmax pmax
comp=Z,15nm,1.0s
INK pmax pmax
comp=Z,6.0nm,0.6s
INK pmax pmax
comp=Z,1.0nm,0.8s
MOD Modoc 90.08 48 PFAKE 11 48 00.0 +7.5
MOD LR LR
comp=Z,6µm,21.0s,MS6.0
MWC Mount Wilson 90.70 56 *e*P **P** **11 47 56.6 +1.0**
NVAR Mina Array Bea 91.08 52 P **P** **11 47 57.7 +0.5**
comp=Z,2.7nm,0.8s,mb4.6,baz=241,slow=6.1,SNR=11
NVAR pP pP 11 48 11.3 +0.2
comp=Z,1.1nm,0.8s,baz=254,slow=8.4,SNR=3.5
NVAR PKPPKP 12 13 27.7
comp=Z,1.1nm,0.9s,baz=62,slow=4.2,SNR=5.7
NVAR Mina Array Bea 91.08 52 P **P** **11 47 57.7 +0.5**
NVAR pP pP 11 48 11.3 +0.2
NVAR P'P' 12 13 27.7
RPN Rapa Nui 91.17 117 PFAKE 11 48 10.0 +12
RPN LR LR
comp=Z,2µm,20.0s,MS5.6
KBL Kabul 91.24 304 *e*P **P** **11 47 56.9 -1.2**
KBL *e*PP pP 11 48 10.1 -1.9
KBL pmax pmax
comp=Z,19nm,0.9s,mb5.4
KBL Kabul 91.24 304 *e*P **P** **11 47 56.9 -1.2**
comp=Z,19nm,0.9s,mb5.4
KBL *e*pP pP 11 48 10.1 -1.9
KK31 Karatay Array 91.28 313 *i* P **P** **11 47 57.4 -0.6**
HAWA Hanford 91.33 44 PFAKE 11 48 10.0 +12
HAWA LR LR
comp=Z,5µm,20.0s,MS5.9
DAC Darwin (Calif) 91.35 54 PFAKE 11 48 10.0 +11
DAC LR LR
comp=Z,4µm,21.0s,MS5.8
WVOR Wild Horse Val 91.39 48 PFAKE 11 48 10.0 +11
WVOR LR LR
comp=Z,4µm,20.0s,MS5.9
TPH Tonopah 91.88 52 PFAKE 11 48 10.0 +9.1
TPH LR LR
comp=Z,3µm,19.0s,MS5.8
PFO Pinyon Flat Ob 91.94 57 PFAKE 11 48 10.0 +8.7
PFO LR LR
comp=Z,4µm,19.0s,MS5.8
BMN Battle Mountai 92.17 50 PFAKE 11 48 10.0 +7.7
BMN LR LR
comp=Z,4µm,19.0s,MS5.8
TPNV Topopah Spring 92.51 53 PFAKE 11 48 20.0 +16
TPNV LR LR
comp=Z,3µm,19.0s,MS5.8
SYO Syowa Base 92.61 199 ⇓ *i*P **P** **11 48 01.3 -2.4**
SYO Syowa Base 92.61 199 ⇓ *i*P **P** **11 48 04.1 +0.4**
BMO Blue Mountains 92.67 45 PFAKE 11 48 20.0 +16
BMO LR LR
comp=Z,4µm,21.0s,MS5.8
BVA0 Borovoye Array 92.75 323 *i* P **P** **11 48 03.1 -1.5**
BVA0 pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
BVAR Borovoye Array 92.75 323 P **P** **11 48 02.8 -1.8**
comp=Z,27nm,0.8s,mb5.7,baz=106,slow=5.3,SNR=110
BVAR pP pP 11 48 16.6 -1.9
comp=Z,9.7nm,0.8s,baz=101,slow=6.2,SNR=5.9
BVAR PKiKP PKiKP 11 52 51.0 -1.5
comp=Z,0.8nm,0.7s,baz=39,slow=0.9,SNR=3.6
BVAR Borovoye Array 92.75 323 P **P** **11 48 02.8 -1.8**
BVAR *PP pP 11 48 16.6 -1.9
BVAR pmax pmax
comp=Z,27nm,0.8s
BVAR pmax pmax
comp=Z,10.0nm,0.8s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 92.75 323 P **P** **11 48 02.8 -1.8**
BVAR pP pP 11 48 16.6 -1.9
BRVK Borovoye 92.82 323 P **P** **11 48 03.7 -1.2**
comp=Z,161nm,1.1s,mb6.4,SNR=14
BRVK Borovoye 92.82 323 ⇑ P **P** **11 48 04.0 -0.9**
SNR=10
BRVK Borovoye 92.82 323 ⇑ *i*P **P** **11 48 03.9 -1.0**
BRVK LR LR
comp=Z,13µm,20.0s,MS6.4
NEW Newport 93.20 42 PFAKE 11 48 20.0 +13
NEW LR LR
comp=Z,6µm,20.0s,MS6.0
LDFC Landfair 93.21 55 *e*P **P** **11 48 06.8 -0.4**
ELK Elko 93.71 50 PFAKE 11 48 20.0 +11
ELK LR LR
comp=Z,4µm,20.0s,MS5.8
HLID Hailey 94.59 47 PFAKE 11 48 20.0 +6.7
HLID LR LR
comp=Z,4µm,20.0s,MS5.9
MSO Missoula 95.21 44 PFAKE 11 48 30.0 +14
MSO LR LR
comp=Z,5µm,20.0s,MS6.0
DUG Dugway 95.50 50 PFAKE 11 48 30.0 +12
DUG LR LR
comp=Z,4µm,20.0s,MS5.8
MVU Marysvale 95.84 52 PFAKE 11 48 30.0 +11
MVU LR LR
comp=Z,4µm,19.0s,MS6.0
YKA Yellowknife Ar 95.94 28 P **P** **11 48 18.2 -0.8**
comp=Z,3.5nm,0.7s,mb4.9,baz=267,slow=4.6,SNR=67
YKA PKKP PKKPbc 12 05 05.6 -4.4
comp=Z,1.8nm,0.6s,baz=85,slow=2.8,SNR=38
YKA PKPPKP 12 13 06.8
comp=Z,0.2nm,0.9s,baz=40,slow=1.1,SNR=4.3
YKA Yellowknife Ar 95.94 28 P **P** **11 48 18.2 -0.8**
YKA PKKP PKKPbc 12 05 05.6 -4.4
YKA P'P' 12 13 06.8
WUAZ Wupatki 96.30 55 PFAKE 11 48 30.0 +8.7
WUAZ LR LR
comp=Z,3µm,22.0s,MS5.8
TUC Tucson 96.56 58 PFAKE 11 48 30.0 +7.4
TUC LR LR
comp=Z,3µm,20.0s,MS5.7
BOZ Bozeman (W) 96.73 45 PFAKE 11 48 30.0 +7.0
BOZ LR LR
comp=Z,4µm,20.0s,MS5.9
AHID Auburn Hatcher 96.96 48 PFAKE 11 48 40.0 +16
AHID LR LR
comp=Z,6µm,21.0s,MS6.1
BW06 Boulder Array 98.09 48 PFAKE 11 48 40.0 +11
BW06 LR LR
comp=Z,5µm,20.0s,MS6.0
PDAR Pinedale Array 98.09 48 P **P** **11 48 28.5 -0.7**
comp=Z,1.7nm,1.0s,mb4.5,baz=252,slow=2.1,SNR=7.8
PDAR sP sP 11 48 47.7 -0.6
comp=Z,2.5nm,1.0s,baz=249,slow=4.1,SNR=6.2
PDAR PKKPbc PKKPbc 12 05 01.4 -2.0
comp=Z,0.6nm,0.6s,baz=83,slow=3.2,SNR=5.8
PDAR PKPPKP 12 13 18.1
comp=Z,1.0nm,0.9s,baz=146,slow=0.5,SNR=5.5
EGMT Eagleton 98.11 43 PFAKE 11 48 40.0 +11
EGMT LR LR
comp=Z,6µm,21.0s,MS6.1
RLMT Red Lodge 98.37 45 PFAKE 11 48 40.0 +10
RLMT LR LR
comp=Z,4µm,21.0s,MS5.9
MVCO Mesa Verde 98.70 53 PFAKE 11 48 40.0 +7.9
MVCO LR LR
comp=Z,4µm,20.0s,MS6.0
AB31 Akbulak array 99.06 319 P **P** **11 48 31.2 -2.2**
AB31 pmax pmax
comp=Z,5.0nm,0.7s,mb5.2
MSEY Mahe Island 99.64 264 PFAKE 11 48 50.0 +14
MSEY LR LR
comp=Z,3µm,19.0s,MS5.8
ARU Arti 99.77 326 *c* iP Pdif 11 48 34.4 -2.1
ARU 11 52 38.0
ARU S SKSac 11 59 05.2 -5.9
ARU pmax pmax
comp=Z,24nm,1.7s,mb5.3
ARU Arti 99.77 326 ⇑ *i*P Pdif 11 48 34.7 -1.8
ARU LR LR
comp=Z,7µm,20.0s,MS6.1
SNAA Sanae 100.26 187 *e*Pdiff Pdif 11 48 37.5 -1.2
SNAA *e* 11 48 41.4
SNAA *e* 11 53 04.9
SNAA *e* 11 53 14.7
SNAA *e* 11 53 18.5
ANMO Albuquerque 100.29 56 *e*P Pdif 11 48 41.0 +2.2
ANMO Albuquerque 100.29 56 PFAKE 11 48 50.0 +11
ANMO LR LR
comp=Z,4µm,22.0s,MS5.9
AKTK Aktyubinsk 100.29 320 P Pdif 11 48 36.7 -2.1
AKTO Aktyubinsk 100.29 320 P Pdif 11 48 36.7 -2.1
comp=Z,3.1nm,0.8s,baz=104,slow=6.4,SNR=12
AKTO PKiKP PKiKP 11 53 06.0 +0.2
comp=Z,1.6nm,0.7s,baz=121,slow=5.9,SNR=3.2
AKTO Aktyubinsk 100.29 320 P Pdif 11 48 36.7 -2.1
AKTO pmax pmax
comp=Z,3.0nm,0.8s
AKTO pmax pmax
comp=Z,2.0nm,0.7s
ISCO Idaho Springs 101.02 51 PFAKE 11 48 50.0 +8.0
ISCO LR LR
comp=Z,5µm,22.0s,MS6.0
SDCO Great Sand Dun 101.10 53 PFAKE 11 48 50.0 +7.6
SDCO LR LR
comp=Z,5µm,21.0s,MS6.0
VNA3 Neumayer Olymp 101.35 185 *e*Pdiff Pdif 11 48 41.7 -1.8
VNA3 *e* 11 48 45.3
VNA3 *e* 11 53 06.2
VNA3 *e* 11 53 19.9
VNA2 Neumayer--Watz 101.45 186 *e*Pdiff Pdif 11 48 42.2 -1.8
VNA2 *e* 11 48 46.4
VNA2 *e* 11 53 07.0
VNA2 *e* 11 53 14.9
VNA2 *e* 11 53 20.8
RES Resolute Bay 101.74 15 P Pdif 11 48 43.4 -1.8
comp=Z,1.6nm,0.7s,baz=261,slow=3.4,SNR=4.7
RES Resolute Bay 101.74 15 P Pdif 11 48 43.4 -1.8
RES pmax pmax
comp=Z,2.0nm,0.7s
VNA1 Neumayer--Stat 101.80 185 *e*Pdiff Pdif 11 48 43.8 -1.7
VNA1 *e* 11 48 47.4
VNA1 *e* 11 53 07.3
VNA1 *e* 11 53 15.8
VNA1 *e* 11 53 20.7
DGMT Dagmar 101.81 42 PFAKE 11 49 00.0 +14
DGMT LR LR
comp=Z,6µm,21.0s,MS6.1
RSSD Black Hills 102.11 46 PFAKE 11 49 00.0 +13
RSSD LR LR
comp=Z,5µm,19.0s,MS6.0
TXAR Lajitas Array 102.55 62 PKKPbc PKKPbc 12 04 47.1 -3.0
comp=Z,0.8nm,0.7s,baz=123,slow=4.1,SNR=12
TXAR PKPPKP 12 13 06.3
comp=Z,0.7nm,1.0s,baz=204,slow=2.0,SNR=2.7
PMSA Palmer Station 102.58 164 PFAKE 11 49 00.0 +11
PMSA LR LR
comp=Z,3µm,19.0s,MS5.8
FFC Flin Flon 102.72 36 PFAKE 11 49 00.0 +10
FFC LR LR
comp=Z,6µm,21.0s,MS6.1
OGNE Ogallala 103.72 50 PFAKE 11 49 10.0 +16
OGNE LR LR
comp=Z,5µm,20.0s,MS6.1
AMTX Amarillo 104.22 56 PFAKE 11 49 10.0 +14
AMTX LR LR
comp=Z,4µm,21.0s,MS5.9
ABPO Ambohimpanom 105.07 248 PFAKE 11 53 30.0 +14
ABPO LR LR
comp=Z,2µm,19.0s,MS5.7
CBKS Cedar Bluff 105.60 52 PFAKE 11 53 30.0 +14
CBKS LR LR
comp=Z,4µm,20.0s,MS5.9
KBS Kingsbay 105.86 353 PFAKE 11 53 30.0 +15
KBS LR LR
comp=Z,8µm,20.0s,MS6.3
JCT Junction City 105.90 60 PFAKE 11 53 30.0 +13
JCT LR LR
comp=Z,3µm,21.0s,MS5.7
WMOK Wichita Mounta 106.61 56 PFAKE 11 53 30.0 +12
WMOK LR LR
comp=Z,4µm,20.0s,MS6.0
ULM Lac du Bonnet 107.03 40 PFAKE 11 53 30.0 +12
ULM LR LR
comp=Z,7µm,19.0s,MS6.2
AGMN Agassiz Refuge 107.36 42 PFAKE 11 53 30.0 +11
AGMN LR LR
comp=Z,5µm,20.0s,MS6.0
ECSD EROS,Sioux Fal 107.49 46 PFAKE 11 53 30.0 +11
ECSD LR LR
comp=Z,5µm,21.0s,MS6.1
KVTX Kingsville 107.64 63 PFAKE 11 53 30.0 +10
KVTX LR LR
comp=Z,3µm,19.0s,MS5.9
LVZ Lovozero 107.81 340 PFAKE 11 53 30.0 +11
LVZ LR LR
comp=Z,4µm,20.0s,MS6.0
KSU1 Kansas State U 108.01 51 PFAKE 11 53 30.0 +10
KSU1 LR LR
comp=Z,4µm,20.0s,MS6.0
KEV Kevo 109.24 343 PFAKE 11 53 30.0 +8.2
KEV LR LR
comp=Z,4µm,19.0s,MS6.0
HKT Hockley 109.35 61 PFAKE 11 53 30.0 +6.8
HKT LR LR
comp=Z,4µm,20.0s,MS6.0
ARCES ARCESS Array B 109.79 343 PKiKP PKiKP 11 53 21.8 -1.0
comp=Z,5.1nm,0.5s,baz=83,slow=2.0,SNR=18
ARCES pPKiKP 11 53 35.6
comp=Z,2.6nm,0.5s,baz=67,slow=2.0,SNR=1.7
ARCES PKKPbc PKKPbc 12 04 25.5 -3.6
comp=Z,3.9nm,0.8s,baz=113,slow=2.8,SNR=5.1
SCIA State Center 110.22 48 PFAKE 11 53 40.0 +16
SCIA LR LR
comp=Z,4µm,20.0s,MS6.0
NATX Nacogdoches 110.24 59 PFAKE 11 53 40.0 +15
NATX LR LR
comp=Z,4µm,19.0s,MS6.0
EYMN Ely 110.30 41 PFAKE 11 53 40.0 +16
EYMN LR LR
comp=Z,4µm,20.0s,MS6.0
GNI Garni 110.54 310 ⇑ *i*PKIKP PKiKP 11 53 23.7 -1.4
GNI Garni 110.54 310 ⇑ *i*PKP PKiKP 11 53 23.8 -1.3
GNI LR LR
comp=Z,4µm,19.0s,MS6.0
MIAR Mount Ida 110.90 56 PFAKE 11 53 40.0 +14
MIAR LR LR
comp=Z,5µm,20.0s,MS6.1
JOF Joensuu 111.37 336 *ep* PKiKP 11 53 24.2 -1.8
comp=Z,7.6nm,0.7s
JOF Joensuu 111.37 336 *e*PKIKP PKiKP 11 53 24.2 -1.8
JOF pmax pmax
comp=Z,8.0nm,0.7s
KIV Kislovodsk 111.39 314 *e*PKIKP PKiKP 11 53 28.1 +1.5
KIV pmax pmax
comp=Z,9.0nm,1.2s
KIV Kislovodsk 111.39 314 PFAKE 11 53 40.0 +13
KIV LR LR
comp=Z,2µm,19.0s,MS5.8
OBN Obninsk 112.16 327 *e*PKP PKiKP 11 53 26.4 -1.3
OBN LR LR
comp=Z,4µm,20.0s,MS6.0
JFWS Jewell Farm 112.20 46 PFAKE 11 53 40.0 +12
JFWS LR LR
comp=Z,4µm,20.0s,MS6.0
CCM Cathedral Cave 112.31 52 PFAKE 11 53 40.0 +11
CCM LR LR
comp=Z,3µm,20.0s,MS5.9
HDIL Hopedale 113.37 49 PFAKE 11 53 40.0 +10
HDIL LR LR
comp=Z,4µm,19.0s,MS6.1
PAYG Puerto Ayora 113.64 94 PFAKE 11 53 40.0 +8.2
PAYG LR LR
comp=Z,2µm,22.0s,MS5.6
VBMS Vicksburg 113.70 58 PFAKE 11 53 40.0 +8.6
VBMS LR LR
comp=Z,3µm,20.0s,MS6.0
KAF Kangasniemi 113.78 337 *ep* PKiKP 11 53 29.0 -1.6
comp=Z,9.2nm,0.7s
KAF Kangasniemi 113.78 337 *e*PKIKP PKiKP 11 53 29.0 -1.6
KAF pmax pmax
comp=Z,9.0nm,0.7s
OXF Oxford 114.31 55 PFAKE 11 53 40.0 +7.5
OXF LR LR
comp=Z,3µm,20.0s,MS5.9
EFI East Falkland 114.77 158 PFAKE 11 53 40.0 +7.1
EFI LR LR
comp=Z,2µm,20.0s,MS5.7
ANN Anapa 114.86 316 *i* PKIKP PKiKP 11 53 23.4 -10
ANN pmax pmax
comp=Z,70nm,1.4s
WVT Waverly 115.33 53 PFAKE 11 53 50.0 +16
WVT LR LR
comp=Z,4µm,21.0s,MS6.0
MALT Malatya 115.69 309 PFAKE 11 53 50.0 +15
MALT LR LR
comp=Z,3µm,19.0s,MS5.8
GLMI Grayling 115.69 43 PFAKE 11 53 50.0 +15
GLMI LR LR
comp=Z,4µm,20.0s,MS6.0
WCI Wyandotte Cave 116.12 51 PFAKE 11 53 50.0 +14
WCI LR LR
comp=Z,3µm,20.0s,MS5.9
PLCA Paso Flores 116.26 142 PKKPbc PKKPbc 12 04 05.0 -1.6
comp=Z,2.5nm,0.7s,baz=57,slow=3.5,SNR=7.2
LRAL Lakeview Retre 116.53 57 PFAKE 11 53 50.0 +13
LRAL LR LR
comp=Z,3µm,19.0s,MS6.0
TEIG Tepich 116.68 71 PFAKE 11 53 50.0 +13
TEIG LR LR
comp=Z,2µm,21.0s,MS5.8
BRAL Brewton 116.79 59 PFAKE 11 53 50.0 +13
BRAL LR LR
comp=Z,3µm,20.0s,MS5.9
AAM Ann Arbor 117.07 46 PFAKE 11 53 50.0 +12
AAM LR LR
comp=Z,4µm,20.0s,MS6.0
SFJD Kangerlussuaq 117.40 11 PFAKE 11 53 50.0 +13
SFJD LR LR
comp=Z,5µm,20.0s,MS6.1
TGUH Tegucigalpa,Un 117.73 78 PFAKE 11 53 50.0 +10
TGUH LR LR
comp=Z,1µm,20.0s,MS5.6
AKASG Malin Array Be 117.98 325 PKP PKPdf 11 53 37.5 -1.5
comp=Z,21nm,0.7s,baz=60,slow=2.3,SNR=49
AKASG pPKP pPKPdf 11 53 51.1 -2.3
comp=Z,5.4nm,0.6s,baz=51,slow=2.7,SNR=7.8
AKASG Malin Array Be 117.98 325 PKIKP PKPdf 11 53 37.5 -1.5
AKASG 11 53 51.1
AKASG pmax pmax
comp=Z,21nm,0.7s
AKASG pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 117.99 325 PFAKE 11 53 50.0 +11
KIEV LR LR
comp=Z,3µm,19.0s,MS5.9
ACSO Alum Creek Sta 118.13 48 PFAKE 11 53 50.0 +10
ACSO LR LR
comp=Z,4µm,22.0s,MS6.0
BR131 Keskin Array S 118.96 312 PFAKE 11 53 50.0 +8.7
BR131 LR LR
comp=Z,1µm,19.0s,MS5.6
BRTR Keskin Array B 118.96 312 PKP PKPdf 11 53 39.8 -1.5
comp=Z,8.1nm,0.9s,baz=100,slow=1.2,SNR=24
BRTR pPKP pPKPdf 11 53 53.9 -1.7
comp=Z,1.3nm,0.5s,baz=132,slow=2.0,SNR=4.3
BRTR PKKPbc PKKPbc 12 03 56.5 -0.3
comp=Z,1.0nm,0.8s,baz=207,slow=2.5,SNR=4.8
BRTR Keskin Array B 118.96 312 PKIKP PKPdf 11 53 39.8 -1.5
BRTR 11 53 53.9
BRTR pmax pmax
comp=Z,8.0nm,1.0s
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 118.96 312 *i* P PKPdf 11 53 40.1 -1.2
GOGA Godfrey 119.37 56 PFAKE 11 53 50.0 +7.8
GOGA LR LR
comp=Z,4µm,22.0s,MS6.0
SUW Suwalki 119.60 330 *e*PKP PKPdf 11 53 41.7 -0.3
SUW Suwalki 119.60 330 *e*PKP PKPdf 11 53 41.7 -0.3
ERPA Erie 119.72 45 PFAKE 11 53 50.0 +7.4
ERPA LR LR
comp=Z,4µm,22.0s,MS6.0
NOA NORSAR Array B 119.94 341 PKP PKPdf 11 53 41.3 -1.2
comp=Z,8.3nm,0.7s,baz=45,slow=2.0,SNR=29
NOA pPKP pPKPdf 11 53 55.0 -1.9
comp=Z,2.2nm,0.5s,baz=42,slow=1.9,SNR=5.6
NOA PKKPab PKKPab 12 03 51.8 -1.6
comp=Z,5.8nm,0.8s,baz=44,slow=3.7,SNR=16
NOA NORSAR Array B 119.94 341 PKIKP PKPdf 11 53 41.3 -1.2
NOA 11 53 55.0
NOA pmax pmax
comp=Z,8.0nm,0.7s
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA pmax pmax
comp=Z,6.0nm,0.8s
NAO01 NORSAR Array S 120.19 341 PFAKE 11 53 50.0 +7.0
NAO01 LR LR
comp=Z,2µm,21.0s,MS5.7
CSS Prodhromos 120.43 307 PFAKE 11 54 00.0 +16
CSS LR LR
comp=Z,2µm,20.0s,MS5.8
MCWV Mont Chateau 120.60 48 PFAKE 11 54 00.0 +16
MCWV LR LR
comp=Z,5µm,19.0s,MS6.2
BOSA Boshof 120.66 231 PKP PKPdf 11 53 44.2 -0.7
comp=Z,20nm,0.8s,baz=115,slow=2.1,SNR=28
BOSA pPKP pPKPdf 11 53 57.7 -1.5
comp=Z,7.6nm,0.9s,baz=176,slow=4.7,SNR=3.2
BOSA Boshof 120.66 231 PKIKP PKPdf 11 53 44.2 -0.7
BOSA 11 53 57.7
BOSA pmax pmax
comp=Z,20nm,0.8s
BOSA pmax pmax
comp=Z,8.0nm,0.9s
BLA Blacksburg 120.88 51 PFAKE 11 54 00.0 +15
BLA LR LR
comp=Z,3µm,21.0s,MS5.9
TIRR Tirgusor 121.05 318 ⇑ *i*P PKPdf 11 53 44.6 -0.5
SCHQ Schefferville 121.39 27 PFAKE 11 54 00.0 +15
SCHQ LR LR
comp=Z,5µm,22.0s,MS6.1
KONO Kongsberg 121.52 341 ⇑ *i*PKIKP PKPdf 11 53 44.2 -1.3
KONO MLR MLR
comp=Z,2µm,20.0s,MS5.9
VRI Vrincioaia 121.56 320 ⇑ *i*P PKPdf 11 53 44.7 -1.4
SSPA Standing Stone 121.71 46 PFAKE 11 54 00.0 +13
SSPA LR LR
comp=Z,4µm,19.0s,MS6.0
BURAR Bucovina Array 121.71 323 ⇑ *i*P PKPdf 11 53 46.8 +0.5
ISP Isparta 121.85 310 PFAKE 11 54 00.0 +13
ISP LR LR
comp=Z,2µm,19.0s,MS5.8
SUR Sutherland 121.98 225 PFAKE 11 54 00.0 +13
SUR LR LR
comp=Z,4µm,21.0s,MS6.0
LBTB Lobatse 122.05 235 PFAKE 11 54 00.0 +12
LBTB LR LR
comp=Z,3µm,19.0s,MS6.0
DWPF Disney 122.08 61 PFAKE 11 54 00.0 +12
DWPF LR LR
comp=Z,2µm,19.0s,MS5.9
NHSC New Hope 122.12 55 PFAKE 11 54 00.0 +12
NHSC LR LR
comp=Z,4µm,20.0s,MS6.1
KWP Kalwaria 122.18 326 PFAKE 11 54 00.0 +13
KWP LR LR
comp=Z,3µm,19.0s,MS5.9
BORG Borgarnes 122.29 359 PFAKE 11 54 00.0 +13
BORG LR LR
comp=Z,4µm,20.0s,MS6.1

LONY Lake Ozonia 122.44 41 PFAKE 11 54 00.0 +12
LONY LR LR
comp=Z,3µm,19.0s,MS6.0
BINY Binghamton 122.48 44 PFAKE 11 54 00.0 +12
BINY LR LR
comp=Z,3µm,19.0s,MS5.9
LCO Las Campanas 122.71 131 PFAKE 11 54 00.0 +11
LCO LR LR
comp=Z,1µm,21.0s,MS5.6
VOIR 122.81 321 ⇑*i*P PKPdf 11 53 46.7 -1.8
CBN Corbin 122.89 49 PFAKE 11 54 00.0 +11
CBN LR LR
comp=Z,3µm,20.0s,MS5.9
UZH Uzhgorod 122.93 325 *e*PKIKP PKPdf 11 53 47.0 -1.6
UZH *e* 11 54 01.0
TRQA Tornquist 123.05 145 PFAKE 11 54 00.0 +11
TRQA LR LR
comp=Z,2µm,19.0s,MS5.8
STHS Stebnicka Huta 123.10 326 *e*PKP PKPdf 11 53 48.8 -0.1
CRVS Cervenica-Dubn 123.25 326 *e*PKP PKPdf 11 53 48.8 -0.4
CRVS *e* 11 53 59.3
CNNC Cliffs of the 123.40 52 PFAKE 11 54 00.0 +10
CNNC LR LR
comp=Z,3µm,20.0s,MS6.0
LSZ Lusaka 123.58 247 PFAKE 11 54 00.0 +9.2
LSZ LR LR
comp=Z,2µm,19.0s,MS5.8
DRGR 123.61 323 ⇓*i*P PKPdf 11 53 49.4 -0.6
KECS Kecovo 124.03 326 *e*PKP PKPdf 11 53 45.1 -5.6
KECS *e* 11 54 03.9
GZR Gura Zlata 124.25 321 ⇑*i*P PKPdf 11 53 50.7 -0.5
GZR Gura Zlata 124.25 321 ⇑P PKPdf 11 53 50.7 -0.5
LBNH Lisbon 124.32 40 PFAKE 11 54 00.0 +8.6
LBNH LR LR
comp=Z,4µm,21.0s,MS6.1
NNA Nana 124.37 110 PFAKE 11 54 00.0 +7.7
NNA LR LR
comp=Z,1µm,20.0s,MS5.5
OKC Ostrava-Krasne 124.53 328 ⇓*i*PKPDF PKPdf 11 53 51.8 +0.2
OKC *ep*PKP pPKPdf 11 54 04.8 -1.2
PSZ Piszkesteto 124.66 325 *e*PKP PKPdf 11 53 51.5 -0.4
PSZ Piszkesteto 124.66 325 ⇓*i*P PKPdf 11 53 51.6 -0.3
PSZ Piszkesteto 124.66 325 ⇑P PKPdf 11 53 51.6 -0.4
PSZ LR LR
comp=Z,2µm,20.0s,MS5.7
BZS Buzias 124.85 322 ⇓*i*P PKPdf 11 53 51.9 -0.5
BZS Buzias 124.85 322 ⇑P PKPdf 11 53 51.9 -0.5
KSP Ksiaz 124.88 330 *e*PKP PKPdf 11 53 52.4 +0.1
KSP Ksiaz 124.88 330 *e*PKP PKPdf 11 53 52.1 -0.2
KSP *ep*PKP pPKPdf 11 54 05.4 -1.2
BCIP Isla Barro Col 124.92 84 PFAKE 11 54 00.0 +6.6
BCIP LR LR
comp=Z,1µm,19.0s,MS5.5
VYHS Vyhne 124.94 326 *e*PKP PKPdf 11 53 51.7 -0.7
RUE Ruedersdorf 125.02 333 *e*PKPdf PKPdf 11 53 52.5 0.0
KOLL Kolacno 125.12 327 *e*PKP PKPdf 11 53 52.5 -0.3
DPC Dobruska-Polom 125.17 329 ⇓*i*PKPDF PKPdf 11 53 53.1 +0.3
DPC *ep*PKP pPKPdf 11 54 07.0 -0.2
UPC Upice 125.23 330 ⇓*i*PKPDF PKPdf 11 53 53.1 +0.2
UPC *ep*PKP pPKPdf 11 54 07.4 +0.1
BUD Budapest 125.39 325 ⇓*e*PKP PKPdf 11 53 53.1 -0.3
PKME Peaks-Kenny Pk 125.47 38 PFAKE 11 54 00.0 +6.4
PKME LR LR
comp=Z,4µm,19.0s,MS6.1
OTAV Otavalo 125.49 95 PFAKE 11 54 10.0 +15
OTAV LR LR
comp=Z,1µm,21.0s,MS5.5
BSEG Bad Segeberg 125.51 336 *e*PKPdf PKPdf 11 53 53.4 0.0
VRAC Vranov 125.66 328 ⇓*i*P PKPdf 11 53 54.1 +0.3
VRAC Vranov 125.66 328 ⇑P PKPdf 11 53 54.1 +0.3
PVCC Panska Ves 125.93 330 ⇓*i*PKPDF PKPdf 11 53 54.3 0.0
PVCC *ep*PKP pPKPdf 11 54 07.9 -0.7
BRG Berggiesshubel 126.01 331 *i* PKIKP PKPdf 11 53 54.2 -0.2
BRG *e* 11 54 07.7
BRG pmax pmax
comp=Z,25nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.1s
BRG Berggiesshubel 126.01 331 *e*PKPdf PKPdf 11 53 54.3 -0.1
BRG *ep*PKPdf pPKPdf 11 54 07.3 -1.5
BRG Berggiesshubel 126.01 331 *i* PKP PKPdf 11 53 54.2 -0.3
comp=Z,41nm,1.0s
BRG *ep*PKP pPKPdf 11 54 07.7 -1.1
comp=Z,13nm,1.1s
ZST Bratislava 126.05 327 *e*PKP PKPdf 11 53 54.6 0.0
CLL Collm 126.17 332 ⇑*i*PKIKP PKPdf 11 53 54.1 -0.6
CLL *e* 11 54 07.0
CLL pmax pmax
comp=Z,38nm,0.7s
CLL Collm 126.17 332 *e*PKPdf PKPdf 11 53 54.1 -0.6
CLL *ep*PKPdf pPKPdf 11 54 07.5 -1.6
CLL Collm 126.17 332 ⇑*i*PKPdf PKPdf 11 53 54.1 -0.6
comp=Z,38nm,0.7s
CLL *ep*PKPdf pPKPdf 11 54 07.0 -2.1
TREC Trest 126.24 329 ⇓*i*PKPDF PKPdf 11 53 55.0 +0.1
VAY Valandovo 126.26 317 *e*PKP PKPdf 11 53 52.7 -2.5
FBE Freiberg 126.26 331 *e*PKPdf PKPdf 11 53 54.7 -0.2
PRU Pruhonice 126.29 330 ⇓*i*PKPDF PKPdf 11 53 54.9 -0.1
PRU *ep*PKP pPKPdf 11 54 08.8 -0.5
HLG Helgoland 126.29 337 *e*PKPdf PKPdf 11 53 54.4 -0.5
PKSM Moragy 126.31 324 ⇑*i*P PKPdf 11 53 54.5 -0.7
PKSM Moragy 126.31 324 ⇑P PKPdf 11 53 54.5 -0.7
NRDL Niedersach Rie 126.64 335 *e*PKPdf PKPdf 11 53 55.4 -0.2
SOP Sopron 126.65 327 ⇓*i*PKP PKPdf 11 53 55.8 0.0
SKO Skopje 126.72 318 *e*PKP PKPdf 11 53 55.5 -0.6
CONA Conrad Observa 126.88 327 ⇑*i*PKiKP PKiKP 11 53 55.9 -0.8
comp=Z,12nm,0.7s,SNR=13
CSNA Conrad Observa 126.88 327 ⇓*i*PKiKP PKiKP 11 53 56.0 -0.7
comp=Z,13nm,0.6s
CLZ Clausthal 126.99 334 *e*PKPdf PKPdf 11 53 56.3 0.0
CLZ *ep*PKPdf pPKPdf 11 54 09.5 -1.1
TANN Tannenbergstha 127.02 331 *e*PKPdf PKPdf 11 53 56.2 -0.2
WERD Werda 127.07 332 *e*PKPdf PKPdf 11 53 56.0 -0.5
GUNZ Gunzen 127.12 331 *e*PKPdf PKPdf 11 53 56.3 -0.3
GUNZ *ep*PKPdf pPKPdf 11 54 09.7 -1.2
WERN Wernitzgruen 127.15 331 *e*PKPdf PKPdf 11 53 56.4 -0.2
NKC Novy Kostel 127.15 331 ⇓*i*PKPDF PKPdf 11 53 56.8 +0.2
NKC *ep*PKP pPKPdf 11 54 09.7 -1.3
BIA Bitola 127.23 317 *e*PKP PKPdf 11 53 55.4 -1.7
MOX Moxa 127.26 332 *e*PKP PKPdf 11 53 56.6 -0.2
comp=Z,31nm,1.4s
MOX Moxa 127.26 332 *e*PKIKP PKPdf 11 53 56.6 -0.2
MOX pmax pmax
comp=Z,31nm,1.4s
MOX Moxa 127.26 332 *e*PKPdf PKPdf 11 53 56.4 -0.4
LVC Limon Verde 127.29 125 PFAKE 11 54 10.0 +12
LVC LR LR
comp=Z,1µm,20.0s,MS5.6
KHC Kasperske Hory 127.32 330 ⇓*i*PKPDF PKPdf 11 53 57.2 +0.2
KHC *ep*PKP pPKPdf 11 54 10.2 -1.1
GEC2 GERESS Array S 127.44 329 *e*PKPdf PKPdf 11 53 56.9 -0.3
GERES GERESS Array B 127.44 329 PKP PKPdf 11 53 57.2 -0.1
comp=Z,21nm,0.7s,baz=70,slow=1.6,SNR=79
GERES pPKP pPKPdf 11 54 10.0 -1.6
comp=Z,6.7nm,0.6s,baz=82,slow=1.4,SNR=9.2
GERES GERESS Array B 127.44 329 PKIKP PKPdf 11 53 57.2 0.0
GERES 11 54 10.0
GERES pmax pmax
comp=Z,21nm,0.7s
GERES pmax pmax
comp=Z,7.0nm,0.6s
MANZ Manzenberg 127.48 331 *e*PKPdf PKPdf 11 53 57.0 -0.3
MANZ *ep*PKPdf pPKPdf 11 54 10.7 -0.9
ROTZ Rotzenmuhle 127.58 331 *e*PKPdf PKPdf 11 53 56.9 -0.6
WET Wettzell 127.66 330 *e*PKPdf PKPdf 11 53 57.8 +0.2
WET *ep*PKPdf pPKPdf 11 54 10.5 -1.5
IBBN Ibbenburen 127.75 336 *e*PKPdf PKPdf 11 53 57.9 +0.2
MOA Molln 127.78 328 ⇓*i*PKiKP PKiKP 11 53 57.5 -0.9
comp=Z,9.7nm,0.8s
UBBA Unterbreizbach 127.88 333 *e*PKPdf PKPdf 11 53 57.8 -0.2
UBBA *ep*PKPdf pPKPdf 11 54 11.4 -0.9
TIR Tirane 128.05 318 PFAKE 11 54 10.0 +11
TIR LR LR
comp=Z,3µm,19.0s,MS5.9
PERS Pernice 128.06 326 *i* P PKPdf 11 53 57.2 -1.3
SOKA Soboth 128.09 326 ⇑*i*PKPdf PKPdf 11 53 57.1 -1.4
comp=Z,23nm,1.2s
GRA1 Grafenberg Arr 128.10 331 *e*PKPdf PKPdf 11 53 57.9 -0.6
GRA1 *ep*PKPdf pPKPdf 11 54 11.6 -1.2
GRF Grafenberg Arr 128.10 331 *e*PKPdf PKPdf 11 53 57.9 -0.6
GRF *ep*PKPdf pPKPdf 11 54 11.6 -1.2
WTSB Winterswijk 128.40 336 *e*P PKPdf 11 53 58.5 -0.5
comp=Z,36nm,1.4s

BUG Bochum--Univer 128.60 335 *e*PKPdf PKPdf 11 53 59.3 -0.1
RJOB Jochberg 128.62 329 *e*PKPdf PKPdf 11 53 58.7 -0.8
BOJS Bojanci 128.66 325 *i* P PKPdf 11 53 59.4 -0.3
LJU Ljubljana 128.75 326 *i* P PKPdf 11 53 59.1 -0.7
KBA Koelnbreinsper 128.75 328 ⇑*i*PKiKP PKiKP 11 53 59.6 -0.8
comp=Z,20nm,1.1s
ESK Eskdalemuir 128.95 345 PFAKE 11 54 10.0 +10
ESK LR LR
comp=Z,3µm,19.0s,MS6.0
TNS Taunus Mts 129.00 334 *e*PKPdf PKPdf 11 53 59.8 -0.4
FUR Furstenfeldbru 129.10 330 *e*PKPdf PKPdf 11 54 00.1 -0.3
TOD Tromm 129.28 333 PKIKP PKPdf 11 54 00.3 -0.4
TRI Trieste 129.37 326 PFAKE 11 54 10.0 +9.0
TRI LR LR
comp=Z,3µm,19.0s,MS6.0
WATA Walderalm 129.50 329 ⇑*i*PKPdf PKPdf 11 54 00.5 -0.7
comp=Z,11nm,0.5s
WTTA Wattenberg 129.52 329 ⇑*i*PKiKP PKiKP 11 54 00.8 -1.2
comp=Z,53nm,1.0s,SNR=9.8
ABH Alteburg 129.64 334 PKP PKPdf 11 54 01.2 -0.2
HGN Heimansgroeve 129.67 336 *eP* PKPdf 11 54 00.7 -0.7
comp=Z,20nm,1.5s
STU Stuttgart 129.69 332 *e*PKPdf PKPdf 11 54 01.6 +0.1
STU *ep*PKPdf pPKPdf 11 54 15.4 -0.5
MOTA Moosalm 129.74 329 ⇑*i*PKiKP PKiKP 11 54 01.0 -1.4
comp=Z,17nm,0.6s
MEM Membach 129.75 335 PKP PKPdf 11 54 01.2 -0.4
RUP Ruppelstein 129.99 334 PKIKP PKPdf 11 54 01.8 -0.3
FETA Feichten 130.15 329 *i* PKiKP PKiKP 11 54 02.3 -1.0
comp=Z,20nm,0.9s,SNR=6.2
LANF Langenberg 130.19 333 PKP PKPdf 11 54 02.2 -0.3
BCLA Clavier 130.19 336 PKP PKPdf 11 54 01.0 -1.4
UCC Uccle 130.28 337 PKP PKPdf 11 54 03.3 +0.7
DAVA Damuels 130.39 330 ⇑*i*PKPdf PKPdf 11 54 01.3 -1.6
comp=Z,16nm,0.8s
WLF Walferdange 130.41 334 PKP PKPdf 11 54 04.4 +1.5
WLF Walferdange 130.41 334 *e*PKPdf PKPdf 11 54 04.1 +1.2
WLF Walferdange 130.41 334 PFAKE 11 54 10.0 +7.1
WLF LR LR
comp=Z,3µm,20.0s,MS5.9
BFO Black Forest 130.41 332 *e*PKPdf PKPdf 11 54 01.6 -1.3
BFO *ep*PKPdf pPKPdf 11 54 15.3 -2.0
BFO Black Forest 130.41 332 *e*PKPdf PKPdf 11 54 01.6 -1.3
BFO *ep*PKPdf pPKPdf 11 54 15.3 -2.0
BFO LR LR
comp=Z,2µm,20.0s,MS5.8
SNF Seneffe 130.53 336 PKP PKPdf 11 54 03.0 -0.1
GIVF Givet 130.63 336 *e*PKIKP PKPdf 11 54 02.7 -0.6
comp=Z,59nm,1.0s
DOU Dourbes 130.73 336 PKP PKPdf 11 54 03.4 -0.1
CDF Champ du Feu 130.84 333 *e*PKIKP PKPdf 11 54 02.7 -1.0
comp=Z,24nm,0.9s
FELD Feldberg im Sc 130.89 332 PKP PKPdf 11 54 02.7 -1.1
BAIF Baives 130.91 336 ⇑*i*PKIKP PKPdf 11 54 03.3 -0.5
comp=Z,20nm,0.8s
TIP Timpagrande 131.19 317 PFAKE 11 54 20.0 +15
TIP LR LR
comp=Z,2µm,20.0s,MS5.7
TUE Stuetta 131.22 329 PFAKE 11 54 20.0 +16
TUE LR LR
comp=Z,3µm,19.0s,MS6.1
TSUM Tsumeb 131.31 237 PFAKE 11 54 20.0 +15
TSUM LR LR
comp=Z,3µm,19.0s,MS6.0
MOF Molkenrain 131.31 332 PKP PKPdf 11 54 04.0 -0.6
MENF Mencas 131.31 338 PKP PKPdf 11 54 05.0 +0.5
CUC Castrocucco 131.39 319 PFAKE 11 54 20.0 +15
CUC LR LR
comp=Z,3µm,19.0s,MS5.9
HINF Hinteralfeld 131.47 332 ⇑*i*PKIKP PKPdf 11 54 04.2 -0.7
comp=Z,25nm,0.6s
AQU L'Aquila 131.60 323 PFAKE 11 54 20.0 +15
AQU LR LR
comp=Z,2µm,19.0s,MS5.7
MEZF Maizieres J'vi 131.76 334 *e*PKIKP PKPdf 11 54 05.2 -0.3
comp=Z,78nm,0.9s
LOMF Lomont 131.82 332 PKP PKPdf 11 54 03.5 -2.1
VLC Villacollemand 132.21 327 PFAKE 11 54 20.0 +14
VLC LR LR
comp=Z,2µm,20.0s,MS5.8
CEL Celeste 132.23 317 PFAKE 11 54 20.0 +13
CEL LR LR
comp=Z,2µm,20.0s,MS5.8
CABF La Chapelle 132.71 332 ⇑*i*PKIKP PKPdf 11 54 07.3 0.0
comp=Z,48nm,0.7s
SDDR Presa de Saban 132.74 71 PFAKE 11 54 20.0 +12
SDDR LR LR
comp=Z,2µm,21.0s,MS5.7
LPL La Plagne 133.19 330 *e*PKIKP PKPdf 11 54 08.2 0.0
comp=Z,40nm,0.7s
LPG La Plagne 133.19 330 *e*PKIKP PKPdf 11 54 08.3 0.0
comp=Z,59nm,0.8s
LOR Lormes 133.22 334 ⇑*i*PKIKP PKPdf 11 54 07.8 -0.5
comp=Z,41nm,1.0s
SSF Saint Saulge 133.54 334 *e*PKIKP PKPdf 11 54 08.6 -0.2
comp=Z,32nm,0.8s
BNI Bardonecchia 133.55 330 PFAKE 11 54 20.0 +11
BNI LR LR
comp=Z,2µm,20.0s,MS5.9
SMF Signal de Mont 133.71 333 *e*PKIKP PKPdf 11 54 08.7 -0.5
comp=Z,43nm,1.0s
MBDF Montbardon 133.73 329 *e*PKIKP PKPdf 11 54 08.8 -0.5
comp=Z,17nm,0.8s
HYF Humbligny 133.75 335 *e*PKIKP PKPdf 11 54 09.4 +0.2
FLN La Foliniere 133.77 338 *e*PKIKP PKPdf 11 54 08.7 -0.5
comp=Z,59nm,0.9s
LDF La Druitiere 133.78 338 ⇑*i*PKIKP PKPdf 11 54 08.5 -0.7
comp=Z,75nm,1.3s
AVF Avril sur Loir 133.81 334 *e*PKIKP PKPdf 11 54 08.6 -0.8
comp=Z,48nm,1.2s
CPUP Villa Florida 133.86 137 PKhKP 11 54 03.2
comp=Z,0.3nm,0.4s,baz=135,slow=4.3,SNR=3.5
CPUP PKP PKPdf 11 54 08.8 -1.3
comp=Z,2.4nm,0.7s,baz=263,slow=4.4,SNR=6.2
CPUP Villa Florida 133.86 137 PKP PKPdf 11 54 08.8 -1.3
CPUP LR LR
comp=Z,242nm,20.0s,MS4.9
SBF Sospel 133.99 328 *e*PKIKP PKPdf 11 54 10.0 +0.2
comp=Z,53nm,0.9s
SDV Santo Domingo 134.00 84 PFAKE 11 54 20.0 +9.3
SDV LR LR
comp=Z,724nm,21.0s,MS5.4
PGF Pioggiola 134.03 326 *e*PKIKP PKPdf 11 54 09.2 -0.7
comp=Z,97nm,0.9s
ORIF Oris-en-Rattie 134.04 330 *e*PKIKP PKPdf 11 54 09.3 -0.6
comp=Z,37nm,0.8s
BGF Bois d'Agland 134.21 334 *e*PKIKP PKPdf 11 54 10.0 -0.1
comp=Z,45nm,0.8s
GRR Gorron 134.22 338 *e*PKIKP PKPdf 11 54 09.7 -0.4
comp=Z,34nm,0.8s
PLDF La Plantade 134.32 333 PKP PKPdf 11 54 10.1 -0.3
WDD Wield Dalam 134.38 315 PFAKE 11 54 20.0 +9.2
WDD LR LR
comp=Z,1µm,19.0s,MS5.7
AGO Saint Agoulin 134.48 333 PKP PKPdf 11 54 11.2 +0.6
FRF La Foret Royal 134.61 328 *e*PKIKP PKPdf 11 54 10.1 -0.9
comp=Z,38nm,0.9s
VIVF Saint-Julien-l 134.67 331 *e*PKIKP PKPdf 11 54 09.8 -1.2
comp=Z,38nm,0.9s
BBSR BB Station 134.67 51 PFAKE 11 54 20.0 +8.6
BBSR LR LR
comp=Z,2µm,19.0s,MS5.8
TCF Toulx Ste Croi 134.70 334 *e*PKIKP PKPdf 11 54 10.9 -0.2
comp=Z,81nm,1.0s
PYM Petit Puy Mans 134.77 333 PKP PKPdf 11 54 11.9 +0.7
TRIS Tristan da Cun 134.80 193 PFAKE 11 54 20.0 +8.4
TRIS LR LR
comp=Z,2µm,20.0s,MS5.7
LMR La Mourre 134.84 328 *e*PKIKP PKPdf 11 54 10.6 -0.8
comp=Z,46nm,1.0s
SMRF Simiane la Rot 134.87 330 *e*PKIKP PKPdf 11 54 11.2 -0.2
comp=Z,63nm,1.1s
TAVF Tavernes 134.88 329 PKP PKPdf 11 54 11.1 -0.4
LBL Lubilhac 135.06 333 PKP PKPdf 11 54 11.7 -0.1
BERF Bertagne 135.28 329 PKP PKPdf 11 54 12.0 -0.2
GELF Grande-Etoile 135.37 329 PKP PKPdf 11 54 11.6 -0.8
MFF Saint Martin d 135.42 336 *e*PKIKP PKPdf 11 54 12.2 -0.2
comp=Z,31nm,0.8s
LASF Ste Croix 135.64 331 *e*PKIKP PKPdf 11 54 12.5 -0.4
comp=Z,46nm,0.9s
RJF Les Rejaudoux 135.77 334 *e*PKIKP PKPdf 11 54 13.1 0.0
comp=Z,21nm,1.0s
CAF Calviac 135.83 333 *e*PKIKP PKPdf 11 54 13.5 +0.3
comp=Z,15nm,0.8s
MTLF Montolieu 136.97 332 *e*PKIKP PKPdf 11 54 15.5 +0.1

comp=Z,16nm,0.7s
SJG San Juan 137.68 71 PFAKE 11 54 30.0 +13
SJG LR LR
comp=Z,2µm,20.0s,MS5.8
KEST Kesra 138.01 318 PKP PKPdf 11 54 18.1 +0.6
comp=Z,4.5nm,0.9s,baz=74,slow=7.4,SNR=7.8
ETSF Etsaut 138.59 334 *e*PKIKP PKPdf 11 54 18.6 +0.2
comp=Z,40nm,0.7s
ANWB Willy Bob 141.85 70 PFAKE 11 54 40.0 +15
ANWB LR LR
comp=Z,1µm,22.0s,MS5.6
PCAB Cabril 142.54 340 *e*PKP PKPdf 11 54 24.8 -0.8
MVO Moncorvo 142.67 338 *e*PKP PKPdf 11 54 22.6 -3.2
ESDC Sonseca Array 142.70 334 PKP PKPdf 11 54 23.1 -2.8
comp=Z,5.2nm,0.8s,baz=30,slow=3.4,SNR=5.6
ESLA Sonseca Array 142.70 334 PFAKE 11 54 40.0 +14
ESLA LR LR
comp=Z,14µm,21.0s,MS6.7
GRGR Grenville 142.74 79 PFAKE 11 54 40.0 +13
GRGR LR LR
comp=Z,984nm,20.0s,MS5.6
PAB San Pablo 142.98 334 PFAKE 11 54 40.0 +14
PAB LR LR
comp=Z,3µm,20.0s,MS6.1
MTE Manteigas 143.53 338 *e*PKP PKPdf 11 54 24.9 -2.4
MTE Manteigas 143.53 338 PFAKE 11 54 40.0 +13
MTE LR LR
comp=Z,2µm,19.0s,MS5.9
PCBR Castelo Branco 143.99 338 *e*PKP PKPdf 11 54 26.3 -1.9
PMRV Marv??o 144.32 337 *e*PKP PKPdf 11 54 27.4 -1.4
BBGH Gun Hill 144.68 77 PFAKE 11 54 40.0 +10
BBGH LR LR
comp=Z,1µm,19.0s,MS5.7
PESTR Estremoz 144.88 337 *e*PKP PKPdf 11 54 28.9 -0.9
PBAR Barrancos 145.26 336 *e*PKP PKPdf 11 54 30.2 -0.2
EVO Evora 145.33 337 *e*PKIKP PKPdf 11 54 28.7 -1.8
comp=Z,134nm,1.1s
EVO Evora 145.33 337 *e*PKP PKPdf 11 54 30.6 +0.1
PBEJ Beja 145.72 337 *e*PKP PKPdf 11 54 32.1 +0.9
CAM4 Nova Friburgo 145.75 149 ⇓*i*P PKPdf 11 54 31.2 -0.5
CAM4 *i* 11 54 32.9
CAM4 *i* 11 54 35.5
CAM4 *i* 11 54 45.2
CAM4 *i* 11 54 50.0
SFS San Fernando 146.35 333 PFAKE 11 54 40.0 +7.7
SFS LR LR
comp=Z,3µm,20.0s,MS6.1
PBDV Barranco-do-Ve 146.42 336 *e*PKP PKPdf 11 54 34.6 +2.2
PTEO Sao Teotonio 146.47 337 *e*PKP PKPdf 11 54 31.7 -0.8
BDFB Brasilia 147.43 134 PKP PKPdf 11 54 34.1 -0.6
comp=Z,17nm,0.7s,baz=211,slow=2.1,SNR=32
BDFB PKPbc PKPbc 11 54 37.1 -0.1
comp=Z,39nm,0.8s,baz=195,slow=6.7,SNR=28
BDFB pPKPbc pPKPbc 11 54 49.8 -1.7
comp=Z,8.8nm,0.5s,baz=169,slow=25,SNR=3.8
BDFB Brasilia 147.43 134 PKIKP PKPdf 11 54 34.1 -0.6
BDFB 11 54 37.1
BDFB 11 54 49.8
BDFB pmax pmax
comp=Z,17nm,0.7s
BDFB pmax pmax
comp=Z,39nm,0.8s
BDFB pmax pmax
comp=Z,9.0nm,0.5s
BDFB Brasilia 147.43 134 PKP PKPdf 11 54 34.1 -0.6
BDFB PKPbc PKPbc 11 54 37.1 -0.1
BDFB pPKPbc pPKPbc 11 54 49.8 -1.7
BDFB LR LR
comp=Z,1µm,20.0s,MS5.7
RTC Rabat Centre 148.69 332 PFAKE 11 54 50.0 +14
RTC LR LR
comp=Z,2µm,20.0s,MS5.8
SHEL Horse Pasture 150.79 219 PFAKE 11 54 50.0 +10
SHEL LR LR
comp=Z,1µm,22.0s,MS5.7
TORD Torodi Ar. Bea 153.79 286 PKP PKPdf 11 54 43.1 -1.5
comp=Z,7.9nm,0.8s,baz=32,slow=1.8,SNR=43
TORD PKPbc PKPbc 11 54 51.2 -1.3
comp=Z,32nm,0.8s,baz=53,slow=2.1,SNR=41
TORD PKPab PKPab 11 55 04.5 -1.0
comp=Z,41nm,1.0s,baz=62,slow=3.2,SNR=14
TORD pPKPab pPKPab 11 55 17.7 -1.8
comp=Z,24nm,0.8s,baz=67,slow=3.9,SNR=4.9
TORD PP PP 11 58 37.3 -2.8
comp=Z,1.8nm,0.8s,baz=84,slow=4.4,SNR=3.8
TORD Torodi Ar. Bea 153.79 286 PKP PKPdf 11 54 43.1 -1.4
TORD PKPbc PKPbc 11 54 51.2 -1.3
TORD PKPab PKPab 11 55 04.5 -1.0
TORD pPKPab pPKPab 11 55 17.7 -1.8
TORD PP PP 11 58 37.3 -2.8
KIC Kosan Boka 160.66 269 *e*PKIKP PKPdf 11 54 52.1 -1.2
comp=Z,156nm,1.1s
DBIC Dimbokro 160.79 270 PKP PKPdf 11 54 52.8 -0.7
comp=Z,17nm,0.9s,baz=51,slow=1.7,SNR=18
DBIC pPKP pPKPdf 11 55 05.9 -1.9
comp=Z,18nm,1.0s,baz=45,slow=1.7,SNR=7.2
DBIC PKPab PKPab 11 55 35.7 -0.1
comp=Z,58nm,0.8s,baz=79,slow=4.6,SNR=30
DBIC Dimbokro 160.79 270 PKIKP PKPdf 11 54 52.8 -0.7
DBIC 11 55 05.9
DBIC 11 55 35.7
DBIC pmax pmax
comp=Z,17nm,0.9s
DBIC pmax pmax
comp=Z,18nm,1.0s
DBIC pmax pmax
comp=Z,59nm,0.8s
DBIC Dimbokro 160.79 270 PKP PKPdf 11 54 52.8 -0.7
DBIC pPKP pPKPdf 11 55 05.9 -1.9
DBIC PKPab PKPab 11 55 35.7 -0.1
DBIC LR LR
comp=Z,1µm,19.0s
LIC Lamto 160.94 269 *e*PKIKP PKPdf 11 54 52.2 -1.4
comp=Z,103nm,1.1s
LIC Lamto 160.94 269 ⇑*i*PKIKP PKPdf 11 54 52.2 -1.4
comp=Z,83nm,1.1s
TIC Toumodi 160.95 270 *e*PKIKP PKPdf 11 54 52.3 -1.3
comp=Z,122nm,1.0s
RCBR Riachuelo 162.74 137 PFAKE 11 55 10.0 +15
RCBR LR LR
comp=Z,1µm,19.0s

*IDC **19** 11:43:10.0±2.4,51.13N×179.29W,h0km,mb3.8/6, mb1 4.2/7,mb1mx3.8/25,mbtmp4.0/7,ML4.0/1,Error ellipse: s-maj=76.1km s-min=21.5km az=7.0*
*ISCJB **19** 11:43:13.8±3.5,51.0N±0.03×179.3W±0.02,h44km±25km, mb3.9/6,Error ellipse: s-maj=54.2km s-min=23.4km az=176.3*
*NEIC **19** 11:43:16.2±1.9,51.46N×179.25W,h30km,ML3.5(AEIC), Error ellipse: s-maj=59.1km s-min=14.0km az=182.0*
ISC 19 11:43:11.4±5.3,512N±04×1794W±01,h5km±35km,n9, σ1§12/10,mb3.9/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.81**	**68**	P	**Pn**	**11 43 43.9**	**+0.6**
ADK				S	**Sn**	**11 44 07.1**	**+0.5**
ATKA	**Atka Island**	**3.38**	**71**	P	**Pn**	**11 44 05.7**	**+0.9**
KDAK	**Kodiak Island**	**16.81**	**57**	Pn	**Pn**	**11 47 05.3**	**-2.0**
	0.5nm,0.3s,baz=157,slow=7.7,SNR=4.3						
YKA	**Yellowknife Ar**	**35.60**	**46**	P	**P**	**11 50 09.0**	**-0.4**
	0.7nm,0.7s,mb3.7,baz=277,slow=9.3,SNR=4.4						
PDAR	**Pinedale Array**	**46.71**	**72**	P	**P**	**11 51 41.6**	**+0.6**
	1.0nm,0.5s,mb4.0,baz=316,slow=3.4,SNR=14						
KURK	**Kurchatov**	**58.85**	**313**	P	**P**	**11 53 12.4**	**+1.8**
	1.3nm,0.7s,mb4.0,baz=45,slow=7.1,SNR=3.9						
TXAR	**Lajitas Array**	**59.05**	**81**	P	**P**	**11 53 10.9**	**-1.4**
	0.4nm,0.8s,mb3.5,baz=318,slow=6.1,SNR=3.3						
MKAR	**Makanchi Array**	**59.83**	**308**	P	**P**	**11 53 17.8**	**+0.3**
	0.6nm,0.7s,mb3.7,baz=58,slow=4.1,SNR=3.6						
AKASG	**Malin Array Be**	**75.56**	**342**	P	**P**	**11 54 55.4**	**-1.3**
	1.8nm,0.5s,mb4.2,baz=19,slow=6.3,SNR=3.3						

*IDC **19** 11:46:36.3±0.5,51.09N×179.22W,h0km,mb4.5/27, mb1 4.6/28,mb1mx4.6/32,mbtmp4.5/28,ML4.7/1,Error ellipse: s-maj=16.3km s-min=10.6km az=168.0*
*BJI **19** 11:46:39.1,51.10N×179.20W,h30km,mB5.8,mb4.7,Ms5.6, Msz5.3*
*ISCJB **19** 11:46:41.5±0.8,51.12N±0.05×179.22W±0.03,h45km±6km, mb4.7/78,MS5.4/2,Error ellipse: s-maj=9.1km s-min=2.9km az=7.5*

*NEIC **19** 11:46:41.1±0.3,5109N×179.22W,h30km,mb4.8/41, ML4.3(AEIC),Error ellipse: s-maj=8.0km s-min=3.4km az=176.0*
*MOS **19** 11:46:41.5±0.9,5108N×179.17W,h47km,mb4.8/44,Error ellipse: s-maj=10.3km s-min=6.2km az=100.4*
ISC 19 11:46:44.1±0.7,5117N±006×17922W±003,h52km±5km, n532,σ0§58/522,mb4.7/78,MS5.4/2,145C-172D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.74**	**65**	P	**Pn**	**11 47 09.8**	**-2.0**
ADK				S	**Sn**	**11 47 32.9**	**+0.1**
ATKA	**Atka Island**	**3.29**	**70**	P	**Pn**	**11 47 31.8**	**-1.3**
SMY	**Shemya**	**4.42**	**293**	P	**Pn**	**11 47 49.2**	**+0.7**
FX1	**Attu Island--F**	**5.01**	**293**	Pn	**Pn**	**11 47 55.3**	**-1.3**
	28nm,0.3s,baz=227,slow=4.7,SNR=33						
FX1				Sn	**Sn**	**11 48 54.3**	**+1.2**
	6.2nm,0.3s,baz=288,slow=20,SNR=1.7						
FX1	**Attu Island--F**	**5.01**	**293**	P	**Pn**	**11 47 55.3**	**-1.3**
FX1						11 48 54.3	
FX1				pmax	pmax		
	comp=Z,28nm,0.3s						
FX1				smax			
	comp=N,6.0nm,0.3s						
FX1	**Attu Island--F**	**5.01**	**293**	P	**Pn**	**11 47 56.7**	**+0.1**
NIKO	**Nikolski**	**6.64**	**70**	P	**Pn**	**11 48 18.5**	**-0.4**
OKCD	**Okmok Cone D**	**7.18**	**67**	P	**Pn**	**11 48 26.2**	**-0.1**
SPIA	**Saint Paul Isl**	**7.99**	**38**	P	**Pn**	**11 48 39.2**	**+1.8**
UNV	**Unalaska Valle**	**8.21**	**66**	P	**Pn**	**11 48 40.5**	**+0.1**
AKUT	**Akutan**	**8.70**	**65**	*e*Pn	**Pn**	**11 48 46.6**	**-0.4**
PETK	**Petropavlovsk-**	**14.30**	**287**	Pn	**Pn**	**11 50 03.7**	**+0.4**
	comp=N,0.2nm,0.3s,baz=105,slow=17,SNR=6.3						
PETK				Sn	**Sn**	**11 52 30.9**	**-9.4**
	comp=N,0.0nm,0.3s,baz=82,slow=20,SNR=3.0						
OHAK	**Old Harbor**	**16.28**	**58**	*e*Pn	**Pn**	**11 50 27.4**	**-1.5**
KDAK	**Kodiak Island**	**16.76**	**56**	Pn	**Pn**	**11 50 30.4**	**-4.5**
	comp=N,2.6nm,0.3s,baz=177,slow=6.7,SNR=11						
KDAK				Sn	**Sn**	**11 53 35.5**	**-4.4**
	comp=N,0.3nm,0.3s,baz=150,slow=20,SNR=6.1						
BILL	**Bilibino**	**18.36**	**343**	*i* P	**Pn**	**11 50 57.1**	**+2.7**
BILL				pmax	pmax		
	comp=Z,22nm,1.7s						
BILL	**Bilibino**	**18.36**	**343**	*e*P	**Pn**	**11 50 55.4**	**+1.0**
	comp=Z,12nm,0.8s						
SEY	**Seymchan**	**19.23**	**319**	*i* P	**Pn**	**11 51 06.5**	**+1.6**
PMR	**Palmer**	**19.47**	**46**	*e*P	**Pn**	**11 51 05.7**	**-2.1**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PMR	**Palmer**	**19.47**	**46**	*e*P	**Pn**	**11 51 05.7**	**-2.1**
	comp=Z,7.3nm,0.6s						
COLA	**College**	**21.24**	**38**	⇓*e*P	**P**	**11 51 26.4**	**+1.1**
COLA	**College**	**21.24**	**38**	*e*P	**P**	**11 51 24.8**	**-0.5**
	comp=Z,23nm,0.9s,mb4.5						
MENT	**Mentasta**	**22.28**	**44**	*e*P	**P**	**11 51 35.9**	**-0.6**
EGAK	**Eagle**	**23.88**	**41**	*e*P	**P**	**11 51 50.9**	**-1.5**
	comp=Z,40nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**25.08**	**275**	*e*P	**P**	**11 52 03.2**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
ASAJ	**Asahikawa**	**26.44**	**270**	P	**P**	**11 52 15.3**	**-0.4**
	comp=Z,9.6nm,0.7s,mb4.4,baz=343,slow=11,SNR=3.1						
ASAJ	**Asahikawa**	**26.44**	**270**	P	**P**	**11 52 15.4**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK	**Inuvik**	**27.78**	**35**	P	**P**	**11 52 26.9**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.2,baz=244,slow=14,SNR=8.5						
INK				PcP	PcP	11 55 41.8	-0.7
	comp=Z,1.6nm,0.7s,baz=219,slow=4.0,SNR=12						
INK	**Inuvik**	**27.78**	**35**	P	**P**	**11 52 27.0**	**-0.6**
INK						11 55 41.8	
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DLBC	**Dease Lake**	**28.70**	**56**	P	**P**	**11 52 36.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=237,slow=13,SNR=2.5						
MJAR	**Matsushiro Arr**	**33.49**	**261**	P	**P**	**11 53 18.4**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=22,slow=10,SNR=3.9						
MJAR	**Matsushiro Arr**	**33.49**	**261**	P	**P**	**11 53 18.4**	**+0.2**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MDJ	**Mudanjiang**	**34.35**	**279**	P	**P**	**11 53 23.6**	**-2.0**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,527nm,12.5s						
YKA	**Yellowknife Ar**	**35.57**	**46**	P	**P**	**11 53 35.3**	**-0.5**
	comp=Z,8.4nm,0.6s,mb4.8,baz=282,slow=8.1,SNR=63						
YKA				PcP	PcP	11 56 03.7	+0.2
	comp=Z,0.9nm,0.8s,baz=287,slow=3.2,SNR=6.3						
YKA				ScP	ScP	11 59 46.5	+1.7
	comp=Z,0.2nm,0.7s,baz=292,slow=3.1,SNR=3.3						
YKA	**Yellowknife Ar**	**35.57**	**46**	P	**P**	**11 53 35.3**	**-0.5**
YKA						11 56 03.7	
YKA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**35.57**	**46**	P	**P**	**11 53 35.3**	**-0.5**
YKA				PcP	PcP	11 56 03.7	+0.2
YKA				ScP	ScP	11 59 46.5	+1.7
A05A	**Maple Falls**	**35.94**	**70**	⇑P	**P**	**11 53 39.7**	**+0.6**
	baz=36						
C04A	**Brinnon**	**35.98**	**73**	⇑P	**P**	**11 53 40.3**	**+0.8**
	baz=36						
E03A	**Lebam**	**36.16**	**75**	⇑P	**P**	**11 53 42.0**	**+0.9**
	baz=36						
B05A	**Bryant**	**36.26**	**72**	⇓P	**P**	**11 53 42.6**	**+0.7**
	baz=36						
B06A	**Marblemount**	**36.51**	**71**	⇓P	**P**	**11 53 44.5**	**+0.5**
	baz=37						
E04A	**Onalaska**	**36.65**	**74**	⇑P	**P**	**11 53 46.5**	**+1.2**
	baz=37						
C05A	**Tolt Reservoir**	**36.76**	**72**	⇓P	**P**	**11 53 47.1**	**+1.0**
	baz=37						
D05A	**Enumclaw**	**36.81**	**73**	⇓P	**P**	**11 53 47.4**	**+0.8**
	baz=37,SNR=6.1						
A07A	**Ashnola River,**	**36.92**	**70**	⇑P	**P**	**11 53 48.1**	**+0.5**
	baz=37,SNR=13						
F04A	**Amboy**	**37.15**	**75**	⇑P	**P**	**11 53 50.2**	**+0.6**
	baz=37						
E05A	**Randle**	**37.25**	**74**	⇑P	**P**	**11 53 50.5**	**+0.2**
	baz=37						
B07A	**Winthrop**	**37.34**	**70**	⇓P	**P**	**11 53 51.4**	**+0.3**
	baz=37,SNR=7.7						
NLW	**Nelson Butte**	**37.39**	**71**	P	**P**	**11 53 52.4**	**+0.9**
G04A	**Mulino**	**37.48**	**76**	⇓P	**P**	**11 53 53.4**	**+1.2**
	baz=38						
ETW	**Entiat**	**37.61**	**72**	P	**P**	**11 53 54.1**	**+0.7**
A08A	**Turner Farm, O**	**37.62**	**69**	⇑P	**P**	**11 53 53.5**	**+0.1**
	baz=38,SNR=9.2						
TBM	**Table Mountain**	**37.66**	**72**	P	**P**	**11 53 54.5**	**+0.7**
E06A	**Yakima**	**37.73**	**74**	⇓P	**P**	**11 53 55.4**	**+1.0**
	baz=38						
C07A	**Waterville**	**37.73**	**71**	⇓P	**P**	**11 53 54.6**	**+0.2**
	baz=38,SNR=10						
B08A	**Colville Reser**	**37.85**	**70**	⇓P	**P**	**11 53 55.9**	**+0.5**
	baz=38,SNR=10						
BOD	**Bodaibo**	**37.90**	**307**	*e*P	**P**	**11 53 54.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
H04A	**Detroit Lake**	**37.92**	**77**	⇓P	**P**	**11 53 56.7**	**+0.7**
	baz=38						
A09A	**Danville**	**38.01**	**69**	⇓P	**P**	**11 53 57.2**	**+0.4**
	baz=38,SNR=8.0						
D07A	**Quincy**	**38.02**	**72**	⇓P	**P**	**11 53 57.1**	**+0.2**
	baz=38,SNR=7.5						
HIA	**Hailar**	**38.12**	**292**	⇑*e*P	**P**	**11 53 56.8**	**-0.9**
G05A	**Wamic**	**38.17**	**76**	⇓P	**P**	**11 53 59.0**	**+0.9**
	baz=38						
F06A	**Goldendale**	**38.23**	**75**	⇓P	**P**	**11 53 58.9**	**+0.2**
	baz=38						
C08A	**Higginbotham F**	**38.29**	**71**	⇓P	**P**	**11 53 59.3**	**+0.1**
	baz=38						
E07A	**Sunnyside**	**38.40**	**73**	⇑P	**P**	**11 54 00.2**	**+0.1**
	baz=38						
WAH2	**Wahluke Slope**	**38.48**	**72**	P	**P**	**11 54 01.2**	**+0.5**
B09A	**Rice**	**38.52**	**69**	⇑P	**P**	**11 54 01.5**	**+0.4**
	baz=39,SNR=6.1						
H05A	**Madras**	**38.53**	**76**	⇑P	**P**	**11 54 01.8**	**+0.7**
	baz=39						
G06A	**Carlson Farm,**	**38.59**	**75**	⇓P	**P**	**11 54 02.3**	**+0.6**
	baz=39						
A10A	**Northport**	**38.61**	**68**	⇑P	**P**	**11 54 02.0**	**+0.2**
	baz=39,SNR=7.2						
RSW	**Rattlesnake Hi**	**38.64**	**73**	P	**P**	**11 54 02.9**	**+0.9**
OD2	**Odessa Site #2**	**38.68**	**71**	P	**P**	**11 54 02.2**	**-0.2**
F07A	**Phinny Hill Vi**	**38.68**	**74**	⇑P	**P**	**11 54 02.8**	**+0.4**
	baz=39,SNR=5.2						
WRD	**Warden**	**38.71**	**72**	P	**P**	**11 54 02.1**	**-0.5**
D08A	**Wollman Farm,**	**38.72**	**72**	⇓P	**P**	**11 54 02.5**	**-0.2**
	baz=39,SNR=6.5						
H2OWA	**Water**	**38.74**	**73**	P	**P**	**11 54 03.5**	**+0.6**
C09A	**Chrisman Ranch**	**38.74**	**70**	⇓P	**P**	**11 54 02.8**	**-0.1**
	baz=39						
I05A	**Bend**	**38.75**	**77**	⇑P	**P**	**11 54 03.7**	**+0.7**
	baz=39						
E08A	**Dider Farm, El**	**38.91**	**73**	⇓P	**P**	**11 54 04.8**	**+0.4**
	baz=39,SNR=6.0						
H06A	**Lindquist Farm**	**39.03**	**76**	⇑P	**P**	**11 54 05.9**	**+0.6**
	baz=39						
D09A	**Jones Farm, Ri**	**39.08**	**71**	⇓P	**P**	**11 54 06.0**	**+0.2**
	baz=39						
B10A	**Chitwood Farm,**	**39.13**	**69**	⇑P	**P**	**11 54 06.3**	**+0.2**
	baz=39						
EDM	**Edmonton**	**39.15**	**60**	*e*P	**P**	**11 54 05.4**	**-0.8**
G07A	**Ruggs Ranch, H**	**39.16**	**75**	⇓P	**P**	**11 54 06.8**	**+0.4**
	baz=39						
YBH	**Yreka Blue Hor**	**39.17**	**81**	P	**P**	**11 54 06.1**	**-0.5**
	comp=Z,3.6nm,1.0s,mb4.1,baz=328,slow=2.4,SNR=4.4						
YBH	**Yreka Blue Hor**	**39.17**	**81**	P	**P**	**11 54 06.1**	**-0.5**
YBH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	**Newport**	**39.20**	**69**	*e*P	**P**	**11 54 06.6**	**-0.1**
NEW				pmax	pmax		
	comp=Z,26nm,1.1s						
NEW	**Newport**	**39.20**	**69**	*e*P	**P**	**11 54 06.6**	**-0.1**
	comp=Z,26nm,1.1s,mb4.9						
C10A	**Spilker Farm,**	**39.31**	**70**	⇑P	**P**	**11 54 07.7**	**+0.1**
	baz=39						
A11A	**Hall Mountain,**	**39.32**	**68**	⇓P	**P**	**11 54 08.3**	**+0.6**
	baz=39,SNR=11						
KSRS	**Korea Array**	**39.38**	**271**	P	**P**	**11 54 08.9**	**+0.6**
	comp=Z,5.4nm,0.7s,mb4.4,baz=60,slow=8.1,SNR=19						
KSRS	**Korea Array**	**39.38**	**271**	P	**P**	**11 54 08.9**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
F08A	**Pendleton**	**39.43**	**73**	⇑P	**P**	**11 54 08.7**	**+0.1**
	baz=40						
E09A	**Wood Farm, Sta**	**39.45**	**72**	⇓P	**P**	**11 54 09.0**	**+0.2**
	baz=40						
I06A	**Prineville**	**39.52**	**77**	⇑P	**P**	**11 54 10.3**	**+0.9**
	baz=40						
B11A	**Sandpoint**	**39.56**	**68**	⇑P	**P**	**11 54 09.9**	**+0.1**
	baz=40						
G08A	**Pilot Rock**	**39.58**	**74**	⇑P	**P**	**11 54 10.2**	**+0.4**
	baz=40						
D10A	**Wagner Farm, O**	**39.70**	**71**	⇓P	**P**	**11 54 10.8**	**-0.1**
	baz=40,SNR=5.1						
A12A	**Yaak River Ran**	**39.75**	**67**	⇓P	**P**	**11 54 11.8**	**+0.5**
	baz=40						
K05A	**Summer Lake**	**39.75**	**79**	⇓P	**P**	**11 54 12.0**	**+0.7**
	baz=40						
I07A	**Izee**	**39.88**	**76**	⇑P	**P**	**11 54 12.8**	**+0.4**
	baz=40,SNR=5.7						
J06A	**Christmas Vall**	**39.92**	**78**	⇑P	**P**	**11 54 14.0**	**+1.3**
	baz=40						
F09A	**S2 Ranch, Elgi**	**40.00**	**73**	⇑P	**P**	**11 54 13.6**	**+0.3**
	baz=40,SNR=9.6						
B12A	**Libby**	**40.00**	**68**	⇑P	**P**	**11 54 13.9**	**+0.5**
	baz=40						
RES	**Resolute Bay**	**40.05**	**24**	P	**P**	**11 54 14.8**	**+1.4**
	comp=Z,0.8nm,0.4s,mb3.8,baz=236,slow=11,SNR=9.7						
RES				PcP	PcP	11 56 17.4	+0.2
	comp=Z,0.7nm,0.3s,baz=324,slow=3.1,SNR=11						
RES	**Resolute Bay**	**40.05**	**24**	P	**P**	**11 54 14.8**	**+1.4**
RES						11 56 17.4	
RES				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
RES				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
H08A	**Prairie City**	**40.15**	**75**	⇓P	**P**	**11 54 14.9**	**+0.2**
	baz=40						
D11A	**Klaveano Farm,**	**40.26**	**70**	⇓P	**P**	**11 54 14.7**	**-0.8**
	baz=40,SNR=6.7						
F10A	**Beach Ranch, E**	**40.27**	**72**	⇑P	**P**	**11 54 15.4**	**-0.2**
	baz=40						
G09A	**Cove**	**40.30**	**74**	⇓P	**P**	**11 54 15.9**	**0.0**
	baz=40,SNR=6.5						
J07A	**Hines**	**40.37**	**77**	⇑P	**P**	**11 54 17.0**	**+0.4**
	baz=40						
C12B	**Naegeli Ranch,**	**40.44**	**69**	⇑P	**P**	**11 54 17.1**	**+0.1**
	baz=40,SNR=6.9						
A13A	**Flathead Natio**	**40.47**	**67**	⇑P	**P**	**11 54 16.9**	**-0.3**
	baz=40						
I08A	**Drewsey**	**40.54**	**76**	⇓P	**P**	**11 54 18.1**	**+0.2**
	baz=41,SNR=6.1						
E11A	**Bogner Ranch,**	**40.68**	**71**	⇑P	**P**	**11 54 18.5**	**-0.5**
	baz=41						
G10A	**Bishop Farm, J**	**40.69**	**73**	⇓P	**P**	**11 54 19.0**	**0.0**
	baz=41,SNR=18						
H09A	**Durkee**	**40.69**	**74**	⇓P	**P**	**11 54 19.4**	**+0.3**
	baz=41						
B13A	**Whitefish**	**40.70**	**68**	⇓P	**P**	**11 54 18.8**	**-0.4**
	baz=41,SNR=5.0						
K07A	**Rock Creek Ran**	**40.78**	**78**	⇓P	**P**	**11 54 21.0**	**+1.1**
	baz=41,SNR=8.2						
J08A	**Circle Bar Ran**	**40.89**	**76**	⇓P	**P**	**11 54 21.2**	**+0.4**
	baz=41						
F11A	**Grangeville**	**40.96**	**72**	⇑P	**P**	**11 54 20.8**	**-0.5**
	baz=41,SNR=6.1						
C13A	**Hot Springs**	**40.98**	**69**	⇑P	**P**	**11 54 21.1**	**-0.4**
	baz=41,SNR=9.9						
I09A	**Lost Marbles R**	**41.01**	**75**	⇑P	**P**	**11 54 21.7**	**-0.1**
	baz=41						
A14A	**Double T Ranch**	**41.02**	**66**	⇓P	**P**	**11 54 21.2**	**-0.6**
	baz=41,SNR=16						
L07A	**Adell**	**41.10**	**79**	⇓P	**P**	**11 54 22.4**	**-0.1**
	baz=41						
G11A	**Walters Elk Ra**	**41.14**	**72**	⇑P	**P**	**11 54 22.7**	**-0.1**
	baz=41,SNR=8.5						
K08A	**Mann Creek Ran**	**41.23**	**77**	⇓P	**P**	**11 54 24.1**	**+0.5**
	baz=41,SNR=5.1						
H10A	**Noah's Angus R**	**41.28**	**74**	⇓P	**P**	**11 54 24.2**	**+0.2**
	baz=41,SNR=13						
J09A	**Fry Pan Ranch,**	**41.34**	**76**	⇓P	**P**	**11 54 24.5**	**+0.1**
	baz=41,SNR=5.7						
D13A	**Huson**	**41.35**	**69**	⇓P	**P**	**11 54 24.2**	**-0.3**
	baz=41						
B14A	**Marquette Ranc**	**41.41**	**67**	⇑P	**P**	**11 54 24.8**	**-0.2**
	baz=41,SNR=9.0						
A15A	**Johnson Ranch,**	**41.41**	**66**	⇓P	**P**	**11 54 24.3**	**-0.7**
	baz=41,SNR=9.0						
N06A	**Buffalo Meadow**	**41.52**	**81**	⇑P	**P**	**11 54 26.7**	**+0.8**
	baz=42,SNR=5.5						
I10A	**Payette**	**41.52**	**74**	⇑P	**P**	**11 54 25.6**	**-0.3**
	baz=42						
M07A	**Soldier Meadow**	**41.56**	**79**	⇓P	**P**	**11 54 26.5**	**+0.2**
	baz=42,SNR=8.8						
L08A	**Fields**	**41.62**	**78**	⇓P	**P**	**11 54 27.3**	**+0.5**
	baz=42						
H11A	**Donnelly**	**41.66**	**73**	⇓P	**P**	**11 54 26.6**	**-0.5**
	baz=42,SNR=6.9						
BEKR	**Beckwourth**	**41.70**	**82**	⇑P	**P**	**11 54 27.7**	**+0.2**
	baz=42						
E13A	**Victor**	**41.84**	**70**	⇑P	**P**	**11 54 28.1**	**-0.5**
	baz=42,SNR=5.7						
B15A	**Bradely Ranch,**	**41.84**	**67**	⇓P	**P**	**11 54 28.0**	**-0.5**
	baz=42,SNR=16						
J10A	**Berg Farm, Mel**	**41.90**	**75**	⇑P	**P**	**11 54 29.4**	**+0.4**
	baz=42						
D14A	**Greenough**	**41.91**	**69**	⇑P	**P**	**11 54 28.9**	**-0.2**
	baz=42,SNR=16						
M08A	**Happy Creek Ra**	**42.02**	**79**	⇑P	**P**	**11 54 30.3**	**+0.3**
	baz=42						
N07B	**Gerlach**	**42.03**	**80**	⇑P	**P**	**11 54 30.3**	**+0.1**
	baz=42						
A16A	**West Butte Ran**	**42.08**	**65**	⇑P	**P**	**11 54 29.6**	**-0.8**
	baz=42,SNR=12						
C15A	**Salmond Ranch,**	**42.09**	**67**	⇓P	**P**	**11 54 30.6**	**+0.1**
	baz=42,SNR=20						
F13A	**Darby**	**42.10**	**71**	⇓P	**P**	**11 54 30.2**	**-0.4**
	baz=42,SNR=12						
I11A	**Placerville**	**42.12**	**74**	⇓P	**P**	**11 54 30.7**	**-0.1**
	baz=42						
L09A	**Wilkinson Ranc**	**42.13**	**78**	⇑P	**P**	**11 54 31.4**	**+0.5**
	baz=42						
K10A	**MacKenzie Ranc**	**42.19**	**76**	⇑P	**P**	**11 54 31.5**	**0.0**
	baz=42,SNR=7.9						
E14A	**Clinton**	**42.27**	**70**	⇑P	**P**	**11 54 31.3**	**-0.7**
	baz=42,SNR=7.5						
B16A	**M & M Farms, S**	**42.28**	**66**	⇓P	**P**	**11 54 31.3**	**-0.8**
	baz=42,SNR=8.9						
H12A	**Diamond D Ranc**	**42.44**	**73**	⇑P	**P**	**11 54 32.8**	**-0.7**
	baz=42,SNR=7.3						
O07A	**Toulon**	**42.45**	**81**	⇓P	**P**	**11 54 33.9**	**+0.3**
	baz=42						
MFID	**Camas Ranch**	**42.48**	**75**	⇑P	**P**	**11 54 33.6**	**-0.1**
	baz=42						
D15A	**Lincoln**	**42.51**	**68**	⇓P	**P**	**11 54 33.8**	**-0.2**
	baz=42,SNR=12						
G13A	**Cobalt**	**42.52**	**72**	⇓P	**P**	**11 54 33.7**	**-0.4**
	baz=43,SNR=15						
N08A	**GE Springer Mi**	**42.55**	**79**	⇓P	**P**	**11 54 34.5**	**+0.1**
	baz=43						
C16A	**Fuhringer Ranc**	**42.57**	**67**	⇑P	**P**	**11 54 34.1**	**-0.4**
	baz=43,SNR=22						
A17A	**Triple J Farms**	**42.59**	**65**	⇑P	**P**	**11 54 33.6**	**-1.0**
	baz=43,SNR=19						
M09A	**Marrel Ranch,**	**42.60**	**78**	⇓P	**P**	**11 54 34.9**	**+0.1**
	baz=43						
F14A	**Wisdom**	**42.66**	**70**	⇓P	**P**	**11 54 35.0**	**-0.1**
	baz=43						
I12A	**Atlanta**	**42.69**	**74**	P	**P**	**11 54 35.4**	**0.0**
	baz=43						
K11A	**Parker Ranch,**	**42.71**	**76**	⇑P	**P**	**11 54 35.6**	**-0.1**
	baz=43,SNR=5.6						
E15A	**Deer Lodge**	**42.76**	**69**	⇑P	**P**	**11 54 35.3**	**-0.7**
	baz=43,SNR=10.0						
H13A	**Challis**	**42.80**	**72**	⇓P	**P**	**11 54 35.9**	**-0.4**
	baz=43						
O08A	**Rochester Mine**	**42.82**	**80**	⇑P	**P**	**11 54 37.4**	**+0.8**
	baz=43						
L10A	**Juniper Basin**	**42.83**	**77**	⇑P	**P**	**11 54 36.5**	**-0.1**
	baz=43,SNR=6.6						
B17A	**L&G Farms, Che**	**42.87**	**66**	⇑P	**P**	**11 54 36.5**	**-0.3**
	baz=43						
N09A	**Rock Creek Ran**	**42.89**	**79**	⇓P	**P**	**11 54 37.3**	**+0.2**
	baz=43						
J12A	**Stokes Ranch,**	**43.01**	**75**	⇑P	**P**	**11 54 38.0**	**0.0**
	baz=43,SNR=8.2						
R06C	**Coleville**	**43.07**	**83**	⇓P	**P**	**11 54 38.7**	**+0.1**
	baz=43						
D16A	**Dana Ranch, Ca**	**43.08**	**68**	⇓P	**P**	**11 54 38.1**	**-0.5**
	baz=43,SNR=6.0						
A18A	**Metzger Ranch,**	**43.09**	**65**	⇑P	**P**	**11 54 37.4**	**-1.2**
	baz=43						
M10A	**I.L. Ranch, Tu**	**43.11**	**77**	⇑P	**P**	**11 54 40.0**	**+1.1**
	baz=43,SNR=5.9						
F15A	**Butte**	**43.16**	**70**	⇑P	**P**	**11 54 38.9**	**-0.3**
	baz=43						
L11A	**Cat Creek Ranc**	**43.22**	**76**	⇑P	**P**	**11 54 40.1**	**+0.3**
	baz=43,SNR=8.7						
C17A	**Wharram Farm,**	**43.23**	**67**	⇑P	**P**	**11 54 39.3**	**-0.5**
	baz=43,SNR=9.3						
I13A	**Wildhorse Cree**	**43.23**	**73**	⇑P	**P**	**11 54 40.1**	**+0.2**
	baz=43,SNR=16						
HLID	**Hailey**	**43.25**	**74**	*e*P	**P**	**11 54 39.9**	**-0.1**
	comp=Z,8.7nm,0.8s,mb4.5						
E16A	**East Helena**	**43.27**	**69**	⇓P	**P**	**11 54 39.7**	**-0.4**
	baz=43,SNR=6.3						
H14A	**Leadore**	**43.30**	**72**	⇓P	**P**	**11 54 40.2**	**-0.2**
	baz=43,SNR=14						
B18A	**Beardsley Farm**	**43.40**	**65**	⇑P	**P**	**11 54 40.6**	**-0.6**
	baz=43,SNR=6.5						
K12A	**Draper Farm, C**	**43.47**	**75**	⇓P	**P**	**11 54 41.9**	**+0.1**
	baz=44,SNR=16						
J13A	**Cove Ranch, Pi**	**43.49**	**74**	⇑P	**P**	**11 54 41.9**	**0.0**
	baz=44,SNR=19						
O09A	**Fish Creek Ran**	**43.49**	**80**	⇓P	**P**	**11 54 42.4**	**+0.5**
	baz=44						
D17A	**Six Diamond Ra**	**43.52**	**67**	⇑P	**P**	**11 54 41.7**	**-0.4**
	baz=44,SNR=6.2						
G15A	**Dillon**	**43.52**	**71**	⇓P	**P**	**11 54 41.6**	**-0.6**
	baz=44,SNR=13						
N10A	**Dunphy**	**43.59**	**78**	⇓P	**P**	**11 54 43.2**	**+0.4**
	baz=44						
EGMT	**Eagleton**	**43.60**	**66**	*e*P	**P**	**11 54 42.2**	**-0.6**
	comp=Z,19nm,0.8s,mb4.9						
M11A	**Holland Ranch,**	**43.62**	**77**	⇑P	**P**	**11 54 43.6**	**+0.6**
	baz=44						
I14A	**Mackay**	**43.63**	**73**	⇓P	**P**	**11 54 43.0**	**-0.1**
	baz=44,SNR=14						
L12A	**House Creek Ra**	**43.68**	**76**	⇓P	**P**	**11 54 43.9**	**+0.4**
	baz=44,SNR=17						
F16A	**Kennard Place,**	**43.70**	**69**	⇑P	**P**	**11 54 43.7**	**+0.1**
	baz=44						
H15A	**Lima**	**43.73**	**71**	⇑P	**P**	**11 54 44.0**	**+0.1**
	baz=44,SNR=9.0						
E17A	**Martinsdale**	**43.79**	**68**	⇓P	**P**	**11 54 44.3**	**0.0**
	baz=44,SNR=11						
Q08A	**Gabbs**	**43.81**	**82**	⇓P	**P**	**11 54 44.8**	**+0.3**
	baz=44						
NVAR	**Mina Array Bea**	**43.84**	**82**	P	**P**	**11 54 45.2**	**+0.4**
	comp=Z,3.1nm,0.8s,mb4.1,baz=286,slow=7.6,SNR=17						
NVA

BJI LR LR
comp=N,3µm,19.1s,MS5.4
BJI LR LR
comp=E,3µm,21.2s,MS5.4
BJI LR LR
comp=Z,4µm,24.3s,MS5.3
R10A Warm Springs 45.17 81 ⇓P P 11 54 55.5 0.0
baz=45
CWC Cottonwood Cre 45.21 84 ⇑P P 11 54 56.1 +0.4
baz=45
S10A Tonopah Range, 45.21 82 ⇓P P 11 54 55.8 0.0
baz=45
Q11A Duckwater 45.23 80 ⇑P P 11 54 55.9 0.0
baz=45
GRAC Grapevine Rang 45.30 83 ⇓P P 11 54 56.5 0.0
baz=45
P12A McGill 45.32 79 ⇓P P 11 54 57.1 +0.5
baz=45
I17A Pilgram Creek 45.35 71 ⇓P P 11 54 57.5 +0.7
baz=45
L15A Malad City 45.37 74 ⇑P P 11 54 57.1 +0.2
baz=45,SNR=7.8
K16A Soda Springs 45.37 73 ⇓P P 11 54 58.0 +1.1
baz=45,SNR=17
TPAW Teton Pass 45.37 72 *e*P P 11 54 57.3 +0.4
comp=Z,4.2nm,0.8s,mb4.3
ISA Isabella 45.45 85 ⇑P P 11 54 57.1 -0.6
baz=46
RLMT Red Lodge 45.45 69 *e*P P 11 54 57.9 +0.4
comp=Z,30nm,0.9s,mb5.1
O13A Hicks Ranch, I 45.49 77 ⇑P P 11 54 58.3 +0.4
baz=46
N14A Grayback Hills 45.55 76 ⇑P P 11 54 58.8 +0.4
baz=46,SNR=10
R11A Troy Canyon, C 45.58 81 ⇑P P 11 54 58.4 -0.3
baz=46
J17A Brown Place, J 45.59 72 ⇑P P 11 54 58.0 -0.7
baz=46
Q12A Willow Creek R 45.63 79 ⇑P P 11 54 59.1 0.0
baz=46
M15A Larsen Ranch, 45.64 75 ⇑P P 11 54 59.0 -0.1
baz=46,SNR=10.0
K17A Gardner Place, 45.82 73 ⇓P P 11 54 60.0 -0.5
baz=46
MPMC Manual Prospec 45.82 84 ⇓P P 11 55 00.4 -0.1
baz=46
P13A Bates Ranch, G 45.88 78 ⇓P P 11 55 01.3 +0.3
baz=46,SNR=7.2
I18A Diamond G Ranc 45.93 71 ⇑P P 11 55 01.0 -0.4
baz=46,SNR=7.0
L16A Fish Haven 45.94 74 ⇓P P 11 55 01.5 +0.1
baz=46
N15A Stansbury Isla 45.94 76 ⇓P P 11 55 01.9 +0.4
baz=46,SNR=12
FURC Furnace Creek, 45.95 83 ⇓P P 11 55 01.3 -0.3
baz=46
TLY Talaya 45.96 302 *e*P P 11 55 01.8 +0.3
TLY pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
J18A Kendall Valley 46.09 72 ⇑P P 11 55 02.5 -0.1
baz=46,SNR=10
ULN Ulaanbaatar 46.12 296 ⇓*e*P P 11 55 02.8 0.0
Q13A Wheeler Ranch, 46.18 79 ⇓P P 11 55 03.6 +0.2
baz=46,SNR=7.1
R12A Pony Springs, 46.20 80 ⇑P P 11 55 03.8 +0.3
baz=46
L17A Cokeville 46.22 73 ⇓P P 11 55 03.8 +0.1
baz=46,SNR=7.3
M16A Huntsville 46.23 75 ⇓P P 11 55 04.0 +0.2
baz=46,SNR=14
EDW2 Edwards Air Fo 46.26 86 ⇑P P 11 55 04.3 +0.2
baz=46
U10A Ash Meadows, A 46.32 83 ⇑P P 11 55 04.9 +0.4
baz=46
P14A Drum Mountains 46.38 77 ⇑P P 11 55 05.3 +0.4
baz=46,SNR=9.9
K18A Toltan Ranch, 46.41 72 ⇑P P 11 55 05.2 +0.1
baz=46,SNR=12
T11A Corn Creek, Al 46.49 81 ⇓P P 11 55 05.5 -0.3
baz=46,SNR=16
S12A Delamar Landin 46.49 81 ⇓P P 11 55 05.4 -0.5
baz=46
SONM Songino Array 46.51 297 P P 11 55 06.5 +0.6
comp=Z,3.1nm,0.6s,mb4.4,baz=59,slow=9.0,SNR=22
SONM PcP PcP 11 56 39.7 +0.3
comp=Z,1.8nm,0.6s,baz=65,slow=2.7,SNR=6.9
SONM ScP ScP 12 00 31.4 +3.2
comp=Z,0.4nm,0.6s,baz=32,slow=3.6,SNR=3.5
SONM Songino Array 46.51 297 P P 11 55 06.5 +0.7
SONM 11 56 39.7
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM pmax pmax
comp=Z,2.0nm,0.6s
N16A Rees Ranch, Co 46.60 75 ⇓P P 11 55 06.6 0.0
baz=47
Q14A Sevier Lake (B 46.62 78 ⇑P P 11 55 07.0 +0.1
baz=47,SNR=16
PDAR Pinedale Array 46.62 72 P P 11 55 06.7 -0.2
comp=Z,18nm,0.9s,mb5.0,baz=307,slow=3.7,SNR=66
SHOC Shoshone 46.68 84 ⇓P P 11 55 07.5 +0.2
baz=47
R13A O'Grain Ranch, 46.69 80 ⇑P P 11 55 07.3 0.0
baz=47
M17A Scullys Gap (B 46.72 74 ⇑P P 11 55 07.2 -0.4
baz=47
GSC Goldstone 46.73 85 ⇑P P 11 55 07.5 -0.2
baz=47
L18A Fontenelle, Gr 46.83 73 ⇓P P 11 55 08.3 -0.2
baz=47,SNR=11
ZAK Zakamensk 46.84 301 *e*P P 11 55 08.8 +0.4
ZAK pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
P15A Leamington 46.88 77 ⇓P P 11 55 09.1 +0.3
baz=47
N17A Moffit Pass 46.93 75 ⇑P P 11 55 09.2 -0.1
baz=47,SNR=5.1
O16A Springville 46.97 76 ⇑P P 11 55 09.8 +0.2
baz=47,SNR=13
K19A Absolon Red Bu 47.02 71 ⇓P P 11 55 09.2 -0.7
baz=47,SNR=22
M18A Lyman 47.11 74 ⇑P P 11 55 10.8 +0.2
baz=47,SNR=6.9
S13A Holt Ranch, En 47.13 80 ⇑P P 11 55 10.8 0.0
baz=47,SNR=8.9
Q15A Fillmore 47.16 78 ⇓P P 11 55 10.9 -0.2
baz=47,SNR=5.4
V11A Goodsprings 47.25 83 ⇓P P 11 55 11.5 -0.3
baz=47
HEC Hector,Ludlow 47.33 85 ⇓P P 11 55 11.9 -0.5
baz=47
MOY Mondy 47.37 304 *e*P P 11 55 13.7 +1.2
K20A Yellowstone Ra 47.41 71 ⇓P P 11 55 12.3 -0.7
baz=47,SNR=9.1
U12A Valley of Fire 47.43 82 ⇑P P 11 55 13.5 +0.4
baz=48
O17A Robinson Place 47.44 75 ⇓P P 11 55 13.4 +0.2
baz=48
T13A Saint George 47.45 81 ⇓P P 11 55 13.8 +0.5
baz=48
MURC Murrieta 47.59 87 ⇓P P 11 55 14.2 -0.2
baz=48
N18A Larsen Ranch, 47.62 74 ⇑P P 11 55 14.2 -0.3
baz=48
V12A Nelson 47.68 83 ⇓P P 11 55 15.0 -0.1
baz=48
R15A Junction 47.71 78 ⇓P P 11 55 16.1 +0.7
baz=48
GMRC Granite Mounta 47.78 84 ⇑P P 11 55 15.6 -0.3
baz=48
U13A Pakoon Wash 47.79 81 ⇑P P 11 55 15.8 -0.2
baz=48,SNR=7.8
L20A Wamsutter 47.80 72 ⇓P P 11 55 15.4 -0.6
baz=48
P17A Butcher Ranch, 47.88 76 ⇑P P 11 55 16.7 +0.1
baz=48
T14A Hurricane 47.93 80 ⇓P P 11 55 17.1 0.0
baz=48,SNR=6.5
Q16A Castle Valley 47.96 77 ⇑P P 11 55 17.7 +0.5
baz=48
N19A John Jarvie Ra 47.97 74 ⇑P P 11 55 16.9 -0.3
baz=48,SNR=7.5
S15A Panguitch 47.99 79 ⇓P P 11 55 17.6 +0.1
baz=48
BELC Belle Mtn. 48.08 85 ⇓P P 11 55 18.2 0.0
baz=48
P18A Preston Nutter 48.09 76 ⇓P P 11 55 18.6 +0.4
baz=48,SNR=5.5
109C Camp Elliot, M 48.11 87 ⇑P P 11 55 18.3 -0.2
baz=48
V13A Grand Canyon W 48.14 82 ⇓P P 11 55 18.8 +0.1
baz=48
R16A Teasdale 48.16 78 ⇑P P 11 55 19.3 +0.5
baz=48,SNR=7.0
M20A Sweetwater, Wa 48.20 72 ⇓P P 11 55 18.9 -0.2
baz=48,SNR=8.4
U14A Mt Trumbull 48.28 81 ⇑P P 11 55 19.5 -0.2
baz=48
T15A Red Dirt Ranch 48.40 80 ⇑P P 11 55 20.6 0.0
baz=48,SNR=5.7
L21A Rawlins 48.41 71 ⇓P P 11 55 20.0 -0.6
baz=48,SNR=7.8
S16A Weppner Ranch, 48.44 79 ⇓P P 11 55 21.0 0.0
baz=48,SNR=8.0
Q18A Rafter H Ranch 48.48 76 ⇑P P 11 55 20.8 -0.5
baz=48,SNR=8.1
IRM Iron Mountain 48.51 85 ⇓P P 11 55 21.5 0.0
baz=49
MONP Monument Peak 48.54 87 ⇓P P 11 55 21.7 -0.1
baz=49
R17A Hanksville Air 48.55 77 ⇑P P 11 55 21.7 0.0
baz=49,SNR=8.2
N20A Spence Gulch, 48.55 73 ⇓P P 11 55 21.7 0.0
baz=49,SNR=6.7
BC3 Big Chuckw Mtn 48.65 85 ⇑P P 11 55 22.2 -0.4
baz=49
W13A Hualapai Mount 48.69 83 ⇓P P 11 55 22.5 -0.4
baz=49,SNR=5.5
U15A North Rim 48.83 80 ⇓P P 11 55 24.0 +0.1
baz=49,SNR=9.2
V14A Boquillas Ranc 48.83 82 ⇓P P 11 55 24.5 +0.5
baz=49
P19A Cripple Cowboy 48.85 75 ⇓P P 11 55 24.1 0.0
baz=49,SNR=12
DVTC Desert V Tower 48.90 87 ⇑P P 11 55 24.1 -0.4
baz=49
SWSC Sam W. Stewart 48.90 86 ⇓P P 11 55 24.4 -0.2
baz=49
L22A Ellis Ranch, M 48.92 71 ⇑P P 11 55 23.3 -1.3
baz=49
S17A Black Ridge (B 48.98 78 ⇓P P 11 55 25.5 +0.3
baz=49,SNR=13
O20A White River Ci 48.99 74 ⇑P P 11 55 24.9 -0.3
baz=49,SNR=11
N21A Black Mountain 49.05 73 ⇓P P 11 55 25.5 -0.1
baz=49,SNR=5.1
X13A Yucca 49.05 83 ⇑P P 11 55 25.0 -0.7
baz=49
R18A Canyonlands Na 49.07 77 ⇑P P 11 55 25.4 -0.4
baz=49,SNR=5.1
Q19A Hogan Spring (49.10 76 ⇓P P 11 55 26.0 0.0
baz=49,SNR=16
W14A Seligman 49.11 82 ⇓P P 11 55 26.1 -0.1
baz=49
Y12C Blythe 49.17 85 ⇓P P 11 55 26.1 -0.5
baz=49
M22A Cedar Creek Ra 49.21 71 ⇑P P 11 55 26.7 -0.1
baz=49
V15A Kaibab Nationa 49.29 81 ⇓P P 11 55 27.5 0.0
baz=49,SNR=9.5
T17A Navajo Res., N 49.38 79 ⇑P P 11 55 27.7 -0.5
baz=49
O21A Pagoda 49.41 73 ⇑P P 11 55 27.9 -0.5
baz=49,SNR=7.0
GLA Glamis 49.44 85 ⇓P P 11 55 28.0 -0.6
baz=50
S18A Hurst Farm, Bl 49.45 77 ⇑P P 11 55 28.6 -0.1
baz=50,SNR=24
Y13A Salome 49.56 84 ⇑P P 11 55 29.0 -0.5
baz=50,SNR=5.1
W15A Williams 49.65 82 ⇑P P 11 55 30.1 -0.2
baz=50
N22A Wattenberg Ran 49.66 72 ⇑P P 11 55 30.9 +0.7
baz=50,SNR=7.0
Q20A Ridgley Place, 49.69 75 ⇓P P 11 55 30.4 -0.1
baz=50
X14A Yava 49.72 83 ⇓P P 11 55 30.3 -0.5
baz=50,SNR=6.1
U17A Shonto 49.73 79 ⇓P P 11 55 30.4 -0.4
baz=50
T18A Mexican Hat 49.87 78 ⇓P P 11 55 31.4 -0.5
baz=50,SNR=9.5
S19A Harvey Farm, M 49.94 77 ⇑P P 11 55 32.1 -0.3
baz=50,SNR=9.2
Y14A Wickenburg 49.99 83 ⇑P P 11 55 32.4 -0.5
baz=50
X15A Humboldt 50.11 82 ⇓P P 11 55 33.5 -0.3
baz=50,SNR=6.7
W16A Flagstaff 50.16 81 ⇓P P 11 55 34.5 +0.4
baz=50
113A Mohawk Valley, 50.29 85 ⇓P P 11 55 34.3 -0.8
baz=50
U18A Rough Rock, Ch 50.33 79 ⇓P P 11 55 35.4 0.0
baz=50
Y15A Casa Rosa Ranc 50.40 83 ⇓P P 11 55 35.7 -0.3
baz=50
R21A Cimarron 50.51 75 ⇓P P 11 55 35.9 -0.8
baz=50
SPITS Spitsbergen Ar 50.57 356 P P 11 55 36.4 -0.3
comp=Z,41nm,0.5s,mb5.6,baz=68,slow=5.2,SNR=16
SPITS Spitsbergen Ar 50.57 356 P P 11 55 36.4 -0.3
SPITS pmax pmax
comp=Z,41nm,0.5s
T19A Beclabito 50.59 78 ⇑P P 11 55 37.7 +0.3
baz=51,SNR=23
X16A Lo Mia Camp, P 50.66 82 ⇓P P 11 55 38.0 +0.1
baz=51,SNR=6.8
V18A Ganado 50.75 79 ⇓P P 11 55 38.6 0.0
baz=51
Y16A Circle Bar Ran 50.99 82 ⇓P P 11 55 39.9 -0.5
baz=51
115A Sonoran Desert 51.30 84 ⇓P P 11 55 42.6 -0.2
baz=51,SNR=7.9
214A Organ Pipe Nat 51.43 85 ⇑P P 11 55 43.3 -0.4
baz=52
Y17A Roosevelt 51.50 82 ⇓P P 11 55 44.0 -0.3
baz=52,SNR=9.0
X18A Snowflake 51.51 81 ⇓P P 11 55 44.1 -0.2
baz=52
116A Eloy 51.72 84 ⇓P P 11 55 45.4 -0.5
baz=52
Y18A Canyon Day Jun 51.95 81 ⇓P P 11 55 47.3 -0.3
baz=52,SNR=5.8
X19A St. Johns 51.99 80 ⇓P P 11 55 47.7 -0.1
baz=52,SNR=5.4
117A Oracle 52.32 83 ⇓P P 11 55 50.2 -0.2
baz=52,SNR=5.3
Y19A Nutrioso 52.32 81 ⇓P P 11 55 49.7 -0.6
baz=52
Z18A Geronimo 52.41 82 ⇓P P 11 55 51.2 +0.2
baz=52
118A Homack Ranch, 52.75 82 ⇓P P 11 55 53.3 -0.2
baz=53
217A Green Valley 52.81 84 ⇑P P 11 55 53.6 -0.3
baz=53
119A Ashpeak Ranch, 53.08 82 ⇓P P 11 55 55.8 -0.1
baz=53
218A Dragoon 53.15 83 ⇑P P 11 55 56.4 -0.1
baz=53
ANMO Albuquerque 53.39 78 ⇓*e*P P 11 55 58.4 +0.2
318A Bisbee 53.55 83 ⇓P P 11 55 59.1 -0.3
baz=54
219A White Tail Can 53.63 82 ⇓P P 11 55 59.4 -0.5
baz=54
ZALV Zalesovo Beam 53.99 313 P P 11 56 01.0 -1.2
comp=Z,0.5nm,0.4s,mb3.8,baz=93,slow=7.7,SNR=3.6
ZALV PcP PcP 11 57 07.2 +0.4
comp=Z,2.6nm,0.7s,baz=18,slow=5.6,SNR=7.4
ZALV Zalesovo Beam 53.99 313 P P 11 56 01.0 -1.3
ZALV 11 57 07.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ZALV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ZALV Zalesovo Beam 53.99 313 P P 11 56 01.0 -1.3
ZALV PcP PcP 11 57 07.2 +0.4
319A Douglas 54.04 83 ⇑P P 11 56 02.8 -0.1
baz=54,SNR=5.3
GTA Gaotai 55.40 292 *e*P P 11 56 13.3 +0.6
GTA PP PP 11 58 15.0 -1.6
GTA AMB AMB
comp=Z,9.0nm,0.8s,mb4.8
GTA AMB AMB
comp=Z,960nm,6.9s
GTA LR LR
comp=N,4µm,19.8s,MS5.6
GTA LR LR
comp=E,4µm,21.3s,MS5.6
GTA LR LR
comp=Z,3µm,18.3s,MS5.4
ARCES ARCESS Array B 58.26 350 P P 11 56 31.9 -0.6
comp=Z,7.5nm,0.9s,mb4.7,baz=27,slow=8.2,SNR=6.2
ARCES ARCESS Array B 58.26 350 P P 11 56 31.9 -0.6
ARCES pmax pmax
comp=Z,8.0nm,0.9s
ARCES ARCESS Array B 58.26 350 P P 11 56 31.9 -0.6
TXAR Lajitas Array 58.95 81 P P 11 56 37.2 -0.6
comp=Z,3.0nm,0.7s,mb4.5,baz=302,slow=5.0,SNR=28
TXAR Lajitas Array 58.95 81 P P 11 56 37.3 -0.6
TXAR pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 58.98 314 P P 11 56 38.8 +1.0
comp=Z,10.0nm,0.6s,mb5.0,baz=43,slow=6.7,SNR=30
KURK ScP ScP 12 01 26.6 +4.3
comp=Z,0.9nm,0.6s,baz=44,slow=7.0,SNR=6.5
KURK Kurchatov 58.98 314 P P 11 56 38.8 +1.0
KURK pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KURK pmax pmax
comp=N,1.0nm,0.6s
MKAR Makanchi Array 59.96 308 P P 11 56 44.2 -0.4
comp=N,4.5nm,0.6s,mb4.7,baz=51,slow=6.1,SNR=46
MKAR ScP ScP 12 01 32.2 +5.6
comp=N,0.4nm,0.6s,baz=38,slow=5.5,SNR=4.2
MKAR Makanchi Array 59.96 308 P P 11 56 44.2 -0.4
MKAR ScP ScP 12 01 32.2 +5.5
GYA Guiyang 60.09 276 P P 11 56 43.8 -2.0
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
SCHQ Schefferville 60.33 38 P P 11 56 45.9 -1.2
comp=Z,5.4nm,0.7s,mb4.7,baz=314,slow=8.6,SNR=5.1
BVAR Borovoye Array 60.88 320 P P 11 56 50.3 -0.5
comp=Z,2.8nm,0.6s,mb4.6,baz=56,slow=6.2,SNR=9.5
BVAR PcP PcP 11 57 34.0 +0.1
comp=Z,2.9nm,0.6s,baz=63,slow=4.7,SNR=5.9
BVAR Borovoye Array 60.88 320 P P 11 56 50.3 -0.5
BVAR 11 57 34.0
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 63.74 345 *e*p P 11 57 08.5 -1.2
comp=Z,5.6nm,0.6s,mb4.8
JOF Joensuu 63.74 345 *e*P P 11 57 08.5 -1.2
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
OXF Oxford 63.90 67 *e*P P 11 57 10.4 -0.9
OXF pmax pmax
comp=Z,32nm,0.9s,mb5.3
OXF Oxford 63.90 67 *e*P P 11 57 10.4 -0.8
comp=Z,32nm,0.9s,mb5.3
KAF Kangasniemi 65.26 347 *e*p P 11 57 18.5 -1.2
comp=Z,4.2nm,0.6s,mb4.7
KAF Kangasniemi 65.26 347 *e*P P 11 57 18.5 -1.2
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
AAK Ala-Archa 66.80 310 *e*P P 11 57 30.9 +1.0
AAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
AAK Ala-Archa 66.80 310 *e*P P 11 57 30.9 +1.1
comp=Z,5.4nm,0.6s,mb4.8
LSA Lhasa 67.27 289 *e*P P 11 57 34.6 +1.6
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LSA Lhasa 67.27 289 *e*P P 11 57 34.6 +1.6
comp=Z,5.2nm,0.6s,mb4.7
AKTK Aktyubinsk 67.71 324 P P 11 57 34.6 -0.8
AKTO Aktyubinsk 67.71 324 P P 11 57 34.6 -0.8
comp=Z,1.5nm,0.5s,mb4.3,baz=63,slow=8.0,SNR=8.5
AKTO Aktyubinsk 67.71 324 P P 11 57 34.7 -0.8
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
NB2 NORSAR Subarra 67.83 355 P P 11 57 35.4 -0.7
comp=Z,3.6nm,0.8s,mb4.5,baz=7.6,slow=6.5
NOA NORSAR Array B 67.83 355 P P 11 57 36.0 -0.1
comp=Z,1.1nm,0.5s,mb4.1,baz=5.9,slow=6.2,SNR=6.1
NOA NORSAR Array B 67.83 355 P P 11 57 36.0 -0.1
NOA pmax pmax
comp=Z,1.0nm,0.5s
OBN Obninsk 69.98 339 *e*P P 11 57 49.0 -0.5
OBN pmax pmax
comp=Z,18nm,1.5s,mb4.8
CMAR Chiang Mai Arr 70.77 276 P P 11 57 54.4 -0.6
comp=Z,1.1nm,0.5s,mb4.0,baz=24,slow=6.8,SNR=10
CMAR Chiang Mai Arr 70.77 276 *e*P P 11 57 54.5 -0.4
TAPN Taplejung 71.03 290 *e*P P 11 57 57.2 +0.8
comp=Z,33nm,0.8s,mb5.3
ODAN Odare 71.59 290 *e*P P 11 58 00.2 +0.4
comp=Z,12nm,0.6s,mb5.0
GUN Gumba 71.69 292 *e*P P 11 58 01.3 +0.9
comp=Z,48nm,0.4s,mb5.8
JIRN Jiri 71.70 291 *e*P P 11 58 01.5 +1.1
comp=Z,46nm,0.7s,mb5.5
RAMN Ramite 71.99 291 *e*P P 11 58 02.6 +0.4
comp=Z,53nm,0.6s,mb5.7
KKN Kakani 72.13 292 *e*P P 11 58 03.8 +0.8
comp=Z,30nm,0.5s,mb5.5
KKN Kakani 72.13 292 *e*P P 11 58 03.8 +0.8
KKN pmax pmax
comp=Z,31nm,0.5s,mb5.5
PKI Pulchoki 72.22 292 *e*P P 11 58 03.5 0.0
comp=Z,26nm,0.6s,mb5.3
PKI Pulchoki 72.22 292 *e*P P 11 58 03.5 0.0
PKI pmax pmax
comp=Z,26nm,0.6s,mb5.3
GKN Gorkha 72.35 293 *e*P P 11 58 04.7 +0.4
comp=Z,22nm,0.5s,mb5.3
DMN Daman 72.37 292 *e*P P 11 58 05.3 +0.9
comp=Z,23nm,0.9s,mb5.1
DANN Dangsing 72.59 294 *e*P P 11 58 06.4 +0.6
comp=Z,22nm,0.7s,mb5.2
KOLN Koldanda 73.12 293 *e*P P 11 58 09.4 +0.5
AKASG Malin Array Be 75.67 342 P P 11 58 22.7 -0.6
comp=Z,17nm,0.4s,mb5.3,baz=20,slow=6.5,SNR=35
AKASG Malin Array Be 75.67 342 P P 11 58 22.7 -0.6
AKASG pmax pmax
comp=Z,17nm,0.4s
KIEV Kiev 75.68 342 *e*P P 11 58 22.8 -0.5
KIEV pmax pmax
comp=Z,32nm,0.8s,mb5.3
KIEV Kiev 75.68 342 *e*P P 11 58 22.8 -0.6
comp=Z,32nm,0.8s,mb5.3
CLL Collm 77.38 352 *i* P P 11 58 32.2 -0.7
CLL pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
CLL Collm 77.38 352 *i* P P 11 58 32.2 -0.7
comp=Z,8.0nm,0.6s,mb4.8
CLL *es*P sP 11 58 45.0 -8.6
DPC Dobruska-Polom 78.00 350 *e*P P 11 58 36.5 +0.1
STHS Stebnicka Huta 78.28 347 *e*P P 11 58 39.3 +1.3
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
STHS Stebnicka Huta 78.28 347 *e*P P 11 58 39.3 +1.3
comp=Z,5.1nm,0.8s,mb4.5
STHS *e*PP PP 12 01 28.8 -5.7
OKC Ostrava-Krasne 78.29 349 *e*P P 11 58 42.9 +4.9
HGN Heimansgroeve 78.35 357 *e*P P 11 58 38.5 +0.1
comp=Z,17nm,0.8s,mb5.0
NKC Novy Kostel 78.49 352 *e*P P 11 58 39.3 +0.2
PRU Pruhonice 78.54 351 *e*pP pP 11 58 47.8 -6.5
CRVS Cervenica-Dubn 78.75 346 *e*P P 11 58 41.0 +0.4
CRVS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CRVS Cervenica-Dubn 78.75 346 *e*P P 11 58 41.0 +0.4
comp=Z,4.8nm,0.8s,mb4.5
BAIF Baives 79.11 358 *e*P P 11 58 42.4 -0.1
comp=Z,13nm,0.7s,mb4.7
BAIF Baives 79.11 358 *e*P P 11 58 42.4 -0.1
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BAIF Baives 79.11 358 *e*P P 11 58 42.4 -0.1
comp=Z,6.3nm,0.7s,mb4.7
KECS Kecovo 79.31 347 *e*P P 11 58 44.1 +0.5
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 79.31 347 *e*P P 11 58 44.1 +0.5
comp=Z,4.7nm,0.9s,mb4.4
KECS *e* 11 59 16.0
BUR08 Bucovina Ar. S 79.36 343 *e*P P 11 58 44.6 +0.7
KHC Kasperske Hory 79.49 351 *e*P P 11 58 45.1 +0.5
VYHS Vyhne 79.52 348 *e*P P 11 58 45.1 +0.3
VYHS pmax pmax

comp=Z,3.0nm,1.2s,mb4.1
VYHS Vyhne 79.52 348 *e*P **P 11 58 45.1 +0.3**
comp=Z,3.2nm,1.2s,mb4.1
GERES GERESS Array B 79.76 351 P **P 11 58 46.0 0.0**
comp=Z,2.1nm,0.6s,mb4.2,baz=26,slow=5.6,SNR=11
GERES GERESS Array B 79.76 351 P **P 11 58 46.0 -0.1**
GERES pmax pmax
comp=Z,2.0nm,0.6s
FLN La Foliniere 80.45 1 *e*P **P 11 58 49.1 -0.7**
LDF La Druitiere 80.62 1 *e*P **P 11 58 49.9 -0.8**
comp=Z,19nm,0.8s,mb4.8
LDF La Druitiere 80.62 1 *e*P **P 11 58 49.9 -0.8**
LDF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LDF La Druitiere 80.62 1 *e*P **P 11 58 49.9 -0.8**
comp=Z,9.5nm,0.8s,mb4.8
MEZF Maizieres J'vi 80.65 357 *e*P **P 11 58 50.7 -0.2**
CDF Champ du Feu 80.65 356 *e*P **P 11 58 50.4 -0.5**
comp=Z,4.2nm,0.6s,mb4.2
CDF Champ du Feu 80.65 356 *e*P **P 11 58 50.4 -0.5**
CDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CDF Champ du Feu 80.65 356 *e*P **P 11 58 50.4 -0.5**
comp=Z,2.1nm,0.6s,mb4.2
GRR Gorron 80.82 1 *e*P **P 11 58 51.2 -0.6**
comp=Z,21nm,0.9s,mb4.8
GRR Gorron 80.82 1 *e*P **P 11 58 51.2 -0.6**
GRR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GRR Gorron 80.82 1 *e*P **P 11 58 51.2 -0.6**
comp=Z,10nm,0.9s,mb4.8
SGMF Saint Gilles 80.92 2 *e*P **P 11 58 52.0 -0.3**
comp=Z,25nm,0.9s,mb4.8
SGMF Saint Gilles 80.92 2 *e*P **P 11 58 52.0 -0.3**
SGMF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SGMF Saint Gilles 80.92 2 *e*P **P 11 58 52.0 -0.3**
comp=Z,12nm,0.9s,mb4.8
GNI Garni 81.28 327 *i*P **P 11 58 58.0 +3.6**
GNI pmax pmax
comp=Z,23nm,1.4s
WRAB Tennant Creek 81.66 224 *i*P **P 11 58 53.9 -2.6**
WRA Warramunga Arr 81.68 224 P **P 11 58 54.7 -1.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=32,slow=5.9,SNR=26
WRA Warramunga Arr 81.68 224 P **P 11 58 54.7 -1.9**
WRA pmax pmax
comp=Z,3.0nm,0.7s
LOR Lormes 81.91 358 *e*P **P 11 58 57.1 -0.5**
comp=Z,9.5nm,0.8s,mb4.5
LOR Lormes 81.91 358 *e*P **P 11 58 57.1 -0.5**
LOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LOR Lormes 81.91 358 *e*P **P 11 58 57.1 -0.5**
comp=Z,4.8nm,0.8s,mb4.5
SSF Saint Saulge 82.13 358 *e*P **P 11 58 58.3 -0.4**
comp=Z,12nm,0.9s,mb4.5
SSF Saint Saulge 82.13 358 *e*P **P 11 58 58.3 -0.4**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SSF Saint Saulge 82.13 358 *e*P **P 11 58 58.3 -0.4**
comp=Z,6.2nm,0.9s,mb4.5
AVF Avril sur Loir 82.40 358 *e*P **P 11 58 59.7 -0.5**
comp=Z,8.4nm,0.7s,mb4.5
AVF Avril sur Loir 82.40 358 *e*P **P 11 58 59.7 -0.5**
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AVF Avril sur Loir 82.40 358 *e*P **P 11 58 59.7 -0.5**
comp=Z,4.2nm,0.7s,mb4.5
CABF La Chapelle 82.50 356 *e*P **P 11 59 00.5 -0.2**
SMF Signal de Mont 82.53 358 *e*P **P 11 59 00.4 -0.5**
MFF Saint Martin d 82.61 1 *e*P **P 11 59 00.8 -0.5**
BGF Bois d'Agland 82.64 359 *e*P **P 11 59 01.0 -0.4**
comp=Z,19nm,0.8s,mb4.9
BGF Bois d'Agland 82.64 359 *e*P **P 11 59 01.0 -0.4**
BGF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BGF Bois d'Agland 82.64 359 *e*P **P 11 59 01.0 -0.4**
comp=Z,9.7nm,0.8s,mb4.9
TCF Toulx Ste Croi 82.92 359 *e*P **P 11 59 02.2 -0.7**
LPL La Plagne 83.56 356 *e*P **P 11 59 06.8 +0.6**
LPG La Plagne 83.58 356 *e*P **P 11 59 07.2 +0.9**
HYB Hyderabad 84.04 290 *e*P **P 11 59 09.0 -0.1**
ORIF Oris-en-Rattie 84.20 356 *e*P **P 11 59 09.9 +0.5**
CAF Calviac 84.28 359 *e*P **P 11 59 09.8 -0.1**
VIVF Saint-Julien-l 84.30 357 *e*P **P 11 59 09.9 -0.1**
MBDF Montbardon 84.35 356 *e*P **P 11 59 10.1 -0.1**
BRTR Keskin Array B 85.03 335 P **P 11 59 14.2 +0.5**
comp=Z,3.9nm,0.7s,mb4.6,baz=64,slow=2.5,SNR=18
BRTR Keskin Array B 85.03 335⇑ *e*P **P 11 59 14.1 +0.4**
SMRF Simiane la Rot 85.15 357 *e*P **P 11 59 14.8 +0.6**
comp=Z,22nm,0.9s,mb5.0
SMRF Simiane la Rot 85.15 357 *e*P **P 11 59 14.8 +0.6**
comp=Z,22nm,0.9s,mb5.3
ASAR Alice Springs 85.15 222 P **P 11 59 13.2 -1.1**
comp=Z,2.7nm,0.8s,mb4.5,baz=26,slow=4.9,SNR=27
ASAR Alice Springs 85.15 222 P **P 11 59 13.2 -1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
FRF La Foret Royal 85.52 356 *e*P **P 11 59 15.7 -0.4**
LMR La Mourre 85.75 356 *e*P **P 11 59 16.9 -0.4**
comp=Z,6.4nm,0.6s,mb4.7
LMR La Mourre 85.75 356 *e*P **P 11 59 16.9 -0.4**
LMR pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
LMR La Mourre 85.75 356 *e*P **P 11 59 16.9 -0.4**
comp=Z,3.2nm,0.6s,mb4.7
MTLF Montolieu 85.87 359 *e*P **P 11 59 17.8 0.0**
EPF Esparros 86.18 0 *e*P **P 11 59 18.6 -0.8**
comp=Z,4.5nm,0.5s,mb4.6
EPF Esparros 86.18 0 *e*P **P 11 59 18.6 -0.8**
EPF pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
EPF Esparros 86.18 0 *e*P **P 11 59 18.6 -0.8**
comp=Z,2.3nm,0.5s,mb4.7
ETSF Etsaut 86.31 1 *e*P **P 11 59 20.3 +0.3**
comp=Z,4.8nm,0.6s,mb4.6
ETSF Etsaut 86.31 1 *e*P **P 11 59 20.3 +0.3**
ETSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
ETSF Etsaut 86.31 1 *e*P **P 11 59 20.3 +0.3**
comp=Z,2.4nm,0.6s,mb4.6
PGF Pioggiola 86.39 354 *e*P **P 11 59 20.1 -0.3**
STKA Stephens Creek 89.60 213 P **P 11 59 35.6 0.0**
comp=Z,8.5nm,0.9s,mb5.1,baz=357,slow=6.6,SNR=16
TORD Torodi Ar. Bea 115.96 359 PKP PKPdf 12 05 19.9 -1.3
comp=Z,0.4nm,0.8s,baz=350,slow=1.7,SNR=2.0
CFAA Coronel Fontan 126.69 97 PKP PKPdf 12 05 40.1 -1.1
comp=Z,0.3nm,0.4s,baz=309,slow=6.5,SNR=4.9
CPUP Villa Florida 129.88 83 PKP PKPdf 12 05 47.1 -0.3
comp=Z,2.1nm,0.8s,baz=337,slow=7.7,SNR=4.1
CPUP Villa Florida 129.88 83 PKIKP PKPdf 12 05 47.1 -0.3
CPUP pmax pmax
comp=Z,2.0nm,0.8s
PLCA Paso Flores 131.16 107 PKP PKPdf 12 05 49.4 0.0
comp=Z,1.8nm,0.8s,baz=39,slow=2.7,SNR=4.2
PLCA Paso Flores 131.16 107 PKIKP PKPdf 12 05 49.4 +0.1
PLCA pmax pmax
comp=Z,2.0nm,0.8s
TSUM Tsumeb 145.45 331 PKPbc PKPbc 12 06 16.2 0.0
comp=Z,9.3nm,0.8s,baz=12,slow=4.6,SNR=24
TSUM Tsumeb 145.45 331 PKPbc PKPbc 12 06 16.2 0.0
MAW Mawson 146.15 217 PKPbc PKPbc 12 06 16.0 -0.9
comp=Z,4.6nm,0.6s,baz=38,slow=11,SNR=7.4
MAW Mawson 146.15 217 PKP2 PKPab 12 06 16.0 -1.7
MAW pmax pmax
comp=Z,5.0nm,0.6s
BOSA Boshof 150.92 311 PKPbc PKPbc 12 06 30.7 +0.2
comp=Z,2.3nm,0.5s,baz=67,slow=3.6,SNR=9.1
BOSA PKPab PKPab 12 06 37.2 -0.8
comp=Z,3.0nm,0.7s,baz=14,slow=3.1,SNR=5.0
BOSA Boshof 150.92 311 PKIKP PKPbc 12 06 30.7 +0.2
BOSA 12 06 37.2
BOSA pmax pmax
comp=Z,2.0nm,0.5s
BOSA pmax pmax
comp=Z,3.0nm,0.7s
VNA3 Neumayer Olymp 159.30 170 *e*PKPdf PKPab 12 07 10.5 -2.1
VNA3 *e* 12 07 14.2
VNA2 Neumayer--Watz 159.82 172 *e*PKPdf PKPab 12 07 13.8 -1.1
baz=178,slow=1.2
VNA2 *e* 12 07 17.6

*IDC **19** 11:57:33.9±3.8, 51.34N×179.24W, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.5/24, mbtmp3.8/4, MS4.3/2, Ms1 4.3/2, ms1mx3.7/49, Error ellipse: s-maj=114.4km s-min=31.4km az=178.0*
*ISCJB **19** 11:57:35.9±2.5, 50.7N×02.4W×179.14W±009, h49km±19km, mb3.7/3, Error ellipse: s-maj=39.5km s-min=9.3km az=0.7*
*NEIC **19** 11:57:36.6, 51.00N×179.29W, h13km, ML4.1(AEIC), After AEIC.*

ISC 19 11:57:38.5±2.4, 50.7N±03×179.08W±009, h49km±18km, n10, σ1°10/11, mb3.7/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.89**	**52**	P	**Pn**	**11 58 07.3**	**-1.0**
ADK				S	**Sn**	**11 58 30.8**	**-0.1**
ATKA	**Atka Island**	**3.39**	**63**	P	**Pn**	**11 58 29.1**	**+0.1**
FX1	**Attu Island--F**	**5.26**	**297**	Pn	**Pn**	**11 58 52.5**	**-2.1**
	2.4nm,0.3s,baz=135,slow=4.6,SNR=9.0						
FX1				Sn	**Sn**	**11 59 55.4**	**+1.5**
	2.9nm,0.3s,baz=273,slow=18,SNR=2.4						
FX1				LR	LR	12 00 11.0	
	comp=Z,3μm,18.1s,baz=152,slow=32						
FX1	**Attu Island--F**	**5.26**	**297**	P	**Pn**	**11 58 53.5**	**-1.0**
NIKO	**Nikolski**	**6.72**	**67**	P	**Pn**	**11 59 15.3**	**+0.9**
PETK	**Petropavlovsk-**	**14.51**	**288**	LR	LR	12 06 20.7	
	comp=Z,1μm,19.5s,baz=327,slow=37						
KDAK	**Kodiak Island**	**16.93**	**55**	Pn	**Pn**	**12 01 26.6**	**-5.0**
	0.8nm,0.3s,baz=270,slow=6.1,SNR=5.2						
YKA	**Yellowknife Ar**	**35.80**	**46**	P	**P**	**12 04 31.8**	**-0.8**
	0.4nm,0.4s,mb3.7,baz=283,slow=7.6,SNR=10						
PDAR	**Pinedale Array**	**46.68**	**71**	P	**P**	**12 06 03.7**	**+1.7**
	0.9nm,0.8s,mb3.8,baz=323,slow=3.1,SNR=6.5						
MKAR	**Makanchi Array**	**60.29**	**309**	P	**P**	**12 07 40.7**	**-1.0**
	0.4nm,0.4s,mb3.8,baz=59,slow=5.2,SNR=4.2						

*ISCJB **19** 12:04:48.7±1.8, 23.21S±005×70.66W±008, h11km±11km, mb4.5/12, Error ellipse: s-maj=12.5km s-min=8.3km az=2.5*
*NEIC **19** 12:04:52.8±3.1, 23.22S×70.63W, h22km±21km, mb4.2/1, Error ellipse: s-maj=16.0km s-min=10.3km az=79.0*
*IDC **19** 12:04:53.3±4.0, 23.22S×70.55W, h25km±24km, mb4.3/9, mb1 4.3/11, mb1mx4.2/19, mbtmp4.2/11, ML3.9/3, Error ellipse: s-maj=24.4km s-min=19.3km az=53.0*

ISC 19 12:04:54.1±3.1, 23.20S±005×70.66W±01, h32km±21km, h26km±.1km:pP-P, n33, σ0°97/27, mb4.5/12, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.64**	**69**	Pg	**Pn**	**12 05 23.6**	**+2.9**
	752nm,0.3s,baz=245,slow=12,SNR=3050						
LVC				Lg		12 05 46.3	
	1μm,0.3s,baz=334,slow=13,SNR=40						
ARE	**Arequipa**	**6.76**	**352**	*e*P	**Pn**	**12 06 31.0**	**-0.2**
ARE				*e*S	**Sn**	**12 07 47.0**	**-0.1**
CFAA	**Coronel Fontan**	**8.62**	**167**	Pn	**Pn**	**12 06 54.5**	**-2.1**
	0.2nm,0.3s,baz=348,slow=14,SNR=9.0						
CFAA				Sn	**Sn**	**12 08 42.4**	**+10**
	0.3nm,0.3s,baz=339,slow=18,SNR=3.0						
SIV	**San Ignacio**	**11.47**	**53**	Pn	**Pn**	**12 07 34.9**	**-0.8**
	2.0nm,0.3s,baz=248,slow=12,SNR=23						
SIV				Sn	**Sn**	**12 09 47.8**	**+5.0**
	0.3nm,0.3s,baz=301,slow=22,SNR=2.9						
CPUP	**Villa Florida**	**12.43**	**107**	Pn	**Pn**	**12 07 49.1**	**+0.3**
	0.3nm,0.3s,baz=258,slow=12,SNR=4.1						
TRQA	**Tornquist**	**16.54**	**156**	*e*P	**Pn**	**12 08 45.3**	**+1.8**
	15nm,0.8s						
BDFB	**Brasilia**	**22.55**	**75**	P	**P**	**12 09 50.8**	**-0.7**
	1.8nm,0.5s,mb3.8,baz=244,slow=16,SNR=5.9						
VNA3	**Neumayer Olymp**	**58.97**	**161**	*e*	**P**	**12 14 50.2**	**+0.1**
VNA3				*e*	pP	12 14 57.8	-2.1
VNA3				*e*		12 15 02.7	
VNA2	**Neumayer--Watz**	**59.57**	**160**	*e*	**P**	**12 14 54.6**	**+0.4**
VNA2				*e*	pP	12 15 02.1	-1.9
VNA2				*e*		12 15 06.5	
TKL	**Tuckaleechee C**	**59.86**	**348**	P	**P**	**12 14 55.8**	**-0.8**
	3.2nm,0.7s,mb4.5,baz=172,slow=8.5,SNR=5.7						
TXAR	**Lajitas Array**	**61.18**	**327**	P	**P**	**12 15 05.4**	**-0.3**
	0.4nm,0.6s,mb3.7,baz=156,slow=8.0,SNR=6.2						
SNAA	**Sanae**	**61.19**	**160**	*e*	**P**	**12 15 05.1**	**-0.2**
SNAA				*e*	pP	12 15 12.6	-2.5
ANMO	**Albuquerque**	**67.11**	**328**	P	**P**	**12 15 46.8**	**+2.3**
	0.2nm,0.3s,mb3.6,baz=114,slow=6.1,SNR=3.9						
LIC	**Lamto**	**70.34**	**74**	*e*P	**P**	**12 16 05.1**	**0.0**
	39nm,1.6s,mb5.1						
TIC	**Toumodi**	**70.53**	**74**	*e*P	**P**	**12 16 04.4**	**-2.0**
	5.9nm,0.8s,mb5.2						
KIC	**Kosan Boka**	**70.65**	**74**	*e*P	**P**	**12 16 07.2**	**+0.1**
	43nm,0.8s,mb5.4						
DBIC	**Dimbokro**	**70.69**	**74**	P	**P**	**12 16 07.4**	**+0.1**
	8.2nm,0.8s,mb4.7,baz=226,slow=6.9,SNR=14						
SYO	**Syowa Base**	**75.45**	**160**⇓	*e*P	**P**	**12 16 34.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.37**	**71**	P	**P**	**12 16 57.6**	**+0.3**
	13nm,0.8s,mb4.9,baz=251,slow=5.2,SNR=50						
MAW	**Mawson**	**83.14**	**164**	P	**P**	**12 17 16.9**	**+0.4**
	3.4nm,0.7s,mb4.5,baz=229,slow=4.5,SNR=11						
BOSA	**Boshof**	**84.00**	**118**	P	**P**	**12 17 21.4**	**-0.3**
	16nm,1.2s,mb5.0,baz=307,slow=0.8,SNR=7.7						
BOSA	**Boshof**	**84.00**	**118**	P	**P**	**12 17 21.4**	**-0.3**
YKA	**Yellowknife Ar**	**92.28**	**341**	P	**P**	**12 18 00.9**	**+0.5**
	1.1nm,0.7s,mb4.3,baz=136,slow=4.4,SNR=34						
YKA	**Yellowknife Ar**	**92.28**	**341**	P	**P**	**12 18 00.9**	**+0.4**
ASAR	**Alice Springs**	**127.69**	**209**	PKP	PKPdf	12 23 56.5	-0.4
	0.9nm,0.8s,baz=146,slow=2.0,SNR=7.6						
WRA	**Warramunga Arr**	**130.71**	**212**	PKP	PKPdf	12 24 02.7	0.0
	0.7nm,0.7s,baz=148,slow=1.6,SNR=11						
BVAR	**Borovoye Array**	**138.06**	**35**	PKP	PKPdf	12 24 16.2	+0.9
	0.7nm,0.6s,baz=247,slow=1.1,SNR=3.9						
KURK	**Kurchatov**	**143.59**	**33**	PKP	PKPdf	12 24 24.1	-1.2
	0.6nm,0.6s,baz=299,slow=3.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**144.14**	**25**	PKP	PKPdf	12 24 25.6	-0.6
	4.6nm,0.9s,baz=316,slow=4.1,SNR=16						
AAK	**Ala-Archa**	**145.19**	**48**	*e*PKPbc	PKPbc	12 24 30.4	+2.3
MKAR	**Makanchi Array**	**147.91**	**36**	PKP	PKPdf	12 24 34.1	+1.2
	4.2nm,0.7s,baz=0.0,slow=1.5,SNR=32						
MKAR				PKPbc	PKPbc	12 24 36.8	+0.8
	4.3nm,0.7s,baz=320,slow=2.7,SNR=32						
MJAR	**Matsushiro Arr**	**151.84**	**305**	PKPbc	PKPbc	12 24 46.8	+0.9
	1.3nm,0.6s,baz=85,slow=2.0,SNR=4.4						
SONM	**Songino Array**	**155.30**	**5**	PKP	PKPdf	12 24 45.2	+1.2
	0.4nm,0.6s,baz=315,slow=0.4,SNR=5.0						
SONM				PKPab	PKPab	12 25 07.4	-1.7
	0.4nm,0.7s,baz=355,slow=4.8,SNR=2.7						

*NEIC **19** 12:05:33.8, 16.90N×100.57W, h5km, MD3.9(MEX), After MEX.*

MEX 19 12:05:35.2±0.9, 17.01N×100.53W, h22km±28km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.26**	**82**	*e*P	Pb	12 05 39.6	-1.8
CAIG				*i* S	Sb	12 05 44.8	-0.7
ACX	**Acapulco**	**0.61**	**104**	*i* P	Pb	12 05 45.2	-2.0
ACX				*i* S	Sb	12 05 54.2	-1.1
ZIIG	**Zihuatanejo**	**1.07**	**304**	*e*P	Pn	12 05 52.1	-2.8
ZIIG				*i* S	Sb	12 06 05.0	-3.6
ZIIG	**Zihuatanejo**	**1.07**	**304**	*e*P	Pn	12 05 52.1	-2.8
ZIIG				*i* S	Sb	12 06 06.8	-1.7
PNIG	**Pinotepa**	**2.39**	**105**	*i* P	Pn	12 06 10.9	-2.1
PNIG				*i* S	Sn	12 06 37.8	-3.9
PNIG	**Pinotepa**	**2.39**	**105**	*i* P	Pn	12 06 10.9	-2.1
PNIG				*i* S	Sn	12 06 39.8	-1.9
UTMO	**Huajuapan**	**2.73**	**72**	*e*P	Pn	12 06 16.4	-1.4
UTMO				*i* S	Sn	12 06 46.6	-3.5

*BUC **19** 12:06:04.7±0.6, 45.67N×26.44E, h158km±5km, MD4.3/2, Error ellipse: s-maj=6.2km s-min=3.3km az=24.0*
*ISCJB **19** 12:06:05.7±1.0, 45.63N±005×26.50E±006, h145km±9km, Error ellipse: s-maj=8.8km s-min=6.5km az=11.2*
*NEIC **19** 12:06:06.1, 45.61N×26.47E, h146km, MG3.1(BUC), After BUC.*

ISC 19 12:06:06.1±1.1, 45.63N±006×26.50E±006, h147km±8km, n21, σ0°56/31, 9C-6D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.25**	**25**⇑	*i*P	**Pn**	**12 06 26.1**	**0.0**
PLOR				*i* S	**Sn**	**12 06 41.8**	**+0.4**
VRI	**Vrincioaia**	**0.29**	**34**⇑	*i*P	**Pn**	**12 06 26.4**	**+0.2**
VRI				*i* S	**Sn**	**12 06 41.9**	**+0.3**
VRI	**Vrincioaia**	**0.29**	**34**	P	**Pn**	**12 06 26.5**	**+0.3**
ISR	**Istrita**	**0.51**	**176**⇓	*i*P	**Pn**	**12 06 27.8**	**+0.6**
VOIR		**1.04**	**260**⇓	*i*P	**Pn**	**12 06 30.5**	**-0.4**
VOIR				*i* S	**Sn**	**12 06 49.0**	**-0.7**
VOIR		**1.04**	**260**	P	**Pn**	**12 06 30.6**	**-0.3**
BUC1	**Bucharest**	**1.32**	**195**⇓	*i*P	**Pn**	**12 06 33.9**	**+0.3**
BUC1				*i* S	**Sn**	**12 06 54.4**	**-0.2**
BUC1	**Bucharest**	**1.32**	**195**⇑	P	**Pn**	**12 06 33.9**	**+0.3**
BUC1				S	**Sn**	**12 06 54.7**	**+0.1**
HARR	**Harsova**	**1.38**	**132**⇑	*i*P	**Pn**	**12 06 34.6**	**+0.4**
HARR				*i* S	**Sn**	**12 06 55.1**	**-0.5**
HARR	**Harsova**	**1.38**	**132**	P	**Pn**	**12 06 34.7**	**+0.6**
TLCR		**1.69**	**104**⇑	*i*P	**Pn**	**12 06 37.8**	**+0.3**
TLCR				*i* S	**Sn**	**12 07 01.8**	**+0.3**
TLCR		**1.69**	**104**	⇓P	**Pn**	**12 06 37.8**	**+0.3**
TLCR				S	**Sn**	**12 07 01.8**	**+0.3**
TIRR	**Tirgusor**	**1.79**	**130**⇑	*i*P	**Pn**	**12 06 39.0**	**+0.4**
TIRR				*i* S	**Sn**	**12 07 02.8**	**-0.7**
TIRR	**Tirgusor**	**1.79**	**130**	P	**Pn**	**12 06 39.0**	**+0.4**
KIS	**Kishinev**	**2.11**	**49**	*i* S	**Sn**	**12 07 09.0**	**-1.1**
	400nm,0.8s						
BURAR	**Bucovina Array**	**2.17**	**336**	⇑P	**Pn**	**12 06 43.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**2.21**	**337**	*e*Pn	**P**	**12 06 43.9**	**+0.5**
GZR	**Gura Zlata**	**2.63**	**266**⇓	*i*P	**Pn**	**12 06 47.9**	**-0.7**
GZR	**Gura Zlata**	**2.63**	**266**	⇓P	**Pn**	**12 06 47.9**	**-0.7**
GZR				S	**Sn**	**12 07 21.8**	**+0.5**
DRGR		**2.88**	**295**⇑	*i*P	**Pn**	**12 06 50.5**	**-1.2**
DRGR		**2.88**	**295**	⇑P	**Pn**	**12 06 50.9**	**-0.7**

IDC 19 12:07:13.0±6.3, 51.44N×179.40W, h66km±44km, mb3.0/4, mb1 3.3/5, mb1mx3.2/24, mbtmp3.1/5, ML3.1/1, Error ellipse: s-maj=131.7km s-min=24.0km az=179.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**4.80**	**290**	P	Pn	12 08 22.5	-0.2
	3.0nm,0.3s,baz=72,slow=3.2,SNR=7.4						
FX1				S	Sn	12 09 22.2	+5.3
	baz=270,slow=20,SNR=2.5						
YKA	**Yellowknife Ar**	**35.46**	**46**	P	P	12 14 02.4	-0.1
	0.1nm,0.4s,baz=280,slow=7.7,SNR=4.5						
SONM	**Songino Array**	**46.29**	**296**	P	P	12 15 32.5	+0.9
	0.2nm,0.5s,baz=31,slow=8.7,SNR=2.8						
PDAR	**Pinedale Array**	**46.65**	**72**	P	P	12 15 34.9	+0.4
	0.5nm,0.7s,baz=335,slow=2.7,SNR=5.4						
MKAR	**Makanchi Array**	**59.70**	**308**	P	P	12 17 09.2	-1.1
	0.3nm,0.5s,baz=66,slow=7.3,SNR=3.5						

IDC 19 12:07:40.3±4.6, 51.10N×179.47W, h63km±39km, mb3.5/8, mb1 3.6/9, mb1mx3.4/27, mbtmp3.5/9, ML3.4/1, Error ellipse: s-maj=36.5km s-min=19.3km az=170.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**4.89**	**294**	P	Pn	12 08 51.1	-0.1
	4.9nm,0.3s,baz=69,slow=14,SNR=5.7						
INK	**Inuvik**	**27.33**	**35**	P	P	12 13 24.8	+0.7
	2.0nm,1.1s,baz=238,slow=9.5,SNR=3.5						
YKA	**Yellowknife Ar**	**35.73**	**46**	P	P	12 14 31.3	-1.1
	0.2nm,0.5s,baz=283,slow=7.3,SNR=6.0						
SONM	**Songino Array**	**46.40**	**296**	P	P	12 16 00.8	+0.7
	0.8nm,1.0s,baz=65,slow=6.1,SNR=5.5						
PDAR	**Pinedale Array**	**46.80**	**72**	P	P	12 16 04.1	+0.8
	0.8nm,0.7s,baz=306,slow=4.8,SNR=4.9						
KURK	**Kurchatov**	**58.91**	**313**	P	P	12 17 33.0	+0.6
	1.4nm,0.5s,baz=42,slow=6.5,SNR=9.3						
MKAR	**Makanchi Array**	**59.88**	**308**	P	P	12 17 39.1	0.0
	0.7nm,0.4s,baz=52,slow=6.2,SNR=13						
BVAR	**Borovoye Array**	**60.83**	**319**	P	P	12 17 45.2	-0.3
	0.4nm,0.3s,baz=49,slow=7.9,SNR=3.8						
WRA	**Warramunga Arr**	**81.52**	**223**	P	P	12 19 50.7	0.0
	0.4nm,0.7s,baz=33,slow=6.2,SNR=2.8						

*ISCJB **19** 12:14:07.7±0.4, 34.12N±001×116.96W±001, h6km±3km, mb3.9/3, Error ellipse: s-maj=2.4km s-min=2.0km az=18.3*
*BJI **19** 12:14:07.0, 34.20N×117.00W, h7km, mb4.4, Msz4.3*
*IDC **19** 12:14:08.8±1.0, 34.15N×116.92W, h0km, mb3.7/2, mb1 3.9/7, mb1mx3.7/23, mbtmp3.6/7, ML3.5/5, Error ellipse: s-maj=16.7km s-min=5.8km az=68.0*
*NEIC **19** 12:14:09.0, 34.16N×116.98W, h7km, ML4.0(PAS), After PAS.*
NEIC Felt [V] at Angelus Oaks; [IV] at Calimesa, Cathedral City and Forest Falls; [III] at Anaheim, Apple Valley, Banning, Beaumont, Big Bear City, Big Bear Lake, Colton, Corona, Grand Terrace, Hemet, Hesperia, Highland, Laguna Niguel, Lake Arrowhead, Loma Linda, Lucerne Valley, Mentone, Moreno Valley, Palm Desert, Palm Springs, Perris, Rancho Mirage, Redlands, Riverside, Running Springs, San Bernardino, San Jacinto, Victorville, Wildomar and Yucaipa; [II] at Aliso Viejo, Crestline, Huntington Beach, Indio, La Quinta, Menifee, Mission Viejo, Murrieta, Norco, Rialto, Sun City and Winchester. Also felt at Bloomington, Blue Jay, Boron, Cedar Glen, Cedarpines Park, Cerritos, Chino Hills, Costa Mesa, Dana Point, Desert Hot Springs, Escondido, Fallbrook, Fontana, Garden Grove, Idyllwild, Indian Wells, Lake Elsinore, Lake Forest, Lytle Creek, March Air Reserve Base, Mira Loma, Morongo Valley, Oro Grande, Palmdale, Pasadena, Placentia, Rancho Cucamonga, San Diego, San Marcos, San Marino, Temecula, Trabuco Canyon, Twentynine Palms and Yorba Linda.

ISC 19 12:14:08.7±0.3, 34.13N±001×116.99W±001, h7km±2km, n114, σ0°89/157, mb3.9/3, 59C-40D, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBRC	**Big Bear Sol-O**	**0.14**	**22**	⇑P	**Pg**	**12 14 12.2**	**+0.6**
	baz=0.1						
BBRC				⇑S	**Sg**	**12 14 14.8**	**+1.1**
	baz=0.1						
MURC	**Murrieta**	**0.56**	**199**	⇑P	**Pg**	**12 14 20.2**	**+0.8**
	baz=0.6						
MURC				⇑S	**Sg**	**12 14 28.1**	**+1.4**
	baz=0.6						
BFSC	**Mount Baldy St**	**0.57**	**281**	⇓P	**Pg**	**12 14 20.0**	**+0.4**
	baz=0.6						
BFSC				⇑S	**Sg**	**12 14 27.6**	**+0.6**
	baz=0.6						
PFO	**Pinyon Flat Ob**	**0.68**	**139**	Pg	**Pg**	**12 14 22.2**	**+0.4**
	711nm,0.3s,baz=321,slow=14						
PFO				Lg		12 14 31.8	
	baz=223,slow=17						
PFO	**Pinyon Flat Ob**	**0.68**	**139**	⇑P	**Pg**	**12 14 22.3**	**+0.5**
	baz=0.7						
PFO				⇑S	**Sg**	**12 14 31.8**	**+1.2**
	baz=0.7						
**

GSC					⇑S		Sg	12 14 46.1	-0.5	
	baz=1.2									
GSC	**Goldstone**	**1.18**	**7**	*e*Pg			**Pg**	**12 14 30.6**	**-0.7**	
GSC				*e*Sg			**Sg**	**12 14 46.0**	**-0.7**	
109C	**Camp Elliot, M**	**1.24**	**185**	⇑P			**Pn**	**12 14 31.6**	**-0.8**	
	baz=1.3									
109C					⇑S		**Sg**	**12 14 47.9**	**-0.7**	
	baz=1.3									
GMRC	**Granite Mounta**	**1.27**	**59**	⇑P			**Pn**	**12 14 31.9**	**-1.0**	
	baz=1.3									
GMRC					⇓S		**Sb**	**12 14 49.4**	**-0.1**	
	baz=1.3									
MONP	**Monument Peak**	**1.32**	**159**	⇓P			**Pn**	**12 14 33.6**	**+0.1**	
	baz=1.3									
MONP					⇑S		**Sb**	**12 14 51.2**	**+0.2**	
	baz=1.3									
BC3	**Big Chuckw Mtn**	**1.36**	**110**	⇑P			**Pn**	**12 14 33.3**	**-0.8**	
	baz=1.4									
BC3					⇑S		**Sb**	**12 14 52.0**	**-0.1**	
	baz=1.4									
LRMC	**Laurel Mountai**	**1.46**	**337**	⇑P			**Pn**	**12 14 34.8**	**-0.7**	
	baz=1.4									
LRMC					⇑S		**Sn**	**12 14 54.5**	**-0.4**	
	baz=1.4									
OSI	**Osito Adit**	**1.52**	**289**	⇑Pb			**Pb**	**12 14 36.8**	**-0.3**	
	baz=1.5									
OSI					⇓Sb		**Sb**	**12 14 57.4**	**+0.8**	
	baz=1.5									
OSI	**Osito Adit**	**1.52**	**289**	*e*Pn			**Pn**	**12 14 36.6**	**+0.3**	
OSI				*e*Sn			**Sn**	**12 14 57.0**	**+0.8**	
IRM	**Iron Mountain**	**1.52**	**88**	⇑P			**Pn**	**12 14 35.1**	**-1.2**	
	baz=1.5									
IRM					⇓Sb		**Sb**	**12 14 57.7**	**+0.9**	
	baz=1.5									
SWSC	**Sam W. Stewart**	**1.55**	**140**	⇑P			**Pn**	**12 14 35.6**	**-1.0**	
	baz=1.6									
SWSC					⇑Sb		**Sb**	**12 14 58.6**	**+1.2**	
	baz=1.6									
TUQ	**Turquoise Moun**	**1.57**	**34**	⇓P			**Pn**	**12 14 35.6**	**-1.3**	
	baz=1.5									
TUQ					⇑Sb		**Sb**	**12 14 58.2**	**+0.2**	
	baz=1.5									
DVTC	**Desert V Tower**	**1.64**	**153**	⇓P			**Pn**	**12 14 37.5**	**-0.4**	
	baz=1.7									
DVTC					⇑Sb		**Sb**	**12 15 01.6**	**+1.4**	
	baz=1.7									
BLG	**Laguna Peak**	**1.72**	**270**	⇑P			**Pn**	**12 14 38.3**	**-0.8**	
	baz=1.7									
BLG					⇑Sb		**Sb**	**12 15 03.2**	**+0.7**	
	baz=1.7									
SCI	**San Clemente I**	**1.74**	**229**	⇑S			**Sn**	**12 15 01.7**	**+0.1**	
	baz=1.8									
LDFC	**Landfair**	**1.81**	**58**	*e*Pn			**Pn**	**12 14 39.2**	**-1.1**	
LDFC				*e*Sn			**Sn**	**12 15 05.3**	**+1.7**	
ARVC	**Arvin**	**1.82**	**304**	⇓P			**Pn**	**12 14 39.7**	**-0.6**	
	baz=1.8									
ARVC					⇑Sb		**Sb**	**12 15 05.9**	**+0.7**	
	baz=1.8									
SHOC	**Shoshone**	**1.86**	**18**	⇓P			**Pn**	**12 14 40.2**	**-0.7**	
	baz=1.8									
SHOC					⇑Sb		**Sb**	**12 15 07.3**	**+0.9**	
	baz=1.8									
ISA	**Isabella**	**1.96**	**322**	⇑P			**Pn**	**12 14 41.5**	**-0.8**	
	baz=1.9									
ISA					⇓Sb		**Sb**	**12 15 09.7**	**+0.4**	
	baz=1.9									
ISA	**Isabella**	**1.96**	**322**	*e*Pn			**Pn**	**12 14 41.7**	**-0.6**	
ISA				*e*Sn			**Sn**	**12 15 09.4**	**+2.3**	
MPMC	**Manual Prospec**	**1.97**	**348**	⇑P			**Pn**	**12 14 41.7**	**-0.8**	
	baz=1.9									
MPMC					⇑Sb		**Sb**	**12 15 11.0**	**+1.4**	
	baz=1.9									
Y12C	**Blythe**	**2.08**	**100**	⇑P			**Pn**	**12 14 42.8**	**-1.2**	
	baz=2.1									
GLA	**Glamis**	**2.10**	**120**	⇓P			**Pn**	**12 14 43.8**	**-0.4**	
	baz=2.1									
GLA	**Glamis**	**2.10**	**120**	*e*Pn			**Pn**	**12 14 43.5**	**-0.7**	
GLA				*e*Sn			**Sn**	**12 15 10.7**	**+0.2**	
W12A	**Cal Nev Ari**	**2.10**	**56**	⇑P			**Pn**	**12 14 43.5**	**-0.8**	
	baz=2.1									
V11A	**Goodsprings**	**2.13**	**36**	P			**Pn**	**12 14 44.2**	**-0.5**	
	baz=2.1,SNR=96									
SNCC	**San Nicolas Is**	**2.29**	**248**	⇓P			**Pn**	**12 14 46.4**	**-0.5**	
	baz=2.3									
SNCC	**San Nicolas Is**	**2.29**	**248**	*e*Pn			**Pn**	**12 14 46.6**	**-0.3**	
SNCC				*e*Sg			**Sg**	**12 15 22.1**	**-0.2**	
U10A	**Ash Meadows, A**	**2.35**	**13**	⇓P			**Pn**	**12 14 46.9**	**-0.7**	
	baz=2.3									
V12A	**Nelson**	**2.37**	**47**	P			**Pn**	**12 14 47.4**	**-0.6**	
	baz=2.3,SNR=262									
V12A					⇓Sb		**Sb**	**12 15 23.4**	**+2.3**	
	baz=2.3									
VES	**Vestal, Richgr**	**2.43**	**315**	⇑P			**Pn**	**12 14 48.3**	**-0.4**	
	baz=2.4									
Y13A	**Salome**	**2.64**	**96**	⇓P			**Pn**	**12 14 50.9**	**-0.8**	
	baz=2.6,SNR=98									
X13A	**Yucca**	**2.65**	**79**	⇓P			**Pn**	**12 14 51.0**	**-0.8**	
	baz=2.6									
W13A	**Hualapai Mount**	**2.73**	**68**	⇓P			**Pn**	**12 14 52.4**	**-0.6**	
	baz=2.7									
SMMC	**Simmler**	**2.75**	**296**	⇑P			**Pn**	**12 14 53.0**	**-0.1**	
	baz=2.7									
V13A	**Grand Canyon W**	**3.00**	**54**	⇑P			**Pn**	**12 14 56.3**	**-0.4**	
	baz=3.0									
113A	**Mohawk Valley,**	**3.01**	**116**	⇑P			**Pn**	**12 14 55.8**	**-1.0**	
	baz=3.0									
U12A	**Valley of Fire**	**3.05**	**40**	⇑P			**Pn**	**12 14 56.8**	**-0.4**	
	baz=3.0,SNR=68									
Y14A	**Wickenburg**	**3.31**	**92**	⇓P			**Pn**	**12 15 00.7**	**-0.2**	
	baz=3.3,SNR=278									
U13A	**Pakoon Wash**	**3.36**	**46**	⇑P			**Pn**	**12 15 01.5**	**-0.1**	
	baz=3.3,SNR=361									
W14A	**Seligman**	**3.39**	**70**	⇓P			**Pn**	**12 15 01.7**	**-0.3**	
	baz=3.4									
X14A	**Yava**	**3.41**	**83**	⇑P			**Pn**	**12 15 01.8**	**-0.4**	
	baz=3.4									
T11A	**Corn Creek, Al**	**3.42**	**24**	⇓P			**Pn**	**12 15 02.7**	**+0.3**	
	baz=3.4,SNR=44									
Z14A	**Wintersburg**	**3.45**	**102**	P			**Pn**	**12 15 01.9**	**-0.9**	
	baz=3.4,SNR=63									
V14A	**Boquillas Ranc**	**3.52**	**64**	⇑P			**Pn**	**12 15 03.7**	**-0.1**	
	baz=3.5									
U14A	**Mt Trumbull**	**3.86**	**53**	⇑P			**Pn**	**12 15 08.6**	**+0.2**	
	baz=3.8,SNR=48									
Y15A	**Casa Rosa Ranc**	**3.87**	**91**	P			**Pn**	**12 15 08.2**	**-0.3**	
	baz=3.9,SNR=1000									
TPH	**Tonopah**	**3.94**	**357**	*e*Pn			**Pn**	**12 15 09.6**	**0.0**	
TPH				*e*Sg			**Sg**	**12 16 15.1**	**-0.2**	
X15A	**Humboldt**	**3.95**	**83**	⇓P			**Pn**	**12 15 09.3**	**-0.3**	
	baz=3.9									
Z15A	**Gila River Ind**	**4.11**	**100**	⇓P			**Pn**	**12 15 11.2**	**-0.7**	
	baz=4.1,SNR=14									
214A	**Organ Pipe Nat**	**4.12**	**121**	⇑P			**Pn**	**12 15 11.5**	**-0.6**	
	baz=4.1									
115A	**Sonoran Desert**	**4.23**	**108**	⇑P			**Pn**	**12 15 12.8**	**-0.7**	
	baz=4.2,SNR=78									
S13A	**Holt Ranch, En**	**4.28**	**35**	⇑P			**Pn**	**12 15 14.6**	**+0.4**	
	baz=4.3									
V15A	**Kaibab Nationa**	**4.30**	**66**	⇓P			**Pn**	**12 15 14.8**	**+0.4**	
	baz=4.3									
T14A	**Hurricane**	**4.32**	**46**	P			**Pn**	**12 15 15.3**	**+0.6**	
	baz=4.3,SNR=51									
NVAR	**Mina Array Bea**	**4.42**	**346**	Pn			**Pn**	**12 15 17.4**	**+1.3**	
	1.0nm,0.3s,baz=170,slow=15,SNR=23									
NVAR					Pg		**Pg**	**12 15 30.5**	**-2.9**	
	7.6nm,0.3s,baz=163,slow=16,SNR=96									
NVAR					Lg			12 16 30.5		
	4.1nm,0.3s,baz=126,slow=40,SNR=3.5									
U15A	**North Rim**	**4.47**	**58**	⇓P			**Pn**	**12 15 17.4**	**+0.6**	
	baz=4.5,SNR=117									
SAO	**San Andreas Ge**	**4.49**	**307**	*e*Pn			**Pn**	**12 15 16.7**	**-0.4**	
Y16A	**Circle Bar Ran**	**4.58**	**92**	⇑P			**Pn**	**12 15 18.8**	**+0.4**	
	baz=4.6,SNR=761									
W16A	**Flagstaff**	**4.60**	**76**	⇓P			**Pn**	**12 15 19.0**	**+0.4**	
	baz=4.6									
X16A	**Lo Mia Camp, P**	**4.60**	**85**	P			**Pn**	**12 15 18.9**	**+0.3**	
	baz=4.6,SNR=95									
R12A	**Pony Springs,**	**4.61**	**24**	⇓P			**Pn**	**12 15 19.5**	**+0.8**	
	baz=4.6,SNR=25									
116A	**Eloy**	**4.69**	**108**	⇑P			**Pn**	**12 15 18.8**	**-1.0**	
	baz=4.7,SNR=19									
Z16A	**Peralta Trail,**	**4.70**	**98**	P			**Pn**	**12 15 19.3**	**-0.6**	
	baz=4.7,SNR=65									
CMB	**Columbia Colle**	**4.77**	**326**	*e*Pn			**Pn**	**12 15 21.6**	**+0.7**	
WUAZ	**Wupatki**	**4.82**	**72**	*e*Pn			**Pn**	**12 15 22.6**	**+1.0**	
WUAZ				*e*Sg			**Sg**	**12 16 43.2**	**-0.2**	
X17A	**Forest Lakes**	**5.12**	**86**	⇓P			**Pn**	**12 15 26.5**	**+0.7**	
	baz=5.1,SNR=116									
Y17A	**Roosevelt**	**5.12**	**93**	P			**Pn**	**12 15 25.6**	**-0.2**	
	baz=5.1,SNR=235									
117A	**Oracle**	**5.45**	**105**	⇓P			**Pn**	**12 15 29.8**	**-0.6**	
	baz=5.4,SNR=21									
Z17A	**San Carlos Hig**	**5.49**	**97**	⇓P			**Pn**	**12 15 30.5**	**-0.4**	
	baz=5.5									
TUC	**Tucson**	**5.50**	**108**	*e*Pn			**Pn**	**12 15 29.8**	**-1.3**	
	5.6nm,0.3s									
TUC				*e*Sn			**Sn**	**12 16 30.2**	**-4.4**	
U17A	**Shonto**	**5.72**	**63**	⇓P			**Pn**	**12 15 35.4**	**+1.3**	
	baz=5.7,SNR=12									
Y18A	**Canyon Day Jun**	**5.79**	**92**	P			**Pn**	**12 15 35.6**	**+0.7**	
	baz=5.8,SNR=134									
T17A	**Navajo Res., N**	**5.79**	**59**	⇑P			**Pn**	**12 15 36.2**	**+1.2**	
	baz=5.8,SNR=14									
X18A	**Snowflake**	**5.83**	**84**	⇑P			**Pn**	**12 15 36.7**	**+1.2**	
	baz=5.8,SNR=59									
118A	**Homack Ranch,**	**6.05**	**102**	⇑P			**Pn**	**12 15 38.4**	**-0.2**	
	baz=6.0									
218A	**Dragoon**	**6.21**	**108**	⇓P			**Pn**	**12 15 40.5**	**-0.2**	
	baz=6.2,SNR=17									
Y19A	**Nutrioso**	**6.42**	**89**	⇑P			**Pn**	**12 15 44.8**	**+1.1**	
	baz=6.4,SNR=123									
318A	**Bisbee**	**6.47**	**113**	⇓P			**Pn**	**12 15 44.1**	**-0.3**	
	baz=6.5,SNR=23									
Z19A	**T-Link Ranch,**	**6.49**	**95**	⇑P			**Pn**	**12 15 45.1**	**+0.6**	
	baz=6.5									
119A	**Ashpeak Ranch,**	**6.56**	**100**	⇓P			**Pn**	**12 15 45.7**	**+0.1**	
	baz=6.6,SNR=39									
ELK	**Elko**	**6.75**	**11**	Pn			**Pn**	**12 15 49.5**	**+1.4**	
	0.4nm,0.3s,baz=182,slow=9.3,SNR=8.7									
ELK				Pg			**Pg**	**12 16 14.4**	**-3.4**	
	0.3nm,0.3s,baz=183,slow=19,SNR=5.0									
ELK				Lg				12 17 38.8		
	1.1nm,0.3s,baz=278,slow=17,SNR=9.9									
ELK	**Elko**	**6.75**	**11**	*e*Pn			**Pn**	**12 15 49.5**	**+1.4**	
	3.9nm,0.8s									
ELK				*e*Sg			**Sg**	**12 17 40.3**	**-4.9**	
219A	**White Tail Can**	**6.83**	**106**	⇑P			**Pn**	**12 15 49.1**	**-0.1**	
	baz=6.8,SNR=14									
DUG	**Dugway**	**6.91**	**28**	Pn			**Pn**	**12 15 53.6**	**+3.3**	
	12nm,0.8s									
DUG				*e*Sg			**Sg**	**12 17 46.7**	**-3.7**	
319A	**Douglas**	**7.05**	**111**	⇑P			**Pn**	**12 15 52.2**	**0.0**	
	baz=7.0,SNR=15									
MVCO	**Mesa Verde**	**7.56**	**64**	Pn			**Pn**	**12 16 00.6**	**+1.3**	
	21nm,0.8s									
MVCO				*e*Sg			**Sg**	**12 18 09.0**	**-2.3**	
ANMO	**Albuquerque**	**8.72**	**82**	Pn			**Pn**	**12 16 16.8**	**+1.5**	
	0.1nm,0.3s,baz=284,slow=9.2,SNR=4.9									
ANMO				Lg				12 18 45.5		
	0.1nm,0.3s,baz=3.8,slow=19,SNR=5.5									
ANMO	**Albuquerque**	**8.72**	**82**	Pn			**Pn**	**12 16 16.8**	**+1.5**	
ANMO				Lg				12 18 45.5		
PDAR	**Pinedale Array**	**10.40**	**32**	Pn			**Pn**	**12 16 41.4**	**+3.2**	
	0.1nm,0.3s,baz=190,slow=7.4,SNR=5.4									
PDAR				Lg				12 19 33.3		
	0.0nm,0.3s,baz=216,slow=29,SNR=3.2									
TXAR	**Lajitas Array**	**12.30**	**109**	Pn			**Pn**	**12 17 06.7**	**+2.4**	
	0.7nm,0.3s,baz=290,slow=12,SNR=60									
TXAR				Lg				12 20 33.6		
	baz=280,slow=26,SNR=2.7									
ULM	**Lac du Bonnet**	**22.33**	**37**	P			**P**	**12 19 05.9**	**-0.9**	
	4.6nm,0.9s,mb3.9,baz=238,slow=11,SNR=4.7									
YKA	**Yellowknife Ar**	**28.42**	**2**	P			**P**	**12 20 03.9**	**+0.3**	
	0.5nm,0.7s,mb3.3,baz=180,slow=8.5,SNR=14									
YKA	**Yellowknife Ar**	**28.42**	**2**	P			**P**	**12 20 03.9**	**+0.3**	
MDJ	**Mudanjiang**	**81.06**	**318**	P			**P**	**12 26 21.9**	**-2.5**	
MDJ				AMB		AMB				
	comp=Z,10.0nm,1.7s,mb4.5									
BJI	**Beijing**	**91.37**	**322**	P			**P**	**12 27 13.6**	**-1.8**	
HHC	**Hu-ho-hao-te**	**93.02**	**325**	*e*P			**P**	**12 27 21.4**	**-1.6**	
WMQ	**Urumqi**	**99.22**	**342**	*e*P			**P**	**12 27 53.5**	**+2.4**	
GTA	**Gaotai**	**99.29**	**332**	*e*P			**P**	**12 27 52.0**	**+0.5**	
GTA				AP		pP		12 27 56.9	+3.1	
GTA				XP		sP		12 28 00.6	+6.0	
XAN	**Xi'an**	**99.68**	**323**	P		Pdif		12 27 51.3	-1.8	
XAN				S		S		12 39 23.4	-3.9	

ISCJB ***19*** *12:22:20.7±3.6, 513N±05ₓ 1794W±02, h70km±27km, mb3.6/7, Error ellipse: s-maj=83.0km s-min=19.1km az=9.1*

IDC ***19*** *12:22:23.3±4.3, 5137Nₓ 17938W, h74km±31km, mb3.4/7, mb1 3.6/8, mb1mx3.4/25, mbtmp3.4/8, Error ellipse: s-maj=80.1km s-min=18.2km az=7.0*

ISC 19 12:22:22.7±3.4, 513N±05ₓ1794W±02, h70km±24km, n8, σ0§62/9, mb3.6/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**4.88**	**292**	P	**Pn**	**12 23 32.8**	**-0.7**
	4.9nm,0.3s,baz=81,slow=5.2,SNR=17						
FX1				S	**Sn**	**12 24 29.2**	**+0.7**
	1.3nm,0.3s,baz=56,slow=11,SNR=1.7						
YKA	**Yellowknife Ar**	**35.54**	**46**	P	**P**	**12 29 12.0**	**-0.5**
	0.3nm,0.6s,mb3.4,baz=282,slow=7.7,SNR=8.0						
SONM	**Songino Array**	**46.37**	**296**	P	**P**	**12 30 40.8**	**-0.7**
	0.4nm,0.7s,mb3.3,baz=59,slow=11,SNR=3.8						
PDAR	**Pinedale Array**	**46.66**	**72**	P	**P**	**12 30 44.2**	**+0.3**
	1.1nm,0.6s,mb3.7,baz=313,slow=3.2,SNR=11						
KURK	**Kurchatov**	**58.82**	**313**	P	**P**	**12 32 14.3**	**+0.9**
	0.5nm,0.4s,mb3.9,baz=43,slow=6.7,SNR=3.6						
TXAR	**Lajitas Array**	**59.01**	**81**	P	**P**	**12 32 15.8**	**+0.8**
	0.1nm,0.7s,mb3.0,baz=298,slow=7.8,SNR=2.6						
MKAR	**Makanchi Array**	**59.81**	**308**	P	**P**	**12 32 19.8**	**-0.5**
	0.4nm,0.4s,mb3.8,baz=49,slow=7.1,SNR=6.1						
AKASG	**Malin Array Be**	**75.52**	**342**	P	**P**	**12 33 58.8**	**-0.2**
	1.1nm,0.5s,mb3.8,baz=16,slow=5.5,SNR=3.9						

NEIC ***19*** *12:30:47.1±0.1, 51.12N×179.35W, mb5.4/146, MS5.4/188, ML5.1(AEIC), Error ellipse: s-maj=4.5km s-min=2.0km az=4.0*

BJI ***19*** *12:30:47.8, 5125N×179.70W, h22km, mB5.7, mb5.4, Ms5.3, Msz5.1*

ISCJB ***19*** *12:30:48.7±0.1, 5109N±003×17930W±002, h33km, mb5.4/280, MS5.3/203, Error ellipse: s-maj=5.0km s-min=1.7km az=6.6*

IDC ***19*** *12:30:49.6±2.2, 5113N×179.25W, h30km±15km, mb4.8/35, mb1 4.9/36, mb1mx4.9/37, mbtmp4.8/36, ML5.0/1, MS4.3/1, Ms1 4.3/1, ms1mx3.5/45, Error ellipse: s-maj=15.1km s-min=8.9km az=166.0*

MOS ***19*** *12:30:50.4±0.8, 51.13N×179.25W, h49km, mb5.6/108, MS5.3/37, Error ellipse: s-maj=6.8km s-min=3.9km az=96.8*

SZGRF ***19*** *12:30:55.1, 5171N×179.49E, h33km, mb5.5, Rat Islands, Aleutian Islands, United States*

DJA ***19*** *12:32:06, 5143N×175.44E, h650km, mb5.0/10*

ISC 19 12:30:52.0±0.1, 5115N±003×17930W±002, h46km, h46km±1.9km: pP-P, n1103, σ0§66/999, mb5.4/280, MS5.3/203, 314C-171D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.79**	**65**	P	**Pn**	**12 31 19.6**	**-0.7**
ADK				S	**Sn**	**12 31 42.4**	**+0.6**
ATKA	**Atka Island**	**3.34**	**70**	P	**Pn**	**12 31 40.7**	**-0.9**
ATKA				S	**Sn**	**12 32 22.3**	**+2.2**
SMY	**Shemya**	**4.38**	**294**	*e*P	**Pn**	**12 31 57.5**	**+1.6**
SMY	**Shemya**	**4.38**	**294**	P	**Pn**	**12 31 58.1**	**+2.2**
FX1	**Attu Island--F**	**4.97**	**293**	Pn	**Pn**	**12 32 04.5**	**+0.6**
	76nm,0.3s,baz=164,slow=5.6,SNR=49						
FX1				Sn	**Sn**	**12 33 02.7**	**+2.6**
	42nm,0.3s,baz=68,slow=19,SNR=3.6						
FX1				LR	LR	12 33 25.1	
	comp=Z,3μm,19.1s,baz=316,slow=31						
FX1	**Attu Island--F**	**4.97**	**293**	P	**Pn**	**12 32 04.5**	**+0.6**
FX1						12 33 02.7	
FX1				pmax	pmax		
	comp=Z,76nm,0.3s						
FX1				smax			
	comp=N,42nm,0.3s						
FX1				MLR	MLR		
	comp=Z,3μm,19.1s						
FX1	**Attu Island--F**	**4.97**	**293**	P	**Pn**	**12 32 05.9**	**+1.9**
NIKO	**Nikolski**	**6.69**	**70**	P	**Pn**	**12 32 27.6**	**0.0**
OKCE	**Okmok Cone E**	**7.20**	**67**	P	**Pn**	**12 32 36.1**	**+1.6**
OKCD	**Okmok Cone D**	**7.23**	**67**	P	**Pn**	**12 32 37.0**	**+2.1**
SPIA	**Saint Paul Isl**	**8.04**	**38**	P	**Pn**	**12 32 49.1**	**+3.2**
UNV	**Unalaska Valle**	**8.26**	**66**	P	**Pn**	**12 32 49.5**	**+0.5**
AKUT	**Akutan**	**8.75**	**65**	*e*Pn	**Pn**	**12 32 55.7**	**-0.1**

FALS	**False Pass**	**10.26**	**63**	*e*Pn			**Pn**	**12 33 16.7**	**+0.3**	
SDPT	**Sand Point**	**12.02**	**62**	*e*Pn			**Pn**	**12 33 38.4**	**-2.0**	
SDPT				*e*Sn			**Sn**	**12 35 52.2**	**-0.7**	
CHGN	**Chignik**	**13.37**	**59**	*e*Pn			**Pn**	**12 33 57.0**	**-1.8**	
PET	**Petropavlovsk**	**13.68**	**286**	*e*P			**Pn**	**12 34 06.4**	**+3.3**	
PET				*e*S			**Sn**	**12 36 38.3**	**+4.9**	
PET					pmax	pmax				
	comp=Z,58nm,1.1s									
PET					MLR	MLR				
	comp=Z,2μm,19.0s									
PET	**Petropavlovsk**	**13.68**	**286**	*e*Pn			**Pn**	**12 34 11.0**	**+8.0**	
PEA0B	**Petropavlovsk-**	**14.25**	**287**	*e*Pn			**Pn**	**12 34 13.4**	**+2.5**	
PETK	**Petropavlovsk-**	**14.25**	**287**	Pn			**Pn**	**12 34 12.1**	**+1.2**	
	comp=Z,1.4nm,0.3s,baz=101,slow=17,SNR=21									
SKR	**Severo-Kuril's**	**15.50**	**278**	*e*P			**Pn**	**12 34 31.0**	**+3.8**	
SKR				*e*S			**Sn**	**12 37 10.7**	**-6.9**	
SKR					pmax	pmax				
	comp=Z,90nm,0.5s									
SKR					pmax	pmax				
	comp=N,130nm,1.0s									
SKR					pmax	pmax				
	comp=E,60nm,0.5s									
SKR					smax					
	comp=N,60nm,0.5s									
SKR					smax					
	comp=E,80nm,0.5s									
OHAK	**Old Harbor**	**16.33**	**58**	*e*Pn			**Pn**	**12 34 35.8**	**-2.0**	
OHAK				*e*Sn			**Sn**	**12 37 37.2**	**-0.4**	
KDAK	**Kodiak Island**	**16.81**	**56**	Pn			**Pn**	**12 34 39.0**	**-4.8**	
	comp=E,597nm,0.4s,SNR=13									
KDAK	**Kodiak Island**	**16.81**	**56**	Pn			**Pn**	**12 34 39.5**	**-4.3**	
	comp=E,5.1nm,0.3s,baz=248,slow=5.8,SNR=22									
KDAK	**Kodiak Island**	**16.81**	**56**	*e*P			**Pn**	**12 34 39.7**	**-4.1**	
KDAK					pmax	pmax				
	comp=Z,219nm,1.6s									
KDAK	**Kodiak Island**	**16.81**	**56**	*e*Pn			**Pn**	**12 34 39.7**	**-4.0**	
	comp=Z,219nm,1.6s									
BILL	**Bilibino**	**18.36**	**343**	*c i*P			**Pn**	**12 35 04.1**	**+1.4**	
BILL					pmax	pmax				
	comp=Z,132nm,1.0s									
SEY	**Seymchan**	**19.21**	**319**	⇓*e*P			**Pn**	**12 35 14.9**	**+1.9**	
PMR	**Palmer**	**19.51**	**46**	*e*P			**Pn**	**12 35 14.2**	**-2.4**	
PMR				*e*S			**S**	**12 38 54.1**	**+1.4**	
PMR					pmax	pmax				
	comp=Z,85nm,1.4s									
PMR	**Palmer**	**19.51**	**46**	*e*P			**Pn**	**12 35 14.2**	**-2.4**	
	comp=Z,85nm,1.4s									
PMR				*e*S			**S**	**12 38 54.1**	**+1.4**	
COLA	**College**	**21.28**	**38**	*e*P			**P**	**12 35 33.3**	**-0.9**	
COLA					pmax	pmax				
	comp=Z,58nm,0.8s,mb5.0									
COLA					MLR	MLR				
	comp=Z,6μm,22.0s,MS4.9									
COLA	**College**	**21.28**	**38**	*e*P			**P**	**12 35 33.3**	**-0.8**	
	comp=Z,58nm,0.8s,mb5.0									
COLA					LR	LR				
	comp=Z,6μm,22.0s,MS4.9									
MENT	**Mentasta**	**22.33**	**44**	*e*P			**P**	**12 35 44.6**	**-0.7**	
MIDW	**Midway**	**22.95**	**176**	PFAKE				12 36 00.0	+7.8	
MIDW					LR	LR				
	comp=Z,5μm,19.0s,MS5.0									
EGAK	**Eagle**	**23.93**	**41**	P			**P**	**12 36 00.1**	**-1.2**	
	comp=Z,185nm,1.0s,mb5.5									
EGAK				*e*Sn				12 40 47.0		
EGAK					LR	LR				
	comp=Z,6μm,22.0s,MS5.0									
DAWY	**Dawson**	**24.49**	**43**	*e*P			**P**	**12 36 05.2**	**-1.1**	
HYT	**Haines Junctio**	**24.88**	**51**	*e*P			**P**	**12 36 08.9**	**-1.0**	
YSS	**Yuzh-Sakhalins**	**25.03**	**275**	⇑*e*P			**P**	**12 36 11.9**	**+0.4**	
YSS

comp=N,1µm,17.0s,MS4.9
MJAR Matsushiro Arr 33.44 261 P P 12 37 26.1 -0.2
comp=N,7.2nm,0.9s,mb4.6,baz=52,slow=7.3,SNR=17
MJAR PcP PcP 12 40 06.3 -0.2
comp=N,4.0nm,1.0s,baz=68,slow=1.5,SNR=5.2
MJAR ScP ScP 12 43 48.1 +1.1
comp=N,5.0nm,1.1s,baz=32,slow=1.3,SNR=8.0
MJAR Matsushiro Arr 33.44 261 P P 12 37 26.1 -0.2
MJAR 12 40 06.4
MJAR pmax pmax
comp=Z,7.0nm,0.9s
MJAR pmax pmax
comp=Z,4.0nm,1.0s
MJAR pmax pmax
comp=N,5.0nm,1.1s
MAJO Matsushiro 33.44 261 *eP* **P 12 37 25.8 -0.5**
comp=N,34nm,1.1s,mb5.2
MAJO LR LR
comp=Z,3µm,19.0s,MS5.0
MAT Matsushiro 33.44 261 P P 12 37 25.8 -0.5
KIP Kipapa 34.02 143 PFAKE 12 37 40.0 +8.6
KIP LR LR
comp=Z,4µm,19.0s,MS5.2
MDJ Mudanjiang 34.30 279 P P 12 37 32.4 -1.3
MDJ AP pP 12 37 43.6 -2.2
MDJ PP PP 12 38 50.5 -1.3
MDJ S S **12 42 54.8 -2.7**
MDJ AMB AMB
comp=Z,30nm,1.2s,mb5.1
MDJ AMB AMB
comp=Z,4µm,14.3s
MDJ LR LR
comp=N,2µm,16.9s,MS5.0
MDJ LR LR
comp=E,2µm,21.4s,MS5.0
MDJ LR LR
comp=Z,4µm,21.6s,MS5.1
MDJ Mudanjiang 34.30 279 *eP* **P 12 37 32.7 -1.0**
comp=Z,26nm,0.9s,mb5.2
MDJ *ep*P pP 12 37 36.3 -10
MDJ LR LR
comp=Z,4µm,20.0s,MS5.1
B04A Port Angeles 35.55 73 ⇓P **P 12 37 45.7 +1.3**
baz=35
YKA Yellowknife Ar 35.62 46 P P 12 37 43.5 -1.2
comp=Z,30nn,1.0s,mb5.2,baz=282,slow=8.3,SNR=209
YKA PcP PcP 12 40 12.6 +0.3
comp=Z,2.6nm,0.8s,baz=287,slow=2.5,SNR=5.0
YKA ScP ScP 12 43 56.1 +1.8
comp=Z,1.7nm,0.8s,baz=291,slow=3.0,SNR=8.8
YKA Yellowknife Ar 35.62 46 P P 12 37 43.5 -1.3
YKA 12 40 12.6
YKA pmax pmax
comp=Z,31nm,1.0s
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA pmax pmax
comp=N,2.0nm,0.8s
YKA Yellowknife Ar 35.62 46 P P 12 37 43.5 -1.2
YKA PcP PcP 12 40 12.7 +0.3
YKA ScP ScP 12 43 56.1 +1.8
NLWA Neilton Lookou 35.63 74 PFAKE 12 38 00.0 +15
NLWA LR LR
comp=Z,4µm,19.0s,MS5.2
VDB Vedder Mountai 35.97 70 P P 12 37 48.2 +0.3
A05A Maple Falls 35.99 70 ⇓P **P 12 37 48.2 +0.1**
baz=36,SNR=5.7
C04A Brinnon 36.03 73 ⇑P **P 12 37 48.7 +0.3**
baz=36
A06A Chilliwack 36.30 70 ⇑P **P 12 37 50.9 +0.1**
baz=36,SNR=5.0
B05A Bryant 36.31 72 ⇑P **P 12 37 51.3 +0.5**
baz=36,SNR=11
JCW Jim Creek 36.44 72 *eP* **P 12 37 53.0 +1.0**
POHA Pohakuloa 36.49 140 PFAKE 12 38 00.0 +7.3
POHA LR LR
comp=Z,7µm,20.0s,MS5.4
B06A Marblemount 36.56 71 ⇓P **P 12 37 52.8 -0.2**
baz=36
RPW Rockport 36.57 71 *eP* **P 12 37 54.1 +1.0**
E04A Onalaska 36.70 74 ⇓P **P 12 37 54.6 +0.4**
baz=36
C05A Tolt Reservoir 36.81 72 ⇓P **P 12 37 55.6 +0.5**
baz=37,SNR=11
D05A Enumclaw 36.86 73 ⇑P **P 12 37 56.7 +1.1**
baz=37,SNR=13
A07A Ashnola River, 36.97 70 ⇓P **P 12 37 56.6 +0.1**
baz=37,SNR=22
LON Longmire 37.18 74 *eP* **P 12 37 59.7 +1.4**
LON pmax pmax
comp=Z,41nm,1.1s,mb5.2
LON Longmire 37.18 74 *eP* **P 12 37 59.7 +1.4**
comp=Z,41nm,1.1s,mb5.2
F04A Amboy 37.20 75 ⇓P **P 12 37 58.9 +0.4**
baz=37
CN2 Changchun 37.28 281 ⇑P **P 12 37 58.5 -0.7**
CN2 *eS* **S 12 43 41.8 -1.4**
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.1
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,7µm,15.0s,MS5.9
CN2 LR LR
comp=E,12µm,15.0s,MS5.9
CN2 LR LR
comp=Z,9µm,17.0s,MS5.6
COR Corvallis 37.34 78 PFAKE 12 38 10.0 +10
COR LR LR
comp=Z,5µm,20.0s,MS5.3
B07A Winthrop 37.39 70 ⇑P **P 12 38 00.3 +0.2**
baz=37,SNR=16
NLW Nelson Butte 37.44 71 P P 12 38 01.2 +0.8
ETW Entiat 37.66 72 *eP* **P 12 38 03.2 +0.9**
I03A Eugene 37.67 78 ⇑P **P 12 38 02.1 -0.3**
baz=38
A08A Turner Farm, O 37.67 69 ⇓P **P 12 38 02.3 -0.1**
baz=38,SNR=25
TBM Table Mountain 37.71 72 P P 12 38 03.4 +0.6
E06A Yakima 37.78 73 ⇑P **P 12 38 04.1 +0.7**
baz=38,SNR=12
C07A Waterville 37.78 71 ⇓P **P 12 38 03.5 +0.1**
baz=38,SNR=13
F05A White Salmon 37.81 75 ⇑P **P 12 38 04.0 +0.4**
baz=38
WTV Waterville 37.84 71 P P 12 38 04.0 +0.1
BOD Bodaibo 37.87 307 *eP* **P 12 38 03.2 -0.7**
BOD pmax pmax
comp=Z,160nm,1.0s,mb5.7
B08A Colville Reser 37.91 70 ⇑P **P 12 38 04.5 0.0**
baz=38,SNR=31
H04A Detroit Lake 37.97 77 ⇓P **P 12 38 05.8 +0.8**
baz=38,SNR=9.1
A09A Danville 38.07 69 ⇓P **P 12 38 06.5 +0.8**
baz=38,SNR=21
D07A Quincy 38.07 72 ⇑P **P 12 38 06.0 +0.2**
baz=38,SNR=16
HIA Hailar 38.08 292 ⇑ *iP* **P 12 38 05.4 -0.5**
HIA LR LR
comp=Z,4µm,19.0s,MS5.3
G05A Wamic 38.22 76 ⇑P **P 12 38 07.3 +0.3**
baz=38
F06A Goldendale 38.28 74 ⇓P **P 12 38 08.3 +0.7**
baz=38,SNR=8.2
C08A Higginbotham F 38.35 71 ⇓P **P 12 38 08.2 0.0**
baz=38
E07A Sunnyside 38.45 73 ⇑P **P 12 38 09.5 +0.4**
baz=38,SNR=9.9
B09A Rice 38.58 69 ⇑P **P 12 38 10.1 0.0**
baz=38,SNR=15
H05A Madras 38.58 76 ⇑P **P 12 38 10.7 +0.6**
baz=38
HUMO Hull Mountain 38.59 80 PFAKE 12 38 20.0 +10
HUMO LR LR
comp=Z,5µm,22.0s,MS5.2
G06A Carlson Farm, 38.64 75 ⇓P **P 12 38 11.1 +0.5**
baz=38
A10A Northport 38.66 68 ⇑P **P 12 38 10.9 +0.1**
baz=38,SNR=17
RSW Rattlesnake Hi 38.69 73 *eP* **P 12 38 11.5 +0.4**
HAWA Hanford 38.73 73 *eP* **P 12 38 11.8 +0.5**
comp=Z,55nm,0.9s,mb5.3
HAWA LR LR
comp=Z,5µm,20.0s,MS5.3
OD2 Odessa Site #2 38.73 71 *eP* **P 12 38 11.1 -0.2**
F07A Phinny Hill Vi 38.73 74 ⇓P **P 12 38 11.7 +0.3**
baz=38,SNR=11
D08A Wollman Farm, 38.77 72 ⇑P **P 12 38 11.5 -0.2**
baz=39,SNR=15
C09A Chrisman Ranch 38.80 70 ⇓P **P 12 38 11.5 -0.3**
baz=39,SNR=12
E08A Dider Farm, El 38.96 73 ⇑P **P 12 38 13.5 +0.2**
baz=39
H06A Lindquist Farm 39.08 76 ⇓P **P 12 38 14.3 0.0**
baz=39
D09A Jones Farm, Ri 39.13 71 ⇑P **P 12 38 14.6 -0.1**
baz=39,SNR=8.2
B10A Chitwood Farm, 39.18 69 ⇓P **P 12 38 15.2 +0.1**
baz=39,SNR=6.0
EDM Edmonton 39.20 60 *eP* **P 12 38 14.5 -0.7**
G07A Ruggs Ranch, H 39.21 75 ⇓P **P 12 38 15.8 +0.5**
baz=39,SNR=6.2
YBH Yreka Blue Hor 39.22 81 P P 12 38 16.5 +1.0
comp=Z,7.6nm,0.9s,mb4.4,baz=270,slow=3.1,SNR=9.0
YBH Yreka Blue Hor 39.22 81 P P 12 38 16.5 +1.0
YBH LR LR
comp=Z,4µm,20.0s,MS5.3
NEW Newport 39.26 69 *eP* **P 12 38 15.6 -0.1**
comp=Z,21nm,0.7s,mb5.0
NEW LR LR
comp=Z,4µm,20.0s,MS5.2
KSRS Korea Array 39.33 271 P P 12 38 17.1 +0.6
comp=Z,29nm,0.9s,mb5.0,baz=58,slow=8.2,SNR=78
KSRS PcP PcP 12 40 24.9 +0.6
comp=Z,1.9nm,0.8s,baz=27,slow=2.9,SNR=4.1
KSRS Korea Array 39.33 271 P P 12 38 17.1 +0.6
KSRS 12 40 24.9
KSRS pmax pmax
comp=Z,29nm,0.9s,mb5.0
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
C10A Spilker Farm, 39.36 70 ⇓P **P 12 38 16.1 -0.5**
baz=39,SNR=9.1
A11A Hall Mountain, 39.37 68 ⇑P **P 12 38 16.9 +0.2**
baz=39,SNR=44
F08A Pendleton 39.48 73 ⇑P **P 12 38 17.7 +0.1**
baz=39,SNR=9.0
E09A Wood Farm, Sta 39.50 72 ⇓P **P 12 38 17.7 -0.1**
baz=39,SNR=19
I06A Prineville 39.57 77 ⇑P **P 12 38 18.5 +0.1**
baz=39
B11A Sandpoint 39.62 68 ⇑P **P 12 38 18.5 -0.3**
baz=39,SNR=12
G08A Pilot Rock 39.63 74 ⇑P **P 12 38 18.8 0.0**
baz=39,SNR=13
LNOR Lincton Mounta 39.74 73 *eP* **P 12 38 20.3 +0.5**
D10A Wagner Farm, O 39.75 71 ⇓P **P 12 38 19.1 -0.7**
baz=40,SNR=13
I07A Izee 39.93 76 ⇑P **P 12 38 21.8 +0.5**
baz=40,SNR=11
J06A Christmas Vall 39.97 78 ⇑P **P 12 38 22.4 +0.6**
baz=40,SNR=14
WDC Whiskeytown Da 39.98 83 *eP* **P 12 38 23.1 +1.3**
comp=Z,23nm,1.1s,mb4.8
WDC LR LR
comp=Z,5µm,21.0s,MS5.4
F09A S2 Ranch, Elgi 40.05 73 ⇓P **P 12 38 22.5 +0.2**
baz=40,SNR=23
B12A Libby 40.06 68 ⇑P **P 12 38 22.3 0.0**
baz=40
RES Resolute Bay 40.08 24 P P 12 38 21.6 -0.7
comp=Z,8.2nm,0.9s,mb4.4,baz=256,slow=9.9,SNR=17
RES PcP PcP 12 40 25.2 -0.8
comp=Z,13nm,0.8s,baz=259,slow=3.3,SNR=9.3
RES Resolute Bay 40.08 24 P P 12 38 21.6 -0.7
RES 12 40 25.2
RES pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
RES pmax pmax
comp=Z,13nn,0.8s,mb4.7
H08A Prairie City 40.20 75 ⇓P **P 12 38 23.7 +0.1**
baz=40,SNR=9.9
D11A Klaveano Farm, 40.31 70 ⇑P **P 12 38 23.9 -0.6**
baz=40,SNR=15
F10A Beach Ranch, E 40.32 72 ⇑P **P 12 38 24.4 -0.2**
baz=40,SNR=11
G09A Cove 40.35 73 ⇓P **P 12 38 24.8 -0.1**
baz=40,SNR=23
CIT Chita 40.38 298 *eP* **P 12 38 25.6 +0.6**
CIT *e* pP 12 38 39.8 +2.5
CIT *e* 12 40 05.0
CIT pmax pmax
comp=Z,286nm,1.1s,mb5.9
J07A Hines 40.42 77 ⇑P **P 12 38 25.7 +0.3**
baz=40,SNR=11
C12B Naegeli Ranch, 40.49 69 ⇓P **P 12 38 25.8 -0.1**
baz=40,SNR=20
HOPS Hopland 40.57 85 PFAKE 12 38 40.0 +13
HOPS LR LR
comp=Z,5µm,21.0s,MS5.4
I08A Drewsey 40.59 76 ⇓P **P 12 38 27.1 +0.2**
baz=40,SNR=14
MOD Modoc 40.62 79 *eP* **P 12 38 28.5 +1.4**
comp=Z,12nm,0.7s,mb4.6
MOD LR LR
comp=Z,5µm,20.0s,MS5.4
E11A Bogner Ranch, 40.74 71 ⇑P **P 12 38 27.2 -0.9**
baz=40,SNR=8.3
G10A Bishop Farm, J 40.74 73 ⇓P **P 12 38 27.7 -0.3**
baz=40,SNR=49
H09A Durkee 40.74 74 ⇓P **P 12 38 28.4 +0.3**
baz=40,SNR=9.2
WALA Waterton Lakes 40.75 66 *eP* **P 12 38 28.0 -0.1**
comp=Z,2.6nm,1.1s
B13A Whitefish 40.76 68 ⇓P **P 12 38 27.6 -0.5**
baz=40,SNR=14
BSMT Bassoo Peak 40.83 68 *eP* **P 12 38 28.5 -0.2**
K07A Rock Creek Ran 40.84 78 ⇑P **P 12 38 29.8 +0.9**
baz=41,SNR=17
BMO Blue Mountains 40.86 74 *eP* **P 12 38 29.5 +0.5**
BMO LR LR
comp=Z,5µm,22.0s,MS5.3
J08A Circle Bar Ran 40.95 76 ⇑P **P 12 38 30.0 +0.2**
baz=41,SNR=12
F11A Grangeville 41.01 72 ⇑P **P 12 38 29.9 -0.4**
baz=41,SNR=15
C13A Hot Springs 41.04 69 ⇑P **P 12 38 30.2 -0.3**
baz=41,SNR=26
I09A Lost Marbles R 41.06 75 ⇑P **P 12 38 30.8 +0.1**
baz=41,SNR=7.7
A14A Double T Ranch 41.07 66 ⇓P **P 12 38 30.3 -0.4**
baz=41,SNR=71
JTMT Jette 41.17 68 *eP* **P 12 38 31.9 +0.3**
G11A Walters Elk Ra 41.20 72 ⇑P **P 12 38 31.5 -0.3**
baz=41,SNR=25
MCCM Marconi Confer 41.20 86 PFAKE 12 38 40.0 +8.1
MCCM LR LR
comp=Z,5µm,22.0s,MS5.4
YBMT Yellow Bay 41.27 68 *eP* **P 12 38 32.7 +0.3**
K08A Mann Creek Ran 41.28 77 ⇓P **P 12 38 32.9 +0.4**
baz=41,SNR=13
H10A Noah's Angus R 41.33 74 ⇓P **P 12 38 32.6 -0.3**
baz=41,SNR=42
WVOR Wild Horse Val 41.35 78 *eP* **P 12 38 33.8 +0.7**
WVOR pmax pmax
comp=Z,22nn,0.8s,mb4.8
WVOR MLR MLR
comp=Z,4µm,20.0s,MS5.2
WVOR Wild Horse Val 41.35 78 *eP* **P 12 38 33.8 +0.7**
comp=Z,22nn,0.8s,mb4.8
WVOR LR LR
comp=Z,4µm,20.0s,MS5.2
J09A Fry Pan Ranch, 41.39 76 ⇑P **P 12 38 33.5 +0.1**
baz=41,SNR=20
B14A Marquette Ranc 41.46 67 ⇑P **P 12 38 33.3 -0.6**
baz=41,SNR=41
SWMT Swartz Lake 41.46 68 *eP* **P 12 38 34.0 +0.1**
A15A Johnson Ranch, 41.47 66 ⇓P **P 12 38 33.1 -0.8**
baz=41,SNR=42
N06A Buffalo Meadow 41.57 80 ⇑P **P 12 38 35.1 +0.2**
baz=41
I10A Payette 41.57 74 ⇑P **P 12 38 35.0 +0.1**
baz=41,SNR=12
M07A Soldier Meadow 41.61 79 ⇓P **P 12 38 35.9 +0.7**
baz=41,SNR=29
L08A Fields 41.67 78 ⇓P **P 12 38 36.4 +0.6**
baz=42,SNR=13
H11A Donnelly 41.72 73 ⇑P **P 12 38 35.7 -0.3**
baz=42,SNR=14
BEKR Beckwourth 41.75 82 ⇓P **P 12 38 36.5 +0.1**
baz=42
MSO Missoula 41.84 69 *eP* **P 12 38 36.7 -0.4**
comp=Z,32nn,1.0s,mb4.9
MSO LR LR
comp=Z,3µm,22.0s,MS5.1
SLMT Seeley Lake 41.89 69 *eP* **P 12 38 37.1 -0.4**
B15A Bradely Ranch, 41.89 67 ⇑P **P 12 38 36.9 -0.6**
baz=42,SNR=59
E13A Victor 41.89 70 ⇓P **P 12 38 36.9 -0.6**
baz=42,SNR=19
J10A Berg Farm, Mel 41.95 75 ⇑P **P 12 38 37.7 -0.3**
baz=42
D14A Greenough 41.97 69 ⇓P **P 12 38 37.4 -0.7**
baz=42,SNR=44
M08A Happy Creek Ra 42.07 79 ⇓P **P 12 38 39.6 +0.7**
baz=42,SNR=9.3
N07B Gerlach 42.08 80 ⇑P **P 12 38 38.9 -0.2**
baz=42
A16A West Butte Ran 42.13 65 ⇓P **P 12 38 38.4 -1.0**
baz=42,SNR=49
C15A Salmond Ranch, 42.14 67 ⇓P **P 12 38 39.5 +0.1**
baz=42,SNR=89
F13A Darby 42.15 71 ⇑P **P 12 38 39.1 -0.5**
baz=42,SNR=20
L09A Wilkinson Ranc 42.18 78 ⇑P **P 12 38 40.2 +0.2**
baz=42,SNR=11
CHMT Chamberlain Mo 42.20 69 *eP* **P 12 38 39.4 -0.6**
K10A MacKenzie Ranc 42.25 76 ⇑P **P 12 38 40.8 +0.3**
baz=42,SNR=17
E14A Clinton 42.32 70 ⇑P **P 12 38 40.7 -0.3**
baz=42,SNR=16
B16A M & M Farms, S 42.34 66 ⇓P **P 12 38 39.9 -1.2**
baz=42,SNR=37
PAHR Pah Rah Range 42.45 81 *eP* **P 12 38 42.3 +0.1**
WCN Washoe City 42.46 82 ⇑P **P 12 38 42.1 -0.1**
baz=42
H12A Diamond D Ranc 42.50 73 ⇓P **P 12 38 42.3 -0.1**
baz=42,SNR=17
O07A Toulon 42.50 81 ⇑P **P 12 38 43.2 +0.7**
baz=42,SNR=7.0
MFID Camas Ranch 42.53 75 ⇑P **P 12 38 42.5 -0.2**
baz=42,SNR=14
D15A Lincoln 42.56 68 ⇓P **P 12 38 42.3 -0.7**
baz=42,SNR=23
G13A Cobalt 42.58 72 ⇑P **P 12 38 42.5 -0.6**
baz=42,SNR=53
N08A GE Springer Mi 42.60 79 ⇑P **P 12 38 43.8 +0.4**
baz=42,SNR=6.3
C16A Fuhringer Ranc 42.62 67 ⇓P **P 12 38 42.7 -0.7**
baz=42,SNR=73
A17A Triple J Farms 42.65 65 ⇑P **P 12 38 42.4 -1.2**
baz=42,SNR=77
M09A Marrel Ranch, 42.66 78 ⇓P **P 12 38 44.2 +0.4**
baz=42,SNR=6.8
F14A Wisdom 42.71 70 ⇑P **P 12 38 43.9 -0.3**
baz=42,SNR=12
K11A Parker Ranch, 42.76 76 ⇑P **P 12 38 44.4 -0.2**
baz=43,SNR=17
E15A Deer Lodge 42.81 69 ⇑P **P 12 38 44.3 -0.7**
baz=43,SNR=22
CMB Columbia Colle 42.83 84 *eP* **P 12 38 50.7 +5.5**
CMB LR LR
comp=Z,6µm,20.0s,MS5.5
H13A Challis 42.85 72 ⇓P **P 12 38 44.9 -0.4**
baz=43,SNR=14
O08A Rochester Mine 42.88 80 ⇓P **P 12 38 44.7 -0.8**
baz=43
L10A Juniper Basin 42.88 77 ⇓P **P 12 38 46.0 +0.4**
baz=43,SNR=17
ALE Alert 42.90 10 P P 12 38 45.0 -0.3
comp=Z,164nm,1.1s,mb5.7,SNR=15
N09A Rock Creek Ran 42.94 79 ⇑P **P 12 38 46.5 +0.4**
baz=43,SNR=5.8
SAO San Andreas Ge 42.94 86 PFAKE 12 39 00.0 +14
SAO LR LR
comp=Z,5µm,21.0s,MS5.3
J12A Stokes Ranch, 43.06 74 ⇑P **P 12 38 46.7 -0.3**
baz=43,SNR=28
R06C Coleville 43.12 83 ⇓P **P 12 38 47.8 +0.3**
baz=43,SNR=13
D16A Dana Ranch, Ca 43.14 68 ⇓P **P 12 38 47.0 -0.6**
baz=43,SNR=10
WAKR Walker 43.14 83 *eP* **P 12 38 48.5 +0.8**
HRY Holter Researc 43.14 68 *eP* **P 12 38 47.4 -0.2**
A18A Metzger Ranch, 43.15 65 ⇑P **P 12 38 46.5 -1.1**
baz=43,SNR=13
M10A I.L. Ranch, Tu 43.16 77 ⇑P **P 12 38 48.2 +0.4**
baz=43,SNR=12
F15A Butte 43.21 70 ⇓P **P 12 38 47.8 -0.4**
baz=43,SNR=8.3
LRM Limekiln Ridge 43.25 70 *eP* **P 12 38 48.2 -0.3**
L11A Cat Creek Ranc 43.27 76 ⇑P **P 12 38 49.0 +0.2**
baz=43,SNR=27
C17A Wharram Farm, 43.28 67 ⇑P **P 12 38 47.9 -0.8**
baz=43,SNR=34
I13A Wildhorse Cree 43.29 73 ⇑P **P 12 38 48.7 -0.1**
baz=43,SNR=46
HLID Hailey 43.30 74 *eP* **P 12 38 49.6 +0.6**
comp=Z,16nn,0.8s,mb4.8
HLID LR LR
comp=Z,4µm,21.0s,MS5.3
E16A East Helena 43.32 68 ⇑P **P 12 38 48.8 -0.3**
baz=43,SNR=16
H14A Leadore 43.35 72 ⇑P **P 12 38 49.1 -0.3**
baz=43,SNR=40
BMN Battle Mountai 43.37 79 *eP* **P 12 38 50.6 +1.0**
BMN pmax pmax
comp=Z,26nn,1.1s,mb4.9
BMN MLR MLR
comp=Z,4µm,21.0s,MS5.3
BMN Battle Mountai 43.37 79 *eP* **P 12 38 50.6 +1.1**
comp=Z,26nn,1.1s,mb4.9
BMN LR LR
comp=Z,4µm,21.0s,MS5.3
DLMT Dillon 43.41 70 *eP* **P 12 38 49.7 -0.1**
B18A Beardsley Farm 43.45 65 ⇑P **P 12 38 49.7 -0.4**
baz=43,SNR=24
K12A Draper Farm, C 43.53 75 ⇑P **P 12 38 51.0 +0.2**
baz=43,SNR=26
J13A Cove Ranch, Pi 43.54 74 ⇓P **P 12 38 51.2 +0.3**
baz=43,SNR=44
O09A Fish Creek Ran 43.54 79 ⇓P **P 12 38 51.5 +0.5**
baz=43,SNR=10.0
MCMT McKenzie Canyo 43.55 71 P P 12 38 51.1 +0.2
D17A Six Diamond Ra 43.57 67 ⇑P **P 12 38 51.0 -0.1**
baz=43,SNR=23
G15A Dillon 43.58 71 ⇑P **P 12 38 50.8 -0.4**
baz=43,SNR=26
N10A Dunphy 43.64 78 ⇓P **P 12 38 51.8 0.0**
baz=44
EGMT Eagleton 43.66 66 *eP* **P 12 38 51.2 -0.5**
comp=Z,40nn,0.9s,mb5.1
EGMT LR LR
comp=Z,4µm,20.0s,MS5.3
M11A Holland Ranch, 43.67 77 ⇑P **P 12 38 52.4 +0.5**
baz=44,SNR=12
I14A Mackay 43.68 73 ⇑P **P 12 38 52.1 +0.1**
baz=44,SNR=34
L12A House Creek Ra 43.73 76 ⇓P **P 12 38 53.2 +0.7**
baz=44,SNR=52
F16A Kennard Place, 43.75 69 ⇑P **P 12 38 52.3 -0.3**
baz=44,SNR=10
H15A Lima 43.78 71 ⇑P **P 12 38 52.7 -0.1**
baz=44,SNR=36
BOZ Bozeman (W) 43.83 70 *eP* **P 12 38 53.1 -0.1**
comp=Z,12nn,0.7s,mb4.7
BOZ LR LR
comp=Z,4µm,22.0s,MS5.2
E17A Martinsdale 43.84 68 ⇓P **P 12 38 53.2 -0.1**
baz=44,SNR=28
Q08A Gabbs 43.86 81 ⇑P **P 12 38 53.6 +0.1**
baz=44,SNR=16
NVAR Mina Array Bea 43.89 82 P P 12 38 54.4 +0.6
comp=Z,7.3nn,0.8s,mb4.5,baz=288,slow=7.5,SNR=43
NVAR PcP PcP 12 40 39.7 +0.5
comp=Z,6.8nn,1.0s,baz=279,slow=3.8,SNR=4.1
NVAR Mina Array Bea 43.89 82 P P 12 38 54.4 +0.6
NVAR PcP PcP 12 40 39.7 +0.5
O10A Cortez Mining, 43.90 79 ⇓P **P 12 38 54.5 +0.6**
baz=44,SNR=5.2
P09A Austin 43.94 80 ⇑P **P 12 38 54.3 +0.2**
baz=44
G16A Moss Hill, Enn 43.95 70 ⇑P **P 12 38 54.2 +0.1**
baz=44,SNR=44
J14A Carey 43.98 73 ⇑P **P 12 38 55.1 +0.6**
baz=44,SNR=20
K13A Stover Farm, H 44.02 75 ⇑P **P 12 38 55.6 +0.9**
baz=44,SNR=12
N11A Elko Archery C 44.06 78 ⇑P **P 12 38 55.5 +0.4**
baz=44
D18A Linhart Farms, 44.06 67 ⇓P **P 12 38 55.2 +0.1**
baz=44,SNR=57

M12A	**Wells**	44.22	77	⇓P		P		12 38 56.8	+0.5	
	baz=44,SNR=13									
I15A	**Monteview**	44.22	72	⇓P		P		12 38 56.5	+0.1	
	baz=44,SNR=12									
F17A	**Fitzpatrick Pl**	44.26	69	⇑P		P		12 38 56.7	+0.1	
	baz=44,SNR=18									
E18A	**Harlowton**	44.34	68	⇓P		P		12 38 57.4	+0.2	
	baz=44,SNR=24									
Q09A	**Carvers**	44.34	81	⇓P		P		12 38 58.0	+0.6	
	baz=44									
MTUM	**Tungsten Hills**	44.39	84	*e*P		P		12 38 58.6	+0.9	
QLMT	**Earthquake Lak**	44.39	70	*e*P		P		12 38 58.0	+0.3	
ELK	**Elko**	44.41	78	*e*P		P		12 38 58.6	+0.7	
ELK					pmax	pmax				
	comp=Z,28nm,1.0s									
ELK					MLR	MLR				
	comp=Z,4μm,21.0s									
ELK	**Elko**	44.41	78	*e*P		P		12 38 58.6	+0.7	
	comp=Z,28nm,1.0s,mb4.9									
ELK					LR	LR				
	comp=Z,4μm,21.0s,MS5.3									
L13A	**Double Diamond**	44.42	75	⇑P		P		12 38 58.8	+0.8	
	baz=44,SNR=30									
N12A	**Clover Valley,**	44.47	77	⇑P		P		12 38 59.1	+0.7	
	baz=44,SNR=18									
O11A	**Cowboy Ranch,**	44.51	78	⇑P		P		12 38 58.9	+0.1	
	baz=44,SNR=17									
G17A	**Pierce Place,**	44.53	69	⇓P		P		12 38 59.0	+0.2	
	baz=44,SNR=12									
FFC	**Flin Flon**	44.53	54		PFAKE			12 39 10.0	+11	
FFC					LR	LR				
	comp=Z,5μm,21.0s,MS5.4									
H16A	**Russell Place,**	44.57	70	⇑P		P		12 38 58.8	-0.3	
	baz=44,SNR=35									
J15A	**Blackfoot**	44.59	73	⇑P		P		12 38 59.9	+0.6	
	baz=44,SNR=24									
RCTC	**Rector, Farmer**	44.61	85	⇓P		P		12 38 59.8	+0.2	
	baz=44									
K14A	**Jones Ranch, D**	44.63	74	⇑P		P		12 39 00.0	+0.4	
	baz=44,SNR=5.7									
M13A	**Montello**	44.71	76	⇑P		P		12 39 00.3	+0.1	
	baz=44									
R09A	**Tonopah**	44.77	82	⇑P		P		12 39 01.2	+0.3	
	baz=45,SNR=33									
TPH	**Tonopah**	44.78	82	*e*P		P		12 39 01.4	+0.5	
	comp=Z,31nm,1.0s,mb5.1									
TPH					*e*pP	pP		12 39 05.5	-7.8	
TPH					LR	LR				
	comp=Z,4μm,21.0s,MS5.3									
TIN	**Tinemaha**	44.78	84	⇑P		P		12 39 01.4	+0.5	
	baz=45									
F18A	**Big Timber**	44.81	68	⇓P		P		12 39 00.7	-0.3	
	baz=45,SNR=15									
Q10A	**Clear Creek Ra**	44.84	80	⇑P		P		12 39 01.6	+0.3	
	baz=45,SNR=14									
I16A	**Newdale**	44.89	72	⇑P		P		12 39 02.0	+0.4	
	baz=45,SNR=15									
YNR	**Norris Junctio**	44.90	70	*e*P		P		12 39 02.7	+1.0	
K15A	**Arbon**	44.94	74	⇓P		P		12 39 02.7	+0.6	
	baz=45,SNR=43									
YFT	**Old Faithful**	44.95	71	*e*P		P		12 39 03.9	+1.7	
O12A	**Currie**	44.99	78	⇓P		P		12 39 03.4	+0.9	
	baz=45,SNR=42									
S09A	**Goldfield**	44.99	82	⇑P		P		12 39 02.6	0.0	
	baz=45,SNR=15									
VES	**Vestal, Richgr**	45.01	86	⇓P		P		12 39 02.3	-0.4	
	baz=45									
BJI	**Beijing**	45.12	282		P	P		12 39 03.0	-0.5	
BJI					S	S		12 45 38.3	-1.1	
BJI					AMB	AMB				
	comp=Z,55nm,0.9s,mb5.4									
BJI					AMB	AMB				
	comp=Z,2μm,12.3s									
BJI					LR	LR				
	comp=N,2μm,19.6s,MS5.3									
BJI					LR	LR				
	comp=E,3μm,18.3s,MS5.3									
BJI					LR	LR				
	comp=Z,2μm,17.7s,MS5.1									
M14A	**Sheep Mountain**	45.12	75	⇑P		P		12 39 03.4	-0.2	
	baz=45,SNR=15									
BJT	**Baijiatuau**	45.13	282	*e*P		P		12 39 03.8	+0.1	
BJT					pmax	pmax				
	comp=Z,29nm,0.8s									
BJT					MLR	MLR				
	comp=Z,3μm,20.0s									
BJT	**Baijiatuau**	45.13	282	*e*P		P		12 39 03.8	+0.2	
	comp=Z,29nm,0.8s,mb5.2									
BJT					LR	LR				
	comp=Z,3μm,20.0s,MS5.2									
H17A	**Grant Village**	45.14	70	⇓P		P		12 39 04.6	+1.0	
	baz=45,SNR=21									
IMW	**Indian Meadow**	45.20	71	*e*P		P		12 39 05.1	+0.9	
	comp=Z,21nm,0.8s,mb5.0									
G18A	**Lazy EL Ranch,**	45.22	69	⇓P		P		12 39 04.1	-0.2	
	baz=45									
R10A	**Warm Springs**	45.22	81	⇓P		P		12 39 04.7	+0.3	
	baz=45,SNR=12									
CWC	**Cottonwood Cre**	45.26	84	⇑P		P		12 39 04.6	-0.1	
	baz=45									
S10A	**Tonopah Range,**	45.27	82	⇓P		P		12 39 05.0	+0.2	
	baz=45,SNR=32									
RRI2	**Red Ridge**	45.29	72	*e*P		P		12 39 05.3	+0.5	
	comp=Z,19nm,0.9s,mb4.9									
Q11A	**Duckwater**	45.29	80	⇓P		P		12 39 04.9	+0.1	
	baz=45									
IRK	**Irkutsk**	45.30	303	*e*P		P		12 39 04.5	-0.3	
IRK				*e*		pP		12 39 15.8	-1.5	
IRK					pmax	pmax				
	comp=Z,178nm,1.1s,mb5.8									
HVU	**Hansel Valley**	45.31	75	*e*P		P		12 39 03.8	-1.2	
GRAC	**Grapevine Rang**	45.35	83	⇑P		P		12 39 05.4	-0.1	
	baz=45									
P12A	**McGill**	45.37	79	⇓P		P		12 39 06.2	+0.6	
	baz=45									
MOOW	**Moose Ponds**	45.40	71	*e*P		P		12 39 06.4	+0.6	
I17A	**Pilgram Creek**	45.41	71	⇑P		P		12 39 06.2	+0.5	
	baz=45,SNR=9.4									
L15A	**Malad City**	45.42	74	⇓P		P		12 39 05.9	0.0	
	baz=45,SNR=26									
K16A	**Soda Springs**	45.42	73	⇓P		P		12 39 06.9	+1.0	
	baz=45,SNR=62									
TPAW	**Teton Pass**	45.43	72	*e*P		P		12 39 06.9	+0.9	
ISA	**Isabella**	45.50	85	⇑P		P		12 39 06.0	-0.7	
	baz=45									
ISA	**Isabella**	45.50	85	*e*P		P		12 39 06.1	-0.6	
	comp=Z,9.6nm,0.9s,mb4.7									
RLMT	**Red Lodge**	45.51	69	*e*P		P		12 39 06.8	+0.3	
	comp=Z,84nm,1.2s,mb5.5									
RLMT					LR	LR				
	comp=Z,6μm,22.0s,MS5.5									
O13A	**Hicks Ranch, I**	45.55	77	⇑P		P		12 39 07.0	+0.1	
	baz=45									
REDW	**Red Top Meadow**	45.56	72	*e*P		P		12 39 07.9	+0.9	
SNOW	**Snow King Moun**	45.56	72	*e*P		P		12 39 07.9	+1.0	
LOHW	**Long Hollow**	45.56	71	*e*P		P		12 39 07.6	+0.6	
N14A	**Grayback Hills**	45.60	76	⇑P		P		12 39 07.8	+0.5	
	baz=45,SNR=19									
ARVC	**Arvin**	45.62	86	⇓P		P		12 39 07.8	+0.2	
	baz=46									
R11A	**Troy Canyon, C**	45.63	80	⇑P		P		12 39 07.4	-0.2	
	baz=46,SNR=15									
J17A	**Brown Place, J**	45.64	72	⇑P		P		12 39 08.2	+0.6	
	baz=45,SNR=13									
DAC	**Darwin (Calif)**	45.67	84		PFAKE			12 39 20.0	+12	
DAC					LR	LR				
	comp=Z,4μm,19.0s,MS5.4									
Q12A	**Willow Creek R**	45.68	79	⇓P		P		12 39 08.5	+0.5	
	baz=46									
M15A	**Larsen Ranch,**	45.70	75	⇑P		P		12 39 08.5	+0.4	
	baz=46,SNR=31									
AHID	**Auburn Hatcher**	45.75	73	*e*P		P		12 39 08.7	+0.2	
	comp=Z,30nm,1.0s,mb5.2									
AHID					LR	LR				
	comp=Z,5μm,19.0s,MS5.5									
SPUT	**South Promonto**	45.78	75	*e*P		P		12 39 09.4	+0.6	
MPMC	**Manual Prospec**	45.87	84	⇑P		P		12 39 09.8	+0.3	
	baz=46									
K17A	**Gardner Place,**	45.87	73	⇑P		P		12 39 09.8	+0.4	
	baz=46,SNR=6.6									
TLY	**Talaya**	45.92	302		P	P		12 39 10.5	+0.8	
	comp=Z,478nm,0.8s,mb6.5,SNR=13									
TLY	**Talaya**	45.92	302		P	P		12 39 10.8	+1.1	
	SNR=24									
TLY	**Talaya**	45.92	302	⇑*i*P		P		12 39 10.4	+0.7	
TLY					pmax	pmax				
	comp=Z,91nm,1.0s,mb5.7									
TLY	**Talaya**	45.92	302	⇑*i*P		P		12 39 10.5	+0.8	
TLY					LR	LR				
	comp=Z,3μm,20.0s,MS5.2									
P13A	**Bates Ranch, G**	45.93	78	⇑P		P		12 39 10.1	+0.1	
	baz=46,SNR=25									
I18A	**Diamond G Ranc**	45.98	71	⇓P		P		12 39 10.4	+0.1	
	baz=46,SNR=18									
L16A	**Fish Haven**	45.99	74	⇑P		P		12 39 10.4	0.0	
	baz=46,SNR=15									
N15A	**Stansbury Isla**	45.99	76	⇑P		P		12 39 10.7	+0.3	
	baz=46,SNR=34									
FURC	**Furnace Creek,**	46.00	83	⇓P		P		12 39 10.7	+0.1	
	baz=46									
OSI	**Osito Adit**	46.02	87	⇑P		P		12 39 11.0	+0.2	
	baz=46									
OSI	**Osito Adit**	46.02	87	*e*P		P		12 39 11.4	+0.7	
	comp=Z,32nm,0.8s,mb5.3									
OSI					*e*pP	pP		12 39 15.2	-8.0	
ULN	**Ulaanbaatar**	46.08	296		P	P		12 39 12.0	+0.9	
	SNR=22									
ULN	**Ulaanbaatar**	46.08	296	*c i*P		P		12 39 11.7	+0.6	
ULN	**Ulaanbaatar**	46.08	296	⇑*i*P		P		12 39 11.8	+0.7	
ULN					LR	LR				
	comp=Z,3μm,20.0s,MS5.3									
TPNV	**Topopah Spring**	46.09	82		PFAKE			12 39 20.0	+8.8	
TPNV					LR	LR				
	comp=Z,5μm,19.0s,MS5.5									
LRMC	**Laurel Mountai**	46.11	85	⇑P		P		12 39 11.1	-0.4	
	baz=46									
J18A	**Kendall Valley**	46.14	72	⇓P		P		12 39 11.6	0.0	
	baz=46,SNR=53									
DUG	**Dugway**	46.23	77	*e*P		P		12 39 12.6	+0.3	
	comp=Z,79nm,1.3s,mb5.5									
DUG					LR	LR				
	comp=Z,3μm,20.0s,MS5.2									
Q13A	**Wheeler Ranch,**	46.23	79	⇓P		P		12 39 12.6	+0.3	
	baz=46,SNR=24									
R12A	**Pony Springs,**	46.25	80	⇑P		P		12 39 12.4	-0.1	
	baz=46,SNR=14									
L17A	**Cokeville**	46.28	73	⇓P		P		12 39 12.7	0.0	
	baz=46,SNR=11									
M16A	**Huntsville**	46.28	75	⇑P		P		12 39 12.5	-0.2	
	baz=46,SNR=18									
EDW2	**Edwards Air Fo**	46.31	86	⇑P		P		12 39 12.8	-0.2	
	baz=46									
FCC	**Fort Churchill**	46.34	46	*e*P		P		12 39 11.6	-1.4	
U10A	**Ash Meadows, A**	46.37	83	⇑P		P		12 39 13.5	0.0	
	baz=46,SNR=10									
NOQ	**North Oquirrh**	46.38	76	*e*P		P		12 39 14.1	+0.7	
O15A	**The Old Anders**	46.38	76	⇓P		P		12 39 14.0	+0.5	
	baz=46									
P14A	**Drum Mountains**	46.43	77	⇓P		P		12 39 14.3	+0.4	
	baz=46,SNR=30									
K18A	**Toltan Ranch,**	46.46	72	⇑P		P		12 39 14.6	+0.5	
	baz=46,SNR=52									
SONM	**Songino Array**	46.47	297		P	P		12 39 15.0	+0.9	
	comp=Z,26nm,0.8s,mb5.2,baz=57,slow=9.2,SNR=188									
SONM					PcP	PcP		12 40 48.1	+0.1	
	comp=Z,12nm,0.8s,baz=56,slow=3.0,SNR=6.8									
SONM					ScP	ScP		12 44 39.1	+1.7	
	comp=Z,4.2nm,1.0s,baz=56,slow=3.2,SNR=8.0									
SONM	**Songino Array**	46.47	297		P	P		12 39 15.0	+0.9	
SONM								12 40 48.1		
SONM					pmax	pmax				
	comp=Z,26nm,0.8s									
SONM					pmax	pmax				
	comp=Z,12nm,0.8s									
SONM					pmax	pmax				
	comp=N,4.0nm,1.0s									
T11A	**Corn Creek, Al**	46.54	81	⇓P		P		12 39 14.7	-0.2	
	baz=46,SNR=49									
S12A	**Delamar Landin**	46.55	81	⇑P		P		12 39 15.3	+0.4	
	baz=46,SNR=18									
DGMT	**Dagmar**	46.57	62		PFAKE			12 39 30.0	+15	
DGMT					LR	LR				
	comp=Z,5μm,21.0s,MS5.4									
PASC	**Pasadena Art C**	46.64	87	*e*P		P		12 39 16.0	+0.4	
	comp=Z,28nm,0.5s,mb5.5									
N16A	**Rees Ranch, Co**	46.65	75	⇓P		P		12 39 15.8	+0.2	
	baz=46,SNR=6.3									
Q14A	**Sevier Lake (B**	46.67	78	⇑P		P		12 39 16.2	+0.4	
	baz=46,SNR=32									
BW06	**Boulder Array**	46.68	72	*e*P		P		12 39 15.7	0.0	
BW06					LR	LR				
	comp=Z,7μm,22.0s,MS5.6									
PDAR	**Pinedale Array**	46.68	72	P		P		12 39 15.9	+0.2	
	comp=Z,57nm,0.9s,mb5.5,baz=305,slow=4.2,SNR=181									
MWC	**Mount Wilson**	46.69	87	*e*P		P		12 39 16.5	+0.5	
SHOC	**Shoshone**	46.73	84	⇑P		P		12 39 15.6	-0.7	
	baz=47									
R13A	**O'Grain Ranch,**	46.74	80	⇑P		P		12 39 16.4	0.0	
	baz=47,SNR=7.5									
M17A	**Scullys Gap (B**	46.77	74	⇓P		P		12 39 15.8	-0.7	
	baz=47,SNR=11									
GSC	**Goldstone**	46.78	85	⇓P		P		12 39 16.4	-0.3	
	baz=47									
GSC	**Goldstone**	46.78	85	*e*P		P		12 39 16.5	-0.2	
GSC					pmax	pmax				
	comp=Z,14nm,0.8s,mb4.9									
GSC	**Goldstone**	46.78	85	*e*P		P		12 39 16.5	-0.2	
	comp=Z,14nm,0.8s,mb4.9									
ZAK	**Zakamensk**	46.81	301	⇓*i*P		P		12 39 17.1	+0.4	
ZAK					pmax	pmax				
	comp=Z,109nm,1.3s,mb5.6									
JLU	**Jordanelle**	46.81	75	*e*P		P		12 39 17.6	+0.7	
NLU	**North Lily Min**	46.82	76	*e*P		P		12 39 17.9	+1.0	
L18A	**Fontenelle, Gr**	46.88	73	⇑P		P		12 39 17.5	+0.1	
	baz=47,SNR=24									
TIA	**Tai'an**	46.88	277	*e*P		P		12 39 17.0	-0.5	
TIA					AMB	AMB				
	comp=Z,35nm,1.0s,mb5.2									
P15A	**Leamington**	46.93	77	⇓P		P		12 39 17.8	0.0	
	baz=47,SNR=16									
BFSC	**Mount Baldy St**	46.93	86	⇓P		P		12 39 17.7	-0.1	
	baz=47									
N17A	**Moffit Pass**	46.98	75	⇑P		P		12 39 18.4	+0.2	
	baz=47,SNR=15									
O16A	**Springville**	47.02	76	⇓P		P		12 39 18.7	+0.2	
	baz=47,SNR=25									
SHPR	**Sheep Range**	47.04	82	*e*P		P		12 39 19.1	+0.4	
DAU	**Daniels Canyon**	47.05	75	*e*P		P		12 39 20.0	+1.3	
MPU	**Maple Canyon**	47.05	76	*e*P		P		12 39 19.5	+0.7	
K19A	**Absolon Red Bu**	47.07	71	⇓P		P		12 39 18.3	-0.5	
	baz=47,SNR=52									
M18A	**Lyman**	47.16	74	⇓P		P		12 39 19.2	-0.4	
	baz=47,SNR=12									
S13A	**Holt Ranch, En**	47.18	80	⇑P		P		12 39 19.8	+0.1	
	baz=47,SNR=18									
T12A	**Moapa**	47.18	82	⇓P		P		12 39 19.7	-0.1	
	baz=47									
Q15A	**Fillmore**	47.22	78	⇑P		P		12 39 20.2	+0.1	
	baz=47,SNR=17									
TUQ	**Turquoise Moun**	47.25	84	⇓P		P		12 39 20.2	-0.1	
	baz=47									
V11A	**Goodsprings**	47.30	83	⇓P		P		12 39 20.9	+0.1	
	baz=47,SNR=14									
GUMO	**Guam**	47.33	231		PFAKE			12 39 30.0	+8.9	
GUMO					LR	LR				
	comp=Z,2μm,19.0s,MS5.1									
MOY	**Mondy**	47.33	304	*e*P		P		12 39 21.6	+0.8	
MOY					pmax	pmax				
	comp=Z,11nm,2.0s,mb4.4									
HEC	**Hector,Ludlow**	47.38	85	⇓P		P		12 39 21.1	-0.3	
	baz=47									
HHC	**Hu-ho-hao-te**	47.45	286	*e*P		P		12 39 22.5	+0.6	
HHC					PCP	PcP		12 40 53.8	+2.2	
HHC					PP	PP		12 41 12.8	-0.4	
HHC					PCS	PcS		12 44 47.8	+0.9	
HHC					*e*S	S		**12 46 11.3**	**-1.6**	
HHC					SCS	ScS		12 49 09.8	-1.6	
HHC					SS	SS		12 49 32.4	-8.2	
HHC					AMB	AMB				
	comp=Z,50nm,1.1s,mb5.4									
HHC					AMB	AMB				
	comp=Z,3μm,6.2s									
HHC					LR	LR				
	comp=N,1μm,20.2s,MS5.0									
HHC					LR	LR				
	comp=E,981nm,15.5s,MS5.0									
HHC					LR	LR				
	comp=Z,2μm,17.8s,MS5.1									
K20A	**Yellowstone Ra**	47.47	71	⇑P		P		12 39 21.3	-0.7	
	baz=47,SNR=26									
U12A	**Valley of Fire**	47.48	82	⇑P		P		12 39 22.5	+0.4	
	baz=47									
O17A	**Robinson Place**	47.49	75	⇑P		P		12 39 22.2	+0.1	
	baz=47									
T13A	**Saint George**	47.50	81	⇓P		P		12 39 22.5	+0.2	
	baz=47,SNR=17									
MVU	**Marysvale**	47.62	78		PFAKE			12 39 40.0	+17	
MVU					LR	LR				
	comp=Z,4μm,21.0s,MS5.3									
MURC	**Murrieta**	47.64	87	⇓P		P		12 39 23.4	0.0	
	baz=48									
MSU	**Marysvale**	47.64	78	*e*P		P		12 39 19.9	-3.4	
M19A	**Rock Springs**	47.66	73	⇓P		P		12 39 22.9	-0.6	
	baz=47,SNR=12									
N18A	**Larsen Ranch,**	47.67	74	⇑P		P		12 39 23.2	-0.3	
	baz=48,SNR=16									
V12A	**Nelson**	47.73	83	⇓P		P		12 39 24.1	0.0	
	baz=48,SNR=12									
TMUT	**Trail Mountain**	47.75	77	*e*P		P		12 39 25.1	+0.9	
R15A	**Junction**	47.77	78	⇑P		P		12 39 24.8	+0.5	
	baz=48,SNR=18									
GMRC	**Granite Mounta**	47.83	84	⇑P		P		12 39 25.0	+0.2	
	baz=48									
U13A	**Pakoon Wash**	47.85	81	⇓P		P		12 39 25.1	+0.1	
	baz=48,SNR=29									
L20A	**Wamsutter**	47.85	72	⇓P		P		12 39 24.6	-0.4	
	baz=48,SNR=14									
O18A	**Roosevelt**	47.89	75	⇑P		P		12 39 26.2	+0.9	
	baz=48,SNR=6.3									
P17A	**Butcher Ranch,**	47.93	76	⇑P		P		12 39 25.8	+0.2	
	baz=48,SNR=11									
T14A	**Hurricane**	47.98	80	⇑P		P		12 39 26.1	+0.1	
	baz=48									
LDFC	**Landfair**	47.99	84	*e*P		P		12 39 25.6	-0.4	
	comp=Z,54nm,1.2s,mb5.5									
LDFC					*e*PcP	PcP		12 40 53.9	+0.3	
W12A	**Cal Nev Ari**	47.99	83	⇑P		P		12 39 25.9	-0.2	
	baz=48									
Q16A	**Castle Valley**	48.01	77	⇓P		P		12 39 26.2	0.0	
	baz=48,SNR=13									
N19A	**John Jarvie Ra**	48.02	74	⇑P		P		12 39 26.0	-0.2	
	baz=48,SNR=20									
S15A	**Panguitch**	48.05	79	⇓P		P		12 39 26.9	+0.4	
	baz=48,SNR=9.5									
PFO	**Pinyon Flat Ob**	48.10	86	⇑P		P		12 39 26.4	-0.5	
	baz=48									
PFO	**Pinyon Flat Ob**	48.10	86	*e*P		P		12 39 26.2	-0.7	
PFO					pmax	pmax				
	comp=Z,14nm,1.0s,mb5.0									
PFO					MLR	MLR				
	comp=Z,3μm,20.0s,MS5.3									
PFO	**Pinyon Flat Ob**	48.10	86	*e*P		P		12 39 26.2	-0.7	
	comp=Z,14nm,1.0s,mb4.9									
PFO					LR	LR				
	comp=Z,3μm,20.0s,MS5.3									
BELC	**Belle Mtn.**	48.13	85	⇑P		P		12 39 26.1	-1.0	
	baz=48									
P18A	**Preston Nutter**	48.14	76	⇑P		P		12 39 27.7	+0.6	
	baz=48,SNR=17									
109C	**Camp Elliot, M**	48.16	87	⇓P		P		12 39 27.0	-0.5	
	baz=48									
V13A	**Grand Canyon W**	48.19	82	⇓P		P		12 39 27.6	0.0	
	baz=48									
R16A	**Teasdale**	48.21	78	⇑P		P		12 39 28.6	+0.9	
	baz=48,SNR=35									
M20A	**Sweetwater, Wa**	48.25	72	⇑P		P		12 39 28.2	+0.1	
	baz=48,SNR=26									
SRU	**San Rafael**	48.29	76	*e*P		P		12 39 28.8	+0.5	
U14A	**Mt Trumbull**	48.33	81	⇓P		P		12 39 28.7	0.0	
	baz=48,SNR=21									
T15A	**Red Dirt Ranch**	48.45	80	⇓P		P		12 39 29.5	-0.1	
	baz=48									
L21A	**Rawlins**	48.46	71	⇓P		P		12 39 29.7	+0.1	
	baz=48,SNR=24									
S16A	**Weppner Ranch,**	48.49	78	⇓P		P		12 39 30.2	+0.3	
	baz=48,SNR=13									
NJ2	**Nanjing**	48.51	272	*e*P		P		12 39 29.6	-0.5	
NJ2					AMB	AMB				
	comp=Z,30nm,0.6s,mb5.5									
Q18A	**Rafter H Ranch**	48.53	76	⇑P		P		12 39 30.7	+0.5	
	baz=48,SNR=22									
BTO	**Baotou**	48.53	286	*e*P		P		12 39 30.9	+0.7	
IRM	**Iron Mountain**	48.56	85	⇑P		P		12 39 30.0	-0.5	
	baz=48									
MONP	**Monument Peak**	48.59	87	⇓P		P		12 39 30.6	-0.1	
	baz=48									
R17A	**Hanksville Air**	48.60	77	⇓P		P		12 39 31.1	+0.4	
	baz=48,SNR=33									
N20A	**Spence Gulch,**	48.60	73	⇓P		P		12 39 31.0	+0.3	
	baz=48,SNR=24									
BC3	**Big Chuckw Mtn**	48.70	85	⇓P		P		12 39 30.7	-0.9	
	baz=48									
RWWY	**Rawlins**	48.72	72	*e*P		P		12 39 31.7	0.0	
W13A	**Hualapai Mount**	48.74	83	⇑P		P		12 39 31.7	-0.1	
	baz=49,SNR=14				

KBS Kingsbay 50.01 357⇓ *e*P P **12 39 40.0 -1.0**
KBS LR LR
comp=Z,2µm,19.0s,MS5.2
WUAZ Wupatki 50.03 81 *e*P P **12 39 41.7 0.0**
comp=Z,18nm,0.9s,mb5.1
WUAZ LR LR
comp=Z,3µm,21.0s,MS5.3
Y14A Wickenburg 50.05 83 ⇓P P **12 39 41.3 -0.6**
baz=50,SNR=13
TARA Tarawa 50.05 190 PFAKE 12 39 50.0 +8.0
TARA LR LR
comp=Z,3µm,20.0s,MS5.2
ULM Lac du Bonnet 50.07 56 P P **12 39 40.3 -1.5**
comp=Z,7.9nm,0.9s,mb4.7,baz=305,slow=8.2,SNR=5.8
ULM Lac du Bonnet 50.07 56 P P **12 39 40.3 -1.5**
ULM LR LR
comp=Z,5µm,21.0s,MS5.5
X15A Humboldt 50.16 82 ⇓P P **12 39 42.9 +0.1**
baz=50,SNR=15
W16A Flagstaff 50.21 81 ⇓P P **12 39 43.0 0.0**
baz=50,SNR=24
113A Mohawk Valley, 50.34 85 ⇑P P **12 39 43.3 -0.8**
baz=50,SNR=5.5
SMCO Snowmass 50.41 74 *e*P P **12 39 36.8 -7.7**
comp=Z,5.2nm,0.7s,mb4.7
Y15A Casa Rosa Ranc 50.45 83 ⇑P P **12 39 44.6 -0.3**
baz=50,SNR=14
Z14A Wintersburg 50.46 84 ⇑P P **12 39 44.2 -0.8**
baz=50
R21A Cimarron 50.56 75 ⇑P P **12 39 45.8 +0.1**
baz=50,SNR=21
SPB4 Spitsbergen Ar 50.58 356 *e*P P **12 39 44.9 -0.4**
SPITS Spitsbergen Ar 50.58 356 P P **12 39 45.1 -0.2**
comp=Z,40nm,0.7s,mb5.5,baz=46,slow=8.4,SNR=51
SPITS Spitsbergen Ar 50.58 356 P P **12 39 45.1 -0.2**
SPITS pmax pmax
comp=Z,40nm,0.7s
T19A Beclabito 50.64 78 ⇑P P **12 39 46.6 +0.3**
baz=50,SNR=57
X16A Lo Mia Camp, P 50.71 82 ⇑P P **12 39 47.2 +0.4**
baz=50,SNR=27
MVCO Mesa Verde 50.72 77 *e*P P **12 39 46.9 0.0**
comp=Z,31nm,1.1s,mb5.2
MVCO LR LR
comp=Z,4µm,20.0s,MS5.4
V18A Ganado 50.80 79 ⇓P P **12 39 47.5 -0.1**
baz=51,SNR=14
ISCO Idaho Springs 50.84 72 PFAKE 12 40 00.0 +12
ISCO LR LR
comp=Z,4µm,21.0s,MS5.4
Y16A Circle Bar Ran 51.04 82 ⇓P P **12 39 49.2 -0.1**
baz=51,SNR=21
X17A Forest Lakes 51.16 81 ⇑P P **12 39 50.0 -0.2**
baz=51
AGMN Agassiz Refuge 51.22 58 PFAKE 12 40 00.0 +9.5
AGMN LR LR
comp=Z,6µm,21.0s,MS5.6
W18A Petrified Fore 51.31 80 ⇑P P **12 39 51.2 -0.2**
baz=51
115A Sonoran Desert 51.35 84 ⇑P P **12 39 51.8 +0.1**
baz=51,SNR=15
214A Organ Pipe Nat 51.48 85 ⇓P P **12 39 52.3 -0.4**
baz=51,SNR=14
Y17A Roosevelt 51.55 82 ⇑P P **12 39 53.3 +0.1**
baz=51,SNR=25
X18A Snowflake 51.56 81 ⇑P P **12 39 53.0 -0.3**
baz=51,SNR=16
DAG Danmarks Havn 51.76 6⇓ *i*P P **12 39 53.2 -0.9**
DAG pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
DAG Danmarks Havn 51.76 6⇓ *i*P P **12 39 53.2 -0.9**
comp=Z,7.3nm,0.6s,mb4.8
116A Eloy 51.77 84 ⇑P P **12 39 54.7 -0.2**
baz=52
TATO Taipei 51.78 263 PFAKE 12 40 10.0 +15
TATO LR LR
comp=Z,3µm,20.0s,MS5.3
Y18A Canyon Day Jun 52.01 81 ⇑P P **12 39 57.2 +0.6**
baz=52,SNR=23
X19A St. Johns 52.04 80 ⇓P P **12 39 57.3 +0.5**
baz=52,SNR=15
Z17A San Carlos Hig 52.05 82 ⇑P P **12 39 56.7 -0.2**
baz=52
SDCO Great Sand Dun 52.21 74 PFAKE 12 40 10.0 +12
SDCO LR LR
comp=Z,4µm,21.0s,MS5.4
OGNE Ogallala 52.25 69 *e*P P **12 39 58.6 +0.3**
comp=Z,211nm,1.7s,mb5.8
OGNE LR LR
comp=Z,3µm,21.0s,MS5.4
XMAS Kiritimati 52.28 152 PFAKE 12 40 10.0 +11
XMAS LR LR
comp=Z,4µm,20.0s,MS5.5
216A Three Points, 52.30 84 ⇑P P **12 39 58.1 -0.6**
baz=52
WHN Wuhan 52.36 274 ⇑P P **12 39 58.5 -0.7**
WHN AMB AMB
comp=Z,81nm,0.9s,mb5.7
117A Oracle 52.37 83 ⇓P P **12 39 59.3 +0.1**
baz=52,SNR=13
Y19A Nutrioso 52.37 81 ⇓P P **12 39 59.3 0.0**
baz=52
TUC Tucson 52.52 83 *e*P P **12 40 00.1 -0.3**
TUC pmax pmax
comp=Z,14nm,0.9s,mb4.9
TUC MLR MLR
comp=Z,4µm,20.0s,MS5.4
TUC Tucson 52.52 83 *e*P P **12 40 00.1 -0.3**
comp=Z,14nm,0.9s,mb4.9
TUC LR LR
comp=Z,4µm,20.0s,MS5.4
118A Homack Ranch, 52.80 82 ⇑P P **12 40 02.3 -0.2**
baz=53,SNR=27
217A Green Valley 52.86 84 ⇑P P **12 40 02.6 -0.3**
baz=53,SNR=6.9
119A Ashpeak Ranch, 53.13 82 ⇓P P **12 40 04.7 -0.2**
baz=53,SNR=14
218A Dragoon 53.20 83 ⇓P P **12 40 05.4 0.0**
baz=53,SNR=16
XAN Xi'an 53.40 281 P P **12 40 06.1 -0.7**
XAN AP pP 12 40 17.9 -1.7
XAN PP PP 12 42 06.8 -0.5
XAN S **S** **12 47 35.3 -0.3**
XAN SS SS 12 51 16.8 +1.2
XAN AMB AMB
comp=Z,23nm,1.0s,mb5.1
XAN AMB AMB
comp=Z,828nm,14.7s
XAN LR LR
comp=N,166nm,20.9s,MS4.5
XAN LR LR
comp=E,400nm,18.1s,MS4.5
XAN LR LR
comp=Z,1µm,21.8s,MS4.9
ANMO Albuquerque 53.44 78 P P **12 40 07.0 -0.2**
comp=Z,7.2nm,1.0s,mb4.5,baz=319,slow=8.6,SNR=16
ANMO Albuquerque 53.44 78⇓ *e*P P **12 40 07.1 -0.1**
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 53.44 78 P P **12 40 07.0 -0.2**
ANMO LR LR
comp=Z,4µm,20.0s,MS5.5
SUMG Summit 53.59 14 *e*P P **12 40 07.7 0.0**
comp=Z,51nm,0.9s,mb5.5
318A Bisbee 53.60 83 ⇑P P **12 40 08.5 +0.1**
baz=53,SNR=13
ECSD EROS,Sioux Fal 53.61 63 *e*P P **12 40 06.8 -1.5**
comp=Z,38nm,1.0s,mb5.3
ECSD LR LR
comp=Z,4µm,20.0s,MS5.5
QZH Quanzhou 53.62 265⇓ *i*P P **12 40 08.8 +0.3**
QZH AMB AMB
comp=Z,180nm,1.0s,mb6.0
219A White Tail Can 53.68 82 ⇓P P **12 40 08.4 -0.6**
baz=54,SNR=23
EYMN Ely 53.76 56 *e*P P **12 40 08.3 -0.9**
comp=Z,23nm,0.9s,mb5.1
EYMN LR LR
comp=Z,5µm,22.0s,MS5.5
ZAA0 Zalesovo Array 53.96 313 *e*P P **12 40 10.1 -0.6**
ZALV Zalesovo Beam 53.96 313 P P **12 40 10.1 -0.5**
comp=Z,7.2nm,0.7s,mb4.7,baz=46,slow=8.5,SNR=33
ZALV PcP PcP 12 41 15.9 +0.5
comp=Z,12nm,0.8s,baz=20,slow=4.7,SNR=7.4
ZALV Zalesovo Beam 53.96 313 P P **12 40 10.1 -0.6**
ZALV 12 41 15.9
ZALV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ZALV pmax pmax
comp=Z,12nm,0.8s,mb4.9
319A Douglas 54.09 83 ⇑P P **12 40 11.4 -0.5**
baz=54,SNR=14
NVS Novosibirsk 54.11 315 *e*P P **12 40 10.9 -0.8**
NVS *e* 12 41 15.2
NVS *e* 12 50 01.4
NVS pmax pmax
comp=N,19nm,1.0s
NVS pmax pmax
comp=E,22nm,1.0s
NVS pmax pmax
comp=Z,32nm,1.0s,mb5.2
CBKS Cedar Bluff 54.97 70 *e*P P **12 40 18.3 +0.1**
comp=Z,82nm,1.0s,mb5.7
CBKS LR LR
comp=Z,4µm,21.0s,MS5.5
LZH Lanzhou 55.15 286 *e*P P **12 40 20.5 +1.0**
LZH AMB AMB
comp=Z,65nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,320nm,4.5s
LZH LR LR
comp=E,2µm,16.8s
LZH LR LR
comp=Z,3µm,18.8s,MS5.3
GTA Gaotai 55.36 292 P P **12 40 21.5 +0.5**
GTA PCP PcP 12 41 21.8 +0.8
GTA S **S** **12 47 58.8 -3.1**
GTA SCS ScS 12 50 07.5 +1.4
GTA SS SS 12 51 42.3 -4.0
GTA AMB AMB
comp=Z,52nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,1µm,8.0s
GTA LR LR
comp=N,1µm,18.4s,MS5.2
GTA LR LR
comp=E,1µm,19.9s,MS5.2
GTA LR LR
comp=Z,2µm,18.4s,MS5.2
SFJD Kangerlussuaq 55.98 22 PFAKE 12 40 40.0 +15
SFJD LR LR
comp=Z,5µm,21.0s,MS5.6
AMTX Amarillo 56.41 75 PFAKE 12 40 40.0 +11
AMTX LR LR
comp=Z,4µm,21.0s,MS5.5
KSU1 Kansas State U 56.61 68 *e*P P **12 40 29.1 -0.8**
comp=Z,49nm,0.9s,mb5.5
KSU1 LR LR
comp=Z,4µm,20.0s,MS5.5
SCIA State Center 56.70 63 *e*P P **12 40 30.2 -0.4**
comp=Z,64nm,0.9s,mb5.7
SCIA LR LR
comp=Z,4µm,20.0s,MS5.5
JFWS Jewell Farm 57.68 60 *e*P P **12 40 35.8 -1.6**
JFWS pmax pmax
comp=Z,55nm,1.1s,mb5.5
JFWS MLR MLR
comp=Z,4µm,22.0s,MS5.4
JFWS Jewell Farm 57.68 60 *e*P P **12 40 35.8 -1.6**
comp=Z,54nm,1.1s,mb5.5
JFWS LR LR
comp=Z,4µm,22.0s,MS5.4
KEV Kevo 57.88 350 PFAKE 12 40 50.0 +12
KEV LR LR
comp=Z,3µm,20.0s,MS5.4
WMOK Wichita Mounta 58.26 73 *e*P P **12 40 41.3 -0.3**
WMOK pmax pmax
comp=Z,16nm,1.0s,mb5.0
WMOK MLR MLR
comp=Z,4µm,20.0s,MS5.6
WMOK Wichita Mounta 58.26 73 *e*P P **12 40 41.2 -0.4**
comp=Z,16nm,1.0s,mb5.0
WMOK LR LR
comp=Z,4µm,20.0s,MS5.6
ARCES ARCESS Array B 58.26 350 P P **12 40 40.6 -0.6**
comp=Z,16nm,0.7s,mb5.1,baz=11,slow=7.4,SNR=16
ARCES ARCESS Array B 58.26 350 P P **12 40 40.6 -0.5**
ARCES pmax pmax
comp=Z,16nm,0.7s
LVZ Lovozero 58.59 346 P P **12 40 42.9 -0.5**
comp=Z,536nm,1.0s,mb6.5,SNR=6.3
LVZ Lovozero 58.59 346⇓ *e*P P **12 40 42.7 -0.7**
LVZ pmax pmax
comp=Z,121nm,1.1s,mb5.8
LVZ Lovozero 58.59 346⇓ *e*P P **12 40 42.8 -0.6**
LVZ LR LR
comp=Z,3µm,22.0s,MS5.3
CD2 Chengdu 58.72 282 P P **12 40 44.9 0.0**
CD2 PCP PcP 12 41 34.4 +0.1
CD2 PP PP 12 42 56.5 +1.7
CD2 S **S** **12 48 43.8 -2.5**
CD2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,2µm,10.9s
CD2 LR LR
comp=N,2µm,19.0s
CD2 LR LR
comp=Z,2µm,17.6s,MS5.3
KURK Kurchatov 58.95 313 P P **12 40 45.3 -0.9**
comp=Z,533nm,0.7s,mb6.7,SNR=57
KURK Kurchatov 58.95 313 P P **12 40 46.1 -0.1**
SNR=22
KURK Kurchatov 58.95 313*c* *i*P P **12 40 45.6 -0.6**
KURK pmax pmax
comp=Z,99nm,1.1s,mb5.8
KURK Kurchatov 58.95 313 *i* P P **12 40 45.7 -0.5**
KURK LR LR
comp=Z,2µm,19.0s,MS5.2
TXAR Lajitas Array 59.00 81 P P **12 40 45.9 -0.9**
comp=Z,8.2nm,0.8s,mb4.8,baz=294,slow=4.7,SNR=80
TXAR Lajitas Array 59.00 81 P P **12 40 45.9 -0.9**
TXAR pmax pmax
comp=Z,8.0nm,0.9s
TXAR Lajitas Array 59.00 81 P P **12 40 45.9 -0.9**
APA Apatity 59.08 346⇓ *i*P P **12 40 46.0 -0.8**
APA pmax pmax
comp=Z,52nm,1.3s,mb5.4
APA MLR MLR
comp=Z,3µm,17.0s,MS5.5
WMQ Urumqi 59.20 303 ⇑P P **12 40 48.9 +0.8**
WMQ AMB AMB
comp=Z,104nm,1.0s,mb5.8
WMQ LR LR
comp=N,752nm,20.0s,MS5.1
WMQ LR LR
comp=E,1µm,20.0s,MS5.1
WMQ LR LR
comp=Z,2µm,21.0s,MS5.2
GLMI Grayling 59.39 55 *e*P P **12 40 49.3 -0.1**
comp=Z,84nm,0.9s,mb5.8
GLMI LR LR
comp=Z,5µm,20.0s,MS5.6
FUNA Funafuti 59.45 182 PFAKE 12 41 00.0 +10
FUNA LR LR
comp=Z,3µm,19.0s,MS5.5
HDIL Hopedale 59.80 62 *e*P P **12 40 51.3 -0.9**
comp=Z,178nm,1.0s,mb6.0
HDIL LR LR
comp=Z,3µm,20.0s,MS5.5
MKAR Makanchi Array 59.93 308 P P **12 40 52.8 -0.2**
comp=Z,43nm,0.8s,mb5.5,baz=56,slow=6.6,SNR=254
MKAR Makanchi Array 59.93 308⇑ *e*P P **12 40 52.7 -0.3**
MKAR Makanchi Array 59.93 308⇑ *e*P P **12 40 52.8 -0.2**
GYA Guiyang 60.04 276⇑ *i*P P **12 40 54.3 +0.3**
GYA PCP PcP 12 41 43.8 +4.2
GYA PP PP 12 43 09.4 +2.8
GYA SCP ScP 12 45 36.0 -0.7
GYA PCS PcS 12 45 40.4 -1.7
GYA S **S** **12 49 02.8 -0.6**
GYA SS SS 12 53 00.6 +0.4
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.5
GYA AMB AMB
comp=Z,680nm,8.0s
GYA LR LR
comp=N,3µm,19.2s,MS5.6
GYA LR LR
comp=E,3µm,18.1s,MS5.6
GYA LR LR
comp=Z,3µm,18.8s,MS5.4
SCHQ Schefferville 60.38 38 P P **12 40 54.5 -1.5**
comp=Z,38nm,1.0s,mb5.4,baz=326,slow=7.3,SNR=12
SCHQ Schefferville 60.38 38 *e*P P **12 40 54.9 -1.0**
comp=Z,49nm,1.1s,mb5.5
SCHQ LR LR
comp=Z,4µm,20.0s,MS5.6
CCM Cathedral Cave 60.42 65 *e*P P **12 40 54.9 -1.6**
CCM pmax pmax
comp=Z,43nm,1.4s,mb5.3
CCM MLR MLR
comp=Z,3µm,20.0s,MS5.4
CCM Cathedral Cave 60.42 65 *e*P P **12 40 54.9 -1.5**
comp=Z,43nm,1.4s,mb5.3
CCM LR LR
comp=Z,3µm,20.0s,MS5.4
JCT Junction City 60.58 77 *e*P P **12 40 56.5 -1.2**
comp=Z,20nm,0.9s,mb5.2
JCT *e*pP pP 12 41 00.3 -10
JCT LR LR
comp=Z,3µm,20.0s,MS5.4
BVA0 Borovoye Array 60.86 320 *i* P P **12 40 58.8 -0.5**
BVA0 pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
BRVK Borovoye 60.88 320 P P **12 40 59.7 +0.3**
comp=Z,249nm,0.9s,mb6.3,SNR=16
BRVK Borovoye 60.88 320 P P **12 40 59.4 0.0**
SNR=15
BRVK Borovoye 60.88 320⇑ *i*P P **12 40 58.8 -0.6**
BRVK LR LR
comp=Z,2µm,19.0s,MS5.3
FVM French Village 60.93 65 *e*P P **12 40 58.8 -1.2**
FVM pmax pmax
comp=Z,158nm,1.7s,mb5.9
FVM French Village 60.93 65 *e*P P **12 40 58.8 -1.2**
comp=Z,158nm,1.7s,mb5.9
MIAR Mount Ida 61.50 70 *e*P P **12 41 03.0 -0.9**
MIAR pmax pmax
comp=Z,41nm,1.2s,mb5.4
MIAR MLR MLR
comp=Z,5µm,20.0s,MS5.7
MIAR Mount Ida 61.50 70 *e*P P **12 41 03.0 -0.8**
comp=Z,41nm,1.2s,mb5.4
MIAR LR LR
comp=Z,5µm,20.0s,MS5.7
SVE Sverdlovsk 61.62 327 *e*P P **12 41 04.0 -0.3**
SVE pmax pmax
comp=Z,28nm,1.2s,mb5.3
AAM Ann Arbor 61.65 57 PFAKE 12 41 20.0 +15
AAM LR LR
comp=Z,4µm,20.0s,MS5.5
OLIL Olney 61.72 63 *e*P P **12 41 04.7 -0.6**
comp=Z,158nm,1.0s,mb6.1
UALR University of 62.06 69 *e*P P **12 41 08.1 +0.4**
comp=Z,10nm,0.8s,mb5.0
SADO Sadowa 62.22 52 P P **12 41 07.0 -1.6**
comp=Z,17nm,1.0s,mb5.2,baz=317,slow=4.5,SNR=6.0
SADO PcP PcP 12 41 47.7 -0.4
comp=Z,18nm,0.9s,baz=5.6,slow=1.7,SNR=4.6
SADO Sadowa 62.22 52 P P **12 41 07.0 -1.6**
SADO PcP PcP 12 41 47.7 -0.4
BLO Bloomington 62.29 61 P P **12 41 08.5 -0.6**
BLO pmax pmax
comp=Z,110nm,1.0s,mb5.9
BLO Bloomington 62.29 61 *e*P P **12 41 08.6 -0.5**
comp=Z,112nm,1.0s,mb6.0
USIN University of 62.51 63 *e*P P **12 41 10.2 -0.3**
comp=Z,136nm,1.0s,mb6.0
ARU Arti 62.63 328⇑ *e*P P **12 41 10.6 -0.5**
ARU pmax pmax
comp=Z,44nm,1.7s,mb5.3
ARU Arti 62.63 328⇑ *e*P P **12 41 10.7 -0.4**
ARU *e*PcP PcP 12 41 49.9 +0.3
ARU LR LR
comp=Z,2µm,21.0s,MS5.2
NATX Nacogdoches 62.80 72 PFAKE 12 41 20.0 +7.3
NATX LR LR
comp=Z,3µm,20.0s,MS5.4
HNR Honiara 62.96 203 PFAKE 12 41 30.0 +16
HNR LR LR
comp=Z,2µm,21.0s,MS5.3
WCI Wyandotte Cave 63.09 62 *e*P P **12 41 13.9 -0.5**
comp=Z,66nm,0.9s,mb5.8
WCI LR LR
comp=Z,2µm,20.0s,MS5.4
DAV Davao City (W) 63.10 246 PFAKE 12 41 30.0 +15
DAV LR LR
comp=Z,2µm,20.0s,MS5.3
HKT Hockley 63.38 75 PFAKE 12 41 30.0 +13
HKT LR LR
comp=Z,3µm,19.0s,MS5.5
QIZ Qiongzhong 63.44 268 PFAKE 12 41 30.0 +13
QIZ LR LR
comp=Z,2µm,21.0s,MS5.2
KMI Kunming 63.45 278 ⇑P P **12 41 16.8 -0.2**
KMI AP pP 12 41 28.4 -1.6
KMI S **S** **12 49 46.1 -0.5**
KMI SS SS 12 53 54.5 +0.8
KMI AMB AMB
comp=Z,30nm,1.0s,mb5.4
KMI LR LR
comp=N,1µm,16.3s,MS5.3
KMI LR LR
comp=E,1µm,16.3s,MS5.3
KMI LR LR
comp=Z,1µm,20.4s,MS5.1
ACSO Alum Creek Sta 63.47 58 PFAKE 12 41 30.0 +13
ACSO LR LR
comp=Z,4µm,22.0s,MS5.5
ERPA Erie 63.69 55 PFAKE 12 41 30.0 +12
ERPA LR LR
comp=Z,4µm,19.0s,MS5.6
WVT Waverly 63.71 65 *e*P P **12 41 18.0 -0.6**
WVT pmax pmax
comp=Z,37nm,1.1s,mb5.3
WVT MLR MLR
comp=Z,3µm,19.0s,MS5.5
WVT Waverly 63.71 65 *e*P P **12 41 18.0 -0.6**
comp=Z,37nm,1.1s,mb5.3
WVT LR LR
comp=Z,3µm,19.0s,MS5.5
JOF Joensuu 63.74 345 *e*p P **12 41 17.4 -0.9**
comp=Z,3.8nm,0.3s,mb4.9
JOF Joensuu 63.74 345 *e*P P **12 41 17.4 -0.9**
JOF pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KVTX Kingsville 63.84 78 PFAKE 12 41 30.0 +10
KVTX LR LR
comp=Z,3µm,20.0s,MS5.5
OXF Oxford 63.95 67 *e*P P **12 41 19.6 -0.6**
OXF pmax pmax
comp=Z,103nm,1.0s,mb5.8
OXF MLR MLR
comp=Z,3µm,20.0s,MS5.4
OXF Oxford 63.95 67 *e*P P **12 41 19.6 -0.6**
comp=Z,103nm,1.0s,mb5.8
OXF LR LR
comp=Z,3µm,20.0s,MS5.4
KLMR Klimovskoe 64.08 340 *e*P P **12 41 20.1 -0.5**
KLMR pmax pmax
comp=Z,93nm,0.9s,mb5.8
LONY Lake Ozonia 64.57 50 PFAKE 12 41 40.0 +16
LONY LR LR
comp=Z,3µm,20.0s,MS5.5
VBMS Vicksburg 64.94 69 PFAKE 12 41 40.0 +13
VBMS LR LR
comp=Z,2µm,21.0s,MS5.4
AFI Afiamalu 65.11 172 PFAKE 12 41 40.0 +12
AFI LR LR
comp=Z,2µm,21.0s,MS5.3
KAF Kangasniemi 65.26 347 *e*p P **12 41 27.1 -1.2**
comp=Z,4.0nm,0.3s,mb4.9,baz=14,slow=5.8
KAF Kangasniemi 65.26 347 *e*P P **12 41 27.1 -1.2**
KAF pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
MCWV Mont Chateau 65.55 57 PFAKE 12 41 40.0 +9.5
MCWV LR LR
comp=Z,4µm,19.0s,MS5.6
BINY Binghamton 65.67 53 *e*P P **12 41 30.6 -0.6**
comp=Z,31nm,1.0s,mb5.3
BINY LR LR
comp=Z,4µm,22.0s,MS5.6
TZTN Tazewell 65.81 61 *e*P P **12 41 32.0 -0.2**
comp=Z,93nm,1.3s,mb5.7
SSPA Standing Stone 65.85 55 PFAKE 12 41 40.0 +7.5
SSPA LR LR
comp=Z,2µm,20.0s,MS5.4
TKM2 Tokmak 2 66.02 309 P P **12 41 34.2 +0.7**
SNR=42

TKM2 Tokmak 2 66.02 309 *i* P **P** **12 41 34.0 +0.5**
LBNH Lisbon 66.12 49 PFAKE 12 41 50.0 +16
LBNH LR LR
comp=Z,3µm,20.0s,MS5.5
ULHL Ulahol 66.20 308 P **P** **12 41 36.3 +1.6**
SNR=11
USP Ospenovka 66.29 310 P **P** **12 41 36.0 +0.7**
SNR=93
TKL Tuckaleechee C 66.33 62 P **P** **12 41 35.1 -0.5**
comp=Z,53nm,0.9s,mb5.5,baz=297,slow=3.1,SNR=46
TKL Tuckaleechee C 66.33 62 *e*P **P** **12 41 35.2 -0.4**
CHMS Chumysh 66.37 310 P **P** **12 41 37.3 +1.6**
SNR=22
LRAL Lakeview Retre 66.41 66 *e*P **P** **12 41 35.0 -1.1**
comp=Z,25nm,0.9s,mb5.2
LRAL LR LR
comp=Z,3µm,20.0s,MS5.5
KBK Karagaybulak 66.53 309 P **P** **12 41 38.5 +1.7**
SNR=47
PKME Peaks-Kenny Pk 66.56 46 PFAKE 12 41 50.0 +13
PKME LR LR
comp=Z,3µm,20.0s,MS5.5
AAK Ala-Archa 66.77 310 P **P** **12 41 39.8 +1.5**
comp=Z,436nm,0.8s,mb6.5,SNR=44
AAK Ala-Archa 66.77 310 *de*P **P** **12 41 38.1 -0.2**
AAK pmax pmax
comp=Z,81nm,1.6s,mb5.5
AAK Ala-Archa 66.77 310 P **P** **12 41 38.3 0.0**
SNR=45
AAK Ala-Archa 66.77 310 *e*P **P** **12 41 38.2 -0.1**
AAK LR LR
comp=Z,1µm,21.0s,MS5.2
KZA Kyzart 66.82 309 P **P** **12 41 40.8 +2.1**
SNR=33
PMG Port Moresby 66.93 216 PFAKE 12 41 50.0 +10
PMG LR LR
comp=Z,2µm,21.0s,MS5.3
BLA Blacksburg 67.04 59 *e*P **P** **12 41 40.0 -0.1**
BLA pmax pmax
comp=Z,52nm,1.3s,mb5.4
BLA MLR MLR
comp=Z,3µm,22.0s,MS5.4
BLA Blacksburg 67.04 59 *e*P **P** **12 41 40.0 0.0**
comp=Z,52nm,1.3s,mb5.4
BLA LR LR
comp=Z,3µm,22.0s,MS5.4
UCH Uchtor 67.07 309 P **P** **12 41 42.9 +2.7**
SNR=5.8
EKS2 Erkin-Say 67.10 310 P **P** **12 41 42.3 +2.0**
SNR=5.7
LSA Lhasa 67.22 289 P **P** **12 41 43.0 +1.6**
LSA Lhasa 67.22 289 *e*P **P** **12 41 43.2 +1.8**
LSA pmax pmax
comp=Z,39nm,0.8s,mb5.5
LSA MLR MLR
comp=Z,2µm,21.0s,MS5.2
LSA Lhasa 67.22 289 *e*P **P** **12 41 43.2 +1.8**
comp=Z,39nm,0.8s,mb5.5
LSA LR LR
comp=Z,2µm,21.0s,MS5.2
AML Almayashu 67.54 310 P **P** **12 41 44.7 +1.5**
SNR=58
AKTK Aktyubinsk 67.69 324 *i* P **P** **12 41 43.4 -0.6**
AKTO Aktyubinsk 67.69 324 *i* P **P** **12 41 43.3 -0.7**
AKTO pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
NB2 NORSAR Subarra 67.84 354 P **P** **12 41 44.1 -0.7**
comp=Z,54nm,1.1s,mb5.5,baz=6.9,slow=6.5
NOA NORSAR Array B 67.84 354 P **P** **12 41 44.4 -0.4**
comp=Z,34nm,1.0s,mb5.3,baz=6.3,slow=6.3,SNR=29
NOA NORSAR Array B 67.84 354 P **P** **12 41 44.4 -0.4**
NOA pmax pmax
comp=Z,34nm,1.0s
BRAL Brewton 67.85 68 PFAKE 12 42 00.0 +15
BRAL LR LR
comp=Z,3µm,20.0s,MS5.6
CBN Corbin 67.92 56 PFAKE 12 42 00.0 +14
CBN LR LR
comp=Z,3µm,21.0s,MS5.5
AB31 Akbulak array 67.93 323 P **P** **12 41 44.9 -0.6**
AB31 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
GOGA Godfrey 68.15 64 *e*P **P** **12 41 46.2 -1.0**
GOGA pmax pmax
comp=Z,47nm,0.9s,mb5.5
GOGA MLR MLR
comp=Z,3µm,19.0s,MS5.6
GOGA Godfrey 68.15 64 *e*P **P** **12 41 46.2 -1.0**
comp=Z,47nm,0.9s,mb5.5
GOGA LR LR
comp=Z,3µm,19.0s,MS5.6
KK31 Karatay Array 68.31 312 *i* P **P** **12 41 47.8 -0.2**
KK31 pmax pmax
comp=Z,55nm,0.8s,mb5.6
KK31 Karatay Array 68.31 312 *i* P **P** **12 41 47.9 -0.1**
KSH Kashi 68.39 306 P **P** **12 41 50.3 +1.8**
KSH PCP PcP 12 42 16.4 +2.7
KSH PP PP 12 44 23.0 +3.7
KSH SCP 12 46 14.1
KSH PCS 12 46 19.3
KSH S S 12 50 44.5 -1.8
KSH SCS ScS 12 51 42.4 -1.8
KSH SS SS 12 55 10.0 +0.5
KSH AMB AMB
comp=Z,596nm,2.4s,mb6.2
KSH LR LR
comp=N,2µm,9.0s
KSH LR LR
comp=E,2µm,6.2s
KSH LR LR
comp=Z,3µm,19.3s,MS5.5
VSU Vasula 68.70 346 *c i*P **P** **12 41 49.6 -0.5**
VSU pmax pmax
comp=Z,131nm,0.9s,mb5.9
VSU Vasula 68.70 346 ⇑*i*P **P** **12 41 49.7 -0.4**
CHRT Chiangrai 69.15 276 ⇑P **P** **12 41 54.0 +0.5**
comp=Z,105nm,1.0s,mb5.7
MOS Moscow 69.16 339 *e*P **P** **12 41 52.5 -0.6**
MOS pmax pmax
comp=Z,216nm,0.9s,mb6.1
MOS Moscow 69.16 339 *e*P **P** **12 41 52.7 -0.4**
KONO Kongsberg 69.32 355 ⇓*e*P **P** **12 41 53.4 -0.6**
KONO Kongsberg 69.32 355 *e*P **P** **12 41 54.0 0.0**
comp=Z,43nm,1.0s,mb5.3
KONO LR LR
comp=Z,2µm,20.0s,MS5.2
SHL Shillong 69.81 286 ⇑*i*P **P** **12 41 57.5 -0.1**
SHL *ex* x 12 51 06.0
CNNC Cliffs of the 69.87 59 PFAKE 12 42 10.0 +12
CNNC LR LR
comp=Z,3µm,19.0s,MS5.5
OBN Obninsk 69.97 339 *c i*P **P** **12 41 57.7 -0.4**
OBN pmax pmax
comp=Z,173nm,0.9s,mb6.0
OBN Obninsk 69.97 339 ⇑*i*P **P** **12 41 57.8 -0.3**
OBN LR LR
comp=Z,2µm,19.0s,MS5.3
NHSC New Hope 70.22 62 *e*P **P** **12 42 00.5 +0.6**
comp=Z,142nm,1.0s,mb5.8
NHSC *ep*P pP 12 42 04.8 -8.4
NHSC LR LR
comp=Z,2µm,21.0s,MS5.4
CHG Chiang Mai 70.46 276 ⇑P **P** **12 42 00.8 -0.8**
comp=Z,18nm,0.9s,mb5.0
CHTO Chiang Mai 70.46 276 P **P** **12 42 01.3 -0.4**
SNR=6.9
CHTO Chiang Mai 70.46 276 *e*P **P** **12 42 00.9 -0.7**
comp=Z,19nm,1.1s,mb4.9
CHTO *e*PP PP 12 44 38.5 +0.7
CHTO LR LR
comp=Z,1µm,20.0s,MS5.1
CM31 Chiang Mai Arr 70.73 276 PFAKE 12 42 10.0 +6.8
CM31 LR LR
comp=Z,953nm,20.0s,MS5.0
CMAR Chiang Mai Arr 70.73 276 P **P** **12 42 02.8 -0.5**
comp=Z,111nm,0.9s,mb4.8,baz=26,slow=6.9,SNR=64
CMAR Chiang Mai Arr 70.73 276 *i* P **P** **12 42 02.7 -0.5**
CMAR pmax pmax
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 70.73 276 *i* P **P** **12 42 02.8 -0.4**
TAPN Taplejung 70.99 290 *e*P **P** **12 42 05.6 +0.8**
comp=Z,496nm,1.2s,mb6.3
ODAN Odare 71.55 290 *e*P **P** **12 42 08.7 +0.6**
comp=Z,110nm,0.9s,mb5.8
GUN Gumba 71.65 292 *e*P **P** **12 42 09.8 +1.1**
comp=Z,405nm,1.0s,mb6.3

JIRN Jiri 71.66 291 *e*P **P** **12 42 09.9 +1.1**
comp=Z,270nm,0.9s,mb6.2
RAMN Ramite 71.95 291 *e*P **P** **12 42 11.2 +0.7**
comp=Z,339nm,0.9s,mb6.3
KKN Kakani 72.09 292 *e*P **P** **12 42 12.3 +0.9**
comp=Z,129nm,0.8s,mb5.9
KKN Kakani 72.09 292 *e*P **P** **12 42 12.3 +0.9**
KKN pmax pmax
comp=Z,129nm,0.8s,mb5.9
PKI Pulchoki 72.18 292 *e*P **P** **12 42 12.6 +0.7**
comp=Z,154nm,1.0s,mb5.9
PKI Pulchoki 72.18 292 *e*P **P** **12 42 12.6 +0.7**
PKI pmax pmax
comp=Z,154nm,1.0s,mb5.9
MNK Minsk 72.31 344 *e*P **P** **12 42 11.0 -1.2**
MNK pmax pmax
comp=Z,530nm,0.8s,mb6.5
GKN Gorkha 72.31 293 *e*P **P** **12 42 13.2 +0.5**
comp=Z,183nm,1.0s,mb6.0
DMN Daman 72.33 292 *e*P **P** **12 42 13.8 +1.0**
comp=Z,142nm,1.0s,mb5.9
VRHR Novokhopersk 72.38 334 *e*P **P** **12 42 12.1 -0.6**
VRHR pmax pmax
comp=Z,50nm,1.1s,mb5.4
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.7s
DANN Dangsing 72.56 293 *e*P **P** **12 42 15.0 +0.9**
comp=E,219nm,0.8s,mb6.1
VSR Storozhevoye 72.92 336 *e*P **P** **12 42 15.4 -0.5**
VSR pmax pmax
comp=Z,20nm,1.1s,mb5.0
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,20nm,1.1s
KOLN Koldanda 73.08 293 *e*P **P** **12 42 17.9 +0.6**
comp=E,115nm,1.0s,mb5.8
COP Copenhagen 73.09 353 *i* P **P** **12 42 17.0 +0.2**
COP pmax pmax
comp=Z,33nm,0.9s,mb5.3
COP Copenhagen 73.09 353 *i* P **P** **12 42 17.0 +0.2**
comp=Z,33nm,0.9s,mb5.3
VORD Divnogorie 73.12 336 *e*P **P** **12 42 16.4 -0.7**
VORD pmax pmax
comp=Z,60nm,1.0s,mb5.5
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=E,20nm,0.7s
DWPF Disney 73.27 66 PFAKE 12 42 30.0 +12
DWPF LR LR
comp=Z,2µm,20.0s,MS5.4
CMIG Matias Romero 73.41 83 P **P** **12 42 18.6 -0.7**
comp=Z,7.3nm,0.9s,mb4.6,baz=329,slow=6.7,SNR=7.3
BSD Bornholm Skovb 73.44 352 ⇓*i*P **P** **12 42 18.3 -0.6**
BSD pmax pmax
comp=Z,32nm,0.9s,mb5.2
BSD Bornholm Skovb 73.44 352 ⇑*i*P **P** **12 42 18.3 -0.6**
comp=Z,32nm,0.9s,mb5.2
SUW Suwalki 73.53 346 *e*P **P** **12 42 18.7 -0.8**
SUW Suwalki 73.53 346 P **P** **12 42 18.3 -1.2**
SUW pmax pmax
comp=Z,120nm,0.8s,mb5.9
SUW Suwalki 73.53 346 *e*P **P** **12 42 18.7 -0.8**
comp=Z,6.8nm,1.0s,mb4.5
ESK Eskdalemuir 73.85 2 *e*P **P** **12 42 21.3 0.0**
ESK pmax pmax
comp=Z,35nm,1.1s,mb5.2
ESK MLR MLR
comp=Z,2µm,20.0s,MS5.3
ESK Eskdalemuir 73.85 2 *e*P **P** **12 42 21.3 -0.1**
comp=Z,35nm,1.1s,mb5.2
ESK LR LR
comp=Z,2µm,20.0s,MS5.3
THN Thein Dam 73.93 302 *e*P **P** **12 42 21.1 -1.1**
RAR Rarotonga 74.07 161 PFAKE 12 42 30.0 +7.1
RAR LR LR
comp=Z,2µm,19.0s,MS5.4
SMLA Simla 74.15 300 *e*P **P** **12 42 23.6 +0.1**
SMLA AMb AMB 12 42 26.3
comp=Z,192nm,1.9s,mb5.7
DDI Dehra Dun 74.28 299 *ex* x 12 42 19.0
NIL Nilore 74.29 304 PFAKE 12 42 40.0 +16
NIL LR LR
comp=Z,157nm,21.0s,MS4.3
BOK Bokaro 74.74 289 *e*P **P** **12 42 26.7 -0.3**
BOK AMb AMB 12 42 28.7
comp=Z,52nm,1.0s,mb5.4
BSEG Bad Segeberg 74.98 354 *e*P **P** **12 42 27.9 0.0**
BSEG pmax pmax
comp=Z,109nm,1.0s,mb5.7
BSEG Bad Segeberg 74.98 354 *e*P **P** **12 42 27.9 0.0**
comp=Z,109nm,1.0s,mb5.7
GKP Gorka Klasztor 75.03 350 *e*P **P** **12 42 28.2 +0.1**
GKP Gorka Klasztor 75.03 350 *e*P **P** **12 42 28.3 +0.1**
TEIG Tepich 75.14 76 PFAKE 12 42 40.0 +11
TEIG LR LR
comp=Z,2µm,21.0s,MS5.3
AKASG Malin Array Be 75.67 342 P **P** **12 42 31.5 -0.4**
comp=Z,70nm,0.5s,mb5.8,baz=20,slow=5.8,SNR=112
AKBB Malin Array Si 75.67 342 *e*P **P** **12 42 31.5 -0.4**
KIEV Kiev 75.68 342 P **P** **12 42 31.5 -0.5**
KIEV pmax pmax
comp=Z,120nm,0.8s,mb5.9
KIEV Kiev 75.68 342 *e*P **P** **12 42 31.4 -0.5**
comp=Z,125nm,0.8s,mb5.9
KIEV LR LR
comp=Z,2µm,21.0s,MS5.3
KBL Kabul 75.73 308 *e*P **P** **12 42 32.3 -0.3**
KBL pmax pmax
comp=Z,155nm,0.9s,mb5.9
KBL Kabul 75.73 308 *e*P **P** **12 42 32.3 -0.3**
comp=Z,155nm,0.9s,mb5.9
NDI New Delhi 76.01 298 *e*P **P** **12 42 32.5 -1.7**
RUE Ruedersdorf 76.16 352 *e*P **P** **12 42 34.6 -0.1**
comp=Z,85nm,1.2s,mb5.5
KAPI Kappang 76.28 244 P **P** **12 42 34.1 -1.8**
comp=Z,11nm,0.9s,mb4.8,baz=180,slow=4.0,SNR=3.1
KAPI Kappang 76.28 244 P **P** **12 42 34.1 -1.8**
KAPI LR LR
comp=Z,738nm,19.0s,MS5.0
WIT Witteveen 76.29 356 *e*P **P** **12 42 36.4 +1.0**
NRDL Niedersach Rie 76.43 354 *e*P **P** **12 42 35.7 -0.5**
comp=Z,62nm,1.0s,mb5.5
IBBN Ibbenburen 76.75 356 *e*P **P** **12 42 38.0 0.0**
comp=Z,142nm,1.0s,mb5.8
CLZ Clausthal 77.06 354 *e*P **P** **12 42 39.8 0.0**
CLZ pmax pmax
comp=Z,94nm,1.1s,mb5.6
CLZ Clausthal 77.06 354 *e*P **P** **12 42 39.8 0.0**
comp=Z,94nm,1.1s,mb5.6
CTAO Charters Tower 77.12 213 PFAKE 12 42 50.0 +10
CTAO LR LR
comp=Z,2µm,20.0s,MS5.4
WTSB Winterswijk 77.13 356 *e*P **P** **12 42 40.1 -0.1**
comp=Z,50nm,1.0s,mb5.4
CLL Collm 77.39 352 ⇑*i*P **P** **12 42 41.0 -0.6**
CLL *i* *PP pP 12 42 55.4 +0.4
CLL pmax pmax
comp=Z,35nm,1.0s,mb5.2
CLL MLR MLR
comp=Z,2µm,20.8s,MS5.3
CLL Collm 77.39 352 *e*P **P** **12 42 40.7 -0.9**
comp=Z,35nm,1.0s,mb5.2
CLL Collm 77.39 352 ⇑*i*P **P** **12 42 41.0 -0.6**
comp=Z,35nm,1.0s,mb5.2
CLL *ep*P pP 12 42 45.0 -10
CLL *i* pPcP pP 12 42 55.4 +0.4
CLL Collm 77.39 352 ⇑*i*P **P** **12 42 41.0 -0.6**
comp=Z,35nm,1.0s,mb5.2
CLL *e* 12 42 45.0
CLL *i* pP pP 12 42 55.4 +0.4
CLL LR LR
comp=Z,2µm,20.8s,MS5.3
GOF Gofitskoye 77.41 331 ⇑*i*P pP 12 42 54.0 -1.2
GOF pmax pmax
comp=Z,180nm,1.2s,mb5.9
LVV L'vov 77.46 345 *e*P **P** **12 42 41.9 -0.1**
KSP Ksiaz 77.52 350 *e*P **P** **12 42 42.6 +0.2**
KSP Ksiaz 77.52 350 ⇓*e*P **P** **12 42 42.0 -0.4**
KSP *ep*P pP 12 42 45.7 -10
BUG Bochum--Univer 77.63 356 *e*P **P** **12 42 42.5 -0.5**
comp=Z,70nm,1.2s,mb5.5
OJC Ojcow 77.71 348 *e*P **P** **12 42 43.6 +0.2**

BRG Berggiesshubel 77.73 351 ⇑*i*P **P** **12 42 43.1 -0.5**
BRG *e* pP 12 42 57.5 +0.6
BRG pmax pmax
comp=Z,16nm,0.9s,mb5.0
BRG Berggiesshubel 77.73 351 *e*P **P** **12 42 42.8 -0.8**
comp=Z,33nm,1.0s,mb5.2
BRG Berggiesshubel 77.73 351 ⇑*i*P **P** **12 42 43.1 -0.4**
comp=Z,27nm,0.9s,mb5.2
BRG *e* 12 42 48.5
comp=Z,17nm,1.0s
BRG *e* pP 12 42 57.5 +0.6
comp=Z,9.0nm,0.8s
KWP Kalwaria 77.86 346 *e*P **P** **12 42 45.0 +0.7**
KWP Kalwaria 77.86 346 P **P** **12 42 44.7 +0.4**
KWP pmax pmax
comp=Z,200nm,0.8s,mb6.1
KWP Kalwaria 77.86 346 ⇓*i*P **P** **12 42 44.8 +0.5**
KWP Kalwaria 77.86 346 *e*P **P** **12 42 45.0 +0.7**
KWP LR LR
comp=Z,2µm,20.0s,MS5.4
UPC Upice 77.89 350 *e*P **P** **12 42 44.5 +0.1**
UPC *ep*P pP 12 42 47.9 -10
DPC Dobruska-Polom 78.01 350 *e*P **P** **12 42 45.4 +0.3**
PVCC Panska Ves 78.01 351 *e*P **P** **12 42 45.3 +0.2**
UBBA Unterbreizbach 78.10 354 *e*P **P** **12 42 45.2 -0.4**
comp=Z,34nm,1.4s,mb5.1
MOX Moxa 78.16 353 *e*P **P** **12 42 45.7 -0.2**
comp=Z,49nm,1.2s,mb5.3
MOX Moxa 78.16 353 *e*P **P** **12 42 45.7 -0.2**
MOX pmax pmax
comp=Z,49nm,1.2s,mb5.3
MOX Moxa 78.16 353 *e*P **P** **12 42 45.4 -0.5**
comp=Z,41nm,1.0s,mb5.3
STHS Stebnicka Huta 78.29 346 *i* P **P** **12 42 47.4 +0.8**
STHS pmax pmax
comp=Z,51nm,1.0s,mb5.4
STHS Stebnicka Huta 78.29 346 *i* P **P** **12 42 47.4 +0.8**
comp=Z,51nm,1.0s,mb5.4
OKC Ostrava-Krasne 78.30 349 *e*P **P** **12 42 47.0 +0.3**
TANN Tannenbergstha 78.32 352 *e*P **P** **12 42 46.5 -0.3**
comp=Z,40nm,1.4s,mb5.2
BEBN Eben Emael 78.34 357 P **P** **12 42 47.1 +0.2**
comp=Z,14nm,1.1s,mb4.8
HGN Heimansgroeve 78.37 357 *e*P **P** **12 42 47.1 0.0**
comp=Z,75nm,1.0s,mb5.6
UCC Uccle 78.38 358 P **P** **12 42 47.1 0.0**
comp=Z,26nm,1.1s,mb5.1
NIE Niedzica 78.42 347 *e*P **P** **12 42 48.2 +0.8**
NKC Novy Kostel 78.50 352 *e*P **P** **12 42 48.0 +0.2**
NKC *ep*P pP 12 42 51.6 -10
KIV Kislovodsk 78.52 330 P **P** **12 42 48.8 +0.8**
SNR=5.6
KIV Kislovodsk 78.52 330 *e*P **P** **12 42 48.4 +0.4**
KIV pmax pmax
comp=Z,48nm,1.1s,mb5.3
KIV MLR MLR
comp=Z,757nm,18.0s,MS5.1
KIV Kislovodsk 78.52 330 ⇑*i*P **P** **12 42 48.3 +0.3**
KIV LR LR
comp=Z,1µm,20.0s,MS5.2
MEM Membach 78.52 357 P **P** **12 42 48.2 +0.3**
comp=Z,42nm,1.0s,mb5.3
PRU Pruhonice 78.55 351 *e*P **P** **12 42 47.8 -0.3**
SNF Seneffe 78.67 358 P **P** **12 42 48.8 +0.1**
comp=Z,29nm,1.3s,mb5.0
BCLA Clavier 78.73 357 P **P** **12 42 49.0 0.0**
comp=Z,28nm,1.0s,mb5.1
CRVS Cervenica-Dubn 78.75 346 *i* P **P** **12 42 49.5 +0.3**
CRVS pmax pmax
comp=Z,41nm,0.9s,mb5.4
CRVS Cervenica-Dubn 78.75 346 *i* P **P** **12 42 49.5 +0.3**
comp=Z,41nm,0.9s,mb5.4
MANZ Manzenberg 78.77 353 *e*P **P** **12 42 48.7 -0.6**
comp=Z,21nm,0.9s,mb5.1
TNS Taunus Mts 78.79 355 *e*P **P** **12 42 49.0 -0.4**
TNS pmax pmax
comp=Z,46nm,1.0s,mb5.4
TNS Taunus Mts 78.79 355 *e*P **P** **12 42 49.0 -0.4**
comp=Z,46nm,1.0s,mb5.4
UZH Uzhgorod 78.89 346 *e*P **P** **12 42 49.5 -0.5**
UZH *i* pP 12 43 01.0 -2.4
UZH *i* 12 43 09.5
BBSR BB Station 78.93 52 PFAKE 12 43 00.0 +9.5
BBSR LR LR
comp=Z,2µm,20.0s,MS5.5
ROTZ Rotzenmuhle 78.98 352 *e*P **P** **12 42 50.3 -0.2**
comp=Z,41nm,1.2s,mb5.2
VRAC Vranov 79.00 349 ⇓*i*P **P** **12 42 51.2 +0.6**
VRAC Vranov 79.00 349 P **P** **12 42 51.3 +0.7**
GIVF Givet 79.06 357 ⇑*i*P **P** **12 42 50.8 -0.1**
comp=Z,90nm,1.0s,mb5.3
GIVF Givet 79.06 357 ⇑*i*P **P** **12 42 50.8 -0.1**
GIVF pmax pmax
comp=Z,45nm,1.0s,mb5.3
GIVF Givet 79.06 357 ⇑*i*P **P** **12 42 50.8 -0.1**
comp=Z,45nm,1.0s,mb5.3
DOU Dourbes 79.08 357 P **P** **12 42 51.1 +0.1**
comp=Z,30nm,1.3s,mb5.1
BAIF Baives 79.12 358 ⇑*i*P **P** **12 42 51.4 +0.2**
comp=Z,142nm,1.0s,mb5.6
BAIF Baives 79.12 358 ⇑*i*P **P** **12 42 51.4 +0.2**
BAIF pmax pmax
comp=Z,71nm,1.0s,mb5.5
BAIF Baives 79.12 358 ⇑*i*P **P** **12 42 51.4 +0.2**
comp=Z,71nm,1.0s,mb5.5
GRA1 Grafenberg Arr 79.14 353 *e*P **P** **12 42 51.2 -0.1**
comp=Z,90nm,1.1s,mb5.6
GRF Grafenberg Arr 79.14 353 *e*P **P** **12 42 51.2 -0.1**
GRF pmax pmax
comp=Z,90nm,1.1s,mb5.6
GRF Grafenberg Arr 79.14 353 *e*P **P** **12 42 51.2 -0.1**
GRF pmax pmax
comp=Z,90nm,1.1s,mb5.6
GRF Grafenberg Arr 79.14 353 *e*P **P** **12 42 51.2 -0.1**
comp=Z,90nm,1.1s,mb5.6
TREC Trest 79.14 350 *e*P **P** **12 42 51.6 +0.3**
AJM Ajmer 79.15 299 *e*P **P** **12 42 51.1 -0.7**
AJM AMb AMB 12 42 54.6
comp=Z,52nm,1.5s,mb5.2
ABH Alteburg 79.18 355 *e*P **P** **12 42 51.4 -0.1**
ANN Anapa 79.28 334 *e*P **P** **12 42 48.6 -3.6**
ANN *e**PP pP 12 43 02.0 -3.6
ANN *e* 12 45 46.8
ANN *eS* S 12 52 44.1 -4.6
ANN *eSSS* 13 01 16.2
ANN pmax pmax
comp=Z,99nm,1.4s,mb5.5
ANN pmax pmax
comp=N,42nm,0.7s
ANN pmax pmax
comp=E,34nm,1.5s
ANN MLR MLR
comp=Z,946nm,21.0s,MS5.1
KIS Kishinev 79.28 341 *e*UNK 12 43 51.5
KIS XM 12 43 53.0
comp=Z,300nm,1.4s
KECS Kecovo 79.31 347 *e*P **P** **12 42 52.6 +0.3**
KECS *e* pP 12 43 04.9 -0.8
KECS pmax pmax
comp=Z,36nm,1.0s,mb5.3
KECS Kecovo 79.31 347 *e*P **P** **12 42 52.6 +0.3**
comp=Z,36nm,1.0s,mb5.3
KECS *e* pP 12 43 04.9 -0.8
IAS Iasi 79.35 342 P **P** **12 42 53.3 +0.8**
BUR08 Bucovina Ar. S 79.36 343 *e*P **P** **12 42 53.2 +0.7**
RUP Ruppelstein 79.38 356 *e*P **P** **12 42 52.7 +0.1**
BURAR Bucovina Array 79.38 343 ⇑*i*P **P** **12 42 53.2 +0.5**
TOD Tromm 79.39 355 *e*P **P** **12 42 52.5 -0.2**
WLF Walferdange 79.46 356 P **P** **12 42 53.7 +0.6**
comp=Z,26nm,1.2s,mb5.0
WLF Walferdange 79.46 356 *e*P **P** **12 42 53.2 +0.1**
WLF pmax pmax
comp=Z,35nm,0.9s,mb5.3
WLF MLR MLR
comp=Z,2µm,21.0s,MS5.5
WLF Walferdange 79.46 356 *e*P **P** **12 42 53.0 -0.1**
comp=Z,44nm,1.0s,mb5.3
WLF Walferdange 79.46 356 *e*P **P** **12 42 53.2 +0.2**
comp=Z,35nm,0.9s,mb5.3
WLF LR LR
comp=Z,2µm,21.0s,MS5.5
KHC Kasperske Hory 79.49 351 *c i*P **P** **12 42 53.4 +0.1**
KHC Kasperske Hory 79.49 351 *e*P **P** **12 42 53.6 +0.3**
KHC *ep*P pP 12 42 57.1 -10
KOLL Kolacno 79.50 348 *e*P **P** **12 42 53.6 +0.3**

KOLL Kolacno 79.50 348 *eP* **P 12 42 53.7 +0.4**
VYHS Vyhne 79.53 348 *i* P **P 12 42 53.8 +0.3**
VYHS pmax pmax
comp=Z,27nm,1.1s,mb5.1
VYHS Vyhne 79.53 348 *i* P **P 12 42 53.8 +0.3**
comp=Z,27nm,1.1s,mb5.1
WET Wettzell 79.54 352 *eP* **P 12 42 53.3 -0.2**
WET pmax pmax
comp=Z,33nm,1.3s,mb5.1
WET Wettzell 79.54 352 *eP* **P 12 42 53.3 -0.2**
comp=Z,33nm,1.3s,mb5.1
BMR Baia Mare 79.63 345 P **P 12 42 55.2 +1.2**
SOC Sochi 79.75 332 *eP* **P 12 42 53.6 -1.2**
SOC pmax pmax
comp=Z,921nm,0.9s,mb6.7
GEC2 GERESS Array S 79.76 351 *eP* **P 12 42 54.3 -0.4**
GEC2 pmax pmax
comp=Z,29nm,1.2s,mb5.1
GEC2 GERESS Array S 79.76 351 *eP* **P 12 42 54.3 -0.4**
comp=Z,29nm,1.2s,mb5.1
GERES GERESS Array B 79.76 351 P **P 12 42 54.5 -0.3**
comp=Z,12nm,0.8s,mb4.9,baz=27,slow=4.6,SNR=64
PSZ Piszkesteto 79.94 347 P **P 12 42 56.6 +0.9**
PSZ pmax pmax
comp=Z,77nm,1.1s,mb5.5
PSZ Piszkesteto 79.94 347⇑ *iP* **P 12 42 56.4 +0.7**
PSZ Piszkesteto 79.94 347 P **P 12 42 56.7 +1.0**
PSZ LR LR
comp=Z,1μm,21.0s,MS5.2
SIM Simferopol' 80.01 337 *eP* **P 12 42 54.0 -2.1**
SIM pmax pmax
comp=Z,23nm,0.8s,mb5.2
ZST Bratislava 80.04 349 *eP* **P 12 42 57.2 +1.0**
ZST *e* pP 12 43 11.3 +1.7
ZST pmax pmax
comp=Z,51nm,1.1s,mb5.4
ZST Bratislava 80.04 349 *eP* **P 12 42 57.2 +1.0**
comp=Z,51nm,1.1s,mb5.4
ZST *e* pP 12 43 11.3 +1.7
RAO Raoul Island 80.06 179 PFAKE 12 43 10.0 +14
RAO LR LR
comp=Z,2μm,21.0s,MS5.5
LANF Langenberg 80.06 355 *eP* **P 12 42 56.4 0.0**
BHPL Bhopal 80.11 295 *eP* **P 12 42 56.8 -0.2**
BHPL AMb AMB 12 42 58.0
comp=Z,80nm,0.9s,mb5.7
STU Stuttgart 80.19 354 *eP* **P 12 42 56.9 -0.2**
STU pmax pmax
comp=Z,22nm,0.9s,mb5.1
STU Stuttgart 80.19 354 *eP* **P 12 42 56.5 -0.6**
comp=Z,36nm,0.9s,mb5.3
STU Stuttgart 80.19 354 *eP* **P 12 42 56.9 -0.1**
comp=Z,22nm,0.9s,mb5.1
CONA Conrad Observa 80.45 350 *i* pP **P 12 42 58.9 +0.5**
comp=Z,50nm,1.1s,mb5.4,SNR=19
CSNA Conrad Observa 80.45 350⇑ *ipP* **P 12 42 59.0 +0.6**
comp=Z,49nm,1.1s,mb5.4
TGUH Tegucigalpa,Un 80.45 80 *eP* **P 12 42 59.4 +0.4**
comp=Z,119nm,1.2s,mb5.7
TGUH LR LR
comp=Z,2μm,20.0s,MS5.3
FLN La Foliniere 80.46 1⇑ *iP* **P 12 42 58.0 -0.5**
comp=Z,208nm,1.2s,mb5.7
FLN La Foliniere 80.46 1⇑ *iP* **P 12 42 58.0 -0.5**
FLN pmax pmax
comp=Z,104nm,1.2s,mb5.6
FLN La Foliniere 80.46 1⇑ *iP* **P 12 42 58.0 -0.5**
comp=Z,104nm,1.2s,mb5.6
DRGR 80.61 345⇑ *iP* **P 12 42 59.7 +0.3**
DRGR 80.61 345 P **P 12 42 59.7 +0.4**
LDF La Druitiere 80.63 1⇑ *iP* **P 12 42 58.9 -0.5**
comp=Z,93nm,1.0s,mb5.4
LDF La Druitiere 80.63 1⇑ *iP* **P 12 42 58.9 -0.5**
LDF pmax pmax
comp=Z,46nm,1.0s,mb5.4
LDF La Druitiere 80.63 1⇑ *iP* **P 12 42 58.9 -0.5**
comp=Z,46nm,1.0s,mb5.4
FUR Furstenfeldbru 80.65 353 *eP* **P 12 42 59.2 -0.3**
FUR pmax pmax
comp=Z,65nm,1.2s,mb5.4
FUR Furstenfeldbru 80.65 353 *eP* **P 12 42 59.2 -0.3**
comp=Z,65nm,1.2s,mb5.4
CDF Champ du Feu 80.66 356⇑ *iP* **P 12 42 59.3 -0.3**
comp=Z,37nm,0.9s,mb5.0
CDF Champ du Feu 80.66 356⇑ *iP* **P 12 42 59.3 -0.3**
CDF pmax pmax
comp=Z,18nm,0.9s,mb5.0
CDF Champ du Feu 80.66 356⇑ *iP* **P 12 42 59.3 -0.3**
comp=Z,18nm,0.9s,mb5.0
MEZF Maizieres J'vi 80.66 357⇑ *iP* **P 12 42 59.7 +0.1**
comp=Z,116nm,1.0s,mb5.5
MEZF Maizieres J'vi 80.66 357⇑ *iP* **P 12 42 59.7 +0.1**
comp=Z,116nm,1.0s,mb5.8
BFO Black Forest 80.68 355 P **P 12 42 59.4 -0.3**
comp=Z,102nm,1.1s,mb5.7,SNR=5.6
BFO Black Forest 80.68 355 *eP* **P 12 42 59.5 -0.2**
BFO pmax pmax
comp=Z,17nm,0.9s,mb5.0
BFO MLR MLR
comp=Z,1μm,22.0s,MS5.3
BFO Black Forest 80.68 355 *eP* **P 12 42 59.2 -0.5**
comp=Z,30nm,1.2s,mb5.1
BFO Black Forest 80.68 355 *eP* **P 12 42 59.5 -0.2**
comp=Z,17nm,0.9s,mb5.0
BFO LR LR
comp=Z,1μm,22.0s,MS5.3
VRI Vrincioaia 80.78 342⇑ *iP* **P 12 43 00.9 +0.6**
NGP Nagpur 80.80 292 *eP* **P 12 42 59.2 -1.6**
NGP AMb AMB 12 43 00.5
comp=Z,60nm,1.6s,mb5.3
PLOR Plostina 80.81 342⇓ *iP* **P 12 43 01.2 +0.8**
GRR Gorron 80.83 1⇑ *iP* **P 12 43 00.2 -0.3**
comp=Z,126nm,1.0s,mb5.5
GRR Gorron 80.83 1⇑ *iP* **P 12 43 00.2 -0.3**
GRR pmax pmax
comp=Z,63nm,1.0s,mb5.5
GRR Gorron 80.83 1⇑ *iP* **P 12 43 00.2 -0.3**
comp=Z,63nm,1.0s,mb5.5
ROSF Rostrenen 80.83 3⇑ *iP* **P 12 43 00.4 -0.1**
comp=Z,210nm,1.3s,mb5.6
ROSF Rostrenen 80.83 3⇑ *iP* **P 12 43 00.4 -0.1**
ROSF pmax pmax
comp=Z,105nm,1.3s,mb5.6
ROSF Rostrenen 80.83 3⇑ *iP* **P 12 43 00.4 -0.1**
comp=Z,105nm,1.3s,mb5.6
ECH Echery 80.86 356 *eP* **P 12 43 00.5 -0.1**
SPAK Spaichingen-Ko 80.89 355 *eP* **P 12 43 00.7 -0.1**
THEF They Montfort 80.90 356 *eP* **P 12 43 00.9 0.0**
SGMF Saint Gilles 80.94 2⇑ *iP* **P 12 43 00.9 -0.2**
comp=Z,169nm,1.1s,mb5.6
SGMF Saint Gilles 80.94 2⇑ *iP* **P 12 43 00.9 -0.2**
SGMF pmax pmax
comp=Z,85nm,1.1s,mb5.6
SGMF Saint Gilles 80.94 2⇑ *iP* **P 12 43 00.9 -0.2**
comp=Z,84nm,1.1s,mb5.6
RJOB Jochberg 80.95 352 *eP* **P 12 43 00.8 -0.3**
comp=Z,24nm,0.8s,mb5.2
ARSA Arzberg 81.15 350⇑ *ipP* **P 12 43 02.9 +0.6**
comp=Z,38nm,1.1s,mb5.3,SNR=11
FELD Feldberg im Sc 81.16 355 *eP* **P 12 43 02.0 -0.2**
MOF Molkenrain 81.22 356 *eP* **P 12 43 02.2 -0.4**
QUIF Quistinic 81.26 3⇑ *iP* **P 12 43 02.6 -0.2**
comp=Z,84nm,1.0s,mb5.3
QUIF Quistinic 81.26 3⇑ *iP* **P 12 43 02.6 -0.2**
QUIF pmax pmax
comp=Z,42nm,1.0s,mb5.3
QUIF Quistinic 81.26 3⇑ *iP* **P 12 43 02.6 -0.2**
comp=Z,42nm,1.0s,mb5.3
GNI Garni 81.27 327⇑ *eP* **P 12 43 03.9 +0.9**
GNI MLR MLR
comp=Z,1μm,21.0s
HINF Hinteralfeld 81.27 356⇑ *iP* **P 12 43 02.4 -0.4**
comp=Z,31nm,1.0s,mb4.9
HINF Hinteralfeld 81.27 356⇑ *iP* **P 12 43 02.4 -0.4**
HINF pmax pmax
comp=Z,15nm,1.0s,mb4.9
HINF Hinteralfeld 81.27 356⇑ *iP* **P 12 43 02.4 -0.4**
comp=Z,15nm,1.0s,mb4.9
RETA Reutte 81.36 353⇑ *iP* **P 12 43 03.6 +0.2**
comp=Z,19nm,0.9s,mb5.0
WATA Walderalm 81.45 353⇑ *iP* **P 12 43 04.0 +0.2**
comp=Z,38nm,0.8s,mb5.3,SNR=8.7
MOTA Moosalm 81.48 353⇑ *iP* **P 12 43 04.1 +0.2**
comp=Z,48nm,1.1s,mb5.3
VOIR 81.52 343⇑ *iP* **P 12 43 05.2 +1.0**
VOIR 81.52 343 P **P 12 43 05.3 +1.1**

WTTA Wattenberg 81.52 352 *i* pP **P 12 43 04.6 +0.5**
comp=Z,73nm,1.1s,mb5.5,SNR=14
KBA Koelnbreinsper 81.55 351⇓ *ipP* **P 12 43 05.1 +0.8**
comp=Z,155nm,1.0s,mb5.9,SNR=34
WRAB Tennant Creek 81.62 223 *c iP* **P 12 43 02.7 -2.2**
WRAB Tennant Creek 81.62 223 *eP* **P 12 43 02.8 -2.1**
comp=Z,13nm,0.8s,mb4.9
WRAB LR LR
comp=Z,2μm,20.0s,MS5.4
DAVA Damuels 81.63 354⇑ *ipP* **P 12 43 05.8 +1.1**
comp=Z,25nm,1.2s,mb5.0
WB2 Warramunga Arr 81.63 223 *eP* **P 12 43 03.0 -1.9**
WRA Warramunga Arr 81.63 223 P **P 12 43 03.1 -1.8**
comp=Z,7.3nm,0.8s,mb4.7,baz=35,slow=6.2,SNR=44
LOMF Lomont 81.74 356 *eP* **P 12 43 05.5 +0.2**
SOKA Soboth 81.77 350⇑ *iP* **P 12 43 05.9 +0.4**
comp=Z,89nm,1.0s,mb5.6
TIRR Tirgusor 81.79 340⇑ *iP* **P 12 43 05.8 +0.2**
TIRR Tirgusor 81.79 340 P **P 12 43 06.2 +0.6**
PKSM Moragy 81.79 348 P **P 12 43 05.4 -0.2**
PERS Pernice 81.81 350 *i* P **P 12 43 06.1 +0.4**
FETA Feichten 81.83 353⇑ *iP* **P 12 43 06.1 +0.3**
comp=Z,49nm,1.1s,mb5.4,SNR=19
KOGS Kog 81.86 349 *i* P **P 12 43 06.3 +0.3**
LOR Lormes 81.92 358⇑ *iP* **P 12 43 06.1 -0.2**
comp=Z,82nm,1.1s,mb5.3
LOR Lormes 81.92 358⇑ *iP* **P 12 43 06.1 -0.2**
LOR pmax pmax
comp=Z,41nm,1.1s,mb5.3
LOR Lormes 81.92 358⇑ *iP* **P 12 43 06.1 -0.2**
comp=Z,41nm,1.1s,mb5.3
BZS Buzias 81.93 345⇓ *iP* **P 12 43 06.6 +0.2**
BZS Buzias 81.93 345 P **P 12 43 06.5 +0.2**
HYF Humbligny 81.95 359⇑ *iP* **P 12 43 06.5 +0.1**
ABTA Abfaltersbach 81.95 352⇑ *iP* **P 12 43 06.5 0.0**
comp=Z,46nm,1.0s,mb5.4,SNR=18
GZR Gura Zlata 81.96 344⇓ *iP* **P 12 43 07.3 +0.8**
GZR Gura Zlata 81.96 344 P **P 12 43 07.0 +0.5**
OBKA Obir 81.99 350⇓ *iP* **P 12 43 06.9 +0.2**
comp=Z,55nm,0.9s,mb5.5,SNR=11
DAVOX Davos/Dischmat 82.13 354 P **P 12 43 07.5 +0.2**
comp=Z,20nm,0.9s,mb5.1,baz=334,slow=7.7,SNR=24
SSF Saint Saulge 82.14 358⇑ *iP* **P 12 43 07.3 -0.1**
comp=Z,62nm,1.0s,mb5.2
SSF Saint Saulge 82.14 358⇑ *iP* **P 12 43 07.3 -0.1**
SSF pmax pmax
comp=Z,31nm,1.0s,mb5.2
SSF Saint Saulge 82.14 358⇑ *iP* **P 12 43 07.3 -0.1**
comp=Z,31nm,1.0s,mb5.2
AKL Akola 82.33 293 *eP* **P 12 43 08.8 -0.1**
AKL AMb AMB 12 43 11.6
comp=Z,68nm,1.4s,mb5.4
CADS Cadrg 82.35 351 *eP* **P 12 43 07.6 -1.0**
AVF Avril sur Loir 82.41 358⇑ *iP* **P 12 43 08.7 -0.2**
comp=Z,85nm,1.1s,mb5.3
AVF Avril sur Loir 82.41 358⇑ *iP* **P 12 43 08.7 -0.2**
AVF pmax pmax
comp=Z,42nm,1.1s,mb5.3
AVF Avril sur Loir 82.41 358⇑ *iP* **P 12 43 08.7 -0.2**
comp=Z,42nm,1.1s,mb5.3
LJU Ljubljana 82.45 350 *eP* **P 12 43 09.5 +0.4**
TUE Stuetta 82.47 354 *eP* **P 12 43 09.5 +0.3**
comp=Z,82nm,1.4s,mb5.5
TUE LR LR
comp=Z,2μm,21.0s,MS5.4
GCIS Gornji Cirnik 82.51 350 *i* P **P 12 43 09.3 0.0**
CABF La Chapelle 82.51 356⇑ *iP* **P 12 43 09.5 +0.1**
comp=Z,85nm,1.1s,mb5.4
CABF La Chapelle 82.51 356⇑ *iP* **P 12 43 09.5 +0.1**
CABF pmax pmax
comp=Z,43nm,1.1s,mb5.4
CABF La Chapelle 82.51 356⇑ *iP* **P 12 43 09.5 +0.1**
comp=Z,42nm,1.1s,mb5.4
SMF Signal de Mont 82.55 358⇑ *iP* **P 12 43 09.4 -0.2**
comp=Z,121nm,1.1s,mb5.6
SMF Signal de Mont 82.55 358⇑ *iP* **P 12 43 09.4 -0.2**
SMF pmax pmax
comp=Z,61nm,1.1s,mb5.5
SMF Signal de Mont 82.55 358⇑ *iP* **P 12 43 09.4 -0.2**
comp=Z,60nm,1.1s,mb5.5
MFF Saint Martin d 82.63 1⇑ *iP* **P 12 43 09.9 -0.1**
comp=Z,74nm,1.0s,mb5.4
MFF Saint Martin d 82.63 1⇑ *iP* **P 12 43 09.9 -0.1**
MFF pmax pmax
comp=Z,37nm,1.0s,mb5.4
MFF Saint Martin d 82.63 1⇑ *iP* **P 12 43 09.9 -0.1**
comp=Z,37nm,1.0s,mb5.4
BGF Bois d'Agland 82.66 359⇑ *iP* **P 12 43 10.0 -0.1**
comp=Z,60nm,1.1s,mb5.2
BGF Bois d'Agland 82.66 359⇑ *iP* **P 12 43 10.0 -0.1**
BGF pmax pmax
comp=Z,30nm,1.1s,mb5.2
BGF Bois d'Agland 82.66 359⇑ *iP* **P 12 43 10.0 -0.1**
comp=Z,30nm,1.1s,mb5.2
TRI Trieste 82.86 351 PFAKE 12 43 20.0 +8.8
TRI LR LR
comp=Z,1μm,21.0s,MS5.3
BOJS Bojanci 82.91 350 *i* P **P 12 43 11.5 0.0**
TCF Toulx Ste Croi 82.93 359⇑ *iP* **P 12 43 11.3 -0.3**
comp=Z,44nm,1.0s,mb5.2
TCF Toulx Ste Croi 82.93 359⇑ *iP* **P 12 43 11.3 -0.3**
TCF pmax pmax
comp=Z,22nm,1.0s,mb5.1
TCF Toulx Ste Croi 82.93 359⇑ *iP* **P 12 43 11.3 -0.3**
comp=Z,22nm,1.0s,mb5.1
AGO Saint Agoulin 83.16 358 *eP* **P 12 43 13.2 +0.5**
PLDF La Plantade 83.23 358 *eP* **P 12 43 13.6 +0.5**
PYM Petit Puy Mans 83.46 358 *eP* **P 12 43 14.3 0.0**
LPL La Plagne 83.57 356⇑ *iP* **P 12 43 15.8 +0.9**
LPG La Plagne 83.59 356⇑ *iP* **P 12 43 16.1 +1.1**
comp=Z,52nm,1.1s,mb5.3
LPG La Plagne 83.59 356⇑ *iP* **P 12 43 16.1 +1.1**
LPG pmax pmax
comp=Z,26nm,1.1s,mb5.3
LPG La Plagne 83.59 356⇑ *iP* **P 12 43 16.1 +1.1**
comp=Z,26nm,1.1s,mb5.3
RJF Les Rejaudoux 83.92 359⇑ *iP* **P 12 43 16.3 -0.4**
comp=Z,82nm,1.2s,mb5.4
RJF Les Rejaudoux 83.92 359⇑ *iP* **P 12 43 16.3 -0.4**
RJF pmax pmax
comp=Z,41nm,1.2s,mb5.4
RJF Les Rejaudoux 83.92 359⇑ *iP* **P 12 43 16.3 -0.4**
comp=Z,41nm,1.2s,mb5.4
LBL Lubilhac 83.97 358 *eP* **P 12 43 17.2 +0.3**
HYB Hyderabad 84.00 290 *eP* **P 12 43 17.0 -0.5**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.7
HYB Hyderabad 84.00 290 *i* P **P 12 43 17.0 -0.5**
comp=Z,60nm,1.0s,mb5.7
HYB *e* pP 12 43 31.0 0.0
HYB Hyderabad 84.00 290 *eP* **P 12 43 17.0 -0.5**
comp=Z,60nm,1.0s,mb5.7
BNI Bardonecchia 84.04 356 *eP* **P 12 43 18.4 +1.1**
BNI pmax pmax
comp=Z,46nm,1.0s,mb5.6
BNI MLR MLR
comp=Z,2μm,21.0s,MS5.5
BNI Bardonecchia 84.04 356 *eP* **P 12 43 18.4 +1.1**
comp=Z,46nm,1.0s,mb5.6
BNI LR LR
comp=Z,2μm,21.0s,MS5.5
FITZ Fitzroy Crossi 84.08 232 *eP* **P 12 43 16.9 -0.8**
comp=Z,57nm,0.8s,mb5.8
ORIF Oris-en-Rattie 84.21 356⇑ *iP* **P 12 43 18.8 +0.7**
comp=Z,60nm,1.1s,mb5.3
ORIF Oris-en-Rattie 84.21 356⇑ *iP* **P 12 43 18.8 +0.7**
ORIF pmax pmax
comp=Z,30nm,1.1s,mb5.3
ORIF Oris-en-Rattie 84.21 356⇑ *iP* **P 12 43 18.8 +0.7**
comp=Z,30nm,1.1s,mb5.3
LFF La Frestale 84.29 360⇑ *iP* **P 12 43 18.5 -0.1**
comp=Z,145nm,1.2s,mb5.7
LFF La Frestale 84.29 360⇑ *iP* **P 12 43 18.5 -0.1**
LFF pmax pmax
comp=Z,73nm,1.2s,mb5.7
LFF La Frestale 84.29 360⇑ *iP* **P 12 43 18.5 -0.1**
comp=Z,73nm,1.2s,mb5.7
CAF Calviac 84.30 359⇑ *iP* **P 12 43 18.7 +0.1**
comp=Z,125nm,1.2s,mb5.6
CAF Calviac 84.30 359⇑ *iP* **P 12 43 18.7 +0.1**
CAF pmax pmax
comp=Z,63nm,1.2s,mb5.6
CAF Calviac 84.30 359⇑ *iP* **P 12 43 18.7 +0.1**
comp=Z,63nm,1.2s,mb5.6
VIVF Saint-Julien-l 84.31 357⇑ *iP* **P 12 43 18.9 +0.2**
comp=Z,45nm,1.1s,mb5.2

VIVF Saint-Julien-l 84.31 357⇑ *iP* **P 12 43 18.9 +0.2**
VIVF pmax pmax
comp=Z,22nm,1.1s,mb5.2
VIVF Saint-Julien-l 84.31 357⇑ *iP* **P 12 43 18.9 +0.2**
comp=Z,22nm,1.1s,mb5.2
MBDF Montbardon 84.36 356⇑ *iP* **P 12 43 19.5 +0.6**
comp=Z,52nm,0.9s,mb5.3
VLC Villacollemand 84.70 353 PFAKE 12 43 30.0 +9.4
VLC LR LR
comp=Z,1μm,22.0s,MS5.2
MALT Malatya 84.97 331 PFAKE 12 43 30.0 +7.9
MALT LR LR
comp=Z,1μm,21.0s,MS5.2
BR131 Keskin Array S 85.02 335 *eP* **P 12 43 22.6 +0.2**
comp=Z,22nm,0.8s,mb5.3
BR131 LR LR
comp=Z,763nm,22.0s,MS5.0
BRTR Keskin Array B 85.02 335 P **P 12 43 22.4 0.0**
comp=Z,24nm,0.8s,mb5.4,baz=54,slow=3.0,SNR=83
BRTR Keskin Array B 85.02 335⇑ *eP* **P 12 43 22.3 -0.1**
BRTR Keskin Array B 85.02 335⇑ *eP* **P 12 43 22.4 0.0**
TOUF Mont Tournerai 85.05 355 *eP* **P 12 43 22.7 +0.3**
AUTN L'Aution 85.06 355 *eP* **P 12 43 22.9 +0.5**
SAOF Saorge 85.06 355 *eP* **P 12 43 22.2 -0.2**
ASAR Alice Springs 85.11 222 P **P 12 43 21.5 -1.3**
comp=Z,4.9nm,0.8s,mb4.7,baz=28,slow=4.7,SNR=50
LASF Ste Croix 85.11 358⇑ *iP* **P 12 43 22.9 +0.2**
comp=Z,29nm,0.9s,mb5.1
SMRF Simiane la Rot 85.16 356⇑ *iP* **P 12 43 23.8 +0.8**
comp=Z,86nm,1.0s,mb5.5
SMRF Simiane la Rot 85.16 356⇑ *iP* **P 12 43 23.8 +0.8**
comp=Z,86nm,1.0s,mb5.8
LUCF Luceram 85.16 355 *eP* **P 12 43 22.8 -0.2**
ARMA Armidale 85.17 205 *eP* **P 12 43 23.4 +0.5**
MVIF Mont Vial 85.17 355 *eP* **P 12 43 23.3 +0.3**
SBF Sospel 85.19 355⇑ *iP* **P 12 43 22.9 -0.2**
comp=Z,148nm,1.0s,mb5.8
REVF Revere 85.31 355 *eP* **P 12 43 23.5 -0.2**
CALN Calern 85.33 356 *eP* **P 12 43 23.1 -0.7**
SKO Skopje 85.51 345 *eP* **P 12 43 24.3 -0.5**
FRF La Foret Royal 85.53 356 *eP* **P 12 43 24.5 -0.3**
comp=Z,64nm,1.0s,mb5.5
FRF La Foret Royal 85.53 356 *eP* **P 12 43 24.5 -0.3**
FRF pmax pmax
comp=Z,32nm,1.0s,mb5.5
FRF La Foret Royal 85.53 356 *eP* **P 12 43 24.5 -0.3**
comp=Z,32nm,1.0s,mb5.5
LMR La Mourre 85.76 356 *eP* **P 12 43 25.8 -0.2**
comp=Z,102nm,1.2s,mb5.6
LMR La Mourre 85.76 356 *eP* **P 12 43 25.8 -0.2**
LMR pmax pmax
comp=Z,51nm,1.2s,mb5.6
LMR La Mourre 85.76 356 *eP* **P 12 43 25.8 -0.2**
comp=Z,51nm,1.2s,mb5.6
POO Poona 85.87 294 *eP* **P 12 43 26.5 -0.4**
POO AMb AMB 12 43 27.8
comp=Z,82nm,0.9s,mb5.9
MTLF Montolieu 85.88 359 *eP* **P 12 43 26.7 +0.1**
comp=Z,80nm,1.3s,mb5.5
MTLF Montolieu 85.88 359 *eP* **P 12 43 26.7 +0.1**
MTLF pmax pmax
comp=Z,40nm,1.3s,mb5.5
MTLF Montolieu 85.88 359 *eP* **P 12 43 26.7 +0.1**
comp=Z,40nm,1.3s,mb5.5
VAY Valandovo 85.95 344 *eP* **P 12 43 26.1 -0.8**
SDDR Presa de Saban 86.17 64 PFAKE 12 43 40.0 +12
SDDR LR LR
comp=Z,2μm,21.0s,MS5.4
EPF Esparros 86.20 0 *eP* **P 12 43 27.4 -0.7**
comp=Z,18nm,0.8s,mb5.1
EPF Esparros 86.20 0 *eP* **P 12 43 27.4 -0.7**
EPF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
EPF Esparros 86.20 0 *eP* **P 12 43 27.4 -0.7**
comp=Z,8.9nm,0.8s,mb5.0
AQU L'Aquila 86.22 351 P **P 12 43 28.8 +0.6**
AQU pmax pmax
comp=Z,65nm,1.0s,mb5.8
AQU MLR MLR
comp=Z,1μm,22.0s,MS5.3
AQU L'Aquila 86.22 351 P **P 12 43 28.8 +0.5**
comp=Z,65nm,1.0s,mb5.8
AQU LR LR
comp=Z,1μm,22.0s,MS5.3
ETSF Etsaut 86.33 1 *eP* **P 12 43 29.1 +0.3**
comp=Z,56nm,1.0s,mb5.4
ETSF Etsaut 86.33 1 *eP* **P 12 43 29.1 +0.3**
ETSF pmax pmax
comp=Z,28nm,1.0s,mb5.5
ETSF Etsaut 86.33 1 *eP* **P 12 43 29.1 +0.3**
comp=Z,28nm,1.0s,mb5.5
TIR Tirane 86.38 346 PFAKE 12 43 40.0 +11
TIR LR LR
comp=Z,1μm,22.0s,MS5.3
MDRS Chennai 86.38 286 *ex* x 12 42 20.2
PGF Pioggiola 86.40 354⇑ *iP* **P 12 43 29.0 -0.1**
comp=Z,152nm,1.0s,mb5.9
KAD Karad 86.64 293 *i* P **P 12 43 29.7 -1.0**
KAD *eP* 12 43 30.9
KAD AMb AMB 12 43 31.1
comp=Z,59nm,0.9s,mb5.8
PTCN Pitcairn Islan 87.37 137 PFAKE 12 43 40.0 +6.1
PTCN LR LR
comp=Z,2μm,20.0s,MS5.6
ISP Isparta 87.60 337 *eP* **P 12 43 32.7 -2.4**
ISP pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
ISP MLR MLR
comp=Z,875nm,20.0s,MS5.2
ISP Isparta 87.60 337 *eP* **P 12 43 32.7 -2.4**
comp=Z,5.7nm,0.7s,mb4.9
ISP LR LR
comp=Z,875nm,20.0s,MS5.2
CUC Castrocucco 88.28 348 PFAKE 12 43 50.0 +12
CUC LR LR
comp=Z,1μm,21.0s,MS5.3
GOA Goa 88.29 293 *eP* **P 12 43 38.6 -0.1**
GOA AMb AMB 12 43 48.0
comp=Z,31nm,2.3s,mb5.1
BCIP Isla Barro Col 88.81 77 PFAKE 12 43 50.0 +8.9
BCIP LR LR
comp=Z,1μm,22.0s,MS5.2
TIP Timpagrande 88.95 348 PFAKE 12 43 50.0 +8.6
TIP LR LR
comp=Z,1μm,19.0s,MS5.3
ESDC Sonseca Array 89.46 4 P **P 12 43 42.4 -1.4**
comp=Z,6.9nm,0.9s,mb5.0,baz=357,slow=4.6,SNR=15
ESLA Sonseca Array 89.46 4 PFAKE 12 44 00.0 +16
ESLA LR LR
comp=Z,9μm,19.0s,MS6.2
MIB Mutribah 89.53 321 *eP* **P 12 43 43.5 -0.8**
baz=321
MIB AMb AMB 12 43 45.5
comp=Z,114nm,1.0s,mb6.2,baz=321
STKA Stephens Creek 89.56 212 *eP* **P 12 43 43.7 -0.4**
comp=Z,19nm,0.8s,mb5.5
STKA Stephens Creek 89.56 212 P **P 12 43 43.5 -0.5**
comp=Z,14nm,0.9s,mb5.3,baz=349,slow=6.7,SNR=24
PAB San Pablo 89.57 4 PFAKE 12 44 00.0 +16
PAB LR LR
comp=Z,2μm,20.0s,MS5.5
CSS Prodhromos 89.58 334 PFAKE 12 44 00.0 +16
CSS LR LR
comp=Z,1μm,22.0s,MS5.2
UMR Umm Al-Rimmam 89.60 320 *eP* **P 12 43 44.1 -0.5**
baz=320
UMR AMb AMB 12 43 45.2
comp=Z,72nm,1.0s,mb6.0,baz=320
MBWA Marble Bar 89.63 235 PFAKE 12 44 00.0 +15
MBWA LR LR
comp=Z,838nm,20.0s,MS5.2
SJG San Juan 89.74 61 PFAKE 12 44 00.0 +15
SJG LR LR
comp=Z,1μm,21.0s,MS5.4
PAYG Puerto Ayora 89.90 91 PFAKE 12 44 00.0 +14
PAYG LR LR
comp=Z,2μm,19.0s,MS5.5
CEL Celeste 89.97 348 PFAKE 12 44 00.0 +14
CEL LR LR
comp=Z,851nm,20.0s,MS5.2
NAY Al-Naaiem 90.06 321 *eP* **P 12 43 45.5 -1.2**
baz=321
NAY AMb AMB 12 43 47.8
comp=Z,42nm,1.1s,mb5.7,baz=321
RDF Al-Radifah 90.22 320 *eP* **P 12 43 46.8 -0.7**
baz=320

RDF					AMb	AMB	12 43 48.7		
	comp=Z,80nm,1.0s,mb6.0,baz=320								
SNZO	**South Karori**	**92.23**	**185**		PFAKE		12 44 10.0	+14	
SNZO					LR	LR			
	comp=Z,2µm,20.0s,MS5.5								
ANWB	**Willy Bob**	**92.47**	**58**		PFAKE		12 44 10.0	+12	
ANWB					LR	LR			
	comp=Z,1µm,22.0s,MS5.3								
WDD	**Wield Dalam**	**92.50**	**349**		PFAKE		12 44 10.0	+12	
WDD					LR	LR			
	comp=Z,1µm,20.0s,MS5.4								
SFS	**San Fernando**	**92.55**	**6**		PFAKE		12 44 10.0	+12	
SFS					LR	LR			
	comp=Z,3µm,22.0s,MS5.7								
KEST	**Kesra**	**93.16**	**353**		P	**P**	**12 44 00.2**	**-0.8**	
	comp=Z,2.2nm,1.0s,mb4.5,baz=243,slow=12,SNR=3.6								
SDV	**Santo Domingo**	**94.59**	**70**		PFAKE		12 44 20.0	+12	
SDV					LR	LR			
	comp=Z,549nm,21.0s,MS5.0								
RTC	**Rabat Centre**	**94.97**	**6**		PFAKE		12 44 20.0	+11	
RTC					LR	LR			
	comp=Z,2µm,20.0s,MS5.5								
MDT	**Midelt**	**96.27**	**5**		P	**P**	**12 44 14.4**	**-0.8**	
	comp=Z,5.0nm,0.9s,mb4.9,baz=328,slow=11,SNR=3.5								
OTAV	**Otavalo**	**96.62**	**81**		PFAKE		12 44 30.0	+13	
OTAV					LR	LR			
	comp=Z,789nm,19.0s,MS5.2								
GRGR	**Grenville**	**97.10**	**61**		PFAKE		12 44 30.0	+11	
GRGR					LR	LR			
	comp=Z,974nm,21.0s,MS5.3								
TAU	**Tasmania Unive**	**98.08**	**204**		PFAKE		12 44 30.0	+7.1	
TAU					LR	LR			
	comp=Z,1µm,20.0s,MS5.4								
NWAO	**Narrogin (SRO)**	**100.58**	**230**		PFAKE		12 44 50.0	+15	
NWAO					LR	LR			
	comp=Z,701nm,21.0s,MS5.2								
NNA	**Nana**	**107.05**	**88**		PFAKE		12 49 20.0	+7.2	
NNA					LR	LR			
	comp=Z,918nm,21.0s,MS5.3								
MSEY	**Mahe Island**	**115.15**	**296**		PFAKE		12 49 40.0	+12	
MSEY					LR	LR			
	comp=Z,521nm,20.0s,MS5.1								
TORD	**Torodi Ar. Bea**	**115.97**	**359**		PKP	PKPdf	12 49 28.5	-1.3	
	comp=Z,1.0nm,0.9s,baz=336,slow=3.0,SNR=5.6								
TORD					PKKPbc	PKKPbc	13 00 03.3	+4.7	
	comp=Z,1.3nm,0.8s,baz=175,slow=3.8,SNR=5.9								
TORD	**Torodi Ar. Bea**	**115.97**	**359**		PKP	PKPdf	12 49 28.5	-1.3	
TORD					PKKPbc	PKKPbc	13 00 03.3	+4.7	
LVC	**Limon Verde**	**119.98**	**89**		PFAKE		12 49 50.0	+13	
LVC					LR	LR			
	comp=Z,831nm,20.0s,MS5.4								
DBIC	**Dimbokro**	**122.21**	**7**		PKP	PKPdf	12 49 40.5	-1.4	
	comp=Z,2.1nm,0.6s,baz=328,slow=7.5,SNR=6.7								
DBIC	**Dimbokro**	**122.21**	**7**		PKP	PKPdf	12 49 40.5	-1.4	
DBIC					LR	LR			
	comp=Z,954nm,21.0s,MS5.4								
TIC	**Toumodi**	**122.23**	**7**	*e*P		PKPdf	12 49 44.9	+3.0	
	comp=Z,16nm,0.2s								
KIC	**Kosan Boka**	**122.53**	**6**	*e*P		PKPdf	12 49 45.6	+3.1	
	comp=Z,121nm,1.7s								
LIC	**Lamto**	**122.64**	**7**	*e*P		PKPdf	12 49 47.1	+4.4	
	comp=Z,59nm,1.9s								
LCO	**Las Campanas**	**123.41**	**96**		PFAKE		12 50 00.0	+16	
LCO					LR	LR			
	comp=Z,1µm,22.0s,MS5.5								
RCBR	**Riachuelo**	**125.55**	**47**		PFAKE		12 50 00.0	+12	
RCBR					LR	LR			
	comp=Z,1µm,21.0s,MS5.5								
CFAA	**Coronel Fontan**	**126.74**	**96**		PKP	PKPdf	12 49 49.0	-0.9	
	comp=Z,0.6nm,0.8s,baz=339,slow=5.3,SNR=7.8								
BDFB	**Brasilia**	**127.48**	**66**		PKP	PKPdf	12 49 51.4	-0.4	
	comp=Z,3.1nm,0.9s,baz=190,slow=26,SNR=4.5								
BDFB	**Brasilia**	**127.48**	**66**		PKP	PKPdf	12 49 51.4	-0.4	
BDFB					LR	LR			
	comp=Z,568nm,21.0s,MS5.2								
CASY	**Casey**	**128.60**	**209**		PFAKE		12 50 00.0	+7.6	
CASY					LR	LR			
	comp=Z,701nm,22.0s,MS5.3								
VNDA	**Vanda**	**128.94**	**185**		PFAKE		12 50 00.0	+7.2	
VNDA					LR	LR			
	comp=Z,778nm,21.0s,MS5.4								
SBA	**Scott Base**	**129.02**	**184**		PFAKE		12 50 00.0	+7.1	
SBA					LR	LR			
	comp=Z,726nm,21.0s,MS5.3								
CPUP	**Villa Florida**	**129.93**	**83**		PKP	PKPdf	12 49 55.2	-0.9	
	comp=Z,2.8nm,0.8s,baz=309,slow=4.1,SNR=8.7								
CPUP	**Villa Florida**	**129.93**	**83**		PKIKP	PKPdf	12 49 55.3	-0.9	
CPUP					pmax	pmax			
	comp=Z,3.0nm,0.8s								
CPUP	**Villa Florida**	**129.93**	**83**	*e*PKPdf		PKPdf	12 49 55.5	-0.7	
CPUP					LR	LR			
	comp=Z,128nm,22.0s,MS4.6								
ABPO	**Ambohimpanom**	**131.42**	**294**		PFAKE		12 50 10.0	+11	
ABPO					LR	LR			
	comp=Z,639nm,20.0s,MS5.3								
TRQA	**Tornquist**	**134.83**	**99**	*e*PKPdf		PKPdf	12 50 04.2	-0.8	
TRQA					LR	LR			
	comp=Z,737nm,21.0s,MS5.4								
LSZ	**Lusaka**	**137.96**	**318**		PFAKE		12 50 20.0	+8.5	
LSZ					LR	LR			
	comp=Z,658nm,21.0s,MS5.3								
QSPA	**South Pole Qui**	**140.90**	**180**		PFAKE		12 50 30.0	+15	
QSPA					LR	LR			
	comp=Z,864nm,22.0s,MS5.5								
EFI	**East Falkland**	**144.21**	**114**		PFAKE		12 50 30.0	+8.4	
EFI					LR	LR			
	comp=Z,1µm,20.0s,MS5.7								
SHEL	**Horse Pasture**	**144.51**	**11**		PFAKE		12 50 40.0	+17	
SHEL					LR	LR			
	comp=Z,955nm,21.0s,MS5.5								
PMSA	**Palmer Station**	**144.78**	**138**		PFAKE		12 50 30.0	+7.8	
PMSA					LR	LR			
	comp=Z,1µm,19.0s,MS5.7								
TSUM	**Tsumeb**	**145.44**	**331**	*e*PKPbc		PKPbc	12 50 25.2	+0.4	
TSUM					LR	LR			
	comp=Z,797nm,22.0s,MS5.5								
MAW	**Mawson**	**146.11**	**217**	PKPbc		PKPbc	12 50 24.2	-1.3	
	comp=Z,13nm,0.9s,baz=62,slow=6.4,SNR=7.0								
MAW	**Mawson**	**146.11**	**217**	*e*PKPbc		PKPbc	12 50 24.2	-1.3	
LBTB	**Lobatse**	**147.67**	**314**	*e*PKIKP		PKPdf	12 50 27.9	-0.5	
LBTB				*e*			12 50 31.6		
LBTB					MLR	MLR			
	comp=Z,742nm,20.0s,MS5.5								
BOSA	**Boshof**	**150.90**	**311**	PKPbc		PKPbc	12 50 39.2	+0.1	
	comp=Z,23nm,0.8s,baz=49,slow=2.3,SNR=19								
BOSA	**Boshof**	**150.90**	**311**	*e*PKPbc		PKPbc	12 50 39.2	0.0	
BOSA				*e*PKPab		PKPab	12 50 47.5	+0.9	
BOSA					LR	LR			
	comp=Z,790nm,19.0s,MS5.5								
SYO	**Syowa Base**	**154.32**	**211⇑**	*e*P		PKPbc	12 50 47.6	+2.1	
SYO	**Syowa Base**	**154.32**	**211⇑**	*e*P		PKPbc	12 50 50.4	+4.9	
SUR	**Sutherland**	**156.12**	**314**		PFAKE		12 50 50.0	+9.2	
SUR					LR	LR			
	comp=Z,1µm,21.0s,MS5.7								
VNA3	**Neumayer Olymp**	**159.29**	**171**	*e*PKPdf		PKPdf	12 50 42.0	-1.5	
VNA3				*e*			12 50 49.3		
VNA3				*e*			12 50 57.8		
VNA3				*e*			12 51 19.7		
VNA3				*e*			12 51 32.7		
VNA3				*e*			12 51 37.5		
VNA2	**Neumayer--Watz**	**159.81**	**172**	*e*PKPdf		PKPdf	12 50 42.0	-2.1	
	baz=92,slow=1.3								
VNA2				*e*			12 50 49.5		
VNA2				*e*			12 50 57.7		
VNA2				*e*			12 51 22.4		
VNA2				*e*			12 51 35.2		
VNA2				*e*			12 51 39.7		

NEIC ***19*** *12:35:36.0±0.5, 5095N×17927W, h30km, mb4.7/2, ML4.4(AEIC), Error ellipse: s-maj=15.0km s-min=5.3km az=172.0*

ISCJB ***19*** *12:35:37.4±1.0, 511N±0.1×17920W±005, h54km±7km, mb4.5/30, Error ellipse: s-maj=18.2km s-min=5.6km az=177.8*

IDC ***19*** *12:35:39.4±3.0, 5108N×179.19W, h58km±25km, mb3.9/17, mb1 4.1/19, mb1mx4.0/27, mbtmp3.9/19, ML4.0/2, Error ellipse: s-maj=22.1km s-min=12.3km az=177.0*

ISC 19 12:35:39.2±0.9, 511N±01×17919W±005, h56km±7km, n59, σ0:85/57, mb4.5/30, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.77**	**61**	P	**Pn**	**12 36 06.1**	**-1.3**
ADK				S	**Sn**	**12 36 29.7**	**+1.0**
ATKA	**Atka Island**	**3.31**	**68**	P	**Pn**	**12 36 27.6**	**-0.9**
ATKA				S	**Sn**	**12 37 07.7**	**+1.2**
SMY	**Shemya**	**4.48**	**294**	P	**Pn**	**12 36 42.9**	**-1.5**
FX1	**Attu Island--F**	**5.07**	**294**	P	**Pn**	**12 36 51.8**	**-0.7**
	45nm,0.3s,baz=186,slow=5.1,SNR=11						
FX1				S	**Sn**	**12 37 51.0**	**+1.4**
	7.5nm,0.3s,baz=277,slow=19,SNR=1.7						
FX1	**Attu Island--F**	**5.07**	**294**	P	**Pn**	**12 36 51.8**	**-0.7**
NIKO	**Nikolski**	**6.66**	**69**	P	**Pn**	**12 37 14.2**	**-0.1**
OKCD	**Okmok Cone D**	**7.20**	**67**	P	**Pn**	**12 37 23.1**	**+1.4**
SPIA	**Saint Paul Isl**	**8.06**	**37**	P	**Pn**	**12 37 35.7**	**+2.2**
UNV	**Unalaska Valle**	**8.23**	**65**	P	**Pn**	**12 37 35.8**	**0.0**
AKUT	**Akutan**	**8.72**	**64**	*e*P	**Pn**	**12 37 42.4**	**-0.2**
SDPT	**Sand Point**	**12.00**	**62**	*e*P	**Pn**	**12 38 24.8**	**-2.5**
	32nm,0.4s						
PETK	**Petropavlovsk-**	**14.35**	**287**	P	**Pn**	**12 38 59.0**	**0.0**
	0.1nm,0.3s,baz=242,slow=24,SNR=2.1						
KDAK	**Kodiak Island**	**16.80**	**56**	P	**Pn**	**12 39 25.9**	**-4.4**
	3.3nm,0.3s,baz=269,slow=4.4,SNR=11						
DAWY	**Dawson**	**24.50**	**43**	*e*P	**P**	**12 40 52.0**	**-0.8**
INK	**Inuvik**	**27.86**	**35**	P	**P**	**12 41 22.4**	**-0.6**
	2.4nm,0.8s,mb3.9,baz=230,slow=11,SNR=9.5						
YKA	**Yellowknife Ar**	**35.62**	**46**	P	**P**	**12 42 30.5**	**-0.6**
	3.1nm,0.6s,mb4.4,baz=283,slow=7.9,SNR=20						
YKA				PcP	PcP	12 44 59.2	+0.8
	0.2nm,0.4s,baz=292,slow=3.4,SNR=4.3						
EDM	**Edmonton**	**39.18**	**60**	*e*P	**P**	**12 43 01.3**	**+0.1**
KSRS	**Korea Array**	**39.40**	**271**	P	**P**	**12 43 03.9**	**+0.5**
	1.4nm,0.6s,mb3.8,baz=58,slow=7.9,SNR=4.7						
NVAR	**Mina Array Bea**	**43.83**	**82**	P	**P**	**12 43 39.9**	**+0.3**
	0.8nm,0.9s,mb3.5,baz=284,slow=7.3,SNR=3.0						
RLMT	**Red Lodge**	**45.47**	**69**	*e*P	**P**	**12 43 53.7**	**+1.2**
	5.5nm,0.7s,mb4.5						
SONM	**Songino Array**	**46.57**	**297**	P	**P**	**12 44 01.7**	**+0.6**
	1.7nm,0.6s,mb4.2,baz=55,slow=7.4,SNR=8.8						
SONM				PcP	PcP	12 45 35.0	+0.6
	1.1nm,0.6s,baz=90,slow=2.8,SNR=4.3						
PDAR	**Pinedale Array**	**46.64**	**72**	P	**P**	**12 44 02.2**	**+0.5**
	4.0nm,0.6s,mb4.6,baz=330,slow=1.9,SNR=17						
SPB4	**Spitsbergen Ar**	**50.67**	**356**	*e*P	**P**	**12 44 31.6**	**-0.6**
SPITS	**Spitsbergen Ar**	**50.67**	**356**	P	**P**	**12 44 31.7**	**-0.5**
	4.1nm,0.4s,mb4.7,baz=54,slow=9.9,SNR=20						
ZALV	**Zalesovo Beam**	**54.07**	**313**	P	**P**	**12 44 56.9**	**-0.8**
	0.5nm,0.3s,mb3.9,baz=65,slow=6.3,SNR=3.9						
ZALV				PcP	PcP	12 46 02.6	+0.7
	0.7nm,0.4s,baz=82,slow=3.1,SNR=2.4						
ARCES	**ARCESS Array B**	**58.36**	**350**	P	**P**	**12 45 26.8**	**-1.2**
	3.2nm,0.6s,mb4.5,baz=27,slow=8.2,SNR=4.1						
TXAR	**Lajitas Array**	**58.94**	**81**	P	**P**	**12 45 32.7**	**+0.1**
	0.6nm,0.5s,mb3.9,baz=302,slow=5.2,SNR=8.0						
MKAR	**Makanchi Array**	**60.04**	**308**	P	**P**	**12 45 39.4**	**-0.5**
	3.4nm,0.4s,mb4.7,baz=50,slow=6.1,SNR=32						
JOF	**Joensuu**	**63.84**	**345**	*e*p	**P**	**12 46 04.0**	**-1.1**
	2.1nm,0.3s,mb4.7						
KAF	**Kangasniemi**	**65.36**	**347**	*e*p	**P**	**12 46 13.9**	**-1.2**
	2.9nm,0.4s,mb4.7						
TKL	**Tuckaleechee C**	**66.31**	**62**	P	**P**	**12 46 21.5**	**-0.1**
	1.6nm,0.5s,mb4.3,baz=286,slow=7.6,SNR=4.1						
NB2	**NORSAR Subarra**	**67.94**	**355**	P	**P**	**12 46 31.0**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=7.0,slow=6.5						
NOA	**NORSAR Array B**	**67.94**	**355**	P	**P**	**12 46 30.8**	**-0.7**
	comp=Z,0.7nm,0.4s,mb4.1,baz=340,slow=4.7,SNR=9.8						
NOA	**NORSAR Array B**	**67.94**	**355**	P	**P**	**12 46 30.8**	**-0.7**
TAPN	**Taplejung**	**71.09**	**290**	*e*P	**P**	**12 46 51.7**	**+0.2**
	comp=Z,21nm,0.9s,mb5.1						
ODAN	**Odare**	**71.64**	**290**	*e*P	**P**	**12 46 54.8**	**0.0**
GUN	**Gumba**	**71.75**	**292**	*e*P	**P**	**12 46 56.5**	**+1.0**
	comp=Z,41nm,0.4s						
JIRN	**Jiri**	**71.75**	**291**	*e*P	**P**	**12 46 56.3**	**+0.8**
	comp=Z,18nm,0.4s,mb5.4						
RAMN	**Ramite**	**72.04**	**291**	*e*P	**P**	**12 46 57.8**	**+0.6**
	comp=Z,25nm,0.5s,mb5.4						
KKN	**Kakani**	**72.19**	**292**	*e*P	**P**	**12 46 58.8**	**+0.7**
	comp=Z,17nm,0.5s,mb5.3						
PKI	**Pulchoki**	**72.28**	**292**	*e*P	**P**	**12 46 59.3**	**+0.7**
	comp=Z,9.1nm,0.4s,mb5.0						
GKN	**Gorkha**	**72.40**	**293**	*e*P	**P**	**12 46 59.9**	**+0.5**
	comp=Z,15nm,0.5s,mb5.2						
DMN	**Daman**	**72.43**	**292**	*e*P	**P**	**12 47 00.3**	**+0.8**
DANN	**Dangsing**	**72.65**	**294**	*e*P	**P**	**12 47 01.8**	**+0.9**
	comp=Z,13nm,0.5s,mb5.1						
KOLN	**Koldanda**	**73.18**	**293**	*e*P	**P**	**12 47 04.6**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9						
AKASG	**Malin Array Be**	**75.77**	**342**	P	**P**	**12 47 18.1**	**-0.5**
	comp=Z,16nm,0.3s,mb5.3,baz=20,slow=6.6,SNR=28						
KIEV	**Kiev**	**75.78**	**342**	*e*P	**P**	**12 47 18.0**	**-0.6**
	comp=Z,26nm,0.4s,mb5.5						
NKC	**Novy Kostel**	**78.59**	**352**	*e*P	**P**	**12 47 34.6**	**+0.2**
BUR08	**Bucovina Ar. S**	**79.46**	**344**	*e*P	**P**	**12 47 39.8**	**+0.6**
KHC	**Kasperske Hory**	**79.59**	**352**	*e*P	**P**	**12 47 40.4**	**+0.5**
GERES	**GERESS Array B**	**79.86**	**351**	P	**P**	**12 47 41.3**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=32,slow=5.3,SNR=9.8						
WRA	**Warramunga Arr**	**81.62**	**224**	P	**P**	**12 47 49.6**	**-1.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=30,slow=5.8,SNR=5.3						
ASAR	**Alice Springs**	**85.09**	**222**	P	**P**	**12 48 08.2**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.7,baz=21,slow=5.3,SNR=4.9						
BRTR	**Keskin Array B**	**85.13**	**335**	P	**P**	**12 48 09.1**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.3,baz=50,slow=2.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**116.06**	**359**	PKP	PKPdf	12 54 15.7	-0.4
	comp=Z,0.1nm,0.3s,baz=3.5,slow=2.6,SNR=2.5						
DBIC	**Dimbokro**	**122.29**	**7**	PKP	PKPdf	12 54 27.7	-0.4
	comp=Z,2.2nm,0.9s,baz=294,slow=0.9,SNR=4.2						
DBIC	**Dimbokro**	**122.29**	**7**	PKP	PKPdf	12 54 27.7	-0.4
BOSA	**Boshof**	**151.00**	**311**	PKPbc	PKPbc	12 55 25.0	-0.4
	comp=Z,2.1nm,0.5s,baz=86,slow=8.8,SNR=4.6						
BOSA	**Boshof**	**151.00**	**311**	PKPbc	PKPbc	12 55 25.0	-0.4

FUNV ***19*** *12:36:06.4, 673N×73.18W, h170km, MW4.1*

ISCJB ***19*** *12:36:07.1±0.8, 689N±007×7296W±006, h176km±6km, mb4.0/8, Error ellipse: s-maj=11.8km s-min=9.9km az=26.7*

IDC ***19*** *12:36:07.0±3.1, 676N×72.97W, h164km±26km, mb3.7/8, mb1 4.0/10, mb1mx3.7/23, mbtmp3.8/10, Error ellipse: s-maj=32.6km s-min=21.5km az=40.0*

NEIC ***19*** *12:36:08.0±0.9, 684N×73.02W, h167km±13km, mb4.4/1, Error ellipse: s-maj=20.9km s-min=11.8km az=136.0*

ISC 19 12:36:08.1±0.8, 688N±007×7296W±006, h169km±6km, n31, σ0:75/34, mb4.0/8, 14C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.17**	**33⇑**	*i*P	**Pn**	**12 36 36.5**	**+0.4**
CAPV				*e*S	**Sn**	**12 36 57.7**	**+0.1**
SOCV	**Socops**	**2.51**	**56⇑**	*i*P	**Pn**	**12 36 51.0**	**+0.8**
SOCV				*e*S	**Sn**	**12 37 23.3**	**+0.3**
SDV	**Santo Domingo**	**3.05**	**49**	P	**Pn**	**12 36 57.8**	**+1.0**
	162nm,0.3s,baz=244,slow=7.3,SNR=496						
SDV				S	**Sn**	**12 37 35.3**	**+0.6**
	68nm,0.3s,baz=74,slow=7.6,SNR=8.1						
ELOV	**Elorza**	**3.46**	**88⇑**	*i*P	**Pn**	**12 37 02.5**	**+0.6**
ELOV				*e*S	**Sn**	**12 37 43.5**	**-0.2**
VIRV	**Villa del Rosa**	**3.64**	**9⇑**	*i*P	**Pn**	**12 37 03.3**	**-1.0**
VIRV				*e*S	**Sn**	**12 37 46.5**	**-1.6**
QARV	**Quebrada Arrib**	**4.09**	**36⇑**	*i*P	**Pn**	**12 37 10.7**	**+0.7**
SANV	**Sanarito**	**4.28**	**52⇑**	*i*P	**Pn**	**12 37 12.7**	**+0.3**
CURV	**Curarigua**	**4.30**	**43⇑**	*i*P	**Pn**	**12 37 13.1**	**+0.3**
DABV	**Dabajuro**	**4.63**	**30**	*e*P	**Pn**	**12 37 17.6**	**+0.6**
TEPV	**Terepaima**	**4.83**	**50⇑**	*i*P	**Pn**	**12 37 19.9**	**+0.3**
SIQV	**Siquisique**	**4.87**	**40⇑**	*i*P	**Pn**	**12 37 20.1**	**0.0**
BAUV	**El Baul**	**5.29**	**67⇑**	*i*P	**Pn**	**12 37 24.5**	**-1.1**
MONV	**Montecano**	**5.84**	**30⇑**	*i*P	**Pn**	**12 37 31.9**	**-1.0**
TURV	**Turiamo**	**6.18**	**55⇑**	*i*P	**Pn**	**12 37 36.7**	**-0.7**
CAOV	**Caicara del Or**	**6.60**	**86⇑**	*i*P	**Pn**	**12 37 41.5**	**-1.4**
CUPV	**Cepira**	**7.76**	**66⇑**	*i*P	**Pn**	**12 37 57.5**	**-0.9**
OTAV	**Otavalo**	**8.57**	**220**	*e*Pn	**Pn**	**12 38 08.7**	**-0.4**
	8.1nm,0.6s						
PCRV	**Puerto La Cruz**	**8.86**	**68**	P	**Pn**	**12 38 13.5**	**+0.7**
	3.0nm,0.3s,baz=167,slow=2.6,SNR=7.5						
MTDJ	**Mount Denham**	**12.13**	**339**	*e*Pn	**Pn**	**12 38 55.7**	**+0.2**
MTDJ				*e*Sn	**Sn**	**12 41 02.4**	**-7.6**
TXAR	**Lajitas Array**	**36.54**	**312**	P	**P**	**12 42 58.1**	**+0.5**
	0.8nm,0.4s,mb3.7,baz=125,slow=8.9,SNR=6.8						
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**	**12 44 24.2**	**-0.1**
	6.4nm,0.5s,mb4.5,baz=144,slow=7.2,SNR=9.0						
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**	**12 44 24.2**	**-0.1**
SCHQ	**Schefferville**	**48.07**	**5**	P	**P**	**12 44 30.9**	**+0.6**
	5.4nm,0.7s,mb4.3,baz=203,slow=13,SNR=4.0						
YBH	**Yreka Blue Hor**	**56.01**	**316**	P	**P**	**12 45 27.8**	**-1.3**
	1.1nm,0.5s,mb4.0,baz=97,slow=8.1,SNR=5.1						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**12 46 18.6**	**+0.3**
	3.2nm,0.5s,mb4.4,baz=133,slow=6.6,SNR=72						
DLBC	**Dease Lake**	**67.35**	**331**	P	**P**	**12 46 46.1**	**+1.4**
	1.2nm,0.6s,mb3.9,baz=116,slow=12,SNR=4.4						
INK	**Inuvik**	**73.03**	**340**	P	**P**	**12 47 19.4**	**+0.4**
	1.2nm,0.6s,mb3.8,baz=25,slow=31,SNR=9.4						
TORD	**Torodi Ar. Bea**	**73.57**	**78**	P	**P**	**12 47 22.6**	**-0.7**
	0.5nm,0.8s,mb3.3,baz=284,slow=5.9,SNR=3.3						
MKAR	**Makanchi Array**	**122.21**	**20**	PKP	PKPdf	12 54 42.7	-0.3
	0.2nm,0.4s,baz=314,slow=2.4,SNR=4.4						
ASAR	**Alice Springs**	**149.27**	**234**	PKPbc	PKPbc	12 55 36.5	-1.1
	1.2nm,0.7s,baz=114,slow=2.9,SNR=11						
WRA	**Warramunga Arr**	**150.50**	**241**	PKPbc	PKPbc	12 55 39.7	-1.0
	0.7nm,0.5s,baz=108,slow=2.7,SNR=22						

IDC 19 12:46:56.6±1.2, 1312N×14472E, h47km±19km, mb3.4/3, mb1 3.7/3, mb1mx3.2/21, mbtmp3.4/3, Error ellipse: s-maj=40.5km s-min=25.0km az=112.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.49**	**18**	P	**Pn**	**12 47 09.0**	**+1.4**
	354nm,0.3s,baz=199,slow=10,SNR=342						
GUMO				S	**Sn**	**12 47 17.7**	**+2.2**
	1µm,0.3s,baz=0.0,slow=20,SNR=151						
WRA	**Warramunga Arr**	**34.40**	**197**	P	**P**	**12 53 39.3**	**-0.2**
	1.0nm,0.7s,baz=20,slow=9.9,SNR=8.9						
ASAR	**Alice Springs**	**38.06**	**196**	P	**P**	**12 54 10.6**	**0.0**
	0.7nm,0.5s,baz=20,slow=11,SNR=12						
YKA	**Yellowknife Ar**	**83.34**	**27**	P	**P**	**12 59 18.3**	**0.0**
	0.1nm,0.6s,baz=284,slow=4.7,SNR=4.5						

ISCJB ***19*** *13:04:18.9±0.8, 5104N×006×179.26W±003, h46km±6km, mb4.5/58, MS4.5/5, Error ellipse: s-maj=10.8km s-min=3.3km az=5.2*

BJI ***19*** *13:04:18.6, 5164N×179.57W, h28km, mB5.4, mb4.8, Ms4.8, Ms4.5*

MOS ***19*** *13:04:18.0±0.9, 5091N×179.12W, h47km, mb4.9/23, Error ellipse: s-maj=11.5km s-min=6.8km az=107.1*

IDC ***19*** *13:04:20.1±3.2, 5106N×179.15W, h45km±29km, mb4.0/19, mb1 4.2/21, mb1mx4.1/29, mbtmp4.0/21, ML3.8/2, MS4.1/1, Ms1 4.1/1, ms1mx3.3/45, Error ellipse: s-maj=22.5km s-min=12.4km az=175.0*

NEIC ***19*** *13:04:21.1±0.7, 5101N×179.16W, h56km±4km, mb4.6/23, ML4.6(AEIC), Error ellipse: s-maj=10.2km s-min=4.5km az=178.0*

ISC 19 13:04:21.6±0.7, 5110N±007×17925W±003, h52km±5km, h46km±3.3km: pP-P, n300, σ0:71/309, mb4.5/58, MS4.5/5, 91C-81D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.78**	**63**	P	**Pn**	**13 04 47.8**	**-2.1**
ADK				S	**Sn**	**13 05 10.2**	**-1.2**
ADK	**Adak**	**1.78**	**63**	P	**Pn**	**13 04 47.9**	**-2.0**
ADK				S	**Sn**	**13 05 10.2**	**-1.1**
ATKA	**Atka Island**	**3.33**	**69**	P	**Pn**	**13 05 09.5**	**-1.5**
ATKA				S	**Sn**	**13 05 51.2**	**+1.8**
SMY	**Shemya**	**4.43**	**294**	P	**Pn**	**13 05 27.6**	**+1.5**
FX1	**Attu Island--F**	**5.02**	**294**	P	**Pn**	**13 05 34.1**	**-0.1**
	4.6nm,0.3s,baz=164,slow=7.0,SNR=17						
FX1				S	**Sn**	**13 06 39.5**	**+8.7**
	4.1nm,0.3s,baz=72,slow=22,SNR=4.1						
FX1				LR	LR	13 07 34.

B09A	Rice	38.56	69	⇓P		P		13 11 38.6	-0.2	
	baz=38									
A10A	Northport	38.65	68	⇑P		P		13 11 40.1	+0.5	
	baz=38									
F07A	Phinny Hill Vi	38.72	74	⇓P		P		13 11 40.3	+0.1	
	baz=39									
C09A	Chrisman Ranch	38.78	70	⇓P		P		13 11 40.6	-0.1	
	baz=39									
E08A	Dider Farm, El	38.95	72	⇑P		P		13 11 42.6	+0.5	
	baz=39									
D09A	Jones Farm, Ri	39.12	71	⇑P		P		13 11 43.6	+0.1	
	baz=39									
KSRS	Korea Array	39.36	271	P		P		13 11 46.2	+0.5	
	comp=Z,2.9nm,0.8s,mb4.0,baz=55,slow=9.2,SNR=7.3									
KSRS	Korea Array	39.36	271	P		P		13 11 46.2	+0.6	
KSRS				pmax		pmax				
	comp=Z,3.0nm,0.9s,mb4.0									
A11A	Hall Mountain,	39.36	68	⇑P		P		13 11 45.7	+0.1	
	baz=39,SNR=6.7									
F08A	Pendleton	39.46	73	⇓P		P		13 11 46.6	+0.2	
	baz=39									
E09A	Wood Farm, Sta	39.48	72	⇓P		P		13 11 46.7	+0.1	
	baz=39									
I06A	Prineville	39.55	77	⇓P		P		13 11 47.8	+0.7	
	baz=39									
B11A	Sandpoint	39.61	68	⇓P		P		13 11 48.2	+0.6	
	baz=40									
I07A	Izee	39.91	76	⇑P		P		13 11 50.7	+0.6	
	baz=40									
F09A	S2 Ranch, Elgi	40.03	73	⇑P		P		13 11 51.8	+0.7	
	baz=40									
D11A	Klaveano Farm,	40.30	70	⇑P		P		13 11 52.8	-0.5	
	baz=40									
G09A	Cove	40.33	73	⇑P		P		13 11 54.2	+0.6	
	baz=40									
C12B	Naegeli Ranch,	40.48	69	⇑P		P		13 11 54.5	-0.3	
	baz=40,SNR=5.7									
I08A	Drewsey	40.57	76	⇑P		P		13 11 56.5	+0.9	
	baz=40									
G10A	Bishop Farm, J	40.72	73	⇓P		P		13 11 56.6	-0.2	
	baz=41,SNR=8.1									
H09A	Durkee	40.72	74	⇑P		P		13 11 57.3	+0.4	
	baz=41									
E11A	Bogner Ranch,	40.72	71	⇑P		P		13 11 56.5	-0.3	
	baz=41									
WALA	Waterton Lakes	40.74	66	*e*P		P		13 11 56.7	-0.2	
	comp=Z,0.3nm,1.0s									
B13A	Whitefish	40.75	68	⇓P		P		13 11 56.7	-0.3	
	baz=41									
F11A	Grangeville	40.99	72	⇓P		P		13 11 58.3	-0.8	
	baz=41									
C13A	Hot Springs	41.03	69	⇑P		P		13 11 59.1	-0.1	
	baz=41									
A14A	Double T Ranch	41.06	66	⇓P		P		13 11 59.3	-0.3	
	baz=41,SNR=13									
G11A	Walters Elk Ra	41.18	72	⇑P		P		13 12 00.5	-0.1	
	baz=41									
J09A	Fry Pan Ranch,	41.37	76	⇓P		P		13 12 02.2	+0.1	
	baz=41									
B14A	Marquette Ranc	41.45	67	⇑P		P		13 12 02.5	-0.3	
	baz=41,SNR=6.6									
A15A	Johnson Ranch,	41.46	66	⇓P		P		13 12 01.8	-1.0	
	baz=41,SNR=5.2									
H11A	Donnelly	41.70	73	⇑P		P		13 12 04.8	-0.1	
	baz=42									
E13A	Victor	41.88	70	⇑P		P		13 12 05.8	-0.5	
	baz=42									
B15A	Bradely Ranch,	41.88	67	⇓P		P		13 12 06.0	-0.3	
	baz=42,SNR=9.8									
D14A	Greenough	41.95	69	⇓P		P		13 12 06.4	-0.5	
	baz=42,SNR=6.7									
A16A	West Butte Ran	42.12	65	⇓P		P		13 12 07.4	-0.9	
	baz=42,SNR=6.4									
C15A	Salmond Ranch,	42.13	67	⇑P		P		13 12 08.1	-0.2	
	baz=42,SNR=11									
F13A	Darby	42.13	71	⇑P		P		13 12 07.6	-0.8	
	baz=42									
K10A	MacKenzie Ranc	42.23	76	⇓P		P		13 12 08.8	-0.3	
	baz=42									
E14A	Clinton	42.30	70	⇓P		P		13 12 08.7	-1.0	
	baz=42									
B16A	M & M Farms, S	42.33	66	⇓P		P		13 12 09.3	-0.6	
	baz=42									
H12A	Diamond D Ranc	42.48	73	⇑P		P		13 12 10.5	-0.7	
	baz=42									
D15A	Lincoln	42.55	68	⇓P		P		13 12 11.1	-0.7	
	baz=42,SNR=5.8									
G13A	Cobalt	42.56	72	⇑P		P		13 12 11.6	-0.3	
	baz=42,SNR=7.8									
C16A	Fuhringer Ranc	42.61	67	⇓P		P		13 12 12.1	-0.2	
	baz=42,SNR=13									
A17A	Triple J Farms	42.64	65	⇓P		P		13 12 11.9	-0.5	
	baz=42,SNR=9.4									
F14A	Wisdom	42.69	70	⇑P		P		13 12 12.6	-0.3	
	baz=42									
E15A	Deer Lodge	42.80	69	⇑P		P		13 12 13.4	-0.4	
	baz=43									
H13A	Challis	42.83	72	⇓P		P		13 12 14.1	+0.1	
	baz=43									
L10A	Juniper Basin	42.87	77	⇓P		P		13 12 14.6	+0.3	
	baz=43									
J12A	Stokes Ranch,	43.05	74	⇓P		P		13 12 16.5	+0.7	
	baz=43									
R06C	Coleville	43.09	83	⇑P		P		13 12 16.8	+0.5	
	baz=43									
D16A	Dana Ranch, Ca	43.13	68	⇑P		P		13 12 16.4	0.0	
	baz=43									
A18A	Metzger Ranch,	43.14	65	⇑P		P		13 12 15.5	-1.0	
	baz=43									
L11A	Cat Creek Ranc	43.25	76	⇑P		P		13 12 17.5	0.0	
	baz=43									
C17A	Wharram Farm,	43.27	67	⇑P		P		13 12 17.1	-0.4	
	baz=43									
I13A	Wildhorse Cree	43.27	73	⇑P		P		13 12 17.7	0.0	
	baz=43,SNR=12									
H14A	Leadore	43.34	72	⇓P		P		13 12 18.1	-0.1	
	baz=43,SNR=6.2									
B18A	Beardsley Farm	43.45	65	⇑P		P		13 12 18.7	-0.3	
	baz=43									
K12A	Draper Farm, C	43.51	75	⇓P		P		13 12 19.9	+0.4	
	baz=43,SNR=6.4									
J13A	Cove Ranch, Pi	43.52	74	⇓P		P		13 12 19.9	+0.3	
	baz=43,SNR=6.6									
G15A	Dillon	43.56	71	⇑P		P		13 12 19.6	-0.3	
	baz=43,SNR=6.9									
EGMT	Eagleton	43.65	66	*e*P		P		13 12 20.0	-0.6	
	comp=Z,15nm,0.8s,mb4.8									
I14A	Mackay	43.66	73	⇓P		P		13 12 21.3	+0.5	
	baz=44									
L12A	House Creek Ra	43.72	76	⇓P		P		13 12 21.9	+0.7	
	baz=44,SNR=10.0									
H15A	Lima	43.77	71	⇑P		P		13 12 21.4	-0.2	
	baz=44,SNR=6.2									
E17A	Martinsdale	43.83	68	⇑P		P		13 12 22.1	+0.1	
	baz=44									
NVAR	Mina Array Bea	43.87	82	P		P		13 12 22.1	-0.4	
	comp=Z,1.2nm,0.7s,mb3.8,baz=281,slow=7.6,SNR=6.0									
G16A	Moss Hill, Enn	43.94	70	⇑P		P		13 12 22.5	-0.4	
	baz=44,SNR=8.0									
J14A	Carey	43.96	73	⇑P		P		13 12 23.2	0.0	
	baz=44									
D18A	Linhart Farms,	44.05	67	⇑P		P		13 12 24.1	+0.2	
	baz=44,SNR=7.8									
F17A	Fitzpatrick Pl	44.24	69	⇑P		P		13 12 25.1	-0.3	
	baz=44									
E18A	Harlowton	44.33	68	⇓P		P		13 12 26.2	+0.2	
	baz=44,SNR=5.5									
L13A	Double Diamond	44.40	75	⇑P		P		13 12 26.9	+0.2	
	baz=44									
H16A	Russell Place,	44.55	70	⇓P		P		13 12 27.9	0.0	
	baz=44,SNR=11									
J15A	Blackfoot	44.57	73	⇑P		P		13 12 27.8	-0.2	
	baz=44									
M13A	Montello	44.69	76	⇓P		P		13 12 29.5	+0.5	
	baz=44,SNR=5.9									
R09A	Tonopah	44.75	82	⇑P		P		13 12 29.3	-0.2	
	baz=45									
F18A	Big Timber	44.80	68	⇑P		P		13 12 29.6	-0.2	
	baz=45									
I16A	Newdale	44.87	72	⇑P		P		13 12 30.7	+0.3	
	baz=45									
K15A	Arbon	44.92	74	⇓P		P		13 12 31.5	+0.7	
	baz=45,SNR=7.3									
O12A	Currie	44.98	78	⇓P		P		13 12 31.3	0.0	
	baz=45									
VES	Vestal, Richgr	44.98	86	⇑P		P		13 12 31.3	-0.1	
	baz=45									
M14A	Sheep Mountain	45.11	75	⇑P		P		13 12 32.5	+0.2	
	baz=45									
H17A	Grant Village	45.12	70	⇓P		P		13 12 33.7	+1.3	
	baz=45									
BJI	Beijing	45.16	282	P		P		13 12 31.8	-0.9	
S10A	Tonopah Range,	45.24	82	⇓P		P		13 12 33.5	0.0	
	baz=45									
P12A	McGill	45.35	79	⇑P		P		13 12 35.0	+0.8	
	baz=45									
L15A	Malad City	45.40	74	⇓P		P		13 12 35.0	+0.4	
	baz=45									
K16A	Soda Springs	45.41	73	⇓P		P		13 12 35.9	+1.3	
	baz=45,SNR=11									
RLMT	Red Lodge	45.49	69	*e*P		P		13 12 35.5	+0.2	
	comp=Z,8.4nm,0.9s,mb4.6									
N14A	Grayback Hills	45.59	76	⇓P		P		13 12 36.4	+0.3	
	baz=45									
R11A	Troy Tranyon, C	45.61	80	⇓P		P		13 12 36.4	0.0	
	baz=45									
J17A	Brown Place, J	45.63	72	⇑P		P		13 12 37.2	+0.8	
	baz=46									
M15A	Larsen Ranch,	45.68	75	⇓P		P		13 12 37.2	+0.4	
	baz=46									
P13A	Bates Ranch, G	45.91	78	⇓P		P		13 12 39.3	+0.7	
	baz=46									
N15A	Stansbury Isla	45.97	76	⇑P		P		13 12 39.6	+0.4	
	baz=46,SNR=6.8									
TLY	Talaya	45.98	302	*e*P		P		13 12 39.7	+0.7	
TLY				pmax		pmax				
	comp=Z,13nm,1.0s,mb4.8									
J18A	Kendall Valley	46.13	71	⇑P		P		13 12 40.3	-0.1	
	baz=46,SNR=6.5									
ULN	Ulaanbaatar	46.13	296	⇑*i*P		P		13 12 40.8	+0.5	
ULN	Ulaanbaatar	46.13	296	*e*P		P		13 12 40.4	+0.1	
	comp=Z,3.1nm,0.7s,mb4.3									
Q13A	Wheeler Ranch,	46.21	79	⇓P		P		13 12 41.5	+0.4	
	baz=46									
L17A	Cokeville	46.26	73	⇓P		P		13 12 41.9	+0.5	
	baz=46									
M16A	Huntsville	46.26	75	⇑P		P		13 12 41.6	+0.2	
	baz=46,SNR=6.6									
SNCC	San Nicolas Is	46.37	89	⇑P		P		13 12 43.1	+0.7	
	baz=46									
P14A	Drum Mountains	46.41	77	⇓P		P		13 12 43.3	+0.6	
	baz=46									
K18A	Toltan Ranch,	46.45	72	⇑P		P		13 12 43.2	+0.3	
	baz=46,SNR=6.7									
SONM	Songino Array	46.52	297	P		P		13 12 44.0	+0.7	
	comp=Z,2.5nm,0.7s,mb4.2,baz=56,slow=9.0,SNR=19									
SONM				PcP		PcP		13 14 17.2	+0.3	
	comp=Z,1.1nm,0.8s,baz=43,slow=2.6,SNR=4.7									
T11A	Corn Creek, Al	46.52	81	⇑P		P		13 12 43.3	-0.2	
	baz=46									
Q14A	Sevier Lake (B	46.65	78	⇑P		P		13 12 44.7	+0.2	
	baz=46									
PDAR	Pinedale Array	46.66	72	P		P		13 12 44.5	0.0	
	comp=Z,9.8nm,0.9s,mb4.7,baz=305,slow=4.3,SNR=55									
M17A	Scullys Gap (B	46.75	74	⇑P		P		13 12 45.9	+0.7	
	baz=47									
ZAK	Zakamensk	46.86	301	⇑*i*P		P		13 12 45.9	-0.1	
ZAK				pmax		pmax				
	comp=Z,11nm,1.4s,mb4.6									
L18A	Fontenelle, Gr	46.87	73	⇓P		P		13 12 45.5	-0.7	
	baz=47									
K19A	Absolon Red Bu	47.05	71	⇓P		P		13 12 47.5	-0.1	
	baz=47,SNR=12									
M18A	Lyman	47.14	74	⇑P		P		13 12 48.5	+0.2	
	baz=47									
S13A	Holt Ranch, En	47.16	80	⇓P		P		13 12 48.4	-0.1	
	baz=47									
MOY	Mondy	47.38	304	*e*P		P		13 12 51.1	+1.0	
K20A	Yellowstone Ra	47.45	71	⇑P		P		13 12 50.0	-0.7	
	baz=47									
HHC	Hu-ho-hao-te	47.50	286	*e*P		P		13 12 48.8	-2.3	
HHC					AP	pP		13 13 00.9	-4.1	
HHC					XP	sP		13 13 07.0	-4.1	
HHC					PP	PP		13 14 38.8	-3.7	
HHC					S	S		13 19 36.8	-5.0	
HHC					XS	sS		13 19 58.1	-7.2	
HHC					SCS	ScS		13 22 35.8	-4.0	
HHC					SS	SS		13 22 58.9	-11	
HHC					AMB	AMB				
	comp=Z,10.0nm,0.8s,mb4.8									
HHC					AMB	AMB				
	comp=Z,634nm,4.6s									
HHC					LR	LR				
	comp=N,403nm,14.3s,MS4.7									
HHC					LR	LR				
	comp=E,360nm,14.3s,MS4.7									
HHC					LR	LR				
	comp=Z,536nm,20.2s									
M19A	Rock Springs	47.65	73	⇓P		P		13 12 53.0	+0.8	
	baz=48									
N18A	Larsen Ranch,	47.65	74	⇑P		P		13 12 52.1	-0.2	
	baz=48									
U13A	Pakoon Wash	47.82	81	⇑P		P		13 12 54.2	+0.5	
	baz=48									
L20A	Wamsutter	47.84	72	⇑P		P		13 12 53.9	+0.2	
	baz=48									
P17A	Butcher Ranch,	47.91	76	⇑P		P		13 12 54.5	+0.2	
	baz=48									
T14A	Hurricane	47.96	80	⇓P		P		13 12 55.1	+0.4	
	baz=48									
Q16A	Castle Valley	47.99	77	⇓P		P		13 12 55.3	+0.4	
	baz=48									
N19A	John Jarvie Ra	48.00	74	⇑P		P		13 12 55.1	+0.2	
	baz=48									
P18A	Preston Nutter	48.12	76	⇓P		P		13 12 55.3	-0.6	
	baz=48									
R16A	Teasdale	48.19	78	⇓P		P		13 12 55.8	-0.7	
	baz=48									
M20A	Sweetwater, Wa	48.24	72	⇓P		P		13 12 56.5	-0.3	
	baz=48									
L21A	Rawlins	48.45	71	⇑P		P		13 12 58.2	-0.2	
	baz=48									
Q18A	Rafter H Ranch	48.51	76	⇑P		P		13 12 59.2	+0.3	
	baz=48									
NJ2	Nanjing	48.54	272	*e*P		P		13 13 01.1	+1.9	
NJ2				AMB		AMB				
	comp=Z,10.0nm,0.6s,mb5.0									
R17A	Hanksville Air	48.58	77	⇑P		P		13 12 59.6	+0.2	
	baz=48									
N20A	Spence Gulch,	48.59	73	⇑P		P		13 12 59.7	+0.2	
	baz=48									
W13A	Hualapai Mount	48.71	83	⇓P		P		13 13 00.7	+0.2	
	baz=49									
U15A	North Rim	48.86	80	⇓P		P		13 13 02.3	+0.7	
	baz=49									
P19A	Cripple Cowboy	48.89	75	⇑P		P		13 13 02.7	+0.9	
	baz=49,SNR=8.6									
S17A	Black Ridge (B	49.01	78	⇑P		P		13 13 02.7	-0.1	
	baz=49									
O20A	White River Ci	49.03	74	⇑P		P		13 13 02.9	0.0	
	baz=49,SNR=8.8									
N21A	Blick Mountain	49.08	73	⇓P		P		13 13 03.4	+0.2	
	baz=49									
R18A	Canyonlands Na	49.10	77	⇓P		P		13 13 03.6	+0.2	
	baz=49									
Q19A	Hogan Spring (	49.13	76	⇑P		P		13 13 05.0	+1.3	
	baz=49,SNR=9.7									
M22A	Cedar Creek Ra	49.24	71	⇓P		P		13 13 04.4	-0.1	
	baz=49									
V15A	Kaibab Nationa	49.32	81	⇓P		P		13 13 05.2	+0.1	
	baz=49									
S18A	Hurst Farm, Bl	49.48	77	⇑P		P		13 13 06.9	+0.5	
	baz=49,SNR=8.4									
R19A	Curley Farm, L	49.55	76	⇓P		P		13 13 06.8	-0.1	
	baz=49,SNR=6.1									
N22A	Wattenberg Ran	49.70	72	⇓P		P		13 13 07.1	-0.8	
	baz=50									
T18A	Mexican Hat	49.90	78	⇓P		P		13 13 08.8	-0.8	
	baz=50									
S19A	Harvey Farm, M	49.97	77	⇓P		P		13 13 10.2	+0.2	
	baz=50,SNR=8.9									
T19A	Beclabito	50.62	78	⇓P		P		13 13 15.2	+0.2	
	baz=50									
SPB4	Spitsbergen Ar	50.63	356	*e*P		P		13 13 14.4	-0.1	
SPITS	Spitsbergen Ar	50.63	356	P		P		13 13 14.1	-0.4	
	comp=Z,12nm,0.7s,mb5.0,baz=38,slow=9.8,SNR=8.0									
V18A	Ganado	50.78	79	⇓P		P		13 13 16.0	-0.2	
	baz=51									
W19A	Sanders	51.51	80	⇑P		P		13 13 21.8	+0.1	
	baz=51									
Y17A	Roosevelt	51.53	82	⇑P		P		13 13 21.8	0.0	
	baz=51									
Y18A	Canyon Day Jun	51.98	81	⇑P		P		13 13 25.0	-0.3	
	baz=52									
X19A	St. Johns	52.02	80	⇓P		P		13 13 25.2	-0.3	
	baz=52									
218A	Dragoon	53.18	83	⇑P		P		13 13 34.0	-0.1	
	baz=53									
ANMO	Albuquerque	53.42	78	⇑*e*P		P		13 13 35.3	-0.6	
XAN	Xi'an	53.44	281	P		P		13 13 34.4	-1.6	
XAN				AP		pP		13 13 46.6	-3.5	
XAN				PP		PP		13 15 35.6	-1.0	
XAN				S		S		13 21 04.5	+0.1	
XAN				SS		SS		13 24 46.3	+1.7	
XAN				AMB		AMB				
	comp=Z,2.0nm,0.5s,mb4.3									
XAN				LR		LR				
	comp=E,92nm,20.8s									
XAN				LR		LR				
	comp=Z,317nm,22.1s,MS4.3									
ZALV	Zalesovo Beam	54.02	313	P		P		13 13 40.3	+0.4	
	comp=Z,1.1nm,0.6s,mb3.9,baz=40,slow=9.4,SNR=2.9									
ZALV				PcP		PcP		13 14 45.2	+0.8	
	comp=Z,1.4nm,0.7s,baz=25,slow=4.9,SNR=5.0									
ZALV	Zalesovo Beam	54.02	313	P		P		13 13 40.3	+0.4	
ZALV				PcP		PcP		13 14 45.2	+0.8	
NVS	Novosibirsk	54.17	315	*e*P		P		13 13 40.3	-0.7	
LZH	Lanzhou	55.19	286	*e*P		P		13 13 50.1	+1.4	
LZH				AP		pP		13 13 57.8	-5.1	
LZH				XP		sP		13 14 00.1	-8.8	
LZH				AMB		AMB				
	comp=Z,20nm,1.0s,mb5.1									
LZH				AMB		AMB				
	comp=Z,83nm,5.0s									
GTA	Gaotai	55.41	292	*e*P		P		13 13 50.8	+0.6	
GTA				AP		pP		13 14 03.1	-1.4	
GTA				XP		sP		13 14 08.1	-2.4	
GTA				PP		PP		13 15 54.8	+0.7	
GTA				S		S		13 21 28.1	-2.7	
GTA				SS		SS		13 25 11.4	-4.0	
GTA				AMB		AMB				
	comp=Z,6.0nm,1.1s,mb4.5									
GTA				AMB		AMB				
	comp=Z,342nm,8.0s									
GTA				LR		LR				
	comp=N,438nm,18.1s,MS4.7									
GTA				LR		LR				
	comp=E,382nm,16.3s,MS4.7									
GTA				LR		LR				
	comp=Z,543nm,17.8s,MS4.7									
CD2	Chengdu	58.76	282	P		P		13 14 14.4	+0.4	
CD2				AMB		AMB				
	comp=Z,10.0nm,0.5s,mb5.1									
TXAR	Lajitas Array	58.98	81	P		P		13 14 14.2	-1.4	
	comp=Z,0.9nm,0.7s,mb3.9,baz=297,slow=4.6,SNR=12									
KURK	Kurchatov	59.01	314	P		P		13 14 16.1	+0.6	
	comp=Z,7.8nm,0.7s,mb4.8,baz=44,slow=6.7,SNR=19									
KURK	Kurchatov	59.01	314	*c i*P		P		13 14 15.9	+0.5	
KURK				pmax		pmax				
	comp=Z,15nm,1.3s,mb4.9									
KURK	Kurchatov	59.01	314	*e*P		P		13 14 14.4	-1.0	
	comp=Z,11nm,1.0s,mb4.9									
WMQ	Urumqi	59.26	303	*e*P		P		13 14 17.3	0.0	
MKAR	Makanchi Array	59.99	308	P		P		13 14 21.5	-0.8	
	comp=Z,4.2nm,0.8s,mb4.5,baz=53,slow=6.8,SNR=24									
GYA	Guiyang	60.07	276	P		P		13 14 22.4	-0.7	
GYA				AP		pP		13 14 36.3	-1.2	
GYA				XP		sP		13 14 41.0	-2.5	
GYA				PCP		PcP		13 15 08.3	-0.3	
GYA				PP		PP		13 16 37.8	+2.0	
GYA				SCP		ScP		13 19 03.4	-1.5	
GYA				PCS		PcS		13 19 08.0	-3.0	
GYA				S		S		13 22 32.8	+0.6	
GYA				XS		sS		13 22 51.8	-4.5	
GYA				AMB		AMB				
	comp=Z,10.0nm,0.8s,mb4.9									
GYA				AMB		AMB				
	comp=Z,90nm,8.3s									
GYA				LR		LR				
	comp=N,380nm,18.2s,MS4.7									
GYA				LR		LR				
	comp=E,260nm,16.1s,MS4.7									
GYA				LR		LR				
	comp=Z,360nm,17.8s,MS4.6									
BVAR	Borovoye Array	60.92	320	P		P		13 14 27.4	-1.1	
	comp=Z,2.3nm,0.8s,mb4.4,baz=45,slow=8.6,SNR=7.8									
BVAR				PcP		PcP		13 15 12.1	+0.6	
	comp=Z,3.0nm,0.8s,baz=82,slow=3.1,SNR=6.5									
ARU	Arti	62.69	328	*d i*P		P		13 14 42.4	+2.1	
ARU				*e*				13 16 56.8		
ARU				*e*S		S		13 23 09.2	+4.7	
ARU				SS		SS		13 27 11.8	+3.0	
ARU				pmax		pmax				
	comp=Z,6.0nm,1.2s,mb4.6									
KMI	Kunming	63.49	278	P		P		13 14 49.0	+2.9	
KMI				AMB		AMB				
	comp=Z,11nm,1.2s,mb4.9									
AAK	Ala-Archa	66.83	310	⇓*i*P		P		13 15 09.1	+1.6	
AAK				pmax		pmax				
	comp=Z,8.0nm,1.5s,mb4.5									
AAK	Ala-Archa	66.83	310	*e*P		P		13 15 07.5	0.0	
NOA	NORSAR Array B	67.90	355	P		P		13 15 12.5	-1.4	
	comp=Z,2.3nm,0.9s,mb4.2,baz=5.1,slow=6.4,SNR=3.4									
NOA	NORSAR Array B	67.90	355	P		P		13 15 12.5	-1.4	
OBN	Obninsk	70.03	339	*e*P		P		13 15 26.5	-0.8	
OBN				*e*				13 15 49.4		
OBN				pmax		pmax				
	comp=Z,15nm,1.2s,mb4.8									
CMAR	Chiang Mai Arr	70.76	276	P		P		13 15 31.4	-0.9	
	comp=Z,0.5nm,0.5s,mb3.7,baz=28,slow=7.4,SNR

DRGR		**80.67**	**345**	⇓*i*P	**P**		**13 16 28.8**	**+0.3**
LDF	**La Druitiere**	**80.68**	**1**	*e*P	**P**		**13 16 27.7**	**-0.8**
	comp=Z,20nm,0.9s,mb4.7							
LDF	**La Druitiere**	**80.68**	**1**	*e*P	**P**		**13 16 27.7**	**-0.8**
LDF				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
LDF	**La Druitiere**	**80.68**	**1**	*e*P	**P**		**13 16 27.7**	**-0.8**
	comp=Z,10.0nm,0.9s,mb4.8							
GRR	**Gorron**	**80.88**	**1**	*e*P	**P**		**13 16 29.1**	**-0.5**
	comp=Z,8.9nm,0.7s,mb4.5							
GRR	**Gorron**	**80.88**	**1**	*e*P	**P**		**13 16 29.1**	**-0.5**
GRR				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
GRR	**Gorron**	**80.88**	**1**	*e*P	**P**		**13 16 29.1**	**-0.5**
	comp=Z,4.4nm,0.7s,mb4.5							
SGMF	**Saint Gilles**	**80.98**	**2**	*e*P	**P**		**13 16 29.7**	**-0.4**
HINF	**Hinteralfeld**	**81.32**	**356**	*e*P	**P**		**13 16 31.3**	**-0.6**
VOIR		**81.57**	**343**	⇑*i*P	**P**		**13 16 34.5**	**+1.2**
WRA	**Warramunga Arr**	**81.62**	**224**	P	**P**		**13 16 31.7**	**-1.9**
	comp=Z,1.0nm,1.0s,mb3.7,baz=31,slow=6.0,SNR=5.3							
GZR	**Gura Zlata**	**82.02**	**345**	⇓*i*P	**P**		**13 16 36.3**	**+0.7**
AVF	**Avril sur Loir**	**82.46**	**358**	*e*P	**P**		**13 16 37.6**	**-0.3**
BGF	**Bois d'Agland**	**82.71**	**359**	*e*P	**P**		**13 16 38.7**	**-0.5**
TCF	**Toulx Ste Croi**	**82.98**	**359**	*e*P	**P**		**13 16 40.3**	**-0.3**
	comp=Z,11nm,0.9s,mb4.6							
TCF	**Toulx Ste Croi**	**82.98**	**359**	*e*P	**P**		**13 16 40.3**	**-0.3**
TCF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
TCF	**Toulx Ste Croi**	**82.98**	**359**	*e*P	**P**		**13 16 40.3**	**-0.3**
	comp=Z,5.3nm,0.9s,mb4.6							
ORIF	**Oris-en-Rattie**	**84.26**	**356**	*e*P	**P**		**13 16 47.7**	**+0.5**
	comp=Z,9.9nm,0.9s,mb4.7							
ORIF	**Oris-en-Rattie**	**84.26**	**356**	*e*P	**P**		**13 16 47.7**	**+0.5**
ORIF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.6							
ORIF	**Oris-en-Rattie**	**84.26**	**356**	*e*P	**P**		**13 16 47.7**	**+0.5**
	comp=Z,9.0nm,0.9s,mb4.9							
BR131	**Keskin Array S**	**85.08**	**335**	*e*P	**P**		**13 16 51.9**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.3							
BRTR	**Keskin Array B**	**85.08**	**335**	P	**P**		**13 16 51.8**	**+0.3**
	comp=Z,3.2nm,0.8s,mb4.5,baz=38,slow=4.5,SNR=14							
BRTR	**Keskin Array B**	**85.08**	**335**	⇑*e*P	**P**		**13 16 52.0**	**+0.6**
ASAR	**Alice Springs**	**85.09**	**222**	P	**P**		**13 16 51.0**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.7,baz=27,slow=5.5,SNR=6.2							
FRF	**La Foret Royal**	**85.58**	**356**	*e*P	**P**		**13 16 53.5**	**-0.3**
	comp=Z,41nm,1.1s,mb5.3							
FRF	**La Foret Royal**	**85.58**	**356**	*e*P	**P**		**13 16 53.5**	**-0.3**
FRF				pmax	pmax			
	comp=Z,21nm,1.1s,mb5.3							
FRF	**La Foret Royal**	**85.58**	**356**	*e*P	**P**		**13 16 53.5**	**-0.3**
	comp=Z,21nm,1.1s,mb5.3							
PGF	**Pioggiola**	**86.46**	**354**	*e*P	**P**		**13 16 57.9**	**-0.3**
	comp=Z,27nm,0.9s,mb5.2							
PGF	**Pioggiola**	**86.46**	**354**	*e*P	**P**		**13 16 57.9**	**-0.3**
PGF				pmax	pmax			
	comp=Z,13nm,0.9s,mb5.2							
PGF	**Pioggiola**	**86.46**	**354**	*e*P	**P**		**13 16 57.9**	**-0.3**
	comp=Z,13nm,0.9s,mb5.2							
TSUM	**Tsumeb**	**145.50**	**331**	*e*PKP	PKPdf		13 23 53.6	0.0
BOSA	**Boshof**	**150.95**	**311**	PKPbc	PKPbc		13 24 07.4	-0.6
	comp=Z,10nm,1.3s,baz=45,slow=3.3,SNR=4.7							

*IDC **19** 13:08:05.1±2.3, 3579N×7148E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.7/27, mbtmp3.9/10, ML3.8/3, MS4.2/1, Ms1 4.2/1, ms1mx3.6/37, Error ellipse: s-maj=52.9km s-min=23.6km az=141.0*

*ISCJB **19** 13:08:21.1±0.4, 3655N±004×7131E±008, h114km±8km, mb3.6/5, Error ellipse: s-maj=10.9km s-min=5.4km az=19.3*

*NEIC **19** 13:08:22.3±1.3, 3649N×7134E, h115km±13km, mb4.4/2, Error ellipse: s-maj=28.2km s-min=11.4km az=131.0*

*NNC **19** 13:08:26.0±10.0, 3695N×7077E, h62km±231km, mb4.0, mpv4.5, Error ellipse: s-maj=86.7km s-min=63.1km az=166.0*

ISC 19 13:08:22.3±0.4, 3654N±004×7129E±008, h111km±8km, n35, σ0§93/42, mb3.6/5, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.70**	**223**	*e*Pn	**Pn**	**13 09 05.2**	**+0.8**
KBL				Sn	**Sn**	13 09 36.4	-0.4
CEP	**Cherat**	**2.75**	**169**	P	**Pn**	**13 09 05.9**	**+0.8**
CEP				S	**Sn**	13 09 37.0	-1.0
CHCP	**Chirah Chowk**	**3.30**	**150**	P	**Pn**	**13 09 13.6**	**+1.3**
SBDP	**Sheikh Budin**	**4.25**	**185**	P	**Pn**	**13 09 24.8**	**-0.2**
AML	**Almayashu**	**5.89**	**18**	P	**Pn**	**13 09 47.6**	**+0.5**
	SNR=262						
UCH	**Uchtor**	**6.21**	**23**	P	**Pn**	**13 09 52.5**	**+1.1**
	SNR=5.3						
KZA	**Kyzart**	**6.33**	**28**	P	**Pn**	**13 09 53.6**	**+0.5**
	SNR=8.5						
EKS2	**Erkin-Say**	**6.41**	**17**	P	**Pn**	**13 09 54.6**	**+0.5**
	SNR=34						
AAK	**Ala-Archa**	**6.57**	**21**	P	**Pn**	**13 09 56.8**	**+0.4**
	SNR=77						
AAK	**Ala-Archa**	**6.57**	**21**	*e*Pn	**Pn**	**13 09 56.9**	**+0.5**
	49nm,0.4s						
AAK				*e*Sn	**Sn**	13 11 07.6	-2.2
KK31	**Karatay Array**	**6.59**	**355**	P	**Pn**	**13 09 55.9**	**-0.6**
	19nm,0.3s,baz=179,slow=13,SNR=409						
KK31				S	**Sn**	13 11 04.5	-5.6
	5.8nm,0.3s,baz=182,slow=24,SNR=7.3						
KBK	**Karagaybulak**	**6.73**	**24**	P	**Pn**	**13 09 59.2**	**+0.7**
	SNR=19						
ULHL	**Ulahol**	**6.87**	**32**	P	**Pn**	**13 10 01.0**	**+0.6**
	SNR=8.0						
CHMS	**Chumysh**	**6.98**	**21**	P	**Pn**	**13 10 02.1**	**+0.2**
	SNR=20						
USP	**Ospenovka**	**7.16**	**19**	P	**Pn**	**13 10 04.0**	**-0.3**
	SNR=47						
TKM2	**Tokmak 2**	**7.19**	**26**	⇑P	**Pn**	**13 10 04.8**	**+0.1**
	12nm,0.4s						
TKM2				⇓S	**Sn**	**13 11 24.1**	**-0.6**
	1.5nm,0.5s						
TKM2	**Tokmak 2**	**7.19**	**26**	P	**Pn**	**13 10 05.1**	**+0.4**
	SNR=36						
SMLA	**Simla**	**7.28**	**136**	*i* P	**Pn**	**13 10 04.8**	**-1.3**
SMLA				*i* S	**Sn**	**13 11 21.4**	**-5.8**
SMLA				*i* S	**Sn**	**13 11 22.5**	**-4.7**
SMLA				*ex*	x	13 11 24.3	
	comp=N,355nm,0.3s						
SMLA				*ex*	x	13 11 25.8	
	comp=E,352nm,0.3s						
MKAR	**Makanchi Array**	**13.13**	**35**	Pn	**Pn**	**13 11 23.0**	**-1.3**
	comp=E,0.2nm,0.3s,baz=219,slow=15,SNR=8.5						
KURK	**Kurchatov**	**15.12**	**18**	Pn	**Pn**	**13 11 44.7**	**-5.1**
	baz=204,slow=10,SNR=2.0						
KURK	**Kurchatov**	**15.12**	**18**	*e*P	**Pn**	**13 11 51.9**	**+2.0**
	comp=E,1.5nm,0.5s						
AB09	**Akbulak array**	**15.18**	**330**	⇑P	**Pn**	**13 11 48.7**	**-1.9**
	comp=E,1.0nm,0.4s						
BVAR	**Borovoye Array**	**16.50**	**358**	P	**Pn**	**13 12 07.3**	**+0.4**
	comp=E,0.5nm,0.3s,baz=188,slow=15,SNR=5.2						
AKTK	**Aktyubinsk**	**16.86**	**330**	P	**Pn**	**13 12 10.9**	**-0.4**
AKTK				LR	LR	13 20 25.7	
AKTO	**Aktyubinsk**	**16.86**	**330**	⇑P	**Pn**	**13 12 12.0**	**+0.6**
	comp=E,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.86**	**330**	P	**Pn**	**13 12 10.9**	**-0.4**
	comp=E,0.8nm,0.3s,baz=141,slow=16,SNR=11						
AKTO				LR	LR	13 20 25.7	
	comp=E,855nm,20.4s,baz=82,slow=42						
ZAA0	**Zalesovo Array**	**19.79**	**24**	*e*P	**P**	**13 12 42.9**	**-0.6**
ZALV	**Zalesovo Beam**	**19.79**	**24**	P	**P**	**13 12 43.2**	**-0.3**
	comp=E,5.1nm,0.4s,baz=209,slow=11,SNR=37						
AKASG	**Malin Array Be**	**33.10**	**309**	P	**P**	**13 14 48.4**	**+1.0**
	comp=E,0.3nm,0.3s,mb3.6,baz=88,slow=6.8,SNR=4.1						
NB2	**NORSAR Subarra**	**44.49**	**323**	P	**P**	**13 16 22.9**	**+0.8**
	comp=Z,0.9nm,0.4s,mb3.9,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**13 16 23.2**	**+1.1**
	comp=Z,1.2nm,0.5s,mb3.9,baz=96,slow=7.7,SNR=6.6						
TORD	**Torodi Ar. Bea**	**65.95**	**269**	P	**P**	**13 18 54.7**	**-2.1**
	comp=Z,0.6nm,0.5s,mb3.7,baz=48,slow=5.3,SNR=12						
INK	**Inuvik**	**73.83**	**9**	P	**P**	**13 19 45.0**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.5,baz=331,slow=4.9,SNR=5.6						
INK	**Inuvik**	**73.83**	**9**	P	**P**	**13 19 45.0**	**+0.8**
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**13 20 25.7**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.4,baz=351,slow=5.4,SNR=9.1						

*CSEM **19** 13:12:52.6±0.1, 3837N×2649E, h10km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.7km az=39.0*

*DDA **19** 13:12:53.0, 3832N×2654E, h17km, Md2.8*

*ISK **19** 13:12:53.1, 3835N×2655E, h5km, MD2.8*

*THE **19** 13:12:53.5, 3834N×2649E, h4km±11km, Error ellipse: s-maj=11.6km s-min=0.3km az=184.0*

*ISCJB **19** 13:12:53.2±0.6, 3830N±003×2646E±004, h10km±3km, Error ellipse: s-maj=5.3km s-min=3.8km az=140.4*

*ATH **19** 13:12:53.0, 3831N×2643E, h36km, MD3.2/3*

ISC 19 13:12:53.6±0.5, 3833N±003×2646E±004, h12km±3km, n20, σ1§01/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**75**	*i* P	**Pg**	**13 12 56.1**	**-0.5**
URLA				*i* S	**Sg**	**13 12 58.6**	**-0.2**
CHOS	**Chios island**	**0.33**	**280**	P	**Pg**	**13 13 00.3**	**+0.1**
CHOS				S	**Sg**	**13 13 05.5**	**+0.9**
BLCB	**Balcova**	**0.46**	**83**	*e*PG	**Pg**	**13 13 01.6**	**-1.0**
BLCB				*e*SG	**Sg**	**13 13 08.3**	**-0.5**
BLCB	**Balcova**	**0.46**	**83**	P	**Pg**	**13 13 02.0**	**-0.6**
BLCB				*e*Sg	**Sg**	**13 13 08.3**	**-0.5**
BLCB				S	**Sg**	**13 13 08.6**	**-0.2**
IZM	**Izmir**	**0.63**	**84**	*e*PG	**Pg**	**13 13 05.4**	**-0.5**
SMG	**Samos**	**0.69**	**154**	*e*PN	**Pn**	**13 13 06.2**	**-2.9**
SMG				*e*SN	**Sg**	**13 13 17.4**	**+1.4**
GCAM	**G?zelcaml?**	**0.88**	**136**	*i* P	**Pg**	**13 13 09.2**	**-1.4**
GCAM				*i* S	**Sg**	**13 13 21.8**	**-0.2**
PRK	**Paraskevi**	**0.93**	**351**	P	**Pg**	**13 13 10.9**	**-0.6**
PRK				S	**Sg**	**13 13 24.4**	**+0.8**
PRK	**Paraskevi**	**0.93**	**351**	*e*PN	**Pn**	**13 13 11.3**	**-1.1**
PRK				*e*SN	**Sn**	**13 13 24.1**	**-1.4**
PRK	**Paraskevi**	**0.93**	**351**	*e*Pn	**Pn**	**13 13 11.3**	**-1.1**
AYVA	**Ayvalik**	**0.99**	**10**	*i* P	**Pb**	**13 13 11.7**	**-1.0**
AYVA				*i* S	**Sg**	**13 13 26.4**	**+0.8**
SIGR	**SIGRI**	**1.00**	**332**	P	**Pb**	**13 13 12.4**	**-0.4**
SIGR				S	**Sg**	**13 13 27.0**	**+1.1**
AKS	**Akhisar**	**1.19**	**62**	*e*PN	**Pn**	**13 13 15.2**	**-0.8**
AKS				*e*SN	**Sn**	**13 13 32.0**	**-0.1**
APE	**Apeiranthos**	**1.46**	**211**	*e*PN	**Pn**	**13 13 18.4**	**-1.3**
MLSB	**Milas**	**1.47**	**134**	*e*PN	**Pn**	**13 13 20.9**	**+1.1**
BDRM	**Kayabasi**	**1.48**	**148**	*i* P	**Pn**	**13 13 18.9**	**-1.1**
BDRM				*i* S	**Sn**	**13 13 40.2**	**+0.9**
MANT	**Manisa**	**1.65**	**84**	*i* P	**Pn**	**13 13 22.9**	**+0.5**
MANT				*i* S	**Sn**	**13 13 44.9**	**+1.4**
BALB	**Balikesir**	**1.71**	**40**	*e*PN	**Pn**	**13 13 24.5**	**+1.3**
KULA	**Kula-Manisa**	**1.74**	**83**	*e*PN	**Pn**	**13 13 24.7**	**+1.2**
YER	**Yerkesik**	**1.87**	**129**	*e*PN	**Pn**	**13 13 26.8**	**+1.4**

*ISCJB **19** 13:18:33.3±0.9, 554N±02×1632W±02, h104km±11km, mb3.5/3, Error ellipse: s-maj=38.5km s-min=13.9km az=152.2*

*NEIC **19** 13:18:34.6±0.7, 5526N×163.15W, h100km±8km, MG3.2(AEIC), Error ellipse: s-maj=27.8km s-min=9.5km az=152.0*

*IDC **19** 13:18:41.0±9.1, 5536N×16227W, h123km±58km, mb3.1/3, mb1 3.4/5, mb1mx3.1/26, mbtmp3.1/5, Error ellipse: s-maj=71.3km s-min=46.2km az=72.0*

ISC 19 13:18:34.1±0.9, 554N±02×1632W±02, h94km±11km, n9, σ0§97/11, mb3.5/3, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.59**	**191**	P	**Pn**	**13 18 49.8**	**-0.1**
FALS				S	**Sn**	**13 19 01.9**	**+0.1**
SDPT	**Sand Point**	**1.57**	**92**	*e*Pn	**Pn**	**13 19 01.1**	**+0.2**
AKUT	**Akutan**	**1.97**	**230**	*e*Pn	**Pn**	**13 19 05.2**	**-0.8**
UNV	**Unalaska Valle**	**2.48**	**231**	P	**Pn**	**13 19 13.2**	**+0.4**
KDAK	**Kodiak Island**	**6.33**	**64**	P	**Pn**	**13 20 06.2**	**+1.5**
	0.5nm,0.3s,baz=207,slow=6.3,SNR=5.0						
KDAK				S	**Sn**	**13 21 12.0**	**-3.3**
	0.7nm,0.3s,baz=312,slow=23,SNR=6.3						
INK	**Inuvik**	**18.76**	**35**	P	**Pn**	**13 22 45.9**	**-0.9**
	0.0nm,0.3s,baz=236,slow=8.3,SNR=4.2						
YKA	**Yellowknife Ar**	**25.48**	**54**	P	**P**	**13 23 54.6**	**+1.6**
	0.4nm,0.6s,mb3.0,baz=275,slow=9.8,SNR=8.4						
PDAR	**Pinedale Array**	**36.43**	**87**	P	**P**	**13 25 29.1**	**-0.2**
	0.3nm,0.8s,mb3.3,baz=267,slow=5.4,SNR=3.0						
TXAR	**Lajitas Array**	**49.26**	**97**	P	**P**	**13 27 12.4**	**-0.6**
	1.3nm,0.5s,mb4.1,baz=300,slow=6.0,SNR=31						

*ISCJB **19** 13:33:49.8±1.1, 1434S±007×754W±01, h50km±11km, mb4.1/13, Error ellipse: s-maj=21.2km s-min=6.2km az=149.0*

*NEIC **19** 13:33:51.6±0.9, 1431S×7547W, h51km±8km, mb4.6/1, Error ellipse: s-maj=13.8km s-min=6.3km az=59.0*

NEIC Felt [III] at Ica.

*IDC **19** 13:33:51.7±1.7, 1430S×7543W, h51km±14km, mb3.9/13, mb1 4.0/17, mb1mx4.0/23, mbtmp3.9/17, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/27, Error ellipse: s-maj=27.7km s-min=9.9km az=54.0*

ISC 19 13:33:51.9±0.9, 1432S±007×754W±01, h52km±9km, n40, σ0§80/37, mb4.1/13, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.69**	**329**	P	**Pn**	**13 34 30.8**	**-2.0**
	20nm,0.3s,baz=179,slow=16,SNR=42						
NNA				S	**Sn**	**13 35 04.8**	**+0.6**
	276nm,0.3s,baz=188,slow=17,SNR=7.8						
NNA				LR	LR	13 35 48.6	
	comp=Z,415nm,19.0s,baz=288,slow=44						
NNA	**Nana**	**2.69**	**329**	*e*Pn	**Pn**	**13 34 31.7**	**-1.1**
NNA				*e*Sn	**Sn**	**13 35 04.2**	**0.0**
NNA				LR	LR	13 35 48.6	
ATAH	**Atahualpa**	**7.83**	**338**	P	**Pn**	**13 35 47.2**	**+3.9**
	1.3nm,0.3s,baz=134,slow=5.9,SNR=5.1						
ATAH				S	**Sn**	**13 37 11.3**	**+0.6**
	3.5nm,0.3s,baz=336,slow=10.0,SNR=2.2						
LVC	**Limon Verde**	**10.31**	**144**	P	**Pn**	**13 36 18.4**	**+1.3**
	1.5nm,0.3s,baz=310,slow=9.1,SNR=19						
LVC				S	**Sn**	**13 38 10.3**	**-1.0**
	1.8nm,0.3s,baz=86,slow=21,SNR=4.2						
LVC	**Limon Verde**	**10.31**	**144**	*e*Pn	**Pn**	**13 36 18.5**	**+1.4**
LVC				*e*Sn	**Sn**	**13 38 10.8**	**-0.5**
SIV	**San Ignacio**	**13.96**	**99**	P	**Pn**	**13 37 06.8**	**-0.3**
	0.3nm,0.3s,baz=281,slow=12,SNR=6.4						
CFAA	**Coronel Fontan**	**18.42**	**160**	P	**Pn**	**13 38 03.6**	**0.0**
	0.1nm,0.3s,baz=336,slow=11,SNR=19						
CPUP	**Villa Florida**	**20.73**	**128**	P	**P**	**13 38 28.1**	**-0.1**
	7.9nm,0.9s,baz=292,slow=11,SNR=13						
CPUP	**Villa Florida**	**20.73**	**128**	*e*P	**P**	**13 38 28.4**	**+0.2**
SDV	**Santo Domingo**	**23.54**	**12**	P	**P**	**13 38 58.7**	**+0.9**
	6.4nm,0.7s,mb4.2,baz=262,slow=3.0,SNR=7.7						
SDV	**Santo Domingo**	**23.54**	**12**	P	**P**	**13 38 59.2**	**+1.5**
TRQA	**Tornquist**	**26.48**	**156**	P	**P**	**13 39 21.8**	**-2.5**
TXAR	**Lajitas Array**	**51.25**	**328**	P	**P**	**13 42 50.1**	**-0.5**
	0.8nm,0.6s,mb3.9,baz=148,slow=9.2,SNR=10						
PDAR	**Pinedale Array**	**64.87**	**333**	P	**P**	**13 44 25.4**	**-0.2**
	0.3nm,0.7s,mb3.4,baz=87,slow=6.4,SNR=2.6						
ELK	**Elko**	**66.05**	**328**	P	**P**	**13 44 33.1**	**-0.2**
	0.8nm,0.8s,mb3.8,baz=141,slow=3.7,SNR=4.4						
NVAR	**Mina Array Bea**	**66.06**	**324**	P	**P**	**13 44 33.9**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=120,slow=5.3,SNR=3.1						
ULM	**Lac du Bonnet**	**66.75**	**346**	P	**P**	**13 44 36.9**	**-0.7**
	3.3nm,0.7s,mb4.5,baz=158,slow=7.3,SNR=5.2						
VNA3	**Neumayer Olymp**	**68.82**	**162**	*e*	**P**	**13 44 51.0**	**+0.6**
VNA3				*e*		13 44 54.2	
VNA1	**Neumayer--Stat**	**69.08**	**161**	*e*	**P**	**13 44 52.8**	**+0.8**
VNA1				*e*		13 44 56.5	
SCHQ	**Schefferville**	**69.26**	**5**	P	**P**	**13 44 52.7**	**-0.6**
	4.0nm,0.8s,mb4.4,baz=247,slow=7.7,SNR=2.5						
SCHQ	**Schefferville**	**69.26**	**5**	P	**P**	**13 44 52.7**	**-0.6**
VNA2	**Neumayer--Watz**	**69.43**	**161**	*e*	**P**	**13 44 54.8**	**+0.6**
	baz=280,slow=6.9						
VNA2				*e*		13 44 58.0	
SNAA	**Sanae**	**71.04**	**161**	*e*	**P**	**13 45 04.3**	**+0.3**
SNAA				*e*		13 45 07.1	
SNAA	**Sanae**	**71.04**	**161**	*e*P	**P**	**13 45 04.2**	**+0.1**
	7.3nm,0.9s,mb4.6						
DBIC	**Dimbokro**	**73.03**	**78**	P	**P**	**13 45 17.4**	**+0.3**
	2.7nm,1.0s,mb4.1,baz=252,slow=6.4,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**81.09**	**74**	*e*P	**P**	**13 46 02.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**81.09**	**74**	P	**P**	**13 46 01.9**	**-0.3**
	8.3nm,0.9s,mb4.7,baz=260,slow=5.5,SNR=20						
TORD	**Torodi Ar. Bea**	**81.09**	**74**	P	**P**	**13 46 01.9**	**-0.3**
YKA	**Yellowknife Ar**	**82.46**	**343**	P	**P**	**13 46 07.7**	**-0.7**
	1.9nm,0.7s,mb4.1,baz=142,slow=6.0,SNR=35						
YKA				pP	pP	13 46 25.3	+2.1
	1.1nm,0.8s,baz=136,slow=5.5,SNR=5.6						
VNDA	**Vanda**	**82.77**	**191**	P	**P**	**13 46 10.8**	**+0.9**
	1.9nm,1.0s,mb4.1,baz=87,slow=2.8,SNR=3.9						
VNDA	**Vanda**	**82.77**	**191**	P	**P**	**13 46 10.8**	**+0.9**
INK	**Inuvik**	**92.16**	**342**	P	**P**	**13 46 54.9**	**-0.5**
	1.7nm,0.9s,mb4.4,baz=116,slow=5.3,SNR=5.2						
ASAR	**Alice Springs**	**132.59**	**218**	PKP	PKPdf	13 53 01.0	-0.6
	1.1nm,0.6s,baz=124,slow=2.1,SNR=28						
WRA	**Warramunga Arr**	**135.09**	**221**	PKP	PKPdf	13 53 06.1	-0.3
	1.9nm,0.7s,baz=136,slow=1.9,SNR=24						
WRA	**Warramunga Arr**	**135.09**	**221**	PKP	PKPdf	13 53 06.0	-0.3
ZAA0	**Zalesovo Array**	**137.52**	**17**	*e*PKP	PKPdf	13 53 09.5	-0.4
ZALV	**Zalesovo Beam**	**137.52**	**17**	PKP	PKPdf	13 53 09.8	0.0
	3.2nm,0.9s,baz=321,slow=2.1,SNR=11						
ULN	**Ulaanbaatar**	**146.49**	**357**	*e*PKPbc	PKPbc	13 53 27.3	-0.1
SONM	**Songino Array**	**146.55**	**358**	PKPbc	PKPbc	13 53 28.1	+0.5
	2.3nm,0.7s,baz=316,slow=1.7,SNR=20						
CMAR	**Chiang Mai Arr**	**173.21**	**52**	PKP	PKPdf	13 53 56.0	-0.3
	0.5nm,0.8s,baz=349,slow=1.5,SNR=4.0						

*ISCJB **19** 13:46:30.5±1.4, 512N±02×17923W±007, h49km±13km, mb3.5/9, Error ellipse: s-maj=25.9km s-min=7.5km az=177.0*

*IDC **19** 13:46:32.7±4.7, 5123N×17941W, h55km±45km, mb3.4/9, mb1 3.7/10, mb1mx3.5/26, mbtmp3.4/10, ML3.2/1, Error ellipse: s-maj=36.1km s-min=15.7km az=158.0*

*NEIC **19** 13:46:32.1±1.5, 5116N×179.16W, h46km±14km, ML3.8(AEIC), Error ellipse: s-maj=26.6km s-min=8.7km az=173.0*

ISC 19 13:46:31.8±1.4, 511N±02×17916W±008, h43km±13km, n20, σ1§16/23, mb3.5/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.73**	**62**	P	**Pn**	**13 46 59.0**	**-0.4**
ADK				S	**Sn**	**13 47 20.4**	**+0.2**
ATKA	**Atka Island**	**3.28**	**68**	P	**Pn**	**13 47 20.9**	**+0.3**
ATKA				S	**Sn**	**13 48 03.2**	**+4.8**
SMY	**Shemya**	**4.48**	**294**	P	**Pn**	**13 47 36.3**	**-0.7**
FX1	**Attu Island--F**	**5.07**	**294**	P	**Pn**	**13 47 43.7**	**-1.4**
	3.3nm,0.3s,baz=284,slow=7.9,SNR=15						
FX1				S	**Sn**	**13 48 44.3**	**+2.1**
	baz=72,slow=20,SNR=2.1						
FX1	**Attu Island--F**	**5.07**	**294**	P	**Pn**	**13 47 44.8**	**-0.3**
PETK	**Petropavlovsk-**	**14.35**	**287**	P	**Pn**	**13 49 55.0**	**+3.0**
	0.1nm,0.3s,baz=91,slow=14,SNR=2.6						
KDAK	**Kodiak Island**	**16.77**	**56**	P	**Pn**	**13 50 21.2**	**-2.0**
	1.1nm,0.3s,baz=72,slow=18,SNR=9.7						
KDAK	**Kodiak Island**	**16.77**	**56**	P	**Pn**	**13 50 21.2**	**-2.0**
INK	**Inuvik**	**27.82**	**35**	P	**P**	**13 52 16.7**	**+0.3**
	0.3nm,0.4s,mb3.3,baz=183,slow=3.5,SNR=3.9						
YKA	**Yellowknife Ar**	**35.59**	**46**	P	**P**	**13 53 23.4**	**-1.2**
	0.7nm,0.6s,mb3.7,baz=282,slow=8.2,SNR=11						
NVAR	**Mina Array Bea**	**43.81**	**82**	P	**P**	**13 54 34.7**	**+1.5**
	0.2nm,0.5s,mb3.1,baz=336,slow=4.2,SNR=2.4						
ELK	**Elko**	**44.34**	**78**	P	**P**	**13 54 38.3**	**+0.9**
	0.7nm,0.5s,mb3.7,baz=278,slow=7.8,SNR=3.8						
PDAR	**Pinedale Array**	**46.61**	**72**	P	**P**	**13 54 56.1**	**+0.8**
	2.2nm,0.5s,mb4.3,baz=318,slow=3.4,SNR=32						
TXAR	**Lajitas Array**	**58.92**	**81**	P	**P**	**13 56 27.4**	**+1.0**
	0.4nm,0.6s,mb3.6,baz=298,slow=4.5,SNR=7.3						
MKAR	**Makanchi Array**	**60.03**	**308**	P	**P**	**13 56 32.2**	**-1.6**
	0.2nm,0.4s,mb3.5,baz=55,slow=6.3,SNR=4.9						
MKAR	**Makanchi Array**	**60.03**	**308**	P	**P**	**13 56 32.2**	**-1.6**
PMG	**Port Moresby**	**66.94**	**216**	P	**P**	**13 57 18.3**	**-1.4**
	12nm,0.8s,baz=325,slow=13,SNR=4.2						
PMG	**Port Moresby**	**66.94**	**216**	P	**P**	**13 57 18.3**	**-1.4**
WRA	**Warramunga Arr**	**81.66**	**224**	P	**P**	**13 58 45.0**	**-0.2**
	0.3

PMR pmax pmax
comp=Z,5.0nm,0.4s
PMR Palmer 19.48 46 *e*P **Pn 14 09 04.8 -1.5**
comp=Z,5.4nm,0.4s
COLA College 21.25 38⇑ *e*P **P 14 09 25.2 +1.4**
COLA College 21.25 38 *e*P **P 14 09 22.9 -0.9**
comp=Z,49nm,0.9s,mb4.8
MENT Mentasta 22.30 44 *e*P **P 14 09 36.1 +1.2**
EGAK Eagle 23.90 41 *e*P **P 14 09 49.7 -1.0**
comp=Z,23nm,0.8s,mb4.7
DAWY Dawson 24.46 43 *e*P **P 14 09 54.6 -1.3**
YSS Yuzh-Sakhalins 25.06 275⇑ *e*P **P 14 10 02.5 +1.0**
YSS pmax pmax
comp=Z,15nm,0.7s,mb4.6
ASAJ Asahikawa 26.42 270 P **P 14 10 11.3 -2.5**
comp=Z,11nm,1.0s,mb4.3,baz=82,slow=15,SNR=2.9
ASAJ Asahikawa 26.42 270 P **P 14 10 11.4 -2.4**
ASAJ pmax pmax
comp=Z,11nm,1.0s
INK Inuvik 27.80 35 P **P 14 10 24.9 -1.0**
comp=Z,3.4nm,0.8s,mb4.0,baz=253,slow=8.3,SNR=27
INK ScP ScP 14 17 19.2 +2.8
comp=Z,1.4nm,1.0s,baz=278,slow=19,SNR=4.6
INK LR LR 14 22 34.9
comp=Z,919nm,18.4s,MS4.4,baz=87,slow=39
INK Inuvik 27.80 35 P **P 14 10 24.9 -1.1**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK pmax pmax
comp=N,1.0nm,1.0s
INK MLR MLR
comp=Z,919nm,18.5s
INK Inuvik 27.80 35 *e*P **P 14 10 25.1 -0.8**
comp=Z,6.2nm,0.8s,mb4.3
DLBC Dease Lake 28.71 56 P **P 14 10 35.0 +0.8**
comp=Z,1.6nm,0.6s,mb3.9,baz=280,slow=11,SNR=5.4
DLBC LR LR 14 20 55.2
comp=Z,566nm,21.0s,MS4.2,baz=240,slow=34
YAK Yakutsk 29.35 312⇑ *e*P **P 14 10 38.5 -1.3**
YAK pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
KLR Kul'dur 30.97 286 *e*P **P 14 10 49.0 -5.2**
MJAR Matsushiro Arr 33.47 261 P **P 14 11 15.6 -0.7**
comp=Z,1.2nm,0.7s,mb4.0,baz=48,slow=7.5,SNR=5.0
MDJ Mudanjiang 34.33 279 P **P 14 11 22.4 -1.2**
MDJ AP pP 14 11 33.5 -4.1
MDJ XP sP 14 11 38.6 -5.5
MDJ PP PP 14 12 40.1 -1.9
MDJ S **S 14 16 46.1 -0.8**
MDJ XS sS 14 17 05.3 -5.3
MDJ AMB AMB
comp=Z,6.0nm,1.2s,mb4.4
MDJ AMB AMB
comp=Z,147nm,5.3s
MDJ LR LR
comp=N,80nm,25.6s,MS3.7
MDJ LR LR
comp=E,164nm,27.6s,MS3.7
MDJ LR LR
comp=Z,266nm,25.9s,MS3.9
YKA Yellowknife Ar 35.59 46 P **P 14 11 33.3 -0.9**
comp=Z,9.7nm,0.7s,mb4.8,baz=281,slow=8.0,SNR=123
YKA PcP PcP 14 14 02.6 +0.8
comp=Z,0.5nm,0.4s,baz=285,slow=3.1,SNR=5.9
YKA ScP ScP 14 17 44.1 +1.4
comp=Z,0.6nm,0.7s,baz=293,slow=3.3,SNR=9.0
YKA Yellowknife Ar 35.59 46 P **P 14 11 33.4 -0.8**
YKA 14 14 02.6
A05A Maple Falls 35.96 70⇑P **P 14 11 38.0 +0.4**
baz=36
C04A Brinnon 36.00 73⇑P **P 14 11 38.5 +0.5**
baz=36
B05A Bryant 36.28 72⇓P **P 14 11 41.0 +0.7**
baz=36
C05A Tolt Reservoir 36.78 72⇑P **P 14 11 45.1 +0.5**
baz=37
D05A Enumclaw 36.83 73⇓P **P 14 11 46.0 +0.9**
baz=37
A07A Ashnola River, 36.94 70⇑P **P 14 11 46.0 0.0**
baz=37,SNR=10
LON Longmire 37.15 74 *e*P **P 14 11 48.5 +0.7**
LON pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LON Longmire 37.15 74 *e*P **P 14 11 48.5 +0.8**
comp=Z,9.5nm,0.7s,mb4.7
F04A Amboy 37.17 75⇓P **P 14 11 48.6 +0.6**
baz=37
CN2 Changchun 37.31 281 *e*P **P 14 11 50.8 +1.7**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
B07A Winthrop 37.36 70⇑P **P 14 11 49.5 0.0**
baz=37,SNR=8.1
G04A Mulino 37.50 76⇓P **P 14 11 51.1 +0.4**
baz=37
A08A Turner Farm, O 37.64 69⇓P **P 14 11 52.2 +0.4**
baz=38
C07A Waterville 37.76 71⇓P **P 14 11 52.6 -0.3**
baz=38,SNR=7.1
F05A White Salmon 37.78 75⇓P **P 14 11 53.4 +0.3**
baz=38
B08A Colville Reser 37.88 70⇑P **P 14 11 53.9 0.0**
baz=38,SNR=7.5
H04A Detroit Lake 37.94 77⇑P **P 14 11 55.4 +0.9**
baz=38
A09A Danville 38.03 69⇓P **P 14 11 55.8 +0.6**
baz=38
D07A Quincy 38.04 72⇑P **P 14 11 55.4 +0.1**
baz=38
HIA Hailar 38.10 292⇑ *e*P **P 14 11 54.8 -1.0**
F06A Goldendale 38.25 75⇑P **P 14 11 57.3 +0.2**
baz=38
C08A Higginbotham F 38.31 71⇓P **P 14 11 57.9 +0.4**
baz=38
E07A Sunnyside 38.42 73⇑P **P 14 11 59.1 +0.6**
baz=38
B09A Rice 38.55 69⇓P **P 14 12 00.1 +0.6**
baz=38
H05A Madras 38.55 76⇑P **P 14 11 59.7 +0.1**
baz=38
G06A Carlson Farm, 38.61 75⇓P **P 14 12 00.1 0.0**
baz=38
A10A Northport 38.63 68⇑P **P 14 12 00.3 +0.1**
baz=38,SNR=5.7
HAWA Hanford 38.70 73 *e*P **P 14 12 01.1 +0.3**
comp=Z,17nm,0.7s,mb4.9
F07A Phinny Hill Vi 38.70 74⇑P **P 14 12 01.1 +0.2**
baz=39,SNR=9.2
D08A Wollman Farm, 38.74 72⇑P **P 14 12 01.1 0.0**
baz=39,SNR=5.4
C09A Chrisman Ranch 38.77 70⇑P **P 14 12 01.1 -0.3**
baz=39
E08A Dider Farm, El 38.93 73⇑P **P 14 12 02.7 0.0**
baz=39
H06A Lindquist Farm 39.05 76⇑P **P 14 12 03.9 +0.1**
baz=39
D09A Jones Farm, Ri 39.10 71⇓P **P 14 12 03.8 -0.4**
baz=39
EDM Edmonton 39.16 60 *e*P **P 14 12 03.7 -0.9**
NEW Newport 39.23 69 *e*P **P 14 12 05.0 -0.2**
NEW pmax pmax
comp=Z,12nm,0.8s
NEW Newport 39.23 69 *e*P **P 14 12 05.0 -0.2**
comp=Z,12nm,0.8s,mb4.7
A11A Hall Mountain, 39.34 68⇑P **P 14 12 06.6 +0.4**
baz=39,SNR=7.1
KSRS Korea Array 39.36 271 P **P 14 12 06.4 0.0**
comp=Z,5.9nm,0.7s,mb4.4,baz=56,slow=7.9,SNR=19
KSRS Korea Array 39.36 271 P **P 14 12 06.4 0.0**
KSRS pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
F08A Pendleton 39.45 73⇑P **P 14 12 06.8 -0.3**
baz=39
E09A Wood Farm, Sta 39.47 72⇓P **P 14 12 07.1 -0.2**
baz=39,SNR=6.7
B11A Sandpoint 39.59 68⇓P **P 14 12 08.4 +0.2**
baz=39
G08A Pilot Rock 39.60 74⇑P **P 14 12 08.4 +0.1**
baz=39
D10A Wagner Farm, O 39.72 71⇑P **P 14 12 08.7 -0.7**
baz=40,SNR=7.4
I07A Izee 39.90 76⇓P **P 14 12 10.8 0.0**
baz=40
J06A Christmas Vall 39.94 78⇑P **P 14 12 11.0 -0.3**
baz=40
F09A S2 Ranch, Elgi 40.02 73⇓P **P 14 12 11.8 0.0**
baz=40,SNR=8.2
B12A Libby 40.03 68⇑P **P 14 12 11.9 +0.1**
baz=40
F10A Beach Ranch, E 40.29 72⇓P **P 14 12 14.3 +0.2**
baz=40
G09A Cove 40.32 73⇓P **P 14 12 14.4 +0.1**
baz=40
J07A Hines 40.40 77⇑P **P 14 12 15.1 +0.1**
baz=40
C12B Naegeli Ranch, 40.46 69⇑P **P 14 12 15.5 +0.1**
baz=40
I08A Drewsey 40.56 76⇓P **P 14 12 15.5 -0.8**
baz=40
MOD Modoc 40.59 79 P **P 14 12 17.5 +0.9**
comp=Z,6.5nm,0.6s,mb4.4
E11A Bogner Ranch, 40.71 71⇑P **P 14 12 16.5 -0.9**
baz=40
G10A Bishop Farm, J 40.71 73⇓P **P 14 12 17.8 +0.3**
baz=40,SNR=16
B13A Whitefish 40.73 68⇓P **P 14 12 17.5 -0.1**
baz=41,SNR=6.4
K07A Rock Creek Ran 40.81 78⇑P **P 14 12 18.8 +0.5**
baz=41,SNR=8.6
J08A Circle Bar Ran 40.92 76⇓P **P 14 12 19.1 -0.1**
baz=41
F11A Grangeville 40.98 72⇓P **P 14 12 19.7 -0.1**
baz=41
C13A Hot Springs 41.01 69⇑P **P 14 12 19.6 -0.3**
baz=41
I09A Lost Marbles R 41.03 75⇑P **P 14 12 19.9 -0.3**
baz=41
A14A Double T Ranch 41.04 66⇓P **P 14 12 19.9 -0.3**
baz=41,SNR=15
G11A Walters Elk Ra 41.16 72⇑P **P 14 12 21.0 -0.3**
baz=41,SNR=7.1
K08A Mann Creek Ran 41.25 77⇓P **P 14 12 22.4 +0.4**
baz=41
H10A Noah's Angus R 41.30 74⇓P **P 14 12 21.7 -0.7**
baz=41,SNR=9.0
WVOR Wild Horse Val 41.32 78 *e*P **P 14 12 22.7 +0.1**
WVOR pmax pmax
comp=Z,13nm,0.8s,mb4.6
WVOR Wild Horse Val 41.32 78 *e*P **P 14 12 22.6 0.0**
comp=Z,13nm,0.8s,mb4.6
J09A Fry Pan Ranch, 41.36 76⇓P **P 14 12 22.9 0.0**
baz=41
B14A Marguette Ranc 41.43 67⇑P **P 14 12 23.5 +0.2**
baz=41
A15A Johnson Ranch, 41.44 66⇓P **P 14 12 22.7 -0.7**
baz=41
N06A Buffalo Meadow 41.54 81⇑P **P 14 12 24.8 +0.4**
baz=41
I10A Payette 41.54 74⇓P **P 14 12 24.4 +0.1**
baz=41
M07A Soldier Meadow 41.58 79⇑P **P 14 12 25.9 +1.1**
baz=41,SNR=13
H11A Donnelly 41.69 73⇓P **P 14 12 25.7 +0.2**
baz=42
BEKR Beckwourth 41.72 82⇓P **P 14 12 25.9 0.0**
baz=42
B15A Bradely Ranch, 41.86 67⇓P **P 14 12 26.6 -0.3**
baz=42,SNR=13
E13A Victor 41.86 70⇑P **P 14 12 27.1 +0.2**
baz=42,SNR=7.6
D14A Greenough 41.93 69⇓P **P 14 12 27.6 0.0**
baz=42,SNR=8.1
M08A Happy Creek Ra 42.04 79⇓P **P 14 12 28.7 +0.2**
baz=42
A16A West Butte Ran 42.10 65⇓P **P 14 12 28.1 -0.7**
baz=42,SNR=9.4
C15A Salmond Ranch, 42.11 67⇑P **P 14 12 28.8 -0.1**
baz=42,SNR=20
F13A Darby 42.12 71⇓P **P 14 12 29.2 +0.2**
baz=42,SNR=8.0
K10A MacKenzie Ranc 42.22 76⇓P **P 14 12 30.6 +0.7**
baz=42,SNR=9.0
E14A Clinton 42.29 70⇑P **P 14 12 30.4 0.0**
baz=42,SNR=6.8
H12A Diamond D Ranc 42.47 73⇑P **P 14 12 31.8 -0.1**
baz=42,SNR=11
MFID Camas Ranch 42.50 75⇓P **P 14 12 32.1 -0.1**
baz=42
D15A Lincoln 42.53 68⇑P **P 14 12 32.4 0.0**
baz=42,SNR=8.2
G13A Cobalt 42.55 72⇓P **P 14 12 32.5 -0.1**
baz=42,SNR=12
C16A Fuhringer Ranc 42.59 67⇑P **P 14 12 32.4 -0.5**
baz=42,SNR=18
A17A Triple J Farms 42.62 65⇑P **P 14 12 32.3 -0.7**
baz=42,SNR=13
F14A Wisdom 42.68 70⇑P **P 14 12 33.4 -0.2**
baz=42
K11A Parker Ranch, 42.73 76⇑P **P 14 12 34.0 0.0**
baz=43
E15A Deer Lodge 42.78 69⇑P **P 14 12 34.1 -0.3**
baz=43
H13A Challis 42.82 72⇑P **P 14 12 34.3 -0.4**
baz=43
L10A Juniper Basin 42.85 77⇑P **P 14 12 35.2 +0.1**
baz=43,SNR=9.0
N09A Rock Creek Ran 42.91 79⇑P **P 14 12 35.9 +0.4**
baz=43
J12A Stokes Ranch, 43.03 74⇑P **P 14 12 37.2 +0.7**
baz=43
R06C Coleville 43.09 83⇓P **P 14 12 37.0 0.0**
baz=43
D16A Dana Ranch, Ca 43.11 68⇓P **P 14 12 36.4 -0.6**
baz=43
A18A Metzger Ranch, 43.12 65⇓P **P 14 12 36.3 -0.7**
baz=43
F15A Butte 43.18 70⇓P **P 14 12 36.8 -0.8**
baz=43
L11A Cat Creek Ranc 43.24 76⇓P **P 14 12 38.0 -0.2**
baz=43,SNR=14
C17A Wharram Farm, 43.25 67⇓P **P 14 12 37.8 -0.4**
baz=43,SNR=7.3
I13A Wildhorse Cree 43.26 73⇓P **P 14 12 38.2 -0.1**
baz=43,SNR=16
HLID Hailey 43.27 74 *e*P **P 14 12 37.8 -0.7**
comp=Z,7.4nm,0.7s,mb4.5
E16A East Helena 43.29 69⇓P **P 14 12 38.7 +0.1**
baz=43
H14A Leadore 43.32 72⇓P **P 14 12 38.9 0.0**
baz=43,SNR=15
B18A Beardsley Farm 43.42 65⇑P **P 14 12 39.2 -0.4**
baz=43
K12A Draper Farm, C 43.50 75⇓P **P 14 12 40.4 +0.2**
baz=43,SNR=12
J13A Cove Ranch, Pi 43.51 74⇑P **P 14 12 40.5 +0.2**
baz=43,SNR=16
O09A Fish Creek Ran 43.51 79⇑P **P 14 12 41.2 +0.7**
baz=43
D17A Six Diamond Ra 43.54 67⇑P **P 14 12 40.2 -0.4**
baz=43
G15A Dillon 43.55 71⇑P **P 14 12 40.4 -0.2**
baz=43,SNR=9.1
EGMT Eagleton 43.63 66 *e*P **P 14 12 41.2 -0.1**
comp=Z,18nm,0.8s,mb4.8
I14A May 43.65 73⇓P **P 14 12 41.8 +0.3**
baz=44,SNR=17
L12A House Creek Ra 43.70 76⇓P **P 14 12 42.4 +0.4**
baz=44,SNR=15
F16A Kennard Place, 43.72 69⇓P **P 14 12 42.2 +0.1**
baz=44,SNR=7.9
H15A Lima 43.75 71⇓P **P 14 12 42.4 +0.2**
baz=44,SNR=9.1
BOZ Bozeman (W) 43.80 70 *e*P **P 14 12 38.8 -3.8**
BOZ pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
BOZ Bozeman (W) 43.80 70 *e*P **P 14 12 38.8 -3.8**
comp=Z,10nm,0.6s,mb4.7
E17A Martinsdale 43.81 68⇓P **P 14 12 43.1 +0.4**
baz=44,SNR=10
NVAR Mina Array Bea 43.86 82 P **P 14 12 43.9 +0.7**
comp=Z,3.2nm,0.7s,mb4.1,baz=284,slow=7.6,SNR=18
G16A Moss Hill, Enn 43.92 70⇓P **P 14 12 43.5 -0.1**
baz=44,SNR=10
J14A Carey 43.95 73⇑P **P 14 12 44.4 +0.5**
baz=44,SNR=10
D18A Linhart Farms, 44.03 67⇓P **P 14 12 45.0 +0.5**
baz=44,SNR=10
M12A Wells 44.19 77⇑P **P 14 12 45.9 +0.1**
baz=44
F17A Fitzpatrick Pl 44.23 69⇑P **P 14 12 46.2 +0.1**
baz=44,SNR=9.5
E18A Harlowton 44.30 68⇓P **P 14 12 46.5 -0.1**
baz=44,SNR=12
ELK Elko 44.38 78 *e*P **P 14 12 47.1 -0.2**
ELK pmax pmax
comp=Z,10.0nm,0.8s
ELK Elko 44.38 78 *e*P **P 14 12 47.1 -0.2**
comp=Z,9.8nm,0.8s,mb4.6
L13A Double Diamond 44.39 75⇓P **P 14 12 47.7 +0.3**
baz=44
N12A Clover Valley, 44.44 77⇑P **P 14 12 48.5 +0.7**
baz=44,SNR=11
O11A Cowboy Ranch, 44.48 79⇓P **P 14 12 48.3 +0.1**
baz=44
G17A Pierce Place, 44.50 70⇑P **P 14 12 48.1 -0.1**
baz=44
H16A Russell Place, 44.54 71⇓P **P 14 12 48.6 0.0**
baz=44,SNR=8.0
R09A Tonopah 44.74 82⇓P **P 14 12 50.4 +0.1**
baz=45,SNR=21
F18A Big Timber 44.78 68⇑P **P 14 12 50.5 0.0**
baz=45,SNR=5.3
Q10A Clear Creek Ra 44.81 81⇑P **P 14 12 50.7 -0.1**
baz=45
I16A Newdale 44.86 72⇑P **P 14 12 50.8 -0.3**
baz=45
O12A Currie 44.97 78⇓P **P 14 12 52.3 +0.3**
baz=45,SNR=10
S09A Goldfield 44.97 82⇑P **P 14 12 52.0 -0.1**
baz=45
VES Vestal, Richgr 44.98 86⇓P **P 14 12 51.4 -0.8**
baz=45
M14A Sheep Mountain 45.09 75⇑P **P 14 12 52.7 -0.3**
baz=45
H17A Grant Village 45.11 71⇑P **P 14 12 53.9 +0.8**
baz=45,SNR=5.8
BJI Beijing 45.14 282 P **P 14 12 53.3 -0.1**
IMW Indian Meadow 45.17 71 *e*P **P 14 12 54.1 +0.5**
comp=Z,5.5nm,0.7s,mb4.5
G18A Lazy EL Ranch, 45.19 69⇑P **P 14 12 53.4 -0.4**
baz=45
R10A Warm Springs 45.20 81⇑P **P 14 12 54.1 +0.3**
baz=45
CWC Cottonwood Cre 45.23 84⇑P **P 14 12 54.1 -0.1**
baz=45
S10A Tonopah Range, 45.24 82⇓P **P 14 12 54.3 +0.1**
baz=45,SNR=9.3
GRAC Grapevine Rang 45.32 83⇓P **P 14 12 54.9 -0.1**
baz=45
P12A McGill 45.34 79⇓P **P 14 12 56.0 +1.0**
baz=45,SNR=11
I17A Pilgram Creek 45.38 71⇑P **P 14 12 55.2 0.0**
baz=45
L15A Malad City 45.39 74⇑P **P 14 12 55.8 +0.4**
baz=45,SNR=5.8
K16A Soda Springs 45.39 73⇑P **P 14 12 56.6 +1.3**
baz=45,SNR=12
ISA Isabella 45.47 85⇑P **P 14 12 55.7 -0.4**
baz=45
RLMT Red Lodge 45.47 69 *e*P **P 14 12 56.3 +0.3**
comp=Z,17nm,0.8s,mb4.9
N14A Grayback Hills 45.58 76⇑P **P 14 12 57.2 +0.3**
baz=45,SNR=12
R11A Troy Canyon, C 45.60 80⇓P **P 14 12 56.8 -0.2**
baz=45
J17A Brown Place, J 45.61 72⇓P **P 14 12 56.9 -0.2**
baz=45
Q12A Willow Creek R 45.65 79⇑P **P 14 12 58.3 +0.9**
baz=46
M15A Larsen Ranch, 45.66 75⇓P **P 14 12 58.1 +0.6**
baz=46,SNR=7.6
MPMC Manual Prospec 45.84 84⇓P **P 14 12 59.1 +0.1**
baz=46
P13A Bates Ranch, G 45.90 78⇑P **P 14 12 59.8 +0.3**
baz=46
TLY Talaya 45.94 302 *e*P **P 14 12 59.9 +0.4**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
TLY MLR MLR
comp=Z,230nm,18.0s,MS4.2
I18A Diamond G Ranc 45.95 71⇑P **P 14 13 00.3 +0.5**
baz=46,SNR=6.1
N15A Stansbury Isla 45.96 76⇑P **P 14 13 00.1 +0.2**
baz=46,SNR=11
FURC Furnace Creek, 45.98 83⇑P **P 14 13 00.1 0.0**
baz=46
LRMC Laurel Mountai 46.09 85⇑P **P 14 13 00.5 -0.4**
baz=46
ULN Ulaanbaatar 46.10 296⇓ *e*P **P 14 13 01.0 +0.1**
ULN Ulaanbaatar 46.10 296 *e*P **P 14 13 00.8 0.0**
comp=Z,3.7nm,0.6s,mb4.5
J18A Kendall Valley 46.11 72⇓P **P 14 13 01.3 +0.3**
baz=46,SNR=9.9
DUG Dugway 46.20 77 *e*P **P 14 13 01.6 -0.1**
DUG pmax pmax
comp=Z,20nm,0.8s,mb5.1
DUG Dugway 46.20 77 *e*P **P 14 13 01.6 -0.1**
comp=Z,20nm,0.8s,mb5.1
Q13A Wheeler Ranch, 46.20 79⇓P **P 14 13 02.0 +0.2**
baz=46
M16A Huntsville 46.25 75⇓P **P 14 13 02.4 +0.3**
baz=46,SNR=9.8
EDW2 Edwards Air Fo 46.28 86⇓P **P 14 13 02.3 -0.2**
baz=46
P14A Drum Mountains 46.40 77⇑P **P 14 13 03.6 +0.2**
baz=46,SNR=12
K18A Toltan Ranch, 46.43 72⇓P **P 14 13 03.3 -0.2**
baz=46,SNR=5.5
SONM Songino Array 46.49 297 P **P 14 13 04.5 +0.5**
comp=Z,3.9nm,0.8s,mb4.4,baz=61,slow=8.5,SNR=24
SONM PcP PcP 14 14 37.9 +0.3
comp=Z,1.8nm,0.6s,baz=85,slow=2.8,SNR=4.9
SONM ScP ScP 14 18 30.2 +4.2
comp=Z,0.8nm,0.8s,baz=68,slow=2.5,SNR=4.6
SONM Songino Array 46.49 297 P **P 14 13 04.5 +0.6**
SONM 14 14 37.9
T11A Corn Creek, Al 46.52 81⇓P **P 14 13 04.3 0.0**
baz=46,SNR=15
S12A Delamar Landin 46.52 81⇑P **P 14 13 04.7 +0.4**
baz=46,SNR=6.3
Q14A Sevier Lake (B 46.64 78⇑P **P 14 13 05.8 +0.6**
baz=46,SNR=13
PDAR Pinedale Array 46.65 72 P **P 14 13 05.5 +0.3**
comp=Z,11nm,0.6s,mb4.9,baz=303,slow=3.7,SNR=60
R13A O'Grain Ranch, 46.71 80⇓P **P 14 13 05.6 -0.1**
baz=47
GSC Goldstone 46.75 85⇑P **P 14 13 05.6 -0.6**
baz=47
GSC Goldstone 46.75 85 *e*P **P 14 13 05.8 -0.3**
GSC pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
GSC Goldstone 46.75 85 *e*P **P 14 13 05.8 -0.3**
comp=Z,8.6nm,0.7s,mb4.8
ZAK Zakamensk 46.82 301⇑ *i*P **P 14 13 06.8 +0.3**
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
L18A Fontenelle, Gr 46.85 73⇓P **P 14 13 07.0 +0.2**
baz=47,SNR=9.2
P15A Leamington 46.90 77⇑P **P 14 13 07.7 +0.5**
baz=47
N17A Moffit Pass 46.95 75⇑P **P 14 13 08.3 +0.7**
baz=47
O16A Springville 46.99 76⇓P **P 14 13 08.4 +0.4**
baz=47,SNR=7.0
K19A Absolon Red Bu 47.04 71⇑P **P 14 13 07.7 -0.6**
baz=47,SNR=21
M18A Lyman 47.13 74⇑P **P 14 13 09.4 +0.4**
baz=47
Q15A Fillmore 47.19 78⇑P **P 14 13 09.7 +0.2**
baz=47
MOY Mondy 47.35 304 *e*P **P 14 13 10.9 +0.3**
K20A Yellowstone Ra 47.44 71⇓P **P 14 13 10.8 -0.6**
baz=47
U12A Valley of Fire 47.45 82⇓P **P 14 13 11.2 -0.3**
baz=47
HHC Hu-ho-hao-te 47.47 286 *e*P **P 14 13 11.0 -0.7**
HHC AP pP 14 13 23.3 -2.9
HHC XP sP 14 13 28.9 -3.7
HHC PCP PcP 14 14 42.5 +1.3
HHC PP PP 14 15 01.8 -1.4
HHC PCS PcS 14 18 36.0 -0.5
HHC *e*S **S 14 19 59.5 -2.6**
HHC XS sS 14 20 21.8 -4.7
HHC SCS ScS 14 22 57.9 -2.2
HHC AMB AMB
comp=Z,14nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,175nm,5.0s
HHC LR LR
comp=N,249nm,16.7s,MS4.5
HHC LR LR
comp=E,326nm,17.8s,MS4.5
HHC LR LR

comp=Z,268nm,16.7s,MS4.3
V12A Nelson 47.70 83 ⇓P **P** **14 13 13.3 -0.2**
baz=48
R15A Junction 47.74 78 ⇑P **P** **14 13 13.9 +0.1**
baz=48
GMRC Granite Mounta 47.80 84 ⇓P **P** **14 13 13.9 -0.5**
baz=48
U13A Pakoon Wash 47.82 81 ⇓P **P** **14 13 14.4 0.0**
baz=48,SNR=8.1
L20A Wamsutter 47.82 72 ⇓P **P** **14 13 14.7 +0.3**
baz=48
P17A Butcher Ranch, 47.90 76 ⇑P **P** **14 13 15.5 +0.4**
baz=48
T14A Hurricane 47.96 80 ⇓P **P** **14 13 15.9 +0.4**
baz=48
N19A John Jarvie Ra 47.99 74 ⇑P **P** **14 13 15.3 -0.3**
baz=48,SNR=6.5
BELC Belle Mtn. 48.10 85 ⇑P **P** **14 13 16.5 -0.2**
baz=48
P18A Preston Nutter 48.11 76 ⇓P **P** **14 13 17.7 +1.1**
baz=48,SNR=7.6
V13A Grand Canyon W 48.16 82 ⇑P **P** **14 13 17.1 0.0**
baz=48
M20A Sweetwater, Wa 48.22 72 ⇓P **P** **14 13 17.9 +0.4**
baz=48,SNR=10
U14A Mt Trumbull 48.30 81 ⇓P **P** **14 13 18.4 +0.3**
baz=48
T15A Red Dirt Ranch 48.42 80 ⇓P **P** **14 13 19.3 +0.2**
baz=48
L21A Rawlins 48.43 71 ⇑P **P** **14 13 19.1 0.0**
baz=48,SNR=6.9
S16A Weppner Ranch, 48.46 78 ⇑P **P** **14 13 19.8 +0.5**
baz=48
Q18A Rafter H Ranch 48.50 76 ⇑P **P** **14 13 19.8 +0.2**
baz=48,SNR=13
IRM Iron Mountain 48.53 85 ⇓P **P** **14 13 19.9 0.0**
baz=48
NJ2 Nanjing 48.53 272 *e*P **P** **14 13 22.0 +2.0**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
MONP Monument Peak 48.57 87 ⇑P **P** **14 13 19.8 -0.4**
baz=48
R17A Hanksville Air 48.57 77 ⇑P **P** **14 13 20.5 +0.3**
baz=48
N20A Spence Gulch, 48.58 73 ⇑P **P** **14 13 20.5 +0.3**
baz=48,SNR=7.9
BC3 Big Chuckw Mtn 48.67 85 ⇓P **P** **14 13 20.1 -0.9**
baz=48
W13A Hualapai Mount 48.71 83 ⇑P **P** **14 13 21.0 -0.3**
baz=49,SNR=7.1
U15A North Rim 48.85 80 ⇑P **P** **14 13 22.7 +0.4**
baz=49,SNR=12
V14A Boquillas Ranc 48.85 82 ⇓P **P** **14 13 22.4 0.0**
baz=49,SNR=7.4
P19A Cripple Cowboy 48.88 75 ⇓P **P** **14 13 22.4 -0.1**
baz=49,SNR=15
DVTC Desert V Tower 48.92 87 ⇑P **P** **14 13 22.7 -0.2**
baz=49
T16A Glen Canyon Da 48.98 79 ⇑P **P** **14 13 23.2 -0.1**
baz=49
S17A Black Ridge (B 49.01 78 ⇑P **P** **14 13 24.1 +0.6**
baz=49,SNR=20
O20A White River Ci 49.01 74 ⇑P **P** **14 13 23.7 +0.2**
baz=49,SNR=6.4
N21A Black Mountain 49.07 73 ⇓P **P** **14 13 24.4 +0.4**
baz=49,SNR=6.2
X13A Yucca 49.07 83 ⇑P **P** **14 13 23.5 -0.6**
baz=49
R18A Canyonlands Na 49.09 77 ⇓P **P** **14 13 23.9 -0.3**
baz=49,SNR=5.9
Q19A Hogan Spring (49.12 76 ⇑P **P** **14 13 24.2 -0.2**
baz=49,SNR=15
W14A Seligman 49.14 82 ⇓P **P** **14 13 24.2 -0.3**
baz=49
Y12C Blythe 49.19 85 ⇑P **P** **14 13 24.5 -0.5**
baz=49
M22A Cedar Creek Ra 49.23 71 ⇓P **P** **14 13 26.3 +1.1**
baz=49,SNR=8.7
V15A Kaibab Nationa 49.31 81 ⇑P **P** **14 13 26.3 +0.4**
baz=49,SNR=6.4
T17A Navajo Res., N 49.41 79 ⇓P **P** **14 13 26.6 0.0**
baz=49
O21A Pagoda 49.43 73 ⇑P **P** **14 13 26.7 -0.1**
baz=49,SNR=7.3
GLA Glamis 49.46 85 ⇓P **P** **14 13 26.7 -0.4**
baz=49
GLA Glamis 49.46 85 *e*P **P** **14 13 27.0 -0.1**
GLA pmax pmax
comp=Z,11nm,0.8s,mb4.9
GLA Glamis 49.46 85 *e*P **P** **14 13 26.9 -0.1**
comp=Z,11nm,0.8s,mb4.9
S18A Hurst Farm, Bl 49.47 77 ⇑P **P** **14 13 27.2 +0.1**
baz=49,SNR=16
N22A Wattenberg Ran 49.68 72 ⇓P **P** **14 13 28.7 0.0**
baz=50
Q20A Ridgley Place, 49.71 75 ⇓P **P** **14 13 28.9 -0.1**
baz=50
X14A Yava 49.74 83 ⇑P **P** **14 13 29.0 -0.2**
baz=50,SNR=6.5
T18A Mexican Hat 49.89 78 ⇓P **P** **14 13 29.7 -0.6**
baz=50,SNR=14
S19A Harvey Farm, M 49.96 77 ⇓P **P** **14 13 31.0 +0.2**
baz=50,SNR=7.3
WUAZ Wupatki 50.00 81 *e*P **P** **14 13 31.6 +0.4**
comp=Z,8.1nm,0.7s,mb4.9
X15A Humboldt 50.14 82 ⇑P **P** **14 13 32.4 +0.2**
baz=50,SNR=6.1
Y15A Casa Rosa Ranc 50.43 83 ⇓P **P** **14 13 34.1 -0.3**
baz=50
SPITS Spitsbergen Ar 50.57 356 P **P** **14 13 34.4 -0.5**
comp=Z,22nm,0.5s,mb5.3,baz=31,slow=9.1,SNR=30
T19A Beclabito 50.61 78 ⇑P **P** **14 13 35.8 +0.1**
baz=50,SNR=22
X16A Lo Mia Camp, P 50.68 82 ⇑P **P** **14 13 36.4 +0.2**
baz=50,SNR=7.1
MVCO Mesa Verde 50.69 77 *e*P **P** **14 13 36.7 +0.4**
comp=Z,6.6nm,0.6s,mb4.7
Y16A Circle Bar Ran 51.01 82 ⇓P **P** **14 13 38.8 +0.1**
baz=51
115A Sonoran Desert 51.32 84 ⇓P **P** **14 13 41.0 -0.2**
baz=51,SNR=7.7
214A Organ Pipe Nat 51.46 85 ⇓P **P** **14 13 41.1 -1.0**
baz=51
Y17A Roosevelt 51.53 82 ⇓P **P** **14 13 42.6 -0.1**
baz=51,SNR=9.5
X18A Snowflake 51.53 81 ⇑P **P** **14 13 42.7 0.0**
baz=51
Y18A Canyon Day Jun 51.98 81 ⇑P **P** **14 13 46.0 +0.1**
baz=52
X19A St. Johns 52.01 80 ⇑P **P** **14 13 46.4 +0.2**
baz=52
SDCO Great Sand Dun 52.18 74 *e*P **P** **14 13 47.3 -0.1**
comp=Z,5.0nm,0.9s,mb4.4
117A Oracle 52.34 83 ⇓P **P** **14 13 48.3 -0.4**
baz=52
Y19A Nutrioso 52.34 81 ⇓P **P** **14 13 48.3 -0.4**
baz=52
TUC Tucson 52.49 83 *e*P **P** **14 13 49.5 -0.3**
TUC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TUC Tucson 52.49 83 *e*P **P** **14 13 49.5 -0.4**
comp=Z,4.6nm,0.8s,mb4.5
119A Ashpeak Ranch, 53.11 82 ⇓P **P** **14 13 54.3 0.0**
baz=53
218A Dragoon 53.18 83 ⇑P **P** **14 13 54.7 -0.1**
baz=53
ANMO Albuquerque 53.41 78 *e*P **P** **14 13 57.4 +0.8**
ANMO Albuquerque 53.41 78 *e*P **P** **14 13 56.5 0.0**
comp=Z,5.8nm,1.1s,mb4.4
XAN Xi'an 53.42 281 P **P** **14 13 56.6 -0.1**
XAN AP pP 14 14 08.3 -3.1
XAN PP PP 14 15 57.1 -0.1
XAN S **S** **14 21 25.8 +1.0**
XAN AMB AMB
comp=Z,2.0nm,0.6s,mb4.2
XAN LR LR
comp=E,87nm,16.7s
XAN LR LR
comp=Z,266nm,27.3s
318A Bisbee 53.57 83 ⇑P **P** **14 13 57.3 -0.5**
baz=53
219A White Tail Can 53.65 82 ⇑P **P** **14 13 58.0 -0.4**
baz=54
ZALV Zalesovo Beam 53.97 313 P **P** **14 13 59.8 -0.6**
comp=Z,0.6nm,0.4s,mb3.9,baz=40,slow=7.8,SNR=4.8
ZALV PcP PcP 14 15 05.8 +0.9
comp=Z,2.2nm,0.6s,baz=26,slow=3.8,SNR=5.9
ZALV Zalesovo Beam 53.97 313 P **P** **14 13 59.8 -0.6**
ZALV PcP PcP 14 15 05.8 +0.9
319A Douglas 54.06 83 ⇓P **P** **14 14 01.7 +0.4**
baz=54
CBKS Cedar Bluff 54.94 70 *e*P **P** **14 14 07.3 -0.3**
CBKS pmax pmax
comp=Z,18nm,0.7s,mb5.2
CBKS Cedar Bluff 54.94 70 *e*P **P** **14 14 07.3 -0.3**
comp=Z,18nm,0.7s,mb5.2
LZH Lanzhou 55.17 286 *e*P **P** **14 14 09.3 0.0**
LZH AP pP 14 14 22.3 -1.9
LZH XP sP 14 14 28.3 -2.2
LZH AMB AMB
comp=Z,20nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,88nm,4.5s
GTA Gaotai 55.38 292 *e*P **P** **14 14 11.1 +0.3**
GTA AP pP 14 14 23.9 -1.8
GTA XP sP 14 14 29.8 -2.1
GTA PP PP 14 16 18.4 +3.7
GTA S **S** **14 21 51.1 +0.1**
GTA XS sS 14 22 12.5 -3.4
GTA AMB AMB
comp=Z,7.0nm,0.7s,mb4.8
GTA AMB AMB
comp=Z,227nm,6.5s
GTA LR LR
comp=N,229nm,17.5s,MS4.5
GTA LR LR
comp=E,208nm,15.5s,MS4.5
GTA LR LR
comp=Z,352nm,14.9s,MS4.6
AMTX Amarillo 56.38 75 *e*P **P** **14 14 18.2 +0.2**
comp=Z,11nm,0.8s,mb4.9
ARCES ARCESS Array B 58.25 350 P **P** **14 14 30.4 -0.3**
comp=Z,7.6nm,0.9s,mb4.7,baz=356,slow=7.3,SNR=6.6
CD2 Chengdu 58.74 282 P **P** **14 14 35.8 +1.1**
CD2 AP pP 14 14 48.4 -1.2
CD2 XP sP 14 14 53.8 -2.1
CD2 PCP PcP 14 15 25.3 +1.4
CD2 PP PP 14 16 47.4 +2.7
CD2 S **S** **14 22 34.6 -0.8**
CD2 XS sS 14 22 56.3 -4.3
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,270nm,6.1s
CD2 LR LR
comp=N,280nm,5.3s
CD2 LR LR
comp=Z,300nm,5.7s
KURK Kurchatov 58.96 313 ⇑*e*P **P** **14 14 36.1 +0.2**
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KURK Kurchatov 58.96 313 *e*P **P** **14 14 34.8 -1.1**
comp=Z,11nm,0.8s,mb4.9
TXAR Lajitas Array 58.97 81 P **P** **14 14 35.5 -0.7**
comp=Z,3.0nm,0.6s,mb4.5,baz=298,slow=4.7,SNR=44
WMQ Urumqi 59.22 303 *e*P **P** **14 14 40.0 +2.2**
HDIL Hopedale 59.77 62 *e*P **P** **14 14 41.0 -0.6**
comp=Z,16nm,0.6s,mb5.2
MKAR Makanchi Array 59.94 308 P **P** **14 14 42.1 -0.6**
comp=Z,4.1nm,0.4s,mb4.8,baz=51,slow=6.2,SNR=64
GYA Guiyang 60.06 276 ⇑*i*P **P** **14 14 44.9 +1.1**
GYA AP pP 14 14 58.0 -0.8
GYA XP sP 14 15 03.4 -1.7
GYA S **S** **14 22 47.6 -5.0**
GYA SS SS 14 26 44.4 -5.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,50nm,4.0s
GYA LR LR
comp=N,400nm,18.0s,MS4.8
GYA LR LR
comp=E,380nm,17.5s,MS4.8
GYA LR LR
comp=Z,530nm,18.2s,MS4.7
SCHQ Schefferville 60.35 38 P **P** **14 14 44.2 -1.2**
comp=Z,8.0nm,0.8s,mb4.8,baz=324,slow=7.3,SNR=8.7
BRVK Borovoye 60.89 320 *e*P **P** **14 14 48.6 -0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
BRVK Borovoye 60.89 320 *e*P **P** **14 14 48.6 -0.4**
comp=Z,5.9nm,1.1s,mb4.6
KMI Kunming 63.47 278 P **P** **14 15 08.4 +1.6**
KMI AMB AMB
comp=Z,8.0nm,1.2s,mb4.7
JOF Joensuu 63.73 345 *e*p **P** **14 15 07.0 -0.9**
comp=Z,3.0nm,0.4s,mb4.7
JOF Joensuu 63.73 345 *e*P **P** **14 15 07.0 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
OXF Oxford 63.92 67 *e*P **P** **14 15 09.5 -0.1**
OXF pmax pmax
comp=Z,23nm,0.6s,mb5.4
OXF Oxford 63.92 67 *e*P **P** **14 15 09.5 -0.1**
comp=Z,23nm,0.6s,mb5.4
KLMR Klimovskoe 64.08 340 *e*P **P** **14 15 09.1 -1.1**
KLMR pmax pmax
comp=Z,34nm,1.8s,mb5.1
KAF Kangasniemi 65.26 347 *e*p **P** **14 15 15.9 -2.0**
comp=Z,2.6nm,0.4s,mb4.6
KAF Kangasniemi 65.26 347 *e*P **P** **14 15 15.9 -2.0**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
TKL Tuckaleechee C 66.30 62 *e*P **P** **14 15 24.4 -0.6**
AAK Ala-Archa 66.78 310 ⇑*e*P **P** **14 15 29.2 +1.2**
AAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
AAK Ala-Archa 66.78 310 *e*P **P** **14 15 28.8 +0.8**
comp=Z,5.6nm,0.8s,mb4.7
LSA Lhasa 67.24 289 P **P** **14 15 31.6 +0.5**
LSA Lhasa 67.24 289 *e*P **P** **14 15 32.7 +1.6**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LSA Lhasa 67.24 289 *e*P **P** **14 15 32.7 +1.6**
comp=Z,4.8nm,0.6s,mb4.7
NB2 NORSAR Subarra 67.83 355 P **P** **14 15 33.6 -0.7**
comp=Z,2.7nm,0.7s,mb4.4,baz=8.1,slow=6.5
NOA NORSAR Array B 67.83 355 P **P** **14 15 33.7 -0.6**
comp=Z,1.8nm,0.5s,mb4.3,baz=342,slow=4.7,SNR=11
NOA LR LR 14 46 02.3
comp=Z,155nm,18.6s,MS4.3,baz=170,slow=37
KONO Kongsberg 69.31 355 ⇓*e*P **P** **14 15 44.3 +0.8**
OBN Obninsk 69.97 339 ⇑*e*P **P** **14 15 47.4 -0.3**
OBN pmax pmax
comp=Z,12nm,0.9s,mb4.8
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.6
CMAR Chiang Mai Arr 70.75 276 P **P** **14 15 52.2 -0.8**
comp=Z,1.5nm,0.7s,mb4.0,baz=26,slow=6.5,SNR=12
TAPN Taplejung 71.01 290 *e*P **P** **14 15 55.1 +0.6**
comp=Z,52nm,0.9s,mb5.5
ODAN Odare 71.57 290 *e*P **P** **14 15 57.6 -0.2**
comp=Z,12nm,0.6s,mb5.0
GUN Gumba 71.67 292 *e*P **P** **14 15 59.4 +0.9**
comp=Z,45nm,0.4s,mb5.8
JIRN Jiri 71.68 291 *e*P **P** **14 15 59.5 +1.0**
comp=Z,37nm,0.6s,mb5.5
RAMN Ramite 71.97 291 *e*P **P** **14 16 00.8 +0.6**
comp=Z,42nm,0.6s,mb5.6
KKN Kakani 72.11 292 *e*P **P** **14 16 01.9 +0.8**
comp=Z,26nm,0.5s,mb5.4
KKN Kakani 72.11 292 *e*P **P** **14 16 01.9 +0.8**
KKN pmax pmax
comp=Z,26nm,0.5s,mb5.4
PKI Pulchoki 72.20 292 *e*P **P** **14 16 02.3 +0.7**
comp=Z,15nm,0.5s,mb5.2
PKI Pulchoki 72.20 292 *e*P **P** **14 16 02.3 +0.7**
PKI pmax pmax
comp=Z,15nm,0.5s,mb5.2
GKN Gorkha 72.33 293 *e*P **P** **14 16 02.8 +0.4**
comp=Z,17nm,0.5s,mb5.3
DMN Daman 72.35 292 *e*P **P** **14 16 03.2 +0.7**
comp=Z,19nm,0.8s,mb5.1
DANN Dangsing 72.57 294 *e*P **P** **14 16 04.5 +0.7**
comp=Z,34nm,0.8s,mb5.3
KOLN Koldanda 73.10 293 *e*P **P** **14 16 07.4 +0.4**
comp=Z,15nm,0.9s,mb4.9
AKASG Malin Array Be 75.66 342 P **P** **14 16 20.6 -0.8**
comp=Z,22nm,0.4s,mb5.4,baz=20,slow=6.6,SNR=38
AKASG Malin Array Be 75.66 342 *i*P **P** **14 16 20.8 -0.7**
AKASG pmax pmax
comp=Z,23nm,0.4s
AKBB Malin Array Si 75.66 342 *e*P **P** **14 16 20.1 -1.4**
KIEV Kiev 75.67 342 *e*P **P** **14 16 20.9 -0.6**
KIEV pmax pmax
comp=Z,24nm,0.5s,mb5.4
KIEV Kiev 75.67 342 *e*P **P** **14 16 20.9 -0.6**
comp=Z,24nm,0.5s,mb5.4
KBL Kabul 75.74 308 *e*P **P** **14 16 22.3 +0.1**
KBL pmax pmax
comp=Z,16nm,1.0s,mb4.9
KBL Kabul 75.74 308 *e*P **P** **14 16 22.3 +0.1**
comp=Z,16nm,1.0s,mb4.9
CLL Collm 77.38 352 *i*P **P** **14 16 31.3 +0.2**
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CLL Collm 77.38 352 *i*P **P** **14 16 31.3 +0.2**
comp=Z,5.0nm,0.6s,mb4.6
BRG Berggiesshubel 77.72 351 *i*P **P** **14 16 33.3 +0.2**
BRG pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BRG Berggiesshubel 77.72 351 *i*P **P** **14 16 33.3 +0.3**
comp=Z,4.8nm,0.6s,mb4.6
KWP Kalwaria 77.85 346 *e*P **P** **14 16 34.2 +0.5**
KWP Kalwaria 77.85 346 ⇓*i*P **P** **14 16 34.2 +0.4**
KWP Kalwaria 77.85 346 *e*P **P** **14 16 34.2 +0.4**
UPC Upice 77.88 350 *e*P **P** **14 16 32.8 -1.1**
DPC Dobruska-Polom 78.00 350 *e*P **P** **14 16 34.8 +0.2**
STHS Stebnicka Huta 78.28 346 *e*P **P** **14 16 37.1 +0.9**
STHS *e* 14 16 43.0
STHS pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
STHS Stebnicka Huta 78.28 346 *e*P **P** **14 16 37.1 +0.9**
comp=Z,7.0nm,0.6s,mb4.8
STHS *e* 14 16 43.0
NKC Novy Kostel 78.49 352 *e*P **P** **14 16 37.4 +0.1**
MEM Membach 78.51 357 P **P** **14 16 38.0 +0.6**
BCLA Clavier 78.72 357 P **P** **14 16 38.5 -0.1**
CRVS Cervenica-Dubn 78.75 346 *e*P **P** **14 16 38.7 -0.1**
CRVS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CRVS Cervenica-Dubn 78.75 346 *e*P **P** **14 16 38.7 -0.1**
comp=Z,8.2nm,0.9s,mb4.7
GIVF Givet 79.05 357 *e*P **P** **14 16 40.2 -0.2**
DOU Dourbes 79.06 357 P **P** **14 16 40.4 -0.1**
comp=Z,15nm,2.5s,mb4.5
BAIF Baives 79.11 358 *e*P **P** **14 16 40.8 +0.1**
comp=Z,21nm,0.7s,mb4.9
BAIF Baives 79.11 358 *e*P **P** **14 16 40.8 +0.1**
BAIF pmax pmax
comp=Z,11nm,0.7s,mb4.9
BAIF Baives 79.11 358 *e*P **P** **14 16 40.8 +0.1**
comp=Z,11nm,0.7s,mb4.9
KECS Kecovo 79.30 347 *e*P **P** **14 16 42.3 +0.5**
KECS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KECS Kecovo 79.30 347 *e*P **P** **14 16 42.3 +0.5**
comp=Z,4.6nm,0.7s,mb4.5
BUR08 Bucovina Ar. S 79.35 343 *e*P **P** **14 16 42.5 +0.4**
BURAR Bucovina Array 79.38 343 ⇓*i*P **P** **14 16 42.5 +0.3**
WLF Walferdange 79.44 356 P **P** **14 16 42.1 -0.4**
KHC Kasperske Hory 79.48 351 ⇑*e*P **P** **14 16 43.6 +0.8**
KHC Kasperske Hory 79.48 351 *e*P **P** **14 16 43.0 +0.2**
VYHS Vyhne 79.52 348 *e*P **P** **14 16 43.2 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VYHS Vyhne 79.52 348 *e*P **P** **14 16 43.2 +0.2**
comp=Z,3.9nm,1.0s,mb4.3
GERES GERESS Array B 79.75 351 P **P** **14 16 43.9 -0.3**
comp=Z,3.0nm,0.5s,mb4.5,baz=21,slow=6.0,SNR=26
FLN La Foliniere 80.45 1 *e*P **P** **14 16 47.5 -0.5**
DRGR 80.61 345 ⇑*i*P **P** **14 16 49.2 +0.3**
LDF La Druitiere 80.62 1 *e*P **P** **14 16 48.3 -0.6**
comp=Z,14nm,0.5s,mb4.8
LDF La Druitiere 80.62 1 *e*P **P** **14 16 48.3 -0.6**
LDF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
LDF La Druitiere 80.62 1 *e*P **P** **14 16 48.3 -0.6**
comp=Z,7.0nm,0.5s,mb4.8
MEZF Maizieres J'vi 80.64 357 *e*P **P** **14 16 49.2 +0.1**
CDF Champ du Feu 80.65 356 *e*P **P** **14 16 48.8 -0.3**
comp=Z,5.3nm,0.6s,mb4.3
CDF Champ du Feu 80.65 356 *e*P **P** **14 16 48.8 -0.3**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CDF Champ du Feu 80.65 356 *e*P **P** **14 16 48.8 -0.3**
comp=Z,2.7nm,0.6s,mb4.3
GRR Gorron 80.82 1 *e*P **P** **14 16 49.7 -0.3**
comp=Z,19nm,0.8s,mb4.8
GRR Gorron 80.82 1 *e*P **P** **14 16 49.7 -0.3**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRR Gorron 80.82 1 *e*P **P** **14 16 49.7 -0.3**
comp=Z,9.3nm,0.8s,mb4.8
ROSF Rostrenen 80.82 3 *e*P **P** **14 16 49.8 -0.2**
comp=Z,15nm,0.6s,mb4.8
ROSF Rostrenen 80.82 3 *e*P **P** **14 16 49.8 -0.2**
ROSF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ROSF Rostrenen 80.82 3 *e*P **P** **14 16 49.8 -0.2**
comp=Z,7.0nm,0.6s,mb4.8
SGMF Saint Gilles 80.92 2 *e*P **P** **14 16 50.4 -0.1**
comp=Z,19nm,0.6s,mb4.9
SGMF Saint Gilles 80.92 2 *e*P **P** **14 16 50.4 -0.1**
SGMF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
SGMF Saint Gilles 80.92 2 *e*P **P** **14 16 50.4 -0.1**
comp=Z,9.4nm,0.6s,mb4.9
HAU Haudompre 81.09 356 *e*P **P** **14 16 51.1 -0.4**
HINF Hinteralfeld 81.26 356 *e*P **P** **14 16 51.8 -0.5**
GNI Garni 81.27 327 ⇓*e*P **P** **14 16 53.8 +1.2**
GNI pmax pmax
comp=Z,15nm,1.6s
VOIR 81.51 343 ⇓*i*P **P** **14 16 54.6 +0.9**
KBA Koelnbreinsper 81.54 351 ⇑*i*P **P** **14 16 53.1 -0.7**
comp=Z,22nm,0.6s,mb5.3
WRAB Tennant Creek 81.65 224 *i*P **P** **14 16 52.9 -1.7**
WRAB Tennant Creek 81.65 224 *e*P **P** **14 16 52.4 -2.2**
comp=Z,3.3nm,0.8s,mb4.3
WB2 Warramunga Arr 81.66 224 *e*P **P** **14 16 52.9 -1.7**
WRA Warramunga Arr 81.66 224 P **P** **14 16 53.0 -1.7**
comp=Z,3.8nm,0.7s,mb4.4,baz=33,slow=6.0,SNR=52
LOR Lormes 81.91 358 *e*P **P** **14 16 55.7 -0.1**
comp=Z,5.8nm,0.6s,mb4.4
LOR Lormes 81.91 358 *e*P **P** **14 16 55.7 -0.1**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LOR Lormes 81.91 358 *e*P **P** **14 16 55.7 -0.1**
comp=Z,2.9nm,0.6s,mb4.4
GZR Gura Zlata 81.95 345 ⇓*i*P **P** **14 16 56.4 +0.4**
SSF Saint Saulge 82.13 358 *e*P **P** **14 16 56.7 -0.2**
comp=Z,8.6nm,0.7s,mb4.5
SSF Saint Saulge 82.13 358 *e*P **P** **14 16 56.7 -0.2**
SSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SSF Saint Saulge 82.13 358 *e*P **P** **14 16 56.7 -0.2**
comp=Z,4.3nm,0.7s,mb4.5
AVF Avril sur Loir 82.40 358 *e*P **P** **14 16 58.0 -0.4**
TUE Stuetta 82.46 354 *e*P **P** **14 16 59.5 +0.8**
comp=Z,5.2nm,0.6s,mb4.6
CABF La Chapelle 82.50 356 *e*P **P** **14 16 58.4 -0.5**
comp=Z,3.6nm,0.5s,mb4.3
CABF La Chapelle 82.50 356 *e*P **P** **14 16 58.4 -0.5**
CABF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
CABF La Chapelle 82.50 356 *e*P **P** **14 16 58.4 -0.5**
comp=Z,1.8nm,0.5s,mb4.3
SMF Signal de Mont 82.53 358 *e*P **P** **14 16 58.8 -0.3**
comp=Z,14nm,0.8s,mb4.7
SMF Signal de Mont 82.53 358 *e*P **P** **14 16 58.8 -0.3**
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
SMF Signal de Mont 82.53 358 *e*P **P** **14 16 58.8 -0.3**
comp=Z,6.8nm,0.8s,mb4.7
MFF Saint Martin d 82.61 1 *e*P **P** **14 16 59.4 -0.1**
comp=Z,7.9nm,0.6s,mb4.7
MFF Saint Martin d 82.61 1 *e*P **P** **14 16 59.4 -0.1**
MFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MFF Saint Martin d 82.61 1 *e*P **P** **14 16 59.4 -0.1**
comp=Z,4.0nm,0.6s,mb4.6
TCF Toulx Ste Croi 82.92 359 *e*P **P** **14 17 00.8 -0.3**
RJF Les Rejaudoux 83.91 359 *e*P **P** **14 17 06.3 +0.1**
FITZ Fitzroy Crossi 84.11 232 *e*P **P** **14 17 06.7 -0.7**
comp=Z,21nm,0.6s,mb5.4
ORIF Oris-en-Rattie 84.19 356 *e*P **P** **14 17 08.4 +0.8**
comp=Z,8.4nm,0.6s,mb4.7
ORIF Oris-en-Rattie 84.19 356 *e*P **P** **14 17 08.4 +0.8**
ORIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7

ORIF	**Oris-en-Rattie**	**84.19**	**356**	*e*P		**P**	**14 17 08.4**	**+0.8**
	comp=Z,4.2nm,0.6s,mb4.8								
LFF	**La Frestale**	**84.28**	**0**	*e*P		**P**	**14 17 07.9**	**-0.1**
CAF	**Calviac**	**84.28**	**359**	*e*P		**P**	**14 17 07.7**	**-0.4**
VIVF	**Saint-Julien-l**	**84.30**	**357**	*e*P		**P**	**14 17 08.2**	**0.0**
	comp=Z,5.5nm,0.6s,mb4.5								
VIVF	**Saint-Julien-l**	**84.30**	**357**	*e*P		**P**	**14 17 08.2**	**0.0**
VIVF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.6								
VIVF	**Saint-Julien-l**	**84.30**	**357**	*e*P		**P**	**14 17 08.2**	**0.0**
	comp=Z,2.8nm,0.6s,mb4.6								
MBDF	**Montbardon**	**84.35**	**356**	*e*P		**P**	**14 17 09.0**	**+0.6**
	comp=Z,9.9nm,0.7s,mb4.8								
MBDF	**Montbardon**	**84.35**	**356**	*e*P		**P**	**14 17 09.0**	**+0.6**
MBDF				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.8								
MBDF	**Montbardon**	**84.35**	**356**	*e*P		**P**	**14 17 09.0**	**+0.6**
	comp=Z,4.9nm,0.7s,mb4.8								
BR131	**Keskin Array S**	**85.02**	**335**	*e*P		**P**	**14 17 10.6**	**-1.3**
	comp=Z,3.4nm,0.7s,mb4.6								
BRTR	**Keskin Array B**	**85.02**	**335**	P		**P**	**14 17 11.2**	**-0.6**
	comp=Z,4.1nm,0.7s,mb4.7,baz=50,slow=2.8,SNR=20								
BRTR	**Keskin Array B**	**85.02**	**335**	*e*P		**P**	**14 17 12.1**	**+0.2**
LASF	**Ste Croix**	**85.10**	**358**	*e*P		**P**	**14 17 12.5**	**+0.3**
ASAR	**Alice Springs**	**85.14**	**222**	P		**P**	**14 17 11.5**	**-1.0**
	comp=Z,2.8nm,0.7s,mb4.5,baz=26,slow=5.6,SNR=43								
SMRF	**Simiane la Rot**	**85.15**	**357**	*e*P		**P**	**14 17 13.2**	**+0.8**
	comp=Z,27nm,1.0s,mb5.0								
SMRF	**Simiane la Rot**	**85.15**	**357**	*e*P		**P**	**14 17 13.2**	**+0.8**
	comp=Z,27nm,1.0s,mb5.3								
SBF	**Sospel**	**85.18**	**355**	*e*P		**P**	**14 17 12.3**	**-0.3**
	comp=Z,50nm,0.9s,mb5.3								
SBF	**Sospel**	**85.18**	**355**	*e*P		**P**	**14 17 12.3**	**-0.3**
SBF				pmax		pmax			
	comp=Z,25nm,0.9s,mb5.3								
SBF	**Sospel**	**85.18**	**355**	*e*P		**P**	**14 17 12.3**	**-0.3**
	comp=Z,25nm,0.9s,mb5.3								
FRF	**La Foret Royal**	**85.52**	**356**	*e*P		**P**	**14 17 13.9**	**-0.4**
	comp=Z,8.6nm,0.5s,mb4.9								
FRF	**La Foret Royal**	**85.52**	**356**	*e*P		**P**	**14 17 13.9**	**-0.4**
FRF				pmax		pmax			
	comp=Z,4.0nm,0.5s,mb4.9								
FRF	**La Foret Royal**	**85.52**	**356**	*e*P		**P**	**14 17 13.9**	**-0.4**
	comp=Z,4.3nm,0.5s,mb4.9								
LMR	**La Mourre**	**85.75**	**356**	*e*P		**P**	**14 17 15.4**	**0.0**
	comp=Z,9.1nm,0.6s,mb4.9								
LMR	**La Mourre**	**85.75**	**356**	*e*P		**P**	**14 17 15.4**	**0.0**
LMR				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.9								
LMR	**La Mourre**	**85.75**	**356**	*e*P		**P**	**14 17 15.4**	**0.0**
	comp=Z,4.6nm,0.6s,mb4.9								
MTLF	**Montolieu**	**85.87**	**359**	*e*P		**P**	**14 17 15.4**	**-0.6**
	comp=Z,4.3nm,0.5s,mb4.6								
MTLF	**Montolieu**	**85.87**	**359**	*e*P		**P**	**14 17 15.4**	**-0.6**
MTLF				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb4.6								
MTLF	**Montolieu**	**85.87**	**359**	*e*P		**P**	**14 17 15.4**	**-0.6**
	comp=Z,2.2nm,0.5s,mb4.6								
ETSF	**Etsaut**	**86.31**	**1**	*e*P		**P**	**14 17 18.3**	**+0.1**
	comp=Z,10nm,0.6s,mb4.9								
ETSF	**Etsaut**	**86.31**	**1**	*e*P		**P**	**14 17 18.3**	**+0.1**
ETSF				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.9								
ETSF	**Etsaut**	**86.31**	**1**	*e*P		**P**	**14 17 18.3**	**+0.1**
	comp=Z,5.1nm,0.6s,mb4.9								
PGF	**Pioggiola**	**86.39**	**354**	*e*P		**P**	**14 17 18.5**	**-0.1**
	comp=Z,26nm,0.8s,mb5.2								
PGF	**Pioggiola**	**86.39**	**354**	*e*P		**P**	**14 17 18.5**	**-0.1**
PGF				pmax		pmax			
	comp=Z,13nm,0.8s,mb5.2								
PGF	**Pioggiola**	**86.39**	**354**	*e*P		**P**	**14 17 18.5**	**-0.1**
	comp=Z,13nm,0.8s,mb5.2								
ESDC	**Sonseca Array**	**89.44**	**4**	P		**P**	**14 17 33.0**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.4,baz=344,slow=4.2,SNR=3.9								
MIB	**Mutribah**	**89.54**	**321**	*e*P		**P**	**14 17 33.1**	**-0.8**
MIB				AMb		AMB	14 17 34.4		
	comp=Z,9.0nm,0.8s,mb5.2								
STKA	**Stephens Creek**	**89.59**	**212**	*e*P		**P**	**14 17 33.7**	**0.0**
	comp=Z,5.9nm,0.8s,mb5.0								
STKA	**Stephens Creek**	**89.59**	**212**	P		**P**	**14 17 33.5**	**-0.2**
	comp=Z,8.3nm,0.8s,mb5.1,baz=337,slow=8.3,SNR=25								
NAY	**Al-Naaiem**	**90.07**	**321**	*e*P		**P**	**14 17 34.3**	**-2.1**
NAY				AMb		AMB	14 17 39.1		
	comp=Z,11nm,1.8s,mb4.9								
TORD	**Torodi Ar. Bea**	**115.96**	**359**	PKP		PKPdf	14 23 18.1	-1.2	
	comp=Z,0.2nm,0.5s,baz=341,slow=2.9,SNR=4.4								
TORD				PKKPbc		PKKPbc	14 33 46.1	-2.0	
	comp=Z,0.8nm,1.0s,baz=189,slow=3.2,SNR=3.4								
TORD				PKKPab		PKKPab	14 33 53.0	-4.9	
	comp=Z,1.0nm,0.8s,baz=180,slow=4.0,SNR=5.8								
TORD	**Torodi Ar. Bea**	**115.96**	**359**	PKP		PKPdf	14 23 18.1	-1.2	
TORD				PKKPbc		PKKPbc	14 33 46.1	-2.0	
TORD				PKKPab		PKKPab	14 33 53.0	-4.9	
DBIC	**Dimbokro**	**122.19**	**7**	PKP		PKPdf	14 23 30.4	-1.0	
	comp=Z,1.2nm,0.5s,baz=105,slow=0.9,SNR=7.3								
CPUP	**Villa Florida**	**129.91**	**83**	PKP		PKPdf	14 23 44.5	-1.1	
	comp=Z,0.4nm,0.4s,baz=156,slow=9.7,SNR=3.9								
PMSA	**Palmer Station**	**144.77**	**138**	*e*PKP		PKPdf	14 24 10.2	-1.5	
TSUM	**Tsumeb**	**145.44**	**331**	*e*PKP		PKPdf	14 24 14.6	+0.3	
MAW	**Mawson**	**146.14**	**217**	PKPbc		PKPbc	14 24 14.3	-0.8	
	comp=Z,3.2nm,0.2s,baz=28,slow=4.3,SNR=12								
LBTB	**Lobatse**	**147.68**	**315**	*e*PKP2		PKPbc	14 24 20.9	+0.2	
BOSA	**Boshof**	**150.91**	**311**	PKPbc		PKPbc	14 24 28.8	+0.1	
	comp=Z,3.2nm,0.5s,baz=53,slow=1.8,SNR=8.4								
BOSA	**Boshof**	**150.91**	**311**	*e*PKPbc		PKPbc	14 24 28.8	+0.1	
VNA3	**Neumayer Olymp**	**159.30**	**170**	*e*PKPdf		PKPdf	14 24 32.0	-1.0	
VNA3				*e*			14 25 09.3		
VNA3				*e*			14 25 14.3		
VNA2	**Neumayer--Watz**	**159.82**	**172**	*e*PKPdf		PKPdf	14 24 32.8	-0.8	
VNA2				*e*			14 25 12.1		
VNA2				*e*			14 25 16.7		

*ISCJB **19** 14:31:23.5±1.2,511.1N±0.1×17932W±006,h59km±9km, mb4.1/17,MS4.0/1,Error ellipse: s-maj=21.8km s-min=6.5km az=178.8*

*BJI **19** 14:31:23.5,5195N×17977W,h27km,mB4.5,mb4.4,Ms4.7, Msz4.5*

*NEIC **19** 14:31:25.3±1.0,511.2N×17932W,h60km±8km, ML4.0(AEIC),Error ellipse: s-maj=19.3km s-min=7.0km az=177.0*

*IDC **19** 14:31:26.2±3.3,511.5N×17933W,h67km±28km,mb3.7/13, mb1 3.8/15,mb1mx3.7/27,mbtmp3.7/15,ML3.2/2,Error ellipse: s-maj=25.0km s-min=15.3km az=170.0*

ISC 19 14:31:25.4±1.1,511N±01×17931W±006,h60km±8km,n32, σ1§00/35,mb4.1/17,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**1.82**	**63**	P		**Pn**	**14 31 52.8**	**-1.6**
ADK				S		**Sn**	**14 32 17.2**	**+0.8**
ATKA	**Atka Island**	**3.37**	**69**	P		**Pn**	**14 32 14.2**	**-1.3**
SMY	**Shemya**	**4.40**	**294**	P		**Pn**	**14 32 28.3**	**-1.3**
FX1	**Attu Island--F**	**4.99**	**294**	P		**Pn**	**14 32 36.1**	**-1.5**
	3.9nm,0.3s,baz=109,slow=15,SNR=17							
FX1				S		**Sn**	**14 33 35.0**	**+1.1**
	1.2nm,0.3s,baz=261,slow=19,SNR=2.2							
FX1	**Attu Island--F**	**4.99**	**294**	P		**Pn**	**14 32 36.4**	**-1.2**
NIKO	**Nikolski**	**5.72**	**70**	P		**Pn**	**14 33 00.6**	**-0.7**
OKCE	**Okmok Cone E**	**7.23**	**67**	P		**Pn**	**14 33 09.8**	**+1.5**
SPIA	**Saint Paul Isl**	**8.09**	**38**	P		**Pn**	**14 33 21.4**	**+1.3**
UNV	**Unalaska Valle**	**8.29**	**66**	P		**Pn**	**14 33 23.5**	**+0.7**
PETK	**Petropavlovsk-**	**14.27**	**287**	P		**Pn**	**14 34 45.8**	**+1.8**
	0.1nm,0.3s,baz=98,slow=18,SNR=4.2							
KDAK	**Kodiak Island**	**16.85**	**56**	P		**Pn**	**14 35 12.7**	**-4.2**
	0.7nm,0.3s,baz=223,slow=5.3,SNR=8.7							
INK	**Inuvik**	**27.88**	**35**	P		**P**	**14 37 07.5**	**-1.5**
	0.9nm,0.7s,mb3.5,baz=242,slow=12,SNR=4.9							
INK	**Inuvik**	**27.88**	**35**	P		**P**	**14 37 07.5**	**-1.5**
MDJ	**Mudanjiang**	**34.31**	**280**	P		**P**	**14 38 06.5**	**+0.8**
MDJ				AMB		AMB		
	comp=Z,5.0nm,1.8s,mb4.1							
MDJ				AMB		AMB		
	comp=Z,40nm,5.7s							
YKA	**Yellowknife Ar**	**35.66**	**46**	P		**P**	**14 38 16.8**	**-0.3**
	comp=Z,1.0nm,0.4s,mb4.1,baz=282,slow=7.6,SNR=33							
YKA	**Yellowknife Ar**	**35.66**	**46**	P		**P**	**14 38 16.8**	**-0.3**
CN2	**Changchun**	**37.29**	**281**	*e*P		**P**	**14 38 29.8**	**-1.5**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.8							
BJI	**Beijing**	**45.12**	**282**	P		**P**	**14 39 36.1**	**+0.6**
BJI				AMB		AMB		
	comp=Z,9.0nm,0.4s,mb5.0							
SONM	**Songino Array**	**46.49**	**297**	P		**P**	**14 39 46.9**	**+0.7**
	comp=Z,0.7nm,0.5s,mb3.8,baz=75,slow=7.7,SNR=6.1							
PDAR	**Pinedale Array**	**46.70**	**72**	P		**P**	**14 39 49.1**	**+1.2**
	comp=Z,2.1nm,0.7s,mb4.2,baz=310,slow=3.1,SNR=15							
SPITS	**Spitsbergen Ar**	**50.64**	**356**	P		**P**	**14 40 16.9**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8,baz=46,slow=7.3,SNR=5.0							
XAN	**Xi'an**	**53.40**	**281**	P		**P**	**14 40 39.1**	**+0.3**
XAN				PP		PP	14 42 39.8	+0.4
XAN				S		**S**	**14 48 11.6**	**+5.3**
XAN				AMB		AMB		
	comp=Z,1.0nm,0.5s,mb4.0							
XAN				LR		LR		
	comp=E,67nm,24.4s							
XAN				LR		LR		
	comp=Z,190nm,29.3s							
TXAR	**Lajitas Array**	**59.02**	**81**	P		**P**	**14 41 19.6**	**+0.8**
	comp=Z,0.4nm,0.5s,mb3.7,baz=297,slow=4.8,SNR=3.5							
MKAR	**Makanchi Array**	**59.97**	**308**	P		**P**	**14 41 24.8**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.3,baz=50,slow=6.5,SNR=15							
MKAR	**Makanchi Array**	**59.97**	**308**	P		**P**	**14 41 24.8**	**-0.3**
NOA	**NORSAR Array B**	**67.91**	**354**	P		**P**	**14 42 17.1**	**+0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=9.2,slow=6.5,SNR=5.5							
AKASG	**Malin Array Be**	**75.73**	**342**	P		**P**	**14 43 03.5**	**-0.5**
	comp=Z,2.6nm,0.4s,mb4.5,baz=20,slow=6.7,SNR=7.4							
AKASG	**Malin Array Be**	**75.73**	**342**	P		**P**	**14 43 03.5**	**-0.6**
GERES	**GERESS Array B**	**79.83**	**351**	P		**P**	**14 43 26.7**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=28,slow=6.0,SNR=6.7							
WRA	**Warramunga Arr**	**81.58**	**223**	P		**P**	**14 43 35.8**	**-0.7**
	comp=Z,0.3nm,0.7s,mb3.3,baz=28,slow=5.6,SNR=4.2							
ASAR	**Alice Springs**	**85.06**	**222**	P		**P**	**14 43 54.9**	**+0.7**
	comp=Z,0.1nm,0.5s,mb3.2,baz=18,slow=6.4,SNR=4.5							
BRTR	**Keskin Array B**	**85.08**	**335**	P		**P**	**14 43 54.0**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.8,baz=4.6,slow=6.2,SNR=4.0							

*ISCJB **19** 14:45:52.0±0.6,3073S×005×17997E±008,h404km±7km, mb4.4/20,Error ellipse: s-maj=10.9km s-min=7.3km az=28.6*

*IDC **19** 14:45:53.8±0.8,3063S×17993W,h412km±7km,mb3.9/13, mb1 4.1/14,mb1mx4.1/17,mbtmp4.0/14,Error ellipse: s-maj=13.7km s-min=12.6km az=143.0*

*NEIC **19** 14:45:53.8±0.4,3064S×17991W,mb4.8/12,Error ellipse: s-maj=11.4km s-min=9.2km az=153.0*

*DJA **19** 14:46:11,3094S×17932E,h594km,Mw5.2/4*

ISC 19 14:45:52.4±0.6,3075S±006×17996W±008,h393km±6km, h417km±7km:pP-P,n52,σ1§16/52,mb4.4/20,7D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.32**	**51**	P		**Pn**	**14 46 51.0**	**+1.1**
	1μm,0.3s,baz=196,slow=2.8,SNR=35							
RAO				S		**S**	**14 47 34.5**	**-1.7**
	765nm,0.3s,baz=302,slow=23,SNR=20							
RAO	**Raoul Island**	**2.32**	**51**	*e*Pn		**Pn**	**14 46 50.9**	**+1.0**
RAO				*e*S		**S**	**14 47 23.0**	**-13**
URZ	**Urewera**	**7.87**	**197**	P		**Pn**	**14 47 47.8**	**+2.2**
	218nm,0.3s,baz=17,slow=3.7,SNR=280							
URZ				S		**S**	**14 49 17.4**	**-0.9**
	65nm,0.3s,baz=122,slow=22,SNR=16							
SNZO	**South Karori**	**11.39**	**201**	*e*P		**Pn**	**14 48 23.5**	**-2.8**
	60nm,0.6s							
RPZ	**Rata Peaks**	**14.78**	**206**	P		**P**	**14 49 01.1**	**-1.4**
	2.9nm,0.3s,baz=241,slow=1.2,SNR=14							
RPZ				S		**S**	**14 51 36.2**	**-3.8**
	1.0nm,0.3s,baz=23,slow=15,SNR=5.9							
DZM	**Mont Dzumac**	**14.92**	**302**	*e*P		**P**	**14 49 05.2**	**+0.9**
AFI	**Afiamalu**	**18.38**	**26**	P		**P**	**14 49 40.2**	**-1.1**
	27nm,0.3s,baz=48,slow=3.1,SNR=18							
AFI				S		**S**	**14 52 45.5**	**-5.2**
	2.9nm,0.3s,baz=90,slow=20,SNR=5.0							
ARMA	**Armidale**	**24.43**	**263**	*e*P		**P**	**14 50 40.3**	**+2.8**
CNB	**Canberra Magne**	**26.06**	**252**	*e*P		**P**	**14 50 54.4**	**+2.5**
EIDS	**Eidsvold**	**26.07**	**275**	*e*P		**P**	**14 50 53.0**	**+1.0**
	18nm,0.8s,mb4.5							
TOO	**Toolangi**	**29.27**	**247**	*e*P		**P**	**14 51 21.8**	**+1.6**
CTA	**Charters Tower**	**32.19**	**281**	*ǁi*P		**P**	**14 51 46.7**	**+0.9**
	14nm,0.6s,mb4.5							
CTA	**Charters Tower**	**32.19**	**281**	P		**P**	**14 51 46.8**	**+1.0**
	21nm,0.6s,mb4.6,baz=106,slow=10,SNR=30							
CTAO	**Charters Tower**	**32.19**	**281**	*e*P		**P**	**14 51 46.6**	**+0.9**
	19nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**32.75**	**258**	*ǁi*P		**P**	**14 51 51.7**	**+1.3**
	16nm,0.5s,mb4.6							
STKA	**Stephens Creek**	**32.75**	**258**	P		**P**	**14 51 51.8**	**+1.4**
	16nm,0.4s,mb4.7,baz=98,slow=9.8,SNR=146							
STKA				ScP		ScP	14 57 28.6	-2.4	
	2.7nm,1.2s,baz=308,slow=5.0,SNR=2.9							
PMG	**Port Moresby**	**37.24**	**298**	*e*P		**P**	**14 52 28.5**	**0.0**
ASAR	**Alice Springs**	**41.40**	**268**	P		**P**	**14 53 01.9**	**-0.5**
	9.1nm,0.3s,mb4.5,baz=104,slow=7.3,SNR=368							
ASAR				pP		pP	14 54 22.0	+3.7	
	3.2nm,0.9s,baz=104,slow=8.4,SNR=3.3							
ASAR				ScP		ScP	14 58 00.9	-2.8	
	4.4nm,0.9s,baz=118,slow=4.3,SNR=14							
ASAR				S		**S**	**14 58 44.2**	**-3.3**
	1.5nm,1.0s,baz=106,slow=14,SNR=4.3							
WB2	**Warramunga Arr**	**42.41**	**274**	*ǁi*P		**P**	**14 53 09.8**	**-0.7**
WRAB	**Tennant Creek**	**42.42**	**274**	*e*P		**P**	**14 53 09.9**	**-0.6**
	44nm,0.7s,mb4.9							
WRA	**Warramunga Arr**	**42.42**	**274**	P		**P**	**14 53 09.9**	**-0.6**
	40nm,0.4s,mb5.1,baz=112,slow=8.1,SNR=883							
WRA				pP		pP	14 54 30.2	+3.3	
	5.2nm,0.9s,baz=108,slow=7.6,SNR=3.5							
WRA				ScP		ScP	14 58 05.3	-2.5	
	2.1nm,1.0s,baz=120,slow=4.0,SNR=7.0							
WRA				S		**S**	**14 58 58.5**	**-3.9**
	4.0nm,1.0s,baz=109,slow=14,SNR=9.9							
FORT	**Forrest**	**44.32**	**256**	*ǁi*P		**P**	**14 53 24.3**	**-1.1**
	89nm,0.6s,mb5.3							
SBA	**Scott Base**	**47.57**	**184**	*e*P		**P**	**14 53 51.7**	**+2.0**
	40nm,1.7s,mb4.5							
VNDA	**Vanda**	**47.59**	**185**	P		**P**	**14 53 50.8**	**+0.9**
	0.8nm,0.6s,baz=351,slow=8.0,SNR=7.3							
VNDA	**Vanda**	**47.59**	**185**	*e*P		**P**	**14 53 50.3**	**+0.5**
	0.8nm,0.6s							
FITZ	**Fitzroy Crossi**	**50.67**	**271**	*ǁi*P		**P**	**14 54 13.3**	**-0.4**
	83nm,0.8s,mb5.0							
KLBR	**Kellerberrin**	**52.63**	**252**	*e*P		**P**	**14 54 26.5**	**-1.4**
	82nm,1.2s,mb4.8							
NWAO	**Narrogin (SRO)**	**52.69**	**250**	P		**P**	**14 54 27.1**	**-1.3**
	2.5nm,0.5s,mb3.7,baz=134,slow=9.6,SNR=8.3							
MUN	**Mundaring**	**53.78**	**251**	*ǁi*P		**P**	**14 54 35.2**	**-1.0**
CASY	**Casey**	**54.04**	**208**	*ǁi*P		**P**	**14 54 36.9**	**-0.5**
QSPA	**South Pole Qui**	**59.36**	**180**	P		**P**	**14 55 16.0**	**+1.8**
	60nm,0.9s,mb4.9,baz=32,slow=1.6,SNR=126							
QSPA	**South Pole Qui**	**59.36**	**180**	*e*P		**P**	**14 55 15.9**	**+1.7**
MAW	**Mawson**	**71.38**	**201**	P		**P**	**14 56 30.3**	**-0.2**
	5.1nm,0.8s,mb4.1,baz=158,slow=6.7,SNR=4.7							
SNAA	**Sanae**	**77.85**	**179**	*e*		**P**	**14 57 06.8**	**-0.3**
SNAA				*e*			14 57 07.9		
SNAA				*e*			14 57 10.1		
SNAA	**Sanae**	**77.85**	**179**	*e*P		**P**	**14 57 06.7**	**-0.4**
	18nm,1.1s,mb4.6							
VNA3	**Neumayer Olymp**	**78.06**	**177**	*e*		**P**	**14 57 08.2**	**-0.1**
VNA3				*e*			14 57 09.2		
VNA3				*e*			14 57 11.1		
VNA2	**Neumayer--Watz**	**78.48**	**178**	*e*		**P**	**14 57 10.8**	**+0.3**
	baz=188,slow=4.9							
VNA2				*e*			14 57 11.9		
VNA2				*e*			14 57 13.5		
VNA1	**Neumayer--Stat**	**78.72**	**177**	*e*		**P**	**14 57 12.4**	**+0.6**
VNA1				*e*			14 57 13.4		
VNA1				*e*			14 57 15.2		
KSRS	**Korea Array**	**83.53**	**321**	P		**P**	**14 57 37.9**	**+0.6**
	0.9nm,0.7s,mb3.6,baz=140,slow=5.4,SNR=3.8							
GLA	**Glamis**	**88.40**	**50**	*e*P		**P**	**14 58 01.6**	**+0.6**
	17nm,1.0s,mb4.7							
NVAR	**Mina Array Bea**	**89.65**	**44**	P		**P**	**14 58 06.3**	**-0.3**
	2.8nm,0.8s,mb4.1,baz=219,slow=7.8,SNR=15							
NVAR	**Mina Array Bea**	**89.65**	**44**	P		**P**	**14 58 06.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**91.92**	**290**	P		**P**	**14 58 16.7**	**-0.9**
	0.5nm,0.6s,mb3.6,baz=147,slow=3.6,SNR=5.1							
CMAR				pP		pP	14 59 53.1	+4.5	
	0.2nm,0.4s,baz=139,slow=5.6,SNR=2.9							
TXAR	**Lajitas Array**	**94.00**	**58**	P		**P**	**14 58 26.7**	**-0.2**
	1.2nm,1.2s,mb3.8,baz=201,slow=9.7,SNR=2.8							
PDAR	**Pinedale Array**	**97.56**	**44**	P		**P**	**14 58 42.0**	**-0.7**
	0.5nm,0.8s,mb3.8,baz=232,slow=3.6,SNR=3.7							
NOA	**NORSAR Array B**	**148.81**	**350**	PKPbc		PKPbc	15 04 51.5	-2.0	
	3.0nm,0.7s,baz=17,slow=4.2,SNR=3.3							
BRTR	**Keskin Array B**	**151.26**	**297**	PKPbc		PKPbc	15 04 58.5	-1.5	
	1.5nm,0.5s,baz=131,slow=3.3,SNR=4.9							
BRTR				PKPab		PKPab	15 05 09.9	+0.2	
	4.3nm,1.0s,baz=51,slow=2.8,SNR=3.1							
LIC	**Lamto**	**155.15**	**168**	*e*P		PKPab	15 05 26.1	-0.6	
	43nm,1.6s							
KIC	**Kosan Boka**	**155.33**	**169**	*e*P		PKPab	15 05 27.1	-0.4	
	15nm,0.7s							
TIC	**Toumodi**	**155.56**	**168**	*e*P		PKPab	15 05 28.0	-0.4	
	9.3nm,0.2s							
DBIC	**Dimbokro**	**155.61**	**168**	PKPab		PKPab	15 05 28.1	-0.5	
	1.7nm,0.6s,baz=166,slow=4.7,SNR=5.1							
TORD	**Torodi Ar. Bea**	**162.42**	**185**	PKPab		PKPab	15 05 57.3	-0.9	
	6.1nm,0.8s,baz=173,slow=3.9,SNR=28							

*IDC **19** 14:51:34.7±2.6,5130N×17951W,h24km±16km,mb4.7/29, mb1 4.9/31,mb1mx4.9/32,mbtmp4.7/31,ML5.0/2,MS4.9/31, Ms1 4.9/31,ms1mx4.8/40,Error ellipse: s-maj=16.2km s-min=9.2km az=154.0*

*ISCJB **19** 14:51:35.2±0.1,5127N±003×17955W±002,h38km, mb5.2/256,MS5.0/71,Error ellipse: s-maj=5.0km s-min=1.7km az=4.7*

*BJI **19** 14:51:36.5,5143N×17984W,h46km,mB5.5,mb5.2,Ms5.1, Msz5.0*

*MOS **19** 14:51:36.4±0.8,5130N×17951W,h49km,mb5.4/110, MS5.1/27,Error ellipse: s-maj=6.7km s-min=4.3km az=95.3*

*NEIC **19** 14:51:39.1±0.4,5130N×17949W,h60km±3km,mb5.2/164, ML5.5(AEIC),Error ellipse: s-maj=4.8km s-min=2.2km az=183.0*

*GCMT **19** 14:51:39.2±0.3,5105N×17942W,h35km±1km,MW5.6/83, Moment Tensor Solution. s39,c46; s83,c126; Duration: 1s5 Moment tensor: Scale 10^17Nm; Mrr2.46±.14; Mθθ-1.99±.09; Mϕϕ-0.47±.08; Mre1.18±.09; Mrθ-0.68±.04; Mrϕ1.13±.07; Best double couple: Mo2.85900×10^17 NP1:ϕ258.00000°,δ29.00000°,λ109.00000°. NP2: ϕ57.00000°,δ62.00000°,λ80.00000°. Principal axes: T 3.0150, Plg71.0000°, Azm305.0000°; N -0.3160, Plg9.0000°, Azm62.0000°; P -2.7030, Plg17.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SZGRF **19** 14:51:40.1,5168N×179.17E,h33km,mb5.3,MS4.8,Rat Islands, Aleutian Islands, United States*

ISC 19 14:51:37.3±0.1,5133N±004×17956W±002,h40km, h40km±1.7km:pP-P,n923,σ0§73/916,mb5.2/256,MS5.0/71, 290C-160D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**1.88**	**72**	P		**Pn**	**14 52 06.2**	**-0.7**
ADK				S		**Sn**	**14 52 29.5**	**+0.2**
ATKA	**Atka Island**	**3.45**	**73**	P		**Pn**	**14 52 28.9**	**+0.4**
ATKA				S		**Sn**	**14 53 09.8**	**+1.9**
SMY	**Shemya**	**4.16**	**292**	P		**Pn**	**14 52 40.5**	**+2.3**
SMY				S		**Sn**	**14 53 30.1**	**+4.7**
FX1	**Attu Island--F**	**4.74**	**292**	Pn		**Pn**	**14 52 47.5**	**+1.2**
	74nm,0.3s,baz=219,slow=6.5,SNR=107							
FX1				Sn		**Sn**	**14 53 49.8**	**+10**
	162nm,0.3s,baz=112,slow=18,SNR=12							
FX1				LR		LR	14 54 19.2		
	comp=Z,7μm,21.7s,baz=102,slow=34							
FX1	**Attu Island--F**

HABR eS **S** **15 02 22.4 +1.0**
HABR e*SS sS 15 02 44.0 +4.3
HABR eSS SS 15 03 52.0 -33
HABR e 15 08 11.3
HABR pmax pmax
comp=E,79nm,2.7s
HABR pmax pmax
comp=Z,115nm,2.0s,mb5.3
HABR pmax pmax
comp=N,42nm,2.2s
HABR MLR MLR
comp=Z,722nm,16.0s,MS4.4
HABR MLR MLR
comp=N,901nm,16.0s,MS4.7
HABR MLR MLR
comp=E,1µm,16.0s,MS4.7
YAK Yakutsk 29.09 311 eP **P** **14 57 32.4 -1.2**
YAK e*PP pP 14 57 43.1 -1.5
YAK ePPP 14 58 33.6
YAK eS **S** **15 02 23.2 +0.9**
YAK pmax pmax
comp=Z,12nm,0.9s,mb4.6
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,11nm,1.2s
YAK pmax pmax
comp=Z,15nm,0.6s,mb4.9
YAK smax
comp=E,579nm,14.2s
YAK MLR MLR
comp=Z,3µm,22.0s,MS4.9
YAK MLR MLR
comp=N,825nm,18.0s,MS4.8
YAK MLR MLR
comp=E,2µm,16.0s,MS4.8
YAK Yakutsk 29.09 311 eP **P** **14 57 32.7 -0.9**
comp=E,23nm,0.7s,mb5.0
TIXI Tiksi 30.44 331 *i* P **P** **14 57 46.4 +0.9**
TIXI Tiksi 30.44 331 eP **P** **14 57 46.0 +0.5**
comp=E,12nm,0.3s,mb5.1
KLR Kul'dur 30.73 286 ⇓*i*P **P** **14 57 44.3 -4.0**
KLR eS **S** **15 02 55.0 +6.7**
KLR pmax pmax
comp=E,160nm,1.6s
KLR pmax pmax
comp=Z,200nm,1.6s,mb5.7
KLR MLR MLR
comp=Z,3µm,14.0s,MS5.0
CLNS Chul'man 32.26 302 eP **P** **14 57 59.3 -2.3**
CLNS e*PP pP 14 58 08.7 -3.9
CLNS e 14 59 08.1
CLNS eS **S** **15 03 12.5 +0.5**
CLNS eSSS 15 05 30.9
CLNS pmax pmax
comp=N,4.0nm,1.1s
CLNS pmax pmax
comp=Z,27nm,1.6s,mb4.8
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS pmax pmax
comp=N,8.0nm,1.1s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS pmax pmax
comp=Z,12nm,1.1s,mb4.6
CLNS smax
comp=N,94nm,14.1s
CLNS smax
comp=E,366nm,14.5s
CLNS MLR MLR
comp=N,2µm,16.0s,MS5.0
CLNS MLR MLR
comp=Z,1µm,18.0s,MS4.7
CLNS MLR MLR
comp=E,1µm,16.0s,MS5.0
MJAR Matsushiro Arr 33.30 260 P **P** **14 58 11.2 +0.2**
comp=E,7.2nm,0.9s,mb4.6,baz=52,slow=7.6,SNR=16
MJAR PcP PcP 15 00 51.9 -0.4
comp=E,2.7nm,0.8s,baz=77,slow=1.5,SNR=5.7
MJAR LR LR 15 09 41.7
comp=E,2µm,22.0s,MS4.8,baz=65,slow=33
MJAR Matsushiro Arr 33.30 260 P **P** **14 58 11.2 +0.2**
MJAR 15 00 51.9
MAJO Matsushiro 33.31 260 eP **P** **14 58 11.1 +0.1**
MAJO pmax pmax
comp=Z,50nm,1.2s,mb5.3
MAJO Matsushiro 33.31 260 eP **P** **14 58 11.1 +0.1**
comp=Z,50nm,1.2s,mb5.3
MAT Matsushiro 33.31 260 P **P** **14 58 11.1 +0.1**
MAT eS **S** **15 03 26.0 -2.6**
MDJ Mudanjiang 34.11 279 P **P** **14 58 17.0 -0.9**
MDJ AP pP 14 58 25.8 -3.1
MDJ PP PP 14 59 34.0 -1.4
MDJ S **S** **15 03 41.0 +0.1**
MDJ AMB AMB
comp=Z,11nm,1.1s,mb4.7
MDJ AMB AMB
comp=Z,285nm,8.4s
MDJ LR LR
comp=N,857nm,20.8s
MDJ LR LR
comp=E,1µm,32.2s
MDJ LR LR
comp=Z,2µm,22.4s,MS4.8
MDJ Mudanjiang 34.11 279 eP **P** **14 58 17.1 -0.8**
comp=Z,14nm,0.8s,mb5.0
JHJ Hachijo jima 2 34.62 254 LR LR 15 09 55.1
comp=Z,1µm,21.1s,MS4.6,baz=84,slow=32
YKA Yellowknife Ar 35.61 46 P **P** **14 58 29.7 -0.9**
comp=Z,22nm,0.7s,mb5.2,baz=282,slow=8.3,SNR=176
YKA PcP PcP 15 00 58.0 -0.4
comp=Z,4.8nm,0.8s,baz=286,slow=2.9,SNR=7.4
YKA ScP ScP 15 04 41.7 +0.8
comp=Z,3.5nm,0.6s,baz=289,slow=3.6,SNR=22
YKA LR LR 15 14 54.6
comp=Z,1µm,20.3s,MS4.6,baz=155,slow=39
YKA Yellowknife Ar 35.61 46 P **P** **14 58 29.7 -0.9**
YKA 15 00 58.0
YKA Yellowknife Ar 35.61 46 P **P** **14 58 29.7 -0.9**
YKA PcP PcP 15 00 58.0 -0.4
YKA ScP ScP 15 04 41.7 +0.8
YKA LR LR 15 14 54.6
B04A Port Angeles 35.66 73 ⇓P **P** **14 58 31.9 +0.6**
baz=36
A05A Maple Falls 36.09 71 ⇓P **P** **14 58 35.0 +0.2**
baz=36,SNR=6.8
C04A Brinnon 36.13 73 ⇓P **P** **14 58 36.0 +0.7**
baz=36,SNR=6.1
E03A Lebam 36.33 75 ⇓P **P** **14 58 37.7 +0.8**
baz=36
A06A Chilliwack 36.40 70 ⇑P **P** **14 58 38.1 +0.6**
baz=36
B05A Bryant 36.41 72 ⇑P **P** **14 58 37.7 +0.1**
baz=36,SNR=14
B06A Marblemount 36.66 71 ⇓P **P** **14 58 40.1 +0.4**
baz=36
E04A Onalaska 36.82 74 ⇑P **P** **14 58 41.9 +0.8**
baz=37
C05A Tolt Reservoir 36.91 72 ⇓P **P** **14 58 42.3 +0.4**
baz=37,SNR=7.6
D05A Enumclaw 36.97 73 ⇓P **P** **14 58 43.1 +0.7**
baz=37,SNR=6.9
A07A Ashnola River, 37.07 70 ⇓P **P** **14 58 43.1 -0.1**
baz=37,SNR=21
CN2 Changchun 37.09 280 eP **P** **14 58 43.1 -0.3**
CN2 eXP sP 14 59 03.0 +3.7
CN2 eS **S** **15 04 26.3 -0.3**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,1µm,18.0s,MS4.8
CN2 LR LR
comp=E,1µm,18.0s,MS4.8
CN2 LR LR
comp=Z,2µm,19.0s,MS4.8
LON Longmire 37.29 74 P **P** **14 58 46.7 +1.6**
LON pmax pmax
comp=Z,18nm,0.7s,mb5.0
LON Longmire 37.29 74 eP **P** **14 58 46.0 +0.9**
comp=Z,18nm,0.7s,mb5.0
F04A Amboy 37.32 75 ⇑P **P** **14 58 45.5 +0.1**
baz=37,SNR=13
COR Corvallis 37.46 78 eP **P** **14 58 48.0 +1.4**

WPW White Pass 37.47 74 P **P** **14 58 47.6 +0.9**
B07A Winthrop 37.49 70 ⇑P **P** **14 58 46.7 -0.1**
baz=37,SNR=24
NLW Nelson Butte 37.54 71 P **P** **14 58 48.1 +0.9**
SLFW Sugar Loaf 37.58 72 P **P** **14 58 48.5 +1.0**
CBIJ Chichi jima 37.63 245 P **P** **14 58 47.0 -1.2**
comp=Z,64nm,0.7s,mb5.5,baz=338,slow=8.9,SNR=6.9
CBIJ LR LR 15 11 36.4
comp=Z,904nm,20.3s,MS4.6,baz=12,slow=32
G04A Mulino 37.65 76 ⇓P **P** **14 58 47.9 -0.3**
baz=38,SNR=9.0
VLMM Larch Mountain 37.75 76 P **P** **14 58 50.1 +1.1**
A08A Turner Farm, O 37.76 69 ⇓P **P** **14 58 48.4 -0.7**
baz=38,SNR=17
TBM Table Mountain 37.81 72 P **P** **14 58 50.9 +1.3**
HIA Hailar 37.86 291 *c i*P **P** **14 58 49.6 -0.3**
HIA Hailar 37.86 291 eP **P** **14 58 49.1 -0.8**
comp=Z,166nm,1.5s,mb5.5
C07A Waterville 37.89 71 ⇓P **P** **14 58 50.1 -0.1**
baz=38,SNR=16
E06A Yakima 37.89 74 ⇓P **P** **14 58 50.6 +0.4**
baz=38
F05A White Salmon 37.93 75 ⇓P **P** **14 58 50.3 -0.3**
baz=38
B08A Colville Reser 38.00 70 ⇑P **P** **14 58 50.9 -0.2**
baz=38,SNR=22
HOOD Mount Hood Mea 38.09 76 eP **P** **14 58 52.8 +0.9**
comp=Z,79nm,1.0s,mb5.4
H04A Detroit Lake 38.09 77 ⇑P **P** **14 58 52.0 +0.1**
baz=38,SNR=15
A09A Danville 38.16 69 ⇑P **P** **14 58 52.5 +0.1**
baz=38,SNR=13
D07A Quincy 38.18 72 ⇓P **P** **14 58 53.1 +0.5**
baz=38,SNR=12
G05A Wamic 38.34 76 ⇓P **P** **14 58 54.4 +0.4**
baz=38,SNR=7.0
FRIS Frissel Point 38.39 77 P **P** **14 58 56.4 +1.9**
F06A Goldendale 38.40 75 ⇑P **P** **14 58 54.9 +0.4**
baz=38,SNR=6.9
C08A Higginbotham F 38.44 71 ⇓P **P** **14 58 54.6 -0.2**
baz=38,SNR=9.7
E07A Sunnyside 38.56 73 ⇓P **P** **14 58 56.0 +0.1**
baz=38,SNR=5.8
B09A Rice 38.67 69 ⇑P **P** **14 58 56.9 +0.1**
baz=38,SNR=14
H05A Madras 38.70 76 ⇑P **P** **14 58 57.2 +0.2**
baz=38,SNR=6.2
HUMO Hull Mountain 38.72 80 eP **P** **14 58 58.5 +1.2**
comp=Z,26nm,1.1s,mb4.9
G06A Carlson Farm, 38.75 75 ⇑P **P** **14 58 57.5 0.0**
baz=39,SNR=5.3
HAWA Hanford 38.83 73 eP **P** **14 58 58.3 +0.2**
comp=Z,63nm,1.0s,mb5.3
F07A Phinny Hill Vi 38.85 74 ⇓P **P** **14 58 58.2 -0.1**
baz=39,SNR=8.2
D08A Wollman Farm, 38.87 72 ⇑P **P** **14 58 58.7 +0.3**
baz=39,SNR=21
C09A Chrisman Ranch 38.89 70 ⇑P **P** **14 58 58.6 0.0**
baz=39,SNR=16
I05A Bend 38.93 77 ⇑P **P** **14 58 59.3 +0.3**
baz=39,SNR=7.8
E08A Dider Farm, El 39.07 73 ⇑P **P** **14 59 00.2 +0.1**
baz=39,SNR=16
KSRS Korea Array 39.16 270 P **P** **14 59 01.9 +0.9**
comp=Z,18nm,0.9s,mb4.8,baz=56,slow=8.1,SNR=33
KSRS PcP PcP 15 01 10.1 +0.4
comp=Z,3.1nm,0.8s,baz=64,slow=2.4,SNR=5.6
KSRS LR LR 15 14 22.0
comp=Z,670nm,21.0s,MS4.5,baz=58,slow=35
KSRS Korea Array 39.16 270 P **P** **14 59 01.9 +0.9**
KSRS 15 01 10.1
KSRS pmax pmax
comp=Z,18nm,0.9s,mb4.8
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KSRS MLR MLR
comp=Z,670nm,21.0s,MS4.5
H06A Lindquist Farm 39.20 76 ⇓P **P** **14 59 00.9 -0.3**
baz=39,SNR=14
D09A Jones Farm, Ri 39.23 71 ⇑P **P** **14 59 01.3 -0.1**
baz=39,SNR=6.6
EDM Edmonton 39.25 60 P **P** **14 59 00.7 -0.8**
EDM Edmonton 39.25 60 eP **P** **14 59 00.4 -1.1**
B10A Chitwood Farm, 39.27 69 ⇓P **P** **14 59 01.8 0.0**
baz=39
SNY Shenyang 39.31 279 ⇑P **P** **14 59 02.8 +0.6**
SNY S **S** **15 05 03.0 +2.8**
SNY AMB AMB
comp=Z,72nm,1.7s,mb5.1
SNY AMB AMB
comp=Z,848nm,3.5s
SNY LR LR
comp=N,1µm,19.1s,MS4.8
SNY LR LR
comp=E,1µm,22.8s,MS4.8
SNY LR LR
comp=Z,2µm,21.1s,MS4.9
G07A Ruggs Ranch, H 39.32 75 ⇑P **P** **14 59 02.3 0.0**
baz=39,SNR=7.2
NEW Newport 39.35 69 P **P** **14 59 02.4 0.0**
NEW pmax pmax
comp=Z,63nm,1.0s
NEW Newport 39.35 69 eP **P** **14 59 02.0 -0.4**
comp=Z,63nm,1.0s,mb5.3
YBH Yreka Blue Hor 39.36 81 P **P** **14 59 05.3 +2.7**
YBH pmax pmax
comp=Z,45nm,1.0s
YBH Yreka Blue Hor 39.36 81 eP **P** **14 59 04.5 +1.9**
comp=Z,45nm,1.0s,mb5.2
C10A Spilker Farm, 39.45 70 ⇑P **P** **14 59 02.9 -0.4**
baz=39,SNR=7.6
A11A Hall Mountain, 39.46 68 ⇓P **P** **14 59 03.2 -0.2**
baz=39,SNR=14
F08A Pendleton 39.59 73 ⇓P **P** **14 59 04.5 +0.1**
baz=39
E09A Wood Farm, Sta 39.60 72 ⇓P **P** **14 59 04.1 -0.5**
baz=39,SNR=21
I06A Prineville 39.69 77 ⇓P **P** **14 59 04.9 -0.5**
baz=40,SNR=10.0
B11A Sandpoint 39.71 68 ⇑P **P** **14 59 05.1 -0.3**
baz=40,SNR=8.5
G08A Pilot Rock 39.74 74 ⇓P **P** **14 59 05.0 -0.7**
baz=40,SNR=12
D10A Wagner Farm, O 39.85 71 ⇓P **P** **14 59 05.8 -0.8**
baz=40,SNR=32
A12A Yaak River Ran 39.88 67 ⇑P **P** **14 59 06.5 -0.3**
baz=40
RES Resolute Bay 39.98 24 P **P** **14 59 07.4 0.0**
comp=Z,3.0nm,0.8s,mb4.1,baz=272,slow=10,SNR=8.4
RES Resolute Bay 39.98 24 P **P** **14 59 07.7 +0.3**
RES pmax pmax
comp=Z,18nm,1.2s,mb4.7
RES Resolute Bay 39.98 24 eP **P** **14 59 06.9 -0.5**
comp=Z,18nm,1.2s,mb4.7
I07A Izee 40.05 76 ⇑P **P** **14 59 08.5 +0.3**
baz=40,SNR=21
J06A Christmas Vall 40.10 78 ⇓P **P** **14 59 08.8 0.0**
baz=40,SNR=26
WDC Whiskeytown Da 40.12 83 eP **P** **14 59 10.2 +1.3**
WDC pmax pmax
comp=Z,16nm,0.9s,mb4.8
WDC Whiskeytown Da 40.12 83 eP **P** **14 59 10.2 +1.2**
comp=Z,16nm,0.9s,mb4.8
CIT Chita 40.14 298 eP **P** **14 59 09.4 +0.4**
CIT *e* pP 14 59 19.8 -0.4
CIT *e* 14 59 26.1
CIT pmax pmax
comp=Z,195nm,1.8s,mb5.5
B12A Libby 40.14 68 ⇓P **P** **14 59 08.9 -0.1**
baz=40
F09A S2 Ranch, Elgi 40.16 73 ⇑P **P** **14 59 09.1 0.0**
baz=40,SNR=11
H08A Prairie City 40.32 75 ⇓P **P** **14 59 10.9 +0.4**
baz=40,SNR=9.8
D11A Klaveano Farm, 40.41 70 ⇑P **P** **14 59 10.8 -0.5**
baz=40
F10A Beach Ranch, E 40.43 72 ⇑P **P** **14 59 11.1 -0.3**
baz=40,SNR=15
G09A Cove 40.46 74 ⇑P **P** **14 59 11.5 -0.1**
baz=40,SNR=11
J07A Hines 40.55 77 ⇓P **P** **14 59 12.8 +0.4**
baz=40,SNR=12
C12B Naegeli Ranch, 40.58 69 ⇓P **P** **14 59 12.4 -0.3**
baz=40,SNR=25
I08A Drewsey 40.71 76 ⇓P **P** **14 59 13.8 0.0**
baz=40,SNR=25
MOD Modoc 40.75 79 eP **P** **14 59 15.0 +0.9**

comp=Z,21nm,0.7s,mb4.9
WALA Waterton Lakes 40.83 66 eP **P** **14 59 14.1 -0.6**
comp=Z,1.6nm,1.1s
E11A Bogner Ranch, 40.84 71 ⇓P **P** **14 59 14.2 -0.5**
baz=41,SNR=11
B13A Whitefish 40.84 68 ⇑P **P** **14 59 14.6 -0.2**
baz=41,SNR=9.1
G10A Bishop Farm, J 40.84 73 ⇓P **P** **14 59 15.0 +0.1**
baz=41,SNR=37
H09A Durkee 40.85 74 ⇑P **P** **14 59 15.3 +0.4**
baz=41,SNR=11
K07A Rock Creek Ran 40.96 78 ⇓P **P** **14 59 17.1 +1.3**
baz=41,SNR=32
BMO Blue Mountains 40.97 74 P **P** **14 59 16.1 +0.2**
BMO pmax pmax
comp=Z,21nm,1.0s,mb4.7
BMO Blue Mountains 40.97 74 eP **P** **14 59 15.8 -0.1**
comp=Z,20nm,1.0s,mb4.7
J08A Circle Bar Ran 41.07 76 ⇓P **P** **14 59 17.0 +0.3**
baz=41,SNR=20
F11A Grangeville 41.11 72 ⇓P **P** **14 59 17.1 +0.1**
baz=41,SNR=15
C13A Hot Springs 41.13 69 ⇑P **P** **14 59 16.8 -0.3**
baz=41,SNR=26
A14A Double T Ranch 41.15 66 ⇑P **P** **14 59 17.1 -0.2**
baz=41,SNR=35
I09A Lost Marbles R 41.18 75 ⇓P **P** **14 59 17.6 0.0**
baz=41,SNR=8.1
G11A Walters Elk Ra 41.30 72 ⇓P **P** **14 59 18.6 0.0**
baz=41,SNR=20
K08A Mann Creek Ran 41.41 77 ⇓P **P** **14 59 19.9 +0.4**
baz=41,SNR=16
H10A Noah's Angus R 41.44 74 ⇓P **P** **14 59 19.8 0.0**
baz=41,SNR=26
WVOR Wild Horse Val 41.48 78 P **P** **14 59 20.6 +0.5**
WVOR pmax pmax
comp=Z,29nm,0.7s,mb5.0
WVOR Wild Horse Val 41.48 78 eP **P** **14 59 20.2 +0.1**
comp=Z,29nm,0.7s,mb5.0
J09A Fry Pan Ranch, 41.51 76 ⇑P **P** **14 59 21.0 +0.6**
baz=41,SNR=30
B14A Marquette Ranc 41.54 67 ⇓P **P** **14 59 20.1 -0.4**
baz=41,SNR=11
A15A Johnson Ranch, 41.54 66 ⇑P **P** **14 59 19.6 -1.0**
baz=41,SNR=6.0
I10A Payette 41.68 74 ⇑P **P** **14 59 22.6 +0.9**
baz=42,SNR=22
N06A Buffalo Meadow 41.70 81 ⇓P **P** **14 59 22.5 +0.6**
baz=42,SNR=31
M07A Soldier Meadow 41.74 79 ⇓P **P** **14 59 22.5 +0.2**
baz=42
L08A Fields 41.80 78 ⇑P **P** **14 59 23.1 +0.4**
baz=42,SNR=17
H11A Donnelly 41.82 73 ⇑P **P** **14 59 22.5 -0.4**
baz=42,SNR=9.5
MSO Missoula 41.93 69 eP **P** **14 59 23.3 -0.5**
comp=Z,48nm,1.1s,mb5.0
B15A Bradely Ranch, 41.98 67 ⇑P **P** **14 59 23.4 -0.7**
baz=42,SNR=19
E13A Victor 41.99 70 ⇓P **P** **14 59 23.8 -0.4**
baz=42,SNR=33
D14A Greenough 42.05 69 ⇑P **P** **14 59 24.4 -0.3**
baz=42,SNR=81
J10A Berg Farm, Mel 42.07 75 ⇓P **P** **14 59 24.6 -0.2**
baz=42,SNR=9.4
M08A Happy Creek Ra 42.20 79 ⇑P **P** **14 59 27.0 +1.0**
baz=42,SNR=12
A16A West Butte Ran 42.21 65 ⇑P **P** **14 59 24.9 -1.1**
baz=42,SNR=22
DL2 Dalian 42.22 277 ⇑*i*P **P** **14 59 25.6 -0.6**
DL2 PP PP 15 01 08.8 +4.6
DL2 S **S** **15 05 43.5 0.0**
DL2 AMB AMB
comp=Z,30nm,1.0s,mb4.9
DL2 AMB AMB
comp=Z,220nm,5.4s
DL2 LR LR
comp=N,550nm,16.2s
DL2 LR LR
comp=Z,590nm,15.8s,MS4.6
C15A Salmond Ranch, 42.22 67 ⇑P **P** **14 59 26.4 +0.3**
baz=42,SNR=78
F13A Darby 42.25 71 ⇑P **P** **14 59 26.2 -0.2**
baz=42,SNR=22
K10A MacKenzie Ranc 42.37 76 ⇓P **P** **14 59 27.8 +0.5**
baz=42,SNR=56
E14A Clinton 42.41 70 ⇑P **P** **14 59 27.5 -0.2**
baz=42,SNR=30
H12A Diamond D Ranc 42.60 73 ⇑P **P** **14 59 28.6 -0.7**
baz=42,SNR=16
WCN Washoe City 42.60 82 ⇓P **P** **14 59 29.5 +0.2**
baz=42
O07A Toulon 42.64 81 ⇓P **P** **14 59 30.6 +1.1**
baz=42,SNR=23
MFID Camas Ranch 42.64 75 ⇑P **P** **14 59 29.9 +0.4**
baz=42,SNR=20
D15A Lincoln 42.65 68 ⇑P **P** **14 59 29.5 -0.1**
baz=42,SNR=38
G13A Cobalt 42.68 72 ⇑P **P** **14 59 29.4 -0.4**
baz=42,SNR=47
C16A Fuhringer Ranc 42.71 67 ⇑P **P** **14 59 29.3 -0.7**
baz=42,SNR=31
A17A Triple J Farms 42.72 65 ⇑P **P** **14 59 29.2 -1.0**
baz=42,SNR=40
N08A GE Springer Mi 42.73 79 ⇓P **P** **14 59 30.6 +0.3**
baz=43,SNR=13
ALE Alert 42.75 10 P **P** **14 59 30.0 0.0**
comp=Z,106nm,0.6s,mb5.8,SNR=8.2
M09A Marrel Ranch, 42.78 78 ⇑P **P** **14 59 31.5 +0.8**
baz=43,SNR=13
F14A Wisdom 42.80 70 ⇑P **P** **14 59 31.2 +0.3**
baz=43,SNR=19
K11A Parker Ranch, 42.88 76 ⇑P **P** **14 59 31.9 +0.4**
baz=43,SNR=30
E15A Deer Lodge 42.91 69 ⇓P **P** **14 59 31.7 +0.1**
baz=43,SNR=38
H13A Challis 42.95 72 ⇑P **P** **14 59 31.4 -0.7**
baz=43,SNR=8.7
CMB Columbia Colle 42.98 84 P **P** **14 59 33.4 +1.1**
CMB pmax pmax
comp=Z,12nm,1.0s,mb4.6
CMB Columbia Colle 42.98 84 eP **P** **14 59 32.4 +0.1**
comp=Z,12nm,1.0s,mb4.6
B17A L&G Farms, Che 43.00 66 ⇓P **P** **14 59 31.7 -0.7**
baz=43
L10A Juniper Basin 43.01 77 ⇑P **P** **14 59 32.7 +0.1**
baz=43,SNR=46
O08A Rochester Mine 43.01 80 ⇑P **P** **14 59 33.3 +0.8**
baz=43
N09A Rock Creek Ran 43.07 79 ⇓P **P** **14 59 33.4 +0.4**
baz=43
J12A Stokes Ranch, 43.18 74 ⇑P **P** **14 59 33.7 -0.1**
baz=43,SNR=31
A18A Metzger Ranch, 43.22 65 ⇓P **P** **14 59 33.1 -1.1**
baz=43,SNR=11
D16A Dana Ranch, Ca 43.22 68 ⇓P **P** **14 59 33.6 -0.6**
baz=43,SNR=11
R06C Coleville 43.26 83 ⇑P **P** **14 59 35.9 +1.2**
baz=43,SNR=14
M10A I.L. Ranch, Tu 43.28 77 ⇓P **P** **14 59 35.4 +0.6**
baz=43,SNR=30
F15A Butte 43.31 70 ⇑P **P** **14 59 34.3 -0.6**
baz=43,SNR=21
C17A Wharram Farm, 43.36 67 ⇑P **P** **14 59 34.6 -0.7**
baz=43,SNR=16
L11A Cat Creek Ranc 43.39 76 ⇓P **P** **14 59 35.9 +0.3**
baz=43,SNR=68
I13A Wildhorse Cree 43.40 73 ⇑P **P** **14 59 35.7 +0.1**
baz=43,SNR=52
E16A East Helena 43.41 69 ⇑P **P** **14 59 35.6 -0.2**
baz=43,SNR=14
HLID Hailey 43.41 74 eP **P** **14 59 35.9 +0.1**
comp=Z,37nm,0.9s,mb5.1
H14A Leadore 43.45 72 ⇓P **P** **14 59 35.8 -0.3**
baz=43,SNR=44
BMN Battle Mountai 43.50 79 P **P** **14 59 37.3 +0.8**
BMN pmax pmax
comp=Z,21nm,0.8s,mb4.9
BMN Battle Mountai 43.50 79 eP **P** **14 59 36.4 -0.1**
comp=Z,21nm,0.8s,mb4.9
DLMT Dillon 43.50 70 eP **P** **14 59 35.8 -0.7**
comp=Z,27nm,1.1s,mb4.9
B18A Beardsley Farm 43.53 65 ⇓P **P** **14 59 35.8 -0.9**
baz=43,SNR=16
K12A Draper Farm, C 43.64 75 ⇑P **P** **14 59 38.0 +0.4**
baz=44,SNR=54
J13A Cove Ranch, Pi 43.65 74 ⇑P **P** **14 59 38.2 +0.5**
baz=44,SNR=97

D17A **Six Diamond Ra** 43.66 67 ⇑P P 14 59 37.8 0.0
baz=44,SNR=38
G15A **Dillon** 43.67 71 ⇓P P 14 59 37.4 -0.4
baz=44,SNR=36
O09A **Fish Creek Ran** 43.67 79 ⇑P P 14 59 38.5 +0.5
baz=44,SNR=25
EGMT **Eagleton** 43.73 66 eP P 14 59 37.2 -1.1
comp=Z,49nm,0.8s,mb5.3
I14A **Mackay** 43.79 73 ⇓P P 14 59 39.1 +0.3
baz=44,SNR=46
M11A **Holland Ranch,** 43.79 77 ⇓P P 14 59 40.0 +1.1
baz=44,SNR=36
F16A **Kennard Place,** 43.85 69 ⇑P P 14 59 39.3 0.0
baz=44,SNR=14
L12A **House Creek Ra** 43.85 76 ⇑P P 14 59 39.8 +0.5
baz=44,SNR=64
H15A **Lima** 43.88 71 ⇓P P 14 59 39.3 -0.3
baz=44,SNR=41
BOZ **Bozeman (W)** 43.92 70 P P 14 59 39.8 0.0
BOZ pmax pmax
comp=Z,64nm,0.9s,mb5.3
BOZ **Bozeman (W)** 43.92 70 eP P 14 59 39.5 -0.3
comp=Z,64nm,0.9s,mb5.3
E17A **Martinsdale** 43.93 68 ⇓P P 14 59 39.7 -0.2
baz=44,SNR=44
Q08A **Gabbs** 44.00 81 ⇓P P 14 59 40.7 +0.2
baz=44
O10A **Cortez Mining,** 44.03 79 ⇓P P 14 59 41.3 +0.5
baz=44,SNR=7.7
NVAR **Mina Array Bea** 44.03 82 P P 14 59 41.5 +0.7
comp=Z,19nm,0.8s,mb4.9,baz=293,slow=7.7,SNR=30
G16A **Moss Hill, Enn** 44.05 70 ⇑P P 14 59 40.7 -0.2
baz=44,SNR=75
P09A **Austin** 44.08 80 ⇑P P 14 59 41.9 +0.7
baz=44,SNR=6.4
J14A **Carey** 44.09 73 ⇓P P 14 59 41.7 +0.5
baz=44,SNR=51
K13A **Stover Farm, H** 44.13 75 ⇑P P 14 59 42.5 +1.0
baz=44,SNR=7.4
D18A **Linhart Farms,** 44.15 67 ⇓P P 14 59 41.9 +0.3
baz=44,SNR=6.5
N11A **Elko Archery C** 44.19 78 ⇑P P 14 59 42.6 +0.6
baz=44
I15A **Monteview** 44.32 72 ⇓P P 14 59 43.4 +0.3
baz=44
M12A **Wells** 44.34 77 ⇓P P 14 59 43.8 +0.5
baz=44,SNR=44
F17A **Fitzpatrick Pl** 44.35 69 ⇓P P 14 59 43.2 -0.1
baz=44,SNR=61
E18A **Harlowton** 44.42 68 ⇓P P 14 59 44.5 +0.6
baz=44,SNR=48
P10A **Eureka** 44.45 80 ⇑P P 14 59 44.7 +0.5
baz=44
Q09A **Carvers** 44.48 81 ⇑P P 14 59 45.6 +1.2
baz=44,SNR=5.3
ELK **Elko** 44.53 78 P P 14 59 45.6 +0.8
ELK pmax pmax
comp=Z,37nm,0.9s
ELK **Elko** 44.53 78 eP P 14 59 45.1 +0.3
comp=Z,37nm,0.8s,mb5.3
L13A **Double Diamond** 44.54 75 ⇑P P 14 59 45.7 +0.9
baz=44,SNR=31
FFC **Flin Flon** 44.56 54 P P 14 59 42.7 -2.1
FFC pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
FFC **Flin Flon** 44.56 54 eP P 14 59 42.5 -2.3
comp=Z,8.5nm,1.0s,mb4.5
N12A **Clover Valley,** 44.59 77 ⇓P P 14 59 46.3 +1.0
baz=44,SNR=34
G17A **Pierce Place,** 44.62 69 ⇑P P 14 59 46.0 +0.5
baz=44,SNR=54
O11A **Cowboy Ranch,** 44.64 78 ⇑P P 14 59 46.5 +0.8
baz=44,SNR=18
H16A **Russell Place,** 44.66 71 ⇓P P 14 59 46.0 +0.2
baz=44,SNR=90
J15A **Blackfoot** 44.69 73 ⇓P P 14 59 46.6 +0.6
baz=44,SNR=14
K14A **Jones Ranch, D** 44.74 74 ⇓P P 14 59 46.8 +0.4
baz=45
M13A **Montello** 44.83 76 ⇑P P 14 59 47.4 +0.2
baz=45,SNR=36
F18A **Big Timber** 44.90 68 ⇑P P 14 59 47.6 -0.1
baz=45,SNR=32
R09A **Tonopah** 44.91 82 ⇑P P 14 59 48.2 +0.3
baz=45,SNR=64
BJI **Beijing** 44.91 282 P P 14 59 48.3 +0.4
BJI S S 15 06 20.8 -2.1
BJI AMB AMB
comp=Z,28nm,0.9s,mb5.1
BJI AMB AMB
comp=Z,619nm,3.7s
BJI LR LR
comp=N,1μm,19.8s,MS4.9
BJI LR LR
comp=E,1μm,23.2s,MS4.9
BJI LR LR
comp=Z,1μm,27.9s,MS4.7
TPH **Tonopah** 44.92 82 P P 14 59 48.5 +0.6
TPH pmax pmax
comp=Z,39nm,1.0s,mb5.2
TPH **Tonopah** 44.92 82 eP P 14 59 48.4 +0.4
comp=Z,39nm,1.0s,mb5.2
P11A **Circle Ranch,** 44.93 79 ⇑P P 14 59 48.6 +0.6
baz=45
Q10A **Clear Creek Ra** 44.97 80 ⇑P P 14 59 49.1 +0.8
baz=45,SNR=57
I16A **Newdale** 44.99 72 ⇑P P 14 59 49.0 +0.6
baz=45,SNR=8.3
K15A **Arbon** 45.05 74 ⇓P P 14 59 49.6 +0.7
baz=45,SNR=16
IRK **Irkutsk** 45.06 302 eP P 14 59 48.6 -0.3
IRK e 15 00 11.0
IRK pmax pmax
comp=Z,101nm,1.7s,mb5.4
O12A **Currie** 45.12 78 ⇓P P 14 59 50.3 +0.8
baz=45,SNR=56
S09A **Goldfield** 45.14 82 ⇓P P 14 59 50.3 +0.6
baz=45,SNR=17
VES **Vestal, Richgr** 45.16 86 ⇑P P 14 59 50.0 +0.1
baz=45
H17A **Grant Village** 45.23 70 ⇑P P 14 59 51.9 +1.5
baz=45,SNR=27
M14A **Sheep Mountain** 45.24 75 ⇓P P 14 59 50.6 +0.1
baz=45,SNR=31
IMW **Indian Meadow** 45.30 71 eP P 14 59 51.1 +0.2
comp=Z,37nm,1.0s,mb5.2
G18A **Lazy EL Ranch,** 45.31 69 ⇓P P 14 59 51.0 0.0
baz=45,SNR=10
DCID1 **Drake Creek** 45.33 72 eP P 14 59 52.3 +1.2
comp=Z,29nm,0.8s,mb5.2
R10A **Warm Springs** 45.36 81 ⇓P P 14 59 51.9 +0.5
baz=45,SNR=24
RRI2 **Red Ridge** 45.39 72 eP P 14 59 52.2 +0.6
comp=Z,30nm,0.8s,mb5.2
S10A **Tonopah Range,** 45.41 82 ⇑P P 14 59 51.7 0.0
baz=45,SNR=41
CWC **Cottonwood Cre** 45.41 84 ⇓P P 14 59 51.7 -0.2
baz=45
Q11A **Duckwater** 45.42 80 ⇑P P 14 59 52.3 +0.4
baz=45,SNR=21
GRAC **Grapevine Rang** 45.50 83 ⇑P P 14 59 53.3 +0.7
baz=45
P12A **McGill** 45.50 79 ⇑P P 14 59 52.7 +0.2
baz=45,SNR=31
I17A **Pilgram Creek** 45.51 71 ⇑P P 14 59 52.9 +0.4
baz=45,SNR=5.3
K16A **Soda Springs** 45.53 73 ⇑P P 14 59 53.9 +1.2
baz=45,SNR=37
TPAW **Teton Pass** 45.53 72 eP P 14 59 53.0 +0.3
comp=Z,17nm,0.7s,mb5.1
L15A **Malad City** 45.53 74 ⇑P P 14 59 52.8 +0.1
baz=45,SNR=18
RLMT **Red Lodge** 45.59 69 eP P 14 59 53.3 +0.1
comp=Z,153nm,1.0s,mb5.9
ISA **Isabella** 45.66 85 ⇓P P 14 59 53.8 0.0
baz=46
ISA **Isabella** 45.66 85 P P 14 59 53.7 -0.1
ISA pmax pmax
comp=Z,15nm,1.0s,mb4.9
ISA **Isabella** 45.66 85 eP P 14 59 53.1 -0.7
comp=Z,15nm,1.0s,mb4.9
REDW **Red Top Meadow** 45.66 72 eP P 14 59 53.7 0.0
comp=Z,24nm,1.0s,mb5.1
SNOW **Snow King Moun** 45.66 72 eP P 14 59 54.0 +0.3
comp=Z,23nm,0.9s,mb5.1
LOHW **Long Hollow** 45.66 71 eP P 14 59 53.8 0.0
comp=Z,24nm,1.0s,mb5.1
O13A **Hicks Ranch, I** 45.67 77 ⇓P P 14 59 54.1 +0.3
baz=46,SNR=9.5
TLY **Talaya** 45.68 302 P P 14 59 54.1 +0.3
comp=Z,160nm,0.7s,mb6.1,SNR=9.1
TLY **Talaya** 45.68 302 i/eP P 14 59 54.5 +0.7
TLY eS S 15 06 30.7 -3.0
TLY eSS SS 15 09 44.4 -13
TLY pmax pmax
comp=Z,76nm,1.6s,mb5.4
TLY MLR MLR
comp=Z,3μm,21.0s,MS5.2
TLY **Talaya** 45.68 302 eP P 14 59 54.2 +0.4
comp=Z,120nm,1.5s,mb5.6
N14A **Grayback Hills** 45.72 76 ⇑P P 14 59 54.3 0.0
baz=46,SNR=31
J17A **Brown Place, J** 45.74 72 ⇑P P 14 59 54.3 -0.1
baz=46,SNR=11
R11A **Troy Canyon, C** 45.77 80 ⇓P P 14 59 54.7 +0.1
baz=46,SNR=64
M15A **Larsen Ranch,** 45.81 75 ⇑P P 14 59 54.7 -0.3
baz=46,SNR=58
Q12A **Willow Creek R** 45.81 79 ⇓P P 14 59 55.5 +0.5
baz=46,SNR=18
ULN **Ulaanbaatar** 45.85 296 eP P 14 59 55.9 +0.7
ULN pmax pmax
comp=Z,16nm,0.6s,mb5.1
ULN **Ulaanbaatar** 45.85 296 eP P 14 59 55.9 +0.7
comp=Z,16nm,0.6s,mb5.1
AHID **Auburn Hatcher** 45.86 73 P P 14 59 55.2 -0.1
comp=Z,36nm,0.9s,mb5.3
P13A **Bates Ranch, G** 46.06 78 ⇑P P 14 59 57.1 +0.2
baz=46,SNR=22
I18A **Diamond G Ranc** 46.08 71 ⇑P P 14 59 57.3 +0.3
baz=46,SNR=16
JOW **Kunigami** 46.09 258 LR LR 15 15 52.6
comp=Z,700nm,21.3s,MS4.6,baz=309,slow=32
L16A **Fish Haven** 46.10 74 ⇓P P 14 59 57.7 +0.5
baz=46,SNR=14
N15A **Stansbury Isla** 46.11 76 ⇓P P 14 59 56.9 -0.4
baz=46,SNR=36
OSI **Osito Adit** 46.17 87 P P 14 59 56.0 -1.9
comp=Z,25nm,0.7s,mb5.3
SONM **Songino Array** 46.24 296 P P 14 59 59.3 +1.1
comp=Z,10nm,0.5s,mb5.0,baz=62,slow=8.8,SNR=106
SONM ScP ScP 15 05 24.1 +1.1
comp=Z,5.7nm,1.2s,baz=85,slow=2.9,SNR=6.8
SONM LR LR 15 20 50.8
comp=Z,4μm,18.2s,MS5.5,baz=56,slow=38
J18A **Kendall Valley** 46.24 72 ⇑P P 14 59 57.9 -0.4
baz=46,SNR=35
DUG **Dugway** 46.35 77 P P 14 59 59.2 0.0
DUG pmax pmax
comp=Z,110nm,1.0s,mb5.7
DUG **Dugway** 46.35 77 eP P 14 59 59.1 -0.1
comp=Z,108nm,1.0s,mb5.7
Q13A **Wheeler Ranch,** 46.36 79 ⇑P P 14 59 59.3 0.0
baz=46,SNR=37
L17A **Cokeville** 46.38 73 ⇓P P 14 59 59.2 -0.3
baz=46,SNR=11
R12A **Pony Springs,** 46.38 80 ⇑P P 14 59 59.6 +0.1
baz=46,SNR=20
M16A **Huntsville** 46.39 75 ⇑P P 14 59 59.4 -0.1
baz=46,SNR=35
EDW2 **Edwards Air Fo** 46.46 86 ⇓P P 14 59 59.7 -0.4
baz=46
P14A **Drum Mountains** 46.56 77 ⇑P P 15 00 00.8 0.0
baz=46,SNR=38
K18A **Toltan Ranch,** 46.57 72 ⇓P P 15 00 00.9 +0.1
baz=46,SNR=21
ZAK **Zakamensk** 46.57 301 ⇑i/eP P 15 00 01.2 +0.4
ZAK 15 01 49.7
ZAK pmax pmax
comp=Z,52nm,1.5s,mb5.2
DGMT **Dagmar** 46.63 62 eP P 15 00 00.5 -0.7
comp=Z,32nm,1.0s,mb5.2
S12A **Delamar Landin** 46.68 81 ⇑P P 15 00 02.3 +0.5
baz=46,SNR=23
T11A **Corn Creek, Al** 46.68 81 ⇑P P 15 00 02.4 +0.6
baz=46,SNR=54
TIA **Tai'an** 46.69 277 eP P 15 00 02.0 +0.1
TIA AMB AMB
comp=Z,12nm,0.8s,mb4.9
N16A **Rees Ranch, Co** 46.77 75 ⇑P P 15 00 02.9 +0.5
baz=47,SNR=9.8
PDAR **Pinedale Array** 46.78 72 P P 15 00 02.5 0.0
comp=Z,58nm,0.9s,mb5.5,baz=326,slow=3.5,SNR=183
PDAR ScP ScP 15 05 28.1 +2.8
comp=Z,1.4nm,1.1s,baz=334,slow=6.9,SNR=2.6
PDAR LR LR 15 16 56.0
comp=Z,1μm,21.6s,MS4.8,baz=308,slow=32
Q14A **Sevier Lake (B** 46.80 78 ⇓P P 15 00 03.1 +0.4
baz=47,SNR=41
MWC **Mount Wilson** 46.85 87 P P 15 00 03.8 +0.6
MWC pmax pmax
comp=Z,35nm,1.1s,mb5.2
MWC **Mount Wilson** 46.85 87 eP P 15 00 03.5 +0.3
comp=Z,35nm,1.1s,mb5.2
R13A **O'Grain Ranch,** 46.87 80 ⇑P P 15 00 03.7 +0.4
baz=47,SNR=22
M17A **Scullys Gap (B** 46.88 74 ⇑P P 15 00 03.1 -0.3
baz=47,SNR=21
GSC **Goldstone** 46.93 85 ⇓P P 15 00 03.8 0.0
baz=47
GSC **Goldstone** 46.93 85 P P 15 00 03.8 0.0
GSC pmax pmax
comp=Z,22nm,0.8s,mb5.1
GSC **Goldstone** 46.93 85 eP P 15 00 03.2 -0.6
comp=Z,22nm,0.8s,mb5.1
L18A **Fontenelle, Gr** 46.99 73 ⇑P P 15 00 04.1 0.0
baz=47,SNR=33
P15A **Leamington** 47.05 77 ⇑P P 15 00 04.8 +0.1
baz=47,SNR=40
MOY **Mondy** 47.09 303 eP P 15 00 05.6 +0.8
MOY pmax pmax
comp=Z,13nm,2.2s,mb4.5
N17A **Moffit Pass** 47.10 75 ⇑P P 15 00 04.6 -0.4
baz=47,SNR=22
O16A **Springville** 47.14 76 ⇑P P 15 00 05.6 +0.2
baz=47,SNR=27
K19A **Absolon Red Bu** 47.17 71 ⇑P P 15 00 05.0 -0.6
baz=47,SNR=51
HHC **Hu-ho-hao-te** 47.24 285 eP P 15 00 06.9 +0.7
HHC AP pP 15 00 19.3 +1.8
HHC XP sP 15 00 24.3 +2.1
HHC PP PP 15 01 56.8 -0.3
HHC PCS PcS 15 05 32.0 0.0
HHC S S 15 06 51.8 -4.5
HHC XS sS 15 07 13.4 -1.7
HHC SCS ScS 15 09 54.3 -2.3
HHC SS SS 15 10 16.8 -6.7
HHC AMB AMB
comp=Z,42nm,1.8s,mb5.1
HHC AMB AMB
comp=Z,444nm,5.8s
HHC LR LR
comp=N,1μm,16.7s,MS5.2
HHC LR LR
comp=E,2μm,19.0s,MS5.2
HHC LR LR
comp=Z,2μm,20.2s,MS5.1
M18A **Lyman** 47.27 74 ⇓P P 15 00 06.2 -0.2
baz=47,SNR=30
S13A **Holt Ranch, En** 47.31 80 ⇑P P 15 00 06.9 +0.2
baz=47,SNR=43
Q15A **Fillmore** 47.34 78 ⇓P P 15 00 06.8 -0.2
baz=47
TUQ **Turquoise Moun** 47.39 84 ⇑P P 15 00 07.5 +0.1
baz=47
V11A **Goodsprings** 47.44 83 ⇑P P 15 00 08.0 +0.2
baz=47
SSE **Sheshan** 47.52 269 P P 15 00 07.8 -0.6
SSE XP sP 15 00 24.0 -0.5
SSE PP PP 15 01 58.3 -1.6
SSE S S 15 07 00.3 -0.1
SSE XS sS 15 07 17.8 -1.5
SSE AMB AMB
comp=Z,52nm,0.9s,mb5.6
SSE AMB AMB
comp=Z,360nm,7.2s
SSE LR LR
comp=N,512nm,23.7s,MS4.5
SSE LR LR
comp=E,348nm,23.7s,MS4.5
SSE LR LR
comp=Z,726nm,24.3s,MS4.6
HEC **Hector,Ludlow** 47.53 85 ⇑P P 15 00 08.6 +0.1
baz=47
K20A **Yellowstone Ra** 47.57 71 ⇓P P 15 00 07.9 -0.7
baz=47
O17A **Robinson Place** 47.61 75 ⇓P P 15 00 09.6 +0.6
baz=47,SNR=16
U12A **Valley of Fire** 47.62 82 ⇑P P 15 00 09.5 +0.4
baz=48,SNR=6.0
T13A **Saint George** 47.64 81 ⇓P P 15 00 09.5 +0.2
baz=48,SNR=15
M19A **Rock Springs** 47.77 73 ⇓P P 15 00 10.1 -0.2
baz=48,SNR=7.6
N18A **Larsen Ranch,** 47.78 74 ⇓P P 15 00 09.9 -0.4
baz=48,SNR=23
MURC **Murrieta** 47.79 87 ⇑P P 15 00 09.7 -0.8
baz=48
V12A **Nelson** 47.88 83 ⇑P P 15 00 10.7 -0.4
baz=48
R15A **Junction** 47.89 78 ⇓P P 15 00 11.3 0.0
baz=48,SNR=13
L20A **Wamsutter** 47.95 72 ⇓P P 15 00 11.2 -0.4
baz=48,SNR=8.4
GMRC **Granite Mounta** 47.98 84 ⇓P P 15 00 11.8 -0.2
baz=48
U13A **Pakoon Wash** 47.98 81 ⇓P P 15 00 12.1 +0.1
baz=48,SNR=30
O18A **Roosevelt** 48.01 75 ⇓P P 15 00 12.3 +0.2
baz=48,SNR=13
P17A **Butcher Ranch,** 48.05 76 ⇑P P 15 00 12.7 +0.3
baz=48,SNR=10
T14A **Hurricane** 48.12 80 ⇑P P 15 00 13.0 0.0
baz=48,SNR=12
N19A **John Jarvie Ra** 48.13 74 ⇓P P 15 00 12.9 -0.2
baz=48,SNR=31
Q16A **Castle Valley** 48.13 77 ⇑P P 15 00 13.3 +0.3
baz=48,SNR=16
LDFC **Landfair** 48.13 84 eP P 15 00 12.1 -1.1
comp=Z,22nm,0.7s,mb5.3
S15A **Panguitch** 48.18 79 ⇓P P 15 00 14.0 +0.6
baz=48,SNR=17
PFO **Pinyon Flat Ob** 48.25 86 ⇓P P 15 00 13.7 -0.4
baz=48
PFO **Pinyon Flat Ob** 48.25 86 P P 15 00 13.0 -1.1
PFO pmax pmax
comp=Z,23nm,1.4s,mb5.0
PFO **Pinyon Flat Ob** 48.25 86 eP P 15 00 12.2 -1.9
comp=Z,23nm,1.4s,mb5.0
P18A **Preston Nutter** 48.26 76 ⇓P P 15 00 14.6 +0.6
baz=48,SNR=16
BELC **Belle Mtn.** 48.28 85 ⇓P P 15 00 13.8 -0.5
baz=48
BTO **Baotou** 48.32 286 eP P 15 00 15.4 +0.9
V13A **Grand Canyon W** 48.33 82 ⇓P P 15 00 15.4 +0.7
baz=48,SNR=18
NJ2 **Nanjing** 48.34 271 eP P 15 00 18.3 +3.6
NJ2 AP pP 15 00 28.3 +2.1
NJ2 XP sP 15 00 32.3 +1.5
NJ2 S S 15 07 16.0 +4.0
NJ2 XS sS 15 07 35.0 +4.1
NJ2 AMB AMB
comp=Z,40nm,1.0s,mb5.4
NJ2 AMB AMB
comp=Z,2μm,4.8s
NJ2 LR LR
comp=N,1μm,22.8s,MS5.0
NJ2 LR LR
comp=E,1μm,20.4s,MS5.0
NJ2 LR LR
comp=Z,2μm,20.4s,MS5.2
R16A **Teasdale** 48.34 78 ⇓P P 15 00 15.7 +1.0
baz=48,SNR=30
M20A **Sweetwater, Wa** 48.36 72 ⇓P P 15 00 14.9 +0.1
baz=48,SNR=26
U14A **Mt Trumbull** 48.47 81 ⇓P P 15 00 16.2 +0.5
baz=48,SNR=23
L21A **Rawlins** 48.56 71 ⇑P P 15 00 15.9 -0.4
baz=48,SNR=28
T15A **Red Dirt Ranch** 48.58 80 ⇑P P 15 00 17.3 +0.7
baz=48,SNR=26
S16A **Weppner Ranch,** 48.62 78 ⇓P P 15 00 17.4 +0.5
baz=48,SNR=21
Q18A **Rafter H Ranch** 48.65 76 ⇑P P 15 00 17.1 0.0
baz=48,SNR=33
IRM **Iron Mountain** 48.71 85 ⇓P P 15 00 17.4 -0.2
baz=49
N20A **Spence Gulch,** 48.71 73 ⇓P P 15 00 17.5 0.0
baz=48,SNR=22
R17A **Hanksville Air** 48.72 77 ⇓P P 15 00 17.7 0.0
baz=49,SNR=32
MONP **Monument Peak** 48.75 87 ⇑P P 15 00 17.7 -0.2
baz=49
BC3 **Big Chuckw Mtn** 48.85 85 ⇑P P 15 00 18.3 -0.4
baz=49
W13A **Hualapai Mount** 48.88 83 ⇓P P 15 00 18.8 -0.1
baz=49,SNR=13
U15A **North Rim** 49.01 80 ⇓P P 15 00 20.1 +0.2
baz=49,SNR=50
P19A **Cripple Cowboy** 49.02 75 ⇓P P 15 00 19.9 0.0
baz=49,SNR=65
V14A **Boquillas Ranc** 49.02 82 ⇓P P 15 00 19.8 -0.1
baz=49,SNR=33
L22A **Ellis Ranch, M** 49.07 71 ⇓P P 15 00 20.3 +0.1
baz=49,SNR=12
SWSC **Sam W. Stewart** 49.11 86 ⇑P P 15 00 20.1 -0.6
baz=49
T16A **Glen Canyon Da** 49.14 79 ⇓P P 15 00 20.1 -0.7
baz=49
O20A **White River Ci** 49.16 74 ⇑P P 15 00 21.0 +0.1
baz=49,SNR=15
S17A **Black Ridge (B** 49.16 78 ⇑P P 15 00 20.8 -0.2
baz=49,SNR=64
N21A **Black Mountain** 49.20 73 ⇓P P 15 00 20.9 -0.4
baz=49,SNR=15
RSSD **Black Hills** 49.22 67 eP P 15 00 20.3 -1.1
RSSD pmax pmax
comp=Z,17nm,0.9s,mb5.1
RSSD **Black Hills** 49.22 67 eP P 15 00 20.3 -1.1
comp=Z,17nm,0.9s,mb5.1
R18A **Canyonlands Na** 49.24 77 ⇓P P 15 00 21.1 -0.5
baz=49,SNR=43
X13A **Yucca** 49.24 83 ⇓P P 15 00 21.1 -0.6
baz=49,SNR=6.9
Q19A **Hogan Spring (** 49.27 76 ⇑P P 15 00 21.6 -0.2
baz=49,SNR=84
W14A **Seligman** 49.31 82 ⇓P P 15 00 21.9 -0.2
baz=49,SNR=17
M22A **Cedar Creek Ra** 49.36 71 ⇑P P 15 00 22.0 -0.4
baz=49,SNR=28
V15A **Kaibab Nationa** 49.48 81 ⇑P P 15 00 23.6 +0.1
baz=49,SNR=72
T17A **Navajo Res., N** 49.57 79 ⇑P P 15 00 23.3 -0.8
baz=49,SNR=20
O21A **Pagoda** 49.57 73 ⇑P P 15 00 23.3 -0.8
baz=49,SNR=28
S18A **Hurst Farm, Bl** 49.62 77 ⇓P P 15 00 24.1 -0.5
baz=50,SNR=71
GLA **Glamis** 49.64 85 ⇑P P 15 00 23.8 -1.0
baz=50
GLA **Glamis** 49.64 85 eP P 15 00 25.1 +0.4
GLA pmax pmax
comp=Z,47nm,1.1s,mb5.4
GLA **Glamis** 49.64 85 eP P 15 00 23.0 -1.7
comp=Z,47nm,1.1s,mb5.4
R19A **Curley Farm, L** 49.69 76 ⇓P P 15 00 24.8 -0.2
baz=50,SNR=14
Y13A **Salome** 49.76 84 ⇓P P 15 00 25.1 -0.5
baz=50
N22A **Wattenberg Ran** 49.81 72 ⇓P P 15 00 25.8 -0.2
baz=50,SNR=20
W15A **Williams** 49.84 81 ⇓P P 15 00 27.0 +0.9
baz=50,SNR=11
Q20A **Ridgley Place,** 49.86 75 ⇑P P 15 00 26.4 +0.1
baz=50,SNR=17
U17A **Shonto** 49.91 79 ⇑P P 15 00 26.8 +0.1
baz=50,SNR=8.6
X14A **Yava** 49.91 83 ⇑P P 15 00 26.9 +0.1
baz=50,SNR=22
U16A **Tuba City** 49.91 80 ⇓P P 15 00 27.0 +0.2
baz=50,SNR=5.9
T18A **Mexican Hat** 50.05 78 ⇓P P 15 00 26.8 -0.9
baz=50,SNR=41
ULM **Lac du Bonnet** 50.11 56 P P 15 00 26.3 -1.8
comp=Z,3.4nm,0.4s,mb4.7,baz=303,slow=7.1,SNR=5.5
ULM LR LR 15 22 43.9
comp=Z,701nm,18.3s,MS4.7,baz=122,slow=37
ULM **Lac du Bonnet** 50.11 56 P P 15 00 26.3 -1.8
ULM LR LR 15 22 43.9
S19A **Harvey Farm, M** 50.11 77 ⇑P P 15 00 27.8 -0.5
baz=50,SNR=32
WUAZ **Wupatki** 50.17 80 eP P 15 00 28.7 0.0
comp=Z,41nm,1.0s,mb5.4

Y14A	**Wickenburg**	**50.19**	**83**	⇓	P		**P**	**15 00 28.3**	**-0.6**
	baz=50,SNR=5.9								
X15A	**Humboldt**	**50.31**	**82**	⇓	P		**P**	**15 00 29.9**	**+0.1**
	baz=50,SNR=13								
W16A	**Flagstaff**	**50.35**	**81**	⇓	P		**P**	**15 00 30.7**	**+0.6**
	baz=50,SNR=6.7								
SPB4	**Spitsbergen Ar**	**50.39**	**356**		*e*P		**P**	**15 00 30.1**	**+0.3**
113A	**Mohawk Valley,**	**50.49**	**85**	⇑	P		**P**	**15 00 30.3**	**-0.8**
	baz=50								
U18A	**Rough Rock, Ch**	**50.51**	**79**	⇓	P		**P**	**15 00 31.4**	**+0.1**
	baz=50,SNR=14								
Y15A	**Casa Rosa Ranc**	**50.60**	**83**	⇑	P		**P**	**15 00 32.2**	**+0.3**
	baz=50,SNR=10								
R21A	**Cimarron**	**50.68**	**75**	⇑	P		**P**	**15 00 32.8**	**+0.3**
	baz=50,SNR=29								
T19A	**Beclabito**	**50.77**	**78**	⇓	P		**P**	**15 00 33.5**	**+0.3**
	baz=51,SNR=90								
MVCO	**Mesa Verde**	**50.84**	**77**		*e*P		**P**	**15 00 33.8**	**+0.1**
	comp=Z,59nm,1.1s,mb5.4								
X16A	**Lo Mia Camp, P**	**50.85**	**82**	⇓	P		**P**	**15 00 34.6**	**+0.8**
	baz=51,SNR=19								
V18A	**Ganado**	**50.93**	**79**	⇓	P		**P**	**15 00 34.6**	**+0.2**
	baz=51								
ISCO	**Idaho Springs**	**50.94**	**72**		P		**P**	**15 00 35.2**	**+0.7**
ISCO					pmax	pmax			
	comp=Z,24nm,1.0s,mb5.1								
ISCO	**Idaho Springs**	**50.94**	**72**		*e*P		**P**	**15 00 35.1**	**+0.7**
	comp=Z,24nm,1.0s,mb5.1								
Y16A	**Circle Bar Ran**	**51.18**	**82**	⇓	P		**P**	**15 00 36.5**	**+0.1**
	baz=51,SNR=16								
X17A	**Forest Lakes**	**51.29**	**81**	⇓	P		**P**	**15 00 37.4**	**+0.2**
	baz=51								
W18A	**Petrified Fore**	**51.44**	**80**	⇓	P		**P**	**15 00 38.3**	**0.0**
	baz=51								
V19A	**Window Rock**	**51.48**	**79**	⇑	P		**P**	**15 00 38.8**	**+0.3**
	baz=51								
115A	**Sonoran Desert**	**51.50**	**84**	⇑	P		**P**	**15 00 38.8**	**0.0**
	baz=51								
DAG	**Danmarks Havn**	**51.59**	**6**	⇑	*i*P		**P**	**15 00 38.2**	**-0.7**
DAG					pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.7								
DAG	**Danmarks Havn**	**51.59**	**6**		*i*P		**P**	**15 00 38.2**	**-0.7**
	comp=Z,4.2nm,0.4s,mb4.7								
214A	**Organ Pipe Nat**	**51.64**	**85**	⇓	P		**P**	**15 00 39.9**	**+0.1**
	baz=52,SNR=8.5								
W19A	**Sanders**	**51.66**	**80**	⇑	P		**P**	**15 00 40.8**	**+0.8**
	baz=52,SNR=5.1								
Y17A	**Roosevelt**	**51.70**	**82**	⇓	P		**P**	**15 00 40.0**	**-0.2**
	baz=52,SNR=9.3								
X18A	**Snowflake**	**51.70**	**80**	⇑	P		**P**	**15 00 41.1**	**+0.9**
	baz=52,SNR=14								
116A	**Eloy**	**51.92**	**84**	⇓	P		**P**	**15 00 42.0**	**+0.1**
	baz=52								
Y18A	**Canyon Day Jun**	**52.14**	**81**	⇓	P		**P**	**15 00 43.9**	**+0.3**
	baz=52								
X19A	**St. Johns**	**52.17**	**80**	⇑	P		**P**	**15 00 43.7**	**0.0**
	baz=52,SNR=13								
WHN	**Wuhan**	**52.18**	**273**		P		**P**	**15 00 43.4**	**-0.5**
WHN					S		**S**	**15 08 08.9**	**+3.4**
WHN					AMB	AMB			
	comp=Z,580nm,2.2s,mb6.1								
WHN					LR	LR			
	comp=Z,2μm,24.6s,MS5.1								
Z17A	**San Carlos Hig**	**52.19**	**82**	⇑	P		**P**	**15 00 43.9**	**0.0**
	baz=52								
SDCO	**Great Sand Dun**	**52.32**	**74**		*e*P		**P**	**15 00 44.0**	**-0.8**
	comp=Z,73nm,1.4s,mb5.4								
OGNE	**Ogallala**	**52.34**	**69**		*e*P		**P**	**15 00 44.5**	**-0.4**
	comp=Z,100nm,1.1s,mb5.7								
216A	**Three Points,**	**52.45**	**84**	⇑	P		**P**	**15 00 45.9**	**0.0**
	baz=52								
Y19A	**Nutrioso**	**52.51**	**81**	⇓	P		**P**	**15 00 46.2**	**0.0**
	baz=52,SNR=6.2								
117A	**Oracle**	**52.51**	**83**	⇓	P		**P**	**15 00 46.4**	**+0.1**
	baz=52,SNR=9.9								
TUC	**Tucson**	**52.66**	**83**		*e*P		**P**	**15 00 47.3**	**-0.1**
TUC					pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9								
TUC	**Tucson**	**52.66**	**83**		*e*P		**P**	**15 00 47.3**	**-0.1**
	comp=Z,16nm,1.0s,mb4.9								
118A	**Homack Ranch,**	**52.95**	**82**	⇓	P		**P**	**15 00 49.2**	**-0.3**
	baz=53								
217A	**Green Valley**	**53.00**	**84**	⇓	P		**P**	**15 00 49.9**	**0.0**
	baz=53,SNR=6.2								
XAN	**Xi'an**	**53.20**	**280**		P		**P**	**15 00 50.9**	**-0.4**
XAN					AP		pP	15 00 59.5	-3.4
XAN					PP		PP	15 02 50.4	-1.0
XAN					S		**S**	**15 08 19.1**	**-0.2**
XAN					AMB	AMB			
	comp=Z,17nm,1.0s,mb4.9								
XAN					LR	LR			
	comp=N,347nm,24.9s,MS4.6								
XAN					LR	LR			
	comp=E,598nm,22.6s,MS4.6								
XAN					LR	LR			
	comp=Z,1μm,23.2s,MS4.9								
119A	**Ashpeak Ranch,**	**53.27**	**82**	⇑	P		**P**	**15 00 52.0**	**0.0**
	baz=53,SNR=11								
218A	**Dragoon**	**53.35**	**83**	⇑	P		**P**	**15 00 52.2**	**-0.3**
	baz=53,SNR=14								
SUMG	**Summit**	**53.46**	**14**		*e*P		**P**	**15 00 52.8**	**+0.1**
	comp=Z,36nm,0.9s,mb5.3								
QZH	**Quanzhou**	**53.47**	**265**	⇑	*i*P		**P**	**15 00 52.8**	**-0.6**
QZH					S		**S**	**15 08 28.3**	**+5.2**
QZH					AMB	AMB			
	comp=Z,140nm,1.0s,mb5.8								
QZH					AMB	AMB			
	comp=Z,1μm,2.7s,mb6.4								
QZH					LR	LR			
	comp=N,2μm,17.6s								
QZH					LR	LR			
	comp=E,4μm,25.1s								
QZH					LR	LR			
	comp=Z,2μm,24.5s								
ANMO	**Albuquerque**	**53.57**	**78**	⇓	*e*P		**P**	**15 00 54.3**	**+0.3**
ANMO					pmax	pmax			
	comp=Z,7.0nm,0.9s								
ANMO	**Albuquerque**	**53.57**	**78**		*e*P		**P**	**15 00 54.1**	**0.0**
	comp=Z,10nm,1.0s,mb4.7								
ECSD	**EROS,Sioux Fal**	**53.68**	**63**		*e*P		**P**	**15 00 52.6**	**-2.1**
	comp=Z,13nm,0.8s,mb4.9								
ZAA0	**Zalesovo Array**	**53.71**	**313**		*e*P		**P**	**15 00 54.7**	**-0.1**
ZALV	**Zalesovo Beam**	**53.71**	**313**		P		**P**	**15 00 54.9**	**+0.1**
	comp=Z,2.0nm,0.4s,mb4.4,baz=52,slow=5.5,SNR=7.9								
ZALV					PcP	PcP		15 02 00.8	+0.3
	comp=Z,7.8nm,0.6s,baz=36,slow=3.8,SNR=7.3								
ZALV					LR	LR		15 25 16.6	
	comp=Z,993nm,20.1s,MS4.9,baz=246,slow=38								
ZALV	**Zalesovo Beam**	**53.71**	**313**		P		**P**	**15 00 54.9**	**+0.1**
ZALV								15 02 00.8	
ZALV	**Zalesovo Beam**	**53.71**	**313**		P		**P**	**15 00 54.9**	**+0.1**
ZALV					PcP	PcP		15 02 00.8	+0.3
ZALV					LR	LR		15 25 16.6	
318A	**Bisbee**	**53.75**	**83**	⇑	P		**P**	**15 00 54.7**	**-0.7**
	baz=54,SNR=10.0								
EYMN	**Ely**	**53.79**	**56**		*e*P		**P**	**15 00 53.7**	**-1.8**
	comp=Z,27nm,1.0s,mb5.1								
219A	**White Tail Can**	**53.82**	**82**	⇓	P		**P**	**15 00 55.6**	**-0.3**
	baz=54,SNR=11								
NVS	**Novosibirsk**	**53.86**	**315**		*e*P		**P**	**15 00 55.3**	**-0.6**
NVS					*e*			15 01 59.5	
NVS					*e*S		ScS	15 10 42.6	+1.2
NVS					pmax	pmax			
	comp=N,14nm,2.0s								
NVS					pmax	pmax			
	comp=E,28nm,2.0s								
NVS					pmax	pmax			
	comp=Z,42nm,2.0s,mb5.0								
NVS					smax				
	comp=N,32nm,2.4s								
NVS					smax				
	comp=E,61nm,2.6s								
319A	**Douglas**	**54.23**	**83**	⇑	P		**P**	**15 00 58.6**	**-0.3**
	baz=54,SNR=11								
LZH	**Lanzhou**	**54.94**	**286**	⇑	P		**P**	**15 01 05.1**	**+1.1**
LZH					AP		pP	15 01 19.1	+3.5
LZH					XP		sP	15 01 25.8	+5.6
LZH					PP		PP	15 03 09.0	+2.1
LZH					S		**S**	**15 08 41.0**	**-1.7**
LZH					XS		sS	15 09 00.0	-1.9
LZH					SS		SS	15 12 25.0	-1.1
LZH					AMB	AMB			
	comp=Z,35nm,1.1s,mb5.3								
LZH					AMB	AMB			
	comp=Z,182nm,4.6s								
LZH					LR	LR			
	comp=E,1μm,15.9s								
LZH					LR	LR			
	comp=Z,2μm,17.8s,MS5.3								
CBKS	**Cedar Bluff**	**55.06**	**70**		P		**P**	**15 01 04.7**	**-0.1**
CBKS					pmax	pmax			
	comp=Z,99nm,0.9s,mb5.8								
CBKS	**Cedar Bluff**	**55.06**	**70**		*e*P		**P**	**15 01 04.5**	**-0.3**
	comp=Z,99nm,0.9s,mb5.8								
GTA	**Gaotai**	**55.14**	**291**		P		**P**	**15 01 06.3**	**+0.9**
GTA					AP		pP	15 01 16.5	-0.5
GTA					XP		sP	15 01 20.1	-1.5
GTA					PP		PP	15 03 11.3	+2.6
GTA					S		**S**	**15 08 46.4**	**+1.1**
GTA					XS		sS	15 09 03.6	-0.9
GTA					SCS		ScS	15 10 50.8	-0.2
GTA					AMB	AMB			
	comp=Z,40nm,1.7s,mb5.2								
GTA					AMB	AMB			
	comp=Z,447nm,7.7s								
GTA					LR	LR			
	comp=N,2μm,17.2s,MS5.3								
GTA					LR	LR			
	comp=E,2μm,16.7s,MS5.3								
GTA					LR	LR			
	comp=Z,2μm,16.6s,MS5.4								
AMTX	**Amarillo**	**56.52**	**75**		*e*P		**P**	**15 01 14.8**	**-0.5**
	comp=Z,66nm,1.1s,mb5.6								
KSU1	**Kansas State U**	**56.70**	**68**		*e*P		**P**	**15 01 15.1**	**-1.4**
	comp=Z,99nm,0.8s,mb5.9								
SCIA	**State Center**	**56.77**	**63**		*e*P		**P**	**15 01 15.7**	**-1.3**
	comp=Z,25nm,0.6s,mb5.4								
JFWS	**Jewell Farm**	**57.73**	**60**		P		**P**	**15 01 22.5**	**-1.3**
JFWS					pmax	pmax			
	comp=Z,30nm,0.8s,mb5.4								
JFWS	**Jewell Farm**	**57.73**	**60**		*e*P		**P**	**15 01 21.6**	**-2.2**
	comp=Z,30nm,0.8s,mb5.4								
ARCES	**ARCESS Array B**	**58.05**	**350**		P		**P**	**15 01 24.3**	**-1.3**
	comp=Z,3.7nm,0.6s,mb4.6,baz=27,slow=8.5,SNR=7.8								
WMOK	**Wichita Mounta**	**58.37**	**73**		*e*P		**P**	**15 01 27.7**	**-0.6**
WMOK					pmax	pmax			
	comp=Z,30nm,1.0s,mb5.3								
WMOK	**Wichita Mounta**	**58.37**	**73**		*e*P		**P**	**15 01 27.7**	**-0.6**
	comp=Z,30nm,1.0s,mb5.3								
CD2	**Chengdu**	**58.52**	**281**		P		**P**	**15 01 29.3**	**-0.1**
CD2					AP		pP	15 01 39.3	-1.8
CD2					XP		sP	15 01 43.3	-2.4
CD2					PCP		PcP	15 02 19.6	0.0
CD2					PP		PP	15 03 40.1	+1.2
CD2					S		**S**	**15 09 28.3**	**-1.8**
CD2					XS		sS	15 09 44.8	-4.6
CD2					AMB	AMB			
	comp=Z,30nm,0.5s,mb5.6								
CD2					AMB	AMB			
	comp=Z,410nm,7.7s								
CD2					LR	LR			
	comp=E,1μm,18.4s								
CD2					LR	LR			
	comp=Z,1μm,21.4s,MS5.0								
KURK	**Kurchatov**	**58.70**	**313**		P		**P**	**15 01 30.6**	**+0.1**
	comp=Z,95nm,1.1s,mb5.7,SNR=14								
KURK	**Kurchatov**	**58.70**	**313**		LR	LR		15 28 37.3	
	comp=Z,2μm,19.3s,MS5.2,baz=45,slow=38								
KURK	**Kurchatov**	**58.70**	**313**		*e*P		**P**	**15 01 30.0**	**-0.5**
KURK					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.9								
KURK	**Kurchatov**	**58.70**	**313**		*e*P		**P**	**15 01 28.8**	**-1.7**
	comp=Z,24nm,0.9s,mb5.2								
APA	**Apatity**	**58.86**	**346**	⇑	*e*P		**P**	**15 01 31.0**	**-0.3**
APA					pmax	pmax			
	comp=Z,45nm,1.5s,mb5.3								
APA					MLR	MLR			
	comp=Z,3μm,23.0s,MS5.4								
WMQ	**Urumqi**	**58.96**	**302**		P		**P**	**15 01 33.3**	**+0.9**
WMQ					XP		sP	15 01 48.3	-0.4
WMQ					PCP		PcP	15 02 21.8	+0.7
WMQ					PP		PP	15 03 45.8	+3.3
WMQ					S		**S**	**15 09 35.8**	**+0.2**
WMQ					XS		sS	15 09 53.3	-1.6
WMQ					SS		SS	15 13 32.5	+3.5
WMQ					AMB	AMB			
	comp=Z,49nm,1.3s,mb5.4								
WMQ					AMB	AMB			
	comp=Z,375nm,4.5s								
WMQ					LR	LR			
	comp=N,2μm,27.0s,MS5.1								
WMQ					LR	LR			
	comp=E,1μm,28.0s,MS5.1								
WMQ					LR	LR			
	comp=Z,3μm,22.0s								
TXAR	**Lajitas Array**	**59.13**	**81**		P		**P**	**15 01 33.2**	**-0.6**
	comp=Z,18nm,0.9s,mb5.1,baz=302,slow=4.5,SNR=47								
TXAR					LR	LR		15 25 22.7	
	comp=Z,688nm,19.5s,MS4.8,baz=55,slow=34								
TXAR	**Lajitas Array**	**59.13**	**81**		P		**P**	**15 01 33.2**	**-0.6**
TXAR					LR	LR		15 25 22.7	
MKAR	**Makanchi Array**	**59.69**	**308**		P		**P**	**15 01 37.0**	**-0.3**
	comp=Z,7.9nm,0.5s,mb5.0,baz=50,slow=7.1,SNR=77								
MKAR					LR	LR		15 27 52.5	
	comp=Z,1μm,21.9s,MS5.1,baz=37,slow=36								
MKAR	**Makanchi Array**	**59.69**	**308**		P		**P**	**15 01 37.0**	**-0.3**
MKAR					LR	LR		15 27 52.5	
GYA	**Guiyang**	**59.85**	**276**	⇑	*i*P		**P**	**15 01 38.1**	**-0.6**
GYA					AP		pP	15 01 48.4	-2.0
GYA					XP		sP	15 01 52.4	-2.6
GYA					PP		PP	15 03 50.6	-0.2
GYA					SCP		ScP	15 06 23.4	+0.9
GYA					S		**S**	**15 09 48.0**	**+0.5**
GYA					XS		sS	15 10 04.6	-2.3
GYA					AMB	AMB			
	comp=Z,20nm,1.0s,mb5.1								
GYA					AMB	AMB			
	comp=Z,280nm,8.0s								
GYA					LR	LR			
	comp=N,650nm,21.3s,MS4.9								
GYA					LR	LR			
	comp=E,750nm,20.0s,MS4.9								
GYA					LR	LR			
	comp=Z,2μm,21.9s,MS5.1								
HDIL	**Hopedale**	**59.86**	**62**		*e*P		**P**	**15 01 37.2**	**-1.4**
	comp=Z,55nm,0.6s,mb5.8								
SCHQ	**Schefferville**	**60.34**	**38**		P		**P**	**15 01 40.8**	**-0.9**
	comp=Z,46nm,0.9s,mb5.5,baz=325,slow=7.3,SNR=30								
SCHQ					LR	LR		15 29 17.1	
	comp=Z,2μm,20.2s,MS5.2,baz=132,slow=38								
CCM	**Cathedral Cave**	**60.49**	**65**		P		**P**	**15 01 41.2**	**-1.8**
CCM					pmax	pmax			
	comp=Z,13nm,0.6s,mb5.1								
CCM	**Cathedral Cave**	**60.49**	**65**		*e*P		**P**	**15 01 41.0**	**-1.9**
	comp=Z,13nm,0.6s,mb5.1								
BVA0	**Borovoye Array**	**60.61**	**319**		*i*P		**P**	**15 01 42.9**	**-0.6**
BVA0					pmax	pmax			
	comp=Z,5.0nm,1.5s,mb4.4								
BVAR	**Borovoye Array**	**60.61**	**319**		LR	LR		15 29 36.3	
	comp=Z,3μm,21.7s,MS5.4,baz=46,slow=38								
BRVK	**Borovoye**	**60.63**	**319**		P		**P**	**15 01 43.5**	**-0.2**
BRVK					pmax	pmax			
	comp=Z,20nm,0.6s,mb5.4								
BRVK	**Borovoye**	**60.63**	**319**		*e*P		**P**	**15 01 43.4**	**-0.3**
	comp=Z,13nm,0.6s,mb5.2								
SLM	**Saint Louis**	**60.66**	**64**		P		**P**	**15 01 43.5**	**-0.6**
SLM					pmax	pmax			
	comp=Z,33nm,0.6s,mb5.6								
SLM	**Saint Louis**	**60.66**	**64**		P		**P**	**15 01 42.1**	**-2.0**
	comp=Z,33nm,0.6s,mb5.6								
JCT	**Junction City**	**60.71**	**77**		P		**P**	**15 01 43.5**	**-1.0**
JCT					pmax	pmax			
	comp=Z,28nm,1.0s,mb5.3								
JCT	**Junction City**	**60.71**	**77**		*e*P		**P**	**15 01 42.6**	**-1.9**
	comp=Z,28nm,1.0s,mb5.3								
FVM	**French Village**	**61.01**	**65**		P		**P**	**15 01 45.2**	**-1.3**
FVM					pmax	pmax			
	comp=Z,19nm,0.7s,mb5.3								
FVM	**French Village**	**61.01**	**65**		*e*P		**P**	**15 01 44.9**	**-1.6**
	comp=Z,25nm,0.7s,mb5.5								
SVE	**Sverdlovsk**	**61.37**	**327**		*e*P		**P**	**15 01 47.2**	**-1.4**
MIAR	**Mount Ida**	**61.59**	**69**		P		**P**	**15 01 49.9**	**-0.6**
MIAR					pmax	pmax			
	comp=Z,75nm,1.1s,mb5.7								
MIAR	**Mount Ida**	**61.59**	**69**		*e*P		**P**	**15 01 49.7**	**-0.7**
	comp=Z,75nm,1.1s,mb5.7								
OLIL	**Olney**	**61.79**	**63**		*e*P		**P**	**15 01 50.5**	**-1.2**
	comp=Z,97nm,0.9s,mb5.9								
SIUC	**Southern Illin**	**61.88**	**64**		*e*P		**P**	**15 01 50.9**	**-1.4**
	comp=Z,54nm,0.8s,mb5.7								
UALR	**University of**	**62.15**	**68**		*e*P		**P**	**15 01 53.5**	**-0.7**
	comp=Z,20nm,0.9s,mb5.2								
BLO	**Bloomington**	**62.35**	**61**		P		**P**	**15 01 55.0**	**-0.5**
BLO					pmax	pmax			
	comp=Z,25nm,0.6s,mb5.5								
BLO	**Bloomington**	**62.35**	**61**		*e*P		**P**	**15 01 54.3**	**-1.2**
	comp=Z,25nm,0.6s,mb5.5								
ARU	**Arti**	**62.39**	**328**	⇓	*e*P		**P**	**15 01 54.4**	**-1.1**
ARU					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.8								
ARU	**Arti**	**62.39**	**328**		*e*P		**P**	**15 01 54.6**	**-0.9**
	comp=Z,7.7nm,0.5s,mb5.1								
USIN	**University of**	**62.57**	**63**		*e*P		**P**	**15 01 56.0**	**-1.0**
	comp=Z,133nm,0.8s,mb6.1								
DAV	**Davao City (W)**	**63.02**	**246**		LR	LR		15 24 54.7	
	comp=Z,1μm,21.7s,MS5.0,baz=162,slow=32								
WCI	**Wyandotte Cave**	**63.15**	**62**		*e*P		**P**	**15 01 59.8**	**-1.0**
WCI					pmax	pmax			
	comp=Z,34nm,0.8s,mb5.5								
WCI	**Wyandotte Cave**	**63.15**	**62**		*e*P		**P**	**15 01 59.8**	**-1.0**
	comp=Z,34nm,0.8s,mb5.5								
KMI	**Kunming**	**63.26**	**277**	⇑	P		**P**	**15 02 00.9**	**-0.8**
KMI					AP		pP	15 02 13.1	-0.4
KMI					XP		sP	15 02 17.3	-0.8
KMI					PP		PP	15 04 20.5	-0.4
KMI					S		**S**	**15 10 26.4**	**-4.3**
KMI					XS		sS	15 10 46.3	-3.9
KMI					SS		SS	15 14 36.1	-0.9
KMI					AMB	AMB			
	comp=Z,23nm,1.3s,mb5.2								
KMI					AMB	AMB			
	comp=Z,333nm,4.4s								
KMI					LR	LR			
	comp=N,537nm,17.4s,MS4.9								
KMI					LR	LR			
	comp=E,617nm,21.3s,MS4.9								
KMI					LR	LR			
	comp=Z,865nm,16.0s								
QIZ	**Qiongzhong**	**63.28**	**267**		P		**P**	**15 02 01.1**	**-0.8**
QIZ					S		**S**	**15 10 31.3**	**+0.2**
QIZ					SS		SS	15 14 39.3	+1.6
QIZ					LR	LR			
	comp=E,676nm,18.5s								
QIZ					LR	LR			
	comp=Z,552nm,21.8s,MS4.7								
ACSO	**Alum Creek Sta**	**63.52**	**58**		*e*P		**P**	**15 02 01.8**	**-1.5**
	comp=Z,14nm,0.4s,mb5.3								
JOF	**Joensuu**	**63.52**	**345**		*e*P		**P**	**15 02 02.5**	**-0.4**
	comp=Z,3.1nm,0.4s,mb4.7								
JOF	**Joensuu**	**63.52**	**345**		*e*P		**P**	**15 02 02.5**	**-0.4**
JOF					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7								
WVT	**Waverly**	**63.78**	**64**		*e*P		**P**	**15 02 04.1**	**-0.9**
WVT					pmax	pmax			
	comp=Z,41nm,0.8s,mb5.5								
WVT	**Waverly**	**63.78**	**64**		*e*P		**P**	**15 02 04.1**	**-1.0**
	comp=Z,41nm,0.8s,mb5.5								
KLMR	**Klimovskoe**	**63.85**	**340**		*e*P		**P**	**15 02 04.0**	**-1.1**
KLMR					pmax	pmax			
	comp=Z,44nm,1.5s,mb5.3								
OXF	**Oxford**	**64.04**	**67**		*e*P		**P**	**15 02 05.9**	**-0.8**
OXF					pmax	pmax			
	comp=Z,240nm,0.9s,mb6.2								
OXF	**Oxford**	**64.04**	**67**		*e*P		**P**	**15 02 05.9**	**-0.8**
	comp=Z,240nm,0.9s,mb6.2								
KAF	**Kangasniemi**	**65.05**	**347**		*e*p		**P**	**15 02 12.2**	**-0.7**
	comp=Z,2.9nm,0.4s,mb4.7								
KAF	**Kangasniemi**	**65.05**	**347**		*e*P		**P**	**15 02 12.2**	**-0.7**
KAF					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7								
BINY	**Binghamton**	**65.69**	**52**		*e*P		**P**	**15 02 16.4**	**-1.0**
	comp=Z,45nm,0.9s,mb5.5								
TKM2	**Tokmak 2**	**65.77**	**309**		P		**P**	**15 02 18.8**	**+0.9**
TKM2					pmax	pmax			
	comp=Z,46nm,1.6s,mb5.3								
TKM2	**Tokmak 2**	**65.77**	**309**		P		**P**	**15 02 19.4**	**+1.5**
	SNR=14								
TZTN	**Tazewell**	**65.87**	**61**		*e*P		**P**	**15 02 18.0**	**-0.6**
	comp=Z,32nm,1.1s,mb5.3								
SSPA	**Standing Stone**	**65.89**	**55**		*e*P		**P**	**15 02 17.4**	**-1.2**
	comp=Z,23nm,0.8s,mb5.3								
USP	**Ospenovka**	**66.05**	**310**		P		**P**	**15 02 21.4**	**+1.7**
	SNR=17								
CHMS	**Chumysh**	**66.13**	**309**		P		**P**	**15 02 21.5**	**+1.4**
	SNR=9.5								
KBK	**Karagaybulak**	**66.29**	**309**		P		**P**	**15 02 22.8**	**+1.6**
	SNR=17								
FRU	**Bishkek**	**66.31**	**309**		*i*P		**P**	**15 02 22.0**	**+0.6**
FRU					*e*		pP	15 02 36.0	+2.8
FRU					pmax	pmax			
	comp=Z,200nm,2.0s,mb5.8								
LRAL	**Lakeview Retre**	**66.49**	**66**		*e*P		**P**	**15 02 21.1**	**-1.5**
	comp=Z,38nm,0.9s,mb5.4								
AAK	**Ala-Archa**	**66.53**	**309**		P		**P**	**15 02 24.0**	**+1.3**
	comp=Z,135nm,1.5s,mb5.8,SNR=15								
AAK	**Ala-Archa**	**66.53**	**309**	*c*	*i*P		**P**	**15 02 23.6**	**+0.9**
AAK					pmax	pmax			
	comp=Z,33nm,1.9s,mb5.0								
AAK	**Ala-Archa**	**66.53**	**309**		P		**P**	**15 02 24.3**	**+1.6**
	SNR=18								
AAK	**Ala-Archa**	**66.53**	**309**		*e*P		**P**	**15 02 23.1**	**+0.4**
	comp=Z,14nm,0.6s,mb

OBN *i* 15 02 58.4
OBN *e*S S 15 11 42.9 -5.4
OBN pmax pmax
comp=Z,25nm,0.9s,mb5.1
OBN MLR MLR
comp=Z,2µm,19.0s,MS5.4
CHG Chiang Mai 70.27 276 ⇑P **P 15 02 45.9 -0.6**
comp=Z,14nm,0.8s,mb4.9
CHTO Chiang Mai 70.27 276 *e*P **P 15 02 45.5 -1.0**
CHTO pmax pmax
comp=Z,12nm,0.9s,mb4.8
CHTO Chiang Mai 70.27 276 *e*P **P 15 02 45.5 -1.0**
comp=Z,12nm,0.9s,mb4.8
NHSC New Hope 70.28 62 *e*P **P 15 02 46.8 +0.4**
comp=Z,113nm,1.0s,mb5.8
CMAR Chiang Mai Arr 70.54 275 P **P 15 02 47.8 -0.3**
comp=Z,4.0nm,0.7s,mb4.5,baz=30,slow=7.0,SNR=42
CMAR LR LR 15 38 33.9
comp=Z,426nm,18.5s,MS4.7,baz=48,slow=40
TAPN Taplejung 70.77 290 *e*P **P 15 02 50.4 +1.0**
comp=Z,214nm,1.0s,mb6.0
ODAN Odare 71.33 290 *e*P **P 15 02 53.6 +0.8**
comp=Z,59nm,0.7s,mb5.6
GUN Gumba 71.43 291 *e*P **P 15 02 54.6 +1.2**
comp=Z,203nm,0.5s,mb6.3
JIRN Jiri 71.44 291 *e*P **P 15 02 54.7 +1.3**
comp=Z,116nm,0.6s,mb6.0
RAMN Ramite 71.73 290 *e*P **P 15 02 55.9 +0.7**
comp=Z,104nm,0.5s,mb6.0
KKN Kakani 71.87 292 *e*P **P 15 02 57.0 +1.0**
comp=Z,110nm,0.5s,mb6.0
KKN Kakani 71.87 292 *e*P **P 15 02 57.0 +1.0**
KKN pmax pmax
comp=Z,110nm,0.5s,mb6.0
PKI Pulchoki 71.96 292 *e*P **P 15 02 57.4 +0.8**
comp=Z,58nm,0.6s,mb5.7
PKI Pulchoki 71.96 292 *e*P **P 15 02 57.4 +0.8**
PKI pmax pmax
comp=Z,58nm,0.6s,mb5.7
GKN Gorkha 72.08 292 *e*P **P 15 02 57.9 +0.6**
comp=Z,68nm,0.5s,mb5.9
DMN Daman 72.11 292 *e*P **P 15 02 58.3 +0.8**
DANN Dangsing 72.33 293 *e*P **P 15 02 59.7 +0.9**
KOLN Koldanda 72.86 293 *e*P **P 15 03 02.5 +0.6**
comp=Z,52nm,0.9s,mb5.4
DWPF Disney 73.34 66 *e*P **P 15 03 04.5 -0.3**
comp=Z,33nm,0.7s,mb5.4
PPT Papeete 73.46 150 *e*S S 15 12 35.2 +3.4
comp=Z,905nm,28.8s
PPT Papeete 73.46 150 *e*LR LR 15 25 39.0
comp=Z,2µm,27.2s,baz=344
PPT Papeete 73.46 150 LR LR 15 28 04.5
comp=Z,537nm,19.2s,MS4.8,baz=73,slow=30
ESK Eskdalemuir 73.68 2 *e*P **P 15 03 06.9 +0.6**
ESK pmax pmax
comp=Z,11nm,0.9s,mb4.8
ESK Eskdalemuir 73.68 2 *e*P **P 15 03 06.9 +0.6**
comp=Z,11nm,0.9s,mb4.8
THN Thein Dam 73.69 302 *e*P **P 15 03 05.8 -1.0**
SMLA Simla 73.91 300 *i*P **P 15 03 09.0 +0.9**
DDI Dehra Dun 74.05 299 *ex* x 15 03 04.2
BOK Bokaro 74.53 289 *e*P **P 15 03 11.6 -0.2**
BOK AMb AMB 15 03 14.7
comp=Z,48nm,1.1s,mb5.3
BSEG Bad Segeberg 74.78 354 *e*P **P 15 03 12.9 +0.2**
BSEG pmax pmax
comp=Z,49nm,1.0s,mb5.4
BSEG Bad Segeberg 74.78 354 *e*P **P 15 03 12.9 +0.2**
comp=Z,49nm,1.0s,mb5.4
TEIG Tepich 75.26 76 *e*P **P 15 03 16.7 +0.7**
AKASG Malin Array Be 75.44 342 P **P 15 03 15.4 -1.2**
comp=Z,6.3nm,0.4s,mb4.9,baz=18,slow=5.6,SNR=38
AKASG LR LR 15 41 03.6
comp=Z,807nm,18.4s,MS5.1,baz=35,slow=39
AKASG Malin Array Be 75.44 342 P **P 15 03 15.4 -1.2**
AKASG LR LR 15 41 03.6
AKBB Malin Array Si 75.44 342 *e*P **P 15 03 15.8 -0.8**
KIEV Kiev 75.45 342 *e*P **P 15 03 15.8 -0.9**
KIEV pmax pmax
comp=Z,13nm,0.6s,mb5.0
KIEV Kiev 75.45 342 *e*P **P 15 03 15.8 -0.9**
comp=Z,13nm,0.6s,mb5.0
KBL Kabul 75.49 307 *e*P **P 15 03 16.9 -0.3**
KBL pmax pmax
comp=Z,41nm,0.9s,mb5.4
KBL Kabul 75.49 307 *e*P **P 15 03 16.9 -0.2**
comp=Z,41nm,0.9s,mb5.4
WIT Witteveen 76.09 356 *e*P **P 15 03 21.4 +1.0**
KAPI Kappang 76.21 243 P **P 15 03 20.8 -0.7**
comp=Z,9.1nm,0.8s,mb4.7,baz=204,slow=10,SNR=5.1
NRDL Niedersach Rie 76.23 354 *e*P **P 15 03 20.7 -0.4**
comp=Z,36nm,1.2s,mb5.2
IBBN Ibbenburen 76.55 355 *e*P **P 15 03 23.0 +0.1**
comp=Z,70nm,1.0s,mb5.5
CLZ Clausthal 76.86 354 *e*P **P 15 03 24.8 +0.2**
CLZ pmax pmax
comp=Z,63nm,1.4s,mb5.3
CLZ Clausthal 76.86 354 *e*P **P 15 03 24.8 +0.2**
comp=Z,63nm,1.4s,mb5.3
WTSB Winterswijk 76.94 356 *e*P **P 15 03 24.8 -0.3**
comp=Z,40nm,1.3s,mb5.2
GOF Gofitskoye 77.17 331 *e*P pP 15 03 44.4 +5.8
CTA Charters Tower 77.18 213 *e*P **P 15 03 26.0 -0.7**
comp=Z,9.5nm,0.8s,mb4.8
CTA Charters Tower 77.18 213 P **P 15 03 25.8 -0.9**
comp=Z,13nm,0.8s,mb4.9,baz=25,slow=6.3,SNR=11
CTA Charters Tower 77.18 213 *e*P **P 15 03 26.0 -0.7**
CTA pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 77.18 352 *e*P **P 15 03 25.6 -0.9**
comp=Z,15nm,0.9s,mb4.9
CLL Collm 77.18 352 ⇑*i*P **P 15 03 25.7 -0.8**
comp=Z,47nm,1.7s,mb5.1
CLL *es*P sP 15 03 51.0 +7.9
CLL *e*PS 15 14 00.0
CLL *e*SS SS 15 18 36.0 +27
CLL LmH 15 41 00.0
comp=N,600nm,20.5s
CLL LmH 15 41 00.0
comp=E,300nm,19.6s
KSP Ksiaz 77.31 350 *e*P **P 15 03 26.9 -0.3**
KSP Ksiaz 77.31 350 *e*P **P 15 03 26.6 -0.6**
KSP LR LR
comp=Z,3µm,20.9s,MS5.6
BUG Bochum--Univer 77.44 356 *e*P **P 15 03 27.5 -0.4**
comp=Z,31nm,0.7s,mb5.3
OJC Ojcow 77.49 347 *e*P **P 15 03 28.2 0.0**
BRG Berggiesshubel 77.53 351 *i*P **P 15 03 27.7 -0.7**
BRG *e* pP 15 03 39.3 -1.2
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BRG MLR MLR
comp=Z,790nm,28.0s,MS4.9
BRG Berggiesshubel 77.53 351 *e*P **P 15 03 27.7 -0.7**
comp=Z,12nm,0.8s,mb4.9
BRG Berggiesshubel 77.53 351 *i*P **P 15 03 27.7 -0.7**
comp=Z,13nm,1.0s,mb4.8
BRG *e* pP 15 03 39.3 -1.2
comp=Z,9.5nm,0.9s
BRG
comp=N,975nm,19.6s
BRG
comp=E,600nm,17.8s
BRG
comp=Z,1µm,28.0s
BRG Berggiesshubel 77.53 351 *i*P **P 15 03 27.7 -0.7**
comp=Z,7.6nm,1.0s,mb4.6
BRG *e* pP 15 03 39.3 -1.2
BRG LR LR
comp=Z,790nm,28.0s,MS4.9
MAK Makhachkala 77.58 327 *e*P **P 15 03 29.3 +0.5**
MAK *e* pP 15 03 40.3 -0.6
MAK *e* 15 06 30.4
MAK pmax pmax
comp=Z,211nm,2.5s,mb5.6
MAK MLR MLR
comp=Z,3µm,20.0s,MS5.6
KWP Kalwaria 77.64 345 *e*P **P 15 03 29.6 +0.6**
KWP Kalwaria 77.64 345 ⇑*i*P **P 15 03 29.7 +0.7**
KWP Kalwaria 77.64 345 *e*P **P 15 03 29.6 +0.6**
UPC Upice 77.68 350 *e*P **P 15 03 29.4 +0.1**
DPC Dobruska-Polom 77.80 350 *e*P **P 15 03 30.1 +0.2**
DPC AMS AMS 15 44 10.0
comp=Z,2µm,18.1s
PVCC Panska Ves 77.81 351 *e*P **P 15 03 30.1 +0.1**
PVCC AMS AMS 15 43 50.0
comp=Z,1µm,18.3s
UBBA Unterbreizbach 77.90 354 *e*P **P 15 03 30.3 -0.2**
comp=Z,52nm,1.8s,mb5.2
MOX Moxa 77.96 353 *e*P **P 15 03 30.5 -0.3**
comp=Z,27nm,1.4s,mb5.0
MOX Moxa 77.96 353 *e*P **P 15 03 30.5 -0.3**
MOX pmax pmax
comp=Z,27nm,1.4s,mb5.0
MOX Moxa 77.96 353 *e*P **P 15 03 30.4 -0.4**
comp=Z,18nm,1.1s,mb4.9
STHS Stebnicka Huta 78.07 346 *e*P **P 15 03 31.8 +0.3**
STHS pmax pmax
comp=Z,18nm,1.1s,mb4.9
STHS Stebnicka Huta 78.07 346 *e*P **P 15 03 31.8 +0.3**
comp=Z,18nm,1.1s,mb4.9
OKC Ostrava-Krasne 78.08 348 *e*P **P 15 03 31.8 +0.3**
OKC AMS AMS 15 43 20.0
comp=Z,2µm,21.0s
TANN Tannenbergstha 78.11 352 *e*P **P 15 03 31.5 -0.2**
comp=Z,37nm,1.5s,mb5.1
HGN Heimansgroeve 78.17 356 *e*P **P 15 03 31.8 -0.2**
comp=Z,39nm,0.9s,mb5.3
UCC Uccle 78.19 357 P **P 15 03 32.1 0.0**
KIV Kislovodsk 78.27 330 *e*P **P 15 03 30.2 -2.5**
KIV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
KIV MLR MLR
comp=Z,1µm,20.0s,MS5.3
NKC Novy Kostel 78.30 352 *e*P **P 15 03 32.7 0.0**
NKC AMS AMS 15 46 10.0
comp=Z,900nm,19.3s
MEM Membach 78.33 356 P **P 15 03 32.7 -0.1**
comp=Z,22nm,1.3s,mb4.9
PRU Pruhonice 78.34 351 *e*P **P 15 03 32.8 -0.2**
PRU AMS AMS 15 42 00.0
comp=Z,1µm,17.3s
SNF Seneffe 78.48 357 P **P 15 03 33.7 0.0**
comp=Z,34nm,2.4s,mb4.8
CRVS Cervenica-Dubn 78.54 346 *i*P **P 15 03 34.3 +0.2**
comp=Z,12nm,0.9s,mb4.8
CRVS LR LR
comp=Z,600nm,22.6s,MS4.9
BCLA Clavier 78.54 357 P **P 15 03 33.7 -0.3**
MANZ Manzenberg 78.57 352 *e*P **P 15 03 33.8 -0.4**
comp=Z,31nm,1.5s,mb5.0
TNS Taunus Mts 78.59 355 *e*P **P 15 03 34.1 -0.2**
TNS pmax pmax
comp=Z,17nm,0.8s,mb5.0
TNS Taunus Mts 78.59 355 *e*P **P 15 03 34.1 -0.2**
comp=Z,17nm,0.8s,mb5.0
UZH Uzhgorod 78.67 345 *e*P **P 15 03 34.7 -0.1**
UZH *e* 15 03 53.5
ROTZ Rotzenmuhle 78.78 352 *e*P **P 15 03 35.3 -0.1**
VRAC Vranov 78.79 349 LR LR 15 44 58.7
comp=Z,1µm,18.1s,MS5.4,baz=16,slow=41
VRAC Vranov 78.79 349 ⇑*i*P **P 15 03 35.5 +0.1**
VRAC Vranov 78.79 349 P **P 15 03 35.6 +0.2**
GIVF Givet 78.87 357 ⇑*i*P **P 15 03 35.6 -0.3**
comp=Z,23nm,0.7s,mb4.9
GIVF Givet 78.87 357 ⇑*i*P **P 15 03 35.6 -0.3**
GIVF pmax pmax
comp=Z,12nm,0.7s,mb4.9
GIVF Givet 78.87 357 ⇑*i*P **P 15 03 35.6 -0.3**
comp=Z,12nm,0.7s,mb4.9
DOU Dourbes 78.89 357 P **P 15 03 36.0 0.0**
comp=Z,12nm,1.2s,mb4.7
AJM Ajmer 78.91 298 *e*P **P 15 03 35.7 -0.8**
AJM AMb AMB 15 03 38.9
comp=Z,65nm,1.6s,mb5.3
AJM AML AML 15 03 39.5
comp=Z,85nm,1.2s
TREC Trest 78.93 350 *e*P **P 15 03 35.8 -0.4**
GRA1 Grafenberg Arr 78.93 353 *e*P **P 15 03 36.3 +0.1**
GRA1 LR LR
comp=Z,500nm,21.7s,MS4.8
GRF Grafenberg Arr 78.93 353 *e*P **P 15 03 36.3 +0.1**
GRF *e*L 15 35 20.7
comp=Z,478nm,21.7s
BAIF Baives 78.94 358 ⇑*i*P **P 15 03 36.2 0.0**
comp=Z,113nm,1.2s,mb5.4
BAIF Baives 78.94 358 ⇑*i*P **P 15 03 36.2 0.0**
BAIF pmax pmax
comp=Z,57nm,1.2s,mb5.4
BAIF Baives 78.94 358 ⇑*i*P **P 15 03 36.2 0.0**
comp=Z,56nm,1.2s,mb5.4
ANN Anapa 79.04 334 *e*P pP 15 03 52.7 +3.7
ANN *e**PP sP 15 04 07.6 +14
ANN pmax pmax
comp=Z,76nm,1.2s,mb5.5
KIS Kishinev 79.05 341 *e*P **P 15 03 36.0 -0.9**
KIS pmax pmax
comp=Z,190nm,1.8s,mb5.7
KIS MLR MLR
comp=Z,2µm,17.0s,MS5.5
KIS MLR MLR
comp=N,2µm,18.0s
KIS MLR MLR
comp=Z,2µm,18.0s
KIS Kishinev 79.05 341 *e*P **P 15 03 36.0 -0.9**
comp=Z,200nm,1.8s,mb5.8
KIS *e*L 15 33 16.0
KIS LRM 15 43 22.0
comp=Z,2µm,18.0s
KECS Kecovo 79.09 347 *i*P **P 15 03 37.2 +0.1**
KECS *e* 15 03 52.2
KECS pmax pmax
comp=Z,13nm,1.3s,mb4.7
KECS Kecovo 79.09 347 *i*P **P 15 03 37.2 +0.1**
comp=Z,13nm,1.3s,mb4.7
KECS *e* 15 03 52.2
BUR08 Bucovina Ar. S 79.14 343 *e*P **P 15 03 37.6 +0.3**
BURAR Bucovina Array 79.16 343 ⇑*i*P **P 15 03 37.7 +0.2**
BURAR Bucovina Array 79.16 343 ⇑P **P 15 03 37.7 +0.2**
RUP Ruppelstein 79.19 356 *e*P **P 15 03 37.5 -0.1**
WLF Walferdange 79.26 356 P **P 15 03 38.1 +0.1**
WLF Walferdange 79.26 356 P **P 15 03 37.7 -0.3**
WLF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
WLF Walferdange 79.26 356 *e*P **P 15 03 38.1 +0.1**
WLF Walferdange 79.26 356 *e*P **P 15 03 37.5 -0.5**
comp=Z,6.1nm,0.6s,mb4.7
KOLL Kolacno 79.29 348 *e*P **P 15 03 37.7 -0.5**
KHC Kasperske Hory 79.29 351 *e*P **P 15 03 38.3 +0.1**
KHC *e*pP pP 15 03 51.5 +1.3
KHC AMS AMS 15 42 20.0
comp=Z,1µm,17.7s
VYHS Vyhne 79.31 348 *i*P **P 15 03 38.3 0.0**
VYHS pmax pmax
comp=Z,19nm,1.5s,mb4.8
VYHS Vyhne 79.31 348 *i*P **P 15 03 38.3 0.0**
comp=Z,19nm,1.5s,mb4.8
WET Wettzell 79.34 352 *e*P **P 15 03 38.3 -0.1**
SMOL Smolenice 79.47 349 *e*P **P 15 03 38.4 -0.8**
GEC2 GERESS Array S 79.56 351 *e*P **P 15 03 39.2 -0.4**
GERES GERESS Array B 79.56 351 P **P 15 03 39.1 -0.6**
comp=Z,5.8nm,0.5s,mb4.8,baz=25,slow=5.5,SNR=54
GERES LR LR 15 43 11.8
comp=Z,887nm,20.6s,MS5.1,baz=17,slow=39
PSZ Piszkesteto 79.73 347 ⇑*e*P **P 15 03 41.3 +0.7**
PSZ Piszkesteto 79.73 347 ⇑*i*P **P 15 03 41.0 +0.4**
PSZ Piszkesteto 79.73 347 *e*P **P 15 03 40.8 +0.2**
comp=Z,29nm,1.1s,mb5.1
ZST Bratislava 79.83 349 *e*P **P 15 03 41.8 +0.7**
comp=Z,16nm,0.6s,mb5.1
ZST LR LR
comp=Z,1µm,18.7s,MS5.3
LANF Langenberg 79.87 355 *e*P **P 15 03 41.2 -0.1**
BHPL Bhopal 79.89 294 *e*P **P 15 03 41.1 -0.8**
BHPL AML AML 15 03 44.7
comp=Z,106nm,1.4s
STU Stuttgart 79.99 354 *e*P **P 15 03 41.6 -0.4**
CONA Conrad Observa 80.24 350 ⇑*i*P **P 15 03 43.7 +0.4**
comp=Z,28nm,1.3s,mb5.0
CSNA Conrad Observa 80.24 350 ⇑*i*P **P 15 03 43.8 +0.5**
comp=Z,21nm,1.1s,mb5.0
FLN La Foliniere 80.28 1 ⇑*i*P **P 15 03 43.0 -0.5**
comp=Z,70nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,508nm,22.5s,MS4.5
FLN La Foliniere 80.28 1 ⇑*i*P **P 15 03 43.0 -0.5**
FLN pmax pmax
comp=Z,35nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,510nm,22.5s,MS4.8
FLN La Foliniere 80.28 1 ⇑*i*P **P 15 03 43.0 -0.5**
comp=Z,35nm,1.1s,mb5.2
FLN LR LR
comp=Z,510nm,22.5s,MS4.8
DRGR 80.39 345 ⇑*i*P **P 15 03 44.3 +0.1**
DRGR 80.39 345 P **P 15 03 44.6 +0.4**
SOP Sopron 80.40 349 ⇑*e*P **P 15 03 44.8 +0.6**
FUR Furstenfeldbru 80.45 353 *e*P **P 15 03 44.1 -0.3**
LDF La Druitiere 80.45 0 ⇑*i*P **P 15 03 43.8 -0.7**
comp=Z,90nm,1.0s,mb5.3
LDF La Druitiere 80.45 0 ⇑*i*P **P 15 03 43.8 -0.7**
LDF pmax pmax
comp=Z,45nm,1.0s,mb5.3
LDF La Druitiere 80.45 0 ⇑*i*P **P 15 03 43.8 -0.7**
comp=Z,45nm,1.0s,mb5.3
CDF Champ du Feu 80.46 355 ⇑*i*P **P 15 03 44.1 -0.4**
comp=Z,21nm,0.9s,mb4.8
CDF Champ du Feu 80.46 355 ⇑*i*P **P 15 03 44.1 -0.4**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CDF Champ du Feu 80.46 355 ⇑*i*P **P 15 03 44.1 -0.4**
comp=Z,10nm,0.9s,mb4.8
MEZF Maizieres J'vi 80.47 357 ⇑*i*P **P 15 03 44.6 +0.1**
BFO Black Forest 80.49 355 P **P 15 03 44.8 +0.1**
BFO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BFO Black Forest 80.49 355 *e*P **P 15 03 44.2 -0.5**
GRR Gorron 80.65 1 ⇑*i*P **P 15 03 45.2 -0.3**
comp=Z,67nm,0.9s,mb5.2
GRR Gorron 80.65 1 ⇑*i*P **P 15 03 45.2 -0.3**
GRR pmax pmax
comp=Z,33nm,0.9s,mb5.3
GRR Gorron 80.65 1 ⇑*i*P **P 15 03 45.2 -0.3**
comp=Z,33nm,0.9s,mb5.3
ROSF Rostrenen 80.66 3 *e*P **P 15 03 45.2 -0.4**
ECH Echery 80.66 355 *e*P **P 15 03 45.3 -0.3**
SPAK Spaichingen-Ko 80.69 354 *e*P **P 15 03 45.3 -0.4**
LIBD Limburg 80.71 355 *e*P **P 15 03 45.7 -0.1**
THEF They Montfort 80.71 356 *e*P **P 15 03 45.8 0.0**
RJOB Jochberg 80.74 352 *e*P **P 15 03 45.8 -0.2**
SGMF Saint Gilles 80.76 2 ⇑*i*P **P 15 03 45.9 -0.2**
comp=Z,66nm,0.9s,mb5.3
SGMF Saint Gilles 80.76 2 ⇑*i*P **P 15 03 45.9 -0.2**
SGMF pmax pmax
comp=Z,33nm,0.9s,mb5.3
SGMF Saint Gilles 80.76 2 ⇑*i*P **P 15 03 45.9 -0.2**
comp=Z,33nm,0.9s,mb5.3
HAU Haudompre 80.91 356 ⇑*i*P **P 15 03 46.6 -0.3**
comp=Z,17nm,0.7s,mb4.8
HAU *e*MLR MLR
comp=Z,1µm,21.8s,MS4.9
HAU Haudompre 80.91 356 ⇑*i*P **P 15 03 46.6 -0.3**
HAU pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
HAU MLR MLR
comp=Z,1µm,21.8s,MS5.2
HAU Haudompre 80.91 356 ⇑*i*P **P 15 03 46.6 -0.3**
comp=Z,8.6nm,0.7s,mb4.8
HAU LR LR
comp=Z,1µm,21.8s,MS5.2
ARSA Arzberg 80.94 350 ⇑*i*P **P 15 03 47.6 +0.5**
comp=Z,24nm,1.3s,mb5.0,SNR=6.7
FELD Feldberg im Sc 80.96 355 *e*P **P 15 03 46.7 -0.5**
GNI Garni 81.03 327 ⇓*e*P **P 15 03 48.0 +0.3**
GNI pmax pmax
comp=Z,36nm,2.0s
MOF Molkenrain 81.03 355 *e*P **P 15 03 47.1 -0.5**
MLR Muntele Rosu 81.07 342 LR LR 15 42 16.7
comp=Z,863nm,21.1s,MS5.1,baz=335,slow=38
HINF Hinteralfeld 81.08 356 ⇑*i*P **P 15 03 47.2 -0.6**
comp=Z,7.7nm,0.5s,mb4.6
HINF Hinteralfeld 81.08 356 ⇑*i*P **P 15 03 47.2 -0.6**
HINF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
HINF Hinteralfeld 81.08 356 ⇑*i*P **P 15 03 47.2 -0.6**
comp=Z,3.8nm,0.5s,mb4.6
WATA Walderalm 81.25 352 ⇑*i*P **P 15 03 49.0 +0.3**
comp=Z,11nm,0.6s,mb5.0
MOTA Moosalm 81.28 353 *i*P **P 15 03 49.0 +0.1**
comp=Z,45nm,1.3s,mb5.2,SNR=6.4
VOIR 81.29 343 ⇑*i*P **P 15 03 49.9 +0.9**
VOIR 81.29 343 P **P 15 03 49.9 +0.9**
WTTA Wattenberg 81.31 352 *i*P **P 15 03 49.6 +0.5**
comp=Z,27nm,0.7s,mb5.3,SNR=9.1
KBA Koelnbreinsper 81.34 351 ⇑*i*P **P 15 03 50.0 +0.7**
comp=Z,56nm,0.7s,mb5.6,SNR=20
DAVA Damuels 81.43 354 ⇑*i*P **P 15 03 49.5 -0.2**
comp=Z,16nm,1.5s,mb4.7
LOMF Lomont 81.54 356 *e*P **P 15 03 48.2 -2.1**
SOKA Soboth 81.56 350 ⇑*i*P **P 15 03 50.7 +0.3**
comp=Z,80nm,2.0s,mb5.3
PKSM Moragy 81.58 347 ⇑*i*P **P 15 03 50.2 -0.3**
PKSM Moragy 81.58 347 P **P 15 03 50.1 -0.4**
PERS Pernice 81.60 350 *e*P **P 15 03 50.8 +0.2**
FETA Feichten 81.63 353 ⇑*i*P **P 15 03 51.1 +0.3**
comp=Z,27nm,1.1s,mb5.1,SNR=11
WRAB Tennant Creek 81.64 223 P **P 15 03 49.0 -2.0**
comp=Z,98nm,1.0s,mb5.7,SNR=8.5
WRAB Tennant Creek 81.64 223*c* P **P 15 03 49.4 -1.6**
WRAB Tennant Creek 81.64 223 *e*P **P 15 03 49.3 -1.7**
comp=Z,19nm,1.0s,mb5.0
WB2 Warramunga Arr 81.64 223 ⇑*i*P **P 15 03 49.2 -1.8**
WRA Warramunga Arr 81.65 223 P **P 15 03 49.7 -1.4**
comp=Z,10nm,0.7s,mb4.8,baz=36,slow=6.2,SNR=103
WRA LR LR 15 40 36.5
comp=Z,331nm,19.3s,MS4.7,baz=5.0,slow=36
BZS Buzias 81.71 345 ⇑*i*P **P 15 03 51.0 -0.2**
BZS Buzias 81.71 345 P **P 15 03 51.2 0.0**
LOR Lormes 81.73 358 ⇑*i*P **P 15 03 51.0 -0.3**
comp=Z,83nm,1.4s,mb5.2
LOR *e*MLR MLR
comp=Z,899nm,19.2s,MS4.8
LOR Lormes 81.73 358 ⇑*i*P **P 15 03 51.0 -0.3**
LOR pmax pmax
comp=Z,42nm,1.4s,mb5.2
LOR MLR MLR
comp=Z,900nm,19.3s,MS5.1
LOR Lormes 81.73 358 ⇑*i*P **P 15 03 51.0 -0.3**
comp=Z,42nm,1.4s,mb5.2
LOR LR LR
comp=Z,900nm,19.3s,MS5.1
GZR Gura Zlata 81.74 344 ⇑*i*P **P 15 03 51.6 +0.2**
GZR Gura Zlata 81.74 344 P **P 15 03 51.7 +0.3**
ABTA Abfaltersbach 81.75 352 ⇑*i*P **P 15 03 51.3 -0.1**
comp=Z,23nm,1.1s,mb5.0,SNR=7.5
HYF Humbligny 81.76 358 ⇑*i*P **P 15 03 51.4 -0.1**
OBKA Obir 81.78 350 ⇑*i*P **P 15 03 51.6 +0.1**
comp=Z,35nm,1.1s,mb5.2,SNR=7.8
ZAVS Zavodnje 81.81 350 *e*P **P 15 03 51.6 -0.1**
SSF Saint Saulge 81.95 358 ⇑*i*P **P 15 03 52.1 -0.4**
comp=Z,19nm,0.6s,mb4.9
SSF Saint Saulge 81.95 358 ⇑*i*P **P 15 03 52.1 -0.4**
SSF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SSF Saint Saulge 81.95 358 ⇑*i*P **P 15 03 52.1 -0.4**
comp=Z,9.6nm,0.6s,mb4.9
AVF Avril sur Loir 82.22 358 ⇑*i*P **P 15 03 53.5 -0.4**
comp=Z,39nm,1.1s,mb5.0
AVF Avril sur Loir 82.22 358 ⇑*i*P **P 15 03 53.5 -0.4**
AVF pmax pmax
comp=Z,19nm,1.1s,mb4.9
AVF Avril sur Loir 82.22 358 ⇑*i*P **P 15 03 53.5 -0.4**
comp=Z,19nm,1.1s,mb5.0
TUE Stuetta 82.27 354 *e*P **P 15 03 54.4 +0.3**
comp=Z,16nm,0.8s,mb5.0
GCIS Gornji Cirnik 82.30 349 *e*P **P 15 03 54.1 -0.2**
CABF La Chapelle 82.31 356 ⇑*i*P **P 15 03 54.4 0.0**
comp=Z,20nm,0.7s,mb4.9
CABF La Chapelle 82.31 356 ⇑*i*P **P 15 03 54.4 0.0**
CABF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CABF La Chapelle 82.31 356 ⇑*i*P **P 15 03 54.4 0.0**
comp=Z,10nm,0.7s,mb4.9
SMF Signal de Mont 82.36 358 ⇑*i*P **P 15 03 54.2 -0.4**
comp=Z,33nm,0.6s,mb5.1
SMF Signal de Mont 82.36 358 ⇑*i*P **P 15 03 54.2 -0.4**
SMF pmax pmax
comp=Z,17nm,0.6s,mb5.2
SMF Signal de Mont 82.36 358 ⇑*i*P **P 15 03 54.2 -0.4**
comp=Z,17nm,0.6s,mb5.1
MFF Saint Martin d 82.44 0 ⇑*i*P **P 15 03 54.9 -0.1**
comp=Z,33nm,0.9s,mb5.0
MFF Saint Martin d 82.44 0 ⇑*i*P **P 15 03 54.9 -0.1**
MFF pmax pmax
comp=Z,17nm,0.9s,mb5.0
MFF Saint Martin d 82.44 0 ⇑*i*P **P 15 03 54.9 -0.1**
comp=Z,17nm,0.9s,mb5.0
BGF Bois d'Agland 82.47 358 ⇑*i*P **P 15 03 54.9 -0.3**

	comp=Z,38nm,1.0s,mb5.0							
BGF	**Bois d'Agland**	**82.47**	**358**	⇑*iP*		**P**	**15 03 54.9**	**-0.3**
BGF				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
BGF	**Bois d'Agland**	**82.47**	**358**	⇑*iP*		**P**	**15 03 54.9**	**-0.3**
	comp=Z,19nm,1.0s,mb5.0							
TCF	**Toulx Ste Croi**	**82.75**	**359**	⇑*iP*		**P**	**15 03 56.2**	**-0.4**
	comp=Z,19nm,0.7s,mb4.9							
TCF	**Toulx Ste Croi**	**82.75**	**359**	⇑*iP*		**P**	**15 03 56.2**	**-0.4**
TCF				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb5.0							
TCF	**Toulx Ste Croi**	**82.75**	**359**	⇑*iP*		**P**	**15 03 56.2**	**-0.4**
	comp=Z,9.6nm,0.7s,mb4.9							
AGO	**Saint Agoulin**	**82.97**	**358**	*eP*		**P**	**15 03 58.1**	**+0.3**
PLDF	**La Plantade**	**83.04**	**358**	*eP*		**P**	**15 03 58.6**	**+0.5**
LPL	**La Plagne**	**83.38**	**356**	⇑*iP*		**P**	**15 04 00.5**	**+0.6**
	comp=Z,12nm,0.6s,mb4.8							
LPL	**La Plagne**	**83.38**	**356**	⇑*iP*		**P**	**15 04 00.5**	**+0.6**
LPL				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.8							
LPL	**La Plagne**	**83.38**	**356**	⇑*iP*		**P**	**15 04 00.5**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.8							
LPG	**La Plagne**	**83.40**	**356**	⇑*iP*		**P**	**15 04 00.9**	**+0.9**
	comp=Z,64nm,1.4s,mb5.2							
LPG	**La Plagne**	**83.40**	**356**	⇑*iP*		**P**	**15 04 00.9**	**+0.9**
LPG				pmax	pmax			
	comp=Z,32nm,1.4s,mb5.2							
LPG	**La Plagne**	**83.40**	**356**	⇑*iP*		**P**	**15 04 00.9**	**+0.9**
	comp=Z,32nm,1.4s,mb5.2							
RJF	**Les Rejaudoux**	**83.74**	**359**	⇑*iP*		**P**	**15 04 01.2**	**-0.6**
	comp=Z,58nm,1.2s,mb5.3							
RJF				*e*MLR	MLR			
	comp=Z,1µm,19.5s,MS4.9							
RJF	**Les Rejaudoux**	**83.74**	**359**	⇑*iP*		**P**	**15 04 01.2**	**-0.6**
RJF				pmax	pmax			
	comp=Z,29nm,1.2s,mb5.3							
RJF				MLR	MLR			
	comp=Z,1µm,19.5s,MS5.2							
RJF	**Les Rejaudoux**	**83.74**	**359**	⇑*iP*		**P**	**15 04 01.2**	**-0.6**
	comp=Z,29nm,1.2s,mb5.3							
RJF				LR	LR			
	comp=Z,1µm,19.5s,MS5.2							
HYB	**Hyderabad**	**83.78**	**290**	*i* P		**P**	**15 04 02.0**	**-0.4**
LBL	**Lubilhac**	**83.78**	**358**	*eP*		**P**	**15 04 02.5**	**+0.5**
BNI	**Bardonecchia**	**83.84**	**356**	P		**P**	**15 04 03.5**	**+1.2**
BNI				pmax	pmax			
	comp=Z,26nm,1.0s,mb5.3							
BNI	**Bardonecchia**	**83.84**	**356**	*eP*		**P**	**15 04 03.3**	**+1.0**
	comp=Z,26nm,1.0s,mb5.3							
ORIF	**Oris-en-Rattie**	**84.01**	**356**	⇑*iP*		**P**	**15 04 03.7**	**+0.5**
	comp=Z,33nm,1.0s,mb5.1							
ORIF				*e*MLR	MLR			
	comp=Z,732nm,21.0s,MS4.7							
ORIF	**Oris-en-Rattie**	**84.01**	**356**	⇑*iP*		**P**	**15 04 03.7**	**+0.5**
ORIF				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.1							
ORIF	**Oris-en-Rattie**	**84.01**	**356**	⇑*iP*		**P**	**15 04 03.7**	**+0.5**
	comp=Z,17nm,1.0s,mb5.1							
FITZ	**Fitzroy Crossi**	**84.06**	**231**	⇑*iP*		**P**	**15 04 02.8**	**-0.8**
	comp=Z,48nm,0.6s,mb5.8							
LFF	**La Frestale**	**84.11**	**360**	⇑*iP*		**P**	**15 04 03.4**	**-0.3**
	comp=Z,51nm,0.9s,mb5.4							
LFF	**La Frestale**	**84.11**	**360**	⇑*iP*		**P**	**15 04 03.4**	**-0.3**
LFF				pmax	pmax			
	comp=Z,25nm,0.9s,mb5.3							
LFF	**La Frestale**	**84.11**	**360**	⇑*iP*		**P**	**15 04 03.4**	**-0.3**
	comp=Z,25nm,0.9s,mb5.3							
CAF	**Calviac**	**84.11**	**359**	⇑*iP*		**P**	**15 04 03.7**	**0.0**
	comp=Z,93nm,1.3s,mb5.5							
CAF	**Calviac**	**84.11**	**359**	⇑*iP*		**P**	**15 04 03.7**	**0.0**
CAF				pmax	pmax			
	comp=Z,47nm,1.3s,mb5.5							
CAF	**Calviac**	**84.11**	**359**	⇑*iP*		**P**	**15 04 03.7**	**0.0**
	comp=Z,47nm,1.3s,mb5.5							
VIVF	**Saint-Julien-l**	**84.12**	**357**	⇑*iP*		**P**	**15 04 03.8**	**+0.1**
	comp=Z,18nm,0.8s,mb5.0							
VIVF	**Saint-Julien-l**	**84.12**	**357**	⇑*iP*		**P**	**15 04 03.8**	**+0.1**
VIVF				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb5.0							
VIVF	**Saint-Julien-l**	**84.12**	**357**	⇑*iP*		**P**	**15 04 03.8**	**+0.1**
	comp=Z,9.1nm,0.8s,mb5.0							
MBDF	**Montbardon**	**84.16**	**355**	⇑*iP*		**P**	**15 04 04.4**	**+0.5**
	comp=Z,18nm,0.6s,mb5.1							
MBDF	**Montbardon**	**84.16**	**355**	⇑*iP*		**P**	**15 04 04.4**	**+0.5**
MBDF				pmax	pmax			
	comp=Z,9.0nm,0.6s,mb5.1							
MBDF	**Montbardon**	**84.16**	**355**	⇑*iP*		**P**	**15 04 04.4**	**+0.5**
	comp=Z,9.3nm,0.6s,mb5.1							
BR131	**Keskin Array S**	**84.79**	**335**	*eP*		**P**	**15 04 06.1**	**-1.1**
	comp=Z,12nm,1.1s,mb4.9							
BRTR	**Keskin Array B**	**84.79**	**335**	P		**P**	**15 04 06.8**	**-0.3**
	comp=Z,5.1nm,0.9s,mb4.6,baz=39,slow=2.7,SNR=14							
BRTR				LR	LR		15 47 43.5	
	comp=Z,327nm,19.6s,MS4.7,baz=44,slow=40							
TOUF	**Mont Tournerai**	**84.85**	**355**	*eP*		**P**	**15 04 07.3**	**-0.1**
AUTN	**L'Aution**	**84.86**	**355**	*eP*		**P**	**15 04 07.1**	**-0.4**
LASF	**Ste Croix**	**84.93**	**358**	⇑*iP*		**P**	**15 04 07.8**	**0.0**
	comp=Z,10nm,0.8s,mb4.7							
LUCF	**Luceram**	**84.97**	**355**	*eP*		**P**	**15 04 08.0**	**0.0**
SMRF	**Simiane la Rot**	**84.97**	**356**	⇑*iP*		**P**	**15 04 08.6**	**+0.6**
	comp=Z,63nm,1.2s,mb5.3							
SMRF	**Simiane la Rot**	**84.97**	**356**	⇑*iP*		**P**	**15 04 08.6**	**+0.6**
	comp=Z,63nm,1.2s,mb5.6							
MVIF	**Mont Vial**	**84.97**	**355**	*eP*		**P**	**15 04 07.6**	**-0.4**
SBF	**Sospel**	**84.99**	**355**	⇑*iP*		**P**	**15 04 07.8**	**-0.3**
	comp=Z,108nm,1.1s,mb5.6							
SBF	**Sospel**	**84.99**	**355**	⇑*iP*		**P**	**15 04 07.8**	**-0.3**
SBF				pmax	pmax			
	comp=Z,54nm,1.1s,mb5.6							
SBF	**Sospel**	**84.99**	**355**	⇑*iP*		**P**	**15 04 07.8**	**-0.3**
	comp=Z,54nm,1.1s,mb5.6							
VILF	**Villemus**	**85.08**	**356**	*eP*		**P**	**15 04 09.5**	**+0.9**
CALN	**Calern**	**85.13**	**355**	*eP*		**P**	**15 04 08.7**	**-0.1**
ASAR	**Alice Springs**	**85.13**	**222**	P		**P**	**15 04 08.0**	**-0.9**
	comp=Z,11nm,0.8s,mb5.0,baz=25,slow=5.6,SNR=122							
PRAF	**Pradon**	**85.16**	**357**	*eP*		**P**	**15 04 09.8**	**+0.8**
ARMA	**Armidale**	**85.27**	**205**	*eP*		**P**	**15 04 09.7**	**+0.3**
SKO	**Skopje**	**85.29**	**344**	*eP*		**P**	**15 04 08.7**	**-1.0**
TAVF	**Tavernes**	**85.31**	**356**	*eP*		**P**	**15 04 10.2**	**+0.5**
TREF	**Trevaresse**	**85.33**	**356**	*eP*		**P**	**15 04 10.7**	**+0.9**
FRF	**La Foret Royal**	**85.33**	**355**	⇑*iP*		**P**	**15 04 09.4**	**-0.5**
	comp=Z,32nm,0.9s,mb5.1							
FRF	**La Foret Royal**	**85.33**	**355**	⇑*iP*		**P**	**15 04 09.4**	**-0.5**
FRF				pmax	pmax			
	comp=Z,16nm,0.9s,mb5.2							
FRF	**La Foret Royal**	**85.33**	**355**	⇑*iP*		**P**	**15 04 09.4**	**-0.5**
	comp=Z,16nm,0.9s,mb5.2							
GELF	**Grande-Etoile**	**85.56**	**356**	*eP*		**P**	**15 04 11.8**	**+0.8**
LMR	**La Mourre**	**85.57**	**356**	⇑*iP*		**P**	**15 04 10.7**	**-0.3**
	comp=Z,52nm,1.0s,mb5.4							
LMR	**La Mourre**	**85.57**	**356**	⇑*iP*		**P**	**15 04 10.7**	**-0.3**
LMR				pmax	pmax			
	comp=Z,26nm,1.0s,mb5.4							
LMR	**La Mourre**	**85.57**	**356**	⇑*iP*		**P**	**15 04 10.7**	**-0.3**
	comp=Z,26nm,1.0s,mb5.4							
BERF	**Bertagne**	**85.62**	**356**	*eP*		**P**	**15 04 11.3**	**0.0**
POO	**Poona**	**85.64**	**294**	*eP*		**P**	**15 04 11.4**	**-0.3**
POO				AML	AML		15 04 12.6	
	comp=Z,36nm,0.8s							
MTLF	**Montolieu**	**85.69**	**359**	⇑*iP*		**P**	**15 04 11.6**	**0.0**
	comp=Z,21nm,0.8s,mb5.1							
MTLF	**Montolieu**	**85.69**	**359**	⇑*iP*		**P**	**15 04 11.6**	**0.0**
MTLF				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb5.1							
MTLF	**Montolieu**	**85.69**	**359**	⇑*iP*		**P**	**15 04 11.6**	**0.0**
	comp=Z,10nm,0.8s,mb5.1							
EPF	**Esparros**	**86.02**	**0**	*eP*		**P**	**15 04 12.5**	**-0.8**
ETSF	**Etsaut**	**86.14**	**1**	*eP*		**P**	**15 04 14.1**	**+0.2**
	comp=Z,19nm,0.6s,mb5.2							
ETSF	**Etsaut**	**86.14**	**1**	*eP*		**P**	**15 04 14.1**	**+0.2**
ETSF				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.2							
ETSF	**Etsaut**	**86.14**	**1**	*eP*		**P**	**15 04 14.1**	**+0.2**
	comp=Z,9.6nm,0.6s,mb5.2							
PGF	**Pioggiola**	**86.20**	**354**	*eP*		**P**	**15 04 13.9**	**-0.3**
SDDR	**Presa de Saban**	**86.24**	**64**	*eP*		**P**	**15 04 14.8**	**+0.1**
	comp=Z,25nm,0.9s,mb5.5							
KAD	**Karad**	**86.42**	**293**	*i* P		**P**	**15 04 15.0**	**-0.6**
KAD				*eP*			15 04 15.1	
KAD				AML	AML		15 04 17.8	
	comp=Z,35nm,1.0s							
MVO	**Moncorvo**	**87.65**	**6**	*eP*		**P**	**15 04 20.5**	**-0.8**
MTE	**Manteigas**	**88.38**	**6**	*eP*		**P**	**15 04 25.2**	**+0.5**
PCBR	**Castelo Branco**	**88.94**	**6**	*eP*		**P**	**15 04 26.6**	**-0.8**
MIB	**Mutribah**	**89.28**	**321**	*eP*		**P**	**15 04 28.2**	**-0.9**
	baz=321							
MIB				AMb	AMB		15 04 29.9	
	comp=Z,26nm,0.7s,mb5.7,baz=321							
ESDC	**Sonseca Array**	**89.29**	**3**	P		**P**	**15 04 28.0**	**-1.0**
	comp=Z,2.0nm,0.6s,mb4.7,baz=352,slow=4.8,SNR=7.8							
UMR	**Umm Al-Rimmam**	**89.35**	**320**	*eP*		**P**	**15 04 28.8**	**-0.7**
	baz=320							
UMR				AMb	AMB		15 04 30.0	
	comp=Z,26nm,1.1s,mb5.5,baz=320							
STKA	**Stephens Creek**	**89.63**	**212**	*eP*		**P**	**15 04 29.7**	**-0.7**
	comp=Z,15nm,0.8s,mb5.4							
STKA	**Stephens Creek**	**89.63**	**212**	P		**P**	**15 04 30.1**	**-0.2**
	comp=Z,19nm,0.8s,mb5.5,baz=8.5,slow=5.6,SNR=50							
STKA				LR	LR		15 43 07.4	
	comp=Z,757nm,18.6s,MS5.2,baz=27,slow=34							
RDF	**Al-Radifah**	**89.97**	**320**	*eP*		**P**	**15 04 31.4**	**-1.0**
	baz=320							
RDF				AMb	AMB		15 04 39.8	
	comp=Z,27nm,1.2s,mb5.5,baz=320							
CNB	**Canberra Magne**	**90.50**	**205**	*eP*		**P**	**15 04 35.2**	**+0.8**
KEST	**Kesra**	**92.95**	**353**	P		**P**	**15 04 45.1**	**-1.0**
	comp=Z,1.5nm,0.8s,mb4.5,baz=96,slow=14,SNR=3.5							
KEST				LR	LR		15 50 03.4	
	comp=Z,297nm,21.9s,MS4.7,baz=175,slow=38							
FORT	**Forrest**	**93.84**	**223**	*eP*		**P**	**15 04 49.6**	**-0.3**
	comp=Z,18nm,0.7s,mb5.6							
TOA0	**Torodi Ar. Sit**	**115.78**	**359**	*e*PKPdf	PKPdf		15 10 13.6	-2.0
TORD	**Torodi Ar. Bea**	**115.78**	**359**	PKP	PKPdf		15 10 14.6	-1.0
	comp=Z,1.0nm,0.4s,baz=351,slow=2.3,SNR=24							
TORD				PKKPbc	PKKPbc		15 20 44.4	-0.9
	comp=Z,1.7nm,0.9s,baz=187,slow=1.7,SNR=8.6							
DBIC	**Dimbokro**	**122.05**	**6**	PKP	PKPdf		15 10 26.9	-0.7
	comp=Z,5.0nm,0.4s,baz=345,slow=2.8,SNR=36							
DBIC	**Dimbokro**	**122.05**	**6**	PKIKP	PKPdf		15 10 26.9	-0.8
DBIC				pmax	pmax			
	comp=Z,5.0nm,0.4s							
DBIC	**Dimbokro**	**122.05**	**6**	*e*PKPdf	PKPdf		15 10 26.7	-0.9
TIC	**Toumodi**	**122.06**	**6**	*e*PKIKP	PKPdf		15 10 26.5	-1.2
	comp=Z,24nm,0.3s							
KIC	**Kosan Boka**	**122.36**	**6**	*e*PKIKP	PKPdf		15 10 26.9	-1.4
	comp=Z,37nm,0.8s							
LIC	**Lamto**	**122.48**	**6**	*e*PKIKP	PKPdf		15 10 27.2	-1.3
	comp=Z,28nm,0.8s							
LIC	**Lamto**	**122.48**	**6**	*e*PKIKP	PKPdf		15 10 27.2	-1.3
	comp=Z,14nm,0.7s							
LIC				*e*MLR	MLR			
	comp=Z,642nm,20.8s,MS5.0							
LIC	**Lamto**	**122.48**	**6**	*e*PKPdf	PKPdf		15 10 27.2	-1.3
LIC				LR	LR			
	comp=Z,320nm,20.8s,MS5.0							
CPUP	**Villa Florida**	**130.08**	**83**	PKP	PKPdf		15 10 41.4	-1.1
	comp=Z,0.4nm,0.3s,baz=306,slow=14,SNR=2.6							
CPUP	**Villa Florida**	**130.08**	**83**	PKP	PKPdf		15 10 41.4	-1.1
TRQA	**Tornquist**	**135.02**	**98**	*e*PKPdf	PKPdf		15 10 50.5	-1.0
QSPA	**South Pole Qui**	**141.09**	**180**	*e*PKPpre			15 10 55.3	
EFI	**East Falkland**	**144.43**	**114**	*e*PKIKP	PKPdf		15 11 05.3	-2.8
TSUM	**Tsumeb**	**145.20**	**331**	*e*PKP	PKPdf		15 11 10.0	-0.4
MAW	**Mawson**	**146.16**	**218**	*eP*	PKPdf		15 11 10.5	-0.1
	comp=Z,14nm,0.8s							
MAW	**Mawson**	**146.16**	**218**	PKPbc	PKPbc		15 11 10.4	-1.3
	comp=Z,19nm,0.8s,baz=91,slow=4.7,SNR=19							
LBTB	**Lobatse**	**147.42**	**314**	*e*PKP2	PKPab		15 11 16.7	-1.9
BOSA	**Boshof**	**150.65**	**311**	PKPbc	PKPbc		15 11 24.6	0.0
	comp=Z,9.5nm,0.5s,baz=22,slow=2.3,SNR=39							
BOSA	**Boshof**	**150.65**	**311**	*e*PKPbc	PKPbc		15 11 24.5	-0.2
VNA3	**Neumayer Olymp**	**159.50**	**171**	*e*PKPdf	PKPdf		15 11 43.8	+14
VNA3				*e*			15 12 06.9	
VNA3				*e*			15 12 17.6	
VNA3				*e*			15 12 21.6	
VNA2	**Neumayer--Watz**	**160.01**	**172**	*e*PKPdf	PKPdf		15 11 28.4	-2.0
VNA2				*e*			15 11 44.7	
VNA2				*e*			15 12 09.1	
VNA2				*e*			15 12 20.3	
VNA2				*e*			15 12 23.4	
VNA1	**Neumayer--Stat**	**160.21**	**171**	*e*PKPdf	PKPab		15 12 09.8	-1.5
VNA1				*e*			15 12 20.3	
VNA1				*e*			15 12 24.0	

*ISCJB **19** 15:04:29.9±0.8, 25°48.N±005×56.13E±0.10, h10km, Error ellipse: s-maj=13.3km s-min=5.7km az=21.4*
*CSEM **19** 15:04:31.4±0.1, 25°60.N×55°99.E, h10km, ML3.0/3, Error ellipse: s-maj=5.9km s-min=2.6km az=131.0*

ISC 19 15:04:30.4±1.8, 25°46.N±006×563E±02, h12km±11km, n12, σ0.83/14, 2C, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BANOM	**Banah**	**0.46**	**359**	⇑P		**Pg**	**15 04 39.9**	**+0.3**
	SNR=328							
BANOM	**Banah**	**0.46**	**359**	Pg		**Pg**	**15 04 39.7**	**+0.1**
	SNR=328							
BANOM				Sg		**Sg**	**15 04 45.7**	**-0.1**
HATD	**Hatta, Dubai**	**0.65**	**194**	⇑P		**Pg**	**15 04 41.5**	**-1.5**
	SNR=78							
HATD	**Hatta, Dubai**	**0.65**	**194**	Pg		**Pg**	**15 04 43.0**	**0.0**
	SNR=58							
NAZ	**Nazwa, Dubai**	**0.75**	**232**	Pg		**Pg**	**15 04 45.6**	**+0.7**
	SNR=32							
FAQ	**Al Faqa, Dubai**	**0.96**	**223**	Pg		**Pg**	**15 04 48.8**	**-0.1**
	SNR=90							
ASUD	**Al Ashush, Dub**	**1.21**	**227**	Pn		**Pn**	**15 04 55.3**	**+2.1**
BTHS		**5.16**	**255**	P		**Pn**	**15 05 47.1**	**-0.4**
HRDDS		**6.74**	**249**	S		**Sn**	**15 07 19.3**	**-6.6**
HRDDS		**6.74**	**249**	P		**Pn**	**15 06 09.0**	**-0.2**
KFJS		**7.95**	**292**	P		**Pn**	**15 06 25.7**	**-0.1**
LYLS		**8.97**	**250**	P		**Pn**	**15 06 38.7**	**-1.1**
LYLS				S		**Sn**	**15 08 13.9**	**-7.0**

*IDC **19** 15:16:33.8±1.5, 37°86.N×142°57.E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.5/25, mbtmp3.6/8, ML2.9/3, MS3.5/1, Ms1 3.5/1, ms1mx3.0/37, Error ellipse: s-maj=34.9km s-min=19.4km az=83.0*
*ISCJB **19** 15:16:37.6±1.0, 37°83.N±005×142°41.E±0.08, h37km±11km, mb3.4/5, Error ellipse: s-maj=11.3km s-min=6.2km az=30.1*
*JMA **19** 15:16:38.5±0.2, 37°80.N×142°27.E, h39km±3km, M3.5*
*NEIC **19** 15:16:40.4±1.6, 37°82.N×142°43.E, h44km±13km, MG3.5(JMA), Error ellipse: s-maj=22.0km s-min=12.5km az=114.0*

ISC 19 15:16:35.8±1.3, 37°83.N±004×142°32.E±006, h3km±6km, n20, σ1.17/30, mb3.4/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JIO	**Ouri**	**0.99**	**309**	P		**Pg**	**15 16 56.2**	**+1.4**
JIO				*e*S		**Sg**	**15 17 08.4**	**+0.8**
JMM	**Marumori**	**1.21**	**272**	P		**Pg**	**15 16 58.9**	**-0.1**
JMM				*e*S		**Sg**	**15 17 13.3**	**-1.4**
JFK	**Kawauchi**	**1.24**	**248**	P		**Pg**	**15 16 58.9**	**-0.7**
JFK				*e*S		**Sg**	**15 17 13.6**	**-2.0**
JOU	**Okura**	**1.41**	**293**	P		**Pn**	**15 17 02.7**	**+0.3**
JMK	**Ichinoseki**	**1.42**	**323**	P		**Pn**	**15 17 02.7**	**+0.3**
JMK				*e*S		**Sb**	**15 17 20.2**	**-1.1**
JFT	**Otama**	**1.61**	**259**	P		**Pn**	**15 17 05.3**	**+0.2**
JFT				*e*S		**Sn**	**15 17 24.7**	**-1.6**
JOM	**Ohasama**	**1.83**	**334**	P		**Pn**	**15 17 08.7**	**+0.6**
JYK	**Kaneyama**	**1.89**	**306**	P		**Pn**	**15 17 09.7**	**+0.8**
JFY	**Yanaizu**	**2.12**	**259**	P		**Pn**	**15 17 13.6**	**+1.5**
JFY				*e*S		**Sn**	**15 17 38.8**	**-0.2**
MJAR	**Matsushiro Arr**	**3.53**	**250**	Pn		**Pn**	**15 17 34.2**	**+2.7**
	1.2nm,0.3s,baz=77,slow=15,SNR=9.4							
MJAR				Sn		**Sn**	**15 18 16.4**	**+2.7**
	0.9nm,0.3s,baz=130,slow=17,SNR=3.2							
MJAR				LR	LR		15 18 39.2	
	comp=Z,639nm,20.0s,baz=75,slow=34							
MAJO	**Matsushiro**	**3.53**	**250**	*e*Pn		**Pn**	**15 17 33.2**	**+1.7**
MAT	**Matsushiro**	**3.53**	**250**	P		**Pn**	**15 17 31.9**	**+0.4**
MAT				*e*S		**Sn**	**15 18 14.1**	**+0.4**
ERM	**Erimo**	**4.23**	**8**	*e*Pn		**Pn**	**15 17 42.2**	**+1.1**
JHJ	**Hachijo jima 2**	**5.14**	**205**	Pn		**Pn**	**15 17 53.0**	**-0.6**
	6.0nm,0.3s,baz=50,slow=17,SNR=3.2							
JHJ				Sn		**Sn**	**15 18 46.8**	**-6.6**
	3.5nm,0.3s,baz=90,slow=19,SNR=2.2							
ASAJ	**Asahikawa**	**6.28**	**2**	Pn		**Pn**	**15 18 08.3**	**-1.0**
	0.1nm,0.3s,baz=202,slow=11,SNR=2.2							
ASAJ				Sn		**Sn**	**15 19 19.8**	**-1.8**
	0.2nm,0.3s,baz=270,slow=20,SNR=1.9							
SONM	**Songino Array**	**27.95**	**303**	P		**P**	**15 22 27.8**	**+0.5**
	0.3nm,0.6s,mb3.1,baz=115,slow=7.4,SNR=4.3							
MKAR	**Makanchi Array**	**44.31**	**302**	P		**P**	**15 24 45.2**	**-1.6**
	0.2nm,0.5s,mb3.1,baz=87,slow=11,SNR=2.9							
KURK	**Kurchatov**	**46.02**	**308**	P		**P**	**15 25 00.8**	**+0.5**
	0.6nm,0.4s,mb3.9,baz=80,slow=8.1,SNR=4.2							
WRA	**Warramunga Arr**	**57.95**	**189**	P		**P**	**15 26 28.3**	**-1.1**
	0.7nm,0.6s,mb3.9,baz=6.4,slow=7.4,SNR=14							
ASAR	**Alice Springs**	**61.68**	**189**	P		**P**	**15 26 53.9**	**-1.1**
	0.2nm,1.1s,mb3.2,baz=13,slow=13,SNR=4.4							

*TEH **19** 15:25:12.0, 35°86.N×48°98.E, h20km, ML4.0*
*CSEM **19** 15:26:56.5±0.2, 35°68.N×48°93.E, h0km±1km, ML4.0, Error ellipse: s-maj=2.2km s-min=1.4km az=7.0*
*THR **19** 15:26:57.5±1.4, 35°72.N×48°92.E, h15km±11km, ML4.0*
*IDC **19** 15:26:57.1±1.1, 35°63.N×48°85.E, h0km, mb3.7/8, mb1 3.7/11, mb1mx3.6/27, mbtmp3.7/11, ML3.2/3, Error ellipse: s-maj=20.7km s-min=15.4km az=170.0*
*ISCJB **19** 15:26:58.8±0.3, 35°78.N±003×48°97.E±003, h10km, mb3.7/8, Error ellipse: s-maj=3.8km s-min=3.0km az=1.7*
*NEIC **19** 15:27:00.6±0.5, 35°82.N×49°01.E, h10km, mb3.9/1, ML4.0(THR), MN4.0(TEH), Error ellipse: s-maj=9.5km s-min=5.6km az=206.0*

ISC 19 15:26:59.6±0.2, 35°79.N±002×48°95.E±002, h10km, n88, σ1.46/109, mb3.7/8, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IRAZ	**Razeghan**	**0.89**	**115**	Pg		**Pg**	**15 27 13.6**	**-3.0**
IRAZ	**Razeghan**	**0.89**	**115**	*e*Pg		**Pg**	**15 27 13.7**	**-2.9**
IRAZ				*e*			15 27 34.7	
ZNJK	**Zanjan**	**0.91**	**346**	*e*Pg		**Pg**	**15 27 15.6**	**-1.4**
ZNJK				*e*Sg		**Sg**	**15 27 28.9**	**+0.1**
IMHD	**Mahdasht**	**1.40**	**94**	*e*Pg		**Pn**	**15 27 23.5**	**-1.7**
IMHD				*e*			15 27 49.6	
SNGE	**Sanandaj**	**1.48**	**242**	*e*Pg		**Pn**	**15 27 23.5**	**-2.7**
SNGE				AML	AML		15 27 43.8	
	comp=E,3µm,0.5s							
SNGE	**Sanandaj**	**1.48**	**242**	*e*Pg		**Pn**	**15 27 23.8**	**-2.5**
	SNR=90							
ASAO	**Ashtian**	**1.52**	**144**	*e*Pg		**Pn**	**15 27 25.0**	**-1.8**
THKV	**Tehran--Karaj**	**1.57**	**85**	*e*Pg		**Pn**	**15 27 27.1**	**-0.4**
THKV				AML	AML		15 28 01.4	
	comp=N,1µm,0.5s							
CHTH	**Charan**	**1.77**	**86**	*e*Pg		**Pn**	**15 27 30.1**	**-0.1**
CHTH				*e*Sg		**Sg**	**15 27 54.8**	**-1.8**
CHTH	**Charan**	**1.77**	**86**	*e*Pg		**Pn**	**15 27 30.4**	**+0.1**
	SNR=90							
CHTH				*e*Sg		**Sg**	**15 27 54.8**	**-1.8**
	SNR=90							
ILIN	**Lien**	**1.84**	**242**	Pn		**Pn**	**15 27 30.2**	**-1.0**
ILIN	**Lien**	**1.84**	**242**	*e*Pn		**Pn**	**15 27 30.3**	**-0.9**
ILIN				*e*			15 27 57.9	
IKOM	**Komasi**	**2.00**	**217**	*e*Pn		**Pn**	**15 27 32.4**	**-1.0**
IKOM				Sn		**Sn**	**15 28 00.6**	**+2.2**
IKOM	**Komasi**	**2.00**	**217**	*e*Pn		**Pn**	**15 27 32.4**	**-1.0**
IKOM				*e*Sn		**Sn**	**15 28 00.7**	**+2.3**
IKOM				*e*			15 28 10.4	
IVIS	**Veis**	**2.13**	**234**	*e*Pn		**Pn**	**15 27 35.5**	**+0.3**
IVIS				*e*Sn		**Sn**	**15 28 03.1**	**+1.4**
IVIS	**Veis**	**2.13**	**234**	*e*Pn		**Pn

IBAF				*e*			15 30 59.8	
RDF	**Al-Radifah**	**6.95**	**190**	*e*P		**Pn**	**15 28 40.0**	**-1.4**
	baz=190							
RDF					AML	AML	15 29 59.6	
	comp=Z,15nm,0.5s,baz=190							
KFJS		**7.63**	**187**	P		**Pn**	**15 28 48.3**	**-2.4**
IKRD	**Kardeh**	**7.79**	**80**	Pn		**Pn**	**15 29 03.5**	**+11**
IKRD	**Kardeh**	**7.79**	**80**	*e*Pn		**Pn**	**15 29 03.6**	**+11**
ASYS		**9.14**	**207**	P		**Pn**	**15 29 07.9**	**-3.6**
ASF	**Jabal al Asfar**	**10.64**	**254**	Pn		**Pn**	**15 29 29.3**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=323,slow=11,SNR=6.4							
BRTR	**Keskin Array B**	**12.74**	**293**	Pn		**Pn**	**15 29 58.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=91,slow=17,SNR=2.7							
LYLS		**13.78**	**187**	P		**Pn**	**15 30 08.9**	**-6.1**
AKTK	**Aktyubinsk**	**16.05**	**21**	Pn		**Pn**	**15 30 42.7**	**-2.4**
AKTK				Sn		**Sn**	**15 33 36.6**	**-6.4**
AKTO	**Aktyubinsk**	**16.05**	**21**	Pn		**Pn**	**15 30 42.7**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=210,slow=15,SNR=5.9							
AKTO				Sn		**Sn**	**15 33 36.6**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=96,slow=19,SNR=2.1							
AKASG	**Malin Array Be**	**20.61**	**322**	P		**P**	**15 31 36.9**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=132,slow=9.3,SNR=4.0							
BRVK	**Borovoye**	**22.88**	**34**	*e*P		**P**	**15 32 04.9**	**+1.8**
BRVK	**Borovoye**	**22.88**	**34**	*e*P		**P**	**15 32 04.9**	**+1.9**
	comp=Z,3.1nm,0.8s,mb3.8							
BVAR	**Borovoye Array**	**22.91**	**35**	P		**P**	**15 32 04.7**	**+1.3**
	comp=Z,2.2nm,0.7s,mb3.7,baz=216,slow=7.3,SNR=8.1							
KURK	**Kurchatov**	**26.04**	**46**	P		**P**	**15 32 33.1**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.5,baz=250,slow=9.1,SNR=3.8							
MKAR	**Makanchi Array**	**27.16**	**56**	P		**P**	**15 32 43.6**	**+0.7**
	comp=Z,0.6nm,0.6s,mb3.3,baz=244,slow=7.0,SNR=5.4							
ZALV	**Zalesovo Beam**	**30.79**	**43**	P		**P**	**15 33 16.4**	**+1.3**
	comp=Z,0.6nm,0.5s,mb3.7,baz=247,slow=7.7,SNR=3.7							
KEST	**Kesra**	**31.99**	**282**	P		**P**	**15 33 25.7**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.8,baz=273,slow=4.1,SNR=3.9							
CMAR	**Chiang Mai Arr**	**47.21**	**98**	P		**P**	**15 35 31.1**	**-1.7**
	comp=Z,0.7nm,0.6s,mb3.7,baz=295,slow=9.0,SNR=6.3							
CMAR	**Chiang Mai Arr**	**47.21**	**98**	P		**P**	**15 35 31.0**	**-1.7**
TORD	**Torodi Ar. Bea**	**48.00**	**254**	P		**P**	**15 35 37.1**	**-1.8**
	comp=Z,0.7nm,0.9s,mb3.7,baz=46,slow=8.4,SNR=3.7							

IDC 19 15:35:54.2±0.9, 4109S×4462E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, MS3.2/2, Ms1 3.1/2, ms1mx3.0/24, Error ellipse: s-maj=52.7km s-min=27.0km az=19.0, Crozet Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
BOSA	**Boshof**	**20.13**	**302**	LR	LR		15 46 24.5	
	comp=Z,149nm,21.8s,baz=128,slow=31							
TORD	**Torodi Ar. Bea**	**66.97**	**314**	P		P	15 46 49.3	+0.6
	0.8nm,1.1s,baz=150,slow=5.8,SNR=3.0							
ASAR	**Alice Springs**	**74.34**	**108**	P		P	15 47 33.6	-0.1
	0.6nm,0.9s,baz=228,slow=5.6,SNR=7.2							
WRA	**Warramunga Arr**	**76.97**	**105**	P		P	15 47 49.5	+0.6
	0.8nm,1.0s,baz=223,slow=4.8,SNR=5.6							
CMAR	**Chiang Mai Arr**	**77.73**	**52**	P		P	15 47 53.0	0.0
	0.9nm,0.9s,baz=228,slow=6.7,SNR=6.8							
PLCA	**Paso Flores**	**79.56**	**224**	LR		LR	16 14 36.3	
	comp=Z,6.4nm,21.9s,baz=7.7,slow=29							
TXAR	**Lajitas Array**	**151.71**	**256**	PKPbc		PKPbc	15 55 50.6	0.0
	1.0nm,0.9s,baz=127,slow=7.2,SNR=8.0							
TXAR				PKPab		PKPab	15 55 58.9	-0.5
	1.1nm,0.9s,baz=128,slow=8.1,SNR=7.2							
YKA	**Yellowknife Ar**	**155.23**	**337**	PKPab		PKPab	15 56 12.0	-1.2
	0.3nm,0.7s,baz=35,slow=4.7,SNR=5.3							

*ISCJB **19** 15:36:40.9±1.4, 468N±0.1×153.1E±02, h38km±12km, mb3.8/10, Error ellipse: s-maj=27.7km s-min=8.4km az=140.4*
*MOS **19** 15:36:41.5±0.9, 4681N×15297E, h43km, mb4.6/1, Error ellipse: s-maj=21.1km s-min=11.5km az=60.3*
*NEIC **19** 15:36:44.1±1.2, 4677N×15300E, h51km±10km, mb4.4/1, Error ellipse: s-maj=17.7km s-min=9.1km az=139.0*
*IDC **19** 15:36:45.3±3.1, 4683N×15300E, h62km±27km, mb3.4/10, mb1 3.7/12, mb1mx3.5/25, mbtmp3.5/12, ML3.3/2, Error ellipse: s-maj=29.3km s-min=18.1km az=150.0*
ISC 19 15:36:43.7±1.2, 468N±01×1531E±02, h46km±10km, n20, σ0s73/22, mb3.8/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
SKR	**Severo-Kuril's**	**4.39**	**26**	*e*PN		**Pn**	**15 37 47.0**	**-0.7**
SKR				*e*			15 38 36.5	
YUK	**Yuzh-Kuril'sk**	**5.77**	**244**	*e*PN		**Pn**	**15 38 05.1**	**-1.6**
YUK				*e*S		**Sn**	**15 39 12.1**	**+0.5**
YUK					smax			
	comp=N,190nm,0.5s							
YUK					smax			
	comp=E,190nm,0.5s							
PETK	**Petropavlovsk-**	**7.00**	**24**	P		**Pn**	**15 38 24.1**	**+0.7**
	comp=E,0.2nm,0.3s,baz=176,slow=10,SNR=8.2							
PETK				S		**Sn**	**15 39 51.1**	**+9.5**
	baz=203,slow=21,SNR=2.4							
ASAJ	**Asahikawa**	**7.83**	**254**	P		**Pn**	**15 38 36.0**	**+1.1**
	comp=E,0.7nm,0.3s,baz=77,slow=16,SNR=7.7							
ASAJ	**Asahikawa**	**7.83**	**254**	PN		**Pn**	**15 38 36.1**	**+1.1**
ASAJ					pmax	pmax		
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**8.55**	**240**	*e*PN		**Pn**	**15 38 44.5**	**-0.3**
KSRS	**Korea Array**	**20.78**	**252**	P		**P**	**15 41 21.5**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=48,slow=10.0,SNR=2.8							
INK	**Inuvik**	**41.64**	**32**	*e*P		**P**	**15 44 27.6**	**+0.7**
MKAR	**Makanchi Array**	**46.90**	**297**	P		**P**	**15 45 09.4**	**+0.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=72,slow=8.0,SNR=3.7							
BRVK	**Borovoye**	**50.85**	**309**	P		**P**	**15 45 39.9**	**+0.5**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
BRVK	**Borovoye**	**50.85**	**309**	P		**P**	**15 45 39.9**	**+0.5**
	comp=Z,2.5nm,0.6s,mb4.3							
YKA	**Yellowknife Ar**	**50.91**	**37**	P		**P**	**15 45 40.3**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=296,slow=7.4,SNR=6.6							
PDAR	**Pinedale Array**	**64.75**	**54**	P		**P**	**15 47 17.4**	**+0.3**
	comp=Z,0.5nm,0.8s,mb3.6,baz=199,slow=4.1,SNR=3.8							
NB2	**NORSAR Subarra**	**68.19**	**341**	P		**P**	**15 47 37.9**	**-0.8**
	comp=Z,1.3nm,0.6s,mb4.1,baz=27,slow=6.5							
NOA	**NORSAR Array B**	**68.19**	**341**	P		**P**	**15 47 38.0**	**-0.7**
	comp=Z,1.8nm,0.7s,mb4.2,baz=28,slow=6.1,SNR=5.2							
AKASG	**Malin Array Be**	**71.50**	**326**	P		**P**	**15 47 57.8**	**-1.5**
	comp=Z,1.4nm,0.4s,mb4.2,baz=35,slow=6.6,SNR=2.9							
ASAR	**Alice Springs**	**72.23**	**198**	P		P	**15 48 03.5**	**-0.3**
	comp=Z,0.2nm,0.7s,mb3.2,baz=21,slow=4.1,SNR=4.1							
MLR	**Muntele Rosu**	**77.02**	**325**	P		**P**	**15 48 31.2**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.4,baz=173,slow=13,SNR=3.6							
TXAR	**Lajitas Array**	**77.50**	**61**	P		**P**	**15 48 34.6**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=301,slow=5.6,SNR=7.3							
BRTR	**Keskin Array B**	**78.34**	**317**	P		**P**	**15 48 39.0**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.7,baz=56,slow=7.6,SNR=4.2							

JMA 19 15:39:34.3, 2942N×14141E, h125km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
CBIJ	**Chichi jima**	**2.41**	**163**	P		Pn	15 40 13.6	+0.4
CBIJ				*e*S		Sn	15 40 43.5	+0.4
JHHJ	**Haha-jima-NKT**	**2.86**	**166**	P		Pn	15 40 19.4	+0.4
JHHJ				*e*S		Sn	15 40 54.5	+1.1
JHJ2	**Mitsune**	**3.92**	**340**	*e*S		Sn	15 41 17.9	-0.5
BSO1	**Boso 1**	**5.23**	**356**	P		Pn	15 40 52.8	+2.4
BSO1				*e*S		Sn	15 41 51.3	+1.7
BSO3	**Boso 3**	**5.42**	**352**	*e*S		Sn	15 41 56.1	+1.9
BSO4	**Boso 4**	**5.63**	**351**	*e*S		Sn	15 42 02.6	+3.4
JOD2	**Odawara 2**	**6.15**	**342**	P		Pn	15 41 04.7	+2.0
JOD2				*e*S		Sn	15 42 12.5	+0.8
JHU	**Hanno**	**6.66**	**345**	P		Pn	15 41 11.2	+1.6
JHU				*e*S		Sn	15 42 23.7	-0.4
JYT	**Yasato**	**6.87**	**352**	P		Pn	15 41 13.6	+1.2
JYT				*e*S		Sn	15 42 27.2	-1.8
JRY	**Ryogami san**	**6.91**	**343**	P		Pn	15 41 14.4	+1.4
JRY				S		Sn	15 42 30.6	+0.5
JAG	**Ashikaga**	**7.18**	**347**	P		Pn	15 41 16.3	-0.3
JAG				*e*S		Sn	15 42 33.0	-3.6
JHO	**Hitachi**	**7.21**	**355**	P		Pn	15 41 17.9	+0.9
JHO				*e*S		Sn	15 42 33.1	-4.2
JFK	**Kawauchi**	**7.94**	**357**	P		Pn	15 41 27.1	+0.2
JFK				*e*S		Sn	15 42 53.1	-1.9
JMK	**Ichinoseki**	**9.51**	**359**	P		Pn	15 41 50.2	+2.2
JMK				*e*S		Sn	15 43 29.4	-3.6

*TEH **19** 15:40:17.9, 3098N×4870E, h18km, ML3.5*
*CSEM **19** 15:40:44.0, 3107N×4919E, h35km, ML3.1, After THR*
*THR **19** 15:40:44.1±0.3, 3107N×4920E, h35km±4km, ML3.1*
ISC 19 15:40:43.8±3.7, 311N±02×492E±02, h10km±18km, n15, σ0s38/15, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.08**	**342**	*e*Pg		**Pg**	**15 41 04.3**	**-0.3**
SHGR				*e*Sg		**Sg**	**15 41 18.9**	**+0.3**
SHGR					AML	AML	15 41 21.0	
	comp=E,358nm,0.4s							
SHGR					AML	AML	15 41 28.6	
	comp=N,288nm,0.6s							
SHGR	**Shooshtar-Gavs**	**1.08**	**342**	*e*Pg		**Pg**	**15 41 04.3**	**-0.3**
	SNR=102							
SHGR				*e*Sg		**Sg**	**15 41 18.9**	**+0.3**
	comp=N,288nm,0.6s,SNR=102							
IPIR	**Pirpir**	**2.15**	**42**	*e*Pn		**Pn**	**15 41 19.5**	**-0.3**
IPIR				*e*			15 41 48.3	
IGAR	**Gharneh**	**2.76**	**61**	*e*Pn		**Pn**	**15 41 29.0**	**+0.9**
IGAR				*e*			15 42 03.9	
IKLH	**Kolahrood**	**3.01**	**41**	*e*Pn		**Pn**	**15 41 31.2**	**-0.4**
IKLH				*e*			15 42 11.0	
IZEF	**Zefreh**	**3.22**	**55**	*e*Pn		**Pn**	**15 41 33.8**	**-0.6**
IZEF				*e*			15 42 20.9	
NASN	**Na'in**	**3.52**	**60**	*e*Pn		**Pn**	**15 41 38.7**	**+0.2**
NASN					AML	AML	15 42 19.8	
	comp=N,32nm,0.3s							
ASAO	**Ashtian**	**3.53**	**11**	*e*Pn		**Pn**	**15 41 38.9**	**+0.2**
ASAO					AML	AML	15 42 33.4	
	comp=N,46nm,0.6s							
ASAO					AML	AML	15 42 36.2	
	comp=E,36nm,0.8s							
GHVR	**GHOM**	**3.82**	**27**	*e*Pn		**Pn**	**15 41 42.5**	**-0.2**
GHVR					AML	AML	15 42 39.9	
	comp=N,27nm,0.5s							
GHVR					AML	AML	15 42 45.7	
	comp=E,30nm,0.7s							
ISAD	**Sadrabad**	**3.92**	**77**	*e*Pn		**Pn**	**15 41 44.4**	**+0.3**
ISAD				*e*			15 42 34.7	
SNGE	**Sanandaj**	**4.29**	**339**	*e*Pn		**Pn**	**15 41 49.3**	**+0.1**
SNGE					AML	AML	15 42 41.0	
	comp=N,24nm,0.8s							
SNGE					AML	AML	15 42 45.7	
	comp=E,16nm,0.8s							
BHD	**Baghdad**	**4.63**	**299**	*e*Pn		x	15 41 43.0	
BHD				*e*Sn		x	15 42 34.0	
IMEH	**Mehriz**	**4.65**	**85**	*e*Pn		**Pn**	**15 41 54.3**	**+0.2**
IMEH				*e*			15 42 52.2	
IBAF	**Bafgh**	**5.47**	**83**	*e*Pn		**Pn**	**15 42 05.1**	**-0.3**
IBAF				*e*			15 42 06.0	
MSL	**Mosul**	**7.34**	**318**	*e*Pn		x	15 42 15.0	

NEIC 19 15:43:45.3, 3730S×17906E, h15km, ML3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.66**	**246**	P	Pg	15 43 58.0	-0.1
MXZ				S	Sg	15 44 05.6	-1.2
PUZ	**Puketiti**	**1.00**	**219**	P	Pb	15 44 03.8	-0.5
MWZ	**Matawai**	**1.59**	**229**	P	Pn	15 44 12.3	-0.6
URZ	**Urewera**	**1.82**	**238**	P	Pn	15 44 15.9	-0.1
EDRZ	**Edgecumbe**	**2.01**	**246**	P	Pn	15 44 18.6	-0.1
MARZ	**Manawahe**	**2.01**	**249**	P	Pn	15 44 18.2	-0.5
KNZ	**Kokohu**	**2.04**	**212**	P	Pn	15 44 17.3	-1.7
KUZ	**Kuaotunu**	**2.73**	**281**	P	Pn	15 44 24.8	-3.8
BKZ	**Black Stump Fm**	**2.75**	**227**	P	Pn	15 44 27.8	-1.0
MKAZ	**Moumakai**	**3.11**	**272**	P	Pn	15 44 34.3	+0.5
MOVZ	**Moawhango**	**3.34**	**230**	P	Pn	15 44 35.9	-1.1
WNVZ	**Wahianoa**	**3.39**	**232**	P	Pn	15 44 36.5	-1.2
BFZ	**Birch Farm**	**4.03**	**212**	P	Pn	15 44 42.7	-3.7
WAZ	**Wanganui**	**4.03**	**231**	P	Pn	15 44 46.0	-0.4
WCZ	**Waipu Caves**	**4.03**	**288**	P	Pn	15 44 47.0	+0.6
MRZ	**Mangatainoka R**	**4.32**	**218**	P	Pn	15 44 46.3	-4.1
MTW	**Mount Morrison**	**4.74**	**215**	P	Pn	15 44 51.7	-4.5
CAW	**Cannon Point**	**4.91**	**218**	P	Pn	15 44 53.9	-4.6
NNZ	**Nelson**	**5.89**	**227**	P	Pn	15 45 07.7	-4.3
LTZ	**Lake Taylor**	**7.56**	**221**	P	Pn	15 45 29.4	-5.4
WHZ	**Wether Hill Ro**	**11.95**	**221**	P	Pn	15 46 38.9	+4.0
DCZ	**Deep Cove**	**12.10**	**224**	P	Pn	15 46 27.1	-10

IDC 19 15:54:13.6±3.9, 2295S×17562W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.6/15, mbtmp3.8/2, Error ellipse: s-maj=188.6km s-min=56.5km az=152.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
ASAR	**Alice Springs**	**46.16**	**259**	P		P	16 02 41.2	+0.9
	0.8nm,0.5s,baz=92,slow=8.0,SNR=39							
ASAR					PcP	PcP	16 04 16.2	-0.2
	0.2nm,0.7s,baz=112,slow=4.0,SNR=5.3							
WRA	**Warramunga Arr**	**46.50**	**264**	P		P	16 02 42.0	-1.0
	0.5nm,0.4s,baz=105,slow=8.1,SNR=27							
AKASG	**Malin Array Be**	**146.21**	**331**	PKPbc		PKPbc	16 13 54.9	-0.9
	0.4nm,0.3s,baz=46,slow=4.2,SNR=4.9							

*BJI **19** 16:04:27.6, 1317N×12582E, h10km, mB5.0, mb4.6, Ms4.3, Msz4.2*
*ISCJB **19** 16:04:32.6±1.2, 1377N±003×12551E±004, h7km±7km, mb4.5/47, MS3.7/13, Error ellipse: s-maj=6.3km s-min=4.6km az=179.2*
*NEIC **19** 16:04:34.3±0.3, 1368N×12552E, h10km, mb4.7/19, Error ellipse: s-maj=10.3km s-min=5.8km az=60.0*
*MOS **19** 16:04:35.9±1.0, 1369N×12551E, h33km, mb4.8/15, Error ellipse: s-maj=17.1km s-min=8.6km az=112.5*
*MAN **19** 16:04:36, 1385N×12540E, h35km, mb4.4, ML3.2, MS3.1*
*IDC **19** 16:04:38.7±0.8, 1368N×12545E, h39km±6km, mb4.1/13, mb1 4.2/13, mb1mx4.1/22, mbtmp4.1/13, MS3.6/6, Ms1 3.7/6, ms1mx3.3/38, Error ellipse: s-maj=21.5km s-min=12.3km az=74.0*
ISC 19 16:04:35.2±1.3, 1374N±003×12547E±004, h12km±8km, h14km±2.7km, pP-P, n119, σ1s12/126, mb4.5/47, MS3.7/13, 11C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
PVCP	**Virac**	**1.28**	**264**	*e*P		**Pn**	**16 04 57.7**	**-1.3**
CNP	**Catarman**	**1.45**	**213**	*e*P		**Pn**	**16 05 01.2**	**-0.1**
CNP				*e*S		**Sn**	**16 05 19.8**	**-0.4**
MMPH	**Masbate**	**2.26**	**233**	*e*P		**Pn**	**16 05 16.7**	**+4.3**
MMPH				*e*S		**Sn**	**16 05 44.8**	**+4.6**
PLP	**Palo**	**2.60**	**191↑**	*e*P		**Pn**	**16 05 18.3**	**+1.2**
PLP				*i* S		**Sn**	**16 05 48.0**	**-0.6**
AUQP	**San Andres**	**2.75**	**262**	*e*P		**Pn**	**16 05 20.3**	**+1.2**
OCLP	**Ormoc**	**2.80**	**198**	*e*P		**Pn**	**16 05 21.5**	**+1.7**
GQP	**Guinayangan**	**2.94**	**274↑**	*i*P		**Pn**	**16 05 21.3**	**-0.5**
GQP				*i* S		**Sn**	**16 05 56.1**	**-0.8**
RCP	**Roxas**	**3.43**	**231↑**	*e*P		**Pn**	**16 05 29.1**	**+0.7**
POLP	**Polilio Island**	**3.56**	**286**	*e*P		**Pn**	**16 05 29.9**	**-0.3**
OTRP	**Odiongan**	**3.63**	**248**	*e*P		**Pn**	**16 05 30.9**	**-0.3**
MSLP	**Maasin**	**3.63**	**189**	*e*P		**Pn**	**16 05 31.1**	**-0.2**
KALP	**Kalibo**	**3.68**	**236**	*e*P		**Pn**	**16 05 23.8**	**-8.1**
LLP	**Lapu-Lapu**	**3.71**	**204**	*e*P		**Pn**	**16 05 31.8**	**-0.5**
LLP				*e*S		**Sn**	**16 06 08.8**	**-7.1**
GUIM	**Jordan**	**4.18**	**223**	*e*P		**Pn**	**16 05 39.7**	**+0.9**
BALP	**Baler**	**4.26**	**298**	*e*P		**Pn**	**16 05 36.6**	**-3.3**
PALP	**Palanan**	**4.42**	**319**	*e*P		**Pn**	**16 05 40.3**	**-1.8**
SJMP	**San Jose**	**4.42**	**254**	*e*P		**Pn**	**16 05 43.6**	**+1.4**
PCPH	**Palayan**	**4.60**	**294↑**	*e*P		**Pn**	**16 05 42.0**	**-2.6**
PCPH				*e*S		**Sn**	**16 06 31.3**	**-6.7**
CAUP	**Cauayan**	**4.74**	**313**	*e*P		**Pn**	**16 05 45.8**	**-0.8**
LUBP	**Lubang**	**5.07**	**271**	*e*P		**Pn**	**16 05 50.5**	**-0.6**
CUYO	**Cuyo Island**	**5.21**	**237**	*e*P		**Pn**	**16 05 53.4**	**+0.4**
BUSP	**Coron**	**5.42**	**252**	*e*P		**Pn**	**16 05 56.8**	**+1.0**
SCZP	**Santa Cruz**	**5.74**	**291**	*e*P		**Pn**	**16 05 58.4**	**-1.9**
BOLP	**Bolinao**	**5.97**	**297**	*e*P		**Pn**	**16 06 02.2**	**-1.3**
ABRA	**Dolores**	**6.01**	**311**	*e*P		**Pn**	**16 06 03.5**	**-0.4**
PAGZ	**Pagadian**	**6.20**	**199**	*e*P		**Pn**	**16 06 08.9**	**+2.3**
ENPP	**El Nido**	**6.42**	**248**	*e*P		**Pn**	**16 06 10.7**	**+1.1**
QIZ	**Qiongzhong**	**15.88**	**291**	P		**Pn**	**16 08 16.0**	**-2.7**
QIZ					LR	LR		
	comp=E,302nm,16.8s							
QIZ					LR	LR		
	comp=Z,349nm,17.8s							
NJ2	**Nanjing**	**19.21**	**343**	*e*P		**Pn**	**16 09 00.6**	**+0.6**
NJ2					AMB	AMB		
	comp=Z,20nm,0.8s							
KAPI	**Kappang**	**19.48**	**197**	LR		LR	16 17 12.7	
	comp=Z,139nm,22.0s,baz=30,slow=39							
WHN	**Wuhan**	**19.61**	**330**	P		**Pn**	**16 09 09.5**	**+4.6**
CBIJ	**Chichi jima**	**20.51**	**47**	LR		LR	16 15 13.2	
	comp=Z,120nm,19.8s,MS3.3,baz=245,slow=31							
GYA	**Guiyang**	**21.69**	**309**	P		**P**	**16 09 29.3**	**+3.3**
GYA				PP			16 09 54.3	
GYA				S		**S**	**16 13 28.3**	**+2.4**
GYA				SS			16 14 08.3	
GYA					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2							
GYA					AMB	AMB		
	comp=Z,50nm,5.0s							
GYA					LR	LR		
	comp=N,380nm,12.0s,MS4.2							
GYA					LR	LR		
	comp=E,470nm,11.8s,MS4.2							
GYA					LR	LR		
	comp=Z,660nm,13.0s,MS4.2							
JHJ	**Hachijo jima 2**	**23.29**	**32**	LR		LR	16 16 54.9	
	comp=Z,100nm,18.6s,MS3.3,baz=22,slow=32							
KSRS	**Korea Array**	**23.72**	**5**	P		**P**	**16 09 47.5**	**+0.3**
	comp=Z,5.0nm,0.9s,mb3.9,baz=180,slow=10,SNR=14							
KSRS					pP		16 09 58.5	
	comp=Z,7.7nm,0.9s,baz=178,slow=10.0,SNR=10							
KMI	**Kunming**	**24.20**	**301**	P		**P**	**16 09 52.8**	**+1.1**
KMI				AP			16 09 54.9	
KMI				S		**S**	**16 14 07.4**	**-2.5**
KMI					AMB	AMB		
	comp=Z,6.0nm,1.1s,mb3.9							
KMI					LR	LR		
	comp=N,208nm,14.4s,MS3.8							
KMI					LR	LR		
	comp=E,137nm,16.8s,MS3.8							
KMI					LR	LR		
	comp=Z,207nm,14.0s,MS3.8							
XAN	**Xi'an**	**25.17**	**326**	P		**P**	**16 10 00.3**	**-0.2**
XAN				AP		pP	16 10 03.3	-1.0
XAN				PP			16 10 39.8	
XAN				S		**S**	**16 14 26.9**	**+1.5**
XAN				SS			16 15 30.3	
XAN					AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.2							
XAN					LR	LR		
	comp=Z,68nm,22.4s,MS3.1							
CHRT	**Chiangrai**	**25.31**	**287**	⇑P		**P**	**16 10 03.0**	**+1.1**
CM31	**Chiang Mai Arr**	**25.90**	**284**	*e*P		**P**	**16 10 05.1**	**-2.1**
CMAR	**Chiang Mai Arr**	**25.90**	**284**	P		**P**	**16 10 06.8**	**-0.4**
	comp=Z,11nm,0.8s,mb4.5,baz=95,slow=7.9,SNR=69							
CMAR					PcP	PcP	16 13 36.0	-0.3
	comp=Z,1.5nm,1.0s,baz=9.7,slow=1.3,SNR=6.5							
CMAR					pPcP		16 13 48.3	
	comp=Z,1.0nm,0.7s,baz=45,slow=1.7,SNR=6.2							
CMAR					LR	LR	16 21 04.5	
	comp=Z,89nm,20.1s,MS3.3,baz=85,slow=38							
CMAR	**Chiang Mai Arr**	**25.90**	**284**	P		**P**	**16 10 06.9**	**-0.3**
CMAR							16 13 36.0	
CHG	**Chiang Mai**	**25.94**	**285**	P		**P**	**16 10 07.0**	**-0.6**
CHTO	**Chiang Mai**	**25.94**	**285**	P		**P**	**16 10 03.3**	**-4.3**
CHTO					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2							
CHTO	**Chiang Mai**	**25.94**	**285**	P		**P**	**16 10 03.3**	**-4.3**
	comp=Z,6.1nm,0.8s,mb4.2							
CD2	**Chengdu**	**26.28**	**314**	P		**P**	**16 10 09.8**	**-0.8**
CD2				AP		pP	16 10 12.8	-1.6
CD2				XP		sP	16 10 15.8	-0.2
CD2				PP			16 10 52.3	
CD2				PCP		PcP	16 13 36.0	-0.9
CD2				S		**S**	**16 14 40.6**	**-2.5**
CD2					AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6							
CD2					AMB	AMB		
	comp=Z,150nm,6.0s							
CD2					LR	LR		
	comp=N,220nm,9.5s							
CD2					LR	LR		
	comp=Z,250nm,5.9s							
KAKA	**Kakadu**	**27.17**	**165**	*e*P		x	16 09 17.0	
	comp=Z,11nm,0.6s							
BJI	**Beijing**	**27.44**	**344**	P		**P**	**16 10 21.5**	**+0.6**
BJI					AMB	AMB		
	comp=Z,12

WRA						16 13 58.2	
WB2	**Warramunga Arr**	**34.59**	**165**	*e*P	**P**	**16 11 22.4**	**-1.7**
LSA	**Lhasa**	**35.45**	**302**	P	**P**	**16 11 33.0**	**+1.5**
LSA	**Lhasa**	**35.45**	**302**	*e*P	**P**	**16 11 33.5**	**+2.0**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LSA	**Lhasa**	**35.45**	**302**	*e*P	**P**	**16 11 33.5**	**+2.0**
	comp=Z,7.9nm,0.9s,mb4.6						
HIA	**Hailar**	**35.74**	**354**	*i* P	**P**	**16 11 33.3**	**-0.4**
KLR	**Kul'dur**	**35.76**	**7**	*e*P	**P**	**16 11 30.2**	**-3.7**
ULN	**Ulaanbaatar**	**37.31**	**339**	*e*P	**P**	**16 11 47.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
ULN	**Ulaanbaatar**	**37.31**	**339**	*e*P	**P**	**16 11 47.8**	**+0.6**
	comp=Z,1.9nm,0.4s,mb4.3						
SONM	**Songino Array**	**37.52**	**339**	P	**P**	**16 11 49.5**	**+0.6**
	comp=Z,3.5nm,0.9s,mb4.1,baz=158,slow=8.1,SNR=16						
SONM				pP	pP	16 12 00.5	+7.7
	comp=Z,5.6nm,0.9s,baz=156,slow=9.0,SNR=11						
SONM				PcP	PcP	16 14 06.8	-0.2
	comp=Z,0.7nm,0.9s,baz=145,slow=3.6,SNR=2.7						
SONM				pPcP		16 14 18.2	
	comp=Z,0.6nm,0.7s,baz=173,slow=5.8,SNR=3.5						
SONM	**Songino Array**	**37.52**	**339**	P	**P**	**16 11 49.5**	**+0.6**
SONM				*PP	pP	16 12 00.5	+7.8
SONM						16 14 06.8	
TAPN	**Taplejung**	**37.70**	**297**	*e*P	**P**	**16 11 52.0**	**+1.2**
ODAN	**Odare**	**37.87**	**296**	*e*P	**P**	**16 11 53.0**	**+0.8**
	comp=Z,25nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**38.08**	**167**	P	**P**	**16 11 53.4**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.3,baz=348,slow=7.0,SNR=92						
ASAR				PcP	PcP	16 14 08.1	-1.0
	comp=Z,1.5nm,0.8s,baz=342,slow=2.9,SNR=5.5						
RAMN	**Ramite**	**38.58**	**296**	*e*P	**P**	**16 11 59.2**	**+1.0**
CTA	**Charters Tower**	**39.35**	**148**	P	**P**	**16 12 04.6**	**0.0**
	comp=Z,7.8nm,0.9s,mb4.5,baz=331,slow=8.3,SNR=6.0						
GUN	**Gumba**	**39.41**	**297**	*e*P	**P**	**16 12 06.3**	**+1.2**
	comp=Z,34nm,0.9s,mb5.1						
KKN	**Kakani**	**39.90**	**297**	*e*P	**P**	**16 12 09.8**	**+0.6**
GKN	**Gorkha**	**40.50**	**297**	*e*P	**P**	**16 12 14.5**	**+0.3**
	comp=Z,13nm,0.8s,mb4.6						
DANN	**Dangsing**	**41.33**	**297**	*e*P	**P**	**16 12 21.4**	**+0.4**
KOLN	**Koldanda**	**41.35**	**296**	*e*P	**P**	**16 12 21.8**	**+0.6**
	comp=Z,17nm,1.0s,mb4.6						
WMQ	**Urumqi**	**44.04**	**320**	*e*P	**P**	**16 12 42.0**	**-0.8**
FORT	**Forrest**	**44.33**	**177**	*e*P	**P**	**16 12 44.9**	**-0.3**
	comp=Z,17nm,0.7s,mb4.9						
BOD	**Bodaibo**	**44.84**	**351**	*e*P	**P**	**16 12 47.8**	**-1.2**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.0						
PETK	**Petropavlovsk-**	**46.85**	**26**	P	**P**	**16 13 05.5**	**+0.6**
	comp=Z,3.4nm,1.0s,mb4.2,baz=256,slow=5.8,SNR=3.8						
STKA	**Stephens Creek**	**47.92**	**161**	*e*P	**P**	**16 13 13.3**	**-0.2**
	comp=Z,9.2nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**47.92**	**161**	P	**P**	**16 13 13.4**	**0.0**
	comp=Z,9.8nm,0.8s,mb4.9,baz=338,slow=6.8,SNR=26						
YAK	**Yakutsk**	**48.31**	**3**⇓	*e*P	**P**	**16 13 15.9**	**-0.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
MKAR	**Makanchi Array**	**48.82**	**321**	P	**P**	**16 13 21.1**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.2,baz=112,slow=8.5,SNR=12						
MKAR				pP	pP	16 13 32.2	+7.9
	comp=Z,2.6nm,0.7s,baz=115,slow=7.9,SNR=12						
MKAR				PcP	PcP	16 14 44.6	-0.3
	comp=Z,1.1nm,0.9s,baz=105,slow=5.0,SNR=2.5						
MKAR	**Makanchi Array**	**48.82**	**321**	P	**P**	**16 13 21.1**	**+0.8**
MKAR				pP	pP	16 13 32.2	+7.9
MKAR				PcP	PcP	16 14 44.6	-0.3
ZALV	**Zalesovo Beam**	**51.23**	**330**	P	**P**	**16 13 38.1**	**-0.4**
	comp=Z,2.8nm,0.8s,mb4.2,baz=116,slow=6.8,SNR=8.8						
ZALV				pP	pP	16 13 49.2	+6.8
	comp=Z,4.1nm,0.7s,baz=120,slow=8.6,SNR=6.6						
ZALV	**Zalesovo Beam**	**51.23**	**330**	P	**P**	**16 13 38.1**	**-0.4**
ZALV				pP	pP	16 13 49.2	+6.8
AAK	**Ala-Archa**	**52.35**	**314**⇓	*e*P	**P**	**16 13 50.9**	**+3.9**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.9s,mb3.9						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
NVS	**Novosibirsk**	**52.50**	**331**	*e*P	**P**	**16 13 47.1**	**-0.9**
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
NVS				pmax	pmax		
	comp=E,8.0nm,1.8s						
KURK	**Kurchatov**	**52.79**	**324**	*e*P	**P**	**16 13 50.5**	**+0.3**
KURK				*e*		16 14 01.3	
KURK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
KURK	**Kurchatov**	**52.79**	**324**	*e*P	**P**	**16 13 50.5**	**+0.3**
	comp=Z,14nm,0.8s,mb4.9						
KURK				*e*		16 14 01.3	
TOO	**Toolangi**	**54.40**	**160**	*e*P	**P**	**16 14 02.2**	**+0.2**
KBL	**Kabul**	**54.77**	**303**	P	**P**	**16 14 05.2**	**+0.2**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KBL	**Kabul**	**54.77**	**303**	P	**P**	**16 14 05.2**	**+0.2**
	comp=Z,5.1nm,0.9s,mb4.5						
TIXI	**Tiksi**	**57.92**	**1**⇑	*e*P	**P**	**16 14 25.4**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
TIXI	**Tiksi**	**57.92**	**1**	*e*P	**P**	**16 14 25.8**	**-1.0**
	comp=Z,6.1nm,1.0s,mb4.6						
BRVK	**Borovoye**	**58.46**	**324**	*e*P	**P**	**16 14 31.4**	**+0.5**
BRVK				*e*		16 14 42.1	
BRVK				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
BRVK	**Borovoye**	**58.46**	**324**	*e*P	**P**	**16 14 31.4**	**+0.5**
	comp=Z,17nm,1.1s,mb5.0						
BRVK				*e*		16 14 42.1	
BILL	**Bilibino**	**60.31**	**16**⇑	*e*P	**P**	**16 14 43.4**	**0.0**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.6						
ARU	**Arti**	**65.92**	**326**	*c i*P	**P**	**16 15 20.2**	**-0.7**
ARU				*e*S	S	16 24 06.3	-1.5
ARU				*e*SS	SS	16 28 21.1	-1.5
ARU				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.7						
ARU	**Arti**	**65.92**	**326**	*e*P	**P**	**16 15 19.9**	**-1.0**
	comp=Z,6.3nm,0.6s,mb4.8						
ARU				*e*		16 15 31.0	
KIV	**Kislovodsk**	**75.44**	**312**	*e*P	**P**	**16 16 21.6**	**+2.5**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
COLA	**College**	**76.27**	**26**	*i* P	**P**	**16 16 23.3**	**-0.1**
OBN	**Obninsk**	**78.23**	**324**	*e*P	**P**	**16 16 35.2**	**+0.5**
OBN				*i*		16 16 44.4	
OBN				*e*S	S	16 26 19.2	-10
OBN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
EGAK	**Eagle**	**79.12**	**26**	*e*P	**P**	**16 16 39.4**	**0.0**
	comp=Z,3.7nm,1.0s,mb4.3						
INK	**Inuvik**	**81.37**	**22**	P	**P**	**16 16 51.1**	**-0.3**
	comp=Z,4.2nm,1.1s,mb4.3,baz=264,slow=4.6,SNR=7.1						
INK	**Inuvik**	**81.37**	**22**	*e*P	**P**	**16 16 51.0**	**-0.4**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**81.37**	**22**	*e*P	**P**	**16 16 51.0**	**-0.4**
	comp=Z,5.9nm,1.2s,mb4.4						
AKASG	**Malin Array Be**	**83.40**	**320**	*i* P	**P**	**16 17 03.7**	**+1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RES	**Resolute Bay**	**88.24**	**10**	*e*P	**P**	**16 17 25.5**	**-0.4**
RES				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
RES	**Resolute Bay**	**88.24**	**10**	*e*P	**P**	**16 17 25.5**	**-0.4**
	comp=Z,4.9nm,1.1s,mb4.7						
YKA	**Yellowknife Ar**	**90.92**	**24**	P	**P**	**16 17 36.4**	**-2.2**
	comp=Z,0.3nm,0.7s,mb3.7,baz=294,slow=3.8,SNR=6.2						
YKA	**Yellowknife Ar**	**90.92**	**24**⇑	*e*P	**P**	**16 17 41.5**	**+2.8**
YKA	**Yellowknife Ar**	**90.92**	**24**	P	**P**	**16 17 36.4**	**-2.2**
VNDA	**Vanda**	**93.45**	**173**	LR	LR	17 00 37.8	
	comp=Z,102nm,19.7s,MS4.3,baz=280,slow=36						
TORD	**Torodi Ar. Bea**	**118.22**	**293**	PKP	PKPdf	16 23 22.0	-1.3
	comp=Z,0.2nm,0.4s,baz=69,slow=1.4,SNR=3.7						
SDV	**Santo Domingo**	**152.42**	**36**	*e*PKPdf	PKPdf	16 24 24.6	-0.8
SDV				*e*PKPbc	PKPbc	16 24 31.8	-0.4

*ISCJB **19** 16:06:52.9±1.6, 1889N±008×1455E±02, h242km±15km, mb3.1/7, Error ellipse: s-maj=34.6km s-min=12.5km az=172.3*
*NEIC **19** 16:06:53.9±1.5, 1890N×14557E, h239km±14km, mb3.5/1, Error ellipse: s-maj=25.4km s-min=10.0km az=79.0*
*IDC **19** 16:06:53.2±2.1, 1889N×14559E, h232km±21km, mb3.0/6, mb1 3.4/9, mb1mx3.2/23, mbtmp3.2/9, Error ellipse: s-maj=29.3km s-min=13.9km az=80.0*

ISC 19 16:06:53.7±1.5, 1886N±008×1456E±02, h235km±14km, n13, σ0°72/14, mb3.1/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.29**	**187**	P	**Pn**	**16 08 12.8**	**+0.2**
	3.7nm,0.3s,baz=218,slow=19,SNR=4.0						
GUMO				S	**S**	**16 09 14.7**	**-0.7**
	4.9nm,0.3s,baz=30,slow=20,SNR=2.6						
JOW	**Kunigami**	**17.78**	**300**	P	**P**	**16 10 45.1**	**+0.3**
	5.4nm,0.3s,baz=93,slow=16,SNR=6.0						
MJAR	**Matsushiro Arr**	**18.76**	**341**	P	**P**	**16 10 56.4**	**+1.1**
	0.6nm,0.3s,baz=168,slow=10,SNR=7.8						
MAT	**Matsushiro**	**18.76**	**341**	P	**P**	**16 10 56.0**	**+0.6**
WRAB	**Tennant Creek**	**40.09**	**196**	*e*P	**P**	**16 14 07.2**	**+0.6**
	1.0nm,0.5s,mb3.5						
WB2	**Warramunga Arr**	**40.10**	**196**	*e*P	**P**	**16 14 07.2**	**+0.5**
WRA	**Warramunga Arr**	**40.10**	**196**	P	**P**	**16 14 07.4**	**+0.6**
	0.6nm,0.5s,mb3.2,baz=8.7,slow=8.9,SNR=7.4						
SONM	**Songino Array**	**42.93**	**321**	P	**P**	**16 14 28.0**	**-1.3**
	0.3nm,0.7s,mb2.8,baz=138,slow=8.2,SNR=4.3						
ASAR	**Alice Springs**	**43.77**	**196**	P	**P**	**16 14 36.3**	**0.0**
	0.2nm,0.5s,mb2.7,baz=18,slow=6.2,SNR=3.3						
CMAR	**Chiang Mai Arr**	**44.06**	**277**	P	**P**	**16 14 39.1**	**+0.3**
	0.5nm,0.8s,mb2.9,baz=76,slow=7.5,SNR=4.0						
MK31	**Makanchi Array**	**58.25**	**314**	*e*P	**P**	**16 16 23.2**	**-0.4**
MKAR	**Makanchi Array**	**58.25**	**314**	P	**P**	**16 16 22.2**	**-1.4**
	0.7nm,0.6s,mb3.5,baz=90,slow=7.4,SNR=5.5						
YKA	**Yellowknife Ar**	**77.91**	**28**	P	**P**	**16 18 24.8**	**-0.5**
	0.3nm,0.5s,mb3.1,baz=287,slow=5.7,SNR=5.3						

*BJI **19** 16:18:35.1, 51.10N×179.20W, h47km, mb4.7*
*ISCJB **19** 16:18:39.4±1.3, 51.1N±0.1×179.29W±008, h54km±10km, mb4.2/26, Error ellipse: s-maj=21.1km s-min=7.8km az=175.2*
*IDC **19** 16:18:40.6±3.6, 51.11N×179.25W, h54km±31km, mb3.8/17, mb1 4.0/19, mb1mx3.9/26, mbtmp3.8/19, ML3.5/2, Error ellipse: s-maj=20.8km s-min=13.7km az=169.0*
*NEIC **19** 16:18:40.1±0.8, 51.12N×179.22W, h48km±6km, mb4.2/3, ML3.6(AEIC), Error ellipse: s-maj=11.5km s-min=4.9km az=178.0*

ISC 19 16:18:40.7±1.2, 511N±01×17927W±008, h50km±10km, n42, σ0°79/45, mb4.2/26, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.79**	**63**	P	**Pn**	**16 19 07.7**	**-1.5**
ADK				S	**Sn**	**16 19 31.7**	**+0.9**
ATKA	**Atka Island**	**3.34**	**69**	P	**Pn**	**16 19 29.7**	**-0.7**
ATKA				S	**Sn**	**16 20 10.7**	**+1.8**
FX1	**Attu Island--F**	**5.01**	**294**	P	**Pn**	**16 19 53.7**	**+0.5**
	12nm,0.3s,baz=198,slow=5.6,SNR=21						
FX1				S	**Sn**	**16 21 00.1**	**+10**
	3.4nm,0.3s,baz=100,slow=22,SNR=5.8						
PETK	**Petropavlovsk-**	**14.29**	**287**	P	**Pn**	**16 21 58.7**	**-1.2**
	0.1nm,0.3s,baz=96,slow=17,SNR=2.4						
KDAK	**Kodiak Island**	**16.82**	**56**	P	**Pn**	**16 22 27.5**	**-4.9**
	0.5nm,0.3s,baz=248,slow=11,SNR=3.1						
KDAK	**Kodiak Island**	**16.82**	**56**	P	**Pn**	**16 22 27.5**	**-4.9**
MDJ	**Mudanjiang**	**34.33**	**280**	P	**P**	**16 25 16.5**	**-5.7**
YKA	**Yellowknife Ar**	**35.64**	**46**	P	**P**	**16 25 32.3**	**-0.9**
	1.6nm,0.5s,mb4.2,baz=282,slow=8.1,SNR=27						
KSRS	**Korea Array**	**39.35**	**271**	P	**P**	**16 26 05.8**	**+0.8**
	1.7nm,0.7s,mb3.9,baz=59,slow=8.1,SNR=6.1						
HLID	**Hailey**	**43.30**	**74**	*e*P	**P**	**16 26 37.4**	**+0.2**
	1.7nm,0.8s,mb3.8						
NVAR	**Mina Array Bea**	**43.88**	**82**	P	**P**	**16 26 41.8**	**-0.1**
	0.6nm,0.7s,mb3.5,baz=297,slow=9.8,SNR=3.5						
SONM	**Songino Array**	**46.51**	**297**	P	**P**	**16 27 01.5**	**-1.1**
	1.1nm,0.6s,mb4.0,baz=60,slow=9.1,SNR=9.9						
SONM				PcP	PcP	16 28 36.5	+0.3
	0.6nm,0.6s,baz=63,slow=2.8,SNR=4.3						
PDAR	**Pinedale Array**	**46.67**	**72**	P	**P**	**16 27 04.3**	**+0.3**
	4.5nm,0.9s,mb4.4,baz=336,slow=3.3,SNR=15						
SPITS	**Spitsbergen Ar**	**50.63**	**356**	P	**P**	**16 27 33.3**	**-0.7**
	2.4nm,0.4s,mb4.4,baz=38,slow=9.8,SNR=8.2						
ZALV	**Zalesovo Beam**	**54.01**	**313**	P	**P**	**16 27 58.8**	**-0.4**
	0.3nm,0.3s,mb3.7,baz=44,slow=10,SNR=2.0						
ZALV				PcP	PcP	16 29 04.2	+0.5
	0.3nm,0.3s,baz=90,slow=3.3,SNR=4.0						
GTA	**Gaotai**	**55.40**	**292**	*e*P	**P**	**16 28 09.9**	**+0.4**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**58.99**	**81**	P	**P**	**16 28 34.3**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=297,slow=4.2,SNR=7.5						
KURK	**Kurchatov**	**59.00**	**314**	*e*P	**P**	**16 28 34.2**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**59.98**	**308**	P	**P**	**16 28 41.3**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.4,baz=52,slow=6.3,SNR=32						
LSA	**Lhasa**	**67.26**	**289**	P	**P**	**16 29 30.7**	**+0.9**
	comp=Z,82nm,0.3s						
NOA	**NORSAR Array B**	**67.90**	**355**	P	**P**	**16 29 32.8**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=7.5,slow=6.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**70.75**	**276**	P	**P**	**16 29 51.4**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=25,slow=6.7,SNR=7.5						
TAPN	**Taplejung**	**71.03**	**290**	*e*P	**P**	**16 29 54.2**	**+1.0**
ODAN	**Odare**	**71.58**	**290**	*e*P	**P**	**16 29 57.2**	**+0.6**
GUN	**Gumba**	**71.69**	**292**	*e*P	**P**	**16 29 58.3**	**+1.1**
	comp=Z,18nm,0.4s,mb5.3						
JIRN	**Jiri**	**71.69**	**291**	*e*P	**P**	**16 29 57.7**	**+0.5**
RAMN	**Ramite**	**71.98**	**291**	*e*P	**P**	**16 29 59.5**	**+0.5**
	comp=Z,16nm,0.5s,mb5.2						
KKN	**Kakani**	**72.13**	**292**	*e*P	**P**	**16 30 00.6**	**+0.8**
	comp=Z,7.4nm,0.5s,mb4.9						
PKI	**Pulchoki**	**72.22**	**292**	*e*P	**P**	**16 30 01.2**	**+0.8**
GKN	**Gorkha**	**72.34**	**293**	*e*P	**P**	**16 30 01.5**	**+0.4**
	comp=Z,6.3nm,0.4s,mb4.9						
DMN	**Daman**	**72.37**	**292**	*e*P	**P**	**16 30 02.2**	**+1.0**
DANN	**Dangsing**	**72.59**	**294**	*e*P	**P**	**16 30 03.5**	**+0.9**
KOLN	**Koldanda**	**73.12**	**293**	*e*P	**P**	**16 30 06.0**	**+0.3**
	comp=Z,3.2nm,0.4s,mb4.6						
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**16 30 19.9**	**-0.5**
	comp=Z,6.2nm,0.4s,mb4.9,baz=19,slow=6.5,SNR=18						
AKBB	**Malin Array Si**	**75.72**	**342**	*e*P	**P**	**16 30 19.6**	**-0.8**
KBL	**Kabul**	**75.78**	**308**	*e*P	**P**	**16 30 20.8**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.3						
BUR08	**Bucovina Ar. S**	**79.41**	**343**	*e*P	**P**	**16 30 41.2**	**+0.1**
GERES	**GERESS Array B**	**79.82**	**351**	P	**P**	**16 30 41.9**	**-1.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=18,slow=5.1,SNR=8.5						
WRA	**Warramunga Arr**	**81.61**	**224**	P	**P**	**16 30 51.7**	**-1.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=33,slow=5.9,SNR=14						
BRTR	**Keskin Array B**	**85.08**	**335**	P	**P**	**16 31 10.8**	**0.0**
	comp=Z,1.3nm,0.8s,mb4.1,baz=82,slow=2.1,SNR=5.3						
ASAR	**Alice Springs**	**85.08**	**222**	P	**P**	**16 31 10.1**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.9,baz=26,slow=5.6,SNR=13						
STKA	**Stephens Creek**	**89.53**	**212**	P	**P**	**16 31 32.1**	**0.0**
	comp=Z,2.7nm,1.1s,mb4.5,baz=326,slow=7.3,SNR=5.8						

IDC 19 16:31:35.0±26.0, 2216S×17292W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=479.0km s-min=151.7km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.06**	**265**	P	P	16 38 56.1	+0.7
	5.7nm,0.3s,baz=94,slow=13,SNR=14						
STKA	**Stephens Creek**	**41.41**	**247**	*e*P	P	16 39 22.1	-1.1
	1.5nm,0.9s						
STKA	**Stephens Creek**	**41.41**	**247**	P	P	16 39 22.1	-1.1
	0.7nm,0.4s,baz=94,slow=7.3,SNR=5.0						
ASAR	**Alice Springs**	**48.77**	**257**	P	P	16 40 21.7	-0.2
	0.6nm,0.3s,baz=94,slow=7.0,SNR=53						
WB2	**Warramunga Arr**	**49.06**	**262**	*e*P	P	16 40 24.3	+0.1
WRA	**Warramunga Arr**	**49.07**	**262**	P	P	16 40 24.5	+0.2
	2.1nm,0.3s,baz=97,slow=8.4,SNR=121						
FITZ	**Fitzroy Crossi**	**57.50**	**262**	*e*P	P	16 41 28.6	+2.2
	2.8nm,0.6s						

IDC 19 16:44:52.8±1.7, 196N×12621E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=159.6km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.18**	**160**	P	P	16 50 01.4	+0.1
	0.8nm,0.6s,baz=338,slow=10,SNR=19						
ASAR	**Alice Springs**	**26.55**	**164**	P	P	16 50 32.9	+0.4
	0.2nm,0.5s,baz=346,slow=7.8,SNR=14						
ASAR				PcP	PcP	16 53 56.2	-1.2
	0.2nm,0.6s,baz=355,slow=2.3,SNR=6.4						
MKAR	**Makanchi Array**	**58.71**	**326**	P	P	16 54 52.7	+0.4
	0.2nm,0.5s,baz=119,slow=6.9,SNR=6.1						

*ISCJB **19** 16:53:60.0±1.1, 513N±0.1×179.03W±005, h68km±8km, mb4.0/25, Error ellipse: s-maj=20.0km s-min=5.7km az=178.7*
*IDC **19** 16:54:00.3±3.9, 5131N×17925W, h58km±34km, mb3.7/17, mb1 3.9/18, mb1mx3.8/26, mbtmp3.7/18, ML2.9/1, Error ellipse: s-maj=22.9km s-min=14.0km az=169.0*
*NEIC **19** 16:54:00.3±0.8, 5130N×179.12W, h59km±7km, mb4.0/2, ML4.1(AEIC), Error ellipse: s-maj=15.5km s-min=6.2km az=176.0*
*BJI **19** 16:54:00.3, 5130N×179.10W, h58km, mB5.0, mb4.6, Ms4.8, Msz4.5*

ISC 19 16:54:01.6±1.0, 513N±01×17903W±006, h68km±7km, n37, σ1°27/41, mb4.0/25, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.59**	**66**	P	**Pn**	**16 54 25.1**	**-2.5**
ADK				S	**Sn**	**16 54 47.9**	**+0.7**
ATKA	**Atka Island**	**3.15**	**71**	P	**Pn**	**16 54 47.7**	**-1.0**
ATKA				S	**Sn**	**16 55 26.2**	**+1.2**
SMY	**Shemya**	**4.50**	**292**	P	**Pn**	**16 55 05.4**	**-1.6**
SMY				S	**Sn**	**16 55 58.8**	**+0.7**
FX1	**Attu Island--F**	**5.09**	**292**	P	**Pn**	**16 55 11.6**	**-3.5**
	1.5nm,0.3s,baz=221,slow=20,SNR=3.7						
FX1				S	**Sn**	**16 56 15.3**	**+2.8**
	5.2nm,0.3s,baz=267,slow=18,SNR=3.3						
FX1	**Attu Island--F**	**5.09**	**292**	P	**Pn**	**16 55 13.5**	**-1.6**
SPIA	**Saint Paul Isl**	**7.85**	**38**	P	**Pn**	**16 55 54.4**	**+1.6**
UNV	**Unalaska Vale**	**8.06**	**66**	P	**Pn**	**16 55 55.9**	**+0.1**
KDAK	**Kodiak Island**	**16.61**	**57**	P	**Pn**	**16 57 46.0**	**-3.6**
	1.7nm,0.3s,baz=288,slow=12,SNR=20						
EGAK	**Eagle**	**23.73**	**41**	*e*P	**P**	**16 59 06.6**	**-0.4**
	3.0nm,0.4s,mb4.0						
DAWY	**Dawson**	**24.29**	**43**	*e*P	**P**	**16 59 11.7**	**-0.4**
INK	**Inuvik**	**27.64**	**35**	P	**P**	**16 59 42.4**	**+0.1**
	0.6nm,0.6s,mb3.3,baz=261,slow=11,SNR=3.2						
MDJ	**Mudanjiang**	**34.45**	**279**	P	**P**	**17 00 44.5**	**+2.1**
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,52nm,4.3s						
YKA	**Yellowknife Ar**	**35.42**	**46**	P	**P**	**17 00 50.6**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.1,baz=281,slow=7.9,SNR=27						
YKA				PcP	PcP	17 03 19.5	+0.8
	comp=Z,0.3nm,0.7s,baz=295,slow=3.2,SNR=4.4						
CN2	**Changchun**	**37.43**	**281**	*e*P	**P**	**17 01 10.8**	**+2.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NVAR	**Mina Array Bea**	**43.71**	**83**	P	**P**	**17 02 02.5**	**+2.8**
	comp=Z,0.2nm,0.4s,mb3.2,baz=291,slow=7.6,SNR=3.9						
NVAR	**Mina Array Bea**	**43.71**	**83**	P	**P**	**17 02 02.5**	**+2.8**
BJI	**Beijing**	**45.26**	**282**	P	**P**	**17 02 14.3**	**+2.3**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**46.19**	**296**	*e*P	**P**	**17 02 18.9**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.6						
PDAR	**Pinedale Array**	**46.48**	**72**	P	**P**	**17 02 22.5**	**+0.9**
	comp=Z,4.6nm,0.6s,mb4.4,baz=300,slow=4.0,SNR=50						
SONM	**Songino Array**	**46.58**	**297**	P	**P**	**17 02 22.3**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.5,baz=44,slow=8.5,SNR=5.7						
SPITS	**Spitsbergen Ar**	**50.49**	**356**	P	**P**	**17 02 50.4**	**-1.5**
	comp=Z,17nm,0.9s,mb5.0,baz=359,slow=16,SNR=4.3						
XAN	**Xi'an**	**53.54**	**281**	P	**P**	**17 03 17.0**	**+1.8**
X

6.4nm,0.3s,baz=322,slow=20,SNR=30
FX1 Sn **Sn** 17 24 40.0 +1.5
5.9nm,0.3s,baz=73,slow=19,SNR=3.3
FX1 Attu Island--F 5.03 294 P **Pn** 17 23 40.1 -1.6
UNV Unalaska Valle 8.27 65 P **Pn** 17 24 27.0 +1.0
KDAK Kodiak Island 16.83 56 Pn **Pn** 17 26 16.1 -4.7
0.5nm,0.3s,baz=283,slow=18,SNR=7.9
YKA Yellowknife Ar 35.65 46 P **P** 17 29 19.8 -1.9
0.2nm,0.5s,mb3.4,baz=282,slow=7.3,SNR=5.3
SONM Songino Array 46.53 297 P **P** 17 30 51.1 0.0
0.2nm,0.6s,mb3.2,baz=36,slow=11,SNR=3.3
PDAR Pinedale Array 46.67 72 P **P** 17 30 52.8 +0.5
0.5nm,0.5s,mb3.7,baz=326,slow=2.6,SNR=8.3
TXAR Lajitas Array 58.98 81 P **P** 17 32 24.2 +1.0
0.1nm,0.4s,mb3.2,baz=335,slow=4.0,SNR=4.1
MKAR Makanchi Array 60.01 308 P **P** 17 32 29.9 -0.2
0.2nm,0.3s,mb3.6,baz=39,slow=9.3,SNR=3.0
ASAR Alice Springs 85.07 222 P **P** 17 34 59.2 +0.2
0.4nm,0.6s,mb3.7,baz=22,slow=5.5,SNR=6.5

IDC 19 17:27:44.4±1.5, 816S×12190E, h0km, mb3.7/2, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=218.1km s-min=21.2km az=55.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.78**	**326**	Pn	Pn	17 28 42.0	-2.0
	2.8nm,0.3s,baz=124,slow=12,SNR=4.1						
WRA	**Warramunga Ar**	**16.81**	**135**	Pn	Pn	17 31 43.1	+1.8
	0.3nm,0.3s,baz=316,slow=12,SNR=12						
WRA				Sn	Sn	17 34 38.7	-10
	0.1nm,0.3s,baz=310,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**19.24**	**145**	P	Pn	17 32 12.2	+0.8
	0.2nm,0.3s,baz=328,slow=12,SNR=40						
ASAR				S	Sn	17 35 43.7	-4.1
	0.0nm,0.3s,baz=313,slow=21,SNR=3.4						
STKA	**Stephens Creek**	**29.88**	**145**	P	P	17 33 52.2	-1.7
	0.9nm,0.8s,baz=322,slow=14,SNR=2.5						
MKAR	**Makanchi Array**	**65.06**	**331**	P	P	17 38 27.6	+0.9
	0.4nm,0.5s,baz=135,slow=7.7,SNR=5.9						

IDC 19 18:01:48.9±2.0, 625S×12608E, h0km, mb3.2/1, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=144.8km s-min=31.1km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.80**	**150**	Pn	Pn	18 05 33.8	+0.9
	0.1nm,0.3s,baz=327,slow=11,SNR=25						
ASAR	**Alice Springs**	**18.88**	**157**	P	Pn	18 06 10.7	-0.8
	0.1nm,0.3s,baz=340,slow=12,SNR=22						
MKAR	**Makanchi Array**	**65.51**	**329**	P	P	18 12 34.1	+0.1
	0.1nm,0.5s,baz=124,slow=7.7,SNR=1.8						

IDC 19 18:02:05.4±4.0, 243S×14087E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/15, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=122.6km s-min=26.9km az=84.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.54**	**200**	P	Pn	18 06 23.8	-0.1
	0.2nm,0.3s,baz=25,slow=12,SNR=13						
ASAR	**Alice Springs**	**22.16**	**197**	P	P	18 07 03.3	+0.2
	0.8nm,0.7s,baz=29,slow=10,SNR=18						
CMAR	**Chiang Mai Arr**	**46.18**	**298**	P	P	18 10 31.1	-1.3
	0.5nm,0.8s,baz=124,slow=5.5,SNR=4.5						
MKAR	**Makanchi Array**	**70.89**	**322**	P	P	18 13 25.2	+0.8
	0.6nm,0.9s,baz=106,slow=7.7,SNR=3.3						

*ISCJB **19** 18:07:49.9±0.6, 3302N×4887E×008, h10km, Error ellipse: s-maj=9.8km s-min=4.1km az=11.3*
*CSEM **19** 18:07:52.7±0.2, 3293N×4902E, h30km, ML3.4/3, Error ellipse: s-maj=8.3km s-min=2.7km az=91.0*
*THR **19** 18:07:52.3±0.4, 3298N×4899E, h16km±3km, ML2.5*
*KISR **19** 18:07:53.0, 3246N×4901E, h33km, ML2.3*

ISC 19 18:07:51.8±0.8, 3299N×4894E±008, h12km±7km, n11, σ1§12/21, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.89**	**188**	*e*Pg	**Pg**	**18 08 08.9**	**0.0**
SHGR				*e*Sg	**Sg**	**18 08 21.3**	**+0.8**
SHGR				AML	AML	18 08 25.4	
	comp=N,253nm,0.3s						
SHGR	**Shooshtar-Gavs**	**0.89**	**188**	*e*Pg	**Pg**	**18 08 08.9**	**0.0**
	SNR=91						
SHGR				*e*Sg	**Sg**	**18 08 21.3**	**+0.9**
	comp=N,253nm,0.3s,SNR=91						
ASAO	**Ashtian**	**1.80**	**30**	*e*Pg	**Pg**	**18 08 25.0**	**-1.3**
ASAO				*e*Sg	**Sg**	**18 08 49.0**	**-0.6**
ASAO				AML	AML	18 08 57.0	
	comp=E,40nm,0.5s						
ASAO				AML	AML	18 08 59.2	
	comp=N,45nm,0.6s						
ASAO	**Ashtian**	**1.80**	**30**	*e*Pg	**Pg**	**18 08 25.0**	**-1.3**
	SNR=91						
ASAO				*e*Sg	**Sg**	**18 08 49.0**	**-0.6**
	comp=N,45nm,0.6s,SNR=91						
GHVR	**GHOM**	**2.46**	**52**	*e*Pn	**Pn**	**18 08 33.1**	**+1.5**
SNGE	**Sanandaj**	**2.48**	**328**	*e*Pn	**Pn**	**18 08 34.6**	**+2.6**
SNGE				*e*Sg	**Sg**	**18 09 11.1**	**-0.3**
SNGE				AML	AML	18 09 21.9	
	comp=N,14nm,0.4s						
SNGE	**Sanandaj**	**2.48**	**328**	*e*Pn	**Pn**	**18 08 34.6**	**+2.7**
	SNR=52						
SNGE				*e*Sg	**Sg**	**18 09 11.1**	**-0.4**
	comp=N,14nm,0.4s,SNR=90						
NAY	**Al-Naaiem**	**4.00**	**202**	*e*P	**Pn**	**18 08 53.0**	**+0.1**
NAY				*e*S	**Sn**	**18 09 38.9**	**-0.8**
	comp=N,4.6nm,0.7s						
NAY	**Al-Naaiem**	**4.00**	**202**	*e*P	**Pn**	**18 08 53.0**	**+0.1**
	baz=206						
NAY				*e*S	**Sn**	**18 09 38.9**	**-0.8**
	baz=206						
NAY				AML	AML	18 09 42.0	
	comp=Z,5.0nm,0.7s,baz=206						
RDF	**Al-Radifah**	**4.22**	**197**	*e*P	**Pn**	**18 08 56.6**	**+0.7**
RDF				*e*S	**Sn**	**18 09 43.4**	**-1.7**
	comp=Z,6.7nm,0.6s						
RDF	**Al-Radifah**	**4.22**	**197**	*e*P	**Pn**	**18 08 56.6**	**+0.7**
	baz=200						
RDF				*e*S	**Sn**	**18 09 43.4**	**-1.8**
	baz=200						
RDF				AML	AML	18 09 45.6	
	comp=Z,7.0nm,0.6s,baz=200						

*ISCJB **19** 18:12:11.0±0.7, 3852S±006×17582E±008, h177km±6km, Error ellipse: s-maj=12.6km s-min=7.8km az=137.0*
*NEIC **19** 18:12:12.9, 3837S×17588E, h159km, MG4.3(WEL), After WEL.*

ISC 19 18:12:10.9±0.9, 3849S±007×17584E±008, h180km±7km, n52, σ0§83/54, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.24**	**200**	P	**Pn**	**18 12 34.9**	**0.0**
WATZ				S	**Sn**	**18 12 52.1**	**-1.4**
RATZ	**Rangitukua**	**0.39**	**188**	P	**Pn**	**18 12 35.3**	**0.0**
HATZ	**Hinemaiaia**	**0.45**	**154**	P	**Pn**	**18 12 35.4**	**-0.1**
HATZ				S	**Sn**	**18 12 51.9**	**-2.7**
KATZ	**Kakaramea**	**0.50**	**193**	P	**Pn**	**18 12 36.0**	**+0.3**
TWVZ	**Taurewa**	**0.67**	**208**	P	**Pn**	**18 12 36.9**	**+0.4**
NGZ	**Ngauruhoe**	**0.71**	**195**	P	**Pn**	**18 12 37.3**	**+0.5**
HIZ	**Hauiti**	**0.77**	**268**	P	**Pn**	**18 12 36.7**	**-0.4**
TUVZ	**Tukino**	**0.80**	**190**	P	**Pn**	**18 12 38.0**	**+0.8**
FWVZ	**Far West T-bar**	**0.80**	**196**	P	**Pn**	**18 12 37.9**	**+0.6**
TGRZ	**Tauranga**	**0.82**	**24**	P	**Pn**	**18 12 36.6**	**-0.9**
BKZ	**Black Stump Fm**	**0.85**	**143**	P	**Pn**	**18 12 38.0**	**+0.4**
WNVZ	**Wahianoa**	**0.86**	**193**	P	**Pn**	**18 12 38.5**	**+0.8**
MOVZ	**Moawhango**	**0.92**	**184**	P	**Pn**	**18 12 38.6**	**+0.5**
URZ	**Urewera**	**1.02**	**78**	P	**Pn**	**18 12 38.0**	**-0.8**
VRZ	**Vera Road**	**1.06**	**233**	P	**Pn**	**18 12 39.5**	**+0.4**
MWZ	**Matawai**	**1.33**	**84**	P	**Pn**	**18 12 41.2**	**-0.2**
RAEZ	**Rainy Point**	**1.38**	**234**	P	**Pn**	**18 12 43.2**	**+1.4**
WAZ	**Wanganui**	**1.43**	**207**	P	**Pn**	**18 12 43.3**	**+1.1**
MKAZ	**Moumakai**	**1.47**	**339**	P	**Pn**	**18 12 41.9**	**-0.8**
MKAZ				S	Sn	18 12 45.0	-22
KNZ	**Kokohu**	**1.53**	**111**	P	**Pn**	**18 12 43.9**	**+0.7**
NEZ	**North Egmont**	**1.57**	**239**	P	**Pn**	**18 12 45.2**	**+1.7**
TSZ	**Takapari Road**	**1.58**	**177**	P	**Pn**	**18 12 44.7**	**+1.1**
PKE	**Pukeiti**	**1.61**	**243**	P	**Pn**	**18 12 45.3**	**+1.4**
NWEZ	**Newall Road**	**1.73**	**242**	P	**Pn**	**18 12 46.6**	**+1.5**
PUZ	**Puketiti**	**1.95**	**79**	P	**Pn**	**18 12 47.3**	**-0.1**
MXZ	**Matakaoa Point**	**2.15**	**65**	P	**Pn**	**18 12 49.8**	**+0.1**
MRZ	**Mangatainoka R**	**2.18**	**185**	P	**Pn**	**18 12 50.2**	**+0.2**
BFZ	**Birch Farm**	**2.22**	**172**	P	**Pn**	**18 12 50.9**	**+0.6**
KIW	**Kapiti Island**	**2.48**	**197**	P	**Pn**	**18 12 53.6**	**+0.3**
MTW	**Mount Morrison**	**2.68**	**185**	P	**Pn**	**18 12 55.9**	**+0.2**
CAW	**Cannon Point**	**2.69**	**193**	P	**Pn**	**18 12 56.0**	**+0.2**
MRW	**Makara Radio**	**2.88**	**197**	P	**Pn**	**18 12 58.1**	**+0.1**
PAWZ	**Paruwai Farm**	**2.91**	**186**	P	**Pn**	**18 12 58.5**	**+0.1**
WEL	**Wellington**	**2.92**	**196**	P	**Pn**	**18 12 58.5**	**0.0**
SNZO	**South Karori**	**2.95**	**197**	P	**Pn**	**18 12 58.8**	**-0.1**
MSWZ	**Moikau Station**	**2.96**	**189**	P	**Pn**	**18 12 59.1**	**+0.1**
TCW	**Tory Channel**	**2.98**	**203**	P	**Pn**	**18 12 59.2**	**0.0**
BHW	**Baring Head**	**3.01**	**194**	P	**Pn**	**18 12 59.6**	**-0.1**
NNZ	**Nelson**	**3.32**	**214**	P	**Pn**	**18 13 03.1**	**-0.4**
QRZ	**Quartz Range**	**3.46**	**226**	P	**Pn**	**18 13 04.5**	**-0.7**
CMWZ	**Cape Campbell**	**3.49**	**200**	P	**Pn**	**18 13 06.1**	**+0.6**
BSWZ	**Blackbirch Sta**	**3.56**	**204**	P	**Pn**	**18 13 06.3**	**-0.1**
THZ	**Tophouse**	**3.97**	**214**	P	**Pn**	**18 13 11.0**	**-0.6**
KHZ	**Kahutara**	**4.30**	**203**	P	**Pn**	**18 13 15.4**	**-0.4**
DSZ	**Denniston Nort**	**4.49**	**222**	P	**Pn**	**18 13 17.2**	**-1.0**
LTZ	**Lake Taylor**	**5.08**	**211**	P	**Pn**	**18 13 24.2**	**-1.6**
MQZ	**McQueen's Vall**	**5.75**	**204**	P	**Pn**	**18 13 32.4**	**-2.1**
RPZ	**Rata Peaks**	**6.35**	**213**	P	**Pn**	**18 13 41.2**	**-1.2**
ODZ	**Otahua Downs**	**7.62**	**209**	P	**Pn**	**18 13 58.0**	**-1.0**
JCZ	**Jackson Bay**	**7.72**	**221**	P	**Pn**	**18 13 59.7**	**-0.7**
VNA3	**Neumayer Olymp**	**70.51**	**178**	*e*	**P**	**18 23 09.7**	**+4.3**
VNA3				*e*		18 23 12.9	
VNA2	**Neumayer--Watz**	**70.87**	**179**	*e*	**P**	**18 23 12.8**	**+5.2**
	baz=191,slow=7.4						
VNA2				*e*		18 23 15.7	

*NEIC **19** 18:15:12.4±0.8, 3423N×13858E, h10km, mb3.9/1, Error ellipse: s-maj=27.0km s-min=12.2km az=91.0*
*ISCJB **19** 18:15:14.3±0.8, 3423N±010×1383E±02, h33km, mb3.6/4, Error ellipse: s-maj=26.1km s-min=11.6km az=162.1*
*IDC **19** 18:15:17.4±1.8, 3444N×13905E, h62km±27km, mb3.2/3, mb1 3.3/4, mb1mx3.1/23, mbtmp3.1/4, ML2.5/1, Error ellipse: s-maj=76.2km s-min=17.4km az=66.0*

ISC 19 18:15:16.1±0.8, 343N±01×1386E±02, h35km, n7, σ0§90/8, mb3.6/4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.56**	**140**	P	**Pn**	**18 15 42.0**	**+0.8**
	9.6nm,0.3s,baz=334,slow=20,SNR=14						
JHJ				S	**Sn**	**18 16 12.6**	**+12**
	17nm,0.3s,baz=284,slow=24,SNR=8.1						
MJAR	**Matsushiro Arr**	**2.24**	**352**	P	**Pn**	**18 15 50.2**	**-0.5**
	1.3nm,0.3s,baz=99,slow=7.6,SNR=10						
MAJO	**Matsushiro**	**2.24**	**352**	*e*P	**Pn**	**18 15 50.5**	**-0.1**
MKAR	**Makanchi Array**	**43.67**	**304**	P	**P**	**18 23 18.9**	**+1.7**
	0.4nm,0.8s,mb3.2,baz=90,slow=10,SNR=3.6						
KURK	**Kurchatov**	**45.85**	**310**	*e*P	**P**	**18 23 34.3**	**-0.3**
	1.0nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	**54.11**	**185**	P	**P**	**18 24 36.0**	**-1.5**
	0.5nm,0.5s,mb3.7,baz=0.8,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**57.83**	**185**	P	**P**	**18 25 04.0**	**0.0**
	0.5nm,0.6s,mb3.7,baz=16,slow=13,SNR=16						

*BJI **19** 18:16:52.3, 5100N×179.10W, h19km, mB5.0, mb4.7, Ms4.4, Msz4.1*
*NEIC **19** 18:16:56.4, 5102N×179.10W, h20km, mb4.9/23, ML4.1(AEIC), After AEIC.*
*MOS **19** 18:16:57.1±1.1, 5112N×17908W, h53km, mb4.7/13, Error ellipse: s-maj=12.2km s-min=8.0km az=108.1*
*ISCJB **19** 18:16:58.2±0.8, 5115N±007×17908W±005, h61km±6km, mb4.5/52, Error ellipse: s-maj=11.2km s-min=4.7km az=175.2*
*IDC **19** 18:16:58.5±3.4, 5113N×179.13W, h51km±29km, mb3.8/20, mb1 4.0/22, mb1mx3.9/29, mbtmp3.8/22, ML3.7/2, MS3.9/7, Ms1 3.8/7, ms1mx3.4/47, Error ellipse: s-maj=20.4km s-min=12.4km az=169.0*

ISC 19 18:16:59.8±0.8, 5110N±008×17905W±005, h62km±5km, h9km±9.3km: pP-P, n119, σ1§03/124, mb4.5/52, 6C-7D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.68**	**61**	P	**Pn**	**18 17 25.7**	**-1.1**
ADK				S	**Sn**	**18 17 47.3**	**+0.1**
ADK	**Adak**	**1.68**	**61**	P	**Pn**	**18 17 25.8**	**-1.0**
ADK				S	**Sn**	**18 17 47.3**	**+0.1**
ATKA	**Atka Island**	**3.22**	**68**	P	**Pn**	**18 17 46.9**	**-0.9**
ATKA				S	**Sn**	**18 18 28.0**	**+3.2**
SMY	**Shemya**	**4.54**	**294**	P	**Pn**	**18 18 04.8**	**-1.1**
SMY				S	**Sn**	**18 18 58.3**	**+0.9**
FX1	**Attu Island--F**	**5.13**	**293**	P	**Pn**	**18 18 11.8**	**-2.2**
	11nm,0.3s,baz=248,slow=2.5,SNR=35						
FX1				S	**Sn**	**18 19 13.6**	**+1.8**
	8.2nm,0.3s,baz=322,slow=18,SNR=2.3						
FX1	**Attu Island--F**	**5.13**	**293**	P	**Pn**	**18 18 11.8**	**-2.1**
FX1				S	**Sn**	**18 19 13.6**	**+1.8**
FX1				pmax	pmax		
	comp=Z,11nm,0.3s						
FX1				smax			
	comp=N,8.0nm,0.3s						
FX1	**Attu Island--F**	**5.13**	**293**	P	**Pn**	**18 18 12.8**	**-1.2**
OKFG	**Magazine Ridge**	**7.22**	**67**	P	**Pn**	**18 18 43.5**	**+1.0**
SPIA	**Saint Paul Isl**	**7.98**	**37**	P	**Pn**	**18 18 54.5**	**+1.6**
UNV	**Unalaska Valle**	**8.14**	**65**	P	**Pn**	**18 18 55.4**	**+0.3**
AKUT	**Akutan**	**8.63**	**64**	*e*P	**Pn**	**18 19 02.1**	**+0.3**
PETK	**Petropavlovsk-**	**14.42**	**287**	P	**Pn**	**18 20 20.6**	**+0.3**
	comp=N,0.2nm,0.3s,baz=99,slow=18,SNR=4.3						
PETK				LR	LR	18 25 27.1	
	comp=N,247nm,20.8s,baz=289,slow=35						
SVW2	**Sparrevohn**	**16.38**	**43**	*e*P	**Pn**	**18 20 47.5**	**+2.1**
KDAK	**Kodiak Island**	**16.71**	**56**	P	**Pn**	**18 20 44.7**	**-4.7**
	comp=N,2.6nm,0.3s,baz=215,slow=2.1,SNR=10						
KDAK	**Kodiak Island**	**16.71**	**56**	P	**Pn**	**18 20 44.7**	**-4.7**
BILL	**Bilibino**	**18.45**	**342**	*e*P	**Pn**	**18 21 11.1**	**+0.4**
BILL				*e*S	**S**	**18 24 28.5**	**-8.2**
BILL				pmax	pmax		
	comp=Z,17nm,1.2s						
BILL				MLR	MLR		
	comp=Z,300nm,19.0s						
BILL	**Bilibino**	**18.45**	**342**	*e*P	**Pn**	**18 21 11.1**	**+0.4**
	comp=Z,24nm,1.3s						
KTH	**Kantishna Hill**	**19.44**	**39**	*e*P	**Pn**	**18 21 21.1**	**-1.4**
	comp=Z,9.9nm,0.5s						
TRF	**Thorofare Moun**	**19.65**	**40**	*e*P	**Pn**	**18 21 23.0**	**-1.9**
	comp=Z,7nm,1.6s						
BPAW	**Bear Paw Mtn.**	**19.67**	**38**	*e*P	**Pn**	**18 21 23.8**	**-1.4**
	comp=Z,6.0nm,0.5s						
MCK	**McKinley**	**20.32**	**40**	*e*P	**P**	**18 21 29.9**	**-0.4**
MCK				pmax	pmax		
	comp=Z,27nm,1.7s						
MCK	**McKinley**	**20.32**	**40**	*e*P	**P**	**18 21 29.9**	**-0.4**
	comp=Z,28nm,1.7s						
COLA	**College**	**21.23**	**38**	*e*P	**P**	**18 21 41.4**	**+1.3**
PAX	**Paxson**	**21.50**	**44**	*e*P	**P**	**18 21 42.1**	**-0.9**
PAX				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.2						
PAX	**Paxson**	**21.50**	**44**	*e*P	**P**	**18 21 42.1**	**-0.9**
	comp=Z,6.6nm,0.5s,mb4.2						
COLD	**Coldfoot**	**21.57**	**31**	*e*P	**P**	**18 21 44.1**	**+0.3**
	comp=Z,4.4nm,0.6s,mb4.1						
MENT	**Mentasta**	**22.26**	**44**	*e*P	**P**	**18 21 51.3**	**+0.2**
EGAK	**Eagle**	**23.86**	**41**	*e*P	**P**	**18 22 01.9**	**-5.0**
	comp=Z,21nm,1.1s,mb4.5						
DAWY	**Dawson**	**24.42**	**43**	*e*P	**P**	**18 22 10.5**	**-1.5**
YSS	**Yuzh-Sakhalins**	**25.19**	**276**	*e*P	**P**	**18 22 20.7**	**+1.5**
INK	**Inuvik**	**27.78**	**35**	P	**P**	**18 22 41.8**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.7,baz=231,slow=9.9,SNR=8.1						
HABR	**Khabarovsk**	**29.38**	**283**	*e*P	**P**	**18 22 54.9**	**-1.8**
HABR				*e**PP	pP	18 23 07.5	-4.3
HABR				*e**SP	sP	18 23 13.9	-5.2
HABR				*e*S	**S**	**18 27 45.0**	**-0.8**
HABR				*e**SS	sS	18 28 06.9	-4.7
HABR				*e*SS	SS	18 29 16.2	-36
HABR				*e*		18 29 43.1	
HABR				*e*		18 33 32.2	
HABR				MLR	MLR		
	comp=Z,39nm,17.0s						
HABR				MLR	MLR		
	comp=Z,11nm,14.0s						

YAK	**Yakutsk**	**29.49**	**312**	*e*P	**P**	**18 22 55.6**	**-1.9**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
KLR	**Kul'dur**	**31.11**	**286**	*e*P	**P**	**18 23 06.8**	**-5.1**
MDJ	**Mudanjiang**	**34.46**	**280**	P	**P**	**18 23 39.6**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,8.0nm,2.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,120nm,4.7s						
YKA	**Yellowknife Ar**	**35.54**	**46**	P	**P**	**18 23 50.1**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=278,slow=9.6,SNR=27						
YKA				LR	LR	18 40 20.5	
	comp=Z,93nm,19.6s,baz=190,slow=39						
CN2	**Changchun**	**37.45**	**281**	*e*P	**P**	**18 24 04.8**	**-2.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
BOD	**Bodaibo**	**38.02**	**307**	*e*P	**P**	**18 24 10.3**	**-1.2**
BOD				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
KSRS	**Korea Array**	**39.48**	**271**	P	**P**	**18 24 23.6**	**-0.3**
	comp=Z,2.9nm,0.9s,mb4.0,baz=51,slow=8.5,SNR=6.1						
KSRS				LR	LR	18 42 08.1	
	comp=Z,103nm,18.1s,baz=254,slow=38						
KSRS	**Korea Array**	**39.48**	**271**	P	**P**	**18 24 23.7**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,103nm,18.1s						
NVAR	**Mina Array Bea**	**43.74**	**82**	P	**P**	**18 24 58.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=294,slow=4.6,SNR=2.4						
BJI	**Beijing**	**45.28**	**282**	P	**P**	**18 25 10.8**	**-0.2**
BJI				S	**S**	**18 31 46.8**	**+0.1**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.4s,mb4.9						
BJI				AMB	AMB		
	comp=Z,221nm,5.1s						
BJI				LR	LR		
	comp=N,192nm,26.0s						
BJI				LR	LR		
	comp=E,252nm,25.1s						
BJI				LR	LR		
	comp=Z,86nm,20.8s						
TLY	**Talaya**	**46.08**	**303**	*e*P	**P**	**18 25 17.1**	**0.0**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
TLY				MLR	MLR		
	comp=Z,230nm,21.0s						
ULN	**Ulaanbaatar**	**46.24**	**296**	*e*P	**P**	**18 25 18.3**	**-0.2**
ULN	**Ulaanbaatar**	**46.24**	**296**	*e*P	**P**	**18 25 18.1**	**-0.4**
	comp=Z,4.9nm,1.0s,mb4.4						
PDAR	**Pinedale Array**	**46.55**	**72**	P	**P**	**18 25 22.2**	**+1.4**
	comp=Z,5.6nm,1.0s,mb4.5,baz=315,slow=3.3,SNR=34						
PDAR				LR	LR	18 42 29.5	
	comp=Z,116nm,18.2s,baz=334,slow=33						
SONM	**Songino Array**	**46.63**	**297**	P	**P**	**18 25 22.0**	**+0.5**
	comp=Z,1.9nm,0.8s,mb4.1,baz=53,slow=9.8,SNR=13						
SONM				PcP	PcP	18 26 54.7	+0.3
	comp=Z,0.6nm,0.6s,baz=40,slow=2.4,SNR=3.2						
ZAK	**Zakamensk**	**46.97**	**301**	*e*P	**P**	**18 25 19.4**	**-4.7**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
MOY	**Mondy**	**47.49**	**304**	*e*P	**P**	**18 25 28.9**	**+0.8**
SPB4	**Spitsbergen Ar**	**50.64**	**356**	*e*P	**P**	**18 25 51.0**	**-0.9**
SPITS	**Spitsbergen Ar**	**50.64**	**356**	P	**P**	**18 25 51.7**	**-0.2**
	comp=Z,3.6nm,0.5s,mb4.6,baz=76,slow=8.2,SNR=22						
SPITS	**Spitsbergen Ar**	**50.64**	**356**	P	**P**	**18 25 51.7**	**-0.2**
XAN	**Xi'an**	**53.56**	**281**	P	**P**	**18 26 12.3**	**-1.8**
XAN				AP	pP	18 26 20.4	-10
XAN				PP	PP	18 28 14.5	-0.5
XAN				S	**S**	**18 33 45.8**	**+3.3**
XAN				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3						
XAN				AMB	AMB		
	comp=Z,40nm,18.3s						
XAN				LR	LR		
	comp=E,51nm,21.3s						
XAN				LR	LR		
	comp=Z,98nm,27.4s						
ZALV	**Zalesovo Beam**	**54.11**	**313**	P	**P**	**18 26 16.4**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.7,baz=61,slow=13,SNR=2.5						
ZALV				PcP	PcP	18 27 23.4	+1.6
	comp=Z,0.7nm,0.5s,baz=64,slow=3.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**54.11**	**313**	P	**P**	**18 26 16.4**	**-1.4**
ZALV				PcP	PcP	18 27 23.4	+1.6
LZH	**Lanzhou**	**55.31**	**286**	*e*P	**P**	**18 26 27.5**	**+0.7**
LZH				AP	pP	18 26 30.0	-13
LZH				AMB	AMB		
	comp=Z,19nm,1.6s,mb4.9						
LZH				AMB	AMB		
	comp=Z,85nm,4.2s						
GTA	**Gaotai**	**55.52**	**292**	*e*P	**P**	**18 26 29.0**	**+0.7**
GTA				AP	pP	18 26 32.3	-12
GTA				XP	sP	18 26 35.4	-16
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
LPIG	**La Paz**	**58.39**	**90**	LR	LR	18 47 12.2	
	comp=Z,71nm,19.7s,baz=142,slow=31						
TXAR	**Lajitas Array**	**58.85**	**81**	P	**P**	**18 26 53.2**	**+1.3**
	comp=Z,0.8nm,0.4s,mb4.1,baz=306,slow=5.4,SNR=7.8						
TXAR	**Lajitas Array**	**58.85**	**81**	P	**P**	**18 26 53.2**	**+1.3**
KURK	**Kurchatov**	**59.10**	**314**	*e*P	**P**	**18 26 53.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4

	comp=Z,14nm,0.5s,mb5.2							
GKN	**Gorkha**	**72.47**	**293**	*e*P		**P**	**18 28 19.8**	**+0.2**
	comp=Z,15nm,0.5s,mb5.2							
DMN	**Daman**	**72.49**	**292**	*e*P		**P**	**18 28 19.9**	**+0.1**
	comp=Z,14nm,1.0s,mb4.8							
DANN	**Dangsing**	**72.72**	**294**	*e*P		**P**	**18 28 21.8**	**+0.7**
	comp=Z,23nm,0.9s,mb5.1							
KOLN	**Koldanda**	**73.25**	**293**	*e*P		**P**	**18 28 24.9**	**+0.7**
EKA	**Eskdalemuir Ar**	**73.88**	**2**	P		**P**	**18 28 27.7**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=354,slow=4.5,SNR=8.8							
AKASG	**Malin Array Be**	**75.77**	**342**	P		**P**	**18 28 37.9**	**-0.6**
	comp=Z,14nm,0.5s,mb5.2,baz=20,slow=6.6,SNR=38							
AKBB	**Malin Array Si**	**75.77**	**342**	*e*P		**P**	**18 28 37.9**	**-0.5**
KIEV	**Kiev**	**75.78**	**342**	*e*P		**P**	**18 28 37.8**	**-0.7**
KIEV				pmax		pmax		
	comp=Z,14nm,0.6s,mb5.1							
KIEV	**Kiev**	**75.78**	**342**	*e*P		**P**	**18 28 37.8**	**-0.7**
	comp=Z,14nm,0.6s,mb5.1							
KBL	**Kabul**	**75.89**	**308**	*e*P		**P**	**18 28 38.8**	**-0.6**
KBL				pmax		pmax		
	comp=Z,17nm,1.2s,mb4.8							
KBL	**Kabul**	**75.89**	**308**	*e*P		**P**	**18 28 38.8**	**-0.7**
	comp=Z,17nm,1.2s,mb4.8							
CLL	**Collm**	**77.46**	**352**	*e*P		**P**	**18 28 48.0**	**0.0**
KWP	**Kalwaria**	**77.94**	**346**	||*i*P		**P**	**18 28 51.3**	**+0.6**
DPC	**Dobruska-Polom**	**78.08**	**350**	*e*P		**P**	**18 28 52.9**	**+1.4**
VRAC	**Vranov**	**79.08**	**350**	LR		LR	19 04 17.2	
	comp=Z,150nm,19.5s,baz=346,slow=36							
BUR08	**Bucovina Ar. S**	**79.45**	**344**	*e*P		**P**	**18 28 59.2**	**+0.2**
BURAR	**Bucovina Array**	**79.48**	**344**	||*i*P		**P**	**18 28 59.8**	**+0.6**
KHC	**Kasperske Hory**	**79.57**	**352**	*e*P		**P**	**18 29 00.7**	**+1.1**
GERES	**GERESS Array B**	**79.84**	**351**	P		**P**	**18 29 00.4**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=28,slow=5.0,SNR=8.2							
DRGR		**80.70**	**345**	||*i*P		**P**	**18 29 06.6**	**+0.8**
MLR	**Muntele Rosu**	**81.39**	**343**	P		**P**	**18 29 10.6**	**+1.1**
	comp=Z,5.8nm,0.5s,mb4.8,baz=13,slow=3.3,SNR=7.6							
VOIR		**81.61**	**343**	||*i*P		**P**	**18 29 12.6**	**+2.0**
WRA	**Warramunga Arr**	**81.70**	**224**	P		**P**	**18 29 10.1**	**-1.2**
	comp=Z,0.6nm,0.8s,mb3.6,baz=34,slow=6.1,SNR=7.6							
BZS	**Buzias**	**82.02**	**346**	||*i*P		**P**	**18 29 13.1**	**+0.3**
GZR	**Gura Zlata**	**82.05**	**346**	||*i*P		**P**	**18 29 13.9**	**+1.0**
BRTR	**Keskin Array B**	**85.14**	**335**	P		**P**	**18 29 29.9**	**+1.1**
	comp=Z,2.2nm,0.8s,mb4.3,baz=28,slow=2.0,SNR=8.4							
ASAR	**Alice Springs**	**85.17**	**222**	P		**P**	**18 29 28.2**	**-0.8**
	comp=Z,0.5nm,0.6s,mb3.8,baz=26,slow=5.7,SNR=9.9							
BOSA	**Boshof**	**151.05**	**312**	PKPbc		PKPbc	18 36 46.4	+1.1
	comp=Z,3.3nm,0.9s,baz=352,slow=1.4,SNR=3.0							
BOSA	**Boshof**	**151.05**	**312**	PKIKP		PKPbc	18 36 46.4	+1.1
BOSA				pmax		pmax		
	comp=Z,3.0nm,0.9s							

*CSEM **19** 18:21:24.7±0.3, 3453N×2500E, h10km, MD3.8, Error ellipse: s-maj=9.2km s-min=2.2km az=66.0*
*ISCJB **19** 18:21:26.4±0.4, 3456N±003×2493E±006, h33km, mb3.6/5, Error ellipse: s-maj=7.2km s-min=4.3km az=152.7*
*IDC **19** 18:21:27.7±2.1, 3478N×2495E, h31km±14km, mb3.5/5, mb1 3.7/9, mb1mx3.5/25, mbtmp3.6/9, ML3.7/4, Error ellipse: s-maj=22.7km s-min=20.0km az=8.0*
*ATH **19** 18:21:28.8, 3483N×2480E, h38km±2km, MD3.8/7*
*NEIC **19** 18:21:28.8, 3483N×2479E, h39km, MD3.8(ATH), After ATH.*
*HLW **19** 18:21:28.0, 3484N×2520E, h20km, Mb3.9*

ISC 19 18:21:27.6±0.8, 3466N±003×2491E±005, h24km±8km, n54, σ1⁰20/59, mb3.5/5.1, D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.36**	**347**	P	**Pb**	**18 21 34.8**	**-0.8**
IDI	**Anoyia**	**0.62**	**358**	Pg	**Pb**	**18 21 38.4**	**-1.5**
	520nm,0.3s,baz=184,slow=16,SNR=266						
IDI				Lg		18 21 46.3	
	1μm,0.3s,baz=321,slow=14,SNR=104						
IDI	**Anoyia**	**0.62**	**358**	Pg	**Pb**	**18 21 38.3**	**-1.6**
LAST	**Lasithi**	**0.68**	**43**	P	**Pb**	**18 21 41.3**	**+0.4**
GVD	**Gavdhos**	**0.70**	**285**	*e*PN	**Pn**	**18 21 41.2**	**-0.8**
NPS	**Neapolis**	**0.83**	**44**	*e*PN	**Pn**	**18 21 43.9**	**+0.1**
NPS				*e*SN	**Sn**	**18 21 55.8**	**+0.6**
NPS	**Neapolis**	**0.83**	**44**	*e*Pn	**Pn**	**18 21 43.9**	**+0.1**
NPS				*e*Sn	**Sn**	**18 21 55.9**	**+0.7**
VAM	**Vamos**	**0.94**	**322**	*e*PN	**Pn**	**18 21 44.0**	**-1.4**
ZKR	**Zakros**	**1.16**	**67**	P	**Pn**	**18 21 51.4**	**+3.0**
THR6	**Thira Island,**	**1.74**	**13**	P	**Pn**	**18 21 57.2**	**+1.0**
THR6				S	**Sn**	**18 22 06.4**	**-11**
THR1	**Thera Island**	**1.76**	**15**	P	**Pn**	**18 21 57.1**	**+0.5**
THR5	**Thira Island,**	**1.79**	**11**	P	**Pn**	**18 21 58.6**	**+1.7**
THR3	**Thira Island,**	**1.79**	**13**	P	**Pn**	**18 21 58.2**	**+1.3**
THR4	**Thira Island,**	**1.84**	**12**	P	**Pn**	**18 21 58.7**	**+1.1**
KARP	**Karpathos**	**2.04**	**64**	*e*PN	**Pn**	**18 22 03.1**	**+2.6**
KARP	**Karpathos**	**2.04**	**64**	*e*Pn	**Pn**	**18 22 03.3**	**+2.8**
APE	**Apeiranthos**	**2.45**	**12**	P	**Pn**	**18 22 06.1**	**0.0**
APE	**Apeiranthos**	**2.45**	**12**	*e*PN	**Pn**	**18 22 06.2**	**+0.1**
APE	**Apeiranthos**	**2.45**	**12**	*e*Pn	**Pn**	**18 22 06.0**	**-0.1**
VLI	**Velíai**	**2.61**	**322**	*e*PN	**Pn**	**18 22 08.0**	**-0.2**
ARG	**Arkhangelos**	**3.05**	**59**	*e*PN	**Pn**	**18 22 16.4**	**+2.1**
ARG	**Arkhangelos**	**3.05**	**59**	*e*Pn	**Pn**	**18 22 16.0**	**+1.7**
SLUM		**3.17**	**175**	P	**Pn**	**18 22 18.4**	**+2.4**
HMAT	**Matruh**	**4.00**	**152**	||P	**Pn**	**18 22 28.9**	**+1.5**
SWA2		**5.42**	**175**	P	**Pn**	**18 22 49.0**	**+2.1**
AWBH		**7.18**	**151**	P	**Pn**	**18 23 11.9**	**+0.8**
KOT	**Kottamia**	**7.52**	**127**	P	**Pn**	**18 23 15.5**	**-0.3**
HSAF	**As Saff**	**7.55**	**130**	P	**Pn**	**18 23 15.7**	**-0.4**
HFRF	**Wahat Farafira**	**8.04**	**158**	P	**Pn**	**18 23 23.6**	**+0.8**
AMAG	**Maghara**	**8.06**	**118**	P	**Pn**	**18 23 22.0**	**-1.2**
SUZ		**8.25**	**123**	P	**Pn**	**18 23 25.3**	**-0.4**
RSH		**8.28**	**114**	P	**Pn**	**18 23 24.7**	**-1.5**
BRTR	**Keskin Array B**	**8.60**	**51**	Pn	**Pn**	**18 23 31.8**	**+1.2**
	0.1nm,0.3s,baz=218,slow=12,SNR=3.6						
HRSH	**Kfar Ka'horesh**	**8.86**	**100**	P	**Pn**	**18 23 24.7**	**-9.4**
MMAI	**Mount Meron Ar**	**8.88**	**98**	Pn	**Pn**	**18 23 32.7**	**-1.7**
	1.3nm,0.3s,baz=297,slow=11,SNR=9.8						
MMAI				Sn	**Sn**	**18 25 09.2**	**-4.4**
	1.2nm,0.3s,baz=316,slow=10,SNR=3.8						
HNKL	**Nakhl**	**9.01**	**119**	P	**Pn**	**18 23 35.2**	**-1.0**
EIL	**Elat**	**9.86**	**118**	Pn	**Pn**	**18 23 47.8**	**+0.1**
	2.4nm,0.3s,baz=144,slow=23,SNR=23						
EIL				Sn	**Sn**	**18 25 30.4**	**-7.3**
	0.6nm,0.3s,baz=19,slow=12,SNR=3.5						
HKAT	**Jabal Katrina**	**9.87**	**126**	P	**Pn**	**18 23 47.6**	**-0.4**
ASF	**Jabal al Asfar**	**10.32**	**101**	Pn	**Pn**	**18 23 53.2**	**-1.0**
	0.2nm,0.3s,baz=276,slow=21,SNR=5.6						
AKASG	**Malin Array Be**	**16.34**	**10**	Pn	**Pn**	**18 25 14.7**	**-0.5**
	0.8nm,0.3s,baz=201,slow=11,SNR=7.6						
GERES	**GERESS Array B**	**16.43**	**333**	Pn	**Pn**	**18 25 17.2**	**+0.8**
	0.1nm,0.3s,baz=146,slow=12,SNR=8.9						
MIB	**Mutribah**	**19.57**	**98**	*e*P	**Pn**	**18 25 54.3**	**-0.8**
	7.9nm,0.4s						
MIB	**Mutribah**	**19.57**	**98**	*e*P	**Pn**	**18 25 54.3**	**-0.9**
	baz=99						
MIB				AMb	AMB	18 25 55.6	
	comp=Z,8.0nm,0.4s,baz=99						
NAY	**Al-Naaiem**	**19.69**	**100**	*e*P	**Pn**	**18 25 55.5**	**-1.0**
	comp=Z,2.8nm,0.5s						
NAY	**Al-Naaiem**	**19.69**	**100**	*e*P	**Pn**	**18 25 55.5**	**-1.1**
	baz=100						
NAY				AMb	AMB	18 25 58.7	
	comp=Z,3.0nm,0.5s,baz=100						
UMR	**Umm Al-Rimmam**	**19.96**	**98**	*e*P	**Pn**	**18 25 58.7**	**-1.1**
	comp=Z,8.4nm,0.7s						
UMR	**Umm Al-Rimmam**	**19.96**	**98**	*e*P	**Pn**	**18 25 58.7**	**-1.1**
	baz=99						
UMR				AMb	AMB	18 26 00.8	
	comp=Z,8.0nm,0.7s,baz=99						
RDF	**Al-Radifah**	**20.06**	**100**	*e*P	**P**	**18 26 00.3**	**+1.2**
	comp=Z,19nm,1.3s						
RDF	**Al-Radifah**	**20.06**	**100**	*e*P	**P**	**18 26 00.3**	**+1.2**
	baz=101						
RDF				AMb	AMB	18 26 16.8	
	comp=Z,19nm,1.3s,baz=101						
TORD	**Torodi Ar. Bea**	**30.01**	**230**	P	**P**	**18 27 34.9**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.6,baz=30,slow=8.9,SNR=19						
MKAR	**Makanchi Array**	**44.22**	**56**	P	**P**	**18 29 33.6**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.7,baz=268,slow=8.3,SNR=8.9						
MKAR				PcP	PcP	18 31 16.7	-2.3
	comp=Z,0.1nm,0.6s,baz=279,slow=2.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**45.50**	**46**	P	**P**	**18 29 42.5**	**-2.2**
	comp=Z,0.4nm,0.3s,mb3.7,baz=268,slow=7.2,SNR=2.3						
SONM	**Songino Array**	**59.96**	**50**	P	**P**	**18 31 31.4**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=301,slow=8.4,SNR=3.0						
YKA	**Yellowknife Ar**	**77.86**	**342**	P	**P**	**18 33 20.5**	**-2.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=30,slow=5.2,SNR=4.5						

*THE **19** 18:24:23.0, 3455N×2482E, h9km±1km, Error ellipse: s-maj=2.0km s-min=0.7km az=36.0*
*ISCJB **19** 18:24:24.6±2.4, 3461N±01×2484E±006, h29km±12km, Error ellipse: s-maj=23.5km s-min=8.5km az=176.4*
*NEIC **19** 18:24:25.0, 3469N×2485E, h28km, MD3.6(ATH), After ATH.*
*ATH **19** 18:24:25.0, 3469N×2485E, h28km, MD3.6/4*
*CSEM **19** 18:24:26.5±0.5, 3484N×2484E, h20km, MD3.6, Error ellipse: s-maj=16.4km s-min=7.0km az=173.0*

ISC 19 18:24:24.3±2.1, 3466N±01×2484E±007, h24km±9km, n7, σ1⁰02/11, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.43**	**357**	P	**Pb**	**18 24 32.2**	**-1.2**
SIVA				S	**Sb**	**18 24 39.5**	**0.0**
GVD	**Gavdhos**	**0.67**	**292**	*e*PN	**Pn**	**18 24 38.0**	**-0.3**
LAST	**Lasithi**	**0.78**	**42**	P	**Pb**	**18 24 38.8**	**-0.4**
LAST				S	**Sb**	**18 24 50.6**	**+1.3**
NPS	**Neapolis**	**0.93**	**43**	*e*PN	**Pn**	**18 24 41.3**	**-0.6**
NPS				*e*SN	**Sn**	**18 24 53.0**	**-1.4**
KARN	**Karanos**	**1.11**	**317**	P	**Pn**	**18 24 43.4**	**-1.0**
KARN				S	**Sn**	**18 24 59.8**	**+0.8**
KARP	**Karpathos**	**2.13**	**63**	*e*PN	**Pn**	**18 25 00.0**	**+1.6**
VLI	**Velíai**	**2.63**	**324**	*e*PN	**Pn**	**18 25 06.7**	**+1.4**

IDC 19 18:29:04.8±2.0, 8575N×11912E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/17, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=199.0km s-min=23.7km az=53.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.56**	**129**	P	Pn	18 33 23.5	0.0
	0.1nm,0.3s,baz=304,slow=12,SNR=9.3						
ASAR	**Alice Springs**	**20.63**	**138**	P	P	18 33 47.4	+1.3
	0.5nm,0.4s,baz=317,slow=9.5,SNR=30						
STKA	**Stephens Creek**	**31.21**	**141**	P	P	18 35 25.0	-1.0
	0.5nm,0.3s,baz=327,slow=12,SNR=5.7						
MKAR	**Makanchi Array**	**64.13**	**333**	P	P	18 39 41.1	+0.1
	0.2nm,0.6s,baz=151,slow=7.7,SNR=3.4						

IDC 19 18:29:45.1±3.2, 7135N×15615E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=105.3km s-min=41.9km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.70**	**237**	P	P	18 35 08.6	+0.5
	0.2nm,0.4s,baz=61,slow=9.4,SNR=7.0						
ASAR	**Alice Springs**	**26.95**	**230**	P	P	18 35 28.4	-0.1
	0.1nm,0.3s,baz=60,slow=10.0,SNR=8.1						
ASAR				PcP	PcP	18 38 49.5	-1.1
	0.2nm,0.7s,baz=73,slow=2.7,SNR=4.0						
MKAR	**Makanchi Array**	**84.26**	**318**	P	P	18 42 19.3	+0.5
	0.4nm,0.6s,baz=113,slow=6.9,SNR=5.2						

*IDC **19** 18:41:43.5±27.0, 2408S×17275W, h0km, mb4.5/4, mb1 4.6/4, mb1mx4.0/16, mbtmp4.5/4, Error ellipse: s-maj=495.4km s-min=139.8km az=80.0*
*NEIC **19** 18:41:46.6±1.7, 2433S×17245W, h35km, mb4.5/6, Error ellipse: s-maj=61.0km s-min=28.1km az=152.0*

ISC 19 18:42:28.3±3.2, 2435S±06×1783W±04, h35km, n14, σ0⁰97/14, mb4.4/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARMA	**Armidale**	**27.37**	**250**	*e*P	**P**	**18 48 12.9**	**+2.6**
CTA	**Charters Tower**	**33.06**	**270**	*e*P	**P**	**18 49 04.4**	**+3.7**
	2.2nm,0.3s,mb4.6						
CTA	**Charters Tower**	**33.06**	**270**	P	**P**	**18 49 04.8**	**+4.1**
	2.7nm,0.3s,mb4.7,baz=101,slow=10,SNR=7.8						
CTAO	**Charters Tower**	**33.06**	**270**	*e*P	**P**	**18 49 04.5**	**+3.8**
	4.9nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**36.05**	**249**	*e*P	**P**	**18 49 26.2**	**-0.3**
	2.8nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**36.05**	**249**	P	**P**	**18 49 26.4**	**-0.1**
	2.8nm,0.4s,mb4.5,baz=101,slow=11,SNR=21						
BBOO	**Buckleboo**	**40.75**	**247**	*e*P	**P**	**18 50 04.0**	**-2.0**
	1.4nm,0.3s,mb4.1						
ASAR	**Alice Springs**	**43.53**	**261**	P	**P**	**18 50 28.6**	**-0.2**
	2.2nm,0.4s,mb4.3,baz=90,slow=7.2,SNR=30						
WB2	**Warramunga Arr**	**43.95**	**266**	*e*P	**P**	**18 50 32.2**	**0.0**
WRAB	**Tennant Creek**	**43.95**	**266**	*e*P	**P**	**18 50 32.2**	**0.0**
	3.3nm,0.5s,mb4.3						
WRA	**Warramunga Arr**	**43.96**	**266**	P	**P**	**18 50 32.3**	**0.0**
	2.4nm,0.3s,mb4.4,baz=104,slow=8.1,SNR=120						
FITZ	**Fitzroy Crossi**	**52.38**	**265**	*e*P	**P**	**18 51 36.9**	**-0.4**
	5.3nm,0.9s,mb4.5						
VNA3	**Neumayer Olymp**	**84.38**	**176**	*e*	**P**	**18 54 56.9**	**+0.4**
VNA3				*e*		18 54 59.0	
VNA1	**Neumayer--Stat**	**85.05**	**177**	*e*	**P**	**18 54 59.7**	**-0.2**
VNA1				*e*		18 55 02.3	

IDC 19 18:55:56.6±3.6, 1995N×10091E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.4/20, mbtmp3.3/5, Error ellipse: s-maj=141.5km s-min=20.8km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.41**	**355**	P	P	19 00 36.0	+0.6
	0.3nm,0.5s,baz=179,slow=8.1,SNR=4.6						
WRA	**Warramunga Arr**	**37.22**	**121**	P	P	19 03 10.0	0.0
	0.9nm,0.8s,baz=303,slow=8.9,SNR=8.4						
ASAR	**Alice Springs**	**38.53**	**127**	P	P	19 03 20.9	-0.2
	0.3nm,0.4s,baz=302,slow=7.7,SNR=23						
SONM	**Songino Array**	**49.85**	**5**	P	P	19 04 52.6	+1.1
	0.1nm,0.5s,baz=184,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**51.27**	**344**	P	P	19 05 01.0	-1.2
	0.1nm,0.3s,baz=162,slow=9.1,SNR=6.8						

*NEIC **19** 19:13:21.1, 5109N×17941W, h20km, ML3.2(AEIC), After AEIC.*
*ISCJB **19** 19:13:24.6±1.4, 5220N±03×1793W±01, h54km±13km, mb3.6/8, Error ellipse: s-maj=56.4km s-min=9.2km az=5.0*
*IDC **19** 19:13:25.4±3.9, 5189N×17943W, h47km±33km, mb3.3/8, mb1 3.6/10, mb1mx3.4/26, mbtmp3.5/10, ML3.4/2, Error ellipse: s-maj=78.3km s-min=18.6km az=3.0*

ISC 19 19:13:26.1±1.4, 5220N±03×1793W±01, h49km±12km, n14, σ0⁰70/16, mb3.6/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.61**	**92**	P	**Pn**	**19 13 52.2**	**+0.1**
ADK				S	**Sn**	**19 14 17.4**	**+5.7**
SMY	**Shemya**	**4.13**	**283**	P	**Pn**	**19 14 26.4**	**-0.1**
FX1	**Attu Island--F**	**4.71**	**284**	P	**Pn**	**19 14 33.3**	**-1.2**
	5.3nm,0.3s,baz=225,slow=2.6,SNR=14						
FX1				S	**Sn**	**19 15 28.8**	**+1.1**
	baz=112,slow=19,SNR=1.3						
FX1	**Attu Island--F**	**4.71**	**284**	P	**Pn**	**19 14 34.3**	**-0.2**
KDAK	**Kodiak Island**	**16.36**	**59**	P	**Pn**	**19 17 11.1**	**-1.0**
	0.2nm,0.3s,baz=151,slow=6.7,SNR=4.4						
KDAK	**Kodiak Island**	**16.36**	**59**	P	**Pn**	**19 17 11.1**	**-1.0**
YKA	**Yellowknife Ar**	**35.05**	**47**	P	**P**	**19 20 14.8**	**+1.2**
	0.2nm,0.5s,mb3.3,baz=281,slow=7.7,SNR=4.1						
SONM	**Songino Array**	**46.11**	**296**	P	**P**	**19 21 44.3**	**-0.7**
	0.2nm,0.5s,mb3.3,baz=70,slow=4.9,SNR=4.1						
PDAR	**Pinedale Array**	**46.42**	**72**	P	**P**	**19 21 47.8**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=302,slow=3.3,SNR=4.7						
KURK	**Kurchatov**	**58.39**	**313**	P	**P**	**19 23 16.1**	**+0.1**
	1.3nm,0.5s,mb4.2,baz=42,slow=6.6,SNR=8.5						
TXAR	**Lajitas Array**	**58.86**	**81**	P	**P**	**19 23 20.2**	**+0.6**
	0.1nm,0.3s,mb3.3,baz=294,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	**59.43**	**308**	P	**P**	**19 23 22.2**	**-1.1**
	0.8nm,0.5s,mb4.0,baz=50,slow=6.1,SNR=16						
AKASG	**Malin Array Be**	**74.89**	**342**	P	**P**	**19 25 01.2**	**0.0**
	0.5nm,0.5s,mb3.7,baz=19,slow=5.9,SNR=4.3						
GERES	**GERESS Array B**	**78.95**	**351**	P	**P**	**19 25 24.2**	**+0.2**
	0.3nm,0.6s,mb3.4,baz=28,slow=3.2,SNR=3.5						

IDC 19 19:17:34.5±4.5, 1400N×14438E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, MS3.4/2, Ms1 3.3/2, ms1mx2.8/21, Error ellipse: s-maj=186.1km s-min=22.6km az=78.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.15**	**197**	P	P	19 24 30.9	+0.8
	0.3nm,0.5s,baz=17,slow=9.8,SNR=8.2						
ASAR	**Alice Springs**	**38.81**	**195**	P	P	19 25 01.4	+0.1
	0.2nm,0.7s,baz=14,slow=9.9,SNR=6.4						
STKA	**Stephens Creek**	**45.69**	**183**	P	P	19 25 55.9	-1.3
	0.7nm,0.7s,baz=17,slow=7.2,SNR=2.5						
STKA				LR	LR	19 46 00.2	
	comp=Z,25nm,21.8s,baz=24,slow=37						
MKAR	**Makanchi Array**	**60.87**	**316**	P	P	19 27 49.0	+0.2
	0.3nm,0.5s,baz=95,slow=8.0,SNR=7.8						
KURK	**Kurchatov**	**63.96**	**320**	P	P	19 28 09.8	+0.2
	0.7nm,0.4s,baz=104,slow=6.9,SNR=6.6						
YKA	**Yellowknife Ar**	**82.72**	**27**	LR	LR	20 10 16.4	
	comp=Z,34nm,18.4s,baz=350,slow=38						

IDC 19 19:43:39.5±1.5, 5495N×12716E, h53km±8km, mb3.3/4, mb1 3.5/4, mb1mx3.2/18, mbtmp3.3/4, Error ellipse: s-maj=129.0km s-min=16.2km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.24**	**165**	P	P	19 49 08.9	-0.8
	0.2nm,0.3s,baz=344,slow=10.0,SNR=11						
WRA				pP	pP	19 49 23.3	+0.1
	0.7nm,0.5s,baz=343,slow=10.0,SNR=5.4						
ASAR	**Alice Springs**	**29.72**	**167**	P	P	19 49 41.5	+0.7
	0.2nm,0.5s,baz=356,slow=7.9,SNR=9.3						
ASAR				pP	pP	19 49 55.2	+0.9
	0.3nm,0.5s,baz=2.0,slow=9.8,SNR=3.9						
ASAR				PcP	PcP	19 52 44.0	+0.1
	0.1nm,0.4s,baz=354,slow=2.8,SNR=3.8						
STKA	**Stephens Creek**	**39.62**	**161**	P	P	19 51 06.1	0.0
	1.8nm,0.5s,baz=321,slow=9.0,SNR=11						
STKA				pP	pP	19 51 19.2	-0.7
	1.2nm,0.4s,baz=350,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**56.37**	**324**	P	P	19 53 15.2	-0.1
	0.3nm,0.3s,baz=112,slow=7.2,SNR=19						
MKAR				pP	pP	19 53 29.8	0.0
	1.2nm,1.0s,baz=128,slow=7.9,SNR=4.9						

KRSC 19 20:09:16.0±0.3, 5195N×16070E, h10km±10km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.22**	**340**	*e*P	Pn	20 09 38.6	-0.5
SPN				*i* S	Sb	20 09 55.0	0.0
RUS	**Russkaya**	**1.43**	**291**	*i* P	Pn	20 09 41.8	-0.2
RUS				*i* S	Sn	20 10 01.3	+0.5
NLC	**Nalytchevo**	**1.48**	**326**	*i* P	Pn	20 09 42.9	+0.3
NLC				*i* S	Sn	20 10 02.7	+0.8
PET	**Petropavlovsk**	**1.65**	**311**	*i* P	Pn	20 09 45.5	+0.5
PET				*i* S	Sn	20 10 06.4	+0.2
GRL	**Gorelyy**	**1.72**	**292**	*e*P	Pn	20 09 47.2	+1.2
AVH	**Avacha**	**1.78**	**319**	*i* P	Pn	20 09 48.1	+1.3
AVH				*i* S	Sn	20 10 10.7	+1.3
GNL	**Ganaly**	**2.42**	**317**	*e*P	Pn	20 09 57.5	+1.9
GNL				*i* S	Sn	20 10 28.4	+3.2
MIPR	**Malaya Ipel'ka**	**2.45**	**279**	*e*P	Pn	20 09 56.4	+0.4
TUMR	**Tumrok**	**3.36**	**355**	P	Pn	20 10 09.6	+1.2
TUMR				*i* S	Sn	20 10 48.2	-0.1
KMNR	**Kamenistaya**	**3.82**	**356**	P	Pn	20 10 16.5	+1.7
ZLN	**Zelenaya**	**4.08**	**1**	P	Pn	20 10 21.0	+2.7
ZLN				*i* S	Sn	20 11 08.1	+2.1

*DDA **19** 20:14:43.4, 3726N×3470E, h5km±31km, Md2.4*
*ISCJB **19** 20:14:46.1±1.5, 3711N±008×3455E±01, h10km, Error ellipse: s-maj=16.9km s-min=6.1km az=40.5*
*ISK **19** 20:14:46.3, 3709N×3455E, h10km, MD2.8*
*CSEM **19** 20:14:46.3, 3709N×3455E, h10km, MD2.8, After ISK*

ISC 19 20:14:47.1±1.5, 3710N±01×3466E±01, h16km±8km, n8, σ0⁰60/9, Turkey

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

0.2nm,0.3s,baz=108,slow=6.4,SNR=2.3
YKA Yellowknife Ar 18.55 64 P **P** **20 32 00.2 +1.8**
0.2nm,0.3s,baz=278,slow=9.9,SNR=13
YKA PcP PcP 20 36 23.5 +0.6
0.1nm,0.3s,baz=274,slow=1.2,SNR=5.4
FX1 Attu Island--F 19.89 265 P **P** **20 32 13.1 +0.1**
5.0nm,0.3s,baz=348,slow=2.1,SNR=11
PETK Petropavlovsk- 27.62 279 P **P** **20 33 27.0 -0.5**
1.9nm,0.6s,mb3.8,baz=69,slow=13,SNR=5.4
PETK LR LR 20 45 23.9
comp=Z,58nm,19.3s,baz=146,slow=38
MDJ Mudanjiang 47.12 288 P **P** **20 36 08.1 -3.3**
MDJ AMB AMB
comp=Z,5.0nm,1.7s,mb4.0
MDJ AMB AMB
comp=Z,101nm,5.4s
KSRS Korea Array 53.37 283 P **P** **20 36 58.8 +0.2**
comp=Z,1.6nm,0.7s,mb4.2,baz=44,slow=6.9,SNR=3.7
SONM Songino Array 55.13 306 P **P** **20 37 11.8 +0.6**
comp=Z,1.1nm,0.4s,mb4.2,baz=33,slow=6.0,SNR=12
ZALV Zalesovo Beam 57.79 324 P **P** **20 37 29.5 -0.4**
comp=Z,1.6nm,0.6s,mb4.3,baz=27,slow=7.9,SNR=9.0
KURK Kurchatov 62.45 326 P **P** **20 38 02.4 +0.5**
comp=Z,0.8nm,0.4s,mb4.1,baz=28,slow=6.8,SNR=9.6
BVAR Borovoye Array 62.51 332 P **P** **20 38 01.9 -0.2**
comp=Z,1.8nm,0.6s,mb4.2,baz=28,slow=5.8,SNR=14
MKAR Makanchi Array 64.84 321 P **P** **20 38 16.8 -0.8**
comp=Z,0.5nm,0.5s,mb3.6,baz=36,slow=5.7,SNR=11
XAN Xi'an 65.25 295 P **P** **20 38 18.8 -1.6**
XAN AP pP 20 38 44.1 -2.1
XAN PP PP 20 40 43.1 -1.6
XAN S S 20 46 53.6 -1.7
XAN SS SS 20 51 08.4 -0.7
XAN AMB AMB
comp=Z,2.0nm,0.5s,mb4.2
XAN LR LR
comp=E,35nm,20.7s
XAN LR LR
comp=Z,43nm,17.4s
WMQ Urumqi 65.65 316 *e*P **P** **20 38 23.0 +0.2**
GYA Guiyang 72.66 293 *e*P **P** **20 39 08.0 +1.6**
GYA AMB AMB
comp=Z,10.0nm,1.2s,mb4.5
ESDC Sonseca Array 77.83 24 P **P** **20 39 36.7 +1.0**
comp=Z,0.4nm,0.5s,mb3.4,baz=338,slow=6.8,SNR=3.5
BOSA Boshof 149.04 3 PKPbc PKPbc 20 47 25.5 0.0
comp=Z,3.0nm,0.7s,baz=14,slow=6.2,SNR=9.0

IDC 19 20:44:45.9±9.8, 337N×12711E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.6/3, Error ellipse: s-maj=185.7km s-min=157.4km az=81.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.23**	**163**	P	P	20 50 04.3	-0.3
	1.8nm,0.7s,baz=344,slow=10,SNR=16						
ASAR	**Alice Springs**	**27.68**	**166**	P	P	20 50 35.7	-0.1
	0.1nm,0.4s,baz=340,slow=7.8,SNR=4.2						
STKA	**Stephens Creek**	**37.66**	**160**	P	P	20 52 03.5	+0.6
	0.8nm,0.7s,baz=340,slow=12,SNR=2.9						

*BJI **19** 20:51:18.5, 5155N×17964W, h19km, mB5.1, mb4.7, Ms4.7, Msz4.2*
*NEIC **19** 20:51:19.8, 5103N×17921W, h20km, mb4.7/36, ML4.6(AEIC), After AEIC.*
*MOS **19** 20:51:20.8±0.7, 5112N×17922W, h48km, mb4.8/30, Error ellipse: s-maj=10.4km s-min=6.6km az=101.0*
*ISCJB **19** 20:51:21.1±0.8, 5109N±007×17921W±004, h51km±6km, mb4.5/82, MS4.0/22, Error ellipse: s-maj=11.3km s-min=4.2km az=172.2*
*IDC **19** 20:51:22.3±2.1, 5110N×17926W, h48km±18km, mb4.1/28, mb1 4.2/30, mb1mx4.2/34, mbtmp4.1/30, ML3.8/2, MS3.8/16, Ms1 3.8/16, ms1mx3.7/34, Error ellipse: s-maj=17.8km s-min=9.9km az=174.0*
ISC 19 20:51:23.3±0.7, 5110N±007×17920W±004, h56km±5km, h44km±1.9km: pP-P, n206, σ0992/205, mb4.5/82, MS4.0/22, 7C-5D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.76**	**62**	P	**Pn**	**20 51 49.7**	**-1.6**
ADK				S	**Sn**	**20 52 12.9**	**+0.3**
ADK	**Adak**	**1.76**	**62**	P	**Pn**	**20 51 49.8**	**-1.6**
ADK				S	**Sn**	**20 52 12.9**	**+0.4**
SMY	**Shemya**	**4.46**	**294**	P	**Pn**	**20 52 27.7**	**-0.6**
SMY				S	**Sn**	**20 53 21.1**	**+2.2**
FX1	**Attu Island--F**	**5.05**	**294**	P	**Pn**	**20 52 35.1**	**-1.2**
	14nm,0.3s,baz=211,slow=1.9,SNR=33						
FX1				S	**Sn**	**20 53 32.5**	**-0.8**
	3.7nm,0.3s,baz=270,slow=20,SNR=2.1						
FX1	**Attu Island--F**	**5.05**	**294**	P	**Pn**	**20 52 35.2**	**-1.1**
OKFG	**Magazine Ridge**	**7.30**	**67**	P	**Pn**	**20 53 07.5**	**+0.3**
SPIA	**Saint Paul Isl**	**8.04**	**37**	P	**Pn**	**20 53 19.5**	**+2.2**
UNV	**Unalaska Valle**	**8.23**	**66**	P	**Pn**	**20 53 19.8**	**0.0**
SDPT	**Sand Point**	**11.99**	**62**	*e*P	**Pn**	**20 54 09.3**	**-1.9**
	18nm,0.3s						
PETK	**Petropavlovsk-**	**14.33**	**287**	P	**Pn**	**20 54 42.2**	**-0.7**
	0.3nm,0.3s,baz=96,slow=19,SNR=12						
PETK				LR	LR	20 59 59.7	
	comp=Z,274nm,20.5s,baz=96,slow=36						
TNA	**Tin City**	**15.62**	**18**	Pn	**Pn**	**20 55 01.7**	**+2.1**
	18nm,1.0s						
SVW2	**Sparrevohn**	**16.45**	**43**	*e*P	**Pn**	**20 55 12.9**	**+2.9**
KDAK	**Kodiak Island**	**16.79**	**56**	P	**Pn**	**20 55 09.8**	**-4.5**
	1.7nm,0.3s,baz=207,slow=10,SNR=28						
KDAK				S	**S**	**20 58 15.8**	**-12**
	0.2nm,0.3s,baz=285,slow=19,SNR=3.8						
KDAK	**Kodiak Island**	**16.79**	**56**	*e*Pn	**Pn**	**20 55 09.9**	**-4.3**
KDAK				*e*Sn	**Sn**	**20 58 22.1**	**+2.5**
BILL	**Bilibino**	**18.43**	**343**	⇑*i*P	**Pn**	**20 55 37.0**	**+2.7**
BILL				pmax	pmax		
	comp=Z,125nm,1.5s						
BILL				MLR	MLR		
	comp=Z,500nm,18.0s						
BILL	**Bilibino**	**18.43**	**343**	*e*P	**Pn**	**20 55 37.2**	**+3.0**
	comp=Z,109nm,1.3s						
PPLA	**Purkeypile**	**18.69**	**40**	*e*P	**Pn**	**20 55 38.5**	**+1.1**
	comp=Z,79nm,1.2s						
SEW	**Seward**	**18.92**	**50**	*e*P	**Pn**	**20 55 37.3**	**-2.9**
CHUM	**Lake Minchumin**	**19.11**	**38**	*e*P	**Pn**	**20 55 41.9**	**-0.5**
	comp=Z,26nm,0.9s						
KTH	**Kantishna Hill**	**19.50**	**39**	*e*P	**Pn**	**20 55 45.8**	**-1.3**
	comp=Z,95nm,1.1s						
TRF	**Thorofare Moun**	**19.71**	**40**	*e*P	**Pn**	**20 55 47.5**	**-2.1**
	comp=Z,184nm,1.5s						
BPAW	**Bear Paw Mtn.**	**19.73**	**38**	*e*P	**Pn**	**20 55 48.3**	**-1.5**
	comp=Z,58nm,1.2s						
MCK	**McKinley**	**20.38**	**40**	*e*P	**P**	**20 55 55.0**	**+0.1**
MCK				pmax	pmax		
	comp=Z,38nm,1.2s						
MCK	**McKinley**	**20.38**	**40**	*e*P	**P**	**20 55 55.0**	**+0.1**
	comp=Z,38nm,1.2s						
COLA	**College**	**21.29**	**38**	⇑*e*P	**P**	**20 56 05.8**	**+1.1**
COLA	**College**	**21.29**	**38**	*e*P	**P**	**20 56 04.5**	**-0.2**
	comp=Z,26nm,1.0s,mb4.5						
PAX	**Paxson**	**21.57**	**44**	*e*P	**P**	**20 56 07.0**	**-0.7**
PAX				pmax	pmax		
	comp=Z,53nm,1.2s,mb4.8						
PAX	**Paxson**	**21.57**	**44**	*e*P	**P**	**20 56 07.0**	**-0.8**
	comp=Z,53nm,1.2s,mb4.8						
COLD	**Coldfoot**	**21.62**	**31**	*e*P	**P**	**20 56 08.3**	**0.0**
	comp=Z,10.0nm,1.0s,mb4.2						
EGAK	**Eagle**	**23.93**	**41**	*e*P	**P**	**20 56 26.4**	**-5.2**
	comp=Z,42nm,1.2s,mb4.7						
DAWY	**Dawson**	**24.48**	**43**	*e*P	**P**	**20 56 35.7**	**-1.0**
YSS	**Yuzh-Sakhalins**	**25.10**	**276**	⇑*e*P	**P**	**20 56 42.1**	**-0.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**25.10**	**276**	*e*P	**P**	**20 56 42.4**	**0.0**
	comp=Z,30nm,0.9s,mb4.8						
INK	**Inuvik**	**27.84**	**35**	P	**P**	**20 57 05.8**	**-1.0**
	comp=Z,1.3nm,0.4s,mb3.9,baz=250,slow=8.2,SNR=9.2						
INK				LR	LR	21 08 55.0	
	comp=Z,292nm,19.6s,MS3.9,baz=278,slow=38						
INK	**Inuvik**	**27.84**	**35**	P	**P**	**20 57 05.8**	**-1.0**
INK				LR	LR	21 08 55.0	
DLBC	**Dease Lake**	**28.72**	**56**	LR	LR	21 07 57.9	
	comp=Z,289nm,19.3s,MS3.9,baz=281,slow=35						
YAK	**Yakutsk**	**29.42**	**312**	*i* P	**P**	**20 57 20.1**	**-0.9**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
TIXI	**Tiksi**	**30.76**	**331**	⇓*e*P	**P**	**20 57 34.7**	**+1.9**
KLR	**Kul'dur**	**31.02**	**286**	*e*P	**P**	**20 57 30.7**	**-4.5**
KLR				pmax	pmax		
	comp=E,24nm,1.4s						
KLR				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.9						
MJAR	**Matsushiro Arr**	**33.49**	**261**	P	**P**	**20 57 57.3**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=41,slow=7.7,SNR=4.2						
MJAR				LR	LR	21 09 29.1	
	comp=Z,179nm,21.8s,MS3.8,baz=70,slow=32						
MAT	**Matsushiro**	**33.50**	**261**	P	**P**	**20 57 56.9**	**-0.2**
MAT				*e*S	**S**	**21 03 33.6**	**+19**
MDJ	**Mudanjiang**	**34.38**	**280**	P	**P**	**20 58 02.9**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,47nm,5.4s						
YKA	**Yellowknife Ar**	**35.61**	**46**	P	**P**	**20 58 14.6**	**-0.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=282,slow=8.1,SNR=40						
YKA				PcP	PcP	21 00 43.1	+0.7
	comp=Z,0.3nm,0.5s,baz=288,slow=2.9,SNR=4.3						
YKA				ScP	ScP	21 04 26.3	+3.0
	comp=Z,0.2nm,0.6s,baz=268,slow=3.1,SNR=4.3						
YKA				LR	LR	21 14 02.1	
	comp=Z,129nm,18.2s,MS3.7,baz=250,slow=38						
YKA	**Yellowknife Ar**	**35.61**	**46**	P	**P**	**20 58 14.7**	**-0.3**
YKA				PcP		21 00 43.1	
CN2	**Changchun**	**37.36**	**281**	*e*P	**P**	**20 58 30.8**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CBIJ	**Chichi jima**	**37.74**	**245**	LR	LR	21 12 17.1	
	comp=Z,120nm,20.8s,MS3.7,baz=347,slow=33						
BOD	**Bodaibo**	**37.95**	**307**	*e*P	**P**	**20 58 33.8**	**-1.1**
BOD				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
HIA	**Hailar**	**38.16**	**292**	⇓*e*P	**P**	**20 58 36.1**	**-0.7**
HIA	**Hailar**	**38.16**	**292**	*e*P	**P**	**20 58 35.3**	**-1.5**
	comp=Z,20nm,1.3s,mb4.7						
EDM	**Edmonton**	**39.17**	**60**	*e*P	**P**	**20 58 44.5**	**-0.7**
YBH	**Yreka Blue Hor**	**39.17**	**81**	P	**P**	**20 58 46.6**	**+1.3**
	comp=Z,3.9nm,1.0s,mb4.1,baz=320,slow=7.9,SNR=2.9						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**20 58 47.5**	**+0.3**
	comp=Z,6.5nm,0.9s,mb4.3,baz=59,slow=7.6,SNR=14						
KSRS				LR	LR	21 13 49.5	
	comp=Z,82nm,19.9s,MS3.6,baz=20,slow=34						
KSRS	**Korea Array**	**39.39**	**271**	P	**P**	**20 58 47.6**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
KSRS				MLR	MLR		
	comp=Z,82nm,19.9s,MS3.6						
RES	**Resolute Bay**	**40.10**	**24**	LR	LR	21 17 40.4	
	comp=Z,98nm,18.2s,MS3.7,baz=307,slow=39						
HLID	**Hailey**	**43.26**	**74**	*e*P	**P**	**20 59 19.8**	**+0.9**
	comp=Z,5.6nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	**43.84**	**82**	P	**P**	**20 59 23.7**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.5,baz=287,slow=6.2,SNR=4.8						
ELK	**Elko**	**44.36**	**78**	P	**P**	**20 59 29.2**	**+1.4**
	comp=Z,2.3nm,0.8s,mb4.0,baz=289,slow=9.7,SNR=12						
ELK	**Elko**	**44.36**	**78**	*e*P	**P**	**20 59 29.4**	**+1.6**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ELK	**Elko**	**44.36**	**78**	*e*P	**P**	**20 59 29.4**	**+1.6**
	comp=Z,5.4nm,0.9s,mb4.3						
BJI	**Beijing**	**45.19**	**282**	P	**P**	**20 59 33.8**	**-0.6**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
RLMT	**Red Lodge**	**45.47**	**69**	*e*P	**P**	**20 59 38.1**	**+1.6**
	comp=Z,15nm,1.1s,mb4.7						
TLY	**Talaya**	**46.01**	**302**	*e*P	**P**	**20 59 40.9**	**+0.2**
TLY				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
TLY				MLR	MLR		
	comp=Z,144nm,18.0s,MS4.0						
ULN	**Ulaanbaatar**	**46.16**	**296**	*e*P	**P**	**20 59 41.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**46.16**	**296**	*e*P	**P**	**20 59 41.9**	**-0.1**
	comp=Z,9.6nm,0.9s,mb4.7						
DUG	**Dugway**	**46.18**	**77**	*e*P	**P**	**20 59 42.6**	**+0.5**
DUG				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
DUG	**Dugway**	**46.18**	**77**	*e*P	**P**	**20 59 42.6**	**+0.4**
	comp=Z,9.3nm,0.9s,mb4.7						
SONM	**Songino Array**	**46.55**	**297**	P	**P**	**20 59 45.6**	**+0.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=52,slow=8.7,SNR=16						
SONM				PcP	PcP	21 01 18.3	0.0
	comp=Z,0.7nm,0.5s,baz=44,slow=3.5,SNR=3.7						
SONM				LR	LR	21 20 20.6	
	comp=Z,218nm,19.9s,MS4.1,baz=108,slow=37						
SONM	**Songino Array**	**46.55**	**297**	P	**P**	**20 59 45.6**	**+0.6**
SONM						21 01 18.3	
SONM	**Songino Array**	**46.55**	**297**	P	**P**	**20 59 45.6**	**+0.7**
SONM				PcP	PcP	21 01 18.3	0.0
SONM				LR	LR	21 20 20.6	
PDAR	**Pinedale Array**	**46.63**	**72**	P	**P**	**20 59 46.6**	**+1.0**
	comp=Z,6.1nm,0.8s,mb4.6,baz=317,slow=3.6,SNR=15						
PDAR				LR	LR	21 17 44.7	
	comp=Z,109nm,19.6s,MS3.8,baz=302,slow=34						
ZAK	**Zakamensk**	**46.89**	**301**	*e*P	**P**	**20 59 47.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
GUMO	**Guam**	**47.34**	**231**	LR	LR	21 14 59.4	
	comp=Z,64nm,20.9s,MS3.6,baz=42,slow=30						
MOY	**Mondy**	**47.41**	**304**	*e*P	**P**	**20 59 52.7**	**+1.0**
HHC	**Hu-ho-hao-te**	**47.53**	**286**	*e*P	**P**	**20 59 53.4**	**+0.7**
HHC				PCP	PcP	21 01 24.4	+2.5
HHC				PP	PP	21 01 44.1	-0.1
HHC				PCS	PcS	21 05 19.0	+1.7
HHC				*e*S	**S**	**21 06 41.5**	**-1.8**
HHC				SCS	ScS	21 09 40.8	-0.1
HHC				SS	SS	21 10 03.3	-8.1
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,166nm,4.6s						
HHC				LR	LR		
	comp=N,223nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=E,138nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=Z,195nm,14.3s,MS4.2						
NJ2	**Nanjing**	**48.57**	**272**	*e*P	**P**	**21 00 03.6**	**+2.7**
NJ2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.6						
ULM	**Lac du Bonnet**	**50.05**	**56**	LR	LR	21 22 46.7	
	comp=Z,206nm,18.3s,MS4.2,baz=287,slow=38						
SPITS	**Spitsbergen Ar**	**50.64**	**356**	P	**P**	**21 00 15.4**	**-0.6**
	comp=Z,19nm,0.6s,mb5.2,baz=359,slow=7.8,SNR=18						
ANMO	**Albuquerque**	**53.39**	**78**	*i* P	**P**	**21 00 41.5**	**+4.5**
FRB	**Frobisher Bay**	**53.40**	**31**	P	**P**	**21 00 36.1**	**-0.5**
	comp=Z,3.0nm,0.4s,mb4.6,baz=313,slow=8.0,SNR=13						
XAN	**Xi'an**	**53.47**	**281**	P	**P**	**21 00 36.8**	**-0.8**
XAN				AP	pP	21 00 48.4	-4.2
XAN				PP	PP	21 02 37.4	-0.8
XAN				S	**S**	**21 08 06.3**	**+0.4**
XAN				SS	SS	21 11 47.9	+1.7
XAN				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3						
XAN				AMB	AMB		
	comp=Z,28nm,16.6s						
XAN				LR	LR		
	comp=E,49nm,16.2s						
XAN				LR	LR		
	comp=Z,101nm,22.5s						
ZALV	**Zalesovo Beam**	**54.05**	**313**	P	**P**	**21 00 42.0**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=14,slow=6.5,SNR=2.9						
ZALV				PcP	PcP	21 01 46.8	+1.0
	comp=Z,1.5nm,0.7s,baz=64,slow=3.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**54.05**	**313**	P	**P**	**21 00 42.0**	**+0.5**
ZALV				PcP	PcP	21 01 46.8	+1.0
LZH	**Lanzhou**	**55.22**	**286**	*e*P	**P**	**21 00 50.5**	**+0.2**
LZH				AP	pP	21 01 01.3	-4.0
LZH				XP	sP	21 01 06.6	-5.1
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,79nm,4.7s						
GTA	**Gaotai**	**55.44**	**292**	*e*P	**P**	**21 00 52.0**	**+0.2**
GTA				AP	pP	21 01 04.8	-2.1
GTA				PP	PP	21 02 57.3	+1.5
GTA				S	**S**	**21 08 32.1**	**-0.2**
GTA				SS	SS	21 12 17.1	+0.1
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,1μm,9.2s						
GTA				LR	LR		
	comp=N,247nm,18.1s,MS4.5						
GTA				LR	LR		
	comp=E,272nm,17.0s,MS4.5						
GTA				LR	LR		
	comp=Z,614nm,16.7s,MS4.8						
ARCES	**ARCESS Array B**	**58.33**	**350**	P	**P**	**21 01 11.6**	**-0.2**
	comp=Z,12nm,1.1s,mb4.9,baz=19,slow=7.9,SNR=4.0						
ARCES	**ARCESS Array B**	**58.33**	**350**	P	**P**	**21 01 11.6**	**-0.2**
CD2	**Chengdu**	**58.79**	**282**	P	**P**	**21 01 16.8**	**+1.2**
CD2				PCP	PcP	21 02 06.3	+1.6
CD2				PP	PP	21 03 28.3	+2.5
CD2				S	**S**	**21 09 15.6**	**-0.9**
CD2				SS	SS	21 13 10.5	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
CD2				AMB	AMB		
	comp=Z,180nm,5.3s						
CD2				LR	LR		
	comp=N,200nm,8.9s						
CD2				LR	LR		
	comp=Z,210nm,8.3s						
TXAR	**Lajitas Array**	**58.94**	**81**	P	**P**	**21 01 16.7**	**0.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=299,slow=5.0,SNR=16						
TXAR				LR	LR	21 26 01.7	
	comp=Z,103nm,18.1s,MS4.0,baz=5.0,slow=35						
TXAR	**Lajitas Array**	**58.94**	**81**	P	**P**	**21 01 16.7**	**0.0**
TXAR				LR	LR	21 26 01.7	
KURK	**Kurchatov**	**59.04**	**314**	P	**P**	**21 01 17.4**	**+0.4**
	comp=Z,3.5nm,0.5s,mb4.6,baz=41,slow=6.6,SNR=16						
KURK	**Kurchatov**	**59.04**	**314**	⇑*e*P	**P**	**21 01 17.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WMQ	**Urumqi**	**59.29**	**303**	*e*P	**P**	**21 01 19.5**	**+0.7**
WMQ				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,218nm,5.0s						
WMQ				LR	LR		
	comp=N,247nm,22.0s,MS4.4						
WMQ				LR	LR		
	comp=E,188nm,24.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,131nm,17.0s						
MKAR	**Makanchi Array**	**60.02**	**308**	P	**P**	**21 01 23.3**	**-0.5**
	comp=Z,2.5nm,0.3s,mb4.7,baz=52,slow=6.5,SNR=130						
GYA	**Guiyang**	**60.10**	**276**	⇑*i*P	**P**	**21 01 25.3**	**+0.6**
GYA				AP	pP	21 01 38.0	-1.9
GYA				PP	PP	21 03 39.8	+2.3
GYA				SCP	ScP	21 06 07.3	+1.3
GYA				S	**S**	**21 09 30.3**	**-3.3**
GYA				SS	SS	21 13 28.8	-2.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,50nm,6.0s						
GYA				LR	LR		
	comp=N,380nm,17.6s,MS4.7						
GYA				LR	LR		
	comp=E,350nm,17.3s,MS4.7						
GYA				LR	LR		
	comp=Z,500nm,17.0s,MS4.7						
SCHQ	**Schefferville**	**60.38**	**38**	P	**P**	**21 01 25.5**	**-0.7**
	comp=Z,4.1nm,0.8s,mb4.5,baz=269,slow=17,SNR=5.1						
BVAR	**Borovoye Array**	**60.95**	**320**	P	**P**	**21 01 30.4**	**+0.4**
	comp=Z,0.8nm,0.4s,mb4.2,baz=58,slow=6.3,SNR=10						
KMI	**Kunming**	**63.52**	**278**	P	**P**	**21 01 47.4**	**-0.2**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
JOF	**Joensuu**	**63.81**	**345**	*e*p	**P**	**21 01 48.4**	**-0.6**
	comp=Z,2.0nm,0.3s,mb4.6						
JOF	**Joensuu**	**63.81**	**345**	*e*P	**P**	**21 01 48.4**	**-0.6**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
KAF	**Kangasniemi**	**65.33**	**347**	*e*p	**P**	**21 01 57.8**	**-1.1**
	comp=Z,2.0nm,0.3s,mb4.6						
KAF	**Kangasniemi**	**65.33**	**347**	*e*P	**P**	**21 01 57.8**	**-1.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
AAK	**Ala-Archa**	**66.86**	**310**	⇓*e*P	**P**	**21 02 10.3**	**+1.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
EKS2	**Erkin-Say**	**67.18**	**310**	*e*P	**P**	**21 02 11.9**	**+0.9**
	comp=Z,3.6nm,0.6s,mb4.6						
LSA	**Lhasa**	**67.30**	**289**	P	**P**	**21 02 10.4**	**-1.6**
LSA	**Lhasa**	**67.30**	**289**	*e*P	**P**	**21 02 12.7**	**+0.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
LSA	**Lhasa**	**67.30**	**289**	*e*P	**P**	**21 02 12.7**	**+0.6**
	comp=Z,6.4nm,0.9s,mb4.7						
AKTK	**Aktyubinsk**	**67.77**	**324**	P	**P**	**21 02 14.2**	**-0.4**
AKTO	**Aktyubinsk**	**67.77**	**324**	P	**P**	**21 02 14.2**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=72,slow=9.1,SNR=6.3						
NB2	**NORSAR Subarra**	**67.91**	**355**	P	**P**	**21 02 14.4**	**-0.9**
	comp=Z,14nm,1.2s,mb4.9,baz=7.9,slow=6.5						
NOA	**NORSAR Array B**	**67.91**	**355**	P	**P**	**21 02 15.1**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.2,baz=8.3,slow=6.3,SNR=8.8						
NOA	**NORSAR Array B**	**67.91**	**355**	P	**P**	**21 02 15.1**	**-0.2**
OBN	**Obninsk**	**70.05**	**339**	*e*P	**P**	**21 02 28.5**	**-0.2**
OBN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
CMAR	**Chiang Mai Arr**	**70.79**	**276**	P	**P**	**21 02 31.8**	**-2.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=31,slow=6.9,SNR=11						
CMAR				LR	LR	21 37 30.3	
	comp=Z,51nm,19.1s,MS3.8,baz=230,slow=39						
CMAR	**Chiang Mai Arr**	**70.79**	**276**	*i* P	**P**	**21 02 33.2**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TAPN	**Taplejung**	**71.07**	**290**	*e*P	**P**	**21 02 36.0**	**+0.6**
	comp=Z,4.1nm,0.9s,mb5.3						
ODAN	**Odare**	**71.63**	**290**	*e*P	**P**	**21 02 39.2**	**+0.5**
GUN	**Gumba**	**71.73**	**292**	*e*P	**P**	**21 02 40.2**	**+0.8**
	comp=Z,24nm,0.4s,mb5.5						
JIRN	**Jiri**	**71.74**	**291**	*e*P	**P**	**21 02 40.4**	**+1.0**
RAMN	**Ram

FLN	**La Foliniere**	**80.52**	**1**	*e*P		**P**	**21 03 28.2**	**-0.7**
LDF	**La Druitiere**	**80.69**	**1**	*e*P		**P**	**21 03 29.1**	**-0.7**
	comp=Z,5.2nm,0.4s,mb4.5							
CDF	**Champ du Feu**	**80.72**	**356**	*e*P		**P**	**21 03 29.2**	**-0.8**
GRR	**Gorron**	**80.89**	**1**	*e*P		**P**	**21 03 30.4**	**-0.5**
ROSF	**Rostrenen**	**80.89**	**3**	*e*P		**P**	**21 03 30.5**	**-0.4**
SGMF	**Saint Gilles**	**80.99**	**2**	*e*P		**P**	**21 03 31.1**	**-0.3**
	comp=Z,8.2nm,0.5s,mb4.7							
SGMF	**Saint Gilles**	**80.99**	**2**	*e*P		**P**	**21 03 31.1**	**-0.3**
SGMF				pmax		pmax		
	comp=Z,4.0nm,0.5s,mb4.6							
SGMF	**Saint Gilles**	**80.99**	**2**	*e*P		**P**	**21 03 31.1**	**-0.3**
	comp=Z,4.1nm,0.5s,mb4.6							
HAU	**Haudompre**	**81.17**	**356**	*e*P		**P**	**21 03 31.8**	**-0.6**
KBA	**Koelnbreinsper**	**81.61**	**351**	*i*P		**P**	**21 03 35.6**	**+0.8**
	comp=Z,26nm,1.4s,mb5.0							
WRA	**Warramunga Arr**	**81.64**	**224**	P		**P**	**21 03 34.0**	**-1.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=33,slow=6.0,SNR=5.3							
FETA	**Feichten**	**81.89**	**353**	*i*P		**P**	**21 03 37.0**	**+0.8**
	comp=Z,7.4nm,1.4s,mb4.4							
LOR	**Lormes**	**81.98**	**358**	*e*P		**P**	**21 03 36.2**	**-0.5**
SSF	**Saint Saulge**	**82.20**	**358**	*e*P		**P**	**21 03 37.4**	**-0.4**
AVF	**Avril sur Loir**	**82.47**	**358**	*e*P		**P**	**21 03 38.7**	**-0.6**
SMF	**Signal de Mont**	**82.61**	**358**	*e*P		**P**	**21 03 39.5**	**-0.5**
	comp=Z,4.4nm,0.5s,mb4.5							
SMF	**Signal de Mont**	**82.61**	**358**	*e*P		**P**	**21 03 39.5**	**-0.5**
SMF				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb4.4							
SMF	**Signal de Mont**	**82.61**	**358**	*e*P		**P**	**21 03 39.5**	**-0.5**
	comp=Z,2.2nm,0.5s,mb4.4							
MFF	**Saint Martin d**	**82.68**	**1**	*e*P		**P**	**21 03 40.1**	**-0.3**
BGF	**Bois d'Agland**	**82.71**	**359**	*e*P		**P**	**21 03 39.8**	**-0.7**
PSI	**Prapat**	**82.72**	**265**	P		**P**	**21 03 40.6**	**-0.5**
	comp=Z,1.6nm,0.3s,mb4.5,baz=24,slow=14,SNR=3.7							
TCF	**Toulx Ste Croi**	**82.99**	**359**	*e*P		**P**	**21 03 41.3**	**-0.7**
LPL	**La Plagne**	**83.63**	**356**	*e*P		**P**	**21 03 45.9**	**+0.6**
LPG	**La Plagne**	**83.65**	**356**	*e*P		**P**	**21 03 46.1**	**+0.7**
ORIF	**Oris-en-Rattie**	**84.27**	**356**	*e*P		**P**	**21 03 49.1**	**+0.6**
	comp=Z,2.9nm,0.6s,mb4.3							
ORIF	**Oris-en-Rattie**	**84.27**	**356**	*e*P		**P**	**21 03 49.1**	**+0.6**
ORIF				pmax		pmax		
	comp=Z,1.0nm,0.6s,mb4.1							
ORIF	**Oris-en-Rattie**	**84.27**	**356**	*e*P		**P**	**21 03 49.1**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.3							
LFF	**La Frestale**	**84.35**	**0**	*e*P		**P**	**21 03 48.7**	**-0.3**
VIVF	**Saint-Julien-l**	**84.37**	**357**	*e*P		**P**	**21 03 49.1**	**0.0**
MBDF	**Montbardon**	**84.42**	**356**	*e*P		**P**	**21 03 49.7**	**+0.4**
	comp=Z,4.6nm,0.6s,mb4.5							
MBDF	**Montbardon**	**84.42**	**356**	*e*P		**P**	**21 03 49.7**	**+0.4**
MBDF				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.4							
MBDF	**Montbardon**	**84.42**	**356**	*e*P		**P**	**21 03 49.7**	**+0.4**
	comp=Z,2.3nm,0.6s,mb4.5							
BRTR	**Keskin Array B**	**85.10**	**335**	P		**P**	**21 03 52.6**	**-0.2**
	comp=Z,1.8nm,1.0s,mb4.2,baz=23,slow=4.0,SNR=5.3							
BRTR	**Keskin Array B**	**85.10**	**335**	*i* P		**P**	**21 03 55.4**	**+2.6**
BRTR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
ASAR	**Alice Springs**	**85.11**	**222**	P		**P**	**21 03 52.3**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.1,baz=23,slow=7.0,SNR=3.4							
SMRF	**Simiane la Rot**	**85.22**	**357**	*e*P		**P**	**21 03 54.0**	**+0.6**
FRF	**La Foret Royal**	**85.59**	**356**	*e*P		**P**	**21 03 54.6**	**-0.6**
	comp=Z,4.5nm,0.6s,mb4.6							
FRF	**La Foret Royal**	**85.59**	**356**	*e*P		**P**	**21 03 54.6**	**-0.6**
FRF				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.5							
FRF	**La Foret Royal**	**85.59**	**356**	*e*P		**P**	**21 03 54.6**	**-0.6**
	comp=Z,2.3nm,0.6s,mb4.6							
LMR	**La Mourre**	**85.82**	**356**	*e*P		**P**	**21 03 56.1**	**-0.3**
EPF	**Esparros**	**86.25**	**0**	*e*P		**P**	**21 03 57.7**	**-0.8**
	comp=Z,8.2nm,0.9s,mb4.7							
EPF	**Esparros**	**86.25**	**0**	*e*P		**P**	**21 03 57.7**	**-0.8**
EPF				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.7							
EPF	**Esparros**	**86.25**	**0**	*e*P		**P**	**21 03 57.7**	**-0.8**
	comp=Z,4.1nm,0.9s,mb4.7							
ETSF	**Etsaut**	**86.38**	**1**	*e*P		**P**	**21 03 59.3**	**+0.2**
	comp=Z,8.2nm,0.8s,mb4.7							
ETSF	**Etsaut**	**86.38**	**1**	*e*P		**P**	**21 03 59.3**	**+0.2**
ETSF				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.7							
ETSF	**Etsaut**	**86.38**	**1**	*e*P		**P**	**21 03 59.3**	**+0.2**
	comp=Z,4.1nm,0.8s,mb4.7							
PGF	**Pioggiola**	**86.46**	**354**	*e*P		**P**	**21 03 59.7**	**+0.2**
	comp=Z,9.3nm,0.7s,mb4.8							
PGF	**Pioggiola**	**86.46**	**354**	*e*P		**P**	**21 03 59.7**	**+0.2**
PGF				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.8							
PGF	**Pioggiola**	**86.46**	**354**	*e*P		**P**	**21 03 59.7**	**+0.2**
	comp=Z,4.7nm,0.7s,mb4.8							
STKA	**Stephens Creek**	**89.55**	**213**	P		**P**	**21 04 14.3**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.6,baz=5.1,slow=4.4,SNR=5.3							
STKA				LR		LR	21 43 12.0	
	comp=Z,78nm,18.6s,MS4.2,baz=24,slow=35							
STKA	**Stephens Creek**	**89.55**	**213**	*e*P		**P**	**21 04 13.4**	**-0.7**
	comp=Z,1.1nm,1.1s,mb4.1							
TORD	**Torodi Ar. Bea**	**116.03**	**359**	PKP		PKPdf	21 09 59.1	-0.9
	comp=Z,0.5nm,0.9s,baz=339,slow=2.4,SNR=4.6							
TORD				PKKPbc		PKKPbc	21 20 28.6	+0.1
	comp=Z,0.4nm,0.9s,baz=174,slow=2.7,SNR=4.9							
DBIC	**Dimbokro**	**122.26**	**7**	PKP		PKPdf	21 10 10.9	-1.1
	comp=Z,0.6nm,0.4s,baz=0.0,slow=3.0,SNR=4.6							
DBIC	**Dimbokro**	**122.26**	**7**	PKIKP		PKPdf	21 10 11.0	-1.0
DBIC				pmax		pmax		
	comp=Z,1.0nm,0.4s							
TSUM	**Tsumeb**	**145.52**	**331**	*e*P		PKPdf	21 10 54.3	-0.6
BOSA	**Boshof**	**150.98**	**311**	PKPbc		PKPbc	21 11 08.9	-0.5
	comp=Z,1.4nm,0.6s,baz=61,slow=20,SNR=3.8							
BOSA	**Boshof**	**150.98**	**311**	PKIKP		PKPbc	21 11 09.0	-0.4
BOSA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
VNA2	**Neumayer--Watz**	**159.75**	**172**	*e*PKPdf		PKPab	21 11 52.7	-0.6
VNA2				*e*			21 12 07.2	

IDC ***19*** *20:56:46.5±1.8, 354S×142.19E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/17, mbtmp3.9/7, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=47.4km s-min=11.6km az=98.0*

ISCJB ***19*** *20:56:48.4±1.2, 341S±008×142.6E±02, h33km, mb3.9/6, Error ellipse: s-maj=29.8km s-min=12.1km az=179.2*

NEIC ***19*** *20:56:49.8±1.0, 339S×142.68E, h35km, mb4.2/3, Error ellipse: s-maj=26.3km s-min=10.9km az=88.0*

ISC 19 20:56:49.7±4.6, 341S±009×1426E±02, h30km±31km, n17, σ0°76/16, mb3.9/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.95**	**168**	LR	LR	21 07 20.8	
	comp=Z,104nm,20.5s,baz=228,slow=38						
WRAB	**Tennant Creek**	**18.30**	**206**	*e*P	**Pn**	**21 01 00.3**	**-1.1**
	16nm,1.0s						
WB2	**Warramunga Arr**	**18.31**	**206**	*e*P	**Pn**	**21 01 02.1**	**+0.6**
WB2				*e*S	Sx	21 04 18.4	
WRA	**Warramunga Arr**	**18.31**	**206**	P	**Pn**	**21 01 00.4**	**-1.1**
	0.4nm,0.3s,baz=26,slow=13,SNR=24						
WRA				S	Sx	21 04 20.0	
	0.0nm,0.3s,baz=26,slow=22,SNR=3.9						
KNA	**Kununurra**	**18.34**	**227**	*e*P	**Pn**	**21 01 02.9**	**+1.0**
	12nm,0.6s						
ASAR	**Alice Springs**	**21.83**	**202**	P	**P**	**21 01 39.4**	**-0.3**
	2.2nm,1.0s,baz=30,slow=9.2,SNR=15						
ASAR				S		**S**	**21 05 39.3**	**-0.2**
	1.6nm,1.1s,baz=18,slow=21,SNR=9.2						
FITZ	**Fitzroy Crossi**	**22.14**	**228**	*e*P	**P**	**21 01 44.4**	**+1.4**
	12nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**28.33**	**182**	P	**P**	**21 02 41.4**	**+0.5**
	1.8nm,0.9s,mb3.7,baz=332,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**28.33**	**182**	P	**P**	**21 02 41.4**	**+0.5**
PSI	**Prapat**	**44.11**	**278**	P	**P**	**21 04 54.5**	**-1.2**
	2.9nm,0.4s,mb4.3,baz=201,slow=5.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**48.19**	**298**	P	**P**	**21 05 27.4**	**-0.3**
	0.8nm,0.9s,mb3.8,baz=119,slow=6.0,SNR=8.8						
LSA	**Lhasa**	**59.21**	**308**	*e*P	**P**	**21 06 48.6**	**+0.3**
MKAR	**Makanchi Array**	**72.75**	**321**	P	**P**	**21 08 15.3**	**+0.3**
	1.0nm,1.0s,mb3.7,baz=113,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**72.75**	**321**	P	**P**	**21 08 15.3**	**+0.3**
BVAR	**Borovoye Array**	**82.13**	**324**	P	**P**	**21 09 07.4**	**0.0**
	1.2nm,0.8s,mb3.9,baz=144,slow=5.2,SNR=4.5						
QSPA	**South Pole Qui**	**86.54**	**180**	P	**P**	**21 09 29.5**	**+0.1**
DBIC	**Dimbokro**	**147.45**	**277**	PKPbc	PKPbc	21 16 30.1	-1.7
	1.9nm,0.7s,baz=84,slow=4.6,SNR=5.7						

IDC 19 21:18:09.5±1.1, 080N×2728W, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/20, mbtmp3.9/6, MS3.3/1, Ms1 3.3/1, ms1mx2.7/32, Error ellipse: s-maj=33.2km s-min=29.2km az=70.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**31.22**	**66**	P	P	21 24 30.8	-0.1
	1.3nm,0.7s,baz=256,slow=9.5,SNR=25						
CPUP	**Villa Florida**	**39.59**	**225**	LR	LR	21 41 34.1	
	comp=Z,36nm,19.4s,baz=219,slow=36						
TSUM	**Tsumeb**	**48.30**	**117**	P	P	21 26 54.0	+1.0
	2.2nm,0.8s,baz=258,slow=11,SNR=5.6						
BOSA	**Boshof**	**58.12**	**125**	P	P	21 28 05.1	-0.2
	1.5nm,0.7s,baz=299,slow=10,SNR=3.1						
GERES	**GERESS Array B**	**59.40**	**30**	P	P	21 28 13.5	-0.2
	0.2nm,0.7s,baz=240,slow=5.5,SNR=5.3						
AKASG	**Malin Array Be**	**68.80**	**35**	P	P	21 29 15.9	+0.4
	0.2nm,0.3s,baz=240,slow=6.8,SNR=4.1						
VNA2	**Neumayer--Watz**	**72.78**	**173**	*e*	P	21 29 40.7	+1.3
VNA2				*e*		21 29 43.1	
VNA2				*e*		21 29 49.6	
VNA3	**Neumayer Olymp**	**72.83**	**174**	*e*	P	21 29 40.6	+0.9
VNA3				*e*		21 29 43.2	
VNA3				*e*		21 29 50.6	
TXAR	**Lajitas Array**	**77.74**	**300**	P	P	21 30 09.6	+0.8
	0.2nm,0.3s,baz=113,slow=4.2,SNR=3.5						
ASAR	**Alice Springs**	**150.85**	**143**	PKPbc	PKPbc	21 38 04.6	-0.3
	0.4nm,0.6s,baz=208,slow=2.1,SNR=6.0						
ASAR				PKPab	PKPab	21 38 11.9	0.0
	0.5nm,0.7s,baz=203,slow=2.5,SNR=6.4						
WRA	**Warramunga Arr**	**153.82**	**138**	PKPbc	PKPbc	21 38 10.5	-1.2
	0.2nm,0.9s,baz=228,slow=2.5,SNR=2.9						
WRA				PKPab	PKPab	21 38 24.3	-0.2
	0.2nm,0.6s,baz=230,slow=3.0,SNR=5.8						

ISCJB ***19*** *21:19:36.5±0.6, 594S±007×104.17E±008, h10km, mb3.6/10, Error ellipse: s-maj=13.6km s-min=6.9km az=138.4*

IDC ***19*** *21:19:37.1±3.0, 609S×104.04E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.6/19, mbtmp3.5/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/19, Error ellipse: s-maj=140.3km s-min=17.9km az=55.0*

NEIC ***19*** *21:19:41.7±0.6, 599S×104.15E, h35km, mb3.6/4, Error ellipse: s-maj=19.9km s-min=7.6km az=52.0*

DJA ***19*** *21:19:47, 560S×10.497E, h10km, MLv4.0/4*

ISC 19 21:19:38.8±0.6, 588S±007×10429E±008, h10km, n33, σ1°15/31, mb3.6/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**1.15**	**29**	P	**Pb**	**21 19 59.5**	**-1.4**
KLI				S	**Sb**	**21 20 11.9**	**-4.0**
SBJI	**Serang**	**1.85**	**98**	P	**Pn**	**21 20 09.3**	**-1.3**
DBJI	**Dramaga**	**2.54**	**106**	P	**Pn**	**21 20 21.4**	**+1.3**
CBJI	**Citeko**	**2.61**	**102**	P	**Pn**	**21 20 26.8**	**+5.7**
KSI	**Kapahiang**	**2.78**	**323**	P	**Pg**	**21 20 34.0**	**+1.8**
KSI				S	**Sg**	**21 21 14.6**	**+6.4**
LEM	**Lembang**	**3.44**	**106**	P	**Pn**	**21 20 40.8**	**+8.2**
PSI	**Prapat**	**10.15**	**328**	LR	LR	21 25 43.9	
	comp=Z,36nm,20.1s,baz=201,slow=36						
KKM	**Kota Kinabalu**	**16.79**	**45**	Pn	**Pn**	**21 23 36.0**	**+1.7**
MBWA	**Marble Bar**	**21.33**	**137**	*e*P	**P**	**21 24 25.2**	**-0.9**
	7.5nm,1.0s,mb4.0						
FITZ	**Fitzroy Crossi**	**24.13**	**122**	*e*P	**P**	**21 24 56.0**	**+0.9**
	0.9nm,0.8s,mb3.2						
CM31	**Chiang Mai Arr**	**24.75**	**348**	P	**P**	**21 24 58.9**	**-1.8**
CMAR	**Chiang Mai Arr**	**24.75**	**348**	P	**P**	**21 25 03.8**	**+3.1**
	0.3nm,0.6s,mb3.0,baz=185,slow=9.5,SNR=4.1						
QIZ	**Qiongzhong**	**25.34**	**12**	P	**P**	**21 25 06.9**	**+0.7**
WRA	**Warramunga Arr**	**32.38**	**118**	P	**P**	**21 26 08.7**	**-0.2**
	0.4nm,0.6s,mb3.5,baz=292,slow=10.0,SNR=6.6						
WRAB	**Tennant Creek**	**32.38**	**118**	*e*P	**P**	**21 26 09.6**	**+0.6**
	0.7nm,0.6s,mb3.7						
WB2	**Warramunga Arr**	**32.39**	**118**	*e*P	**P**	**21 26 09.6**	**+0.6**
ASAR	**Alice Springs**	**33.53**	**125**	P	**P**	**21 26 19.7**	**+0.7**
	0.4nm,0.3s,mb3.8,baz=296,slow=7.5,SNR=9.7						
LSA	**Lhasa**	**37.55**	**341**	P	**P**	**21 26 53.4**	**0.0**
CTAO	**Charters Tower**	**43.12**	**113**	P	**P**	**21 27 39.4**	**-0.4**
STKA	**Stephens Creek**	**43.40**	**131**	P	**P**	**21 27 43.0**	**+1.1**
	1.5nm,0.4s,mb4.0,baz=302,slow=7.8,SNR=6.1						
STKA	**Stephens Creek**	**43.40**	**131**	*e*P	**P**	**21 27 40.9**	**-0.9**
	0.3nm,0.8s,mb3.4						
SONM	**Songino Array**	**53.51**	**2**	P	**P**	**21 29 01.1**	**+1.6**
	1.2nm,1.3s,mb3.7,baz=222,slow=1.9,SNR=2.7						
SONM				PcP	PcP	21 30 08.6	+2.3
	0.1nm,0.5s,baz=170,slow=2.6,SNR=2.8						
HNR	**Honiara**	**55.23**	**97**	P	**P**	**21 29 12.0**	**-0.7**
MK31	**Makanchi Array**	**55.95**	**342**	*e*P	**P**	**21 29 17.5**	**+0.3**
MKAR	**Makanchi Array**	**55.95**	**342**	P	**P**	**21 29 17.1**	**-0.1**
	0.2nm,0.5s,mb3.4,baz=154,slow=8.3,SNR=6.5						
MKAR				LR	LR	21 58 05.1	
	comp=Z,65nm,19.2s,baz=187,slow=41						
KURK	**Kurchatov**	**60.56**	**342**	P	**P**	**21 29 47.5**	**-1.9**
ZALV	**Zalesovo Beam**	**61.81**	**347**	P	**P**	**21 29 58.1**	**+0.3**
	0.3nm,0.3s,mb3.9,baz=132,slow=8.0,SNR=2.2						
BRVK	**Borovoye**	**65.37**	**338**	P	**P**	**21 30 19.9**	**-1.5**
KIV	**Kislovodsk**	**74.25**	**319**	P	**P**	**21 31 15.3**	**-1.0**
MALT	**Malatya**	**75.09**	**312**	P	**P**	**21 31 20.5**	**-0.8**
DCID1	**Drake Creek**	**131.19**	**34**	PKPdf	PKPdf	21 38 51.5	+0.1
TXAR	**Lajitas Array**	**144.77**	**45**	PKPbc	PKPdf	21 39 14.9	-1.9
	0.2nm,0.5s,baz=296,slow=4.6,SNR=3.0						
SDV	**Santo Domingo**	**174.14**	**301**	*e*PKPdf	PKPdf	21 39 48.4	-1.5

NEIC 19 21:58:56.6, 6223N×15013W, h8km, ML3.2(AEIC), ML3.7(PMR), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.70**	**250**	P	Pg	21 59 09.2	-0.8
SKT				S	Sg	21 59 18.8	-0.4
GHO	**Glory Hole Cre**	**0.73**	**128**	P	Pg	21 59 10.1	-0.5
PMR	**Palmer**	**0.80**	**143**	P	Pg	21 59 11.5	-0.3
PMR				S	Sg	21 59 22.3	+0.2
FIB	**Fire Island**	**1.07**	**181**	P	Pg	21 59 17.1	+0.1
FIB				*e*S	Sg	21 59 30.0	-0.8
RC01	**Rabbit Creek A**	**1.16**	**170**	P	Pg	21 59 17.1	-1.6
RC01				S	Sg	21 59 34.0	+0.2
PPLA	**Purkeypile**	**1.16**	**306**	P	Pb	21 59 18.2	-0.6
PPLA				S	Sg	21 59 33.5	-0.4
TRF	**Thorofare Moun**	**1.23**	**357**	P	Pn	21 59 19.3	-0.7
TRF				S	Sb	21 59 35.3	-0.7
KTH	**Kantishna Hill**	**1.38**	**345**	P	Pn	21 59 21.7	-0.3
KTH				S	Sb	21 59 39.1	-1.1
MCK	**McKinley**	**1.61**	**19**	P	Pn	21 59 25.1	0.0
MCK				*e*Sn	Sn	21 59 46.1	+0.1
SLKM	**Skilak Lake**	**1.73**	**181**	P	Pn	21 59 26.4	-0.4
BPAW	**Bear Paw Mtn.**	**1.92**	**349**	P	Pn	21 59 28.8	-0.6
CHUM	**Lake Minchumin**	**1.94**	**330**	*e*P	Pn	21 59 27.2	-2.5
SEW	**Seward**	**2.16**	**171**	P	Pn	21 59 33.8	+1.1
SEW				*e*Sn	Sn	22 00 00.5	+1.0
PAX	**Paxson**	**2.28**	**69**	P	Pn	21 59 35.3	+0.9
PAX				*e*Sn	Sn	22 00 02.0	-0.7
EYAK	**Cordova Ski Ar**	**2.70**	**127**	P	Pn	21 59 40.5	+0.3
TT01	**Tatalina**	**2.81**	**287**	P	Pn	21 59 41.6	0.0
SVW2	**Sparrevohn**	**2.83**	**249**	*e*P	Pn	21 59 41.5	-0.5
COLA	**College**	**2.85**	**20**	*e*Pn	Pn	21 59 40.8	-1.4
COLA				*e*Pg	Pg	21 59 50.9	-0.2
COLA				*e*Sn	Sn	22 00 16.6	+0.1
COLA				*e*Sg	Sg	22 00 24.8	-3.1
IL1	**Eielson Array**	**2.94**	**28**	P	Pn	21 59 42.6	-0.8
MENT	**Mentasta**	**3.05**	**74**	*e*Pn	Pn	21 59 47.2	+2.2
MENT				*e*Pg	Pg	21 59 52.8	-2.2
MENT				*e*Sn	Sn	22 00 21.2	-0.4
MENT				*e*Sg	Sg	22 00 34.4	-0.1
DOT	**Dot Lake**	**3.12**	**60**	P	Pn	21 59 47.2	+1.3
BCA3	**Beaver Creek A**	**3.94**	**74**	P	Pn	21 59 58.5	+1.3
IM3	**Indian Mountai**	**4.09**	**336**	P	Pn	21 59 59.1	-0.1
KDAK	**Kodiak Island**	**4.63**	**196**	*e*Pn	Sn	22 00 08.0	+1.4
KDAK				*e*Sn	Sn	22 01 00.0	-0.4
EGAK	**Eagle**	**4.76**	**54**	*e*Pn	Pn	22 00 09.2	+0.7
EGAK				*e*Pg	Pg	22 00 28.0	+0.3
EGAK				*e*Sn	Sn	22 01 04.3	+0.5
EGAK				*e*Sg	Sg	22 01 24.8	-4.5
COLD	**Coldfoot**	**5.02**	**360**	*e*Pn	Pn	22 00 12.9	+0.9
	5.6nm,0.7s						
COLD				*e*Sn	Sn	22 01 08.4	-1.7
DAWY	**Dawson**	**5.21**	**65**	*e*Pn	Pn	22 00 15.6	+1.0
DAWY				*e*Pg	Pg	22 00 32.8	-3.4
DAWY				*e*Sn	Sn	22 01 17.5	+2.8
DAWY				*e*Sg	Sg	22 01 40.3	-3.3
BM3	**Burnt Mountain**	**5.72**	**22**	P	Pn	22 00 21.2	-0.4
TNA	**Tin City**	**8.52**	**301**	*e*Pn	Pn	22 01 00.1	+0.2
TNA				*e*Sn	Sn	22 02 35.4	-0.6

ISCJB ***19*** *22:47:40.8±0.2, 4096N±002×11639W±002, h0km, Error ellipse: s-maj=2.5km s-min=2.2km az=31.4*

NEIC ***19*** *22:47:41.6±0.6, 4098N×11648W, h0km, ML2.8, Error ellipse: s-maj=10.6km s-min=6.9km az=143.0, Suspected Mining explosion.*

NEIC 55 km [35 miles] NE of Battle Mountain.

IDC ***19*** *22:47:42.3±1.1, 4101N×11632W, h0km, mb2.6/1, mb1 3.3/3, mb1mx3.2/20, mbtmp2.9/3, ML3.4/2, Error ellipse: s-maj=11.4km s-min=5.0km az=166.0*

ISC 19 22:47:41.7±0.2, 4098N±002×11636W±002, h0km, n51, σ0°88/74, 20C-24D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N10A	**Dunphy**	**0.28**	**204**	⇓P	**Pg**	**22 47 46.9**	**-0.1**
	baz=0.2,SNR=48						
N10A				⇓S	**Sg**	**22 47 49.4**	**-1.2**
	baz=0.2						
N11A	**Elko Archery C**	**0.50**	**108**	⇓P	**Pg**	**22 47 51.7**	**+0.5**
	baz=0.5						
M10A	**I.L. Ranch, Tu**	**0.56**	**346**	⇓P	**Pg**	**22 47 52.9**	**+0.4**
	baz=0.6,SNR=136						
M11A	**Holland Ranch,**	**0.63**	**43**	⇓P	**Pg**	**22 47 54.7**	**+1.0**
	baz=0.7						
O10A	**Cortez Mining,**	**0.69**	**189**	⇑P	**Pg**	**22 47 54.7**	**-0.2**
	baz=0.7,SNR=18						
O10A				⇑S	**Sg**	**22 48 05.0**	**+1.2**
	baz=0.7						
ELK	**Elko**	**0.88**	**105**	Pg	**Pg**	**22 47 59.6**	**+1.1**
	21nm,0.3s,baz=289,slow=18,SNR=348						
ELK				Lg		22 48 09.7	
	33nm,0.3s,baz=183,slow=14,SNR=18						
N09A	**Rock Creek Ran**	**0.89**	**262**	⇓P	**Pg**	**22 47 59.0**	**+0.2**
	baz=0.9,SNR=82						
M09A	**Marrel Ranch,**	**0.94**	**299**	⇓P	**Pg**	**22 48 00.2**	**+0.6**
	baz=0.9,SNR=32						
O11A	**Cowboy Ranch,**	**1.00**	**147**	⇑P	**Pg**	**22 48 00.8**	**0.0**
	baz=1.0,SNR=62						
N12A	**Clover Valley,**	**1.01**	**97**	⇑P	**Pg**	**22 48 01.6**	**+0.6**
	baz=1.0,SNR=365						
O09A	**Fish Creek Ran**	**1.02**	**218**	⇑P	**Pg**	**22 48 00.8**	**-0.4**
	baz=1.0,SNR=12						
L10A	**Juniper Basin**	**1.10**	**356**	⇓P	**Pg**	**22 48 03.0**	**+0.2**
	baz=1.1,SNR=67						
L10A				⇑S	**Sg**	**22 48 18.8**	**+1.7**
	baz=1.1						
M12A	**Wells**	**1.18**	**68**	⇑P	**Pg**	**22 48 04.7**	**+0.5**
	baz=1.2,SNR=16						
L11A	**Cat Creek Ranc**	**1.27**	**21**	P	**Pg**	**22 48 06.0**	**-0.1**
	baz=1.3,SNR=113						
P10A	**Eureka**	**1.35**	**183**	⇑P	**Pn**	**22 48 06.5**	**-1.3**
	baz=1.3						
N08A	**GE Springer Mi**	**1.36**	**262**	⇓P	**Pg**	**22 48 06.4**	**-1.3**
	baz=1.3						
N08A				⇑S	**Sg**	**22 48 25.7**	**+0.5**
	baz=1.3						
L09A	**Wilkinson Ranc**	**1.43**	**317**	⇑P	**Pn**	**22 48 08.0**	**-0.8**
	baz=1.4,SNR=27						
P11A	**Circle Ranch,**	**1.49**	**162**	⇑P	**Pn**	**22 48 08.7**	**-1.0**
	baz=1

BRTR	**Keskin Array B**	**69.01**	**49**	P		P	23 05 30.7	-0.2		
	1.2nm,0.8s,baz=227,slow=10,SNR=5.0									
YKA	**Yellowknife Ar**	**82.35**	**332**	P		P	23 06 46.9	+0.1		
	0.4nm,0.9s,baz=93,slow=5.0,SNR=4.3									

IDC 19 22:59:18.7±1.1, 478N×3265W, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.8/8, MS3.9/19, Ms1 3.9/19, ms1mx3.7/34, Error ellipse: s-maj=41.8km s-min=21.8km az=164.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**18.66**	**57**	LR	LR	23 08 51.7	
	comp=Z,424nm,20.7s,baz=218,slow=31						
BDFB	**Brasilia**	**25.36**	**217**	LR	LR	23 13 34.3	
	comp=Z,126nm,18.7s,baz=187,slow=34						
DBIC	**Dimbokro**	**27.71**	**85**	P	P	23 05 08.8	-0.2
	1.6nm,0.8s,baz=242,slow=15,SNR=2.9						
DBIC				LR	LR	23 13 17.0	
	comp=Z,268nm,22.0s,baz=263,slow=30						
PCRV	**Puerto La Cruz**	**32.15**	**281**	LR	LR	23 18 58.9	
	comp=Z,153nm,18.2s,baz=29,slow=37						
TORD	**Torodi Ar. Bea**	**34.89**	**74**	P	P	23 06 13.0	+0.8
	1.3nm,0.7s,baz=263,slow=7.1,SNR=5.8						
TORD				LR	LR	23 18 23.9	
	comp=Z,245nm,19.4s,baz=260,slow=33						
SIV	**San Ignacio**	**34.89**	**233**	P	P	23 06 12.3	+0.1
	2.2nm,0.9s,baz=74,slow=14,SNR=4.5						
SDV	**Santo Domingo**	**37.92**	**278**	LR	LR	23 22 19.9	
	comp=Z,97nm,18.9s,baz=358,slow=36						
MDT	**Midelt**	**38.25**	**40**	LR	LR	23 21 24.8	
	comp=Z,271nm,18.9s,baz=326,slow=35						
CPUP	**Villa Florida**	**39.09**	**216**	LR	LR	23 22 30.5	
	comp=Z,105nm,20.4s,baz=17,slow=36						
NNA	**Nana**	**47.00**	**249**	LR	LR	23 27 33.6	
	comp=Z,143nm,18.2s,baz=148,slow=36						
ATAH	**Atahualpa**	**47.14**	**256**	LR	LR	23 28 16.3	
	comp=Z,249nm,19.0s,baz=120,slow=37						
KEST	**Kesra**	**49.40**	**46**	LR	LR	23 29 60.0	
	comp=Z,79nm,18.2s,baz=247,slow=37						
TSUM	**Tsumeb**	**54.87**	**117**	LR	LR	23 26 05.2	
	comp=Z,165nm,21.0s,baz=305,slow=29						
TKL	**Tuckaleechee C**	**56.13**	**310**	LR	LR	23 27 34.3	
	comp=Z,134nm,18.7s,baz=88,slow=30						
SCHQ	**Schefferville**	**57.02**	**337**	LR	LR	23 29 29.5	
	comp=Z,154nm,18.8s,baz=246,slow=32						
GERES	**GERESS Array B**	**58.90**	**34**	P	P	23 09 20.0	+0.6
	1.1nm,0.9s,baz=232,slow=6.3,SNR=5.4						
BOSA	**Boshof**	**64.77**	**125**	LR	LR	23 32 10.8	
	comp=Z,100nm,19.3s,baz=80,slow=30						
MLR	**Muntele Rosu**	**64.90**	**42**	P	P	23 10 00.3	+0.3
	7.5nm,1.1s,baz=320,slow=5.1,SNR=5.2						
EIL	**Elat**	**68.20**	**60**	LR	LR	23 41 48.7	
	comp=Z,184nm,18.0s,baz=99,slow=37						
AKASG	**Malin Array Be**	**68.74**	**37**	P	P	23 10 24.9	+0.6
	0.2nm,0.3s,baz=253,slow=6.9,SNR=8.0						
BRTR	**Keskin Array B**	**68.79**	**49**	P	P	23 10 23.6	-1.2
	1.5nm,1.0s,baz=243,slow=11,SNR=5.4						
BRTR				LR	LR	23 39 29.3	
	comp=Z,50nm,18.4s,baz=266,slow=35						
ANMO	**Albuquerque**	**74.02**	**305**	LR	LR	23 39 20.2	
	comp=Z,167nm,20.2s,baz=157,slow=32						
PDAR	**Pinedale Array**	**77.17**	**313**	P	P	23 11 15.0	+0.5
	0.5nm,0.8s,baz=77,slow=7.9,SNR=3.4						
PDAR				LR	LR	23 41 01.4	
	comp=Z,85nm,19.4s,baz=348,slow=32						
YKA	**Yellowknife Ar**	**82.07**	**332**	P	P	23 11 40.5	-0.2
	0.4nm,1.0s,baz=98,slow=6.1,SNR=3.7						

IDC 19 23:13:53.5±4.3, 289S×15064E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=131.3km s-min=31.6km az=104.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.25**	**222**	P	P	23 19 02.2	-0.6
	2.8nm,0.6s,baz=50,slow=10,SNR=21						
ASAR	**Alice Springs**	**26.24**	**217**	P	P	23 19 31.8	+1.3
	0.3nm,0.6s,baz=52,slow=9.0,SNR=4.5						
SONM	**Songino Array**	**63.58**	**328**	P	P	23 24 25.8	-0.2
	0.4nm,0.6s,baz=149,slow=5.2,SNR=3.9						

CASC 19 23:14:34.8±1.6, 1277N×8871W, h39km±116km, MD3.7, ML3.6, 12C-9D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.78**	**33**	⇓*e*P	x	23 14 49.9	
BLLM	**Bellamira**	**0.81**	**34**	⇓*e*P	x	23 14 50.0	
BLLM				*e*S	x	23 15 01.1	
SNVI	**San Vicente**	**0.84**	**351**	⇑*e*P	x	23 14 50.1	
SNVI				*e*S	x	23 15 02.0	
LFRS	**El Faro**	**0.91**	**338**	⇓*e*P	x	23 14 50.6	
CNCH	**Conchagua**	**0.99**	**59**	⇓*e*P	x	23 14 52.6	
CNCH				*e*S	x	23 15 05.9	
LBRS	**Las Brisas**	**1.01**	**341**	⇑*e*P	x	23 14 52.5	
CAHU	**Cacacuatique**	**1.10**	**26**	⇑*e*P	x	23 14 54.5	
CAHU				*e*S	x	23 15 10.1	
BOQS	**Boqueron**	**1.11**	**330**	⇑*e*P	x	23 14 53.5	
BOQS				*e*S	x	23 15 09.2	
SBLS	**San Blas**	**1.38**	**320**	*e*P	x	23 14 57.4	
SBLS				*e*S	x	23 15 16.1	
SNJE	**San Jose**	**1.40**	**321**	⇓*e*P	x	23 14 57.6	
SNJE				*e*S	x	23 15 15.3	
RTR	**El Retiro**	**1.44**	**321**	⇓*e*P	x	23 14 58.4	
RTR				*e*S	x	23 15 16.9	
CRIN	**San Cristobal**	**1.62**	**92**	⇓*e*P	Pn	23 15 01.5	+0.7
CRIN				*e*S	Sn	23 15 21.6	+1.1
TEL3	**Telica 3**	**1.83**	**96**	⇑*e*P	Pn	23 15 03.8	0.0
TGUH	**Tegucigalpa,Un**	**1.89**	**47**	⇑*e*P	Pn	23 15 05.1	+0.5
MIRN	**Miramar**	**1.98**	**99**	⇑*e*P	Pn	23 15 05.7	-0.1
CNGN	**Cerro Negro**	**1.98**	**98**	⇑*e*P	Pn	23 15 05.6	-0.3
CNGN				AML	AML	23 15 37.0	
	comp=E,648nm,0.4s						
MOMN	**Momotombo**	**2.15**	**99**	⇑*e*P	Pn	23 15 08.3	+0.2
COPN	**Copaltepe**	**2.15**	**106**	⇑*e*P	Pn	23 15 07.6	-0.5
COPN				*e*S	Sn	23 15 34.3	+0.7
COPN				AML	AML	23 15 35.3	
	comp=Z,458nm,0.4s						
IXG	**Ixpaco**	**2.20**	**310**	*e*P	Pn	23 15 09.1	+0.3
IXG				*e*S	Sn	23 15 34.7	0.0
CSAN		**2.31**	**104**	⇑*e*P	Pn	23 15 10.4	0.0
CSAN				*e*S	Sn	23 15 38.0	+0.5
APYN	**Apoyeque**	**2.36**	**103**	⇓*e*P	Pn	23 15 11.1	0.0
NBG	**Las Nubes**	**2.41**	**319**	*e*P	Pn	23 15 13.7	+2.0
XAVN	**Gruta Xavier**	**2.41**	**105**	⇓*e*P	Pn	23 15 11.8	+0.1
MRL	**Marmol**	**2.47**	**337**	*e*P	Pn	23 15 14.2	+1.6
MGAN	**Managua**	**2.48**	**104**	*e*S	Sn	23 15 41.5	-0.4
HUEN		**2.51**	**100**	*e*P	Pn	23 15 13.2	+0.1
FUG	**Fuego 3**	**2.66**	**309**	*e*P	Pn	23 15 16.1	+0.9
FUG				*e*S	Sn	23 15 47.4	+1.2
FG6		**2.76**	**310**	*e*P	Pn	23 15 18.5	+1.9
FG6				*e*S	Sn	23 15 50.6	+1.9
CHI2		**16.85**	**117**	⇓*e*P	x	23 15 00.9	

JMA 19 23:17:38.6±0.2, 3072N×14113E, h46km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.73**	**165**	P	Pn	23 18 35.1	+1.5
CBIJ				*e*S	Sn	23 19 17.6	+1.3
JHO	**Hitachi**	**5.89**	**356**	P	Pn	23 19 05.1	+1.8
JHO				*e*S	Sn	23 20 07.9	-1.6
JFK	**Kawauchi**	**6.63**	**358**	*e*S	Sn	23 20 24.7	-3.0
JMK	**Ichinoseki**	**8.21**	**0**	*e*S	Sn	23 21 01.7	-4.8

*SZGRF **19** 23:21:25.1, 3584N×7314E, h33km, mb4.9, Northwestern Kashmir*
*ISCJB **19** 23:21:50.4±0.3, 3726N±002×7204E±003, h194km±3km, mb4.3/125, Error ellipse: s-maj=3.5km s-min=2.7km az=147.7*
*BJI **19** 23:21:51.6, 3757N×7201E, h204km, mB4.9, mb4.5*
*MOS **19** 23:21:51.1±0.9, 3730N×7203E, h200km, mb4.4/56, Error ellipse: s-maj=6.9km s-min=3.6km az=125.3*
*NEIC **19** 23:21:52.5±0.1, 3726N×7211E, mb4.5/71, Error ellipse: s-maj=4.8km s-min=2.8km az=212.0*

*IDC **19** 23:21:52.4±0.6, 3715N×7204E, h206km±5km, mb3.8/20, mb1 4.0/23, mb1mx3.9/28, mbtmp3.9/23, Error ellipse: s-maj=12.7km s-min=7.6km az=20.0*
*NNC **19** 23:21:59.8±4.0, 3796N×7193E, h218km±31km, mb3.5, mpv4.8, Error ellipse: s-maj=38.3km s-min=21.6km az=10.0*

ISC 19 23:21:51.3±0.2, 3725N±002×7204E±003, h187km±3km, h205km±1.5km:pP-P, n390, o093/426, mb4.5/125, 21C-33D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.42**	**182**	⇓P	**Pn**	**23 22 46.6**	**+1.2**
CEP				S	**Sn**	**23 23 28.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.72**	**164**	⇑P	**Pn**	**23 22 51.3**	**+2.2**
KSH	**Kashi**	**3.83**	**53**	⇑*i*P	**Pn**	**23 22 52.0**	**+1.6**
KSH				S	**Sn**	**23 23 37.9**	**+1.2**
KSH				Smax			
	comp=N,7μm,0.4s						
KSH				Smax			
	comp=E,21μm,1.2s						
SRNI	**Srinagar**	**3.89**	**143**	*e*P	**Pn**	**23 22 52.8**	**+1.6**
SRNI				*e*S	**Sn**	**23 23 38.5**	**+0.5**
AML	**Almayashu**	**5.04**	**14**	P	**Pn**	**23 23 06.3**	**+0.5**
	SNR=614						
AML	**Almayashu**	**5.04**	**14**	*e*Pn	**Pn**	**23 23 06.2**	**+0.4**
	comp=E,2μm,0.9s						
AML				*e*Sn	**Sn**	**23 23 56.6**	**-7.8**
SBDP	**Sheikh Budin**	**5.04**	**192**	P	**Pn**	**23 23 05.9**	**0.0**
JMU	**Jammu**	**5.09**	**152**	*e*P	**Pn**	**23 23 09.0**	**+2.4**
UCH	**Uchtor**	**5.33**	**20**	P	**Pn**	**23 23 10.3**	**+0.8**
	SNR=36						
UCH	**Uchtor**	**5.33**	**20**	*e*Pn	**Pn**	**23 23 10.3**	**+0.9**
	comp=E,314nm,0.8s						
UCH				*e*Sn	**Sn**	**23 24 09.2**	**-1.9**
SARP	**Sargodha**	**5.34**	**174**	P	**Pn**	**23 23 09.7**	**-0.1**
KZA	**Kyzart**	**5.42**	**26**	P	**Pn**	**23 23 10.8**	**+0.1**
	SNR=46						
EKS2	**Erkin-Say**	**5.57**	**13**	P	**Pn**	**23 23 13.0**	**+0.4**
	SNR=190						
EKS2	**Erkin-Say**	**5.57**	**13**	*e*Pn	**Pn**	**23 23 12.9**	**+0.3**
	comp=E,120nm,0.5s						
EKS2				*e*Sn	**Sn**	**23 24 13.2**	**-3.5**
THN	**Thein Dam**	**5.67**	**147**	*e*P	**Pn**	**23 23 13.8**	**-0.3**
THN				*e*S	**Sn**	**23 24 17.2**	**-2.2**
DLH	**Dalhousie**	**5.70**	**144**	*e*P	**Pn**	**23 23 15.0**	**+0.6**
DLH				*ex*	x	23 24 19.0	
AAK	**Ala-Archa**	**5.70**	**19**	P	**Pn**	**23 23 15.1**	**+0.8**
	SNR=150						
AAK	**Ala-Archa**	**5.70**	**19**	*e*Pn	**Pn**	**23 23 15.0**	**+0.7**
AAK				*e*Sn	**Sn**	**23 24 18.2**	**-1.6**
KBK	**Karagaybulak**	**5.84**	**22**	P	**Pn**	**23 23 17.1**	**+0.9**
	SNR=81						
FRU	**Bishkek**	**5.92**	**19**	⇓*i*PN	**Pn**	**23 23 17.0**	**-0.2**
FRU				pmax	pmax		
	comp=Z,240nm,1.6s						
ULHL	**Ulahol**	**5.95**	**32**	P	**Pn**	**23 23 17.6**	**0.0**
	SNR=33						
KK31	**Karatay Array**	**5.96**	**349**	⇑P	**Pn**	**23 23 17.5**	**-0.2**
	comp=Z,48nm,0.4s,baz=169,slow=12						
KK31				⇓S	**Sn**	**23 24 20.7**	**-5.4**
	comp=Z,75nm,0.3s,baz=165,slow=26						
KK31	**Karatay Array**	**5.96**	**349**	*i* PN	**Pn**	**23 23 17.5**	**-0.3**
KK31				pmax	pmax		
	comp=Z,64nm,0.2s						
CHMS	**Chumysh**	**6.11**	**19**	P	**Pn**	**23 23 19.7**	**+0.1**
	SNR=106						
TKM2	**Tokmak 2**	**6.29**	**25**	⇑P	**Pn**	**23 23 22.6**	**+0.6**
	comp=Z,120nm,1.0s						
TKM2				⇓S	**Sn**	**23 24 30.6**	**-3.0**
	comp=Z,58nm,0.7s						
TKM2	**Tokmak 2**	**6.29**	**25**	*e*PN	**Pn**	**23 23 22.3**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,66nm,0.7s						
TKM2	**Tokmak 2**	**6.29**	**25**	P	**Pn**	**23 23 22.3**	**+0.3**
	SNR=97						
TKM2	**Tokmak 2**	**6.29**	**25**	*e*Pn	**Pn**	**23 23 22.3**	**+0.3**
	comp=Z,66nm,0.7s						
TKM2				*e*Sn	**Sn**	**23 24 27.6**	**-6.1**
USP	**Ospenovka**	**6.30**	**17**	P	**Pn**	**23 23 21.6**	**-0.5**
	SNR=85						
SDNR	**Sundarnagar**	**7.03**	**143**	*e*P	**Pn**	**23 23 31.2**	**-0.7**
SDNR				*e*S	**Sn**	**23 24 44.8**	**-6.7**
SMLA	**Simla**	**7.43**	**144**	*i* P	**Pn**	**23 23 37.2**	**+0.1**
SMLA				*i* S	**Sn**	**23 24 55.9**	**-5.1**
DDI	**Dehra Dun**	**8.53**	**142**	*ex*	x	23 23 47.6	
DDI				*e*S	**Sn**	**23 25 20.0**	**-7.0**
NDI	**New Delhi**	**9.58**	**152**	*ex*	x	23 24 03.0	
NDI				*ex*	x	23 25 37.0	
PTH	**Pithoragarh**	**10.27**	**136**	*e*P	**Pn**	**23 24 14.1**	**-0.2**
PTH				*e*S	**Sn**	**23 26 01.2**	**-7.5**
LGTI	**Lohaghat**	**10.37**	**136**	*e*P	**Pn**	**23 24 14.0**	**-1.5**
LGTI				*ex*	x	23 25 50.5	
AJM	**Ajmer**	**10.96**	**168**	*e*P	**Pn**	**23 24 17.7**	**-5.5**
AJM				AMb	AMB	23 24 22.3	
	comp=Z,99nm,0.7s						
AJM				*e*S	**Sn**	**23 26 10.9**	**-14**
VAN	**Vannovskaya**	**11.08**	**278**	⇑*i*P	**Pn**	**23 24 22.1**	**-2.5**
VAN				S	**Sn**	**23 26 21.7**	**-6.1**
MKAR	**Makanchi Array**	**12.20**	**35**	P	**Pn**	**23 24 39.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=13,SNR=12						
DANN	**Dangsing**	**13.25**	**129**	*e*P	**Pn**	**23 24 51.5**	**-0.9**
	comp=Z,83nm,0.2s						
KOLN	**Koldanda**	**13.57**	**131**	*e*P	**Pn**	**23 24 56.3**	**0.0**
WMQ	**Urumqi**	**13.59**	**56**	P	**Pn**	**23 24 56.1**	**-0.3**
WMQ				XP		23 25 47.8	
WMQ				S	**Sn**	**23 27 20.6**	**-7.0**
WMQ				AMB	AMB		
	comp=Z,6.0nm,1.0s						
GKN	**Gorkha**	**14.05**	**127**	*e*P	**Pn**	**23 25 01.4**	**-0.9**
	comp=Z,530nm,0.6s						
GKN				*e*S	**Sn**	**23 27 27.3**	**-12**
KURBB	**Kurchatov Arra**	**14.15**	**17**	⇑P	**Pn**	**23 25 05.0**	**+1.6**
	comp=Z,2.4nm,0.9s						
KURK	**Kurchatov**	**14.26**	**17**	⇑P	**Pn**	**23 25 05.3**	**+0.6**
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**14.26**	**17**	P	**Pn**	**23 25 01.0**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=206,slow=10,SNR=31						
KURK	**Kurchatov**	**14.26**	**17**	*e*Pn	**Pn**	**23 25 06.3**	**+1.7**
ALBI	**Allahabad**	**14.53**	**142**	*ex*	x	23 25 03.0	
KKN	**Kakani**	**14.60**	**126**	*e*P	**Pn**	**23 25 07.8**	**-1.4**
	comp=Z,133nm,0.6s						
KKN	**Kakani**	**14.60**	**126**	*e*P	**Pn**	**23 25 07.8**	**-1.4**
KKN				pmax	pmax		
	comp=Z,133nm,0.6s						
DMN	**Daman**	**14.62**	**127**	*e*P	**Pn**	**23 25 08.5**	**-0.8**
	comp=Z,261nm,0.7s						
BHPL	**Bhopal**	**14.71**	**160**	*e*P	**Pn**	**23 25 09.8**	**-0.8**
BHPL				AMb	AMB	23 25 13.9	
	comp=Z,90nm,0.9s						
BHPL				*ex*	x	23 27 44.3	
PKI	**Pulchoki**	**14.84**	**127**	*e*P	**Pn**	**23 25 11.9**	**-0.1**
	comp=Z,229nm,0.6s						
PKI	**Pulchoki**	**14.84**	**127**	*e*P	**Pn**	**23 25 11.9**	**-0.1**
PKI				pmax	pmax		
	comp=Z,229nm,0.6s						
AB01	**Akbulak array**	**14.87**	**328**	⇑P	**Pn**	**23 25 10.3**	**-1.9**
	comp=Z,14nm,0.6s						
AB01				⇑S	**Sn**	**23 27 45.9**	**-12**
	comp=Z,45nm,0.8s						
AB31	**Akbulak array**	**14.87**	**328**	P	**Pn**	**23 25 10.2**	**-2.0**
AB31				pmax	pmax		
	comp=Z,19nm,0.6s						
GUN	**Gumba**	**14.91**	**125**	*e*P	**Pn**	**23 25 11.6**	**-1.3**
JIRN	**Jiri**	**15.28**	**125**	*e*P	**Pn**	**23 25 17.2**	**-0.3**
	comp=Z,216nm,0.5s						
BVA0	**Borovoye Array**	**15.82**	**356**	⇑P	**Pn**	**23 25 23.0**	**-0.7**
	comp=Z,1.2nm,0.5s						
BVA0	**Borovoye Array**	**15.82**	**356**	P	**Pn**	**23 25 22.6**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**15.82**	**356**	P	**Pn**	**23 25 23.2**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=158,slow=14,SNR=76						
BVAR				S	**S**	**23 28 13.2**	**-5.9**
	comp=Z,0.2nm,0.3s,baz=163,slow=25,SNR=4.9						
BRVK	**Borovoye**	**15.86**	**356**	*e*P	**Pn**	**23 25 24.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,13nm,0.7s						
BRVK	**Borovoye**	**15.86**	**356**	*e*Pn	**Pn**	**23 25 24.3**	**+0.1**
	comp=Z,14nm,0.7s						
RAMN	**Ramite**	**16.03**	**126**	*e*P	**Pn**	**23 25 27.2**	**+0.6**
	comp=Z,355nm,0.7s						
TAPN	**Taplejung**	**16.50**	**122**	*e*P	**Pn**	**23 25 31.8**	**-0.4**
	comp=Z,220nm,0.9s						
TAPN				*e*S	**S**	**23 28 22.7**	**-12**

AKTK	**Aktyubinsk**	**16.58**	**327**	P	**Pn**	**23 25 32.2**	**-0.6**
AKTK				S	**S**	**23 28 30.1**	**-5.5**
AKTO	**Aktyubinsk**	**16.58**	**327**	⇑P	**Pn**	**23 25 32.1**	**-0.8**
	comp=Z,18nm,0.8s						
AKTO				⇑S	**S**	**23 28 28.4**	**-7.3**
	comp=Z,8.8nm,1.0s						
AKTO	**Aktyubinsk**	**16.58**	**327**	P	**Pn**	**23 25 32.2**	**-0.6**
	comp=Z,11nm,0.3s,baz=132,slow=10,SNR=129						
AKTO				S	**S**	**23 28 30.1**	**-5.5**
	comp=Z,1.1nm,0.3s,baz=327,slow=19,SNR=7.6						
ODAN	**Odare**	**16.61**	**124**	*e*P	**Pn**	**23 25 33.2**	**-0.3**
	comp=Z,234nm,0.6s						
ODAN				*e*S	**S**	**23 28 25.3**	**-11**
AKL	**Akola**	**17.05**	**164**	*e*P	**Pn**	**23 25 38.0**	**-0.8**
AKL				AMb	AMB	23 25 40.4	
	comp=Z,81nm,1.4s						
NGP	**Nagpur**	**17.16**	**157**	*e*P	**Pn**	**23 25 37.9**	**-2.2**
NGP				AMb	AMB	23 25 40.1	
	comp=Z,69nm,0.0s						
LSA	**Lhasa**	**17.61**	**110**	P	**Pn**	**23 25 47.4**	**+2.0**
LSA	**Lhasa**	**17.61**	**110**	*e*P	**Pn**	**23 25 47.3**	**+1.9**
LSA				*e*S	**S**	**23 28 58.0**	**+1.1**
LSA				pmax	pmax		
	comp=Z,47nm,0.8s						
LSA	**Lhasa**	**17.61**	**110**	*e*Pn	**Pn**	**23 25 47.2**	**+1.8**
	comp=Z,47nm,0.8s						
LSA				*e*S	**S**	**23 28 58.0**	**+1.1**
BOK	**Bokaro**	**17.92**	**135**	*e*P	**Pn**	**23 25 46.7**	**-2.4**
BOK				AMb	AMB	23 25 49.0	
	comp=Z,53nm,0.8s						
BOK				*ex*	x	23 28 56.5	
POO	**Poona**	**18.72**	**175**	*e*P	**P**	**23 25 55.6**	**-0.2**
POO				AMb	AMB	23 26 00.5	
	comp=Z,63nm,0.6s						
ZAA0	**Zalesovo Array**	**18.89**	**24**	*e*P	**P**	**23 25 57.2**	**-0.1**
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**P**	**23 25 57.4**	**+0.1**
	comp=Z,11nm,0.3s,baz=209,slow=10,SNR=137						
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**P**	**23 25 57.4**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,11nm,0.3s						
NVS	**Novosibirsk**	**19.19**	**20**	*e*P	**P**	**23 25 59.9**	**-0.6**
NVS				*e*S	**S**	**23 29 23.8**	**-3.9**
NVS				pmax	pmax		
	comp=N,16nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,17nm,1.1s						
NVS				smax			
	comp=N,30nm,1.6s						
NVS				smax			
	comp=E,19nm,1.9s						
KAD	**Karad**	**19.95**	**174**	*e*P	**P**	**23 26 09.2**	**+0.1**
HYB	**Hyderabad**	**20.57**	**162**	*e*P	**P**	**23 26 15.0**	**-0.7**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**20.57**	**162**	*i* P	**P**	**23 26 15.0**	**-0.7**
	comp=Z,50nm,1.0s						
HYB				*e*		23 26 58.0	
HYB				*e*S	**S**	**23 29 56.0**	**+0.7**
HYB	**Hyderabad**	**20.57**	**162**	*e*P	**P**	**23 26 15.0**	**-0.7**
	comp=Z,50nm,1.0s						
HYB				*e*S	**S**	**23 30 08.0**	**+13**
DGRG	**David-gareji**	**21.01**	**290**	P	**P**	**23 26 21.4**	**+1.3**
SVE	**Sverdlovsk**	**21.02**	**342**	⇓*e*P	**P**	**23 26 20.1**	**+0.1**
SVE				pmax	pmax		
	comp=Z,47nm,1.2s,mb4.7						
ARU	**Arti**	**21.21**	**339**	*d i*P	**P**	**23 26 21.8**	**-0.3**
ARU				pmax	pmax		
	comp=Z,82nm,1.8s,mb4.8						
ARU	**Arti**	**21.21**	**339**	*e*P	**P**	**23 26 21.7**	**-0.4**
	comp=Z,36nm,0.9s,mb4.7						
MTA	**Mtatsminda**	**21.46**	**290**	P	**P**	**23 26 25.4**	**+0.6**
GNI	**Garni**	**21.47**	**286**	P	**P**	**23 26 26.7**	**+1.7**
	comp=Z,20nm,0.6s,mb4.6,baz=167,slow=7.6,SNR=16						
GNI	**Garni**	**21.47**	**286**	*d i*P	**P**	**23 26 26.9**	**+1.9**
GNI				pmax	pmax		
	comp=Z,85nm,1.2s						
GNI	**Garni**	**21.47**	**286**	*e*P	**P**	**23 26 26.7**	**+1.7**
	comp=Z,128nm,1.0s,mb5.2						
UMR	**Umm Al-Rimmam**	**21.67**	**256**	*e*P	**P**	**23 26 26.3**	**-0.9**
	baz=256						
UMR				AMb	AMB	23 26 33.0	
	comp=Z,35nm,1.1s,mb4.7,baz=256						
VIS	**Vishakhapatnam**	**21.84**	**150**	*e*P	**P**	**23 26 28.2**	**-0.9**
MIB	**Mutribah**	**21.85**	**257**	*e*P	**P**	**23 26 28.4**	**-0.7**
	baz=257						
MIB				AMb	AMB	23 26 39.2	
	comp=Z,32nm,1.0s,mb4.7,baz=257						
KBD	**Kabd**	**21.86**	**256**	*e*P	**P**	**23 26 28.3**	**-0.9**
	baz=255						
GTA	**Gaotai**	**21.86**	**76**	*e*P	**P**	**23 26 30.0**	**+0.9**
GTA				XP	sP	23 27 32.8	+7.9
GTA				S	**S**	**23 30 16.3**	**-1.0**
GTA				XS	sS	23 30 26.3	-48
GTA				SS		23 31 13.3	
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.0						
GTA				AMB	AMB		
	comp=Z,44nm,5.1s						
GTA				LR	LR		
	comp=N,117nm,12.5s						
GTA				LR	LR		
	comp=E,150nm,13.1s						
GTA				LR	LR		
	comp=Z,125nm,13.1s						
GOR	**Gori**	**21.98**	**291**	P	**P**	**23 26 31.9**	**+1.6**
RDF	**Al-

KMI Kunming 28.78 106 P **P** **23 27 36.0 +4.4**
KMI AMB AMB
comp=Z,6.0nm,0.7s,mb4.4
CHTO Chiang Mai 29.86 121 *eP* **P** **23 27 44.1 +2.9**
CHTO *e*PP* pP 23 28 24.2 +4.5
CHTO *eS* **S** **23 32 25.6 +1.3**
OBN Obninsk 29.93 318*c iP* **P** **23 27 40.8 -0.6**
OBN *i *PP* pP 23 28 22.2 +2.3
OBN *i* 23 28 47.6
OBN pmax pmax
comp=Z,35nm,1.0s,mb5.0
OBN Obninsk 29.93 318 *eP* **P** **23 27 41.4 0.0**
comp=Z,20nm,0.4s,mb5.2
BR131 Keskin Array S 30.01 287 *eP* **P** **23 27 43.1 +0.8**
BRTR Keskin Array B 30.01 287 P **P** **23 27 43.1 +0.8**
comp=Z,12nm,0.7s,mb4.8,baz=98,slow=7.1,SNR=95
XAN Xi'an 30.02 85 P **P** **23 27 43.0 +0.5**
XAN AP pP 23 28 24.1 +3.1
XAN PP PP 23 28 55.1 +1.1
XAN S **S** **23 32 26.6 0.0**
XAN AMB AMB
comp=Z,4.0nm,0.8s,mb4.2
XAN AMB AMB
comp=Z,17nm,18.6s
XAN LR LR
comp=E,18nm,21.5s
XAN LR LR
comp=Z,45nm,16.7s
CMAR Chiang Mai Arr 30.10 121 P **P** **23 27 43.6 +0.3**
comp=Z,0.8nm,0.4s,mb3.8,baz=314,slow=9.1,SNR=10
CMAR pP pP 23 28 25.1 +3.3
comp=Z,4.0nm,1.0s,baz=312,slow=11,SNR=2.8
MMAI Mount Meron Ar 30.14 273 P **P** **23 27 42.9 -0.7**
comp=Z,1.5nm,0.8s,mb3.8,baz=64,slow=9.8,SNR=2.6
HHC Hu-ho-hao-te 30.73 71 *eP* **P** **23 27 50.3 +1.7**
HHC AP pP 23 28 32.0 +4.8
HHC XP sP 23 28 54.5 +5.7
HHC *eS* **S** **23 32 34.9 -2.6**
HHC XS sS 23 33 48.6 +2.8
HHC PCS PcS 23 34 27.9 +2.4
HHC SCS ScS 23 38 01.5 -1.6
HHC AMB AMB
comp=Z,7.0nm,0.7s,mb4.5
HHC AMB AMB
comp=Z,142nm,5.0s
GYA Guiyang 31.16 100⇓ *iP* **P** **23 27 53.6 +1.0**
GYA AP pP 23 28 35.6 +4.4
GYA XP sP 23 28 59.3 +6.6
GYA PP PP 23 29 06.9 +0.1
GYA PCP PcP 23 30 40.6 -2.3
GYA S **S** **23 32 45.8 +1.3**
GYA XS sS 23 34 00.6 +7.6
GYA SS SS 23 34 53.0 -13
GYA SCS ScS 23 38 00.3 -5.4
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,50nm,4.0s
KLMR Klimovskoe 31.25 330 *eP* **P** **23 27 51.5 -1.4**
KLMR pmax pmax
comp=Z,34nm,1.2s,mb5.0
ISP Isparta 32.74 284 *eP* **P** **23 28 07.0 +0.7**
ISP pmax pmax
comp=Z,11nm,0.7s,mb4.7
ISP Isparta 32.74 284 *eP* **P** **23 28 07.0 +0.7**
comp=Z,11nm,0.7s,mb4.7
AKASG Malin Array Be 33.14 308 P **P** **23 28 08.7 -0.8**
comp=Z,12nm,0.7s,mb4.7,baz=78,slow=7.3,SNR=25
AKASG pP pP 23 28 50.4 +2.0
comp=Z,2.9nm,0.6s,baz=82,slow=7.2,SNR=3.6
KIEV Kiev 33.15 308 *eP* **P** **23 28 08.3 -1.3**
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
KIEV Kiev 33.15 308 *eP* **P** **23 28 08.3 -1.3**
comp=Z,8.2nm,0.6s,mb4.6
BJI Beijing 34.32 71 P **P** **23 28 20.1 +0.2**
BJI AMB AMB
comp=Z,5.0nm,0.4s,mb4.6
PLOR Plostina 34.64 299⇓ *iP* **P** **23 28 23.9 +1.3**
MLR Muntele Rosu 35.15 298 P **P** **23 28 28.0 +1.1**
comp=Z,21nm,0.7s,mb4.9,baz=308,slow=1.1,SNR=28
BURAR Bucovina Array 35.59 302⇓ *iP* **P** **23 28 30.9 +0.3**
BUR08 Bucovina Ar. S 35.60 302 *eP* **P** **23 28 31.1 +0.4**
BUR08 *e* 23 29 36.7
BUR08 *ePP* PP 23 29 54.2 -1.2
JOF Joensuu 35.65 329 *ep* **P** **23 28 30.7 -0.2**
comp=Z,5.9nm,0.3s,mb4.7
JOF Joensuu 35.65 329 *eP* **P** **23 28 30.7 -0.2**
JOF pmax pmax
comp=Z,6.0nm,0.3s,mb4.7
VOIR 35.78 298⇓ *iP* **P** **23 28 33.0 +0.7**
VOIR 35.78 298⇓ *iP* **P** **23 28 33.0 +0.7**
VSU Vasula 36.13 321⇑ *eP* **P** **23 28 34.9 -0.1**
VSU pmax pmax
comp=Z,34nm,0.9s,mb5.0
LVV L'vov 36.39 306 *eP* **P** **23 28 37.4 0.0**
SUW Suwalki 37.22 313 *eP* **P** **23 28 44.0 -0.3**
SUW Suwalki 37.22 313 *eP* **P** **23 28 43.1 -1.2**
SUW *e*PP* pP 23 29 27.0 +3.3
SUW *e* 23 30 12.3
SUW pmax pmax
comp=Z,22nm,0.9s,mb4.8
SUW Suwalki 37.22 313 *eP* **P** **23 28 43.1 -1.2**
comp=Z,22nm,0.9s,mb4.8
SUW *ep*P pP 23 29 27.0 +3.3
SUW *eP*P PP 23 30 12.3 -0.7
KWP Kalwaria 37.25 305 *eP* **P** **23 28 45.5 +0.9**
KWP Kalwaria 37.25 305⇓ *iP* **P** **23 28 45.8 +1.2**
KWP Kalwaria 37.25 305 *eP* **P** **23 28 45.0 +0.4**
KWP *ep*P pP 23 29 28.0 +3.9
DRGR 37.32 301⇓ *iP* **P** **23 28 46.1 +0.8**
DRGR 37.32 301 ⇓⇓P **P** **23 28 46.1 +0.8**
GZR Gura Zlata 37.38 298⇑ *iP* **P** **23 28 46.4 +0.6**
GZR Gura Zlata 37.38 298 ⇑⇑P **P** **23 28 46.4 +0.6**
KAF Kangasniemi 37.46 326 *ep* **P** **23 28 45.5 -0.7**
comp=Z,0.7nm,0.3s,mb3.8,baz=110,slow=8.6
KAF Kangasniemi 37.46 326 *eP* **P** **23 28 45.5 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
UZH Uzhgorod 37.53 304*d iP* **P** **23 28 47.5 +0.5**
UZH *e* pP 23 29 29.3 +2.8
CRVS Cervenica-Dubn 38.07 304 *eP* **P** **23 28 52.4 +0.9**
CRVS pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
CRVS Cervenica-Dubn 38.07 304 *eP* **P** **23 28 52.4 +0.9**
comp=Z,5.0nm,1.1s,mb4.1
CRVS *ePP* PP 23 30 24.0 +1.5
BZS Buzias 38.17 299⇓ *iP* **P** **23 28 53.1 +0.7**
BZS Buzias 38.17 299 ⇓⇓P **P** **23 28 53.1 +0.7**
STHS Stebnicka Huta 38.20 305 *eP* **P** **23 28 52.8 +0.2**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
STHS Stebnicka Huta 38.20 305 *eP* **P** **23 28 52.8 +0.2**
comp=Z,3.9nm,0.7s,mb4.2
STHS *ePP* PP 23 30 22.3 -1.6
KECS Kecovo 38.74 304 *i P* **P** **23 28 57.8 +0.7**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KECS Kecovo 38.74 304 *i P* **P** **23 28 57.8 +0.7**
comp=Z,2.7nm,0.8s,mb3.9
KECS *ePP* PP 23 30 24.0 -5.7
NIE Niedzica 38.81 305 *eP* **P** **23 28 58.8 +1.1**
OJC Ojcow 39.12 306 *eP* **P** **23 28 59.9 -0.4**
PSZ Piszkesteto 39.16 303⇑ *iP* **P** **23 28 59.2 -1.4**
PSZ Piszkesteto 39.16 303 *eP* **P** **23 29 01.2 +0.6**
PSZ *ep*P pP 23 29 44.1 +3.7
PSZ *eP*P PP 23 30 35.2 +0.9
VYHS Vyhne 39.83 304 *eP* **P** **23 29 06.5 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.6s,mb4.0
VYHS Vyhne 39.83 304 *eP* **P** **23 29 06.5 +0.4**
comp=Z,6.9nm,1.6s,mb4.0
VYHS *eP*P PP 23 30 41.1 -0.4
KOLL Kolacno 40.11 304 *eP* **P** **23 29 09.2 +0.8**
PKSM Moragy 40.18 300⇓ *iP* **P** **23 29 09.2 +0.2**
PKSM Moragy 40.18 300 ⇓⇓P **P** **23 29 09.2 +0.2**
GKP Gorka Klasztor 40.70 311 *eP* **P** **23 29 13.6 +0.4**
GKP Gorka Klasztor 40.70 311 *eP* **P** **23 29 13.6 +0.4**
SMOL Smolenice 40.76 304 *eP* **P** **23 29 14.3 +0.5**
ARCES ARCESS Array B 40.78 337 P **P** **23 29 13.7 +0.1**
comp=Z,16nm,0.7s,mb4.8,baz=115,slow=8.6,SNR=24
ARE0 ARCESS Array S 40.78 337 *eP* **P** **23 29 13.6 0.0**
ZST Bratislava 41.01 303 *eP* **P** **23 29 16.0 +0.2**
ZST pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
ZST Bratislava 41.01 303 *eP* **P** **23 29 16.0 +0.2**
comp=Z,5.0nm,0.9s,mb4.1
VRAC Vranov 41.25 305⇓⇓ *iP* **P** **23 29 18.7 +1.0**
VRAC Vranov 41.25 305 ⇓⇓P **P** **23 29 18.7 +1.0**
QZH Quanzhou 41.33 94 *eP* **P** **23 29 21.6 +2.9**
KSP Ksiaz 41.34 307 *eP* **P** **23 29 19.0 +0.6**
KSP Ksiaz 41.34 307 *eP* **P** **23 29 18.5 +0.1**
KSP *ePP* PP 23 30 58.3 +0.6
DPC Dobruska-Polom 41.35 307 *eP* **P** **23 29 19.1 +0.6**
UPC Upice 41.54 307 *eP* **P** **23 29 20.6 +0.6**
CONA Conrad Observa 41.86 303⇓ *iP* **P** **23 29 23.4 +0.7**
comp=Z,17nm,0.9s,mb4.7
CSNA Conrad Observa 41.87 303⇓ *iP* **P** **23 29 23.4 +0.7**
comp=Z,16nm,0.8s,mb4.7
TREC Trest 41.97 305 *eP* **P** **23 29 24.0 +0.4**
PSI Prapat 42.26 138 P **P** **23 29 24.8 -1.5**
comp=Z,11nm,0.8s,mb4.5,baz=312,slow=7.7,SNR=14
PSI Prapat 42.26 138 P **P** **23 29 24.8 -1.5**
PVCC Panska Ves 42.45 307 *eP* **P** **23 29 28.1 +0.6**
PRU Pruhonice 42.52 306 *eP* **P** **23 29 28.6 +0.6**
SOKA Soboth 42.59 301⇓ *iP* **P** **23 29 29.0 +0.4**
comp=Z,13nm,0.9s,mb4.6
BOJS Bojanci 42.62 300 *eP* **P** **23 29 29.6 +0.7**
RUE Ruedersdorf 42.81 310 *eP* **P** **23 29 30.3 -0.1**
RUE *ep*P pP 23 30 14.7 +4.0
RUE *eP*cP PcP 23 31 17.9 +0.1
BRG Berggiesshubel 42.82 308 *i P* **P** **23 29 30.7 +0.3**
BRG **PP* pP 23 30 14.3 +3.5
BRG pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
BRG Berggiesshubel 42.82 308 *eP* **P** **23 29 30.6 +0.2**
comp=Z,15nm,0.7s,mb4.7
BRG Berggiesshubel 42.82 308 *i P* **P** **23 29 30.7 +0.3**
comp=Z,15nm,0.7s,mb4.7
BRG pP pP 23 30 14.3 +3.5
comp=Z,11nm,1.3s
YAK Yakutsk 42.87 36⇑ *eP* **P** **23 29 30.5 -0.2**
YAK Yakutsk 42.87 36 *eP* **P** **23 29 30.3 -0.4**
VNDS Vrh nad Dolski 42.90 301 *i P* **P** **23 29 32.0 +0.8**
TIP Timpagrande 42.91 290 *eP* **P** **23 29 31.0 -0.3**
MOA Molln 42.94 303⇓ *iP* **P** **23 29 31.6 +0.2**
comp=Z,9.6nm,0.8s,mb4.5
LJU Ljubljana 43.03 301 *i P* **P** **23 29 33.1 +1.0**
GERES GERESS Array B 43.19 305 P **P** **23 29 32.8 -0.5**
comp=Z,1.1nm,0.6s,mb3.7,baz=83,slow=7.1,SNR=12
GERES *e* PP PP 23 31 16.6 -0.9
comp=Z,1.3nm,0.7s,baz=76,slow=8.2,SNR=6.0
KHC Kasperske Hory 43.23 305 *eP* **P** **23 29 34.3 +0.6**
MDJ Mudanjiang 43.31 61 P **P** **23 29 32.3 -2.1**
MDJ AMB AMB
comp=Z,6.0nm,1.5s,mb4.0
MDJ AMB AMB
comp=Z,52nm,4.8s
CLL Collm 43.38 308 *i P* **P** **23 29 34.5 -0.4**
CLL *e*PP* pP 23 30 20.0 +4.7
CLL *e* 23 31 20.0
CLL pmax pmax
comp=Z,13nm,0.9s,mb4.6
CLL Collm 43.38 308 *eP* **P** **23 29 34.6 -0.3**
comp=Z,13nm,0.9s,mb4.6
CLL Collm 43.38 308 *i P* **P** **23 29 34.5 -0.4**
comp=Z,13nm,0.9s,mb4.6
CLL *ep*P pP 23 30 20.0 +4.7
CLL *eP*P PP 23 31 20.0 +0.6
CLL *ex* x 23 31 29.0
CLL Collm 43.38 308 *i P* **P** **23 29 34.5 -0.4**
comp=Z,13nm,0.9s,mb4.6
CLL *ep*P pP 23 30 20.0 +4.7
CLL *eP*P PP 23 31 20.0 +0.6
CUC Castrocucco 43.40 292 *eP* **P** **23 29 35.8 +0.6**
comp=Z,52nm,0.7s,mb5.3
CUC *ep*P pP 23 30 18.9 +3.2
VOJS Vojsko 43.48 301 *i P* **P** **23 29 36.0 +0.3**
KBA Koelnbreinsper 43.67 302⇓ *iP* **P** **23 29 37.4 +0.2**
comp=Z,5.3nm,0.8s,mb4.2
WET Wettzell 43.69 305 *eP* **P** **23 29 37.6 +0.2**
WET pmax pmax
comp=Z,12nm,1.4s,mb4.3
WET Wettzell 43.69 305 *eP* **P** **23 29 37.6 +0.2**
comp=Z,12nm,1.4s,mb4.3
TANN Tannenbergstha 43.80 307 *eP* **P** **23 29 38.5 +0.2**
comp=Z,9.0nm,1.0s,mb4.3
KSRS Korea Array 43.85 72 P **P** **23 29 37.5 -1.3**
comp=Z,1.7nm,0.7s,mb3.8,baz=277,slow=6.2,SNR=5.5
KSRS Korea Array 43.85 72 P **P** **23 29 37.5 -1.3**
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
RJOB Jochberg 43.94 303 *eP* **P** **23 29 40.1 +0.7**
comp=Z,10.0nm,1.0s,mb4.4
ROTZ Rotzenmuhle 44.04 306 *eP* **P** **23 29 41.3 +1.1**
comp=Z,9.0nm,1.0s,mb4.3
MANZ Manzenberg 44.08 307 *eP* **P** **23 29 41.0 +0.5**
comp=Z,8.0nm,1.0s,mb4.3
ABTA Abfaltersbach 44.29 302⇓ *iP* **P** **23 29 41.5 -0.7**
comp=Z,5.9nm,1.0s,mb4.2
NB2 NORSAR Subarra 44.29 323 P **P** **23 29 41.0 -1.0**
comp=Z,12nm,0.5s,mb4.8,baz=93,slow=7.9
NOA NORSAR Array B 44.29 323 P **P** **23 29 41.0 -1.0**
comp=Z,15nm,0.7s,mb4.8,baz=94,slow=7.7,SNR=50
NOA pP pP 23 30 24.8 +2.1
comp=Z,2.3nm,0.6s,baz=94,slow=8.1,SNR=2.8
MOX Moxa 44.31 308 *eP* **P** **23 29 42.6 +0.3**
comp=Z,17nm,1.3s,mb4.5
MOX Moxa 44.31 308 *eP* **P** **23 29 42.6 +0.3**
MOX pmax pmax
comp=Z,17nm,1.3s,mb4.5
MOX Moxa 44.31 308 *eP* **P** **23 29 42.5 +0.2**
comp=Z,11nm,1.0s,mb4.4
NAO01 NORSAR Array S 44.44 322 *eP* **P** **23 29 42.4 -0.7**
NAO01 *ep*P pP 23 30 26.4 +2.5
GRA1 Grafenberg Arr 44.69 306 *eP* **P** **23 29 46.3 +1.0**
comp=Z,27nm,1.3s,mb4.7
GRF Grafenberg Arr 44.69 306 *eP* **P** **23 29 46.3 +1.0**
GRF pmax pmax
comp=Z,27nm,1.3s,mb4.7
GRF Grafenberg Arr 44.69 306 *eP* **P** **23 29 46.3 +1.0**
GRF pmax pmax
comp=Z,27nm,1.3s,mb4.7
GRF Grafenberg Arr 44.69 306 *eP* **P** **23 29 46.3 +1.0**
comp=Z,27nm,1.3s,mb4.7
TIXI Tiksi 44.77 22⇑ *eP* **P** **23 29 45.7 +0.1**
TIXI pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
TIXI Tiksi 44.77 22 *eP* **P** **23 29 45.5 -0.1**
comp=Z,8.9nm,0.5s,mb4.7
TIXI *ep*P pP 23 30 31.4 +5.1
BSEG Bad Segeberg 44.80 312 *eP* **P** **23 29 46.4 +0.3**
BSEG pmax pmax
comp=Z,24nm,0.8s,mb4.9
BSEG Bad Segeberg 44.80 312 *eP* **P** **23 29 46.4 +0.3**
comp=Z,24nm,0.8s,mb4.9
FUR Furstenfeldbru 44.88 304 *eP* **P** **23 29 47.1 +0.3**
FUR pmax pmax
comp=Z,27nm,1.1s,mb4.8
FUR Furstenfeldbru 44.88 304 *eP* **P** **23 29 47.1 +0.3**
comp=Z,27nm,1.1s,mb4.8
CLZ Clausthal 44.96 309 *eP* **P** **23 29 47.5 +0.1**
CLZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
CLZ Clausthal 44.96 309 *eP* **P** **23 29 47.5 +0.1**
comp=Z,9.0nm,1.0s,mb4.3
KONO Kongsberg 45.03 320 *eP* **P** **23 29 47.1 -0.8**
KONO pmax pmax
comp=Z,13nm,0.5s,mb4.8
KONO Kongsberg 45.03 320 *eP* **P** **23 29 47.1 -0.8**
comp=Z,13nm,0.5s,mb4.8
MOTA Moosalm 45.13 303⇓ *iP* **P** **23 29 48.0 -0.8**
comp=Z,7.0nm,0.8s,mb4.3
FETA Feichten 45.44 303⇓ *iP* **P** **23 29 50.7 -0.6**
comp=Z,8.9nm,1.0s,mb4.3
DAVA Damuels 45.96 303⇓ *iP* **P** **23 29 55.1 -0.2**
comp=Z,28nm,0.6s,mb5.1
STU Stuttgart 46.14 305 *eP* **P** **23 29 57.2 +0.5**
comp=Z,14nm,1.1s,mb4.5
STU Stuttgart 46.14 305 P **P** **23 29 56.1 -0.6**
VLC Villacollemand 46.28 299 *eP* **P** **23 29 58.4 +0.5**
comp=Z,14nm,0.6s,mb4.8
TNS Taunus Mts 46.38 307 *eP* **P** **23 29 58.7 +0.1**
TNS pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
TNS Taunus Mts 46.38 307 *eP* **P** **23 29 58.7 +0.1**
comp=Z,9.0nm,1.1s,mb4.3
TUE Stuetta 46.48 302 *eP* **P** **23 29 58.8 -0.6**
comp=Z,3.2nm,0.6s,mb4.1
IBBN Ibbenburen 46.50 310 *eP* **P** **23 29 59.7 +0.2**
comp=Z,16nm,0.8s,mb4.7
BFO Black Forest 46.79 305 *eP* **P** **23 30 01.7 0.0**
BFO pmax pmax
comp=Z,12nm,1.4s,mb4.3
BFO Black Forest 46.79 305 *eP* **P** **23 30 01.7 0.0**
comp=Z,12nm,1.4s,mb4.3
BUG Bochum–Univer 46.93 309 *eP* **P** **23 30 03.3 +0.5**
comp=Z,15nm,0.7s,mb4.7
SPITS Spitsbergen Ar 46.96 347 P **P** **23 30 03.4 +0.7**
comp=Z,7.6nm,0.7s,mb4.5,baz=318,slow=11,SNR=9.7
CDF Champ du Feu 47.46 305 *eP* **P** **23 30 07.4 +0.5**
comp=Z,9.1nm,0.8s,mb4.2
CDF Champ du Feu 47.46 305 *eP* **P** **23 30 07.4 +0.5**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
CDF Champ du Feu 47.46 305 *eP* **P** **23 30 07.4 +0.5**
comp=Z,4.6nm,0.8s,mb4.2
PGF Pioggiola 47.67 297 *eP* **P** **23 30 08.0 -0.7**
comp=Z,22nm,0.7s,mb4.6
PGF Pioggiola 47.67 297 *eP* **P** **23 30 08.0 -0.7**
PGF pmax pmax
comp=Z,11nm,0.7s,mb4.6
PGF Pioggiola 47.67 297 *eP* **P** **23 30 08.0 -0.7**
comp=Z,11nm,0.7s,mb4.6
MEM Membach 47.85 308 P **P** **23 30 10.5 +0.6**
comp=Z,7.2nm,1.1s,mb4.2
HINF Hinteralfeld 47.86 304 *eP* **P** **23 30 09.5 -0.5**
comp=Z,21nm,0.9s,mb4.5
HINF Hinteralfeld 47.86 304 *eP* **P** **23 30 09.5 -0.5**
HINF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
HINF Hinteralfeld 47.86 304 *eP* **P** **23 30 09.5 -0.5**
comp=Z,10nm,0.9s,mb4.5
WLF Walferdange 47.94 307 P **P** **23 30 11.2 +0.6**
comp=Z,12nm,1.3s,mb4.3
WLF Walferdange 47.94 307 *eP* **P** **23 30 11.1 +0.5**
comp=Z,19nm,0.9s,mb4.5
WLF Walferdange 47.94 307 *eP* **P** **23 30 11.4 +0.9**
HAU Haudompre 48.15 305 *eP* **P** **23 30 11.7 -0.6**
comp=Z,26nm,0.9s,mb4.6
HAU Haudompre 48.15 305 *eP* **P** **23 30 11.7 -0.6**
HAU pmax pmax
comp=Z,13nm,0.9s,mb4.6
HAU Haudompre 48.15 305 *eP* **P** **23 30 11.7 -0.6**
comp=Z,13nm,0.9s,mb4.6
BCLA Clavier 48.33 308 P **P** **23 30 14.4 +0.8**
SBF Sospel 48.42 299 *eP* **P** **23 30 14.2 -0.2**
comp=Z,60nm,0.8s,mb5.0
SBF Sospel 48.42 299 *eP* **P** **23 30 14.2 -0.2**
SBF pmax pmax
comp=Z,30nm,0.8s,mb5.0
SBF Sospel 48.42 299 *eP* **P** **23 30 14.2 -0.2**
comp=Z,30nm,0.8s,mb5.0
LPG La Plagne 48.47 301 *eP* **P** **23 30 14.9 +0.2**
comp=Z,17nm,0.8s,mb4.4
LPG La Plagne 48.47 301 *eP* **P** **23 30 14.9 +0.2**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LPG La Plagne 48.47 301 *eP* **P** **23 30 14.9 +0.2**
comp=Z,8.6nm,0.8s,mb4.4
LPL La Plagne 48.48 301 *eP* **P** **23 30 14.8 0.0**
comp=Z,34nm,1.0s,mb4.6
LPL La Plagne 48.48 301 *eP* **P** **23 30 14.8 0.0**
LPL pmax pmax
comp=Z,17nm,1.0s,mb4.6
LPL La Plagne 48.48 301 *eP* **P** **23 30 14.8 0.0**
comp=Z,17nm,1.0s,mb4.6
BNI Bardonecchia 48.63 301 *eP* **P** **23 30 15.6 -0.4**
BNI *e*PP* pP 23 31 00.6 +3.3
BNI pmax pmax
comp=Z,17nm,1.1s,mb4.6
BNI Bardonecchia 48.63 301 *eP* **P** **23 30 15.6 -0.4**
comp=Z,17nm,1.1s,mb4.6
BNI *ep*P pP 23 31 00.6 +3.2
CABF La Chapelle 48.64 303 *eP* **P** **23 30 16.1 +0.1**
comp=Z,21nm,0.8s,mb4.5
CABF La Chapelle 48.64 303 *eP* **P** **23 30 16.1 +0.1**
CABF pmax pmax
comp=Z,11nm,0.8s,mb4.5
CABF La Chapelle 48.64 303 *eP* **P** **23 30 16.1 +0.1**
comp=Z,11nm,0.8s,mb4.5
MBDF Montbardon 48.65 300 *eP* **P** **23 30 15.4 -0.7**
comp=Z,14nm,0.8s,mb4.3
MBDF Montbardon 48.65 300 *eP* **P** **23 30 15.4 -0.7**
MBDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
MBDF Montbardon 48.65 300 *eP* **P** **23 30 15.4 -0.7**
comp=Z,6.8nm,0.8s,mb4.3
GIVF Givet 48.69 308 *eP* **P** **23 30 16.5 +0.1**
comp=Z,25nm,1.0s,mb4.5
GIVF Givet 48.69 308 *eP* **P** **23 30 16.5 +0.1**
GIVF pmax pmax
comp=Z,12nm,1.0s,mb4.5
GIVF Givet 48.69 308 *eP* **P** **23 30 16.5 +0.1**
comp=Z,12nm,1.0s,mb4.5
DOU Dourbes 48.84 308 P **P** **23 30 17.9 +0.4**
UCC Uccle 48.85 309 P **P** **23 30 17.4 -0.1**
MEZF Maizieres J'vi 48.89 306 *eP* **P** **23 30 17.8 -0.1**
comp=Z,57nm,1.2s,mb4.8
MEZF Maizieres J'vi 48.89 306 *eP* **P** **23 30 17.8 -0.1**
comp=Z,57nm,1.2s,mb5.1
SNF Seneffe 48.95 308 P **P** **23 30 18.1 -0.2**
comp=Z,6.4nm,1.2s,mb4.1
FRF La Foret Royal 49.05 299 *eP* **P** **23 30 18.6 -0.6**
comp=Z,32nm,0.8s,mb4.7
FRF La Foret Royal 49.05 299 *eP* **P** **23 30 18.6 -0.6**
FRF pmax pmax
comp=Z,16nm,0.8s,mb4.7
FRF La Foret Royal 49.05 299 *eP* **P** **23 30 18.6 -0.6**
comp=Z,16nm,0.8s,mb4.7
BAIF Baives 49.09 308 *eP* **P** **23 30 19.5 +0.1**
comp=Z,70nm,1.2s,mb4.9
BAIF Baives 49.09 308 *eP* **P** **23 30 19.5 +0.1**
BAIF pmax pmax
comp=Z,35nm,1.2s,mb4.9
BAIF Baives 49.09 308 *eP* **P** **23 30 19.5 +0.1**
comp=Z,35nm,1.2s,mb4.9
LMR La Mourre 49.21 299 *eP* **P** **23 30 19.8 -0.6**
KEST Kesra 49.59 288 P **P** **23 30 23.9 +0.5**
comp=Z,3.9nm,0.6s,mb4.2,baz=352,slow=2.2,SNR=32
SMRF Simiane la Rot 49.68 300 *eP* **P** **23 30 24.4 +0.5**
comp=Z,27nm,1.0s,mb4.5
SMRF Simiane la Rot 49.68 300 *eP* **P** **23 30 24.4 +0.5**
comp=Z,27nm,1.0s,mb4.8
LOR Lormes 49.96 304 *eP* **P** **23 30 24.7 -1.3**
comp=Z,50nm,1.4s,mb4.7
LOR Lormes 49.96 304 *eP* **P** **23 30 24.7 -1.3**
LOR pmax pmax
comp=Z,25nm,1.4s,mb4.7
LOR Lormes 49.96 304 *eP* **P** **23 30 24.7 -1.3**
comp=Z,25nm,1.4s,mb4.7
VIVF Saint-Julien-l 50.05 301 *eP* **P** **23 30 26.4 -0.3**
comp=Z,15nm,0.8s,mb4.4
VIVF Saint-Julien-l 50.05 301 *eP* **P** **23 30 26.4 -0.3**
VIVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
VIVF Saint-Julien-l 50.05 301 *eP* **P** **23 30 26.4 -0.3**
comp=Z,7.3nm,0.8s,mb4.4
SMF Signal de Mont 50.13 304 *eP* **P** **23 30 26.6 -0.7**
comp=Z,33nm,0.8s,mb4.7
SMF Signal de Mont 50.13 304 *eP* **P** **23 30 26.6 -0.7**
SMF pmax pmax
comp=Z,17nm,0.8s,mb4.7
SMF Signal de Mont 50.13 304 *eP* **P** **23 30 26.6 -0.7**
comp=Z,17nm,0.8s,mb4.7
SSF Saint Saulge 50.25 304 *eP* **P** **23 30 27.3 -0.8**
AVF Avril sur Loir 50.42 304 *eP* **P** **23 30 28.8 -0.6**
comp=Z,44nm,0.9s,mb4.8
AVF Avril sur Loir 50.42 304 *eP* **P** **23 30 28.8 -0.6**
AVF pmax pmax
comp=Z,22nm,0.9s,mb4.8
AVF Avril sur Loir 50.42 304 *eP* **P** **23 30 28.8 -0.6**
comp=Z,22nm,0.9s,mb4.8
HYF Humbligny 50.76 305 *eP* **P** **23 30 31.7 -0.3**
BGF Bois d'Agland 50.82 304 *eP* **P** **23 30 31.8 -0.6**
LASF Ste Croix 50.84 300 *eP* **P** **23 30 32.6 0.0**
comp=Z,34nm,1.0s,mb4.6
TCF Toulx Ste Croi 51.32 303 *eP* **P** **23 30 35.8 -0.3**
comp=Z,57nm,1.2s,mb4.8
TCF Toulx Ste Croi 51.32 303 *eP* **P** **23 30 35.8 -0.3**
TCF pmax pmax
comp=Z,29nm,1.2s,mb4.8
TCF Toulx Ste Croi 51.32 303 *eP* **P** **23 30 35.8 -0.3**
comp=Z,29nm,1.2s,mb4.8
YSS Yuzh-Sakhalins 51.71 55⇓ *eP* **P** **23 30 40.1 +1.0**
YSS pmax pmax
comp=Z,4.0nm,0.4s,mb4.4

CAF	**Calviac**	**51.81**	**302**	*e*P		**P**	**23 30 39.6**	**-0.2**
	comp=Z,26nm,1.0s,mb4.5								
CAF	**Calviac**	**51.81**	**302**	*e*P		**P**	**23 30 39.6**	**-0.2**
CAF				pmax	pmax				
	comp=Z,13nm,1.0s,mb4.5								
CAF	**Calviac**	**51.81**	**302**	*e*P		**P**	**23 30 39.6**	**-0.2**
	comp=Z,13nm,1.0s,mb4.5								
MJAR	**Matsushiro Arr**	**51.91**	**69**	P		**P**	**23 30 40.2**	**-0.5**
	comp=Z,1.4nm,0.8s,mb3.7,baz=294,slow=11,SNR=4.7								
MJAR				pP	pP		23 31 26.1	+3.5	
	comp=Z,1.7nm,0.8s,baz=290,slow=11,SNR=3.8								
RJF	**Les Rejaudoux**	**52.07**	**302**	*e*P		**P**	**23 30 41.4**	**-0.3**
	comp=Z,49nm,1.3s,mb4.7								
RJF	**Les Rejaudoux**	**52.07**	**302**	*e*P		**P**	**23 30 41.4**	**-0.3**
RJF				pmax	pmax				
	comp=Z,25nm,1.3s,mb4.7								
RJF	**Les Rejaudoux**	**52.07**	**302**	*e*P		**P**	**23 30 41.4**	**-0.3**
	comp=Z,25nm,1.3s,mb4.7								
LDF	**La Druitiere**	**52.20**	**307**	*e*P		**P**	**23 30 41.4**	**-1.2**
	comp=Z,35nm,1.0s,mb4.7								
LDF	**La Druitiere**	**52.20**	**307**	*e*P		**P**	**23 30 41.4**	**-1.2**
LDF				pmax	pmax				
	comp=Z,18nm,1.0s,mb4.7								
LDF	**La Druitiere**	**52.20**	**307**	*e*P		**P**	**23 30 41.4**	**-1.2**
	comp=Z,18nm,1.0s,mb4.6								
MTLF	**Montolieu**	**52.20**	**300**	*e*P		**P**	**23 30 42.3**	**-0.4**
	comp=Z,21nm,1.0s,mb4.4								
MTLF	**Montolieu**	**52.20**	**300**	*e*P		**P**	**23 30 42.3**	**-0.4**
MTLF				pmax	pmax				
	comp=Z,11nm,1.0s,mb4.4								
MTLF	**Montolieu**	**52.20**	**300**	*e*P		**P**	**23 30 42.3**	**-0.4**
	comp=Z,11nm,1.0s,mb4.4								
ESK	**Eskdalemuir**	**52.36**	**316**	*e*P		**P**	**23 30 43.4**	**-0.3**
FLN	**La Foliniere**	**52.38**	**307**	*e*P		**P**	**23 30 42.8**	**-1.1**
	comp=Z,34nm,0.9s,mb4.7								
FLN	**La Foliniere**	**52.38**	**307**	*e*P		**P**	**23 30 42.8**	**-1.1**
FLN				pmax	pmax				
	comp=Z,17nm,0.9s,mb4.7								
FLN	**La Foliniere**	**52.38**	**307**	*e*P		**P**	**23 30 42.8**	**-1.1**
	comp=Z,17nm,0.9s,mb4.7								
LFF	**La Frestale**	**52.70**	**302**	*e*P		**P**	**23 30 46.0**	**-0.4**
	comp=Z,23nm,0.8s,mb4.7								
LFF	**La Frestale**	**52.70**	**302**	*e*P		**P**	**23 30 46.0**	**-0.4**
LFF				pmax	pmax				
	comp=Z,11nm,0.8s,mb4.6								
LFF	**La Frestale**	**52.70**	**302**	*e*P		**P**	**23 30 46.0**	**-0.4**
	comp=Z,11nm,0.8s,mb4.7								
GRR	**Gorron**	**52.72**	**307**	*e*P		**P**	**23 30 45.5**	**-1.0**
	comp=Z,30nm,0.7s,mb4.8								
GRR	**Gorron**	**52.72**	**307**	*e*P		**P**	**23 30 45.5**	**-1.0**
GRR				pmax	pmax				
	comp=Z,15nm,0.7s,mb4.8								
GRR	**Gorron**	**52.72**	**307**	*e*P		**P**	**23 30 45.5**	**-1.0**
	comp=Z,15nm,0.7s,mb4.8								
MFF	**Saint Martin d**	**52.78**	**304**	*e*P		**P**	**23 30 45.8**	**-1.1**
EPF	**Esparros**	**53.59**	**300**	*e*P		**P**	**23 30 51.6**	**-1.3**
SGMF	**Saint Gilles**	**53.84**	**307**	*e*P		**P**	**23 30 53.9**	**-0.8**
	comp=Z,44nm,0.9s,mb4.9								
SGMF	**Saint Gilles**	**53.84**	**307**	*e*P		**P**	**23 30 53.9**	**-0.8**
SGMF				pmax	pmax				
	comp=Z,22nm,0.9s,mb4.9								
SGMF	**Saint Gilles**	**53.84**	**307**	*e*P		**P**	**23 30 53.9**	**-0.8**
	comp=Z,22nm,0.9s,mb4.9								
ETSF	**Etsaut**	**54.26**	**300**	*e*P		**P**	**23 30 57.6**	**-0.1**
	comp=Z,39nm,1.2s,mb4.7								
ETSF	**Etsaut**	**54.26**	**300**	*e*P		**P**	**23 30 57.6**	**-0.1**
ETSF				pmax	pmax				
	comp=Z,20nm,1.2s,mb4.7								
ETSF	**Etsaut**	**54.26**	**300**	*e*P		**P**	**23 30 57.6**	**-0.1**
	comp=Z,20nm,1.2s,mb4.7								
ROSF	**Rostrenen**	**54.28**	**307**	*e*P		**P**	**23 30 56.8**	**-1.0**
	comp=Z,47nm,0.9s,mb4.9								
ROSF	**Rostrenen**	**54.28**	**307**	*e*P		**P**	**23 30 56.8**	**-1.0**
ROSF				pmax	pmax				
	comp=Z,24nm,0.9s,mb4.9								
ROSF	**Rostrenen**	**54.28**	**307**	*e*P		**P**	**23 30 56.8**	**-1.0**
	comp=Z,24nm,0.9s,mb4.9								
QUIF	**Quistinic**	**54.34**	**307**	*e*P		**P**	**23 30 57.2**	**-1.0**
	comp=Z,11nm,0.5s,mb4.5								
QUIF	**Quistinic**	**54.34**	**307**	*e*P		**P**	**23 30 57.2**	**-1.0**
QUIF				pmax	pmax				
	comp=Z,5.0nm,0.5s,mb4.5								
QUIF	**Quistinic**	**54.34**	**307**	*e*P		**P**	**23 30 57.2**	**-1.0**
	comp=Z,5.3nm,0.5s,mb4.5								
BILL	**Bilibino**	**57.57**	**26**	*i* P		**P**	**23 31 21.2**	**+0.4**
BILL				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.2								
ESDC	**Sonseca Array**	**57.85**	**298**	P		**P**	**23 31 22.7**	**-0.5**
	comp=Z,6.7nm,0.7s,mb4.6,baz=58,slow=7.2,SNR=30								
ESLA	**Sonseca Array**	**57.85**	**298**	*e*P		**P**	**23 31 23.1**	**-0.1**
SUMG	**Summit**	**60.63**	**341**	*e*P		**P**	**23 31 42.8**	**+1.1**
	comp=Z,13nm,0.8s,mb4.8								
SUMG				*e*pP	pP		23 32 29.2	+4.3	
TOA0	**Torodi Ar. Sit**	**66.57**	**269**	*e*P		**P**	**23 32 19.1**	**-2.4**
TORD	**Torodi Ar. Bea**	**66.57**	**269**	P		**P**	**23 32 18.9**	**-2.6**
	comp=Z,2.8nm,0.6s,mb4.3,baz=46,slow=5.9,SNR=47								
LSZ	**Lusaka**	**66.57**	**227**	*e*P		**P**	**23 32 24.2**	**+2.8**
INK	**Inuvik**	**73.03**	**10**	*e*P		**P**	**23 32 59.8**	**-0.3**
MBWA	**Marble Bar**	**73.44**	**134**	*e*P		**P**	**23 33 04.2**	**+1.2**
COLA	**College**	**73.53**	**17**	*e*P		**P**	**23 33 03.3**	**+0.3**
MCK	**McKinley**	**74.24**	**18**	*e*P		**P**	**23 33 06.7**	**-0.4**
MCK				pmax	pmax				
	comp=Z,3.0nm,0.4s,mb4.4								
MCK	**McKinley**	**74.24**	**18**	*e*P		**P**	**23 33 06.7**	**-0.5**
	comp=Z,2.7nm,0.4s,mb4.3								
DBIC	**Dimbokro**	**75.57**	**267**	P		**P**	**23 33 13.7**	**-1.9**
	comp=Z,1.4nm,0.7s,mb3.7,baz=31,slow=2.6,SNR=3.9								
LBTB	**Lobatse**	**75.79**	**223**	*e*P		**P**	**23 33 18.8**	**+2.3**
BOSA	**Boshof**	**78.86**	**221**	P		**P**	**23 33 35.7**	**+2.2**
YKA	**Yellowknife Ar**	**80.46**	**3**	P		**P**	**23 33 41.0**	**-0.7**
	comp=Z,2.8nm,0.5s,mb4.1,baz=349,slow=5.4,SNR=73								
YKA				pP	pP		23 34 31.0	+3.7	
	comp=Z,1.8nm,0.8s,baz=351,slow=5.5,SNR=5.0								
YKA	**Yellowknife Ar**	**80.46**	**3**	P		**P**	**23 33 41.0**	**-0.7**
YKA				pP	pP		23 34 31.0	+3.7	
NWAO	**Narrogin (SRO)**	**81.55**	**143**	*e*P		**P**	**23 33 47.7**	**-0.1**
WRA	**Warramunga Arr**	**81.68**	**123**	P		**P**	**23 33 47.8**	**-0.9**
	comp=Z,0.6nm,0.6s,mb3.4,baz=324,slow=4.9,SNR=9.8								
WRA				pP	pP		23 34 37.1	+2.7	
	comp=Z,2.1nm,0.9s,baz=324,slow=5.3,SNR=7.7								
WRA				PKKPbc	PKKPbc		23 52 18.6	-0.4	
	comp=Z,0.2nm,0.9s,baz=136,slow=2.4,SNR=4.8								
WRA	**Warramunga Arr**	**81.68**	**123**	P		**P**	**23 33 47.8**	**-1.0**
WRA				*PP	pP		23 34 37.1	+2.6	
WRAB	**Tennant Creek**	**81.68**	**123**	*e*P		**P**	**23 33 48.2**	**-0.6**
WRAB				pmax	pmax				
	comp=Z,2.0nm,0.7s,mb3.9								
WRAB	**Tennant Creek**	**81.68**	**123**	*e*P		**P**	**23 33 48.2**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.7								
WB2	**Warramunga Arr**	**81.69**	**123**	P		**P**	**23 33 47.6**	**-1.2**
ASAR	**Alice Springs**	**84.00**	**126**	P		**P**	**23 33 59.3**	**-1.3**
	comp=Z,0.5nm,0.9s,mb3.2,baz=324,slow=4.6,SNR=3.5								
ASAR				pP	pP		23 34 49.9	+3.3	
	comp=Z,1.8nm,1.0s,baz=313,slow=4.9,SNR=6.1								
PMG	**Port Moresby**	**84.01**	**106**	*e*P		**P**	**23 34 02.3**	**+1.4**
BOZ	**Bozeman (W)**	**97.42**	**3**	*e*P		**P**	**23 35 06.6**	**+3.3**
BOZ				*e*PP	pP		23 35 53.2	+3.3	
BOZ				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb5.3								
BOZ	**Bozeman (W)**	**97.42**	**3**	*e*P		**P**	**23 35 06.5**	**+3.2**
	comp=Z,10.0nm,0.6s,mb5.3								
BOZ				*e*pP	pP		23 35 53.1	+3.2	

*ISCJB **19** 23:32:42.6±7.1, 72S±02×1562E±04, h71km±53km, mb3.6/7, Error ellipse: s-maj=70.5km s-min=34.1km az=22.0*

*IDC **19** 23:32:44.0±7.5, 726S×15622E, h72km±57km, mb3.5/7, mb1 3.7/8, mb1mx3.6/17, mbtmp3.5/8, ML3.3/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/30, Error ellipse: s-maj=62.9km s-min=32.7km az=112.0*

ISC 19 23:32:43.3±5.6, 73S±02×1563E±04, h68km±40km, n10, σ0s92/8, mb3.6/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**9.26**	**256**	P	**Pn**	**23 34 54.1**	**0.0**
	1.6nm,0.3s,baz=82,slow=3.3,SNR=3.9						
PMG				LR	LR	23 37 44.9	
	comp=Z,48nm,19.9s,baz=43,slow=33						
CTA	**Charters Tower**	**16.02**	**216**	LR	LR	23 41 55.2	
	comp=Z,38nm,18.7s,baz=229,slow=34						
WRA	**Warramunga Arr**	**24.72**	**237**	P	**P**	**23 37 58.9**	**+0.5**
	0.5nm,0.5s,mb3.2,baz=59,slow=9.6,SNR=7.5						
ASAR	**Alice Springs**	**26.95**	**230**	P	**P**	**23 38 18.3**	**-0.3**
	0.3nm,0.5s,mb3.1,baz=60,slow=10,SNR=5.0						
CMAR	**Chiang Mai Arr**	**62.04**	**295**	P	**P**	**23 42 56.6**	**-0.5**
	0.9nm,0.4s,mb4.1,baz=130,slow=8.4,SNR=5.8						
SONM	**Songino Array**	**70.25**	**327**	P	**P**	**23 43 49.9**	**+0.7**
	0.2nm,0.3s,mb3.4,baz=132,slow=5.6,SNR=4.5						
MKAR	**Makanchi Array**	**84.44**	**318**	P	**P**	**23 45 09.5**	**+0.9**
	0.9nm,0.7s,mb3.7,baz=97,slow=5.8,SNR=10						
ZALV	**Zalesovo Beam**	**85.11**	**326**	P	**P**	**23 45 10.6**	**-1.2**
	0.4nm,0.4s,mb3.8,baz=102,slow=6.1,SNR=3.2						
YKA	**Yellowknife Ar**	**95.98**	**28**	P	**P**	**23 46 02.6**	**0.0**
	0.3nm,0.8s,mb3.8,baz=269,slow=4.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**154.31**	**285**	PKPbc	PKPbc	23 52 37.2	+0.3
	0.4nm,0.8s,baz=89,slow=1.4,SNR=2.5						
TORD				PKPab	PKPab	23 52 50.1	-1.0
	0.4nm,0.7s,baz=87,slow=4.1,SNR=3.4						

IDC 19 23:38:46.1±6.5, 550S×14729E, h176km±65km, mb2.7/1, mb1 3.0/3, mb1mx2.8/16, mbtmp2.8/3, Error ellipse: s-maj=108.5km s-min=52.8km az=120.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.88**	**182**	P	Pn	23 39 47.1	+1.5
	4.0nm,0.3s,baz=338,slow=11,SNR=7.9						
PMG				S	Sn	23 40 31.5	-0.6
	2.6nm,0.3s,baz=241,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**19.10**	**220**	P	P	23 42 55.9	+0.3
	0.2nm,0.3s,baz=44,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**22.19**	**214**	P	P	23 43 29.0	+0.8
	0.6nm,0.6s,baz=49,slow=8.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**145.25**	**285**	PKPbc	PKPbc	23 58 02.0	-2.0
	0.2nm,0.8s,baz=72,slow=2.9,SNR=3.1						

*DDA **19** 23:49:04.8, 3696N×3460E, h23km±1km, Md3.5*

*CSEM **19** 23:49:05.5±0.1, 3707N×3463E, h5km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.3km az=176.0*

*ISCJB **19** 23:49:05.1±0.5, 3707N±002×3457E±002, h0km±3km, mb3.4/4, Error ellipse: s-maj=3.2km s-min=2.9km az=33.9*

*ISK **19** 23:49:05.4, 3706N×3462E, h5km, ML3.5*

*IDC **19** 23:49:06.6±1.0, 3708N×3461E, h0km, mb3.5/4, mb1 3.6/9, mb1mx3.5/25, mbtmp3.6/9, ML3.7/5, Error ellipse: s-maj=19.6km s-min=12.8km az=82.0*

*NEIC **19** 23:49:06.0, 3704N×3466E, h7km, ML3.4(ISK), After ISK.*

ISC 19 23:49:06.5±0.4, 3706N±002×3461E±002, h3km±3km, n63, σ1s05/86, mb3.4/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.20**	**201**	*e*PG	**Pg**	**23 49 10.4**	**-0.1**
MERS				*e*SG	**Sg**	**23 49 14.0**	**+0.9**
KARA	**Karaisali**	**0.41**	**60**	*e*PG	**Pg**	**23 49 13.7**	**-0.6**
KARA				*e*SG	**Sg**	**23 49 20.0**	**+0.4**
KRTS	**Karatas**	**0.78**	**128**	*e*PG	**Pg**	**23 49 21.3**	**-0.2**
CEYT	**Ceyhan**	**0.91**	**93**	*e*PG	**Pg**	**23 49 23.9**	**-0.1**
BSTP	**Nigde**	**0.97**	**336**	*i* P	**Pg**	**23 49 25.2**	**0.0**
BSTP				*i* S	**Sg**	**23 49 40.5**	**+2.6**
NIG	**Nigde**	**1.05**	**360**	*e*PG	**Pg**	**23 49 25.5**	**-1.2**
NIG				*e*SG	**Sg**	**23 49 40.8**	**+0.5**
KOZT	**Kozan**	**1.05**	**66**	*e*PG	**Pg**	**23 49 24.6**	**-2.2**
KOZT				*e*SG	**Sg**	**23 49 40.1**	**-0.3**
IKL	**Isikli**	**1.11**	**223**	*e*PN	**Pn**	**23 49 25.7**	**-3.2**
IKL				*e*SN	**Sn**	**23 49 42.2**	**-2.4**
ANDN	**Andirin**	**1.48**	**69**	*i* P	**Pn**	**23 49 32.2**	**-1.7**
ANDN				*i* S	**Sb**	**23 49 55.3**	**+1.6**
HTY	**Hatay**	**1.54**	**127**	*e*PN	**Pn**	**23 49 33.9**	**-1.0**
EREN	**Erenkoy**	**1.57**	**193**	*e*PN	**Pn**	**23 49 34.7**	**-0.5**
KMRS	**Kahramanmaras**	**1.88**	**76**	*e*PN	**Pn**	**23 49 38.9**	**-0.6**
LFK	**Lefkose**	**1.98**	**207**	*e*PN	**Pn**	**23 49 40.6**	**-0.3**
KUZU	**Kuzuini**	**1.99**	**98**	*i* P	**Pn**	**23 49 40.5**	**-0.6**
KUZU				*i* S	**Sn**	**23 50 07.8**	**+1.2**
KONT	**Konya--Tatoy**	**2.00**	**297**	*e*PN	**Pn**	**23 49 40.5**	**-0.7**
BNN	**Bunyan**	**2.04**	**28**	*e*PN	**Pn**	**23 49 42.2**	**+0.5**
GAZ	**Gaziantep**	**2.08**	**86**	*e*PN	**Pn**	**23 49 41.6**	**-0.7**
LADK	**Ladik-KONYA**	**2.12**	**303**	*e*PN	**Pn**	**23 49 42.3**	**-0.5**
PINB	**Pinarbasi**	**2.15**	**41**	*i* P	**Pn**	**23 49 44.2**	**+1.1**
PINB				*i* S	**Sn**	**23 50 16.4**	**+6.1**
PINB	**Pinarbasi**	**2.15**	**41**	*i* P	**Pn**	**23 49 44.2**	**+1.0**
SARI	**SarD1z-Kayseri**	**2.31**	**45**	*e*PN	**Pn**	**23 49 40.9**	**-4.5**
CSS	**Prodhromos**	**2.34**	**207**	*e*Pn	**Pn**	**23 49 45.8**	**0.0**
CSS	**Prodhromos**	**2.34**	**207**	*e*Pg	**Pg**	**23 49 52.2**	**+0.9**
CSS	**Prodhromos**	**2.34**	**207**	*e*Pn	**Pg**	**23 49 45.8**	**0.0**
CSS				*e*Pg	**Pg**	**23 49 52.2**	**+0.9**
CSS				Sn	**Sn**	**23 50 14.4**	**-0.5**
CSS				*e*Sg	**Sg**	**23 50 23.1**	**+1.4**
GZT	**Gaziantep**	**2.37**	**82**	*i* P	**Pn**	**23 49 45.9**	**-0.4**
GZT				*i* S	**Sn**	**23 50 21.4**	**+5.5**
LEF	**Lefka**	**2.39**	**216**	*e*PN	**Pn**	**23 49 45.1**	**-1.4**
KAMT	**Kaman**	**2.41**	**343**	*e*PN	**Pn**	**23 49 46.4**	**-0.5**
YOZ	**Yozgat**	**2.63**	**12**	*e*PN	**Pn**	**23 49 50.4**	**+0.5**
BR131	**Keskin Array S**	**2.77**	**344**	*e*Pn	**Pn**	**23 49 51.3**	**-0.4**
BR131	**Keskin Array S**	**2.77**	**344**	*e*Pg	**Pg**	**23 49 58.9**	**-0.7**
BR131	**Keskin Array S**	**2.77**	**344**	*e*Pn	**Pn**	**23 49 51.3**	**-0.4**
BR131				*e*Pg	**Pg**	**23 49 58.9**	**-0.7**
BR131				*e*Sn	**Sn**	**23 50 25.0**	**-0.6**
BR131				*e*Sg	**Sg**	**23 50 34.9**	**-0.6**
BRTR	**Keskin Array B**	**2.77**	**344**	Pn	**Pn**	**23 49 51.3**	**-0.4**
	0.5nm,0.3s,baz=164,slow=18,SNR=27						
BRTR				Pg	**Pg**	**23 49 57.1**	**-2.5**
	2.7nm,0.3s,baz=164,slow=16,SNR=41						
BRTR				Lg		23 50 34.6	
	3.4nm,0.3s,baz=160,slow=30,SNR=8.2						
BRTR	**Keskin Array B**	**2.77**	**344**	Pg	**Pg**	**23 49 57.1**	**-2.5**
KIZT	**Kizilcal**	**2.82**	**311**	*e*PN	**Pn**	**23 49 52.9**	**+0.5**
HWQ	**Hawqa**	**2.98**	**158**	*e*Pn	**Pn**	**23 49 54.0**	**-0.6**
CORM	**Corum**	**3.11**	**0**	*e*PN	**Pn**	**23 49 57.5**	**+1.0**
DARE	**Darende-Malaty**	**3.15**	**52**	*e*PN	**Pn**	**23 49 50.5**	**-6.5**
ANTB	**Antalya**	**3.17**	**268**	*e*PN	**Pn**	**23 49 57.9**	**+0.6**
LOD	**Lodumlu**	**3.18**	**333**	*e*PN	**Pn**	**23 49 57.7**	**+0.4**
BCK	**Bucak**	**3.23**	**278**	*e*PN	**Pn**	**23 49 58.8**	**+0.7**
BHL	**Bhannes**	**3.26**	**165**	*e*Pn	**Pn**	**23 49 57.5**	**-1.0**
MYA	**Malataya**	**3.28**	**66**	*e*PN	**Pn**	**23 49 58.8**	**+0.1**
ISP	**Isparta**	**3.36**	**285**	*e*PN	**Pn**	**23 50 01.0**	**+1.2**
ISP	**Isparta**	**3.36**	**285**	*e*Pn	**Pn**	**23 49 59.5**	**-0.3**
ISP				*e*Pg	**Pg**	**23 50 10.2**	**-0.7**
ISP				Sn	**Sn**	**23 50 38.2**	**-2.0**
ISP				*e*Sg	**Sg**	**23 50 54.4**	**0.0**
URFA	**Urfa**	**3.38**	**82**	*e*PN	**Pn**	**23 49 59.7**	**-0.4**
SVSK	**Karacayir**	**3.41**	**33**	*e*PN	**Pn**	**23 50 01.4**	**+0.8**
SHUT	**Suhut-Afyon**	**3.55**	**296**	*e*PN	**Pn**	**23 50 03.6**	**+1.2**
SVRC	**Sivrice-ELAZID**	**3.95**	**69**	*e*PN	**Pn**	**23 50 08.9**	**+1.0**
ALT	**Altintas**	**4.07**	**301**	*e*PN	**Pn**	**23 50 10.9**	**+1.2**
MMAI	**Mount Meron Ar**	**4.09**	**171**	Pn	**Pn**	**23 50 08.9**	**-1.0**
	14nm,0.3s,baz=356,slow=12,SNR=96						
MMAI				Sn	**Sn**	**23 50 54.9**	**-3.3**
	5.1nm,0.3s,baz=339,slow=24,SNR=3.5						
PTK	**Pertek**	**4.20**	**63**	*e*PN	**Pn**	**23 50 12.2**	**+0.9**
KHL	**Karahalli**	**4.23**	**289**	*e*PN	**Pn**	**23 50 12.8**	**+1.0**
EZC	**Erzincan**	**4.89**	**55**	*e*PN	**Pn**	**23 50 17.7**	**-3.2**
ASF	**Jabal al Asfar**	**5.23**	**158**	Pn	**Pn**	**23 50 26.7**	**+1.2**
	1.1nm,0.3s,baz=228,slow=10,SNR=31						
ASF				Sn	**Sn**	**23 51 30.8**	**+4.5**
	baz=36,slow=19,SNR=3.0						
EIL	**Elat**	**7.38**	**178**	Pn	**Pn**	**23 50 56.8**	**+1.8**
	0.3nm,0.3s,baz=13,slow=16,SNR=3.5						
EIL				Sn	**Sn**	**23 52 21.9**	**+2.7**
	0.5nm,0.3s,baz=16,slow=12,SNR=3.1						
IDI	**Anoyia**	**8.06**	**260**	Pn	**Pn**	**23 51 05.4**	**+1.0**
	1.7nm,0.3s,baz=56,slow=5.0,SNR=8.6						
GERES	**GERESS Array B**	**19.24**	**314**	P	**Pn**	**23 53 32.3**	**-0.4**
	0.2nm,0.3s,baz=121,slow=11,SNR=8.8						
AKTK	**Aktyubinsk**	**21.44**	**44**	P	**P**	**23 53 55.0**	**-0.6**
AKTK	**Aktyubinsk**	**21.44**	**44**	P	**P**	**23 53 55.0**	**-0.6**
AKTO	**Aktyubinsk**	**21.44**	**44**	P	**P**	**23 53 55.0**	**-0.6**
	1.1nm,0.5s,mb3.4,baz=229,slow=8.8,SNR=5.0						
MKAR	**Makanchi Array**	**36.29**	**59**	P	**P**	**23 56 12.3**	**+1.3**
	0.3nm,0.6s,mb3.4,baz=262,slow=8.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**37.84**	**240**	P	**P**	**23 56 24.7**	**+0.2**
	0.4nm,0.8s,mb3.2,baz=36,slow=6.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**38.13**	**47**	P	**P**	**23 56 27.7**	**+1.1**
	0.5nm,0.4s,mb3.6,baz=267,slow=10,SNR=2.3						

*NEIC **19** 23:51:09.0, 3705N×3466E, h5km, ML3.6(ISK), After ISK.*

*DDA **19** 23:51:10.6, 3700N×3469E, h22km, Md3.5*

*ISK **19** 23:51:10.6, 3705N×3463E, h7km, ML3.6*

*CSEM **19** 23:51:10.8±0.1, 3707N×3465E, h8km, Mw3.4, Error ellipse: s-maj=1.6km s-min=1.3km az=179.0*

*IDC **19** 23:51:11.0±1.0, 3703N×3456E, h0km, mb3.5/4, mb1 3.7/9, mb1mx3.6/24, mbtmp3.7/9, ML3.9/5, MS2.5/1, Ms1 2.5/1, ms1mx2.1/32, Error ellipse: s-maj=20.0km s-min=12.9km az=83.0*

*ISCJB **19** 23:51:11.2±0.5, 3701N±002×3465E±003, h11km±3km, mb3.5/4, Error ellipse: s-maj=3.8km s-min=3.0km az=37.1*

*NIC **19** 23:51:16.8±0.4, 3700N×3447E, h46km, ML3.5, MW3.4*

ISC 19 23:51:11.6±0.5, 3702N±002×3465E±003, h6km±4km, n66, σ0s94/82, mb3.5/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.18**	**213**	*e*PG	**Pg**	**23 51 15.3**	**+0.1**
MERS				*e*SG	**Sg**	**23 51 19.1**	**+1.6**
KARA	**Karaisali**	**0.41**	**53**	*e*PG	**Pg**	**23 51 18.8**	**-0.7**
KARA				*e*SG	**Sg**	**23 51 25.3**	**+0.5**
KRTS	**Karatas**	**0.73**	**127**	*e*PG	**Pg**	**23 51 26.3**	**+0.6**
CEYT	**Ceyhan**	**0.88**	**90**	*e*PG	**Pg**	**23 51 28.7**	**+0.1**
BSTP	**Nigde**	**1.02**	**336**	*i* P	**Pg**	**23 51 30.1**	**-1.1**
BSTP				*i* S	**Sg**	**23 51 46.1**	**+1.5**
KOZT	**Kozan**	**1.05**	**64**	*e*PG	**Pg**	**23 51 29.6**	**-2.1**
KOZT				*e*SG	**Sg**	**23 51 46.4**	**+1.0**
NIG	**Nigde**	**1.09**	**359**	*e*PG	**Pg**	**23 51 30.4**	**-2.1**
IKL	**Isikli**	**1.10**	**225**	*e*PN	**Pn**	**23 51 30.7**	**-2.8**
COBT	**Iskenderun**	**1.39**	**111**	*i* P	**Pn**	**23 51 36.4**	**-1.1**
ANDN	**Andirin**	**1.47**	**67**	*i* P	**Pn**	**23 51 37.3**	**-1.3**
ANDN				*i* S	**Sn**	**23 52 00.0**	**+1.9**
HTY	**Hatay**	**1.50**	**126**	*e*PN	**Pn**	**23 51 38.9**	**-0.2**
EREN	**Erenkoy**	**1.53**	**195**	*e*PN	**Pn**	**23 51 39.0**	**-0.5**
KMRS	**Kahramanmaras**	**1.86**	**74**	*e*PN	**Pn**	**23 51 43.9**	**-0.2**
LFK	**Lefkose**	**1.96**	**208**	*e*PN	**Pn**	**23 51 44.5**	**-0.9**
KUZU	**Kuzuini**	**1.96**	**96**	*i* P	**Pn**	**23 51 45.4**	**-0.1**
KUZU				*i* S	**Sn**	**23 52 10.9**	**+0.5**
KONT	**Konya--Tatoy**	**2.04**	**298**	*e*PN	**Pn**	**23 51 46.1**	**-0.4**
GAZ	**Gaziantep**	**2.06**	**85**	*e*PN	**Pn**	**23 51 46.8**	**+0.1**
BNN	**Bunyan**	**2.06**	**27**	*e*PN	**Pn**	**23 51 46.4**	**-0.5**
PHNC	**Paralimni**	**2.07**	**194**	P	**Pn**	**23 51 46.2**	**-0.7**
	5.1nm,0.6s						
PHNC				S	**Sn**	**23 52 11.8**	**-1.2**
LADK	**Ladik-KONYA**	**2.16**	**304**	*e*PN	**Pn**	**23 51 47.3**	**-0.9**
PINB	**Pinarbasi**	**2.16**	**40**	*i* P	**Pn**	**23 51 49.2**	**+1.0**
PINB				*i* S	**Sn**	**23 52 21.4**	**+6.1**
MAMC	**Mammari**	**2.18**	**213**	P	**Pn**	**23 51 47.7**	**-0.7**
CSS	**Prodhromos**	**2

BJT	**Baijiatuau**	**38.92**	**344**	P		pP		00 18 42.0 +0.9
LZH	**Lanzhou**	**40.51**	**328**	*e*P		**P**		**00 18 48.3 +4.4**
LZH					AP	pP		00 18 55.5 +1.1
LZH					XP	sP		00 18 58.0 -0.7
LZH					AMB	AMB		
	comp=Z,21nm,1.5s,mb4.5							
LZH					AMB	AMB		
	comp=Z,85nm,4.2s							
LSA	**Lhasa**	**44.73**	**311**	*e*P		**P**		**00 19 20.1 +1.8**
	comp=Z,3.0nm,0.6s,mb4.3							
LSA	**Lhasa**	**44.73**	**311**	*e*P		**P**		**00 19 17.5 -0.8**
	comp=Z,3.0nm,0.6s,mb4.3							
GTA	**Gaotai**	**45.11**	**328**	*e*P		**P**		**00 19 22.8 +1.7**
GTA					AP	pP		00 19 31.8 +0.1
GTA					XP	sP		00 19 35.9 -0.1
GTA					AMB	AMB		
	comp=Z,4.0nm,0.4s,mb4.6							
TAPN	**Taplejung**	**46.35**	**306**	*e*P		**P**		**00 19 31.9 +0.7**
ODAN	**Odare**	**46.41**	**305**	*e*P		**P**		**00 19 32.1 +0.4**
	comp=Z,7.5nm,0.5s,mb4.8							
HIA	**Hailar**	**47.08**	**352**	P		**P**		**00 19 36.0 -0.5**
RAMN	**Ramite**	**47.09**	**305**	*e*P		**P**		**00 19 38.0 +1.0**
	comp=Z,9.6nm,0.5s,mb5.0							
JIRN	**Jiri**	**47.71**	**306**	*e*P		**P**		**00 19 43.1 +1.3**
GUN	**Gumba**	**48.06**	**306**	*e*P		**P**		**00 19 45.1 +0.6**
	comp=Z,14nm,0.5s,mb5.3							
TAU	**Tasmania Unive**	**48.33**	**162**	P		**P**		**00 19 45.8 -0.5**
KKN	**Kakani**	**48.50**	**305**	*e*P		**P**		**00 19 48.1 +0.2**
	comp=Z,5.0nm,0.4s,mb4.9							
ULN	**Ulaanbaatar**	**48.80**	**341**	*e*P		**P**		**00 19 50.4 +0.5**
	comp=Z,1.5nm,0.8s,mb4.1							
SONM	**Songino Array**	**49.00**	**340**	P		**P**		**00 19 50.4 -1.0**
	comp=Z,0.6nm,0.4s,mb4.0,baz=159,slow=9.1,SNR=11							
GKN	**Gorkha**	**49.11**	**305**	*e*P		**P**		**00 19 52.5 -0.1**
KOLN	**Koldanda**	**49.87**	**305**	*e*P		**P**		**00 19 57.0 -1.4**
DANN	**Dangsing**	**49.96**	**305**	*e*P		**P**		**00 19 59.5 +0.5**
	comp=Z,22nm,0.5s,mb5.4							
PETK	**Petropavlovsk-**	**55.64**	**21**	P		**P**		**00 20 40.5 0.0**
	comp=Z,3.8nm,1.0s,mb4.4,baz=215,slow=7.4,SNR=3.3							
MK31	**Makanchi Array**	**59.64**	**325**	*e*P		**P**		**00 21 09.3 +0.5**
MKAR	**Makanchi Array**	**59.64**	**325**	P		**P**		**00 21 09.2 +0.4**
	comp=Z,3.7nm,0.4s,mb4.8,baz=114,slow=8.0,SNR=68							
MKAR					PcP	PcP		00 21 55.7 0.0
	comp=Z,0.8nm,0.5s,baz=115,slow=4.5,SNR=4.8							
RAO	**Raoul Island**	**59.99**	**126**	*e*P		**P**		**00 21 11.8 +0.3**
ZALV	**Zalesovo Beam**	**62.50**	**332**	P		**P**		**00 21 27.5 -0.6**
	comp=Z,1.6nm,0.6s,mb4.4,baz=124,slow=7.9,SNR=6.5							
AAK	**Ala-Archa**	**62.57**	**317**	P		**P**		**00 21 28.2 -0.6**
KURK	**Kurchatov**	**63.78**	**327**	P		**P**		**00 21 36.6 0.0**
	comp=Z,4.6nm,0.5s,mb4.7,baz=126,slow=6.3,SNR=60							
KURK	**Kurchatov**	**63.78**	**327**	*e*P		**P**		**00 21 36.8 +0.1**
BVAR	**Borovoye Array**	**69.37**	**327**	P		**P**		**00 22 11.7 -0.5**
	comp=Z,1.4nm,0.3s,mb4.3,baz=79,slow=5.3,SNR=24							
BRVK	**Borovoye**	**69.44**	**327**	*e*P		**P**		**00 22 12.7 0.0**
	comp=Z,1.8nm,0.3s,mb4.5							
BILL	**Bilibino**	**70.05**	**14**	P		**P**		**00 22 16.2 0.0**
AKTK	**Aktyubinsk**	**75.81**	**321**	P		**P**		**00 22 49.7 -0.9**
AKTO	**Aktyubinsk**	**75.81**	**321**	P		**P**		**00 22 49.7 -0.9**
	comp=Z,0.5nm,0.3s,mb3.9,baz=221,slow=2.8,SNR=4.8							
SBA	**Scott Base**	**83.00**	**172**	P		**P**		**00 23 28.9 -0.3**
MALT	**Malatya**	**88.70**	**308**	*e*P		**P**		**00 23 54.4 -4.0**
ARCES	**ARCESS Array B**	**92.17**	**340**	P		**P**		**00 24 12.1 -1.7**
	comp=Z,6.9nm,1.0s,mb5.0,baz=64,slow=5.5,SNR=5.5							
ARCES	**ARCESS Array B**	**92.17**	**340**	P		**P**		**00 24 12.1 -1.7**
TOA0	**Torodi Ar. Sit**	**125.27**	**288**	PKPdf		PKPdf		00 29 56.8 -9.5
TORD	**Torodi Ar. Bea**	**125.27**	**288**	PKP		PKPdf		00 30 05.8 -0.5
	comp=Z,0.3nm,0.3s,baz=80,slow=1.5,SNR=14							
DBIC	**Dimbokro**	**132.87**	**282**	*e*PKPdf		PKPdf		00 30 19.9 -0.9

AUST ***20*** *00:11:30,11*$^{60}_{S}$*×117*$^{40}_{E}$*,h0*^{km}*,ML4.1*
ISCJB ***20*** *00:11:42.1±2.4,1109S±008×119.1E±0.2,h7*$^{km}_{\pm}$*16*^{km}*, mb3.8/3,MS2.8/2, Error ellipse: s-maj=27.7km s-min=6.1km az=153.4*
IDC ***20*** *00:11:43.3±1.6,1108S×11938E,h0*^{km}*, mb3.9/3, mb1 4.0/6,mb1mx3.8/17,mbtmp3.9/6,ML3.8/3,MS3.0/2, Ms1 3.0/2,ms1mx2.7/27, Error ellipse: s-maj=60.9km s-min=11.7km az=53.0*
NEIC ***20*** *00:11:46.7±1.2,11.11S×119.13E,h25*^{km}*,mb3.7/1, Error ellipse: s-maj=40.3km s-min=10.0km az=57.0*
ISC 20 00:11:46.2±3.4,1110S±008×1192E±01,h21$^{km}_{\pm}$**26**^{km}**,n15,** σ1℘**09/19,mb3.8/3,MS2.8/2,South of Sumba**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**2.59**	**349**	P		P	**Pn**	**00 12 23.8**	**-3.1**
	108nm,0.6s,4μm1.0nm								
BMNI				S			**Sn**	**00 12 57.4**	**-0.4**
	108nm,0.6s,4μm1.0nm								
KAPI	**Kappang**	**6.07**	**5**	Pn		Pn	**Pn**	**00 13 14.2**	**-0.6**
	3.7nm,0.3s,baz=212,slow=9.7,SNR=23								
KAPI				Sn			**Sn**	**00 14 24.0**	**+0.4**
	16nm,0.3s,baz=102,slow=22,SNR=48								
FITZ	**Fitzroy Crossi**	**9.34**	**139**	*e*P			**Pn**	**00 13 58.6**	**-1.2**
	9.1nm,0.4s								
FITZ				*e*S			**Sn**	**00 15 44.4**	**+0.1**
WRA	**Warramunga Arr**	**17.02**	**123**	Pn			**Pn**	**00 15 43.3**	**+0.2**
	0.3nm,0.3s,baz=282,slow=15,SNR=20								
WRA				Sn			**Sn**	**00 18 51.6**	**-0.3**
	0.4nm,0.3s,baz=286,slow=25,SNR=8.5								
WRAB	**Tennant Creek**	**17.03**	**123**	*e*Pn			**Pn**	**00 15 45.2**	**+1.9**
	2.5nm,0.4s								
WRAB				*e*Sn			**Sn**	**00 18 47.0**	**-5.0**
WB2	**Warramunga Arr**	**17.03**	**123**	*e*P			**Pn**	**00 15 45.4**	**+2.1**
WB2				*e*Sn			**Sn**	**00 18 44.9**	**-7.2**
ASAR	**Alice Springs**	**18.77**	**134**	P			**Pn**	**00 16 04.8**	**+0.1**
	0.3nm,0.3s,baz=313,slow=13,SNR=27								
ASAR				S			**Sn**	**00 19 32.6**	**-1.6**
	0.4nm,0.3s,baz=304,slow=22,SNR=8.2								
NWAO	**Narrogin (SRO)**	**21.80**	**184**	LR		LR	LR	00 24 10.6	
	comp=Z,21nm,21.3s,MS2.5,baz=278,slow=34								
PSI	**Prapat**	**24.45**	**303**	LR		LR	LR	00 29 26.9	
	comp=Z,58nm,18.0s,MS3.1,baz=128,slow=43								
PALK	**Pallekele**	**42.44**	**294**	*e*P			**P**	**00 19 33.7**	**-6.2**
SONM	**Songino Array**	**59.76**	**350**	P			**P**	**00 21 50.7**	**+1.2**
	0.6nm,0.6s,mb3.8,baz=169,slow=7.6,SNR=4.2								
MKAR	**Makanchi Array**	**66.40**	**333**	P			**P**	**00 22 33.5**	**-0.1**
	0.5nm,0.6s,mb3.8,baz=135,slow=7.2,SNR=2.1								
VNDA	**Vanda**	**69.90**	**171**	*e*P			**P**	**00 22 49.4**	**-5.9**
ZALV	**Zalesovo Beam**	**71.06**	**339**	P			**P**	**00 23 02.4**	**-0.2**
	0.9nm,0.5s,mb3.9,baz=126,slow=2.6,SNR=4.3								
PDAR	**Pinedale Array**	**127.29**	**44**	PKP			PKPdf	00 30 52.0	+2.4
	0.4nm,0.9s,baz=307,slow=1.8,SNR=4.0								

SKHL ***20*** *00:36:50.9±3.4, 4777N×15577E, h78*$^{km}_{\pm}$*34*^{km}*, mb5.4/6, Ms4.8/7*
BJI ***20*** *00:36:50.6, 4823N×15525E, h22*^{km}*, mB4.9, mb5.0, Ms4.7, Msz4.6*
IDC ***20*** *00:36:51.1±0.5, 4815N×15495E, h0*^{km}*, mb4.5/19, mb1 4.7/22, mb1mx4.7/25, mbtmp4.6/22, ML4.3/3, MS4.3/19, Ms1 4.3/19, ms1mx4.1/38, Error ellipse: s-maj=17.9km s-min=11.4km az=153.0*
NEIC ***20*** *00:36:52.8±1.7, 4804N×15498E, h12*$^{km}_{\pm}$*10*^{km}*, mb5.2/99, MS4.7/7, Error ellipse: s-maj=4.7km s-min=2.8km az=152.0*
GCMT ***20*** *00:36:52.8±0.4, 4809N×15530E, h28*^{km}*, MW5.0/64, Moment Tensor Solution. s35,c45; s64,c103; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr3.49±.20; Mθθ-1.08±.12; Mφφ-2.41±.13; Mre1.09±.21; Mθφ-1.51±.07; Mθr1.51±.19; Best double couple: M*$_{o}$*3.91400×10*^{16} *NP1:*ϕ_{s}*212.00000°,δ31.00000°,λ.88.00000°. NP2: *ϕ_{s}*34.00000°,δ59.00000°,λ91.00000°. Principal axes: T 3.9620, Plg76.0000°, Azm308.0000°; N -0.0970, Plg1.0000°, Azm214.0000°; P -3.8660, Plg14.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***20*** *00:36:53.8±0.9, 4802N×15492E, h30*^{km}*, mb5.3/66, MS4.4/21 Error ellipse: s-maj=7.4km s-min=4.2km az=98.1*
ISCJB ***20*** *00:36:54.7±0.2, 4798N±003×15499E±004, h38*^{km}*, mb5.1/176, MS4.5/46, Error ellipse: s-maj=5.1km s-min=2.5km az=147.6*
SZGRF ***20*** *00:37:03.4, 4930N×15381E, h33*^{km}*, mb5.4, MS4.5, Kuril Islands, Russia*
DJA ***20*** *00:38:10, 4769N×14940E, h598*^{km}*, mb4.6/7*
ISC 20 00:36:57.0±0.2,4806N±003×15495E±004,h39$^{km}_{\pm}$**1.0**^{km}**:pP-P,n503,**σ**0:88**/515**,mb5.1**/176**,MS4.5**/45**, 72C-30D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.73**	**16**	*e*P			**Pn**	**00 37 35.0**	**-3.2**
SKR						AMB	AMB	00 37 36.5	
	170nm,0.8s								
SKR						AMB	AMB	00 37 36.5	
	120nm,0.8s								
SKR						AMB	AMB	00 37 36.5	
	240nm,0.8s								
SKR				*i* S			**Sn**	**00 38 05.5**	**-4.5**
SKR						A		00 38 22.5	
	10μm,2.0s								
SKR						A		00 38 22.5	
	10μm,2.0s								
SKR						A		00 38 22.5	
	10μm,2.0s								
SKR						A		00 38 22.5	
	4μm,2.0s								
SKR						A		00 38 22.5	
	4μm,0.6s								
SKR						A		00 38 22.5	
	5μm,0.6s								
SKR						A		00 38 22.5	
	2μm,0.6s								
SKR						AMS	AMS	00 38 54.0	
	10μm,12.0s								
SKR						AMS	AMS	00 38 54.0	
	12μm,14.0s								
SKR						AMS	AMS	00 38 54.0	
	12μm,14.0s								
SKR						AMS	AMS	00 38 54.0	
	11μm,12.0s								
PEA0B	**Petropavlovsk-**	**5.35**	**18**	*e*Pn			**Pn**	**00 38 13.4**	**-0.7**
PEA0B				*e*Sn			**Sn**	**00 39 15.2**	**+0.8**
PETK	**Petropavlovsk-**	**5.35**	**18**	Pn			**Pn**	**00 38 12.9**	**-1.2**
	9.0nm,0.3s,baz=169,slow=11,SNR=46								
PETK						LR	LR	00 40 38.1	
	comp=Z,3μm,19.1s,baz=317,slow=43								
PET	**Petropavlovsk**	**5.50**	**24**	*e*Pn			**Pn**	**00 38 16.5**	**+0.3**
PET						pmax	pmax		
	comp=Z,313nm,0.6s								
PET						MLR	MLR		
	comp=Z,2μm,18.0s								
PET						MLR	MLR		
	comp=Z,3μm,12.0s								
PET	**Petropavlovsk**	**5.50**	**24**	*e*Pn			**Pn**	**00 38 15.2**	**-1.0**
PET				*e*Sn			**Sn**	**00 39 21.9**	**+3.8**
KUR	**Kuril'sk**	**5.64**	**242**	*e*PN			**Pn**	**00 38 16.0**	**-2.2**
KUR				*e*S			**Sn**	**00 39 22.4**	**+0.8**
KUR						pmax	pmax		
	comp=Z,5μm,2.0s								
KUR						pmax	pmax		
	comp=N,330nm,0.7s								
KUR						pmax	pmax		
	comp=E,260nm,0.7s								
KUR						pmax	pmax		
	comp=Z,710nm,0.7s								
KUR						smax			
	comp=N,10μm,2.0s								
KUR						smax			
	comp=N,2μm,0.8s								
KUR						smax			
	comp=E,750nm,0.8s								
KUR						MLR	MLR		
	comp=N,8μm,15.0s								
KUR						MLR	MLR		
	comp=Z,4μm,15.0s								
KUR	**Kuril'sk**	**5.64**	**242**	*e*P			**Pn**	**00 38 16.0**	**-2.2**
KUR						AMB	AMB	00 38 18.0	
	comp=Z,5μm,2.0s								
KUR						AMB	AMB	00 38 28.5	
	comp=Z,330nm,0.7s								
KUR						AMB	AMB	00 38 28.5	
	comp=Z,260nm,0.7s								
KUR						AMB	AMB	00 38 28.5	
	comp=Z,710nm,0.7s								
KUR						*e*S	**Sn**	**00 39 22.4**	**+0.8**
KUR						A		00 39 33.0	
	comp=Z,10μm,2.0s								
KUR						A		00 39 44.0	
	comp=Z,2μm,0.8s								
KUR						A		00 39 44.0	
	comp=Z,750nm,0.8s								
KUR						AMS	AMS	00 40 40.0	
	comp=Z,8μm,15.0s								
KUR						AMS	AMS	00 40 40.0	
	comp=Z,4μm,15.0s								
YUK	**Yuzh-Kuril'sk**	**7.50**	**241**	PN			**Pn**	**00 38 44.7**	**+1.1**
YUK				*e*S			**Sn**	**00 40 14.1**	**+6.8**
YUK						pmax	pmax		
	comp=Z,350nm,0.4s								
YUK						pmax	pmax		
	comp=N,190nm,0.5s								
YUK						pmax	pmax		
	comp=N,2μm,1.0s								
YUK						pmax	pmax		
	comp=Z,2μm,1.0s								
YUK						smax			
	comp=N,3μm,1.0s								
YUK						smax			
	comp=E,2μm,1.0s								
YUK						smax			
	comp=N,6μm,2.0s								
YUK						smax			
	comp=E,5μm,1.0s								
YUK						MLR	MLR		
	comp=N,6μm,17.0s								
YUK						MLR	MLR		
	comp=Z,6μm,17.0s								
YUK						MLR	MLR		
	comp=E,10μm,15.0s								
YUK	**Yuzh-Kuril'sk**	**7.50**	**241**	*e*P			**Pn**	**00 38 44.7**	**+1.1**
YUK						AMB	AMB	00 38 45.5	
	comp=E,350nm,0.4s								
YUK						AMB	AMB	00 38 45.5	
	comp=E,190nm,0.5s								
YUK						AMB	AMB	00 38 49.1	
	comp=E,2μm,1.0s								
YUK						AMB	AMB	00 38 49.4	
	comp=E,2μm,1.0s								
YUK						*e*S	**Sn**	**00 40 14.1**	**+6.8**
YUK						A		00 40 30.9	
	comp=E,2μm,1.0s								
YUK						A		00 40 30.9	
	comp=E,3μm,0.9s								
YUK						A		00 40 46.5	
	comp=E,5μm,2.0s								
YUK						A		00 40 46.5	
	comp=E,5μm,1.0s								
YUK						AMS	AMS	00 41 28.7	
	comp=E,10μm,15.0s								
YUK						AMS	AMS	00 41 28.7	
	comp=E,6μm,17.0s								
YSS	**Yuzh-Sakhalins**	**8.33**	**267**	⇑*i*P			**Pn**	**00 38 58.6**	**+3.5**
YSS				*e*S			**Sn**	**00 40 28.7**	**+0.9**
YSS						A		00 40 38.8	
	comp=E,190nm,1.0s								
YSS						*e*LQ		00 40 46.0	
YSS						*e*LR	LR	00 41 32.0	
YSS						AMS	AMS	00 42 11.0	
	comp=E,2μm,16.0s								
YSS						AMS	AMS	00 42 11.0	
	comp=E,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**8.33**	**267**	*e*Pn			**Pn**	**00 38 59.3**	**+4.2**
TYV	**Tymovskoe**	**8.48**	**294**	*e*P			**Pn**	**00 38 58.6**	**+1.4**
TYV						AMB	AMB	00 39 03.7	
	comp=E,93nm,0.9s								
TYV						*e*S	**Sn**	**00 40 31.0**	**-0.5**
TYV						A		00 40 34.5	
	comp=E,24nm,0.5s								
TYV						A		00 40 34.5	
	comp=E,15nm,0.7s								
TYV						AMS	AMS	00 42 50.0	
	comp=E,4μm,16.0s								
TYV						AMS	AMS	00 42 50.0	
	comp=E,4μm,15.0s								
TYV						AMS	AMS	00 42 50.0	
	comp=E,6μm,15.0s								
UGL	**Uglegorsk**	**8.61**	**282**	*e*P			**Pn**	**00 39 02.5**	**+3.6**
UGL						AMB	AMB	00 39 05.0	
	comp=E,84nm,0.8s								
UGL						AMB	AMB	00 39 05.0	
	comp=E,48nm,0.8s								
UGL						AMB	AMB	00 39 05.0	
	comp=E,204nm,0.8s								
UGL						AMS	AMS	00 42 30.0	
	comp=E,11μm,17.0s								
UGL						AMS	AMS	00 42 30.0	
	comp=E,3μm,15.0s								
UGL						AMS	AMS	00 42 30.0	
	comp=E,5μm,15.0s								
JMP	**Maruseppu**	**9.02**	**248**	P			**Pn**	**00 39 07.0**	**+2.4**
OKH	**Okha**	**9.38**	**310**	*e*P			**Pn**	**00 39 12.9**	**+3.5**
OKH				*e*P				00 39 13.0	
OKH				*e*S			**Sn**	**00 41 01.1**	**+7.7**
OKH				*e*S			**Sn**	**00 41 02.0**	**+8.6**
OKH				*e*LQ				00 41 50.0	
OKH						AMS	AMS	00 44 17.4	
	comp=E,5μm,12.0s								
OKH						AMS	AMS	00 44 17.4	
	comp=E,5μm,11.0s								
JWK2	**Keihoku**	**9.38**	**258**	P			**Pn**	**00 39 15.7**	**+6.2**
ASAJ	**Asahikawa**	**9.45**	**250**	Pn			**Pn**	**00 39 13.6**	**+3.2**
	comp=E,14nm,0.3s,baz=76,slow=13,SNR=62								
ASAJ	**Asahikawa**	**9.45**	**250**	P			**Pn**	**00 39 13.9**	**+3.5**
ASAJ	**Asahikawa**	**9.45**	**250**	PN			**Pn**	**00 39 13.6**	**+3.2**
ASAJ				pmax		pmax			
	comp=Z,14nm,0.3s								
ERM	**Erimo**	**10.30**	**238**	Pn			**Pn**	**00 39 23.2**	**+1.1**
	comp=Z,676nm,0.4s,SNR=20								
ERM	**Erimo**	**10.30**	**238**	‖*e*PN			**Pn**	**00 39 21.8**	**-0.3**
ERM	**Erimo**	**10.30**	**238**	*e*Pn			**Pn**	**00 39 22.0**	**-0.1**
JEM	**Erimo**	**10.30**	**238**	P			**Pn**	**00 39 20.7**	**-1.4**
NKL	**Nikolayevsk**	**10.40**	**305**	*i* P			**Pn**	**00 39 22.7**	**-0.6**
NKL						AMB	AMB	00 39 24.4	
	comp=Z,30nm,1.2s								
NKL						AMB	AMB	00 39 24.4	
	comp=Z,70nm,1.2s								
NKL						AMB	AMB	00 39 24.4	
	comp=Z,120nm,1.1s								
NKL						*e*L		00 42 15.0	
NKL						AMS	AMS	00 44 32.0	
	comp=Z,2μm,14.0s								
NKL						AMS	AMS	00 44 32.0	
	comp=Z,2μm,14.0s								
NKL						AMS	AMS	00 44 32.0	
	comp=Z,4μm,14.0s								
JEW	**Eniwo**	**10.82**	**246**	P			**Pn**	**00 39 29.9**	**+0.7**
JSH	**Shimam**	**11.80**	**248**	P			**Pn**	**00 39 42.6**	**+0.1**
JOT	**Ohata**	**11.92**	**241**	P			**Pn**	**00 39 41.3**	**-3.0**
JTM	**Tenmabayashi**	**12.29**	**239**	P			**Pn**	**00 39 45.3**	**-4.0**
FX1	**Attu Island--F**	**12.56**	**61**	Pn			**Pn**	**00 39 48.7**	**-4.1**
	comp=Z,7.1nm,0.3s,baz=271,slow=22,SNR=13								
FX1				Sn			**Sn**	**00 41 56.4**	**-15**
	comp=Z,4.3nm,0.3s,baz=246,slow=19,SNR=4.4								
FX1				LR		LR	LR	00 43 54.3	
	comp=Z,787nm,18.4s,baz=247,slow=34								
JOM	**Ohasama**	**13.07**	**234**	P			**Pn**	**00 39 55.3**	**-4.6**
HABR	**Khabarovsk**	**13.26**	**279**	*e*PN			**Pn**	**00 40 06.4**	**+3.9**
HABR				*e*				00 42 34.1	
HABR						MLR	MLR		
	comp=Z,701nm,10.0s								
JYA	**Atsumi**	**14.55**	**235**	P			**Pn**	**00 40 16.4**	**-3.8**
SEY	**Seymchan**	**14.97**	**355**	‖*e*P			**Pn**	**00 40 24.2**	**-1.3**
KLR	**Kul'dur**	**15.37**	**283**	*e*P			**Pn**	**00 40 29.3**	**-1.5**
KLR						pmax	pmax		
	comp=E,170nm,1.8s								
KLR						pmax	pmax		
	comp=Z,120nm,1.8s								
KLR						MLR	MLR		
	comp=E,2μm,13.0s								
KLR						MLR	MLR		
	comp=Z,14μm,13.0s								
MAJO	**Matsushiro**	**16.87**	**233**	*e*P			**Pn**	**00 40 47.6**	**-2.4**
MAJO						pmax	pmax		
	comp=Z,72nm,1.2s								
MAJO	**Matsushiro**	**16.87**	**233**	*e*Pn			**Pn**	**00 40 47.6**	**-2.4**
	comp=Z,72nm,1.2s								
MAT	**Matsushiro**	**16.87**	**233**	P			**Pn**	**00 40 46.8**	**-3.2**
MAT	**Matsushiro**	**16.87**	**233**	P			**Pn**	**00 40 47.3**	**-2.7**
MJAR	**Matsushiro Arr**	**16.87**	**233**	Pn			**Pn**	**00 40 47.7**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=29,slow=12,SNR=19								
JRY	**Ryogami san**	**16.90**	**230**	P			**Pn**	**00 40 46.9**	**-3.5**
MDJ	**Mudanjiang**	**17.82**	**268**	P			**Pn**	**00 41 00.6**	**-1.1**
MDJ				AP		pP		00 41 09.3	-2.6
MDJ				XP		sP		00 41 13.3	-3.5
MDJ				S			**S**	**00 44 18.1**	**-6.6**
MDJ				PCP		PcP		00 45 35.6	-1.3
MDJ				AMB		AMB			
	comp=Z,5.0nm,0.6s								
MDJ				AMB		AMB			
	comp=Z,162nm,6.5s								
MDJ				LR		LR			
	comp=N,328nm,14.2s								
MDJ				LR		LR			
	comp=E,814nm,14.9s								
MDJ				LR		LR			
	comp=Z,1μm,14.2s								
MDJ	**Mudanjiang**	**17.82**	**268**	*e*Pn			**Pn**	**00 41 01.2**	**-0.5**
	comp=Z,13nm,0.6s								
ZEA	**Zeya**	**18.30**	**298**	*e*P			**Pn**	**00 41 06.2**	**-1.3**
ZEA						AMB	AMB	00 41 11.7	
	comp=Z,43nm,1.2s								
ZEA						AMB	AMB	00 41 12.0	
	comp=Z,400nm,6.0s								
JHJ	**Hachijo jima 2**	**18.80**	**223**	LR			LR	00 49 30.2	
	comp=Z,131nm,18.4s,baz=114,slow=40								
YAK	**Yakutsk**	**19.94**	**324**	*e*P			**Pn**	**00 41 22.9**	**-4.2**
YAK				*e*S			**S**	**00 45 05.6**	**-1.5**
YAK						pmax	pmax		
	comp=Z,21nm,0.9s								
YAK						pmax	pmax		
	comp=Z,131nm,0.9s								
YAK						pmax	pmax		
	comp=E,183nm,1.5s								
YAK						pmax	pmax		
	comp=N,134nm,1.5s								
YAK						smax			
	comp=N,257nm,3.2s								
YAK						smax			
	comp=E,81nm,3.0s								
YAK						MLR	MLR		
	comp=Z,1μm,15.0s								
YAK						MLR	MLR		
	comp=N,651nm,15.0s								
YAK						MLR	MLR		
	comp=E,652nm,15.0s								
YAK	**Yakutsk**	**19.94**	**324**	*e*P			**Pn**	**00 41 25.6**	**-1.5**
	comp=E,103nm,0.7s								
CLNS	**Chul'man**	**20.17**	**307**	*e*P			**P**	**00 41 30.5**	**+2.8**
CLNS				*e*				00 41 45.7	
CLNS				*e*SS				00 45 37.2	
CLNS						pmax	pmax		
	comp=Z,102nm,1.0s								

CN2 LR LR
comp=E,1μm,15.0s,MS4.5
CN2 LR LR
comp=Z,2μm,15.0s,MS4.5
KSRS Korea Array 22.39 252 P **P** **00 41 52.6 +1.0**
comp=Z,35nm,0.6s,mb5.0,baz=52,slow=10,SNR=73
KSRS PcP PcP 00 45 46.1 +0.7
comp=Z,1.2nm,0.7s,baz=17,slow=1.3,SNR=4.4
KSRS LR LR 00 49 45.4
comp=Z,606nm,18.4s,MS4.1,baz=59,slow=34
KSRS Korea Array 22.39 252 P **P** **00 41 52.7 +1.0**
KSRS 00 45 46.2
KSRS pmax pmax
comp=Z,35nm,0.6s,mb5.0
KSRS MLR MLR
comp=Z,606nm,18.4s,MS4.1
HIA Hailar 23.16 286 *d iP* **P** **00 41 59.4 -0.4**
HIA Hailar 23.16 286 *eP* **P** **00 41 58.3 -1.4**
comp=Z,16nm,1.0s,mb4.4
CBIJ Chichi jima 23.19 210 LR LR 00 49 16.3
comp=Z,159nm,21.7s,MS3.4,baz=110,slow=32
GAMB Gambell 24.02 37 *eP* **P** **00 42 08.7 +0.9**
comp=Z,56nm,1.1s,mb4.9
DL2 Dalian 25.68 262 P **P** **00 42 23.5 +0.4**
DL2 *eS* **S** **00 46 50.5 +1.7**
DL2 AMB AMB
comp=Z,20nm,0.7s,mb4.8
DL2 LR LR
comp=N,350nm,12.6s
DL2 LR LR
comp=Z,350nm,13.1s,MS4.1
BOD Bodaibo 26.15 307 *eP* **P** **00 42 25.2 -1.9**
BOD pmax pmax
comp=Z,12nm,1.2s,mb4.3
TNA Tin City 26.25 35 *eP* **P** **00 42 28.8 +0.9**
comp=Z,62nm,0.9s,mb5.1
TNA *e* pP 00 42 39.1 +0.5
TIXI Tiksi 26.58 342⇑ *eP* **P** **00 42 28.5 -2.4**
TIXI pmax pmax
comp=Z,23nm,1.3s,mb4.5
TIXI MLR MLR
comp=Z,700nm,12.0s,MS4.4
TIXI Tiksi 26.58 342 *eP* **P** **00 42 28.4 -2.4**
comp=Z,19nm,1.0s,mb4.6
BJI Beijing 28.75 268 P **P** **00 42 51.4 +0.8**
BJI S **S** **00 47 36.5 -0.7**
BJI AMB AMB
comp=Z,14nm,1.1s,mb4.6
BJI AMB AMB
comp=Z,108nm,3.9s
BJI LR LR
comp=N,821nm,16.3s,MS4.5
BJI LR LR
comp=E,527nm,19.2s,MS4.5
BJI LR LR
comp=Z,430nm,24.5s
BJT Baijiatuau 28.77 268 P **P** **00 42 49.3 -1.4**
SSE Sheshan 30.74 249 P **P** **00 43 07.1 -1.1**
SSE S **S** **00 48 08.5 0.0**
SSE XS sS 00 48 24.3 -2.3
SSE AMB AMB
comp=Z,34nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,120nm,10.5s
SSE LR LR
comp=N,133nm,17.0s,MS4.2
SSE LR LR
comp=E,479nm,17.0s,MS4.2
HHC Hu-ho-hao-te 31.46 273 *eP* **P** **00 43 14.8 +0.3**
HHC AP pP 00 43 24.3 -1.1
HHC XP sP 00 43 27.9 -2.2
HHC PP PP 00 44 17.8 -8.0
HHC *eS* **S** **00 48 17.5 -2.1**
HHC XS sS 00 48 32.9 -4.8
HHC PCS PcS 00 49 52.0 +0.9
HHC SCS ScS 00 53 43.8 -0.5
HHC AMB AMB
comp=Z,37nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,106nm,4.9s
HHC LR LR
comp=N,626nm,14.3s,MS4.7
HHC LR LR
comp=E,1μm,14.3s,MS4.7
HHC LR LR
comp=Z,1μm,14.3s,MS4.8
NJ2 Nanjing 31.58 253 *eP* **P** **00 43 17.3 +1.7**
NJ2 AP pP 00 43 28.1 +1.6
NJ2 XP sP 00 43 30.1 -1.1
NJ2 PP PP 00 44 21.5 -5.8
NJ2 S **S** **00 48 21.5 -0.1**
NJ2 XS sS 00 48 35.5 -4.2
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.1
NJ2 AMB AMB
comp=Z,80nm,8.8s
NJ2 LR LR
comp=N,490nm,24.1s
NJ2 LR LR
comp=E,730nm,17.0s
NJ2 LR LR
comp=Z,720nm,16.9s
ULN Ulaanbaatar 31.66 288⇓ *eP* **P** **00 43 14.7 -1.5**
ULN Ulaanbaatar 31.66 288 *eP* **P** **00 43 15.5 -0.7**
comp=Z,7.6nm,0.8s,mb4.6
SONM Songino Array 32.09 288 P **P** **00 43 19.4 -0.6**
comp=Z,5.8nm,0.9s,mb4.4,baz=67,slow=8.6,SNR=30
SONM PcP PcP 00 46 08.6 +0.2
comp=Z,1.6nm,0.9s,baz=73,slow=2.4,SNR=3.9
SONM LR LR 00 57 29.2
comp=Z,2μm,18.2s,MS4.7,baz=226,slow=39
SONM Songino Array 32.09 288 P **P** **00 43 19.4 -0.6**
SONM 00 46 08.6
TLY Talaya 32.71 296 *eP* **P** **00 43 25.1 -0.2**
TLY pmax pmax
comp=Z,24nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,1μm,15.0s,MS4.7
TLY Talaya 32.71 296 *eP* **P** **00 43 25.0 -0.3**
comp=Z,26nm,1.0s,mb5.1
BPAW Bear Paw Mtn. 32.95 41 *eP* **P** **00 43 27.3 0.0**
BPAW *e* pP 00 43 38.5 +0.3
KTH Kantishna Hill 32.95 42 *eP* **P** **00 43 27.5 +0.1**
comp=Z,20nm,1.1s,mb5.0
TRF Thorofare Moun 33.23 42 *eP* **P** **00 43 28.9 -0.9**
comp=Z,12nm,0.8s,mb4.9
TRF *e* pP 00 43 40.7 0.0
ZAK Zakamensk 33.27 294⇑ *iP* **P** **00 43 29.9 -0.4**
ZAK *e* 00 46 11.9
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
COLD Coldfoot 33.54 35 *eP* **P** **00 43 32.1 -0.4**
comp=Z,18nm,0.9s,mb5.0
COLD *e* pP 00 43 43.1 -0.3
MCK McKinley 33.84 42 *eP* **P** **00 43 35.4 +0.3**
MCK *e* pP 00 43 45.5 -0.5
COLA College 34.33 40 *eP* **P** **00 43 39.4 +0.4**
COLA *e* pP 00 43 50.7 +0.4
COLA pmax pmax
comp=Z,26nm,0.8s,mb5.2
COLA College 34.33 40 *eP* **P** **00 43 39.7 +0.4**
comp=Z,26nm,0.8s,mb5.2
COLA *e* pP 00 43 50.7 +0.4
PAX Paxson 35.42 43 P **P** **00 43 50.2 +1.4**
PAX *e* pP 00 43 59.5 -0.2
PAX pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
PAX Paxson 35.42 43 P **P** **00 43 50.2 +1.4**
comp=Z,7.4nm,1.0s,mb4.6
PAX *e* pP 00 43 59.5 -0.2
WHN Wuhan 35.47 255⇓ P **P** **00 43 50.3 +0.8**
WHN S **S** **00 49 28.0 +6.1**
WHN LR LR
comp=Z,838nm,21.3s,MS4.5
NACB Ninganchiao 35.54 240 *eP* **P** **00 43 48.2 -1.9**
XAN Xi'an 36.87 265 P **P** **00 44 01.1 -0.4**
XAN AP pP 00 44 10.1 -2.4
XAN XP sP 00 44 14.8 -2.4
XAN PP PP 00 45 27.1 +1.3
XAN PCP PcP 00 46 22.8 +0.3
XAN S **S** **00 49 40.8 -2.5**
XAN SCP ScP 00 50 05.6 -0.4
XAN PCS PcS 00 50 09.6 -1.0
XAN SS SS 00 52 11.3 -14
XAN SCS ScS 00 54 08.8 -4.4
XAN AMB AMB
comp=Z,12nm,1.4s,mb4.5
XAN AMB AMB
comp=Z,125nm,8.7s
XAN LR LR
comp=N,307nm,17.6s,MS4.3
XAN LR LR
comp=E,273nm,16.0s,MS4.3
XAN LR LR
comp=Z,860nm,16.0s,MS4.6
EGAK Eagle 37.20 40 *eP* **P** **00 44 05.0 +1.2**
comp=Z,18nm,0.8s,mb5.0
LZH Lanzhou 39.10 271⇑ P **P** **00 44 21.0 +0.8**
LZH AP pP 00 44 31.6 +0.3
LZH XP sP 00 44 35.4 -0.5
LZH PP PP 00 45 55.0 +4.9
LZH PCP PcP 00 46 30.5 +1.2
LZH S **S** **00 50 17.5 +0.6**
LZH XS sS 00 50 33.8 -1.5
LZH SS SS 00 53 00.1 -10
LZH AMB AMB
comp=Z,53nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,170nm,4.5s
LZH LR LR
comp=N,742nm,14.4s
LZH LR LR
comp=Z,1μm,15.6s,MS4.8
HYT Haines Junctio 39.46 45 *eP* **P** **00 44 24.7 +1.8**
INK Inuvik 39.87 33 *eP* **P** **00 44 26.5 +0.3**
GTA Gaotai 40.00 279 *eP* **P** **00 44 27.9 +0.2**
GTA AP pP 00 44 39.6 +0.8
GTA XP sP 00 44 43.5 +0.1
GTA PP PP 00 46 05.6 +5.6
GTA PCP PcP 00 46 33.3 +1.2
GTA S **S** **00 50 31.4 +1.0**
GTA XS sS 00 50 48.9 +0.1
GTA SS SS 00 53 23.3 -4.8
GTA AMB AMB
comp=Z,12nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,164nm,4.2s
GTA LR LR
comp=N,645nm,14.6s,MS4.8
GTA LR LR
comp=E,921nm,16.4s,MS4.8
GTA LR LR
comp=Z,1μm,16.1s,MS4.8
SIT Sitka 41.57 51 *eP* **P** **00 44 40.7 +0.3**
SIT pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
SIT Sitka 41.57 51 *eP* **P** **00 44 40.7 +0.4**
comp=Z,7.4nm,0.8s,mb4.4
CD2 Chengdu 42.23 265 P **P** **00 44 46.5 +0.4**
CD2 AP pP 00 44 57.3 0.0
CD2 XP sP 00 45 00.3 -1.6
CD2 PP PP 00 46 27.5 +3.2
CD2 PCP PcP 00 46 41.5 +1.9
CD2 PCS PcS 00 50 32.3 +0.8
CD2 S **S** **00 51 03.4 -0.3**
CD2 XS sS 00 51 19.3 -2.9
CD2 SS SS 00 54 05.0 -7.6
CD2 AMB AMB
comp=Z,70nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,170nm,5.4s
CD2 LR LR
comp=N,410nm,11.3s
CD2 LR LR
comp=Z,530nm,16.1s,MS4.5
ZAA0 Zalesovo Array 42.87 305 *eP* **P** **00 44 49.4 -1.5**
ZAA0 *e* pP 00 45 01.2 -0.9
ZALV Zalesovo Beam 42.87 305 P **P** **00 44 49.6 -1.4**
comp=Z,3.6nm,0.5s,mb4.3,baz=68,slow=6.4,SNR=17
ZALV PcP PcP 00 46 40.9 -0.3
comp=Z,7.2nm,0.9s,baz=82,slow=3.1,SNR=9.3
ZALV LR LR 01 03 37.2
comp=Z,389nm,18.0s,MS4.3,baz=229,slow=38
ZALV Zalesovo Beam 42.87 305 P **P** **00 44 49.6 -1.4**
ZALV 00 46 40.9
ZALV Zalesovo Beam 42.87 305 P **P** **00 44 49.6 -1.4**
ZALV PcP PcP 00 46 40.9 -0.3
ZALV LR LR 01 03 37.2
GYA Guiyang 43.21 258⇑ *iP* **P** **00 44 54.6 +0.5**
GYA AP pP 00 45 04.8 -0.5
GYA XP sP 00 45 08.6 -1.3
GYA PP PP 00 46 37.6 +2.7
GYA SCP ScP 00 50 31.6 +0.8
GYA PCS PcS 00 50 35.5 0.0
GYA S **S** **00 51 18.3 +0.1**
GYA XS sS 00 51 35.3 -1.4
GYA SS SS 00 54 25.6 -6.4
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,80nm,4.5s
GYA LR LR
comp=N,420nm,15.0s,MS4.6
GYA LR LR
comp=E,350nm,14.6s,MS4.6
GYA LR LR
comp=Z,560nm,15.8s,MS4.6
NVS Novosibirsk 43.39 307 *eP* **P** **00 44 53.2 -2.0**
NVS *e* 00 46 37.8
NVS pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,12nm,1.8s
DLBC Dease Lake 43.79 47 P **P** **00 44 55.8 -2.6**
WMQ Urumqi 45.62 291 P **P** **00 45 13.0 -0.1**
WMQ AMB AMB
comp=Z,17nm,1.1s,mb4.9
WMQ AMB AMB
comp=Z,326nm,6.0s
WMQ LR LR
comp=N,766nm,8.0s
WMQ LR LR
comp=E,1μm,7.5s
WMQ LR LR
comp=N,382nm,16.0s,MS4.6
WMQ LR LR
comp=E,358nm,16.0s,MS4.6
WMQ LR LR
comp=Z,557nm,16.0s,MS4.6
QIZ Qiongzhong 46.51 247 P **P** **00 45 19.0 -1.4**
QIZ S **S** **00 52 06.6 +0.6**
QIZ LR LR
comp=N,184nm,16.9s,MS4.4
QIZ LR LR
comp=E,320nm,18.6s,MS4.4
QIZ LR LR
comp=Z,543nm,15.1s,MS4.6
KMI Kunming 46.70 260 P **P** **00 45 22.3 +0.4**
KMI AP pP 00 45 32.9 -0.2
KMI XP sP 00 45 37.4 -0.4
KMI PP PP 00 47 11.0 -1.0
KMI S **S** **00 52 07.8 -1.0**
KMI XS sS 00 52 25.8 -1.6
KMI SCS ScS 00 55 11.1 -2.2
KMI SS SS 00 55 26.8 -8.4
KMI AMB AMB
comp=Z,19nm,1.4s,mb4.8
KMI AMB AMB
comp=Z,77nm,3.1s
KMI LR LR
comp=N,552nm,18.2s,MS4.7
KMI LR LR
comp=E,312nm,14.9s,MS4.7
KMI LR LR
comp=Z,320nm,19.6s,MS4.3
MKAR Makanchi Array 47.45 297 P **P** **00 45 26.7 -0.7**
comp=Z,23nm,0.7s,mb5.2,baz=64,slow=7.8,SNR=214
MKAR PcP PcP 00 46 56.5 -0.7
comp=Z,2.0nm,0.9s,baz=24,slow=1.7,SNR=2.4
MKAR ScP ScP 00 50 55.1 +7.1
comp=Z,0.7nm,0.6s,baz=74,slow=8.3,SNR=5.3
MKAR LR LR 01 07 02.5
comp=Z,545nm,18.5s,MS4.5,baz=40,slow=38
MKAR Makanchi Array 47.45 297 P **P** **00 45 26.7 -0.7**
MKAR 00 46 56.5
KURK Kurchatov 47.68 303 P **P** **00 45 28.1 -1.1**
comp=Z,477nm,0.8s,SNR=38
KURK Kurchatov 47.68 303 P **P** **00 45 28.8 -0.4**
SNR=20
KURK Kurchatov 47.68 303 *eP* **P** **00 45 27.9 -1.3**
KURK pmax pmax
comp=Z,59nm,0.8s,mb5.7
KURK Kurchatov 47.68 303 *eP* **P** **00 45 27.9 -1.3**
comp=Z,59nm,0.8s,mb5.7
KURK *e* 00 47 08.4
ALE Alert 48.31 6 P **P** **00 45 33.0 -0.7**
comp=Z,156nm,0.8s,mb6.1,SNR=8.6
YKA Yellowknife Ar 49.12 38 P **P** **00 45 39.8 -0.3**
comp=Z,2.4nm,0.6s,mb4.4,baz=297,slow=7.5,SNR=31
YKA Yellowknife Ar 49.12 38 P **P** **00 45 39.8 -0.3**
YKA pmax pmax
comp=Z,2.0nm,0.6s
RES Resolute Bay 49.19 19 *eP* **P** **00 45 40.8 +0.3**
BVA0 Borovoye Array 50.99 309 *i P* **P** **00 45 52.9 -1.5**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BRVK Borovoye 51.03 309 P **P** **00 45 53.5 -1.2**
comp=Z,128nm,0.6s,mb6.0,SNR=9.8
BRVK Borovoye 51.03 309 *eP* **P** **00 45 53.1 -1.5**
LSA Lhasa 51.45 273 P **P** **00 45 59.0 +0.9**
LSA Lhasa 51.45 273 *eP* **P** **00 45 59.9 +1.8**
LSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LSA Lhasa 51.45 273 *eP* **P** **00 45 59.9 +1.8**
comp=Z,9.1nm,0.8s,mb4.8
IMP Imphal 52.80 267 *eP* **P** **00 46 09.0 +0.8**
HEBO Mount Hebo 53.39 61 *eP* **P** **00 46 11.1 -1.3**
ULHL Ulahol 53.54 295 P **P** **00 46 13.7 +0.3**
SNR=5.2
TKM2 Tokmak 2 53.54 296 *eP* **P** **00 46 13.5 0.0**
TKM2 *e* 00 47 20.7
TKM2 pmax pmax
comp=Z,12nm,1.0s,mb4.8
TKM2 Tokmak 2 53.54 296 P **P** **00 46 13.6 +0.2**
SNR=11
TKM2 Tokmak 2 53.54 296 *eP* **P** **00 46 13.5 +0.1**
comp=Z,12nm,1.0s,mb4.8
TKM2 *e*PcP PcP 00 47 20.6 +0.9
CHTO Chiang Mai 53.63 257 *eP* **P** **00 46 14.1 -0.3**
CHTO pmax pmax
comp=Z,30nm,1.1s,mb5.1
CHTO Chiang Mai 53.63 257 *eP* **P** **00 46 14.1 -0.3**
comp=Z,30nm,1.1s,mb5.1
SHL Shillong 53.65 269⇑ *iP* **P** **00 46 16.5 +2.0**
SVE Sverdlovsk 53.72 317 *eP* **P** **00 46 12.8 -1.7**
SVE pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CM31 Chiang Mai Arr 53.89 257 *eP* **P** **00 46 18.0 +1.7**
CM31 *e*PcP PcP 00 47 21.0 -0.5
CMAR Chiang Mai Arr 53.89 257 P **P** **00 46 17.7 +1.4**
comp=Z,8.4nm,0.8s,mb4.7,baz=30,slow=7.5,SNR=52
CMAR LR LR 01 10 21.5
comp=Z,333nm,19.9s,MS4.4,baz=56,slow=37
USP Ospenovka 54.00 297 P **P** **00 46 16.9 +0.1**
SNR=26
CHMS Chumysh 54.00 297 P **P** **00 46 16.7 -0.2**
SNR=7.4
KBK Karagaybulak 54.08 296 P **P** **00 46 17.6 +0.2**
SNR=10
KZA Kyzart 54.24 295 P **P** **00 46 19.6 +1.1**
SNR=10
AAK Ala-Archa 54.37 296 P **P** **00 46 19.2 -0.3**
comp=Z,134nm,0.7s,mb6.0,SNR=13
AAK Ala-Archa 54.37 296⇓ P **P** **00 46 19.8 +0.3**
SNR=6.0
AAK Ala-Archa 54.37 296 *c iP* **P** **00 46 18.9 -0.6**
AAK pmax pmax
comp=Z,11nm,0.9s,mb4.8
AAK MLR MLR
comp=Z,300nm,18.0s,MS4.4
AAK Ala-Archa 54.37 296 P **P** **00 46 19.6 +0.1**
SNR=14
AAK Ala-Archa 54.37 296 *eP* **P** **00 46 18.6 -0.9**
comp=Z,16nm,0.8s,mb5.0
EDM Edmonton 54.51 48 *eP* **P** **00 46 20.6 +0.3**
EKS2 Erkin-Say 54.78 297 P **P** **00 46 22.8 +0.2**
SNR=19
EKS2 Erkin-Say 54.78 297 *eP* **P** **00 46 22.4 -0.1**
comp=Z,14nm,0.8s,mb5.1
EKS2 *e*PcP PcP 00 47 25.3 +0.7
ARU Arti 54.89 318 P **P** **00 46 21.4 -1.6**
comp=Z,107nm,0.8s,mb5.9,SNR=6.4
ARU Arti 54.89 318 *d iP* **P** **00 46 21.7 -1.3**
ARU *e* 00 48 23.4
ARU S **S** **00 54 02.6 +1.3**
ARU SS SS 00 57 45.7 +1.4
ARU pmax pmax
comp=Z,15nm,0.8s,mb5.1
ARU Arti 54.89 318 *eP* **P** **00 46 21.3 -1.8**
comp=Z,12nm,0.7s,mb5.0
AML Almayashu 55.14 296 P **P** **00 46 25.9 +0.8**
SNR=7.5
AML Almayashu 55.14 296 *eP* **P** **00 46 24.9 -0.2**
comp=Z,9.1nm,1.0s,mb4.8
AML *e*PcP PcP 00 47 26.0 +0.1
TAPN Taplejung 55.27 274 *eP* **P** **00 46 27.0 +0.8**
comp=Z,18nm,0.7s,mb5.2
NEW Newport 55.39 54 P **P** **00 46 26.8 0.0**
ODAN Odare 55.80 273 *eP* **P** **00 46 31.3 +1.2**
JIRN Jiri 56.08 275 *eP* **P** **00 46 33.1 +1.1**
comp=Z,30nm,0.5s,mb5.6
GUN Gumba 56.12 275 *eP* **P** **00 46 32.9 +0.5**
comp=Z,43nm,0.8s,mb5.5
RAMN Ramite 56.27 274 *eP* **P** **00 46 34.2 +0.8**
comp=Z,97nm,0.8s,mb5.9
KK31 Karatay Array 56.46 299 *i P* **P** **00 46 33.5 -1.0**
KK31 pmax pmax
comp=Z,11nm,0.9s,mb4.9
KKN Kakani 56.60 276 *eP* **P** **00 46 36.4 +0.6**
comp=Z,68nm,1.0s,mb5.7
KKN Kakani 56.60 276 *eP* **P** **00 46 36.4 +0.6**
KKN pmax pmax
comp=Z,68nm,1.0s,mb5.6
WALA Waterton Lakes 56.65 52 *eP* **P** **00 46 35.4 -0.4**
comp=Z,0.3nm,0.9s
PKI Pulchoki 56.66 275 *eP* **P** **00 46 36.8 +0.6**
comp=Z,108nm,1.2s,mb5.7
PKI Pulchoki 56.66 275 *eP* **P** **00 46 36.8 +0.6**
PKI pmax pmax
comp=Z,108nm,1.2s,mb5.8
DMN Daman 56.84 276 *eP* **P** **00 46 38.4 +1.0**
comp=Z,84nm,1.0s,mb5.7
GKN Gorkha 56.89 276 *eP* **P** **00 46 38.5 +0.7**
comp=Z,60nm,0.6s,mb5.8
ARCES ARCESS Array B 57.02 341 LR LR 01 15 02.5
comp=Z,798nm,19.5s,MS4.8,baz=212,slow=40
DANN Dangsing 57.25 277 *eP* **P** **00 46 41.5 +1.2**
comp=Z,90nm,0.6s,mb6.0
KOLN Koldanda 57.74 277 *eP* **P** **00 46 44.7 +0.9**
AB31 Akbulak array 58.54 310 P **P** **00 46 47.7 -1.4**
AB31 pmax pmax
comp=Z,11nm,0.6s,mb5.1
BOK Bokaro 58.86 272 *eP* **P** **00 46 50.8 -0.9**
FFC Flin Flon 58.93 41 *eP* **P** **00 46 51.4 -0.3**
FFC *e* pP 00 47 02.7 -0.5
FFC *e* 00 47 42.0
FFC pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
FFC Flin Flon 58.93 41 *eP* **P** **00 46 51.4 -0.3**
comp=Z,7.2nm,0.8s,mb4.8
FFC *e* pP 00 47 02.7 -0.6
FFC *e*PcP PcP 00 47 42.0 +1.5
SUMG Summit 59.30 5 *eP* **P** **00 46 54.5 +0.5**
comp=Z,98nm,1.0s,mb5.8
LRM Limekiln Ridge 59.41 54 *eP* **P** **00 46 58.5 +3.4**
FCC Fort Churchill 59.48 34 *eP* **P** **00 46 55.1 -0.3**
KLMR Klimovskoe 59.62 329 *eP* **P** **00 46 53.9 -2.5**
KLMR pmax pmax
comp=Z,21nm,1.2s,mb5.0
HLID Hailey 59.74 57 P **P** **00 46 57.9 +0.4**
comp=Z,5.0nm,1.1s,mb4.5
SMLA Simla 59.79 284 *eP* **P** **00 46 57.6 -0.4**
SMLA AMb AMB 00 46 58.6
comp=Z,64nm,1.5s,mb5.4
NVAR Mina Array Bea 60.73 64 P **P** **00 47 05.7 +1.4**
comp=Z,0.6nm,0.6s,mb3.9,baz=293,slow=7.4,SNR=4.5
RRI2 Red Ridge 61.61 56 *eP* **P** **00 47 10.2 0.0**
comp=Z,8.8nm,0.8s,mb4.9
RRI2 *e*PcP PcP 00 47 51.6 +0.1
DUG Dugway 62.83 59 *eP* **P** **00 47 18.5 +0.1**
DUG pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
DUG Dugway 62.83 59 *eP* **P** **00 47 18.4 +0.1**
comp=Z,7.7nm,1.1s,mb4.8

TPNV **Topopah Spring** 62.93 64 *e*P P 00 47 18.3 -0.8
TPNV pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
TPNV Topopah Spring 62.93 64 *e*P P 00 47 18.3 -0.8
comp=Z,4.1nm,0.8s,mb4.6
BW06 Boulder Array 62.97 55 *e*P P 00 47 19.4 +0.1
comp=Z,6.3nm,1.0s,mb4.7
PDAR Pinedale Array 62.97 55 P P 00 47 19.6 +0.3
comp=Z,1.8nm,0.9s,mb4.2,baz=317,slow=6.1,SNR=10
AJM Ajmer 64.53 282 *e*P P 00 47 29.4 -0.4
ULM Lac du Bonnet 64.71 42 P P 00 47 30.1 -0.5
comp=Z,5.3nm,0.9s,mb4.6,baz=317,slow=5.5,SNR=5.5
BHPL Bhopal 64.90 277 *e*P P 00 47 32.1 -0.2
OBN Obninsk 64.92 326⇓*e*P P 00 47 31.3 -0.6
OBN *e*S S 00 56 09.7 -0.6
OBN *e*SS SS 01 00 29.4 +8.0
OBN pmax pmax
comp=Z,25nm,1.3s,mb5.1
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.7
RSSD Black Hills 65.03 51 *e*P P 00 47 32.7 -0.1
RSSD *e* pP 00 47 44.2 -0.3
RSSD pmax pmax
comp=Z,14nm,0.8s,mb5.0
RSSD Black Hills 65.03 51 *e*P P 00 47 32.7 -0.1
comp=Z,14nm,0.8s,mb5.0
RSSD *e* pP 00 47 44.1 -0.3
NGP Nagpur 65.26 275 *e*P P 00 47 34.0 -0.6
VSU Vasula 65.62 333 *i* P P 00 47 35.4 -1.0
PSI Prapat 65.77 245 LR LR 01 17 46.3
comp=Z,146nm,19.1s,MS4.2,baz=18,slow=37
PV10 Paradox Valley 66.22 59 *e*P P 00 47 39.9 -0.7
comp=Z,330nm,0.8s,mb6.4
PV10 *e* pP 00 47 52.3 +0.1
PV01 Paradox Valley 66.65 59 *e*P P 00 47 42.6 -0.8
AKL Akola 66.93 276 *e*P P 00 47 46.4 +1.1
ISCO Idaho Springs 67.16 56 *e*P P 00 47 46.3 -0.3
ISCO pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
ISCO Idaho Springs 67.16 56 *e*P P 00 47 46.3 -0.3
comp=Z,4.7nm,0.9s,mb4.5
NB2 NORSAR Subarra 67.38 342 P P 00 47 46.7 -0.9
comp=Z,5.1nm,0.7s,mb4.7,baz=26,slow=6.5
NOA NORSAR Array B 67.38 342 P P 00 47 47.0 -0.6
comp=Z,14nm,1.0s,mb5.0,baz=26,slow=6.4,SNR=21
NOA LR LR 01 21 49.0
comp=Z,417nm,18.5s,MS4.7,baz=0.0,slow=40
NOA NORSAR Array B 67.38 342 P P 00 47 47.0 -0.5
NOA LR LR 01 21 49.0
BORG Borgarnes 67.49 358 *e*P P 00 47 48.7 +0.5
HYB Hyderabad 68.21 272 *i* P P 00 47 54.0 +0.6
HYB Hyderabad 68.21 272 *e*P P 00 47 54.0 +0.6
CTA Charters Tower 68.28 189 LR LR 01 16 26.9
comp=Z,96nm,18.7s,MS4.1,baz=48,slow=35
CTAO Charters Tower 68.28 189 *e*P P 00 47 51.7 -1.9
CTAO pmax pmax
comp=Z,22nm,1.5s,mb5.0
CTAO Charters Tower 68.28 189 *e*P P 00 47 51.6 -2.0
comp=Z,22nm,1.5s,mb5.0
OGNE Ogallala 68.30 53 *e*P P 00 47 54.8 +1.1
comp=Z,36nm,0.8s,mb5.5
OGNE *e* pP 00 48 05.2 -0.3
SDCO Great Sand Dun 68.66 57 *e*P P 00 47 56.4 +0.4
comp=Z,18nm,1.9s,mb4.7
KONO Kongsberg 68.98 342⇓*e*P P 00 47 57.8 +0.2
ECSD EROS,Sioux Fal 69.08 47 *e*P P 00 47 57.5 -1.0
comp=Z,12nm,0.8s,mb4.9
ECSD *e* pP 00 48 08.7 -1.6
ANMO Albuquerque 70.08 60 LR LR 01 16 08.5
comp=Z,113nm,18.9s,MS4.1,baz=336,slow=34
ANMO Albuquerque 70.08 60 *i* P P 00 48 03.5 -1.4
ANMO Albuquerque 70.08 60 P P 00 48 04.3 -0.5
comp=Z,4.8nm,1.0s,mb4.4
WRAB Tennant Creek 70.16 201 *e*P P 00 48 05.0 -0.3
WRAB *e* pP 00 48 15.5 -1.6
WRAB *e* 00 50 40.9
WRAB pmax pmax
comp=Z,21nm,1.0s,mb5.0
WRAB Tennant Creek 70.16 201 *e*P P 00 48 05.0 -0.3
comp=Z,21nm,1.0s,mb5.0
WRAB *e* pP 00 48 15.5 -1.5
WRAB *e*PP PP 00 50 40.9 -0.3
WB2 Warramunga Arr 70.17 201 *e*P P 00 48 05.5 +0.2
WB2 *e* pP 00 48 15.5 -1.6
WB2 *e* 00 48 38.9
WRA Warramunga Arr 70.17 201 P P 00 48 05.2 -0.1
comp=Z,1.6nm,0.7s,mb4.1,baz=15,slow=6.4,SNR=13
SUW Suwalki 70.43 332 *e*P P 00 48 06.4 -0.2
SUW pmax pmax
comp=Z,51nm,1.1s,mb5.4
SUW Suwalki 70.43 332 *e*P P 00 48 06.4 -0.2
comp=Z,51nm,1.1s,mb5.4
POO Poona 70.57 276 *e*P P 00 48 07.4 -0.7
KIV Kislovodsk 70.77 315 *e*P P 00 48 09.8 +0.9
KIV pmax pmax
comp=Z,13nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,300nm,18.0s,MS4.6
KIV Kislovodsk 70.77 315 *e*P P 00 48 08.7 -0.2
FITZ Fitzroy Crossi 70.89 210 *e*P P 00 48 11.1 +1.3
comp=Z,9.3nm,1.0s,mb4.7
FITZ *e* pP 00 48 19.5 -2.1
AKASG Malin Array Be 71.14 327 P P 00 48 09.7 -1.3
comp=Z,9.7nm,0.7s,mb4.8,baz=33,slow=6.1,SNR=27
AKASG LR LR 01 21 09.3
comp=Z,272nm,18.5s,MS4.5,baz=15,slow=37
AKASG Malin Array Be 71.14 327 *i* P P 00 48 10.1 -0.9
AKASG pmax pmax
comp=Z,10.0nm,0.7s
KIEV Kiev 71.15 327 *e*P P 00 48 10.1 -1.0
KIEV pmax pmax
comp=Z,27nm,1.2s,mb5.0
KIEV Kiev 71.15 327 *e*P P 00 48 10.1 -1.0
comp=Z,27nm,1.2s,mb5.1
KAD Karad 71.21 275 *e*P P 00 48 12.4 +0.4
SCHQ Schefferville 71.61 24 P P 00 48 12.8 -1.0
comp=Z,5.1nm,0.8s,mb4.5,baz=353,slow=5.6,SNR=14
SCHQ Schefferville 71.61 24 *e*P P 00 48 14.2 +0.4
BSD Bornholm Skovb 71.84 337 *i* P P 00 48 15.2 0.0
BSD pmax pmax
comp=Z,29nm,0.8s,mb5.3
BSD Bornholm Skovb 71.84 337 *i* P P 00 48 15.2 0.0
comp=Z,29nm,0.8s,mb5.2
COP Copenhagen 71.95 339 *e*P P 00 48 16.0 +0.2
COP pmax pmax
comp=Z,26nm,0.9s,mb5.2
COP Copenhagen 71.95 339 *i* P P 00 48 16.0 +0.2
comp=Z,26nm,0.9s,mb5.2
COP Copenhagen 71.95 339 *e*P P 00 48 16.0 +0.2
comp=Z,26nm,0.9s,mb5.2
SCIA State Center 72.11 47 *e*P P 00 48 16.5 -0.5
comp=Z,32nm,0.8s,mb5.3
SCIA *e* pP 00 48 27.3 -1.5
LVV L'vov 73.72 329 *e*P P 00 48 25.9 -0.5
ASAR Alice Springs 73.86 200 P P 00 48 28.3 +0.9
comp=Z,1.4nm,0.8s,mb4.0,baz=359,slow=4.7,SNR=14
BSEG Bad Segeberg 74.06 339 *e*P P 00 48 28.3 0.0
BSEG pmax pmax
comp=Z,32nm,0.9s,mb5.2
BSEG Bad Segeberg 74.06 339 *e*P P 00 48 28.3 0.0
comp=Z,32nm,0.9s,mb5.2
PALK Pallekele 74.10 263 *e*P P 00 48 27.5 -1.7
KWP Kalwaria 74.32 330⇓*i*P P 00 48 30.5 +0.6
KWP Kalwaria 74.32 330 ⇓P P 00 48 30.5 +0.6
KIS Kishinev 74.34 325⇓*i*P P 00 48 29.0 -1.1
KIS Kishinev 74.34 325⇓*i*UNK 00 48 29.0
RUE Ruedersdorf 74.51 337 *e*P P 00 48 30.7 -0.2
comp=Z,64nm,1.0s,mb5.5
RUE Ruedersdorf 74.51 337 *e*P P 00 48 31.0 0.0
comp=Z,68nm,1.1s,mb5.5
RUE *e*PcP PcP 00 48 43.9 -1.4
WMOK Wichita Mounta 74.58 55 *e*P P 00 48 30.9 -0.8
WMOK *e* pP 00 48 42.4 -1.2
WMOK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
WMOK Wichita Mounta 74.58 55 *e*P P 00 48 30.9 -0.8
comp=Z,8.4nm,0.8s,mb4.7
WMOK *e* pP 00 48 42.4 -1.2
IAS Iasi 74.66 326 P P 00 48 32.0 +0.1
OJC Ojcow 74.76 332 *e*P P 00 48 32.4 -0.1
STHS Stebnicka Huta 74.99 331 *i* P P 00 48 34.1 +0.3
STHS pmax pmax
comp=Z,27nm,0.9s,mb5.2
STHS Stebnicka Huta 74.99 331 *i* P P 00 48 34.1 +0.3
STHS Stebnicka Huta 74.99 331 *i* P P 00 48 34.1 +0.3
comp=Z,27nm,0.9s,mb5.2
BUR08 Bucovina Ar. S 75.15 327 *e*P P 00 48 34.8 0.0
BURAR Bucovina Array 75.17 327⇑*i*P P 00 48 35.0 +0.1
BURAR Bucovina Array 75.17 327 ⇑P P 00 48 35.0 +0.1
KSP Ksiaz 75.27 334 *e*P P 00 48 34.9 -0.5
NIE Niedzica 75.29 331 *e*P P 00 48 36.3 +0.8
UZH Uzhgorod 75.32 330 *c* *i*P P 00 48 35.3 -0.4
UZH *i* pP 00 48 48.7 +1.1
CRVS Cervenica-Dubn 75.37 330 *i* P P 00 48 36.1 +0.1
CRVS *e* pP 00 48 48.7 +0.8
CRVS pmax pmax
comp=Z,13nm,0.9s,mb4.9
CRVS Cervenica-Dubn 75.37 330 *i* P P 00 48 36.1 +0.1
comp=Z,13nm,0.9s,mb4.8
CRVS *e* pP 00 48 48.7 +0.8
RAC Raciborz 75.38 333 *e*P P 00 48 36.9 +0.9
NRDL Niedersach Rie 75.43 339 *e*P P 00 48 36.1 -0.2
comp=Z,26nm,1.0s,mb5.1
OKC Ostrava-Krasne 75.61 333⇑*i*P P 00 48 37.2 -0.1
UPC Upice 75.65 334⇑⇑*e*P P 00 48 37.6 0.0
DPC Dobruska-Polom 75.70 334⇑⇑*i*P P 00 48 38.3 +0.4
BMR Baia Mare 75.73 328⇓⇓*i*P P 00 48 38.6 +0.5
BMR Baia Mare 75.73 328 ⇓⇓P P 00 48 38.6 +0.5
TXAR Lajitas Array 75.77 62 P P 00 48 38.2 -0.4
comp=Z,3.3nm,0.8s,mb4.3,baz=299,slow=4.3,SNR=21
CLL Collm 75.77 336⇓*i*P P 00 48 38.3 0.0
CLL *e* 00 48 53.0
CLL pmax pmax
comp=Z,72nm,1.0s,mb5.6
CLL MLR MLR
comp=Z,400nm,19.3s,MS4.7
CLL Collm 75.77 336 *e*P P 00 48 37.6 -0.7
comp=Z,72nm,1.0s,mb5.6
CLL Collm 75.77 336⇓*i*P P 00 48 38.3 0.0
comp=Z,72nm,1.0s,mb5.6
CLL *e*PcP PcP 00 48 53.0 +2.2
CLL *ex* x 01 04 12.0
CLL Collm 75.77 336⇓*i*P P 00 48 38.3 0.0
comp=Z,72nm,1.0s,mb5.6
CLL *e* 00 48 53.0
CLL LR LR
comp=Z,400nm,19.3s,MS4.7
MBWA Marble Bar 75.80 214 P P 00 48 37.6 -1.0
TLCR 75.84 324⇑*i*P P 00 48 38.7 -0.1
BRG Berggiesshubel 75.91 336 *i* P P 00 48 38.7 -0.3
BRG pmax pmax
comp=Z,20nm,1.2s,mb4.9
BRG Berggiesshubel 75.91 336 *e*P P 00 48 38.5 -0.5
comp=Z,34nm,1.2s,mb5.2
BRG Berggiesshubel 75.91 336 *i* P P 00 48 38.7 -0.4
comp=Z,34nm,1.2s,mb5.2
CLZ Clausthal 75.97 338 *e*P P 00 48 39.6 +0.3
CLZ pmax pmax
comp=Z,72nm,1.2s,mb5.5
CLZ Clausthal 75.97 338 *e*P P 00 48 39.6 +0.3
comp=Z,72nm,1.2s,mb5.5
FBE Freiberg 76.03 336 *e*P P 00 48 39.9 +0.2
comp=Z,47nm,1.0s,mb5.4
PVCC Panska Ves 76.05 335⇑*i*P P 00 48 39.7 -0.1
KECS Kecovo 76.05 331 *e*P P 00 48 39.6 -0.3
KECS *e* pP 00 48 51.6 -0.2
KECS pmax pmax
comp=Z,13nm,1.0s,mb4.8
KECS Kecovo 76.05 331 *e*P P 00 48 39.5 -0.4
KECS *e*PCP PcP 00 48 51.6 -0.4
KECS Kecovo 76.05 331 *e*P P 00 48 39.6 -0.3
comp=Z,13nm,1.0s,mb4.8
KECS *e* pP 00 48 51.6 -0.2
PLOR Plostina 76.12 326⇑*i*P P 00 48 40.7 +0.3
IBBN Ibbenburen 76.16 340 *e*P P 00 48 40.7 +0.3
comp=Z,50nm,1.0s,mb5.4
PRU Pruhonice 76.54 335⇑*i*P P 00 48 42.7 +0.1
VRAC Vranov 76.55 333⇓*i*P P 00 48 43.8 +1.1
VRAC Vranov 76.55 333 P P 00 48 43.6 +0.9
VYHS Vyhne 76.58 332 *e*P P 00 48 43.2 +0.3
VYHS pmax pmax
comp=Z,18nm,1.2s,mb4.9
VYHS Vyhne 76.58 332 *e*P P 00 48 43.2 +0.3
comp=Z,18nm,1.2s,mb4.9
HARR Harsova 76.60 324⇓*i*P P 00 48 43.3 +0.2
HARR Harsova 76.60 324 ⇓P P 00 48 43.4 +0.3
TIRR Tirgusor 76.61 324⇓*i*P P 00 48 43.5 +0.4
TIRR Tirgusor 76.61 324 ⇓P P 00 48 43.5 +0.3
KOLL Kolacno 76.64 332 *e*P P 00 48 43.4 +0.2
WTSB Winterswijk 76.70 340⇑*e*P P 00 48 43.5 0.0
comp=Z,55nm,1.2s,mb5.4
TANN Tannenbergstha 76.73 336 *e*P P 00 48 43.6 -0.1
comp=Z,43nm,1.7s,mb5.1
PSZ Piszkesteto 76.74 331 P P 00 48 44.5 +0.7
PSZ Piszkesteto 76.74 331⇑*i*P P 00 48 44.3 +0.5
PSZ Piszkesteto 76.74 331 *e*P P 00 48 43.3 -0.5
comp=Z,22nm,1.0s,mb5.0
WERD Werda 76.74 337 *e*P P 00 48 43.7 -0.1
comp=Z,41nm,1.2s,mb5.2
MOX Moxa 76.74 337 *e*P P 00 48 44.1 +0.3
comp=Z,49nm,1.3s,mb5.3
MOX Moxa 76.74 337 *e*P P 00 48 44.1 +0.3
MOX pmax pmax
comp=Z,49nm,1.3s,mb5.3
MOX Moxa 76.74 337 *e*P P 00 48 43.6 -0.2
comp=Z,39nm,1.1s,mb5.2
DRGR 76.76 328⇑*i*P P 00 48 44.0 +0.1
DRGR 76.76 328 P P 00 48 43.9 0.0
GUNZ Gunzen 76.81 336 *e*P P 00 48 44.1 -0.1
comp=Z,32nm,1.0s,mb5.2
WERN Wernitzgruen 76.87 336 *e*P P 00 48 44.5 0.0
comp=Z,37nm,0.9s,mb5.3
TREC Trest 76.89 334⇑*i*P P 00 48 44.8 +0.2
UBBA Unterbreizbach 77.00 338 *e*P P 00 48 44.7 -0.5
comp=Z,29nm,1.4s,mb5.0
SMOL Smolenice 77.00 333 *e*P P 00 48 45.4 +0.1
VOIR 77.08 326⇓*i*P P 00 48 46.5 +0.8
VOIR 77.08 326 ⇓P P 00 48 46.5 +0.7
BUG Bochum--Univer 77.08 340 *e*P P 00 48 45.9 +0.3
comp=Z,51nm,1.2s,mb5.3
MALT Malatya 77.16 314 *e*P P 00 48 45.4 -0.9
MANZ Manzenberg 77.21 336 *e*P P 00 48 46.3 -0.1
comp=Z,31nm,1.1s,mb5.2
WBK Wadi Bani Khal 77.36 290 ⇑P P 00 48 49.2 +1.5
SNR=6.0
ZST Bratislava 77.38 333 *e*P P 00 48 48.5 +1.1
comp=Z,24nm,1.0s,mb5.1
ZST LR LR
comp=Z,400nm,19.6s,MS4.7
ROTZ Rotzenmuhle 77.39 336 *e*P P 00 48 47.7 +0.3
comp=Z,37nm,1.0s,mb5.3
MIAR Mount Ida 77.53 52 P P 00 48 48.4 -0.1
MIAR pmax pmax
comp=Z,13nm,0.9s,mb4.9
MIAR Mount Ida 77.53 52 *e*P P 00 48 48.2 -0.3
comp=Z,13nm,0.8s,mb4.9
KHC Kasperske Hory 77.59 335⇑*i*P P 00 48 49.0 +0.5
KHC *e* pP 00 49 02.0 +1.6
KHC Kasperske Hory 77.59 335⇑*i*P P 00 48 49.0 +0.5
KHC *ex* x 00 49 02.0
KHC Kasperske Hory 77.59 335⇑*i*P P 00 48 49.0 +0.5
KHC *e* pP 00 49 02.0 +1.6
KHC *e* 01 19 12.0
SMDO Samad 77.61 291 ⇑P P 00 48 50.4 +1.3
SNR=5.6
HOQ Hoqain 77.69 291 P P 00 48 50.5 +0.9
SNR=12
GRA1 Grafenberg Arr 77.72 337 *e*P P 00 48 49.6 +0.4
comp=Z,72nm,1.0s,mb5.6
GRA1 LR LR
comp=Z,300nm,20.9s,MS4.6
GRF Grafenberg Arr 77.72 337 *e*P P 00 48 49.6 +0.4
GRF pmax pmax
comp=Z,72nm,1.0s,mb5.6
GRF MLR MLR
comp=Z,300nm,20.9s,MS4.6
GRF Grafenberg Arr 77.72 337 *e*P P 00 48 49.6 +0.4
GRF pmax pmax
comp=Z,72nm,1.0s,mb5.6
GRF MLR MLR
comp=Z,300nm,20.9s,MS4.6
GRF Grafenberg Arr 77.72 337 *e*P P 00 48 49.6 +0.4
comp=Z,72nm,1.0s,mb5.6
GRF *e*L 01 26 15.8
comp=Z,272nm,20.9s
WET Wettzell 77.77 336 *e*P P 00 48 49.9 +0.4
WET pmax pmax
comp=Z,59nm,1.1s,mb5.4
WET Wettzell 77.77 336 *e*P P 00 48 49.9 +0.4
comp=Z,59nm,1.1s,mb5.4
GEC2 GERESS Array S 77.81 335 *e*P P 00 48 49.5 -0.3
GEC2 pmax pmax
comp=Z,27nm,1.1s,mb5.1
GEC2 GERESS Array S 77.81 335 *e*P P 00 48 49.5 -0.3
comp=Z,27nm,1.1s,mb5.1
GERES GERESS Array B 77.81 335 P P 00 48 50.1 +0.3
comp=Z,10nm,0.7s,mb4.9,baz=33,slow=5.1,SNR=97
GERES LR LR 01 26 43.7
comp=Z,522nm,19.2s,MS4.9,baz=207,slow=38
TNS Taunus Mts 77.93 339 *e*P P 00 48 50.4 0.0
TNS pmax pmax
comp=Z,34nm,0.9s,mb5.3
TNS Taunus Mts 77.93 339 *e*P P 00 48 50.4 0.0
comp=Z,34nm,0.9s,mb5.3
GZR Gura Zlata 77.94 328⇑*i*P P 00 48 50.9 +0.3
GZR Gura Zlata 77.94 328 P P 00 48 50.6 0.0
CONA Conrad Observa 78.00 333⇑*i*pP P 00 48 51.3 +0.5
comp=Z,40nm,1.2s,mb5.2,SNR=26
CSNA Conrad Observa 78.00 333⇑⇑pP P 00 48 51.4 +0.5
comp=Z,39nm,1.2s,mb5.2
HGN Heimansgroeve 78.02 340⇑⇑*e*P P 00 48 50.8 -0.1
comp=Z,49nm,1.1s,mb5.4
BEBN Eben Emael 78.04 341 P P 00 48 51.1 +0.1
comp=Z,13nm,1.1s,mb4.8
JMDO Jabal Madar 78.08 290 P P 00 48 53.0 +1.3
SNR=9.2
MEM Membach 78.14 340 P P 00 48 52.0 +0.4
comp=Z,34nm,1.3s,mb5.1
BZS Buzias 78.16 329⇓*i*P P 00 48 51.3 -0.5
BZS Buzias 78.16 329 P P 00 48 51.4 -0.4
BR131 Keskin Array S 78.27 318 *e*P P 00 48 52.8 +0.2
comp=Z,22nm,0.9s,mb5.1
BRTR Keskin Array B 78.27 318 P P 00 48 53.2 +0.7
comp=Z,19nm,0.9s,mb5.0,baz=66,slow=3.6,SNR=57
BRTR LR LR 01 28 59.3
comp=Z,145nm,18.4s,MS4.3,baz=201,slow=40
WCI Wyandotte Cave 78.30 45 *e*P P 00 48 52.4 -0.3
WCI *e* pP 00 49 02.6 -2.0
WCI pmax pmax
comp=Z,21nm,0.9s,mb5.1
WCI Wyandotte Cave 78.30 45 *e*P P 00 48 52.4 -0.3
comp=Z,21nm,0.9s,mb5.1
WCI *e* pP 00 49 02.6 -2.0
ARQ Araqi 78.36 292 ⇑P P 00 48 54.3 +1.1
SNR=8.7
BSY Bisya 78.37 291 P P 00 48 54.1 +0.8
SNR=16
TOD Tromm 78.42 338 *e*P P 00 48 53.1 0.0
ABH Alteburg 78.47 339 *e*P P 00 48 53.6 +0.2
BCLA Clavier 78.48 341 P P 00 48 53.8 +0.3
comp=Z,12nm,1.0s,mb4.8
MOA Molln 78.55 334⇑*i*P P 00 48 54.3 +0.4
comp=Z,22nm,0.9s,mb5.1,SNR=10
SNF Seneffe 78.62 341 P P 00 48 54.6 +0.4
PKSM Moragy 78.65 331⇓*i*P P 00 48 53.9 -0.6
PKSM Moragy 78.65 331 ⇓P P 00 48 53.9 -0.6
ARSA Arzberg 78.71 333⇑*i*P P 00 48 55.0 +0.3
comp=Z,22nm,1.1s,mb5.0,SNR=7.3
RUP Ruppelstein 78.75 339 *e*P P 00 48 54.5 -0.5
GIVF Givet 78.88 341 *e*P P 00 48 55.6 -0.1
comp=Z,43nm,1.0s,mb5.0
GIVF Givet 78.88 341 *e*P P 00 48 55.6 -0.1
GIVF pmax pmax
comp=Z,22nm,1.0s,mb5.0
GIVF Givet 78.88 341 *e*P P 00 48 55.6 -0.1
comp=Z,22nm,1.0s,mb5.0
DOU Dourbes 78.94 341 P P 00 48 56.2 +0.2
comp=Z,14nm,1.9s,mb4.6
UMR Umm Al-Rimmam 79.00 302 *e*P P 00 48 56.6 -0.1
baz=302
UMR AMb AMB 00 48 58.0
comp=Z,105nm,1.2s,mb5.6,baz=302
MIB Mutribah 79.03 302 *e*P P 00 48 56.7 -0.1
baz=302
MIB AMb AMB 00 48 58.2
comp=Z,137nm,1.0s,mb5.8,baz=302
BAIF Baives 79.06 341 *e*P P 00 48 56.7 +0.1
comp=Z,51nm,1.2s,mb5.0
BAIF Baives 79.06 341 *e*P P 00 48 56.7 +0.1
BAIF pmax pmax
comp=Z,26nm,1.2s,mb5.0
BAIF Baives 79.06 341 *e*P P 00 48 56.7 +0.1
comp=Z,26nm,1.2s,mb5.0
RJOB Jochberg 79.07 335 *e*P P 00 48 57.1 +0.4
comp=Z,24nm,0.9s,mb5.1
STU Stuttgart 79.09 338 *e*P P 00 48 56.3 -0.5
STU pmax pmax
comp=Z,27nm,1.1s,mb5.1
STU Stuttgart 79.09 338 *e*P P 00 48 56.8 0.0
comp=Z,39nm,1.2s,mb5.2
STU Stuttgart 79.09 338 *e*P P 00 48 56.3 -0.5
comp=Z,27nm,1.1s,mb5.1
FUR Furstenfeldbru 79.10 336 *e*P P 00 48 57.5 +0.6
FUR pmax pmax
comp=Z,56nm,1.0s,mb5.5
FUR Furstenfeldbru 79.10 336 *e*P P 00 48 57.5 +0.6
comp=Z,56nm,1.0s,mb5.5
LANF Langenberg 79.24 339 *e*P P 00 48 57.9 +0.2
KBD Kabd 79.30 302 *e*P P 00 48 58.2 -0.2
baz=302
KBD AMb AMB 00 48 59.9
comp=Z,82nm,1.1s,mb5.6,baz=302
SOKA Soboth 79.37 333⇑*i*P P 00 48 58.7 +0.3
comp=Z,41nm,1.2s,mb5.2
PERS Pernice 79.38 333 *e*P P 00 48 58.5 0.0
QRN Al-Qurain 79.50 301 *e*P P 00 48 59.3 -0.1
baz=301
QRN AMb AMB 00 49 00.9
comp=Z,107nm,1.1s,mb5.7,baz=301
NAY Al-Naaiem 79.50 302 *e*P P 00 48 59.5 +0.1
baz=302
NAY AMb AMB 00 49 00.8
comp=Z,73nm,1.0s,mb5.6,baz=302
KBA Koelnbreinsper 79.51 334⇑*i*pP P 00 48 59.8 +0.6
comp=Z,67nm,1.0s,mb5.5,SNR=34
RDF Al-Radifah 79.57 302 *e*P P 00 48 59.9 +0.1
baz=302
RDF AMb AMB 00 49 01.5
comp=Z,183nm,1.1s,mb5.9,baz=302
OBKA Obir 79.67 333⇑*i*P P 00 49 00.3 +0.3
comp=Z,24nm,1.4s,mb4.9
BFO Black Forest 79.72 338 P P 00 49 00.5 +0.2
comp=Z,104nm,1.1s,mb5.7,SNR=6.4
BFO Black Forest 79.72 338 *e*P P 00 49 00.2 -0.1
BFO pmax pmax
comp=Z,37nm,1.2s,mb5.2
BFO Black Forest 79.72 338 *e*P P 00 49 00.2 -0.1
comp=Z,37nm,1.2s,mb5.2
BFO Black Forest 79.72 338 *e*P P 00 49 00.2 0.0
comp=Z,19nm,1.0s,mb5.0
WATA Walderalm 79.78 336⇑*i*pP P 00 49 01.2 +0.6
comp=Z,36nm,0.9s,mb5.3,SNR=22
SPAK Spaichingen-Ko 79.81 338 *e*P P 00 49 01.0 +0.2
WTTA Wattenberg 79.83 336⇑*i*pP P 00 49 01.8 +0.9
comp=Z,86nm,1.1s,mb5.6,SNR=25
MYKA Terra Mystica 79.83 334⇑*i*P P 00 49 01.0 +0.1
comp=Z,13nm,1.0s,mb4.8
RETA Reutte 79.86 336⇑*i*pP P 00 49 01.7 +0.7
comp=Z,26nm,1.0s,mb5.1
MOTA Moosalm 79.90 336⇑*i*pP P 00 49 01.8 +0.5
comp=Z,62nm,1.0s,mb5.5,SNR=37
CDF Champ du Feu 79.90 339⇑*i*P P 00 49 01.4 +0.1
comp=Z,81nm,1.3s,mb5.2
CDF Champ du Feu 79.90 339⇑*i*P P 00 49 01.4 +0.1
CDF pmax pmax
comp=Z,40nm,1.3s,mb5.2
CDF Champ du Feu 79.90 339⇑*i*P P 00 49 01.4 +0.1
comp=Z,40nm,1.3s,mb5.1
GCIS Gornji Cirnik 79.92 332 *i* P P 00 49 01.7 +0.3
ECH Echery 80.11 339 *e*P P 00 49 02.5 +0.1
ECH Echery 80.11 339 *e*P P 00 49 02.3 -0.1
ECH pmax pmax
comp=Z,47nm,1.6s,mb5.2
ECH Echery 80.11 339 *e*P P 00 49 02.3 -0.1
comp=Z,47nm,1.6s,mb5.2
FELD Feldberg im Sc 80.22 338 *e*P P 00 49 03.1 +0.1
DAVA Damuels 80.28 337⇑*i*pP P 00 49 03.9 +0.5
comp=Z,36nm,1.0s,mb5.2,SNR=19
FETA Feichten 80.30 336⇓*i*pP P 00 49 04.4 +1.0
comp=Z,29nm,1.0s,mb5.1,SNR=18
MEZF Maizieres J'vi 80.34 340 *e*P P 00 49 03.9 +0.3
THEF They Montfort 80.38 340 *e*P P 00 49 04.0 +0.2
MOF Molkenrain 80.46 339 *e*P P 00 49 04.2 -0.1
STKA Stephens Creek 80.47 191 P P 00 49 02.2 -2.1
HAU Haudompre 80.50 339⇑*i*P P 00 49 04.3 -0.2
comp=Z,60nm,1.3s,mb5.1
HAU *e*MLR MLR

comp=Z,436nm,22.2s,MS4.5
HAU Haudompre 80.50 339⇑ *i*P **P 00 49 04.3 -0.2**
HAU pmax pmax
comp=Z,30nm,1.3s,mb5.1
HAU MLR MLR
comp=Z,440nm,22.3s,MS4.8
HAU Haudompre 80.50 339⇑ *i*P **P 00 49 04.3 -0.2**
comp=Z,30nm,1.3s,mb5.1
HAU LR LR
comp=Z,440nm,22.3s,MS4.8
HINF Hinteralfeld 80.56 339⇑ *i*P **P 00 49 04.6 -0.2**
BBS Basel-Blauen 80.72 338 *e*P **P 00 49 05.8 +0.1**
LOMF Lomont 81.00 339 *e*P **P 00 49 06.6 -0.6**
TUE Stuetta 81.17 337 *e*P **P 00 49 08.6 +0.5**
comp=Z,27nm,0.8s,mb5.2
FLN La Foliniere 81.24 344 *e*P **P 00 49 08.0 -0.4**
FLN *e*MLR MLR
comp=Z,338nm,20.0s,MS4.4
FLN La Foliniere 81.24 344 *e*P **P 00 49 08.0 -0.4**
FLN LR LR
comp=Z,340nm,20.0s,MS4.7
LDF La Druitiere 81.33 344 *e*P **P 00 49 09.3 +0.4**
comp=Z,87nm,1.4s,mb5.2
LDF La Druitiere 81.33 344 *e*P **P 00 49 09.3 +0.4**
LDF pmax pmax
comp=Z,43nm,1.4s,mb5.2
LDF La Druitiere 81.33 344 *e*P **P 00 49 09.3 +0.4**
comp=Z,43nm,1.4s,mb5.2
STIP Stip 81.35 326 *e*P **P 00 49 08.2 -1.0**
SKO Skopje 81.39 327 *e*P **P 00 49 09.3 -0.1**
VAY Valandovo 81.53 326 *e*P **P 00 49 09.3 -0.8**
GRR Gorron 81.67 344 *e*P **P 00 49 10.5 -0.2**
LOR Lormes 81.77 341⇑ *i*P **P 00 49 11.0 -0.3**
comp=Z,32nm,1.1s,mb4.9
LOR *e*MLR MLR
comp=Z,361nm,20.8s,MS4.4
LOR Lormes 81.77 341⇑ *i*P **P 00 49 11.0 -0.3**
LOR pmax pmax
comp=Z,16nm,1.1s,mb4.9
LOR MLR MLR
comp=Z,360nm,20.8s,MS4.7
LOR Lormes 81.77 341⇑ *i*P **P 00 49 11.0 -0.3**
comp=Z,16nm,1.1s,mb4.9
LOR LR LR
comp=Z,360nm,20.8s,MS4.7
CABF La Chapelle 81.87 339 *e*P **P 00 49 12.2 +0.4**
PPT Papeete 81.94 127 *e*LR LR 01 14 55.1
comp=Z,311nm,24.0s,baz=332
PPT Papeete 81.94 127 LR LR 01 18 50.6
comp=Z,173nm,20.1s,MS4.4,baz=290,slow=31
KRUS Krusevo 81.98 327 *e*P **P 00 49 12.5 0.0**
SSF Saint Saulge 82.04 341 *e*P **P 00 49 13.0 +0.3**
comp=Z,15nm,0.9s,mb4.6
SSF Saint Saulge 82.04 341 *e*P **P 00 49 13.0 +0.3**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SSF Saint Saulge 82.04 341 *e*P **P 00 49 13.0 +0.3**
comp=Z,7.4nm,0.9s,mb4.6
SGMF Saint Gilles 82.10 345 *e*P **P 00 49 12.8 -0.2**
FORT Forrest 82.11 203 *e*P pP 00 49 25.8 +0.8
comp=Z,44nm,0.8s
AVF Avril sur Loir 82.33 341⇑ *i*P **P 00 49 14.2 0.0**
comp=Z,18nm,0.8s,mb4.8
AVF Avril sur Loir 82.33 341⇑ *i*P **P 00 49 14.2 0.0**
AVF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
AVF Avril sur Loir 82.33 341⇑ *i*P **P 00 49 14.2 0.0**
comp=Z,9.2nm,0.8s,mb4.8
SMF Signal de Mont 82.36 340⇑ *i*P **P 00 49 14.4 0.0**
comp=Z,79nm,1.4s,mb5.2
SMF Signal de Mont 82.36 340⇑ *i*P **P 00 49 14.4 0.0**
SMF pmax pmax
comp=Z,40nm,1.4s,mb5.2
SMF Signal de Mont 82.36 340⇑ *i*P **P 00 49 14.4 0.0**
comp=Z,40nm,1.4s,mb5.2
QUIF Quistinic 82.53 345 *e*P **P 00 49 15.5 +0.3**
BGF Bois d'Agland 82.67 341 *e*P **P 00 49 16.5 +0.5**
LPL La Plagne 82.74 338⇑ *i*P **P 00 49 17.5 +1.2**
comp=Z,73nm,1.4s,mb5.2
LPL La Plagne 82.74 338⇑ *i*P **P 00 49 17.5 +1.2**
LPL pmax pmax
comp=Z,37nm,1.4s,mb5.2
LPL La Plagne 82.74 338⇑ *i*P **P 00 49 17.5 +1.2**
comp=Z,37nm,1.4s,mb5.2
LPG La Plagne 82.75 338⇑ *i*P **P 00 49 17.5 +1.1**
comp=Z,102nm,1.4s,mb5.4
LPG La Plagne 82.75 338⇑ *i*P **P 00 49 17.5 +1.1**
LPG pmax pmax
comp=Z,51nm,1.4s,mb5.4
LPG La Plagne 82.75 338⇑ *i*P **P 00 49 17.5 +1.1**
comp=Z,51nm,1.4s,mb5.4
PLDF La Plantade 83.05 340 *e*P **P 00 49 18.5 +0.5**
TCF Toulx Ste Croi 83.06 341⇑ *i*P **P 00 49 18.1 +0.1**
AGO Saint Agoulin 83.08 341 *e*P **P 00 49 18.6 +0.5**
BNI Bardonecchia 83.18 338 *e*P **P 00 49 18.9 +0.2**
BNI pmax pmax
comp=Z,49nm,1.6s,mb5.3
BNI Bardonecchia 83.18 338 *e*P **P 00 49 18.9 +0.3**
comp=Z,49nm,1.6s,mb5.3
MFF Saint Martin d 83.24 343 *e*P **P 00 49 19.2 +0.2**
comp=Z,55nm,1.3s,mb5.1
MFF Saint Martin d 83.24 343 *e*P **P 00 49 19.2 +0.2**
MFF pmax pmax
comp=Z,27nm,1.3s,mb5.1
MFF Saint Martin d 83.24 343 *e*P **P 00 49 19.2 +0.2**
comp=Z,27nm,1.3s,mb5.1
MBDF Montbardon 83.46 338 *e*P **P 00 49 20.6 +0.5**
comp=Z,42nm,1.2s,mb5.0
MBDF Montbardon 83.46 338 *e*P **P 00 49 20.6 +0.5**
MBDF pmax pmax
comp=Z,21nm,1.2s,mb5.0
MBDF Montbardon 83.46 338 *e*P **P 00 49 20.6 +0.5**
comp=Z,21nm,1.2s,mb5.0
ORIF Oris-en-Rattie 83.51 338⇑ *i*P **P 00 49 21.2 +0.9**
comp=Z,70nm,1.3s,mb5.3
ORIF *e*MLR MLR
comp=Z,240nm,20.5s,MS4.3
ORIF Oris-en-Rattie 83.51 338⇑ *i*P **P 00 49 21.2 +0.9**
ORIF pmax pmax
comp=Z,35nm,1.3s,mb5.3
ORIF Oris-en-Rattie 83.51 338⇑ *i*P **P 00 49 21.2 +0.9**
comp=Z,35nm,1.3s,mb5.3
VIVF Saint-Julien-l 83.86 339⇑ *i*P **P 00 49 22.7 +0.6**
comp=Z,80nm,1.7s,mb5.3
VIVF Saint-Julien-l 83.86 339⇑ *i*P **P 00 49 22.7 +0.6**
VIVF pmax pmax
comp=Z,40nm,1.7s,mb5.3
VIVF Saint-Julien-l 83.86 339⇑ *i*P **P 00 49 22.7 +0.6**
comp=Z,40nm,1.7s,mb5.3
SBF Sospel 84.10 337 *e*P **P 00 49 23.1 -0.3**
comp=Z,44nm,1.0s,mb5.3
SBF Sospel 84.10 337 *e*P **P 00 49 23.1 -0.3**
SBF pmax pmax
comp=Z,22nm,1.0s,mb5.2
SBF Sospel 84.10 337 *e*P **P 00 49 23.1 -0.3**
comp=Z,22nm,1.0s,mb5.2
RJF Les Rejaudoux 84.15 342 *e*P **P 00 49 23.6 0.0**
RJF *e*MLR MLR
comp=Z,360nm,19.8s,MS4.5
RJF Les Rejaudoux 84.15 342 *e*P **P 00 49 23.6 0.0**
RJF LR LR
comp=Z,360nm,19.8s,MS4.8
CAF Calviac 84.39 341 *e*P **P 00 49 25.3 +0.5**
SMRF Simiane la Rot 84.47 338 *e*P **P 00 49 25.3 +0.1**
FRF La Foret Royal 84.59 337 *e*P **P 00 49 25.7 -0.2**
comp=Z,32nm,1.3s,mb5.0
FRF La Foret Royal 84.59 337 *e*P **P 00 49 25.7 -0.2**
FRF pmax pmax
comp=Z,16nm,1.3s,mb5.0
FRF La Foret Royal 84.59 337 *e*P **P 00 49 25.7 -0.2**
comp=Z,16nm,1.3s,mb5.0
LFF La Frestale 84.66 342 *e*P **P 00 49 26.0 -0.2**
LASF Ste Croix 84.79 340 *e*P **P 00 49 27.3 +0.4**
LMR La Mourre 84.83 337 *e*P **P 00 49 27.1 0.0**
EPF Esparros 86.57 342 *e*P **P 00 49 35.3 -0.4**
NWAO Narrogin (SRO) 87.42 211 *e*P **P 00 49 39.3 -0.4**
NWAO *e* pP 00 49 50.9 -0.9
NWAO pmax pmax
comp=Z,12nm,0.8s
NWAO Narrogin (SRO) 87.42 211 *e*P **P 00 49 39.3 -0.4**
comp=Z,12nm,0.8s,mb5.2
NWAO *e* pP 00 49 50.9 -0.8
ESDC Sonseca Array 90.66 344 P **P 00 49 54.1 -1.0**
comp=Z,0.9nm,0.6s,mb4.3,baz=13,slow=2.9,SNR=4.3
TAU Tasmania Unive 90.84 186 P **P 00 49 52.4 -3.1**
KEST Kesra 91.10 333 P **P 00 49 58.1 +0.8**
comp=Z,1.5nm,0.9s,mb4.3,baz=197,slow=18,SNR=6.7
KEST LR LR 01 36 02.1
comp=Z,122nm,19.4s,MS4.3,baz=92,slow=39
TORD Torodi Ar. Bea 114.58 331 PKP PKiKP 00 55 31.6 -1.4
comp=Z,0.5nm,0.8s,baz=11,slow=3.2,SNR=4.8
VNDA Vanda 125.38 178 PKP PKPdf 00 55 52.3 +0.4
comp=Z,4.3nm,0.7s,baz=242,slow=4.1,SNR=20
VNDA Vanda 125.38 178 *e*PKPdf PKPdf 00 55 51.0 -0.8
QSPA South Pole Qui 137.80 180 PKP PKPdf 00 56 16.6 +1.4
comp=Z,1.7nm,0.8s,baz=304,slow=2.3,SNR=4.2
QSPA South Pole Qui 137.80 180 PKP PKPdf 00 56 16.6 +1.4
CPUP Villa Florida 146.74 61 PKPbc PKPbc 00 56 33.0 -1.5
comp=Z,3.5nm,0.7s,baz=336,slow=1.8,SNR=8.6
CPUP Villa Florida 146.74 61 *e*PKPdf PKPdf 00 56 31.9 -0.8
CPUP *e* 00 56 44.7
SNAA Sanae 154.16 196 *e*PKPdf PKPdf 00 56 41.1 -1.7
SNAA *e* 00 56 50.3
SNAA *e* 00 57 16.9
SNAA *e* 00 57 21.3
VNA2 Neumayer--Watz 155.58 194 *e*PKPdf PKPdf 00 56 45.0 +0.2
VNA2 *e* 00 56 53.7
VNA2 *e* 00 56 56.5
VNA2 *e* 00 57 23.1
VNA2 *e* 00 57 29.0
VNA3 Neumayer Olymp 155.64 192 *e*PKPdf PKPdf 00 56 45.1 +0.3
VNA3 *e* 00 56 54.9
VNA3 *e* 00 56 58.5
VNA3 *e* 00 57 23.6
VNA3 *e* 00 57 28.3
VNA1 Neumayer--Stat 155.96 194 *e*PKPdf PKPab 00 57 25.1 +12
VNA1 *e* 00 57 31.4

***MEX* 20 00:53:49.7±1.2, 1461W×9401W, h16km±999km, MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**1.33**	**35**	*i*	P		Pn	00 54 09.8	-3.8
PCIG				*i*	S		Sn	00 54 25.4	-5.6
THIG		**1.71**	**80**	*i*	P		Pn	00 54 15.6	-3.3
THIG				*i*	S		Sn	00 54 35.1	-5.4
TGIG		**2.32**	**22**	*i*	P		Pn	00 54 26.1	-1.2
TGIG				*i*	S		Sn	00 54 51.3	-4.1
HUIG	**Huatulco**	**2.33**	**300**	*i*	P		Pn	00 54 23.9	-3.5
HUIG				*i*	S		Sn	00 54 50.5	-5.1
CCIG	**Comitan**	**2.46**	**47**	*i*	P		Pn	00 54 27.2	-1.9
CCIG				*i*	S		Sn	00 54 53.5	-5.4
CMIG	**Matias Romero**	**2.61**	**341**	*i*	P		Pn	00 54 29.8	-1.4
CMIG				*i*	S		Sn	00 54 58.4	-4.1

*ISCJB **20** 01:00:56.7±1.6, 325S±004×13842E±009, h71km±18km, mb4.3/18, Error ellipse: s-maj=15.5km s-min=7.2km az=7.7*
*BJI **20** 01:00:57.4, 320S×13830E, h80km, mB4.8, mb4.8*
*NEIC **20** 01:00:59.4±1.7, 324S×13835E, h80km±16km, mb4.3/13, Error ellipse: s-maj=13.5km s-min=10.6km az=61.0*
*IDC **20** 01:01:00.4±3.0, 329S×13821E, h85km±27km, mb4.1/8, mb1 4.2/11, mb1mx4.1/16, mbtmp4.1/11, MS3.6/2, Ms1 3.6/2, ms1mx3.2/18, Error ellipse: s-maj=24.2km s-min=10.9km az=81.0*
*DJA **20** 01:01:02, 307S×139.12E, h161km, mb4.8/5*
ISC 20 01:00:57.7±1.3, 323S±005×13844E±009, h64km±16km, n49, σ0°95/45, mb4.4/18, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.38**	**73**	P			**Pn**	**01 01 35.1**	**+0.7**
JAY				S			**Sn**	**01 02 01.7**	**-0.7**
MMPI	**Merauke**	**5.55**	**160**	P			**Pn**	**01 02 22.3**	**+4.5**
	926nm,0.6s,4.2nm								
PMG	**Port Moresby**	**10.62**	**126**	P			**Pn**	**01 03 31.0**	**+3.8**
	0.7nm,0.3s,baz=322,slow=10,SNR=3.8								
COEN	**Coen**	**11.64**	**157**	*e*Pn			**Pn**	**01 03 41.6**	**+0.5**
	33nm,0.6s								
COEN				*e*Sn			**Sn**	**01 05 47.7**	**-1.7**
COEN	**Coen**	**11.64**	**157**	P			**Pn**	**01 03 42.1**	**+1.0**
	22nm,0.8s								
WRAB	**Tennant Creek**	**17.07**	**193**	*e*P			**Pn**	**01 04 51.5**	**-0.8**
	27nm,0.6s								
WRAB				*e*Sn			**Sn**	**01 07 51.7**	**-10**
WRAB	**Tennant Creek**	**17.07**	**193**	P			**Pn**	**01 04 51.2**	**-1.0**
WB2	**Warramunga Arr**	**17.08**	**193**	*e*P			**Pn**	**01 04 51.4**	**-1.0**
WRA	**Warramunga Arr**	**17.08**	**193**	P			**Pn**	**01 04 52.0**	**-0.4**
	2.3nm,0.3s,baz=10,slow=12,SNR=96								
WRA				S			**S**	**01 07 56.8**	**-11**
	0.9nm,0.3s,baz=11,slow=21,SNR=5.5								
WRA	**Warramunga Arr**	**17.08**	**193**	P			**Pn**	**01 04 52.0**	**-0.4**
WRA				S			**S**	**01 07 56.8**	**-11**
CTA	**Charters Tower**	**18.41**	**156**	P			**Pn**	**01 05 10.2**	**+1.6**
	1.0nm,0.3s,baz=335,slow=12,SNR=7.0								
CTAO	**Charters Tower**	**18.41**	**156**	*e*P			**Pn**	**01 05 08.3**	**-0.2**
	5.2nm,0.6s								
FITZ	**Fitzroy Crossi**	**19.38**	**219**	*e*P			**Pn**	**01 05 19.8**	**-0.4**
	14nm,0.6s								
FITZ	**Fitzroy Crossi**	**19.38**	**219**	P			**Pn**	**01 05 22.5**	**+2.3**
	26nm,1.1s								
ASAR	**Alice Springs**	**20.78**	**192**	P			**P**	**01 05 35.1**	**+1.5**
	17nm,0.6s,baz=20,slow=11,SNR=171								
ASAR				S			**S**	**01 09 20.7**	**-1.5**
	9.9nm,0.9s,baz=13,slow=25,SNR=11								
BBKI	**Banjar Baru**	**23.56**	**269**	P			**P**	**01 06 05.8**	**+3.1**
	73nm,1.3s,mb5.0								
KKM	**Kota Kinabalu**	**24.03**	**293**	*e*P			**P**	**01 06 06.1**	**-0.9**
	9.1nm,0.5s,mb4.5								
MBWA	**Marble Bar**	**25.47**	**224**	*e*P			**P**	**01 06 21.0**	**+1.0**
	9.6nm,1.0s,mb4.3								
STKA	**Stephens Creek**	**28.65**	**174**	P			**P**	**01 06 49.4**	**+1.0**
	1.5nm,0.3s,mb4.2,baz=341,slow=7.2,SNR=9.3								
STKA	**Stephens Creek**	**28.65**	**174**	P			**P**	**01 06 49.4**	**+1.0**
FORT	**Forrest**	**29.10**	**199**	*e*P			**P**	**01 06 53.0**	**+0.5**
	5.5nm,0.6s,mb4.5								
PPI	**Padang Panjang**	**38.12**	**273**	P			**P**	**01 08 10.8**	**-0.2**
PSI	**Prapat**	**39.95**	**278**	P			**P**	**01 08 24.2**	**-2.1**
	9.0nm,0.8s,mb4.6,baz=40,slow=3.2,SNR=9.7								
KSRS	**Korea Array**	**41.64**	**347**	LR		LR	LR	01 25 34.7	
	comp=Z,18nm,18.7s,baz=135,slow=35								
CMAR	**Chiang Mai Arr**	**44.46**	**300**	P			**P**	**01 09 03.2**	**+0.3**
	3.1nm,0.7s,mb4.2,baz=121,slow=6.5,SNR=14								
CHTO	**Chiang Mai**	**44.61**	**301**	*e*P			**P**	**01 09 03.8**	**-0.3**
	2.1nm,0.5s,mb4.2								
XAN	**Xi'an**	**46.35**	**326**	P			**P**	**01 09 17.3**	**-0.3**
XAN						AMB	AMB		
	comp=Z,108nm,8.7s								
AFI	**Afiamalu**	**50.26**	**105**	LR		LR	LR	01 28 28.3	
	comp=Z,216nm,19.1s,baz=253,slow=33								
GTA	**Gaotai**	**55.33**	**324**	*e*P			**P**	**01 10 25.6**	**+0.6**
GTA						AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7								
SONM	**Songino Array**	**58.07**	**335**	P			**P**	**01 10 43.8**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=156,slow=7.5,SNR=4.0								
HYB	**Hyderabad**	**62.51**	**291**	*e*P			**P**	**01 11 15.0**	**-0.2**
MKAR	**Makanchi Array**	**70.03**	**323**	P			**P**	**01 12 03.4**	**+0.5**
	comp=Z,4.0nm,0.5s,mb4.6,baz=185,slow=25,SNR=192								
ZALV	**Zalesovo Beam**	**72.25**	**330**	P			**P**	**01 12 15.3**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.3,baz=118,slow=6.2,SNR=12								
ZALV	**Zalesovo Beam**	**72.25**	**330**	P			**P**	**01 12 15.3**	**-0.8**
TKM2	**Tokmak 2**	**72.74**	**317**	*e*P			**P**	**01 12 19.8**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.2								
AAK	**Ala-Archa**	**73.39**	**316**	*e*P			**P**	**01 12 23.6**	**+0.6**
	comp=Z,4.2nm,1.2s,mb4.2								
EKS2	**Erkin-Say**	**73.90**	**316**	*e*P			**P**	**01 12 25.6**	**-0.4**
	comp=Z,7.5nm,1.2s,mb4.5								
KURK	**Kurchatov**	**73.98**	**325**	*e*P			**P**	**01 12 25.9**	**-0.5**
	comp=Z,9.3nm,0.9s,mb4.7								
VNDA	**Vanda**	**75.29**	**175**	P			**P**	**01 12 33.5**	**0.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=322,slow=6.2,SNR=8.8								
VNDA	**Vanda**	**75.29**	**175**	*e*P			**P**	**01 12 34.6**	**+1.1**
	comp=Z,1.3nm,0.6s,mb4.0								
BRVK	**Borovoye**	**79.65**	**325**	*e*P			**P**	**01 12 58.2**	**0.0**
	comp=Z,10nm,0.7s,mb4.9								
GERES	**GERESS Array B**	**114.70**	**323**	PKP		PKiKP		01 19 30.4	-0.6
	comp=Z,0.4nm,0.7s,baz=122,slow=4.9,SNR=3.7								
TXAR	**Lajitas Array**	**115.80**	**59**	PKP		PKPdf		01 19 33.7	0.0
	comp=Z,0.3nm,0.5s,baz=190,slow=3.2,SNR=6.3								
TXAR	**Lajitas Array**	**115.80**	**59**	PKP		PKPdf		01 19 33.7	0.0
JCT	**Junction City**	**118.81**	**57**	*e*PKPdf		PKPdf		01 19 39.6	+0.1
WVT	**Waverly**	**126.28**	**47**	*e*PKPdf		PKPdf		01 19 53.3	-0.4
TORD	**Torodi Ar. Bea**	**136.13**	**286**	PKP		PKPdf		01 20 10.5	-2.4
	comp=Z,0.2nm,0.3s,baz=73,slow=1.9,SNR=7.6								
TORD	**Torodi Ar. Bea**	**136.13**	**286**	PKP		PKPdf		01 20 10.5	-2.4
CPUP	**Villa Florida**	**146.89**	**153**	PKP		PKPdf		01 20 28.9	-3.0
	comp=Z,0.2nm,0.3s,baz=171,slow=20,SNR=3.1								
CPUP						PKPbc	PKPbc	01 20 34.3	+0.6
	comp=Z,0.5nm,0.4s,baz=257,slow=1.2,SNR=5.5								

*NEIC **20** 01:02:19.6, 1628N×9825W, h5km, MD3.6(MEX), After MEX.*
MEX 20 01:02:19.5±0.6, 1626N×9822W, h6km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**34**	*e*P			Pg	01 02 22.0	-0.7
PNIG				*i*	S		Sg	01 02 24.9	+0.2
UTMO	**Huajuapan**	**1.61**	**14**	*i*	P		Pn	01 02 45.0	-3.5
UTMO				*i*	S		Sn	01 03 05.3	-4.3
VHO	**Vista Hermosa**	**1.63**	**60**	*i*	P		Pn	01 02 45.7	-3.1
VHO				*i*	S		Sn	01 03 05.2	-5.0
VHO	**Vista Hermosa**	**1.63**	**60**	*i*	P		Pn	01 02 45.7	-3.1
VHO				*i*	S		Sn	01 03 07.1	-3.0
ACX	**Acapulco**	**1.74**	**290**	*i*	P		Pn	01 02 47.2	-3.0
ACX				*i*	S		Sn	01 03 08.3	-4.4
HUIG	**Huatulco**	**2.09**	**103**	*i*	P		Pn	01 02 53.5	-1.5
HUIG				*i*	S		Sn	01 03 16.8	-4.6
HUIG	**Huatulco**	**2.09**	**103**	*i*	P		Pn	01 02 53.5	-1.5
HUIG				*i*	S		Sn	01 03 19.1	-2.3
CAIG	**El Cayaco**	**2.12**	**292**	*i*	P		Pn	01 02 51.9	-3.6
CAIG				*i*	S		Sn	01 03 16.8	-5.3

*ISCJB **20** 01:08:56.8±0.8, 2399N±003×12244E±002, h9km±6km, Error ellipse: s-maj=4.8km s-min=2.9km az=171.5*
*JMA **20** 01:08:58.6±0.2, 2437N×12238E, h55km, M2.5*
*TAP **20** 01:08:58.4, 2406N×12243E, h42km±1km, ML3.2, C*
ISC 20 01:08:57.5±0.9, 2401N±003×12244E±002, h15km±7km, n29, σ0°80/49, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**49**	P			**Pg**	**01 09 11.2**	**+0.2**
YOJ				*e*S			**Sg**	**01 09 20.3**	**+0.2**
ENA	**Nanau**	**0.76**	**303**	P			**Pb**	**01 09 12.8**	**+0.4**
	baz=300								
ENA				*e*S			**Sb**	**01 09 23.5**	**+1.0**
	baz=300								
TWD	**Chiawan**	**0.77**	**275**	P			**Pb**	**01 09 13.1**	**+0.6**
	baz=272								
TWD				S			**Sb**	**01 09 22.7**	**-0.2**
	baz=272								
TWC	**Suao**	**0.80**	**318**	*i*	P		**Pb**	**01 09 12.8**	**-0.3**
	baz=316								
TWC				*i*	S		**Sb**	**01 09 23.7**	**0.0**
	baz=316								
TWE	**Neicheng**	**0.99**	**315**	P			**Pb**	**01 09 16.3**	**-0.1**
	baz=313								
TWE				*e*S			**Sb**	**01 09 30.4**	**+1.1**
	baz=313								
ENTT	**Nioudou**	**1.01**	**308**	P			**Pb**	**01 09 17.0**	**+0.3**
	baz=306								
ENTT				*e*S			**Sb**	**01 09 30.2**	**+0.4**
	baz=306								
NNS	**Nan Shan**	**1.06**	**294**	*e*P			**Pb**	**01 09 17.7**	**+0.2**
	baz=291								
NNS				*e*S			**Sb**	**01 09 31.2**	**0.0**
	baz=291								
TWB1	**Santiao Chiao**	**1.07**	**338**	*e*P			**Pb**	**01 09 17.1**	**-0.6**
	baz=337								
WHF	**Hehuan Shan**	**1.08**	**277**	*e*P			**Pb**	**01 09 17.4**	**-0.4**
	baz=274								
WHF				*e*S			**Sb**	**01 09 31.6**	**-0.2**
	baz=274								
EHY	**Hungye**	**1.14**	**244**	*e*P			**Pb**	**01 09 17.7**	**-1.2**
	baz=241								
EHY				*e*S			**Sb**	**01 09 32.5**	**-1.0**
	baz=241								
NSK	**Sanguang**	**1.19**	**304**	P			**Pn**	**01 09 19.1**	**-0.4**
	baz=290								
NSK				S			**Sb**	**01 09 34.0**	**-0.7**
	baz=290								
NWF	**Wu-fen Shan**	**1.21**	**331**	P			**Pn**	**01 09 18.9**	**-1.0**
	baz=329								
NWF				*e*S			**Sb**	**01 09 35.2**	**-0.3**
	baz=329								
IRIF	**Iriomote-Funau**	**1.22**	**75**	P			**Pn**	**01 09 19.7**	**-0.3**
IRIF				*e*S			**Sb**	**01 09 36.0**	**+0.1**
TWF1	**Yuli**	**1.23**	**238**	P			**Pn**	**01 09 19.4**	**-0.7**
	baz=227								
TWF1				*e*S			**Sb**	**01 09 35.1**	**-1.1**
	baz=227								
TWA	**Mucha**	**1.24**	**321**	*e*P			**Pn**	**01 09 19.5**	**-0.7**
	baz=334								
HATJ	**Hateruma jima**	**1.25**	**88**	*e*S			**Sb**	**01 09 37.6**	**+0.9**
SMLT	**Sun Moon Lake**	**1.41**	**265**	P			**Pn**	**01 09 22.6**	**0.0**
	baz=263								
SMLT				*e*S			**Sn**	**01 09 40.0**	**-0.9**
	baz=263								
TYC	**Yuchr**	**1.45**	**266**	*e*P			**Pn**	**01 09 22.4**	**-0.7**
	baz=264								
JKRS	**Kuro-shima**	**1.45**	**81**	P			**Pn**	**01 09 24.0**	**+0.8**
JKRS				*e*S			**Sn**	**01 09 41.9**	**-0.1**
YUS	**Yu-Shan**	**1.46**	**249**	P			**Pn**	**01 09 23.3**	**+0.1**
	baz=247								
YUS				*e*S			**Sn**	**01 09 41.4**	**-0.6**
	baz=247								
ELDTW	**Lidau**	**1.54**	**238**	*e*P			**Pn**	**01 09 23.4**	**-1.0**
	baz=236								
ALS	**Alishan**	**1.58**	**252**	*e*P			**Pn**	**01 09 25.3**	**+0.4**
	baz=250								
JIJ	**Ishigaki jima**	**1.60**	**77**	P			**Pn**	**01 09 25.2**	**+0.1**
JIJ				*e*S			**Sn**	**01 09 44.3**	**-1.2**
CHN5	**Tsauling**	**1.66**	**256**	*e*P			**Pn**	**01 09 26.5**	**+0.5**
	baz=254								
TWG	**Pinlang**	**1.73**	**227**	*e*P			**Pn**	**01 09 24.6**	**-2.4**
	baz=233								
CHN4	**Tsaushan**	**1.81**	**249**	*e*P			**Pn**	**01 09 29.2**	**+1.1**
	baz=247								
CHN4				*e*S			**Sn**	**01 09 51.8**	**+0.9**
	baz=247								
CHN1	**Nanshi**	**1.94**	**245**	*e*P			**Pn**	**01 09 30.9**	**+1.1**
	baz=243								
CHN1				*e*S			**Sn**	**01 09 55.4**	**+1.6**
	baz=243								
TWK	**Hsinying**	**1.94**	**248**	*e*P			**Pn**	**01 09 30.5**	**+0.7**
	baz=246								
TWK				*e*S			**Sn**	**01 09 55.6**	**+1.7**
	baz=246								
SCZT	**Fangliau**	**2.34**	**226**	*e*P			**Pn**	**01 09 36.8**	**+1.5**
	baz=224								

*NEIC **20** 01:16:00.9, 51.13N×179.37W, h14km, ML3.6(AEIC), ML4.2(PMR), After AEIC.*
*ISCJB **20** 01:16:02.4±1.4, 51.1N±0.2×179.33W±0.08, h71km±11km, mb3.7/10, Error ellipse: s-maj=26.2km s-min=8.0km az=179.8*
*IDC **20** 01:16:04.4±3.4, 51.10N×179.41W, h74km±28km, mb3.5/10, mb1 3.7/11, mb1mx3.6/24, mbtmp3.5/11, Error ellipse: s-maj=24.8km s-min=16.2km az=170.0*
ISC 20 01:16:03.5±1.4, 511N±0.2×17928W±0.08, h66km±10km, n20, σ0°93/21, mb3.7/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.80**	**63**	P			**Pn**	**01 16 31.3**	**-1.1**
ADK				S			**Sn**	**01 16 55.2**	**+0.9**

NOA	**NORSAR Array B**	**67.91**	**355**	P		**P**		**01 26 54.2**	**-0.2**
	1.1nm,0.8s,mb3.7,baz=84,slow=14,SNR=6.1								
NOA	**NORSAR Array B**	**67.91**	**355**	P		**P**		**01 26 54.2**	**-0.2**
AKASG	**Malin Array Be**	**75.73**	**342**	P		**P**		**01 27 41.6**	**+0.1**
	1.8nm,0.4s,mb4.1,baz=18,slow=6.4,SNR=4.3								
GERES	**GERESS Array B**	**79.83**	**351**	P		**P**		**01 28 04.9**	**+0.6**
	0.6nm,0.5s,mb3.7,baz=24,slow=4.8,SNR=7.4								
WRA	**Warramunga Arr**	**81.60**	**224**	P		**P**		**01 28 13.6**	**-0.3**
	0.2nm,0.8s,mb3.0,baz=35,slow=6.5,SNR=3.9								
ASAR	**Alice Springs**	**85.07**	**222**	P		**P**		**01 28 31.1**	**-0.6**
	0.1nm,0.4s,mb3.1,baz=34,slow=5.0,SNR=2.8								
ASAR	**Alice Springs**	**85.07**	**222**	P		**P**		**01 28 31.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**116.03**	**359**	PKP		PKPdf		01 34 38.7	-0.2
	0.3nm,0.9s,baz=7.1,slow=1.6,SNR=2.6								

*IDC **20** 01:25:26.7±0.9, 1561S×173.18W, h0km, mb4.2/8, mb1 4.5/8, mb1mx4.2/16, mbtmp4.2/8, MS3.8/8, Ms1 3.9/8, ms1mx3.6/25, Error ellipse: s-maj=60.8km s-min=18.7km az=146.0*

*NEIC **20** 01:25:28.4±0.7, 1557S×173.22W, h10km, mb4.5/3, Error ellipse: s-maj=43.9km s-min=13.1km az=145.0*

*ISCJB **20** 01:25:31.2±0.6, 1515S×102×1736W×01, h33km, mb4.2/11, MS4.0/7, Error ellipse: s-maj=30.3km s-min=13.6km az=145.9*

ISC 20 01:25:33.0±0.6, 152S×102×1735W×01, h35km, n39, σ0≤90/17, mb4.2/11, MS4.0/7, 2C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.11**	**53**	Pn		**Pn**	**01 25 58.9**	**-6.9**
	108nm,0.3s,baz=40,slow=1.4,SNR=42							
AFI				Sn		**Sn**	**01 26 19.0**	**-12**
	553nm,0.3s,baz=58,slow=23,SNR=10							
RAR	**Rarotonga**	**14.36**	**117**	LR		LR	01 33 19.7	
	comp=Z,89nm,18.9s,baz=295,slow=34							
PPT	**Papeete**	**23.08**	**99**	*e*LQ			01 34 57.5	
	541nm,27.8s							
PPT				*e*LR		LR	01 35 52.1	
	178nm,24.2s							
URZ	**Urewera**	**24.43**	**198**	LR		LR	01 39 13.7	
	comp=Z,312nm,18.1s,MS3.8,baz=277,slow=34							
PMG	**Port Moresby**	**38.81**	**274**	LR		LR	01 44 13.6	
	comp=Z,294nm,20.9s,MS4.1,baz=205,slow=29							
STKA	**Stephens Creek**	**44.05**	**240**	P		**P**	**01 33 36.8**	**-0.9**
	2.2nm,0.8s,mb4.0,baz=64,slow=5.7,SNR=4.9							
STKA				LR		LR	01 49 06.2	
	comp=Z,148nm,21.9s,MS3.9,baz=28,slow=32							
WB2	**Warramunga Arr**	**49.78**	**257**	*e*P		**P**	**01 34 23.1**	**+0.5**
WRAB	**Tennant Creek**	**49.78**	**257**	*e*P		**P**	**01 34 22.7**	**+0.1**
	5.7nm,1.2s,mb4.5							
WRA	**Warramunga Arr**	**49.79**	**257**	P		**P**	**01 34 22.3**	**-0.3**
	1.5nm,0.7s,mb4.1,baz=93,slow=7.4,SNR=19							
ASAR	**Alice Springs**	**50.07**	**252**	P		**P**	**01 34 25.5**	**+0.7**
	4.3nm,0.7s,mb4.6,baz=86,slow=8.4,SNR=40							
FORT	**Forrest**	**55.41**	**243**	*e*P		**P**	**01 35 04.2**	**0.0**
	4.0nm,0.5s,mb4.7							
VNDA	**Vanda**	**63.57**	**186**	LR		LR	01 56 01.4	
	comp=Z,62nm,20.9s,MS3.8,baz=4.4,slow=29							
NVAR	**Mina Array Bea**	**74.24**	**42**	P		**P**	**01 37 07.8**	**+1.3**
	0.9nm,0.7s,mb3.8,baz=227,slow=9.8,SNR=6.6							
KSRS	**Korea Array**	**75.93**	**316**	LR		LR	02 05 23.9	
	comp=Z,29nm,20.1s,MS3.6,baz=110,slow=31							
TXAR	**Lajitas Array**	**80.58**	**56**	P		**P**	**01 37 41.6**	**-0.6**
	1.8nm,1.1s,mb3.9,baz=214,slow=4.2,SNR=12							
TXAR				LR		LR	02 07 50.2	
	comp=Z,141nm,19.2s,MS4.3,baz=180,slow=32							
COLA	**College**	**82.17**	**11**	*e*P		**P**	**01 37 50.5**	**+0.7**
	1.8nm,0.4s,mb4.3							
PDAR	**Pinedale Array**	**82.18**	**42**	P		**P**	**01 37 49.2**	**-1.2**
	1.5nm,0.8s,mb4.0,baz=207,slow=2.6,SNR=12							
PDAR				LR		LR	02 07 60.0	
	comp=Z,117nm,18.5s,MS4.3,baz=43,slow=31							
PDAR	**Pinedale Array**	**82.18**	**42**	P		**P**	**01 37 49.2**	**-1.2**
PDAR				LR		LR	02 07 60.0	
MAW	**Mawson**	**87.96**	**199**	P		**P**	**01 38 17.0**	**-2.0**
	1.9nm,0.3s,mb4.8,baz=300,slow=14,SNR=4.1							
YKA	**Yellowknife Ar**	**89.95**	**23**	P		**P**	**01 38 27.8**	**-0.4**
	0.5nm,0.7s,mb4.0,baz=238,slow=4.7,SNR=9.7							
VNA3	**Neumayer Olymp**	**93.08**	**175**	*e*		**P**	**01 38 43.9**	**+1.1**
VNA3				*e*			01 38 50.2	
VNA2	**Neumayer--Watz**	**93.57**	**175**	*e*		**P**	**01 38 46.0**	**+0.9**
	baz=151,slow=2.0							
VNA2				*e*			01 38 52.5	
STHS	**Stebnicka Huta**	**143.80**	**344**	*e*PKP		PKPdf	01 45 02.0	-2.4
STHS	**Stebnicka Huta**	**143.80**	**344**	*e*P		PKPdf	01 45 02.0	-2.4
DPC	**Dobruska-Polom**	**144.03**	**349**	*e*PKP		PKPdf	01 45 06.0	+1.2
KECS	**Kecovo**	**144.85**	**344**	*e*PKP		PKPdf	01 45 07.2	+0.9
KECS	**Kecovo**	**144.85**	**344**	*e*P		PKPdf	01 45 07.2	+0.9
VYHS	**Vyhne**	**145.26**	**346**	*e*PKP		PKPdf	01 45 08.4	+1.4
VYHS	**Vyhne**	**145.26**	**346**	*e*P		PKPbc	01 45 08.4	+1.6
KOLL	**Kolacno**	**145.29**	**346**	*e*PKP		PKPdf	01 45 08.8	+1.7
KOLL	**Kolacno**	**145.29**	**346**	*e*P		PKPdf	01 45 08.8	+1.7
SMOL	**Smolenice**	**145.57**	**347**	*e*PKP		PKPdf	01 45 10.3	+2.8
SMOL	**Smolenice**	**145.57**	**347**	*e*P		PKPdf	01 45 10.3	+2.8
KHC	**Kasperske Hory**	**145.66**	**352**	*e*PKP		PKPdf	01 45 06.5	-1.2
KHC				*ex*		x	01 45 09.5	
KHC	**Kasperske Hory**	**145.66**	**352**	*e*P		PKPdf	01 45 09.5	+1.8
GERES	**GERESS Array B**	**145.92**	**351**	PKPbc		PKPbc	01 45 08.7	-0.1
	1.5nm,0.8s,baz=16,slow=1.9,SNR=10							
BRTR	**Keskin Array B**	**145.93**	**321**	PKPbc		PKPab	01 45 11.8	+2.1
	1.4nm,0.8s,baz=137,slow=2.5,SNR=6.8							
CONA	**Conrad Observa**	**146.44**	**349**	↑*p*PKiKP		PKiKP	01 45 17.2	+3.8
	14nm,1.5s							
CSNA	**Conrad Observa**	**146.45**	**349**	↑*p*PKiKP		PKiKP	01 45 17.0	+3.6
	13nm,1.4s							

*IDC **20** 01:49:09.4±3.0, 750S×156.85E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=90.0km s-min=30.5km az=120.0*

*NEIC **20** 01:49:14.9±1.1, 752S×156.83E, h35km, mb3.9/1, Error ellipse: s-maj=33.2km s-min=15.4km az=125.0*

ISC 20 01:49:14.4±1.8, 76S±02×1569E±03, h35km, n10, σ0≤39/9, mb3.8/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**9.82**	**258**	Pn		**Pn**	**01 51 33.3**	**+0.1**
	1.6nm,0.3s,baz=108,slow=9.6,SNR=3.3							
WRAB	**Tennant Creek**	**25.09**	**238**	*e*P		**P**	**01 54 36.3**	**+0.3**
	2.1nm,0.7s,mb3.8							
WRA	**Warramunga Arr**	**25.10**	**238**	P		**P**	**01 54 35.8**	**-0.3**
	1.4nm,0.5s,mb3.7,baz=61,slow=9.5,SNR=9.7							
ASAR	**Alice Springs**	**27.27**	**231**	P		**P**	**01 54 55.0**	**-0.7**
	0.1nm,0.3s,mb2.8,baz=58,slow=8.7,SNR=5.1							
FORT	**Forrest**	**35.52**	**226**	*e*P		**P**	**01 56 08.7**	**+0.6**
	7.9nm,0.9s,mb4.6							
SONM	**Songino Array**	**70.83**	**327**	P		**P**	**02 00 27.2**	**-0.3**
	0.3nm,0.6s,mb3.4,baz=130,slow=6.3,SNR=3.2							
MKAR	**Makanchi Array**	**85.08**	**318**	P		**P**	**02 01 46.8**	**+0.1**
	0.4nm,0.4s,mb3.9,baz=98,slow=7.2,SNR=5.1							
ZALV	**Zalesovo Beam**	**85.70**	**326**	P		**P**	**02 01 49.9**	**+0.3**
	0.4nm,0.3s,mb4.1,baz=108,slow=5.3,SNR=2.7							
ZALV	**Zalesovo Beam**	**85.70**	**326**	P		**P**	**02 01 49.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**155.00**	**285**	PKP		PKPdf	02 09 06.5	+1.8
	0.4nm,0.9s,baz=98,slow=1.4,SNR=2.5							

IDC 20 02:03:51.5±4.1, 757S×1056.7E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.7/4, Error ellipse: s-maj=166.2km s-min=28.9km az=49.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.38**	**117**	P		P	02 10 05.6	+0.1
	0.3nm,0.9s,baz=289,slow=11,SNR=4.4							
SONM	**Songino Array**	**55.17**	**1**	P		P	02 13 25.9	+0.1
	0.3nm,0.4s,baz=170,slow=7.8,SNR=4.8							
MKAR	**Makanchi Array**	**57.98**	**341**	P		P	02 13 46.0	+0.2
	0.4nm,0.3s,baz=154,slow=7.9,SNR=5.0							
ZALV	**Zalesovo Beam**	**63.76**	**346**	P		P	02 14 24.9	-0.2
	0.8nm,0.3s,baz=147,slow=5.9,SNR=4.5							

*IDC **20** 02:18:16.9±0.5, 5120N×179.10W, h0km, mb4.6/31, mb1 4.8/32, mb1mx4.7/34, mbtmp4.6/32, ML4.7/1, MS4.2/21, Ms1 4.2/21, ms1mx4.0/33, Error ellipse: s-maj=17.7km s-min=10.6km az=169.0*

*BJI **20** 02:18:18.9, 5143N×179.36W, h14km, mB5.0, mb4.9, Ms4.7, Msz4.3*

*GCMT **20** 02:18:20.4±0.4, 5104N×178.87W, h29km±1km, MW5.0/57, Moment Tensor Solution. s29,c37; s57,c81; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.03±.20; Mθθ=-2.71±.13; Mϕϕ=-0.31±.12; Mrθ=2.16±.18; Mrϕ=-0.80±.08; Mθϕ=1.30±.17; Best double couple: M=3.91000×10^16 NP1:ϕ=261.0000°, δ26.00000°, λ105.00000°. NP2: ϕ=64.0000°, δ65.00000°, λ83.00000°. Principal axes: T 3.9860, Plg69.0000°, Azm320.0000°; N -0.1480, Plg7.0000°, Azm67.0000°; P -3.8340, Plg20.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 02:18:20.4, 5097N×178.95W, h15km, mb5.0/145, ML4.8(PMR), ML5.0(AEIC), After AEIC.*

*MOS **20** 02:18:21.9±0.9, 51.18N×178.98W, h44km, mb5.2/92, MS4.2/7, Error ellipse: s-maj=7.5km s-min=4.5km az=90.0*

*ISCJB **20** 02:18:22.2±0.7, 51.19N±004×179.03W±0.03, h44km±5km, mb4.9/205, MS4.3/38, Error ellipse: s-maj=7.2km s-min=2.7km az=10.3*

*SZGRF **20** 02:18:25.0, 51.36N×179.81W, h33km, mb5.0, Andreanof Islands, Aleutian Islands, United States*

ISC 20 02:18:25.3±0.7, 5127N±004×17902W±003, h54km±5km, h42km±2.8km; pP-P, n763, σ0≤69/764, mb4.9/205, MS4.3/38, 186C-150D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**1.58**	**66**	P		**Pn**	**02 18 48.5**	**-2.4**
ADK				S		**Sn**	**02 19 11.0**	**+0.8**
SMY	**Shemya**	**4.50**	**292**	P		**Pn**	**02 19 31.7**	**+1.0**
FX1	**Attu Island--F**	**5.08**	**292**	Pn		**Pn**	**02 19 38.1**	**-0.7**
	9.1nm,0.3s,baz=73,slow=20,SNR=14							
FX1				Sn		**Sn**	**02 20 46.3**	**+10**
	11nm,0.3s,baz=63,slow=20,SNR=6.4							
FX1	**Attu Island--F**	**5.08**	**292**	P		**Pn**	**02 19 38.1**	**-0.7**
FX1							02 20 46.3	
FX1				pmax		pmax		
	comp=Z,9.0nm,0.3s							
FX1				smax				
	comp=N,11nm,0.3s							
FX1	**Attu Island--F**	**5.08**	**292**	P		**Pn**	**02 19 38.3**	**-0.5**
NIKO	**Nikolski**	**6.49**	**71**	*e*Pn		**Pn**	**02 19 55.7**	**-2.3**
	comp=N,289nm,0.8s							
OKCD	**Okmok Cone D**	**7.02**	**68**	P		**Pn**	**02 20 04.5**	**-0.8**
SPIA	**Saint Paul Isl**	**7.84**	**38**	P		**Pn**	**02 20 18.5**	**+2.1**
UNV	**Unalaska Valle**	**8.05**	**66**	P		**Pn**	**02 20 18.9**	**-0.6**
SDPT	**Sand Point**	**11.81**	**63**	*e*P		**Pn**	**02 21 09.6**	**-1.1**
	comp=N,71nm,0.4s							
GAMB	**Gambell**	**13.13**	**14**	*e*Pn		**Pn**	**02 21 31.2**	**+2.5**
	comp=N,4μm,0.9s							
CHGN	**Chignik**	**13.16**	**59**	*e*P		**Pn**	**02 21 28.6**	**-0.5**
PET	**Petropavlovsk**	**13.81**	**286**	*e*P		**Pn**	**02 21 46.3**	**+8.3**
PET				*e*S		**Sn**	**02 24 16.4**	**+6.8**
PET				pmax		pmax		
	comp=Z,52nm,1.5s							
PET				MLR		MLR		
	comp=Z,1μm,14.0s							
PETK	**Petropavlovsk-**	**14.39**	**286**	Pn		**Pn**	**02 21 49.1**	**+3.5**
	comp=Z,0.3nm,0.3s,baz=104,slow=16,SNR=5.5							
TNA	**Tin City**	**15.42**	**18**	*e*Pn		**Pn**	**02 21 58.4**	**-0.6**
	comp=Z,22nm,1.0s							
OHAK	**Old Harbor**	**16.12**	**58**	*e*Pn		**Pn**	**02 22 03.1**	**-4.8**
SVW2	**Sparrevohn**	**16.25**	**44**	*e*P		**Pn**	**02 22 11.2**	**+1.7**
KDAK	**Kodiak Island**	**16.60**	**57**	Pn		**Pn**	**02 22 09.3**	**-4.7**
	comp=Z,2.9nm,0.3s,baz=271,slow=5.7,SNR=22							
KDAK				Sn		**Sn**	**02 25 17.9**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=319,slow=23,SNR=6.8							
KDAK	**Kodiak Island**	**16.60**	**57**	*e*P		**Pn**	**02 22 12.9**	**-1.1**
KDAK							02 25 17.9	
KDAK				pmax		pmax		
	comp=Z,427nm,2.2s							
KDAK	**Kodiak Island**	**16.60**	**57**	*e*Pn		**Pn**	**02 22 12.9**	**-1.0**
	comp=Z,427nm,2.2s							
KDAK				Sn		**Sn**	**02 25 17.9**	**+0.8**
BILL	**Bilibino**	**18.30**	**342**	↑*e*P		**Pn**	**02 22 36.1**	**+1.4**
BILL				pmax		pmax		
	comp=Z,34nm,1.4s							
BILL				MLR		MLR		
	comp=Z,800nm,17.0s							
BILL	**Bilibino**	**18.30**	**342**	*e*P		**Pn**	**02 22 35.6**	**+0.8**
	comp=Z,49nm,1.1s							
PPLA	**Purkeypile**	**18.49**	**41**	*e*P		**Pn**	**02 22 38.2**	**+1.1**
	comp=Z,59nm,0.7s							
FIB	**Fire Island**	**18.69**	**47**	*e*P		**Pn**	**02 22 40.1**	**+0.5**
FIB				pmax		pmax		
	comp=Z,102nm,0.5s							
FIB	**Fire Island**	**18.69**	**47**	*e*P		**Pn**	**02 22 40.1**	**+0.6**
	comp=Z,102nm,0.5s							
SEW	**Seward**	**18.72**	**50**	*e*P		**Pn**	**02 22 38.1**	**-1.9**
	comp=Z,40nm,0.7s							
RC01	**Rabbit Creek A**	**18.87**	**47**	*e*P		**Pn**	**02 22 41.6**	**-0.1**
	comp=Z,14nm,0.4s							
KTH	**Kantishna Hill**	**19.30**	**40**	*e*P		**Pn**	**02 22 45.5**	**-1.2**
	comp=Z,86nm,0.7s							
PMR	**Palmer**	**19.30**	**46**	*e*P		**Pn**	**02 22 44.2**	**-2.7**
PMR				pmax		pmax		
	comp=Z,57nm,1.6s							
PMR	**Palmer**	**19.30**	**46**	*e*P		**Pn**	**02 22 44.2**	**-2.7**
	comp=Z,56nm,1.6s							
TRF	**Thorofare Moun**	**19.51**	**40**	*e*P		**Pn**	**02 22 48.1**	**-1.1**
	comp=Z,88nm,1.1s							
BPAW	**Bear Paw Mtn.**	**19.52**	**38**	*e*P		**Pn**	**02 22 48.4**	**-1.1**
	comp=Z,66nm,1.0s							
MCK	**McKinley**	**20.17**	**40**	*e*P		**P**	**02 22 55.1**	**+0.3**
MCK				pmax		pmax		
	comp=Z,27nm,0.6s							
MCK	**McKinley**	**20.17**	**40**	*e*P		**P**	**02 22 55.1**	**+0.3**
	comp=Z,28nm,0.6s							
COLA	**College**	**21.08**	**38**	*e*P		**P**	**02 23 03.5**	**-1.1**
COLA				pmax		pmax		
	comp=Z,32nm,0.8s,mb4.7							
COLA	**College**	**21.08**	**38**	*e*P		**P**	**02 23 03.5**	**-1.1**
	comp=Z,32nm,0.8s,mb4.7							
PAX	**Paxson**	**21.36**	**44**	*e*P		**P**	**02 23 07.3**	**-0.3**
PAX				pmax		pmax		
	comp=Z,46nm,0.6s,mb5.0							
PAX	**Paxson**	**21.36**	**44**	*e*P		**P**	**02 23 07.3**	**-0.3**
	comp=Z,46nm,0.6s,mb5.0							
COLD	**Coldfoot**	**21.42**	**31**	*e*P		**P**	**02 23 08.4**	**+0.2**
	comp=Z,29nm,0.9s,mb4.6							
MENT	**Mentasta**	**22.12**	**45**	*e*P		**P**	**02 23 16.0**	**+0.3**
EGAK	**Eagle**	**23.72**	**41**	*e*P		**P**	**02 23 30.9**	**-0.9**
	comp=Z,37nm,0.8s,mb4.9							
DAWY	**Dawson**	**24.28**	**43**	*e*P		**P**	**02 23 36.0**	**-0.9**
HYT	**Haines Junctio**	**24.67**	**51**	*e*P		**P**	**02 23 41.0**	**+0.4**
YSS	**Yuzh-Sakhalins**	**25.19**	**275**	*e*P		**P**	**02 23 46.0**	**+0.6**
YSS				*e*		pP	02 23 57.8	-1.2
YSS				pmax		pmax		
	comp=Z,70nm,1.1s,mb5.1							
YSS				MLR		MLR		
	comp=Z,400nm,20.0s,MS3.9							
YSS	**Yuzh-Sakhalins**	**25.19**	**275**	*e*P		**P**	**02 23 45.4**	**0.0**
	comp=Z,36nm,0.9s,mb4.9							
ASAJ	**Asahikawa**	**26.57**	**270**	P		**P**	**02 23 55.8**	**-2.1**
	comp=Z,16nm,1.0s,mb4.5,baz=25,slow=8.2,SNR=4.3							
ASAJ	**Asahikawa**	**26.57**	**270**	P		**P**	**02 23 55.8**	**-2.1**
ASAJ				pmax		pmax		
	comp=Z,16nm,1.0s							
INK	**Inuvik**	**27.63**	**35**	P		**P**	**02 24 06.0**	**-1.2**
	comp=Z,11nm,1.0s,mb4.4,baz=240,slow=9.1,SNR=22							
INK	**Inuvik**	**27.63**	**35**	P		**P**	**02 24 06.0**	**-1.1**
INK				pmax		pmax		
	comp=Z,11nm,1.0s							
INK	**Inuvik**	**27.63**	**35**	*e*P		**P**	**02 24 06.7**	**-0.4**
YAK	**Yakutsk**	**29.39**	**311**	↓*e*P		**P**	**02 24 23.6**	**+0.8**
YAK				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.6							
YAK				MLR		MLR		
	comp=Z,300nm,16.0s,MS4.0							
TIXI	**Tiksi**	**30.66**	**331**	*i* P		**P**	**02 24 38.3**	**+4.3**
TIXI				MLR		MLR		
	comp=Z,900nm,23.0s,MS4.4							
KLR	**Kul'dur**	**31.08**	**286**	*e*P		**P**	**02 24 33.8**	**-4.1**
KLR				pmax		pmax		
	comp=E,43nm,1.2s							
KLR				pmax		pmax		
	comp=Z,60nm,1.2s,mb5.3							
MJAR	**Matsushiro Arr**	**33.63**	**261**	LR		LR	02 38 26.4	
	comp=Z,230nm,20.3s,MS3.9,baz=65,slow=36							
MDJ	**Mudanjiang**	**34.46**	**279**	P		**P**	**02 25 06.9**	**-0.5**
MDJ				AP		pP	02 25 17.9	-3.4
MDJ				PP		PP	02 26 25.3	-0.8
MDJ				PCP		PcP	02 27 41.8	+0.2
MDJ				S		**S**	**02 30 28.8**	**-2.9**
MDJ				XS		sS	02 30 47.9	-7.2
MDJ				SCS		ScS	02 35 23.3	-1.2
MDJ						AMB	AMB	
	comp=Z,11nm,1.1s,mb4.7							
MDJ						LR	LR	
	comp=N,182nm,15.3s,MS4.2							
MDJ						LR	LR	
	comp=E,269nm,16.0s,MS4.2							
MDJ						LR	LR	
	comp=Z,373nm,18.6s,MS4.2							
YKA	**Yellowknife Ar**	**35.41**	**46**	P		**P**	**02 25 14.4**	**-1.0**
	comp=Z,13nm,0.8s,mb4.9,baz=283,slow=8.2,SNR=117							
YKA						PcP	PcP	02 27 44.3	+0.3
	comp=Z,1.8nm,0.8s,baz=290,slow=2.7,SNR=6.1							
YKA						ScP	ScP	02 31 30.2	+5.3
	comp=Z,0.5nm,0.7s,baz=283,slow=3.1,SNR=6.8							
YKA						LR	LR	02 41 41.9	
	comp=Z,280nm,18.4s,MS4.0,baz=170,slow=40							
YKA	**Yellowknife Ar**	**35.41**	**46**	P		**P**	**02 25 14.4**	**-1.0**
YKA							02 27 44.3	
YKA	**Yellowknife Ar**	**35.41**	**46**	P		**P**	**02 25 14.4**	**-1.0**
YKA						PcP	PcP	02 27 44.3	+0.3
YKA						ScP	ScP	02 31 30.2	+5.2
YKA						LR	LR	02 41 41.9	
A05A	**Maple Falls**	**35.79**	**71**	↓P		**P**	**02 25 18.6**	**-0.3**
	baz=36							
A06A	**Chilliwack**	**36.10**	**70**	↓P		**P**	**02 25 21.9**	**+0.3**
	baz=36							
B05A	**Bryant**	**36.10**	**72**	↑P		**P**	**02 25 21.9**	**+0.3**
	baz=36							
B06A	**Marblemount**	**36.35**	**71**	↓P		**P**	**02 25 24.4**	**+0.7**
	baz=36							
RPW	**Rockport**	**36.37**	**71**	P		**P**	**02 25 24.3**	**+0.5**
E04A	**Onalaska**	**36.50**	**75**	↑P		**P**	**02 25 25.4**	**+0.4**
	baz=36							
C05A	**Tolt Reservoir**	**36.61**	**72**	↓P		**P**	**02 25 26.4**	**+0.6**
	baz=36							
D05A	**Enumclaw**	**36.66**	**73**	↑P		**P**	**02 25 27.4**	**+1.1**
	baz=36							
A07A	**Ashnola River,**	**36.77**	**70**	↓P		**P**	**02 25 27.4**	**+0.2**
	baz=37,SNR=7.7							
RCS	**Mount Rainier-**	**36.97**	**74**	P		**P**	**02 25 30.5**	**+1.6**
FMW	**Mount Fremont**	**36.98**	**74**	P		**P**	**02 25 30.1**	**+1.1**
RCM	**Mount Rainier-**	**36.98**	**74**	P		**P**	**02 25 31.1**	**+2.0**
F04A	**Amboy**	**37.01**	**75**	↑P		**P**	**02 25 29.4**	**+0.2**
	baz=37							
E05A	**Randle**	**37.10**	**74**	↑P		**P**	**02 25 30.3**	**+0.3**
	baz=37							
WPW	**White Pass**	**37.16**	**74**	P		**P**	**02 25 31.6**	**+1.0**
B07A	**Winthrop**	**37.19**	**71**	↓P		**P**	**02 25 30.7**	**-0.1**
	baz=37,SNR=6.0							
NLW	**Nelson Butte**	**37.24**	**71**	P		**P**	**02 25 32.1**	**+1.0**
SLFW	**Sugar Loaf**	**37.27**	**72**	P		**P**	**02 25 32.5**	**+1.0**
G04A	**Mulino**	**37.33**	**77**	↓P		**P**	**02 25 32.6**	**+0.5**
	baz=37							
CN2	**Changchun**	**37.43**	**281**	*e*P		**P**	**02 25 31.0**	**-1.9**
CN2				*e*S		**S**	**02 31 16.3**	**-0.9**
CN2						AMB	AMB	
	comp=Z,10.0nm,0.8s,mb4.7							
CN2						AMB	AMB	
	comp=Z,200nm,5.0s							
CN2						LR	LR	
	comp=N,400nm,14.0s,MS4.5							
CN2						LR	LR	
	comp=E,400nm,14.0s,MS4.5							
CN2						LR	LR	
	comp=Z,300nm,18.0s,MS4.1							
ETW	**Entiat**	**37.46**	**72**	P		**P**	**02 25 33.9**	**+0.8**
A08A	**Turner Farm, O**	**37.47**	**69**	↓P		**P**	**02 25 33.1**	**-0.1**
	baz=37,SNR=9.0							
TBM	**Table Mountain**	**37.51**	**73**	P		**P**	**02 25 34.3**	**+0.8**
C07A	**Waterville**	**37.58**	**72**	↑P		**P**	**02 25 33.8**	**-0.3**
	baz=37,SNR=7.6							
WTV	**Waterville**	**37.64**	**72**	P		**P**	**02 25 35.0**	**+0.4**
EBG	**Ellensburg**	**37.65**	**73**	↓P		**P**	**02 25 35.8**	**+1.1**
B08A	**Colville Reser**	**37.70**	**70**	↑P		**P**	**02 25 34.9**	**-0.2**
	baz=38,SNR=7.6							
H04A	**Detroit Lake**	**37.77**	**77**	↓P		**P**	**02 25 35.8**	**0.0**
	baz=38							
A09A	**Danville**	**37.86**	**69**	↓P		**P**	**02 25 36.5**	**+0.1**
	baz=38,SNR=7.4							
D07A	**Quincy**	**37.87**	**72**	↑P		**P**	**02 25 36.5**	**-0.1**
	baz=38,SNR=10.0							
BOD	**Bodaibo**	**37.93**	**307**	*e*P		**P**	**02 25 36.0**	**-0.9**
BOD				pmax		pmax		
	comp=Z

G09A **Cove** 40.15 74 ⇓P P 02 25 55.5 -0.1
baz=40,SNR=7.6
C12B **Naegeli Ranch,** 40.29 69 ⇑P P 02 25 56.6 -0.1
baz=40,SNR=13
I08A **Drewsey** 40.39 76 ⇓P P 02 25 57.7 +0.1
baz=40
MOD **Modoc** 40.43 80 *e*P P 02 25 58.3 +0.4
comp=Z,6.6nm,0.7s,mb4.5
E11A **Bogner Ranch,** 40.53 71 ⇓P P 02 25 58.3 -0.5
baz=40
G10A **Bishop Farm, J** 40.54 73 ⇑P P 02 25 58.6 -0.3
baz=40,SNR=21
WALA **Waterton Lakes** 40.54 67 *e*P P 02 25 58.9 +0.1
B13A **Whitefish** 40.55 68 ⇓P P 02 25 58.8 -0.1
baz=40
BSMT **Bassoo Peak** 40.62 69 P P 02 25 59.8 +0.4
K07A **Rock Creek Ran** 40.64 78 ⇓P P 02 26 00.7 +1.0
baz=40
BMO **Blue Mountains** 40.66 74 *e*P P 02 26 00.3 +0.5
J08A **Circle Bar Ran** 40.75 77 ⇓P P 02 26 01.2 +0.6
baz=41
F11A **Grangeville** 40.81 72 ⇑P P 02 26 00.1 -0.9
baz=41
C13A **Hot Springs** 40.83 69 ⇑P P 02 26 00.8 -0.4
baz=41,SNR=7.4
A14A **Double T Ranch** 40.86 67 ⇑P P 02 26 01.1 -0.4
baz=41,SNR=20
JTMT **Jette** 40.97 69 *e*P P 02 26 03.3 +1.0
K08A **Mann Creek Ran** 41.09 77 ⇓P P 02 26 03.7 +0.4
baz=41
H10A **Noah's Angus R** 41.13 74 ⇑P P 02 26 03.5 -0.3
baz=41
WVOR **Wild Horse Val** 41.16 78 P P 02 25 59.1 -4.9
WVOR pmax pmax
comp=Z,14nm,0.8s,mb4.6
WVOR **Wild Horse Val** 41.16 78 *e*P P 02 26 04.4 +0.5
comp=Z,14nm,0.8s,mb4.7
D13A **Huson** 41.19 70 ⇓P P 02 26 03.4 -0.8
baz=41
B14A **Marquette Ranc** 41.25 67 ⇑P P 02 26 04.4 -0.2
baz=41,SNR=8.9
A15A **Johnson Ranch,** 41.26 66 ⇑P P 02 26 03.8 -0.9
baz=41,SNR=8.1
I10A **Payette** 41.37 75 ⇑P P 02 26 05.7 0.0
baz=41,SNR=5.1
M07A **Soldier Meadow** 41.42 80 ⇑P P 02 26 06.6 +0.5
baz=41,SNR=11
L08A **Fields** 41.48 78 ⇓P P 02 26 06.4 -0.1
baz=41
H11A **Donnelly** 41.52 73 ⇓P P 02 26 06.5 -0.4
baz=41,SNR=7.1
MSO **Missoula** 41.63 70 *e*P P 02 26 07.5 -0.3
comp=Z,22nm,1.3s,mb4.6
SLMT **Seeley Lake** 41.69 69 *e*P P 02 26 07.9 -0.3
B15A **Bradely Ranch,** 41.69 67 ⇓P P 02 26 07.4 -0.7
baz=42,SNR=18
E13A **Victor** 41.69 70 ⇑P P 02 26 07.9 -0.4
baz=42,SNR=8.5
J10A **Berg Farm, Mel** 41.75 76 ⇑P P 02 26 08.7 -0.1
baz=42
D14A **Greenough** 41.76 69 ⇓P P 02 26 08.2 -0.6
baz=42,SNR=17
A16A **West Butte Ran** 41.92 66 ⇑P P 02 26 09.5 -0.6
baz=42
C15A **Salmond Ranch,** 41.93 68 ⇓P P 02 26 10.2 0.0
baz=42,SNR=30
F13A **Darby** 41.94 71 ⇑P P 02 26 10.1 -0.3
baz=42,SNR=9.9
I11A **Placerville** 41.98 74 ⇑P P 02 26 10.5 -0.1
baz=42
L09A **Wilkinson Ranc** 41.99 78 ⇓P P 02 26 11.1 +0.4
baz=42
CHMT **Chamberlain Mo** 41.99 69 *e*P P 02 26 10.6 -0.2
K10A **MacKenzie Ranc** 42.05 76 ⇓P P 02 26 11.3 +0.1
baz=42,SNR=7.2
E14A **Clinton** 42.11 70 ⇓P P 02 26 11.3 -0.4
baz=42,SNR=7.5
PAHR **Pah Rah Range** 42.26 82 *e*P P 02 26 15.9 +2.9
H12A **Diamond D Ranc** 42.30 73 ⇓P P 02 26 12.9 -0.3
baz=42,SNR=7.6
MFID **Camas Ranch** 42.33 75 ⇑P P 02 26 13.3 -0.2
baz=42
D15A **Lincoln** 42.36 69 ⇓P P 02 26 13.3 -0.4
baz=42,SNR=11
G13A **Cobalt** 42.37 72 ⇓P P 02 26 13.7 -0.1
baz=42,SNR=12
N08A **GE Springer Mi** 42.41 80 ⇑P P 02 26 13.9 -0.3
baz=42
C16A **Fuhringer Ranc** 42.42 67 ⇑P P 02 26 13.8 -0.4
baz=42
A17A **Triple J Farms** 42.44 65 ⇑P P 02 26 13.6 -0.8
baz=42,SNR=22
F14A **Wisdom** 42.50 71 ⇑P P 02 26 14.5 -0.4
baz=42
K11A **Parker Ranch,** 42.56 76 ⇑P P 02 26 14.8 -0.7
baz=42
E15A **Deer Lodge** 42.61 69 ⇑P P 02 26 15.3 -0.4
baz=42,SNR=8.0
H13A **Challis** 42.65 73 ⇓P P 02 26 15.8 -0.3
baz=42,SNR=5.8
L10A **Juniper Basin** 42.69 77 ⇓P P 02 26 16.5 +0.1
baz=42,SNR=6.3
B17A **L&G Farms, Che** 42.71 66 ⇑P P 02 26 15.9 -0.6
baz=42,SNR=15
J12A **Stokes Ranch,** 42.86 75 ⇓P P 02 26 17.8 0.0
baz=43,SNR=7.6
D16A **Dana Ranch, Ca** 42.93 68 ⇑P P 02 26 17.9 -0.4
baz=43
HRY **Holter Researc** 42.93 69 *e*P P 02 26 18.2 -0.1
A18A **Metzger Ranch,** 42.94 65 ⇓P P 02 26 17.3 -1.0
baz=43,SNR=5.5
M10A **I.L. Ranch, Tu** 42.96 78 ⇑P P 02 26 18.8 +0.1
baz=43
F15A **Butte** 43.01 70 ⇓P P 02 26 18.4 -0.5
baz=43
LRM **Limekiln Ridge** 43.04 70 *e*P P 02 26 16.2 -3.0
C17A **Wharram Farm,** 43.07 67 ⇓P P 02 26 18.8 -0.6
baz=43,SNR=16
L11A **Cat Creek Ranc** 43.08 76 ⇓P P 02 26 19.9 +0.3
baz=43,SNR=12
I13A **Wildhorse Cree** 43.09 73 ⇑P P 02 26 19.5 -0.2
baz=43,SNR=23
HLID **Hailey** 43.10 74 ⇑P P 02 26 19.6 -0.2
baz=43
HLID **Hailey** 43.10 74 *e*P P 02 26 20.1 +0.3
comp=Z,12nm,1.0s,mb4.6
E16A **East Helena** 43.12 69 ⇓P P 02 26 19.6 -0.3
baz=43,SNR=8.1
H14A **Leadore** 43.15 72 ⇑P P 02 26 20.1 0.0
baz=43,SNR=14
DLMT **Dillon** 43.20 71 *e*P P 02 26 21.2 +0.7
B18A **Beardsley Farm** 43.24 65 ⇓P P 02 26 20.3 -0.5
baz=43,SNR=15
K12A **Draper Farm, C** 43.33 75 ⇓P P 02 26 22.2 +0.6
baz=43,SNR=17
J13A **Cove Ranch, Pi** 43.34 74 ⇑P P 02 26 21.9 +0.2
baz=43,SNR=24
MCMT **McKenzie Canyo** 43.34 72 P P 02 26 21.9 +0.2
LCCM **Lewis and Clar** 43.37 70 P P 02 26 21.9 0.0
G15A **Dillon** 43.37 71 ⇓P P 02 26 21.5 -0.4
baz=43,SNR=11
EGMT **Eagleton** 43.45 66 ⇑P P 02 26 22.1 -0.4
baz=43
EGMT **Eagleton** 43.45 66 *e*P P 02 26 21.4 -1.1
comp=Z,21nm,0.8s,mb4.9
M11A **Holland Ranch,** 43.48 77 ⇑P P 02 26 22.9 +0.1
baz=43
I14A **Mackay** 43.48 73 ⇓P P 02 26 23.2 +0.5
baz=43,SNR=22
L12A **House Creek Ra** 43.54 76 ⇓P P 02 26 23.7 +0.5
baz=43,SNR=18
F16A **Kennard Place,** 43.55 70 ⇑P P 02 26 23.0 -0.3
baz=43,SNR=7.9
H15A **Lima** 43.58 72 ⇓P P 02 26 23.3 -0.3
baz=43,SNR=11
BOZ **Bozeman (W)** 43.62 70 ⇑P P 02 26 23.9 0.0
baz=44
BOZ **Bozeman (W)** 43.62 70 *e*P P 02 26 24.0 +0.1
BOZ pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
BOZ **Bozeman (W)** 43.62 70 *e*P P 02 26 24.0 +0.1
comp=Z,10nm,0.6s,mb4.7
E17A **Martinsdale** 43.63 68 ⇑P P 02 26 24.1 +0.1
baz=44,SNR=11
Q08A **Gabbs** 43.67 82 ⇑P P 02 26 24.4 0.0
baz=44
NVAR **Mina Array Bea** 43.70 83 P P 02 26 25.1 +0.4
comp=Z,3.7nm,0.8s,mb4.2,baz=283,slow=8.0,SNR=7.6

G16A **Moss Hill, Enn** 43.74 70 ⇓P P 02 26 24.5 -0.4
baz=44,SNR=9.0
J14A **Carey** 43.78 74 ⇓P P 02 26 25.8 +0.6
baz=44,SNR=11
D18A **Linhart Farms,** 43.86 67 ⇓P P 02 26 26.1 +0.3
baz=44,SNR=20
F17A **Fitzpatrick Pl** 44.05 69 ⇓P P 02 26 27.3 0.0
baz=44,SNR=6.9
E18A **Harlowton** 44.13 68 ⇑P P 02 26 28.2 +0.2
baz=44,SNR=17
QLMT **Earthquake Lak** 44.19 71 *e*P P 02 26 29.2 +0.8
MTUM **Tungsten Hills** 44.20 84 *e*P P 02 26 29.2 +0.6
ELK **Elko** 44.21 78 P P 02 26 29.2 +0.5
comp=Z,3.7nm,0.8s,mb4.2,baz=295,slow=7.6,SNR=19
ELK LR LR 02 41 26.2
comp=Z,303nm,21.6s,MS4.2,baz=302,slow=31
ELK **Elko** 44.21 78 *e*P P 02 26 29.3 +0.6
comp=Z,8.1nm,0.8s,mb4.5
L13A **Double Diamond** 44.22 75 ⇓P P 02 26 29.2 +0.5
baz=44,SNR=9.0
N12A **Clover Valley,** 44.27 78 ⇓P P 02 26 29.5 +0.3
baz=44,SNR=9.3
O11A **Cowboy Ranch,** 44.32 79 ⇓P P 02 26 29.8 +0.2
baz=44
G17A **Pierce Place,** 44.32 70 ⇓P P 02 26 29.6 +0.1
baz=44
H16A **Russell Place,** 44.36 71 ⇓P P 02 26 30.3 +0.5
baz=44,SNR=5.1
J15A **Blackfoot** 44.39 73 ⇓P P 02 26 30.4 +0.3
baz=44
K14A **Jones Ranch, D** 44.43 74 ⇓P P 02 26 30.7 +0.3
baz=44
M13A **Montello** 44.51 76 ⇓P P 02 26 31.2 +0.1
baz=44,SNR=11
R09A **Tonopah** 44.59 82 ⇑P P 02 26 31.6 -0.1
baz=44,SNR=9.4
F18A **Big Timber** 44.60 68 ⇑P P 02 26 31.5 -0.3
baz=44,SNR=5.3
I16A **Newdale** 44.69 72 ⇓P P 02 26 32.8 +0.3
baz=44,SNR=8.8
YNR **Norris Junctio** 44.69 70 *e*P P 02 26 33.7 +1.2
K15A **Arbon** 44.74 74 ⇓P P 02 26 33.3 +0.5
baz=45,SNR=9.5
YFT **Old Faithful** 44.75 71 *e*P P 02 26 34.9 +2.0
O12A **Currie** 44.80 78 ⇑P P 02 26 33.6 +0.2
baz=45
S09A **Goldfield** 44.81 83 ⇑P P 02 26 33.5 0.0
baz=45
M14A **Sheep Mountain** 44.93 76 ⇓P P 02 26 34.5 +0.1
baz=45,SNR=6.2
H17A **Grant Village** 44.93 71 ⇓P P 02 26 35.1 +0.7
baz=45
IMW **Indian Meadow** 45.00 72 *e*P P 02 26 35.8 +0.8
comp=Z,18nm,1.1s,mb4.8
CWC **Cottonwood Cre** 45.07 85 ⇑P P 02 26 35.5 -0.1
baz=45
S10A **Tonopah Range,** 45.08 82 ⇓P P 02 26 35.6 0.0
baz=45
RRI2 **Red Ridge** 45.08 72 *e*P P 02 26 36.2 +0.6
comp=Z,12nm,0.9s,mb4.7
Q11A **Duckwater** 45.09 80 ⇓P P 02 26 35.9 +0.1
baz=45
HVU **Hansel Valley** 45.11 75 *e*P P 02 26 36.5 +0.6
P12A **McGill** 45.18 79 ⇓P P 02 26 36.6 +0.2
baz=45
MOOW **Mose Ponds** 45.20 72 *e*P P 02 26 37.1 +0.5
I17A **Pilgram Creek** 45.20 71 ⇓P P 02 26 37.0 +0.4
baz=45
L15A **Malad City** 45.22 75 ⇑P P 02 26 38.3 +1.6
baz=45,SNR=5.6
K16A **Soda Springs** 45.22 73 ⇓P P 02 26 38.1 +1.4
baz=45,SNR=18
TPAW **Teton Pass** 45.22 72 *e*P P 02 26 37.4 +0.6
BJI **Beijing** 45.26 282 P P 02 26 37.3 +0.2
BJI S S 02 33 13.5 +0.3
BJI AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
BJI LR LR
comp=N,242nm,22.0s
BJI LR LR
comp=E,301nm,27.6s
BJI LR LR
comp=Z,167nm,24.2s,MS3.9
RLMT **Red Lodge** 45.30 69 ⇑P P 02 26 37.6 +0.3
baz=45
ISA **Isabella** 45.32 86 ⇓P P 02 26 37.1 -0.5
baz=45
ISA **Isabella** 45.32 86 *e*P P 02 26 36.6 -1.0
ISA pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ISA **Isabella** 45.32 86 *e*P P 02 26 36.6 -1.0
comp=Z,4.2nm,0.9s,mb4.3
REDW **Red Top Meadow** 45.36 72 *e*P P 02 26 38.6 +0.8
comp=Z,11nm,1.1s,mb4.6
SNOW **Snow King Moun** 45.36 72 *e*P P 02 26 38.6 +0.9
comp=Z,20nm,1.2s,mb4.8
LOHW **Long Hollow** 45.36 72 *e*P P 02 26 38.4 +0.6
IRK **Irkutsk** 45.38 303 *e*P P 02 26 37.5 -0.4
IRK pmax pmax
comp=Z,48nm,1.2s,mb5.2
N14A **Grayback Hills** 45.41 76 ⇓P P 02 26 38.7 +0.5
baz=45,SNR=11
J17A **Brown Place, J** 45.44 72 ⇓P P 02 26 38.9 +0.4
baz=45,SNR=8.4
R11A **Troy Canyon, C** 45.44 81 ⇓P P 02 26 38.4 -0.1
baz=45,SNR=6.1
Q12A **Willow Creek R** 45.49 79 ⇑P P 02 26 39.7 +0.8
baz=45
M15A **Larsen Ranch,** 45.50 75 ⇑P P 02 26 39.0 +0.1
baz=45,SNR=8.9
SPUT **South Promonto** 45.59 75 *e*P P 02 26 40.3 +0.6
MPMC **Manual Prospec** 45.68 85 ⇓P P 02 26 39.9 -0.6
baz=46
P13A **Bates Ranch, G** 45.74 78 ⇓P P 02 26 41.0 +0.2
baz=46
I18A **Diamond G Ranc** 45.78 71 ⇑P P 02 26 41.7 +0.6
baz=46,SNR=13
L16A **Fish Haven** 45.79 74 ⇑P P 02 26 41.4 +0.2
baz=46
N15A **Stansbury Isla** 45.79 76 ⇑P P 02 26 41.6 +0.3
baz=46,SNR=16
FURC **Furnace Creek,** 45.82 84 ⇓P P 02 26 41.3 -0.3
baz=46
TPNV **Topopah Spring** 45.90 83 ⇓P P 02 26 41.5 -0.6
baz=46
TPNV **Topopah Spring** 45.90 83 *e*P P 02 26 41.8 -0.3
TPNV pmax pmax
comp=Z,12nm,0.8s,mb4.9
TPNV **Topopah Spring** 45.90 83 *e*P P 02 26 41.8 -0.4
comp=Z,12nm,0.8s,mb4.9
J18A **Kendall Valley** 45.94 72 ⇓P P 02 26 42.6 +0.2
baz=46,SNR=13
TLY **Talaya** 46.01 302 *e*P P 02 26 43.7 +0.9
TLY pmax pmax
comp=Z,14nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,343nm,19.0s,MS4.3
DUG **Dugway** 46.03 77 ⇓P P 02 26 43.5 +0.3
baz=46
DUG **Dugway** 46.03 77 *e*P P 02 26 43.3 +0.2
DUG pmax pmax
comp=Z,40nm,1.1s,mb5.3
DUG **Dugway** 46.03 77 *e*P P 02 26 43.3 +0.2
comp=Z,40nm,1.1s,mb5.3
Q13A **Wheeler Ranch,** 46.04 79 ⇑P P 02 26 44.2 +1.0
baz=46,SNR=8.0
R12A **Pony Springs,** 46.06 80 ⇑P P 02 26 43.7 +0.3
baz=46
M16A **Huntsville** 46.08 75 ⇓P P 02 26 43.7 +0.2
baz=46,SNR=15
FCC **Fort Churchill** 46.14 46 *e*P P 02 26 42.7 -1.0
O15A **The Old Anders** 46.19 77 ⇑P P 02 26 44.7 +0.3
baz=46
ULN **Ulaanbaatar** 46.19 296 ⇑*e*P P 02 26 44.0 -0.3
ULN **Ulaanbaatar** 46.19 296 *e*P P 02 26 44.5 +0.3
comp=Z,22nm,1.0s,mb5.0
P14A **Drum Mountains** 46.24 78 ⇓P P 02 26 45.5 +0.7
baz=46,SNR=8.6
K18A **Toltan Ranch,** 46.26 72 ⇓P P 02 26 45.5 +0.6
baz=46,SNR=19
T11A **Corn Creek, Al** 46.35 82 ⇑P P 02 26 45.6 -0.1
baz=46
S12A **Delamar Landin** 46.36 81 ⇓P P 02 26 45.6 -0.1
baz=46
BW06 **Boulder Array** 46.47 72 ⇑P P 02 26 46.7 +0.1
baz=46
BW06 **Boulder Array** 46.47 72 *e*P P 02 26 46.4 -0.2
comp=Z,30nm,0.8s,mb5.3
PDAR **Pinedale Array** 46.47 72 P P 02 26 46.5 0.0
comp=Z,40nm,0.9s,mb5.3,baz=310,slow=3.3,SNR=159
PDAR LR LR 02 43 39.7
comp=Z,190nm,18.7s,MS4.1,baz=314,slow=33
Q14A **Sevier Lake (B** 46.48 79 ⇑P P 02 26 47.2 +0.6
baz=46,SNR=12
SHOC **Shoshone** 46.54 84 ⇓P P 02 26 47.2 0.0
baz=46
R13A **O'Grain Ranch,** 46.55 80 ⇓P P 02 26 47.7 +0.5
baz=46
M17A **Scullys Gap (B** 46.57 74 ⇓P P 02 26 47.3 -0.1
baz=46
SONM **Songino Array** 46.57 297 P P 02 26 47.9 +0.6
comp=Z,4.4nm,1.0s,mb4.3,baz=167,slow=20,SNR=5.1
SONM ScP ScP 02 32 13.9 +4.7
comp=Z,1.2nm,0.9s,baz=35,slow=5.3,SNR=5.3
SONM LR LR 02 47 38.2
comp=Z,610nm,18.8s,MS4.6,baz=330,slow=38
GSC **Goldstone** 46.59 85 ⇓P P 02 26 47.3 -0.4
baz=46
GSC **Goldstone** 46.59 85 *e*P P 02 26 47.5 -0.1
GSC pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
GSC **Goldstone** 46.59 85 *e*P P 02 26 47.5 -0.2
comp=Z,5.9nm,0.7s,mb4.6
NLU **North Lily Min** 46.62 77 *e*P P 02 26 48.8 +1.0
L18A **Fontenelle, Gr** 46.68 73 ⇓P P 02 26 48.0 -0.2
baz=46,SNR=12
P15A **Leamington** 46.73 77 ⇑P P 02 26 48.6 0.0
baz=47
N17A **Moffit Pass** 46.78 75 ⇓P P 02 26 49.1 +0.1
baz=47,SNR=5.6
O16A **Springville** 46.82 76 ⇑P P 02 26 49.7 +0.3
baz=47,SNR=7.1
DAU **Daniels Canyon** 46.85 76 *e*P P 02 26 50.8 +1.3
K19A **Absolon Red Bu** 46.86 72 ⇑P P 02 26 49.3 -0.3
baz=47,SNR=27
ZAK **Zakamensk** 46.89 301 ⇑*i*P P 02 26 50.5 +0.7
ZAK pmax pmax
comp=Z,21nm,1.2s,mb4.9
M18A **Lyman** 46.96 74 ⇑P P 02 26 50.1 -0.3
baz=47
S13A **Holt Ranch, En** 46.99 80 ⇓P P 02 26 50.5 -0.1
baz=47,SNR=7.3
Q15A **Fillmore** 47.02 78 ⇑P P 02 26 50.7 -0.2
baz=47
K20A **Yellowstone Ra** 47.26 71 ⇓P P 02 26 52.2 -0.6
baz=47,SNR=10
U12A **Valley of Fire** 47.29 82 ⇓P P 02 26 52.9 -0.1
baz=47
O17A **Robinson Place** 47.29 76 ⇑P P 02 26 52.8 -0.2
baz=47
S14A **Cedar City** 47.30 80 ⇓P P 02 26 53.1 0.0
baz=47
T13A **Saint George** 47.31 81 ⇑P P 02 26 53.7 +0.5
baz=47,SNR=6.3
MOY **Mondy** 47.41 304 *e*P P 02 26 54.9 +1.1
M19A **Rock Springs** 47.46 73 ⇑P P 02 26 54.4 +0.1
baz=47
N18A **Larsen Ranch,** 47.47 74 ⇓P P 02 26 53.2 -1.2
baz=47
V12A **Nelson** 47.54 83 ⇑P P 02 26 54.8 -0.2
baz=47
R15A **Junction** 47.57 79 ⇓P P 02 26 55.2 0.0
baz=47
HHC **Hu-ho-hao-te** 47.59 286 *e*P P 02 26 55.8 +0.5
HHC AP pP 02 27 05.3 -4.3
HHC XP sP 02 27 09.8 -6.1
HHC PCS PcS 02 32 20.3 +0.6
HHC *e*S S 02 33 45.3 -1.2
HHC XS sS 02 34 03.3 -7.3
HHC SCS ScS 02 36 39.8 -3.9
HHC SS SS 02 37 08.3 -6.3
HHC AMB AMB
comp=Z,14nm,1.2s,mb4.9
HHC AMB AMB
comp=Z,208nm,5.3s
HHC LR LR
comp=N,204nm,13.1s,MS4.4
HHC LR LR
comp=E,220nm,14.3s,MS4.4
HHC LR LR
comp=Z,342nm,20.2s
GMRC **Granite Mounta** 47.65 85 ⇑P P 02 26 55.6 -0.3
baz=48
L20A **Wamsutter** 47.65 72 ⇑P P 02 26 55.6 -0.2
baz=48,SNR=6.3
U13A **Pakoon Wash** 47.66 82 ⇓P P 02 26 56.0 +0.1
baz=48
P17A **Butcher Ranch,** 47.73 76 ⇓P P 02 26 56.8 +0.3
baz=48
LDFC **Landfair** 47.80 84 *e*P P 02 26 56.6 -0.4
comp=Z,5.7nm,0.5s,mb4.9
Q16A **Castle Valley** 47.81 77 ⇓P P 02 26 57.3 +0.2
baz=48
N19A **John Jarvie Ra** 47.82 74 ⇓P P 02 26 57.4 +0.3
baz=48
P18A **Preston Nutter** 47.94 76 ⇓P P 02 26 58.2 +0.2
baz=48
BELC **Belle Mtn.** 47.95 86 ⇑P P 02 26 58.2 0.0
baz=48
V13A **Grand Canyon W** 48.00 82 ⇓P P 02 26 58.4 -0.1
baz=48
R16A **Teasdale** 48.01 78 ⇓P P 02 26 59.2 +0.6
baz=48,SNR=11
M20A **Sweetwater, Wa** 48.05 73 ⇑P P 02 26 58.8 -0.1
baz=48,SNR=12
SRU **San Rafael** 48.09 77 ⇓P P 02 26 58.5 -0.7
baz=48
U14A **Mt Trumbull** 48.14 81 ⇑P P 02 26 59.4 -0.3
baz=48
L21A **Rawlins** 48.26 72 ⇓P P 02 26 59.8 -0.7
baz=48,SNR=12
T15A **Red Dirt Ranch** 48.26 80 ⇓P P 02 27 00.2 -0.3
baz=48
S16A **Weppner Ranch,** 48.30 79 ⇓P P 02 27 00.5 -0.3
baz=48
Q18A **Rafter H Ranch** 48.33 76 ⇓P P 02 27 00.7 -0.4
baz=48,SNR=7.2
N20A **Spence Gulch,** 48.40 73 ⇑P P 02 27 01.5 -0.1
baz=48,SNR=11
R17A **Hanksville Air** 48.40 77 ⇓P P 02 27 01.6 0.0
baz=48,SNR=13
W13A **Hualapai Mount** 48.55 83 ⇓P P 02 27 02.7 -0.1
baz=48
NJ2 **Nanjing** 48.68 272 *e*P P 02 27 06.4 +2.6
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.3
U15A **North Rim** 48.69 81 ⇑P P 02 27 03.8 0.0
baz=48,SNR=9.2
V14A **Boquillas Ranc** 48.69 82 ⇓P P 02 27 03.7 -0.1
baz=48
P19A **Cripple Cowboy** 48.70 75 ⇑P P 02 27 04.0 +0.1
baz=48,SNR=28
L22A **Ellis Ranch, M** 48.77 71 ⇑P P 02 27 04.6 +0.2
baz=49
S17A **Black Ridge (B** 48.84 78 ⇑P P 02 27 05.3 +0.3
baz=49,SNR=15
O20A **White River Ci** 48.84 74 ⇑P P 02 27 04.7 -0.3
baz=49,SNR=23
N21A **Black Mountain** 48.90 73 ⇓P P 02 27 05.4 +0.1
baz=49,SNR=6.3
R18A **Canyonlands Na** 48.92 77 ⇓P P 02 27 05.1 -0.5
baz=49,SNR=9.0
RSSD **Black Hills** 48.93 67 *e*P P 02 27 04.4 -1.2
RSSD pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
RSSD **Black Hills** 48.93 67 *e*P P 02 27 04.4 -1.2
comp=Z,7.4nm,0.9s,mb4.7
Q19A **Hogan Spring (** 48.95 76 ⇓P P 02 27 05.6 -0.3
baz=49,SNR=22
W14A **Seligman** 48.98 82 ⇑P P 02 27 06.1 0.0
baz=49
M22A **Cedar Creek Ra** 49.06 72 ⇓P P 02 27 06.4 -0.2
baz=49,SNR=16
V15A **Kaibab Nationa** 49.15 81 ⇓P P 02 27 07.6 +0.2
baz=49,SNR=8.0
O21A **Pagoda** 49.26 73 ⇑P P 02 27 08.0 -0.2
baz=49,SNR=6.9
S18A **Hurst Farm, Bl** 49.30 78 ⇓P P 02 27 08.5 0.0
baz=49,SNR=21
R19A **Curley Farm, L** 49.37 77 ⇓P P 02 27 09.4 +0.3
baz=49
N22A **Wattenberg Ran** 49.51 72 ⇑P P 02 27 10.5 +0.4
baz=49,SNR=16
Q20A **Ridgley Place,** 49.54 75 ⇓P P 02 27 09.7 -0.7
baz=49,SNR=10

X14A Yava 49.58 83 ⇑P P 02 27 10.2 -0.5
baz=49
T18A Mexican Hat 49.73 78 ⇑P P 02 27 11.2 -0.5
baz=50,SNR=18
S19A Harvey Farm, M 49.79 77 ⇓P P 02 27 12.1 -0.2
baz=50,SNR=9.6
WUAZ Wupatki 49.84 81 ⇓P P 02 27 12.4 -0.3
baz=50
WUAZ Wupatki 49.84 81 eP P 02 27 12.5 -0.1
comp=Z,7.5nm,0.8s,mb4.8
Y14A Wickenburg 49.86 84 ⇓P P 02 27 12.3 -0.5
baz=50
ULM Lac du Bonnet 49.86 56 P P 02 27 11.4 -1.1
comp=Z,1.4nm,0.3s,mb4.4,baz=294,slow=4.8,SNR=3.6
ULM LR LR 02 47 40.4
comp=Z,283nm,19.1s,MS4.3,baz=272,slow=35
X15A Humboldt 49.98 82 ⇓P P 02 27 13.5 -0.2
baz=50
U18A Rough Rock, Ch 50.19 79 ⇑P P 02 27 15.0 -0.3
baz=50
Y15A Casa Rosa Ranc 50.27 83 ⇓P P 02 27 15.5 -0.4
baz=50
R21A Cimarron 50.37 75 ⇑P P 02 27 17.0 +0.5
baz=50,SNR=9.3
T19A Beclabito 50.45 78 ⇓P P 02 27 17.2 0.0
baz=50,SNR=22
SPITS Spitsbergen Ar 50.48 356 P P 02 27 16.9 0.0
comp=Z,15nm,0.5s,mb5.3,baz=33,slow=4.6,SNR=21
X16A Lo Mia Camp, P 50.52 82 ⇑P P 02 27 17.7 -0.1
baz=50
MVCO Mesa Verde 50.52 77 ⇑P P 02 27 17.9 +0.1
baz=50
MVCO Mesa Verde 50.52 77 eP P 02 27 17.8 0.0
comp=Z,6.0nm,0.6s,mb4.7
V18A Ganado 50.61 80 ⇑P P 02 27 19.1 +0.6
baz=50
115A Sonoran Desert 51.17 84 ⇓P P 02 27 22.3 -0.3
baz=51
Y17A Roosevelt 51.37 82 ⇑P P 02 27 24.1 -0.1
baz=51
SDCO Great Sand Dun 52.01 75 eP P 02 27 29.4 +0.6
comp=Z,11nm,1.0s,mb4.8
117A Oracle 52.18 83 ⇓P P 02 27 30.0 -0.2
baz=52
TUC Tucson 52.33 83 eP P 02 27 30.6 -0.7
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TUC Tucson 52.33 83 eP P 02 27 30.6 -0.7
comp=Z,3.3nm,0.8s,mb4.3
118A Homack Ranch, 52.62 83 ⇓P P 02 27 33.5 0.0
baz=52
218A Dragoon 53.02 83 ⇓P P 02 27 36.2 -0.2
baz=53
FRB Frobisher Bay 53.19 31 P P 02 27 36.4 -0.9
comp=Z,23nm,0.9s,mb5.1,baz=318,slow=8.3,SNR=35
ANMO Albuquerque 53.25 78 P P 02 27 37.2 -0.9
comp=Z,3.6nm,1.0s,mb4.2,baz=322,slow=7.0,SNR=7.6
ANMO LR LR 02 46 33.6
comp=Z,233nm,20.6s,MS4.2,baz=128,slow=32
ANMO Albuquerque 53.25 78⇑ eP P 02 27 36.9 -1.2
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 53.25 78 eP P 02 27 37.4 -0.7
comp=Z,5.3nm,1.1s,mb4.4
ECSD EROS,Sioux Fal 53.41 64 eP P 02 27 37.3 -1.8
comp=Z,11nm,1.0s,mb4.8
SUMG Summit 53.44 14 eP P 02 27 38.7 -0.3
comp=Z,21nm,0.9s,mb5.1
219A White Tail Can 53.49 83 ⇑P P 02 27 39.7 -0.2
baz=53
XAN Xi'an 53.55 281 P P 02 27 40.0 -0.3
XAN AP pP 02 27 51.3 -3.6
XAN PP PP 02 29 40.3 -0.8
XAN S **S** **02 35 09.8 +0.6**
XAN SS SS 02 38 51.6 +1.9
XAN AMB AMB
comp=Z,7.0nm,1.2s,mb4.5
XAN AMB AMB
comp=Z,142nm,8.6s
XAN LR LR
comp=N,39nm,23.3s,MS3.8
XAN LR LR
comp=E,81nm,24.1s,MS3.8
XAN LR LR
comp=Z,185nm,21.8s,MS4.1
319A Douglas 53.90 83 ⇑P P 02 27 43.0 +0.1
baz=54
ZALV Zalesovo Beam 54.01 313 P P 02 27 42.1 -1.3
comp=Z,1.1nm,0.6s,mb3.9,baz=20,slow=4.7,SNR=6.0
ZALV PcP PcP 02 28 48.5 +0.7
comp=Z,8.1nm,1.0s,baz=29,slow=3.3,SNR=11
ZALV LR LR 02 51 37.6
comp=Z,143nm,21.4s,MS4.0,baz=82,slow=37
ZALV Zalesovo Beam 54.01 313 P P 02 27 42.1 -1.3
ZALV 02 28 48.5
NVS Novosibirsk 54.15 315 eP P 02 27 42.3 -2.1
NVS e 02 28 48.1
NVS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,7.0nm,1.3s
CBKS Cedar Bluff 54.76 70 eP P 02 27 48.8 -0.3
CBKS pmax pmax
comp=Z,34nm,1.0s,mb5.3
CBKS Cedar Bluff 54.76 70 eP P 02 27 48.8 -0.3
comp=Z,34nm,1.0s,mb5.3
LZH Lanzhou 55.28 286 eP P 02 27 53.9 +1.0
LZH PP PP 02 29 59.0 +2.4
LZH eS **S** **02 35 30.3 -2.3**
LZH SS SS 02 39 15.1 -1.9
LZH AMB AMB
comp=Z,42nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,160nm,5.0s
LZH LR LR
comp=E,523nm,14.4s
LZH LR LR
comp=Z,853nm,15.9s,MS4.9
GTA Gaotai 55.48 292 ⇑P P 02 27 54.9 +0.7
GTA PP PP 02 30 01.8 +3.5
GTA S **S** **02 35 36.3 +1.2**
GTA SS SS 02 39 23.1 +3.2
GTA AMB AMB
comp=Z,13nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,97nm,4.8s
GTA LR LR
comp=N,279nm,14.9s,MS4.5
GTA LR LR
comp=E,196nm,15.2s,MS4.5
GTA LR LR
comp=Z,224nm,16.9s,MS4.3
AMTX Amarillo 56.21 75 eP P 02 28 00.1 +0.6
comp=Z,7.3nm,0.6s,mb4.9
KSU1 Kansas State U 56.41 68 eP P 02 27 59.5 -1.4
comp=Z,18nm,0.8s,mb5.2
SCIA State Center 56.49 63 eP P 02 28 01.0 -0.4
comp=Z,28nm,0.9s,mb5.3
JFWS Jewell Farm 57.47 61 eP P 02 28 06.6 -1.7
JFWS pmax pmax
comp=Z,16nm,0.9s,mb5.0
JFWS Jewell Farm 57.47 61 eP P 02 28 06.6 -1.7
comp=Z,16nm,0.9s,mb5.0
WMOK Wichita Mounta 58.06 73 eP P 02 28 12.3 -0.3
WMOK pmax pmax
comp=Z,11nm,1.0s,mb4.8
WMOK Wichita Mounta 58.06 73 eP P 02 28 12.3 -0.2
comp=Z,11nm,1.0s,mb4.9
ARCES ARCESS Array B 58.18 350 P P 02 28 11.4 -1.5
comp=Z,14nm,0.9s,mb5.0,baz=7.8,slow=9.8,SNR=6.6
ARCES LR LR 02 54 39.8
comp=Z,375nm,18.9s,MS4.5,baz=31,slow=38
TXAR Lajitas Array 58.81 81 P P 02 28 16.8 -1.0
comp=Z,3.3nm,0.9s,mb4.4,baz=300,slow=4.3,SNR=19
TXAR LR LR 02 53 10.5
comp=Z,94nm,18.8s,MS3.9,baz=340,slow=36
CD2 Chengdu 58.86 282 P P 02 28 19.4 +1.2
CD2 PCP PcP 02 29 09.0 +1.9
CD2 PP PP 02 30 31.0 +2.5
CD2 PCS PcS 02 33 09.4 +0.4
CD2 S **S** **02 36 19.0 -0.8**
CD2 SS SS 02 40 13.4 0.0
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,130nm,5.9s
CD2 LR LR
comp=N,180nm,7.1s
CD2 LR LR
comp=Z,240nm,10.7s,MS4.6
KURK Kurchatov 59.00 314 eP P 02 28 18.1 -0.8
KURK e 02 29 06.8
KURK pmax pmax
comp=Z,19nm,1.0s,mb5.1
KURK Kurchatov 59.00 314 eP P 02 28 18.1 -0.8
comp=Z,19nm,1.0s,mb5.1
KURK ePcP PcP 02 29 06.8 -0.5
WMQ Urumqi 59.29 303 P P 02 28 22.9 +1.9
WMQ AMB AMB
comp=Z,23nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,180nm,4.5s
WMQ LR LR
comp=N,302nm,29.0s,MS4.3
WMQ LR LR
comp=E,163nm,28.0s,MS4.3
WMQ LR LR
comp=Z,356nm,22.0s
HDIL Hopedale 59.59 62 eP P 02 28 21.9 -1.2
comp=Z,65nm,0.9s,mb5.7
MKAR Makanchi Array 59.99 308 P P 02 28 24.8 -1.0
comp=Z,1.4nm,0.4s,mb4.4,baz=51,slow=5.7,SNR=16
MKAR LR LR 02 54 37.6
comp=Z,230nm,21.6s,MS4.3,baz=31,slow=36
SCHQ Schefferville 60.18 38 P P 02 28 25.7 -1.2
comp=Z,14nm,1.1s,mb4.9,baz=341,slow=7.1,SNR=5.7
SCHQ LR LR 02 56 18.5
comp=Z,367nm,18.7s,MS4.5,baz=353,slow=38
GYA Guiyang 60.20 276 P P 02 28 27.3 -0.2
GYA AP pP 02 28 40.3 -2.0
GYA PP PP 02 30 40.3 -0.1
GYA SCP ScP 02 33 10.3 +1.6
GYA PCS PcS 02 33 15.5 +0.4
GYA S **S** **02 36 30.3 -6.8**
GYA XS sS 02 36 51.4 -11
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,80nm,4.4s
GYA LR LR
comp=N,420nm,17.5s,MS4.8
GYA LR LR
comp=E,390nm,16.8s,MS4.8
GYA LR LR
comp=Z,560nm,17.3s,MS4.8
JCT Junction City 60.39 77 eP P 02 28 28.9 +0.2
JCT pmax pmax
comp=Z,11nm,1.0s,mb4.8
JCT Junction City 60.39 77 eP P 02 28 28.9 +0.2
comp=Z,11nm,1.0s,mb4.9
BRVK Borovoye 60.90 320 eP P 02 28 31.5 -0.4
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
BRVK Borovoye 60.90 320 eP P 02 28 31.5 -0.4
comp=Z,4.9nm,0.9s,mb4.6
MIAR Mount Ida 61.29 70 eP P 02 28 33.6 -1.2
MIAR pmax pmax
comp=Z,18nm,1.0s,mb5.2
MIAR Mount Ida 61.29 70 eP P 02 28 33.6 -1.2
comp=Z,18nm,1.0s,mb5.2
OLIL Olney 61.52 63 eP P 02 28 35.7 -0.6
comp=Z,61nm,0.9s,mb5.7
BLO Bloomington 62.08 62 eP P 02 28 39.3 -0.8
BLO pmax pmax
comp=Z,47nm,0.9s,mb5.6
BLO Bloomington 62.08 62 eP P 02 28 39.3 -0.8
comp=Z,47nm,0.9s,mb5.6
USIN University of 62.30 63 eP P 02 28 40.6 -0.9
comp=Z,50nm,1.0s,mb5.6
ARU Arti 62.62 328 eP P 02 28 43.1 -0.3
ARU e 02 30 57.9
ARU S **S** **02 37 10.8 +3.8**
WCI Wyandotte Cave 62.88 62 eP P 02 28 44.4 -1.0
WCI pmax pmax
comp=Z,33nm,0.9s,mb5.5
WCI Wyandotte Cave 62.88 62 eP P 02 28 44.4 -0.9
comp=Z,33nm,0.9s,mb5.5
HKT Hockley 63.18 75 eP P 02 28 47.8 +0.3
HKT pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
HKT Hockley 63.18 75 eP P 02 28 47.8 +0.3
comp=Z,8.9nm,1.2s,mb4.8
WVT Waverly 63.50 65 eP P 02 28 48.9 -0.6
WVT pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
WVT Waverly 63.50 65 eP P 02 28 48.9 -0.7
comp=Z,6.3nm,0.8s,mb4.7
KMI Kunming 63.60 278 P P 02 28 50.0 -0.4
KMI S **S** **02 37 20.3 +0.2**
KMI AMB AMB
comp=Z,12nm,0.7s,mb5.0
KMI LR LR
comp=Z,77nm,23.5s,MS3.8
JOF Joensuu 63.67 345 ep P 02 28 49.0 -1.2
comp=Z,5.7nm,0.6s,mb4.8
JOF Joensuu 63.67 345 eP P 02 28 49.0 -1.2
JOF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
OXF Oxford 63.75 67 eP P 02 28 50.2 -1.0
OXF pmax pmax
comp=Z,98nm,1.4s,mb5.7
OXF Oxford 63.75 67 eP P 02 28 50.2 -1.0
comp=Z,98nm,1.4s,mb5.7
KLMR Klimovskoe 64.03 340 eP P 02 28 51.4 -1.2
KLMR pmax pmax
comp=Z,27nm,1.2s,mb5.2
KAF Kangasniemi 65.19 347 ep P 02 28 59.2 -0.9
comp=Z,8.6nm,0.6s,mb5.0
KAF Kangasniemi 65.19 347 eP P 02 28 59.2 -0.9
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
TZTN Tazewell 65.61 62 eP P 02 29 02.9 -0.3
comp=Z,35nm,1.4s,mb5.2
SSPA Standing Stone 65.64 55 eP P 02 29 02.8 -0.6
comp=Z,22nm,1.3s,mb5.0
TKM2 Tokmak 2 66.08 309 eP P 02 29 06.6 +0.4
TKM2 pmax pmax
comp=Z,14nm,1.0s,mb5.0
TKM2 Tokmak 2 66.08 309 P P 02 29 06.9 +0.7
SNR=11
TKM2 Tokmak 2 66.08 309 eP P 02 29 06.6 +0.4
comp=Z,14nm,1.0s,mb5.0
TKL Tuckaleechee C 66.12 62 P P 02 29 06.5 -0.1
comp=Z,19nm,0.8s,mb5.2,baz=305,slow=7.9,SNR=26
TKL Tuckaleechee C 66.12 62 eP P 02 29 06.0 -0.6
LRAL Lakeview Retre 66.20 67 eP P 02 29 05.9 -1.2
comp=Z,8.4nm,0.7s,mb4.9
USP Ospenovka 66.35 310 P P 02 29 09.7 +1.8
SNR=22
KBK Karagaybulak 66.59 309 P P 02 29 10.8 +1.3
SNR=9.4
FRU Bishkek 66.62 310 eP P 02 29 09.5 -0.2
AAK Ala-Archa 66.83 310 eP P 02 29 10.5 -0.5
AAK pmax pmax
comp=Z,18nm,1.0s,mb5.1
AAK Ala-Archa 66.83 310 P P 02 29 12.3 +1.3
SNR=13
AAK Ala-Archa 66.83 310 eP P 02 29 10.5 -0.5
comp=Z,18nm,1.0s,mb5.0
KZA Kyzart 66.88 309 P P 02 29 13.2 +1.8
SNR=9.4
EKS2 Erkin-Say 67.15 310 P P 02 29 14.6 +1.6
SNR=18
EKS2 Erkin-Say 67.15 310 eP P 02 29 13.7 +0.6
comp=Z,21nm,1.0s,mb5.1
LSA Lhasa 67.35 289 P P 02 29 16.0 +1.5
LSA Lhasa 67.35 289 eP P 02 29 16.1 +1.6
LSA pmax pmax
comp=Z,14nm,0.8s,mb5.0
LSA Lhasa 67.35 289 eP P 02 29 16.1 +1.6
comp=Z,14nm,0.8s,mb5.0
AML Almayashu 67.60 310 P P 02 29 17.8 +1.9
SNR=19
AML Almayashu 67.60 310 eP P 02 29 17.4 +1.5
comp=Z,20nm,1.0s,mb5.1
NB2 NORSAR Subarra 67.74 355 P P 02 29 15.7 -0.8
comp=Z,2.6nm,0.7s,mb4.4,baz=6.6,slow=6.5
NOA NORSAR Array B 67.74 355 P P 02 29 16.3 -0.2
comp=Z,3.8nm,0.8s,mb4.5,baz=6.5,slow=6.3,SNR=10
NOA LR LR 02 57 28.1
comp=Z,214nm,18.7s,MS4.4,baz=0.0,slow=35
NOA NORSAR Array B 67.74 355 P P 02 29 16.3 -0.2
NOA LR LR 02 57 28.1
GOGA Godfrey 67.94 64 eP P 02 29 16.9 -1.3
GOGA pmax pmax
comp=Z,12nm,0.8s,mb5.0
GOGA Godfrey 67.94 64 eP P 02 29 16.9 -1.2
comp=Z,12nm,0.8s,mb5.0
OBN Obninsk 69.92 339⇓ eP P 02 29 30.0 -0.1
OBN e 02 32 09.0
OBN eS S 02 38 37.6 +2.1
OBN pmax pmax
comp=Z,47nm,0.9s,mb5.4
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.7
OBN Obninsk 69.92 339 eP P 02 29 29.8 -0.3
comp=Z,42nm,0.9s,mb5.4
SHL Shillong 69.95 286 eP P 02 29 30.5 -0.2
NHSC New Hope 70.01 62 eP P 02 29 31.0 0.0
comp=Z,19nm,0.6s,mb5.2
CHTO Chiang Mai 70.62 276 eP P 02 29 34.1 -0.8
CHTO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CHTO Chiang Mai 70.62 276 eP P 02 29 34.1 -0.8
comp=Z,4.9nm,1.0s,mb4.4
CMAR Chiang Mai Arr 70.89 276 P P 02 29 35.2 -1.3
comp=Z,3.0nm,1.0s,mb4.2,baz=25,slow=6.9,SNR=10
CMAR LR LR 03 02 53.6
comp=Z,76nm,19.6s,MS4.0,baz=47,slow=38
GUN Gumba 71.77 292 eP P 02 29 42.8 +1.0
comp=Z,141nm,0.7s,mb6.0
JIRN Jiri 71.78 291 eP P 02 29 42.7 +0.9
comp=Z,70nm,0.7s,mb5.7
KKN Kakani 72.21 292 eP P 02 29 45.0 +0.6
comp=Z,20nm,0.5s,mb5.3
KKN Kakani 72.21 292 eP P 02 29 45.0 +0.6
KKN pmax pmax
comp=Z,20nm,0.5s,mb5.3
PKI Pulchoki 72.30 292 eP P 02 29 45.6 +0.7
comp=Z,29nm,0.8s,mb5.3
PKI Pulchoki 72.30 292 eP P 02 29 45.6 +0.7
PKI pmax pmax
comp=Z,29nm,0.8s,mb5.3
GKN Gorkha 72.42 293 eP P 02 29 46.2 +0.5
comp=Z,58nm,1.1s,mb5.4
DMN Daman 72.45 292 eP P 02 29 46.0 +0.2
comp=Z,32nm,1.0s,mb5.2
DANN Dangsing 72.67 294 eP P 02 29 48.0 +0.9
comp=Z,49nm,0.7s,mb5.5
KOLN Koldanda 73.20 293 eP P 02 29 49.9 -0.4
comp=Z,25nm,0.9s,mb5.1
PPT Papeete 73.23 151 eLR LR 02 52 00.9
comp=Z,338nm,26.2s
PPT Papeete 73.23 151 LR LR 02 56 43.0
comp=Z,233nm,19.3s,MS4.5,baz=319,slow=32
SUW Suwalki 73.45 347 eP P 02 29 50.8 -0.5
SUW Suwalki 73.45 347 eP P 02 29 50.8 -0.5
EKA Eskdalemuir Ar 73.71 2 P P 02 29 53.0 +0.2
comp=Z,6.1nm,0.9s,mb4.5,baz=351,slow=5.5,SNR=11
BSEG Bad Segeberg 74.88 354 eP P 02 30 00.0 +0.4
BSEG pmax pmax
comp=Z,22nm,1.0s,mb5.0
BSEG Bad Segeberg 74.88 354 eP P 02 30 00.0 +0.4
comp=Z,22nm,1.0s,mb5.0
AKASG Malin Array Be 75.61 342 P P 02 30 03.4 -0.5
comp=Z,31nm,0.8s,mb5.3,baz=21,slow=6.1,SNR=60
AKASG LR LR 03 08 51.3
comp=Z,164nm,19.5s,MS4.3,baz=5.0,slow=40
AKASG Malin Array Be 75.61 342 P P 02 30 03.4 -0.5
AKASG LR LR 03 08 51.2
AKBB Malin Array Si 75.61 342 eP P 02 30 03.3 -0.6
KIEV Kiev 75.62 342 eP P 02 30 03.0 -0.9
KIEV pmax pmax
comp=Z,45nm,1.0s,mb5.3
KIEV Kiev 75.62 342 eP P 02 30 03.0 -1.0
comp=Z,45nm,1.0s,mb5.3
NRDL Niedersach Rie 76.33 354 eP P 02 30 08.0 +0.1
comp=Z,24nm,1.1s,mb5.0
IBBN Ibbenburen 76.64 356 eP P 02 30 10.1 +0.4
comp=Z,47nm,1.2s,mb5.3
CLZ Clausthal 76.96 354 eP P 02 30 11.9 +0.4
CLZ pmax pmax
comp=Z,29nm,1.1s,mb5.1
CLZ Clausthal 76.96 354 eP P 02 30 11.9 +0.4
comp=Z,29nm,1.1s,mb5.1
WTSB Winterswijk 77.02 356 eP P 02 30 12.1 +0.3
CLL Collm 77.29 352 eP P 02 30 12.7 -0.7
comp=Z,8.0nm,1.0s,mb4.6
CLL Collm 77.29 352 i P P 02 30 12.8 -0.6
comp=Z,8.0nm,1.0s,mb4.6
CLL Lm 02 12 00.0
comp=N,200nm,20.7s
CLL Lm 02 12 00.0
comp=E,500nm,19.6s
CLL Lm 02 12 00.0
comp=Z,700nm,19.2s
LVV L'vov 77.39 345 eP P 02 30 12.9 -1.1
GOF Gofitskoye 77.40 331 eP P 02 30 07.4 -6.7
GOF pmax pmax
comp=Z,80nm,1.3s,mb5.5
KSP Ksiaz 77.44 350 eP P 02 30 14.4 +0.2
OJC Ojcow 77.63 348 eP P 02 30 15.1 -0.2
BRG Berggiesshubel 77.64 352 eP P 02 30 15.0 -0.3
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 77.64 352 eP P 02 30 14.8 -0.5
comp=Z,6.0nm,1.0s,mb4.5
BRG Berggiesshubel 77.64 352 eP P 02 30 15.0 -0.4
comp=Z,6.0nm,1.0s,mb4.5
FBE Freiberg 77.65 352 eP P 02 30 15.1 -0.3
comp=Z,16nm,1.0s,mb4.9
KWP Kalwaria 77.78 346 eP P 02 30 17.0 +0.9
KWP Kalwaria 77.78 346 i P P 02 30 16.8 +0.7
KWP Kalwaria 77.78 346 eP P 02 30 17.0 +0.9
UPC Upice 77.80 350 eP P 02 30 16.4 +0.2
DPC Dobruska-Polom 77.92 350 eP P 02 30 17.0 +0.1
PVCC Panska Ves 77.92 351 eP P 02 30 15.5 -1.4
MOX Moxa 78.06 353 eP P 02 30 17.4 -0.3
comp=Z,10.0nm,1.0s,mb4.7
MOX Moxa 78.06 353 eP P 02 30 17.4 -0.3
MOX pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MOX Moxa 78.06 353 eP P 02 30 17.5 -0.2
comp=Z,12nm,1.1s,mb4.7
WERD Werda 78.20 353 eP P 02 30 18.0 -0.5
comp=Z,10.0nm,1.2s,mb4.6
STHS Stebnicka Huta 78.21 347 eP P 02 30 19.4 +0.9
STHS pmax pmax
comp=Z,13nm,1.1s,mb4.8
STHS Stebnicka Huta 78.21 347 eP P 02 30 19.4 +0.9
comp=Z,12nm,1.1s,mb4.8
OKC Ostrava-Krasne 78.21 349 eP P 02 30 18.7 +0.2
TANN Tannenbergstha 78.22 353 eP P 02 30 18.4 -0.2
comp=Z,49nm,2.0s,mb5.1
HGN Heimansgroeve 78.26 357 eP P 02 30 17.9 -0.9
comp=Z,27nm,0.9s,mb5.2
GUNZ Gunzen 78.29 353 eP P 02 30 18.8 -0.1
comp=Z,10.0nm,1.2s,mb4.6
WERN Wernitzgruen 78.36 353 eP P 02 30 19.3 0.0
comp=Z,14nm,1.0s,mb4.8
NKC Novy Kostel 78.41 353 eP P 02 30 19.7 +0.1
MEM Membach 78.41 357 P P 02 30 20.1 +0.5
comp=Z,14nm,1.0s,mb4.8
PRU Pruhonice 78.46 351 eP P 02 30 19.6 -0.3
KIV Kislovodsk 78.50 331 eP P 02 30 20.8 +0.6
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,190nm,19.0s,MS4.5
KIV Kislovodsk 78.50 331 eP P 02 30 20.8 +0.5
comp=Z,19nm,1.0s,mb5.0
SNF Seneffe 78.56 358 P P 02 30 20.8 +0.3
comp=Z,11nm,1.3s,mb4.6
BCLA Clavier 78.62 357 P P 02 30 20.3 -0.5
MANZ Manzenberg 78.68 353 eP P 02 30 21.0 -0.1
comp=Z,5.0nm,0.8s,mb4.5
CRVS Cervenica-Dubn 78.68 346 eP P 02 30 21.1 0.0
CRVS pmax pmax
comp=Z,36nm,1.9s,mb5.0
CRVS Cervenica-Dubn 78.68 346 eP P 02 30 21.1 0.0
comp=Z,36nm,1.9s,mb5.0
TNS Taunus Mts 78.69 355 eP P 02 30 21.3 +0.2
TNS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
TNS Taunus Mts 78.69 355 eP P 02 30 21.3 +0.2
comp=Z,10.0nm,0.8s,mb4.8
UZH Uzhgorod 78.82 346 eP P 02 30 21.0 -0.9
UZH e pP 02 30 40.7 +3.5

ROTZ	**Rotzenmuhle**	**78.89**	**353**	*eP*		**P**	**02 30 22.4**	**+0.2**
	comp=Z,20nm,1.5s,mb4.8								
VRAC	**Vranov**	**78.92**	**350**	⇑	*iP*	**P**	**02 30 22.8**	**+0.4**
GIVF	**Givet**	**78.95**	**357**	*eP*		**P**	**02 30 22.4**	**-0.2**
	comp=Z,43nm,1.2s,mb5.0								
GIVF	**Givet**	**78.95**	**357**	*eP*		**P**	**02 30 22.4**	**-0.2**
GIVF				pmax	pmax				
	comp=Z,22nm,1.2s,mb5.0								
GIVF	**Givet**	**78.95**	**357**	*eP*		**P**	**02 30 22.4**	**-0.2**
	comp=Z,22nm,1.2s,mb5.0								
DOU	**Dourbes**	**78.97**	**358**	P		**P**	**02 30 22.6**	**-0.1**
BAIF	**Baives**	**79.01**	**358**	⇑	*iP*	**P**	**02 30 23.0**	**+0.1**
	comp=Z,46nm,1.0s,mb5.1								
BAIF	**Baives**	**79.01**	**358**	⇑	*iP*	**P**	**02 30 23.0**	**+0.1**
BAIF				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.1								
BAIF	**Baives**	**79.01**	**358**		*iP*	**P**	**02 30 23.0**	**+0.1**
	comp=Z,23nm,1.0s,mb5.1								
GRA1	**Grafenberg Arr**	**79.04**	**353**	*eP*		**P**	**02 30 23.4**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**79.04**	**353**	*eP*		**P**	**02 30 23.4**	**+0.3**
GRF				pmax	pmax				
	comp=Z,20nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**79.04**	**353**	*eP*		**P**	**02 30 23.4**	**+0.3**
GRF				pmax	pmax				
	comp=Z,20nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**79.04**	**353**	*eP*		**P**	**02 30 23.4**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0								
TREC	**Trest**	**79.05**	**350**	*eP*		**P**	**02 30 22.7**	**-0.4**
KECS	**Kecovo**	**79.23**	**347**	*eP*		**P**	**02 30 24.0**	**-0.1**
KECS				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.7								
KECS	**Kecovo**	**79.23**	**347**	*eP*		**P**	**02 30 24.0**	**-0.1**
	comp=Z,7.6nm,0.9s,mb4.6								
IAS	**Iasi**	**79.29**	**342**	⇓	*iP*	**P**	**02 30 25.1**	**+0.6**
IAS	**Iasi**	**79.29**	**342**	P		**P**	**02 30 25.1**	**+0.6**
BUR08	**Bucovina Ar. S**	**79.30**	**344**	*eP*		**P**	**02 30 24.8**	**+0.3**
BURAR	**Bucovina Array**	**79.32**	**344**	⇑	*iP*	**P**	**02 30 25.3**	**+0.7**
WLF	**Walferdange**	**79.35**	**357**	*eP*		**P**	**02 30 24.8**	**0.0**
WLF				pmax	pmax				
	comp=Z,21nm,1.1s,mb5.0								
WLF	**Walferdange**	**79.35**	**357**	*eP*		**P**	**02 30 25.5**	**+0.7**
	comp=Z,17nm,1.0s,mb4.9								
WLF	**Walferdange**	**79.35**	**357**	*eP*		**P**	**02 30 24.8**	**+0.1**
	comp=Z,21nm,1.1s,mb5.0								
KHC	**Kasperske Hory**	**79.40**	**352**	*eP*		**P**	**02 30 25.3**	**+0.2**
KOLL	**Kolacno**	**79.42**	**348**	*eP*		**P**	**02 30 25.6**	**+0.4**
VYHS	**Vyhne**	**79.45**	**348**	*eP*		**P**	**02 30 25.5**	**+0.2**
VYHS				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.5								
VYHS	**Vyhne**	**79.45**	**348**	*eP*		**P**	**02 30 25.5**	**+0.2**
	comp=Z,7.1nm,1.1s,mb4.5								
WET	**Wettzell**	**79.45**	**352**	*eP*		**P**	**02 30 24.5**	**-0.8**
WET				pmax	pmax				
	comp=Z,14nm,1.7s,mb4.6								
WET	**Wettzell**	**79.45**	**352**	*eP*		**P**	**02 30 24.5**	**-0.8**
	comp=Z,14nm,1.7s,mb4.6								
SMOL	**Smolenice**	**79.60**	**349**	*eP*		**P**	**02 30 26.9**	**+0.7**
GEC2	**GERESS Array S**	**79.67**	**351**	*eP*		**P**	**02 30 26.4**	**-0.1**
GEC2				pmax	pmax				
	comp=Z,12nm,1.4s,mb4.6								
GEC2	**GERESS Array S**	**79.67**	**351**	*eP*		**P**	**02 30 26.4**	**-0.1**
	comp=Z,12nm,1.4s,mb4.6								
GERES	**GERESS Array B**	**79.67**	**351**	P		**P**	**02 30 26.4**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.3,baz=25,slow=5.3,SNR=25								
PSZ	**Piszkesteto**	**79.87**	**347**	P		**P**	**02 30 28.7**	**+1.1**
PSZ	**Piszkesteto**	**79.87**	**347**	⇓	*iP*	**P**	**02 30 28.5**	**+0.9**
PSZ	**Piszkesteto**	**79.87**	**347**	*eP*		**P**	**02 30 28.1**	**+0.5**
	comp=Z,17nm,1.1s,mb4.9								
ZST	**Bratislava**	**79.95**	**349**	*eP*		**P**	**02 30 28.9**	**+0.8**
ZST				pmax	pmax				
	comp=Z,11nm,0.9s,mb4.8								
ZST	**Bratislava**	**79.95**	**349**	*eP*		**P**	**02 30 28.9**	**+0.8**
	comp=Z,11nm,0.9s,mb4.8								
FLN	**La Foliniere**	**80.34**	**1**	⇑	*iP*	**P**	**02 30 29.7**	**-0.4**
	comp=Z,45nm,1.1s,mb5.0								
FLN	**La Foliniere**	**80.34**	**1**	⇑	*iP*	**P**	**02 30 29.7**	**-0.4**
FLN				pmax	pmax				
	comp=Z,22nm,1.1s,mb5.0								
FLN	**La Foliniere**	**80.34**	**1**	⇑	*iP*	**P**	**02 30 29.7**	**-0.4**
	comp=Z,22nm,1.1s,mb5.0								
CONA	**Conrad Observa**	**80.36**	**350**	⇑	*iP*	**P**	**02 30 30.8**	**+0.6**
	comp=Z,13nm,1.2s,mb4.8,SNR=9.0								
CSNA	**Conrad Observa**	**80.36**	**350**	⇑	*iP*	**P**	**02 30 30.8**	**+0.6**
	comp=Z,13nm,1.1s,mb4.8								
LDF	**La Druitiere**	**80.51**	**1**	⇑	*iP*	**P**	**02 30 30.5**	**-0.6**
	comp=Z,46nm,1.0s,mb5.1								
LDF	**La Druitiere**	**80.51**	**1**	⇑	*iP*	**P**	**02 30 30.5**	**-0.6**
LDF				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.1								
LDF	**La Druitiere**	**80.51**	**1**	⇑	*iP*	**P**	**02 30 30.5**	**-0.6**
	comp=Z,23nm,1.0s,mb5.1								
DRGR		**80.54**	**345**	⇓	*iP*	**P**	**02 30 31.7**	**+0.4**
DRGR		**80.54**	**345**	P		**P**	**02 30 31.7**	**+0.4**
MEZF	**Maizieres J'vi**	**80.55**	**357**	⇑	*iP*	**P**	**02 30 31.2**	**-0.1**
	comp=Z,44nm,1.1s,mb5.0								
MEZF	**Maizieres J'vi**	**80.55**	**357**	⇑	*iP*	**P**	**02 30 31.2**	**-0.1**
	comp=Z,44nm,1.1s,mb5.3								
CDF	**Champ du Feu**	**80.55**	**356**	⇑	*iP*	**P**	**02 30 31.0**	**-0.3**
	comp=Z,15nm,0.9s,mb4.6								
CDF	**Champ du Feu**	**80.55**	**356**	⇑	*iP*	**P**	**02 30 31.0**	**-0.3**
CDF				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.6								
CDF	**Champ du Feu**	**80.55**	**356**	⇑	*iP*	**P**	**02 30 31.0**	**-0.3**
	comp=Z,7.3nm,0.9s,mb4.6								
FUR	**Furstenfeldbru**	**80.55**	**353**	*eP*		**P**	**02 30 30.9**	**-0.4**
FUR				pmax	pmax				
	comp=Z,27nm,1.2s,mb5.0								
FUR	**Furstenfeldbru**	**80.55**	**353**	*eP*		**P**	**02 30 30.9**	**-0.4**
	comp=Z,27nm,1.2s,mb5.0								
ROSF	**Rostrenen**	**80.71**	**3**	*eP*		**P**	**02 30 32.0**	**-0.1**
GRR	**Gorron**	**80.71**	**1**	⇑	*iP*	**P**	**02 30 31.9**	**-0.2**
	comp=Z,54nm,1.0s,mb5.1								
GRR	**Gorron**	**80.71**	**1**	⇑	*iP*	**P**	**02 30 31.9**	**-0.2**
GRR				pmax	pmax				
	comp=Z,27nm,1.0s,mb5.1								
GRR	**Gorron**	**80.71**	**1**	⇑	*iP*	**P**	**02 30 31.9**	**-0.2**
	comp=Z,27nm,1.0s,mb5.1								
VRI	**Vrincioaia**	**80.72**	**342**	⇓	*iP*	**P**	**02 30 33.0**	**+0.7**
VRI	**Vrincioaia**	**80.72**	**342**	⇓	P	**P**	**02 30 33.0**	**+0.7**
ECH	**Echery**	**80.75**	**356**	*eP*		**P**	**02 30 31.8**	**-0.6**
ECH				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4								
ECH	**Echery**	**80.75**	**356**	*eP*		**P**	**02 30 31.8**	**-0.6**
	comp=Z,4.0nm,0.8s,mb4.4								
PLOR	**Plostina**	**80.75**	**342**	P		**P**	**02 30 33.3**	**+0.9**
PLOR	**Plostina**	**80.75**	**342**	⇑	*iP*	**P**	**02 30 33.5**	**+1.1**
SGMF	**Saint Gilles**	**80.81**	**2**	*eP*		**P**	**02 30 32.5**	**-0.2**
	comp=Z,54nm,1.0s,mb5.1								
SGMF	**Saint Gilles**	**80.81**	**2**	*eP*		**P**	**02 30 32.5**	**-0.2**
SGMF				pmax	pmax				
	comp=Z,27nm,1.0s,mb5.1								
SGMF	**Saint Gilles**	**80.81**	**2**	*eP*		**P**	**02 30 32.5**	**-0.2**
	comp=Z,27nm,1.0s,mb5.1								
TLCR		**80.96**	**340**	⇓	*iP*	**P**	**02 30 33.9**	**+0.4**
TLCR		**80.96**	**340**	⇓	P	**P**	**02 30 33.9**	**+0.4**
HAU	**Haudompre**	**81.00**	**356**	*eP*		**P**	**02 30 33.3**	**-0.4**
	comp=Z,25nm,1.0s,mb4.8								
HAU	**Haudompre**	**81.00**	**356**	*eP*		**P**	**02 30 33.3**	**-0.4**
HAU				pmax	pmax				
	comp=Z,12nm,1.0s,mb4.8								
HAU	**Haudompre**	**81.00**	**356**	*eP*		**P**	**02 30 33.3**	**-0.4**
	comp=Z,12nm,1.0s,mb4.8								
ARSA	**Arzberg**	**81.07**	**350**	⇑	*iP*	**P**	**02 30 34.7**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7								
HINF	**Hinteralfeld**	**81.17**	**356**	⇑	*iP*	**P**	**02 30 34.0**	**-0.6**
	comp=Z,15nm,1.1s,mb4.5								
HINF	**Hinteralfeld**	**81.17**	**356**	⇑	*iP*	**P**	**02 30 34.0**	**-0.6**
HINF				pmax	pmax				
	comp=Z,8.0nm,1.1s,mb4.6								
HINF	**Hinteralfeld**	**81.17**	**356**	⇑	*iP*	**P**	**02 30 34.0**	**-0.6**
	comp=Z,7.7nm,1.1s,mb4.5								
RETA	**Reutte**	**81.27**	**353**	⇑	*iP*	**P**	**02 30 35.1**	**0.0**
	comp=Z,6.5nm,0.9s,mb4.5								
MOTA	**Moosalm**	**81.38**	**353**	⇑	*iP*	**P**	**02 30 35.8**	**0.0**
	comp=Z,20nm,1.3s,mb4.9								
WTTA	**Wattenberg**	**81.42**	**353**	⇑	*iP*	**P**	**02 30 36.5**	**+0.6**
	comp=Z,26nm,1.2s,mb5.0,SNR=10								
VOIR		**81.45**	**343**	⇑	*iP*	**P**	**02 30 37.6**	**+1.5**
VOIR		**81.45**	**343**	P		**P**	**02 30 37.5**	**+1.3**
KBA	**Koelnbreinsper**	**81.46**	**351**	⇑	*iP*	**P**	**02 30 37.1**	**+1.0**
	comp=Z,50nm,1.1s,mb5.4,SNR=32								
HARR	**Harsova**	**81.61**	**341**	⇓	*iP*	**P**	**02 30 38.0**	**+1.0**
HARR	**Harsova**	**81.61**	**341**	⇓	P	**P**	**02 30 38.0**	**+1.0**
SOKA	**Soboth**	**81.69**	**350**	⇓	*iP*	**P**	**02 30 37.8**	**+0.5**
	comp=Z,27nm,1.1s,mb5.1								

PKSM	**Moragy**	**81.71**	**348**	⇑	*iP*	**P**	**02 30 37.1**	**-0.4**
PKSM	**Moragy**	**81.71**	**348**	⇑	P	**P**	**02 30 37.1**	**-0.4**
PERS	**Pernice**	**81.72**	**350**	*eP*		**P**	**02 30 37.7**	**+0.2**
FETA	**Feichten**	**81.73**	**353**	⇑	*iP*	**P**	**02 30 37.9**	**+0.3**
	comp=Z,15nm,0.9s,mb4.9,SNR=15								
LOR	**Lormes**	**81.81**	**358**	⇑	*iP*	**P**	**02 30 37.8**	**-0.2**
	comp=Z,30nm,1.1s,mb4.8								
LOR	**Lormes**	**81.81**	**358**	⇑	*iP*	**P**	**02 30 37.8**	**-0.2**
LOR				pmax	pmax				
	comp=Z,15nm,1.1s,mb4.8								
LOR	**Lormes**	**81.81**	**358**	⇑	*iP*	**P**	**02 30 37.8**	**-0.2**
	comp=Z,15nm,1.1s,mb4.8								
WRAB	**Tennant Creek**	**81.83**	**224**	*eP*		**P**	**02 30 36.5**	**-1.8**
WRAB				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb3.9								
WRAB	**Tennant Creek**	**81.83**	**224**	*eP*		**P**	**02 30 36.5**	**-1.8**
	comp=Z,1.4nm,0.6s,mb4.1								
HYF	**Humbligny**	**81.83**	**359**	*eP*		**P**	**02 30 38.2**	**+0.1**
WRA	**Warramunga Arr**	**81.84**	**224**	P		**P**	**02 30 36.4**	**-2.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=33,slow=6.1,SNR=13								
WRA				LR		LR	03 01 38.3		
	comp=Z,87nm,20.4s,MS4.1,baz=340,slow=32								
ABTA	**Abfaltersbach**	**81.86**	**352**	⇑	*iP*	**P**	**02 30 38.4**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9,SNR=6.1								
BZS	**Buzias**	**81.86**	**346**	⇓	*iP*	**P**	**02 30 38.5**	**+0.2**
BZS	**Buzias**	**81.86**	**346**	P		**P**	**02 30 38.5**	**+0.2**
GZR	**Gura Zlata**	**81.89**	**345**	⇓	*iP*	**P**	**02 30 39.1**	**+0.7**
GZR	**Gura Zlata**	**81.89**	**345**	⇓	P	**P**	**02 30 39.1**	**+0.6**
SSF	**Saint Saulge**	**82.03**	**358**	⇑	*iP*	**P**	**02 30 39.0**	**-0.1**
	comp=Z,21nm,1.1s,mb4.7								
SSF	**Saint Saulge**	**82.03**	**358**	⇑	*iP*	**P**	**02 30 39.0**	**-0.1**
SSF				pmax	pmax				
	comp=Z,10.0nm,1.1s,mb4.7								
SSF	**Saint Saulge**	**82.03**	**358**	⇑	*iP*	**P**	**02 30 39.0**	**-0.1**
	comp=Z,10nm,1.1s,mb4.7								
AVF	**Avril sur Loir**	**82.30**	**358**	⇑	*iP*	**P**	**02 30 40.4**	**-0.2**
	comp=Z,27nm,1.0s,mb4.8								
AVF	**Avril sur Loir**	**82.30**	**358**	⇑	*iP*	**P**	**02 30 40.4**	**-0.2**
AVF				pmax	pmax				
	comp=Z,14nm,1.0s,mb4.8								
AVF	**Avril sur Loir**	**82.30**	**358**	⇑	*iP*	**P**	**02 30 40.4**	**-0.2**
	comp=Z,14nm,1.0s,mb4.8								
TUE	**Stuetta**	**82.37**	**354**	*eP*		**P**	**02 30 41.0**	**+0.1**
	comp=Z,9.0nm,0.9s,mb4.7								
CABF	**La Chapelle**	**82.40**	**356**	*eP*		**P**	**02 30 41.1**	**0.0**
	comp=Z,34nm,1.1s,mb4.9								
CABF	**La Chapelle**	**82.40**	**356**	*eP*		**P**	**02 30 41.1**	**0.0**
CABF				pmax	pmax				
	comp=Z,17nm,1.1s,mb4.9								
CABF	**La Chapelle**	**82.40**	**356**	*eP*		**P**	**02 30 41.1**	**0.0**
	comp=Z,17nm,1.1s,mb4.9								
GCIS	**Gornji Cirnik**	**82.42**	**350**	*eP*		**P**	**02 30 41.1**	**-0.1**
SMF	**Signal de Mont**	**82.44**	**358**	⇑	*iP*	**P**	**02 30 41.1**	**-0.2**
	comp=Z,45nm,1.0s,mb5.0								
SMF	**Signal de Mont**	**82.44**	**358**	⇑	*iP*	**P**	**02 30 41.1**	**-0.2**
SMF				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.1								
SMF	**Signal de Mont**	**82.44**	**358**	⇑	*iP*	**P**	**02 30 41.1**	**-0.2**
	comp=Z,22nm,1.0s,mb5.0								
MFF	**Saint Martin d**	**82.51**	**1**	*eP*		**P**	**02 30 41.5**	**-0.1**
	comp=Z,27nm,0.9s,mb5.0								
MFF	**Saint Martin d**	**82.51**	**1**	*eP*		**P**	**02 30 41.5**	**-0.1**
MFF				pmax	pmax				
	comp=Z,13nm,0.9s,mb5.0								
MFF	**Saint Martin d**	**82.51**	**1**	*eP*		**P**	**02 30 41.5**	**-0.1**
	comp=Z,13nm,0.9s,mb5.0								
BGF	**Bois d'Agland**	**82.54**	**359**	*eP*		**P**	**02 30 41.5**	**-0.3**
	comp=Z,46nm,1.3s,mb5.1								
BGF	**Bois d'Agland**	**82.54**	**359**	*eP*		**P**	**02 30 41.5**	**-0.3**
BGF				pmax	pmax				
	comp=Z,23nm,1.3s,mb5.0								
BGF	**Bois d'Agland**	**82.54**	**359**	*eP*		**P**	**02 30 41.5**	**-0.3**
	comp=Z,23nm,1.3s,mb5.0								
TCF	**Toulx Ste Croi**	**82.82**	**359**	*eP*		**P**	**02 30 43.0**	**-0.3**
	comp=Z,27nm,1.0s,mb4.9								
TCF	**Toulx Ste Croi**	**82.82**	**359**	*eP*		**P**	**02 30 43.0**	**-0.3**
TCF				pmax	pmax				
	comp=Z,13nm,1.0s,mb4.9								
TCF	**Toulx Ste Croi**	**82.82**	**359**	*eP*		**P**	**02 30 43.0**	**-0.3**
	comp=Z,13nm,1.0s,mb4.9								
BOJS	**Bojanci**	**82.82**	**350**	*eP*		**P**	**02 30 43.0**	**-0.3**
LPL	**La Plagne**	**83.47**	**356**	*eP*		**P**	**02 30 47.4**	**+0.8**
	comp=Z,14nm,1.1s,mb4.6								
LPL	**La Plagne**	**83.47**	**356**	*eP*		**P**	**02 30 47.4**	**+0.8**
LPL				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.6								
LPL	**La Plagne**	**83.47**	**356**	*eP*		**P**	**02 30 47.4**	**+0.8**
	comp=Z,6.8nm,1.1s,mb4.6								
STH	**Stony Hill**	**83.48**	**69**	*iS*		**P**	**02 30 53.3**	**+6.2**
LPG	**La Plagne**	**83.49**	**356**	*eP*		**P**	**02 30 47.8**	**+1.1**
	comp=Z,27nm,1.3s,mb4.8								
LPG	**La Plagne**	**83.49**	**356**	*eP*		**P**	**02 30 47.8**	**+1.1**
LPG				pmax	pmax				
	comp=Z,14nm,1.3s,mb4.8								
LPG	**La Plagne**	**83.49**	**356**	*eP*		**P**	**02 30 47.8**	**+1.1**
	comp=Z,14nm,1.3s,mb4.8								
GWJ	**Greenwich**	**83.53**	**69**	⇑	*iP*	**P**	**02 30 48.1**	**+0.8**
RKT	**Rikitea**	**83.57**	**140**	*eLR*		LR	02 57 04.5		
	comp=Z,380nm,26.0s								
CMJ	**Castle Mountai**	**83.69**	**69**	⇑	*iP*	**P**	**02 30 48.9**	**+0.7**
RJF	**Les Rejaudoux**	**83.81**	**360**	⇑	*iP*	**P**	**02 30 48.0**	**-0.4**
	comp=Z,12nm,0.9s,mb4.7								
RJF	**Les Rejaudoux**	**83.81**	**360**	⇑	*iP*	**P**	**02 30 48.0**	**-0.4**
RJF				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.7								
RJF	**Les Rejaudoux**	**83.81**	**360**	⇑	*iP*	**P**	**02 30 48.0**	**-0.4**
	comp=Z,6.1nm,0.9s,mb4.7								
BNI	**Bardonecchia**	**83.93**	**356**	*eP*		**P**	**02 30 49.8**	**+0.8**
BNI				pmax	pmax				
	comp=Z,16nm,1.0s,mb5.1								
BNI	**Bardonecchia**	**83.93**	**356**	*eP*		**P**	**02 30 49.8**	**+0.7**
	comp=Z,16nm,1.0s,mb5.1								
ORIF	**Oris-en-Rattie**	**84.10**	**357**	⇑	*iP*	**P**	**02 30 50.5**	**+0.6**
	comp=Z,18nm,1.0s,mb4.9								
ORIF	**Oris-en-Rattie**	**84.10**	**357**	⇑	*iP*	**P**	**02 30 50.5**	**+0.6**
ORIF				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.8								
ORIF	**Oris-en-Rattie**	**84.10**	**357**	⇑	*iP*	**P**	**02 30 50.5**	**+0.6**
	comp=Z,8.9nm,1.0s,mb4.8								
HYB	**Hyderabad**	**84.12**	**290**	*iP*		**P**	**02 30 50.0**	**-0.4**
HYB	**Hyderabad**	**84.12**	**290**	*eP*		**P**	**02 30 50.0**	**-0.4**
LFF	**La Frestale**	**84.17**	**0**	⇑	*iP*	**P**	**02 30 50.2**	**0.0**
	comp=Z,109nm,1.3s,mb5.5								
LFF	**La Frestale**	**84.17**	**0**	⇑	*iP*	**P**	**02 30 50.2**	**0.0**
LFF				pmax	pmax				
	comp=Z,55nm,1.3s,mb5.5								
LFF	**La Frestale**	**84.17**	**0**	⇑	*iP*	**P**	**02 30 50.2**	**0.0**
	comp=Z,54nm,1.3s,mb5.5								
CAF	**Calviac**	**84.18**	**359**	⇑	*iP*	**P**	**02 30 50.4**	**+0.1**
	comp=Z,47nm,1.2s,mb5.2								
CAF	**Calviac**	**84.18**	**359**	⇑	*iP*	**P**	**02 30 50.4**	**+0.1**
CAF				pmax	pmax				
	comp=Z,23nm,1.2s,mb5.2								
CAF	**Calviac**	**84.18**	**359**	⇑	*iP*	**P**	**02 30 50.4**	**+0.1**
	comp=Z,23nm,1.2s,mb5.2								
VIVF	**Saint-Julien-l**	**84.20**	**357**	*eP*		**P**	**02 30 50.6**	**+0.2**
	comp=Z,20nm,1.0s,mb4.9								
VIVF	**Saint-Julien-l**	**84.20**	**357**	*eP*		**P**	**02 30 50.6**	**+0.2**
VIVF				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.9								
VIVF	**Saint-Julien-l**	**84.20**	**357**	*eP*		**P**	**02 30 50.6**	**+0.2**
	comp=Z,10nm,1.0s,mb4.9								
MBDF	**Montbardon**	**84.25**	**356**	⇑	*iP*	**P**	**02 30 51.3**	**+0.6**
	comp=Z,26nm,1.0s,mb5.0								
MBDF	**Montbardon**	**84.25**	**356**	⇑	*iP*	**P**	**02 30 51.3**	**+0.6**
MBDF				pmax	pmax				
	comp=Z,13nm,1.0s,mb5.0								
MBDF	**Montbardon**	**84.25**	**356**	⇑	*iP*	**P**	**02 30 51.3**	**+0.6**
	comp=Z,13nm,1.0s,mb5.0								
FITZ	**Fitzroy Crossi**	**84.29**	**232**	*eP*		**P**	**02 30 49.7**	**-1.3**
	comp=Z,4.4nm,0.8s,mb4.6								
BR131	**Keskin Array S**	**84.99**	**335**	*eP*		**P**	**02 30 54.3**	**-0.2**
	comp=Z,12nm,0.9s,mb5.0								
BRTR	**Keskin Array B**	**84.99**	**335**	P		**P**	**02 30 54.8**	**+0.3**
	comp=Z,13nm,0.9s,mb5.1,baz=44,slow=3.1,SNR=43								
BRTR				LR		LR	03 15 29.4		
	comp=Z,70nm,18.7s,MS4.1,baz=170,slow=40								
BRTR	**Keskin Array B**	**84.99**	**335**	*iP*		**P**	**02 30 54.7**	**+0.2**
BRTR				pmax	pmax				
	comp=Z,13nm,0.9s								
LASF	**Ste Croix**	**85.00**	**358**	⇑	*iP*	**P**	**02 30 54.7**	**+0.3**
	comp=Z,14nm,1.0s,mb4.8								
SMRF	**Simiane la Rot**	**85.05**	**357**	*eP*		**P**	**02 30 55.5**	**+0.8**
	comp=Z,34nm,1.0s,mb5.2								
SMRF	**Simiane la Rot**	**85.05**	**357**	*eP*		**P**	**02 30 55.5**	**+0.8**
	comp=Z,34nm,1.0s,mb5.4								

SBF	**Sospel**	**85.08**	**355**	⇑	*iP*	**P**	**02 30 54.5**	**-0.3**
	comp=Z,80nm,1.0s,mb5.5								
SBF	**Sospel**	**85.08**	**355**	⇑	*iP*	**P**	**02 30 54.5**	**-0.3**
SBF				pmax	pmax				
	comp=Z,40nm,1.0s,mb5.5								
SBF	**Sospel**	**85.08**	**355**	⇑	*iP*	**P**	**02 30 54.5**	**-0.3**
	comp=Z,40nm,1.0s,mb5.5								
ASAR	**Alice Springs**	**85.31**	**222**	P		**P**	**02 30 55.1**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.1,baz=27,slow=5.5,SNR=12								
FRF	**La Foret Royal**	**85.42**	**356**	⇑	*iP*	**P**	**02 30 56.2**	**-0.3**
	comp=Z,33nm,1.0s,mb5.1								
FRF	**La Foret Royal**	**85.42**	**356**	⇑	*iP*	**P**	**02 30 56.2**	**-0.3**
FRF				pmax	pmax				
	comp=Z,16nm,1.0s,mb5.1								
FRF	**La Foret Royal**	**85.42**	**356**	⇑	*iP*	**P**	**02 30 56.2**	**-0.3**
	comp=Z,16nm,1.0s,mb5.1								
LMR	**La Mourre**	**85.66**	**356**	*eP*		**P**	**02 30 57.5**	**-0.2**
	comp=Z,67nm,1.4s,mb5.4								
LMR	**La Mourre**	**85.66**	**356**	*eP*		**P**	**02 30 57.5**	**-0.2**
LMR				pmax	pmax				
	comp=Z,33nm,1.4s,mb5.4								
LMR	**La Mourre**	**85.66**	**356**	*eP*		**P**	**02 30 57.5**	**-0.2**
	comp=Z,33nm,1.4s,mb5.4								
MTLF	**Montolieu**	**85.77**	**359**	*eP*		**P**	**02 30 58.3**	**+0.1**
	comp=Z,25nm,1.0s,mb5.1								
MTLF	**Montolieu**	**85.77**	**359**	*eP*		**P**	**02 30 58.3**	**+0.1**
MTLF				pmax	pmax				
	comp=Z,13nm,1.0s,mb5.1								
MTLF	**Montolieu**	**85.77**	**359**	*eP*		**P**	**02 30 58.3**	**+0.1**
	comp=Z,13nm,1.0s,mb5.1								
EPF	**Esparros**	**86.08**	**0**	*eP*		**P**	**02 30 59.1**	**-0.7**
	comp=Z,7.8nm,0.9s,mb4.6								
EPF	**Esparros**	**86.08**	**0**	*eP*		**P**	**02 30 59.1**	**-0.7**
EPF				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.7								
EPF	**Esparros**	**86.08**	**0**	*eP*		**P**	**02 30 59.1**	**-0.7**
	comp=Z,3.9nm,0.9s,mb4.6								
AQU	**L'Aquila**	**86.13**	**351**	*eP*		**P**	**02 30 58.4**	**-1.7**
AQU				pmax	pmax				
	comp=Z,19nm,0.8s,mb5.4								
AQU	**L'Aquila**	**86.13**	**351**	*eP*		**P**	**02 30 58.4**	**-1.7**
	comp=Z,19nm,0.8s,mb5.4

CLCH AML AML 03 07 45.1
comp=E,59µm,0.5s
ANTU Antumapu 1.23 135⇑ *i*P **Pn 03 07 19.2 +0.3**
ANTU AML AML 03 07 39.1
comp=E,56µm,0.5s
LNV Longovilo 1.27 170⇑ *i*P **Pn 03 07 18.0 -1.4**
FCH Farellones 1.32 118⇓ *i*P **Pn 03 07 20.7 +0.6**
FCH *i*S **Sn 03 07 39.2 +2.3**
FCH AML AML 03 07 39.7
comp=E,46µm,0.4s
PCH Pirque 1.34 133⇑ *i*P **Pn 03 07 20.5 +0.2**
CHCH Chadas Angostu 1.50 145⇑ *i*P **Pn 03 07 21.0 -1.6**
YECH El Yeso 1.65 126⇓ *i*P **Pn 03 07 25.7 +1.2**
YECH AML AML 03 07 55.5
comp=N,23µm,0.3s
CACH El Canelo 1.67 148⇑ *i*P **Pn 03 07 26.2 +1.2**
LMEL Las Melosas 1.68 133⇓ *i*P **Pn 03 07 26.1 +1.0**
LMEL *e*S **Sn 03 07 49.4 +3.6**
LMEL Las Melosas 1.68 133⇓ *i*P **Pn 03 07 26.1 +1.0**
LMEL *e*S **Sn 03 07 49.4 +3.6**
LMEL AML AML 03 07 53.2
comp=N,50µm,0.3s
OVCH Ovalle 2.13 11 *e*P **Pn 03 07 31.5 +0.3**
OVCH AML AML 03 08 09.2
comp=N,33µm,0.6s
NICH Los Niches 2.32 171⇑ *i*P **Pn 03 07 33.9 0.0**
TLL Tololo Astrono 2.64 17⇑ *i*P **Pn 03 07 38.7 +0.5**
TLL *e*S **Sn 03 08 12.1 +2.8**
TLL Tololo Astrono 2.64 17⇑ *i*P **Pn 03 07 38.7 +0.6**
TLL *e*S **Sn 03 08 12.1 +2.8**
TLL AML AML 03 08 29.3
comp=N,10µm,0.5s
TALC Talca 2.69 179 *e*P Px 03 08 08.3
TALC *i*S Sx 03 08 40.5
TALC Talca 2.69 179 *e*P Px 03 08 08.3
TALC *i*S Sx 03 08 40.5
TALC AML AML 03 08 53.1
comp=N,85µm,0.3s
CFAA Coronel Fontan 3.12 70 Pn **Pn 03 07 47.7 +2.9**
comp=N,27nm,0.3s,baz=246,slow=12,SNR=336
CFAA Lg 03 08 29.3
comp=N,22nm,0.3s,baz=100,slow=12,SNR=3.1
CFAA LR LR 03 09 18.1
comp=N,3µm,20.2s,baz=217,slow=47
CFAA Coronel Fontan 3.12 70 Pn **Pn 03 07 47.7 +2.9**
CFAA Lg 03 08 29.3
CFAA LR LR 03 09 18.1
LCO Las Campanas 3.77 13 *e*Pn **Pn 03 07 53.3 -0.6**
LCO *e*Sn **Sn 03 08 37.2 -0.2**
LCO Las Campanas 3.77 13⇑ *i*P **Pn 03 07 53.7 -0.1**
LCO AML AML 03 08 53.7
comp=E,4µm,0.5s
TRQA Tornquist 9.55 127 *e*Pn **Pn 03 09 13.9 +0.8**
LVC Limon Verde 10.35 14 Pn **Pn 03 09 20.0 -4.0**
comp=E,1.1nm,0.3s,baz=152,slow=6.5,SNR=9.4
LVC Sn **Sn 03 11 28.2 +9.0**
baz=180,slow=17,SNR=3.7
LVC LR LR 03 13 25.2
comp=E,7µm,21.5s,baz=211,slow=38
LVC Limon Verde 10.35 14 *e*Pn **Pn 03 09 20.8 -3.3**
LPA La Plata 11.65 105 *de*P **Pn 03 09 39.0 -2.8**
LPA *e*PP 03 09 50.0
LPA *es*P 03 09 52.0
CPUP Villa Florida 14.01 67 Pn **Pn 03 10 10.8 -3.3**
comp=E,4.9nm,0.3s,baz=215,slow=12,SNR=17
CPUP Sn **Sn 03 12 50.6 +1.8**
comp=E,1.2nm,0.3s,baz=212,slow=6.0,SNR=3.3
CPUP LR LR 03 16 29.9
comp=E,2µm,18.4s,baz=230,slow=41
CPUP Villa Florida 14.01 67 P **Pn 03 10 10.8 -3.3**
CPUP 03 12 50.6
CPUP pmax pmax
comp=Z,5.0nm,0.3s
CPUP smax
comp=N,1.0nm,0.3s
CPUP MLR MLR
comp=Z,2µm,18.4s
CPUP Villa Florida 14.01 67 *e*Pn **Pn 03 10 11.4 -2.8**
comp=Z,13nm,0.3s
ARE Arequipa 16.17 1 *e*P **Pn 03 10 44.0 +1.1**
SIV San Ignacio 19.22 33 P **Pn 03 11 17.0 -3.5**
comp=Z,0.7nm,0.3s,baz=225,slow=11,SNR=54
NNA Nana 21.16 346 P **P 03 11 38.9 -1.7**
comp=Z,14nm,1.1s,mb4.2,baz=188,slow=13,SNR=2.7
NNA LR LR 03 18 26.0
comp=Z,2µm,18.9s,MS4.5,baz=177,slow=33
NNA Nana 21.16 346 *e*P **P 03 11 41.0 +0.4**
comp=Z,69nm,1.4s,mb4.8
EFI East Falkland 21.41 156 P **P 03 11 42.4 -0.6**
comp=Z,572nm,0.8s,mb6.0,SNR=23
EFI East Falkland 21.41 156 *e*P **P 03 11 41.9 -1.1**
EFI pmax pmax
comp=Z,162nm,1.1s,mb5.3
EFI East Falkland 21.41 156 *e*P **P 03 11 41.9 -1.1**
comp=Z,162nm,1.1s,mb5.3
USHA Ushuaia 22.24 175 P **P 03 11 52.3 +0.4**
comp=Z,44nm,1.0s,mb4.9,baz=332,slow=4.5,SNR=12
USHA LR LR 03 20 43.1
comp=Z,2µm,20.9s,MS4.4,baz=341,slow=37
ATAH Atahualpa 26.32 345 P **P 03 12 33.2 +2.0**
comp=Z,3.4nm,0.7s,mb4.0,baz=138,slow=22,SNR=6.4
ATAH LR LR 03 21 21.3
comp=Z,1µm,18.6s,MS4.6,baz=291,slow=33
BDFB Brasilia 27.37 57 P **P 03 12 39.3 -1.2**
comp=Z,46nm,1.1s,mb4.9,baz=219,slow=14,SNR=54
BDFB LR LR 03 24 32.9
comp=Z,4µm,21.2s,MS4.9,baz=220,slow=39
BDFB Brasilia 27.37 57 P **P 03 12 39.3 -1.2**
BDFB pmax pmax
comp=Z,46nm,1.1s
BDFB MLR MLR
comp=Z,4µm,21.2s
BDFB Brasilia 27.37 57 *e*P **P 03 12 38.7 -1.8**
comp=Z,93nm,1.1s,mb5.2
PMSA Palmer Station 32.44 174 LR LR 03 25 59.0
comp=Z,3µm,21.8s,MS4.9,baz=339,slow=35
RPN Rapa Nui 32.99 270 LR LR 03 23 07.6
comp=Z,2µm,21.1s,MS4.9,baz=130,slow=30
OTAV Otavalo 33.38 348 *e*P **P 03 13 36.1 +2.4**
comp=Z,34nm,1.4s,mb5.1
SDV Santo Domingo 41.37 2 P **P 03 14 40.9 -0.4**
comp=Z,38nm,1.0s,mb5.0,baz=221,slow=6.7,SNR=23
SDV LR LR 03 32 55.5
comp=Z,1µm,21.3s,MS4.7,baz=202,slow=38
SDV Santo Domingo 41.37 2 *e*P **P 03 14 40.2 -1.1**
comp=Z,32nm,0.9s,mb5.0
SDV *ep*P pP 03 14 56.6 +7.6
RCBR Riachuelo 42.71 59 *e*P **P 03 14 51.2 -1.2**
comp=Z,42nm,1.2s,mb5.0
PCRV Puerto La Cruz 43.16 10 LR LR 03 35 00.3
comp=Z,2µm,18.3s,MS5.0,baz=306,slow=39
VNA3 Neumayer Olymp 50.45 158 *e*P **P 03 15 51.7 -0.6**
VNA3 *e* pP 03 15 59.6 -0.6
VNA3 *e* 03 16 04.4
VNA3 *e* 03 16 13.9
CRPR Cabo Rojo, PR 50.61 6 *e*P **P 03 15 53.4 -0.7**
comp=Z,24nm,1.1s,mb5.0
CELP Cerrillos 50.72 6 *e*P **P 03 15 54.7 -0.2**
VNA1 Neumayer--Stat 50.75 157 *e*P **P 03 15 54.8 +0.2**
VNA1 *e* 03 16 05.6
VNA1 *e* 03 16 17.5
LRS Lares 50.91 6 *e*P **P 03 15 55.5 -0.9**
LRS *ep*P pP 03 16 07.1 +2.9
VNA2 Neumayer--Watz 51.09 158 *e*P **P 03 15 57.0 -0.2**
VNA2 *e* pP 03 16 04.7 -0.3
VNA2 *e* 03 16 09.2
VNA2 *e* 03 16 18.1
SDDR Presa de Saban 51.39 0 *e*P **P 03 15 59.5 -0.4**
comp=Z,20nm,1.0s,mb5.0
SNAA Sanae 52.67 158 *e*P **P 03 16 08.2 -0.7**
SNAA *e* 03 16 20.8
SNAA *e* 03 16 30.0
SNAA Sanae 52.67 158 *c i*P **P 03 16 08.2 -0.7**
SNAA pmax pmax
comp=Z,64nm,1.3s
SNAA Sanae 52.67 158 *e*P **P 03 16 08.1 -0.9**
comp=Z,52nm,1.1s,mb5.4
CMIG Matias Romero 54.26 332 P **P 03 16 20.2 -1.0**
comp=Z,0.8nm,0.4s,mb4.0,baz=121,slow=12,SNR=1.8
TEIG Tepich 54.97 341 *e*P **P 03 16 24.7 -1.6**
comp=Z,17nm,0.6s,mb5.2
RKT Rikitea 56.03 263 *e*S **S 03 24 21.2 0.0**
comp=Z,676nm,31.0s
RKT *e*LR LR 03 32 58.3
comp=Z,1µm,25.0s,baz=124
RKT Rikitea 56.03 263 *eT* 04 17 04.5
comp=Z,7.7nm,0.2s
MAIT Maitri 57.36 157 *e*P **P 03 16 41.0 -1.8**
NVL N'lazarevskaya 57.39 157 *e*P **P 03 16 42.4 -0.6**
NVL pmax pmax
comp=Z,61nm,1.5s,mb5.4
QSPA South Pole Qui 57.53 180 P **P 03 16 44.0 +0.1**
comp=Z,66nm,1.0s,mb5.6,baz=143,slow=3.2,SNR=80
VNDA Vanda 65.43 191 P **P 03 17 37.1 -0.2**
comp=Z,5.5nm,1.1s,mb4.5,baz=134,slow=6.5,SNR=7.9
VNDA PKP2bc 03 46 17.6
comp=Z,1.5nm,0.9s,baz=269,slow=5.3,SNR=4.3
VNDA Vanda 65.43 191 P **P 03 17 37.1 -0.2**
VNDA pmax pmax
comp=Z,6.0nm,1.1s
VNDA pmax pmax
comp=Z,2.0nm,0.9s
VNDA Vanda 65.43 191 *e*P **P 03 17 37.8 +0.5**
comp=Z,13nm,1.3s,mb4.8
NHSC New Hope 65.95 352 *e*P **P 03 17 41.3 +0.3**
comp=Z,90nm,1.2s,mb5.7
HKT Hockley 66.38 337 *e*P **P 03 17 43.9 0.0**
HKT pmax pmax
comp=Z,54nm,1.6s,mb5.3
HKT Hockley 66.38 337 *e*P **P 03 17 43.9 -0.1**
comp=Z,54nm,1.6s,mb5.3
GOGA Godfrey 66.69 349 *e*P **P 03 17 44.6 -1.2**
GOGA pmax pmax
comp=Z,41nm,1.4s,mb5.3
GOGA Godfrey 66.69 349 *e*P **P 03 17 44.6 -1.2**
comp=Z,41nm,1.4s,mb5.3
LRAL Lakeview Retre 66.96 346 *e*P **P 03 17 46.5 -1.1**
comp=Z,45nm,1.7s,mb5.2
VBMS Vicksburg 66.98 343 *e*P **P 03 17 47.5 -0.1**
comp=Z,49nm,1.1s,mb5.5
NATX Nacogdoches 67.69 339 *e*P **P 03 17 52.3 +0.1**
comp=Z,44nm,1.0s,mb5.5
CNNC Cliffs of the 67.83 355 *e*P **P 03 17 53.1 +0.1**
comp=Z,32nm,1.0s,mb5.3
JCT Junction City 68.25 334 *e*P **P 03 17 55.8 +0.1**
JCT pmax pmax
comp=Z,117nm,1.8s,mb5.6
JCT Junction City 68.25 334 *e*P **P 03 17 55.8 0.0**
comp=Z,117nm,1.8s,mb5.6
TXAR Lajitas Array 68.75 330 P **P 03 17 58.5 -0.4**
comp=Z,1.2nm,0.6s,mb4.0,baz=153,slow=7.9,SNR=21
TXAR LR LR 03 43 45.6
comp=Z,882nm,18.3s,MS5.0,baz=185,slow=32
TXAR PKP2bc 03 46 16.5
comp=Z,0.2nm,0.5s,baz=236,slow=1.4,SNR=5.5
TXAR Lajitas Array 68.75 330 P **P 03 17 58.5 -0.5**
TXAR LR LR 03 43 45.6
TXAR ⇑*e* 03 46 16.5
CPCT Cooper Cave 68.86 349 *e*P **P 03 17 58.1 -1.3**
SWET Sewanee 68.87 348 *e*P **P 03 17 58.5 -1.0**
OXF Oxford 68.90 344 *e*P **P 03 17 58.7 -1.0**
OXF pmax pmax
comp=Z,82nm,1.0s,mb5.6
OXF Oxford 68.90 344 *e*P **P 03 17 58.6 -1.1**
comp=Z,82nm,1.0s,mb5.6
TKL Tuckaleechee C 68.94 349 *e*P **P 03 17 58.6 -1.3**
TZTN Tazewell 69.78 350 *e*P **P 03 18 04.3 -0.8**
comp=Z,19nm,1.1s,mb4.9
MIAR Mount Ida 69.98 341 *e*P **P 03 18 06.0 -0.4**
MIAR pmax pmax
comp=Z,51nm,1.6s,mb5.2
MIAR Mount Ida 69.98 341 *e*P **P 03 18 06.0 -0.4**
comp=Z,51nm,1.6s,mb5.2
WVT Waverly 70.12 346 *e*P **P 03 18 06.0 -1.2**
WVT pmax pmax
comp=Z,57nm,0.9s,mb5.5
WVT Waverly 70.12 346 *e*P **P 03 18 06.0 -1.3**
comp=Z,57nm,0.9s,mb5.5
JSRW J. Sargeant Re 70.27 355 *e*P **P 03 18 08.1 0.0**
PPT Papeete 70.73 261 *e*S S 03 27 23.9 -0.9
comp=Z,742nm,25.0s
PPT Papeete 70.73 261 *e*LR LR 03 39 37.7
comp=Z,1µm,25.8s,baz=112
PPT Papeete 70.73 261 LR LR 03 42 42.9
comp=Z,618nm,18.2s,MS4.9,baz=296,slow=30
GDL2 Guadalupe Moun 71.55 331 *e*P **P 03 18 16.3 +0.3**
GDL2 *ep*P pP 03 18 23.5 -0.6
WMOK Wichita Mounta 71.75 337 *e*P **P 03 18 16.3 -0.9**
WMOK pmax pmax
comp=Z,29nm,1.5s,mb5.0
WMOK Wichita Mounta 71.75 337 *e*P **P 03 18 16.2 -0.9**
comp=Z,29nm,1.5s,mb5.0
USIN University of 71.87 347 *e*P **P 03 18 16.4 -1.4**
comp=Z,68nm,1.2s,mb5.5
WCI Wyandotte Cave 71.87 348 *e*P **P 03 18 16.6 -1.2**
WCI pmax pmax
comp=Z,132nm,2.3s,mb5.5
WCI Wyandotte Cave 71.87 348 *e*P **P 03 18 16.6 -1.1**
comp=Z,132nm,2.3s,mb5.5
SDMD Soldier's Deli 71.91 356 *e*P **P 03 18 18.8 +0.8**
comp=Z,31nm,1.1s,mb5.2
SDMD *ep*P pP 03 18 25.2 -0.9
SIUC Southern Illin 71.94 345 *e*P **P 03 18 17.0 -1.2**
comp=Z,24nm,0.9s,mb5.1
SIUC *ep*P pP 03 18 25.7 -0.6
FVM French Village 72.46 345 *e*P **P 03 18 20.1 -1.2**
FVM pmax pmax
comp=Z,75nm,1.4s,mb5.4
FVM French Village 72.46 345 *e*P **P 03 18 20.1 -1.2**
comp=Z,75nm,1.4s,mb5.4
MVL Millersville 72.47 356 *e*P **P 03 18 21.5 +0.2**
OLIL Olney 72.69 347 *e*P **P 03 18 21.6 -1.1**
comp=Z,92nm,1.8s,mb5.4
OLIL *ep*P pP 03 18 28.6 -2.2
BLO Bloomington 72.83 348 *e*P **P 03 18 22.0 -1.5**
BLO pmax pmax
comp=Z,63nm,1.7s,mb5.3
BLO Bloomington 72.83 348 *e*P **P 03 18 22.0 -1.4**
comp=Z,64nm,1.7s,mb5.3
AMTX Amarillo 72.89 335 *e*P **P 03 18 24.1 +0.1**
comp=Z,53nm,1.3s,mb5.3
319A Douglas 72.98 327 ⇑P **P 03 18 24.7 +0.2**
baz=73,SNR=8.2
SLM Saint Louis 73.04 345 *e*P **P 03 18 24.0 -0.8**
SSPA Standing Stone 73.20 355 *e*P **P 03 18 24.8 -0.8**
comp=Z,29nm,1.3s,mb5.0
ACSO Alum Creek Sta 73.32 351 *e*P **P 03 18 25.1 -1.3**
comp=Z,31nm,0.8s,mb5.3
318A Bisbee 73.36 326 ⇑P **P 03 18 26.9 +0.1**
baz=74,SNR=12
219A White Tail Can 73.49 327 ⇑P **P 03 18 27.9 +0.3**
baz=74,SNR=24
218A Dragoon 73.83 327 ⇑P **P 03 18 29.6 +0.1**
baz=74,SNR=5.6
217A Green Valley 74.03 326 ⇓P **P 03 18 30.9 +0.2**
baz=74,SNR=13
LIC Lamto 74.08 72 *e*P **P 03 18 30.2 -1.3**
comp=Z,99nm,1.1s,mb5.6
119A Ashpeak Ranch, 74.16 328 ⇑P **P 03 18 31.8 +0.3**
baz=74,SNR=5.9
LPM Los Pinos Moun 74.32 330 *e*P **P 03 18 33.3 +0.9**
LENM Lemitar 74.33 330 *e*P **P 03 18 33.2 +0.8**
TIC Toumodi 74.33 71 *e*P **P 03 18 31.8 -1.2**
comp=Z,201nm,1.3s,mb5.9
MAW Mawson 74.34 164 *e*P **P 03 18 32.1 0.0**
comp=Z,28nm,1.1s,mb5.1
MAW Mawson 74.34 164 P **P 03 18 31.5 -0.6**
comp=Z,34nm,0.9s,mb5.3,baz=212,slow=8.0,SNR=12
MAW LR LR 03 53 38.0
comp=Z,1µm,18.9s,MS5.2,baz=231,slow=38
MAW Mawson 74.34 164 *e*P **P 03 18 32.1 0.0**
MAW pmax pmax
comp=Z,29nm,1.1s
118A Homack Ranch, 74.35 327 ⇓P **P 03 18 33.1 +0.5**
baz=75
KIC Kosan Boka 74.39 72 *e*P **P 03 18 32.3 -1.0**
comp=Z,283nm,1.2s,mb6.1
TUC Tucson 74.45 326 *e*P **P 03 18 32.9 -0.3**
TUC pmax pmax
comp=Z,22nm,1.5s,mb4.9
TUC Tucson 74.45 326 *e*P **P 03 18 32.9 -0.3**
comp=Z,22nm,1.5s,mb4.9
DBIC Dimbokro 74.48 71 P **P 03 18 32.8 -1.0**
comp=Z,29nm,0.9s,mb5.2,baz=204,slow=6.3,SNR=39
DBIC PP PP 03 21 21.6 +1.0
comp=Z,5.1nm,1.1s,baz=217,slow=8.5,SNR=3.9
DBIC LR LR 03 51 36.8
comp=Z,588nm,18.1s,MS4.9,baz=214,slow=36
DBIC Dimbokro 74.48 71 *e*P **P 03 18 32.8 -1.0**
DBIC pmax pmax
comp=Z,38nm,1.0s
DBIC Dimbokro 74.48 71 *e*P **P 03 18 32.8 -1.0**
comp=Z,38nm,1.0s,mb5.3
216A Three Points, 74.52 326 ⇑P **P 03 18 33.6 +0.1**
baz=75,SNR=10
Z19A T-Link Ranch, 74.58 328 ⇓P **P 03 18 34.8 +0.9**
baz=75
117A Oracle 74.65 327 ⇑P **P 03 18 34.7 +0.3**
baz=75,SNR=7.8
HDIL Hopedale 74.69 346 *e*P **P 03 18 32.1 -2.2**
comp=Z,86nm,1.6s,mb5.4
ANMO Albuquerque 74.80 331⇑ *e*P **P 03 18 34.2 -0.9**
ANMO pmax pmax
comp=Z,16nm,1.3s
ANMO Albuquerque 74.80 331 *e*P **P 03 18 35.2 +0.1**
comp=Z,24nm,1.3s,mb5.0
TRY Troy 75.09 358 *e*P **P 03 18 36.9 +0.3**
TRY *ep*P pP 03 18 44.5 -0.2
116A Eloy 75.10 326 ⇑P **P 03 18 37.5 +0.6**
baz=75
KSU1 Kansas State U 75.10 340 *e*P **P 03 18 35.8 -0.9**
comp=Z,21nm,1.1s,mb5.0
214A Organ Pipe Nat 75.13 325 ⇑P **P 03 18 37.5 +0.4**
baz=75,SNR=7.7
Y19A Nutrioso 75.14 328 ⇓P **P 03 18 37.9 +0.7**
baz=76,SNR=39
SUR Sutherland 75.19 119 *e*P **P 03 18 38.6 +0.9**
comp=Z,28nm,0.9s,mb5.2
115A Sonoran Desert 75.46 326 ⇑P **P 03 18 39.8 +0.8**
baz=76,SNR=9.8
X19A St. Johns 75.55 329 ⇑P **P 03 18 40.4 +0.9**
baz=76
Y17A Roosevelt 75.64 327 ⇑P **P 03 18 40.4 +0.5**
baz=76,SNR=20
ACCN Adirondack Com 75.74 359 *e*P **P 03 18 41.0 +0.7**
comp=Z,26nm,1.1s,mb5.1
CBKS Cedar Bluff 75.78 338 *e*P **P 03 18 39.9 -0.8**
CBKS pmax pmax
comp=Z,38nm,1.0s,mb5.3
CBKS Cedar Bluff 75.78 338 *e*P **P 03 18 39.9 -0.8**
comp=Z,38nm,1.0s,mb5.3
X18A Snowflake 75.93 328 ⇓P **P 03 18 42.0 +0.4**
baz=76
Y16A Circle Bar Ran 76.08 327 ⇑P **P 03 18 43.0 +0.5**
baz=76,SNR=16
X17A Forest Lakes 76.15 327 ⇑P **P 03 18 43.9 +1.0**
baz=76,SNR=8.4
W19A Sanders 76.17 329 ⇑P **P 03 18 43.9 +0.9**
baz=76
113A Mohawk Valley, 76.26 324 ⇓P **P 03 18 44.1 +0.5**
baz=77
W18A Petrified Fore 76.33 329 ⇑P **P 03 18 44.7 +0.7**
baz=77
Z14A Wintersburg 76.34 325 ⇓P **P 03 18 44.6 +0.6**
baz=77
X16A Lo Mia Camp, P 76.51 327 ⇓P **P 03 18 45.5 +0.6**
baz=77,SNR=25
V19A Window Rock 76.54 329 ⇓P **P 03 18 45.4 +0.4**
baz=77,SNR=10
Y15A Casa Rosa Ranc 76.54 326 ⇓P **P 03 18 45.3 +0.2**
baz=77,SNR=11
LBNH Lisbon 76.57 360 *e*P **P 03 18 45.0 -0.1**
LBNH pmax pmax
comp=Z,188nm,2.3s,mb5.6
LBNH Lisbon 76.57 360 *e*P **P 03 18 45.0 -0.1**
comp=Z,188nm,2.3s,mb5.6
W17A Winslow 76.73 328 ⇓P **P 03 18 47.0 +0.9**
baz=77
SCIA State Center 76.84 344 *e*P **P 03 18 46.2 -0.5**
comp=Z,49nm,1.2s,mb5.3
Y14A Wickenburg 76.84 326 ⇓P **P 03 18 47.0 +0.2**
baz=77,SNR=9.6
SDCO Great Sand Dun 76.85 333 *e*P **P 03 18 47.0 +0.2**
comp=Z,22nm,1.4s,mb4.9
V18A Ganado 76.92 329 ⇓P **P 03 18 47.5 +0.3**
baz=77
X15A Humboldt 76.93 327 ⇓P **P 03 18 47.7 +0.3**
baz=77,SNR=18
LONY Lake Ozonia 77.00 358 *e*P **P 03 18 47.1 -0.3**
comp=Z,5.1nm,0.9s,mb4.5
W16A Flagstaff 77.11 327 ⇑P **P 03 18 49.2 +0.8**
baz=77,SNR=15
Y13A Salome 77.14 325 ⇑P **P 03 18 49.0 +0.5**
baz=78
JFWS Jewell Farm 77.15 346 *e*P **P 03 18 47.1 -1.2**
JFWS pmax pmax
comp=Z,25nm,0.9s,mb5.1
JFWS Jewell Farm 77.15 346 *e*P **P 03 18 47.1 -1.2**
comp=Z,26nm,0.9s,mb5.2
X14A Yava 77.22 326 ⇓P **P 03 18 49.5 +0.6**
baz=78,SNR=6.7
DVTC Desert V Tower 77.34 323 ⇓P **P 03 18 50.4 +0.7**
baz=78
WUAZ Wupatki 77.39 328 ⇑P **P 03 18 50.5 +0.6**
baz=78
WUAZ Wupatki 77.39 328 *e*P **P 03 18 50.8 +0.9**
comp=Z,42nm,1.4s,mb5.2
SWSC Sam W. Stewart 77.41 323 ⇑P **P 03 18 50.8 +0.7**
baz=78
Y12C Blythe 77.42 325 ⇑P **P 03 18 50.9 +0.8**
baz=78
T19A Beclabito 77.47 330 ⇓P **P 03 18 50.6 +0.3**
baz=78,SNR=7.6
U18A Rough Rock, Ch 77.49 329 ⇑P **P 03 18 50.6 +0.3**
baz=78,SNR=15
W15A Williams 77.52 327 ⇑P **P 03 18 51.4 +0.8**
baz=78,SNR=5.7
MVCO Mesa Verde 77.58 331 ⇓P **P 03 18 51.2 +0.3**
baz=78
MVCO Mesa Verde 77.58 331 *e*P **P 03 18 51.4 +0.6**
comp=Z,30nm,1.1s,mb5.1
MONP Monument Peak 77.69 323 ⇑P **P 03 18 52.1 +0.5**
baz=78
X13A Yucca 77.77 325 ⇓P **P 03 18 52.3 +0.3**
baz=78,SNR=20
U16A Tuba City 77.81 328 ⇓P **P 03 18 52.7 +0.5**
baz=78,SNR=8.8
BC3 Big Chuckw Mtn 77.81 324 ⇓P **P 03 18 53.0 +0.8**
baz=78
W14A Seligman 77.92 326 ⇑P **P 03 18 53.4 +0.6**
baz=78,SNR=7.0
U17A Shonto 77.98 329 ⇓P **P 03 18 54.0 +0.9**
baz=78
V15A Kaibab Nationa 78.00 327 ⇑P **P 03 18 53.9 +0.6**
baz=78,SNR=22
DRV Dumont d'Urvil 78.03 192 P **P 03 18 43.0 -10**
DRV S S 03 28 45.0 0.0
DRV SS SS 03 34 05.0 +20
DRV R 03 44 00.0
IRM Iron Mountain 78.06 324 ⇑P **P 03 18 54.3 +0.6**
baz=78
T18A Mexican Hat 78.09 330 ⇑P **P 03 18 53.9 +0.1**
baz=78,SNR=9.5
R21A Cimarron 78.19 332 ⇓P **P 03 18 54.9 +0.7**
baz=78,SNR=7.0
W13A Hualapai Mount 78.21 326 ⇑P **P 03 18 54.9 +0.4**
baz=78,SNR=12
PFO Pinyon Flat Ob 78.27 323 ⇑P **P 03 18 55.6 +0.8**
baz=79
PFO Pinyon Flat Ob 78.27 323 *e*P **P 03 18 55.4 +0.6**
PFO pmax pmax
comp=Z,37nm,1.2s,mb5.2
PFO Pinyon Flat Ob 78.27 323 *e*P **P 03 18 55.4 +0.5**
comp=Z,37nm,1.2s,mb5.2
V14A Boquillas Ranc 78.28 327 ⇓P **P 03 18 55.4 +0.6**
baz=79,SNR=14
S19A Harvey Farm, M 78.30 331 ⇓P **P 03 18 55.2 +0.3**
baz=79,SNR=7.2
BELC Belle Mtn. 78.35 324 ⇓P **P 03 18 55.9 +0.6**
baz=79
T17A Navajo Res., N 78.38 329 ⇓P **P 03 18 56.3 +1.0**
baz=79,SNR=6.5
U15A North Rim 78.56 328 ⇓P **P 03 18 57.2 +0.8**
baz=79,SNR=8.6
S18A Hurst Farm, Bl 78.61 330 ⇓P **P 03 18 57.4 +0.8**
baz=79,SNR=27
MURC Murrieta 78.64 323 ⇓P **P 03 18 57.5 +0.6**
baz=79
SMCO Snowmass 78.66 333 *e*P **P 03 18 49.7 -7.2**
comp=Z,49nm,1.3s,mb5.3
T16A Glen Canyon Da 78.67 328 ⇓P **P 03 18 57.9 +1.0**
baz=79
ISCO Idaho Springs 78.69 334 *e*P **P 03 18 57.6 +0.6**
ISCO pmax pmax
comp=Z,29nm,1.3s,mb5.0
ISCO Idaho Springs 78.69 334 *e*P **P 03 18 57.6 +0.6**
comp=Z,29nm,1.3s,mb5.0
PV04 Paradox Valley 78.76 331 *e*P **P 03 18 57.9 +0.5**
LDFC Landfair 78.78 325 *e*P **P 03 18 58.5 +0.9**
LDFC *ep*P pP 03 19 05.6 -0.2

GMRC **Granite Mounta** 78.81 324 ⇑P P 03 18 58.6 +0.8
baz=79
W12A **Cal Nev Ari** 78.84 325 ⇓P P 03 18 58.6 +0.7
baz=79
V13A **Grand Canyon W** 78.87 326 ⇑P P 03 18 58.8 +0.7
baz=79,SNR=14
S17A **Black Ridge (B** 78.91 329 ⇓P P 03 18 58.7 +0.5
baz=79
U14A **Mt Trumbull** 78.96 327 ⇓P P 03 18 59.2 +0.7
baz=79,SNR=20
T15A **Red Dirt Ranch** 79.09 328 ⇓P P 03 18 60.0 +0.7
baz=79,SNR=7.9
R18A **Canyonlands Na** 79.16 330 ⇓P P 03 18 59.9 +0.3
baz=80
V12A **Nelson** 79.18 325 ⇓P P 03 19 00.1 +0.3
baz=80,SNR=11
HEC **Hector,Ludlow** 79.18 324 ⇓P P 03 19 00.7 +0.9
baz=80
TSUM **Tsumeb** 79.28 106 eP P 03 19 00.5 -0.3
comp=Z,63nm,1.1s,mb5.5
U13A **Pakoon Wash** 79.32 326 ⇑P P 03 19 01.0 +0.4
baz=80,SNR=7.6
S16A **Weppner Ranch,** 79.33 329 ⇑P P 03 19 00.6 +0.1
baz=80,SNR=6.2
Q19A **Hogan Spring (** 79.38 331 ⇓P P 03 19 01.2 +0.4
baz=80
BFSC **Mount Baldy St** 79.38 323 ⇑P P 03 19 01.3 +0.3
baz=80
ECSD **EROS,Sioux Fal** 79.41 342 eP P 03 18 59.8 -1.0
comp=Z,34nm,0.9s,mb5.3
T14A **Hurricane** 79.44 327 ⇓P P 03 19 01.6 +0.5
baz=80,SNR=8.2
TUQ **Turquoise Moun** 79.46 325 ⇑P P 03 19 01.6 +0.3
baz=80
R17A **Hanksville Air** 79.53 330 ⇓P P 03 19 01.7 +0.1
baz=80,SNR=10
V11A **Goodsprings** 79.55 325 ⇓P P 03 19 02.2 +0.4
baz=80,SNR=5.4
U12A **Valley of Fire** 79.60 326 ⇑P P 03 19 02.2 +0.2
baz=80,SNR=6.3
S15A **Panguitch** 79.63 328 ⇓P P 03 19 02.5 +0.3
baz=80
R16A **Teasdale** 79.75 329 ⇓P P 03 19 03.2 +0.4
baz=80
O21A **Pagoda** 79.75 333 ⇓P P 03 19 03.5 +0.7
baz=80
T13A **Saint George** 79.78 327 ⇓P P 03 19 03.7 +0.7
baz=80,SNR=7.0
GSC **Goldstone** 79.79 324 ⇓P P 03 19 03.7 +0.6
baz=80
GSC **Goldstone** 79.79 324 eP P 03 19 03.9 +0.8
GSC pmax pmax
comp=Z,41nm,1.6s,mb5.1
GSC **Goldstone** 79.79 324 eP P 03 19 03.9 +0.7
comp=Z,41nm,1.6s,mb5.1
P19A **Cripple Cowboy** 79.84 332 ⇑P P 03 19 03.6 +0.3
baz=80,SNR=12
Q18A **Rafter H Ranch** 79.86 331 ⇑P P 03 19 03.5 +0.1
baz=80
N22A **Wattenberg Ran** 79.88 334 ⇓P P 03 19 04.1 +0.7
baz=80
SHPR **Sheep Range** 79.95 326 eP P 03 19 04.8 +0.8
O20A **White River Ci** 79.98 332 ⇓P P 03 19 04.1 0.0
baz=80,SNR=7.4
R15A **Junction** 80.03 329 ⇓P P 03 19 04.7 +0.3
baz=80,SNR=5.3
SRU **San Rafael** 80.03 330 ⇑P P 03 19 04.3 0.0
baz=80
SRU **San Rafael** 80.03 330 eP P 03 19 04.5 +0.2
SRU pmax pmax
comp=Z,20nm,1.4s,mb4.8
SRU **San Rafael** 80.03 330 eP P 03 19 04.5 +0.1
comp=Z,20nm,1.4s,mb4.8
EDW2 **Edwards Air Fo** 80.05 323 ⇓P P 03 19 04.4 -0.1
baz=80
S14A **Cedar City** 80.06 328 ⇑P P 03 19 05.2 +0.7
baz=80,SNR=6.7
Q16A **Castle Valley** 80.14 330 ⇓P P 03 19 05.3 +0.4
baz=80,SNR=6.7
S13A **Holt Ranch, En** 80.22 327 ⇓P P 03 19 06.2 +0.8
baz=80,SNR=14
MSU **Marysvale** 80.24 329 eP P 03 19 04.4 -1.1
N21A **Black Mountain** 80.24 333 ⇑P P 03 19 06.5 +1.0
baz=81
P18A **Preston Nutter** 80.35 331 ⇑P P 03 19 06.6 +0.5
baz=81,SNR=14
LRMC **Laurel Mountai** 80.37 323 ⇓P P 03 19 06.6 +0.3
baz=81
BOSA **Boshof** 80.41 118 P P 03 19 06.0 -0.9
comp=Z,50nm,1.1s,mb5.4,baz=234,slow=5.3,SNR=39
BOSA LR LR 03 52 11.9
comp=Z,1μm,18.9s,MS5.3,baz=231,slow=34
BOSA **Boshof** 80.41 118 eP P 03 19 05.9 -0.9
BOSA pmax pmax
comp=Z,54nm,1.0s,mb5.4
BOSA **Boshof** 80.41 118 eP P 03 19 05.9 -0.9
comp=Z,54nm,1.0s,mb5.4
P17A **Butcher Ranch,** 80.43 330 ⇑P P 03 19 07.2 +0.7
baz=81
U10A **Ash Meadows, A** 80.45 325 ⇓P P 03 19 07.4 +0.8
baz=81,SNR=5.1
M22A **Cedar Creek Ra** 80.45 334 ⇓P P 03 19 07.1 +0.6
baz=81
T11A **Corn Creek, Al** 80.58 326 ⇑P P 03 19 07.8 +0.5
baz=81,SNR=17
N20A **Spence Gulch,** 80.59 333 ⇑P P 03 19 07.6 +0.3
baz=81,SNR=5.4
S12A **Delamar Landin** 80.70 327 ⇓P P 03 19 08.5 +0.5
baz=81
MPMC **Manual Prospec** 80.73 324 ⇓P P 03 19 08.6 +0.5
baz=81
Q15A **Fillmore** 80.73 329 ⇑P P 03 19 08.7 +0.6
baz=81
FURC **Furnace Creek,** 80.74 325 ⇑P P 03 19 08.7 +0.5
baz=81
R13A **O'Grain Ranch,** 80.76 328 ⇓P P 03 19 09.0 +0.7
baz=81
O18A **Roosevelt** 80.80 331 ⇓P P 03 19 08.9 +0.5
baz=81
TPNV **Topopah Spring** 80.83 325 ⇑P P 03 19 09.3 +0.6
baz=81
TPNV **Topopah Spring** 80.83 325 eP P 03 19 09.3 +0.6
TPNV pmax pmax
comp=Z,231nm,3.0s
TPNV **Topopah Spring** 80.83 325 eP P 03 19 09.3 +0.6
comp=Z,231nm,3.0s
ISA **Isabella** 80.91 323 ⇑P P 03 19 10.0 +0.8
baz=81
ISA **Isabella** 80.91 323 eP P 03 19 09.9 +0.8
ISA pmax pmax
comp=Z,21nm,1.3s,mb4.9
ISA **Isabella** 80.91 323 eP P 03 19 09.9 +0.8
comp=Z,21nm,1.3s,mb4.9
RWWY **Rawlins** 80.93 334 eP P 03 19 10.1 +1.0
comp=Z,35nm,1.3s,mb5.1
L22A **Ellis Ranch, M** 80.94 335 ⇑P P 03 19 09.7 +0.6
baz=81
N19A **John Jarvie Ra** 81.00 332 ⇓P P 03 19 09.1 -0.3
baz=81,SNR=7.7
PKM **Peak Mountain** 81.01 322 ⇑P P 03 19 10.6 +0.9
baz=81
O17A **Robinson Place** 81.03 331 ⇑P P 03 19 09.9 +0.2
baz=81,SNR=11
Q14A **Sevier Lake (B** 81.11 328 ⇓P P 03 19 10.7 +0.6
baz=81,SNR=7.3
M20A **Sweetwater, Wa** 81.13 333 ⇑P P 03 19 10.3 +0.2
baz=82
R12A **Pony Springs,** 81.17 327 ⇓P P 03 19 11.0 +0.5
baz=82
L21A **Rawlins** 81.23 334 ⇑P P 03 19 11.0 +0.3
baz=82
MPU **Maple Canyon** 81.26 330 eP P 03 19 11.8 +0.9
comp=Z,44nm,1.6s,mb5.1
MPU epP pP 03 19 19.3 +0.2
N18A **Larsen Ranch,** 81.27 332 ⇓P P 03 19 11.1 +0.3
baz=82
CASY **Casey** 81.32 181 eP P 03 19 10.2 -0.8
CWC **Cottonwood Cre** 81.32 324 ⇓P P 03 19 12.0 +0.7
baz=82
VES **Vestal, Richgr** 81.36 323 ⇑P P 03 19 12.1 +0.6
baz=82
O16A **Springville** 81.36 330 ⇑P P 03 19 11.9 +0.5
baz=82,SNR=5.5
NLU **North Lily Min** 81.39 330 eP P 03 19 12.0 +0.4
GRAC **Grapevine Rang** 81.41 325 ⇑P P 03 19 12.0 +0.2
baz=82
Q13A **Wheeler Ranch,** 81.42 328 ⇑P P 03 19 11.7 -0.1
baz=82,SNR=5.3

SMMC **Simmler** 81.42 322 ⇑P P 03 19 12.3 +0.4
baz=82
DAU **Daniels Canyon** 81.43 331 eP P 03 19 12.2 +0.4
DAU e*PP pP 03 19 25.0 +5.0
M19A **Rock Springs** 81.51 332 ⇑P P 03 19 12.6 +0.4
baz=82
P14A **Drum Mountains** 81.52 329 ⇑P P 03 19 12.8 +0.6
baz=82,SNR=9.2
L20A **Wamsutter** 81.63 333 ⇑P P 03 19 12.9 +0.2
baz=82
R11A **Troy Canyon, C** 81.64 327 ⇓P P 03 19 13.7 +0.8
baz=82,SNR=15
JLU **Jordanelle** 81.67 331 eP P 03 19 13.3 +0.3
N17A **Moffit Pass** 81.70 331 ⇓P P 03 19 13.4 +0.2
baz=82,SNR=7.0
S10A **Tonopah Range,** 81.77 326 ⇓P P 03 19 13.8 +0.1
baz=82,SNR=7.9
RCTC **Rector, Farmer** 81.81 323 ⇑P P 03 19 14.5 +0.7
baz=82
P13A **Bates Ranch, G** 81.82 328 ⇓P P 03 19 14.3 +0.4
baz=82,SNR=6.8
Q12A **Willow Creek R** 81.85 327 ⇑P P 03 19 14.6 +0.5
baz=82
N16A **Rees Ranch, Co** 81.91 331 ⇑P P 03 19 14.7 +0.5
baz=82
DUG **Dugway** 81.91 329 ⇓P P 03 19 14.6 +0.3
baz=82
DUG **Dugway** 81.91 329 eP P 03 19 14.0 -0.3
DUG pmax pmax
comp=Z,12nm,1.0s,mb4.8
DUG **Dugway** 81.91 329 eP P 03 19 13.9 -0.3
comp=Z,12nm,1.0s,mb4.8
S09A **Goldfield** 81.92 325 ⇓P P 03 19 14.5 +0.1
baz=82,SNR=7.5
R10A **Warm Springs** 81.93 326 ⇓P P 03 19 15.2 +0.8
baz=82,SNR=7.6
RSSD **Black Hills** 81.96 337 eP P 03 19 14.1 -0.4
RSSD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
RSSD **Black Hills** 81.96 337 eP P 03 19 14.1 -0.3
comp=Z,9.6nm,0.9s,mb4.7
Q11A **Duckwater** 82.07 327 ⇑P P 03 19 15.5 +0.3
baz=82,SNR=12
K20A **Yellowstone Ra** 82.19 334 ⇑P P 03 19 15.4 -0.3
baz=82
TPH **Tonopah** 82.19 325 eP P 03 19 15.7 -0.2
TPH pmax pmax
comp=Z,27nm,1.3s,mb5.0
TPH **Tonopah** 82.19 325 eP P 03 19 15.7 -0.2
comp=Z,27nm,1.3s,mb5.0
L18A **Fontenelle, Gr** 82.21 332 ⇓P P 03 19 15.6 -0.2
baz=82,SNR=5.9
EYMN **Ely** 82.23 347 eP P 03 19 14.8 -1.0
comp=Z,27nm,1.3s,mb5.0
P12A **McGill** 82.24 328 ⇓P P 03 19 16.3 +0.3
baz=83
R09A **Tonopah** 82.25 326 ⇑P P 03 19 16.3 +0.1
baz=83,SNR=8.2
MTUM **Tungsten Hills** 82.28 324 eP P 03 19 17.7 +1.4
M16A **Huntsville** 82.34 331 ⇓P P 03 19 16.3 -0.3
baz=83
N15A **Stansbury Isla** 82.36 330 ⇓P P 03 19 16.4 -0.3
baz=83,SNR=6.4
O13A **Hicks Ranch, I** 82.36 329 ⇑P P 03 19 16.9 +0.2
baz=83
Q10A **Clear Creek Ra** 82.40 326 ⇑P P 03 19 17.3 +0.4
baz=83,SNR=6.8
K19A **Absolon Red Bu** 82.52 333 ⇓P P 03 19 16.6 -0.8
baz=83,SNR=7.0
LBTB **Lobatse** 82.58 115 eP P 03 19 17.1 -1.3
LBTB pmax pmax
comp=Z,114nm,1.3s,mb5.7
LBTB **Lobatse** 82.58 115 eP P 03 19 17.1 -1.3
comp=Z,114nm,1.3s,mb5.7
N14A **Grayback Hills** 82.61 330 ⇑P P 03 19 17.8 -0.2
baz=83,SNR=5.4
SPUT **South Promonto** 82.68 330 eP P 03 19 18.6 +0.3
L17A **Cokeville** 82.69 332 ⇑P P 03 19 17.7 -0.6
baz=83
BW06 **Boulder Array** 82.74 333 ⇑P P 03 19 18.1 -0.5
baz=83
BW06 **Boulder Array** 82.74 333 eP P 03 19 18.2 -0.4
comp=Z,19nm,1.4s,mb4.9
PDAR **Pinedale Array** 82.74 333 P P 03 19 18.1 -0.5
comp=Z,3.7nm,1.1s,mb4.3,baz=144,slow=5.3,SNR=12
PDAR PKKPbc PKKPbc 03 37 41.2 -3.1
comp=Z,0.9nm,0.7s,baz=75,slow=1.5,SNR=4.7
PDAR LR LR 03 52 26.2
comp=Z,564nm,20.6s,MS4.9,baz=146,slow=33
M15A **Larsen Ranch,** 82.81 330 ⇑P P 03 19 18.5 -0.4
baz=83,SNR=8.8
O12A **Currie** 82.81 328 ⇓P P 03 19 19.1 0.0
baz=83
K18A **Toltan Ranch,** 82.82 333 ⇑P P 03 19 18.8 -0.2
baz=83,SNR=11
L16A **Fish Haven** 82.85 331 ⇑P P 03 19 18.8 -0.4
baz=83,SNR=5.7
NVAR **Mina Array Bea** 83.00 325 P P 03 19 20.1 +0.1
comp=Z,5.0nm,0.9s,mb4.6,baz=150,slow=6.1,SNR=26
P10A **Eureka** 83.07 327 ⇑P P 03 19 21.2 +0.9
baz=83
O11A **Cowboy Ranch,** 83.11 328 ⇓P P 03 19 20.7 +0.2
baz=83,SNR=22
Q08A **Gabbs** 83.16 325 ⇓P P 03 19 20.9 +0.1
baz=84
HVU **Hansel Valley** 83.20 330 eP P 03 19 20.7 -0.3
HVU pmax pmax
comp=Z,177nm,2.9s,mb5.6
HVU **Hansel Valley** 83.20 330 eP P 03 19 20.7 -0.3
comp=Z,177nm,2.9s,mb5.6
M14A **Sheep Mountain** 83.22 330 ⇑P P 03 19 20.7 -0.4
baz=84,SNR=12
L15A **Malad City** 83.23 331 ⇓P P 03 19 20.5 -0.7
baz=84,SNR=9.9
K17A **Gardner Place,** 83.26 332 ⇑P P 03 19 20.7 -0.6
baz=84
J18A **Kendall Valley** 83.30 333 ⇑P P 03 19 20.9 -0.6
baz=84,SNR=7.0
N12A **Clover Valley,** 83.42 328 ⇑P P 03 19 21.8 -0.3
baz=84,SNR=7.4
ELK **Elko** 83.42 328 eP P 03 19 21.9 -0.2
ELK pmax pmax
comp=Z,11nm,1.0s
ELK **Elko** 83.42 328 eP P 03 19 21.9 -0.3
comp=Z,11nm,1.0s,mb4.8
M13A **Montello** 83.45 329 ⇑P P 03 19 21.7 -0.6
baz=84,SNR=8.0
TOA0 **Torodi Ar. Sit** 83.48 70 eP P 03 19 22.0 -1.1
TORD **Torodi Ar. Bea** 83.48 70 P P 03 19 21.9 -1.1
comp=Z,30nm,0.9s,mb5.3,baz=248,slow=4.4,SNR=117
TORD LR LR 03 56 56.2
comp=Z,724nm,18.1s,MS5.1,baz=215,slow=36
AGMN **Agassiz Refuge** 83.49 344 eP P 03 19 21.0 -1.4
comp=Z,16nm,0.9s,mb5.0
K16A **Soda Springs** 83.60 332 ⇑P P 03 19 23.0 0.0
baz=84,SNR=13
O10A **Cortez Mining,** 83.62 327 ⇑P P 03 19 23.7 +0.5
baz=84
R06C **Coleville** 83.63 324 ⇓P P 03 19 23.6 +0.3
baz=84
I18A **Diamond G Ranc** 83.64 333 ⇓P P 03 19 23.0 -0.3
baz=84,SNR=7.9
J17A **Brown Place, J** 83.70 332 ⇓P P 03 19 23.4 -0.1
baz=84
CMB **Columbia Colle** 83.72 323 eP P 03 19 24.4 +0.6
CMB pmax pmax
comp=Z,17nm,1.3s,mb5.0
CMB **Columbia Colle** 83.72 323 eP P 03 19 24.4 +0.7
comp=Z,17nm,1.3s,mb5.0
REDW **Red Top Meadow** 83.75 332 eP P 03 19 23.6 -0.2
comp=Z,16nm,1.4s,mb5.0
SNOW **Snow King Moun** 83.80 333 eP P 03 19 24.1 +0.1
comp=Z,7.3nm,0.9s,mb4.8
LOHW **Long Hollow** 83.87 333 eP P 03 19 24.1 -0.3
comp=Z,118nm,2.8s,mb5.5
TPAW **Teton Pass** 83.90 332 eP P 03 19 24.3 -0.3
comp=Z,37nm,1.7s,mb5.2
RRI2 **Red Ridge** 83.92 332 eP P 03 19 24.7 0.0
comp=Z,153nm,2.8s,mb5.6
K14A **Jones Ranch, D** 84.00 331 ⇓P P 03 19 24.4 -0.7
baz=84,SNR=7.9
MOOW **Moose Ponds** 84.04 333 eP P 03 19 24.1 -1.1
comp=Z,4.3nm,1.1s,mb4.5
DCID1 **Drake Creek** 84.08 332 eP P 03 19 26.1 +0.6
comp=Z,31nm,1.2s,mb5.3
I17A **Pilgram Creek** 84.11 333 ⇑P P 03 19 26.0 +0.4
baz=84
M11A **Holland Ranch,** 84.22 328 ⇓P P 03 19 26.2 0.0
baz=84,SNR=13
O08A **Rochester Mine** 84.39 326 ⇓P P 03 19 26.8 -0.3
baz=85,SNR=13
J15A **Blackfoot** 84.41 331 ⇓P P 03 19 27.3 +0.2
baz=85
I16A **Newdale** 84.43 332 ⇑P P 03 19 26.8 -0.4
baz=85,SNR=6.1
L12A **House Creek Ra** 84.46 329 ⇓P P 03 19 27.2 -0.2
baz=85,SNR=5.8
PAHR **Pah Rah Range** 84.52 325 eP P 03 19 28.4 +0.6
comp=Z,36nm,1.4s,mb5.3
PAHR epP pP 03 19 34.0 -2.1
M10A **I.L. Ranch, Tu** 84.62 328 ⇑P P 03 19 28.2 -0.1
baz=85
O07A **Toulon** 84.63 326 ⇑P P 03 19 28.7 +0.3
baz=85
RLMT **Red Lodge** 84.65 334 ⇑P P 03 19 28.0 -0.3
baz=85
RLMT **Red Lodge** 84.65 334 eP P 03 19 28.4 +0.1
comp=Z,107nm,2.4s,mb5.5
RLMT epP pP 03 19 35.8 -0.7
N08A **GE Springer Mi** 84.77 326 ⇑P P 03 19 28.4 -0.7
baz=85,SNR=5.7
J14A **Carey** 84.79 331 ⇑P P 03 19 29.1 +0.1
baz=85
L11A **Cat Creek Ranc** 84.80 329 ⇓P P 03 19 29.4 +0.3
baz=85,SNR=10
K12A **Draper Farm, C** 84.81 330 ⇓P P 03 19 29.4 +0.3
baz=85,SNR=9.8
G18A **Lazy EL Ranch,** 84.92 334 ⇓P P 03 19 29.3 -0.4
baz=85
I15A **Monteview** 84.93 332 ⇓P P 03 19 30.2 +0.4
baz=85
L10A **Juniper Basin** 85.04 328 ⇓P P 03 19 30.2 -0.1
baz=85,SNR=12
O06A **Flanigan** 85.09 325 ⇓P P 03 19 30.9 +0.3
baz=85
J13A **Cove Ranch, Pi** 85.12 330 ⇓P P 03 19 30.9 +0.2
baz=85,SNR=8.5
QLMT **Earthquake Lak** 85.21 333 eP P 03 19 32.0 +0.8
I14A **Mackay** 85.26 331 ⇓P P 03 19 31.8 +0.4
baz=86,SNR=5.5
ULM **Lac du Bonnet** 85.33 345 P P 03 19 29.6 -2.0
comp=Z,12nm,0.8s,mb5.1,baz=169,slow=4.1,SNR=15
ULM **Lac du Bonnet** 85.33 345 eP P 03 19 29.9 -1.7
comp=Z,16nm,1.0s,mb5.1
HLID **Hailey** 85.36 330 ⇓P P 03 19 31.9 0.0
baz=86
HLID **Hailey** 85.36 330 eP P 03 19 32.0 +0.1
comp=Z,43nm,1.8s,mb5.3
G17A **Pierce Place,** 85.36 334 ⇓P P 03 19 31.9 0.0
baz=86
J12A **Stokes Ranch,** 85.39 330 ⇑P P 03 19 32.0 -0.1
baz=86,SNR=14
K11A **Parker Ranch,** 85.41 329 ⇓P P 03 19 32.2 0.0
baz=86
M08A **Happy Creek Ra** 85.41 327 ⇑P P 03 19 32.4 +0.2
baz=86
F18A **Big Timber** 85.48 334 ⇑P P 03 19 31.8 -0.6
baz=86,SNR=10
H15A **Lima** 85.51 332 ⇑P P 03 19 32.7 +0.1
baz=86,SNR=6.3
I13A **Wildhorse Cree** 85.52 331 ⇓P P 03 19 32.9 +0.2
baz=86,SNR=13
L09A **Wilkinson Ranc** 85.53 327 ⇑P P 03 19 32.5 -0.3
baz=86
N06A **Buffalo Meadow** 85.54 325 ⇓P P 03 19 32.8 -0.1
baz=86,SNR=8.1
G16A **Moss Hill, Enn** 85.69 333 ⇑P P 03 19 33.8 +0.3
baz=86
M07A **Soldier Meadow** 85.73 326 ⇓P P 03 19 34.4 +0.6
baz=86
K10A **MacKenzie Ranc** 85.78 328 ⇓P P 03 19 34.1 +0.1
baz=86
H14A **Leadore** 85.80 332 ⇓P P 03 19 34.4 +0.3
baz=86,SNR=7.3
F17A **Fitzpatrick Pl** 85.83 334 ⇑P P 03 19 34.1 0.0
baz=86,SNR=6.7
MFID **Camas Ranch** 85.84 329 ⇓P P 03 19 33.9 -0.4
baz=86,SNR=6.6
G15A **Dillon** 85.90 332 ⇑P P 03 19 34.4 -0.2
baz=86,SNR=8.9
L08A **Fields** 85.97 327 ⇓P P 03 19 35.2 +0.2
baz=86
BOZ **Bozeman (W)** 85.97 333 eP P 03 19 34.5 -0.4
BOZ e*PP pP 03 19 46.2 +3.0
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
BOZ **Bozeman (W)** 85.97 333 eP P 03 19 34.5 -0.4
comp=Z,5.2nm,0.7s,mb4.9
BOZ epP pP 03 19 46.2 +3.0
DLMT **Dillon** 86.11 332 eP P 03 19 35.7 +0.1
comp=Z,20nm,1.3s,mb5.2
H13A **Challis** 86.11 331 ⇑P P 03 19 35.5 -0.1
baz=86,SNR=11
E18A **Harlowton** 86.12 335 ⇓P P 03 19 35.4 -0.2
baz=86
I11A **Placerville** 86.29 330 ⇓P P 03 19 36.3 -0.2
baz=87
L07A **Adell** 86.30 326 ⇓P P 03 19 37.2 +0.6
baz=87
WVOR **Wild Horse Val** 86.30 327 eP P 03 19 36.5 -0.1
WVOR pmax pmax
comp=Z,17nm,1.2s,mb5.2
WVOR **Wild Horse Val** 86.30 327 eP P 03 19 36.5 -0.1
comp=Z,17nm,1.2s,mb5.2
H12A **Diamond D Ranc** 86.35 331 ⇓P P 03 19 36.7 -0.1
baz=87
E17A **Martinsdale** 86.37 334 ⇑P P 03 19 36.7 -0.2
baz=87
LRM **Limekiln Ridge** 86.44 333 eP P 03 19 37.3 +0.2
LRM epP pP 03 19 43.8 -1.7
K08A **Mann Creek Ran** 86.46 327 ⇓P P 03 19 37.4 0.0
baz=87
F15A **Butte** 86.47 333 ⇑P P 03 19 37.2 -0.2
baz=87,SNR=9.6
G13A **Cobalt** 86.54 331 ⇑P P 03 19 37.9 +0.2
baz=87,SNR=12
D18A **Linhart Farms,** 86.61 335 ⇓P P 03 19 37.6 -0.4
baz=87,SNR=11
MOD **Modoc** 86.66 326 eP P 03 19 39.3 +0.9
comp=Z,228nm,3.0s
MOD epP pP 03 19 45.6 -1.0
E16A **East Helena** 86.74 334 ⇓P P 03 19 38.3 -0.3
baz=87
WDC **Whiskeytown Da** 86.74 324 eP P 03 19 38.3 -0.5
WDC pmax pmax
comp=Z,48nm,1.6s,mb5.5
WDC **Whiskeytown Da** 86.74 324 eP P 03 19 38.3 -0.5
comp=Z,48nm,1.6s,mb5.5
K07A **Rock Creek Ran** 86.78 327 ⇓P P 03 19 39.4 +0.4
baz=87,SNR=12
F14A **Wisdom** 86.79 332 ⇑P P 03 19 39.1 +0.2
baz=87,SNR=8.4
I10A **Payette** 86.80 329 ⇑P P 03 19 39.0 0.0
baz=87
D17A **Six Diamond Ra** 86.89 335 ⇓P P 03 19 39.3 -0.1
baz=87
HRY **Holter Researc** 86.94 334 eP P 03 19 39.6 -0.1
J08A **Circle Bar Ran** 86.95 328 ⇑P P 03 19 40.0 +0.2
baz=87,SNR=20
H11A **Donnelly** 86.95 330 ⇑P P 03 19 39.6 -0.1
baz=87,SNR=12
E15A **Deer Lodge** 87.01 333 ⇓P P 03 19 39.5 -0.5
baz=87
D16A **Dana Ranch, Ca** 87.11 334 ⇑P P 03 19 40.4 -0.1
baz=87,SNR=5.7
I09A **Lost Marbles R** 87.11 329 ⇑P P 03 19 40.5 0.0
baz=87,SNR=21
F13A **Darby** 87.15 332 ⇑P P 03 19 40.3 -0.4
baz=88,SNR=12
H10A **Noah's Angus R** 87.17 330 ⇑P P 03 19 40.6 -0.3
baz=88
SCHQ **Schefferville** 87.28 3 P P 03 19 39.2 -1.9
comp=Z,22nm,1.1s,mb5.3,baz=57,slow=2.1,SNR=6.4
SCHQ LR LR 03 57 47.2
comp=Z,389nm,19.6s,MS4.8,baz=125,slow=35
EGMT **Eagleton** 87.31 336 ⇓P P 03 19 40.1 -1.3
baz=88
EGMT **Eagleton** 87.31 336 eP P 03 19 40.3 -1.1
comp=Z,30nm,1.3s,mb5.4
C17A **Wharram Farm,** 87.33 335 ⇑P P 03 19 40.5 -0.9
baz=88,SNR=6.7
E14A **Clinton** 87.33 332 ⇑P P 03 19 41.6 0.0
baz=88
J07A **Hines** 87.34 327 ⇓P P 03 19 41.2 -0.5
baz=88
I08A **Drewsey** 87.43 328 ⇑P P 03 19 42.3 +0.2

baz=88,SNR=6.8
D15A Lincoln 87.48 333 ⇓P P 03 19 41.9 -0.4
baz=88,SNR=8.2
BMO Blue Mountains 87.62 329 *e*P P 03 19 41.7 -1.3
BMO pmax pmax
comp=Z,39nm,1.8s,mb5.3
BMO Blue Mountains 87.62 329 *e*P P 03 19 41.7 -1.3
comp=Z,39nm,1.8s,mb5.3
E13A Victor 87.63 332 ⇑P P 03 19 43.0 0.0
baz=88,SNR=11
B18A Beardsley Farm 87.63 336 ⇓P P 03 19 42.2 -0.7
baz=88,SNR=12
H09A Durkee 87.63 329 ⇓P P 03 19 42.7 -0.3
baz=88
J06A Christmas Vall 87.63 327 ⇑P P 03 19 42.6 -0.5
baz=88
YBH Yreka Blue Hor 87.69 324 P P 03 19 41.9 -1.5
comp=Z,6.9nm,0.9s,mb4.9,baz=190,slow=6.1,SNR=4.2
C16A Fuhringer Ranc 87.83 334 ⇓P P 03 19 43.4 -0.5
baz=88
D14A Greenough 87.89 333 ⇓P P 03 19 43.9 -0.2
baz=88,SNR=11
G10A Bishop Farm, J 87.90 330 ⇑P P 03 19 43.8 -0.4
baz=88
B17A L&G Farms, Che 87.90 335 ⇓P P 03 19 43.6 -0.6
baz=88
H08A Prairie City 87.95 328 ⇓P P 03 19 44.4 -0.2
baz=88
F11A Grangeville 87.97 331 ⇑P P 03 19 44.2 -0.4
baz=88
I07A Izee 87.98 328 ⇑P P 03 19 45.0 +0.3
baz=88,SNR=5.7
SLMT Seeley Lake 88.02 333 *e*P P 03 19 45.1 +0.3
A18A Metzger Ranch, 88.10 336 ⇓P P 03 19 44.1 -1.1
baz=88,SNR=8.4
C15A Salmond Ranch, 88.12 334 ⇑P P 03 19 45.2 -0.1
baz=88,SNR=10
G09A Cove 88.17 329 ⇑P P 03 19 45.6 +0.1
baz=88,SNR=14
I06A Prineville 88.20 327 ⇓P P 03 19 46.1 +0.4
baz=88,SNR=5.3
D13A Huson 88.27 332 ⇓P P 03 19 45.9 -0.1
baz=89
B16A M & M Farms, S 88.33 335 ⇓P P 03 19 45.6 -0.6
baz=89,SNR=8.4
E11A Bogner Ranch, 88.37 331 ⇓P P 03 19 45.5 -1.0
baz=89
A17A Triple J Farms 88.42 335 ⇑P P 03 19 45.6 -1.1
baz=89,SNR=8.6
SWMT Swartz Lake 88.43 333 *e*P P 03 19 46.6 -0.2
F10A Beach Ranch, E 88.48 330 ⇓P P 03 19 46.5 -0.6
baz=89
B15A Bradely Ranch, 88.56 334 ⇓P P 03 19 46.2 -1.1
baz=89,SNR=8.1
G08A Pilot Rock 88.69 329 ⇑P P 03 19 47.4 -0.6
baz=89
A16A West Butte Ran 88.74 335 ⇓P P 03 19 47.7 -0.5
baz=89,SNR=6.1
C13A Hot Springs 88.79 333 ⇑P P 03 19 47.9 -0.5
baz=89
B14A Marquette Ranc 88.86 334 ⇑P P 03 19 48.0 -0.7
baz=89,SNR=5.2
H06A Lindquist Farm 88.86 328 ⇓P P 03 19 49.1 +0.3
baz=89
G07A Ruggs Ranch, H 88.98 328 ⇓P P 03 19 49.7 +0.3
baz=89
A15A Johnson Ranch, 89.17 334 ⇑P P 03 19 49.1 -1.1
baz=90
B13A Whitefish 89.32 333 ⇓P P 03 19 50.3 -0.6
baz=90
A14A Double T Ranch 89.42 334 ⇓P P 03 19 50.6 -0.7
baz=90
WALA Waterton Lakes 89.68 334 *e*P P 03 19 52.4 -0.2
comp=Z,1.5nm,1.5s,mb4.1
HAWA Hanford 89.80 329 *e*P P 03 19 53.9 +0.7
comp=Z,24nm,1.3s,mb5.4
HAWA *e*pP pP 03 20 00.8 -0.7
RSW Rattlesnake Hi 89.83 329 *e*P P 03 19 53.7 +0.4
RSW *e*pP pP 03 20 01.3 -0.3
LSZ Lusaka 89.92 108 P P 03 19 54.6 -0.1
comp=Z,29nm,1.1s,mb5.5,baz=233,slow=4.3,SNR=27
LSZ Lusaka 89.92 108 P P 03 19 54.6 -0.1
LSZ pmax pmax
comp=Z,29nm,1.1s,mb5.5
LSZ Lusaka 89.92 108 *e*P P 03 19 55.2 +0.5
LSZ pmax pmax
comp=Z,45nm,1.2s,mb5.7
LSZ Lusaka 89.92 108 *e*P P 03 19 55.2 +0.6
comp=Z,45nm,1.2s,mb5.7
D08A Wollman Farm, 90.06 330 ⇓P P 03 19 53.7 -0.7
baz=90
E07A Sunnyside 90.07 329 ⇓P P 03 19 54.4 -0.1
baz=90
OD2 Odessa Site #2 90.23 330 *e*P P 03 19 54.8 -0.4
C09A Chrisman Ranch 90.37 331 ⇑P P 03 19 55.3 -0.6
baz=91,SNR=6.0
A11A Hall Mountain, 90.53 332 ⇓P P 03 19 55.5 -1.0
baz=91,SNR=8.0
B09A Rice 90.81 331 ⇑P P 03 19 56.8 -1.0
baz=91,SNR=6.8
FFC Flin Flon 90.90 343 *e*P P 03 19 57.0 -1.1
FFC pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
FFC Flin Flon 90.90 343 *e*P P 03 19 57.0 -1.1
comp=Z,1.0nm,0.6s,mb4.3
A10A Northport 91.02 332 ⇑P P 03 19 57.5 -1.3
baz=91,SNR=6.7
C07A Waterville 91.04 330 ⇓P P 03 19 58.5 -0.5
baz=91,SNR=5.6
ETW Entiat 91.08 329 *e*P P 03 19 59.7 +0.6
A09A Danville 91.43 331 ⇑P P 03 19 59.4 -1.3
baz=92,SNR=5.9
B07A Winthrop 91.66 330 ⇓P P 03 20 01.2 -0.6
baz=92
A08A Turner Farm, O 91.69 331 ⇓P P 03 20 00.6 -1.3
baz=92,SNR=5.1
A07A Ashnola River, 92.22 330 ⇑P P 03 20 04.5 0.0
baz=92
EDM Edmonton 92.92 336 *e*P P 03 20 05.4 -2.1
FCC Fort Churchill 93.02 349 *e*P P 03 20 07.0 -0.8
FCC pmax pmax
comp=Z,1.0nm,1.8s,mb3.9
FCC Fort Churchill 93.02 349 *e*P P 03 20 07.0 -0.9
comp=Z,0.9nm,1.8s,mb3.9
ESDC Sonsea Array 95.46 46 P P 03 20 18.6 -1.0
comp=Z,2.1nm,0.9s,mb4.6,baz=224,slow=3.9,SNR=5.0
ESDC LR LR 04 00 39.3
comp=Z,386nm,18.3s,MS4.9,baz=170,slow=34
YKA Yellowknife Ar 100.93 341 P Pdif 03 20 41.4 -2.8
comp=Z,0.5nm,0.5s,baz=144,slow=4.6,SNR=18
YKA PKKPbc PKKPbc 03 36 53.5 -4.0
comp=Z,0.3nm,0.4s,baz=322,slow=3.6,SNR=15
YKA Yellowknife Ar 100.93 341 P Pdif 03 20 41.4 -2.8
YKA PKKPbc PKKPbc 03 36 53.5 -4.0
GERES GERESS Array B 111.03 45 PKiKP PKiKP 03 25 26.6 -1.3
comp=Z,1.2nm,0.8s,baz=191,slow=1.4,SNR=7.2
DRGR 115.79 50 ⇑*i*P PKPdf 03 25 36.9 -0.2
KWP Kalwaria 116.77 47 *e*PKP PKPdf 03 25 38.3 -0.5
KWP Kalwaria 116.77 47 ⇑*i*P PKPdf 03 25 38.5 -0.4
KWP Kalwaria 116.77 47 *e*PKP PKPdf 03 25 38.3 -0.6
MLR Muntele Rosu 117.44 52 PKP PKPdf 03 25 38.2 -2.1
comp=Z,1.7nm,0.5s,baz=324,slow=14,SNR=3.3
BURAR Bucovina Array 117.67 49 ⇓*i*P PKPdf 03 25 39.7 -1.0
SUW Suwalki 118.44 42 *e*PKP PKPdf 03 25 41.3 -0.6
SUW Suwalki 118.44 42 *e*PKP PKPdf 03 25 41.3 -0.6
ASAR Alice Springs 118.86 207 PKP PKPdf 03 25 40.8 -3.1
comp=Z,0.7nm,0.7s,baz=152,slow=1.7,SNR=9.1
ASAR PP PP 03 27 03.0 +1.6
comp=Z,0.7nm,1.0s,baz=142,slow=5.1,SNR=4.2
ASAR PKKPbc PKKPbc 03 35 57.4 -0.9
comp=Z,1.0nm,0.9s,baz=1.2,slow=2.9,SNR=8.3
ASAR Alice Springs 118.86 207 PKIKP PKPdf 03 25 40.8 -3.1
ASAR 03 27 03.0
MMAI Mount Meron Ar 119.98 68 PKP PKPdf 03 25 44.6 -1.0
comp=Z,0.6nm,0.5s,baz=90,slow=2.9,SNR=3.5
BR131 Keskin Array S 120.93 60 *e*PKPdf PKPdf 03 25 46.0 -1.3
BRTR Keskin Array B 120.93 60 PKP PKPdf 03 25 45.9 -1.3
comp=Z,2.9nm,0.8s,baz=191,slow=4.5,SNR=13
AKASG Malin Array Be 121.09 47 PKP PKPdf 03 25 45.0 -2.1
comp=Z,3.0nm,0.7s,baz=267,slow=2.4,SNR=12
AKASG PP PP 03 27 11.4 -6.3
comp=Z,0.2nm,0.2s,baz=255,slow=6.9,SNR=4.3
WB2 Warramunga Arr 122.03 209 *e*P PKPdf 03 25 47.6 -2.4
WRA Warramunga Arr 122.04 209 PKP PKPdf 03 25 47.4 -2.7
comp=Z,3.7nm,1.1s,baz=169,slow=1.5,SNR=24
WRA PKKPbc PKKPbc 03 35 45.8 -0.6
comp=Z,1.3nm,1.1s,baz=328,slow=3.2,SNR=5.3

WRAB Tennant Creek 122.04 209 ⇑*i*PKIKP PKPdf 03 25 48.2 -1.9
WRAB Tennant Creek 122.04 209 *e*PKPdf PKPdf 03 25 48.8 -1.2
COEN Coen 122.88 221 *e*PKPdf PKPdf 03 25 51.0 -0.8
OBN Obninsk 126.28 43 ⇑*i*PKIKP PKPdf 03 25 55.2 -1.8
OBN *e*PS PS 03 37 52.5 -2.9
OBN pmax pmax
comp=Z,26nm,1.3s
OBN MLR MLR
comp=Z,400nm,18.0s,MS5.1
OBN Obninsk 126.28 43 ⇑*e*PKP PKPdf 03 25 56.5 -0.5
FITZ Fitzroy Crossi 126.84 201 *e*P PKPdf 03 25 56.0 -3.3
comp=Z,8.7nm,1.2s
KLMR Klimovskoe 128.18 35 *e*PKIKP PKPdf 03 25 57.6 -2.8
KIV Kislovodsk 128.54 57 *i* PKIKP PKPdf 03 26 01.0 -0.7
KIV pmax pmax
comp=Z,20nm,1.1s
GOF Gofitskoye 128.99 56 *e*PKIKP PKPdf 03 25 55.3 -7.2
GNI Garni 129.26 62 *e*PKIKP PKPdf 03 26 02.9 -0.3
BILL Bilibino 131.80 335 ⇑*i*PKIKP PKPdf 03 26 06.2 -0.9
BILL *e* 03 28 30.9
BILL pmax pmax
comp=Z,13nm,1.3s
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.8
BILL Bilibino 131.80 335 *i* PKP PKPdf 03 26 06.3 -0.8
ARU Arti 138.56 40 ⇑*i*PKIKP PKPdf 03 26 20.2 +0.2
ARU Arti 138.56 40 ⇑*e*PKP PKPdf 03 26 20.3 +0.3
SEY Seymchan 139.05 331 ⇑*e*PKIKP PKPdf 03 26 20.0 -0.7
PETK Petropavlovsk- 139.46 315 PKP PKPdf 03 26 20.1 -1.6
comp=Z,8.9nm,1.0s,baz=86,slow=7.4,SNR=5.2
TIXI Tiksi 139.47 350 *i* PKIKP PKPdf 03 26 22.9 +1.6
KOD Kodaikanal 143.84 121 *e*P PKPdf 03 26 28.0 -2.8
PALK Pallekele 143.97 129 *e*PKIKP PKPdf 03 26 28.5 -2.6
BHJ Bhuj 144.74 95 *e*P PKPdf 03 26 31.2 -1.0
KAD Karad 145.65 108 *e*P PKPdf 03 26 32.1 -1.8
KAD AMb AMB 03 26 36.3
comp=Z,82nm,1.3s
POO Poona 146.03 106 ⇓*i*P PKPdf 03 26 32.0 -2.5
comp=Z,130nm,1.0s
POO *e*P 03 26 33.2
POO AMb AMB 03 26 36.5
comp=Z,125nm,1.1s
BRVK Borovoye 146.05 42 ⇓*e*PKP2 PKPab 03 26 33.5 -1.5
BVAR Borovoye Array 146.12 42 PKPbc PKPbc 03 26 33.7 -0.9
comp=Z,16nm,0.5s,baz=295,slow=3.0,SNR=74
YAK Yakutsk 147.61 341 *c i*PKP2 PKPdf 03 26 36.8 +1.0
YAK pmax pmax
comp=Z,119nm,1.0s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK Yakutsk 147.61 341 ⇑*i*PKP PKPdf 03 26 36.0 +0.2
KSM Kuching 148.88 184 *e*PKPbc PKPbc 03 26 42.1 -1.2
KSM *e*PKPab PKPab 03 26 47.3 +0.1
HYB Hyderabad 149.17 112 *i* PKP PKPbc 03 26 43.0 -0.9
HYB Hyderabad 149.17 112 *e*P PKPbc 03 26 43.0 -0.9
YSS Yuzh-Sakhalins 150.24 309 *e*PKIKP PKPbc 03 26 43.7 -2.0
ASAJ Asahikawa 151.02 303 PKPbc PKPbc 03 26 46.4 -1.3
comp=E,38nm,1.1s,baz=258,slow=9.4,SNR=10.0
ASAJ Asahikawa 151.02 303 PKIKP PKPbc 03 26 46.4 -1.2
ASAJ pmax pmax
comp=Z,38nm,1.1s
EKS2 Erkin-Say 151.08 60 P PKPdf 03 26 42.3 +0.3
SNR=6.1
EKS2 Erkin-Say 151.08 60 *e*PKPdf PKPdf 03 26 42.1 +0.1
EKS2 *e*PKPbc PKPbc 03 26 47.8 -0.1
AML Almayashu 151.10 61 P PKPbc 03 26 48.3 +0.4
SNR=18
AML Almayashu 151.10 61 *e*PKPdf PKPdf 03 26 41.8 -0.3
AML *e*PKPbc PKPbc 03 26 48.5 +0.6
BHPL Bhopal 151.22 101 *e*P PKPdf 03 26 41.9 -0.9
USP Ospenovka 151.51 58 P PKPbc 03 26 48.3 -0.5
SNR=24
AAK Ala-Archa 151.61 60 P PKPbc 03 26 48.9 -0.1
SNR=26
AAK Ala-Archa 151.61 60 *e*PKPdf PKPdf 03 26 43.1 +0.3
FRU Bishkek 151.67 59 *e*PKIKP PKPbc 03 26 48.0 -1.2
FRU *e* 03 27 01.0
FRU pmax pmax
comp=Z,130nm,2.0s
NVS Novosibirsk 151.68 31 *e*PKIKP PKPbc 03 26 47.5 -1.3
NVS pmax pmax
comp=N,12nm,1.1s
NVS pmax pmax
comp=E,25nm,1.1s
NVS pmax pmax
comp=Z,107nm,1.1s
UCH Uchtor 151.69 61 P PKPbc 03 26 50.8 +1.6
SNR=5.3
UCH Uchtor 151.69 61 *e*PKPbc PKPbc 03 26 50.1 +0.9
KURK Kurchatov 151.72 42 PKP PKPdf 03 26 41.4 -1.3
comp=Z,2.7nm,1.0s,baz=300,slow=2.9,SNR=22
KURK PKPbc PKPbc 03 26 47.9 -1.1
comp=Z,37nm,0.7s,baz=301,slow=2.9,SNR=115
KURK Kurchatov 151.72 42 PKIKP PKPdf 03 26 41.4 -1.3
KURK 03 26 47.9
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURK pmax pmax
comp=Z,37nm,0.7s
KURK Kurchatov 151.72 42 *e*PKPdf PKPdf 03 26 41.1 -1.5
CHMS Chumysh 151.74 59 P PKPbc 03 26 48.7 -0.6
SNR=12
KULM Kulim 151.80 164 *e*PKPbc PKPbc 03 26 49.0 -1.4
KBK Karagaybulak 151.94 60 P PKPbc 03 26 50.3 +0.5
SNR=8.4
KZA Kyzart 152.25 61 P PKPbc 03 26 50.9 +0.3
SNR=16
TKM2 Tokmak 2 152.36 59 P PKPbc 03 26 50.2 -0.5
SNR=18
TKM2 Tokmak 2 152.36 59 *e*PKPdf PKPdf 03 26 44.0 +0.1
TKM2 *e*PKPbc PKPbc 03 26 50.1 -0.6
THN Thein Dam 152.58 82 *ex* x 03 26 49.5
ULHL Ulahol 152.95 60 P PKPbc 03 26 52.8 +0.8
SNR=7.6
ZAA0 Zalesovo Array 152.97 31 *e*PKPdf PKPdf 03 26 43.0 -1.4
ZAA0 *e*PKPbc PKPbc 03 26 50.2 -1.5
ZALV Zalesovo Beam 152.97 31 PKP PKPdf 03 26 43.3 -1.1
comp=Z,5.9nm,0.9s,baz=286,slow=2.8,SNR=20
ZALV PKPbc PKPbc 03 26 50.5 -1.2
comp=Z,39nm,0.7s,baz=298,slow=3.2,SNR=74
DDI Dehra Dun 154.13 87 *e*P PKPdf 03 26 47.0 +0.1
BOD Bodaibo 154.59 353 *e*PKIKP PKPbc 03 26 53.2 -1.9
BOD *e* 03 27 07.8
BOD pmax pmax
comp=Z,13nm,1.3s
MJAR Matsushiro Ant 155.16 287 PKPbc PKPdf 03 26 53.4 +5.3
comp=Z,1.9nm,0.8s,baz=255,slow=0.8,SNR=4.4
MKAR Makanchi Array 155.67 47 PKP PKPdf 03 26 47.2 -1.2
comp=Z,4.3nm,1.1s,baz=304,slow=2.6,SNR=14
MKAR PKPab PKPab 03 27 13.5 -1.3
comp=Z,9.9nm,0.7s,baz=287,slow=3.4,SNR=3.8
MKAR PP PP 03 30 49.0 -3.0
comp=Z,2.9nm,1.0s,baz=289,slow=3.7,SNR=4.7
MKAR Makanchi Array 155.67 47 PKP PKPdf 03 26 47.2 -1.2
MKAR PKPab PKPab 03 27 13.5 -1.3
MKAR PP PP 03 30 49.0 -3.0
KLR Kul'dur 155.95 320 *e*PKIKP PKPdf 03 26 42.2 -6.5
MDJ Mudanjiang 159.64 312 PKP PKPdf 03 26 53.3 -0.1
WMQ Urumqi 160.42 50 PKP PKPdf 03 26 53.1 -1.3
WMQ XPKP 03 27 08.4
WMQ PKP2 PKPab 03 27 35.9 +0.4
WMQ PKS 03 30 25.1
WMQ PP PP 03 31 19.0 +1.0
WMQ SKS SKSdf 03 33 53.3 -4.5
WMQ SKKS SKKSac 03 38 01.5 -3.2
WMQ PP PP
comp=Z,260nm,6.0s
WMQ LR LR
comp=N,195nm,21.0s
WMQ LR LR
comp=E,277nm,20.0s
WMQ LR LR
comp=Z,233nm,21.0s
TLY Talaya 160.73 9 *i* PKIKP PKPdf 03 26 55.9 +1.5
TLY *e* 03 31 17.0
TLY pmax pmax
comp=Z,10.0nm,1.1s
ZAK Zakamensk 161.94 10 *e*PKP2 PKPab 03 27 39.3 -2.5
ZAK pmax pmax
comp=Z,5.0nm,1.3s
CN2 Changchun 162.61 314 *e*PKP PKPdf 03 26 56.3 -0.3
CN2 *e*APKP 03 27 06.9
CN2 PP PP 03 31 32.5 +2.9
CN2 LR LR
comp=N,300nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,300nm,19.0s
KSRS Korea Array 163.27 292 PKP PKPdf 03 26 55.4 -2.1
comp=Z,3.1nm,0.9s,baz=66,slow=1.1,SNR=8.0
KSRS PKPab PKPab 03 27 47.3 -0.9
comp=Z,0.8nm,0.3s,baz=83,slow=3.1,SNR=3.5
KSRS PKKP 03 35 05.2
comp=Z,1.6nm,0.8s,baz=262,slow=9.1,SNR=5.4
KSRS Korea Array 163.27 292 PKIKP PKPdf 03 26 55.4 -2.1
KSRS 03 27 47.3
KSRS pmax pmax
comp=Z,3.0nm,0.9s
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 163.50 147 PKP PKPdf 03 26 57.0 -1.3
comp=Z,1.2nm,0.3s,baz=259,slow=3.0,SNR=9.3
CMAR PKPab PKPab 03 27 47.7 -1.7
comp=Z,1.8nm,0.3s,baz=200,slow=5.0,SNR=4.9
CHTO Chiang Mai 163.81 146 *e*PKIKP PKPdf 03 26 57.8 -0.7
CHTO *e* 03 27 49.6
SHL Shillong 163.98 112 *e*P PKPdf 03 26 57.0 -1.5
SONM Songino Array 164.81 5 PKP PKPdf 03 26 57.3 -1.2
comp=Z,0.6nm,0.8s,baz=260,slow=1.0,SNR=4.5
SONM PKPab PKPab 03 27 54.2 -0.2
comp=Z,4.3nm,1.0s,baz=344,slow=4.4,SNR=12
ULN Ulaanbaatar 164.82 3 *e*PKIKP PKPdf 03 26 57.6 -1.0
LSA Lhasa 165.00 97 *e*PKP2 PKPab 03 27 55.9 -0.2
QIZ Qiongzhong 166.31 186 PKP PKPdf 03 26 59.3 -1.4
QIZ SS SS 03 52 31.4 +4.6
QIZ LR LR
comp=N,249nm,20.4s
QIZ LR LR
comp=Z,283nm,21.5s
BJI Beijing 170.32 321 PKP PKPdf 03 27 01.0 -1.7
BJI PP PP 03 32 08.6 -0.6
BJI LR LR
comp=N,302nm,20.4s
BJI LR LR
comp=E,363nm,22.0s
BJI LR LR
comp=Z,235nm,20.5s
GTA Gaotai 170.40 43 PKP PKPdf 03 27 02.3 -0.5
GTA APKP 03 27 13.4
GTA XPKP 03 27 17.4
GTA PKP2 PKPab 03 28 20.3 +0.8
GTA SKKS SKKSac 03 38 55.8 +0.8
GTA PP PP
comp=Z,140nm,6.8s
GTA LR LR
comp=N,267nm,14.6s
GTA LR LR
comp=E,234nm,16.7s
GTA LR LR
comp=Z,257nm,16.6s
KMI Kunming 171.00 146 PKP PKPdf 03 27 02.9 -0.7
KMI PP PP 03 32 14.3 +1.9
KMI SKKS SKKSac 03 38 56.5 -1.8
KMI PP PP
comp=Z,94nm,4.2s
KMI LR LR
comp=N,250nm,21.5s
KMI LR LR
comp=E,262nm,26.5s
KMI LR LR
comp=Z,370nm,21.5s
NJ2 Nanjing 171.07 269 *e*PKP PKPdf 03 27 02.4 -1.0
HHC Hu-ho-hao-te 171.46 343 *e*PKP PKPdf 03 27 02.5 -0.8
HHC APKP 03 27 13.4
HHC XPKP 03 27 17.4
HHC PKP2 PKPab 03 28 25.1 +1.1
HHC PKS 03 30 34.1
HHC PP PP 03 32 16.8 +2.5
HHC SKS SKSdf 03 34 00.8 -4.1
HHC SKKS SKKSac 03 38 59.3 -0.5
HHC PP PP
comp=Z,250nm,5.7s
HHC LR LR
comp=N,344nm,19.0s
HHC LR LR
comp=E,246nm,14.3s
HHC LR LR
comp=Z,382nm,17.8s
GYA Guiyang 173.61 167 PKP PKPdf 03 27 04.1 -0.6
GYA APKP 03 27 14.9
GYA XPKP 03 27 18.5
GYA PKS 03 30 34.9
GYA PP PP 03 32 32.0 +7.2
GYA PP PP
comp=Z,90nm,5.0s
GYA LR LR
comp=N,280nm,20.0s
GYA LR LR
comp=E,200nm,19.6s
GYA LR LR
comp=Z,330nm,20.5s
WHN Wuhan 174.43 249 PKP PKPdf 03 27 03.8 -1.1
CD2 Chengdu 175.72 113 PKP PKPdf 03 27 05.1 -0.1
CD2 APKP 03 27 15.9
CD2 XPKP 03 27 19.5
CD2 PKP2 PKPab 03 28 45.3 +1.8
CD2 PP PP 03 32 38.8 +2.3
CD2 SKS SKSdf 03 34 02.8 -3.8
CD2 SKKS SKKSac 03 39 19.8 -1.2
CD2 PP PP
comp=Z,260nm,11.9s
CD2 LR LR
comp=N,480nm,18.4s
CD2 LR LR
comp=Z,480nm,19.6s
XAN Xi'an 178.57 340 PKP PKPdf 03 27 06.3 +0.7
XAN APKP 03 27 17.0
XAN SKS SKSdf 03 34 03.8 -3.0
XAN LR LR
comp=N,54nm,25.1s
XAN LR LR
comp=E,124nm,25.1s
XAN LR LR
comp=Z,300nm,23.2s

*ISCJB **20** 03:10:31.0±2.1,23S±0.1×1003E±0.1,h61km±15km, mb4.2/14, Error ellipse: s-maj=31.1km s-min=10.6km az=139.9*
*IDC **20** 03:10:31.7±1.0,233S×10038E,h49km±5km,mb3.7/11, mb1 3.9/11,mb1mx3.7/22,mbtmp3.7/11, Error ellipse: s-maj=41.9km s-min=10.5km az=53.0*
*NEIC **20** 03:10:31.8±0.8,241S×10034E,mb4.4/5, Error ellipse: s-maj=36.5km s-min=7.7km az=55.0*
*DJA **20** 03:10:32,219S×100.17E,h30km,MLv4.4/4*
ISC 20 03:10:32.3±2.0,23S±.01×1004E±.01,h53km±15km, h53km±1.8km:pP-P,n26,σ0≈86/26,mb4.2/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.41**	**3**	P		**Pn**	**03 10 54.4**	**-1.2**
PDSI				S		**Sn**	**03 11 12.3**	**-0.8**
PPI	**Padang Panjang**	**1.86**	**0**	P		**Pn**	**03 11 01.6**	**-0.2**
KSI	**Kapahiang**	**2.56**	**121**	P		**Pn**	**03 11 16.3**	**+4.9**
RGRI	**Rengat**	**2.77**	**45**	P		**Pn**	**03 11 16.1**	**+1.9**
PSI	**Prapat**	**5.30**	**344**	P		**Pn**	**03 11 49.5**	**+0.6**
	1.4nm,0.3s,baz=155,slow=10,SNR=8.3							
CMAR	**Chiang Mai Arr**	**20.70**	**356**	P		**P**	**03 15 08.4**	**+0.2**
	2.6nm,0.5s,baz=187,slow=10,SNR=9.2							
FITZ	**Fitzroy Crossi**	**29.31**	**124**	*e*P		**P**	**03 16 29.8**	**-0.2**
	2.9nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**37.49**	**120**	P		**P**	**03 17 40.7**	**-0.5**
	3.4nm,0.6s,mb4.4,baz=302,slow=9.0,SNR=46							
WRA				pP			03 17 54.5	-0.4
	1.7nm,0.9s,baz=294,slow=9.6,SNR=6.5							
WRA				PcP		PcP	03 19 59.4	+0.6
	0.4nm,0.5s,baz=304,slow=2.3,SNR=4.7							
WRAB	**Tennant Creek**	**37.50**	**120**	*e*P		**P**	**03 17 40.6**	**-0.6**
	4.9nm,0.6s,mb4.5							
WB2	**Warramunga Arr**	**37.50**	**120**	*e*P		**P**	**03 17 40.8**	**-0.4**
ASAR	**Alice Springs**	**38.74**	**126**	P		**P**	**03 17 51.8**	**+0.1**
	2.3nm,0.5s,mb4.2,baz=301,slow=7.8,SNR=51							

ASAR				pP	pP	03 18 04.5	-1.1	
	1.8nm,0.8s,baz=306,slow=8.1,SNR=5.8							
ASAR				PcP	PcP	03 20 03.6	+1.0	
	0.5nm,0.5s,baz=304,slow=2.2,SNR=6.0							
ASAR				S	**S**	**03 23 44.6**	**-0.7**	
	0.5nm,0.7s,baz=295,slow=16,SNR=4.7							
KSRS	**Korea Array**	**47.10**	**30**	P	**P**	**03 18 59.2**	**+0.2**	
	0.8nm,0.5s,mb3.9,baz=233,slow=8.5,SNR=3.2							
STKA	**Stephens Creek**	**48.64**	**132**	*eP*	**P**	**03 19 12.1**	**+1.0**	
	1.2nm,0.5s,mb4.2							
STKA	**Stephens Creek**	**48.64**	**132**	P	**P**	**03 19 11.9**	**+0.8**	
	1.8nm,0.7s,mb4.2,baz=316,slow=7.9,SNR=5.5							
SONM	**Songino Array**	**50.23**	**5**	P	**P**	**03 19 23.5**	**+0.7**	
	1.0nm,0.6s,mb4.0,baz=187,slow=9.4,SNR=12							
TKM2	**Tokmak 2**	**50.29**	**336**	*eP*	**P**	**03 19 24.8**	**+1.4**	
	3.7nm,0.5s,mb4.7							
EKS2	**Erkin-Say**	**50.82**	**335**	*eP*	**P**	**03 19 28.9**	**+1.5**	
	3.8nm,0.8s,mb4.4							
EKS2				*e*pP	pP	03 19 44.5	+2.7	
MKAR	**Makanchi Array**	**51.45**	**344**	P	**P**	**03 19 32.4**	**+0.3**	
	0.8nm,0.5s,mb3.9,baz=158,slow=9.0,SNR=24							
MKAR				pP	pP	03 19 45.5	-0.9	
	0.9nm,0.5s,baz=150,slow=8.4,SNR=6.3							
MKAR	**Makanchi Array**	**51.45**	**344**	P	**P**	**03 19 32.4**	**+0.3**	
MKAR				pP	pP	03 19 45.5	-0.9	
KURK	**Kurchatov**	**56.03**	**343**	P	**P**	**03 20 05.0**	**-0.4**	
	0.5nm,0.5s,mb3.8,baz=165,slow=7.0,SNR=4.2							
KURK				pP	pP	03 20 17.9	-2.1	
	1.0nm,0.6s,baz=163,slow=7.2,SNR=6.2							
ZALV	**Zalesovo Beam**	**57.56**	**349**	P	**P**	**03 20 14.7**	**-1.6**	
	0.7nm,0.3s,mb4.2,baz=185,slow=8.9,SNR=4.9							
ZALV				pP	pP	03 20 28.8	-2.1	
	0.9nm,0.4s,baz=140,slow=5.1,SNR=3.0							
ZALV	**Zalesovo Beam**	**57.56**	**349**	P	**P**	**03 20 14.7**	**-1.6**	
ZALV				pP	pP	03 20 28.8	-2.1	
BVAR	**Borovoye Array**	**60.62**	**340**	P	**P**	**03 20 36.8**	**-0.7**	
	1.7nm,0.6s,mb4.3,baz=153,slow=10,SNR=7.1							
BVAR				pP	pP	03 20 51.6	-0.6	
	1.2nm,0.5s,baz=150,slow=8.6,SNR=4.6							
BRTR	**Keskin Array B**	**73.83**	**312**	P	**P**	**03 22 01.0**	**-0.5**	
	0.9nm,0.8s,mb3.8,baz=120,slow=7.5,SNR=4.2							
TXAR	**Lajitas Array**	**144.72**	**38**	PKP	PKPdf	03 30 04.0	+0.1	
	2.9nm,0.6s,baz=226,slow=1.2,SNR=21							
JCT	**Junction City**	**146.09**	**32**	*e*PKPbc	PKPbc	03 30 07.7	+0.6	

*NEIC **20** 03:15:47.9, 32.78S×71.75W, h30km, ML3.5(GUC), After GUC.*
NEIC Felt [II] at Santiago, Valparaiso and Vina del Mar.
GUC 20 03:15:47.9±0.5, 32.78S×71.75W, h30km±3km, MD3.4, ML3.5, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.26**	**159**	⇑*i*P	Pb	03 15 54.6	-0.2
IHA				*i* S	Sb	03 15 59.9	+0.3
PEL	**Peldehue**	**0.96**	**112**	*i* P	Pn	03 16 05.5	+0.1
PEL				*i* S	Sn	03 16 18.2	+0.2
PEL				AML	AML	03 16 20.5	
	comp=E,6μm,0.4s						
JACH	**Jahuel**	**0.98**	**84**	*e*P	Pn	03 16 05.7	+0.1
TACH	**Talagante**	**1.10**	**142**	*i* P	Pn	03 16 07.5	+0.2
TACH				*i* S	Sn	03 16 22.2	+0.8
SAN	**Santiago**	**1.13**	**126**	⇑*i*P	Pn	03 16 07.9	+0.3
SAN				*i* S	Sn	03 16 23.0	+0.9
SAN	**Santiago**	**1.13**	**126**	⇑*i*P	Pn	03 16 07.9	+0.3
SAN				*i* S	Sn	03 16 23.0	+0.9
SAN				AML	AML	03 16 26.3	
	comp=E,1μm,0.4s						
CLCH	**Cerro Calan**	**1.19**	**121**	⇓*i*P	Pn	03 16 08.9	+0.5
CLCH				*i* S	Sn	03 16 24.9	+1.4
CLCH				AML	AML	03 16 27.4	
	comp=N,2μm,0.5s						
LNV	**Longovilo**	**1.20**	**166**	*i* P	Pn	03 16 08.8	+0.2
LNV				*i* S	Sn	03 16 24.8	+0.9
ANTU	**Antumapu**	**1.22**	**130**	*i* P	Pn	03 16 09.2	+0.3
ANTU				*i* S	Sn	03 16 25.6	+1.3
ANTU	**Antumapu**	**1.22**	**130**	*i* P	Pn	03 16 09.2	+0.3
ANTU				*i* S	Sn	03 16 25.6	+1.3
ANTU				AML	AML	03 16 29.2	
	comp=E,2μm,0.3s						
PCH	**Pirque**	**1.33**	**129**	*i* P	Pn	03 16 11.1	+0.7
PCH				*i* S	Sn	03 16 28.8	+1.7
FCH	**Farellones**	**1.34**	**114**	⇓*i*P	Pn	03 16 11.4	+0.9
FCH				*i* S	Sn	03 16 29.4	+2.1
FCH				AML	AML	03 16 29.7	
	comp=N,1μm,0.2s						
YECH	**El Yeso**	**1.65**	**123**	⇑*i*P	Pn	03 16 16.6	+1.8
YECH				*i* S	Sn	03 16 38.8	+3.9
YECH				AML	AML	03 16 48.8	
	comp=N,680nm,0.6s						

*NEIC **20** 03:17:23.1, 5096N×17957W, h10km, ML3.2(AEIC), After AEIC.*
*ISCJB **20** 03:17:24.9±2.0, 51.1N±02×1795W±0.1, h62km±16km, mb3.8/6, Error ellipse: s-maj=33.0km s-min=10.7km az=2.0*
*IDC **20** 03:17:27.1±4.1, 5102N×17955W, h66km±38km, mb3.5/6, mb1 3.8/7, mb1mx3.5/25, mbtmp3.5/7, ML3.2/1, Error ellipse: s-maj=32.7km s-min=20.9km az=171.0*
ISC 20 03:17:26.2±1.9, 511N±02×1794W±01, h56km±15km, n12, σ0°97/14, mb3.8/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.89**	**64**	P	**Pn**	**03 17 56.7**	**+0.7**
ADK				S	**Sn**	**03 18 23.4**	**+4.8**
FX1	**Attu Island--F**	**4.93**	**294**	P	**Pn**	**03 18 37.4**	**-0.2**
	3.6nm,0.3s,baz=207,slow=11,SNR=4.9						
FX1				S	**Sn**	**03 19 33.5**	**+0.2**
	0.6nm,0.3s,baz=265,slow=23,SNR=2.7						
KDAK	**Kodiak Island**	**16.91**	**56**	P	**Pn**	**03 21 16.2**	**-2.4**
	0.4nm,0.3s,baz=291,slow=19,SNR=8.7						
KTH	**Kantishna Hill**	**19.60**	**40**	*e*P	**Pn**	**03 21 50.9**	**-0.3**
	14nm,1.2s						
YKA	**Yellowknife Ar**	**35.72**	**46**	P	**P**	**03 24 19.4**	**+0.6**
	0.6nm,0.6s,mb3.7,baz=282,slow=7.2,SNR=20						
YKA	**Yellowknife Ar**	**35.72**	**46**	P	**P**	**03 24 19.4**	**+0.6**
PDAR	**Pinedale Array**	**46.77**	**72**	P	**P**	**03 25 51.9**	**+2.2**
	1.5nm,0.6s,mb4.1,baz=313,slow=3.5,SNR=12						
TXAR	**Lajitas Array**	**59.08**	**81**	P	**P**	**03 27 19.8**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=326,slow=4.4,SNR=6.4						
TXAR	**Lajitas Array**	**59.08**	**81**	P	**P**	**03 27 19.8**	**-0.7**
NOA	**NORSAR Array B**	**67.91**	**354**	P	**P**	**03 28 18.5**	**+0.2**
	1.1nm,0.7s,mb4.0,baz=7.6,slow=6.2,SNR=3.5						
HFS	**Hagfors**	**68.64**	**353**	P	**P**	**03 28 22.6**	**-0.2**
	2.9nm,0.9s,mb4.2,baz=350,slow=3.5,SNR=4.6						
WRA	**Warramunga Arr**	**81.53**	**223**	P	**P**	**03 29 37.0**	**-0.4**
	0.4nm,0.8s,mb3.4,baz=29,slow=5.9,SNR=2.9						

*IDC **20** 03:18:03.9±0.5, 3270S×7165W, h0km, mb4.3/13, mb1 4.4/16, mb1mx4.4/19, mbtmp4.3/16, ML4.7/3, MS4.0/2, Ms1 4.0/2, ms1mx3.5/22, Error ellipse: s-maj=22.4km s-min=14.4km az=95.0*
*ISCJB **20** 03:18:08.4±0.7, 3269S±003×7179W±006, h40km±5km, mb4.4/27, MS3.9/2, Error ellipse: s-maj=8.6km s-min=5.4km az=167.4*
*GUC **20** 03:18:08.8±0.7, 3270S×7174W, h21km±10km, ML4.6*
*NEIC **20** 03:18:08.8, 3270S×7174W, h21km, mb4.5/14, ML4.6(GUC), After GUC.*
NEIC Felt [II] at Santiago, Valparaiso and Vina del Mar.
ISC 20 03:18:08.4±0.7, 3272S±003×7180W±005, h25km±5km, n64, σ1°93/67, mb4.4/27, MS3.9/2, 1C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.34**	**157**	⇓*i*P	**Pb**	**03 18 15.8**	**-0.1**
IHA				*i* S	**Sb**	**03 18 21.4**	**+0.3**
PACH	**Papudo**	**0.35**	**60**	*e*P	**Pb**	**03 18 15.9**	**-0.3**
ROCH	**El Roble**	**0.71**	**111**	⇑*e*P	**Pb**	**03 18 21.7**	**-0.4**
JACH	**Jahuel**	**1.02**	**88**	*e*P	**Pn**	**03 18 26.0**	**-1.0**
PEL	**Peldehue**	**1.03**	**115**	*e*P	**Pn**	**03 18 26.4**	**-0.8**
PEL				*i* S	**Sb**	**03 18 40.2**	**-0.4**
PEL				AML	AML	03 18 46.4	
	comp=E,53μm,0.5s						
TACH	**Talagante**	**1.18**	**142**	⇓*i*P	**Pn**	**03 18 29.3**	**0.0**
SAN	**Santiago**	**1.21**	**128**	*e*P	**Pn**	**03 18 29.4**	**-0.3**
SAN				*i* S	**Sn**	**03 18 45.3**	**+0.1**
CLCH	**Cerro Calan**	**1.26**	**123**	⇓*e*P	**Pn**	**03 18 30.3**	**-0.1**
CLCH				*i* S	**Sn**	**03 18 46.7**	**+0.2**
CLCH				AML	AML	03 18 51.0	
	comp=N,24μm,0.5s						
PCH	**Pirque**	**1.41**	**130**	⇓*i*P	**Pn**	**03 18 32.9**	**+0.5**
FCH	**Farellones**	**1.41**	**116**	⇓*i*P	**Pn**	**03 18 32.8**	**+0.4**
FCH				*i* S	**Sn**	**03 18 51.0**	**+0.8**
FCH				AML	AML	03 18 54.4	
	comp=N,15μm,0.6s						
LMEL	**Las Melosas**	**1.75**	**131**	*e*P	**Pn**	**03 18 38.5**	**+1.4**
LMEL				*i* S	**Sn**	**03 19 00.8**	**+2.2**
LMEL	**Las Melosas**	**1.75**	**131**	*e*P	**Pn**	**03 18 38.5**	**+1.4**
LMEL				*i* S	**Sn**	**03 19 00.8**	**+2.2**
LMEL				AML	AML	03 19 07.5	
	comp=N,11μm,0.7s						
CFAA	**Coronel Fontan**	**3.22**	**71**	Pn	**Pn**	**03 19 00.2**	**+2.9**
	comp=N,11nm,0.3s,baz=245,slow=12,SNR=26						
CFAA				Lg		03 19 43.3	
	comp=N,17nm,0.3s,baz=95,slow=17,SNR=4.9						
CFAA	**Coronel Fontan**	**3.22**	**71**	Pn	**Pn**	**03 19 00.2**	**+2.9**
CFAA				Lg		03 19 43.3	
LCO	**Las Campanas**	**3.81**	**15**	*e*Pn	**Pn**	**03 19 05.1**	**-0.4**
LCO				*e*Sn	**Sn**	**03 19 51.8**	**+2.2**
TRQA	**Tornquist**	**9.62**	**126**	*e*Pn	**Pn**	**03 20 26.9**	**+1.7**
	comp=N,464nm,1.8s						
LVC	**Limon Verde**	**10.38**	**15**	Pn	**Pn**	**03 20 33.3**	**-2.4**
	comp=N,0.5nm,0.3s,baz=203,slow=7.7,SNR=2.3						
LVC				Sn	**Sn**	**03 22 32.7**	**+1.4**
	comp=N,1.5nm,0.3s,baz=271,slow=17,SNR=3.4						
LVC	**Limon Verde**	**10.38**	**15**	*e*Pn	**Pn**	**03 20 36.9**	**+1.1**
	comp=N,430nm,1.8s						
LVC				Sn	**Sn**	**03 22 32.7**	**+1.4**
CPUP	**Villa Florida**	**14.11**	**67**	Pn	**Pn**	**03 21 25.4**	**-1.2**
	comp=N,1.6nm,0.3s,baz=201,slow=9.3,SNR=9.1						
CPUP				Sn	**Sn**	**03 24 02.5**	**0.0**
	comp=N,0.4nm,0.3s,baz=133,slow=18,SNR=2.0						
CPUP	**Villa Florida**	**14.11**	**67**	*e*Pn	**Pn**	**03 21 28.0**	**+1.4**
	comp=N,25nm,0.5s						
SIV	**San Ignacio**	**19.29**	**33**	P	**Pn**	**03 22 29.6**	**-2.9**
	comp=N,0.7nm,0.3s,baz=221,slow=11,SNR=7.5						
USHA	**Ushuaia**	**22.24**	**175**	P	**P**	**03 23 03.3**	**+0.3**
	comp=N,9.5nm,1.0s,mb4.2,baz=343,slow=11,SNR=2.9						
USHA				LR	LR	03 32 21.8	
	comp=N,255nm,18.3s,MS3.7,baz=340,slow=39						
BDFB	**Brasilia**	**27.46**	**57**	P	**P**	**03 23 49.9**	**-2.7**
	comp=N,3.2nm,0.8s,mb3.9,baz=116,slow=26,SNR=3.5						
PMSA	**Palmer Station**	**32.44**	**174**	LR	LR	03 37 40.8	
	comp=N,363nm,18.1s,MS4.1,baz=99,slow=36						
OTAV	**Otavalo**	**33.37**	**348**	*e*P	**P**	**03 24 47.1**	**+2.3**
	comp=N,2.0nm,0.8s,mb4.1						
SDV	**Santo Domingo**	**41.38**	**2**	P	**P**	**03 25 52.0**	**-0.6**
	comp=N,7.7nm,0.9s,mb4.3,baz=194,slow=17,SNR=3.5						
VNA3	**Neumayer Olymp**	**50.47**	**158**	*e*	**P**	**03 27 03.8**	**+0.1**
VNA3				*e*		03 27 18.7	
VNA2	**Neumayer--Watz**	**51.12**	**158**	*e*	**P**	**03 27 08.2**	**-0.3**
	baz=287,slow=8.7						
VNA2				*e*		03 27 21.4	
SNAA	**Sanae**	**52.70**	**158**	*e*	**P**	**03 27 20.1**	**-0.2**
SNAA				*e*		03 27 32.5	
SNAA	**Sanae**	**52.70**	**158**	*e*P	**P**	**03 27 19.9**	**-0.4**
	comp=N,4.6nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**57.52**	**180**	P	**P**	**03 27 55.4**	**+0.4**
	comp=N,4.4nm,0.7s,mb4.6,baz=145,slow=5.6,SNR=9.7						
VNDA	**Vanda**	**65.40**	**191**	P	**P**	**03 28 48.2**	**0.0**
	comp=N,1.3nm,1.1s,mb3.9,baz=160,slow=2.5,SNR=3.4						
TXAR	**Lajitas Array**	**68.72**	**330**	P	**P**	**03 29 09.8**	**0.0**
	comp=N,0.4nm,0.5s,mb3.6,baz=156,slow=9.2,SNR=12						
TXAR	**Lajitas Array**	**68.72**	**330**	P	**P**	**03 29 09.8**	**0.0**
WVT	**Waverly**	**70.11**	**346**	*e*P	**P**	**03 29 17.5**	**-0.8**
	comp=N,10nm,0.8s,mb4.8						
LIC	**Lamto**	**74.18**	**72**	*e*P	**P**	**03 29 41.9**	**-1.4**
	comp=N,49nm,1.6s,mb5.2						
MAW	**Mawson**	**74.35**	**164**	P	**P**	**03 29 42.8**	**-0.6**
	comp=N,2.5nm,0.5s,mb4.4,baz=223,slow=13,SNR=3.5						
TIC	**Toumodi**	**74.44**	**71**	*e*P	**P**	**03 29 43.6**	**-1.1**
	comp=N,5.7nm,0.2s,mb5.2						
KIC	**Kosan Boka**	**74.49**	**72**	*e*P	**P**	**03 29 43.9**	**-1.2**
	comp=N,58nm,1.1s,mb5.4						
DBIC	**Dimbokro**	**74.58**	**71**	P	**P**	**03 29 44.1**	**-1.4**
	comp=N,3.5nm,0.6s,mb4.5,baz=234,slow=8.5,SNR=12						
DBIC	**Dimbokro**	**74.58**	**71**	*e*P	**P**	**03 29 44.7**	**-0.9**
	comp=N,3.4nm,0.6s,mb4.5						
ANMO	**Albuquerque**	**74.76**	**331**	*e*P	**P**	**03 29 46.9**	**+0.8**
	comp=N,4.5nm,1.4s,mb4.2						
SDCO	**Great Sand Dun**	**76.82**	**333**	*e*P	**P**	**03 29 58.6**	**+0.8**
	comp=N,1.3nm,0.6s,mb4.0						
WUAZ	**Wupatki**	**77.35**	**328**	*e*P	**P**	**03 30 01.1**	**+0.3**
	comp=N,7.2nm,1.1s,mb4.5						
TSUM	**Tsumeb**	**79.37**	**106**	*e*P	**P**	**03 30 12.1**	**-0.4**
	comp=N,10nm,1.2s,mb4.6						
BOSA	**Boshof**	**80.49**	**118**	P	**P**	**03 30 17.5**	**-1.0**
	comp=N,5.4nm,0.7s,mb4.6,baz=259,slow=5.2,SNR=11						
BOSA	**Boshof**	**80.49**	**118**	*e*P	**P**	**03 30 17.5**	**-1.0**
	comp=N,4.6nm,0.7s,mb4.5						
DUG	**Dugway**	**81.87**	**329**	*e*P	**P**	**03 30 26.2**	**+0.9**
	comp=N,1.2nm,0.7s,mb3.9						
LBTB	**Lobatse**	**82.66**	**115**	*e*P	**P**	**03 30 29.1**	**-0.9**
	comp=N,5.6nm,0.4s,mb5.0						
PDAR	**Pinedale Array**	**82.71**	**333**	P	**P**	**03 30 30.2**	**+0.6**
	comp=N,0.5nm,0.8s,mb3.6,baz=132,slow=2.2,SNR=4.1						
NVAR	**Mina Array Bea**	**82.95**	**325**	P	**P**	**03 30 31.9**	**+1.0**
	comp=N,0.7nm,0.5s,mb3.9,baz=144,slow=5.8,SNR=5.5						
ELK	**Elko**	**83.38**	**328**	*e*P	**P**	**03 30 33.7**	**+0.6**
	comp=N,1.9nm,0.8s,mb4.2						
TOA0	**Torodi Ar. Sit**	**83.58**	**70**	*e*P	**P**	**03 30 33.3**	**-1.5**
TORD	**Torodi Ar. Bea**	**83.58**	**70**	P	**P**	**03 30 33.7**	**-1.1**
	comp=N,4.9nm,0.8s,mb4.7,baz=280,slow=5.8,SNR=34						
ULM	**Lac du Bonnet**	**85.31**	**345**	P	**P**	**03 30 41.9**	**-0.8**
	comp=N,1.4nm,0.6s,mb4.3,baz=184,slow=3.4,SNR=3.8						
ULM	**Lac du Bonnet**	**85.31**	**345**	*e*P	**P**	**03 30 41.8**	**-0.9**
	comp=N,3.2nm,0.9s,mb4.5						
HLID	**Hailey**	**85.32**	**330**	*e*P	**P**	**03 30 43.8**	**+0.9**
	comp=N,1.4nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	**100.91**	**341**	P	Pdif	03 31 53.3	-2.1
	comp=N,0.2nm,0.5s,baz=145,slow=4.8,SNR=8.2						
WRA	**Warramunga Arr**	**121.98**	**209**	PKP	PKPdf	03 36 59.0	-2.2
	comp=N,0.3nm,0.6s,baz=160,slow=1.7,SNR=7.8						
BVAR	**Borovoye Array**	**146.20**	**42**	PKPbc	PKPbc	03 37 46.1	+0.1
	comp=N,5.6nm,0.6s,baz=299,slow=2.9,SNR=21						
PSI	**Prapat**	**148.99**	**162**	PKPbc	PKPbc	03 37 53.3	-1.6
	comp=N,3.8nm,0.5s,baz=171,slow=23,SNR=5.4						
KURK	**Kurchatov**	**151.80**	**42**	PKPbc	PKPbc	03 37 60.0	-0.4
	comp=N,8.8nm,0.5s,baz=310,slow=2.6,SNR=24						
KURK				PKPab	PKPab	03 38 07.4	-2.0
	comp=N,1.8nm,0.5s,baz=296,slow=3.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**153.03**	**31**	PKPbc	PKPbc	03 38 02.4	-0.7
	comp=N,7.8nm,0.6s,baz=302,slow=3.1,SNR=18						
ZALV				PKPab	PKPab	03 38 14.7	+0.2
	comp=N,5.4nm,0.8s,baz=308,slow=3.6,SNR=7.2						
MKAR	**Makanchi Array**	**155.76**	**47**	PKPbc	PKPdf	03 38 08.2	+8.5
	comp=N,0.5nm,0.6s,baz=9.0,slow=2.7,SNR=3.7						
MKAR				PKPab	PKPab	03 38 25.3	-1.0
	comp=N,2.0nm,0.5s,baz=294,slow=3.1,SNR=18						

*TRN **20** 03:19:34.3, 1909N×6475W, h15km*
*NEIC **20** 03:19:36.1, 19.13N×64.54W, h67km±4km, MD3.5(RSPR), After RSPR.*
RSPR 20 03:19:36.1, 1913N×6454W, h67km±4km, MD3.5/11, MD3.5/11, 13C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.44**	**153**	⇑*e*P	Pn	03 19 47.8	-0.3
ABV				*e*S	Sn	03 19 56.1	-0.8
TBVI	**Tortola**	**0.71**	**186**	⇑*e*P	Pn	03 19 50.2	-0.7
TBVI				*e*S	Sn	03 20 01.4	-0.4
STVI	**Saint Thomas**	**0.86**	**207**	⇑*e*P	Pn	03 19 52.0	-0.8
STVI				*e*S	Sn	03 20 04.4	-0.7
CDVI	**St. Croix**	**1.39**	**189**	⇑*e*P	Pn	03 20 01.4	+2.0
HUMP	**Col San Antoni**	**1.58**	**232**	⇑*e*P	Pn	03 20 01.2	-0.8
HUMP				*e*S	Sn	03 20 21.5	-0.1
SJG	**San Juan**	**1.83**	**237**	⇑*e*P	Pn	03 20 05.3	-0.1
SJG	**San Juan**	**1.83**	**237**	⇑*e*P	Pn	03 20 04.2	-1.1
SJG				*e*S	Sn	03 20 26.9	-0.8
SJG	**San Juan**	**1.83**	**237**	⇑*e*P	Pn	03 20 04.2	-1.1
SJG	**San Juan**	**1.83**	**237**	⇑*e*P	Pn	03 20 05.3	-0.1
CELP	**Cerrillos**	**2.20**	**242**	⇑*e*P	Pn	03 20 09.6	-0.8
CELP				*e*S	Sn	03 20 26.9	-10
OBIP	**Obispado Ponce**	**2.24**	**242**	⇑*e*P	Pn	03 20 09.4	-1.5
LRS	**Lares**	**2.34**	**250**	⇑*e*P	Pn	03 20 11.6	-0.7
CRPR	**Cabo Rojo, PR**	**2.68**	**246**	⇑*e*P	Pn	03 20 16.9	0.0
CRPR				*e*S	Sn	03 20 47.4	-0.9

*IDC **20** 03:21:59.6±0.5, 3262S×7164W, h0km, mb4.7/16, mb1 4.8/19, mb1mx4.7/22, mbtmp4.7/19, ML4.8/2, MS4.1/5, Ms1 4.1/5, ms1mx3.7/23, Error ellipse: s-maj=19.6km s-min=14.3km az=82.0*
*BJI **20** 03:22:03.2, 3354S×7121W, h29km, mB5.3, Ms5.3, Msz5.0*
*NEIC **20** 03:22:03.4, 3270S×7181W, h30km, mb4.9/38, ML5.0(GUC), After GUC.*
NEIC Felt [IV] at San Antonio and Valparaiso, [III] at Zapallar and [II] at Santiago. Also felt at La Ligua, Paine, San Bernardo and Vina del Mar.
*GUC **20** 03:22:03.4±0.7, 3270S×7181W, h30km±2km, ML5.0*
*MOS **20** 03:22:03.7±1.2, 3263S×7162W, h33km, mb5.2/18, Error ellipse: s-maj=16.1km s-min=8.4km az=103.1*
*ISCJB **20** 03:22:04.0±0.6, 3264S±003×7172W±004, h31km±4km, mb4.8/52, MS4.2/6, Error ellipse: s-maj=6.4km s-min=3.5km az=138.9*
*DJA **20** 03:22:06, 3305S×7100W, h10km, mb5.1/4*
ISC 20 03:22:04.8±0.6, 3268S±003×7169W±004, h26km±4km, n333, σ0°78/289, mb4.8/52, MS4.2/6, 101C-80D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.26**	**57**	*e*P	**Pb**	**03 22 11.8**	**+0.5**
IHA	**Instituto Hidr**	**0.35**	**173**	⇑*i*P	**Pb**	**03 22 11.6**	**-1.0**
IHA				*i* S	**Sb**	**03 22 17.4**	**-0.6**
ROCH	**El Roble**	**0.65**	**117**	⇑*i*P	**Pb**	**03 22 17.3**	**-0.2**
JACH	**Jahuel**	**0.93**	**91**	⇑*i*P	**Pn**	**03 22 21.7**	**-0.4**
PEL	**Peldehue**	**0.97**	**119**	⇑*i*P	**Pn**	**03 22 22.4**	**-0.2**
PEL				*i* S	**Sb**	**03 22 36.3**	**+1.1**
PEL				AML	AML	03 22 37.5	
	comp=N,113μm,0.7s						
SAN	**Santiago**	**1.16**	**132**	*e*P	**Pn**	**03 22 24.9**	**-0.4**
SAN				*i* S	**Sn**	**03 22 40.9**	**+0.5**
TACH	**Talagante**	**1.16**	**147**	⇓*i*P	**Pn**	**03 22 24.7**	**-0.6**
CLCH	**Cerro Calan**	**1.21**	**127**	⇓*i*P	**Pn**	**03 22 25.9**	**-0.1**
CLCH				*i* S	**Sn**	**03 22 42.8**	**+1.3**
CLCH				AML	AML	03 22 52.0	
	comp=N,58μm,0.7s						
ANTU	**Antumapu**	**1.26**	**135**	⇓*i*P	**Pn**	**03 22 26.4**	**-0.3**
ANTU				*i* S	**Sn**	**03 22 43.7**	**+1.0**
ANTU	**Antumapu**	**1.26**	**135**	⇓*i*P	**Pn**	**03 22 26.4**	**-0.3**
ANTU				*i* S	**Sn**	**03 22 43.7**	**+1.0**
ANTU				AML	AML	03 22 48.9	
	comp=N,45μm,0.6s						
LNV	**Longovilo**	**1.30**	**170**	⇑*i*P	**Pn**	**03 22 25.6**	**-1.7**
FCH	**Farellones**	**1.35**	**119**	⇓*i*P	**Pn**	**03 22 28.3**	**+0.5**
FCH				*i* S	**Sn**	**03 22 46.3**	**+1.4**
FCH				AML	AML	03 22 50.0	
	comp=N,37μm,0.8s						
PCH	**Pirque**	**1.37**	**134**	⇑*i*P	**Pn**	**03 22 28.3**	**+0.1**
YECH	**El Yeso**	**1.67**	**127**	⇑*i*P	**Pn**	**03 22 33.3**	**+0.9**
YECH				*i* S	**Sn**	**03 22 56.5**	**+3.5**
YECH				AML	AML	03 23 01.9	
	comp=N,18μm,0.4s						
CACH	**El Canelo**	**1.70**	**148**	⇑*i*P	**Pn**	**03 22 33.6**	**+0.8**
LMEL	**Las Melosas**	**1.71**	**134**	⇑*i*P	**Pn**	**03 22 34.0**	**+1.1**
LMEL				*i* S	**Sn**	**03 22 57.0**	**+3.1**
LMEL	**Las Melosas**	**1.71**	**134**	⇑*i*P	**Pn**	**03 22 34.0**	**+1.1**
LMEL				*i* S	**Sn**	**03 22 57.0**	**+3.1**
LMEL				AML	AML	03 22 59.9	
	comp=N,20μm,0.4s						
OVCH	**Ovalle**	**2.10**	**12**	⇓*i*P	**Pn**	**03 22 38.6**	**+0.3**
TLL	**Tololo Astrono**	**2.61**	**17**	⇑*i*P	**Pn**	**03 22 46.0**	**+0.7**
TLL				AML	AML	03 23 33.7	
	comp=N,13μm,0.5s						
CFAA	**Coronel Fontan**	**3.12**	**71**	Pn	**Pn**	**03 22 55.0**	**+2.8**
	comp=N,18nm,0.3s,baz=238,slow=12,SNR=18						
CFAA				Lg		03 23 39.0	
	comp=N,78nm,0.3s,baz=105,

WCI **Wyandotte Cave** 71.84 348 *e*P P 03 33 23.4 -1.7
comp=Z,7.3nm,0.8s,mb4.7
FVM **French Village** 72.43 345 *e*P P 03 33 27.8 -0.8
FVM pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
FVM **French Village** 72.43 345 *e*P P 03 33 27.8 -0.8
comp=Z,9.4nm,1.0s,mb4.7
319A **Douglas** 72.95 327 ⇓P P 03 33 32.4 +0.6
baz=73
ACSO **Alum Creek Sta** 73.29 351 *e*P P 03 33 31.5 -2.2
comp=Z,20nm,0.7s,mb5.2
318A **Bisbee** 73.33 326 ⇓P P 03 33 34.2 +0.1
baz=74
219A **White Tail Can** 73.46 327 ⇓P P 03 33 35.2 +0.4
baz=74
218A **Dragoon** 73.80 327 ⇓P P 03 33 37.3 +0.5
baz=74
217A **Green Valley** 74.00 326 ⇑P P 03 33 38.3 +0.4
baz=74
LIC **Lamto** 74.08 72 *e*P P 03 33 37.5 -1.4
comp=Z,30nm,0.8s,mb5.3
118A **Homack Ranch,** 74.32 327 ⇑P P 03 33 40.1 +0.3
baz=75
TIC **Toumodi** 74.34 71 *e*P P 03 33 39.0 -1.4
comp=Z,62nm,1.1s,mb5.5
MAW **Mawson** 74.36 164 P P 03 33 38.9 -0.9
comp=Z,7.3nm,0.9s,mb4.6,baz=226,slow=8.7,SNR=4.6
KIC **Kosan Boka** 74.39 72 *e*P P 03 33 39.5 -1.3
comp=Z,78nm,0.9s,mb5.7
TUC **Tucson** 74.43 326 *e*P P 03 33 39.8 -0.7
TUC pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
TUC **Tucson** 74.43 326 *e*P P 03 33 39.8 -0.7
comp=Z,2.4nm,1.1s,mb4.0
DBIC **Dimbokro** 74.48 71 P P 03 33 40.1 -1.1
comp=Z,16nm,0.9s,mb5.0,baz=209,slow=6.0,SNR=24
DBIC **Dimbokro** 74.48 71 *e*P P 03 33 39.6 -1.7
DBIC pmax pmax
comp=Z,13nm,0.7s
DBIC **Dimbokro** 74.48 71 *e*P P 03 33 39.6 -1.7
comp=Z,13nm,0.7s,mb5.0
ANMO **Albuquerque** 74.77 331 ⇓*e*P P 03 33 43.1 +0.7
ANMO pmax pmax
comp=Z,6.0nm,1.5s
ANMO **Albuquerque** 74.77 331 *e*P P 03 33 42.9 +0.5
comp=Z,4.0nm,1.0s,mb4.3
116A **Eloy** 75.07 326 ⇑P P 03 33 44.5 +0.4
baz=75
214A **Organ Pipe Nat** 75.10 325 ⇑P P 03 33 45.0 +0.6
baz=75
Y19A **Nutrioso** 75.11 328 ⇑P P 03 33 45.3 +0.9
baz=75
SUR **Sutherland** 75.22 119 *e*P P 03 33 45.3 -0.1
comp=Z,13nm,0.7s,mb5.0
115A **Sonoran Desert** 75.43 326 ⇑P P 03 33 47.0 +0.7
baz=76
X19A **St. Johns** 75.52 329 ⇑P P 03 33 47.2 +0.4
baz=76
Z16A **Peralta Trail,** 75.58 326 ⇓P P 03 33 47.6 +0.5
baz=76
Y17A **Roosevelt** 75.61 327 ⇑P P 03 33 47.3 0.0
baz=76
CBKS **Cedar Bluff** 75.75 338 *e*P P 03 33 47.0 -1.0
CBKS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
CBKS **Cedar Bluff** 75.75 338 *e*P P 03 33 47.0 -1.0
comp=Z,7.5nm,0.7s,mb4.7
Y16A **Circle Bar Ran** 76.05 327 ⇓P P 03 33 50.7 +0.9
baz=76
X17A **Forest Lakes** 76.12 327 ⇑P P 03 33 51.0 +0.8
baz=76
X16A **Lo Mia Camp, P** 76.48 327 ⇓P P 03 33 52.9 +0.6
baz=77
V19A **Window Rock** 76.51 329 ⇓P P 03 33 53.3 +0.9
baz=77
Y15A **Casa Rosa Ranc** 76.51 326 ⇑P P 03 33 52.8 +0.4
baz=77
SDCO **Great Sand Dun** 76.82 333 *e*P P 03 33 54.6 +0.6
comp=Z,69nm,2.6s,mb5.1
X15A **Humboldt** 76.91 327 ⇑P P 03 33 55.1 +0.5
baz=77
W16A **Flagstaff** 77.08 327 ⇑P P 03 33 56.6 +1.0
baz=77
JFWS **Jewell Farm** 77.12 346 *e*P P 03 33 54.7 -0.9
JFWS pmax pmax
comp=Z,50nm,1.7s,mb5.2
JFWS **Jewell Farm** 77.12 346 *e*P P 03 33 54.7 -0.9
comp=Z,50nm,1.7s,mb5.2
WUAZ **Wupatki** 77.36 328 ⇑P P 03 33 57.9 +0.8
baz=78
WUAZ **Wupatki** 77.36 328 *e*P P 03 33 57.8 +0.7
comp=Z,70nm,2.5s,mb5.1
T19A **Beclabito** 77.45 330 ⇓P P 03 33 57.7 +0.1
baz=78
U18A **Rough Rock, Ch** 77.46 329 ⇑P P 03 33 58.5 +0.8
baz=78
X13A **Yucca** 77.74 326 ⇑P P 03 33 59.4 +0.1
baz=78,SNR=6.6
U16A **Tuba City** 77.78 328 ⇑P P 03 33 59.7 +0.3
baz=78
BC3 **Big Chuckw Mtn** 77.78 324 ⇓P P 03 34 00.2 +0.7
baz=78
W14A **Seligman** 77.90 326 ⇑P P 03 34 00.6 +0.5
baz=78
U17A **Shonto** 77.95 329 ⇓P P 03 34 01.1 +0.7
baz=78
V15A **Kaibab Nationa** 77.98 327 ⇓P P 03 34 01.2 +0.6
baz=78
T18A **Mexican Hat** 78.06 330 ⇑P P 03 34 01.6 +0.6
baz=78
W13A **Hualapai Mount** 78.18 326 ⇓P P 03 34 02.5 +0.7
baz=78
PFO **Pinyon Flat Ob** 78.25 323 P P 03 34 02.2 0.0
comp=Z,4.2nm,0.9s,mb4.4,baz=107,slow=3.6,SNR=5.3
PFO LR LR 04 02 19.7
comp=Z,158nm,21.0s,MS4.3,baz=144,slow=31
PFO **Pinyon Flat Ob** 78.25 323 ⇑P P 03 34 02.8 +0.7
baz=78
PFO **Pinyon Flat Ob** 78.25 323 P P 03 34 02.2 0.0
PFO LR LR 04 02 19.7
V14A **Boquillas Ranc** 78.25 327 ⇓P P 03 34 02.5 +0.4
baz=78
S19A **Harvey Farm, M** 78.27 331 ⇓P P 03 34 02.6 +0.4
baz=79
BELC **Belle Mtn.** 78.33 324 ⇑P P 03 34 03.2 +0.7
baz=79
T17A **Navajo Res., N** 78.35 329 ⇑P P 03 34 03.5 +0.9
baz=79
U15A **North Rim** 78.53 328 ⇓P P 03 34 04.5 +0.9
baz=79
S18A **Hurst Farm, Bl** 78.58 330 ⇑P P 03 34 04.8 +0.9
baz=79
SMCO **Snowmass** 78.63 333 *e*P P 03 33 57.1 -7.0
comp=Z,6.2nm,0.9s,mb4.5
GMRC **Granite Mounta** 78.78 324 ⇑P P 03 34 05.9 +0.8
baz=79
V13A **Grand Canyon W** 78.84 326 ⇓P P 03 34 05.8 +0.5
baz=79
S17A **Black Ridge (B** 78.88 329 ⇓P P 03 34 06.1 +0.5
baz=79
U14A **Mt Trumbull** 78.93 327 ⇓P P 03 34 06.6 +0.7
baz=79
V12A **Nelson** 79.15 325 ⇓P P 03 34 07.5 +0.4
baz=79
HEC **Hector,Ludlow** 79.15 324 ⇓P P 03 34 08.1 +1.0
baz=79
U13A **Pakoon Wash** 79.29 326 ⇓P P 03 34 08.7 +0.8
baz=80
TSUM **Tsumeb** 79.30 106 *e*P P 03 34 07.7 -0.7
comp=Z,22nm,0.9s,mb5.1
Q19A **Hogan Spring (** 79.35 331 ⇑P P 03 34 09.2 +1.1
baz=80
ECSD **EROS,Sioux Fal** 79.38 342 *e*P P 03 34 07.1 -1.0
comp=Z,15nm,0.8s,mb5.0
T14A **Hurricane** 79.41 327 ⇑P P 03 34 09.0 +0.5
baz=80
TUQ **Turquoise Moun** 79.44 325 ⇓P P 03 34 09.0 +0.4
baz=80
R17A **Hanksville Air** 79.50 330 ⇓P P 03 34 09.0 0.0
baz=80
U12A **Valley of Fire** 79.57 326 ⇓P P 03 34 09.8 +0.5
baz=80
T13A **Saint George** 79.76 327 ⇑P P 03 34 10.8 +0.5
baz=80
GSC **Goldstone** 79.76 324 ⇓P P 03 34 10.8 +0.4
baz=80
P19A **Cripple Cowboy** 79.82 332 ⇓P P 03 34 10.9 +0.3
baz=80
Q18A **Rafter H Ranch** 79.83 331 ⇑P P 03 34 11.1 +0.4
baz=80
N22A **Wattenberg Ran** 79.85 334 ⇓P P 03 34 11.5 +0.7
baz=80
R15A **Junction** 80.00 329 ⇓P P 03 34 12.1 +0.5
baz=80
SRU **San Rafael** 80.00 330 ⇑P P 03 34 11.7 0.0
baz=80
SRU **San Rafael** 80.00 330 *e*P P 03 34 11.8 +0.2
SRU pmax pmax
comp=Z,33nm,2.5s,mb4.8
SRU **San Rafael** 80.00 330 *e*P P 03 34 11.8 +0.2
comp=Z,33nm,2.5s,mb4.8
EDW2 **Edwards Air Fo** 80.03 323 ⇑P P 03 34 12.2 +0.4
baz=80
Q16A **Castle Valley** 80.11 330 ⇓P P 03 34 12.9 +0.7
baz=80
S13A **Holt Ranch, En** 80.19 327 ⇓P P 03 34 13.3 +0.6
baz=80
N21A **Black Mountain** 80.21 333 ⇓P P 03 34 13.4 +0.7
baz=80
P18A **Preston Nutter** 80.33 331 ⇑P P 03 34 13.9 +0.6
baz=81
U10A **Ash Meadows, A** 80.42 325 ⇑P P 03 34 14.3 +0.4
baz=81
BOSA **Boshof** 80.43 118 P P 03 34 13.6 -0.9
comp=Z,16nm,0.9s,mb5.0,baz=229,slow=5.6,SNR=18
BOSA **Boshof** 80.43 118 *e*P P 03 34 13.3 -1.1
BOSA pmax pmax
comp=Z,17nm,0.9s,mb5.0
BOSA **Boshof** 80.43 118 *e*P P 03 34 13.3 -1.1
comp=Z,17nm,0.9s,mb5.0
T11A **Corn Creek, Al** 80.55 326 ⇓P P 03 34 14.9 +0.3
baz=81,SNR=6.2
MPMC **Manual Prospec** 80.70 324 ⇑P P 03 34 15.7 +0.2
baz=81
FURC **Furnace Creek,** 80.72 325 ⇑P P 03 34 16.3 +0.8
baz=81
R13A **O'Grain Ranch,** 80.73 328 ⇑P P 03 34 16.4 +0.8
baz=81
TPNV **Topopah Spring** 80.80 325 ⇑P P 03 34 16.8 +0.8
baz=81
TPNV **Topopah Spring** 80.80 325 *e*P P 03 34 16.9 +0.9
TPNV pmax pmax
comp=Z,37nm,2.1s,mb5.0
TPNV **Topopah Spring** 80.80 325 *e*P P 03 34 16.9 +0.9
comp=Z,37nm,2.1s,mb4.9
ISA **Isabella** 80.88 323 ⇑P P 03 34 17.2 +0.7
baz=81
N19A **John Jarvie Ra** 80.97 332 ⇑P P 03 34 16.8 +0.1
baz=81
PKM **Peak Mountain** 80.98 322 ⇑P P 03 34 17.9 +0.9
baz=81
O17A **Robinson Place** 81.01 331 ⇓P P 03 34 17.6 +0.7
baz=81
Q14A **Sevier Lake (B** 81.08 328 ⇓P P 03 34 18.0 +0.6
baz=81
R12A **Pony Springs,** 81.14 327 ⇑P P 03 34 18.3 +0.6
baz=81
VES **Vestal, Richgr** 81.33 323 ⇑P P 03 34 18.7 -0.2
baz=82
GRAC **Grapevine Rang** 81.39 325 ⇓P P 03 34 19.6 +0.5
baz=82
P14A **Drum Mountains** 81.49 329 ⇑P P 03 34 20.2 +0.6
baz=82
R11A **Troy Canyon, C** 81.61 327 ⇑P P 03 34 20.4 +0.2
baz=82,SNR=5.6
JLU **Jordanelle** 81.64 331 *e*P P 03 34 20.5 +0.2
N17A **Moffit Pass** 81.67 331 ⇓P P 03 34 20.9 +0.4
baz=82
S10A **Tonopah Range,** 81.74 326 ⇓P P 03 34 21.2 +0.3
baz=82
P13A **Bates Ranch, G** 81.80 328 ⇓P P 03 34 21.8 +0.6
baz=82
DUG **Dugway** 81.88 329 ⇓P P 03 34 22.0 +0.4
baz=82
DUG **Dugway** 81.88 329 *e*P P 03 34 21.3 -0.3
DUG pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
DUG **Dugway** 81.88 329 *e*P P 03 34 21.3 -0.3
comp=Z,1.8nm,1.0s,mb4.0
S09A **Goldfield** 81.89 325 ⇑P P 03 34 22.2 +0.5
baz=82
R10A **Warm Springs** 81.90 326 ⇓P P 03 34 22.5 +0.8
baz=82
R09A **Tonopah** 82.22 326 ⇑P P 03 34 23.6 +0.2
baz=82
N15A **Stansbury Isla** 82.33 330 ⇑P P 03 34 23.7 -0.2
baz=83
Q10A **Clear Creek Ra** 82.37 326 ⇑P P 03 34 24.8 +0.5
baz=83
LBTB **Lobatse** 82.60 115 *e*P P 03 34 24.8 -1.1
LBTB pmax pmax
comp=Z,11nm,0.6s,mb5.1
LBTB **Lobatse** 82.60 115 *e*P P 03 34 24.8 -1.2
comp=Z,11nm,0.6s,mb5.1
PDAR **Pinedale Array** 82.72 333 P P 03 34 25.2 -0.7
comp=Z,1.0nm,0.8s,mb3.9,baz=141,slow=5.0,SNR=7.5
M15A **Larsen Ranch,** 82.78 330 ⇓P P 03 34 25.8 -0.5
baz=83
L16A **Fish Haven** 82.82 331 ⇑P P 03 34 26.5 0.0
baz=83
NVAR **Mina Array Bea** 82.97 325 P P 03 34 27.6 +0.2
comp=Z,1.7nm,0.7s,mb4.2,baz=154,slow=5.5,SNR=12
O11A **Cowboy Ranch,** 83.08 328 ⇑P P 03 34 27.8 -0.1
baz=83,SNR=6.3
Q08A **Gabbs** 83.13 325 ⇑P P 03 34 28.1 0.0
baz=83
M14A **Sheep Mountain** 83.19 330 ⇓P P 03 34 28.2 -0.1
baz=84
L15A **Malad City** 83.20 331 ⇑P P 03 34 28.1 -0.4
baz=84
J18A **Kendall Valley** 83.27 333 ⇓P P 03 34 28.6 -0.2
baz=84
N12A **Clover Valley,** 83.39 328 ⇓P P 03 34 29.5 +0.1
baz=84
ELK **Elko** 83.39 328 *e*P P 03 34 29.2 -0.2
ELK pmax pmax
comp=Z,5.0nm,0.9s
ELK **Elko** 83.39 328 *e*P P 03 34 29.2 -0.2
comp=Z,4.5nm,0.9s,mb4.5
M13A **Montello** 83.42 329 ⇑P P 03 34 29.9 +0.3
baz=84
AGMN **Agassiz Refuge** 83.46 344 *e*P P 03 34 28.4 -1.2
comp=Z,77nm,2.4s,mb5.3
TOA0 **Torodi Ar. Sit** 83.49 70 *e*P P 03 34 29.1 -1.4
TORD **Torodi Ar. Bea** 83.49 70 P P 03 34 29.3 -1.3
comp=Z,16nm,0.8s,mb5.1,baz=250,slow=4.4,SNR=63
TORD **Torodi Ar. Bea** 83.49 70 P P 03 34 29.3 -1.3
K16A **Soda Springs** 83.57 332 ⇓P P 03 34 30.6 +0.3
baz=84
J17A **Brown Place, J** 83.67 332 ⇑P P 03 34 31.0 +0.1
baz=84
M12A **Wells** 83.79 329 ⇓P P 03 34 31.7 +0.2
baz=84
LOHW **Long Hollow** 83.84 333 *e*P P 03 34 31.1 -0.5
comp=Z,2.4nm,1.0s,mb4.3
TPAW **Teton Pass** 83.87 332 *e*P P 03 34 31.4 -0.5
comp=Z,3.5nm,0.8s,mb4.5
K14A **Jones Ranch, D** 83.98 331 ⇑P P 03 34 32.4 0.0
baz=84
MOOW **Moose Ponds** 84.01 333 *e*P P 03 34 32.3 -0.2
comp=Z,2.0nm,0.8s,mb4.3
M11A **Holland Ranch,** 84.19 328 ⇓P P 03 34 33.9 +0.4
baz=84
O08A **Rochester Mine** 84.36 326 ⇓P P 03 34 35.0 +0.6
baz=85
J15A **Blackfoot** 84.38 331 ⇓P P 03 34 34.8 +0.4
baz=85
I16A **Newdale** 84.40 332 ⇑P P 03 34 34.9 +0.4
baz=85
L12A **House Creek Ra** 84.43 329 ⇓P P 03 34 34.9 +0.2
baz=85
N08A **GE Springer Mi** 84.74 326 ⇓P P 03 34 36.7 +0.4
baz=85
J14A **Carey** 84.76 331 ⇓P P 03 34 37.6 +1.2
baz=85
L11A **Cat Creek Ranc** 84.77 329 ⇑P P 03 34 36.6 +0.2
baz=85
L10A **Juniper Basin** 85.01 328 ⇓P P 03 34 37.8 +0.2
baz=85
J13A **Cove Ranch, Pi** 85.09 330 ⇑P P 03 34 38.1 +0.1
baz=85
I14A **Mackay** 85.23 331 ⇑P P 03 34 39.2 +0.5
baz=86
ULM **Lac du Bonnet** 85.30 345 P P 03 34 37.4 -1.5
comp=Z,6.7nm,0.8s,mb4.8,baz=142,slow=4.9,SNR=11
ULM **Lac du Bonnet** 85.30 345 *e*P P 03 34 37.1 -1.7
comp=Z,6.5nm,0.8s,mb4.8
HLID **Hailey** 85.33 330 ⇑P P 03 34 39.6 +0.4
baz=86
HLID **Hailey** 85.33 330 *e*P P 03 34 39.5 +0.3
comp=Z,60nm,2.8s,mb5.2
J12A **Stokes Ranch,** 85.36 330 ⇑P P 03 34 38.8 -0.6
baz=86,SNR=7.6
K11A **Parker Ranch,** 85.38 329 ⇑P P 03 34 39.4 -0.1
baz=86
F18A **Big Timber** 85.45 334 ⇓P P 03 34 39.5 -0.2
baz=86
H15A **Lima** 85.48 332 ⇑P P 03 34 40.3 +0.3
baz=86
I13A **Wildhorse Cree** 85.49 331 ⇑P P 03 34 40.5 +0.4
baz=86
H14A **Leadore** 85.77 332 ⇓P P 03 34 41.4 +0.1
baz=86
F17A **Fitzpatrick Pl** 85.80 334 ⇓P P 03 34 41.6 +0.1
baz=86
MFID **Camas Ranch** 85.81 329 ⇑P P 03 34 41.3 -0.3
baz=86
G15A **Dillon** 85.88 332 ⇑P P 03 34 41.6 -0.3
baz=86
H13A **Challis** 86.08 331 ⇓P P 03 34 42.9 -0.1
baz=86,SNR=6.0
E18A **Harlowton** 86.09 335 ⇑P P 03 34 42.3 -0.6
baz=86
F15A **Butte** 86.44 333 ⇑P P 03 34 44.5 -0.2
baz=87,SNR=5.9
G13A **Cobalt** 86.51 331 ⇑P P 03 34 44.7 -0.3
baz=87
D18A **Linhart Farms,** 86.58 335 ⇓P P 03 34 45.0 -0.4
baz=87
E16A **East Helena** 86.71 334 ⇑P P 03 34 45.6 -0.4
baz=87
K07A **Rock Creek Ran** 86.75 327 ⇑P P 03 34 46.8 +0.6
baz=87
F14A **Wisdom** 86.76 332 ⇓P P 03 34 46.5 +0.3
baz=87
I10A **Payette** 86.77 329 ⇑P P 03 34 46.2 -0.1
baz=87
D17A **Six Diamond Ra** 86.87 335 ⇓P P 03 34 46.6 -0.1
baz=87
J08A **Circle Bar Ran** 86.92 328 ⇑P P 03 34 47.3 +0.2
baz=87
H11A **Donnelly** 86.93 330 ⇑P P 03 34 47.2 +0.1
baz=87
I09A **Lost Marbles R** 87.08 329 ⇑P P 03 34 47.5 -0.4
baz=87
F13A **Darby** 87.12 332 ⇓P P 03 34 47.3 -0.7
baz=87,SNR=6.6
H10A **Noah's Angus R** 87.14 330 ⇓P P 03 34 48.1 0.0
baz=87
SCHQ **Wiziefferville** 87.25 3 P P 03 34 46.5 -1.9
comp=Z,7.8nm,1.2s,mb4.8,baz=95,slow=7.6,SNR=3.8
E14A **Clinton** 87.31 333 ⇑P P 03 34 48.8 -0.1
baz=88
D15A **Lincoln** 87.45 333 ⇑P P 03 34 49.6 +0.1
baz=88
BMO **Blue Mountains** 87.59 329 *e*P P 03 34 49.9 -0.4
comp=Z,49nm,2.5s,mb5.3
E13A **Victor** 87.60 332 ⇑P P 03 34 49.6 -0.7
baz=88
B18A **Beardsley Farm** 87.60 336 ⇑P P 03 34 48.8 -1.4
baz=88,SNR=6.7
YBH **Yreka Blue Hor** 87.66 324 P P 03 34 48.5 -2.2
comp=Z,4.0nm,0.9s,mb4.7,baz=19,slow=2.4,SNR=4.1
D14A **Greenough** 87.86 333 ⇓P P 03 34 51.2 -0.3
baz=88
H08A **Prairie City** 87.92 328 ⇑P P 03 34 51.7 -0.2
baz=88
I07A **Izee** 87.95 328 ⇑P P 03 34 52.3 +0.3
baz=88
C15A **Salmond Ranch,** 88.10 334 ⇓P P 03 34 52.5 -0.1
baz=88
G09A **Cove** 88.14 329 ⇑P P 03 34 52.2 -0.7
baz=88
I06A **Prineville** 88.17 327 ⇓P P 03 34 53.6 +0.5
baz=88
D13A **Huson** 88.24 332 ⇓P P 03 34 53.6 +0.3
baz=88
B16A **M & M Farms, S** 88.30 335 ⇑P P 03 34 52.7 -0.8
baz=89
A17A **Triple J Farms** 88.39 335 ⇓P P 03 34 53.3 -0.7
baz=89
B15A **Bradely Ranch,** 88.53 334 ⇑P P 03 34 53.7 -0.9
baz=89
B14A **Marquette Ranc** 88.83 334 ⇓P P 03 34 56.1 0.0
baz=89
B12A **Libby** 89.80 333 ⇑P P 03 34 59.9 -0.7
baz=90
LSZ **Lusaka** 89.94 108 P P 03 35 01.6 -0.6
comp=Z,9.0nm,0.9s,mb5.1,baz=249,slow=2.7,SNR=14
LSZ **Lusaka** 89.94 108 *e*P P 03 35 02.4 +0.2
LSZ pmax pmax
comp=Z,15nm,1.2s,mb5.2
LSZ **Lusaka** 89.94 108 *e*P P 03 35 02.4 +0.2
comp=Z,15nm,1.2s,mb5.2
OD2 **Odessa Site #2** 90.20 330 *e*P P 03 35 02.1 -0.4
A11A **Hail Mountain,** 90.50 332 ⇓P P 03 35 03.0 -0.9
baz=91
B09A **Rice** 90.79 331 ⇑P P 03 35 04.2 -1.0
baz=91
A10A **Northport** 90.99 332 ⇑P P 03 35 05.6 -0.5
baz=91
C07A **Waterville** 91.01 330 ⇓P P 03 35 05.9 -0.3
baz=91
A09A **Danville** 91.40 331 ⇑P P 03 35 07.3 -0.8
baz=92
B07A **Winthrop** 91.63 330 ⇓P P 03 35 08.4 -0.7
baz=92
A08A **Turner Farm, O** 91.66 331 ⇑P P 03 35 08.7 -0.5
baz=92
EDM **Edmonton** 92.89 336 *e*P P 03 35 12.6 -2.2
FCC **Fort Churchill** 92.99 349 *e*P P 03 35 13.7 -1.4
comp=Z,0.1nm,0.9s
YKA **Yellowknife Ar** 100.90 341 P Pdif 03 35 48.9 -2.7
comp=Z,0.3nm,0.6s,baz=142,slow=4.5,SNR=10.0
BR131 **Keskin Array S** 120.93 60 *e*PKPdf PKPdf 03 40 53.2 -1.4
AKASG **Malin Array Be** 121.08 47 PKP PKPdf 03 40 52.0 -2.6
comp=Z,2.0nm,0.7s,baz=259,slow=2.8,SNR=9.0
WRA **Warramunga Arr** 122.06 209 PKP PKPdf 03 40 55.2 -2.3
comp=Z,0.6nm,0.6s,baz=168,slow=1.6,SNR=7.6
OBN **Obninsk** 126.27 43 ⇑*i*PKIKP PKPdf 03 41 02.9 -1.5
OBN pmax pmax
comp=Z,6.0nm,0.6s
OBN MLR MLR
comp=Z,300nm,17.0s,MS5.0
KIV **Kislovodsk** 128.54 57 *e*PKIKP PKPdf 03 41 08.4 -0.7
KIV pmax pmax
comp=Z,12nm,1.0s
KIV **Kislovodsk** 128.54 57 *e*PKPdf PKPdf 03 41 08.3 -0.8
BILL **Bilibino** 131.77 335 ⇓*i*PKIKP PKPdf 03 41 14.0 -0.5
BILL *e* 03 48 14.4
BILL pmax pmax
comp=Z,11nm,2.3s
ARU **Arti** 138.55 40 *i* PKIKP PKPdf 03 41 27.2 -0.3
ARU 03 44 14.4
ARU SS SS 04 02 23.7 -6.9
TIXI **Tiksi** 139.44 350 *i* PKIKP PKPdf 03 41 29.9 +1.2
BRVK **Borovoye** 146.04 42 *e*PKP2 PKPab 03 41 41.1 -1.3
BVAR **Borovoye Array** 146.11 42 PKPbc PKPbc 03 41 40.6 -1.4
comp=Z,11nm,0.6s,baz=297,slow=2.9,SNR=50
YAK **Yakutsk** 147.58 341 *e*PKP2 PKPdf 03 41 43.7 +0.5
YAK pmax pmax
comp=Z,38nm,0.9s
YAK **Yakutsk** 147.58 341 *e*PKPbc PKPdf 03 41 44.5 +1.4
PSI **Prapat** 149.00 162 PKPbc PKPbc 03 41 49.0 -2.1
comp=Z,15nm,0.8s,baz=267,slow=1.8,SNR=15
HYB **Hyderabad** 149.19 112 *i* PKP PKPbc 03 41 50.5 -0.9
HYB **Hyderabad** 149.19 112 *e*P PKPbc 03 41 50.5 -0.9
EKS2 **Erkin-Say** 151.08 60 P PKPbc 03 41 54.9 -0.3
SNR=17
EKS2 **Erkin-Say** 151.08 60 *e*PKPbc PKPbc 03 41 54.5 -0.7
AML **Almayashu** 151.09 61 P PKPbc 03 41 55.1 -0.2
SNR=12
AML **Almayashu** 151.09 61 *e*PKPbc PKPbc 03 41 54.8 -0.5
USP **Ospenovka** 151.50 58 P PKPbc 03 41 55.7 -0.5
SNR=19
AAK **Ala-Archa** 151.61 60 P PKPbc 03 41 56.5 0.0
SNR=24
AAK **Ala-Archa** 151.61 60 *e*PKPbc PKPbc 03 41 56.1 -0.4
NVS **Novosibirsk** 151.66 31 *e*PKIKP PKPbc 03 41 54.5 -1.7
NVS pmax pmax
comp=N,5.0nm,0.9s
NVS pmax pmax
comp=E,5.0nm,0.9s

NVS					pmax	pmax			
	comp=Z,31nm,0.9s								
UCH	**Uchtor**	**151.69**	**61**	*e*PKPbc	PKPbc	03 41 56.2	-0.5		
KURK	**Kurchatov**	**151.71**	**42**	PKPbc	PKPbc	03 41 55.5	-0.9		
	comp=Z,19nm,0.6s,baz=303,slow=3.0,SNR=46								
KURK	**Kurchatov**	**151.71**	**42**	*c i*PKIKP	PKPbc	03 41 55.4	-1.0		
KURK	**Kurchatov**	**151.71**	**42**	*e*PKPbc	PKPbc	03 41 55.3	-1.1		
CHMS	**Chumysh**	**151.73**	**59**	P	PKPbc	03 41 55.9	-0.9		
	SNR=7.9								
KBK	**Karagaybulak**	**151.94**	**60**	P	PKPbc	03 41 57.0	-0.2		
	SNR=5.1								
KZA	**Kyzart**	**152.25**	**61**	P	PKPbc	03 41 57.8	-0.1		
	SNR=7.6								
TKM2	**Tokmak 2**	**152.36**	**59**	P	PKPbc	03 41 57.7	-0.5		
	SNR=9.9								
TKM2	**Tokmak 2**	**152.36**	**59**	*e*PKPbc	PKPbc	03 41 57.2	-1.0		
ZAA0	**Zalesovo Array**	**152.95**	**31**	*e*PKPbc	PKPbc	03 41 57.5	-1.6		
ZALV	**Zalesovo Beam**	**152.95**	**31**	PKPbc	PKPbc	03 41 57.9	-1.2		
	comp=Z,22nm,0.7s,baz=294,slow=3.2,SNR=47								
ZALV				PKPab	PKPab	03 42 09.7	-0.7		
	comp=Z,8.4nm,0.7s,baz=291,slow=4.6,SNR=5.9								
ZALV	**Zalesovo Beam**	**152.95**	**31**	PKPbc	PKPbc	03 41 57.9	-1.2		
ZALV				PKPab	PKPab	03 42 09.7	-0.7		
MKAR	**Makanchi Array**	**155.66**	**47**	PKPbc	PKPdf	03 42 03.9	+8.0		
	comp=Z,2.2nm,0.8s,baz=8.7,slow=1.6,SNR=7.5								
MKAR				PKPab	PKPab	03 42 21.2	-1.0		
	comp=Z,5.6nm,0.6s,baz=288,slow=3.1,SNR=17								
MKAR	**Makanchi Array**	**155.66**	**47**	PKPbc	PKPdf	03 42 03.9	+8.0		
MKAR				PKPab	PKPab	03 42 21.2	-1.0		
WMQ	**Urumqi**	**160.41**	**49**	*e*PKP	PKPdf	03 42 00.5	-1.3		
WMQ				LR	LR				
	comp=N,78nm,17.5s								
WMQ				LR	LR				
	comp=E,130nm,15.0s								
WMQ				LR	LR				
	comp=Z,83nm,20.0s								
CN2	**Changchun**	**162.58**	**315**	*e*PKP	PKPdf	03 42 05.6	+1.5		
CN2				PP	PP	03 46 41.9	+5.0		
CN2				LR	LR				
	comp=N,300nm,17.0s								
CN2				LR	LR				
	comp=E,300nm,17.0s								
CN2				LR	LR				
	comp=Z,300nm,19.0s								
SONM	**Songino Array**	**164.79**	**5**	PKPab	PKPab	03 43 00.8	-0.9		
	comp=Z,1.6nm,0.9s,baz=341,slow=4.6,SNR=5.0								
GTA	**Gaotai**	**170.39**	**43**	PKP	PKPdf	03 42 10.0	-0.2		
KMI	**Kunming**	**171.03**	**146**	PKP	PKPdf	03 42 11.9	+0.9		
NJ2	**Nanjing**	**171.06**	**269**	*e*PKP	PKPdf	03 42 09.4	-1.4		
HHC	**Hu-ho-hao-te**	**171.44**	**343**	*e*PKP	PKPdf	03 42 09.1	-1.6		
HHC				APKP		03 42 20.0			
HHC				XPKP		03 42 23.9			
HHC				PKP2	PKPab	03 43 31.5	+0.1		
HHC				PKS		03 45 40.6			
HHC				PP	PP	03 47 23.5	+1.9		
HHC				SKS	SKSdf	03 49 06.9	-5.4		
HHC				SKKS	SKKSac	03 54 04.8	-2.2		
HHC				PP	PP				
	comp=Z,133nm,5.3s								
HHC				LR	LR				
	comp=N,180nm,14.3s								
HHC				LR	LR				
	comp=E,105nm,17.8s								
HHC				LR	LR				
	comp=Z,141nm,16.7s								
GYA	**Guiyang**	**173.64**	**167**	*e*PKP	PKPdf	03 42 12.6	+0.5		
GYA				APKP		03 42 22.6			
GYA				XPKP		03 42 26.9			
GYA				PKP2	PKPab	03 43 40.5	-1.0		
GYA				PKS		03 45 43.0			
GYA				SKS	SKSdf	03 49 08.9	-4.8		
GYA				SKKS	SKKSac	03 54 15.4	-2.7		
GYA				PP	PP				
	comp=Z,120nm,8.9s								
GYA				LR	LR				
	comp=N,180nm,22.0s								
GYA				LR	LR				
	comp=E,100nm,20.6s								
GYA				LR	LR				
	comp=Z,130nm,20.5s								
LZH	**Lanzhou**	**174.98**	**46**	*e*PKP	PKPdf	03 42 11.8	-0.5		
LZH				APKP		03 42 25.0			
CD2	**Chengdu**	**175.75**	**113**	PKP	PKPdf	03 42 11.3	-1.4		
CD2				APKP		03 42 22.1			
CD2				XPKP		03 42 25.8			
CD2				PKP2	PKPab	03 43 51.3	+0.2		
CD2				PKS		03 45 42.0			
CD2				PP	PP	03 47 45.5	+1.4		
CD2				SKS	SKSdf	03 49 09.0	-5.0		
CD2				SKKS	SKKSac	03 54 26.3	-2.2		
CD2				PP	PP				
	comp=Z,150nm,5.9s								
CD2				LR	LR				
	comp=N,340nm,15.5s								
CD2				LR	LR				
	comp=Z,290nm,19.0s								
XAN	**Xi'an**	**178.55**	**339**	PKP	PKPdf	03 42 13.8	+0.8		
XAN				APKP		03 42 24.6			
XAN				PP	PP	03 48 01.3	+5.4		
XAN				SKS	SKSdf	03 49 10.9	-3.3		
XAN				SKKS	SKKSac	03 54 42.3	+1.4		
XAN				LR	LR				
	comp=N,58nm,23.3s								
XAN				LR	LR				
	comp=E,99nm,21.4s								
XAN				LR	LR				
	comp=Z,249nm,19.9s								

CSEM ***2*** *03:25:31.3±0.1, 39.35N×1609E, h15km, Ms4.0, Error ellipse: s-maj=2.1km s-min=0.9km az=86.0*

ISCJB ***2*** *03:25:31.5±0.3, 39.38N±001×16.15E±002, h8km±2km, mb3.5/3, Error ellipse: s-maj=3.0km s-min=2.1km az=173.6*

NEIC ***2*** *03:25:32.0, 39.37N×1621E, h11km, ML3.7(ROM), ML3.7(PDG), After ROM.*

NEIC Felt [IV] at Castrolibero, Cosenza, Montalto Uffugo and Rende.

VIE ***2*** *03:25:32.8±0.7, 39.44N×1629E, h10km, mb3.3/2, Ms4.0/3, Error ellipse: s-maj=11.4km s-min=2.8km az=55.0*

PDG ***2*** *03:25:32.3±0.9, 39.38N×1622E, h7km±2km, ML3.7/10, Error ellipse: s-maj=1.1km s-min=2.3km az=0.0*

ROM ***2*** *03:25:32.2±0.2, 39.36N×1619E, h11km±1km, Ml3.6/41, Error ellipse: s-maj=2.3km s-min=1.2km az=88.0*

IDC ***2*** *03:25:37.1±2.0, 39.67N×1594E, h38km±25km, mb3.4/3, mb1 3.5/8, mb1mx3.4/27, mbtmp3.3/8, ML3.4/5, Error ellipse: s-maj=29.6km s-min=18.7km az=122.0*

ISC 20 03:25:32.2±0.3, 3936N±001×1611E±002, h4km±2km, n172, σ1§04/226, mb3.5/3, 24C-14D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CARO	**Carolei**	**0.14**	**140**	*e*Pg	**Pg**	**03 25 35.6**	**+0.7**
CARO				Sg	**Sg**	**03 25 38.2**	**+1.5**
CARO	**Carolei**	**0.14**	**140**	*e*Pg	**Pg**	**03 25 35.6**	**+0.7**
CARO				Sg	**Sg**	**03 25 38.2**	**+1.5**
	35µm,0.4s						
TIP	**Timpagrande**	**0.54**	**109**	*e*Pg	**Pg**	**03 25 40.9**	**-1.5**
TIP				*e*Sg	**Sg**	**03 25 48.3**	**-1.2**
TIP	**Timpagrande**	**0.54**	**109**	*i*Pg	**Pg**	**03 25 41.2**	**-1.3**
TIP				Sg	**Sg**	**03 25 47.8**	**-1.7**
	4µm,0.9s						
SERS	**Sersale**	**0.56**	**125**	*e*Pg	**Pg**	**03 25 41.8**	**-1.0**
SERS				Sg	**Sg**	**03 25 49.5**	**-0.5**
SERS	**Sersale**	**0.56**	**125**	*e*Pg	**Pg**	**03 25 41.8**	**-1.0**
SERS				Sg	**Sg**	**03 25 49.5**	**-0.5**
	4µm,0.6s						
GRI	**Girifalco**	**0.59**	**155**	Pg	**Pg**	**03 25 43.5**	**0.0**
GRI				Sg	**Sg**	**03 25 52.9**	**+1.8**
GRI	**Girifalco**	**0.59**	**155**	Pg	**Pg**	**03 25 43.5**	**0.0**
GRI				Sg	**Sg**	**03 25 52.9**	**+1.8**
	3µm,0.4s						
CUC	**Castrocucco**	**0.67**	**341**	*e*Pg	**Pg**	**03 25 44.8**	**-0.2**
CUC				*e*Sg	**Sg**	**03 25 56.0**	**+2.2**
CUC	**Castrocucco**	**0.67**	**341**	*e*Pg	**Pg**	**03 25 44.6**	**-0.4**
CUC				*e*Sg	**Sg**	**03 25 56.0**	**+2.3**
CUC	**Castrocucco**	**0.67**	**341**	*i*Pg	**Pg**	**03 25 44.8**	**-0.2**
CUC				Sg	**Sg**	**03 25 55.3**	**+1.5**
	5µm,0.5s						
ORI	**Oriolo Calabro**	**0.75**	**21**	Pg	**Pg**	**03 25 45.4**	**-1.2**
ORI	**Oriolo Calabro**	**0.75**	**21**	Pg	**Pg**	**03 25 45.4**	**-1.2**
	4µm,0.4s						
JOPP	**Joppolo**	**0.77**	**193**	Pg	**Pg**	**03 25 47.8**	**+0.9**
JOPP				Sg	**Sg**	**03 25 59.6**	**+2.7**
JOPP	**Joppolo**	**0.77**	**193**	Pg	**Pg**	**03 25 47.8**	**+0.9**
JOPP				Sg	**Sg**	**03 25 59.6**	**+2.7**
	3µm,0.6s						
SCHR	**S. Chirico Rap**	**0.84**	**358**	Pg	**Pg**	**03 25 48.0**	**-0.3**
	993nm,0.5s						
SCHR	**S. Chirico Rap**	**0.84**	**358**	Pg	**Pg**	**03 25 48.0**	**-0.3**
	993nm,0.5s						
SIRI	**Monte Sirino -**	**0.84**	**347**	*e*Pg	**Pg**	**03 25 48.3**	**0.0**
SIRI				Sg	**Sg**	**03 26 01.5**	**+2.3**
SIRI	**Monte Sirino -**	**0.84**	**347**	*e*Pg	**Pg**	**03 25 48.3**	**0.0**
SIRI				Sg	**Sg**	**03 26 01.5**	**+2.3**
	4µm,0.3s						
MGR	**Morigerati**	**0.89**	**331**	Pg	**Pg**	**03 25 48.9**	**-0.3**
MGR				Sg	**Sg**	**03 26 02.6**	**+1.9**
MGR	**Morigerati**	**0.89**	**331**	Pg	**Pg**	**03 25 48.9**	**-0.3**
MGR				Sg	**Sg**	**03 26 02.6**	**+1.9**
	3µm,0.3s						
BULG	**Bulgheria - Ca**	**0.91**	**322**	Pg	**Pg**	**03 25 49.7**	**+0.1**
	4µm,0.4s						
BULG	**Bulgheria - Ca**	**0.91**	**322**	Pg	**Pg**	**03 25 49.7**	**+0.1**
	4µm,0.4s						
PLAC	**Placanica**	**0.94**	**164**	Pg	**Pg**	**03 25 50.4**	**+0.1**
	1µm,0.8s						
PLAC	**Placanica**	**0.94**	**164**	Pg	**Pg**	**03 25 50.4**	**+0.1**
	1µm,0.8s						
MTSN	**Montesano sull**	**0.95**	**343**	*i*Pg	**Pg**	**03 25 50.0**	**-0.3**
MTSN				Sg	**Sg**	**03 26 04.6**	**+2.0**
MTSN	**Montesano sull**	**0.95**	**343**	*i*Pg	**Pg**	**03 25 50.0**	**-0.3**
MTSN				Sg	**Sg**	**03 26 04.6**	**+2.0**
	2µm,0.3s						
MCEL	**Monticello**	**0.99**	**346**	*i*Pg	**Pg**	**03 25 50.6**	**-0.6**
	2µm,0.6s						
MCEL	**Monticello**	**0.99**	**346**	*i*Pg	**Pg**	**03 25 50.6**	**-0.6**
	2µm,0.6s						
CRAC	**Craco**	**1.04**	**14**	Pg	**Pg**	**03 25 52.6**	**+0.6**
	6µm,0.8s						
CRAC	**Craco**	**1.04**	**14**	Pg	**Pg**	**03 25 52.6**	**+0.6**
	6µm,0.8s						
CEL	**Celeste**	**1.11**	**189**	Pg	**Pg**	**03 25 53.0**	**-0.5**
	2µm,0.4s						
CEL				*e*Sg	**Sg**	**03 26 06.2**	**-1.6**
CEL	**Celeste**	**1.11**	**189**	*e*Pg	**Pg**	**03 25 52.6**	**-0.9**
CEL				*e*Sg	**Sg**	**03 26 06.2**	**-1.7**
CEL	**Celeste**	**1.11**	**189**	Pg	**Pg**	**03 25 53.0**	**-0.5**
	2µm,0.4s						
CMPR	**Campora**	**1.14**	**327**	Pg	**Pg**	**03 25 53.1**	**-0.9**
CMPR				Sg	**Sg**	**03 26 10.3**	**+1.5**
CMPR	**Campora**	**1.14**	**327**	Pg	**Pg**	**03 25 53.1**	**-0.9**
CMPR				Sg	**Sg**	**03 26 10.3**	**+1.5**
	1µm,0.5s						
SCLL	**Scilla**	**1.14**	**196**	Pg	**Pg**	**03 25 53.7**	**-0.4**
	318nm,0.5s						
SCLL	**Scilla**	**1.14**	**196**	Pg	**Pg**	**03 25 53.7**	**-0.4**
	318nm,0.5s						
PTRP	**Pietrapertosa**	**1.16**	**358**	Pg	**Pg**	**03 25 54.2**	**-0.2**
	828nm,0.5s						
PTRP	**Pietrapertosa**	**1.16**	**358**	Pg	**Pg**	**03 25 54.2**	**-0.2**
	828nm,0.5s						
MSRU	**Castanea**	**1.19**	**203**	Pg	**Pg**	**03 25 54.4**	**-0.6**
MSRU				Sg	**Sg**	**03 26 10.3**	**-0.1**
MSRU	**Castanea**	**1.19**	**203**	Pg	**Pg**	**03 25 54.4**	**-0.6**
MSRU				Sg	**Sg**	**03 26 10.3**	**-0.1**
	4µm,0.8s						
MIGL	**Miglionico**	**1.27**	**12**	Pg	**Pg**	**03 25 55.8**	**-0.7**
	9µm,0.8s						
MIGL	**Miglionico**	**1.27**	**12**	Pg	**Pg**	**03 25 55.8**	**-0.7**
	9µm,0.8s						
SLNA	**Salina**	**1.27**	**232**	Pg	**Pn**	**03 25 56.3**	**-0.4**
	641nm,0.3s						
SLNA	**Salina**	**1.27**	**232**	Pg	**Pn**	**03 25 56.3**	**-0.4**
	641nm,0.3s						
MILZ	**Milazzo**	**1.28**	**212**	Pg	**Pn**	**03 25 55.6**	**-1.3**
	2µm,0.4s						
MILZ	**Milazzo**	**1.28**	**212**	Pg	**Pn**	**03 25 55.6**	**-1.3**
	2µm,0.4s						
LLI	**Lipari**	**1.28**	**225**	Pg	**Pn**	**03 25 56.8**	**-0.1**
	6µm,0.7s						
LLI	**Lipari**	**1.28**	**225**	Pg	**Pn**	**03 25 56.8**	**-0.1**
	6µm,0.7s						
CDRU	**Civita di Ruta**	**1.29**	**332**	Pg	**Pn**	**03 25 55.4**	**-1.5**
	677nm,0.4s						
CDRU	**Civita di Ruta**	**1.29**	**332**	Pg	**Pn**	**03 25 55.4**	**-1.5**
	677nm,0.4s						
VPL	**Vulcano Piano**	**1.31**	**222**	Pg	**Pn**	**03 25 56.5**	**-0.8**
	2µm,0.6s						
VPL	**Vulcano Piano**	**1.31**	**222**	Pg	**Pn**	**03 25 56.5**	**-0.8**
	2µm,0.6s						
SGO	**Sicignano**	**1.35**	**333**	Pg	**Pn**	**03 25 56.4**	**-1.4**
SGO	**Sicignano**	**1.35**	**333**	Pg	**Pn**	**03 25 56.4**	**-1.4**
LTRZ	**Laterza**	**1.36**	**24**	Pg	**Pg**	**03 25 57.5**	**-0.7**
	2µm,0.7s						
LTRZ	**Laterza**	**1.36**	**24**	Pg	**Pg**	**03 25 57.5**	**-0.7**
	2µm,0.7s						
MPAZ	**Palizzi**	**1.41**	**183**	Pg	**Pn**	**03 25 58.1**	**-0.5**
	862nm,0.4s						
MPAZ	**Palizzi**	**1.41**	**183**	Pg	**Pn**	**03 25 58.1**	**-0.5**
	862nm,0.4s						
ACER	**Acerenza**	**1.43**	**355**	Pg	**Pg**	**03 25 59.4**	**-0.2**
	3.0nm,0.4s						
ACER	**Acerenza**	**1.43**	**355**	Pg	**Pg**	**03 25 59.4**	**-0.2**
	3.0nm,0.4s						
MRLC	**Muro Lucano**	**1.47**	**341**	Pg	**Pn**	**03 25 59.5**	**0.0**
	245nm,0.5s						
MRLC	**Muro Lucano**	**1.47**	**341**	Pg	**Pn**	**03 25 59.5**	**0.0**
	245nm,0.5s						
SG1	**Sgolgore (BA)**	**1.54**	**16**	*e*Pn	**Pn**	**03 26 00.2**	**-0.3**
SG1				*e*Sn	**Sg**	**03 26 25.5**	**+3.8**
MMME	**Mongiuffi-Meli**	**1.57**	**205**	Pg	**Pn**	**03 26 00.3**	**-0.5**
	675nm,0.6s						
MMME	**Mongiuffi-Meli**	**1.57**	**205**	Pg	**Pn**	**03 26 00.3**	**-0.5**
	675nm,0.6s						
PALZ	**Palazzo San Ge**	**1.59**	**356**	Pg	**Pn**	**03 26 01.4**	**+0.3**
	1µm,1.0s						
PALZ	**Palazzo San Ge**	**1.59**	**356**	Pg	**Pn**	**03 26 01.4**	**+0.3**
	1µm,1.0s						
AMUR	**Altamura**	**1.59**	**14**	Pg	**Pn**	**03 26 01.2**	**+0.1**
	690nm,0.7s						
AMUR	**Altamura**	**1.59**	**14**	Pg	**Pn**	**03 26 01.2**	**+0.1**
	690nm,0.7s						
MCRV	**Calabrutti - M**	**1.59**	**333**	Pg	**Pn**	**03 26 00.0**	**-1.1**
	484nm,0.5s						
MCRV	**Calabrutti - M**	**1.59**	**333**	Pg	**Pn**	**03 26 00.0**	**-1.1**
	484nm,0.5s						
NOCI	**Noci**	**1.61**	**27**	Pg	**Pn**	**03 26 01.1**	**-0.2**
	571nm,0.6s						
NOCI	**Noci**	**1.61**	**27**	Pg	**Pn**	**03 26 01.1**	**-0.2**
	571nm,0.6s						
VULT	**Monte Vulture**	**1.64**	**347**	Pg	**Pg**	**03 26 02.5**	**-1.0**
	601nm,0.7s						
VULT	**Monte Vulture**	**1.64**	**347**	Pg	**Pg**	**03 26 02.5**	**-1.0**
	601nm,0.7s						
MRVN	**Minervino Murg**	**1.70**	**2**	Pg	**Pg**	**03 26 02.9**	**-1.9**
	215nm,0.4s						
MRVN	**Minervino Murg**	**1.70**	**2**	Pg	**Pg**	**03 26 02.9**	**-1.9**
	215nm,0.4s						
SNAL	**S. Angelo Dei**	**1.71**	**337**	Pg	**Pn**	**03 26 02.2**	**-0.5**
	1µm,1.0s						
SNAL	**S. Angelo Dei**	**1.71**	**337**	Pg	**Pn**	**03 26 02.2**	**-0.5**
	1µm,1.0s						
CSSN	**Cassano Irpino**	**1.71**	**331**	Pg	**Pn**	**03 26 01.9**	**-0.9**
	176nm,0.4s						
CSSN	**Cassano Irpino**	**1.71**	**331**	Pg	**Pn**	**03 26 01.9**	**-0.9**
	176nm,0.4s						
PE1	**Pezze di Greco**	**1.76**	**35**	*e*Pn	**Pn**	**03 26 03.2**	**-0.3**
PE1				*e*Sn	**Sg**	**03 26 34.3**	**+5.5**
SCTE	**Santa Cesarea**	**1.96**	**68**	Pg	**Pn**	**03 26 05.3**	**-0.8**
SCTE	**Santa Cesarea**	**1.96**	**68**	Pg	**Pn**	**03 26 05.3**	**-0.8**
FG5	**Orsara di Pugl**	**2.02**	**342**	Pg	**Pn**	**03 26 07.3**	**+0.2**
	141nm,0.6s						
FG5	**Orsara di Pugl**	**2.02**	**342**	Pg	**Pn**	**03 26 07.3**	**+0.2**
	141nm,0.6s						
GALF	**Gagliano Caste**	**2.04**	**217**	Pg	**Pn**	**03 26 09.5**	**+2.2**
GALF	**Gagliano Caste**	**2.04**	**217**	Pg	**Pn**	**03 26 09.5**	**+2.2**
GIB	**Gibilmanna**	**2.13**	**231**	Pg	**Pn**	**03 26 08.6**	**+0.1**
	468nm,0.8s						
GIB	**Gibilmanna**	**2.13**	**231**	Pg	**Pn**	**03 26 08.6**	**+0.1**
	468nm,0.8s						
HAGA	**Augusta**	**2.20**	**200**	Pg	**Pn**	**03 26 09.7**	**+0.2**
	402nm,0.6s						
HAGA	**Augusta**	**2.20**	**200**	Pg	**Pn**	**03 26 09.7**	**+0.2**
	402nm,0.6s						
VAE	**Valguarnera**	**2.30**	**216**	Pn	**Pg**	**03 26 14.4**	**-1.9**
	5.3nm,0.3s,baz=312,slow=16,SNR=20						
VAE				Sn	**Sg**	**03 26 48.8**	**+2.7**
	11nm,0.3s,baz=149,slow=6.3,SNR=5.0						
MS1	**Monte Sant'Ang**	**2.35**	**357**	*e*Pn	**Pn**	**03 26 13.5**	**+2.0**
RGNG	**Rignano Grg**	**2.35**	**350**	Pg	**Pn**	**03 26 10.8**	**-0.7**
RGNG	**Rignano Grg**	**2.35**	**350**	Pg	**Pn**	**03 26 10.8**	**-0.7**
SSY	**Sortino**	**2.35**	**201**	Pg	**Pn**	**03 26 11.7**	**+0.2**
SSY	**Sortino**	**2.35**	**201**	Pg	**Pn**	**03 26 11.7**	**+0.2**
MSAG	**Monte S. Angel**	**2.35**	**356**	Pg	**Pn**	**03 26 11.3**	**-0.3**
MSAG	**Monte S. Angel**	**2.35**	**356**	Pg	**Pn**	**03 26 11.3**	**-0.3**
SGRT	**San Giovanni R**	**2.41**	**354**	Pg	**Pn**	**03 26 11.8**	**-0.6**
SGRT	**San Giovanni R**	**2.41**	**354**	Pg	**Pn**	**03 26 11.8**	**-0.6**
SGG	**Gregorio Mates**	**2.42**	**327**	Pg	**Pn**	**03 26 12.9**	**+0.4**
	190nm,0.7s						
SGG	**Gregorio Mates**	**2.42**	**327**	Pg	**Pn**	**03 26 12.9**	**+0.4**
	190nm,0.7s						
HVZN	**Vizzini**	**2.44**	**207**	Pg	**Pn**	**03 26 13.8**	**+1.0**
HVZN	**Vizzini**	**2.44**	**207**	Pg	**Pn**	**03 26 13.8**	**+1.0**
HAVL	**Avola**	**2.52**	**198**	Pg	**Pn**	**03 26 13.7**	**-0.1**
	240nm,0.4s						
HAVL	**Avola**	**2.52**	**198**	Pg	**Pn**	**03 26 13.7**	**-0.1**
	240nm,0.4s						
RAFF	**Raffo Rosso**	**2.54**	**213**	Pg	**Pn**	**03 26 15.3**	**+1.2**
	192nm,0.6s						
RAFF	**Raffo Rosso**	**2.54**	**213**	Pg	**Pn**	**03 26 15.3**	**+1.2**
	192nm,0.6s						
FG2	**Serracapriola**	**2.55**	**344**	Pg	**Pn**	**03 26 14.5**	**+0.2**
FG2	**Serracapriola**	**2.55**	**344**	Pg	**Pn**	**03 26 14.5**	**+0.2**
KEK	**Kerkira**	**2.88**	**82**	*e*P	**Pn**	**03 26 18.3**	**-0.5**
SDI	**San Donato**	**2.93**	**324**	Pg	**Pn**	**03 26 19.9**	**+0.4**
	23nm,0.4s						
SDI	**San Donato**	**2.93**	**324**	Pg	**Pn**	**03 26 19.9**	**+0.4**
	23nm,0.4s						
ULC	**Ulcinj**	**3.53**	**42**	*i*Pn	**Pn**	**03 26 27.3**	**-0.5**
ULC				*e*Sn	**Sn**	**03 27 11.1**	**+1.1**
HCY	**Herceg Novi**	**3.58**	**30**	*i*Pn	**Pn**	**03 26 27.8**	**-0.6**
HCY				*e*Sn	**Sn**	**03 27 12.4**	**+1.3**
BUM	**Brajici-Budva**	**3.62**	**35**	*i*Pn	**Pn**	**03 26 28.5**	**-0.5**
BUM				*e*Sn	**Sn**	**03 27 13.5**	**+1.3**
JAN	**Janina**	**3.68**	**84**	*e*P	**Pn**	**03 26 30.4**	**+0.5**
VLS	**Valsamata**	**3.70**	**107**	*e*P	**Pn**	**03 26 29.4**	**-0.7**
PDG	**Podgorica**	**3.89**	**37**	*i*Pn	**Pn**	**03 26 31.9**	**-0.8**
PDG				*e*Sn	**Sn**	**03 27 18.7**	**-0.1**
TTG	**Podgorica**	**3.89**	**37**	*i*Pn	**Pn**	**03 26 31.9**	**-0.8**
TTG				*e*Sn	**Sn**	**03 27 18.7**	**-0.1**
BRY	**Bratogost**	**3.99**	**27**	*i*Pn	**Pn**	**03 26 33.6**	**-0.5**
BRY				*e*Sn	**Sn**	**03 27 22.3**	**+1.1**
NKY	**Niksic**	**4.08**	**31**	*i*Pn	**Pn**	**03 26 34.8**	**-0.6**
NKY				*e*Sn	**Sn**	**03 27 24.4**	**+0.8**
BIA	**Bitola**	**4.33**	**66**	*e*Pn	**Pn**	**03 26 38.1**	**-0.6**
BIA	**Bitola**	**4.33**	**66**	*e*Pn	**Pn**	**03 26 38.2**	**-0.6**
BIA				*e*Sg	**Sn**	**03 27 30.0**	**+0.4**
PVY	**Plav**	**4.36**	**41**	*i*Pn	**Pn**	**03 26 38.9**	**-0.3**
PVY				*e*Sn	**Sn**	**03 27 30.7**	**+0.3**
UPM	**Unac-Piva**	**4.38**	**28**	*i*Pn	**Pn**	**03 26 39.1**	**-0.4**
UPM				*e*Sn	**Sn**	**03 27 31.8**	**+0.8**
RLS	**Riolos of Patr**	**4.39**	**106**	*e*P	**Pn**	**03 26 40.4**	**+0.8**
KRUS	**Krusevo**	**4.41**	**61**	*e*Pn	**Pn**	**03 26 40.7**	**+0.8**
KRUS				*e*Sg	**Sn**	**03 27 30.1**	**-1.6**
EVR	**Evrytania**	**4.46**	**94**	*e*P	**Pn**	**03 26 43.0**	**+2.5**
KZN	**Kozani**	**4.46**	**76**	*e*P	**Pn**	**03 26 42.7**	**+2.1**
BEY	**Berane**	**4.53**	**38**	*e*Pn	**Pn**	**03 26 41.8**	**+0.3**
BEY				*e*Sn	**Sn**	**03 27 35.4**	**+0.8**
IVA	**Berane**	**4.53**	**38**	*e*Pn	**Pn**	**03 26 41.8**	**+0.3**
IVA				*e*Sn	**Sn**	**03 27 35.4**	**+0.8**
THL	**Klokotos Trika**	**4.58**	**86**	*e*P	**Pn**	**03 26 43.5**	**+1.3**
PLE	**Pljevlja**	**4.67**	**31**	*i*Pn	**Pn**	**03 26 43.8**	**+0.3**
PLE				*e*Sn	**Sn**	**03 27 38.7**	**+0.5**
BBLS	**Lazići**	**5.14**	**28**	*i*Pn	**Pn**	**03 26 49.9**	**+0.1**
BBLS				*e*Sn	**Sn**	**03 27 45.5**	**-4.1**
STIP	**Stip**	**5.19**	**61**	*e*Pn	**Pn**	**03 26 49.9**	**-0.6**
STIP	**Stip**	**5.19**	**61**	*e*Pn	**Pn**	**03 26 50.0**	**-0.6**
STIP				*e*Sg	**Sn**	**03 27 49.4**	**-1.4**
VAY	**Valandovo**	**5.31**	**66**	*e*Pn	**Pn**	**03 26 51.6**	**-0.7**
LKR	**Lokris**	**5.42**	**95**	*e*P	**Pn**	**03 26 54.3**	**+0.6**
BARS	**Barje**	**5.53**	**49**	*e*Pn	**Pn**	**03 26 55.6**	**+0.4**
BARS				*e*Sn	**Sn**	**03 27 58.4**	**-0.7**
PLG	**Polygyros**	**5.74**	**78**	*e*P	**Pn**	**03 26 58.5**	**+0.4**
ATH	**Athens Observa**	**6.12**	**101**	*e*P	**Pn**	**03 27 03.5**	**+0.2**
BOJS	**Bojanci**	**6.17**	**354**	*i*Pn

comp=Z,63nm,18.1s,baz=290,slow=42
MKAR Makanchi Array 19.10 302 P **Pn 03 35 20.7 -2.8**
comp=Z,0.2nm,0.3s,baz=106,slow=11,SNR=9.2
BOD Bodaibo 19.50 13 *e*P **Pn 03 35 29.0 +0.8**
JIRN Jiri 20.13 242 *e*P **P 03 35 33.9 -0.1**
GUN Gumba 20.19 243 *e*P **P 03 35 34.5 -0.2**
comp=Z,39nm,0.9s
RAMN Ramite 20.31 240 *e*P **P 03 35 35.3 -0.7**
comp=Z,26nm,0.9s
KKN Kakani 20.68 243 *e*P **P 03 35 39.4 -0.6**
comp=Z,79nm,1.2s
KKN Kakani 20.68 243 *e*P **P 03 35 39.4 -0.6**
KKN pmax pmax
comp=Z,79nm,1.2s
PKI Pulchoki 20.72 243 *e*P **P 03 35 41.1 +0.6**
ZAA0 Zalesovo Array 20.84 323 *e*P **P 03 35 40.7 -0.9**
ZALV Zalesovo Beam 20.84 323 P **P 03 35 40.2 -1.3**
comp=Z,8.2nm,0.8s,baz=128,slow=9.6,SNR=23
ZALV LR LR 03 43 55.7
comp=Z,68nm,18.5s,baz=76,slow=37
DMN Daman 20.91 243 *e*P **P 03 35 42.6 +0.1**
comp=Z,48nm,1.2s
KLR Kul'dur 20.91 52 *e*P **P 03 35 39.9 -2.5**
GKN Gorkha 21.00 245 *e*P **P 03 35 43.1 -0.4**
comp=Z,39nm,1.0s,mb4.7
DANN Dangsing 21.42 247 *e*P **P 03 35 47.6 -0.4**
comp=Z,48nm,0.8s,mb4.9
KOLN Koldanda 21.87 246 *e*P **P 03 35 52.6 -0.3**
comp=Z,26nm,0.9s,mb4.7
KURK Kurchatov 22.63 310 P **P 03 36 00.4 -0.3**
comp=Z,17nm,1.1s,mb4.4,baz=107,slow=12,SNR=37
KURK Kurchatov 22.63 310⇓*i*P **P 03 36 00.5 -0.2**
KURK pmax pmax
comp=Z,32nm,1.1s,mb4.7
KURK Kurchatov 22.63 310 *e*P **P 03 36 00.1 -0.6**
comp=Z,51nm,1.1s,mb4.9
TKM2 Tokmak 2 23.35 289 *e*P **P 03 36 11.4 +3.0**
TKM2 pmax pmax
comp=Z,4.0nm,1.0s,mb3.8
TKM2 Tokmak 2 23.35 289 *e*P **P 03 36 11.4 +3.0**
comp=Z,3.8nm,1.0s,mb3.8
AAK Ala-Archa 24.17 289⇑*i*P **P 03 36 16.6 +0.5**
AAK pmax pmax
comp=Z,6.0nm,2.6s,mb3.6
AAK Ala-Archa 24.17 289 *e*P **P 03 36 16.1 0.0**
comp=Z,2.4nm,0.8s,mb3.7
UCH Uchtor 24.18 288 *e*P **P 03 36 18.0 +1.8**
comp=Z,9.6nm,1.1s,mb4.1
EKS2 Erkin-Say 24.70 289 *e*P **P 03 36 21.9 +1.0**
comp=Z,11nm,1.4s,mb4.2
MJAR Matsushiro Arr 25.37 85 P **P 03 36 26.0 -1.1**
comp=Z,3.1nm,1.0s,mb3.8,baz=284,slow=12,SNR=6.2
BVAR Borovoye Array 28.19 312 P **P 03 36 52.5 +0.2**
comp=Z,3.9nm,0.6s,mb4.2,baz=108,slow=8.8,SNR=17
BRVK Borovoye 28.26 312 *e*P **P 03 36 53.5 +0.6**
BRVK *e* 03 37 45.6
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
BRVK Borovoye 28.26 312 *e*P **P 03 36 53.5 +0.6**
comp=Z,3.9nm,0.8s,mb4.1
BRVK *e* 03 37 45.6
ARU Arti 35.60 315*c i*P **P 03 37 57.5 +0.2**
ARU *e* 03 39 17.5
ARU *e*S **S 03 43 31.5 -0.6**
ARU *e*SS SS 03 45 56.6 -10
ARU pmax pmax
comp=Z,16nm,1.2s,mb4.8
ARU Arti 35.60 315 *e*P **P 03 37 57.7 +0.5**
comp=Z,12nm,0.9s,mb4.8
PSI Prapat 36.64 192 P **P 03 38 07.2 +0.7**
comp=Z,12nm,0.9s,mb4.7,baz=338,slow=6.1,SNR=8.3
PSI Prapat 36.64 192 P **P 03 38 07.2 +0.7**
BILL Bilibino 43.37 28⇓*e*P **P 03 39 01.2 -0.6**
BILL *e* 03 40 41.7
BILL *e*S **S 03 45 26.4 -1.8**
BILL pmax pmax
comp=Z,8.0nm,2.0s,mb4.1
GNI Garni 46.51 292 P **P 03 39 25.2 -2.0**
comp=Z,0.8nm,0.3s,mb4.1,baz=38,slow=19,SNR=1.9
GNI Garni 46.51 292 *e*P **P 03 39 27.6 +0.4**
GNI pmax pmax
comp=Z,26nm,1.7s
OBN Obninsk 48.00 314⇓*e*P **P 03 39 38.3 -0.3**
OBN *e* 03 41 30.9
OBN *e*S **S 03 46 25.4 -10**
OBN pmax pmax
comp=Z,13nm,1.5s,mb4.7
AKASG Malin Array Be 53.44 310 P **P 03 40 19.0 -0.6**
comp=Z,2.8nm,0.8s,mb4.3,baz=59,slow=7.7,SNR=6.0
AKASG Malin Array Be 53.44 310 *e*P **P 03 40 19.7 +0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 53.44 310 *e*P **P 03 40 19.6 0.0**
BR131 Keskin Array S 54.59 295 *e*P **P 03 40 28.3 +0.1**
comp=Z,4.4nm,0.9s,mb4.5
BRTR Keskin Array B 54.59 295 P **P 03 40 28.5 +0.3**
comp=Z,3.6nm,0.9s,mb4.4,baz=82,slow=8.9,SNR=12
BRTR Keskin Array B 54.59 295 *e*P **P 03 40 29.2 +1.0**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 58.27 324 P **P 03 40 53.5 -0.7**
comp=Z,2.4nm,0.5s,mb4.5,baz=68,slow=8.3,SNR=6.4
HFS Hagfors 58.27 324 P **P 03 40 53.5 -0.7**
NB2 NORSAR Subarra 59.01 326 P **P 03 40 58.6 -0.6**
comp=Z,2.2nm,0.6s,mb4.4,baz=61,slow=7.4
NOA NORSAR Array B 59.01 326 P **P 03 40 59.0 -0.2**
comp=Z,4.0nm,0.8s,mb4.5,baz=65,slow=6.8,SNR=8.9
COLD Coldfoot 59.60 26 *e*P **P 03 41 04.2 +1.0**
comp=Z,4.9nm,0.9s,mb4.5
COLA College 61.62 28 *e*P **P 03 41 17.7 +0.7**
COLA pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
COLA College 61.62 28 *e*P **P 03 41 17.7 +0.7**
comp=Z,9.1nm,1.1s,mb4.8
BRG Berggiesshubel 62.24 314 P **P 03 41 22.5 +1.1**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
BRG Berggiesshubel 62.24 314 *e*(P) **P 03 41 22.5 +1.1**
comp=Z,3.8nm,1.0s,mb4.5
CLL Collm 62.55 315 *e*P **P 03 41 24.0 +0.5**
GERES GERESS Array B 63.36 312 P **P 03 41 29.3 +0.4**
comp=Z,0.9nm,0.9s,mb3.9,baz=32,slow=7.8,SNR=5.1
INK Inuvik 64.16 21 P **P 03 41 34.0 +0.2**
comp=Z,1.7nm,0.8s,mb4.1,baz=346,slow=5.8,SNR=7.3
INK Inuvik 64.16 21 *e*P **P 03 41 34.4 +0.5**
WRAB Tennant Creek 64.30 150 *e*P **P 03 41 35.5 +0.2**
WRAB pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
WRAB Tennant Creek 64.30 150 *e*P **P 03 41 35.5 +0.2**
comp=Z,4.6nm,0.9s,mb4.5
WRA Warramunga Arr 64.30 150 P **P 03 41 35.2 -0.2**
comp=Z,4.0nm,0.9s,mb4.5,baz=346,slow=7.1,SNR=21
WRA Warramunga Arr 64.30 150 *e*P **P 03 41 35.5 +0.1**
WRA pmax pmax
comp=Z,4.0nm,0.9s
ASAR Alice Springs 67.54 153 P **P 03 41 56.7 +0.6**
comp=Z,4.7nm,0.8s,mb4.5,baz=335,slow=6.1,SNR=35
YKA Yellowknife Ar 73.66 18 P **P 03 42 33.1 +0.1**
comp=Z,2.0nm,0.9s,mb4.1,baz=326,slow=5.6,SNR=31
STKA Stephens Creek 77.84 150 P **P 03 42 56.9 -0.3**
comp=Z,3.9nm,0.7s,mb4.4,baz=327,slow=6.2,SNR=9.4
HLID Hailey 89.97 28 *e*P **P 03 44 00.9 +1.7**
comp=Z,48nm,2.5s,mb5.4
TORD Torodi Ar. Bea 92.76 289 P **P 03 44 12.3 -0.3**
comp=Z,1.1nm,1.0s,mb4.2,baz=24,slow=3.9,SNR=5.2

NEIC ***20*** *03:43:54.6, 50.98N×179.58W, h10km, ML3.2(AEIC), After AEIC.*
ISCJB ***20*** *03:43:59.0±2.0, 51.5N±0.3×179.48W±0.10, h64km±11km, mb3.9/11, Error ellipse: s-maj=49.7km s-min=8.9km az=5.3*
IDC ***20*** *03:44:00.9±3.1, 51.52N×179.42W, h60km±26km, mb3.6/11, mb1 3.7/13, mb1mx3.6/28, mbtmp3.6/13, ML3.3/2, MS4.1/1, Ms1 4.1/1, ms1mx2.9/35, Error ellipse: s-maj=49.0km s-min=13.7km az=9.0*
ISC 20 03:44:00.5±1.9**, 51.5N**±0.3×**179.4W**±0.1**, h56**km±11km**, n16,** σ**1.18**/17**, mb3.9**/11**, Andreanof Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ADK Adak 1.71 77 P **Pn 03 44 28.0 0.0**
ADK S **Sn 03 44 53.2 +4.5**
FX1 Attu Island--F 4.78 289 P **Pn 03 45 08.2 -1.7**
3.4nm,0.3s,baz=253,slow=14,SNR=5.1
FX1 S **Sn 03 46 05.2 +1.3**
0.8nm,0.3s,baz=240,slow=16,SNR=1.9
KDAK Kodiak Island 16.64 57 P **Pn 03 47 48.2 -1.5**
0.2nm,0.3s,baz=88,slow=21,SNR=10
KDAK Kodiak Island 16.64 57 P **Pn 03 47 48.2 -1.5**
YKA Yellowknife Ar 35.39 46 P **P 03 50 50.6 +0.3**
0.3nm,0.5s,mb3.5,baz=282,slow=7.1,SNR=12
RES Resolute Bay 39.75 24 LR LR 04 07 37.4
comp=Z,226nm,19.4s,baz=184,slow=36
NVAR Mina Array Bea 43.89 83 P **P 03 52 03.5 +2.2**
0.3nm,0.5s,mb3.3,baz=284,slow=5.5,SNR=2.5
SONM Songino Array 46.25 296 P **P 03 52 21.4 +1.5**
0.5nm,0.6s,mb3.6,baz=65,slow=10,SNR=3.3
PDAR Pinedale Array 46.60 72 P **P 03 52 23.9 +1.1**
0.7nm,0.7s,mb3.7,baz=314,slow=3.8,SNR=7.8
SPITS Spitsbergen Ar 50.19 356 P **P 03 52 50.8 +0.9**
4.5nm,0.7s,mb4.6,baz=12,slow=10.0,SNR=7.0
KURK Kurchatov 58.65 313 P **P 03 53 52.0 +0.4**
1.1nm,0.3s,mb4.4,baz=43,slow=6.5,SNR=4.0
TXAR Lajitas Array 58.99 81 P **P 03 53 52.6 -1.6**
0.2nm,0.7s,mb3.3,baz=320,slow=6.3,SNR=3.2
MKAR Makanchi Array 59.65 308 P **P 03 53 57.1 -1.5**
0.5nm,0.4s,mb3.9,baz=52,slow=7.0,SNR=7.6
BVAR Borovoye Array 60.54 319 P **P 03 54 04.0 -0.5**
0.9nm,0.5s,mb4.1,baz=60,slow=6.0,SNR=4.4
NOA NORSAR Array B 67.46 354 P **P 03 54 49.5 -0.3**
1.1nm,0.7s,mb4.0,baz=7.1,slow=6.3,SNR=3.7
AKASG Malin Array Be 75.29 342 P **P 03 55 36.5 -0.7**
0.9nm,0.4s,mb4.0,baz=17,slow=5.6,SNR=3.9

BJI ***20*** *03:51:40.8, 51.00N×179.30W, h16km, mB5.0, mb4.6, Ms4.5, Msz4.5*
NEIC ***20*** *03:51:43.8, 51.02N×179.29W, h16km, mb4.4/33, ML4.1(AEIC), ML4.7(PMR), After AEIC.*
MOS ***20*** *03:51:44.6±0.9, 51.09N×179.30W, h48km, mb4.6/26, Error ellipse: s-maj=11.8km s-min=7.4km az=102.4*
ISCJB ***20*** *03:51:45.7±0.9, 51.28N±0.07×179.35W±0.05, h48km±7km, mb4.3/59, MS4.2/3, Error ellipse: s-maj=11.4km s-min=4.8km az=177.3*
IDC ***20*** *03:51:45.3±2.4, 51.13N×179.30W, h42km±20km, mb3.8/17, mb1 4.0/19, mb1mx3.9/27, mbtmp3.8/19, ML3.6/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/42, Error ellipse: s-maj=21.8km s-min=11.6km az=176.0*
ISC 20 03:51:47.3±0.9**, 51.26N**±0.09×**179.33W**±0.05**, h48**km±6km**, h42**km±4.4km**: pP-P, n134,** σ**0.97**/135**, mb4.3**/59**, MS4.2**/3**, 13C-7D, Andreanof Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ADK Adak 1.76 68 P **Pn 03 52 14.4 -1.0**
ADK S **Sn 03 52 37.6 +1.0**
SMY Shemya 4.32 292 P **Pn 03 52 51.5 +1.1**
FX1 Attu Island--F 4.91 292 P **Pn 03 52 58.9 +0.5**
8.3nm,0.3s,baz=196,slow=15,SNR=14
FX1 S **Sn 03 53 53.3 -0.6**
baz=146,slow=22,SNR=1.5
FX1 Attu Island--F 4.91 292 P **Pn 03 52 58.9 +0.5**
FX1 S **Sn 03 53 53.3 -0.6**
UNV Unalaska Valle 8.24 67 P **Pn 03 53 44.8 +0.7**
CHGN Chignik 13.34 60 *e*P **Pn 03 54 53.6 -0.1**
PETK Petropavlovsk- 14.20 286 P **Pn 03 55 05.2 -0.3**
baz=94,slow=18,SNR=1.8
PETK LR LR 03 59 47.6
comp=Z,156nm,18.8s,baz=292,slow=34
KDAK Kodiak Island 16.77 57 P **Pn 03 55 33.7 -4.7**
1.1nm,0.3s,baz=328,slow=18,SNR=16
KDAK S **S 03 58 39.9 -12**
0.2nm,0.3s,baz=0.0,slow=20,SNR=3.6
KDAK Kodiak Island 16.77 57 P **Pn 03 55 33.7 -4.7**
KDAK S **S 03 58 39.9 -12**
BILL Bilibino 18.25 343⇑*e*P **Pn 03 55 57.9 +1.3**
BILL *e*S **S 03 59 14.2 -8.0**
BILL pmax pmax
comp=Z,19nm,1.5s
BILL MLR MLR
comp=Z,200nm,18.0s
BILL Bilibino 18.25 343 *e*P **Pn 03 55 57.8 +1.2**
comp=Z,23nm,1.1s
PPLA Purkeypile 18.62 41 *e*P **Pn 03 56 02.4 +1.2**
comp=Z,54nm,1.3s
SEW Seward 18.88 50 *e*P **Pn 03 56 02.3 -2.0**
CHUM Lake Minchumin 19.03 38 *e*P **Pn 03 56 05.8 -0.3**
comp=Z,12nm,1.0s
KTH Kantishna Hill 19.43 40 *e*P **Pn 03 56 09.8 -1.0**
comp=Z,24nm,0.7s
TRF Thorofare Moun 19.64 40 *e*P **Pn 03 56 11.9 -1.4**
comp=Z,83nm,1.6s
BPAW Bear Paw Mtn. 19.65 38 *e*P **Pn 03 56 12.3 -1.1**
comp=Z,13nm,0.8s
MCK McKinley 20.31 40 *e*P **P 03 56 19.7 +0.9**
MCK pmax pmax
comp=Z,19nm,1.2s
MCK McKinley 20.31 40 *e*P **P 03 56 19.7 +0.9**
comp=Z,19nm,1.2s
COLA College 21.21 38 *e*P **P 03 56 29.5 +0.9**
COLA pmax pmax
comp=Z,14nm,1.0s,mb4.2
COLA College 21.21 38 *e*P **P 03 56 29.5 +0.9**
comp=Z,14nm,1.0s,mb4.3
PAX Paxson 21.51 44 *e*P **P 03 56 31.6 -0.1**
PAX pmax pmax
comp=Z,14nm,1.1s,mb4.3
PAX Paxson 21.51 44 *e*P **P 03 56 31.6 -0.1**
comp=Z,14nm,1.1s,mb4.3
COLD Coldfoot 21.53 31 *e*P **P 03 56 32.6 +0.7**
comp=Z,4.8nm,0.7s,mb4.0
EGAK Eagle 23.86 41 *e*P **P 03 56 55.0 -0.7**
comp=Z,52nm,1.5s,mb4.7
DAWY Dawson 24.42 43 *e*P **P 03 56 59.8 -1.2**
INK Inuvik 27.75 35 P **P 03 57 29.1 -1.8**
comp=Z,0.7nm,0.5s,mb3.5,baz=252,slow=15,SNR=8.4
INK Inuvik 27.75 35 *e*P **P 03 57 30.6 -0.3**
DLBC Dease Lake 28.70 56 P **P 03 57 36.6 -2.8**
comp=Z,1.6nm,0.8s,mb3.8,baz=0.0,slow=20,SNR=2.5
KLR Kul'dur 30.89 286 *e*P **P 03 57 53.6 -5.4**
YKA Yellowknife Ar 35.55 46 P **P 03 58 38.8 -0.6**
comp=Z,2.4nm,0.5s,mb4.3,baz=282,slow=7.9,SNR=68
YKA ScP ScP 04 04 49.2 +0.2
comp=Z,0.2nm,0.6s,baz=293,slow=3.4,SNR=3.1
YKA Yellowknife Ar 35.55 46 P **P 03 58 38.8 -0.6**
YKA ScP ScP 04 04 49.2 +0.2
CN2 Changchun 37.24 281 ⇑P **P 03 58 51.9 -2.1**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
BOD Bodaibo 37.78 307 *e*P **P 03 58 56.9 -1.5**
BOD pmax pmax
comp=Z,11nm,1.1s,mb4.5
HIA Hailar 38.02 292 *i* P **P 03 58 59.8 -0.7**
KSRS Korea Array 39.31 271 P **P 03 59 10.8 -0.6**
comp=Z,1.7nm,0.8s,mb3.9,baz=54,slow=9.7,SNR=4.5
KSRS Korea Array 39.31 271 P **P 03 59 10.8 -0.6**
KSRS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
WVOR Wild Horse Val 41.35 78 *e*P **P 03 59 30.5 +2.3**
WVOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
WVOR Wild Horse Val 41.35 78 *e*P **P 03 59 30.5 +2.2**
comp=Z,4.8nm,0.9s,mb4.1
HLID Hailey 43.29 74 *e*P **P 03 59 44.2 +0.2**
comp=Z,3.1nm,0.9s,mb4.0
NVAR Mina Array Bea 43.90 82 P **P 03 59 49.5 +0.6**
comp=Z,0.5nm,0.6s,mb3.5,baz=294,slow=7.4,SNR=2.7
ELK Elko 44.41 78 *e*P **P 03 59 52.5 -0.5**
ELK pmax pmax
comp=Z,4.0nm,0.9s
ELK Elko 44.41 78 *e*P **P 03 59 52.5 -0.5**
comp=Z,3.7nm,0.9s,mb4.1
TLY Talaya 45.85 302 *i* P **P 04 00 05.1 +0.8**
TLY pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ULN Ulaanbaatar 46.02 296⇓*e*P **P 04 00 06.2 +0.6**
ULN Ulaanbaatar 46.02 296 *e*P **P 04 00 05.5 -0.1**
comp=Z,2.5nm,0.7s,mb4.2
DUG Dugway 46.22 77 *e*P **P 04 00 08.3 +1.0**
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
DUG Dugway 46.22 77 *e*P **P 04 00 08.3 +0.9**
comp=Z,8.0nm,1.0s,mb4.6
SONM Songino Array 46.40 296 P **P 04 00 09.0 +0.3**
comp=Z,1.7nm,0.8s,mb4.0,baz=59,slow=9.3,SNR=10.0
BW06 Boulder Array 46.66 72 *e*P **P 04 00 10.6 -0.2**
comp=Z,4.1nm,0.7s,mb4.5
PDAR Pinedale Array 46.66 72 P **P 04 00 10.9 +0.1**
comp=Z,4.5nm,0.7s,mb4.5,baz=313,slow=3.8,SNR=19
ZAK Zakamensk 46.73 301 *e*P **P 04 00 11.2 0.0**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
RSSD Black Hills 49.11 67 *e*P **P 04 00 30.3 +0.6**
RSSD pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
RSSD Black Hills 49.11 67 *e*P **P 04 00 30.3 +0.6**
comp=Z,1.7nm,0.5s,mb4.3
SPITS Spitsbergen Ar 50.47 356 P **P 04 00 38.8 -0.8**
comp=Z,2.8nm,0.4s,mb4.6,baz=37,slow=10.0,SNR=21
SDCO Great Sand Dun 52.20 74 *e*P **P 04 00 53.9 +0.9**
comp=Z,2.6nm,1.1s,mb4.1
XAN Xi'an 53.36 281 P **P 04 01 00.1 -1.5**
XAN AP pP 04 01 09.5 -5.4
XAN PP PP 04 03 00.6 -1.4
XAN SCS ScS 04 10 47.6 +0.8
XAN SS SS 04 12 11.3 +1.4
XAN AMB AMB
comp=Z,3.0nm,0.6s,mb4.4
XAN LR LR
comp=E,59nm,29.1s
XAN LR LR
comp=Z,155nm,30.4s,MS3.9
ANMO Albuquerque 53.44 78⇑*e*P **P 04 01 04.9 +2.7**
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ZALV Zalesovo Beam 53.87 313 P **P 04 01 04.5 -0.6**
comp=Z,0.5nm,0.3s,mb4.0,baz=36,slow=5.4,SNR=3.1
GTA Gaotai 55.30 292 *e*P **P 04 01 15.8 +0.1**
GTA AP pP 04 01 29.1 +0.1
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.5
WMOK Wichita Mounta 58.25 73 *e*P **P 04 01 37.4 +0.8**
WMOK pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
WMOK Wichita Mounta 58.25 73 *e*P **P 04 01 37.4 +0.8**
comp=Z,1.5nm,0.6s,mb4.2
KURK Kurchatov 58.86 313⇑*e*P **P 04 01 40.6 -0.1**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KURK Kurchatov 58.86 313 *e*P **P 04 01 40.2 -0.5**
comp=Z,4.8nm,0.6s,mb4.7
TXAR Lajitas Array 59.00 81 P **P 04 01 40.4 -1.6**
comp=Z,0.5nm,0.6s,mb3.8,baz=299,slow=5.4,SNR=11
WMQ Urumqi 59.13 303 *e*P **P 04 01 45.0 +2.4**
WMQ AMB AMB
comp=Z,6.0nm,1.3s,mb4.5
MKAR Makanchi Array 59.85 308 P **P 04 01 46.5 -1.0**
comp=Z,4.7nm,0.8s,mb4.6,baz=51,slow=6.0,SNR=35
MKAR Makanchi Array 59.85 308 *i* P **P 04 01 47.2 -0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
GYA Guiyang 60.01 276 P **P 04 01 50.3 +1.4**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
SCHQ Schefferville 60.30 38 P **P 04 01 48.8 -1.8**
comp=Z,6.9nm,1.1s,mb4.6,baz=350,slow=11,SNR=2.9
BRVK Borovoye 60.78 320 *e*P **P 04 01 54.9 +1.1**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BRVK Borovoye 60.78 320 *e*P **P 04 01 54.9 +1.1**
comp=Z,3.6nm,0.9s,mb4.5
SADO Sadowa 62.17 52 LR LR 04 30 53.2
comp=Z,133nm,18.8s,MS4.1,baz=287,slow=38
WCI Wyandotte Cave 63.05 62 *e*P **P 04 02 08.6 -0.7**
WCI pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
WCI Wyandotte Cave 63.05 62 *e*P **P 04 02 08.6 -0.7**
comp=Z,3.9nm,0.6s,mb4.7
KMI Kunming 63.41 278 P **P 04 02 13.3 +1.4**
KMI AP pP 04 02 25.3 -0.1
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,60nm,4.3s
KMI LR LR
comp=N,239nm,24.8s
KMI LR LR
comp=E,263nm,40.3s
KMI LR LR
comp=Z,370nm,21.7s,MS4.5
JOF Joensuu 63.63 345 *e*p **P 04 02 12.0 -0.7**
comp=Z,1.0nm,0.4s,mb4.2
JOF Joensuu 63.63 345 *e*P **P 04 02 12.0 -0.7**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 65.15 347 *e*p **P 04 02 21.6 -1.1**
comp=Z,0.9nm,0.3s,mb4.3
KAF Kangasniemi 65.15 347 *e*P **P 04 02 21.6 -1.1**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
TKM2 Tokmak 2 65.94 309 *e*P **P 04 02 28.9 +0.9**
TKM2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
TKM2 Tokmak 2 65.94 309 *e*P **P 04 02 28.9 +0.8**
comp=Z,5.1nm,1.0s,mb4.5
AAK Ala-Archa 66.69 309 *e*P **P 04 02 33.4 +0.5**
AAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
AAK Ala-Archa 66.69 309 *e*P **P 04 02 33.4 +0.5**
comp=Z,5.2nm,1.0s,mb4.5
EKS2 Erkin-Say 67.01 310 *e*P **P 04 02 35.9 +1.0**
comp=Z,3.9nm,0.9s,mb4.4
NB2 NORSAR Subarra 67.73 354 P **P 04 02 38.5 -0.7**
comp=Z,13nm,1.4s,mb4.8,baz=6.4,slow=6.5
NOA NORSAR Array B 67.73 354 P **P 04 02 38.9 -0.3**
comp=Z,1.5nm,0.8s,mb4.1,baz=8.4,slow=6.3,SNR=7.3
VSU Vasula 68.59 346 *i* P **P 04 02 43.5 -1.1**
VSU pmax pmax
comp=Z,24nm,0.9s,mb5.1
OBN Obninsk 69.86 339⇑*e*P **P 04 02 52.6 +0.1**
OBN *e*S S 04 12 00.1 +2.0
OBN pmax pmax
comp=Z,55nm,2.1s,mb5.1
AKASG Malin Array Be 75.56 342 P **P 04 03 25.5 -0.9**
comp=Z,9.0nm,0.4s,mb5.0,baz=22,slow=6.6,SNR=21
AKASG Malin Array Be 75.56 342 *i* P **P 04 03 25.8 -0.6**
AKASG pmax pmax
comp=Z,9.0nm,0.4s
AKBB Malin Array Si 75.56 342 *e*P **P 04 03 25.7 -0.7**
CLL Collm 77.28 352 *e*P **P 04 03 36.0 -0.1**
KWP Kalwaria 77.75 346 *e*P **P 04 03 39.3 +0.6**
KWP Kalwaria 77.75 346⇓*i*P **P 04 03 39.3 +0.6**
KWP Kalwaria 77.75 346 *e*P **P 04 03 39.3 +0.6**
STHS Stebnicka Huta 78.18 346 *e*P **P 04 03 41.9 +0.8**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 78.18 346 *e*P **P 04 03 41.9 +0.8**
comp=Z,3.6nm,1.0s,mb4.3
MEM Membach 78.41 357 P **P 04 03 43.0 +0.6**
CRVS Cervenica-Dubn 78.65 346 *e*P **P 04 03 43.9 +0.2**
CRVS Cervenica-Dubn 78.65 346 *e*P **P 04 03 44.0 +0.3**
KECS Kecovo 79.20 347 *e*P **P 04 03 46.3 -0.5**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 79.20 347 *e*P **P 04 03 46.3 -0.5**
comp=Z,2.3nm,0.8s,mb4.2
BUR08 Bucovina Ar. S 79.25 343 *e*P **P 04 03 47.2 +0.2**
BURAR Bucovina Array 79.28 343⇓*i*P **P 04 03 47.3 +0.1**
BURAR Bucovina Array 79.28 343 ⇓P **P 04 03 47.3 +0.1**
KHC Kasperske Hory 79.38 351⇑*e*P **P 04 03 48.3 +0.5**
KHC Kasperske Hory 79.38 351 *e*P **P 04 03 47.0 -0.8**
KOLL Kolacno 79.39 348 *e*P **P 04 03 48.4 +0.6**
VYHS Vyhne 79.42 348 *e*P **P 04 03 48.3 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
VYHS Vyhne 79.42 348 *e*P **P 04 03 48.3 +0.4**
comp=Z,3.6nm,1.3s,mb4.1
GERES GERESS Array B 79.66 351 P **P 04 03 49.1 -0.1**
comp=Z,1.5nm,0.7s,mb4.1,baz=30,slow=5.5,SNR=8.2
PSZ Piszkesteto 79.83 347 *e*P **P 04 03 50.9 +0.7**
PSZ pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
PSZ Piszkesteto 79.83 347 *e*P **P 04 03 50.9 +0.7**
comp=Z,8.1nm,1.1s,mb4.6
CONA Conrad Observa 80.34 350⇑*i*P **P 04 03 53.4 +0.5**
comp=Z,5.6nm,1.1s,mb4.4
CSNA Conrad Observa 80.34 350⇑*i*P **P 04 03 53.3 +0.4**
comp=Z,5.9nm,1.2s,mb4.4
DRGR 80.50 345⇓*i*P **P 04 03 53.7 -0.1**
DRGR 80.50 345 ⇓P **P 04 03 53.7 -0.2**
VOIR 81.41 343⇓*i*P **P 04 04 00.1 +1.4**
KBA Koelnbreinsper 81.44 351⇑*i*P **P 04 03 59.3 +0.4**
comp=Z,23nm,1.4s,mb4.9
WRA Warramunga Arr 81.70 223 P **P 04 03 57.3 -3.1**

comp=Z,0.4nm,0.8s,mb3.4,baz=34,slow=5.9,SNR=3.1
FETA Feichten 81.72 353 ⇑ *i*P P 04 04 00.8 **+0.5**
comp=Z,4.6nm,1.1s,mb4.3
GZR Gura Zlata 81.85 344 ⇑ *i*P P 04 04 01.6 **+0.6**
GZR Gura Zlata 81.85 344 ⇑ P P 04 04 01.6 **+0.5**
BNI Bardonecchia 83.93 356 *e*P P 04 04 12.5 **+0.7**
BNI pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
BNI Bardonecchia 83.93 356 *e*P P 04 04 12.5 **+0.7**
comp=Z,4.8nm,0.9s,mb4.6
BR131 Keskin Array S 84.92 335 *e*P P 04 04 16.9 **0.0**
comp=Z,2.2nm,0.8s,mb4.3
BRTR Keskin Array B 84.92 335 P P 04 04 16.6 **-0.3**
comp=Z,2.1nm,0.8s,mb4.3,baz=51,slow=3.5,SNR=7.6
BRTR Keskin Array B 84.92 335 ⇑ *e*P P 04 04 17.1 **+0.2**
ASAR Alice Springs 85.17 222 P P 04 04 16.0 **-2.2**
comp=Z,0.3nm,0.7s,mb3.5,baz=27,slow=6.3,SNR=3.7
TORD Torodi Ar. Bea 115.86 359 PKP PKPdf 04 10 22.2 -2.5
comp=Z,0.1nm,0.5s,baz=356,slow=2.5,SNR=3.3
TSUM Tsumeb 145.33 331 *e*PKPdf PKPdf 04 11 19.2 -0.4
LBTB Lobatse 147.58 315 *e*PKPbc PKPbc 04 11 26.0 0.0
LBTB *e*PKPab PKPab 04 11 28.9 +0.6
BOSA Boshof 150.81 311 PKPbc PKPbc 04 11 33.5 -0.5
comp=Z,4.2nm,1.0s,baz=60,slow=3.7,SNR=2.9

KRSC 20 04:03:26.5±0.9, 5339N×16272E, h43km±42km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.31**	**334**	P	Pn	04 03 49.1	+0.9
MKZ				*i* S	Sn	04 04 06.2	+1.7
SPN	**Mys Shipunski**	**1.65**	**261**	*e*P	Pn	04 03 54.3	+1.4
SPN				*i* S	Sn	04 04 14.5	+1.7
NLC	**Nalytchevo**	**2.04**	**265**	P	Pn	04 04 00.4	+2.1
NLC				*i* S	Sn	04 04 25.0	+2.6
AVH	**Avacha**	**2.39**	**269**	*e*P	Pn	04 04 05.8	+2.7
AVH				*e*S	Sn	04 04 35.0	+3.9
RUS	**Russkaya**	**2.72**	**251**	P	Pn	04 04 09.1	+1.5
RUS				*i* S	Sn	04 04 39.6	+0.3
KMNR	**Kamenistaya**	**2.78**	**330**	*e*P	Sn	04 04 11.3	+2.9
KMNR				*e*S	Sn	04 04 44.0	+3.4
KBTR	**Krutoberegovo**	**2.83**	**1**	P	Sn	04 04 08.2	-0.8
ZLN	**Zelenaya**	**2.86**	**338**	P	Pn	04 04 11.7	+2.2
ZLN				*i* S	Sn	04 04 44.5	+1.9
GNL	**Ganaly**	**2.87**	**278**	*e*P	Pn	04 04 12.8	+3.2
GNL				*e*S	Sn	04 04 45.9	+3.1
KPT	**Kopyto**	**2.96**	**332**	P	Pn	04 04 13.5	+2.6

*NEIC **20** 04:22:36.3, 3276S×7175W, h29km, ML3.1(GUC), After GUC.*
GUC 20 04:22:36.3±0.7, 3276S×7175W, h29km±6km, MD3.8, ML3.1, 7C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.28**	**160**	⇓ *i*P	Pb	04 22 43.2	-0.2
IHA				*i* S	Sb	04 22 48.7	+0.5
PEL	**Peldehue**	**0.97**	**113**	⇓ *i*P	Pn	04 22 53.9	-0.1
PEL				*i* S	Sn	04 23 07.3	+0.4
PEL				AML	AML	04 23 10.2	
	comp=E,2μm,0.3s						
JACH	**Jahuel**	**0.98**	**86**	*e*P	Pn	04 22 53.6	-0.5
TACH	**Talagante**	**1.12**	**143**	⇑ *i*P	Pn	04 22 56.2	+0.2
TACH				*i* S	Sn	04 23 11.0	+0.5
SAN	**Santiago**	**1.15**	**127**	*e*P	Pn	04 22 56.3	0.0
SAN				*i* S	Sn	04 23 11.5	+0.4
CLCH	**Cerro Calan**	**1.20**	**122**	⇑ *i*P	Pn	04 22 57.4	+0.3
CLCH				*i* S	Sn	04 23 13.2	+0.8
CLCH				AML	AML	04 23 17.8	
	comp=E,508nm,0.4s						
LNV	**Longovilo**	**1.22**	**167**	⇑ *i*P	Pn	04 22 57.4	0.0
LNV				*i* S	Sn	04 23 13.4	+0.4
ANTU	**Antumapu**	**1.24**	**131**	*e*P	Pn	04 22 58.1	+0.6
ANTU				*i* S	Sn	04 23 14.5	+1.2
ANTU	**Antumapu**	**1.24**	**131**	*e*P	Pn	04 22 58.1	+0.6
ANTU				*i* S	Sn	04 23 14.5	+1.2
ANTU				AML	AML	04 23 20.6	
	comp=E,575nm,0.4s						
PCH	**Pirque**	**1.35**	**130**	⇓ *i*P	Pn	04 23 00.1	+1.0
PCH				*i* S	Sn	04 23 17.9	+1.9
FCH	**Farellones**	**1.35**	**115**	⇑ *i*P	Pn	04 22 59.9	+0.7
FCH				*i* S	Sn	04 23 18.1	+2.0
FCH				AML	AML	04 23 18.7	
	comp=N,1μm,0.3s						
SJCH	**San Jose de Ma**	**1.46**	**127**	*e*P	Pn	04 23 02.4	+1.7
SJCH				*i* S	Sn	04 23 21.8	+2.9
SJCH	**San Jose de Ma**	**1.46**	**127**	*e*P	Pn	04 23 02.4	+1.7
SJCH				*i* S	Sn	04 23 21.8	+2.9
SJCH				AML	AML	04 23 26.2	
	comp=E,199nm,0.4s						
CACH	**El Canelo**	**1.66**	**145**	⇑ *i*P	Pn	04 23 05.6	+2.2
YECH	**El Yeso**	**1.66**	**123**	*e*P	Pn	04 23 05.3	+1.9
YECH				*e*S	Sn	04 23 27.1	+3.3
YECH				AML	AML	04 23 32.8	
	comp=N,252nm,0.5s						
LMEL	**Las Melosas**	**1.69**	**130**	⇑ *i*P	Pn	04 23 05.8	+2.0
LMEL				*i* S	Sn	04 23 27.8	+3.3
LMEL	**Las Melosas**	**1.69**	**130**	⇑ *i*P	Pn	04 23 05.8	+2.0
LMEL				*i* S	Sn	04 23 27.8	+3.3
LMEL				AML	AML	04 23 31.8	
	comp=N,615nm,0.3s						

*NEIC **20** 04:26:12.4, 3246S×7164W, h43km, MD3.8(GUC), After GUC.*
GUC 20 04:26:12.4±0.8, 3246S×7164W, h43km±5km, MD3.8, ML3.0, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEL	**Peldehue**	**1.05**	**130**	⇑ *i*P	Pn	04 26 31.8	+1.1
PEL				*i* S	Sn	04 26 45.9	+1.7
PEL				AML	AML	04 26 48.3	
	comp=E,1μm,0.3s						
CLCH	**Cerro Calan**	**1.31**	**135**	*e*P	Pn	04 26 35.2	+1.0
CLCH				*i* S	Sn	04 26 52.7	+2.1
CLCH				AML	AML	04 26 55.8	
	comp=E,367nm,0.6s						
ANTU	**Antumapu**	**1.39**	**143**	*e*P	Pn	04 26 36.1	+0.8
ANTU				*i* S	Sn	04 26 54.0	+1.5
ANTU	**Antumapu**	**1.39**	**143**	*e*P	Pn	04 26 36.1	+0.8
ANTU				*i* S	Sn	04 26 54.0	+1.5
ANTU				AML	AML	04 26 56.6	
	comp=N,301nm,0.4s						
FCH	**Farellones**	**1.43**	**127**	⇓ *i*P	Pn	04 26 37.8	+2.0
FCH				*i* S	Sn	04 26 56.2	+2.9
FCH				AML	AML	04 26 56.6	
	comp=N,288nm,0.4s						
CHCH	**Chadas Angostu**	**1.68**	**151**	*i* S	Sn	04 27 01.6	+1.9
LMEL	**Las Melosas**	**1.83**	**139**	*e*P	Pn	04 26 43.8	+2.4
LMEL				*i* S	Sn	04 27 07.4	+4.0
LMEL	**Las Melosas**	**1.83**	**139**	*e*P	Pn	04 26 43.8	+2.4
LMEL				*i* S	Sn	04 27 07.4	+4.0
LMEL				AML	AML	04 27 10.2	
	comp=N,313nm,0.3s						
CACH	**El Canelo**	**1.87**	**152**	*e*P	Pn	04 26 43.8	+1.9
CACH				*i* S	Sn	04 27 07.2	+3.1

GUC 20 04:28:17.7±0.9, 2298S×7016W, h33km±11km, ML2.6, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.30**	**245**	⇓ *i*P	Pb	04 28 25.2	-0.2
MECH				AML	AML	04 28 38.5	
	comp=N,789nm,0.7s						
CEN1	**Los Morros**	**0.41**	**186**	⇓ *i*P	Pb	04 28 29.1	+2.1
CEN1				*i* S	Sb	04 28 38.1	+4.8
CEN1				AML	AML	04 28 39.4	
	comp=N,296nm,0.4s						
ANCH	**Antofagasta**	**0.74**	**198**	⇓ *i*P	Pn	04 28 31.6	-0.1
ANCH				*i* S	Sn	04 28 41.1	-0.8
MACH	**Maria Elena**	**0.86**	**25**	*e*P	Pn	04 28 33.4	-0.1
MACH				*i* S	Sn	04 28 45.5	+0.6
TOCH	**Tocopilla**	**0.88**	**357**	⇑ *i*P	Pn	04 28 33.3	-0.5
TOCH				*i* S	Sn	04 28 45.3	-0.2
TOCH				AML	AML	04 28 48.6	
	comp=N,918nm,0.1s						
LVC	**Limon Verde**	**1.20**	**73**	⇑ *i*P	Pn	04 28 39.5	+1.3
LVC				*e*S	Sn	04 28 55.8	+2.4
LVC				AML	AML	04 28 59.1	
	comp=N,77nm,0.3s						

*IDC **20** 04:28:13.5±1.8, 620S×14754E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, ML3.4/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/30, Error ellipse: s-maj=40.1km s-min=17.7km az=102.0*
*ISCJB **20** 04:28:14.3±5.6, 6.13S±0.10×1478E±0.03, h23km±40km, mb4.0/6, Error ellipse: s-maj=43.7km s-min=15.7km az=174.8*
*NEIC **20** 04:28:17.2±2.9, 6.12S×14789E, h37km±24km, mb4.3/3, Error ellipse: s-maj=25.3km s-min=21.1km az=103.0*
ISC 20 04:28:17.4±3.9, 615S±009×1478E±02, h31km±30km, n13, σ0§61/12, mb4.0/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.28**	**190**	Pn	Pn	**04 29 07.2**	**+0.5**
	4.9nm,0.3s,baz=4.9,slow=7.6,SNR=12						
PMG				Sn	**Sn**	**04 29 44.7**	**-0.1**
	8.5nm,0.3s,baz=228,slow=19,SNR=10.0						
WRAB	**Tennant Creek**	**18.90**	**222**	*e*P	**Pn**	**04 32 36.1**	**-0.2**
	3.6nm,0.6s						
WB2	**Warramunga Arr**	**18.91**	**222**	*e*P	**Pn**	**04 32 35.7**	**-0.7**
WRA	**Warramunga Arr**	**18.91**	**222**	P	**Pn**	**04 32 35.8**	**-0.7**
	0.5nm,0.3s,baz=48,slow=11,SNR=29						
ASAR	**Alice Springs**	**21.92**	**216**	P	**P**	**04 33 08.7**	**+0.4**
	3.9nm,0.7s,mb4.0,baz=53,slow=9.4,SNR=51						
ASAR				S	**S**	**04 37 08.7**	**-0.2**
	0.8nm,0.8s,baz=32,slow=22,SNR=6.7						
FITZ	**Fitzroy Crossi**	**24.63**	**239**	*e*P	**P**	**04 33 36.5**	**+1.2**
	14nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**26.23**	**192**	P	**P**	**04 33 49.1**	**-0.5**
	1.5nm,0.6s,mb3.7,baz=4.3,slow=12,SNR=4.1						
KAPI	**Kappang**	**27.89**	**271**	P	**P**	**04 34 04.4**	**-0.4**
	3.0nm,0.6s,mb4.1,baz=90,slow=20,SNR=2.9						
MBWA	**Marbar**	**30.96**	**238**	*e*P	**P**	**04 34 32.9**	**+0.9**
	3.6nm,0.6s,mb4.4						
NWAO	**Narrogin (SRO)**	**38.92**	**223**	LR	LR	04 52 46.5	
	comp=Z,43nm,19.3s,baz=260,slow=38						
MKAR	**Makanchi Array**	**78.09**	**320**	P	**P**	**04 40 12.9**	**-0.4**
	0.1nm,0.4s,mb3.1,baz=116,slow=7.0,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**145.85**	**284**	*e*PKPbc	PKPbc	04 47 54.5	-0.2
TORD	**Torodi Ar. Bea**	**145.85**	**284**	PKPbc	PKPbc	04 47 53.9	-0.8
	0.3nm,0.5s,baz=63,slow=3.5,SNR=19						

NEIC 20 04:35:12.3, 3977S×17961W, h12km, ML4.4(WEL), **After WEL., East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**2.23**	**289**	P	Pn	04 35 47.9	-1.2
KNZ				S	Sn	04 36 11.8	-4.8
PUZ	**Puketiti**	**2.38**	**315**	P	Pn	04 35 49.4	-1.6
PUZ				S	Sn	04 36 17.1	-3.0
MWZ	**Matawai**	**2.65**	**302**	P	Pn	04 35 53.9	-0.9
MWZ				S	Sn	04 36 24.9	-1.9
MXZ	**Matakaoa Point**	**2.74**	**323**	P	Pn	04 35 55.3	-0.8
URZ	**Urewera**	**2.97**	**300**	P	Pn	04 35 59.2	0.0
BKZ	**Black Stump Fm**	**3.08**	**280**	P	Pn	04 35 59.9	-0.8
BKZ				S	Sn	04 36 34.9	-2.5
EDRZ	**Edgecumbe**	**3.30**	**299**	P	Pn	04 36 03.9	+0.2
BFZ	**Birch Farm**	**3.30**	**253**	P	Pn	04 36 00.7	-3.1
TSZ	**Takapari Road**	**3.42**	**264**	P	Pn	04 36 03.9	-1.5
HATZ	**Hinemaiaia**	**3.45**	**283**	P	Pn	04 36 06.4	+0.6
MOVZ	**Moawhango**	**3.60**	**274**	P	Pn	04 36 07.9	0.0
RATZ	**Rangitukua**	**3.69**	**283**	P	Pn	04 36 09.5	+0.3
TUVZ	**Tukino**	**3.70**	**276**	P	Pn	04 36 10.1	+0.9
KATZ	**Kakaramea**	**3.72**	**281**	P	Pn	04 36 10.0	+0.4
WNVZ	**Wahianoa**	**3.73**	**275**	P	Pn	04 36 10.7	+1.0
NGZ	**Ngauruhoe**	**3.75**	**278**	P	Pn	04 36 10.1	+0.1
WATZ	**Wairara**	**3.77**	**285**	P	Pn	04 36 10.5	+0.3
WTVZ	**West Tongariro**	**3.77**	**278**	P	Pn	04 36 10.7	+0.4
MRZ	**Mangatainoka R**	**3.79**	**255**	P	Pn	04 36 07.5	-3.0
TWVZ	**Taurewa**	**3.90**	**279**	P	Pn	04 36 12.2	+0.2
MTW	**Mount Morrison**	**3.98**	**248**	P	Pn	04 36 08.9	-4.2
PAWZ	**Paruwai Farm**	**4.11**	**245**	P	Pn	04 36 10.3	-4.6
WAZ	**Wanganui**	**4.17**	**268**	P	Pn	04 36 17.6	+2.0
MSWZ	**Moikau Station**	**4.25**	**246**	P	Pn	04 36 12.0	-4.7
CAW	**Cannon Point**	**4.28**	**250**	P	Pn	04 36 13.3	-3.9
KIW	**Kapiti Island**	**4.33**	**254**	P	Pn	04 36 15.5	-2.4
VRZ	**Vera Road**	**4.41**	**277**	P	Pn	04 36 18.3	-0.7
HIZ	**Hauiti**	**4.48**	**284**	P	Pn	04 36 20.6	+0.6
WEL	**Wellington**	**4.54**	**249**	P	Pn	04 36 16.9	-3.9
MRW	**Makara Radio**	**4.58**	**250**	P	Pn	04 36 17.4	-3.9
SNZO	**South Karori**	**4.60**	**249**	P	Pn	04 36 17.5	-4.1
RAEZ	**Rainy Point**	**4.66**	**274**	P	Pn	04 36 24.4	+1.9
KUZ	**Kuaotunu**	**4.75**	**308**	P	Pn	04 36 22.8	-1.0
TCW	**Tory Channel**	**4.88**	**251**	P	Pn	04 36 21.8	-3.7
MKAZ	**Moumakai**	**4.88**	**301**	P	Pn	04 36 25.5	0.0
NEZ	**North Egmont**	**4.89**	**274**	P	Pn	04 36 27.9	+2.3
BSWZ	**Blackbirch Sta**	**5.32**	**246**	P	Pn	04 36 27.2	-4.2
NNZ	**Nelson**	**5.54**	**253**	P	Pn	04 36 31.3	-3.2
KHZ	**Kahutara**	**5.81**	**241**	P	Pn	04 36 32.3	-6.0
THZ	**Tophouse**	**6.02**	**248**	P	Pn	04 36 37.0	-4.1
QRZ	**Quartz Range**	**6.10**	**258**	P	Pn	04 36 39.4	-2.8
DSZ	**Denniston Nort**	**6.81**	**250**	P	Pn	04 36 47.6	-4.4
MQZ	**McQueen's Vall**	**7.00**	**233**	P	Pn	04 36 48.7	-5.8
RPZ	**Rata Peaks**	**8.02**	**238**	P	Pn	04 37 03.4	-5.1
LBZ	**Lake Benmore**	**8.88**	**235**	P	Pn	04 37 15.6	-4.7

*IDC **20** 04:38:46.1±0.5, 353N×12649E, h0km, mb4.4/15, mb1 4.6/15, mb1mx4.5/20, mbtmp4.4/15, MS3.5/3, Ms1 3.5/3, ms1mx3.1/27, Error ellipse: s-maj=32.0km s-min=11.1km az=70.0*
*MOS **20** 04:38:49.8±1.2, 354N×12645E, h33km, mb5.0/9, Error ellipse: s-maj=24.2km s-min=9.0km az=106.9*
*ISCJB **20** 04:38:50.8±3.3, 355N±007×1265E±0.1, h42km±30km, mb4.6/34, MS3.7/3, Error ellipse: s-maj=18.7km s-min=9.3km az=157.2*
*NEIC **20** 04:38:56.5±3.5, 349N×12642E, h81km±33km, mb4.7/11, Error ellipse: s-maj=18.0km s-min=7.8km az=70.0*
*BJI **20** 04:38:57.7, 403N×12634E, h80km, mB5.1, mb4.6*
ISC 20 04:38:52.4±2.6, 356N±006×1265E±01, h39km±24km, n58, σ0§94/54, mb4.6/33, MS3.7/3, 6C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.62**	**345**	LR	LR	04 41 27.7	
	comp=Z,462nm,20.3s,baz=181,slow=44						
GUMO	**Guam**	**20.66**	**60**	LR	LR	04 51 31.4	
	comp=Z,82nm,18.7s,MS3.1,baz=38,slow=37						
FITZ	**Fitzroy Crossi**	**21.54**	**182**	*e*P	**P**	**04 43 39.2**	**+0.8**
	8.2nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**24.57**	**162**	*e*P	**P**	**04 44 08.9**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**24.57**	**162**	*e*P	**P**	**04 44 08.9**	**0.0**
	comp=Z,30nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**24.58**	**162**	P	**P**	**04 44 08.3**	**-0.6**
	comp=Z,22nm,0.8s,mb4.8,baz=343,slow=10,SNR=122						
WRA				S	**S**	**04 48 29.7**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=338,slow=20,SNR=5.3						
WB2	**Warramunga Arr**	**24.58**	**162**	*e*P	**P**	**04 44 07.6**	**-1.3**
ASAR	**Alice Springs**	**27.99**	**165**	P	**P**	**04 44 39.0**	**-0.7**
	comp=Z,0.6nm,0.3s,mb3.7,baz=342,slow=7.8,SNR=13						
ASAR				PcP	PcP		
	comp=Z,0.8nm,0.5s,baz=340,slow=2.2,SNR=6.7						
WHN	**Wuhan**	**29.21**	**338**	⇑ P	**P**	**04 44 50.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.80**	**301**	P	**P**	**04 45 05.3**	**+0.6**
	comp=Z,1.2nm,0.3s,mb4.2,baz=110,slow=7.1,SNR=10						
CMAR	**Chiang Mai Arr**	**30.80**	**301**	⇑ *e*P	**P**	**04 45 06.4**	**+1.7**
KSRS	**Korea Array**	**33.76**	**2**	P	**P**	**04 45 29.9**	**-0.5**
	comp=Z,3.8nm,0.7s,mb4.5,baz=178,slow=9.2,SNR=12						
KSRS				LR	LR	05 00 32.8	
	comp=Z,168nm,18.0s,MS3.8,baz=315,slow=39						
FORT	**Forrest**	**34.17**	**178**	*e*P	**P**	**04 45 34.3**	**+0.2**
	comp=Z,9.4nm,0.8s,mb4.8						
BJT	**Baijiatuau**	**37.49**	**347**	*e*P	**P**	**04 46 02.3**	**-0.1**
BJT				pmax	pmax		
	comp=Z,34nm,0.9s						
BJT	**Baijiatuau**	**37.49**	**347**	*e*P	**P**	**04 46 02.3**	**-0.1**
	comp=Z,34nm,0.9s,mb5.2						
STKA	**Stephens Creek**	**38.03**	**159**	*e*P	**P**	**04 46 07.7**	**+0.6**
	comp=Z,3.9nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**38.03**	**159**	P	**P**	**04 46 07.4**	**+0.3**
	comp=Z,5.2nm,0.7s,mb4.4,baz=331,slow=8.5,SNR=18						
STKA				PcP	PcP	04 48 21.8	-0.3
	comp=Z,2.1nm,0.6s,baz=16,slow=1.7,SNR=3.4						
SHL	**Shillong**	**39.83**	**307**	⇓ *i*P	**P**	**04 46 22.5**	**+0.3**
MDJ	**Mudanjiang**	**40.98**	**3**	*e*P	**P**	**04 46 31.2**	**-0.3**
	comp=Z,9.2nm,0.9s,mb4.4						
RAMN	**Ramite**	**44.69**	**305**	*e*P	**P**	**04 47 01.8**	**-0.1**
	comp=Z,22nm,0.5s,mb5.2						
JIRN	**Jiri**	**45.32**	**306**	*e*P	**P**	**04 47 07.0**	**+0.1**
	comp=Z,6.1nm,0.5s,mb4.7						
HABR	**Khabarovsk**	**45.34**	**8**	P	**P**	**04 47 04.9**	**-1.7**
HABR				*e**PP	pP	04 47 14.6	-3.1
HABR				*e*S	**S**	**04 53 44.3**	**-0.4**
HABR				*e**SS	sS	04 54 00.9	-2.2
HABR				*e*		04 56 59.1	
HABR				*e*SSS		04 57 57.4	
HABR				MLR	MLR		
	comp=Z,150nm,15.0s,MS4.0						
GUN	**Gumba**	**45.67**	**306**	*e*P	**P**	**04 47 09.6**	**-0.1**
	comp=Z,6.3nm,0.4s,mb4.9						
KLR	**Kul'dur**	**45.72**	**5**	*e*P	**P**	**04 47 04.1**	**-5.6**
HIA	**Hailar**	**45.91**	**354**	⇑ *e*P	**P**	**04 47 13.3**	**+2.2**
HIA	**Hailar**	**45.91**	**354**	*e*P	**P**	**04 47 12.9**	**+1.7**
	comp=Z,9.4nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**47.22**	**342**	*i* P	**P**	**04 47 23.3**	**+1.8**
SONM	**Songino Array**	**47.40**	**342**	P	**P**	**04 47 22.4**	**-0.4**
	comp=Z,1.3nm,0.6s,mb4.1,baz=159,slow=8.3,SNR=12						
SONM				PcP	PcP	04 48 52.0	-1.0
	comp=Z,0.9nm,0.7s,baz=152,slow=2.1,SNR=4.3						
KOLN	**Koldanda**	**47.47**	**305**	*e*P	**P**	**04 47 24.0**	**+0.3**
	comp=Z,9.8nm,0.5s,mb5.0						
DANN	**Dangsing**	**47.56**	**306**	*e*P	**P**	**04 47 24.2**	**-0.2**
	comp=Z,1.6nm,0.5s,mb5.3						
HVS	**Khovu-Aksy**	**54.82**	**335**	*i* P	**P**	**04 48 20.2**	**+1.7**
PETK	**Petropavlovsk-**	**55.66**	**22**	P	**P**	**04 48 24.4**	**-0.1**
	comp=Z,7.1nm,0.7s,mb4.8,baz=207,slow=4.9,SNR=7.9						
PETK	**Petropavlovsk-**	**55.66**	**22**	P	**P**	**04 48 24.4**	**-0.1**
MKAR	**Makanchi Array**	**57.59**	**325**	P	**P**	**04 48 37.5**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.5,baz=122,slow=8.8,SNR=39						
YAK	**Yakutsk**	**58.39**	**2**	⇑ *e*P	**P**	**04 48 44.6**	**+1.0**
YAK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
TKM2	**Tokmak 2**	**59.75**	**319**	*e*P	**P**	**04 48 53.8**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TKM2	**Tokmak 2**	**59.75**	**319**	*e*P	**P**	**04 48 53.8**	**+0.3**
	comp=Z,5.4nm,0.9s,mb4.6						
ZALV	**Zalesovo Beam**	**60.66**	**333**	P	**P**	**04 48 58.3**	**-1.1**
	comp=Z,0.9nm,0.3s,mb4.3,baz=98,slow=6.4,SNR=4.6						
KURK	**Kurchatov**	**61.78**	**328**	P	**P**	**04 49 06.3**	**-0.8**
	comp=Z,5.5nm,0.6s,mb4.9,baz=130,slow=6.3,SNR=27						
KURK	**Kurchatov**	**61.78**	**328**	⇓ *e*P	**P**	**04 49 06.5**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
SEY	**Seymchan**	**62.24**	**13**	*i* P	**P**	**04 49 11.4**	**+1.4**
BVAR	**Borovoye Array**	**67.36**	**327**	P	**P**	**04 49 43.1**	**-0.4**
	comp=Z,5.6nm,0.9s,mb4.6,baz=120,slow=8.8,SNR=16						
BRVK	**Borovoye**	**67.43**	**327**	*e*P	**P**	**04 49 44.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
BRVK	**Borovoye**	**67.43**	**327**	*e*P	**P**	**04 49 44.3**	**+0.4**
	comp=Z,12nm,1.1s,mb4.8						
TIXI	**Tiksi**	**68.02**	**1**	⇑ *e*P	**P**	**04 49 46.4**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,14nm,2.6s,mb4.5						
ARU	**Arti**	**74.98**	**328**	*c i*P	**P**	**04 50 29.9**	**+0.3**
ARU				*e*		04 53 13.6	
ARU				S	S	05 00 04.6	+0.2
ARU				SS	SS	05 04 52.0	-1.4
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KDAK	**Kodiak Island**	**82.14**	**32**	P	**P**	**04 51 09.5**	**+0.6**
	comp=Z,6.6nm,0.8s,mb4.6,baz=315,slow=2.9,SNR=3.6						
KDAK	**Kodiak Island**	**82.14**	**32**	P	**P**	**04 51 09.5**	**+0.6**
COLD	**Coldfoot**	**84.12**	**23**	*e*P	**P**	**04 51 20.1**	**+1.1**
	comp=Z,2.9nm,0.9s,mb4.4						
MCK	**McKinley**	**84.40**	**26**	*e*P	**P**	**04 51 20.4**	**-0.1**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
MCK	**McKinley**	**84.40**	**26**	*e*P	**P**	**04 51 20.4**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.6						
BRTR	**Keskin Array B**	**89.98**	**310**	P	**P**	**04 51 45.2**	**-2.9**
	comp=Z,2.4nm,1.1s,mb4.5,baz=94,slow=3.6,SNR=5.4						
ARCES	**ARCESS Array B**	**90.55**	**340**	P	**P**	**04 51 48.8**	**-1.3**
	comp=Z,4.3nm,0.9s,mb4.8,baz=82,slow=9.1,SNR=5.4						
AKASG	**Malin Array Be**	**91.91**	**321**	P	**P**	**04 51 55.4**	**-1.4**
	comp=Z,0.5nm,0.5s,mb4.1,baz=80,slow=3.4,SNR=3.4						
YKA	**Yellowknife

PETK Petropavlovsk- 77.02 351 LR LR 06 28 39.5
comp=Z,52nm,19.1s,baz=322,slow=32
CMAR Chiang Mai Arr 82.26 294 P P 06 00 25.2 +1.2
0.9nm,0.6s,baz=143,slow=3.9,SNR=5.5
GERES GERESS Array B 149.12 331 PKPbc PKPbc 06 07 50.1 -0.5
0.2nm,0.3s,baz=24,slow=5.0,SNR=5.2
TORD Torodi Ar. Bea 166.19 225 PKP PKPdf 06 08 07.3 -1.1
0.8nm,0.9s,baz=163,slow=1.0,SNR=4.0

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*ISCJB **20** 05:56:12.2±0.5, 726S×008×155.15E±008, h28km, mb4.6/27, MS3.6/9, Error ellipse: s-maj=14.1km s-min=7.1km az=136.6*
*BJI **20** 05:56:12.9, 692S×155.46E, h34km, mB5.1, mb4.9*
*MOS **20** 05:56:13.9±1.0, 709S×154.96E, h33km, mb5.2/6, Error ellipse: s-maj=13.2km s-min=11.6km az=138.2*
*NEIC **20** 05:56:14.8±0.4, 7.11S×154.94E, mb4.9/12, Error ellipse: s-maj=13.7km s-min=8.8km az=134.0*
*IDC **20** 05:56:17.6±5.0, 727S×154.97E, h56km±43km, mb4.2/12, mb1 4.3/14, mb1mx4.2/18, mbtmp4.2/14, ML3.4/1, MS3.7/10, Ms1 3.7/10, ms1mx3.5/27, Error ellipse: s-maj=29.7km s-min=18.2km az=91.0*
ISC 20 05:56:13.9±0.5, 732S±008×155.23E±008, h30km, h30km±2.1km: pP-P, n55, σ1s12/49, mb4.6/27, MS3.6/9, 2C-2D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
HNR	**Honiara**	**5.12**	**115**	P			**Pn**	**05 57 36.0**	**+7.5**
PMG	**Port Moresby**	**8.25**	**255**	P			**Pn**	**05 58 12.9**	**+1.3**
	2.6nm,0.3s,baz=59,slow=10,SNR=9.5								
PMG				S			**Sn**	**05 59 46.2**	**+2.3**
	3.5nm,0.3s,baz=292,slow=16,SNR=7.1								
PMG	**Port Moresby**	**8.25**	**255**	*e*Pn			**Pn**	**05 58 11.7**	**0.0**
PMG				*e*Sn			**Sn**	**05 59 46.1**	**+2.2**
CTA	**Charters Tower**	**15.39**	**214**	P			**Pn**	**05 59 52.1**	**+3.1**
	baz=52,slow=15,SNR=2.8								
CTA				LR			LR	06 04 50.5	
	comp=Z,523nm,20.3s,baz=49,slow=34								
WRAB	**Tennant Creek**	**23.81**	**236**	P			**P**	**06 01 24.5**	**0.0**
WRAB				*e**PP				06 01 32.9	
WRAB				pmax			pmax		
	comp=Z,24nm,1.1s,mb4.5								
WRAB	**Tennant Creek**	**23.81**	**236**	P			**P**	**06 01 24.5**	**0.0**
	comp=Z,24nm,1.1s,mb4.5								
WRAB				*e*pP				06 01 32.9	
WB2	**Warramunga Arr**	**23.82**	**236**	*e*P			**P**	**06 01 22.5**	**-2.0**
WRA	**Warramunga Arr**	**23.83**	**236**	P			**P**	**06 01 22.7**	**-1.9**
	comp=Z,16nm,0.9s,mb4.4,baz=62,slow=9.6,SNR=55								
WRA				LR			LR	06 10 21.6	
	comp=Z,168nm,18.8s,MS3.5,baz=60,slow=36								
ASAR	**Alice Springs**	**26.13**	**229**	P			**P**	**06 01 44.0**	**-1.6**
	comp=Z,6.1nm,1.0s,mb4.1,baz=62,slow=8.9,SNR=39								
STKA	**Stephens Creek**	**27.54**	**206**	*e*P			**P**	**06 01 59.6**	**+1.5**
	comp=Z,4.7nm,0.8s,mb4.2								
STKA	**Stephens Creek**	**27.54**	**206**	P			**P**	**06 01 57.8**	**-0.3**
	comp=Z,7.3nm,0.9s,mb4.3,baz=24,slow=9.3,SNR=9.4								
STKA				LR			LR	06 12 35.4	
	comp=Z,352nm,19.5s,MS4.0,baz=27,slow=36								
FITZ	**Fitzroy Crossi**	**30.74**	**247**	*e*P			**P**	**06 02 25.1**	**-1.6**
	comp=Z,9.5nm,0.6s,mb4.8								
AFI	**Afiamalu**	**33.05**	**104**	LR			LR	06 13 28.5	
	comp=Z,121nm,19.8s,MS3.6,baz=295,slow=31								
FORT	**Forrest**	**34.51**	**224**	*e*P			**P**	**06 02 59.9**	**+0.3**
	comp=Z,14nm,0.9s,mb4.9								
FORT				*e*pP			pP	06 03 09.4	+1.1
CBIJ	**Chichi jima**	**36.48**	**340**	LR			LR	06 16 20.6	
	comp=Z,33nm,20.9s,MS3.1,baz=123,slow=33								
URZ	**Urewera**	**36.61**	**151**	LR			LR	06 14 31.1	
	comp=Z,66nm,20.1s,MS3.4,baz=236,slow=30								
MBWA	**Marble Bar**	**36.95**	**244**	*e*P			**P**	**06 03 18.7**	**-2.0**
	comp=Z,8.5nm,0.7s,mb4.7								
MBWA				*e*pP			pP	06 03 27.8	-1.7
WHN	**Wuhan**	**54.34**	**316**	↑P			**P**	**06 05 38.9**	**+1.0**
PPT	**Papeete**	**54.68**	**106**	LR			LR	06 24 23.3	
	comp=Z,109nm,19.9s,MS3.9,baz=268,slow=31								
KLR	**Kul'dur**	**59.95**	**342**	*e*P			**P**	**06 06 12.2**	**-5.0**
PETK	**Petropavlovsk-**	**60.23**	**2**	P			**P**	**06 06 19.5**	**+0.4**
	comp=Z,8.8nm,0.8s,mb4.8,baz=163,slow=8.4,SNR=9.4								
CMAR	**Chiang Mai Arr**	**61.14**	**296**	P			**P**	**06 06 26.2**	**+0.3**
	comp=Z,1.9nm,0.4s,mb4.6,baz=119,slow=5.2,SNR=14								
CMAR				LR			LR	06 31 48.1	
	comp=Z,30nm,19.2s,MS3.5,baz=247,slow=35								
CMAR	**Chiang Mai Arr**	**61.14**	**296**	*i* P			**P**	**06 06 28.0**	**+2.0**
CMAR				pmax			pmax		
	comp=Z,2.0nm,0.4s								
CD2	**Chengdu**	**62.20**	**311**	P			**P**	**06 06 33.1**	**+0.2**
CD2				AMB			AMB		
	comp=Z,30nm,1.0s,mb5.4								
HIA	**Hailar**	**64.32**	**335**↑	*e*P			**P**	**06 06 45.8**	**-0.7**
LZH	**Lanzhou**	**64.71**	**316**	*e*P			**P**	**06 06 50.3**	**+0.9**
LZH				AP			pP	06 06 56.5	-2.2
LZH				XP			sP	06 06 59.3	-2.9
LZH				AMB			AMB		
	comp=Z,19nm,1.5s,mb4.9								
LZH				AMB			AMB		
	comp=Z,89nm,4.7s								
GTA	**Gaotai**	**69.14**	**317**	*e*P			**P**	**06 07 18.5**	**+1.0**
GTA				AP			pP	06 07 27.6	+0.7
GTA				XP			sP	06 07 32.3	+1.9
GTA				AMB			AMB		
	comp=Z,6.0nm,1.0s,mb4.5								
ULN	**Ulaanbaatar**	**69.40**	**328**↓	*e*P			**P**	**06 07 19.4**	**+0.4**
SONM	**Songino Array**	**69.74**	**327**	P			**P**	**06 07 21.1**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=135,slow=6.2,SNR=19								
VNDA	**Vanda**	**70.25**	**178**	P			**P**	**06 07 26.4**	**+2.6**
	comp=Z,1.2nm,0.9s,mb3.8,baz=0.0,slow=4.0,SNR=3.3								
VNDA				LR			LR	06 32 33.8	
	comp=Z,43nm,18.1s,MS3.8,baz=60,slow=31								
VNDA	**Vanda**	**70.25**	**178**	P			**P**	**06 07 26.4**	**+2.6**
VNDA				LR			LR	06 32 33.8	
BILL	**Bilibino**	**75.59**	**4**↓	*e*P			**P**	**06 07 56.1**	**+0.7**
BILL				*e*				06 10 48.2	
BILL				pmax			pmax		
	comp=Z,13nm,1.1s,mb4.8								
BILL	**Bilibino**	**75.59**	**4**	*e*P			**P**	**06 07 55.7**	**+0.3**
	comp=Z,14nm,1.1s,mb4.8								
RC01	**Rabbit Creek A**	**80.47**	**24**	*e*P			**P**	**06 08 22.5**	**-0.1**
	comp=Z,6.0nm,0.4s,mb4.9								
TIXI	**Tiksi**	**80.71**	**352**	*i* P			**P**	**06 08 24.0**	**+0.3**
TIXI				pmax			pmax		
	comp=Z,2.0nm,1.1s,mb4.0								
MCK	**McKinley**	**82.27**	**22**	*e*P			**P**	**06 08 31.5**	**-0.6**
MCK				pmax			pmax		
	comp=Z,26nm,0.9s,mb5.2								
MCK	**McKinley**	**82.27**	**22**	*e*P			**P**	**06 08 31.5**	**-0.6**
	comp=Z,26nm,0.9s,mb5.2								
COLA	**College**	**83.30**	**21**	*e*P			**P**	**06 08 36.8**	**-0.7**
COLA				pmax			pmax		
	comp=Z,16nm,0.9s,mb5.0								
COLA	**College**	**83.30**	**21**	*e*P			**P**	**06 08 36.8**	**-0.7**
	comp=Z,16nm,0.9s,mb5.0								
MK31	**Makanchi Array**	**83.80**	**319**	*e*P			**P**	**06 08 40.3**	**-0.1**
MKAR	**Makanchi Array**	**83.80**	**319**	P			**P**	**06 08 40.0**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.5,baz=110,slow=5.4,SNR=28								
ZALV	**Zalesovo Beam**	**84.58**	**326**	P			**P**	**06 08 42.6**	**-1.6**
	comp=Z,1.0nm,0.4s,mb4.3,baz=123,slow=5.5,SNR=4.5								
EGAK	**Eagle**	**85.73**	**23**	*e*P			**P**	**06 08 50.1**	**+0.4**
	comp=Z,13nm,1.3s,mb5.0								
EGAK				*e*pP			pP	06 08 59.3	0.0
KURK	**Kurchatov**	**87.23**	**322**	*e*P			**P**	**06 08 56.3**	**-1.1**
KURK				pmax			pmax		
	comp=Z,5.0nm,0.5s,mb5.0								
KURK	**Kurchatov**	**87.23**	**322**	*e*P			**P**	**06 08 56.3**	**-1.1**
	comp=Z,4.9nm,0.5s,mb5.0								
AAK	**Ala-Archa**	**88.14**	**313**	*i* P			**P**	**06 09 02.1**	**+0.1**
INK	**Inuvik**	**89.94**	**21**	*e*P			**P**	**06 09 09.9**	**0.0**
INK				pmax			pmax		
	comp=Z,11nm,1.1s								
INK	**Inuvik**	**89.94**	**21**	*e*P			**P**	**06 09 09.9**	**0.0**
	comp=Z,11nm,1.1s,mb5.1								
NVAR	**Mina Array Bea**	**91.74**	**52**	P			**P**	**06 09 21.0**	**+2.1**
	comp=Z,1.4nm,0.8s,mb4.3,baz=249,slow=5.9,SNR=7.7								
YKA	**Yellowknife Ar**	**96.52**	**28**	P			**P**	**06 09 39.8**	**-0.5**
	comp=Z,1.4nm,0.7s,mb4.5,baz=265,slow=4.6,SNR=27								
PDAR	**Pinedale Array**	**98.74**	**48**	P			**P**	**06 09 50.6**	**-0.2**
	comp=Z,0.1nm,0.4s,mb3.7,baz=65,slow=28,SNR=3.5								
PDAR				LR			LR	06 51 05.5	
	comp=Z,60nm,19.3s,MS4.1,baz=158,slow=33								
MAK	**Makhachkala**	**107.92**	**313**	*e*P			Pdif	06 10 34.1	+2.8
MAK				*e*PPP				06 17 15.2	
MAK				*e*				06 21 49.6	
MAK				*e*SS			SS	06 30 22.8	+11
MAK				pmax			pmax		
	comp=Z,229nm,1.4s								
TAM	**Tamanrasset**	**147.06**	**301**	*e*PKP2			PKPab	06 15 56.7	+0.4
BDFB	**Brasilia**	**147.58**	**135**	PKPbc			PKPbc	06 15 57.1	+0.8
	comp=Z,2.6nm,0.8s,baz=265,slow=21,SNR=3.7								
TORD	**Torodi Ar. Bea**	**153.34**	**285**	PKP			PKPdf	06 16 03.4	+0.7
	comp=Z,0.8nm,1.0s,baz=40,slow=1.9,SNR=3.4								
TORD				PKPbc			PKPbc	06 16 09.4	-0.8
	comp=Z,3.0nm,0.9s,baz=49,slow=1.6,SNR=12								

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*NEIC **20** 05:57:19.2, 1639N×9824W, h5km, MD3.7(MEX), After MEX.*
MEX 20 05:57:18.8±0.6, 1635N×9823W, h10km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
PNIG	**Pinotepa**	**0.11**	**66**	*i* P			Pg	05 57 20.6	-0.9
PNIG				*i* S			Sg	05 57 23.0	-0.4
PNIG	**Pinotepa**	**0.11**	**66**	*i* P			Pg	05 57 20.4	-1.1
PNIG				*i* S			Sg	05 57 23.4	0.0
UTMO	**Huajuapan**	**1.53**	**15**	*i* P			Pn	05 57 42.8	-3.4
UTMO				*i* S			Sn	05 58 01.8	-4.4
VHO	**Vista Hermosa**	**1.60**	**63**	*i* P			Pn	05 57 43.9	-3.3
VHO				*i* S			Sn	05 58 03.4	-4.6
VHO	**Vista Hermosa**	**1.60**	**63**	*i* P			Pn	05 57 45.1	-2.1
VHO				*i* S			Sn	05 58 05.7	-2.3
ACX	**Acapulco**	**1.70**	**288**	*i* P			Pn	05 57 45.3	-3.2
ACX				*i* S			Sn	05 58 06.0	-4.4
ACX	**Acapulco**	**1.70**	**288**	*i* P			Pn	05 57 45.3	-3.2
ACX				*i* S			Sn	05 58 06.8	-3.6
CAIG	**El Cayaco**	**2.08**	**290**	*i* P			Pn	05 57 51.0	-2.6
CAIG				*i* S			Sn	05 58 14.2	-5.4
CAIG	**El Cayaco**	**2.08**	**290**	*i* P			Pn	05 57 52.5	-1.2
CAIG				*i* S			Sn	05 58 16.8	-2.9
HUIG	**Huatulco**	**2.12**	**105**	*i* P			Pn	05 57 51.8	-2.5
HUIG				*i* S			Sn	05 58 15.2	-5.5
HUIG	**Huatulco**	**2.12**	**105**	*i* P			Pn	05 57 51.8	-2.5
HUIG				*i* S			Sn	05 58 18.8	-1.9
TPIG	**Tehuac#an**	**2.22**	**22**	*i* P			Pn	05 57 53.9	-1.9
TPIG				*i* S			Sn	05 58 18.1	-5.1
PPM	**Popocatepetl**	**2.73**	**352**	*i* P			Pn	05 58 00.3	-2.4
PPM				*i* S			Sn	05 58 32.6	-3.3
PPM	**Popocatepetl**	**2.73**	**352**	*i* P			Pn	05 58 01.3	-1.4
PPM				*i* S			Sn	05 58 35.1	-0.7
CMIG	**Matias Romero**	**3.29**	**77**	*i* P			Pn	05 58 08.3	-2.1
CMIG				*i* S			Sn	05 58 48.1	-1.5

IDC 20 06:05:35.5±26.0, 2350S×17334W, h0km, mb4.3/4, mb1 4.5/4, mb1mx4.0/15, mbtmp4.3/4, MS3.3/2, Ms1 3.3/2, ms1mx2.8/22, Error ellipse: s-maj=479.4km s-min=138.3km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
CTA	**Charters Tower**	**37.59**	**267**	*e*P			P	06 12 52.3	+0.3
	4.5nm,0.3s								
CTA	**Charters Tower**	**37.59**	**267**	P			P	06 12 52.2	+0.2
	7.3nm,0.5s,baz=92,slow=11,SNR=14								
PMG	**Port Moresby**	**40.24**	**284**	LR			LR	06 27 29.4	
	comp=Z,12nm,18.7s,baz=238,slow=33								
STKA	**Stephens Creek**	**40.53**	**248**	*e*P			P	06 13 16.4	-0.2
	0.7nm,0.3s								
STKA	**Stephens Creek**	**40.53**	**248**	P			P	06 13 16.6	0.0
	1.0nm,0.3s,baz=83,slow=9.5,SNR=8.9								
ASAR	**Alice Springs**	**48.11**	**259**	P			P	06 14 17.2	-0.1
	0.7nm,0.3s,baz=103,slow=7.8,SNR=18								
WB2	**Warramunga Arr**	**48.51**	**264**	*e*P			P	06 14 20.2	-0.3
WRA	**Warramunga Arr**	**48.52**	**264**	P			P	06 14 20.3	-0.3
	3.2nm,0.5s,baz=103,slow=8.0,SNR=42								
FITZ	**Fitzroy Crossi**	**56.94**	**263**	*e*P			P	06 15 25.4	+2.4
	3.2nm,0.7s								
TXAR	**Lajitas Array**	**85.11**	**55**	LR			LR	06 48 18.9	
	comp=Z,38nm,19.2s,baz=0.0,slow=30								

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*NEIC **20** 06:11:49.2, 1634N×9824W, h9km, MD3.8(MEX), After MEX.*
MEX 20 06:11:48.8±0.9, 1633N×9825W, h9km±4km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
PNIG	**Pinotepa**	**0.13**	**61**	*e*P			Pg	06 11 51.0	-0.8
PNIG				*i* S			Sg	06 11 53.8	-0.1
UTMO	**Huajuapan**	**1.56**	**16**	*i* P			Pn	06 12 13.7	-2.9
UTMO				*i* S			Sn	06 12 32.1	-4.9
VHO	**Vista Hermosa**	**1.63**	**63**	*i* P			Pn	06 12 15.3	-2.4
VHO				*i* S			Sn	06 12 34.5	-4.3
VHO	**Vista Hermosa**	**1.63**	**63**	*i* P			Pn	06 12 15.3	-2.4
VHO				*i* S			Sn	06 12 35.7	-3.1
CAIG	**El Cayaco**	**2.06**	**291**	*e*P			Pn	06 12 21.0	-2.6
CAIG				*i* S			Sn	06 12 44.7	-4.8
CAIG	**El Cayaco**	**2.06**	**291**	*e*P			Pn	06 12 22.9	-0.8
CAIG				*i* S			Sn	06 12 47.5	-2.0
HUIG	**Huatulco**	**2.13**	**105**	*i* P			Pn	06 12 20.4	-4.2
HUIG				*i* S			Sn	06 12 47.3	-3.9
PPM	**Popocatepetl**	**2.75**	**353**	*i* P			Pn	06 12 33.7	+0.7
PPM				*i* S			Sn	06 13 06.2	-0.2
CMIG	**Matias Romero**	**3.31**	**76**	*i* P			Pn	06 12 37.2	-3.6
CMIG				*i* S			Sn	06 13 16.0	-4.3
ZIIG	**Zihuatanejo**	**3.33**	**293**	*i* P			Pn	06 12 37.0	-4.1
ZIIG				*i* S			Sn	06 13 14.5	-6.3
ZIIG	**Zihuatanejo**	**3.33**	**293**	*i* P			Pn	06 12 37.0	-4.1
ZIIG				*i* S			Sn	06 13 19.0	-1.8

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*IDC **20** 06:12:14.1±1.8, 288S×12794E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/24, Error ellipse: s-maj=157.7km s-min=23.5km az=67.0*
*ISCJB **20** 06:12:16.6±1.1, 28S±01×1282E±02, h33km, mb3.5/3, Error ellipse: s-maj=27.7km s-min=13.8km az=145.4*
*NEIC **20** 06:12:20.1±0.7, 285S×12820E, h55km, mb3.3/1, Error ellipse: s-maj=21.6km s-min=11.1km az=65.0*
ISC 20 06:12:19.4±1.1, 30S±01×12799E±009, h35km, n9, σ0s61/9, mb3.5/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
KAPI	**Kappang**	**8.46**	**256**	LR			LR	06 18 21.8	
	comp=Z,40nm,19.1s,baz=241,slow=44								
KAPI	**Kappang**	**8.46**	**256**	*e*Pn			**Pn**	**06 14 23.2**	**+3.6**
KAPI				*e*Sn			**Sn**	**06 15 53.2**	**-0.7**
WRAB	**Tennant Creek**	**17.98**	**160**	*e*Pn			**Pn**	**06 16 26.6**	**0.0**
	1.2nm,0.5s								
WRA	**Warramunga Arr**	**17.98**	**160**	P			**Pn**	**06 16 26.5**	**-0.2**
	0.3nm,0.3s,baz=339,slow=12,SNR=12								
ASAR	**Alice Springs**	**21.36**	**165**	P			**P**	**06 17 03.8**	**0.0**
	1.5nm,0.4s,mb3.7,baz=343,slow=12,SNR=27								
MKAR	**Makanchi Array**	**63.77**	**327**	P			**P**	**06 22 47.4**	**-0.4**
	0.5nm,0.8s,mb3.6,baz=107,slow=7.7,SNR=3.6								
MKAR	**Makanchi Array**	**63.77**	**327**	P			**P**	**06 22 47.4**	**-0.4**
KURK	**Kurchatov**	**68.05**	**329**	P			**P**	**06 23 15.3**	**+0.1**
	0.1nm,0.2s,mb3.4,baz=138,slow=5.7,SNR=3.5								
KURK	**Kurchatov**	**68.05**	**329**	P			**P**	**06 23 15.3**	**+0.1**

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*ISCJB **20** 06:12:57.3±0.6, 1721S±006×7033W±008, h107km±7km, mb4.6/25, Error ellipse: s-maj=15.1km s-min=7.2km az=144.1*
*NEIC **20** 06:12:58.9±0.3, 1728S×7037W, mb4.9/12, Error ellipse: s-maj=10.2km s-min=5.7km az=60.0*
NEIC Felt [III] at Moquegua.
*BJI **20** 06:12:58.9, 1730S×7040W, h110km, mB5.1*
*IDC **20** 06:12:59.4±0.8, 1725S×7033W, h109km±4km, mb4.2/14, mb1 4.2/18, mb1mx4.1/24, mbtmp4.1/18, MS3.1/1, Ms1 3.1/1, ms1mx2.2/28, Error ellipse: s-maj=24.3km s-min=12.9km az=40.0*
ISC 20 06:12:58.4±0.6, 1724S±006×7032W±008, h100km±7km, h112km±1.2km: pP-P, n58, σ0s64/46, mb4.6/25, 1C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
ARE	**Arequipa**	**1.36**	**304**↑	*i* P			**Pn**	**06 13 23.7**	**+0.8**
ARE				*i* S			**Sn**	**06 13 41.5**	**0.0**
LVC	**Limon Verde**	**5.51**	**166**	P			**Pn**	**06 14 18.0**	**-0.1**
	3.0nm,0.3s,baz=326,slow=8.1,SNR=58								
LVC				S			**Sn**	**06 15 15.4**	**-4.7**
	10nm,0.3s,baz=164,slow=19,SNR=25								
LVC	**Limon Verde**	**5.51**	**166**	*e*Pn			**Pn**	**06 14 17.6**	**-0.4**
	42nm,0.6s								
LVC				*e*Sn			**Sn**	**06 15 14.9**	**-5.2**
NNA	**Nana**	**8.19**	**309**	P			**Pn**	**06 14 53.6**	**-0.9**
	1.3nm,0.3s,baz=159,slow=17,SNR=4.7								
NNA				S			**Sn**	**06 16 20.6**	**-4.8**
	2.3nm,0.3s,baz=230,slow=18,SNR=2.7								
NNA	**Nana**	**8.19**	**309**	*e*Pn			**Pn**	**06 14 53.1**	**-1.4**
NNA				*e*Sn			**Sn**	**06 16 20.4**	**-5.1**
SIV	**San Ignacio**	**8.95**	**83**	P			**Pn**	**06 15 04.9**	**+0.1**
	14nm,0.3s,baz=267,slow=12,SNR=190								
LCO	**Las Campanas**	**11.73**	**182**	*e*Pn			**Pn**	**06 15 43.0**	**+0.6**
CFAA	**Coronel Fontan**	**14.43**	**173**	P			**Pn**	**06 16 17.8**	**-0.1**
	0.0nm,0.3s,baz=353,slow=12,SNR=14								
CPUP	**Villa Florida**	**15.07**	**129**	P			**Pn**	**06 16 24.6**	**-1.5**
	0.5nm,0.3s,baz=225,slow=4.1,SNR=4.3								
OTAV	**Otavalo**	**19.12**	**334**	P			**Pn**	**06 17 17.1**	**+1.5**
	4.9nm,0.6s								
BDFB	**Brasilia**	**21.45**	**89**	P			**P**	**06 17 39.5**	**+0.6**
	3.6nm,0.5s,mb4.0,baz=248,slow=16,SNR=15								
TRQA	**Tornquist**	**22.00**	**162**	*e*P			**P**	**06 17 44.4**	**0.0**
	7.3nm,1.0s,mb4.0								
SDV	**Santo Domingo**	**25.96**	**359**	P			**P**	**06 18 21.1**	**-0.6**
	2.7nm,0.5s,mb4.0,baz=345,slow=1.0,SNR=6.6								
SDV				LR			LR	06 29 54.2	
	comp=Z,35nm,18.3s,baz=221,slow=39								
PCRV	**Puerto La Cruz**	**27.81**	**12**	P			**P**	**06 18 38.9**	**+0.5**
	3.9nm,0.4s,mb4.3,baz=326,slow=3.7,SNR=8.3								
TKL	**Tuckaleechee C**	**54.13**	**346**	P			**P**	**06 22 12.7**	**-0.4**
	7.8nm,0.8s,mb4.8,baz=153,slow=8.9,SNR=8.6								
SWET	**Sewanee**	**54.23**	**344**	*e*P			**P**	**06 22 13.5**	**-0.4**
WVT	**Waverly**	**55.60**	**343**	*e*P			**P**	**06 22 23.1**	**-0.7**
	9.3nm,0.6s,mb5.0								
TXAR	**Lajitas Array**	**56.39**	**325**	P			**P**	**06 22 30.2**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=151,slow=9.9,SNR=4.9								
TXAR				pP			pP	06 22 56.7	+2.8
	0.3nm,0.6s,baz=147,slow=7.8,SNR=3.4								
WCI	**Wyandotte Cave**	**57.17**	**345**	*e*P			**P**	**06 22 34.2**	**-0.7**
	18nm,0.6s,mb5.3								
SIUC	**Southern Illin**	**57.48**	**342**	*e*P			**P**	**06 22 36.8**	**-0.2**
	33nm,0.7s,mb5.5								
SIUC				*e*pP			pP	06 23 04.2	+2.8
FVM	**French Village**	**58.09**	**341**	*e*P			**P**	**06 22 40.9**	**-0.4**
	23nm,1.0s,mb5.2								
FVM				*e*pP			pP	06 23 09.0	+3.3
BLO	**Bloomington**	**58.12**	**345**	*e*P			**P**	**06 22 40.9**	**-0.6**
	16nm,0.7s,mb5.2								
SADO	**Sadowa**	**62.23**	**353**	P			**P**	**06 23 08.6**	**-0.8**
	3.4nm,0.4s,mb4.7,baz=296,slow=16,SNR=9.1								
EYMN	**Ely**	**67.60**	**345**	*e*P			**P**	**06 23 44.5**	**+0.3**
LIC	**Lamto**	**68.57**	**76**	*e*P			**P**	**06 23 50.8**	**-0.2**
	14nm,0.5s,mb5.0								
TIC	**Toumodi**	**68.72**	**76**	*e*P			**P**	**06 23 51.8**	**-0.2**
	8.3nm,0.2s,mb5.2								
KIC	**Kosan Boka**	**68.88**	**76**	*e*P			**P**	**06 23 53.0**	**0.0**
	79nm,0.6s,mb5.7								
DBIC	**Dimbokro**	**68.89**	**76**	P			**P**	**06 23 53.1**	**+0.1**
	16nm,0.5s,mb5.1,baz=226,slow=6.1,SNR=55								
DBIC	**Dimbokro**	**68.89**	**76**	*e*P			**P**	**06 23 53.0**	**0.0**
	13nm,0.6s,mb4.9								
AGMN	**Agassiz Refuge**	**69.11**	**342**	*e*P			**P**	**06 23 53.6**	**0.0**
	37nm,2.1s,mb4.8								
PDAR	**Pinedale Array**	**69.77**	**330**	P			**P**	**06 23 58.6**	**+0.8**
	0.5nm,0.6s,mb3.5,baz=127,slow=7.8,SNR=6.0								
ULM	**Lac du Bonnet**	**70.87**	**343**	P			**P**	**06 24 04.0**	**-0.3**
	3.8nm,0.3s,mb4.7,baz=153,slow=6.1,SNR=11								
ULM				pP			pP	06 24 31.8	+2.2
	5.6nm,0.5s,baz=148,slow=5.2,SNR=5.9								
ULM	**Lac du Bonnet**	**70.87**	**343**	*e*P			**P**	**06 24 04.0**	**-0.3**
	3.2nm,0.4s,mb4.5								
ULM				*e*pP			pP	06 24 31.9	+2.3
SCHQ	**Schefferville**	**71.84**	**2**	P			**P**	**06 24 09.9**	**-0.1**
	5.2nm,0.9s,mb4.3,baz=114,slow=2.3,SNR=4.2			

*IDC **20** 06:15:02.4±0.9, 47.11N×15560E, h0km, mb3.9/12, mb1 4.1/14, mb1mx3.9/27, mbtmp3.9/14, ML3.5/2, Error ellipse: s-maj=25.0km s-min=15.6km az=163.0*
*ISCJB **20** 06:15:04.6±4.9, 4700N±009×1556E±02, h29km±35km, mb3.9/13, Error ellipse: s-maj=20.6km s-min=11.3km az=38.2*
*MOS **20** 06:15:06.9±1.0, 4700N×15539E, h46km, mb4.2/7, Error ellipse: s-maj=23.4km s-min=16.8km az=89.5*

ISC 20 06:15:08.1±2.0, 470N±01×1556E±02, h42km±16km, n25, σ0s98/26, mb3.9/13, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.72**	**5**	*e*PN	**Pn**	**06 16 03.9**	**+1.0**
PETK	**Petropavlovsk-**	**6.28**	**12**	Pn	**Pn**	**06 16 33.4**	**-4.7**
	0.6nm,0.3s,baz=163,slow=16,SNR=7.5						
PETK				Sn	**Sn**	**06 17 48.7**	**+0.2**
	0.6nm,0.3s,baz=116,slow=15,SNR=3.6						
ASAJ	**Asahikawa**	**9.54**	**257**	Pn	**Pn**	**06 17 22.1**	**-0.6**
	0.7nm,0.3s,baz=104,slow=12,SNR=3.8						
ASAJ	**Asahikawa**	**9.54**	**257**	PN	**Pn**	**06 17 22.1**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KDAK	**Kodiak Island**	**32.65**	**51**	P	**P**	**06 21 33.4**	**-2.3**
	comp=Z,11nm,1.0s,mb4.7,baz=324,slow=8.7,SNR=3.3						
SONM	**Songino Array**	**32.83**	**290**	P	**P**	**06 21 36.9**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.4,baz=88,slow=6.4,SNR=3.2						
INK	**Inuvik**	**40.55**	**33**	P	**P**	**06 22 42.5**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.6,baz=306,slow=6.3,SNR=12						
INK	**Inuvik**	**40.55**	**33**	P	**P**	**06 22 42.6**	**-0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**43.83**	**306**	P	**P**	**06 23 07.6**	**-2.0**
	comp=Z,1.2nm,0.4s,mb4.0,baz=60,slow=9.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**43.83**	**306**	P	**P**	**06 23 07.6**	**-2.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**48.32**	**298**	P	**P**	**06 23 45.3**	**+0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=65,slow=8.6,SNR=8.9						
MKAR	**Makanchi Array**	**48.32**	**298**	P	**P**	**06 23 45.3**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**48.62**	**304**	P	**P**	**06 23 48.1**	**+0.7**
	comp=Z,5.0nm,0.6s,mb4.7,baz=67,slow=8.6,SNR=36						
KURK	**Kurchatov**	**48.62**	**304**	P	**P**	**06 23 48.1**	**+0.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
YKA	**Yellowknife Ar**	**49.72**	**37**	P	**P**	**06 23 55.0**	**-0.6**
	comp=Z,1.0nm,0.6s,mb4.0,baz=294,slow=7.1,SNR=18						
YKA	**Yellowknife Ar**	**49.72**	**37**	P	**P**	**06 23 55.0**	**-0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**52.00**	**310**	P	**P**	**06 24 12.9**	**+0.1**
	comp=Z,1.8nm,0.5s,mb4.3,baz=51,slow=8.3,SNR=10						
BVAR	**Borovoye Array**	**52.00**	**310**	P	**P**	**06 24 12.9**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PDAR	**Pinedale Array**	**63.24**	**55**	P	**P**	**06 25 32.3**	**+0.3**
	comp=Z,1.3nm,0.9s,mb4.1,baz=294,slow=1.5,SNR=6.9						
ASAR	**Alice Springs**	**72.99**	**201**	P	**P**	**06 26 34.5**	**+1.3**
	comp=Z,0.3nm,0.8s,mb3.3,baz=11,slow=5.2,SNR=3.4						
TXAR	**Lajitas Array**	**75.91**	**62**	P	**P**	**06 26 50.6**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=305,slow=5.1,SNR=11						
TXAR	**Lajitas Array**	**75.91**	**62**	P	**P**	**06 26 50.7**	**+0.4**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**78.96**	**335**	P	**P**	**06 27 07.6**	**+0.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=38,slow=6.8,SNR=4.1						
BRTR	**Keskin Array B**	**79.35**	**318**	P	**P**	**06 27 12.9**	**+3.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=60,slow=1.5,SNR=4.6						
BRTR	**Keskin Array B**	**79.35**	**318**	P	**P**	**06 27 12.9**	**+3.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*IDC **20** 06:16:06.8±2.9, 1326N×8899W, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.6/19, mbtmp3.5/4, ML3.6/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/20, Error ellipse: s-maj=95.8km s-min=48.2km az=36.0*
*NEIC **20** 06:16:11.9±1.0, 1269N×8964W, h49km±12km, mb4.4/2, Error ellipse: s-maj=17.4km s-min=8.3km az=214.0*
*ISCJB **20** 06:16:14.3±0.6, 1304N±007×8992W±005, h33km, mb3.6/2, MS3.2/2, Error ellipse: s-maj=11.8km s-min=4.3km az=30.3*
*CASC **20** 06:16:16.0±1.4, 1323N×8980W, h31km±3km, MD3.8, mb4.4(NEIC)*
*MEX **20** 06:16:22.3±0.5, 1306N×9044W, h82km±27km, MD4.6*

ISC 20 06:16:16.6±0.7, 1318N±009×8982W±006, h52km±12km, n52, σ1s12/48, mb3.6/2, MS3.2/2, 3C-10D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.68**	**17**	↓*i*P	x	06 16 28.9	
SNJE	**San Jose**	**0.71**	**17**	*e*P	x	06 16 29.2	
RTR	**El Retiro**	**0.73**	**14**	↓*i*P	x	06 16 29.7	
BOQS	**Boqueron**	**0.76**	**44**	↑*e*P	x	06 16 29.9	
BOQS				*e*S	x	06 16 40.9	
BOQS				*e*S	x	06 16 41.0	
SNET	**Serv Nac Est T**	**0.76**	**49**	↓*e*P	x	06 16 29.5	
LFRS	**El Faro**	**0.86**	**59**	↓*e*P	x	06 16 30.9	
RBDL	**Robledal**	**0.94**	**8**	↓*i*P	x	06 16 32.7	
LBRS	**Las Brisas**	**0.94**	**54**	*e*P	x	06 16 32.3	
LBRS				*e*S	x	06 16 46.1	
SNVI	**San Vicente**	**1.05**	**66**	↓*e*P	x	06 16 33.7	
SNVI				*e*S	x	06 16 47.9	
PCG	**Pacaya**	**1.43**	**328**	*e*P	**Pn**	**06 16 40.3**	**+0.2**
NBG	**Las Nubes**	**1.49**	**340**	↓*e*P	**Pn**	**06 16 42.1**	**+1.1**
VSM	**San Miguel**	**1.53**	**81**	↓*e*P	x	06 16 41.1	
BLLM	**Bellamira**	**1.56**	**80**	*e*P	x	06 16 41.3	
BLLM				*e*S	x	06 17 01.1	
FUG	**Fuego 3**	**1.60**	**322**	*e*P	**Pn**	**06 16 42.1**	**-0.5**
FUG				*e*S	**Sn**	**06 17 01.8**	**-0.3**
CAHU	**Cacacuatique**	**1.67**	**69**	↑*e*P	x	06 16 42.8	
FG6		**1.71**	**323**	*e*P	**Pn**	**06 16 43.7**	**-0.3**
FG6				*e*S	**Sn**	**06 17 04.4**	**-0.5**
CNCH	**Conchagua**	**1.94**	**87**	↑*e*P	x	06 16 46.2	
JAT	**Jato**	**2.09**	**303**	*e*P	**Pn**	**06 16 49.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.63**	**70**	*e*P	**Pn**	**06 16 55.3**	**-1.3**
TGUH	**Tegucigalpa,Un**	**2.63**	**70**	*e*Pn	**Pn**	**06 16 53.7**	**-2.9**
THIG		**2.93**	**306**	*e*P	**Pn**	**06 17 00.8**	**+0.1**
THIG				*i*S	**Sn**	**06 17 30.1**	**-4.5**
TEL3	**Telica 3**	**2.97**	**101**	*e*P	**Pn**	**06 17 01.2**	**0.0**
MIRN	**Miramar**	**3.12**	**103**	↓*e*P	**Pn**	**06 17 02.1**	**-1.3**
COPN	**Copaltepe**	**3.31**	**107**	↓*e*P	**Pn**	**06 17 06.2**	**+0.3**
CSAN		**3.46**	**106**	*e*P	**Pn**	**06 17 08.3**	**+0.3**
APYN	**Apoyeque**	**3.52**	**105**	*e*P	**Pn**	**06 17 08.7**	**-0.1**
CCIG	**Comitan**	**3.81**	**324**	*e*P	**Pn**	**06 17 14.7**	**+1.9**
CCIG				*i*S	**Sn**	**06 17 56.7**	**+0.3**
CCIG	**Comitan**	**3.81**	**324**	*e*P	**Pn**	**06 17 14.7**	**+1.9**
CCIG				*i*S	**Sn**	**06 17 57.1**	**+0.7**
PCIG		**4.14**	**308**	*e*P	**Pn**	**06 17 16.6**	**-0.7**
PCIG				*i*S	**Sn**	**06 18 00.1**	**-4.3**
TGIG		**4.79**	**319**	*e*P	**Pn**	**06 17 27.9**	**+1.7**
TGIG				*i*S	**Sn**	**06 18 19.1**	**-1.5**
CMIG	**Matias Romero**	**6.24**	**309**	Pn	**Pn**	**06 17 46.4**	**+0.2**
	1.1nm,0.3s,baz=98,slow=12,SNR=12						
CMIG				Sn	**Sn**	**06 18 52.6**	**-3.6**
	1.7nm,0.3s,baz=90,slow=5.1,SNR=5.2						
CMIG	**Matias Romero**	**6.24**	**309**	*e*P	**Pn**	**06 17 46.5**	**+0.3**
CMIG				*i*S	**Sn**	**06 18 52.5**	**-3.8**
CMIG	**Matias Romero**	**6.24**	**309**	*e*P	**Pn**	**06 17 46.5**	**+0.3**
CMIG				*i*S	**Sn**	**06 18 54.4**	**-1.9**
HUIG	**Huatulco**	**6.61**	**294**	*i*P	**Pn**	**06 17 52.0**	**+0.8**
HUIG				*i*S	**Sn**	**06 19 04.4**	**-0.8**
TEIG	**Tepich**	**7.16**	**12**	*i*P	**Pn**	**06 17 59.8**	**+1.0**
TEIG				*i*S	**Sn**	**06 19 27.8**	**+9.0**
TEIG	**Tepich**	**7.16**	**12**	*i*P	**Pn**	**06 17 59.6**	**+0.8**
VHO	**Vista Hermosa**	**7.71**	**301**	*e*P	**Pn**	**06 18 07.2**	**+0.9**
VHO				*i*S	**Sn**	**06 19 26.5**	**-5.9**
VHO	**Vista Hermosa**	**7.71**	**301**	*e*P	**Pn**	**06 18 07.8**	**+1.4**
VHO				*i*S	**Sn**	**06 19 39.5**	**+7.1**
UTMO	**Huajuapan**	**8.97**	**302**	*i*P	**Pn**	**06 18 22.1**	**-1.5**
UTMO				*i*S	**Sn**	**06 19 59.3**	**-4.0**
BCIP	**Isla Barro Col**	**10.58**	**111**	*e*Pn	**Pn**	**06 18 35.8**	**-10**
OTAV	**Otavalo**	**17.10**	**138**	*e*Pn	**Pn**	**06 20 03.0**	**-9.2**
	1.2nm,0.8s						
CHI2		**18.00**	**117**	*e*P	x	06 16 58.4	
TXAR	**Lajitas Array**	**20.58**	**324**	P	**P**	**06 20 53.7**	**+2.5**
	0.3nm,0.5s,baz=142,slow=10,SNR=8.7						
TXAR	**Lajitas Array**	**20.58**	**324**	P	**P**	**06 20 53.7**	**+2.5**
TKL	**Tuckaleechee C**	**23.04**	**13**	LR	LR	06 30 29.4	
	comp=Z,111nm,20.0s,MS3.3,baz=116,slow=38						
PCRV	**Puerto La Cruz**	**24.84**	**94**	LR	LR	06 31 19.7	
	comp=Z,77nm,20.6s,MS3.2,baz=12,slow=38						
NVAR	**Mina Array Bea**	**35.65**	**320**	P	**P**	**06 23 11.1**	**+1.4**
	0.8nm,0.7s,mb3.8,baz=122,slow=6.9,SNR=3.5						
LVC	**Limon Verde**	**41.05**	**150**	*e*P	**P**	**06 23 45.7**	**-10**
	42nm,0.3s						
YKA	**Yellowknife Ar**	**52.32**	**346**	P	**P**	**06 25 20.5**	**-2.3**
	0.5nm,0.8s,mb3.5,baz=145,slow=7.8,SNR=8.8						
WRA	**Warramunga Arr**	**137.24**	**255**	PKP	PKPdf	06 35 35.1	0.0
	0.2nm,0.6s,baz=86,slow=2.3,SNR=4.1						
WRA	**Warramunga Arr**	**137.24**	**255**	PKP	PKPdf	06 35 35.1	0.0
CMAR	**Chiang Mai Arr**	**147.40**	**344**	PKPbc	PKPbc	06 35 52.7	-2.9
	0.7nm,0.3s,baz=328,slow=3.2,SNR=5.8						

*ISCJB **20** 06:48:17.9±4.1, 504N±01×17888W±008, h27km±28km, mb4.0/13, Error ellipse: s-maj=22.6km s-min=8.7km az=175.7*
*IDC **20** 06:48:20.1±2.1, 5126N×179.17W, h0km, mb4.0/11, mb1 4.2/12, mb1mx3.9/27, mbtmp4.0/12, ML4.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/39, Error ellipse: s-maj=62.3km s-min=18.0km az=1.0*
*NEIC **20** 06:48:20.3±1.3, 5072N×179.00W, mb4.1/5, ML3.6(AEIC), Error ellipse: s-maj=32.7km s-min=11.6km az=175.0*

ISC 20 06:48:19.9±3.9, 504N±01×17881W±009, h29km±27km, n24, σ0s89/26, mb4.0/13, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**2.02**	**41**	P	**Pn**	**06 48 53.5**	**+1.6**
ADK				S	**Sn**	**06 49 16.6**	**+0.5**
FX1	**Attu Island--F**	**5.59**	**300**	Pn	**Pn**	**06 49 41.2**	**+0.2**
	2.9nm,0.3s,baz=162,slow=7.4,SNR=4.1						
FX1				Sn	**Sn**	**06 50 44.4**	**+0.2**
	3.2nm,0.3s,baz=108,slow=20,SNR=2.3						
FX1	**Attu Island--F**	**5.59**	**300**	Pn	**Pn**	**06 49 41.2**	**+0.2**
FX1				Sn	**Sn**	**06 50 44.4**	**+0.2**
PETK	**Petropavlovsk-**	**14.79**	**290**	LR	LR	06 55 42.2	
	comp=Z,38nm,18.8s,baz=188,slow=31						
KDAK	**Kodiak Island**	**17.00**	**54**	Pn	**Pn**	**06 52 13.5**	**-1.7**
	1.2nm,0.3s,baz=236,slow=2.7,SNR=21						
KDAK	**Kodiak Island**	**17.00**	**54**	*e*Pn	**Pn**	**06 52 14.3**	**-0.9**
SEW	**Seward**	**19.20**	**48**	*e*P	**Pn**	**06 52 40.3**	**-1.9**
	16nm,1.1s						
KTH	**Kantishna Hill**	**19.91**	**38**	*e*P	**Pn**	**06 52 49.6**	**-1.0**
	12nm,0.8s						
KTH				*e*pP	pP	06 52 53.8	-2.8
BPAW	**Bear Paw Mtn.**	**20.15**	**37**	*e*P	**P**	**06 52 52.0**	**+0.6**
	5.1nm,0.6s						
BPAW				*e*pP		06 52 56.1	
PAX	**Paxson**	**21.92**	**42**	*e*P	**P**	**06 53 10.8**	**+0.2**
	2.8nm,0.7s,mb3.8						
INK	**Inuvik**	**28.29**	**34**	P	**P**	**06 54 09.4**	**-0.9**
	0.8nm,0.7s,mb3.5,baz=264,slow=13,SNR=5.8						
YKA	**Yellowknife Ar**	**35.93**	**45**	P	**P**	**06 55 18.3**	**+1.1**
	1.1nm,0.5s,mb4.0,baz=284,slow=7.5,SNR=16						
YKA	**Yellowknife Ar**	**35.93**	**45**	P	**P**	**06 55 18.3**	**+1.1**
SAO	**San Andreas Ge**	**42.69**	**86**	*e*P	**P**	**06 56 15.4**	**+1.5**
	7.2nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**46.63**	**71**	P	**P**	**06 56 50.1**	**+4.8**
	2.9nm,0.9s,mb4.2,baz=308,slow=4.0,SNR=18						
SONM	**Songino Array**	**47.10**	**297**	P	**P**	**06 56 49.2**	**+0.3**
	0.7nm,0.7s,mb3.7,baz=52,slow=11,SNR=4.3						
TXAR	**Lajitas Array**	**58.82**	**81**	P	**P**	**06 58 20.5**	**+4.9**
	0.2nm,0.5s,mb3.4,baz=300,slow=4.5,SNR=3.5						
KURK	**Kurchatov**	**59.71**	**314**	P	**P**	**06 58 21.8**	**+0.4**
	2.3nm,0.7s,mb4.3,baz=44,slow=6.8,SNR=9.6						
MKAR	**Makanchi Array**	**60.65**	**309**	P	**P**	**06 58 27.5**	**-0.4**
	0.6nm,0.3s,mb4.1,baz=47,slow=6.9,SNR=9.9						
BVAR	**Borovoye Array**	**61.65**	**320**	P	**P**	**06 58 34.9**	**+0.3**
	0.4nm,0.3s,mb4.0,baz=65,slow=6.8,SNR=3.1						
AKASG	**Malin Array Be**	**76.50**	**342**	P	**P**	**07 00 06.0**	**-0.7**
	3.6nm,0.4s,mb4.7,baz=20,slow=6.5,SNR=12						
BUR08	**Bucovina Ar. S**	**80.19**	**344**	*e*P	**P**	**07 00 27.6**	**+0.5**
GERES	**GERESS Array B**	**80.57**	**352**	P	**P**	**07 00 28.7**	**-0.5**
	1.1nm,1.0s,mb3.7,baz=18,slow=5.7,SNR=5.0						
BRTR	**Keskin Array B**	**85.86**	**335**	P	**P**	**07 00 55.5**	**-1.0**
	1.1nm,0.7s,mb4.2,baz=48,slow=5.3,SNR=3.7						

*GUC **20** 06:53:13.6±0.8, 3266S×7183W, h26km±19km, ML4.4*
*IDC **20** 06:53:16.5±11.0, 3327S×7149W, h46km±87km, mb4.0/3, mb1 3.9/4, mb1mx3.6/14, mbtmp3.9/4, ML4.6/1, MS2.8/1, Ms1 2.7/1, ms1mx2.5/17, Error ellipse: s-maj=83.6km s-min=68.9km az=63.0*

ISC 20 06:53:13.5±1.4, 3270S±007×7196W±009, h31km±10km, n20, σ0s88/22, mb4.1/3, 5C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.42**	**140**	*i*P	**Pb**	**06 53 22.0**	**-0.7**
PEL	**Peldehue**	**1.16**	**113**	↑*i*P	**Pn**	**06 53 33.1**	**-0.5**
PEL				*i*S	**Sn**	**06 53 46.9**	**-1.5**
PEL				AML	AML	06 53 49.6	
	comp=E,28μm,0.3s						
TACH	**Talagante**	**1.28**	**138**	↑*i*P	**Pn**	**06 53 35.1**	**-0.2**
SAN	**Santiago**	**1.32**	**125**	*e*P	**Pn**	**06 53 35.7**	**-0.2**
SAN				*i*S	**Sn**	**06 53 51.4**	**-1.0**
LNV	**Longovilo**	**1.33**	**160**	↑*e*P	**Pn**	**06 53 36.0**	**+0.1**
CLCH	**Cerro Calan**	**1.38**	**120**	↓*i*P	**Pn**	**06 53 36.5**	**-0.1**
CLCH				*i*S	**Sn**	**06 53 53.7**	**-0.2**
CLCH				AML	AML	06 53 55.9	
	comp=N,9μm,0.5s						
ANTU	**Antumapu**	**1.41**	**128**	↓*i*P	**Pn**	**06 53 37.1**	**+0.1**
ANTU				*i*S	**Sn**	**06 53 54.7**	**+0.1**
ANTU				AML	AML	06 53 57.6	
	comp=N,11μm,0.4s						
PCH	**Pirque**	**1.52**	**127**	↑*e*P	**Pn**	**06 53 38.7**	**+0.1**
FCH	**Farellones**	**1.54**	**114**	↓*i*P	**Pn**	**06 53 39.0**	**+0.2**
FCH				*e*S	**Sn**	**06 53 57.4**	**-0.3**
FCH				AML	AML	06 53 57.8	
	comp=N,9μm,0.2s						
CACH	**El Canelo**	**1.81**	**141**	↑*e*P	**Pn**	**06 53 44.3**	**+1.8**
LMEL	**Las Melosas**	**1.86**	**128**	*e*P	**Pn**	**06 53 44.6**	**+1.3**
LMEL				*e*S	**Sn**	**06 54 08.3**	**+2.5**
LMEL				AML	AML	06 54 12.1	
	comp=N,8μm,0.2s						
CPUP	**Villa Florida**	**14.23**	**67**	P	**Pn**	**06 56 33.3**	**+0.4**
	comp=N,0.6nm,0.3s,baz=210,slow=11,SNR=5.6						
CPUP				S	**Sn**	**06 59 10.4**	**+0.8**
	comp=N,0.3nm,0.3s,baz=156,slow=20,SNR=2.1						
BDFB	**Brasilia**	**27.57**	**58**	LR	LR	07 12 16.2	
	comp=N,19nm,18.7s,baz=219,slow=41						
DBIC	**Dimbokro**	**74.71**	**72**	P	**P**	**07 04 50.2**	**-0.4**
	comp=N,1.3nm,0.6s,mb4.1,baz=202,slow=5.4,SNR=3.8						
BOSA	**Boshof**	**80.62**	**118**	P	**P**	**07 05 21.6**	**-1.8**
	comp=N,2.3nm,0.8s,mb4.2,baz=251,slow=4.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**83.71**	**70**	P	**P**	**07 05 39.8**	**+0.1**
	comp=N,1.5nm,0.8s,mb4.2,baz=242,slow=4.1,SNR=8.4						
TORD				pP	pP	07 05 53.2	+3.8
	comp=N,0.4nm,0.5s,baz=257,slow=4.3,SNR=4.6						
BVAR	**Borovoye Array**	**146.28**	**42**	PKPbc	PKPbc	07 12 52.1	+1.7
	comp=N,1.7nm,0.6s,baz=301,slow=3.3,SNR=9.4						
KURK	**Kurchatov**	**151.88**	**41**	PKPbc	PKPbc	07 13 06.0	+1.2
	comp=N,2.5nm,0.6s,baz=301,slow=3.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**153.09**	**31**	PKPbc	PKPbc	07 13 08.7	+1.3
	comp=N,2.4nm,0.6s,baz=282,slow=2.9,SNR=8.0						
MKAR	**Makanchi Array**	**155.85**	**47**	PKPab	PKPab	07 13 31.8	+0.8
	comp=N,0.8nm,0.6s,baz=297,slow=2.8,SNR=6.7						

IDC 20 06:53:39.8±1.0, 3146N×9096E, h0km, mb3.6/9, mb1 3.8/9, mb1mx3.7/23, mbtmp3.6/9, MS3.8/1, Ms1 3.8/1, ms1mx2.8/24, Error ellipse: s-maj=35.9km s-min=21.4km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.71**	**339**	Pn	Pn	06 57 34.8	-0.4
	0.1nm,0.3s,baz=153,slow=13,SNR=3.9						
SONM	**Songino Array**	**20.16**	**31**	P	P	06 58 16.6	+1.1
	0.8nm,0.5s,baz=211,slow=13,SNR=7.1						
KURK	**Kurchatov**	**21.32**	**338**	P	P	06 58 27.1	-0.9
	0.8nm,0.5s,baz=150,slow=10.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**22.91**	**351**	P	P	06 58 44.2	-0.8
	1.2nm,0.5s,baz=181,slow=13,SNR=5.5						
AKTO	**Aktyubinsk**	**30.92**	**317**	LR	LR	07 14 10.3	
	comp=Z,153nm,18.7s,baz=161,slow=40						
GERES	**GERESS Array B**	**59.05**	**311**	P	P	07 03 42.2	+0.8
	0.1nm,0.3s,baz=109,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	**65.90**	**135**	P	P	07 04 27.4	-0.2
	0.4nm,0.6s,baz=328,slow=6.7,SNR=3.8						
ASAR	**Alice Springs**	**68.51**	**138**	P	P	07 04 44.2	+0.1
	0.4nm,0.7s,baz=325,slow=6.2,SNR=5.7						
INK	**Inuvik**	**75.20**	**16**	P	P	07 05 24.0	+0.3
	1.1nm,0.8s,baz=341,slow=8.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**82.64**	**281**	P	P	07 06 05.6	+0.1
	1.0nm,0.6s,baz=51,slow=4.7,SNR=7.5						
YKA	**Yellowknife Ar**	**84.15**	**12**	P	P	07 06 12.0	-0.3
	0.3nm,0.9s,baz=336,slow=5.3,SNR=4.3						

IDC 20 06:55:08.9±9.2, 626S×14860E, h64km±62km, mb3.3/2, mb1 3.5/4, mb1mx3.3/16, mbtmp3.4/4, ML2.3/1, Error ellipse: s-maj=78.6km s-min=61.8km az=95.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.44**	**205**	P	Pn	06 56 00.2	+0.2
	2.2nm,0.3s,baz=329,slow=5.9,SNR=4.2						
PMG				S	Sn	06 56 40.0	+0.5
	1.8nm,0.3s,baz=342,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**19.41**	**224**	P	Pn	06 59 30.4	-1.4
	0.3nm,0.3s,baz=49,slow=10,SNR=12						
ASAR	**Alice Springs**	**22.34**	**218**	P	P	07 00 01.9	+0.3
	0.8nm,0.4s,baz=51,slow=9.3,SNR=22						
STKA	**Stephens Creek**	**26.31**	**194**	P	P	07 00 38.3	-0.4
	0.5nm,0.5s,baz=27,slow=4.5,SNR=3.7						

*JMA **20** 07:33:29.2±0.3, 2389N×12277E, h15km, M2.8*

TAP 20 07:33:27.3, 2378N×12267E, h5km±2km, ML3.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.75**	**24**	P	Pg	07 33 41.2	-0.5
YOJ				S	Sg	07 33 49.3	-2.1
TWD	**Chiawan**	**1.03**	**287**	*e*P	Pg	07 33 48.0	+0.9
	baz=287						
ENA	**Nanau**	**1.07**	**307**	P	Pg	07 33 48.4	+0.5
	baz=307						
HATJ	**Hateruma jima**	**1.07**	**75**	P	Pg	07 33 47.2	-0.7
HATJ				*e*S	Sg	07 34 00.7	-1.1
IRIF	**Iriomote-Funau**	**1.11**	**60**	P	Pg	07 33 47.1	-1.6
IRIF				S	Sg	07 34 00.9	-2.2
TWC	**Suao**	**1.12**	**318**	*i*P	Pg	07 33 48.8	0.0
	baz=317						
TWC				*e*S	Sg	07 34 02.5	-0.8
	baz=317						
ESL	**Shilin**	**1.14**	**272**	*e*P	Pg	07 33 49.2	+0.1
	baz=271						
ESL				S	Sg	07 34 06.4	+2.5
	baz=271						
EHY	**Hungye**	**1.27**	**258**	*e*P	Pn	07 33 51.7	+0.1
	baz=257						
EHY				S	Sg	07 34 09.5	+1.4
	baz=257						
JKRS	**Kuro-shima**	**1.30**	**69**	P	Pn	07 33 51.1	-1.0
JKRS				*e*S	Sg	07 34 06.7	-2.5
TWE	**Neicheng**	**1.31**	**316**	P	Pn	07 33 53.0	+0.7
	baz=315						
ENTT	**Nioudou**	**1.33**	**311**	P	Pn	07 33 53.2	+0.8
	baz=310						
TWF1	**Yuli**	**1.33**	**252**	P	Pn	07 33 52.7	+0.2
	baz=251						
TWF1				*e*S	Sb	07 34 11.1	+1.1
	baz=251						
WHF	**Hehuan Shan**	**1.34**	**286**	*i*P	Pn	07 33 52.9	+0.3
	baz=285						
NNS	**Nan Shan**	**1.36**	**299**	*e*P	Pn	07 33 52.4	-0.5
	baz=299						
JIJ	**Ishigaki jima**	**1.46**	**66**	P	Pn	07 33 53.2	-1.1
JIJ				S	Sn	07 34 11.3	-2.5
NSK	**Sanguang**	**1.50**	**307**	*e*P	Pn	07 33 56.0	+1.2
	baz=306						
NSK				*e*S	Sn	07 34 15.3	+0.6
	baz=306						
NWF	**Wu-fen Shan**	**1.52**	**328**	*e*P	Pn	07 33 55.4	+0.3
	baz=327						
YUS	**Yu-

*CSEM **20** 07:37:20.5, 3946N×3304E, h2km, MD3.8, After ISK*

ISK 20 07:37:20.5, 3946N×3304E, h2km, MD3.8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.48**	**334**	PG	Pg	07 37 30.4	+0.7
LOD				*e*SG	Sg	07 37 38.5	+2.5
KIZT	**Kizilcal**	**1.07**	**238**	*e*PG	Pg	07 37 41.6	+0.6
CANT	**Cankiri**	**1.23**	**21**	*e*PN	Pn	07 37 45.1	+0.5
CANT				*e*SN	Sn	07 38 02.7	+0.9
LADK	**Ladik-KONYA**	**1.36**	**203**	*e*PN	Pn	07 37 47.2	+0.7
KONT	**Konya--Tatoy**	**1.60**	**200**	*e*PN	Pn	07 37 50.4	+0.6
ESKT	**Eskisehir**	**1.70**	**273**	*e*PN	Pn	07 37 52.2	+1.1
ESKT				*e*SN	Sn	07 38 15.2	+1.8
MDU	**Mudurnu**	**1.73**	**306**	*e*PN	Pn	07 37 51.9	+0.4
TOS	**Tosya**	**1.75**	**25**	*e*PN	Pn	07 37 53.3	+1.5
TOS				*e*SN	Sn	07 38 15.9	+1.3
YOZ	**Yozgat**	**1.77**	**83**	*e*PN	Pn	07 37 52.8	+0.6
SAFT	**Safranbolu**	**1.80**	**351**	*e*PN	Pn	07 37 53.5	+1.0
NIG	**Nigde**	**1.82**	**137**	*e*PN	Pn	07 37 53.6	+0.8
SHUT	**Suhut-Afyon**	**2.14**	**246**	*e*PN	Pn	07 37 58.5	+1.3
GULT	**Gulveren**	**2.17**	**297**	*e*PN	Pn	07 37 59.4	+1.8
BNN	**Bunyan**	**2.26**	**105**	*e*PN	Pn	07 37 59.9	+1.0
ALT	**Altintas**	**2.31**	**261**	*e*PN	Pn	07 38 01.6	+2.0
CAVI	**Cavuskoy**	**2.57**	**288**	*e*PN	Pn	07 38 04.5	+1.4
ADVT	**Abdulvahap**	**2.72**	**292**	*e*PN	Pn	07 38 06.8	+1.6
DIKM	**Dikmen**	**2.76**	**37**	*e*PN	Pn	07 38 08.2	+2.4
BCK	**Bucak**	**2.77**	**225**	*e*PN	Pn	07 38 08.2	+2.2
KVT	**Kavak**	**2.81**	**54**	*e*PN	Pn	07 38 08.6	+2.2
HRT	**Hereke**	**2.92**	**299**	*e*PN	Pn	07 38 10.4	+2.4
KOZT	**Kozan**	**2.95**	**131**	*e*PN	Pn	07 38 10.3	+2.0
SVSK	**Karacayir**	**3.09**	**80**	*e*PN	Pn	07 38 11.8	+1.6
CEYT	**Ceyhan**	**3.24**	**138**	*e*PN	Pn	07 38 14.4	+2.0
KULA	**Kula-Manisa**	**3.54**	**256**	*e*PN	Pn	07 38 18.3	+1.8
DARE	**Darende-Malaty**	**3.73**	**96**	*e*PN	Pn	07 38 19.0	-0.1
AKS	**Akhisar**	**4.11**	**264**	*e*PN	Pn	07 38 26.9	+2.6

*BJI **20** 07:42:47.4, 4 00S×100 67E, h27km, mB5.2, mb5.1, Ms5.0, Msz4.8*

*ISCJB **20** 07:42:51.9±0.3, 350S±003×10052E±003, h28km, mb5.0/78, MS4.7/13, Error ellipse: s-maj=5.9km s-min=3.7km az=136.7*

*MOS **20** 07:42:52.6±1.0, 338S×100 67E, h33km, mb5.3/24, Error ellipse: s-maj=13.2km s-min=6.4km az=107.3*

*DJA **20** 07:42:53, 350S×10030E, h19km, Mw5.4/12*

*IDC **20** 07:42:53.6±0.5, 346S×10063E, h26km±2km, mb4.5/24, mb1 4.6/26, mb1mx4.6/30, mbtmp4.5/26, ML4.2/2, Error ellipse: s-maj=14.6km s-min=9.0km az=44.0*

*NEIC **20** 07:42:53.5±0.2, 350S×10062E, mb5.1/34, Error ellipse: s-maj=8.1km s-min=5.1km az=58.0*

ISC 20 07:42:54.3±0.2, 348S±003×10052E±003, h30km, h30km±7km: pP-P, n204, σ1°16/204, mb5.0/78, MS4.7/13, 9C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**2.08**	**95**	P	**Pn**	**07 43 26.0**	**-1.1**
KSI				S	**Sn**	**07 43 58.5**	**+6.6**
PDSI	**Padang**	**2.55**	**359**	P	**Pn**	**07 43 32.9**	**-0.8**
PDSI				S	**Sn**	**07 44 03.6**	**-0.1**
PPI	**Padang Panjang**	**3.01**	**358**	P	**Pn**	**07 43 40.1**	**+0.2**
RGRI	**Rengat**	**3.60**	**30**	P	**Pn**	**07 43 48.4**	**+0.3**
KLI	**Kotabumi**	**4.54**	**108**	P	**Pn**	**07 44 02.3**	**+1.4**
PPBI	**Pangkal Pinang** 92nm,1.3s,0.7nm	**5.76**	**77**	P	**Pn**	**07 44 19.4**	**+1.6**
SBJI	**Serang** 309nm,0.9s,3μm1.1nm	**6.17**	**115**	P	**Pn**	**07 44 31.1**	**+7.6**
MYKOM	**Kota Tinggi** 176nm,1.6s,1.0nm	**6.20**	**32**	P	**Pn**	**07 44 25.2**	**+1.3**
PSI	**Prapat** 1.4nm,0.3s,baz=172,slow=11,SNR=10.0	**6.44**	**346**	Pn	**Pn**	**07 44 24.0**	**-3.2**
DBJI	**Dramaga** 291nm,0.9s,3μm1.1nm	**6.91**	**116**	P	**Pn**	**07 44 33.8**	**+0.2**
CBJI	**Citeko** 988nm,0.9s,9μm2.7nm	**6.95**	**115**	P	**Pn**	**07 44 36.8**	**+2.7**
TPI	**Tanjungpandan**	**7.16**	**84**	P	**Pn**	**07 44 49.1**	**+12**
LEM	**Lembang** 290nm,0.9s,6μm0.9nm	**7.81**	**115**	P	**Pn**	**07 44 46.2**	**+0.3**
XMIS	**Christmas Isla**	**8.62**	**144**	*e*P	**Pn**	**07 44 49.6**	**-7.4**
XMIS				*e*S	**Sn**	**07 46 17.7**	**-16**
XMIS	**Christmas Isla**	**8.62**	**144**	*e*Pn	**Pn**	**07 44 49.6**	**-7.5**
XMIS				*e*S	**Sn**	**07 46 17.7**	**-16**
XMIS				*e*Sn	**Sn**	**07 46 20.6**	**-13**
KULM	**Kulim** 71nm,1.6s	**8.71**	**1**	*e*Pn	**Pn**	**07 44 57.7**	**-0.7**
KULM	**Kulim** 71nm,1.0s,0.2nm	**8.71**	**1**	P	**Pn**	**07 44 59.9**	**+1.5**
COCO	**West Island**	**9.39**	**203**	*e*Pn	**Pn**	**07 45 04.8**	**-2.9**
COCO	**West Island** 137nm,1.1s	**9.39**	**203**	P	**Pn**	**07 45 06.1**	**-1.5**
KSM	**Kuching**	**10.95**	**63**	*e*Pn	**Pn**	**07 45 31.1**	**+2.0**
STKI	**Sintang** 72nm,1.1s,5μm	**11.50**	**72**	P	**Pn**	**07 45 44.5**	**+7.9**
SJI	**Sawahan** 116nm,0.8s	**11.96**	**111**	P	**Pn**	**07 45 42.1**	**-0.8**
SBUM	**Sibu** 65nm,1.3s,1μm	**13.09**	**63**	P	**Pn**	**07 46 01.0**	**+2.6**
KMMI	**Kalianget** 88nm,1.6s,1μm	**13.85**	**105**	P	**Pn**	**07 46 10.9**	**+2.2**
BBKI	**Banjar Baru** 345nm,0.8s,2μm	**14.29**	**90**	P	**Pn**	**07 46 17.6**	**+2.8**
SMKI	**Samarinda** 91nm,1.5s	**16.95**	**80**	P	**Pn**	**07 46 52.8**	**+3.4**
KKM	**Kota Kinabalu** 78nm,1.1s	**18.31**	**59**	Pn	**Pn**	**07 47 06.1**	**-0.1**
KKM	**Kota Kinabalu** 79nm,1.1s,972nm	**18.31**	**59**	P	**Pn**	**07 47 07.3**	**+1.1**
KAPI	**Kappang** 793nm,0.9s,SNR=8.8	**19.24**	**95**	Pn	**Pn**	**07 47 15.5**	**-2.0**
KAPI	**Kappang** 2.4nm,0.3s,baz=275,slow=8.2,SNR=23	**19.24**	**95**	P	**Pn**	**07 47 14.7**	**-2.8**
KAPI	**Kappang** 154nm,1.0s	**19.24**	**95**	*e*Pn	**Pn**	**07 47 14.8**	**-2.7**
KAPI	**Kappang** 91nm,1.2s,672nm	**19.24**	**95**	P	**Pn**	**07 47 15.2**	**-2.3**
MYLDM	**Lahad Datu** 153nm,1.6s,2μm	**19.91**	**64**	P	**Pn**	**07 47 26.1**	**+0.6**
BDT	**Bhumibol Dam** 13nm,1.0s	**20.65**	**356**	P	**P**	**07 47 30.0**	**-1.6**
CM31	**Chiang Mai Arr** 32nm,1.0s,mb4.7	**21.86**	**356**	*e*P	**P**	**07 47 43.3**	**-1.3**
CMAR	**Chiang Mai Arr** 22nm,1.0s,mb4.5,baz=185,slow=9.4,SNR=32	**21.86**	**356**	P	**P**	**07 47 42.8**	**-1.9**
CMAR	1.0nm,0.3s,baz=218,slow=4.0,SNR=6.3			PcP	PcP	07 51 45.0	+1.2
CMAR	1.2nm,0.4s,baz=211,slow=3.9,SNR=4.2			pPcP		07 51 53.5	
CMAR	**Chiang Mai Arr**	**21.86**	**356**	P	**P**	**07 47 42.8**	**-1.8**
CMAR						07 51 45.1	
KDI	**Kendari** 61nm,1.3s,mb4.9	**22.06**	**92**	P	**P**	**07 47 47.5**	**+0.6**
CHG	**Chiang Mai** 20nm,0.6s,mb4.7	**22.21**	**356**	⇓P	**P**	**07 47 49.6**	**+1.2**
CHTO	**Chiang Mai**	**22.21**	**356**	*e*P	**P**	**07 47 47.0**	**-1.4**
CHTO	comp=Z,22nm,1.1s,mb4.5			pmax	pmax		
CHTO	**Chiang Mai** comp=Z,22nm,1.1s,mb4.5	**22.21**	**356**	*e*P	**P**	**07 47 47.0**	**-1.4**
QIZ	**Qiongzhong**	**24.18**	**22**	P	**P**	**07 48 07.0**	**-1.1**
QIZ				S	**S**	**07 52 30.3**	**+5.7**
QIZ	comp=N,652nm,14.1s,MS4.5			LR	LR		
QIZ	comp=E,794nm,14.4s,MS4.5			LR	LR		
QIZ	comp=Z,661nm,14.7s,MS4.2			LR	LR		
QIZ	**Qiongzhong** comp=Z,148nm,1.8s,mb5.1	**24.18**	**22**	*e*P	**P**	**07 48 07.7**	**-0.4**
QIZ				*e*pP		07 48 15.8	
MBWA	**Marble Bar** comp=Z,16nm,1.4s,mb4.3	**25.65**	**135**	*e*P	**P**	**07 48 20.3**	**-1.2**
MBWA				*e*pP	pP	07 48 29.0	-1.2
MBWA	**Marble Bar** comp=Z,21nm,1.2s,mb4.6	**25.65**	**135**	P	**P**	**07 48 24.2**	**+2.7**
LBMI	**Labuha** comp=Z,91nm,1.0s,mb5.2	**27.11**	**85**	P	**P**	**07 48 42.2**	**+7.4**
KMI	**Kunming**	**28.52**	**4**	P	**P**	**07 48 50.6**	**+3.4**
KMI				AP	pP	07 48 59.3	+3.3
KMI				XP	sP	07 49 02.8	+3.1
KMI				PP	PP	07 49 43.8	-8.2
KMI				S	**S**	**07 53 36.4**	**+3.2**
KMI				XS	sS	07 53 51.3	+3.5
KMI				SS	SS	07 55 03.9	-31
KMI	comp=Z,7.0nm,0.7s,mb4.5			AMB	AMB		
KMI	comp=Z,101nm,4.6s			AMB	AMB		
KMI	comp=N,321nm,15.7s,MS4.4			LR	LR		
KMI	comp=E,722nm,16.6s,MS4.4			LR	LR		
KMI	comp=Z,299nm,13.3s,MS4.1			LR	LR		
FITZ	**Fitzroy Crossi** comp=Z,30nm,0.9s,mb5.0	**28.57**	**122**	*e*P	**P**	**07 48 46.6**	**-1.2**
FITZ	**Fitzroy Crossi** comp=Z,53nm,0.9s,mb5.3	**28.57**	**122**	P	**P**	**07 48 47.1**	**-0.7**
GYA	**Guiyang**	**30.35**	**11**	⇑*i*P	**P**	**07 49 03.3**	**-0.2**
GYA				AP	pP	07 49 12.5	+0.2
GYA				XP	sP	07 49 16.5	+0.5
GYA				PP	PP	07 50 01.3	-11
GYA				PCP	PcP	07 52 04.8	+1.5
GYA				S	**S**	**07 53 57.3**	**-4.8**
GYA				SCP	ScP	07 55 43.3	-0.4
GYA				PCS	PcS	07 55 47.6	+0.6
GYA	comp=Z,20nm,1.0s,mb4.8			AMB	AMB		
GYA	comp=Z,120nm,4.3s			AMB	AMB		
GYA	comp=N,830nm,16.0s,MS4.6			LR	LR		
GYA	comp=E,850nm,15.6s,MS4.6			LR	LR		
GYA	comp=Z,1μm,14.9s,MS4.6			LR	LR		
RAMN	**Ramite** comp=Z,56nm,1.0s,mb5.5	**33.11**	**337**	*e*P	**P**	**07 49 29.4**	**+1.7**
JIRN	**Jiri** comp=Z,167nm,1.1s,mb5.9	**33.90**	**337**	*e*P	**P**	**07 49 36.4**	**+1.7**
PKI	**Pulchoki**	**34.14**	**336**	*e*P	**P**	**07 49 37.7**	**+1.0**
LSA	**Lhasa**	**34.19**	**345**	P	**P**	**07 49 38.0**	**+0.9**
LSA	**Lhasa**	**34.19**	**345**	*e*P	**P**	**07 49 38.6**	**+1.5**
LSA	comp=Z,44nm,1.1s,mb5.3			pmax	pmax		
LSA	**Lhasa** comp=Z,44nm,1.1s,mb5.3	**34.19**	**345**	*e*P	**P**	**07 49 38.6**	**+1.5**
GUN	**Gumba**	**34.25**	**337**	*e*P	**P**	**07 49 39.2**	**+1.5**
DMN	**Daman**	**34.30**	**335**	*e*P	**P**	**07 49 39.7**	**+1.6**
CD2	**Chengdu**	**34.34**	**5**	P	**P**	**07 49 37.0**	**-1.4**
CD2				PP	PP	07 50 52.8	-3.8
CD2				PCP	PcP	07 52 12.4	-1.7
CD2				S	**S**	**07 55 02.0**	**-2.1**
CD2				PCS	PcS	07 55 57.1	-3.4
CD2				SS	SS	07 57 15.8	-18
CD2	comp=Z,20nm,0.9s,mb5.0			AMB	AMB		
CD2	comp=Z,180nm,7.1s			AMB	AMB		
CD2	comp=N,1μm,17.8s			LR	LR		
CD2	comp=Z,950nm,14.3s,MS4.7			LR	LR		
KKN	**Kakani** comp=Z,73nm,0.9s,mb5.6	**34.38**	**336**	*e*P	**P**	**07 49 40.2**	**+1.4**
KKN	**Kakani**	**34.38**	**336**	*e*P	**P**	**07 49 40.2**	**+1.4**
KKN	comp=Z,73nm,0.9s,mb5.6			pmax	pmax		
GKN	**Gorkha** comp=Z,50nm,0.9s,mb5.5	**34.84**	**335**	*e*P	**P**	**07 49 43.6**	**+0.8**
KOLN	**Koldanda** comp=Z,46nm,0.9s,mb5.4	**35.09**	**333**	*e*P	**P**	**07 49 46.2**	**+1.3**
DANN	**Dangsing** comp=Z,44nm,0.5s,mb5.6	**35.52**	**334**	*e*P	**P**	**07 49 49.6**	**+1.0**
WHN	**Wuhan**	**36.32**	**20**	⇓P	**P**	**07 49 55.5**	**0.0**
WHN				S	**S**	**07 55 40.0**	**+5.4**
WHN	comp=Z,1μm,19.1s,MS4.6			LR	LR		
WRA	**Warramunga Arr** comp=Z,5.8nm,0.4s,mb4.7,baz=308,slow=9.2,SNR=55	**36.81**	**119**	P	**P**	**07 49 58.3**	**-1.6**
WRA	comp=Z,4.2nm,1.0s,baz=294,slow=16,SNR=7.5			S	**S**	**07 55 38.6**	**-3.8**
WRAB	**Tennant Creek** comp=Z,123nm,0.8s,mb5.8,SNR=10	**36.82**	**119**	P	**P**	**07 49 58.9**	**-1.0**
WRAB	**Tennant Creek** comp=Z,21nm,1.0s,mb4.9	**36.82**	**119**	*e*P	**P**	**07 49 58.6**	**-1.3**
WRAB	**Tennant Creek**	**36.82**	**119**	*e*P	**P**	**07 49 58.7**	**-1.2**
WRAB	**Tennant Creek** comp=Z,28nm,1.2s,mb5.0	**36.82**	**119**	P	**P**	**07 49 58.9**	**-1.0**
WB2	**Warramunga Arr**	**36.82**	**119**	*e*P	**P**	**07 49 58.5**	**-1.4**
WB2				*e*S	**S**	**07 55 38.5**	**-4.1**
ASAR	**Alice Springs** comp=Z,25nm,0.9s,mb5.0,baz=301,slow=8.0,SNR=81	**37.97**	**125**	P	**P**	**07 50 09.1**	**-0.5**
ASAR	comp=Z,2.7nm,0.7s,baz=289,slow=14,SNR=9.7			S	**S**	**07 56 01.4**	**+1.3**
XAN	**Xi'an**	**38.15**	**11**	P	**P**	**07 50 09.8**	**-1.1**
XAN				PP	PP	07 51 39.1	+0.5
XAN				PCP	PcP	07 52 26.0	+0.6
XAN				S	**S**	**07 56 01.1**	**-1.2**
XAN				SCP	ScP	07 56 12.8	+1.6
XAN	comp=Z,72nm,1.0s,mb5.4			AMB	AMB		
XAN	comp=Z,130nm,7.9s			AMB	AMB		
XAN	comp=N,252nm,12.9s,MS4.6			LR	LR		
XAN	comp=E,575nm,13.3s,MS4.6			LR	LR		
XAN	comp=Z,2μm,18.0s,MS5.1			LR	LR		
NJ2	**Nanjing**	**39.40**	**25**	*e*P	**P**	**07 50 21.4**	**0.0**
NJ2				AMB	AMB		
LZH	**Lanzhou** comp=Z,20nm,0.5s,mb5.1	**39.48**	**4**	*e*P	**P**	**07 50 22.5**	**+0.4**
LZH				AP	pP	07 50 31.8	+0.8
LZH				XP	sP	07 50 36.8	+2.1
LZH				PP	PP	07 51 58.5	+5.4
LZH				*e*S	**S**	**07 56 23.8**	**+1.4**
LZH				XS	sS	07 56 39.3	+2.2
LZH				SS	SS	07 59 12.0	-5.7
LZH	comp=Z,69nm,1.5s,mb5.2			AMB	AMB		
LZH	comp=Z,230nm,4.6s			AMB	AMB		
LZH	comp=N,1μm,16.7s			LR	LR		
LZH	comp=Z,2μm,18.1s,MS4.9			LR	LR		
GTA	**Gaotai**	**42.69**	**359**	⇑P	**P**	**07 50 48.6**	**+0.2**
GTA				PCP	PcP	07 52 40.5	+0.6
GTA				S	**S**	**07 57 14.8**	**+5.0**
GTA				SS	SS	08 00 21.1	0.0
GTA	comp=Z,21nm,1.1s,mb4.8			AMB	AMB		
GTA	comp=Z,210nm,3.8s			AMB	AMB		
GTA	comp=N,217nm,17.8s,MS4.6			LR	LR		
GTA	comp=E,622nm,16.6s,MS4.6			LR	LR		
GTA	comp=Z,240nm,18.7s,MS4.1			LR	LR		
COEN	**Coen** comp=Z,7.5nm,1.6s,mb4.2	**43.35**	**107**	P	**P**	**07 50 54.6**	**+0.4**
BTO	**Baotou**	**44.73**	**10**	*e*P	**P**	**07 51 04.0**	**-0.8**
HHC	**Hu-ho-hao-te**	**45.26**	**12**	*e*P	**P**	**07 51 09.6**	**+0.6**
HHC				PCP	PcP	07 52 47.8	-0.8
HHC				PP	PP	07 52 58.1	+2.8
HHC				PCS	PcS	07 56 39.6	-2.8
HHC				*e*S	**S**	**07 57 42.6**	**-4.8**
HHC	comp=Z,291nm,1.3s,mb6.0			AMB	AMB		
HHC	comp=Z,312nm,3.8s			AMB	AMB		
HHC	comp=N,770nm,16.6s,MS4.9			LR	LR		
HHC	comp=E,691nm,15.5s,MS4.9			LR	LR		
HHC	comp=Z,573nm,15.5s,MS4.6			LR	LR		
BJI	**Beijing**	**45.63**	**17**	P	**P**	**07 51 11.9**	**-0.1**
BJI				PP	PP	07 53 00.3	+1.0
BJI				S	**S**	**07 57 56.8**	**+4.0**
BJI	comp=Z,40nm,1.2s,mb5.2			AMB	AMB		
BJI	comp=Z,160nm,3.6s			AMB	AMB		
BJI	comp=N,1μm,16.6s,MS5.0			LR	LR		
BJI	comp=E,926nm,16.6s,MS5.0			LR	LR		
BJI	comp=Z,841nm,24.2s			LR	LR		
CTA	**Charters Tower** comp=Z,12nm,1.0s,mb4.9	**47.51**	**114**	*e*P	**P**	**07 51 26.2**	**-0.9**
CTA	**Charters Tower**	**47.51**	**114**	*e*P	**P**	**07 51 26.2**	**-0.9**
CTA	comp=Z,12nm,1.0s			pmax	pmax		
CTAO	**Charters Tower**	**47.51**	**114**	*e*P	**P**	**07 51 26.1**	**-1.0**
CTAO	comp=Z,20nm,1.0s,mb5.1			pmax	pmax		
CTAO	**Charters Tower** comp=Z,20nm,1.0s,mb5.1	**47.51**	**114**	*e*P	**P**	**07 51 26.1**	**-1.0**
CTAO	**Charters Tower** comp=Z,28nm,0.9s,mb5.3	**47.51**	**114**	P	**P**	**07 51 26.7**	**-0.4**
STKA	**Stephens Creek** comp=Z,9.1nm,0.9s,mb4.8	**47.79**	**131**	*e*P	**P**	**07 51 29.1**	**0.0**
STKA				*e*pP	pP	07 51 35.4	-2.8
STKA	**Stephens Creek** comp=Z,9.6nm,0.8s,mb4.9,baz=307,slow=7.5,SNR=23	**47.79**	**131**	P	**P**	**07 51 29.1**	**+0.1**
KSRS	**Korea Array** comp=Z,42nm,1.1s,mb5.4,baz=219,slow=8.1,SNR=62	**48.03**	**30**	P	**P**	**07 51 30.1**	**-0.7**
KSH	**Kashi**	**48.39**	**335**	P	**P**	**07 51 35.1**	**+1.6**
KSH				AP	pP	07 51 45.1	+2.5
KSH				XP	sP	07 51 48.5	+2.3
KSH				PCP	PcP	07 53 01.0	+1.3
KSH				PP	PP	07 53 27.8	+1.4
KSH				SCP	ScP	07 56 52.3	-0.2
KSH				PCS	PcS	07 56 56.6	+1.0
KSH				S	**S**	**07 58 32.0**	**-0.1**
KSH				XS	sS	07 58 48.3	+1.2
KSH				SCS	ScS	08 01 22.4	-1.9
KSH				SS	SS	08 01 57.9	-4.3
KSH	comp=Z,64nm,1.0s,mb5.6			AMB	AMB		
KSH	comp=Z,2μm,6.0s			AMB	AMB		
KSH	comp=Z,1μm,5.5s			LR	LR		
WMQ	**Urumqi**	**48.48**	**348**	⇑P	**P**	**07 51 35.3**	**+1.1**
WMQ				XP	sP	07 51 44.3	-2.6
WMQ				S	**S**	**07 58 33.0**	**-0.3**
WMQ				XS	sS	07 58 49.0	+0.7
WMQ				SCS	ScS	08 01 22.5	-2.2
WMQ	comp=Z,46nm,1.0s,mb5.5			AMB	AMB		
WMQ	comp=Z,347nm,5.6s			AMB	AMB		
WMQ	comp=N,233nm,20.0s,MS4.3			LR	LR		
WMQ	comp=E,201nm,20.0s,MS4.3			LR	LR		
WMQ	comp=Z,210nm,18.0s,MS4.2			LR	LR		
SNY	**Shenyang**	**49.73**	**23**	⇑P	**P**	**07 51 42.5**	**-1.3**
SNY	comp=Z,18nm,0.9s,mb5.1			AMB	AMB		
ULHL	**Ulahol** SNR=7.6	**50.56**	**337**	P	**P**	**07 51 51.1**	**+1.0**
KZA	**Kyzart** SNR=11	**50.82**	**336**	P	**P**	**07 51 53.4**	**+1.4**
SONM	**Songino Array** comp=Z,54nm,0.9s,mb5.5,baz=187,slow=9.1,SNR=275	**51.36**	**5**	P	**P**	**07 51 56.9**	**+0.9**
SONM	comp=Z,35nm,0.8s,baz=185,slow=8.6,SNR=18			pP	pP	07 52 05.6	+0.5
SONM	comp=Z,5.5nm,0.9s,baz=176,slow=2.4,SNR=1.9			PcP	PcP	07 53 10.5	+0.1
SONM	comp=Z,2.9nm,0.6s,baz=181,slow=3.3,SNR=4.3			pPcP		07 53 18.5	
SONM	**Songino Array**	**51.36**	**5**	P	**P**	**07 51 56.9**	**+0.9**
SONM				*PP	pP	07 52 05.6	+0.5
SONM						07 53 10.5	
TKM2	**Tokmak 2** SNR=13	**51.39**	**337**	P	**P**	**07 51 57.4**	**+1.1**
ULN	**Ulaanbaatar**	**51.45**	**6**	*e*P	**P**	**07 51 57.5**	**+0.9**
ULN				*e**PP	pP	07 52 06.3	+0.5
ULN	comp=Z,61nm,1.1s,mb5.4			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,61nm,1.1s,mb5.4	**51.45**	**6**	*e*P	**P**	**07 51 57.5**	**+0.9**
ULN				*e*pP	pP	07 52 06.3	+0.5
ULN	**Ulaanbaatar** comp=Z,66nm,1.1s,comp=Z,731nm,mb5.5	**51.45**	**6**	P	**P**	**07 51 57.2**	**+0.6**
AML	**Almayashu** SNR=8.7	**51.52**	**335**	P	**P**	**07 51 58.5**	**+1.2**
AML	**Almayashu** comp=Z,20nm,1.1s,mb5.0	**51.52**	**335**	*e*P	**P**	**07 51 58.2**	**+0.9**
AAK	**Ala-Archa** comp=Z,44nm,1.2s,mb5.3,SNR=5.1	**51.59**	**336**	P	**P**	**07 51 59.2**	**+1.4**
AAK	**Ala-Archa**	**51.59**	**336**	*e*P	**P**	**07 51 58.8**	**+1.0**
AAK				*e**PP	pP	07 52 08.5	+1.5
AAK	comp=Z,14nm,1.2s,mb4.8			pmax	pmax		
AAK	**Ala-Archa** SNR=5.7	**51.59**	**336**	P	**P**	**07 51 58.9**	**+1.1**
AAK	**Ala-Archa** comp=Z,14nm,1.2s,mb4.8	**51.59**	**336**	*e*P	**P**	**07 51 58.8**	**+1.0**
AAK				*e*pP	pP	07 52 08.5	+1.5
AAK	**Ala-Archa** comp=Z,7.1nm,2.4s,mb4.2	**51.59**	**336**	P	**P**	**07 51 59.1**	**+1.3**
FRU	**Bishkek**	**51.71**	**336**	*e*P	**P**	**07 51 59.0**	**+0.3**
CHMS	**Chumysh** SNR=6.2	**51.79**	**336**	P	**P**	**07 51 59.8**	**+0.5**
EKS2	**Erkin-Say** SNR=24	**51.92**	**335**	P	**P**	**07 52 01.3**	**+1.1**
EKS2	**Erkin-Say** comp=Z,26nm,0.9s,mb5.2	**51.92**	**335**	*e*P	**P**	**07 52 01.1**	**+0.9**
USP	**Ospenovka** SNR=21	**52.12**	**336**	P	**P**	**07 52 02.2**	**+0.5**
CN2	**Changchun**	**52.13**	**23**	⇑P	**P**	**07 52 00.6**	**-1.2**
CN2				*e*AP	pP	07 52 10.6	-0.4
CN2				*e*S	**S**	**07 59 22.3**	**-1.8**
CN2	comp=Z,60nm,1.0s,mb5.5			AMB	AMB		
CN2	comp=Z,200nm,4.0s			AMB	AMB		
CN2	comp=N,600nm,16.0s,MS5.0			LR	LR		
CN2	comp=E,800nm,16.0s,MS5.0			LR	LR		
CN2	comp=Z,1μm,18.0s,MS5.0			LR	LR		
MKAR	**Makanchi Array** comp=Z,25nm,0.9s,mb5.1,baz=148,slow=7.9,SNR=142	**52.59**	**344**	P	**P**	**07 52 05.2**	**+0.1**
MKAR	comp=Z,4.4nm,0.5s,baz=150,slow=8.6,SNR=6.6			pP	pP	07 52 13.6	-0.8
MAJO	**Matsushiro**	**53.10**	**38**	*e*P	**P**	**07 52 06.5**	**-2.6**
MAJO				*e**PP	pP	07 52 16.5	-1.8
MAJO	comp=Z,377nm,2.8s,mb5.8			pmax	pmax		
MAJO	**Matsushiro** comp=Z,377nm,2.8s,mb5.8	**53.10**	**38**	*e*P	**P**	**07 52 06.5**	**-2.6**
MAJO				*e*pP	pP	07 52 16.5	-1.9
MAT	**Matsushiro**	**53.10**	**38**	P	**P**	**07 52 07.2**	**-1.9**
MJAR	**Matsushiro Arr** comp=Z,17nm,1.0s,mb4.9,baz=220,slow=8.0,SNR=29	**53.10**	**38**	P	**P**	**07 52 07.8**	**-1.3**
MJAR	comp=Z,14nm,1.1s,baz=227,slow=8.1,SNR=7.2			pP	pP	07 52 15.6	-2.7
EIDS	**Eidsvold** comp=Z,11nm,1.0s,mb4.8	**53.18**	**119**	*e*P	**P**	**07 52 09.2**	**-0.7**
ZAK	**Zakamensk**	**53.70**	**2**	⇑*e*P	**P**	**07 52 13.5**	**+0.2**
ZAK				*e*	pP	07 52 22.3	-0.2
ZAK	comp=Z,7.0nm,1.0s,mb4.5			pmax	pmax		
OPO	**Ambohidratompo** comp=Z,2.2nm,0.9s,mb4.1,baz=94,slow=17,SNR=3.4	**54.23**	**250**	P	**P**	**07 52 18.7**	**+1.0**
MDJ	**Mudanjiang**	**54.49**	**25**	P	**P**	**07 52 18.5**	**-0.6**
MDJ				AP	pP	07 52 27.4	-1.0
MDJ				XP	sP	07 52 31.1	-0.8
MDJ				PCP	PcP	07 53 21.5	-0.8
MDJ				PP	PP	07 54 21.0	-0.7
MDJ				PCS	PcS	07 57 20.9	-0.9
MDJ				S	**S**	**07 59 55.4**	**-0.7**
MDJ				XS	sS	08 00 11.3	0.0
MDJ				AMB	AMB		
MDJ	comp=Z,17nm,1.0s,mb4.9			AMB	AMB		
MDJ	comp=Z,57nm,4.8s			LR	LR		
MDJ	comp=N,529nm,

TLY	**Talaya**	**55.02**	**2**	*e*P	**P**	**07 52 23.7**	**+0.9**
TLY				*e*		07 52 40.3	
TLY				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
TLY	**Talaya**	**55.02**	**2**	*e*P	**P**	**07 52 23.5**	**+0.7**
	comp=Z,16nm,0.9s,mb5.0						
HIA	**Hailar**	**55.12**	**15**	*e*P	**P**	**07 52 22.7**	**-0.9**
HIA				*e**PP	pP	07 52 31.5	-1.3
HIA				pmax	pmax		
	comp=Z,27nm,1.3s						
HIA	**Hailar**	**55.12**	**15**	*e*P	**P**	**07 52 22.6**	**-1.0**
	comp=Z,27nm,1.3s,mb5.1						
HIA				*e*pP	pP	07 52 31.5	-1.4
ARMA	**Armidale**	**55.13**	**125**	*e*P	**P**	**07 52 25.6**	**+1.5**
IRK	**Irkutsk**	**55.61**	**3**	*e*P	**P**	**07 52 26.7**	**-0.3**
IRK				*e*	pP	07 52 35.6	-0.7
IRK				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
KURK	**Kurchatov**	**57.17**	**344**	P	**P**	**07 52 38.9**	**+0.7**
	comp=Z,224nm,1.0s,mb6.2,SNR=22						
KURK	**Kurchatov**	**57.17**	**344**	P	**P**	**07 52 38.1**	**-0.1**
	comp=Z,21nm,1.0s,mb5.1,baz=159,slow=6.6,SNR=20						
KURK	**Kurchatov**	**57.17**	**344**	*e*P	**P**	**07 52 38.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
KURK	**Kurchatov**	**57.17**	**344**	*e*P	**P**	**07 52 38.2**	**+0.1**
	comp=Z,50nm,1.1s,mb5.5						
ZAA0	**Zalesovo Array**	**58.71**	**349**	*e*P	**P**	**07 52 48.7**	**-0.2**
ZALV	**Zalesovo Beam**	**58.71**	**349**	P	**P**	**07 52 48.7**	**-0.2**
	comp=Z,45nm,0.9s,mb5.5,baz=163,slow=5.7,SNR=92						
ZALV	**Zalesovo Beam**	**58.71**	**349**	P	**P**	**07 52 48.7**	**-0.2**
KLR	**Kul'dur**	**59.07**	**23**	*e*P	**P**	**07 52 45.7**	**-5.9**
KLR				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.2						
NVS	**Novosibirsk**	**59.86**	**349**	*e*P	**P**	**07 52 55.3**	**-1.6**
NVS				pmax	pmax		
	comp=N,15nm,1.1s						
NVS				pmax	pmax		
	comp=E,11nm,1.1s						
NVS				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
BVA0	**Borovoye Array**	**61.74**	**340**	*i* P	**P**	**07 53 08.1**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
BVAR	**Borovoye Array**	**61.74**	**340**	P	**P**	**07 53 09.0**	**-0.7**
	comp=Z,8.1nm,0.8s,mb4.9,baz=145,slow=8.5,SNR=39						
BVAR				pP	pP	07 53 17.0	-2.1
	comp=Z,2.2nm,0.5s,baz=133,slow=11,SNR=7.5						
BRVK	**Borovoye**	**61.81**	**340**	P	**P**	**07 53 09.1**	**-1.1**
	comp=Z,54nm,1.4s,mb5.5,SNR=5.4						
BRVK	**Borovoye**	**61.81**	**340**	*e*P	**P**	**07 53 09.3**	**-0.9**
BRVK				*e**PP	pP	07 53 18.7	-0.8
BRVK				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
BRVK	**Borovoye**	**61.81**	**340**	*e*P	**P**	**07 53 09.3**	**-0.8**
	comp=Z,18nm,1.3s,mb5.0						
BRVK				*e*pP	pP	07 53 18.7	-0.8
YSS	**Yuzh-Sakhalins**	**62.46**	**31**	*e*P	**P**	**07 53 13.5**	**-1.2**
YSS				*e**PP	pP	07 53 22.7	-1.4
YSS				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.6						
YSS	**Yuzh-Sakhalins**	**62.46**	**31**	*e*P	**P**	**07 53 13.5**	**-1.2**
	comp=Z,32nm,0.7s,mb5.6						
YSS				*e*pP	pP	07 53 22.7	-1.3
AB31	**Akbulak array**	**63.18**	**331**	P	**P**	**07 53 17.7**	**-1.7**
AB31				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.4						
AKTK	**Aktyubinsk**	**64.90**	**332**	P	**P**	**07 53 29.9**	**-0.8**
AKTO	**Aktyubinsk**	**64.90**	**332**	P	**P**	**07 53 29.9**	**-0.8**
	comp=Z,7.5nm,1.1s,mb4.6,baz=133,slow=5.5,SNR=10						
AKTO	**Aktyubinsk**	**64.90**	**332**	*i* P	**P**	**07 53 28.4**	**-2.3**
AKTO				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
SVE	**Sverdlovsk**	**68.24**	**338**↓	*e*P	**P**	**07 53 51.9**	**0.0**
SVE				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.3						
ARU	**Arti**	**68.76**	**337**	*d* iP	**P**	**07 53 54.3**	**-0.9**
ARU				*e*S	S	08 02 56.0	-0.6
ARU				*e*SS	SS	08 07 20.4	-1.6
ARU				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
ARU	**Arti**	**68.76**	**337**	*e*P	**P**	**07 53 54.4**	**-0.8**
YAK	**Yakutsk**	**69.04**	**14**	*e*P	**P**	**07 53 55.2**	**-1.6**
YAK				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.5						
YAK				pmax	pmax		
	comp=N,23nm,1.2s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK	**Yakutsk**	**69.04**	**14**	*e*P	**P**	**07 53 55.8**	**-1.0**
	comp=E,42nm,0.8s,mb5.4						
YAK				*e*pP	pP	07 54 03.8	-2.5
ASF	**Jabal al Asfar**	**69.87**	**306**	P	**P**	**07 54 03.4**	**+0.8**
	comp=E,5.1nm,1.2s,mb4.3,baz=79,slow=4.4,SNR=3.7						
MALT	**Malatya**	**70.72**	**313**	P	**P**	**07 54 05.7**	**-1.9**
EIL	**Elat**	**70.76**	**303**	P	**P**	**07 54 09.6**	**+1.5**
	comp=E,7.2nm,0.9s,mb4.6,baz=134,slow=3.9,SNR=4.6						
EIL	**Elat**	**70.76**	**303**	P	**P**	**07 54 09.6**	**+1.5**
LSZ	**Lusaka**	**72.05**	**255**	P	**P**	**07 54 17.0**	**+0.9**
	comp=E,1.5nm,0.7s,mb4.0,baz=56,slow=3.6,SNR=3.4						
LSZ				pP	pP	07 54 25.3	-0.3
	comp=E,7.9nm,1.0s,baz=97,slow=2.4,SNR=6.9						
LSZ	**Lusaka**	**72.05**	**255**	*e*P	**P**	**07 54 16.8**	**+0.7**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
LSZ	**Lusaka**	**72.05**	**255**	*e*P	**P**	**07 54 16.8**	**+0.7**
	comp=Z,8.4nm,1.0s,mb4.6						
ANN	**Anapa**	**73.78**	**319**	*e*P	**P**	**07 54 24.8**	**-1.0**
ANN				pmax	pmax		
	comp=Z,1μm,6.3s						
PETK	**Petropavlovsk-**	**73.86**	**32**	P	**P**	**07 54 25.3**	**-0.8**
	comp=Z,8.2nm,0.8s,mb4.7,baz=247,slow=1.2,SNR=6.7						
PETK	**Petropavlovsk-**	**73.86**	**32**	P	**P**	**07 54 25.3**	**-0.8**
BRTR	**Keskin Array B**	**74.70**	**313**	P	**P**	**07 54 30.7**	**-0.6**
	comp=Z,2.8nm,0.8s,mb4.2,baz=143,slow=6.8,SNR=7.0						
BRTR				pP	pP	07 54 38.6	-2.2
	comp=Z,2.4nm,0.8s,baz=134,slow=9.1,SNR=5.5						
BOSA	**Boshof**	**75.41**	**241**	P	**P**	**07 54 35.7**	**+0.1**
	comp=Z,3.3nm,0.9s,mb4.2,baz=145,slow=14,SNR=3.1						
SEY	**Seymchan**	**76.80**	**22**	*e*P	**P**	**07 54 42.6**	**-0.2**
TIXI	**Tiksi**	**77.23**	**9**	*e*P	**P**	**07 54 43.3**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
TIXI	**Tiksi**	**77.23**	**9**	*e*P	**P**	**07 54 43.3**	**-1.7**
	comp=Z,18nm,1.1s,mb4.9						
OBN	**Obninsk**	**78.32**	**328**↑	*e*P	**P**	**07 54 51.4**	**0.0**
OBN				*e*		07 57 46.4	
OBN				*e*S	S	08 04 42.8	-1.9
OBN				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
KLMR	**Klimovskoe**	**79.38**	**334**	P	**P**	**07 54 57.4**	**+0.3**
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
VNDA	**Vanda**	**80.62**	**169**	P	**P**	**07 55 03.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=267,slow=7.3,SNR=7.8						
AKASG	**Malin Array Be**	**80.97**	**322**	P	**P**	**07 55 05.1**	**-0.8**
	comp=Z,2.9nm,0.9s,mb4.2,baz=98,slow=4.2,SNR=9.0						
AKASG				pP	pP	07 55 13.8	-1.8
	comp=Z,0.3nm,0.3s,baz=84,slow=5.0,SNR=2.7						
MLR	**Muntele Rosu**	**81.73**	**317**	P	**P**	**07 55 10.0**	**-0.1**
	comp=Z,4.0nm,1.1s,mb4.3,baz=16,slow=10,SNR=4.4						
MLR	**Muntele Rosu**	**81.73**	**317**	P	**P**	**07 55 10.0**	**-0.1**
TSUM	**Tsumeb**	**82.20**	**251**	pP	pP	07 55 22.8	0.0
	comp=Z,2.1nm,0.9s,baz=99,slow=4.6,SNR=3.9						
BUR08	**Bucovina Ar. S**	**82.73**	**319**	*e*P	**P**	**07 55 16.2**	**+0.9**
BILL	**Bilibino**	**84.36**	**20**↑	*e*P	**P**	**07 55 23.0**	**-0.2**
BILL				*e*		07 58 34.4	
BILL				*e*S	S	08 05 46.0	-0.8
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
BILL	**Bilibino**	**84.36**	**20**	*e*P	**P**	**07 55 21.2**	**-2.0**
	comp=Z,6.2nm,0.9s,mb4.7						
GERES	**GERESS Array B**	**90.50**	**319**	P	**P**	**07 55 54.2**	**+0.9**
	comp=Z,3.8nm,1.1s,mb4.6,baz=114,slow=3.3,SNR=15						
GERES				pP	pP	07 56 02.4	-0.6
	comp=Z,0.7nm,0.3s,baz=87,slow=4.3,SNR=6.0						
BRG	**Berggiesshubel**	**90.51**	**321**	*e*P	**P**	**07 55 54.3**	**+1.0**
BRG				*e*		07 56 12.9	
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
BRG	**Berggiesshubel**	**90.51**	**321**	*e*P	**P**	**07 55 54.3**	**+1.0**
	comp=Z,7.3nm,0.7s,mb5.1						
BRG				*e*		07 56 12.9	
	comp=Z,2.3nm,0.8s						
KHC	**Kasperske Hory**	**90.60**	**319**	*e*P	**P**	**07 55 53.9**	**+0.2**
CLL	**Collm**	**91.14**	**321**	*e*P	**P**	**07 55 56.0**	**-0.2**
NOA	**NORSAR Array B**	**92.68**	**331**	P	**P**	**07 56 03.0**	**-0.1**
	comp=Z,2.7nm,1.0s,mb4.6,baz=99,slow=4.4,SNR=2.6						
YKA	**Yellowknife Ar**	**115.63**	**17**	PKP	PKPdf	08 01 32.2	-1.0
	comp=Z,0.6nm,0.9s,baz=318,slow=2.6,SNR=7.7						
YKA				pPKP	pPKPdf	08 01 39.9	-3.3
	comp=Z,0.4nm,0.7s,baz=349,slow=2.2,SNR=5.3						
YKA	**Yellowknife Ar**	**115.63**	**17**	PKP	PKPdf	08 01 32.2	-1.0
YKA				pPKP	pPKPdf	08 01 39.9	-3.3
SCHQ	**Schefferville**	**127.79**	**351**	PKP	PKPdf	08 01 55.9	-0.9
	comp=Z,2.8nm,0.7s,baz=326,slow=3.6,SNR=3.1						
NVAR	**Mina Array Bea**	**130.40**	**40**	PKP	PKPdf	08 02 03.8	+1.5
	comp=Z,1.3nm,0.7s,baz=282,slow=0.8,SNR=6.0						
NVAR				pPKP	pPKPdf	08 02 11.4	-0.9
	comp=Z,1.2nm,0.7s,baz=114,slow=0.6,SNR=3.5						
NVAR				SKPbc	SKPbc	08 05 24.7	+1.2
	comp=Z,1.2nm,0.8s,baz=275,slow=5.2,SNR=5.1						
PDAR	**Pinedale Array**	**132.60**	**30**	PKP	PKPdf	08 02 07.3	+1.0
	comp=Z,0.3nm,0.8s,baz=268,slow=2.6,SNR=3.7						
PDAR				pPKP	pPKPdf	08 02 15.6	-0.8
	comp=Z,0.5nm,0.8s,baz=298,slow=3.2,SNR=3.4						
PDAR				SKP		08 05 41.4	
	comp=Z,0.5nm,0.8s,baz=104,slow=2.9,SNR=3.6						
CPUP	**Villa Florida**	**143.43**	**215**	pPKP	pPKPdf	08 02 33.1	-3.6
	comp=Z,3.6nm,0.9s,baz=171,slow=2.0,SNR=7.7						
CPUP	**Villa Florida**	**143.43**	**215**	*e*PKPdf	PKPdf	08 02 24.8	-1.9
WMOK	**Wichita Mounta**	**144.10**	**28**	*e*PKIKP	PKPdf	08 02 24.8	-2.8
FVM	**French Village**	**144.23**	**15**	*e*PKIKP	PKPdf	08 02 24.5	-3.2
SIUC	**Southern Illin**	**144.78**	**13**	*e*PKPdf	PKPdf	08 02 27.0	-1.7
WCI	**Wyandotte Cave**	**144.86**	**9**	*e*PKIKP	PKPdf	08 02 26.9	-1.9
WCI				*e*		08 02 36.0	
TXAR	**Lajitas Array**	**145.54**	**39**	PKPbc	PKPbc	08 02 30.9	+0.6
	comp=Z,36nm,0.9s,baz=287,slow=1.5,SNR=266						
TXAR				pPKPbc	pPKPbc	08 02 39.3	-0.9
	comp=Z,28nm,0.8s,baz=0.0,slow=0.9,SNR=19						
BLA	**Blacksburg**	**146.42**	**1**	*e*PKP2	PKPab	08 02 32.3	-1.4
MIAR	**Mount Ida**	**146.43**	**21**	*e*PKP2	PKPab	08 02 32.2	-1.6
WVT	**Waverly**	**146.61**	**12**	*e*PKPbc	PKPbc	08 02 32.7	-0.7
WVT				*e*pPKPdf	pPKPdf	08 02 41.3	-0.6
UALR	**University of**	**146.65**	**19**	*e*PKPbc	PKPbc	08 02 33.4	-0.2
TZTN	**Tazewell**	**146.89**	**6**	*e*PKPbc	PKPbc	08 02 33.6	-0.5
JCT	**Junction City**	**146.99**	**33**	*e*PKP2	PKPab	08 02 34.5	-1.6
TKL	**Tuckaleechee C**	**147.74**	**7**	*e*PKPbc	PKPbc	08 02 36.0	-0.5
TKL				*e*PKPab	PKPab	08 02 38.3	-0.6
OXF	**Oxford**	**147.78**	**15**	*e*PKP2	PKPab	08 02 35.7	-3.3
GOGA	**Godfrey**	**149.99**	**7**	*e*PKP2	PKPab	08 02 42.1	-5.9

CASC 20 07:43:11.5±1.9, 1184N×8672W, h143km±9km, MD4.0, ML2.7, 8C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.36**	**20**↑	*i* P	Pn	07 43 31.5	+0.1
COPN				*e*S	Sn	07 43 47.2	+0.6
COPN				AML	AML	07 43 51.4	
	comp=Z,368nm,0.4s						
CSAN		**0.45**	**41**↑	*i* P	Pn	07 43 31.9	+0.2
CSAN				*e*S	Sn	07 43 46.7	-0.5
XAVN	**Gruta Xavier**	**0.49**	**52**↓	*i* P	Pn	07 43 31.9	-0.1
TICN	**Ticuantepe**	**0.52**	**68**↓	*e*P	Pn	07 43 32.2	+0.1
APYN	**Apoyeque**	**0.53**	**43**↓	*e*P	Pn	07 43 31.8	-0.4
MGAN	**Managua**	**0.55**	**57**↓	*i* P	Pn	07 43 32.0	-0.3
MGAN				*e*S	Sn	07 43 49.8	+1.6
MGAN				AML	AML	07 43 50.5	
	comp=N,26nm,0.5s						
MOMN	**Momotombo**	**0.59**	**17**↓	*e*P	Pn	07 43 32.5	-0.1
MIRN	**Miramar**	**0.59**	**1**↑	*e*P	Pn	07 43 32.5	-0.1
WILN	**Americas 2**	**0.61**	**59**↓	*i* P	Pn	07 43 32.2	-0.5
APON	**Apoyo**	**0.64**	**83**↓	*e*P	Pn	07 43 33.1	+0.2
TEL3	**Telica 3**	**0.74**	**350**	*e*P	Pn	07 43 32.1	-1.4
CRIN	**San Cristobal**	**0.91**	**339**	*e*P	Pn	07 43 35.5	+0.6
CRIN				*e*S	Sn	07 43 54.9	+2.2
CONN	**Concepcion**	**1.11**	**104**↓	*i* P	Pn	07 43 36.6	0.0
CNCH	**Conchagua**	**1.79**	**323**↑	*e*P	x	07 43 43.7	
LIM1	**Limonal**	**1.83**	**128**↑	*e*P	Pn	07 43 45.0	+0.7
VCR	**Vista de Mar**	**2.01**	**148**↓	*e*P	Pn	07 43 47.6	+1.2
VCR				*e*S	Sn	07 44 15.4	+2.2
BLLM	**Bellamira**	**2.17**	**317**	*e*P	x	07 43 48.6	
VSM	**San Miguel**	**2.19**	**316**	*e*P	x	07 43 48.0	
JCR	**Jicaral**	**2.53**	**141**↓	*e*P	Pn	07 43 53.7	+1.0
JCR				*e*S	Sn	07 44 23.9	-0.6
CGA2	**Cerro Gallo 2**	**2.86**	**129**	*e*P	Pn	07 43 57.2	+0.3
CGA2				*e*S	Sn	07 44 34.3	+2.4
LFRS	**El Faro**	**2.89**	**308**	*e*P	x	07 43 57.6	
PRS1	**Puriscal**	**3.00**	**128**	*e*P	Pn	07 43 59.9	+1.3
BOQS	**Boqueron**	**3.13**	**307**	*e*P	x	07 44 01.3	
LAJ	**Bijagual**	**3.22**	**127**↓	*e*P	Pn	07 43 59.0	-2.4
SBLS	**San Blas**	**3.46**	**305**	*e*P	x	07 44 05.6	
URSC	**Urasca**	**3.51**	**124**↑	*e*P	Pn	07 44 06.9	+1.7
URSC				*e*S	Sn	07 44 50.3	+3.5
BUS	**Buena Vista**	**3.69**	**128**	*e*P	Pn	07 44 09.8	+2.3
BUS				*e*S	Sn	07 44 54.9	+3.8
CHI2		**14.70**	**118**↑	*e*P	x	07 43 34.5	
LAPE	**La Pedrera**	**15.52**	**105**↑	*e*P	x	07 43 42.4	
LAPE				*i* S	x	07 44 06.3	

IDC 20 07:48:55.2±3.7, 632S×15475E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=135.1km s-min=36.5km az=116.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.01**	**234**	P	P	07 54 12.1	+0.1
	0.9nm,0.8s,baz=57,slow=9.5,SNR=4.2						
ASAR	**Alice Springs**	**26.44**	**227**	P	P	07 54 34.0	-0.1
	1.6nm,0.7s,baz=67,slow=9.1,SNR=8.5						
MKAR	**Makanchi Array**	**82.74**	**319**	P	P	08 01 20.9	-0.2
	0.7nm,0.8s,baz=111,slow=6.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**152.61**	**286**	PKPbc	PKPbc	08 08 55.2	+0.3
	0.7nm,0.7s,baz=60,slow=2.2,SNR=6.7						

BJI **20** *07:55:13.3, 3874S×17864E, h22km, mB6.5, mb5.8, Ms6.6, Msz6.4*

SZGRF **20** *07:55:14.9, 3940S×17842E, h56km, mb6.8, Off east coast of North Island, New Zealand*

NEIC **20** *07:55:15.8±0.1, 3901S×17829E, h20km, mb6.3/86, ME6.3, MS6.5/165, MW6.5, ML6.9(WEL), Error ellipse: s-maj=4.4km s-min=3.0km az=158.0, Moment Tensor Solution. s37 Moment tensor: Scale 10^{18}Nm; M_{rr}=4.67; $M_{\theta\theta}$=4.51; $M_{\phi\phi}$=0.15; $M_{r\theta}$=0.76; $M_{r\phi}$=3.32; $M_{\theta\phi}$=1.95; Best double couple: M_o=6.00000×10^{18} NP1:ϕ_s82.00000°, δ40.00000°, λ-59.00000°. NP2:ϕ_s224.00000°, δ56.00000°, λ-114.00000°. Principal axes: T 6.5300, Plg8.0000°, Azm330.0000°; N -1.1600, Plg19.0000°, Azm237.0000°; P -5.3800, Plg68.0000°, Azm82.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s216.00000°, δ52.00000°, λ-117.00000°. NP2:ϕ_s75.00000°, δ45.00000°, λ-60.00000°. Principal axes: T Plg4.0000°, Azm324.0000°; N Plg0.0000°, Azm0.0000°; P Plg69.0000°, Azm64.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC One person died of a heart attack, 3 buildings collapsed and several heavily damaged [VII], a main road damaged and power outages occurred at Gisborne. Felt [VII] at Mangapapa and Whataupoko; [V] at Kaiti; [V] at Edgecumbe and Wairoa; [IV] at Blenheim, Hastings, Kapiti, Napier, Tauranga, Wanganui and Whakatane; [III] at Lower Hutt, New Plymouth, Palmerston North, Rotorua, Taupo, Te Puke, Upper Hutt and Wellington; [II] at Christchurch and Nelson. Also felt at Auckland, Dannevirke, Leeston, Levin, Marton, North Shore, Opotiki, Otaki, Porirua and Waipukurau.

GCMT **20** *07:55:15.8±0.1, 3892S×17840E, h30km, MW6.6/119, Moment Tensor Solution. s119,c289; s110,c484; Duration: 4s7 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.76±.00; $M_{\theta\theta}$0.57±.00; $M_{\phi\phi}$0.19±.00; $M_{r\theta}$-0.06±.01; $M_{r\phi}$0.56±.00; $M_{\theta\phi}$0.21±.01; Best double couple: M_o0.90300×10^{19} NP1:ϕ_s72.00000°, δ46.00000°, λ-63.00000°. NP2:ϕ_s217.00000°, δ50.00000°, λ-115.00000°. Principal axes: T 0.9750, Plg2.0000°, Azm324.0000°; N -0.1430, Plg19.0000°, Azm233.0000°; P -0.8320, Plg71.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS **20** *07:55:17.6±1.0, 3878S×17803E, h33km, mb6.4/33, MS6.5/62 Error ellipse: s-maj=8.9km s-min=7.5km az=57.0*

IDC **20** *07:55:18.9±1.1, 3881S×17804E, h34km±7km, mb5.7/28, mb1 5.7/29, mb1mx5.7/29, mbtmp5.7/29, ML5.4/1, MS6.4/26, Ms1 6.4/26, ms1mx6.2/32, Error ellipse: s-maj=10.1km s-min=7.0km az=28.0*

ISCJB **20** *07:55:19.2±0.3, 3891S±002×17798E±003, h47km±2km, mb6.2/115, MS6.5/212, Error ellipse: s-maj=4.2km s-min=3.4km az=151.2*

DJA **20** *07:55:19, 3894S×17790E, h25km, Mw6.9/25*

IGIL **20** *07:55:22.9, 3899S×17778E, h68km, MS6.7*

ISC 20 07:55:20.0±0.3, 3895S±002×17801E±003, h42km±2km, h40km±1.6km: pP-P, n1373, σ1911/538, mb6.2/113, MS6.5/212, 189C-207D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.27**	**254**	P	**Pn**	**07 55 29.5**	**+1.4**
MWZ	**Matawai**	**0.72**	**328**↑	*e*P	**Pn**	**07 55 33.1**	**-0.6**
PUZ	**Puketiti**	**0.90**	**12**	P	**Pn**	**07 55 31.8**	**-4.3**
PUZ				S	**Sn**	**07 55 42.4**	**-5.4**
URZ	**Urewera**	**0.99**	**314**	Pg	**Pn**	**07 55 37.6**	**+0.2**
	33μm,0.3s,baz=180,slow=2.6,SNR=3741						
URZ	**Urewera**	**0.99**	**314**	P	**Pn**	**07 55 37.5**	**+0.2**
BKZ	**Black Stump Fm**	**1.20**	**259**	P	**Pn**	**07 55 42.5**	**+2.2**
EDRZ	**Edgecumbe**	**1.30**	**310**↑	P	**Pn**	**07 55 42.6**	**+0.9**
MXZ	**Matakaoa Point**	**1.40**	**10**	P	**Pn**	**07 55 39.1**	**-3.9**
MARZ	**Manawahe**	**1.42**	**312**	P	**Pn**	**07 55 43.6**	**+0.3**
MKRZ	**Makatiti**	**1.46**	**303**	P	**Pn**	**07 55 45.1**	**+1.3**
HATZ	**Hinemaiaia**	**1.50**	**272**	P	**Pn**	**07 55 46.3**	**+1.9**
WIZ	**White Island**	**1.56**	**335**	P	**Pn**	**07 55 43.4**	**-1.8**
LIRZ	**Lichensteins R**	**1.59**	**306**	P	**Pn**	**07 55 46.3**	**+0.7**
UTU	**Utuhina**	**1.62**	**298**	*e*P	**Pn**	**07 55 47.4**	**+1.4**
KARZ	**Kaharoa**	**1.67**	**303**	P	**Pn**	**07 55 47.3**	**+0.6**
RITZ	**Rihia Road**	**1.68**	**268**	P	**Pn**	**07 55 49.7**	**+2.9**
RATZ	**Rangitukua**	**1.75**	**272**	P	**Pn**	**07 55 49.4**	**+1.6**
WATZ	**Wairara**	**1.80**	**277**	*e*P	**Pn**	**07 55 50.3**	**+1.9**
KATZ	**Kakaramea**	**1.81**	**268**↑	*e*P	**Pn**	**07 55 50.7**	**+2.1**
MOVZ	**Moawhango**	**1.81**	**255**↑	P	**Pn**	**07 55 51.0**	**+2.3**
TGRZ	**Tauranga**	**1.84**	**311**↑	*e*P	**Pn**	**07 55 48.8**	**-0.2**
TUVZ	**Tukino**	**1.86**	**259**↑	P	**Pn**	**07 55 51.9**	**+2.6**
NGZ	**Ngauruhoe**	**1.89**	**262**↑	P	**Pn**	**07 55 52.1**	**+2.4**
WTVZ	**West Tongariro**	**1.89**	**264**↑	*e*P	**Pn**	**07 55 52.2**	**+2.4**
WNVZ	**Wahianoa**	**1.92**	**258**↑	P	**Pn**	**07 55 52.5**	**+2.4**
DRZ	**Dome Shelter**	**1.93**	**259**	P	**Pn**	**07 55 53.4**	**+3.1**
TSZ	**Takapari Road**	**1.94**	**234**	P	**Pn**	**07 55 51.5**	**+1.1**
FWVZ	**Far West T-bar**	**1.94**	**260**	P	**Pn**	**07 55 53.0**	**+2.6**
TWVZ	**Taurewa**	**2.01**	**266**↑	*e*P	**Pn**	**07 55 53.3**	**+1.9**
BFZ	**Birch Farm**	**2.20**	**218**	P	**Pn**	**07 55 53.0**	**-1.0**
TOZ	**Tahuroa Road**	**2.32**	**301**	P	**Pn**	**07 55 56.3**	**+0.7**
WAZ	**Wanganui**	**2.48**	**250**	P	**Pn**	**07 56 00.7**	**+2.9**
HIZ	**Hauiti**	**2.51**	**279**	P	**Pn**	**07 56 00.2**	**+2.0**
MRZ	**Mangatainoka R**	**2.54**	**227**	P	**Pn**	**07 55 58.9**	**+0.3**
VRZ	**Vera Road**	**2.54**	**265**	P	**Pn**	**07 56 00.9**	**+2.3**
RAEZ	**Rainy Point**	**2.83**	**262**	P	**Pn**	**07 56 05.8**	**+3.1**
KUZ	**Kuaotunu**	**2.85**	**320**↑	P	**Pn**	**07 56 01.5**	**-1.4**
MKAZ	**Moumakai**	**2.90**	**308**	P	**Pn**	**07 56 03.7**	**+0.1**
MTW	**Mount Morrison**	**2.93**	**220**	P	**Pn**	**07 56 02.1**	**-1.9**
KIW	**Kapiti Island**	**3.06**	**230**	P	**Pn**	**07 56 05.3**	**-0.5**
DFE	**Dawson Falls**	**3.06**	**262**	P	**Pn**	**07 56 10.2**	**+4.4**
NEZ	**North Egmont**	**3.06**	**263**	P	**Pn**	**07 56 09.5**	**+3.7**
PAWZ	**Paruwai Farm**	**3.14**	**218**	P	**Pn**	**07 56 04.6**	**-2.2**
PKE	**Pukeiti**	**3.14**	**264**	P	**Pn**	**07 56 09.8**	**+2.9**
OTAZ	**Otara**	**3.15**	**308**	P	**Pn**	**07 56 08.3**	**+1.2**
NWEZ	**Newall Road**	**3.24**	**263**	P	**Pn**	**07 56 11.3**	**+3.0**
MSWZ	**Moikau Station**	**3.25**	**220**	P	**Pn

comp=Z,468nm,1.0s,mb6.0
EIDS eS S 08 05 21.1 -2.0
AFI Afiamalu 26.52 23 PFAKE 08 01 00.0 +6.4
AFI LR LR
comp=Z,19µm,22.0s,MS5.6
FUNA Funafuti 30.31 2 PFAKE 08 01 40.0 +13
FUNA LR LR
comp=Z,70µm,22.0s,MS6.3
STKA Stephens Creek 30.36 272 eP P **08 01 30.0 +2.3**
STKA eSCS ScS 08 12 01.3 -0.6
STKA Stephens Creek 30.36 272 P P **08 01 28.9 +1.1**
comp=Z,194nm,0.8s,mb5.9,baz=104,slow=9.8,SNR=270
STKA S S **08 06 29.4 +4.1**
comp=Z,16nm,1.1s,baz=139,slow=20,SNR=1.4
STKA LR LR 08 12 49.3
comp=Z,124µm,20.9s,MS6.5,baz=108,slow=35
ADE Adelaide 31.49 265 P P **08 01 40.0 +2.3**
CTA Charters Tower 33.18 295 eP P **08 01 53.0 +0.4**
comp=Z,292nm,1.1s,mb6.1
CTA ePP PP 08 03 08.4 +0.3
CTA eS S **08 07 12.4 +3.0**
CTA eSCS ScS 08 12 18.0 +1.7
CTA Charters Tower 33.18 295 P P **08 01 53.5 +0.9**
comp=Z,260nm,1.0s,mb6.1,baz=126,slow=10.0,SNR=114
CTA S S **08 07 13.0 +3.5**
comp=Z,19nm,1.0s,baz=41,slow=20,SNR=2.3
CTA LR LR 08 14 46.7
comp=Z,71µm,20.5s,MS6.4,baz=130,slow=35
CTA Charters Tower 33.18 295 eP P **08 01 53.0 +0.4**
CTA e 08 03 08.4
CTA eS S **08 07 12.4 +3.0**
CTA e 08 12 18.0
CTA pmax pmax
comp=Z,292nm,1.1s
CTAO Charters Tower 33.18 295 eP P **08 01 53.4 +0.8**
comp=Z,769nm,1.3s,mb6.5
CTAO eS S **08 07 05.3 -4.1**
CTAO LR LR
comp=Z,80µm,19.0s,MS6.5
HNR Honiara 33.55 326 eP P **08 01 54.1 -1.8**
HNR eS S **08 07 11.7 -3.5**
HNR pmax pmax
comp=Z,3µm,1.1s,mb7.2
HNR MLR MLR
comp=Z,53µm,22.0s,MS6.2
HNR Honiara 33.55 326 eP P **08 01 54.1 -1.7**
comp=Z,3µm,1.1s,mb7.2
HNR eS S **08 07 11.7 -3.5**
HNR LR LR
comp=Z,53µm,22.0s,MS6.2
DRV Dumont d'Urvil 35.01 205 P P **08 02 12.0 +4.0**
DRV S S **08 07 46.0 +9.2**
DRV L 08 10 00.0
DRV R 08 12 00.0
PAE Paea 35.27 62 eP P **08 02 08.7 -2.0**
comp=Z,3µm,1.1s,mb7.1
PAE Paea 35.27 62 eP P **08 02 08.7 -2.0**
PAE pmax pmax
comp=Z,3µm,1.1s,mb7.1
PPT Papeete 35.33 62 eP P **08 02 09.3 -2.0**
comp=Z,531nm,1.5s,mb6.2
PPT eS S **08 07 39.8 -2.9**
comp=Z,19µm,25.2s
PPT eLQ 08 10 11.5
comp=Z,63µm,26.2s
PPT eLR LR 08 11 14.9
comp=Z,88µm,22.2s,baz=233
PPT Papeete 35.33 62 P P **08 02 10.5 -0.8**
comp=Z,246nm,0.9s,mb6.1,baz=265,slow=1.3,SNR=15
PPT LR LR 08 13 03.1
comp=Z,53µm,21.4s,MS6.3,baz=228,slow=30
PPT T 08 39 24.3
comp=Z,225nm,0.3s,baz=335,slow=23,SNR=6.4
PPT Papeete 35.33 62 P P **08 02 10.5 -0.8**
PPT LR LR 08 13 03.1
TVO Taravao 35.41 63 eP P **08 02 10.1 -1.8**
comp=Z,3µm,1.1s,mb7.1
TVO Taravao 35.41 63 eP P **08 02 10.1 -1.8**
TVO pmax pmax
comp=Z,3µm,1.1s,mb7.1
TIAR Tiarei 35.50 62 eP P **08 02 10.8 -1.9**
comp=Z,3µm,0.9s,mb7.3
MEH Mehetia 36.18 64 eP P **08 02 16.7 -1.8**
comp=Z,3µm,1.1s,mb7.1
PMOR Pomariorio Ree 38.27 61 eP P **08 02 34.2 -2.1**
comp=Z,410nm,1.3s,mb6.0
VAH Vaihoa 38.29 62 eP P **08 02 34.0 -2.4**
comp=Z,339nm,1.2s,mb5.9
VNDA Vanda 39.29 185 P P **08 02 45.8 +1.6**
comp=Z,5.6nm,0.8s,baz=7.0,slow=8.5,SNR=17
VNDA S S **08 08 44.2 +2.6**
comp=Z,4.1nm,1.1s,baz=198,slow=3.2,SNR=1.7
VNDA LR LR 08 15 22.4
comp=Z,65µm,21.8s,MS6.4,baz=24,slow=30
VNDA Vanda 39.29 185 P P **08 02 45.8 +1.7**
VNDA S S **08 08 44.2 +2.6**
VNDA Vanda 39.29 185 P P **08 02 45.8 +1.6**
VNDA S S **08 08 44.2 +2.6**
VNDA LR LR 08 15 22.4
SBA Scott Base 39.30 184 eP P **08 02 47.2 +3.0**
SBA e*PP pP 08 02 58.2 +2.3
SBA eS S **08 08 48.0 +6.2**
SBA pmax pmax
comp=Z,388nm,1.7s,mb5.9
SBA MLR MLR
comp=Z,75µm,21.0s,MS6.5
SBA Scott Base 39.30 184 eP P **08 02 47.2 +3.0**
comp=Z,388nm,1.7s,mb5.9
SBA ⇑epP pP 08 02 58.2 +2.3
SBA eS S **08 08 48.0 +6.3**
SBA LR LR
comp=Z,75µm,21.0s,MS6.5
COEN Coen 39.52 299 eP P **08 02 46.5 -0.2**
comp=Z,864nm,1.3s,mb6.3
ASAR Alice Springs 40.25 279 P P **08 02 52.6 -0.1**
comp=Z,632nm,0.8s,mb6.4,baz=118,slow=7.2,SNR=1164
ASAR ScP ScP 08 08 44.4 +2.7
comp=Z,14nm,0.9s,baz=121,slow=5.2,SNR=5.7
ASAR S S **08 08 57.1 0.0**
comp=Z,61nm,1.0s,baz=117,slow=15,SNR=15
ASAR P3KPbc 08 32 58.8
comp=Z,3.2nm,0.9s,baz=300,slow=4.2,SNR=17
ASAR P3KP 08 34 16.2
comp=Z,3.0nm,1.1s,baz=259,slow=0.9,SNR=4.9
ASAR Alice Springs 40.25 279 P P **08 02 52.6 -0.1**
ASAR S S **08 08 57.2 +0.1**
ASAR Alice Springs 40.25 279 P P **08 02 52.6 -0.1**
ASAR ScP ScP 08 08 44.4 +2.7
ASAR S S **08 08 57.1 0.0**
ASAR e 08 32 58.8
ASAR PKKKP 08 34 16.2
PMG Port Moresby 40.34 309 P P **08 02 53.2 -0.3**
comp=Z,646nm,0.9s,mb6.4,baz=116,slow=5.2,SNR=84
PMG ScP ScP 08 08 45.7 +3.5
comp=Z,151nm,1.1s,baz=148,slow=1.4,SNR=7.8
PMG LR LR 08 15 11.3
comp=Z,26µm,21.2s,MS6.0,baz=140,slow=30
PMG Port Moresby 40.34 309*d* iP P **08 02 53.4 -0.2**
PMG pmax pmax
comp=Z,565nm,0.9s
PMG Port Moresby 40.34 309 eP P **08 02 53.6 0.0**
comp=Z,398nm,0.7s,mb6.2
PMG LR LR
comp=Z,153µm,22.0s,MS6.8
TARA Tarawa 40.38 352 eP P **08 02 52.0 -1.8**
comp=Z,1µm,1.3s,mb6.5
TARA LR LR
comp=Z,18µm,20.0s,MS5.9
FORT Forrest 41.36 266 eP P **08 03 02.5 +0.7**
comp=Z,492nm,0.8s,mb6.2
FORT eS S **08 09 17.4 +3.9**
WB2 Warramunga Arr 42.02 284 eP P **08 03 06.4 -0.9**
WB2 eS S **08 09 20.9 -2.5**
WRAB Tennant Creek 42.02 284*d* iP P **08 03 06.4 -0.9**
WRAB Tennant Creek 42.02 284 eP P **08 03 06.6 -0.8**
comp=Z,849nm,1.4s,mb6.2
WRAB LR LR
comp=Z,151µm,19.0s,MS6.9
WRA Warramunga Arr 42.02 284 P P **08 03 06.5 -0.9**
comp=Z,176nm,0.8s,mb5.8,baz=129,slow=7.2,SNR=703
WRA S S **08 09 22.7 -0.8**
comp=Z,43nm,1.0s,baz=128,slow=15,SNR=9.7
WRA LR LR 08 21 00.4
comp=Z,126µm,19.9s,MS6.8,baz=115,slow=37
WRA Warramunga Arr 42.02 284 P P **08 03 06.5 -0.9**
WRA S S **08 09 22.7 -0.8**

RKT Rikitea 42.79 83 eP P **08 03 11.0 -2.5**
comp=Z,108nm,1.1s,mb5.5
RKT eS S **08 09 31.5 -3.2**
comp=Z,27µm,28.8s
RKT eLQ 08 12 59.9
comp=Z,103µm,33.5s
RKT eLR LR 08 15 02.9
comp=Z,127µm,25.5s,baz=238
RKT Rikitea 42.79 83 eP P **08 03 11.0 -2.5**
RKT eS S **08 09 31.5 -3.2**
RKT pmax pmax
comp=Z,108nm,1.1s,mb5.5
RKT Rikitea 42.79 83 eP P **08 03 11.0 -2.5**
comp=Z,108nm,1.1s,mb5.5
RKT eS S **08 09 31.5 -3.2**
RKT eLQ 08 12 59.9
PTCN Pitcairn Islan 45.55 88 eP P **08 03 35.6 -0.1**
comp=Z,1µm,1.5s,mb6.7
PTCN LR LR
comp=Z,43µm,20.0s,MS6.4
CASY Casey 46.10 211 eP P **08 03 41.0 +1.6**
CASY eS S **08 10 24.2 +2.4**
XMAS Kiritimati 46.63 35 eP P **08 03 43.8 -0.4**
comp=Z,664nm,1.1s,mb6.5
XMAS LR LR
comp=Z,25µm,19.0s,MS6.2
TAOE Nuku Hiva Isla 47.94 63 eS S **08 10 47.4 -1.9**
comp=Z,66µm,23.9s
TAOE eLQ 08 15 24.1
comp=Z,163µm,26.1s
TAOE eLR LR 08 17 19.2
comp=Z,219µm,22.7s,baz=229
KWAJ Kwajalein Atol 48.48 346 eP P **08 03 56.3 -2.2**
comp=Z,672nm,1.4s,mb6.5
NWAO Narrogin (SRO) 48.79 257 P P **08 04 00.2 -0.6**
comp=Z,145nm,0.9s,mb6.0,baz=114,slow=6.9,SNR=52
NWAO S S **08 11 03.1 +2.2**
comp=Z,7.1nm,0.8s,baz=292,slow=19,SNR=3.4
NWAO LR LR 08 24 30.6
comp=Z,73µm,18.3s,MS6.7,baz=97,slow=36
NWAO Narrogin (SRO) 48.79 257 eP P **08 03 59.2 -1.6**
NWAO e*PP pP 08 04 09.5 -3.2
NWAO e*SP sP 08 04 14.8 -2.9
NWAO eS S **08 11 00.4 -0.5**
NWAO pmax pmax
comp=Z,220nm,0.9s
NWAO MLR MLR
comp=Z,58µm,19.0s
NWAO Narrogin (SRO) 48.79 257 eP P **08 03 59.2 -1.6**
comp=Z,220nm,0.9s,mb6.2
NWAO epP pP 08 04 09.5 -3.2
NWAO esP sP 08 04 14.8 -2.8
NWAO eS S **08 11 00.4 -0.4**
NWAO LR LR
comp=Z,58µm,19.0s,MS6.6
KLBR Kellerberrin 48.97 259⇓*i* P P **08 04 01.5 -0.7**
comp=Z,1µm,1.6s,mb6.7
KLBR eS S **08 11 03.8 +0.4**
FITZ Fitzroy Crossi 49.75 279⇓*i* P P **08 04 07.8 -0.5**
comp=Z,1µm,1.5s,mb6.7
FITZ Fitzroy Crossi 49.75 279 eP pP 08 04 21.0 +0.8
FITZ eS S **08 11 15.2 +0.6**
FITZ eSCS ScS 08 13 54.1 -2.4
MUN Mundaring 49.98 258⇓*i* P P **08 04 09.0 -0.9**
MUN eS S **08 11 18.3 +0.7**
QSPA South Pole Qui 51.18 180 P P **08 04 19.0 +0.7**
comp=Z,356nm,1.0s,mb6.2,baz=28,slow=2.1,SNR=364
QSPA S S **08 11 36.5 +3.5**
comp=Z,1.3nm,0.3s,baz=9.5,slow=12,SNR=1.8
QSPA LR LR 08 22 18.4
comp=Z,110µm,20.9s,MS6.9,baz=45,slow=32
QSPA P3KP 08 33 43.0
comp=Z,0.7nm,0.4s,baz=111,slow=2.3,SNR=2.6
MBWA Marble Bar 52.60 272⇓*i* P P **08 04 28.6 -1.1**
comp=Z,501nm,0.8s,mb6.5
MBWA eS S **08 11 49.6 -4.4**
MBWA LR LR
comp=Z,85µm,20.0s,MS6.8
MIR Mirnyy 53.06 210k *i* P P **08 04 34.0 +1.6**
MIR *i* S S **08 12 00.0 +0.9**
MIR *i* PS 08 12 26.0
MIR *i* SSS 08 17 30.0
MIR pmax pmax
comp=Z,400nm,2.0s,mb6.0
MIR pmax pmax
comp=Z,5µm,4.0s
MIR MLR MLR
comp=Z,24µm,17.0s,MS6.3
RPN Rapa Nui 60.59 102 P P **08 05 27.0 +0.7**
comp=Z,337nm,1.2s,mb6.4,baz=337,slow=5.5,SNR=12
RPN LR LR 08 25 14.2
comp=Z,26µm,20.5s,MS6.4,baz=245,slow=30
RPN Rapa Nui 60.59 102 eP P **08 05 26.3 0.0**
RPN pmax pmax
comp=Z,2µm,1.6s,mb6.9
RPN MLR MLR
comp=Z,28µm,21.0s,MS6.4
RPN Rapa Nui 60.59 102 eP P **08 05 26.3 -0.1**
comp=Z,2µm,1.6s,mb6.9
RPN LR LR
comp=Z,28µm,21.0s,MS6.4
GUMO Guam 60.74 322 P P **08 05 25.5 -1.9**
comp=Z,229nm,1.1s,mb6.2,baz=188,slow=7.6,SNR=3.6
GUMO S S **08 13 40.3 -1.1**
comp=Z,38nm,0.7s,baz=197,slow=19,SNR=2.1
GUMO LR LR 08 27 38.4
comp=Z,14µm,21.6s,MS6.1,baz=150,slow=32
GUMO Guam 60.74 322 P P **08 05 25.5 -1.9**
GUMO S S **08 13 40.3 -1.1**
KAPI Kappang 62.42 287 P P **08 05 38.8 0.0**
SNR=23
KAPI Kappang 62.42 287 P P **08 05 37.1 -1.8**
comp=Z,161nm,1.0s,mb6.1,baz=128,slow=3.3,SNR=25
KAPI S S **08 14 03.4 +0.5**
comp=Z,8.7nm,1.0s,baz=72,slow=16,SNR=2.4
KAPI Kappang 62.42 287 eP P **08 05 37.0 -1.9**
comp=Z,384nm,1.0s,mb6.5
KAPI LR LR
comp=Z,61µm,19.0s,MS6.8
MAW Mawson 63.17 203 eP P **08 05 45.0 +1.9**
comp=Z,165nm,1.3s,mb6.0
MAW Mawson 63.17 203 P P **08 05 45.1 +2.1**
comp=Z,339nm,1.2s,mb6.3,baz=125,slow=8.7,SNR=36
MAW S S **08 14 13.0 +2.1**
comp=Z,5.8nm,0.8s,baz=54,slow=17,SNR=2.1
MAW LR LR 08 32 56.9
comp=Z,26µm,18.9s,MS6.4,baz=118,slow=36
MAW PKPPKP 08 34 42.4
comp=Z,21nm,1.0s,baz=277,slow=7.4,SNR=6.1
MAW Mawson 63.17 203 P P **08 05 45.1 +2.0**
MAW S S **08 14 13.0 +2.1**
MAW pmax pmax
comp=Z,339nm,1.3s
MAW smax
comp=N,6.0nm,0.8s
MAW MLR MLR
comp=Z,26µm,18.9s
PUH Pauahi 63.21 28 eP P **08 05 43.6 -0.2**
STCH Steam Cracks 63.25 29 eP P **08 05 44.0 -0.1**
POHA Pohakuloa 63.44 28 eP P **08 05 44.8 -0.5**
comp=Z,828nm,1.2s,mb6.7
POHA LR LR
comp=Z,16µm,20.0s,MS6.2
HON Honolulu 64.03 25 eP P **08 05 48.6 -0.6**
KIP Kipapa 64.12 25 eP P **08 05 49.9 +0.1**
KIP pmax pmax
comp=Z,1µm,1.4s,mb6.7
KIP MLR MLR
comp=Z,11µm,19.0s,MS6.1
KIP Kipapa 64.12 25 eP P **08 05 49.9 +0.1**
comp=Z,1µm,1.4s,mb6.7
KIP LR LR
comp=Z,11µm,19.0s,MS6.1
PMSA Palmer Station 65.85 155 P P **08 06 01.4 +0.8**
comp=Z,90nm,1.1s,mb5.7,baz=224,slow=12,SNR=3.5
PMSA Palmer Station 65.85 155 eP P **08 05 57.3 -3.3**
comp=Z,314nm,1.3s,mb6.2
PMSA LR LR
comp=Z,40µm,22.0s,MS6.6
DAV Davao City (W) 66.72 301 P P **08 06 07.0 +0.2**
SNR=69
DAV Davao City (W) 66.72 301 P P **08 06 07.1 +0.2**
comp=Z,1µm,0.8s,mb7.0,baz=62,slow=2.3,SNR=50
DAV Davao City (W) 66.72 301⇓*e*P P **08 06 04.0 -2.8**
DAV Davao City (W) 66.72 301 eP P **08 06 06.4 -0.4**
comp=Z,15µm,2.1s

DAV LR LR
comp=Z,27µm,20.0s,MS6.5
MIDW Midway 66.95 4 eP P **08 06 06.9 -1.1**
comp=Z,385nm,1.4s,mb6.2
MIDW LR LR
comp=Z,21µm,19.0s,MS6.4
BUKP Musuan 67.65 301 eP P **08 06 12.6 -0.2**
SYO Syowa Base 68.05 195⇑*i* P P **08 06 13.2 -1.3**
SYO Syowa Base 68.05 195⇓*i* P P **08 06 18.0 +3.5**
PAGZ Pagadian 68.76 300 eP P **08 06 18.9 -0.8**
MSLP Maasin 69.45 303 eP P **08 06 21.1 -2.9**
SNAA Sanae 69.68 180 eP P **08 06 25.1 +0.5**
SNAA e 08 06 29.8
SNAA e pP 08 06 37.7 +0.6
SNAA e 08 06 47.1
SNAA Sanae 69.68 180*d* iP P **08 06 24.7 +0.1**
SNAA pmax pmax
comp=Z,611nm,1.3s
SNAA Sanae 69.68 180 eP P **08 06 25.3 +0.7**
comp=Z,676nm,1.3s,mb6.4
TBP Tagbilaran 69.78 302 eP P **08 06 24.3 -1.8**
XMIS Christmas Isla 69.78 273 eP P **08 06 25.1 -1.0**
XMIS e pP 08 06 39.8 +1.2
XMIS eS S 08 15 35.3 +2.8
VNA3 Neumayer Olymp 69.98 177 eP P **08 06 27.2 +0.8**
VNA3 e 08 06 31.8
VNA3 e pP 08 06 39.3 +0.4
VNA3 e 08 06 48.8
TSM Tawau 70.09 293⇑P P **08 06 28.0 0.0**
MAIT Maitri 70.14 185 eP P **08 06 27.0 -0.4**
NVL N'lazarevskaya 70.14 185*d* iP P **08 06 28.6 +1.2**
NVL eS S 08 15 36.6 +1.5
NVL pmax pmax
comp=Z,526nm,1.6s,mb6.2
PLP Palo 70.14 304⇓*e*P P **08 06 26.6 -1.6**
LLP Lapu-Lapu 70.18 302 eP P **08 06 28.4 -0.1**
MYLDM Lahad Datu 70.25 294⇑P P **08 06 30.4 +1.4**
VNA2 Neumayer--Watz 70.37 178 eP P **08 06 30.1 +1.3**
baz=177,slow=6.5
VNA2 e 08 06 34.8
VNA2 e pP 08 06 42.4 +1.1
VNA2 e 08 06 51.6
VNA1 Neumayer--Stat 70.62 178 eP P **08 06 31.6 +1.2**
VNA1 e 08 06 36.6
VNA1 e pP 08 06 44.3 +1.5
VNA1 e 08 06 53.2
USHA Ushuaia 70.71 146 LR LR 08 29 54.4
comp=Z,80µm,21.9s,MS6.9,baz=124,slow=29
USHA PKP2ab 08 34 23.9
comp=Z,15nm,0.9s,baz=42,slow=0.5,SNR=7.5
GUIM Jordan 71.32 301 eP P **08 06 32.5 -2.8**
CNP Catarman 71.35 304 eP P **08 06 27.2 -8.3**
SDKM Sandakan 71.50 294⇑P P **08 06 35.8 -0.8**
RCP Roxas 71.90 302⇓*e*P P **08 06 40.6 +1.8**
KKM Kota Kinabalu 72.48 293 eP P **08 06 41.7 -0.8**
comp=Z,705nm,0.9s,mb6.6
KKM LR LR
comp=Z,22µm,21.0s,MS6.4
KKM Kota Kinabalu 72.48 293⇓P P **08 06 42.3 -0.2**
PVCP Virac 72.48 305 eP P **08 06 38.6 -3.7**
CUYO Cuyo Island 72.53 300 eP P **08 06 40.3 -2.4**
KDM Kudat 72.64 294⇑P P **08 06 43.7 +0.3**
BTM Bintulu 72.83 289⇓P P **08 06 44.5 -0.1**
OTRP Odiongan 72.96 302 eP P **08 06 42.5 -2.7**
SBUM Sibu 72.97 288 P P **08 06 45.3 -0.1**
BATP Bataraza 73.27 296 eP P **08 06 45.7 -1.4**
PPR Puerto Princes 73.32 298⇓*e*P P **08 06 47.3 0.0**
SJMP San Jose 73.63 301 eP P **08 06 46.8 -2.3**
CBIJ Chichi jima 73.74 327 P P **08 06 48.3 -1.2**
comp=Z,203nm,1.0s,mb6.0,baz=253,slow=22,SNR=5.8
CBIJ LR LR 08 35 45.0
comp=Z,15µm,21.8s,MS6.2,baz=8.6,slow=33
KSM Kuching 73.75 286 eP P **08 06 48.5 -1.5**
comp=Z,437nm,1.0s,mb6.3
KSM Kuching 73.75 286 P P **08 06 49.7 -0.3**
GQP Guinayangan 73.82 303 eP P **08 06 48.7 -1.6**
ENPP Ei Nido 73.86 299 eP P **08 06 50.3 -0.3**
BUSP Coron 73.92 300 eP P **08 06 49.8 -1.1**
COYC Coyhaique 74.98 137⇓*e*P P **08 06 56.8 +0.2**
LUBP Lubang 75.14 302 eP P **08 06 54.4 -3.5**
COCO West Island 75.62 266 PFAKE 08 07 10.0 +9.2
COCO LR LR
comp=Z,30µm,19.0s,MS6.6
BALP Baler 75.74 304 eP P **08 07 01.6 +0.3**
CAUP Cauayan 76.47 305 eP P **08 07 05.9 +0.5**
BOLP Bolinao 77.28 303 eP P **08 07 10.1 +0.1**
EFI East Falkland 77.36 148*d* iP P **08 07 10.3 +0.3**
EFI East Falkland 77.36 148 eP P **08 07 10.4 +0.4**
comp=Z,283nm,1.0s,mb6.2
EFI LR LR
comp=Z,38µm,22.0s,MS6.7
MYKOM Kota Tinggi 78.86 281⇓P P **08 07 18.9 -0.1**
PLCA Paso Flores 79.03 134 P P **08 07 20.0 +0.5**
comp=Z,148nm,1.2s,mb5.8,baz=219,slow=5.8,SNR=90
PLCA S S 08 17 17.4 +2.1
comp=Z,0.4nm,0.5s,baz=240,slow=16,SNR=1.9
PLCA PKKP PKKPdf 08 25 56.9 -0.6
comp=Z,2.5nm,1.2s,baz=110,slow=4.1,SNR=2.4
PLCA PKKPbc PKKPbc 08 26 10.6 +0.4
comp=Z,4.5nm,1.1s,baz=342,slow=1.4,SNR=5.1
PLCA PKP2ab 08 34 04.3
comp=Z,2.3nm,0.8s,baz=50,slow=1.0,SNR=5.2
PLCA LR LR 08 34 33.3
comp=Z,25µm,20.4s,MS6.5,baz=227,slow=30
PLCA Paso Flores 79.03 134 P P **08 07 20.0 +0.5**
PLCA S S 08 17 17.4 +2.1
PLCA pmax pmax
comp=Z,148nm,1.2s
PLCA Paso Flores 79.03 134 eP P **08 07 20.1 +0.6**
comp=Z,617nm,1.6s,mb6.3
PLCA LR LR
comp=Z,25µm,20.0s,MS6.5
KGM Kluang 79.41 281⇑P P **08 07 22.1 +0.1**
JHJ Hachijo jima 2 80.00 328 LR LR 08 39 33.5
comp=Z,8µm,21.7s,MS6.0,baz=235,slow=33
JOW Kunigami 80.26 316 P P **08 07 25.1 -1.1**
comp=Z,41nm,0.9s,mb5.4,baz=244,slow=4.7,SNR=7.1
JOW LR LR 08 39 16.8
comp=Z,10µm,21.3s,MS6.2,baz=164,slow=33
JOW Kunigami 80.26 316 P P **08 07 25.1 -1.1**
JOW LR LR 08 39 16.8
TWG Pinlang 81.31 309 eP P **08 07 29.0 -2.9**
comp=Z,155nm,0.8s,mb6.0
YULB Yu-li 81.60 309 eP P **08 07 30.1 -3.3**
comp=Z,198nm,0.9s,mb6.0
KTGM Kuala Trenggan 81.67 284⇑P P **08 07 34.1 0.0**
TPUB Ta-pu 81.94 309 eP P **08 07 33.3 -1.9**
comp=Z,283nm,1.0s,mb6.2
NACB Ninganchiao 82.01 310 P P **08 07 28.2 -7.3**
comp=Z,419nm,1.4s,mb6.2
SSLB Suanglung 82.11 309 eP P **08 07 30.2 -5.8**
comp=Z,505nm,1.1s,mb6.4
YHNB Yeheng 82.51 310 eP P **08 07 37.1 -1.1**
comp=Z,362nm,1.3s,mb6.2
YHNB LR LR
comp=Z,26µm,22.0s,MS6.5
TATO Taipei 82.67 310 eP P **08 07 37.8 -1.2**
comp=Z,394nm,1.1s,mb6.3
TATO LR LR
comp=Z,33µm,21.0s,MS6.7
IPM Ipoh 82.73 282⇑P P **08 07 38.9 -0.8**
PSI Prapat 83.28 279 P P **08 07 40.3 -2.1**
comp=Z,57nm,0.8s,mb5.6,baz=144,slow=4.5,SNR=40
PSI PP PP 08 10 54.1 -0.4
comp=Z,65nm,1.2s,baz=163,slow=8.4,SNR=5.3
PSI S S 08 17 55.9 -4.3
comp=Z,1.4nm,0.4s,baz=360,slow=23,SNR=7.5
KULM Kulim 83.54 282 eP P **08 07 42.0 -1.8**
comp=Z,149nm,1.0s,mb6.1
KULM Kulim 83.54 282⇑P P **08 07 42.9 -0.9**
MJAR Matsushiro Arr 83.61 329 P P **08 07 41.8 -1.7**
comp=Z,16nm,0.9s,mb5.2,baz=164,slow=5.1,SNR=14
MJAR PP PP 08 10 54.8 -2.2
comp=Z,4.4nm,0.9s,baz=134,slow=54,SNR=4.8
MJAR PKPPKP 08 34 01.8
comp=Z,3.6nm,1.1s,baz=296,slow=3.7,SNR=5.3
MJAR LR LR 08 41 25.7
comp=Z,15µm,21.9s,MS6.3,baz=180,slow=33
MJAR Matsushiro Arr 83.61 329 P P **08 07 41.8 -1.7**
MJAR 08 10 54.8
MAJO Matsushiro 83.61 329 eP P **08 07 42.1 -1.4**
comp=Z,111nm,1.0s,mb6.0
MAJO LR LR
comp=Z,16µm,22.0s,MS6.3

MAT Matsushiro 83.61 329 P **P** **08 07 41.9 -1.6**
MAT S S 08 17 58.0 -4.4
CLCH Cerro Calan 84.01 128⇓*e*P **P** **08 07 45.5 -0.4**
FCH Farellones 84.20 129⇓*e*P **P** **08 07 47.5 +0.5**
QZH Quanzhou 84.40 308 *i* P **P** **08 07 47.4 -0.5**
QZH S S 08 18 06.0 -4.9
QZH AMB AMB
comp=Z,870nm,1.3s,mb6.7
QZH AMB AMB
comp=Z,5μm,9.8s
QZH LR LR
comp=N,13μm,19.0s,MS6.6
QZH LR LR
comp=E,21μm,19.0s,MS6.6
QZH LR LR
comp=Z,43μm,24.8s
SNG Songkhla 84.77 283 P **P** **08 07 52.0 +2.0**
comp=Z,220nm,0.8s,mb6.3
HKC Hong Kong Obse 85.28 303⇓*i*P **P** **08 07 52.0 -0.4**
HKC *i* S S 08 18 16.0 -3.8
TRQA Tornquist 85.62 137 *e*P **P** **08 07 53.8 -0.2**
comp=Z,358nm,1.6s,mb6.3
TRQA LR LR
comp=Z,23μm,20.0s,MS6.6
QIZ Qiongzhong 85.90 298 P **P** **08 07 55.6 +0.1**
QIZ XP sP 08 08 09.5 -3.5
QIZ PP PP 08 11 16.3 +0.3
QIZ S S 08 18 17.4 -8.6
QIZ SS SS 08 24 05.5 +0.9
QIZ LR LR
comp=E,13μm,23.3s
QIZ LR LR
comp=Z,32μm,24.7s,MS6.6
QIZ Qiongzhong 85.90 298 *e*P **P** **08 07 53.4 -2.1**
comp=Z,186nm,1.5s,mb6.1
QIZ LR LR
comp=Z,15μm,21.0s,MS6.4
TLL Tololo Astrono 86.04 126⇓*e*P **P** **08 07 55.8 -0.4**
GZH Guangzhou 86.38 303 P **P** **08 07 58.1 +0.3**
GZH LR LR
comp=N,4μm,20.2s,MS6.3
GZH LR LR
comp=E,11μm,20.4s,MS6.3
GZH LR LR
comp=Z,15μm,23.5s,MS6.3
ERM Erimo 86.60 335 *e*P **P** **08 07 58.1 -0.3**
ERM pmax pmax
comp=Z,42nm,1.6s,mb5.4
ERM Erimo 86.60 335 *e*P **P** **08 07 57.3 -1.1**
comp=Z,91nm,1.6s,mb5.8
ERM LR LR
comp=Z,23μm,21.0s,MS6.6
LCO Las Campanas 86.90 125 *e*P **P** **08 08 00.7 +0.2**
comp=Z,459nm,1.6s,mb6.5
LCO LR LR
comp=Z,21μm,21.0s,MS6.5
SSE Sheshan 87.46 314 P **P** **08 08 04.9 +2.0**
SSE AP pP 08 08 14.8 -0.8
SSE XP sP 08 08 18.3 -2.1
SSE PP PP 08 11 29.1 +0.7
SSE S S 08 18 43.8 +3.2
SSE SS SS 08 24 31.8 +4.6
SSE AMB AMB
comp=Z,155nm,0.9s,mb6.2
SSE AMB AMB
comp=Z,3μm,12.0s
SSE LR LR
comp=N,8μm,26.0s,MS6.2
SSE LR LR
comp=E,11μm,26.0s,MS6.2
SSE LR LR
comp=Z,18μm,23.0s,MS6.4
YUK Yuzh-Kuril'sk 87.56 337 P **P** **08 08 05.8 +2.8**
YUK pmax pmax
comp=Z,5μm,7.0s
YUK pmax pmax
comp=N,2μm,4.0s
ASAJ Asahikawa 88.66 335 P **P** **08 08 08.4 +0.2**
comp=N,60nm,0.9s,mb5.9,baz=243,slow=10,SNR=15
ASAJ Asahikawa 88.66 335 P **P** **08 08 08.4 +0.2**
ASAJ pmax pmax
comp=Z,61nm,0.9s
NNT Nongplab 88.91 287 P **P** **08 08 10.5 +0.4**
KSRS Korea Array 88.91 322 P **P** **08 08 10.2 +0.6**
comp=Z,79nm,1.0s,mb6.0,baz=143,slow=5.7,SNR=109
KSRS PP PP 08 11 36.1 -3.8
comp=Z,8.9nm,1.0s,baz=151,slow=6.6,SNR=4.5
KSRS LR LR 08 45 10.0
comp=Z,13μm,21.6s,MS6.3,baz=140,slow=34
NJ2 Nanjing 89.49 313 *e*P **P** **08 08 12.4 0.0**
NJ2 AP pP 08 08 23.6 -1.7
NJ2 XP sP 08 08 26.5 -3.5
NJ2 PP PP 08 11 44.5 -0.2
NJ2 S S 08 18 56.0 -3.7
NJ2 XS sS 08 19 11.5 -10
NJ2 AMB AMB
comp=Z,90nm,1.0s,mb6.0
NJ2 AMB AMB
comp=Z,2μm,11.5s
NJ2 LR LR
comp=N,16μm,31.0s,MS6.4
NJ2 LR LR
comp=E,14μm,29.3s,MS6.4
NJ2 LR LR
comp=Z,14μm,29.4s,MS6.2
LPA La Plata 90.13 137*c*eP **P** **08 08 09.0 -6.6**
LPA *e*PCP PcP 08 08 14.0 -2.8
LPA *e*SKS 08 18 42.0
LPA *e*SCS ScS 08 19 06.0 -4.0
LPA
comp=Z,21μm,18.0s
ADK Adak 90.57 3 *e*P **P** **08 08 16.3 -0.6**
ADK *e**SP sP 08 08 31.3 -3.2
ADK pmax pmax
comp=Z,428nm,1.1s,mb6.7
ADK MLR MLR
comp=Z,10μm,19.0s,MS6.3
ADK Adak 90.57 3 *e*P **P** **08 08 16.3 -0.6**
comp=Z,428nm,1.1s,mb6.7
ADK *es*P sP 08 08 31.3 -3.2
ADK LR LR
comp=Z,10μm,19.0s,MS6.3
NST Nakhon Sawan 90.59 290 P **P** **08 08 16.7 -1.2**
comp=Z,35nm,0.8s,mb5.7
PAYG Puerto Ayora 90.91 92 PFAKE 08 08 30.0 +10
PAYG LR LR
comp=Z,5μm,19.0s,MS5.9
WHN Wuhan 91.04 309 ⇑P **P** **08 08 19.4 -0.3**
WHN SKS 08 18 46.0
WHN S S 08 19 16.1 +2.1
WHN LR LR
comp=N,24μm,20.8s,MS6.8
WHN LR LR
comp=E,24μm,19.2s,MS6.8
WHN LR LR
comp=Z,35μm,19.4s,MS6.8
CEN1 Los Morros 91.08 121⇓*e*P **P** **08 08 20.4 +0.2**
YSS Yuzh-Sakhalins 91.14 337*b* *i*P **P** **08 08 19.7 0.0**
YSS *i* 08 18 48.0
YSS *i* S S 08 19 18.0 +3.8
YSS *e*PS PS 08 21 05.0 +37
YSS pmax pmax
comp=Z,11μm,11.0s
YSS pmax pmax
comp=Z,280nm,1.0s,mb6.5
YSS Yuzh-Sakhalins 91.14 337 *i* P **P** **08 08 19.2 -0.5**
SKR Severo-Kuril's 91.30 346 *e*P **P** **08 08 16.0 -4.4**
SKR *e*S SKSac 08 18 48.0 -0.7
SKR pmax pmax
comp=N,3μm,14.0s
SKR pmax pmax
comp=Z,4μm,14.0s
SKR pmax pmax
comp=Z,310nm,1.0s,mb6.6
SKR smax
comp=N,10μm,10.0s
SKR smax
comp=E,10μm,10.0s
SKR MLR MLR
comp=N,13μm,20.0s,MS6.5
SKR MLR MLR
comp=E,9μm,20.0s,MS6.5
SKR MLR MLR
comp=Z,16μm,20.0s,MS6.5
SMY Shemya 91.37 358 *e*P **P** **08 08 23.3 +2.7**
SMY pmax pmax
comp=Z,2μm,2.0s,mb7.0
SMY Shemya 91.37 358 *e*P **P** **08 08 23.3 +2.7**
comp=Z,2μm,2.0s,mb7.0
LPIG La Paz 91.73 60 P **P** **08 08 23.9 +0.9**
comp=Z,21nm,0.3s,mb5.9,baz=33,slow=0.6,SNR=12
NIKO Nikolski 92.25 8 P **P** **08 08 23.9 -0.8**
comp=Z,975nm,1.5s,mb6.9
SNCC San Nicolas Is 92.27 48 ⇑P **P** **08 08 25.1 -0.2**
baz=92
SNCC San Nicolas Is 92.27 48 *e*P **P** **08 08 24.5 -0.8**
comp=Z,2μm,2.2s,mb7.0
LVC Limon Verde 92.47 122 *e*P **P** **08 08 28.7 +2.0**
comp=Z,553nm,1.5s,mb6.7
LVC *e*pP pP 08 08 41.2 +1.7
LVC LR LR
comp=Z,23μm,21.0s,MS6.6
SCI San Clemente I 92.64 49 ⇑P **P** **08 08 27.2 +0.2**
baz=93
BSC Santa Cruz Isl 92.74 47 ⇑P **P** **08 08 27.3 -0.2**
baz=93
SBC Santa Barbara 93.02 47 ⇓P **P** **08 08 28.8 +0.1**
baz=93
GYA Guiyang 93.09 302⇓*i*P **P** **08 08 28.6 -0.7**
GYA AP pP 08 08 39.6 -2.5
GYA XP sP 08 08 43.5 -3.3
GYA PP PP 08 12 17.6 +4.4
GYA SKS 08 18 57.9
GYA S S 08 19 33.3 +0.7
GYA XS sS 08 19 51.8 -2.4
GYA AMB AMB
comp=Z,260nm,1.0s,mb6.6
GYA AMB AMB
comp=Z,2μm,10.6s
GYA LR LR
comp=N,6μm,20.7s,MS6.4
GYA LR LR
comp=E,12μm,19.2s,MS6.4
GYA LR LR
comp=Z,10μm,20.7s,MS6.3
PET Petropavlovsk 93.12 348 *e*P **P** **08 08 25.0 -3.7**
PET *e*PPP 08 14 16.7
PET *e*S S 08 19 32.0 +0.3
PET *e*PS PS 08 20 45.8 -4.2
PET *e*SSS 08 29 20.7
PET pmax pmax
comp=Z,2μm,13.9s
PET pmax pmax
comp=Z,2μm,13.6s
PET pmax pmax
comp=Z,63nm,0.9s,mb6.0
PET smax
comp=N,11μm,14.2s
PET MLR MLR
comp=Z,11μm,20.0s,MS6.3
PET MLR MLR
comp=Z,9μm,19.0s
PET Petropavlovsk 93.12 348 *e*P **P** **08 08 30.4 +1.7**
PET LR LR
comp=Z,10μm,20.0s,MS6.3
DL2 Dalian 93.14 319 *i* P **P** **08 08 28.8 -0.4**
DL2 PP PP 08 12 11.3 -2.1
DL2 SKS 08 18 57.5
DL2 S S 08 19 30.5 -2.0
DL2 SS SS 08 25 49.8 +0.6
DL2 AMB AMB
comp=Z,40nm,1.6s,mb5.6
DL2 AMB AMB
comp=Z,1μm,14.9s
DL2 LR LR
comp=N,6μm,18.9s
DL2 LR LR
comp=Z,8μm,19.5s,MS6.2
BLG Laguna Peak 93.15 48 ⇓P **P** **08 08 29.2 -0.2**
baz=93
CM31 Chiang Mai Arr 93.25 291 PFAKE 08 08 40.0 +10
CM31 LR LR
comp=Z,15μm,20.0s,MS6.5
CMAR Chiang Mai Arr 93.25 291 P **P** **08 08 30.0 -0.2**
comp=Z,15nm,0.9s,mb5.4,baz=127,slow=0.8,SNR=4.3
CMAR PP PP 08 12 08.2 -6.3
comp=Z,8.5nm,1.0s,baz=122,slow=4.4,SNR=4.4
CMAR PKKP PKKPbc 08 25 40.6 +3.7
comp=Z,0.9nm,0.3s,baz=297,slow=3.6,SNR=5.3
CMAR PKPPKP 08 33 43.0
comp=Z,0.9nm,0.3s,baz=335,slow=4.0,SNR=3.4
CMAR LR LR 08 55 05.0
comp=Z,17μm,19.7s,MS6.5,baz=148,slow=38
PKM Peak Mountain 93.28 47 ⇓P **P** **08 08 30.4 +0.5**
baz=94
FMP Fort Macarthur 93.31 48 ⇑P **P** **08 08 30.2 0.0**
baz=94
PEA0B Petropavlovsk- 93.36 348 *e*P **P** **08 08 28.5 -1.3**
PETK Petropavlovsk- 93.36 348 P **P** **08 08 28.2 -1.6**
comp=Z,22nm,0.8s,mb5.6,baz=125,slow=6.1,SNR=15
PETK LR LR 08 45 37.2
comp=Z,8μm,21.4s,MS6.2,baz=163,slow=32
UNV Unalaska Valle 93.38 9 *e*P **P** **08 08 29.2 -0.7**
comp=Z,176nm,1.2s,mb6.4
109C Camp Elliot, M 93.43 50 ⇓P **P** **08 08 30.8 +0.1**
baz=94
CHG Chiang Mai 93.47 291 ⇑P **P** **08 08 30.7 -0.5**
comp=Z,75nm,1.2s,mb6.0
CHTO Chiang Mai 93.47 291 P **P** **08 08 31.6 +0.3**
SNR=30
CHTO Chiang Mai 93.47 291 *e*P **P** **08 08 30.4 -0.8**
CHTO pmax pmax
comp=Z,62nm,1.0s,mb6.0
CHTO MLR MLR
comp=Z,13μm,20.0s,MS6.4
CHTO Chiang Mai 93.47 291 *e*P **P** **08 08 30.4 -0.8**
comp=Z,62nm,1.0s,mb6.0
CHTO LR LR
comp=Z,13μm,20.0s,MS6.4
SMMC Simmler 93.48 46 ⇑P **P** **08 08 31.2 +0.4**
baz=94
TIA Tai'an 93.52 315 ⇑P **P** **08 08 30.9 -0.1**
TIA AMB AMB
comp=Z,48nm,1.5s,mb5.7
TIA AMB AMB
comp=Z,417nm,10.0s
TIA LR LR
comp=E,1μm,15.0s
DECC Green Verdugo 93.67 48 ⇑P **P** **08 08 31.7 -0.1**
baz=94
PASC Pasadena Art C 93.70 48 *e*P **P** **08 08 32.3 +0.4**
comp=E,356nm,1.2s,mb6.7
OSI Osito Adit 93.71 48 ⇑P **P** **08 08 32.1 +0.2**
baz=94
OSI Osito Adit 93.71 48 *e*P **P** **08 08 32.1 +0.1**
comp=E,315nm,1.6s,mb6.5
SAO San Andreas Ge 93.73 44 *e*P **P** **08 08 32.6 +0.6**
comp=E,56nm,1.0s,mb6.0
SAO LR LR
comp=Z,17μm,20.0s,MS6.5
MWC Mount Wilson 93.81 48 *e*P **P** **08 08 33.4 +1.0**
comp=Z,290nm,1.6s,mb6.5
MONP Monument Peak 93.84 50 ⇑P **P** **08 08 33.4 +0.8**
baz=94
DVTC Desert V Tower 93.87 51 ⇓P **P** **08 08 33.2 +0.5**
baz=94
MURC Murrieta 93.88 49 ⇑P **P** **08 08 32.9 +0.1**
baz=94
MDJ Mudanjiang 93.93 328 P **P** **08 08 30.1 -2.6**
MDJ AP pP 08 08 39.8 -5.7
MDJ XP sP 08 08 43.3 -6.9
MDJ S S 08 19 41.4 +2.2
MDJ AMB AMB
comp=Z,25nm,1.2s,mb5.5
MDJ AMB AMB
comp=Z,2μm,13.6s
MDJ LR LR
comp=N,12μm,25.8s,MS6.3
MDJ LR LR
comp=E,8μm,24.2s,MS6.3
MDJ LR LR
comp=Z,19μm,25.8s,MS6.4
MDJ Mudanjiang 93.93 328 PFAKE 08 08 40.0 +7.3
MDJ LR LR
comp=Z,9μm,21.0s,MS6.2
MCCM Marconi Confer 93.98 43 PFAKE 08 08 40.0 +6.9
MCCM LR LR
comp=Z,21μm,20.0s,MS6.6
ARVC Arvin 94.01 47 ⇓P **P** **08 08 33.5 +0.2**
baz=94
NNA Nana 94.02 109 *e*P **P** **08 08 33.2 -0.7**
comp=Z,97nm,1.5s,mb6.0
NNA LR LR
comp=Z,14μm,22.0s,MS6.4
BFSC Mount Baldy St 94.06 48 ⇑P **P** **08 08 33.7 +0.2**
baz=94
SWSC Sam W. Stewart 94.25 50 ⇑P **P** **08 08 34.5 +0.1**
baz=94
EDW2 Edwards Air Fo 94.32 48 ⇓P **P** **08 08 34.8 0.0**
baz=94
PFO Pinyon Flat Ob 94.32 50 P **P** **08 08 36.0 +1.2**
comp=Z,48nm,1.0s,mb5.9,baz=252,slow=3.3,SNR=47
PFO LR LR 08 42 47.3
comp=Z,22μm,20.5s,MS6.6,baz=236,slow=30
PFO Pinyon Flat Ob 94.32 50 ⇑P **P** **08 08 35.1 +0.4**
baz=94
PFO Pinyon Flat Ob 94.32 50 *e*P **P** **08 08 34.7 -0.1**
PFO pmax pmax
comp=Z,343nm,1.6s,mb6.5
PFO MLR MLR
comp=Z,22μm,20.0s,MS6.6
PFO Pinyon Flat Ob 94.32 50 *e*P **P** **08 08 34.7 -0.1**
comp=Z,343nm,1.6s,mb6.5
PFO LR LR
comp=Z,22μm,20.0s,MS6.6
VES Vestal, Richgr 94.38 47 ⇓P **P** **08 08 35.1 +0.1**
baz=95
SNY Shenyang 94.41 322 P **P** **08 08 31.8 -3.2**
SNY SKS 08 19 04.6
SNY S S 08 19 51.3 +7.8
SNY AMB AMB
comp=Z,27nm,1.9s,mb5.3
SNY AMB AMB
comp=Z,2μm,12.0s
SNY LR LR
comp=N,8μm,21.6s,MS6.3
SNY LR LR
comp=E,9μm,22.8s,MS6.3
SNY LR LR
comp=Z,16μm,20.8s,MS6.5
BBRC Big Bear Sol-O 94.51 49 ⇑P **P** **08 08 36.0 +0.4**
baz=95
HOPS Hopland 94.51 42 *e*P **P** **08 08 37.2 +1.7**
HOPS LR LR
comp=Z,29μm,20.0s,MS6.7
ISA Isabella 94.60 47 ⇓P **P** **08 08 36.4 +0.4**
baz=95
ISA Isabella 94.60 47 *e*P **P** **08 08 36.2 +0.2**
RCTC Rector, Farmer 94.63 46 ⇑P **P** **08 08 36.4 +0.3**
baz=95
112A Yuma 94.71 51 ⇓P **P** **08 08 36.9 +0.3**
baz=95
KMI Kunming 94.86 298 P **P** **08 08 37.8 +0.4**
KMI AP pP 08 08 50.3 0.0
KMI XP sP 08 08 54.9 -0.1
KMI PP PP 08 12 31.3 +4.3
KMI SKS 08 19 11.5
KMI S S 08 19 45.1 -3.1
KMI XS sS 08 20 03.9 -5.8
KMI SS SS 08 26 16.6 +2.6
KMI AMB AMB
comp=Z,25nm,1.2s,mb5.5
KMI AMB AMB
comp=Z,2μm,12.9s
KMI LR LR
comp=N,16μm,20.3s,MS6.7
KMI LR LR
comp=E,16μm,17.8s,MS6.7
KMI LR LR
comp=Z,30μm,23.7s
BELC Belle Mtn. 94.87 50 ⇓P **P** **08 08 37.4 +0.1**
baz=95
RRX Edison Barstow 94.89 48 ⇓P **P** **08 08 37.7 +0.4**
baz=95
GLA Glamis 94.91 51 ⇓P **P** **08 08 38.3 +0.8**
baz=95
GLA Glamis 94.91 51 *e*P **P** **08 08 38.2 +0.7**
ARE Arequipa 94.92 116⇑*i*P **P** **08 08 38.0 0.0**
LRMC Laurel Mountai 94.92 48 ⇑P **P** **08 08 37.9 +0.4**
baz=95
BC3 Big Chuckw Mtn 94.95 50 ⇓P **P** **08 08 38.0 +0.3**
baz=95
HABR Khabarovsk 95.02 333 *e*P **P** **08 08 36.4 -1.2**
HABR *e* 08 12 26.0
HABR *e*S SKSac 08 19 05.2 -4.1
HABR *e* 08 19 45.9
HABR *e*SS SS 08 26 13.1 -2.6
HABR *e*SSS 08 29 55.9
HABR MLR MLR
comp=Z,8μm,20.0s,MS6.2
CN2 Changchun 95.08 325 ⇑P **P** **08 08 37.0 -1.0**
CN2 *e*XP sP 08 08 51.5 -4.0
CN2 PP PP 08 12 28.8 +0.3
CN2 SKS 08 19 08.3
CN2 *e*S S 08 19 47.5 -1.8
CN2 XS sS 08 20 04.9 -5.9
CN2 SS SS 08 26 15.3 -1.4
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.6
CN2 AMB AMB
comp=Z,2μm,16.0s
CN2 LR LR
comp=N,4μm,20.0s,MS6.2
CN2 LR LR
comp=E,6μm,20.0s,MS6.2
CN2 LR LR
comp=Z,8μm,25.0s,MS6.1
CMB Columbia Colle 95.24 44 *e*P **P** **08 08 38.4 -0.4**
CMB MLR MLR
comp=Z,17μm,21.0s,MS6.5
HEC Hector,Ludlow 95.25 49 ⇑P **P** **08 08 39.6 +0.6**
baz=96
GSC Goldstone 95.30 48 ⇓P **P** **08 08 39.7 +0.5**
baz=96
GSC Goldstone 95.30 48 *e*P **P** **08 08 39.9 +0.7**
comp=Z,219nm,1.5s,mb6.4
113A Mohawk Valley, 95.36 52 ⇓P **P** **08 08 39.5 -0.1**
baz=96,SNR=18
CWC Cottonwood Cre 95.38 47 ⇑P **P** **08 08 40.3 +0.8**
baz=96
214A Organ Pipe Nat 95.40 53 ⇑P **P** **08 08 39.9 +0.1**
baz=96,SNR=36
MPMC Manual Prospec 95.44 47 ⇑P **P** **08 08 40.0 +0.2**
baz=96
IRM Iron Mountain 95.48 50 ⇓P **P** **08 08 40.4 +0.3**
baz=96
DAC Darwin (Calif) 95.54 47 PFAKE 08 08 50.0 +10
DAC LR LR
comp=Z,18μm,21.0s,MS6.5
KHMM Horse Mountain 95.57 40 *e*P **P** **08 08 41.9 +1.6**
Y12C Blythe 95.58 51 ⇓P **P** **08 08 40.8 +0.3**
baz=96
GMRC Granite Mounta 95.61 49 ⇑P **P** **08 08 41.0 +0.4**
baz=96
TIN Tinemaha 95.73 46 ⇓P **P** **08 08 41.4 +0.3**
baz=96
MTUM Tungsten Hills 95.75 46 *e*P **P** **08 08 42.0 +0.7**
MLAC Mammoth Lakes 95.80 45 ⇓P **P** **08 08 41.6 +0.2**
baz=96
TUQ Turquoise Moun 95.91 49 ⇓P **P** **08 08 42.1 +0.1**
baz=96
WDC Whiskeytown Da 95.95 41 *e*P **P** **08 08 42.4 +0.3**
WDC LR LR
comp=Z,17μm,21.0s,MS6.5
SHOC Shoshone 96.03 48 ⇓P **P** **08 08 42.5 0.0**
baz=96
Y13A Salome 96.04 51 ⇓P **P** **08 08 42.8 +0.1**
baz=96,SNR=45
ATAH Atahualpa 96.09 104 LR LR 08 43 03.3
comp=Z,23μm,19.8s,MS6.7,baz=64,slow=30
FURC Furnace Creek, 96.09 47 ⇓P **P** **08 08 42.7 -0.1**
baz=96
R06C Coleville 96.10 44 ⇑P **P** **08 08 42.4 -0.4**
baz=96
LDFC Landfair 96.14 49 *e*P **P** **08 08 44.0 +1.0**
GRAC Grapevine Rang 96.17 47 ⇑P **P** **08 08 42.8 -0.3**
baz=96
115A Sonoran Desert 96.27 53 ⇑P **P** **08 08 43.9 +0.2**
baz=96,SNR=19
Z14A Wintersburg 96.27 52 ⇓P **P** **08 08 43.9 +0.2**
baz=96,SNR=32
216A Three Points, 96.28 54 ⇑P **P** **08 08 43.7 -0.1**
baz=96
U10A Ash Meadows, A 96.36 48 ⇑P **P** **08 08 44.6 +0.6**
baz=97
W12A Cal Nev Ari 96.44 49 ⇓P **P** **08 08 45.3 +0.9**
baz=97,SNR=8.7
V11A Goodsprings 96.48 49 ⇓P **P** **08 08 45.5 +0.9**

	baz=97,SNR=18									
WCN	**Washoe City**	**96.49**	**44**	⇑P		**P**		**08 08 44.6**	**+0.1**
	baz=97									
116A	**Eloy**	**96.50**	**53**	⇑P		**P**		**08 08 45.4**	**+0.7**
	baz=97,SNR=21									
217A	**Green Valley**	**96.53**	**54**	⇑P		**P**		**08 08 45.2**	**+0.3**
	baz=97,SNR=32									
X13A	**Yucca**	**96.57**	**50**	⇑P		**P**		**08 08 45.3**	**+0.3**
	baz=97,SNR=45									
BEKR	**Beckwourth**	**96.58**	**43**	⇑P		**P**		**08 08 44.9**	**0.0**
	baz=97									
Y14A	**Wickenburg**	**96.63**	**51**	⇓P		**P**		**08 08 45.4**	**+0.1**
	baz=97,SNR=41									
NVAR	**Mina Array Bea**	**96.66**	**45**	P		**P**		**08 08 45.6**	**+0.3**
	comp=Z,5.8nm,0.9s,mb5.0,baz=213,slow=8.2,SNR=30									
NVAR				PKKP		PKKPbc		08 25 31.3	+2.8	
	comp=Z,1.0nm,0.6s,baz=96,slow=1.8,SNR=3.6									
NVAR				PKPPKP				08 33 47.8		
	comp=Z,0.3nm,0.5s,baz=29,slow=3.4,SNR=4.3									
P06A	**Stead Airport,**	**96.69**	**43**	⇓P		**P**		**08 08 45.4**	**0.0**
	baz=97									
Z15A	**Gila River Ind**	**96.71**	**52**	⇑P		**P**		**08 08 46.1**	**+0.4**
	baz=97,SNR=13									
R08A	**Mina**	**96.71**	**45**	⇓P		**P**		**08 08 46.1**	**+0.5**
	baz=97									
YBH	**Yreka Blue Hor**	**96.72**	**40**	P		**P**		**08 08 45.3**	**-0.2**
	comp=Z,22nm,1.1s,mb5.5,baz=151,slow=1.9,SNR=11									
YBH	**Yreka Blue Hor**	**96.72**	**40**	P		**P**		**08 08 45.3**	**-0.2**
YBH				pmax		pmax				
	comp=Z,22nm,1.1s									
YBH	**Yreka Blue Hor**	**96.72**	**40**	*e*P		**P**		**08 08 45.8**	**+0.3**
	comp=Z,53nm,1.3s,mb5.8									
YBH				LR		LR				
	comp=Z,17µm,21.0s,MS6.5									
V12A	**Nelson**	**96.74**	**49**	⇑P		**P**		**08 08 46.0**	**+0.2**
	baz=97,SNR=33									
Q07A	**Schurz**	**96.75**	**44**	⇓P		**P**		**08 08 46.3**	**+0.6**
	baz=97									
XAN	**Xi'an**	**96.76**	**309**	P		**P**		**08 08 45.1**	**-0.8**
XAN				PP		PP		08 12 47.8	+6.1	
XAN				SKS				08 19 17.3		
XAN				S		S		08 20 02.0	-2.3	
XAN				AMB		AMB				
	comp=Z,11nm,1.3s,mb5.1									
XAN				LR		LR				
	comp=N,3µm,24.7s,MS6.0									
XAN				LR		LR				
	comp=E,7µm,26.1s,MS6.0									
XAN				LR		LR				
	comp=Z,19µm,23.9s,MS6.5									
S09A	**Goldfield**	**96.77**	**46**	⇑P		**P**		**08 08 46.0**	**+0.1**
	baz=97									
TPNV	**Topopah Spring**	**96.78**	**47**	⇓P		**P**		**08 08 46.2**	**+0.4**
	baz=97									
TPNV	**Topopah Spring**	**96.78**	**47**	*e*P		**P**		**08 08 46.3**	**+0.4**
TPNV				LR		LR				
	comp=Z,14µm,20.0s,MS6.4									
BJT	**Baijiatuau**	**96.80**	**317**	*e*P		**P**		**08 08 45.0**	**-0.9**
BJT				pmax		pmax				
	comp=Z,16nm,0.3s									
BJT				MLR		MLR				
	comp=Z,13µm,21.0s									
BJT	**Baijiatuau**	**96.80**	**317**	*e*P		**P**		**08 08 45.0**	**-0.9**
	comp=Z,16nm,0.3s,mb5.9									
BJT				LR		LR				
	comp=Z,13µm,21.0s,MS6.4									
BJI	**Beijing**	**96.81**	**317**	P		**P**		**08 08 45.3**	**-0.7**
BJI				PP		PP		08 12 43.0	+1.0	
BJI				SKS				08 19 16.5		
BJI				S		S		08 20 10.8	+6.4	
BJI				AMB		AMB				
	comp=Z,21nm,0.8s,mb5.6									
BJI				AMB		AMB				
	comp=Z,2µm,16.3s									
BJI				LR		LR				
	comp=N,6µm,22.1s,MS6.2									
BJI				LR		LR				
	comp=E,7µm,23.2s,MS6.2									
BJI				LR		LR				
	comp=Z,13µm,38.6s									
318A	**Bisbee**	**96.83**	**55**	⇑P		**P**		**08 08 46.5**	**+0.2**
	baz=97,SNR=26									
KLR	**Kul'dur**	**96.86**	**332**	*e*P		**P**		**08 08 39.0**	**-6.9**
KLR				*e*S		SKSac		08 19 15.5	-3.4	
KLR				*e*PS		ScS		08 20 06.0	+1.3	
KLR				pmax		pmax				
	comp=N,900nm,13.5s									
KLR				pmax		pmax				
	comp=Z,3µm,13.5s									
KLR				smax						
	comp=N,6µm,12.0s									
KLR				smax						
	comp=E,2µm,12.0s									
W13A	**Hualapai Mount**	**96.89**	**50**	⇓P		**P**		**08 08 46.9**	**+0.5**
	baz=97,SNR=35									
TUC	**Tucson**	**96.91**	**54**	*e*P		**P**		**08 08 46.6**	**0.0**
	comp=E,110nm,1.8s,mb6.0									
TUC				LR		LR				
	comp=Z,7µm,21.0s,MS6.1									
U11A	**Corn Creek**	**96.91**	**48**	⇓P		**P**		**08 08 46.3**	**-0.2**
	baz=97									
CHGN	**Chignik**	**96.97**	**13**	*e*P		**P**		**08 08 47.0**	**+0.8**
PAHR	**Pah Rah Range**	**96.98**	**44**	*e*P		**P**		**08 08 47.4**	**+0.6**
CPUP	**Villa Florida**	**97.00**	**132**	P		**P**		**08 08 46.9**	**-0.4**
	comp=Z,15nm,1.0s,mb5.4,baz=218,slow=5.4,SNR=21									
CPUP				PP		PP		08 12 41.7	-0.9	
	comp=Z,5.8nm,1.1s,baz=220,slow=9.9,SNR=2.9									
CPUP				PKKP		PKKPbc		08 25 25.9	-0.6	
	comp=Z,2.8nm,0.7s,baz=28,slow=0.8,SNR=11									
CPUP				PKPPKP				08 33 41.6		
	comp=Z,4.3nm,0.9s,baz=10,slow=2.1,SNR=9.4									
CPUP				LR		LR		08 46 34.0		
	comp=Z,28µm,18.7s,MS6.8,baz=207,slow=32									
CPUP	**Villa Florida**	**97.00**	**132**	*e*P		**P**		**08 08 45.5**	**-1.9**
CPUP				pmax		pmax				
	comp=Z,130nm,1.2s									
CPUP				MLR		MLR				
	comp=Z,5µm,19.0s									
CPUP	**Villa Florida**	**97.00**	**132**	*e*P		**P**		**08 08 45.5**	**-1.9**
	comp=Z,130nm,1.2s,mb6.2									
CPUP				LR		LR				
	comp=Z,5µm,19.0s,MS6.0									
TPH	**Tonopah**	**97.01**	**46**	*e*P		**P**		**08 08 46.5**	**-0.4**
TPH				pmax		pmax				
	comp=Z,94nm,1.5s,mb6.0									
TPH				MLR		MLR				
	comp=Z,8µm,20.0s,MS6.2									
TPH	**Tonopah**	**97.01**	**46**	*e*P		**P**		**08 08 46.5**	**-0.5**
	comp=Z,94nm,1.5s,mb6.0									
TPH				LR		LR				
	comp=Z,8µm,20.0s,MS6.2									
Y15A	**Casa Rosa Ranc**	**97.05**	**52**	⇑P		**P**		**08 08 47.8**	**+0.6**
	baz=97,SNR=41									
X14A	**Yava**	**97.06**	**51**	⇓P		**P**		**08 08 48.1**	**+0.8**
	baz=97,SNR=31									
SHPR	**Sheep Range**	**97.10**	**48**	*e*P		**P**		**08 08 48.2**	**+0.8**
117A	**Oracle**	**97.11**	**54**	⇓P		**P**		**08 08 47.9**	**+0.4**
	baz=97,SNR=27									
P07A	**Fallon**	**97.13**	**44**	⇑P		**P**		**08 08 47.2**	**-0.2**
	baz=97									
218A	**Dragoon**	**97.15**	**55**	⇑P		**P**		**08 08 48.1**	**+0.4**
	baz=97,SNR=21									
GVA	**Apache Junctio**	**97.16**	**53**	P		**P**		**08 08 48.6**	**+0.9**
GVA				PP		PP		08 12 42.6	-2.1	
GVA				*e*PKKP		PKKPbc		08 25 48.2	+21	
GVA				*e*				08 25 59.0		
Q08A	**Gabbs**	**97.17**	**45**	⇑P		**P**		**08 08 47.4**	**-0.2**
	baz=97									
Z16A	**Peralta Trail,**	**97.19**	**53**	⇓P		**P**		**08 08 48.2**	**+0.3**
	baz=97,SNR=18									
R09A	**Tonopah**	**97.21**	**46**	⇑P		**P**		**08 08 48.0**	**+0.1**
	baz=97,SNR=35									
HUMO	**Hull Mountain**	**97.24**	**40**	*e*P		**P**		**08 08 48.0**	**+0.2**
	comp=Z,257nm,1.8s,mb6.4									
HUMO				*e*PP		PP		08 12 47.4	+2.2	
HUMO				LR		LR				
	comp=Z,18µm,21.0s,MS6.5									
319A	**Douglas**	**97.24**	**55**	⇓P		**P**		**08 08 47.8**	**-0.3**
	baz=98,SNR=8.0									
S10A	**Tonopah Range,**	**97.26**	**46**	⇓P		**P**		**08 08 48.0**	**0.0**
	baz=98,SNR=21									
V13A	**Grand Canyon W**	**97.34**	**49**	⇓P		**P**		**08 08 49.0**	**+0.5**
	baz=98,SNR=35									
U12A	**Valley of Fire**	**97.41**	**49**	⇑P		**P**		**08 08 49.2**	**+0.4**
	baz=98,SNR=19									
W14A	**Seligman**	**97.44**	**50**	⇓P		**P**		**08 08 49.3**	**+0.4**
	baz=98,SNR=75									
X15A	**Humboldt**	**97.47**	**51**	⇑P		**P**		**08 08 49.5**	**+0.4**
	baz=98,SNR=56									
N06A	**Buffalo Meadow**	**97.49**	**43**	⇓P		**P**		**08 08 48.7**	**-0.3**
	baz=98									
T12A	**Moapa**	**97.51**	**48**	⇓P		**P**		**08 08 48.6**	**-0.6**
	baz=98,SNR=12									
Y16A	**Circle Bar Ran**	**97.52**	**52**	⇓P		**P**		**08 08 49.5**	**+0.2**
	baz=98,SNR=45									
Q09A	**Carvers**	**97.57**	**45**	⇑P		**P**		**08 08 50.0**	**+0.6**
	baz=98									
T11A	**Corn Creek, Al**	**97.57**	**48**	⇓P		**P**		**08 08 50.0**	**+0.6**
	baz=98,SNR=52									
O07A	**Toulon**	**97.58**	**44**	⇑P		**P**		**08 08 49.6**	**+0.2**
	baz=98,SNR=8.6									
118A	**Homack Ranch,**	**97.64**	**54**	⇑P		**P**		**08 08 50.7**	**+0.8**
	baz=98,SNR=16									
219A	**White Tail Can**	**97.67**	**55**	⇑P		**P**		**08 08 50.4**	**+0.3**
	baz=98,SNR=12									
R10A	**Warm Springs**	**97.68**	**46**	⇑P		**P**		**08 08 50.4**	**+0.5**
	baz=98,SNR=14									
V14A	**Boquillas Ranc**	**97.72**	**50**	⇓P		**P**		**08 08 51.1**	**+1.0**
	baz=98,SNR=59									
U13A	**Pakoon Wash**	**97.74**	**49**	⇓P		**P**		**08 08 51.0**	**+0.8**
	baz=98,SNR=18									
Z17A	**San Carlos Hig**	**97.76**	**53**	⇓P		**P**		**08 08 51.0**	**+0.6**
	baz=98,SNR=8.5									
Y17A	**Roosevelt**	**97.79**	**53**	⇑P		**P**		**08 08 51.2**	**+0.6**
	baz=98,SNR=18									
I02A	**Mapleton**	**97.85**	**38**	⇓P		**P**		**08 08 50.8**	**+0.3**
	baz=98									
Z18A	**Geronimo**	**97.89**	**54**	⇓P		**P**		**08 08 51.4**	**+0.3**
	baz=98									
X16A	**Lo Mia Camp, P**	**97.91**	**52**	⇑P		**P**		**08 08 51.6**	**+0.5**
	baz=98,SNR=42									
W15A	**Williams**	**97.91**	**51**	⇑P		**P**		**08 08 51.9**	**+0.8**
	baz=98,SNR=14									
CD2	**Chengdu**	**97.94**	**303**	P		**P**		**08 08 53.0**	**+1.7**
CD2				AP		pP		08 09 03.5	-0.7	
CD2				XP		sP		08 09 07.3	-1.6	
CD2				PP		PP		08 12 50.6	-0.2	
CD2				SKS				08 19 23.9		
CD2				S		S		08 20 13.8	-0.7	
CD2				XS		sS		08 20 31.5	-4.6	
CD2				AMB		AMB				
	comp=Z,20nm,1.0s,mb5.6									
CD2				AMB		AMB				
	comp=Z,2µm,11.6s									
CD2				LR		LR				
	comp=N,10µm,20.8s									
CD2				LR		LR				
	comp=Z,14µm,21.4s,MS6.4									
N07B	**Gerlach**	**97.97**	**43**	⇑P		**P**		**08 08 51.6**	**+0.4**
	baz=98									
Q10A	**Clear Creek Ra**	**98.00**	**46**	⇓P		**P**		**08 08 51.7**	**+0.3**
	baz=98									
S12A	**Delamar Landin**	**98.04**	**48**	⇓P		**P**		**08 08 52.1**	**+0.5**
	baz=98,SNR=18									
O08A	**Rochester Mine**	**98.06**	**44**	⇓P		**P**		**08 08 51.6**	**0.0**
	baz=98,SNR=13									
MOD	**Modoc**	**98.07**	**42**	*e*P		**P**		**08 08 51.8**	**+0.2**
	comp=Z,59nm,1.2s,mb6.0									
MOD				*e*PP		PP		08 12 50.2	-1.4	
MOD				LR		LR				
	comp=Z,23µm,20.0s,MS6.7									
P09A	**Austin**	**98.09**	**45**	⇑P		**P**		**08 08 51.6**	**-0.1**
	baz=98									
R11A	**Troy Canyon, C**	**98.13**	**47**	⇓P		**P**		**08 08 52.0**	**+0.1**
	baz=98,SNR=15									
119A	**Ashpeak Ranch,**	**98.14**	**54**	⇓P		**P**		**08 08 52.5**	**+0.3**
	baz=98,SNR=8.7									
T13A	**Saint George**	**98.18**	**49**	⇓P		**P**		**08 08 52.9**	**+0.6**
	baz=98,SNR=11									
U14A	**Mt Trumbull**	**98.20**	**49**	⇑P		**P**		**08 08 52.9**	**+0.6**
	baz=98,SNR=31									
W16A	**Flagstaff**	**98.30**	**51**	⇑P		**P**		**08 08 53.6**	**+0.8**
	baz=98,SNR=34									
CMIG	**Matias Romero**	**98.35**	**75**	LR		LR		08 47 10.8		
	comp=Z,8µm,18.2s,MS6.2,baz=161,slow=32									
V15A	**Kaibab Nationa**	**98.40**	**50**	⇓P		**P**		**08 08 53.7**	**+0.4**
	baz=99,SNR=29									
N08A	**GE Springer Mi**	**98.42**	**44**	⇓P		**P**		**08 08 53.8**	**+0.6**
	baz=99,SNR=14									
Q11A	**Duckwater**	**98.43**	**46**	⇑P		**P**		**08 08 53.7**	**+0.4**
	baz=99,SNR=13									
O09A	**Fish Creek Ran**	**98.50**	**45**	⇑P		**P**		**08 08 53.7**	**+0.1**
	baz=99									
Z19A	**T-Link Ranch,**	**98.51**	**54**	⇓P		**P**		**08 08 53.9**	**+0.1**
	baz=99									
P10A	**Eureka**	**98.52**	**45**	⇑P		**P**		**08 08 54.0**	**+0.3**
	baz=99									
COR	**Corvallis**	**98.53**	**38**	PFAKE				08 09 00.0	+6.4	
COR				LR		LR				
	comp=Z,28µm,20.0s,MS6.8									
S13A	**Holt Ranch, En**	**98.59**	**48**	⇓P		**P**		**08 08 54.6**	**+0.5**
	baz=99,SNR=26									
L07A	**Adell**	**98.66**	**42**	⇑P		**P**		**08 08 54.2**	**-0.1**
	baz=99,SNR=8.3									
BMN	**Battle Mountai**	**98.67**	**44**	*e*P		**P**		**08 08 53.7**	**-0.6**
BMN				*e*				08 12 55.3		
BMN				pmax		pmax				
	comp=Z,62nm,1.5s,mb5.9									
BMN				MLR		MLR				
	comp=Z,16µm,20.0s,MS6.5									
BMN	**Battle Mountai**	**98.67**	**44**	*e*P		**P**		**08 08 53.6**	**-0.7**
	comp=Z,62nm,1.5s,mb5.9									
BMN				*e*PP		PP		08 12 55.3	-0.8	
BMN				LR		LR				
	comp=Z,16µm,20.0s,MS6.5									
R12A	**Pony Springs,**	**98.67**	**47**	⇑P		**P**		**08 08 54.8**	**+0.4**
	baz=99,SNR=9.8									
WUAZ	**Wupatki**	**98.68**	**51**	⇓P		**P**		**08 08 54.8**	**+0.3**
	baz=99									
WUAZ	**Wupatki**	**98.68**	**51**	*e*P		**P**		**08 08 55.5**	**+1.0**
	comp=Z,72nm,1.5s,mb6.0									
WUAZ				*e*PP		PP		08 12 57.4	+1.0	
WUAZ				LR		LR				
	comp=Z,14µm,21.0s,MS6.4									
T14A	**Hurricane**	**98.69**	**49**	⇑P		**P**		**08 08 54.9**	**+0.4**
	baz=99,SNR=18									
U15A	**North Rim**	**98.74**	**50**	⇑P		**P**		**08 08 54.9**	**+0.2**
	baz=99,SNR=40									
M08A	**Happy Creek Ra**	**98.76**	**43**	⇓P		**P**		**08 08 54.7**	**0.0**
	baz=99,SNR=10									
W17A	**Winslow**	**98.79**	**52**	⇑P		**P**		**08 08 54.8**	**-0.2**
	baz=99									
N09A	**Rock Creek Ran**	**98.80**	**44**	⇑P		**P**		**08 08 55.4**	**+0.5**
	baz=99,SNR=7.9									
P11A	**Circle Ranch,**	**98.86**	**46**	⇑P		**P**		**08 08 55.0**	**-0.2**
	baz=99									
X18A	**Snowflake**	**98.90**	**53**	⇑P		**P**		**08 08 55.7**	**+0.2**
	baz=99,SNR=8.1									
R13A	**O'Grain Ranch,**	**98.94**	**48**	⇑P		**P**		**08 08 56.1**	**+0.5**
	baz=99,SNR=13									
Y19A	**Nutrioso**	**98.96**	**53**	⇓P		**P**		**08 08 55.6**	**-0.2**
	baz=99,SNR=16									
O10A	**Cortez Mining,**	**98.96**	**45**	⇓P		**P**		**08 08 55.6**	**0.0**
	baz=99									
Q12A	**Willow Creek R**	**99.03**	**47**	⇓P		**P**		**08 08 55.9**	**-0.1**
	baz=99,SNR=10									
T15A	**Red Dirt Ranch**	**99.08**	**49**	⇓P		**P**		**08 08 56.6**	**+0.3**
	baz=99,SNR=22									
S14A	**Cedar City**	**99.12**	**48**	⇑P		**P**		**08 08 57.0**	**+0.6**
	baz=99,SNR=14									
K07A	**Rock Creek Ran**	**99.19**	**42**	⇓P		**P**		**08 08 57.7**	**+1.2**
	baz=99,SNR=14									
M09A	**Marrel Ranch,**	**99.24**	**43**	⇑P		**P**		**08 08 56.8**	**0.0**
	baz=100									
X19A	**St. Johns**	**99.24**	**53**	⇑P		**P**		**08 08 57.1**	**+0.1**
	baz=100									
U16A	**Tuba City**	**99.25**	**51**	⇓P		**P**		**08 08 57.2**	**+0.2**
	baz=100,SNR=16									
N10A	**Dunphy**	**99.26**	**44**	⇑P		**P**		**08 08 56.9**	**0.0**
	baz=100									
O11A	**Cowboy Ranch,**	**99.32**	**45**	⇑P		**P**		**08 08 57.4**	**+0.2**
	baz=100,SNR=11									
WVOR	**Wild Horse Val**	**99.32**	**42**	*e*P		**P**		**08 08 57.3**	**+0.1**
WVOR				pmax		pmax				
	comp=Z,220nm,1.9s,mb6.4									
WVOR				MLR		MLR				
	comp=Z,20µm,20.0s,MS6.6									
WVOR	**Wild Horse Val**	**99.32**	**42**	*e*P		**P**		**08 08 57.3**	**+0.1**
	comp=Z,220nm,1.9s,mb6.4									
WVOR				LR		LR				
	comp=Z,20µm,20.0s,MS6.6									
G04A	**Mulino**	**99.39**	**38**	⇓P		**P**		**08 08 57.9**	**+0.5**
	baz=100									
W18A	**Petrified Fore**	**99.42**	**52**	⇓P		**P**		**08 08 58.1**	**+0.2**
	baz=100									
Q13A	**Wheeler Ranch,**	**99.44**	**47**	⇑P		**P**		**08 08 57.7**	**-0.1**
	baz=100									
KDAK	**Kodiak Island**	**99.48**	**15**	PFAKE				08 09 10.0	+13	
KDAK				LR		LR				
	comp=Z,17µm,19.0s,MS6.6									
S15A	**Panguitch**	**99.53**	**49**	⇑P		**P**		**08 08 59.1**	**+0.8**
	baz=100,SNR=14									
L09A	**Wilkinson Ranc**	**99.54**	**43**	⇓P				08 08 58.6		
	baz=100									
R14A	**James Farms, M**	**99.57**	**48**	⇓P		Pdif		08 08 58.0	-0.6	
	baz=100									
T16A	**Glen Canyon Da**	**99.58**	**50**	⇓P		Pdif		08 08 58.8	+0.1	
	baz=100,SNR=14									
H05A	**Madras**	**99.59**	**39**	⇑P		Pdif		08 08 58.8	+0.1	
	baz=100,SNR=6.0									
I06A	**Prineville**	**99.59**	**40**	⇓P		Pdif		08 08 59.0	+0.3	
	baz=100,SNR=9.9									
K08A	**Mann Creek Ran**	**99.61**	**42**	⇓P		Pdif		08 08 59.0	+0.2	
	baz=100,SNR=15									
W19A	**Sanders**	**99.63**	**53**	⇓P		Pdif		08 08 58.4	-0.6	
	baz=100									
TXAR	**Lajitas Array**	**99.63**	**60**	P		Pdif		08 08 59.1	+0.1	
	comp=Z,3.9nm,1.0s,baz=207,slow=7.0,SNR=22									
TXAR				PP		PP		08 12 57.5	-6.2	
	comp=Z,1.3nm,1.2s,baz=289,slow=2.8,SNR=3.6									
TXAR				PKKP		PKKPbc		08 25 22.1	+2.3	
	comp=Z,3.3nm,0.8s,baz=79,slow=4.5,SNR=9.5									
TXAR				PKPPKP				08 33 37.3		
	comp=Z,1.0nm,1.1s,baz=355,slow=1.5,SNR=3.5									
TXAR				LR		LR		08 46 01.6		
	comp=Z,24µm,19.5s,MS6.7,baz=275,slow=31									
TXAR	**Lajitas Array**	**99.63**	**60**	P		Pdif		08 08 59.1	+0.2	
TXAR								08 12 57.5		
J07A	**Hines**	**99.64**	**41**	⇓P		Pdif		08 08 58.4	-0.6	
	baz=100									
V18A	**Ganado**	**99.69**	**52**	⇓P		Pdif		08 08 59.6	+0.4	
	baz=100,SNR=18									
N11A	**Elko Archery C**	**99.75**	**45**	⇓P		Pdif		08 08 59.1	-0.4	
	baz=100									
P13A	**Bates Ranch, G**	**99.78**	**47**	⇑P		Pdif		08 08 59.8	+0.2	
	baz=100,SNR=13									
M10A	**I.L. Ranch, Tu**	**99.80**	**44**	⇓P		Pdif		08 08 59.6	-0.1	
	baz=100,SNR=12									
U17A	**Shonto**	**99.83**	**51**	⇓P		Pdif		08 09 00.3	+0.4	
	baz=100,SNR=8.2									
E03A	**Lebam**	**99.86**	**37**	⇓P		Pdif		08 08 59.9	-0.1	
	baz=100									
HHC	**Hu-ho-hao-te**	**99.88**	**315**	*e*P		Pdif		08 09 00.9	+0.9	
HHC				PP		PP		08 13 09.0	+3.6	
HHC				S		S		08 20 27.4	-2.9	
HHC				SS		SS		08 27 23.8	-0.6	
HHC				AMB		AMB				
	comp=Z,21nm,1.1s,mb5.5									
HHC				AMB		AMB				
	comp=Z,1µm,12.0s									
HHC				LR		LR				
	comp=N,10µm,20.2s,MS6.4									
HHC				LR		LR				
	comp=E,7µm,20.2s,MS6.4									
HHC				LR		LR				
	comp=Z,15µm,21.6s,MS6.5									
Q14A	**Sevier Lake (B**	**99.88**	**47**	⇓P		Pdif		08 09 00.2	+0.1	
	baz=100,SNR=19									
O12A	**Currie**	**99.92**	**46**	⇓P		Pdif		08 09 00.2	0.0	
	baz=100									
R15A	**Junction**	**99.94**	**49**	⇓P		Pdif		08 09 00.7	+0.3	
	baz=100,SNR=7.3									
F04A	**Amboy**	**99.94**	**38**	⇓P		Pdif		08 09 00.3	-0.1	
	baz=100									
ELK	**Elko**	**99.97**	**45**	*e*P		Pdif		08 09 00.1	-0.4	
ELK				pmax		pmax				
	comp=Z,97nm,2.1s									
ELK				MLR		MLR				
	comp=Z,17µm,21.0s									
ELK	**Elko**	**99.97**	**45**	*e*Pdif		Pdif		08 09 00.1	-0.3	
	comp=Z,97nm,2.1s									
ELK				LR		LR				
	comp=Z,17µm,21.0s,MS6.5									
T17A	**Navajo Res., N**	**100.01**	**50**	⇓P		Pdif		08 09 00.9	+0.3	
	baz=100,SNR=12									
S16A	**Weppner Ranch,**	**100.02**	**49**	⇓P		Pdif		08 09 00.7	+0.1	
	baz=100,SNR=12									
I07A	**Izee**	**100.04**	**40**	⇓P		Pdif		08 09 00.6	-0.2	
	baz=100,SNR=6.8									
J08A	**Circle Bar Ran**	**100.06**	**42**	⇓P		Pdif		08 09 00.4	-0.5	
	baz=100,SNR=10									
H06A	**Lindquist Farm**	**100.09**	**40**	⇑P		Pdif		08 09 00.5	-0.5	
	baz=100,SNR=7.3									
M11A	**Holland Ranch,**	**100.14**	**44**	⇓P		Pdif		08 09 01.6	+0.4	
	baz=100,SNR=7.7									
N12A	**Clover Valley,**	**100.16**	**45

LZH PP PP 08 13 20.8 +5.0
LZH SKS 08 19 40.0
LZH S Sdif 08 20 38.0 -4.3
LZH SS SS 08 27 42.0 -1.5
LZH AMB AMB
comp=Z,122nm,1.4s
LZH AMB AMB
comp=Z,565nm,6.5s
LZH LR LR
comp=E,14µm,19.5s
LZH LR LR
comp=Z,28µm,20.0s,MS6.8
ANMO Albuquerque 101.36 54 *e*P Pdif 08 09 06.8 +0.2
ANMO Albuquerque 101.36 54 PFAKE 08 09 20.0 +13
ANMO LR LR
comp=Z,12µm,19.0s,MS6.4
H09A Durkee 101.39 41 ⇑P Pdif 08 09 06.7 -0.1
baz=102
I10A Payette 101.43 42 ⇓P Pdif 08 09 07.1 +0.1
baz=102
K12A Draper Farm, C 101.45 44 ⇓P Pdif 08 09 07.8 +0.7
baz=102,SNR=6.2
R18A Canyonlands Na 101.46 50 ⇓P Pdif 08 09 07.5 +0.4
baz=102,SNR=16
MFID Camas Ranch 101.48 43 ⇓P Pdif 08 09 07.4 +0.3
baz=102,SNR=9.1
S19A Harvey Farm, M 101.50 51 ⇓P Pdif 08 09 07.3 +0.1
baz=102,SNR=9.1
M14A Sheep Mountain 101.53 46 ⇓P Pdif 08 09 07.1 -0.3
baz=102,SNR=11
MVCO Mesa Verde 101.54 51 ⇓P Pdif 08 09 07.1 -0.3
baz=102
MVCO Mesa Verde 101.54 51 *e*Pdif Pdif 08 09 06.9 -0.6
comp=Z,34nm,1.4s
MVCO *e*PP PP 08 13 09.8 -8.3
MVCO LR LR
comp=Z,16µm,21.0s,MS6.5
SRU San Rafael 101.56 49 ⇑P Pdif 08 09 08.1 +0.6
baz=102
SRU San Rafael 101.56 49 *e*P Pdif 08 09 08.5 +1.0
C05A Tolt Reservoir 101.57 37 ⇑P Pdif 08 09 07.4 -0.2
baz=102
E07A Sunnyside 101.63 39 ⇓P Pdif 08 09 07.9 0.0
baz=102
HAWA Hanford 101.67 39 *e*Pdif Pdif 08 09 08.1 +0.1
comp=Z,97nm,1.9s
HAWA LR LR
comp=Z,17µm,20.0s,MS6.6
P17A Butcher Ranch, 101.67 48 ⇑P Pdif 08 09 08.4 +0.3
baz=102,SNR=5.6
BMO Blue Mountains 101.70 41 *e*P Pdif 08 09 07.5 -0.7
BMO pmax pmax
comp=Z,47nm,1.6s
BMO MLR MLR
comp=Z,24µm,20.0s,MS6.7
BMO Blue Mountains 101.70 41 *e*Pdif Pdif 08 09 07.5 -0.7
comp=Z,48nm,1.6s
BMO LR LR
comp=Z,24µm,20.0s,MS6.7
O16A Springville 101.72 47 ⇓P Pdif 08 09 08.5 +0.3
baz=102
G09A Cove 101.76 40 ⇓P Pdif 08 09 08.7 +0.3
baz=102,SNR=6.5
J12A Stokes Ranch, 101.76 43 ⇓P Pdif 08 09 08.8 +0.4
baz=102,SNR=14
R19A Curley Farm, L 101.78 50 ⇓P Pdif 08 09 08.5 +0.1
baz=102
Q18A Rafter H Ranch 101.79 49 ⇓P Pdif 08 09 08.6 +0.1
baz=102,SNR=8.1
B05A Bryant 101.79 36 ⇓P Pdif 08 09 08.8 +0.3
baz=102
HIA Hailar 101.79 325 PFAKE 08 09 20.0 +11
HIA LR LR
comp=Z,9µm,20.0s,MS6.3
H10A Noah's Angus R 101.81 42 ⇑P Pdif 08 09 08.6 0.0
baz=102
K13A Stover Farm, H 101.90 44 ⇓P Pdif 08 09 09.0 0.0
baz=102,SNR=6.2
E08A Dider Farm, El 101.97 39 ⇑P Pdif 08 09 09.2 -0.1
baz=102
DAU Daniels Canyon 101.99 47 *e*P Pdif 08 09 14.8 +5.4
F09A S2 Ranch, Elgi 101.99 40 ⇑P Pdif 08 09 09.5 0.0
baz=102
M15A Larsen Ranch, 102.01 46 ⇑P Pdif 08 09 09.1 -0.4
baz=102
D07A Quincy 102.02 38 ⇓P Pdif 08 09 09.5 -0.1
baz=102
HVU Hansel Valley 102.04 46 *e*P Pdif 08 09 10.5 +0.9
P18A Preston Nutter 102.06 49 ⇑P Pdif 08 09 09.2 -0.6
baz=102
G10A Bishop Farm, J 102.10 41 ⇓P Pdif 08 09 09.3 -0.6
baz=102
O17A Robinson Place 102.15 48 ⇑P Pdif 08 09 10.6 +0.4
baz=102,SNR=13
N16A Rees Ranch, Co 102.20 47 ⇓P Pdif 08 09 10.2 -0.2
baz=102
Q19A Hogan Spring (102.21 50 ⇑P Pdif 08 09 10.7 +0.3
baz=102,SNR=8.4
H11A Donnelly 102.27 42 ⇓P Pdif 08 09 10.9 +0.2
baz=102,SNR=15
TGUH Tegucigalpa,Un 102.32 82 PFAKE 08 09 20.0 +9.1
TGUH LR LR
comp=Z,14µm,20.0s,MS6.5
K14A Jones Ranch, D 102.33 45 ⇓P Pdif 08 09 12.0 +1.1
baz=103,SNR=6.7
C07A Waterville 102.33 38 ⇓P Pdif 08 09 10.4 -0.6
baz=103
HLID Hailey 102.34 43 ⇑P Pdif 08 09 11.2 +0.2
baz=103
HLID Hailey 102.34 43 *e*Pdif Pdif 08 09 10.9 -0.1
comp=Z,9.3nm,1.0s
HLID LR LR
comp=Z,8µm,19.0s,MS6.3
J13A Cove Ranch, Pi 102.36 44 ⇑P Pdif 08 09 11.3 +0.2
baz=103,SNR=14
M16A Huntsville 102.37 47 ⇓P Pdif 08 09 10.7 -0.4
baz=103
L15A Malad City 102.40 46 ⇓P Pdif 08 09 11.5 +0.2
baz=103,SNR=9.9
D08A Wollman Farm, 102.44 39 ⇓P Pdif 08 09 11.9 +0.5
baz=103,SNR=5.9
E09A Wood Farm, Sta 102.44 39 ⇑P Pdif 08 09 11.6 +0.1
baz=103
KVTX Kingsville 102.52 65 PFAKE 08 09 20.0 +8.2
KVTX LR LR
comp=Z,12µm,19.0s,MS6.4
F10A Beach Ranch, E 102.52 40 ⇓P Pdif 08 09 11.8 0.0
baz=103,SNR=6.9
N17A Moffit Pass 102.58 47 ⇓P Pdif 08 09 11.9 -0.2
baz=103
O18A Roosevelt 102.62 48 ⇓P Pdif 08 09 11.7 -0.6
baz=103
J14A Carey 102.66 44 ⇓P Pdif 08 09 12.8 +0.4
baz=103,SNR=16
I13A Wildhorse Cree 102.73 43 ⇓P Pdif 08 09 12.1 -0.6
baz=103
D09A Jones Farm, Ri 102.74 39 ⇑P Pdif 08 09 12.4 -0.4
baz=103
H12A Diamond D Ranc 102.77 42 ⇑P Pdif 08 09 13.3 +0.4
baz=103,SNR=16
Q20A Ridgley Place, 102.78 50 ⇑P Pdif 08 09 13.3 +0.3
baz=103,SNR=7.0
B07A Winthrop 102.85 37 ⇓P Pdif 08 09 13.0 -0.2
baz=103
R21A Cimarron 102.86 51 ⇓P Pdif 08 09 13.3 0.0
baz=103,SNR=12
C08A Higginbotham F 102.89 38 ⇑P Pdif 08 09 13.4 0.0
baz=103
JCT Junction City 102.97 61 *e*P Pdif 08 09 13.0 -0.8
JCT pmax pmax
comp=Z,78nm,1.8s
JCT MLR MLR
comp=Z,31µm,20.0s,MS6.8
JCT Junction City 102.97 61 *e*Pdif Pdif 08 09 13.0 -0.8
comp=Z,78nm,1.8s
JCT LR LR
comp=Z,31µm,20.0s,MS6.8
F11A Grangeville 103.00 41 ⇑P Pdif 08 09 13.7 -0.3
baz=103
H13A Challis 103.10 43 ⇓P Pdif 08 09 14.6 +0.2
baz=103,SNR=11
I14A Mackay 103.10 44 ⇑P Pdif 08 09 14.5 +0.1
baz=103,SNR=6.9
A07A Ashnola River, 103.15 36 ⇓P Pdif 08 09 14.6 0.0
baz=103
D10A Wagner Farm, O 103.24 39 ⇓P Pdif 08 09 15.6 +0.6
baz=104,SNR=7.0
C09A Chrisman Ranch 103.27 38 ⇓P Pdif 08 09 15.5 +0.4
baz=104
N18A Larsen Ranch, 103.27 48 ⇑P Pdif 08 09 15.3 +0.2
baz=104
L17A Cokeville 103.32 46 ⇑P Pdif 08 09 15.5 +0.2
baz=104
K16A Soda Springs 103.39 45 ⇓P Pdif 08 09 15.9 +0.2
baz=104
G13A Cobalt 103.46 42 ⇑P Pdif 08 09 16.2 +0.2
baz=104,SNR=9.7
N19A John Jarvie Ra 103.51 48 ⇑P Pdif 08 09 16.6 +0.4
baz=104
O20A White River Ci 103.57 49 ⇑P Pdif 08 09 16.5 0.0
baz=104
A08A Turner Farm, O 103.60 37 ⇓P Pdif 08 09 17.0 +0.4
baz=104
H14A Leadore 103.60 43 ⇓P Pdif 08 09 17.1 +0.5
baz=104,SNR=16
AHID Auburn Hatcher 103.62 46 PFAKE 08 09 30.0 +13
AHID LR LR
comp=Z,13µm,21.0s,MS6.5
I15A Monteview 103.67 44 ⇓P Pdif 08 09 17.2 +0.3
baz=104
L18A Fontenelle, Gr 103.68 47 ⇑P Pdif 08 09 17.2 +0.3
baz=104
K17A Gardner Place, 103.71 46 ⇑P Pdif 08 09 17.4 +0.3
baz=104,SNR=7.7
SDCO Great Sand Dun 103.72 53 PFAKE 08 09 30.0 +13
SDCO LR LR
comp=Z,8µm,20.0s,MS6.2
TRIS Tristan da Cun 103.76 172 PFAKE 08 09 30.0 +13
TRIS LR LR
comp=Z,8µm,22.0s,MS6.2
F13A Darby 103.88 42 ⇑P Pdif 08 09 17.7 -0.1
baz=104
WRAK Wrangell Islan 103.88 26 PFAKE 08 09 30.0 +12
WRAK LR LR
comp=Z,10µm,22.0s,MS6.3
H15A Lima 103.99 44 ⇓P Pdif 08 09 18.8 +0.5
baz=104
N20A Spence Gulch, 104.00 49 ⇑P Pdif 08 09 18.7 +0.3
baz=104
I16A Newdale 104.13 45 ⇑P Pdif 08 09 19.7 +0.7
baz=104,SNR=10
K18A Toltan Ranch, 104.13 46 ⇓P Pdif 08 09 19.3 +0.3
baz=104,SNR=8.0
NEW Newport 104.15 39 PFAKE 08 09 30.0 +11
NEW LR LR
comp=Z,26µm,20.0s,MS6.8
J17A Brown Place, J 104.23 45 ⇓P Pdif 08 09 19.6 +0.2
baz=104,SNR=7.7
AMTX Amarillo 104.39 57 PFAKE 08 09 30.0 +10
AMTX LR LR
comp=Z,21µm,20.0s,MS6.7
E13A Victor 104.39 41 ⇓P Pdif 08 09 20.3 +0.2
baz=105
N21A Black Mountain 104.39 49 ⇑P Pdif 08 09 20.5 +0.4
baz=105
G15A Dillon 104.44 43 ⇓P Pdif 08 09 20.5 +0.2
baz=105,SNR=10
M20A Sweetwater, Wa 104.46 48 ⇑P Pdif 08 09 20.5 0.0
baz=105
BW06 Boulder Array 104.49 46 ⇓P Pdif 08 09 20.7 +0.2
baz=105
BW06 Boulder Array 104.49 46 PFAKE 08 09 30.0 +9.5
BW06 LR LR
comp=Z,16µm,20.0s,MS6.5
PDAR Pinedale Array 104.49 46 Pdiff Pdif 08 09 19.8 -0.8
comp=Z,3.5nm,0.9s,baz=227,slow=4.0,SNR=21
PDAR PKiKP PKiKP 08 13 35.4 -0.7
comp=Z,6.1nm,1.1s,baz=245,slow=3.9,SNR=8.6
PDAR PKKPbc PKKPbc 08 25 06.2 +0.1
comp=Z,4.1nm,1.0s,baz=85,slow=5.1,SNR=8.2
PDAR PKKP PKKPab 08 25 22.6 +0.8
comp=Z,6.7nm,1.0s,baz=81,slow=4.8,SNR=7.7
J18A Kendall Valley 104.52 46 ⇑P Pdif 08 09 20.8 +0.2
baz=105,SNR=5.9
I17A Pilgram Creek 104.66 45 ⇓P Pdif 08 09 21.9 +0.6
baz=105
D13A Huson 104.68 41 ⇑P Pdif 08 09 22.1 +0.6
baz=105
L20A Wamsutter 104.70 48 ⇓P Pdif 08 09 22.3 +0.8
baz=105
E14A Clinton 104.73 42 ⇓P Pdif 08 09 22.5 +0.9
baz=105
TNA Tin City 104.75 6 *e*Pdif Pdif 08 09 20.2 -1.5
comp=Z,69nm,1.6s
MSO Missoula 104.77 41 PFAKE 08 09 30.0 +8.2
MSO LR LR
comp=Z,16µm,20.0s,MS6.6
H16A Russell Place, 104.80 44 ⇑P Pdif 08 09 23.0 +1.1
baz=105
F15A Butte 104.88 43 ⇑P Pdif 08 09 23.0 +0.8
baz=105
ISCO Idaho Springs 104.93 51 PFAKE 08 09 30.0 +7.5
ISCO LR LR
comp=Z,15µm,20.0s,MS6.5
K19A Absolon Red Bu 104.93 47 ⇑P Pdif 08 09 23.4 +0.9
baz=105
BCIP Isla Barro Col 105.14 90 PFAKE 08 09 30.0 +6.6
BCIP LR LR
comp=Z,15µm,22.0s,MS6.5
TRF Thorofare Moun 105.14 14 *e*Pdif Pdif 08 09 22.5 -0.9
comp=Z,59nm,1.6s
TRF *e*PKPdf PKiKP 08 13 36.0 -0.5
CHUM Lake Minchumin 105.16 13 *e*PKPdf PKiKP 08 13 35.7 -0.9
BOZ Bozeman (W) 105.21 43 *e*P Pdif 08 09 24.2 +0.5
BOZ Bozeman (W) 105.21 43 *e*PKPdf PKiKP 08 13 37.9 +0.7
TEIG Tepich 105.22 76 PFAKE 08 13 50.0 +12
TEIG LR LR
comp=Z,8µm,20.0s,MS6.3
HKT Hockley 105.40 64 *e*PKPdf PKiKP 08 13 43.4 +5.2
HKT LR LR
comp=Z,16µm,20.0s,MS6.6
BPAW Bear Paw Mtn. 105.60 14 *e*PKPdf PKiKP 08 13 36.0 -1.4
LSA Lhasa 105.75 295 *e*PKPdf PKiKP 08 13 38.7 -0.1
LSA LR LR
comp=Z,11µm,20.0s,MS6.4
SUR Sutherland 105.94 200 PFAKE 08 13 50.0 +11
SUR LR LR
comp=Z,31µm,20.0s,MS6.8
RLMT Red Lodge 106.15 45 *e*PKPdf PKiKP 08 13 37.3 -1.7
RLMT LR LR
comp=Z,13µm,20.0s,MS6.5
ABPO Ambohimpanom 106.21 228 PFAKE 08 13 50.0 +10
ABPO LR LR
comp=Z,12µm,20.0s,MS6.4
WMOK Wichita Mounta 106.21 58 PFAKE 08 13 50.0 +10
WMOK LR LR
comp=Z,10µm,20.0s,MS6.4
DLBC Dease Lake 106.24 26 *e*PKPdf PKiKP 08 13 38.3 -0.5
OPO Ambohidratompo 106.58 228 PKKPbc PKKPbc 08 24 58.3 -0.4
comp=Z,1.3nm,0.3s,baz=321,slow=3.7,SNR=9.3
COLA College 106.89 15 *e*P Pdif 08 09 31.1 -0.1
COLA pmax pmax
comp=Z,29nm,1.5s
COLA MLR MLR
comp=Z,11µm,19.0s,MS6.4
COLA College 106.89 15 *e*Pdif Pdif 08 09 31.1 -0.1
comp=Z,29nm,1.5s
COLA *e*PKPdf PKiKP 08 13 31.4 -8.4
COLA LR LR
comp=Z,11µm,19.0s,MS6.4
ULN Ulaanbaatar 106.95 318 *e*P Pdif 08 09 31.1 -0.4
ULN MLR MLR
comp=Z,14µm,21.0s,MS6.5
BILL Bilibino 107.03 355 ⇑*e*P Pdif 08 09 33.1 +1.3
BILL *e* 08 13 55.0
BILL *e*S SKSac 08 20 03.2 -3.4
BILL *e*PS PS 08 23 15.9 -2.6
BILL *e*SS SS 08 29 03.2 +1.4
BILL pmax pmax
comp=Z,17nm,2.0s
BILL Bilibino 107.03 355 *e*PKPdf PKiKP 08 13 40.6 +0.6
BILL LR LR
comp=Z,10µm,20.0s,MS6.4
NATX Nacogdoches 107.27 63 PFAKE 08 13 50.0 +8.4
NATX LR LR
comp=Z,20µm,21.0s,MS6.6
SONM Songino Array 107.27 318 Pdiff Pdif 08 09 31.1 -1.8
comp=Z,0.8nm,0.7s,baz=67,slow=4.8,SNR=3.0
SONM PKiKP PKiKP 08 13 40.1 -1.0
comp=Z,4.2nm,0.9s,baz=174,slow=2.7,SNR=3.6
SONM PKKPbc PKKPbc 08 24 58.3 +0.7
comp=Z,6.0nm,1.0s,baz=287,slow=2.5,SNR=8.7
SONM PKKP PKKPbc 08 25 12.0 +14
comp=Z,5.4nm,1.0s,baz=318,slow=4.0,SNR=6.0
RAMN Ramite 107.42 291 *e*P PKiKP 08 13 42.0 0.0
EGMT Eagleton 107.72 42 PFAKE 08 13 50.0 +8.2
EGMT LR LR
comp=Z,16µm,20.0s,MS6.6
OGNE Ogallala 107.80 52 PFAKE 08 13 50.0 +7.8
OGNE LR LR
comp=Z,14µm,21.0s,MS6.5
YAK Yakutsk 107.92 338 *e*PKPdf PKiKP 08 13 40.2 -1.6
YAK LR LR
comp=Z,11µm,20.0s,MS6.4
HYB Hyderabad 107.97 278 *i* Pdif Pdif 08 09 36.0 0.0
HYB *e*PP PP 08 14 12.0 +6.0
HYB *e*SKS SKSac 08 20 12.0 -1.0
HYB *e*Sdif Sdif 08 21 36.0 -2.5
HYB *e*SP SP 08 23 22.0 -2.6
HYB *e*PPS 08 24 28.0
HYB *e*SS SS 08 29 24.0 +7.8
HYB LR LR 08 55 34.0
comp=Z,32nm,20.0s
HYB Hyderabad 107.97 278 *e*P Pdif 08 09 36.0 0.0
CBKS Cedar Bluff 107.98 54 PFAKE 08 13 50.0 +7.3
CBKS LR LR
comp=Z,11µm,20.0s,MS6.4
DAWY Dawson 108.05 18 *e*Pdif Pdif 08 09 30.7 -5.7
DAWY *e*PKPdf PKiKP 08 13 38.6 -3.4
JIRN Jiri 108.12 291 *e*P PKiKP 08 13 43.0 -0.3
BOSA Boshof 108.14 205 Pdiff Pdif 08 09 38.7 +1.9
comp=Z,7.3nm,1.1s,baz=202,slow=7.3,SNR=3.6
BOSA PKKPbc PKKPbc 08 24 53.1 -1.1
comp=Z,9.6nm,0.8s,baz=6.2,slow=3.8,SNR=13
BOSA Boshof 108.14 205 Pdif Pdif 08 09 38.7 +1.9
BOSA PKKPbc PKKPbc 08 24 53.1 -1.0
BOSA LR LR
comp=Z,17µm,19.0s,MS6.6
EGAK Eagle 108.23 17 *e*PKPdf PKiKP 08 13 41.3 -1.0
EGAK LR LR
comp=Z,7µm,19.0s,MS6.2
RSSD Black Hills 108.49 48 *e*PKPdf PKiKP 08 13 43.0 -0.4
RSSD LR LR
comp=Z,14µm,20.0s,MS6.5
GUN Gumba 108.49 291 *e*P PKiKP 08 13 43.4 -0.6
comp=Z,125nm,1.0s
COLD Coldfoot 108.58 12 *e*PKPdf PKiKP 08 13 43.1 +0.2
PKI Pulchoki 108.64 291 *e*P PKiKP 08 13 43.7 -0.6
comp=Z,176nm,1.4s
KKN Kakani 108.86 291 *e*P PKiKP 08 13 43.5 -1.2
comp=Z,51nm,0.8s
DMN Daman 108.89 290 *e*P PKiKP 08 13 44.2 -0.5
EDM Edmonton 109.23 36 *e*PKPdf PKiKP 08 13 43.3 -1.2
EDM *e*PP PP 08 14 14.7 0.0
GKN Gorkha 109.45 291 *e*P PKiKP 08 13 44.4 -1.4
MIAR Mount Ida 109.61 61 *e*PKPdf PKiKP 08 13 45.5 -0.3
MIAR LR LR
comp=Z,16µm,20.0s,MS6.6
KOLN Koldanda 110.08 290 *e*P PKiKP 08 13 45.8 -1.2
comp=Z,64nm,0.9s
KSU1 Kansas State U 110.14 56 *e*PKPdf PKiKP 08 13 46.0 -0.7
KSU1 LR LR
comp=Z,15µm,20.0s,MS6.6
BOD Bodaibo 110.24 329 *e*PKIKP PKiKP 08 13 40.9 -5.4
BOD pmax pmax
comp=Z,29nm,1.6s
DANN Dangsing 110.28 290 *e*P PKiKP 08 13 46.7 -0.6
comp=Z,65nm,0.8s
VBMS Vicksburg 110.43 65 PFAKE 08 14 00.0 +13
VBMS LR LR
comp=Z,10µm,21.0s,MS6.4
ZAK Zakamensk 110.45 319 *e*PKIKP PKiKP 08 13 46.6 -0.3
ZAK *e* 08 14 25.2
ZAK *e* 08 16 50.7
ZAK pmax pmax
comp=Z,15nm,1.5s
UALR University of 110.58 62 *e*PKPdf PKiKP 08 13 47.7 +0.1
SOR Soroa 110.70 77 *e*P PP 08 14 24.0 -1.8
BDFB Brasilia 110.73 132 PKKPbc PKKPbc 08 24 43.9 -1.8
comp=Z,2.7nm,0.9s,baz=110,slow=19,SNR=4.0
BDFB Brasilia 110.73 132 PFAKE 08 14 00.0 +11
BDFB LR LR
comp=Z,27µm,20.0s,MS6.8
TLY Talaya 111.04 320 ⇓P PKiKP 08 13 48.3 +0.4
SNR=5.2
TLY Talaya 111.04 320 *i* PKIKP PKiKP 08 13 48.8 +0.8
TLY *e* 08 20 26.2
TLY *e*SS SS 08 30 17.0 +20
TLY pmax pmax
comp=Z,35nm,1.5s
TLY MLR MLR
comp=Z,13µm,21.0s,MS6.5
TLY Talaya 111.04 320 *e*PKPdf PKiKP 08 13 49.1 +1.1
TLY LR LR
comp=Z,13µm,21.0s,MS6.5
KAD Karad 111.29 275 *i* P PKiKP 08 13 46.6 -2.9
LBTB Lobatse 111.33 207 PFAKE 08 14 00.0 +10
LBTB LR LR
comp=Z,27µm,19.0s,MS6.8
MSEY Mahe Island 111.55 245 PFAKE 08 14 00.0 +10
MSEY LR LR
comp=Z,15µm,19.0s,MS6.6
SDV Santo Domingo 112.13 97 PFAKE 08 14 00.0 +8.8
SDV LR LR
comp=Z,6µm,19.0s,MS6.2
BRAL Brewton 112.24 68 PFAKE 08 14 00.0 +9.1
BRAL LR LR
comp=Z,8µm,21.0s,MS6.3
OXF Oxford 112.46 63 PFAKE 08 14 00.0 +8.7
OXF LR LR
comp=Z,14µm,21.0s,MS6.5
ECSD EROS,Sioux Fal 112.69 52 *e*PKPdf PKiKP 08 13 50.2 -1.1
ECSD *e*PP PP 08 14 36.7 -3.0
ECSD LR LR
comp=Z,14µm,21.0s,MS6.5
INK Inuvik 112.89 18 PKiKP PKiKP 08 13 49.9 -1.1
comp=Z,28nm,0.9s,baz=194,slow=2.4,SNR=33
INK Inuvik 112.89 18 *i* PKiKP PKiKP 08 13 49.9 -1.1
INK pmax pmax
comp=Z,28nm,0.9s
INK Inuvik 112.89 18 *e*PKPdf PKiKP 08 13 49.4 -1.6
LRAL Lakeview Retre 113.37 66 PFAKE 08 14 00.0 +7.0
LRAL LR LR
comp=Z,10µm,22.0s,MS6.4
FVM French Village 113.61 60 *e*PKIKP PKiKP 08 13 53.8 +0.5
SCIA State Center 113.84 55 *e*PKPdf PKiKP 08 13 53.1 -0.5
SCIA LR LR
comp=Z,15µm,20.0s,MS6.6
SIUC Southern Illin 114.28 60 *e*PKPdf PKiKP 08 13 53.6 -1.0
WVT Waverly 114.41 62 *e*PKIKP PKiKP 08 13 53.2 -1.7
WVT *e* 08 14 47.8
WVT MLR MLR
comp=Z,20µm,20.0s,MS6.7
YKA Yellowknife Ar 114.53 28 Pdiff Pdif 08 10 11.1 +5.9
comp=Z,1.3nm,0.8s,baz=222,slow=4.2,SNR=10
YKA PKP PKiKP 08 13 53.0 -1.3
comp=Z,36nm,0.8s,baz=249,slow=1.4,SNR=214
YKA PP PP 08 14 48.8 -3.6
comp=Z,5.5nm,0.9s,baz=253,slow=1.3,SNR=2.7
YKA PKKPbc PKKPbc 08 24 32.2 -1.9
comp=Z,1.6nm,0.6s,baz=44,slow=3.7,SNR=18
YKA SKKPbc 08 28 21.7
comp=Z,2.7nm,1.1s,baz=53,slow=4.4,SNR=3.7
YKA Yellowknife Ar 114.53 28 P Pdif 08 10 11.1 +5.9
YKA 08 13 53.0
YKA 08 14 48.8
YKA 08 24 32.2
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=Z,36nm,0.8s
YKA pmax pmax
comp=Z,6.0nm,0.9s
YKA Yellowknife Ar 114.53 28 PKP PKiKP 08 13 53.0 -1.3
YKA PP PP 08 14 48.8 -3.6
YKA PKKPbc PKKPbc 08 24 32.2 -1.9
YKA SKKPbc 08 28 21.7
RCC Rio Carpintero 114.74 84 *e*P PP 08 14 53.8 -0.8
DWPF Disney 114.81 73 PFAKE 08 14 10.0 +14
DWPF LR LR
comp=Z,4µm,20.0s,MS6.0
AGMN Agassiz Refuge 115.52 48 *e*PKPdf PKPdf 08 13 54.9 -1.8
AGMN *e*PP PP 08 14 58.7 -1.0
AGMN LR LR
comp=Z,11µm,20.0s,MS6.5
DDI Dehra Dun 115.53 289 *ex* PKPdf 08 13 52.0 -5.3
FFC Flin Flon 115.56 39 *e*PKIKP PKPdf 08 13 55.5 -1.0
FFC MLR MLR
comp=Z,9µm,20.0s,MS6.4

OLIL	**Olney**	**115.56**	**60**	*e*PKPdf	PKPdf	08 13 56.0	-1.0		
TIXI	**Tiksi**	**115.61**	**345**	*i* PKIKP	PKPdf	08 13 54.5	-1.6		
TIXI	**Tiksi**	**115.61**	**345**	*e*PKP	PKPdf	08 13 54.6	-1.5		
HDIL	**Hopedale**	**115.68**	**58**	*e*PKPdf	PKPdf	08 13 56.5	-0.7		
HDIL				LR	LR				
	comp=Z,12μm,21.0s,MS6.5								
MOAC	**Moa**	**115.69**	**84**	*e*P	PP	08 14 59.9	-1.4		
WMQ	**Urumqi**	**115.79**	**306**	PDIF	Pdif	08 10 07.8	-3.0		
WMQ				PKP	PKPdf	08 13 54.8	-2.5		
WMQ				XPKP		08 14 08.8			
WMQ				PP	PP	08 15 02.1	+0.4		
WMQ				PKS		08 17 29.8			
WMQ				SKS	SKSdf	08 21 02.1	-3.7		
WMQ				SKKS	SKKSac	08 21 51.0	-7.5		
WMQ				S	Sdif	08 22 37.3	-6.4		
WMQ				PP	PP				
	comp=Z,1μm,5.4s								
WMQ				LR	LR				
	comp=N,7μm,24.0s,MS6.4								
WMQ				LR	LR				
	comp=E,8μm,25.0s,MS6.4								
WMQ				LR	LR				
	comp=Z,9μm,23.0s,MS6.3								
MASC	**Masc**	**115.98**	**84**	*e*P	PP	08 15 05.2	+1.9		
GOGA	**Godfrey**	**116.09**	**67**	*e*PKIKP	PKPdf	08 13 56.2	-2.0		
GOGA				MLR	MLR				
	comp=Z,7μm,19.0s,MS6.3								
JFWS	**Jewell Farm**	**116.24**	**55**	*e*PKIKP	PKPdf	08 13 56.5	-1.7		
JFWS				*e*		08 15 04.2			
JFWS				MLR	MLR				
	comp=Z,8μm,20.0s,MS6.3								
ULM	**Lac du Bonnet**	**116.49**	**46**	PKP	PKPdf	08 13 56.6	-1.8		
	comp=Z,28nm,0.9s,baz=242,slow=2.0,SNR=33								
ULM				PP	PP	08 15 03.6	-2.8		
	comp=Z,7.0nm,0.9s,baz=241,slow=8.5,SNR=5.1								
ULM				PKKPbc	PKKPbc	08 24 26.6	-0.3		
	comp=Z,7.7nm,1.0s,baz=109,slow=2.6,SNR=5.3								
ULM	**Lac du Bonnet**	**116.49**	**46**	*e*PKPdf	PKPdf	08 13 56.3	-2.2		
ULM				*e*PP	PP	08 15 03.4	-3.1		
ULM				LR	LR				
	comp=Z,14μm,21.0s,MS6.6								
WCI	**Wyandotte Cave**	**116.53**	**61**	*e*PKIKP	PKPdf	08 13 57.8	-1.1		
WCI				MLR	MLR				
	comp=Z,17μm,20.0s,MS6.7								
BLO	**Bloomington**	**116.84**	**60**	*e*PKIKP	PKPdf	08 13 58.6	-0.9		
TKL	**Tuckaleechee C**	**117.00**	**65**	*e*PKIKP	PKPdf	08 13 58.8	-1.1		
SDDR	**Presa de Saban**	**117.60**	**87**	*e*PKPdf	PKPdf	08 14 01.1	-0.4		
SDDR				LR	LR				
	comp=Z,6μm,19.0s,MS6.2								
TZTN	**Tazewell**	**117.60**	**64**	*e*PKPdf	PKPdf	08 14 00.5	-0.5		
EYMN	**Ely**	**117.90**	**50**	*e*PKPdf	PKPdf	08 14 00.3	-0.9		
EYMN				LR	LR				
	comp=Z,13μm,20.0s,MS6.5								
NHSC	**New Hope**	**118.31**	**69**	*e*PKPdf	PKPdf	08 14 02.0	-0.5		
NHSC				LR	LR				
	comp=Z,7μm,20.0s,MS6.3								
THN	**Thein Dam**	**118.33**	**290**	*ex*	PKPdf	08 14 00.4	-2.2		
LSZ	**Lusaka**	**119.12**	**214**	P	PKPdf	08 14 05.5	+0.8		
	SNR=16								
LSZ	**Lusaka**	**119.12**	**214**	PKP	PKPdf	08 14 03.5	-1.2		
	comp=Z,14nm,1.1s,baz=147,slow=1.7,SNR=15								
LSZ				PKKPbc	PKKPbc	08 24 18.2	+1.2		
	comp=Z,11nm,1.0s,baz=350,slow=5.1,SNR=9.1								
LSZ	**Lusaka**	**119.12**	**214**	*e*PKPdf	PKPdf	08 14 04.3	-0.3		
LSZ				LR	LR				
	comp=Z,21μm,20.0s,MS6.8								
TSUM	**Tsumeb**	**119.32**	**201**	PKP	PKPdf	08 14 05.1	+0.1		
	comp=Z,11nm,1.0s,baz=157,slow=3.5,SNR=15								
TSUM				PP	PP	08 15 22.6	-2.4		
	comp=Z,11nm,0.9s,baz=174,slow=4.2,SNR=1.6								
TSUM				PKKPbc	PKKPbc	08 24 16.6	+0.2		
	comp=Z,13nm,1.0s,baz=342,slow=5.1,SNR=14								
TSUM	**Tsumeb**	**119.32**	**201**	*e*PKPdf	PKPdf	08 14 05.0	-0.1		
TSUM				*e*PP	PP	08 15 26.7	+1.7		
TSUM				LR	LR				
	comp=Z,34μm,19.0s,MS7.0								
ACSO	**Alum Creek Sta**	**119.75**	**61**	*e*PKPdf	PKPdf	08 14 03.9	-1.2		
ACSO				LR	LR				
	comp=Z,30μm,21.0s,MS6.9								
BLA	**Blacksburg**	**120.12**	**65**	*e*PKIKP	PKPdf	08 14 05.1	-0.8		
BLA				*e*		08 15 31.2			
BLA				MLR	MLR				
	comp=Z,16μm,21.0s,MS6.6								
AAM	**Ann Arbor**	**120.24**	**58**	*e*PKIKP	PKPdf	08 14 05.1	-0.8		
AAM				MLR	MLR				
	comp=Z,11μm,20.0s,MS6.5								
MKAR	**Makanchi Array**	**120.55**	**307**	PKP	PKPdf	08 14 04.5	-1.9		
	comp=Z,56nm,0.9s,baz=76,slow=1.5,SNR=86								
MKAR				PP	PP	08 15 30.6	-4.0		
	comp=Z,19nm,0.9s,baz=72,slow=2.8,SNR=2.8								
MKAR				SKP		08 17 40.4			
	comp=Z,29nm,1.2s,baz=98,slow=2.5,SNR=5.2								
MKAR				PKKPab	PKKPab	08 24 12.6	+1.1		
	comp=Z,1.9nm,0.6s,baz=305,slow=4.3,SNR=7.4								
MKAR				SKKPbc		08 27 48.1			
	comp=Z,3.6nm,1.0s,baz=256,slow=2.5,SNR=3.6								
GLMI	**Grayling**	**120.73**	**55**	*e*PKPdf	PKPdf	08 14 03.9	-2.9		
GLMI				LR	LR				
	comp=Z,16μm,20.0s,MS6.7								
CNNC	**Cliffs of the**	**121.00**	**68**	*e*PKPdf	PKPdf	08 14 07.0	-0.6		
CNNC				LR	LR				
	comp=Z,11μm,20.0s,MS6.5								
GRGR	**Grenville**	**121.06**	**100**	PFAKE		08 14 20.0	+12		
GRGR				LR	LR				
	comp=Z,5μm,19.0s,MS6.2								
SJG	**San Juan**	**121.11**	**91**	PFAKE		08 14 20.0	+12		
SJG				LR	LR				
	comp=Z,11μm,19.0s,MS6.5								
FCC	**Fort Churchill**	**121.29**	**38**	*e*PKIKP	PKPdf	08 14 05.3	-2.1		
FCC				*e*		08 15 37.2			
KSH	**Kashi**	**121.50**	**297**	PKP	PKPdf	08 14 09.0	+0.5		
KSH				PKS		08 17 44.3			
KSH				SKS	SKSdf	08 21 09.0	-7.9		
KSH				SKKS	SKKSac	08 22 37.4	+0.9		
KSH				PP	PP				
	comp=Z,3μm,8.6s								
KSH				LR	LR				
	comp=N,44μm,21.7s,MS7.2								
KSH				LR	LR				
	comp=E,30μm,19.9s,MS7.2								
KSH				LR	LR				
	comp=Z,52μm,27.6s								
MCWV	**Mont Chateau**	**121.64**	**62**	*e*PKPdf	PKPdf	08 14 07.8	-0.9		
MCWV				LR	LR				
	comp=Z,13μm,19.0s,MS6.6								
ZAA0	**Zalesovo Array**	**122.05**	**316**	*e*PKPdf	PKPdf	08 14 07.2	-1.8		
ZALV	**Zalesovo Beam**	**122.05**	**316**	PKP	PKPdf	08 14 07.4	-1.6		
	comp=Z,32nm,0.8s,baz=153,slow=1.7,SNR=62								
ULHL	**Ulahol**	**122.51**	**300**	P	PKPdf	08 14 09.6	-0.8		
	SNR=52								
ERPA	**Erie**	**122.61**	**60**	*e*PKPdf	PKPdf	08 14 10.2	-0.3		
ERPA				*e*PP	PP	08 15 48.7	-0.1		
ERPA				LR	LR				
	comp=Z,22μm,20.0s,MS6.8								
CBN	**Corbin**	**122.72**	**65**	*e*PKPdf	PKPdf	08 14 09.2	-1.7		
CBN				LR	LR				
	comp=Z,14μm,20.0s,MS6.6								
BIM	**Bigot**	**122.95**	**98**	*e*P	PKPdf	08 14 11.6	-0.3		
FDF	**Fort de France**	**123.02**	**98**	*e*P	PKPdf	08 14 12.4	+0.3		
FDF	**Fort de France**	**123.02**	**98**	*e*PKPdf	PKPdf	08 14 11.7	-0.4		
KZA	**Kyzart**	**123.11**	**300**	P	PKPdf	08 14 11.2	-0.2		
	SNR=92								
TKM2	**Tokmak 2**	**123.23**	**301**	P	PKPdf	08 14 11.0	-0.6		
	SNR=23								
TKM2	**Tokmak 2**	**123.23**	**301**	*e*PKPdf	PKPdf	08 14 10.7	-0.9		
TKM2				LR	LR				
	comp=Z,14μm,22.0s,MS6.6								
NVS	**Novosibirsk**	**123.25**	**316**	⇑ *i* PKIKP	PKPdf	08 14 09.3	-2.0		
NVS				pmax	pmax				
	comp=N,89nm,1.8s								
NVS				pmax	pmax				
	comp=E,147nm,1.8s								
NVS				pmax	pmax				
	comp=Z,225nm,1.8s								
BBGH	**Gun Hill**	**123.28**	**100**	PFAKE		08 14 20.0	+7.4		
BBGH				LR	LR				
	comp=Z,11μm,22.0s,MS6.5								
SSPA	**Standing Stone**	**123.42**	**62**	*e*P	PKPdf	08 14 10.9	-1.2		
SSPA				LR	LR				
	comp=Z,12μm,22.0s,MS6.5								
KBK	**Karagaybulak**	**123.55**	**300**	P	PKPdf	08 14 11.7	-0.6		
	SNR=49								
UCH	**Uchtor**	**123.67**	**300**	P	PKPdf	08 14 13.3	+0.8		
	SNR=22								
UCH	**Uchtor**	**123.67**	**300**	*e*PKPdf	PKPdf	08 14 12.9	+0.3		
UCH				LR	LR				
	comp=Z,9μm,21.0s,MS6.4								
CHMS	**Chumysh**	**123.82**	**301**	P	PKPdf	08 14 11.5	-1.3		
	SNR=49								
FRU	**Bishkek**	**123.85**	**301**	⇑ *i* PKIKP	PKPdf	08 14 11.5	-1.4		
FRU				*e*		08 16 03.0			
FRU				pmax	pmax				
	comp=Z,450nm,2.0s								
AAK	**Ala-Archa**	**123.85**	**300**	P	PKPdf	08 14 13.1	+0.2		
	SNR=42								
AAK	**Ala-Archa**	**123.85**	**300**	P	PKPdf	08 14 12.0	-0.9		
	SNR=34								
AAK	**Ala-Archa**	**123.85**	**300**	*i* PKP	PKPdf	08 14 12.2	-0.7		
USP	**Ospenovka**	**124.10**	**301**	P	PKPdf	08 14 12.0	-1.3		
	SNR=64								
AML	**Almayashu**	**124.19**	**299**	P	PKPdf	08 14 13.0	-0.6		
	SNR=140								
AML	**Almayashu**	**124.19**	**299**	*e*PKPdf	PKPdf	08 14 12.9	-0.6		
AML				LR	LR				
	comp=Z,17μm,20.0s,MS6.7								
EKS2	**Erkin-Say**	**124.34**	**300**	P	PKPdf	08 14 13.4	-0.4		
	SNR=58								
EKS2	**Erkin-Say**	**124.34**	**300**	*e*PKPdf	PKPdf	08 14 13.2	-0.6		
EKS2				*e*PP	PP	08 15 57.1	-3.4		
EKS2				LR	LR				
	comp=Z,15μm,22.0s,MS6.6								
KURK	**Kurchatov**	**124.34**	**311**	⇑ P	PKPdf	08 14 12.7	-0.8		
	SNR=72								
KURK	**Kurchatov**	**124.34**	**311**	PKKPbc		08 23 57.5			
	comp=Z,2.9nm,1.0s,baz=279,slow=4.2,SNR=4.1								
KURK	**Kurchatov**	**124.34**	**311**	PKIKP	PKPdf	08 14 11.6	-1.9		
KURK				pmax	pmax				
	comp=Z,251nm,1.2s								
KURK	**Kurchatov**	**124.34**	**311**	*i* PKP	PKPdf	08 14 12.0	-1.5		
SHEL	**Horse Pasture**	**125.27**	**176**	PFAKE		08 14 30.0	+14		
SHEL				LR	LR				
	comp=Z,17μm,19.0s,MS6.8								
BINY	**Binghamton**	**125.36**	**61**	*e*PKPdf	PKPdf	08 14 15.2	-0.6		
BINY				*e*PP	PP	08 16 06.2	-1.0		
BINY				LR	LR				
	comp=Z,27μm,20.0s,MS6.9								
RCBR	**Riachuelo**	**125.50**	**137**	*e*PKPdf	PKPdf	08 14 16.6	-0.4		
RCBR				LR	LR				
	comp=Z,19μm,20.0s,MS6.8								
WBK	**Wadi Bani Khal**	**126.09**	**271**	P	PKPdf	08 14 17.9	+0.1		
	SNR=19								
RES	**Resolute Bay**	**126.37**	**19**	*e*PKIKP	PKPdf	08 14 14.9	-1.9		
JMDO	**Jabal Madar**	**126.64**	**270**	P	PKPdf	08 14 18.6	-0.2		
	SNR=41								
RBK	**Rabkut**	**126.95**	**263**	P	PKPdf	08 14 20.0	+0.5		
	SNR=36								
SMDO	**Samad**	**127.05**	**271**	⇓ P	PKPdf	08 14 19.6	0.0		
	SNR=30								
BIDO	**Bidbid**	**127.23**	**272**	P	PKPdf	08 14 20.4	+0.4		
	SNR=15								
WHFO	**Wadi Hawf**	**127.53**	**263**	P	PKPdf	08 14 20.6	-0.1		
	SNR=14								
BSY	**Bisya**	**127.55**	**270**	P	PKPdf	08 14 20.1	-0.4		
	SNR=35								
ABTO	**Aybut**	**127.57**	**262**	P	PKPdf	08 14 21.4	+0.7		
	SNR=24								
HOQ	**Hoqain**	**127.90**	**271**	P	PKPdf	08 14 21.3	0.0		
	SNR=25								
ARQ	**Araqi**	**128.39**	**270**	P	PKPdf	08 14 22.1	0.0		
	SNR=39								
LBNH	**Lisbon**	**128.87**	**60**	*e*PKPdf	PKPdf	08 14 21.9	-0.5		
LBNH				*e*SKPdf	SKPdf	08 17 48.3	-5.9		
LBNH				LR	LR				
	comp=Z,24μm,20.0s,MS6.9								
HATD	**Hatta, Dubai**	**129.47**	**272**	P	PKPdf	08 14 23.7	-0.5		
	SNR=31								
BBSR	**BB Station**	**129.50**	**77**	*e*PKPdf	PKPdf	08 14 23.7	-0.3		
BBSR				LR	LR				
	comp=Z,8μm,20.0s,MS6.4								
BVA0	**Borovoye Array**	**129.91**	**311**	*i* PKIKP	PKPdf	08 14 21.3	-2.8		
BVA0				pmax	pmax				
	comp=Z,37nm,1.4s								
BRVK	**Borovoye**	**129.98**	**311**	P	PKPdf	08 14 23.8	-0.4		
	SNR=72								
BRVK	**Borovoye**	**129.98**	**311**	*i* PKP	PKPdf	08 14 23.1	-1.1		
PKME	**Peaks-Kenny Pk**	**130.97**	**60**	*e*PKPdf	PKPdf	08 14 25.9	-0.5		
PKME				LR	LR				
	comp=Z,20μm,20.0s,MS6.8								
SCHQ	**Schefferville**	**134.62**	**47**	PKP	PKPdf	08 14 32.1	-0.8		
	comp=Z,68nm,1.0s,baz=284,slow=2.0,SNR=22								
SCHQ				PP	PP	08 17 04.3	-2.8		
	comp=Z,11nm,1.0s,baz=283,slow=4.5,SNR=6.7								
SCHQ	**Schefferville**	**134.62**	**47**	*e*PKPdf	PKPdf	08 14 31.1	-1.8		
SCHQ				LR	LR				
	comp=Z,13μm,19.0s,MS6.7								
AB31	**Akbulak array**	**135.51**	**304**	PKHKP		08 14 18.8			
AB31				pmax	pmax				
	comp=Z,34nm,0.9s								
SVE	**Sverdlovsk**	**136.06**	**315**	*i* PKIKP	PKPdf	08 14 34.3	-1.2		
SVE				*e*		08 17 18.0			
SVE				pmax	pmax				
	comp=Z,180nm,1.2s								
SVE				pmax	pmax				
	comp=Z,2μm,15.9s								
SVE				MLR	MLR				
	comp=Z,15μm,23.0s,MS6.7								
AKTO	**Aktyubinsk**	**136.94**	**306**	PKHKP		08 14 26.1			
AKTO				pmax	pmax				
	comp=Z,13nm,1.1s								
ARU	**Arti**	**137.18**	**315**	PKIKP	PKPdf	08 14 34.6	-3.0		
ARU						08 17 17.6			
ARU	**Arti**	**137.18**	**315**	*e*PKP	PKPdf	08 14 34.5	-3.1		
QRN	**Al-Qurain**	**137.78**	**272**	*e*P	PKPdf	08 14 35.5	-4.1		
	baz=272								
QRN				AMb	AMB	08 14 46.3			
	comp=Z,697nm,2.1s,baz=272								
SOKR	**Solikamsk**	**138.13**	**319**	*i* PKIKP	PKPdf	08 14 38.9	-0.4		
SOKR				pmax	pmax				
	comp=Z,310nm,1.1s								
RDF	**Al-Radifah**	**138.15**	**272**	*e*P	PKPdf	08 14 35.5	-4.8		
	baz=272								
RDF				AMb	AMB	08 14 47.0			
	comp=Z,520nm,2.0s,baz=272								
KBD	**Kabd**	**138.15**	**272**	*e*P	PKPdf	08 14 35.5	-4.8		
	baz=272								
KBD				AMb	AMB	08 14 47.3			
	comp=Z,186nm,1.6s,baz=272								
KBS	**Kingsbay**	**139.51**	**356**	*e*PKIKP	PKPdf	08 14 39.4	-2.0		
KBS				MLR	MLR				
	comp=Z,11μm,20.0s,MS6.6								
SPB4	**Spitsbergen Ar**	**139.93**	**354**	*e*PKPdf	PKPdf	08 14 34.0	-8.2		
SFJD	**Kangerlussuaq**	**141.10**	**28**	PFAKE		08 15 00.0	+16		
SFJD				LR	LR				
	comp=Z,12μm,20.0s,MS6.7								
DAG	**Danmarks Havn**	**141.38**	**6**	⇓ *i* PKHKP	PKPdf	08 14 36.1	-8.7		
DAG				pmax	pmax				
	comp=Z,29nm,0.7s								
DAG				MLR	MLR				
	comp=Z,12μm,22.0s,MS6.6								
DAG				MLR	MLR				
	comp=N,9μm,23.0s								
DAG	**Danmarks Havn**	**141.38**	**6**	⇓ *i* P	PKPdf	08 14 36.1	-8.7		
	comp=N,29nm,0.7s								
DAG									
	comp=Z,12μm,22.0s								
SUMG	**Summit**	**141.80**	**17**	*e*PKPdf	PKPdf	08 14 40.0	-5.6		
BHD	**Baghdad**	**142.43**	**276**	*e*PKP	PKPdf	08 14 40.0	-8.0		
MAK	**Makhachkala**	**142.84**	**292**	*e*PKHKP	PKPdf	08 14 41.8	-6.6		
MAK				*e*		08 18 00.9			
MAK				*e*		08 21 51.1			
MAK				*e*SS	SS	08 36 37.7	+4.4		
MAK				*e*SSS		08 41 52.6			
MAK				pmax	pmax				
	comp=Z,435nm,1.4s								
DGRG	**David-gareji**	**144.09**	**289**	P	PKPdf	08 14 48.8	-1.8		
GNI	**Garni**	**144.27**	**287**	*e*P	PKPdf	08 14 47.4	-3.5		
GNI	**Garni**	**144.27**	**287**	P	PKPdf	08 14 49.4	-1.5		
	SNR=25								
GNI	**Garni**	**144.27**	**287**	*d i* PKIKP	PKPdf	08 14 49.4	-1.6		
GNI	**Garni**	**144.27**	**287**	*i* PKP	PKPdf	08 14 49.5	-1.5		
HKR	**Hakkari**	**144.35**	**283**	*e*P	PKPdf	08 14 49.4	-1.8		
CUKT	**Cukurca**	**144.36**	**282**	*e*P	PKPdf	08 14 48.2	-3.0		
MSL	**Mosul**	**144.49**	**280**	*e*PKP	PKPdf	08 14 49.0	-2.5		
MTA	**Mtatsminda**	**144.56**	**290**	P	PKPdf	08 14 48.9	-2.5		
CLDR	**Caldiran**	**144.64**	**285**	*e*P	PKPdf	08 14 49.7	-1.9		
LVZ	**Lovozero**	**144.71**	**337**	*e*PKIKP	PKPdf	08 14 48.3	-2.6		
LVZ				MLR	MLR				
	comp=Z,14μm,22.0s,MS6.7								
VANB	**Van**	**144.90**	**284**	*e*P	PKPdf	08 14 50.5	-1.6		
GOR	**Gori**	**145.12**	**290**	P	PKPbc	08 14 51.9	-0.1		
APA	**Apatity**	**145.29**	**337**	⇑ *i* PKP2	PKPdf	08 14 50.0	-1.9		
APA				*i*		08 22 02.0			
APA				*e*SS	SS	08 37 00.0	+0.4		
APA				pmax	pmax				
	comp=Z,350nm,1.4s								
APA				MLR	MLR				
	comp=Z,16μm,19.0s,MS6.8								
AGRB	**Hanur-Agry**	**145.44**	**286**	*e*P	PKPdf	08 14 52.8	-0.2		
KEV	**Kevo**	**145.52**	**343**	*e*p	PKPdf	08 14 50.5	-1.7		
	comp=Z,254nm,1.1s								
KEV	**Kevo**	**145.52**	**343**	*e*PKP2	PKPdf	08 14 50.5	-1.7		
KEV				pmax	pmax				
	comp=Z,254nm,1.1s								
KARS	**Kars**	**145.60**	**287**	*e*P	PKPdf	08 14 52.9	-0.3		
ONI	**Oni**	**145.71**	**291**	P	PKPdf	08 14 52.9	-0.5		
ARCES	**ARCESS Array B**	**146.03**	**343**	PKPbc	PKPdf	08 14 52.4	-0.7		
	comp=Z,309nm,0.9s,baz=47,slow=2.4,SNR=146								
ARCES	**ARCESS Array B**	**146.03**	**343**	PKP2	PKPdf	08 14 52.4	-0.7		
ARCES				pmax	pmax				
	comp=Z,309nm,0.9s								
ARE0	**ARCESS Array S**	**146.03**	**343**	*e*PKPdf	PKPdf	08 14 52.3	-0.7		
ARE0				*e*PKPbc	PKPbc	08 14 53.6	-0.4		
KLMR	**Klimovskoe**	**146.28**	**324**	*i* PKIKP	PKPdf	08 14 52.8	-0.9		
KLMR				pmax	pmax				
	comp=Z,1.0nm,1.1s								
KIV	**Kislovodsk**	**146.46**	**293**	P	PKPdf	08 14 53.5	-1.1		
	SNR=34								
KIV	**Kislovodsk**	**146.46**	**293**	*e*PKHKP		08 14 47.9			
KIV				*i*		08 14 53.4			
KIV				*e*		08 18 23.7			
KIV				*e*		08 21 52.9			
KIV				*e*		08 30 50.0			
KIV				pmax	pmax				
	comp=Z,215nm,1.2s								
KIV	**Kislovodsk**	**146.46**	**293**	*e*PKPbc	PKPdf	08 14 54.8	+0.2		
KIV				LR	LR				
	comp=Z,9μm,20.0s,MS6.5								
EZM	**Erzurum**	**146.74**	**286**	*e*P	PKPdf	08 14 55.8	+0.6		
BCA	**Borcka**	**146.85**	**288**	*e*P	PKPdf	08 14 54.6	-0.7		
TRO	**Tromso**	**147.29**	**347**	*e*P	PKPbc	08 14 58.2	+0.6		
TRO				*e*SS	SS	08 37 19.7	-2.3		
LIC	**Lamto**	**147.31**	**174**	*e*PKIKP	PKPdf	08 14 56.7	-0.3		
	comp=Z,3μm,1.5s								
PZAR	**Pazar-Rize**	**147.34**	**288**	*e*P	PKPbc	08 14 58.7	+0.1		
VRHR	**Novokhopersk**	**147.34**	**306**	*i* PKIKP	PKPdf	08 14 56.2	+0.4		
VRHR				pmax	pmax				
	comp=E,130nm,0.8s								
VRHR				pmax	pmax				
	comp=Z,370nm,0.8s								
VRHR				pmax	pmax				
	comp=N,100nm,0.7s								
VRHR				MLR	MLR				
	comp=Z,11μm,25.0s,MS6.5								
VRHR				MLR	MLR				
	comp=N,7μm,19.0s								
VRHR				MLR	MLR				
	comp=E,5μm,18.0s								
KIC	**Kosan Boka**	**147.46**	**175**	*e*PKIKP	PKPdf	08 14 56.9	-0.4		
	comp=E,7μm,1.5s								
JMIC	**Jan Mayen**	**147.71**	**4**	*e*P	PKPdf	08 14 57.8	+1.9		
TIC	**Toumodi**	**147.72**	**174**	*e*PKIKP	PKPdf	08 14 56.2	-1.5		
	comp=E,4μm,1.5s								
DBIC	**Dimbokro**	**147.76**	**175**	PKP	PKPdf	08 14 57.7	-0.1		
	comp=E,259nm,1.0s,baz=152,slow=3.3,SNR=29								
DBIC				PKPbc	PKPbc	08 15 00.5	-0.1		
	comp=E,259nm,1.0s,baz=152,slow=4.0,SNR=86								
DBIC	**Dimbokro**	**147.76**	**175**	*e*PKPdf	PKPdf	08 14 57.6	-0.2		
DBIC				*e*PKPbc	PKPbc	08 15 00.9	+0.3		
DBIC				LR	LR				
	comp=Z,24μm,20.0s,MS7.0								
EZC	**Erzincan**	**147.87**	**285**	*e*P	PKPdf	08 14 57.9	+0.8		
SVRC	**Sivrice-ELAZID**	**147.95**	**282**	*e*P	PKPdf	08 14 56.8	-0.5		
PTK	**Pertek**	**148.00**	**283**	*e*P	PKPdf	08 14 56.1	-1.2		
URFA	**Urfa**	**148.08**	**280**	*e*P	PKPdf	08 14 56.8	-0.8		
KTUT	**Trabzon**	**148.15**	**287**	*e*P	PKPdf	08 14 55.6	-1.9		
GUMT	**Gumushane**	**148.27**	**286**	*e*P	PKPdf	08 14 58.0	+0.3		
SOC	**Sochi**	**148.55**	**292**	*d i* PKIKP	PKPdf	08 14 56.6	-1.5		
SOC				*i*		08 15 03.2			
SOC				*e*		08 18 33.8			
SOC				*e*PPP		08 21 50.8			
SOC				*e*SS	SS	08 37 38.9	+0.5		
SOC				pmax	pmax				
	comp=Z,3μm,0.7s								
SOC				pmax	pmax				
	comp=Z,5μm,0.8s								
SOC				MLR	MLR				

comp=Z,201nm,1.4s
KAF Kangasniemi 151.09 333 *e*p PKPdf 08 15 00.5 -1.0
comp=Z,367nm,0.9s
KAF Kangasniemi 151.09 333 *e*PKIKP PKPdf 08 15 00.5 -1.0
KAF pmax pmax
comp=Z,367nm,0.9s
KONS Konsvik 151.09 348 *e*P PKPbc 08 15 06.0 -1.3
KONS ⇑*i*P 08 15 06.4
KONS AMb AMB 08 15 09.7
comp=Z,821nm,1.9s
MOR8 Moi Rana 151.16 346 *e*P PKPbc 08 15 05.5 -1.9
MOR8 AMb AMB 08 15 08.8
comp=Z,450nm,1.6s
STOK Stokkvaagen 151.26 347⇑*i*P PKPbc 08 15 06.8 -0.9
STOK AMb AMB 08 15 10.0
comp=Z,911nm,1.7s
CSS Prodhromos 151.61 273 P PKPdf 08 15 00.7 -2.5
MAMC Mammari 151.76 273 P PKPbc 08 15 09.2 -0.6
BORG Borgarnes 151.78 17 *e*PKIKP PKPdf 08 15 01.3 -1.2
BORG *e* 08 15 09.4
BORG MLR MLR
comp=Z,10μm,21.0s
SZAC Souni-Zanaja 151.89 272 P PKPbc 08 15 09.3 -0.8
comp=Z,5.7nm,0.7s
CDAG Cicekdag 151.97 283 *i* P PKPbc 08 15 09.8 -0.3
ALFC Alevga 152.24 273 P PKPbc 08 15 09.6 -1.3
comp=Z,10nm,1.5s
PPCY Paphos 152.35 272 P PKPbc 08 15 09.6 -1.5
BR131 Keskin Array S 152.54 283 *e*PKPdf PKPdf 08 15 03.7 -0.7
BR131 *e*PKPbc PKPbc 08 15 11.0 -0.4
BR131 LR LR
comp=Z,10μm,20.5s,MS6.6
BRTR Keskin Array B 152.54 283 PKP PKPdf 08 15 03.2 -1.2
comp=Z,34nm,1.2s,baz=151,slow=2.8,SNR=30
BRTR PKPbc PKPbc 08 15 11.1 -0.4
comp=Z,135nm,0.9s,baz=139,slow=4.6,SNR=112
BBTS Babate 152.62 148 PKP PKPdf 08 15 07.2 +2.0
comp=Z,334nm,1.2s,baz=332,slow=0.7,SNR=4.3
BBTS PKPbc PKPbc 08 15 13.1 +0.9
comp=Z,531nm,1.1s,baz=281,slow=1.0,SNR=5.9
SIM Simferopol' 152.65 294*d i*PKIKP PKPdf 08 15 03.8 -0.6
SIM pmax pmax
comp=Z,111nm,0.9s
SIM pmax pmax
comp=Z,980nm,8.4s
NSS Namsos 153.09 347 *e*P PKPbc 08 15 09.8 -2.0
NSS *e*PP PP 08 18 56.7 -0.3
TOA0 Torodi Ar. Sit 154.10 188 *e*PKPdf PKPdf 08 15 07.0 -0.4
TOA0 *e*PKPbc PKPbc 08 15 15.3 -0.2
TOA0 *e*PKPab PKPab 08 15 29.3 +0.3
TORD Torodi Ar. Bea 154.10 188 PKP PKPdf 08 15 06.4 -1.0
comp=Z,40nm,1.1s,baz=230,slow=0.2,SNR=100
TORD PKPbc PKPbc 08 15 15.1 -0.4
comp=Z,34nm,0.9s,baz=136,slow=1.6,SNR=22
TORD PKPab PKPab 08 15 29.0 0.0
comp=Z,125nm,0.9s,baz=178,slow=3.2,SNR=26
TORD Torodi Ar. Bea 154.10 188 PKP PKPdf 08 15 06.4 -1.0
TORD PKPbc PKPbc 08 15 15.1 -0.4
TORD PKPab PKPab 08 15 29.0 0.0
MNK Minsk 154.57 318 *e*PKIKP PKPdf 08 15 05.0 -1.8
MNK *e* 08 19 12.0
MNK *e*PPS 08 32 08.0
MNK *e*SS SS 08 38 40.0 -3.7
MNK pmax pmax
comp=Z,280nm,1.0s
MNK pmax pmax
comp=Z,10μm,6.0s
ISP Isparta 154.57 278‖*i*P PKPbc 08 15 14.4 -1.5
ISP Isparta 154.57 278 P PKPdf 08 15 03.1 -4.3
ISP *e*PKPdf PKPdf 08 15 06.7 -0.7
ISP *e*PKPbc PKPbc 08 15 15.7 -0.2
ISP LR LR
comp=Z,23μm,19.0s,MS7.0
KSL Kastellorizon 154.88 274 *e*PN PKPbc 08 15 13.0 -3.6
AKASG Malin Array Be 155.13 308 PKP PKPdf 08 15 05.7 -2.0
comp=Z,13nm,0.8s,baz=65,slow=1.4,SNR=50
AKASG PKPbc PKPdf 08 15 15.7 +8.0
comp=Z,29nm,0.7s,baz=62,slow=2.8,SNR=29
AKASG PKPab PKPab 08 15 30.6 -2.0
comp=Z,81nm,0.8s,baz=61,slow=4.3,SNR=14
AKASG PP PP 08 19 05.9 -3.5
comp=Z,4.2nm,0.8s,baz=64,slow=4.8,SNR=4.0
AKBB Malin Array Si 155.13 308 *e*PKIKP PKPdf 08 15 05.9 -1.8
AKBB *e* 08 15 15.8
KIEV Kiev 155.14 308 *e*PKIKP PKPdf 08 15 05.5 -2.2
KIEV *e* 08 15 15.8
KIEV MLR MLR
comp=Z,11μm,22.0s,MS6.6
DOMB Dombas 155.90 347 *e*P PKPdf 08 15 17.3 +9.0
DOMB AMb AMB 08 15 20.4
comp=Z,145nm,1.7s
ARG Arkhangelos 156.03 273 *e*PN PKPdf 08 15 14.5 +5.1
KIS Kishinev 156.18 300 *i* PKIKP PKPdf 08 15 09.0 -0.2
KIS *e* 08 15 20.0
KIS *e* 08 19 14.0
KIS Kishinev 156.18 300 *e*PKIKP PKPdf 08 15 09.0 -0.2
KIS Kishinev 156.18 300 *e*PP PP 08 19 14.0 -1.5
comp=Z,3μm,22.0s
NB2 NORSAR Subarra156.40 344 PKPdf PKPdf 08 15 07.5 -1.6
comp=Z,282nm,1.7s,baz=32,slow=1.4
NB2 NORSAR Subarra156.40 344 PKPdf PKPdf 08 15 07.5 -1.6
baz=32,slow=1.4
NOA NORSAR Array B156.40 344 PKP PKPdf 08 15 07.5 -1.5
comp=Z,13nm,1.1s,baz=30,slow=1.6,SNR=10.0
KARP Karpathos 156.59 271 *e*PB PKPdf 08 15 10.5 +0.3
NAO01 NORSAR Array S 156.65 344 *e*PKPdf PKPdf 08 15 08.4 -1.0
NAO01 *e*PKPab PKPab 08 15 37.5 -1.3
NAO01 LR LR
comp=Z,13μm,20.0s,MS6.8
HYA Hoyanger 157.18 350 *e*P PKPdf 08 15 12.2 +2.2
ZKR Zakros 157.20 269 P PKPdf 08 15 10.2 -0.8
SUW Suwalki 157.21 320 *e*PKPdf PKPdf 08 15 09.7 -0.7
SUW *e*PKPab PKPab 08 15 36.8 -4.6
SUW LMZ 09 18 37.0
comp=Z,18μm,28.3s
SUW Suwalki 157.21 320 *e*PKPdf PKPdf 08 15 09.7 -0.6
SUW *e*PKPab PKPab 08 15 36.8 -4.6
BLCB Balcova 157.36 278 P PKPdf 08 15 06.5 -4.6
SMG Samos 157.39 276 *e*PB PKPdf 08 15 19.5 +8.4
PRD Provadia 157.50 290 *e*P PKPdf 08 15 11.2 +0.1
VRI Vrincioaia 157.78 297‖*i*P PKPdf 08 15 11.4 +0.1
VRI Vrincioaia 157.78 297‖P PKPdf 08 15 11.4 +0.1
LAST Lasithi 157.79 269 P PKPdf 08 15 09.9 -1.8
KONO Kongsberg 158.01 344 *e*P PKPdf 08 15 11.2 0.0
KONO Kongsberg 158.01 344 PFAKE 08 15 20.0 +8.9
KONO LR LR
comp=Z,14μm,22.0s,MS6.8
BER Bergen 158.05 350 *e*P PKPdf 08 15 10.3 -0.9
PRK Paraskevi 158.10 280 P PKPdf 08 15 10.3 -1.6
PRK Paraskevi 158.10 280 *e*PN PKPdf 08 15 12.0 +0.1
JMB Yambol 158.10 288 P PKPdf 08 15 12.0 +0.2
SIVA Sivas 158.27 268 P PKPdf 08 15 11.0 -1.3
IDI Anoyia 158.29 269 PKP PKPdf 08 15 13.0 +0.7
baz=152,slow=6.2
ODD1 Odda 158.32 348 *e*P PKPdf 08 15 10.3 -1.2
SIGR SIGRI 158.41 280 P PKPdf 08 15 09.3 -3.0
ALN Alexandroupoli 158.44 284 P PKPdf 08 15 09.2 -3.1
BURAR Bucovina Array 158.47 303⇑*i*P PKPdf 08 15 12.7 +0.6
BURAR Bucovina Array 158.47 303 P PKPdf 08 15 12.8 +0.7
BUR08 Bucovina Ar. S 158.47 303 *e*PKPdf PKPdf 08 15 11.3 -0.8
BUR08 *e*PKPab PKPab 08 15 46.8 -0.4
SZH Strazhica 158.57 291 *e*P PKPdf 08 15 12.4 0.0
LVV L'vov 158.57 309 *e*PKIKP PKPdf 08 15 12.1 0.0
LVV *e* 08 19 32.5
WAL1 Walls 158.67 359 *e*P PKPdf 08 15 09.2 -2.8
GVD Gavdhos 158.77 267 *e*PB PKPdf 08 15 13.0 +0.1
LRW Lerwick 158.78 359 *e*P PKPdf 08 15 09.3 -2.8
LRW AMS AMS 09 34 43.5
comp=Z,10μm,20.8s,MS6.6
BLS5 Blasjo 158.81 348 *e*P PKPdf 08 15 12.1 0.0
RDO Rodhopi 158.84 285 *e*PN PKPdf 08 15 12.5 -0.3
DIM Dimitrovgrad 158.88 287 *e*P PKPdf 08 15 11.2 -1.6
VOIR 159.00 297⇑*i*P PKPdf 08 15 15.2 +2.4
VOIR 159.00 297⇑P PKPdf 08 15 15.2 +2.4
LIA Limnos Island 159.01 281 P PKPdf 08 15 10.4 -2.6
WAR Warsaw 159.24 317 *e*PKP PKPdf 08 15 14.5 +1.7
WAR LMZ 09 21 30.4
comp=Z,19μm,27.0s
WAR Warsaw 159.24 317 *e*PKP PKPdf 08 15 14.5 +1.6
WAR LR LR
comp=Z,19μm,27.0s,MS6.8
KWP Kalwaria 159.44 309 *e*PKPdf PKPdf 08 15 12.7 -0.5
KWP *ep*PKPdf pPKPdf 08 15 25.5 -1.0
KWP *e*PKPab PKPab 08 15 51.6 +0.3
KWP LMZ 09 23 58.3
comp=Z,15μm,25.6s
KWP Kalwaria 159.44 309 *e*PKIKP PKPdf 08 15 12.7 -0.5
KWP *e* 08 15 25.5
KWP Kalwaria 159.44 309⇑*i*P PKPdf 08 15 13.0 -0.2
KWP Kalwaria 159.44 309 *e*PKPdf PKPdf 08 15 12.7 -0.5
KWP *ep*PKPdf pPKPdf 08 15 25.5 -1.0
KWP *e*PKPab PKPab 08 15 51.6 +0.3
PLD Plovdiv 159.50 287 P PKPdf 08 15 10.3 -3.2
PLD Plovdiv 159.50 287 *e*P PKPdf 08 15 12.7 -0.8
BEL Belsk 159.57 317 *e*PKPdf PKPdf 08 15 12.0 -1.2
BMR Baia Mare 159.58 304 PKIKP PKPdf 08 15 13.8 +0.4
PTL Penteli 159.76 276 *e*PB PKPdf 08 15 12.5 -1.4
AOS Alonnisos 159.93 279 P PKPdf 08 15 05.1 -9.0
NAIG Nisos Aigina 160.00 275 *e*PB PKPdf 08 15 13.0 -1.2
UZH Uzhgorod 160.05 307 *i* PKIKP PKPdf 08 15 13.0 -0.9
UZH *i* 08 15 53.0
UZH *i* 08 19 33.0
UZH *e*PPP 08 23 20.0
UZH *e* 08 32 48.0
UZH *i* 08 40 44.0
DID Didima 160.14 274 P PKPdf 08 15 10.8 -3.6
VLI Veliai 160.20 271 *e*PB PKPdf 08 15 22.5 +8.0
MMB Musomiste 160.22 286 *e*P PKPdf 08 15 13.0 -1.3
BSD Bornholm Skovb 160.23 330 *i* P PKPdf 08 15 12.7 -1.2
comp=Z,43nm,1.0s
BSD *i* S 08 26 25.1
BSD
comp=Z,8μm,22.0s
BSD Bornholm Skovb 160.23 330 *i* P PKPdf 08 15 12.7 -1.2
BSD *i* S 08 26 25.1
DRGR 160.33 301‖*i*P PKPdf 08 15 14.0 -0.3
DRGR 160.33 301 P PKPdf 08 15 13.1 -1.2
PLG Polygyros 160.38 282 *e*PN PKPdf 08 15 14.0 -0.6
STHS Stebnicka Huta 160.40 310 *e*PKP PKPdf 08 15 13.5 -0.8
STHS *e* 08 15 56.2
STHS *e* 08 16 13.5
NEO Neokhori 160.45 279 *e*PN PKPdf 08 15 13.5 -1.2
LTK Loutraki 160.45 275 P PKPdf 08 15 10.6 -4.1
CRVS Cervenica-Dubn 160.47 308 *e*PKIKP PKPdf 08 15 13.0 -1.4
CRVS *e* 08 15 55.7
CRVS Cervenica-Dubn 160.47 308 *e*PKP PKPdf 08 15 13.0 -1.4
CRVS *e* 08 15 55.7
CRVS *e* 08 16 13.0
CRVS Cervenica-Dubn 160.47 308 *e*PKP PKPdf 08 15 13.0 -1.4
CRVS *e* 08 15 55.7
CRVS *e* 08 16 13.0
CRVS LR LR
comp=Z,9μm,25.0s
SOH Sokhos 160.48 284 P PKPdf 08 15 11.7 -3.0
XOR Xorichti 160.48 279 P PKPdf 08 15 13.8 -0.9
GKP Gorka Klasztor 160.53 324 *e*PKP PKPdf 08 15 13.6 -0.7
GKP *e*PKPab PKPab 08 15 54.9 -1.0
GKP LMZ 09 27 48.7
comp=Z,16μm,23.8s
GKP Gorka Klasztor 160.53 324 *e*PKP PKPdf 08 15 13.6 -0.7
GKP *e*PKPab PKPab 08 15 54.9 -0.9
GKP LR LR
comp=Z,16μm,23.8s
LKR Lokris 160.53 277 P PKPdf 08 15 11.0 -3.8
GZR Gura Zlata 160.59 297‖*i*P PKPdf 08 15 14.0 -0.6
GZR Gura Zlata 160.59 297‖P PKPdf 08 15 14.0 -0.6
VTS Vitosha 160.59 289 P PKPdf 08 15 17.8 +3.1
VTS Vitosha 160.59 289 *e*P PKPdf 08 15 13.5 -1.2
MLA1 Latheron 160.61 2 *e*P PKPdf 08 15 12.2 -2.0
HORT Hortiatis 160.66 283 P PKPdf 08 15 15.4 +0.5
COP Copenhagen 160.68 335 *i* P PKPdf 08 15 12.6 -1.8
comp=Z,25nm,1.0s
COP *e*S 08 26 27.8
COP
comp=Z,5μm,21.0s
THE Thessaloniki 160.76 283 P PKPdf 08 15 11.7 -3.3
KNT Kendrikon 160.84 285 P PKPdf 08 15 14.2 -0.8
OJC Ojcow 160.90 313 *e*PKPdf PKPdf 08 15 12.4 -2.4
OJC *ep*PKPab pPKPab 08 16 12.8 +2.3
NIE Niedzica 160.96 311 *e*P PKPdf 08 15 13.9 -1.0
VAY Valandovo 161.09 285 P PKPdf 08 15 11.9 -3.4
VAY Valandovo 161.09 285 *e*PKP PKPdf 08 15 10.3 -5.0
LIT Litokhoron 161.09 281 P PKPdf 08 15 17.4 +2.1
ITM Ithomi 161.09 272 *e*PB PKPdf 08 15 16.0 +0.6
AGG Agios Georgios 161.10 278 P PKPdf 08 15 06.6 -8.8
PYL PYLOS 161.18 271 P PKPdf 08 15 12.7 -2.8
GRG Griva 161.21 284 P PKPdf 08 15 11.7 -3.7
KECS Kecovo 161.22 308 *e*PKIKP PKPdf 08 15 13.8 -1.4
KECS *e* 08 15 58.1
KECS *e* 08 19 38.7
KECS Kecovo 161.22 308 *e*PKP PKPdf 08 15 13.8 -1.4
KECS *e* 08 15 58.1
KECS *e* 08 16 13.5
KECS *e*PP PP 08 19 38.7 -4.0
KAC Achnashellach 161.31 6 *e*P PKPdf 08 15 12.8 -2.2
MCD Coleburn Disti 161.33 2 *e*P PKPdf 08 15 12.6 -2.4
BZS Buzias 161.34 299⇑*i*P PKPdf 08 15 13.6 -1.8
BZS Buzias 161.34 299 P PKPdf 08 15 13.3 -2.1
STIP Stip 161.38 286 P PKPdf 08 15 14.5 -1.1
THL Klokotos Trika 161.41 279 P PKPdf 08 15 12.4 -3.3
MDO Dochfour 161.43 4 *e*P PKPdf 08 15 12.9 -2.2
KPL Plockton 161.44 6 P PKPdf 08 15 13.2 -1.9
KPL AMS AMS 09 36 47.5
comp=Z,11μm,19.5s
KPL Plockton 161.44 6 *e*P PKPdf 08 15 13.2 -1.9
KPL AMS AMS 09 36 47.5
comp=Z,11μm,19.5s
EVR Evrytania 161.49 277 *e*PN PKPdf 08 15 15.5 -0.3
CMLA Cha da Macela 161.51 86 *e*PP PP 08 19 32.1 -13
CMLA *e*SS SS 08 40 17.2 +18
CMLA *e*LQ 09 03 18.7
CMLA *e*LR LR 09 10 49.8
CMLA Cha da Macela 161.51 86 PFAKE 08 15 30.0 +14
CMLA LR LR
comp=Z,11μm,19.0s
MME1 Meikle Cairn 161.61 2 *e*P PKPdf 08 15 13.0 -2.3
KZN Kozani 161.66 282 *e*PN PKPdf 08 15 16.5 +0.6
PSZ Piszkesteto 161.80 307‖*e*PKP PKPdf 08 15 16.2 +0.4
PSZ Piszkesteto 161.80 307⇑*i*P PKPdf 08 15 14.3 -1.5
PSZ Piszkesteto 161.80 307 *e*PKPdf PKPdf 08 15 14.1 -1.7
PSZ *e*PKPab PKPab 08 16 00.3 -1.3
PSZ *e*PP PP 08 19 42.3 -3.6
PSZ LR LR
comp=Z,18μm,19.0s
KAR1 Arisaig 161.84 7 *e*P PKPdf 08 15 13.4 -2.1
RAC Raciborz 161.87 314 *e*PKIKP PKPdf 08 15 15.7 -0.1
SKO Skopje 161.93 287 P PKPdf 08 15 12.3 -3.9
SKO Skopje 161.93 287 *e*PKP PKPdf 08 15 13.1 -3.0
FNA Florina 161.98 283 P PKPdf 08 15 12.0 -4.2
OKC Ostrava-Krasne 162.02 314 *e*PKIKP PKPdf 08 15 15.4 -0.6
OKC *e* 08 16 02.0
OKC *e* 08 19 52.1
OKC *e*SS SS 08 41 02.6 +60
OKC Ostrava-Krasne 162.02 314 *e*PKPDF PKPdf 08 15 15.4 -0.6
OKC *e*PKPAB PKPab 08 16 02.0 -0.5
OKC *ep*PKP pPKPab 08 16 18.4 +3.0
OKC *e*PP PP 08 19 52.1 +5.3
OKC *ex* x 08 41 02.6
OKC *ex* x 08 47 35.9
OKC AMS AMS 09 34 50.0
comp=Z,10μm,18.2s
OKC Ostrava-Krasne 162.02 314 *e*PKP PKPdf 08 15 15.4 -0.6
OKC *e* 08 16 02.0
OKC *e* 08 16 18.4
OKC *e*PP PP 08 19 52.1 +5.3
OKC *e*SS SS 08 41 02.6 +60
OKC *e* 08 47 35.9
BIA Bitola 162.02 284 P PKPdf 08 15 15.3 -1.0
KRUS Krusevo 162.08 285 *e*PKP PKPdf 08 15 13.5 -2.8
KFL Anninata 162.16 274 P PKPdf 08 15 16.4 -0.1
VYHS Vyhne 162.23 309 *e*PKIKP PKPdf 08 15 14.8 -1.4
VYHS *e* 08 16 02.0
VYHS Vyhne 162.23 309 *e*PKP PKPdf 08 15 14.8 -1.4
VYHS *e* 08 16 02.0
VYHS *e* 08 16 18.2
VYHS Vyhne 162.23 309 *e*PKP PKPdf 08 15 14.8 -1.4
VYHS *e* 08 16 02.0
VYHS *e* 08 16 18.2
VYHS LR LR
comp=Z,8μm,21.9s
JAN Janina 162.31 280 *e*PN PKPdf 08 15 17.0 +0.4
VLS Valsamata 162.33 275 P PKPdf 08 15 14.3 -2.4
VLS Valsamata 162.33 275 *e*PN PKPdf 08 15 15.5 -1.2
KOLL Kolacno 162.45 310 *e*PKIKP PKPdf 08 15 16.1 -0.3
KOLL *e* 08 16 04.3
KOLL Kolacno 162.45 310 *e*PKP PKPdf 08 15 16.1 -0.3
KOLL *e* 08 16 04.3
KOLL *e* 08 16 22.3
KSP Ksiaz 162.47 319 *e*PKPdf PKPdf 08 15 15.7 -0.7
KSP *e*PKPab PKPab 08 16 04.0 -0.4
KSP LMZ 09 30 12.2
comp=Z,35μm,23.3s
KSP Ksiaz 162.47 319 *e*PKPdf PKPdf 08 15 15.3 -1.1
KSP *e*PKPab PKPab 08 16 03.5 -1.0
KSP *ep*PKPab pPKPab 08 16 18.7 +1.4
KSP *e*PP PP 08 19 53.0 +3.9
KSP *e*PPS 08 33 17.0
KSP *e*SS SS 08 40 09.0 +1.5
KSP LR LR
comp=Z,41μm,23.3s
RUE Ruedersdorf 162.61 326 *e*PKPdf PKPdf 08 15 16.2 -0.3
CHIE El Hierro 162.61 125 PKP PKPdf 08 15 19.6 +2.3
TAM Tamanrasset 162.66 204 *e*PKIKP PKPdf 08 15 17.8 +0.3
EAB Aberfoyle 162.68 4 *e*P PKPdf 08 15 14.5 -1.9
DPC Dobruska-Polom 162.74 317 *e*PKIKP PKPdf 08 15 16.0 -0.7
DPC *e* 08 15 24.8
DPC *e* 08 16 04.1
DPC *e* 08 19 57.7
DPC MLR MLR
comp=Z,15μm,21.6s
DPC Dobruska-Polom 162.74 317 *e*PKPDF PKPdf 08 15 16.0 -0.7
DPC *ex* x 08 15 24.8
DPC *e*PKPAB PKPab 08 16 04.1 -1.6
DPC *ep*PKP pPKPab 08 16 21.8 +3.3
DPC *e*PP PP 08 19 57.7 +7.1
DPC *ex* x 08 40 53.2
DPC *ex* x 08 47 19.3
DPC AMS AMS 09 29 20.0
comp=Z,15μm,21.6s
UPC Upice 162.81 318 *e*PKIKP PKPdf 08 15 16.2 -0.5
UPC *e* 08 15 23.8
UPC *e* 08 16 04.7
UPC Upice 162.81 318 *e*PKPDF PKPdf 08 15 16.2 -0.5
UPC *ex* x 08 15 23.8
UPC *e*PKPAB PKPab 08 16 04.7 -1.3
UPC *ep*PKP pPKPab 08 16 21.5 +2.7
BSEG Bad Segeberg 162.82 335 *e*PKPdf PKPdf 08 15 15.4 -1.2
BSEG *e*PKPab PKPab 08 16 04.5 -1.3
EDI Edinburgh 163.00 2 *e*P PKPdf 08 15 14.1 -2.6
EDI AMS AMS 09 37 42.0
comp=Z,11μm,19.8s
ESY Stoneypath 163.02 1 *e*P PKPdf 08 15 16.0 -0.8
PGBU Glenifferbraes 163.05 5 AMS AMS 09 30 06.8
comp=Z,12μm,19.8s
SMOL Smolenice 163.06 311 *e*PKP PKPdf 08 15 16.9 -0.1
SMOL *e* 08 16 07.6
SMOL *e* 08 16 22.9
TIR Tirane 163.12 285 P PKPdf 08 15 16.9 -0.5
KEK Kerkira 163.13 279 *e*PB PKPdf 08 15 17.0 -0.4
EBL Broad Law 163.15 2 *e*P PKPdf 08 15 16.3 -0.9
VRAC Vranov 163.16 314‖*i*P PKPdf 08 15 16.8 -0.3
VRAC Vranov 163.16 314 P PKPdf 08 15 17.4 +0.3
PKSM Moragy 163.19 302‖*i*P PKPdf 08 15 15.6 -1.6
PKSM Moragy 163.19 302 P PKPdf 08 15 15.7 -1.5
EHIG Higuera 163.28 124 PKP PKPdf 08 15 21.2 +3.3
ZST Bratislava 163.40 310 *e*PKP PKPdf 08 15 16.0 -1.4
ZST *e* 08 16 10.6
ZST *e* 08 16 25.9
ZST Bratislava 163.40 310 *e*PKP PKPdf 08 15 16.0 -1.4
ZST *e* 08 16 10.6
ZST *e* 08 16 25.9
ZST LR LR
comp=Z,8μm,24.9s
XSO Sourhope Farm 163.45 1 *e*P PKPdf 08 15 14.7 -2.5
PVCC Panska Ves 163.54 320 *e*PKIKP PKPdf 08 15 16.7 -0.7
PVCC *e* 08 16 08.8
PVCC *e* 08 19 55.4
PVCC *e*SS SS 08 40 21.2 +2.7
PVCC MLR MLR
comp=Z,14μm,22.2s
PVCC Panska Ves 163.54 320 *e*PKPDF PKPdf 08 15 16.7 -0.7
PVCC *e*PKPAB PKPab 08 16 08.8 -0.3
PVCC *ep*PKP pPKPab 08 16 25.1 +3.1
PVCC *e*PP PP 08 19 55.4 +0.7
PVCC *e*SS SS 08 40 21.2 +2.7
PVCC *ex* x 08 48 04.5
PVCC AMS AMS 09 32 00.0
comp=Z,14μm,22.2s
ESK Eskdalemuir 163.60 2 *e*P PKPdf 08 15 15.7 -1.7
ESK AMS AMS 09 32 09.8
comp=Z,13μm,18.7s
ESK Eskdalemuir 163.60 2 PFAKE 08 15 30.0 +13
ESK LR LR
comp=Z,13μm,19.0s
BRG Berggiesshubel 163.63 322 *e*PKIKP PKPdf 08 15 14.6 -2.9
BRG *e* 08 16 08.3
BRG 08 20 02.0
BRG MLR MLR
comp=Z,10μm,20.3s
BRG Berggiesshubel 163.63 322 *e*PKPdf PKPdf 08 15 16.2 -1.3
BRG *e*PKPab PKPab 08 16 08.0 -1.5
BRG Berggiesshubel 163.63 322 *e*PKP PKPdf 08 15 14.6 -2.9
comp=Z,116nm,1.6s
BRG *e* 08 16 08.3
comp=Z,151nm,1.4s
BRG *e* 08 16 25.6
comp=Z,199nm,1.4s
BRG PP PP 08 20 02.0 +6.9
BRG SKKS SKKSac 08 26 43.1 +4.0
comp=Z,19nm,1.8s
BRG SKS SKKSac 08 26 45.0 +5.9
BRG *e* 08 30 21.0
BRG SS SS 08 40 27.0 +7.7
BRG
comp=N,3μm,22.4s
BRG
comp=E,6μm,18.8s
BRG
comp=Z,18μm,20.3s
BRG Berggiesshubel 163.63 322 *e*PKP PKPdf 08 15 14.6 -2.9
BRG *e* 08 16 08.3
BRG *e* 08 16 25.6
BRG PP PP 08 20 02.0 +6.9
BRG SKKS SKKSac 08 26 43.1 +4.0
BRG SKS SKKSac 08 26 45.0 +5.9
BRG *e* 08 30 21.0
BRG SS SS 08 40 27.0 +7.7
BRG LR LR
comp=Z,10μm,20.3s
CLL Collm 163.77 324 *e*PKIKP PKPdf 08 15 16.0 -1.6
CLL *i* 08 16 09.0
CLL pmax pmax
comp=Z,509nm,3.0s
CLL pmax pmax
comp=Z,122nm,1.3s
CLL MLR MLR
comp=Z,20μm,22.1s
CLL Collm 163.77 324 *e*PKPdf PKPdf 08 15 16.0 -1.6
CLL *e*PKPab PKPab 08 16 08.6 -1.5
CLL Collm 163.77 324 *e*PKPdf PKPdf 08 15 16.0 -1.6
comp=Z,509nm,3.0s
CLL *i* PKPab PKPab 08 16 09.0 -1.1
comp=Z,122nm,1.3s
CLL *ex* x 08 16 16.0
CLL *ep*PKPab pPKPab 08 16 27.0 +4.0
comp=Z,186nm,1.3s
CLL *e*PKSdf 08 18 47.0
CLL *e*PP PP 08 19 55.0 -0.8
CLL *ex* x 08 20 12.0
CLL *ex* x 08 22 09.0
CLL *e*SKSdf SKSdf 08 22 22.0 +3.6
CLL *ex* x 08 22 41.0
CLL *e*PPP 08 24 00.0
CLL *ex* x 08 25 18.0
CLL *e*SKKSac SKKSac 08 26 44.0 +4.1
CLL *e*PPPrev 08 27 21.0
CLL *e*PSKS 08 30 20.0
CLL *e*PPS 08 33 35.0
CLL *ex* x 08 37 18.0
CLL *e*SS SS 08 40 12.0 -8.7
CLL *e*PSS 08 41 22.0
CLL *e*PSPS 08 41 48.0
CLL *e*SSS 08 46 52.0
CLL *ex* x 08 54 42.0
TREC Trest 163.78 315 *e*PKIKP PKPdf 08 15 17.3 -0.4
TREC *e* 08 15 25.8

TREC e 08 16 09.2
TREC e 08 20 04.1
TREC MLR MLR
comp=Z,15µm,20.9s
TREC Trest 163.78 315 ePKPDF PKPdf 08 15 17.3 -0.4
TREC ex x 08 15 25.8
TREC ePKPAB PKPab 08 16 09.2 -1.0
TREC epPKP pPKPab 08 16 26.2 +3.1
TREC ePP PP 08 20 04.1 +8.0
TREC ex x 08 40 57.3
TREC ex x 08 47 42.0
TREC AMS AMS 09 30 40.0
comp=Z,15µm,20.9s
CCAN Las Canadas 163.81 127 PKP PKPdf 08 15 21.1 +2.6
FBE Freiberg 163.88 323 ePKPdf PKPdf 08 15 16.1 -1.6
FBE ePKPab PKPab 08 16 09.0 -1.6
PRU Pruhonice 163.88 319 ePIKPdf PKPdf 08 15 17.4 -0.4
PRU e 08 16 10.0
PRU e 08 20 04.0
PRU eSS SS 08 41 18.7 +57
PRU MLR MLR
comp=Z,13µm,19.4s
PRU Pruhonice 163.88 319 ePKPDF PKPdf 08 15 17.4 -0.4
PRU ePKPAB PKPab 08 16 10.0 -0.7
PRU epPKP pPKPab 08 16 26.2 +2.7
PRU ePP PP 08 20 04.0 +7.5
PRU ex x 08 41 18.7
PRU ex x 08 47 31.4
PRU AMS AMS 09 35 20.0
comp=Z,13µm,19.4s
SOP Sopron 163.96 309⇑ ePKP PKPdf 08 15 17.5 -0.4
GAL1 Galloway 163.97 6 P PKPdf 08 15 16.7 -1.0
GAL1 AMS AMS 09 30 52.8
comp=Z,10µm,20.7s
GAL1 Galloway 163.97 6 eP PKPdf 08 15 15.3 -2.3
GAL1 eP 08 15 16.7
GAL1 AMS AMS 09 30 52.8
comp=Z,10µm,20.7s
NRDL Niedersach Rie 164.07 332 ePKPdf PKPdf 08 15 17.6 -0.2
EBAJ Bajamar 164.20 127 PKP PKPdf 08 15 20.2 +1.5
CONA Conrad Observa 164.26 311⇓ *i* PKPdf PKPdf 08 15 17.1 -1.1
comp=Z,53nm,1.7s,SNR=14
CONA ⇑ *i* PKPab PKPab 08 16 13.3 +0.9
comp=Z,285nm,1.3s
CSNA Conrad Observa 164.26 311⇓ *i* PKPdf PKPdf 08 15 17.1 -1.1
comp=Z,52nm,1.8s
CSNA ⇑ *i* PKPab PKPab 08 16 13.3 +0.9
comp=Z,272nm,1.3s
EOSO Osorio 164.35 130 PKP PKPdf 08 15 22.7 +3.8
CLZ Clausthal 164.49 330 ePKPdf PKPdf 08 15 17.0 -1.2
CLZ ePKPab PKPab 08 16 11.6 -1.6
CLZ epPKPab pPKPab 08 16 29.5 +3.4
TANN Tannenbergstha 164.64 323 ePKPdf PKPdf 08 15 16.9 -1.5
TANN ePKPab PKPab 08 16 12.4 -1.6
TANN epPKPab pPKPab 08 16 29.4 +2.6
WERD Werda 164.69 323 ePKPdf PKPdf 08 15 16.7 -1.8
WERD ePKPab PKPab 08 16 12.6 -1.6
GUNZ Gunzen 164.73 323 ePKPdf PKPdf 08 15 16.6 -1.9
GUNZ ePKPab PKPab 08 16 13.2 -1.2
GUNZ epPKPab pPKPab 08 16 28.7 +1.4
WERN Wernitzgruen 164.76 323 ePKPdf PKPdf 08 15 17.3 -1.2
WERN ePKPab PKPab 08 16 13.4 -1.1
WERN epPKPab pPKPab 08 16 28.9 +1.5
NKC Novy Kostel 164.77 322 ePKIKP PKPdf 08 15 17.9 -0.6
NKC e 08 16 13.2
NKC e 08 20 06.6
NKC eSS SS 08 40 29.8 -1.2
NKC Novy Kostel 164.77 322 ePKPDF PKPdf 08 15 17.9 -0.6
NKC ePKPAB PKPab 08 16 13.2 -1.3
NKC epPKP pPKPab 08 16 28.7 +1.3
NKC ePP PP 08 20 06.6 +5.5
NKC eSS SS 08 40 29.8 -1.2
NKC ex x 08 48 08.1
NKC AMS AMS 09 32 40.0
comp=Z,13µm,21.8s
NKC Novy Kostel 164.77 322 ePKP PKPdf 08 15 17.9 -0.6
NKC e 08 16 13.2
NKC e 08 16 28.7
NKC ePP PP 08 20 06.6 +5.5
NKC eSS SS 08 40 29.8 -1.2
NKC e 08 48 08.1
ARSA Arzberg 164.78 309 *i* PKPdf PKPdf 08 15 18.9 +0.3
comp=Z,66nm,1.8s,SNR=17
ARSA ⇑ *i* PKPab PKPab 08 16 13.7 -1.1
comp=Z,88nm,1.2s
MOX Moxa 164.86 325 ePKP PKPdf 08 15 16.9 -1.7
comp=Z,170nm,1.9s
MOX e 08 16 13.9
MOX e 08 16 31.7
MOX
comp=Z,11µm,22.0s
MOX Moxa 164.86 325 ePKIKP PKPdf 08 15 16.9 -1.7
MOX e 08 16 13.9
MOX MLR MLR
comp=Z,11µm,22.0s
MOX Moxa 164.86 325 ePKPdf PKPdf 08 15 16.9 -1.7
MOX ePKPab PKPab 08 16 13.4 -1.5
KHC Kasperske Hory 164.90 317 ePKIKP PKPdf 08 15 19.6 +0.9
KHC e 08 14.4
KHC e 08 20 06.0
KHC MLR MLR
comp=Z,20µm,23.6s
KHC Kasperske Hory 164.90 317 ePKP PKPdf 08 15 19.6 +0.9
KHC e 08 15 20.0
KHC e 08 16 14.4
KHC e 08 16 30.5
KHC e 08 17 18.5
KHC ePP PP 08 20 06.0 +4.1
KHC eSS SS 08 40 53.5 +21
KHC e 08 48 12.3
KHC LR LR
comp=Z,20µm,23.6s
GEC2 GERESS Array S 165.00 316 ePKPdf PKPdf 08 15 17.4 -1.4
GERES GERESS Array B 165.00 316 PKP PKPdf 08 15 17.2 -1.6
comp=Z,5.1nm,1.0s,baz=159,slow=1.1,SNR=30
GERES PKPab PKPab 08 16 15.1 -0.6
comp=Z,8.9nm,0.8s,baz=64,slow=3.1,SNR=6.5
GERES PP PP 08 20 03.4 +1.0
comp=Z,6.0nm,1.1s,baz=50,slow=6.5,SNR=2.6
IBBN Ibbenburen 165.02 336 ePKPdf PKPdf 08 15 18.6 -0.1
MANZ Manzenberg 165.09 322 ePKPdf PKPdf 08 15 17.2 -1.6
MANZ ePKPab PKPab 08 16 14.6 -1.4
MANZ epPKPab pPKPab 08 16 31.4 +2.5
ROTZ Rotzenmuhle 165.19 322 ePKPdf PKPdf 08 15 18.5 -0.4
ROTZ ePKPab PKPab 08 16 15.4 -1.0
ROTZ epPKPab pPKPab 08 16 31.8 +2.5
MOA Molln 165.23 312⇑ *i* PKPdf PKPdf 08 15 17.9 -1.1
comp=Z,68nm,1.6s,SNR=8.5
MOA ⇑ *i* PKPab PKPab 08 16 16.3 -0.4
comp=Z,186nm,1.3s
WET Wettzell 165.26 319 ePKPdf PKPdf 08 15 18.6 -0.4
PERS Pernice 165.30 307 *i* PKPdf PKPdf 08 15 17.6 -1.6
PERS *i* 08 15 30.1
PERS *i* 08 16 16.0
SOKA Soboth 165.33 307⇑ *i* PKPdf PKPdf 08 15 17.3 -1.8
comp=Z,96nm,1.7s
SOKA ⇓ *i* PKPab PKPab 08 16 16.6 -0.6
comp=Z,60nm,1.2s
LHO Holmfirth 165.40 360 eP PKPdf 08 15 14.3 -4.7
UBBA Unterbreizbach 165.43 328 ePKPdf PKPdf 08 15 18.6 -0.5
TIP Timpagrande 165.43 277 ePKPdf PKPdf 08 15 17.6 -1.9
TIP LR LR
comp=Z,17µm,19.0s
CFTV Fuerteventura 165.46 133 PKP PKPdf 08 15 21.5 +1.6
WLF1 Llynfaes 165.56 6 eP PKPdf 08 15 14.2 -5.0
WTSB Winterswijk 165.61 338 ePKiKP PKPdf 08 15 16.9 -2.3
comp=Z,122nm,2.4s
WTSB Winterswijk 165.61 338 ePKPab PKPab 08 16 15.9 -2.2
BOJS Bojanci 165.66 303 *i* PKPdf PKPdf 08 15 16.9 -2.6
BOJS *i* 08 15 29.7
BOJS *i* 08 16 19.1
OBKA Obir 165.71 307⇑ *i* PKPdf PKPdf 08 15 18.7 -0.8
comp=Z,44nm,1.4s
OBKA ⇑ *i* PKPab PKPab 08 16 18.6 -0.2
comp=Z,59nm,1.1s
GRA1 Grafenberg Arr 165.71 323 ePKPdf PKPdf 08 15 17.1 -2.3
GRA1 ePKPab PKPab 08 16 17.9 -0.8
GRA1 epPKPab pPKPab 08 16 33.2 +1.6
GRA1 e 08 25 01.4
GRA1 LR LR
comp=Z,13µm,20.1s
GRF Grafenberg Arr 165.71 323 ePKPdf PKPdf 08 15 17.1 -2.3
GRF ePKPab PKPab 08 16 17.9 -0.8
GRF epPKPab pPKPab 08 16 33.2 +1.6
GRF e 08 25 01.4
GRF eL 09 38 11.0
comp=Z,13µm,20.1s
BUG Bochum--Univer 165.92 336 ePKPab PKPab 08 16 19.9 +0.4
CEL Celeste 165.99 273 ePKPdf PKPdf 08 15 20.1 +0.1
CEL LR LR
comp=Z,21µm,20.0s
SBD1 Bryn Du 166.01 3 eP PKPdf 08 15 18.9 -0.6
RJOB Jochberg 166.13 314 ePKPdf PKPdf 08 15 18.7 -1.1
RJOB ePKPab PKPab 08 16 19.3 -1.4
RJOB epPKPab pPKPab 08 16 36.3 +2.8
AEU East Anglia Un 166.15 352 eP PKPdf 08 15 18.8 -0.8
KBA Koelnbreinsper 166.16 311⇑ *i* PKPdf PKPdf 08 15 17.8 -2.1
comp=Z,83nm,1.4s,SNR=17
KBA ⇓ *i* PKPab PKPab 08 16 20.2 -0.7
comp=Z,169nm,1.2s
CWF Charnwood Fore 166.20 358 eP PKPdf 08 15 16.0 -3.7
CUC Castrocucco 166.20 280 ePKPdf PKPdf 08 15 19.3 -0.8
CUC ePKPab PKPab 08 16 20.7 -0.6
CUC LR LR
comp=Z,22µm,19.0s
MYKA Terra Mystica 166.21 309⇓ *i* PKPdf PKPdf 08 15 18.4 -1.4
comp=Z,94nm,1.7s
MYKA ⇓ *i* PKPab PKPab 08 16 20.2 -0.8
comp=Z,100nm,1.5s
JAVS Javornik 166.27 306 *i* PKPdf PKPdf 08 15 19.2 -0.7
VOY Vojsko 166.32 306 ePKPdf PKPdf 08 15 19.1 -0.9
VOY e 08 15 20.2
VOY e 08 15 34.9
VOY e 08 16 20.1
VOY e 08 16 34.2
TNS Taunus Mts 166.51 330 ePKPdf PKPdf 08 15 18.8 -1.2
TNS ePKPab PKPab 08 16 20.7 -1.5
WDD Wield Dalam 166.52 262 PFAKE 08 15 30.0 +10
WDD LR LR
comp=Z,20µm,19.0s
TRI Trieste 166.54 305 PFAKE 08 15 30.0 +10
TRI LR LR
comp=Z,17µm,19.0s
ABTA Abfaltersbach 166.82 311⇓ *i* PKPdf PKPdf 08 15 19.5 -0.8
comp=Z,70nm,1.7s,SNR=6.8
ABTA ⇓ *i* PKPab PKPab 08 16 22.6 -1.1
comp=Z,162nm,1.1s
TOD Tromm 166.85 328 PKP PKPdf 08 15 18.5 -1.8
HGN Heimansgroeve 166.93 337 ePKiKP PKPdf 08 15 18.0 -2.2
comp=Z,43nm,2.2s
HGN Heimansgroeve 166.93 337 ePKPab PKPab 08 16 22.0 -2.0
HGN Heimansgroeve 166.93 337 ePP PP 08 20 05.5 -6.4
MCH1 Michaelchurch 166.93 3 eP PKPdf 08 15 18.6 -1.6
MCH1 AMS AMS 09 34 46.0
comp=Z,13µm,22.4s
BEBN Eben Emael 166.98 338 PKP PKPdf 08 15 19.9 -0.4
BEBN PKPab PKPab 08 16 22.4 -1.8
SSW Stow on the Wo 166.98 360 eP PKPdf 08 15 20.0 -0.3
WATA Walderalm 167.04 315⇓ *i* PKPdf PKPdf 08 15 20.3 -0.2
comp=Z,27nm,1.1s
WATA ⇑ *i* PKPab PKPab 08 16 23.7 -1.0
comp=Z,135nm,1.5s
MEM Membach 167.04 337 PKP PKPdf 08 15 20.0 -0.3
MEM APKP 08 15 32.1
MEM PKPab PKPab 08 16 22.7 -1.8
WTTA Wattenberg 167.05 314⇑ *i* PKPdf PKPdf 08 15 19.3 -1.2
comp=Z,152nm,1.7s,SNR=8.4
WTTA ⇓ *i* PKPab PKPab 08 16 24.2 -0.5
comp=Z,200nm,1.5s
ABH Alteburg 167.13 331 PKP PKPdf 08 15 19.5 -1.0
MOTA Moosalm 167.29 316⇑ *i* PKPdf PKPdf 08 15 18.9 -1.8
comp=Z,41nm,1.1s,SNR=10.0
MOTA ⇑ *i* PKPab PKPab 08 16 25.3 -0.5
comp=Z,35nm,1.1s
HGH Gray Hill 167.30 2 eP PKPdf 08 15 16.2 -4.3
STU Stuttgart 167.30 324 ePKPdf PKPdf 08 15 19.2 -1.4
STU ePKPab PKPab 08 16 24.6 -1.2
STU epPKPab pPKPab 08 16 40.9 +2.3
STU Stuttgart 167.30 324 ePKPdf PKPdf 08 15 19.3 -1.4
UCC Uccle 167.33 341 PKP PKPdf 08 15 20.6 0.0
KTD Kalmit 167.37 328 PKIKP PKPdf 08 15 20.6 0.0
RETA Reutte 167.39 317⇑ *i* PKPdf PKPdf 08 15 19.1 -1.7
comp=Z,68nm,2.2s,SNR=13
BCLA Clavier 167.42 338 PKP PKPdf 08 15 20.1 -0.5
BCLA E 08 15 27.1
BCLA APKP 08 15 29.8
BCLA PKPab PKPab 08 16 24.0 -2.2
BCLA PP PP 08 20 09.3 -5.1
SWN1 Swindon 167.43 359 AMS AMS 09 30 25.2
comp=Z,13µm,22.1s
RUP Ruppelstein 167.46 332 PKP PKPdf 08 15 19.8 -0.9
SNF Seneffe 167.62 341 PKP PKPdf 08 15 20.3 -0.5
SNF APKP 08 15 29.3
SNF PKPab PKPab 08 16 25.3 -1.7
SNF PP PP 08 20 24.6 +9.2
TFO1 Folkestone 167.64 351 AMS AMS 09 37 57.6
comp=Z,17µm,21.1s
FETA Feichten 167.69 315⇑ *i* PKPdf PKPdf 08 15 19.7 -1.2
comp=Z,100nm,1.5s,SNR=10
FETA ⇓ *i* PKPab PKPab 08 16 28.4 +0.8
comp=Z,65nm,1.3s
LANF Langenberg 167.75 328 PKP PKPdf 08 15 19.8 -1.1
WLF Walferdange 167.81 334 PKP PKPdf 08 15 20.9 -0.1
WLF APKP 08 15 30.4
WLF PKPab PKPab 08 16 27.0 -0.9
WLF Walferdange 167.81 334 ePKPdf PKPdf 08 15 20.0 -0.9
WLF ePKPab PKPab 08 16 26.2 -1.7
WLF Walferdange 167.81 334 ePKPdf PKPdf 08 15 20.7 -0.3
WLF LR LR
comp=Z,15µm,21.0s
AQU L'Aquila 167.83 291 PFAKE 08 15 30.0 +8.8
AQU LR LR
comp=Z,12µm,20.0s
HTL Hartland 167.83 8 AMS AMS 09 34 41.3
comp=Z,15µm,19.0s
GIVF Givet 167.84 339 ePKIKP PKPdf 08 15 18.2 -2.8
DOU Dourbes 167.91 339 PKP PKPdf 08 15 19.7 -1.3
DOU APKP 08 15 30.3
DOU PKPab PKPab 08 16 26.6 -1.8
SPAK Spaichingen-Ko 167.98 323 PKP PKPdf 08 15 19.5 -1.6
DAVA Damuels 167.98 318⇑ *i* PKPdf PKPdf 08 15 19.5 -1.6
comp=Z,75nm,1.6s,SNR=9.1
BFO Black Forest 168.02 325 ePKPdf PKPdf 08 15 20.6 -0.5
BFO ePKPab PKPab 08 16 27.0 -1.9
BFO epPKPab pPKPab 08 16 43.9 +2.1
MENF Mencas 168.03 347 PKP PKPdf 08 15 19.1 -2.0
BAIF Baives 168.05 340 ePKIKP PKPdf 08 15 18.2 -2.9
comp=Z,80nm,1.3s
DAVOX Davos/Dischmat 168.30 316 PKPab PKPab 08 16 29.9 -0.4
baz=53,slow=8.8
DAVOX PP PP 08 20 23.4 +4.0
comp=Z,14nm,1.1s,baz=51,slow=6.9,SNR=3.3
CDF Champ du Feu 168.41 328 ePKIKP PKPdf 08 15 18.3 -3.1
comp=Z,200nm,1.6s
DYA Yadsworthy 168.43 6 P PKPdf 08 15 18.9 -2.5
DYA AMS AMS 09 27 18.2
comp=Z,18µm,21.6s
DYA Yadsworthy 168.43 6 eP PKPdf 08 15 18.9 -2.5
DYA AMS AMS 09 27 18.2
comp=Z,18µm,21.6s
LIBD Limburg 168.48 326 PKIKP PKPdf 08 15 21.5 0.0
FELD Feldberg im Sc 168.50 324 PKP PKPdf 08 15 19.8 -1.7
ECH Echery 168.62 327 PKP PKPdf 08 15 20.0 -1.5
ECH Echery 168.62 327 ePKPdf PKPdf 08 15 20.0 -1.6
TUE Stuetta 168.78 316 ePKPdf PKPdf 08 15 20.4 -1.3
TUE ePKPab PKPab 08 16 33.5 +1.1
TUE LR LR
comp=Z,14µm,19.0s
MOF Molkenrain 168.91 326 PKP PKPdf 08 15 20.4 -1.3
BBS Basel-Blauen 169.03 324 PKIKP PKPdf 08 15 20.4 -1.4
HINF Hinteralfeld 169.06 327 ePKIKP PKPdf 08 15 19.0 -2.8
comp=Z,578nm,1.9s
THEF They Montfort 169.08 331 PKP PKPdf 08 15 20.6 -1.2
HAU Haudompre 169.12 329 ePKIKP PKPdf 08 15 19.1 -2.8
comp=Z,559nm,1.9s
HAU eMLR MLR
comp=Z,21µm,22.2s
HAU Haudompre 169.12 329 ePKPdf PKPdf 08 15 19.1 -2.8
HAU LR LR
comp=Z,21µm,22.3s
MEZF Maizieres J'vi 169.18 334 ePKIKP PKPdf 08 15 19.6 -2.3
comp=Z,821nm,1.8s
VLC Villacollemand 169.37 303 ePKPdf PKPdf 08 15 19.9 -2.2
VLC LR LR
comp=Z,15µm,22.0s
LOMF Lomont 169.42 325 PKP PKPdf 08 15 22.1 0.0
FLN La Foliniere 170.13 354 ePKIKP PKPdf 08 15 19.8 -2.6
comp=Z,151nm,1.3s
FLN eMLR MLR
comp=Z,18µm,19.5s
FLN La Foliniere 170.13 354 ePKPdf PKPdf 08 15 19.8 -2.6
FLN LR LR
comp=Z,18µm,19.5s
OG01 Vacheresse 170.25 322 PKP PKPdf 08 15 21.9 -0.7
LDF La Druitiere 170.26 353 ePKIKP PKPdf 08 15 19.8 -2.7
comp=Z,116nm,1.2s
CABF La Chapelle 170.31 325 ePKIKP PKPdf 08 15 20.5 -2.1
comp=Z,484nm,1.8s
KEST Kesra 170.42 254 PKP PKPdf 08 15 23.5 +0.4
comp=Z,7.0nm,1.0s,baz=290,slow=1.0,SNR=12
KEST PKPab PKPab 08 16 40.6 +0.5
comp=Z,12nm,0.8s,baz=27,slow=0.5,SNR=14
KEST PP PP 08 20 30.4 -0.5
comp=Z,35nm,1.4s,baz=52,slow=5.6,SNR=7.4
GRR Gorron 170.53 355 ePKIKP PKPdf 08 15 20.1 -2.6
comp=Z,99nm,1.3s
ROSF Rostrenen 170.57 5 ePKIKP PKPdf 08 15 20.1 -2.6
comp=Z,310nm,1.7s
LOR Lormes 170.65 335 ePKIKP PKPdf 08 15 20.4 -2.4
comp=Z,315nm,1.8s
LOR eMLR MLR
comp=Z,31µm,22.5s
LOR Lormes 170.65 335 ePKPdf PKPdf 08 15 20.4 -2.4
LOR LR LR
comp=Z,31µm,22.5s
SGMF Saint Gilles 170.69 2 ePKIKP PKPdf 08 15 20.4 -2.4
comp=Z,619nm,1.9s
RSL Roselend 170.73 319 PKP PKPdf 08 15 22.0 -0.9
LPL La Plagne 170.79 318 ePKIKP PKPdf 08 15 21.0 -1.9
comp=Z,136nm,1.5s
LPG La Plagne 170.79 318 ePKIKP PKPdf 08 15 21.1 -1.8
comp=Z,147nm,1.3s
PGF Pioggiola 170.92 297 ePKIKP PKPdf 08 15 20.8 -2.3
comp=Z,929nm,1.8s
SSF Saint Saulge 170.95 335 ePKIKP PKPdf 08 15 20.5 -2.5
comp=Z,312nm,1.8s
QUIF Quistinic 170.99 5 ePKIKP PKPdf 08 15 20.7 -2.2
comp=Z,568nm,1.8s
HYF Humbligny 171.02 339 ePKIKP PKPdf 08 15 20.8 -2.2
OSPF L'Ospedale 171.04 291 PKP PKPdf 08 15 22.4 -0.8
BNI Bardonecchia 171.12 316 ePKIKP PKPdf 08 15 22.8 -0.3
BNI MLR MLR
comp=Z,23µm,20.0s
SMF Signal de Mont 171.20 333 ePKIKP PKPdf 08 15 20.5 -2.6
comp=Z,344nm,1.9s
AVF Avril sur Loir 171.24 335 ePKIKP PKPdf 08 15 20.4 -2.7
comp=Z,257nm,1.8s
SAOF Saorge 171.25 308 PKP PKPdf 08 15 22.4 -0.8
MBDF Montbardon 171.28 314 ePKIKP PKPdf 08 15 21.0 -2.2
comp=Z,164nm,1.3s
AUTN L'Aution 171.32 309 PKP PKPdf 08 15 22.9 -0.3
GDM Grand'Maison 171.32 319 PKP PKPdf 08 15 22.7 -0.5
SBF Sospel 171.38 308 ePKIKP PKPdf 08 15 20.8 -2.5
SURF Saint Ours 171.41 313 PKP PKPdf 08 15 23.3 0.0
TOUF Mont Tournerai 171.42 309 PKP PKPdf 08 15 22.7 -0.6
LUCF Luceram 171.43 308 PKP PKPdf 08 15 22.9 -0.4
GRN Grenoble 171.48 320 PKP PKPdf 08 15 23.0 -0.3
REVF Revere 171.49 307 PKP PKPdf 08 15 22.4 -0.9
MVIF Mont Vial 171.54 309 PKP PKPdf 08 15 22.7 -0.7
BGF Bois d'Agland 171.61 337 ePKIKP PKPdf 08 15 21.1 -2.2
comp=Z,427nm,1.6s
ORIF Oris-en-Rattie 171.64 318 ePKIKP PKPdf 08 15 21.1 -2.3
comp=Z,94nm,1.2s
ORIF eMLR MLR
comp=Z,30µm,21.2s
CALN Calern 171.78 309 PKP PKPdf 08 15 22.9 -0.6
PLDF La Plantade 171.85 331 PKP PKPdf 08 15 23.9 +0.5
OG25 Le Caire 171.89 315 PKP PKPdf 08 15 22.7 -0.8
AGO Saint Agoulin 171.96 334 PKP PKPdf 08 15 23.9 +0.4
SSB Saint Sauveur 172.03 325 PKP PKPdf 08 15 22.4 -1.1
SSB Saint Sauveur 172.03 325 ePKPdf PKPdf 08 15 22.2 -1.4
FRF La Foret Royal 172.03 308 ePKIKP PKPdf 08 15 21.4 -2.2
comp=Z,639nm,1.9s
TCF Toulx Ste Croi 172.04 338 ePKIKP PKPdf 08 15 21.3 -2.2
comp=Z,249nm,1.6s
OCF Saint Nazaire 172.17 318 PKP PKPdf 08 15 22.2 -1.4
OG26 St.-Nazaire-De 172.17 318 PKP PKPdf 08 15 22.2 -1.4
STOF St-Etienne Org 172.22 313 PKP PKPdf 08 15 23.9 +0.2
MFF Saint Martin d 172.23 351 ePKIKP PKPdf 08 15 21.4 -2.2
comp=Z,262nm,1.6s
LMR La Mourre 172.24 307 ePKIKP PKPdf 08 15 21.5 -2.2
comp=Z,614nm,1.9s
PYM Petit Puy Mans 172.26 333 PKP PKPdf 08 15 24.3 +0.7
VIVF Saint-Julien-l 172.29 322 ePKIKP PKPdf 08 15 21.5 -2.2
comp=Z,278nm,1.6s
TAVF Tavernes 172.36 310 PKP PKPdf 08 15 23.7 0.0
VILF Villemus 172.42 313 PKP PKPdf 08 15 22.2 -1.6
SMRF Simiane la Rot 172.42 314 ePKIKP PKPdf 08 15 21.9 -1.9
comp=Z,487nm,1.9s
VERF Verneugheol 172.44 335 PKP PKPdf 08 15 23.0 -0.7
LBL Lubilhac 172.61 330 PKP PKPdf 08 15 24.8 +1.0
CKFL Kef-Lekhel 172.64 252 P PKPdf 08 15 23.0 -1.1
CAEH `Ain El Ouahch 172.68 256 P PKPdf 08 15 26.0 +1.9
CTEI Djebel Teioual 172.73 249 P PKPdf 08 15 23.0 -1.2
TREF Trevaresse 172.75 312 PKP PKPdf 08 15 24.1 +0.2
BERF Bertagne 172.75 309 PKP PKPdf 08 15 23.9 0.0
CASM Ain Smara 172.75 251 P PKPdf 08 15 26.0 +1.8
PRAF Pradon 172.76 314 PKP PKPdf 08 15 22.4 -1.5
GELF Grande-Etoile 172.87 311 PKP PKPdf 08 15 23.9 -0.1
RJF Les Rejaudoux 173.14 339 ePKIKP PKPdf 08 15 22.0 -2.0
comp=Z,271nm,1.9s
RJF eMLR MLR
comp=Z,42µm,21.2s
RJF Les Rejaudoux 173.14 339 ePKPdf PKPdf 08 15 22.0 -2.0
RJF LR LR
comp=Z,42µm,21.3s
LASF Ste Croix 173.26 321 ePKIKP PKPdf 08 15 22.3 -1.8
comp=Z,264nm,1.5s
CAF Calviac 173.31 334 ePKIKP PKPdf 08 15 22.5 -1.6
comp=Z,397nm,1.9s
DFRA Djebel Bou Aff 173.32 251 P PKPdf 08 15 25.0 +0.6
MDT Midelt 173.52 160 PKP PKPdf 08 15 26.1 +1.5
comp=Z,60nm,1.1s,baz=222,slow=0.8,SNR=13
MDT PKPab PKPab 08 16 54.9 +1.3
comp=Z,22nm,1.1s,baz=154,slow=2.8,SNR=4.0
LFF La Frestale 173.68 342 ePKIKP PKPdf 08 15 22.2 -2.0
comp=Z,519nm,1.7s
RTC Rabat Centre 173.69 140 PFAKE 08 15 30.0 +5.4
RTC LR LR
comp=Z,30µm,22.0s
PMAFR Mafra 174.31 88 eLQ 09 07 49.2
PMAFR eLR LR 09 18 11.7
comp=Z,23µm,18.0s
LIS Lisbon 174.40 90 eP PKPdf 08 15 24.8 +0.1
LIS ePP PP 08 20 51.4 +0.7
LIS eSS SS 08 42 07.7 -1.0
LIS AMS AMS 09 26 39.2
comp=Z,12µm,23.3s
LIS Lisbon 174.40 90 ePP PP 08 20 51.4 +0.7
LIS eSS SS 08 42 07.7 -0.9
LIS A 09 26 39.2
comp=Z,12µm,23.3s
MORF Marmelete 174.50 105 ePKPdf PKPdf 08 15 26.6 +1.8
MORF eSS SS 08 42 11.9 +2.6
MORF eLR LR 09 17 58.5
comp=Z,18µm,20.0s
PTEO Sao Teotonio 174.52 103 ePKPdf PKPdf 08 15 25.4 +0.6
PTEO Sao Teotonio 174.52 103 ePP PP 08 20 55.8 +4.7
MTLF Montolieu 174.58 325 ePKIKP PKPdf 08 15 22.6 -2.0
comp=Z,227nm,1.7s
PCAB Cabril 174.62 57 ePKPdf PKPdf 08 15 25.2 +0.5
PCAB Cabril 174.62 57 ePKPab PKPab 08 16 58.2 -0.3
PCAB Cabril 174.62 57 ePP PP 08 20 54.3 +3.1
FILF Fillols 175.01 318 PKP PKPdf 08 15 24.5 -0.2
PBDV Barranco-do-Ve 175.01 108 ePKPdf PKPdf 08 15 25.9 +1.0
PBDV eSS SS 08 42 16.6 +2.4
PBDV eLR LR 09 18 10.7
comp=Z,15µm,20.0s
PVRL Vila Real 175.03 60 ePKPdf PKPdf 08 15 26.0 +1.2
PVRL Vila Real 175.03 60 ePKPab PKPab 08 16 59.1 -1.3
PVRL Vila Real 175.03 60 ePP PP 08 20 56.3 +3.0
EMHD Djebel Mahouad 175.21 237 P PKPdf 08 15 27.0 +2.0
PVAQ Vaqueiros 175.23 107 ePKPdf PKPdf 08 15 25.7 +0.7
PVAQ eSS SS 08 42 18.8 +2.5
PVAQ eLQ 09 08 12.8
PVAQ eLR LR 09 18 36.1
comp=Z,15µm,22.0s
EVO Evora 175.27 93 ePKIKP PKPdf 08 15 23.1 -1.9
comp=Z,1µm,1.7s
EVO eMLR MLR
comp=Z,34µm,21.2s

PBEJ	**Beja**	**175.30**	**99**	*e*PKPdf	PKPdf	08 15 26.1	+1.1
MLS	**Moulis**	**175.36**	**331**	PKP	PKPdf	08 15 25.6	+0.8
PBRG	**Braganca**	**175.38**	**50**	*e*PKPdf	PKPdf	08 15 25.6	+0.7
VALF	**Valcebollere**	**175.40**	**320**	PKP	PKPdf	08 15 25.1	+0.2
MTE	**Manteigas**	**175.47**	**70**	*e*PKPdf	PKPdf	08 15 25.8	+0.8
MTE	**Manteigas**	**175.47**	**70**	*e*PKPab	PKPab	08 17 01.4	-1.0
MTE	**Manteigas**	**175.47**	**70**	*e*PP	PP	08 20 53.2	-2.4
MTE				*e*SS	SS	08 42 16.0	-2.6
MTE				*e*LQ		09 08 08.9	
MTE				*e*LR	LR	09 19 11.6	
	comp=Z,17µm,22.0s						
MTE	**Manteigas**	**175.47**	**70**	*e*PKPdf	PKPdf	08 15 25.5	+0.6
MTE				LR	LR		
	comp=Z,22µm,22.0s						
MVO	**Moncorvo**	**175.54**	**59**	*e*PKPdf	PKPdf	08 15 25.4	+0.5
MVO	**Moncorvo**	**175.54**	**59**	*e*PKPab	PKPab	08 17 01.8	-0.8
MVO	**Moncorvo**	**175.54**	**59**	*e*PP	PP	08 20 52.3	-3.4
MVO				*e*SS	SS	08 42 25.1	+6.3
MVO				*e*LQ		09 07 59.1	
MVO				*e*LR	LR	09 17 48.6	
	comp=Z,22µm,20.0s						
EPF	**Esparros**	**175.56**	**337**	*e*PKIKP	PKPdf	08 15 23.4	-1.5
	comp=Z,561nm,1.5s						
LABF	**Labassere**	**175.62**	**340**	PKP	PKPdf	08 15 25.6	+0.7
PESTR	**Estremoz**	**175.63**	**89**	*e*PKPdf	PKPdf	08 15 25.9	+0.9
PESTR	**Estremoz**	**175.63**	**89**	*e*PKPab	PKPab	08 17 03.7	+0.5
PESTR	**Estremoz**	**175.63**	**89**	*e*PP	PP	08 20 53.3	-3.2
PESTR				*e*SS	SS	08 42 21.1	+0.7
PESTR				*e*LQ		09 08 26.5	
PESTR				*e*LR	LR	09 17 56.1	
	comp=Z,14µm,20.0s						
PCBR	**Castelo Branco**	**175.66**	**76**	*e*PKPdf	PKPdf	08 15 25.3	+0.3
PCBR	**Castelo Branco**	**175.66**	**76**	*e*PKPab	PKPab	08 17 03.3	0.0
REYF	**Montagne du Re**	**175.71**	**344**	PKP	PKPdf	08 15 26.1	+1.2
ATE	**Arette**	**175.75**	**347**	PKP	PKPdf	08 15 26.5	+1.6
RESF	**Ens**	**175.76**	**336**	PKP	PKPdf	08 15 26.4	+1.5
PMRV	**Marv??o**	**175.77**	**82**	*e*PKPdf	PKPdf	08 15 25.2	+0.1
PMRV	**Marv??o**	**175.77**	**82**	*e*PKPab	PKPab	08 17 04.3	+0.5
PMRV	**Marv??o**	**175.77**	**82**	*e*PP	PP	08 20 53.7	-3.5
PMRV				*e*SS	SS	08 42 20.8	-0.9
PMRV				*e*LQ		09 08 01.5	
PMRV				*e*LR	LR	09 18 27.3	
	comp=Z,15µm,20.0s						
VIEF	**Viey**	**175.78**	**339**	PKP	PKPdf	08 15 25.9	+1.0
SFS	**San Fernando**	**175.84**	**125**	PFAKE		08 15 30.0	+4.8
SFS				LR	LR		
	comp=Z,51µm,20.0s						
LARF	**Larrau**	**175.84**	**350**	PKP	PKPdf	08 15 26.3	+1.3
ETSF	**Etsaut**	**175.91**	**345**	*e*PKIKP	PKPdf	08 15 22.6	-2.4
	comp=Z,190nm,1.5s						
PBAR	**Barrancos**	**175.97**	**99**	*e*PKPdf	PKPdf	08 15 26.3	+1.1
PBAR	**Barrancos**	**175.97**	**99**	*e*PKPab	PKPab	08 17 05.2	+0.5
PBAR	**Barrancos**	**175.97**	**99**	*e*PP	PP	08 20 57.8	-0.5
PBAR				*e*SS	SS	08 42 21.8	-1.7
PBAR				*e*LQ		09 08 30.5	
PBAR				*e*LR	LR	09 18 44.3	
	comp=Z,17µm,22.0s						
EANR	**'Ain N'Sour**	**176.13**	**220**	P	PKPdf	08 15 29.5	+4.2
ECHA	**Ech Chlef**	**176.14**	**225**	P	PKPdf	08 15 28.9	+3.6
EBNR	**Beni Rached**	**176.15**	**228**	P	PKPdf	08 15 28.0	+2.7
PAB	**San Pablo**	**178.07**	**71**	*e*PKIKP	PKPdf	08 15 26.1	+0.6
PAB				MLR	MLR		
	comp=Z,15µm,20.0s						
ESDC	**Sonseca Array**	**178.31**	**64**	PKP	PKPdf	08 15 26.1	+0.6
	comp=Z,21nm,1.0s,baz=351,slow=1.7,SNR=47						
ESDC				PKPab		08 17 13.4	
	comp=Z,38nm,1.1s,baz=311,slow=5.0,SNR=8.8						
ESDC				PP	PP	08 21 09.9	+1.0
	comp=Z,1.6nm,0.8s,baz=340,slow=2.0,SNR=4.4						
ESLA	**Sonseca Array**	**178.31**	**64**	*e*PKPdf	PKPdf	08 15 26.1	+0.6
ESLA				LR	LR		
	comp=Z,98µm,20.0s						
CART	**Cartagena**	**178.43**	**210**	*e*PKPdf	PKPdf	08 15 24.9	-0.7
EBEN	**Beniarda**	**178.60**	**260**	PKP	PKPdf	08 15 23.7	-1.9

CASC 20 07:57:58.3±1.4, 1326N×8977W, h32km±4km, MD3.6, 4C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.60**	**14**	*e*P	x	07 58 10.7	
SBLS				*e*S	x	07 58 20.2	
SNJE	**San Jose**	**0.63**	**15**	*e*P	x	07 58 11.1	
SNJE				*e*S	x	07 58 20.5	
RTR	**El Retiro**	**0.65**	**11**	*e*P	x	07 58 11.5	
BOQS	**Boqueron**	**0.68**	**45**	*e*P	x	07 58 11.7	
LFRS	**El Faro**	**0.78**	**62**	*e*P	x	07 58 12.8	
LFU	**La Fuente**	**0.81**	**52**	*e*P	x	07 58 13.6	
LBRS	**Las Brisas**	**0.86**	**56**	*e*P	x	07 58 14.2	
LBRS				*e*S	x	07 58 26.8	
RBDL	**Robledal**	**0.86**	**6**	*e*P	x	07 58 14.5	
LCBS	**La Ceiba**	**0.87**	**63**	*e*P	x	07 58 12.8	
NBG	**Las Nubes**	**1.44**	**337**	*e*P	Pn	07 58 24.0	+1.8
BLLM	**Bellamira**	**1.50**	**83**	*e*P	x	07 58 23.3	
FUG	**Fuego 3**	**1.58**	**319**	*e*P	Pn	07 58 24.1	0.0
FUG				*e*S	Sn	07 58 44.1	+0.7
FG6		**1.69**	**320**	*e*P	Pn	07 58 26.0	+0.4
FG6				*e*S	Sn	07 58 46.8	+0.6

*ISCJB **20** 07:59:37.0±0.6, 1862N±005×14542E±009, h628km±7km, mb4.7/51, Error ellipse: s-maj=12.6km s-min=8.3km az=175.8*
*IDC **20** 07:59:38.0±0.8, 1862N×14541E, h616km±10km, mb3.9/17, mb1 4.0/22, mb1mx4.0/27, mbtmp4.0/22, Error ellipse: s-maj=13.8km s-min=9.2km az=89.0*
*BJI **20** 07:59:37.3, 1871N×14556E, h640km, mB4.9, mb5.1*
*NEIC **20** 07:59:38.3±0.9, 1866N×14540E, h623km±11km, mb4.8/23, Error ellipse: s-maj=12.9km s-min=9.8km az=79.0*

ISC 20 07:59:37.6±0.6, 1863N±005×14545E±009, h613km±7km, n83, σ0°98/79, mb4.7/51, 2D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.05**	**186**	P	**P**	**08 01 12.3**	**+0.5**
	72nm,0.3s,baz=342,slow=2.7,SNR=15						
GUMO				S	**S**	**08 02 27.1**	**-1.4**
	61nm,0.3s,baz=11,slow=20,SNR=10.0						
CBIJ	**Chichi jima**	**8.95**	**341**	P	**P**	**08 01 46.6**	**+0.4**
	39nm,0.3s,baz=262,slow=24,SNR=12						
CBIJ				S	**S**	**08 03 30.7**	**-1.1**
	4.9nm,0.3s,baz=270,slow=20,SNR=3.8						
JHJ	**Hachijo jima 2**	**15.30**	**342**	P	**P**	**08 02 48.0**	**+0.2**
	25nm,0.3s,baz=170,slow=12,SNR=7.2						
JOW	**Kunigami**	**17.81**	**300**	P	**P**	**08 03 11.4**	**+0.5**
	7.6nm,0.3s,baz=138,slow=11,SNR=22						
MJAR	**Matsushiro Arr**	**18.95**	**342**	P	**P**	**08 03 20.1**	**-1.0**
	5.0nm,0.3s,baz=168,slow=9.7,SNR=40						
MJAR				S	**S**	**08 06 29.8**	**+7.8**
	baz=181,slow=16,SNR=4.4						
MAJO	**Matsushiro**	**18.95**	**342**	*e*P	**P**	**08 03 20.5**	**-0.5**
	32nm,0.6s						
MAT	**Matsushiro**	**18.95**	**342**	P	**P**	**08 03 20.3**	**-0.8**
NACB	**Ninganchiao**	**22.87**	**288**	*e*P	**P**	**08 03 56.1**	**-0.4**
	19nm,0.7s,mb4.8						
YULB	**Yu-li**	**23.03**	**286**	*e*P	**P**	**08 03 57.4**	**-0.5**
	24nm,0.7s,mb4.9						
YHNB	**Yeheng**	**23.15**	**289**	*e*P	**P**	**08 03 58.9**	**0.0**
	39nm,0.7s,mb5.1						
TWG	**Pinlang**	**23.17**	**285**	*e*P	**P**	**08 03 57.3**	**-1.8**
	12nm,0.5s,mb4.8						
KSRS	**Korea Array**	**24.23**	**324**	P	**P**	**08 04 08.2**	**-0.1**
	54nm,0.8s,mb5.2,baz=145,slow=9.3,SNR=126						
ASAJ	**Asahikawa**	**25.52**	**355**	P	**P**	**08 04 21.1**	**+1.6**
	21nm,0.6s,mb4.9,baz=217,slow=12,SNR=20						
YSS	**Yuzh-Sakhalins**	**28.33**	**356**	*e*P	**P**	**08 04 44.6**	**+0.6**
	13nm,0.5s,mb4.8						
MDJ	**Mudanjiang**	**29.11**	**336**	P	**P**	**08 04 51.1**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,24nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,80nm,5.1s						
MDJ	**Mudanjiang**	**29.11**	**336**	*e*P	**P**	**08 04 51.1**	**+0.4**
	comp=Z,30nm,0.9s,mb4.9						
CN2	**Changchun**	**30.21**	**331**	P	**P**	**08 05 00.6**	**+0.4**
CN2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.1						
WHN	**Wuhan**	**30.57**	**299**	P	**P**	**08 05 04.4**	**+0.9**
BJT	**Baijiatuau**	**33.01**	**316**	*e*P	**P**	**08 05 24.0**	**0.0**
	comp=Z,39nm,0.4s,mb5.4						
BJI	**Beijing**	**33.02**	**316**	P	**P**	**08 05 24.1**	**0.0**
BJI				AMB	AMB		
	comp=Z,79nm,0.6s,mb5.5						
PETK	**Petropavlovsk-**	**35.70**	**13**	P	**P**	**08 05 47.6**	**+1.5**
	comp=Z,2.2nm,0.4s,mb4.0,baz=164,slow=8.1,SNR=7.9						
XAN	**Xi'an**	**35.94**	**303**	P	**P**	**08 05 48.1**	**-0.3**
XAN				AMB	AMB		
	comp=Z,26nm,1.0s,mb4.7						
HHC	**Hu-ho-hao-te**	**36.48**	**315**	*e*P	**P**	**08 05 53.3**	**+0.6**
HHC				AMB	AMB		
	comp=Z,59nm,0.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,121nm,4.0s						
HIA	**Hailar**	**36.91**	**332**	*e*P	**P**	**08 05 56.6**	**+0.6**
	comp=Z,69nm,1.0s,mb5.1						
CD2	**Chengdu**	**39.57**	**296**	P	**P**	**08 06 18.0**	**+0.2**
CD2				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**39.85**	**196**	P	**P**	**08 06 20.9**	**+0.7**
	comp=Z,11nm,0.5s,mb4.7,baz=19,slow=8.0,SNR=5.0						
LZH	**Lanzhou**	**40.49**	**304**	*e*P	**P**	**08 06 25.8**	**+0.7**
LZH				AMB	AMB		
	comp=Z,88nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,220nm,4.0s						
ULN	**Ulaanbaatar**	**42.68**	**322**	*e*P	**P**	**08 06 42.7**	**+0.7**
	comp=Z,29nm,0.7s,mb4.9						
SONM	**Songino Array**	**43.05**	**322**	P	**P**	**08 06 45.6**	**+0.7**
	comp=Z,20nm,0.5s,mb4.9,baz=124,slow=6.0,SNR=167						
SONM				PcP	PcP	08 08 20.4	-0.2
	comp=Z,3.7nm,0.8s,baz=136,slow=4.3,SNR=4.0						
SONM				ScP	ScP	08 11 10.4	-3.9
	comp=Z,2.8nm,0.9s,baz=138,slow=4.7,SNR=5.4						
ASAR	**Alice Springs**	**43.53**	**195**	P	**P**	**08 06 49.6**	**+0.7**
	comp=Z,8.6nm,0.4s,mb4.6,baz=11,slow=7.5,SNR=4.3						
ASAR				ScP	ScP	08 11 15.5	-1.1
	comp=Z,3.9nm,0.8s,baz=359,slow=5.6,SNR=3.2						
CMAR	**Chiang Mai Arr**	**44.00**	**278**	P	**P**	**08 06 53.8**	**+1.1**
	comp=Z,19nm,0.7s,mb4.7,baz=69,slow=6.5,SNR=63						
GTA	**Gaotai**	**44.40**	**308**	P	**P**	**08 06 56.3**	**+0.8**
GTA				PCP	PcP	08 08 25.8	+0.3
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
GTA				AMB	AMB		
	comp=Z,149nm,4.8s						
YAK	**Yakutsk**	**44.74**	**350**	*e*P	**P**	**08 06 57.5**	**-0.1**
	comp=Z,109nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**50.36**	**184**	P	**P**	**08 07 40.5**	**+0.7**
	comp=Z,7.0nm,0.4s,mb4.4,baz=351,slow=8.9,SNR=6.7						
LSA	**Lhasa**	**50.36**	**293**	P	**P**	**08 07 42.0**	**+1.9**
LSA	**Lhasa**	**50.36**	**293**	*e*P	**P**	**08 07 42.0**	**+1.9**
	comp=Z,39nm,0.6s,mb5.0						
BILL	**Bilibino**	**51.12**	**10**	*e*P	**P**	**08 07 45.4**	**+0.5**
	comp=Z,9.5nm,0.6s,mb4.4						
TIXI	**Tiksi**	**53.91**	**354**	*e*P	**P**	**08 08 03.9**	**-0.7**
	comp=Z,14nm,0.6s,mb4.5						
WMQ	**Urumqi**	**54.18**	**311**	P	**P**	**08 08 07.8**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,26nm,1.0s,mb4.5						
ZAA0	**Zalesovo Array**	**57.93**	**323**	*e*P	**P**	**08 08 31.8**	**-0.7**
ZALV	**Zalesovo Beam**	**57.93**	**323**	P	**P**	**08 08 32.2**	**-0.3**
	comp=Z,12nm,0.4s,mb4.4,baz=108,slow=6.9,SNR=45						
ZALV				PcP	PcP	08 09 15.7	-0.5
	comp=Z,2.1nm,0.5s,baz=126,slow=7.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**57.93**	**323**	P	**P**	**08 08 32.2**	**-0.3**
ZALV				PcP	PcP	08 09 15.7	-0.5
MKAR	**Makanchi Array**	**58.34**	**314**	P	**P**	**08 08 36.1**	**+0.6**
	comp=Z,37nm,0.7s,mb4.6,baz=89,slow=8.3,SNR=314						
MKAR				PcP	PcP	08 09 17.1	-0.9
	comp=Z,2.7nm,0.5s,baz=85,slow=4.6,SNR=2.4						
KDAK	**Kodiak Island**	**59.54**	**33**	P	**P**	**08 08 43.9**	**+0.6**
	comp=Z,3.0nm,0.5s,mb3.8,baz=144,slow=18,SNR=15						
KURK	**Kurchatov**	**61.16**	**318**	P	**P**	**08 08 54.3**	**+0.3**
	comp=Z,117nm,0.8s,mb5.2,baz=98,slow=6.7,SNR=54						
CHUM	**Lake Minchumin**	**61.30**	**27**	*e*P	**P**	**08 08 46.6**	**-8.0**
	comp=Z,19nm,0.6s,mb4.5						
ULHL	**Ulahol**	**62.44**	**308**	P	**P**	**08 09 03.2**	**+0.7**
	SNR=5.3						
TKM2	**Tokmak 2**	**62.91**	**309**	P	**P**	**08 09 06.1**	**+0.6**
	SNR=7.3						
TKM2	**Tokmak 2**	**62.91**	**309**	*e*P	**P**	**08 09 05.9**	**+0.4**
	comp=Z,16nm,0.7s,mb4.5						
KZA	**Kyzart**	**63.19**	**308**	P	**P**	**08 09 08.8**	**+1.6**
	SNR=6.9						
KBK	**Karagaybulak**	**63.40**	**309**	P	**P**	**08 09 09.1**	**+0.5**
	SNR=11						
USP	**Uspenovka**	**63.71**	**310**	P	**P**	**08 09 10.4**	**-0.2**
	SNR=15						
AAK	**Ala-Archa**	**63.73**	**309**	P	**P**	**08 09 10.6**	**-0.1**
	SNR=7.9						
AAK	**Ala-Archa**	**63.73**	**309**	*e*P	**P**	**08 09 10.7**	**0.0**
	comp=Z,9.2nm,1.0s,mb4.1						
EKS2	**Erkin-Say**	**64.26**	**309**	P	**P**	**08 09 14.4**	**+0.4**
	SNR=8.1						
AML	**Almayashu**	**64.34**	**308**	P	**P**	**08 09 15.8**	**+1.2**
	SNR=25						
AML	**Almayashu**	**64.34**	**308**	*e*P	**P**	**08 09 15.6**	**+1.1**
	comp=Z,25nm,0.6s,mb4.7						
AML				*e*PcP	PcP	08 09 42.7	+0.1
BRVK	**Borovoye**	**66.44**	**320**	*e*P	**P**	**08 09 27.2**	**-0.2**
	comp=Z,34nm,0.8s,mb4.8						
INK	**Inuvik**	**69.53**	**23**	P	**P**	**08 09 46.2**	**+0.5**
	comp=Z,5.1nm,0.7s,mb4.0,baz=286,slow=6.2,SNR=29						
INK	**Inuvik**	**69.53**	**23**	*e*Pdif	**P**	**08 09 45.9**	**+0.1**
	comp=Z,13nm,1.2s,mb4.2						
ARU	**Arti**	**72.98**	**325**	*e*P	**P**	**08 10 05.9**	**-0.2**
	comp=Z,56nm,0.6s,mb5.3						
YKA	**Yellowknife Ar**	**78.16**	**28**	P	**P**	**08 10 34.9**	**+0.4**
	comp=Z,2.8nm,0.4s,mb4.0,baz=287,slow=5.1,SNR=76						
YKA	**Yellowknife Ar**	**78.16**	**28**	P	**P**	**08 10 34.9**	**+0.4**
KEV	**Kevo**	**81.92**	**342**	*e*p	**P**	**08 10 52.6**	**-1.4**
	comp=Z,2.3nm,0.4s,mb4.1						
ARCES	**ARCESS Array B**	**82.48**	**342**	P	**P**	**08 10 56.4**	**-0.4**
	comp=Z,20nm,0.8s,mb4.7,baz=69,slow=6.8,SNR=34						
ARCES	**ARCESS Array B**	**82.48**	**342**	P	**P**	**08 10 56.4**	**-0.4**
NVAR	**Mina Array Bea**	**83.36**	**52**	P	**P**	**08 11 02.8**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=272,slow=5.4,SNR=4.8						
JOF	**Joensuu**	**83.98**	**335**	*e*p	**P**	**08 11 02.1**	**-2.2**
	comp=Z,8.9nm,0.3s,mb4.8						
KAF	**Kangasniemi**	**86.38**	**336**	*e*p	**P**	**08 11 14.0**	**-1.9**
	comp=Z,3.4nm,0.4s,mb4.3						
RDF	**Al-Radifah**	**87.79**	**300**	*e*P	**P**	**08 11 20.9**	**-2.3**
RDF				AMb	AMB	08 11 21.6	
	comp=Z,37nm,0.9s,mb5.1						
NAY	**Al-Naaiem**	**87.94**	**300**	*e*P	**P**	**08 11 21.8**	**-2.1**
NAY				AMb	AMB	08 11 26.1	
	comp=Z,20nm,0.9s,mb4.8						
AKASG	**Malin Array Be**	**91.23**	**325**	P	**P**	**08 11 36.0**	**-2.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=52,slow=4.9,SNR=5.2						
HFS	**Hagfors**	**92.36**	**338**	P	**P**	**08 11 41.2**	**-2.4**
	comp=Z,2.8nm,0.4s,mb4.7,baz=98,slow=4.5,SNR=17						
NB2	**NORSAR Subarra**	**92.55**	**340**	P	**P**	**08 11 42.6**	**-1.9**
	comp=Z,1.5nm,0.6s,mb4.2,baz=42,slow=4.6						
NOA	**NORSAR Array B**	**92.55**	**340**	P	**P**	**08 11 42.9**	**-1.6**
	comp=Z,0.3nm,0.5s,mb3.6,baz=51,slow=4.2,SNR=9.0						
BRTR	**Keskin Array B**	**93.99**	**314**	P	**P**	**08 11 49.9**	**-1.7**
	comp=Z,2.2nm,0.7s,mb4.4,baz=83,slow=3.5,SNR=8.6						
ESLA	**Sonseca Array**	**115.35**	**334**	*e*PKPdf	PKPdf	08 17 13.3	+2.3
PAB	**San Pablo**	**115.61**	**334**	*e*PKPdf	PKPdf	08 17 13.1	+1.6
LSZ	**Lusaka**	**120.16**	**263**	PKP	PKPdf	08 17 21.0	+0.2
	comp=Z,8.6nm,0.6s,baz=46,slow=0.9,SNR=8.7						
TSUM	**Tsumeb**	**130.84**	**260**	SKPbc	SKPbc	08 20 07.2	-2.1
	comp=Z,3.4nm,0.8s,baz=78,slow=5.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	**132.32**	**309**	SKPbc	SKPbc	08 20 10.9	-3.6
	comp=Z,6.0nm,0.6s,baz=41,slow=3.0,SNR=8.9						
PLCA	**Paso Flores**	**142.13**	**133**	PKP	PKPdf	08 17 59.2	-2.1
	comp=Z,1.4nm,0.8s,baz=289,slow=3.3,SNR=3.3						
LCO	**Las Campanas**	**145.47**	**114**	*e*PKPbc	PKPbc	08 18 10.7	+1.7

*ISCJB **20** 08:12:31.3±0.5, 3937N±003×3310E±004, h10km, Error ellipse: s-maj=5.3km s-min=3.3km az=135.1*
*CSEM **20** 08:12:31.0±0.1, 3940N×3307E, h5km, MD2.9, Error ellipse: s-maj=3.1km s-min=1.9km az=108.0*
*DDA **20** 08:12:31.6, 3940N×3314E, h7km±1km, Md2.8*
*ISK **20** 08:12:31.6, 3941N×3305E, h9km, MD2.9*

ISC 20 08:12:31.7±0.5, 3937N±003×3312E±004, h4km±10km, n14, σ0°93/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.58**	**332**	*e*PG	**Pg**	**08 12 42.3**	**-0.6**
LOD				*e*SG	**Sg**	**08 12 50.2**	**-0.3**
CDAG	**Cicekdag**	**1.00**	**75**	*i*P	**Pg**	**08 12 50.2**	**-0.8**
CDAG	**Cicekdag**	**1.00**	**75**	*i*P	**Pg**	**08 12 50.2**	**-0.7**
CDAG				*i*S	**Sg**	**08 13 05.2**	**+1.3**
CDAG	**Cicekdag**	**1.00**	**75**	*i*P	**Pg**	**08 12 50.2**	**-0.7**
CDAG				*i*S	**Sg**	**08 13 05.2**	**+1.2**
KIZT	**Kizilcal**	**1.08**	**243**	*e*PG	**Pg**	**08 12 52.1**	**-0.2**
KIZT				*e*SG	**Sg**	**08 13 07.0**	**+0.6**
ELDT	**Eldivan**	**1.14**	**12**	*i*P	**Pg**	**08 12 52.7**	**-1.0**
ELDT				*i*S	**Sg**	**08 13 09.4**	**+1.0**
KDHN	**Kadinhani**	**1.15**	**223**	*i*P	**Pg**	**08 12 54.3**	**+0.5**
KDHN				*i*S	**Sg**	**08 13 09.4**	**+0.7**
LADK	**Ladik-KONYA**	**1.31**	**207**	*e*PN	**Pn**	**08 12 56.6**	**-0.1**
KONT	**Konya--Tatoy**	**1.54**	**203**	*e*PN	**Pg**	**08 13 00.4**	**-0.8**
KONT				*e*SN	**Sg**	**08 13 20.8**	**-0.4**
YOZ	**Yozgat**	**1.73**	**80**	*e*PN	**Pn**	**08 13 03.0**	**+0.6**
ESKT	**Eskisehir**	**1.76**	**276**	*i*P	**Pg**	**08 13 03.7**	**-1.8**
ESKT				*i*S	**Sg**	**08 13 30.4**	**+2.2**
SEYT	**Eskypehyr**	**1.76**	**276**	*i*P	**Pg**	**08 13 03.7**	**-1.7**
CTKT	**Corum**	**1.79**	**45**	*i*P	**Pg**	**08 13 04.8**	**-1.3**
CTKT				*i*S	**Sg**	**08 13 30.3**	**+1.0**
SAFT	**Safranbolu**	**1.90**	**350**	*e*PN	**Pn**	**08 13 04.4**	**-0.4**

*IDC **20** 08:15:15.2±3.3, 1322S×16698E, h134km±24km, mb3.8/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=31.9km s-min=25.1km az=87.0*
*ISCJB **20** 08:15:18.2±4.2, 133S±02×1669E±03, h177km±33km, mb4.0/8, Error ellipse: s-maj=42.4km s-min=26.0km az=174.4*
*NEIC **20** 08:15:18.7±3.1, 1323S×16697E, h169km±24km, mb4.5/1, Error ellipse: s-maj=27.4km s-min=16.7km az=91.0*

ISC 20 08:15:18.8±4.1, 133S±02×1669E±03, h166km±32km, n12, σ0°58/10, mb4.0/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.84**	**298**	*e*Pn	**Pn**	**08 17 09.7**	**-0.3**
PMG	**Port Moresby**	**19.77**	**279**	*e*P	**P**	**08 19 37.7**	**+1.5**
STKA	**Stephens Creek**	**29.73**	**227**	P	**P**	**08 21 09.8**	**+0.3**
	8.8nm,0.7s,mb4.6,baz=44,slow=8.5,SNR=33						
WRA	**Warramunga Arr**	**31.91**	**254**	P	**P**	**08 21 28.0**	**-0.8**
	0.5nm,0.6s,mb3.4,baz=86,slow=9.2,SNR=5.7						
WRA				ScP	ScP	08 27 46.4	+3.1
	1.2nm,0.9s,baz=80,slow=3.9,SNR=5.4						
ASAR	**Alice Springs**	**32.93**	**247**	P	**P**	**08 21 37.4**	**-0.3**
	0.4nm,0.4s,mb3.5,baz=74,slow=9.5,SNR=12						
ASAR				PcP	PcP	08 24 18.2	+0.1
	0.3nm,1.0s,baz=70,slow=3.4,SNR=4.3						
ASAR				ScP	ScP	08 27 50.1	+3.3
	1.0nm,0.9s,baz=92,slow=2.8,SNR=6.4						
NWAO	**Narrogin (SRO)**	**49.25**	**238**	P	**P**	**08 23 50.1**	**-0.6**
	7.9nm,1.0s,mb4.3,baz=39,slow=4.5,SNR=5.5						
MJAR	**Matsushiro Arr**	**56.45**	**332**	P	**P**	**08 24 43.1**	**-0.1**
	1.5nm,0.7s,mb3.9,baz=172,slow=8.8,SNR=4.7						
VNDA	**Vanda**	**64.33**	**181**	P	**P**	**08 25 36.3**	**+0.2**
	1.4nm,0.7s,mb3.9,baz=8.0,slow=8.2,SNR=6.5						
QSPA	**South Pole Qui**	**76.77**	**180**	P	**P**	**08 26 51.6**	**+0.2**
	1.2nm,0.3s,mb4.0,baz=286,slow=2.4,SNR=4.8						
LSA	**Lhasa**	**84.51**	**302**	*e*P	**P**	**08 27 33.3**	**0.0**
	3.9nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**118.75**	**346**	PKP	PKPdf	08 33 46.2	-0.4
	2.6nm,0.7s,baz=29,slow=2.8,SNR=4.6						
ARCES	**ARCESS Array B**	**118.75**	**346**	PKP	PKPdf	08 33 46.2	-0.4

*ATH **20** 08:23:30.6, 3628N×2935E, h31km±1km, MD3.9/5*
*CSEM **20** 08:23:30.4±0.1, 3614N×2947E, h40km, MD3.9, Error ellipse: s-maj=1.9km s-min=1.0km az=76.0*
*ISCJB **20** 08:23:31.1±0.2, 3613N±002×2945E±003, h60km±7km, mb3.6/3, Error ellipse: s-maj=3.5km s-min=3.2km az=147.6*
*NEIC **20** 08:23:31.0, 3626N×2937E, h10km, MD3.9(ATH), ML3.9(ISK), After ATH.*
*GII **20** 08:23:33.7±0.0, 3616N×2954E, h30km±1km, mb

RCY	Rachaya	5.91	115	*e*Pn		Pn	08 24 58.0 +0.3
KSDI	Kefar Szold	5.94	118	Pn		Pn	08 24 58.3 +0.2
HRSH	Kfar Ka'horesh	5.96	124	P		Pn	08 25 03.9 +5.6
AANS		6.09	164	P		Pn	08 24 59.4 -0.8
MMLI	Mount Malkishu	6.21	125	Pn		Pn	08 25 02.0 +0.2
MMLI				Sn		Sn	08 26 10.3 -1.2
RSH		6.32	144	P		Pn	08 25 03.9 +0.6
AMAG	Maghara	6.36	149	P		Pn	08 25 04.2 +0.3
HMDT	Nahal Hemdat	6.39	126	Pn		Pn	08 25 04.9 +0.5
HMDT				Sn		Sn	08 26 15.8 -0.2
SQR		6.44	166	P		Pn	08 25 04.6 -0.4
KOT	Kottamia	6.54	161	P		Pn	08 25 06.4 +0.1
AYT	Al 'Ayyat	6.61	167	P		Pn	08 25 07.2 -0.1
KZIT	Kziot	6.70	140	Pn		Pn	08 25 08.6 +0.1
RTMI	Retamim	6.74	138	Pn		Pn	08 25 09.0 0.0
DSI	Dead Sea	6.75	131	Pn		Pn	08 25 09.3 0.0
DSI				Sn		Sn	08 26 24.1 -0.7
HSAF	As Saff	6.77	164	P		Pn	08 25 09.4 -0.1
GLL	Jalalah	6.85	163	P		Pn	08 25 10.4 -0.2
MZDA	Masada	6.93	133	Pn		Pn	08 25 11.9 +0.2
SUZ		6.93	155	P		Pn	08 25 12.1 +0.4
ZAF		7.35	158	P		Pn	08 25 17.7 +0.2
ZNM		7.37	156	P		Pn	08 25 18.0 +0.2
PRNI	Paran	7.45	139	Pn		Pn	08 25 18.7 -0.2
KRMI	Paran Flat	7.50	142	Pn		Pn	08 25 19.1 -0.4
HRFI	Mount Harif	7.72	141	Pn		Pn	08 25 22.6 +0.1
AWBH		7.83	183	P		Pn	08 25 23.5 -0.6
MBRI	Mt Berech	7.86	142	Pn		Pn	08 25 24.2 -0.2
EIL	Elat	7.97	143	Pn		Pn	08 25 25.9 -0.2
AQBJ	Aqaba	7.98	142	Pn		Pn	08 25 26.1 0.0
HKAT	Jabal Katrina	8.55	152	P		Pn	08 25 34.2 +0.3
TR2		8.57	154	P		Pn	08 25 34.2 +0.1
TR2		8.57	154	P		Pn	08 25 34.2 0.0
TR1		9.00	153	P		Pn	08 25 40.3 +0.3
HFRF	Wahat Farafira	9.04	186	P		Pn	08 25 39.8 -0.7
HDK1	Dakhla	10.59	180	P		Pn	08 26 01.4 -0.4
GTR	Jabal at Tayr	10.67	174	P		Pn	08 26 01.9 -0.9
AKTK	Aktyubinsk	25.04	46	P		P	08 28 50.2 -1.3
AKTK	Aktyubinsk	25.04	46	P		P	08 28 50.1 -1.4
AKTO	Aktyubinsk	25.04	46	P		P	08 28 50.1 -1.4
	0.7nm,0.6s,mb3.4,baz=241,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	33.84	234	P		P	08 30 11.6 +1.7
	1.1nm,0.6s,mb3.9,baz=29,slow=8.6,SNR=10.0						
MKAR	Makanchi Array	40.32	58	P		P	08 31 05.3 +0.7
	0.4nm,0.6s,mb3.4,baz=280,slow=7.2,SNR=3.8						

CSEM ***20*** *08:27:19.1±0.3, 3939N×3308E, h1km±2km, MD3.0, Error ellipse: s-maj=4.6km s-min=1.9km az=104.0*
ISCJB ***20*** *08:27:21.0±0.6, 3941N±003×3306E±005, h10km, Error ellipse: s-maj=6.2km s-min=4.2km az=36.7*
DDA ***20*** *08:27:20.9, 3944N×3295E, h7km±1km, Md2.8*
ISK ***20*** *08:27:20.1, 3939N×3309E, h5km, MD3.0*
ISC 20 08:27:20.4±0.7, 3939N±004×3310E±005, h3km±6km, n9, σ0§97/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LOD	Lodumlu	0.56	333	*e*PG		Pg	08 27 31.3	+0.1
LOD				*e*SG		Sg	08 27 39.8	+1.3
CDAG	Cicekdag	1.01	76	*i* P		Pg	08 27 38.8	-1.0
CDAG	Cicekdag	1.01	76	*i* P		Pg	08 27 39.1	-0.7
CDAG				*i* S		Sn	08 27 58.2	+2.0
CDAG	Cicekdag	1.01	76	*i* P		Pg	08 27 39.1	-0.7
CDAG				*i* S		Sn	08 27 58.2	+2.0
KIZT	Kizilcal	1.08	242	*e*PG		Pg	08 27 40.8	-0.3
KIZT				*e*SG		Sn	08 27 56.2	-1.7
ELDT	Eldivan	1.13	13	*i* P		Pg	08 27 42.3	+0.3
ELDT				*i* S		Sn	08 27 57.9	-1.2
KDHN	Kadinhani	1.16	222	*i* P		Pg	08 27 42.3	-0.3
KDHN				*i* S		Sg	08 27 58.3	+0.7
KONT	Konya--Tatoy	1.55	202	*e*PN		Pn	08 27 49.0	+0.1
KONT				*e*SN		Sn	08 28 10.6	+1.0
YOZ	Yozgat	1.73	81	*e*PN		Pg	08 27 52.4	-1.2
YOZ				*e*SN		Sn	08 28 14.2	+0.1

NEIC 20 08:30:35.8, 3890S×17836E, h41km, ML3.7(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KNZ	Kokohu	0.55	257	P		Pn	08 30 46.6	-0.6
MWZ	Matawai	0.86	311	P		Pn	08 30 50.9	-0.5
MWZ				S		Sn	08 31 02.1	-0.7
URZ	Urewera	1.17	303	P		Pn	08 30 55.6	-0.1
MXZ	Matakaoa Point	1.33	358	P		Pn	08 30 57.7	-0.2
BKZ	Black Stump Fm	1.48	259	P		Pn	08 30 59.5	-0.4
EDRZ	Edgecumbe	1.50	301	P		Pn	08 31 00.5	+0.3
MOVZ	Moawhango	2.09	255	P		Pn	08 31 08.4	+0.1
TUVZ	Tukino	2.14	259	P		Pn	08 31 08.5	+0.2
NGZ	Ngauruhoe	2.17	262	P		Pn	08 31 09.4	+0.1
TSZ	Takapari Road	2.19	237	P		Pn	08 31 08.1	-1.5
WNVZ	Wahianoa	2.19	258	P		Pn	08 31 09.7	0.0
WPVZ	Whakapapa	2.21	261	P		Pn	08 31 10.0	0.0
TWVZ	Taurewa	2.28	265	P		Pn	08 31 10.5	-0.4
WAZ	Wanganui	2.75	251	P		Pn	08 31 18.2	+0.8
HIZ	Hauiti	2.77	277	P		Pn	08 31 18.0	+0.4
MRZ	Mangatainoka R	2.77	230	P		Pn	08 31 15.7	-2.0
KUZ	Kuaotunu	3.00	315	P		Pn	08 31 19.7	-1.1
KIW	Kapiti Island	3.30	232	P		Pn	08 31 23.2	-1.7
PAWZ	Paruwai Farm	3.35	221	P		Pn	08 31 22.0	-3.6
CAW	Cannon Point	3.35	228	P		Pn	08 31 23.2	-2.5
PKE	Pukeiti	3.42	264	P		Pn	08 31 27.6	+1.1
NNZ	Nelson	4.47	237	P		Pn	08 31 38.0	-3.0
QRZ	Quartz Range	4.88	245	P		Pn	08 31 43.5	-3.1
DSZ	Denniston Nort	5.76	238	P		Pn	08 31 55.1	-3.6

IDC ***20*** *08:45:40.9±3.0, 1329N×8804W, h216km±35km, mb2.8/4, mb1 3.2/6, mb1mx3.1/22, mbtmp2.9/6, Error ellipse: s-maj=55.4km s-min=20.7km az=29.0*
ISCJB ***20*** *08:45:41.1±0.7, 133N±02×880W±0.1, h231km±8km, mb3.1/4, Error ellipse: s-maj=32.6km s-min=11.5km az=42.2*
CASC ***20*** *08:45:44.3±1.7, 1286N×8830W, h189km±18km, MD4.4, ML3.0*
ISC 20 08:45:42.2±0.7, 134N±02×880W±02, h216km±9km, n34, σ1§13/22, mb3.1/4, 9C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BLLM	Bellamira	0.22	272	‖ *e*P		x	08 46 10.8	
CNCH	Conchagua	0.23	133	‖ *e*P		x	08 46 10.4	
VSM	San Miguel	0.26	268	*e*P		x	08 46 11.2	
CAHU	Cacacuatique	0.39	329	‖ *e*P		x	08 46 11.3	
SNVI	San Vicente	0.83	282	‖ *e*P		x	08 46 13.3	
LCBS	La Ceiba	0.97	283	‖ *e*P		x	08 46 14.1	
LFRS	El Faro	1.04	280	‖ *e*P		x	08 46 14.1	
LBRS	Las Brisas	1.05	287	‖ *e*P		x	08 46 14.6	
CRIN	San Cristobal	1.19	128	‖ *e*P		Pn	08 46 15.2	+0.3
SNET	Serv Nac Est T	1.22	282	*e*P		x	08 46 15.3	
BOQS	Boqueron	1.27	284	*e*P		x	08 46 16.3	
TEL3	Telica 3	1.42	127	‖ *e*P		Pn	08 46 16.6	-0.1
CNGN	Cerro Negro	1.58	126	*e*S		S	08 46 46.0	0.0
CNGN				*e*S		S	08 46 46.2	+0.2
CNGN				AML		AML	08 46 53.9	
	comp=E,117nm,0.3s							
MIRN	Miramar	1.61	128	‖ *e*P		Pn	08 46 18.2	-0.1
SNJE	San Jose	1.61	286	‖ *e*P		x	08 46 19.1	
SBLS	San Blas	1.62	284	‖ *e*P		x	08 46 18.9	
RTR	El Retiro	1.66	286	‖ *e*P		x	08 46 19.6	
MOMN	Momotombo	1.76	125	*e*P		Pn	08 46 20.5	+0.8
RBDL	Robledal	1.76	293	‖ *i* P		x	08 46 20.5	
COPN	Copaltepe	1.86	132	‖ *e*P		Pn	08 46 20.3	-0.3
COPN				*e*S		S	08 46 48.2	-2.4
CSAN		1.99	129	*e*P		Pn	08 46 23.6	+1.8
CSAN				*e*S		S	08 46 52.5	-0.3
JCR	Jicaral	4.56	141	*e*P		Pn	08 46 52.1	+0.6
JCR				*e*S		S	08 47 42.1	-4.1
PRS1	Puriscal	4.99	133	*e*P		Pn	08 46 58.8	+1.9
LAJ	Bijagual	5.21	133	*e*P		Pn	08 46 58.1	-1.5
URSC	Urasca	5.48	130	‖ *e*P		Pn	08 47 05.8	+2.7
CMIG	Matias Romero	7.56	300	P		Pn	08 47 29.2	-0.6
	comp=E,0.4nm,0.3s,baz=120,slow=11,SNR=15							
CMIG				S		S	08 48 48.7	-7.1
	comp=E,0.2nm,0.3s,baz=37,slow=3.8,SNR=3.4							
CHI2		16.57	121	‖ *e*P		x	08 46 15.1	
SDV	Santo Domingo	17.63	103	P		P	08 49 31.8	-1.2
	comp=E,0.3nm,0.3s,baz=295,slow=14,SNR=5.0							
TXAR	Lajitas Array	21.47	320	P		P	08 50 13.6	-0.4
	comp=E,0.4nm,0.6s,mb3.1,baz=147,slow=10,SNR=6.8							
TKL	Tuckaleechee C	22.45	9	P		P	08 50 23.7	+0.7
	comp=E,1.1nm,0.4s,mb3.7,baz=163,slow=12,SNR=4.3							
PDAR	Pinedale Array	34.65	332	P		P	08 52 11.7	+0.7
	comp=E,0.5nm,1.0s,mb3.0,baz=128,slow=5.8,SNR=3.5							
YKA	Yellowknife Ar	52.52	345	P		P	08 54 31.7	-1.2
	comp=E,0.2nm,0.5s,mb2.8,baz=149,slow=6.6,SNR=6.7							
WRA	Warramunga Arr	139.01	255	PKP		PKPdf	09 04 43.5	-0.3
	comp=E,0.3nm,0.5s,baz=87,slow=1.9,SNR=4.3							
ASAR	Alice Springs	139.12	249	PKP		PKPdf	09 04 43.3	-0.5
	comp=E,0.2nm,0.7s,baz=126,slow=2.4,SNR=3.3							

IDC 20 08:49:46.8±27.0, 1908S×17410W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/18, mbtmp4.2/4, Error ellipse: s-maj=507.9km s-min=159.6km az=73.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.30	262	P		P	08 57 00.8	-0.1
	4.5nm,0.8s,baz=89,slow=9.0,SNR=10							
STKA	Stephens Creek	41.70	243	P		P	08 57 37.8	+0.3
	1.4nm,0.7s,baz=83,slow=9.3,SNR=4.6							
ASAR	Alice Springs	48.42	255	P		P	08 58 31.1	0.0
	3.3nm,0.6s,baz=92,slow=8.1,SNR=67							
WRA	Warramunga Arr	48.45	260	P		P	08 58 31.0	-0.4
	0.7nm,0.3s,baz=98,slow=5.5,SNR=13							

ISCJB ***20*** *08:51:22.3±0.8, 1417S×008×7366W×009, h83km±9km, mb3.7/6, Error ellipse: s-maj=17.9km s-min=6.4km az=139.3*
IDC ***20*** *08:51:22.5±1.7, 1420S×7361W, h67km±17km, mb3.6/6, mb1 3.9/10, mb1mx3.7/23, mbtmp3.8/10, Error ellipse: s-maj=30.8km s-min=11.7km az=40.0*
NEIC ***20*** *08:51:23.1±0.8, 1418S×7363W, h75km±8km, mb4.2/2, Error ellipse: s-maj=15.1km s-min=7.3km az=56.0*
ISC 20 08:51:23.4±0.7, 1416S±007×7363W±009, h76km±8km, n25, σ0§81/25, mb3.7/6, 1C, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARE	Arequipa	3.08	138	‖ *i* P		Pn	08 52 11.0	+1.2
ARE				*i* S		Sn	08 52 46.5	+1.0
NNA	Nana	3.81	304	P		Pn	08 52 20.0	+0.4
	99nm,0.3s,baz=136,slow=11,SNR=70							
NNA				S		Sn	08 53 02.9	-0.4
	112nm,0.3s,baz=218,slow=18,SNR=6.7							
ATAH	Atahualpa	8.52	326	P		Pn	08 53 24.0	-0.1
	3.0nm,0.3s,baz=136,slow=6.8,SNR=12							
LVC	Limon Verde	9.52	153	P		Pn	08 53 35.1	-2.6
	2.8nm,0.3s,baz=342,slow=9.4,SNR=21							
LVC				S		Sn	08 55 13.7	-9.4
	3.8nm,0.3s,baz=222,slow=23,SNR=8.9							
LVC	Limon Verde	9.52	153	P		Pn	08 53 35.1	-2.6
LVC				S		Sn	08 55 13.7	-9.4
SIV	San Ignacio	12.26	100	P		Pn	08 54 15.3	+0.2
	1.3nm,0.3s,baz=289,slow=13,SNR=43							
LCO	Las Campanas	15.03	170	*e*Pn		Pn	08 54 51.6	+0.1
	13nm,1.0s							
OTAV	Otavalo	15.08	341	*e*Pn		Pn	08 54 51.8	-0.5
	24nm,1.4s							
CFAA	Coronel Fontan	18.05	165	P		Pn	08 55 28.8	-0.4
	0.1nm,0.3s,baz=326,slow=12,SNR=5.6							
CPUP	Villa Florida	19.48	131	P		Pn	08 55 44.3	-1.8
	0.5nm,0.3s,baz=293,slow=10,SNR=15							
SDV	Santo Domingo	23.09	8	P		P	08 56 22.8	0.0
	1.6nm,0.5s,mb3.6,baz=124,slow=7.3,SNR=4.0							
TXAR	Lajitas Array	52.07	326	P		P	09 00 26.6	+1.0
	0.5nm,0.5s,mb3.9,baz=152,slow=8.1,SNR=12							
PDAR	Pinedale Array	65.55	332	P		P	09 01 59.7	+0.9
	0.2nm,0.6s,mb3.1,baz=121,slow=6.7,SNR=3.0							
VNA3	Neumayer Olymp	68.42	162	*e*		P	09 02 16.9	+0.2
VNA3				*e*			09 02 21.1	
VNA1	Neumayer--Stat	68.66	161	*e*		P	09 02 18.4	+0.2
VNA2	Neumayer--Watz	69.02	161	*e*		P	09 02 21.1	+0.7
	baz=287,slow=8.6							
VNA2				*e*			09 02 25.3	
SNAA	Sanae	70.63	162	*e*		P	09 02 30.1	-0.2
SNAA				*e*			09 02 34.5	
DBIC	Dimbokro	71.28	78	P		P	09 02 34.5	-0.8
	2.2nm,0.5s,mb4.3,baz=267,slow=6.2,SNR=9.5							
TORD	Torodi Ar. Bea	79.37	73	P		P	09 03 21.6	-0.1
	2.6nm,0.8s,mb4.1,baz=259,slow=4.4,SNR=10							
YKA	Yellowknife Ar	82.84	342	P		P	09 03 39.0	0.0
	0.5nm,0.8s,mb3.4,baz=136,slow=5.4,SNR=12							
YKA	Yellowknife Ar	82.84	342	P		P	09 03 39.0	0.0
ASAR	Alice Springs	133.76	216	PKP		PKPdf	09 10 31.6	-0.7
	0.5nm,0.8s,baz=130,slow=2.1,SNR=5.6							
WRA	Warramunga Arr	136.35	220	PKP		PKPdf	09 10 36.6	-0.7
	1.2nm,0.9s,baz=141,slow=1.3,SNR=7.3							
ZALV	Zalesovo Beam	136.83	19	PKP		PKPdf	09 10 37.8	+0.8
	0.5nm,0.3s,baz=267,slow=2.5,SNR=3.1							
SONM	Songino Array	146.43	360	PKPbc		PKPbc	09 10 56.7	+0.9
	1.0nm,0.6s,baz=325,slow=2.4,SNR=7.9							

NOU ***20*** *08:52:19.4±0.9, 1846S×168.15E, h30km, MD2.7, ML4.2*
ISCJB ***20*** *08:52:20.3±1.6, 1900S±007×1687E±0.1, h89km±13km, mb4.1/8, Error ellipse: s-maj=20.1km s-min=12.2km az=5.5*
IDC ***20*** *08:52:20.2±10.0, 1871S×16880E, h87km±92km, mb3.7/7, mb1 3.8/7, mb1mx3.8/16, mbtmp3.7/7, Error ellipse: s-maj=38.3km s-min=24.3km az=44.0*
NEIC ***20*** *08:52:24.0±2.3, 1875S×16883E, h127km±20km, mb4.5/3, Error ellipse: s-maj=17.3km s-min=11.1km az=77.0*
ISC 20 08:52:21.4±1.5, 1897S±007×1687E±01, h83km±12km, n26, σ0§91/24, mb4.1/8, 4C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.73	214	*e*P		Pn	08 53 16.1	-0.7
DZM				*e*S		Sn	08 53 58.8	-0.8
DZM				AMP			08 54 01.4	
	comp=Z,5μm,1.5s							
PLUM	Mont Dore	3.80	210	*e*P		Pn	08 53 17.8	+0.1
PLUM				*e*S		Sn	08 54 01.8	+0.5
PLUM				AMP			08 54 03.6	
	comp=Z,698nm,0.5s							
LASL	Noumea	3.82	211	*e*P		Pn	08 53 18.0	+0.1
LASL				*e*S		Sn	08 54 01.7	0.0
LASL				AMP			08 54 03.3	
	comp=Z,936nm,0.0s							
NOUC	Port Laguerre	3.83	215	*e*P		Pn	08 53 18.5	+0.4
NOUC				*e*S		Sn	08 54 01.1	-1.0
NOUC				AMP			08 54 06.4	
	comp=Z,462nm,1.4s							
NORM	Noumea	3.84	212	*e*P		Pn	08 53 18.3	+0.1
NORM				*e*S		Sn	08 54 01.7	-0.5
NORM				AMP			08 54 02.3	
	comp=Z,991nm,1.1s							
ONTRN	Noumea	3.92	212	*e*P		Pn	08 53 19.8	+0.4
ONTRN				*e*S		Sn	08 54 03.7	-0.5
ONTRN				AMP			08 54 05.8	
	comp=Z,2μm,0.3s							
HNR	Honiara	12.71	317	*e*Pn		Pn	08 55 19.5	+0.4
	comp=Z,309nm,0.9s							
EIDS	Eidsvold	17.49	246	*e*P		Pn	08 56 22.4	+2.4
	comp=Z,2.6nm,0.6s							
URZ	Urewera	20.58	161	P		P	08 56 54.4	+0.9
	comp=Z,11nm,0.7s,baz=311,slow=3.5,SNR=5.0							
CTAO	Charters Tower	21.17	263	*e*P		P	08 57 00.8	+0.7
CAN	Canberra	23.84	223	*e*P		P	08 57 27.9	+0.9
	comp=Z,13nm,0.4s,mb4.6							
CAN				*e*pP			08 57 56.5	
STKA	Stephens Creek	27.55	237	P		P	08 58 01.1	+0.6
	comp=Z,1.1nm,0.6s,mb3.6,baz=72,slow=11,SNR=4.8							
WRA	Warramunga Arr	32.37	262	P		P	08 58 44.0	+0.8
	comp=Z,0.3nm,0.5s,mb3.3,baz=100,slow=7.5,SNR=3.3							
ASAR	Alice Springs	32.68	256	P		P	08 58 45.0	-1.0
	comp=Z,2.1nm,0.6s,mb4.2,baz=82,slow=8.5,SNR=16							
VNDA	Vanda	58.68	182	P		P	09 02 09.9	+0.2
	comp=Z,1.0nm,1.0s,mb3.8,baz=17,slow=8.6,SNR=4.7							
MJAR	Matsushiro Arr	62.27	333	P		P	09 02 31.0	-3.7
	comp=Z,1.8nm,0.7s,mb4.2,baz=165,slow=7.1,SNR=4.5							
ULN	Ulaanbaatar	86.33	324	*e*P		P	09 04 52.3	-1.8
	comp=Z,11nm,1.4s,mb4.6							
SONM	Songino Array	86.69	323	P		P	09 04 54.1	-1.7
	comp=Z,3.7nm,0.8s,mb4.4,baz=154,slow=6.4,SNR=21							
YKA	Yellowknife Ar	100.67	27	P		Pdif	09 05 57.6	-2.6
	comp=Z,0.3nm,0.7s,baz=255,slow=4.7,SNR=8.5							
MKAR	Makanchi Array	101.18	316	P		Pdif	09 06 01.6	-0.8
	comp=Z,0.4nm,0.6s,baz=102,slow=6.9,SNR=5.1							
ARCES	ARCESS Array B	124.67	345	PKP		PKPdf	09 11 07.5	-3.1
	comp=Z,12nm,1.1s,baz=48,slow=1.8,SNR=7.3							
GERES	GERESS Array B	144.01	332	PKP		PKPdf	09 11 43.4	-3.8
	comp=Z,0.9nm,0.7s,baz=17,slow=1.4,SNR=7.0							
MOA	Molln	144.47	330	‖ *i* PKPdf		PKPdf	09 11 44.9	-3.1
	comp=Z,3.7nm,0.6s							
SOKA	Soboth	144.91	328	⇑ *i* PKPdf		PKPdf	09 11 46.0	-2.8
	comp=Z,3.8nm,0.6s							
ABTA	Abfaltersbach	146.09	330	⇑ *i* PKPab		PKPab	09 11 48.7	-3.9
	comp=Z,2.6nm,0.7s							
FETA	Feichten	146.70	332	⇑ *i* PKPab		PKPab	09 11 51.6	-3.4
	comp=Z,7.3nm,1.0s							

ISCJB ***20*** *08:54:04.9±0.6, 45N±02×3259W±009, h10km, mb4.0/12, Error ellipse: s-maj=22.8km s-min=13.6km az=1.3*
IDC ***20*** *08:54:05.1±0.7, 451N×3263W, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, Error ellipse: s-maj=27.3km s-min=18.5km az=11.0*
NEIC ***20*** *08:54:06.6±0.4, 448N×3262W, h10km, mb4.5/2, Error ellipse: s-maj=14.2km s-min=8.7km az=182.0*
ISC 20 08:54:06.8±0.6, 45N±02×3262W±009, h10km, n15, σ0§36/14, mb4.0/12, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	27.72	84	P		P	08 59 55.8	+0.1
	5.4nm,0.8s,mb4.2,baz=281,slow=4.9,SNR=3.8							
TOA0	Torodi Ar. Sit	34.95	73	*e*P		P	09 00 59.7	+0.3
TORD	Torodi Ar. Bea	34.95	73	P		P	09 00 59.2	-0.2
	4.1nm,1.0s,mb4.3,baz=262,slow=8.8,SNR=9.1							
TORD	Torodi Ar. Bea	34.95	73	P		P	09 00 59.2	-0.2
SDV	Santo Domingo	37.99	279	P		P	09 01 25.9	+0.6
	2.3nm,0.7s,mb4.0,baz=85,slow=11,SNR=3.8							
CPUP	Villa Florida	38.86	217	P		P	09 01 32.3	-0.2
	0.3nm,0.3s,mb3.5,baz=25,slow=7.5,SNR=3.4							
GERES	GERESS Array B	59.13	34	P		P	09 04 07.6	0.0
	1.2nm,0.9s,mb3.9,baz=243,slow=4.4,SNR=5.8							
BOSA	Boshof	64.59	124	P		P	09 04 44.6	-0.1
	3.4nm,0.9s,mb4.4,baz=250,slow=2.5,SNR=4.2							
ULM	Lac du Bonnet	69.66	322	P		P	09 05 16.2	-0.3
	2.5nm,0.8s,mb4.2,baz=135,slow=3.6,SNR=3.1							
TXAR	Lajitas Array	71.30	299	P		P	09 05 27.3	+0.3
	0.4nm,0.9s,mb3.4,baz=133,slow=7.9,SNR=3.5							
PDAR	Pinedale Array	77.39	313	P		P	09 06 02.5	+0.3
	1.0nm,0.8s,mb3.8,baz=88,slow=4.5,SNR=8.3							
RES	Resolute Bay	78.58	346	*e*P		P	09 06 08.4	+0.2
	2.7nm,1.0s,mb4.1							
YKA	Yellowknife Ar	82.34	332	P		P	09 06 28.3	-0.3
	0.7nm,0.7s,mb3.7,baz=101,slow=5.5,SNR=12							
NVAR	Mina Array Bea	83.86	308	P		P	09 06 36.2	-0.8
	1.2nm,0.9s,mb4.0,baz=119,slow=8.8,SNR=3.5							
ASAR	Alice Springs	156.91	147	PKP		PKPdf	09 14 03.4	-0.1
	0.5nm,1.0s,baz=194,slow=4.8,SNR=4.6							
ASAR				PKPab		PKPab	09 14 33.0	-0.2
	0.6nm,0.9s,baz=194,slow=6.6,SNR=3.4							

NEIC ***20*** *09:13:25.0±1.2, 961S×11953E, h61km±13km, mb4.5/8, Error ellipse: s-maj=14.8km s-min=7.5km az=67.0*
BJI ***20*** *09:13:24.3, 907S×12028E, h47km, mB5.0, mb4.8*
ISCJB ***20*** *09:13:28.0±0.8, 952S±004×11985E±006, h114km±8km, mb4.4/23, Error ellipse: s-maj=10.7km s-min=5.5km az=151.4*
IDC ***20*** *09:13:27.2±2.7, 955S×11952E, h83km±25km, mb3.9/11, mb1 4.1/14, mb1mx3.9/22, mbtmp4.0/14, Error ellipse: s-maj=31.5km s-min=11.3km az=70.0*
DJA ***20*** *09:13:27, 930S×12027E, h265km, MLv5.1/4*
ISC 20 09:13:28.4±0.7, 955S±004×11983E±006, h100km±7km, n46, σ0§97/59, mb4.4/23, 1C, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	4.51	359	P		Pn	09 14 34.1	-0.4
	11nm,0.3s,baz=203,slow=10,SNR=35							
KAPI				S		Sn	09 15 25.6	-0.3
	30nm,0.3s,baz=357,slow=23,SNR=11							
KAPI	Kappang	4.51	359	P		Pn	09 14 35.1	+0.6
DNP	Denpasar	4.64	280	P		Pn	09 14 39.0	+2.7
NBBI	Negara	5.28	282	P		Pn	09 14 53.8	+8.8
	491nm,0.8s,8μm2.3nm							
BBKI	Banjar Baru	7.82	320	P		Pn	09 15 19.9

DANN	**Dangsing**	**51.33**	**318**	*eP*		**P**		**09 22 22.0**	**-0.8**
	comp=Z,29nm,0.7s,mb5.4								
GTA	**Gaotai**	**52.14**	**340**	⇑P		**P**		**09 22 30.1**	**+1.5**
GTA				AMB		AMB			
	comp=Z,8.0nm,0.7s,mb4.9								
SONM	**Songino Array**	**58.36**	**349**	P		**P**		**09 23 13.7**	**+0.6**
	comp=Z,2.9nm,0.8s,mb4.3,baz=169,slow=7.3,SNR=18								
MKAR	**Makanchi Array**	**65.32**	**333**	P		**P**		**09 24 00.0**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.1,baz=143,slow=7.0,SNR=20								
ZALV	**Zalesovo Beam**	**69.84**	**339**	P		**P**		**09 24 27.9**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.1,baz=149,slow=6.1,SNR=9.6								
KURK	**Kurchatov**	**69.85**	**334**	P		**P**		**09 24 27.8**	**-0.5**
	comp=Z,1.7nm,0.9s,mb3.9,baz=145,slow=5.2,SNR=7.7								
BVAR	**Borovoye Array**	**75.16**	**332**	P		**P**		**09 24 59.3**	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=134,slow=8.6,SNR=8.0								
AKTK	**Aktyubinsk**	**80.14**	**325**	P		**P**		**09 25 26.9**	**-0.6**
AKTO	**Aktyubinsk**	**80.14**	**325**	P		**P**		**09 25 26.9**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.0,baz=170,slow=5.4,SNR=4.4								

IDC 20 09:29:28.5±1.9, 206N×9593E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, ML3.2/1, MS4.4/1, Ms1 4.6/1, ms1mx3.9/31, Error ellipse: s-maj=55.6km s-min=21.0km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
PSI	**Prapat**	**3.08**	**76**	Pn		Pn	09	30	18.2	-0.2
	2.8nm,0.3s,baz=282,slow=4.1,SNR=12									
CMAR	**Chiang Mai Arr**	**16.56**	**10**	Pn		Pn	09	33	23.4	+1.0
	baz=195,slow=11,SNR=5.9									
CMAR				LR		LR	09	39	49.5	
	comp=Z,1μm,19.7s,baz=135,slow=38									
WRA	**Warramunga Arr**	**43.56**	**122**	P		P	09	37	35.1	+0.5
	0.7nm,0.9s,baz=303,slow=9.0,SNR=5.0									
ASAR	**Alice Springs**	**44.92**	**127**	P		P	09	37	45.0	-0.4
	0.2nm,0.6s,baz=302,slow=7.9,SNR=6.7									
MKAR	**Makanchi Array**	**46.12**	**347**	P		P	09	37	54.8	+0.3
	1.3nm,0.4s,baz=158,slow=8.8,SNR=18									
SONM	**Songino Array**	**46.49**	**10**	P		P	09	37	57.0	-0.4
	0.9nm,0.5s,baz=183,slow=10,SNR=8.7									
ZALV	**Zalesovo Beam**	**52.52**	**352**	P		P	09	38	43.2	-0.2
	1.6nm,0.5s,baz=178,slow=6.9,SNR=7.9									

IDC 20 09:40:09.0±8.0, 608S×15008E, h65km±60km, mb3.0/2, mb1 3.4/3, mb1mx3.1/16, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=119.4km s-min=52.6km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
PMG	**Port Moresby**	**4.39**	**221**	P		Pn	09	41	13.7	+0.5
	4.1nm,0.3s,baz=67,slow=2.9,SNR=11									
PMG				S		Sn	09	42	03.9	+0.9
	2.5nm,0.3s,baz=342,slow=16,SNR=3.4									
WRA	**Warramunga Arr**	**20.58**	**227**	P		P	09	44	42.4	-0.3
	0.7nm,0.5s,baz=53,slow=11,SNR=12									
ASAR	**Alice Springs**	**23.40**	**220**	P		P	09	45	12.7	+0.3
	0.3nm,0.3s,baz=54,slow=9.2,SNR=22									
TORD	**Torodi Ar. Bea**	**148.07**	**285**	PKPbc		PKPbc	09	59	47.6	-0.8
	1.7nm,1.2s,baz=67,slow=1.8,SNR=2.7									

*BGS **20** 09:48:11.6±1.9, 3792N×3502E, h10km, mb5.6, MS5.2*
*SZGRF **20** 09:48:18.6, 3868N×3422E, h10km, mb5.1, MS4.5, Turkey*
*DDA **20** 09:48:27.2, 3942N×3305E, h3km±4km, Md5.3, Ml5.6*
*CSEM **20** 09:48:28.4±0.0, 3942N×3310E, h10km, mb5.3/94, Ms5.3, Mw5.6, Error ellipse: s-maj=1.1km s-min=0.7km az=15.0*
*IDC **20** 09:48:28.2±0.4, 3942N×3309E, h0km, mb4.8/25, mb1 4.9/36, mb1mx4.9/37, mbtmp4.8/36, ML4.2/9, MS5.3/24, Ms1 5.3/24, ms1mx5.1/39, Error ellipse: s-maj=8.4km s-min=7.0km az=179.0*
*MOS **20** 09:48:28.9±1.0, 3948N×3315E, h14km, mb5.3/78, MS5.2/59, Error ellipse: s-maj=4.2km s-min=2.5km az=124.3*
*BJI **20** 09:48:28.3, 3947N×3280E, h24km, mB5.5, mb5.1, Ms5.6, Msz5.4*
*ISK **20** 09:48:28.4, 3942N×3307E, h6km, ML5.7*
*ISCJB **20** 09:48:29.0±0.3, 3945N±001×33.13E±001, h13km±2km, mb5.1/183, MS5.5/230, Error ellipse: s-maj=2.0km s-min=1.4km az=17.2*
*NEIC **20** 09:48:29.9±0.2, 3942N×3321E, h10km, mb5.2/116, MS5.6/185, ML5.7(ISK), Error ellipse: s-maj=3.2km s-min=2.4km az=14.0*
NEIC A minaret and other buildings collapsed at Yeniyapan and a mosque and animal shelters were damaged at Abazlar. Mud brick houses and masonry structures were damaged at Sirapinar. Shelters collapsed at Suyuguzel and killed about 100 animals. Slight damage at Ankara. Felt at Elmadag and in Aksaray, Cankiri, Kayseri, Kirrikkale, Konya and Yozgat.
*PDG **20** 09:48:29.1±0.6, 3941N×3308E, h11km±2km, ML4.9/10, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
*GCMT **20** 09:48:30.0±0.2, 3943N×3310E, h12km, MW5.7/96, Moment Tensor Solution. s36,c44; s96,c205; Duration: 1!6 Moment tensor: Scale 10^17 Nm; Mrr-0.33±.08; Mθθ-2.83±.06; Mφφ3.17±.07; Mrθ0.55±.21; Mrφ-1.58±.06; Mθφ-2.08±.23; Best double couple: Mo3.86900×10^17 NP1:φ214.00000°,δ73.00000°,λ17.00000°. NP2: φ119.00000°,δ74.00000°,λ162.00000°. Principal axes: T 4.5160, Plg24.0000°, Azm76.0000°; N -1.2870, Plg66.0000°, Azm259.0000°; P -3.2210, Plg1.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*PRU **20** 09:48:33.6, 4051N×3371E, h0km, M5.2*
*DJA **20** 09:48:37, 3895N×3449E, h10km, mb5.4/14*

ISC 20 09:48:30.4±0.3, 3943N±001×3315E±001, h11km±2km, h14km±.7km: pP-P, n1108, σ1§08/1018, mb5.1/183, MS5.5/230, 67C-37D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
KAMT	**Kaman**	**0.44**	**98**	*e*PG		**Pg**	**09**	**48**	**37.7**	**-1.4**
BR131	**Keskin Array S**	**0.47**	**52**	⇑*i*Pg		**Pg**	**09**	**48**	**38.7**	**-1.1**
BRTR	**Keskin Array B**	**0.47**	**52**	Pg		**Pg**	**09**	**48**	**38.8**	**-1.0**
	4μm,0.3s,baz=222,slow=19									
LOD	**Lodumlu**	**0.55**	**327**	*e*PG		**Pg**	**09**	**48**	**39.4**	**-1.6**
CDAG	**Cicekdag**	**0.96**	**78**	⇑*i*P		**Pg**	**09**	**48**	**47.3**	**-1.6**
CDAG				*i* S		**Sg**	**09**	**49**	**02.3**	**+0.8**
ELDT	**Eldivan**	**1.08**	**11**	*i* P		**Pg**	**09**	**48**	**51.1**	**0.0**
ELDT				*i* P		**Pg**	**09**	**48**	**51.1**	**0.0**
ELDT				*i* S		**Sg**	**09**	**49**	**06.2**	**+1.0**
KIZT	**Kizilcal**	**1.13**	**241**	*e*PG		**Pg**	**09**	**48**	**48.4**	**-3.8**
KDHN	**Kadinhani**	**1.22**	**222**	⇑*i*P		**Pn**	**09**	**48**	**50.3**	**-3.0**
KDHN				*i* S		**Sb**	**09**	**49**	**06.4**	**-2.7**
CANT	**Cankiri**	**1.23**	**17**	*e*PN		**Pn**	**09**	**48**	**53.1**	**-0.3**
CANT				*e*SN		**Sn**	**09**	**49**	**10.5**	**+0.5**
LADK	**Ladik-KONYA**	**1.38**	**207**	*e*PN		**Pn**	**09**	**48**	**54.0**	**-1.5**
KONT	**Konya--Tatoy**	**1.61**	**203**	*e*PN		**Pn**	**09**	**48**	**57.0**	**-1.7**
BSTP	**Nigde**	**1.66**	**153**	⇓*i*P		**Pn**	**09**	**48**	**58.7**	**-0.7**
BSTP				*i* S		**Sg**	**09**	**49**	**23.7**	**-0.1**
YOZ	**Yozgat**	**1.69**	**82**	*e*PN		**Pn**	**09**	**48**	**60.0**	**+0.2**
CTKT	**Corum**	**1.73**	**46**	⇑*i*P		**Pn**	**09**	**49**	**00.6**	**+0.2**
CTKT				*i* S		**Sg**	**09**	**49**	**30.7**	**+4.7**
TOS	**Tosya**	**1.73**	**22**	*e*PN		**Pn**	**09**	**49**	**00.2**	**-0.2**
NIG	**Nigde**	**1.75**	**139**	*e*PN		**Pn**	**09**	**49**	**00.4**	**-0.2**
ESKT	**Eskisehir**	**1.79**	**274**	*e*PN		**Pn**	**09**	**48**	**59.3**	**-1.8**
ESKT	**Eskisehir**	**1.79**	**274**	⇓*i*P		**Pn**	**09**	**48**	**59.0**	**-2.2**
ESKT				*i* S		**Sg**	**09**	**49**	**28.5**	**+0.7**
MDU	**Mudurnu**	**1.81**	**305**	*e*PN		**Pn**	**09**	**49**	**00.6**	**-0.9**
SAFT	**Safranbolu**	**1.84**	**349**	*e*PN		**Pn**	**09**	**49**	**00.7**	**-1.2**
BOLV	**Bolvadin**	**1.86**	**248**	⇑*i*P		**Pn**	**09**	**49**	**00.3**	**-1.8**
BOLV				*i* S		**Sn**	**09**	**49**	**26.2**	**+0.6**
BALT	**Daday**	**2.11**	**5**	⇓*i*P		**Pn**	**09**	**49**	**05.1**	**-0.5**
BALT				*i* S		**Sn**	**09**	**49**	**26.7**	**-5.0**
BORA	**Eskisehir**	**2.13**	**283**	⇑*i*P		**Pn**	**09**	**49**	**04.2**	**-1.8**
BORA				*i* S		**Sn**	**09**	**49**	**34.2**	**+1.9**
BNN	**Bunyan**	**2.17**	**105**	*e*PN		**Pn**	**09**	**49**	**06.7**	**+0.2**
SHUT	**Suhut-Afyon**	**2.21**	**247**	*e*PN		**Pn**	**09**	**49**	**06.2**	**-0.8**
HENT	**Hendek**	**2.22**	**309**	⇓*i*P		**Pn**	**09**	**49**	**05.7**	**-1.4**
HENT				*i* S		**Sg**	**09**	**49**	**42.6**	**+0.9**
GULT	**Gulveren**	**2.26**	**297**	*e*PN		**Pn**	**09**	**49**	**07.3**	**-0.4**
KDZE	**Karadeniz Ereo**	**2.29**	**326**	*e*PN		**Pn**	**09**	**49**	**07.3**	**-0.8**
BYBT	**Boyabat**	**2.38**	**31**	*e*PN		**Pn**	**09**	**49**	**09.6**	**+0.3**
ALT	**Altintas**	**2.39**	**262**	*e*PN		**Pn**	**09**	**49**	**08.3**	**-1.2**
BOYT	**Boyabat**	**2.39**	**33**	*i* P		**Pn**	**09**	**49**	**15.2**	**+5.7**
BZK	**Bozkurt**	**2.60**	**14**	*e*PN		**Pn**	**09**	**49**	**13.0**	**+0.6**
ISP	**Isparta**	**2.61**	**233**	*e*PN		**Pn**	**09**	**49**	**10.8**	**-1.6**
ISP	**Isparta**	**2.61**	**233**	P		**Pn**	**09**	**49**	**11.4**	**-1.1**
ISP	**Isparta**	**2.61**	**233**	⇑*i*P		**Pn**	**09**	**49**	**11.2**	**-1.3**
ISP	**Isparta**	**2.61**	**233**	⇑*i*P		**Pn**	**09**	**49**	**11.0**	**-1.5**
ISP	**Isparta**	**2.61**	**233**	⇑*i*P		**Pn**	**09**	**49**	**11.2**	**-1.3**
KARA	**Karaisali**	**2.63**	**145**	*e*PN		**Pn**	**09**	**49**	**12.5**	**-0.3**
PINB	**Pinarbasi**	**2.64**	**106**	⇑*i*P		**Pn**	**09**	**49**	**13.2**	**+0.3**
PINB				*i* S		**Sn**	**09**	**49**	**46.0**	**+1.1**
CAVI	**Cavuskoy**	**2.66**	**288**	*e*PN		**Pn**	**09**	**49**	**12.9**	**-0.3**
DIKM	**Dikmen**	**2.73**	**35**	*e*PN		**Pn**	**09**	**49**	**14.9**	**+0.7**
TOKT	**Tokat**	**2.76**	**70**	*e*PN		**Pn**	**09**	**49**	**15.1**	**+0.6**
KVT	**Kavak**	**2.76**	**52**	*e*PN		**Pn**	**09**	**49**	**14.9**	**+0.4**
MERS	**Mersin**	**2.78**	**157**	*e*PN		**Pn**	**09**	**49**	**14.3**	**-0.5**
ADVT	**Abdulvahap**	**2.81**	**292**	*e*PN		**Pn**	**09**	**49**	**14.9**	**-0.3**
BCK	**Bucak**	**2.82**	**226**	*e*PN		**Pn**	**09**	**49**	**14.2**	**-1.1**
SARI	**SarD1z-Kayseri**	**2.86**	**104**	*e*PN		**Pn**	**09**	**49**	**15.1**	**-0.8**
KOZT	**Kozan**	**2.87**	**132**	*e*PN		**Pn**	**09**	**49**	**17.1**	**+1.1**
GDZ	**Gediz**	**2.87**	**264**	⇑*i*P		**Pn**	**09**	**49**	**14.5**	**-1.6**
GDZ				*i* S		**Sg**	**09**	**49**	**57.0**	**-5.7**
SVSK	**Karacayir**	**3.01**	**80**	*e*PN		**Pn**	**09**	**49**	**18.2**	**+0.3**
HRT	**Hereke**	**3.01**	**299**	*e*PN		**Pn**	**09**	**49**	**17.3**	**-0.7**
KHL	**Karahalli**	**3.04**	**250**	*e*PN		**Pn**	**09**	**49**	**17.5**	**-0.9**
KHAL	**Karahalli**	**3.05**	**251**	⇑*i*P		**Pn**	**09**	**49**	**17.0**	**-1.5**
KHAL				*i* S		**Sn**	**09**	**49**	**58.4**	**+3.4**
ANDN	**Andirin**	**3.11**	**125**	⇑*i*P		**Pn**	**09**	**49**	**20.0**	**+0.6**
ANDN				*i* S		**Sg**	**09**	**50**	**09.7**	**-0.8**
YLV	**Yalova**	**3.12**	**292**	*e*PN		**Pn**	**09**	**49**	**18.6**	**-0.8**
SILT	**Sile**	**3.19**	**304**	*e*PN		**Pn**	**09**	**49**	**19.9**	**-0.5**
ANTB	**Antalya**	**3.21**	**219**	*e*PN		**Pn**	**09**	**49**	**20.8**	**+0.1**
GEMT	**Gemlik**	**3.21**	**289**	*e*PN		**Pn**	**09**	**49**	**19.5**	**-1.2**
IKL	**Isikli**	**3.22**	**172**	*e*PN		**Pn**	**09**	**49**	**21.2**	**+0.4**
KRTS	**Karatas**	**3.35**	**148**	*e*PN		**Pn**	**09**	**49**	**22.9**	**+0.2**
ARMT	**Armutlu**	**3.48**	**290**	*e*PN		**Pn**	**09**	**49**	**24.2**	**-0.3**
KMRS	**Kahramanmaras**	**3.52**	**122**	*e*PN		**Pn**	**09**	**49**	**25.8**	**+0.8**
ISK	**Istanbul-Kandi**	**3.53**	**299**	*e*PN		**Pn**	**09**	**49**	**24.1**	**-1.1**
KULA	**Kula-Manisa**	**3.62**	**257**	*e*PN		**Pn**	**09**	**49**	**25.4**	**-1.0**
KLYT	**Kilyos**	**3.63**	**301**	*e*PN		**Pn**	**09**	**49**	**26.0**	**-0.5**
DENT	**Denizli**	**3.64**	**244**	*e*PN		**Pn**	**09**	**49**	**25.8**	**-0.8**
DARE	**Darende-Malaty**	**3.65**	**96**	*e*PN		**Pn**	**09**	**49**	**25.8**	**-1.0**
BGKT	**Bogazkoy**	**3.78**	**299**	*e*PN		**Pn**	**09**	**49**	**28.2**	**-0.3**
KCT	**Karacabey**	**3.78**	**284**	*e*PN		**Pn**	**09**	**49**	**27.4**	**-1.2**
COBT	**Iskenderun**	**3.80**	**139**	*i* P		**Pn**	**09**	**49**	**30.4**	**+1.5**
AKCD	**Akcadag**	**3.89**	**105**	⇑*i*P		**Pn**	**09**	**49**	**31.1**	**+0.9**
AKCD				*i* S		**Sg**	**09**	**50**	**33.1**	**-2.3**
AKCD	**Akcadag**	**3.89**	**105**	*i* P		**Pn**	**09**	**49**	**31.0**	**+0.9**
GAZ	**Gaziantep**	**3.91**	**124**	*e*PN		**Pn**	**09**	**49**	**32.1**	**+1.7**
EREN	**Erenkoy**	**3.98**	**168**	*e*PN		**Pn**	**09**	**49**	**32.0**	**+0.7**
CTKS	**Kestanelik-??a**	**3.98**	**298**	*e*PN		**Pn**	**09**	**49**	**31.2**	**-0.2**
CTT	**Catalca**	**4.01**	**297**	*e*PN		**Pn**	**09**	**49**	**30.4**	**-1.2**
HTY	**Hatay**	**4.07**	**144**	*e*PN		**Pn**	**09**	**49**	**33.8**	**+1.3**
BALB	**Balikesir**	**4.08**	**275**	*e*PN		**Pn**	**09**	**49**	**32.1**	**-0.6**
BNT	**Bandirma**	**4.13**	**285**	*e*PN		**Pn**	**09**	**49**	**32.3**	**-1.1**
LFK	**Lefkose**	**4.16**	**176**	*e*PN		**Pn**	**09**	**49**	**34.9**	**+1.1**
EDC	**Edincik**	**4.17**	**284**	*e*PN		**Pn**	**09**	**49**	**33.0**	**-0.9**
SLVT	**Silivri**	**4.18**	**297**	*e*PN		**Pn**	**09**	**49**	**33.1**	**-1.0**
AKS	**Akhisar**	**4.19**	**264**	*e*PN		**Pn**	**09**	**49**	**33.5**	**-0.7**
CTYL	**Yal??k??y-??at**	**4.23**	**300**	*e*PN		**Pn**	**09**	**49**	**34.7**	**-0.1**
MAMC	**Mammari**	**4.25**	**179**	P		**Pn**	**09**	**49**	**35.6**	**+0.5**
MYA	**Malataya**	**4.26**	**103**	*e*PN		**Pn**	**09**	**49**	**36.5**	**+1.3**
ALFC	**Alevga**	**4.29**	**186**	⇑P		**Pn**	**09**	**49**	**33.3**	**-2.3**
	26nm,0.7s									
LEF	**Lefka**	**4.31**	**183**	*e*PN		**Pn**	**09**	**49**	**37.4**	**+1.5**
CSS	**Prodhromos**	**4.46**	**178**	P		**Pn**	**09**	**49**	**35.4**	**-2.6**
YES	**Yerkesik**	**4.47**	**241**	*e*PN		**Pn**	**09**	**49**	**36.0**	**-3.0**
CRLT	**Corlu**	**4.48**	**294**	*e*PN		**Pn**	**09**	**49**	**37.4**	**-0.7**
ATAB	**Bozova**	**4.49**	**114**	⇑*i*P		**Pn**	**09**	**49**	**38.4**	**+0.1**
ATAB				*i* S		**Sg**	**09**	**50**	**50.8**	**-3.7**
ESPY	**Espiye-Giresun**	**4.52**	**69**	*e*PN		**Pn**	**09**	**49**	**40.3**	**+1.6**
TKR	**Tekirdag**	**4.57**	**292**	*e*PN		**Pn**	**09**	**49**	**39.6**	**+0.1**
PPCY	**Paphos**	**4.59**	**188**	P		**Pn**	**09**	**49**	**40.9**	**+1.2**
SZAC	**Souni-Zanaja**	**4.67**	**183**	P		**Pn**	**09**	**49**	**41.7**	**+0.8**
IZM	**Izmir**	**4.71**	**259**	*e*PN		**Pn**	**09**	**49**	**41.3**	**0.0**
MLSB	**Milas**	**4.73**	**245**	*e*PN		**Pn**	**09**	**49**	**41.6**	**-0.1**
URFA	**Urfa**	**4.88**	**112**	*e*PN		**Pn**	**09**	**49**	**44.6**	**+1.0**
PTK	**Pertek**	**4.88**	**94**	*e*PN		**Pn**	**09**	**49**	**45.1**	**+1.4**
BLCB	**Balcova**	**4.88**	**260**	*e*PN		**Pn**	**09**	**49**	**44.0**	**+0.3**
BLCB	**Balcova**	**4.88**	**260**	P		**Pn**	**09**	**49**	**44.6**	**+0.9**
SVRC	**Sivrice-ELAZID**	**4.91**	**100**	*e*PN		**Pn**	**09**	**49**	**46.8**	**+2.7**
GUMT	**Gumushane**	**4.97**	**76**	*e*PN		**Pn**	**09**	**49**	**47.5**	**+2.6**
LPK	**Lapseki**	**5.00**	**283**	*e*PN		**Pn**	**09**	**49**	**45.4**	**0.0**
SEV	**Sevastopol'**	**5.12**	**4**	*e*P		**Pn**	**09**	**49**	**47.6**	**+0.6**
SEV				*e*S		**Sn**	**09**	**50**	**44.6**	**-1.5**
EZC	**Erzincan**	**5.16**	**84**	*e*PN		**Pn**	**09**	**49**	**44.4**	**-3.5**
DAT	**Datca**	**5.16**	**240**	*e*PN		**Pn**	**09**	**49**	**48.1**	**+0.5**
EZN	**Ezine**	**5.29**	**276**	*e*PN		**Pn**	**09**	**49**	**49.9**	**+0.6**
ALU	**Alushta**	**5.33**	**10**	*e*P		**Pn**	**09**	**49**	**50.0**	**+0.2**
ALU				*e*S		**Sn**	**09**	**50**	**51.3**	**+0.2**
PRK	**Paraskevi**	**5.34**	**270**	P		**Pn**	**09**	**49**	**48.9**	**-1.1**
EDRB	**Edirne**	**5.44**	**298**	*e*PN		**Pn**	**09**	**49**	**51.9**	**+0.5**
ENEZ	**Enez**	**5.52**	**286**	*e*PN		**Pn**	**09**	**49**	**52.6**	**+0.1**
SIM	**Simferopol'**	**5.56**	**7**	*de*P		**Pn**	**09**	**49**	**52.4**	**-0.6**
SIM				*e*S		**Sn**	**09**	**50**	**54.7**	**-2.1**
SIM				pmax		pmax				
	comp=Z,629nm,1.0s									
SIM	**Simferopol'**	**5.56**	**7**	*i* P		**Pn**	**09**	**49**	**49.6**	**-3.4**
HWQ	**Hawqa**	**5.61**	**156**	*e*Pn		**Pn**	**09**	**49**	**53.5**	**-0.2**
SUDU	**Sudak**	**5.62**	**14**	*e*P		**Pn**	**09**	**49**	**53.1**	**-0.8**
SUDU				*e*S		**Sn**	**09**	**50**	**57.0**	**-1.4**
CHOS	**Chios island**	**5.63**	**262**	P		**Pn**	**09**	**49**	**58.3**	**+4.2**
GADA	**Gvkgeada**	**5.64**	**280**	*e*PN		**Pn**	**09**	**49**	**54.7**	**+0.6**
ALN	**Alexandroupoli**	**5.64**	**287**	P		**Pn**	**09**	**49**	**51.9**	**-2.2**
SIGR	**SiGRI**	**5.66**	**270**	P		**Pn**	**09**	**49**	**54.4**	**-0.1**
JMB	**Yambol**	**5.82**	**303**	P		**Pn**	**09**	**49**	**56.4**	**-0.2**
JMB	**Yambol**	**5.82**	**303**	*i* P		**Pg**	**09**	**50**	**22.0**	**+0.1**
BHL	**Bhannes**	**5.87**	**159**	*e*Pn		**Pn**	**09**	**49**	**56.6**	**-0.7**
TIRR	**Tirgusor**	**6.14**	**326**	⇑*i*P		**Pn**	**09**	**50**	**01.0**	**0.0**
TIRR	**Tirgusor**	**6.14**	**326**	*e*Pn		**Pn**	**09**	**50**	**00.5**	**-0.4**
	comp=Z,699nm,1.0s									
LIA	**Limnos Island**	**6.17**	**277**	P		**Pn**	**09**	**50**	**01.0**	**-0.4**
CVD	**Cernavoda**	**6.20**	**324**	P		**Pn**	**09**	**50**	**02.8**	**+1.1**
ANN	**Anapa**	**6.24**	**29**	*e*P		**Pn**	**09**	**50**	**01.4**	**-0.9**
ANN				*e*S		**Sn**	**09**	**51**	**14.1**	**+0.6**
ANN				pmax		pmax				
	comp=Z,34nm,0.5s									
ANN				MLR		MLR				
	comp=Z,21μm,13.0s									
ANN	**Anapa**	**6.24**	**29**	*i* P		**Pn**	**09**	**50**	**01.4**	**-0.9**
LOS	**Limnos**	**6.25**	**277**	P		**Pn**	**09**	**50**	**02.5**	**0.0**
RCY	**Rachaya**	**6.31**	**159**	*e*Pn		**Pn**	**09**	**50**	**03.0**	**-0.4**
KERU	**Kerch**	**6.36**	**22**	*e*P		**Pn**	**09**	**50**	**05.9**	**+1.9**
SOC	**Sochi**	**6.44**	**48**	*c i*P		**Pn**	**09**	**50**	**04.6**	**-0.5**
SOC				*e*			09	51	17.4	
SOC				pmax		pmax				
	comp=Z,2μm,1.2s									
SOC				MLR		MLR				
	comp=Z,442μm,16.0s									
APE	**Apeiranthos**	**6.45**	**251**	*e*P		**Pn**	**09**	**50**	**04.0**	**-1.2**
APE	**Apeiranthos**	**6.45**	**251**	⇓*i*P		**Pn**	**09**	**50**	**05.6**	**+0.4**
HARR	**Harsova**	**6.53**	**325**	⇑*i*P		**Pn**	**09**	**50**	**06.1**	**-0.3**
HARR	**Harsova**	**6.53**	**325**	P		**Pn**	**09**	**50**	**07.5**	**+1.2**
TLCR		**6.59**	**332**	⇑*i*P		**Pn**	**09**	**50**	**06.6**	**-0.5**
MMAI	**Mount Meron Ar**	**6.66**	**163**	Pn		**Pn**	**09**	**50**	**07.1**	**-1.0**
	comp=Z,9.7nm,0.3s,baz=346,slow=13,SNR=27									
MMAI				Sn		**Sn**	**09**	**51**	**19.9**	**-4.0**
	baz=346,slow=18,SNR=1.8									
MMAI				Lg			09	52	04.0	
	comp=Z,1.0nm,0.3s,baz=339,slow=24,SNR=2.1									
MMAI				LR		LR	09	53	30.5	
	comp=Z,40μm,18.2s,baz=0.0,slow=45									
THR6	**Thira Island,**	**6.86**	**246**	P		**Pn**	**09**	**50**	**11.9**	**+1.0**
PLD	**Plovdiv**	**6.95**	**295**	P		**Pn**	**09**	**50**	**11.7**	**-0.4**
PVL	**Pavlikeni**	**6.99**	**305**	*i* P		**Pn**	**09**	**50**	**12.0**	**-0.7**
ZKR	**Zakros**	**7.01**	**234**	P		**Pn**	**09**	**50**	**13.3**	**+0.3**
OUR	**Ouranopolis**	**7.11**	**280**	P		**Pn**	**09**	**50**	**12.6**	**-1.7**
AOS	**Alonnisos**	**7.20**	**271**	P		**Pn**	**09**	**50**	**16.7**	**+1.2**
PAIG	**Paliouri**	**7.32**	**277**	P		**Pn**	**09**	**50**	**16.2**	**-1.0**
MMB	**Musomiste**	**7.50**	**290**	*i* P		**Pn**	**09**	**50**	**18.0**	**-1.6**
PLG	**Polygyros**	**7.52**	**280**	P		**Pn**	**09**	**50**	**19.5**	**-0.5**
SOH	**Sokhos**	**7.64**	**284**	P		**Pn**	**09**	**50**	**26.4**	**+4.9**
XOR	**Xorichti**	**7.71**	**273**	P		**Pn**	**09**	**50**	**26.0**	**+3.4**
IDI	**Anoyia**	**7.77**	**240**	Pn		**Pn**	**09**	**50**	**24.0**	**+0.6**
	comp=Z,8.2nm,0.3s,baz=52,slow=14,SNR=24									
IDI				LR		LR	09	53	50.0	
	comp=Z,23μm,20.4s,baz=57,slow=42									
HORT	**Hortiatis**	**7.80**	**282**	P		**Pn**	**09**	**50**	**23.4**	**-0.4**
ASF	**Jabal al Asfar**	**7.86**	**156**	Pn		**Pn**	**09**	**50**	**24.2**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=207,slow=5.3,SNR=30									
ASF				Sn		**Sn**	**09**	**51**	**57.0**	**+3.5**
	comp=Z,0.5nm,0.3s,baz=240,slow=20,SNR=2.3									
ASF				LR		LR	09	53	49.3	
	comp=Z,26μm,20.5s,baz=68,slow=41									
ASF	**Jabal al Asfar**	**7.86**	**156**	P		**Pn**	**09**	**50**	**24.2**	**-0.4**
ASF							09	51	57.0	
THE	**Thessaloniki**	**7.91**	**282**	P		Px	09	50	52.2	
LKR	**Lokris**	**7.94**	**268**	P		**Pn**	**09**	**50**	**26.5**	**+0.8**
SIVA	**Sivas**	**7.98**	**239**	P		**Pn**	**09**	**50**	**29.9**	**+3.6**
VRI	**Vrincioaia**	**7.98**	**326**	⇑*i*P		**Pn**	**09**	**50**	**26.2**	**0.0**
PLOR	**Plostina**	**8.00**	**325**	⇓*i*P		**Pn**	**09**	**50**	**26.6**	**0.0**
DID	**Didima**	**8.01**	**259**	P		**Pn**	**09**	**50**	**28.2**	**+1.5**
KNT	**Kendrikon**	**8.03**	**286**	P		**Pn**	**09**	**50**	**27.8**	**+0.9**
MLR	**Muntele Rosu**	**8.06**	**321**	Pn		**Pn**	**09**	**50**	**28.1**	**+0.8**
	comp=

AKASG Sn **Sn** 09 53 21.5 -3.7
comp=Z,8.6nm,0.3s,baz=163,slow=23,SNR=5.4
AKASG LR LR 09 56 51.0
comp=Z,17μm,19.1s,baz=165,slow=43
AKASG Malin Array Be 11.60 347 P **Pn** 09 51 12.5 -3.3
AKASG 09 53 21.5
AKBB Malin Array Si 11.60 347 *e*Pn **Pn** 09 51 12.2 -3.6
AKBB *e*Sn **Sn** 09 53 14.6 -11
GLBA Cilibad 11.81 86 P **Pn** 09 51 25.8 +7.1
SNR=23
PQL Pirkuli 11.90 79 P **Pn** 09 51 26.5 +6.5
SNR=12
UZH Uzhgorod 12.05 323 *e*P **Pn** 09 51 20.7 -1.3
UZH *e*S **Sn** 09 53 35.0 -1.3
UZH MLR MLR
comp=N,9μm,13.0s
UZH MLR MLR
comp=E,10μm,13.0s
UZH MLR MLR
comp=Z,10μm,13.0s
UZH Uzhgorod 12.05 323 *e*P **Pn** 09 51 22.0 0.0
SIZA Siyzn 12.14 77 P **Pn** 09 51 29.1 +5.8
SNR=9.8
ALIB Ii-Bayraml 12.23 83 P **Pn** 09 51 31.7 +7.3
SNR=18
LVV L'vov 12.24 331 *e*P **Pn** 09 51 23.1 -1.4
LVV *e*S **Sn** 09 53 49.3 +8.5
LVV L'vov 12.24 331 *e*P **Pn** 09 51 23.5 -1.0
VORD Divnogorie 12.31 18 *e*P **Pn** 09 51 27.9 +2.4
VORD *e*S **Sn** 09 53 39.6 -3.0
VORD pmax pmax
comp=Z,110nm,0.8s
VORD pmax pmax
comp=N,140nm,0.5s
VORD pmax pmax
comp=E,120nm,0.8s
VORD smax
comp=N,320nm,0.9s
VORD smax
comp=Z,100nm,1.7s
VORD smax
comp=E,100nm,0.8s
VORD MLR MLR
comp=N,7μm,13.0s
VORD MLR MLR
comp=Z,5μm,13.0s
VORD MLR MLR
comp=E,2μm,11.0s
VSR Storozhevoye 12.51 18 *e*P **Pn** 09 51 28.8 +0.6
VSR *e*S **Sn** 09 53 40.1 -7.4
VSR pmax pmax
comp=Z,40nm,1.1s
VSR pmax pmax
comp=N,120nm,1.2s
VSR pmax pmax
comp=E,60nm,1.1s
VSR smax
comp=E,320nm,1.0s
VSR smax
comp=Z,30nm,1.0s
VSR smax
comp=N,40nm,0.7s
VSR MLR MLR
comp=N,3μm,13.0s
VSR MLR MLR
comp=Z,2μm,13.0s
VSR MLR MLR
comp=E,3μm,12.0s
KWP Kalwaria 12.62 327 *e*P **Pn** 09 51 31.5 +1.8
KWP LMZ 09 56 30.3
comp=E,17μm,24.2s
PKSM Moragy 12.62 307 ⇓*i*P **Pn** 09 51 30.6 +0.9
PKSM Moragy 12.62 307 ⇓P **Pn** 09 51 30.6 +1.0
CRVS Cervenica-Dubn 12.64 322 *e*P **Pn** 09 51 29.3 -0.6
CRVS MLR MLR
comp=Z,7μm,18.8s
CRVS Cervenica-Dubn 12.64 322 *e*PN **Pn** 09 51 29.2 -0.7
TIP Timpagrande 12.71 274 *e*Pn **Pn** 09 51 30.5 -0.4
comp=Z,111nm,1.0s
TIP Timpagrande 12.71 274 *e*Pn **Pn** 09 51 30.6 -0.4
comp=Z,111nm,1.0s
PSZ Piszkesteto 12.79 316 *e*Pn **Pn** 09 51 35.2 +3.1
PSZ Piszkesteto 12.79 316 ⇑*e*P **Pn** 09 51 35.4 +3.3
PSZ Piszkesteto 12.79 316 ⇑*i*P **Pn** 09 51 33.3 +1.2
PSZ Piszkesteto 12.79 316 *e*Pn **Pn** 09 51 35.2 +3.1
KECS Kecovo 12.83 319 *e*PN **Pn** 09 51 32.7 0.0
VOR Voronezh 13.00 17 *e*P **Pn** 09 51 34.0 -0.9
VOR pmax pmax
comp=Z,200nm,2.0s
BUD Budapest 13.03 313 ⇑*e*P **Pn** 09 51 39.0 +3.7
VRHR Novokhopersk 13.09 24 *e*P **Pn** 09 51 35.8 -0.3
VRHR pmax pmax
comp=Z,30nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,40nm,1.1s
VRHR MLR MLR
comp=Z,5μm,12.0s
VRHR MLR MLR
comp=N,6μm,11.0s
VRHR MLR MLR
comp=E,7μm,13.0s
STHS Stebnicka Huta 13.10 324 *e*PN **Pn** 09 51 34.7 -1.6
CUC Castrocucco 13.36 278 *e*Pn **Pn** 09 51 41.7 +1.7
comp=E,167nm,1.1s
CEL Celeste 13.51 270 *e*Pn **Pn** 09 51 40.3 -1.6
comp=E,152nm,1.2s
CEL Celeste 13.51 270 *e*Pn **Pn** 09 51 40.3 -1.6
comp=E,152nm,1.2s
NIE Niedzica 13.54 322 *e*P **Pn** 09 51 42.6 +0.3
NIE *e*PP 09 51 55.4
VYHS Vyhne 13.71 316 *e*P **Pn** 09 51 45.4 +0.9
VYHS MLR MLR
comp=Z,8μm,17.9s
VYHS Vyhne 13.71 316 *e*PN **Pn** 09 51 45.4 +0.9
KOLL Kolacno 13.99 316 *e*PN **Pn** 09 51 48.7 +0.3
OJC Ojcow 14.33 323 *e*P **Pn** 09 51 52.3 -0.8
OJC *e*PP 09 52 02.9
OJC *e*S **Sn** 09 54 29.7 -2.2
OJC *e*SS 09 54 44.6
OJC L 09 58 57.5
comp=Z,14nm,17.9s
OJC Ojcow 14.33 323 *e*P **Pn** 09 51 52.2 -0.9
OJC Ojcow 14.33 323 *e*P **Pn** 09 51 52.3 -0.8
OJC *e*S **Sn** 09 54 29.7 -2.2
OJC MLR MLR
comp=Z,14μm,17.9s
OJC Ojcow 14.33 323 *e*P **Pn** 09 51 52.3 -0.8
OJC *e*PP 09 52 02.9
OJC *e*S **Sn** 09 54 29.7 -2.2
OJC *e*SS 09 54 44.6
SMOL Smolenice 14.49 314 *e*PN **Pn** 09 51 59.8 +4.6
ZST Bratislava 14.50 312 *e*P **Pn** 09 51 57.0 +1.6
ZST *e* 09 54 28.7
ZST MLR MLR
comp=Z,14μm,13.8s
ZST Bratislava 14.50 312 *e*PN **Pn** 09 51 57.0 +1.6
ZST *e*SN **Sn** 09 54 28.7 -7.4
BOJS Bojanci 14.53 300 *i* P pP 09 52 08.7 +3.2
SOP Sopron 14.56 310 ⇑*e* **Pn** 09 51 58.3 +2.0
VAE Valguarnera 14.82 268 Pn **Pn** 09 51 59.8 0.0
comp=Z,1.5nm,0.3s,baz=32,slow=9.5,SNR=3.2
VAE LR LR 09 57 25.5
comp=Z,14μm,18.3s,baz=26,slow=36
OKC Ostrava-Krasne 14.88 319 *e*PPP **Pn** 09 52 03.6 +3.0
OKC AMS AMS 09 59 00.0
comp=Z,20μm,12.4s
PERS Pernice 15.01 305 *i* P **Pn** 09 52 10.6 +8.3
SOKA Soboth 15.08 305 ⇑*i*Pn **Pn** 09 52 04.4 +1.2
comp=Z,32nm,1.0s
CONA Conrad Observa 15.10 310 ⇑*i*Pn **Pn** 09 52 03.6 +0.1
comp=Z,59nm,1.5s
MIB Mutribah 15.11 125 *e*P **Pn** 09 52 04.2 +0.5
comp=Z,382nm,0.9s
MIB Mutribah 15.11 125 *e*P **Pn** 09 52 04.2 +0.5
baz=125
MIB AMb AMB 09 52 08.8
comp=Z,382nm,0.9s,baz=125
MORC Moravsky Berou 15.15 318 P **Pn** 09 52 05.4 +1.2
MORC Moravsky Berou 15.15 318 ⇓*i*P **Pn** 09 52 04.6 +0.4
MORC Moravsky Berou 15.15 318 *e*Pn **Pn** 09 52 04.8 +0.6
LJU Ljubljana 15.18 302 *i* P **Pn** 09 52 11.2 +6.6
WDD Wield Dalam 15.18 262 Pn **Pn** 09 52 05.8 +1.1
comp=Z,269nm,1.0s
WDD Wield Dalam 15.18 262 Pn **Pn** 09 52 05.8 +1.1
comp=Z,269nm,1.0s
AQU L'Aquila 15.22 287 *e*P **Pn** 09 52 08.0 +2.9
AQU pmax pmax
comp=Z,131nm,1.0s
AQU L'Aquila 15.22 287 *e*Pn **Pn** 09 52 08.0 +2.8
comp=Z,131nm,1.0s
WAR Warsaw 15.32 331 *e*P **Pn** 09 52 05.7 -0.7
WAR *e*pP pP 09 52 13.7 -0.6
WAR LMZ 09 59 04.6
comp=Z,9μm,22.0s
WAR Warsaw 15.32 331 *e*P **Pn** 09 52 05.7 -0.6
WAR *e*pP pP 09 52 13.7 -0.6
VRAC Vranov 15.38 315 Pn **Pn** 09 52 07.1 -0.1
comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=25
VRAC LR LR 09 58 54.4
comp=Z,12μm,19.3s,baz=130,slow=41
VRAC Vranov 15.38 315 P **Pn** 09 52 09.5 +2.2
VRAC Vranov 15.38 315 ⇓*i*P **Pn** 09 52 08.7 +1.4
VRAC Vranov 15.38 315 P **Pn** 09 52 09.5 +2.3
NAY Al-Naaiem 15.43 127 *e*P **Pn** 09 52 07.8 -0.2
comp=Z,146nm,1.3s
NAY Al-Naaiem 15.43 127 *e*P **Pn** 09 52 07.8 -0.2
baz=127
NAY AMb AMB 09 52 18.7
comp=Z,146nm,1.3s,baz=127
JAVS Javornik 15.44 301 *e*P **Pn** 09 52 11.6 +3.6
MNK Minsk 15.50 348 ⇓*e*P **Pn** 09 52 02.0 -6.7
MNK pmax pmax
comp=E,160nm,1.2s
MNK pmax pmax
comp=Z,180nm,1.1s
MNK pmax pmax
comp=N,250nm,1.2s
MNK MLR MLR
comp=E,31μm,10.0s
MNK MLR MLR
comp=Z,36μm,16.0s
MNK MLR MLR
comp=N,30μm,18.0s
UMR Umm Al-Rimmam 15.52 125 *e*P **Pn** 09 52 08.8 -0.3
comp=N,492nm,1.2s
UMR Umm Al-Rimmam 15.52 125 *e*P **Pn** 09 52 08.8 -0.3
baz=125
UMR AMb AMB 09 52 20.7
comp=Z,492nm,1.2s,baz=125
VOY Vojsko 15.60 301 *e*P **Pn** 09 52 11.9 +1.9
VOY *e* 09 52 15.8
VOY *e* 09 52 28.8
VOY *e* 09 52 45.1
VOY *e* 09 53 11.7
VOY *e* 09 53 41.0
KBD Kabd 15.76 126 *e*P **Pn** 09 52 11.9 -0.4
comp=Z,244nm,1.3s
KBD Kabd 15.76 126 *e*P **Pn** 09 52 11.9 -0.4
baz=126
KBD AMb AMB 09 52 17.1
comp=Z,244nm,1.3s,baz=126
RDF Al-Radifah 15.85 127 *e*P **Pn** 09 52 13.6 +0.2
comp=Z,406nm,1.1s
RDF Al-Radifah 15.85 127 *e*P **Pn** 09 52 13.6 +0.2
baz=127
RDF AMb AMB 09 52 18.1
comp=Z,406nm,1.1s,baz=127
OBN Obninsk 15.86 7 ⇓*e*P **Pn** 09 52 10.7 -2.6
OBN *e*S **Sn** 09 55 06.3 -2.6
OBN pmax pmax
comp=Z,240nm,1.6s
OBN MLR MLR
comp=Z,8μm,18.0s
OBN Obninsk 15.86 7 *e*Pn **Pn** 09 52 11.6 -1.7
MYKA Terra Mystica 15.95 303 ⇑*i*Pn **Pn** 09 52 15.8 +1.1
comp=Z,94nm,1.1s
TREC Trest 15.99 314 *e*P **Pn** 09 52 15.6 +0.5
TREC AMS AMS 10 00 50.0
comp=Z,12μm,12.3s
MOA Molln 16.02 308 ⇓*i*P **Pn** 09 52 19.0 +3.4
comp=Z,45nm,0.9s,SNR=7.2
SUW Suwalki 16.08 338 *e*P **Pn** 09 52 12.3 -4.0
SUW *e*pP pP 09 52 20.8 -1.9
SUW LMZ 09 59 05.7
comp=Z,11μm,19.6s
SUW Suwalki 16.08 338 *e*P **Pn** 09 52 12.3 -4.0
SUW *e*pP pP 09 52 20.8 -2.0
DPC Dobruska-Polom 16.13 318 *e*P **Pn** 09 52 17.0 +0.1
DPC AMS AMS 09 59 20.0
comp=Z,19μm,15.7s
QRN Al-Qurain 16.20 127 *e*P **Pn** 09 52 17.6 -0.4
baz=127
QRN AMb AMB 09 52 26.1
comp=Z,586nm,1.3s,baz=127
KBA Koelnbreinsper 16.30 304 ⇑*i*Pn **Pn** 09 52 20.6 +1.5
comp=Z,112nm,1.1s,SNR=16
UPC Upice 16.38 318 *e*P **Pn** 09 52 20.7 +0.6
KSP Ksiaz 16.44 319 *e*P **Pn** 09 52 24.0 +3.1
KSP *e*pP pP 09 52 27.2 +0.5
KSP LMZ 09 59 58.1
comp=Z,27μm,16.2s
KSP Ksiaz 16.44 319 ⇑*e*P **Pn** 09 52 20.4 -0.4
KSP *e*PP 09 52 36.8
IDID Didziasalis 16.46 347 *e*P **Pn** 09 52 23.1 +2.0
MOS Moscow 16.58 9 *e*P **Pn** 09 52 19.8 -2.9
MOS *e*S **Sn** 09 55 20.7 -5.9
MOS pmax pmax
comp=Z,669nm,1.4s
MOS MLR MLR
comp=Z,5μm,15.0s
MOS Moscow 16.58 9 *e*P **Pn** 09 52 19.9 -2.8
ABTA Abfaltersbach 16.73 303 ⇓*i*P **Pn** 09 52 26.2 +1.6
comp=Z,20nm,1.0s,SNR=9.5
GEC2 GERESS Array S 16.80 310 *e*P **Pn** 09 52 24.7 -0.7
GERES GERESS Array B 16.80 310 Pn **Pn** 09 52 24.8 -0.6
comp=Z,0.1nm,0.3s,baz=114,slow=6.5,SNR=39
ISAL Salakas 16.81 346 *e*P **Pn** 09 52 25.7 +0.1
PRU Pruhonice 16.88 315 *e*P **Pn** 09 52 29.4 +3.0
PRU AMS AMS 09 54 40.0
PRU AMS AMS 10 00 50.0
comp=Z,12μm,16.5s
KHC Kasperske Hory 17.00 311 *e*P **Pn** 09 52 25.8 -2.1
KHC Kasperske Hory 17.00 311 *e*P **Pn** 09 52 27.7 -0.2
KHC AMS AMS 10 00 40.0
comp=Z,13μm,10.8s
PVCC Panska Ves 17.15 316 *e*P **Pn** 09 52 29.7 -0.1
PVCC AMS AMS 10 01 00.0
comp=Z,13μm,11.1s
WET Wettzell 17.41 311 *e*P **Pn** 09 52 32.4 -0.7
WTTA Wattenberg 17.46 304 ⇓*i*P **Pn** 09 52 34.7 +1.0
comp=Z,68nm,1.7s,SNR=12
WATA Walderalm 17.52 304 ⇑*i*P **Pn** 09 52 36.8 +2.3
comp=Z,81nm,1.4s,SNR=7.0
WATA Walderalm 17.52 304 P **Pn** 09 52 36.8 +2.3
comp=Z,81nm,1.4s,SNR=7.0
VLC Villacollemand 17.60 293 *e*P **Pn** 09 52 36.7 +1.2
comp=Z,112nm,1.2s
VLC Villacollemand 17.60 293 *e*P **Pn** 09 52 36.7 +1.2
comp=Z,112nm,1.2s
GKP Gorka Klasztor 17.61 327 *e*P **Pn** 09 52 33.5 -2.1
GKP *e*pP pP 09 52 37.4 -2.3
GKP LMZ 10 01 14.4
comp=Z,19μm,18.2s
GKP Gorka Klasztor 17.61 327 *e*P **Pn** 09 52 33.5 -2.1
GKP *e*pP pP 09 52 37.4 -2.3
BRG Berggiesshubel 17.67 317 *e*P **Pn** 09 52 35.0 -1.3
BRG Berggiesshubel 17.67 317 *i* P **Pn** 09 52 35.1 -1.2
comp=Z,79nm,1.6s
BRG *e* 09 52 48.1
comp=Z,82nm,1.6s
BRG
comp=N,23μm,23.8s
BRG
comp=E,18μm,20.1s
BRG
comp=Z,12μm,15.4s
BRG Berggiesshubel 17.67 317 *i* P **Pn** 09 52 35.1 -1.2
comp=Z,47nm,1.6s
BRG *e* 09 52 48.1
MOTA Moosalm 17.83 304 ⇓*i*Pn **Pn** 09 52 37.5 -0.8
comp=Z,48nm,0.9s,SNR=16
FETA Feichten 17.98 302 ⇑*i*P **Pn** 09 52 40.4 +0.3
comp=Z,55nm,1.1s,SNR=17
FUR Furstenfeldbru 18.00 306 *e*P **Pn** 09 52 39.4 -0.9
FBE Freiberg 18.01 316 *e*P **Pn** 09 52 40.0 -0.5
ROTZ Rotzenmuhle 18.09 312 *e*P **Pn** 09 52 40.6 -0.8
RETA Reutte 18.09 304 ⇓*i*P **Pn** 09 52 41.7 +0.1
comp=Z,52nm,1.0s,SNR=16
NKC Novy Kostel 18.16 313 *e*P **Pn** 09 52 43.4 +1.0
NKC AMS AMS 10 01 30.0
comp=Z,10μm,17.2s
WERN Wernitzgruen 18.23 313 *e*P **Pn** 09 52 43.9 +0.7
MANZ Manzenberg 18.24 312 *e*P **Pn** 09 52 43.3 -0.1
TANN Tannenbergstha 18.24 314 *e*P **Pn** 09 52 44.4 +1.0
GUNZ Gunzen 18.29 314 *e*P **Pn** 09 52 45.9 +1.9
WERD Werda 18.35 314 *e*P **Pn** 09 52 46.4 +1.8
CLL Collm 18.41 317 *e*P **Pn** 09 52 44.0 -1.3
CLL *e*S **Sn** 09 56 12.0 +1.2
CLL pmax pmax
comp=Z,288nm,2.7s
CLL MLR MLR
comp=Z,6μm,19.4s
CLL Collm 18.41 317 *e*P **Pn** 09 52 44.0 -1.3
comp=Z,288nm,2.7s
CLL *i* PP 09 52 56.0
CLL *e*x x 09 53 11.0
CLL *e*S **Sn** 09 56 12.0 +1.2
CLL LmV 10 01 00.0
comp=Z,6μm,19.4s
CLL Collm 18.41 317 *e*P **Pn** 09 52 44.0 -1.3
comp=Z,288nm,2.7s
CLL *i* 09 52 56.0
CLL *e*S **Sn** 09 56 12.0 +1.2
DAVOX Davos/Dischmat 18.47 301 P **Pn** 09 52 47.3 +1.1
comp=Z,0.6nm,0.3s,baz=104,slow=9.4,SNR=35
PGF Pioggiola 18.48 287 *e*P **Pn** 09 52 46.4 0.0
comp=Z,279nm,1.2s
PGF Pioggiola 18.48 287 *e*P **Pn** 09 52 46.4 0.0
PGF pmax pmax
comp=Z,140nm,1.2s
PGF Pioggiola 18.48 287 *e*P **Pn** 09 52 46.4 0.0
comp=Z,140nm,1.2s
DAVA Damuels 18.61 303 ⇑*i*Pn **Pn** 09 52 48.3 +0.4
comp=Z,94nm,1.0s,SNR=10
GRA1 Grafenberg Arr 18.63 311 *e*P **Pn** 09 52 46.9 -1.1
GRF Grafenberg Arr 18.63 311 *e*P **Pn** 09 52 46.9 -1.1
GRF *e*L 10 00 16.8
comp=Z,7μm,20.9s
RUE Ruedersdorf 18.67 321 *e*P **Pn** 09 52 47.4 -1.2
comp=Z,195nm,1.3s
RUE Ruedersdorf 18.67 321 *e*Pn **Pn** 09 52 49.7 +1.1
comp=Z,121nm,1.0s
RUE Ruedersdorf 18.67 321 *e*Pn **Pn** 09 52 49.7 +1.1
comp=Z,121nm,1.0s
TUE Stuetta 18.75 300 *e*P **Pn** 09 52 49.3 -0.3
comp=Z,54nm,0.9s
TUE Stuetta 18.75 300 *e*P **Pn** 09 52 49.3 -0.3
comp=Z,54nm,0.9s
MOX Moxa 18.83 314 *e*P **Pn** 09 52 51.9 +1.4
comp=Z,198nm,2.2s
MOX
comp=Z,8μm,19.0s
MOX Moxa 18.83 314 *e*P **Pn** 09 52 52.0 +1.5
comp=Z,61nm,1.8s
KEST Kesra 19.21 266 P **Pn** 09 52 52.9 -2.3
comp=Z,0.0nm,0.3s,baz=126,slow=8.7,SNR=2.9
VSU Vasula 19.49 350 *e*P **Pn** 09 52 55.7 -2.7
VSU pmax pmax
comp=Z,275nm,0.8s
VSU MLR MLR
comp=Z,10μm,16.0s
VSU Vasula 19.49 350 *e*P **Pn** 09 52 55.8 -2.6
STU Stuttgart 19.50 306 *e*P **Pn** 09 52 58.7 0.0
STU pmax pmax
comp=Z,81nm,1.0s
STU Stuttgart 19.50 306 *e*P **Pn** 09 52 56.5 -2.2
comp=Z,53nm,0.9s
STU Stuttgart 19.50 306 *e*P **Pn** 09 52 58.7 0.0
comp=Z,81nm,1.0s
STU Stuttgart 19.50 306 *e*P **Pn** 09 52 58.7 0.0
comp=Z,81nm,1.0s
ABKT Ailbek 19.54 86 Pn **Pn** 09 52 58.2 -0.9
comp=Z,727nm,1.2s,SNR=29
SPAK Spaichingen-Ko 19.55 304 *e*P **Pn** 09 52 58.8 -0.4
SAOF Saorge 19.61 292 *e*P **Pn** 09 52 59.3 -0.7
SBF Sospel 19.69 291 *e*P **Pn** 09 52 59.9 -1.0
comp=Z,410nm,1.0s
SBF Sospel 19.69 291 *e*P **Pn** 09 52 59.9 -1.0
SBF pmax pmax
comp=Z,205nm,1.0s
SBF Sospel 19.69 291 *e*P **Pn** 09 52 59.9 -1.0
comp=Z,205nm,1.0s
AUTN L'Aution 19.71 292 *e*P **Pn** 09 53 04.6 +3.5
REVF Revere 19.73 291 *e*P **Pn** 09 53 01.6 +0.2
LUCF Luceram 19.76 291 *e*P **Pn** 09 53 00.8 -0.9
UBBA Unterbreizbach 19.82 313 *e*P **Pn** 09 53 01.2 -1.2
comp=Z,118nm,1.4s
TOUF Mont Tournerai 19.84 292 *e*P **Pn** 09 53 02.1 -0.5
BSD Bornholm Skovb 19.88 328 *i* P **Pn** 09 53 00.9 -2.2
comp=Z,96nm,0.9s
BSD
comp=Z,9μm,17.0s
MVIF Mont Vial 19.90 291 *e*P **Pn** 09 53 02.9 -0.5
BFO Black Forest 19.91 305 *e*P **Pn** 09 53 01.3 -2.2
BFO pmax pmax
comp=Z,361nm,1.7s
BFO Black Forest 19.91 305 *e*P **Pn** 09 53 01.3 -2.2
comp=Z,361nm,1.7s
FELD Feldberg im Sc 19.99 303 *e*P **Pn** 09 53 03.3 -1.1
TOD Tromm 20.04 308 *e*P **P** 09 53 04.2 +1.0
CALN Calern 20.08 291 *e*P **P** 09 53 06.0 +2.3
CLZ Clausthal 20.09 316 *e*P **P** 09 53 03.2 -0.5
CLZ pmax pmax
comp=Z,81nm,1.0s
CLZ Clausthal 20.09 316 *e*P **P** 09 53 03.2 -0.5
comp=Z,81nm,1.0s
OG22 Abries 20.13 294 *e*P **P** 09 53 05.3 +1.1
RGN Rugen 20.18 325 *e*P **P** 09 53 04.4 -0.3
comp=Z,276nm,1.0s
RGN Rugen 20.18 325 *e*P **P** 09 53 04.5 -0.2
comp=Z,393nm,1.3s
RGN Rugen 20.18 325 *e*P **P** 09 53 04.5 -0.2
comp=Z,393nm,1.3s
SURF Saint Ours 20.19 293 *e*P **P** 09 53 06.7 +1.8
BBS Basel-Blauen 20.21 302 *e*P **P** 09 53 06.6 +1.5
MBDF Montbardon 20.24 294 *e*P **P** 09 53 05.4 -0.1
comp=Z,250nm,0.9s
MBDF Montbardon 20.24 294 *e*P **P** 09 53 05.4 -0.1
MBDF pmax pmax
comp=Z,125nm,0.9s
MBDF Montbardon 20.24 294 *e*P **P** 09 53 05.4 -0.1
comp=Z,125nm,0.9s
FRF La Foret Royal 20.24 290 *e*P **P** 09 53 05.9 +0.4
comp=Z,277nm,1.3s
FRF La Foret Royal 20.24 290 *e*P **P** 09 53 05.9 +0.4
FRF pmax pmax
comp=Z,138nm,1.3s
FRF La Foret Royal 20.24 290 *e*P **P** 09 53 05.9 +0.4
comp=Z,138nm,1.3s
LIBD Limburg 20.32 304 *e*P **P** 09 53 07.4 +1.1
LMR La Mourre 20.33 290 *e*P **P** 09 53 05.7 -0.8
comp=Z,246nm,1.2s
LMR La Mourre 20.33 290 *e*P **P** 09 53 05.7 -0.8
LMR pmax pmax
comp=Z,123nm,1.2s
LMR La Mourre 20.33 290 *e*P **P** 09 53 05.7 -0.8
comp=Z,123nm,1.2s
BNI Bardonecchia 20.34 295 *e*P **P** 09 53 08.2 +1.6
BNI pmax pmax
comp=Z,166nm,0.9s
BNI MLR MLR
comp=Z,13μm,21.0s,MS5.3
BNI Bardonecchia 20.34 295 *e*P **P** 09 53 08.2 +1.6
comp=Z,166nm,0.9s
BNI Bardonecchia 20.34 295 *e*P **P** 09 53 08.2 +1.6
comp=Z,166nm,0.9s
BNI LR LR
comp=Z,13μm,21.0s,MS5.3
LPG La Plagne 20.35 296 *e*P **P** 09 53 07.0 +0.4
comp=Z,303nm,0.9s
LPG La Plagne 20.35 296 *e*P **P** 09 53 07.0 +0.4
LPG pmax pmax
comp=Z,152nm,0.9s
LPG La Plagne 20.35 296 *e*P **P** 09 53 07.0 +0.4
comp=Z,152nm,0.9s
LPL La Plagne 20.36 296 *e*P **P** 09 53 07.3 +0.5
comp=Z,255nm,1.0s
LPL La Plagne 20.36 296 *e*P **P** 09 53 07.3 +0.5
LPL pmax pmax
comp=Z,127nm,1.0s
LPL La Plagne 20.36 296 *e*P **P** 09 53 07.3 +0.5
comp=Z,127nm,1.0s
KTD Kalmit 20.38 307 *e*P **P** 09 53 08.7 +1.8
PUL Pulkovo 20.43 356 *e*P **P** 09 53 06.9 -0.5

LANF Langenberg 20.44 306 *e*P **P** 09 53 07.4 -0.2
RSL Roselend 20.46 296 *e*P **P** 09 53 07.9 0.0
TNS Taunus Mts 20.48 310 *e*P **P** 09 53 08.1 +0.1
TNS pmax pmax
comp=Z,28nm,1.1s
TNS Taunus Mts 20.48 310 *e*P **P** 09 53 08.1 +0.1
comp=Z,28nm,1.1s
OG01 Vacheresse 20.53 298 *e*P **P** 09 53 08.7 +0.2
MOF Molkenrain 20.55 303 *e*P **P** 09 53 09.2 +0.4
NRDL Niedersach Rie 20.56 317 *e*P **P** 09 53 07.1 -1.7
comp=Z,80nm,1.1s
CDF Champ du Feu 20.61 304 *e*P **P** 09 53 10.0 +0.6
ECH Echery 20.63 304 *e*P **P** 09 53 10.5 +0.9
ECH Echery 20.63 304 *e*P **P** 09 53 09.7 +0.1
ECH pmax pmax
comp=Z,193nm,0.9s
ECH MLR MLR
comp=Z,10µm,20.0s,MS5.2
ECH Echery 20.63 304 *e*P **P** 09 53 09.7 +0.1
comp=Z,193nm,0.9s
ECH LR LR
comp=Z,10µm,20.0s,MS5.2
LOMF Lomont 20.63 301 *e*P **P** 09 53 08.5 -1.2
AKTK Aktyubinsk 20.66 50 *i*P **P** 09 53 09.3 -0.6
AKTO Aktyubinsk 20.66 50 P **P** 09 53 09.3 -0.6
comp=Z,39nm,0.7s,baz=244,slow=11,SNR=52
AKTO S **S** 09 57 01.0 +0.6
comp=Z,6.5nm,1.0s,baz=18,slow=20,SNR=2.5
AKTO LR LR 10 04 03.6
comp=Z,6µm,18.3s,MS5.0,baz=251,slow=45
AKTO Aktyubinsk 20.66 50 *i*P **P** 09 53 09.3 -0.6
TAVF Tavernes 20.67 290 *e*P **P** 09 53 10.9 +0.7
OG25 Le Caire 20.71 293 *e*P **P** 09 53 11.3 +0.8
HINF Hinteralfeld 20.73 302 *e*P **P** 09 53 11.0 +0.3
comp=Z,179nm,1.1s
HINF Hinteralfeld 20.73 302 *e*P **P** 09 53 11.0 +0.3
HINF pmax pmax
comp=Z,90nm,1.1s
HINF Hinteralfeld 20.73 302 *e*P **P** 09 53 11.0 +0.3
comp=Z,90nm,1.1s
GDM Grand'Maison 20.75 295 *e*P **P** 09 53 11.4 +0.4
STOF St-Etienne Org 20.80 292 *e*P **P** 09 53 14.7 +3.2
ORIF Oris-en-Rattie 20.89 294 *e*P **P** 09 53 12.6 +0.1
comp=Z,204nm,1.0s
ORIF *e*MLR MLR
comp=Z,17µm,20.0s,MS5.1
ORIF Oris-en-Rattie 20.89 294 *e*P **P** 09 53 12.6 +0.1
ORIF pmax pmax
comp=Z,102nm,1.0s
ORIF Oris-en-Rattie 20.89 294 *e*P **P** 09 53 12.6 +0.1
comp=Z,102nm,1.0s
VILF Villemus 20.93 291 *e*P **P** 09 53 13.5 +0.5
CABF La Chapelle 20.98 299 *e*P **P** 09 53 12.2 -1.3
comp=Z,289nm,1.2s
CABF La Chapelle 20.98 299 *e*P **P** 09 53 12.2 -1.3
CABF pmax pmax
comp=Z,144nm,1.2s
CABF La Chapelle 20.98 299 *e*P **P** 09 53 12.2 -1.3
comp=Z,144nm,1.2s
GRN Grenoble 21.02 295 *e*P **P** 09 53 14.0 +0.1
SMRF Simiane la Rot 21.04 291 *e*P **P** 09 53 14.6 +0.5
comp=Z,208nm,1.2s,mb5.0
SMRF Simiane la Rot 21.04 291 *e*P **P** 09 53 14.6 +0.5
comp=Z,104nm,1.2s,mb5.0
HAU Haudompre 21.10 303 *e*P **P** 09 53 14.6 -0.1
comp=Z,149nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,11µm,19.2s,MS5.0
HAU Haudompre 21.10 303 *e*P **P** 09 53 14.6 -0.1
HAU pmax pmax
comp=Z,74nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,11µm,19.3s,MS5.3
HAU Haudompre 21.10 303 *e*P **P** 09 53 14.6 -0.1
comp=Z,74nm,0.9s,mb5.0
HAU LR LR
comp=Z,11µm,19.3s,MS5.3
GELF Grande-Etoile 21.12 290 *e*P **P** 09 53 15.4 +0.4
TREF Trevaresse 21.16 290 *e*P **P** 09 53 14.8 -0.7
BSEG Bad Segeberg 21.22 321 *e*P **P** 09 53 13.5 -2.4
BSEG pmax pmax
comp=Z,74nm,0.9s,mb5.0
BSEG Bad Segeberg 21.22 321 *e*P **P** 09 53 13.5 -2.4
comp=Z,74nm,0.9s,mb5.0
OCF Saint Nazaire 21.27 293 *e*P **P** 09 53 17.6 +1.0
OG26 St.-Nazaire-De 21.27 293 *e*P **P** 09 53 17.6 +1.0
COP Copenhagen 21.31 327 *i*P **P** 09 53 17.4 +0.5
COP *e*S **S** 09 57 26.5 +13
COP pmax pmax
comp=Z,55nm,1.0s,mb4.8
COP MLR MLR
comp=Z,5µm,17.0s,MS5.0
COP Copenhagen 21.31 327 *i*P **P** 09 53 17.4 +0.5
comp=Z,55nm,1.0s,mb4.8
COP *e*S **S** 09 57 26.5 +13
COP
comp=Z,5µm,17.0s
OG05 Jujurieux 21.32 297 *e*P **P** 09 53 16.8 -0.3
PRAF Pradon 21.32 291 *e*P **P** 09 53 17.6 +0.4
THEF They Montfort 21.39 303 *e*P **P** 09 53 18.1 +0.3
AB31 Akbulak array 21.43 54 P **P** 09 53 18.0 -0.2
AB31 pmax pmax
comp=Z,93nm,0.8s,mb5.2
BUG Bochum--Univer 21.64 312 *e*P **P** 09 53 20.4 -0.2
comp=Z,84nm,1.2s,mb5.0
WLF Walferdange 21.68 307 P **P** 09 53 20.1 -0.9
comp=Z,39nm,1.8s,mb4.5
WLF Walferdange 21.68 307 *e*P **P** 09 53 22.2 +1.2
WLF LR LR
comp=Z,6µm,20.0s,MS5.0
IBBN Ibbenburen 21.74 315 *e*P **P** 09 53 21.4 -0.1
comp=Z,147nm,1.0s,mb5.4
VIVF Saint-Julien-l 21.74 294 *e*P **P** 09 53 21.9 +0.2
comp=Z,150nm,1.1s,mb5.0
VIVF Saint-Julien-l 21.74 294 *e*P **P** 09 53 21.9 +0.2
VIVF pmax pmax
comp=Z,75nm,1.1s,mb5.0
VIVF Saint-Julien-l 21.74 294 *e*P **P** 09 53 21.9 +0.2
comp=Z,75nm,1.1s,mb5.0
KLMR Klimovskoe 21.81 8 *i*P **P** 09 53 22.1 -0.1
KLMR pmax pmax
comp=Z,504nm,1.4s,mb5.8
SSB Saint Sauveur 21.87 295 *e*P **P** 09 53 22.3 -0.7
SSB pmax pmax
comp=Z,41nm,1.0s,mb4.8
SSB MLR MLR
comp=Z,7µm,19.0s,MS5.1
SSB Saint Sauveur 21.87 295 *e*P **P** 09 53 22.3 -0.7
comp=Z,41nm,1.0s,mb4.8
SSB Saint Sauveur 21.87 295 *e*P **P** 09 53 22.3 -0.8
comp=Z,41nm,1.0s,mb4.8
SSB LR LR
comp=Z,7µm,19.0s,MS5.1
MEZF Maizieres J'vi 22.06 303 *e*P **P** 09 53 25.2 +0.2
comp=Z,513nm,1.4s,mb5.5
MEZF Maizieres J'vi 22.06 303 *e*P **P** 09 53 25.2 +0.2
comp=Z,256nm,1.4s,mb5.5
MEM Membach 22.08 309 P **P** 09 53 25.4 +0.2
comp=Z,57nm,1.2s,mb4.9
WTSB Winterswijk 22.12 313 *e*P **P** 09 53 25.8 +0.1
HGN Heimansgroeve 22.18 310 *e*P **P** 09 53 26.9 +0.7
HGN Heimansgroeve 22.18 310 *e*S **S** 09 57 33.2 +2.9
LASF Ste Croix 22.28 292 *e*P **P** 09 53 27.4 0.0
comp=Z,184nm,1.3s,mb5.1
LASF Ste Croix 22.28 292 *e*P **P** 09 53 27.4 0.0
comp=Z,92nm,1.3s,mb5.1
BEBN Eben Emael 22.34 310 P **P** 09 53 28.5 +0.5
BEBN Eben Emael 22.34 310 P **P** 09 53 28.4 +0.4
BCLA Clavier 22.44 308 P **P** 09 53 30.4 +1.4
comp=Z,44nm,1.5s,mb4.7
BCLA Clavier 22.44 308 P **P** 09 53 30.4 +1.4
comp=Z,44nm,1.5s,mb4.7
COLF Collangettes 22.49 295 *e*P **P** 09 53 30.3 +0.7
SMF Signal de Mont 22.52 298 *e*P **P** 09 53 29.2 -0.7
comp=Z,162nm,1.1s,mb5.1
SMF Signal de Mont 22.52 298 *e*P **P** 09 53 29.2 -0.7
SMF pmax pmax
comp=Z,81nm,1.1s,mb5.1
SMF Signal de Mont 22.52 298 *e*P **P** 09 53 29.2 -0.7
comp=Z,81nm,1.1s,mb5.1
PLDF La Plantade 22.58 296 *e*P **P** 09 53 30.2 -0.4
LOR Lormes 22.60 300 *e*P **P** 09 53 30.2 -0.6
comp=Z,343nm,1.2s,mb5.3
LOR *e*MLR MLR
comp=Z,12µm,19.2s,MS5.0
LOR Lormes 22.60 300 *e*P **P** 09 53 30.2 -0.6
LOR pmax pmax
comp=Z,171nm,1.2s,mb5.3
LOR MLR MLR
comp=Z,12µm,19.3s,MS5.3
LOR Lormes 22.60 300 *e*P **P** 09 53 30.2 -0.6
comp=Z,171nm,1.2s,mb5.3
LOR LR LR
comp=Z,12µm,19.3s,MS5.3
GIVF Givet 22.63 307 *e*P **P** 09 53 30.8 -0.3
comp=Z,124nm,1.0s,mb5.0
GIVF Givet 22.63 307 *e*P **P** 09 53 30.8 -0.3
GIVF pmax pmax
comp=Z,62nm,1.0s,mb5.0
GIVF Givet 22.63 307 *e*P **P** 09 53 30.8 -0.3
comp=Z,62nm,1.0s,mb5.0
DOU Dourbes 22.77 307 P **P** 09 53 31.2 -1.4
comp=Z,28nm,1.7s,mb4.4
LBL Lubilhac 22.78 294 *e*P **P** 09 53 31.8 -0.9
SSF Saint Saulge 22.80 299 *e*P **P** 09 53 32.2 -0.7
comp=Z,138nm,1.0s,mb5.0
SSF Saint Saulge 22.80 299 *e*P **P** 09 53 32.2 -0.7
SSF pmax pmax
comp=Z,69nm,1.0s,mb5.0
SSF Saint Saulge 22.80 299 *e*P **P** 09 53 32.2 -0.7
comp=Z,69nm,1.0s,mb5.0
AVF Avril sur Loir 22.87 299 *e*P **P** 09 53 32.5 -1.1
comp=Z,134nm,0.9s,mb5.1
AVF Avril sur Loir 22.87 299 *e*P **P** 09 53 32.5 -1.1
AVF pmax pmax
comp=Z,67nm,0.9s,mb5.1
AVF Avril sur Loir 22.87 299 *e*P **P** 09 53 32.5 -1.1
comp=Z,67nm,0.9s,mb5.1
AGO Saint Agoulin 22.93 297 *e*P **P** 09 53 33.0 -1.3
PYM Petit Puy Mans 22.99 296 *e*P **P** 09 53 35.1 +0.2
BAIF Baives 23.00 307 *e*P **P** 09 53 34.1 -0.9
comp=Z,221nm,1.2s,mb5.2
BAIF Baives 23.00 307 *e*P **P** 09 53 34.1 -0.9
BAIF pmax pmax
comp=Z,111nm,1.2s,mb5.2
BAIF Baives 23.00 307 *e*P **P** 09 53 34.1 -0.9
comp=Z,111nm,1.2s,mb5.2
EJON La Jonquera 23.00 287 P **P** 09 53 38.3 +3.2
comp=Z,3.9nm,0.6s,mb4.0
SNF Seneffe 23.09 308 P **P** 09 53 36.7 +0.8
comp=Z,30nm,1.5s,mb4.5
KAF Kangasniemi 23.09 352 *e*p **P** 09 53 35.3 -0.5
comp=Z,108nm,0.8s,mb5.3
KAF Kangasniemi 23.09 352 *e*P **P** 09 53 35.3 -0.5
KAF pmax pmax
comp=Z,108nm,0.8s,mb5.3
UCC Uccle 23.13 309 P **P** 09 53 36.9 +0.6
BGF Bois d'Agland 23.18 298 *e*P **P** 09 53 36.2 -0.8
comp=Z,145nm,1.0s,mb5.1
BGF Bois d'Agland 23.18 298 *e*P **P** 09 53 36.2 -0.8
BGF pmax pmax
comp=Z,72nm,1.0s,mb5.1
BGF Bois d'Agland 23.18 298 *e*P **P** 09 53 36.2 -0.8
comp=Z,72nm,1.0s,mb5.1
ETOS Metsea 23.33 281 P **P** 09 53 39.0 +0.4
HYF Humbligny 23.42 300 *e*P **P** 09 53 39.2 -0.2
MTLF Montolieu 23.46 290 *e*P **P** 09 53 39.6 -0.4
comp=Z,214nm,1.6s,mb5.0
MTLF Montolieu 23.46 290 *e*P **P** 09 53 39.6 -0.4
MTLF pmax pmax
comp=Z,107nm,1.6s,mb5.0
MTLF Montolieu 23.46 290 *e*P **P** 09 53 39.6 -0.4
comp=Z,107nm,1.6s,mb5.0
JOF Joensuu 23.54 358 *e*p **P** 09 53 39.8 -0.8
comp=Z,118nm,0.8s,mb5.4
JOF Joensuu 23.54 358 *e*P **P** 09 53 39.8 -0.8
JOF pmax pmax
comp=Z,118nm,0.8s,mb5.4
TCF Toulx Ste Croi 23.59 297 *e*P **P** 09 53 40.8 -0.4
comp=Z,252nm,1.4s,mb5.2
TCF Toulx Ste Croi 23.59 297 *e*P **P** 09 53 40.8 -0.4
TCF pmax pmax
comp=Z,126nm,1.4s,mb5.2
TCF Toulx Ste Croi 23.59 297 *e*P **P** 09 53 40.8 -0.4
comp=Z,126nm,1.4s,mb5.2
CAF Calviac 23.60 294 *e*P **P** 09 53 40.7 -0.5
comp=Z,107nm,1.1s,mb4.9
CAF Calviac 23.60 294 *e*P **P** 09 53 40.7 -0.5
CAF pmax pmax
comp=Z,53nm,1.1s,mb4.9
CAF Calviac 23.60 294 *e*P **P** 09 53 40.7 -0.5
comp=Z,53nm,1.1s,mb4.9
BANOM Banah 23.60 118 ⇓P **P** 09 53 42.6 +1.2
SNR=12
NAZ Nazwa, Dubai 23.79 121 P **P** 09 53 43.4 +0.2
SNR=11
ASUD Al Ashush, Dub 23.82 122 P **P** 09 53 43.9 +0.5
SNR=5.5
ARU Arti 23.84 36⇑*i*P **P** 09 53 43.3 -0.1
ARU MLR MLR
comp=Z,5µm,20.0s,MS5.0
FAQ Al Faqa, Dubai 23.91 121 P **P** 09 53 44.4 +0.1
SNR=7.0
RJF Les Rejaudoux 24.00 294 *e*P **P** 09 53 43.7 -1.2
comp=Z,412nm,1.6s,mb5.3
RJF *e*MLR MLR
comp=Z,11µm,21.2s,MS5.0
RJF Les Rejaudoux 24.00 294 *e*P **P** 09 53 43.7 -1.2
RJF pmax pmax
comp=Z,206nm,1.6s,mb5.3
RJF MLR MLR
comp=Z,11µm,21.3s,MS5.3
RJF Les Rejaudoux 24.00 294 *e*P **P** 09 53 43.7 -1.2
comp=Z,206nm,1.6s,mb5.3
RJF LR LR
comp=Z,11µm,21.3s,MS5.3
EMHD Djebel Mahouad 24.02 272 P **P** 09 53 44.5 -0.7
HFS Hagfors 24.05 336 P **P** 09 53 45.3 +0.1
comp=Z,42nm,0.9s,mb4.9,baz=141,slow=9.6,SNR=24
HFS LR LR 10 03 32.4
comp=Z,6µm,21.8s,MS5.0,baz=147,slow=38
HATD Hatta, Dubai 24.21 120 ⇓P **P** 09 53 47.4 +0.4
SNR=25
MLS Moulis 24.30 289 *e*P **P** 09 53 47.0 -0.7
EPOB Poblet 24.43 285 P **P** 09 53 52.1 +3.2
comp=Z,16nm,1.1s,mb4.4
LFF La Frestale 24.54 294 *e*P **P** 09 53 50.4 +0.6
comp=Z,124nm,1.2s,mb5.0
LFF La Frestale 24.54 294 *e*P **P** 09 53 50.4 +0.6
LFF pmax pmax
comp=Z,62nm,1.2s,mb5.0
LFF La Frestale 24.54 294 *e*P **P** 09 53 50.4 +0.6
comp=Z,62nm,1.2s,mb5.0
EIBI Ibiza 24.58 279 P **P** 09 53 51.2 +0.9
comp=Z,63nm,1.2s,mb5.0
EIBI Ibiza 24.58 279 P **P** 09 53 51.2 +0.9
comp=Z,63nm,1.2s,mb5.0
EPF Esparros 24.85 289 *e*P **P** 09 53 53.2 +0.5
comp=Z,84nm,1.2s,mb4.8
EPF Esparros 24.85 289 *e*P **P** 09 53 53.2 +0.5
EPF pmax pmax
comp=Z,42nm,1.2s,mb4.8
EPF Esparros 24.85 289 *e*P **P** 09 53 53.2 +0.5
comp=Z,42nm,1.2s,mb4.8
RESF Ens 24.86 288 *e*P **P** 09 53 52.2 -0.6
EBIE Bielsa 25.01 288 P **P** 09 53 56.1 +1.9
comp=Z,61nm,0.9s,mb5.1
EBIE Bielsa 25.01 288 P **P** 09 53 56.1 +1.9
comp=Z,61nm,0.9s,mb5.1
SVE Sverdlovsk 25.02 37⇓*e*P **P** 09 53 54.7 +0.6
SVE *e* 09 54 29.7
SVE *e*PPP 09 54 39.5
SVE *e*S **S** 09 58 16.8 -1.0
SVE pmax pmax
comp=Z,223nm,1.4s,mb5.5
ERTA Horta de San J 25.04 284 P **P** 09 53 55.0 +0.6
comp=Z,53nm,1.0s,mb5.0
ERTA Horta de San J 25.04 284 P **P** 09 53 55.0 +0.5
comp=Z,53nm,1.0s,mb5.0
LABF Labassere 25.04 289 *e*P **P** 09 53 55.5 +1.0
SOKR Solikamsk 25.09 29 *e*P **P** 09 53 56.7 +2.0
SOKR pmax pmax
comp=Z,240nm,1.2s,mb5.6
VIEF Viey 25.09 289 *e*P **P** 09 53 55.3 +0.4
EBNR Beni Rached 25.10 273 P **P** 09 54 00.0 +5.0
KONO Kongsberg 25.11 331 *e*P **P** 09 53 56.1 +1.3
KONO Kongsberg 25.11 331 *e*P **P** 09 53 53.0 -1.9
KONO Kongsberg 25.11 331 *e*P **P** 09 53 54.6 -0.2
comp=Z,66nm,0.8s,mb5.2
KONO LR LR
comp=Z,6µm,21.0s,MS5.1
TFO1 Folkestone 25.17 308 AMS AMS 10 07 06.7
comp=Z,6µm,16.4s,MS5.2
MFF Saint Martin d 25.24 297 *e*P **P** 09 53 54.8 -1.4
comp=Z,111nm,1.0s,mb5.0
MFF Saint Martin d 25.24 297 *e*P **P** 09 53 54.8 -1.4
MFF pmax pmax
comp=Z,56nm,1.0s,mb5.0
MFF Saint Martin d 25.24 297 *e*P **P** 09 53 54.8 -1.4
comp=Z,56nm,1.0s,mb5.0
LDF La Druitiere 25.45 302 *e*P **P** 09 53 56.6 -1.5
comp=Z,308nm,1.4s,mb5.3
LDF La Druitiere 25.45 302 *e*P **P** 09 53 56.6 -1.5
LDF pmax pmax
comp=Z,154nm,1.4s,mb5.3
LDF La Druitiere 25.45 302 *e*P **P** 09 53 56.6 -1.5
comp=Z,154nm,1.4s,mb5.3
ARQ Araqi 25.49 122 ⇓P **P** 09 53 59.8 +1.1
SNR=29
NAO01 NORSAR Array S 25.50 334 *e*P **P** 09 53 58.6 +0.1
NAO01 NORSAR Array S 25.50 334 *e*P **P** 09 53 58.6 +0.2
NAO01 LR LR
comp=Z,11µm,21.0s,MS5.4
ETSF Etsaut 25.52 289 *e*P **P** 09 53 58.2 -0.5
comp=Z,94nm,0.9s,mb5.0
ETSF Etsaut 25.52 289 *e*P **P** 09 53 58.2 -0.5
ETSF pmax pmax
comp=Z,47nm,0.9s,mb5.0
ETSF Etsaut 25.52 289 *e*P **P** 09 53 58.2 -0.5
comp=Z,47nm,0.9s,mb5.0
EANR 'Ain N'Sour 25.53 272 P **P** 09 54 04.0 +5.1
NB2 NORSAR Subarra 25.54 335 P **P** 09 53 58.2 -0.6
comp=Z,71nm,1.1s,mb5.1,baz=138,slow=9.3
NOA NORSAR Array B 25.54 335 P **P** 09 53 58.0 -0.8
comp=Z,23nm,0.8s,mb4.8,baz=131,slow=10.0,SNR=55
NOA LR LR 10 06 06.2
comp=Z,8µm,18.1s,MS5.3,baz=145,slow=41
ESAC San Caprasio 25.55 286 P **P** 09 54 03.6 +4.5
ATE Arette 25.61 289 *e*P **P** 09 54 02.3 +2.7
FLN La Foliniere 25.71 302 *e*P **P** 09 53 59.5 -1.0
comp=Z,87nm,0.9s,mb5.0
FLN *e*MLR MLR
comp=Z,10µm,19.0s,MS5.0
FLN La Foliniere 25.71 302 *e*P **P** 09 53 59.5 -1.0
FLN pmax pmax
comp=Z,43nm,0.9s,mb5.0
FLN MLR MLR
comp=Z,10µm,19.0s,MS5.3
FLN La Foliniere 25.71 302 *e*P **P** 09 53 59.5 -1.0
comp=Z,43nm,0.9s,mb5.0
FLN LR LR
comp=Z,10µm,19.0s,MS5.3
EMOS Mosqueruela 25.73 283 P **P** 09 54 05.8 +5.1
comp=Z,70nm,1.1s,mb5.1
LARF Larrau 25.82 289 *e*P **P** 09 54 02.0 +0.5
HOQ Hoqain 25.84 121 ⇑P **P** 09 54 03.5 +1.6
SNR=19
EBEN Beniarda 25.85 279 P **P** 09 54 03.4 +1.6
comp=Z,50nm,1.0s,mb5.0
EBEN Beniarda 25.85 279 P **P** 09 54 03.4 +1.6
comp=Z,50nm,1.0s,mb5.0
GRR Gorron 25.91 301 *e*P **P** 09 54 01.3 -0.9
comp=Z,226nm,0.9s,mb5.4
GRR Gorron 25.91 301 *e*P **P** 09 54 01.3 -0.9
GRR pmax pmax
comp=Z,113nm,0.9s,mb5.4
GRR Gorron 25.91 301 *e*P **P** 09 54 01.3 -0.9
comp=Z,113nm,0.9s,mb5.4
BLS5 Blasjo 26.18 329 *e*P **P** 09 54 06.5 +1.9
ECHE Chera 26.24 281 P **P** 09 54 06.6 +1.3
ECHE pmax pmax
comp=Z,53nm,1.2s,mb5.0
ECHE Chera 26.24 281 P **P** 09 54 06.6 +1.3
comp=Z,53nm,1.2s,mb5.0
ECHE Chera 26.24 281 P **P** 09 54 06.6 +1.3
comp=Z,53nm,1.2s,mb5.0
BSY Bisya 26.35 122 ⇑P **P** 09 54 06.8 +0.3
SNR=13
BSYO Bisya 26.39 122 P **P** 09 54 06.8 0.0
SNR=13
ODD1 Odda 26.41 330⇑*i*P **P** 09 54 07.8 +1.2
ODD1 AMb AMB 09 54 11.7
comp=Z,116nm,1.7s,mb5.1
ODD1 Odda 26.41 330⇑*i*P **P** 09 54 07.8 +1.1
comp=Z,116nm,1.7s,mb5.1,SNR=34
BIDO Bidbid 26.43 119 ⇓P **P** 09 54 08.4 +1.2
SNR=6.9
SMDO Samad 26.70 120 ⇑P **P** 09 54 11.3 +1.7
SNR=14
JQE Queens East 26.79 303 *e*P **P** 09 54 10.4 +0.2
JLP Les Platons 26.84 303 *e*P **P** 09 54 10.3 -0.4
ETOB Tobarra 26.87 279 P **P** 09 54 12.7 +1.7
comp=Z,18nm,0.7s,mb4.7
ETOB Tobarra 26.87 279 P **P** 09 54 12.7 +1.6
comp=Z,18nm,0.7s,mb4.7
JSA Saint Aubin 26.87 303 AMS AMS 10 06 00.4
comp=Z,5µm,18.0s,MS5.1
ECRI Cripan 26.97 288 P **P** 09 54 16.3 +4.4
ECRI pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
ECRI Cripan 26.97 288 P **P** 09 54 16.3 +4.4
comp=Z,8.3nm,0.7s,mb4.4
SGMF Saint Gilles 27.02 301 *e*P **P** 09 54 11.8 -0.5
comp=Z,94nm,1.0s,mb5.0
SGMF Saint Gilles 27.02 301 *e*P **P** 09 54 11.8 -0.5
SGMF pmax pmax
comp=Z,47nm,1.0s,mb5.0
SGMF Saint Gilles 27.02 301 *e*P **P** 09 54 11.8 -0.5
comp=Z,47nm,1.0s,mb5.0
SWN1 Swindon 27.06 308 *e*P **P** 09 54 12.7 +0.1
SWN1 AMb AMB 09 54 16.4
comp=Z,326nm,1.2s,mb5.7
SWN1 AMS AMS 10 07 39.9
comp=Z,5µm,18.2s,MS5.1
SWN1 Swindon 27.06 308 *e*P **P** 09 54 12.7 +0.1
comp=Z,326nm,1.2s,mb5.7
CWF Charnwood Fore 27.06 311 *e*P **P** 09 54 13.0 +0.4
CWF AMb AMB 09 54 16.0
comp=Z,93nm,1.5s,mb5.1
CWF AMS AMS 10 08 01.9
comp=Z,4µm,17.2s,MS5.0
CWF Charnwood Fore 27.06 311 *e*P **P** 09 54 13.0 +0.4
comp=Z,93nm,1.5s,mb5.1
SSW Stow on the Wo 27.19 309 *e*P **P** 09 54 12.9 -0.8
JMDO Jabal Madar 27.21 121 ⇑P **P** 09 54 15.7 +1.5
SNR=24
BER Bergen 27.22 330 *e*P **P** 09 54 17.4 +3.5
ASK Askoy 27.33 330 *e*P **P** 09 54 19.0 +4.0
KBI1 Birley Grange 27.33 312 *e*P **P** 09 54 15.1 0.0
QUIF Quistinic 27.39 300 *e*P **P** 09 54 14.3 -1.4
KWE Weaver Farm 27.45 311 *e*P **P** 09 54 15.7 -0.4
ROSF Rostrenen 27.50 301 *e*P **P** 09 54 14.5 -2.1
comp=Z,134nm,1.3s,mb5.1
ROSF Rostrenen 27.50 301 *e*P **P** 09 54 14.5 -2.1
ROSF pmax pmax
comp=Z,67nm,1.3s,mb5.1
ROSF Rostrenen 27.50 301 *e*P **P** 09 54 14.5 -2.1
comp=Z,67nm,1.3s,mb5.1
ELAN Lanestosa 27.59 290 P **P** 09 54 22.5 +5.0
comp=Z,31nm,0.9s,mb4.9
HPK Haverah Park 27.59 313 *e*P **P** 09 54 17.0 -0.4
HPK AMb AMB 09 54 22.1
comp=Z,168nm,2.0s,mb5.3
HPK AMS AMS 10 09 36.0
comp=Z,5µm,16.5s,MS5.2
HPK Haverah Park 27.59 313 *e*P **P** 09 54 17.0 -0.4
comp=Z,168nm,2.0s,mb5.3
EVIA Vianos 27.60 280 P **P** 09 54 19.3 +1.7
EVIA pmax pmax
comp=Z,16nm,0.7s,mb4.8
EVIA Vianos 27.60 280 P **P** 09 54 19.3 +1.7
comp=Z,16nm,0.7s,mb4.8
LHO Holmfirth 27.60 312 *e*P **P** 09 54 17.8 +0.4
WBK Wadi Bani Khal 27.62 120 ⇓P **P** 09 54 19.9 +2.0
SNR=12
STNC Stoke 27.68 311 AMS AMS 10 09 10.4
comp=Z,5µm,16.9s,MS5.1
HGH Gray Hill 27.70 308 *e*P **P** 09 54 18.9 +0.5
MCH1 Michaelchurch 27.89 309 *e*P **P** 09 54 19.3 -0.8
MCH1 AMb AMB 09 54 24.5
comp=Z,160nm,1.5s,mb5.4
MCH1 AMS AMS 10 09 38.6
comp=Z,5µm,17.5s,MS5.2
MCH1 Michaelchurch 27.89 309 *e*P **P** 09 54 19.3 -0.7
comp=Z,160nm,1.5s,mb5.4
NSS Namsos 28.03 341 *e*P **P** 09 54 20.8 -0.4
NSS AMb AMB 09 54 31.1
comp=Z,281nm,4.0s
NSS Namsos 28.03 341 *e*P **P** 09 54 20.8 -0.4
comp=Z,281nm,4.0s,SNR=28

KK31 **Karatay Array** 28.16 70 *i* P **P** 09 54 22.0 -0.6
KK31 pmax pmax
comp=Z,54nm,1.0s,mb5.1
DYA Yadsworthy 28.18 305 AMS AMS 10 06 56.2
comp=Z,7μm,19.1s,MS5.2
APA Apatity 28.19 0⇑ *i* P **P** 09 54 29.0 +6.5
APA *e* 09 55 11.0
APA pmax pmax
comp=Z,21nm,1.0s,mb4.7
APA MLR MLR
comp=Z,13μm,16.0s,MS5.6
XAL Allendale 28.20 315 *e*P **P** 09 54 23.2 +0.4
EQES Quesada 28.23 278 P **P** 09 54 27.1 +3.8
comp=Z,11nm,0.6s,mb4.7
SBD1 Bryn Du 28.25 311 *e*P **P** 09 54 23.2 -0.1
GUD Guadarrama 28.45 285 P **P** 09 54 27.0 +1.8
GUD pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
GUD Guadarrama 28.45 285 P **P** 09 54 27.0 +1.8
comp=Z,5.5nm,0.6s,mb4.4
GUD Guadarrama 28.45 285 P **P** 09 54 27.0 +1.8
comp=Z,5.5nm,0.6s,mb4.4
ESDC Sonseca Array 28.49 282 P **P** 09 54 24.4 -1.2
comp=Z,9.1nm,0.9s,mb4.4,baz=69,slow=9.3,SNR=11
ESLA Sonseca Array 28.49 282 PFAKE 09 54 40.0 +14
ESLA LR LR
comp=Z,41μm,22.0s,MS6.0
LVZ Lovozero 28.53 1 PFAKE 09 54 40.0 +14
LVZ LR LR
comp=Z,8μm,19.0s,MS5.4
HTL Hartland 28.61 306 AMS AMS 10 08 30.2
comp=Z,7μm,16.8s,MS5.3
EBAN Banos Encina 28.69 279 P **P** 09 54 28.8 +1.5
EBAN pmax pmax
comp=Z,58nm,1.2s,mb5.2
EBAN Banos Encina 28.69 279 P **P** 09 54 28.8 +1.5
comp=Z,58nm,1.2s,mb5.2
EBAN Banos Encina 28.69 279 P **P** 09 54 28.8 +1.4
comp=Z,58nm,1.2s,mb5.2
BRVK Borovoye 28.71 49 ⇑P **P** 09 54 28.8 +1.4
SNR=9.4
BRVK Borovoye 28.71 49 *e*P **P** 09 54 28.8 +1.5
BRVK LR LR
comp=Z,6μm,20.0s,MS5.2
WPM1 Penmaenmawr 28.71 311 *e*P **P** 09 54 27.7 +0.3
TAM Tamanrasset 28.73 243 *e*P **P** 09 54 27.7 -0.1
TAM pmax pmax
comp=Z,14nm,1.0s,mb4.7
TAM MLR MLR
comp=Z,4μm,20.0s,MS5.0
TAM Tamanrasset 28.73 243 *e*P **P** 09 54 27.7 -0.1
comp=Z,14nm,1.0s,mb4.7
TAM Tamanrasset 28.73 243 *e*P **P** 09 54 27.7 -0.1
comp=Z,14nm,1.0s,mb4.7
TAM LR LR
comp=Z,4μm,20.0s,MS5.0
BVA0 Borovoye Array 28.76 49 *i* P **P** 09 54 28.5 +0.7
BVA0 pmax pmax
comp=Z,17nm,1.4s,mb4.6
BVAR Borovoye Array 28.76 49 P **P** 09 54 27.3 -0.5
comp=Z,2.8nm,0.7s,mb4.1,baz=286,slow=5.5,SNR=13
BVAR LR LR 10 09 20.9
comp=Z,6μm,20.3s,MS5.2,baz=266,slow=44
ESY Stoneypath 28.76 317 *e*P **P** 09 54 28.4 +0.6
PAB San Pablo 28.81 282 PFAKE 09 54 40.0 +12
PAB LR LR
comp=Z,3μm,19.0s,MS4.9
MOR8 Moi Rana 28.83 344 *e*P **P** 09 54 29.9 +1.7
EKA Eskdalemuir Ar 28.86 315 P **P** 09 54 28.4 -0.3
comp=Z,13nm,0.6s,mb4.8,baz=119,slow=9.4,SNR=30
EGUA Guajares 28.87 277 P **P** 09 54 29.7 +0.7
EGUA pmax pmax
comp=Z,125nm,1.0s,mb5.6
EGUA Guajares 28.87 277 P **P** 09 54 29.7 +0.7
comp=Z,125nm,1.0s,mb5.6
EGUA Guajares 28.87 277 P **P** 09 54 29.7 +0.7
comp=Z,125nm,1.0s,mb5.6
ESK Eskdalemuir 28.88 315 *e*P **P** 09 54 29.2 +0.3
ESK AMb AMB 09 54 30.2
comp=Z,62nm,2.4s,mb4.9
ESK AMS AMS 10 08 24.8
comp=Z,5μm,19.5s,MS5.1
ESK Eskdalemuir 28.88 315 *e*P **P** 09 54 28.8 -0.1
ESK pmax pmax
comp=Z,41nm,1.1s,mb5.1
ESK MLR MLR
comp=Z,6μm,20.0s,MS5.2
ESK Eskdalemuir 28.88 315 *e*P **P** 09 54 28.8 -0.1
comp=Z,41nm,1.1s,mb5.1
ESK Eskdalemuir 28.88 315 *e*P **P** 09 54 28.8 0.0
comp=Z,41nm,1.1s,mb5.1
ESK LR LR
comp=Z,6μm,20.0s,MS5.2
EBL Broad Law 28.94 316 *e*P **P** 09 54 28.9 -0.4
WLF1 Llynfaes 29.01 311 *e*P **P** 09 54 29.3 -0.7
WLF1 AMb AMB 09 54 35.0
comp=Z,52nm,1.3s,mb5.1
WLF1 Llynfaes 29.01 311 *e*P **P** 09 54 29.3 -0.7
comp=Z,52nm,1.3s,mb5.1
EDI Edinburgh 29.07 317 *e*P **P** 09 54 30.6 +0.1
EDI AMb AMB 09 54 34.1
comp=Z,177nm,1.2s,mb5.7
EDI AMS AMS 10 12 43.0
comp=Z,4μm,16.4s,MS5.1
EDI Edinburgh 29.07 317 *e*P **P** 09 54 30.6 +0.1
comp=Z,177nm,1.2s,mb5.7
YRC Rhoscolyn 29.10 311 *e*P **P** 09 54 30.8 0.0
EAU Auchinoon 29.18 316 *e*P **P** 09 54 31.3 -0.2
EADA Adamuz 29.30 280 P **P** 09 54 34.2 +1.5
comp=Z,11nm,1.0s,mb4.5
EADA Adamuz 29.30 280 P **P** 09 54 34.1 +1.4
comp=Z,11nm,1.0s,mb4.5
GAL1 Galloway 29.58 314 AMS AMS 10 10 48.0
comp=Z,3μm,16.1s,MS5.0
MCD Coleburn Disti 29.69 320⇑ *e*P **P** 09 54 35.8 -0.1
PGBU Glenifferbraes 29.73 316 AMS AMS 10 09 11.0
comp=Z,6μm,19.9s,MS5.2
EAB Aberfoyle 29.77 317 *e*P **P** 09 54 37.3 +0.6
LRW Lerwick 29.80 325 *e*P **P** 09 54 36.3 -0.7
LRW AMb AMB 09 54 37.6
comp=Z,151nm,1.6s,mb5.5
LRW AMS AMS 10 08 27.4
comp=Z,6μm,18.9s,MS5.2
LRW Lerwick 29.80 325 *e*P **P** 09 54 36.3 -0.6
comp=Z,151nm,1.6s,mb5.5
EMIJ Mijas 29.88 277 P **P** 09 54 38.6 +0.7
comp=Z,37nm,0.9s,mb5.1
EMIJ Mijas 29.88 277 P **P** 09 54 38.6 +0.7
comp=Z,37nm,0.9s,mb5.1
GMM Mts of Mourne 30.12 312 *e*P **P** 09 54 39.6 -0.2
TZK Tazeka 30.24 272 *i* P **P** 09 54 42.0 +0.9
ARCES ARCESS Array B 30.44 355 P **P** 09 54 42.1 -0.3
comp=Z,11nm,0.7s,mb4.7,baz=163,slow=6.6,SNR=21
ARCES LR LR 10 06 58.1
comp=Z,6μm,19.1s,MS5.3,baz=177,slow=36
MVO Moncorvo 30.51 286 *e*P **P** 09 54 45.7 +2.3
KEV Kevo 30.56 356 PFAKE 09 55 00.0 +16
KEV LR LR
comp=Z,9μm,20.0s,MS5.4
EKS2 Erkin-Say 30.60 71 PFAKE 09 55 00.0 +16
EKS2 LR LR
comp=Z,5μm,20.0s,MS5.2
AML Almayashu 30.62 72 PFAKE 09 55 00.0 +16
AML LR LR
comp=Z,5μm,19.0s,MS5.2
KAC Achnashellach 30.69 319 *e*P **P** 09 54 44.3 -0.5
KPL Plockton 30.82 318 AMS AMS 10 10 46.7
comp=Z,6μm,17.3s,MS5.3
SFS San Fernando 31.01 277 PFAKE 09 55 00.0 +12
SFS LR LR
comp=Z,17μm,21.0s,MS5.7
MTE Manteigas 31.04 285 *e*P **P** 09 54 51.4 +3.3
MTE Manteigas 31.04 285 PFAKE 09 55 00.0 +12
MTE LR LR
comp=Z,4μm,19.0s,MS5.1
USP Ospenovka 31.05 69 P **P** 09 54 47.4 -0.8
SNR=14
PCBR Castelo Branco 31.11 284 *e*P **P** 09 54 51.8 +3.1
AAK Ala-Archa 31.13 71 P **P** 09 54 50.2 +1.4
SNR=10
AAK Ala-Archa 31.13 71 *e*P **P** 09 54 49.2 +0.3
AAK pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
AAK MLR MLR
comp=Z,4μm,21.0s,MS5.0
AAK Ala-Archa 31.13 71 P **P** 09 54 49.5 +0.7
SNR=18
AAK Ala-Archa 31.13 71 *e*P **P** 09 54 49.3 +0.4
AAK LR LR
comp=Z,7μm,20.0s,MS5.3
PBAR Barrancos 31.17 281 *e*P **P** 09 54 51.3 +2.0
FRU Bishkek 31.19 70 *e*P **P** 09 54 48.5 -0.9
FRU pmax pmax
comp=Z,110nm,2.0s,mb5.3
UCH Uchtor 31.20 71 PFAKE 09 55 00.0 +10
UCH LR LR
comp=Z,2μm,20.0s,MS4.8
CHMS Chumysh 31.26 70 P **P** 09 54 50.4 +0.3
SNR=15
MIF Mishlifen 31.30 271 *i* P **P** 09 54 51.0 +0.6
PESTR Estremoz 31.41 282 *e*P **P** 09 54 54.2 +2.8
KBK Karagaybulak 31.46 70 P **P** 09 54 52.9 +1.1
SNR=20
KZA Kyzart 31.77 71 P **P** 09 54 55.4 +0.9
SNR=20
PBEJ Beja 31.84 281 *e*P **P** 09 54 56.9 +1.7
TKM2 Tokmak 2 31.89 70 *e*P **P** 09 54 56.3 +0.7
TKM2 pmax pmax
comp=Z,14nm,0.7s,mb4.9
TKM2 MLR MLR
comp=Z,4μm,21.0s,MS5.1
TKM2 Tokmak 2 31.89 70 P **P** 09 54 57.8 +2.3
SNR=8.4
TKM2 Tokmak 2 31.89 70 *e*P **P** 09 54 56.3 +0.7
comp=Z,14nm,0.7s,mb4.9
TKM2 Tokmak 2 31.89 70 *e*P **P** 09 54 56.3 +0.8
comp=Z,14nm,0.7s,mb4.9
TKM2 LR LR
comp=Z,4μm,21.0s,MS5.1
PVAQ Vaqueiros 31.90 280 *e*P **P** 09 54 55.8 +0.1
comp=Z,138nm,1.7s,mb5.5
PBDV Barranco-do-Ve 32.10 279 *e*P **P** 09 55 01.7 +4.2
RTC Rabat Centre 32.34 273 PFAKE 09 55 10.0 +10
RTC LR LR
comp=Z,3μm,19.0s,MS5.0
ULHL Ulahol 32.47 71 P **P** 09 55 01.5 +0.9
SNR=22
NIL Nilore 32.53 87 PFAKE 09 55 10.0 +8.7
NIL LR LR
comp=Z,328nm,22.0s,MS4.0
KSH Kashi 32.82 76 *e*P **P** 09 55 07.1 +3.3
KSH AP pP 09 55 11.5 +4.2
KSH XP sP 09 55 14.1 +5.4
KSH PP PP 09 56 17.0 -0.9
KSH PCP PcP 09 57 50.9 +2.4
KSH S **S** **10 00 24.4 +3.6**
KSH XS sS 10 00 31.0 +4.5
KSH SCP ScP 10 01 33.5 +1.1
KSH PCS PcS 10 01 35.8 +2.1
KSH SS SS 10 02 24.3 -18
KSH SCS ScS 10 05 32.9 +0.6
KSH AMB AMB
comp=Z,79nm,0.4s,mb6.0
KSH AMB AMB
comp=Z,2μm,4.9s
KSH LR LR
comp=N,18μm,13.0s
KSH LR LR
comp=E,9μm,9.4s
KSH LR LR
comp=Z,11μm,16.6s,MS5.6
KURK Kurchatov 33.53 55 P **P** 09 55 09.9 +0.1
SNR=24
KURK Kurchatov 33.53 55 LR LR 10 11 58.1
comp=Z,4μm,18.1s,MS5.1,baz=290,slow=42
KURK Kurchatov 33.53 55⇑ *i* P **P** 09 55 09.5 -0.3
KURK LR LR
comp=Z,8μm,20.0s,MS5.4
THN Thein Dam 34.91 88 *e*P **P** 09 55 21.1 -0.9
MKAR Makanchi Array 36.12 62 P **P** 09 55 32.1 -0.1
comp=Z,15nm,0.9s,mb4.9,baz=280,slow=7.2,SNR=41
MKAR LR LR 10 11 32.9
comp=Z,4μm,21.3s,MS5.1,baz=274,slow=38
SDNR Sundarnagar 36.27 89 *e*P **P** 09 55 34.1 +0.4
NVS Novosibirsk 36.53 48 *e*P **P** 09 55 34.9 -0.8
NVS pmax pmax
comp=Z,78nm,1.5s,mb5.3
NVS pmax pmax
comp=N,34nm,1.2s
NVS pmax pmax
comp=E,30nm,1.1s
SMLA Simla 36.58 89 *e*P **P** 09 55 35.1 -1.2
SMLA AMb AMB 09 55 38.4
comp=Z,88nm,1.0s,mb5.5
AJM Ajmer 36.82 98 *e*P **P** 09 55 38.1 -0.3
AJM AMb AMB 09 55 41.2
comp=Z,29nm,1.4s,mb4.9
ZAA0 Zalesovo Array 37.42 50 *e*P **P** 09 55 42.3 -0.9
ZAA0 Zalesovo Array 37.42 50 *e*P **P** 09 55 42.3 -0.9
ZALV Zalesovo Beam 37.42 50 P **P** 09 55 42.4 -0.8
comp=Z,11nm,0.7s,mb4.8,baz=261,slow=9.8,SNR=18
DDI Dehra Dun 37.62 90 *ex* x 09 55 39.0
TOA0 Torodi Ar. Sit 38.14 235 *e*P **P** 09 55 48.1 -1.6
TOA0 Torodi Ar. Sit 38.14 235 *e*P **P** 09 55 48.1 -1.6
TORD Torodi Ar. Bea 38.14 235 P **P** 09 55 47.9 -1.8
comp=Z,24nm,0.8s,mb5.0,baz=33,slow=7.9,SNR=69
TORD PcP PcP 09 58 05.2 +0.7
comp=Z,5.4nm,0.7s,baz=25,slow=2.6,SNR=4.9
TORD LR LR 10 13 47.2
comp=Z,5μm,20.9s,MS5.3,baz=30,slow=40
SPB4 Spitsbergen Ar 39.48 355 *e*P **P** 09 56 00.9 +0.7
SPB4 Spitsbergen Ar 39.48 355 *e*P **P** 09 56 00.9 +0.6
BORG Borgarnes 40.14 327 PFAKE 09 56 20.0 +14
BORG LR LR
comp=Z,3μm,19.0s,MS5.2
WMQ Urumqi 40.39 65 P **P** 09 56 08.8 +0.6
WMQ PP PP 09 57 46.3 +5.3
WMQ AMB AMB
comp=Z,64nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,287nm,5.0s
WMQ LR LR
comp=N,6μm,27.0s,MS5.5
WMQ LR LR
comp=E,5μm,25.0s,MS5.5
WMQ LR LR
comp=Z,5μm,21.0s,MS5.4
BHPL Bhopal 40.69 100 *e*P **P** 09 56 10.5 -0.4
BHPL AMb AMB 09 56 18.3
comp=Z,36nm,1.6s,mb4.7
POO Poona 40.80 109 *e*P **P** 09 56 10.0 -1.9
POO *e*P pP 09 56 12.8 -2.6
POO AMb AMB 09 56 20.0
comp=Z,114nm,1.4s,mb5.3
KAD Karad 41.83 110 *ex* x 09 56 15.7
KAD AMb AMB 09 56 28.2
comp=Z,63nm,1.6s,mb5.0
AKL Akola 41.83 103 *e*P **P** 09 56 19.6 -0.7
AKL AMb AMB 09 56 22.2
comp=Z,69nm,1.3s,mb5.1
GOA Goa 42.76 112 *ex* x 09 57 34.9
GOA AMb AMB 09 58 07.5
comp=Z,75nm,1.7s,mb5.1
DANN Dangsing 42.94 89 *e*P **P** 09 56 29.4 +0.1
comp=Z,44nm,0.7s,mb6.3
KOLN Koldanda 43.10 90 *e*P **P** 09 56 30.2 -0.4
comp=Z,194nm,0.7s,mb5.9
NGP Nagpur 43.11 101 *e*P **P** 09 56 28.7 -2.0
NGP AMb AMB 09 56 35.9
comp=Z,56nm,1.5s,mb5.1
DAG Danmarks Havn 43.46 345⇑ *i*P **P** 09 56 33.6 +0.7
DAG pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
DAG Danmarks Havn 43.46 345⇑ *i*P **P** 09 56 33.6 +0.7
comp=Z,8.7nm,0.6s,mb4.7
GKN Gorkha 43.79 89 *e*P **P** 09 56 35.6 -0.6
comp=Z,289nm,0.7s,mb6.1
DMN Daman 44.34 89 *e*P **P** 09 56 40.4 -0.2
comp=Z,315nm,0.7s,mb6.2
KKN Kakani 44.39 89 *e*P **P** 09 56 40.3 -0.7
comp=Z,104nm,0.6s,mb5.7
KKN Kakani 44.39 89 *e*P **P** 09 56 40.3 -0.7
KKN pmax pmax
comp=Z,104nm,0.6s,mb5.7
PKI Pulchoki 44.59 89 *e*P **P** 09 56 42.0 -0.6
comp=Z,94nm,0.7s,mb5.7
PKI Pulchoki 44.59 89 *e*P **P** 09 56 42.0 -0.6
PKI pmax pmax
comp=Z,94nm,0.7s,mb5.7
GUN Gumba 44.79 88 *e*P **P** 09 56 43.6 -0.6
comp=Z,211nm,0.8s,mb6.0
HYB Hyderabad 44.98 106 *e*P **P** 09 56 45.0 -0.8
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.4
HYB Hyderabad 44.98 106 *e*P **P** 09 56 45.0 -0.8
comp=Z,60nm,1.0s,mb5.4
HYB Hyderabad 44.98 106 *i* P **P** 09 56 45.0 -0.8
comp=Z,60nm,1.0s,mb5.4
JIRN Jiri 45.16 88 *e*P **P** 09 56 46.9 -0.2
comp=Z,132nm,0.7s,mb5.9
RAMN Ramite 45.82 89 *e*P **P** 09 56 51.5 -0.9
comp=Z,180nm,0.7s,mb6.1
BOK Bokaro 46.89 93 *e*P **P** 09 56 59.2 -1.6
BOK AMb AMB 09 57 09.1
comp=Z,111nm,1.5s,mb5.6
DBIC Dimbokro 47.23 236 P **P** 09 57 01.4 -2.1
comp=Z,22nm,0.8s,mb5.1,baz=25,slow=8.2,SNR=23
DBIC LR LR 10 18 59.6
comp=Z,4μm,19.6s,MS5.4,baz=24,slow=39
DBIC Dimbokro 47.23 236 P **P** 09 57 01.4 -2.1
DBIC pmax pmax
comp=Z,22nm,0.8s
DBIC MLR MLR
comp=Z,4μm,19.6s
DBIC Dimbokro 47.23 236 *e*P **P** 09 57 01.6 -1.9
comp=Z,35nm,0.8s,mb5.3
DBIC Dimbokro 47.23 236 *e*P **P** 09 57 01.6 -1.9
comp=Z,35nm,0.8s,mb5.3
DBIC LR LR
comp=Z,5μm,20.0s,MS5.5
TIC Toumodi 47.35 237 *e*P **P** 09 57 02.4 -2.1
comp=Z,312nm,1.2s,mb6.1
KIC Kosan Boka 47.38 236 *e*P **P** 09 57 02.8 -1.9
comp=Z,127nm,0.7s,mb6.0
MOY Mondy 47.40 52 *e*P **P** 09 57 06.6 +2.2
MOY pmax pmax
comp=Z,5.0nm,1.9s,mb4.1
SUMG Summit 47.40 337 *e*P **P** 09 57 04.5 +0.3
comp=Z,632nm,2.9s,mb6.0
SUMG Summit 47.40 337 *e*P **P** 09 57 04.5 +0.3
comp=Z,632nm,2.9s,mb6.0
LIC Lamto 47.67 236 *e*P **P** 09 57 04.8 -2.2
comp=Z,145nm,0.8s,mb6.1
LIC Lamto 47.67 236 *e*P **P** 09 57 05.0 -2.0
comp=Z,91nm,0.8s,mb5.6
LIC *e*MLR MLR
comp=Z,6μm,22.0s,MS5.2
LIC Lamto 47.67 236 *e*P **P** 09 57 05.0 -2.0
comp=Z,46nm,0.8s,mb5.6
LIC LR LR
comp=Z,3μm,22.0s,MS5.2
LSA Lhasa 48.01 83 P **P** 09 57 10.0 +0.5
LSA Lhasa 48.01 83 *e*P **P** 09 57 09.9 +0.4
LSA pmax pmax
comp=Z,72nm,0.8s,mb5.8
LSA MLR MLR
comp=Z,4μm,22.0s,MS5.3
LSA Lhasa 48.01 83 *e*P **P** 09 57 09.9 +0.4
comp=Z,72nm,0.8s,mb5.8
LSA Lhasa 48.01 83 *e*P **P** 09 57 09.9 +0.4
comp=Z,72nm,0.8s,mb5.8
LSA LR LR
comp=Z,4μm,22.0s,MS5.3
VIS Vishakhapatnam 48.38 102 *e*P **P** 09 57 10.7 -1.7
VIS AMb AMB 09 57 14.3
comp=Z,58nm,1.1s,mb5.5
MSEY Mahe Island 48.48 150 PFAKE 09 57 20.0 +6.8
MSEY LR LR
comp=Z,3μm,21.0s,MS5.3
KOD Kodaikanal 48.92 114 *e*P **P** 09 57 15.6 -1.1
KOD AMb AMB 09 57 23.8
comp=Z,67nm,0.5s,mb6.0
TLY Talaya 49.00 51 ⇑P **P** 09 57 17.5 +0.7
SNR=12
TLY Talaya 49.00 51 *e*P **P** 09 57 18.2 +1.4
TLY *e* 10 07 53.3
TLY pmax pmax
comp=Z,41nm,1.9s,mb5.1
TLY MLR MLR
comp=Z,3μm,18.0s,MS5.3
TLY Talaya 49.00 51 *e*P **P** 09 57 17.7 +0.9
TLY LR LR
comp=Z,5μm,20.0s,MS5.5
ZAK Zakamensk 49.12 53 *e*P **P** 09 57 18.6 +0.9
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
IRK Irkutsk 49.23 50 *e*P **P** 09 57 23.3 +4.8
IRK pmax pmax
comp=Z,31nm,1.8s,mb5.0
GTA Gaotai 50.38 67 *e*P **P** 09 57 27.5 0.0
GTA AP pP 09 57 31.3 +0.3
GTA PP PP 09 59 25.0 +2.2
GTA S **S** **10 04 42.1 +1.7**
GTA SS SS 10 08 15.5 +1.7
GTA AMB AMB
comp=Z,28nm,0.8s,mb5.3
GTA AMB AMB
comp=Z,622nm,4.2s
GTA LR LR
comp=N,4μm,22.0s,MS5.4
GTA LR LR
comp=E,2μm,22.0s,MS5.4
GTA LR LR
comp=Z,5μm,17.3s,MS5.5
SHL Shillong 50.61 87 *e*P **P** 09 57 28.0 -1.4
SONM Songino Array 51.84 55 P **P** 09 57 38.4 +0.1
comp=Z,3.9nm,0.6s,mb4.5,baz=294,slow=6.9,SNR=20
ALE Alert 51.87 350 P **P** 09 57 39.0 +0.8
comp=Z,86nm,1.2s,mb5.6,SNR=8.0
SFJD Kangerlussuaq 52.07 330 PFAKE 09 57 50.0 +10
SFJD LR LR
comp=Z,4μm,19.0s,MS5.5
ULN Ulaanbaatar 52.24 55 ⇑P **P** 09 57 41.9 +0.6
SNR=16
ULN Ulaanbaatar 52.24 55 *e*P **P** 09 57 41.3 0.0
ULN Ulaanbaatar 52.24 55 *e*P **P** 09 57 41.4 +0.1
ULN LR LR
comp=Z,5μm,21.0s,MS5.5
IMP Imphal 52.60 87 *e*P **P** 09 57 44.0 -0.3
BOD Bodaibo 53.11 41 *e*P **P** 09 57 46.7 -0.9
BOD pmax pmax
comp=Z,32nm,1.1s,mb5.2
LSZ Lusaka 54.62 186 P **P** 09 58 01.8 +2.8
SNR=7.5
LSZ Lusaka 54.62 186 *e*P **P** 09 58 00.1 +1.1
LSZ pmax pmax
comp=Z,43nm,1.4s,mb5.3
LSZ MLR MLR
comp=Z,5μm,21.0s,MS5.5
LSZ Lusaka 54.62 186 *e*P **P** 09 58 00.1 +1.1
comp=Z,43nm,1.4s,mb5.3
LSZ LR LR
comp=Z,5μm,21.0s,MS5.5
LZH Lanzhou 54.66 70 *e*P **P** 09 57 59.8 +0.5
LZH PP PP 10 00 04.0 +2.4
LZH *e*S **S** **10 05 37.5 -1.6**
LZH SS SS 10 09 21.0 -0.6
LZH AMB AMB
comp=Z,100nm,1.4s,mb5.7
LZH AMB AMB
comp=Z,417nm,5.4s
LZH LR LR
comp=N,4μm,14.4s
LZH LR LR
comp=Z,4μm,16.0s,MS5.6
TIXI Tiksi 54.86 23⇓ *i*P **P** 09 57 59.9 -0.2
TIXI MLR MLR
comp=Z,5μm,20.0s,MS5.6
CD2 Chengdu 57.02 75 P **P** 09 58 17.5 +1.3
CD2 AP pP 09 58 21.4 +1.6
CD2 XP sP 09 58 23.5 +2.3
CD2 PCP PcP 09 59 12.5 +1.2
CD2 PP PP 10 00 20.8 -1.9
CD2 S **S** **10 06 09.6 -1.0**
CD2 SS SS 10 09 59.3 +0.4
CD2 AMB AMB
comp=Z,50nm,1.0s,mb5.5
CD2 AMB AMB
comp=Z,990nm,11.6s
CD2 LR LR
comp=N,2μm,21.4s
CD2 LR LR
comp=Z,3μm,23.8s,MS5.3
HHC Hu-ho-hao-te 57.98 61 *e*P **P** 09 58 23.3 +0.4
HHC AP pP 09 58 27.8 +1.3
HHC XP sP 09 58 30.5 +2.6
HHC PP PP 10 00 33.6 +2.5
HHC PCS PcS 10 03 15.3 -0.9

HHC eS S 10 06 20.5 -2.5
HHC SCS ScS 10 08 08.5 -3.9
HHC SS SS 10 10 12.6 -1.0
HHC AMB AMB
comp=Z,31nm,1.3s,mb5.2
HHC AMB AMB
comp=Z,685nm,5.1s
HHC LR LR
comp=N,3μm,23.9s
HHC LR LR
comp=E,3μm,17.3s
HHC LR LR
comp=Z,4μm,19.0s,MS5.6
YAK Yakutsk 58.91 33 eP P 09 58 30.2 +1.2
YAK pmax pmax
comp=Z,14nm,0.8s,mb5.0
YAK Yakutsk 58.91 33 eP P 09 58 29.8 +0.8
YAK LR LR
comp=Z,4μm,20.0s,MS5.5
KMI Kunming 59.20 82 P P 09 58 30.1 -1.5
KMI PCP PcP 09 59 21.5 +1.5
KMI PP PP 10 00 45.8 +3.5
KMI S S 10 06 37.8 -1.5
KMI SS SS 10 10 32.3 -1.2
KMI AMB AMB
comp=Z,33nm,1.2s,mb5.2
KMI LR LR
comp=N,2μm,17.6s,MS5.5
KMI LR LR
comp=E,2μm,17.6s,MS5.5
KMI LR LR
comp=Z,2μm,20.4s,MS5.3
XAN Xi'an 59.30 69 P P 09 58 32.0 -0.2
XAN AP pP 09 58 36.9 +1.1
XAN PP PP 10 00 41.9 -1.0
XAN S S 10 06 39.6 -0.7
XAN SS SS 10 10 35.3 +0.7
XAN AMB AMB
comp=Z,19nm,1.5s,mb4.9
XAN AMB AMB
comp=Z,588nm,13.4s
XAN LR LR
comp=N,1μm,21.7s,MS5.3
XAN LR LR
comp=E,2μm,22.1s,MS5.3
XAN LR LR
comp=Z,4μm,18.4s,MS5.6
HIA Hailar 59.46 49 eP P 09 58 33.2 +0.2
HIA pmax pmax
comp=Z,19nm,0.8s
HIA MLR MLR
comp=Z,5μm,20.0s
HIA Hailar 59.46 49 eP P 09 58 33.2 +0.2
comp=Z,19nm,0.8s,mb5.2
HIA Hailar 59.46 49 eP P 09 58 33.2 +0.2
comp=Z,19nm,0.8s,mb5.2
HIA LR LR
comp=Z,5μm,20.0s,MS5.6
ABPO Ambohimpanom 59.62 165 PFAKE 09 58 50.0 +16
ABPO LR LR
comp=Z,3μm,21.0s,MS5.4
CHG Chiang Mai 59.76 90 ⇑P P 09 58 33.8 -1.7
comp=Z,26nm,0.9s,mb5.3
CHTO Chiang Mai 59.76 90 ⇑P P 09 58 35.6 0.0
SNR=14
CHTO Chiang Mai 59.76 90 eP P 09 58 33.9 -1.6
CHTO pmax pmax
comp=Z,16nm,0.8s,mb5.1
CHTO MLR MLR
comp=Z,1μm,21.0s,MS5.1
CHTO Chiang Mai 59.76 90 eP P 09 58 33.9 -1.6
comp=Z,16nm,0.8s,mb5.1
CHTO LR LR
comp=Z,1μm,21.0s,MS5.1
CM31 Chiang Mai Arr 59.96 90 PFAKE 09 58 50.0 +13
CM31 LR LR
comp=Z,1μm,21.0s,MS5.0
CMAR Chiang Mai Arr 59.97 90 P P 09 58 35.5 -1.5
comp=Z,15nm,0.8s,mb5.1,baz=298,slow=7.9,SNR=42
CMAR LR LR 10 26 37.6
comp=Z,2μm,21.7s,MS5.1,baz=161,slow=38
TSUM Tsumeb 60.12 197 eP P 09 58 37.2 -0.6
comp=Z,34nm,1.4s,mb5.2
TSUM Tsumeb 60.12 197 eP P 09 58 37.2 -0.5
comp=Z,34nm,1.4s,mb5.2
TSUM LR LR
comp=Z,3μm,20.0s,MS5.4
BDT Bhumibol Dam 60.71 91 P P 09 58 41.0 -1.1
comp=Z,22nm,1.0s,mb5.2
RES Resolute Bay 61.12 346 eP P 09 58 43.7 -0.3
RES pmax pmax
comp=Z,73nm,2.3s,mb5.4
RES Resolute Bay 61.12 346 eP P 09 58 43.7 -0.3
comp=Z,73nm,2.3s,mb5.4
RES Resolute Bay 61.12 346 eP P 09 58 43.7 -0.3
comp=Z,73nm,2.3s,mb5.4
BJI Beijing 61.47 60 P P 09 58 47.1 +0.2
BJI AMB AMB
comp=Z,34nm,1.5s,mb5.3
BJT Baijiatuau 61.48 60 PFAKE 09 59 00.0 +13
BJT LR LR
comp=Z,3μm,20.0s,MS5.4
GYA Guiyang 61.48 78⇓ iP P 09 58 47.9 +0.7
GYA PCP PcP 09 59 31.4 +2.3
GYA PP PP 10 01 05.3 +2.9
GYA SCP ScP 10 03 29.5 -1.2
GYA S S 10 07 06.6 -2.0
GYA SS SS 10 11 08.4 -0.8
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,280nm,13.5s
GYA LR LR
comp=N,2μm,22.7s,MS5.3
GYA LR LR
comp=E,2μm,20.3s,MS5.3
GYA LR LR
comp=Z,2μm,21.3s,MS5.2
NST Nakhon Sawan 62.51 92 P P 09 58 51.0 -3.2
comp=Z,42nm,0.7s,mb5.7
SCHQ Schefferville 64.01 321 P P 09 59 03.0 -0.6
comp=Z,5.8nm,0.7s,mb4.7,baz=76,slow=19,SNR=7.6
SCHQ LR LR 10 23 39.6
comp=Z,3μm,21.9s,MS5.4,baz=313,slow=33
LBTB Lobatse 64.50 188 eP P 09 59 06.7 -0.3
LBTB pmax pmax
comp=Z,82nm,1.4s,mb5.6
LBTB MLR MLR
comp=Z,3μm,19.0s,MS5.5
LBTB Lobatse 64.50 188 eP P 09 59 06.7 -0.3
comp=Z,82nm,1.4s,mb5.6
LBTB Lobatse 64.50 188 eP P 09 59 06.7 -0.3
comp=Z,82nm,1.4s,mb5.6
LBTB LR LR
comp=Z,3μm,19.0s,MS5.5
WHN Wuhan 65.03 70 ⇑P P 09 59 15.9 +5.2
WHN XP sP 09 59 24.0 +8.3
WHN S S 10 07 56.3 +3.5
WHN AMB AMB
comp=Z,38nm,0.7s,mb5.5
WHN LR LR
comp=N,2μm,15.5s,MS5.8
WHN LR LR
comp=E,4μm,14.2s,MS5.8
WHN LR LR
comp=Z,7μm,20.3s
SNY Shenyang 65.42 55 ⇓P P 09 59 13.3 +0.3
SNY AMB AMB
comp=Z,12nm,0.5s,mb5.2
SNY AMB AMB
comp=Z,1μm,12.0s
SNY LR LR
comp=N,3μm,22.2s,MS5.7
SNY LR LR
comp=E,4μm,18.0s,MS5.7
SNY LR LR
comp=Z,4μm,18.0s,MS5.7
CN2 Changchun 65.55 53 eP P 09 59 13.3 -0.5
CN2 eAP pP 09 59 17.9 +0.4
CN2 eS S 10 07 56.1 -2.7
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,4μm,19.0s,MS5.8
CN2 LR LR
comp=E,4μm,19.0s,MS5.8
CN2 LR LR
comp=Z,4μm,21.0s,MS5.5
SHEL Horse Pasture 65.99 221 PFAKE 09 59 30.0 +13
SHEL LR LR
comp=Z,1μm,21.0s,MS5.2
KLR Kul'dur 66.31 45 eP P 09 59 13.8 -4.8
SEY Seymchan 67.07 26 eP P 09 59 24.0 +0.7
BILL Bilibino 67.23 17⇓ eP P 09 59 23.7 -0.5
BILL eS S 10 08 12.8 -5.6
BILL pmax pmax
comp=Z,37nm,1.0s,mb5.4
BILL MLR MLR
comp=Z,2μm,20.0s,MS5.3
BILL Bilibino 67.23 17 eP P 09 59 24.3 +0.1
BILL Bilibino 67.23 17 eP P 09 59 24.3 +0.1
comp=Z,43nm,1.1s,mb5.4
BILL e pP 09 59 28.8 +1.0
BILL LR LR
comp=Z,3μm,19.0s,MS5.5
NJ2 Nanjing 67.46 66 eP P 09 59 28.1 +1.9
NJ2 PP PP 10 01 58.9 +4.3
NJ2 S S 10 08 22.0 -0.2
NJ2 XS sS 10 08 30.5 +2.2
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
NJ2 AMB AMB
comp=Z,260nm,6.0s
NJ2 LR LR
comp=N,1μm,22.3s,MS5.3
NJ2 LR LR
comp=E,2μm,24.9s,MS5.3
NJ2 LR LR
comp=Z,2μm,23.9s,MS5.2
MDJ Mudanjiang 67.62 50 P P 09 59 25.9 -1.1
MDJ PCP PcP 09 59 53.0 -1.1
MDJ PP PP 10 01 54.3 -1.4
MDJ SCS ScS 10 09 20.9 -4.4
MDJ AMB AMB
comp=Z,7.0nm,2.1s,mb4.3
MDJ AMB AMB
comp=Z,356nm,7.4s
MDJ LR LR
comp=N,3μm,20.3s,MS5.6
MDJ LR LR
comp=E,2μm,20.3s,MS5.6
MDJ LR LR
comp=Z,3μm,21.4s,MS5.4
MDJ Mudanjiang 67.62 50 PFAKE 09 59 40.0 +13
MDJ LR LR
comp=Z,3μm,22.0s,MS5.5
QIZ Qiongzhong 68.06 83 P P 09 59 29.1 -1.1
QIZ S S 10 08 29.4 -0.3
QIZ LR LR
comp=N,2μm,23.0s,MS5.3
QIZ LR LR
comp=E,1μm,23.4s,MS5.3
QIZ LR LR
comp=Z,3μm,22.7s,MS5.4
QIZ Qiongzhong 68.06 83 PFAKE 09 59 40.0 +10
QIZ LR LR
comp=Z,3μm,22.0s,MS5.5
BOSA Boshof 68.09 187 P P 09 59 29.4 -0.7
comp=Z,33nm,0.8s,mb5.5,baz=11,slow=6.0,SNR=46
BOSA Boshof 68.09 187 eP P 09 59 29.4 -0.6
BOSA pmax pmax
comp=Z,38nm,0.8s,mb5.5
BOSA MLR MLR
comp=Z,3μm,20.0s,MS5.5
BOSA Boshof 68.09 187 eP P 09 59 29.4 -0.6
comp=Z,38nm,0.8s,mb5.5
BOSA Boshof 68.09 187 eP P 09 59 29.4 -0.6
comp=Z,38nm,0.8s,mb5.5
BOSA LR LR
comp=Z,3μm,20.0s,MS5.5
HABR Khabarovsk 68.53 44 P P 09 59 31.2 -1.5
HABR e*PP pP 09 59 34.6 -1.8
HABR e 09 59 56.3
HABR ePPP 10 03 40.8
HABR eS S 10 08 33.9 -0.7
HABR e 10 09 30.8
HABR eSS SS 10 12 58.7 +0.9
HABR pmax pmax
comp=E,29nm,1.7s
HABR pmax pmax
comp=N,33nm,1.8s
HABR pmax pmax
comp=Z,33nm,1.9s,mb4.9
HABR MLR MLR
comp=Z,3μm,17.0s,MS5.6
KULM Kulim 69.32 100 eP P 09 59 34.5 -3.6
comp=Z,36nm,0.8s,mb5.3
KULM LR LR
comp=Z,2μm,20.0s,MS5.3
SSE Sheshan 69.64 66 P P 09 59 38.9 -1.0
SSE S S 10 08 47.3 -0.9
SSE AMB AMB
comp=Z,28nm,0.6s,mb5.4
SSE AMB AMB
comp=Z,803nm,12.0s
SSE LR LR
comp=N,1μm,20.4s,MS5.3
SSE LR LR
comp=E,1μm,20.4s,MS5.3
SSE LR LR
comp=Z,3μm,23.8s,MS5.4
KSRS Korea Array 70.62 57 P P 09 59 44.6 -1.2
comp=Z,7.7nm,0.7s,mb4.7,baz=303,slow=5.3,SNR=21
KSRS LR LR 10 34 23.1
comp=Z,4μm,20.2s,MS5.6,baz=317,slow=39
KSRS Korea Array 70.62 57 P P 09 59 44.6 -1.2
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KSRS MLR MLR
comp=Z,4μm,20.2s,MS5.6
PKME Peaks-Kenny Pk 70.73 313 PFAKE 10 00 00.0 +14
PKME LR LR
comp=Z,4μm,19.0s,MS5.6
INK Inuvik 72.12 355 P P 09 59 53.7 -0.6
comp=Z,6.9nm,1.0s,mb4.5,baz=16,slow=9.3,SNR=17
SUR Sutherland 72.36 191 PFAKE 10 00 10.0 +14
SUR LR LR
comp=Z,3μm,20.0s,MS5.6
FCC Fort Churchill 72.80 334 eP P 09 59 58.3 -0.2
comp=Z,0.4nm,0.9s
FCC Fort Churchill 72.80 334 eP P 09 59 58.3 -0.3
comp=Z,0.4nm,0.9s
LBNH Lisbon 72.84 313 PFAKE 10 00 10.0 +11
LBNH LR LR
comp=Z,3μm,19.0s,MS5.6
TATO Taipei 73.38 71 PFAKE 10 00 10.0 +7.5
TATO LR LR
comp=Z,3μm,20.0s,MS5.6
YHNB Yeheng 73.47 72 PFAKE 10 00 10.0 +6.9
YHNB LR LR
comp=Z,4μm,21.0s,MS5.7
YSS Yuzh-Sakhalins 73.57 42 eP P 10 00 03.0 -0.3
YSS e 10 00 19.6
YSS pmax pmax
comp=Z,30nm,1.3s,mb5.1
YSS Yuzh-Sakhalins 73.57 42 eP P 10 00 03.2 -0.1
YSS LR LR
comp=Z,1μm,20.0s,MS5.2
COLD Coldfoot 73.64 1 eP P 10 00 03.3 0.0
comp=Z,16nm,1.0s,mb4.9
COLD Coldfoot 73.64 1 eP P 10 00 03.3 0.0
comp=Z,16nm,1.0s,mb4.9
TNA Tin City 74.06 9 eP P 10 00 05.6 -0.2
comp=Z,101nm,2.1s,mb5.4
TNA Tin City 74.06 9 eP P 10 00 05.6 -0.2
comp=Z,101nm,2.1s,mb5.4
LONY Lake Ozonia 74.08 315 PFAKE 10 00 20.0 +14
LONY LR LR
comp=Z,3μm,20.0s,MS5.6
YKA Yellowknife Ar 75.16 345 P P 10 00 11.2 -1.0
comp=Z,8.6nm,0.7s,mb4.8,baz=30,slow=5.6,SNR=95
YKA LR LR 10 33 41.7
comp=Z,830nm,20.7s,MS5.0,baz=95,slow=36
YKA Yellowknife Ar 75.16 345 P P 10 00 11.2 -1.0
YKA LR LR 10 33 41.7
ASAJ Asahikawa 75.33 45 P P 10 00 15.1 +1.5
comp=Z,5.5nm,0.7s,mb4.6,baz=185,slow=23,SNR=4.3
ASAJ Asahikawa 75.33 45 P P 10 00 15.1 +1.5
ASAJ pmax pmax
comp=Z,6.0nm,0.7s
BBSR BB Station 75.67 300 PFAKE 10 00 30.0 +14
BBSR LR LR
comp=Z,2μm,20.0s,MS5.4
COLA College 76.03 0 eP P 10 00 17.0 -0.2
COLA pmax pmax
comp=Z,23nm,1.3s,mb5.0
COLA MLR MLR
comp=Z,2μm,20.0s,MS5.4
COLA College 76.03 0 eP P 10 00 17.0 -0.2
comp=Z,23nm,1.3s,mb5.0
COLA College 76.03 0 eP P 10 00 17.0 -0.2
comp=Z,23nm,1.3s,mb5.0
COLA LR LR
comp=Z,2μm,20.0s,MS5.4
EGAK Eagle 76.03 357 eP P 10 00 17.5 +0.3
comp=Z,12nm,0.8s,mb4.9
EGAK Eagle 76.03 357 eP P 10 00 17.5 +0.3
comp=Z,12nm,0.8s,mb4.9
EGAK LR LR
comp=Z,3μm,19.0s,MS5.7
BINY Binghamton 76.43 314 PFAKE 10 00 30.0 +10
BINY LR LR
comp=Z,3μm,21.0s,MS5.5
PET Petropavlovsk 76.56 30 PFAKE 10 00 30.0 +10
PET LR LR
comp=Z,3μm,22.0s,MS5.6
DAWY Dawson 76.67 357 eP P 10 00 21.1 +0.2
DAWY Dawson 76.67 357 eP P 10 00 21.1 +0.3
BPAW Bear Paw Mtn. 76.76 2 eP P 10 00 20.8 -0.5
comp=Z,16nm,1.0s,mb4.9
BPAW Bear Paw Mtn. 76.76 2 eP P 10 00 20.8 -0.5
comp=Z,16nm,1.0s,mb4.9
ERM Erimo 77.03 46 PFAKE 10 00 30.0 +6.7
ERM LR LR
comp=Z,4μm,21.0s,MS5.7
MAJO Matsushiro 77.70 53 eP P 10 00 27.0 -0.1
MAJO pmax pmax
comp=Z,102nm,1.9s,mb5.4
MAJO MLR MLR
comp=Z,3μm,19.0s,MS5.7
MAJO Matsushiro 77.70 53 eP P 10 00 27.0 -0.1
comp=Z,102nm,1.9s,mb5.4
MAJO Matsushiro 77.70 53 eP P 10 00 27.0 -0.2
comp=Z,102nm,1.9s,mb5.4
MAJO LR LR
comp=Z,3μm,19.0s,MS5.7
MAT Matsushiro 77.70 53 P P 10 00 28.1 +1.0
MAT eS S 10 10 23.0 +3.9
MJAR Matsushiro Arr 77.70 53 P P 10 00 28.5 +1.3
comp=Z,10nm,0.8s,mb4.8,baz=323,slow=2.7,SNR=14
RCBR Riachuelo 77.78 252 PFAKE 10 00 40.0 +12
RCBR LR LR
comp=Z,3μm,20.0s,MS5.5
PPLA Purkeypile 77.93 2 eP P 10 00 27.1 -0.8
comp=Z,11nm,0.6s,mb5.0
PPLA Purkeypile 77.93 2 eP P 10 00 27.1 -0.8
comp=Z,11nm,0.6s,mb5.0
MENT Mentasta 77.94 359 eP P 10 00 28.6 +0.6
MENT Mentasta 77.94 359 eP P 10 00 28.6 +0.7
MVL Millersville 78.09 312 eP P 10 00 29.7 +0.5
comp=Z,52nm,1.4s,mb5.3
COCO West Island 78.29 116 PFAKE 10 00 40.0 +9.4
COCO LR LR
comp=Z,1μm,19.0s,MS5.3
SSPA Standing Stone 78.53 314 PFAKE 10 00 40.0 +8.3
SSPA LR LR
comp=Z,2μm,22.0s,MS5.4
FFC Flin Flon 78.64 335 eP P 10 00 32.2 +0.2
FFC pmax pmax
comp=Z,12nm,0.9s,mb4.8
FFC MLR MLR
comp=Z,3μm,20.0s,MS5.7
FFC Flin Flon 78.64 335 eP P 10 00 32.2 +0.2
comp=Z,12nm,0.9s,mb4.8
FFC Flin Flon 78.64 335 eP P 10 00 32.2 +0.2
comp=Z,12nm,0.9s,mb4.8
FFC LR LR
comp=Z,3μm,20.0s,MS5.7
ERPA Erie 78.68 316 PFAKE 10 00 40.0 +7.5
ERPA LR LR
comp=Z,3μm,20.0s,MS5.6
KSM Kuching 79.15 97 PFAKE 10 00 50.0 +15
KSM LR LR
comp=Z,2μm,19.0s,MS5.5
GLMI Grayling 79.18 320 PFAKE 10 00 50.0 +15
GLMI LR LR
comp=Z,3μm,20.0s,MS5.7
SVW2 Sparrevohn 79.57 4 eP P 10 00 37.8 +0.8
SVW2 Sparrevohn 79.57 4 eP P 10 00 37.8 +0.9
HYT Haines Junctio 79.80 355 eP P 10 00 38.8 +0.6
HYT Haines Junctio 79.80 355 eP P 10 00 38.8 +0.6
RC01 Rabbit Creek A 79.80 1 eP P 10 00 37.8 -0.4
comp=Z,22nm,0.8s,mb5.1
RC01 Rabbit Creek A 79.80 1 eP P 10 00 37.8 -0.5
comp=Z,22nm,0.8s,mb5.1
CBN Corbin 79.88 311 PFAKE 10 00 50.0 +11
CBN LR LR
comp=Z,2μm,20.0s,MS5.4
EYMN Ely 80.08 326 PFAKE 10 00 50.0 +10
EYMN LR LR
comp=Z,3μm,19.0s,MS5.6
ULM Lac du Bonnet 80.10 330 P P 10 00 40.3 +0.3
comp=Z,13nm,0.8s,mb4.9,baz=36,slow=4.9,SNR=11
ULM LR LR 10 34 57.0
comp=Z,2μm,20.8s,MS5.5,baz=45,slow=35
ULM Lac du Bonnet 80.10 330 eP P 10 00 39.2 -0.8
comp=Z,15nm,0.9s,mb4.9
ULM Lac du Bonnet 80.10 330 eP P 10 00 39.2 -0.8
comp=Z,15nm,0.9s,mb4.9
ULM LR LR
comp=Z,3μm,20.0s,MS5.6
MCWV Mont Chateau 80.30 314 PFAKE 10 00 50.0 +8.7
MCWV LR LR
comp=Z,2μm,20.0s,MS5.5
AAM Ann Arbor 80.50 318 PFAKE 10 00 50.0 +7.6
AAM LR LR
comp=Z,3μm,20.0s,MS5.6
JSRW J. Sargeant Re 80.52 311 eP P 10 00 42.0 -0.6
JSRW J. Sargeant Re 80.52 311 eP P 10 00 42.0 -0.6
KKM Kota Kinabalu 80.84 90 PFAKE 10 01 00.0 +15
KKM LR LR
comp=Z,2μm,20.0s,MS5.5
ACSO Alum Creek Sta 81.61 316 eP P 10 00 50.3 +1.9
ACSO LR LR
comp=Z,4μm,20.0s,MS5.7
AGMN Agassiz Refuge 81.64 328 eP P 10 00 48.9 +0.6
AGMN Agassiz Refuge 81.64 328 eP P 10 00 48.9 +0.6
AGMN LR LR
comp=Z,2μm,21.0s,MS5.5
CNNC Cliffs of the 82.20 310 PFAKE 10 01 00.0 +8.5
CNNC LR LR
comp=Z,3μm,19.0s,MS5.6
BLA Blacksburg 82.32 312 PFAKE 10 01 00.0 +7.9
BLA LR LR
comp=Z,2μm,20.0s,MS5.5
ANWB Willy Bob 82.69 287 PFAKE 10 01 10.0 +16
ANWB LR LR
comp=Z,2μm,19.0s,MS5.4
KDAK Kodiak Island 83.03 3 P P 10 00 56.5 +1.1
comp=Z,12nm,0.7s,mb5.0,baz=32,slow=7.0,SNR=9.3
KDAK Kodiak Island 83.03 3 eP P 10 00 57.1 +1.7
KDAK LR LR
comp=Z,4μm,20.0s,MS5.7
EDM Edmonton 83.27 340 eP P 10 00 57.1 +0.4
EDM Edmonton 83.27 340 eP P 10 00 57.1 +0.4
JFWS Jewell Farm 83.34 322 PFAKE 10 01 10.0 +13
JFWS LR LR
comp=Z,3μm,19.0s,MS5.7
WRAK Wrangell Islan 83.73 352 PFAKE 10 01 10.0 +11
WRAK LR LR
comp=Z,3μm,19.0s,MS5.7
BBGH Gun Hill 83.84 282 PFAKE 10 01 10.0 +10
BBGH LR LR
comp=Z,3μm,19.0s,MS5.7
BLO Bloomington 84.27 317 eP P 10 01 01.0 -1.1
BLO pmax pmax
comp=Z,20nm,1.0s,mb5.2
BLO Bloomington 84.27 317 eP P 10 01 00.9 -1.2
comp=Z,20nm,1.0s,mb5.2
BLO Bloomington 84.27 317 eP P 10 01 00.9 -1.2
comp=Z,20nm,1.0s,mb5.2
TZTN Tazewell 84.56 314 eP P 10 01 04.6 +1.0
HDIL Hopedale 84.66 320 eP P 10 01 03.7 -0.4
comp=Z,32nm,0.9s,mb5.5
HDIL Hopedale 84.66 320 eP P 10 01 03.7 -0.4
comp=Z,32nm,0.9s,mb5.5

HDIL LR LR
comp=Z,3µm,19.0s,MS5.6
WCI Wyandotte Cave 84.84 316 *e*P **P 10 01 05.1 +0.1**
WCI pmax pmax
comp=Z,18nm,0.9s,mb5.2
WCI MLR MLR
comp=Z,2µm,19.0s,MS5.6
WCI Wyandotte Cave 84.84 316 *e*P **P 10 01 05.1 +0.1**
comp=Z,18nm,0.9s,mb5.2
WCI Wyandotte Cave 84.84 316 *e*P **P 10 01 05.1 0.0**
comp=Z,18nm,0.9s,mb5.2
WCI LR LR
comp=Z,2µm,19.0s,MS5.6
NHSC New Hope 85.04 309 PFAKE 10 01 20.0 +14
NHSC LR LR
comp=Z,2µm,19.0s,MS5.6
TKL Tuckaleechee C 85.32 313 *e*P **P 10 01 06.8 -0.7**
TKL Tuckaleechee C 85.32 313 *e*P **P 10 01 06.8 -0.7**
ADK Adak 85.41 18 PFAKE 10 01 20.0 +12
ADK LR LR
comp=Z,3µm,20.0s,MS5.7
OLIL Olney 85.41 318 *e*P **P 10 01 06.9 -1.0**
comp=Z,32nm,0.9s,mb5.5
OLIL Olney 85.41 318 *e*P **P 10 01 06.9 -1.0**
comp=Z,32nm,0.9s,mb5.5
SCIA State Center 85.52 323 PFAKE 10 01 20.0 +12
SCIA LR LR
comp=Z,3µm,19.0s,MS5.7
ECSD EROS,Sioux Fal 85.60 326 *e*P **P 10 01 08.1 -0.6**
comp=Z,11nm,0.8s,mb5.1
ECSD EROS,Sioux Fal 85.60 326 *e*PP PP 10 04 25.2 -1.5
ECSD EROS,Sioux Fal 85.60 326 *e*P **P 10 01 08.1 -0.7**
comp=Z,11nm,0.8s,mb5.1
ECSD *e*PP PP 10 04 25.2 -1.4
ECSD LR LR
comp=Z,2µm,19.0s,MS5.6
SJG San Juan 85.62 290 PFAKE 10 01 20.0 +11
SJG LR LR
comp=Z,2µm,20.0s,MS5.6
USIN University of 85.76 317 *e*P **P 10 01 08.5 -1.1**
comp=Z,39nm,0.9s,mb5.6
USIN University of 85.76 317 *e*P **P 10 01 08.5 -1.1**
comp=Z,39nm,0.9s,mb5.6
CPCT Cooper Cave 85.89 314 *e*P **P 10 01 10.1 -0.3**
CPCT Cooper Cave 85.89 314 *e*P **P 10 01 10.1 -0.2**
GRGR Grenville 86.06 282 PFAKE 10 01 20.0 +8.5
GRGR LR LR
comp=Z,995nm,20.0s,MS5.2
SIUC Southern Illin 86.76 318 *e*P **P 10 01 13.9 -0.7**
SIUC Southern Illin 86.76 318 *e*P **P 10 01 13.9 -0.7**
GOGA Godfrey 86.76 311 *e*P **P 10 01 14.8 +0.1**
GOGA MLR MLR
comp=Z,2µm,21.0s,MS5.6
TRIS Tristan da Cun 86.86 215 PFAKE 10 01 30.0 +15
TRIS LR LR
comp=Z,1µm,20.0s,MS5.3
EGMT Eagleton 86.89 336 PFAKE 10 01 30.0 +15
EGMT LR LR
comp=Z,4µm,20.0s,MS5.8
WALA Waterton Lakes 87.20 339 *e*P **P 10 01 18.1 +1.6**
WVT Waverly 87.21 316 *e*P **P 10 01 15.3 -1.5**
WVT pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
WVT MLR MLR
comp=Z,3µm,19.0s,MS5.7
WVT Waverly 87.21 316 *e*P **P 10 01 15.2 -1.6**
comp=Z,10.0nm,0.9s,mb5.0
WVT Waverly 87.21 316 *e*P **P 10 01 15.2 -1.6**
comp=Z,10.0nm,0.9s,mb5.0
WVT LR LR
comp=Z,3µm,19.0s,MS5.7
DAV Davao City (W) 87.43 83 PFAKE 10 01 30.0 +12
DAV LR LR
comp=Z,2µm,22.0s,MS5.5
RSSD Black Hills 88.30 331 *e*P **P 10 01 22.4 +0.6**
RSSD MLR MLR
comp=Z,3µm,19.0s,MS5.8
YBMT Yellow Bay 88.31 339 *e*P **P 10 01 23.6 +1.7**
SWMT Swartz Lake 88.63 338 *e*P **P 10 01 23.3 0.0**
SWMT Swartz Lake 88.63 338 *e*P **P 10 01 23.3 -0.1**
SDDR Presa de Saban 88.75 294 *e*P **P 10 01 28.3 +3.9**
SDDR LR LR
comp=Z,2µm,19.0s,MS5.4
NEW Newport 88.78 341 PFAKE 10 01 40.0 +16
NEW LR LR
comp=Z,2µm,19.0s,MS5.6
LRAL Lakeview Retre 89.06 313 *e*P **P 10 01 24.8 -0.8**
comp=Z,9.0nm,0.7s,mb5.2
LRAL Lakeview Retre 89.06 313 *e*P **P 10 01 24.8 -0.8**
comp=Z,9.0nm,0.7s,mb5.2
LRAL LR LR
comp=Z,3µm,19.0s,MS5.8
MSO Missoula 89.23 338 PFAKE 10 01 40.0 +14
MSO LR LR
comp=Z,2µm,20.0s,MS5.6
OXF Oxford 89.28 316 PFAKE 10 01 40.0 +13
OXF LR LR
comp=Z,3µm,19.0s,MS5.8
RLMT Red Lodge 89.30 334 PFAKE 10 01 40.0 +13
RLMT LR LR
comp=Z,3µm,21.0s,MS5.7
KSU1 Kansas State U 89.32 323 PFAKE 10 01 40.0 +13
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.6
DWPF Disney 89.32 307 PFAKE 10 01 40.0 +13
DWPF LR LR
comp=Z,1µm,19.0s,MS5.4
BOZ Bozeman (W) 89.60 336 PFAKE 10 01 40.0 +12
BOZ LR LR
comp=Z,3µm,20.0s,MS5.8
JCW Jim Creek 89.99 344 *e*P **P 10 01 30.3 +0.6**
JCW Jim Creek 89.99 344 *e*P **P 10 01 30.3 +0.6**
DLMT Dillon 90.15 337 *e*P **P 10 01 34.3 +3.8**
KAPI Kappang 90.52 96 PFAKE 10 01 40.0 +7.3
KAPI LR LR
comp=Z,960nm,20.0s,MS5.2
BRAL Brewton 90.59 312 PFAKE 10 01 40.0 +7.2
BRAL LR LR
comp=Z,2µm,19.0s,MS5.6
GTBY Guantanamo Bay 90.80 297 PFAKE 10 01 50.0 +16
GTBY LR LR
comp=Z,1µm,19.0s,MS5.4
CBKS Cedar Bluff 90.97 325 PFAKE 10 01 50.0 +16
CBKS LR LR
comp=Z,2µm,20.0s,MS5.7
HAWA Hanford 91.13 341 PFAKE 10 01 50.0 +15
HAWA LR LR
comp=Z,3µm,21.0s,MS5.7
NLWA Neilton Lookou 91.16 345 PFAKE 10 01 50.0 +15
NLWA LR LR
comp=Z,4µm,21.0s,MS5.8
PHWY Pilot Hill 91.25 330 *e*P **P 10 01 36.0 +0.3**
PHWY Pilot Hill 91.25 330 *e*P **P 10 01 36.0 +0.3**
TPAW Teton Pass 91.30 335 *e*P **P 10 01 37.2 +1.3**
TPAW Teton Pass 91.30 335 *e*P **P 10 01 37.2 +1.3**
MIAR Mount Ida 91.44 319 *e*P **P 10 01 37.7 +1.0**
MIAR MLR MLR
comp=Z,3µm,21.0s,MS5.6
BW06 Boulder Array 91.47 333 PFAKE 10 01 50.0 +13
BW06 LR LR
comp=Z,4µm,19.0s,MS5.8
PDAR Pinedale Array 91.47 333 P **P 10 01 37.2 +0.5**
comp=Z,1.5nm,0.8s,mb4.4,baz=44,slow=4.6,SNR=8.0
VBMS Vicksburg 91.62 315 PFAKE 10 01 50.0 +12
VBMS LR LR
comp=Z,2µm,20.0s,MS5.6
BMO Blue Mountains 91.98 339 PFAKE 10 01 50.0 +11
BMO LR LR
comp=Z,2µm,20.0s,MS5.6
AHID Auburn Hatcher 92.00 335 PFAKE 10 01 50.0 +11
AHID LR LR
comp=Z,3µm,19.0s,MS5.7
HLID Hailey 92.33 337 PFAKE 10 01 50.0 +9.3
HLID LR LR
comp=Z,3µm,20.0s,MS5.7
ISCO Idaho Springs 92.60 329 PFAKE 10 01 50.0 +8.0
ISCO LR LR
comp=Z,2µm,19.0s,MS5.7
BDFB Brasilia 93.15 252 P **P 10 01 44.7 -0.1**
comp=Z,1.9nm,0.7s,mb4.6,baz=224,slow=24,SNR=3.5
BDFB LR LR 10 44 12.4
comp=Z,876nm,19.3s,MS5.2,baz=214,slow=36
COR Corvallis 93.71 343 PFAKE 10 02 00.0 +13
COR LR LR
comp=Z,3µm,19.0s,MS5.8
WMOK Wichita Mounta 93.86 322 *e*P **P 10 01 47.2 -0.7**
WMOK pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
WMOK MLR MLR
comp=Z,3µm,19.0s,MS5.7
WMOK Wichita Mounta 93.86 322 *e*P **P 10 01 47.2 -0.7**
comp=Z,8.6nm,0.9s,mb5.2
WMOK Wichita Mounta 93.86 322 *e*P **P 10 01 47.2 -0.7**
comp=Z,8.6nm,0.9s,mb5.2
WMOK LR LR
comp=Z,3µm,19.0s,MS5.7
NATX Nacogdoches 94.19 318 PFAKE 10 02 00.0 +11
NATX LR LR
comp=Z,2µm,20.0s,MS5.7
SDCO Great Sand Dun 94.32 328 PFAKE 10 02 00.0 +10
SDCO LR LR
comp=Z,3µm,19.0s,MS5.8
WVOR Wild Horse Val 94.59 339 PFAKE 10 02 00.0 +8.9
WVOR LR LR
comp=Z,3µm,21.0s,MS5.7
DUG Dugway 94.87 335 PFAKE 10 02 00.0 +7.6
DUG LR LR
comp=Z,3µm,19.0s,MS5.7
SDV Santo Domingo 94.89 286 PFAKE 10 02 00.0 +7.1
SDV LR LR
comp=Z,759nm,19.0s,MS5.2
SRU San Rafael 95.05 332 *e*P **P 10 01 53.9 +0.6**
SRU San Rafael 95.05 332 *e*P **P 10 01 53.9 +0.7**
AMTX Amarillo 95.09 324 PFAKE 10 02 00.0 +6.5
AMTX LR LR
comp=Z,3µm,19.0s,MS5.7
ELK Elko 95.15 336 PFAKE 10 02 10.0 +16
ELK LR LR
comp=Z,4µm,21.0s,MS5.8
HUMO Hull Mountain 95.51 343 PFAKE 10 02 10.0 +15
HUMO LR LR
comp=Z,3µm,20.0s,MS5.7
MOD Modoc 95.53 340 PFAKE 10 02 10.0 +15
MOD LR LR
comp=Z,2µm,20.0s,MS5.6
MVCO Mesa Verde 95.97 330 PFAKE 10 02 10.0 +13
MVCO LR LR
comp=Z,3µm,22.0s,MS5.7
BMN Battle Mountai 96.04 338 PFAKE 10 02 10.0 +12
BMN LR LR
comp=Z,2µm,19.0s,MS5.6
MVU Marysvale 96.19 333 PFAKE 10 02 10.0 +12
MVU LR LR
comp=Z,3µm,19.0s,MS5.8
HKT Hockley 96.24 317 PFAKE 10 02 10.0 +11
HKT LR LR
comp=Z,2µm,20.0s,MS5.7
YBH Yreka Blue Hor 96.28 342 PFAKE 10 02 10.0 +11
YBH LR LR
comp=Z,2µm,19.0s,MS5.6
ANMO Albuquerque 97.11 328 PFAKE 10 02 10.0 +7.3
ANMO LR LR
comp=Z,3µm,19.0s,MS5.7
WDC Whiskeytown Da 97.33 342 PFAKE 10 02 10.0 +6.4
WDC LR LR
comp=Z,2µm,19.0s,MS5.6
GUMO Guam 97.52 66 PFAKE 10 02 20.0 +15
GUMO LR LR
comp=Z,2µm,21.0s,MS5.5
JCT Junction City 97.83 320 PFAKE 10 02 20.0 +14
JCT LR LR
comp=Z,2µm,20.0s,MS5.6
NVAR Mina Array Bea 98.21 338 P **P 10 02 08.3 +0.8**
comp=Z,0.4nm,0.6s,mb4.2,baz=37,slow=8.0,SNR=3.2
NVAR PP PP 10 06 09.4 +3.5
comp=Z,1.2nm,0.9s,baz=20,slow=4.5,SNR=5.4
TPH Tonopah 98.21 337 PFAKE 10 02 20.0 +12
TPH LR LR
comp=Z,2µm,20.0s,MS5.7
WUAZ Wupatki 98.55 331 PFAKE 10 02 20.0 +11
WUAZ LR LR
comp=Z,2µm,19.0s,MS5.7
TPNV Topopah Spring 98.94 336 PFAKE 10 02 20.0 +9.1
TPNV LR LR
comp=Z,3µm,19.0s,MS5.8
HOPS Hopland 98.97 341 PFAKE 10 02 20.0 +9.0
HOPS LR LR
comp=Z,3µm,20.0s,MS5.8
CMB Columbia Colle 99.17 339 PFAKE 10 02 20.0 +8.1
CMB LR LR
comp=Z,2µm,20.0s,MS5.7
KVTX Kingsville 99.24 317 PFAKE 10 02 20.0 +7.6
KVTX LR LR
comp=Z,3µm,19.0s,MS5.8
TEIG Tepich 99.31 306 PFAKE 10 02 20.0 +7.2
TEIG LR LR
comp=Z,2µm,19.0s,MS5.6
MCCM Marconi Confer 99.72 341 PFAKE 10 02 30.0 +16
MCCM LR LR
comp=Z,2µm,20.0s,MS5.6
DAC Darwin (Calif) 99.98 336 PFAKE 10 02 30.0 +14
DAC LR LR
comp=Z,2µm,20.0s,MS5.7
MBWA Marble Bar 100.59 109 PFAKE 10 02 30.0 +12
MBWA LR LR
comp=Z,1µm,20.0s,MS5.4
TXAR Lajitas Array 100.65 323 P Pdif 10 02 18.4 0.0
comp=Z,0.9nm,0.8s,baz=80,slow=2.9,SNR=8.5
TXAR Lajitas Array 100.65 323 P Pdif 10 02 18.4 -0.1
SAO San Andreas Ge 100.65 339 PFAKE 10 02 30.0 +12
SAO LR LR
comp=Z,2µm,19.0s,MS5.7
TUC Tucson 101.17 329 PFAKE 10 02 30.0 +9.2
TUC LR LR
comp=Z,2µm,19.0s,MS5.6
BCIP Isla Barro Col 101.45 292 PFAKE 10 02 30.0 +8.0
BCIP LR LR
comp=Z,761nm,20.0s,MS5.2
PFO Pinyon Flat Ob 102.06 334 PFAKE 10 02 40.0 +15
PFO LR LR
comp=Z,2µm,20.0s,MS5.6
TGUH Tegucigalpa,Un 103.17 301 PFAKE 10 02 40.0 +10
TGUH LR LR
comp=Z,2µm,19.0s,MS5.7
NWAO Narrogin (SRO) 105.97 120 PFAKE 10 07 10.0 +16
NWAO LR LR
comp=Z,2µm,20.0s,MS5.6
OTAV Otavalo 106.41 284 PFAKE 10 07 10.0 +14
OTAV LR LR
comp=Z,900nm,20.0s,MS5.3
CPUP Villa Florida 106.56 249 PFAKE 10 07 10.0 +14
CPUP LR LR
comp=Z,311nm,19.0s,MS4.9
MIDW Midway 106.93 28 PFAKE 10 07 10.0 +14
MIDW LR LR
comp=Z,3µm,19.0s,MS5.8
WRA Warramunga Arr 110.84 99 PKiKP PKiKP 10 07 05.7 +2.0
comp=Z,0.9nm,0.9s,baz=321,slow=1.9,SNR=6.2
WRA PP PP 10 07 38.2 -3.3
comp=Z,1.2nm,0.9s,baz=319,slow=7.0,SNR=4.8
WRA Warramunga Arr 110.84 99 PP PP 10 07 38.2 -3.3
WRAB Tennant Creek 110.85 99 PFAKE 10 07 20.0 +16
WRAB LR LR
comp=Z,1µm,21.0s,MS5.5
ASAR Alice Springs 112.64 103 PKiKP PKiKP 10 07 07.2 +0.1
comp=Z,0.9nm,0.8s,baz=312,slow=1.5,SNR=8.2
ASAR PP PP 10 07 52.4 -2.0
comp=Z,0.9nm,0.8s,baz=319,slow=7.5,SNR=6.3
ASAR Alice Springs 112.64 103 PP PP 10 07 52.4 -2.0
NNA Nana 112.93 273 PFAKE 10 07 20.0 +12
NNA LR LR
comp=Z,1µm,20.0s,MS5.4
LVC Limon Verde 113.04 259 PFAKE 10 07 20.0 +12
LVC LR LR
comp=Z,1µm,21.0s,MS5.5
PMG Port Moresby 114.43 82 PFAKE 10 07 20.0 +9.2
PMG LR LR
comp=Z,1µm,20.0s,MS5.5
PAYG Puerto Ayora 115.73 292 PFAKE 10 07 20.0 +6.7
PAYG LR LR
comp=Z,1µm,20.0s,MS5.5
TRQA Tornquist 116.30 241 PFAKE 10 07 30.0 +16
TRQA LR LR
comp=Z,2µm,19.0s,MS5.7
LCO Las Campanas 117.88 254 PFAKE 10 07 30.0 +13
LCO LR LR
comp=Z,2µm,21.0s,MS5.7
CTAO Charters Tower 120.11 92 PFAKE 10 07 30.0 +8.5
CTAO LR LR
comp=Z,2µm,20.0s,MS5.7
EFI East Falkland 120.35 226 PFAKE 10 07 30.0 +9.1
EFI LR LR
comp=Z,1µm,20.0s,MS5.6
CASY Casey 120.67 153 PFAKE 10 07 30.0 +8.9
CASY LR LR
comp=Z,1µm,19.0s,MS5.5
STKA Stephens Creek 122.75 106 PKP PKPdf 10 07 24.6 -1.7
comp=Z,4.2nm,0.7s,baz=328,slow=2.1,SNR=6.8
STKA Stephens Creek 122.75 106 PKIKP PKPdf 10 07 24.5 -1.7
PLCA Paso Flores 123.41 242 PKP PKPdf 10 07 26.5 -0.7
comp=Z,2.5nm,0.9s,baz=352,slow=7.1,SNR=5.6
PLCA Paso Flores 123.41 242 PKP PKPdf 10 07 26.5 -0.7
PLCA LR LR
comp=Z,1µm,19.0s,MS5.6
HNR Honiara 124.10 73 PFAKE 10 07 40.0 +11
HNR LR LR
comp=Z,2µm,21.0s,MS5.7
TARA Tarawa 125.19 52 PFAKE 10 07 40.0 +8.5
TARA LR LR
comp=Z,2µm,21.0s,MS5.8
PMSA Palmer Station 127.82 213 PFAKE 10 07 50.0 +15
PMSA LR LR
comp=Z,1µm,21.0s,MS5.6
QSPA South Pole Qui 129.27 180 PFAKE 10 07 50.0 +13
QSPA LR LR
comp=Z,1µm,21.0s,MS5.7
CAN Canberra 129.81 107 PFAKE 10 07 50.0 +10
CAN LR LR
comp=Z,2µm,19.0s,MS5.8
TAU Tasmania Unive 131.46 117 PFAKE 10 07 50.0 +7.5
TAU LR LR
comp=Z,2µm,20.0s,MS5.8
DRV Dumont d'Urvil 132.05 149 PP PP 10 10 51.0 +46
DRV L 10 40 00.0
VNDA Vanda 136.29 166 PFAKE 10 08 00.0 +9.4
VNDA LR LR
comp=Z,2µm,21.0s,MS5.8
SBA Scott Base 137.00 167 PFAKE 10 08 00.0 +8.1
SBA LR LR
comp=Z,1µm,20.0s,MS5.7
XMAS Kiritimati 137.59 16 PFAKE 10 08 10.0 +15
XMAS LR LR
comp=Z,3µm,19.0s,MS6.0
AFI Afiamalu 146.42 48 PFAKE 10 08 20.0 +9.5
AFI LR LR
comp=Z,2µm,20.0s,MS5.8
SNZO South Karori 150.80 106 PFAKE 10 08 30.0 +13
SNZO LR LR
comp=Z,1µm,20.0s,MS5.8
RAO Raoul Island 152.53 78 PFAKE 10 08 30.0 +10
RAO LR LR
comp=Z,2µm,21.0s,MS5.8

DDA ***20*** *09:56:32.8, 3941N×3308E, h20km±3km, Md3.4*
ISK ***20*** *09:56:33.6, 3941N×3307E, h5km, ML4.1*
CSEM ***20*** *09:56:34.1±0.1, 3941N×3307E, h2km, MD3.4, Error ellipse: s-maj=1.7km s-min=1.5km az=164.0*
ISCJB ***20*** *09:56:35.5±0.3, 3940N±003×3307E±003, h10km, Error ellipse: s-maj=4.7km s-min=3.6km az=175.7*
ISC 20 09:56:36.3±0.3, 3941N±003×3309E±003, h10km, n36, σ0.9s91/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.54**	**333**	*e*PG		**Pg**	**09 56 44.7**	**-2.1**
CDAG	**Cicekdag**	**1.02**	**78**	*i* P		**Pg**	**09 56 51.1**	**-4.8**
CDAG				*i* S		**Sg**	**09 57 07.1**	**-2.0**
KIZT	**Kizilcal**	**1.08**	**241**	*e*PG		**Pg**	**09 56 54.3**	**-2.7**
KONT	**Konya--Tatoy**	**1.57**	**201**	*e*PN		**Pn**	**09 57 03.5**	**-0.7**
ESKT	**Eskisehir**	**1.73**	**274**	*e*PN		**Pn**	**09 57 05.6**	**-0.9**
YOZ	**Yozgat**	**1.74**	**82**	*e*PN		**Pn**	**09 57 05.3**	**-1.3**
YOZ				*e*SN		**Sn**	**09 57 30.7**	**+1.8**
NIG	**Nigde**	**1.76**	**137**	*e*PN		**Pn**	**09 57 06.2**	**-0.7**
TOS	**Tosya**	**1.77**	**24**	*e*PN		**Pn**	**09 57 06.1**	**-1.0**
MDU	**Mudurnu**	**1.78**	**307**	*e*PN		**Pn**	**09 57 07.4**	**+0.2**
SAFT	**Safranbolu**	**1.85**	**351**	*e*PN		**Pn**	**09 57 07.5**	**-0.6**
SAFT				*e*SN		**Sn**	**09 57 32.8**	**+1.3**
SHUT	**Suhut-Afyon**	**2.15**	**247**	*e*PN		**Pn**	**09 57 11.4**	**-0.9**
BNN	**Bunyan**	**2.22**	**104**	*e*PN		**Pn**	**09 57 12.5**	**-0.7**
GULT	**Gulveren**	**2.22**	**298**	*e*PN		**Pn**	**09 57 13.7**	**+0.5**
KDZE	**Karadeniz Ereo**	**2.28**	**327**	*e*PN		**Pn**	**09 57 14.1**	**+0.2**
ALT	**Altintas**	**2.34**	**262**	*e*PN		**Pn**	**09 57 15.1**	**+0.4**
BYBT	**Boyabat**	**2.42**	**31**	*e*PN		**Pn**	**09 57 16.0**	**0.0**
ISP	**Isparta**	**2.55**	**233**	*e*PN		**Pn**	**09 57 18.2**	**+0.5**
CAVI	**Cavuskoy**	**2.62**	**289**	*e*PN		**Pn**	**09 57 19.0**	**+0.3**
BZK	**Bozkurt**	**2.64**	**15**	*e*PN		**Pn**	**09 57 19.2**	**+0.2**
KARA	**Karaisali**	**2.65**	**144**	*e*PN		**Pn**	**09 57 19.5**	**+0.5**
BCK	**Bucak**	**2.76**	**226**	*e*PN		**Pn**	**09 57 21.3**	**+0.7**
MERS	**Mersin**	**2.78**	**156**	*e*PN		**Pn**	**09 57 21.7**	**+0.8**
DIKM	**Dikmen**	**2.78**	**36**	*e*PN		**Pn**	**09 57 21.7**	**+0.8**
TOKT	**Tokat**	**2.81**	**70**	*e*PN		**Pn**	**09 57 21.7**	**+0.4**
KVT	**Kavak**	**2.81**	**53**	*e*PN		**Pn**	**09 57 21.6**	**+0.2**
KOZT	**Kozan**	**2.89**	**131**	*e*PN		**Pn**	**09 57 23.1**	**+0.7**
SARI	**SarD1z-Kayseri**	**2.91**	**103**	*e*PN		**Pn**	**09 57 21.6**	**-1.0**
KHL	**Karahalli**	**2.98**	**250**	*e*PN		**Pn**	**09 57 22.7**	**-0.9**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN		**Pn**	**09 57 25.3**	**+0.6**
IKL	**Isikli**	**3.20**	**171**	*e*PN		**Pn**	**09 57 26.8**	**+0.1**
DST	**Dursunbey**	**3.45**	**275**	*e*PN		**Pn**	**09 57 30.7**	**+0.6**
KMRS	**Kahramanmaras**	**3.55**	**121**	*e*PN		**Pn**	**09 57 32.6**	**+1.1**
KULA	**Kula-Manisa**	**3.56**	**257**	*e*PN		**Pn**	**09 57 31.2**	**-0.4**
BALB	**Balikesir**	**4.03**	**275**	*e*PN		**Pn**	**09 57 38.6**	**+0.5**
YER	**Yerkesik**	**4.41**	**240**	*e*PN		**Pn**	**09 57 44.1**	**+0.8**
CRLT	**Corlu**	**4.44**	**294**	*e*PN		**Pn**	**09 57 44.4**	**+0.8**

DDA ***20*** *10:10:38.8, 3934N×3313E, h7km±2km, Md4.4, Ml4.6*
ISK ***20*** *10:10:38.7, 3940N×3309E, h5km, ML3.3*
CSEM ***20*** *10:10:39.1±0.1, 3939N×3312E, h2km, ML4.6, Error ellipse: s-maj=2.4km s-min=1.5km az=5.0*
ISCJB ***20*** *10:10:40.7±0.3, 3937N±003×3311E±003, h10km, Error ellipse: s-maj=4.0km s-min=3.1km az=170.7*
ISC 20 10:10:41.3±0.3, 3939N±003×3313E±003, h10km, n37, σ1§15/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**92**	*e*PG		**Pg**	**10 10 49.0**	**-1.2**
LOD	**Lodumlu**	**0.57**	**331**	*e*PG		**Pg**	**10 10 50.2**	**-2.2**
LOD				*e*SG		**Sg**	**10 10 58.6**	**-1.3**
CDAG	**Cicekdag**	**0.99**	**76**	*i* P		**Pg**	**10 10 58.4**	**-2.0**
CDAG				*i* S		**Sg**	**10 11 13.2**	**-0.1**
CDAG	**Cicekdag**	**0.99**	**76**	*i* P		**Pg**	**10 10 58.6**	**-1.8**
KIZT	**Kizilcal**	**1.09**	**243**	*e*PG		**Pg**	**10 11 00.3**	**-2.0**
KIZT				*e*SG		**Sg**	**10 11 16.1**	**-0.5**
ELDT	**Eldivan**	**1.12**	**12**	*i* P		**Pb**	**10 11 00.9**	**-1.9**
ELDT				*i* P			10 11 00.9	
ELDT				*i* S		**Sb**	**10 11 17.3**	**+0.3**
CANT	**Cankiri**	**1.27**	**17**	*e*PN		**Pn**	**10 11 04.1**	**-1.0**
LADK	**Ladik-KONYA**	**1.33**	**207**	*e*PN		**Pn**	**10 11 04.3**	**-1.6**
SGKT	**Sivrigoynuk**	**1.44**	**326**	*i* P		**Pn**	**10 11 06.8**	**-0.6**
SGKT				*i* S		**Sn**	**10 11 28.8**	**+2.4**
SGKT	**Sivrigoynuk**	**1.44**	**326**	*i* P		**Pn**	**10 11 06.8**	**-0.6**
SGKT				*i* S		**Sn**	**10 11 28.8**	**+2.4**
KONT	**Konya--Tatoy**	**1.56**	**203**	*e*PN		**Pn**	**10 11 08.4**	**-0.7**
YOZ	**Yozgat**	**1.71**	**81**	*e*PN		**Pn**	**10 11 11.4**	**+0.2**
YOZ				*e*SN		**Sn**	**10 11 34.9**	**+1.7**
NIG	**Nigde**	**1.73**	**137**	*e*PN		**Pn**	**10 11 11.9**	**+0.6**
ESKT	**Eskisehir**	**1.77**	**275**	*i* P		**Pn**	**10 11 12.2**	**+0.3**
ESKT				*i* S		**Sn**	**10 11 37.1**	**+2.6**
ESKT	**Eskisehir**	**1.77**	**275**	*e*Pn		**Pn**	**10 11 11.9**	**0.0**
SEYT	**Eskypehyr**	**1.77**	**275**	*i* P		**Pn**	**10 11 12.2**	**+0.3**
SEYT				*i* S		**Sn**	**10 11 37.1**	**+2.6**
CTKT	**Corum**	**1.77**	**45**	*i* P		**Pn**	**10 11 12.9**	**+0.8**
CTKT				*i* S		**Sn**	**10 11 38.3**	**+3.7**
TOS	**Tosya**	**1.78**	**22**	*e*PN		**Pn**	**10 11 11.2**	**-0.9**
BOLV	**Bolvadin**	**1.82**	**249**	*i* P		**Pn**	**10 11 12.3**	**-0.4**
BOLV				*i* S		**Sn**	**10 11 38.7**	**+2.9**
MDU	**Mudurnu**	**1.82**	**307**	*e*PN		**Pn**	**10 11 13.0**	**+0.3**
SAFT	**Safranbolu**	**1.88**	**350**	*e*PN		**Pn**	**10 11 13.9**	**+0.4**
BORA	**Eskisehir**	**2.12**	**284**	*i* P		**Pn**	**10 11 14.8**	**-2.0**
BORA				*i* S		**Sn**	**10 11 44.2**	**+1.0**
BALT	**Daday**	**2.15**	**5**	*i* P		**Pn**	**10 11 19.2**	**+2.0**
SHUT	**Suhut-Afyon**	**2.17**	**248**	*e*PN		**Pn**	**10 11 17.2**	**-0.3**
BNN	**Bunyan**	**2.18**	**103**	*e*PN		**Pn**	**10 11 17.8**	**+0.2**
GULT	**Gulveren**	**2.26**	**298**	*e*PN		**Pn**	**10 11 18.7**	**-0.1**
ALT	**Altintas**	**2.37**	**263**	*e*PN		**Pn**	**10 11 20.3**	**+0.1**
BYBT	**Boyabat**	**2.42**	**31**	*e*PN		**Pn**	**10 11 20.8**	**-0.2**
KARA	**Karaisali**	**2.61**	**144**	*e*PN		**Pn**	**10 11 24.2**	**+0.7**
MERS	**Mersin**	**2.75**	**156**	*e*PN		**Pn**	**10 11 25.7**	**+0.3**
KVT	**Kavak**	**2.80**	**52**	*e*PN		**Pn**	**10 11 27.2**	**+1.0**

KOZT	Kozan	2.85	131	*e*PN	Pn	10 11 27.2 +0.3
SARI	SarD1z-Kayseri	2.87	103	*e*PN	Pn	10 11 26.7 -0.4
SVSK	Karacayir	3.04	79	*e*PN	Pn	10 11 30.1 +0.8
GEMT	Gemlik	3.20	290	*e*PN	Pn	10 11 31.9 +0.2
DST	Dursunbey	3.49	275	*e*PN	Pn	10 11 36.4 +0.8
KULA	Kula-Manisa	3.59	257	*e*PN	Pn	10 11 38.0 +1.0

CSEM ***20*** *10:16:03.2±0.2, 3939N×3309E, h0km±1km, MD3.5, Error ellipse: s-maj=2.4km s-min=2.2km az=152.0*
DDA ***20*** *10:16:03.9, 3942N×3298E, h7km±7km, Md3.5*
ISK ***20*** *10:16:03.6, 3940N×3312E, h5km, MD3.5*
ISCJB ***20*** *10:16:05.2±0.3, 3939N±003×3309E±003, h10km, Error ellipse: s-maj=4.8km s-min=3.4km az=145.4*

ISC 20 10:16:05.6±0.3, 3939N±003×3306E±003, h10km, n31, σ1§12/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	Kaman	0.51	92	*e*PG	Pg	10 16 13.0	-2.5
LOD	Lodumlu	0.55	335	*e*PG	Pg	10 16 14.7	-1.6
CDAG	Cicekdag	1.04	77	*i* P	Pg	10 16 22.7	-3.0
CDAG	Cicekdag	1.04	77	*i* P	Pg	10 16 22.7	-2.9
CDAG				*i* S	Sg	10 16 41.5	+2.3
CDAG	Cicekdag	1.04	77	*i* P	Pg	10 16 22.7	-3.0
CDAG				*i* S	Sg	10 16 41.5	+2.3
KIZT	Kizilcal	1.05	241	*e*PN	Pn	10 16 24.7	-1.7
ELDT	Eldivan	1.13	14	*i* P	Pb	10 16 24.7	-2.7
ELDT				*i* S	Sb	10 16 41.8	-0.3
KDHN	Kadinhani	1.14	221	*i* P	Pb	10 16 26.1	-1.2
KDHN				*i* S	Sb	10 16 41.5	-0.7
CANT	Cankiri	1.29	19	*e*PN	Pn	10 16 28.8	-0.8
CANT				*e*SN	Sn	10 16 47.0	0.0
LADK	Ladik-KONYA	1.31	205	*e*PN	Pn	10 16 29.6	-0.3
SGKT	Sivrigoynuk	1.41	327	*i* P	Pn	10 16 30.8	-0.6
SGKT				*i* S	Sn	10 16 54.2	+4.2
KONT	Konya--Tatoy	1.54	201	*e*PN	Pn	10 16 34.1	+0.9
ESKT	Eskisehir	1.72	275	*i* P	Pn	10 16 34.7	-0.8
ESKT				*i* S	Sn	10 16 57.9	+0.4
ESKT	Eskisehir	1.72	275	*e*Pn	Pn	10 16 36.7	+1.2
SEYT	Eskypehyr	1.72	275	*i* P	Pn	10 16 34.7	-0.8
SEYT				*i* S	Sn	10 16 57.9	+0.4
NIG	Nigde	1.76	136	*e*PN	Pn	10 16 36.1	-0.1
YOZ	Yozgat	1.77	81	*e*PN	Pn	10 16 35.9	-0.4
YOZ				*e*SN	Sn	10 16 59.6	+0.9
BOLV	Bolvadin	1.77	248	*i* P	Pn	10 16 36.0	-0.3
BOLV				*i* S	Sn	10 17 02.7	+3.8
MDU	Mudurnu	1.78	308	*e*PN	Pn	10 16 37.4	+1.0
TOS	Tosya	1.80	24	*e*PN	Pn	10 16 36.5	-0.2
CTKT	Corum	1.81	47	*i* P	Pn	10 16 36.0	-0.8
CTKT				*i* S	Sn	10 17 01.1	+1.3
SAFT	Safranbolu	1.87	351	*e*PN	Pn	10 16 38.6	+0.9
SHUT	Suhut-Afyon	2.13	248	*e*PN	Pn	10 16 43.1	+2.0
BNN	Bunyan	2.23	103	*e*PN	Pn	10 16 42.9	+0.2
KDZE	Karadeniz Ereo	2.28	328	*e*PN	Pn	10 16 43.7	+0.3
ALT	Altintas	2.31	263	*e*PN	Pn	10 16 45.2	+1.5
BYBT	Boyabat	2.45	32	*e*PN	Pn	10 16 46.1	+0.5
CAVI	Cavuskoy	2.61	289	*e*PN	Pn	10 16 48.9	+1.1
KVT	Kavak	2.84	53	*e*PN	Pn	10 16 51.4	+0.4
KOZT	Kozan	2.89	130	*e*PN	Pn	10 16 52.0	+0.3
SVSK	Karacayir	3.08	79	*e*PN	Pn	10 16 54.7	+0.4

ISCJB ***20*** *10:49:43.7±1.5, 129N±0.1×1432E±0.3, h197km±17km, mb3.7/8, Error ellipse: s-maj=41.7km s-min=16.4km az=8.8*
IDC ***20*** *10:49:45.4±1.4, 1295N×14332E, h200km±17km, mb3.5/7, mb1 3.7/7, mb1mx3.3/23, mbtmp3.5/7, Error ellipse: s-maj=35.5km s-min=14.3km az=96.0*
NEIC ***20*** *10:49:45.2±1.1, 1293N×14328E, h199km±13km, mb4.2/1, Error ellipse: s-maj=28.8km s-min=11.3km az=98.0*

ISC 20 10:49:45.2±1.4, 129N±0.1×1433E±0.3, h198km±16km, n13, σ0§63/15, mb3.7/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.68	67	P	Pn	10 50 21.2	+0.7
	24nm,0.3s,baz=234,slow=20,SNR=71						
GUMO				S	Sn	10 50 47.5	-0.3
	111nm,0.3s,baz=9.5,slow=23,SNR=13						
GUMO	Guam	1.68	67	*e*Pn	Pn	10 50 20.5	+0.1
GUMO				S	Sn	10 50 47.5	-0.3
WRAB	Tennant Creek	33.81	195	*e*P	P	10 56 08.7	-0.1
	3.9nm,0.6s,mb4.1						
WB2	Warramunga Arr	33.82	195	*e*P	P	10 56 08.9	+0.1
WRA	Warramunga Arr	33.82	195	P	P	10 56 09.2	+0.4
	3.0nm,0.7s,mb4.0,baz=14,slow=9.3,SNR=41						
ASAR	Alice Springs	37.50	194	P	P	10 56 40.5	+0.3
	1.3nm,0.5s,mb3.7,baz=18,slow=13,SNR=42						
STKA	Stephens Creek	44.57	182	P	P	10 57 36.6	-1.0
	0.8nm,0.4s,mb3.4,baz=7.1,slow=8.1,SNR=3.2						
KURK	Kurchatov	64.10	320	P	P	10 59 58.5	+0.3
	0.6nm,0.2s,mb3.8,baz=108,slow=6.0,SNR=2.7						
BVAR	Borovoye Array	69.49	322	P	P	11 00 32.1	0.0
	0.7nm,0.3s,mb3.8,baz=103,slow=8.3,SNR=5.2						
YKA	Yellowknife Ar	84.16	27	P	P	11 01 52.8	-1.1
	0.3nm,0.6s,mb3.2,baz=286,slow=5.3,SNR=7.6						
YKA	Yellowknife Ar	84.16	27	P	P	11 01 52.8	-1.1
NVAR	Mina Array Bea	88.54	51	P	P	11 02 17.1	+1.4
	0.7nm,0.7s,mb3.6,baz=262,slow=6.1,SNR=3.4						
BR131	Keskin Array S	96.39	313	*e*P	P	11 02 51.4	-0.4
	100nm,0.2s						

CSEM ***20*** *10:50:11.8±0.1, 3936N×3308E, h5km, MD3.6, Error ellipse: s-maj=1.3km s-min=1.1km az=167.0*
DDA ***20*** *10:50:11.1, 3931N×3319E, h7km±5km, Md3.5*
ISK ***20*** *10:50:11.6, 3936N×3308E, h4km, MD3.6, ML3.6*
ISCJB ***20*** *10:50:12.8±0.3, 3936N±002×3309E±003, h10km, Error ellipse: s-maj=3.6km s-min=2.7km az=44.6*

ISC 20 10:50:13.5±0.3, 3936N±002×3308E±003, h10km, n49, σ0§83/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	Lodumlu	0.58	335	*e*PG	Pg	10 50 22.7	-2.1
LOD				*e*SG	Sg	10 50 32.2	-0.3
CDAG	Cicekdag	1.03	75	*i* P	Pg	10 50 28.9	-4.5
CDAG	Cicekdag	1.03	75	*i* P	Pg	10 50 29.4	-4.0
CDAG				*i* S	Sg	10 50 43.5	-3.4
CDAG	Cicekdag	1.03	75	*i* P	Pg	10 50 28.9	-4.5
CDAG				*i* S	Sg	10 50 43.5	-3.4
KIZT	Kizilcal	1.05	243	*e*PG	Pg	10 50 32.2	-1.5
KIZT				*e*SG	Sg	10 50 47.3	+0.1
KDHN	Kadinhani	1.12	222	*i* P	Pb	10 50 33.7	-1.3
KDHN				*i* S	Sb	10 50 49.5	-0.1
ELDT	Eldivan	1.16	13	*i* P	Pb	10 50 34.2	-1.5
ELDT				*i* S	Sb	10 50 51.8	+1.0
LADK	Ladik-KONYA	1.28	206	*e*PN	Pn	10 50 36.1	-1.4
LADK				*e*SN	Sn	10 50 54.6	-0.1
CANT	Cankiri	1.31	18	*e*PN	Pn	10 50 36.6	-1.4
SGKT	Sivrigoynuk	1.45	327	*i* P	Pn	10 50 38.9	-0.9
KONT	Konya--Tatoy	1.52	202	*e*PN	Pn	10 50 40.1	-0.6
KONT				*e*SN	Sn	10 51 00.8	+0.2
NIG	Nigde	1.73	136	*e*PN	Pn	10 50 43.6	0.0
ESKT	Eskisehir	1.73	276	*e*PN	Pn	10 50 43.4	-0.3
ESKT	Eskisehir	1.73	276	*i* P	Pn	10 50 44.1	+0.5
SEYT	Eskypehyr	1.73	276	*i* P	Pn	10 50 44.1	+0.4
YOZ	Yozgat	1.76	80	*e*PN	Pn	10 50 42.9	-1.1
BOLV	Bolvadin	1.78	250	*i* P	Pn	10 50 43.9	-0.3
BOLV				*i* S	Sn	10 51 11.2	+4.3
MDU	Mudurnu	1.81	308	*e*PN	Pn	10 50 45.2	+0.4
CTKT	Corum	1.82	46	*i* P	Pn	10 50 44.6	-0.3
CTKT				*i* S	Sn	10 51 09.5	+1.4
TOS	Tosya	1.82	23	*e*PN	Pn	10 50 44.0	-1.0
SAFT	Safranbolu	1.90	351	*e*PN	Pn	10 50 45.2	-0.8
SHUT	Suhut-Afyon	2.13	249	*e*PN	Pn	10 50 49.4	+0.3
BALT	Daday	2.19	6	*i* P	Pn	10 50 51.7	+1.8
BALT				*i* S	Sn	10 51 20.7	+3.7
BNN	Bunyan	2.21	102	*e*PN	Pn	10 50 50.5	+0.2
GULT	Gulveren	2.25	299	*e*PN	Pn	10 50 50.6	-0.1
KDZE	Karadeniz Ereo	2.32	328	*e*PN	Pn	10 50 52.4	+0.7
ALT	Altintas	2.33	263	*e*PN	Pn	10 50 51.8	0.0
BYBT	Boyabat	2.47	31	*e*PN	Pn	10 50 53.6	-0.2
ISP	Isparta	2.52	234	*e*PN	Pn	10 50 55.1	+0.6
KARA	Karaisali	2.61	143	*e*PN	Pn	10 50 56.0	+0.3
CAVI	Cavuskoy	2.63	290	*e*PN	Pn	10 50 56.6	+0.6
BZK	Bozkurt	2.69	15	*e*PN	Pn	10 50 57.2	+0.4
BCK	Bucak	2.72	227	*e*PN	Pn	10 50 57.9	+0.6
MERS	Mersin	2.73	155	*e*PN	Pn	10 50 57.9	+0.4
ADVT	Abdulvahap	2.79	294	*e*PN	Pn	10 50 58.5	+0.3
DIKM	Dikmen	2.83	35	*e*PN	Pn	10 50 59.7	+0.9
TOKT	Tokat	2.84	69	*e*PN	Pn	10 50 59.1	+0.2
KVT	Kavak	2.85	52	*e*PN	Pn	10 50 59.1	+0.1
KOZT	Kozan	2.86	130	*e*PN	Pn	10 50 59.7	+0.5
SARI	SarD1z-Kayseri	2.90	102	*e*PN	Pn	10 50 59.1	-0.6
KHL	Karahalli	2.96	251	*e*PN	Pn	10 51 00.9	+0.3
SVSK	Karacayir	3.08	78	*e*PN	Pn	10 51 02.7	+0.5
IKL	Isikli	3.15	171	*e*PN	Pn	10 51 03.6	+0.5
GEMT	Gemlik	3.18	291	*e*PN	Pn	10 51 03.9	+0.3
DST	Dursunbey	3.45	276	*e*PN	Pn	10 51 07.5	+0.2
KMRS	Kahramanmaras	3.52	120	*e*PN	Pn	10 51 08.7	+0.4
KULA	Kula-Manisa	3.55	258	*e*PN	Pn	10 51 08.7	+0.1
BALB	Balikesir	4.03	276	*e*PN	Pn	10 51 16.0	+0.7
YER	Yerkesik	4.38	241	*e*PN	Pn	10 51 21.4	+1.4

GUC 20 11:02:09.4±0.4, 2300S×7012W, h38km±3km, MD3.5, ML3.1, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.32	250	*e*P	Pn	11 02 17.2	-0.6
MECH				*e*S	Sn	11 02 23.4	-0.1
MECH				AML	AML	11 02 28.2	
	comp=N,3μm,0.3s						
CEN1	Los Morros	0.40	191	⇓*i*P	Pn	11 02 21.4	+2.6
CEN1				*i* S	Sn	11 02 30.4	+5.1
CEN1				AML	AML	11 02 32.2	
	comp=E,2μm,0.2s						
ANCH	Antofagasta	0.73	201	⇑*i*P	Pn	11 02 23.0	-0.3
ANCH				*i* S	Sn	11 02 33.6	+0.3
ANCH				AML	AML	11 02 34.6	
	comp=N,2μm,0.1s						
MACH	Maria Elena	0.86	23	⇑*i*P	Pn	11 02 25.7	+0.6
MACH				*i* S	Sn	11 02 37.9	+1.4
LVC	Limon Verde	1.18	71	*i* P	Pn	11 02 31.7	+2.3
LVC				*i* S	Sn	11 02 47.9	+3.7
LVC				AML	AML	11 02 49.6	
	comp=N,652nm,0.5s						
CPN1	Cerro Paranal	1.64	189	AML	AML	11 03 04.1	
	comp=E,376nm,0.2s						

IDC ***20*** *11:13:35.3±1.2, 3266S×7179W, h0km, mb3.5/3, mb1 3.9/5, mb1mx3.8/15, mbtmp3.6/5, ML4.3/2, Error ellipse: s-maj=45.4km s-min=33.8km az=55.0*
ISCJB ***20*** *11:13:36.9±1.4, 3268S±006×7186W±009, h17km±10km, mb3.4/3, Error ellipse: s-maj=13.1km s-min=8.6km az=150.4*
NEIC ***20*** *11:13:39.6, 3271S×7165W, h9km, MD4.3(GUC), After GUC.*
NEIC Felt [II] at Rancagua and Santiago.
GUC ***20*** *11:13:39.6±0.5, 3271S×7165W, h9km±6km, MD4.3, ML4.0*

ISC 20 11:13:38.4±1.2, 3270S±006×7178W±007, h17km±7km, n24, σ0§73/30, mb3.4/3, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.34	160	⇑*i*P	Pg	11 13 46.2	+0.6
ROCH	El Roble	0.70	113	*e*P	Pb	11 13 52.2	+0.1
JACH	Jahuel	1.00	89	*e*P	Pb	11 13 56.4	-0.8
PEL	Peldehue	1.02	116	*e*P	Pb	11 13 57.1	-0.4
PEL				*i* S	Sb	11 14 09.9	-0.7
PEL				AML	AML	11 14 14.5	
	comp=E,16μm,0.4s						
TACH	Talagante	1.18	144	⇑*e*P	Pn	11 13 59.3	-0.8
SAN	Santiago	1.20	129	*e*P	Pn	11 13 59.6	-0.7
SAN				*i* S	Sb	11 14 15.4	-0.4
CLCH	Cerro Calan	1.25	124	⇓*e*P	Pn	11 14 00.8	-0.2
CLCH				*i* S	Sb	11 14 16.7	-0.6
CLCH				AML	AML	11 14 23.9	
	comp=E,4μm,0.7s						
LNV	Longovilo	1.29	166	*e*P	Pn	11 14 00.4	-1.1
ANTU	Antumapu	1.29	132	*e*P	Pn	11 14 01.4	-0.1
ANTU				*i* S	Sn	11 14 18.0	-0.5
FCH	Farellones	1.40	117	⇓*i*P	Pn	11 14 04.4	+1.4
FCH				*i* S	Sn	11 14 21.2	+0.2
FCH				AML	AML	11 14 21.9	
	comp=E,5μm,0.3s						
PCH	Pirque	1.40	131	*e*P	Pn	11 14 03.1	0.0
PCH				*i* S	Sn	11 14 21.9	+0.8
CHCH	Chadas Angostu	1.55	143	*e*P	Pn	11 14 05.5	+0.4
LMEL	Las Melosas	1.75	131	*e*P	Pn	11 14 08.9	+1.1
LMEL				*i* S	Sn	11 14 31.1	+1.5
LMEL	Las Melosas	1.75	131	*e*P	Pn	11 14 08.9	+1.1
LMEL				*i* S	Sn	11 14 31.1	+1.5
LMEL				AML	AML	11 14 34.1	
	comp=N,3μm,0.1s						
LCO	Las Campanas	3.79	14	*e*Pn	Pn	11 14 36.3	+0.3
LCO				*e*Sn	Sn	11 15 28.2	+8.0
PLCA	Paso Flores	8.07	173	Pn	Pn	11 15 34.9	+0.1
	comp=N,0.6nm,0.3s,baz=332,slow=10,SNR=15						
CPUP	Villa Florida	14.09	67	Pn	Pn	11 16 57.9	+0.8
	comp=N,0.7nm,0.3s,baz=209,slow=13,SNR=3.9						
CPUP	Villa Florida	14.09	67	Pn	Pn	11 16 57.9	+0.8
TXAR	Lajitas Array	68.71	330	P	P	11 24 40.2	-0.7
	comp=N,0.1nm,0.5s,mb3.0,baz=162,slow=9.2,SNR=4.8						
NVAR	Mina Array Bea	82.95	325	P	P	11 26 02.8	+0.7
	comp=N,0.3nm,0.5s,mb3.6,baz=165,slow=7.2,SNR=2.8						
TORD	Torodi Ar. Bea	83.56	70	P	P	11 26 04.7	-1.1
	comp=N,0.3nm,0.8s,mb3.5,baz=262,slow=6.0,SNR=3.6						
CDAG	Cicekdag	121.51	60	*i* P	PKPdf	11 32 30.5	-0.2
BVAR	Borovoye Array	146.18	42	PKPbc	PKPbc	11 33 16.9	-0.2
	comp=N,0.8nm,0.5s,baz=304,slow=3.9,SNR=6.3						
ZALV	Zalesovo Beam	153.01	31	PKPbc	PKPbc	11 33 33.2	-0.9
	comp=N,1.5nm,0.6s,baz=324,slow=3.6,SNR=7.6						

ISCJB ***20*** *11:18:56.8±0.3, 6771N±002×1548E±006, h10km, mb3.1/3, Error ellipse: s-maj=3.7km s-min=2.7km az=41.1*
IDC ***20*** *11:18:57.8±1.2, 6782N×1498E, h0km, mb3.1/3, mb1 3.3/6, mb1mx3.3/23, mbtmp3.2/6, ML3.4/3, Error ellipse: s-maj=21.6km s-min=6.6km az=125.0*
CSEM ***20*** *11:18:58.4±0.1, 6788N×1464E, h20km, ML2.9, Error ellipse: s-maj=3.4km s-min=1.5km az=126.0*
NEIC ***20*** *11:18:58.1±0.7, 6779N×1509E, h10km, ML2.9(BER), Error ellipse: s-maj=11.9km s-min=7.3km az=129.0*
HEL ***20*** *11:18:58.0±0.1, 6782N×1520E, h7km±1km, ML2.9, MD2.8(BER), ML2.9(BER)*
BER ***20*** *11:18:59.2±3.2, 6784N×1515E, h7km, MD2.8, ML2.9, ML3.3(NAO)*
NAO ***20*** *11:19:00.1±2.5, 6796N×1505E, h24km±23km, ML3.3*

ISC 20 11:18:57.8±0.3, 6776N±002×1525E±006, h10km, n58, σ1§33/111, mb3.1/3, 7C, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEI	Steigen	0.17	359	⇑*i*P	Pg	11 19 00.2	-1.3
STEI				*i* S	Sg	11 19 02.0	-2.1
STEI				AML	AML	11 19 02.4	
	comp=Z,5μm,0.1s						
STEI	Steigen	0.17	359	⇑*i*P	Pg	11 19 00.2	-1.3
STEI				*e*S	Sg	11 19 02.0	-2.1
STEI				AML	AML	11 19 02.4	
	comp=Z,5μm,0.1s						
STEI	Steigen	0.17	359	⇑*i*P	Pg	11 19 00.2	-1.3
	SNR=122						
STEI				*e*S	Sg	11 19 02.0	-2.0
	comp=Z,5μm,0.1s,SNR=122						
LOF	Lofoten	0.75	301	⇑*i*P	Pg	11 19 11.0	-1.1
LOF				*i* S	Sg	11 19 19.8	-2.1
LOF				AML	AML	11 19 21.2	
	comp=Z,447nm,0.4s						
LOF	Lofoten	0.75	301	⇑*i*P	Pg	11 19 11.0	-1.1
LOF				*e*		11 19 11.1	
LOF				*e*S	Sg	11 19 19.8	-2.1
LOF				AML	AML	11 19 21.2	
	comp=Z,447nm,0.4s						
LOF	Lofoten	0.75	301	⇑*i*P	Pg	11 19 11.0	-1.1
	SNR=95						
LOF				*e*S	Sg	11 19 19.8	-2.1
	comp=Z,447nm,0.4s,SNR=95						
LOF	Lofoten	0.75	301	⇑*i*P	Pg	11 19 11.0	-1.1
LOF				*e*S	Sg	11 19 19.8	-2.1
KONS	Konsvik	1.51	214	*e*P	Pn	11 19 24.2	-0.6
KONS				*e*S	Sn	11 19 45.3	+0.8
KONS				AML	AML	11 19 46.1	
	comp=Z,300nm,0.4s						
FLOS	Flostrand	1.61	208	*e*P	Pn	11 19 26.1	-0.1
FLOS				*e*S	Sn	11 19 47.7	+0.8
FLOS				AML	AML	11 19 58.7	
	comp=Z,417nm,0.5s						
MOR8	Moi Rana	1.62	192	*e*P	Pn	11 19 24.8	-1.5
MOR8				*e*S	Sn	11 19 46.6	-0.7
MOR8				AML	AML	11 19 47.5	
	comp=Z,289nm,0.2s						
MOR8	Moi Rana	1.62	192	*e*P	Pn	11 19 24.8	-1.6
	SNR=50						
MOR8				*e*S	Sn	11 19 46.6	-0.7
	comp=Z,289nm,0.2s,SNR=50						
MOR8	Moi Rana	1.62	192	*e*P	Pn	11 19 24.8	-1.5
MOR8				*e*S	Sn	11 19 46.6	-0.7
STOK	Stokkvaagen	1.68	212	*e*P	Pn	11 19 27.1	0.0
STOK				*e*S	Sn	11 19 50.6	+2.0
STOK				AML	AML	11 19 53.4	
	comp=Z,337nm,0.5s						
STOK	Stokkvaagen	1.68	212	*e*P	Pn	11 19 27.1	0.0
	SNR=50						
STOK				*e*S	Sn	11 19 50.6	+2.0
	comp=Z,337nm,0.5s,SNR=50						
STOK	Stokkvaagen	1.68	212	*e*P	Pn	11 19 27.1	0.0
STOK				*e*S	Sn	11 19 50.6	+2.0
TRO	Tromso	2.31	34	*e*P	Pn	11 19 36.0	+0.1
TRO				*e*S	Sn	11 20 05.5	+1.2
TRO				*e*SG	Sg	11 20 08.0	-4.1
TRO				AML	AML	11 20 11.3	
	comp=Z,92nm,0.5s						
TRO	Tromso	2.31	34	*e*P	Pn	11 19 36.0	+0.2
	SNR=50						
TRO				*e*S	Sn	11 20 05.5	+1.2
	SNR=50						
TRO				*e*Sg	Sg	11 20 07.9	-4.1
	SNR=92						
TRO	Tromso	2.31	34	*e*P	Pn	11 19 36.0	+0.1
TRO				*e*S	Sn	11 20 05.5	+1.2
TRO				*e*SG	Sg	11 20 08.0	-4.1
KIF	Kilpisjarvi	2.41	56	*e*P	Pn	11 19 38.2	+1.1
KIF				*e*S	Sn	11 20 06.6	0.0
KTK1	Kautokeino	3.21	63	*e*P	Pn	11 19 51.2	+3.0
KTK1				AML	AML	11 20 45.9	
	comp=N,69nm,0.6s						
HEF	Hetta	3.22	74	*e*P	Pn	11 19 49.4	+1.1
HEF				*e*S	Sn	11 20 26.3	-0.4
NSS	Namsos	3.50	204	*e*P	Pn	11 19 53.3	+1.1
NSS				*e*S	Sn	11 20 31.2	-2.4
NSS				AML	AML	11 20 46.4	
	comp=Z,80nm,0.4s						
NSS	Namsos	3.50	204	*e*P	Pn	11 19 53.3	+1.1
NSS				*e*S	Sn	11 20 31.2	-2.4
ARA0	ARCESS Array S	4.15	60	*e*P	Pn	11 20 00.8	-0.3
ARA0				*e*PG	Pg	11 20 12.6	-4.6
ARA0				*e*SG	Sg	11 21 07.0	-4.0
ARA0	ARCESS Array S	4.15	60	Pn	Pn	11 20 00.8	-0.3
	baz=247,slow=14						
ARA0				Pg	Pg	11 20 12.6	-4.6
	baz=243,slow=16						
ARA0				Lg		11 21 07.0	
	baz=258,slow=37						
ARCES	ARCESS Array B	4.15	60	Pn	Pn	11 20 00.9	-0.2
	comp=Z,1.0nm,0.3s,baz=249,slow=13,SNR=30						
ARCES				Pg	Pg	11 20 11.9	-5.3
	comp=Z,26nm,0.3s,baz=246,slow=14,SNR=119						
ARCES				Sn	Sn	11 20 51.0	+1.4
	comp=Z,5.7nm,0.3s,baz=246,slow=22,SNR=3.2						
ARCES				Lg		11 21 09.0	
	comp=Z,17nm,0.3s,baz=246,slow=30,SNR=13						
ARCES	ARCESS Array B	4.15	60	Pg	Pg	11 20 11.9	-5.3
ARE0	ARCESS Array S	4.15	60	*e*Pn	Pn	11 20 03.6	+2.5
ARE0	ARCESS Array S	4.15	60	*e*Pn	Pn	11 20 03.6	+2.5
SGF	Sodankyl	4.33	89	*e*P	Pn	11 20 05.2	+1.7
SGF				*e*S	Sn	11 20 53.3	-0.6
KEV	Kevo	4.72	59	*e*P	Pn	11 20 09.2	+0.3
KEV				*e*S	Sn	11 21 02.4	-1.2
KEV				MSG		11 21 31.3	
	comp=Z,14nm,0.2s						
OUL	Oulu	5.04	117	*e*P	Pn	11 20 15.2	+1.9
OUL				*e*S	Sn	11 21 10.7	-0.8
VRF	Varrio	5.46	83	*e*P	Pn	11 20 18.6	-0.3
VRF				*e*S	Sn	11 21 20.4	-1.3
VRF				MSG		11 22 01.8	
	comp=Z,13nm,0.2s						
VAF	Ylistaro	5.66	143	*e*P	Pn	11 20 23.7	+2.0
VAF				*e*S	Sn	11 21 27.6	+1.0
MSF	Maaselka	5.75	102	*e*P	Pn	11 20 23.3	+0.3
MSF				*e*S	Sn	11 21 28.0	-0.9
KU6	Riekki	6.02	100	*e*P	Pn	11 20 27.4	+0.7
KU6				*e*S	Sn	11 21 33.0	-2.5
KU6				MSG		11 22 10.3	
	comp=Z,9.6nm,0.3s						
KJN	Kajaani	6.29	120	*e*P	Pn	11 20 31.5	+1.1
KJN				*e*S	Sn	11 21 40.1	-2.0
KJN				MSG		11 22 29.4	
	comp=Z,9.5nm,0.2s						
APA0	Apatity Array	6.76	83	Pn	Pn	11 20 36.4	-0.4
	baz=279,slow=12						
APA0	Apatity Array	6.76	83	*e*P	Pn	11 20 36.4	-0.4
SUF	Sumiainen	6.81	133	*e*P	Pn	11 20 39.5	+1.9
SUF				*e*S	Sn	11 21 53.8	-1.3
SUF				MSG		11 22 39.9	
	comp=Z,10nm,0.3s						
KEF	Keuruu	6.93	139	*e*P	Pn	11 20 41.3	+2.1
KEF				*e*S	Sn	11 21 57.0	-1.0
KEF				MSG

*ISK **20** 11:40:51.2, 39.34N×33.13E, h5km, MD3.5*
*ISCJB **20** 11:40:53.1±0.3, 39.33N±0.002×33.15E±0.003, h10km, Error ellipse: s-maj=3.7km s-min=3.2km az=29.7*
ISC 20 11:40:53.6±0.3,**3934N**±002×**3312E**±003,**h10**km,**n41**, σ1§**05**/53,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**86**	PG	**Pg**	**11 41 00.3**	**-2.2**
LOD	**Lodumlu**	**0.62**	**334**	PG	**Pg**	**11 41 03.7**	**-1.9**
LOD				*e*SG	**Sg**	**11 41 13.0**	**-0.6**
CDAG	**Cicekdag**	**1.01**	**73**	*i* P	**Pg**	**11 41 08.8**	**-4.2**
CDAG	**Cicekdag**	**1.01**	**73**	*i* P	**Pg**	**11 41 10.1**	**-2.9**
CDAG				*i* S	**Sg**	**11 41 24.2**	**-1.9**
CDAG	**Cicekdag**	**1.01**	**73**	*i* P	**Pg**	**11 41 08.8**	**-4.2**
CDAG				*i* S	**Sg**	**11 41 24.2**	**-1.9**
KIZT	**Kizilcal**	**1.07**	**245**	PG	**Pg**	**11 41 12.9**	**-1.2**
KDHN	**Kadinhani**	**1.13**	**224**	*i* P	**Pb**	**11 41 14.2**	**-0.9**
KDHN				*i* S	**Sb**	**11 41 30.3**	**+0.4**
ELDT	**Eldivan**	**1.18**	**11**	*i* P	**Pb**	**11 41 14.1**	**-1.9**
ELDT				*i* S	**Sb**	**11 41 31.2**	**-0.1**
LADK	**Ladik-KONYA**	**1.28**	**208**	*e*PN	**Pn**	**11 41 16.9**	**-0.6**
LADK				*e*SN	**Sn**	**11 41 34.9**	**+0.3**
CANT	**Cankiri**	**1.32**	**17**	*e*PN	**Pn**	**11 41 16.7**	**-1.4**
CANT				*e*SN	**Sn**	**11 41 36.5**	**+0.7**
SGKT	**Sivrigoynuk**	**1.48**	**327**	*i* P	**Pn**	**11 41 19.4**	**-0.9**
SGKT				*i* S	**Sn**	**11 41 42.8**	**+3.1**
KONT	**Konya--Tatoy**	**1.51**	**203**	*e*PN	**Pn**	**11 41 20.1**	**-0.6**
NIG	**Nigde**	**1.69**	**136**	*e*PN	**Pn**	**11 41 23.2**	**+0.1**
YOZ	**Yozgat**	**1.73**	**79**	*e*PN	**Pn**	**11 41 23.0**	**-0.6**
ESKT	**Eskisehir**	**1.77**	**277**	*i* P	**Pn**	**11 41 25.0**	**+0.8**
ESKT				*i* S	**Sn**	**11 41 53.0**	**+6.3**
ESKT	**Eskisehir**	**1.77**	**277**	*e*Pn	**Pn**	**11 41 24.2**	**0.0**
SEYT	**Eskypehyr**	**1.77**	**277**	*i* P	**Pn**	**11 41 25.0**	**+0.8**
BOLV	**Bolvadin**	**1.80**	**251**	*i* P	**Pn**	**11 41 24.7**	**0.0**
BOLV				*i* S	**Sn**	**11 41 51.5**	**+4.0**
CTKT	**Corum**	**1.81**	**44**	*i* P	**Pn**	**11 41 25.0**	**+0.2**
CTKT				*i* S	**Sn**	**11 41 49.7**	**+1.8**
TOS	**Tosya**	**1.83**	**22**	*e*PN	**Pn**	**11 41 24.3**	**-0.8**
MDU	**Mudurnu**	**1.85**	**308**	*e*PN	**Pn**	**11 41 26.0**	**+0.7**
SAFT	**Safranbolu**	**1.93**	**350**	*e*PN	**Pn**	**11 41 26.8**	**+0.4**
BORA	**Eskisehir**	**2.13**	**286**	*i* P	**Pn**	**11 41 28.3**	**-0.9**
BNN	**Bunyan**	**2.17**	**102**	*e*PN	**Pn**	**11 41 29.2**	**-0.6**
BALT	**Daday**	**2.21**	**5**	*i* P	**Pn**	**11 41 31.9**	**+1.7**
BALT				*i* S	**Sn**	**11 42 03.0**	**+5.5**
HENT	**Hendek**	**2.26**	**312**	*i* P	**Pn**	**11 41 36.0**	**+5.1**
KDZE	**Karadeniz Ereo**	**2.35**	**328**	*e*PN	**Pn**	**11 41 33.3**	**+1.0**
BYBT	**Boyabat**	**2.47**	**30**	*e*PN	**Pn**	**11 41 34.7**	**+0.8**
KARA	**Karaisali**	**2.57**	**143**	*e*PN	**Pn**	**11 41 35.1**	**-0.1**
MERS	**Mersin**	**2.70**	**155**	*e*PN	**Pn**	**11 41 37.4**	**+0.4**
BZK	**Bozkurt**	**2.71**	**14**	*e*PN	**Pn**	**11 41 37.4**	**+0.3**
TOKT	**Tokat**	**2.81**	**68**	*e*PN	**Pn**	**11 41 39.7**	**+1.1**
KOZT	**Kozan**	**2.82**	**130**	*e*PN	**Pn**	**11 41 39.2**	**+0.6**
DIKM	**Dikmen**	**2.83**	**34**	*e*PN	**Pn**	**11 41 39.3**	**+0.5**
KVT	**Kavak**	**2.84**	**51**	*e*PN	**Pn**	**11 41 39.6**	**+0.7**
SARI	**SarD1z-Kayseri**	**2.86**	**102**	*e*PN	**Pn**	**11 41 38.1**	**-1.2**
SVSK	**Karacayir**	**3.05**	**78**	*e*PN	**Pn**	**11 41 42.0**	**+0.2**
IKL	**Isikli**	**3.12**	**172**	*e*PN	**Pn**	**11 41 43.8**	**+0.9**
KMRS	**Kahramanmaras**	**3.48**	**120**	*e*PN	**Pn**	**11 41 48.5**	**+0.7**
MYA	**Malataya**	**4.26**	**102**	*e*PN	**Pn**	**11 41 59.6**	**+1.1**
PTK	**Pertek**	**4.90**	**93**	*e*PN	**Pn**	**11 42 08.9**	**+1.7**

IDC 20 11:47:10.2±2.2,**367N×9575E**,**h0**km,**mb3.4**/3,**mb1 3.7**/5, **mb1mx3.4**/22,**mbtmp3.4**/5,**ML3.7**/2,**Error ellipse: s-maj=64.7km s-min=25.2km az=51.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.28**	**105**	Pn	Pn	11 48 02.9	0.0
	4.8nm,0.3s,baz=322,slow=16,SNR=13						
PSI				Sn	Sn	11 48 46.5	+3.8
	4.5nm,0.3s,baz=173,slow=15,SNR=5.4						
CMAR	**Chiang Mai Arr**	**15.03**	**12**	Pn	Pn	11 50 44.4	+0.3
	0.1nm,0.3s,baz=194,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**44.52**	**347**	P	P	11 55 23.5	0.0
	0.1nm,0.4s,baz=156,slow=9.4,SNR=2.6						
WRA	**Warramunga Arr**	**44.57**	**123**	P	P	11 55 24.0	-0.4
	1.0nm,0.5s,baz=302,slow=9.2,SNR=1.9						
ASAR	**Alice Springs**	**46.03**	**128**	P	P	11 55 36.3	+0.4
	0.3nm,0.7s,baz=300,slow=7.5,SNR=8.5						

*NEIC **20** 11:52:54.1, 34.32N×142.10E, h16km, MG3.6(JMA), After JMA.*
*JMA **20** 11:52:54.1±0.4, 34.32N×142.10E, h16km±3km, M3.6*
*ISCJB **20** 11:52:56.7±1.4, 34.41N±0.05×142.02E±0.07, h22km±8km, mb3.5/7, Error ellipse: s-maj=11.7km s-min=6.7km az=142.4*
*IDC **20** 11:53:05.4±2.9, 34.37N×141.44E, h51km±25km, mb3.3/7, mb1 3.5/9, mb1mx3.4/24, mbtmp3.4/9, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/18, Error ellipse: s-maj=23.9km s-min=15.0km az=90.0*
ISC 20 11:52:56.8±1.3,**3443N**±005×**14198E**±007,**h9**km±6km,**n25**, σ1§**05**/34,**mb3.5**/7,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.86**	**285**	P	**Pg**	**11 53 12.4**	**-0.9**
BSO1				*e*S	**Sg**	**11 53 25.2**	**+0.7**
BSO2	**Boso 2**	**1.06**	**288**	*e*S	**Sg**	**11 53 32.3**	**+1.3**
BSO3	**Boso 3**	**1.27**	**287**	P	**Pn**	**11 53 19.6**	**-1.1**
BSO3				*e*S	**Sb**	**11 53 37.3**	**0.0**
BSO4	**Boso 4**	**1.46**	**293**	P	**Pn**	**11 53 22.9**	**-0.5**
BSO4				*e*S	**Sn**	**11 53 43.3**	**+0.6**
CHOJ	**Chosi**	**1.57**	**324**	P	**Pn**	**11 53 24.1**	**-0.7**
JHJ	**Hachijo jima 2**	**2.25**	**235**	P	**Pn**	**11 53 34.4**	**+0.2**
	21nm,0.3s,baz=226,slow=22,SNR=16						
JHJ				S	**Sn**	**11 53 57.0**	**-5.0**
	34nm,0.3s,baz=72,slow=19,SNR=4.2						
JOD2	**Odawara 2**	**2.52**	**290**	P	**Pn**	**11 53 36.5**	**-1.4**
JIZS	**Izushimoda**	**2.58**	**277**	*e*S	**Sn**	**11 54 09.1**	**-1.0**
JAG	**Ashikaga**	**2.87**	**315**	P	**Pn**	**11 53 42.1**	**-0.6**
JRY	**Ryogami san**	**2.98**	**303**	P	**Pn**	**11 53 43.8**	**-0.4**
JYN	**Shimob**	**3.02**	**292**	P	**Pn**	**11 53 43.9**	**-0.8**
JYN				*e*S	**Sn**	**11 54 20.9**	**-0.1**
JMM	**Marumori**	**3.56**	**345**	P	**Pn**	**11 53 52.4**	**+0.2**
MJAR	**Matsushiro Arr**	**3.73**	**305**	P	**Pn**	**11 53 54.6**	**0.0**
	2.3nm,0.3s,baz=272,slow=2.8,SNR=20						
MJAR				S	**Sn**	**11 54 39.7**	**+1.1**
	1.6nm,0.3s,baz=108,slow=15,SNR=4.5						
MAJO	**Matsushiro**	**3.73**	**305**	*e*PN	**Pn**	**11 53 52.1**	**-2.5**
MAJO				*e*Sn	**Sn**	**11 54 37.6**	**-1.0**
MAT	**Matsushiro**	**3.73**	**305**	P	**Pn**	**11 53 56.0**	**+1.4**
MAT				S	**Sn**	**11 54 39.7**	**+1.1**
CBIJ	**Chichi jima**	**7.31**	**179**	P	**Pn**	**11 54 49.5**	**+5.7**
	3.5nm,0.3s,baz=250,slow=16,SNR=6.4						
CBIJ				S	**Sn**	**11 56 06.3**	**-0.6**
	6.6nm,0.3s,baz=342,slow=20,SNR=4.4						
CBIJ				LR	LR	11 57 22.3	
	comp=Z,116nm,20.5s,baz=92,slow=35						
SONM	**Songino Array**	**29.68**	**308**	P	**P**	**11 59 04.5**	**+1.7**
	0.4nm,0.6s,mb3.4,baz=111,slow=10.0,SNR=3.3						
SONM	**Songino Array**	**29.68**	**308**	P	**P**	**11 59 04.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**41.36**	**259**	P	**P**	**12 00 42.1**	**-1.2**
	0.5nm,0.4s,mb3.5,baz=45,slow=7.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**44.03**	**314**	P	**P**	**12 01 05.0**	**+0.4**
	0.5nm,0.3s,mb3.7,baz=75,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**45.93**	**304**	P	**P**	**12 01 20.4**	**+0.7**
	0.7nm,0.7s,mb3.7,baz=94,slow=10.0,SNR=7.2						
KURK	**Kurchatov**	**47.93**	**310**	*e*P	**P**	**12 01 34.5**	**-0.9**
WRA	**Warramunga Arr**	**54.56**	**189**	P	**P**	**12 02 27.1**	**+1.8**
	0.7nm,0.6s,mb3.9,baz=5.2,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**58.28**	**189**	P	**P**	**12 02 54.1**	**+2.3**
	0.4nm,0.7s,mb3.6,baz=16,slow=11,SNR=9.0						
YKA	**Yellowknife Ar**	**65.83**	**30**	P	**P**	**12 03 47.0**	**+4.9**
	0.1nm,0.7s,mb3.0,baz=302,slow=7.0,SNR=3.5						

*IDC **20** 12:03:34.9±0.9, 1622S×16759E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.3/20, mbtmp4.3/13, MS4.1/8, Ms1 4.1/8, ms1mx3.7/31, Error ellipse: s-maj=26.0km s-min=19.4km az=109.0*
*NOU **20** 12:03:36.3±1.0, 1603S×16696E, h30km, MD3.3, ML4.0*
*ISCJB **20** 12:03:37.4±0.7, 1646S±0.004×1677E±0.1, h33km, mb4.4/14, MS4.0/7, Error ellipse: s-maj=16.0km s-min=5.6km az=1.8*
*NEIC **20** 12:03:40.0±0.7, 1630S×16762E, h35km, mb4.8/7, Error ellipse: s-maj=16.3km s-min=12.8km az=119.0*
ISC 20 12:03:39.6±0.7,**1643S**±004×**1677E**±01,**h35**km,**n56**, σ1§**16**/33,**mb4.4**/14,**MS4.0**/7,**1C**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.74**	**192**	*e*P	**Pn**	**12 05 02.4**	**+0.1**
DZM				*e*S	**Sn**	**12 06 05.7**	**-1.4**
DZM				AMP		12 06 12.1	
	comp=Z,2μm,3.6s						
DZM	**Mont Dzumac**	**5.74**	**192**	*e*Pn	**Pn**	**12 05 02.6**	**+0.2**
DZM				*e*Sn	**Sn**	**12 06 09.0**	**+1.9**
NOUC	**Port Laguerre**	**5.80**	**193**	*e*P	**Pn**	**12 05 02.9**	**-0.3**
NOUC				*e*S	**Sn**	**12 06 06.3**	**-2.2**
NOUC				AMP		12 06 11.6	
	comp=Z,67nm,0.6s						
NORM	**Noumea**	**5.89**	**191**	*e*P	**Pn**	**12 05 04.3**	**-0.1**
NORM				*e*S	**Sn**	**12 06 10.4**	**-0.3**
NORM				AMP		12 06 13.3	
	comp=Z,188nm,0.3s						
PLUM	**Mont Dore**	**5.91**	**190**	*e*P	**Pn**	**12 05 04.9**	**+0.3**
EIDS	**Eidsvold**	**17.91**	**237**	*e*P	**Pn**	**12 07 47.8**	**+1.8**
RAO	**Raoul Island**	**18.35**	**137**	LR	LR	12 13 34.2	
	comp=Z,780nm,20.4s,baz=344,slow=32						
ARMA	**Armidale**	**20.27**	**224**	*e*P	**P**	**12 08 19.8**	**+7.6**
RMQ	**Roma**	**20.28**	**237**	*e*P	**P**	**12 08 14.4**	**+2.1**
	comp=Z,89nm,1.2s						
CTA	**Charters Tower**	**20.72**	**257**	*e*P	**P**	**12 08 18.0**	**+0.9**
	comp=Z,174nm,0.7s						
CTA	**Charters Tower**	**20.72**	**257**	P	**P**	**12 08 17.9**	**+0.8**
	comp=Z,16nm,0.7s,baz=77,slow=12,SNR=19						
CTAO	**Charters Tower**	**20.72**	**257**	*e*Pn	**P**	**12 08 17.5**	**+0.4**
	comp=Z,14nm,0.7s						
PMG	**Port Moresby**	**21.23**	**287**	LR	LR	12 14 15.7	
	comp=Z,288nm,19.0s,MS3.7,baz=340,slow=30						
MTSU	**Mount Surprise**	**22.43**	**262**	*e*P	**P**	**12 08 36.6**	**+1.2**
	comp=Z,369nm,0.9s,mb5.1						
URZ	**Urewera**	**23.26**	**161**	P	**P**	**12 08 47.7**	**+3.6**
	comp=Z,4.7nm,0.6s,mb4.1,baz=107,slow=20,SNR=3.6						
URZ				LR	LR	12 16 54.3	
	comp=Z,1μm,18.8s,MS4.3,baz=193,slow=34						
CMSA	**Cobar Meteorol**	**25.07**	**229**	*e*P	**P**	**12 09 01.6**	**+0.8**
	comp=Z,12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**28.28**	**232**	*e*P	**P**	**12 09 30.6**	**+0.9**
	comp=Z,17nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**28.28**	**232**	P	**P**	**12 09 30.5**	**+0.8**
	comp=Z,8.5nm,0.8s,mb4.4,baz=62,slow=6.7,SNR=14						
WB2	**Warramunga Arr**	**31.88**	**259**	*e*P	**P**	**12 10 00.2**	**-1.6**
WRA	**Warramunga Arr**	**31.89**	**259**	P	**P**	**12 10 00.3**	**-1.5**
	comp=Z,2.5nm,0.7s,mb4.1,baz=88,slow=8.2,SNR=17						
WRA				LR	LR	12 19 41.5	
	comp=Z,66nm,20.2s,MS3.3,baz=65,slow=30						
WRA	**Warramunga Arr**	**31.89**	**259**	P	**P**	**12 10 00.3**	**-1.5**
WRA				LR	LR	12 19 41.5	
ASAR	**Alice Springs**	**32.53**	**252**	P	**P**	**12 10 06.5**	**-0.9**
	comp=Z,13nm,0.7s,mb5.0,baz=76,slow=9.1,SNR=165						
GUMO	**Guam**	**37.42**	**322**	LR	LR	12 23 57.3	
	comp=Z,237nm,20.8s,MS4.0,baz=110,slow=33						
FORT	**Forrest**	**38.85**	**241**	*e*P	**P**	**12 10 59.2**	**-2.4**
	comp=Z,25nm,0.7s,mb5.1						
PPT	**Papeete**	**40.77**	**98**	*e*LQ		12 20 59.8	
	comp=Z,785nm,29.5s						
PPT				*e*LR	LR	12 22 35.2	
	comp=Z,200nm,26.2s						
PPT	**Papeete**	**40.77**	**98**	LR	LR	12 24 07.8	
	comp=Z,226nm,19.9s,MS4.0,baz=90,slow=30						
MJAR	**Matsushiro Arr**	**59.61**	**333**	P	**P**	**12 13 39.5**	**-0.6**
	comp=Z,1.9nm,0.7s,mb4.2,baz=169,slow=9.2,SNR=5.5						
VNDA	**Vanda**	**61.18**	**181**	P	**P**	**12 13 51.9**	**+1.6**
	comp=Z,0.8nm,0.8s,mb3.9,baz=49,slow=7.9,SNR=3.3						
ASAJ	**Asahikawa**	**64.48**	**340**	P	**P**	**12 14 11.5**	**-1.1**
	comp=Z,7.9nm,1.0s,mb4.7,baz=211,slow=12,SNR=4.4						
FX1	**Attu Island--F**	**69.18**	**4**	LR	LR	12 40 02.2	
	comp=Z,388nm,19.5s,MS4.7,baz=186,slow=32						
PETK	**Petropavlovsk-**	**69.79**	**354**	P	**P**	**12 14 46.0**	**-0.1**
	comp=Z,2.4nm,0.7s,mb4.2,baz=151,slow=6.1,SNR=3.6						
PETK				LR	LR	12 40 30.5	
	comp=Z,151nm,19.6s,MS4.2,baz=200,slow=32						
CMAR	**Chiang Mai Arr**	**76.05**	**294**	P	**P**	**12 15 23.7**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=114,slow=4.1,SNR=8.0						
SONM	**Songino Array**	**84.12**	**324**	P	**P**	**12 16 06.4**	**-0.5**
	comp=Z,1.9nm,0.9s,mb4.2,baz=152,slow=6.1,SNR=8.5						
NVAR	**Mina Array Bea**	**88.03**	**49**	P	**P**	**12 16 26.7**	**+0.3**
	comp=Z,0.1nm,0.2s,baz=248,slow=9.6,SNR=2.4						
VNA3	**Neumayer Olymp**	**92.53**	**181**	*e*	pP	12 16 53.5	-4.5
VNA3				*e*		12 16 58.0	
VNA3				*e*		12 17 10.1	
VNA2	**Neumayer--Watz**	**92.81**	**182**	*e*	pP	12 16 55.5	-3.8
	baz=178,slow=4.0						
VNA2				*e*		12 17 00.2	
VNA2				*e*		12 17 14.5	
MKAR	**Makanchi Array**	**98.74**	**316**	P	**P**	**12 17 16.1**	**+0.7**
	comp=Z,0.4nm,0.8s,mb4.0,baz=93,slow=6.9,SNR=3.6						
ARCES	**ARCESS Array B**	**122.00**	**345**	PKP	PKPdf	12 22 29.0	-0.6
	comp=Z,6.2nm,0.9s,baz=20,slow=4.0,SNR=3.6						
ARCES	**ARCESS Array B**	**122.00**	**345**	PKP	PKPdf	12 22 29.0	-0.6
FETA	**Feichten**	**144.04**	**333**	*i* PKPdf	PKPdf	12 23 10.3	-1.2
	comp=Z,2.6nm,0.8s						
CDF	**Champ du Feu**	**144.31**	**338**	*e*PKP1	PKPdf	12 23 11.8	-0.1
HINF	**Hinteralfeld**	**144.97**	**337**	*e*PKP1	PKPdf	12 23 13.7	+0.6
HAU	**Haudompre**	**144.99**	**338**	*e*PKP1	PKPdf	12 23 13.5	+0.4
FLN	**La Foliniere**	**146.34**	**346**	*e*PKP1	PKPbc	12 23 16.5	-0.1
LDF	**La Druitiere**	**146.42**	**345**	*e*PKP1	PKPbc	12 23 16.6	-0.2
	comp=Z,16nm,0.8s						
LOR	**Lormes**	**146.48**	**340**	*e*PKP1	PKPbc	12 23 17.4	+0.3
SSF	**Saint Saulge**	**146.78**	**340**	*e*PKP1	PKPbc	12 23 18.4	+0.5
	comp=Z,8.6nm,0.6s						
GRR	**Gorron**	**146.78**	**346**	*e*PKP1	PKPbc	12 23 18.1	+0.2
SMF	**Signal de Mont**	**147.03**	**339**	*e*PKP1	PKPbc	12 23 18.0	-0.7
SGMF	**Saint Gilles**	**147.28**	**348**	*e*PKP1	PKPbc	12 23 19.4	+0.1
ROSF	**Rostrenen**	**147.34**	**349**	*e*PKP1	PKPbc	12 23 19.9	+0.4
BGF	**Bois d'Agland**	**147.44**	**340**	*e*PKP1	PKPbc	12 23 20.1	+0.3
	comp=Z,7.2nm,0.5s						
TCF	**Toulx Ste Croi**	**147.88**	**341**	*e*PKP1	PKPbc	12 23 21.3	+0.3
PGF	**Pioggiola**	**148.24**	**329**	*e*PKP1	PKPbc	12 23 22.3	+0.2
	comp=Z,25nm,0.9s						
MFF	**Saint Martin d**	**148.27**	**344**	*e*PKP1	PKPbc	12 23 22.2	+0.1
	comp=Z,6.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**166.12**	**258**	PKPab	PKPab	12 24 42.1	-0.5
	comp=Z,0.4nm,0.8s,baz=105,slow=4.1,SNR=2.6						

*ISCJB **20** 12:10:12.6±0.9, 39.38N±0.004×33.19E±0.004, h1km±8km, Error ellipse: s-maj=6.3km s-min=5.3km az=149.4*
*CSEM **20** 12:10:12.4±0.1, 39.36N×33.18E, h5km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.1km az=129.0*
*DDA **20** 12:10:12.9, 39.31N×3323E, h7km±2km, Md3.0*
*ISK **20** 12:10:12.5, 39.38N×3320E, h4km, MD2.9*
ISC 20 12:10:13.3±0.6,**3937N**±003×**3318E**±004,**h4**km±6km,**n10**, σ0§**66**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.41**	**90**	*e*PG	**Pg**	**12 10 21.0**	**-0.2**
KAMT				*e*SG	**Sg**	**12 10 27.2**	**+0.7**
LOD	**Lodumlu**	**0.61**	**328**	*e*PG	**Pg**	**12 10 24.9**	**-0.1**
LOD				*e*SG	**Sg**	**12 10 34.0**	**+1.1**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**12 10 31.0**	**-0.5**
CDAG				*i* S	**Sg**	**12 10 44.2**	**+0.2**
KIZT	**Kizilcal**	**1.12**	**245**	*e*PN	**Pn**	**12 10 34.6**	**-1.2**
KIZT				*e*SN	**Sn**	**12 10 51.2**	**-0.5**
ELDT	**Eldivan**	**1.14**	**10**	*i* P	**Pn**	**12 10 35.7**	**-0.2**
ELDT				*i* S	**Sn**	**12 10 52.1**	**+0.2**
KDHN	**Kadinhani**	**1.19**	**225**	*i* P	**Pg**	**12 10 35.6**	**-0.4**
KDHN				*i* S	**Sg**	**12 10 51.7**	**+0.4**
LADK	**Ladik-KONYA**	**1.33**	**209**	*e*PN	**Pn**	**12 10 38.3**	**-0.3**
LADK				*e*SN	**Sn**	**12 10 57.6**	**+0.8**
KONT	**Konya--Tatoy**	**1.56**	**205**	*e*PN	**Pn**	**12 10 41.8**	**0.0**
KONT				*e*SN	**Sn**	**12 11 03.5**	**+1.0**
YOZ	**Yozgat**	**1.68**	**80**	*e*PN	**Pn**	**12 10 43.1**	**-0.3**
CTKT	**Corum**	**1.76**	**44**	*i* P	**Pg**	**12 10 45.6**	**-1.4**
CTKT				*i* S	**Sg**	**12 11 10.6**	**+0.8**

*ISCJB **20** 12:14:21.0±0.8, 29.89N±0.003×36.24E±0.06, h0km, Error ellipse: s-maj=7.7km s-min=4.4km az=163.5*
*GII **20** 12:14:21.7±2.0, 29.87N×36.18E, h0km, EXPLOSION*
*SGS **20** 12:14:21.6, 30.06N×36.19E, h7km*
*HLW **20** 12:14:23.8, 30.78N×35.23E, h25km, Mb3.1*
ISC 20 12:14:21.4±0.8,**2988N**±003×**3625E**±006,**h0**km,**n23**, σ0§**71**/26,**Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.05**	**262**	Pg	**Pg**	**12 14 41.0**	**-0.6**
HRFI	**Mount Harif**	**1.06**	**279**	Pg	**Pg**	**12 14 41.9**	**+0.1**
EIL	**Elat**	**1.15**	**260**	Pg	**Pg**	**12 14 43.3**	**-0.1**
ZFRI	**Zfri**	**1.15**	**306**	Pg	**Pg**	**12 14 42.8**	**-0.6**
ZFRI				Sg	**Sg**	**12 14 59.3**	**+1.0**
MBRI	**Mt Berech**	**1.16**	**266**	Pg	**Pg**	**12 14 43.4**	**-0.3**
MBRI				Sg	**Sg**	**12 15 01.8**	**+3.1**
PRNI	**Paran**	**1.18**	**294**	Pg	**Pg**	**12 14 43.6**	**-0.4**
JLOS		**1.31**	**210**	S	**Sg**	**12 15 05.0**	**+1.3**
JLOS		**1.31**	**210**	P	**Pg**	**12 14 46.3**	**-0.4**
KRMI	**Paran Flat**	**1.34**	**281**	Pg	**Pg**	**12 14 46.3**	**-0.9**
HBST	**Basata**	**1.47**	**244**	P	**Pn**	**12 14 49.7**	**+0.5**
HBST				S	**Sg**	**12 15 08.4**	**-0.4**
MZDA	**Masada**	**1.62**	**332**	Pn	**Pn**	**12 14 51.6**	**+0.3**
TBKS	**Tabuk**	**1.67**	**171**	S	**Sn**	**12 15 14.7**	**+0.6**
TBKS	**Tabuk**	**1.67**	**171**	P	**Pn**	**12 14 52.1**	**+0.2**
BDAS	**Al Bad'**	**1.75**	**215**	S	**Sn**	**12 15 16.0**	**-0.2**
BDAS	**Al Bad'**	**1.75**	**215**	P	**Pn**	**12 14 52.8**	**-0.3**
YTIR	**Yattir**	**1.77**	**327**	Pn	**Pn**	**12 14 53.9**	**+0.5**
DSI	**Dead Sea**	**1.85**	**336**	Pn	**Pn**	**12 14 55.3**	**+0.9**
KZIT	**Kziot**	**1.90**	**303**	Pn	**Pn**	**12 14 54.5**	**-0.7**
HNKL	**Nakhl**	**1.97**	**272**	P	**Pn**	**12 14 46.3**	**-10**
RSHS		**2.02**	**219**	P	**Pn**	**12 14 55.7**	**-1.0**
HKAT	**Jabal Katrina**	**2.39**	**236**	P	**Pn**	**12 15 01.6**	**-0.2**
HKAT	**Jabal Katrina**	**2.39**	**236**	P	**Pn**	**12 15 01.6**	**-0.2**
TR2		**2.66**	**237**	P	**Pn**	**12 15 05.2**	**-0.4**

*ISCJB **20** 12:24:26.4±0.6, 34.39N±0.004×141.63E±0.07, h33km, mb3.6/8, Error ellipse: s-maj=8.1km s-min=5.7km az=154.2*
*NEIC **20** 12:24:28.8, 34.69N×141.55E, h20km, MG3.3(JMA), After JMA.*
*JMA **20** 12:24:28.8±0.2, 34.69N×141.55E, h20km±3km, M3.3*
*IDC **20** 12:24:31.5±2.1, 34.29N×141.39E, h50km±20km, mb3.4/8, mb1 3.7/11, mb1mx3.6/25, mbtmp3.5/11, ML3.7/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/28, Error ellipse: s-maj=20.9km s-min=9.8km az=87.0*
ISC 20 12:24:29.0±0.6,**3442N**±004×**14148E**±007,**h35**km,**n29**, σ1§**14**/39,**mb3.6**/8,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.47**	**300**	P	**Pn**	**12 38.2**	**-1.0**
BSO1				*e*S	**Sn**	**12 44 44.8**	**-1.6**
BSO3	**Boso 3**	**0.88**	**296**	P	**Pn**	**12 24 45.2**	**+0.3**
BSO3				*e*S	**Sn**	**12 24 56.2**	**-0.3**
BSO4	**Boso 4**	**1.10**	**302**	P	**Pn**	**12 24 48.4**	**+0.6**
BSO4				*e*S	**Sn**	**12 25 01.4**	**-0.4**
KTR	**Katsuura**	**1.20**	**308**	P	**Pn**	**12 24 49.7**	**+0.5**
CHOJ	**Chosi**	**1.38**	**339**	P	**Pn**	**12 24 49.7**	**-2.0**
JCN	**Nagara**	**1.45**	**314**	P	**Pn**	**12 24 52.8**	**+0.2**
JHJ	**Hachijo jima 2**	**1.92**	**228**	P	**Pn**	**12 24 59.5**	**+0.4**
	31nm,0.3s,baz=70,slow=19,SNR=22						
JHJ				S	**Sn**	**12 25 21.2**	**-0.7**
	62nm,0.3s,baz=32,slow=15,SNR=7.2						
JOD2

BNN	**Bunyan**	**2.12**	**102**	*e*PN	**Pn**	**12 35 02.7**	**-0.7**
BORA	**Eskisehir**	**2.19**	**286**	*i* P	**Pn**	**12 35 02.6**	**-1.8**
SHUT	**Suhut-Afyon**	**2.20**	**250**	*e*PN	**Pn**	**12 35 04.5**	**+0.1**
BALT	**Daday**	**2.21**	**4**	*i* P	**Pn**	**12 35 06.9**	**+2.2**
BALT				*i* S	**Sn**	**12 35 36.9**	**+4.8**
HENT	**Hendek**	**2.31**	**311**	*i* P	**Pn**	**12 35 08.8**	**+2.8**
GULT	**Gulveren**	**2.34**	**299**	*e*PN	**Pn**	**12 35 06.9**	**+0.4**
KDZE	**Karadeniz Ereo**	**2.40**	**327**	*e*PN	**Pn**	**12 35 07.7**	**+0.5**
ALT	**Altintas**	**2.41**	**265**	*e*PN	**Pn**	**12 35 07.2**	**-0.2**
BYBT	**Boyabat**	**2.46**	**29**	*e*PN	**Pn**	**12 35 08.2**	**+0.2**
KARA	**Karaisali**	**2.53**	**144**	*e*PN	**Pn**	**12 35 10.3**	**+1.3**
ISP	**Isparta**	**2.57**	**236**	*e*PN	**Pn**	**12 35 09.1**	**-0.5**
MERS	**Mersin**	**2.67**	**156**	*e*PN	**Pn**	**12 35 11.6**	**+0.7**
BZK	**Bozkurt**	**2.71**	**13**	*e*PN	**Pn**	**12 35 11.9**	**+0.4**
BCK	**Bucak**	**2.76**	**229**	*e*PN	**Pn**	**12 35 12.1**	**-0.2**
TOKT	**Tokat**	**2.77**	**68**	*e*PN	**Pn**	**12 35 13.2**	**+0.9**
KOZT	**Kozan**	**2.77**	**131**	*e*PN	**Pn**	**12 35 12.2**	**-0.2**
KVT	**Kavak**	**2.80**	**50**	*e*PN	**Pn**	**12 35 13.9**	**+1.1**
SARI	**SarD1z-Kayseri**	**2.81**	**102**	*e*PN	**Pn**	**12 35 11.8**	**-1.0**
DIKM	**Dikmen**	**2.81**	**33**	*e*PN	**Pn**	**12 35 13.9**	**+1.1**
SVSK	**Karacayir**	**3.00**	**77**	*e*PN	**Pn**	**12 35 15.1**	**-0.4**
KHL	**Karahalli**	**3.03**	**252**	*e*PN	**Pn**	**12 35 15.7**	**-0.3**
IKL	**Isikli**	**3.10**	**173**	*e*PN	**Pn**	**12 35 17.7**	**+0.8**
ANTB	**Antalya**	**3.14**	**220**	*e*PN	**Pn**	**12 35 17.7**	**+0.3**
GEMT	**Gemlik**	**3.27**	**291**	*e*PN	**Pn**	**12 35 19.0**	**-0.3**
DST	**Dursunbey**	**3.54**	**276**	*e*PN	**Pn**	**12 35 24.0**	**+1.0**
ARMT	**Armutlu**	**3.55**	**292**	*e*PN	**Pn**	**12 35 23.4**	**+0.3**
ISK	**Istanbul-Kandi**	**3.61**	**300**	*e*PN	**Pn**	**12 35 24.6**	**+0.7**
KULA	**Kula-Manisa**	**3.62**	**259**	*e*PN	**Pn**	**12 35 25.3**	**+1.2**
BGKT	**Bogazkoy**	**3.86**	**300**	*e*PN	**Pn**	**12 35 28.1**	**+0.8**
CRLT	**Corlu**	**4.55**	**295**	*e*PN	**Pn**	**12 35 37.8**	**+1.0**

*ISK **20** 12:48:10.6, 3943N×3308E, h2km, MD3.3, ML3.3*
*ISCJB **20** 12:48:11.8±0.3, 3943N±002×3312E±003, h10km, Error ellipse: s-maj=3.7km s-min=2.9km az=152.1*
*CSEM **20** 12:48:11.3±0.1, 3943N×3310E, h5km, MD3.3, Error ellipse: s-maj=2.2km s-min=1.9km az=38.0*
*DDA **20** 12:48:11.1, 3940N×3308E, h7km±4km, Md3.7*

ISC 20 12:48:11.7±0.5, 3942N±003×3311E±003, h3km±4km, n31, σ0§94/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.47**	**96**	*e*PG	**Pg**	**12 48 20.5**	**-0.2**
LOD	**Lodumlu**	**0.54**	**331**	*e*PG	**Pg**	**12 48 21.9**	**-0.1**
LOD				*e*SG	**Sg**	**12 48 29.4**	**+0.4**
CDAG	**Cicekdag**	**1.00**	**78**	*i* P	**Pg**	**12 48 30.6**	**-0.2**
CDAG				*i* S	**Sn**	**12 48 45.7**	**-1.3**
ELDT	**Eldivan**	**1.09**	**13**	*i* P	**Pn**	**12 48 32.6**	**-1.2**
ELDT				*i* S	**Sn**	**12 48 48.6**	**-0.9**
KIZT	**Kizilcal**	**1.10**	**241**	*e*PN	**Pn**	**12 48 32.4**	**-1.4**
KDHN	**Kadinhani**	**1.19**	**221**	*i* P	**Pg**	**12 48 34.2**	**-0.2**
KDHN				*i* S	**Sg**	**12 48 49.2**	**-0.5**
CANT	**Cankiri**	**1.25**	**18**	*e*PN	**Pn**	**12 48 35.7**	**-0.2**
CANT				*e*SN	**Sn**	**12 48 53.0**	**-0.2**
LADK	**Ladik-KONYA**	**1.35**	**206**	*e*PN	**Pn**	**12 48 36.5**	**-0.8**
SGKT	**Sivrigoynuk**	**1.41**	**325**	*i* P	**Pn**	**12 48 38.1**	**0.0**
KONT	**Konya--Tatoy**	**1.58**	**202**	*e*PN	**Pn**	**12 48 40.4**	**-0.1**
YOZ	**Yozgat**	**1.73**	**82**	*e*PN	**Pg**	**12 48 43.0**	**-1.7**
YOZ				*e*SN	**Sg**	**12 49 06.9**	**-0.2**
ESKT	**Eskisehir**	**1.75**	**274**	*i* P	**Pn**	**12 48 43.5**	**+0.7**
ESKT				*i* S	**Sn**	**12 49 03.3**	**-2.3**
ESKT	**Eskisehir**	**1.75**	**274**	*e*Pn	**Pn**	**12 48 42.3**	**-0.5**
SEYT	**Eskypehyr**	**1.75**	**274**	*i* P	**Pn**	**12 48 43.5**	**+0.7**
SEYT				*i* S	**Sn**	**12 49 03.3**	**-2.3**
TOS	**Tosya**	**1.76**	**23**	*e*PN	**Pn**	**12 48 42.9**	**0.0**
NIG	**Nigde**	**1.76**	**138**	*e*PN	**Pn**	**12 48 43.5**	**+0.5**
CTKT	**Corum**	**1.76**	**47**	*i* P	**Pg**	**12 48 44.6**	**-0.9**
CTKT				*i* S	**Sg**	**12 49 10.1**	**+1.8**
MDU	**Mudurnu**	**1.79**	**306**	*e*PN	**Pn**	**12 48 43.9**	**+0.5**
BOLV	**Bolvadin**	**1.82**	**248**	*i* P	**Pn**	**12 48 43.5**	**-0.3**
BOLV				*i* S	**Sg**	**12 49 10.5**	**+0.5**
SAFT	**Safranbolu**	**1.84**	**350**	*e*PN	**Pn**	**12 48 44.8**	**+0.7**
BORA	**Eskisehir**	**2.10**	**283**	*i* P	**Pn**	**12 48 47.1**	**-0.5**
BORA				*i* S	**Sn**	**12 49 15.1**	**+0.9**
BALT	**Daday**	**2.12**	**6**	*i* P	**Pg**	**12 48 49.6**	**-2.7**
BALT				*i* S	**Sg**	**12 49 21.1**	**+1.3**
SHUT	**Suhut-Afyon**	**2.17**	**247**	*e*PN	**Pn**	**12 48 49.2**	**+0.6**
BNN	**Bunyan**	**2.21**	**104**	*e*PN	**Pn**	**12 48 50.0**	**+0.9**
GULT	**Gulveren**	**2.23**	**298**	*e*PN	**Pn**	**12 48 50.3**	**+0.9**
ALT	**Altintas**	**2.35**	**262**	*e*PN	**Pn**	**12 48 52.2**	**+1.0**
BYBT	**Boyabat**	**2.41**	**31**	*e*PN	**Pn**	**12 48 52.5**	**+0.7**
KARA	**Karaisali**	**2.65**	**144**	*e*PN	**Pn**	**12 48 56.1**	**+1.0**
KOZT	**Kozan**	**2.88**	**131**	*e*PN	**Pn**	**12 48 59.8**	**+1.3**
SARI	**SarD1z-Kayseri**	**2.89**	**104**	*e*PN	**Pn**	**12 48 58.1**	**-0.4**
KMRS	**Kahramanmaras**	**3.54**	**122**	*e*PN	**Pn**	**12 49 08.9**	**+1.5**

*TAP **20** 13:19:14.8, 2442N×12194E, h31km, ML3.9, C*
*JMA **20** 13:19:14.0±0.2, 2447N×12187E, h44km, M3.1*
*ISCJB **20** 13:19:15.2±0.3, 2439N±002×12201E±002, h24km±3km, Error ellipse: s-maj=3.4km s-min=2.4km az=143.0*

ISC 20 13:19:15.3±0.4, 2439N±002×12200E±002, h20km±2km, n59, σ0§87/110, 10C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.24**	**278**	⇓*i*P	**Pg**	**13 19 21.1**	**+0.1**
ENA	baz=273			*e*S	**Sg**	**13 19 25.0**	**-0.1**
EHP	**Heping Village**	**0.25**	**251**	P	**Pg**	**13 19 21.5**	**+0.3**
EHP	baz=239			S	**Sg**	**13 19 27.1**	**+1.8**
TWC	**Suao**	**0.26**	**327**	⇓*i*P	**Pg**	**13 19 21.5**	**+0.2**
TWC	baz=337			*i* S	**Sg**	**13 19 25.8**	**+0.4**
ILA	**Ilan**	**0.44**	**328**	P	**Pg**	**13 19 24.4**	**0.0**
ILA	baz=332			S	**Sg**	**13 19 31.1**	**+0.5**
TWE	**Neicheng**	**0.45**	**317**	⇓*i*P	**Pg**	**13 19 24.1**	**-0.4**
TWE	baz=320			*i* S	**Sg**	**13 19 30.7**	**-0.1**
ENTT	**Nioudou**	**0.47**	**302**	⇓*i*P	**Pg**	**13 19 24.4**	**-0.6**
ENTT	baz=306			*i* S	**Sg**	**13 19 31.0**	**-0.4**
TWD	**Chiawan**	**0.48**	**230**	⇑*i*P	**Pg**	**13 19 25.0**	**-0.3**
TWD	baz=231			S	**Sg**	**13 19 33.0**	**+1.1**
HWA	**Hwalien**	**0.55**	**221**	*e*P	**Pb**	**13 19 26.0**	**-0.3**
HWA	baz=215			*e*S	**Sg**	**13 19 35.5**	**+1.6**
NNS	**Nan Shan**	**0.58**	**275**	⇑P	**Pb**	**13 19 26.1**	**-0.6**
NNS	baz=272			S	**Sb**	**13 19 34.1**	**-0.5**
TWB1	**Santiao Chiao**	**0.61**	**359**	*e*P	**Pb**	**13 19 27.2**	**-0.2**
TWB1	baz=4.0			S	**Sb**	**13 19 35.9**	**+0.3**
NSK	**Sanguang**	**0.65**	**296**	⇑*i*P	**Pb**	**13 19 27.3**	**-0.8**
NSK	baz=295			S	**Sb**	**13 19 35.8**	**-0.9**
TWA	**Mucha**	**0.70**	**327**	P	**Pb**	**13 19 28.6**	**-0.3**
TWA	baz=329			*e*S	**Sb**	**13 19 38.4**	**+0.3**
NWF	**Wu-fen Shan**	**0.70**	**343**	*i* P	**Pb**	**13 19 28.9**	**0.0**
NWF	baz=347			S	**Sb**	**13 19 39.1**	**+0.9**
WHF	**Hehuan Shan**	**0.72**	**250**	⇑*i*P	**Pb**	**13 19 28.9**	**-0.3**
WHF	baz=246			S	**Sb**	**13 19 38.9**	**+0.3**
TWT	**Tachien**	**0.77**	**260**	⇑*i*P	**Pb**	**13 19 29.8**	**-0.2**
TWT	baz=257			S	**Sb**	**13 19 40.8**	**+0.7**
ESL	**Shilin**	**0.78**	**222**	⇑P	**Pb**	**13 19 29.1**	**-1.1**
ESL	baz=231			*e*S	**Sb**	**13 19 40.4**	**0.0**
TAP1	**Taipei**	**0.78**	**326**	P	**Pb**	**13 19 30.1**	**-0.1**
TAP1	baz=328			S	**Sb**	**13 19 40.6**	**+0.3**
TWS1	**Kuangyinshan**	**0.88**	**323**	P	**Pb**	**13 19 31.7**	**-0.3**
TWS1	baz=324			*e*S	**Sb**	**13 19 44.0**	**+0.6**
YOJ	**Yonaguni jima**	**0.92**	**86**	P	**Pb**	**13 19 32.5**	**-0.1**
YOJ				S	**Sb**	**13 19 46.1**	**+1.6**
NCU	**National Centr**	**0.94**	**308**	*e*P	**Pb**	**13 19 32.6**	**-0.4**
NCU	baz=296			*e*S	**Sb**	**13 19 45.5**	**+0.5**
NSTT	**Nanjuang**	**0.94**	**285**	⇑*i*P	**Pb**	**13 19 32.7**	**-0.4**
NSTT	baz=283			*e*S	**Sb**	**13 19 44.8**	**-0.3**
HSN	**Hsinchu**	**1.03**	**294**	*e*P	**Pb**	**13 19 33.7**	**-0.7**
HSN	baz=307			*e*S	**Sb**	**13 19 47.7**	**+0.2**
EHY	**Hungye**	**1.08**	**215**	*e*P	**Pb**	**13 19 32.9**	**-2.5**
EHY	baz=212			*e*S	**Sb**	**13 19 48.5**	**-0.6**
TWQ1	**Liyutan**	**1.12**	**268**	P	**Pn**	**13 19 35.9**	**0.0**
TWQ1	baz=266			*e*S	**Sb**	**13 19 51.0**	**+0.8**
SMLT	**Sun Moon Lake**	**1.13**	**243**	⇑P	**Pn**	**13 19 35.2**	**-0.9**
SMLT	baz=241			*e*S	**Sb**	**13 19 49.9**	**-0.6**
TYC	**Yuchr**	**1.16**	**245**	⇑P	**Pn**	**13 19 35.6**	**-0.8**
TYC	baz=243			*e*S	**Sb**	**13 19 51.0**	**-0.2**
TWF1	**Yuli**	**1.22**	**212**	*e*P	**Pn**	**13 19 35.2**	**-2.1**
TWF1	baz=222			*e*S	**Sb**	**13 19 53.2**	**+0.1**
PCYT	**Pengchaiyu**	**1.23**	**3**	*e*P	**Pn**	**13 19 36.3**	**-1.2**
	baz=5.0						
TCU	**Taichung**	**1.24**	**259**	*e*P	**Pn**	**13 19 37.1**	**-0.4**
TCU	baz=256			*e*S	**Sb**	**13 19 52.6**	**-0.9**
WNT	**Mingjian**	**1.31**	**247**	*e*P	**Pn**	**13 19 38.9**	**+0.4**
WNT	baz=245			*e*S	**Sn**	**13 19 56.5**	**+1.0**
YUS	**Yu-Shan**	**1.32**	**227**	⇑P	**Pn**	**13 19 38.3**	**-0.4**
YUS	baz=214			*e*S	**Sn**	**13 19 55.4**	**-0.2**
ALS	**Alishan**	**1.41**	**232**	*e*P	**Pn**	**13 19 39.6**	**-0.2**
ALS	baz=219			*e*S	**Sn**	**13 19 60.0**	**+2.2**
CHKT	**Chengkung**	**1.41**	**205**	*e*P	**Pn**	**13 19 39.0**	**-1.0**
CHKT	baz=188			*e*S	**Sn**	**13 19 56.7**	**-1.3**
CHN5	**Tsauling**	**1.45**	**237**	*e*P	**Pn**	**13 19 40.6**	**+0.2**
CHN5	baz=235			*e*S	**Sn**	**13 20 00.2**	**+1.4**
WGK	**Gukeng**	**1.49**	**242**	*e*P	**Pn**	**13 19 41.5**	**+0.4**
ELDTW	**Lidau**	**1.50**	**217**	*e*P	**Pn**	**13 19 39.7**	**-1.4**
ELDTW	baz=215			*e*S	**Sn**	**13 20 00.3**	**+0.2**
IRIF	**Iriomote-Funau**	**1.58**	**92**	P	**Pn**	**13 19 42.0**	**-0.2**
IRIF				*e*S	**Sn**	**13 20 02.6**	**+0.6**
CHN2	**Minshiung**	**1.64**	**239**	*e*P	**Pn**	**13 19 44.0**	**+0.9**
CHN4	**Tsaushan**	**1.66**	**232**	*e*P	**Pn**	**13 19 44.0**	**+0.7**
CHN4	baz=230			*e*S	**Sn**	**13 20 03.8**	**-0.2**
WTCT	**Ta-ch'eng**	**1.66**	**252**	*e*P	**Pn**	**13 19 43.5**	**+0.2**
WTCT	baz=249			*e*S	**Sn**	**13 20 03.4**	**-0.7**
STYT	**Tauyuan**	**1.67**	**223**	⇓*e*P	**Pn**	**13 19 43.6**	**0.0**
CHY	**Chiayi**	**1.70**	**239**	*e*P	**Pn**	**13 19 43.8**	**-0.1**
CHY	baz=237			*e*S	**Sn**	**13 20 06.2**	**+1.1**
WTP	**Ta-pu**	**1.71**	**228**	*e*P	**Pn**	**13 19 44.5**	**+0.5**
WTP	baz=226			*e*S	**Sn**	**13 20 08.0**	**+2.7**
TWG	**Pinlang**	**1.78**	**209**	*e*P	**Pn**	**13 19 43.8**	**-1.3**
TWK	**Hsinying**	**1.78**	**231**	*e*P	**Pn**	**13 19 45.6**	**+0.6**
TWK	baz=229			*e*S	**Sn**	**13 20 08.4**	**+1.3**
WSF	**Szhu**	**1.79**	**246**	*e*P	**Pn**	**13 19 45.0**	**-0.2**
WSF	baz=243			*e*S	**Sn**	**13 20 08.2**	**+0.8**
CHN1	**Nanshi**	**1.81**	**229**	*e*P	**Pn**	**13 19 46.1**	**+0.7**
JKRS	**Kuro-shima**	**1.84**	**94**	P	**Pn**	**13 19 46.0**	**+0.2**
JKRS				*e*S	**Sn**	**13 20 09.6**	**+1.2**
CHN8	**Yiju**	**1.94**	**238**	*e*P	**Pn**	**13 19 46.9**	**-0.4**
CHN8	baz=236			*e*S	**Sn**	**13 20 13.1**	**+2.0**
JIJ	**Ishigaki jima**	**1.95**	**90**	P	**Pn**	**13 19 47.2**	**-0.1**
JIJ				*e*S	**Sn**	**13 20 11.2**	**-0.1**
ECL	**Taimali**	**2.03**	**209**	*e*P	**Pn**	**13 19 46.8**	**-1.6**
ECL	baz=197			*e*S	**Sn**	**13 20 11.9**	**-1.4**
SCLT	**Jiali**	**2.05**	**234**	*e*P	**Pn**	**13 19 49.0**	**+0.2**
SCLT	baz=218			*e*S	**Sn**	**13 20 14.7**	**+0.9**
SSD	**Sandimen**	**2.07**	**218**	*e*P	**Pn**	**13 19 49.8**	**+0.9**
SSD	baz=216			*e*S	**Sn**	**13 20 14.4**	**+0.2**
TWM1	**Shoushan**	**2.13**	**223**	*e*P	**Pn**	**13 19 50.4**	**+0.5**
LAY	**Lan-yu**	**2.38**	**190**	*e*P	**Pn**	**13 19 51.3**	**-2.0**
LAY	baz=177			*e*S	**Sn**	**13 20 19.1**	**-2.8**
SCZT	**Fangliau**	**2.38**	**213**	*e*P	**Pn**	**13 19 54.3**	**+1.0**
SCZT	baz=200			*e*S	**Sn**	**13 20 23.5**	**+1.6**
PNG	**Penghu**	**2.39**	**250**	*e*P	**Pn**	**13 19 52.3**	**-1.0**
PNG	baz=248			*e*S	**Sn**	**13 20 20.4**	**-1.6**
JTJ	**Tarama**	**2.47**	**84**	P	**Pn**	**13 19 55.1**	**+0.6**
JTJ				*e*S	**Sn**	**13 20 24.6**	**+0.5**
KNM	**Kinmen**	**3.25**	**271**	*e*P	**Pn**	**13 20 04.4**	**-0.9**

*ISK **20** 13:47:01.2, 3941N×3310E, h5km, MD3.4*
*DDA **20** 13:47:02.0, 3940N×3303E, h3km±3km, Md3.5*
*CSEM **20** 13:47:02.2±0.1, 3940N×3310E, h5km, MD3.4, Error ellipse: s-maj=1.8km s-min=1.2km az=15.0*
*ISCJB **20** 13:47:03.3±0.3, 3939N±002×3307E±003, h10km, Error ellipse: s-maj=3.7km s-min=3.1km az=142.9*

ISC 20 13:47:03.7±0.3, 3940N±002×3306E±003, h10km, n35, σ1§08/47, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.51**	**93**	*e*PG	**Pg**	**13 47 11.2**	**-2.4**
LOD	**Lodumlu**	**0.54**	**335**	*e*PG	**Pg**	**13 47 12.7**	**-1.6**
LOD				*e*SG	**Sg**	**13 47 21.7**	**+0.3**
CDAG	**Cicekdag**	**1.04**	**77**	*i* P	**Pg**	**13 47 20.7**	**-3.0**
CDAG				*i* S	**Sg**	**13 47 37.8**	**+0.6**
KIZT	**Kizilcal**	**1.05**	**241**	*e*PG	**Pg**	**13 47 22.4**	**-1.6**
ELDT	**Eldivan**	**1.13**	**14**	*i* P	**Pb**	**13 47 24.0**	**-1.3**
ELDT				*i* S	**Sb**	**13 47 40.2**	**+0.1**
KDHN	**Kadinhani**	**1.14**	**220**	*i* P	**Pb**	**13 47 24.3**	**-1.2**
KDHN				*i* S	**Sb**	**13 47 39.7**	**-0.7**
CANT	**Cankiri**	**1.28**	**19**	*e*PN	**Pn**	**13 47 26.4**	**-1.3**
CANT				*e*SN	**Sn**	**13 47 44.1**	**-0.8**
LADK	**Ladik-KONYA**	**1.31**	**205**	*e*PN	**Pn**	**13 47 26.8**	**-1.2**
SGKT	**Sivrigoynuk**	**1.41**	**327**	*i* P	**Pn**	**13 47 29.2**	**-0.2**
KONT	**Konya--Tatoy**	**1.55**	**201**	*e*PN	**Pn**	**13 47 31.1**	**-0.2**
KONT				*e*SN	**Sn**	**13 47 52.8**	**+1.3**
ESKT	**Eskisehir**	**1.72**	**275**	*i* P	**Pn**	**13 47 34.1**	**+0.5**
ESKT				*i* S	**Sn**	**13 47 57.2**	**+1.6**
ESKT	**Eskisehir**	**1.72**	**275**	*e*Pn	**Pn**	**13 47 34.1**	**+0.5**
SEYT	**Eskypehyr**	**1.72**	**275**	*i* P	**Pn**	**13 47 34.1**	**+0.5**
SEYT				*i* S	**Sn**	**13 47 57.2**	**+1.6**
YOZ	**Yozgat**	**1.76**	**81**	*e*PN	**Pn**	**13 47 33.7**	**-0.6**
YOZ				*e*SN	**Sn**	**13 47 57.4**	**+0.6**
NIG	**Nigde**	**1.77**	**136**	*e*PN	**Pn**	**13 47 34.5**	**+0.2**
MDU	**Mudurnu**	**1.78**	**308**	*e*PN	**Pn**	**13 47 35.0**	**+0.5**
BOLV	**Bolvadin**	**1.78**	**248**	*i* P	**Pn**	**13 47 34.3**	**-0.1**
BOLV				*i* S	**Sn**	**13 48 02.1**	**+5.0**
TOS	**Tosya**	**1.80**	**24**	*e*PN	**Pn**	**13 47 33.5**	**-1.2**
CTKT	**Corum**	**1.81**	**47**	*i* P	**Pn**	**13 47 35.3**	**+0.4**
CTKT				*i* S	**Sn**	**13 48 00.1**	**+2.3**
SAFT	**Safranbolu**	**1.86**	**351**	*e*PN	**Pn**	**13 47 36.1**	**+0.4**
BORA	**Eskisehir**	**2.07**	**284**	*i* P	**Pn**	**13 47 37.7**	**-0.8**
SHUT	**Suhut-Afyon**	**2.13**	**248**	*e*PN	**Pn**	**13 47 39.8**	**+0.5**
BALT	**Daday**	**2.15**	**7**	*i* P	**Pn**	**13 47 41.6**	**+2.0**
GULT	**Gulveren**	**2.21**	**299**	*e*PN	**Pn**	**13 47 40.8**	**+0.3**
BNN	**Bunyan**	**2.23**	**103**	*e*PN	**Pn**	**13 47 40.9**	**+0.2**
ALT	**Altintas**	**2.32**	**262**	*e*PN	**Pn**	**13 47 42.9**	**+1.0**
BYBT	**Boyabat**	**2.44**	**32**	*e*PN	**Pn**	**13 47 44.2**	**+0.5**
CAVI	**Cavuskoy**	**2.61**	**289**	*e*PN	**Pn**	**13 47 46.6**	**+0.8**
KARA	**Karaisali**	**2.65**	**143**	*e*PN	**Pn**	**13 47 46.7**	**+0.2**
PINB	**Pinarbasi**	**2.70**	**104**	*i* P	**Pn**	**13 47 49.0**	**+1.9**
PINB				*i* S	**Sn**	**13 48 25.7**	**+5.8**
MERS	**Mersin**	**2.77**	**155**	*e*PN	**Pn**	**13 47 49.3**	**+1.1**
GDZ	**Gediz**	**2.80**	**265**	*i* P	**Pn**	**13 47 55.1**	**+6.6**
KOZT	**Kozan**	**2.89**	**131**	*e*PN	**Pn**	**13 47 50.4**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.92**	**103**	*e*PN	**Pn**	**13 47 48.5**	**-1.7**
SVSK	**Karacayir**	**3.08**	**79**	*e*PN	**Pn**	**13 47 52.8**	**+0.3**

*IDC **20** 14:41:46.8±1.2, 8.13S×118.41E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.7/18, mbtmp3.7/6, ML3.4/2, Error ellipse: s-maj=39.9km s-min=14.6km az=62.0*
*ISCJB **20** 14:41:48.2±0.9, 8.22S±005×1183E±01, h33km, mb3.7/4, Error ellipse: s-maj=16.4km s-min=7.2km az=170.0*
*NEIC **20** 14:41:51.1±0.8, 8.24S×118.38E, h35km, mb3.6/2, Error ellipse: s-maj=22.4km s-min=9.9km az=70.0*

ISC 20 14:41:51.5±0.9, 8.23S±005×1186E±01, h35km, n15, σ1§13/18, mb3.7/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.41**	**20**	Pn	**Pn**	**14 42 41.0**	**-1.1**
KAPI	6.4nm,0.3s,baz=201,slow=6.3,SNR=42			Sn	**Sn**	**14 43 21.2**	**-0.2**
FITZ	**Fitzroy Crossi** 14nm,0.3s,baz=4.3,slow=24,SNR=11	**11.99**	**146**	*e*P	**Pn**	**14 44 40.7**	**+0.7**
FITZ	8.1nm,0.6s			*e*S	**Sn**	**14 46 51.9**	**-0.7**
KNA	**Kununurra**	**12.47**	**128**	*e*P	**Pn**	**14 44 48.6**	**+2.0**
	6.4nm,0.8s						
MBWA	**Marble Bar**	**12.91**	**175**	*e*Pn	**Pn**	**14 44 50.0**	**-2.5**
MBWA				*e*Sn	**Sn**	**14 47 07.4**	**-7.5**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=303,slow=12,SNR=10	**19.21**	**129**	P	**Pn**	**14 46 14.2**	**+0.4**
WRAB	**Tennant Creek** 3.3nm,0.9s	**19.22**	**129**	*e*P	**Pn**	**14 46 13.1**	**-0.7**
WB2	**Warramunga Arr**	**19.22**	**129**	*e*P	**Pn**	**14 46 15.0**	**+1.1**
WB2	**Warramunga Arr**	**19.22**	**129**	*e*P	**Pn**	**14 46 13.7**	**-0.2**
WB2				*e*Sn	**Sn**	**14 49 47.2**	**-1.3**
ASAR	**Alice Springs** 1.7nm,0.6s,mb3.5,baz=310,slow=9.0,SNR=16	**21.26**	**138**	P	**P**	**14 46 36.7**	**+1.9**
ASAR	0.3nm,0.8s,baz=320,slow=23,SNR=4.4			S	**S**	**14 50 37.2**	**+7.9**
STKA	**Stephens Creek** 0.9nm,0.4s,mb4.0,baz=347,slow=8.2,SNR=6.5	**31.82**	**141**	P	**P**	**14 48 13.8**	**+0.8**
STKA	**Stephens Creek** 1.0nm,1.2s,mb3.5	**31.82**	**141**	*e*P	**P**	**14 48 13.4**	**+0.4**
SONM	**Songino Array** 0.9nm,0.8s,mb3.9,baz=167,slow=7.1,SNR=2.2	**56.84**	**350**	P	**P**	**14 51 33.2**	**+0.7**
MKAR	**Makanchi Array** 0.3nm,0.6s,mb3.5,baz=159,slow=6.0,SNR=4.5	**63.57**	**333**	P	**P**	**14 52 18.0**	**-0.6**
CPUP	**Villa Florida** 0.5nm,0.3s,baz=165,slow=3.5,SNR=4.8	**145.42**	**187**	PKPbc	PKPbc	15 01 27.3	+0.8
CPUP	**Villa Florida**	**145.42**	**187**	*e*PKPdf	PKPdf	15 01 27.2	+0.5
CPUP				PKPbc	PKPbc	15 01 27.3	+0.8

IDC 20 14:46:37.5±7.5, 070S×13327E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/16, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=445.9km s-min=29.4km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=358,slow=12,SNR=5.8	**19.15**	**177**	P	Pn	14 51 02.9	-0.4
WRA	0.0nm,0.3s,baz=357,slow=24,SNR=2.8			S	Sn	14 54 26.5	-12
ASAR	**Alice Springs** 1.7nm,1.0s,baz=356,slow=10,SNR=11	**22.84**	**178**	P	P	14 51 42.4	0.0
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=106,slow=8.6,SNR=2.6	**64.93**	**324**	P	P	14 57 19.0	+0.1

NEIC 20 14:48:30.2, 3885S×17849E, h23km, ML3.7(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**0.66**	**255**	P	Pb	14 48 43.6	+0.6
PUZ	**Puketiti**	**0.80**	**347**	P	Pb	14 48 45.4	0.0
PUZ				S	Sb	14 48 55.8	+0.1
MWZ	**Matawai**	**0.91**	**304**	P	Pb	14 48 46.5	-0.8
URZ	**Urewera**	**1.23**	**298**	P	Pn	14 48 51.3	-0.7
MXZ	**Matakaoa Point**	**1.29**	**354**	P	Pn	14 48 52.9	+0.1
EDRZ	**Edgecumbe**	**1.56**	**298**	P	Pn	14 48 56.6	+0.1
BKZ	**Black Stump Fm**	**1.59**	**258**	P	Pn	14 48 56.5	-0.4
MARZ	**Manawahe**	**1.67**	**301**	P	Pn	14 48 57.7	-0.3
WIZ	**White Island**	**1.67**	**322**	P	Pn	14 48 57.4	-0.6
LIRZ	**Lichensteins R**	**1.86**	**296**	P	Pn	14 49 00.4	-0.2
MOVZ	**Moawhango**	**2.20**	**254**	P	Pn	14 49 05.5	+0.2
TUVZ	**Tukino**	**2.25**	**258**	P	Pn	14 49 06.3	+0.4
NGZ	**Ngauruhoe**	**2.27**	**261**	P	Pn	14 49 06.4	+0.1
WTVZ	**West Tongariro**	**2.28**	**262**	P	Pn	14 49 06.5	+0.2
TSZ	**Takapari Road**	**2.30**	**238**	P	Pn	14 49 05.6	-1.1
WNVZ	**Wahianoa**	**2.30**	**257**	P	Pn	14

NLC	**Nalytchevo**	**2.05**	**14**	P	Pn	15 00 57.9	+0.6
NLC				*i* S	Sn	15 01 23.7	+0.8
AVH	**Avacha**	**2.08**	**4**	P	Pn	15 00 59.5	+1.8
AVH				*i* S	Sn	15 01 25.4	+1.7
SPN	**Mys Shipunski**	**2.13**	**25**	P	Pn	15 01 00.2	+1.9
SPN				*i* S	Sn	15 01 26.7	+1.9
GNL	**Ganaly**	**2.53**	**352**	*e*P	Pn	15 01 05.3	+1.4
GNL				*e*S	Sn	15 01 36.3	+1.5
KBTR	**Krutoberegovo**	**5.64**	**25**	P	Pn	15 01 47.9	+1.3

ISK ***20*** *15:06:35.8, 3936N×3315E, h3km, MD3.3*
ISCJB ***20*** *15:06:36.9±0.3, 3937N±002×3314E±003, h10km, Error ellipse: s-maj=3.9km s-min=2.7km az=142.4*
CSEM ***20*** *15:06:36.3±0.1, 3935N×3315E, h5km, MD3.3, Error ellipse: s-maj=2.4km s-min=1.9km az=155.0*
DDA ***20*** *15:06:36.0, 3937N×3316E, h8km±2km, Md3.5*

ISC 20 15:06:36.8±0.5, 3936N±002×3315E±003, h3km±4km, n28, σ0§84/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.43**	**89**	*e*PG	**Pg**	**15 06 44.7**	**-0.5**
LOD	**Lodumlu**	**0.61**	**331**	*e*PG	**Pg**	**15 06 48.0**	**-0.5**
LOD				*e*SG	**Sg**	**15 06 57.0**	**+0.5**
CDAG	**Cicekdag**	**0.98**	**74**	*i* P	**Pg**	**15 06 54.6**	**-1.0**
CDAG				*i* S	**Sg**	**15 07 08.3**	**0.0**
KIZT	**Kizilcal**	**1.10**	**245**	*e*Pn	**Pn**	**15 06 57.3**	**-1.7**
KIZT				*e*SN	**Sn**	**15 07 13.2**	**-1.5**
ELDT	**Eldivan**	**1.15**	**10**	*i* P	**Pg**	**15 06 58.0**	**-0.9**
ELDT				*i* S	**Sn**	**15 07 15.2**	**-0.7**
KDHN	**Kadinhani**	**1.16**	**224**	*i* P	**Pg**	**15 06 58.8**	**-0.3**
KDHN				*i* S	**Sg**	**15 07 14.9**	**+0.7**
CANT	**Cankiri**	**1.30**	**16**	*e*PN	**Pn**	**15 07 00.8**	**-0.9**
LADK	**Ladik-KONYA**	**1.31**	**208**	*e*PN	**Pn**	**15 07 01.0**	**-0.9**
LADK				*e*SN	**Sn**	**15 07 19.7**	**-0.2**
KONT	**Konya--Tatoy**	**1.54**	**204**	*e*PN	**Pg**	**15 07 05.3**	**-1.0**
KONT				*e*SN	**Sg**	**15 07 27.0**	**+0.7**
NIG	**Nigde**	**1.69**	**137**	*e*PN	**Pn**	**15 07 07.6**	**+0.5**
YOZ	**Yozgat**	**1.70**	**80**	*e*PN	**Pn**	**15 07 07.4**	**+0.1**
YOZ				*e*SN	**Sn**	**15 07 29.6**	**+0.1**
CTKT	**Corum**	**1.78**	**44**	*i* P	**Pn**	**15 07 08.9**	**+0.5**
CTKT				*i* S	**Sg**	**15 07 36.7**	**+2.6**
ESKT	**Eskisehir**	**1.79**	**276**	*i* P	**Pn**	**15 07 09.5**	**+1.0**
ESKT				*i* S	**Sg**	**15 07 38.0**	**+3.6**
ESKT	**Eskisehir**	**1.79**	**276**	*e*Pn	**Pn**	**15 07 08.8**	**+0.2**
SEYT	**Eskypehyr**	**1.79**	**276**	*i* P	**Pn**	**15 07 09.5**	**+0.9**
TOS	**Tosya**	**1.80**	**21**	*e*PN	**Pn**	**15 07 09.1**	**+0.4**
BOLV	**Bolvadin**	**1.83**	**250**	*i* P	**Pn**	**15 07 09.6**	**+0.5**
BOLV				*i* S	**Sg**	**15 07 36.4**	**+0.7**
MDU	**Mudurnu**	**1.86**	**307**	*e*PN	**Pn**	**15 07 09.9**	**+0.5**
SAFT	**Safranbolu**	**1.91**	**349**	*e*PN	**Pn**	**15 07 11.1**	**+0.9**
BORA	**Eskisehir**	**2.15**	**285**	*i* P	**Pn**	**15 07 12.8**	**-0.7**
BNN	**Bunyan**	**2.15**	**103**	*e*PN	**Pn**	**15 07 14.1**	**+0.5**
BALT	**Daday**	**2.18**	**5**	*i* P	**Pg**	**15 07 17.1**	**-1.5**
BALT				*i* S	**Sg**	**15 07 46.7**	**-0.1**
SHUT	**Suhut-Afyon**	**2.18**	**249**	*e*PN	**Pn**	**15 07 14.2**	**+0.3**
HENT	**Hendek**	**2.27**	**311**	*i* P	**Pg**	**15 07 20.0**	**-0.2**
GULT	**Gulveren**	**2.29**	**299**	*e*PN	**Pn**	**15 07 16.2**	**+0.7**
ALT	**Altintas**	**2.38**	**264**	*e*PN	**Pn**	**15 07 17.5**	**+0.8**
BYBT	**Boyabat**	**2.44**	**30**	*e*PN	**Pn**	**15 07 18.0**	**+0.5**
SVSK	**Karacayir**	**3.02**	**78**	*e*PN	**Pn**	**15 07 26.3**	**+0.8**

ISCJB ***20*** *15:13:41.3±0.4, 1752N±004×4022E±005, h10km, mb4.0/14, MS3.8/10, Error ellipse: s-maj=7.4km s-min=5.0km az=144.5*
IDC ***20*** *15:13:42.6±1.4, 1766N×4006E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/24, mbtmp3.9/10, MS3.7/13, Ms1 3.7/13, ms1mx3.6/28, Error ellipse: s-maj=41.2km s-min=18.6km az=162.0*
NEIC ***20*** *15:13:43.2±0.9, 1751N×4011E, h10km, mb4.1/6, Error ellipse: s-maj=21.2km s-min=12.1km az=161.0*
SGS ***20*** *15:13:44.9, 1748N×4042E, h9km*
CSEM ***20*** *15:13:50.3±0.3, 1756N×4112E, h10km, ML3.5, Error ellipse: s-maj=10.9km s-min=4.0km az=94.0*
DHMR ***20*** *15:13:51.8±0.9, 1746N×4140E, h6km±999km, ML3.5*

ISC 20 15:13:43.2±0.4, 1754N±004×4023E±005, h10km, n45, σ1§34/43, mb4.0/14, MS3.8/10, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**1.97**	**113**	S	**Sn**	**15 14 35.7**	**-5.7**
FRSJ	**Farasan al Kab**	**1.97**	**113**	P	**Pn**	**15 14 13.6**	**-3.1**
WBHS	**Wadi 'Ibn Hash**	**2.60**	**65**	P	**Pn**	**15 14 23.0**	**-2.4**
JAZS	**Jizan**	**2.61**	**100**	S	**Sn**	**15 14 51.0**	**-6.2**
JAZS	**Jizan**	**2.61**	**100**	P	**Pn**	**15 14 25.2**	**-0.3**
JAZS	**Jizan**	**2.61**	**100**	P	**Pn**	**15 14 25.2**	**-0.3**
JAZS				S	**Sn**	**15 14 51.0**	**-6.2**
LTHS	**Al Lith**	**2.73**	**4**	P	**Pn**	**15 14 21.7**	**-5.4**
BLJS	**Baljurashi**	**2.74**	**28**	P	**Pn**	**15 14 27.1**	**-0.1**
DJNS	**Zahran al Janu**	**3.17**	**87**	P	**Pn**	**15 14 31.1**	**-2.0**
SHBS		**3.49**	**352**	P	**Pn**	**15 14 31.8**	**-5.8**
TATS	**Tathlith**	**3.67**	**57**	P	**Sn**	**15 15 23.7**	**+0.3**
HAJJ	**Hajjah** 147nm,0.7s	**3.71**	**119**	*i* P	**Pn**	**15 14 39.5**	**-1.1**
HAJJ				*i* S	**Sn**	**15 15 16.0**	**-8.4**
HAJJ	**Hajjah**	**3.71**	**119**	*i* P	**Pn**	**15 14 39.5**	**-1.1**
HAJJ				*i* S	**Sn**	**15 15 16.0**	**-8.4**
HAJJ	comp=Z,294nm,0.7s			AML	AML	15 15 25.9	
SHMS		**3.92**	**353**	P	**Pn**	**15 14 38.0**	**-5.6**
ZQRN	**Zuqar Island**	**4.22**	**145**	*i* S	**Sn**	**15 15 37.0**	**0.0**
FDAS		**4.28**	**2**	P	**Pn**	**15 14 44.0**	**-4.4**
ZUQR	**Zugar Island** comp=Z,105nm,0.6s	**4.28**	**145**	*i* P	**Pn**	**15 14 51.5**	**+3.0**
ZUQR				*i* S	**Sn**	**15 15 38.5**	**-0.1**
ZUQR	**Zugar Island**	**4.28**	**145**	*i* P	**Pn**	**15 14 51.5**	**+2.9**
ZUQR	comp=N,211nm,0.6s			AML	AML	15 14 58.4	
ZUQR				*i* S	**Sn**	**15 15 38.5**	**-0.1**
HNH	**Hunish Island**	**4.51**	**148**	*i* P	**Pn**	**15 14 56.4**	**+3.8**
HNSH				*i* S	**Sn**	**15 15 45.5**	**+1.4**
LYLS		**7.98**	**55**	P	Sx	15 17 47.5	
EIL	**Elat** comp=N,323nm,18.9s,baz=271,slow=33	**13.01**	**339**	LR	LR	15 20 51.3	
ASF	**Jabal al Asfar** comp=N,191nm,18.2s,baz=45,slow=36	**14.88**	**349**	LR	LR	15 22 27.0	
MMAI	**Mount Meron Ar** comp=N,146nm,19.2s,baz=295,slow=35	**16.02**	**345**	LR	LR	15 23 01.9	
CSS	**Prodhromos** comp=N,8.7nm,0.6s	**18.41**	**342**	*e*Pn	**Pn**	**15 18 01.3**	**+2.6**
MALT	**Malatya** comp=N,2.2nm,0.9s	**20.76**	**356**	*e*P	**P**	**15 18 24.0**	**-0.3**
GNI	**Garni** comp=N,132nm,20.6s,MS3.4,baz=180,slow=37	**22.87**	**9**	LR	LR	15 27 38.7	
KBL	**Kabul** comp=N,1.1nm,0.5s,mb3.9	**30.78**	**51**	P	**P**	**15 19 59.7**	**+0.7**
TAM	**Tamanrasset** comp=N,2.1nm,0.9s,mb4.1	**32.95**	**285**	*e*P	**P**	**15 20 18.2**	**0.0**
TOA0	**Torodi Ar. Sit**	**37.37**	**269**	*e*P	**P**	**15 20 54.9**	**-1.5**
TORD	**Torodi Ar. Bea** comp=N,1.6nm,0.8s,mb3.9,baz=78,slow=8.0,SNR=12	**37.37**	**269**	P	**P**	**15 20 56.0**	**-0.5**
TORD	comp=N,79nm,21.9s,MS3.5,baz=115,slow=36			LR	LR	15 36 21.3	
GERES	**GERESS Array B** comp=N,0.4nm,0.6s,mb3.3,baz=126,slow=6.8,SNR=4.3	**37.93**	**331**	P	**P**	**15 21 01.0**	**+0.2**
ARU	**Arti** comp=N,3.8nm,0.9s,mb4.0	**41.22**	**15**	P	**P**	**15 21 28.6**	**+0.5**
RGN	**Rugen** comp=N,113nm,0.9s	**42.35**	**337**	P	**P**	**15 21 35.0**	**-2.3**
BVAR	**Borovoye Array** comp=N,0.5nm,0.6s,mb3.5,baz=216,slow=7.3,SNR=3.7	**42.52**	**27**	P	**P**	**15 21 40.4**	**+1.6**
KURK	**Kurchatov** comp=N,1.8nm,0.8s,mb4.0,baz=238,slow=8.0,SNR=17	**45.04**	**34**	P	**P**	**15 21 59.4**	**+0.3**
MKAR	**Makanchi Array** comp=N,1.3nm,0.7s,mb3.9,baz=234,slow=7.3,SNR=11	**45.23**	**40**	P	**P**	**15 22 01.6**	**+1.0**
MKAR	comp=N,192nm,18.1s,MS4.1,baz=176,slow=39			LR	LR	15 43 18.5	
DBIC	**Dimbokro** comp=N,2.0nm,0.7s,mb4.1,baz=49,slow=12,SNR=4.6	**45.28**	**262**	P	**P**	**15 22 01.1**	**-0.3**
DBIC	comp=N,199nm,18.2s,MS4.1,baz=58,slow=37			LR	LR	15 41 47.8	
KONO	**Kongsberg** comp=N,7.5nm,1.0s,mb4.7	**47.55**	**339**	P	**P**	**15 22 21.3**	**+2.6**
BOSA	**Boshof** comp=N,97nm,18.1s,MS3.8,baz=230,slow=36	**48.11**	**198**	LR	LR	15 42 17.6	
NOA	**NORSAR Array B** comp=N,1.4nm,0.8s,mb4.0,baz=137,slow=7.9,SNR=4.0	**48.11**	**342**	P	**P**	**15 22 21.7**	**-1.2**
ZALV	**Zalesovo Beam** comp=N,2.5nm,0.6s,mb4.4,baz=242,slow=8.2,SNR=9.1	**49.97**	**33**	P	**P**	**15 22 36.7**	**-0.6**
ZALV	comp=N,87nm,18.3s,MS3.8,baz=22,slow=39			LR	LR	15 45 51.0	
CMAR	**Chiang Mai Arr** comp=N,0.9nm,0.4s,mb4.2,baz=310,slow=4.2,SNR=4.1	**55.63**	**79**	P	**P**	**15 23 21.8**	**+2.1**
CMAR	comp=N,30nm,20.9s,MS3.4,baz=96,slow=35			LR	LR	15 46 15.4	
SONM	**Songino Array** comp=N,1.1nm,0.8s,mb4.1,baz=270,slow=5.9,SNR=8.1	**61.24**	**45**	P	**P**	**15 23 60.0**	**+1.4**
SONM	comp=N,129nm,19.1s,MS4.1,baz=321,slow=40			LR	LR	15 54 13.6	
KSRS	**Korea Array** comp=N,49nm,18.8s,MS3.9,baz=310,slow=39	**77.77**	**54**	LR	LR	16 04 08.3	
PETK	**Petropavlovsk-** comp=N,63nm,18.0s,MS4.1,baz=242,slow=38	**91.51**	**32**	LR	LR	16 11 49.9	

NEIC ***20*** *15:40:48.7, 1077N×5927W, h104km, MD4.1(TRN), After TRN.*

TRN 20 15:40:48.9, 1091N×5940W, h8km, MD4.0, 8C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	**Speyside**	**1.18**	**289**	⇑*i*P	Pb	15 41 12.6	+1.1
TOSP				*e*S	Sg	15 41 29.1	+2.2
TPR	**Prospect**	**1.38**	**282**	*e*P	Pn	15 41 15.3	+0.9
TPR				*e*S	Sb	15 41 33.9	+1.2
TPR	**Prospect**	**1.38**	**282**	*e*P	Pn	15 41 15.3	+0.9
TPR				*e*S	Sb	15 41 36.6	+3.9
TBH	**Brigand Hill**	**1.69**	**256**	⇑*i*P	Pn	15 41 19.1	+0.4
TBH				*e*S	Sn	15 41 42.1	+1.6
TRN	**Trinidad (W)**	**1.98**	**263**	⇑*i*P	Pn	15 41 22.6	-0.1
TRN				*e*S	Sn	15 41 47.5	-0.3
TPP	**Pointe-a-Pierr**	**2.10**	**254**	*e*P	Pn	15 41 25.1	+0.8
TPP	**Pointe-a-Pierr**	**2.10**	**254**	*e*S	Sn	15 41 52.9	+2.3
TPP	**Pointe-a-Pierr**	**2.10**	**254**	*e*P	Pn	15 41 26.3	+2.0
TPP				*e*S	Sn	15 41 52.9	+2.3
TCE	**Chacachacare**	**2.32**	**265**	*e*P	Pn	15 41 27.5	+0.2
TCE				*e*S	Sn	15 41 55.9	-0.2
GRCU	**Cariacou**	**2.54**	**308**	⇑*i*P	Pn	15 41 30.4	+0.1
GRCU				*e*S	Sn	15 42 00.7	-0.8
GRIC	**Isle de Caille**	**2.54**	**303**	*e*P	Pn	15 41 31.0	+0.6
GRIC				*e*S	Sn	15 42 02.2	+0.6
GRHS	**Sauteurs**	**2.56**	**301**	⇑*e*P	Pn	15 41 31.4	+0.8
GRHS				*e*S	Sn	15 42 01.9	0.0
GRHS	**Sauteurs**	**2.56**	**301**	⇑*e*P	Pn	15 41 31.4	+0.8
GRHS				*e*S	Sn	15 42 03.9	+2.0
GRHS				*e*S	Sn	15 42 05.2	+3.3
GRSS	**Sisters**	**2.57**	**303**	*e*P	Pn	15 41 31.6	+0.8
GRSS				*e*S	Sn	15 42 01.9	-0.3
FCV	**Fort Charlotte**	**2.87**	**321**	*e*P	Pn	15 41 36.3	+1.3
BHS	**Barnard House**	**2.91**	**325**	*e*P	Pn	15 41 35.7	+0.2
BHS	**Barnard House**	**2.91**	**325**	*e*P	Pn	15 41 39.5	+4.0
BHS				*e*P		15 41 41.6	
SVB	**Belmont**	**2.97**	**323**	⇑*i*P	Pn	15 41 36.3	+0.1
SVB				*e*S	Sn	15 42 12.6	+0.5
SSV	**Crater Summit**	**2.98**	**324**	*e*P	Pn	15 41 36.5	+0.2
SSV				*e*S	Sn	15 42 12.6	+0.4
SSV	**Crater Summit**	**2.98**	**324**	*e*P	Pn	15 41 36.5	+0.2
SSV				*e*S	Sn	15 42 16.3	+4.1
SVV	**Soufriere Volc**	**2.98**	**324**	*e*S	Sn	15 42 11.9	-0.5
SVV	**Soufriere Volc**	**2.98**	**324**	*e*P	Pn	15 41 37.5	+1.1
SVV				*e*S	Sn	15 42 15.0	+2.6
SFAN	**Fancy Village**	**3.01**	**325**	*e*P	Pn	15 41 36.9	+0.1
SFAN	**Fancy Village**	**3.01**	**325**	*e*P	Pn	15 41 39.9	+3.1
MCLT	**Moule a Chique**	**3.17**	**332**	⇑P	Pn	15 41 39.4	+0.4
MCLT				*e*S	Sn	15 42 17.1	+0.2
SLB	**Belfond**	**3.31**	**331**	*e*P	Pn	15 41 42.5	+1.5
SLB				*e*S	Sn	15 42 20.6	0.0
SLB	**Belfond**	**3.31**	**331**	*e*P	Pn	15 41 42.5	+1.5
SLB				*e*S	Sn	15 42 24.8	+4.2
MVM	**Montagne Vaucl**	**3.91**	**338**	*e*P	Pn	15 41 49.6	+0.5
BIM	**Bigot**	**3.94**	**336**	*e*P	Pn	15 41 50.1	+0.5
FDF	**Fort de France**	**4.17**	**336**	*e*P	Pn	15 41 53.5	+0.7

IDC ***20*** *15:44:01.5±1.6, 005N×9766E, h0km, mb4.2/7, mb1 4.2/9, mb1mx4.0/23, mbtmp4.1/9, ML3.8/2, Error ellipse: s-maj=49.5km s-min=18.0km az=61.0*
ISCJB ***20*** *15:44:02.9±2.4, 008N±008×9758E±009, h24km±16km, mb4.2/14, Error ellipse: s-maj=19.4km s-min=8.0km az=140.7*
DJA ***20*** *15:44:04, 002N×9753E, h29km, MLv4.1/6*
NEIC ***20*** *15:44:06.6±0.5, 0.11N×9769E, h35km, mb4.1/9, Error ellipse: s-maj=13.5km s-min=7.4km az=62.0*

ISC 20 15:44:01.9±2.6, 004N±008×9754E±009, h4km±14km, n37, σ0§76/36, mb4.2/14, 6C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.25**	**2**	P	**Pg**	**15 44 26.0**	**+0.1**
PPI	**Padang Panjang**	**2.90**	**100**	P	**Pn**	**15 44 48.8**	**0.0**
PSI	**Prapat** 3.6nm,0.3s,baz=174,slow=9.3,SNR=12	**3.07**	**27**	Pn	**Pn**	**15 44 50.0**	**-1.2**
PSI	**Prapat**	**3.07**	**27**	Pn	**Pn**	**15 44 50.0**	**-1.2**
PDSI	**Padang**	**3.07**	**108**	P	**Pn**	**15 44 50.7**	**-0.5**
FRIM	**Kepong**	**5.17**	**52**	⇓P	**Pn**	**15 45 20.4**	**+0.4**
IPM	**Ipoh**	**5.62**	**38**	⇓P	**Pn**	**15 45 26.7**	**+0.5**
IPM	**Ipoh**	**5.62**	**38**	P	**Pn**	**15 45 26.5**	**+0.3**
BSI	**Banda Aceh**	**5.86**	**338**	P	**Pn**	**15 45 29.5**	**-0.1**
KULM	**Kulim** 30nm,1.0s	**6.07**	**31**	*e*Pn	**Pn**	**15 45 31.8**	**-0.6**
KULM	**Kulim**	**6.07**	**31**	⇑P	**Pn**	**15 45 32.7**	**+0.3**
KSI	**Kapahiang**	**6.24**	**126**	P	**Pn**	**15 45 35.0**	**+0.2**
MYKOM	**Kota Tinggi**	**6.54**	**75**	⇓P	**Pn**	**15 45 39.7**	**+0.8**
KTGM	**Kuala Trenggan**	**7.66**	**47**	⇑P	**Pn**	**15 45 54.8**	**+0.5**
SBUM	**Sibu**	**14.87**	**81**	⇑P	**Pn**	**15 47 34.7**	**+1.7**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=192,slow=11,SNR=16	**18.35**	**4**	P	**Pn**	**15 48 16.1**	**-1.3**
CHTO	**Chiang Mai** 1.4nm,0.6s	**18.70**	**4**	*e*P	**Pn**	**15 48 20.2**	**-1.5**
KKM	**Kota Kinabalu** 25nm,0.9s	**19.57**	**72**	*e*P	**Pn**	**15 48 30.7**	**-1.5**
KKM	**Kota Kinabalu**	**19.57**	**72**	⇑P	**Pn**	**15 48 25.5**	**-6.7**
SDKM	**Sandakan**	**20.39**	**74**	⇑P	**P**	**15 48 35.5**	**-4.5**
TSM	**Tawau**	**20.75**	**78**	⇑P	**P**	**15 48 39.8**	**-4.0**
LSA	**Lhasa** 4.6nm,1.0s,mb4.2	**30.11**	**349**	P	**P**	**15 50 14.1**	**+1.4**
WRA	**Warramunga Arr** 2.1nm,0.8s,mb3.8,baz=303,slow=8.9,SNR=30	**41.14**	**121**	P	**P**	**15 51 46.8**	**-0.7**
WRAB	**Tennant Creek** 3.3nm,0.8s,mb4.0	**41.15**	**121**	*e*P	**P**	**15 51 46.8**	**-0.8**
ASAR	**Alice Springs** 2.6nm,0.7s,mb4.0,baz=298,slow=8.0,SNR=42	**42.43**	**126**	P	**P**	**15 51 57.9**	**-0.2**
KSRS	**Korea Array** 2.4nm,0.7s,mb4.2,baz=218,slow=8.4,SNR=9.1	**46.61**	**34**	P	**P**	**15 52 30.4**	**-0.8**
TKM2	**Tomak 2** 2.3nm,0.9s,mb4.1	**47.01**	**338**	P	**P**	**15 52 34.6**	**+0.4**
EKS2	**Erkin-Say** 1.5nm,0.6s,mb4.1	**47.50**	**336**	P	**P**	**15 52 38.7**	**+0.7**
SONM	**Songino Array** 2.3nm,0.8s,mb4.3,baz=190,slow=9.2,SNR=17	**48.22**	**8**	P	**P**	**15 52 44.1**	**+0.5**
ULN	**Ulaanbaatar** 1.8nm,0.8s,mb4.2	**48.34**	**9**	P	**P**	**15 52 45.0**	**+0.5**
MKAR	**Makanchi Array** 3.2nm,0.5s,mb4.6,baz=159,slow=8.9,SNR=59	**48.44**	**346**	P	**P**	**15 52 45.9**	**+0.6**
STKA	**Stephens Creek** 1.6nm,1.2s,mb3.8	**52.33**	**132**	P	**P**	**15 53 15.2**	**+0.1**
KURK	**Kurchatov** 1.9nm,0.7s,mb4.1,baz=166,slow=7.1,SNR=14	**52.99**	**345**	P	**P**	**15 53 19.9**	**+0.3**
ZAA0	**Zalesovo Array**	**54.75**	**351**	*e*P	**P**	**15 53 32.4**	**0.0**
ZALV	**Zalesovo Beam** 7.1nm,0.7s,mb4.8,baz=178,slow=6.4,SNR=19	**54.75**	**351**	P	**P**	**15 53 32.6**	**+0.2**
BRVK	**Borovoye** 1.3nm,0.8s,mb4.0	**57.51**	**341**	P	**P**	**15 53 51.4**	**-0.7**
TXAR	**Lajitas Array** 0.5nm,0.7s,baz=169,slow=1.3,SNR=5.6	**144.46**	**33**	PKP	PKPdf	16 03 39.0	-1.3

NEIC ***20*** *15:45:39.1±0.3, 1549S×17306W, h10km, mb4.6/6, Error ellipse: s-maj=12.0km s-min=8.9km az=141.0*
ISCJB ***20*** *15:45:40.7±0.5, 156S±0.1×173.1W±0.1, h33km, mb4.3/16, MS3.8/2, Error ellipse: s-maj=19.7km s-min=12.7km az=139.9*
IDC ***20*** *15:45:41.7±4.7, 1549S×173.10W, h26km±30km, mb4.1/10, mb1 4.4/11, mb1mx4.2/19, mbtmp4.2/11, ML4.3/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/26, Error ellipse: s-maj=26.5km s-min=14.4km az=128.0*

ISC 20 15:45:38.4±4.6, 1552S±010×1731W±01, h6km±27km, n24, σ0§64/21, mb4.3/16, MS3.8/2, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga** 1.5nm,0.3s,baz=212,slow=15,SNR=3.8	**13.84**	**116**	Pn	**Pn**	**15 48 54.4**	**-0.9**
PPT	**Papeete** 71nm,28.2s	**22.62**	**98**	*e*LR	LR	15 55 30.9	
URZ	**Urewera** 28nm,0.5s,mb4.9,baz=278,slow=5.4,SNR=1.1	**24.25**	**199**	P	**P**	**15 50 58.4**	**+2.1**
URZ	6.4nm,0.7s,baz=344,slow=15,SNR=5.0			S	**S**	**15 55 14.8**	**-0.6**
URZ	comp=Z,154nm,19.9s,MS3.5,baz=188,slow=32			LR	LR	15 58 47.0	
STKA	**Stephens Creek** 2.0nm,0.6s,mb4.0,baz=90,slow=7.2,SNR=8.9	**44.25**	**240**	P	**P**	**15 53 48.1**	**-0.8**
STKA	**Stephens Creek** 0.6nm,0.8s,mb3.4	**44.25**	**240**	*e*P	**P**	**15 53 48.0**	**-0.9**
WRA	**Warramunga Arr** 0.4nm,0.3s,mb3.9,baz=95,slow=6.6,SNR=9.5	**50.12**	**257**	P	**P**	**15 54 34.3**	**-0.6**
ASAR	**Alice Springs** 2.1nm,0.5s,mb4.5,baz=86,slow=7.9,SNR=36	**50.37**	**252**	P	**P**	**15 54 36.5**	**-0.2**
VNDA	**Vanda** 3.2nm,0.9s,mb4.4,baz=340,slow=7.0,SNR=8.7	**63.29**	**186**	P	**P**	**15 56 08.2**	**+0.5**
ISA	**Isabella** 5.3nm,1.0s,mb4.4	**72.52**	**44**	P	**P**	**15 57 06.2**	**-0.1**
PETK	**Petropavlovsk-** 3.1nm,0.8s,mb4.3,baz=137,slow=7.2,SNR=3.4	**72.83**	**342**	P	**P**	**15 57 08.1**	**+0.2**
NVAR	**Mina Array Bea** 3.9nm,0.7s,mb4.4,baz=225,slow=9.6,SNR=16	**74.21**	**42**	P	**P**	**15 57 17.0**	**+0.7**
NVAR	**Mina Array Bea**	**74.21**	**42**	P	**P**	**15 57 17.0**	**+0.7**
TPH	**Tonopah** 17nm,1.4s,mb4.8	**74.71**	**43**	*e*P	**P**	**15 57 19.6**	**+0.4**
ELK	**Elko** 6.1nm,1.3s,mb4.4	**77.47**	**41**	*e*P	**P**	**15 57 35.2**	**+0.3**
TXAR	**Lajitas Array** 1.5nm,0.9s,mb3.9,baz=223,slow=6.3,SNR=11	**80.42**	**56**	P	**P**	**15 57 51.0**	**-0.3**
PV01	**Paradox Valley**	**80.58**	**46**	*e*P	**P**	**15 57 52.0**	**0.0**
MCK	**McKinley** 3.7nm,0.7s,mb4.4	**81.18**	**11**	*e*P	**P**	**15 57 54.2**	**-0.4**
PDAR	**Pinedale Array** 1.8nm,0.8s,mb4.0,baz=212,slow=4.0,SNR=12	**82.14**	**42**	P	**P**	**15 57 60.0**	**-0.3**
COLA	**College** 5.0nm,0.9s,mb4.4	**82.42**	**11**	*e*P	**P**	**15 58 01.3**	**+0.2**
SDCO	**Great Sand Dun** 1.3nm,1.0s,mb3.9	**82.56**	**48**	*e*P	**P**	**15 58 02.8**	**+0.2**
YKA	**Yellowknife Ar** 0.7nm,0.6s,mb4.1,baz=238,slow=4.9,SNR=18	**90.08**	**23**	P	**P**	**15 58 38.6**	**-0.3**
ULM	**Lac du Bonnet** comp=Z,73nm,18.8s,MS4.2,baz=26,slow=33	**93.83**	**39**	LR	LR	16 37 01.4	
GERES	**GERESS Array B** 0.4nm,0.6s,baz=43,slow=2.5,SNR=4.0	**146.30**	**352**	PKPbc	PKPbc	16 05 19.5	-0.6
BRTR	**Keskin Array B** 1.7nm,0.7s,baz=93,slow=4.0,SNR=4.8	**146.44**	**321**	PKPbc	PKPbc	16 05 21.6	+0.8

DJA 20 15:49:57, 117S×11986E, h10km, MLv4.1/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.26**	**355**	P	Pg	15 50 02.3	-0.1
PCI				S	Sg	15 50 07.9	+1.9
KAPI	**Kappang**	**3.82**	**182**	P	Pn	15 50 56.4	+0.5
KDI	**Kendari**	**3.91**	**135**	P	Pn	15 51 01.9	+4.8
KDI				S	Sn	15 51 58.5	+15
BBKI	**Banjar Baru**	**5.51**	**245**	S	Sn	15 52 24.4	+1.8
MYLDM	**Lahad Datu** 35nm,0.8s,0.2nm	**6.45**	**348**	P	Pn	15 51 37.3	+5.2
LBMI	**Labuha**	**7.66**	**86**	P	Pn	15 51 43.8	-4.9
LBMI				S	Sn	15 53 09.4	-6.2

BYKL 20 16:24:17.3±0.5, 5357N×11491E, h31km±45km, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIT	**Chita**	**1.76**	**209**	*e*Pg	Pn	16 24 47.9	+2.4
CIT				*e*Sg	Sn	16 25 11.5	+4.7
CIT	67nm,0.1s			Pmax			
CIT	681nm,0.2s			Smax			
UKT	**Uakit**	**2.06**	**339**	*e*PN	Pn	16 24 52.7	+2.9
UKT				*e*		16 25 20.3	
UKT	comp=Z,90nm,0.6s			pmax	pmax		
UKT	comp=N,295nm,0.5s			smax			
UKT	**Uakit**	**2.06**	**339**	*e*Pn	Pn	16 24 49.4	-0.4
UKT				*e*Pg	Pn	16 24 52.9	+3.1
UKT				*e*Sg	Sn	16 25 20.5	+6.1
UKT	comp=N,20nm,0.5s			Pmax

TRTB				*e*Sg	Sn	16 26 39.6	+23	
TRTB				Pmax				
	comp=N,12nm,0.7s							
TRTB				Smax				
	comp=N,26nm,0.9s							
UUDB	**Ulan-Yde**	**4.72**	**252**	*e*Pg	Pn	16 25 42.6	+16	
UUDB				*e*Sg	Sn	16 26 45.3	+25	
UUDB				Pmax				
	comp=N,15nm,0.7s							
UUDB				Smax				
	comp=N,51nm,1.0s							
ZRHB	**Zarechye**	**4.79**	**261**	*e*Sg	Sn	16 26 47.0	+25	
ZRHB				Smax				
	comp=N,172nm,1.0s							
TRG	**Tyrgan**	**5.21**	**264**	*e*	Sn	16 26 27.1	-5.0	
TRG				*e*Sg	Sn	16 26 58.7	+27	
TRG				Smax				
	comp=N,24nm,0.7s							
TRG	**Tyrgan**	**5.21**	**264**	*e*	Sn	16 26 25.7	-6.4	
HRMR	**Khuramsha**	**5.22**	**251**	*e*Pg	Pn	16 25 51.7	+19	
HRMR				*e*Sg	Sn	16 26 59.0	+27	
HRMR				Pmax				
	comp=N,18nm,0.6s							
HRMR				Smax				
	comp=N,155nm,0.7s							
LSTR	**Listvyanka**	**6.36**	**259**	*e*Sg	Sn	16 27 34.3	+34	
LSTR				Smax				
	comp=N,21nm,0.8s							
IRK	**Irkutsk**	**6.57**	**263**	*e*Sg	Sn	16 27 42.0	+37	
IRK				Smax				
	comp=N,77nm,0.6s							
CLNS	**Chul'man**	**6.58**	**56**	*e*Sg	Sn	16 27 39.7	+34	
KROS	**Kirovskiy**	**7.16**	**78**	*e*Sg	Sn	16 27 57.6	+38	
ARS	**Arshan**	**7.76**	**263**	*e*Sg	Sn	16 28 17.2	+43	
ARS				Smax				
	comp=N,20nm,0.6s							
MOY	**Mondy**	**8.68**	**263**	*e*Sg	Sx	16 28 47.5		
MOY				Smax				
	comp=N,12nm,0.9s							
ORL	**Orlik**	**9.16**	**270**	*e*Sg	Sx	16 29 01.9		
ORL				Smax				
	comp=N,7.0nm,1.6s							

MOS ***20*** *16:24:25.4±1.6,5379N×11460E,h10km,mb4.3/1,Error ellipse: s-maj=24.7km s-min=12.6km az=99.9*

BYKL 20 16:24:26.5±0.8,5355N×11474E,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CIT	**Chita**	**1.69**	**206**	*e*Pg	Pg	16 24 56.4	-2.5
CIT				*e*Sg	Sg	16 25 19.7	-1.1
CIT				Pmax			
	124nm,0.2s						
CIT				Smax			
	718nm,0.7s						
UKT	**Uakit**	**2.05**	**342**	*e*Pg	Pg	16 25 02.4	-3.3
UKT				*e*Sg	Sg	16 25 28.2	-4.1
UKT				Pmax			
	93nm,0.8s						
UKT				Smax			
	295nm,1.0s						
YLYR	**Ulyunkhan**	**2.49**	**304**	*e*PN	Pn	16 25 04.9	-3.3
YLYR				*e*		16 25 35.7	
YLYR				pmax	pmax		
	comp=Z,27nm,0.3s						
YLYR				smax			
	comp=N,339nm,0.5s						
YLYR	**Ulyunkhan**	**2.49**	**304**	*e*Pn	Pn	16 25 04.9	-3.3
YLYR				*e*Pg	Pg	16 25 11.1	-3.0
YLYR				*e*Sg	Sg	16 25 41.4	-4.9
YLYR				Pmax			
	comp=N,22nm,0.8s						
YLYR				Smax			
	comp=N,352nm,1.0s						
YLYR	**Ulyunkhan**	**2.49**	**304**	*e*Sg	Sn	16 25 35.7	-3.5
SYVR	**Suvo**	**2.83**	**274**	*e*PN	Pn	16 25 07.5	-5.3
SYVR				*e*	Sn	16 25 47.4	-0.2
SYVR				pmax	pmax		
	comp=Z,36nm,0.4s						
SYVR				smax			
	comp=N,400nm,1.2s						
SYVR	**Suvo**	**2.83**	**274**	*e*Pg	Pg	16 25 17.1	-3.5
SYVR				*e*Sg	Sg	16 25 51.9	-5.4
SYVR				Pmax			
	comp=N,23nm,0.5s						
SYVR				Smax			
	comp=N,246nm,1.0s						
SYVR				*e*Sg	Sg	16 25 47.4	-10
SYVR	**Suvo**	**2.83**	**274**	*e*Pg	Pg	16 25 07.9	-13
NLYR	**Nelyaty**	**3.00**	**10**	*e*PN	Pn	16 25 11.1	-4.1
NLYR				*e*		16 25 51.7	
NLYR				pmax	pmax		
	comp=Z,50nm,0.9s						
NLYR				smax			
	comp=N,511nm,0.9s						
NLYR	**Nelyaty**	**3.00**	**10**	*e*Sg	Sg	16 26 01.8	-1.0
NLYR				Smax			
	comp=N,499nm,1.0s						
NLYR	**Nelyaty**	**3.00**	**10**	*e*	Pn	16 25 11.5	-3.7
KMO	**Kumora**	**3.11**	**320**	*e*PN	Pn	16 25 11.9	-4.9
KMO				*e*S	Sn	16 25 43.1	-12
KMO				*e*		16 25 52.8	
KMO				pmax	pmax		
	comp=Z,47nm,0.4s						
KMO				smax			
	comp=N,259nm,0.8s						
YOA	**Uoyan**	**3.12**	**327**	*e*PN	Pn	16 25 15.3	-1.6
YOA	**Uoyan**	**3.12**	**327**	*e*	Pg	16 25 25.3	-1.0
YOA				*e*Sg	Sg	16 26 03.4	-3.3
YOA				max			
	comp=N,67nm,1.0s						
YOA				Smax			
	comp=N,402nm,0.9s						
YOA	**Uoyan**	**3.12**	**327**	*e*Pg	Pn	16 25 14.8	-2.1
TUP	**Tupik**	**3.20**	**72**	*e*Sg	Sg	16 26 05.2	-4.0
TUP				Smax			
	comp=N,112nm,0.9s						
MXMB	**Maximikha**	**3.60**	**268**	*e*Sg	Sg	16 26 19.6	-2.5
MXMB				Smax			
	comp=N,393nm,0.9s						
NIZ	**Nizh Angarsk**	**3.75**	**309**	*e*PN	Pn	16 25 24.8	-0.8
NIZ				*e*		16 26 17.2	
NIZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NIZ				smax			
	comp=N,153nm,1.2s						
NIZ	**Nizh Angarsk**	**3.75**	**309**	*e*Pn	Pn	16 25 21.6	-4.0
NIZ				*e*Pg	Pg	16 25 34.8	-3.6
NIZ	**Nizh Angarsk**	**3.75**	**309**	*e*	Pg	16 25 35.2	-3.2
CRS	**Chara**	**3.92**	**30**	*e*PN	Pn	16 25 26.7	-1.1
CRS				*e*	Sn	16 26 18.0	+3.5
CRS				pmax	pmax		
	comp=Z,27nm,1.3s						
CRS				smax			
	comp=E,180nm,1.4s						
CRS				*e*Sg	Sn	16 26 17.9	+3.4
CRS	**Chara**	**3.92**	**30**	*e*Pg	Pn	16 25 26.8	-1.0
KPC	**Khapcheranga**	**4.12**	**202**	*e*PN	Pn	16 25 32.3	+1.6
KPC				pmax	pmax		
	comp=Z,6.0nm,0.2s						
KPC				smax			
	comp=E,130nm,0.7s						
KPC	**Khapcheranga**	**4.12**	**202**	*e*	Pg	16 25 41.4	-4.1
KPC				*e*Sg	Sg	16 26 31.5	-7.4
KPC				max			
	comp=E,11nm,0.3s						
KPC				Smax			
	comp=E,128nm,0.9s						
KPC				*e*		16 26 04.4	
KPC	**Khapcheranga**	**4.12**	**202**	*e*Pg	Pn	16 25 32.2	+1.5
OGRR	**Ongureny**	**4.26**	**274**	*e*PN	Pn	16 25 33.6	+1.1
OGRR				*e*	Sg	16 26 31.9	-11
OGRR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OGRR				smax			
	comp=N,67nm,0.9s						
OGRR	**Ongureny**	**4.26**	**274**	*e*	Pg	16 25 40.2	-7.8
OGRR				*e*Sg	Sg	16 26 38.0	-5.2
OGRR				max			
	comp=N,6.0nm,0.8s						
OGRR				Smax			
	comp=N,65nm,1.0s						
OGRR				*e*Sg	Sg	16 26 31.7	-11
OGRR	**Ongureny**	**4.26**	**274**	*e*Pg	Pn	16 25 33.4	+0.9

TRTB	**Turuntaevo**	**4.50**	**256**	*e*Pg	Pg	16 25 47.9	-4.9	
TRTB				*e*Sg	Sg	16 26 47.8	-3.3	
TRTB				Pmax				
	comp=N,18nm,0.7s							
TRTB				Smax				
	comp=N,68nm,1.0s							
UUDB	**Ulan-Yde**	**4.62**	**251**	*e*Pg	Pg	16 25 49.4	-5.6	
UUDB				*e*Sg	Sg	16 26 51.5	-3.4	
UUDB				Pmax				
	comp=N,21nm,0.7s							
UUDB				Smax				
	comp=N,79nm,1.3s							
TRG	**Tyrgan**	**5.11**	**264**	*e*Sg	Sg	16 27 05.0	-5.6	
TRG				Smax				
	comp=N,35nm,0.7s							
HRMR	**Khuramsha**	**5.12**	**251**	*e*Pg	Pg	16 25 58.4	-6.2	
HRMR				*e*Sg	Sg	16 27 06.2	-4.7	
HRMR				Pmax				
	comp=N,18nm,0.5s							
HRMR				Smax				
	comp=N,283nm,1.1s							
LSTR	**Listvyanka**	**6.25**	**258**	*e*Sg	Sg	16 27 38.4	-8.8	
LSTR				Smax				
	comp=N,21nm,0.7s							
IRK	**Irkutsk**	**6.47**	**263**	*e*Sg	Sg	16 27 46.2	-7.9	
IRK				Smax				
	comp=N,80nm,0.9s							
ARS	**Arshan**	**7.66**	**263**	*e*Sg	Sg	16 28 23.0	-9.1	
ARS				Smax				
	comp=N,46nm,1.0s							
ZAK	**Zakamensk**	**7.76**	**250**	*e*PN	Pg	16 26 39.1	-16	
ZAK				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MOY	**Mondy**	**8.58**	**263**	*e*Sg	Sx	16 28 52.2		
MOY				Smax				
	comp=Z,84nm,0.9s							
ORL	**Orlik**	**9.05**	**270**	*e*Sg	Sx	16 29 06.9		
ORL				Smax				
	comp=Z,18nm,1.4s							

ISCJB ***20*** *16:25:58.4±1.5,2318S±007×702W±0.1,h62km±14km, mb4.0/8,Error ellipse: s-maj=21.0km s-min=8.6km az=24.4*

NEIC ***20*** *16:25:59.0±1.2,2305S×70.14W,h48km±11km,mb4.0/2, Error ellipse: s-maj=15.1km s-min=8.2km az=114.0*

IDC ***20*** *16:25:59.4±0.8,2305S×70.16W,h51km±5km,mb3.8/7, mb1 3.9/10,mb1mx3.8/18,mbtmp3.7/10,MS3.1/2, Ms1 3.2/2,ms1mx2.6/36,Error ellipse: s-maj=25.8km s-min=18.3km az=9.0*

ISC 20 16:25:59.3±1.5,2311S±007×702W±01,h53km±14km,n24, σ1s05/22,mb4.0/8,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.25**	**67**	P	**Pn**	**16 26 21.7**	**+1.2**
	670nm,0.3s,baz=273,slow=9.2,SNR=2029						
LVC				S	**Sn**	**16 26 38.0**	**+1.6**
	2µm,0.3s,baz=250,slow=8.4,SNR=19						
LVC	**Limon Verde**	**1.25**	**67**	*e*Pn	**Pn**	**16 26 21.1**	**+0.5**
LVC				P		16 26 21.7	
LVC				*e*Sn	**Sn**	**16 26 34.6**	**-1.7**
LVC				S	**Sn**	**16 26 38.0**	**+1.6**
LCO	**Las Campanas**	**5.90**	**185**	*e*Pn	**Pn**	**16 27 25.1**	**+0.9**
	28nm,0.6s						
LCO				*e*Sn	**Sn**	**16 28 29.1**	**-1.3**
CFAA	**Coronel Fontan**	**8.63**	**169**	P	**Pn**	**16 28 01.4**	**-0.2**
	0.1nm,0.3s,baz=49,slow=20,SNR=6.6						
CFAA				S	**Sn**	**16 29 49.3**	**+12**
	0.1nm,0.3s,baz=238,slow=17,SNR=3.7						
CFAA	**Coronel Fontan**	**8.63**	**169**	P	**Pn**	**16 28 01.4**	**-0.2**
CFAA				S	**Sn**	**16 29 49.3**	**+12**
SIV	**San Ignacio**	**11.11**	**52**	P	**Pn**	**16 28 33.5**	**-2.1**
	0.9nm,0.3s,baz=243,slow=12,SNR=21						
CPUP	**Villa Florida**	**12.10**	**108**	P	**Pn**	**16 28 49.0**	**0.0**
	0.1nm,0.3s,baz=268,slow=11,SNR=4.0						
CPUP				LR	LR	16 34 13.3	
	comp=Z,110nm,19.4s,baz=74,slow=41						
TRQA	**Tornquist**	**16.47**	**157**	*e*Pn	**Pn**	**16 29 46.9**	**+0.2**
	5.5nm,0.8s						
ATAH	**Atahualpa**	**17.87**	**332**	LR	LR	16 35 35.8	
	comp=Z,65nm,21.1s,baz=176,slow=33						
BDFB	**Brasilia**	**22.16**	**74**	P	**P**	**16 30 51.6**	**+0.7**
	1.2nm,0.5s,mb3.6,baz=253,slow=22,SNR=3.3						
VNA3	**Neumayer Olymp**	**58.94**	**161**	*e*	pP	16 36 07.5	+0.2
VNA3				*e*		16 36 09.1	
VNA3				*e*		16 36 13.2	
VNA2	**Neumayer--Watz**	**59.53**	**160**	*e*	pP	16 36 12.4	+1.0
	baz=294,slow=9.8						
VNA2				*e*		16 36 13.8	
VNA2				*e*		16 36 18.6	
TXAR	**Lajitas Array**	**61.30**	**327**	P	**P**	**16 36 09.8**	**+0.4**
	0.4nm,0.6s,mb3.7,baz=155,slow=7.7,SNR=5.4						
QSPA	**South Pole Qui**	**67.09**	**180**	*e*P	**P**	**16 36 48.7**	**+2.0**
	1.5nm,0.5s,mb4.3						
DBIC	**Dimbokro**	**70.30**	**73**	P	**P**	**16 37 06.4**	**-1.3**
	1.3nm,0.6s,mb4.0,baz=224,slow=9.7,SNR=3.4						
PDAR	**Pinedale Array**	**74.93**	**331**	P	**P**	**16 37 35.4**	**+0.8**
	0.3nm,0.5s,mb3.5,baz=134,slow=8.3,SNR=4.4						
ULM	**Lac du Bonnet**	**76.50**	**343**	P	**P**	**16 37 42.2**	**-1.1**
	2.4nm,0.7s,mb4.2,baz=160,slow=4.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**78.98**	**71**	P	**P**	**16 37 57.6**	**-0.3**
	1.4nm,0.5s,mb4.2,baz=248,slow=4.8,SNR=22						
TORD				pP	pP	16 38 12.8	-0.3
	0.8nm,0.5s,baz=250,slow=5.1,SNR=3.6						
YKA	**Yellowknife Ar**	**92.32**	**341**	P	**P**	**16 39 03.1**	**-0.1**
	1.1nm,0.6s,mb4.4,baz=139,slow=4.2,SNR=31						
YKA				pP	pP	16 39 17.4	-1.3
	0.4nm,0.6s,baz=139,slow=4.1,SNR=5.6						
ASAR	**Alice Springs**	**127.96**	**208**	PKP	PKPdf	16 45 00.5	+0.6
	0.6nm,0.7s,baz=122,slow=2.0,SNR=13						
WRA	**Warramunga Arr**	**130.99**	**211**	PKP	PKPdf	16 45 06.7	+0.9
	0.6nm,0.5s,baz=150,slow=1.6,SNR=21						
ZALV	**Zalesovo Beam**	**143.90**	**25**	PKP	PKPdf	16 45 28.9	+0.6
	0.7nm,0.4s,baz=214,slow=1.1,SNR=4.0						
ZALV				pPKP	pPKPdf	16 45 42.5	-1.8
	0.7nm,0.4s,baz=238,slow=2.8,SNR=2.1						
ZALV	**Zalesovo Beam**	**143.90**	**25**	PKP	PKPdf	16 45 28.9	+0.5
ZALV				pPKP	pPKPdf	16 45 42.5	-1.8
MKAR	**Makanchi Array**	**147.61**	**36**	PKPbc	PKPbc	16 45 38.3	+0.6
	0.7nm,0.4s,baz=320,slow=3.3,SNR=11						
MKAR				pPKPbc	pPKPbc	16 45 53.1	-0.4
	2.5nm,0.6s,baz=316,slow=3.2,SNR=15						

IDC ***20*** *16:35:18.9±2.7,3154N×11645W,h0km,mb3.8/2, mb1 4.1/8,mb1mx3.8/25,mbtmp3.7/8,ML3.9/4,MS3.3/3, Ms1 3.3/3,ms1mx2.8/38,Error ellipse: s-maj=40.5km s-min=12.6km az=44.0*

BJI ***20*** *16:35:21.1,3176N×11658W,h19km,mB4.9,mb4.9,Ms4.6, Msz4.7*

ISCJB ***20*** *16:35:22.2±0.6,3174N±004×116.19W±003,h20km±4km, mb4.2/3,MS4.2/2,Error ellipse: s-maj=7.0km s-min=4.1km az=169.3*

NEIC ***20*** *16:35:23.3,3177N×116.18W,h7km,ML4.0(ECX), ML4.5(PAS),After ECX.*

NEIC Felt strongly at Ensenada. Felt [III] at Campo and San Diego; [II] at El Cajon, California. Also felt at Brawley, El Centro, Escondido, Imperial Beach, Julian, La Jolla, La Mesa, Poway, San Ysidro, Temecula and Vista.

ECX ***20*** *16:35:23.3±0.5,3177N×116.18W,h7km,MD3.8,ML4.0*

ISC 20 16:35:23.7±0.6,3179N±004×11624W±003,h12km±3km, n52,σ1s26/65,mb4.2/3,MS4.1/2,7C-2D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDX	**Rancho Dowling**	**0.29**	**60**	⇑*i*P	**Pg**	**16 35 28.8**	**-0.8**
RDX				*e*S	**Sg**	**16 35 32.3**	**-1.2**
ECNX	**Esteban Cantu**	**0.33**	**247**	⇑*i*P	**Pg**	**16 35 30.0**	**-0.3**
ECNX				*e*S	**Sg**	**16 35 35.2**	**+0.4**
ENX	**Ensenada**	**0.37**	**285**	⇑*i*P	**Pg**	**16 35 31.3**	**+0.2**
ENX				*e*S	**Sg**	**16 35 37.1**	**+0.9**
PBX	**Punta Banda**	**0.41**	**264**	⇑*i*P	**Pg**	**16 35 31.6**	**-0.2**
PBX				*e*S	**Sg**	**16 35 38.0**	**+0.6**
PBX				⇓*e*		16 35 39.1	
	comp=N,15µm,0.4s						
PBX				⇓*e*		16 35 43.6	
	comp=E,14µm,0.6s						
PBX	**Punta Banda**	**0.41**	**264**	⇑*i*P	**Pg**	**16 35 31.6**	**-0.2**
PBX				*e*S	**Sg**	**16 35 38.0**	**+0.6**
CBX	**Cerro Bola**	**0.63**	**326**	⇑*e*P	**Pg**	**16 35 35.5**	**-0.5**
CBX				*e*S	**Sg**	**16 35 44.8**	**+0.5**

RMX	**La Rumorosa**	**0.82**	**10**	⇑*e*P	**Pg**	**16 35 39.0**	**-0.6**	
RMX				*e*S	**Sg**	**16 35 50.2**	**-0.1**	
CPBX	**Cerro Prieto**	**1.01**	**52**	*e*P	**Pb**	**16 35 38.5**	**-4.6**	
CPBX				*e*S	**Sg**	**16 35 51.8**	**-4.6**	
GLA	**Glamis**	**1.74**	**43**	*e*Pn	**Pn**	**16 35 51.6**	**-2.0**	
GLA				*e*Sn	**Sn**	**16 36 12.3**	**-3.4**	
PFO	**Pinyon Flat Ob**	**1.82**	**354**	Pn	**Pn**	**16 35 54.2**	**-0.6**	
	comp=E,71nm,0.3s,baz=184,slow=14,SNR=141							
PFO				Lg		16 36 19.9		
	comp=E,69nm,0.3s,baz=173,slow=14,SNR=4.8							
PFO	**Pinyon Flat Ob**	**1.82**	**354**	*e*Pn	**Pn**	**16 35 54.0**	**-0.8**	
PFO				*e*Sn	**Sn**	**16 36 18.3**	**+0.5**	
MWC	**Mount Wilson**	**2.87**	**328**	*e*Pn	**Pn**	**16 36 08.5**	**-0.6**	
MWC				*e*Sn	**Sn**	**16 36 49.2**	**+5.6**	
PASC	**Pasadena Art C**	**2.88**	**326**	*e*Pn	**Pn**	**16 36 08.6**	**-0.8**	
PASC				*e*Sn	**Sn**	**16 36 43.6**	**-0.3**	
SNCC	**San Nicolas Is**	**3.13**	**299**	*e*Pn	**Pn**	**16 36 09.9**	**-2.8**	
SNCC				*e*Sn	**Sn**	**16 36 46.0**	**-4.1**	
LDFC	**Landfair**	**3.41**	**16**	*e*Pn	**Pn**	**16 36 17.5**	**+0.8**	
OSI	**Osito Adit**	**3.50**	**324**	*e*Pn	**Pn**	**16 36 17.6**	**-0.3**	
OSI				*e*Sn	**Sn**	**16 36 57.0**	**-2.2**	
GSC	**Goldstone**	**3.53**	**352**	*e*Pn	**Pn**	**16 36 18.2**	**-0.2**	
GSC				*e*Sn	**Sg**	**16 37 12.6**	**-4.6**	
ISA	**Isabella**	**4.29**	**335**	*e*Pn	**Pn**	**16 36 29.1**	**+0.5**	
ISA				*e*Sn	**Sn**	**16 37 28.1**	**+10**	
TUC	**Tucson**	**4.66**	**82**	*e*Pn	**Pn**	**16 36 31.4**	**-2.5**	
TPNV	**Topopah Spring**	**5.15**	**360**	*e*Pn	**Pn**	**16 36 42.0**	**+1.5**	
	comp=E,52nm,0.4s							
TPNV				*e*Sn	**Sg**	**16 38 02.5**	**-6.4**	
WUAZ	**Wupatki**	**5.50**	**46**	*e*Pn	**Pn**	**16 36 45.4**	**0.0**	
	comp=E,66nm,0.8s							
CCUT	**Cedar City**	**6.22**	**22**	*e*Pn	**Pn**	**16 36 57.0**	**+1.8**	
	comp=E,20nm,0.6s							
CCUT				*e*Sg	**Sg**	**16 38 50.2**	**+7.0**	
TPH	**Tonopah**	**6.32**	**353**	*e*Pn	**Pn**	**16 36 56.8**	**+0.1**	
	comp=E,16nm,0.8s							
TPH				*e*		16 37 22.6		
SAO	**San Andreas Ge**	**6.57**	**320**	Pn	**Pn**	**16 36 57.0**	**-3.0**	
NVAR	**Mina Array Bea**	**6.84**	**346**	Pn	**Pn**	**16 37 03.7**	**+0.1**	
	baz=172,slow=15,SNR=2.4							
NVAR				Lg		16 39 02.4		
	comp=E,0.3nm,0.3s,baz=180,slow=33,SNR=2.7							
NVAR	**Mina Array Bea**	**6.84**	**346**	Pn	**Pn**	**16 37 03.7**	**+0.1**	
NVAR				Lg		16 39 02.4		
MSU	**Marysvale**	**7.49**	**25**	*e*Pn	**Pn**	**16 37 17.0**	**+4.4**	
	comp=E,22nm,0.6s							
LAZ	**Ladron**	**8.07**	**69**	Pn	**Pn**	**16 37 22.0**	**+1.4**	
	comp=E,2.9nm,0.6s							
LENM	**Lemitar**	**8.14**	**71**	*e*Pn	**Pn**	**16 37 18.4**	**-3.2**	
	comp=E,6.0nm,0.4s							
MVCO	**Mesa Verde**	**8.37**	**48**	*e*Pn	**Pn**	**16 37 26.6**	**+1.9**	
	comp=E,22nm,0.5s							
ANMO	**Albuquerque**	**8.77**	**66**	Pn	**Pn**	**16 37 32.1**	**+2.0**	
	comp=E,0.2nm,0.3s,baz=256,slow=16,SNR=2.9							
ANMO				LR	LR	16 40 56.4		
	comp=E,88nm,18.7s,baz=158,slow=37							
ANMO	**Albuquerque**	**8.77**	**66**	*e*Pn	**Pn**	**16 37 32.1**	**+1.9**	
	comp=E,6.8nm,0.9s							
PV10	**Paradox Valley**	**8.83**	**40**	Pn	**Pn**	**16 37 33.3**	**+2.3**	
	comp=E,633nm,0.8s							
DUG	**Dugway**	**8.83**	**17**	*e*Pn	**Pn**	**16 37 32.6**	**+1.5**	
	comp=E,5.2nm,0.7s							
PV01	**Paradox Valley**	**8.92**	**43**	Pn	**Pn**	**16 37 33.5**	**+1.1**	
	comp=E,1µm,0.8s							
ELK	**Elko**	**8.97**	**5**	Pn	**Pn**	**16 37 35.6**	**+2.7**	
	comp=E,1.6nm,0.3s,baz=173,slow=7.9,SNR=38							
ELK				Lg		16 40 04.5		
	comp=E,0.2nm,0.3s,baz=262,slow=18,SNR=3.6							
ELK				LR	LR	16 41 16.7		
	comp=E,134nm,18.7s,baz=278,slow=39							
ELK	**Elko**	**8.97**	**5**	*e*Pn	**Pn**	**16 37 34.7**	**+1.7**	
	comp=E,4.4nm,0.5s							
SMCO	**Snowmass**	**10.55**	**43**	*e*Pn	**Pn**	**16 37 51.0**	**-3.7**	
	comp=E,18nm,1.0s							
SDCO	**Great Sand Dun**	**10.64**	**53**	*e*Pn	**Pn**	**16 37 59.8**	**+3.9**	
	comp=E,5.8nm,1.0s							
TXAR	**Lajitas Array**	**11.11**	**99**	Pn	**Pn**	**16 38 02.1**	**-0.2**	
	comp=E,0.7nm,0.3s,baz=279,slow=12,SNR=34							
TXAR				Lg		16 41 18.1		
	comp=E,0.1nm,0.3s,baz=286,slow=31,SNR=3.7							
PDAR	**Pinedale Array**	**12.18**	**24**	Pn	**Pn**	**16 38 20.9**	**+4.1**	
	comp=E,0.1nm,0.3s,baz=195,slow=14,SNR=7.6							
TPAW	**Teton Pass**	**12.40**	**18**	*e*Pn	**Pn**	**16 38 25.7**	**+5.7**	
	comp=E,20nm,1.5s							
BBB	**Bella Bella**	**22.15**	**340**	LR	LR	16 49 24.3		
	comp=E,147nm,18.2s,MS3.4,baz=212,slow=38							
DLBC	**Dease Lake**	**28.25**	**345**	P	**P**	**16 41 16.1**	**-0.2**	
	comp=E,2.4nm,0.9s,mb3.8,baz=153,slow=9.0,SNR=4.0							
YKA	**Yellowknife Ar**	**30.74**	**1**	P	**P**	**16 41 38.4**	**+0.2**	
	comp=E,0.4nm,0.6s,mb3.4,baz=181,slow=8.3,SNR=9.6							
YKA	**Yellowknife Ar**	**30.74**	**1**	P	**P**	**16 41 38.4**	**+0.1**	
CN2	**Changchun**	**86.03**	**320**	*e*P	**P**	**16 48 02.4**	**-1.7**	
CN2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb5.2							
HHC	**Hu-ho-hao-te**	**95.30**	**326**	*e*P	**P**	**16 48 43.0**	**-4.6**	
HHC				AP	pP	16 48 48.3	-3.4	
HHC				PP	PP	16 52 34.9	-2.0	
HHC				SKS		16 59 17.3		
HHC				*e*S	S	16 59 53.5	-10	
HHC				LR	LR			
	comp=N,136nm,15.5s,MS5.0							
HHC				LR	LR			
	comp=E,381nm,17.8s,MS5.0							
HHC				LR	LR			
	comp=Z,279nm,20.2s,MS4.7							
WMQ	**Urumqi**	**101.64**	**343**	*e*P	Pdif	16 49 14.3	-1.6	
XAN	**Xi'an**	**101.92**	**323**	P	Pdif	16 49 16.8	-0.4	
XAN				PP	PP	16 53 27.1	-0.6	
XAN				S	Sdif	17 00 59.1	0.0	
XAN				AMB	AMB			
	comp=Z,1.0nm,0.5s							
XAN				LR	LR			
	comp=N,64nm,30.6s							
XAN				LR	LR			
	comp=E,90nm,23.7s							
XAN				LR	LR			
	comp=Z,164nm,22.2s							
LZH	**Lanzhou**	**102.73**	**328**	*e*P	Pdif	16 49 19.8	-1.0	
LZH				AP		16 49 23.5		
LZH				XP		16 49 25.5		
KMI	**Kunming**	**112.25**	**322**	PKP	PKiKP	16 53 58.8	-0.9	

NEIC ***20*** *16:46:53.3,3175N×116.19W,h7km,ML3.2(

WUAZ	**Wupatki**	**5.50**	**46**	Pn	Pn	16 48 15.3	-0.3
WUAZ				*e*Sg	Sg	16 49 51.1	+1.2

IDC ***20*** *16:55:49.6±2.7, 51.19N×179.06W, h14km±16km, mb4.7/33, mb1 4.8/35, mb1mx4.8/36, mbtmp4.7/35, ML3.9/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/49, Error ellipse: s-maj=16.3km s-min=9.4km az=171.0*

MOS ***20*** *16:55:51.6±0.8, 51.15N×179.04W, h39km, mb5.3/101, MS4.2/10, Error ellipse: s-maj=7.6km s-min=4.2km az=97.6*

BJI ***20*** *16:55:51.7, 51.42N×179.50W, h27km, mB5.1, mb5.0, Ms4.6, Msz4.4*

ISCJB ***20*** *16:55:53.0±0.2, 51.19N±004×179.07W±002, h47km, mb5.1/242, MS4.2/48, Error ellipse: s-maj=5.3km s-min=1.8km az=3.7*

NEIC ***20*** *16:55:54.4±0.5, 51.20N×179.05W, h49km±4km, mb5.1/147, MS4.3/4, ML4.8(PMR), ML4.9(AEIC), Error ellipse: s-maj=5.4km s-min=2.4km az=181.0*

GCMT ***20*** *16:55:54.4±0.4, 51.03N×178.92W, h30km±1km, MW5.0/58, Moment Tensor Solution. s29,c34; s58,c84; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.40±.19; Mθθ-2.43±.13; Mϕϕ0.03±.12; Mrθ1.83±.17; Mθϕ-0.75±.07; Mϕr1.03±.16; Best double couple: M₀3.28400×10¹⁶ NP1:ϕs265.00000°, δ26.00000°, λ108.00000°. NP2: ϕs65.00000°, δ65.00000°, λ82.00000°. Principal axes: T 3.1970, Plg69.0000°, Azm319.0000°; N 0.1790, Plg8.0000°, Azm69.0000°; P -3.3700, Plg20.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***20*** *16:55:57.6, 51.69N×179.33E, h33km, mb5.2, Rat Islands, Aleutian Islands, United States*

ISC 20 16:55:55.1±0.2, 51.28N±004×179.08W±002, h49km, h49km±4.2km:pP-P, n806, σ0.972/804, mb5.1/242, MS4.2/48, 183C-144D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.61**	**67**	P	**Pn**	**16 56 19.9**	**-1.2**
ADK				S	**Sn**	**16 56 41.1**	**+0.4**
GSTR	**Great Sitkin T**	**2.05**	**65**	*e*Pn	**Pn**	**16 56 26.7**	**-0.4**
SMY	**Shemya**	**4.46**	**292**	P	**Pn**	**16 57 00.4**	**+0.3**
SMY				S	**Sn**	**16 57 53.7**	**+3.0**
FX1	**Attu Island--F**	**5.05**	**292**	Pn	**Pn**	**16 57 08.0**	**-0.1**
	51nm,0.3s,baz=229,slow=4.2,SNR=17						
FX1				Sn	**Sn**	**16 58 14.7**	**+10**
	9.0nm,0.3s,baz=64,slow=23,SNR=6.6						
FX1				LR	LR	16 59 06.3	
	comp=Z,3μm,18.8s,baz=260,slow=39						
FX1	**Attu Island--F**	**5.05**	**292**	P	**Pn**	**16 57 08.0**	**-0.2**
FX1						16 58 14.7	
FX1	**Attu Island--F**	**5.05**	**292**	Pn	**Pn**	**16 57 08.0**	**-0.2**
FX1				Sn	**Sn**	**16 58 14.7**	**+10**
FX1				LR	LR	16 59 06.3	
OKFG	**Magazine Ridge**	**7.17**	**68**	P	**Pn**	**16 57 38.7**	**+1.5**
OKFG				S	**Sn**	**16 59 02.7**	**+5.5**
SPIA	**Saint Paul Isl**	**7.85**	**38**	P	**Pn**	**16 57 49.5**	**+3.0**
UNV	**Unalaska Valle**	**8.08**	**67**	P	**Pn**	**16 57 50.1**	**+0.3**
UNV				S	**Sn**	**16 59 23.0**	**+3.4**
AKGG	**Akutan Green G**	**8.46**	**65**	P	**Pn**	**16 57 56.6**	**+1.7**
AKUT	**Akutan**	**8.57**	**65**	*e*Pn	**Pn**	**16 57 51.1**	**-5.3**
FALS	**False Pass**	**10.08**	**63**	P	**Pn**	**16 58 17.1**	**+0.1**
SDPT	**Sand Point**	**11.84**	**63**	*e*P	**Pn**	**16 58 39.3**	**-1.7**
	32nm,0.3s						
CHGN	**Chignik**	**13.19**	**60**	*e*P	**Pn**	**16 58 58.3**	**-1.1**
PET	**Petropavlovsk**	**13.78**	**286**	*e*P	**Pn**	**16 59 07.8**	**+0.3**
PET				*e*S	**Sn**	**17 01 42.8**	**+4.0**
PET				pmax	pmax		
	comp=Z,700nm,4.8s						
PET				pmax	pmax		
	comp=Z,50nm,1.6s						
PET				MLR	MLR		
	comp=Z,800nm,17.0s						
PET	**Petropavlovsk**	**13.78**	**286**	*e*Pn	**Pn**	**16 59 10.1**	**+2.6**
PEA0B	**Petropavlovsk-**	**14.35**	**286**	*e*Pn	**Pn**	**16 59 19.4**	**+4.2**
PETK	**Petropavlovsk-**	**14.35**	**286**	Pn	**Pn**	**16 59 14.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=91,slow=14,SNR=4.5						
OHAK	**Old Harbor**	**16.14**	**58**	*e*Pn	**Pn**	**16 59 33.9**	**-4.5**
SVW2	**Sparrevohn**	**16.26**	**44**	*e*Pn	**Pn**	**16 59 42.2**	**+2.4**
KDAK	**Kodiak Island**	**16.62**	**57**	Pn	**Pn**	**16 59 40.0**	**-4.4**
	comp=Z,275nm,0.4s,SNR=23						
KDAK	**Kodiak Island**	**16.62**	**57**	Pn	**Pn**	**16 59 41.5**	**-2.9**
	comp=Z,4.0nm,0.3s,baz=262,slow=8.5,SNR=36						
KDAK				Sn	**Sn**	**17 02 46.6**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=130,slow=23,SNR=6.2						
KDAK	**Kodiak Island**	**16.62**	**57**	*e*P	**Pn**	**16 59 40.1**	**-4.3**
KDAK				pmax	pmax		
	comp=Z,20nm,0.4s						
KDAK	**Kodiak Island**	**16.62**	**57**	*e*Pn	**Pn**	**16 59 40.1**	**-4.3**
	comp=Z,20nm,0.4s						
RSO	**Redoubt South**	**17.28**	**48**	*e*Pn	**Pn**	**16 59 54.5**	**+1.9**
BILL	**Bilibino**	**18.27**	**342**	*e*P	**Pn**	**17 00 06.5**	**+1.9**
BILL				*e*S	**S**	**17 03 29.2**	**-1.2**
BILL				pmax	pmax		
	comp=Z,56nm,1.4s						
BILL				MLR	MLR		
	comp=Z,700nm,17.0s						
BILL	**Bilibino**	**18.27**	**342**	*e*Pn	**Pn**	**17 00 06.0**	**+1.3**
	comp=Z,47nm,0.9s						
SEY	**Seymchan**	**19.20**	**318**	*e*P	**Pn**	**17 00 16.2**	**+0.3**
PMR	**Palmer**	**19.32**	**46**	*e*P	**Pn**	**17 00 14.8**	**-2.5**
PMR				pmax	pmax		
	comp=Z,11nm,0.6s						
PMR	**Palmer**	**19.32**	**46**	*e*Pn	**Pn**	**17 00 14.8**	**-2.5**
	comp=Z,11nm,0.6s						
COLA	**College**	**21.10**	**38**	*e*P	**P**	**17 00 35.1**	**+0.1**
COLA	**College**	**21.10**	**38**	*e*Pn	**P**	**17 00 33.8**	**-1.2**
	comp=Z,58nm,0.8s,mb5.0						
MENT	**Mentasta**	**22.14**	**45**	*e*Pn	**P**	**17 00 46.0**	**-0.1**
EGAK	**Eagle**	**23.74**	**41**	*e*Pn	**P**	**17 01 00.6**	**-1.7**
	comp=Z,80nm,0.9s,mb5.2						
DAWY	**Dawson**	**24.30**	**43**	*e*Pn	**P**	**17 01 06.1**	**-1.3**
YSS	**Yuzh-Sakhalins**	**25.16**	**275**	*e*P	**P**	**17 01 15.0**	**-0.4**
YSS				*e*	pP	17 01 26.2	-1.9
YSS				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.3						
YSS	**Yuzh-Sakhalins**	**25.16**	**275**	*e*P	**P**	**17 01 16.1**	**+0.6**
	comp=Z,89nm,1.0s,mb5.2						
ASAJ	**Asahikawa**	**26.53**	**269**	P	**P**	**17 01 27.4**	**-0.5**
	comp=Z,49nm,1.1s,mb4.9,baz=54,slow=5.9,SNR=7.7						
ASAJ	**Asahikawa**	**26.53**	**269**	P	**P**	**17 01 27.4**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,49nm,1.1s						
ERM	**Erimo**	**27.27**	**265**	*e*P	**P**	**17 01 35.0**	**+0.5**
ERM				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.7						
ERM	**Erimo**	**27.27**	**265**	P	**P**	**17 01 36.1**	**+1.6**
INK	**Inuvik**	**27.64**	**35**	P	**P**	**17 01 37.1**	**-0.4**
	comp=Z,13nm,0.8s,mb4.6,baz=250,slow=14,SNR=18						
INK				PcP	PcP	17 04 53.1	-0.3
	comp=Z,2.1nm,0.5s,baz=258,slow=1.2,SNR=3.5						
INK	**Inuvik**	**27.64**	**35**	*e*P	**P**	**17 01 36.5**	**-1.1**
INK				*e*		17 04 52.7	
INK				pmax	pmax		
	comp=Z,22nm,1.0s						
INK	**Inuvik**	**27.64**	**35**	*e*P	**P**	**17 01 36.5**	**-1.1**
	comp=Z,22nm,1.0s,mb4.8						
INK				*e*PcP	PcP	17 04 52.7	-0.8
DLBC	**Dease Lake**	**28.56**	**56**	P	**P**	**17 01 46.2**	**+0.4**
HABR	**Khabarovsk**	**29.33**	**283**	*de*P	**P**	**17 01 49.2**	**-3.6**
HABR				*e**PP	pP	17 02 09.2	+3.6
HABR				*e*		17 02 48.1	
HABR				*e*		17 04 52.7	
HABR				*e*S	**S**	**17 06 38.6**	**-3.8**
HABR				*e*SS	SS	17 08 16.7	-31
HABR						17 12 22.9	
HABR				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.9						
HABR				pmax	pmax		
	comp=E,21nm,1.0s						
HABR				pmax	pmax		
	comp=N,17nm,1.4s						
HABR				MLR	MLR		
	comp=Z,107nm,15.0s,MS3.6						
YAK	**Yakutsk**	**29.35**	**311**	*e*P	**P**	**17 01 51.4**	**-1.5**
YAK				*e*		17 08 39.7	
YAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,352nm,20.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,173nm,24.0s,MS4.0						
YAK				MLR	MLR		
	comp=E,345nm,22.0s,MS4.0						
YAK	**Yakutsk**	**29.35**	**311**	*e*P	**P**	**17 01 50.8**	**-2.1**
	comp=E,20nm,1.1s,mb4.8						
TIXI	**Tiksi**	**30.64**	**331**	*e*P	**P**	**17 02 05.3**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
TIXI	**Tiksi**	**30.64**	**331**	P	**P**	**17 02 05.7**	**+1.6**
	comp=Z,4.0nm,1.1s,mb4.2						
KLR	**Kul'dur**	**31.04**	**286**	⇓*i*P	**P**	**17 02 03.8**	**-4.1**
KLR				pmax	pmax		
	comp=E,73nm,1.2s						
KLR				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.5						
MJAR	**Matsushiro Arr**	**33.60**	**261**	P	**P**	**17 02 30.0**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.3,baz=47,slow=7.0,SNR=8.3						
MJAR				LR	LR	17 15 45.1	
	comp=Z,215nm,19.1s,MS3.9,baz=65,slow=36						
MAJO	**Matsushiro**	**33.60**	**261**	*e*P	**P**	**17 02 28.7**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
MAJO	**Matsushiro**	**33.60**	**261**	*e*P	**P**	**17 02 28.7**	**-1.8**
	comp=Z,21nm,1.1s,mb5.0						
MAT	**Matsushiro**	**33.60**	**261**	P	**P**	**17 02 30.0**	**-0.4**
MDJ	**Mudanjiang**	**34.42**	**279**	P	**P**	**17 02 35.6**	**-1.9**
MDJ				PP	PP	17 03 52.8	-3.1
MDJ				PCP	PcP	17 05 12.6	+0.7
MDJ				S	**S**	**17 08 02.0**	**+0.2**
MDJ				PCS	PcS	17 08 58.8	+0.6
MDJ				SCS	ScS	17 13 00.0	+4.7
MDJ				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,94nm,3.2s						
MDJ				LR	LR		
	comp=N,141nm,9.4s						
MDJ				LR	LR		
	comp=E,206nm,16.1s						
MDJ				LR	LR		
	comp=Z,283nm,13.0s,MS4.2						
MDJ	**Mudanjiang**	**34.42**	**279**	*e*P	**P**	**17 02 35.6**	**-1.8**
	comp=Z,18nm,1.0s,mb5.0						
YKA	**Yellowknife Ar**	**35.43**	**46**	P	**P**	**17 02 45.0**	**-0.9**
	comp=Z,22nm,0.9s,mb5.1,baz=282,slow=8.2,SNR=137						
YKA				PcP	PcP	17 05 14.8	+0.3
	comp=Z,2.4nm,0.7s,baz=290,slow=3.1,SNR=8.7						
YKA				ScP	ScP	17 08 59.1	+3.1
	comp=Z,1.5nm,0.8s,baz=288,slow=3.3,SNR=5.1						
YKA				LR	LR	17 19 13.4	
	comp=Z,288nm,18.8s,MS4.1,baz=260,slow=40						
YKA	**Yellowknife Ar**	**35.43**	**46**	P	**P**	**17 02 45.0**	**-0.9**
YKA						17 05 14.9	
YKA	**Yellowknife Ar**	**35.43**	**46**	P	**P**	**17 02 45.0**	**-0.9**
YKA				PcP	PcP	17 05 14.8	+0.3
YKA				ScP	ScP	17 08 59.1	+3.1
YKA				LR	LR	17 19 13.4	
NLWA	**Neilton Lookou**	**35.47**	**74**	⇑P	**P**	**17 02 47.5**	**+1.0**
	baz=35						
VDB	**Vedder Mountai**	**35.79**	**71**	P	**P**	**17 02 49.9**	**+0.6**
A05A	**Maple Falls**	**35.82**	**71**	⇓P	**P**	**17 02 49.6**	**+0.2**
	baz=36						
A06A	**Chilliwack**	**36.13**	**70**	⇓P	**P**	**17 02 52.4**	**+0.3**
	baz=36						
B05A	**Bryant**	**36.13**	**72**	⇑P	**P**	**17 02 53.0**	**+0.8**
	baz=36						
C05A	**Tolt Reservoir**	**36.64**	**72**	⇓P	**P**	**17 02 56.9**	**+0.5**
	baz=36						
FL2	**Flat Top 2**	**36.95**	**75**	P	**P**	**17 03 00.1**	**+1.0**
LON	**Longmire**	**37.01**	**74**	*e*P	**P**	**17 02 59.8**	**+0.2**
LON				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
LON	**Longmire**	**37.01**	**74**	*e*P	**P**	**17 02 59.8**	**+0.1**
	comp=Z,13nm,0.7s,mb4.9						
F04A	**Amboy**	**37.04**	**75**	⇓P	**P**	**17 03 00.5**	**+0.6**
	baz=37						
B07A	**Winthrop**	**37.22**	**71**	⇓P	**P**	**17 03 01.7**	**+0.3**
	baz=37,SNR=10						
CN2	**Changchun**	**37.40**	**281**	⇑P	**P**	**17 03 01.8**	**-1.1**
CN2				*e*AP	pP	17 03 06.1	-10
CN2				*e*S	**S**	**17 08 49.8**	**+2.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=Z,300nm,16.0s,MS4.2						
A08A	**Turner Farm, O**	**37.50**	**69**	⇓P	**P**	**17 03 03.6**	**-0.1**
	baz=37,SNR=11						
C07A	**Waterville**	**37.61**	**72**	⇓P	**P**	**17 03 04.5**	**-0.2**
	baz=37,SNR=5.5						
F05A	**White Salmon**	**37.65**	**75**	⇑P	**P**	**17 03 05.9**	**+0.9**
	baz=38						
WTV	**Waterville**	**37.67**	**72**	P	**P**	**17 03 05.6**	**+0.3**
EBG	**Ellensburg**	**37.68**	**73**	P	**P**	**17 03 06.1**	**+0.8**
B08A	**Colville Reser**	**37.73**	**70**	⇓P	**P**	**17 03 05.9**	**+0.2**
	baz=38,SNR=13						
H04A	**Detroit Lake**	**37.81**	**77**	⇓P	**P**	**17 03 07.1**	**+0.7**
	baz=38						
A09A	**Danville**	**37.89**	**69**	⇓P	**P**	**17 03 07.2**	**+0.1**
	baz=38,SNR=8.2						
BOD	**Bodaibo**	**37.90**	**307**	*e*P	**P**	**17 03 06.1**	**-0.9**
D07A	**Quincy**	**37.90**	**72**	⇑P	**P**	**17 03 06.9**	**-0.3**
	baz=38						
G05A	**Wamic**	**38.05**	**76**	⇓P	**P**	**17 03 08.7**	**+0.3**
	baz=38						
F06A	**Goldendale**	**38.12**	**75**	⇑P	**P**	**17 03 09.2**	**+0.2**
	baz=38						
HIA	**Hailar**	**38.16**	**292**	*e*P	**P**	**17 03 08.3**	**-1.0**
HIA				pmax	pmax		
	comp=Z,39nm,0.9s						
HIA	**Hailar**	**38.16**	**292**	*e*P	**P**	**17 03 08.3**	**-1.1**
	comp=Z,39nm,0.9s,mb5.1						
C08A	**Higginbotham F**	**38.17**	**71**	⇑P	**P**	**17 03 09.5**	**0.0**
	baz=38						
E07A	**Sunnyside**	**38.28**	**73**	⇑P	**P**	**17 03 10.4**	**+0.1**
	baz=38						
B09A	**Rice**	**38.40**	**70**	⇓P	**P**	**17 03 11.2**	**-0.1**
	baz=38,SNR=11						
HAWA	**Hanford**	**38.56**	**73**	*e*P	**P**	**17 03 12.9**	**+0.2**
	comp=Z,22nm,0.6s,mb5.1						
HAWA				*e*PP	PP	17 04 28.4	-13
OD2	**Odessa Site #2**	**38.56**	**71**	P	**P**	**17 03 12.9**	**+0.2**
F07A	**Phinny Hill Vi**	**38.57**	**74**	⇓P	**P**	**17 03 13.1**	**+0.3**
	baz=38						
D08A	**Wollman Farm,**	**38.60**	**72**	⇑P	**P**	**17 03 12.8**	**-0.2**
	baz=38,SNR=8.7						
C09A	**Chrisman Ranch**	**38.62**	**71**	⇓P	**P**	**17 03 13.0**	**-0.2**
	baz=38,SNR=6.1						
I05A	**Bend**	**38.64**	**77**	⇓P	**P**	**17 03 13.8**	**+0.4**
	baz=38						
E08A	**Dider Farm, El**	**38.79**	**73**	⇑P	**P**	**17 03 14.8**	**+0.2**
	baz=39						
D09A	**Jones Farm, Ri**	**38.96**	**72**	⇑P	**P**	**17 03 16.3**	**+0.3**
	baz=39						
EDM	**Edmonton**	**39.01**	**61**	*e*P	**P**	**17 03 15.5**	**-0.9**
G07A	**Ruggs Ranch, H**	**39.04**	**75**	⇑P	**P**	**17 03 17.2**	**+0.5**
	baz=39						
YBH	**Yreka Blue Hor**	**39.07**	**81**	P	**P**	**17 03 20.4**	**+3.4**
	comp=Z,7.7nm,0.9s,mb4.5,baz=290,slow=7.9,SNR=8.2						
YBH				LR	LR	17 15 52.1	
	comp=Z,314nm,19.7s,MS4.1,baz=303,slow=31						
NEW	**Newport**	**39.08**	**69**	*e*P	**P**	**17 03 16.7**	**-0.3**
NEW				pmax	pmax		
	comp=Z,25nm,1.0s						
NEW	**Newport**	**39.08**	**69**	*e*P	**P**	**17 03 16.7**	**-0.3**
	comp=Z,25nm,1.0s,mb4.9						
F08A	**Pendleton**	**39.31**	**74**	⇓P	**P**	**17 03 19.3**	**+0.3**
	baz=39						
E09A	**Wood Farm, Sta**	**39.33**	**72**	⇑P	**P**	**17 03 19.2**	**+0.1**
	baz=39,SNR=5.1						
B11A	**Sandpoint**	**39.44**	**69**	⇑P	**P**	**17 03 20.1**	**+0.1**
	baz=39						
G08A	**Pilot Rock**	**39.46**	**74**	⇑P	**P**	**17 03 20.6**	**+0.3**
	baz=39,SNR=6.4						
KSRS	**Korea Array**	**39.47**	**271**	P	**P**	**17 03 20.6**	**+0.2**
	comp=Z,12nm,0.8s,mb4.7,baz=56,slow=8.6,SNR=34						
KSRS				PcP	PcP	17 05 25.4	-1.9
	comp=Z,2.2nm,1.0s,baz=96,slow=2.5,SNR=4.8						
KSRS				LR	LR	17 19 06.3	
	comp=Z,85nm,18.3s,MS3.6,baz=226,slow=35						
KSRS	**Korea Array**	**39.47**	**271**	P	**P**	**17 03 20.6**	**+0.2**
KSRS						17 05 25.4	
KSRS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
KSRS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
KSRS				MLR	MLR		
	comp=Z,85nm,18.3s,MS3.6						
D10A	**Wagner Farm, O**	**39.58**	**71**	⇓P	**P**	**17 03 20.6**	**-0.6**
	baz=39,SNR=6.5						
SNY	**Shenyang**	**39.62**	**279**	⇓P	**P**	**17 03 22.0**	**+0.4**
SNY				AMB	AMB		
	comp=Z,35nm,1.1s,mb5.0						
SNY				AMB	AMB		
	comp=Z,107nm,5.7s						
SNY				LR	LR		
	comp=N,246nm,19.6s,MS4.2						
SNY				LR	LR		
	comp=E,251nm,22.8s,MS4.2						
SNY				LR	LR		
	comp=Z,251nm,22.2s,MS4.0						
I07A	**Izee**	**39.76**	**76**	⇓P	**P**	**17 03 23.0**	**+0.3**
	baz=40						
F09A	**S2 Ranch, Elgi**	**39.88**	**73**	⇓P	**P**	**17 03 23.7**	**-0.1**
	baz=40,SNR=10						
RES	**Resolute Bay**	**39.91**	**24**	P	**P**	**17 03 23.3**	**-0.3**
	comp=Z,3.7nm,1.0s,mb4.1,baz=254,slow=9.1,SNR=5.9						
RES				PcP	PcP	17 05 26.5	-1.6
	comp=Z,3.1nm,0.7s,baz=316,slow=4.1,SNR=6.1						
RES	**Resolute Bay**	**39.91**	**24**	P	**P**	**17 03 23.3**	**-0.3**
RES						17 05 26.5	
RES				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
RES	**Resolute Bay**	**39.91**	**24**	*e*P	**P**	**17 03 22.9**	**-0.7**
	comp=Z,4.0nm,1.0s,mb4.1						
H08A	**Prairie City**	**40.04**	**75**	⇑P	**P**	**17 03 25.0**	**0.0**
	baz=40						
D11A	**Klaveano Farm,**	**40.14**	**71**	⇑P	**P**	**17 03 25.4**	**-0.5**
	baz=40,SNR=6.0						
F10A	**Beach Ranch, E**	**40.15**	**72**	⇑P	**P**	**17 03 25.6**	**-0.3**
	baz=40						
G09A	**Cove**	**40.18**	**74**	⇓P	**P**	**17 03 25.9**	**-0.3**
	baz=40,SNR=11						
C12B	**Naegeli Ranch,**	**40.32**	**69**	⇑P	**P**	**17 03 26.9**	**-0.4**
	baz=40,SNR=11						
CIT	**Chita**	**40.44**	**298**	*e*P	**P**	**17 03 28.5**	**+0.2**
CIT				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.6						
MOD	**Modoc**	**40.46**	**80**	*e*P	**P**	**17 03 28.5**	**-0.1**
	comp=Z,9.3nm,0.7s,mb4.6						
E11A	**Bogner Ranch,**	**40.56**	**71**	⇓P	**P**	**17 03 28.8**	**-0.6**
	baz=40						
G10A	**Bishop Farm, J**	**40.57**	**73**	⇑P	**P**	**17 03 29.4**	**-0.1**
	baz=40,SNR=28						
WALA	**Waterton Lakes**	**40.57**	**67**	*e*P	**P**	**17 03 28.9**	**-0.4**
	comp=Z,1.2nm,1.1s						
H09A	**Durkee**	**40.57**	**74**	⇑P	**P**	**17 03 29.5**	**+0.1**
	baz=40,SNR=7.2						
B13A	**Whitefish**	**40.58**	**68**	⇓P	**P**	**17 03 28.8**	**-0.7**
	baz=40,SNR=7.9						
K07A	**Rock Creek Ran**	**40.67**	**78**	⇑P	**P**	**17 03 30.9**	**+0.6**
	baz=40,SNR=9.0						
J08A	**Circle Bar Ran**	**40.78**	**77**	⇑P	**P**	**17 03 31.2**	**0.0**
	baz=41						
F11A	**Grangeville**	**40.84**	**72**	⇓P	**P**	**17 03 31.3**	**-0.3**
	baz=41						
C13A	**Hot Springs**	**40.86**	**69**	⇑P	**P**	**17 03 31.4**	**-0.4**
	baz=41,SNR=11						
A14A	**Double T Ranch**	**40.89**	**66**	⇑P	**P**	**17 03 32.1**	**0.0**
	baz=41,SNR=37						
I09A	**Lost Marbles R**	**40.89**	**75**	⇓P	**P**	**17 03 32.4**	**+0.2**
	baz=41						
L07A	**Adell**	**40.99**	**79**	⇑P	**P**	**17 03 33.4**	**+0.5**
	baz=41						
K08A	**Mann Creek Ran**	**41.12**	**77**	⇓P	**P**	**17 03 33.8**	**-0.2**
	baz=41						
H10A	**Noah's Angus R**	**41.16**	**74**	⇑P	**P**	**17 03 34.5**	**+0.2**
	baz=41,SNR=18						
WVOR	**Wild Horse Val**	**41.19**	**78**	*e*P	**P**	**17 03 34.6**	**0.0**
WVOR				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.9						
WVOR	**Wild Horse Val**	**41.19**	**78**	*e*P	**P**	**17 03 34.5**	**0.0**
	comp=Z,32nm,1.0s,mb4.9						
D13A	**Huson**	**41.22**	**70**	⇑P	**P**	**17 03 34.5**	**-0.3**
	baz=41,SNR=10						
B14A	**Marquette Ranc**	**41.28**	**67**	⇓P	**P**	**17 03 34.9**	**-0.3**
	baz=41,SNR=19						
A15A	**Johnson Ranch,**	**41.29**	**66**	⇓P	**P**	**17 03 34.2**	**-1.1**
	baz=41,SNR=16						
I10A	**Payette**	**41.40**	**75**	⇑P	**P**	**17 03 37.1**	**+0.8**
	baz=41						
H11A	**Donnelly**	**41.55**	**73**	⇓P	**P**	**17 03 37.5**	**+0.1**
	baz=41						
MSO	**Missoula**	**41.66**	**70**	*e*P	**P**	**17 03 37.9**	**-0.5**
	comp=Z,21nm,1.0s,mb4.7						
B15A	**Bradely Ranch,**	**41.72**	**67**	⇓P	**P**	**17 03 38.5**	**-0.3**
	baz=42,SNR=29						
E13A	**Victor**	**41.72**	**70**	⇓P	**P**	**17 03 38.5**	**-0.4**
	baz=42						
D14A	**Greenough**	**41.79**	**69**	⇑P	**P**	**17 03 38.9**	**-0.5**
	baz=42,SNR=24						
M08A	**Happy Creek Ra**	**41.91**	**79**	⇓P	**P**	**17 03 41.5**	**+1.1**
	baz=42						
A16A	**West Butte Ran**	**41.95**	**66**	⇓P	**P**	**17 03 40.3**	**-0.5**
	baz=42,SNR=20						
C15A	**Salmond Ranch,**	**41.96**	**68**	⇑P	**P**	**17 03 41.1**	**+0.3**
	baz=42,SNR=50						
F13A	**Darby**	**41.98**	**71**	⇑P	**P**	**17 03 40.7**	**-0.2**
	baz=42,SNR=13						
K10A	**MacKenzie Ranc**	**42.08**	**76**	⇓P	**P**	**17 03 42.2**	**+0.4**
	baz=42,SNR=9.1						
E14A	**Clinton**	**42.14**	**70**	⇓P	**P**	**17 03

comp=Z,6.9nm,0.7s,mb4.5
DLMT Dillon 43.23 71 *e*P **P 17 03 50.4 -0.8**
comp=Z,7.4nm,0.9s,mb4.4
B18A Beardsley Farm 43.27 65 ⇓P **P 17 03 51.3 -0.1**
baz=43,SNR=19
K12A Draper Farm, C 43.36 75 ⇑P **P 17 03 52.3 +0.1**
baz=43,SNR=15
J13A Cove Ranch, Pi 43.37 74 ⇑P **P 17 03 52.5 +0.2**
baz=43,SNR=26
D17A Six Diamond Ra 43.40 67 ⇓P **P 17 03 52.3 -0.2**
baz=43,SNR=17
G15A Dillon 43.40 71 ⇑P **P 17 03 52.3 -0.2**
baz=43,SNR=5.8
EGMT Eagleton 43.48 66 ⇓P **P 17 03 52.9 -0.2**
baz=43
EGMT Eagleton 43.48 66 *e*P **P 17 03 52.2 -0.9**
comp=Z,32nm,0.9s,mb5.0
M11A Holland Ranch, 43.51 77 ⇓P **P 17 03 53.6 +0.2**
baz=43
I14A Mackay 43.51 73 ⇑P **P 17 03 54.0 +0.5**
baz=43,SNR=22
L12A House Creek Ra 43.57 76 ⇓P **P 17 03 54.3 +0.4**
baz=43
F16A Kennard Place, 43.58 70 ⇑P **P 17 03 54.2 +0.2**
baz=43,SNR=11
H15A Lima 43.61 72 ⇑P **P 17 03 54.4 +0.1**
baz=43
BOZ Bozeman (W) 43.65 70 ⇓P **P 17 03 54.6 +0.1**
baz=44
BOZ Bozeman (W) 43.65 70 *e*P **P 17 03 54.2 -0.3**
BOZ pmax pmax
comp=Z,12nm,0.8s,mb4.7
BOZ Bozeman (W) 43.65 70 *e*P **P 17 03 54.2 -0.3**
comp=Z,12nm,0.8s,mb4.7
E17A Martinsdale 43.66 68 ⇓P **P 17 03 54.7 +0.1**
baz=44,SNR=13
NVAR Mina Array Bea 43.74 82 P **P 17 03 54.0 -1.3**
comp=Z,6.3nm,0.9s,mb4.4,baz=298,slow=5.4,SNR=15
J14A Carey 43.81 74 ⇓P **P 17 03 56.1 +0.3**
baz=44,SNR=15
D18A Linhart Farms, 43.89 67 ⇑P **P 17 03 56.7 +0.3**
baz=44,SNR=11
M12A Wells 44.05 77 ⇓P **P 17 03 58.3 +0.5**
baz=44
F17A Fitzpatrick Pl 44.08 69 ⇑P **P 17 03 57.9 0.0**
baz=44,SNR=9.6
E18A Harlowton 44.16 68 ⇓P **P 17 03 59.1 +0.6**
baz=44,SNR=28
ELK Elko 44.25 78 P **P 17 03 59.6 +0.2**
comp=Z,4.8nm,0.7s,mb4.3,baz=311,slow=8.2,SNR=13
ELK Elko 44.25 78 *e*P **P 17 03 59.6 +0.2**
ELK pmax pmax
comp=Z,11nm,0.8s
ELK Elko 44.25 78 *e*P **P 17 03 59.6 +0.2**
comp=Z,10nm,0.8s,mb4.6
N12A Clover Valley, 44.31 78 ⇓P **P 17 04 00.4 +0.5**
baz=44,SNR=9.5
G17A Pierce Place, 44.35 70 ⇑P **P 17 04 00.4 +0.2**
baz=44,SNR=6.0
H16A Russell Place, 44.39 71 ⇓P **P 17 04 00.6 +0.1**
baz=44,SNR=11
J15A Blackfoot 44.42 73 ⇓P **P 17 04 01.4 +0.7**
baz=44
K14A Jones Ranch, D 44.46 74 ⇓P **P 17 04 01.2 +0.2**
baz=44
M13A Montello 44.54 76 ⇑P **P 17 04 02.2 +0.5**
baz=44,SNR=9.4
R09A Tonopah 44.62 82 ⇓P **P 17 04 03.2 +0.8**
baz=44,SNR=5.7
TPH Tonopah 44.63 82 *e*P **P 17 04 05.2 +2.8**
TPH pmax pmax
comp=Z,12nm,0.8s,mb4.8
TPH Tonopah 44.63 82 *e*P **P 17 04 05.2 +2.8**
comp=Z,12nm,0.8s,mb4.8
F18A Big Timber 44.63 68 ⇓P **P 17 04 02.8 +0.4**
baz=44,SNR=10
Q10A Clear Creek Ra 44.68 81 ⇓P **P 17 04 03.5 +0.6**
baz=44
I16A Newdale 44.72 72 ⇓P **P 17 04 03.1 0.0**
baz=44,SNR=6.7
O12A Currie 44.83 78 ⇑P **P 17 04 04.6 +0.6**
baz=45,SNR=17
S09A Goldfield 44.84 83 ⇓P **P 17 04 05.5 +1.3**
baz=45,SNR=5.3
M14A Sheep Mountain 44.96 76 ⇓P **P 17 04 05.4 +0.4**
baz=45
H17A Grant Village 44.97 71 ⇓P **P 17 04 05.7 +0.6**
baz=45
PKM Peak Mountain 45.00 88 ⇑P **P 17 04 06.4 +0.9**
baz=45
IMW Indian Meadow 45.03 72 *e*P **P 17 04 06.3 +0.8**
comp=Z,12nm,0.9s,mb4.7
G18A Lazy EL Ranch, 45.05 69 ⇑P **P 17 04 05.9 +0.2**
baz=45
R10A Warm Springs 45.07 81 ⇓P **P 17 04 06.5 +0.5**
baz=45
S10A Tonopah Range, 45.11 82 ⇓P **P 17 04 06.3 +0.1**
baz=45,SNR=5.8
RRI2 Red Ridge 45.12 72 *e*P **P 17 04 06.7 +0.5**
comp=Z,15nm,0.9s,mb4.8
Q11A Duckwater 45.13 80 ⇓P **P 17 04 06.8 +0.4**
baz=45
P12A McGill 45.21 79 ⇓P **P 17 04 07.4 +0.3**
baz=45,SNR=7.8
BJI Beijing 45.23 282 P **P 17 04 07.3 +0.1**
BJI PP PP 17 05 52.4 -1.0
BJI S **S 17 10 47.8 +4.3**
BJI AMB AMB
comp=Z,21nm,1.2s,mb4.8
BJI LR LR
comp=N,174nm,21.3s,MS4.2
BJI LR LR
comp=E,305nm,25.9s,MS4.2
BJI LR LR
comp=Z,156nm,22.6s,MS3.9
I17A Pilgram Creek 45.23 71 ⇑P **P 17 04 07.7 +0.5**
baz=45
L15A Malad City 45.25 75 ⇑P **P 17 04 07.7 +0.3**
baz=45,SNR=9.6
K16A Soda Springs 45.25 73 ⇑P **P 17 04 08.5 +1.2**
baz=45,SNR=22
TPAW Teton Pass 45.26 72 *e*P **P 17 04 07.8 +0.4**
comp=Z,8.2nm,0.8s,mb4.6
RLMT Red Lodge 45.33 69 ⇑P **P 17 04 08.2 +0.3**
baz=45
RLMT Red Lodge 45.33 69 *e*P **P 17 04 07.5 -0.4**
comp=Z,62nm,1.1s,mb5.3
IRK Irkutsk 45.35 303 *e*P **P 17 04 07.1 -0.9**
IRK pmax pmax
comp=Z,42nm,1.1s,mb5.2
ISA Isabella 45.35 86 P **P 17 04 06.3 -1.9**
ISA pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
ISA Isabella 45.35 86 P **P 17 04 06.3 -1.9**
comp=Z,3.5nm,0.7s,mb4.3
REDW Red Top Meadow 45.39 72 *e*P **P 17 04 08.3 -0.1**
comp=Z,10nm,1.1s,mb4.6
LOHW Long Hollow 45.39 72 *e*P **P 17 04 08.4 0.0**
comp=Z,4.4nm,0.6s,mb4.5
N14A Grayback Hills 45.44 76 ⇑P **P 17 04 09.2 +0.4**
baz=45
J17A Brown Place, J 45.47 72 ⇓P **P 17 04 09.1 0.0**
baz=45
R11A Troy Canyon, C 45.48 81 ⇑P **P 17 04 09.1 -0.1**
baz=45,SNR=10
AHID Auburn Hatcher 45.58 73 *e*P **P 17 04 10.2 +0.2**
comp=Z,22nm,0.9s,mb5.1
K17A Gardner Place, 45.70 73 ⇑P **P 17 04 11.2 +0.3**
baz=46
P13A Bates Ranch, G 45.77 78 ⇓P **P 17 04 11.8 +0.3**
baz=46,SNR=15
L16A Fish Haven 45.82 74 ⇓P **P 17 04 12.3 +0.5**
baz=46
N15A Stansbury Isla 45.82 76 ⇓P **P 17 04 12.3 +0.4**
baz=46
TPNV Topopah Spring 45.93 83 ⇑P **P 17 04 13.1 +0.3**
baz=46
TPNV Topopah Spring 45.93 83 *e*P **P 17 04 12.9 +0.1**
TPNV pmax pmax
comp=Z,16nm,0.8s,mb5.0
TPNV Topopah Spring 45.93 83 *e*P **P 17 04 12.9 +0.1**
comp=Z,16nm,0.8s,mb5.0
J18A Kendall Valley 45.97 72 ⇓P **P 17 04 12.9 -0.1**
baz=46,SNR=20
TLY Talaya 45.97 302 P **P 17 04 13.3 +0.4**
comp=Z,170nm,0.7s,mb6.1,SNR=7.3
TLY Talaya 45.97 302 *e*P **P 17 04 13.3 +0.4**
TLY pmax pmax
comp=Z,23nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,314nm,21.0s,MS4.2
TLY Talaya 45.97 302 *e*P **P 17 04 13.1 +0.2**
comp=Z,29nm,1.0s,mb5.2
DUG Dugway 46.06 77 ⇓P **P 17 04 14.3 +0.5**
baz=46
DUG Dugway 46.06 77 *e*P **P 17 04 14.2 +0.4**
DUG pmax pmax
comp=Z,44nm,1.1s,mb5.3
DUG Dugway 46.06 77 *e*P **P 17 04 14.2 +0.4**
comp=Z,44nm,1.1s,mb5.3
R12A Pony Springs, 46.09 80 ⇑P **P 17 04 14.0 0.0**
baz=46
L17A Cokeville 46.11 74 ⇑P **P 17 04 14.3 +0.2**
baz=46
M16A Huntsville 46.11 75 ⇓P **P 17 04 14.4 +0.2**
baz=46
ULN Ulaanbaatar 46.15 296 *e*P **P 17 04 14.7 +0.4**
ULN pmax pmax
comp=Z,42nm,1.1s,mb5.3
ULN Ulaanbaatar 46.15 296 *e*P **P 17 04 14.7 +0.3**
comp=Z,42nm,1.1s,mb5.3
FCC Fort Churchill 46.16 46 *e*P **P 17 04 12.8 -1.5**
FCC *e*PcP PcP 17 05 48.4 -1.0
comp=Z,0.2nm,0.9s
P14A Drum Mountains 46.27 78 ⇑P **P 17 04 15.6 +0.2**
baz=46
K18A Toltan Ranch, 46.29 72 ⇓P **P 17 04 15.6 0.0**
baz=46,SNR=19
T11A Corn Creek, Al 46.39 82 ⇓P **P 17 04 16.2 -0.2**
baz=46,SNR=11
BW06 Boulder Array 46.51 72 ⇑P **P 17 04 17.5 +0.3**
baz=46
BW06 Boulder Array 46.51 72 *e*P **P 17 04 16.9 -0.3**
comp=Z,40nm,0.8s,mb5.4
PDAR Pine Array 46.51 72 P **P 17 04 17.0 -0.2**
comp=Z,39nm,0.8s,mb5.4,baz=314,slow=2.9,SNR=137
PDAR ScP ScP 17 09 44.8 +4.9
comp=Z,0.6nm,0.9s,baz=90,slow=1.5,SNR=3.8
PDAR LR LR 17 20 27.1
comp=Z,201nm,21.5s,MS4.0,baz=304,slow=32
Q14A Sevier Lake (B 46.51 78 ⇓P **P 17 04 17.6 +0.3**
baz=46,SNR=23
SONM Songino Array 46.54 297 P **P 17 04 17.8 +0.4**
comp=Z,18nm,0.9s,mb5.0,baz=63,slow=9.1,SNR=103
SONM ScP ScP 17 09 43.5 +3.5
comp=Z,1.3nm,0.8s,baz=32,slow=4.8,SNR=5.2
SONM LR LR 17 25 07.1
comp=Z,551nm,19.1s,MS4.5,baz=51,slow=38
M17A Scullys Gap (B 46.60 74 ⇓P **P 17 04 18.3 +0.3**
baz=46,SNR=8.6
L18A Fontenelle, Gr 46.71 73 ⇑P **P 17 04 18.7 -0.2**
baz=46,SNR=15
P15A Leamington 46.77 77 ⇑P **P 17 04 19.6 +0.3**
baz=47,SNR=5.9
N17A Moffit Pass 46.82 75 ⇓P **P 17 04 19.9 +0.2**
baz=47,SNR=8.4
O16A Springville 46.85 76 ⇓P **P 17 04 20.7 +0.8**
baz=47,SNR=5.1
ZAK Zakamensk 46.86 301 ⇑ *i*P **P 17 04 20.6 +0.7**
ZAK pmax pmax
comp=Z,34nm,1.3s,mb5.1
K19A Absolon Red Bu 46.90 71 ⇑P **P 17 04 19.8 -0.5**
baz=47,SNR=15
M18A Lyman 46.99 74 ⇓P **P 17 04 21.3 +0.3**
baz=47,SNR=9.1
S13A Holt Ranch, En 47.02 80 ⇑P **P 17 04 21.9 +0.6**
baz=47,SNR=5.6
Q15A Fillmore 47.05 78 ⇑P **P 17 04 22.1 +0.6**
baz=47
K20A Yellowstone Ra 47.29 71 ⇓P **P 17 04 22.6 -0.7**
baz=47,SNR=12
T13A Saint George 47.34 81 ⇓P **P 17 04 24.0 +0.2**
baz=47
MOY Mondy 47.38 304 *e*P **P 17 04 24.1 +0.2**
MOY pmax pmax
comp=Z,3.0nm,3.1s
M19A Rock Springs 47.49 73 ⇓P **P 17 04 25.4 +0.4**
baz=47
N18A Larsen Ranch, 47.50 74 ⇑P **P 17 04 25.4 +0.5**
baz=47,SNR=7.7
HHC Hu-ho-hao-te 47.55 286 *e*P **P 17 04 26.0 +0.6**
HHC AP pP 17 04 30.8 -7.9
HHC XP sP 17 04 34.8 -10
HHC PCP PcP 17 05 56.1 +1.5
HHC PP PP 17 06 16.0 -0.9
HHC PCS PcS 17 09 50.3 +0.3
HHC *e*S **S 17 11 17.0 +0.3**
HHC XS sS 17 11 26.3 -13
HHC SCS ScS 17 14 17.4 +3.1
HHC SS SS 17 14 37.8 -6.9
HHC AMB AMB
comp=Z,21nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,68nm,3.8s
HHC LR LR
comp=N,136nm,16.7s,MS4.5
HHC LR LR
comp=E,381nm,17.8s,MS4.5
HHC LR LR
comp=Z,279nm,17.8s,MS4.3
L20A Wamsutter 47.68 72 ⇓P **P 17 04 26.4 0.0**
baz=48
GMRC Granite Mounta 47.68 85 ⇓P **P 17 04 26.0 -0.5**
baz=48
U13A Pakoon Wash 47.69 82 ⇓P **P 17 04 27.1 +0.6**
baz=48,SNR=7.0
O18A Roosevelt 47.73 75 ⇑P **P 17 04 27.2 +0.5**
baz=48,SNR=7.1
P17A Butcher Ranch, 47.77 76 ⇓P **P 17 04 27.2 +0.2**
baz=48
SSE Sheshan 47.82 269 P **P 17 04 26.8 -0.8**
SSE S **S 17 11 23.4 +2.6**
SSE XS sS 17 11 34.4 -8.8
SSE AMB AMB
comp=Z,34nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,82nm,5.4s
SSE LR LR
comp=N,61nm,28.2s,MS3.5
SSE LR LR
comp=E,44nm,28.2s,MS3.5
SSE LR LR
comp=Z,72nm,23.2s,MS3.6
N19A John Jarvie Ra 47.85 74 ⇓P **P 17 04 27.5 -0.2**
baz=48,SNR=5.2
P18A Preston Nutter 47.97 76 ⇑P **P 17 04 28.1 -0.6**
baz=48,SNR=14
BELC Belle Mtn. 47.98 86 ⇓P **P 17 04 28.8 0.0**
baz=48
R16A Teasdale 48.05 78 ⇓P **P 17 04 30.1 +0.8**
baz=48
M20A Sweetwater, Wa 48.08 73 ⇑P **P 17 04 29.3 -0.2**
baz=48,SNR=12
SRU San Rafael 48.12 77 ⇓P **P 17 04 30.2 +0.4**
baz=48
U14A Mt Trumbull 48.17 81 ⇑P **P 17 04 30.5 +0.2**
baz=48
L21A Rawlins 48.29 72 ⇓P **P 17 04 30.6 -0.5**
baz=48,SNR=12
T15A Red Dirt Ranch 48.29 80 ⇓P **P 17 04 31.2 0.0**
baz=48
S16A Weppner Ranch, 48.33 79 ⇑P **P 17 04 31.8 +0.4**
baz=48,SNR=10
Q18A Rafter H Ranch 48.37 76 ⇑P **P 17 04 31.6 -0.1**
baz=48
N20A Spence Gulch, 48.44 73 ⇑P **P 17 04 32.3 +0.1**
baz=48,SNR=16
R17A Hanksville Air 48.44 77 ⇑P **P 17 04 32.3 +0.1**
baz=48,SNR=20
RWWY Rawlins 48.55 72 *e*P **P 17 04 33.1 0.0**
comp=Z,23nm,0.9s,mb5.2
BTO Baotou 48.63 287 *e*P **P 17 04 33.9 +0.2**
NJ2 Nanjing 48.64 272 *e*P **P 17 04 36.4 +2.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
U15A North Rim 48.72 81 ⇓P **P 17 04 34.6 +0.2**
baz=49,SNR=19
V14A Boquillas Ranc 48.73 82 ⇑P **P 17 04 34.8 +0.3**
baz=49,SNR=8.6
P19A Cripple Cowboy 48.74 75 ⇓P **P 17 04 34.7 +0.1**
baz=49,SNR=11
S17A Black Ridge (B 48.87 78 ⇓P **P 17 04 35.7 +0.1**
baz=49,SNR=21
O20A White River Ci 48.88 74 ⇓P **P 17 04 36.0 +0.4**
baz=49,SNR=9.7
N21A Black Mountain 48.93 73 ⇓P **P 17 04 35.9 0.0**
baz=49,SNR=10
X13A Yucca 48.95 83 ⇓P **P 17 04 35.9 -0.3**
baz=49
R18A Canyonlands Na 48.96 77 ⇑P **P 17 04 36.2 -0.1**
baz=49,SNR=13
RSSD Black Hills 48.96 67 *e*P **P 17 04 35.0 -1.2**
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
RSSD Black Hills 48.96 67 *e*P **P 17 04 35.0 -1.2**
comp=Z,8.0nm,0.6s,mb4.9
Q19A Hogan Spring (48.99 76 ⇑P **P 17 04 35.9 -0.6**
baz=49,SNR=25
M22A Cedar Creek Ra 49.09 72 ⇓P **P 17 04 37.0 -0.2**
baz=49,SNR=7.4
V15A Kaibab Nationa 49.18 81 ⇓P **P 17 04 38.6 +0.6**
baz=49,SNR=9.9
T17A Navajo Res., N 49.28 79 ⇑P **P 17 04 38.6 -0.1**
baz=49
O21A Pagoda 49.29 73 ⇑P **P 17 04 38.6 -0.2**
baz=49,SNR=11
S18A Hurst Farm, Bl 49.33 78 ⇑P **P 17 04 39.2 +0.1**
baz=49,SNR=28
R19A Curley Farm, L 49.40 77 ⇓P **P 17 04 39.7 +0.1**
baz=49,SNR=6.1
PV10 Paradox Valley 49.49 76 *e*P **P 17 04 40.6 +0.3**
comp=Z,519nm,0.8s,mb6.6
N22A Wattenberg Ran 49.54 72 ⇓P **P 17 04 40.6 -0.1**
baz=49,SNR=13
Q20A Ridgley Place, 49.58 75 ⇓P **P 17 04 40.9 -0.1**
baz=49,SNR=8.4
U17A Shonto 49.62 79 ⇑P **P 17 04 40.8 -0.5**
baz=50
U16A Tuba City 49.62 80 ⇑P **P 17 04 41.3 -0.1**
baz=50
T18A Mexican Hat 49.76 78 ⇑P **P 17 04 41.5 -0.9**
baz=50,SNR=25
S19A Harvey Farm, M 49.83 77 ⇓P **P 17 04 42.8 0.0**
baz=50,SNR=10
WUAZ Wupatki 49.88 81 ⇑P **P 17 04 43.1 -0.2**
baz=50
WUAZ Wupatki 49.88 81 *e*P **P 17 04 41.5 -1.8**
comp=Z,15nm,1.0s,mb5.0
ULM Lac du Bonnet 49.88 56 P **P 17 04 41.9 -1.2**
comp=Z,3.4nm,0.6s,mb4.5,baz=324,slow=5.3,SNR=3.7
ULM LR LR 17 28 45.7
comp=Z,183nm,18.2s,MS4.1,baz=269,slow=40
KBS Kingsbay 49.89 357 *e*P **P 17 04 43.5 +0.7**
KBS pmax pmax
comp=Z,98nm,1.9s,mb5.5
PV01 Paradox Valley 49.92 76 *e*P **P 17 04 43.6 0.0**
comp=Z,2µm,1.0s
X15A Humboldt 50.01 82 ⇓P **P 17 04 44.3 0.0**
baz=50
W16A Flagstaff 50.05 81 ⇓P **P 17 04 44.7 +0.1**
baz=50
U18A Rough Rock, Ch 50.22 79 ⇓P **P 17 04 46.0 +0.1**
baz=50
SMCO Snowmass 50.24 74 *e*P **P 17 04 37.1 -8.9**
comp=Z,5.1nm,0.7s,mb4.7
R21A Cimarron 50.40 75 ⇓P **P 17 04 47.2 0.0**
baz=50,SNR=10.0
SPB4 Spitsbergen Ar 50.46 356 *e*P **P 17 04 47.0 -0.2**
SPITS Spitsbergen Ar 50.46 356 P **P 17 04 47.3 +0.1**
comp=Z,13nm,0.4s,mb5.3,baz=46,slow=8.4,SNR=55
T19A Beclabito 50.48 78 ⇓P **P 17 04 48.1 +0.2**
baz=50,SNR=27
MVCO Mesa Verde 50.56 77 ⇑P **P 17 04 48.9 +0.5**
baz=50
MVCO Mesa Verde 50.56 77 *e*P **P 17 04 48.5 +0.1**
comp=Z,11nm,0.7s,mb4.9
ISCO Idaho Springs 50.67 73 *e*P **P 17 04 49.5 +0.3**
ISCO pmax pmax
comp=Z,15nm,1.0s,mb4.9
ISCO Idaho Springs 50.67 73 *e*P **P 17 04 49.5 +0.3**
comp=Z,15nm,1.0s,mb4.9
AGMN Agassiz Refuge 51.04 59 *e*P **P 17 04 49.9 -2.0**
comp=Z,15nm,1.1s,mb4.8
115A Sonoran Desert 51.20 84 ⇓P **P 17 04 53.6 +0.3**
baz=51
W19A Sanders 51.37 80 ⇓P **P 17 04 55.1 +0.6**
baz=51
Y17A Roosevelt 51.40 82 ⇑P **P 17 04 54.8 0.0**
baz=51
SDCO Great Sand Dun 52.04 75 *e*P **P 17 04 59.8 +0.2**
comp=Z,20nm,1.2s,mb4.9
Y19A Nutrioso 52.21 81 ⇓P **P 17 05 00.8 0.0**
baz=52,SNR=7.4
TUC Tucson 52.36 83 *e*P **P 17 05 01.3 -0.7**
TUC pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TUC Tucson 52.36 83 *e*P **P 17 05 01.3 -0.7**
comp=Z,7.3nm,1.0s,mb4.6
WHN Wuhan 52.49 274 ⇓P **P 17 05 02.4 -0.5**
118A Homack Ranch, 52.65 83 ⇓P **P 17 05 04.3 +0.2**
baz=52
218A Dragoon 53.05 83 ⇓P **P 17 05 07.3 +0.2**
baz=53
ANMO Albuquerque 53.28 78 P **P 17 05 09.3 +0.6**
comp=Z,3.2nm,0.8s,mb4.3,baz=300,slow=6.3,SNR=5.8
ANMO LR LR 17 25 34.9
comp=Z,173nm,18.4s,MS4.1,baz=193,slow=34
ANMO Albuquerque 53.28 78 *e*P **P 17 05 07.6 -1.1**
ANMO pmax pmax
comp=Z,8.0nm,1.4s
ANMO Albuquerque 53.28 78 *e*P **P 17 05 09.0 +0.3**
comp=Z,5.7nm,1.0s,mb4.5
ECSD EROS,Sioux Fal 53.43 63 *e*P **P 17 05 08.0 -1.7**
comp=Z,15nm,0.9s,mb4.9
SUMG Summit 53.44 14 *e*P **P 17 05 09.2 -0.2**
comp=Z,36nm,1.0s,mb5.3
318A Bisbee 53.45 84 ⇓P **P 17 05 10.2 +0.2**
baz=53
XAN Xi'an 53.51 281 P **P 17 05 09.4 -1.0**
XAN AP pP 17 05 21.8 -2.2
XAN PP PP 17 07 13.3 +2.2
XAN S **S 17 12 39.3 -0.2**
XAN SCS ScS 17 14 55.8 +0.4
XAN AMB AMB
comp=Z,11nm,1.5s,mb4.6
XAN AMB AMB
comp=Z,73nm,6.2s
XAN LR LR
comp=N,109nm,21.0s,MS4.1
XAN LR LR
comp=E,135nm,21.4s,MS4.1
XAN LR LR
comp=Z,254nm,20.9s,MS4.2
219A White Tail Can 53.52 83 ⇑P **P 17 05 10.4 -0.2**
baz=53
EYMN Ely 53.57 57 *e*P **P 17 05 08.9 -1.8**
comp=Z,26nm,1.1s,mb5.1
QZH Quanzhou 53.77 265 P **P 17 05 12.3 -0.1**
QZH AMB AMB
comp=Z,80nm,1.0s,mb5.6
ZAA0 Zalesovo Array 53.98 313 *e*P **P 17 05 10.8 -2.7**
ZAA0 *e*PcP PcP 17 06 18.1 0.0
ZALV Zalesovo Beam 53.98 313 P **P 17 05 13.0 -0.5**
comp=Z,2.4nm,0.6s,mb4.3,baz=47,slow=8.7,SNR=10
ZALV PcP PcP 17 06 18.8 +0.6
comp=Z,17nm,1.0s,baz=39,slow=5.7,SNR=14
ZALV LR LR 17 29 40.1
comp=Z,119nm,19.0s,MS4.0,baz=91,slow=38
ZALV Zalesovo Beam 53.98 313 P **P 17 05 13.0 -0.5**
ZALV 17 06 18.8
ZALV Zalesovo Beam 53.98 313 P **P 17 05 13.0 -0.5**
ZALV PcP PcP 17 06 18.8 +0.6
ZALV LR LR 17 29 40.1
NVS Novosibirsk 54.12 315 *i* P **P 17 05 13.8 -0.7**
NVS *i* 17 06 18.8
NVS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
NVS pmax pmax
comp=N,8.0nm,1.3s
NVS pmax pmax
comp=E,11nm,1.3s
CBKS Cedar Bluff 54.79 70 *e*P **P 17 05 19.2 -0.5**
CBKS pmax pmax
comp=Z,47nm,0.9s,mb5.5
CBKS Cedar Bluff 54.79 70 *e*P **P 17 05 19.2 -0.5**
comp=Z,48nm,0.9s,mb5.5
LZH Lanzhou 55.25 286 *e*P **P 17 05 23.4 +0.4**
LZH AP pP 17 05 28.3 -8.3
LZH XP sP 17 05 31.1 -11
LZH PP PP 17 07 28.0 +1.4
LZH *e*S **S 17 13 03.4 +0.6**
LZH SS SS 17 16 47.0 -0.1

LZH AMB AMB
comp=Z,63nm,1.1s,mb5.6
LZH AMB AMB
comp=Z,220nm,4.8s
LZH LR LR
comp=N,920nm,14.4s
LZH LR LR
comp=Z,2µm,16.0s,MS5.2
GTA Gaotai 55.44 292 ⇑P **P 17 05 24.9 +0.5**
GTA AP pP 17 05 29.9 -8.1
GTA XP sP 17 05 32.3 -11
GTA PP PP 17 07 32.3 +4.0
GTA S **S 17 13 09.3 +3.9**
GTA XS sS 17 13 17.8 -10
GTA AMB AMB
comp=Z,31nm,1.1s,mb5.2
GTA AMB AMB
comp=Z,64nm,4.5s
GTA LR LR
comp=N,211nm,18.7s,MS4.4
GTA LR LR
comp=E,224nm,16.0s,MS4.4
GTA LR LR
comp=Z,271nm,16.7s,MS4.4
KSU1 Kansas State U 56.44 68 *eP* **P 17 05 30.5 -0.9**
comp=Z,22nm,0.6s,mb5.4
SCIA State Center 56.52 63 *eP* **P 17 05 31.0 -1.0**
comp=Z,13nm,0.6s,mb5.1
WMOK Wichita Mounta 58.09 73 *eP* **P 17 05 42.8 -0.4**
WMOK pmax pmax
comp=Z,12nm,0.9s,mb4.9
WMOK Wichita Mounta 58.09 73 *eP* **P 17 05 42.8 -0.4**
comp=Z,12nm,0.9s,mb4.9
ARCES ARCESS Array B 58.16 350 P **P 17 05 42.6 -0.6**
comp=Z,12nm,0.9s,mb5.0,baz=22,slow=7.4,SNR=12
ARCES LR LR 17 33 20.9
comp=Z,160nm,19.9s,MS4.1,baz=19,slow=39
ARE0 ARCESS Array S 58.16 350 *eP* **P 17 05 41.0 -2.1**
LVZ Lovozero 58.49 346 P **P 17 05 45.9 +0.4**
comp=Z,226nm,0.9s,mb6.2,SNR=7.0
CD2 Chengdu 58.83 282 P **P 17 05 47.9 -0.5**
CD2 AP pP 17 05 52.5 -10
CD2 PCP PcP 17 06 39.4 +2.0
CD2 PP PP 17 07 59.3 +0.8
CD2 S **S 17 13 50.4 +0.3**
CD2 SS SS 17 17 44.1 +0.5
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
CD2 AMB AMB
comp=Z,170nm,5.7s
CD2 LR LR
comp=N,230nm,7.3s
CD2 LR LR
comp=Z,210nm,6.2s
TXAR Lajitas Array 58.84 81 P **P 17 05 47.6 -0.9**
comp=Z,7.4nm,0.9s,mb4.7,baz=302,slow=6.0,SNR=20
TXAR LR LR 17 30 01.7
comp=Z,101nm,19.8s,MS4.0,baz=5.0,slow=35
KURK Kurchatov 58.97 314 P **P 17 05 48.9 -0.2**
comp=Z,22nm,0.8s,mb5.2,baz=43,slow=6.6,SNR=40
KURK Kurchatov 58.97 314 *eP* **P 17 05 48.3 -0.7**
KURK *e* 17 06 37.3
KURK pmax pmax
comp=Z,32nm,1.0s,mb5.3
KURK Kurchatov 58.97 314 *eP* **P 17 05 48.3 -0.8**
comp=Z,32nm,1.0s,mb5.3
KURK *e*PcP PcP 17 06 37.3 -0.3
WMQ Urumqi 59.25 303 P **P 17 05 51.5 +0.4**
WMQ XP sP 17 05 59.3 -11
WMQ PCP PcP 17 06 39.6 +0.7
WMQ AMB AMB
comp=Z,24nm,1.1s,mb5.1
WMQ AMB AMB
comp=Z,255nm,3.4s
WMQ LR LR
comp=N,248nm,26.0s,MS4.3
WMQ LR LR
comp=E,181nm,29.0s,MS4.3
WMQ LR LR
comp=Z,325nm,22.0s
HDIL Hopedale 59.62 62 *eP* **P 17 05 52.8 -0.9**
comp=Z,30nm,0.5s,mb5.6
MKAR Makanchi Array 59.96 308 P **P 17 05 55.6 -0.3**
comp=Z,8.6nm,0.4s,mb5.1,baz=50,slow=6.2,SNR=204
MKAR LR LR 17 32 06.4
comp=Z,195nm,21.6s,MS4.2,baz=39,slow=36
GYA Guiyang 60.16 276 ⇓*iP* **P 17 05 56.8 -0.8**
GYA AP pP 17 06 05.3 -6.1
GYA PCP PcP 17 06 45.4 +2.6
GYA PP PP 17 08 08.9 -1.6
GYA PCS PcS 17 10 45.8 +0.4
GYA S **S 17 14 01.0 -6.4**
GYA SS SS 17 17 59.5 -5.2
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
GYA AMB AMB
comp=Z,120nm,4.0s
GYA LR LR
comp=N,420nm,17.2s,MS4.8
GYA LR LR
comp=E,390nm,17.8s,MS4.8
GYA LR LR
comp=Z,580nm,16.5s,MS4.8
SCHQ Schefferville 60.19 38 P **P 17 05 56.6 -0.7**
comp=Z,20nm,0.9s,mb5.2,baz=324,slow=8.6,SNR=12
SCHQ Schefferville 60.19 38 *eP* **P 17 05 56.0 -1.4**
comp=Z,33nm,1.0s,mb5.3
JCT Junction City 60.42 77 *eP* **P 17 06 00.6 +1.3**
JCT pmax pmax
comp=Z,22nm,1.0s,mb5.1
JCT Junction City 60.42 77 *eP* **P 17 06 00.6 +1.3**
comp=Z,22nm,1.0s,mb5.1
BVAR Borovoye Array 60.85 320 P **P 17 06 01.1 -0.9**
comp=Z,4.8nm,0.5s,mb4.8,baz=53,slow=6.8,SNR=28
BRVK Borovoye 60.87 320 P **P 17 06 01.3 -0.8**
comp=Z,57nm,0.6s,mb5.9,SNR=5.5
BRVK Borovoye 60.87 320 P **P 17 06 01.7 -0.4**
BRVK pmax pmax
comp=Z,14nm,0.9s,mb5.1
BRVK Borovoye 60.87 320 *eP* **P 17 06 01.2 -0.9**
comp=Z,9.0nm,0.8s,mb5.0
BRVK *e*PcP PcP 17 06 45.1 -0.2
MIAR Mount Ida 61.32 70 P **P 17 06 05.1 -0.3**
MIAR pmax pmax
comp=Z,28nm,1.1s,mb5.3
MIAR Mount Ida 61.32 70 *eP* **P 17 06 04.7 -0.7**
comp=Z,28nm,1.1s,mb5.3
OLIL Olney 61.54 63 *eP* **P 17 06 06.0 -0.8**
comp=Z,98nm,1.0s,mb5.9
SADO Sadowa 62.03 53 P **P 17 06 09.1 -1.0**
comp=Z,5.9nm,0.7s,mb4.8,baz=342,slow=6.5,SNR=4.3
SADO Sadowa 62.03 53 P **P 17 06 09.1 -1.0**
ARU Arti 62.60 328 *eiP* **P 17 06 12.8 -0.8**
ARU *e* 17 08 31.7
ARU *e*S **S 17 14 35.4 -2.1**
ARU pmax pmax
comp=Z,23nm,1.5s,mb5.1
ARU Arti 62.60 328 *eP* **P 17 06 13.1 -0.5**
comp=Z,5.2nm,0.6s,mb4.8
WCI Wyandotte Cave 62.90 62 *eP* **P 17 06 15.2 -0.8**
WCI pmax pmax
comp=Z,49nm,1.0s,mb5.6
WCI Wyandotte Cave 62.90 62 *eP* **P 17 06 15.2 -0.8**
comp=Z,49nm,1.0s,mb5.6
ACSO Alum Creek Sta 63.28 58 *eP* **P 17 06 17.1 -1.4**
comp=Z,37nm,1.0s,mb5.5
WVT Waverly 63.53 65 *eP* **P 17 06 19.7 -0.4**
WVT pmax pmax
comp=Z,17nm,1.1s,mb5.0
KMI Kunming 63.57 278 P **P 17 06 20.3 -0.2**
KMI AP pP 17 06 25.3 -9.1
KMI PP PP 17 08 43.5 +3.0
KMI S **S 17 14 50.6 +0.1**
KMI XS sS 17 15 00.1 -14
KMI SS SS 17 18 59.3 +1.3
KMI AMB AMB
comp=Z,12nm,1.3s,mb4.8
KMI AMB AMB
comp=Z,131nm,4.0s
KMI LR LR
comp=N,92nm,17.5s,MS4.2
KMI LR LR
comp=E,118nm,17.5s,MS4.2
KMI LR LR
comp=Z,128nm,17.0s,MS4.2
QIZ Qiongzhong 63.59 268 P **P 17 06 21.0 +0.3**
QIZ S **S 17 14 54.6 +3.8**
QIZ LR LR
comp=Z,189nm,18.6s,MS4.3
JOF Joensuu 63.65 345 *ep* **P 17 06 19.6 -0.9**
comp=Z,13nm,0.5s,mb5.2
JOF Joensuu 63.65 345 *eP* **P 17 06 19.6 -0.9**
JOF pmax pmax
comp=Z,13nm,0.5s,mb5.2
OXF Oxford 63.78 67 *eP* **P 17 06 20.9 -0.9**
OXF pmax pmax
comp=Z,42nm,0.8s,mb5.5
OXF Oxford 63.78 67 *eP* **P 17 06 20.9 -0.9**
comp=Z,42nm,0.8s,mb5.5
KLMR Klimovskoe 64.01 340 *eP* **P 17 06 21.9 -1.0**
KLMR pmax pmax
comp=Z,41nm,1.1s,mb5.4
KAF Kangasniemi 65.17 347 *ep* **P 17 06 28.8 -1.6**
comp=Z,18nm,0.8s,mb5.2,baz=14,slow=5.8
KAF Kangasniemi 65.17 347 *eP* **P 17 06 28.8 -1.6**
KAF pmax pmax
comp=Z,18nm,0.8s,mb5.2
SSPA Standing Stone 65.67 55 *eP* **P 17 06 33.0 -1.0**
comp=Z,7.2nm,0.8s,mb4.8
TKM2 Tokmak 2 66.05 309 *eP* **P 17 06 37.1 +0.7**
TKM2 *e* 17 07 06.4
TKM2 pmax pmax
comp=Z,22nm,0.9s,mb5.2
TKM2 Tokmak 2 66.05 309 P **P 17 06 37.5 +1.1**
SNR=19
TKM2 Tokmak 2 66.05 309 *eP* **P 17 06 37.1 +0.7**
comp=Z,22nm,0.9s,mb5.2
TKM2 *e*PcP PcP 17 07 06.4 -0.2
TKL Tuckaleechee C 66.15 62 P **P 17 06 36.8 -0.4**
comp=Z,32nm,1.1s,mb5.3,baz=321,slow=3.4,SNR=17
TKL LR LR 17 33 20.7
comp=Z,172nm,19.3s,MS4.3,baz=294,slow=34
LRAL Lakeview Retre 66.23 67 *eP* **P 17 06 35.7 -2.0**
comp=Z,108nm,0.9s,mb5.9
USP Ospenovka 66.32 310 P **P 17 06 39.8 +1.7**
SNR=30
CHMS Chumysh 66.40 310 P **P 17 06 39.7 +1.1**
SNR=9.0
KBK Karagaybulak 66.56 309 P **P 17 06 41.1 +1.4**
SNR=17
AAK Ala-Archa 66.80 310 P **P 17 06 41.3 +0.1**
comp=Z,190nm,0.6s,mb6.3,SNR=18
AAK Ala-Archa 66.80 310 P **P 17 06 41.6 +0.4**
AAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AAK Ala-Archa 66.80 310 P **P 17 06 42.6 +1.5**
SNR=27
AAK Ala-Archa 66.80 310 *eP* **P 17 06 41.5 +0.3**
comp=Z,30nm,0.9s,mb5.3
KZA Kyzart 66.85 309 P **P 17 06 43.4 +1.9**
SNR=13
UCH Uchtor 67.09 309 *eP* **P 17 06 44.4 +1.3**
comp=Z,5.0nm,1.0s,mb4.5
EKS2 Erkin-Say 67.12 310 P **P 17 06 44.9 +1.6**
SNR=26
EKS2 Erkin-Say 67.12 310 *eP* **P 17 06 43.8 +0.5**
comp=Z,26nm,0.7s,mb5.4
LSA Lhasa 67.31 289 P **P 17 06 46.0 +1.3**
LSA Lhasa 67.31 289 *eP* **P 17 06 46.0 +1.3**
LSA pmax pmax
comp=Z,33nm,1.1s,mb5.3
LSA Lhasa 67.31 289 *eP* **P 17 06 46.0 +1.3**
comp=Z,34nm,1.1s,mb5.3
AML Almayashu 67.56 310 P **P 17 06 48.5 +2.4**
SNR=23
AML Almayashu 67.56 310 *eP* **P 17 06 47.5 +1.5**
comp=Z,35nm,0.9s,mb5.4
NB2 NORSAR Subarra 67.73 355 P **P 17 06 45.9 -0.9**
comp=Z,0.8nm,0.7s,mb3.9,baz=7.0,slow=6.2
NOA NORSAR Array B 67.73 355 P **P 17 06 46.3 -0.5**
comp=Z,7.0nm,0.8s,mb4.8,baz=6.9,slow=6.3,SNR=18
NOA LR LR 17 35 00.6
comp=Z,89nm,19.0s,MS4.0,baz=350,slow=35
NAO01 NORSAR Array S 67.94 355 *eP* **P 17 06 43.5 -4.6**
GOGA Godfrey 67.97 64 *eP* **P 17 06 47.5 -1.3**
GOGA pmax pmax
comp=Z,17nm,1.1s,mb5.0
GOGA Godfrey 67.97 64 *eP* **P 17 06 47.5 -1.3**
comp=Z,17nm,1.1s,mb5.0
VSU Vasula 68.61 346 *eP* **P 17 06 51.6 -0.7**
VSU pmax pmax
comp=Z,48nm,1.0s,mb5.4
TAOE Nuku Hiva Isla 68.66 138 *e*LR LR 17 27 31.0
comp=Z,2µm,22.9s
MOS Moscow 69.09 339 *eP* **P 17 06 54.7 -0.7**
MOS *e* 17 09 38.9
MOS pmax pmax
comp=Z,90nm,1.0s,mb5.7
KONO Kongsberg 69.21 355 *eP* **P 17 06 55.7 -0.3**
OBN Obninsk 69.90 339 ⇓*eP* **P 17 07 00.3 -0.1**
OBN *e* 17 09 37.4
OBN pmax pmax
comp=Z,91nm,1.0s,mb5.7
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.5
OBN Obninsk 69.90 339 P **P 17 07 00.4 0.0**
SHL Shillong 69.91 286 *eP* **P 17 07 02.0 +1.1**
CHTO Chiang Mai 70.58 276 *eP* **P 17 07 04.2 -0.9**
CHTO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
CHTO Chiang Mai 70.58 276 *eP* **P 17 07 04.2 -0.9**
comp=Z,5.4nm,1.0s,mb4.4
CMAR Chiang Mai Arr 70.85 276 P **P 17 07 06.1 -0.6**
comp=Z,4.5nm,0.8s,mb4.4,baz=27,slow=6.7,SNR=38
CMAR LR LR 17 39 11.9
comp=Z,65nm,18.3s,MS3.9,baz=39,slow=37
GUN Gumba 71.73 292 *eP* **P 17 07 12.8 +0.8**
comp=Z,195nm,0.5s,mb6.3
JIRN Jiri 71.74 291 *eP* **P 17 07 13.0 +1.0**
comp=Z,103nm,0.7s,mb5.9
RAMN Ramite 72.03 291 *eP* **P 17 07 14.4 +0.6**
comp=Z,119nm,0.6s,mb6.0
KKN Kakani 72.17 292 *eP* **P 17 07 15.4 +0.8**
comp=Z,46nm,0.4s,mb5.7
KKN Kakani 72.17 292 *eP* **P 17 07 15.4 +0.8**
KKN pmax pmax
comp=Z,46nm,0.4s,mb5.8
PKI Pulchoki 72.26 292 *eP* **P 17 07 15.8 +0.7**
comp=Z,70nm,0.8s,mb5.7
PKI Pulchoki 72.26 292 *eP* **P 17 07 15.8 +0.7**
PKI pmax pmax
comp=Z,70nm,0.8s,mb5.6
GKN Gorkha 72.39 293 *eP* **P 17 07 16.2 +0.3**
comp=Z,48nm,0.7s,mb5.6
DMN Daman 72.41 292 *eP* **P 17 07 16.6 +0.6**
DANN Dangsing 72.63 294 *eP* **P 17 07 18.0 +0.7**
comp=Z,96nm,0.8s,mb5.8
KOLN Koldanda 73.16 293 *eP* **P 17 07 21.0 +0.5**
comp=Z,29nm,0.8s,mb5.2
CMIG Matias Romero 73.26 84 P **P 17 07 20.4 -0.7**
comp=Z,5.5nm,0.9s,mb4.5,baz=122,slow=11,SNR=3.6
CMIG Matias Romero 73.26 84 P **P 17 07 20.4 -0.7**
PPT Papeete 73.26 151 *e*LR LR 17 29 45.0
comp=Z,352nm,27.0s,baz=350
PPT Papeete 73.26 151 LR LR 17 34 54.6
comp=Z,192nm,19.3s,MS4.4,baz=346,slow=32
JOSI Joshimath 73.33 298 *eP* **P 17 07 22.3 +0.9**
SUW Suwalki 73.44 347 *eP* **P 17 07 20.7 -0.9**
SUW Suwalki 73.44 347 *eP* **P 17 07 20.7 -0.9**
THN Thein Dam 73.98 302 *eP* **P 17 07 24.1 -1.1**
RAR Rarotonga 74.14 161 LR LR 17 34 25.5
comp=Z,284nm,18.9s,MS4.6,baz=289,slow=31
SMLA Simla 74.21 300 *eP* **P 17 07 26.5 0.0**
DDI Dehra Dun 74.34 299 *ex* x 17 07 21.0
KALG Kalgarh 74.58 298 *ex* x 17 07 19.1
HLG Helgoland 74.75 356 *eP* **P 17 07 28.6 -0.7**
comp=Z,194nm,1.3s,mb5.9
BSEG Bad Segeberg 74.86 354 *eP* **P 17 07 30.3 +0.4**
BSEG pmax pmax
comp=Z,41nm,1.1s,mb5.3
BSEG Bad Segeberg 74.86 354 *eP* **P 17 07 30.3 +0.4**
comp=Z,41nm,1.1s,mb5.3
KKR Kurukshetra 75.30 300 *eP* **P 17 07 33.1 +0.2**
AKASG Malin Array Be 75.59 342 P **P 17 07 33.7 -0.5**
comp=Z,29nm,0.5s,mb5.4,baz=19,slow=5.8,SNR=112
AKASG LR LR 17 47 45.2
comp=Z,170nm,18.6s,MS4.4,baz=15,slow=41
AKASG Malin Array Be 75.59 342 P **P 17 07 33.7 -0.5**
AKASG LR LR 17 47 45.2
AKBB Malin Array Si 75.59 342 *eP* **P 17 07 33.4 -0.8**
KBL Kabul 75.76 308 *eP* **P 17 07 33.9 -1.6**
KBL pmax pmax
comp=Z,41nm,1.0s,mb5.3
KBL Kabul 75.76 308 *eP* **P 17 07 33.9 -1.6**
comp=Z,40nm,1.0s,mb5.3
NDI New Delhi 76.07 298 *ex* x 17 07 36.0
AYAN Aya Nagar 76.27 298 *eP* **P 17 07 38.5 0.0**
AYAN AMb AMB 17 07 39.4
comp=Z,28nm,0.7s,mb5.3
NRDL Niedersach Rie 76.31 354 *eP* **P 17 07 38.0 -0.3**
comp=Z,18nm,1.0s,mb5.0
SONA Sohna 76.48 298 *eP* **P 17 07 39.6 0.0**
SONA AMb AMB 17 07 41.5
comp=Z,37nm,0.7s,mb5.4
IBBN Ibbenburen 76.63 356 *eP* **P 17 07 40.2 +0.1**
comp=Z,56nm,1.0s,mb5.5
AGRA Agra 76.79 297 *eP* **P 17 07 41.5 +0.1**
KUDL Kundal 76.89 299 *eP* **P 17 07 42.2 +0.3**
CLZ Clausthal 76.95 354 *eP* **P 17 07 42.0 +0.2**
CLZ pmax pmax
comp=Z,40nm,1.1s,mb5.3
CLZ Clausthal 76.95 354 *eP* **P 17 07 42.0 +0.2**
comp=Z,40nm,1.1s,mb5.3
WTSB Winterswijk 77.01 356 *eP* **P 17 07 42.3 +0.1**
CLL Collm 77.28 352 ⇑*iP* **P 17 07 43.0 -0.7**
CLL *e* pP 17 07 58.0 +0.1
CLL pmax pmax
comp=Z,13nm,0.9s,mb4.9
CLL Collm 77.28 352 *eP* **P 17 07 43.0 -0.7**
comp=Z,13nm,0.9s,mb4.9
CLL Collm 77.28 352 ⇑*iP* **P 17 07 43.0 -0.7**
comp=Z,13nm,0.9s,mb4.9
CLL *ex* x 17 07 51.0
CLL *ep*P pP 17 07 58.0 +0.1
CLL *es*PcP 17 08 15.0
CLL Collm 77.28 352 ⇑*iP* **P 17 07 43.0 -0.7**
comp=Z,13nm,0.9s,mb4.9
CLL *e* pP 17 07 58.0 +0.1
CTA Charters Tower 77.30 213 *eP* **P 17 07 43.2 -0.9**
comp=Z,4.6nm,1.0s,mb4.4
CTA Charters Tower 77.30 213 *eP* **P 17 07 43.2 -0.9**
CTA pmax pmax
comp=Z,5.0nm,1.0s
KHET Khetri 77.32 299 *eP* **P 17 07 44.4 0.0**
KHET AMb AMB 17 07 45.9
comp=Z,49nm,1.0s,mb5.4
LVV L'vov 77.37 345 *iP* **P 17 07 44.4 +0.1**
KSP Ksiaz 77.42 350 *eP* **P 17 07 44.4 -0.2**
KSP Ksiaz 77.42 350 *eP* **P 17 07 44.0 -0.5**
BUG Bochum--Univer 77.52 356 *eP* **P 17 07 44.9 -0.2**
comp=Z,23nm,0.8s,mb5.2
OJC Ojcow 77.61 348 *eP* **P 17 07 45.5 -0.1**
BRG Berggiesshubel 77.63 352 *iP* **P 17 07 45.2 -0.5**
BRG *e* pP 17 08 00.9 +1.0
BRG pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRG Berggiesshubel 77.63 352 *eP* **P 17 07 45.1 -0.6**
comp=Z,20nm,1.2s,mb4.9
BRG Berggiesshubel 77.63 352 *iP* **P 17 07 45.2 -0.5**
comp=Z,20nm,1.2s,mb4.9
BRG *e* pP 17 08 00.8 +0.9
comp=Z,7.2nm,1.1s
FBE Freiberg 77.63 352 *eP* **P 17 07 46.4 +0.7**
comp=Z,26nm,1.1s,mb5.1
KWP Kalwaria 77.77 346 *eP* **P 17 07 47.2 +0.7**
KWP Kalwaria 77.77 346 ⇓*iP* **P 17 07 46.9 +0.4**
KWP Kalwaria 77.77 346 *eP* **P 17 07 47.2 +0.7**
UPC Upice 77.78 350 *eP* **P 17 07 46.5 -0.1**
DPC Dobruska-Polom 77.91 350 *eP* **P 17 07 47.3 +0.1**
PVCC Panska Ves 77.91 351 *eP* **P 17 07 47.0 -0.3**
ABKT Ailbek 78.04 317 P **P 17 07 48.4 +0.2**
comp=Z,91nm,1.1s,mb5.6,SNR=5.9
MOX Moxa 78.05 353 *eP* **P 17 07 48.1 +0.1**
comp=Z,16nm,1.1s,mb4.9
MOX Moxa 78.05 353 *eP* **P 17 07 48.1 +0.1**
MOX pmax pmax
comp=Z,16nm,1.1s,mb4.9
MOX Moxa 78.05 353 *eP* **P 17 07 47.8 -0.2**
comp=Z,14nm,1.0s,mb4.8
WERD Werda 78.19 353 *eP* **P 17 07 48.6 -0.2**
comp=Z,10.0nm,1.1s,mb4.7
STHS Stebnicka Huta 78.19 347 *eP* **P 17 07 49.6 +0.7**
STHS pmax pmax
comp=Z,23nm,1.2s,mb5.0
STHS Stebnicka Huta 78.19 347 *eP* **P 17 07 49.6 +0.7**
comp=Z,22nm,1.2s,mb5.0
OKC Ostrava-Krasne 78.20 349 *eP* **P 17 07 49.3 +0.4**
TANN Tannenbergstha 78.21 352 *eP* **P 17 07 49.0 +0.1**
comp=Z,15nm,1.4s,mb4.7
BEBN Eben Emael 78.22 357 P **P 17 07 49.0 0.0**
comp=Z,8.4nm,1.2s,mb4.5
HGN Heimansgroeve 78.25 357 *eP* **P 17 07 48.6 -0.5**
comp=Z,32nm,1.0s,mb5.2
NIE Niedzica 78.32 347 *eP* **P 17 07 50.3 +0.7**
MORC Moravsky Berou 78.33 349 P **P 17 07 49.8 +0.2**
MORC pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
MORC Moravsky Berou 78.33 349 *eP* **P 17 07 49.5 -0.1**
comp=Z,10nm,1.3s,mb4.6
WERN Wernitzgruen 78.34 353 *eP* **P 17 07 49.8 +0.1**
comp=Z,21nm,1.0s,mb5.0
NKC Novy Kostel 78.39 352 *eP* **P 17 07 50.0 +0.1**
MEM Membach 78.40 357 P **P 17 07 50.0 +0.1**
comp=Z,21nm,1.0s,mb5.0
PRU Pruhonice 78.45 351 *eP* **P 17 07 50.1 -0.1**
PRU *e*PCP PcP 17 07 57.7 -1.6
KIV Kislovodsk 78.47 331 *eP* **P 17 07 50.9 +0.4**
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,126nm,18.0s,MS4.3
KIV Kislovodsk 78.47 331 *eP* **P 17 07 50.4 -0.1**
comp=Z,22nm,0.9s,mb5.1
SNF Seneffe 78.55 358 P **P 17 07 51.1 +0.3**
BCLA Clavier 78.61 357 P **P 17 07 51.0 -0.1**
CRVS Cervenica-Dubn 78.66 346 *eP* **P 17 07 51.7 +0.2**
CRVS pmax pmax
comp=Z,19nm,1.0s,mb5.0
CRVS Cervenica-Dubn 78.66 346 *eP* **P 17 07 51.7 +0.2**
comp=Z,19nm,1.0s,mb5.0
MANZ Manzenberg 78.67 353 *eP* **P 17 07 51.3 -0.1**
comp=Z,19nm,1.3s,mb4.9
TNS Taunus Mts 78.67 355 *eP* **P 17 07 51.4 -0.1**
TNS pmax pmax
comp=Z,21nm,1.0s,mb5.0
TNS Taunus Mts 78.67 355 *eP* **P 17 07 51.4 -0.1**
comp=Z,21nm,1.0s,mb5.0
UZH Uzhgorod 78.80 346 *c iP* **P 17 07 52.0 -0.2**
UZH *i* 17 07 59.7
UZH *i* pP 17 08 04.0 -2.5
UZH *e* pP 17 08 08.3 +1.8
ROTZ Rotzenmuhle 78.88 353 *eP* **P 17 07 52.4 -0.2**
comp=Z,10.0nm,1.0s,mb4.7
VRAC Vranov 78.90 350 ⇓*iP* **P 17 07 53.4 +0.6**
VRAC Vranov 78.90 350 ⇓*iP* **P 17 07 53.4 +0.6**
GIVF Givet 78.94 357 ⇑*iP* **P 17 07 52.7 -0.3**
comp=Z,39nm,1.0s,mb5.0
GIVF Givet 78.94 357 ⇑*iP* **P 17 07 52.7 -0.3**
GIVF pmax pmax
comp=Z,20nm,1.0s,mb5.0
GIVF Givet 78.94 357 ⇑*iP* **P 17 07 52.7 -0.3**
comp=Z,20nm,1.0s,mb5.0
DOU Dourbes 78.96 358 P **P 17 07 53.0 0.0**
comp=Z,12nm,1.2s,mb4.7
BAIF Baives 79.00 358 ⇑*iP* **P 17 07 53.3 0.0**
comp=Z,52nm,0.9s,mb5.2
BAIF Baives 79.00 358 ⇑*iP* **P 17 07 53.3 0.0**
BAIF pmax pmax
comp=Z,26nm,0.9s,mb5.2
BAIF Baives 79.00 358 ⇑*iP* **P 17 07 53.3 0.0**
comp=Z,26nm,0.9s,mb5.2
GRA1 Grafenberg Arr 79.03 353 *eP* **P 17 07 53.7 +0.3**
comp=Z,39nm,1.0s,mb5.3
GRF Grafenberg Arr 79.03 353 *eP* **P 17 07 53.7 +0.3**
GRF pmax pmax
comp=Z,39nm,1.0s,mb5.3
GRF Grafenberg Arr 79.03 353 *eP* **P 17 07 53.7 +0.3**
GRF pmax pmax
comp=Z,39nm,1.0s,mb5.3
GRF Grafenberg Arr 79.03 353 *eP* **P 17 07 53.7 +0.3**
comp=Z,39nm,1.0s,mb5.3
TREC Trest 79.04 350 *eP* **P 17 07 53.5 0.0**
AJM Ajmer 79.21 299 *eP* **P 17 07 54.4 -0.4**
AJM AMb AMB 17 07 55.8
comp=Z,53nm,1.1s,mb5.4
KECS Kecovo 79.22 347 *eP* **P 17 07 54.5 0.0**
KECS pmax pmax

comp=Z,13nm,0.9s,mb4.9
KECS Kecovo 79.22 347 *e*P P **17 07 54.5 0.0**
comp=Z,13nm,0.9s,mb4.8
RUP Ruppelstein 79.26 356 *e*P P **17 07 54.6 -0.1**
TOD Tromm 79.27 355 *e*P P **17 07 54.6 -0.2**
BUR08 Bucovina Ar. S 79.28 344⇑*i*P P **17 07 55.1 +0.2**
BURAR Bucovina Array 79.30 344⇑*i*P P **17 07 55.3 +0.3**
BURAR Bucovina Array 79.30 344 ⇑P P **17 07 55.3 +0.3**
WLF Walferdange 79.34 357 P P **17 07 55.9 +0.7**
comp=Z,10nm,0.9s,mb4.8
WLF Walferdange 79.34 357 *e*P P **17 07 55.7 +0.6**
comp=Z,16nm,0.9s,mb5.0
KHC Kasperske Hory 79.39 352 *e*P P **17 07 55.6 +0.2**
KHC *e*PCP PcP 17 08 01.6 -1.8
KOLL Kolacno 79.40 348 *e*P P **17 07 55.8 +0.3**
KOLL *e*PCP PcP 17 08 00.9 -2.6
VYHS Vyhne 79.43 348 *i* P P **17 07 55.7 0.0**
VYHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VYHS Vyhne 79.43 348 *i* P P **17 07 55.7 0.0**
comp=Z,9.1nm,1.1s,mb4.6
WET Wettzell 79.44 352 *e*P P **17 07 55.4 -0.3**
WET pmax pmax
comp=Z,17nm,1.3s,mb4.8
WET Wettzell 79.44 352 *e*P P **17 07 55.4 -0.3**
comp=Z,17nm,1.3s,mb4.8
SMOL Smolenice 79.59 349 *e*P P **17 07 57.6 +1.1**
GEC2 GERESS Array S 79.66 351 *e*P P **17 07 56.5 -0.4**
GEC2 pmax pmax
comp=Z,12nm,1.2s,mb4.7
GEC2 GERESS Array S 79.66 351 *e*P P **17 07 56.5 -0.4**
comp=Z,12nm,1.2s,mb4.7
GERES GERESS Array B 79.66 351 P P **17 07 56.2 -0.7**
comp=Z,3.5nm,0.5s,mb4.5,baz=22,slow=5.7,SNR=42
GERES LR LR 17 50 17.8
comp=Z,163nm,18.3s,MS4.4,baz=272,slow=41
MODS Modra-Piesok 79.74 349 *e*P P **17 07 59.2 +1.8**
PSZ Piszkesteto 79.85 347 P P **17 07 58.5 +0.6**
PSZ pmax pmax
comp=Z,32nm,1.1s,mb5.2
PSZ Piszkesteto 79.85 347⇑*i*P P **17 07 58.4 +0.5**
PSZ Piszkesteto 79.85 347 *e*P P **17 07 58.3 +0.4**
comp=Z,32nm,1.1s,mb5.2
ZST Bratislava 79.94 349 *e*P P **17 07 59.3 +0.9**
ZST pmax pmax
comp=Z,19nm,0.9s,mb5.0
ZST Bratislava 79.94 349 *e*P P **17 07 59.3 +0.9**
comp=Z,19nm,0.9s,mb5.0
LANF Langenberg 79.95 355 *e*P P **17 07 58.3 -0.1**
STU Stuttgart 80.08 354 *e*P P **17 07 59.1 -0.1**
comp=Z,16nm,0.8s,mb5.0
STU Stuttgart 80.08 354 P P **17 07 57.8 -1.4**
RAO Raoul Island 80.18 179 LR LR 17 34 54.0
comp=Z,196nm,21.3s,MS4.4,baz=6.6,slow=29
BHPL Bhopal 80.19 295 *e*P P **17 07 59.6 -0.6**
BHPL AMb AMB 17 08 02.1
comp=Z,63nm,0.8s,mb5.6
FLN La Foliniere 80.33 1⇑*i*P P **17 08 00.0 -0.5**
comp=Z,80nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,129nm,20.2s,MS4.0
FLN La Foliniere 80.33 1⇑*i*P P **17 08 00.0 -0.5**
FLN pmax pmax
comp=Z,40nm,1.1s,mb5.3
FLN MLR MLR
comp=Z,130nm,20.3s,MS4.3
FLN La Foliniere 80.33 1⇑*i*P P **17 08 00.0 -0.5**
comp=Z,40nm,1.1s,mb5.3
FLN LR LR
comp=Z,130nm,20.3s,MS4.3
CONA Conrad Observa 80.34 350⇑*i*P P **17 08 01.0 +0.4**
comp=Z,20nm,1.2s,mb4.9
CSNA Conrad Observa 80.35 350⇑*i*P P **17 08 00.9 +0.3**
comp=Z,18nm,1.2s,mb4.9
LDF La Druitiere 80.50 1⇑*i*P P **17 08 00.7 -0.8**
comp=Z,50nm,0.9s,mb5.2
LDF La Druitiere 80.50 1⇑*i*P P **17 08 00.7 -0.8**
LDF pmax pmax
comp=Z,25nm,0.9s,mb5.1
LDF La Druitiere 80.50 1⇑*i*P P **17 08 00.7 -0.8**
comp=Z,25nm,0.9s,mb5.2
DRGR 80.53 345⇓*i*P P **17 08 01.6 0.0**
DRGR 80.53 345 ⇓P P **17 08 01.6 +0.1**
MEZF Maizieres J'vi 80.54 357⇑*i*P P **17 08 01.7 +0.1**
comp=Z,54nm,1.0s,mb5.1
MEZF Maizieres J'vi 80.54 357⇑*i*P P **17 08 01.7 +0.1**
comp=Z,54nm,1.0s,mb5.4
FUR Furstenfeldbru 80.54 353 *e*P P **17 08 02.0 +0.3**
FUR pmax pmax
comp=Z,17nm,0.8s,mb5.0
FUR Furstenfeldbru 80.54 353 *e*P P **17 08 02.0 +0.3**
comp=Z,17nm,0.8s,mb5.0
CDF Champ du Feu 80.54 356 *e*P P **17 08 01.2 -0.5**
comp=Z,11nm,0.9s,mb4.5
CDF Champ du Feu 80.54 356 *e*P P **17 08 01.2 -0.5**
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CDF Champ du Feu 80.54 356 *e*P P **17 08 01.2 -0.5**
comp=Z,5.7nm,0.9s,mb4.5
BFO Black Forest 80.57 355 *e*P P **17 08 01.4 -0.4**
BFO pmax pmax
comp=Z,16nm,1.2s,mb4.8
BFO Black Forest 80.57 355 *e*P P **17 08 01.4 -0.4**
comp=Z,16nm,1.2s,mb4.8
ROSF Rostrenen 80.70 3⇑*i*P P **17 08 02.3 -0.2**
comp=Z,129nm,1.4s,mb5.4
ROSF Rostrenen 80.70 3⇑*i*P P **17 08 02.3 -0.2**
ROSF pmax pmax
comp=Z,65nm,1.4s,mb5.4
ROSF Rostrenen 80.70 3*i*P P **17 08 02.3 -0.2**
comp=Z,65nm,1.4s,mb5.4
GRR Gorron 80.70 1⇑*i*P P **17 08 02.2 -0.3**
comp=Z,61nm,0.9s,mb5.2
GRR Gorron 80.70 1⇑*i*P P **17 08 02.2 -0.3**
GRR pmax pmax
comp=Z,30nm,0.9s,mb5.2
GRR Gorron 80.70 1⇑*i*P P **17 08 02.2 -0.3**
comp=Z,30nm,0.9s,mb5.2
VRI Vrincioaia 80.70 342⇓*i*P P **17 08 03.2 +0.6**
VRI Vrincioaia 80.70 342 ⇓P P **17 08 03.2 +0.6**
PLOR Plostina 80.73 342⇓*i*P P **17 08 03.4 +0.7**
ECH Echery 80.74 356 *e*P P **17 08 02.4 -0.3**
ECH Echery 80.74 356 *e*P P **17 08 02.1 -0.6**
ECH pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ECH Echery 80.74 356 *e*P P **17 08 02.1 -0.6**
comp=Z,10nm,0.9s,mb4.8
SPAK Spaichingen-Ko 80.77 355 *e*P P **17 08 02.9 0.0**
THEF They Montfort 80.78 357 *e*P P **17 08 02.9 0.0**
SGMF Saint Gilles 80.80 2 *e*P P **17 08 02.8 -0.3**
RJOB Jochberg 80.84 352 *e*P P **17 08 03.0 -0.3**
comp=Z,12nm,0.8s,mb4.9
JASL Jaisalmer 80.88 302 *e*P P **17 08 03.6 -0.3**
JASL AMb AMB 17 08 04.7
comp=Z,74nm,0.8s,mb5.7
NGP Nagpur 80.88 292 *e*P P **17 08 03.1 -0.8**
NGP AMb AMB 17 08 14.9
comp=Z,26nm,2.1s,mb4.8
TLCR 80.94 340⇑*i*P P **17 08 04.3 +0.5**
TLCR 80.94 340 ⇑P P **17 08 04.3 +0.5**
HAU Haudompre 80.99 356 *e*P P **17 08 03.6 -0.4**
comp=Z,40nm,1.1s,mb5.0
HAU *e*MLR MLR
comp=Z,153nm,21.0s,MS4.0
HAU Haudompre 80.99 356 *e*P P **17 08 03.6 -0.4**
HAU pmax pmax
comp=Z,20nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,150nm,21.0s,MS4.3
HAU Haudompre 80.99 356 *e*P P **17 08 03.6 -0.4**
comp=Z,20nm,1.1s,mb5.0
HAU LR LR
comp=Z,150nm,21.0s,MS4.3
FELD Feldberg im Sc 81.04 355 *e*P P **17 08 04.0 -0.3**
ARSA Arzberg 81.05 350⇑*i*P P **17 08 04.8 +0.4**
comp=Z,11nm,0.8s,mb4.8
QUIF Quistinic 81.12 3⇑*i*P P **17 08 04.5 -0.3**
comp=Z,90nm,1.2s,mb5.3
QUIF Quistinic 81.12 3⇑*i*P P **17 08 04.5 -0.3**
QUIF pmax pmax
comp=Z,45nm,1.2s,mb5.3
QUIF Quistinic 81.12 3⇑*i*P P **17 08 04.5 -0.3**
comp=Z,45nm,1.2s,mb5.3
HINF Hinteralfeld 81.15 356⇑*i*P P **17 08 04.3 -0.6**
comp=Z,19nm,1.0s,mb4.7
HINF Hinteralfeld 81.15 356⇑*i*P P **17 08 04.3 -0.6**
HINF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
HINF Hinteralfeld 81.15 356⇑*i*P P **17 08 04.3 -0.6**
comp=Z,9.7nm,1.0s,mb4.7
WATA Walderalm 81.34 353⇑*i*P P **17 08 06.1 +0.2**
comp=Z,14nm,0.6s,mb5.0
MOTA Moosalm 81.37 353⇑*i*P P **17 08 06.1 0.0**
comp=Z,8.8nm,0.6s,mb4.8
WTTA Wattenberg 81.41 353⇑*i*P P **17 08 06.5 +0.2**
comp=Z,42nm,1.2s,mb5.2
VOIR 81.43 343⇓*i*P P **17 08 07.6 +1.1**
KBA Koelnbreinsper 81.44 351⇑*i*P P **17 08 07.3 +0.8**
comp=Z,93nm,1.2s,mb5.6
HARR Harsova 81.59 341⇓*i*P P **17 08 07.5 +0.2**
HARR Harsova 81.59 341 ⇓P P **17 08 07.5 +0.2**
SOKA Soboth 81.67 350⇑*i*P P **17 08 07.9 +0.2**
comp=Z,47nm,1.1s,mb5.3
PKSM Moragy 81.69 348⇓*i*P P **17 08 07.2 -0.6**
PERS Pernice 81.70 350 *i* P P **17 08 08.0 +0.1**
TIRR Tirgusor 81.72 340⇓*i*P P **17 08 08.3 +0.3**
TIRR Tirgusor 81.72 340 ⇓P P **17 08 08.3 +0.4**
FETA Feichten 81.72 353⇑*i*P P **17 08 08.2 +0.2**
comp=Z,29nm,1.1s,mb5.1
LOR Lormes 81.80 358⇑*i*P P **17 08 08.1 -0.3**
comp=Z,60nm,1.2s,mb5.1
LOR *e*MLR MLR
comp=Z,159nm,21.0s,MS4.0
LOR Lormes 81.80 358⇑*i*P P **17 08 08.1 -0.3**
LOR pmax pmax
comp=Z,30nm,1.2s,mb5.1
LOR MLR MLR
comp=Z,160nm,21.0s,MS4.4
LOR Lormes 81.80 358⇑*i*P P **17 08 08.1 -0.3**
comp=Z,30nm,1.2s,mb5.1
LOR LR LR
comp=Z,160nm,21.0s,MS4.4
WRAB Tennant Creek 81.81 224 P P **17 08 06.3 -2.3**
WRAB pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
WRAB Tennant Creek 81.81 224 *e*P P **17 08 05.8 -2.8**
comp=Z,8.3nm,1.3s,mb4.5
WB2 Warramunga Arr 81.81 224 *e*P P **17 08 06.1 -2.5**
WRA Warramunga Arr 81.82 224 P P **17 08 06.6 -2.1**
comp=Z,2.5nm,0.8s,mb4.2,baz=33,slow=6.0,SNR=22
HYF Humbligny 81.82 359 *e*P P **17 08 08.4 -0.1**
BZS Buzias 81.84 345⇓*i*P P **17 08 08.4 -0.2**
BZS Buzias 81.84 345 ⇓P P **17 08 08.4 -0.2**
ABTA Abfaltersbach 81.85 352⇑*i*P P **17 08 08.6 0.0**
comp=Z,20nm,0.9s,mb5.0
GZR Gura Zlata 81.87 345⇑*i*P P **17 08 09.2 +0.4**
GZR Gura Zlata 81.87 345 ⇑P P **17 08 09.2 +0.4**
OBKA Obir 81.89 351⇓*i*P P **17 08 09.2 +0.4**
comp=Z,27nm,1.1s,mb5.1
SSF Saint Saulge 82.02 358⇑*i*P P **17 08 09.3 -0.2**
comp=Z,32nm,1.0s,mb4.9
SSF Saint Saulge 82.02 358⇑*i*P P **17 08 09.3 -0.2**
SSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 82.02 358⇑*i*P P **17 08 09.3 -0.2**
comp=Z,16nm,1.0s,mb4.9
DAVOX Davos/Dischmat 82.02 354 LR LR 17 46 03.1
comp=Z,99nm,18.1s,MS4.2,baz=72,slow=37
AVF Avril sur Loir 82.29 358⇑*i*P P **17 08 10.6 -0.3**
comp=Z,53nm,1.1s,mb5.1
AVF Avril sur Loir 82.29 358⇑*i*P P **17 08 10.6 -0.3**
AVF pmax pmax
comp=Z,26nm,1.1s,mb5.1
AVF Avril sur Loir 82.29 358⇑*i*P P **17 08 10.6 -0.3**
comp=Z,26nm,1.1s,mb5.1
TUE Stuetta 82.36 354 *e*P P **17 08 11.8 +0.5**
comp=Z,13nm,0.8s,mb4.9
CABF La Chapelle 82.39 356⇑*i*P P **17 08 11.6 +0.1**
comp=Z,50nm,1.0s,mb5.1
CABF La Chapelle 82.39 356⇑*i*P P **17 08 11.6 +0.1**
CABF pmax pmax
comp=Z,25nm,1.0s,mb5.1
CABF La Chapelle 82.39 356⇑*i*P P **17 08 11.6 +0.1**
comp=Z,25nm,1.0s,mb5.1
AKL Akola 82.41 294 *e*P P **17 08 12.0 0.0**
AKL AMb AMB 17 08 24.3
comp=Z,31nm,1.6s,mb5.0
SMF Signal de Mont 82.42 358⇑*i*P P **17 08 11.5 -0.1**
comp=Z,64nm,1.1s,mb5.3
SMF Signal de Mont 82.42 358⇑*i*P P **17 08 11.5 -0.1**
SMF pmax pmax
comp=Z,42nm,1.1s,mb5.3
SMF Signal de Mont 82.42 358⇑*i*P P **17 08 11.5 -0.1**
comp=Z,42nm,1.1s,mb5.3
MFF Saint Martin d 82.50 1⇑*i*P P **17 08 11.8 -0.2**
comp=Z,40nm,0.9s,mb5.0
MFF Saint Martin d 82.50 1⇑*i*P P **17 08 11.8 -0.2**
MFF pmax pmax
comp=Z,20nm,0.9s,mb5.0
MFF Saint Martin d 82.50 1⇑*i*P P **17 08 11.8 -0.2**
comp=Z,20nm,0.9s,mb5.0
BGF Bois d'Agland 82.53 359 *e*P P **17 08 11.9 -0.3**
comp=Z,34nm,1.0s,mb5.0
BGF Bois d'Agland 82.53 359 *e*P P **17 08 11.9 -0.3**
BGF pmax pmax
comp=Z,17nm,1.0s,mb5.0
BGF Bois d'Agland 82.53 359 *e*P P **17 08 11.9 -0.3**
comp=Z,17nm,1.0s,mb5.0
JAVS Javornik 82.55 351 *i* P P **17 08 11.8 -0.5**
VISS Visnje 82.56 350 *i* P P **17 08 12.1 -0.3**
BOJS Bojanci 82.81 350 *i* P P **17 08 13.4 -0.2**
TCF Toulx Ste Croi 82.81 359 *e*P P **17 08 13.3 -0.3**
comp=Z,32nm,1.0s,mb5.0
TCF Toulx Ste Croi 82.81 359 *e*P P **17 08 13.3 -0.3**
TCF pmax pmax
comp=Z,16nm,1.0s,mb5.0
TCF Toulx Ste Croi 82.81 359 *e*P P **17 08 13.3 -0.3**
comp=Z,16nm,1.0s,mb5.0
AGO Saint Agoulin 83.03 358 *e*P P **17 08 15.9 +1.1**
PLDF La Plantade 83.11 358 *e*P P **17 08 16.8 +1.6**
LPL La Plagne 83.46 356 *e*P P **17 08 17.8 +0.8**
LPG La Plagne 83.47 356⇑*i*P P **17 08 18.1 +1.0**
comp=Z,21nm,1.0s,mb4.8
LPG La Plagne 83.47 356⇑*i*P P **17 08 18.1 +1.0**
LPG pmax pmax
comp=Z,11nm,1.0s,mb4.8
LPG La Plagne 83.47 356⇑*i*P P **17 08 18.1 +1.0**
comp=Z,11nm,1.0s,mb4.8
RKT Rikitea 83.60 140 *e*LR LR 17 34 36.3
comp=Z,465nm,27.8s,baz=337
RJF Les Rejaudoux 83.80 360 *e*P P **17 08 18.5 -0.3**
comp=Z,45nm,1.0s,mb5.3
RJF *e*MLR MLR
comp=Z,205nm,18.5s,MS4.2
RJF Les Rejaudoux 83.80 360 *e*P P **17 08 18.5 -0.3**
RJF pmax pmax
comp=Z,23nm,1.0s,mb5.3
RJF MLR MLR
comp=Z,200nm,18.5s,MS4.5
RJF Les Rejaudoux 83.80 360 *e*P P **17 08 18.5 -0.3**
comp=Z,23nm,1.0s,mb5.2
RJF LR LR
comp=Z,200nm,18.5s,MS4.5
LBL Lubilhac 83.85 358 *e*P P **17 08 20.3 +1.3**
HAKT HAKKARI 83.92 327 *i* P P **17 08 27.2 +7.7**
BNI Bardonecchia 83.92 356 P P **17 08 20.6 +1.2**
BNI pmax pmax
comp=Z,25nm,1.0s,mb5.3
BNI Bardonecchia 83.92 356 *e*P P **17 08 20.4 +1.0**
comp=Z,25nm,1.0s,mb5.3
KEMA Kemaliye 84.03 332 *i* P P **17 08 21.0 +1.0**
HYB Hyderabad 84.09 290 *i* P P **17 08 20.0 -0.7**
HYB *e*pP pP 17 08 34.0 -1.0
HYB Hyderabad 84.09 290 *e*P P **17 08 20.0 -0.7**
ORIF Oris-en-Rattie 84.09 356⇑*i*P P **17 08 20.8 +0.6**
comp=Z,24nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,92nm,21.2s,MS3.8
ORIF Oris-en-Rattie 84.09 356⇑*i*P P **17 08 20.8 +0.6**
ORIF pmax pmax
comp=Z,12nm,0.9s,mb5.0
ORIF Oris-en-Rattie 84.09 356⇑*i*P P **17 08 20.8 +0.6**
comp=Z,12nm,0.9s,mb5.0
LFF La Frestale 84.16 0⇑*i*P P **17 08 20.5 -0.1**
comp=Z,80nm,1.0s,mb5.5
LFF La Frestale 84.16 0⇑*i*P P **17 08 20.5 -0.1**
LFF pmax pmax
comp=Z,40nm,1.0s,mb5.5
LFF La Frestale 84.16 0⇑*i*P P **17 08 20.5 -0.1**
comp=Z,40nm,1.0s,mb5.5
CAF Calviac 84.17 359 *e*P P **17 08 20.7 0.0**
comp=Z,55nm,1.1s,mb5.3
CAF Calviac 84.17 359 *e*P P **17 08 20.7 0.0**
CAF pmax pmax
comp=Z,27nm,1.1s,mb5.3
CAF Calviac 84.17 359 *e*P P **17 08 20.7 0.0**
comp=Z,27nm,1.1s,mb5.3
VIVF Saint-Julien-l 84.19 357⇑*i*P P **17 08 20.9 +0.1**
comp=Z,23nm,1.0s,mb5.0
VIVF Saint-Julien-l 84.19 357⇑*i*P P **17 08 20.9 +0.1**
VIVF pmax pmax
comp=Z,12nm,1.0s,mb5.0
VIVF Saint-Julien-l 84.19 357⇑*i*P P **17 08 20.9 +0.1**
comp=Z,12nm,1.0s,mb5.0
MBDF Montbardon 84.24 356⇑*i*P P **17 08 21.7 +0.7**
comp=Z,41nm,0.9s,mb5.2
MBDF Montbardon 84.24 356⇑*i*P P **17 08 21.7 +0.7**
MBDF pmax pmax
comp=Z,21nm,0.9s,mb5.3
MBDF Montbardon 84.24 356⇑*i*P P **17 08 21.7 +0.7**
comp=Z,20nm,0.9s,mb5.3
FITZ Fitzroy Crossi 84.27 232 *e*P P **17 08 20.2 -1.1**
comp=Z,16nm,0.6s,mb5.3
ELZG Elazig 84.59 331 *i* P P **17 08 24.1 +1.2**
TOUF Mont Tournerai 84.93 355 *e*P P **17 08 24.8 +0.3**
AUTN L'Aution 84.94 355 *e*P P **17 08 24.8 +0.2**
SAOF Saorge 84.94 355 *e*P P **17 08 24.5 -0.1**
BR131 Keskin Array S 84.97 335 *e*P P **17 08 24.7 -0.1**
BRTR Keskin Array B 84.97 335 P P **17 08 25.0 +0.2**
comp=Z,19nm,0.8s,mb5.2,baz=60,slow=3.0,SNR=47
BRTR LR LR 17 48 59.6
comp=Z,55nm,18.4s,MS4.0,baz=162,slow=38
LASF Ste Croix 84.99 358 *e*P P **17 08 24.9 +0.1**
comp=Z,28nm,1.0s,mb5.1
SMRF Simiane la Rot 85.04 357⇑*i*P P **17 08 25.8 +0.7**
comp=Z,51nm,0.9s,mb5.3
SMRF Simiane la Rot 85.04 357⇑*i*P P **17 08 25.8 +0.7**
comp=Z,51nm,0.9s,mb5.7
LUCF Luceram 85.05 355 *e*P P **17 08 25.1 0.0**
MVIF Mont Vial 85.05 355 *e*P P **17 08 25.3 +0.2**
SBF Sospel 85.07 355 *e*P P **17 08 24.8 -0.4**
comp=Z,102nm,0.9s,mb5.6
SBF Sospel 85.07 355 *e*P P **17 08 24.8 -0.4**
SBF pmax pmax
comp=Z,51nm,0.9s,mb5.7
SBF Sospel 85.07 355 *e*P P **17 08 24.8 -0.4**
comp=Z,51nm,0.9s,mb5.7
AKCD Akcadag 85.09 332 *i* P P **17 08 26.5 +1.0**
VILF Villemus 85.16 357 *e*P P **17 08 26.5 +0.8**
PINB Pinarbasi 85.19 333 *i* P P **17 08 26.6 +0.7**
REVF Revere 85.20 355 *e*P P **17 08 25.8 -0.1**
CALN Calern 85.21 356 *e*P P **17 08 26.7 +0.8**
ASAR Alice Springs 85.30 222 P P **17 08 25.1 -1.3**
comp=Z,3.8nm,1.0s,mb4.5,baz=23,slow=5.0,SNR=21
TAVF Tavernes 85.38 356 *e*P P **17 08 27.3 +0.5**
FRF La Foret Royal 85.41 356 *e*P P **17 08 26.6 -0.3**
comp=Z,40nm,0.9s,mb5.2
FRF La Foret Royal 85.41 356 *e*P P **17 08 26.6 -0.3**
FRF pmax pmax
comp=Z,20nm,0.9s,mb5.2
FRF La Foret Royal 85.41 356 *e*P P **17 08 26.6 -0.3**
comp=Z,20nm,0.9s,mb5.2
BORA Eskisehir 85.62 338 *i* P P **17 08 28.3 +0.3**
LMR La Mourre 85.64 356 *e*P P **17 08 27.9 -0.2**
comp=Z,82nm,1.1s,mb5.5
LMR La Mourre 85.64 356 *e*P P **17 08 27.9 -0.2**
LMR pmax pmax
comp=Z,41nm,1.1s,mb5.6
LMR La Mourre 85.64 356 *e*P P **17 08 27.9 -0.2**
comp=Z,41nm,1.1s,mb5.6
MTLF Montolieu 85.75 359 *e*P P **17 08 28.6 0.0**
comp=Z,62nm,1.2s,mb5.4
MTLF Montolieu 85.75 359 *e*P P **17 08 28.6 0.0**
MTLF pmax pmax
comp=Z,31nm,1.2s,mb5.4
MTLF Montolieu 85.75 359 *e*P P **17 08 28.6 0.0**
comp=Z,31nm,1.2s,mb5.4
ESKT Eskisehir 85.86 337 *i* P P **17 08 29.6 +0.4**
EPF Esparros 86.07 0 *e*P P **17 08 29.5 -0.7**
comp=Z,24nm,1.1s,mb5.0
EPF Esparros 86.07 0 *e*P P **17 08 29.5 -0.7**
EPF pmax pmax
comp=Z,12nm,1.1s,mb5.0
EPF Esparros 86.07 0 *e*P P **17 08 29.5 -0.7**
comp=Z,12nm,1.1s,mb5.0
AQU L'Aquila 86.12 351 *e*P P **17 08 30.2 -0.2**
AQU pmax pmax
comp=Z,32nm,0.8s,mb5.6
AQU L'Aquila 86.12 351 *e*P P **17 08 30.2 -0.3**
comp=Z,32nm,0.8s,mb5.6
ETSF Etsaut 86.19 1 *e*P P **17 08 31.1 +0.3**
comp=Z,27nm,0.9s,mb5.2
ETSF Etsaut 86.19 1 *e*P P **17 08 31.1 +0.3**
ETSF pmax pmax
comp=Z,14nm,0.9s,mb5.2
ETSF Etsaut 86.19 1 *e*P P **17 08 31.1 +0.3**
comp=Z,14nm,0.9s,mb5.2
ANDN Andirin 86.22 333 *i* P P **17 08 32.2 +1.2**
PGF Pioggiola 86.29 354⇑*i*P P **17 08 31.0 -0.3**
comp=Z,86nm,0.9s,mb5.7
PGF Pioggiola 86.29 354⇑*i*P P **17 08 31.0 -0.3**
PGF pmax pmax
comp=Z,43nm,0.9s,mb5.7
PGF Pioggiola 86.29 354⇑*i*P P **17 08 31.0 -0.3**
comp=Z,43nm,0.9s,mb5.7
KAD Karad 86.72 294 *e*P P **17 08 32.9 -0.9**
MVO Moncorvo 87.67 6 *e*P P **17 08 38.0 -0.1**
comp=Z,34nm,1.2s,mb5.5
MTE Manteigas 88.40 6 *e*P P **17 08 42.2 +0.7**
ESDC Sonseca Array 89.32 4 P P **17 08 45.2 -0.7**
comp=Z,5.5nm,0.8s,mb4.9,baz=353,slow=4.7,SNR=14
PMRV Marv??o 89.38 6 *e*P P **17 08 46.0 -0.1**
STKA Stephens Creek 89.75 213 *e*P P **17 08 46.9 -0.7**
comp=Z,6.6nm,0.9s,mb5.0
STKA Stephens Creek 89.75 213 P P **17 08 47.0 -0.7**
comp=Z,11nm,1.0s,mb5.1,baz=354,slow=6.3,SNR=8.8
STKA LR LR 17 46 45.1
comp=Z,171nm,19.0s,MS4.5,baz=218,slow=34
CEL Celeste 89.88 348 *e*P P **17 08 46.6 -1.9**
comp=Z,17nm,0.9s,mb5.4
ASF Jabal al Asfar 91.08 330 LR LR 17 55 45.1
comp=Z,94nm,18.8s,MS4.2,baz=79,slow=39
KEST Kesra 93.05 353 P P **17 09 01.7 -1.5**
comp=Z,1.9nm,0.8s,mb4.6,baz=294,slow=4.2,SNR=6.1
MDT Midelt 96.13 5 LR LR 17 49 26.1
comp=Z,67nm,20.2s,MS4.1,baz=336,slow=33
TORD Torodi Ar. Bea 115.84 359 PKP PKPdf 17 14 31.1 -1.2
comp=Z,0.2nm,0.4s,baz=7.5,slow=1.5,SNR=4.1
TORD PP PP 17 15 31.4 -3.7
comp=Z,0.9nm,0.9s,baz=10,slow=6.2,SNR=3.6
DBIC Dimbokro 122.07 7 PKP PKPdf 17 14 43.0 -1.4
comp=Z,1.3nm,0.4s,baz=335,slow=2.5,SNR=10
CPUP Villa Florida 129.78 83 PKP PKPdf 17 14 57.2 -1.4
comp=Z,0.4nm,0.4s,baz=318,slow=7.1,SNR=4.2
PLCA Paso Flores 131.10 107 PKP PKPdf 17 14 59.5 -1.1
comp=Z,2.2nm,0.8s,baz=314,slow=4.4,SNR=3.7
QSPA South Pole Qui 141.03 180 PKhKP 17 15 13.1
comp=Z,2.4nm,1.0s,baz=16,slow=1.9,SNR=4.9
QSPA South Pole Qui 141.03 180 *e*PKPpre 17 15 12.2
TSUM Tsumeb 145.39 332 PKPbc PKPbc 17 15 27.7 +0.3
comp=Z,26nm,0.9s,baz=353,slow=5.3,SNR=46
TSUM Tsumeb 145.39 332 *e*PKPdf PKPdf 17 15 27.0 -0.4
LBTB Lobatse 147.68 315 *e*PKP2 PKPbc 17 15 34.2 +0.3
BOSA Boshof 150.91 312 PKPbc PKPbc 17 15 41.2 -0.7
comp=Z,5.2nm,0.5s,baz=26,slow=1.6,SNR=21
BOSA Boshof 150.91 312 *e*PKPbc PKPbc 17 15 40.9 -1.0
VNA3 Neumayer Olymp 159.39 170 *e*PKPdf PKPdf 17 15 44.1 -2.2
VNA3 *e* 17 16 23.0
VNA3 *e* 17 16 31.5
VNA3 *e* 17 16 36.6
VNA2 Neumayer--Watz 159.92 172 *e*PKPdf PKPdf 17 15 45.7 -1.2
baz=268,slow=2.8
VNA2 *e* 17 16 26.2
VNA2 *e* 17 16 34.2
VNA2 *e* 17 16 39.6

ISCJB ***20*** *17:10:13.0±0.8, 39.39N±.005×33.10E±.005, h9km±6km, Error ellipse: s-maj=9.0km s-min=5.3km az=148.4*
CSEM ***20*** *17:10:12.7±0.1, 39.39N×.3309E, h12km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.6km az=169.0*
ISK ***20*** *17:10:12.7, 39.39N×.3309E, h15km, MD2.8*
DDA ***20*** *17:10:13.6, 39.39N×.3313E, h7km±2km, Md2.9*
ISC 20 17:10:13.4±0.8, 3939N±.005×3310E±.005, h12km±6km, n9, σ0s78/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**93**	*e*PG	**Pg**	**17 10 22.7**	**0.0**
KAMT				*e*SG	**Sg**	**17 10 30.0**	**+1.0**
LOD	**Lodumlu**	**0.56**	**332**	*e*PG	**Pg**	**17 10 24.0**	**-0.3**
CDAG	**Cicekdag**	**1.01**	**76**	*i* P	**Pn**	**17 10 32.3**	**-1.1**
CDAG				*i* S	**Sn**	**17 10 47.0**	**-0.5**
KIZT	**Kizilcal**	**1.08**	**242**	*e*PG	**Pg**	**17 10 33.8**	**-0.3**
KIZT				*e*SG	**Sn**	**17 10 49.3**	**+0.1**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pb**	**17 10 34.7**	**-0.1**
ELDT				*i* S	**Sn**	**17 10 51.1**	**+0.8**
KDHN	**Kadinhani**	**1.16**	**222**	*i* P	**Pb**	**17 10 36.2**	**+0.8**
KDHN				*i* S	**Sn**	**17 10 52.6**	**+1.4**
LADK	**Ladik-KONYA**	**1.32**	**206**	*e*PN	**Pn**	**17 10 36.5**	**-1.2**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*PN	**Pn**	**17 10 39.9**	**-1.0**
YOZ	**Yozgat**	**1.73**	**81**	*e*PN	**Pn**	**17 10 43.8**	**+0.5**

ISK ***20*** *17:22:03.7, 39.37N×33.11E, h12km, MD2.7*
CSEM ***20*** *17:22:03.8±0.1, 39.37N×33.12E, h10km, MD2.7, Error ellipse: s-maj=1.9km s-min=1.1km az=151.0*
DDA ***20*** *17:22:04.0, 39.38N×33.10E, h7km±2km, Md2.7*
ISCJB ***20*** *17:22:04.7±0.5, 3936N±004×33.11E±004, h10km, Error ellipse: s-maj=5.5km s-min=3.7km az=149.8*

ISC 20 17:22:04.8±0.6, **3936N**±004×**3313E**±004, **h5**km±8km, **n13,** σ1§**02**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**88**	*e*PG	**Pg**	**17 22 13.3**	**-0.3**
KAMT				*e*SG	**Sg**	**17 22 20.6**	**+1.1**
LOD	**Lodumlu**	**0.60**	**333**	*e*PG	**Pg**	**17 22 14.8**	**-1.6**
LOD				*e*SG	**Sg**	**17 22 24.6**	**+0.3**
CDAG	**Cicekdag**	**1.00**	**74**	*i* P	**Pg**	**17 22 23.1**	**-0.9**
CDAG				*i* S	**Sg**	**17 22 38.1**	**+1.1**
CDAG	**Cicekdag**	**1.00**	**74**	*i* P	**Pg**	**17 22 23.2**	**-0.8**
KIZT	**Kizilcal**	**1.08**	**244**	*e*PG	**Pg**	**17 22 25.1**	**-0.4**
KIZT				*e*SG	**Sg**	**17 22 39.9**	**+0.5**
KDHN	**Kadinhani**	**1.15**	**224**	*e*P	**Pg**	**17 22 26.1**	**-0.7**
KDHN				*i* S	**Sg**	**17 22 42.1**	**+0.5**
KDHN	**Kadinhani**	**1.15**	**224**	*i* P	**Pg**	**17 22 27.4**	**+0.7**
KDHN				*i* S	**Sg**	**17 22 42.4**	**+0.8**
ELDT	**Eldivan**	**1.16**	**11**	*e*P	**Pg**	**17 22 26.3**	**-0.7**
ELDT				*i* S	**Sg**	**17 22 42.3**	**+0.3**
LADK	**Ladik-KONYA**	**1.30**	**208**	*e*PN	**Pn**	**17 22 27.6**	**-2.0**
KONT	**Konya--Tatoy**	**1.53**	**203**	*e*PN	**Pn**	**17 22 32.2**	**-0.5**
YOZ	**Yozgat**	**1.72**	**80**	*e*PN	**Pn**	**17 22 35.0**	**-0.4**
ESKT	**Eskisehir**	**1.77**	**276**	*e*P	**Pn**	**17 22 37.8**	**+1.7**
ESKT				*i* S	**Sn**	**17 23 02.3**	**+3.4**
SEYT	**Eskypehyr**	**1.77**	**276**	*e*P	**Pn**	**17 22 37.8**	**+1.7**
SEYT				*i* S	**Sn**	**17 23 02.3**	**+3.4**

IDC ***20*** *17:27:45.4±0.9, 3921S×17584E, h92km±11km, mb3.9/3, mb1 4.0/4, mb1mx3.8/14, mbtmp3.9/4, Error ellipse: s-maj=26.5km s-min=11.4km az=133.0*
ISCJB ***20*** *17:27:46.0±0.3, 3906S±004×17578E±006, h114km±3km, mb4.2/4, Error ellipse: s-maj=8.2km s-min=5.1km az=32.2*
NEIC ***20*** *17:27:48.0, 3894S×17580E, h101km, mb4.3/1, After WEL.*

ISC 20 17:27:46.9±0.3, **3907S**±004×**17578E**±006, **h107**km±3km, **n73,** σ1§**15**/73, **mb4.2**/4, **1D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITZ	**Rihia Road**	**0.10**	**35**	P	**Pn**	**17 28 02.2**	**+0.5**
KATZ	**Kakaramea**	**0.11**	**323**	P	**Pn**	**17 28 01.9**	**+0.1**
NGZ	**Ngauruhoe**	**0.18**	**231**	P	**Pn**	**17 28 02.4**	**+0.5**
NGZ				S	**Sn**	**17 28 13.2**	**0.0**
RATZ	**Rangitukua**	**0.20**	**358**	P	**Pn**	**17 28 01.8**	**-0.2**
TUVZ	**Tukino**	**0.23**	**206**	P	**Pn**	**17 28 03.1**	**+1.1**
FWVZ	**Far West T-bar**	**0.26**	**223**	P	**Pn**	**17 28 02.8**	**+0.6**
TWVZ	**Taurewa**	**0.27**	**268**	P	**Pn**	**17 28 02.7**	**+0.5**
DRZ	**Dome Shelter**	**0.27**	**219**	P	**Pn**	**17 28 03.5**	**+1.3**
HATZ	**Hinemaiaia**	**0.30**	**55**	P	**Pn**	**17 28 02.3**	**0.0**
WNVZ	**Wahianoa**	**0.30**	**208**	P	**Pn**	**17 28 03.5**	**+1.2**
MOVZ	**Moawhango**	**0.34**	**184**	P	**Pn**	**17 28 03.5**	**+1.0**
WATZ	**Wairara**	**0.36**	**354**	P	**Pn**	**17 28 02.4**	**-0.2**
BKZ	**Black Stump Fm**	**0.56**	**101**	P	**Pn**	**17 28 04.1**	**+0.2**
VRZ	**Vera Road**	**0.80**	**265**	P	**Pn**	**17 28 06.1**	**+0.3**
HIZ	**Hauiti**	**0.91**	**307**	P	**Pn**	**17 28 06.4**	**-0.5**
WAZ	**Wanganui**	**0.93**	**222**	P	**Pn**	**17 28 08.5**	**+1.4**
UTU	**Utuhina**	**0.94**	**20**	P	**Pn**	**17 28 07.0**	**-0.3**
UTU				S	**Sn**	**17 28 11.6**	**-11**
TSZ	**Takapari Road**	**1.00**	**172**	P	**Pn**	**17 28 09.7**	**+1.8**
RAEZ	**Rainy Point**	**1.10**	**258**	P	**Pn**	**17 28 10.3**	**+1.4**
EDRZ	**Edgecumbe**	**1.22**	**38**	P	**Pn**	**17 28 09.6**	**-0.6**
URZ	**Urewera**	**1.31**	**53**	P	**Pn**	**17 28 10.7**	**-0.6**
URZ	baz=241,slow=8.4			S	**Sn**	**17 28 27.8**	**-2.0**
	436nm,0.3s,baz=128,slow=21,SNR=86						
URZ	**Urewera**	**1.31**	**53**	P	**Pn**	**17 28 10.6**	**-0.7**
NEZ	**North Egmont**	**1.33**	**261**	P	**Pn**	**17 28 12.9**	**+1.4**
PKE	**Pukeiti**	**1.40**	**264**	P	**Pn**	**17 28 13.3**	**+1.0**
KNZ	**Kokohu**	**1.48**	**89**	P	**Pn**	**17 28 13.8**	**+0.6**
NWEZ	**Newall Road**	**1.50**	**261**	P	**Pn**	**17 28 14.5**	**+1.0**
MWZ	**Matawai**	**1.55**	**62**	P	**Pn**	**17 28 13.2**	**-0.9**
MRZ	**Mangatainoka R**	**1.60**	**185**	P	**Pn**	**17 28 15.5**	**+0.7**
BFZ	**Birch Farm**	**1.65**	**168**	P	**Pn**	**17 28 16.4**	**+1.0**
KIW	**Kapiti Island**	**1.92**	**200**	P	**Pn**	**17 28 19.3**	**+0.6**
MKAZ	**Moumakai**	**2.01**	**346**	P	**Pn**	**17 28 19.1**	**-0.8**
MTW	**Mount Morrison**	**2.10**	**186**	P	**Pn**	**17 28 21.5**	**+0.5**
CAW	**Cannon Point**	**2.11**	**195**	P	**Pn**	**17 28 21.7**	**+0.5**
PUZ	**Puketiti**	**2.18**	**64**	P	**Pn**	**17 28 21.4**	**-0.6**
KUZ	**Kuaotunu**	**2.31**	**359**	P	**Pn**	**17 28 22.5**	**-1.3**
MRW	**Makara Radio**	**2.32**	**201**	P	**Pn**	**17 28 23.8**	**0.0**
PAWZ	**Paruwai Farm**	**2.33**	**187**	P	**Pn**	**17 28 24.2**	**+0.2**
WEL	**Wellington**	**2.35**	**199**	P	**Pn**	**17 28 23.4**	**-0.8**
MSWZ	**Moikau Station**	**2.38**	**190**	P	**Pn**	**17 28 24.8**	**+0.1**
SNZO	**South Karori**	**2.39**	**200**	P	**Pn**	**17 28 24.7**	**0.0**
TCW	**Tory Channel**	**2.44**	**208**	P	**Pn**	**17 28 25.3**	**0.0**
BHW	**Baring Head**	**2.44**	**196**	P	**Pn**	**17 28 25.4**	**0.0**
MXZ	**Matakaoa Point**	**2.49**	**54**	P	**Pn**	**17 28 25.8**	**-0.3**
NNZ	**Nelson**	**2.83**	**220**	P	**Pn**	**17 28 29.9**	**-0.6**
CMWZ	**Cape Campbell**	**2.94**	**204**	P	**Pn**	**17 28 32.1**	**+0.2**
BSWZ	**Blackbirch Sta**	**3.02**	**208**	P	**Pn**	**17 28 32.5**	**-0.5**
QRZ	**Quartz Range**	**3.06**	**234**	P	**Pn**	**17 28 33.0**	**-0.5**
THZ	**Tophouse**	**3.48**	**218**	P	**Pn**	**17 28 38.3**	**-0.8**
KHZ	**Kahutara**	**3.76**	**206**	P	**Pn**	**17 28 41.5**	**-1.4**
DSZ	**Denniston Nort**	**4.05**	**227**	P	**Pn**	**17 28 45.3**	**-1.5**
LTZ	**Lake Taylor**	**4.57**	**214**	P	**Pn**	**17 28 51.6**	**-2.2**
CRLZ	**Canterbury Las**	**5.18**	**207**	P	**Pn**	**17 28 58.3**	**-2.6**
MQZ	**McQueen's Vall**	**5.20**	**206**	P	**Pn**	**17 28 59.0**	**-3.3**
RPZ	**Rata Peaks**	**5.85**	**216**	P	**Pn**	**17 29 09.4**	**-1.6**
RPZ	4.9nm,0.3s,baz=53,slow=2.9,SNR=23			S	**Sn**	**17 30 12.1**	**-4.7**
	24nm,0.3s,baz=24,slow=19,SNR=26						
RPZ	**Rata Peaks**	**5.85**	**216**	P	**Pn**	**17 29 09.5**	**-1.6**
FOZ	**Fox Glacier**	**6.42**	**224**	P	**Pn**	**17 29 14.5**	**-4.3**
LBZ	**Lake Benmore**	**6.77**	**216**	P	**Pn**	**17 29 20.9**	**-2.6**
ODZ	**Otahua Downs**	**7.09**	**211**	P	**Pn**	**17 29 24.8**	**-3.1**
JCZ	**Jackson Bay**	**7.26**	**224**	P	**Pn**	**17 29 27.0**	**-3.3**
EAZ	**Earnscleugh**	**7.81**	**216**	P	**Pn**	**17 29 34.8**	**-2.9**
TUZ	**Tuapeka**	**8.25**	**211**	P	**Pn**	**17 29 40.9**	**-2.7**
STKA	**Stephens Creek**	**28.63**	**274**	P	**P**	**17 33 34.8**	**+1.6**
	2.8nm,1.0s,mb3.8,baz=117,slow=14,SNR=5.6						
ASAR	**Alice Springs**	**38.56**	**281**	P	**P**	**17 34 59.7**	**+0.6**
	1.9nm,0.4s,mb4.3,baz=116,slow=5.9,SNR=70						
WRA	**Warramunga Arr**	**40.38**	**286**	P	**P**	**17 35 14.6**	**+0.4**
	2.5nm,0.6s,mb4.2,baz=128,slow=7.2,SNR=63						
QSPA	**South Pole Qui**	**51.06**	**180**	*e*P	**P**	**17 36 40.9**	**+3.3**
	2.3nm,0.7s,mb4.3						
SYO	**Syowa Base**	**67.48**	**196**	⇓*e*P	**P**	**17 38 30.3**	**-0.3**
VNA3	**Neumayer Olymp**	**69.93**	**178**	*e*	**P**	**17 38 47.3**	**+1.5**
VNA3				*e*		17 38 52.8	
VNA2	**Neumayer--Watz**	**70.30**	**179**	*e*	**P**	**17 38 50.1**	**+2.1**
VNA2				*e*		17 38 54.8	
VNA1	**Neumayer--Stat**	**70.56**	**179**	*e*	**P**	**17 38 52.1**	**+2.5**
VNA1				*e*		17 38 57.2	
ARCES	**ARCESS Array B**	**145.62**	**342**	PKPbc	PKPbc	17 47 10.7	-1.1
	4.5nm,1.0s,baz=40,slow=2.1,SNR=5.1						
DBIC	**Dimbokro**	**147.74**	**179**	PKPbc	PKPbc	17 47 19.6	+0.1
	1.9nm,0.6s,baz=191,slow=6.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**153.66**	**193**	PKPbc	PKPbc	17 47 32.7	-0.7
	0.2nm,0.4s,baz=164,slow=1.4,SNR=5.2						
TORD				PKPab	PKPab	17 47 46.5	+0.1
	0.5nm,0.5s,baz=172,slow=4.4,SNR=5.8						
CLL	**Collm**	**162.81**	**321**	*e*PKPab	PKPab	17 48 26.0	+0.8

NEIC 20 17:34:48.0, 3884S×17830E, h25km, ML3.8(WEL), **After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.52**	**249**	P	**Pb**	**17 34 59.2**	**+0.6**
PUZ	**Puketiti**	**0.77**	**357**	P	Pb	**17 35 02.6**	**-0.1**
PUZ				S	Sb	**17 35 13.6**	**+0.9**
MWZ	**Matawai**	**0.79**	**310**	P	Pb	**17 35 02.4**	**-0.6**
URZ	**Urewera**	**1.10**	**301**	P	Pn	**17 35 07.2**	**-0.6**
MXZ	**Matakaoa Point**	**1.27**	**0**	P	Pn	**17 35 10.1**	**-0.1**
EDRZ	**Edgecumbe**	**1.43**	**300**	P	Pn	**17 35 12.8**	**+0.5**
BKZ	**Black Stump Fm**	**1.45**	**256**	P	Pn	**17 35 12.5**	**0.0**
KATZ	**Kakaramea**	**2.04**	**265**	P	Pn	**17 35 21.0**	**+0.3**
MOVZ	**Moawhango**	**2.06**	**253**	P	Pn	**17 35 21.4**	**+0.4**
TUVZ	**Tukino**	**2.10**	**257**	P	Pn	**17 35 22.2**	**+0.6**
NGZ	**Ngauruhoe**	**2.13**	**260**	P	Pn	**17 35 22.4**	**+0.5**
WTVZ	**West Tongariro**	**2.13**	**262**	P	Pn	**17 35 22.4**	**+0.4**
WNVZ	**Wahianoa**	**2.16**	**256**	P	Pn	**17 35 22.8**	**+0.5**
FWVZ	**Far West T-bar**	**2.18**	**258**	P	Pn	**17 35 23.1**	**+0.5**
TSZ	**Takapari Road**	**2.18**	**235**	P	Pn	**17 35 21.9**	**-0.8**
TWVZ	**Taurewa**	**2.24**	**263**	P	Pn	**17 35 23.8**	**+0.3**
BFZ	**Birch Farm**	**2.43**	**220**	P	Pn	**17 35 23.9**	**-2.1**
WAZ	**Wanganui**	**2.73**	**249**	P	Pn	**17 35 31.2**	**+1.0**
VRZ	**Vera Road**	**2.77**	**263**	P	Pn	**17 35 31.3**	**+0.5**
MRZ	**Mangatainoka R**	**2.78**	**228**	P	Pn	**17 35 29.1**	**-1.7**
KUZ	**Kuaotunu**	**2.92**	**315**	P	Pn	**17 35 32.0**	**-0.9**
MKAZ	**Moumakai**	**3.02**	**304**	P	Pn	**17 35 34.1**	**-0.1**
MTW	**Mount Morrison**	**3.16**	**222**	P	Pn	**17 35 33.0**	**-3.1**
KIW	**Kapiti Island**	**3.30**	**231**	P	Pn	**17 35 36.3**	**-1.7**
NEZ	**North Egmont**	**3.30**	**261**	P	Pn	**17 35 39.7**	**+1.6**
CAW	**Cannon Point**	**3.36**	**227**	P	Pn	**17 35 36.6**	**-2.3**
PAWZ	**Paruwai Farm**	**3.36**	**220**	P	Pn	**17 35 35.9**	**-3.0**
PKE	**Pukeiti**	**3.38**	**263**	P	Pn	**17 35 40.6**	**+1.5**
MSWZ	**Moikau Station**	**3.48**	**221**	P	Pn	**17 35 37.2**	**-3.3**
NWEZ	**Newall Road**	**3.48**	**261**	P	Pn	**17 35 42.3**	**+1.8**
MRW	**Makara Radio**	**3.65**	**228**	P	Pn	**17 35 40.5**	**-2.4**
SNZO	**South Karori**	**3.70**	**227**	P	Pn	**17 35 40.9**	**-2.6**
TCW	**Tory Channel**	**3.89**	**231**	P	Pn	**17 35 43.4**	**-2.8**
WCZ	**Waipu Caves**	**4.28**	**311**	P	Pn	**17 35 51.7**	**+0.2**
BSWZ	**Blackbirch Sta**	**4.44**	**228**	P	Pn	**17 35 50.9**	**-2.8**
NNZ	**Nelson**	**4.46**	**236**	P	Pn	**17 35 51.8**	**-2.2**
QRZ	**Quartz Range**	**4.87**	**244**	P	Pn	**17 35 56.6**	**-2.9**
THZ	**Tophouse**	**5.05**	**233**	P	Pn	**17 35 59.5**	**-2.6**
DSZ	**Denniston Nort**	**5.75**	**238**	P	Pn	**17 36 08.9**	**-2.8**
LTZ	**Lake Taylor**	**6.04**	**227**	P	Pn	**17 36 11.4**	**-4.2**
MQZ	**McQueen's Vall**	**6.46**	**219**	P	Pn	**17 36 17.5**	**-3.9**

CASC 20 17:39:35.8±2.2, **1378N×9137W, h20**km±11km, **MD3.8, 2C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.59**	**334**	⇓*i*P	Pb	**17 39 48.3**	**+0.8**
JAT				*e*S	Sb	**17 39 54.8**	**-0.8**
FUG	**Fuego 3**	**0.84**	**37**	⇓*e*P	Pb	**17 39 52.0**	**+0.3**
FUG				*e*S	Sb	**17 40 02.0**	**-0.4**
FG6		**0.91**	**311**	⇑*e*P	Pb	**17 39 52.8**	**-0.1**
FG6				*e*S	Sb	**17 40 05.9**	**+1.5**
IXG	**Ixpaco**	**0.97**	**66**	⇓*e*P	Pb	**17 39 54.1**	**+0.2**
IXG				*e*S	Sb	**17 40 07.7**	**+1.5**
NBG	**Las Nubes**	**1.27**	**51**	⇓*e*P	Pn	**17 39 59.7**	**+1.2**
NBG				*e*S	Sn	**17 40 17.7**	**+2.7**
RBDL	**Robledal**	**1.67**	**78**	⇑*e*P	x	**17 40 04.1**	
RTR	**El Retiro**	**1.68**	**86**	*e*P	x	**17 40 04.6**	
RTR				*e*S	x	**17 40 26.8**	
SBLS	**San Blas**	**1.69**	**88**	*e*P	x	**17 40 03.8**	
SBLS				*e*S	x	**17 40 26.7**	

ISCJB ***20*** *17:47:10.4±1.5, 3883S±006×1784E±02, h39km±13km, mb3.6/2, MS3.7/3, Error ellipse: s-maj=20.3km s-min=9.7km az=14.4*
NEIC ***20*** *17:47:10.2, 3888S×17849E, h56km, ML4.5(WEL), After WEL.*
NEIC Felt [IV] at Whataupoko. Also felt at Gisborne.
IDC ***20*** *17:47:10.8±4.5, 3896S×17823E, h31km±27km, mb3.6/2, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, ML3.9/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/24, Error ellipse: s-maj=39.0km s-min=32.6km az=67.0*

ISC 20 17:47:10.1±2.4, **3882S**±006×**1784E**±01, **h25**km±15km, **n65,** σ0§**75**/35, **mb3.6**/2, **MS3.7**/3, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.61**	**250**	P	**Pb**	**17 47 22.5**	**+0.3**
URZ	**Urewera**	**1.16**	**298**	Pn	**Pn**	**17 47 30.5**	**-0.4**
URZ	1μm,0.3s,baz=181,slow=3.3,SNR=1190			Pg	**Pn**	**17 47 31.8**	**+1.0**
	1μm,0.3s,baz=213,slow=2.8,SNR=1325						
URZ				Lg		17 47 47.4	
	532nm,0.3s,baz=350,slow=23,SNR=37						
MXZ	**Matakaoa Point**	**1.25**	**356**	P	**Pn**	**17 47 32.1**	**+0.1**
EDRZ	**Edgecumbe**	**1.49**	**298**	P	**Pn**	**17 47 35.8**	**+0.4**
BKZ	**Black Stump Fm**	**1.54**	**256**	P	**Pn**	**17 47 35.6**	**-0.4**
WIZ	**White Island**	**1.61**	**323**	P	**Pn**	**17 47 36.5**	**-0.4**
LIRZ	**Lichensteins R**	**1.79**	**296**	P	**Pn**	**17 47 39.5**	**+0.1**
HATZ	**Hinemaiaia**	**1.81**	**267**	P	**Pn**	**17 47 39.9**	**+0.1**
KARZ	**Kaharoa**	**1.88**	**294**	P	**Pn**	**17 47 40.6**	**-0.1**
WHTZ	**Whakaora**	**1.93**	**274**	P	**Pn**	**17 47 41.9**	**+0.6**
RITZ	**Rihia Road**	**2.00**	**265**	P	**Pn**	**17 47 42.8**	**+0.5**
RATZ	**Rangitukua**	**2.06**	**268**	P	**Pn**	**17 47 43.4**	**+0.2**
WATZ	**Wairara**	**2.10**	**272**	P	**Pn**	**17 47 43.8**	**+0.1**
KATZ	**Kakaramea**	**2.13**	**265**	P	**Pn**	**17 47 44.5**	**+0.4**
MOVZ	**Moawhango**	**2.15**	**253**	P	**Pn**	**17 47 44.7**	**+0.3**
TUVZ	**Tukino**	**2.20**	**257**	P	**Pn**	**17 47 45.6**	**+0.6**
NGZ	**Ngauruhoe**	**2.22**	**260**	P	**Pn**	**17 47 45.7**	**+0.3**
WTVZ	**West Tongariro**	**2.22**	**261**	P	**Pn**	**17 47 45.6**	**+0.2**
WNVZ	**Wahianoa**	**2.25**	**256**	P	**Pn**	**17 47 46.1**	**+0.3**
DRZ	**Dome Shelter**	**2.27**	**257**	P	**Pn**	**17 47 46.6**	**+0.6**
TSZ	**Takapari Road**	**2.27**	**236**	P	**Pn**	**17 47 45.0**	**-1.1**
FWVZ	**Far West T-bar**	**2.27**	**258**	P	**Pn**	**17 47 46.3**	**+0.2**
TWVZ	**Taurewa**	**2.34**	**263**	P	**Pn**	**17 47 46.9**	**0.0**
BFZ	**Birch Farm**	**2.50**	**221**	P	**Pn**	**17 47 46.8**	**-2.5**
HIZ	**Hauiti**	**2.80**	**275**	P	**Pn**	**17 47 53.7**	**+0.3**
WAZ	**Wanganui**	**2.82**	**249**	P	**Pn**	**17 47 54.3**	**+0.7**
MRZ	**Mangatainoka R**	**2.86**	**229**	P	**Pn**	**17 47 52.3**	**-1.9**
VRZ	**Vera Road**	**2.87**	**263**	P	**Pn**	**17 47 54.5**	**+0.3**
KUZ	**Kuaotunu**	**2.97**	**313**	P	**Pn**	**17 47 54.5**	**-1.2**
MKAZ	**Moumakai**	**3.08**	**303**	P	**Pn**	**17 47 56.8**	**-0.4**
RAEZ	**Rainy Point**	**3.17**	**260**	P	Px	**17 47 59.3**	
MTW	**Mount Morrison**	**3.24**	**223**	P	Px	**17 47 56.1**	
OTAZ	**Otara**	**3.33**	**303**	P	Px	**17 48 01.5**	
KIW	**Kapiti Island**	**3.39**	**232**	P	Px	**17 47 59.5**	
NEZ	**North Egmont**	**3.39**	**261**	P	Px	**17 48 02.7**	
PAWZ	**Paruwai Farm**	**3.44**	**221**	P	Px	**17 47 58.0**	
CAW	**Cannon Point**	**3.44**	**227**	P	Px	**17 47 59.6**	
PKE	**Pukeiti**	**3.47**	**262**	P	Px	**17 48 03.6**	
NWEZ	**Newall Road**	**3.57**	**261**	P	Px	**17 48 05.4**	
WEL	**Wellington**	**3.73**	**227**	P	Px	**17 48 03.5**	
MRW	**Makara Radio**	**3.73**	**229**	P	Px	**17 48 03.4**	
SNZO	**South Karori**	**3.78**	**228**	P	Px	**17 48 03.9**	
TCW	**Tory Channel**	**3.98**	**232**	P	Px	**17 48 06.7**	
WCZ	**Waipu Caves**	**4.33**	**310**	P	Px	**17 48 14.3**	
NNZ	**Nelson**	**4.55**	**237**	P	Px	**17 48 14.7**	
QRZ	**Quartz Range**	**4.96**	**244**	P	Px	**17 48 19.9**	
THZ	**Tophouse**	**5.18**	**233**	P	Px	**17 48 22.2**	
DSZ	**Denniston Nort**	**5.84**	**238**	P	Px	**17 48 31.5**	
LTZ	**Lake Taylor**	**6.12**	**228**	P	Px	**17 48 34.7**	
RPZ	**Rata Peaks**	**7.39**	**226**	Pn	Px	**17 48 52.6**	
RPZ	2.2nm,0.3s,baz=68,slow=11,SNR=9.8			Sn	Sx	**17 50 09.9**	
	8.8nm,0.3s,baz=354,slow=19,SNR=20						
FOZ	**Fox Glacier**	**8.11**	**231**	P	Px	**17 49 00.3**	
LBZ	**Lake Benmore**	**8.30**	**225**	P	Px	**17 49 04.9**	
ODZ	**Otahua Downs**	**8.50**	**220**	P	Px	**17 49 07.7**	
EAZ	**Earnscleugh**	**9.32**	**224**	P	Px	**17 49 19.6**	
TUZ	**Tuapeka**	**9.65**	**219**	P	Px	**17 49 24.4**	
ASAR	**Alice Springs**	**40.54**	**279**	P	**P**	**17 54 46.4**	**-1.1**
	1.2nm,0.6s,mb3.7,baz=133,slow=8.7,SNR=57						
WRA	**Warramunga Arr**	**42.30**	**283**	P	**P**	**17 55 00.8**	**-1.1**
	0.5nm,0.4s,mb3.5,baz=123,slow=7.2,SNR=31						
WRA				LR	LR	18 13 56.2	
	comp=Z,59nm,20.2s,MS3.5,baz=170,slow=38						
VNA3	**Neumayer Olymp**	**70.10**	**177**	*e*	**P**	**17 58 20.5**	**+0.9**
VNA3				*e*		17 58 32.3	
VNA2	**Neumayer--Watz**	**70.49**	**178**	*e*	**P**	**17 58 23.7**	**+1.7**
VNA2				*e*		17 58 35.1	
PLCA	**Paso Flores**	**78.89**	**134**	LR	LR	18 24 59.1	
	comp=Z,35nm,20.4s,MS3.7,baz=10,slow=29						
TXAR	**Lajitas Array**	**99.29**	**60**	LR	LR	18 37 36.5	
	comp=Z,44nm,19.8s,MS4.0,baz=185,slow=30						
YKA	**Yellowknife Ar**	**114.27**	**28**	PKP	PKiKP	18 05 46.2	-0.2
	0.2nm,0.5s,baz=249,slow=2.3,SNR=5.0						
MKAR	**Makanchi Array**	**120.72**	**307**	PKP	PKPdf	18 05 57.2	-2.1
	0.3nm,0.6s,baz=98,slow=1.4,SNR=3.3						
ARCES	**ARCESS Array B**	**145.99**	**343**	PKPbc	PKPbc	18 06 45.7	-0.8
	2.6nm,0.9s,baz=30,slow=5.6,SNR=9.4						
TORD	**Torodi Ar. Bea**	**154.27**	**187**	PKPbc	PKPbc	18 07 09.0	+0.5
	0.2nm,0.8s,baz=133,slow=1.0,SNR=2.5						
TORD				PKPab	PKPab	18 07 21.6	-0.7
	0.6nm,0.8s,baz=208,slow=2.0,SNR=4.0						

IDC 20 17:50:27.2±10.0, **389N×9749E, h0**km, **mb3.4**/2, **mb1 3.7**/3, **mb1mx3.3**/21, **mbtmp3.4**/3, **ML3.7**/1, **Error ellipse: s-maj=316.9km s-min=45.8km az=75.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.55**	**5**	Pn	Pn	**17 53 54.5**	**+0.1**
	0.1nm,0.3s,baz=199,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**43.26**	**125**	P	P	**17 58 30.5**	**-0.2**
	0.3nm,0.4s,baz=304,slow=9.3,SNR=5.7						
ASAR	**Alice Springs**	**44.82**	**129**	P	P	**17 58 43.4**	**+0.1**
	0.2nm,0.4s,baz=302,slow=7.7,SNR=9.9						

CSEM ***20*** *17:53:46.6±0.1, 39.36N×33.18E, h5km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.5km az=152.0*
ISK ***20*** *17:53:46.7, 39.35N×33.18E, h5km, MD2.9*
ISCJB ***20*** *17:53:47.2±0.8, 3937N±004×3320E±004, h6km±6km, Error ellipse: s-maj=6.5km s-min=4.7km az=156.3*
DDA ***20*** *17:53:47.0, 39.35N×33.19E, h7km±2km, Md2.8*

ISC 20 17:53:47.7±0.7, **3936N**±004×**3319E**±004, **h10**km±6km, **n16,** σ0§**75**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.41**	**88**	PG	**Pg**	**17 53 55.4**	**-0.4**
KAMT				*e*SG	**Sg**	**17 54 01.5**	**+0.3**
LOD	**Lodumlu**	**0.62**	**329**	*e*PG	**Pg**	**17 53 59.3**	**-0.5**
LOD				*e*SG	**Sg**	**17 54 08.3**	**+0.6**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**17 54 05.2**	**-1.0**
CDAG				*i* S	**Sg**	**17 54 19.1**	**+0.6**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**17 54 05.2**	**-0.9**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**17 54 05.2**	**-0.9**
CDAG				*i

KOLL				*e*SN	**Sn**	17 59 18.3	**-1.5**
VYHS	**Vyhne**	**4.99**	**21**	*e*PN	**Pn**	17 58 22.2	**+0.1**
VYHS				*e*SN	**Sn**	17 59 19.7	**-0.7**
KHC	**Kasperske Hory**	**5.55**	**342**	*e*PG	**Pn**	17 58 31.9	**+2.0**
KHC				*e*SG	**Sn**	17 59 33.4	**-0.9**
PRU	**Pruhonice**	**6.22**	**350**	*e*SG	Sx	17 59 48.4	
CLL	**Collm**	**7.74**	**345**	*e*(Sn)	**Sn**	18 00 28.0	**-0.1**
CLL				*ex*	x	18 01 15.0	
CLL				*e*Sg	**Sg**	18 01 22.0	**+7.6**

MOS ***20*** *18:09:02.5±1.0, 063N×12750E, h160km, mb4.6/3, Error ellipse: s-maj=31.2km s-min=11.5km az=105.4*
ISCJB ***20*** *18:09:05.7±0.5, 062N±003×12761E±006, h186km±4km, mb4.3/23, Error ellipse: s-maj=9.5km s-min=5.0km az=171.8*
NEIC ***20*** *18:09:06.4±1.0, 057N×12762E, h180km±10km, mb4.6/10, Error ellipse: s-maj=11.9km s-min=5.7km az=65.0*
BJI ***20*** *18:09:06.7, 080N×12804E, h195km, mb4.4*
DJA ***20*** *18:09:06, 070N×12775E, h162km, Mw5.1/5*
IDC ***20*** *18:09:06.8±1.2, 052N×12756E, h188km±10km, mb3.9/13, mb1 4.0/15, mb1mx3.9/20, mbtmp4.0/15, MS3.0/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=17.5km s-min=7.1km az=79.0*

ISC 20 18:09:06.4±0.5, 060N±003×12763E±006, h178km±4km, n73, σ1§05/76, mb4.3/23, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.32**	**304**	P	**Pn**	**18 09 30.9**	**+0.6**
LBMI	**Labuha**	**1.23**	**186**	P	**Pn**	**18 09 36.2**	**+0.4**
MNI	**Manado**	**2.92**	**287**	P	**Pn**	**18 09 53.4**	**-0.5**
SGSI	**Sangihe**	**3.72**	**326**	P	**Pn**	**18 10 11.4**	**+7.5**
AAI	**Ambon**	**4.29**	**172**	P	**Pn**	**18 10 12.1**	**+0.9**
GSPH	**General Santos**	**6.08**	**334⇑**	*e*P	**Pn**	**18 10 32.7**	**-1.7**
GSPH				*e*S	**Sn**	**18 11 38.4**	**-5.3**
KDI	**Kendari** 34nm,0.7s,4μm0.5nm	**6.75**	**228**	P	**Pn**	**18 10 42.4**	**-0.9**
DAV	**Davao City (W)** 62nm,0.3s,baz=15,slow=3.6,SNR=4.2	**6.75**	**342**	P	**Pn**	**18 10 42.9**	**-0.4**
DAV				S	**Sn**	**18 12 00.7**	**+1.0**
DAV	46nm,0.3s,baz=322,slow=23,SNR=3.7			LR	LR	18 12 40.2	
DAV	**Davao City (W)** comp=Z,115nm,21.1s,baz=291,slow=31	**6.75**	**342**	P	**Pn**	**18 10 42.9**	**-0.4**
DAV				S	**Sn**	**18 12 00.7**	**+1.0**
DAV				LR	LR	18 12 40.2	
BUKP	**Musuan**	**7.67**	**341**	*e*P	**Pn**	**18 10 54.9**	**-0.6**
PCI	**Palu** 51nm,0.8s,1μm0.4nm	**7.94**	**259**	P	**Pn**	**18 10 58.8**	**-0.1**
PAGZ	**Pagadian**	**8.36**	**330**	*e*P	**Pn**	**18 11 03.3**	**-1.2**
BUTP	**Butuan**	**8.55**	**347**	*e*P	**Pn**	**18 11 06.8**	**-0.2**
IPIL	**Ipil**	**8.74**	**325**	*e*P	**Pn**	**18 11 09.5**	**-0.1**
KAPI	**Kappang** 2.2nm,0.3s,baz=177,slow=6.0,SNR=14	**9.64**	**235**	P	**Pn**	**18 11 21.0**	**-0.3**
KAPI				S	**Sn**	**18 13 05.8**	**-3.0**
MSLP	**Maasin**	**9.87**	**344**	*e*P	**Pn**	**18 11 11.9**	**-12**
BMNI	**Bima** 121nm,0.7s,1μm	**12.72**	**224**	P	**Pn**	**18 12 01.8**	**+0.7**
PVCP	**Virac**	**13.37**	**345**	*e*P	**Pn**	**18 12 09.4**	**+0.1**
KHKI	**Kahang-Kahang** 36nm,0.6s	**14.93**	**233**	P	**Pn**	**18 12 32.7**	**+3.9**
LUBP	**Lubang**	**14.96**	**331**	*e*P	**Pn**	**18 12 28.4**	**-0.7**
IGBI	**Denpasar**	**15.56**	**233**	P	**Pn**	**18 12 39.0**	**+2.4**
SJI	**Sawahan** 38nm,0.7s,738nm	**17.85**	**242**	P	**Pn**	**18 13 06.0**	**+1.9**
FITZ	**Fitzroy Crossi** 8.2nm,0.7s	**18.68**	**186**	*e*P	**P**	**18 13 06.0**	**-5.2**
FITZ	**Fitzroy Crossi**	**18.68**	**186**	P	**P**	**18 13 07.0**	**-4.2**
COEN	**Coen** 2.2nm,0.6s,mb3.7	**21.12**	**134**	*e*P	**P**	**18 13 38.5**	**+1.1**
WRAB	**Tennant Creek**	**21.44**	**162**	*e*P	**P**	**18 13 40.1**	**-0.6**
WRAB	**Tennant Creek** 28nm,0.9s,mb4.6	**21.44**	**162**	*e*P	**P**	**18 13 40.0**	**-0.7**
WRAB	**Tennant Creek** 30nm,0.9s,mb4.6	**21.44**	**162**	P	**P**	**18 13 40.6**	**-0.1**
WRA	**Warramunga Arr** 9.7nm,0.6s,mb4.3,baz=340,slow=11,SNR=62	**21.44**	**163**	P	**P**	**18 13 40.1**	**-0.6**
WRA				S	**S**	**18 17 24.2**	**-3.3**
WRA	2.5nm,0.8s,baz=343,slow=18,SNR=11			ScP	ScP	18 20 54.1	-3.2
WRA	**Warramunga Arr** 1.1nm,0.9s,baz=353,slow=3.6,SNR=4.8	**21.44**	**163**	P	**P**	**18 13 40.1**	**-0.7**
WRA				S	**S**	**18 17 24.2**	**-3.3**
WB2	**Warramunga Arr**	**21.45**	**162**	*e*P	**P**	**18 13 40.1**	**-0.7**
WB2				*e*S	**S**	**18 17 21.0**	**-6.5**
ASAR	**Alice Springs** 1.1nm,0.3s,mb3.9,baz=343,slow=11,SNR=21	**24.88**	**166**	P	**P**	**18 14 12.1**	**-0.7**
ASAR	1.2nm,0.4s,baz=3.2,slow=1.9,SNR=7.4			PcP	PcP	18 17 43.5	-0.5
ASAR	0.5nm,0.6s,baz=337,slow=14,SNR=2.9			S	**S**	**18 18 21.2**	**-1.4**
ASAR	0.8nm,1.0s,baz=341,slow=2.5,SNR=3.2			ScP	ScP	18 21 03.1	-3.2
ASAR	**Alice Springs**	**24.88**	**166**	P	**P**	**18 14 12.1**	**-0.7**
ASAR						18 17 43.5	
ASAR				S	**S**	**18 18 21.2**	**-1.4**
CMAR	**Chiang Mai Arr** 0.3nm,0.7s,mb3.1,baz=119,slow=8.8,SNR=3.5	**33.29**	**304**	P	**P**	**18 15 27.6**	**+0.2**
CMAR	0.5nm,0.8s,baz=134,slow=2.6,SNR=4.7			PcP	PcP	18 18 04.3	-1.1
CMAR	0.4nm,0.8s,baz=151,slow=3.3,SNR=4.0			ScP	ScP	18 21 32.3	-0.9
CMAR	**Chiang Mai Arr**	**33.29**	**304**	P	**P**	**18 15 27.6**	**+0.2**
CMAR						18 18 04.3	
NWAO	**Narrogin (SRO)** 7.9nm,0.7s,mb4.5,baz=18,slow=6.7,SNR=6.9	**34.76**	**195**	P	**P**	**18 15 38.6**	**-1.1**
STKA	**Stephens Creek** 2.0nm,0.3s,mb4.2	**34.90**	**159**	*e*P	**P**	**18 15 41.2**	**+0.2**
STKA	**Stephens Creek** 2.5nm,0.3s,mb4.3,baz=340,slow=8.5,SNR=8.2	**34.90**	**159**	P	**P**	**18 15 41.5**	**+0.4**
KSRS	**Korea Array** 1.2nm,0.5s,mb3.8,baz=180,slow=9.6,SNR=6.6	**36.68**	**0**	P	**P**	**18 15 56.6**	**+0.6**
MJAR	**Matsushiro Arr** 3.3nm,0.5s,mb4.3,baz=189,slow=8.9,SNR=14	**37.09**	**14**	P	**P**	**18 15 58.6**	**-0.9**
ARMA	**Armidale**	**38.38**	**146**	*e*P	**P**	**18 16 12.0**	**+1.5**
LSA	**Lhasa**	**45.20**	**313**	P	**P**	**18 17 08.3**	**+2.5**
LSA	**Lhasa**	**45.20**	**313**	*e*P	**P**	**18 17 08.1**	**+2.3**
LSA	comp=Z,5.0nm,0.8s,mb4.2			pmax	pmax		
LSA	**Lhasa** comp=Z,4.9nm,0.8s,mb4.2	**45.20**	**313**	*e*P	**P**	**18 17 08.1**	**+2.2**
RAMN	**Ramite** comp=Z,26nm,0.6s,mb5.0	**47.31**	**307**	*e*P	**P**	**18 17 23.7**	**+1.3**
JIRN	**Jiri**	**47.96**	**308**	*e*P	**P**	**18 17 28.4**	**+1.1**
GUN	**Gumba** comp=Z,17nm,0.5s,mb4.9	**48.32**	**308**	*e*P	**P**	**18 17 31.0**	**+0.9**
DMN	**Daman**	**48.80**	**307**	*e*P	**P**	**18 17 34.2**	**+0.5**
GKN	**Gorkha**	**49.34**	**307**	*e*P	**P**	**18 17 38.3**	**+0.4**
KOLN	**Koldanda** comp=Z,35nm,0.7s,mb5.1	**50.07**	**307**	*e*P	**P**	**18 17 44.3**	**+0.9**
DANN	**Dangsing** comp=Z,32nm,0.6s,mb5.1	**50.19**	**307**	*e*P	**P**	**18 17 45.1**	**+0.8**
ULN	**Ulaanbaatar**	**50.36**	**342**	*e*P	**P**	**18 17 44.9**	**-0.2**
ULN	**Ulaanbaatar**	**50.36**	**342**	P	**P**	**18 17 46.2**	**+1.1**
SONM	**Songino Array** comp=Z,1.7nm,0.7s,mb3.8,baz=152,slow=8.5,SNR=15	**50.53**	**342**	P	**P**	**18 17 46.9**	**+0.4**
SONM	comp=Z,1.0nm,0.8s,baz=177,slow=2.5,SNR=4.2			PcP	PcP	18 19 01.6	-0.1
SONM	comp=Z,0.3nm,0.8s,baz=116,slow=3.4,SNR=3.2			ScP	ScP	18 22 37.9	-3.1
SONM	**Songino Array**	**50.53**	**342**	P	**P**	**18 17 46.9**	**+0.4**
SONM						18 19 01.6	
PEA0B	**Petropavlovsk-**	**58.00**	**21**	*e*P	**P**	**18 18 41.2**	**+1.0**
PETK	**Petropavlovsk-** comp=Z,11nm,0.6s,mb4.9,baz=182,slow=4.9,SNR=43	**58.00**	**21**	P	**P**	**18 18 41.2**	**+1.0**
MKAR	**Makanchi Array** comp=Z,3.1nm,0.3s,mb4.6,baz=113,slow=8.1,SNR=78	**60.63**	**326**	P	**P**	**18 18 58.4**	**-0.1**
MKAR	comp=Z,1.0nm,0.6s,baz=122,slow=8.0,SNR=4.6			PcP	PcP	18 19 40.6	-0.3
YAK	**Yakutsk**	**61.30**	**1**	*e*P	**P**	**18 19 02.2**	**-0.4**
YAK	comp=Z,13nm,0.9s,mb4.8			pmax	pmax		
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.4s,mb4.0,baz=112,slow=6.6,SNR=5.7	**63.77**	**333**	P	**P**	**18 19 17.5**	**-1.7**
KURK	**Kurchatov**	**64.85**	**328**	⇓*i*P	**P**	**18 19 25.5**	**-0.8**
KURK	comp=Z,7.0nm,0.8s,mb4.5			pmax	pmax		
KURK	**Kurchatov** comp=Z,7.7nm,0.6s,mb4.7	**64.85**	**328**	*e*P	**P**	**18 19 25.4**	**-0.9**
NVS	**Novosibirsk**	**65.06**	**333**	*e*P	**P**	**18 19 24.4**	**-3.1**
BVAR	**Borovoye Array**	**70.42**	**327**	P	**P**	**18 20 00.6**	**-0.5**
	comp=Z,1.8nm,0.7s,mb3.9,baz=131,slow=8.4,SNR=12						
AKTK	**Aktyubinsk**	**76.66**	**322**	P	**P**	**18 20 36.1**	**-1.5**
AKTO	**Aktyubinsk** comp=Z,2.8nm,0.6s,mb4.1,baz=116,slow=7.9,SNR=8.6	**76.66**	**322**	P	**P**	**18 20 36.1**	**-1.5**
VNDA	**Vanda** comp=Z,3.0nm,0.5s,mb4.2,baz=311,slow=6.2,SNR=20	**80.22**	**173**	P	**P**	**18 20 56.1**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.5s,baz=295,slow=2.1,SNR=4.5	**101.95**	**25**	PKiKP	PKiKP	18 26 58.8	-2.6
TXAR	**Lajitas Array** comp=Z,0.1nm,0.5s,baz=329,slow=1.5,SNR=3.7	**122.75**	**54**	PKP	PKPdf	18 27 41.3	-0.5
TORD	**Torodi Ar. Bea** comp=Z,1.5nm,0.7s,baz=67,slow=1.7,SNR=12	**124.70**	**286**	PKP	PKPdf	18 27 44.9	-1.0
DBIC	**Dimbokro** comp=Z,0.9nm,0.6s,baz=123,slow=3.3,SNR=3.2	**132.04**	**279**	PKP	PKPdf	18 28 00.1	+0.1
DBIC	comp=Z,1.7nm,0.5s,baz=91,slow=3.7,SNR=7.3			SKPbc	SKPbc	18 31 08.0	-1.7
CPUP	**Villa Florida** comp=Z,0.7nm,0.4s,baz=108,slow=3.2,SNR=5.6	**153.97**	**170**	PKPbc	PKPbc	18 28 44.9	-0.6
CPUP	**Villa Florida**	**153.97**	**170**	PKPbc	PKPbc	18 28 44.9	-0.6

IDC ***20*** *18:09:06.3±1.8, 921Sx12459E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/15, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=191.6km s-min=28.8km az=53.0*
ISCJB ***20*** *18:09:11.4±2.9, 90S±01×1248E±02, h56km±37km, mb3.7/2, Error ellipse: s-maj=31.6km s-min=15.0km az=152.7*
NEIC ***20*** *18:09:19.6±2.8, 957Sx12464E, h136km±36km, mb4.0/2, Error ellipse: s-maj=28.0km s-min=23.6km az=46.0*

ISC 20 18:09:12.6±2.4, 90S±02×1249E±02, h48km±34km, n9, σ1§34/10, mb3.7/2, 1C, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNA	**Kununurra** 8.1nm,0.4s	**7.74**	**151**	*e*P	**Pn**	**18 11 05.7**	**+2.9**
KNA				*e*S	**Sn**	**18 12 38.2**	**+9.1**
KAKA	**Kakadu** 33nm,0.6s	**8.30**	**117**	*e*P	x	18 11 15.4	
FITZ	**Fitzroy Crossi** 2.5nm,0.3s	**9.12**	**175**	*e*P	**Pn**	**18 11 19.7**	**-2.0**
FITZ				*e*S	**Sn**	**18 13 04.2**	**+1.2**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=314,slow=14,SNR=36	**14.24**	**141**	Pn	**Pn**	**18 12 30.7**	**-1.0**
WRAB	**Tennant Creek** 0.9nm,0.5s	**14.24**	**141**	*e*P	**Pn**	**18 12 32.1**	**+0.5**
SBUM	**Sibu**	**16.96**	**311**	⇑P	**Pn**	**18 13 06.4**	**-0.3**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=326,slow=12,SNR=17	**16.98**	**151**	Pn	**Pn**	**18 13 03.7**	**-3.1**
CMAR	**Chiang Mai Arr** 0.5nm,0.8s,mb3.4,baz=138,slow=8.2,SNR=3.4	**37.38**	**317**	P	**P**	**18 16 21.3**	**+0.3**
MKAR	**Makanchi Array** 0.9nm,0.5s,mb4.0,baz=118,slow=8.1,SNR=2.6	**67.21**	**330**	P	**P**	**18 20 02.4**	**+0.6**

CSEM ***20*** *18:12:23.8±0.1, 3939Nx3316E, h10km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.3km az=163.0*
DDA ***20*** *18:12:24.3, 3936N×3318E, h7km±1km, Md2.8*
ISK ***20*** *18:12:24.3, 3945N×3322E, h23km, MD2.7*
ISCJB ***20*** *18:12:25.0±0.5, 3935N±005×3319E±005, h10km, Error ellipse: s-maj=7.5km s-min=4.1km az=149.5*

ISC 20 18:12:25.0±0.5, 3935N±005×3317E±005, h10km, n9, σ0§84/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.42**	**88**	*e*PG	**Pg**	**18 12 33.2**	**0.0**
KAMT				*e*SG	**Sg**	**18 12 39.4**	**+0.7**
LOD	**Lodumlu**	**0.62**	**330**	*e*PG	**Pg**	**18 12 36.0**	**-1.0**
CDAG	**Cicekdag**	**0.97**	**73**	*i* P	**Pg**	**18 12 42.9**	**-0.6**
CDAG				*i* S	**Sg**	**18 12 56.4**	**+0.3**
KIZT	**Kizilcal**	**1.11**	**245**	*e*PN	**Pn**	**18 12 46.0**	**-0.6**
KIZT				*e*SN	**Sn**	**18 13 01.9**	**-0.1**
ELDT	**Eldivan**	**1.15**	**10**	*e*P	**Pb**	**18 12 47.2**	**+0.2**
ELDT				*i* S	**Sb**	**18 13 03.4**	**+1.4**
KDHN	**Kadinhani**	**1.17**	**225**	*e*P	**Pb**	**18 12 46.8**	**-0.5**
KDHN				*i* S	**Sb**	**18 13 03.5**	**+1.1**
LADK	**Ladik-KONYA**	**1.31**	**209**	*e*PN	**Pn**	**18 12 49.4**	**0.0**
KONT	**Konya--Tatoy**	**1.54**	**205**	*e*PN	**Pn**	**18 12 53.3**	**+0.8**
YOZ	**Yozgat**	**1.69**	**80**	*e*PN	**Pn**	**18 12 52.4**	**-2.0**

ISCJB ***20*** *18:16:23.9±1.4, 272N±0.1×5541E±008, h38km±12km, mb3.9/5, Error ellipse: s-maj=21.7km s-min=9.3km az=157.7*
IDC ***20*** *18:16:23.1±2.9, 2760N×5532E, h0km, mb4.0/5, mb1 4.0/5, mb1mx3.5/25, mbtmp4.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/36, Error ellipse: s-maj=91.3km s-min=25.2km az=144.0*
CSEM ***20*** *18:16:24.4±0.1, 2753N×5540E, h25km, ML3.3, Error ellipse: s-maj=2.5km s-min=1.3km az=172.0*
KISR ***20*** *18:16:25.4, 2848N×5510E, h3km, ML3.5*
THR ***20*** *18:16:26.4±0.8, 2761N×5554E, h14km±7km, ML3.3*
NEIC ***20*** *18:16:26.4, 2761N×5554E, h14km, ML3.3(THR), After THR.*

ISC 20 18:16:25.5±1.5, 274N±02×5546E±008, h24km±15km, n18, σ0§97/25, mb3.9/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.63**	**88**	*e*Pg	**Pb**	**18 16 38.0**	**+0.2**
BNDS	comp=E,1μm,0.6s			AML	AML	18 17 16.3	
BNDS	**Bandar-Abbas**	**0.63**	**88**	*e*Pg	**Pb**	**18 16 37.0**	**-0.8**
GHIR	**Ghir-Karzin**	**2.37**	**293**	*e*Pn	**Pn**	**18 17 06.8**	**+3.8**
GHIR				*e*Sg	**Sn**	**18 17 40.4**	**+9.1**
GHIR	comp=E,200nm,0.6s			AML	AML	18 17 52.5	
GHIR	comp=N,198nm,0.6s			AML	AML	18 17 56.4	
GHIR	**Ghir-Karzin**	**2.37**	**293**	*e*Pn	**Pn**	**18 17 06.0**	**+3.1**
GHIR				*e*Sg	**Sn**	**18 17 40.0**	**+8.7**
KRBR	**Kerman**	**2.83**	**23**	*e*Pn	**Pn**	**18 17 10.6**	**+1.3**
KRBR				*e*Sg	**Sn**	**18 17 47.7**	**+5.0**
KRBR	comp=E,78nm,0.6s			AML	AML	18 17 54.5	
KRBR	**Kerman** SNR=90	**2.83**	**23**	*e*Pn	**Pn**	**18 17 10.0**	**+0.7**
KRBR				*e*Sg	**Sn**	**18 17 47.7**	**+5.0**
KRBR	**Kerman**	**2.83**	**23**	*e*Pn	**Pn**	**18 17 10.0**	**+0.7**
KRBR				*e*Sg	**Sn**	**18 17 47.0**	**+4.3**
QRN	**Al-Qurain** baz=274	**6.81**	**283**	*e*P	**Pn**	**18 18 04.4**	**+0.6**
QRN	comp=Z,20nm,0.4s,baz=274			AML	AML	18 19 26.9	
RDF	**Al-Radifah**	**7.16**	**284**	*e*P	**Pn**	**18 18 09.0**	**+0.3**
NAY	**Al-Naaiem** baz=278	**7.48**	**286**	*e*P	**Pn**	**18 18 13.4**	**+0.2**
NAY	baz=278			*e*S	**Sn**	**18 19 33.9**	**-3.4**
NAY	comp=Z,5.0nm,0.6s,baz=278			AML	AML	18 19 42.3	
MIB	**Mutribah** baz=283	**7.54**	**291**	*e*P	**Pn**	**18 18 12.8**	**-1.2**
MIB	baz=283			*e*S	**Sn**	**18 19 33.5**	**-5.2**
MIB	comp=Z,8.0nm,0.8s,baz=283			AML	AML	18 19 41.1	
AKTK	**Aktyubinsk**	**23.11**	**4**	P	**P**	**18 21 28.1**	**-1.4**
AKTO	**Aktyubinsk** comp=Z,1.5nm,0.6s,mb3.6,baz=191,slow=10,SNR=4.2	**23.11**	**4**	P	**P**	**18 21 28.1**	**-1.4**
BVAR	**Borovoye Array** comp=Z,1.5nm,0.7s,mb3.7,baz=206,slow=8.4,SNR=6.9	**27.93**	**19**	P	**P**	**18 22 13.6**	**0.0**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.6s,mb3.7,baz=226,slow=8.1,SNR=7.0	**28.65**	**40**	P	**P**	**18 22 20.6**	**+0.5**
ZALV	**Zalesovo Beam** comp=Z,2.8nm,0.6s,mb4.4,baz=237,slow=9.6,SNR=11	**34.20**	**31**	P	**P**	**18 23 08.8**	**-0.1**
CLL	**Collm**	**39.84**	**319**	*e*P	**P**	**18 23 57.0**	**+0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.6s,mb3.8,baz=59,slow=6.7,SNR=14	**52.02**	**265**	P	**P**	**18 25 33.8**	**+0.4**
TORD	comp=Z,40nm,19.9s,baz=25,slow=39			LR	LR	18 50 13.0	

BJI ***20*** *18:53:23.8, 4090N×7822E, h10km, ML3.3*
NNC ***20*** *18:53:33.0±7.5, 41.34N×78.14E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=78.2km s-min=44.2km az=89.0*

ISC 20 18:53:21.0±4.8, 405N±02×792E±04, h35km, n16, σ1§05/16, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.65**	**250**	P	**Pn**	**18 54 01.3**	**0.0**
KSH				S	**Sn**	**18 54 31.8**	**-0.4**
KSH	comp=N,499nm,0.8s			Smax			
KSH	comp=E,638nm,0.6s			Smax			
ULHL	**Ulahol** SNR=72	**2.85**	**310**	P	**Pn**	**18 53 58.6**	**-5.3**
KNDC	**Almaty** comp=E,34nm,0.4s	**3.21**	**329**	⇑Pn	**Pn**	**18 54 08.5**	**-0.5**
KNDC	comp=E,105nm,0.5s			⇑Sn	**Sn**	**18 54 37.3**	**-8.7**
KZA	**Kyzart** SNR=53	**3.38**	**300**	P	**Pn**	**18 54 06.8**	**-4.5**
TKM2	**Tokmak 2** comp=E,8.2nm,0.4s	**3.64**	**313**	⇑Pn	**Pn**	**18 54 11.4**	**-3.5**
TKM2	comp=E,27nm,0.3s			⇓Lg		18 54 48.1	
TKM2	**Tokmak 2** SNR=17	**3.64**	**313**	P	**Pn**	**18 54 11.5**	**-3.4**
KBK	**Karagaybulak** SNR=30	**3.87**	**306**	P	**Pn**	**18 54 17.0**	**-0.9**
UCH	**Uchtor** SNR=15	**3.94**	**298**	P	**Pn**	**18 54 18.0**	**-0.9**
AAK	**Ala-Archa** SNR=34	**4.14**	**303**	P	**Pn**	**18 54 21.7**	**0.0**
CHMS	**Chumysh** SNR=13	**4.18**	**309**	P	**Pn**	**18 54 22.5**	**+0.3**
AML	**Almayashu** SNR=16	**4.46**	**294**	P	**Pn**	**18 54 27.5**	**+1.4**
USP	**Ospenovka** SNR=13	**4.49**	**310**	P	**Pn**	**18 54 26.9**	**+0.4**
EKS2	**Erkin-Say** SNR=13	**4.62**	**300**	P	**Pn**	**18 54 30.9**	**+2.7**
KK31	**Karatay Array** comp=E,2.0nm,0.5s,baz=114,slow=16,SNR=28	**7.00**	**295**	⇑Pn	**Pn**	**18 55 09.7**	**+8.7**
KK31	comp=E,1.3nm,0.3s,baz=105,slow=27,SNR=5.9			⇑Lg		18 56 36.5	
KURBB	**Kurchatov Arra** comp=E,0.1nm,0.3s	**10.16**	**358**	⇑Lg		18 58 27.9	
KURK	**Kurchatov** comp=E,3.5nm,1.2s	**10.26**	**358**	⇓Lg		18 58 31.5	

IDC 20 19:04:26.0±2.9, 2308S×17154E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.8/14, mbtmp3.7/4, MS3.1/3, Ms1 3.1/3, ms1mx2.9/23, Error ellipse: s-maj=117.8km s-min=45.9km az=157.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island** comp=Z,112nm,18.5s,baz=294,slow=33	**11.29**	**125**	LR	LR	19 10 37.0	
URZ	**Urewera** comp=Z,67nm,18.2s,baz=45,slow=34	**15.87**	**164**	LR	LR	19 13 31.4	
RPZ	**Rata Peaks** comp=Z,48nm,18.2s,baz=4.5,slow=34	**20.59**	**181**	LR	LR	19 15 55.1	
ASAR	**Alice Springs** 0.2nm,0.4s,baz=96,slow=9.4,SNR=5.5	**34.49**	**261**	P	P	19 11 16.0	+0.1
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=98,slow=8.4,SNR=12	**34.69**	**268**	P	P	19 11 17.0	-0.7
CMAR	**Chiang Mai Arr** 0.7nm,0.7s,baz=130,slow=4.0,SNR=5.7	**82.02**	**294**	P	P	19 16 50.0	+1.6
SONM	**Songino Array** 0.5nm,0.8s,baz=143,slow=3.6,SNR=3.6	**91.56**	**322**	P	P	19 17 34.0	-0.4
GERES	**GERESS Array B** 0.3nm,0.5s,baz=353,slow=4.9,SNR=3.3	**148.87**	**331**	PKPbc	PKPbc	19 24 14.1	-1.4
TORD	**Torodi Ar. Bea** 0.7nm,1.0s,baz=46,slow=1.4,SNR=3.8	**166.20**	**226**	PKP	PKPdf	19 24 34.0	0.0

ISCJB ***20*** *19:28:30.6±0.6, 3692N±007×13558E±008, h378km±6km, mb2.9/3, Error ellipse: s-maj=12.0km s-min=9.9km az=155.6*
IDC ***20*** *19:28:31.4±1.1, 3698N×13559E, h366km±17km, mb2.7/3, mb1 3.1/7, mb1mx2.9/26, mbtmp3.1/7, Error ellipse: s-maj=30.3km s-min=19.2km az=49.0*
JMA ***20*** *19:28:31.0±0.5, 3700N×13556E, h372km±5km, M3.3*

ISC 20 19:28:31.6±0.6, 3692N±007×13562E±008, h370km±6km, n22, σ0§67/30, mb2.9/3, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**0.86**	**138**	P	**Pn**	**19 29 18.8**	**-0.3**
JJH	**Hakui**	**0.93**	**89**	P	**Pn**	**19 29 19.2**	**-0.1**
JGM	**Miyama**	**1.50**	**143**	P	**Pn**	**19 29 22.0**	**+0.1**
JWT	**Wachi**	**1.64**	**186**	P	**Pn**	**19 29 22.7**	**+0.1**
JWT				S	**S**	**19 30 02.1**	**-1.5**
MAT	**Matsushiro**	**2.11**	**99**	P	**Pn**	**19 29 25.7**	**+0.2**
MAT				S	**S**	**19 30 09.2**	**+0.3**
MAT	**Matsushiro**	**2.11**	**99**	P	**Pn**	**19 29 26.0**	**+0.5**
MJAR	**Matsushiro Arr** 7.3nm,0.3s,baz=284,slow=7.5,SNR=76	**2.11**	**99**	P	**Pn**	**19 29 25.6**	**0.0**
JSD	**Sado**	**2.38**	**61**	P	**Pn**	**19 29 27.3**	**-0.1**
JIE	**Ise**	**2.67**	**160**	P	**Pn**	**19 29 30.6**	**+0.8**
JWY	**Kouya**	**2.69**	**180**	P	**Pn**	**19 29 30.4**	**+0.4**
JYN	**Shimob**	**2.76**	**120**	P	**Pn**	**19 29 30.7**	**+0.2**
JRY	**Ryogami san**	**2.79**	**108**	P	**Pn**	**19 29 31.3**	**+0.6**
JRY				S	**S**	**19 30 19.3**	**+0.9**
JOD2	**Odawara 2**	**3.26**	**119**	P	**Pn**	**19 29 35.4**	**+0.6**
JOD2				S	**S**	**19 30 26.2**	**+0.5**
JWZ	**Kozaga**	**3.38**	**179**	P	**Pn**	**19 29 36.3**	**+0.3**
JMK	**Ichinoseki**	**4.87**	**64**	P	**Pn**	**19 29 50.4**	**-0.3**
JMK				S	**S**	**19 30 54.7**	**-0.1**
BSO1	**Boso 1**	**4.91**	**116**	P	**Pn**	**19 29 50.7**	**-0.5**
BSO1				S	**S**	**19 30 54.1**	**-1.5**
KSRS	**Korea Array** 0.6nm,0.3s,baz=94,slow=12,SNR=20	**6.17**	**277**	P	**Pn**	**19 30 05.1**	**+0.2**
ASAJ	**Asahikawa** 2.4nm,0.3s,baz=237,slow=12,SNR=10	**8.94**	**34**	P	**Pn**	**19 30 36.8**	**-0.1**
ASAJ	0.4nm,0.3s,baz=39,slow=32,SNR=6.8			S	**S**	**19 32 11

BFZ	**Birch Farm**	**2.28 224**	P		**Pn**	**19 34 09.7**	**-0.7**
MRZ	**Mangatainoka R**	**2.66 232**	P		**Pn**	**19 34 15.1**	**-0.5**
WAZ	**Wanganui**	**2.68 254**	P		**Pn**	**19 34 17.7**	**+1.8**
HIZ	**Hauiti**	**2.77 280**	P		**Pn**	**19 34 17.8**	**+0.7**
MTW	**Mount Morrison**	**3.02 225**	P		**Pn**	**19 34 19.0**	**-1.6**
KUZ	**Kuaotunu**	**3.09 317**	P		**Pn**	**19 34 20.7**	**-0.9**
MKAZ	**Moumakai**	**3.16 307**	P		**Pn**	**19 34 22.1**	**-0.4**
KIW	**Kapiti Island**	**3.19 234**	P		**Pn**	**19 34 22.3**	**-0.6**
PAWZ	**Paruwai Farm**	**3.21 223**	P		**Pn**	**19 34 21.6**	**-1.7**
CAW	**Cannon Point**	**3.23 230**	P		**Pn**	**19 34 22.3**	**-1.2**
NEZ	**North Egmont**	**3.30 265**	P		Px	19 34 26.5	
MSWZ	**Moikau Station**	**3.33 224**	P		**Pn**	**19 34 22.9**	**-2.0**
PKE	**Pukeiti**	**3.38 266**	P		Px	19 34 27.1	
NWEZ	**Newall Road**	**3.47 265**	*eP*		Px	19 34 28.7	
MRW	**Makara Radio**	**3.53 231**	P		Px	19 34 26.3	
BHW	**Baring Head**	**3.54 227**	P		Px	19 34 25.7	
SNZO	**South Karori**	**3.57 230**	P		Px	19 34 26.7	
TCW	**Tory Channel**	**3.78 234**	P		Px	19 34 29.5	
BSWZ	**Blackbirch Sta**	**4.31 231**	P		Px	19 34 36.4	
NNZ	**Nelson**	**4.36 239**	P		Px	19 34 37.9	
WCZ	**Waipu Caves**	**4.44 313**	P		Px	19 34 40.2	
QRZ	**Quartz Range**	**4.79 247**	P		Px	19 34 43.0	
THZ	**Tophouse**	**4.95 235**	P		Px	19 34 45.0	
KHZ	**Kahutara**	**4.95 226**	P		Px	19 34 45.2	
DSZ	**Denniston Nort**	**5.66 240**	P		Px	19 34 55.0	
LTZ	**Lake Taylor**	**5.91 229**	P		Px	19 34 57.4	
MQZ	**McQueen's Vall**	**6.31 221**	P		Px	19 35 03.0	
RPZ	**Rata Peaks**	**7.18 227**	Pn		Px	19 35 15.3	
	1.0nm,0.3s,baz=72,slow=16,SNR=8.7						
RPZ			Sn		Sx	19 36 29.4	
	11nm,0.3s,baz=350,slow=22,SNR=28						
RPZ	**Rata Peaks**	**7.18 227**	P		Px	19 35 15.6	
FOZ	**Fox Glacier**	**7.91 233**	P		Px	19 35 23.6	
LBZ	**Lake Benmore**	**8.09 226**	P		Px	19 35 28.0	
ODZ	**Otahua Downs**	**8.27 221**	P		Px	19 35 30.7	
STKA	**Stephens Creek**	**30.61 272**	P		**P**	**19 39 45.6**	**-1.2**
	3.7nm,1.2s,mb4.1,baz=169,slow=20,SNR=3.4						
PPT	**Papeete**	**35.17 62**	LR		LR	19 51 20.9	
	comp=Z,75nm,21.9s,baz=119,slow=30						
ASAR	**Alice Springs**	**40.51 279**	P		**P**	**19 41 11.2**	**-0.7**
	2.6nm,0.7s,mb4.0,baz=125,slow=8.3,SNR=35						
WRA	**Warramunga Arr**	**42.29 284**	P		**P**	**19 41 25.3**	**-1.2**
	1.1nm,0.8s,mb3.6,baz=126,slow=7.1,SNR=13						
VNA3	**Neumayer Olymp**	**69.86 177**	*e*		**P**	**19 44 45.1**	**+2.1**
VNA3			*e*			19 44 52.5	
VNA3			*e*			19 44 56.6	
VNA2	**Neumayer--Watz**	**70.25 178**	*e*		**P**	**19 44 47.7**	**+2.3**
	baz=172,slow=4.9						
VNA2			*e*			19 44 55.1	
VNA2			*e*			19 44 58.9	
TORD	**Torodi Ar. Bea**	**154.02 188**	PKPab		PKPab	19 53 46.6	+0.4
	1.0nm,1.0s,baz=178,slow=3.4,SNR=3.9						

*NEIC **20** 19:38:53.7±1.6,2380N×12163E,h10km,Error ellipse: s-maj=22.9km s-min=7.0km az=108.0*
*TAP **20** 19:38:56.0,2391N×12141E,h28km,ML3.6,B*
*ISCJB **20** 19:38:56.1±0.2,2388N±001×12150E±002,h25km±2km, Error ellipse: s-maj=2.8km s-min=1.9km az=36.8*
*JMA **20** 19:38:56.6±0.2,2401N×12147E,h76km,M2.7*
ISC 20 19:38:56.4±0.2,2388N±001×12149E±002,h24km±2km, n68,σ0§87/116,11C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESF	**Shoufeng Towns**	**0.02**	**118**	*i* P	**Pb**	**19 39 00.9**	**+0.5**
	baz=112						
ESF				*i* S	**Sb**	**19 39 04.7**	**+1.5**
	baz=112						
ESL	**Shilin**	**0.08**	**217**	⇑*i* P	**Pb**	**19 39 01.0**	**+0.3**
	baz=169						
ESL				S	**Sb**	**19 39 04.4**	**+0.8**
	baz=169						
HWA	**Hwalien**	**0.14**	**48**	⇑*i* P	**Pb**	**19 39 02.0**	**+0.7**
	baz=61						
HWA				*e*S	**Sb**	**19 39 06.5**	**+1.9**
	baz=61						
TEGC	**Jichi Village**	**0.18**	**164**	*e*P	**Pb**	**19 39 01.6**	**0.0**
	baz=149						
TWD	**Chiawan**	**0.22**	**27**	⇑*i* P	**Pb**	**19 39 02.3**	**+0.1**
	baz=38						
TWD				S	**Sb**	**19 39 06.4**	**+0.3**
	baz=38						
NACB	**Ninganchiao**	**0.31**	**19**	*e*P	**Pb**	**19 39 02.2**	**-1.2**
NACB				*e*S	**Sb**	**19 39 07.9**	**-0.3**
WHF	**Hehuan Shan**	**0.33**	**322**	⇓*i* P	**Pb**	**19 39 03.7**	**-0.1**
	baz=325						
WHF				S	**Sb**	**19 39 08.8**	**0.0**
	baz=325						
EHY	**Hungye**	**0.40**	**202**	⇑*i* P	**Pb**	**19 39 03.9**	**-1.0**
	baz=188						
EHY				*e*S	**Sb**	**19 39 11.4**	**+0.7**
	baz=188						
TWT	**Tachien**	**0.47**	**323**	P	**Pb**	**19 39 05.9**	**-0.1**
	baz=322						
TWT				*i* S	**Sb**	**19 39 12.0**	**-0.6**
	baz=322						
SSLB	**Suanglung**	**0.50**	**259**	*e*P	**Pb**	**19 39 05.1**	**-1.3**
SSLB				*e*S	**Sb**	**19 39 11.7**	**-1.7**
YULB	**Yu-li**	**0.52**	**200**	*e*P	**Pb**	**19 39 05.0**	**-1.8**
YULB				*e*S	**Sb**	**19 39 13.6**	**-0.3**
SMLT	**Sun Moon Lake**	**0.54**	**270**	⇑*i* P	**Pb**	**19 39 06.5**	**-0.7**
	baz=266						
SMLT				S	**Sb**	**19 39 13.7**	**-0.8**
	baz=266						
TWF1	**Yuli**	**0.55**	**198**	⇑*i* P	**Pb**	**19 39 05.9**	**-1.6**
	baz=183						
TWF1				*e*S	**Sb**	**19 39 15.3**	**+0.4**
	baz=183						
NNS	**Nan Shan**	**0.57**	**349**	P	**Pb**	**19 39 07.5**	**-0.1**
	baz=359						
NNS				*e*S	**Sb**	**19 39 15.1**	**-0.2**
	baz=359						
TYC	**Yuchr**	**0.58**	**272**	⇑*i* P	**Pb**	**19 39 06.9**	**-0.9**
	baz=272						
TYC				*e*S	**Sb**	**19 39 14.2**	**-1.4**
	baz=272						
ENA	**Nanau**	**0.59**	**23**	*e*P	**Pb**	**19 39 07.2**	**-0.9**
	baz=32						
YUS	**Yu-Shan**	**0.63**	**232**	⇓*i* P	**Pb**	**19 39 08.7**	**0.0**
	baz=218						
YUS				*e*S	**Sb**	**19 39 17.5**	**+0.5**
	baz=218						
ALS	**Alishan**	**0.73**	**240**	⇓*i* P	**Pb**	**19 39 10.2**	**-0.2**
	baz=226						
ALS				S	**Sb**	**19 39 19.9**	**0.0**
	baz=226						
WNT	**Mingjian**	**0.73**	**270**	*e*P	**Pb**	**19 39 09.7**	**-0.8**
	baz=267						
WNT				*e*S	**Sb**	**19 39 20.6**	**+0.4**
	baz=267						
ENTT	**Nioudou**	**0.76**	**5**	P	**Pb**	**19 39 10.5**	**-0.5**
	baz=23						
CHKT	**Chengkung**	**0.79**	**188**	*e*P	**Pb**	**19 39 10.2**	**-1.2**
	baz=173						
CHKT				*e*S	**Sb**	**19 39 21.8**	**+0.2**
	baz=173						
TCU	**Taichung**	**0.79**	**290**	⇑P	**Pb**	**19 39 11.2**	**-0.1**
	baz=289						
TCU				S	**Sb**	**19 39 22.3**	**+0.7**
	baz=289						
YHNB	**Yeheng**	**0.79**	**353**	*e*P	**Pb**	**19 39 10.9**	**-0.6**
YHNB				*e*S	**Sb**	**19 39 20.4**	**-1.4**
CHN5	**Tsauling**	**0.79**	**249**	*e*P	**Pb**	**19 39 11.3**	**-0.2**
	baz=245						
CHN5				S	**Sb**	**19 39 22.0**	**+0.2**
	baz=245						
TWC	**Suao**	**0.80**	**24**	P	**Pb**	**19 39 11.0**	**-0.6**
	baz=36						
TWC				*e*S	**Sb**	**19 39 22.7**	**+0.8**
	baz=36						
NSK	**Sanguang**	**0.80**	**352**	P	**Pb**	**19 39 11.2**	**-0.4**
	baz=356						
NSK				*e*S	**Sb**	**19 39 20.9**	**-1.1**
	baz=356						
TWQ1	**Liyutan**	**0.80**	**306**	⇑*i* P	**Pb**	**19 39 11.7**	**0.0**
	baz=307						
TWQ1				S	**Sb**	**19 39 23.4**	**+1.4**
	baz=307						
ELDTW	**Lidau**	**0.81**	**212**	*e*P	**Pb**	**19 39 10.2**	**-1.6**
	baz=207						
ELDTW				*e*S	**Sb**	**19 39 22.3**	**-0.1**
	baz=207						
TWE	**Neicheng**	**0.85**	**11**	P	**Pb**	**19 39 11.5**	**-1.0**
	baz=16						
TWE				*e*S	**Sb**	**19 39 24.8**	**+1.2**
	baz=16						
NSTT	**Nanjuang**	**0.87**	**329**	⇑P	**Pb**	**19 39 12.2**	**-0.5**
	baz=332						
NSTT				S	**Sb**	**19 39 23.7**	**-0.3**
	baz=332						
WGK	**Gukeng**	**0.87**	**257**	*e*P	**Pb**	**19 39 11.0**	**-1.8**
	baz=254						
WGK				*e*S	**Sb**	**19 39 24.1**	**+0.1**
	baz=254						
CHN4	**Tsaushan**	**0.97**	**237**	*e*P	**Pn**	**19 39 15.0**	**+0.4**
	baz=242						
CHN4				*e*S	**Sb**	**19 39 28.7**	**+1.7**
	baz=242						
TPUB	**Ta-pu**	**0.98**	**234**	*e*P	**Pn**	**19 39 14.1**	**-0.5**
STYT	**Tauyuan**	**0.98**	**223**	P	**Pn**	**19 39 14.1**	**-0.6**
	baz=219						
STYT				S	**Sb**	**19 39 28.0**	**+0.8**
	baz=219						
CHN2	**Minshiung**	**0.99**	**250**	*e*P	**Pn**	**19 39 14.9**	**+0.1**
	baz=244						
WTP	**Ta-pu**	**1.02**	**232**	⇓P	**Pn**	**19 39 15.3**	**+0.1**
	baz=222						
WTP				*e*S	**Sb**	**19 39 29.6**	**+1.3**
	baz=222						
HSN	**Hsinchu**	**1.03**	**333**	*e*P	**Pn**	**19 39 15.2**	**-0.2**
	baz=324						
CHY	**Chiayi**	**1.05**	**249**	*e*P	**Pn**	**19 39 15.5**	**-0.1**
	baz=245						
CHY				*e*S	**Sb**	**19 39 29.4**	**+0.3**
	baz=245						
TATO	**Taipei**	**1.09**	**0**	*e*P	**Pn**	**19 39 15.7**	**-0.5**
TATO				*e*S	**Sb**	**19 39 30.9**	**+0.6**
TWA	**Mucha**	**1.10**	**5**	*e*P	**Pn**	**19 39 16.1**	**-0.2**
	baz=23						
TWK	**Hsinying**	**1.10**	**236**	*e*P	**Pn**	**19 39 16.7**	**+0.4**
	baz=233						
TWK				*e*S	**Sb**	**19 39 31.6**	**+1.0**
	baz=233						
WTCT	**Ta-ch'eng**	**1.10**	**269**	*e*P	**Pn**	**19 39 15.9**	**-0.4**
	baz=267						
WTCT				*e*S	**Sb**	**19 39 30.6**	**-0.2**
	baz=267						
NCU	**National Centr**	**1.12**	**346**	*e*P	**Pn**	**19 39 17.7**	**+1.2**
	baz=349						
NCU				*e*S	**Sb**	**19 39 33.2**	**+2.0**
	baz=349						
CHN1	**Nanshi**	**1.12**	**232**	⇑P	**Pn**	**19 39 17.1**	**+0.5**
	baz=228						
CHN1				*e*S	**Sb**	**19 39 32.7**	**+1.5**
	baz=228						
TWG	**Pinlang**	**1.12**	**200**	*e*P	**Pn**	**19 39 13.4**	**-3.2**
TWG	**Pinlang**	**1.12**	**200**	*e*P	**Pn**	**19 39 13.9**	**-2.7**
	baz=178						
TAP1	**Taipei**	**1.15**	**2**	*e*P	**Pn**	**19 39 17.7**	**+0.7**
	baz=29						
WSF	**Szu**	**1.18**	**258**	*e*P	**Pn**	**19 39 17.8**	**+0.4**
	baz=255						
WSF				*e*S	**Sn**	**19 39 33.4**	**+0.6**
	baz=255						
TWB1	**Santiao Chiao**	**1.21**	**22**	*e*P	**Pn**	**19 39 17.9**	**0.0**
	baz=42						
NWF	**Wu-fen Shan**	**1.22**	**13**	*e*P	**Pn**	**19 39 17.4**	**-0.5**
	baz=29						
NWF				*e*S	**Sn**	**19 39 34.7**	**+1.1**
	baz=29						
TWS1	**Kuangyinshan**	**1.22**	**357**	*e*P	**Pn**	**19 39 18.4**	**+0.5**
	baz=19						
TWS1				*e*S	**Sn**	**19 39 35.6**	**+2.0**
	baz=19						
CHN8	**Yiju**	**1.29**	**246**	*e*P	**Pn**	**19 39 19.0**	**+0.2**
	baz=230						
CHN8				*e*S	**Sn**	**19 39 35.9**	**+0.6**
	baz=230						
CHN3	**Shinhua**	**1.30**	**232**	*e*P	**Pn**	**19 39 19.7**	**+0.6**
	baz=226						
ECL	**Taimali**	**1.37**	**201**	*e*P	**Pn**	**19 39 18.6**	**-1.4**
	baz=182						
SSD	**Sandimen**	**1.38**	**215**	*e*P	**Pn**	**19 39 20.0**	**-0.1**
	baz=226						
SSD				*e*S	**Sn**	**19 39 38.9**	**+1.3**
	baz=226						
TWM1	**Shoushan**	**1.44**	**223**	*e*P	**Pn**	**19 39 22.6**	**+1.6**
	baz=217						
YOJ	**Yonaguni jima**	**1.51**	**67**	P	**Pn**	**19 39 21.8**	**-0.1**
YOJ				*e*S	**Sn**	**19 39 40.7**	**-0.1**
SCZT	**Fangliau**	**1.70**	**208**	*e*P	**Pn**	**19 39 25.5**	**+0.9**
	baz=218						
PNG	**Penghu**	**1.80**	**260**	*e*P	**Pn**	**19 39 24.9**	**-1.0**
	baz=257						
PNG				*e*S	**Sn**	**19 39 47.3**	**-0.7**
	baz=257						
LAY	**Lan-yu**	**1.83**	**178**	*e*P	**Pn**	**19 39 24.1**	**-2.3**
	baz=173						
TWP	**Hsiaoliuchiu**	**1.84**	**214**	*e*P	**Pn**	**19 39 28.9**	**+2.4**
	baz=224						
TWK1	**Hengchun**	**2.03**	**198**	*e*P	**Pn**	**19 39 29.2**	**+0.1**
	baz=178						
IRIF	**Iriomote-Funau**	**2.10**	**77**	P	**Pn**	**19 39 30.3**	**+0.3**
IRIF				*e*S	**Sn**	**19 39 55.6**	**+0.2**
HATJ	**Hateruma jima**	**2.13**	**85**	*e*S	**Sn**	**19 39 56.2**	**+0.1**
JKRS	**Kuro-shima**	**2.33**	**81**	P	**Pn**	**19 39 33.4**	**+0.1**
JKRS				*e*S	**Sn**	**19 40 01.8**	**+0.6**
JIJ	**Ishigaki jima**	**2.47**	**78**	P	**Pn**	**19 39 35.0**	**-0.2**
JIJ				*e*S	**Sn**	**19 40 03.7**	**-1.0**
KNM	**Kinmen**	**2.84**	**281**	*e*P	**Pn**	**19 39 40.5**	**+0.3**
	baz=276						
JTJ	**Tarama**	**3.03**	**75**	P	**Pn**	**19 39 43.3**	**+0.4**
JTJ				*e*S	**Sn**	**19 40 18.2**	**-0.2**

*CSEM **20** 19:50:11.0±0.2,3939N×3318E,h10km,MD2.7,Error ellipse: s-maj=7.1km s-min=2.6km az=154.0*
*DDA **20** 19:50:11.5,3939N×3317E,h7km±2km,Md2.9*
*ISK **20** 19:50:11.1,3943N×3316E,h12km,MD2.7*
*ISCJB **20** 19:50:12.2±0.5,3937N±005×3318E±005,h10km,Error ellipse: s-maj=7.4km s-min=4.1km az=149.3*
ISC 20 19:50:11.7±1.0,3938N±005×3314E±006,h3km±10km,n9, σ0§62/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.45**	**91**	*e*PG	**Pg**	**19 50 20.1**	**-0.1**
KAMT				*e*SG	**Sg**	**19 50 26.7**	**+0.7**
LOD	**Lodumlu**	**0.58**	**330**	*e*PG	**Pg**	**19 50 22.3**	**-0.5**
CDAG	**Cicekdag**	**0.98**	**75**	*i* P	**Pg**	**19 50 29.9**	**-0.7**
CDAG				*i* S	**Sg**	**19 50 43.5**	**+0.2**
KIZT	**Kizilcal**	**1.10**	**243**	*e*PN	**Pn**	**19 50 33.0**	**-0.9**
KIZT				*e*SN	**Sn**	**19 50 50.2**	**+0.7**
ELDT	**Eldivan**	**1.13**	**11**	*i* P	**Pb**	**19 50 34.2**	**+0.4**
ELDT				*i* S	**Sb**	**19 50 49.4**	**+0.6**
KDHN	**Kadinhani**	**1.17**	**223**	*i* P	**Pb**	**19 50 34.6**	**+0.1**
KDHN				*i* S	**Sb**	**19 50 51.0**	**+1.0**
LADK	**Ladik-KONYA**	**1.32**	**207**	*e*PN	**Pn**	**19 50 36.7**	**-0.3**
KONT	**Konya--Tatoy**	**1.56**	**203**	*e*PN	**Pn**	**19 50 39.6**	**-0.6**
YOZ	**Yozgat**	**1.71**	**81**	*e*PN	**Pn**	**19 50 41.3**	**-1.0**

*IDC **20** 20:05:19.5±4.1,772S×109.18E,h0km,mb3.5/3,mb1 3.6/3, mb1mx3.4/18,mbtmp3.5/3,Error ellipse: s-maj=254.9km s-min=28.2km az=51.0*
*ISCJB **20** 20:05:21.9±1.4,87S±0.1×10829E±009,h33km,mb3.4/3, Error ellipse: s-maj=19.3km s-min=9.7km az=25.7*
*DJA **20** 20:05:28,821S×10850E,h37km,MLv3.9/6*
ISC 20 20:05:22.7±1.2,87S±01×10822E±009,h35km,n10, σ1§29/10,mb3.4/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**1.95**	**342**	P	**Pn**	**20 05 56.4**	**+3.0**
JCJI	**Jatiwangi**	**2.19**	**1**	P	**Pn**	**20 05 55.5**	**-1.2**
DBJI	**Dramaga**	**2.58**	**325**	P	**Pn**	**20 06 06.8**	**+4.8**
CBJI	**Citeko**	**2.64**	**329**	P	**Pn**	**20 06 03.5**	**+0.7**
SMRI	**Semarang**	**2.74**	**54**	P	**Pn**	**20 06 03.9**	**-0.3**
SJI	**Sawahan**	**3.64**	**75**	P	**Pn**	**20 06 17.1**	**+0.5**
KRKI	**Karangkates**	**4.22**	**83**	P	**Sn**	**20 07 13.0**	**+0.3**
WRA	**Warramunga Arr**	**27.62**	**117**	P	**P**	**20 11 05.5**	**-1.7**
	0.1nm,0.5s,mb2.7,baz=289,slow=9.9,SNR=2.9						
STKA	**Stephens Creek**	**38.62**	**131**	P	**P**	**20 12 44.3**	**+1.5**
	0.8nm,0.6s,mb3.6,baz=332,slow=8.5,SNR=3.2						
MKAR	**Makanchi Array**	**59.88**	**340**	P	**P**	**20 15 23.2**	**-1.8**
	0.4nm,0.4s,mb3.8,baz=148,slow=8.6,SNR=8.4						

*NEIC **20** 20:37:17.4, 1576N×6070W,h27km,MD3.3(TRN),After TRN.*
TRN 20 20:37:13.3,1582N×6062W,h16km,MD3.3,M3.5(FDF), 4C-2D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**0.65**	**319**	*e*P	**Pg**	**20 37 27.9**	**+1.7**
MGG	**Marie-Galante**	**0.68**	**278**	⇓*i* P	**Pg**	**20 37 29.5**	**+2.8**
SFG	**Saint Francois**	**0.71**	**308**	⇑*i* P	**Pg**	**20 37 29.3**	**+2.1**
DWS	**Wesley**	**0.71**	**250**	*e*P	**Pg**	**20 37 30.5**	**+3.2**
DWS				*e*S	**Sg**	**20 37 41.7**	**+4.8**
DWS	**Wesley**	**0.71**	**250**	*e*P	**Pg**	**20 37 32.5**	**+5.2**
DWS				*e*S	**Sg**	**20 37 41.7**	**+4.8**
DOG	**Dongo Capester**	**0.99**	**283**	⇓*i* P	**Pb**	**20 37 34.1**	**+2.1**
TBG	**Guadaloupe-3**	**0.99**	**272**	⇑*i* P	**Pb**	**20 37 34.1**	**+2.0**
BCG	**Bois Riant Cap**	**1.00**	**285**	*e*P	**Pb**	**20 37 34.5**	**+2.2**
SCG	**Saint Claude**	**1.05**	**282**	*e*P	**Pb**	**20 37 35.0**	**+1.9**
HMG	**Houelmont**	**1.06**	**279**	*e*P	**Pb**	**20 37 35.1**	**+1.9**
HMG				*e*S	**Sb**	**20 37 50.0**	**+3.2**
LZG	**Guadaloupe-1**	**1.16**	**286**	*e*P	**Pn**	**20 37 36.6**	**+1.7**
FDF	**Fort de France**	**1.20**	**206**	*e*P	**Pn**	**20 37 36.6**	**+1.3**
FDF				*e*S	**Sb**	**20 37 52.0**	**+1.2**
FDF	**Fort de France**	**1.20**	**206**	*e*P	**Pn**	**20 37 36.4**	**+1.0**
MVM	**Montagne Vaucl**	**1.28**	**192**	*e*P	**Pn**	**20 37 37.9**	**+1.3**
BIM	**Bigot**	**1.37**	**199**	*e*P	**Pn**	**20 37 39.0**	**+1.3**
BIM				*e*S	**Sn**	**20 37 57.0**	**+1.5**
BPA	**Boggy Peak**	**1.71**	**316**	⇑*e*P	**Pn**	**20 37 44.5**	**+2.1**
BPA				*e*S	**Sn**	**20 38 07.9**	**+4.0**
BPA	**Boggy Peak**	**1.71**	**316**	⇑*e*P	**Pn**	**20 37 45.7**	**+3.3**
BPA				*e*S	**Sn**	**20 38 09.2**	**+5.3**
SLW	**Petit Monier**	**1.81**	**190**	*e*P	**Pn**	**20 37 45.8**	**+1.9**
SLW				*e*S	**Sn**	**20 38 10.0**	**+3.4**
SLW	**Petit Monier**	**1.81**	**190**	*e*P	**Pn**	**20 37 47.9**	**+4.0**
SLW				*e*S	**Sn**	**20 38 10.0**	**+3.4**
SLPE	**Piton Saint Es**	**2.00**	**191**	*e*P	**Pn**	**20 37 48.8**	**+2.4**
SLPE				*e*S	**Sn**	**20 38 13.8**	**+2.7**
SLPE	**Piton Saint Es**	**2.00**	**191**	*e*P	**Pn**	**20 37 50.1**	**+3.7**
SLPE				*e*S	**Sn**	**20 38 13.8**	**+2.7**
SLDE	**Delcer**	**2.05**	**192**	*e*P	**Pn**	**20 37 51.3**	**+4.2**
SLDE				*e*S	**Sn**	**20 38 15.3**	**+3.0**
SLDE	**Delcer**	**2.05**	**192**	*e*P	**Pn**	**20 37 53.6**	**+6.5**
SLDE				*e*S	**Sn**	**20 38 15.3**	**+3.0**

*NEIC **20** 20:42:56.2,1586N×9695W,h15km,MD3.7(MEX),After MEX.*
MEX 20 20:42:56.2±0.5,1585N×9696W,h15km±7km,MD3.7,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.82**	**96**	*i* P	**Pg**	**20 43 09.1**	**-3.0**
HUIG				*i* S	**Sg**	**20 43 19.6**	**-3.3**
VHO	**Vista Hermosa**	**1.23**	**10**	*i* P	**Pn**	**20 43 15.5**	**-3.4**
VHO				*i* S	**Sb**	**20 43 30.0**	**-5.0**
PNIG	**Pinotepa**	**1.25**	**296**	*i* P	**Pn**	**20 43 15.3**	**-3.8**
PNIG				*i* S	**Sb**	**20 43 30.9**	**-4.5**
UTMO	**Huajuapan**	**2.13**	**338**	*i* P	**Pn**	**20 43 28.8**	**-2.4**
UTMO				*i* S	**Sn**	**20 43 52.9**	**-4.6**
CMIG	**Matias Romero**	**2.34**	**58**	*i* P	**Pn**	**20 43 32.0**	**-2.1**
CMIG				*i* S	**Sn**	**20 43 59.0**	**-3.6**

*NEIC **20** 20:57:36.4±2.9,2399N×12251E,h10km,Error ellipse: s-maj=32.6km s-min=13.7km az=89.0*
*ISCJB **20** 20:57:41.0±0.4,2409N±002×12227E±002,h21km±4km, Error ellipse: s-maj=4.0km s-min=2.5km az=160.8*
*TAP **20** 20:57:41.0,24.16N×122.27E,h29km,ML3.4,D*
*JMA **20** 20:57:40.1±0.2,24.34N×122.12E,h55km,M2.9*
ISC 20 20:57:40.6±0.5,2410N±002×12227E±002,h15km±3km, n51,σ0§76/86,1C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.58**	**305**	*e*P	**Pg**	**20 57 52.1**	**0.0**
	baz=307						
ENA				*e*S	**Sg**	**20 58 00.4**	**+0.5**
	baz=307						
TWD	**Chiawan**	**0.61**	**269**	P	**Pg**	**20 57 53.2**	**+0.6**
	baz=249						
TWD				*e*S	**Sg**	**20 58 02.4**	**+1.6**
	baz=249						
HWA	**Hwalien**	**0.62**	**259**	*e*P	**Pg**	**20 57 53.4**	**+0.7**
	baz=240						
NACB	**Ninganchiao**	**0.62**	**277**	*e*P	**Pg**	**20 57 53.0**	**+0.2**
TWC	**Suao**	**0.64**	**323**	⇓*i* P	**Pg**	**20 57 52.7**	**-0.5**
	baz=319						
TWC				*e*S	**Sg**	**20 58 00.8**	**-0.9**
	baz=319						
YOJ	**Yonaguni jima**	**0.77**	**62**	P	**Pg**	**20 57 55.7**	**0.0**
YOJ				S	**Sg**	**20 58 07.2**	**+1.3**
ESL	**Shilin**	**0.81**	**250**	*e*P	**Pb**	**20 57 55.4**	**-1.1**
	baz=236						
TWE	**Neicheng**	**0.83**	**319**	*e*P	**Pb**	**20 57 56.2**	**-0.5**
	baz=315						
TWE				*e*S	**Sb**	**20 58 07.9**	**+0.3**
	baz=315						
ENTT	**Nioudou**	**0.84**	**310**	P	**Pb**	**20 57 56.9**	**0.0**
	baz=306						
ENTT				*e*S	**Sb**	**20 58 07.8**	**-0.1**
	baz=306						
NNS	**Nan Shan**	**0.88**	**293**	*e*P	**Pb**	**20 57 57.7**	**0.0**
	baz=289						
NNS				S	**Sb**	**20 58 09.8**	**+0.5**
	baz=289						
WHF	**Hehuan Shan**	**0.92**	**273**	P	**Pb**	**20 57 58.1**	**-0.1**
	baz=269						
WHF				*e*S	**Sb**	**20 58 10.9**	**+0.7**
	baz=269						
TWB1	**Santiao Chiao**	**0.94**	**345**	*e*P	**Pb**	**20 57 58.1**	**-0.6**
	baz=353						
TWB1				*e*S	**Sb**	**20 58 10.1**	**-0.9**
	baz=353						
YHNB	**Yeheng**	**0.99**	**305**	*e*P	**Pb**	**20 57 59.2**	**-0.3**
YHNB				*e*S	**Sb**	**20 58 12.8**	**+0.5**
TWT	**Tachien**	**1.01**	**279**	*e*

	baz=241								
IRIF	**Iriomote-Funau**	**1.36**	**80**	P		**Pn**	**20 58 04.7**	**-0.3**	
IRIF				eS		**Sn**	**20 58 23.0**	**+0.3**	
TWQ1	**Liyutan**	**1.39**	**281**	eP		**Pn**	**20 58 05.4**	**0.0**	
	baz=277								
TWQ1				eS		**Sn**	**20 58 22.8**	**-0.6**	
	baz=277								
HATJ	**Hateruma jima**	**1.41**	**91**	eS		**Sn**	**20 58 25.4**	**+1.5**	
TCU	**Taichung**	**1.45**	**272**	eP		**Pn**	**20 58 06.4**	**+0.1**	
	baz=269								
TCU				eS		**Sn**	**20 58 24.7**	**-0.4**	
	baz=269								
ELDTW	**Lidau**	**1.46**	**232**	eP		**Pn**	**20 58 05.0**	**-1.3**	
	baz=221								
ELDTW				eS		**Sn**	**20 58 23.8**	**-1.3**	
	baz=221								
ALS	**Alishan**	**1.46**	**247**	eP		**Pn**	**20 58 06.8**	**+0.4**	
	baz=245								
ALS				eS		**Sn**	**20 58 25.3**	**+0.1**	
	baz=245								
CHN5	**Tsauling**	**1.54**	**251**	eP		**Pn**	**20 58 07.9**	**+0.5**	
	baz=249								
CHN5				eS		**Sn**	**20 58 27.6**	**+0.5**	
	baz=249								
PCYT	**Pengchaiyu**	**1.54**	**353**	eP		**Pn**	**20 58 06.7**	**-0.8**	
	baz=351								
JKRS	**Kuro-shima**	**1.60**	**85**	P		**Pn**	**20 58 08.5**	**+0.2**	
JKRS				eS		**Sn**	**20 58 29.6**	**+0.9**	
WGK	**Gukeng**	**1.61**	**256**	eP		**Pn**	**20 58 09.8**	**+1.4**	
	baz=254								
STYT	**Tauyuan**	**1.67**	**236**	eP		**Pn**	**20 58 09.3**	**+0.1**	
	baz=227								
STYT				eS		**Sn**	**20 58 30.5**	**+0.2**	
	baz=227								
TWG	**Pinlang**	**1.68**	**221**	eP		**Pn**	**20 58 06.6**	**-2.8**	
TWG	**Pinlang**	**1.68**	**221**	eP		**Pn**	**20 58 08.2**	**-1.1**	
	baz=220								
CHN4	**Tsaushan**	**1.70**	**245**	eP		**Pn**	**20 58 10.7**	**+1.0**	
	baz=235								
CHN4				eS		**Sn**	**20 58 31.7**	**+0.4**	
	baz=235								
JIJ	**Ishigaki jima**	**1.73**	**81**	P		**Pn**	**20 58 09.6**	**-0.6**	
JIJ				eS		**Sn**	**20 58 31.5**	**-0.5**	
WTP	**Ta-pu**	**1.73**	**241**	eP		**Pn**	**20 58 10.8**	**+0.6**	
	baz=240								
WTP				eS		**Sn**	**20 58 32.4**	**+0.4**	
	baz=240								
TWK	**Hsinying**	**1.83**	**244**	eP		**Pn**	**20 58 11.6**	**+0.2**	
	baz=242								
TWK				eS		**Sn**	**20 58 35.9**	**+1.6**	
	baz=242								
CHN1	**Nanshi**	**1.83**	**241**	eP		**Pn**	**20 58 12.0**	**+0.5**	
	baz=239								
CHN1				eS		**Sn**	**20 58 35.0**	**+0.6**	
	baz=239								
ECL	**Taimali**	**1.92**	**219**	eP		**Pn**	**20 58 11.8**	**-0.9**	
	baz=228								
SSD	**Sandimen**	**2.01**	**228**	eP		**Pn**	**20 58 14.8**	**+0.8**	
	baz=222								
SSD				eS		**Sn**	**20 58 40.8**	**+1.8**	
	baz=222								
LAY	**Lan-yu**	**2.15**	**198**	eP		**Pn**	**20 58 13.9**	**-2.0**	
	baz=199								
JTJ	**Tarama**	**2.29**	**76**	eS		**Sn**	**20 58 46.9**	**+1.2**	
SCZT	**Fangliau**	**2.29**	**222**	eP		**Pn**	**20 58 16.1**	**-1.6**	
	baz=217								

IDC 20 20:58:47.0±3.0, **1238S**×**16565E**, **h0**km, **mb4.0**/7, **mb1 4.1**/7, **mb1mx3.9**/17, **mbtmpg3.9**/7, **MS3.2**/4, **Ms1 3.2**/4, **ms1mx2.8**/33, **Error ellipse: s-maj=98.6km s-min=31.2km az=137.0**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.67**	**176**	eP	Pn	21 01 19.2	+12
PMG	**Port Moresby**	**18.39**	**277**	LR	LR	21 09 05.6	
	comp=Z,27nm,18.6s,baz=96,slow=34						
CTA	**Charters Tower**	**20.12**	**245**	LR	LR	21 10 20.7	
	comp=Z,38nm,18.5s,baz=228,slow=34						
STKA	**Stephens Creek**	**29.43**	**225**	LR	LR	21 16 05.2	
	comp=Z,58nm,18.9s,baz=26,slow=35						
WRA	**Warramunga Arr**	**30.96**	**252**	P	P	21 05 07.0	+0.9
	1.2nm,1.0s,baz=83,slow=8.9,SNR=9.2						
ASAR	**Alice Springs**	**32.13**	**245**	P	P	21 05 15.5	-0.8
	0.8nm,0.8s,baz=73,slow=9.2,SNR=9.9						
NWAO	**Narrogin (SRO)**	**48.65**	**237**	LR	LR	21 27 35.7	
	comp=Z,63nm,19.2s,baz=43,slow=36						
CMAR	**Chiang Mai Arr**	**72.56**	**294**	P	P	21 10 16.8	+0.4
	0.7nm,0.7s,baz=129,slow=4.7,SNR=6.9						
SONM	**Songino Array**	**79.68**	**324**	P	P	21 10 55.9	-0.4
	0.3nm,0.6s,baz=126,slow=7.3,SNR=3.2						
MKAR	**Makanchi Array**	**94.42**	**317**	P	P	21 12 09.2	+0.3
	0.6nm,0.6s,baz=96,slow=6.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**94.57**	**324**	P	P	21 12 09.1	-0.3
	0.2nm,0.3s,baz=99,slow=4.7,SNR=2.4						
YKA	**Yellowknife Ar**	**96.19**	**27**	P	P	21 12 16.7	+0.1
	0.6nm,0.8s,baz=256,slow=4.6,SNR=6.8						

*CSEM **20** 21:10:09.7±0.1, 4078N×3071E, h10km, ML3.2, Error ellipse: s-maj=2.0km s-min=1.4km az=8.0*
*ISK **20** 21:10:09.9, 4077N×3071E, h11km, MD2.9*
*ISCJB **20** 21:10:10.7±0.4, 4078N±003×3070E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.3km az=176.9*
*DDA **20** 21:10:10.4, 4079N×3070E, h7km×3km, Md2.8, Ml3.2*
ISC 20 21:10:10.6±0.6, **4081N**±003×**3071E**±003, **h3**km±4km, **n27**, **s**1§**17**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.15**	**84**	*i* P	**Pg**	**21 10 14.3**	**+0.8**
HENT				*i* S	**Sg**	**21 10 16.8**	**+1.4**
GULT	**Gulveren**	**0.40**	**201**	*e*PG	**Pg**	**21 10 17.9**	**-0.4**
GULT				*e*SG	**Sg**	**21 10 23.3**	**-0.2**
MDU	**Mudurnu**	**0.52**	**131**	*e*PG	**Pg**	**21 10 19.6**	**-0.9**
HRT	**Hereke**	**0.79**	**271**	*e*PG	**Pg**	**21 10 25.9**	**+0.3**
HRT				*e*SG	**Sg**	**21 10 37.3**	**+1.5**
ADVT	**Abdulvahap**	**0.83**	**243**	*e*PG	**Pg**	**21 10 25.6**	**-0.8**
ADVT				*e*SG	**Sg**	**21 10 37.2**	**+0.1**
CAVI	**Cavuskoy**	**0.89**	**228**	*e*PG	**Pg**	**21 10 27.3**	**-0.4**
CAVI				*e*SG	**Sg**	**21 10 39.5**	**+0.2**
BORA	**Eskisehir**	**0.95**	**192**	*i* P	**Pg**	**21 10 27.6**	**-1.2**
BORA				*i* S	**Sg**	**21 10 39.8**	**-1.2**
YLV	**Yalova**	**1.04**	**257**	*e*PG	**Pg**	**21 10 30.6**	**+0.1**
YLV				*e*SG	**Sg**	**21 10 45.2**	**+1.2**
GEMT	**Gemlik**	**1.21**	**253**	*e*PN	**Pn**	**21 10 32.9**	**-1.5**
ISK	**Istanbul-Kandi**	**1.27**	**282**	*e*PN	**Pn**	**21 10 34.1**	**-1.1**
ESKT	**Eskisehir**	**1.29**	**175**	*i* P	**Pg**	**21 10 34.4**	**-0.9**
ESKT				*i* S	**Sg**	**21 10 53.0**	**+0.9**
ESKT	**Eskisehir**	**1.29**	**175**	*e*Pn	**Pn**	**21 10 33.9**	**-1.6**
SEYT	**Eskypehyr**	**1.29**	**175**	*i* P	**Pg**	**21 10 34.4**	**-0.9**
SEYT				*i* S	**Sg**	**21 10 53.0**	**+0.9**
KLYT	**Kilyos**	**1.33**	**290**	*e*PN	**Pn**	**21 10 35.4**	**-0.7**
ULDT	**Uludag**	**1.37**	**241**	*i* P	**Pn**	**21 10 36.4**	**-0.1**
ULDT				*i* S	**Sg**	**21 10 55.7**	**+1.1**
ARMT	**Armutlu**	**1.42**	**261**	*e*PN	**Pn**	**21 10 36.2**	**-1.0**
BGKT	**Bogazkoy**	**1.51**	**285**	*e*PN	**Pn**	**21 10 37.7**	**-0.8**
SAFT	**Safranbolu**	**1.56**	**73**	*e*PN	**Pn**	**21 10 38.4**	**-0.8**
CTKS	**Kestanelik-??a**	**1.72**	**285**	*e*PN	**Pn**	**21 10 40.5**	**-0.9**
ELBA	**Catalca**	**1.75**	**282**	*i* P	**Pn**	**21 10 42.9**	**+1.0**
ELBA				*i* S	**Sn**	**21 11 06.2**	**+1.5**
CTT	**Catalca**	**1.75**	**282**	*e*PN	**Pn**	**21 10 40.9**	**-0.9**
ALT	**Altintas**	**1.81**	**195**	*e*PN	**Pn**	**21 10 41.4**	**-1.2**
SLVT	**Silivri**	**1.93**	**283**	*e*PN	**Pn**	**21 10 43.2**	**-1.1**
GDZ	**Gediz**	**1.96**	**209**	*i* P	**Pn**	**21 10 46.6**	**+2.0**
GDZ				*i* S	**Sn**	**21 11 12.5**	**+2.8**
BOLV	**Bolvadin**	**2.10**	**175**	*i* P	**Pn**	**21 10 49.2**	**+2.6**
BOLV				*i* S	**Sn**	**21 11 15.9**	**+2.8**
KIZT	**Kizilcal**	**2.13**	**154**	*e*PN	**Pn**	**21 10 46.4**	**-0.6**
BALT	**Daday**	**2.15**	**69**	*i* P	**Pn**	**21 10 49.4**	**+2.1**
BALT				*i* S	**Sn**	**21 11 20.5**	**+6.1**

*IDC **20** 21:11:54.8±1.2, 705S×15583E, h46km±7km, mb3.9/10, mb1 4.0/10, mb1mx3.9/18, mbtmpg3.9/10, MS3.3/6, Ms1 3.3/6, ms1mx3.0/26, Error ellipse: s-maj=31.0km s-min=19.7km az=102.0*
*ISCJB **20** 21:12:00.9±4.0, 7.1S±0.1×1558E±0.2, h117km±33km, mb4.0/12, Error ellipse: s-maj=26.6km s-min=21.6km az=170.3*
*NEIC **20** 21:12:03.8±3.4, 707S×15567E, h124km±26km, mb4.3/2, Error ellipse: s-maj=27.2km s-min=16.0km az=89.0*

ISC 20 21:12:01.5±3.6, **713S**±01×**1559E**±02, **h109**km±28km, **n23**, **s**1§**02**/18, **mb4.0**/12, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.95**	**254**	P	**Pn**	**21 14 06.5**	**-1.4**
	6.9nm,0.3s,baz=49,slow=8.5,SNR=19						
PMG				S	**Sn**	**21 15 48.2**	**+1.3**
	1.7nm,0.3s,baz=334,slow=20,SNR=5.0						
PMG				LR	LR	21 17 28.3	
	comp=Z,133nm,19.2s,baz=63,slow=37						
PMG	**Port Moresby**	**8.95**	**254**	*e*Pn	**Pn**	**21 14 07.3**	**-0.6**
PMG				S	**Sn**	**21 15 48.2**	**+1.3**
CTA	**Charters Tower**	**15.95**	**215**	P	**Pn**	**21 15 40.6**	**+0.9**
	0.4nm,0.3s,baz=29,slow=10,SNR=3.2						
CTA				LR	LR	21 21 05.2	
	comp=Z,77nm,19.6s,baz=45,slow=34						
GUMO	**Guam**	**23.28**	**332**	LR	LR	21 24 11.4	
	comp=Z,66nm,18.7s,baz=99,slow=32						
WRAB	**Tennant Creek**	**24.49**	**236**	*e*P	**P**	**21 17 10.8**	**+0.2**
	16nm,2.0s,mb4.0						
WRA	**Warramunga Arr**	**24.50**	**236**	P	**P**	**21 17 10.6**	**-0.2**
	0.8nm,0.4s,mb3.5,baz=58,slow=10.0,SNR=21						
WRA				PcP	PcP	21 20 47.9	+1.2
	0.9nm,0.9s,baz=55,slow=2.2,SNR=4.4						
ASAR	**Alice Springs**	**26.79**	**230**	P	**P**	**21 17 30.6**	**-0.8**
	1.0nm,0.3s,mb3.8,baz=59,slow=9.5,SNR=26						
ASAR				PcP	PcP	21 20 53.4	+1.6
	0.5nm,0.5s,baz=68,slow=2.7,SNR=7.2						
STKA	**Stephens Creek**	**28.04**	**207**	P	**P**	**21 17 41.0**	**-1.5**
	1.8nm,0.7s,mb3.7,baz=358,slow=17,SNR=3.9						
STKA				LR	LR	21 27 23.0	
	comp=Z,70nm,18.7s,baz=26,slow=33						
STKA	**Stephens Creek**	**28.04**	**207**	*e*P	**P**	**21 17 41.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**31.44**	**247**	*e*P	**P**	**21 18 11.8**	**-0.9**
	5.7nm,0.6s,mb4.5						
KAPI	**Kappang**	**36.00**	**271**	P	**P**	**21 18 49.3**	**-3.0**
	9.6nm,0.9s,mb4.7,baz=170,slow=6.1,SNR=3.4						
RPZ	**Rata Peaks**	**38.83**	**162**	LR	LR	21 33 17.3	
	comp=Z,38nm,21.9s,baz=198,slow=33						
PETK	**Petropavlovsk-comp=Z,29nm,18.5s,baz=325,slow=34**	**59.98**	**1**	LR	LR	21 45 22.3	
CMAR	**Chiang Mai Arr**	**61.63**	**295**	P	**P**	**21 22 08.7**	**+0.6**
	1.7nm,0.6s,mb4.2,baz=124,slow=5.5,SNR=18						
CMAR				pP	pP	21 22 21.2	-14
	2.3nm,0.6s,baz=117,slow=5.0,SNR=6.4						
SONM	**Songino Array**	**69.90**	**327**	P	**P**	**21 23 01.4**	**+0.8**
	1.0nm,0.4s,mb4.0,baz=144,slow=6.3,SNR=12						
SONM				pP	pP	21 23 13.9	-14
	0.7nm,0.5s,baz=142,slow=5.6,SNR=5.6						
QSPA	**South Pole Qui**	**82.89**	**180**	P	**P**	**21 24 15.4**	**+2.0**
	2.1nm,0.5s,mb4.2,baz=27,slow=1.8,SNR=7.1						
MKAR	**Makanchi Array**	**84.07**	**318**	P	**P**	**21 24 20.4**	**+0.3**
	1.9nm,0.6s,mb4.1,baz=98,slow=6.6,SNR=21						
ZALV	**Zalesovo Beam**	**84.76**	**326**	P	**P**	**21 24 23.1**	**-0.2**
	0.8nm,0.5s,mb3.9,baz=132,slow=6.0,SNR=4.4						
YKA	**Yellowknife Ar**	**96.00**	**28**	P	**P**	**21 25 15.8**	**-0.2**
	0.3nm,0.8s,mb3.8,baz=272,slow=5.1,SNR=3.6						
GERES	**GERESS Array B**	**127.59**	**329**	PKP	PKPdf	21 30 55.1	+1.3
	0.8nm,0.7s,baz=90,slow=1.3,SNR=6.5						
GERES				pPKP	pPKPdf	21 31 08.7	-15
	0.4nm,0.6s,baz=94,slow=5.3,SNR=2.2						
TORD	**Torodi Ar. Bea**	**153.91**	**285**	PKP	PKPdf	21 31 41.2	+0.1
	0.2nm,0.7s,baz=45,slow=1.6,SNR=2.3						
TORD				PKPbc	PKPbc	21 31 49.2	+0.1
	1.2nm,0.8s,baz=48,slow=2.1,SNR=6.2						
TORD				PKPab	PKPab	21 32 02.9	+0.2
	1.0nm,0.8s,baz=86,slow=3.6,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.91**	**285**	PKP	PKPdf	21 31 41.2	+0.1
TORD				PKPbc	PKPbc	21 31 49.2	+0.1
TORD				PKPab	PKPab	21 32 02.9	+0.2
DBIC	**Dimbokro**	**160.89**	**270**	PKPab	PKPab	21 32 32.6	-0.3
	1.5nm,0.6s,baz=135,slow=3.5,SNR=6.1						

*DDA **20** 21:18:43.6, 3935N×3313E, h7km±3km, Md2.1*
*ISK **20** 21:18:43.8, 3939N×3309E, h7km, MD2.8*
*ISCJB **20** 21:18:44.1±0.8, 3937N±004×3310E±004, h2km±8km, Error ellipse: s-maj=6.7km s-min=4.6km az=146.9*
*CSEM **20** 21:18:44.0±0.2, 3941N×3309E, h12km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.3km az=150.0*
ISC 20 21:18:44.7±0.5, **3938N**±004×**3311E**±004, **h8**km±9km, **n9**, **s**0§**52**/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.47**	**91**	PG	**Pg**	**21 18 53.7**	**-0.1**
KAMT				*e*SG	**Sg**	**21 19 00.8**	**+0.9**
LOD	**Lodumlu**	**0.58**	**333**	*e*PG	**Pg**	**21 18 54.7**	**-1.2**
LOD				*e*SG	**Sg**	**21 19 03.6**	**+0.2**
CDAG	**Cicekdag**	**1.01**	**76**	*i* P	**Pg**	**21 19 03.3**	**-0.8**
CDAG				*i* S	**Sg**	**21 19 16.6**	**-0.5**
KIZT	**Kizilcal**	**1.08**	**243**	*e*PG	**Pg**	**21 19 05.3**	**-0.1**
KIZT				*e*SG	**Sg**	**21 19 19.7**	**+0.3**
ELDT	**Eldivan**	**1.14**	**12**	*i* P	**Pg**	**21 19 06.5**	**-0.1**
ELDT				*i* S	**Sg**	**21 19 22.2**	**+0.9**
KDHN	**Kadinhani**	**1.15**	**222**	*i* P	**Pg**	**21 19 07.1**	**+0.2**
KDHN				*i* S	**Sg**	**21 19 21.7**	**-0.1**
LADK	**Ladik-KONYA**	**1.31**	**207**	*e*PN	**Pn**	**21 19 09.2**	**-0.2**
KONT	**Konya--Tatoy**	**1.55**	**203**	*e*PN	**Pn**	**21 19 12.8**	**+0.2**
YOZ	**Yozgat**	**1.73**	**81**	*e*PN	**Pn**	**21 19 15.3**	**+0.1**

*ISCJB **20** 21:20:16.7±0.8, 3936N±004×3309E±004, h4km±8km, Error ellipse: s-maj=6.5km s-min=5.1km az=153.5*
*CSEM **20** 21:20:16.3±0.1, 3937N×3309E, h12km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.7km az=13.0*
*DDA **20** 21:20:16.7, 3937N×3311E, h4km±2km, Md2.5*
*ISK **20** 21:20:16.5, 3938N×3310E, h15km, MD2.8*
ISC 20 21:20:17.3±0.7, **3937N**±004×**3309E**±004, **h11**km±7km, **n14**, **s**0§**65**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**90**	PG	**Pg**	**21 20 26.4**	**-0.3**
KAMT				*e*SG	**Sg**	**21 20 33.7**	**+0.6**
LOD	**Lodumlu**	**0.58**	**334**	*e*PG	**Pg**	**21 20 27.9**	**-0.7**
LOD				*e*SG	**Sg**	**21 20 36.5**	**+0.3**
CDAG	**Cicekdag**	**1.02**	**75**	*i* P	**Pg**	**21 20 35.9**	**-1.1**
CDAG				*i* S	**Sg**	**21 20 51.0**	**+0.6**
KIZT	**Kizilcal**	**1.06**	**243**	*e*PG	**Pg**	**21 20 38.0**	**+0.4**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pb**	**21 20 39.6**	**+0.6**
KDHN				*i* S	**Sb**	**21 20 54.8**	**+1.1**
ELDT	**Eldivan**	**1.15**	**13**	*i* P	**Pb**	**21 20 38.9**	**-0.4**
ELDT				*i* S	**Sb**	**21 20 55.2**	**+1.0**
ELDT	**Eldivan**	**1.15**	**13**	*i* P	**Pb**	**21 20 38.8**	**-0.4**
ELDT				*i* S	**Sb**	**21 20 55.2**	**+1.0**
LADK	**Ladik-KONYA**	**1.30**	**206**	*e*PN	**Pn**	**21 20 40.5**	**-0.9**
KONT	**Konya--Tatoy**	**1.53**	**202**	*e*PN	**Pn**	**21 20 44.1**	**-0.4**
ESKT	**Eskisehir**	**1.74**	**276**	*i* P	**Pn**	**21 20 46.9**	**-0.6**
ESKT				*i* S	**Sn**	**21 21 15.8**	**+6.1**
ESKT	**Eskisehir**	**1.74**	**276**	*e*Pn	**Pn**	**21 20 46.9**	**-0.6**
SEYT	**Eskypehyr**	**1.74**	**276**	*i* P	**Pn**	**21 20 46.9**	**-0.6**
YOZ	**Yozgat**	**1.75**	**80**	*e*PN	**Pn**	**21 20 47.4**	**-0.2**
BNN	**Bunyan**	**2.20**	**103**	*e*PN	**Pn**	**21 20 53.8**	**0.0**

*CSEM **20** 21:50:16.5±0.1, 3936N×3316E, h5km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.4km az=7.0*
*DDA **20** 21:50:16.5, 3935N×3319E, h18km±3km, Md3.5*
*ISK **20** 21:50:16.0, 3936N×3317E, h5km, MD3.5*
*ISCJB **20** 21:50:17.8±0.2, 3937N±002×3315E±002, h10km, Error ellipse: s-maj=3.2km s-min=2.4km az=159.7*
ISC 20 21:50:18.3±0.2, **3936N**±002×**3317E**±002, **h10**km, **n47**, **s**0§**01**/65, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.42**	**89**	PG	**Pg**	**21 50 25.4**	**-1.1**
LOD	**Lodumlu**	**0.61**	**329**	PG	**Pg**	**21 50 28.8**	**-1.5**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**21 50 35.1**	**-1.8**
CDAG				*i* S	**Sg**	**21 50 47.6**	**-1.8**
KIZT	**Kizilcal**	**1.12**	**245**	PN	**Pn**	**21 50 37.8**	**-2.2**
KIZT				*e*SN	**Sn**	**21 50 55.4**	**0.0**
ELDT	**Eldivan**	**1.14**	**10**	*i* P	**Pb**	**21 50 38.7**	**-1.4**
ELDT				*i* S	**Sb**	**21 50 55.0**	**0.0**
KDHN	**Kadinhani**	**1.18**	**225**	*i* P	**Pb**	**21 50 38.8**	**-1.9**
KDHN				*i* S	**Sb**	**21 50 55.5**	**-0.6**
CANT	**Cankiri**	**1.29**	**15**	*e*PN	**Pn**	**21 50 41.7**	**-0.7**
CANT				*e*SN	**Sn**	**21 51 00.3**	**+0.6**
LADK	**Ladik-KONYA**	**1.32**	**209**	*e*PN	**Pn**	**21 50 41.6**	**-1.2**
LADK				*e*SN	**Sn**	**21 51 00.7**	**+0.2**
AVNT	**Avonos**	**1.43**	**113**	*i* P	**Pn**	**21 50 43.5**	**-0.9**
AVNT				*i* S	**Sn**	**21 51 03.5**	**+0.3**
KONT	**Konya--Tatoy**	**1.55**	**204**	*e*PN	**Pn**	**21 50 45.9**	**-0.1**
KONT				*e*SN	**Sn**	**21 51 07.8**	**+1.6**
BSTP	**Nigde**	**1.59**	**152**	*i* P	**Pn**	**21 50 46.6**	**+0.1**
BSTP				*i* S	**Sn**	**21 51 11.4**	**+4.3**
NIG	**Nigde**	**1.68**	**138**	*e*PN	**Pn**	**21 50 48.7**	**+0.9**
YOZ	**Yozgat**	**1.68**	**80**	*e*PN	**Pn**	**21 50 47.7**	**-0.1**
CTKT	**Corum**	**1.77**	**44**	*i* P	**Pn**	**21 50 49.5**	**+0.5**
CTKT				*i* S	**Sn**	**21 51 12.6**	**+1.1**
TOS	**Tosya**	**1.79**	**21**	*e*PN	**Pn**	**21 50 49.0**	**-0.4**
ESKT	**Eskisehir**	**1.81**	**276**	*i* P	**Pn**	**21 50 49.4**	**-0.1**
ESKT				*i* S	**Sn**	**21 51 16.6**	**+4.1**
ESKT	**Eskisehir**	**1.81**	**276**	*e*Pn	**Pn**	**21 50 49.7**	**+0.2**
SEYT	**Eskypehyr**	**1.81**	**276**	*i* P	**Pn**	**21 50 49.4**	**-0.1**
SEYT				*i* S	**Sg**	**21 51 16.5**	**+0.1**
BOLV	**Bolvadin**	**1.85**	**250**	*i* P	**Pn**	**21 50 49.7**	**-0.4**
BOLV				*i* S	**Sg**	**21 51 16.7**	**-1.1**
MDU	**Mudurnu**	**1.87**	**307**	*e*PN	**Pn**	**21 50 51.0**	**+0.7**
SAFT	**Safranbolu**	**1.91**	**349**	*e*PN	**Pn**	**21 50 51.9**	**+0.9**
BNN	**Bunyan**	**2.14**	**103**	*e*PN	**Pn**	**21 50 55.0**	**+0.9**
BORA	**Eskisehir**	**2.16**	**285**	*i* P	**Pn**	**21 50 53.4**	**-1.0**
BORA				*i* S	**Sg**	**21 51 28.0**	**+0.1**
BALT	**Daday**	**2.17**	**4**	*i* P	**Pn**	**21 50 56.5**	**+1.9**
BALT				*i* S	**Sn**	**21 51 20.4**	**-1.1**
GULT	**Gulveren**	**2.31**	**298**	*e*PN	**Pn**	**21 50 56.6**	**+0.2**
ALT	**Altintas**	**2.40**	**264**	*e*PN	**Pn**	**21 50 57.6**	**0.0**
KARA	**Karaisali**	**2.57**	**144**	*e*PN	**Pn**	**21 51 00.1**	**+0.1**
ISP	**Isparta**	**2.58**	**235**	*e*PN	**Pn**	**21 51 00.6**	**+0.5**
PINB	**Pinarbasi**	**2.61**	**104**	*i* P	**Pn**	**21 51 01.1**	**+0.6**
PINB				*i* S	**Sg**	**21 51 39.5**	**-2.5**
EYL	**Eskiyayla**	**2.61**	**298**	*e*PN	**Pn**	**21 51 01.1**	**+0.5**
CAVI	**Cavuskoy**	**2.70**	**289**	*e*PN	**Pn**	**21 51 01.6**	**-0.2**
MERS	**Mersin**	**2.71**	**156**	*e*PN	**Pn**	**21 51 02.2**	**+0.3**
TOKA	**Tokat**	**2.72**	**68**	*i* P	**Pn**	**21 51 02.1**	**+0.1**
TOKA				*i* S	**Sn**	**21 51 36.8**	**+1.9**
TOKT	**Tokat**	**2.77**	**69**	*e*PN	**Pn**	**21 51 03.5**	**+0.9**
BCK	**Bucak**	**2.78**	**228**	*e*PN	**Pn**	**21 51 04.0**	**+1.2**
KVT	**Kavak**	**2.79**	**51**	*e*PN	**Pn**	**21 51 03.5**	**+0.5**
KOZT	**Kozan**	**2.81**	**131**	*e*PN	**Pn**	**21 51 03.6**	**+0.4**
SARI	**SarD1z-Kayseri**	**2.83**	**103**	*e*PN	**Pn**	**21 51 02.1**	**-1.5**
ADVT	**Abdulvahap**	**2.85**	**293**	*e*PN	**Pn**	**21 51 04.0**	**+0.2**
SVSK	**Karacayir**	**3.00**	**78**	*e*PN	**Pn**	**21 51 07.0**	**+1.1**
HRT	**Hereke**	**3.06**	**300**	*e*PN	**Pn**	**21 51 06.5**	**-0.2**
IKL	**Isikli**	**3.15**	**172**	*e*PN	**Pn**	**21 51 08.0**	**+0.1**
ANTB	**Antalya**	**3.16**	**220**	*e*PN	**Pn**	**21 51 09.5**	**+1.4**
KMRS	**Kahramanmaras**	**3.46**	**121**	*e*PN	**Pn**	**21 51 12.6**	**+0.3**
AKCD	**Akcadag**	**3.86**	**105**	*e*P	**Pn**	**21 51 20.1**	**+2.4**
AKCD				*i* S	**Sg**	**21 52 20.8**	**-1.4**
GUMT	**Gumushane**	**4.97**	**75**	*e*PN	**Pn**	**21 51 34.0**	**+1.0**
EZC	**Erzincan**	**5.15**	**84**	*e*PN	**Pn**	**21 51 31.3**	**-4.2**

IDC 20 21:52:05.4±37.0, **2347S**×**17901W**, **h520**km±355km, **mb3.1**/4, **mb1 3.2**/4, **mb1mx3.0**/16, **mbtmp3.1**/4, **Error ellipse: s-maj=228.1km s-min=94.7km az=83.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.38**	**269**	P	P	21 57 52.3	+0.1
	3.0nm,0.4s,baz=94,slow=12,SNR=8.6						
STKA	**Stephens Creek**	**35.73**	**248**	P	P	21 58 19.7	-0.4
	1.4nm,0.4s,baz=92,slow=10,SNR=7.6						
ASAR	**Alice Springs**	**43.00**	**260**	P	P	21 59 18.9	+0.1
	0.5nm,0.6s,baz=91,slow=6.4,SNR=6.9						
WRA	**Warramunga Arr**	**43.34**	**265**	P	P	21 59 21.4	-0.1
	0.8nm

BALT	**Daday**	**2.18**	**4**	*i* P		**Pn**	**22 21 22.7**	**+2.4**
BALT				*i* S		**Sn**	**22 21 48.5**	**+1.2**
SHUT	**Suhut-Afyon**	**2.20**	**249**	*e*PN		**Pn**	**22 21 21.6**	**+1.0**
GULT	**Gulveren**	**2.31**	**298**	*e*PN		**Pn**	**22 21 22.6**	**+0.5**
ALT	**Altintas**	**2.40**	**264**	*e*PN		**Pn**	**22 21 23.1**	**-0.3**
KARA	**Karaisali**	**2.56**	**144**	*e*PN		**Pn**	**22 21 25.6**	**0.0**
ISP	**Isparta**	**2.58**	**235**	*e*PN		**Pn**	**22 21 25.5**	**-0.4**
EYL	**Eskiyayla**	**2.62**	**298**	*e*PN		**Pn**	**22 21 27.5**	**+1.2**
MERS	**Mersin**	**2.70**	**157**	*e*PN		**Pn**	**22 21 27.0**	**-0.5**
CAVI	**Cavuskoy**	**2.71**	**289**	*e*PN		**Pn**	**22 21 27.5**	**0.0**
TOKT	**Tokat**	**2.76**	**69**	*e*PN		**Pn**	**22 21 29.0**	**+0.7**
BCK	**Bucak**	**2.78**	**228**	*e*PN		**Pn**	**22 21 28.5**	**-0.1**
DIKM	**Dikmen**	**2.78**	**34**	*e*PN		**Pn**	**22 21 29.0**	**+0.4**
KVT	**Kavak**	**2.79**	**51**	*e*PN		**Pn**	**22 21 29.0**	**+0.3**
KOZT	**Kozan**	**2.80**	**131**	*e*PN		**Pn**	**22 21 29.5**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.82**	**103**	*e*PN		**Pn**	**22 21 28.0**	**-1.1**
ADVT	**Abdulvahap**	**2.86**	**293**	*e*PN		**Pn**	**22 21 30.9**	**+1.3**
SVSK	**Karacayir**	**3.00**	**78**	*e*PN		**Pn**	**22 21 31.9**	**+0.3**
IKL	**Isikli**	**3.14**	**173**	*e*PN		**Pn**	**22 21 34.9**	**+1.3**
ANTB	**Antalya**	**3.16**	**220**	*e*PN		**Pn**	**22 21 34.9**	**+1.0**
KMRS	**Kahramanmaras**	**3.46**	**121**	*e*PN		**Pn**	**22 21 38.8**	**+0.9**
MYA	**Malataya**	**4.22**	**102**	*e*PN		**Pn**	**22 21 50.1**	**+1.7**

*DJA **20** 22:37:41, 55.78S×2792W, h10km, mb5.0/5*
*ISCJB **20** 22:37:51.6±2.4, 5595S±007×277W±02, h118km±23km, mb4.9/19, Error ellipse: s-maj=15.5km s-min=10.8km az=158.3*
*IDC **20** 22:37:53.3±0.6, 5594S×2780W, h121km±4km, mb4.4/12, mb1 4.4/13, mb1mx4.4/16, mbtmp4.4/13, MS3.5/9, Ms1 3.5/9, ms1mx3.3/20, Error ellipse: s-maj=14.2km s-min=11.7km az=74.0*
*NEIC **20** 22:37:56.5±1.7, 5600S×2776W, h150km±15km, mb4.7/3, Error ellipse: s-maj=8.9km s-min=6.3km az=59.0*
*BJI **20** 22:37:56.5, 5600S×2780W, h150km*
ISC 20 22:37:54.8±2.4, 5601S±007×277W±02, h133km±22km, n82, σ0°77/35, mb4.8/19, 2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.94**	**158**	*e*P		**Pn**	**22 41 43.5**	**+0.2**
VNA1				*e*			22 41 47.8	
VNA1				*e*			22 41 51.6	
VNA1				*e*			22 41 58.7	
VNA3	**Neumayer Olymp**	**17.12**	**160**	*e*P		**Pn**	**22 41 45.3**	**-0.2**
VNA3				*e*			22 41 48.8	
VNA3				*e*			22 41 52.7	
VNA3				*e*			22 42 00.1	
VNA2	**Neumayer--Watz**	**17.34**	**157**	*e*P		**Pn**	**22 41 47.8**	**-0.3**
	baz=314,slow=13							
VNA2				*e*			22 41 50.8	
VNA2				*e*			22 41 55.1	
SNAA	**Sanae**	**18.89**	**156**	*e*P		**P**	**22 42 04.4**	**-0.1**
SNAA				*e*			22 42 07.8	
SNAA				*e*			22 42 12.0	
SNAA	**Sanae**	**18.89**	**156**	*e*P		**P**	**22 42 04.8**	**+0.3**
	85nm,0.7s							
PMSA	**Palmer Station**	**19.71**	**229**	P		**P**	**22 42 14.6**	**+1.3**
	1.5nm,0.3s,baz=95,slow=6.1,SNR=6.3							
MAIT	**Maitri**	**22.43**	**147**	*e*P		**P**	**22 42 40.5**	**-1.7**
MAIT				*e*E			22 42 44.2	
SYO	**Syowa Base**	**31.80**	**141**	‖*e*P		**P**	**22 44 04.4**	**-1.6**
SYO	**Syowa Base**	**31.80**	**141**	‖*i*P		**P**	**22 44 06.5**	**+0.5**
QSPA	**South Pole Qui**	**34.24**	**180**	P		**P**	**22 44 28.3**	**+1.2**
	21nm,0.7s,mb5.0,baz=203,slow=4.4,SNR=80							
QSPA				PcP		PcP	22 47 00.1	-0.1
	3.0nm,0.6s,baz=134,slow=6.3,SNR=2.7							
QSPA				ScP		ScP	22 50 30.6	-1.9
	0.8nm,0.4s,baz=263,slow=8.1,SNR=3.1							
QSPA				LR		LR	22 57 26.9	
	comp=Z,51nm,18.4s,baz=192,slow=34							
QSPA	**South Pole Qui**	**34.24**	**180**	P		**P**	**22 44 28.3**	**+1.2**
QSPA				PcP		PcP	22 47 00.1	-0.1
QSPA				ScP		ScP	22 50 30.6	-1.9
QSPA				LR		LR	22 57 26.9	
CPUP	**Villa Florida**	**36.57**	**312**	P		**P**	**22 44 46.6**	**-1.0**
	4.1nm,0.6s,mb4.2,baz=129,slow=7.0,SNR=20							
CPUP				pP		pP	22 45 13.5	-3.2
	4.5nm,0.8s,baz=134,slow=7.8,SNR=3.7							
CPUP				PcP		PcP	22 47 08.0	+0.1
	1.4nm,0.5s,baz=99,slow=3.2,SNR=3.1							
CPUP				ScP		ScP	22 50 39.8	-2.1
	1.5nm,0.6s,baz=89,slow=3.2,SNR=4.3							
CPUP	**Villa Florida**	**36.57**	**312**	*e*P		**P**	**22 44 46.5**	**-1.0**
	25nm,0.7s,mb5.0							
CPUP				*e*pP		pP	22 45 15.3	-1.4
CPUP				PcP		PcP	22 47 08.0	+0.1
CPUP				ScP		ScP	22 50 39.8	-2.1
CFAA	**Coronel Fontan**	**37.28**	**294**	P		**P**	**22 44 51.1**	**-2.4**
	0.4nm,0.5s,baz=150,slow=6.8,SNR=6.0							
CFAA				PcP		PcP	22 47 09.9	-0.1
	0.3nm,0.6s,baz=162,slow=6.4,SNR=3.0							
MAW	**Mawson**	**40.35**	**144**	P		**P**	**22 45 19.5**	**+0.8**
	19nm,0.7s,mb4.8,baz=236,slow=8.1,SNR=16							
MAW				PcP		PcP	22 47 19.6	+0.4
	6.7nm,0.8s,baz=239,slow=5.9,SNR=3.1							
MAW				LR		LR	22 59 36.6	
	comp=Z,77nm,19.7s,baz=303,slow=32							
BDFB	**Brasilia**	**43.19**	**331**	P		**P**	**22 45 43.0**	**+0.7**
	1.4nm,0.6s,mb3.8,baz=143,slow=20,SNR=4.4							
BDFB				LR		LR	23 02 32.5	
	comp=Z,33nm,19.1s,baz=293,slow=34							
LVC	**Limon Verde**	**45.03**	**301**	*e*P		**P**	**22 45 57.3**	**+0.4**
	11nm,0.6s,mb4.7							
BOSA	**Boshof**	**46.24**	**76**	P		**P**	**22 46 06.7**	**+0.3**
	8.0nm,0.8s,mb4.4,baz=200,slow=7.8,SNR=13							
BOSA				PcP		PcP	22 47 40.7	+1.0
	4.1nm,0.9s,baz=219,slow=6.5,SNR=2.9							
BOSA				LR		LR	23 02 10.0	
	comp=Z,58nm,19.7s,baz=63,slow=32							
VNDA	**Vanda**	**46.60**	**183**	P		**P**	**22 46 09.4**	**+0.8**
	10nm,0.8s,mb4.5,baz=186,slow=6.1,SNR=28							
VNDA				LR		LR	23 06 44.7	
	comp=Z,25nm,18.9s,baz=73,slow=37							
TSUM	**Tsumeb**	**49.91**	**61**	P		**P**	**22 46 35.3**	**+0.6**
	4.6nm,0.9s,mb4.1,baz=186,slow=5.5,SNR=10							
LIC	**Lamto**	**64.78**	**25**	*e*P		**P**	**22 48 19.0**	**+0.1**
	29nm,0.7s,mb5.2							
KIC	**Kosan Boka**	**64.98**	**25**	*e*P		**P**	**22 48 20.0**	**-0.2**
	62nm,1.0s,mb5.4							
TIC	**Toumodi**	**65.19**	**25**	*e*P		**P**	**22 48 21.6**	**+0.1**
	47nm,0.8s,mb5.3							
DBIC	**Dimbokro**	**65.25**	**25**	P		**P**	**22 48 22.1**	**+0.1**
	5.4nm,0.6s,mb4.5,baz=168,slow=8.2,SNR=20							
DBIC				LR		LR	23 09 05.1	
	comp=Z,47nm,21.7s,baz=324,slow=29							
TOA0	**Torodi Ar. Sit**	**73.16**	**30**	*e*P		**P**	**22 49 11.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.16**	**30**	P		**P**	**22 49 11.0**	**+0.4**
	22nm,0.7s,mb5.0,baz=198,slow=6.7,SNR=372							
TORD				pP		pP	22 49 39.2	-4.2
	5.4nm,0.7s,baz=198,slow=6.8,SNR=3.7							
TORD				LR		LR	23 14 19.5	
	comp=Z,37nm,18.1s,baz=230,slow=30							
NWAO	**Narrogin (SRO)**	**86.50**	**151**	*e*P		**P**	**22 50 21.9**	**-0.5**
	39nm,0.6s,mb5.4							
NWAO	**Narrogin (SRO)**	**86.50**	**151**	P		**P**	**22 50 22.0**	**-0.4**
	6.7nm,0.9s,mb4.5,baz=199,slow=2.9,SNR=5.2							
MUN	**Mundaring**	**87.11**	**150**	*e*P		**P**	**22 50 25.4**	**+0.1**
KLBR	**Kellerberrin**	**87.91**	**151**	*e*P		**P**	**22 50 29.1**	**0.0**
	26nm,0.7s,mb5.2							
BLDU	**Ballidu**	**88.54**	**150**	*e*P		**P**	**22 50 31.4**	**-0.7**
	4.9nm,0.7s,mb4.5							
KMBL	**Kambalda**	**89.18**	**154**	*e*P		**P**	**22 50 35.1**	**0.0**
	96nm,0.8s,mb5.8							
CMIG	**Matias Romero**	**91.91**	**298**	LR		LR	23 29 26.6	
	comp=Z,52nm,18.2s,baz=96,slow=34							
STKA	**Stephens Creek**	**91.99**	**171**	P		**P**	**22 50 48.2**	**+0.1**
	2.1nm,0.7s,mb4.3,baz=155,slow=9.8,SNR=4.8							
STKA				LR		LR	23 32 44.1	
	comp=Z,23nm,19.0s,baz=24,slow=36							
STKA	**Stephens Creek**	**91.99**	**171**	P		**P**	**22 50 48.2**	**+0.1**
STKA				LR		LR	23 32 44.1	
ASAR	**Alice Springs**	**99.11**	**163**	P		**P**	**22 51 19.8**	**-0.9**
	3.5nm,0.9s,mb4.8,baz=191,slow=4.4,SNR=25							
ASAR				PP		PP	22 55 19.8	-3.9
	2.0nm,0.9s,baz=188,slow=7.5,SNR=10.0							
WRA	**Warramunga Arr**	**102.83**	**163**	P		Pdif	22 51 36.0	-1.3
	0.8nm,0.7s,baz=200,slow=4.4,SNR=8.9							
WRA				PP		PP	22 55 50.5	-1.2
	1.7nm,1.0s,baz=192,slow=6.4,SNR=6.2							
WRA				PKKPbc		PKKPbc	23 07 33.5	+1.4
	0.3nm,0.5s,baz=359,slow=2.8,SNR=8.7							
TXAR	**Lajitas Array**	**106.52**	**298**	PKKPab		PKKPab	23 07 38.1	+1.3
	0.5nm,0.9s,baz=354,slow=1.3,SNR=3.8							

NOA	**NORSAR Array B**	**120.67**	**21**	PKP		PKPdf	22 56 28.8	-0.4
	1.0nm,0.8s,baz=208,slow=2.0,SNR=3.4							
NVAR	**Mina Array Bea**	**121.12**	**293**	PKP		PKPdf	22 56 30.6	-0.2
	0.3nm,0.3s,baz=106,slow=2.3,SNR=2.8							
KOLN	**Koldanda**	**124.35**	**90**	*e*P		PKPdf	22 56 36.8	-0.6
	12nm,0.7s							
DANN	**Dangsing**	**124.89**	**90**	*e*P		PKPdf	22 56 37.7	-0.7
	16nm,0.7s							
DMN	**Daman**	**125.07**	**92**	*e*P		PKPdf	22 56 38.7	-0.1
KAF	**Kangasniemi**	**125.10**	**28**	*e*p		PKPdf	22 56 36.6	-1.1
	4.7nm,0.6s							
GKN	**Gorkha**	**125.11**	**91**	*e*P		PKPdf	22 56 38.0	-0.8
	17nm,1.1s							
PKI	**Pulchoki**	**125.21**	**92**	*e*P		PKPdf	22 56 38.7	-0.3
KKN	**Kakani**	**125.31**	**92**	*e*P		PKPdf	22 56 38.9	-0.3
CMAR	**Chiang Mai Arr**	**125.35**	**111**	PKP		PKPdf	22 56 39.5	-0.1
	4.2nm,0.9s,baz=235,slow=3.7,SNR=20							
CMAR				PP		PP	22 58 28.6	-3.0
	0.4nm,0.3s,baz=228,slow=7.3,SNR=4.3							
RAMN	**Ramite**	**125.40**	**94**	*e*P		PKPdf	22 56 39.2	-0.2
JIRN	**Jiri**	**125.72**	**93**	*e*P		PKPdf	22 56 39.3	-0.7
	18nm,0.7s							
GUN	**Gumba**	**125.74**	**92**	*e*P		PKPdf	22 56 39.3	-0.7
	14nm,1.0s							
JOF	**Joensuu**	**127.11**	**29**	*e*p		PKPdf	22 56 40.8	-0.7
	4.1nm,0.6s							
LSA	**Lhasa**	**130.06**	**95**	*e*PKPdf		PKPdf	22 56 49.1	+0.8
ARCES	**ARCESS Array B**	**131.01**	**22**	PKP		PKPdf	22 56 48.7	-0.1
	3.4nm,0.7s,baz=288,slow=1.2,SNR=9.4							
ARCES	**ARCESS Array B**	**131.01**	**22**	PKP		PKPdf	22 56 48.7	-0.1
BVAR	**Borovoye Array**	**135.00**	**58**	PKP		PKPdf	22 56 56.6	-0.1
	3.4nm,0.8s,baz=248,slow=2.1,SNR=13							
BVAR				SKPbc		SKPbc	23 00 13.6	-1.2
	0.4nm,0.6s,baz=242,slow=3.2,SNR=3.7							
YKA	**Yellowknife Ar**	**135.95**	**318**	PKP		PKPdf	22 56 57.8	-0.4
	2.2nm,0.7s,baz=126,slow=2.3,SNR=28							
YKA				pPKP		pPKPdf	22 57 29.2	-4.5
	0.7nm,0.6s,baz=131,slow=2.1,SNR=3.6							
YKA				SKPbc		SKPbc	23 00 14.9	-2.4
	2.0nm,0.9s,baz=122,slow=1.9,SNR=14							
YKA	**Yellowknife Ar**	**135.95**	**318**	PKP		PKPdf	22 56 57.8	-0.4
YKA				pPKP		pPKPdf	22 57 29.2	-4.5
YKA				SKPbc		SKPbc	23 00 14.9	-2.4
MKAR	**Makanchi Array**	**137.15**	**72**	PKhKP			22 56 52.1	
	0.4nm,0.7s,baz=274,slow=3.8,SNR=3.4							
MKAR				PKP		PKPdf	22 57 02.4	+1.5
	0.9nm,0.6s,baz=238,slow=2.3,SNR=7.3							
MKAR				SKPbc		SKPbc	23 00 19.7	-1.8
	0.7nm,0.7s,baz=229,slow=3.3,SNR=4.6							
MKAR	**Makanchi Array**	**137.15**	**72**	PKP			22 56 52.1	
MKAR				PKP		PKPdf	22 57 02.4	+1.5
MKAR				SKPbc		SKPbc	23 00 19.7	-1.8
KURK	**Kurchatov**	**137.65**	**65**	PKhKP			22 56 52.5	
	1.2nm,0.8s,baz=236,slow=3.7,SNR=5.9							
KURK				PKP		PKPdf	22 57 03.3	+1.6
	1.1nm,0.7s,baz=233,slow=2.3,SNR=8.1							
KURK				SKPbc		SKPbc	23 00 21.4	-1.4
	1.5nm,0.9s,baz=235,slow=3.3,SNR=6.2							
RES	**Resolute Bay**	**137.72**	**339**	PKP		PKPdf	22 57 01.2	0.0
	4.4nm,1.0s,baz=128,slow=1.9,SNR=10							
DLBC	**Dease Lake**	**140.06**	**307**	SKPbc		SKPbc	23 00 28.3	-0.9
	2.2nm,0.7s,baz=198,slow=6.4,SNR=3.3							
GTA	**Gaotai**	**142.01**	**93**	PKP		PKPdf	22 57 11.8	+1.7
ZAA0	**Zalesovo Array**	**142.61**	**64**	*e*PKPdf			22 57 06.6	
ZALV	**Zalesovo Beam**	**142.61**	**64**	PKhKP			22 57 06.5	
	2.4nm,0.7s,baz=221,slow=3.8,SNR=11							
ZALV				PP		PP	23 00 18.1	-3.0
	0.2nm,0.3s,baz=321,slow=6.3,SNR=3.7							
ZALV				SKPbc		SKPbc	23 00 34.1	-1.8
	1.0nm,0.8s,baz=231,slow=3.0,SNR=3.0							
ZALV	**Zalesovo Beam**	**142.61**	**64**	PKP			22 57 06.5	
ZALV				PP		PP	23 00 18.1	-3.0
ZALV				SKPbc		SKPbc	23 00 34.1	-1.8
XAN	**Xi'an**	**143.13**	**108**	PKP		PKPdf	22 57 09.5	-2.7
INK	**Inuvik**	**145.59**	**321**	*e*PKPbc		PKPbc	22 57 15.5	-0.4
DAWY	**Dawson**	**146.55**	**312**	*e*PKPbc		PKPbc	22 57 18.5	-0.4
PAX	**Paxson**	**148.82**	**309**	*e*PKPbc		PKPbc	22 57 24.9	0.0
MCK	**McKinley**	**150.52**	**309**	*e*PKPbc		PKPbc	22 57 29.4	+0.3
KDAK	**Kodiak Island**	**150.54**	**297**	PKPbc		PKPbc	22 57 29.6	+0.3
	16nm,0.6s,baz=103,slow=3.4,SNR=11							
KDAK				pPKPbc		pPKPbc	22 58 00.4	-4.2
	12nm,0.8s,baz=132,slow=8.5,SNR=2.0							
SONM	**Songino Array**	**151.01**	**87**	PKP		PKPdf	22 57 24.6	-0.3
	1.0nm,0.9s,baz=216,slow=2.7,SNR=5.6							
SONM				PKPbc		PKPbc	22 57 30.7	-0.1
	21nm,0.6s,baz=222,slow=3.4,SNR=109							
SONM				pPKPbc		pPKPbc	22 58 02.2	-3.9
	2.4nm,0.6s,baz=231,slow=2.7,SNR=2.7							
TRF	**Thorofare Moun**	**151.05**	**309**	*e*PKPbc		PKPbc	22 57 30.5	+0.1
KTH	**Kantishna Hill**	**151.35**	**309**	*e*PKPbc		PKPbc	22 57 31.0	0.0
ULN	**Ulaanbaatar**	**151.40**	**87**	*e*PKPbc		PKPbc	22 57 31.4	-0.3
BJT	**Baijiatuau**	**151.44**	**109**	*e*PKPbc		PKPbc	22 57 31.7	-0.3
BJI	**Beijing**	**151.46**	**109**	P		PKPbc	22 57 31.5	-0.5
COLD	**Coldfoot**	**151.59**	**316**	*e*PKPbc		PKPbc	22 57 31.9	+0.4
KSRS	**Koren Array**	**155.25**	**128**	PKPab		PKPab	22 57 55.5	-1.5
	2.7nm,0.8s,baz=221,slow=3.5,SNR=6.4							
MJAR	**Matsushiro Arr**	**158.31**	**148**	PKPab		PKPab	22 58 09.8	-0.4
	0.6nm,0.4s,baz=187,slow=4.2,SNR=4.5							

*TEH **20** 23:19:01.6, 3676N×5460E, h3km, ML4.0*
*CSEM **20** 23:20:01.0±0.1, 3680N×5465E, h2km, ML4.0, Error ellipse: s-maj=2.4km s-min=1.8km az=152.0*
*NNC **20** 23:20:01.2×45.0, 3752N×5460E, h0km, mb3.6, Error ellipse: s-maj=411.7km s-min=259.7km az=11.0*
*ISCJB **20** 23:20:01.9±0.3, 3687N±003×5470E±003, h10km, mb3.4/6, MS2.9/2, Error ellipse: s-maj=4.7km s-min=3.1km az=153.2*
*IDC **20** 23:20:02.7±1.7, 3677N×5485E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.6/25, mbtmp3.6/8, ML3.8/1, MS3.0/4, Ms1 3.0/4, ms1mx2.6/33, Error ellipse: s-maj=27.3km s-min=23.5km az=39.0*
*NEIC **20** 23:20:03.9, 3676N×5460E, h3km, mb3.6/4, MN4.0(TEH), After TEH.*
*THR **20** 23:20:03.1±0.5, 3662N×5493E, h16km±7km, ML4.1*
ISC 20 23:20:03.8±0.3, 3685N±003×5472E±003, h10km, n88, σ1°40/98, mb3.4/6, MS2.9/2, 3C-3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IGLO	**Ghaloghah**	**0.80**	**244**	Pg		**Pg**	**23 20 15.6**	**-3.6**
IGLO	**Ghaloghah**	**0.80**	**244**	*e*Pg		**Pg**	**23 20 15.6**	**-3.6**
IGLO				*e*			23 20 41.7	
IKIA	**Kiasar**	**1.06**	**233**	*e*Pg		**Pg**	**23 20 20.9**	**-3.2**
IKIA				*e*			23 20 39.6	
MRVT	**Maraveh tapeh**	**1.35**	**53**	*e*Pg		**Pg**	**23 20 28.5**	**-1.3**
MRVT				*e*Sg		**Sg**	**23 20 47.6**	**+0.2**
MRVT				AML		AML	23 20 51.1	
	comp=E,3μm,0.2s							
MRVT				AML		AML	23 20 53.1	
	comp=N,2μm,0.4s							
MRVT	**Maraveh tapeh**	**1.35**	**53**	*e*Pg		**Pg**	**23 20 28.6**	**-1.2**
	SNR=91							
MRVT				*e*Sg		**Sg**	**23 20 47.2**	**-0.2**
	SNR=91							
IANJ	**Anjilo**	**1.53**	**206**	*e*Pg		**Pg**	**23 20 29.1**	**-4.0**
IANJ				*e*			23 20 50.8	
ISHM	**Shahmirzad**	**1.56**	**228**	*e*Pg		**Pg**	**23 20 30.2**	**-3.5**
ISHM				*e*			23 20 32.6	
IALA	**Alasht**	**1.72**	**244**	*e*Pg		**Pg**	**23 20 32.1**	**-4.7**
IALA				*e*			23 21 01.9	
IFIR	**Firoozkooh**	**2.00**	**233**	Pn		**Pn**	**23 20 37.6**	**0.0**
IFIR	**Firoozkooh**	**2.00**	**233**	*e*Pn		**Pn**	**23 20 37.7**	**+0.1**
IFIR				*e*			23 21 06.3	
IPRN	**Peran**	**2.02**	**253**	Pn		**Pn**	**23 20 37.6**	**-0.2**
IPRN				Sn		**Sn**	**23 21 04.0**	**+0.9**
IPRN	**Peran**	**2.02**	**253**	*e*Pn		**Pn**	**23 20 37.7**	**-0.1**
IPRN				*e*Sn		**Sn**	**23 21 04.1**	**+1.0**
IPRN				*e*			23 21 07.1	
ILAS	**Lasjerd**	**2.05**	**225**	Pn		**Pn**	**23 20 37.6**	**-0.7**
ILAS	**Lasjerd**	**2.05**	**225**	*e*Pn		**Pn**	**23 20 37.7**	**-0.6**
ILAS				*e*			23 21 12.5	
IDMV	**Damavand**	**2.52**	**240**	*e*Pn		**Pn**	**23 20 44.3**	**-0.5**
IDMV				*e*			23 21 23.6	
DAMV	**Damavand**	**2.54**	**242**	*e*Pn		**Pn**	**23 20 46.6**	**+1.6**
DAMV				AML		AML	23 21 23.9	
	comp=E,1μm,0.5s							
DAMV				AML		AML	23 21 26.9	
	comp=N,958nm,0.6s							
IKRD	**Kardeh**	**3.04**	**90**	Pn		**Pg**	**23 21 04.8**	**+2.7**
IKRD	**Kardeh**	**3.04**	**90**	*e*Pn		**Pg**	**23 21 04.9**	**+2.8**
IKRD				*e*			23 21 20.6	
CHTH	**Charan**	**3.05**	**253**	*e*Pn		**Pn**	**23 20 54.5**	**+2.4**
IVRN	**Varamin**	**3.06**	**234**	*e*Pn		**Pn**	**23 20 50.8**	**-1.3**
IVRN	**Varamin**	**3.06**	**234**	Pn		**Pn**	**23 20 51.9**	**-0.2**
IVRN				Lg			23 21 35.1	
IVRN	**Varamin**	**3.06**	**234**	*e*Pn		**Pn**	**23 20 52.0**	**-0.1**
IVRN				*e*Lg			23 21 35.2	
IVRN				*e*			23 21 43.1	
ISFB	**Sefidab**	**3.21**	**220**	*e*Pn		**Pn**	**23 20 53.0**	**-1.3**
ISFB				*e*			23 21 03.8	
THKV	**Tehran--Karaj**	**3.24**	**254**	*e*Pn		**Pn**	**23 20 57.2**	**+2.5**
THKV				AML		AML	23 21 45.0	
	comp=E,707nm,0.6s							
THKV				AML		AML	23 21 46.9	
	comp=N,602nm,0.4s							
IMHD	**Mahdasht**	**3.48**	**252**	*e*Pn		**Pn**	**23 20 58.8**	**+0.9**
IMHD	**Mahdasht**	**3.48**	**252**	Pn		**Pn**	**23 21 00.0**	**+2.1**
IMHD	**Mahdasht**	**3.48**	**252**	*e*Pn		**Pn**	**23 21 00.1**	**+2.2**
IMHD				*e*			23 21 09.0	
GHVR	**GHOM**	**3.66**	**231**	*e*Pn		**Pn**	**23 21 01.5**	**+1.0**
GHVR				AML		AML	23 22 11.6	
	comp=E,275nm,0.5s							
GHVR				AML		AML	23 22 18.7	
	comp=N,235nm,0.5s							
GHVR	**GHOM**	**3.66**	**231**	*e*Pn		**Pn**	**23 21 01.6**	**+1.2**
	SNR=52							
IMOG	**Moghan**	**3.79**	**100**	Pn		**Pn**	**23 21 03.6**	**+1.3**
IMOG	**Moghan**	**3.79**	**100**	*e*Pn		**Pn**	**23 21 03.7**	**+1.4**
IMOG				*e*			23 21 06.2	
NASN	**Na'in**	**4.34**	**202**	*e*Pn		**Pn**	**23 21 08.9**	**-0.9**
NASN				*e*Sg		**Sg**	**23 22 13.5**	**-10**
IMYA	**Miami**	**4.36**	**95**	*e*Pn		**Pn**	**23 21 11.4**	**+1.4**
IMYA				*e*			23 21 30.9	
IKLH	**Kolahrood**	**4.37**	**217**	*e*Pn		**Pn**	**23 21 09.6**	**-0.6**
IKLH				*e*			23 22 17.6	
IZEF	**Zefreh**	**4.41**	**207**	*e*Pn		**Pn**	**23 21 09.7**	**-1.1**
IZEF				*e*			23 22 37.6	
ICHK	**Chekchek**	**4.60**	**183**	*e*Pn		**Pn**	**23 21 12.4**	**-1.0**
ICHK				*e*			23 21 32.1	
ISAD	**Sadrabad**	**5.00**	**190**	Pn		**Pn**	**23 21 14.5**	**-4.4**
ISAD	**Sadrabad**	**5.00**	**190**	*e*Pn		**Pn**	**23 21 14.5**	**-4.4**
ISAD				*e*			23 22 53.7	
ITEG	**Tejag**	**5.15**	**139**	*e*Pn		**Pn**	**23 21 21.5**	**+0.6**
ITEG	**Tejag**	**5.15**	**139**	*e*Pn		**Pn**	**23 21 21.5**	**+0.6**
ITEG				*e*			23 21 22.1	
IPIR	**Pirpir**	**5.22**	**218**	Pn		**Pn**	**23 21 24.1**	**+2.2**
IPIR	**Pirpir**	**5.22**	**218**	*e*Pn		**Pn**	**23 21 24.2**	**+2.3**
IPIR				*e*			23 22 58.2	
IBAF	**Bafgh**	**5.29**	**172**	*e*Pn		**Pn**	**23 21 22.0**	**-0.9**
IBAF				*e*			23 22 25.5	
IMEH	**Mehriz**	**5.45**	**181**	*e*Pn		**Pn**	**23 21 24.1**	**-0.9**
IMEH				*e*			23 23 02.4	
GLBA	**Ciilabad**	**5.54**	**297**	P		**Pn**	**23 21 25.0**	**-1.2**
	SNR=11							
IKOO	**Koosh

GUMO	**Guam**		**0.76**	**329**	*e*Pn		**Pn**	**23**	**42**	**40.2 -0.3**
GUMO					*e*Sn		**Sn**	**23**	**42**	**52.1 +0.3**
WRA	**Warramunga Arr**	**34.39**	**198**		P		**P**	**23**	**49**	**06.3 0.0**
	0.5nm,0.6s,mb3.5,baz=21,slow=9.8,SNR=13									
CMAR	**Chiang Mai Arr**	**44.85**	**283**		P		**P**	**23**	**50**	**33.5 +0.2**
	0.8nm,0.3s,mb3.9,baz=64,slow=5.1,SNR=4.5									
SONM	**Songino Array**	**47.49**	**325**		P		**P**	**23**	**50**	**53.9 +0.3**
	0.3nm,0.5s,mb3.3,baz=128,slow=7.0,SNR=3.2									
MKAR	**Makanchi Array**	**62.23**	**316**		P		**P**	**23**	**52**	**40.1 0.0**
	0.4nm,0.5s,mb3.7,baz=87,slow=9.7,SNR=9.8									
KURK	**Kurchatov**	**65.34**	**320**		P		**P**	**23**	**52**	**59.8 -0.7**
	0.8nm,0.7s,mb3.7,baz=100,slow=6.9,SNR=3.7									
BVAR	**Borovoye Array**	**70.68**	**322**		P		**P**	**23**	**53**	**33.6 -0.3**
	0.6nm,0.5s,mb3.7,baz=100,slow=7.8,SNR=8.5									
INK	**Inuvik**	**74.82**	**22**		P		**P**	**23**	**53**	**57.8 -0.4**
	0.6nm,0.6s,mb3.5,baz=237,slow=5.2,SNR=4.1									
YKA	**Yellowknife Ar**	**83.26**	**27**		P		**P**	**23**	**54**	**44.9 +0.5**
	0.3nm,0.6s,mb3.3,baz=288,slow=5.7,SNR=4.1									
ARCES	**ARCESS Array B**	**87.83**	**342**		P		**P**	**23**	**55**	**07.3 +0.4**
	5.4nm,1.0s,mb4.5,baz=82,slow=8.7,SNR=3.6									
ARCES	**ARCESS Array B**	**87.83**	**342**		P		**P**	**23**	**55**	**07.3 +0.4**
TORD	**Torodi Ar. Bea**	**135.56**	**304**		PKP		PKPdf	00	01	39.8 +0.8
	0.4nm,1.0s,baz=118,slow=1.5,SNR=4.3									
DBIC	**Dimbokro**	**144.50**	**302**		PKP		PKPdf	00	01	54.2 -1.0
	1.8nm,0.6s,baz=56,slow=2.9,SNR=9.6									
DBIC	**Dimbokro**	**144.50**	**302**		PKP		PKPdf	00	01	54.2 -1.0

CASC 20 23:42:36.9±2.0, 1296N×8915W, h31km±7km, MD3.6, ML3.1, 4C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.67**	**8**	*e*P	x	23 42 50.1	
LFRS				*e*S	x	23 43 00.4	
SNVI	**San Vicente**	**0.72**	**25**	*e*P	x	23 42 50.7	
SNVI				AML	x	23 43 06.5	
	comp=Z,86nm,0.2s						
BOQS	**Boqueron**	**0.78**	**351⇑**	*e*P	x	23 42 52.1	
BOQS				*e*S	x	23 43 03.4	
LBRS	**Las Brisas**	**0.78**	**8**	*e*P	x	23 42 51.7	
VSM	**San Miguel**	**0.97**	**61⇑**	*e*P	x	23 42 54.5	
VSM				*e*S	x	23 43 09.1	
VSM				AML	x	23 43 12.5	
	comp=Z,1μm,0.2s						
SBLS	**San Blas**	**0.99**	**332⇑**	*e*P	x	23 42 54.9	
SNJE	**San Jose**	**1.00**	**334**	*e*P	x	23 42 55.5	
BLLM	**Bellamira**	**1.01**	**62**	*e*P	x	23 42 54.7	
BLLM				*e*S	x	23 43 09.3	
RTR	**El Retiro**	**1.05**	**333**	*e*P	x	23 42 56.2	
CAHU	**Cacacuatique**	**1.22**	**49⇓**	*e*P	x	23 42 58.1	
CAHU				*e*S	x	23 43 16.2	
RBDL	**Robledal**	**1.26**	**336**	*e*P	x	23 42 59.1	
CNCH	**Conchagua**	**1.32**	**76⇑**	*e*P	x	23 42 58.5	
CNCH				*e*S	x	23 43 16.1	
CRIN	**San Cristobal**	**2.07**	**97**	*e*P	Pn	23 43 09.9	+0.5
TGUH	**Tegucigalpa,Un**	**2.13**	**59**	AML	AML	23 43 43.1	
	comp=N,465nm,0.5s						
TEL3	**Telica 3**	**2.28**	**99**	*e*P	Pn	23 43 12.0	-0.5
CHI2		**17.32**	**117**	*e*P	x	23 43 10.8	

*IDC **21** 00:13:48.5±4.3, 5135N×179.11W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, MS3.8/1, Ms1 3.8/1, ms1mx2.7/37, Error ellipse: s-maj=133.5km s-min=30.3km az=3.0*

*NEIC **21** 00:13:48.3, 5084N×179.29W, h13km, ML3.1(AEIC), After AEIC.*

*ISCJB **21** 00:13:51.2±4.7, 509N±04×1792W±0.3, h47km±31km, mb3.7/4, Error ellipse: s-maj=71.1km s-min=28.4km az=172.6*

ISC 21 00:13:49.2±7.2, 509N±04×1793W±02, h17km±47km, n7, σ1º03/8, mb3.7/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.88**	**58**	P	**Pn**	**00 14 20.8**	**+0.3**
ADK				S	**Sn**	**00 14 44.0**	**+0.3**
YKA	**Yellowknife Ar**	**35.76**	**46**	P	**P**	**00 20 45.2**	**-1.5**
	0.2nm,0.4s,mb3.4,baz=280,slow=7.4,SNR=4.1						
YKA	**Yellowknife Ar**	**35.76**	**46**	P	**P**	**00 20 45.2**	**-1.5**
PDAR	**Pinedale Array**	**46.73**	**72**	P	**P**	**00 22 17.7**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=340,slow=4.3,SNR=4.9						
MKAR	**Makanchi Array**	**60.10**	**308**	P	**P**	**00 23 56.0**	**+0.8**
	0.5nm,0.3s,mb4.0,baz=49,slow=6.3,SNR=15						
MKAR				LR	LR	00 50 51.9	
	comp=Z,74nm,18.1s,baz=346,slow=37						
CNNC	**Cliffs of the**	**69.97**	**59**	P	**P**	**00 24 59.0**	**-0.5**
	24nm,0.5s						
AKASG	**Malin Array Be**	**75.90**	**342**	P	**P**	**00 25 34.0**	**-0.3**
	0.8nm,0.4s,mb4.0,baz=20,slow=6.9,SNR=2.8						

*ISCJB **21** 00:14:50.6±1.9, 3447N±005×14184E±0.10, h23km±12km, mb3.5/6, Error ellipse: s-maj=13.5km s-min=8.8km az=4.7*

*IDC **21** 00:14:50.3±1.1, 3456N×14161E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.4/25, mbtmp3.4/8, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/20, Error ellipse: s-maj=27.7km s-min=18.8km az=92.0*

*JMA **21** 00:14:50.5±0.5, 3445N×14190E, h36km±4km, M3.3*

*NEIC **21** 00:14:57.5±3.1, 3474N×14152E, h46km±24km, MG3.3(JMA), Error ellipse: s-maj=36.5km s-min=24.7km az=75.0*

ISC 21 00:14:51.7±1.7, 3448N±005×14176E±009, h17km±9km, n22, σ093/25, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.67**	**285**	P	**Pg**	**00 15 05.2**	**+0.3**
BSO3	**Boso 3**	**1.08**	**287**	P	**Pb**	**00 15 12.2**	**+0.3**
BSO4	**Boso 4**	**1.28**	**294**	P	**Pn**	**00 15 15.0**	**+0.2**
CHOJ	**Chosi**	**1.42**	**329**	P	**Pn**	**00 15 16.4**	**-0.4**
CHOJ				*e*S	**Sn**	**00 15 35.4**	**+0.2**
JIM2	**Oshima 3**	**1.94**	**278**	P	**Pn**	**00 15 23.2**	**-0.7**
JHJ	**Hachijo jima 2**	**2.14**	**231**	Pn	**Pn**	**00 15 26.4**	**-0.2**
	13nm,0.3s,baz=258,slow=20,SNR=7.2						
JHJ				Sn	**Sn**	**00 15 52.2**	**-0.5**
	74nm,0.3s,baz=257,slow=24,SNR=11						
JOD2	**Odawara 2**	**2.33**	**290**	P	**Pn**	**00 15 28.5**	**-0.8**
JHO	**Hitachi**	**2.33**	**336**	P	**Pn**	**00 15 28.5**	**-0.9**
JHU	**Hanno**	**2.45**	**305**	P	**Pn**	**00 15 31.2**	**+0.3**
JAG	**Ashikaga**	**2.70**	**316**	P	**Pn**	**00 15 34.6**	**+0.2**
JFK	**Kawauchi**	**2.97**	**346**	P	**Pn**	**00 15 36.9**	**-1.1**
JNY	**Yasuok**	**3.32**	**286**	P	**Pn**	**00 15 44.4**	**+1.5**
MJAR	**Matsushiro Arr**	**3.55**	**306**	Pn	**Pn**	**00 15 46.3**	**+0.2**
	5.0nm,0.3s,baz=155,slow=12,SNR=16						
MAJO	**Matsushiro**	**3.55**	**306**	*e*Pn	**Pn**	**00 15 45.5**	**-0.7**
MAJO				Sn	**Sn**	**00 16 24.4**	**-3.3**
MAT	**Matsushiro**	**3.55**	**306**	P	**Pn**	**00 15 46.5**	**+0.4**
MAT				S	**Sn**	**00 16 29.9**	**+2.2**
SONM	**Songino Array**	**29.50**	**308**	LR	LR	00 32 02.6	
	comp=Z,36nm,18.4s,baz=24,slow=35						
ZALV	**Zalesovo Beam**	**43.87**	**314**	P	**P**	**00 22 55.1**	**-1.8**
	0.5nm,0.4s,mb3.6,baz=72,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**45.75**	**304**	P	**P**	**00 23 12.7**	**+0.6**
	0.5nm,0.7s,mb3.5,baz=88,slow=9.4,SNR=5.2						
BVAR	**Borovoye Array**	**52.52**	**314**	P	**P**	**00 24 04.1**	**+0.3**
	0.3nm,0.3s,mb3.7,baz=86,slow=5.9,SNR=3.8						
WRA	**Warramunga Arr**	**54.58**	**189**	P	**P**	**00 24 19.1**	**-0.1**
	0.5nm,0.7s,mb3.7,baz=1.7,slow=7.7,SNR=8.6						
ASAR	**Alice Springs**	**58.31**	**188**	P	**P**	**00 24 49.3**	**+3.6**
	0.3nm,0.7s,mb3.4,baz=12,slow=6.0,SNR=3.1						
YKA	**Yellowknife Ar**	**65.88**	**30**	P	**P**	**00 25 37.4**	**+1.3**
	0.1nm,0.4s,mb3.2,baz=290,slow=7.2,SNR=3.9						

*CSEM **21** 00:22:47.6±0.2, 4338N×4579E, h10km, mb3.8, Error ellipse: s-maj=7.0km s-min=2.6km az=97.0*

*MOS **21** 00:22:53.2±1.8, 4319N×4569E, h53km, mb4.4/1, Error ellipse: s-maj=24.8km s-min=10.3km az=23.2*

*ISCJB **21** 00:22:55.7±0.4, 4308N±004×4573E±003, h33km, Error ellipse: s-maj=5.7km s-min=2.8km az=26.7*

ISC 21 00:22:56.3±0.4, 4311N±004×4571E±003, h35km, n26, σ1º19/50, 12C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.66**	**267⇑**	*i*P	**Pn**	**00 23 09.7**	**+0.5**
SNJR				*e*S	**Sn**	**00 23 22.5**	**+4.2**
VLKR	**Vladikavkaz**	**0.76**	**266⇑**	*i*P	**Pn**	**00 23 10.8**	**+0.2**
VLKR				*i*S	**Sn**	**00 23 24.1**	**+3.3**
DBC	**Dubki**	**0.82**	**96**	*i*P	**Pn**	**00 23 09.5**	**-1.9**
DBC				*i*S	**Sn**	**00 23 23.5**	**+1.2**
DBC				pmax	pmax		
	comp=Z,139nm,0.1s						
UNCR	**Uncukul**	**0.89**	**116⇑**	*i*P	**Pn**	**00 23 10.7**	**-1.5**
UNCR				*e*S	**Sn**	**00 23 26.3**	**+2.5**
TRKR	**Terskaya**	**0.95**	**311⇑**	*i*P	**Pn**	**00 23 12.5**	**-0.6**
TRKR				*i*S	**Sn**	**00 23 27.2**	**+1.8**
ARNR	**Ardon**	**1.05**	**275⇓**	*i*P	**Pn**	**00 23 13.8**	**-0.8**
ARNR				*i*S	**Sn**	**00 23 29.3**	**+1.3**
BUJR	**Buynaksk**	**1.06**	**105**	*i*P	**Pn**	**00 23 15.5**	**+0.8**
BUJR				*i*S	**Sn**	**00 23 32.0**	**+3.8**
BUJR				pmax	pmax		
	comp=Z,80nm,0.2s						
KMSR	**Komsomolskaya**	**1.07**	**285⇑**	*i*P	**Pn**	**00 23 14.0**	**-0.8**
KMSR				*e*S	**Sn**	**00 23 29.7**	**+1.2**
KORR	**Kora**	**1.21**	**270⇑**	*i*P	**Pn**	**00 23 15.3**	**-1.4**
KORR				*i*S	**Sn**	**00 23 32.4**	**+0.6**
PRTR	**Priterechnaya**	**1.23**	**302⇑**	*i*P	**Pn**	**00 23 15.8**	**-1.2**
PRTR				*i*S	**Sn**	**00 23 32.9**	**+0.6**
MAK	**Makhachkala**	**1.32**	**96⇑**	*i*P	**Pn**	**00 23 20.1**	**+1.9**
MAK				*i*		00 23 39.3	
MAK				pmax	pmax		
	comp=Z,83nm,0.3s						
MAK				smax			
	comp=Z,646nm,0.4s						
MAK				smax			
	comp=N,1μm,0.4s						
MAK				smax			
	comp=E,2μm,0.9s						
LSNR	**Lesken**	**1.40**	**278⇓**	*i*P	**Pn**	**00 23 17.6**	**-1.7**
LSNR				*i*S	**Sn**	**00 23 35.8**	**-0.7**
KMKR	**Kumukh**	**1.41**	**133⇑**	*i*P	**Pn**	**00 23 24.5**	**+5.0**
KMKR				*i*S	**Sn**	**00 23 44.0**	**+7.2**
KMKR				pmax	pmax		
	comp=Z,139nm,0.2s						
MTA	**Mtatsminda**	**1.57**	**206**	P	**Pn**	**00 23 20.9**	**-0.7**
MTA				S	**Sn**	**00 23 41.4**	**+0.7**
GOR	**Gori**	**1.63**	**227**	P	**Pn**	**00 23 21.7**	**-0.8**
GOR				S	**Sn**	**00 23 43.2**	**+1.0**
DGRG	**David-gareji**	**1.67**	**189**	P	**Pn**	**00 23 23.3**	**+0.2**
DGRG				S	**Sn**	**00 23 46.6**	**+3.3**
ONI	**Oni**	**1.75**	**253**	P	**Pn**	**00 23 23.2**	**-0.9**
ONI				S	**Sn**	**00 23 45.1**	**0.0**
SEKA	**Sheki**	**2.19**	**149**	P	**Pn**	**00 23 29.5**	**-0.7**
	SNR=144						
SEKA				S	**Sn**	**00 23 56.6**	**+0.5**
GANJ	**Ganja**	**2.50**	**169**	P	**Pn**	**00 23 33.2**	**-1.2**
	SNR=3.1						
GANJ				S	**Sn**	**00 24 03.0**	**-0.7**
GOF	**Gofitskoye**	**2.75**	**316**	*e*P	**Pn**	**00 23 47.0**	**+9.2**
GOF				pmax	pmax		
	comp=Z,30nm,0.8s						
SIZA	**Siyzn**	**3.12**	**129**	P	**Pn**	**00 23 42.8**	**-0.2**
	SNR=4.4						
SIZA				S	**Sn**	**00 24 19.7**	**+0.7**
PQL	**Pirkuli**	**3.16**	**136**	P	**Pn**	**00 23 43.2**	**-0.3**
	SNR=3.1						
PQL				S	**Sn**	**00 24 21.8**	**+1.9**
GLBA	**Clilabad**	**4.36**	**151**	P	**Pn**	**00 23 58.5**	**-1.5**
	SNR=6.3						
GLBA				S	**Sn**	**00 24 47.8**	**-1.7**
AKTO	**Aktyubinsk**	**11.17**	**45**	⇑P	**Pn**	**00 25 27.4**	**-5.9**
	comp=Z,0.9nm,0.9s						
AKTO				⇑S	**Sn**	**00 27 25.7**	**-11**
	comp=Z,0.5nm,0.8s						
AKTO	**Aktyubinsk**	**11.17**	**45**	P	**Pn**	**00 25 27.4**	**-5.9**
	comp=Z,0.9nm,0.9s						
AKTO				S	**Sn**	**00 27 25.7**	**-11**
	comp=Z,0.5nm,0.8s						
AB01	**Akbulak array**	**11.62**	**53**	⇓P	**Pn**	**00 25 33.9**	**-5.5**
	comp=Z,1.2nm,0.3s,baz=249,slow=11						
AB01				⇑S	**Sn**	**00 27 37.5**	**-10**
	comp=Z,2.6nm,0.8s,baz=247,slow=28						

*IDC **21** 00:44:59.2±1.1, 3952N×7689E, h0km, mb3.8/7, mb1 3.9/12, mb1mx3.7/27, mbtmp3.7/12, ML3.3/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/28, Error ellipse: s-maj=21.5km s-min=18.4km az=125.0*

*NNC **21** 00:44:59.6±2.3, 3910N×7662E, h0km, mb4.2, mpv4.3, Error ellipse: s-maj=22.0km s-min=14.5km az=141.0*

*MOS **21** 00:45:02.6±1.7, 3950N×7710E, h33km, mb4.2/6, Error ellipse: s-maj=12.7km s-min=6.5km az=98.6*

*BJI **21** 00:45:03.0, 3969N×7703E, h31km, mB4.6, mb4.5, ML4.4, Ms3.9, Msz3.5*

*ISCJB **21** 00:45:04.0±0.4, 3949N±002×7720E±004, h75km±6km, mb4.0/13, Error ellipse: s-maj=5.6km s-min=3.8km az=163.8*

*NEIC **21** 00:45:05.0±0.5, 3948N×7728E, h70km±8km, mb4.4/5, Error ellipse: s-maj=9.3km s-min=4.6km az=63.0*

ISC 21 00:45:04.9±0.3, 3942N±003×7712E±004, h63km±6km, n95, σ150/118, mb4.0/13, 4C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.89**	**277⇓**	*i*PG	**Pn**	**00 45 18.8**	**-2.9**
KSH				SG	**Sn**	**00 45 31.4**	**-2.7**
KSH				Smax			
	comp=N,17μm,0.4s						
KSH				Smax			
	comp=E,13μm,0.4s						
ULHL	**Ulahol**	**2.90**	**347**	P	**Pn**	**00 45 49.3**	**+0.7**
	SNR=74						
KZA	**Kyzart**	**3.01**	**332**	P	**Pn**	**00 45 50.8**	**+0.7**
	SNR=282						
UCH	**Uchtor**	**3.43**	**326**	P	**Pn**	**00 45 56.6**	**+0.8**
	SNR=16						
UCH	**Uchtor**	**3.43**	**326**	*e*Pn	**Pn**	**00 45 56.4**	**+0.5**
UCH				Sn	**Sn**	**00 46 27.8**	**-7.5**
KBK	**Karagaybulak**	**3.63**	**334**	P	**Pn**	**00 45 59.6**	**+1.1**
	SNR=64						
TKM2	**Tokmak 2**	**3.68**	**342**	⇓Pn	**Pn**	**00 46 00.2**	**+1.0**
	comp=E,63nm,0.5s						
TKM2				⇓Sn	**Sn**	**00 46 46.8**	**+5.4**
	comp=E,346nm,0.6s						
TKM2	**Tokmak 2**	**3.68**	**342**	P	**Pn**	**00 46 00.1**	**+0.9**
	SNR=114						
TKM2	**Tokmak 2**	**3.68**	**342**	*e*Pn	**Pn**	**00 46 00.1**	**+0.8**
TKM2				Sn	**Sn**	**00 46 40.8**	**-0.6**
AML	**Almayashu**	**3.75**	**317**	P	**Pn**	**00 46 01.6**	**+1.3**
	SNR=7.5						
AML	**Almayashu**	**3.75**	**317**	*e*Pn	**Pn**	**00 46 00.6**	**+0.4**
AML				*e*Sn	**Sn**	**00 46 41.6**	**-1.6**
AAK	**Ala-Archa**	**3.77**	**329**	*d*iPN	**Pn**	**00 46 01.3**	**+0.8**
AAK	**Ala-Archa**	**3.77**	**329**	P	**Pn**	**00 46 01.5**	**+0.9**
	SNR=9.0						
AAK	**Ala-Archa**	**3.77**	**329**	*e*Pn	**Pn**	**00 46 01.4**	**+0.8**
AAK				*e*Sn	**Sn**	**00 46 41.6**	**-2.1**
KNDC	**Almaty**	**3.79**	**358**	⇑Pn	**Pn**	**00 46 03.2**	**+2.4**
	comp=E,143nm,0.6s						
KNDC				⇓Sn	**Sn**	**00 46 55.3**	**+11**
	comp=E,1μm,1.0s						
FRU	**Bishkek**	**3.90**	**332**	*e*PN	**Pn**	**00 46 02.5**	**+0.3**
FRU				*i*S	**Sn**	**00 46 58.0**	**+11**
FRU				pmax	pmax		
	comp=Z,170nm,1.8s						
FRU				smax			
	comp=E,2.0nm,2.0s						
CHMS	**Chumysh**	**4.00**	**334**	P	**Pn**	**00 46 04.4**	**+0.8**
	SNR=47						
EKS2	**Erkin-Say**	**4.11**	**323**	P	**Pn**	**00 46 06.2**	**+1.1**
	SNR=24						
EKS2	**Erkin-Say**	**4.11**	**323**	*e*Pn	**Pn**	**00 46 06.0**	**+0.8**
EKS2				*e*Sn	**Sn**	**00 46 46.9**	**-5.0**
USP	**Ospenovka**	**4.32**	**334**	P	**Pn**	**00 46 08.5**	**+0.5**
	SNR=15						
KK31	**Karatay Array**	**6.19**	**309**	⇑Pn	**Pn**	**00 46 32.1**	**-1.5**
	comp=E,1.6nm,0.5s,baz=128,slow=12,SNR=47						
KK31				Pg	**Pn**	**00 46 50.5**	**+17**
	comp=E,25nm,0.7s,baz=120,slow=14,SNR=37						
KK31				Lg		00 48 11.4	
	comp=E,68nm,0.7s,baz=124,slow=27,SNR=8.4						
CHCP	**Chirah Chowk**	**6.53**	**210**	⇓P	**Pn**	**00 46 43.0**	**+4.6**
DLH	**Dalhousie**	**6.93**	**188**	*e*P	**Pn**	**00 46 49.0**	**+5.2**
DLH				*ex*	x	00 48 06.0	
THN	**Thein Dam**	**7.06**	**190**	*e*P	**Pn**	**00 46 49.1**	**+3.5**
THN				*ex*	x	00 48 09.4	
SDNR	**Sundarnagar**	**7.90**	**181**	*ex*	x	00 47 06.5	
KBL	**Kabul**	**8.09**	**235**	*e*P	**Pn**	**00 47 02.6**	**+3.0**
KBL				*e*		00 48 32.6	
KBL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KBL	**Kabul**	**8.09**	**235**	*e*Pn	**Pn**	**00 47 02.6**	**+2.9**
KBL				*e*Sn	**Sn**	**00 48 32.6**	**+3.0**
SMLA	**Simla**	**8.27**	**180**	*i*P	**Pn**	**00 47 05.6**	**+3.4**
SMLA				*e*S	**Sn**	**00 48 32.0**	**-2.1**
SMLA				*ex*	x	00 48 40.0	
	comp=N,326nm,0.4s						
SMLA				*ex*	x	00 48 42.9	
	comp=E,289nm,0.3s						
MKAR	**Makanchi Array**	**8.28**	**25**	Pn	**Pn**	**00 47 01.8**	**-0.4**
	comp=E,0.4nm,0.3s,baz=211,slow=14,SNR=32						
MKAR				Sn	**Sn**	**00 48 33.2**	**-1.0**
	comp=E,0.5nm,0.3s,baz=198,slow=18,SNR=3.2						
MKAR				Lg		00 49 14.3	
	comp=E,0.7nm,0.3s,baz=231,slow=18,SNR=3.1						
MKAR	**Makanchi Array**	**8.28**	**25**	P	**Pn**	**00 47 01.8**	**-0.4**
MKAR						00 48 33.2	
MK31	**Makanchi Array**	**8.28**	**25**	*e*Pn	**Pn**	**00 47 02.1**	**-0.1**
MK31				*e*Sn	**Sn**	**00 48 30.7**	**-3.4**
WMQ	**Urumqi**	**9.06**	**58**	P	**Pn**	**00 47 13.8**	**+1.0**
WMQ				S	**Sn**	**00 48 54.1**	**+0.9**
WMQ				Smax			
	comp=N,65nm,1.2s						
WMQ				Smax			
	comp=E,61nm,1.4s						
WMQ				LR	LR		
	comp=N,247nm,22.0s						
WMQ				LR	LR		
	comp=E,160nm,21.0s						
WMQ				LR	LR		
	comp=Z,98nm,19.0s						
JOSI	**Joshimath**	**9.07**	**167**	*e*P	**Pn**	**00 47 16.2**	**+3.2**
JOSI				*e*S	**Sn**	**00 48 48.7**	**-4.8**
JOSI				AML	AML	00 49 17.7	
	comp=E,127nm,0.6s						
JOSI				AML	AML	00 49 18.1	
	comp=N,190nm,0.7s						
DDI	**Dehra Dun**	**9.11**	**175**	*e*P	**Pn**	**00 47 13.0**	**-0.6**
DDI				*e*S	**Sn**	**00 48 47.0**	**-7.6**
SONA	**Sohna**	**11.14**	**180**	*e*S	**Sn**	**00 49 36.9**	**-7.4**
KURBB	**Kurchatov Arra**	**11.25**	**5**	⇓Pn	**Pn**	**00 47 46.6**	**+4.0**
	comp=N,0.8nm,0.8s						
KURK	**Kurchatov**	**11.34**	**5**	⇓Pn	**Pn**	**00 47 48.1**	**+4.1**
KURK	**Kurchatov**	**11.34**	**5**	Pn	**Pn**	**00 47 39.2**	**-4.8**
	comp=N,0.1nm,0.3s,baz=193,slow=12,SNR=4.0						
KURK				Sn	**Sn**	**00 49 38.1**	**-11**
	comp=N,0.1nm,0.3s,baz=201,slow=26,SNR=4.2						
KURK				Lg		00 50 47.6	
	comp=N,0.2nm,0.3s,baz=202,slow=30,SNR=5.4						
KURK				LR	LR	00 52 22.6	
	comp=N,98nm,20.1s,baz=180,slow=40						
KURK	**Kurchatov**	**11.34**	**5**	*e*P	**Pn**	**00 47 42.9**	**-1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**11.34**	**5**	*e*Pn	**Pn**	**00 47 42.9**	**-1.1**
	comp=Z,2.6nm,0.7s						
KURK				Sn	**Sn**	**00 49 38.1**	**-11**
KURK				Lg		00 50 47.6	
KURK				LR	LR	00 52 22.6	
KHET	**Khetri**	**11.37**	**186**	*e*S	**Sn**	**00 49 42.6**	**-7.2**
DANN	**Dangsing**	**12.34**	**152**	*e*P	**Pn**	**00 47 58.3**	**+0.6**
	comp=Z,15nm,0.4s						
KOLN	**Koldanda**	**12.81**	**153**	*e*P	**Pn**	**00 48 03.6**	**-0.5**
	comp=Z,9.5nm,0.4s						
GKN	**Gorkha**	**12.99**	**149**	*e*P	**Pn**	**00 48 06.2**	**-0.3**
	comp=Z,18nm,0.4s						
KKN	**Kakani**	**13.44**	**147**	*e*P	**Pn**	**00 48 13.0**	**+0.4**
DMN	**Daman**	**13.53**	**148**	*e*P	**Pn**	**00 48 13.5**	**-0.3**
GUN	**Gumba**	**13.59**	**145**	*e*P	**Pn**	**00 48 14.6**	**-0.1**
	comp=Z,22nm,0.4s						
PKIN	**Phulchoki**	**13.67**	**147**	*e*P	**Pn**	**00 48 16.0**	**+0.2**
	comp=Z,19nm,0.5s						
PKI	**Pulchoki**	**13.68**	**147**	*e*P	**Pn**	**00 48 15.9**	**0.0**
	comp=Z,15nm,0.5s						
PKI	**Pulchoki**	**13.68**	**147**	*e*P	**Pn**	**00 48 16.0**	**+0.1**
PKI				pmax	pmax		
	comp=Z,19nm,0.5s						
PKI	**Pulchoki**	**13.68**	**147**	*e*P	**Pn**	**00 48 16.0**	**+0.1**
	comp=Z,19nm,0.5s						
JIRN	**Jiri**	**13.95**	**145**	*e*P	**Pn**	**00 48 19.2**	**-0.2**
	comp=Z,13nm,0.4s						
BVA0	**Borovoye Array**	**14.37**	**343**	⇑Pn	**Pn**	**00 48 27.3**	**+2.5**
	comp=Z,1.6nm,1.1s,baz=160,slow=14,SNR=32						
BVAR	**Borovoye Array**	**14.37**	**343**	Pn	**Pn**	**00 48 20.1**	**-4.8**
	comp=Z,0.2nm,0.3s,baz=151,slow=13,SNR=12						
BVAR				Lg		00 52 14.2	
	comp=Z,0.3nm,0.3s,baz=177,slow=32,SNR=4.3						
BRVK	**Borovoye**	**14.43**	**343**	*e*P	**Pn**	**00 48 22.8**	**-2.7**
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
BRVK	**Borovoye**	**14.43**	**343**	*e*Pn	**Pn**	**00 48 22.8**	**-2.7**
	comp=Z,13nm,1.0s						
BRVK				*e*Sn	**Sn**	**00 50 53.8**	**-10**
RAMN	**Ramite**	**14.74**	**145**	*e*P	**Pn**	**00 48 28.6**	**-1.2**
	comp=Z,40nm,0.7s						
LSA	**Lhasa**	**15.07**	**126**	*e*P	**Pn**	**00 48 36.1**	**+2.0**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
LSA	**Lhasa**	**15.07**	**126**	*e

ARCES	**ARCESS Array B**	**40.43**	**335**	P	**P**	**00 52 36.6**	**+0.1**
	comp=Z,1.9nm,0.8s,mb3.9,baz=101,slow=9.3,SNR=3.3						
ARE0	**ARCESS Array S**	**40.43**	**335**	P	**P**	**00 52 30.5**	**-6.0**
PSZ	**Piszkesteto**	**41.41**	**301**	P	**P**	**00 52 39.9**	**-4.9**
RUE	**Ruedersdorf**	**44.52**	**309**	*e*P	**P**	**00 53 05.3**	**-4.6**
	comp=Z,19nm,0.3s,mb5.4						
NB2	**NORSAR Subarra**	**45.06**	**321**	P	**P**	**00 53 15.3**	**+1.3**
	comp=Z,2.0nm,0.8s,mb4.0,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**45.06**	**321**	P	**P**	**00 53 15.3**	**+1.2**
	comp=Z,1.4nm,0.7s,mb3.9,baz=88,slow=7.9,SNR=5.1						
NOA	**NORSAR Array B**	**45.06**	**321**	P	**P**	**00 53 15.3**	**+1.2**
GERES	**GERESS Array B**	**45.27**	**304**	P	**P**	**00 53 17.4**	**+1.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=60,slow=7.9,SNR=4.8						
BNI	**Bardonecchia**	**50.95**	**301**	*e*P	**P**	**00 53 55.6**	**-4.2**
BNI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BNI	**Bardonecchia**	**50.95**	**301**	*e*P	**P**	**00 53 55.6**	**-4.2**
	comp=Z,4.0nm,1.1s,mb4.3						
TORD	**Torodi Ar. Bea**	**70.56**	**271**	P	**P**	**00 56 14.7**	**+1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=43,slow=4.8,SNR=10						
YKA	**Yellowknife Ar**	**78.00**	**6**	P	**P**	**00 56 58.2**	**+2.3**
	comp=Z,1.6nm,0.6s,mb4.1,baz=346,slow=5.5,SNR=29						
YKA	**Yellowknife Ar**	**78.00**	**6**	P	**P**	**00 56 58.2**	**+2.3**
WRA	**Warramunga Arr**	**79.62**	**126**	P	**P**	**00 57 10.0**	**+4.6**
	comp=Z,0.3nm,1.0s,mb3.2,baz=321,slow=5.4,SNR=3.1						
WRAB	**Tennant Creek**	**79.62**	**126**	*e*P	**P**	**00 57 02.9**	**-2.5**
WB2	**Warramunga Arr**	**79.63**	**126**	P	**P**	**00 57 02.8**	**-2.6**

*ISCJB **21** 00:57:31.1±0.8,3703N±003×2923E±003,h2km±6km, Error ellipse: s-maj=5.7km s-min=3.5km az=159.4*
*NEIC **21** 00:57:31.0,3704N×2920E,h11km,MD3.2(ISK),After ISK.*
*DDA **21** 00:57:31.1,3703N×2930E,h33km±1km,Md3.5*
*ISK **21** 00:57:31.3,3704N×2920E,h11km,MD3.2*
*CSEM **21** 00:57:32.3±0.1,3712N×2923E,h10km,MD3.5,Error ellipse: s-maj=2.5km s-min=1.6km az=161.0*

ISC 21 00:57:31.8±0.6,3703N±003×2922E±003,h3km±5km,n46, σ0 93/56,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.34**	**52**	*i* P		**Pg**	**00 57 38.0**	**-0.4**
GOLH				*i* S		**Sg**	**00 57 44.6**	**+1.8**
TURN	**Turunc**	**0.52**	**253**	*i* P		**Pg**	**00 57 46.1**	**+4.4**
TURN				*i* S		**Sg**	**00 57 57.4**	**+8.8**
DENT	**Denizli**	**0.74**	**348**	*e*PG		**Pg**	**00 57 45.2**	**-0.8**
YER	**Yerkesik**	**0.76**	**278**	*e*PG		**Pg**	**00 57 46.2**	**-0.2**
YER				*e*SG		**Sg**	**00 57 57.0**	**+0.7**
KSL	**Kastellorizon**	**0.92**	**162**	*e*P		**Pg**	**00 57 49.5**	**+0.1**
ANTB	**Antalya**	**1.15**	**96**	*e*PN		**Pn**	**00 57 53.6**	**-1.2**
ANTB				*e*SN		**Sn**	**00 58 10.9**	**-0.1**
BCK	**Bucak**	**1.17**	**68**	*e*PN		**Pn**	**00 57 54.2**	**-0.8**
BCK				*e*SN		**Sn**	**00 58 11.9**	**+0.5**
MLSB	**Milas**	**1.19**	**283**	*e*PN		**Pn**	**00 57 54.5**	**-0.8**
ARG	**Arkhangelos**	**1.20**	**228**	*e*P		**Pg**	**00 57 52.8**	**-1.9**
ARG	**Arkhangelos**	**1.20**	**228**	P		**Pg**	**00 57 53.2**	**-1.5**
ISP	**Isparta**	**1.31**	**51**	*e*PN		**Pn**	**00 57 55.4**	**-1.5**
ISP	**Isparta**	**1.31**	**51**	P		**Pg**	**00 57 56.7**	**-0.2**
ISP	**Isparta**	**1.31**	**51**	P		**Pg**	**00 57 56.7**	**-0.2**
KHL	**Karahalli**	**1.32**	**10**	*e*PN		**Pn**	**00 57 55.7**	**-1.4**
DAT	**Datca**	**1.35**	**258**	*e*PN		**Pn**	**00 57 55.9**	**-1.7**
KHAL	**Karahalli**	**1.36**	**9**	*i* P		**Pn**	**00 57 57.1**	**-0.5**
KHAL				*i* S		**Sg**	**00 58 17.4**	**+2.0**
BDRM	**Kayabasi**	**1.42**	**272**	*i* P		**Pn**	**00 57 58.4**	**-0.1**
BDRM				*i* S		**Sb**	**00 58 18.1**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**343**	*e*PN		**Pn**	**00 57 59.5**	**-0.7**
MANT	**Manisa**	**1.55**	**340**	*i* P		**Pn**	**00 57 60.0**	**-0.3**
MANT				*i* S		**Sn**	**00 58 21.9**	**+1.0**
GCAM	**G?zelcaml?**	**1.72**	**294**	*i* P		**Pn**	**00 58 02.4**	**-0.2**
SHUT	**Suhut-Afyon**	**1.85**	**34**	*e*PN		**Pn**	**00 58 04.0**	**-0.4**
SMG	**Samos**	**2.02**	**290**	*e*P		**Pn**	**00 58 06.0**	**-0.7**
SMG	**Samos**	**2.02**	**290**	P		**Pn**	**00 58 06.6**	**-0.1**
GDZ	**Gediz**	**2.07**	**6**	*i* P		**Pn**	**00 58 07.7**	**+0.3**
IZM	**Izmir**	**2.07**	**312**	*e*PN		**Pn**	**00 58 07.0**	**-0.4**
ALT	**Altintas**	**2.14**	**19**	*e*PN		**Pn**	**00 58 08.3**	**-0.1**
AKHS	**Akhisar**	**2.16**	**329**	*i* P		**Pn**	**00 58 08.0**	**-0.7**
AKHS	**Akhisar**	**2.16**	**329**	*i* P		**Pn**	**00 58 07.9**	**-0.7**
AKS	**Akhisar**	**2.16**	**329**	*e*PN		**Pn**	**00 58 08.0**	**-0.6**
BOLV	**Bolvadin**	**2.17**	**38**	*i* P		**Pn**	**00 58 09.4**	**+0.7**
BLCB	**Balcova**	**2.20**	**309**	*e*PN		**Pn**	**00 58 09.1**	**-0.1**
KARP	**Karpathos**	**2.23**	**229**	*e*P		**Pn**	**00 58 09.9**	**+0.4**
KONT	**Konya--Tatoy**	**2.66**	**69**	*e*PN		**Pn**	**00 58 16.1**	**+0.6**
LADK	**Ladik-KONYA**	**2.75**	**64**	*e*PN		**Pn**	**00 58 17.5**	**+0.7**
KIZT	**Kizilcal**	**2.80**	**48**	*e*PN		**Pn**	**00 58 17.9**	**+0.5**
ESKT	**Eskisehir**	**2.80**	**27**	*e*PN		**Pn**	**00 58 16.5**	**-0.9**
BALB	**Balikesir**	**2.81**	**338**	*e*PN		**Pn**	**00 58 17.5**	**-0.2**
BORA	**Eskisehir**	**3.01**	**18**	*i* P		**Pn**	**00 58 19.1**	**-1.2**
ZKR	**Zakros**	**3.09**	**233**	*e*P		**Pn**	**00 58 23.3**	**+1.8**
GEMT	**Gemlik**	**3.40**	**360**	*e*PN		**Pn**	**00 58 26.2**	**+0.5**
NPS	**Neapolis**	**3.41**	**240**	*e*P		**Pn**	**00 58 26.9**	**+1.1**
GULT	**Gulveren**	**3.55**	**16**	*e*PN		**Pn**	**00 58 27.6**	**-0.1**
LAST	**Lasithi**	**3.56**	**240**	P		**Pn**	**00 58 29.5**	**+1.7**
SIVA	**Sivas**	**4.10**	**242**	P		**Pn**	**00 58 38.5**	**+3.2**
BR131	**Keskin Array S**	**4.39**	**51**	*e*Pn		**Pn**	**00 58 38.9**	**-0.4**
BR131				*e*Sn		**Sn**	**00 59 32.5**	**+1.6**
BR131	**Keskin Array S**	**4.39**	**51**	*e*Pn		**Pn**	**00 58 38.9**	**-0.4**
BR131				*e*Sn		**Sn**	**00 59 32.5**	**+1.5**

IDC 21 01:16:02.3±2.0,4929S×12411E,h0km,mb3.8/4, mb1 3.9/4,mb1mx3.8/12,mbtmp3.8/4,MS3.4/6,Ms1 3.4/6, ms1mx3.2/15,Error ellipse: s-maj=113.8km s-min=24.7km az=104.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**17.13**	**340**	LR		LR	01 24 32.5	
	comp=Z,150nm,20.4s,baz=34,slow=30							
STKA	**Stephens Creek**	**21.79**	**44**	P		P	01 20 55.8	+0.1
	1.8nm,0.9s,baz=188,slow=14,SNR=2.8							
STKA				LR		LR	01 28 20.8	
	comp=Z,88nm,21.6s,baz=204,slow=34							
ASAR	**Alice Springs**	**26.71**	**20**	P		P	01 21 43.3	+0.1
	1.8nm,0.9s,baz=187,slow=9.3,SNR=12							
WRA	**Warramunga Arr**	**30.40**	**19**	P		P	01 22 16.3	+0.2
	1.3nm,1.1s,baz=199,slow=9.6,SNR=3.7							
WRA				LR		LR	01 33 35.0	
	comp=Z,68nm,20.2s,baz=180,slow=35							
VNDA	**Vanda**	**31.75**	**165**	LR		LR	01 34 32.7	
	comp=Z,75nm,18.4s,baz=105,slow=35							
CTA	**Charters Tower**	**34.09**	**39**	LR		LR	01 36 17.5	
	comp=Z,63nm,19.7s,baz=232,slow=36							
QSPA	**South Pole Qui**	**40.84**	**180**	P		P	01 23 45.4	+0.4
	1.1nm,0.4s,baz=350,slow=6.1,SNR=5.0							
TSUM	**Tsumeb**	**85.92**	**245**	LR		LR	02 00 28.9	
	comp=Z,32nm,20.7s,baz=322,slow=31							
PDAR	**Pinedale Array**	**142.85**	**79**	PKP		PKPdf	01 35 41.5	+4.5
	0.6nm,1.0s,baz=251,slow=4.5,SNR=3.8							
YKA	**Yellowknife Ar**	**145.82**	**45**	PKPbc		PKPbc	01 35 41.1	-1.0
	0.1nm,0.6s,baz=256,slow=2.5,SNR=3.1							

IDC 21 01:44:50.9±5.7,2634S×6957E,h0km,mb3.8/4,mb1 4.0/4, mb1mx3.7/20,mbtmp3.8/4,MS3.3/7,Ms1 3.3/7, ms1mx3.1/28,Error ellipse: s-maj=153.5km s-min=40.2km az=57.0,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.21**	**256**	LR		LR	02 06 27.2	
	comp=Z,68nm,20.7s,baz=258,slow=33							
MAW	**Mawson**	**41.49**	**184**	LR		LR	02 05 35.1	
	comp=Z,65nm,18.4s,baz=284,slow=30							
CMAR	**Chiang Mai Arr**	**52.88**	**36**	P		P	01 54 08.6	-0.2
	1.2nm,0.3s,baz=225,slow=7.3,SNR=6.8							
CMAR				LR		LR	02 12 33.5	
	comp=Z,19nm,18.6s,baz=50,slow=31							
ASAR	**Alice Springs**	**57.83**	**102**	P		P	01 54 44.0	-0.5
	0.6nm,0.9s,baz=248,slow=6.0,SNR=4.1							
WRA	**Warramunga Arr**	**59.37**	**99**	P		P	01 54 55.9	+0.5
	0.7nm,0.8s,baz=252,slow=7.1,SNR=5.4							
VNDA	**Vanda**	**64.98**	**166**	LR		LR	02 21 22.4	
	comp=Z,24nm,20.2s,baz=355,slow=34							
MMAI	**Mount Meron Ar**	**67.38**	**329**	LR		LR	02 22 47.7	
	comp=Z,14nm,19.2s,baz=190,slow=34							
MKAR	**Makanchi Array**	**73.69**	**9**	P		P	01 56 26.4	+0.2
	0.7nm,0.9s,baz=208,slow=4.9,SNR=4.5							
ZALV	**Zalesovo Beam**	**81.03**	**9**	LR		LR	02 32 20.8	
	comp=Z,22nm,19.9s,baz=18,slow=35							
KSRS	**Korea Array**	**83.83**	**43**	LR		LR	02 34 19.3	
	comp=Z,11nm,18.6s,baz=175,slow=35							

*IDC **21** 01:47:48.6±2.0,530S×14507E,h0km,mb3.5/2,mb1 4.0/5, mb1mx3.7/17,mbtmp3.8/5,ML3.3/3,MS3.1/2,Ms1 3.1/2, ms1mx2.7/14,Error ellipse: s-maj=57.6km s-min=26.8km az=82.0*
*ISCJB **21** 01:47:57.7±4.5,56S±02×1452E±02,h98km±49km,Error ellipse: s-maj=38.7km s-min=28.9km az=147.2*
*NEIC **21** 01:48:03.5±3.4,590S×14570E,h159km±46km,mb3.9/1, Error ellipse: s-maj=56.2km s-min=21.6km az=118.0*

ISC 21 01:47:58.5±4.5,56S±02×1452E±02,h88km±53km,n10, σ0 87/11,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.28**	**152**	Pn		**Pn**	**01 49 01.2**	**-0.2**
	1.2nm,0.3s,baz=0.0,slow=11,SNR=2.4							
PMG				Sn		**Sn**	**01 49 51.1**	**+0.9**
	1.0nm,0.3s,baz=310,slow=16,SNR=2.7							
PMG				LR		LR	01 50 54.7	
	comp=Z,160nm,20.9s,baz=307,slow=41							
PMG	**Port Moresby**	**4.28**	**152**	Pn		**Pn**	**01 49 01.2**	**-0.2**
PMG				Sn		**Sn**	**01 49 51.1**	**+0.9**
PMG				LR		LR	01 50 54.7	
CTA	**Charters Tower**	**14.45**	**176**	Pn		**Pn**	**01 51 16.5**	**-2.3**
	0.1nm,0.3s,baz=12,slow=12,SNR=3.5							
CTA	**Charters Tower**	**14.45**	**176**	Pn		**Pn**	**01 51 16.5**	**-2.3**
WRAB	**Tennant Creek**	**17.71**	**215**	*e*P		**Pn**	**01 51 59.4**	**-0.2**
	4.3nm,0.7s							
WB2	**Warramunga Arr**	**17.72**	**215**	*e*P		**Pn**	**01 52 00.6**	**+0.9**
WRA	**Warramunga Arr**	**17.73**	**215**	P		**Pn**	**01 51 59.9**	**+0.1**
	0.6nm,0.3s,baz=40,slow=12,SNR=50							
ASAR	**Alice Springs**	**20.99**	**210**	P		**P**	**01 52 34.9**	**0.0**
	2.8nm,0.8s,baz=42,slow=8.3,SNR=28							
STKA	**Stephens Creek**	**26.37**	**187**	LR		LR	02 05 22.7	
	comp=Z,59nm,20.6s,baz=22,slow=40							
MKAR	**Makanchi Array**	**76.02**	**321**	P		**P**	**01 59 36.5**	**+0.3**
	0.3nm,0.9s,baz=115,slow=6.5,SNR=2.5							

*MOS **21** 02:42:47.8±2.6,5700N×11849E,h15km,mb4.3/1,Error ellipse: s-maj=22.0km s-min=14.6km az=136.0*

BYKL 21 02:42:46.1±0.4,5715N×11881E,h18km±4km,3C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**0.39**	**230**	*e*PG		Pg	02 42 54.1	0.0
CRS				*e*			02 42 59.1	
CRS				pmax	pmax			
	comp=Z,62nm,0.1s							
CRS				smax				
	comp=E,1μm,0.4s							
CRS	**Chara**	**0.39**	**230**	⇑*i*Pg		Pg	02 42 54.2	+0.1
CRS				*i* Sg		Sg	02 42 59.2	-0.3
CRS				Pmax				
	comp=E,198nm,0.2s							
CRS				Smax				
	comp=E,1μm,0.4s							
NLYR	**Nelyaty**	**1.83**	**250**	*e*PN		Pn	02 43 17.4	+0.8
NLYR				*e*			02 43 40.2	
NLYR				pmax	pmax			
	comp=Z,240nm,0.8s							
NLYR				smax				
	comp=E,1μm,1.0s							
NLYR	**Nelyaty**	**1.83**	**250**	⇓*i*Pn		Pn	02 43 17.5	+0.9
NLYR				⇓*i*Pg		Pg	02 43 19.0	-2.3
NLYR				*e*Sg		Sg	02 43 41.7	-3.3
NLYR				Pmax				
	comp=E,229nm,0.3s							
NLYR				Smax				
	comp=E,1μm,0.9s							
BOD	**Bodaibo**	**2.68**	**287**	*e*PN		Pn	02 43 28.3	0.0
BOD				*e*			02 43 33.5	
BOD				*e*			02 44 07.8	
BOD				pmax	pmax			
	comp=Z,64nm,0.2s							
BOD				smax				
	comp=N,578nm,0.4s							
BOD	**Bodaibo**	**2.68**	**287**	⇓*i*Pn		Pn	02 43 28.8	+0.5
BOD				⇓*i*Pg		Pg	02 43 33.9	-3.5
BOD				*e*Sg		Sg	02 44 07.5	-4.7
BOD				Pmax				
	comp=N,63nm,0.2s							
BOD				Smax				
	comp=N,577nm,0.4s							
TUP	**Tupik**	**2.81**	**166**	*e*PN		Pn	02 43 30.6	+0.6
TUP				*e*			02 43 35.7	
TUP				*e*S		Sn	02 44 04.0	+0.7
TUP				*e*			02 44 11.8	
TUP				pmax	pmax			
	comp=Z,87nm,0.3s							
TUP				smax				
	comp=E,470nm,0.5s							
TUP	**Tupik**	**2.81**	**166**	*e*Pn		Pn	02 43 30.6	+0.6
TUP				⇑*i*Pg		Pg	02 43 35.7	-4.2
TUP				*e*Sn		Sn	02 44 05.1	+1.8
TUP				*i* Sg		Sg	02 44 11.9	-4.3
TUP				Pmax				
	comp=E,87nm,0.3s							
TUP				Smax				
	comp=E,576nm,1.0s							
NRGR	**Nerungri**	**3.28**	**96**	*e*PN		Pn	02 43 47.4	+11
UKT	**Uakit**	**3.33**	**242**	*e*Pn		Pn	02 43 38.1	+0.9
UKT				*e*			02 43 45.7	
UKT				*e*S		Sn	02 44 16.2	-0.1
UKT				*e*			02 44 26.4	
UKT				pmax	pmax			
	comp=Z,28nm,0.5s							
UKT				smax				
	comp=N,161nm,0.8s							
UKT	**Uakit**	**3.33**	**242**	*e*Pg		Pg	02 43 45.9	-4.0
UKT				*e*Sg		Sg	02 44 28.3	-4.7
UKT				*e*SgSg			02 44 34.2	
UKT				Pmax				
	comp=N,27nm,0.8s							
UKT				max				
	comp=N,163nm,1.0s							
CLNS	**Chul'man**	**3.34**	**93**	*e*PN		Pn	02 43 39.9	+2.5
CLNS				*e*			02 43 49.1	
CLNS				*e*S		Sn	02 44 19.8	+3.3
CLNS				*e*			02 44 32.2	
CLNS				pmax	pmax			
	comp=N,3.0nm,0.2s							
CLNS				pmax	pmax			
	comp=E,5.0nm,0.2s							
CLNS				pmax	pmax			
	comp=Z,8.0nm,0.2s							
CLNS				pmax	pmax			
	comp=E,9.0nm,0.3s							
CLNS				pmax	pmax			
	comp=N,6.0nm,0.3s							
CLNS				pmax	pmax			
	comp=Z,19nm,0.3s							
CLNS				smax				
	comp=E,38nm,0.4s							
CLNS				smax				
	comp=N,54nm,0.4s							
CLNS				smax				
	comp=Z,9.0nm,0.3s							
CLNS	**Chul'man**	**3.34**	**93**	*e*Pn		Pn	02 43 39.5	+2.1
CLNS				*e*			02 44 19.8	
CLNS				*e*Sg		Sg	02 44 29.6	-3.8
IENR	**Iengra**	**3.46**	**103**	*e*Pg		Pg	02 43 49.0	-3.4
IENR				*e*Sg		Sg	02 44 34.6	-2.6
TNDR	**Tynda**	**3.87**	**119**	*e*Pn		Pn	02 43 46.5	+1.9
TNDR				*e*Pg		Pg	02 43 54.6	-5.5
TNDR				*e*			02 44 31.5	
TNDR				*e*Sg		Sg	02 44 46.2	-4.0
YOA	**Uoyan**	**4.04**	**258**	*e*Sg		Sg	02 44 51.7	-4.1
YOA				Smax				
	comp=Z,213nm,1.8s							
KMO	**Kumora**	**4.40**	**256**	*e*PN		Pn	02 43 54.4	+2.5
KMO				*e*			02 44 05.6	
KMO				*e*			02 44 59.2	
KMO				pmax	pmax			
	comp=Z,5.0nm,0.4s							
KMO				smax				
	comp=N,254nm,0.9s							
KMO	**Kumora**	**4.40**	**256**	*e*Pn		Pn	02 43 52.9	+1.0
KMO				*e*			02 44 07.5	
KMO				*e*			02 44 56.2	
KMO				*i* Sg		Sg	02 45 02.2	-5.0
KMO				max				
	comp=N,26nm,0.4s							
KMO				Smax				
	comp=N,253nm,0.8s							
YLYR	**Ulyunkhan**	**4.86**	**245**	*e*PN		Pn	02 43 59.4	+1.2
YLYR				*e*S		Sg	02 45 14.8	-7.1
YLYR				smax				
	comp=N,72nm,0.8s							
YLYR	**Ulyunkhan**	**4.86**	**245**	⇑*i*Pn		Pn	02 43 59.3	+1.1
YLYR				*e*Pg		Pg	02 44 13.2	-5.9
YLYR				*e*			02 44 19.1	
YLYR				*e*Sg		Sg	02 45 15.7	-6.2
YLYR				max				
	comp=N,9.0nm,0.6s							
YLYR				Smax				
	comp=N,60nm,0.6s							
NIZ	**Nizh Angarsk**	**5.32**	**259**	*e*Pg		Pg	02 44 21.7	-6.2
NIZ				*e*Sg		Sg	02 45 29.9	-6.8
NIZ				Pmax				
	comp=N,13nm,0.8s							
NIZ				Smax				
	comp=N,83nm,0.7s							
KROS	**Kirovskiy**	**5.35**	**117**	*e*Pn		Pn	02 44 02.1	-2.8
KROS				*e*Sn		Sn	02 44 54.0	-12
KROS				*e*Sg		Sg	02 45 28.4	-9.2
KROS				max				
	comp=N,8.0nm,0.5s							
KROS				Smax				
	comp=N,45nm,0.5s							
CIT	**Chita**	**5.98**	**213**	*e*Sg		Sg	02 45 51.4	-6.4
CIT				*e*			02 45 59.3	
CIT				max				
	comp=N,271nm,0.3s							
SYVR	**Suvo**	**6.12**	**239**	*e*PN		Pn	02 44 15.8	+0.3
SYVR				*e*			02 44 36.0	
SYVR	**Suvo**	**6.12**	**239**	*e*Pn		Pn	02 44 15.5	0.0
SYVR				*e*Pg		Pn	02 44 35.7	+20
SYVR				*e*			02 45 26.3	
SYVR				*e*Sg		Sn	02 45 55.4	+31
SYVR				Pmax				
	comp=N,5.0nm,0.7s							
SYVR				Smax				
	comp=N,65nm,1.0s							
MXMB	**Maximikha**	**6.95**	**240**	*e*Sg		Sn	02 46 20.5	+35
MXMB				Smax				
	comp=N,127nm,1.3s							
OGRR	**Ongureny**	**7.29**	**246**	*e*Sg		Sn	02 46 33.0	+39
OGRR				Smax				
	comp=N,68nm,2.2s							
TRTB	**Turuntaevo**	**8.13**	**237**	*e*Sg		Sn	02 46 57.1	+43
TRTB				Smax				
	comp=N,27nm,0.8s							
UUDB	**Ulan-Yde**	**8.37**	**235**	*e*Sg		Sn	02 47 05.3	+45
UUDB				Smax				
	comp=N,56nm,1.5s							
KPC	**Khapcheranga**	**8.39**	**210**	*e*		Pn	02 45 18.4	+32
KPC				*e*Sg		Sn	02 47 05.6	+45
KPC				max				
	comp=N,3.0nm,1.4s							
KPC				Smax				
	comp=N,48nm,1.4s							
HRMR	**Khuramsha**	**8.85**	**236**	*e*		Pn	02 45 03.7	+11
HRMR				*e*Sg		Sn	02 47 19.8	+48
HRMR				max				
	comp=N,15nm,1.0s							
HRMR				Smax				
	comp=N,86nm,1.1s							
ARS	**Arshan**	**10.86**	**248**	*e*Sg		Sn	02 48 22.1	+61
ARS				Smax				
	comp=N,48nm,0.8s							
MOY	**Mondy**	**11.73**	**250**	*e*Sg		Sn	02 48 48.3	+66
MOY				Smax				
	comp=N,26nm,1.4s							
ORL	**Orlik**	**11.87**	**255**	*e*		Sx	02 48 22.7	
ORL				*e*Sg		Sn	02 48 52.0	+66
ORL				Smax				
	comp=N,14nm,0.9s							

*ISCJB **21** 02:53:52.3±2.8,210S±02×1787W±0.1,h591km±34km, mb3.9/7,Error ellipse: s-maj=32.2km s-min=20.0km az=16.7*
*IDC **21** 02:53:55.8±2.9,2118S×17846W,h642km±36km,mb3.1/4, mb1 3.4/5,mb1mx3.1/17,mbtmp3.2/5,Error ellipse: s-maj=34.5km s-min=19.6km az=0.0*
*NEIC **21** 02:53:57.0±0.8,2113S×17864W,h650km,mb4.0/3,Error ellipse: s-maj=23.2km s-min=18.5km az=170.0*

ISC 21 02:53:53.2±3.0,210S±02×1786W±01,h589km±36km,n14, σ0 39/13,mb3.9/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.60**	**191**	P		**P**	**02 57 25.1**	**-0.3**
	1.7nm,0.3s,baz=56,slow=3.6,SNR=8.1							
CTA	**Charters Tower**	**32.87**	**265**	P		**P**	**02 59 40.9**	**+0.8**
	3.0nm,0.4s,mb4.3,baz=91,slow=13,SNR=10.0							
CTAO	**Charters Tower**	**32.87**	**265**	*e*P		**P**	**02 59 40.4**	**+0.4**
	1.5nm,0.4s,mb4.0							
PMG	**Port Moresby**	**34.90**	**284**	*e*P		**P**	**02 59 57.0**	**-0.1**
	3.8nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**43.85**	**257**	P		**P**	**03 01 09.1**	**+0.5**
	2.4nm,0.5s,mb4.0,baz=95,slow=7.7,SNR=41							
ASAR				S		**S**	**03 06 57.6**	**-0.4**
	0.8nm,0.8s,baz=94,slow=16,SNR=5.7							
WB2	**Warramunga Arr**	**43.95**	**263**	*e*P		**P**	**03 01 09.1**	**-0.4**
WRAB	**Tennant Creek**	**43.96**	**263**	*e*P		**P**	**03 01 09.2**	**-0.4**
	1.8nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**43.97**	**263**	P		**P**	**03 01 09.3**	**-0.3**
	1.9nm,0.3s,mb4.1,baz=97,slow=7.5,SNR=78							
FITZ	**Fitzroy Crossi**	**52.40**	**263**	*e*P		**P**	**03 02 12.5**	**+0.4**
	4.0nm,1.6s,mb3.5							
VNA3	**Neumayer Olymp**	**87.69**	**176**	*e*		**P**	**03 05 39.5**	**-0.1**
VNA3				*e*			03 05 43.4	
TXAR	**Lajitas Array**	**87.80**	**58**	P		**P**	**03 05 40.6**	**-0.3**
	0.3nm,0.8s,mb3.1,baz=216,slow=6.2,SNR=3.7							
VNA2	**Neumayer--Watz**	**88.13**	**177**	*e*		**P**	**03 05 42.2**	**+0.6**
VNA2				*e*			03 05 46.0	
AKASG	**Malin Array Be**	**143.16**	**330**	PKP		PKPdf	03 12 16.5	-4.2
	0.9nm,0.4s,baz=43,slow=4.2,SNR=6.5							
TORD	**Torodi Ar. Bea**	**172.20**	**182**	PKPab		PKPab	03 14 19.5	-4.3
	0.4nm,0.9s,baz=177,slow=2.9,SNR=2.9							

*ISCJB **21** 03:10:54.8±0.7,572S±02×1412W±0.2,h10km,mb4.6/16, MS4.9/30,Error ellipse: s-maj=23.3km s-min

comp=Z,1µm,30.2s
TBI eLR LR 03 26 29.3
comp=Z,8µm,29.2s,baz=176
RKT Rikitea 34.38 10 *e*S **S 03 23 01.5 -10**
comp=Z,697nm,29.5s
RKT eLQ 03 25 15.4
comp=Z,6µm,29.8s
RKT eLR LR 03 26 38.9
comp=Z,6µm,28.5s,baz=188
RPN Rapa Nui 37.63 51 LR LR 03 28 54.4
comp=Z,431nm,21.4s,MS4.2,baz=205,slow=29
USHA Ushuaia 38.98 119 LR LR 03 28 44.0
comp=Z,893nm,20.3s,MS4.6,baz=214,slow=27
PPT Papeete 40.08 348 *e*S **S 03 24 29.5 -8.7**
comp=Z,1µm,26.8s
PPT eLQ 03 27 36.4
comp=Z,692nm,23.5s
PPT eLR LR 03 29 06.9
comp=Z,9µm,28.2s,baz=179
PPT Papeete 40.08 348 LR LR 03 30 41.0
comp=Z,2µm,18.1s,MS5.0,baz=162,slow=30
VNA3 Neumayer Olymp 47.37 161 *e* **P 03 19 30.0 -0.4**
VNA3 *e* pP 03 19 33.9 +0.4
VNA3 *e* 03 19 38.1
VNA3 *e* 03 19 44.9
VNA3 *e* 03 19 56.4
VNA3 *e* 03 21 08.5
VNA2 Neumayer--Watz 48.04 161 *e* **P 03 19 34.7 -0.9**
baz=215,slow=6.5
VNA2 *e* pP 03 19 39.1 +0.4
VNA2 *e* 03 19 43.9
VNA2 *e* 03 19 50.7
VNA2 *e* 03 20 02.0
VNA2 *e* 03 21 15.2
VNA1 Neumayer--Stat 48.12 161 *e* **P 03 19 36.4 +0.2**
VNA1 *e* pP 03 19 40.3 +1.0
VNA1 *e* 03 19 44.6
VNA1 *e* 03 20 03.6
SNAA Sanae 48.14 164 *e* **P 03 19 35.1 -1.2**
SNAA *e* pP 03 19 39.7 +0.2
SNAA *e* 03 19 43.7
SNAA *e* 03 19 50.6
SNAA Sanae 48.14 164 *e*P **P 03 19 34.9 -1.4**
comp=Z,22nm,1.3s,mb5.0
AFI Afiamalu 49.05 319 LR LR 03 34 26.5
comp=Z,858nm,21.9s,MS4.7,baz=153,slow=29
CNB Canberra Magne 50.24 265 *e*P **P 03 19 53.8 +1.0**
TRQA Tornquist 53.49 105 *e*P **P 03 20 18.2 +1.1**
comp=Z,8.2nm,1.2s,mb4.5
TRQA LR LR
comp=Z,721nm,21.0s,MS4.7
SYO Syowa Base 54.07 180⇑ *e*sP sP 03 20 21.7 -3.5
MAW Mawson 54.20 191 LR LR 03 40 39.9
comp=Z,1µm,20.2s,MS5.0,baz=157,slow=33
MAW Mawson 54.20 191 P **P 03 20 16.2 -5.6**
comp=Z,4.5nm,1.2s,mb4.3
MAW LR LR
comp=Z,2µm,21.0s,MS5.2
CMSA Cobar Meteorol 55.09 265 *e*P **P 03 20 30.2 +1.4**
comp=Z,6.9nm,0.9s,mb4.7
STKA Stephens Creek 57.04 261 P **P 03 20 43.5 +0.8**
comp=Z,6.5nm,0.9s,mb4.6,baz=155,slow=5.9,SNR=7.9
STKA LR LR 03 40 28.8
comp=Z,1µm,20.7s,MS5.0,baz=135,slow=31
STKA Stephens Creek 57.04 261 *e*P **P 03 20 44.5 +1.7**
comp=Z,7.8nm,0.9s,mb4.7
STKA Stephens Creek 57.04 261 *e*P **P 03 20 43.5 +0.8**
comp=Z,2.8nm,1.0s,mb4.2
LVC Limon Verde 61.76 88 *e*P **P 03 21 14.9 -0.5**
comp=Z,5.8nm,0.8s,mb4.8
LVC LR LR
comp=Z,498nm,22.0s,MS4.6
CTA Charters Tower 63.87 273 P **P 03 21 29.7 +0.2**
comp=Z,10nm,0.9s,mb4.9,baz=145,slow=4.6,SNR=7.7
CTA LR LR 03 44 50.6
comp=Z,352nm,20.1s,MS4.5,baz=139,slow=32
CTA Charters Tower 63.87 273 *e*P **P 03 21 30.1 +0.6**
comp=Z,8.0nm,0.9s,mb4.8
CTAO Charters Tower 63.87 273 *e*P **P 03 21 29.9 +0.4**
comp=Z,40nm,1.5s,mb5.2
CTAO LR LR
comp=Z,519nm,19.0s,MS4.7
CPUP Villa Florida 65.05 100 P **P 03 21 37.0 -0.2**
comp=Z,0.4nm,0.4s,mb3.8,baz=249,slow=6.6,SNR=3.9
CPUP LR LR 03 45 17.1
comp=Z,517nm,18.4s,MS4.8,baz=27,slow=32
CPUP Villa Florida 65.05 100 *e*P **P 03 21 37.5 +0.3**
comp=Z,8.2nm,1.0s,mb4.7
CPUP LR LR
comp=Z,122nm,19.0s,MS4.1
ASAR Alice Springs 67.67 261 P **P 03 21 53.0 -1.0**
comp=Z,3.3nm,0.7s,mb4.5,baz=139,slow=6.3,SNR=32
WB2 Warramunga Arr 70.45 263 *e*P **P 03 22 09.2 -2.1**
WB2 Warramunga Arr 70.45 263 *e*P **P 03 22 10.4 -0.9**
WRA Warramunga Arr 70.46 263 P **P 03 22 10.3 -1.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=146,slow=5.7,SNR=21
WRA LR LR 03 49 01.4
comp=Z,1µm,20.2s,MS5.1,baz=110,slow=32
WRAB Tennant Creek 70.46 263 *e*P **P 03 22 11.0 -0.3**
comp=Z,14nm,1.0s,mb4.8
WRAB S S 03 31 24.4 +0.1
WRAB LR LR
comp=Z,1µm,20.0s,MS5.1
PMG Port Moresby 72.19 280 *e*P **P 03 22 21.4 -0.5**
comp=Z,18nm,1.2s,mb4.9
FITZ Fitzroy Crossi 76.63 257 *e*P **P 03 22 48.5 +0.8**
comp=Z,5.5nm,0.9s,mb4.5
MBWA Marble Bar 77.19 251 *e*P **P 03 22 49.8 -1.1**
comp=Z,9.8nm,1.0s,mb4.7
MBWA S S 03 32 38.2 -2.0
MBWA LR LR
comp=Z,811nm,22.0s,MS5.0
BDFB Brasilia 78.75 101 LR LR 03 53 03.8
comp=Z,179nm,18.5s,MS4.4,baz=199,slow=32
ROSC El Rosal 81.85 68 LR LR 03 54 14.1
comp=Z,144nm,19.0s,MS4.3,baz=200,slow=32
SUR Sutherland 89.46 165 PFAKE 03 24 00.0 +6.2
SUR LR LR
comp=Z,963nm,21.0s,MS5.2
KAPI Kappang 90.67 260 LR LR 04 01 43.5
comp=Z,1µm,20.2s,MS5.2,baz=158,slow=34
TXAR Lajitas Array 91.88 32 LR LR 03 56 08.0
comp=Z,241nm,18.9s,MS4.7,baz=0.0,slow=30
BOSA Boshof 93.74 168 P **P 03 24 14.8 +1.1**
comp=Z,6.6nm,1.2s,mb5.0,baz=170,slow=6.1,SNR=3.2
BOSA LR LR 04 05 11.5
comp=Z,963nm,18.7s,MS5.3,baz=180,slow=35
ANMO Albuquerque 96.41 28 PFAKE 03 24 40.0 +15
ANMO LR LR
comp=Z,902nm,21.0s,MS5.2
TSUM Tsumeb 101.83 160 PFAKE 03 25 00.0 +10
TSUM LR LR
comp=Z,812nm,20.0s,MS5.2
LSZ Lusaka 107.24 169 PFAKE 03 29 30.0 +6.7
LSZ LR LR
comp=Z,714nm,20.0s,MS5.2
QIZ Qiongzhong 116.01 265 PKP PKPdf 03 29 36.1 -3.6
QIZ PP PP 03 30 44.5 +0.2
QIZ LR LR
comp=N,210nm,23.7s
QIZ LR LR
comp=Z,352nm,25.8s,MS4.9
YKA Yellowknife Ar 121.17 14 PKP PKPdf 03 29 52.3 +4.1
comp=Z,0.1nm,0.4s,baz=262,slow=30,SNR=3.3
CMAR Chiang Mai Arr 121.37 255 PKP PKPdf 03 29 51.7 +1.7
comp=Z,0.6nm,0.3s,baz=163,slow=0.9,SNR=3.4
FCC Fort Churchill 121.57 27 *e*PKPdf PKPdf 03 29 50.9 +1.8
KMI Kunming 124.78 263 PKP PKPdf 03 29 58.8 +2.4
KMI PP PP 03 31 49.0 +4.7
KMI PPP 03 34 29.0
KMI SS SS 03 48 42.8 +4.0
KMI SSS 03 53 18.8
KMI PP PP
comp=Z,81nm,7.4s
KMI LR LR
comp=N,149nm,26.8s,MS4.7
KMI LR LR
comp=E,146nm,28.1s,MS4.7
KMI LR LR
comp=Z,282nm,29.4s,MS4.8
CN2 Changchun 126.97 295 *e*PKP PKPdf 03 30 04.1 +4.1
TORD Torodi Ar. Bea 127.77 132 PKP PKPdf 03 30 01.9 -0.5
comp=Z,0.3nm,0.9s,baz=258,slow=1.1,SNR=2.5
HHC Hu-ho-hao-te 131.96 283 *e*PKP PKPdf 03 30 08.8 -0.8
HHC PP PP 03 32 35.1 +3.6
HHC PKS 03 33 42.9
HHC SKS SKSdf 03 37 15.0 -5.6
HHC SKKS SKKSac 03 39 22.1 -4.6
HHC SS SS 03 50 06.5 -1.3
HHC PP PP
comp=Z,87nm,5.0s
HHC LR LR
comp=N,161nm,19.0s,MS4.9
HHC LR LR
comp=E,165nm,17.8s,MS4.9
HHC LR LR
comp=Z,262nm,20.2s,MS4.9
ULN Ulaanbaatar 139.09 287 PFAKE 03 30 40.0 +17
ULN LR LR
comp=Z,220nm,20.0s,MS4.9
SONM Songino Array 139.41 287 PKP PKPdf 03 30 24.8 +1.6
comp=Z,0.3nm,0.5s,baz=176,slow=2.2,SNR=2.2
SUMG Summit 146.77 32 *e*PKPbc PKPbc 03 30 39.2 +1.9
WMQ Urumqi 146.88 268 PKP PKPdf 03 30 41.3 +4.8
ESDC Sonseca Array 147.36 104 PKPbc PKPbc 03 30 40.2 +0.3
comp=Z,1.7nm,0.8s,baz=225,slow=2.9,SNR=6.9
ESDC Sonseca Array 147.36 104 PKPbc PKPbc 03 30 40.2 +0.3
KBL Kabul 149.46 235 *e*PKPdf PKPdf 03 30 40.8 -0.3
KEST Kesra 150.86 125 PKPbc PKPbc 03 30 47.2 -1.6
comp=Z,1.0nm,1.0s,baz=240,slow=14,SNR=2.1
MK31 Makanchi Array 151.71 267 *e*PKPbc PKPbc 03 30 50.8 +0.4
MK31 *e*PKPab PKPab 03 30 58.8 -0.6
MKAR Makanchi Array 151.71 267 PKPbc PKPbc 03 30 50.5 0.0
comp=Z,3.1nm,0.9s,baz=132,slow=4.1,SNR=14
MKAR PKPab PKPab 03 30 59.3 -0.1
comp=Z,11nm,1.0s,baz=111,slow=3.6,SNR=16
MKAR Makanchi Array 151.71 267 PKPbc PKPbc 03 30 50.5 0.0
MKAR PKPab PKPab 03 30 59.3 -0.1
AAK Ala-Archa 153.12 253 *e*PKPbc PKPbc 03 30 54.7 +0.9
AAK *e*PKPab PKPab 03 31 03.1 -2.4
ZALV Zalesovo Beam 154.14 283 PKPbc PKPbc 03 30 55.3 -0.2
comp=Z,0.5nm,0.5s,baz=166,slow=0.6,SNR=3.3
ZALV PKPab PKPab 03 31 07.0 -2.4
comp=Z,2.9nm,0.8s,baz=121,slow=4.3,SNR=7.2
KURK Kurchatov 155.93 271 *e*PKPdf PKPdf 03 30 50.5 +0.5
KURK LR LR
comp=Z,289nm,21.0s,MS5.1
WLF Walferdange 159.33 98 *e*SS SS 03 55 19.6 +0.1
WLF *e*SSS 04 01 48.4
BFO Black Forest 159.72 103 *e*SS SS 03 55 29.1 +5.6
BFO *e*SSS 04 01 40.1
STU Stuttgart 160.44 103 *e*SS SS 03 55 34.9 +3.8
STU *e*SSS 04 01 54.8
TNS Taunus Mts 160.88 99 *e*SS SS 03 55 36.7 +1.0
TNS *e*SSS 04 01 56.6
BUG Bochum--Univer 160.88 94 *e*SS SS 03 55 36.2 +0.4
BUG *e*SSS 04 01 58.4
FUR Furstenfeldbru 161.16 107 *e*SS SS 03 55 39.6 +0.9
FUR *e*SSS 04 01 57.4
IBBN Ibbenburen 161.56 92 *e*SS SS 03 56 07.6 +25
IBBN *e*SSS 04 02 34.2
RJOB Jochberg 161.67 110 *e*SSS 04 02 01.7
UBBA Unterbreizbach 162.03 99 *e*SS SS 03 55 51.3 +3.5
UBBA *e*SSS 04 02 14.0
GRF Grafenberg Arr 162.06 103 *e*SS SS 03 55 51.9 +3.9
GRF *e*SSS 04 02 14.2
GRF *e*L 04 50 09.9
comp=Z,294nm,21.1s
WET Wettzell 162.60 107 *e*SS SS 03 55 57.2 +3.5
WET *e*SSS 04 02 18.7
ROTZ Rotzenmuhle 162.62 104 *e*SS SS 03 55 58.6 +4.7
ROTZ *e*SSS 04 02 19.9
MANZ Manzenberg 162.70 103 *e*SS SS 03 55 59.4 +4.7
MANZ *e*SSS 04 02 20.7
CLZ Clausthal 162.76 96 *e*SS SS 03 55 58.5 +3.1
CLZ *e*SSS 04 02 25.2
MOX Moxa 162.81 101 *e*SS SS 03 56 00.4 +4.6
MOX *e*SSS 04 02 22.6
GEC2 GERESS Array S 162.85 109 *e*SS SS 03 55 58.6 +2.4
GEC2 *e*SSS 04 02 19.0
GERES GERESS Array B 162.85 109 PKP PKPdf 03 30 58.1 +0.1
comp=Z,0.1nm,0.3s,baz=228,slow=1.2,SNR=2.6
NRDL Niedersach Rie 162.93 94 *e*SS SS 03 55 57.3 +0.2
NRDL *e*SSS 04 02 54.6
TANN Tannenbergstha 163.13 103 *e*SS SS 03 56 03.4 +4.2
TANN *e*SSS 04 02 24.6
BSEG Bad Segeberg 163.66 90 *e*SS SS 03 56 06.3 +1.6
BSEG *e*SSS 04 02 35.4
CLL Collm 163.90 101 *e*SS SS 03 56 11.8 +4.7
CLL *e*SSS 04 02 35.8
CLL Collm 163.90 101 *e*SS SS 03 56 08.0 +0.9
CLL *e*SSS 04 02 25.0
CLL *ex* x 04 03 15.0
CLL *e*SSSS 04 06 48.0
CLL *ex* x 04 09 06.0
CLL LmV 04 53 00.0
comp=Z,300nm,19.4s
BRG Berggiesshubel 164.17 103 *e*SS SS 03 56 15.4 +5.5
BRG *e*SSS 04 02 38.9
OBN Obninsk 177.56 149 PFAKE 03 31 20.0 +14
OBN LR LR
comp=Z,545nm,21.0s

*NEIC **21** 03:53:33.5, 3779N×2133E, h2km, MD3.5(ATH), After ATH.*
*ATH **21** 03:53:33.3, 3779N×2133E, h5km, MD3.5/5*
*ISCJB **21** 03:53:34.1±0.6, 3776N±003×2126E±005, h10km, Error ellipse: s-maj=5.9km s-min=3.4km az=150.7*
*CSEM **21** 03:53:34.1±0.2, 3777N×2130E, h8km, MD3.5, Error ellipse: s-maj=4.5km s-min=2.5km az=53.0*
*THE **21** 03:53:34.5, 3776N×2127E, h4km±3km, ML3.0/3, Error ellipse: s-maj=4.4km s-min=1.0km az=236.0*
ISC 21 03:53:34.6±0.5, 3776N±003×2127E±004, h10km, n22, σ1§22/35, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.33**	**27**	*e*PG	**Pg**		**03 53 39.3**	**-1.9**
RLS				*e*SG	**Sg**		**03 53 43.5**	**-2.2**
RLS	**Riolos of Patr**	**0.33**	**27**	*e*Pg	**Pg**		**03 53 39.3**	**-1.9**
RLS				*e*Sg	**Sg**		**03 53 43.3**	**-2.4**
VLS	**Valsamata**	**0.68**	**308**	P	**Pg**		**03 53 46.6**	**-1.2**
VLS				S	**Sg**		**03 53 57.5**	**+0.8**
VLS	**Valsamata**	**0.68**	**308**	*e*PG	**Pg**		**03 53 46.6**	**-1.2**
VLS				*e*SB	**Sb**		**03 53 57.8**	**-0.2**
ITM	**Ithomi**	**0.78**	**138**	*e*PB	**Pb**		**03 53 48.6**	**-1.6**
ITM				*e*SB	**Sb**		**03 53 59.0**	**-1.9**
PYL	**PYLOS**	**0.94**	**156**	P	**Pg**		**03 53 51.2**	**-1.5**
PYL				S	**Sg**		**03 54 06.8**	**+1.8**
EVR	**Evrytania**	**1.23**	**20**	*e*PB	**Pb**		**03 53 56.3**	**-1.6**
EVR	**Evrytania**	**1.23**	**20**	*e*Pn	**Pn**		**03 53 56.9**	**-0.9**
LTK	**Loutraki**	**1.37**	**78**	P	**Pn**		**03 53 58.4**	**-1.3**
LTK				S	**Sb**		**03 54 18.5**	**+0.8**
AGG	**Agios Georgios**	**1.51**	**33**	P	**Pn**		**03 54 00.3**	**-1.4**
AGG				S	**Sn**		**03 54 23.0**	**+1.6**
DID	**Didima**	**1.58**	**99**	P	**Pn**		**03 54 01.9**	**-0.8**
DID				S	**Sn**		**03 54 24.5**	**+1.4**
THL	**Klokotos Trika**	**1.89**	**18**	P	**Pn**		**03 54 07.7**	**+0.8**
THL				S	**Sn**		**03 54 31.5**	**+0.7**
THL	**Klokotos Trika**	**1.89**	**18**	*e*PN	**Pn**		**03 54 08.6**	**+1.7**
THL	**Klokotos Trika**	**1.89**	**18**	*e*Pb	**Pb**		**03 54 08.8**	**-0.4**
THL				S	**Sn**		**03 54 31.5**	**+0.7**
IGT	**Igoumenitsa**	**1.92**	**338**	P	**Pn**		**03 54 07.7**	**+0.4**
IGT				S	**Sn**		**03 54 32.8**	**+1.4**
PAIG	**Paliouri**	**2.87**	**40**	P	**Pn**		**03 54 20.9**	**+0.6**
FNA	**Florina**	**3.02**	**1**	P	**Pn**		**03 54 23.1**	**+0.7**
PLG	**Polygyros**	**3.11**	**32**	P	**Pn**		**03 54 24.3**	**+0.6**
KARN	**Karanos**	**3.17**	**137**	P	**Pn**		**03 54 25.7**	**+1.1**
KARN				S	**Sn**		**03 55 03.4**	**+0.9**
GRG	**Griva**	**3.31**	**15**	P	**Pn**		**03 54 26.2**	**-0.2**
OUR	**Ouranopolis**	**3.32**	**39**	P	**Pn**		**03 54 27.9**	**+1.3**
CHOS	**Chios island**	**3.83**	**79**	P	**Pn**		**03 54 34.7**	**+1.2**

*CSEM **21** 04:16:29.9±0.1, 3936N×3316E, h10km, MD2.6, Error ellipse: s-maj=2.1km s-min=1.8km az=162.0*
*ISCJB **21** 04:16:30.1±0.8, 3934N±004×3316E±004, h6km±6km, Error ellipse: s-maj=6.8km s-min=5.1km az=155.3*
*DDA **21** 04:16:30.3, 3938N×3315E, h7km±2km, Md2.1*
*ISK **21** 04:16:30.1, 3935N×3317E, h7km, MD2.6*
ISC 21 04:16:30.4±0.7, 3934N±004×3316E±004, h7km±6km, n10, σ0§52/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.43**	**85**	*e*PG	**Pg**		**04 16 38.9**	**+0.2**
KAMT				*e*SG	**Sg**		**04 16 45.2**	**+0.8**
LOD	**Lodumlu**	**0.63**	**331**	*e*PG	**Pg**		**04 16 42.0**	**-0.5**
LOD				*e*SG	**Sg**		**04 16 51.9**	**+1.2**
CDAG	**Cicekdag**	**0.98**	**73**	*i* P	**Pg**		**04 16 48.8**	**-0.5**
CDAG				*i* S	**Sg**		**04 17 01.6**	**-0.5**
KIZT	**Kizilcal**	**1.09**	**246**	*e*PN	**Pn**		**04 16 52.0**	**-0.1**
KIZT				*e*SN	**Sn**		**04 17 07.1**	**-0.3**
KDHN	**Kadinhani**	**1.15**	**225**	*i* P	**Pg**		**04 16 52.4**	**+0.1**
KDHN				*i* S	**Sn**		**04 17 09.1**	**+0.2**
ELDT	**Eldivan**	**1.17**	**10**	*i* P	**Pg**		**04 16 52.2**	**-0.7**
ELDT				*i* S	**Sn**		**04 17 09.1**	**-0.3**
LADK	**Ladik-KONYA**	**1.29**	**209**	*e*PN	**Pn**		**04 16 55.3**	**+0.5**
KONT	**Konya--Tatoy**	**1.52**	**204**	*e*PN	**Pg**		**04 16 58.9**	**-0.6**
YOZ	**Yozgat**	**1.70**	**79**	*e*PN	**Pn**		**04 17 00.6**	**+0.1**
BNN	**Bunyan**	**2.15**	**102**	*e*PN	**Pn**		**04 17 07.2**	**+0.5**

*NEIC **21** 04:48:44.0, 1924N×6459W, h57km, MD3.5(RSPR), After RSPR.*
RSPR 21 04:48:44.0, 1924N×6459W, h57km±5km, MD3.5/14, MD3.5/14, 12C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ABV	**Anegada**	**0.56**	**154**⇑	*e*P	**Pn**		04 48 55.5	-1.0
ABV	**Anegada**	**0.56**	**154**	*e*S	**Sn**		04 49 04.8	-0.7
TBVI	**Tortola**	**0.82**	**182**⇑	*e*P	**Pn**		04 48 58.6	-1.0
TBVI				*e*S	**Sn**		04 49 10.5	-0.6
STVI	**Saint Thomas**	**0.95**	**201**⇑	*e*P	**Pn**		04 49 00.1	-1.2
STVI				*e*S	**Sn**		04 49 13.6	-0.5
CDVI	**St. Croix**	**1.49**	**186**⇑	*e*P	**Pn**		04 49 10.0	+1.4
HUMP	**Col San Antoni**	**1.62**	**228**⇑	*e*P	**Pn**		04 49 09.5	-0.7
HUMP				*e*S	**Sn**		04 49 29.6	-0.4
SJG	**San Juan**	**1.86**	**233**⇓	*e*P	**Pn**		04 49 12.7	-0.8
SJG				*e*S	**Sn**		04 49 34.7	-1.1
SJG	**San Juan**	**1.86**	**233**⇑	*e*P	**Pn**		04 49 12.8	-0.6
SJG				*e*S	**Sn**		04 49 34.8	-1.0
CELP	**Cerrillos**	**2.21**	**239**⇑	*e*P	**Pn**		04 49 17.8	-0.6
CELP				*e*S	**Sn**		04 49 44.2	-0.4
OBIP	**Obispado Ponce**	**2.25**	**238**⇑	*e*P	**Pn**		04 49 18.2	-0.7
OBIP				*e*S	**Sn**		04 49 45.0	-0.6
ICM	**Isla Caja Muer**	**2.27**	**234**⇑	*e*P	**Pn**		04 49 18.5	-0.6
LRS	**Lares**	**2.34**	**246**⇑	*e*P	**Pn**		04 49 19.4	-0.6
AGPR	**Aguadilla, PR**	**2.51**	**253**⇑	*e*P	**Pn**		04 49 21.8	-0.6
LSP	**Las Mesas**	**2.59**	**246**⇑	*e*P	**Pn**		04 49 23.0	-0.5
CRPR	**Cabo Rojo, PR**	**2.69**	**243**⇑	*e*P	**Pn**		04 49 24.6	-0.2
CRPR				*e*S	**Sn**		04 49 55.3	-0.9

*ISCJB **21** 05:13:55.6±1.3, 5.73N±004×82.76W±005, h12km±9km, mb4.0/11, MS4.0/14, Error ellipse: s-maj=10.2km s-min=5.5km az=145.2*
*IDC **21** 05:13:55.7±0.8, 564N×8260W, h0km, mb3.8/8, mb1 4.1/12, mb1mx3.9/23, mbtmp3.9/12, ML3.6/4, MS4.0/17, Ms1 3.9/17, ms1mx3.7/33, Error ellipse: s-maj=37.7km s-min=14.7km az=57.0*
*NEIC **21** 05:13:56.9±0.5, 557N×8261W, h10km, mb4.7/6, Error ellipse: s-maj=14.1km s-min=9.1km az=57.0*
*GCMT **21** 05:13:56.9±0.3, 567N×8254W, h21km±1km, MW5.0/71, Moment Tensor Solution. s25,c30; s71,c109; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.10±.17; Mθθ 0.00±.12; Mϕϕ -0.10±.16; Mrθ 0.49±.25; Mrϕ 3.77±.12; Mθϕ 0.32±.25; Best double couple: Mo 3.81700×10^16 NP1: ϕs 0.00000°, δ 82.00000°, λ 175.00000°. NP2: ϕs 91.00000°, δ 85.00000°, λ 8.00000°. Principal axes: T 3.8070, Plg 9.0000°, Azm 316.0000°; N 0.0180, Plg 81.0000°, Azm 124.0000°; P -3.8260, Plg 2.0000°, Azm 225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*CASC **21** 05:13:58.2, 584N×8264W, h14km, MD4.5, ML3.7, mb4.7(NEIC)*
ISC 21 05:13:56.3±1.6, 577N±005×8275W±006, h1km±11km, n73, σ1§20/65, mb4.0/11, MS4.0/14, 3C-9D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**2.90**	**352**⇓	*e*P	**Pn**		**05 14 42.0**	**-1.7**
ACR				*e*S	**Sn**		**05 15 18.0**	**-1.2**
BAR1		**3.50**	**351**⇑	*e*P	**Pn**		**05 14 50.9**	**-1.0**
BAR1				*e*S	**Sn**		**05 15 34.2**	**+0.2**
BUS	**Buena Vista**	**3.89**	**345**⇓	*e*P	**Pn**		**05 14 57.3**	**0.0**
BUS				*e*S	**Sn**		**05 15 43.8**	**0.0**
QCR	**Quepos**	**3.90**	**339**⇑	*e*P	**Pn**		**05 14 56.1**	**-1.3**
QCR				*e*S	**Sn**		**05 15 42.5**	**-1.3**
URSC	**Urasca**	**4.17**	**346**⇑	*e*P	**Pn**		**05 15 00.9**	**-0.2**
URSC				*e*S	**Sn**		**05 15 50.8**	**+0.2**
LAJ	**Bijagual**	**4.29**	**342**⇓	*e*P	**Pn**		**05 15 02.1**	**-0.7**
LAJ				*e*S	**Sn**		**05 15 53.1**	**-0.5**
SJS	**Escuela Geolog**	**4.34**	**343**	*e*P	**Pn**		**05 15 04.3**	**+0.8**
SJS				*e*S	**Sn**		**05 15 55.9**	**+1.0**
BCIP	**Isla Barro Col**	**4.44**	**40**	*e*P	**Pn**		**05 15 03.6**	**-1.3**
BCIP	**Isla Barro Col**	**4.44**	**40**	*e*Pn	**Pn**		**05 15 04.3**	**-0.6**
BCIP				*e*Sn	**Sn**		**05 15 59.2**	**+1.9**
PRS1	**Puriscal**	**4.47**	**340**⇓	*e*P	**Pn**		**05 15 03.4**	**-1.8**
PRS1				*e*S	**Sn**		**05 15 56.8**	**-1.1**
CGA2	**Cerro Gallo 2**	**4.55**	**338**⇓	*e*P	**Pn**		**05 15 06.2**	**-0.3**
CGA2				*e*S	**Sn**		**05 16 00.4**	**+0.3**
JCR	**Jicaral**	**4.68**	**330**⇓	*e*P	**Pn**		**05 15 07.5**	**-0.7**
JCR				*e*S	**Sn**		**05 16 03.3**	**0.0**
FORC	**Fortuna**	**5.04**	**338**⇓	*e*P	**Pn**		**05 15 13.7**	**+0.5**
FORC				*e*S	**Sn**		**05 16 11.9**	**-0.2**
VCR	**Vista de Mar**	**5.19**	**327**⇓	*e*P	**Pn**		**05 15 14.9**	**-0.2**
VCR				*e*S	**Sn**		**05 16 15.6**	**-0.2**
LIM1	**Limonal**	**5.49**	**333**	*i* P	**Pn**		**05 15 19.6**	**+0.3**
LIM1				*i* S	**Sn**		**05 16 23.1**	**-0.1**
SSN	**San Juan del S**	**6.30**	**331**	*e*P	**Pn**		**05 15 31.7**	**+1.3**
SSN				*e*S	**Sn**		**05 16 42.9**	**-0.2**
OTAV	**Otavalo**	**6.97**	**142**	*e*Pn	**Pn**		**05 15 33.7**	**-6.0**
	10nm,0.6s							
MGAN	**Managua**	**7.22**	**332**	AML	AML		05 17 14.7	
	comp=N,19nm,0.6s							
COPN	**Copaltepe**	**7.42**	**329**	*e*P	**Pn**		**05 15 48.3**	**+2.5**
COPN				AML	AML		05 17 18.1	
	comp=Z,406nm,0.5s							
MIRN	**Miramar**	**7.70**	**330**	*e*P	**Pn**		**05 15 52.3**	**+2.6**
ROSC	**El Rosal**	**8.43**	**96**	Pn	**Pn**		**05 16 01.5**	**+1.8**
	comp=Z,2.4nm,0.3s,baz=271,slow=3.5,SNR=7.9							
CNCH	**Conchagua**	**8.99**	**326**	*e*S	x		05 17 49.6	
BLLM	**Bellamira**	**9.35**	**325**	*e*P	x		05 16 14.2	
VSM	**San Miguel**	**9.36**	**325**	*e*P	x		05 16 15.2	
TGUH	**Tegucigalpa,Un**	**9.37**	**332**	*e*P	**Pn**		**05 16 16.0**	**+3.4**
TGUH				AMb	AMB		05 16 20.5	
	comp=Z,163nm,1.1s							
TGUH	**Tegucigalpa,Un**	**9.37**	**332**	*e*Pn	**Pn**		**05 16 19.0**	**+6.4**
	comp=Z,37nm,0.9s							
CAHU	**Cacacuatique**	**9.60**	**326**	*e*P	x		05 16 18.0	
SNVI	**San Vicente**	**9.84**	**323**	*e*P	x		05 16 21.2	
LFRS	**El Faro**	**9.98**	**322**	*e*P	x		05 16 24.6	
SBLS	**San Blas**	**10.50**	**320**	*e*P	x		05 16 29.8	
SNJE	**San Jose**	**10.51**	**321**	*e*P	x		05 16 31.2	
SNJE				*e*S	x		05 18 28.6	
RTR	**El Retiro**	**10.55**	**320**	*e*P	x		05 16 30.9	
LAPE	**La Pedrera**	**11.24**	**80**	*i* P	x		05 15 21.0	
SDV	**Santo Domingo**	**12.41**	**75**	Pn	**Pn**		**05 16 53.3**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=278,slow=12,SNR=20							
SDV				Sn	**Sn**		**05 19 06.5**	**-6.8**
	comp=Z,0.5nm,0.3s,baz=33,slow=18,SNR=3.5							
SDV	**Santo Domingo**	**12.41**	**75**⇓	*e*P	**Pn**		**05 16 54.5**	**+0.3**
SDV	**Santo Domingo**	**12.41**	**75**	*e*Pn	**Pn**		**05 16 53.1**	**-1.2**
ATAH	**Atahualpa**	**13.41**	**161**	Pn	**Pn**		**05 17 06.5**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=125,slow=12,SNR=2.3							
ATAH				LR	LR		05 21 48.3	
	comp=Z,1µm,20.1s,baz=116,slow=35							
TEIG	**Tepich**		**15.34**	**340**	LR	LR	05 23 07.5	
	comp=Z,757nm,20.5s,baz=133,slow=36							
CMIG	**Matias Romero**	**16.36**	**314**	Pn	**Pn**		**05 17 48.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=168,slow=12,SNR=4.3							
CMIG				Sn	**Sn**		**05 20 55.8**	**+6.0**
	comp=Z,0.1nm,0.3s,baz=270,slow=20,SNR=2.7							
CMIG				LR	LR		05 23 06.5	
	comp=Z,673nm,21.7s,baz=115,slow=33							
CMIG	**Matias Romero**	**16.36**	**314**

CAIG				*i*	S			05 18 36.0	
SIV	**San Ignacio**	**30.46**	**136**	P		**P**		**05 20 07.4**	**-3.4**
	comp=Z,1.0nm,0.8s,mb3.7,baz=270,slow=8.1,SNR=5.6								
TXAR	**Lajitas Array**	**30.66**	**322**	P		**P**		**05 20 15.2**	**+2.6**
	comp=Z,0.2nm,0.5s,mb3.4,baz=149,slow=7.2,SNR=2.4								
TXAR					LR	LR		05 34 27.6	
	comp=Z,163nm,20.2s,MS3.7,baz=275,slow=40								
LVC	**Limon Verde**	**31.29**	**155**	LR		LR		05 32 58.7	
	comp=Z,125nm,20.1s,MS3.6,baz=336,slow=37								
ACSO	**Alum Creek Sta**	**34.31**	**360**	*e*P		**P**		**05 20 42.0**	**-2.5**
	comp=Z,15nm,1.2s,mb4.8								
HDIL	**Hopedale**	**35.13**	**351**	*e*P		**P**		**05 20 49.2**	**-2.3**
	comp=Z,18nm,0.6s								
SDCO	**Great Sand Dun**	**37.98**	**330**	*e*P		**P**		**05 21 17.5**	**+1.6**
	comp=Z,12nm,1.5s,mb4.4								
CFAA	**Coronel Fontan**	**39.66**	**160**	P		**P**		**05 21 29.6**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=324,slow=9.2,SNR=3.9								
CPUP	**Villa Florida**	**40.32**	**143**	LR		LR		05 40 27.5	
	comp=Z,196nm,18.2s,MS4.0,baz=310,slow=40								
BDFB	**Brasilia**	**40.44**	**122**	LR		LR		05 38 31.3	
	comp=Z,159nm,19.4s,MS3.9,baz=285,slow=37								
RSSD	**Black Hills**	**42.53**	**337**	*e*P		**P**		**05 21 55.1**	**+1.7**
	comp=Z,5.7nm,1.1s,mb4.2								
PDAR	**Pinedale Array**	**43.82**	**331**	P		**P**		**05 22 04.8**	**+0.9**
	comp=Z,1.2nm,1.2s,mb3.5,baz=138,slow=9.6,SNR=3.8								
PDAR					LR	LR		05 41 40.3	
	comp=Z,138nm,19.6s,MS3.9,baz=355,slow=38								
ULM	**Lac du Bonnet**	**45.68**	**348**	P		**P**		**05 22 19.7**	**+1.0**
	comp=Z,1.6nm,0.5s,mb4.3,baz=159,slow=14,SNR=2.1								
ULM					LR	LR		05 41 02.4	
	comp=Z,77nm,19.0s,MS3.7,baz=170,slow=36								
NVAR	**Mina Array Bea**	**45.77**	**320**	P		**P**		**05 22 21.2**	**+1.6**
	comp=Z,0.7nm,0.6s,mb3.9,baz=139,slow=7.0,SNR=5.3								
NVAR	**Mina Array Bea**	**45.77**	**320**	P		**P**		**05 22 21.2**	**+1.6**
RKT	**Rikitea**	**58.52**	**239**	*e*S		**S**		**05 32 12.1**	**+12**
	comp=Z,427nm,32.2s								
RKT					*e*LR	LR		05 41 48.9	
	comp=Z,509nm,36.2s								
YKA	**Yellowknife Ar**	**61.26**	**344**	P		**P**		**05 24 12.4**	**-0.6**
	comp=Z,1.9nm,0.7s,mb4.4,baz=140,slow=6.5,SNR=38								
PPT	**Papeete**	**69.91**	**249**	*e*S		S		05 34 26.6	+5.5
	comp=Z,64nm,25.8s								
INK	**Inuvik**	**70.94**	**342**	P		**P**		**05 25 15.2**	**+0.2**
	comp=Z,1.8nm,0.9s,mb4.2,baz=43,slow=2.4,SNR=5.5								
INK	**Inuvik**	**70.94**	**342**	*e*P		**P**		**05 25 15.2**	**+0.1**
	comp=Z,7.8nm,1.3s,mb4.7								
DBIC	**Dimbokro**	**77.36**	**84**	LR		LR		05 56 59.9	
	comp=Z,64nm,19.5s,MS4.0,baz=167,slow=34								
TORD	**Torodi Ar. Bea**	**83.31**	**77**	P		**P**		**05 26 25.7**	**0.0**
	comp=Z,0.1nm,0.4s,mb3.4,baz=103,slow=20,SNR=4.7								
NOA	**NORSAR Array B**	**86.92**	**29**	LR		LR		06 02 02.8	
	comp=Z,38nm,18.6s,MS3.8,baz=270,slow=33								
DAVOX	**Davos/Dischmat**	**87.64**	**43**	LR		LR		06 01 21.1	
	comp=Z,55nm,18.4s,MS4.0,baz=274,slow=32								
HFS	**Hagfors**	**88.25**	**30**	LR		LR		06 00 29.5	
	comp=Z,108nm,18.7s,MS4.3,baz=68,slow=32								
GERES	**GERESS Array B**	**89.94**	**41**	LR		LR		06 00 29.8	
	comp=Z,98nm,19.5s,MS4.2,baz=267,slow=31								
AFI	**Afiamalu**	**90.43**	**256**	LR		LR		05 57 34.5	
	comp=Z,70nm,20.2s,MS4.1,baz=62,slow=29								
VRAC	**Vranov**	**91.73**	**40**	LR		LR		06 02 31.8	
	comp=Z,90nm,18.1s,MS4.2,baz=271,slow=32								
MLR	**Muntele Rosu**	**98.82**	**42**	LR		LR		06 10 31.1	
	comp=Z,79nm,18.1s,MS4.2,baz=231,slow=34								
SONM	**Songino Array**	**126.02**	**352**	PKP		PKPdf		05 33 00.1	-0.5
	comp=Z,0.2nm,0.5s,baz=6.9,slow=4.8,SNR=2.3								
WRA	**Warramunga Arr**	**141.31**	**245**	PKP		PKPdf		05 33 30.8	+0.9
	comp=Z,0.4nm,0.7s,baz=94,slow=2.3,SNR=2.4								

IDC ***21*** *05:22:53.3±0.7, 3589N×13628E, h0km, mb4.1/14, mb1 4.3/15, mb1mx4.1/27, mbtmp4.1/15, ML3.7/1, MS3.6/12, Ms1 3.6/12, ms1mx3.3/35, Error ellipse: s-maj=18.0km s-min=11.2km az=170.0*

ISCJB ***21*** *05:22:53.5±0.7, 3589N±004×13630E±004, h11km±4km, mb4.2/21, MS3.6/9, Error ellipse: s-maj=6.8km s-min=5.6km az=25.7*

JMA ***21*** *05:22:54.5, 3594N×13635E, h7km±1km, M4.5 Broadband fault plane solution: P waves. NP1: φs260.00000°, δ61.00000°, λ168.00000°. NP2: φs356.00000°, δ79.00000°, λ29.00000°. Principal axes: T Plg28.0000°, Azm222.0000°; N Plg59.0000°, Azm14.0000°; P Plg12.0000°, Azm125.0000°;*

JMA Felt IV J1.

BJI ***21*** *05:22:54.5, 3559N×13668E, h33km, mB4.7, mb4.3, Ms3.8, Msz3.7*

NEIC ***21*** *05:22:54.5, 3594N×13635E, h7km, mb4.5/6, MW4.2(NIED), After JMA.*

NEIC Recorded [4 JMA] in Fukui, [2 JMA] in Mie and [1 JMA] in Aichi, Gifu, Hyogo, Ishikawa, Kyoto, Nagano, Nara, Osaka, Shiga and Tottori Prefectures.

MOS ***21*** *05:22:56.0±1.1, 3583N×13623E, h33km, mb4.6/4, Error ellipse: s-maj=15.1km s-min=12.8km az=131.8*

NIED ***21*** *05:23:00, 3600N×13630E, h5km, Mw4.3 Best double couple: M₀2.73000×10¹⁵ NP1:φs357.00000°, δ76.00000°, λ29.00000°. NP2:φs260.00000°, δ62.00000°, λ164.00000°.*

ISC 21 05:22:54.3±0.7, 3592N±004×13633E±004, h6km±4km, n54, σ0s94/50, mb4.2/21, MS3.6/10, 2C-1D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKG	**Kaga**	**0.36**	**1**	⇑P		**Pg**	**05 23 01.3**	**0.0**
JKG				S		**Sg**	**05 23 06.1**	**+0.1**
JGM	**Miyama**	**0.38**	**124**	⇓P		**Pg**	**05 23 01.9**	**+0.2**
JGM				S		**Sg**	**05 23 07.3**	**+0.7**
JWT	**Wachi**	**0.98**	**230**	⇑Pn		**Pg**	**05 23 13.4**	**+0.3**
JTT	**Ttatey**	**1.07**	**49**	P		**Pg**	**05 23 14.2**	**-0.5**
MAJO	**Matsushiro**	**1.64**	**67**	*e*Pn		**Pn**	**05 23 23.7**	**0.0**
MAJO				*e*Sn		**Sn**	**05 23 43.8**	**-1.4**
MAT	**Matsushiro**	**1.64**	**67**	P		**Pn**	**05 23 23.7**	**0.0**
MAT				S		**Sn**	**05 23 48.0**	**+2.8**
MJAR	**Matsushiro Arr**	**1.65**	**67**	Pg		**Pg**	**05 23 24.8**	**-1.1**
	120nm,0.3s,baz=249,slow=16,SNR=255							
MJAR				Lg			05 23 47.1	
	30nm,0.3s,baz=238,slow=38,SNR=9.5							
JHJ	**Hachijo jima 2**	**3.99**	**133**	LR		LR	05 25 04.0	
	comp=Z,322nm,19.9s,baz=100,slow=32							
KSRS	**Korea Array**	**6.93**	**285**	Pn		**Pn**	**05 24 37.1**	**+0.8**
	1.5nm,0.3s,baz=99,slow=14,SNR=9.6							
KSRS				Sn		**Sn**	**05 25 54.6**	**-0.8**
	1.6nm,0.3s,baz=99,slow=24,SNR=9.7							
KSRS				LR		LR	05 27 17.7	
	comp=Z,424nm,18.2s,baz=134,slow=38							
KSRS	**Korea Array**	**6.93**	**285**	P		**Pn**	**05 24 37.1**	**+0.8**
KSRS							05 25 54.6	
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.3s							
KSRS				smax				
	comp=N,2.0nm,0.3s							
KSRS				MLR		MLR		
	comp=Z,424nm,18.2s							
CBIJ	**Chichi jima**	**10.11**	**149**	LR		LR	05 28 03.2	
	comp=Z,74nm,22.0s,baz=92,slow=31							
CN2	**Changchun**	**11.48**	**317**	*e*P		**Pn**	**05 25 43.3**	**+4.6**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.9s							
CN2				LR		LR		
	comp=N,400nm,15.0s							
CN2				LR		LR		
	comp=E,300nm,15.0s							
CN2				LR		LR		
	comp=Z,300nm,17.0s							
KLR	**Kul'dur**	**13.72**	**347**	*e*P		**Pn**	**05 26 17.0**	**+7.7**
HHC	**Hu-ho-hao-te**	**20.00**	**292**	*e*P		**P**	**05 27 31.9**	**+4.3**
HHC				AMB		AMB		
	comp=Z,22nm,1.3s							
HHC				AMB		AMB		
	comp=Z,71nm,5.5s							
HHC				LR		LR		
	comp=N,176nm,17.4s,MS3.7							
HHC				LR		LR		
	comp=E,205nm,15.3s,MS3.7							
HHC				LR		LR		
	comp=Z,121nm,15.3s,MS3.4							
PETK	**Petropavlovsk-**	**22.83**	**34**	LR		LR	05 36 56.9	
	comp=Z,86nm,19.2s,MS3.2,baz=220,slow=37							
ULN	**Ulaanbaatar**	**24.69**	**308**	*e*P		**P**	**05 28 17.0**	**+1.0**
ULN				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.4							
ULN	**Ulaanbaatar**	**24.69**	**308**	*e*P		**P**	**05 28 17.0**	**+1.0**
	comp=Z,13nm,1.1s,mb4.4							
SONM	**Songino Array**	**25.11**	**308**	P		**P**	**05 28 20.7**	**+1.0**
	comp=Z,6.9nm,0.8s,mb4.2,baz=111,slow=9.1,SNR=26							
SONM				LR		LR	05 38 32.5	
	comp=Z,162nm,18.1s,MS3.6,baz=122,slow=37							
LZH	**Lanzhou**	**26.22**	**280**	*e*P		**P**	**05 28 32.0**	**+2.1**
LZH				AP		pP	05 28 40.5	+8.9
LZH				XP		sP	05 28 44.0	+12
LZH				AMB		AMB		
	comp=Z,21nm,1.3s,mb4.5							
LZH				AMB		AMB		
	comp=Z,86nm,4.2s							
BOD	**Bodaibo**	**26.47**	**333**	*e*P		**P**	**05 28 30.4**	**-1.5**
GTA	**Gaotai**	**28.99**	**288**	*e*P		**P**	**05 28 59.3**	**+4.6**
GTA				AP		pP	05 29 04.6	+8.2
GTA				XP		sP	05 29 07.6	+10
GTA				AMB		AMB		
	comp=Z,2.0nm,0.7s,mb4.0							
CMAR	**Chiang Mai Arr**	**37.25**	**252**	LR		LR	05 45 22.3	
	comp=Z,38nm,18.6s,MS3.2,baz=258,slow=36							
ZALV	**Zalesovo Beam**	**39.67**	**314**	LR		LR	05 47 29.4	
	comp=Z,54nm,19.1s,MS3.4,baz=264,slow=37							
MKAR	**Makanchi Array**	**41.25**	**302**	P		**P**	**05 30 39.8**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.6,baz=84,slow=12,SNR=5.2							
MKAR					LR	LR	05 47 51.8	
	comp=Z,68nm,20.6s,MS3.5,baz=11,slow=36							
KURK	**Kurchatov**	**43.41**	**309**	P		**P**	**05 30 57.2**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.8,baz=89,slow=8.2,SNR=5.2							
KURK	**Kurchatov**	**43.41**	**309**	*e*P		**P**	**05 30 56.1**	**-1.5**
KURK				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.1							
KURK	**Kurchatov**	**43.41**	**309**	*e*P		**P**	**05 30 56.1**	**-1.5**
	comp=Z,3.2nm,0.7s,mb4.2							
AML	**Almayashu**	**48.10**	**297**	*e*P		**P**	**05 31 36.1**	**+1.3**
	comp=Z,3.4nm,0.6s,mb4.5							
BVAR	**Borovoye Array**	**48.29**	**312**	P		**P**	**05 31 34.4**	**-1.7**
	comp=Z,0.5nm,0.4s,mb3.9,baz=86,slow=7.4,SNR=3.4							
FITZ	**Fitzroy Crossi**	**54.67**	**192**	*e*P		**P**	**05 32 23.0**	**-1.2**
	comp=Z,1.9nm,0.7s,mb4.2							
WRAB	**Tennant Creek**	**55.57**	**182**	*e*P		**P**	**05 32 29.5**	**-1.1**
WRAB				pmax		pmax		
	comp=Z,15nm,1.1s,mb4.9							
WRAB	**Tennant Creek**	**55.57**	**182**	*e*P		**P**	**05 32 29.5**	**-1.1**
	comp=Z,15nm,1.1s,mb4.9							
WB2	**Warramunga Arr**	**55.58**	**182**	*e*P		**P**	**05 32 30.1**	**-0.6**
WRA	**Warramunga Arr**	**55.58**	**182**	P		**P**	**05 32 30.2**	**-0.5**
	comp=Z,9.8nm,0.9s,mb4.8,baz=357,slow=7.6,SNR=85							
AKTK	**Aktyubinsk**	**56.35**	**311**	P		**P**	**05 32 35.9**	**-0.1**
AKTO	**Aktyubinsk**	**56.35**	**311**	P		**P**	**05 32 35.9**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=68,slow=11,SNR=6.5							
INK	**Inuvik**	**57.23**	**26**	P		**P**	**05 32 42.2**	**+0.2**
	comp=Z,2.3nm,0.9s,mb4.2,baz=292,slow=7.9,SNR=5.0							
INK	**Inuvik**	**57.23**	**26**	P		**P**	**05 32 42.2**	**+0.2**
ASAR	**Alice Springs**	**59.30**	**183**	P		**P**	**05 32 56.5**	**-0.3**
	comp=Z,4.2nm,0.8s,mb4.5,baz=12,slow=12,SNR=55							
ARCES	**ARCESS Array B**	**63.56**	**338**	LR		LR	06 03 19.9	
	comp=Z,184nm,18.9s,MS4.3,baz=114,slow=38							
YKA	**Yellowknife Ar**	**66.79**	**29**	P		**P**	**05 33 46.0**	**-0.3**
	comp=Z,0.5nm,0.8s,mb3.6,baz=302,slow=6.8,SNR=6.6							
YKA	**Yellowknife Ar**	**66.79**	**29**	P		**P**	**05 33 46.0**	**-0.3**
AKASG	**Malin Array Be**	**72.61**	**320**	P		**P**	**05 34 21.6**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.9,baz=47,slow=6.6,SNR=3.3							
BRTR	**Keskin Array B**	**76.45**	**309**	LR		LR	06 16 11.5	
	comp=Z,25nm,18.0s,MS3.6,baz=158,slow=42							
RAO	**Raoul Island**	**77.81**	**140**	LR		LR	06 01 24.0	
	comp=Z,151nm,20.6s,MS4.3,baz=38,slow=30							
DLMT	**Dillon**	**77.97**	**42**	*e*P		**P**	**05 34 54.1**	**+0.7**
	comp=Z,4.6nm,0.8s,mb4.5							
NVAR	**Mina Array Bea**	**78.90**	**51**	P		**P**	**05 35 00.0**	**+1.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=308,slow=4.5,SNR=5.6							
PDAR	**Pinedale Array**	**81.32**	**43**	P		**P**	**05 35 12.0**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=298,slow=3.2,SNR=8.8							
GERES	**GERESS Array B**	**81.41**	**326**	P		**P**	**05 35 12.8**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=46,slow=5.6,SNR=2.8							
GERES	**GERESS Array B**	**81.41**	**326**	P		**P**	**05 35 12.8**	**+0.8**
EIL	**Elat**	**81.47**	**300**	LR		LR	06 16 45.5	
	comp=Z,34nm,18.8s,MS3.7,baz=132,slow=40							
PV01	**Paradox Valley**	**84.98**	**46**	*e*P		**P**	**05 35 31.2**	**+0.6**
	comp=Z,380nm,1.1s							
TXAR	**Lajitas Array**	**94.00**	**49**	P		**P**	**05 36 14.0**	**+0.5**
	comp=Z,0.8nm,0.8s,mb4.2,baz=274,slow=2.6,SNR=9.0							
TXAR	**Lajitas Array**	**94.00**	**49**	P		**P**	**05 36 14.0**	**+0.5**
TXAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							

BJI ***21*** *05:48:06.6, 484S×132.21E, h33km, mB5.1, mb4.5*

IDC ***21*** *05:48:10.3±0.6, 400S×131.71E, h0km, mb4.3/9, mb1 4.5/11, mb1mx4.4/16, mbtmp4.5/11, ML4.3/2, MS3.4/2, Ms1 3.4/2, ms1mx3.0/21, Error ellipse: s-maj=34.6km s-min=14.7km az=66.0*

NEIC ***21*** *05:48:15.4±0.5, 434S×131.41E, h35km, mb4.6/10, Error ellipse: s-maj=17.1km s-min=8.7km az=68.0*

ISCJB ***21*** *05:48:16.6±1.3, 414S±007×131.62E±008, h62km±12km, mb4.4/18, Error ellipse: s-maj=15.9km s-min=8.3km az=139.9*

DJA ***21*** *05:48:19, 465S×131.38E, h45km, MLv4.4/5*

ISC 21 05:48:17.4±1.3, 415S±007×13160E±008, h50km±13km, n59, σ0s96/51, mb4.4/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TLE	**Tual**	**1.86**	**143**	P		**Pn**	**05 48 47.5**	**+0.6**
SWI	**Sorong**	**3.29**	**354**	P		**Pn**	**05 49 14.8**	**+8.4**
AAI	**Ambon**	**3.43**	**278**	P		**Pn**	**05 49 08.2**	**-0.2**
BAKI	**Biak**	**5.37**	**57**	P		**Pn**	**05 49 43.7**	**+8.6**
	481nm,0.8s,4μm1.4nm							
KAKA	**Kakadu**	**8.54**	**175**	*e*P		x	05 49 14.9	
	70nm,0.4s							
KAKA				*e*S		x	05 50 45.3	
KAKA	**Kakadu**	**8.54**	**175**	P		x	05 49 15.1	
KAPI	**Kappang**	**11.85**	**265**	Pn		**Pn**	**05 51 07.5**	**+3.7**
	2.3nm,0.3s,baz=116,slow=8.9,SNR=7.4							
KAPI				LR		LR	05 55 58.2	
	comp=Z,430nm,20.2s,baz=91,slow=39							
FITZ	**Fitzroy Crossi**	**15.04**	**202**	*e*P		**Pn**	**05 51 39.9**	**-7.0**
	19nm,0.5s							
FITZ				*e*S		Sx	05 54 17.5	
FITZ	**Fitzroy Crossi**	**15.04**	**202**	*e*P		**Pn**	**05 51 40.4**	**-6.6**
	9.1nm,0.6s							
FITZ				*e*S		Sx	05 54 17.0	
FITZ	**Fitzroy Crossi**	**15.04**	**202**	P		**Pn**	**05 51 40.6**	**-6.3**
	29nm,0.6s							
WRAB	**Tennant Creek**	**15.91**	**171**	*e*P		**Pn**	**05 51 52.9**	**-5.2**
	26nm,0.7s							
WRAB				*e*S		Sx	05 54 40.0	
WRAB	**Tennant Creek**	**15.91**	**171**	P		**Pn**	**05 51 53.4**	**-4.7**
	42nm,0.8s							
WRA	**Warramunga Arr**	**15.92**	**171**	Pn		**Pn**	**05 51 52.9**	**-5.3**
	2.0nm,0.3s,baz=356,slow=13,SNR=30							
WRA				Sn		Sx	05 54 41.1	
	3.0nm,0.3s,baz=351,slow=23,SNR=13							
WB2	**Warramunga Arr**	**15.92**	**171**	*e*P		**Pn**	**05 51 51.4**	**-6.9**
WB2				*e*S		Sx	05 54 40.9	
WB2	**Warramunga Arr**	**15.92**	**171**	*e*P		**Pn**	**05 51 52.5**	**-5.7**
WB2				*e*S		Sx	05 54 40.5	
PMG	**Port Moresby**	**16.30**	**109**	Pn		**Pn**	**05 52 00.1**	**-3.0**
	1.7nm,0.3s,baz=25,slow=6.4,SNR=7.8							
PMG				LR		LR	05 58 13.9	
	comp=Z,70nm,21.8s,baz=266,slow=37							
PMG	**Port Moresby**	**16.30**	**109**	*e*P		**Pn**	**05 52 02.7**	**-0.4**
	23nm,0.7s							
PMG	**Port Moresby**	**16.30**	**109**	P		**Pn**	**05 52 03.0**	**-0.1**
	38nm,1.0s							
ASAR	**Alice Springs**	**19.53**	**174**	P		**Pn**	**05 52 40.4**	**-2.1**
	2.5nm,0.3s,baz=350,slow=9.9,SNR=254							
ASAR				S		Sx	05 56 06.3	
	0.7nm,0.3s,baz=354,slow=24,SNR=5.9							
SBUM	**Sibu**	**20.45**	**288**	P		**P**	**05 52 53.1**	**+2.1**
MBWA	**Marble Bar**	**20.47**	**213**	*e*P		**P**	**05 52 49.0**	**-2.1**
	17nm,1.0s							
MBWA	**Marble Bar**	**20.47**	**213**	P		**P**	**05 52 49.7**	**-1.4**
CTA	**Charters Tower**	**21.32**	**139**	P		**P**	**05 53 00.8**	**+0.4**
	16nm,0.6s,mb4.5,baz=326,slow=12,SNR=30							
CTA	**Charters Tower**	**21.32**	**139**	*e*P		**P**	**05 53 00.6**	**+0.3**
	12nm,0.6s,mb4.4							
CTAO	**Charters Tower**	**21.32**	**139**	*e*P		**P**	**05 53 00.7**	**+0.3**
	37nm,1.0s,mb4.7							
CTAO	**Charters Tower**	**21.32**	**139**	P		**P**	**05 52 59.9**	**-0.4**
	34nm,1.1s,mb4.6							
KSM	**Kuching**	**22.00**	**284**	P		**P**	**05 53 16.0**	**+8.3**
FORT	**Forrest**	**26.70**	**187**	*e*P		**P**	**05 53 52.4**	**+0.4**
	23nm,0.6s,mb4.9							
EIDS	**Eidsvold**	**28.20**	**140**	*e*P		**P**	**05 54 05.5**	**0.0**
	10nm,1.1s,mb4.4							
STKA	**Stephens Creek**	**29.13**	**162**	P		**P**	**05 54 13.3**	**-0.5**
	5.0nm,0.5s,mb4.5,baz=340,slow=9.8,SNR=21							
STKA	**Stephens Creek**	**29.13**	**162**	*e*P		**P**	**05 54 13.6**	**-0.2**
	4.1nm,0.5s,mb4.4							
STKA	**Stephens Creek**	**29.13**	**162**	*e*P		**P**	**05 54 13.6**	**-0.2**
	1.1nm,0.6s,mb3.8							
KLBR	**Kellerberrin**	**30.24**	**204**	*e*P		**P**	**05 54 22.9**	**-0.7**
	8.4nm,0.6s,mb4.7							
ARMA	**Armidale**	**32.25**	**146**	*e*P		**P**	**05 54 42.1**	**+0.8**
CNB	**Canberra Magne**	**35.09**	**154**	*e*P		**P**	**05 55 06.6**	**+0.6**
TOO	**Toolangi**	**35.61**	**161**	*e*P		**P**	**05 55 11.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**39.25**	**306**	P		**P**	**05 55 41.1**	**-0.3**
	1.5nm,0.5s,mb4.0,baz=136,slow=6.3,SNR=9.4							
MJAR	**Matsushiro Arr**	**40.95**	**8**	P		**P**	**05 55 51.9**	**-3.3**
	1.4nm,0.6s,mb3.8,baz=184,slow=7.7,SNR=4.9							
GTA	**Gaotai**	**52.31**	**329**	*e*P		**P**	**05 57 24.5**	**+0.3**
GTA				AP		pP	05 57 37.1	-0.7
GTA				XP		sP	05 57 41.9	-1.6
GTA				AMB		AMB		
	comp=Z,4.0nm,1.2s,mb4.2							
ULN	**Ulaanbaatar**	**56.10**	**340**	P		x	05 58 02.6	
	comp=Z,6.3nm,1.5s							
SONM	**Songino Array**	**56.30**	**340**	P		**P**	**05 57 52.9**	**-0.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=161,slow=7.9,SNR=8.0							
PETK	**Petropavlovsk-**	**61.14**	**18**	P		**P**	**05 58 26.1**	**-0.5**
	comp=Z,4.4nm,0.9s,mb4.6,baz=206,slow=4.1,SNR=4.4							
WMQ	**Urumqi**	**61.93**	**325**	P		**P**	**05 58 32.1**	**0.0**
WMQ				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.9							
MK31	**Makanchi Array**	**66.77**	**325**	*e*P		**P**	**05 59 03.6**	**-0.1**
MKAR	**Makanchi Array**	**66.77**	**325**	P		**P**	**05 59 03.7**	**+0.1**
	comp=Z,4.3nm,0.6s,mb4.7,baz=113,slow=8.4,SNR=55							
MKAR	**Makanchi Array**	**66.77**	**325**	P		**P**	**05 59 03.7**	**+0.1**
TKM2	**Tokmak 2**	**68.85**	**319**	*e*P		**P**	**05 59 17.4**	**+0.5**
	comp=Z,8.3nm,1.0s,mb4.6							
AAK	**Ala-Archa**	**69.44**	**319**	P		**P**	**05 59 26.8**	**+6.3**
AML	**Almayashu**	**69.75**	**318**	*e*P		**P**	**05 59 23.4**	**+1.0**
	comp=Z,7.2nm,0.8s,mb4.7							
ZALV	**Zalesovo Beam**	**69.78**	**333**	P		**P**	**05 59 20.9**	**-1.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=100,slow=6.2,SNR=10							
KURK	**Kurchatov**	**70.96**	**328**	*e*P		**P**	**05 59 29.2**	**-0.5**
	comp=Z,11nm,1.0s,mb4.8							
VNDA	**Vanda**	**75.07**	**173**	P		**P**	**05 59 54.6**	**+1.1**
	comp=Z,3.0nm,0.9s,mb4.2,baz=321,slow=5.4,SNR=3.5							
BRVK	**Borovoye**	**76.61**	**327**	*e*P		**P**	**06 00 02.3**	**-0.4**
	comp=Z,7.8nm,1.1s,mb4.5							
MALT	**Malatya**	**95.04**	**308**	P		**P**	**06 01 29.9**	**-5.3**
TXAR	**Lajitas Array**	**122.09**	**58**	PKP		PKPdf	06 07 07.4	+0.2
	comp=Z,0.2nm,0.7s,baz=224,slow=2.5,SNR=3.8							
TORD	**Torodi Ar. Bea**	**129.76**	**284**	PKP		PKPdf	06 07 22.5	+0.2
	comp=Z,0.5nm,0.7s,baz=32,slow=1.6,SNR=3.3							
CPUP	**Villa Florida**	**148.49**	**165**	PKPbc		PKPbc	06 07 59.9	+0.4
	comp=Z,4.0nm,0.7s,baz=186,slow=1.6,SNR=19							
CPUP	**Villa Florida**	**148.49**	**165**	*e*PKPbc		PKPbc	06 07 59.9	+0.4
ROSC	**El Rosal**	**154.14**	**87**	PKPbc		PKPbc	06 08 13.0	0.0
	comp=Z,4.3nm,0.5s,baz=103,slow=19,SNR=3.2							

IDC ***21*** *06:26:40.9±0.7, 550N×8250W, h0km, mb4.2/12, mb1 4.4/17, mb1mx4.2/25, mbtmp4.2/17, ML3.5/5, MS3.6/10, Ms1 3.6/10, ms1mx3.3/29, Error ellipse: s-maj=31.3km s-min=13.0km az=61.0*

ISCJB ***21*** *06:26:42.4±0.3, 574N±004×8246W±004, h10km, mb4.4/31, MS3.7/9, Error ellipse: s-maj=6.2km s-min=4.4km az=139.5*

NEIC ***21*** *06:26:42.8±0.5, 559

comp=E,0.1nm,0.3s,baz=129,slow=6.4,SNR=7.6
CMIG LR LR 06 36 04.9
comp=E,254nm,18.4s,baz=119,slow=34
SDDR Presa de Saban 17.09 39 *e*P **Pn 06 30 46.1 +2.5**
comp=E,30nm,0.9s
PCRV Puerto La Cruz 18.23 75 P **Pn 06 30 55.7 -2.1**
comp=E,0.2nm,0.3s,baz=346,slow=8.3,SNR=2.4
NNA Nana 18.51 162 P **Pn 06 30 56.5 -4.7**
comp=E,0.3nm,0.3s,baz=348,slow=12,SNR=4.7
NNA Nana 18.51 162 *e*P **Pn 06 30 56.4 -4.8**
comp=E,17nm,1.1s
ICM Isla Caja Muer 19.73 51 *e*P **Pn 06 31 17.6 +1.7**
TKL Tuckaleechee C 29.77 358 LR LR 06 47 09.4
comp=E,65nm,18.1s,MS3.3,baz=188,slow=41
SIV San Ignacio 30.29 136 P **P 06 32 52.5 -3.8**
comp=E,2.1nm,0.9s,mb4.0,baz=320,slow=13,SNR=8.5
WVT Waverly 30.61 352 *e*P **P 06 32 57.5 -1.4**
comp=E,9.2nm,1.0s,mb4.7
TXAR Lajitas Array 30.81 322 P **P 06 33 00.7 -0.1**
comp=E,0.6nm,0.8s,mb3.5,baz=139,slow=9.8,SNR=6.1
TXAR LR LR 06 44 48.6
comp=E,95nm,21.0s,MS3.4,baz=180,slow=35
OLIL Olney 33.21 352 *e*P **P 06 33 20.6 -1.1**
comp=E,28nm,0.9s,mb5.2
BLO Bloomington 33.45 354 *e*P **P 06 33 22.8 -1.1**
comp=E,15nm,0.8s,mb5.0
HDIL Hopedale 35.17 351 *e*P **P 06 33 36.9 -1.8**
comp=E,23nm,0.7s,mb5.2
319A Douglas 35.76 319 ⇓P **P 06 33 44.5 +0.6**
baz=36
219A White Tail Can 36.14 320 ⇑P **P 06 33 48.0 +0.7**
baz=36
318A Bisbee 36.26 318 ⇑P **P 06 33 48.5 +0.3**
baz=36
ANMO Albuquerque 36.50 326 *e*P **P 06 33 50.6 +0.3**
comp=E,8.0nm,1.3s,mb4.4
ANMO *e*pP 06 34 03.3
118A Homack Ranch, 37.02 320 ⇓P **P 06 33 55.1 +0.5**
baz=37
217A Green Valley 37.02 318 ⇑P **P 06 33 55.1 +0.3**
baz=37
117A Oracle 37.47 319 ⇑P **P 06 33 58.8 +0.3**
baz=38
X19A St. Johns 37.78 323 ⇓P **P 06 34 02.0 +0.9**
baz=38
116A Eloy 38.10 318 ⇑P **P 06 34 03.9 +0.1**
baz=38
SDCO Great Sand Dun 38.10 330 *e*P **P 06 34 04.6 +0.8**
comp=E,10nm,1.2s,mb4.4
SDCO *e* 06 35 38.9
X18A Snowflake 38.25 322 ⇑P **P 06 34 05.7 +0.7**
baz=38
Y17A Roosevelt 38.26 320 ⇓P **P 06 34 05.5 +0.3**
baz=38
W19A Sanders 38.30 323 ⇑P **P 06 34 06.4 +0.9**
baz=39
214A Organ Pipe Nat 38.48 316 ⇓P **P 06 34 07.3 +0.2**
baz=39
Y16A Circle Bar Ran 38.78 320 ⇑P **P 06 34 10.1 +0.5**
baz=39
V18A Ganado 39.04 323 ⇓P **P 06 34 12.1 +0.4**
baz=39
X16A Lo Mia Camp, P 39.10 321 ⇓P **P 06 34 13.2 +0.9**
baz=39
MVCO Mesa Verde 39.27 326 ⇓P **P 06 34 14.3 +0.7**
baz=40
MVCO Mesa Verde 39.27 326 *e*P **P 06 34 13.9 +0.3**
comp=E,9.6nm,0.9s,mb4.4
T19A Beclabito 39.29 326 ⇑P **P 06 34 14.2 +0.4**
baz=40
Y15A Casa Rosa Ranc 39.38 319 ⇓P **P 06 34 14.9 +0.3**
baz=40
CFAA Coronel Fontan 39.58 161 P **P 06 34 12.4 -3.8**
comp=E,0.1nm,0.3s,baz=335,slow=4.6,SNR=6.6
113A Mohawk Valley, 39.61 317 ⇑P **P 06 34 16.6 0.0**
baz=40
R21A Cimarron 39.62 329 ⇑P **P 06 34 17.2 +0.6**
baz=40
X15A Humboldt 39.65 320 ⇑P **P 06 34 16.7 -0.1**
baz=40
ISCO Idaho Springs 39.76 332 *e*P **P 06 34 18.5 +0.8**
comp=E,4.7nm,1.3s,mb4.0
WUAZ Wupatki 39.77 322 ⇑P **P 06 34 18.6 +0.7**
baz=40
Y14A Wickenburg 39.80 319 ⇑P **P 06 34 18.5 +0.4**
baz=40
PV01 Paradox Valley 39.98 327 *e*P **P 06 34 19.9 +0.4**
T18A Mexican Hat 39.99 325 ⇓P **P 06 34 20.3 +0.7**
baz=40
S19A Harvey Farm, M 40.01 326 ⇑P **P 06 34 20.9 +1.1**
baz=40
X14A Yava 40.06 320 ⇑P **P 06 34 20.5 +0.3**
baz=40
U17A Shonto 40.07 324 ⇓P **P 06 34 21.0 +0.7**
baz=40
CPUP Villa Florida 40.17 144 P **P 06 34 15.4 -5.9**
comp=E,0.3nm,0.4s,mb3.3,baz=307,slow=8.6,SNR=3.9
CPUP LR LR 06 51 41.0
comp=E,66nm,19.7s,MS3.5,baz=308,slow=38
BDFB Brasilia 40.24 122 LR LR 06 51 23.9
comp=E,68nm,18.6s,MS3.5,baz=103,slow=37
T17A Navajo Res., N 40.43 324 ⇑P **P 06 34 23.9 +0.6**
baz=41
Q20A Ridgley Place, 40.44 328 ⇓P **P 06 34 24.1 +0.7**
baz=41
S18A Hurst Farm, Bl 40.45 326 ⇑P **P 06 34 24.0 +0.6**
baz=41
V15A Kaibab Nationa 40.46 322 ⇑P **P 06 34 24.1 +0.6**
baz=41,SNR=7.3
W14A Seligman 40.65 320 ⇓P **P 06 34 25.2 +0.1**
baz=41
Y12C Blythe 40.70 317 ⇑P **P 06 34 26.2 +0.6**
baz=41
X13A Yucca 40.74 319 ⇓P **P 06 34 26.0 +0.1**
baz=41
S17A Black Ridge (B 40.87 325 ⇑P **P 06 34 27.5 +0.6**
baz=41
R18A Canyonlands Na 40.89 326 ⇓P **P 06 34 27.4 +0.3**
baz=41
V14A Boquillas Ranc 40.93 321 ⇓P **P 06 34 28.0 +0.6**
baz=41
Q19A Hogan Spring (40.95 328 ⇓P **P 06 34 27.6 0.0**
baz=41,SNR=5.8
O21A Pagoda 40.98 330 ⇓P **P 06 34 29.1 +1.3**
baz=41
W13A Hualapai Mount 41.09 319 ⇓P **P 06 34 29.3 +0.5**
baz=41
DVTC Desert V Tower 41.17 315 ⇑P **P 06 34 29.5 +0.1**
baz=41
BC3 Big Chuckw Mtn 41.28 317 ⇓P **P 06 34 30.6 +0.3**
baz=42
O20A White River Ci 41.30 330 ⇓P **P 06 34 31.2 +0.8**
baz=42
R17A Hanksville Air 41.36 326 ⇓P **P 06 34 30.8 -0.1**
baz=42,SNR=6.1
T15A Red Dirt Ranch 41.38 323 ⇑P **P 06 34 31.7 +0.6**
baz=42
S16A Weppner Ranch, 41.38 324 ⇑P **P 06 34 31.6 +0.4**
baz=42
N21A Black Mountain 41.42 331 ⇓P **P 06 34 32.1 +0.7**
baz=42,SNR=6.7
U14A Mt Trumbull 41.47 322 ⇓P **P 06 34 32.3 +0.4**
baz=42
M22A Cedar Creek Ra 41.49 332 ⇑P **P 06 34 32.6 +0.6**
baz=42
Q18A Rafter H Ranch 41.53 327 ⇑P **P 06 34 32.4 +0.1**
baz=42,SNR=5.3
SRU San Rafael 41.75 327 ⇓P **P 06 34 34.3 +0.2**
baz=42
N20A Spence Gulch, 41.84 330 ⇓P **P 06 34 35.5 +0.6**
baz=42
O19A Miners Draw (B 41.87 329 ⇓P **P 06 34 35.3 +0.2**
baz=42
L22A Ellis Ranch, M 41.91 333 ⇑P **P 06 34 36.4 +1.0**
baz=42
U13A Pakoon Wash 41.96 321 ⇑P **P 06 34 36.2 +0.3**
baz=42
P18A Preston Nutter 41.97 327 ⇓P **P 06 34 36.7 +0.8**
baz=42
Q16A Castle Valley 41.97 326 ⇓P **P 06 34 36.4 +0.5**
baz=42
V12A Nelson 42.10 320 ⇓P **P 06 34 36.9 -0.2**
baz=42
P17A Butcher Ranch, 42.12 327 ⇑P **P 06 34 37.6 +0.4**
baz=42
O18A Roosevelt 42.30 328 ⇑P **P 06 34 39.5 +0.9**
baz=43
T13A Saint George 42.30 322 ⇑P **P 06 34 39.0 +0.4**
baz=43
S14A Cedar City 42.34 323 ⇓P **P 06 34 39.5 +0.6**
baz=43
N19A John Jarvie Ra 42.34 330 ⇓P **P 06 34 39.0 +0.1**
baz=43
RSSD Black Hills 42.62 337 *e*P **P 06 34 41.5 +0.3**
comp=E,5.0nm,1.1s,mb4.2
S13A Holt Ranch, En 42.63 322 ⇓P **P 06 34 41.8 +0.4**
baz=43,SNR=9.2
O17A Robinson Place 42.64 328 ⇓P **P 06 34 42.0 +0.7**
baz=43
N18A Larsen Ranch, 42.65 329 ⇑P **P 06 34 42.3 +0.8**
baz=43
Q15A Fillmore 42.70 325 ⇑P **P 06 34 42.2 +0.3**
baz=43
L20A Wamsutter 42.78 331 ⇑P **P 06 34 42.7 +0.3**
baz=43
O16A Springville 43.06 327 ⇑P **P 06 34 45.3 +0.5**
baz=43
R13A O'Grain Ranch, 43.09 323 ⇑P **P 06 34 45.2 +0.2**
baz=43,SNR=9.4
M18A Lyman 43.19 329 ⇑P **P 06 34 46.2 +0.4**
baz=44
Q14A Sevier Lake (B 43.21 324 ⇑P **P 06 34 45.8 -0.3**
baz=44,SNR=5.4
N17A Moffit Pass 43.23 328 ⇑P **P 06 34 46.6 +0.5**
baz=44
K20A Yellowstone Ra 43.28 332 ⇑P **P 06 34 46.4 -0.1**
baz=44,SNR=8.0
P14A Drum Mountains 43.50 325 ⇑P **P 06 34 49.3 +1.0**
baz=44
M17A Scullys Gap (B 43.53 329 ⇓P **P 06 34 48.3 -0.3**
baz=44,SNR=9.2
L18A Fontenelle, Gr 43.54 330 ⇓P **P 06 34 48.6 -0.1**
baz=44,SNR=11
R12A Pony Springs, 43.57 323 ⇓P **P 06 34 49.1 +0.2**
baz=44
Q13A Wheeler Ranch, 43.62 324 ⇑P **P 06 34 49.4 +0.1**
baz=44,SNR=8.5
K19A Absolon Red Bu 43.65 332 ⇑P **P 06 34 49.4 -0.1**
baz=44,SNR=10
DUG Dugway 43.77 326 ⇑P **P 06 34 50.7 +0.2**
baz=44
FURC Furnace Creek, 43.84 319 ⇑P **P 06 34 51.2 0.0**
baz=44
M16A Huntsville 43.91 328 ⇓P **P 06 34 51.9 +0.3**
baz=44
BW06 Boulder Array 43.94 331 ⇑P **P 06 34 51.8 0.0**
baz=44
PDAR Pinedale Array 43.94 331 P **P 06 34 51.6 -0.2**
comp=E,1.4nm,0.9s,mb3.7,baz=129,slow=12,SNR=11
PDAR LR LR 06 54 58.0
comp=E,88nm,19.3s,MS3.7,baz=331,slow=38
P13A Bates Ranch, G 43.95 324 ⇓P **P 06 34 52.4 +0.4**
baz=44
MPMC Manual Prospec 44.02 318 ⇑P **P 06 34 52.4 -0.2**
baz=44
K18A Toltan Ranch, 44.08 331 ⇓P **P 06 34 53.1 +0.2**
baz=44,SNR=18
L17A Cokeville 44.09 329 ⇑P **P 06 34 53.3 +0.2**
baz=44
Q12A Willow Creek R 44.16 323 ⇑P **P 06 34 53.7 0.0**
baz=44
R11A Troy Canyon, C 44.17 322 ⇓P **P 06 34 54.1 +0.3**
baz=44
N14A Grayback Hills 44.42 326 ⇓P **P 06 34 55.4 -0.3**
baz=45,SNR=6.3
M15A Larsen Ranch, 44.45 328 ⇑P **P 06 34 56.2 +0.2**
baz=45
P12A McGill 44.48 324 ⇑P **P 06 34 56.4 +0.1**
baz=45
J18A Kendall Valley 44.50 331 ⇑P **P 06 34 56.0 -0.3**
baz=45,SNR=16
Q11A Duckwater 44.53 322 ⇓P **P 06 34 56.7 +0.1**
baz=45
S10A Tonopah Range, 44.54 321 ⇓P **P 06 34 56.7 -0.1**
baz=45
K17A Gardner Place, 44.59 330 ⇑P **P 06 34 57.4 +0.4**
baz=45
I18A Diamond G Ranc 44.77 332 ⇑P **P 06 34 58.8 +0.3**
baz=45
L15A Malad City 44.80 328 ⇑P **P 06 34 57.9 -0.9**
baz=45,SNR=6.8
S09A Goldfield 44.82 320 ⇑P **P 06 34 58.7 -0.2**
baz=45
O12A Currie 44.91 325 ⇓P **P 06 34 59.9 +0.3**
baz=45
J17A Brown Place, J 44.94 331 ⇑P **P 06 34 59.5 -0.3**
baz=45,SNR=11
M14A Sheep Mountain 44.96 327 ⇓P **P 06 34 59.5 -0.6**
baz=45,SNR=7.1
Q10A Clear Creek Ra 44.97 322 ⇓P **P 06 35 00.7 +0.5**
baz=45
VES Vestal, Richgr 44.98 317 ⇓P **P 06 35 00.3 0.0**
baz=45
REDW Red Top Meadow 45.01 331 *e*P **P 06 35 00.8 +0.4**
comp=E,11nm,1.0s,mb4.8
R09A Tonopah 45.03 321 ⇓P **P 06 35 00.7 +0.1**
baz=45
SNOW Snow King Moun 45.04 341 *e*P **P 06 35 00.8 +0.2**
comp=E,14nm,1.1s,mb4.8
TPAW Teton Pass 45.16 331 *e*P **P 06 35 01.2 -0.3**
comp=E,8.8nm,0.9s,mb4.7
RRI2 Red Ridge 45.23 330 *e*P **P 06 35 01.6 -0.6**
comp=E,11nm,0.9s,mb4.8
I17A Pilgram Creek 45.30 331 ⇓P **P 06 35 02.6 -0.1**
baz=46,SNR=6.3
M13A Montello 45.31 326 ⇑P **P 06 35 02.7 -0.1**
baz=46
O11A Cowboy Ranch, 45.35 324 ⇑P **P 06 35 03.5 +0.4**
baz=46
IMW Indian Meadow 45.45 331 *e*P **P 06 35 03.9 0.0**
comp=E,4.8nm,0.8s,mb4.5
N12A Clover Valley, 45.46 325 ⇓P **P 06 35 04.1 +0.1**
baz=46
RLMT Red Lodge 45.62 334 ⇓P **P 06 35 05.2 0.0**
baz=46
RLMT Red Lodge 45.62 334 *e*P **P 06 35 04.8 -0.4**
comp=E,5.8nm,1.1s,mb4.5
RLMT *e*pP 06 35 17.8
I16A Newdale 45.70 331 ⇓P **P 06 35 06.0 +0.1**
baz=46
ULM Lac du Bonnet 45.73 348 P **P 06 35 03.9 -2.1**
comp=E,7.4nm,1.1s,mb4.6,baz=157,slow=8.9,SNR=5.3
ULM Lac du Bonnet 45.73 348 *e*P **P 06 35 02.9 -3.1**
comp=E,5.0nm,0.9s,mb4.5
M12A Wells 45.77 326 ⇑P **P 06 35 05.6 -0.8**
baz=46
J15A Blackfoot 45.82 330 ⇑P **P 06 35 06.5 -0.3**
baz=46,SNR=8.3
G18A Lazy EL Ranch, 45.90 333 ⇑P **P 06 35 06.9 -0.5**
baz=46
NVAR Mina Array Bea 45.92 320 P **P 06 35 07.9 +0.2**
comp=E,4.6nm,0.9s,mb4.5,baz=143,slow=7.8,SNR=12
Q08A Gabbs 45.94 321 ⇑P **P 06 35 07.8 -0.1**
baz=46
L12A Bee Creek Ra 46.31 326 ⇑P **P 06 35 10.6 -0.2**
baz=47
J14A Carey 46.32 329 ⇑P **P 06 35 10.8 0.0**
baz=47,SNR=12
F18A Big Timber 46.42 334 ⇑P **P 06 35 11.3 -0.3**
baz=47,SNR=8.1
G17A Pierce Place, 46.43 333 ⇑P **P 06 35 11.7 +0.1**
baz=47,SNR=9.6
K12A Draper Farm, C 46.58 327 ⇑P **P 06 35 12.4 -0.4**
baz=47
R06C Coleville 46.71 320 ⇓P **P 06 35 13.8 -0.1**
baz=47
J13A Cove Ranch, Pi 46.72 328 ⇓P **P 06 35 13.3 -0.6**
baz=47
I14A Mackay 46.72 329 ⇓P **P 06 35 14.0 +0.1**
baz=47
L11A Cat Creek Ranc 46.73 326 ⇓P **P 06 35 13.7 -0.3**
baz=47
H15A Lima 46.81 331 ⇓P **P 06 35 15.0 +0.4**
baz=47,SNR=13
F17A Fitzpatrick Pl 46.84 333 ⇓P **P 06 35 15.2 +0.4**
baz=47
G16A Moss Hill, Enn 46.86 332 ⇑P **P 06 35 15.2 +0.2**
baz=47
N09A Rock Creek Ran 46.91 323 ⇓P **P 06 35 15.2 -0.2**
baz=47
O08A Rochester Mine 46.94 322 ⇑P **P 06 35 15.4 -0.3**
baz=47
HLID Hailey 46.96 328 ⇓P **P 06 35 15.8 0.0**
baz=47
HLID Hailey 46.96 328 *e*P **P 06 35 15.6 -0.2**
comp=E,3.2nm,0.9s,mb4.5
E18A Harlowton 47.02 334 ⇓P **P 06 35 16.3 +0.1**
baz=47
I13A Wildhorse Cree 47.05 329 ⇑P **P 06 35 16.3 -0.2**
baz=47,SNR=9.8
BOZ Bozeman (W) 47.09 332 ⇑P **P 06 35 16.6 -0.1**
baz=47
BOZ Bozeman (W) 47.09 332 *e*P **P 06 35 16.1 -0.7**
comp=E,6.1nm,1.0s,mb4.7
J12A Stokes Ranch, 47.10 328 ⇑P **P 06 35 16.5 -0.4**
baz=47
G15A Dillon 47.14 331 ⇑P **P 06 35 17.2 +0.1**
baz=48
H14A Leadore 47.17 330 ⇓P **P 06 35 17.4 0.0**
baz=48
F16A Kennard Place, 47.19 332 ⇑P **P 06 35 17.9 +0.4**
baz=48
K11A Parker Ranch, 47.29 326 ⇑P **P 06 35 18.0 -0.3**
baz=48
O07A Toulon 47.30 322 ⇓P **P 06 35 18.4 -0.1**
baz=48
E17A Martinsdale 47.36 333 ⇓P **P 06 35 18.8 -0.1**
baz=48
D18A Linhart Farms, 47.47 335 ⇑P **P 06 35 19.4 -0.2**
baz=48,SNR=6.3
H13A Challis 47.58 329 ⇑P **P 06 35 20.3 -0.3**
baz=48
MFID Camas Ranch 47.61 327 ⇓P **P 06 35 20.7 -0.2**
baz=48
F15A Butte 47.64 332 ⇑P **P 06 35 21.2 +0.2**
baz=48
K10A MacKenzie Ranc 47.76 326 ⇑P **P 06 35 21.9 -0.1**
baz=48
M08A Happy Creek Ra 47.78 324 ⇓P **P 06 35 22.0 -0.3**
baz=48
D17A Six Diamond Ra 47.81 334 ⇓P **P 06 35 22.8 +0.4**
baz=48
H12A Diamond D Ranc 47.87 329 ⇑P **P 06 35 22.8 -0.1**
baz=48
G13A Cobalt 47.94 330 ⇑P **P 06 35 23.0 -0.4**
baz=48
I11A Placerville 48.01 328 ⇑P **P 06 35 23.8 -0.2**
baz=48
D16A Dana Ranch, Ca 48.10 334 ⇑P **P 06 35 25.0 +0.4**
baz=48
K09A Rome 48.19 325 ⇑P **P 06 35 24.7 -0.7**
baz=48,SNR=10
C17A Wharram Farm, 48.22 335 ⇑P **P 06 35 25.2 -0.3**
baz=49,SNR=8.7
N06A Buffalo Meadow 48.24 322 ⇓P **P 06 35 25.4 -0.4**
baz=48
B18A Beardsley Farm 48.41 336 ⇓P **P 06 35 26.8 -0.1**
baz=49,SNR=6.5
F13A Darby 48.48 330 ⇓P **P 06 35 26.9 -0.6**
baz=49
E14A Clinton 48.53 332 ⇓P **P 06 35 27.7 -0.2**
baz=49
WVOR Wild Horse Val 48.54 324 *e*P **P 06 35 27.7 -0.4**
comp=E,17nm,1.2s,mb5.0
H11A Donnelly 48.58 328 ⇑P **P 06 35 27.4 -0.9**
baz=49,SNR=6.8
K08A Mann Creek Ran 48.64 325 ⇓P **P 06 35 28.0 -0.9**
baz=49
L07A Adell 48.70 324 ⇑P **P 06 35 28.5 -0.8**
baz=49
B17A L&G Farms, Che 48.75 335 ⇓P **P 06 35 29.6 +0.1**
baz=49
C16A Fuhringer Ranc 48.77 334 ⇑P **P 06 35 29.9 +0.1**
baz=49
A18A Metzger Ranch, 48.85 336 ⇑P **P 06 35 30.2 -0.1**
baz=49,SNR=9.6
E13A Victor 48.88 331 ⇓P **P 06 35 30.4 -0.3**
baz=49
H10A Noah's Angus R 48.89 328 ⇑P **P 06 35 29.9 -0.8**
baz=49
I09A Lost Marbles R 49.02 327 ⇑P **P 06 35 31.2 -0.5**
baz=49
J08A Circle Bar Ran 49.03 325 ⇓P **P 06 35 31.6 -0.2**
baz=49
K07A Rock Creek Ran 49.06 324 ⇑P **P 06 35 31.8 -0.3**
baz=49
A17A Triple J Farms 49.22 336 ⇑P **P 06 35 33.2 +0.1**
baz=50
F11A Grangeville 49.46 329 ⇑P **P 06 35 34.4 -0.6**
baz=50
D13A Huson 49.48 332 ⇓P **P 06 35 35.2 0.0**
baz=50
B15A Bradely Ranch, 49.52 334 ⇓P **P 06 35 35.4 0.0**
baz=50
G10A Bishop Farm, J 49.55 328 ⇓P **P 06 35 35.0 -0.8**
baz=50
B14A Marsette Ranc 49.87 333 ⇓P **P 06 35 38.1 -0.1**
baz=50
A15A Johnson Ranch, 50.09 334 ⇓P **P 06 35 39.3 -0.5**
baz=50
I06A Prineville 50.38 325 ⇓P **P 06 35 41.7 -0.4**
baz=51
B13A Whitefish 50.41 333 ⇑P **P 06 35 42.3 0.0**
baz=51
SCHQ Schefferville 50.53 12 P **P 06 35 43.9 +0.9**
comp=E,7.2nm,1.0s,mb4.6,baz=145,slow=6.6,SNR=5.4
SCHQ Schefferville 50.53 12 P **P 06 35 43.9 +0.9**
G08A Pilot Rock 50.53 327 ⇓P **P 06 35 42.9 -0.3**
baz=51
B11A Sandpoint 51.34 332 ⇓P **P 06 35 49.4 +0.1**
baz=52
D09A Jones Farm, Ri 51.35 329 ⇓P **P 06 35 49.0 -0.4**
baz=52
C07A Waterville 52.66 329 ⇑P **P 06 35 59.3 +0.2**
baz=53
A08A Turner Farm, O 53.10 330 ⇓P **P 06 36 02.2 -0.1**
baz=53
EDM Edmonton 53.60 337 *e*P **P 06 36 04.7 -1.2**
FCC Fort Churchill 53.62 353 *e*P **P 06 36 04.5 -1.5**
comp=E,0.2nm,1.1s
YKA Yellowknife Ar 61.33 344 P **P 06 36 58.9 -1.4**
comp=E,7.3nm,0.8s,mb4.9,baz=140,slow=6.4,SNR=84
YKA LR LR 07 08 50.4
comp=E,5.2nm,18.2s,MS2.7,baz=20,slow=41
DLBC Dease Lake 64.00 334 *e*P **P 06 37 18.4 +0.2**
DLBC *e*pP 06 37 33.0
PPT Papeete 70.13 249 LR LR 07 02 25.8
comp=E,82nm,18.8s,MS4.0,baz=86,slow=31
INK Inuvik 71.01 342 P **P 06 38 01.8 -0.6**
comp=E,2.5nm,0.9s,mb4.3,baz=106,slow=5.6,SNR=6.6
INK Inuvik 71.01 342 *e*P **P 06 38 01.6 -0.9**
comp=E,16nm,1.6s,mb4.9
INK *e* 06 38 17.5
SUMG Summit 71.91 13 *e*P **P 06 38 09.2 +1.4**
comp=E,10nm,0.9s,mb5.0
TORD Torodi Ar. Bea 83.08 77 P **P 06 39 09.5 -1.9**
comp=E,1.6nm,1.1s,mb4.2,baz=282,slow=6.9,SNR=3.1
NOA NORSAR Array B 86.81 29 P **P 06 39 29.9 +0.7**
comp=E,1.9nm,0.9s,mb4.3,baz=275,slow=4.5,SNR=3.0
QSPA South Pole Qui 95.78 180 P **P 06 40 07.8 -2.8**
comp=E,1.8nm,0.9s,mb4.6,baz=332,slow=1.2,SNR=4.1
CN2 Changchun 124.58 336 *e*PKP PKPdf 06 45 43.4 -1.4
WMQ Urumqi 129.86 9 *e*PKP PKPdf 06 45 53.0 -1.9
HHC Hu-ho-hao-te 131.85 346 *e*PKP PKPdf 06 45 51.8 -7.0
HHC XPKP 06 46 05.8
HHC PP PP
comp=Z,77nm,5.9s
NJ2 Nanjing 137.24 333 *e*PKP PKPdf 06 46 03.8 -5.3
LZH Lanzhou 137.94 352 *e*PKP PKPdf 06 46 08.3 -2.0
LZH XPKP 06 46 12.8
LZH LR LR
comp=E,137nm,18.0s
LZH LR LR
comp=Z,193nm,20.1s,MS4.8
XAN Xi'an 138.96 345 PKP PKPdf 06 46 12.1 -0.1
XAN PP PP 06 49 09.1 +6.4
XAN PPP 06 52 12.6
XAN SKS SKSdf 06 53 20.9 -3.4
XAN SKKS SKKSac 06 55 59.8 0.0
XAN SS SS 07 07 24.4 +5.3
XAN LR LR
comp=E,17nm,22.6s
XAN LR LR
comp=Z,44nm,19.8s,MS4.2
ASAR Alice Springs 140.72 239 PKP PKPdf 06 46 11.6 -4.1
comp=Z,0.4nm,0.8s,baz=123,slow=3.4,SNR=2.9
CD2 Chengdu 143.04 351 PKP PKPdf 06 46 17.8 -1.9
GYA Guiyang 146.76 345 *e*PKP PKPdf 06 46 22.8 -3.4
GYA PKP2 PKPab 06 46 27.9 -1.1
GYA PP PP 06 49 53.0 +3.1
GYA PP PP
comp=Z,80nm,8.7s
KMI Kunming 148.88 351 PKP PKPdf 06 46 28.1 -1.7

CSEM ***21*** *06:53:27.9±0.1, 39.39N×33.19E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.1km az=6.0*
ISK ***21*** *06:53:27.6, 39.36N×33.15E, h6km, MD2.8*
ISCJB ***21*** *06:53:28.4±1.0, 39.38N±005×33.15E±004, h5km±9km, Error ellipse: s-maj=7.8km s-min=5.5km az=0.3*
DDA ***21*** *06:53:28.8, 39.36N×33.18E, h7km±1km, Md3.0*
ISC 21 06:53:29.0±0.8, 3938N±005×3315E±005, h10km±10km, n12, σ0995/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.43**	**91**	*e*P	**G**	**Pg**	**06 53 36.2**	**-1.2**
KAMT				*e*SG		**Sg**	**06 53 43.5**	**+0.3**
LOD	**Lodumlu**	**0.59**	**330**	*e*PG	**G**	**Pg**	**06 53 39.6**	**-0.8**
LOD				*e*SG		**Sg**	**06 53 48.9**	**+0.6**
CDAG	**Cicekdag**	**0.97**	**75**	*i* P		**Pg**	**06 53 47.2**	**-0.5**
CDAG				*i* S		**Sg**	**06 54 01.4**	**+1.0**
KIZT	**Kizilcal**	**1.11**	**244**	*e*PN		**Pn**	**06 53 49.4**	**-1.1**
KIZT				*e*SN		**Sn**	**06 54 04.3**	**-1.4**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P		**Pb**	**06 53 51.4**	**+0.1**
KDHN				*i* S		**Sb**	**06 54 08.3**	**+1.8**
CANT	**Cankiri**	**1.28**	**16**	*e*PN		**Pn**	**06 53 52.7**	**-0.2**
LADK	**Ladik-KONYA**	**1.33**	**208**	*e*PN		**Pn**	**06 53 53.5**	**0.0**
ESKT	**Eskisehir**	**1.79**	**275**	*i* P		**Pn**	**06 54 02.3**	**+2.5**
ESKT				*i* S		**Sn**	**06 54 32.3**	**+10**
ESKT	**Eskisehir**	**1.79**	**275**	*e*Pn		**Pn**	**06 53 58.9**	**-0.9**
SEYT	**Eskypehyr**	**1.79**	**275**	*i* P		**Pn**	**06 54 02.3**	**+2.5**
MDU	**Mudurnu**	**1.85**	**307**	*e*PN		**Pn**	**06 54 00.9**	**+0.3**
SAFT	**Safranbolu**	**1.90**	**349**	*e*PN		**Pn**	**06 54 01.6**	**+0.3**

NIED ***21*** *07:01:00, 35.90N×136.40E, h5km, Mw3.8 Best double couple: M0 5.25000×10^14 NP1:ϕs=258.00000°, δ89.00000°, λ178.00000°. NP2:ϕs=349.00000°, δ88.00000°, λ1.00000°.*
ISCJB ***21*** *07:01:07.5±1.1, 35.91N±005×136.32E±006, h8km±8km, mb3.5/6, Error ellipse: s-maj=9.5km s-min=6.7km az=136.6*
IDC ***21*** *07:01:07.8±0.9, 35.82N×136.32E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.6/24, mbtmp3.6/7, ML3.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/44, Error ellipse: s-maj=21.8km s-min=12.5km az=163.0*
NEIC ***21*** *07:01:08.6, 35.94N×136.35E, h7km, MG4.2(JMA), After JMA.*
NEIC Recorded [3 JMA] in Fukui, [2 JMA] in Gifu and [1 JMA] in Aichi, Ishikawa, Shiga and Nagano Prefectures.
JMA ***21*** *07:01:08.6, 35.94N×136.35E, h7km±1km, M4.2 Broadband fault plane solution: P waves. NP1: ϕs=75.00000°, δ82.00000°, λ-174.00000°. NP2: ϕs=345.00000°, δ84.00000°, λ-8.00000°. Principal axes: T Plg1.0000°, Azm30.0000°; N Plg80.0000°, Azm126.0000°; P Plg10.0000°, Azm300.0000°;*
JMA Felt III J1.
ISC 21 07:01:08.4±1.2, 3591N±005×13632E±006, h4km±8km, n14, σ0978/18, mb3.5/6, 2C-1D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JKG	**Kaga**	**0.36**	**1**	⇑P		**Pg**	**07 01 15.4**	**-0.1**
JKG				S		**Sg**	**07 01 20.2**	**0.0**
JGM	**Miyama**	**0.39**	**123**	⇓P		**Pg**	**07 01 16.0**	**+0.1**
JGM				S		**Sg**	**07 01 21.4**	**+0.5**
JTT	**Ttatey**	**1.07**	**49**	⇑P		**Pg**	**07 01 28.4**	**-0.6**
MAJO	**Matsushiro**	**1.65**	**67**	*e*Pn		**Pg**	**07 01 37.8**	**-0.4**
MAJO				*e*S		**Sg**	**07 02 01.5**	**0.0**
MAT	**Matsushiro**	**1.65**	**67**	P		**Pn**	**07 01 37.9**	**-0.3**
MAT				S		**Sg**	**07 02 01.4**	**0.0**
MJAR	**Matsushiro Arr**	**1.65**	**67**	Pg		**Pn**	**07 01 38.3**	**+0.1**
	55nm,0.3s,baz=253,slow=18,SNR=95							
MJAR				Lg			07 02 01.4	
	68nm,0.3s,baz=246,slow=26,SNR=16							
MJAR	**Matsushiro Arr**	**1.65**	**67**	Pg		**Pn**	**07 01 38.3**	**+0.1**
MJAR				Lg			07 02 01.4	
KSRS	**Korea Array**	**6.92**	**285**	Pn		**Pn**	**07 02 51.0**	**+0.3**
	0.6nm,0.3s,baz=96,slow=14,SNR=4.0							
KSRS				LR		LR	07 05 24.2	
	comp=Z,80nm,20.5s,baz=336,slow=37							
SONM	**Songino Array**	**25.11**	**308**	P		**P**	**07 06 35.5**	**+1.4**
	1.9nm,0.7s,mb3.8,baz=109,slow=10,SNR=13							
MKAR	**Makanchi Array**	**41.25**	**302**	P		**P**	**07 08 53.5**	**-1.0**
	0.2nm,0.3s,mb3.2,baz=87,slow=8.8,SNR=5.8							
KURK	**Kurchatov**	**43.41**	**309**	P		**P**	**07 09 12.1**	**0.0**
	0.3nm,0.4s,mb3.4,baz=87,slow=7.8,SNR=2.5							
WRA	**Warramunga Arr**	**55.58**	**182**	P		**P**	**07 10 43.7**	**-1.5**
	0.4nm,0.4s,mb3.8,baz=0.9,slow=8.0,SNR=5.0							
ASAR	**Alice Springs**	**59.30**	**183**	P		**P**	**07 11 10.9**	**-0.4**
	0.4nm,0.7s,mb3.6,baz=13,slow=12,SNR=8.8							
PDAR	**Pinedale Array**	**81.33**	**43**	P		**P**	**07 13 28.5**	**+2.4**
	0.2nm,0.5s,mb3.3,baz=293,slow=4.8,SNR=2.7							

CSEM ***21*** *07:16:58.9±0.3, 32.21N×6.30W, h12km, MD3.5, Error ellipse: s-maj=12.2km s-min=6.0km az=141.0*
MDD ***21*** *07:16:59.9±0.6, 32.05N×6.18W, h0km, mb4.0/3, Error ellipse: s-maj=6.5km s-min=3.8km az=157.0, PRXIMO*
ISCJB ***21*** *07:17:00.5±0.6, 32.15N±006×6.29W±005, h22km±5km, Error ellipse: s-maj=11.1km s-min=4.6km az=144.3*
CNRM ***21*** *07:17:00.1, 32.04N×6.18W, h0km, MD3.5*
ISC 21 07:16:59.7±1.0, 3205N±005×621W±004, h11km±5km, n16, σ0995/32, Morocco

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TZC	**Tazercounte**	**0.26**	**292**	*i* P		**Pg**	**07 17 05.0**	**0.0**
TZC				*i* S		**Sg**	**07 17 09.5**	**+1.0**
KIB	**El Ksiba**	**0.54**	**15**	*i* P		**Pg**	**07 17 09.0**	**-1.3**
KIB				*i* S		**Sg**	**07 17 17.0**	**-0.5**
CZD	**Col de Zad**	**1.39**	**45**	*i* P		**Pn**	**07 17 25.5**	**+0.5**
CZD				*i* S		**Sn**	**07 17 43.5**	**+0.1**
ZFT	**Errachidia**	**1.58**	**90**	*i* P		**Pn**	**07 17 27.5**	**-0.1**
ZFT				*i* S		**Sn**	**07 17 48.0**	**0.0**
MIF	**Mishlifen**	**1.59**	**31**	*i* P		**Pn**	**07 17 29.0**	**+1.3**
MIF				*i* S		**Sn**	**07 17 49.0**	**+0.7**
OUK	**Oukaimeden**	**1.64**	**240**	*i* P		**Pn**	**07 17 28.5**	**0.0**
OUK				*i* S		**Sn**	**07 17 49.5**	**-0.2**
RTC	**Rabat Centre**	**2.01**	**344**	*i* P		**Pn**	**07 17 35.0**	**+1.5**
RTC				*i* S		**Sn**	**07 17 59.0**	**+0.4**
CIA	**Chichaoua**	**2.22**	**258**	*i* P		**Pn**	**07 17 38.0**	**+1.5**
CIA				*i* S		**Sn**	**07 18 03.5**	**-0.5**
TZK	**Tazeka**	**2.65**	**39**	*e*P		**Pn**	**07 17 43.0**	**+0.6**
TZK				*e*S		**Sn**	**07 18 14.5**	**0.0**
YBT	**Youssef Ben Ta**	**3.69**	**234**	P		**Pn**	**07 17 57.0**	**+0.3**
YBT				S		**Sn**	**07 18 37.0**	**-3.2**
EGRO	**El Granado**	**5.57**	**350**	P		**Pn**	**07 18 21.0**	**-1.5**
	1.4nm,0.2s,SNR=7.9							
EGRO				S		**Sn**	**07 19 20.8**	**-5.7**
	2.8nm,0.3s,SNR=7.9							
EGRO	**El Granado**	**5.57**	**350**	P		**Pn**	**07 18 21.1**	**-1.4**
	1.4nm,0.2s,SNR=7.9							
EGRO				S		**Sn**	**07 19 20.8**	**-5.7**
	2.8nm,0.3s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.72**	**356**	P		**Pn**	**07 18 22.6**	**-1.9**
	0.7nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**07 19 22.5**	**-7.6**
	0.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.72**	**356**	P		**Pn**	**07 18 22.6**	**-1.8**
	0.7nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**07 19 22.5**	**-7.6**
	0.5nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**6.72**	**355**	P		**Pn**	**07 18 37.2**	**-1.1**
	1.4nm,0.2s,SNR=6.7							
EBAD				S		**Sn**	**07 19 47.8**	**-7.1**
	2.0nm,0.2s,SNR=5.2							
EBAD	**Badajoz**	**6.72**	**355**	P		**Pn**	**07 18 37.2**	**-1.1**
	1.4nm,0.2s,SNR=6.7							
EBAD				S		**Sn**	**07 19 47.8**	**-7.1**
	2.0nm,0.2s,SNR=5.2							

BJI ***21*** *07:23:33.6, 51.53N×179.11W, h25km, mB5.8, mb5.6, Ms6.0, Msz5.8*
MOS ***21*** *07:23:34.4±0.9, 51.23N×178.94W, h33km, mb5.9/133, MS5.8/15, Error ellipse: s-maj=6.1km s-min=3.5km az=94.1*
ISCJB ***21*** *07:23:35.1±0.1, 51.24N±003×178.94W±002, h38km, mb5.6/422, MS5.9/54, Error ellipse: s-maj=3.8km s-min=1.5km az=6.1*
NEIC ***21*** *07:23:35.5±0.1, 51.24N×179.01W, h30km, mb5.7/289, ML5.5(AEIC), Error ellipse: s-maj=3.9km s-min=1.9km az=2.0*
IDC ***21*** *07:23:37.6±2.3, 51.27N×178.92W, h49km±21km, mb5.1/43, mb1 5.1/46, mb1mx5.1/48, mbtmp5.1/46, ML4.8/3, Error ellipse: s-maj=12.7km s-min=7.9km az=164.0*
SZGRF ***21*** *07:23:41.0, 51.73N×179.80E, h33km, mb5.6, Rat Islands, Aleutian Islands, United States*
DJA ***21*** *07:23:47, 51.17N×179.79W, h105km, Mw6.0/18*
ISC 21 07:23:37.1±0.1, 5129N±003×17899W±002, h40km, h40km±1.7km:pP-P, n1420, σ0977/1388, mb5.6/422, MS5.9/54, 220C-217D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.55**	**67**	P		**Pn**	**07 24 01.2**	**-1.0**
ADK				S		**Sn**	**07 24 23.4**	**+2.3**
SMY	**Shemya**	**4.51**	**291**	P		**Pn**	**07 24 44.6**	**+1.8**
SMY				S		**Sn**	**07 25 37.6**	**+3.7**
FX1	**Attu Island--F**	**5.10**	**291**	P		**Pn**	**07 24 52.1**	**+1.3**
	59nm,0.3s,baz=114,slow=2.7,SNR=35							
FX1	**Attu Island--F**	**5.10**	**291**	P		**Pn**	**07 24 52.1**	**+1.3**
FX1				S		**Sn**	**07 25 53.4**	**+5.1**
NIKO	**Nikolski**	**6.46**	**71**	P		**Pn**	**07 25 09.8**	**+0.3**
OKCE	**Okmok Cone E**	**6.96**	**68**	P		**Pn**	**07 25 17.7**	**+1.3**
OKCD	**Okmok Cone D**	**6.99**	**68**	P		**Pn**	**07 25 18.8**	**+2.0**
SPIA	**Saint Paul Isl**	**7.80**	**38**	P		**Pn**	**07 25 30.5**	**+2.5**
UNV	**Unalaska Valle**	**8.02**	**67**	P		**Pn**	**07 25 31.7**	**+0.7**
AKGG	**Akutan Green G**	**8.40**	**65**	P		**Pn**	**07 25 38.0**	**+1.8**
AKLV	**Akutan Long Va**	**8.41**	**65**	P		**Pn**	**07 25 38.2**	**+1.9**
AKUT	**Akutan**	**8.51**	**65**	P		**Pn**	**07 25 39.3**	**+1.7**
SDPT	**Sand Point**	**11.78**	**63**	*e*P		**Pn**	**07 26 23.0**	**+0.7**
	70nm,0.3s							
GAMB	**Gambell**	**13.10**	**14**	Pn		**Pn**	**07 26 41.2**	**+0.9**
	174nm,0.8s							
CHGN	**Chignik**	**13.13**	**60**	*e*P		**Pn**	**07 26 40.5**	**-0.3**
PET	**Petropavlovsk**	**13.83**	**286**	⇑*e*P		**Pn**	**07 26 53.0**	**+2.7**
PET					pmax	pmax		
	comp=Z,46nm,1.3s							
PET	**Petropavlovsk**	**13.83**	**286**	Pn		**Pn**	**07 26 53.2**	**+2.9**
PETK	**Petropavlovsk-**	**14.40**	**286**	P		**Pn**	**07 26 59.2**	**+1.1**
	comp=Z,2.5nm,0.3s,baz=94,slow=17,SNR=44							
TNA	**Tin City**	**15.39**	**17**	*e*P		**Pn**	**07 27 17.0**	**+5.9**
	comp=Z,2μm,0.9s							
SKR	**Severo-Kuril's**	**15.67**	**278**	P		**Pn**	**07 27 12.0**	**-2.8**
SKR				S		**S**	**07 30 07.5**	**-13**
SKR					pmax	pmax		
	comp=Z,450nm,1.0s							
SKR					pmax	pmax		
	comp=E,3μm,14.0s							
SKR					pmax	pmax		
	comp=Z,3μm,14.0s							
SKR					smax			
	comp=N,160nm,0.9s							
SKR					smax			
	comp=E,130nm,0.9s							
SKR					MLR	MLR		
	comp=N,17μm,20.0s							
SKR					MLR	MLR		
	comp=E,25μm,20.0s							
SKR					MLR	MLR		
	comp=Z,34μm,20.0s							
OHAK	**Old Harbor**	**16.09**	**58**	*e*P		**Pn**	**07 27 16.2**	**-3.8**
SVW2	**Sparrevohn**	**16.21**	**44**	*e*P		**Pn**	**07 27 23.3**	**+1.7**
KDAK	**Kodiak Island**	**16.57**	**57**	Pn		**Pn**	**07 27 23.0**	**-3.1**
	comp=Z,896nm,0.4s,SNR=35							
KDAK	**Kodiak Island**	**16.57**	**57**	P		**Pn**	**07 27 24.3**	**-1.8**
	comp=Z,20nm,0.3s,baz=245,slow=5.3,SNR=52							
KDAK					S	**S**	**07 30 26.6**	**-12**
	baz=332,slow=15,SNR=1.5							
KDAK	**Kodiak Island**	**16.57**	**57**	*e*P		**Pn**	**07 27 22.5**	**-3.6**
KDAK					pmax	pmax		
	comp=Z,406nm,1.4s							
KDAK	**Kodiak Island**	**16.57**	**57**	*e*P		**Pn**	**07 27 22.4**	**-3.7**
	comp=Z,406nm,1.4s							
BILL	**Bilibino**	**18.28**	**342**	⇓*i*P		**Pn**	**07 27 49.5**	**+2.3**
BILL					pmax	pmax		
	comp=Z,91nm,1.2s							
BILL					MLR	MLR		
	comp=Z,111μm,20.0s							
BILL	**Bilibino**	**18.28**	**342**	*e*P		**Pn**	**07 27 49.3**	**+2.1**
	comp=Z,203nm,1.1s							
PPLA	**Purkeypile**	**18.46**	**41**	*e*P		**Pn**	**07 27 51.2**	**+1.8**
	comp=Z,40nm,0.3s							
FIB	**Fire Island**	**18.66**	**47**	*e*P		**Pn**	**07 27 53.8**	**+1.9**
FIB					pmax	pmax		
	comp=Z,340nm,1.2s							
FIB	**Fire Island**	**18.66**	**47**	*e*P		**Pn**	**07 27 50.1**	**-1.7**
	comp=Z,340nm,1.2s							
SEW	**Seward**	**18.69**	**50**	*e*P		**Pn**	**07 27 49.8**	**-2.5**
	comp=Z,125nm,0.7s							
RC01	**Rabbit Creek A**	**18.84**	**47**	*e*P		**Pn**	**07 27 53.6**	**-0.4**
	comp=Z,11nm,0.3s							
CHUM	**Lake Minchumin**	**18.87**	**38**	*e*P		**Pn**	**07 27 55.1**	**+0.7**
	comp=Z,166nm,0.7s							
SEY	**Seymchan**	**19.23**	**318**	⇑*i*P		**Pn**	**07 27 59.5**	**+0.8**
KTH	**Kantishna Hill**	**19.26**	**40**	*e*P		**Pn**	**07 27 58.3**	**-0.8**
	comp=Z,20nm,0.5s							
PMR	**Palmer**	**19.27**	**46**	*e*P		**Pn**	**07 28 00.1**	**+0.9**
PMR					pmax	pmax		
	comp=Z,67nm,0.9s							
PMR	**Palmer**	**19.27**	**46**	*e*P		**Pn**	**07 27 57.3**	**-1.9**
	comp=Z,67nm,0.9s							
TRF	**Thorofare Moun**	**19.47**	**40**	*e*P		**Pn**	**07 28 01.0**	**-0.6**
	comp=Z,11nm,0.3s							
BPAW	**Bear Paw Mtn.**	**19.49**	**38**	*e*P		**Pn**	**07 28 01.1**	**-0.6**
	comp=Z,396nm,0.8s							
MCK	**McKinley**	**20.14**	**40**	*e*P		**P**	**07 28 07.5**	**+0.1**
MCK					pmax	pmax		
	comp=Z,120nm,0.8s							
MCK	**McKinley**	**20.14**	**40**	*e*P		**P**	**07 28 07.3**	**-0.1**
	comp=Z,119nm,0.8s							
COLA	**College**	**21.05**	**38**	*d i*P		**P**	**07 28 18.1**	**+0.9**
COLA	**College**	**21.05**	**38**	*e*P		**P**	**07 28 17.8**	**+0.6**
	comp=Z,158nm,0.8s,mb5.4							
COLA					LR	LR		
	comp=Z,28μm,19.1s,MS5.7							
PAX	**Paxson**	**21.33**	**44**	P		**P**	**07 28 20.3**	**+0.1**
PAX	**Paxson**	**21.33**	**44**	*e*P		**P**	**07 28 20.0**	**-0.3**
	comp=Z,17nm,0.3s,mb4.9							
COLD	**Coldfoot**	**21.39**	**31**	*e*P		**P**	**07 28 21.5**	**+0.7**
	comp=Z,40nm,0.6s,mb4.9							
MENT	**Mentasta**	**22.09**	**45**	*e*P		**P**	**07 28 29.0**	**+0.7**
KUR	**Kuril'sk**	**22.75**	**268**	*e*P		**P**	**07 28 34.0**	**-1.5**
KUR					pmax	pmax		
	comp=Z,320nm,1.0s,mb5.7							
KUR					pmax	pmax		
	comp=E,6μm,4.0s							
KUR					pmax	pmax		
	comp=Z,8μm,4.0s							
MIDW	**Midway**	**23.08**	**176**	*e*P		**P**	**07 28 42.4**	**+3.2**
	comp=Z,266nm,1.1s,mb5.6							
MIDW					LR	LR		
	comp=Z,41μm,19.0s,MS5.9							
PNL	**Peninsula**	**23.62**	**54**	*e*P		**P**	**07 28 42.5**	**-1.7**
	comp=Z,123nm,0.9s,mb5.3							
EGAK	**Eagle**	**23.69**	**41**	*e*P		**P**	**07 28 43.5**	**-1.2**
	comp=Z,301nm,1.0s,mb5.7							
EGAK					LR	LR		
	comp=Z,16μm,19.7s,MS5.5							
DAWY	**Dawson**	**24.25**	**43**	*e*P		**P**	**07 28 48.9**	**-0.9**
HYT	**Haines Junctio**	**24.64**	**51**	*e*P		**P**	**07 28 52.8**	**-0.6**
YSS	**Yuzh-Sakhalins**	**25.21**	**275**	*e*P		**P**	**07 28 59.5**	**+0.7**
YSS				*e*S		**S**	**07 33 20.0**	**-1.2**
YSS					pmax	pmax		
	comp=Z,110nm,0.6s,mb5.6							
YSS					pmax	pmax		
	comp=N,70μm,0.6s							
YSS					pmax	pmax		
	comp=Z,2μm,8.0s							
YSS					MLR	MLR		
	comp=N,16μm,20.0s,MS5.8							
YSS					MLR	MLR		
	comp=E,22μm,20.0s,MS5.8							
YSS					MLR	MLR		
	comp=Z,31μm,20.0s,MS5.8							
YSS	**Yuzh-Sakhalins**	**25.21**	**275**	*e*P		**P**	**07 29 00.2**	**+1.4**
	comp=Z,111nm,0.7s,mb5.5							
YSS					LR	LR		
	comp=Z,9μm,21.0s,MS5.3							
SKAG	**Skagway**	**25.69**	**54**	*e*P		**P**	**07 29 04.0**	**+1.0**
	comp=Z,14nm,0.7s,mb4.6							
SIT	**Sitka**	**25.84**	**60**	*e*P		**P**	**07 29 05.1**	**+0.8**
SIT					pmax	pmax		
	comp=Z,40nm,1.1s,mb4.9							
SIT	**Sitka**	**25.84**	**60**	*e*P		**P**	**07 29 05.1**	**+0.8**
	comp=Z,40nm,1.1s,mb4.9							
ASAJ	**Asahikawa**	**26.59**	**270**	P		**P**	**07 29 12.2**	**+1.0**
	comp=Z,81nm,0.9s,mb5.3,baz=39,slow=5.6,SNR=11							
ASAJ	**Asahikawa**	**26.59**	**270**	P		**P**	**07 29 12.3**	**+1.1**
ASAJ					pmax	pmax		
	comp=Z,81nm,0.9s							
CRAG	**Craig**	**27.28**	**63**	*e*P		**P**	**07 29 17.1**	**-0.3**
	comp=Z,32nm,1.1s,mb4.8							
ERM	**Erimo**	**27.32**	**265**	*e*P		**P**	**07 29 19.2**	**+1.3**
ERM					pmax	pmax		
	comp=Z,63nm,1.1s,mb5.1							
ERM	**Erimo**	**27.32**	**265**	*e*P		**P**	**07 29 19.2**	**+1.3**
	comp=Z,63nm,1.1s,mb5.1							
INK	**Inuvik**	**27.60**	**35**	P		**P**	**07 29 19.1**	**-1.0**
	comp=Z,36nm,0.9s,mb5.0,baz=258,slow=7.4,SNR=82							
INK	**Inuvik**	**27.60**	**35**	*e*P		**P**	**07 29 19.3**	**-0.7**
INK					pmax	pmax		
	comp=Z,59nm,1.0s							
INK	**Inuvik**	**27.60**	**35**	*e*P		**P**	**07 29 19.3**	**-0.7**
	comp=Z,59nm,1.0s,mb5.2							
DLBC	**Dease Lake**	**28.50**	**56**	P		**P**	**07 29 28.3**	**+0.1**
	comp=Z,4.4nm,0.6s,mb4.4,baz=300,slow=7.1,SNR=14							
DLBC	**Dease Lake**	**28.50**	**56**	*e*P		**P**	**07 29 28.7**	**+0.5**
HABR	**Khabarovsk**	**29.38**	**283**	*e*P		**P**	**07 29 36.1**	**0.0**
HABR				*e*		pP	07 29 49.1	+2.0
HABR				*e*PPP			07 30 38.5	
HABR				*e*			07 32 40.2	
HABR				*e*S		**S**	**07 34 27.8**	**+1.0**
HABR				*e**SS		sS	07 34 44.4	-0.8
HABR				*e*SS		SS	07 35 58.2	-34
HABR				*e*			07 36 23.7	
HABR				*e*			07 40 13.3	
HABR					MLR	MLR		
	comp=Z,12μm,15.0s,MS5.6							
HABR					MLR	MLR		
	comp=Z,10μm,13.0s							
YAK	**Yakutsk**	**29.39**	**311**	*e*P		**P**	**07 29 34.7**	**-1.3**
YAK				*e**PP		pP	07 29 45.9	-1.1
YAK				*e*PPP		PP	07 30 42.3	-0.3
YAK				*e*S		**S**	**07 34 25.4**	**-1.3**
YAK					pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8							
YAK					pmax	pmax		
	comp=N,6.0nm,1.2s							
YAK					pmax	pmax		
	comp=E,5.0nm,1.3s							
YAK					smax			
	comp=N,110nm,2.0s							
YAK					smax			
	comp=E,138nm,2.4s							
YAK					MLR	MLR		
	comp=E,26μm,23.0s							
YAK					MLR	MLR		
	comp=Z,29μm,23.0s,MS5.8							
YAK	**Yakutsk**	**29.39**	**311**	⇑*e*P		**P**	**07 29 36.6**	**+0.6**
TIXI	**Tiksi**	**30.65**	**331**	⇑*e*P		**P**	**07 29 48.5**	**+1.4**
TIXI	**Tiksi**	**30.65**	**331**	*e*P		**P**	**07 29 48.7**	**+1.6**
	comp=Z,21nm,1.2s,mb4.8							
KLR	**Kul'dur**	**31.09**	**286**	*e*P		**P**	**07 29 46.7**	**-4.5**
KLR					pmax	pmax		
	comp=E,140nm,1.0s							
KLR					pmax	pmax		
	comp=Z,200nm,1.0s,mb5.9							
NRGR	**Nerungri**	**32.72**	**302**	*e*P		**P**	**07 30 04.7**	**-0.8**
NRGR				S		**S**	**07 35 26.3**	**+7.4**
NRGR				smax				
	comp=N,17nm,0.4s							
MAJO	**Matsushiro**	**33.66**	**261**	*e*P		**P**	**07 30 14.6**	**+0.8**
MAJO					pmax	pmax		
	comp=Z,114nm,1.6s,mb5.5							
MAJO					MLR	MLR		
	comp=Z,9μm,21.9s,MS5.5							
MAJO	**Matsushiro**	**33.66**	**261**	*e*P		**P**	**07 30 14.6**	**+0.7**
	comp=Z,114nm,1.6s,mb5.5							
MAJO					LR	LR		
	comp=Z,9μm,21.9s,MS5.5							
MAT	**Matsushiro**	**33.66**	**261**	P		**P**	**07 30 14.1**	**+0.3**
MJAR	**Matsushiro Arr**	**33.66**	**261**	P		**P**	**07 30 14.0**	**+0.2**
	comp=Z,12nm,0.7s,mb4.9,baz=51,slow=7.5,SNR=31							
KIP	**Kipapa**	**34.01**	**143**	⇓*i*P		**P**	**07 30 17.0**	**0.0**
MDJ	**Mudanjiang**	**34.47**	**279**	P		**P**	**07 30 20.5**	**-0.3**
MDJ					AP	pP	07 30 29.1	-2.8
MDJ					XP	sP	07 30 34.1	-2.6
MDJ					AMB	AMB		
	comp=Z,58nm,0.8s,mb5.6							
MDJ					AMB	AMB		
	comp=Z,580nm,8.1s							
MDJ					LR	LR		
	comp=N,6μm,19.7s,MS5.8							
MDJ					LR	LR		
	comp=E,20μm,22.5s,MS5.8							
MDJ					LR	LR		
	comp=Z,27μm,21.1s,MS6.0							
MDJ	**Mudanjiang**	**34.47**	**279**	*e*P		**P**	**07 30 20.4**	**-0.4**
	comp=Z,45nm,0.8s,mb5.5							
C03A	**Quillayute Air**	**34.74**	**74**	⇑P		**P**	**07 30 22.9**	**-0.1**
	baz=34							
JHJ	**Hachijo jima 2**	**34.96**	**255**	P		**P**	**07 30 26.0**	**+0.9**
	comp=Z,207nm,0.8s,mb6.1,baz=215,slow=6.0,SNR=4.9							
OOW	**Octopus West**	**35.06**	**74**	P		**P**	**07 30 27.5**	**+1.7**
PGC	**Sidney**	**35.10**	**72**	*e*P		**P**	**07 30 27.0**	**+0.8**
	comp=Z,3.6nm,0.9s,mb4.3							
B04A	**Port Angeles**	**35.33**	**73**	⇓P		**P**	**07 30 29.4**	**+1.2**
	baz=35							
YKA	**Yellowknife Ar**	**35.38**	**46**	P		**P**	**07 30 27.7**	**-0.6**
	comp=Z,88nm,0.9s,mb5.7,baz=283,slow=8.2,SNR=374							
YKA					P3KPbc		08 01 12.5	
	comp=Z,0.4nm,0.7s,baz=96,slow=5.5,SNR=7.0							
YKA	**Yellowknife Ar**

COR	**Corvallis**	**37.12**	**78**	*eP*		**P**		**07 30 44.6**	**+1.2**
COR					pmax	pmax				
	comp=Z,133nm,1.0s,mb5.7									
COR					MLR	MLR				
	comp=Z,14µm,18.9s,MS5.8									
COR	**Corvallis**	**37.12**	**78**	*eP*		**P**		**07 30 44.6**	**+1.1**
	comp=Z,133nm,1.0s,mb5.7									
COR					LR	LR				
	comp=Z,14µm,18.9s,MS5.8									
WPW	**White Pass**	**37.14**	**74**	P		**P**		**07 30 44.1**	**+0.5**
B07A	**Winthrop**	**37.16**	**71**	⇓P		**P**		**07 30 43.9**	**+0.2**
	baz=37,SNR=84									
G04A	**Mulino**	**37.30**	**77**	⇓P		**P**		**07 30 45.5**	**+0.4**
	baz=37,SNR=23									
D06A	**Cle Elum**	**37.32**	**73**	⇓P		**P**		**07 30 45.5**	**+0.3**
	baz=37,SNR=40									
VLMM	**Larch Mountain**	**37.41**	**76**	P		**P**		**07 30 46.6**	**+0.7**
ETW	**Entiat**	**37.43**	**72**	*eP*		**P**		**07 30 46.6**	**+0.5**
A08A	**Turner Farm, O**	**37.44**	**69**	⇑P		**P**		**07 30 46.0**	**-0.1**
	baz=37,SNR=93									
CN2	**Changchun**	**37.45**	**281**	⇓P		**P**		**07 30 46.1**	**-0.2**
CN2				eAP		pP		07 30 55.8	-1.7
CN2				AMB		AMB				
	comp=Z,40nm,0.9s,mb5.2									
CN2				AMB		AMB				
	comp=Z,200nm,4.0s									
CN2				LR		LR				
	comp=N,10µm,18.0s,MS5.8									
CN2				LR		LR				
	comp=E,11µm,18.0s,MS5.8									
CN2				LR		LR				
	comp=Z,17µm,21.0s,MS5.8									
TBM	**Table Mountain**	**37.48**	**73**	P		**P**		**07 30 46.9**	**+0.4**
E06A	**Yakima**	**37.55**	**74**	⇓P		**P**		**07 30 47.6**	**+0.5**
	baz=37,SNR=19									
C07A	**Waterville**	**37.55**	**72**	⇓P		**P**		**07 30 47.2**	**+0.1**
	baz=37,SNR=32									
F05A	**White Salmon**	**37.59**	**75**	⇓P		**P**		**07 30 47.8**	**+0.4**
	baz=37,SNR=8.3									
EBG	**Ellensburg**	**37.62**	**73**	P		**P**		**07 30 48.4**	**+0.7**
B08A	**Colville Reser**	**37.67**	**70**	⇑P		**P**		**07 30 48.4**	**+0.3**
	baz=37,SNR=114									
H04A	**Detroit Lake**	**37.75**	**77**	⇓P		**P**		**07 30 48.9**	**+0.1**
	baz=38,SNR=29									
HOOD	**Mount Hood Mea**	**37.75**	**76**	*eP*		**P**		**07 30 48.9**	**+0.1**
	comp=Z,64nm,0.7s,mb5.5									
HOOD				*e*		pP		07 30 58.5	-1.5
A09A	**Danville**	**37.83**	**69**	⇑P		**P**		**07 30 49.7**	**+0.2**
	baz=38,SNR=92									
D07A	**Quincy**	**37.84**	**72**	⇑P		**P**		**07 30 49.5**	**-0.1**
	baz=38,SNR=50									
BOD	**Bodaibo**	**37.94**	**307**	*eP*		**P**		**07 30 49.2**	**-1.0**
BOD					pmax	pmax				
	comp=Z,50nm,1.0s,mb5.2									
CBIJ	**Chichi jima**	**37.94**	**245**	P		**P**		**07 30 50.5**	**-0.1**
	comp=Z,39nm,0.6s,mb5.3,baz=131,slow=19,SNR=3.0									
MXC	**Moxie City**	**37.95**	**73**	P		**P**		**07 30 50.7**	**+0.3**
EPH	**Ephrata**	**37.99**	**72**	P		**P**		**07 30 50.8**	**0.0**
G05A	**Wamic**	**37.99**	**76**	⇑P		**P**		**07 30 51.3**	**+0.4**
	baz=38,SNR=18									
F06A	**Goldendale**	**38.06**	**75**	⇓P		**P**		**07 30 51.9**	**+0.5**
	baz=38,SNR=24									
C08A	**Higginbotham F**	**38.11**	**71**	⇓P		**P**		**07 30 51.5**	**-0.3**
	baz=38,SNR=7.7									
HIA	**Hailar**	**38.21**	**292**	*eP*		**P**		**07 30 51.2**	**-1.4**
HIA					pmax	pmax				
	comp=Z,77nm,0.6s									
HIA	**Hailar**	**38.21**	**292**	*eP*		**P**		**07 30 51.2**	**-1.4**
	comp=Z,77nm,0.6s,mb5.6									
E07A	**Sunnyside**	**38.22**	**73**	⇑P		**P**		**07 30 53.2**	**+0.5**
	baz=38,SNR=37									
B09A	**Rice**	**38.34**	**70**	⇑P		**P**		**07 30 53.6**	**-0.1**
	baz=38,SNR=69									
H05A	**Madras**	**38.35**	**77**	⇓P		**P**		**07 30 54.2**	**+0.3**
	baz=38,SNR=9.9									
HUMO	**Hull Mountain**	**38.37**	**81**	*eP*		**P**		**07 30 54.8**	**+0.7**
	comp=Z,27nm,0.9s,mb5.0									
HUMO					LR	LR				
	comp=Z,8µm,20.7s,MS5.5									
G06A	**Carlson Farm,**	**38.41**	**75**	⇓P		**P**		**07 30 54.4**	**0.0**
	baz=38,SNR=10.0									
A10A	**Northport**	**38.43**	**69**	⇓P		**P**		**07 30 54.2**	**-0.3**
	baz=38,SNR=68									
RSW	**Rattlesnake Hi**	**38.46**	**73**	*eP*		**P**		**07 30 55.4**	**+0.6**
HAWA	**Hanford**	**38.50**	**73**	*eP*		**P**		**07 30 55.2**	**+0.2**
	comp=Z,198nm,0.8s,mb5.9									
OD2	**Odessa Site #2**	**38.50**	**71**	*eP*		**P**		**07 30 55.0**	**-0.1**
F07A	**Phinny Hill Vi**	**38.51**	**74**	⇓P		**P**		**07 30 55.4**	**+0.2**
	baz=38,SNR=83									
WRD	**Warden**	**38.53**	**72**	P		**P**		**07 30 54.8**	**-0.5**
D08A	**Wollman Farm,**	**38.54**	**72**	⇓P		**P**		**07 30 54.7**	**-0.7**
	baz=38,SNR=35									
C09A	**Chrisman Ranch**	**38.56**	**71**	⇓P		**P**		**07 30 55.0**	**-0.6**
	baz=38,SNR=37									
I05A	**Bend**	**38.58**	**77**	⇓P		**P**		**07 30 56.0**	**+0.2**
	baz=38,SNR=22									
E08A	**Dider Farm, El**	**38.73**	**73**	⇓P		**P**		**07 30 56.9**	**-0.2**
	baz=38,SNR=28									
H06A	**Lindquist Farm**	**38.85**	**76**	⇑P		**P**		**07 30 58.0**	**-0.1**
	baz=39,SNR=12									
KHMM	**Horse Mountain**	**38.85**	**83**	*eP*		**P**		**07 31 02.0**	**+3.8**
D09A	**Jones Farm, Ri**	**38.90**	**72**	⇑P		**P**		**07 30 57.9**	**-0.6**
	baz=39,SNR=10									
B10A	**Chitwood Farm,**	**38.95**	**69**	⇓P		**P**		**07 30 58.8**	**0.0**
	baz=39,SNR=21									
EDM	**Edmonton**	**38.95**	**61**	*eP*		**P**		**07 30 57.6**	**-1.2**
G07A	**Ruggs Ranch, H**	**38.98**	**75**	⇑P		**P**		**07 30 59.5**	**+0.4**
	baz=39,SNR=17									
YBH	**Yreka Blue Hor**	**39.01**	**82**	P		**P**		**07 30 59.6**	**+0.2**
	comp=Z,16nm,0.9s,mb4.8,baz=300,slow=4.8,SNR=21									
YBH	**Yreka Blue Hor**	**39.01**	**82**	*eP*		**P**		**07 31 00.8**	**+1.4**
YBH					pmax	pmax				
	comp=Z,43nm,0.9s									
YBH					MLR	MLR				
	comp=Z,10µm,19.7s									
YBH	**Yreka Blue Hor**	**39.01**	**82**	*eP*		**P**		**07 31 00.8**	**+1.4**
	comp=Z,43nm,0.9s,mb5.2									
YBH					LR	LR				
	comp=Z,10µm,19.7s,MS5.6									
NEW	**Newport**	**39.02**	**69**	*eP*		**P**		**07 30 58.7**	**-0.7**
NEW					pmax	pmax				
	comp=Z,134nm,0.9s									
NEW					MLR	MLR				
	comp=Z,14µm,20.6s									
NEW	**Newport**	**39.02**	**69**	*eP*		**P**		**07 30 58.7**	**-0.8**
	comp=Z,134nm,0.9s,mb5.7									
NEW					LR	LR				
	comp=Z,14µm,20.6s,MS5.8									
C10A	**Spilker Farm,**	**39.13**	**70**	⇓P		**P**		**07 31 00.3**	**0.0**
	baz=39,SNR=31									
A11A	**Hall Mountain,**	**39.14**	**68**	⇑P		**P**		**07 31 00.6**	**+0.2**
	baz=39,SNR=122									
F08A	**Pendleton**	**39.25**	**74**	⇑P		**P**		**07 31 01.5**	**+0.1**
	baz=39,SNR=26									
E09A	**Wood Farm, Sta**	**39.27**	**72**	⇑P		**P**		**07 31 01.2**	**-0.3**
	baz=39,SNR=16									
I06A	**Prineville**	**39.34**	**77**	⇓P		**P**		**07 31 02.1**	**-0.1**
	baz=39,SNR=8.6									
B11A	**Sandpoint**	**39.38**	**69**	⇑P		**P**		**07 31 02.5**	**+0.1**
	baz=39,SNR=55									
G08A	**Pilot Rock**	**39.40**	**74**	⇑P		**P**		**07 31 02.5**	**-0.1**
	baz=39,SNR=36									
LNOR	**Lincton Mounta**	**39.51**	**73**	*eP*		**P**		**07 31 04.7**	**+1.2**
D10A	**Wagner Farm, O**	**39.52**	**71**	⇑P		**P**		**07 31 03.0**	**-0.6**
	baz=39,SNR=54									
KSRS	**Korea Array**	**39.52**	**271**	P		**P**		**07 31 05.0**	**+1.2**
	comp=Z,27nm,0.8s,mb5.1,baz=56,slow=8.0,SNR=82									
KSRS	**Korea Array**	**39.52**	**271**	P		**P**		**07 31 05.0**	**+1.2**
KSRS					pmax	pmax				
	comp=Z,27nm,0.8s,mb5.0									
A12A	**Yaak River Ran**	**39.56**	**68**	⇓P		**P**		**07 31 04.2**	**+0.3**
	baz=39,SNR=28									
K05A	**Summer Lake**	**39.58**	**79**	⇑P		**P**		**07 31 05.1**	**+0.9**
	baz=39,SNR=16									
SNY	**Shenyang**	**39.67**	**279**	⇑P		**P**		**07 31 05.1**	**+0.1**
SNY					AMB	AMB				
	comp=Z,113nm,0.7s,mb5.7									
SNY					AMB	AMB				
	comp=Z,1µm,7.9s									
SNY					LR	LR				
	comp=N,10µm,20.4s									
SNY					LR	LR				
	comp=Z,11µm,31.2s									
I07A	**Izee**	**39.70**	**76**	⇓P		**P**		**07 31 05.8**	**+0.7**
	baz=39,SNR=42									
WDC	**Whiskeytown Da**	**39.77**	**83**	*eP*		**P**		**07 31 06.4**	**+0.7**
WDC					pmax	pmax				
	comp=Z,19nm,0.8s,mb4.9									
WDC	**Whiskeytown Da**	**39.77**	**83**	*eP*		**P**		**07 31 06.4**	**+0.6**
	comp=Z,19nm,0.8s,mb4.9									
F09A	**S2 Ranch, Elgi**	**39.82**	**73**	⇓P		**P**		**07 31 06.6**	**+0.4**
	baz=40,SNR=33									
B12A	**Libby**	**39.82**	**68**	⇑P		**P**		**07 31 05.9**	**-0.2**
	baz=40,SNR=24									
RES	**Resolute Bay**	**39.87**	**24**	*eP*		**P**		**07 31 06.0**	**-0.2**
RES					pmax	pmax				
	comp=Z,9.0nm,0.7s,mb4.6									
RES	**Resolute Bay**	**39.87**	**24**	*eP*		**P**		**07 31 06.0**	**-0.2**
	comp=Z,9.4nm,0.7s,mb4.6									
H08A	**Prairie City**	**39.98**	**75**	⇑P		**P**		**07 31 07.5**	**0.0**
	baz=40,SNR=16									
D11A	**Klaveano Farm,**	**40.08**	**71**	⇓P		**P**		**07 31 07.8**	**-0.5**
	baz=40,SNR=47									
F10A	**Beach Ranch, E**	**40.09**	**73**	⇓P		**P**		**07 31 08.7**	**+0.3**
	baz=40,SNR=74									
G09A	**Cove**	**40.12**	**74**	⇓P		**P**		**07 31 08.8**	**+0.2**
	baz=40,SNR=54									
J07A	**Hines**	**40.20**	**77**	⇓P		**P**		**07 31 09.8**	**+0.4**
	baz=40,SNR=28									
C12B	**Naegeli Ranch,**	**40.26**	**69**	⇑P		**P**		**07 31 09.4**	**-0.3**
	baz=40,SNR=79									
I08A	**Drewsey**	**40.37**	**76**	⇑P		**P**		**07 31 10.9**	**+0.3**
	baz=40,SNR=36									
MOD	**Modoc**	**40.40**	**80**	*eP*		**P**		**07 31 11.5**	**+0.5**
	comp=Z,158nm,0.8s,mb5.8									
CIT	**Chita**	**40.48**	**298**	*eP*		**P**		**07 31 11.5**	**0.0**
CIT					pmax	pmax				
	comp=Z,603nm,1.3s,mb6.2									
G10A	**Bishop Farm, J**	**40.51**	**73**	⇓P		**P**		**07 31 12.0**	**+0.2**
	baz=40,SNR=252									
WALA	**Waterton Lakes**	**40.51**	**67**	*eP*		**P**		**07 31 11.7**	**-0.1**
	comp=Z,9.1nm,1.0s,mb4.4									
H09A	**Durkee**	**40.51**	**75**	⇓P		**P**		**07 31 12.2**	**+0.4**
	baz=40,SNR=15									
B13A	**Whitefish**	**40.52**	**68**	⇑P		**P**		**07 31 11.7**	**-0.2**
	baz=40,SNR=54									
BSMT	**Bassoo Peak**	**40.59**	**69**	*eP*		**P**		**07 31 12.5**	**0.0**
K07A	**Rock Creek Ran**	**40.62**	**78**	⇓P		**P**		**07 31 13.3**	**+0.6**
	baz=40,SNR=41									
BMO	**Blue Mountains**	**40.63**	**74**	*eP*		**P**		**07 31 13.0**	**+0.1**
	comp=Z,120nm,0.7s,mb5.6									
J08A	**Circle Bar Ran**	**40.72**	**77**	⇓P		**P**		**07 31 13.9**	**+0.3**
	baz=40,SNR=22									
F11A	**Grangeville**	**40.78**	**72**	⇑P		**P**		**07 31 13.8**	**-0.2**
	baz=40,SNR=21									
C13A	**Hot Springs**	**40.80**	**69**	⇓P		**P**		**07 31 14.0**	**-0.2**
	baz=40,SNR=88									
A14A	**Double T Ranch**	**40.84**	**67**	⇑P		**P**		**07 31 14.4**	**-0.1**
	baz=40,SNR=183									
I09A	**Lost Marbles R**	**40.84**	**75**	⇑P		**P**		**07 31 14.3**	**-0.2**
	baz=41,SNR=21									
L07A	**Adell**	**40.93**	**79**	⇓P		**P**		**07 31 15.5**	**+0.1**
	baz=41,SNR=20									
JTMT	**Jette**	**40.94**	**69**	*eP*		**P**		**07 31 15.2**	**-0.1**
YBMT	**Yellow Bay**	**41.04**	**68**	*eP*		**P**		**07 31 16.9**	**+0.7**
K08A	**Mann Creek Ran**	**41.06**	**78**	⇓P		**P**		**07 31 16.4**	**-0.1**
	baz=41,SNR=32									
H10A	**Noah's Angus R**	**41.11**	**74**	⇓P		**P**		**07 31 16.5**	**-0.3**
	baz=41,SNR=111									
WVOR	**Wild Horse Val**	**41.13**	**78**	*eP*		**P**		**07 31 17.8**	**+0.8**
WVOR					pmax	pmax				
	comp=Z,48nm,0.8s,mb5.2									
WVOR	**Wild Horse Val**	**41.13**	**78**	*eP*		**P**		**07 31 17.2**	**+0.2**
	comp=Z,48nm,0.8s,mb5.2									
WVOR					LR	LR				
	comp=Z,6µm,19.9s,MS5.5									
OHCM	**Honcut**	**41.15**	**84**	*eP*		**P**		**07 31 17.6**	**+0.4**
D13A	**Huson**	**41.16**	**70**	⇓P		**P**		**07 31 16.4**	**-0.8**
	baz=41,SNR=31									
J09A	**Fry Pan Ranch,**	**41.17**	**76**	⇓P		**P**		**07 31 16.8**	**-0.5**
	baz=41,SNR=22									
B14A	**Marquette Ranc**	**41.22**	**67**	⇑P		**P**		**07 31 17.2**	**-0.5**
	baz=41,SNR=125									
SWMT	**Swartz Lake**	**41.23**	**69**	*eP*		**P**		**07 31 17.2**	**-0.5**
A15A	**Johnson Ranch,**	**41.23**	**66**	⇑P		**P**		**07 31 16.7**	**-1.0**
	baz=41,SNR=49									
I10A	**Payette**	**41.34**	**75**	⇓P		**P**		**07 31 18.9**	**+0.2**
	baz=41,SNR=68									
N06A	**Buffalo Meadow**	**41.35**	**81**	⇓P		**P**		**07 31 19.4**	**+0.6**
	baz=41,SNR=39									
M07A	**Soldier Meadow**	**41.39**	**80**	⇑P		**P**		**07 31 19.6**	**+0.4**
	baz=41,SNR=65									
H11A	**Donnelly**	**41.49**	**74**	⇑P		**P**		**07 31 19.3**	**-0.6**
	baz=41,SNR=78									
BEKR	**Beckwourth**	**41.54**	**82**	⇓P		**P**		**07 31 20.2**	**-0.1**
	baz=41									
K09A	**Rome**	**41.54**	**77**	⇓P		**P**		**07 31 20.2**	**-0.2**
	baz=41,SNR=12									
MSO	**Missoula**	**41.60**	**70**	*eP*		**P**		**07 31 19.9**	**-0.9**
	comp=Z,339nm,1.3s,mb5.8									
MSO					LR	LR				
	comp=Z,4µm,20.3s,MS5.3									
SLMT	**Seeley Lake**	**41.66**	**69**	*eP*		**P**		**07 31 20.7**	**-0.6**
B15A	**Bradely Ranch,**	**41.66**	**67**	⇓P		**P**		**07 31 20.7**	**-0.5**
	baz=41,SNR=135									
E13A	**Victor**	**41.66**	**70**	⇑P		**P**		**07 31 21.0**	**-0.3**
	baz=41,SNR=54									
O06A	**Flanigan**	**41.69**	**82**	⇑P		**P**		**07 31 22.0**	**+0.3**
	baz=41,SNR=22									
J10A	**Berg Farm, Mel**	**41.73**	**76**	⇓P		**P**		**07 31 21.9**	**0.0**
	baz=41,SNR=8.2									
D14A	**Greenough**	**41.73**	**69**	⇓P		**P**		**07 31 21.5**	**-0.3**
	baz=41,SNR=154									
M08A	**Happy Creek Ra**	**41.85**	**79**	⇓P		**P**		**07 31 23.5**	**+0.6**
	baz=42,SNR=15									
A16A	**West Butte Ran**	**41.90**	**66**	⇓P		**P**		**07 31 22.5**	**-0.6**
	baz=42,SNR=53									
C15A	**Salmond Ranch,**	**41.90**	**68**	⇑P		**P**		**07 31 23.4**	**+0.2**
	baz=42,SNR=94									
F13A	**Darby**	**41.92**	**71**	⇓P		**P**		**07 31 23.1**	**-0.2**
	baz=42,SNR=50									
P06A	**Stead Airport,**	**41.94**	**82**	⇑P		**P**		**07 31 23.2**	**-0.4**
	baz=42									
I11A	**Placerville**	**41.95**	**74**	⇑P		**P**		**07 31 23.4**	**-0.3**
	baz=42,SNR=116									
L09A	**Wilkinson Ranc**	**41.96**	**78**	⇑P		**P**		**07 31 24.3**	**+0.5**
	baz=42,SNR=36									
CHMT	**Chamberlain Mo**	**41.97**	**69**	*eP*		**P**		**07 31 23.2**	**-0.6**
K10A	**MacKenzie Ranc**	**42.02**	**76**	⇓P		**P**		**07 31 24.3**	**0.0**
	baz=42,SNR=52									
E14A	**Clinton**	**42.08**	**70**	⇓P		**P**		**07 31 24.5**	**-0.3**
	baz=42,SNR=72									
B16A	**M & M Farms, S**	**42.10**	**66**	⇑P		**P**		**07 31 23.8**	**-1.0**
	baz=42,SNR=19									
PAHR	**Pah Rah Range**	**42.24**	**82**	*eP*		**P**		**07 31 26.9**	**+0.9**
	comp=Z,171nm,1.0s,mb5.6									
WCN	**Washoe City**	**42.25**	**83**	⇓P		**P**		**07 31 26.7**	**+0.5**
	baz=42									
H12A	**Diamond D Ranc**	**42.27**	**73**	⇓P		**P**		**07 31 25.8**	**-0.4**
	baz=42,SNR=69									
O07A	**Toulon**	**42.29**	**81**	⇑P		**P**		**07 31 26.8**	**+0.3**
	baz=42,SNR=23									
MFID	**Camas Ranch**	**42.30**	**75**	⇑P		**P**		**07 31 26.7**	**+0.1**
	baz=42,SNR=43									
D15A	**Lincoln**	**42.33**	**69**	⇓P		**P**		**07 31 26.4**	**-0.3**
	baz=42,SNR=80									
G13A	**Cobalt**	**42.35**	**72**	⇑P		**P**		**07 31 26.4**	**-0.5**
	baz=42,SNR=73									
N08A	**GE Springer Mi**	**42.38**	**80**	⇓P		**P**		**07 31 27.8**	**+0.5**
	baz=42,SNR=17									
C16A	**Fuhringer Ranc**	**42.39**	**67**	⇓P		**P**		**07 31 26.3**	**-0.9**
	baz=42,SNR=219									
A17A	**Triple J Farms**	**42.41**	**65**	⇑P		**P**		**07 31 26.7**	**-0.7**
	baz=42,SNR=50									
M09A	**Marrel Ranch,**	**42.44**	**78**	⇑P		**P**		**07 31 28.0**	**+0.3**
	baz=42,SNR=34									
F14A	**Wisdom**	**42.48**	**71**	⇑P		**P**		**07 31 27.9**	**0.0**
	baz=42,SNR=28									
K11A	**Parker Ranch,**	**42.54**	**76**	⇑P		**P**		**07 31 28.9**	**+0.4**
	baz=42,SNR=40									
E15A	**Deer Lodge**	**42.58**	**69**	⇓P		**P**		**07 31 28.0**	**-0.8**
	baz=42,SNR=72									
DL2	**Dalian**	**42.58**	**277**	⇑*i*P		**P**		**07 31 28.8**	**-0.1**
DL2					AMB	AMB				
	comp=Z,20nm,0.8s,mb4.9									
DL2					AMB	AMB				
	comp=Z,310nm,3.7s									
DL2					LR	LR				
	comp=N,4µm,24.5s									
DL2					LR	LR				
	comp=Z,6µm,22.7s,MS5.4									
H13A	**Challis**	**42.62**	**73**	⇓P		**P**		**07 31 28.7**	**-0.5**
	baz=42,SNR=49									
O08A	**Rochester Mine**	**42.66**	**80**	⇑P		**P**		**07 31 29.8**	**+0.3**
	baz=42,SNR=26									
L10A	**Juniper Basin**	**42.66**	**77**	⇓P		**P**		**07 31 29.8**	**+0.3**
	baz=42,SNR=44									
B17A	**L&G Farms, Che**	**42.68**	**66**	⇓P		**P**		**07 31 29.0**	**-0.6**
	baz=42,SNR=106									
N09A	**Rock Creek Ran**	**42.72**	**79**	⇓P		**P**		**07 31 29.7**	**-0.2**
	baz=42,SNR=16									
ALE	**Alert**	**42.73**	**10**	P		**P**		**07 31 29.0**	**-0.6**
	comp=Z,262nm,0.8s,mb6.0,SNR=25									
J12A	**Stokes Ranch,**	**42.84**	**75**	⇑P		**P**		**07 31 31.0**	**+0.1**
	baz=43,SNR=48									
D16A	**Dana Ranch, Ca**	**42.90**	**68**	⇑P		**P**		**07 31 30.9**	**-0.5**
	baz=43,SNR=66									
HRY	**Holter Researc**	**42.91**	**69**	*eP*		**P**		**07 31 31.2**	**-0.2**
R06C	**Coleville**	**42.91**	**83**	⇓P		**P**		**07 31 31.6**	**0.0**
	baz=43,SNR=7.5									
A18A	**Metzger Ranch,**	**42.91**	**65**	⇓P		**P**		**07 31 30.7**	**-0.7**
	baz=43,SNR=23									
WAKR	**Walker**	**42.93**	**83**	*eP*		**P**		**07 31 32.2**	**+0.5**
F15A	**Butte**	**42.98**	**70**	⇓P		**P**		**07 31 31.2**	**-0.8**
	baz=43,SNR=51									
LRM	**Limekiln Ridge**	**43.01**	**70**	*eP*		**P**		**07 31 31.9**	**-0.4**
C17A	**Wharram Farm,**	**43.04**	**67**	⇑P		**P**		**07 31 31.7**	**-0.9**
	baz=43,SNR=67									
L11A	**Cat Creek Ranc**	**43.05**	**77**	⇑P		**P**		**07 31 32.8**	**+0.2**
	baz=43,SNR=76									
I13A	**Wildhorse Cree**	**43.06**	**73**	⇑P		**P**		**07 31 32.7**	**+0.1**
	baz=43,SNR=215									
HLID	**Hailey**	**43.08**	**74**	⇓P		**P**		**07 31 33.2**	**+0.3**
	baz=43									
HLID	**Hailey**	**43.08**	**74**	*eP*		**P**		**07 31 32.5**	**-0.3**
	comp=Z,194nm,0.8s,mb5.9									
HLID					LR	LR				
	comp=Z,5µm,19.3s,MS5.4									
E16A	**East Helena**	**43.09**	**69**	⇓P		**P**		**07 31 33.4**	**+0.6**
	baz=43,SNR=48									
H14A	**Leadore**	**43.12**	**72**	⇓P		**P**		**07 31 33.0**	**-0.2**
	baz=43,SNR=87									
BMN	**Battle Mountai**	**43.15**	**80**	*eP*		**P**		**07 31 33.8**	**+0.3**
BMN					pmax	pmax				
	comp=Z,90nm,0.8s,mb5.5									
BMN	**Battle Mountai**	**43.15**	**80**	*eP*		**P**		**07 31 33.8**	**+0.3**
	comp=Z,90nm,0.8s,mb5.5									
DLMT	**Dillon**	**43.17**	**71**	*eP*		**P**		**07 31 33.1**	**-0.5**
	comp=Z,225nm,1.3s,mb5.7									
B18A	**Beardsley Farm**	**43.22**	**66**	⇑P		**P**		**07 31 33.4**	**-0.5**
	baz=43,SNR=69									
K12A	**Draper Farm, C**	**43.30**	**75**	⇑P		**P**		**07 31 35.1**	**+0.5**
	baz=43,SNR=77									
J13A	**Cove Ranch, Pi**	**43.31**	**74**	⇓P		**P**		**07 31 35.1**	**+0.3**
	baz=43,SNR=281									
MCMT	**McKenzie Canyo**	**43.32**	**72**	*eP*		**P**		**07 31 34.6**	**-0.2**
	comp=Z,32nm,0.7s,mb5.2									
O09A	**Fish Creek Ran**	**43.33**	**80**	⇓P		**P**		**07 31 35.3**	**+0.4**
	baz=43,SNR=17									
D17A	**Six Diamond Ra**	**43.34**	**68**	⇓P		**P**		**07 31 34.8**	**-0.1**
	baz=43,SNR=66									
G15A	**Dillon**	**43.34**	**71**	⇑P		**P**		**07 31 34.5**	**-0.5**
	baz=43,SNR=49									
EGMT	**Eagleton**	**43.42**	**66**	⇓P		**P**		**07 31 35.3**	**-0.3**
	baz=43									
EGMT	**Eagleton**	**43.42**	**66**	*eP*		**P**		**07 31 35.1**	**-0.4**
	comp=Z,340nm,0.8s,mb6.1									
N10A	**Dunphy**	**43.42**	**79**	⇑P		**P**		**07 31 36.0**	**+0.4**
	baz=43,SNR=6.7			

S09A **Goldfield** 44.78 83 ⇓P P 07 31 46.9 +0.3
baz=44,SNR=29
VES **Vestal, Richgr** 44.80 86 ⇑P P 07 31 46.5 -0.2
baz=45
M14A **Sheep Mountain** 44.90 76 ⇑P P 07 31 48.1 +0.6
baz=45,SNR=41
H17A **Grant Village** 44.91 71 ⇓P P 07 31 47.6 +0.1
baz=45,SNR=26
IMW **Indian Meadow** 44.97 72 *e*P P 07 31 48.5 +0.4
comp=Z,237nm,1.1s,mb5.9
G18A **Lazy EL Ranch,** 44.99 69 ⇑P P 07 31 47.8 -0.3
baz=45,SNR=32
DCID1 **Drake Creek** 45.00 72 *e*P P 07 31 49.6 +1.4
comp=Z,354nm,1.4s,mb6.0
R10A **Warm Springs** 45.01 81 ⇓P P 07 31 48.3 0.0
baz=45,SNR=11
CWC **Cottonwood Cre** 45.05 85 ⇑P P 07 31 48.8 +0.1
baz=45
S10A **Tonopah Range,** 45.05 82 ⇑P P 07 31 48.7 0.0
baz=45,SNR=48
RRI2 **Red Ridge** 45.06 72 *e*P P 07 31 49.2 +0.5
comp=Z,1μm,1.8s,mb6.5
Q11A **Duckwater** 45.07 80 ⇑P P 07 31 48.5 -0.3
baz=45,SNR=52
HVU **Hansel Valley** 45.09 75 *e*P P 07 31 49.3 +0.4
HVU pmax pmax
comp=Z,201nm,0.7s,mb6.1
HVU **Hansel Valley** 45.09 75 *e*P P 07 31 49.3 +0.3
comp=Z,201nm,0.7s,mb6.1
GRAC **Grapevine Rang** 45.14 84 ⇑P P 07 31 49.5 +0.1
baz=45
P12A **McGill** 45.15 79 ⇓P P 07 31 49.7 +0.3
baz=45,SNR=38
MOOW **Moose Ponds** 45.17 72 *e*P P 07 31 49.7 +0.1
comp=Z,157nm,1.2s,mb5.7
I17A **Pilgram Creek** 45.17 71 ⇑P P 07 31 50.0 +0.4
baz=45,SNR=30
L15A **Malad City** 45.19 75 ⇑P P 07 31 50.3 +0.5
baz=45,SNR=46
K16A **Soda Springs** 45.19 73 ⇑P P 07 31 50.2 +0.4
baz=45,SNR=160
TPAW **Teton Pass** 45.20 72 *e*P P 07 31 49.9 +0.1
comp=Z,180nm,1.0s,mb5.9
RLMT **Red Lodge** 45.27 69 ⇓P P 07 31 50.4 +0.1
baz=45
RLMT **Red Lodge** 45.27 69 *e*P P 07 31 50.0 -0.3
comp=Z,251nm,1.0s,mb6.0
RLMT *e* 07 32 04.8
RLMT LR LR
comp=Z,9μm,22.0s,MS5.7
BJI **Beijing** 45.28 282 P P 07 31 51.4 +0.9
BJI AMB AMB
comp=Z,72nm,0.7s,mb5.6
BJI AMB AMB
comp=Z,1μm,3.7s
BJI LR LR
comp=N,12μm,26.2s
BJI LR LR
comp=E,15μm,20.4s
BJI LR LR
comp=Z,14μm,33.5s
BJT **Baijiatuau** 45.30 282 *e*P P 07 31 51.3 +0.7
BJT pmax pmax
comp=Z,63nm,0.7s
BJT **Baijiatuau** 45.30 282 *e*P P 07 31 51.3 +0.6
comp=Z,63nm,0.7s,mb5.6
ISA **Isabella** 45.30 86 ⇑P P 07 31 50.1 -0.6
baz=45
ISA **Isabella** 45.30 86 *e*P P 07 31 49.5 -1.2
ISA pmax pmax
comp=Z,87nm,0.9s,mb5.6
ISA **Isabella** 45.30 86 *e*P P 07 31 49.5 -1.2
comp=Z,86nm,0.9s,mb5.6
O13A **Hicks Ranch, I** 45.32 78 ⇓P P 07 31 50.8 0.0
baz=45,SNR=13
REDW **Red Top Meadow** 45.33 72 *e*P P 07 31 51.2 +0.4
comp=Z,280nm,1.1s,mb6.0
SNOW **Snow King Moun** 45.33 72 *e*P P 07 31 52.2 +1.3
comp=Z,154nm,0.9s,mb5.8
LOHW **Long Hollow** 45.33 72 *e*P P 07 31 51.0 +0.1
comp=Z,336nm,1.5s,mb6.0
N14A **Grayback Hills** 45.38 76 ⇓P P 07 31 51.7 +0.4
baz=45,SNR=39
IRK **Irkutsk** 45.39 303 *e*P P 07 31 50.8 -0.4
IRK pmax pmax
comp=Z,69nm,2.0s,mb5.1
J17A **Brown Place, J** 45.41 72 ⇓P P 07 31 51.7 +0.2
baz=45,SNR=43
R11A **Troy Canyon, C** 45.42 81 ⇓P P 07 31 51.3 -0.3
baz=45,SNR=68
Q12A **Willow Creek R** 45.46 80 ⇓P P 07 31 52.0 0.0
baz=45,SNR=26
M15A **Larsen Ranch,** 45.47 75 ⇑P P 07 31 51.6 -0.4
baz=45,SNR=15
AHID **Auburn Hatcher** 45.52 73 *e*P P 07 31 52.7 +0.3
comp=Z,460nm,1.4s,mb6.2
SPUT **South Promonto** 45.56 75 *e*P P 07 31 54.4 +1.7
K17A **Gardner Place,** 45.64 73 ⇓P P 07 31 53.4 +0.1
baz=45,SNR=44
MPMC **Manual Prospec** 45.66 85 ⇑P P 07 31 53.1 -0.5
baz=45
P13A **Bates Ranch, G** 45.71 79 ⇑P P 07 31 53.7 -0.3
baz=45,SNR=36
I18A **Diamond G Ranc** 45.75 71 ⇓P P 07 31 54.2 0.0
baz=45
L16A **Fish Haven** 45.76 74 ⇑P P 07 31 54.0 -0.3
baz=46,SNR=25
N15A **Stansbury Isla** 45.77 76 ⇑P P 07 31 54.0 -0.3
baz=46,SNR=9.4
FURC **Furnace Creek,** 45.79 84 ⇓P P 07 31 54.2 -0.4
baz=46
OSI **Osito Adit** 45.81 87 *e*P P 07 31 55.2 +0.4
comp=Z,165nm,0.8s,mb6.0
J18A **Kendall Valley** 45.91 72 ⇓P P 07 31 55.2 -0.2
baz=46,SNR=113
BLG **Laguna Peak** 45.93 88 ⇑P P 07 31 56.1 +0.4
baz=46
DUG **Dugway** 46.00 77 ⇑P P 07 31 56.1 -0.1
baz=46
DUG **Dugway** 46.00 77 *e*P P 07 31 56.2 0.0
DUG pmax pmax
comp=Z,491nm,1.1s,mb6.3
DUG **Dugway** 46.00 77 *e*P P 07 31 56.2 0.0
comp=Z,491nm,1.1s,mb6.3
Q13A **Wheeler Ranch,** 46.01 79 ⇓P P 07 31 56.6 +0.3
baz=46,SNR=72
TLY **Talaya** 46.01 302 P P 07 31 57.0 +0.9
comp=Z,319nm,0.8s,mb6.3,SNR=9.0
TLY **Talaya** 46.01 302 P P 07 31 57.0 +0.8
SNR=8.7
TLY **Talaya** 46.01 302 *c iP* P 07 31 56.5 +0.4
TLY pmax pmax
comp=Z,49nm,0.8s,mb5.5
TLY **Talaya** 46.01 302 *e*P P 07 31 57.0 +0.8
comp=Z,44nm,0.8s,mb5.4
TLY LR LR
comp=Z,25μm,22.0s,MS6.1
R12A **Pony Springs,** 46.03 80 ⇑P P 07 31 56.3 -0.2
baz=46,SNR=34
L17A **Cokeville** 46.05 74 ⇑P P 07 31 56.5 0.0
baz=46,SNR=42
M16A **Huntsville** 46.05 75 ⇑P P 07 31 56.5 -0.1
baz=46,SNR=148
EDW2 **Edwards Air Fo** 46.10 86 ⇑P P 07 31 57.0 -0.1
baz=46
FCC **Fort Churchill** 46.10 46 *e*P P 07 31 55.3 -1.5
FCC pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
FCC **Fort Churchill** 46.10 46 *e*P P 07 31 55.2 -1.5
comp=Z,4.9nm,1.4s,mb4.2
NOQ **North Oquirrh** 46.15 76 *e*P P 07 31 58.1 +0.7
comp=Z,685nm,1.4s,mb6.4
U10A **Ash Meadows, A** 46.16 83 ⇓P P 07 31 58.0 +0.6
baz=46,SNR=7.4
ULN **Ulaanbaatar** 46.20 296 P P 07 31 58.5 +0.9
SNR=29
ULN **Ulaanbaatar** 46.20 296 *e*P P 07 31 58.0 +0.4
ULN pmax pmax
comp=Z,76nm,0.7s,mb5.7
ULN **Ulaanbaatar** 46.20 296 *e*P P 07 31 58.0 +0.4
comp=Z,76nm,0.7s,mb5.7
P14A **Drum Mountains** 46.21 78 ⇓P P 07 31 57.8 0.0
baz=46,SNR=66
K18A **Toltan Ranch,** 46.23 72 ⇓P P 07 31 57.8 -0.2
baz=46,SNR=162
T11A **Corn Creek, Al** 46.33 82 ⇑P P 07 31 58.6 -0.3
baz=46,SNR=74
S12A **Delamar Landin** 46.33 81 ⇑P P 07 31 59.0 +0.2
baz=46,SNR=37
N16A **Rees Ranch, Co** 46.43 75 ⇑P P 07 31 59.3 -0.2
baz=46,SNR=10
JOW **Kunigami** 46.44 259 P P 07 32 00.2 +0.4
comp=Z,96nm,1.0s,mb5.7,baz=120,slow=1.8,SNR=7.3
BW06 **Boulder Array** 46.45 72 ⇑P P 07 31 59.3 -0.3
baz=46
BW06 **Boulder Array** 46.45 72 *e*P P 07 31 59.0 -0.6
comp=Z,218nm,0.7s,mb6.2
PDAR **Pinedale Array** 46.45 72 P P 07 31 59.5 -0.2
comp=Z,239nm,0.8s,mb6.2,baz=316,slow=3.1,SNR=374
Q14A **Sevier Lake (B** 46.45 79 ⇑P P 07 31 59.5 -0.2
baz=46,SNR=155
MWC **Mount Wilson** 46.49 87 *e*P P 07 32 00.9 +0.8
MWC pmax pmax
comp=Z,154nm,1.0s,mb5.9
MWC **Mount Wilson** 46.49 87 *e*P P 07 32 00.9 +0.8
comp=Z,154nm,1.0s,mb5.9
SHOC **Shoshone** 46.52 84 ⇓P P 07 32 00.2 -0.1
baz=46
R13A **O'Grain Ranch,** 46.52 80 ⇑P P 07 32 00.2 -0.1
baz=46,SNR=22
M17A **Scullys Gap (B** 46.54 74 ⇓P P 07 32 00.3 -0.1
baz=46,SNR=46
GSC **Goldstone** 46.57 85 ⇑P P 07 32 00.1 -0.6
baz=46
GSC **Goldstone** 46.57 85 *e*P P 07 32 00.2 -0.6
GSC pmax pmax
comp=Z,197nm,1.0s,mb6.0
GSC **Goldstone** 46.57 85 *e*P P 07 32 00.2 -0.5
comp=Z,197nm,1.0s,mb6.0
SONM **Songino Array** 46.58 297 P P 07 32 01.5 +0.8
comp=Z,61nm,0.7s,mb5.6,baz=58,slow=8.4,SNR=319
JLU **Jordanelle** 46.59 76 *e*P P 07 32 01.4 +0.6
NLU **North Lily Min** 46.60 77 *e*P P 07 32 01.3 +0.4
L18A **Fontenelle, Gr** 46.66 73 ⇑P P 07 32 00.6 -0.7
baz=45,SNR=158
P15A **Leamington** 46.71 77 ⇑P P 07 32 01.6 -0.2
baz=46,SNR=41
BFSC **Mount Baldy St** 46.73 87 ⇑P P 07 32 01.8 -0.2
baz=46
N17A **Moffit Pass** 46.76 75 ⇑P P 07 32 01.6 -0.5
baz=46,SNR=22
O16A **Springville** 46.80 76 ⇓P P 07 32 02.6 +0.2
baz=46,SNR=22
DAU **Daniels Canyon** 46.82 76 *e*P P 07 32 03.4 +0.8
MPU **Maple Canyon** 46.83 76 *e*P P 07 32 03.5 +0.8
comp=Z,164nm,0.8s,mb6.0
SHPR **Sheep Range** 46.83 82 *e*P P 07 32 04.0 +1.3
K19A **Absolon Red Bu** 46.84 72 ⇑P P 07 32 02.1 -0.6
baz=46,SNR=372
ZAK **Zakamensk** 46.90 301 *e*P P 07 32 02.9 -0.2
ZAK *e* 07 34 33.8
ZAK pmax pmax
comp=Z,37nm,1.3s,mb5.2
M18A **Lyman** 46.93 74 ⇑P P 07 32 02.8 -0.7
baz=47,SNR=90
S13A **Holt Ranch, En** 46.96 80 ⇓P P 07 32 03.2 -0.5
baz=47,SNR=87
T12A **Moapa** 46.97 82 ⇓P P 07 32 03.5 -0.4
baz=47
Q15A **Fillmore** 46.99 78 ⇓P P 07 32 03.7 -0.3
baz=47,SNR=18
R14A **James Farms, M** 47.03 79 ⇑P P 07 32 04.3 0.0
baz=47
TIA **Tai'an** 47.06 277 *e*P P 07 32 02.0 -2.5
P16A **Fountain Green** 47.06 77 ⇓P P 07 32 04.8 +0.3
baz=47
V11A **Goodsprings** 47.09 83 ⇓P P 07 32 04.7 -0.1
baz=47,SNR=18
HEC **Hector,Ludlow** 47.17 85 ⇓P P 07 32 05.7 +0.2
baz=47
K20A **Yellowstone Ra** 47.23 71 ⇓P P 07 32 04.6 -1.2
baz=47,SNR=191
U12A **Valley of Fire** 47.26 82 ⇓P P 07 32 06.5 +0.4
baz=47,SNR=9.2
O17A **Robinson Place** 47.27 76 ⇑P P 07 32 06.1 0.0
baz=47,SNR=26
S14A **Cedar City** 47.28 80 ⇓P P 07 32 06.3 +0.1
baz=47,SNR=20
T13A **Saint George** 47.28 81 ⇑P P 07 32 06.3 0.0
baz=47,SNR=79
MOY **Mondy** 47.41 304 *e*P P 07 32 07.7 +0.6
MSU **Marysvale** 47.42 78 *e*P P 07 32 08.0 +0.7
M19A **Rock Springs** 47.43 73 ⇓P P 07 32 07.1 -0.3
baz=47,SNR=21
MURC **Murrieta** 47.43 87 ⇓P P 07 32 07.6 +0.1
baz=47
N18A **Larsen Ranch,** 47.44 74 ⇓P P 07 32 06.8 -0.6
baz=47,SNR=41
V12A **Nelson** 47.52 83 ⇑P P 07 32 08.1 -0.1
baz=47,SNR=5.6
TMUT **Trail Mountain** 47.53 77 *e*P P 07 32 09.4 +1.2
HHC **Hu-ho-hao-te** 47.60 286 *e*P P 07 32 09.3 +0.6
HHC AP pP 07 32 19.4 -0.8
HHC XP sP 07 32 23.3 -1.6
HHC AMB AMB
comp=Z,65nm,1.2s,mb5.5
HHC AMB AMB
comp=Z,913nm,6.4s
HHC LR LR
comp=N,10μm,16.7s,MS6.1
HHC LR LR
comp=E,15μm,19.0s,MS6.1
HHC LR LR
comp=Z,28μm,22.6s,MS6.2
L20A **Wamsutter** 47.62 72 ⇓P P 07 32 08.4 -0.5
baz=47,SNR=86
GMRC **Granite Mounta** 47.63 85 ⇓P P 07 32 08.8 -0.1
baz=47
U13A **Pakoon Wash** 47.63 82 ⇓P P 07 32 09.4 +0.4
baz=47,SNR=46
O18A **Roosevelt** 47.67 75 ⇓P P 07 32 09.1 -0.1
baz=47,SNR=74
P17A **Butcher Ranch,** 47.71 76 ⇑P P 07 32 09.2 -0.3
baz=47,SNR=32
T14A **Hurricane** 47.77 80 ⇑P P 07 32 10.3 +0.2
baz=48,SNR=40
LDFC **Landfair** 47.78 84 *e*P P 07 32 10.4 +0.3
comp=Z,32nm,0.7s,mb5.5
W12A **Cal Nev Ari** 47.78 84 ⇑P P 07 32 10.0 -0.2
baz=48
Q16A **Castle Valley** 47.79 77 ⇓P P 07 32 10.0 -0.2
baz=48,SNR=52
N19A **John Jarvie Ra** 47.79 74 ⇑P P 07 32 09.8 -0.4
baz=48,SNR=77
S15A **Panguitch** 47.83 79 ⇓P P 07 32 11.5 +1.0
baz=48,SNR=28
SSE **Sheshan** 47.88 269 P P 07 32 10.8 -0.2
SSE AMB AMB
comp=Z,27nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,653nm,4.9s
PFO **Pinyon Flat Ob** 47.89 86 P P 07 32 11.1 +0.1
comp=Z,6.3nm,0.8s,mb4.7,baz=336,slow=5.7,SNR=6.5
PFO **Pinyon Flat Ob** 47.89 86 ⇑P P 07 32 11.1 0.0
baz=48
PFO **Pinyon Flat Ob** 47.89 86 *e*P P 07 32 11.6 +0.5
PFO pmax pmax
comp=Z,75nm,1.0s,mb5.7
PFO **Pinyon Flat Ob** 47.89 86 *e*P P 07 32 10.9 -0.1
comp=Z,75nm,1.0s,mb5.7
P18A **Preston Nutter** 47.91 76 ⇓P P 07 32 11.3 +0.2
baz=48,SNR=79
109C **Camp Elliot, M** 47.96 88 ⇓P P 07 32 11.4 -0.2
baz=48
R16A **Teasdale** 47.99 78 ⇑P P 07 32 12.1 +0.4
baz=48,SNR=34
M20A **Sweetwater, Wa** 48.02 73 ⇓P P 07 32 11.7 -0.3
baz=48,SNR=91
SRU **San Rafael** 48.06 77 ⇓P P 07 32 12.1 -0.2
baz=48
SRU **San Rafael** 48.06 77 *e*P P 07 32 12.7 +0.4
SRU pmax pmax
comp=Z,228nm,0.8s,mb6.2
SRU **San Rafael** 48.06 77 *e*P P 07 32 12.7 +0.4
comp=Z,228nm,0.8s,mb6.3
U14A **Mt Trumbull** 48.12 81 ⇑P P 07 32 12.6 -0.1
baz=48,SNR=21
O19A **Miners Draw (B** 48.18 74 ⇓P P 07 32 13.0 -0.2
baz=48,SNR=258
L21A **Rawlins** 48.23 72 ⇓P P 07 32 12.7 -0.8
baz=48,SNR=118
T15A **Red Dirt Ranch** 48.23 80 ⇓P P 07 32 13.6 -0.1
baz=48,SNR=82
S16A **Weppner Ranch,** 48.27 79 ⇑P P 07 32 13.9 0.0
baz=48,SNR=24
Q18A **Rafter H Ranch** 48.31 76 ⇑P P 07 32 13.7 -0.4
baz=48,SNR=75
N20A **Spence Gulch,** 48.38 73 ⇑P P 07 32 14.9 +0.2
baz=48,SNR=115
R17A **Hanksville Air** 48.38 77 ⇓P P 07 32 14.3 -0.4
baz=48,SNR=62
RWWY **Rawlins** 48.49 72 *e*P P 07 32 15.7 +0.1
comp=Z,100nm,0.7s,mb6.0
BC3 **Big Chuckw Mtn** 48.49 86 ⇓P P 07 32 15.5 -0.2
baz=48
W13A **Hualapai Mount** 48.53 83 ⇑P P 07 32 15.6 -0.3
baz=48,SNR=27
U15A **North Rim** 48.66 81 ⇓P P 07 32 17.0 +0.1
baz=48,SNR=97
V14A **Boquillas Ranc** 48.67 82 ⇑P P 07 32 17.1 +0.2
baz=48,SNR=32
P19A **Cripple Cowboy** 48.68 75 ⇓P P 07 32 16.3 -0.7
baz=48,SNR=197
BTO **Baotou** 48.68 287 *e*P P 07 32 17.6 +0.6
NJ2 **Nanjing** 48.70 272 *e*P P 07 32 18.6 +1.3
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
S17A **Black Ridge (B** 48.81 78 ⇓P P 07 32 17.6 -0.5
baz=48,SNR=64
O20A **White River Ci** 48.82 74 ⇓P P 07 32 18.0 -0.1
baz=48,SNR=166
N21A **Black Mountain** 48.87 73 ⇑P P 07 32 18.3 -0.2
baz=49,SNR=88
X13A **Yucca** 48.89 84 ⇑P P 07 32 18.6 -0.2
baz=49,SNR=11
R18A **Canyonlands Na** 48.90 77 ⇓P P 07 32 17.8 -0.9
baz=49,SNR=14
RSSD **Black Hills** 48.90 67 *e*P P 07 32 17.8 -0.9
RSSD pmax pmax
comp=Z,44nm,0.7s,mb5.6
RSSD **Black Hills** 48.90 67 *e*P P 07 32 17.8 -0.9
comp=Z,44nm,0.7s,mb5.6
Q19A **Hogan Spring (** 48.93 76 ⇓P P 07 32 18.3 -0.7
baz=49,SNR=172
W14A **Seligman** 48.95 82 ⇓P P 07 32 19.1 -0.1
baz=49,SNR=22
Y12C **Blythe** 49.01 85 ⇓P P 07 32 19.3 -0.3
baz=49,SNR=12
M22A **Cedar Creek Ra** 49.03 72 ⇓P P 07 32 19.1 -0.6
baz=49,SNR=136
V15A **Kaibab Nationa** 49.13 81 ⇑P P 07 32 20.8 +0.3
baz=49,SNR=84
T17A **Navajo Res., N** 49.22 79 ⇓P P 07 32 20.7 -0.4
baz=49,SNR=17
O21A **Pagoda** 49.23 74 ⇓P P 07 32 21.2 0.0
baz=49,SNR=56
S18A **Hurst Farm, Bl** 49.27 78 ⇑P P 07 32 20.9 -0.7
baz=49,SNR=131
GLA **Glamis** 49.28 86 ⇓P P 07 32 21.6 -0.2
baz=49
GLA **Glamis** 49.28 86 *e*P P 07 32 22.5 +0.8
GLA pmax pmax
comp=Z,190nm,0.9s,mb6.1
GLA **Glamis** 49.28 86 *e*P P 07 32 21.7 0.0
comp=Z,194nm,0.9s,mb6.1
R19A **Curley Farm, L** 49.34 77 ⇓P P 07 32 21.5 -0.7
baz=49,SNR=12
Y13A **Salome** 49.40 84 ⇓P P 07 32 22.5 -0.1
baz=49,SNR=8.9
PV10 **Paradox Valley** 49.43 76 *e*P P 07 32 23.3 +0.5
comp=Z,44nm,0.8s
N22A **Wattenberg Ran** 49.48 72 ⇓P P 07 32 23.0 -0.2
baz=49,SNR=118
W15A **Williams** 49.48 82 ⇓P P 07 32 23.2 -0.1
baz=49,SNR=11
PV04 **Paradox Valley** 49.50 76 *e*P P 07 32 23.6 +0.3
Q20A **Ridgley Place,** 49.52 75 ⇑P P 07 32 23.4 -0.1
baz=49,SNR=62
X14A **Yava** 49.56 83 ⇑P P 07 32 23.5 -0.3
baz=49,SNR=42
U17A **Shonto** 49.56 79 ⇓P P 07 32 23.7 -0.1
baz=49,SNR=22
U16A **Tuba City** 49.56 80 ⇑P P 07 32 23.6 -0.3
baz=49,SNR=27
T18A **Mexican Hat** 49.70 78 ⇓P P 07 32 23.8 -1.1
baz=49,SNR=112
S19A **Harvey Farm, M** 49.77 77 ⇓P P 07 32 24.6 -0.8
baz=50,SNR=55
PHWY **Pilot Hill** 49.77 71 *e*P P 07 32 24.6 -0.8
comp=Z,22nm,0.6s,mb5.4
112A **Yuma** 49.78 86 ⇑P P 07 32 25.4 -0.2
baz=50
WUAZ **Wupatki** 49.82 81 ⇑P P 07 32 25.8 0.0
baz=50
WUAZ **Wupatki** 49.82 81 *e*P P 07 32 25.4 -0.3
comp=Z,55nm,0.8s,mb5.6
ULM **Lac du Bonnet** 49.83 57 P P 07 32 24.6 -1.1
comp=Z,14nm,0.7s,mb5.1,baz=305,slow=7.9,SNR=14
ULM **Lac du Bonnet** 49.83 57 *e*P P 07 32 23.8 -1.8
comp=Z,26nm,1.1s,mb5.2
Y14A **Wickenburg** 49.84 84 ⇓P P 07 32 25.7 -0.3
baz=50,SNR=19
PV01 **Paradox Valley** 49.87 76 *e*P P 07 32 25.5 -0.6
comp=Z,8μm,0.8s
KBS **Kingsbay** 49.88 357 *e*P P 07 32 23.1 -2.6
KBS *e* 07 33 23.7
KBS AMS AMS 07 50 32.2
comp=Z,9μm,32.3s,MS5.6
KBS **Kingsbay** 49.88 357 *e*P P 07 32 26.2 +0.5
KBS pmax pmax
comp=Z,56nm,0.7s,mb5.7
KBS MLR MLR
comp=Z,9μm,19.0s,MS5.8
KBS **Kingsbay** 49.88 357 *e*P P 07 32 26.2 +0.5
comp=Z,56nm,0.7s,mb5.7
KBS LR LR
comp=Z,9μm,19.0s,MS5.8
X15A **Humboldt** 49.95 82 ⇑P P 07 32 26.9 +0.1
baz=50,SNR=29
W16A **Flagstaff** 49.99 81 ⇑P P 07 32 27.4 +0.3
baz=50,SNR=22
113A **Mohawk Valley,** 50.13 85 ⇑P P 07 32 28.2 -0.1
baz=50
U18A **Rough Rock, Ch** 50.16 79 ⇑P P 07 32 28.7 +0.3
baz=50,SNR=21
SMCO **Snowmass** 50.18 74 *e*P P 07 32 20.2 -8.3
comp=Z,36nm,0.7s,mb5.5
Y15A **Casa Rosa Ranc** 50.24 83 ⇑P P 07 32 29.0 0.0
baz=50,SNR=24
Z14A **Wintersburg** 50.25 84 ⇑P P 07 32 29.1 0.0
baz=50
R21A **Cimarron** 50.34 75 ⇓P P 07 32 29.5 -0.2
baz=50,SNR=73
T19A **Beclabito** 50.42 78 ⇓P P 07 32 30.4 0.0
baz=50,SNR=135
SPB4 **Spitsbergen Ar** 50.45 356 *e*P P 07 32 29.5 -0.6
X16A **Lo Mia Camp, P** 50.49 82 ⇓P P 07 32 31.0 +0.1
baz=50,SNR=43
MVCO **Mesa Verde** 50.50 77 ⇑P P 07 32 30.8 -0.1
baz=50
MVCO **Mesa Verde** 50.50 77 *e*P P 07 32 30.7 -0.2
comp=Z,36nm,0.7s,mb5.5
V18A **Ganado** 50.58 80 ⇓P P 07 32 31.4 -0.2
baz=50,SNR=32
ISCO **Idaho Springs** 50.61 73 *e*P P 07 32 31.8 +0.1
ISCO pmax pmax
comp=Z,76nm,1.0s,mb5.6
ISCO **Idaho Springs** 50.61 73 *e*P P 07 32 31.8 +0.1
comp=Z,76nm,1.0s,mb5.6
Z15A **Gila River Ind** 50.79 84 ⇓P P 07 32 33.3 +0.1
baz=50
Y16A **Circle Bar Ran** 50.83 83 ⇑P P 07 32 33.3 -0.2
baz=51,SNR=14
AGMN **Agassiz Refuge** 50.98 59 *e*P P 07 32 32.8 -1.6
comp=Z,26nm,0.7s,mb5.3
W18A **Petrified Fore** 51.09 80 ⇑P P 07 32 35.3 -0.1
baz=51,SNR=27
V19A **Window Rock** 51.13 79 ⇓P P 07 32 35.3 -0.4
baz=51,SNR=18
115A **Sonoran Desert** 51.14 84 ⇓P P 07 32 35.7 -0.1
baz=51,SNR=30
Z16A **Peralta Trail,** 51.21 83 ⇓P P 07 32 36.3 0.0
baz=51,SNR=6.4
214A **Organ Pipe Nat** 51.28 85 ⇓P P 07 32 36.4 -0.4
baz=51,SNR=11
Y17A **Roosevelt** 51.34 82 ⇓P P 07 32 37.4 +0.1
baz=51,SNR=30
X18A **Snowflake** 51.34 81 ⇓P P 07 32 36.9 -0.5
baz=51,SNR=23
116A **Eloy** 51.56 84 ⇑P P 07 32 38.5 -0.5
baz=51,SNR=13
DAG **Danmarks Havn** 51.59 6 ⇑*iP* P 07 32 38.2 -0.4
comp=Z,13nm,0.6s,mb5.0

DAG
comp=Z,47µm,22.0s
X19A St. Johns 51.82 80 ⇑P P 07 32 40.2 -0.7
baz=52,SNR=33
Z17A San Carlos Hig 51.84 82 ⇑P P 07 32 40.7 -0.3
baz=52,SNR=7.3
SDCO Great Sand Dun 51.98 75 *eP* **P 07 32 42.0 0.0**
comp=Z,58nm,0.9s,mb5.5
OGNE Ogallala 52.01 69 *eP* **P 07 32 42.7 +0.5**
comp=Z,80nm,0.6s,mb5.8
216A Three Points, 52.09 84 ⇑P P 07 32 42.5 -0.4
baz=52
Y19A Nutrioso 52.16 81 ⇓P P 07 32 43.4 0.0
baz=52,SNR=15
117A Oracle 52.16 83 ⇑P P 07 32 43.7 +0.3
baz=52,SNR=27
Z18A Geronimo 52.25 82 ⇑P P 07 32 44.2 +0.1
baz=52
YHNB Yeheng 52.28 263 *eP* **P 07 32 44.3 -0.1**
comp=Z,33nm,0.7s,mb5.4
TUC Tucson 52.31 84 *eP* **P 07 32 44.2 -0.3**
TUC pmax pmax
comp=Z,30nm,1.1s,mb5.1
TUC Tucson 52.31 84 *eP* **P 07 32 44.2 -0.3**
comp=Z,30nm,1.1s,mb5.1
NACB Ninganchiao 52.51 262 *eP* **P 07 32 43.0 -3.1**
comp=Z,32nm,0.7s,mb5.4
WHN Wuhan 52.55 274 ⇑P P 07 32 45.8 -0.5
WHN AMB AMB
comp=Z,57nm,1.0s,mb5.5
WHN AMB AMB
comp=Z,1µm,12.6s
WHN LR LR
comp=N,11µm,17.6s,MS6.2
WHN LR LR
comp=E,13µm,16.3s,MS6.2
WHN LR LR
comp=Z,18µm,21.0s,MS6.1
118A Homack Ranch, 52.59 83 ⇑P P 07 32 46.4 -0.2
baz=52,SNR=42
Z19A T-Link Ranch, 52.59 82 ⇑P P 07 32 46.6 0.0
baz=52
217A Green Valley 52.65 84 ⇑P P 07 32 46.9 -0.2
baz=52
119A Ashpeak Ranch, 52.92 82 ⇑P P 07 32 48.8 -0.3
baz=53,SNR=18
218A Dragoon 52.99 83 ⇓P P 07 32 49.5 -0.1
baz=53,SNR=14
SSLB Suanglung 53.19 263 *eP* **P 07 32 50.8 -0.3**
comp=Z,82nm,0.8s,mb5.7
ANMO Albuquerque 53.22 78 P **P 07 32 51.8 +0.5**
comp=Z,17nm,0.9s,mb5.0,baz=317,slow=10,SNR=27
ANMO Albuquerque 53.22 78 *eP* **P 07 32 52.0 +0.8**
ANMO pmax pmax
comp=Z,19nm,0.9s
ANMO Albuquerque 53.22 78 *eP* **P 07 32 52.0 +0.8**
comp=Z,19nm,0.9s,mb5.0
YULB Yu-li 53.26 262 *eP* **P 07 32 51.1 -0.5**
comp=Z,36nm,0.6s,mb5.5
ECSD EROS,Sioux Fal 53.38 64 *eP* **P 07 32 50.4 -1.9**
comp=Z,28nm,0.6s,mb5.4
318A Bisbee 53.39 84 ⇓P P 07 32 51.8 -0.7
baz=53,SNR=13
SUMG Summit 53.41 14 *eP* **P 07 32 52.4 +0.3**
comp=Z,112nm,0.9s,mb5.8
LENM Lemitar 53.43 79 *eP* **P 07 32 55.1 +2.3**
219A White Tail Can 53.47 83 ⇑P P 07 32 53.2 +0.1
baz=53,SNR=17
EYMN Ely 53.51 57 *eP* **P 07 32 52.1 -1.1**
comp=Z,85nm,1.0s,mb5.6
LPM Los Pinos Moun 53.54 79 *eP* **P 07 32 54.6 +1.0**
XAN Xi'an 53.56 281 P **P 07 32 53.8 +0.1**
XAN AP pP 07 33 05.0 -0.3
XAN AMB AMB
comp=Z,24nm,0.9s,mb5.1
XAN AMB AMB
comp=Z,691nm,8.4s
XAN LR LR
comp=N,2µm,24.6s,MS5.5
XAN LR LR
comp=E,5µm,23.6s,MS5.5
XAN LR LR
comp=Z,10µm,28.1s,MS5.7
TPUB Ta-pu 53.74 262 *eP* **P 07 32 54.4 -0.8**
comp=Z,70nm,0.7s,mb5.7
TWG Pinlang 53.82 262 P **P 07 32 57.0 +1.2**
comp=Z,34nm,0.8s,mb5.3
QZH Quanzhou 53.82 265 ⇑*iP* **P 07 32 54.6 -1.2**
QZH AMB AMB
comp=Z,110nm,1.0s,mb5.7
QZH AMB AMB
comp=Z,2µm,3.6s
319A Douglas 53.88 83 ⇑P P 07 32 56.0 -0.1
baz=54,SNR=5.5
BJO Bjornoya 53.89 354 AMS AMS 07 59 47.6
comp=Z,9µm,19.4s,MS5.8
ZAA0 Zalesovo Array 54.01 313 *eP* **P 07 32 56.5 -0.2**
ZALV Zalesovo Beam 54.01 313 P **P 07 32 57.1 +0.5**
comp=Z,2.7nm,0.4s,mb4.5,baz=54,slow=7.5,SNR=24
NVS Novosibirsk 54.15 315 *iP* **P 07 32 57.2 -0.5**
NVS *e* pP 07 33 11.3 +2.0
NVS pmax pmax
comp=N,13nm,1.8s
NVS pmax pmax
comp=Z,31nm,1.8s,mb4.9
NVS pmax pmax
comp=E,10.0nm,1.4s
CBKS Cedar Bluff 54.73 70 *eP* **P 07 33 01.8 -0.4**
CBKS pmax pmax
comp=Z,254nm,0.8s,mb6.3
CBKS Cedar Bluff 54.73 70 *eP* **P 07 33 01.8 -0.4**
comp=Z,254nm,0.8s,mb6.3
LZH Lanzhou 55.30 286 ⇑P P 07 33 06.8 +0.5
LZH AP pP 07 33 16.8 -1.2
LZH XP sP 07 33 20.8 -1.8
LZH AMB AMB
comp=Z,116nm,1.3s,mb5.8
LZH AMB AMB
comp=Z,1µm,6.8s
LZH LR LR
comp=E,8µm,18.3s
LZH LR LR
comp=Z,18µm,20.0s,MS6.1
GTA Gaotai 55.49 292 P **P 07 33 07.8 +0.1**
GTA AP pP 07 33 18.3 -1.0
GTA XP sP 07 33 22.8 -1.2
GTA AMB AMB
comp=Z,108nm,0.5s,mb6.1
GTA AMB AMB
comp=Z,1µm,4.5s
GTA LR LR
comp=N,7µm,23.2s,MS5.8
GTA LR LR
comp=E,7µm,23.5s,MS5.8
GTA LR LR
comp=Z,13µm,22.3s,MS6.0
AMTX Amarillo 56.18 75 *eP* **P 07 33 13.5 +0.8**
comp=Z,53nm,0.6s,mb5.7
AMTX LR LR
comp=Z,15µm,22.0s,MS6.0
GDL2 Guadalupe Moun 56.36 79 *eP* **P 07 33 14.3 +0.3**
KSU1 Kansas State U 56.38 68 *eP* **P 07 33 12.8 -1.2**
comp=Z,131nm,0.8s,mb6.0
SCIA State Center 56.46 63 *eP* **P 07 33 13.6 -0.9**
comp=Z,64nm,0.5s,mb5.9
JFWS Jewell Farm 57.44 61 P **P 07 33 20.2 -1.3**
JFWS pmax pmax
comp=Z,210nm,1.1s,mb6.1
JFWS Jewell Farm 57.44 61 *eP* **P 07 33 19.6 -1.9**
comp=Z,213nm,1.2s,mb6.0
JFWS *e* pP 07 33 33.4 +0.2
JFWS LR LR
comp=Z,20µm,20.0s,MS6.2
KEV Kevo 57.78 350 *ep* **P 07 33 22.4 -1.1**
comp=Z,13nm,0.7s,mb5.1
KEV Kevo 57.78 350 *eP* **P 07 33 22.4 -1.1**
KEV pmax pmax
comp=Z,13nm,0.7s,mb5.1
WMOK Wichita Mounta 58.03 73 *eP* **P 07 33 25.5 -0.3**
WMOK pmax pmax
comp=Z,56nm,0.8s,mb5.7
WMOK Wichita Mounta 58.03 73 *eP* **P 07 33 25.5 -0.2**
comp=Z,56nm,0.8s,mb5.6
ARCES ARCESS Array B 58.16 350 P **P 07 33 25.1 -1.0**
comp=Z,52nm,0.8s,mb5.6,baz=24,slow=6.6,SNR=54
ARE0 ARCESS Array S 58.16 350 *eP* **P 07 33 25.1 -1.0**
LPIG La Paz 58.35 90 P **P 07 33 27.1 -1.0**
comp=Z,18nm,0.7s,mb5.2,baz=216,slow=5.1,SNR=3.8
LVZ Lovozero 58.49 346 ⇑P **P 07 33 28.0 -0.5**
comp=Z,1µm,0.7s,mb7.0,SNR=7.2
LVZ Lovozero 58.49 346 ⇑*eP* **P 07 33 28.1 -0.4**
TRO Tromso 58.68 353 *eP* **P 07 33 27.4 -2.3**
TRO AMS AMS 07 58 17.6
comp=Z,8µm,26.4s,MS5.7
TRO Tromso 58.68 353 *eP* **P 07 33 27.4 -2.3**
TRO *e* 07 34 28.6
TXAR Lajitas Array 58.78 81 P **P 07 33 29.9 -1.2**
comp=Z,4.0nm,0.6s,mb4.7,baz=309,slow=5.0,SNR=75
TXAR PKP2bc 08 03 15.4
comp=Z,1.1nm,0.9s,baz=159,slow=5.2,SNR=4.2
TXAR Lajitas Array 58.78 81 P **P 07 33 29.9 -1.2**
TXAR ⇑*e* 08 03 15.4
CD2 Chengdu 58.88 282 P **P 07 33 31.1 -0.6**
CD2 AP pP 07 33 41.3 -2.1
CD2 XP sP 07 33 45.1 -3.0
CD2 PCP PcP 07 34 20.4 -0.3
CD2 AMB AMB
comp=Z,60nm,0.8s,mb5.7
CD2 AMB AMB
comp=Z,870nm,9.0s
CD2 LR LR
comp=N,6µm,21.6s
CD2 LR LR
comp=Z,8µm,28.8s
KTK1 Kautokeino 58.90 351 *eP* **P 07 33 28.3 -2.9**
KTK1 *e* 07 34 32.6
KTK1 AMb AMB 08 03 05.0
comp=N,11µm,17.8s
KTK1 Kautokeino 58.90 351 *eP* **P 07 33 28.3 -2.9**
KTK1 *e* 07 34 32.6
APA Apatity 58.99 346 *eP* **P 07 33 33.9 +2.0**
APA MLR MLR
comp=Z,9µm,22.0s,MS5.8
KURK Kurchatov 59.00 314 P **P 07 33 31.8 -0.4**
comp=Z,229nm,0.9s,mb6.2,SNR=19
KURK Kurchatov 59.00 314 P **P 07 33 31.5 -0.7**
KURK pmax pmax
comp=Z,40nm,1.0s,mb5.4
KURK Kurchatov 59.00 314 *eP* **P 07 33 31.4 -0.9**
comp=Z,70nm,1.0s,mb5.7
KURK LR LR
comp=Z,41µm,20.0s,MS6.6
GLMI Grayling 59.15 56 *eP* **P 07 33 33.7 +0.3**
comp=Z,164nm,0.9s,mb6.1
WMQ Urumqi 59.29 303 P **P 07 33 35.9 +1.5**
WMQ AP pP 07 33 48.6 +2.5
WMQ PCP PcP 07 34 23.8 +1.6
WMQ AMB AMB
comp=Z,94nm,1.0s,mb5.8
WMQ AMB AMB
comp=Z,667nm,3.6s
WMQ LR LR
comp=N,23µm,30.0s,MS6.2
WMQ LR LR
comp=E,20µm,31.0s,MS6.2
WMQ LR LR
comp=Z,16µm,28.0s,MS6.0
HDIL Hopedale 59.56 62 *eP* **P 07 33 35.3 -0.9**
comp=Z,295nm,0.7s,mb6.4
MK31 Makanchi Array 60.00 308 *eP* **P 07 33 38.1 -1.1**
MKAR Makanchi Array 60.00 308 P **P 07 33 38.2 -1.0**
comp=Z,20nm,0.4s,mb5.5,baz=53,slow=5.7,SNR=223
MKAR Makanchi Array 60.00 308 P **P 07 33 38.2 -1.0**
SCHQ Schefferville 60.14 38 P **P 07 33 38.8 -1.3**
comp=Z,53nm,0.8s,mb5.6,baz=318,slow=7.9,SNR=42
SCHQ Schefferville 60.14 38 *eP* **P 07 33 38.7 -1.3**
comp=Z,133nm,1.1s,mb5.9
GYA Guiyang 60.22 276 ⇑*iP* **P 07 33 41.3 +0.3**
GYA AP pP 07 33 51.5 -1.2
GYA XP sP 07 33 55.8 -1.6
GYA PCP PcP 07 34 28.0 +1.9
GYA AMB AMB
comp=Z,90nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,800nm,8.4s
GYA LR LR
comp=N,5µm,23.0s,MS5.8
GYA LR LR
comp=E,6µm,23.6s,MS5.8
GYA LR LR
comp=Z,5µm,23.3s,MS5.6
SLM Saint Louis 60.35 64 *eP* **P 07 33 41.4 -0.3**
SLM Saint Louis 60.35 64 *eP* **P 07 33 40.9 -0.9**
comp=Z,75nm,0.9s,mb5.7
JCT Junction City 60.36 77 P **P 07 33 41.2 -0.7**
JCT pmax pmax
comp=Z,76nm,1.0s,mb5.7
JCT Junction City 60.36 77 *eP* **P 07 33 41.1 -0.8**
comp=Z,76nm,1.0s,mb5.7
FVM French Village 60.69 65 *eP* **P 07 33 42.6 -1.5**
BVA0 Borovoye Array 60.88 320 *iP* **P 07 33 44.5 -0.6**
BVA0 pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
BRVK Borovoye 60.90 320 P **P 07 33 45.2 0.0**
comp=Z,147nm,1.2s,mb6.0,SNR=15
BRVK Borovoye 60.90 320 *eP* **P 07 33 44.5 -0.7**
BRVK pmax pmax
comp=Z,16nm,0.6s,mb5.3
BRVK Borovoye 60.90 320 *eP* **P 07 33 44.5 -0.7**
comp=Z,16nm,0.6s,mb5.3
MIAR Mount Ida 61.26 70 *eP* **P 07 33 47.2 -0.8**
MIAR *e* pP 07 33 59.6 -0.2
MIAR pmax pmax
comp=Z,113nm,1.1s,mb5.9
MIAR Mount Ida 61.26 70 *eP* **P 07 33 47.2 -0.8**
comp=Z,113nm,1.1s,mb5.9
MIAR *e* pP 07 33 59.5 -0.2
AAM Ann Arbor 61.40 57 P **P 07 33 48.5 -0.3**
AAM pmax pmax
comp=Z,74nm,0.7s,mb5.9
AAM Ann Arbor 61.40 57 *eP* **P 07 33 48.0 -0.9**
comp=Z,74nm,0.7s,mb5.9
OLIL Olney 61.48 63 *eP* **P 07 33 48.7 -0.7**
comp=Z,412nm,0.8s,mb6.6
SIUC Southern Illin 61.57 64 *eP* **P 07 33 49.2 -0.8**
comp=Z,140nm,0.9s,mb6.1
UALR University of 61.83 69 *eP* **P 07 33 52.3 +0.5**
PARMO Parma 62.00 66 *eP* **P 07 33 51.9 -1.0**
BLO Bloomington 62.05 62 *eP* **P 07 33 52.0 -1.3**
BLO pmax pmax
comp=Z,244nm,0.8s,mb6.4
BLO Bloomington 62.05 62 *eP* **P 07 33 52.0 -1.3**
comp=Z,244nm,0.8s,mb6.4
USIN University of 62.27 63 *eP* **P 07 33 53.9 -0.8**
comp=Z,465nm,0.8s,mb6.7
MOR8 Moi Rana 62.42 354 *eP* **P 07 33 54.4 -0.8**
GLAT Glass 62.54 66 *eP* **P 07 33 57.3 +0.7**
NATX Nacogdoches 62.58 73 *eP* **P 07 33 57.2 +0.4**
comp=Z,45nm,0.8s,mb5.7
ARU Arti 62.62 328 *diP* **P 07 33 56.7 0.0**
ARU *e* 07 36 16.3
ARU S **S 07 42 23.1 +1.6**
ARU SS SS 07 46 31.9 +6.7
ARU pmax pmax
comp=Z,13nm,0.5s,mb5.3
ARU Arti 62.62 328 *eP* **P 07 33 56.4 -0.3**
comp=Z,21nm,0.6s,mb5.5
ARU LR LR
comp=Z,26µm,20.0s,MS6.4
WCI Wyandotte Cave 62.84 62 P **P 07 33 57.8 -0.8**
WCI pmax pmax
comp=Z,250nm,0.8s,mb6.4
WCI Wyandotte Cave 62.84 62 *eP* **P 07 33 57.6 -1.0**
comp=Z,254nm,0.8s,mb6.4
HKT Hockley 63.16 75 *eP* **P 07 34 01.1 +0.4**
ACSO Alum Creek Sta 63.23 59 *eP* **P 07 33 59.9 -1.1**
comp=Z,45nm,0.7s,mb5.7
ERPA Erie 63.45 55 *eP* **P 07 34 02.1 -0.4**
comp=Z,128nm,0.8s,mb6.1
WVT Waverly 63.47 65 *eP* **P 07 34 02.5 -0.2**
WVT pmax pmax
comp=Z,84nm,0.9s,mb5.9
WVT Waverly 63.47 65 *eP* **P 07 34 02.5 -0.2**
comp=Z,84nm,0.9s,mb5.9
KVTX Kingsville 63.62 78 *eP* **P 07 34 06.6 +2.8**
comp=Z,98nm,1.0s,mb5.8
KMI Kunming 63.62 278 P **P 07 34 04.8 +0.9**
KMI AP pP 07 34 15.3 -0.4
KMI XP sP 07 34 19.8 -0.5
KMI AMB AMB
comp=Z,29nm,1.1s,mb5.2
KMI LR LR
comp=N,5µm,25.5s,MS5.7
KMI LR LR
comp=E,5µm,27.9s,MS5.7
KMI LR LR
comp=Z,8µm,31.6s,MS5.7
QIZ Qiongzhong 63.64 268 P **P 07 34 05.4 +1.3**
QIZ AMB AMB
comp=Z,19nm,1.2s,mb5.0
QIZ AMB AMB
comp=Z,568nm,10.4s
QIZ Qiongzhong 63.64 268 *eP* **P 07 34 05.1 +1.0**
comp=Z,7.5nm,0.6s,mb4.9
QIZ *e* pP 07 34 16.1 +0.2
JOF Joensuu 63.65 345 *ep* **P 07 34 03.0 -0.5**
comp=Z,77nm,0.6s,mb5.9
ALLY Alegheny Colle 63.71 56 *eP* **P 07 34 04.0 -0.2**
OXF Oxford 63.72 67 *eP* **P 07 34 03.8 -0.6**
OXF pmax pmax
comp=Z,273nm,0.8s,mb6.3
OXF Oxford 63.72 67 *eP* **P 07 34 03.8 -0.6**
comp=Z,273nm,0.8s,mb6.3
KLMR Klimovskoe 64.02 340 *eP* **P 07 34 06.0 +0.1**
KLMR pmax pmax
comp=Z,61nm,0.9s,mb5.6
ZAIG Zacatecas 64.18 85 *i* P **P 07 34 07.0 -0.5**
NSS Namsos 64.20 355 *eP* **P 07 34 04.1 -2.9**
NSS *e* 07 35 03.8
NSS AMS AMS 08 01 30.3
comp=Z,10µm,25.8s,MS5.9
NSS Namsos 64.20 355 *eP* **P 07 34 04.1 -2.9**
NSS *e* 07 35 03.8
VBMS Vicksburg 64.71 70 *eP* **P 07 34 10.5 -0.4**
comp=Z,150nm,1.0s,mb6.0
KAF Kangasniemi 65.17 347 *ep* **P 07 34 12.8 -0.6**
comp=Z,84nm,0.6s,mb6.0,baz=14,slow=5.9
KAF Kangasniemi 65.17 347 *eP* **P 07 34 12.8 -0.6**
KAF pmax pmax
comp=Z,84nm,0.6s,mb6.0
MCWV Mont Chateau 65.31 57 *eP* **P 07 34 13.6 -1.1**
comp=Z,81nm,0.8s,mb5.8
BINY Binghamton 65.42 53 *eP* **P 07 34 14.4 -1.0**
comp=Z,252nm,1.1s,mb6.2
TZTN Tazewell 65.57 62 *eP* **P 07 34 16.0 -0.5**
comp=Z,108nm,0.9s,mb5.9
SSPA Standing Stone 65.61 55 *eP* **P 07 34 15.5 -1.2**
comp=Z,79nm,0.7s,mb5.8
TKM2 Tokmak 2 66.08 309 P **P 07 34 21.0 +1.4**
TKM2 pmax pmax
comp=Z,52nm,0.9s,mb5.6
TKM2 Tokmak 2 66.08 309 P **P 07 34 21.1 +1.5**
SNR=28
TKM2 Tokmak 2 66.08 309 *eP* **P 07 34 20.8 +1.2**
comp=Z,52nm,0.9s,mb5.6
TKL Tuckaleechee C 66.09 63 *eP* **P 07 34 19.1 -0.7**
LRAL Lakeview Retre 66.17 67 *eP* **P 07 34 19.8 -0.6**
comp=Z,63nm,0.8s,mb5.7
ULHL Ulahol 66.27 308 P **P 07 34 22.1 +1.2**
SNR=56
PKME Peaks-Kenny Pk 66.32 47 *eP* **P 07 34 20.5 -0.6**
comp=Z,31nm,1.0s,mb5.3
USP Ospenovka 66.35 310 P **P 07 34 21.5 +0.1**
SNR=103
MOL Molde 66.36 357 *eP* **P 07 34 19.8 -1.4**
MOL AMS AMS 07 58 49.9
comp=Z,8µm,26.6s,MS5.8
CHMS Chumysh 66.43 310 P **P 07 34 23.6 +1.8**
SNR=21
KBK Karagaybulak 66.59 309 P **P 07 34 25.2 +2.3**
SNR=16
FRU Bishkek 66.62 310 *eP* **P 07 34 24.0 +0.9**
FRU *eS* SKSac 07 44 13.0 -3.2
FRU pmax pmax
comp=Z,70nm,1.6s,mb5.4
FRU MLR MLR
comp=Z,19µm,22.0s,MS6.3
BLA Blacksburg 66.80 59 P **P 07 34 23.9 -0.4**
BLA pmax pmax
comp=Z,50nm,0.8s,mb5.6
BLA Blacksburg 66.80 59 *eP* **P 07 34 23.4 -0.8**
comp=Z,50nm,0.8s,mb5.6
AAK Ala-Archa 66.83 310 P **P 07 34 25.8 +1.4**
comp=Z,599nm,0.7s,mb6.7,SNR=43
AAK Ala-Archa 66.83 310 P **P 07 34 25.4 +0.9**
SNR=22
AAK Ala-Archa 66.83 310 ⇑*eP* **P 07 34 25.1 +0.7**
AAK pmax pmax
comp=Z,39nm,0.7s,mb5.5
AAK Ala-Archa 66.83 310 P **P 07 34 25.7 +1.3**
SNR=74
AAK Ala-Archa 66.83 310 *eP* **P 07 34 24.8 +0.4**
comp=Z,66nm,0.7s,mb5.8
AAK LR LR
comp=Z,21µm,20.0s,MS6.3
KZA Kyzart 66.88 309 P **P 07 34 26.0 +1.3**
SNR=54
UCH Uchtor 67.13 309 *eP* **P 07 34 28.2 +1.9**
comp=Z,9.8nm,0.8s,mb4.9
EKS2 Erkin-Say 67.16 310 P **P 07 34 27.9 +1.5**
SNR=93
EKS2 Erkin-Say 67.16 310 *eP* **P 07 34 27.4 +1.0**
comp=Z,79nm,0.6s,mb5.9
PMG Port Moresby 67.16 217 ⇑*iP* **P 07 34 26.2 -0.5**
LSA Lhasa 67.36 289 P **P 07 34 27.3 -0.7**
LSA LR LR
comp=N,7µm,17.7s,MS6.2
LSA LR LR
comp=E,12µm,16.8s,MS6.2
LSA LR LR
comp=Z,20µm,18.6s,MS6.4
LSA Lhasa 67.36 289 *eP* **P 07 34 30.2 +2.2**
LSA pmax pmax
comp=Z,93nm,0.6s,mb6.0
LSA Lhasa 67.36 289 *eP* **P 07 34 30.1 +2.2**
comp=Z,93nm,0.6s,mb6.0
AML Almayashu 67.60 310 P **P 07 34 31.3 +2.0**
SNR=58
AML Almayashu 67.60 310 *eP* **P 07 34 30.9 +1.6**
comp=Z,91nm,0.9s,mb5.8
AML LR LR
comp=Z,23µm,20.0s,MS6.4
BRAL Brewton 67.61 68 *eP* **P 07 34 29.4 -0.2**
comp=Z,117nm,0.8s,mb6.0
CBN Corbin 67.68 57 *eP* **P 07 34 29.7 -0.2**
comp=Z,44nm,0.6s,mb5.7
AKTK Aktyubinsk 67.69 325 P **P 07 34 29.4 -0.3**
AKTO Aktyubinsk 67.69 325 P **P 07 34 29.4 -0.3**
comp=Z,19nm,0.8s,mb5.2,baz=58,slow=8.0,SNR=10
NB2 NORSAR Subarra 67.72 355 P **P 07 34 29.5 -0.2**
comp=Z,47nm,0.8s,mb5.6,baz=7.5,slow=6.5
NOA NORSAR Array B 67.72 355 P **P 07 34 29.5 -0.3**
comp=Z,42nm,0.7s,mb5.6,baz=7.2,slow=6.3,SNR=116
GOGA Godfrey 67.91 64 *eP* **P 07 34 30.2 -1.2**
GOGA pmax pmax
comp=Z,279nm,1.2s,mb6.2
GOGA Godfrey 67.91 64 *eP* **P 07 34 30.2 -1.2**
comp=Z,279nm,1.2s,mb6.2
NAO01 NORSAR Array S 67.93 355 *eP* **P 07 34 31.1 0.0**
comp=Z,10nm,0.7s,mb5.0
KK31 Karatay Array 68.36 312 *iP* **P 07 34 33.5 -0.5**
HFS Hagfors 68.46 353 P **P 07 34 33.1 -1.3**
comp=Z,36nm,0.7s,mb5.5,baz=35,slow=5.4,SNR=41
KSH Kashi 68.46 307 P **P 07 34 37.3 +2.6**
KSH AP pP 07 34 47.4 +0.7
KSH XP sP 07 34 51.5 +0.2
KSH PCP PcP 07 35 03.0 +3.2
KSH AMB AMB
comp=Z,218nm,0.7s,mb6.3
KSH AMB AMB
comp=Z,1µm,4.8s
KSH LR LR
comp=N,12µm,14.1s,MS6.4
KSH LR LR
comp=E,8µm,11.1s,MS6.4
KSH LR LR
comp=Z,13µm,20.5s
VSU Vasula 68.61 346 ⇑*iP* **P 07 34 35.6 +0.3**
ZIIG Zihuatanejo 68.69 88 *iP* **P 07 34 36.8 +0.4**
MOS Moscow 69.10 339 *eP* **P 07 34 37.5 -0.9**
MOS *e* pP 07 34 50.7 +0.3
MOS *e* 07 35 02.3
MOS pmax pmax
comp=Z,271nm,0.8s,mb6.2
KONO Kongsberg 69.20 355 *eP* **P 07 34 39.2 +0.3**
KONO AMS AMS 08 08 07.1
comp=Z,7µm,26.6s,MS5.8
KONO Kongsberg 69.20 355 P **P 07 34 39.5 +0.5**
KONO pmax pmax

comp=Z,48nm,0.8s,mb5.5
KONO Kongsberg 69.20 355 *e*P P 07 34 39.4 +0.4
comp=Z,48nm,0.8s,mb5.5
IMP Imphal 69.30 284 *e*P P 07 34 40.0 -0.2
IMP *i* x x 07 35 40.0
PPM Popocatepetl 69.38 85 *i* P P 07 34 40.0 -0.7
CNNC Cliffs of the 69.63 59 *e*P P 07 34 42.5 +0.4
comp=Z,74nm,0.8s,mb5.7
KKM Kota Kinabalu 69.68 254 *e*P P 07 34 42.8 +0.2
comp=Z,26nm,0.8s,mb5.2
OBN Obninsk 69.91 339 P P 07 34 44.5 +1.1
comp=Z,2µm,0.8s,mb7.0,SNR=5.8
OBN Obninsk 69.91 339⇑ *e*P P 07 34 43.6 +0.2
OBN *e* 07 35 04.8
OBN pmax pmax
comp=Z,299nm,0.8s,mb6.3
OBN MLR MLR
comp=Z,20µm,22.0s,MS6.3
OBN Obninsk 69.91 339 *e*P P 07 34 43.7 +0.3
comp=Z,177nm,0.8s,mb5.0
SHL Shillong 69.96 286 *e*P P 07 34 43.0 -1.2
SHL *e*S S 07 43 53.0 +1.5
KKTK Khon Kaen 70.07 271 P P 07 34 45.0 0.0
comp=Z,494nm,1.0s,mb6.4
LVIG Laguna Verde 70.27 83 *i* P P 07 34 49.0 +2.8
CHG Chiang Mai 70.64 276 ⇑P P 07 34 48.5 +0.1
comp=Z,22nm,0.9s,mb5.1
CHTO Chiang Mai 70.64 276 *e*P P 07 34 47.7 -0.7
CHTO pmax pmax
comp=Z,15nm,0.8s,mb5.0
CHTO Chiang Mai 70.64 276 *e*P P 07 34 47.7 -0.7
comp=Z,15nm,0.8s,mb5.0
CM31 Chiang Mai Arr 70.91 276 *e*P P 07 34 50.2 +0.1
comp=Z,27nm,0.7s,mb5.3
CM31 LR LR
comp=Z,5µm,20.0s,MS5.8
CMAR Chiang Mai Arr 70.91 276 P P 07 34 50.0 0.0
comp=Z,31nm,0.7s,mb5.3,baz=26,slow=6.4,SNR=94
CMAR Chiang Mai Arr 70.91 276⇑ *e*P P 07 34 50.5 +0.4
AGT Agartala 71.60 285 *i* x x 07 35 52.0
AGT *i* x x 07 36 20.0
PNIG Pinotepa 71.70 87 *i* P P 07 34 49.8 -5.0
GUN Gumba 71.78 292 *e*P P 07 34 56.2 +0.9
comp=Z,387nm,0.8s,mb6.4
JIRN Jiri 71.79 291 *e*P P 07 34 56.4 +1.1
comp=Z,361nm,0.7s,mb6.4
RAMN Ramite 72.08 291 *e*P P 07 34 57.6 +0.5
comp=Z,433nm,0.7s,mb6.5
KKN Kakani 72.22 292 *e*P P 07 34 58.5 +0.6
comp=Z,129nm,0.6s,mb6.0
KKN Kakani 72.22 292 *e*P P 07 34 58.5 +0.6
KKN pmax pmax
comp=Z,129nm,0.6s,mb6.0
MNK Minsk 72.22 344⇓ *e*P P 07 34 55.0 -2.5
MNK *e*S S 07 44 10.0 -6.8
MNK *e*SSS 07 52 00.0
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.3
MNK MLR MLR
comp=E,19µm,18.0s,MS6.5
MNK MLR MLR
comp=N,20µm,20.0s,MS6.5
MNK MLR MLR
comp=Z,37µm,22.0s,MS6.6
NST Nakhon Sawan 72.25 273 P P 07 34 52.1 -6.1
comp=Z,90nm,1.0s,mb5.7
PKI Pulchoki 72.31 292 *e*P P 07 34 59.5 +1.1
PKIN Phulchoki 72.31 292 *e*P P 07 34 59.4 +1.0
comp=Z,116nm,0.6s,mb6.0
VRHR Novokhopersk 72.33 334 *e*P P 07 34 58.2 0.0
VRHR pmax pmax
comp=E,70nm,0.8s
VRHR pmax pmax
comp=Z,60nm,0.8s,mb5.6
VRHR pmax pmax
comp=N,20nm,0.6s
GKN Gorkha 72.43 293 *e*P P 07 34 59.4 +0.2
comp=N,256nm,0.9s,mb6.2
DMN Daman 72.46 292 *e*P P 07 34 59.8 +0.5
DANN Dangsing 72.68 294 *e*P P 07 35 01.1 +0.5
comp=N,444nm,0.7s,mb6.5
VSR Storozhevoye 72.87 336 *e*P P 07 35 01.7 +0.3
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.3
VSR pmax pmax
comp=E,10.0nm,0.9s
COP Copenhagen 72.97 353 *i* P P 07 35 02.4 +0.5
VORD Divnogorie 73.07 336 *e*P P 07 35 03.1 +0.6
VORD pmax pmax
comp=N,150nm,0.6s
VORD pmax pmax
comp=Z,80nm,0.6s,mb5.8
VORD pmax pmax
comp=E,40nm,0.3s
CMIG Matias Romero 73.20 84 *i* P P 07 35 02.1 -1.7
KOLN Koldanda 73.21 293 *e*P P 07 35 03.9 +0.1
comp=E,176nm,0.9s,mb6.0
BSD Bornholm Skovb 73.33 352 *i* P P 07 35 03.6 -0.4
BSD pmax pmax
comp=Z,30nm,0.8s,mb5.3
BSD Bornholm Skovb 73.33 352 *i* P P 07 35 03.6 -0.4
comp=Z,30nm,0.8s,mb5.3
HUIG Huatulco 73.43 85 *i* P P 07 35 06.4 +1.2
SUW Suwalki 73.44 347 *e*P P 07 35 03.5 -1.1
SUW Suwalki 73.44 347 P P 07 35 04.3 -0.4
SUW pmax pmax
comp=Z,100nm,0.8s,mb5.8
SUW Suwalki 73.44 347 *e*P P 07 35 03.5 -1.2
EKA Eskdalemuir Ar 73.69 2 P P 07 35 05.5 -0.6
comp=Z,26nm,0.8s,mb5.2,baz=358,slow=4.2,SNR=6.5
ESK Eskdalemuir 73.70 3 P P 07 35 06.9 +0.7
ESK pmax pmax
comp=Z,26nm,0.9s,mb5.2
ESK Eskdalemuir 73.70 3 *e*P P 07 35 06.4 +0.2
comp=Z,26nm,0.8s,mb5.2
PTH Pithoragarh 73.78 297 *e*P P 07 35 06.2 -0.9
PTH *ex* x 07 36 05.1
DLH Dalhousie 73.80 302 *e*P P 07 35 08.0 +0.8
DLH *ex* x 07 36 07.0
LGTI Lohaghat 73.84 297 *e*P P 07 35 08.4 +1.0
LGTI *ex* x 07 36 08.0
THN Thein Dam 74.02 302 *e*P P 07 35 07.5 -1.0
RGN Rugen 74.03 353 *e*P P 07 35 09.1 +1.0
comp=Z,132nm,0.9s,mb5.9
RGN Rugen 74.03 353 *e*P P 07 35 08.8 +0.7
comp=Z,106nm,0.8s,mb5.8
SDNR Sundarnagar 74.07 300 *e*P P 07 35 08.8 0.0
SMLA Simla 74.25 300⇓ *i*P P 07 35 09.2 -0.6
SMLA AMb AMB 07 35 11.6
comp=Z,440nm,0.5s,mb6.6
CAL Calcutta 74.37 286⇓ *i*P P 07 35 12.5 +1.9
CAL ⇑ *i*x x 07 45 45.2
DDI Dehra Dun 74.38 299 *e*P P 07 35 10.6 0.0
NNT Nongplab 74.84 271 P P 07 35 14.0 +0.6
BSEG Bad Segeberg 74.85 354 *e*P P 07 35 13.9 +1.0
comp=Z,111nm,0.9s,mb5.8
TEIG Tepich 74.92 77 *e*P P 07 35 15.0 +1.1
comp=Z,23nm,0.8s,mb5.2
CCIG Comitan 75.52 82 *e*P P 07 35 17.4 +0.1
DLF Lyons Farm 75.59 5 *e*P P 07 35 15.2 -2.0
AKASG Malin Array Be 75.59 342 P P 07 35 16.5 -0.7
comp=Z,188nm,0.8s,mb6.1,baz=21,slow=5.9,SNR=250
AKBB Malin Array Si 75.59 342 P P 07 35 16.2 -1.0
AKBB Malin Array Si 75.59 342 *e*P P 07 35 16.1 -1.1
KIEV Kiev 75.60 342 *e*P P 07 35 16.3 -1.0
KIEV pmax pmax
comp=Z,175nm,0.8s,mb6.0
KIEV Kiev 75.60 342 *e*P P 07 35 16.3 -1.0
comp=Z,175nm,0.8s,mb6.0
DSB Dublin 75.65 5 *e*P P 07 35 17.7 +0.2
comp=Z,70nm,0.8s,mb5.6
KBL Kabul 75.80 308 *e*P P 07 35 18.5 -0.2
KBL pmax pmax
comp=Z,95nm,0.8s,mb5.8
KBL Kabul 75.80 308 *e*P P 07 35 18.5 -0.2
comp=Z,95nm,0.8s,mb5.8
BEL Belsk 75.89 348 *e*P P 07 35 19.5 +0.6
RUE Ruedersdorf 76.04 352 *e*P P 07 35 20.1 +0.3
comp=Z,74nm,0.9s,mb5.6
RUE Ruedersdorf 76.04 352 *e*P P 07 35 20.1 +0.4
comp=Z,62nm,0.8s,mb5.6
ALBI Allahabad 76.12 293 *e*P P 07 35 19.0 -1.6
NRDL Niedersach Rie 76.30 354 *e*P P 07 35 21.5 +0.3
comp=Z,58nm,0.9s,mb5.5
KAKA Kakadu 76.39 229 *e*P x 07 34 20.0
comp=Z,25nm,0.6s
KAKA Kakadu 76.39 229 *e*P x 07 35 19.0
comp=Z,129nm,0.8s
KAPI Kappang 76.52 244 P P 07 35 21.6 -1.4
comp=Z,5.6nm,0.7s,mb4.6,baz=186,slow=20,SNR=3.7
IBBN Ibbenburen 76.62 356 *e*P P 07 35 23.8 +0.8
comp=Z,136nm,0.9s,mb5.9
KSM Kuching 76.86 256 *e*P P 07 35 25.5 +0.6
comp=Z,36nm,1.0s,mb5.3
CLZ Clausthal 76.94 354 *e*P P 07 35 25.5 +0.7
CLZ pmax pmax
comp=Z,91nm,0.9s,mb5.7
CLZ Clausthal 76.94 354 *e*P P 07 35 25.5 +0.7
comp=Z,91nm,0.9s,mb5.7
WTSB Winterswijk 77.00 356 *e*P P 07 35 24.5 -0.7
comp=Z,57nm,1.4s,mb5.3
CLL Collm 77.27 352⇓ *i*P P 07 35 26.9 +0.2
CLL *e* 07 35 34.0
CLL pmax pmax
comp=Z,40nm,0.8s,mb5.4
CLL Collm 77.27 352 *e*P P 07 35 26.5 -0.2
comp=Z,40nm,0.8s,mb5.4
CLL Collm 77.27 352⇓ *i*P P 07 35 26.9 +0.2
comp=Z,40nm,0.8s,mb5.4
CLL *e*pP pP 07 35 34.0 -4.8
CTA Charters Tower 77.34 213 P P 07 35 25.9 -1.5
comp=Z,20nm,0.9s,mb5.1,baz=29,slow=8.4,SNR=16
CTA Charters Tower 77.34 213 *e*P P 07 35 27.1 -0.3
comp=Z,14nm,0.8s,mb5.0
CTAO Charters Tower 77.34 213 *e*P P 07 35 26.8 -0.5
comp=Z,23nm,0.9s,mb5.1
CTAO *e* 07 35 41.7
LVV L'vov 77.37 345 *e*P P 07 35 26.7 -0.6
KSP Ksiaz 77.42 350 *e*P P 07 35 27.7 +0.1
KSP Ksiaz 77.42 350 *e*P P 07 35 27.3 -0.2
BUG Bochum--Univer 77.50 356 *e*P P 07 35 28.2 +0.2
comp=Z,51nm,0.9s,mb5.5
BWNR Bhubaneshwar 77.59 287 *e*P P 07 35 30.6 +1.6
OJC Ojcow 77.61 348 *e*P P 07 35 29.1 +0.5
BRG Berggiesshubel 77.62 352 *i* P P 07 35 28.7 0.0
BRG pmax pmax
comp=Z,18nm,0.7s,mb5.1
BRG Berggiesshubel 77.62 352 *e*P P 07 35 28.7 0.0
comp=Z,30nm,0.7s,mb5.3
BRG Berggiesshubel 77.62 352 *i* P P 07 35 28.7 0.0
comp=Z,30nm,0.7s,mb5.3
FBE Freiberg 77.62 352 *e*P P 07 35 29.1 +0.4
comp=Z,53nm,0.8s,mb5.5
KWP Kalwaria 77.76 346 *e*P P 07 35 29.8 +0.3
KWP Kalwaria 77.76 346⇑ *i*P P 07 35 29.7 +0.2
KWP Kalwaria 77.76 346 *e*P P 07 35 29.8 +0.3
UPC Upice 77.78 350 *e*P P 07 35 29.9 +0.3
MAK Makhachkala 77.81 327 *e*P P 07 35 29.5 -0.4
MAK *e* 07 38 22.1
MAK *e*S S 07 45 21.7 +2.4
MAK *e* 07 45 45.4
MAK pmax pmax
comp=Z,266nm,1.8s,mb5.9
DPC Dobruska-Polom 77.90 350 *e*P P 07 35 30.2 0.0
PVCC Panska Ves 77.90 351 *e*P P 07 35 30.7 +0.4
UBBA Unterbreizbach 77.98 354 *e*P P 07 35 30.8 +0.1
comp=Z,15nm,0.9s,mb4.9
MOX Moxa 78.04 353 *e*P P 07 35 31.1 +0.1
comp=Z,38nm,0.9s,mb5.3
MOX Moxa 78.04 353 *e*P P 07 35 31.1 +0.1
MOX pmax pmax
comp=Z,38nm,0.9s,mb5.3
MOX Moxa 78.04 353 *e*P P 07 35 31.2 +0.2
comp=Z,44nm,0.9s,mb5.4
ABKT Ailbek 78.07 317 P P 07 35 32.3 +0.9
comp=Z,190nm,0.9s,mb6.0,SNR=7.1
WERD Werda 78.18 353 *e*P P 07 35 32.1 +0.3
comp=Z,26nm,1.0s,mb5.1
STHS Stebnicka Huta 78.19 347 *e*P P 07 35 32.8 +0.9
STHS pmax pmax
comp=Z,41nm,0.7s,mb5.5
STHS Stebnicka Huta 78.19 347 *e*P P 07 35 32.8 +0.9
STHS *e* 07 46 58.6
STHS Stebnicka Huta 78.19 347 *e*P P 07 35 32.8 +0.9
comp=Z,41nm,0.7s,mb5.5
OKC Ostrava-Krasne 78.19 349 *e*P P 07 35 31.7 -0.2
TANN Tannenbergstha 78.20 353 *e*P P 07 35 32.2 +0.3
comp=Z,151nm,2.7s,mb5.5
BEBN Eben Emael 78.21 357 P P 07 35 32.6 +0.6
comp=Z,23nm,0.8s,mb5.2
HGN Heimansgroeve 78.23 357 *e*P P 07 35 31.4 -0.7
comp=Z,123nm,1.4s,mb5.7
UCC Uccle 78.25 358 P P 07 35 31.5 -0.7
GUNZ Gunzen 78.26 353 *e*P P 07 35 32.7 +0.4
comp=Z,27nm,0.8s,mb5.2
NIE Niedzica 78.32 347 *e*P P 07 35 33.0 +0.4
MORC Moravsky Berou 78.33 349⇑ *i*P P 07 35 33.6 +1.0
MORC Moravsky Berou 78.33 349 *e*P P 07 35 32.1 -0.5
comp=Z,43nm,1.1s,mb5.3
WERN Weitzgrund 78.34 353 *e*P P 07 35 33.2 +0.5
comp=Z,73nm,0.8s,mb5.7
NKC Novy Kostel 78.38 353 *e*P P 07 35 32.8 -0.1
MEM Membach 78.39 357 P P 07 35 32.9 0.0
comp=Z,66nm,1.0s,mb5.5
PRU Pruhonice 78.44 351 *e*P P 07 35 33.0 -0.2
KIV Kislovodsk 78.49 331 P P 07 35 35.0 +1.4
comp=Z,489nm,1.0s,mb6.4,SNR=5.8
KIV Kislovodsk 78.49 331 P P 07 35 35.4 +1.7
SNR=7.0
KIV Kislovodsk 78.49 331*c* *i*P P 07 35 34.1 +0.5
KIV *e* 07 38 28.6
KIV pmax pmax
comp=Z,87nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,20µm,23.0s,MS6.4
KIV Kislovodsk 78.49 331 *e*P P 07 35 34.3 +0.7
comp=Z,196nm,1.1s,mb6.0
MENF Mencas 78.52 359 *e*P P 07 35 34.0 +0.3
SNF Seneffe 78.54 358 P P 07 35 34.4 +0.7
comp=Z,32nm,1.0s,mb5.2
BCLA Clavier 78.60 357 P P 07 35 33.9 -0.2
comp=Z,42nm,1.0s,mb5.3
MANZ Manzenberg 78.66 353 *e*P P 07 35 34.8 +0.4
comp=Z,31nm,1.0s,mb5.2
CRVS Cervenica-Dubn 78.66 346 *e*P P 07 35 34.6 +0.1
CRVS pmax pmax
comp=Z,49nm,0.8s,mb5.5
CRVS Cervenica-Dubn 78.66 346 *e*P P 07 35 34.6 +0.1
CRVS *e* 07 46 56.3
CRVS Cervenica-Dubn 78.66 346 *e*P P 07 35 34.6 +0.1
comp=Z,49nm,0.8s,mb5.5
TNS Taunus Mts 78.67 355 *e*P P 07 35 35.0 +0.5
TNS pmax pmax
comp=Z,64nm,0.8s,mb5.6
TNS Taunus Mts 78.67 355 *e*P P 07 35 35.0 +0.5
comp=Z,64nm,0.8s,mb5.6
BBSR BB Station 78.69 52 *e*P P 07 35 34.0 -1.0
comp=Z,31nm,0.8s,mb5.3
UZH Uzhgorod 78.80 346 *e*P P 07 35 34.7 -0.6
UZH *e* 07 35 40.0
UZH *e* 07 38 34.0
UZH *e*S S 07 45 27.0 -2.7
ROTZ Rotzenmuhle 78.87 353 *e*P P 07 35 36.3 +0.7
comp=Z,33nm,1.0s,mb5.2
VRAC Vranov 78.90 350 P P 07 35 36.1 +0.3
comp=Z,50nm,0.8s,mb5.5,baz=17,slow=5.3,SNR=41
VRAC Vranov 78.90 350⇑ *i*P P 07 35 36.0 +0.2
VRAC Vranov 78.90 350⇑ P P 07 35 36.0 +0.2
GIVF Givet 78.93 358 *e*P P 07 35 35.5 -0.4
comp=Z,107nm,0.9s,mb5.5
GIVF Givet 78.93 358 *e*P P 07 35 35.5 -0.4
GIVF pmax pmax
comp=Z,53nm,0.9s,mb5.5
GIVF Givet 78.93 358 *e*P P 07 35 35.5 -0.4
comp=Z,53nm,0.9s,mb5.5
DOU Dourbes 78.94 358 P P 07 35 36.4 +0.4
comp=Z,27nm,1.0s,mb5.1
BAIF Baives 78.99 358 *e*P P 07 35 36.1 -0.2
comp=Z,193nm,0.8s,mb5.8
BAIF Baives 78.99 358 *e*P P 07 35 36.1 -0.2
BAIF pmax pmax
comp=Z,96nm,0.8s,mb5.8
BAIF Baives 78.99 358 *e*P P 07 35 36.1 -0.2
comp=Z,96nm,0.8s,mb5.8
GRA1 Grafenberg Arr 79.02 353 *e*P P 07 35 37.1 +0.7
comp=Z,102nm,0.9s,mb5.8
GRF Grafenberg Arr 79.02 353 *e*P P 07 35 37.1 +0.7
GRF pmax pmax
comp=Z,102nm,0.9s,mb5.8
GRF Grafenberg Arr 79.02 353 *e*P P 07 35 37.1 +0.7
comp=Z,102nm,0.9s,mb5.8
TREC Trest 79.03 350 *e*P P 07 35 36.5 0.0
ABH Alteburg 79.05 356 *e*P P 07 35 36.9 +0.3
KIS Kishinev 79.21 341⇓ *i*P P 07 35 36.0 -1.5
KIS pmax pmax
comp=Z,400nm,1.0s,mb6.3
KIS Kishinev 79.21 341⇓ *i*P P 07 35 36.0 -1.5
comp=Z,400nm,1.0s,mb6.3
KECS Kecovo 79.21 347 *e*P P 07 35 38.2 +0.7
KECS pmax pmax
comp=Z,39nm,0.8s,mb5.4
KECS Kecovo 79.21 347 *e*P P 07 35 38.2 +0.7
comp=Z,39nm,0.8s,mb5.4
ANN Anapa 79.23 335 *e*P P 07 35 36.4 -1.3
ANN *e* 07 35 44.5
ANN *e*S S 07 45 33.8 -0.7
ANN pmax pmax
comp=Z,79nm,0.7s,mb5.8
AJM Ajmer 79.25 299 *e*P P 07 35 38.0 -0.1
AJM AMb AMB 07 35 39.4
comp=Z,134nm,0.6s,mb6.0
RUP Ruppelstein 79.25 356 *e*P P 07 35 38.2 +0.5
TOD Tromm 79.26 355 *e*P P 07 35 38.0 +0.3
BUR08 Bucovina Ar. S 79.28 344 *e*P P 07 35 38.0 +0.1
BURAR Bucovina Array 79.30 344⇓ *i*P P 07 35 38.7 +0.7
BURAR Bucovina Array 79.30 344⇓ P P 07 35 38.6 +0.6
WLF Walferdange 79.33 357 P P 07 35 39.1 +1.0
comp=Z,40nm,1.0s,mb5.3
WLF Walferdange 79.33 357 *e*P P 07 35 38.8 +0.7
WLF pmax pmax
comp=Z,54nm,0.8s,mb5.5
WLF Walferdange 79.33 357 *e*P P 07 35 38.9 +0.8
comp=Z,71nm,0.9s,mb5.6
WLF Walferdange 79.33 357 *e*P P 07 35 38.8 +0.7
comp=Z,54nm,0.8s,mb5.5
KHC Kasperske Hory 79.38 352 *e*P P 07 35 38.5 +0.1
KHC *e*pP pP 07 35 44.5 -6.0
KOLL Kolacno 79.40 348 *e*P P 07 35 39.3 +0.8
VYHS Vyhne 79.43 348 *e*P P 07 35 38.6 -0.1
VYHS pmax pmax
comp=Z,22nm,0.9s,mb5.1
VYHS Vyhne 79.43 348 *e*P P 07 35 38.6 -0.1
VYHS *e* 07 46 47.4
VYHS Vyhne 79.43 348 *e*P P 07 35 38.6 -0.1
comp=Z,22nm,0.9s,mb5.1
WET Wettzell 79.43 352 *e*P P 07 35 39.0 +0.3
WET pmax pmax
comp=Z,20nm,0.9s,mb5.0
WET Wettzell 79.43 352 *e*P P 07 35 39.0 +0.3
comp=Z,20nm,0.9s,mb5.0
SMOL Smolenice 79.58 349 *e*P P 07 35 40.4 +0.9
KTD Kalmit 79.58 355 *e*P P 07 35 40.4 +0.9
GEC2 GERESS Array S 79.65 352 *e*P P 07 35 40.1 +0.2
GEC2 pmax pmax
comp=Z,25nm,0.8s,mb5.2
GEC2 GERESS Array S 79.65 352 *e*P P 07 35 40.1 +0.2
comp=Z,25nm,0.8s,mb5.2
GERES GERESS Array B 79.65 352 P P 07 35 39.6 -0.3
comp=Z,23nm,0.7s,mb5.2,baz=32,slow=5.2,SNR=136
SOC Sochi 79.71 332 *e*P P 07 35 40.2 -0.1
SOC *e* 07 35 46.3
SOC *e*S S 07 45 37.5 -2.1
MODS Modra-Piesok 79.74 349 *e*P P 07 35 41.0 +0.6
MODS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MODS Modra-Piesok 79.74 349 *e*P P 07 35 41.0 +0.6
MODS *e* 07 46 43.6
MODS Modra-Piesok 79.74 349 *e*P P 07 35 41.0 +0.6
comp=Z,6.7nm,0.9s,mb4.6
PSZ Piszkesteto 79.85 347 *e*P P 07 35 41.5 +0.5
PSZ pmax pmax
comp=Z,111nm,1.1s,mb5.7
PSZ Piszkesteto 79.85 347⇓ *e*P P 07 35 42.3 +1.3
PSZ Piszkesteto 79.85 347⇓ *i*P P 07 35 40.3 -0.7
PSZ Piszkesteto 79.85 347 *e*P P 07 35 41.5 +0.5
comp=Z,111nm,1.1s,mb5.7
KULM Kulim 79.87 266 *e*P P 07 35 41.4 -0.2
comp=Z,20nm,0.8s,mb5.1
ZST Bratislava 79.94 349 *e*P P 07 35 42.8 +1.4
ZST pmax pmax
comp=Z,54nm,0.8s,mb5.5
ZST Bratislava 79.94 349 *e*P P 07 35 42.8 +1.4
ZST *e* 07 46 36.6
ZST Bratislava 79.94 349 *e*P P 07 35 42.8 +1.4
comp=Z,54nm,0.8s,mb5.5
LANF Langenberg 79.94 355 *e*P P 07 35 41.7 +0.3
SIM Simferopol' 79.95 337 *e*P P 07 35 38.3 -3.3
SIM *e*S S 07 45 44.0 +1.9
SIM pmax pmax
comp=Z,150nm,8.0s
STU Stuttgart 80.07 355 P P 07 35 42.7 +0.6
STU pmax pmax
comp=Z,57nm,0.8s,mb5.5
STU Stuttgart 80.07 355 *e*P P 07 35 42.5 +0.4
comp=Z,66nm,0.9s,mb5.6
STU Stuttgart 80.07 355 *e*P P 07 35 42.6 +0.5
comp=Z,57nm,0.8s,mb5.5
BHPL Bhopal 80.23 295⇑ *i*P P 07 35 42.8 -0.6
BHPL AMb AMB 07 35 45.0
comp=Z,152nm,0.8s,mb6.0
BHPL *i* x x 07 36 41.5
TGUH Tegucigalpa,Un 80.23 80 *e*P P 07 35 44.2 +0.7
comp=Z,105nm,1.1s,mb5.7
FLN La Foliniere 80.32 1 *e*P P 07 35 42.8 -0.7
comp=Z,240nm,0.9s,mb5.8
FLN La Foliniere 80.32 1 *e*P P 07 35 42.8 -0.7
FLN pmax pmax
comp=Z,120nm,0.9s,mb5.8
FLN La Foliniere 80.32 1 *e*P P 07 35 42.8 -0.7
comp=Z,120nm,0.9s,mb5.8
CONA Conrad Observa 80.34 350⇑ *i*P P 07 35 43.6 -0.1
comp=Z,43nm,0.7s,mb5.5
CSNA Conrad Observa 80.34 350⇑ *i*P P 07 35 43.6 0.0
comp=Z,44nm,0.8s,mb5.5
BUD Budapest 80.39 348⇓ *e*P P 07 35 44.8 +0.9
BUD *e* 07 36 44.4
LDF La Druitiere 80.49 1 *e*P P 07 35 43.6 -0.8
comp=Z,189nm,0.8s,mb5.8
LDF La Druitiere 80.49 1 *e*P P 07 35 43.6 -0.8
LDF pmax pmax
comp=Z,94nm,0.8s,mb5.8
LDF La Druitiere 80.49 1 *e*P P 07 35 43.6 -0.8
comp=Z,94nm,0.8s,mb5.8
SOP Sopron 80.50 349⇓ *e*P P 07 35 45.8 +1.3
SOP *e* 07 36 43.7
DRGR 80.53 345⇓ *i*P P 07 35 44.7 +0.1
DRGR 80.53 345 ⇓P P 07 35 44.7 0.0
MEZF Maizieres J'vi 80.53 357 *e*P P 07 35 44.4 -0.2
comp=Z,184nm,1.0s,mb5.7
MEZF Maizieres J'vi 80.53 357 *e*P P 07 35 44.4 -0.2
comp=Z,184nm,1.0s,mb6.0
CDF Champ du Feu 80.53 356 *e*P P 07 35 44.1 -0.5
comp=Z,66nm,0.8s,mb5.3
CDF Champ du Feu 80.53 356 *e*P P 07 35 44.1 -0.5
CDF pmax pmax
comp=Z,33nm,0.8s,mb5.3
CDF Champ du Feu 80.53 356 *e*P P 07 35 44.1 -0.5
comp=Z,33nm,0.8s,mb5.3
FUR Furstenfeldbru 80.53 353 *e*P P 07 35 45.2 +0.6
FUR pmax pmax
comp=Z,83nm,0.9s,mb5.7
FUR Furstenfeldbru 80.53 353 *e*P P 07 35 45.2 +0.6
comp=Z,83nm,0.9s,mb5.7
BFO Black Forest 80.56 355 P P 07 35 45.5 +0.7
comp=Z,194nm,0.7s,mb6.1,SNR=10
BFO Black Forest 80.56 355 *e*P P 07 35 45.0 +0.2
BFO pmax pmax
comp=Z,28nm,0.8s,mb5.2
BFO Black Forest 80.56 355 *e*P P 07 35 45.0 +0.2
comp=Z,28nm,0.8s,mb5.2
MOA Moln 80.58 351⇑ *i*P P 07 35 44.3 -0.6
comp=Z,14nm,0.7s,mb5.0
ROSF Rostrenen 80.68 3 *e*P P 07 35 45.1 -0.4
comp=Z,182nm,1.2s,mb5.6
ROSF Rostrenen 80.68 3 *e*P P 07 35 45.1 -0.4
ROSF pmax pmax
comp=Z,91nm,1.2s,mb5.6
ROSF Rostrenen 80.68 3 *e*P P 07 35 45.1 -0.4
comp=Z,91nm,1.2s,mb5.6
GRR Gorron 80.69 1 *e*P P 07 35 44.9 -0.6
comp=Z,270nm,0.8s,mb5.9
GRR Gorron 80.69 1 *e*P P 07 35 44.9 -0.6
GRR pmax pmax
comp=Z,135nm,0.8s,mb5.9
GRR Gorron 80.69 1 *e*P P 07 35 44.9 -0.6

comp=Z,135nm,0.8s,mb5.9
VRI Vrincioaia 80.71 342⇑ iP P 07 35 45.8 +0.2
VRI Vrincioaia 80.71 342 ⇑P P 07 35 45.8 +0.1
ECH Echery 80.73 356 eP P 07 35 46.2 +0.5
ECH Echery 80.73 356 P P 07 35 45.7 0.0
ECH Echery 80.73 356 eP P 07 35 45.3 -0.4
comp=Z,73nm,1.1s,mb5.5
ODB Odobesti 80.73 342⇑ iP P 07 35 47.3 +1.5
ODB Odobesti 80.73 342 ⇑P P 07 35 47.3 +1.6
PLOR Plostina 80.74 342⇑ iP P 07 35 46.6 +0.8
EIDS Eidsvold 80.76 207 eP P 07 35 46.6 +0.7
comp=Z,17nm,1.1s,mb4.9
EIDS e pP 07 36 00.6 +2.5
SPAK Spaichingen-Ko 80.76 355 eP P 07 35 46.2 +0.3
THEF They Montfort 80.77 357 eP P 07 35 46.4 +0.5
LIBD Limburg 80.78 356 eP P 07 35 47.3 +1.3
SGMF Saint Gilles 80.78 2 eP P 07 35 45.6 -0.4
comp=Z,215nm,0.8s,mb5.8
SGMF Saint Gilles 80.78 2 eP P 07 35 45.6 -0.4
SGMF pmax pmax
comp=Z,107nm,0.8s,mb5.8
SGMF Saint Gilles 80.78 2 eP P 07 35 45.6 -0.4
comp=Z,107nm,0.8s,mb5.8
RJOB Jochberg 80.83 352 eP P 07 35 46.7 +0.4
comp=Z,63nm,0.8s,mb5.6
NGP Nagpur 80.93 292 eP P 07 35 46.0 -1.3
NGP AMb AMB 07 35 51.1
comp=Z,87nm,1.1s,mb5.6
NGP ex x 07 36 50.0
comp=Z,634nm,1.4s
NGP eS x 07 46 48.0
TLCR 80.94 340⇓ iP P 07 35 47.5 +0.6
TLCR 80.94 340 ⇓P P 07 35 47.5 +0.7
HAU Haudompre 80.98 356 eP P 07 35 46.5 -0.5
comp=Z,106nm,0.9s,mb5.5
HAU Haudompre 80.98 356 eP P 07 35 46.5 -0.5
HAU pmax pmax
comp=Z,53nm,0.9s,mb5.5
HAU Haudompre 80.98 356 eP P 07 35 46.5 -0.5
comp=Z,53nm,0.9s,mb5.5
FELD Feldberg im Sc 81.03 355 eP P 07 35 47.5 +0.2
ARSA Arzberg 81.05 350⇑ iP P 07 35 45.1 -2.3
comp=Z,35nm,0.8s,mb5.4
VIS Vishakhapatnam 81.06 287 eP P 07 35 47.8 -0.2
VIS AMb AMB 07 35 49.7
comp=Z,32nm,0.6s,mb5.4
MOF Molkenrain 81.10 356 eP P 07 35 47.7 0.0
QUIF Quistinic 81.11 3 eP P 07 35 47.2 -0.5
comp=Z,157nm,0.9s,mb5.6
QUIF Quistinic 81.11 3 eP P 07 35 47.2 -0.5
QUIF pmax pmax
comp=Z,79nm,0.9s,mb5.6
QUIF Quistinic 81.11 3 eP P 07 35 47.2 -0.5
comp=Z,79nm,0.9s,mb5.6
HINF Hinteralfeld 81.14 356 eP P 07 35 47.2 -0.7
comp=Z,59nm,0.8s,mb5.3
HINF Hinteralfeld 81.14 356 eP P 07 35 47.2 -0.7
HINF pmax pmax
comp=Z,30nm,0.8s,mb5.3
HINF Hinteralfeld 81.14 356 eP P 07 35 47.2 -0.7
comp=Z,30nm,0.8s,mb5.3
MLR Muntele Rosu 81.22 343 P P 07 35 48.6 +0.3
comp=Z,118nm,0.8s,mb5.9,baz=5.9,slow=7.0,SNR=132
RETA Reutte 81.24 353⇑ iP P 07 35 45.2 -3.3
comp=Z,29nm,0.9s,mb5.4
WATA Walderalm 81.33 353⇓ iP P 07 35 48.5 -0.5
comp=Z,69nm,0.9s,mb5.6
MOTA Moosalm 81.36 353⇓ iP P 07 35 49.0 -0.1
comp=Z,31nm,0.7s,mb5.4
WTTA Wattenberg 81.40 353⇓ iP P 07 35 49.1 -0.2
comp=Z,92nm,0.8s,mb5.8
KBA Koelnbreinsper 81.44 352⇑ iP P 07 35 49.8 +0.3
comp=Z,274nm,0.9s,mb6.2
VOIR 81.44 343⇑ iP P 07 35 50.8 +1.3
DAVA Damuels 81.50 354⇑ iP P 07 35 50.3 +0.4
comp=Z,20nm,1.0s,mb5.0
HARR Harsova 81.60 341⇑ iP P 07 35 50.3 -0.1
HARR Harsova 81.60 341 ⇑P P 07 35 50.3 -0.1
LOMF Lomont 81.61 356 eP P 07 35 50.6 +0.2
SOKA Soboth 81.67 350⇑ iP P 07 35 50.4 -0.3
comp=Z,113nm,1.0s,mb5.8
PKSM Moragy 81.69 348⇑ iP P 07 35 50.0 -0.9
PKSM Moragy 81.69 348 ⇑P P 07 35 50.0 -0.8
PERS Pernice 81.70 350 eP P 07 35 51.4 +0.5
FETA Feichten 81.71 353⇓ iP P 07 35 51.2 +0.3
comp=Z,82nm,0.9s,mb5.7
TIRR Tirgusor 81.72 341⇑ iP P 07 35 51.6 +0.6
TIRR Tirgusor 81.72 341 ⇑P P 07 35 51.6 +0.5
LOR Lormes 81.79 358 eP P 07 35 50.8 -0.5
comp=Z,80nm,0.8s,mb5.4
LOR Lormes 81.79 358 eP P 07 35 50.8 -0.5
LOR pmax pmax
comp=Z,40nm,0.8s,mb5.4
LOR Lormes 81.79 358 eP P 07 35 50.8 -0.5
comp=Z,40nm,0.8s,mb5.4
HYF Humbligny 81.81 359 eP P 07 35 51.3 -0.2
ABTA Abfaltersbach 81.84 352⇑ iP P 07 35 50.1 -1.5
comp=Z,64nm,0.9s,mb5.6
BZS Buzias 81.84 346⇑ iP P 07 35 51.7 0.0
BZS Buzias 81.84 346 ⇑P P 07 35 51.7 +0.1
MYKA Terra Mystica 81.85 351⇑ iP P 07 35 52.4 +0.7
comp=Z,38nm,0.8s,mb5.4
WRAB Tennant Creek 81.86 224 P P 07 35 51.0 -0.9
comp=Z,130nm,1.1s,mb5.8,SNR=7.2
WRAB Tennant Creek 81.86 224 eP P 07 35 50.8 -1.1
WRAB e pP 07 36 03.7 -0.4
WRAB pmax pmax
comp=Z,27nm,1.0s,mb5.1
WRAB Tennant Creek 81.86 224 eP P 07 35 50.8 -1.2
comp=Z,27nm,1.0s,mb5.1
WRAB e pP 07 36 03.7 -0.4
WB2 Warramunga Arr 81.87 224 eP P 07 35 50.0 -1.9
WB2 Warramunga Arr 81.87 224 eP P 07 35 50.3 -1.7
WRA Warramunga Arr 81.87 224 P P 07 35 49.9 -2.1
comp=Z,12nm,0.8s,mb4.9,baz=34,slow=6.2,SNR=22
GZR Gura Zlata 81.87 345⇑ iP P 07 35 52.1 +0.3
GZR Gura Zlata 81.87 345 ⇑P P 07 35 52.1 +0.3
OBKA Obir 81.88 351⇓ iP P 07 35 51.9 0.0
comp=Z,108nm,0.8s,mb5.8
SSF Saint Saulge 82.00 358 eP P 07 35 52.1 -0.4
comp=Z,84nm,0.8s,mb5.4
SSF Saint Saulge 82.00 358 eP P 07 35 52.1 -0.4
SSF pmax pmax
comp=Z,42nm,0.8s,mb5.4
SSF Saint Saulge 82.00 358 eP P 07 35 52.1 -0.4
comp=Z,42nm,0.8s,mb5.4
DAVOX Davos/Dischmat 82.01 354 P P 07 35 53.2 +0.7
comp=Z,50nm,0.8s,mb5.5,baz=354,slow=4.5,SNR=87
CADS Cadrg 82.24 351 eP P 07 35 52.8 -0.9
AVF Avril sur Loir 82.28 358 eP P 07 35 53.4 -0.5
comp=Z,143nm,0.9s,mb5.6
AVF Avril sur Loir 82.28 358 eP P 07 35 53.4 -0.5
AVF pmax pmax
comp=Z,71nm,0.9s,mb5.6
AVF Avril sur Loir 82.28 358 eP P 07 35 53.4 -0.5
comp=Z,71nm,0.9s,mb5.6
LJU Ljubljana 82.34 351 iP P 07 35 54.7 +0.4
TUE Stuetta 82.35 354 eP P 07 35 54.7 +0.4
comp=Z,66nm,0.8s,mb5.6
AGRB Hanur-Agry 82.35 329 eP P 07 35 54.7 +0.3
CABF La Chapelle 82.38 356 eP P 07 35 54.3 -0.1
comp=Z,121nm,0.9s,mb5.5
CABF La Chapelle 82.38 356 eP P 07 35 54.3 -0.1
CABF pmax pmax
comp=Z,61nm,0.9s,mb5.5
CABF La Chapelle 82.38 356 eP P 07 35 54.3 -0.1
comp=Z,60nm,0.9s,mb5.5
GCIS Gornji Cirnik 82.40 350 eP P 07 35 54.6 0.0
GCIS e 07 36 11.7
SMF Signal de Mont 82.41 358 eP P 07 35 54.2 -0.4
comp=Z,220nm,0.9s,mb5.8
SMF Signal de Mont 82.41 358 eP P 07 35 54.2 -0.4
SMF pmax pmax
comp=Z,110nm,0.9s,mb5.8
SMF Signal de Mont 82.41 358 eP P 07 35 54.2 -0.4
comp=Z,110nm,0.9s,mb5.8
VOY Vojsko 82.42 351 eP P 07 35 54.3 -0.4
CLDR Caldiran 82.44 328 eP P 07 35 56.2 +1.3
AKL Akola 82.45 294 eP P 07 35 55.0 -0.3
AKL AMb AMB 07 35 59.1
comp=Z,65nm,1.6s,mb5.3
MFF Saint Martin d 82.48 1 eP P 07 35 54.6 -0.4
comp=Z,186nm,0.8s,mb5.8
MFF Saint Martin d 82.48 1 eP P 07 35 54.6 -0.4
MFF pmax pmax
comp=Z,93nm,0.8s,mb5.8
MFF Saint Martin d 82.48 1 eP P 07 35 54.6 -0.4
comp=Z,93nm,0.8s,mb5.8
BGF Bois d'Agland 82.52 359 eP P 07 35 54.6 -0.6
comp=Z,90nm,0.9s,mb5.5
BGF Bois d'Agland 82.52 359 eP P 07 35 54.6 -0.6
BGF pmax pmax
comp=Z,45nm,0.9s,mb5.5
BGF Bois d'Agland 82.52 359 eP P 07 35 54.6 -0.6
comp=Z,45nm,0.9s,mb5.5
EZM Erzurum 82.58 330 eP P 07 35 57.2 +1.6
OG01 Vacheresse 82.64 356 eP P 07 35 56.0 +0.2
GUMT Gumushane 82.65 331 eP P 07 35 57.1 +1.1
SISC Sisak 82.71 349 P P 07 35 56.1 -0.1
SISC Sisak 82.71 349 i P P 07 35 56.1 -0.1
TRI Trieste 82.75 351 P P 07 35 55.8 -0.6
TRI pmax pmax
comp=Z,32nm,0.7s,mb5.5
TRI Trieste 82.75 351 eP P 07 35 55.5 -0.9
comp=Z,31nm,0.7s,mb5.5
TRI LR LR
comp=Z,11µm,21.0s,MS6.2
TCF Toulx Ste Croi 82.79 359 eP P 07 35 56.1 -0.5
comp=Z,105nm,0.8s,mb5.6
TCF Toulx Ste Croi 82.79 359 eP P 07 35 56.1 -0.5
TCF pmax pmax
comp=Z,52nm,0.8s,mb5.6
TCF Toulx Ste Croi 82.79 359 eP P 07 35 56.1 -0.5
comp=Z,52nm,0.8s,mb5.6
BOJS Bojanci 82.80 350 eP P 07 35 56.1 -0.6
PSI Prapat 82.87 266 P P 07 35 57.6 +0.1
comp=Z,64nm,0.7s,mb5.8,baz=22,slow=3.4,SNR=96
MTDJ Mount Denham 82.91 70 eP P 07 35 57.8 +0.2
OG05 Jujurieux 82.97 357 eP P 07 35 57.9 +0.4
AGO Saint Agoulin 83.02 359 eP P 07 35 58.5 +0.7
KVT Kavak 83.06 334 eP P 07 35 59.7 +1.6
PLDF La Plantade 83.09 358 eP P 07 35 58.7 +0.5
BNJ Bonny Gate 83.18 69 eP P 07 35 59.6 +0.6
EZC Erzincan 83.20 331 eP P 07 36 00.4 +1.6
RSL Roselend 83.28 356 eP P 07 36 00.0 +0.9
PYM Petit Puy Mans 83.32 359 eP P 07 36 00.1 +0.7
LPL La Plagne 83.44 356 eP P 07 36 00.6 +0.6
comp=Z,41nm,0.7s,mb5.2
LPL La Plagne 83.44 356 eP P 07 36 00.6 +0.6
LPL pmax pmax
comp=Z,20nm,0.7s,mb5.3
LPL La Plagne 83.44 356 eP P 07 36 00.6 +0.6
comp=Z,20nm,0.7s,mb5.3
LPG La Plagne 83.46 356 eP P 07 36 00.8 +0.7
comp=Z,54nm,0.8s,mb5.3
LPG La Plagne 83.46 356 eP P 07 36 00.8 +0.7
LPG pmax pmax
comp=Z,27nm,0.8s,mb5.3
LPG La Plagne 83.46 356 eP P 07 36 00.8 +0.7
comp=Z,27nm,0.8s,mb5.3
COLF Collangettes 83.54 358 eP P 07 36 00.9 +0.4
TOKT Tokat 83.63 333 eP P 07 35 59.8 -1.2
TOS Tosya 83.64 336 eP P 07 36 02.5 +1.4
CMJ Castle Mountai 83.66 69⇑ eP P 07 36 02.6 +1.1
FRNF Fournols 83.69 359 eP P 07 36 02.0 +0.7
GRN Grenoble 83.76 357 eP P 07 36 02.8 +1.2
SSB Saint Sauveur 83.76 357 eP P 07 36 02.0 +0.4
SSB Saint Sauveur 83.76 357 P P 07 36 02.4 +0.8
SSB Saint Sauveur 83.76 357 eP P 07 36 01.8 +0.2
comp=Z,28nm,0.8s,mb5.4
NVLJ Novalja 83.77 350 P P 07 36 01.5 -0.2
NVLJ Novalja 83.77 350 i P P 07 36 01.5 -0.2
GDM Grand'Maison 83.78 356 eP P 07 36 02.9 +1.2
RJF Les Rejaudoux 83.78 360 eP P 07 36 01.0 -0.7
comp=Z,125nm,0.9s,mb5.7
RJF Les Rejaudoux 83.78 360 eP P 07 36 01.0 -0.7
RJF pmax pmax
comp=Z,63nm,0.9s,mb5.8
RJF Les Rejaudoux 83.78 360 eP P 07 36 01.0 -0.7
comp=Z,62nm,0.9s,mb5.7
SAFT Safranbolu 83.79 337 eP P 07 36 01.5 -0.4
LBL Lubilhac 83.84 358 eP P 07 36 02.8 +0.8
SVSK Karacayir 83.88 333 eP P 07 36 00.1 -2.2
HKR Hakkari 83.91 327 eP P 07 36 02.9 +0.3
BNI Bardonecchia 83.91 356 eP P 07 36 03.4 +1.0
BNI pmax pmax
comp=Z,52nm,0.8s,mb5.7
BNI Bardonecchia 83.91 356 eP P 07 36 03.4 +1.0
comp=Z,52nm,0.8s,mb5.7
JMB Yambol 84.00 341 P P 07 36 02.6 -0.3
ORIF Oris-en-Rattie 84.08 357 eP P 07 36 03.5 +0.3
comp=Z,106nm,0.8s,mb5.7
ORIF Oris-en-Rattie 84.08 357 eP P 07 36 03.5 +0.3
ORIF pmax pmax
comp=Z,53nm,0.8s,mb5.7
ORIF Oris-en-Rattie 84.08 357 eP P 07 36 03.5 +0.3
comp=Z,53nm,0.8s,mb5.7
PTK Pertek 84.11 331 eP P 07 36 01.3 -2.2
OG22 Abries 84.13 356 eP P 07 36 04.7 +1.2
HYB Hyderabad 84.14 290 eP P 07 36 03.5 -0.5
HYB eS S 07 46 26.0 +0.2
HYB pmax pmax
comp=Z,77nm,0.8s,mb5.9
HYB Hyderabad 84.14 290 i P P 07 36 03.5 -0.5
comp=Z,77nm,0.8s,mb5.9
HYB eS S 07 46 26.0 +0.2
HYB Hyderabad 84.14 290 eP P 07 36 03.5 -0.5
comp=Z,77nm,0.8s,mb5.9
HYB eS S 07 46 26.0 +0.2
LFF La Frestale 84.15 0 eP P 07 36 03.4 -0.2
comp=Z,192nm,0.8s,mb6.0
LFF La Frestale 84.15 0 eP P 07 36 03.4 -0.2
LFF pmax pmax
comp=Z,96nm,0.8s,mb6.0
LFF La Frestale 84.15 0 eP P 07 36 03.4 -0.2
comp=Z,96nm,0.8s,mb6.0
CANT Cankiri 84.15 336 eP P 07 36 04.5 +0.8
CAF Calviac 84.16 359 eP P 07 36 03.6 0.0
comp=Z,112nm,0.8s,mb5.8
CAF Calviac 84.16 359 eP P 07 36 03.6 0.0
CAF pmax pmax
comp=Z,56nm,0.8s,mb5.8
CAF Calviac 84.16 359 eP P 07 36 03.6 0.0
comp=Z,56nm,0.8s,mb5.7
VIVF Saint-Julien-l 84.18 357 eP P 07 36 03.6 -0.2
comp=Z,79nm,0.8s,mb5.6
VIVF Saint-Julien-l 84.18 357 eP P 07 36 03.6 -0.2
VIVF pmax pmax
comp=Z,40nm,0.8s,mb5.6
VIVF Saint-Julien-l 84.18 357 eP P 07 36 03.6 -0.2
comp=Z,40nm,0.8s,mb5.6
MBDF Montbardon 84.23 356 eP P 07 36 04.4 +0.4
comp=Z,139nm,0.8s,mb5.8
MBDF Montbardon 84.23 356 eP P 07 36 04.4 +0.4
MBDF pmax pmax
comp=Z,69nm,0.8s,mb5.8
MBDF Montbardon 84.23 356 eP P 07 36 04.4 +0.4
comp=Z,69nm,0.8s,mb5.8
CUKT Cukurca 84.25 327 eP P 07 36 03.7 -0.6
CORM Corum 84.29 335 eP pP 07 36 19.3 +2.6
FITZ Fitzroy Crossi 84.32 232⇓ iP P 07 36 04.0 -0.7
comp=Z,62nm,0.6s,mb5.9
FITZ Fitzroy Crossi 84.32 232 eP P 07 36 04.1 -0.6
comp=Z,32nm,0.7s,mb5.6
PLE Pljevlja 84.41 347⇓ iP P 07 36 05.6 +0.6
OCF Saint Nazaire 84.44 357 eP P 07 36 06.0 +0.9
OG26 St.-Nazaire-De 84.44 357 eP P 07 36 06.0 +0.9
SURF Saint Ours 84.47 356 eP P 07 36 06.1 +0.8
LATR Latur 84.52 293 eP P 07 36 04.2 -1.7
VTS Vitosha 84.52 344 P pP 07 36 17.3 -0.5
BHJ Bhuj 84.54 301 eP P 07 36 06.8 +0.8
BHJ AMb AMB 07 36 07.9
comp=Z,93nm,0.8s,mb5.9
EDRB Edirne 84.57 341 eP P 07 36 06.2 +0.4
VLC Villacollemand 84.58 353 eP P 07 36 06.2 +0.4
comp=Z,50nm,0.8s,mb5.7
YOZ Yozgat 84.60 334 eP P 07 36 06.4 +0.3
SILT Sile 84.61 339 eP P 07 36 06.5 +0.5
UPM Unac-Piva 84.61 347⇓ iP P 07 36 05.7 -0.3
SVRC Sivrice-ELAZID 84.61 331 eP P 07 36 05.3 -0.8
OG25 Le Caire 84.62 356 eP P 07 36 07.0 +1.0
KLYT Kilyos 84.64 339 eP P 07 36 06.2 0.0
PLD Plovdiv 84.72 343 P P 07 36 06.5 -0.1
BGKT Bogazkoy 84.77 339 eP P 07 36 06.6 -0.2
IVA Berane 84.79 346⇓ iP P 07 36 06.6 -0.3
ISK Istanbul-Kandi 84.82 339 eP P 07 36 07.1 0.0
SLVT Silivri 84.85 340 eP P 07 36 07.3 +0.1
CDAG Cicekdag 84.88 335 i P P 07 36 07.8 +0.4
CDAG Cicekdag 84.88 335 i P P 07 36 07.8 +0.4
MDU Mudurnu 84.89 337 eP P 07 36 07.6 +0.2
HRT Hereke 84.91 339 eP P 07 36 07.6 +0.1
TOUF Mont Tournerai 84.92 355 eP P 07 36 08.3 +0.8
AUTN L'Aution 84.93 355 eP P 07 36 08.3 +0.7
MYA Malataya 84.93 331 eP P 07 36 09.3 +1.7
SAOF Saorge 84.93 355 eP P 07 36 07.6 0.0
BRY Bratogost 84.96 347⇓ iP P 07 36 06.8 -0.9
BR131 Keskin Array S 84.97 335 eP P 07 36 07.8 -0.1
BRTR Keskin Array B 84.98 335 P P 07 36 07.8 0.0
comp=Z,79nm,0.8s,mb5.9,baz=50,slow=2.5,SNR=154
NKY Niksic 84.98 347⇓ iP P 07 36 06.8 -1.0
LASF Ste Croix 84.98 358 eP P 07 36 07.8 0.0
comp=Z,79nm,0.8s,mb5.6
STOF St-Etienne Org 85.00 356 eP P 07 36 08.7 +0.8
SMRF Simiane la Rot 85.03 357 eP P 07 36 08.6 +0.5
comp=Z,192nm,0.8s,mb6.0
SMRF Simiane la Rot 85.03 357 eP P 07 36 08.6 +0.5
comp=Z,192nm,0.8s,mb6.3
LUCF Luceram 85.04 355 eP P 07 36 08.9 +0.8
MVIF Mont Vial 85.04 356 eP P 07 36 08.9 +0.8
PVY Plav 85.05 346⇓ iP P 07 36 07.5 -0.7
LOD Lodumlu 85.05 336 eP P 07 36 08.2 -0.1
SBF Sospel 85.06 355 eP P 07 36 07.7 -0.5
comp=Z,444nm,0.8s,mb6.3
SBF Sospel 85.06 355 eP P 07 36 07.7 -0.5
SBF pmax pmax
comp=Z,222nm,0.8s,mb6.3
SBF Sospel 85.06 355 eP P 07 36 07.7 -0.5
comp=Z,222nm,0.8s,mb6.3
GULT Gulveren 85.09 338 eP P 07 36 07.7 -0.8
STON Ston 85.10 348 P P 07 36 06.7 -1.7
STON Ston 85.10 348 i P P 07 36 06.7 -1.7
SARI SarD1z-Kayseri 85.11 333 eP P 07 36 08.0 -0.6
VILF Villemus 85.15 357 eP P 07 36 09.8 +1.1
MSL Mosul 85.19 327 eP P 07 36 10.0 +1.0
REVF Revere 85.19 355 eP P 07 36 09.8 +0.9
BNN Bunyan 85.19 333 eP P 07 36 10.2 +1.2
CALN Calern 85.20 356 eP P 07 36 09.4 +0.5
PRAF Pradon 85.22 357 eP P 07 36 10.2 +1.2
TKR Tekirdag 85.22 340 eP P 07 36 11.1 +2.0
YLV Yalova 85.22 339 eP P 07 36 09.0 -0.1
ADVT Abdulvahap 85.27 338 eP P 07 36 09.2 -0.2
KAMT Kaman 85.29 335 eP P 07 36 12.1 +2.6
TTG Podgorica 85.31 347⇓ iP P 07 36 09.0 -0.5
ASAR Alice Springs 85.34 222 P P 07 36 08.5 -1.2
comp=Z,14nm,0.8s,mb5.2,baz=24,slow=5.7,SNR=89
TAVF Tavernes 85.37 356 eP P 07 36 10.7 +0.9
ARMA Armidale 85.38 205 eP P 07 36 10.1 +0.4
TREF Trevaresse 85.39 357 eP P 07 36 11.1 +1.2
GEMT Gemlik 85.39 339 eP P 07 36 10.8 +0.8
FRF La Foret Royal 85.40 356 eP P 07 36 09.3 -0.6
comp=Z,171nm,0.8s,mb5.9
FRF La Foret Royal 85.40 356 eP P 07 36 09.3 -0.6
FRF pmax pmax
comp=Z,86nm,0.8s,mb5.9
FRF La Foret Royal 85.40 356 eP P 07 36 09.3 -0.6
comp=Z,86nm,0.8s,mb5.9
HCY Herceg Novi 85.41 347⇓ iP P 07 36 08.9 -1.1
CAVI Cavuskoy 85.46 338 eP P 07 36 09.1 -1.2
BUM Brajici-Budva 85.49 347⇓ iP P 07 36 10.4 0.0
EPON Pontenova 85.49 6 P P 07 36 09.2 -1.2
comp=Z,37nm,0.6s,mb5.7
STIP Stip 85.57 344 eP P 07 36 07.4 -3.4
RKY Sarkoy-Tekirda 85.59 340 eP P 07 36 09.1 -1.8
ALN Alexandroupoli 85.62 341 P P 07 36 10.5 -0.6
URFA Urfa 85.62 331 eP P 07 36 02.6 -8.6
GELF Grande-Etoile 85.63 357 eP P 07 36 11.8 +0.7
EARI Arriondas 85.63 5 P P 07 36 10.4 -0.6
comp=Z,26nm,0.7s,mb5.6
LMR La Mourre 85.63 356 eP P 07 36 10.7 -0.4
comp=Z,181nm,0.9s,mb6.0
LMR La Mourre 85.63 356 eP P 07 36 10.7 -0.4
LMR pmax pmax
comp=Z,91nm,0.9s,mb6.0
LMR La Mourre 85.63 356 eP P 07 36 10.7 -0.4
comp=Z,90nm,0.9s,mb6.0
BERF Bertagne 85.69 357 eP P 07 36 12.4 +1.0
EMAZ Mazaricos 85.74 7 P P 07 36 10.4 -1.2
comp=Z,12nm,0.7s,mb5.2
MTLF Montolieu 85.74 359 eP P 07 36 11.5 -0.1
comp=Z,86nm,0.9s,mb5.7
MTLF Montolieu 85.74 359 eP P 07 36 11.5 -0.1
MTLF pmax pmax
comp=Z,43nm,0.9s,mb5.7
MTLF Montolieu 85.74 359 eP P 07 36 11.5 -0.1
comp=Z,43nm,0.9s,mb5.7
BNT Bandirma 85.75 340 eP P 07 36 11.6 -0.1
EDC Edincik 85.77 340 eP P 07 36 12.6 +0.7
ULC Ulcinj 85.77 346⇓ iP P 07 36 11.4 -0.4
ELAN Lanestosa 85.78 3 P P 07 36 12.2 +0.4
comp=Z,97nm,0.7s,mb6.1
STS Santiago 85.83 7 P P 07 36 11.3 -0.8
STS pmax pmax
comp=Z,22nm,0.8s,mb5.4
STS Santiago 85.83 7 P P 07 36 11.3 -0.8
comp=Z,22nm,0.8s,mb5.4
EALK Alkurruntz 85.84 2 P P 07 36 12.6 +0.4
comp=Z,16nm,0.5s,mb5.5
VAY Valandovo 85.87 344 eP P 07 36 11.3 -1.0
ESKT Eskisehir 85.87 337 eP P 07 36 11.7 -0.7
ESKT Eskisehir 85.87 337 i P P 07 36 12.6 +0.2
SEYT Eskypehyr 85.87 337 i P P 07 36 12.6 +0.2
ELIZ Elizondo 85.90 2 P P 07 36 12.6 +0.2
ELIZ pmax pmax
comp=Z,33nm,0.6s,mb5.7
ELIZ Elizondo 85.90 2 P P 07 36 12.6 +0.2
comp=Z,33nm,0.6s,mb5.7
SDDR Presa de Saban 85.93 65 eP P 07 36 13.5 +0.6
comp=Z,40nm,1.0s,mb5.6
KNT Kendrikon 85.96 344 P P 07 36 14.1 +1.3
LPK Lapseki 85.98 341 eP P 07 36 09.2 -3.7
POO Poona 85.98 295 eP P 07 36 13.1 -0.1
POO AMb AMB 07 36 15.5
comp=Z,71nm,0.8s,mb5.9
LARF Larrau 86.03 1 eP P 07 36 13.4 +0.3
LABF Labassere 86.04 1 eP P 07 36 13.1 0.0
EPF Esparros 86.06 0 eP P 07 36 12.4 -0.8
comp=Z,84nm,0.8s,mb5.7
EPF Esparros 86.06 0 eP P 07 36 12.4 -0.8
EPF pmax pmax
comp=Z,42nm,0.8s,mb5.7
EPF Esparros 86.06 0 eP P 07 36 12.4 -0.8
comp=Z,42nm,0.8s,mb5.7
AQU L'Aquila 86.11 351 eP P 07 36 14.3 +0.8
AQU pmax pmax
comp=Z,116nm,0.8s,mb6.2
AQU MLR MLR
comp=Z,14µm,22.0s,MS6.3
AQU L'Aquila 86.11 351 eP P 07 36 14.3 +0.8
comp=Z,116nm,0.8s,mb6.2
AQU LR LR
comp=Z,14µm,22.0s,MS6.3
MLS Moulis 86.13 360 eP P 07 36 13.4 -0.2
KMRS Kahramanmaras 86.14 332 eP P 07 36 11.8 -1.9
ETSF Etsaut 86.18 1 eP P 07 36 14.0 +0.2
comp=Z,102nm,0.7s,mb5.9
ETSF Etsaut 86.18 1 eP P 07 36 14.0 +0.2
ETSF pmax pmax
comp=Z,51nm,0.7s,mb5.9
ETSF Etsaut 86.18 1 eP P 07 36 14.0 +0.2
comp=Z,51nm,0.7s,mb5.9
VIEF Viey 86.20 1 eP P 07 36 13.9 0.0
KIZT Kizilcal 86.22 336 eP P 07 36 12.2 -1.9
NIG Nigde 86.23 334 eP P 07 36 15.2 +1.1
GRG Griva 86.25 344 P P 07 36 12.4 -1.8
RESF Ens 86.28 0 eP P 07 36 14.7 +0.4
PGF Pioggiola 86.28 354 eP P 07 36 13.9 -0.4
comp=Z,312nm,0.7s,mb6.3
PGF Pioggiola 86.28 354 eP P 07 36 13.9 -0.4
PGF pmax pmax
comp=Z,156nm,0.7s,mb6.3
PGF Pioggiola 86.28 354 eP P 07 36 13.9 -0.4
comp=Z,156nm,0.7s,mb6.3
TIR Tirane 86.28 346 P P 07 36 14.5 +0.2
TIR pmax pmax
comp=Z,50nm,0.6s,mb5.9
TIR Tirane 86.28 346 eP P 07 36 14.1 -0.3
comp=Z,50nm,0.6s,mb5.9
DST Dursunbey 86.31 339 eP P 07 36 14.4 -0.1
BIA Bitola 86.37 345 eP P 07 36 13.5 -1.3
EBIE Bielsa 86.40 1 P P 07 36 16.0 +1.1
comp=Z,40nm,0.7s,mb5.8
ECRI Cripan 86.43 3 P P 07 36 14.3 -0.7
ECRI pmax pmax

comp=Z,14nm,0.8s,mb5.2
ECRI Cripan 86.43 3 P **P** 07 36 14.3 -0.7
comp=Z,14nm,0.8s,mb5.2
HORT Hortiatis 86.48 343 P **P** 07 36 14.0 -1.3
KOZT Kozan 86.48 333 *eP* **P** 07 36 13.8 -1.5
ALT Altintas 86.49 338 *eP* **P** 07 36 09.6 -5.8
MDRS Chennai 86.53 286 *ex* x 07 36 55.2
MDRS *ex* x 07 40 17.2
EZAM Zamans 86.55 7 P **P** 07 36 15.2 -0.5
EZAM pmax pmax
comp=Z,11nm,1.2s,mb5.0
EZAM Zamans 86.55 7 P **P** 07 36 15.2 -0.4
comp=Z,11nm,1.2s,mb5.0
FNA Florina 86.59 345 P **P** 07 36 14.5 -1.4
EZN Ezine 86.60 341 *eP* **P** 07 36 15.0 -0.9
EJON La Jonquera 86.62 359 P **P** 07 36 15.0 -1.0
comp=Z,24nm,0.7s,mb5.5
LADK Ladik-KONYA 86.74 336 *eP* **P** 07 36 16.7 0.0
KAD Karad 86.77 294 *eP* **P** 07 36 16.7 -0.4
KAD AMb AMB 07 36 18.3
comp=Z,45nm,0.6s,mb5.9
KAD *i* x x 07 37 15.2
ELOB Lobios 86.88 7 P **P** 07 36 16.6 -0.6
comp=Z,24nm,0.8s,mb5.5
ECAL Calabor 86.90 6 P **P** 07 36 17.3 -0.1
comp=Z,17nm,0.8s,mb5.3
KARA Karaisali 86.90 333 *eP* **P** 07 36 17.7 +0.2
KONT Konya--Tatoy 86.98 336 *eP* **P** 07 36 17.5 -0.3
PBRG Braganca 87.04 6 *eP* **P** 07 36 17.1 -0.9
OSPF L'Ospedale 87.15 354 *eP* **P** 07 36 18.2 -0.4
KHL Karahalli 87.33 338 *eP* **P** 07 36 19.6 +0.1
ESAC San Caprasio 87.36 1 P **P** 07 36 19.3 -0.2
comp=Z,124nm,0.7s,mb6.2
PVRL Vila Real 87.50 7 *eP* **P** 07 36 19.9 -0.4
ISP Isparta 87.55 337 *c iP* **P** 07 36 20.3 -0.3
ISP Isparta 87.55 337 *eP* **P** 07 36 20.1 -0.5
comp=Z,25nm,0.8s,mb5.5
BHD Baghdad 87.56 325 *eP* **P** 07 36 22.0 +1.3
MVO Moncorvo 87.65 6 *eP* **P** 07 36 20.6 -0.4
comp=Z,59nm,0.9s,mb5.8
EPOB Poblet 87.73 360 P **P** 07 36 21.8 +0.4
comp=Z,46nm,0.9s,mb5.7
IZM Izmir 87.77 340 *eP* **P** 07 36 20.6 -1.0
DENT Denizli 87.98 338 *eP* **P** 07 36 22.4 -0.2
CUC Castrocucco 88.17 349 *eP* **P** 07 36 22.4 -1.1
comp=Z,35nm,0.8s,mb5.6
ETOR Torete 88.23 2 P **P** 07 36 23.0 -0.7
ETOR pmax pmax
comp=Z,26nm,0.6s,mb5.6
ETOR Torete 88.23 2 P **P** 07 36 23.0 -0.8
comp=Z,26nm,0.6s,mb5.6
IKL Isikli 88.24 334 *eP* **P** 07 36 23.2 -0.7
GUD Guadarrama 88.33 4 P **P** 07 36 23.7 -0.5
GUD pmax pmax
comp=Z,33nm,0.8s,mb5.6
GUD Guadarrama 88.33 4 P **P** 07 36 23.7 -0.6
comp=Z,33nm,0.8s,mb5.6
MTE Manteigas 88.38 7 *eP* **P** 07 36 24.1 -0.4
comp=Z,66nm,0.8s,mb5.9
GOA Goa 88.42 293 *eP* **P** 07 36 23.6 -1.3
GOA AMb AMB 07 36 28.4
comp=Z,34nm,1.3s,mb5.4
TIP Timpagrande 88.86 348 *eP* **P** 07 36 26.1 -0.6
comp=Z,24nm,0.8s,mb5.6
PCBR Castelo Branco 88.94 7 *eP* **P** 07 36 26.2 -0.9
comp=Z,40nm,0.8s,mb5.8
ESDC Sonseca Array 89.31 4 P **P** 07 36 27.9 -0.9
comp=Z,25nm,0.8s,mb5.6,baz=354,slow=4.6,SNR=66
ESDC Sonseca Array 89.31 4 P **P** 07 36 27.7 -1.1
comp=Z,33nm,0.9s,mb5.7
ESLA Sonseca Array 89.31 4 *eP* **P** 07 36 28.2 -0.7
comp=Z,5.2nm,0.8s,mb4.9
PMRV Marv??o 89.36 7 *eP* **P** 07 36 28.3 -0.8
PAB San Pablo 89.42 4 P **P** 07 36 28.7 -0.7
PAB pmax pmax
comp=Z,15nm,0.8s,mb5.4
PAB San Pablo 89.42 4 *eP* **P** 07 36 28.6 -0.8
comp=Z,16nm,0.8s,mb5.4
PAB LR LR
comp=Z,6μm,21.0s,MS6.0
ICM Isla Caja Muer 89.47 62 *eP* **P** 07 36 30.4 +0.5
ECHE Chera 89.48 2 P **P** 07 36 29.7 +0.1
ECHE pmax pmax
comp=Z,38nm,0.8s,mb5.8
ECHE Chera 89.48 2 P **P** 07 36 29.7 +0.1
comp=Z,38nm,0.8s,mb5.8
SJG San Juan 89.50 61 *eP* **P** 07 36 30.9 +0.8
SJG pmax pmax
comp=Z,82nm,0.8s
SJG San Juan 89.50 61 *eP* **P** 07 36 30.9 +0.8
comp=Z,82nm,0.8s,mb6.1
CSS Prodhromos 89.53 334 *eP* **P** 07 36 28.9 -1.1
comp=Z,40nm,0.9s,mb5.8
MIB Mutribah 89.54 321 *eP* **P** 07 36 29.4 -0.7
baz=321
MIB AMb AMB 07 36 31.2
comp=Z,134nm,0.8s,mb6.3,baz=321
UMR Umm Al-Rimmam 89.62 321 *eP* **P** 07 36 29.4 -1.1
baz=321
UMR AMb AMB 07 36 31.0
comp=Z,59nm,0.7s,mb6.0,baz=321
PMAFR Mafra 89.68 8 *eP* **P** 07 36 30.0 -0.6
STKA Stephens Creek 89.79 213 P **P** 07 36 30.4 -0.5
comp=Z,41nm,0.8s,mb5.8,baz=342,slow=6.5,SNR=51
STKA Stephens Creek 89.79 213 *eP* **P** 07 36 30.5 -0.4
comp=Z,32nm,0.8s,mb5.7
STKA Stephens Creek 89.79 213 *eP* **P** 07 36 30.2 -0.6
comp=Z,8.6nm,0.8s,mb5.1
STKA *e* pP 07 36 42.9 -0.3
MBWA Marble Bar 89.87 235 *eP* **P** 07 36 30.8 -0.7
comp=Z,18nm,0.8s,mb5.4
CEL Celeste 89.87 348 *eP* **P** 07 36 29.5 -2.0
comp=Z,47nm,0.8s,mb5.9
PESTR Estremoz 89.90 7 *eP* **P** 07 36 30.9 -0.7
comp=Z,39nm,0.8s,mb5.8
KBD Kabd 89.96 320 *eP* **P** 07 36 30.5 -1.5
baz=320
KBD AMb AMB 07 36 35.1
comp=Z,34nm,1.1s,mb5.6,baz=320
EBAD Badajoz 90.05 6 P **P** 07 36 30.7 -1.6
comp=Z,22nm,0.9s,mb5.5
NAY Al-Naaiem 90.07 321 *eP* **P** 07 36 31.5 -1.1
baz=321
NAY AMb AMB 07 36 39.3
comp=Z,31nm,1.2s,mb5.5,baz=321
EVO Evora 90.20 7 *eP* **P** 07 36 32.0 -1.0
comp=Z,58nm,1.2s,mb5.5
EVO Evora 90.20 7 *eP* **P** 07 36 32.4 -0.6
RDF Al-Radifah 90.24 320 *eP* **P** 07 36 32.6 -0.8
baz=320
RDF AMb AMB 07 36 34.5
comp=Z,102nm,0.7s,mb6.3,baz=320
QRN Al-Qurain 90.25 320 *eP* **P** 07 36 32.9 -0.6
baz=320
QRN AMb AMB 07 36 38.0
comp=Z,83nm,1.2s,mb5.9,baz=320
EBEN Beniarda 90.37 1 P **P** 07 36 34.4 +0.6
comp=Z,27nm,0.7s,mb5.7
EVIA Vianos 90.39 3 P **P** 07 36 33.2 -0.7
EVIA pmax pmax
comp=Z,31nm,0.9s,mb5.6
EVIA Vianos 90.39 3 P **P** 07 36 33.2 -0.7
comp=Z,31nm,0.9s,mb5.6
ETOB Tobarra 90.41 2 P **P** 07 36 34.2 +0.1
comp=Z,47nm,0.8s,mb5.9
KOD Kodaikanal 90.42 287 *eP* **P** 07 36 34.9 +0.5
KOD AMb AMB 07 36 37.8
comp=Z,22nm,1.4s,mb5.3
CNB Canberra Magne 90.62 205 *eP* **P** 07 36 33.6 -1.1
PBAR Barrancos 90.63 6 *eP* **P** 07 36 34.4 -0.6
comp=Z,65nm,1.2s,mb5.8
PBEJ Beja 90.72 7 *eP* **P** 07 36 35.2 -0.2
MMAI Mount Meron Ar 90.76 332 P **P** 07 36 35.4 -0.4
comp=Z,17nm,0.9s,mb5.4,baz=30,slow=5.8,SNR=15
EADA Adamuz 90.78 4 P **P** 07 36 35.9 +0.1
comp=Z,34nm,0.8s,mb5.7
PALK Pallekele 90.78 283 *eP* **P** 07 36 36.2 +0.1
PALK pmax pmax
comp=Z,14nm,0.7s,mb5.4
PALK Pallekele 90.78 283 *eP* **P** 07 36 36.1 +0.1
comp=Z,14nm,0.7s,mb5.4
EBAN Banos Encina 90.82 4 P **P** 07 36 36.4 +0.5
EBAN pmax pmax
comp=Z,31nm,0.8s,mb5.7
EBAN Banos Encina 90.82 4 P **P** 07 36 36.4 +0.4
comp=Z,31nm,0.8s,mb5.7

EMIN Mina Concepcio 91.06 6 P **P** 07 36 36.8 -0.2
comp=Z,31nm,0.8s,mb5.7
ASF Jabal al Asfar 91.09 330 P **P** 07 36 37.3 0.0
comp=Z,14nm,0.8s,mb5.4,baz=263,slow=4.3,SNR=22
PTEO Sao Teotonio 91.12 8 *eP* **P** 07 36 37.6 +0.3
EGRO El Granado 91.23 7 P **P** 07 36 35.3 -2.5
comp=Z,54nm,0.8s,mb5.9
IDI Anoyia 91.27 341 P **P** 07 36 38.3 +0.2
comp=Z,14nm,0.8s,mb5.3,baz=3.2,slow=19,SNR=5.6
PVAQ Vaqueiros 91.34 7 *eP* **P** 07 36 38.1 -0.3
ECOG Cogollos-Vega 91.71 4 P **P** 07 36 40.5 +0.4
ECOG pmax pmax
comp=Z,20nm,0.8s,mb5.5
ECOG Cogollos-Vega 91.71 4 P **P** 07 36 40.5 +0.4
comp=Z,20nm,0.8s,mb5.5
ELOJ Sierra Loja 91.82 4 P **P** 07 36 41.1 +0.5
ELOJ pmax pmax
comp=Z,43nm,1.0s,mb5.7
ELOJ Sierra Loja 91.82 4 P **P** 07 36 41.1 +0.5
comp=Z,43nm,1.0s,mb5.7
ERON Agron 91.96 4 P **P** 07 36 40.8 -0.4
comp=Z,23nm,0.8s,mb5.5
ESPR Espera 92.00 6 P **P** 07 36 40.8 -0.7
comp=Z,37nm,0.9s,mb5.7
EGUA Guajares 92.15 4 P **P** 07 36 41.4 -0.8
comp=Z,175nm,0.8s,mb6.4
EMIJ Mijas 92.37 5 P **P** 07 36 42.7 -0.4
comp=Z,44nm,0.7s,mb5.9
EJIF Jimena Fronter 92.44 5 P **P** 07 36 43.1 -0.4
EJIF pmax pmax
comp=Z,611nm,3.2s
EJIF Jimena Fronter 92.44 5 P **P** 07 36 43.1 -0.4
comp=Z,611nm,3.2s
KEST Kesra 93.04 353 P **P** 07 36 46.0 -0.2
comp=Z,10.0nm,0.9s,mb5.3,baz=306,slow=0.6,SNR=23
TOO Toolangi 93.81 208 *eP* **P** 07 36 50.2 +0.8
EIL Elat 94.02 331 P **P** 07 36 50.0 -0.8
comp=Z,2.5nm,0.6s,mb4.8,baz=61,slow=19,SNR=2.6
FORT Forest 94.06 224 *eP* **P** 07 36 46.4 -4.3
comp=Z,30nm,0.8s,mb5.8
FORT Forrest 94.06 224 *eP* **P** 07 36 50.5 -0.2
comp=Z,45nm,0.9s,mb5.9
SDV Santo Domingo 94.35 70 *eP* **P** 07 36 50.3 -2.3
comp=Z,10nm,0.8s,mb5.3
TORD Torodi Ar. Bea 115.83 359 PKP PKPdf 07 42 14.9 -0.4
comp=Z,0.9nm,0.4s,baz=351,slow=2.2,SNR=12
TORD PKKPbc PKKPbc 07 52 43.5 -1.4
comp=Z,2.1nm,0.9s,baz=176,slow=2.4,SNR=5.9
SIV San Ignacio 119.72 78 PKP PKPdf 07 42 21.7 -1.0
comp=Z,2.4nm,0.8s,baz=37,slow=0.9,SNR=8.4
DBIC Dimbokro 122.05 7 PKP PKPdf 07 42 26.5 -0.9
comp=Z,9.0nm,0.6s,baz=41,slow=1.2,SNR=15
DBIC Dimbokro 122.05 7 PKIKP PKPdf 07 42 26.8 -0.6
DBIC Dimbokro 122.05 7 *e*PKPdf PKPdf 07 42 26.1 -1.3
TIC Toumodi 122.06 7 *e*PKP1 PKPdf 07 42 26.4 -1.0
comp=Z,58nm,0.7s
KIC Kosan Boka 122.36 7 *e*PKP1 PKPdf 07 42 26.9 -1.1
comp=Z,56nm,0.7s
LIC Lamto 122.48 7 *e*PKP1 PKPdf 07 42 26.2 -2.0
comp=Z,52nm,0.7s
LIC Lamto 122.48 7 *e*PKIKP PKPdf 07 42 27.8 -0.4
comp=Z,32nm,0.7s
LCO Las Campanas 123.23 96 *e*PKPdf PKPdf 07 42 28.4 -0.7
BDFB Brasilia 127.24 66 PKP PKPdf 07 42 36.1 -1.0
comp=Z,1.6nm,0.6s,baz=51,slow=11,SNR=6.2
CPUP Villa Florida 129.72 83 PKP PKPdf 07 42 41.2 -0.4
comp=Z,4.9nm,0.8s,baz=317,slow=2.6,SNR=20
CPUP Villa Florida 129.72 83 PKIKP PKPdf 07 42 41.2 -0.4
CPUP pmax pmax
comp=Z,5.0nm,0.8s
CPUP Villa Florida 129.72 83 *e*PKPdf PKPdf 07 42 40.9 -0.7
TRQA Tornquist 134.66 99 *e*PKPdf PKPdf 07 42 49.1 -1.5
QSPA South Pole Qui 141.05 180 PKhKP 07 42 54.1
comp=Z,4.3nm,0.6s,baz=155,slow=0.3,SNR=12
TSUM Tsumeb 145.41 332 PKPbc PKPbc 07 43 10.5 0.0
comp=Z,74nm,0.8s,baz=351,slow=6.0,SNR=130
TSUM Tsumeb 145.41 332 *e*PKPdf PKPdf 07 43 10.0 -0.6
MAW Mawson 146.34 218 PKPbc PKPbc 07 43 11.6 -0.4
comp=Z,27nm,0.7s,baz=91,slow=3.3,SNR=20
MAW Mawson 146.34 218 PKP2 PKPab 07 43 11.6 -1.3
MAW pmax pmax
comp=Z,27nm,0.7s
MAW Mawson 146.34 218 *e*PKP PKPdf 07 43 11.7 +1.1
comp=Z,23nm,0.8s
MAW Mawson 146.34 218 *e*PKPdf PKPdf 07 43 10.2 -0.4
MAW LR LR
comp=Z,5μm,22.0s,MS6.2
LBTB Lobatse 147.71 315 *e*PKP2 PKPbc 07 43 16.6 -0.5
BOSA Boshof 150.95 312 PKPbc PKPbc 07 43 24.9 -0.2
comp=Z,28nm,0.6s,baz=28,slow=2.3,SNR=64
BOSA Boshof 150.95 312 *e*PKPdf PKPdf 07 43 20.9 +1.5
BOSA *e*PKPbc PKPbc 07 43 25.2 +0.1
SYO Syowa Base 154.54 212 *i* PKPdf PKPbc 07 43 27.5 -4.3
SYO Syowa Base 154.54 212 *e*PKiKP PKPab 07 43 43.2 -3.4
SUR Sutherland 156.16 315 PKPab PKPab 07 43 56.2 +1.6
comp=Z,8.1nm,0.7s,baz=38,slow=3.1,SNR=6.5
VNA3 Neumayer Olymp 159.40 170 *e*PKPdf PKPdf 07 43 28.5 -1.0
VNA3 *e* 07 43 31.8
VNA3 *e* 07 44 06.1
SNAA Sanae 159.48 177 *e*PKPdf PKPdf 07 43 27.1 -2.4
SNAA *e* 07 43 31.9
SNAA *e* 07 44 06.8
SNAA Sanae 159.48 177 *e*PKPdf PKPdf 07 43 28.2 -1.4
VNA2 Neumayer--Watz 159.93 172 *e*PKPdf PKPdf 07 43 29.6 -0.5
baz=244,slow=1.3
VNA2 Neumayer--Watz 159.93 172 *e*PKPdf PKPdf 07 43 29.6 -0.5
baz=168,slow=1.7
VNA2 *e* 07 43 32.8
VNA2 *e* 07 44 10.3
VNA1 Neumayer--Stat 160.11 171 *e*PKPdf PKPdf 07 43 29.8 -0.5
VNA1 Neumayer--Stat 160.11 171 *e*PKPdf PKPdf 07 43 29.8 -0.5
VNA1 *e* 07 43 32.8
VNA1 *e* 07 44 09.0

BGS **21** *07:24:25.3± 1.8, 49 56N × 178 91W, h33 km, mb6.0, MS5.9*
BJI **21** *07:24:32.5, 51.17N × 179 22W, h26 km, mB6.3, mb6.1, Ms6.1, Msz5.9*
MOS **21** *07:24:33.5± 0.9, 51 33N × 178 92W, h33 km, mb6.3/98, MS6.0/68, Error ellipse: s-maj=7.8km s-min=4.0km az=96.1*
ISCJB **21** *07:24:33.8± 0.1, 51 29N ± 002 × 178 95W ± 002, h36 km, mb6.0/338, MS6.0/182, Error ellipse: s-maj=3.4km s-min=1.5km az=4.2*
IDC **21** *07:24:34.0± 1.6, 51 32N × 178 90W, h27 km ± 10 km, mb5.6/50, mb1 5.6/51, mb1mx5.6/52, mbtmp5.6/51, ML6.0/1, MS6.0/5, Ms1 6.0/5, ms1mx5.3/11, Error ellipse: s-maj=10.8km s-min=7.8km az=154.0*
GCMT **21** *07:24:34.7 ± 0.1, 51 07N × 178 88W, h32 km, MW6.3/118, Moment Tensor Solution. s117,c282; s118,c445; Duration: 3:3 Moment tensor: Scale 10 18 Nm; Mrr 2.03±.02; Mθθ -2.04±.01; Mφφ 0.01±.01; Mrθ 1.93±.03; Mθφ -0.55±.01; Mφr 1.11±.03; Best double couple: Mo 3.06600 × 10 18 NP1: φs 268.00000°, δ 23.00000°, λ 112.00000°. NP2: φs 64.00000°, δ 69.00000°, λ 81.00000°. Principal axes: T 3.0370, Plg65.0000°, Azm319.0000°; N 0.0610, Plg8.0000°, Azm68.0000°; P -3.0940, Plg23.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC **21** *07:24:34.0± 0.1, 51 37N × 178 98W, h25 km, mb6.1/195, ME6.1, ML6.3(AEIC) Error ellipse: s-maj=4.0km s-min=2.9km az=176.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt on Adak.
SZGRF **21** *07:24:38.3, 51 60N × 179 83E, h33 km, mb6.1, MS6.1, Rat Islands, Aleutian Islands, United States*
DJA **21** *07:24:54, 51 53N × 178 36W, h209 km, Mw5.8/16*
ISC 21 07:24:35.8±0.1,**51 34N**±002×**178 97W**±002,**h38**km, **h38**km±1.9km:**pP-P, n1266, c0§78**/1236,**mb6.0**/338, **MS6.0**/182,**259C-204D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
					Op	ISC	h	m	s	ISC
ADK	**Adak**	**1.53**	**68**	P	**Pn**		**07**	**25**	**01.4**	**+0.9**
ADK				S	**Sn**		**07**	**25**	**20.5**	**+1.4**
SMY	**Shemya**	**4.50**	**291**	P	**Pn**		**07**	**25**	**44.2**	**+2.9**
SMY				S	**Sn**		**07**	**26**	**38.3**	**+6.0**
FX1	**Attu Island--F**	**5.09**	**291**	Pn	**Pn**		**07**	**25**	**54.7**	**+5.3**

318nm,0.3s,baz=236,slow=23,SNR=9.3

FX1 Sn **Sn** 07 26 51.3 +4.5
baz=72,slow=20,SNR=1.2
FX1 LR LR 07 27 09.7
comp=Z,54μm,19.4s,baz=113,slow=30
FX1 Attu Island--F 5.09 291 P **Pn** 07 25 54.7 +5.3
FX1 07 26 51.3
FX1 pmax pmax
comp=Z,319nm,0.3s
FX1 MLR MLR
comp=Z,54μm,19.4s
NIKO Nikolski 6.44 71 P **Pn** 07 26 09.2 +1.3
OKCD Okmok Cone D 6.97 68 P **Pn** 07 26 17.6 +2.4
SPIA Saint Paul Isl 7.76 38 P **Pn** 07 26 30.3 +4.2
UNV Unalaska Valle 8.00 67 P **Pn** 07 26 32.6 +3.2
AKGG Akutan Green G 8.38 65 P **Pn** 07 26 37.9 +3.4
AKUT Akutan 8.49 66 P **Pn** 07 26 38.7 +2.7
AKA Akutan 8.49 66 P **Pn** 07 26 38.8 +2.7
SDPT Sand Point 11.75 63 *eP* **Pn** 07 27 22.0 +1.3
comp=Z,355nm,0.4s
CHGN Chignik 13.10 60 *eP* **Pn** 07 27 40.4 +1.3
PET Petropavlovsk 13.82 286 *c iP* **Pn** 07 27 50.9 +2.0
PET *e*S **Sn** 07 30 25.0 +4.1
PET pmax pmax
comp=Z,6μm,6.9s
PET pmax pmax
comp=Z,11μm,18.9s
PET pmax pmax
comp=Z,266nm,0.8s
PET smax
comp=N,119nm,0.9s
PET smax
comp=E,119nm,0.9s
PET MLR MLR
comp=Z,96μm,21.0s
PET MLR MLR
comp=Z,68μm,20.0s
PET Petropavlovsk 13.82 286 *e*Pn **Pn** 07 27 50.5 +1.6
comp=Z,186nm,0.8s
PETK Petropavlovsk- 14.39 286 Pn **Pn** 07 28 00.0 +3.3
comp=Z,5.8nm,0.3s,baz=93,slow=16,SNR=9.2
PETK Sn **Sn** 07 30 39.2 +4.4
comp=Z,0.5nm,0.3s,baz=80,slow=21,SNR=1.9
TNA Tin City 15.35 18 *eP* **Pn** 07 28 14.7 +5.4
comp=Z,1μm,1.4s
SKR Severo-Kuril's 15.68 277 P **Pn** 07 28 12.0 -1.6
SKR S **S** 07 31 05.8 -14
SKR pmax pmax
comp=N,160nm,0.9s
SKR pmax pmax
comp=E,160nm,0.9s
SKR pmax pmax
comp=Z,460nm,0.9s
SKR pmax pmax
comp=E,13μm,12.0s
SKR pmax pmax
comp=Z,13μm,12.0s
SKR pmax pmax
comp=N,5μm,10.0s
SKR smax
comp=N,450nm,1.0s
SKR smax
comp=E,220nm,1.0s
OHAK Old Harbor 16.05 58 *eP* **Pn** 07 28 18.3 -0.1
comp=E,194nm,0.5s
SVW2 Sparrevohn 16.18 44 *eP* **Pn** 07 28 24.5 +4.6
KDAK Kodiak Island 16.54 57 Pn **Pn** 07 28 23.8 -0.7
comp=E,5μm,0.5s,SNR=6.4
KDAK Kodiak Island 16.54 57 Pn **Pn** 07 28 22.3 -2.2
comp=E,58nm,0.3s,baz=263,slow=6.6,SNR=13
KDAK Sn **Sn** 07 31 26.3 -0.5
comp=E,7.9nm,0.3s,baz=315,slow=18,SNR=5.4
KDAK Kodiak Island 16.54 57 Pn **Pn** 07 28 22.3 -2.2
KDAK Sn **Sn** 07 31 26.3 -0.5
BILL Bilibino 18.24 342 *c iP* **Pn** 07 28 46.0 +0.5
BILL pmax pmax
comp=Z,573nm,1.0s
BILL Bilibino 18.24 342 *eP* **Pn** 07 28 48.9 +3.4
comp=Z,552nm,0.8s
FIB Fire Island 18.62 47 *eP* **Pn** 07 28 52.9 +2.7
FIB pmax pmax
comp=Z,413nm,0.6s
FIB Fire Island 18.62 47 *eP* **Pn** 07 28 52.9 +2.6
comp=Z,412nm,0.6s
SEY Seymchan 19.20 318 ⇑ *iP* **Pn** 07 28 58.4 +1.2
SEY Seymchan 19.20 318 ⇑ *iP* **Pn** 07 28 58.5 +1.3
PMR Palmer 19.23 46 *eP* **Pn** 07 29 01.3 +3.7
PMR pmax pmax
comp=Z,63nm,0.6s
PMR Palmer 19.23 46 *eP* **Pn** 07 29 01.3 +3.7
comp=Z,63nm,0.6s
MID Middleton Isla 20.05 54 *eP* **P** 07 29 06.1 +0.8
MID pmax pmax
comp=Z,1μm,0.8s
MID Middleton Isla 20.05 54 *eP* **P** 07 29 06.1 +0.8
comp=Z,1μm,0.8s
MCK McKinley 20.10 40 *eP* **P** 07 29 07.4 +1.6
MCK pmax pmax
comp=Z,480nm,0.7s
MCK McKinley 20.10 40 *eP* **P** 07 29 07.4 +1.6
comp=Z,480nm,0.7s
COLA College 21.01 38 ⇓ *iP* **P** 07 29 16.1 +0.5
COLA College 21.01 38 *eP* **P** 07 29 19.1 +3.5
comp=Z,336nm,0.7s,mb5.8
COLA LR LR
comp=Z,41μm,19.0s,MS5.8
MENT Mentasta 22.05 45 *eP* **P** 07 29 30.8 +4.0
KUR Kuril'sk 22.76 268 *eP* **P** 07 29 38.0 +3.5
MIDW Midway 23.13 176 *eP* **P** 07 29 37.3 -1.2
comp=Z,1μm,1.3s,mb6.1
MIDW LR LR
comp=Z,49μm,21.0s,MS5.9
EGAK Eagle 23.65 41 PFAKE 07 29 50.0 +6.7
EGAK LR LR
comp=Z,61μm,20.0s,MS6.1
DAWY Dawson 24.21 43 *eP* **P** 07 29 47.7 -0.6
YUK Yuzh-Kuril'sk 24.59 267 ⇓ *iP* **P** 07 29 53.0 +0.9
YUK *e* 07 30 45.0
YUK *e* 07 33 26.0
YUK *e*S **S** 07 34 16.0 +5.6
YUK *e*SS 07 35 02.0
YUK pmax pmax
comp=E,980nm,1.0s
YUK pmax pmax
comp=Z,2μm,1.0s,mb6.5
YUK pmax pmax
comp=Z,15μm,7.0s
YUK pmax pmax
comp=N,6μm,5.0s
YUK pmax pmax
comp=E,11μm,5.0s
YUK smax
comp=N,16μm,15.0s
YUK smax
comp=E,11μm,15.0s
YUK MLR MLR
comp=Z,14μm,17.0s,MS5.5
YUK MLR MLR
comp=N,5μm,14.0s,MS5.7
YUK MLR MLR
comp=E,19μm,17.0s,MS5.7
YSS Yuzh-Sakhalins 25.22 275 α *iP* **P** 07 29 59.0 +1.3
YSS *e*S **S** 07 34 22.0 +1.7
YSS pmax pmax
comp=N,430nm,1.0s
YSS pmax pmax
comp=E,850nm,1.0s
YSS pmax pmax
comp=Z,1μm,1.0s,mb6.4
YSS pmax pmax
comp=Z,7μm,6.0s
YSS pmax pmax
comp=N,3μm,8.0s
YSS pmax pmax
comp=E,4μm,8.0s
YSS MLR MLR
comp=Z,17μm,20.0s,MS5.6
YSS Yuzh-Sakhalins 25.22 275 *eP* **P** 07 29 59.6 +1.9
comp=Z,1μm,1.1s,mb6.4
YSS LR LR
comp=Z,9μm,21.0s,MS5.3
SKAG Skagway 25.66 54 P **P** 07 30 01.4 -0.2
comp=Z,61nm,0.4s,mb5.5
SIT Sitka 25.80 60 *eP* **P** 07 30 02.3 -0.6
SIT pmax pmax
comp=Z,44nm,0.7s,mb5.1
SIT Sitka 25.80 60 *eP* **P** 07 30 02.3 -0.6

comp=Z,44nm,0.7s,mb5.1
ASAJ Asahikawa 26.60 269 P **P** **07 30 11.1 +0.8**
comp=Z,732nm,1.0s,mb6.2,baz=55,slow=5.5,SNR=16
ASAJ PcP PcP 07 33 34.8 +1.3
comp=Z,66nm,1.0s,baz=247,slow=7.7,SNR=4.5
ASAJ Asahikawa 26.60 269 P **P** **07 30 11.1 +0.9**
ASAJ 07 33 34.8
ASAJ pmax pmax
comp=Z,732nm,1.0s
ERM Erimo 27.34 265 P **P** **07 30 17.2 +0.3**
ERM pmax pmax
comp=Z,450nm,1.2s,mb5.9
ERM Erimo 27.34 265 *e*P **P** **07 30 15.7 -1.1**
comp=Z,449nm,1.2s,mb5.9
ERM LR LR
comp=Z,24μm,21.0s,MS5.7
WRAK Wrangell Islan 27.52 61 *e*P **P** **07 30 21.0 +2.6**
comp=Z,81nm,0.9s,mb5.3
WRAK LR LR
comp=Z,21μm,19.0s,MS5.7
INK Inuvik 27.55 35 P **P** **07 30 18.6 0.0**
comp=Z,83nm,0.7s,mb5.5,baz=232,slow=5.9,SNR=8.9
INK PcP PcP 07 33 35.7 +0.4
comp=Z,80nm,0.9s,baz=224,slow=3.5,SNR=4.8
INK ScP ScP 07 37 13.1 +0.4
comp=Z,22nm,0.7s,baz=79,slow=29,SNR=13
INK Inuvik 27.55 35 *e*P **P** **07 30 18.4 -0.2**
comp=Z,171nm,0.9s,mb5.7
DLBC Dease Lake 28.47 56 P **P** **07 30 27.4 +0.6**
comp=Z,22nm,0.9s,mb4.8,baz=281,slow=8.7,SNR=5.8
DLBC LR LR 07 43 12.7
comp=Z,29μm,18.3s,MS5.9,baz=274,slow=39
DLBC Dease Lake 28.47 56 *e*P **P** **07 30 27.7 +0.9**
YAK Yakutsk 29.36 311 *e*P **P** **07 30 34.3 -0.4**
YAK *e* 07 31 30.2
YAK *e* 07 33 42.8
YAK *e*S **S** **07 35 25.6 +0.2**
YAK *e* 07 37 22.5
YAK *e* 07 41 17.7
YAK pmax pmax
comp=Z,32nm,1.3s,mb4.9
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,27nm,1.1s
YAK pmax pmax
comp=Z,238nm,1.4s,mb5.7
YAK pmax pmax
comp=E,270nm,1.5s
YAK pmax pmax
comp=N,93nm,1.8s
YAK smax
comp=E,139nm,2.2s
YAK smax
comp=N,253nm,1.9s
YAK MLR MLR
comp=N,24μm,22.0s,MS6.1
YAK MLR MLR
comp=Z,55μm,25.0s,MS6.1
YAK MLR MLR
comp=E,42μm,23.0s,MS6.1
YAK Yakutsk 29.36 311 *e*P **P** **07 30 34.7 0.0**
comp=E,97nm,0.8s,mb5.6
YAK LR LR
comp=Z,46μm,21.0s,MS6.1
HABR Khabarovsk 29.38 283*c i*P **P** **07 30 34.5 -0.5**
HABR *e**PP pP 07 30 43.9 -1.7
HABR *e* 07 31 29.0
HABR *e*PPP 07 31 38.1
HABR *e* 07 33 39.6
HABR *e*S **S** **07 35 27.5 +1.6**
HABR *e**SS sS 07 35 43.7 +0.3
HABR *e*SS SS 07 36 56.7 -34
HABR *e* 07 37 22.4
HABR 07 41 12.2
HABR pmax pmax
comp=Z,291nm,1.0s,mb6.0
HABR pmax pmax
comp=E,309nm,1.0s
HABR pmax pmax
comp=N,96nm,1.0s
HABR MLR MLR
comp=Z,10μm,15.0s,MS5.6
HABR MLR MLR
comp=E,11μm,16.0s,MS5.7
HABR MLR MLR
comp=N,6μm,14.0s,MS5.7
TIXI Tiksi 30.62 331⇓*i*P **P** **07 30 47.1 +1.4**
TIXI MLR MLR
comp=Z,40μm,21.0s,MS6.0
KLR Kul'dur 31.09 286 *e*P **P** **07 30 45.5 -4.6**
KLR pmax pmax
comp=N,1μm,8.0s
KLR pmax pmax
comp=E,2μm,8.0s
KLR pmax pmax
comp=Z,4μm,8.0s
KLR MLR MLR
comp=Z,22μm,16.0s,MS5.9
CLNS Chul'man 32.57 302 *e*P **P** **07 31 02.0 -1.0**
CLNS *e* 07 32 09.3
CLNS *e* 07 33 51.3
CLNS *e*S **S** **07 36 13.9 -1.7**
CLNS pmax pmax
comp=Z,41nm,1.2s,mb5.2
CLNS pmax pmax
comp=E,28nm,1.2s
CLNS pmax pmax
comp=N,32nm,1.0s
CLNS pmax pmax
comp=E,51nm,1.6s
CLNS pmax pmax
comp=Z,34nm,1.4s,mb5.1
CLNS pmax pmax
comp=N,47nm,1.5s
CLNS smax
comp=N,1μm,15.6s
CLNS smax
comp=E,4μm,15.9s
CLNS MLR MLR
comp=N,20μm,20.0s,MS5.9
CLNS MLR MLR
comp=E,14μm,21.0s,MS5.9
CLNS MLR MLR
comp=Z,16μm,21.0s,MS5.7
CLNS Chul'man 32.57 302 *e*P **P** **07 31 05.1 +2.1**
NRGR Nerungri 32.71 302 *e*P **P** **07 31 02.1 -2.1**
NRGR S **S** **07 36 20.3 +2.6**
NRGR smax
comp=N,74nm,0.7s
MJAR Matsushiro Arr 33.67 261 P **P** **07 31 13.4 +0.6**
comp=N,71nm,0.9s,mb5.6,baz=53,slow=7.5,SNR=28
MJAR PcP PcP 07 33 53.0 +1.0
comp=N,43nm,0.9s,baz=70,slow=1.6,SNR=13
MJAR S **S** **07 36 37.8 +4.7**
comp=N,0.5nm,0.3s,baz=19,slow=15,SNR=3.7
MJAR ScP ScP 07 37 34.5 +1.2
comp=N,15nm,1.1s,baz=16,slow=1.8,SNR=7.8
MJAR Matsushiro Arr 33.67 261 P **P** **07 31 13.4 +0.5**
MJAR 07 33 53.0
MJAR S **S** **07 36 37.8 +4.7**
MAJO Matsushiro 33.67 261 *e*P **P** **07 31 13.0 +0.1**
MAJO pmax pmax
comp=Z,301nm,1.0s,mb6.2
MAJO MLR MLR
comp=Z,30μm,22.0s,MS6.0
MAJO Matsushiro 33.67 261 *e*P **P** **07 31 13.0 +0.2**
comp=Z,301nm,1.0s,mb6.2
MAJO LR LR
comp=Z,30μm,22.0s,MS6.0
MAT Matsushiro 33.67 261 P **P** **07 31 12.9 0.0**
MAT S **S** **07 36 31.0 -2.1**
KIP Kipapa 34.05 143⇑*i*P **P** **07 31 16.9 +0.7**
KIP Kipapa 34.05 143 *e*P **P** **07 31 16.7 +0.5**
comp=Z,318nm,1.1s,mb6.2
KIP LR LR
comp=Z,38μm,20.0s,MS6.1
HON Honolulu 34.14 144 *e*P **P** **07 31 16.4 -0.6**
MDJ Mudanjiang 34.47 279 P **P** **07 31 18.9 -0.8**
MDJ AP pP 07 31 27.8 -2.6
MDJ XP sP 07 31 31.6 -3.3
MDJ PP PP 07 32 37.4 -0.7
MDJ PCP PcP 07 33 54.5 +0.4
MDJ S **S** **07 36 44.4 -0.9**
MDJ SCP ScP 07 37 37.3 +1.2
MDJ PCS PcS 07 37 41.0 +0.6
MDJ SCS ScS 07 41 40.0 +1.3
MDJ AMB AMB
comp=Z,228nm,1.0s,mb6.1
MDJ AMB AMB
comp=Z,3μm,7.2s
MDJ LR LR
comp=N,8μm,16.9s,MS5.9
MDJ LR LR
comp=E,20μm,19.7s,MS5.9
MDJ LR LR
comp=Z,27μm,22.5s,MS5.9
MDJ Mudanjiang 34.47 279 *e*P **P** **07 31 19.9 +0.2**
comp=Z,216nm,0.9s,mb6.1
MDJ LR LR
comp=Z,30μm,22.0s,MS6.0
C03A Quillayute Air 34.72 74⇑P **P** **07 31 22.3 +0.6**
baz=35
C03A ⇑S **S** **07 36 54.4 +5.4**
baz=35
JHJ Hachijo jima 2 34.98 255 P **P** **07 31 25.9 +1.7**
comp=Z,544nm,0.9s,mb6.5,baz=265,slow=1.0,SNR=6.9
PGC Sidney 35.08 72 *e*P **P** **07 31 25.9 +1.0**
comp=Z,27nm,1.4s,mb5.0
B04A Port Angeles 35.30 73⇑P **P** **07 31 27.3 +0.4**
baz=35,SNR=10.0
B04A ⇓S **S** **07 37 01.7 +3.6**
baz=35
YKA Yellowknife Ar 35.34 46 P **P** **07 31 26.0 -0.9**
comp=Z,24nm,0.5s,mb5.4,baz=282,slow=7.1,SNR=18
YKA PcP PcP 07 33 55.9 -0.4
comp=Z,56nm,0.9s,baz=290,slow=2.6,SNR=11
YKA ScP ScP 07 37 37.4 -1.5
comp=Z,13nm,0.8s,baz=284,slow=3.6,SNR=14
YKA P3KPbc 08 02 11.4
comp=Z,1.2nm,0.7s,baz=97,slow=5.2,SNR=13
YKA Yellowknife Ar 35.34 46 P **P** **07 31 26.1 -0.8**
YKA 07 33 55.9
YKA Yellowknife Ar 35.34 46 P **P** **07 31 26.1 -0.9**
YKA PcP PcP 07 33 55.9 -0.4
YKA ScP ScP 07 37 37.4 -1.5
YKA *e* 08 02 11.4
NLWA Neilton Lookou 35.39 74⇑P **P** **07 31 28.2 +0.7**
baz=35
NLWA ⇓S **S** **07 37 03.3 +3.9**
baz=35
NLWA Neilton Lookou 35.39 74 *e*P **P** **07 31 28.4 +0.8**
comp=Z,320nm,1.0s,mb6.2
NLWA *e* pP 07 31 40.8 +2.5
NLWA LR LR
comp=Z,30μm,21.0s,MS6.0
A04A Legoe Bay, Lum 35.49 72⇑P **P** **07 31 29.2 +0.8**
baz=35
A04A ⇑S **S** **07 37 03.7 +2.8**
baz=35
D03A Wishkah Elem. 35.57 75⇑P **P** **07 31 29.9 +0.7**
baz=36
D03A ⇑S **S** **07 37 06.6 +4.4**
baz=36
A05A Maple Falls 35.73 71⇓P **P** **07 31 31.1 +0.6**
baz=36,SNR=11
A05A ⇓S **S** **07 37 06.2 +1.5**
baz=36
C04A Brinnon 35.78 73⇑P **P** **07 31 31.6 +0.7**
baz=36
C04A ⇓S **S** **07 37 08.6 +3.3**
baz=36
E03A Lebam 35.97 75⇑P **P** **07 31 33.5 +0.9**
baz=36,SNR=13
E03A ⇑S **S** **07 37 12.1 +3.9**
baz=36
A06A Chilliwack 36.05 70⇓P **P** **07 31 34.0 +0.8**
baz=36,SNR=6.4
A06A ⇓S **S** **07 37 09.3 -0.1**
baz=36
B05A Bryant 36.05 72⇓P **P** **07 31 34.3 +1.0**
baz=36,SNR=18
B05A ⇑S **S** **07 37 11.8 +2.2**
baz=36
D04A Dobbs Creek Ra 36.16 74⇑P **P** **07 31 35.3 +1.2**
baz=36
D04A ⇑S **S** **07 37 16.2 +5.0**
baz=36
F03A Seaside 36.27 76⇑P **P** **07 31 35.9 +0.8**
baz=36
F03A ⇑S **S** **07 37 17.1 +4.2**
baz=36
B06A Marblemount 36.30 71⇑P **P** **07 31 36.0 +0.6**
baz=36,SNR=11
B06A ⇑S **S** **07 37 15.5 +2.1**
baz=36
E04A Onalaska 36.46 75⇑P **P** **07 31 37.4 +0.7**
baz=36
E04A ⇑S **S** **07 37 20.2 +4.5**
baz=36
HEBO Mount Hebo 36.50 77 *e*P **P** **07 31 38.0 +0.9**
comp=Z,522nm,1.1s,mb6.3
POHA Pohakuloa 36.51 141 *e*P **P** **07 31 37.6 +0.2**
comp=Z,260nm,1.1s,mb6.0
POHA LR LR
comp=Z,45μm,21.0s,MS6.2
C05A Tolt Reservoir 36.56 73⇓P **P** **07 31 38.3 +0.7**
baz=36,SNR=17
C05A ⇑S **S** **07 37 19.7 +2.4**
baz=36
H02A Toledo 36.62 78⇓P **P** **07 31 39.0 +0.9**
baz=36
H02A ⇓S **S** **07 37 22.2 +3.9**
baz=36
G03A Yamhill 36.74 77⇓P **P** **07 31 40.0 +0.8**
baz=37,SNR=9.3
G03A ⇓S **S** **07 37 23.1 +3.1**
baz=37
C06A Tall Timber Ra 36.93 72⇑P **P** **07 31 41.7 +1.0**
baz=37,SNR=9.5
C06A ⇑S **S** **07 37 23.6 +0.7**
baz=37
F04A Amboy 36.96 76⇑P **P** **07 31 41.7 +0.7**
baz=37,SNR=19
F04A ⇓S **S** **07 37 26.4 +3.0**
baz=37
E05A Randle 37.05 74⇓P **P** **07 31 42.8 +1.0**
baz=37
E05A ⇑S **S** **07 37 27.4 +2.6**
baz=37
H03A Soap Creek Ran 37.06 78⇑P **P** **07 31 42.8 +1.0**
baz=37,SNR=8.6
I02A Mapleton 37.07 79⇑P **P** **07 31 42.9 +0.9**
baz=37
COR Corvallis 37.10 78 *e*P **P** **07 31 44.0 +1.8**
COR *e* 07 31 59.1
COR pmax pmax
comp=Z,433nm,0.9s,mb6.3
COR MLR MLR
comp=Z,31μm,22.0s,MS6.1
COR Corvallis 37.10 78 *e*P **P** **07 31 44.0 +1.8**
comp=Z,433nm,0.9s,mb6.3
COR *e* 07 31 59.1
COR LR LR
comp=Z,31μm,22.0s,MS6.1
B07A Winthrop 37.14 71⇓P **P** **07 31 43.1 +0.6**
baz=37
G04A Mulino 37.29 77⇓P **P** **07 31 44.7 +0.9**
baz=37,SNR=8.3
D06A Cle Elum 37.30 73⇓P **P** **07 31 44.4 +0.5**
baz=37,SNR=14
A08A Turner Farm, O 37.41 70⇓P **P** **07 31 45.1 +0.3**
baz=37
I03A Eugene 37.43 79⇑P **P** **07 31 46.1 +1.1**
baz=37,SNR=7.4
CN2 Changchun 37.45 281⇓P **P** **07 31 44.8 -0.4**
CN2 *e*XP sP 07 31 58.5 -1.9
CN2 PP PP 07 33 12.5 +1.6
CN2 PCP PcP 07 34 04.8 +1.8
CN2 *e*S **S** **07 37 30.3 -0.6**
CN2 LR LR
comp=N,12μm,17.0s,MS6.0
CN2 LR LR
comp=E,14μm,17.0s,MS6.0
CN2 LR LR
comp=Z,18μm,21.0s,MS5.8
C07A Waterville 37.53 72⇓P **P** **07 31 46.4 +0.6**
baz=37
E06A Yakima 37.53 74⇓P **P** **07 31 46.7 +0.9**
baz=37,SNR=8.7
F05A White Salmon 37.57 75⇑P **P** **07 31 46.7 +0.5**
baz=38
B08A Colville Reser 37.65 70⇑P **P** **07 31 47.4 +0.5**
baz=38
H04A Detroit Lake 37.73 77⇑P **P** **07 31 48.1 +0.6**
baz=38,SNR=22
A09A Danville 37.81 69⇓P **P** **07 31 48.7 +0.5**
baz=38
D07A Quincy 37.82 72⇓P **P** **07 31 48.9 +0.6**
baz=38,SNR=6.3
CBIJ Chichi jima 37.97 245 P **P** **07 31 49.9 +0.1**
comp=Z,205nm,0.8s,mb5.9,baz=24,slow=7.9,SNR=6.1
G05A Wamic 37.98 76⇑P **P** **07 31 50.3 +0.7**
baz=38,SNR=10
F06A Goldendale 38.04 75⇑P **P** **07 31 50.9 +0.8**
baz=38,SNR=8.8
C08A Higginbotham F 38.09 71⇑P **P** **07 31 50.7 +0.2**
baz=38,SNR=12
HIA Hailar 38.20 292⇑*i*P **P** **07 31 50.9 -0.5**
HIA Hailar 38.20 292 *e*P **P** **07 31 50.5 -0.9**
comp=Z,176nm,0.8s,mb5.8
HIA LR LR
comp=Z,42μm,20.0s,MS6.2
E07A Sunnyside 38.20 73⇓P **P** **07 31 51.6 +0.1**
baz=38,SNR=15
B09A Rice 38.32 70⇓P **P** **07 31 52.9 +0.4**
baz=38
H05A Madras 38.34 77⇑P **P** **07 31 53.1 +0.4**
baz=38,SNR=14
HUMO Hull Mountain 38.36 81 PFAKE 07 32 00.0 +7.1
HUMO LR LR
comp=Z,34μm,22.0s,MS6.1
G06A Carlson Farm, 38.39 76⇑P **P** **07 31 53.5 +0.4**
baz=38
A10A Northport 38.41 69⇑P **P** **07 31 53.4 +0.2**
baz=38,SNR=15
HAWA Hanford 38.48 73 PFAKE 07 32 00.0 +6.2
HAWA LR LR
comp=Z,19μm,22.0s,MS5.9
F07A Phinny Hill Vi 38.49 74⇑P **P** **07 31 54.5 +0.6**
baz=38,SNR=20
D08A Wollman Farm, 38.52 72⇑P **P** **07 31 54.1 -0.1**
baz=38
C09A Chrisman Ranch 38.54 71⇓P **P** **07 31 54.2 -0.1**
baz=38
I05A Bend 38.56 77⇓P **P** **07 31 54.9 +0.3**
baz=38,SNR=12
E08A Dider Farm, El 38.71 73⇑P **P** **07 31 56.1 +0.3**
baz=39,SNR=14
H06A Lindquist Farm 38.84 76⇑P **P** **07 31 56.9 0.0**
baz=39,SNR=9.5
D09A Jones Farm, Ri 38.88 72⇑P **P** **07 31 57.3 +0.2**
baz=39,SNR=14
B10A Chitwood Farm, 38.92 69⇑P **P** **07 31 57.5 0.0**
baz=39,SNR=14
G07A Ruggs Ranch, H 38.96 75⇑P **P** **07 31 57.6 -0.3**
baz=39,SNR=6.6
YBH Yreka Blue Hor 38.99 82 P **P** **07 31 59.0 +0.8**
comp=Z,61nm,0.8s,mb5.4,baz=282,slow=4.5,SNR=11
YBH Yreka Blue Hor 38.99 82 P **P** **07 31 59.0 +0.8**
YBH LR LR
comp=Z,27μm,22.0s,MS6.0
NEW Newport 39.00 69 *e*P **P** **07 31 58.0 -0.2**
NEW pmax pmax
comp=Z,223nm,0.6s
NEW MLR MLR
comp=Z,17μm,22.0s
NEW Newport 39.00 69 *e*P **P** **07 31 58.0 -0.1**
comp=Z,223nm,0.6s,mb6.1
NEW LR LR
comp=Z,17μm,22.0s,MS5.8
C10A Spilker Farm, 39.10 70⇑P **P** **07 31 58.8 -0.2**
baz=39,SNR=11
A11A Hall Mountain, 39.11 68⇑P **P** **07 31 59.3 +0.2**
baz=39
F08A Pendleton 39.23 74⇑P **P** **07 32 00.3 +0.2**
baz=39,SNR=9.1
E09A Wood Farm, Sta 39.25 72⇑P **P** **07 32 00.4 +0.2**
baz=39,SNR=13
I06A Prineville 39.33 77⇓P **P** **07 32 01.2 +0.3**
baz=39
B11A Sandpoint 39.36 69⇓P **P** **07 32 01.1 0.0**
baz=39
G08A Pilot Rock 39.38 75⇑P **P** **07 32 01.2 -0.2**
baz=39,SNR=6.7
D10A Wagner Farm, O 39.50 71⇑P **P** **07 32 02.2 -0.1**
baz=39
KSRS Korea Array 39.53 271 P **P** **07 32 03.2 +0.5**
comp=Z,205nm,0.9s,mb5.8,baz=56,slow=7.9,SNR=32
KSRS PcP PcP 07 34 11.0 +1.4
comp=Z,44nm,0.9s,baz=65,slow=3.3,SNR=9.9
KSRS ScP ScP 07 37 57.6 +2.6
comp=Z,4.8nm,1.0s,baz=67,slow=4.7,SNR=3.9
KSRS Korea Array 39.53 271 P **P** **07 32 03.3 +0.6**
KSRS 07 34 11.0
KSRS 07 37 57.7
KSRS pmax pmax
comp=Z,205nm,1.0s,mb5.8
A12A Yaak River Ran 39.54 68⇓P **P** **07 32 02.6 -0.1**
baz=39
K05A Summer Lake 39.57 79⇑P **P** **07 32 03.4 +0.4**
baz=40,SNR=7.9
SNY Shenyang 39.68 279⇑P **P** **07 32 04.3 +0.4**
SNY AMB AMB
comp=Z,158nm,1.0s,mb5.7
SNY AMB AMB
comp=Z,6μm,8.0s
SNY LR LR
comp=N,17μm,25.2s,MS5.9
SNY LR LR
comp=E,10μm,22.8s,MS5.9
SNY LR LR
comp=Z,21μm,21.6s,MS5.9
I07A Izee 39.68 76⇑P **P** **07 32 03.8 -0.1**
baz=40,SNR=14
WDC Whiskeytown Da 39.75 83 PFAKE 07 32 10.0 +5.5
WDC LR LR
comp=Z,10μm,20.0s,MS5.7
B12A Libby 39.80 68⇑P **P** **07 32 04.8 0.0**
baz=40,SNR=7.5
F09A S2 Ranch, Elgi 39.80 73⇓P **P** **07 32 04.9 +0.1**
baz=40,SNR=13
RES Resolute Bay 39.82 24 *e*P **P** **07 32 04.7 0.0**
RES pmax pmax
comp=Z,28nm,0.7s,mb5.1
RES Resolute Bay 39.82 24 *e*P **P** **07 32 04.7 0.0**
comp=Z,28nm,0.7s,mb5.1
H08A Prairie City 39.96 75⇑P **P** **07 32 06.1 -0.1**
baz=40
D11A Klaveano Farm, 40.06 71⇑P **P** **07 32 06.1 -0.9**
baz=40,SNR=18
F10A Beach Ranch, E 40.07 73⇑P **P** **07 32 06.7 -0.5**
baz=40
G09A Cove 40.10 74⇑P **P** **07 32 07.4 +0.1**
baz=40,SNR=12
J07A Hines 40.18 77⇑P **P** **07 32 07.9 -0.2**
baz=40
C12B Naegeli Ranch, 40.24 69⇑P **P** **07 32 08.0 -0.4**
baz=40
I08A Drewsey 40.35 76⇑P **P** **07 32 09.5 +0.1**
baz=40
HOPS Hopland 40.35 85 *e*P **P** **07 32 13.3 +3.8**
comp=Z,179nm,1.0s,mb5.8
HOPS *e* 07 32 27.6
HOPS LR LR
comp=Z,23μm,20.0s,MS6.0
MOD Modoc 40.39 80 PFAKE 07 32 20.0 +10
MOD LR LR
comp=Z,32μm,20.0s,MS6.2
WALA Waterton Lakes 40.48 67 *e*P **P** **07 32 10.4 -0.1**
comp=Z,4.9nm,0.7s
G10A Bishop Farm, J 40.49 73⇑P **P** **07 32 10.3 -0.3**
baz=40
H09A Durkee 40.49 75⇑P **P** **07 32 10.3 -0.3**
baz=40,SNR=8.6
B13A Whitefish 40.50 68⇓P **P** **07 32 10.4 -0.2**
baz=40,SNR=7.5
K07A Rock Creek Ran 40.60 78⇓P **P** **07 32 12.0 +0.5**
baz=40
BMO Blue Mountains 40.61 74 PFAKE 07 32 20.0 +8.4
BMO LR LR
comp=Z,22μm,22.0s,MS6.0
J08A Circle Bar Ran 40.70 77⇑P **P** **07 32 12.4 0.0**
baz=41,SNR=14
F11A Grangeville 40.76 72⇑P **P** **07 32 12.3 -0.5**
baz=41
C13A Hot Springs 40.78 69⇑P **P** **07 32 12.6 -0.3**
baz=41
A14A Double T Ranch 40.81 67⇓P **P** **07 32 12.7 -0.5**
baz=41
I09A Lost Marbles R 40.82 76⇓P **P** **07 32 13.3 0.0**
baz=41,SNR=6.6

L07A **Adell** 40.92 79 ⇑P P 07 32 14.3 +0.2
baz=41,SNR=10
MCCM **Marconi Confer** 40.98 86 PFAKE 07 32 20.0 +5.3
MCCM LR LR
comp=Z,14µm,21.0s,MS5.8
K08A **Mann Creek Ran** 41.04 78 ⇑P P 07 32 15.2 0.0
baz=41
H10A **Noah's Angus R** 41.09 74 ⇑P P 07 32 15.3 -0.2
baz=41
WVOR **Wild Horse Val** 41.12 78 PFAKE 07 32 30.0 +14
WVOR LR LR
comp=Z,24µm,20.0s,MS6.1
D13A **Huson** 41.14 70 ⇓P P 07 32 15.3 -0.7
baz=41
J09A **Fry Pan Ranch,** 41.15 76 ⇑P P 07 32 16.0 0.0
baz=41
B14A **Marquette Ranc** 41.20 67 ⇑P P 07 32 15.6 -0.7
baz=41
A15A **Johnson Ranch,** 41.20 66 ⇓P P 07 32 15.7 -0.7
baz=41
I10A **Payette** 41.32 75 ⇑P P 07 32 17.8 +0.3
baz=41
N06A **Buffalo Meadow** 41.34 81 ⇓P P 07 32 17.8 +0.2
baz=41
M07A **Soldier Meadow** 41.38 80 ⇑P P 07 32 18.3 +0.3
baz=41
H11A **Donnelly** 41.47 74 ⇓P P 07 32 18.4 -0.2
baz=41
BEKR **Beckwourth** 41.52 82 ⇑P P 07 32 18.9 -0.2
baz=41
K09A **Rome** 41.52 77 ⇑P P 07 32 18.6 -0.5
baz=41
MSO **Missoula** 41.58 70 PFAKE 07 32 30.0 +10
MSO LR LR
comp=Z,7µm,19.0s,MS5.6
B15A **Bradely Ranch,** 41.63 67 ⇓P P 07 32 19.2 -0.7
baz=42
E13A **Victor** 41.64 70 ⇑P P 07 32 19.3 -0.7
baz=42
O06A **Flanigan** 41.68 82 ⇓P P 07 32 20.7 +0.2
baz=42,SNR=6.3
J10A **Berg Farm, Mel** 41.71 76 ⇓P P 07 32 20.6 0.0
baz=42,SNR=13
D14A **Greenough** 41.71 69 ⇓P P 07 32 20.0 -0.6
baz=42
M08A **Happy Creek Ra** 41.83 79 ⇑P P 07 32 21.7 0.0
baz=42
N07B **Gerlach** 41.85 80 ⇓P P 07 32 21.8 -0.1
baz=42
A16A **West Butte Ran** 41.87 66 ⇓P P 07 32 21.1 -0.8
baz=42
C15A **Salmond Ranch,** 41.88 68 ⇑P P 07 32 22.2 +0.3
baz=42
F13A **Darby** 41.89 71 ⇑P P 07 32 21.8 -0.3
baz=42
P06A **Stead Airport,** 41.92 82 ⇑P P 07 32 22.1 -0.4
baz=42
I11A **Placerville** 41.93 75 ⇓P P 07 32 21.6 -0.8
baz=42
L09A **Wilkinson Ranc** 41.94 78 ⇓P P 07 32 22.7 +0.1
baz=42
K10A **MacKenzie Ranc** 42.00 77 ⇓P P 07 32 22.9 -0.2
baz=42
E14A **Clinton** 42.06 70 ⇑P P 07 32 23.2 -0.3
baz=42
B16A **M & M Farms, S** 42.07 66 ⇓P P 07 32 23.0 -0.5
baz=42,SNR=9.7
WCN **Washoe City** 42.23 83 ⇓P P 07 32 24.2 -0.7
baz=42
H12A **Diamond D Ranc** 42.25 73 ⇑P P 07 32 24.4 -0.6
baz=42
O07A **Toulon** 42.27 81 ⇑P P 07 32 25.2 0.0
baz=42
MFID **Camas Ranch** 42.28 75 ⇓P P 07 32 25.0 -0.3
baz=42
D15A **Lincoln** 42.30 69 ⇑P P 07 32 24.6 -0.8
baz=42
G13A **Cobalt** 42.32 72 ⇑P P 07 32 25.2 -0.4
baz=42
C16A **Fuhringer Ranc** 42.36 67 ⇑P P 07 32 24.8 -1.1
baz=42
N08A **GE Springer Mi** 42.37 80 ⇓P P 07 32 26.1 +0.1
baz=42
A17A **Triple J Farms** 42.38 65 ⇓P P 07 32 25.1 -0.9
baz=42,SNR=13
M09A **Marrel Ranch,** 42.42 79 ⇑P P 07 32 26.1 -0.4
baz=42
F14A **Wisdom** 42.45 71 ⇑P P 07 32 26.4 -0.3
baz=42
K11A **Parker Ranch,** 42.52 76 ⇓P P 07 32 27.1 -0.2
baz=42
E15A **Deer Lodge** 42.56 70 ⇑P P 07 32 26.7 -0.8
baz=42
DL2 **Dalian** 42.59 277 ⇑*i*P P 07 32 28.3 +0.5
DL2 PP PP 07 34 06.8 0.0
DL2 PCP PcP 07 34 20.8 +1.3
DL2 S **S** **07 38 48.4 +0.6**
DL2 XS sS 07 39 04.5 -1.2
DL2 AMB AMB
comp=Z,120nm,1.0s,mb5.6
DL2 AMB AMB
comp=Z,2µm,5.4s
DL2 LR LR
comp=N,6µm,26.0s
DL2 LR LR
comp=Z,5µm,21.1s,MS5.4
H13A **Challis** 42.60 73 ⇓P P 07 32 27.4 -0.5
baz=42
P07A **Fallon** 42.63 82 ⇓P P 07 32 27.8 -0.4
baz=42
O08A **Rochester Mine** 42.64 80 ⇑P P 07 32 28.3 +0.1
baz=42
L10A **Juniper Basin** 42.64 77 ⇓P P 07 32 28.6 +0.4
baz=42
B17A **L&G Farms, Che** 42.66 66 ⇓P P 07 32 27.3 -1.0
baz=42
ALE **Alert** 42.68 10 P P 07 32 28.8 +0.7
comp=Z,589nm,0.8s,mb6.4,SNR=8.8
N09A **Rock Creek Ran** 42.70 79 ⇑P P 07 32 28.8 0.0
baz=43,SNR=8.8
SAO **San Andreas Ge** 42.73 87 *e*P P 07 32 30.8 +1.8
SAO pmax pmax
comp=Z,73nm,0.9s,mb5.4
SAO MLR MLR
comp=Z,7µm,20.0s,MS5.5
SAO **San Andreas Ge** 42.73 87 *e*P P 07 32 30.8 +1.8
comp=Z,73nm,0.9s,mb5.4
SAO LR LR
comp=Z,7µm,20.0s,MS5.5
J12A **Stokes Ranch,** 42.82 75 ⇑P P 07 32 29.2 -0.5
baz=43
D16A **Dana Ranch, Ca** 42.88 68 ⇑P P 07 32 28.9 -1.2
baz=43
R06C **Coleville** 42.89 83 ⇑P P 07 32 30.1 -0.2
baz=43
F15A **Butte** 42.95 70 ⇓P P 07 32 29.9 -0.8
baz=43,SNR=12
C17A **Wharram Farm,** 43.02 67 ⇑P P 07 32 30.5 -0.8
baz=43
L11A **Cat Creek Ranc** 43.03 77 ⇑P P 07 32 31.5 +0.1
baz=43
I13A **Wildhorse Cree** 43.04 73 ⇑P P 07 32 31.1 -0.4
baz=43
P08A **Dixie Valley** 43.04 81 ⇑P P 07 32 31.8 +0.3
baz=43
Q07A **Schurz** 43.04 82 ⇑P P 07 32 31.8 +0.2
baz=43
HLID **Hailey** 43.05 74 ⇓P P 07 32 31.4 -0.2
baz=43
HLID **Hailey** 43.05 74 *e*P P 07 32 31.5 -0.1
comp=Z,206nm,0.8s,mb5.9
HLID LR LR
comp=Z,23µm,22.0s,MS6.0
E16A **East Helena** 43.06 69 ⇑P P 07 32 31.4 -0.2
baz=43,SNR=17
H14A **Leadore** 43.10 72 ⇑P P 07 32 31.9 0.0
baz=43
BMN **Battle Mountai** 43.13 80 PFAKE 07 32 40.0 +7.7
BMN LR LR
comp=Z,21µm,20.0s,MS6.0
B18A **Beardsley Farm** 43.19 66 ⇓P P 07 32 32.4 -0.2
baz=43
K12A **Draper Farm, C** 43.28 75 ⇓P P 07 32 33.5 +0.1
baz=43
J13A **Cove Ranch, Pi** 43.29 74 ⇑P P 07 32 33.8 +0.3
baz=43
MCMT **McKenzie Canyo** 43.29 72 *e*P P 07 32 33.3 -0.1
O09A **Fish Creek Ran** 43.31 80 ⇑P P 07 32 33.6 -0.1
baz=43
D17A **Six Diamond Ra** 43.31 68 ⇑P P 07 32 33.0 -0.6
baz=43
G15A **Dillon** 43.32 71 ⇑P P 07 32 33.3 -0.4
baz=43
EGMT **Eagleton** 43.39 66 ⇓P P 07 32 33.6 -0.7
baz=43
EGMT **Eagleton** 43.39 66 PFAKE 07 32 40.0 +5.7
EGMT LR LR
comp=Z,13µm,19.0s,MS5.8
N10A **Dunphy** 43.41 79 ⇓P P 07 32 34.7 +0.3
baz=43,SNR=13
I14A **Mackay** 43.43 73 ⇓P P 07 32 34.6 0.0
baz=43
M11A **Holland Ranch,** 43.43 77 ⇑P P 07 32 34.7 +0.1
baz=43
L12A **House Creek Ra** 43.49 76 ⇑P P 07 32 34.8 -0.3
baz=43
F16A **Kennard Place,** 43.50 70 ⇑P P 07 32 34.4 -0.7
baz=43
H15A **Lima** 43.53 72 ⇓P P 07 32 35.0 -0.4
baz=43
BOZ **Bozeman (W)** 43.57 70 ⇑P P 07 32 35.1 -0.6
baz=43
BOZ **Bozeman (W)** 43.57 70 PFAKE 07 32 50.0 +14
BOZ LR LR
comp=Z,8µm,20.0s,MS5.6
E17A **Martinsdale** 43.58 69 ⇓P P 07 32 35.5 -0.2
baz=43
Q08A **Gabbs** 43.63 82 ⇓P P 07 32 36.4 +0.1
baz=44
O10A **Cortez Mining,** 43.66 79 ⇑P P 07 32 36.9 +0.4
baz=44,SNR=9.2
NVAR **Mina Array Bea** 43.66 83 P P 07 32 36.5 0.0
comp=Z,28nm,0.6s,mb5.1,baz=295,slow=3.9,SNR=12
NVAR ScP ScP 07 38 12.7 +1.2
comp=Z,3.0nm,0.9s,baz=275,slow=2.8,SNR=2.8
G16A **Moss Hill, Enn** 43.69 71 ⇑P P 07 32 36.6 -0.1
baz=44
P09A **Austin** 43.71 81 ⇑P P 07 32 36.7 -0.2
baz=44
J14A **Carey** 43.73 74 ⇓P P 07 32 36.8 -0.2
baz=44
K13A **Stover Farm, H** 43.77 75 ⇑P P 07 32 37.9 +0.5
baz=44,SNR=10
D18A **Linhart Farms,** 43.80 67 ⇑P P 07 32 37.4 -0.1
baz=44
MLAC **Mammoth Lakes** 43.82 84 ⇑P P 07 32 37.9 0.0
baz=44
N11A **Elko Archery C** 43.82 78 ⇑P P 07 32 38.0 +0.2
baz=44,SNR=8.8
R08A **Mina** 43.84 83 ⇓P P 07 32 37.6 -0.4
baz=44
I15A **Monteview** 43.97 72 ⇓P P 07 32 38.4 -0.5
baz=44
M12A **Wells** 43.98 77 ⇓P P 07 32 39.2 +0.2
baz=44
F17A **Fitzpatrick Pl** 44.00 69 ⇑P P 07 32 38.7 -0.5
baz=44
E18A **Harlowton** 44.08 68 ⇑P P 07 32 39.9 +0.1
baz=44
Q09A **Carvers** 44.12 81 ⇑P P 07 32 40.0 -0.2
baz=44,SNR=8.0
ELK **Elko** 44.17 78 *e*P P 07 32 40.0 -0.6
ELK pmax pmax
comp=Z,222nm,0.9s
ELK MLR MLR
comp=Z,23µm,20.0s
ELK **Elko** 44.17 78 *e*P P 07 32 40.0 -0.6
comp=Z,222nm,0.9s,mb5.9
ELK LR LR
comp=Z,23µm,20.0s,MS6.1
L13A **Double Diamond** 44.18 76 ⇑P P 07 32 40.9 +0.3
baz=44,SNR=13
N12A **Clover Valley,** 44.23 78 ⇓P P 07 32 41.2 +0.1
baz=44
FFC **Flin Flon** 44.25 54 PFAKE 07 32 50.0 +8.9
FFC LR LR
comp=Z,16µm,19.0s,MS6.0
G17A **Pierce Place,** 44.27 70 ⇓P P 07 32 41.1 -0.2
baz=44
O11A **Cowboy Ranch,** 44.28 79 ⇑P P 07 32 41.7 +0.3
baz=44
H16A **Russell Place,** 44.31 71 ⇓P P 07 32 41.6 -0.1
baz=44
J15A **Blackfoot** 44.34 73 ⇓P P 07 32 42.0 +0.1
baz=44,SNR=16
K14A **Jones Ranch, D** 44.38 75 ⇑P P 07 32 42.6 +0.4
baz=44,SNR=6.6
RCTC **Rector, Farmer** 44.40 86 ⇑P P 07 32 42.1 -0.3
baz=44
M13A **Montello** 44.47 77 ⇓P P 07 32 42.6 -0.3
baz=44
R09A **Tonopah** 44.55 82 ⇑P P 07 32 44.0 +0.3
baz=44
F18A **Big Timber** 44.55 69 ⇓P P 07 32 43.6 0.0
baz=44
TPH **Tonopah** 44.55 82 *e*P P 07 32 46.8 +3.1
TPH pmax pmax
comp=Z,124nm,0.9s,mb5.7
TPH MLR MLR
comp=Z,15µm,21.0s,MS5.9
TPH **Tonopah** 44.55 82 *e*P P 07 32 46.8 +3.1
comp=Z,124nm,0.9s,mb5.7
TPH LR LR
comp=Z,15µm,21.0s,MS5.9
SMMC **Simmler** 44.56 87 ⇓P P 07 32 43.7 0.0
baz=44
TIN **Tinemaha** 44.56 84 ⇓P P 07 32 44.1 +0.4
baz=44
P11A **Circle Ranch,** 44.56 80 ⇓P P 07 32 43.9 +0.2
baz=44
Q10A **Clear Creek Ra** 44.60 81 ⇑P P 07 32 44.0 -0.1
baz=44
I16A **Newdale** 44.63 72 ⇑P P 07 32 44.5 +0.2
baz=44
K15A **Arbon** 44.69 74 ⇓P P 07 32 45.4 +0.7
baz=45,SNR=9.1
O12A **Currie** 44.76 78 ⇓P P 07 32 45.3 0.0
baz=45
S09A **Goldfield** 44.77 83 ⇑P P 07 32 45.6 +0.2
baz=45,SNR=6.1
VES **Vestal, Richgr** 44.79 86 ⇓P P 07 32 45.6 0.0
baz=45
M14A **Sheep Mountain** 44.88 76 ⇑P P 07 32 46.7 +0.4
baz=45
H17A **Grant Village** 44.88 71 ⇓P P 07 32 47.4 +1.2
baz=45,SNR=26
PKM **Peak Mountain** 44.94 88 ⇓P P 07 32 47.5 +0.7
baz=45
G18A **Lazy EL Ranch,** 44.97 69 ⇑P P 07 32 47.0 +0.1
baz=45
R10A **Warm Springs** 44.99 81 ⇓P P 07 32 46.6 -0.5
baz=45
S10A **Tonopah Range,** 45.04 82 ⇓P P 07 32 47.4 -0.2
baz=45
CWC **Cottonwood Cre** 45.04 85 ⇑P P 07 32 48.0 +0.4
baz=45
Q11A **Duckwater** 45.05 80 ⇑P P 07 32 47.3 -0.3
baz=45
GRAC **Grapevine Rang** 45.13 84 ⇓P P 07 32 48.8 +0.5
baz=45
P12A **McGill** 45.13 79 ⇓P P 07 32 48.4 +0.1
baz=45
I17A **Pilgram Creek** 45.15 71 ⇓P P 07 32 48.8 +0.4
baz=45
L15A **Malad City** 45.17 75 ⇓P P 07 32 48.4 -0.1
baz=45
K16A **Soda Springs** 45.17 73 ⇓P P 07 32 48.5 0.0
baz=45
RLMT **Red Lodge** 45.25 69 ⇑P P 07 32 49.1 0.0
baz=45
RLMT **Red Lodge** 45.25 69 PFAKE 07 33 00.0 +11
RLMT LR LR
comp=Z,9µm,22.0s,MS5.7
BJI **Beijing** 45.28 282 P P 07 32 50.8 +1.4
BJI S S 07 39 26.4 -0.5
BJI AMB AMB
comp=Z,285nm,0.9s,mb6.1
BJI AMB AMB
comp=Z,5µm,7.8s
BJI LR LR
comp=N,12µm,25.3s,MS6.0
BJI LR LR
comp=E,15µm,22.6s,MS6.0
BJI LR LR
comp=Z,14µm,23.6s,MS5.8
ISA **Isabella** 45.29 86 ⇓P P 07 32 49.4 -0.2
baz=45
ISA **Isabella** 45.29 86 *e*P P 07 32 48.6 -0.9
ISA pmax pmax
comp=Z,49nm,0.9s,mb5.3
ISA **Isabella** 45.29 86 *e*P P 07 32 48.5 -1.0
comp=Z,49nm,0.9s,mb5.3
BJT **Baijiatuau** 45.29 282 *e*P P 07 32 50.1 +0.6
BJT pmax pmax
comp=Z,243nm,0.8s
BJT MLR MLR
comp=Z,17µm,22.0s
BJT **Baijiatuau** 45.29 282 *e*P P 07 32 50.1 +0.6
comp=Z,243nm,0.8s,mb6.1
BJT LR LR
comp=Z,17µm,22.0s,MS6.0
O13A **Hicks Ranch, I** 45.31 78 ⇑P P 07 32 49.7 +0.1
baz=45,SNR=7.4
N14A **Grayback Hills** 45.36 76 ⇑P P 07 32 49.9 -0.2
baz=45,SNR=22
IRK **Irkutsk** 45.37 303 *e*P P 07 32 50.6 +0.6
IRK pmax pmax
comp=Z,210nm,2.2s,mb5.6
J17A **Brown Place, J** 45.39 72 ⇑P P 07 32 50.2 0.0
baz=45
R11A **Troy Canyon, C** 45.40 81 ⇑P P 07 32 50.0 -0.4
baz=45
DAC **Darwin (Calif)** 45.45 85 P P 07 32 51.6 +0.8
DAC pmax pmax
comp=Z,20nm,1.1s,mb4.9
Q12A **Willow Creek R** 45.45 80 ⇑P P 07 32 50.8 0.0
baz=45
M15A **Larsen Ranch,** 45.45 75 ⇑P P 07 32 50.5 -0.2
baz=45,SNR=18
K17A **Gardner Place,** 45.62 73 ⇓P P 07 32 51.9 -0.2
baz=46,SNR=10
BSC **Santa Cruz Isl** 45.64 88 ⇓P P 07 32 53.0 +0.6
baz=46
MPMC **Manual Prospec** 45.65 85 ⇑P P 07 32 52.5 +0.1
baz=46
P13A **Bates Ranch, G** 45.69 79 ⇓P P 07 32 52.7 0.0
baz=46
I18A **Diamond G Ranc** 45.73 71 ⇓P P 07 32 53.0 +0.1
baz=46
L16A **Fish Haven** 45.74 74 ⇑P P 07 32 52.9 -0.1
baz=46,SNR=23
N15A **Stansbury Isla** 45.75 76 ⇓P P 07 32 53.5 +0.4
baz=46,SNR=13
FURC **Furnace Creek,** 45.78 84 ⇑P P 07 32 53.5 0.0
baz=46
OSI **Osito Adit** 45.80 87 ⇓P P 07 32 53.8 +0.1
baz=46
OSI **Osito Adit** 45.80 87 *e*P P 07 32 53.6 -0.1
comp=Z,182nm,0.9s,mb6.0
J18A **Kendall Valley** 45.89 72 ⇓P P 07 32 54.0 -0.2
baz=46
LRMC **Laurel Mountai** 45.90 85 ⇑P P 07 32 54.2 -0.2
baz=46
BLG **Laguna Peak** 45.92 88 ⇑P P 07 32 54.5 -0.1
baz=46
DUG **Dugway** 45.98 77 ⇑P P 07 32 55.1 +0.1
baz=46
DUG **Dugway** 45.98 77 *e*P P 07 32 55.4 +0.4
DUG pmax pmax
comp=Z,305nm,0.9s,mb6.2
DUG MLR MLR
comp=Z,18µm,20.0s,MS6.0
DUG **Dugway** 45.98 77 *e*P P 07 32 55.4 +0.4
comp=Z,305nm,0.9s,mb6.2
DUG LR LR
comp=Z,18µm,20.0s,MS6.0
TLY **Talaya** 45.99 302 *e*P P 07 32 54.5 -0.4
TLY *e* 07 34 35.0
TLY *e* 07 34 46.7
TLY *e*S S **07 39 42.0 +5.0**
TLY *e* 07 42 50.3
TLY pmax pmax
comp=Z,82nm,1.0s,mb5.6
TLY MLR MLR
comp=Z,13µm,18.0s,MS5.9
TLY **Talaya** 45.99 302 *e*P P 07 32 55.5 +0.6
comp=Z,30nm,0.8s,mb5.3
TLY LR LR
comp=Z,25µm,22.0s,MS6.1
Q13A **Wheeler Ranch,** 46.00 79 ⇑P P 07 32 55.0 -0.1
baz=46
R12A **Pony Springs,** 46.02 80 ⇓P P 07 32 55.0 -0.3
baz=46
L17A **Cokeville** 46.03 74 ⇓P P 07 32 55.4 +0.1
baz=46
M16A **Huntsville** 46.03 75 ⇑P P 07 32 55.1 -0.2
baz=46
FCC **Fort Churchill** 46.07 46 *e*P P 07 32 53.8 -1.6
comp=Z,1.8nm,0.7s
EDW2 **Edwards Air Fo** 46.09 86 ⇑P P 07 32 56.0 +0.1
baz=46
O15A **The Old Anders** 46.14 77 ⇑P P 07 32 56.3 +0.1
baz=46
U10A **Ash Meadows, A** 46.14 83 ⇓P P 07 32 56.4 +0.1
baz=46
ULN **Ulaanbaatar** 46.18 296 ⇑*i*P P 07 32 57.1 +0.7
ULN **Ulaanbaatar** 46.18 296 *e*P P 07 32 57.4 +0.9
comp=Z,256nm,0.9s,mb6.2
ULN LR LR
comp=Z,53µm,21.0s,MS6.5
P14A **Drum Mountains** 46.19 78 ⇓P P 07 32 56.5 -0.2
baz=46
SNCC **San Nicolas Is** 46.20 89 ⇑P P 07 32 57.1 +0.3
baz=46
K18A **Toltan Ranch,** 46.21 73 ⇑P P 07 32 56.5 -0.3
baz=46
DECC **Green Verdugo** 46.29 87 ⇓P P 07 32 57.7 +0.2
baz=46
S12A **Delamar Landin** 46.32 81 ⇓P P 07 32 57.6 -0.1
baz=46
T11A **Corn Creek, Al** 46.32 82 ⇓P P 07 32 57.6 0.0
baz=46
N16A **Rees Ranch, Co** 46.41 75 ⇑P P 07 32 58.1 -0.2
baz=46
BW06 **Boulder Array** 46.42 72 ⇓P P 07 32 57.9 -0.6
baz=46
BW06 **Boulder Array** 46.42 72 *e*P P 07 32 58.2 -0.2
comp=Z,315nm,0.7s,mb6.3
BW06 LR LR
comp=Z,16µm,21.0s,MS5.9
PDAR **Pinedale Array** 46.42 72 P P 07 32 58.0 -0.4
comp=Z,341nm,0.8s,mb6.4,baz=308,slow=2.6,SNR=25
PDAR S S 07 39 44.9 +1.5
comp=Z,1.6nm,0.8s,baz=18,slow=6.9,SNR=4.3
PASC **Pasadena Art C** 46.43 87 *e*P P 07 32 58.9 +0.3
comp=Z,268nm,0.9s,mb6.2
Q14A **Sevier Lake (B** 46.43 79 ⇑P P 07 32 58.6 +0.1
baz=46
JOW **Kunigami** 46.46 259 P P 07 32 59.5 +0.6
comp=Z,372nm,0.9s,mb6.3,baz=73,slow=2.2,SNR=16
MWC **Mount Wilson** 46.48 87 *e*P P 07 32 59.7 +0.8
MWC pmax pmax
comp=Z,134nm,0.9s,mb5.9
MWC **Mount Wilson** 46.48 87 *e*P P 07 32 59.7 +0.7
comp=Z,134nm,0.9s,mb5.9
R13A **O'Grain Ranch,** 46.51 80 ⇑P P 07 32 59.1 0.0
baz=46
SHOC **Shoshone** 46.51 84 ⇓P P 07 32 59.4 +0.3
baz=46
M17A **Scullys Gap (B** 46.52 74 ⇓P P 07 32 58.8 -0.4
baz=46
GSC **Goldstone** 46.56 85 ⇓P P 07 32 59.8 +0.2
baz=46
SONM **Songino Array** 46.57 297 P P 07 33 00.4 +0.9
comp=Z,211nm,1.0s,mb6.0,baz=56,slow=8.1,SNR=22
SONM ScP ScP 07 38 23.7 +0.4
comp=Z,37nm,1.1s,baz=44,slow=6.7,SNR=6.7
SONM S S 07 39 48.9 +3.6
comp=Z,2.9nm,1.2s,baz=118,slow=12,SNR=2.1
SONM P4KPbc 08 10 47.7
comp=Z,1.0nm,0.8s,baz=46,slow=2.5,SNR=7.1
SONM **Songino Array** 46.57 297 P P 07 33 00.4 +0.9
SONM ScP ScP 07 38 23.7 +0.4
SONM S S 07 39 48.9 +3.6
L18A **Fontenelle, Gr** 46.63 73 ⇓P P 07 32 59.7 -0.4
baz=46
P15A **Leamington** 46.69 77 ⇓P P 07 33 00.4 -0.2
baz=47
BFSC **Mount Baldy St** 46.72 87 ⇑P P 07 33 00.4 -0.4
baz=47
N17A **Moffit Pass** 46.74 75 ⇓P P 07 33 00.5 -0.4
baz=47
O16A **Springville** 46.78 76 ⇑P P 07 33 00.9 -0.3
baz=47,SNR=15

K19A	**Absolon Red Bu**	**46.81**	**72**	⇑	P		**P**	**07 33 00.5**	**-0.9**
	baz=47								
ZAK	**Zakamensk**	**46.88**	**301**		*e*P		**P**	**07 33 03.0**	**+1.1**
M18A	**Lyman**	**46.91**	**74**	⇑	P		**P**	**07 33 02.0**	**-0.3**
	baz=47,SNR=23								
S13A	**Holt Ranch, En**	**46.95**	**81**	⇓	P		**P**	**07 33 02.1**	**-0.5**
	baz=47								
T12A	**Moapa**	**46.95**	**82**	⇑	P		**P**	**07 33 03.0**	**+0.3**
	baz=47,SNR=6.6								
Q15A	**Fillmore**	**46.98**	**78**	⇑	P		**P**	**07 33 02.5**	**-0.3**
	baz=47,SNR=14								
R14A	**James Farms, M**	**47.02**	**79**	⇑	P		**P**	**07 33 02.5**	**-0.6**
	baz=47								
TUQ	**Turquoise Moun**	**47.02**	**84**	⇑	P		**P**	**07 33 03.0**	**-0.2**
	baz=47								
P16A	**Fountain Green**	**47.04**	**77**	⇑	P		**P**	**07 33 02.9**	**-0.4**
	baz=47								
TIA	**Tai'an**	**47.06**	**277**		*e*P		**P**	**07 33 03.3**	**-0.2**
TIA					PP		PP	07 34 54.0	-0.2
TIA					S		**S**	**07 39 58.0**	**+5.4**
TIA					AMB		AMB		
	comp=Z,169nm,0.8s,mb6.0								
TIA					AMB		AMB		
	comp=Z,2µm,7.0s								
TIA					LR		LR		
	comp=E,3µm,17.0s								
V11A	**Goodsprings**	**47.07**	**83**	⇓	P		**P**	**07 33 03.6**	**0.0**
	baz=47,SNR=5.2								
BBRC	**Big Bear Sol-O**	**47.16**	**86**	⇑	P		**P**	**07 33 04.4**	**+0.1**
	baz=47								
HEC	**Hector,Ludlow**	**47.16**	**85**	⇑	P		**P**	**07 33 04.0**	**-0.3**
	baz=47								
K20A	**Yellowstone Ra**	**47.21**	**71**	⇑	P		**P**	**07 33 03.9**	**-0.7**
	baz=47								
O17A	**Robinson Place**	**47.25**	**76**	⇑	P		**P**	**07 33 05.2**	**+0.3**
	baz=47								
U12A	**Valley of Fire**	**47.25**	**82**	⇓	P		**P**	**07 33 04.5**	**-0.4**
	baz=47								
S14A	**Cedar City**	**47.26**	**80**	⇓	P		**P**	**07 33 04.4**	**-0.6**
	baz=47								
T13A	**Saint George**	**47.27**	**81**	⇑	P		**P**	**07 33 05.0**	**-0.1**
	baz=47								
M19A	**Rock Springs**	**47.41**	**73**	⇑	P		**P**	**07 33 05.7**	**-0.4**
	baz=47,SNR=13								
N18A	**Larsen Ranch,**	**47.42**	**74**	⇑	P		**P**	**07 33 04.7**	**-1.5**
	baz=47								
MURC	**Murrieta**	**47.42**	**87**	⇑	P		**P**	**07 33 06.0**	**-0.4**
	baz=47								
V12A	**Nelson**	**47.51**	**83**	⇑	P		**P**	**07 33 06.3**	**-0.6**
	baz=47								
HHC	**Hu-ho-hao-te**	**47.60**	**286**		*e*P		**P**	**07 33 08.3**	**+0.7**
HHC					AP		pP	07 33 18.8	+0.2
HHC					XP		sP	07 33 22.3	-0.7
HHC					PCP		PcP	07 34 38.6	+1.8
HHC					PP		PP	07 34 58.4	-0.6
HHC					PCS		PcS	07 38 32.5	+0.3
HHC					*e*S		**S**	**07 39 58.8**	**-1.3**
HHC					XS		sS	07 40 15.4	-2.9
HHC					SCS		ScS	07 42 57.8	0.0
HHC					SS		SS	07 43 20.3	-7.7
HHC					AMB		AMB		
	comp=Z,108nm,1.0s,mb5.8								
HHC					AMB		AMB		
	comp=Z,6µm,7.1s								
HHC					LR		LR		
	comp=N,18µm,19.0s,MS6.3								
HHC					LR		LR		
	comp=E,24µm,20.2s,MS6.3								
HHC					LR		LR		
	comp=Z,27µm,19.0s,MS6.2								
L20A	**Wamsutter**	**47.60**	**72**	⇑	P		**P**	**07 33 06.6**	**-1.1**
	baz=48,SNR=18								
GUMO	**Guam**	**47.60**	**231**		P		**P**	**07 33 07.8**	**0.0**
	comp=Z,194nm,0.9s,mb6.1,baz=174,slow=20,SNR=4.7								
GUMO	**Guam**	**47.60**	**231**		P		**P**	**07 33 07.8**	**-0.1**
GUMO					pmax		pmax		
	comp=Z,194nm,0.9s,mb6.1								
GUMO	**Guam**	**47.60**	**231**		*e*P		**P**	**07 33 07.7**	**-0.2**
	comp=Z,238nm,1.0s,mb6.2								
GUMO					*e*			07 33 24.1	
GUMO					LR		LR		
	comp=Z,8µm,21.0s,MS5.7								
GMRC	**Granite Mounta**	**47.61**	**85**	⇓	P		**P**	**07 33 07.7**	**-0.1**
	baz=48								
U13A	**Pakoon Wash**	**47.62**	**82**	⇑	P		**P**	**07 33 07.6**	**-0.2**
	baz=48								
O18A	**Roosevelt**	**47.65**	**75**	⇓	P		**P**	**07 33 07.8**	**-0.2**
	baz=48								
P17A	**Butcher Ranch,**	**47.69**	**76**	⇓	P		**P**	**07 33 08.2**	**-0.1**
	baz=48								
T14A	**Hurricane**	**47.75**	**81**	⇓	P		**P**	**07 33 08.8**	**-0.1**
	baz=48,SNR=7.7								
Q16A	**Castle Valley**	**47.77**	**77**	⇓	P		**P**	**07 33 08.8**	**-0.2**
	baz=48								
N19A	**John Jarvie Ra**	**47.77**	**74**	⇓	P		**P**	**07 33 08.2**	**-0.8**
	baz=48								
W12A	**Cal Nev Ari**	**47.77**	**84**	⇓	P		**P**	**07 33 08.9**	**-0.1**
	baz=48								
S15A	**Panguitch**	**47.81**	**79**	⇓	P		**P**	**07 33 09.4**	**+0.1**
	baz=48								
PFO	**Pinyon Flat Ob**	**47.88**	**86**		P		**P**	**07 33 08.5**	**-1.4**
	comp=Z,13nm,0.9s,mb5.0,baz=323,slow=6.3,SNR=8.1								
PFO	**Pinyon Flat Ob**	**47.88**	**86**	⇑	P		**P**	**07 33 09.7**	**-0.2**
	baz=48								
PFO	**Pinyon Flat Ob**	**47.88**	**86**		P		**P**	**07 33 08.5**	**-1.4**
PFO					LR		LR		
	comp=Z,9µm,20.0s,MS5.8								
SSE	**Sheshan**	**47.89**	**269**		P		**P**	**07 33 09.8**	**-0.2**
SSE					S		**S**	**07 40 06.8**	**+2.3**
SSE					AMB		AMB		
	comp=Z,199nm,1.1s,mb6.1								
SSE					AMB		AMB		
	comp=Z,3µm,7.8s								
SSE					LR		LR		
	comp=N,6µm,24.4s,MS5.5								
SSE					LR		LR		
	comp=E,3µm,24.6s,MS5.5								
SSE					LR		LR		
	comp=Z,9µm,23.1s,MS5.7								
P18A	**Preston Nutter**	**47.89**	**76**	⇑	P		**P**	**07 33 09.7**	**-0.2**
	baz=48								
BELC	**Belle Mtn.**	**47.91**	**86**	⇑	P		**P**	**07 33 10.2**	**+0.1**
	baz=48								
109C	**Camp Elliot, M**	**47.95**	**88**	⇓	P		**P**	**07 33 10.6**	**+0.1**
	baz=48								
R16A	**Teasdale**	**47.97**	**78**	⇑	P		**P**	**07 33 10.6**	**+0.1**
	baz=48,SNR=18								
M20A	**Sweetwater, Wa**	**48.00**	**73**	⇓	P		**P**	**07 33 10.1**	**-0.7**
	baz=48								
SRU	**San Rafael**	**48.04**	**77**	⇓	P		**P**	**07 33 10.6**	**-0.4**
	baz=48								
U14A	**Mt Trumbull**	**48.10**	**81**	⇓	P		**P**	**07 33 11.6**	**+0.1**
	baz=48								
O19A	**Miners Draw (B**	**48.16**	**75**	⇑	P		**P**	**07 33 11.9**	**-0.1**
	baz=48								
L21A	**Rawlins**	**48.20**	**72**	⇑	P		**P**	**07 33 11.6**	**-0.7**
	baz=48								
T15A	**Red Dirt Ranch**	**48.21**	**80**	⇑	P		**P**	**07 33 12.3**	**-0.1**
	baz=48								
S16A	**Weppner Ranch,**	**48.25**	**79**	⇓	P		**P**	**07 33 12.7**	**0.0**
	baz=48								
Q18A	**Rafter H Ranch**	**48.29**	**76**	⇓	P		**P**	**07 33 12.4**	**-0.6**
	baz=48								
IRM	**Iron Mountain**	**48.34**	**85**	⇑	P		**P**	**07 33 13.5**	**+0.1**
	baz=48								
N20A	**Spence Gulch,**	**48.36**	**73**	⇓	P		**P**	**07 33 13.5**	**+0.1**
	baz=48								
R17A	**Hanksville Air**	**48.36**	**78**	⇑	P		**P**	**07 33 13.2**	**-0.3**
	baz=48								
MONP	**Monument Peak**	**48.38**	**87**	⇑	P		**P**	**07 33 14.1**	**+0.4**
	baz=48								
BC3	**Big Chuckw Mtn**	**48.48**	**86**	⇑	P		**P**	**07 33 14.5**	**0.0**
	baz=48								
W13A	**Hualapai Mount**	**48.51**	**83**	⇓	P		**P**	**07 33 15.0**	**+0.2**
	baz=48								
U15A	**North Rim**	**48.65**	**81**	⇓	P		**P**	**07 33 15.9**	**+0.2**
	baz=48								
V14A	**Boquillas Ranc**	**48.65**	**82**	⇓	P		**P**	**07 33 15.5**	**-0.3**
	baz=49,SNR=9.1								
P19A	**Cripple Cowboy**	**48.66**	**75**	⇓	P		**P**	**07 33 15.4**	**-0.4**
	baz=48								
NJ2	**Nanjing**	**48.70**	**272**		*e*P		**P**	**07 33 15.9**	**-0.4**
NJ2					AP		pP	07 33 25.8	-1.5
NJ2					XP		sP	07 33 29.8	-1.9
NJ2					PP		PP	07 35 08.6	-0.7
NJ2					S		**S**	**07 40 14.0**	**-2.0**
NJ2					XS		sS	07 40 29.0	-5.2
NJ2					AMB		AMB		
	comp=Z,120nm,1.1s,mb5.8								
NJ2					AMB		AMB		
	comp=Z,2µm,10.3s								
NJ2					LR		LR		
	comp=N,4µm,24.0s,MS5.7								
NJ2					LR		LR		
	comp=E,9µm,24.2s,MS5.7								
NJ2					LR		LR		
	comp=Z,7µm,26.3s,MS5.5								
SWSC	**Sam W. Stewart**	**48.74**	**87**	⇑	P		**P**	**07 33 16.9**	**+0.4**
	baz=49								
T16A	**Glen Canyon Da**	**48.78**	**80**	⇓	P		**P**	**07 33 16.4**	**-0.4**
	baz=49								
O20A	**White River Ci**	**48.80**	**74**	⇑	P		**P**	**07 33 16.2**	**-0.6**
	baz=49								
S17A	**Black Ridge (B**	**48.80**	**78**	⇓	P		**P**	**07 33 16.5**	**-0.4**
	baz=49								
N21A	**Black Mountain**	**48.85**	**73**	⇓	P		**P**	**07 33 16.8**	**-0.4**
	baz=49,SNR=18								
RSSD	**Black Hills**	**48.87**	**67**	*e*P			**P**	**07 33 16.5**	**-0.9**
RSSD					pmax		pmax		
	comp=Z,147nm,0.7s,mb6.1								
RSSD					MLR		MLR		
	comp=Z,8µm,19.0s,MS5.8								
RSSD	**Black Hills**	**48.87**	**67**	*e*P			**P**	**07 33 16.5**	**-0.9**
	comp=Z,147nm,0.7s,mb6.1								
RSSD					LR		LR		
	comp=Z,8µm,19.0s,MS5.8								
X13A	**Yucca**	**48.88**	**84**	⇑	P		**P**	**07 33 17.7**	**+0.1**
	baz=49								
R18A	**Canyonlands Na**	**48.88**	**77**	⇓	P		**P**	**07 33 17.8**	**+0.3**
	baz=49,SNR=9.8								
Q19A	**Hogan Spring (**	**48.91**	**76**	⇓	P		**P**	**07 33 16.9**	**-0.8**
	baz=49								
W14A	**Seligman**	**48.94**	**82**	⇓	P		**P**	**07 33 18.4**	**+0.3**
	baz=49,SNR=6.8								
Y12C	**Blythe**	**49.00**	**85**	⇑	P		**P**	**07 33 18.0**	**-0.4**
	baz=49								
M22A	**Cedar Creek Ra**	**49.01**	**72**	⇑	P		**P**	**07 33 17.7**	**-0.7**
	baz=49								
TIY	**Taiyuan**	**49.01**	**282**		P		**P**	**07 33 23.8**	**+5.3**
TIY					AMB		AMB		
	comp=Z,4µm,8.6s								
TIY					LR		LR		
	comp=N,7µm,15.8s,MS6.0								
TIY					LR		LR		
	comp=E,9µm,15.7s,MS6.0								
TIY					LR		LR		
	comp=Z,10µm,16.3s,MS5.9								
V15A	**Kaibab Nationa**	**49.11**	**81**	⇓	P		**P**	**07 33 19.1**	**-0.2**
	baz=49								
T17A	**Navajo Res., N**	**49.20**	**79**	⇓	P		**P**	**07 33 19.5**	**-0.5**
	baz=49								
O21A	**Pagoda**	**49.21**	**74**	⇓	P		**P**	**07 33 19.4**	**-0.7**
	baz=49								
S18A	**Hurst Farm, Bl**	**49.26**	**78**	⇓	P		**P**	**07 33 19.6**	**-0.8**
	baz=49								
GLA	**Glamis**	**49.27**	**86**	⇓	P		**P**	**07 33 20.0**	**-0.5**
	baz=49								
R19A	**Curley Farm, L**	**49.33**	**77**	⇓	P		**P**	**07 33 20.2**	**-0.7**
	baz=49,SNR=11								
Y13A	**Salome**	**49.39**	**84**	⇓	P		**P**	**07 33 21.3**	**-0.2**
	baz=49								
PV10	**Paradox Valley**	**49.41**	**76**	*e*P			**P**	**07 33 22.3**	**+0.7**
N22A	**Wattenberg Ran**	**49.46**	**72**	⇓	P		**P**	**07 33 21.7**	**-0.2**
	baz=49								
W15A	**Williams**	**49.47**	**82**	⇓	P		**P**	**07 33 21.6**	**-0.4**
	baz=49,SNR=7.1								
Q20A	**Ridgley Place,**	**49.50**	**75**	⇑	P		**P**	**07 33 21.5**	**-0.7**
	baz=49								
U17A	**Shonto**	**49.54**	**79**	⇓	P		**P**	**07 33 22.1**	**-0.5**
	baz=49								
X14A	**Yava**	**49.54**	**83**	⇑	P		**P**	**07 33 22.1**	**-0.5**
	baz=50								
U16A	**Tuba City**	**49.55**	**80**	⇑	P		**P**	**07 33 22.1**	**-0.6**
	baz=49								
T18A	**Mexican Hat**	**49.68**	**78**	⇓	P		**P**	**07 33 22.9**	**-0.8**
	baz=50								
S19A	**Harvey Farm, M**	**49.75**	**77**	⇑	P		**P**	**07 33 23.5**	**-0.7**
	baz=50								
112A	**Yuma**	**49.77**	**86**	⇓	P		**P**	**07 33 23.6**	**-0.8**
	baz=50								
ULM	**Lac du Bonnet**	**49.80**	**57**		P		**P**	**07 33 23.1**	**-1.3**
	comp=Z,37nm,0.6s,mb5.6,baz=301,slow=9.0,SNR=13								
ULM	**Lac du Bonnet**	**49.80**	**57**		P		**P**	**07 33 23.1**	**-1.3**
ULM					LR		LR		
	comp=Z,23µm,22.0s,MS6.1								
WUAZ	**Wupatki**	**49.80**	**81**	⇑	P		**P**	**07 33 24.2**	**-0.4**
	baz=50								
Y14A	**Wickenburg**	**49.82**	**84**	⇓	P		**P**	**07 33 24.5**	**-0.2**
	baz=50								
KBS	**Kingsbay**	**49.83**	**357**	*e*P			**P**	**07 33 24.9**	**+0.7**
KBS	**Kingsbay**	**49.83**	**357**	*e*P			**P**	**07 33 25.1**	**+0.8**
KBS					pmax		pmax		
	comp=Z,160nm,0.7s,mb6.2								
KBS	**Kingsbay**	**49.83**	**357**	*e*P			**P**	**07 33 24.8**	**+0.6**
	comp=Z,156nm,0.6s,mb6.2								
KBS					LR		LR		
	comp=Z,9µm,19.0s,MS5.8								
PV01	**Paradox Valley**	**49.85**	**76**	*e*P			**P**	**07 33 24.6**	**-0.4**
X15A	**Humboldt**	**49.94**	**83**	⇑	P		**P**	**07 33 25.4**	**-0.3**
	baz=50								
W16A	**Flagstaff**	**49.98**	**81**	⇑	P		**P**	**07 33 25.6**	**-0.3**
	baz=50,SNR=9.0								
113A	**Mohawk Valley,**	**50.12**	**85**	⇑	P		**P**	**07 33 26.9**	**-0.2**
	baz=50								
U18A	**Rough Rock, Ch**	**50.15**	**79**	⇓	P		**P**	**07 33 26.7**	**-0.5**
	baz=50								
Y15A	**Casa Rosa Ranc**	**50.23**	**83**	⇓	P		**P**	**07 33 27.7**	**-0.1**
	baz=50								
Z14A	**Wintersburg**	**50.24**	**84**	⇓	P		**P**	**07 33 27.7**	**-0.2**
	baz=50								
R21A	**Cimarron**	**50.32**	**76**	⇓	P		**P**	**07 33 28.0**	**-0.5**
	baz=50								
T19A	**Beclabito**	**50.40**	**78**	⇑	P		**P**	**07 33 28.8**	**-0.3**
	baz=50								
SPITS	**Spitsbergen Ar**	**50.41**	**356**		LR		LR	07 56 15.6	
	comp=Z,13µm,18.8s,MS6.0,baz=90,slow=38								
X16A	**Lo Mia Camp, P**	**50.48**	**82**	⇑	P		**P**	**07 33 29.5**	**-0.3**
	baz=50								
MVCO	**Mesa Verde**	**50.48**	**77**	⇑	P		**P**	**07 33 28.9**	**-0.8**
	baz=50								
W17A	**Winslow**	**50.50**	**81**	⇑	P		**P**	**07 33 29.8**	**-0.1**
	baz=50								
V18A	**Ganado**	**50.57**	**80**	⇓	P		**P**	**07 33 30.2**	**-0.2**
	baz=50,SNR=8.8								
ISCO	**Idaho Springs**	**50.59**	**73**	*e*P			**P**	**07 33 31.2**	**+0.7**
ISCO					pmax		pmax		
	comp=Z,122nm,0.8s,mb5.9								
ISCO					MLR		MLR		
	comp=Z,18µm,20.0s,MS6.1								
ISCO	**Idaho Springs**	**50.59**	**73**	*e*P			**P**	**07 33 31.2**	**+0.8**
	comp=Z,122nm,0.8s,mb5.9								
ISCO					LR		LR		
	comp=Z,18µm,20.0s,MS6.1								
Z15A	**Gila River Ind**	**50.78**	**84**	⇓	P		**P**	**07 33 31.8**	**-0.2**
	baz=51								
Y16A	**Circle Bar Ran**	**50.81**	**83**	⇑	P		**P**	**07 33 32.1**	**-0.1**
	baz=51,SNR=9.0								
W18A	**Petrified Fore**	**51.08**	**80**	⇑	P		**P**	**07 33 33.8**	**-0.5**
	baz=51,SNR=9.2								
V19A	**Window Rock**	**51.11**	**79**	⇑	P		**P**	**07 33 34.0**	**-0.5**
	baz=51								
115A	**Sonoran Desert**	**51.13**	**84**	⇑	P		**P**	**07 33 34.2**	**-0.5**
	baz=51								
Z16A	**Peralta Trail,**	**51.20**	**83**	⇑	P		**P**	**07 33 35.3**	**+0.1**
	baz=51,SNR=9.3								
214A	**Organ Pipe Nat**	**51.27**	**85**	⇓	P		**P**	**07 33 35.4**	**-0.3**
	baz=51								
W19A	**Sanders**	**51.30**	**80**	⇓	P		**P**	**07 33 35.5**	**-0.3**
	baz=51								
Y17A	**Roosevelt**	**51.33**	**82**	⇓	P		**P**	**07 33 35.6**	**-0.5**
	baz=51								
X18A	**Snowflake**	**51.33**	**81**	⇑	P		**P**	**07 33 36.2**	**+0.1**
	baz=51,SNR=11								
116A	**Eloy**	**51.55**	**84**	⇓	P		**P**	**07 33 37.7**	**-0.1**
	baz=52								
HSP	**Hornsund**	**51.59**	**356**	*e*P			**P**	**07 33 38.1**	**+0.6**
X19A	**St. Johns**	**51.81**	**81**	⇓	P		**P**	**07 33 39.4**	**-0.3**
	baz=52								
Z17A	**San Carlos Hig**	**51.82**	**82**	⇓	P		**P**	**07 33 39.5**	**-0.4**
	baz=52								
SDCO	**Great Sand Dun**	**51.96**	**75**	*e*P			**P**	**07 33 41.6**	**+0.8**
	comp=Z,145nm,0.8s,mb6.0								
SDCO					*e*		pP	07 33 53.4	+1.5
SDCO					LR		LR		
	comp=Z,14µm,22.0s,MS6.0								
216A	**Three Points,**	**52.08**	**84**	⇑	P		**P**	**07 33 40.8**	**-0.9**
	baz=52								
Y19A	**Nutrioso**	**52.14**	**81**	⇓	P		**P**	**07 33 42.1**	**-0.1**
	baz=52								
117A	**Oracle**	**52.14**	**83**	⇑	P		**P**	**07 33 42.3**	**0.0**
	baz=52								
Z18A	**Geronimo**	**52.24**	**82**	⇓	P		**P**	**07 33 42.5**	**-0.4**
	baz=52								
YHNB	**Yeheng**	**52.30**	**263**		*e*P		**P**	**07 33 43.2**	**-0.3**
	comp=Z,83nm,0.8s,mb5.7								
YHNB					LR		LR		
	comp=Z,15µm,21.0s,MS6.0								
XMAS	**Kiritimati**	**52.36**	**152**		*e*P		**P**	**07 33 44.5**	**+0.5**
	comp=Z,282nm,1.5s,mb6.0								
XMAS					LR		LR		
	comp=Z,20µm,20.0s,MS6.2								
NACB	**Ninganchiao**	**52.52**	**262**		*e*P		**P**	**07 33 44.8**	**-0.3**
	comp=Z,182nm,0.9s,mb6.0								
WHN	**Wuhan**	**52.55**	**274**	⇑	P		**P**	**07 33 44.8**	**-0.5**
WHN					PCP		PcP	07 34 58.6	+3.4
WHN					S		**S**	**07 41 09.8**	**+0.4**
WHN					AMB		AMB		
	comp=Z,7µm,10.7s								
WHN					LR		LR		
	comp=N,5µm,15.5s,MS6.2								
WHN					LR		LR		
	comp=E,19µm,18.2s,MS6.2								
WHN					LR		LR		
	comp=Z,17µm,20.7s,MS6.1								
Z19A	**T-Link Ranch,**	**52.58**	**82**	⇑	P		**P**	**07 33 45.1**	**-0.3**
	baz=52								
118A	**Homack Ranch,**	**52.58**	**83**	⇑	P		**P**	**07 33 45.1**	**-0.4**
	baz=52								
217A	**Green Valley**	**52.63**	**84**	⇑	P		**P**	**07 33 45.3**	**-0.6**
	baz=53								
119A	**Ashpeak Ranch,**	**52.91**	**82**	⇓	P		**P**	**07 33 48.4**	**+0.5**
	baz=53,SNR=7.6								
218A	**Dragoon**	**52.98**	**83**	⇓	P		**P**	**07 33 48.1**	**-0.3**
	baz=53								
SSLB	**Suanglung**	**53.20**	**263**		*e*P		**P**	**07 33 50.0**	**-0.2**
	comp=Z,592nm,1.0s,mb6.5								
ANMO	**Albuquerque**	**53.20**	**78**		P		**P**	**07 33 50.6**	**+0.6**
	comp=Z,69nm,1.1s,mb5.5,baz=310,slow=10.0,SNR=13								
ANMO	**Albuquerque**	**53.20**	**78**		*e*P		**P**	**07 33 51.0**	**+1.0**
ANMO					pmax		pmax		
	comp=Z,59nm,0.9s								
ANMO					MLR		MLR		
	comp=Z,17µm,22.0s								
ANMO	**Albuquerque**	**53.20**	**78**		*e*P		**P**	**07 33 51.0**	**+1.0**
	comp=Z,58nm,0.9s,mb5.5								
ANMO					LR		LR		
	comp=Z,17µm,22.0s,MS6.1								
YULB	**Yu-li**	**53.28**	**262**		*e*P		**P**	**07 33 52.5**	**+1.8**
	comp=Z,170nm,0.9s,mb6.0								
SUMG	**Summit**	**53.36**	**14**		*e*P		**P**	**07 33 50.6**	**-0.1**
	comp=Z,176nm,0.9s,mb6.0								
318A	**Bisbee**	**53.38**	**84**	⇑	P		**P**	**07 33 51.3**	**-0.1**
	baz=53								
219A	**White Tail Can**	**53.45**	**83**	⇑	P		**P**	**07 33 51.9**	**0.0**
	baz=53								
Y22D	**IRIS PASSCAL I**	**53.50**	**79**	⇓	P		**P**	**07 33 52.2**	**0.0**
	baz=53								
XAN	**Xi'an**	**53.56**	**281**		P		**P**	**07 33 51.8**	**-0.9**
XAN					AP		pP	07 34 02.0	-1.8
XAN					XP		sP	07 34 06.0	-2.2
XAN					PP		PP	07 35 53.1	-0.2
XAN					S		**S**	**07 41 17.6**	**-5.4**
XAN					XS		sS	07 41 34.5	-6.9
XAN					SCS		ScS	07 43 35.4	-3.5
XAN					SS		SS	07 44 56.1	-7.2
XAN					AMB		AMB		
	comp=Z,99nm,1.1s,mb5.7								
XAN					AMB		AMB		
	comp=Z,3µm,10.7s								
XAN					LR		LR		
	comp=N,4µm,23.0s,MS5.8								
XAN					LR		LR		
	comp=E,9µm,22.3s,MS5.8								
XAN					LR		LR		
	comp=Z,17µm,22.3s,MS6.0								
TPUB	**Ta-pu**	**53.76**	**262**		*e*P		**P**	**07 33 54.5**	**+0.3**
	comp=Z,353nm,0.9s,mb6.3								
QZH	**Quanzhou**	**53.83**	**265**	⇑	*i*P		**P**	**07 33 54.0**	**-0.8**
QZH					S		**S**	**07 41 31.0**	**+4.1**
QZH					AMB		AMB		
	comp=Z,740nm,1.1s,mb6.5								
QZH					AMB		AMB		
	comp=Z,7µm,12.3s								
QZH					LR		LR		
	comp=N,17µm,22.4s								
QZH					LR		LR		
	comp=E,4µm,17.2s								
QZH					LR		LR		
	comp=Z,17µm,21.8s,MS6.1								
TWG	**Pinlang**	**53.84**	**262**		*e*P		**P**	**07 33 55.2**	**+0.4**
	comp=Z,150nm,1.0s,mb5.9								
319A	**Douglas**	**53.86**	**83**	⇑	P		**P**	**07 33 55.0**	**0.0**
	baz=54								
ZALV	**Zalesovo Beam**	**53.98**	**313**		P		**P**	**07 33 56.3**	**+0.9**
	comp=Z,51nm,0.7s,mb5.6,baz=76,slow=6.3,SNR=16								
ZALV					PcP		PcP	07 35 00.2	0.0
	comp=Z,206nm,0.8s,baz=33,slow=3.1,SNR=27								
ZALV					PKPPKP			08 04 12.3	
	comp=Z,0.6nm,0.4s,baz=224,slow=4.1,

comp=Z,72nm,0.7s,baz=15,slow=5.0,SNR=6.8
ARCES ARCESS Array B 58.11 350 P **P** **07 34 24.2 -0.5**
ARCES PcP PcP 07 35 16.8 +0.8
ARE0 ARCESS Array S 58.11 350 *e*P **P** **07 34 24.8 +0.1**
LPIG La Paz 58.34 90 P **P** **07 34 27.1 +0.1**
comp=Z,18nm,0.5s,mb5.3,baz=193,slow=0.9,SNR=7.4
LVZ Lovozero 58.45 346 P **P** **07 34 27.8 +0.7**
comp=Z,5µm,0.7s,SNR=19
LVZ Lovozero 58.45 346 ⇑*i*P **P** **07 34 27.5 +0.4**
LVZ MLR MLR
comp=Z,20µm,21.0s,MS6.2
GZH Guangzhou 58.47 268 P **P** **07 34 24.0 -3.9**
GZH S **S** **07 42 19.9 -8.6**
GZH LR LR
comp=N,6µm,20.6s,MS5.8
GZH LR LR
comp=E,3µm,20.4s,MS5.8
GZH LR LR
comp=Z,6µm,20.2s,MS5.7
TRO Tromso 58.63 353 *e*P **P** **07 34 27.1 -1.2**
TXAR Lajitas Array 58.77 81 P **P** **07 34 28.9 -1.0**
comp=Z,99nm,0.9s,mb5.8,baz=299,slow=3.6,SNR=15
TXAR PKPPKP 08 04 06.0
comp=Z,1.2nm,0.9s,baz=98,slow=5.5,SNR=3.3
TXAR P4KPbc 08 11 39.8
comp=Z,0.5nm,0.9s,baz=321,slow=3.2,SNR=3.7
TXAR Lajitas Array 58.77 81 P **P** **07 34 28.9 -1.0**
TXAR P'P' 08 04 06.0
KTK1 Kautokeino 58.85 351 *e*P **P** **07 34 31.4 +1.5**
CD2 Chengdu 58.88 282 P **P** **07 34 30.4 -0.2**
CD2 AP pP 07 34 40.5 -1.4
CD2 XP sP 07 34 44.4 -1.9
CD2 PCP PcP 07 35 19.4 -0.3
CD2 PP PP 07 36 41.8 +1.0
CD2 PCS PcS 07 39 20.3 -1.3
CD2 S **S** **07 42 30.5 -3.1**
CD2 XS sS 07 42 47.4 -4.8
CD2 SS SS 07 46 26.6 -0.4
CD2 AMB AMB
comp=Z,590nm,0.9s,mb6.6
CD2 AMB AMB
comp=Z,4µm,11.6s
CD2 LR LR
comp=N,12µm,21.5s
CD2 LR LR
comp=Z,13µm,21.0s,MS6.0
APA Apatity 58.94 346 ⇑*i*P **P** **07 34 32.6 +2.1**
APA *i*S **S** **07 42 33.0 -0.5**
APA *i* 07 42 54.0
APA pmax pmax
comp=Z,280nm,1.6s,mb6.0
APA pmax pmax
comp=Z,6µm,24.0s
APA MLR MLR
comp=Z,15µm,21.0s,MS6.1
KURK Kurchatov 58.97 314 PKPPKP 08 04 02.6
comp=Z,5.4nm,1.1s,baz=254,slow=3.0,SNR=6.8
KURK Kurchatov 58.97 314 ⇑*i*P **P** **07 34 32.2 +1.2**
KURK pmax pmax
comp=Z,134nm,1.0s,mb5.9
KURK Kurchatov 58.97 314 *e*P **P** **07 34 32.5 +1.6**
comp=Z,89nm,0.8s,mb5.8
KURK LR LR
comp=Z,41µm,20.0s,MS6.6
WMQ Urumqi 59.27 303 P **P** **07 34 34.4 +1.2**
WMQ AP pP 07 34 47.4 +3.0
WMQ PCP PcP 07 35 22.3 +1.3
WMQ PP PP 07 36 46.9 +3.0
WMQ PPP 07 38 12.4
WMQ S **S** **07 42 37.8 -0.6**
WMQ XS sS 07 42 54.0 -3.0
WMQ PS 07 42 57.0
WMQ SCS ScS 07 44 18.1 -1.8
WMQ SS SS 07 46 33.1 +0.5
WMQ AMB AMB
comp=Z,148nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,5µm,6.0s
WMQ LR LR
comp=N,14µm,20.0s,MS6.3
WMQ LR LR
comp=E,20µm,20.0s,MS6.3
WMQ LR LR
comp=Z,32µm,20.0s,MS6.4
SCZP Santa Cruz 59.86 257 *e*P **P** **07 34 35.6 -1.9**
MKAR Makanchi Array 59.97 308 P **P** **07 34 37.4 -0.6**
comp=Z,61nm,0.6s,mb5.8,baz=59,slow=7.2,SNR=19
MKAR PKPPKP 08 04 06.8
comp=Z,1.7nm,0.9s,baz=253,slow=3.7,SNR=4.8
MKAR P4KPbc 08 11 44.8
comp=Z,1.4nm,1.0s,baz=35,slow=4.4,SNR=4.8
MKAR Makanchi Array 59.97 308 P **P** **07 34 37.4 -0.6**
MKAR P'P' 08 04 06.8
SCHQ Schefferville 60.10 38 P **P** **07 34 37.8 -0.9**
comp=Z,103nm,1.0s,mb5.8,baz=334,slow=7.4,SNR=14
SCHQ Schefferville 60.10 38 *e*P **P** **07 34 37.4 -1.3**
comp=Z,131nm,1.0s,mb5.9
SCHQ LR LR
comp=Z,25µm,20.0s,MS6.3
GYA Guiyang 60.22 276 ⇑*i*P **P** **07 34 38.1 -1.8**
GYA AP pP 07 34 48.5 -2.7
GYA XP sP 07 34 52.6 -3.0
GYA PCP PcP 07 35 25.8 +0.7
GYA PP PP 07 36 51.5 -1.2
GYA PPP 07 37 42.1
GYA SCP ScP 07 39 22.3 -0.7
GYA PCS PcS 07 39 26.1 -1.5
GYA S **S** **07 42 43.0 -8.0**
GYA XS sS 07 43 00.1 -10
GYA AMB AMB
comp=Z,220nm,1.0s,mb6.1
GYA AMB AMB
comp=Z,3µm,10.8s
GYA LR LR
comp=N,6µm,20.1s,MS5.8
GYA LR LR
comp=E,5µm,22.1s,MS5.8
GYA LR LR
comp=Z,7µm,20.9s,MS5.8
SLM Saint Louis 60.32 64 *e*P **P** **07 34 39.6 -0.9**
SLM pmax pmax
comp=Z,460nm,0.9s,mb6.5
SLM Saint Louis 60.32 64 *e*P **P** **07 34 39.3 -1.2**
comp=Z,462nm,0.8s,mb6.6
STEI Steigen 60.58 354 *e*P **P** **07 34 43.1 +1.4**
STEI AMb AMB 07 34 49.2
comp=Z,98nm,1.3s,mb5.8
SOKR Solikamsk 60.61 331 *c i*P **P** **07 34 42.4 +0.3**
SOKR PPP 07 38 32.3
SOKR S **S** **07 43 02.2 +7.0**
SOKR SSS 07 49 33.3
SOKR pmax pmax
comp=Z,80nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,31µm,19.0s,MS6.5
BVAR Borovoye Array 60.85 320 PKPPKP 08 03 57.5
comp=Z,2.0nm,0.8s,baz=210,slow=5.1,SNR=3.8
BVAR P4KPbc 08 11 48.0
comp=Z,3.3nm,0.9s,baz=68,slow=4.0,SNR=11
BRVK Borovoye 60.87 320 *e*P **P** **07 34 44.4 +0.4**
BRVK pmax pmax
comp=Z,60nm,0.5s,mb6.0
BRVK MLR MLR
comp=Z,28µm,22.0s,MS6.4
BRVK Borovoye 60.87 320 *e*P **P** **07 34 44.4 +0.4**
comp=Z,60nm,0.5s,mb6.0
BRVK LR LR
comp=Z,28µm,22.0s,MS6.4
LUBP Lubang 61.23 255 *e*P **P** **07 34 45.8 -1.1**
OTRP Odiongan 61.23 253 *e*P **P** **07 34 47.7 +0.8**
MSLP Maasin 61.31 249 *e*P **P** **07 34 46.4 -1.1**
AAM Ann Arbor 61.37 57 *e*P **P** **07 34 47.6 0.0**
AAM pmax pmax
comp=Z,160nm,0.9s,mb6.2
AAM Ann Arbor 61.37 57 *e*P **P** **07 34 46.8 -0.8**
comp=Z,64nm,0.4s,mb6.1
AAM LR LR
comp=Z,13µm,21.0s,MS6.1
RCP Roxas 61.43 252 ⇑*e*P **P** **07 34 49.0 +0.7**
SVE Sverdlovsk 61.57 327 *e*P **P** **07 34 50.0 +1.4**
SVE *e* 07 35 30.9
SVE *e* 07 37 11.1
SVE *e*PPP 07 38 40.7
SVE *e*S **S** **07 43 14.1 +6.7**
SVE *e*SS SS 07 47 16.2 +8.2
SVE pmax pmax
comp=Z,40nm,0.8s,mb5.6
SVE MLR MLR
comp=Z,33µm,20.0s,MS6.5
PVMO Portageville 62.18 66 *e*P **P** **07 34 53.1 0.0**
comp=Z,1µm,1.1s,mb6.9
PVMO *e* 07 35 08.2
USIN University of 62.24 63 *e*P **P** **07 34 52.7 -0.8**
comp=Z,1µm,0.7s,mb7.1
GUIM Jordan 62.26 251 *e*P **P** **07 34 54.0 +0.2**
STOK Stokkvaagen 62.30 355 *e*P **P** **07 34 54.0 +0.6**
STOK AMb AMB 07 34 57.5
comp=Z,269nm,0.8s,mb6.4
STOK Stokkvaagen 62.30 355 *e*P **P** **07 34 53.9 +0.5**
MOR8 Moi Rana 62.37 354 *e*P **P** **07 34 53.6 -0.3**
MOR8 AMb AMB 07 34 56.7
comp=Z,96nm,1.0s,mb5.9
MOR8 Moi Rana 62.37 354 *e*P **P** **07 34 52.5 -1.3**
NATX Nacogdoches 62.55 73 *e*P **P** **07 34 55.2 -0.5**
comp=Z,170nm,0.8s,mb6.2
NATX LR LR
comp=Z,18µm,21.0s,MS6.2
ARU Arti 62.58 328 *c i*P **P** **07 34 56.8 +1.4**
ARU *e* 07 35 35.7
ARU *e* 07 37 17.7
ARU *e*PPP 07 38 46.6
ARU *e*S **S** **07 43 23.8 +3.6**
ARU *e*SS SS 07 47 33.9 +10
ARU pmax pmax
comp=Z,68nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,27µm,21.0s,MS6.4
ARU Arti 62.58 328 *e*P **P** **07 34 56.7 +1.2**
comp=Z,94nm,0.8s,mb6.0
ARU LR LR
comp=Z,26µm,20.0s,MS6.4
BUSP Coron 62.61 254 *e*P **P** **07 34 56.0 -0.1**
MET Memphis--Engin 62.96 67 *e*P **P** **07 34 59.2 +0.9**
comp=Z,3µm,1.3s,mb7.2
BORG Borgarnes 62.96 11 P **P** **07 34 58.7 +0.9**
BORG pmax pmax
comp=Z,77nm,0.8s
BORG MLR MLR
comp=Z,9µm,19.0s
BORG Borgarnes 62.96 11 P **P** **07 34 58.7 +0.9**
comp=Z,77nm,0.8s,mb5.9
BORG LR LR
comp=Z,9µm,19.0s,MS6.0
BUKP Musuan 63.01 247 *e*P **P** **07 34 59.2 +0.3**
DAV Davao City (W) 63.37 246 P **P** **07 35 01.6 +0.4**
comp=Z,182nm,0.4s,mb6.6,baz=50,slow=16,SNR=3.0
DAV Davao City (W) 63.37 246 ⇑*i*P **P** **07 34 59.8 -1.4**
DAV Davao City (W) 63.37 246 P **P** **07 35 01.6 +0.4**
DAV LR LR
comp=Z,16µm,21.0s,MS6.2
ERPA Erie 63.42 55 *e*P **P** **07 35 00.2 -1.0**
comp=Z,214nm,0.8s,mb6.3
ERPA LR LR
comp=Z,23µm,19.0s,MS6.4
KVTX Kingsville 63.60 78 *e*P **P** **07 35 02.8 +0.1**
comp=Z,232nm,1.1s,mb6.1
KVTX *e* pP 07 35 16.1 +2.1
KVTX LR LR
comp=Z,8µm,19.0s,MS5.9
JOF Joensuu 63.61 345 *e*p **P** **07 35 01.9 -0.2**
comp=Z,338nm,0.7s,mb6.5
KMI Kunming 63.62 278 P **P** **07 35 02.5 -0.3**
KMI AP pP 07 35 10.4 -3.8
KMI XP sP 07 35 15.9 -2.7
KMI PCP PcP 07 35 39.6 +0.7
KMI PP PP 07 37 23.6 +0.8
KMI PPP 07 38 54.6
KMI SCP 07 39 37.8
KMI PCS 07 39 41.8
KMI S **S** **07 43 29.1 -5.0**
KMI XS sS 07 43 46.9 -5.9
KMI PS 07 43 51.8
KMI SCS ScS 07 44 48.5 -4.7
KMI SS SS 07 47 37.0 -4.6
KMI SSS 07 50 22.3
KMI AMB AMB
comp=Z,229nm,1.2s,mb6.1
KMI AMB AMB
comp=Z,3µm,9.5s
KMI LR LR
comp=N,7µm,18.0s,MS6.0
KMI LR LR
comp=E,7µm,20.1s,MS6.0
KMI LR LR
comp=Z,8µm,21.4s,MS5.9
QIZ Qiongzhong 63.65 268 P **P** **07 35 03.8 +0.7**
QIZ AP pP 07 35 14.8 +0.4
QIZ XP sP 07 35 18.9 +0.1
QIZ S **S** **07 43 38.8 +4.2**
QIZ SS SS 07 47 43.3 +1.0
QIZ AMB AMB
comp=Z,3µm,12.8s
QIZ LR LR
comp=N,5µm,20.3s
QIZ LR LR
comp=Z,7µm,22.5s,MS5.8
QIZ Qiongzhong 63.65 268 *e*P **P** **07 35 04.0 +1.0**
comp=Z,322nm,1.6s,mb6.1
QIZ *e* 07 35 18.2
QIZ LR LR
comp=Z,6µm,21.0s,MS5.8
ENPP El Nido 63.70 254 *e*P **P** **07 35 03.1 -0.3**
KLMR Klimovskoe 63.98 340 *e*P **P** **07 35 03.7 -0.9**
KLMR *e*S **S** **07 43 37.8 +0.4**
KLMR pmax pmax
comp=Z,243nm,1.1s,mb6.1
NSS Namsos 64.16 355 *e*P **P** **07 35 05.8 0.0**
VBMS Vicksburg 64.69 70 *e*P **P** **07 35 09.8 +0.1**
comp=Z,789nm,1.1s,mb6.7
VBMS *e* 07 35 26.2
VBMS LR LR
comp=Z,12µm,19.0s,MS6.1
KAF Kangasniemi 65.12 347 *e*p **P** **07 35 11.5 -0.6**
comp=Z,261nm,0.7s,mb6.4,baz=13,slow=5.8
KAF Kangasniemi 65.12 347 *e*P **P** **07 35 11.5 -0.6**
KAF pmax pmax
comp=Z,261nm,0.7s,mb6.4
AAA Alma-Ata 65.14 309 *e*P **P** **07 35 12.3 -0.2**
AAA *e*S S 07 43 54.7 +2.4
AAA pmax pmax
comp=Z,4µm,15.3s
AAA smax
comp=N,3µm,11.2s
AAA MLR MLR
comp=Z,11µm,19.0s,MS6.1
PPR Puerto Princes 65.24 254 *e*P **P** **07 35 14.8 +1.3**
AFI Afiamalu 65.27 172 P **P** **07 35 13.0 -0.5**
comp=Z,22nm,0.8s,mb5.3,baz=220,slow=15
AFI Afiamalu 65.27 172 P **P** **07 35 13.0 -0.5**
AFI LR LR
comp=Z,10µm,20.0s,MS6.0
LBNH Lisbon 65.84 49 *e*P **P** **07 35 15.0 -2.0**
LBNH pmax pmax
comp=Z,103nm,0.9s,mb5.9
LBNH MLR MLR
comp=Z,18µm,20.0s,MS6.3
LBNH Lisbon 65.84 49 *e*P **P** **07 35 15.0 -2.0**
comp=Z,103nm,0.9s,mb5.9
LBNH LR LR
comp=Z,18µm,20.0s,MS6.3
PKME Peaks-Kenny Pk 66.28 47 *e*P **P** **07 35 18.3 -1.5**
comp=Z,92nm,0.9s,mb5.8
PKME LR LR
comp=Z,19µm,22.0s,MS6.3
FRU Bishkek 66.60 310 *e*P **P** **07 35 24.0 +2.1**
PUL Pulkovo 66.74 344 ⇑*i*P **P** **07 35 23.0 +0.5**
DOMB Dombas 66.78 356 *e*P **P** **07 35 24.4 +1.7**
DOMB AMb AMB 07 35 28.6
comp=Z,115nm,1.2s,mb5.8
DOMB Dombas 66.78 356 *e*P **P** **07 35 23.6 +0.8**
AAK Ala-Archa 66.81 310 P **P** **07 35 25.0 +1.8**
comp=Z,1µm,0.7s,mb7.1,SNR=11
AAK Ala-Archa 66.81 310 *e*P **P** **07 35 24.8 +1.6**
AAK pmax pmax
comp=Z,239nm,0.9s,mb6.2
AAK MLR MLR
comp=Z,21µm,20.0s,MS6.3
AAK Ala-Archa 66.81 310 *e*P **P** **07 35 24.8 +1.5**
comp=Z,239nm,0.9s,mb6.2
AAK LR LR
comp=Z,21µm,20.0s,MS6.3
UCH Uchtor 67.11 309 P **P** **07 35 28.6 +3.5**
SNR=7.2
UCH Uchtor 67.11 309 *e*P **P** **07 35 28.4 +3.3**
comp=Z,44nm,0.9s,mb5.5
UCH LR LR
comp=Z,6µm,19.0s,MS5.8
PMG Port Moresby 67.20 217 P **P** **07 35 25.3 -0.7**
comp=Z,26nm,0.8s,mb5.3,baz=250,slow=2.0,SNR=7.6
PMG Port Moresby 67.20 217 *e*P **P** **07 35 26.8 +0.9**
PMG pmax pmax
comp=Z,47nm,0.9s
PMG MLR MLR
comp=Z,11µm,20.0s
PMG Port Moresby 67.20 217 *e*P **P** **07 35 26.8 +0.9**
comp=Z,47nm,0.9s,mb5.5
PMG LR LR
comp=Z,11µm,20.0s,MS6.1
MOIG Morelia 67.31 87 *i*P **P** **07 35 28.9 +2.2**
LSA Lhasa 67.35 289 P **P** **07 35 29.8 +2.9**
LSA Lhasa 67.35 289 *e*P **P** **07 35 28.6 +1.7**
LSA *e* pP 07 35 41.6 +3.3
LSA pmax pmax
comp=Z,238nm,0.6s,mb6.4
LSA MLR MLR
comp=Z,20µm,19.0s,MS6.4
LSA Lhasa 67.35 289 *e*P **P** **07 35 28.6 +1.7**
comp=Z,238nm,0.6s,mb6.4
LSA *e* pP 07 35 41.6 +3.3
LSA LR LR
comp=Z,20µm,19.0s,MS6.4
BRAL Brewton 67.59 68 *e*P **P** **07 35 28.9 +0.6**
comp=Z,1µm,1.2s,mb6.9
BRAL *e* pP 07 35 42.2 +2.5
BRAL LR LR
comp=Z,10µm,20.0s,MS6.0
CBN Corbin 67.65 57 *e*P **P** **07 35 27.8 -0.8**
comp=Z,185nm,0.8s,mb6.2
CBN *e* 07 35 44.2
CBN LR LR
comp=Z,31µm,19.0s,MS6.5
AKTK Aktyubinsk 67.65 325 P **P** **07 35 28.5 0.0**
AKTO Aktyubinsk 67.65 325 P **P** **07 35 28.5 0.0**
comp=Z,53nm,0.6s,mb5.8,baz=65,slow=9.1,SNR=19
NB2 NORSAR Subarra 67.67 355 P **P** **07 35 27.6 -0.8**
comp=Z,101nm,0.8s,mb5.9,baz=7.8,slow=6.5
NOA NORSAR Array B 67.67 355 P **P** **07 35 27.3 -1.1**
comp=Z,106nm,0.8s,mb5.9,baz=7.2,slow=6.3,SNR=22
NOA PKP2bc 08 03 49.5
comp=Z,8.4nm,1.0s,baz=168,slow=3.1,SNR=4.9
NOA NORSAR Array B 67.67 355 P **P** **07 35 27.3 -1.1**
NOA ⇑*e* 08 03 49.5
NAO01 NORSAR Array S 67.89 355 *e*P **P** **07 35 29.9 +0.2**
comp=Z,35nm,0.8s,mb5.4
NAO01 LR LR
comp=Z,11µm,20.0s,MS6.1
HFS Hagfors 68.41 353 P **P** **07 35 32.1 -0.9**
comp=Z,66nm,0.6s,mb5.8,baz=24,slow=5.0,SNR=19
KSH Kashi 68.44 307 P **P** **07 35 36.5 +3.0**
KSH AP pP 07 35 46.6 +1.6
KSH XP sP 07 35 50.3 +1.0
KSH PCP PcP 07 36 02.3 +3.6
KSH PP PP 07 38 09.3 +5.0
KSH PPP 07 39 47.8
KSH SCP 07 40 01.3
KSH PCS 07 40 05.5
KSH S S 07 44 34.6 +2.4
KSH XS sS 07 44 51.1 -0.1
KSH SCS ScS 07 45 30.6 +0.6
KSH SS SS 07 48 59.8 +4.3
KSH AMB AMB
comp=Z,778nm,0.7s,mb6.8
KSH AMB AMB
comp=Z,8µm,6.2s
KSH LR LR
comp=Z,50µm,21.6s,MS6.7
VSU Vasula 68.56 346 ⇑*i*P **P** **07 35 34.2 +0.2**
TAOE Nuku Hiva Isla 68.66 138 *e*S S 07 44 34.7 -0.6
comp=Z,22µm,28.0s
TAOE Nuku Hiva Isla 68.66 138 *e*LR LR 07 56 17.0
comp=Z,148µm,22.2s,baz=342
WAL1 Walls 68.74 1 *e*P **P** **07 35 36.3 +1.3**
LRW Lerwick 68.86 1 *e*P **P** **07 35 36.6 +0.7**
LRW AMb AMB 07 35 40.4
comp=Z,174nm,1.4s,mb5.8
LRW AMS AMS 08 13 00.7
comp=Z,5µm,19.2s,MS5.7
ODD1 Odda 69.01 357 *e*P **P** **07 35 38.1 +1.3**
ODD1 Odda 69.01 357 *e*P **P** **07 35 37.0 +0.3**
KONO Kongsberg 69.15 355 *e*P **P** **07 35 39.6 +2.0**
KONO Kongsberg 69.15 355 *e*P **P** **07 35 37.5 -0.2**
comp=Z,117nm,0.8s,mb5.9
KONO LR LR
comp=Z,9µm,21.0s,MS6.0
PLIG Platanillo 69.32 86 *i*P **P** **07 35 35.2 -4.1**
SDKM Sandakan 69.43 253 ⇓P **P** **07 35 41.1 +1.0**
BLS5 Blasjo 69.51 357 *e*P **P** **07 35 41.0 +1.2**
BLS5 AMb AMB 07 35 46.6
comp=Z,69nm,0.9s,mb5.6
BLS5 Blasjo 69.51 357 *e*P **P** **07 35 42.5 +2.6**
CNNC Cliffs of the 69.59 59 *e*P **P** **07 35 40.0 -0.8**
comp=Z,166nm,0.7s,mb6.1
CNNC LR LR
comp=Z,17µm,19.0s,MS6.3
KKM Kota Kinabalu 69.70 254 *e*P **P** **07 35 42.2 +0.5**
comp=Z,184nm,1.0s,mb6.0
KKM LR LR
comp=Z,7µm,21.0s,MS5.9
OBN Obninsk 69.87 339 *e*P **P** **07 35 42.0 -0.2**
comp=Z,494nm,0.8s,mb6.5
OBN LR LR
comp=Z,16µm,19.0s,MS6.3
NHSC New Hope 69.95 62 *e*P **P** **07 35 43.4 +0.4**
comp=Z,921nm,0.8s,mb6.8
NHSC LR LR
comp=Z,14µm,20.0s,MS6.2
KKTK Khon Kaen 70.07 271 ⇑P **P** **07 35 44.0 +0.1**
comp=Z,1µm,0.8s,mb7.0
TSM Tawau 70.10 251 ⇓P **P** **07 35 45.1 +1.0**
ORE Reay 70.40 3 *e*P **P** **07 35 46.5 +1.1**
CHTO Chiang Mai 70.64 276 *e*P **P** **07 35 47.1 -0.3**
comp=Z,114nm,1.0s,mb5.8
CHTO LR LR
comp=Z,5µm,20.0s,MS5.8
CMAR Chiang Mai Arr 70.91 276 P **P** **07 35 48.3 -0.7**
comp=Z,92nm,0.9s,mb5.7,baz=28,slow=6.6,SNR=26
RRH Rhenigidale 70.92 4 *e*P **P** **07 35 49.5 +1.0**
MVH1 Achvaich 71.01 3 *e*P **P** **07 35 49.5 +0.5**
RRR Rubha Reidh 71.02 4 *e*P **P** **07 35 49.7 +0.6**
MCD Coleburn Disti 71.38 2 *e*P **P** **07 35 51.0 -0.3**
KAC Achnashellach 71.40 4 *e*P **P** **07 35 51.8 +0.3**
PMOR Pomariorio Ree 71.41 148 *e*P **P** **07 35 53.7 +1.8**
comp=Z,215nm,1.0s,mb6.0
MDO Dochfour 71.49 3 *e*P **P** **07 35 52.0 0.0**
MME1 Meikle Cairn 71.66 2 *e*P **P** **07 35 53.2 +0.3**
VAH Vaihoa 71.72 148 *e*P **P** **07 35 54.4 +0.7**
comp=Z,275nm,1.2s,mb6.1
GUN Gumba 71.77 292 *e*P **P** **07 35 55.7 +1.6**
JIRN Jiri 71.78 291 *e*P **P** **07 35 55.4 +1.2**
comp=Z,2µm,0.8s,mb7.0
KAR1 Arisaig 71.96 4 *e*P **P** **07 35 55.2 +0.5**
RAMN Ramite 72.07 291 *e*P **P** **07 35 56.4 +0.4**
KKN Kakani 72.21 292 *e*P **P** **07 35 58.2 +1.4**
comp=Z,2µm,0.9s,mb6.9
PKI Pulchoki 72.30 292 *e*P **P** **07 35 58.2 +0.9**
PKIN Phulchoki 72.30 292 *e*P **P** **07 35 58.0 +0.7**
comp=Z,916nm,0.9s,mb6.7
GKN Gorkha 72.42 293 *e*P **P** **07 35 58.7 +0.7**
comp=Z,2µm,0.9s,mb7.0
DMN Daman 72.45 292 *e*P **P** **07 35 59.2 +1.0**
comp=Z,2µm,0.9s,mb6.9
DANN Dangsing 72.67 294 *e*P **P** **07 36 00.3 +0.8**
comp=Z,2µm,0.9s,mb7.1
EAB Aberfoyle 72.75 3 *e*P **P** **07 35 59.9 +0.4**
COP Copenhagen 72.92 353 *i*P **P** **07 36 00.4 -0.1**
COP *i*S S 07 45 18.2 -5.7
COP
comp=Z,4µm,19.0s
COP Copenhagen 72.92 353 *e*P **P** **07 36 00.4 -0.1**
COP *i*S S 07 45 18.2 -5.7
COP LR LR
comp=Z,4µm,19.0s,MS5.7
DWPF Disney 73.00 66 *e*P **P** **07 36 02.5 +1.0**
comp=Z,650nm,1.3s,mb6.4
DWPF LR LR
comp=Z,7µm,19.0s,MS6.0

VORD Divnogorie 73.03 336 *e*P P 07 36 02.4 +1.2
VORD *e* 07 38 45.2
VORD *e*PPP 07 40 31.6
VORD *e*S S 07 45 18.2 -7.0
VORD pmax pmax
comp=Z,300nm,0.8s,mb6.3
VORD pmax pmax
comp=N,270nm,0.6s
VORD pmax pmax
comp=E,410nm,0.6s
VORD pmax pmax
comp=Z,600nm,8.1s
VORD pmax pmax
comp=N,150nm,7.6s
VORD pmax pmax
comp=E,90nm,5.8s
VORD smax
comp=N,1μm,11.2s
VORD smax
comp=Z,770nm,16.9s
VORD smax
comp=E,880nm,17.5s
VORD MLR MLR
comp=Z,10μm,19.0s,MS6.1
VORD MLR MLR
comp=N,6μm,15.0s,MS6.2
VORD MLR MLR
comp=E,8μm,17.0s,MS6.2
EDI Edinburgh 73.05 2 *e*P P **07 36 01.4 +0.2**
EDI AMb AMB 07 36 06.6
comp=Z,124nm,1.3s,mb5.7
EDI AMS AMS 08 16 31.5
comp=Z,5μm,19.7s,MS5.8
ESY Stoneypath 73.07 2 *e*P P **07 36 01.7 +0.3**
KOLN Koldanda 73.20 293 *e*P P **07 36 03.2 +0.6**
comp=Z,2μm,1.0s,mb7.0
EBL Broad Law 73.20 2 *e*P P **07 36 03.2 +1.0**
PPT Papeete 73.28 151 *e*S S 07 45 25.1 -3.6
comp=Z,11μm,28.2s
PPT *e*SS SS 07 50 07.8 -3.7
comp=Z,5μm,25.5s
PPT *e*LR LR 07 57 59.8
comp=Z,31μm,29.5s,baz=346
BSD Bornholm Skovb 73.29 352⇓ *e*P P **07 36 00.8 -1.9**
BSD *i* S S 07 45 24.9 -3.1
BSD Bornholm Skovb 73.29 352⇓ *i*P P **07 36 00.8 -1.9**
BSD *i* S S 07 45 24.9 -3.1
BSD *i* S S 07 45 47.6 +20
BSD
comp=Z,9μm,22.0s
BSD Bornholm Skovb 73.29 352⇓ *e*P P **07 36 00.8 -1.9**
BSD *i* S S 07 45 24.9 -3.1
BSD *i* S S 07 45 47.6 +20
BSD Bornholm Skovb 73.29 352 *i* P **07 36 00.5 -2.2**
TIAR Tiarei 73.34 151 *e*P P **07 36 05.0 +1.6**
comp=Z,1μm,1.1s,mb6.7
PAE Paea 73.37 151 *e*P P **07 36 05.2 +1.7**
comp=Z,672nm,1.3s,mb6.4
PAE Paea 73.37 151 *e*P P **07 36 05.2 +1.7**
PAE pmax pmax
comp=Z,672nm,1.3s,mb6.4
SUW Suwalki 73.39 347 *e*P P **07 36 02.2 -1.1**
SUW LMZ 08 08 47.2
comp=Z,14μm,23.0s
SUW Suwalki 73.39 347 *e*P P **07 36 02.2 -1.1**
XSO Sourhope Farm 73.50 2 *e*P P **07 36 04.4 +0.5**
EKA Eskdalemuir Ar 73.64 2 P P **07 36 04.6 -0.2**
comp=Z,78nm,0.6s,mb5.8,baz=353,slow=4.6,SNR=32
ESK Eskdalemuir 73.65 3 P P **07 36 05.1 +0.2**
comp=Z,694nm,0.7s,mb6.7,SNR=13
ESK Eskdalemuir 73.65 3 *e*P P **07 36 04.9 0.0**
ESK AMb AMB 07 36 09.4
comp=Z,148nm,1.4s,mb5.7
ESK AMS AMS 08 15 24.4
comp=Z,6μm,20.1s,MS5.9
ESK Eskdalemuir 73.65 3 *e*P P **07 36 05.2 +0.3**
ESK pmax pmax
comp=Z,177nm,1.1s,mb5.9
ESK MLR MLR
comp=Z,6μm,20.0s,MS5.9
ESK Eskdalemuir 73.65 3 *e*P P **07 36 05.2 +0.3**
comp=Z,177nm,1.1s,mb5.9
ESK LR LR
comp=Z,6μm,20.0s,MS5.9
BTM Bintulu 73.84 254⇓ P P **07 36 07.2 +0.6**
RGN Rugen 73.98 353 *e*P P **07 36 07.0 +0.2**
comp=Z,392nm,0.8s,mb6.4
RGN *e*S S 07 45 33.6 -2.3
RGN *e*SS SS 07 50 47.0 +27
RGN Rugen 73.98 353 *e*P P **07 36 07.4 +0.6**
comp=Z,278nm,0.7s,mb6.3
GAL1 Galloway 74.06 3 *e*P P **07 36 06.5 -0.7**
GAL1 AMb AMB 07 36 08.8
comp=Z,162nm,1.3s,mb5.8
GAL1 AMS AMS 08 07 56.5
comp=Z,10μm,20.9s,MS6.1
XAL Allendale 74.13 2 *e*P P **07 36 08.0 +0.3**
DZM Mont Dzumac 74.21 194 *e*P P **07 36 09.1 +0.7**
comp=Z,90nm,1.0s,mb5.7
DZM *e* 07 36 23.5
GMM Mts of Mourne 74.63 4 *e*P P **07 36 10.0 -0.6**
HLG Helgoland 74.69 356 *e*P P **07 36 11.3 +0.4**
comp=Z,263nm,0.9s,mb6.2
HLG *e*S S 07 45 41.9 -1.9
HLG *e*SS SS 07 50 55.6 +25
WIM Isle of Man 74.78 3 *e*P P **07 36 12.3 +0.9**
BSEG Bad Segeberg 74.81 354 *e*P P **07 36 11.8 +0.2**
BSEG *e*S S 07 45 43.1 -2.1
BSEG Bad Segeberg 74.81 354 *e*P P **07 36 11.8 +0.2**
comp=Z,310nm,0.9s,mb6.2
BSEG *e*S S 07 45 43.1 -2.1
BSEG *e*SS SS 07 50 55.0 +23
GKP Gorka Klasztor 74.88 350 *e*P P **07 36 11.7 -0.3**
GKP LMZ 08 10 31.1
comp=Z,19μm,21.9s
GKP Gorka Klasztor 74.88 350 *e*P P **07 36 11.7 -0.3**
GKP LR LR
comp=Z,19μm,21.9s,MS6.3
TEIG Tepich 74.90 77 *e*P P **07 36 12.5 -0.1**
comp=Z,192nm,1.0s,mb6.0
TEIG LR LR
comp=Z,5μm,20.0s,MS5.8
HPK Haverah Park 75.05 2 *e*P P **07 36 13.4 +0.4**
HPK AMb AMB 07 36 17.6
comp=Z,192nm,1.4s,mb5.8
HPK AMS AMS 08 18 18.0
comp=Z,5μm,20.3s,MS5.8
LDU Leeds Universi 75.21 2 *e*P P **07 36 14.5 +0.6**
LHO Holmfirth 75.46 2 *e*P P **07 36 14.5 -0.9**
WME Myndd Eilian 75.54 3 *e*P P **07 36 15.2 -0.6**
DLF Lyons Farm 75.54 5 *e*P P **07 36 15.3 -0.5**
AKASG Malin Array Be 75.55 342 P P **07 36 15.0 -0.9**
comp=Z,359nm,0.8s,mb6.3,baz=20,slow=6.0,SNR=23
AKASG PKiKP PKiKP 07 42 04.2 +0.6
comp=Z,1.6nm,0.6s,baz=14,slow=1.7,SNR=4.1
AKASG Malin Array Be 75.55 342 P P **07 36 15.0 -0.9**
DSB Dublin 75.60 5 *e*P P **07 36 16.0 -0.2**
comp=Z,257nm,0.8s,mb6.2
WLF1 Llynfaes 75.64 3 *e*P P **07 36 15.4 -1.0**
KBI1 Birley Grange 75.76 2 *e*P P **07 36 16.4 -0.7**
KBL Kabul 75.78 308 *e*P P **07 36 17.2 -0.3**
KBL pmax pmax
comp=Z,430nm,0.9s,mb6.4
KBL Kabul 75.78 308 *e*P P **07 36 17.2 -0.3**
comp=Z,430nm,0.9s,mb6.4
YRE Yr Eifl 75.95 3 *e*P P **07 36 18.8 +0.6**
KWE Weaver Farm 75.99 2 *e*P P **07 36 17.4 -1.0**
RUE Ruedersdorf 76.00 352 *e*P P **07 36 18.1 -0.3**
comp=Z,180nm,1.1s,mb5.9
RUE *e*SS SS 07 51 04.6 +15
RUE Ruedersdorf 76.00 352 *e*P P **07 36 18.3 -0.2**
comp=Z,112nm,0.8s,mb5.8
WIT Witteveen 76.11 356⇑ *i*P P **07 36 19.9 +0.8**
comp=Z,566nm,1.2s,mb6.4
WIT Witteveen 76.11 356 *i* x x 07 36 23.4
comp=Z,1μm,1.0s
ABA1 Baconsthorpe 76.15 360 *e*P P **07 36 19.6 +0.3**
NRDL Niedersach Rie 76.26 354 *e*P P **07 36 19.6 -0.3**
comp=Z,143nm,1.0s,mb5.9
NRDL *e*SS SS 07 51 09.5 +15
CWF Charnwood Fore 76.28 1 *e*P P **07 36 20.3 +0.3**
CWF AMb AMB 07 36 25.3
comp=Z,202nm,1.7s,mb5.8
CWF AMS AMS 08 18 39.6
comp=Z,5μm,19.2s,MS5.8

AEU East Anglia Un 76.42 360 *e*P P **07 36 19.6 -1.2**
KAPI Kappang 76.54 244 P P **07 36 21.8 -0.2**
comp=Z,51nm,1.0s,mb5.4,baz=26,slow=4.8,SNR=7.8
KAPI Kappang 76.54 244 *e*P P **07 36 23.1 +1.1**
comp=Z,91nm,1.0s,mb5.7
KAPI LR LR
comp=Z,3μm,22.0s,MS5.6
IBBN Ibbenburen 76.57 356 *e*P P **07 36 21.8 +0.1**
comp=Z,382nm,1.1s,mb6.2
IBBN *e*S S 07 46 02.7 -2.0
IBBN *e*SS SS 07 51 14.5 +16
KSM Kuching 76.88 256 *e*P P **07 36 24.3 +0.3**
comp=Z,134nm,1.1s,mb5.8
KSM Kuching 76.88 256⇓ P P **07 36 23.9 -0.2**
CLZ Clausthal 76.89 354 *e*P P **07 36 23.7 +0.2**
CLZ pmax pmax
comp=Z,239nm,0.9s,mb6.1
CLZ Clausthal 76.89 354 *e*P P **07 36 23.7 +0.2**
comp=Z,239nm,0.9s,mb6.1
CLZ *e*SS SS 07 51 20.1 +17
WTSB Winterswijk 76.95 356⇑ *i*P P **07 36 23.3 -0.6**
comp=Z,96nm,1.4s,mb5.5
WTSB Winterswijk 76.95 356 *i* x x 07 36 27.0
comp=Z,210nm,1.5s
MCH1 Michaelchurch 76.98 3 *e*P P **07 36 23.5 -0.5**
MCH1 AMb AMB 07 36 27.9
comp=Z,276nm,1.1s,mb6.1
MCH1 *e* 07 46 12.2
MCH1 AMS AMS 08 09 35.2
comp=Z,6μm,20.5s,MS5.9
SSW Stow on the Wo 77.04 2 *e*P P **07 36 24.9 +0.5**
CLL Collm 77.23 352⇑ *i*P P **07 36 24.7 -0.7**
CLL *i* *PP pP 07 36 33.5 -3.5
CLL *e*S S 07 46 13.0 +1.1
CLL pmax pmax
comp=Z,54nm,1.0s,mb5.4
CLL MLR MLR
comp=Z,10μm,22.3s,MS6.1
CLL Collm 77.23 352 *e*P P **07 36 24.5 -0.9**
comp=Z,152nm,1.2s,mb5.8
CLL *e*S S 07 46 09.5 -2.4
CLL *e*SS SS 07 51 23.0 +14
CLL Collm 77.23 352⇑ *i*P P **07 36 24.7 -0.7**
comp=Z,54nm,1.0s,mb5.4
CLL LmH 07 15 00.0
comp=N,5μm,20.8s
CLL LmH 07 15 00.0
comp=E,8μm,19.9s
CLL *i* Pmax 07 36 28.0
comp=Z,146nm,1.1s
CLL *e*Plp 07 36 30.0
comp=Z,2μm,22.2s
CLL *i* pP pP 07 36 33.5 -3.5
CLL *i* (sP) sP 07 36 37.6 -3.7
CLL *i* pPcP 07 36 43.7
CLL *e*PP PP 07 39 24.0 +5.2
CLL *e*PPP 07 41 18.0
CLL *e*S S 07 46 13.0 +1.1
CLL *e*PS 07 46 52.0
CLL *e*SS SS 07 51 06.0 -2.7
CLL Collm 77.23 352⇑ *i*P P **07 36 24.7 -0.7**
comp=Z,54nm,1.0s,mb5.4
CLL *i* pP pP 07 36 33.5 -3.5
CLL *e*S S 07 46 13.0 +1.1
CLL LR LR
comp=Z,10μm,22.3s,MS6.1
SKP1 Kophill 77.30 1 *e*P P **07 36 25.3 -0.6**
LVV L'vov 77.33 345 *e*P P **07 36 25.5 -0.5**
LVV *e*S S 07 46 09.9 -3.1
LVV *i* PS 07 46 56.3
LVV *e*SS SS 07 51 14.1 +3.8
HGH Gray Hill 77.35 2 *e*P P **07 36 26.1 0.0**
KSP Ksiaz 77.37 350 *e*P P **07 36 25.9 -0.3**
KSP LMZ 08 11 42.3
comp=Z,19μm,21.4s
KSP Ksiaz 77.37 350 *e*P P **07 36 25.1 -1.1**
KSP *e* 07 39 15.5
KSP *e*PPP 07 41 15.0
KSP *e*S S 07 46 10.5 -3.0
KSP *e* 07 46 35.0
KSP MLR MLR
comp=Z,27μm,20.3s,MS6.6
KSP Ksiaz 77.37 350 *e*P P **07 36 25.1 -1.1**
KSP *i* pP pP 07 36 28.9 -8.9
KSP *e*PP PP 07 39 15.5 -4.5
KSP *e*PPP 07 41 15.0
KSP *e*S S 07 46 10.5 -3.0
KSP *e*SKS 07 46 35.0
KSP *e*SS SS 07 51 04.0 -6.9
KSP LR LR
comp=Z,27μm,20.3s,MS6.6
CTA Charters Tower 77.39 213 P P **07 36 25.8 -0.8**
comp=Z,109nm,0.9s,mb5.8,baz=28,slow=7.2,SNR=19
CTA Charters Tower 77.39 213 *e*P P **07 36 26.0 -0.6**
comp=Z,84nm,0.9s,mb5.7
CTA *e*S S 07 46 11.3 -2.8
CTAO Charters Tower 77.39 213 *e*P P **07 36 26.3 -0.3**
CTAO pmax pmax
comp=Z,139nm,1.0s,mb5.8
CTAO MLR MLR
comp=Z,9μm,22.0s,MS6.0
CTAO Charters Tower 77.39 213 *e*P P **07 36 26.3 -0.3**
comp=Z,139nm,1.0s,mb5.8
CTAO LR LR
comp=Z,9μm,22.0s,MS6.0
BUG Bochum--Univer 77.46 356 *e*P P **07 36 26.3 -0.4**
comp=Z,167nm,1.0s,mb5.9
BUG *e*S S 07 46 12.6 -1.8
BUG *e*SS SS 07 51 28.0 +16
SWN1 Swindon 77.50 2 P P **07 36 27.2 +0.3**
SWN1 AMb AMB 07 36 33.4
comp=Z,646nm,1.4s,mb6.4
SWN1 AMS AMS 08 18 55.8
comp=Z,6μm,21.1s
SWN1 Swindon 77.50 2 *e*P P **07 36 27.2 +0.3**
SWN1 AMb AMB 07 36 33.4
comp=Z,646nm,1.4s,mb6.4
SWN1 AMS AMS 08 18 55.8
comp=Z,6μm,21.1s,MS5.9
OJC Ojcow 77.56 348 *e*P P **07 36 26.4 -0.9**
OJC *e*pP pP 07 36 40.7 +1.8
OJC *e*sP sP 07 36 47.1 +3.8
OJC *e*S S 07 46 10.5 -5.1
OJC *e*SS SS 07 51 11.2 -2.6
OJC L 08 12 22.3
comp=Z,10nm,20.6s
OJC Ojcow 77.56 348 *e*P P **07 36 26.4 -0.9**
OJC *e**PP pP 07 36 40.7 +1.8
OJC *e*S S 07 46 10.5 -5.1
OJC *e*SS SS 07 51 11.2 -2.6
OJC MLR MLR
comp=Z,10μm,20.6s,MS6.1
BRG Berggiesshubel 77.58 352 *e*P P **07 36 26.7 -0.7**
comp=Z,215nm,1.5s,mb5.9
BRG *e*SS SS 07 51 29.4 +15
BRG Berggiesshubel 77.58 352 *i* P P **07 36 26.7 -0.7**
comp=Z,70nm,1.0s,mb5.5
BRG *e* 07 36 30.2
comp=Z,89nm,0.9s
BRG *e* pP 07 36 40.3 +1.4
comp=Z,70nm,1.1s
BRG *e* 07 46 14.0
BRG *i* 07 46 53.0
BRG SS SS 07 51 35.0 +21
BRG
comp=N,10μm,19.1s
BRG
comp=E,7μm,17.9s
BRG
comp=Z,6μm,18.3s
FBE Freiberg 77.58 352 *e*P P **07 36 27.1 -0.3**
comp=Z,200nm,1.0s,mb6.0
WOL Wolverton 77.71 1 *e*P P **07 36 27.5 -0.6**
WOL AMb AMB 07 36 31.6
comp=Z,461nm,0.8s,mb6.5
KWP Kalwaria 77.72 346 *e*P P **07 36 28.9 +0.7**
KWP LMZ 08 12 23.4
comp=Z,14μm,22.9s
UPC Upice 77.73 350 *e*P P **07 36 27.8 -0.5**
MAK Makhachkala 77.78 327 *c* *i*P P **07 36 29.5 +0.9**
MAK *e* pP 07 36 39.6 -0.6
MAK *i* 07 39 27.7
MAK *e*PPP 07 41 21.4
MAK *e*S S 07 46 21.8 +3.7

MAK *i* 07 46 43.2
MAK pmax pmax
comp=E,275nm,1.1s
MAK pmax pmax
comp=Z,237nm,0.9s,mb6.1
MAK pmax pmax
comp=N,150nm,0.8s
MAK pmax pmax
comp=Z,6μm,10.2s
MAK smax
comp=E,1μm,5.0s
MAK smax
comp=N,4μm,9.5s
MAK MLR MLR
comp=N,53μm,26.0s,MS6.9
MAK MLR MLR
comp=Z,39μm,20.0s
MAK MLR MLR
comp=E,42μm,25.0s,MS6.9
MAK Makhachkala 77.78 327 *i*P P **07 36 29.3 +0.7**
DPC Dobruska-Polom 77.86 350 *e*P P **07 36 28.7 -0.2**
DPC AMS AMS 08 19 20.0
comp=E,10μm,16.2s
PVCC Panska Ves 77.86 351 *e*P P **07 36 28.8 -0.2**
PVCC *e*S S 07 46 19.7 +1.0
PVCC *ex* x 07 46 53.7
PVCC AMS AMS 08 17 20.0
comp=E,10μm,17.4s
HEX Exmoor 77.89 3 *e*P P **07 36 28.6 -0.5**
UBBA Unterbreizbach 77.93 354 *e*P P **07 36 28.9 -0.5**
comp=Z,293nm,1.8s,mb5.9
UBBA *e*S S 07 46 17.5 -2.0
UBBA *e*SS SS 07 51 34.5 +15
HTL Hartland 77.94 4 P P **07 36 29.2 -0.1**
HTL AMb AMB 07 36 32.9
comp=Z,240nm,0.9s,mb6.1
HTL AMS AMS 08 14 55.6
comp=Z,7μm,19.9s
HTL Hartland 77.94 4 *e*P P **07 36 29.2 -0.1**
HTL AMb AMB 07 36 32.9
comp=Z,240nm,0.9s,mb6.1
HTL AMS AMS 08 14 55.6
comp=Z,7μm,19.9s,MS6.0
MOX Moxa 78.00 353 *e*P P **07 36 29.0 -0.7**
comp=Z,134nm,1.1s,mb5.8
MOX
comp=Z,7μm,22.0s
MOX Moxa 78.00 353 *e*P P **07 36 29.0 -0.7**
MOX pmax pmax
comp=Z,134nm,1.1s,mb5.8
MOX MLR MLR
comp=Z,7μm,22.0s,MS5.9
MOX Moxa 78.00 353 *e*P P **07 36 29.3 -0.4**
comp=Z,174nm,1.2s,mb5.9
MOX *e*S S 07 46 18.0 -2.2
MOX *e*SS SS 07 51 35.7 +15
ABKT Ailbek 78.04 317 P P **07 36 31.5 +1.3**
comp=Z,682nm,0.9s,mb6.6,SNR=6.2
WERD Werda 78.14 353 *e*P P **07 36 30.2 -0.3**
comp=Z,146nm,1.2s,mb5.8
STHS Stebnicka Huta 78.15 347 *e*P P **07 36 31.2 +0.6**
STHS pmax pmax
comp=Z,105nm,1.0s,mb5.7
STHS Stebnicka Huta 78.15 347 *e*P P **07 36 31.2 +0.6**
comp=Z,104nm,1.0s,mb5.7
OKC Ostrava-Krasne 78.15 349 *e*P P **07 36 30.1 -0.5**
OKC *e*S S 07 46 22.4 +0.5
OKC AMS AMS 08 17 00.0
comp=Z,11μm,17.2s
OKC Ostrava-Krasne 78.15 349 *e*P P **07 36 30.1 -0.5**
OKC *e*S S 07 46 22.4 +0.5
TANN Tannenbergstha 78.16 353 *e*P P **07 36 30.3 -0.3**
comp=Z,207nm,1.6s,mb5.8
TANN *e*SS SS 07 51 38.4 +16
BEBN Eben Emael 78.17 357 P P **07 36 30.1 -0.5**
comp=Z,46nm,0.8s,mb5.5
HGN Heimansgroeve 78.19 357⇑ *i*P P **07 36 30.4 -0.4**
comp=Z,177nm,1.0s,mb6.0
HGN Heimansgroeve 78.19 357 *i* x x 07 36 34.1
comp=Z,347nm,1.0s
HGN Heimansgroeve 78.19 357 *e*S S 07 46 27.5 +5.3
HGN Heimansgroeve 78.19 357 *e*SS SS 07 51 35.6 +12
UCC Uccle 78.20 358 P P **07 36 30.3 -0.6**
GUNZ Gunzen 78.22 353 *e*P P **07 36 30.7 -0.3**
comp=Z,183nm,1.3s,mb5.8
NIE Niedzica 78.28 347 *e*P P **07 36 31.2 -0.1**
NIE *e* 07 36 37.1
MORC Moravsky Berou 78.28 349 P P **07 36 31.9 +0.6**
MORC Moravsky Berou 78.28 349 *e*P P **07 36 30.9 -0.4**
WERN Wernitzgruen 78.29 353 *e*P P **07 36 31.2 -0.2**
comp=Z,192nm,0.9s,mb6.0
KTGM Kuala Trenggan 78.30 264⇓ P P **07 36 32.8 +0.9**
NKC Novy Kostel 78.34 353 *e*P P **07 36 31.3 -0.3**
NKC *e*S S 07 46 20.0 -3.9
NKC AMS AMS 08 19 10.0
comp=Z,10μm,17.0s
NKC Novy Kostel 78.34 353 *e*P P **07 36 31.3 -0.3**
NKC *e*S S 07 46 20.0 -3.9
MEM Membach 78.34 357 P P **07 36 31.2 -0.4**
comp=Z,200nm,1.0s,mb6.0
PRU Pruhonice 78.40 351 *e*P P **07 36 31.3 -0.6**
PRU *e*pP pP 07 36 40.2 -3.3
PRU *e*PP PP 07 39 29.1 +0.5
PRU *e*S S 07 46 23.4 -1.1
PRU AMS AMS 08 17 40.0
comp=Z,11μm,17.3s
SNG Songkhla 78.44 267 P P **07 36 32.0 -0.7**
comp=Z,260nm,0.8s,mb6.2
KIV Kislovodsk 78.45 331 P P **07 36 33.0 +0.6**
comp=Z,2μm,1.1s,mb7.0,SNR=14
KIV Kislovodsk 78.45 331 *c* *i*P P **07 36 32.3 -0.1**
KIV *e*SS SS 07 51 28.7 +1.2
KIV pmax pmax
comp=Z,441nm,1.0s,mb6.3
KIV Kislovodsk 78.45 331 *e*P P **07 36 32.8 +0.5**
comp=Z,497nm,1.1s,mb6.3
KIV LR LR
comp=Z,15μm,21.0s,MS6.3
KOLS Kolonicke sedl 78.47 346 *e*P P **07 36 33.5 +1.1**
comp=Z,1.8nm,0.9s
SNF Seneffe 78.49 358 P P **07 36 32.6 +0.1**
comp=Z,126nm,1.3s,mb5.7
DYA Yadsworthy 78.52 3 P P **07 36 32.0 -0.6**
DYA AMb AMB 07 36 36.9
comp=Z,353nm,1.2s,mb6.2
DYA AMS AMS 08 18 37.2
comp=Z,6μm,18.4s
DYA Yadsworthy 78.52 3 *e*P P **07 36 32.0 -0.6**
DYA AMb AMB 07 36 36.9
comp=Z,353nm,1.2s,mb6.2
DYA AMS AMS 08 18 37.2
comp=Z,6μm,18.4s,MS6.0
BCLA Clavier 78.55 357 P P **07 36 32.4 -0.4**
comp=Z,58nm,0.7s,mb5.6
MANZ Manzenberg 78.61 353 *e*P P **07 36 32.7 -0.4**
comp=Z,110nm,1.2s,mb5.7
MANZ *e*SS SS 07 51 45.4 +16
CRVS Cervenica-Dubn 78.62 346 *e*P P **07 36 33.4 +0.2**
CRVS *e*S S 07 46 30.4 +3.5
CRVS pmax pmax
comp=Z,111nm,1.0s,mb5.8
CRVS MLR MLR
comp=Z,9μm,22.5s,MS6.1
CRVS Cervenica-Dubn 78.62 346 *e*P P **07 36 33.4 +0.2**
CRVS *e*S S 07 46 30.4 +3.5
CRVS Cervenica-Dubn 78.62 346 *e*P P **07 36 33.4 +0.2**
comp=Z,111nm,1.0s,mb5.7
CRVS *e*S S 07 46 30.4 +3.5
CRVS LR LR
comp=Z,9μm,22.5s,MS6.1
TNS Taunus Mts 78.62 355 *e*P P **07 36 32.9 -0.3**
TNS pmax pmax
comp=Z,176nm,0.9s,mb6.0
TNS Taunus Mts 78.62 355 *e*P P **07 36 32.9 -0.3**
comp=Z,176nm,0.9s,mb6.0
TNS *e*SS SS 07 51 46.0 +16
BBSR BB Station 78.65 52 *e*P P **07 36 33.1 -0.6**
comp=Z,239nm,0.8s,mb6.2
BBSR LR LR
comp=Z,8μm,20.0s,MS6.1
UZH Uzhgorod 78.76 346 *e*P P **07 36 34.0 0.0**
UZH *e*S S 07 46 26.0 -2.4
UZH MLR MLR
comp=Z,3μm,18.0s,MS5.7
TBI Tubuai 78.77 153 *e*S S 07 46 28.7 -0.1
comp=Z,6μm,31.5s

TBI eSS SS 07 51 33.3 -1.3
comp=Z,3µm,25.5s
TBI eLR LR 08 00 37.4
comp=Z,28µm,22.8s,baz=339
ROTZ Rotzenmuhle 78.82 353 eP **P 07 36 34.3 0.0**
comp=Z,134nm,1.1s,mb5.8
ROTZ eSS SS 07 51 48.6 +16
VRAC Vranov 78.85 350 P **P 07 36 33.6 -0.9**
comp=Z,126nm,0.8s,mb5.9,baz=11,slow=5.0,SNR=26
VRAC Vranov 78.85 350 P **P 07 36 34.9 +0.4**
VRAC Vranov 78.85 350 S **P 07 36 35.0 +0.5**
VRAC Vranov 78.85 350 eP **P 07 36 34.4 -0.1**
GIVF Givet 78.89 358 eP **P 07 36 34.0 -0.6**
comp=Z,405nm,1.1s,mb6.0
GIVF Givet 78.89 358 eP **P 07 36 34.0 -0.6**
GIVF pmax pmax
comp=Z,202nm,1.1s,mb6.0
GIVF Givet 78.89 358 eP **P 07 36 34.0 -0.6**
comp=Z,202nm,1.1s,mb6.0
DOU Dourbes 78.90 358 P **P 07 36 34.4 -0.3**
comp=Z,124nm,1.3s,mb5.7
BAIF Baives 78.94 358 eP **P 07 36 34.7 -0.3**
comp=Z,622nm,0.9s,mb6.2
BAIF Baives 78.94 358 eP **P 07 36 34.7 -0.3**
BAIF pmax pmax
comp=Z,311nm,0.9s,mb6.2
BAIF Baives 78.94 358 eP **P 07 36 34.7 -0.3**
comp=Z,311nm,0.9s,mb6.2
GRA1 Grafenberg Arr 78.97 353 eP **P 07 36 35.2 +0.1**
comp=Z,328nm,1.0s,mb6.2
GRA1 eS S 07 46 28.5 -2.2
GRA1 eSS SS 07 51 51.0 +16
GRA1 LR LR
comp=Z,10µm,20.4s,MS6.2
GRF Grafenberg Arr 78.97 353 eP **P 07 36 35.2 +0.1**
GRF eS S 07 46 28.5 -2.2
GRF pmax pmax
comp=Z,328nm,1.0s,mb6.2
GRF MLR MLR
comp=Z,10µm,20.4s,MS6.2
GRF Grafenberg Arr 78.97 353 eP **P 07 36 35.2 +0.1**
comp=Z,328nm,1.0s,mb6.2
GRF e 07 36 38.3
GRF eS S 07 46 28.5 -2.2
GRF eSS SS 07 51 51.0 +16
GRF eL 08 14 11.0
comp=Z,10µm,20.4s
GRFO Grafenberg 78.97 353 eS S 07 46 32.3 +1.6
GRFO eSS SS 07 51 51.1 +16
TREC Trest 78.99 350 eP **P 07 36 35.0 -0.2**
TREC AMS AMS 08 18 40.0
comp=Z,15µm,17.7s
KIS Kishinev 79.17 341 ⇓i P **P 07 36 36.0 -0.2**
KIS e PP 07 39 38.0 +2.9
KIS i S S 07 46 24.0 -8.8
KIS i 07 46 40.0
KIS i PS 07 47 10.0
KIS pmax pmax
comp=Z,700nm,1.0s,mb6.5
KIS Kishinev 79.17 341 i P **P 07 36 36.0 -0.2**
comp=Z,700nm,1.0s,mb6.5
KIS Kishinev 79.17 341 ePP PP 07 39 38.0 +2.9
KIS Kishinev 79.17 341 P **P 07 36 36.8 +0.6**
KECS Kecovo 79.17 347 eP **P 07 36 36.1 -0.1**
KECS pmax pmax
comp=Z,83nm,1.0s,mb5.6
KECS Kecovo 79.17 347 eP **P 07 36 36.1 -0.1**
comp=Z,83nm,1.0s,mb5.6
ANN Anapa 79.19 335 i P **P 07 36 36.3 -0.1**
IAS Iasi 79.23 342 P **P 07 36 37.8 +1.2**
BURAR Bucovina Array 79.26 344 P **P 07 36 37.3 +0.6**
WLF Walferdange 79.28 357 P **P 07 36 37.2 +0.4**
comp=Z,112nm,1.3s,mb5.6
WLF Walferdange 79.28 357 eP **P 07 36 37.3 +0.5**
WLF pmax pmax
comp=Z,120nm,0.8s,mb5.9
WLF Walferdange 79.28 357 eP **P 07 36 36.9 +0.1**
comp=Z,185nm,1.0s,mb6.0
WLF eS S 07 46 35.2 +1.3
WLF eSS SS 07 51 57.1 +18
WLF Walferdange 79.28 357 eP **P 07 36 37.2 +0.4**
comp=Z,121nm,0.8s,mb5.9
WLF LR LR
comp=Z,12µm,20.0s,MS6.2
KHC Kasperske Hory 79.33 352 eP **P 07 36 36.8 -0.3**
KHC epP pP 07 36 44.5 -4.2
KHC eS S 07 46 27.8 -6.8
KHC AMS AMS 08 18 20.0
comp=Z,11µm,17.7s
KOLL Kolacno 79.36 348 eP **P 07 36 37.1 -0.1**
VYHS Vyhne 79.38 348 eP **P 07 36 37.4 0.0**
VYHS eS S 07 46 27.4 -7.7
VYHS pmax pmax
comp=Z,102nm,1.1s,mb5.7
VYHS MLR MLR
comp=Z,6µm,21.9s,MS5.9
VYHS Vyhne 79.38 348 eP **P 07 36 37.4 0.0**
VYHS eS S 07 46 27.4 -7.7
VYHS Vyhne 79.38 348 eP **P 07 36 37.4 0.0**
comp=Z,102nm,1.1s,mb5.7
VYHS eS S 07 46 27.4 -7.7
VYHS LR LR
comp=Z,6µm,21.9s,MS5.9
WET Wettzell 79.38 352 eP **P 07 36 37.2 -0.2**
WET pmax pmax
comp=Z,112nm,1.3s,mb5.6
WET Wettzell 79.38 352 eP **P 07 36 37.2 -0.2**
comp=Z,112nm,1.3s,mb5.6
WET eSS SS 07 51 56.9 +16
ONI Oni 79.45 330 P **P 07 36 39.0 +1.1**
BMR Baia Mare 79.50 345 P **P 07 36 39.7 +1.7**
SMOL Smolenice 79.54 349 eP **P 07 36 38.6 +0.4**
GEC2 GERESS Array S 79.61 352 eP **P 07 36 38.2 -0.4**
GEC2 eS S 07 46 35.1 -2.3
GEC2 pmax pmax
comp=Z,148nm,1.4s,mb5.7
GEC2 GERESS Array S 79.61 352 eP **P 07 36 38.2 -0.4**
comp=Z,148nm,1.4s,mb5.7
GEC2 eS S 07 46 35.1 -2.3
GEC2 eSS SS 07 51 59.4 +15
GERES GERESS Array B 79.61 352 P **P 07 36 37.9 -0.7**
comp=Z,49nm,0.7s,mb5.5,baz=22,slow=4.6,SNR=32
GERES PKKPbc PKKPbc 07 55 25.1 +1.1
comp=Z,0.3nm,0.3s,baz=164,slow=5.3,SNR=4.1
GERES PKPPKP 08 03 25.4
comp=Z,0.7nm,0.6s,baz=209,slow=4.4,SNR=4.3
GERES LR LR 08 19 12.0
comp=Z,10µm,18.2s,MS6.2,baz=19,slow=41
SOC Sochi 79.68 333*c* i P **P 07 36 38.6 -0.5**
SOC e 07 36 46.0
SOC e*PP pP 07 36 49.2 -1.5
SOC e 07 39 42.0
SOC eS S 07 46 39.4 +1.0
SOC i 07 47 00.8
MODS Modra-Piesok 79.69 349 eP **P 07 36 38.2 -0.9**
MODS eS S 07 46 35.4 -3.0
MODS pmax pmax
comp=Z,26nm,1.2s,mb5.0
MODS MLR MLR
comp=Z,6µm,19.9s,MS6.0
MODS Modra-Piesok 79.69 349 eP **P 07 36 38.2 -0.9**
MODS eS S 07 46 35.4 -3.0
MODS Modra-Piesok 79.69 349 eP **P 07 36 38.2 -0.9**
comp=Z,26nm,1.2s,mb5.0
MODS eS S 07 46 35.4 -3.0
MODS LR LR
comp=Z,6µm,19.9s,MS6.0
JLP Les Platons 79.76 2 eP **P 07 36 39.2 -0.2**
GOR Gori 79.78 329 P **P 07 36 39.5 -0.1**
JQE Queens East 79.81 2 eP **P 07 36 39.0 -0.7**
PSZ Piszkesteto 79.81 347 eP **P 07 36 40.5 +0.8**
PSZ pmax pmax
comp=Z,107nm,0.8s,mb5.8
PSZ MLR MLR
comp=Z,11µm,19.0s,MS6.2
PSZ Piszkesteto 79.81 347 eP **P 07 36 40.7 +1.0**
PSZ Piszkesteto 79.81 347 e **P 07 36 40.7 +1.0**
JRS Jersey 79.81 2 eP **P 07 36 39.0 -0.7**
JSA Saint Aubin 79.81 2 eP **P 07 36 39.1 -0.6**
JSA AMb AMB 07 36 44.1
comp=Z,691nm,1.3s,mb6.4
MTA Mtatsminda 79.82 328 P **P 07 36 39.7 -0.2**
DGRG David-gareji 79.84 328 P **P 07 36 39.9 -0.1**
KULM Kulim 79.88 266 eP **P 07 36 39.9 -0.7**
comp=Z,93nm,0.9s,mb5.7
KULM Kulim 79.88 266 ⇑P **P 07 36 40.3 -0.3**
ZST Bratislava 79.89 349 eP **P 07 36 40.7 +0.6**
ZST eS S 07 46 37.7 -2.8
ZST pmax pmax
comp=Z,156nm,0.9s,mb5.9
ZST MLR MLR
comp=Z,12µm,18.3s,MS6.3
ZST Bratislava 79.89 349 eP **P 07 36 40.7 +0.6**
ZST eS S 07 46 37.7 -2.8
ZST Bratislava 79.89 349 eP **P 07 36 40.7 +0.6**
comp=Z,156nm,0.9s,mb5.9
ZST eS S 07 46 37.7 -2.8
ZST LR LR
comp=Z,12µm,18.3s,MS6.3
SIM Simferopol' 79.91 337 eP **P 07 36 36.7 -3.6**
SIM eS S 07 46 40.0 -0.8
SIM ePS 07 47 44.0
SIM pmax pmax
comp=Z,1µm,11.0s
SIM MLR MLR
comp=Z,32µm,20.0s,MS6.7
STU Stuttgart 80.02 355 eP **P 07 36 40.9 0.0**
STU pmax pmax
comp=Z,130nm,0.9s,mb5.9
STU Stuttgart 80.02 355 eP **P 07 36 40.3 -0.6**
comp=Z,193nm,1.0s,mb6.0
STU eSS SS 07 52 06.8 +16
STU Stuttgart 80.02 355 eP **P 07 36 40.7 -0.2**
comp=Z,131nm,0.8s,mb5.9
FLN La Foliniere 80.27 1 eP **P 07 36 41.2 -1.0**
comp=Z,893nm,1.0s,mb6.3
FLN eMLR MLR
comp=Z,10µm,21.0s,MS5.8
FLN La Foliniere 80.27 1 eP **P 07 36 41.2 -1.0**
FLN pmax pmax
comp=Z,446nm,1.0s,mb6.3
FLN MLR MLR
comp=Z,10µm,21.0s,MS6.2
FLN La Foliniere 80.27 1 eP **P 07 36 41.2 -1.0**
comp=Z,446nm,1.0s,mb6.3
FLN LR LR
comp=Z,10µm,21.0s,MS6.2
CONA Conrad Observa 80.30 350 *i* P **P 07 36 42.7 +0.4**
comp=Z,224nm,1.3s,mb5.9,SNR=23
CSNA Conrad Observa 80.30 350 ⇑i P **P 07 36 42.6 +0.2**
comp=Z,218nm,1.4s,mb5.9
LDF La Druitiere 80.44 1 eP **P 07 36 42.1 -1.0**
comp=Z,828nm,0.9s,mb6.3
LDF La Druitiere 80.44 1 eP **P 07 36 42.1 -1.0**
LDF pmax pmax
comp=Z,414nm,0.9s,mb6.4
LDF La Druitiere 80.44 1 eP **P 07 36 42.1 -1.0**
comp=Z,414nm,0.9s,mb6.4
MEZF Maizieres J'vi 80.48 357 eP **P 07 36 42.9 -0.4**
comp=Z,496nm,1.0s,mb6.1
MEZF Maizieres J'vi 80.48 357 eP **P 07 36 42.9 -0.4**
comp=Z,496nm,1.0s,mb6.4
DRGR 80.48 345 P **P 07 36 44.0 +0.6**
CDF Champ du Feu 80.48 356 eP **P 07 36 42.7 -0.6**
comp=Z,202nm,1.0s,mb5.7
CDF Champ du Feu 80.48 356 eP **P 07 36 42.7 -0.6**
CDF pmax pmax
comp=Z,101nm,1.0s,mb5.7
CDF Champ du Feu 80.48 356 eP **P 07 36 42.7 -0.6**
comp=Z,101nm,1.0s,mb5.7
FUR Furstenfeldbru 80.49 353 eP **P 07 36 43.0 -0.4**
FUR pmax pmax
comp=Z,272nm,1.0s,mb6.1
FUR Furstenfeldbru 80.49 353 eP **P 07 36 43.0 -0.4**
comp=Z,272nm,1.0s,mb6.1
FUR eSS SS 07 52 13.9 +16
BFO Black Forest 80.51 355 P **P 07 36 43.5 0.0**
comp=Z,442nm,0.8s,mb6.4,SNR=11
BFO Black Forest 80.51 355 eP **P 07 36 43.0 -0.5**
BFO pmax pmax
comp=Z,248nm,1.7s,mb5.9
BFO MLR MLR
comp=Z,7µm,21.0s,MS6.0
BFO Black Forest 80.51 355 eP **P 07 36 43.0 -0.5**
comp=Z,248nm,1.7s,mb5.9
BFO eSS SS 07 52 14.4 +16
BFO Black Forest 80.51 355 eP **P 07 36 43.0 -0.5**
comp=Z,248nm,1.7s,mb5.9
BFO eSS SS 07 52 14.4 +16
BFO LR LR
comp=Z,7µm,21.0s,MS6.0
MOA Molln 80.54 351 ⇑i P **P 07 36 43.1 -0.6**
comp=Z,79nm,1.3s,mb5.5,SNR=7.2
ROSF Rostrenen 80.64 3 eP **P 07 36 43.6 -0.6**
comp=Z,486nm,1.1s,mb6.0
ROSF Rostrenen 80.64 3 eP **P 07 36 43.6 -0.6**
ROSF pmax pmax
comp=Z,243nm,1.1s,mb6.0
ROSF Rostrenen 80.64 3 eP **P 07 36 43.6 -0.6**
comp=Z,243nm,1.1s,mb6.0
GRR Gorron 80.64 1 eP **P 07 36 43.4 -0.8**
comp=Z,744nm,0.8s,mb6.3
GRR Gorron 80.64 1 eP **P 07 36 43.4 -0.8**
GRR pmax pmax
comp=Z,372nm,0.8s,mb6.4
GRR Gorron 80.64 1 eP **P 07 36 43.4 -0.8**
comp=Z,372nm,0.8s,mb6.4
VRI Vrincioaia 80.67 342 *i* P **P 07 36 46.7 +2.3**
ODB Odobesti 80.69 342 P **P 07 36 46.1 +1.6**
PLOR Plostina 80.69 342 P **P 07 36 46.5 +2.0**
SGMF Saint Gilles 80.74 2 eP **P 07 36 44.1 -0.6**
comp=Z,665nm,0.7s,mb6.3
SGMF Saint Gilles 80.74 2 eP **P 07 36 44.1 -0.6**
SGMF pmax pmax
comp=Z,333nm,0.7s,mb6.4
SGMF Saint Gilles 80.74 2 eP **P 07 36 44.1 -0.6**
comp=Z,333nm,0.7s,mb6.4
RJOB Jochberg 80.79 352 eP **P 07 36 44.6 -0.4**
comp=Z,154nm,0.8s,mb6.0
RJOB eS S 07 46 48.5 -1.4
RJOB eSS SS 07 52 20.7 +19
EIDS Eidsvold 80.80 207 eP **P 07 36 45.6 +0.5**
comp=Z,71nm,1.0s,mb5.5
FRIM Kepong 80.86 264 ⇓P **P 07 36 46.7 +0.9**
HAU Haudompre 80.93 356 eP **P 07 36 45.0 -0.7**
comp=Z,359nm,1.0s,mb6.0
HAU eMLR MLR
comp=Z,10µm,19.0s,MS5.9
HAU Haudompre 80.93 356 eP **P 07 36 45.0 -0.7**
HAU pmax pmax
comp=Z,179nm,1.0s,mb6.0
HAU MLR MLR
comp=Z,10µm,19.0s,MS6.2
HAU Haudompre 80.93 356 eP **P 07 36 45.0 -0.7**
comp=Z,179nm,1.0s,mb6.0
HAU LR LR
comp=Z,10µm,19.0s,MS6.2
ARSA Arzberg 81.00 350 ⇓i P **P 07 36 46.1 0.0**
comp=Z,142nm,1.1s,mb5.8,SNR=20
QUIF Quistinic 81.06 3 eP **P 07 36 45.7 -0.7**
comp=Z,579nm,0.9s,mb6.2
QUIF Quistinic 81.06 3 eP **P 07 36 45.7 -0.7**
QUIF pmax pmax
comp=Z,290nm,0.9s,mb6.2
QUIF Quistinic 81.06 3 eP **P 07 36 45.7 -0.7**
comp=Z,290nm,0.9s,mb6.2
HINF Hinteralfeld 81.10 356 eP **P 07 36 45.6 -1.0**
comp=Z,162nm,0.9s,mb5.7
HINF Hinteralfeld 81.10 356 eP **P 07 36 45.6 -1.0**
HINF pmax pmax
comp=Z,81nm,0.9s,mb5.7
HINF Hinteralfeld 81.10 356 eP **P 07 36 45.6 -1.0**
comp=Z,81nm,0.9s,mb5.7
MLR Muntele Rosu 81.18 343 P **P 07 36 47.5 +0.4**
comp=Z,433nm,0.8s,mb6.4,baz=70,slow=3.3,SNR=22
RETA Reutte 81.20 353 ⇓i P **P 07 36 47.0 -0.2**
comp=Z,67nm,0.8s,mb5.6,SNR=11
WATA Walderalm 81.29 353 ⇓i P **P 07 36 46.8 -0.8**
comp=Z,166nm,0.9s,mb6.0,SNR=22
MOTA Moosalm 81.31 353 ⇑i P **P 07 36 47.6 -0.2**
comp=Z,236nm,1.0s,mb6.1,SNR=24
WTTA Wattenberg 81.35 353 ⇑i P **P 07 36 47.8 -0.2**
comp=Z,350nm,1.1s,mb6.2,SNR=24
KBA Koelnbreinsper 81.39 352 ⇑i P **P 07 36 48.9 +0.7**
comp=Z,569nm,0.8s,mb6.5,SNR=46
VOIR 81.39 343 P **P 07 36 49.8 +1.6**
DAVA Damuels 81.46 354 ⇓i P **P 07 36 48.2 -0.4**
comp=Z,120nm,1.1s,mb5.8
HARR Harsova 81.56 341 P **P 07 36 50.1 +1.0**
SOKA Soboth 81.62 350 ⇑i P **P 07 36 49.4 -0.1**
comp=Z,359nm,1.0s,mb6.3
PKSM Moragy 81.65 348 P **P 07 36 50.0 +0.4**
PKSM Moragy 81.65 348 eP **P 07 36 48.8 -0.8**
PERS Pernice 81.65 350 eP **P 07 36 49.3 -0.3**
PERS e 07 47 02.9
PERS e 07 52 55.3
FETA Feichten 81.67 353 *i* P **P 07 36 50.2 +0.6**
comp=Z,377nm,1.0s,mb6.3,SNR=37
TIRR Tirgusor 81.68 341 P **P 07 36 50.0 +0.2**
TIRR pmax pmax
comp=Z,240nm,0.8s,mb6.2
TIRR Tirgusor 81.68 341 *i* P **P 07 36 49.5 -0.3**
TIRR Tirgusor 81.68 341 eP **P 07 36 49.8 0.0**
comp=Z,235nm,0.8s,mb6.2
LOR Lormes 81.74 358 eP **P 07 36 49.4 -0.7**
comp=Z,314nm,1.0s,mb5.9
LOR eMLR MLR
comp=Z,12µm,20.8s,MS5.9
LOR Lormes 81.74 358 eP **P 07 36 49.4 -0.7**
LOR pmax pmax
comp=Z,157nm,1.0s,mb5.9
LOR MLR MLR
comp=Z,12µm,20.8s,MS6.2
LOR Lormes 81.74 358 eP **P 07 36 49.4 -0.7**
comp=Z,157nm,1.0s,mb5.9
LOR LR LR
comp=Z,12µm,20.8s,MS6.2
HYF Humbligny 81.76 359 eP **P 07 36 49.8 -0.4**
ABTA Abfaltersbach 81.79 352 ⇓i P **P 07 36 50.3 0.0**
comp=Z,178nm,0.9s,mb6.0,SNR=18
BZS Buzias 81.80 346 P **P 07 36 50.3 -0.1**
MYKA Terra Mystica 81.81 351 ⇓i P **P 07 36 50.3 -0.1**
comp=Z,132nm,0.8s,mb5.9
OBKA Obir 81.84 351 ⇓i P **P 07 36 50.1 -0.4**
comp=Z,265nm,0.8s,mb6.2,SNR=38
CVD Cernavoda 81.89 341 P **P 07 36 52.0 +1.1**
WRAB Tennant Creek 81.90 224 P **P 07 36 50.2 -0.9**
comp=Z,522nm,1.1s,mb6.4,SNR=8.7
WRAB Tennant Creek 81.90 224*c* i P **P 07 36 50.6 -0.5**
WRAB Tennant Creek 81.90 224 eP **P 07 36 50.0 -1.1**
comp=Z,79nm,0.9s,mb5.6
WRAB e 07 37 05.3
WRAB LR LR
comp=Z,7µm,21.0s,MS6.0
WB2 Warramunga Arr 81.91 224 eP **P 07 36 49.9 -1.2**
WB2 eS S 07 46 58.9 -3.0
WRA Warramunga Arr 81.91 224 P **P 07 36 49.4 -1.7**
comp=Z,57nm,0.8s,mb5.5,baz=37,slow=6.2,SNR=20
WRA PKKPbc PKKPbc 07 55 24.5 +4.3
comp=Z,0.9nm,0.6s,baz=227,slow=2.4,SNR=6.7
SSF Saint Saulge 81.96 358 eP **P 07 36 50.5 -0.7**
comp=Z,292nm,0.9s,mb5.9
SSF Saint Saulge 81.96 358 eP **P 07 36 50.5 -0.7**
SSF pmax pmax
comp=Z,146nm,0.9s,mb5.9
SSF Saint Saulge 81.96 358 eP **P 07 36 50.5 -0.7**
comp=Z,146nm,0.9s,mb5.9
DAVOX Davos/Dischmat 81.96 354 P **P 07 36 51.1 -0.1**
comp=Z,159nm,0.8s,mb6.0,baz=344,slow=6.3,SNR=27
CADS Cadrg 82.20 351 eP **P 07 36 51.2 -1.3**
AVF Avril sur Loir 82.23 358 eP **P 07 36 51.9 -0.7**
comp=Z,472nm,0.9s,mb6.1
AVF Avril sur Loir 82.23 358 eP **P 07 36 51.9 -0.7**
comp=Z,236nm,0.9s,mb6.1
BUC1 Bucharest 82.26 342 P **P 07 36 53.7 +0.9**
LJU Ljubljana 82.30 351 eP **P 07 36 52.0 -1.0**
LJU ePP PP 07 40 08.8 +7.8
LJU e 07 42 10.4
LJU e 07 48 07.7
CABF La Chapelle 82.33 356 eP **P 07 36 52.9 -0.3**
comp=Z,480nm,1.0s,mb6.1
CABF La Chapelle 82.33 356 eP **P 07 36 52.9 -0.3**
comp=Z,240nm,1.0s,mb6.1
GCIS Gornji Cirnik 82.36 350 eP **P 07 36 52.8 -0.5**
SMF Signal de Mont 82.37 358 eP **P 07 36 52.6 -0.7**
comp=Z,753nm,0.9s,mb6.3
SMF Signal de Mont 82.37 358 eP **P 07 36 52.6 -0.7**
comp=Z,376nm,0.9s,mb6.3
MFF Saint Martin d 82.43 1 eP **P 07 36 53.1 -0.6**
comp=Z,570nm,0.8s,mb6.2
MFF Saint Martin d 82.43 1 eP **P 07 36 53.1 -0.6**
MFF pmax pmax
comp=Z,285nm,0.8s,mb6.2
MFF Saint Martin d 82.43 1 eP **P 07 36 53.1 -0.6**
comp=Z,285nm,0.8s,mb6.2
PSN Preselentsi 82.47 340 P **P 07 36 54.1 +0.2**
BGF Bois d'Agland 82.47 359 eP **P 07 36 53.3 -0.6**
comp=Z,305nm,0.9s,mb5.9
BGF Bois d'Agland 82.47 359 eP **P 07 36 53.3 -0.6**
BGF pmax pmax
comp=Z,153nm,0.9s,mb5.9
BGF Bois d'Agland 82.47 359 eP **P 07 36 53.3 -0.6**
comp=Z,153nm,0.9s,mb5.9
CRAR CRAIOVA 82.69 344 P **P 07 36 55.9 +0.8**
TRI Trieste 82.71 351 eP **P 07 36 54.5 -0.6**
TRI pmax pmax
comp=Z,71nm,0.7s,mb5.8
TRI MLR MLR
comp=Z,11µm,21.0s,MS6.2
TRI Trieste 82.71 351 eP **P 07 36 54.5 -0.6**
comp=Z,72nm,0.7s,mb5.8
TRI LR LR
comp=Z,11µm,21.0s,MS6.2
TCF Toulx Ste Croi 82.75 359 eP **P 07 36 54.5 -0.8**
comp=Z,374nm,0.8s,mb6.2
TCF Toulx Ste Croi 82.75 359 eP **P 07 36 54.5 -0.8**
TCF pmax pmax
comp=Z,187nm,0.8s,mb6.2
TCF Toulx Ste Croi 82.75 359 eP **P 07 36 54.5 -0.8**
comp=Z,187nm,0.8s,mb6.2
BOJS Bojanci 82.76 350 eP **P 07 36 54.9 -0.5**
BOJS ePP PP 07 40 06.9 +2.2
BOJS e 07 48 13.7
MTDJ Mount Denham 82.88 70 eP **P 07 36 56.9 +0.5**
comp=Z,348nm,1.2s,mb6.3
PSI Prapat 82.88 266 P **P 07 36 56.0 -0.5**
comp=Z,261nm,0.9s,mb6.3,baz=16,slow=3.8,SNR=18
PSI Prapat 82.88 266 P **P 07 36 56.0 -0.5**
PRD Provadia 83.09 341 *i* P **P 07 36 57.6 +0.4**
AVR AVREN 83.11 341 *i* P **P 07 36 57.8 +0.5**
SZH Strazhica 83.32 342 *i* P **P 07 36 57.9 -0.5**
LPL La Plagne 83.40 356 eP **P 07 36 59.1 +0.4**
comp=Z,184nm,1.0s,mb5.8
LPL La Plagne 83.40 356 eP **P 07 36 59.1 +0.4**
LPL pmax pmax
comp=Z,92nm,1.0s,mb5.8
LPL La Plagne 83.40 356 eP **P 07 36 59.1 +0.4**
comp=Z,92nm,1.0s,mb5.8
LPG La Plagne 83.42 356 eP **P 07 36 59.5 +0.7**
comp=Z,175nm,0.9s,mb5.8
LPG La Plagne 83.42 356 eP **P 07 36 59.5 +0.7**
LPG pmax pmax
comp=Z,87nm,0.9s,mb5.8
LPG La Plagne 83.42 356 eP **P 07 36 59.5 +0.7**
comp=Z,87nm,0.9s,mb5.8
RKT Rikitea 83.61 140 eS S 07 47 16.8 -2.3
comp=Z,4µm,31.0s
RKT eSS SS 07 52 45.1 -1.7
comp=Z,4µm,26.5s
RKT Rikitea 83.61 140 eLR LR 08 02 49.9
comp=Z,24µm,22.2s,baz=332
SSB Saint Sauveur 83.71 358 eP **P 07 37 00.3 0.0**
SSB pmax pmax
comp=Z,88nm,0.8s,mb5.9
SSB Saint Sauveur 83.71 358 eP **P 07 37 00.3 0.0**
comp=Z,88nm,0.8s,mb5.9
RJF Les Rejaudoux 83.74 360 eP **P 07 36 59.7 -0.7**
comp=Z,669nm,1.1s,mb6.4
RJF eMLR MLR
comp=Z,14µm,20.2s,MS6.0
RJF Les Rejaudoux 83.74 360 eP **P 07 36 59.7 -0.7**
RJF pmax pmax
comp=Z,334nm,1.1s,mb6.4
RJF MLR MLR
comp=Z,14µm,20.3s,MS6.3
RJF Les Rejaudoux 83.74 360 eP **P 07 36 59.7 -0.7**
comp=Z,334nm,1.1s,mb6.4
RJF LR LR
comp=Z,14µm,20.3s,MS6.3
JMB Yambol 83.96 341 *i* P **P 07 37 01.4 -0.3**
GRTK Grand Turk 83.97 63 eP **P 07 37 01.3 -0.8**
comp=Z,303nm,0.9s,mb6.4
ORIF Oris-en-Rattie 84.03 357 eP **P 07 37 02.1 +0.1**
comp=Z,441nm,0.9s,mb6.3
ORIF eMLR MLR
comp=Z,9µm,22.2s,MS5.8
ORIF Oris-en-Rattie 84.03 357 eP **P 07 37 02.1 +0.1**

ORIF pmax pmax
comp=Z,221nm,0.9s,mb6.3
ORIF Oris-en-Rattie 84.03 357 *e*P **P 07 37 02.1 +0.1**
comp=Z,220nm,0.9s,mb6.3
LFF La Frestale 84.10 0 *e*P **P 07 37 01.9 -0.4**
comp=Z,554nm,0.6s,mb6.5
LFF La Frestale 84.10 0 *e*P **P 07 37 01.9 -0.4**
LFF pmax pmax
comp=Z,277nm,0.6s,mb6.6
LFF La Frestale 84.10 0 *e*P **P 07 37 01.9 -0.4**
comp=Z,277nm,0.6s,mb6.6
CAF Calviac 84.11 359 *e*P **P 07 37 02.0 -0.4**
comp=Z,361nm,0.8s,mb6.2
CAF Calviac 84.11 359 *e*P **P 07 37 02.0 -0.4**
CAF pmax pmax
comp=Z,180nm,0.8s,mb6.2
CAF Calviac 84.11 359 *e*P **P 07 37 02.0 -0.4**
comp=Z,180nm,0.8s,mb6.2
HYB Hyderabad 84.13 290 *e*P **P 07 37 02.0 -0.9**
HYB *e*S S 07 47 24.0 -0.9
HYB pmax pmax
comp=Z,250nm,0.8s,mb6.4
HYB Hyderabad 84.13 290 *i*P **P 07 37 02.0 -0.9**
HYB *e*PP PP 07 40 20.0 +3.1
HYB *e*S S 07 47 24.0 -0.9
HYB LR LR 08 18 00.0
comp=Z,13nm,16.0s
HYB Hyderabad 84.13 290 *e*P **P 07 37 02.0 -0.9**
comp=Z,250nm,0.8s,mb6.4
HYB *e*S S 07 47 24.0 -0.9
VIVF Saint-Julien-I 84.13 357 *e*P **P 07 37 02.2 -0.3**
comp=Z,247nm,0.9s,mb6.0
VIVF Saint-Julien-I 84.13 357 *e*P **P 07 37 02.2 -0.3**
VIVF pmax pmax
comp=Z,123nm,0.9s,mb6.0
VIVF Saint-Julien-I 84.13 357 *e*P **P 07 37 02.2 -0.3**
comp=Z,123nm,0.9s,mb6.0
MBDF Montbardon 84.19 356 *e*P **P 07 37 02.8 +0.1**
comp=Z,454nm,0.8s,mb6.4
MBDF Montbardon 84.19 356 *e*P **P 07 37 02.8 +0.1**
MBDF pmax pmax
comp=Z,227nm,0.8s,mb6.3
MBDF Montbardon 84.19 356 *e*P **P 07 37 02.8 +0.1**
comp=Z,227nm,0.8s,mb6.3
FITZ Fitzroy Crossi 84.36 232 *e*P **P 07 37 02.9 -0.9**
comp=Z,349nm,1.0s,mb6.4
FITZ *e*S S 07 47 15.8 -11
FITZ Fitzroy Crossi 84.36 232 *e*P **P 07 37 03.0 -0.8**
comp=Z,215nm,1.0s,mb6.2
PLE Pljevlja 84.37 347 ⇓*i*P **P 07 37 03.6 -0.1**
VTS Vitosha 84.48 344 *i*P **P 07 37 03.9 -0.4**
VLC Villacollemand 84.54 353 *e*P **P 07 37 05.1 +0.5**
comp=Z,182nm,0.8s,mb6.3
VLC LR LR
comp=Z,9µm,22.0s,MS6.1
UPM Unac-Piva 84.56 347 *e*P **P 07 37 03.2 -1.5**
IVA Berane 84.75 346 ⇓*i*P **P 07 37 05.2 -0.4**
BRY Bratogost 84.91 347 *e*P **P 07 37 04.9 -1.6**
LASF Ste Croix 84.93 358 *e*P **P 07 37 06.3 -0.2**
comp=Z,207nm,0.8s,mb6.0
NKY Niksic 84.93 347 ⇓*i*P **P 07 37 05.0 -1.6**
BRTR Keskin Array B 84.94 335 P **P 07 37 06.7 0.0**
comp=Z,287nm,0.8s,mb6.5,baz=40,slow=2.5,SNR=50
KDZ Kurdzhali 84.98 342 *i*P **P 07 37 06.2 -0.6**
SMRF Simiane la Rot 84.98 357 *e*P **P 07 37 07.1 +0.3**
comp=Z,666nm,0.9s,mb6.5
SMRF Simiane la Rot 84.98 357 *e*P **P 07 37 07.1 +0.3**
comp=Z,666nm,0.9s,mb6.8
PVY Plav 85.00 346 *e*P **P 07 37 06.7 -0.2**
SBF Sospel 85.02 355 *e*P **P 07 37 06.1 -0.8**
comp=Z,1µm,0.8s,mb6.8
SBF Sospel 85.02 355 *e*P **P 07 37 06.1 -0.8**
comp=Z,711nm,0.8s,mb6.8
RZN Rozhen 85.08 342 *i*P **P 07 37 07.0 -0.3**
MSL Mosul 85.15 327 *e*P **P 07 37 08.0 +0.2**
KKB Krupnik 85.20 344 *i*P **P 07 37 07.9 0.0**
TTG Podgorica 85.27 347 ⇓*i*P **P 07 37 06.8 -1.5**
FRF La Foret Royal 85.36 356 *e*P **P 07 37 07.8 -0.9**
comp=Z,489nm,0.7s,mb6.4
FRF La Foret Royal 85.36 356 *e*P **P 07 37 07.8 -0.9**
FRF pmax pmax
comp=Z,244nm,0.7s,mb6.4
FRF La Foret Royal 85.36 356 *e*P **P 07 37 07.8 -0.9**
comp=Z,244nm,0.7s,mb6.4
MMB Musomiste 85.36 343 *i*P **P 07 37 08.6 -0.1**
HCY Herceg Novi 85.36 347 ⇓*i*P **P 07 37 08.0 -0.7**
ASAR Alice Springs 85.38 222 P **P 07 37 07.3 -1.6**
comp=Z,57nm,0.8s,mb5.8,baz=26,slow=4.7,SNR=22
ASAR PKP2bc 08 03 16.9
comp=Z,1.5nm,0.9s,baz=226,slow=1.8,SNR=5.0
ASAR Alice Springs 85.38 222 P **P 07 37 07.3 -1.6**
ASAR ⇑*e* 08 03 16.9
ARMA Armidale 85.43 205 *e*P **P 07 37 09.7 +0.8**
BUM Brajici-Budva 85.45 347 ⇓*i*P **P 07 37 08.4 -0.8**
LMR La Mourre 85.59 356 *e*P **P 07 37 09.2 -0.6**
comp=Z,409nm,0.7s,mb6.4
LMR La Mourre 85.59 356 *e*P **P 07 37 09.2 -0.6**
LMR pmax pmax
comp=Z,205nm,0.7s,mb6.5
LMR La Mourre 85.59 356 *e*P **P 07 37 09.2 -0.6**
comp=Z,205nm,0.7s,mb6.5
MTLF Montolieu 85.69 359 *e*P **P 07 37 09.9 -0.4**
comp=Z,386nm,1.0s,mb6.3
MTLF Montolieu 85.69 359 *e*P **P 07 37 09.9 -0.4**
MTLF pmax pmax
comp=Z,193nm,1.0s,mb6.3
MTLF Montolieu 85.69 359 *e*P **P 07 37 09.9 -0.4**
comp=Z,193nm,1.0s,mb6.3
ULC Ulcinj 85.73 346 ⇓*i*P **P 07 37 09.4 -1.2**
VAY Valandovo 85.83 344 *i*P **P 07 37 09.8 -1.2**
SDDR Presa de Saban 85.90 65 *e*P **P 07 37 12.2 +0.4**
comp=Z,126nm,0.9s,mb6.2
SDDR LR LR
comp=Z,7µm,19.0s,MS6.1
POO Poona 85.97 295 ⇓*i*P **P 07 37 10.0 -2.1**
comp=Z,500nm,1.0s,mb6.7
EPF Esparros 86.01 1 *e*P **P 07 37 10.7 -1.2**
comp=Z,214nm,0.8s,mb6.2
EPF Esparros 86.01 1 *e*P **P 07 37 10.7 -1.2**
EPF pmax pmax
comp=Z,107nm,0.8s,mb6.1
EPF Esparros 86.01 1 *e*P **P 07 37 10.7 -1.2**
comp=Z,107nm,0.8s,mb6.1
ETSF Etsaut 86.13 1 *e*P **P 07 37 12.5 0.0**
comp=Z,363nm,0.7s,mb6.4
ETSF Etsaut 86.13 1 *e*P **P 07 37 12.5 0.0**
ETSF pmax pmax
comp=Z,181nm,0.7s,mb6.4
ETSF Etsaut 86.13 1 *e*P **P 07 37 12.5 0.0**
comp=Z,181nm,0.7s,mb6.4
PGF Pioggiola 86.23 354 *e*P **P 07 37 12.4 -0.6**
comp=Z,1µm,0.8s,mb6.8
PGF Pioggiola 86.23 354 *e*P **P 07 37 12.4 -0.6**
PGF pmax pmax
comp=Z,514nm,0.8s,mb6.8
PGF Pioggiola 86.23 354 *e*P **P 07 37 12.4 -0.6**
comp=Z,514nm,0.8s,mb6.8
TIR Tirane 86.24 346 *e*P **P 07 37 14.1 +1.0**
TIR pmax pmax
comp=Z,106nm,0.6s,mb6.2
TIR MLR MLR
comp=Z,11µm,19.0s,MS6.3
TIR Tirane 86.24 346 *e*P **P 07 37 14.1 +1.0**
comp=Z,106nm,0.6s,mb6.2
TIR LR LR
comp=Z,11µm,19.0s,MS6.3
PBRG Braganca 86.99 6 *e*P **P 07 37 17.3 +0.6**
comp=Z,96nm,1.4s,mb5.8
PCAB Cabril 86.99 7 *e*P **P 07 37 16.8 0.0**
comp=Z,108nm,1.0s,mb6.0
PVRL Vila Real 87.45 7 *e*P **P 07 37 19.2 +0.2**
comp=Z,122nm,1.0s,mb6.1
ISP Isparta 87.51 337 *e*P **P 07 37 19.5 +0.2**
ISP pmax pmax
comp=Z,104nm,0.8s,mb6.1
ISP MLR MLR
comp=Z,13µm,21.0s,MS6.3
ISP Isparta 87.51 337 *e*P **P 07 37 19.4 +0.1**
comp=Z,104nm,0.8s,mb6.1
ISP LR LR
comp=Z,13µm,21.0s,MS6.3
MVO Moncorvo 87.61 6 *e*P **P 07 37 19.7 0.0**
comp=Z,178nm,1.0s,mb6.2
MVO Moncorvo 87.61 6 *e*PP PP 07 40 22.1 -22
MVO *e*S S 07 48 01.0 +2.7
MVO *e*SS SS 07 54 18.9 +36
MVO *e*LQ 08 01 04.0
MVO *e*LR LR 08 05 41.8
comp=Z,5µm,19.2s
CUC Castrocucco 88.13 349 *e*P **P 07 37 20.8 -1.4**
comp=Z,108nm,0.8s,mb6.1
CUC LR LR
comp=Z,11µm,20.0s,MS6.3
CMLA Cha da Macela 88.27 21 *e*P **P 07 37 25.6 +2.7**
CMLA *e*S S 07 47 26.9 -38
CMLA *e*SS 07 52 42.5
CMLA *e*LQ 08 00 23.7
CMLA *e*LR LR 08 06 34.2
CMLA Cha da Macela 88.27 21 *e*P **P 07 37 24.5 +1.6**
CMLA pmax pmax
comp=Z,257nm,1.0s,mb6.4
CMLA MLR MLR
comp=Z,12µm,22.0s,MS6.3
CMLA Cha da Macela 88.27 21 *e*P **P 07 37 24.5 +1.6**
comp=Z,257nm,1.0s,mb6.4
CMLA LR LR
comp=Z,12µm,22.0s,MS6.3
MTE Manteigas 88.33 7 *e*P **P 07 37 23.3 +0.1**
comp=Z,219nm,1.1s,mb6.3
MTE *e*S S 07 48 03.7 -1.6
MTE A 08 33 06.5
comp=Z,5µm,16.7s
MTE Manteigas 88.33 7 *e*P **P 07 37 21.9 -1.3**
comp=Z,190nm,0.8s,mb6.4
MTE LR LR
comp=Z,5µm,21.0s,MS5.9
AGPR Aguadilla, PR 88.65 62 *e*P **P 07 37 25.6 +0.5**
comp=Z,550nm,1.3s,mb6.7
TIP Timpagrande 88.81 348 *e*P **P 07 37 24.2 -1.3**
comp=Z,43nm,1.1s,mb5.7
TIP LR LR
comp=Z,7µm,20.0s,MS6.1
PCBR Castelo Branco 88.89 7 *e*P **P 07 37 25.7 -0.2**
comp=Z,132nm,0.7s,mb6.4
CRPR Cabo Rojo, PR 89.03 62 *e*P **P 07 37 27.4 +0.7**
comp=Z,60nm,0.9s,mb5.9
XMIS Christmas Isla 89.14 252 *e*P **P 07 37 28.8 +1.6**
ESDC Sonseca Array 89.26 4 P **P 07 37 25.9 -1.6**
comp=Z,75nm,0.7s,mb6.1,baz=354,slow=3.9,SNR=50
ESLA Sonseca Array 89.26 4 *e*P **P 07 37 26.7 -0.8**
comp=Z,13nm,0.7s,mb5.4
ESLA LR LR
comp=Z,32µm,20.0s,MS6.7
URZ Urewera 89.29 183 P **P 07 37 25.0 -2.4**
comp=Z,30nm,1.0s,mb5.6,baz=357,slow=10.0,SNR=5.4
PMRV Marv??o 89.31 7 *e*P **P 07 37 27.3 -0.5**
comp=Z,146nm,1.0s,mb6.3
PMRV Marv??o 89.31 7 *e*PP PP 07 41 01.6 +3.8
PMRV *e*S S 07 48 15.9 +1.4
PMRV *e*LQ 08 01 15.2
PMRV *e*LR LR 08 05 06.7
comp=Z,4µm,17.7s
PAB San Pablo 89.37 4 *e*P **P 07 37 26.3 -1.8**
PAB pmax pmax
comp=Z,49nm,0.8s,mb5.9
PAB MLR MLR
comp=Z,6µm,21.0s,MS6.0
PAB San Pablo 89.37 4 *e*P **P 07 37 26.3 -1.8**
comp=Z,49nm,0.8s,mb5.9
PAB LR LR
comp=Z,6µm,21.0s,MS6.0
HWQ Hawqa 89.39 332 *e*P **P 07 37 27.9 -0.4**
ICM Isla Caja Muer 89.44 62 *e*P **P 07 37 28.6 -0.2**
SJG San Juan 89.47 61 *e*P **P 07 37 29.3 +0.4**
SJG pmax pmax
comp=Z,411nm,0.9s
SJG MLR MLR
comp=Z,21µm,21.0s
SJG San Juan 89.47 61 *e*P **P 07 37 29.3 +0.4**
comp=Z,411nm,0.9s,mb6.8
SJG LR LR
comp=Z,21µm,21.0s,MS6.5
CSS Prodhromos 89.50 334 *e*P **P 07 37 28.2 -0.6**
comp=Z,138nm,0.8s,mb6.3
CSS LR LR
comp=Z,11µm,21.0s,MS6.2
PMAFR Mafra 89.63 8 *e*P **P 07 37 29.4 +0.1**
comp=Z,480nm,1.1s,mb6.7
PMAFR Mafra 89.63 8 *e*PP PP 07 41 05.1 +4.8
PMAFR *e*S S 07 48 17.2 -0.3
PMAFR *e*SS SS 07 54 44.2 +32
PMAFR *e*LQ 08 01 06.9
PMAFR *e*LR LR 08 07 59.8
comp=Z,6µm,21.9s
PAYG Puerto Ayora 89.70 91 *e*P **P 07 37 31.0 +1.0**
comp=Z,230nm,1.4s,mb6.3
PAYG *e* 07 37 47.6
PAYG LR LR
comp=Z,4µm,20.0s,MS5.8
BHL Bhannes 89.82 332 *e*P **P 07 37 28.5 -1.8**
CEL Celeste 89.83 348 *e*P **P 07 37 28.9 -1.4**
comp=Z,211nm,0.8s,mb6.5
CEL LR LR
comp=Z,8µm,19.0s,MS6.2
STKA Stephens Creek 89.83 213 P **P 07 37 29.9 -0.2**
comp=Z,161nm,0.8s,mb6.4,baz=6.6,slow=5.4,SNR=20
STKA Stephens Creek 89.83 213 *e*P **P 07 37 29.7 -0.3**
comp=Z,109nm,0.8s,mb6.2
STKA Stephens Creek 89.83 213 *e*P **P 07 37 29.9 -0.2**
comp=Z,41nm,0.9s,mb5.8
PESTR Estremoz 89.85 7 *e*P **P 07 37 29.8 -0.6**
comp=Z,153nm,1.1s,mb6.2
PESTR Estremoz 89.85 7 *e*PP PP 07 41 05.4 +3.3
PESTR *e*S S 07 48 18.1 -1.5
PESTR *e*SS SS 07 54 38.5 +23
PESTR *e*LQ 08 01 02.9
PESTR *e*LR LR 08 07 44.7
comp=Z,5µm,18.4s
MBWA Marble Bar 89.90 235 *e*P **P 07 37 29.8 -0.8**
comp=Z,86nm,0.9s,mb6.1
MBWA LR LR
comp=Z,5µm,21.0s,MS5.9
EVO Evora 90.15 7⇑*i*P **P 07 37 31.2 -0.6**
comp=Z,150nm,1.1s,mb5.9
EVO *e*MLR MLR
comp=Z,10µm,22.8s,MS5.9
EVO Evora 90.15 7 *e*P **P 07 37 31.3 -0.5**
comp=Z,120nm,1.2s,mb6.1
RCY Rachaya 90.16 332 *e*P **P 07 37 32.3 +0.4**
PBAR Barrancos 90.58 6 *e*P **P 07 37 32.5 -1.3**
comp=Z,181nm,1.4s,mb6.2
PBAR Barrancos 90.58 6 *e*PP PP 07 41 05.3 -2.6
PBAR *e*S S 07 48 24.4 -1.9
PBAR *e*SS SS 07 54 54.8 +29
PBAR *e*LQ 08 01 31.6
PBAR *e*LR LR 08 07 51.0
comp=Z,6µm,18.6s
CNB Canberra Magne 90.66 205 *e*P **P 07 37 33.3 -0.5**
PBEJ Beja 90.67 7 *e*P **P 07 37 33.9 -0.3**
comp=Z,110nm,1.2s,mb6.1
MMAI Mount Meron Ar 90.72 332 P **P 07 37 33.9 -0.6**
comp=Z,38nm,0.8s,mb5.8,baz=33,slow=5.4,SNR=23
CAN Canberra 90.77 206 *e*P **P 07 37 33.6 -0.7**
CAN pmax pmax
comp=Z,117nm,1.5s,mb6.0
CAN Canberra 90.77 206 *e*P **P 07 37 33.6 -0.7**
comp=Z,117nm,1.5s,mb6.0
PALK Pallekele 90.78 283 *e*P **P 07 37 35.5 +0.5**
PALK pmax pmax
comp=Z,224nm,1.7s,mb6.2
PALK Pallekele 90.78 283 *e*P **P 07 37 35.5 +0.4**
comp=Z,224nm,1.7s,mb6.2
VAE Valguarnera 90.78 349 P **P 07 37 35.0 +0.3**
comp=Z,9.0nm,0.4s,mb5.5,baz=105,slow=5.0,SNR=2.1
ASF Jabal al Asfar 91.05 330 P **P 07 37 35.8 -0.3**
comp=Z,62nm,0.8s,mb6.0,baz=241,slow=3.3,SNR=38
PTEO Sao Teotonio 91.08 8 *e*P **P 07 37 36.5 +0.4**
IDI Anoyia 91.23 341 P **P 07 37 37.0 +0.2**
comp=Z,19nm,0.7s,mb5.6,baz=3.6,slow=8.0,SNR=9.2
PVAQ Vaqueiros 91.30 7 *e*P **P 07 37 37.9 +0.8**
PVAQ Vaqueiros 91.30 7 *e*PP PP 07 41 17.8 +4.2
PVAQ *e*S SKSac 07 48 10.3 +4.0
PVAQ *e*LQ 08 02 07.2
PVAQ *e*LR LR 08 08 34.8
comp=Z,6µm,18.2s
MORF Marmelete 91.32 8 *e*P **P 07 37 37.1 -0.1**
MORF Marmelete 91.32 8 *e*PP PP 07 41 21.1 +7.3
MORF *e*S S 07 48 27.3 -5.8
MORF *e*SS SS 07 54 45.2 +8.4
MORF *e*LQ 08 01 31.4
MORF *e*LR LR 08 09 21.2
comp=Z,8µm,21.6s
PBDV Barranco-do-Ve 91.44 7 *e*P **P 07 37 39.8 +2.0**
PBDV Barranco-do-Ve 91.44 7 *e*PP PP 07 41 16.2 +1.5
PBDV *e*S SKSac 07 48 12.0 +4.9
PBDV *e*LQ 08 01 32.0
PBDV *e*LR LR 08 08 34.2
comp=Z,6µm,20.1s
ABA Alger-Bouzarea 92.21 358 P **P 07 37 46.5 +5.1**
CMAH Djebel Manchou 92.23 355 P **P 07 37 37.0 -4.4**
DFRA Djebel Bou Aff 92.38 356 P **P 07 37 43.0 +0.8**
CKFL Kef-Lekhel 92.49 355 P **P 07 37 43.0 +0.4**
CASM Ain Smara 92.64 356 P **P 07 37 45.0 +1.7**
EBNR Beni Rached 92.74 360 P **P 07 37 38.7 -5.1**
SET Setif 92.75 356 P **P 07 37 45.0 +1.2**
EMHD Djebel Mahouad 92.81 358 P **P 07 37 36.0 -8.1**
ADJB Djebel Djouab 92.85 358 P **P 07 37 40.3 -4.0**
CKHR Kef el Ahmar 92.93 356 P **P 07 37 43.5 -1.2**
KEST Kesra 92.99 353 P **P 07 37 44.2 -0.8**
comp=Z,38nm,0.8s,mb5.8,baz=306,slow=2.4,SNR=24
OKGL Djebel Kef Gue 92.99 0 P **P 07 37 44.0 -1.0**
EANR 'Ain N'Sour 93.08 360 P **P 07 37 44.0 -1.4**
USTO Oran 93.29 1 P **P 07 37 52.0 +5.7**
OJBR Djebel Berber 93.44 1 P **P 07 37 46.0 -1.1**
ETRT Tiaret 93.64 360 P **P 07 37 46.0 -2.0**
ODJA Bouhanifia 93.69 1 P **P 07 37 50.0 +1.8**
OLHC Oulhaca 93.75 2 P **P 07 37 54.0 +5.5**
TOO Toolangi 93.86 208 *e*P **P 07 37 49.2 +0.7**
EIL Elat 93.98 331 P **P 07 37 48.1 -1.5**
comp=Z,18nm,0.9s,mb5.5,baz=4.0,slow=7.2,SNR=7.3
FORT Forrest 94.10 224 *e*P **P 07 37 50.4 +0.6**
comp=Z,88nm,0.9s,mb6.2
FORT Forrest 94.10 224 *e*P **P 07 37 51.8 +2.0**
comp=Z,100nm,0.8s,mb6.3
SDV Santo Domingo 94.33 70 *e*P **P 07 37 52.3 +0.9**
comp=Z,40nm,0.9s,mb5.8
SDV LR LR
comp=Z,2µm,20.0s,MS5.6
FDF Fort de France 94.96 59 *e*P **P 07 37 54.6 +0.3**
FDF pmax pmax
comp=Z,99nm,0.8s,mb6.3
FDF Fort de France 94.96 59 *e*P **P 07 37 55.4 +1.1**
FDF Fort de France 94.96 59 *e*P **P 07 37 54.6 +0.3**
comp=Z,100nm,0.8s,mb6.3
RPZ Rata Peaks 95.07 187 P **P 07 37 51.7 -2.2**
comp=Z,8.1nm,0.8s,mb5.2,baz=63,slow=4.5,SNR=1.9
RPZ LR LR 08 13 23.9
comp=Z,16µm,22.0s,MS6.5,baz=40,slow=31
BIM Bigot 95.18 59 *e*P **P 07 37 57.2 +1.9**
ROSC El Rosal 95.31 76 P **P 07 37 58.6 +2.6**
comp=Z,8.0nm,0.7s,mb5.2,baz=107,slow=11,SNR=5.3
OTAV Otavalo 96.39 82 *e*P **P 07 38 02.2 +1.4**
comp=Z,11nm,0.8s,mb5.3
OTAV LR LR
comp=Z,2µm,20.0s,MS5.5
TAM Tamanrasset 106.09 356 *e*P Pdif 07 38 43.6 -0.4
TAM pmax pmax
comp=Z,10.0nm,1.4s
TAM Tamanrasset 106.09 356 *e*P Pdif 07 38 43.6 -0.4
comp=Z,9.9nm,1.4s
TOA0 Torodi Ar. Sit 115.78 359 *e*P Pdif 07 39 28.4 +1.3
TORD Torodi Ar. Bea 115.78 359 PKP PKPdf 07 43 13.3 -0.9
comp=Z,17nm,0.9s,baz=340,slow=3.1,SNR=19
TORD PP PP 07 44 14.7 -1.9
comp=Z,8.1nm,0.9s,baz=11,slow=5.0,SNR=4.9
TORD SKP 07 46 47.2
comp=Z,1.3nm,0.5s,baz=346,slow=1.8,SNR=4.6
TORD PKKPbc PKKPbc 07 53 44.9 +0.8
comp=Z,6.2nm,0.8s,baz=177,slow=2.1,SNR=11
TORD Torodi Ar. Bea 115.78 359 PKP PKPdf 07 43 13.3 -0.9
TORD PP PP 07 44 14.7 -1.9
TORD SKP 07 46 47.2
TORD PKKPbc PKKPbc 07 53 44.9 +0.9
SIV San Ignacio 119.70 78 PKP PKPdf 07 43 20.7 -1.0
comp=Z,8.8nm,1.0s,baz=300,slow=1.6,SNR=8.1
SIV PKKPbc PKKPbc 07 53 31.9 +2.0
comp=Z,3.6nm,0.9s,baz=155,slow=4.8,SNR=9.2
LVC Limon Verde 119.77 90 PKKPbc PKKPbc 07 53 33.8 +4.0
comp=Z,5.8nm,0.8s,baz=204,slow=1.3,SNR=4.8
DRV Dumont d'Urvil 121.72 198 Pdif Pdif 07 40 01.0 +7.5
DRV Dumont d'Urvil 121.72 198 PP PP 07 45 04.0 +5.7
DRV SKS SKSdf 07 50 25.0 -7.1
DRV SKKS SKKSac 07 51 57.0 +4.2
DRV SP SP 07 54 51.0 +5.0
DRV SS SS 08 01 36.0 +4.3
DRV L 08 15 00.0
DRV R 08 23 00.0
DBIC Dimbokro 122.00 7 PKP PKPdf 07 43 25.1 -1.2
comp=Z,41nm,0.7s,baz=336,slow=2.8,SNR=23
DBIC Dimbokro 122.00 7 *e*PKIKP PKPdf 07 43 25.1 -1.2
DBIC Dimbokro 122.00 7 *e*PKPdf PKPdf 07 43 24.6 -1.7
DBIC LR LR
comp=Z,7µm,21.0s,MS6.3
TIC Toumodi 122.01 7 *e*PKP2 PKPdf 07 43 25.7 -0.6
comp=Z,438nm,1.1s
KIC Kosan Boka 122.32 7 *e*PKP2 PKPdf 07 43 25.2 -1.7
comp=Z,346nm,1.0s
LIC Lamto 122.43 7 *e*PKP2 PKPdf 07 43 26.5 -0.6
comp=Z,236nm,0.9s
LIC Lamto 122.43 7 *e*PKIKP PKPdf 07 43 25.6 -1.5
comp=Z,170nm,0.9s
LIC *e*MLR MLR
comp=Z,12µm,21.5s,MS6.2
LIC Lamto 122.43 7 *e*PKPdf PKPdf 07 43 25.6 -1.5
LIC LR LR
comp=Z,6µm,21.5s,MS6.2
LCO Las Campanas 123.23 96 *e*PKPdf PKPdf 07 43 28.6 +0.6
LCO LR LR
comp=Z,6µm,21.0s,MS6.2
CFAA Coronel Fontan 126.56 97 PKP PKPdf 07 43 31.9 -2.5
comp=Z,2.8nm,0.8s,baz=237,slow=3.4
BDFB Brasilia 127.22 66 PKP PKPdf 07 43 35.7 -0.4
comp=Z,6.1nm,0.8s,baz=336,slow=12,SNR=4.4
BDFB Brasilia 127.22 66 PKP PKPdf 07 43 35.7 -0.4
BDFB LR LR
comp=Z,4µm,21.0s,MS6.1
VNDA Vanda 129.14 185 PKP PKPdf 07 43 38.3 +0.3
comp=Z,8.7nm,1.1s,baz=309,slow=4.7,SNR=5.5
VNDA Vanda 129.14 185 PKIKP PKPdf 07 43 38.3 +0.4
VNDA pmax pmax
comp=Z,9.0nm,1.2s
VNDA Vanda 129.14 185 *e*PKPdf PKPdf 07 43 40.0 +2.1
VNDA LR LR
comp=Z,2µm,20.0s,MS5.8
CPUP Villa Florida 129.71 83 PKP PKPdf 07 43 39.3 -1.3
comp=Z,7.0nm,0.8s,baz=324,slow=3.8,SNR=8.6
CPUP Villa Florida 129.71 83 PKIKP PKPdf 07 43 39.3 -1.2
CPUP pmax pmax
comp=Z,7.0nm,0.8s
CPUP Villa Florida 129.71 83 *e*PKPdf PKPdf 07 43 40.4 -0.1
CPUP LR LR
comp=Z,662nm,19.0s,MS5.3
OPO Ambohidratompo131.20 295 PKP PKPdf 07 43 46.4 +2.8
comp=Z,10.0nm,0.8s,baz=80,slow=1.8,SNR=9.0
OPO SKPbc SKPbc 07 47 07.4 +2.2
comp=Z,6.7nm,1.0s,baz=21,slow=4.6,SNR=4.9
TRQA Tornquist 134.65 99 *e*PKPdf PKPdf 07 43 48.9 -0.6
TRQA LR LR
comp=Z,4µm,20.0s,MS6.1
LPA La Plata 135.19 92*ce*PKP PKPdf 07 43 51.0 +0.4
LPA *e*PP PP 07 46 30.0 +2.8
LPA *e*SKP 07 47 18.0
LPA *e*SKKP 07 56 19.0
LPA
comp=Z,4µm,20.0s
LSZ Lusaka 137.95 319 PKhKP 07 43 48.4
comp=Z,9.9nm,0.8s,baz=7.3,slow=5.0,SNR=4.4
USHA Ushuaia 139.69 123 PKhKP 07 43 51.7
comp=Z,20nm,0.9s,baz=306,slow=2.8,SNR=6.0
QSPA South Pole Qui 141.09 180 PKhKP 07 43 55.8
comp=Z,21nm,0.7s,baz=105,slow=1.1,SNR=9.2
QSPA South Pole Qui 141.09 180 PKP 07 43 55.8
QSPA LR LR
comp=Z,3µm,20.0s,MS6.0
EFI East Falkland 144.10 114 PKIKP PKPdf 07 44 03.5 -2.7
EFI East Falkland 144.10 114 *e*PKPdf PKPdf 07 44 03.0 -3.2
EFI LR LR
comp=Z,6µm,20.0s,MS6.3
SHEL Horse Pasture 144.29 11 *e*PKIKP PKPdf 07 44 06.4 -1.3
SHEL MLR MLR
comp=Z,4µm,22.0s,MS6.1
PMSA Palmer Station 144.78 138 PKP PKPdf 07 44 04.8 -2.1
comp=Z,72nm,0.9s,baz=292,slow=3.5,SNR=5.5
PMSA Palmer Station 144.78 138 PKP PKPdf 07 44 04.8 -2.1
PMSA LR LR
comp=Z,10µm,21.0s,MS6.5
TSUM Tsumeb 145.37 332 PKPbc PKPbc 07 44 09.2 -0.1

comp=Z,183nm,0.7s,baz=24,slow=3.0,SNR=49
MAW Mawson 146.39 218 PKPbc PKPbc 07 44 10.0 -1.0
comp=Z,141nm,0.9s,baz=52,slow=2.2,SNR=19
MAW Mawson 146.39 218 PKP2 PKPab 07 44 10.0 -2.0
MAW pmax pmax
comp=Z,141nm,0.9s
MAW Mawson 146.39 218 *e*P PKPdf 07 44 11.2 +1.5
comp=Z,104nm,0.8s
MAW Mawson 146.39 218 *e*PKPdf PKPdf 07 44 10.4 +0.7
BOSA Boshof 150.92 312 PKPbc PKPbc 07 44 23.8 -0.2
comp=Z,112nm,0.6s,baz=31,slow=1.9,SNR=29
BOSA Boshof 150.92 312 PKIKP PKPbc 07 44 23.8 -0.2
BOSA pmax pmax
comp=Z,112nm,0.6s
SYO Syowa Base 154.59 212 ⇓ *i*pPKPbc pPKPbc 07 44 46.6 +3.6
SUR Sutherland 156.13 315 PKPab PKPab 07 44 53.9 +0.5
comp=Z,29nm,0.7s,baz=312,slow=2.2,SNR=9.4
VNA3 Neumayer Olymp 159.44 170 *e*PKPdf PKPdf 07 44 28.2 -0.3
VNA3 Neumayer Olymp 159.44 170 *e*PKPdf PKPdf 07 44 28.2 -0.3
VNA3 *e* 07 44 29.9
VNA3 *e* 07 45 07.6
VNA3 *e* 07 45 15.4
VNA3 *e* 07 45 21.7
SNAA Sanae 159.52 177 *e*PKPdf PKPdf 07 44 27.1 -1.5
SNAA Sanae 159.52 177 *e*PKPdf PKPdf 07 44 27.1 -1.5
SNAA *e* 07 44 29.7
SNAA *e* 07 45 06.6
SNAA *e* 07 45 13.0
SNAA *e* 07 45 21.9
NVL N'lazarevskaya 159.88 190 *e*PKIKP PKPdf 07 44 30.7 +1.7
NVL pmax pmax
comp=Z,18nm,1.1s
VNA2 Neumayer--Watz 159.97 172 *e*PKPdf PKPdf 07 44 28.4 -0.7
baz=244,slow=1.3
VNA2 Neumayer--Watz 159.97 172 *e*PKPdf PKPdf 07 44 28.4 -0.7
baz=168,slow=1.7
VNA2 *e* 07 44 30.7
VNA2 *e* 07 45 08.9
VNA2 *e* 07 45 16.8
VNA2 *e* 07 45 24.0
VNA1 Neumayer--Stat 160.15 171 *e*PKPdf PKPdf 07 44 28.8 -0.5
VNA1 Neumayer--Stat 160.15 171 *e*PKPdf PKPdf 07 44 28.8 -0.5
VNA1 *e* 07 44 31.1
VNA1 *e* 07 45 10.0
VNA1 *e* 07 45 17.3
VNA1 *e* 07 45 24.7

*ISCJB **21** 07:55:31.5±1.0, 3555N±006×3495E±009, h53km±34km, Error ellipse: s-maj=12.0km s-min=10.7km az=174.5*
*CSEM **21** 07:55:31.8, 3557N×3494E, h32km, MD2.9, After ISK*
*ISK **21** 07:55:31.8, 3557N×3494E, h32km, MD2.9*
ISC 21 07:55:32.3±1.0, 3554N±007×3494E±009, h47km±40km, n6, σ0§53/10, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EREN	**Erenkoy**	**0.63**	**269**	*e*PG		**Pn**	**07 55 44.8**	**-0.1**
EREN				*e*SG		**Sn**	**07 55 54.2**	**+0.1**
LFK	**Lefkose**	**1.18**	**258**	*e*PN		**Pn**	**07 55 51.8**	**-0.5**
LFK				*e*SN		**Sn**	**07 56 07.3**	**+0.1**
IKL	**Isikli**	**1.23**	**305**	*e*PN		**Pn**	**07 55 53.2**	**+0.2**
IKL				*e*SN		**Sn**	**07 56 08.4**	**-0.2**
HWQ	**Hawqa**	**1.51**	**146**	*e*Pn		**Pn**	**07 55 56.7**	**-0.1**
RCY	**Rachaya**	**2.18**	**160**	*e*Pn		**Pn**	**07 56 05.9**	**-0.1**
KMRS	**Kahramanmaras**	**2.52**	**38**	*e*PN		**Pn**	**07 56 12.0**	**+1.4**
KMRS				*e*SN		**Sn**	**07 56 39.3**	**-0.8**

IDC 21 08:00:18.2±4.1, 3485N×10070E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=171.3km s-min=21.9km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.66**	**119**	P		P	08 07 26.0	-0.9
	0.3nm,0.4s,baz=300,slow=9.1,SNR=3.4							
ASAR	**Alice Springs**	**37.83**	**125**	P		P	08 07 37.4	+0.5
	0.4nm,0.6s,baz=300,slow=8.1,SNR=7.5							
SONM	**Songino Array**	**51.34**	**5**	P		P	08 09 24.6	+0.3
	1.2nm,0.7s,baz=185,slow=8.9,SNR=12							
MKAR	**Makanchi Array**	**52.63**	**344**	P		P	08 09 33.5	-0.5
	0.6nm,0.8s,baz=158,slow=8.8,SNR=5.4							
ZALV	**Zalesovo Beam**	**58.74**	**349**	P		P	08 10 17.5	-0.3
	0.8nm,0.6s,baz=180,slow=8.3,SNR=3.7							
TXAR	**Lajitas Array**	**145.42**	**39**	PKPbc		PKPbc	08 19 59.0	+0.1
	0.4nm,0.6s,baz=229,slow=0.8,SNR=8.1							

*CSEM **21** 08:01:46.6±0.0, 3939N×3313E, h5km, MD3.1, Error ellipse: s-maj=1.2km s-min=1.1km az=15.0*
*ISCJB **21** 08:01:47.3±0.8, 3939N±003×3313E±003, h5km±7km, Error ellipse: s-maj=5.9km s-min=4.3km az=4.0*
*DDA **21** 08:01:47.1, 3939N×3314E, h8km±3km, Md2.8*
*ISK **21** 08:01:47.0, 3939N×3314E, h6km, MD3.1*
ISC 21 08:01:47.7±0.6, 3939N±003×3313E±003, h5km±5km, n27, σ0§72/35, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAMT	**Kaman**	**0.46**	**92**	*e*PG		**Pg**	**08 01 55.9**	**-0.6**
KAMT				*e*SG		**Sg**	**08 02 02.9**	**+0.5**
LOD	**Lodumlu**	**0.57**	**331**	*e*PG		**Pg**	**08 01 58.3**	**-0.4**
LOD				*e*SG		**Sg**	**08 02 07.5**	**+1.3**
CDAG	**Cicekdag**	**0.99**	**76**	*i* P		**Pg**	**08 02 05.6**	**-1.1**
CDAG				*i* S		**Sg**	**08 02 19.7**	**+0.1**
CDAG	**Cicekdag**	**0.99**	**76**	*i* P		**Pg**	**08 02 05.7**	**-1.1**
KIZT	**Kizilcal**	**1.09**	**243**	*e*PN		**Pn**	**08 02 08.0**	**-1.6**
KIZT				*e*SN		**Sn**	**08 02 24.6**	**-0.4**
KDHN	**Kadinhani**	**1.17**	**223**	*i* P		**Pg**	**08 02 09.8**	**-0.3**
KDHN				*i* S		**Sg**	**08 02 25.9**	**+0.7**
CANT	**Cankiri**	**1.28**	**17**	*e*PN		**Pn**	**08 02 11.7**	**-0.4**
LADK	**Ladik-KONYA**	**1.32**	**207**	*e*PN		**Pn**	**08 02 12.7**	**-0.1**
SGKT	**Sivrigoynuk**	**1.44**	**326**	*i* P		**Pn**	**08 02 14.5**	**+0.1**
KONT	**Konya--Tatoy**	**1.56**	**203**	*e*PN		**Pn**	**08 02 15.8**	**-0.1**
BSTP	**Nigde**	**1.63**	**151**	*i* P		**Pn**	**08 02 18.7**	**+1.8**
YOZ	**Yozgat**	**1.72**	**81**	*e*PN		**Pn**	**08 02 18.2**	**0.0**
NIG	**Nigde**	**1.72**	**137**	*e*PN		**Pn**	**08 02 18.6**	**+0.4**
ESKT	**Eskisehir**	**1.77**	**275**	*i* P		**Pn**	**08 02 19.2**	**+0.3**
ESKT				*i* S		**Sn**	**08 02 42.0**	**+0.3**
ESKT	**Eskisehir**	**1.77**	**275**	*i* P		**Pn**	**08 02 17.9**	**-0.9**
ESKT	**Eskisehir**	**1.77**	**275**	*e*Pn		**Pn**	**08 02 19.6**	**+0.7**
SEYT	**Eskypehyr**	**1.77**	**275**	*i* P		**Pn**	**08 02 19.2**	**+0.3**
SEYT				*i* S		**Sn**	**08 02 42.0**	**+0.3**
CTKT	**Corum**	**1.78**	**45**	*i* P		**Pn**	**08 02 18.5**	**-0.5**
CTKT	**Corum**	**1.78**	**45**	*i* P		**Pn**	**08 02 18.5**	**-0.5**
CTKT				*i* S		**Sn**	**08 02 45.3**	**+3.4**
TOS	**Tosya**	**1.79**	**22**	*e*PN		**Pn**	**08 02 19.1**	**0.0**
MDU	**Mudurnu**	**1.82**	**307**	*e*PN		**Pn**	**08 02 19.6**	**-0.1**
SAFT	**Safranbolu**	**1.88**	**350**	*e*PN		**Pn**	**08 02 20.0**	**-0.4**
BNN	**Bunyan**	**2.18**	**103**	*e*PN		**Pn**	**08 02 24.6**	**+0.1**
GULT	**Gulveren**	**2.26**	**298**	*e*PN		**Pn**	**08 02 25.6**	**-0.1**
KOZT	**Kozan**	**2.85**	**131**	*e*PN		**Pn**	**08 02 34.3**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.87**	**103**	*e*PN		**Pn**	**08 02 33.1**	**-0.9**
SVSK	**Karacayir**	**3.04**	**79**	*e*PN		**Pn**	**08 02 36.7**	**+0.4**

*IDC **21** 08:28:11.7±2.5, 5168N×17884W, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.5/4, Error ellipse: s-maj=94.3km s-min=29.4km az=4.0*
*NEIC **21** 08:28:11.6, 5096N×17884W, h21km, ML4.1(AEIC), After AEIC.*
*ISCJB **21** 08:28:12.3±1.5, 510N±03×1789W±02, h33km, mb3.5/4, Error ellipse: s-maj=45.6km s-min=13.5km az=158.2*
ISC 21 08:28:15.6±1.7, 514N±04×1790W±02, h35km, n7, σ1§02/8, mb3.5/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADK	**Adak**	**1.50**	**70**	P		**Pn**	**08 28 39.2**	**-0.7**
ADK				S		**Sn**	**08 28 59.5**	**+1.3**
UNV	**Unalaska Valle**	**7.97**	**67**	*e*Pn		**Pn**	**08 30 07.7**	**-1.0**
YKA	**Yellowknife Ar**	**35.29**	**46**	P		**P**	**08 35 06.0**	**-0.7**
	0.2nm,0.6s,mb3.2,baz=283,slow=8.1,SNR=3.5							
YKA	**Yellowknife Ar**	**35.29**	**46**	P		**P**	**08 35 06.0**	**-0.7**
PDAR	**Pinedale Array**	**46.40**	**72**	P		**P**	**08 36 37.4**	**-1.0**
	1.1nm,0.6s,mb4.0,baz=316,slow=4.1,SNR=12							
SONM	**Songino Array**	**46.55**	**297**	P		**P**	**08 36 40.2**	**+0.7**
	0.5nm,0.8s,mb3.5,baz=53,slow=7.6,SNR=4.7							
TXAR	**Lajitas Array**	**58.75**	**81**	P		**P**	**08 38 11.4**	**+1.5**
	0.2nm,0.7s,mb3.2,baz=299,slow=6.1,SNR=3.2							

IDC 21 08:29:14.4±0.9, 5256S×2639E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.9/17, mbtmp4.0/6, Error ellipse: s-maj=39.4km s-min=23.1km az=63.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSUM	**Tsumeb**	**33.99**	**345**	P		P	08 36 00.4	+0.7
	1.8nm,0.6s,baz=163,slow=8.9,SNR=7.0							
QSPA	**South Pole Qui**	**37.66**	**180**	P		P	08 36 31.4	+0.8
	2.0nm,0.5s,baz=228,slow=2.7,SNR=6.1							
CPUP	**Villa Florida**	**65.83**	**258**	P		P	08 40 01.2	-0.3
	0.6nm,0.5s,baz=144,slow=9.4,SNR=3.2							
TORD	**Torodi Ar. Bea**	**68.81**	**334**	P		P	08 40 20.2	-0.2
	0.4nm,0.8s,baz=183,slow=7.5,SNR=2.4							
ASAR	**Alice Springs**	**81.51**	**118**	P		P	08 41 33.7	0.0
	1.1nm,0.5s,baz=214,slow=4.9,SNR=26							
WRA	**Warramunga Arr**	**84.75**	**116**	P		P	08 41 50.4	-0.1
	0.5nm,0.8s,baz=214,slow=4.5,SNR=5.2							

*IDC **21** 08:58:09.7±0.7, 1661N×12258E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.1/22, mbtmp4.1/14, Error ellipse: s-maj=27.7km s-min=16.4km az=69.0*
*MOS **21** 08:58:12.9±0.9, 1657N×12251E, h33km, mb4.8/8, Error ellipse: s-maj=18.1km s-min=9.7km az=110.7*
*ISCJB **21** 08:58:14.3±0.6, 1662N±003×12263E±006, h47km±5km, mb4.3/23, Error ellipse: s-maj=10.1km s-min=4.9km az=169.0*
*NEIC **21** 08:58:14.7±0.3, 1656N×12258E, h35km, mb4.7/8, Error ellipse: s-maj=11.4km s-min=6.8km az=65.0*
ISC 21 08:58:15.4±0.6, 1663N±003×12261E±006, h40km±6km, n54, σ0§95/57, mb4.3/23, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PALP	**Palanan**	**0.47**	**338**	⇓ *i*P		**Pn**	**08 58 23.4**	**-2.4**
PALP				*i* S		**Sn**	**08 58 32.8**	**-0.2**
CAUP	**Cauayan**	**0.82**	**293**	*e*P		**Pn**	**08 58 29.5**	**-1.0**
BALP	**Baler**	**1.33**	**229**	*e*P		**Pn**	**08 58 36.4**	**-1.0**
BALP				*e*S		**Sn**	**08 58 52.5**	**-1.4**
APYP	**Conner**	**1.79**	**313**	*e*P		**Pn**	**08 58 45.1**	**+1.2**
APYP				*e*S		**Sn**	**08 59 06.6**	**+1.1**
POLP	**Polilio Island**	**1.99**	**199**	*e*P		**Pn**	**08 58 46.0**	**-0.7**
POLP				*e*S		**Sn**	**08 59 10.4**	**+0.1**
ABRA	**Dolores**	**2.08**	**300**	*e*P		**Pn**	**08 58 46.0**	**-1.8**
BOLP	**Bolinao**	**2.60**	**265**	*e*P		**Pn**	**08 58 56.8**	**+1.9**
GQP	**Guinayangan**	**2.71**	**183**	⇓ *i*P		**Pn**	**08 58 57.4**	**+0.9**
GQP				*e*S		**Sn**	**08 59 28.2**	**+0.2**
SCZP	**Santa Cruz**	**2.73**	**252**	*e*P		**Pn**	**08 58 58.5**	**+1.8**
PVCP	**Virac**	**3.36**	**153**	⇓ *e*P		**Pn**	**08 59 04.9**	**-0.5**
LUBP	**Lubang**	**3.67**	**219**	*e*P		**Pn**	**08 59 14.2**	**+4.5**
OTRP	**Odiongan**	**4.28**	**188**	*e*P		**Pn**	**08 59 18.8**	**+0.8**
PLP	**Palo**	**5.89**	**157**	⇓ *e*P		**Pn**	**08 59 42.6**	**+2.4**
KSRS	**Korea Array**	**21.27**	**12**	P		**P**	**09 02 57.0**	**-1.4**
	2.2nm,0.6s,mb3.6,baz=193,slow=10.0,SNR=6.2							
CMAR	**Chiang Mai Arr**	**22.64**	**278**	P		**P**	**09 03 13.5**	**+0.3**
	0.7nm,0.3s,mb3.5,baz=88,slow=8.6,SNR=5.7							
MAJO	**Matsushiro**	**24.19**	**32**	*e*P		**P**	**09 03 28.5**	**+0.4**
MAJO				pmax		pmax		
	comp=Z,63nm,0.6s,mb5.2							
MAJO	**Matsushiro**	**24.19**	**32**	*e*P		**P**	**09 03 28.5**	**+0.3**
	comp=Z,63nm,0.6s,mb5.2							
SONM	**Songino Array**	**33.86**	**340**	P		**P**	**09 04 55.0**	**+0.8**
	comp=Z,0.6nm,0.3s,mb3.9,baz=163,slow=11,SNR=6.6							
ZAK	**Zakamensk**	**37.10**	**339**	*e*P		**P**	**09 05 22.2**	**+0.4**
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.1s,mb3.9							
WRAB	**Tennant Creek**	**38.12**	**162**	*e*P		**P**	**09 05 29.6**	**-1.2**
WRAB				pmax		pmax		
	comp=Z,11nm,1.1s,mb4.5							
WRAB	**Tennant Creek**	**38.12**	**162**	*e*P		**P**	**09 05 29.6**	**-1.2**
	comp=Z,11nm,1.1s,mb4.5							
WRA	**Warramunga Arr**	**38.12**	**162**	P		**P**	**09 05 30.3**	**-0.5**
	comp=Z,2.9nm,0.8s,mb4.0,baz=343,slow=9.3,SNR=7.1							
WB2	**Warramunga Ar**	**38.13**	**162**	*e*P		**P**	**09 05 29.8**	**-1.1**
ASAR	**Alice Springs**	**41.54**	**164**	P		**P**	**09 05 59.5**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.5,baz=356,slow=9.1,SNR=21							
MK31	**Makanchi Array**	**44.86**	**321**	*e*P		**P**	**09 06 26.2**	**+0.4**
MKAR	**Makanchi Array**	**44.86**	**321**	P		**P**	**09 06 26.1**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.8,baz=110,slow=9.7,SNR=9.1							
MKAR				PcP		PcP	09 08 06.9	-0.1
	comp=Z,0.6nm,0.8s,baz=102,slow=4.7,SNR=3.1							
PETK	**Petropavlovsk-**	**45.59**	**29**	P		**P**	**09 06 32.6**	**+1.1**
	comp=Z,5.0nm,0.6s,mb4.6,baz=198,slow=3.5,SNR=11							
ZALV	**Zalesovo Beam**	**47.38**	**331**	P		**P**	**09 06 45.2**	**-0.3**
	comp=Z,1.3nm,0.6s,mb4.0,baz=123,slow=7.3,SNR=7.4							
KURK	**Kurchatov**	**48.85**	**324**	P		**P**	**09 06 57.2**	**+0.2**
	comp=Z,4.0nm,0.6s,mb4.6,baz=143,slow=3.6,SNR=20							
KURK	**Kurchatov**	**48.85**	**324**	*e*P		**P**	**09 06 57.0**	**+0.1**
KURK				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.7							
KURK	**Kurchatov**	**48.85**	**324**	*e*P		**P**	**09 06 57.0**	**0.0**
	comp=Z,8.8nm,1.2s,mb4.7							
KBL	**Kabul**	**50.91**	**301**	*e*P		**P**	**09 07 13.3**	**+0.4**
KBL				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.5							
KBL	**Kabul**	**50.91**	**301**	*e*P		**P**	**09 07 13.3**	**+0.4**
	comp=Z,6.8nm,1.1s,mb4.5							
BRVK	**Borovoye**	**54.52**	**324**	*e*P		**P**	**09 07 39.5**	**+0.3**
BRVK				pmax		pmax		
	comp=Z,15nm,1.4s,mb4.8							
BRVK	**Borovoye**	**54.52**	**324**	*e*P		**P**	**09 07 39.5**	**+0.2**
	comp=Z,15nm,1.4s,mb4.8							
BILL	**Bilibino**	**58.38**	**18**	*e*P		**P**	**09 08 07.2**	**+0.8**
BILL				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.2							
BILL	**Bilibino**	**58.38**	**18**	*e*P		**P**	**09 08 06.6**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.4							
AKTK	**Aktyubinsk**	**61.21**	**319**	P		**P**	**09 08 26.5**	**+0.3**
AKTO	**Aktyubinsk**	**61.21**	**319**	P		**P**	**09 08 26.5**	**+0.4**
	comp=Z,1.0nm,0.7s,mb4.1,baz=111,slow=4.8,SNR=4.8							
ARU	**Arti**	**62.00**	**326**	*e*P		**P**	**09 08 31.1**	**-0.3**
ARU				pmax		pmax		
	comp=Z,4.0nm,0.3s,mb5.0							
ARU	**Arti**	**62.00**	**326**	*e*P		**P**	**09 08 31.1**	**-0.3**
	comp=Z,4.0nm,0.3s,mb5.0							
JOF	**Joensuu**	**75.94**	**332**	*e*p		**P**	**09 09 57.0**	**-0.9**
	comp=Z,3.8nm,0.5s,mb4.6							
ARCES	**ARCESS Array B**	**77.03**	**339**	P		**P**	**09 10 04.0**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=74,slow=8.9,SNR=10							
KAF	**Kangasniemi**	**78.38**	**332**	*e*p		**P**	**09 10 10.7**	**-0.8**
	comp=Z,5.0nm,0.7s,mb4.5							
KAF	**Kangasniemi**	**78.38**	**332**	*e*P		**P**	**09 10 10.7**	**-0.8**
KAF				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
AKASG	**Malin Array Be**	**79.43**	**320**	P		**P**	**09 10 16.4**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=67,slow=5.7,SNR=4.7							
AKASG	**Malin Array Be**	**79.43**	**320**	P		**P**	**09 10 16.4**	**-1.1**
NB2	**NORSAR Subarra**	**85.52**	**333**	P		**P**	**09 10 48.4**	**-0.7**
	comp=Z,3.5nm,0.6s,mb4.8,baz=66,slow=4.8							
NOA	**NORSAR Array B**	**85.52**	**333**	P		**P**	**09 10 48.7**	**-0.4**
	comp=Z,3.4nm,0.7s,mb4.7,baz=64,slow=4.9,SNR=11							
NOA	**NORSAR Array B**	**85.52**	**333**	P		**P**	**09 10 48.7**	**-0.4**
YKA	**Yellowknife Ar**	**89.38**	**23**	P		**P**	**09 11 08.2**	**+0.6**
	comp=Z,1.3nm,0.8s,mb4.3,baz=305,slow=4.5,SNR=21							
YKA	**Yellowknife Ar**	**89.38**	**23**	P		**P**	**09 11 08.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**114.55**	**293**	PKP		PKiKP	09 16 51.6	-0.7
	comp=Z,0.4nm,0.8s,baz=101,slow=1.5,SNR=2.9							
TXAR	**Lajitas Array**	**116.11**	**45**	PKP		PKPdf	09 16 55.8	+0.9
	comp=Z,0.4nm,0.9s,baz=178,slow=3.8,SNR=3.5							

*NIED **21** 09:02:00, 3550N×141.10E, h29km, Mw4.4 Best double couple: M0 3.93000×10^15 NP1:φs 318.00000°, δ70.00000°, λ139.00000°. NP2:φs 64.00000°, δ52.00000°, λ26.00000°.*
*IDC **21** 09:02:43.0±0.7, 3546N×140.98E, h0km, mb3.8/9, mb1 4.0/13, mb1mx3.9/26, mbtmp3.8/13, ML3.8/4, MS3.5/1, Ms1 3.5/1, ms1mx2.9/35, Error ellipse: s-maj=22.8km s-min=14.9km az=89.0*
*ISCJB **21** 09:02:46.5±0.7, 3550N±003×141.17E±006, h38km±6km, mb3.9/11, Error ellipse: s-maj=8.9km s-min=5.5km az=4.8*
*NEIC **21** 09:02:47.2, 3550N×141.11E, h34km, MG3.6(JMA), After JMA.*
*JMA **21** 09:02:47.2±0.1, 3550N×141.11E, h34km±1km, M3.6*
ISC 21 09:02:47.0±0.7, 3547N±003×14113E±005, h28km±4km, n31, σ0§96/41, mb3.9/11, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.32**	**316**	⇓ P		**Pb**	**09 02 54.8**	**+0.3**
CHOJ				S		**Sb**	**09 02 59.0**	**+0.1**
KTR	**Katsuura**	**0.74**	**245**	P		**Pb**	**09 03 01.3**	**0.0**
JCN	**Nagara**	**0.76**	**266**	P		**Pb**	**09 03 02.1**	**+0.4**
JCN				S		**Sb**	**09 03 11.6**	**-0.1**
BSO4	**Boso 4**	**0.81**	**234**	P		**Pb**	**09 03 02.4**	**0.0**
BSO4				*e*S		**Sb**	**09 03 11.2**	**-1.8**
BSO1	**Boso 1**	**0.82**	**189**	P		**Pb**	**09 03 02.4**	**-0.3**
BSO1				S		**Sb**	**09 03 14.5**	**+1.1**
BSO3	**Boso 3**	**0.84**	**218**	P		**Pn**	**09 03 02.6**	**-0.4**
BSO3				S		**Sb**	**09 03 14.5**	**+0.6**
JYT	**Yasato**	**1.07**	**315**	P		**Pn**	**09 03 05.7**	**-0.5**
JIM2	**Oshima 3**	**1.58**	**242**	P		**Pn**	**09 03 12.5**	**-0.7**
JIM2				*e*S		**Sn**	**09 03 32.1**	**-0.7**
JAG	**Ashikaga**	**1.66**	**305**	P		**Pn**	**09 03 15.2**	**+0.9**
JOD2	**Odawara 2**	**1.68**	**264**	P		**Pn**	**09 03 14.9**	**+0.3**
JOD2				*e*S		**Sn**	**09 03 36.3**	**+1.1**
JHJ	**Hachijo jima 2**	**2.60**	**206**	Pn		**Pn**	**09 03 27.1**	**-0.1**
	35nm,0.3s,baz=260,slow=20,SNR=13							
JHJ				Sn		**Sn**	**09 03 58.5**	**+0.8**
	90nm,0.3s,baz=312,slow=21,SNR=11							
MJAR	**Matsushiro Ar**	**2.60**	**295**	Pn		**Pn**	**09 03 28.9**	**+1.7**
	6.4nm,0.3s,baz=154,slow=20,SNR=49							
MJAR				LR		LR	09 04 35.9	
	comp=Z,965nm,18.9s,baz=265,slow=46							
MAT	**Matsushiro**	**2.60**	**295**	P		**Pn**	**09 03 28.8**	**+1.6**
MAT				*e*S		**Sn**	**09 03 57.9**	**0.0**
ERM	**Erimo**	**6.72**	**13**	*e*Pn		**Pn**	**09 04 23.2**	**-0.6**
	47nm,1.0s							
ERM				*e*Sn		**Sn**	**09 05 36.1**	**-3.4**
CBIJ	**Chichi jima**	**8.40**	**174**	Pn		**Pn**	**09 04 44.8**	**-2.1**
	15nm,0.3s,baz=352,slow=17,SNR=15							
CBIJ				Sn		**Sn**	**09 06 12.8**	**-7.9**
	7.8nm,0.3s,baz=287,slow=19,SNR=4.7							
ASAJ	**Asahikawa**	**8.71**	**7**	Pn		**Pn**	**09 04 50.8**	**-0.3**
	0.6nm,0.3s,baz=258,slow=19,SNR=2.5							
KSRS	**Korea Array**	**10.82**	**284**	Pn		**Pn**	**09 05 17.9**	**-2.1**
	0.2nm,0.3s,baz=100,slow=13,SNR=2.7							
SONM	**Songino Array**	**28.50**	**306**	P		**P**	**09 08 39.3**	**-0.5**
	0.6nm,0.6s,mb3.4,baz=91,slow=8.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**42.81**	**314**	P		**P**	**09 10 42.1**	**-0.1**
	1.8nm,0.6s,mb4.0,baz=87,slow=7.7,SNR=9.2							
MKAR	**Makanchi Array**	**44.77**	**303**	P		**P**	**09 10 57.9**	**-0.1**
	1.5nm,0.8s,mb3.9,baz=89,slow=10,SNR=12							
KURK	**Kurchatov**	**46.73**	**309**	P		**P**	**09 11 12.1**	**-1.3**
	1.5nm,0.2s,mb4.5,baz=87,slow=8.4,SNR=5.6							
WRA	**Warramunga Arr**	**55.48**	**188**	P		**P**	**09 12 18.9**	**-0.5**
	1.8nm,0.5s,mb4.4,baz=1.9,slow=7.6,SNR=25							
ASAR	**Alice Springs**	**59.21**	**188**	P		**P**	**09 12 45.8**	**+0.1**
	0.5nm,0.6s,mb3.8,baz=19,slow=10.0,SNR=7.3							
YKA	**Yellowknife Ar**	**65.27**	**30**	P		**P**	**09 13 26.6**	**+0.7**
	0.2nm,0.7s,mb3.2,baz=305,slow=6.2,SNR=3.3							
YKA	**Yellowknife Ar**	**65.27**	**30**	P		**P**	**09 13 26.6**	**+0.7**
JOF	**Joensuu**	**67.23**	**332**	*e*p		**P**	**09 13 37.3**	**-1.1**
	1.4nm,0.5s,mb4.2							
NOA	**NORSAR Array B**	**75.54**	**337**	P		**P**	**09 14 29.0**	**+0.5**
	1.4nm,0.7s,mb4.0,baz=40,slow=5.7,SNR=5.7							
PDAR	**Pinedale Array**	**78.93**	**45**	P		**P**	**09 14 50.0**	**+2.0**
	0.3nm,0.5s,mb3.5,baz=267,slow=1.8,SNR=4.3							
CLL	**Collm**	**82.34**	**330**	*e*P		**P**	**09 15 06.0**	**0.0**
TXAR	**Lajitas Array**	**91.26**	**52**	P		**P**	**09 15 51.8**	**+1.7**
	0.3nm,0.9s,mb3.6,baz=304,slow=3.6,SNR=3.9							
TORD	**Torodi Ar. Bea**	**118.26**	**314**	PKP		PKPdf	09 21 31.6	-0.7
	0.3nm,0.7s,baz=41,slow=1.1,SNR=2.3							

*IDC **21** 09:52:36.8±45.0, 138N×121.10E, h89km±161km, mb3.6/3, mb1 3.8/4, mb1mx3.4/19, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=566.2km s-min=185.3km az=158.0*
*ISCJB **21** 09:52:40.1±1.9, 100N±009×1213E±02, h102km±29km, mb3.8/3, Error ellipse: s-maj=38.9km s-min=12.0km az=166.9*
*DJA **21** 09:52:41, 098N×12134E, h31km, mb4.3/2*
**ISC 21 09:52:41.4±1.5, 099N±008×1213E±02, h96km±24km, n9, σ0§61/10, mb3.8/3, Minahassa Pe

	0.4nm,0.4s,mb3.2,baz=164,slow=10.0,SNR=4.2							
WRA	**Warramunga Arr**	**30.67**	**118**	P		**P**	**10 02 05.2**	**+0.3**
	1.9nm,0.5s,mb4.0,baz=291,slow=10,SNR=26							
WRAB	**Tennant Creek**	**30.67**	**118**	*e*Pn		**P**	**10 02 05.2**	**+0.2**
	2.0nm,0.4s,mb4.2							
ASAR	**Alice Springs**	**31.79**	**124**	P		**P**	**10 02 15.0**	**+0.2**
	0.4nm,0.8s,mb3.2,baz=305,slow=8.6,SNR=3.6							
STKA	**Stephens Creek**	**41.64**	**131**	*e*P		**P**	**10 03 40.0**	**+1.7**
	2.2nm,0.7s,mb4.0,baz=288,slow=9.6,SNR=5.7							
STKA	**Stephens Creek**	**41.64**	**131**	*e*P		**P**	**10 03 38.5**	**+0.3**
	0.5nm,0.8s,mb3.3							
KSRS	**Korea Array**	**48.91**	**24**	P		**P**	**10 04 35.4**	**-0.1**
	2.6nm,1.0s,mb4.1,baz=215,slow=8.3,SNR=4.2							
SONM	**Songino Array**	**54.63**	**1**	P		**P**	**10 05 17.9**	**0.0**
	1.1nm,0.7s,mb4.0,baz=172,slow=8.2,SNR=8.8							
SONM				PcP		PcP	10 06 19.6	0.0
	0.3nm,0.4s,baz=161,slow=5.8,SNR=3.5							
MK31	**Makanchi Array**	**57.46**	**341**	*e*P		**P**	**10 05 37.0**	**-1.0**
MKAR	**Makanchi Array**	**57.46**	**341**	P		**P**	**10 05 37.6**	**-0.4**
	0.8nm,0.5s,mb4.0,baz=151,slow=9.3,SNR=5.9							
KURK	**Kurchatov**	**62.07**	**341**	P		**P**	**10 06 08.0**	**-1.6**
	0.6nm,0.3s,mb4.2,baz=157,slow=6.1,SNR=3.0							
BVAR	**Borovoye Array**	**66.86**	**338**	P		**P**	**10 06 40.6**	**-0.1**
	3.2nm,0.5s,mb4.4,baz=142,slow=9.3,SNR=13							
TIXI	**Tiksi**	**80.00**	**7**	*e*P		**P**	**10 07 54.4**	**-3.1**
	2.3nm,0.4s,mb4.4							
TXAR	**Lajitas Array**	**144.60**	**48**	PKP		PKPdf	10 15 25.1	-0.1
	1.0nm,0.7s,baz=235,slow=0.7,SNR=16							

*NNC **21** 09:58:39.0±1.2, 41.55N×73.10E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=14.2km s-min=3.1km az=1.0*
*KNET **21** 09:58:39.7±0.7, 4170N×7323E, h14km±2km, ml3.0, Error ellipse: s-maj=6.0km s-min=3.8km az=123.0*
*ISCJB **21** 09:58:40.5±1.2, 4168N±007×7317E±005, h10km, Error ellipse: s-maj=10.8km s-min=5.7km az=173.6*
ISC 21 09:58:41.4±1.0, 4171N±007×7320E±005, h10km, n12, σ1§28/22, 14C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.56**	**41**	P	**Pg**	**09 58 50.6**	**-1.5**
AML	71nm,0.2s,SNR=128			⇑S	**Sg**	**09 58 59.8**	**+0.4**
	880nm,0.3s						
EKS2	**Erkin-Say**	**1.04**	**24**	⇓P	**Pg**	**09 58 58.9**	**-2.4**
EKS2	20nm,0.2s,SNR=31			⇑S	**Sg**	**09 59 13.7**	**-1.1**
	108nm,0.5s						
UCH	**Uchtor**	**1.10**	**62**	⇓P	**Pb**	**09 59 00.6**	**-1.9**
UCH	42nm,0.3s,SNR=36			⇑S	**Sg**	**09 59 16.9**	**0.0**
	78nm,0.2s						
AAK	**Ala-Archa**	**1.33**	**46**	⇑P	**Pn**	**09 59 04.7**	**-1.2**
AAK	36nm,0.3s,SNR=53			⇑S	**Sb**	**09 59 23.4**	**0.0**
	49nm,0.2s						
KZA	**Kyzart**	**1.57**	**76**	⇑P	**Pn**	**09 59 08.8**	**-0.4**
KZA	209nm,0.2s,SNR=164			⇑S	**Sn**	**09 59 30.9**	**+1.3**
	158nm,0.2s						
KBK	**Karagaybulak**	**1.60**	**53**	⇑P	**Pn**	**09 59 09.7**	**0.0**
KBK	187nm,0.3s,SNR=153			⇓S	**Sn**	**09 59 32.5**	**+2.1**
	225nm,0.3s						
CHMS	**Chumysh**	**1.72**	**41**	⇑P	**Pn**	**09 59 12.0**	**+0.7**
CHMS	73nm,0.4s,SNR=32			⇑S	**Sn**	**09 59 36.2**	**+2.9**
	82nm,0.2s						
USP	**Ospenovka**	**1.82**	**31**	P	**Pn**	**09 59 13.1**	**+0.4**
USP	74nm,0.3s,SNR=183			⇓S	**Sn**	**09 59 37.5**	**+1.6**
	366nm,0.3s						
TKM2	**Tokmak 2**	**2.15**	**55**	⇑P	**Pn**	**09 59 18.3**	**+1.1**
TKM2	34nm,0.4s			⇑S	**Sg**	**09 59 48.9**	**-1.3**
	63nm,0.5s						
TKM2	**Tokmak 2**	**2.15**	**55**	⇑P	**Pn**	**09 59 18.6**	**+1.5**
	74nm,0.4s,SNR=84						
KK31	**Karatay Array**	**2.43**	**306**	P	**Pn**	**09 59 20.9**	**-0.2**
KK31	7.9nm,0.4s,baz=126,slow=17,SNR=101			S	**Sn**	**09 59 52.5**	**+1.6**
	14nm,0.4s,baz=127,slow=14,SNR=10						
AB01	**Akbulak array**	**11.97**	**314**	⇑P	**Pn**	**10 01 30.7**	**-1.1**
	1.0nm,0.8s						

CASC 21 10:03:51.4±1.7, 1388N×9165W, h28km±10km, MD3.8, 1C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.43**	**2**	*e*S	Sb	10 04 08.1	+1.1
FUG	**Fuego 3**	**0.96**	**54**	⇑*e*P	Pn	10 04 09.3	+0.2
FUG				*e*S	Sb	10 04 23.5	+1.6
FG6		**1.00**	**48**	⇓*e*P	Pn	10 04 10.0	+0.3
FG6				*e*S	Sn	10 04 24.2	+1.3
NBG	**Las Nubes**	**1.45**	**61**	⇓*e*P	Pn	10 04 17.6	+1.9
NBG				*e*S	Sn	10 04 36.0	+2.2
RBDL	**Robledal**	**1.92**	**83**	*e*P	x	10 04 22.5	
RBDL				*e*S	x	10 04 46.9	
SNJE	**San Jose**	**1.98**	**90**	*e*P	x	10 04 23.7	
SNJE				*e*S	x	10 04 48.8	
LFRS	**El Faro**	**2.53**	**96**	*e*P	x	10 04 31.8	
LFRS				*e*S	x	10 05 01.3	

*DDA **21** 10:07:48.8, 3586N×3097E, h7km±4km, Md3.4*
*NIC **21** 10:07:49.2±0.3, 3658N×3126E, h41km, ML3.3, MW3.6*
*CSEM **21** 10:07:51.1±0.1, 3596N×3114E, h10km, Mw3.6, Error ellipse: s-maj=2.2km s-min=1.3km az=21.0*
*ISK **21** 10:07:51.9, 3597N×3116E, h16km, ML3.8*
*NEIC **21** 10:07:51.0, 3597N×3117E, h16km, ML3.7(ISK), After ISK.*
*ISCJB **21** 10:07:52.2±0.2, 3583N±002×3103E±003, h33km, Error ellipse: s-maj=3.6km s-min=2.4km az=135.7*
*HLW **21** 10:07:55.2, 3572N×3098E, h33km, Mb3.9*
*GII **21** 10:07:58.6±0.5, 3540N×3399E, h200km, ML3.5/3*
ISC 21 10:07:52.0±0.6, 3586N±002×3105E±003, h14km±4km, n80, σ1§08/99, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTB	**Antalya**	**1.08**	**343**	*e*PG	**Pg**	**10 08 11.4**	**-1.5**
ANTB				*e*SG	**Sg**	**10 08 26.8**	**-0.3**
KSL	**Kastellorizon**	**1.22**	**284**	*e*P	**Pn**	**10 08 09.2**	**-5.4**
KSL	**Kastellorizon**	**1.22**	**284**	*e*Pb	**Pb**	**10 08 13.5**	**-1.3**
PPCY	**Paphos**	**1.44**	**132**	P	**Pg**	**10 08 21.9**	**+2.1**
PPCY				S	**Sg**	**10 08 43.3**	**+4.8**
ALFC	**Alevga**	**1.45**	**119**	P	**Pn**	**10 08 17.4**	**-0.3**
ALFC	22nm,0.2s			S	**Sg**	**10 08 39.9**	**+1.2**
BCK	**Bucak**	**1.64**	**347**	*e*PN	**Pn**	**10 08 20.2**	**-0.1**
BCK				*e*SN	**Sn**	**10 08 39.8**	**-1.3**
LEF	**Lefka**	**1.68**	**116**	*e*PN	**Pn**	**10 08 20.2**	**-0.6**
SZAC	**Souni-Zanaja**	**1.86**	**126**	P	**Pg**	**10 08 25.9**	**-1.9**
SZAC	14nm,0.4s			S	**Sg**	**10 08 51.8**	**-0.2**
MAMC	**Mammari**	**1.90**	**111**	P	**Pn**	**10 08 23.0**	**-1.0**
ISP	**Isparta**	**2.02**	**348**	*e*PN	**Pn**	**10 08 25.2**	**-0.5**
ISP	**Isparta**	**2.02**	**348**	*e*Pn	**Pn**	**10 08 25.7**	**+0.1**
CSS	**Prodhromos**	**2.07**	**115**	P	**Pn**	**10 08 25.3**	**-1.0**
CSS				S	**Sn**	**10 08 53.5**	**+1.6**
CSS	**Prodhromos**	**2.07**	**115**	*e*Pn	**Pn**	**10 08 21.4**	**-4.9**
CSS				P		10 08 25.3	
CSS				S	**Sn**	**10 08 53.5**	**+1.6**
CSS				*e*Sn	**Sg**	**10 08 56.9**	**-1.7**
LFK	**Lefkose**	**2.11**	**105**	*e*PN	**Pn**	**10 08 26.9**	**+0.1**
IKL	**Isikli**	**2.17**	**79**	*e*PN	**Pn**	**10 08 27.2**	**-0.5**
KONT	**Konya--Tatoy**	**2.33**	**27**	*e*PN	**Pn**	**10 08 29.1**	**-0.8**
ARG	**Arkhangelos**	**2.39**	**279**	*e*P	**Pn**	**10 08 29.8**	**-0.9**
DENT	**Denizli**	**2.48**	**320**	*e*PN	**Pn**	**10 08 32.8**	**+0.8**
LADK	**Ladik-KONYA**	**2.56**	**24**	*e*PN	**Pn**	**10 08 32.3**	**-0.7**
YER	**Yerkesik**	**2.56**	**301**	*e*PN	**Pn**	**10 08 34.8**	**+1.8**
EREN	**Erenkoy**	**2.56**	**97**	*e*PN	**Pn**	**10 08 33.3**	**+0.2**
PHNC	**Paralimni**	**2.58**	**108**	P	**Pg**	**10 08 37.7**	**-3.9**
PHNC				S	**Sg**	**10 09 13.5**	**-1.6**
KHL	**Karahalli**	**2.74**	**334**	*e*PN	**Pn**	**10 08 36.0**	**+0.5**
DAT	**Datca**	**2.93**	**288**	*e*PN	**Pn**	**10 08 39.8**	**+1.7**
MERS	**Mersin**	**2.98**	**69**	*e*PN	**Pn**	**10 08 38.4**	**-0.4**
MLSB	**Milas**	**2.99**	**300**	*e*PN	**Pn**	**10 08 41.1**	**+2.2**
KIZT	**Kizilcal**	**3.08**	**12**	*e*PN	**Pn**	**10 08 39.8**	**-0.5**
BDRM	**Kayabasi**	**3.14**	**294**	*i* P	**Pn**	**10 08 41.3**	**+0.3**
BDRM				*i* S	**Sn**	**10 09 16.5**	**-1.8**
KARP	**Karpathos**	**3.18**	**265**	*e*P	**Pn**	**10 08 41.7**	**+0.2**
KARP	**Karpathos**	**3.18**	**265**	*e*Pn	**Pn**	**10 08 41.3**	**-0.2**
KARP				*e*Sn	**Sn**	**10 09 16.1**	**-3.0**
KULA	**Kula-Manisa**	**3.26**	**325**	*e*PN	**Pn**	**10 08 43.5**	**+0.8**
ALT	**Altintas**	**3.27**	**347**	*e*PN	**Pn**	**10 08 42.1**	**-0.7**
GDZ	**Gediz**	**3.45**	**339**	*i* P	**Pn**	**10 08 45.4**	**+0.1**
GDZ				*i* S	**Sn**	**10 09 23.1**	**-2.9**
KARA	**Karaisali**	**3.52**	**65**	*e*PN	**Pn**	**10 08 46.3**	**+0.1**
KRTS	**Karatas**	**3.57**	**77**	*e*PN	**Pn**	**10 08 46.3**	**-0.7**
NIG	**Nigde**	**3.63**	**51**	*e*PN	**Pn**	**10 08 47.7**	**0.0**
ESKT	**Eskisehir**	**3.66**	**358**	*e*PN	**Pn**	**10 08 48.3**	**+0.2**
ESKT	**Eskisehir**	**3.66**	**358**	*i* P	**Pn**	**10 08 49.3**	**+1.3**
SEYT	**Eskypehyr**	**3.66**	**358**	*i* P	**Pn**	**10 08 49.3**	**+1.2**
SMG	**Samos**	**3.85**	**300**	*e*P	**Pn**	**10 08 49.0**	**-1.7**
AKHS	**Akhisar**	**3.96**	**320**	*e*P	**Pn**	**10 08 51.8**	**-0.4**
AKHS				*i* S	**Sn**	**10 09 31.6**	**-6.8**
AKHS	**Akhisar**	**3.96**	**320**	*e*P	**Pn**	**10 08 51.8**	**-0.5**
AKHS				*i* S	**Sn**	**10 09 31.6**	**-6.9**
BLCB	**Balcova**	**4.07**	**309**	*e*PN	**Pn**	**10 08 55.6**	**+1.8**
KAMT	**Kaman**	**4.09**	**30**	*e*PN	**Pn**	**10 08 53.2**	**-0.8**
HTY	**Hatay**	**4.14**	**85**	*e*PN	**Pn**	**10 08 55.0**	**+0.3**
KOZT	**Kozan**	**4.17**	**66**	*e*PN	**Pn**	**10 08 55.1**	**0.0**
DST	**Dursunbey**	**4.20**	**334**	*e*PN	**Pn**	**10 08 56.7**	**+1.2**
LOD	**Lodumlu**	**4.24**	**18**	*e*PN	**Pn**	**10 08 56.0**	**-0.1**
CAVI	**Cavuskoy**	**4.44**	**348**	*e*PN	**Pn**	**10 08 59.3**	**+0.5**
NPS	**Neapolis**	**4.47**	**264**	*e*P	**Pn**	**10 09 00.0**	**+0.8**
MMC6	**Mount Meron ar**	**4.58**	**127**	Pn	**Pn**	**10 09 03.2**	**+2.4**
GULT	**Gulveren**	**4.58**	**355**	*e*PN	**Pn**	**10 09 01.6**	**+0.8**
MMA0	**Mount Meron ar**	**4.59**	**127**	Pn	**Pn**	**10 09 03.4**	**+2.5**
OFRI	**'Ofer**	**4.59**	**134**	Pn	**Pn**	**10 09 05.4**	**+4.5**
MDU	**Mudurnu**	**4.60**	**2**	*e*PN	**Pn**	**10 09 01.0**	**0.0**
APE	**Apeiranthos**	**4.61**	**287**	*e*P	**Pn**	**10 09 00.6**	**-0.5**
APE	**Apeiranthos**	**4.61**	**287**	*e*Pb	**Pn**	**10 09 00.9**	**-0.2**
KSDI	**Kefar Szold**	**4.65**	**124**	Pn	**Pn**	**10 09 03.3**	**+1.6**
GEMT	**Gemlik**	**4.79**	**343**	*e*PN	**Pn**	**10 09 04.4**	**+0.7**
BNN	**Bunyan**	**4.85**	**51**	*e*PN	**Pn**	**10 09 04.3**	**-0.2**
KUZU	**Kuzuini**	**4.95**	**78**	*i* P	**Pn**	**10 09 07.2**	**+1.3**
MMLI	**Mount Malkishu**	**4.98**	**132**	Pn	**Pn**	**10 09 07.7**	**+1.4**
KMRS	**Kahramanmaras**	**4.98**	**69**	*e*PN	**Pn**	**10 09 06.7**	**+0.4**
ARMT	**Armutlu**	**5.00**	**341**	*e*PN	**Pn**	**10 09 07.6**	**+1.1**
HMDT	**Nahal Hemdat**	**5.18**	**133**	Pn	**Pn**	**10 09 09.7**	**+0.8**
HMDT				Sn	**Sn**	**10 10 07.5**	**-1.0**
SARI	**SarD1z-Kayseri**	**5.31**	**56**	*e*PN	**Pn**	**10 09 06.2**	**-4.6**
GZT	**Gaziantep**	**5.45**	**72**	*i* P	**Pn**	**10 09 14.8**	**+2.1**
AMAG	**Maghara**	**5.51**	**160**	P	**Pn**	**10 09 13.8**	**+0.2**
DSI	**Dead Sea**	**5.60**	**139**	Pn	**Pn**	**10 09 14.9**	**+0.1**
DSI				Sn	**Sn**	**10 10 17.1**	**-1.8**
HMAT	**Matruh**	**5.79**	**216**	P	**Pn**	**10 09 16.7**	**-0.7**
HMAT				S	**Sn**	**10 10 17.0**	**-6.5**
KOT	**Kottamia**	**5.95**	**173**	P	**Pn**	**10 09 20.0**	**+0.3**
SUZ		**6.19**	**165**	P	**Pn**	**10 09 23.3**	**+0.3**
GLL	**Jalalah**	**6.29**	**175**	P	**Pn**	**10 09 24.2**	**-0.1**
HNKL	**Nakhl**	**6.41**	**157**	P	**Pn**	**10 09 26.1**	**+0.1**
PRNI	**Paran**	**6.42**	**148**	Pn	**Pn**	**10 09 25.4**	**-0.7**
KRMI	**Paran Flat**	**6.51**	**151**	Pn	**Pn**	**10 09 27.0**	**-0.3**
SLUM		**6.53**	**230**	P	**Pn**	**10 09 27.9**	**+0.3**
ZNM		**6.65**	**166**	P	**Pn**	**10 09 29.3**	**+0.1**
MBRI	**Mt Berech**	**6.87**	**151**	Pn	**Pn**	**10 09 31.9**	**-0.3**
MBRI				Sn	**Sn**	**10 10 47.3**	**-3.0**
EIL	**Elat**	**7.00**	**151**	Pn	**Pn**	**10 09 33.4**	**-0.6**
EIL				Sn	**Sn**	**10 10 48.7**	**-4.6**

*CSEM **21** 10:11:31.7±0.1, 3940N×3318E, h2km, MD3.2, Error ellipse: s-maj=2.7km s-min=2.4km az=68.0*
*DDA **21** 10:11:32.2, 3939N×3319E, h7km±1km, Md2.9*
*ISK **21** 10:11:32.3, 3940N×3317E, h5km, MD3.2*
*ISCJB **21** 10:11:33.0±0.4, 3938N±003×3317E±003, h10km, Error ellipse: s-maj=4.2km s-min=3.3km az=174.8*
ISC 21 10:11:33.5±0.4, 3938N±003×3318E±003, h10km, n26, σ0§89/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.42**	**92**	*e*PG	**Pg**	**10 11 40.9**	**-0.8**
KAMT				*e*SG	**Sg**	**10 11 46.5**	**-0.7**
LOD	**Lodumlu**	**0.60**	**328**	*e*PG	**Pg**	**10 11 43.5**	**-1.6**
LOD				*e*SG	**Sg**	**10 11 52.3**	**-0.6**
CDAG	**Cicekdag**	**0.96**	**75**	*i* P	**Pg**	**10 11 50.4**	**-1.5**
CDAG				*i* S	**Sg**	**10 12 03.8**	**-0.5**
ELDT	**Eldivan**	**1.12**	**10**	*i* P	**Pb**	**10 11 54.2**	**-0.8**
ELDT				*i* S	**Sb**	**10 12 09.6**	**-0.1**
KIZT	**Kizilcal**	**1.12**	**244**	*e*PN	**Pn**	**10 11 54.2**	**-1.0**
KDHN	**Kadinhani**	**1.19**	**224**	*i* P	**Pb**	**10 11 55.3**	**-0.9**
KDHN				*i* S	**Sb**	**10 12 09.6**	**-2.0**
CANT	**Cankiri**	**1.27**	**15**	*e*PN	**Pn**	**10 11 56.6**	**-0.7**
LADK	**Ladik-KONYA**	**1.34**	**208**	*e*PN	**Pn**	**10 11 57.7**	**-0.5**
KONT	**Konya--Tatoy**	**1.57**	**204**	*e*PN	**Pn**	**10 12 01.9**	**+0.4**
YOZ	**Yozgat**	**1.68**	**81**	*e*PN	**Pn**	**10 12 03.6**	**+0.7**
NIG	**Nigde**	**1.69**	**138**	*e*PN	**Pn**	**10 12 04.2**	**+1.0**
TOS	**Tosya**	**1.77**	**21**	*e*PN	**Pn**	**10 12 04.0**	**-0.3**
ESKT	**Eskisehir**	**1.81**	**275**	*i* P	**Pg**	**10 12 08.3**	**+0.2**
ESKT				*i* S	**Sg**	**10 12 32.6**	**+1.0**
ESKT	**Eskisehir**	**1.81**	**275**	*e*Pn	**Pn**	**10 12 05.4**	**+0.8**
SEYT	**Eskypehyr**	**1.81**	**275**	*i* P	**Pg**	**10 12 08.3**	**+0.2**
SEYT				*i* S	**Sg**	**10 12 32.6**	**+1.1**
MDU	**Mudurnu**	**1.85**	**306**	*e*PN	**Pn**	**10 12 05.8**	**+0.5**
SAFT	**Safranbolu**	**1.89**	**349**	*e*PN	**Pn**	**10 12 06.5**	**+0.7**
BNN	**Bunyan**	**2.14**	**103**	*e*PN	**Pn**	**10 12 10.0**	**+0.7**
GULT	**Gulveren**	**2.30**	**298**	*e*PN	**Pn**	**10 12 12.7**	**+1.3**
BYBT	**Boyabat**	**2.41**	**30**	*e*PN	**Pn**	**10 12 13.6**	**+0.6**
KARA	**Karaisali**	**2.58**	**145**	*e*PN	**Pn**	**10 12 15.9**	**+0.6**
DIKM	**Dikmen**	**2.77**	**34**	*e*PN	**Pn**	**10 12 18.4**	**+0.5**
KVT	**Kavak**	**2.78**	**51**	*e*PN	**Pn**	**10 12 19.3**	**+1.3**
KOZT	**Kozan**	**2.82**	**132**	*e*PN	**Pn**	**10 12 19.4**	**+0.8**
SARI	**SarD1z-Kayseri**	**2.83**	**103**	*e*PN	**Pn**	**10 12 18.4**	**-0.4**
SVSK	**Karacayir**	**3.00**	**79**	*e*PN	**Pn**	**10 12 22.3**	**+1.2**

ISC 21 10:13:00.4±1.3, 4852N±008×2086E±008, h6km±7km, n6, σ1§09/12, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KECS	**Kecovo**	**0.25**	**262**	*e*PG	**Pg**	**10 13 04.9**	**-0.4**
KECS				*e*SG	**Sg**	**10 13 08.6**	**-0.1**
CRVS	**Cervenica-Dubn**	**0.56**	**46**	*e*PG	**Pg**	**10 13 11.7**	**+0.6**
CRVS				*e*SG	**Sg**	**10 13 18.5**	**+0.2**
STHS	**Stebnicka Huta**	**0.94**	**16**	*e*PN	**Pn**	**10 13 18.8**	**-1.3**
STHS				*e*SN	**Sn**	**10 13 32.4**	**-1.4**
NIE	**Niedzica**	**0.97**	**338**	*e*Pg	**Pg**	**10 13 21.0**	**+1.9**
NIE				*e*Sg	**Sg**	**10 13 31.8**	**+0.1**
VYHS	**Vyhne**	**1.35**	**270**	*e*PG	**Pg**	**10 13 25.1**	**-1.1**
VYHS				*e*SG	**Sg**	**10 13 42.6**	**-1.1**
KOLL	**Kolacno**	**1.63**	**273**	*e*PN	**Pn**	**10 13 31.4**	**+1.7**
KOLL				*e*SN	**Sn**	**10 13 52.2**	**+1.2**

*ISCJB **21** 10:13:03.9±0.9, 3940N±004×3317E±004, h3km±8km, Error ellipse: s-maj=6.1km s-min=5.4km az=155.5*
*ISK **21** 10:13:03.8, 3941N×3318E, h9km, MD2.9*
*CSEM **21** 10:13:03.5±0.1, 3941N×3318E, h10km, MD2.9, Error ellipse: s-maj=2.3km s-min=2.0km az=152.0*
*DDA **21** 10:13:03.8, 3939N×3317E, h8km±1km, Md2.5*
ISC 21 10:13:04.5±0.6, 3940N±004×3317E±004, h10km±7km, n12, σ0§57/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.42**	**94**	*e*PG	**Pg**	**10 13 12.7**	**-0.2**
KAMT				*e*SG	**Sg**	**10 13 18.3**	**-0.2**
LOD	**Lodumlu**	**0.58**	**328**	*e*PG	**Pg**	**10 13 15.5**	**-0.3**
LOD				*e*SG	**Sg**	**10 13 23.8**	**+0.3**
CDAG	**Cicekdag**	**0.96**	**76**	*i* P	**Pg**	**10 13 22.4**	**-0.5**
CDAG				*i* S	**Sg**	**10 13 35.9**	**+0.5**
ELDT	**Eldivan**	**1.11**	**10**	*i* P	**Pg**	**10 13 24.4**	**-1.4**
ELDT				*i* S	**Sg**	**10 13 41.3**	**+1.0**
KIZT	**Kizilcal**	**1.13**	**243**	*e*PN	**Pn**	**10 13 26.1**	**-0.2**
KDHN	**Kadinhani**	**1.20**	**223**	*i* P	**Pb**	**10 13 27.0**	**-0.3**
KDHN				*i* S	**Sg**	**10 13 43.9**	**+0.7**
CANT	**Cankiri**	**1.25**	**16**	*e*PN	**Pn**	**10 13 27.5**	**-0.6**
LADK	**Ladik-KONYA**	**1.35**	**208**	*e*PN	**Pn**	**10 13 29.1**	**-0.3**
KONT	**Konya--Tatoy**	**1.58**	**204**	*e*PN	**Pn**	**10 13 32.6**	**0.0**
YOZ	**Yozgat**	**1.68**	**81**	*e*PN	**Pn**	**10 13 34.4**	**+0.4**
NIG	**Nigde**	**1.71**	**138**	*e*PN	**Pn**	**10 13 34.9**	**+0.5**
TOS	**Tosya**	**1.76**	**22**	*e*PN	**Pn**	**10 13 35.6**	**+0.5**

*ISCJB **21** 10:17:20.0±1.6, 142N±0.1×1454E±0.3, h108km±11km, mb3.7/9, Error ellipse: s-maj=40.6km s-min=17.0km az=178.4*
*IDC **21** 10:17:19.6±1.8, 1428N×14550E, h88km±13km, mb3.5/8, mb1 3.7/8, mb1mx3.5/20, mbtmp3.5/8, MS3.9/1, Ms1 3.9/1, ms1mx3.2/26, Error ellipse: s-maj=36.9km s-min=19.3km az=87.0*
*NEIC **21** 10:17:20.2±1.4, 1421N×14555E, h98km±11km, mb3.9/1, Error ellipse: s-maj=27.0km s-min=11.1km az=88.0*
ISC 21 10:17:20.3±1.8, 142N±01×1455E±02, h97km±13km, n15, σ0§59/16, mb3.7/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.88**	**226**	P	**Pn**	**10 17 39.8**	**+0.7**
GUMO	334nm,0.3s,baz=107,slow=3.0,SNR=170			S	**Sn**	**10 17 52.7**	**-0.7**
	628nm,0.3s,baz=64,slow=24,SNR=19						
GUMO	**Guam**	**0.88**	**226**	*e*Pn	**Pn**	**10 17 39.5**	**+0.3**
GUMO				*e*Sn	**Sn**	**10 17 53.3**	**-0.1**
WRAB	**Tennant Creek**	**35.66**	**198**	*e*P	**P**	**10 24 07.9**	**-1.2**
	1.2nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**35.67**	**198**	*e*P	**P**	**10 24 08.9**	**-0.4**
WRA	**Warramunga Arr**	**35.67**	**198**	P	**P**	**10 24 09.9**	**+0.6**
	0.3nm,0.4s,mb3.6,baz=19,slow=9.1,SNR=8.8						
ASAR	**Alice Springs**	**39.31**	**197**	P	**P**	**10 24 41.0**	**+1.0**
	0.2nm,0.6s,mb3.1,baz=20,slow=11,SNR=3.6						
SONM	**Songino Array**	**46.60**	**324**	P	**P**	**10 25 38.8**	**+0.3**
	0.5nm,0.5s,mb3.5,baz=132,slow=8.8,SNR=4.9						
NWAO	**Narrogin (SRO)**	**54.10**	**209**	LR	LR	10 49 37.0	
	comp=Z,118nm,20.6s,baz=149,slow=36						
MK31	**Makanchi Array**	**61.49**	**316**	*e*P	**P**	**10 27 27.1**	**+0.3**
MKAR	**Makanchi Array**	**61.49**	**316**	P	**P**	**10 27 27.1**	**+0.3**
	0.8nm,0.3s,mb4.2,baz=90,slow=8.7,SNR=10						
ZALV	**Zalesovo Beam**	**61.49**	**324**	P	**P**	**10 27 26.0**	**-0.8**
	0.3nm,0.3s,mb3.8,baz=94,slow=10,SNR=2.5						
ZALV	**Zalesovo Beam**	**61.49**	**324**	P	**P**	**10 27 25.9**	**-0.8**
YKA	**Yellowknife Ar**	**82.03**	**28**	P	**P**	**10 29 29.2**	**-0.2**
	0.3nm,0.5s,mb3.4,baz=288,slow=4.9,SNR=5.3						
ARCES	**ARCESS Array B**	**86.69**	**342**	P	**P**	**10 29 52.7**	**-0.2**
	4.7nm,1.0s,mb4.4,baz=60,slow=7.6,SNR=3.1						
PDAR	**Pinedale Array**	**91.09**	**45**	P	**P**	**10 30 14.3**	**+0.1**
	0.2nm,0.6s,mb3.4,baz=245,slow=3.9,SNR=2.9						

*IDC **21** 10:42:32.0±1.5, 8.19S×11863E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.6/18, mbtmp3.6/6, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.6/26, Error ellipse: s-maj=61.6km s-min=21.6km az=58.0*
*ISCJB **21** 10:42:34.3±0.7, 8.17S±005×1188E±0.1, h33km, mb4.0/6, Error ellipse: s-maj=17.4km s-min=7.5km az=171.3*
*NEIC **21** 10:42:37.0±0.7, 8.18S×11872E, h35km, mb4.3/3, Error ellipse: s-maj=24.2km s-min=9.5km az=67.0*
ISC 21 10:42:37.0±0.7, 815S±006×1188E±01, h35km, n13, σ1§07/16, mb4.0/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.25**	**17**	P	**Pn**	**10 43 25.2**	**-0.2**
KAPI	1.6nm,0.3s,baz=200,slow=7.1,SNR=10			Sn	**Sn**	**10 44 02.6**	**-0.3**
	7.0nm,0.3s,baz=80,slow=16,SNR=12						
KAPI				LR	LR	10 44 48.3	
	comp=Z,134nm,19.4s,baz=208,slow=41						
FITZ	**Fitzroy Crossi**	**11.91**	**147**	*e*Pn	**Pn**	**10 45

	523nm,1.4s								
CASY	**Casey**	**59.52**	**207**	*e*P		**P**		**10 54 15.8**	**-1.1**
	357nm,2.0s								
MJAR	**Matsushiro Arr**	**74.76**	**324**	P		**P**		**10 55 54.0**	**+0.4**
	1.4nm,0.8s,mb3.7,baz=147,slow=6.9,SNR=3.6								
MAW	**Mawson**	**76.85**	**200**	P		**P**		**10 56 04.5**	**-0.5**
	4.3nm,0.6s,mb4.4,baz=157,slow=7.7,SNR=6.2								
MAW	**Mawson**	**76.85**	**200**	*e*P		**P**		**10 56 04.3**	**-0.8**
	1.4nm,0.7s,mb3.8								
KSRS	**Korea Array**	**81.18**	**319**	P		**P**		**10 56 27.9**	**-1.2**
	1.1nm,0.5s,mb3.9,baz=139,slow=5.9,SNR=5.2								
PETK	**Petropavlovsk-**	**81.45**	**345**	P		**P**		**10 56 30.3**	**+0.3**
	8.7nm,1.0s,mb4.5,baz=110,slow=7.5,SNR=7.0								
SNAA	**Sanae**	**82.78**	**178**	*e*		**P**		**10 56 35.6**	**-1.4**
SNAA				*e*				10 56 38.7	
SNAA				*e*				10 56 43.8	
SNAA				*e*				10 57 17.5	
SNAA	**Sanae**	**82.78**	**178**	*e*P		**P**		**10 56 35.6**	**-1.4**
	5.3nm,0.9s,mb4.4								
VNA3	**Neumayer Olymp**	**82.90**	**176**	*e*		**P**		**10 56 36.6**	**-1.0**
VNA3				*e*				10 56 38.8	
VNA3				*e*				10 56 43.6	
VNA3				*e*				10 57 18.3	
VNA2	**Neumayer--Watz**	**83.35**	**177**	*e*		**P**		**10 56 39.5**	**-0.4**
	baz=180,slow=2.8								
VNA2				*e*				10 56 42.0	
VNA2				*e*				10 56 46.2	
VNA2				*e*				10 57 21.3	
VNA1	**Neumayer--Stat**	**83.57**	**176**	*e*		**P**		**10 56 40.8**	**-0.2**
VNA1				*e*				10 56 43.0	
VNA1				*e*				10 56 47.3	
VNA1				*e*				10 57 22.4	
NVAR	**Mina Array Bea**	**84.46**	**43**	P		**P**		**10 56 48.7**	**+2.8**
	2.7nm,0.8s,mb4.1,baz=225,slow=8.2,SNR=16								
NVAR	**Mina Array Bea**	**84.46**	**43**	P		**P**		**10 56 48.7**	**+2.8**
PLCA	**Paso Flores**	**85.29**	**133**	P		**P**		**10 56 51.5**	**+1.2**
	2.8nm,0.8s,mb4.2,baz=159,slow=3.5,SNR=6.6								
PLCA	**Paso Flores**	**85.29**	**133**	P		**P**		**10 56 51.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**92.38**	**289**	P		**P**		**10 57 25.9**	**+1.7**
	1.7nm,0.7s,mb4.4,baz=136,slow=3.2,SNR=8.7								
PDAR	**Pinedale Array**	**92.38**	**43**	P		**P**		**10 57 25.7**	**+2.1**
	0.9nm,0.8s,mb4.1,baz=212,slow=2.9,SNR=8.7								
MKAR	**Makanchi Array**	**115.14**	**312**	PKP		PKiKP		11 02 52.8	-0.9
	0.4nm,0.7s,baz=54,slow=2.1,SNR=4.4								
BOSA	**Boshof**	**121.74**	**203**	PKP		PKPdf		11 03 06.8	-0.3
	5.4nm,1.1s,baz=131,slow=4.1,SNR=3.7								
NB2	**NORSAR Subarra**	**144.22**	**353**	PKP		PKPdf		11 03 46.3	-1.6
	comp=Z,9.9nm,0.8s,baz=13,slow=3.5								
NOA	**NORSAR Array B**	**144.22**	**353**	PKP		PKPdf		11 03 46.6	-1.3
	comp=Z,8.0nm,0.8s,baz=20,slow=2.5,SNR=20								
AKASG	**Malin Array Be**	**147.79**	**328**	PKPbc		PKPbc		11 03 56.6	-0.7
	comp=Z,3.1nm,0.6s,baz=44,slow=4.1,SNR=13								
BRTR	**Keskin Array B**	**150.57**	**306**	PKPbc		PKPbc		11 04 04.5	0.0
	comp=Z,1.8nm,0.7s,baz=134,slow=3.8,SNR=6.9								
BRTR				PKPab		PKPab		11 04 12.6	+0.8
	comp=Z,3.6nm,0.8s,baz=98,slow=3.6,SNR=9.2								
GERES	**GERESS Array B**	**155.36**	**342**	PKPab		PKPab		11 04 32.3	+0.8
	comp=Z,0.5nm,0.6s,baz=11,slow=1.0,SNR=3.6								
TORD	**Torodi Ar. Bea**	**167.44**	**176**	PKPab		PKPab		11 05 23.8	-1.3
	comp=Z,1.6nm,0.9s,baz=174,slow=3.9,SNR=7.3								

*CSEM **21** 10:46:14.8±0.1,3835N×2182E,h5km,MD3.1,Error ellipse: s-maj=3.2km s-min=2.0km az=117.0*
*ATH **21** 10:46:14.4,3838N×2177E,h5km±4km,MD3.2/9*
*NEIC **21** 10:46:14.8,3838N×2177E,h6km,MD3.1(ATH), ML3.0(THE),After ATH.*
*ISCJB **21** 10:46:15.5±0.4,3838N±003×2171E±004,h10km,Error ellipse: s-maj=4.7km s-min=3.7km az=17.5*
*THE **21** 10:46:15.4,3837N×2174E,h3km±2km,ML3.1/2,Error ellipse: s-maj=2.2km s-min=0.8km az=337.0*

ISC 21 10:46:15.5±0.5,3838N±003×2174E±004,h7km±5km,n22, σ1§05/32,Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.39**	**214**	*e*PB		**Pg**	**10 46 22.4**	**-0.6**
RLS				*e*SB		**Sg**	**10 46 28.6**	**+0.6**
EVR	**Evrytania**	**0.54**	**6**	*e*PB		**Pg**	**10 46 25.4**	**-0.5**
EVR	**Evrytania**	**0.54**	**6**	*e*Pb		**Pg**	**10 46 26.0**	**+0.1**
AGG	**Agios Georgios**	**0.79**	**35**	P		**Pg**	**10 46 30.2**	**-0.5**
AGG				S		**Sg**	**10 46 42.3**	**+1.3**
VLS	**Valsamata**	**0.93**	**258**	P		**Pg**	**10 46 31.8**	**-1.5**
VLS				S		**Sg**	**10 46 47.0**	**+1.7**
VLS	**Valsamata**	**0.93**	**258**	*e*PG		**Pg**	**10 46 31.9**	**-1.4**
VLS				*e*SB		**Sb**	**10 46 46.6**	**+0.2**
VLS	**Valsamata**	**0.93**	**258**	*e*Pb		**Pg**	**10 46 31.9**	**-1.4**
VLS				*e*Sb		**Sb**	**10 46 47.1**	**+0.7**
LTK	**Loutraki**	**1.03**	**110**	P		**Pg**	**10 46 34.4**	**-0.8**
LTK				S		**Sg**	**10 46 49.8**	**+1.2**
THL	**Klokotos Trika**	**1.20**	**10**	P		**Pb**	**10 46 38.3**	**-0.3**
THL				S		**Sb**	**10 46 55.8**	**+1.4**
THL	**Klokotos Trika**	**1.20**	**10**	*e*Pn		**Pn**	**10 46 36.9**	**-1.9**
THL	**Klokotos Trika**	**1.20**	**10**	P		**Pb**	**10 46 38.3**	**-0.3**
THL				S		**Sb**	**10 46 55.8**	**+1.4**
ITM	**Ithomi**	**1.21**	**173**	*e*PB		**Pb**	**10 46 37.2**	**-1.4**
JAN	**Janina**	**1.45**	**332**	*e*PB		**Pb**	**10 46 42.3**	**-0.6**
JAN	**Janina**	**1.45**	**332**	*e*Pb		**Pb**	**10 46 42.5**	**-0.4**
DID	**Didima**	**1.47**	**126**	P		**Pn**	**10 46 42.1**	**-0.3**
DID				S		**Sn**	**10 47 03.1**	**+1.2**
PYL	**PYLOS**	**1.48**	**180**	P		**Pn**	**10 46 41.8**	**-0.8**
PYL				S		**Sn**	**10 47 01.9**	**-0.3**
NEO	**Neokhori**	**1.48**	**51**	*e*PB		**Pb**	**10 46 42.3**	**-1.1**
XOR	**Xorichti**	**1.50**	**49**	P		**Pn**	**10 46 42.7**	**-0.2**
VLI	**Veliai**	**1.91**	**150**	*e*PN		**Pn**	**10 46 50.5**	**+2.0**
KEK	**Kerkira**	**2.02**	**312**	*e*PN		**Pn**	**10 46 51.7**	**+1.8**
KEK	**Kerkira**	**2.02**	**312**	*e*Pn		**Pn**	**10 46 50.7**	**+0.8**
PAIG	**Paliouri**	**2.16**	**44**	P		**Pn**	**10 46 51.4**	**-0.5**

CASC 21 11:13:53.6±1.3,1437N×9025W,h13km±215km,MD3.8, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NBG	**Las Nubes**	**0.23**	**337**	*e*P		Pg	11 14 00.0	+1.4
NBG				*e*S		Sg	11 14 03.4	+1.3
PCG	**Pacaya**	**0.34**	**274**	*e*P		Pg	11 14 01.2	+0.6
PCG				*e*S		Sg	11 14 06.7	+1.4
FUG	**Fuego 3**	**0.58**	**278**	*e*P		Pg	11 14 05.1	+0.2
RBDL	**Robledal**	**0.60**	**115**	*e*P		x	11 14 05.8	
RBDL				*e*S		x	11 14 13.7	
SNJE	**San Jose**	**0.80**	**128**	*e*P		x	11 14 09.2	

*IDC **21** 11:17:40.5±2.3,3265S×7176W,h0km,mb3.8/1,mb1 3.8/2, mb1mx3.6/15,mbtmp3.7/2,ML3.9/1,Error ellipse: s-maj=124.0km s-min=42.4km az=94.0*
*ISCJB **21** 11:17:41.3±1.7,3266S±005×7194W±008,h12km±13km, Error ellipse: s-maj=11.1km s-min=8.6km az=155.1*
*GUC **21** 11:17:43.5±0.5,3270S×7187W,h17km±23km,MD3.7, ML3.6*
*NEIC **21** 11:17:43.5,3270S×7187W,h17km,ML3.6(GUC),After GUC.*

ISC 21 11:17:42.6±1.2,3265S±005×7185W±007,h13km±6km,n21, σ0§84/29,6C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.42**	**155**	⇑*i*P		**Pg**	**11 17 51.3**	**+0.4**
IHA				*i* S		**Sg**	**11 17 57.1**	**+0.6**
JACH	**Jahuel**	**1.06**	**92**	⇑*i*P		**Pb**	**11 18 02.3**	**-0.5**
JACH				*i* S		**Sb**	**11 18 17.2**	**+0.6**
PEL	**Peldehue**	**1.10**	**117**	⇑*i*P		**Pb**	**11 18 02.7**	**-0.7**
PEL				*i* S		**Sb**	**11 18 17.4**	**-0.3**
PEL				AML		AML	11 18 19.7	
	comp=E,5μm,0.6s							
TACH	**Talagante**	**1.26**	**143**	⇑*i*P		**Pn**	**11 18 04.9**	**-1.1**
TACH				*i* S		**Sb**	**11 18 21.0**	**-1.4**
CLCH	**Cerro Calan**	**1.33**	**124**	⇓*i*P		**Pn**	**11 18 06.2**	**-0.7**
CLCH				*i* S		**Sb**	**11 18 23.7**	**-0.7**
CLCH				AML		AML	11 18 25.3	
	comp=N,2μm,0.7s							
CLCH				AML		AML	11 18 25.8	
	comp=N,2μm,0.8s							
ANTU	**Antumapu**	**1.37**	**132**	AML		AML	11 18 30.4	
	comp=N,2μm,0.6s							
FCH	**Farellones**	**1.48**	**118**	⇓*i*P		**Pn**	**11 18 07.9**	**-1.0**
FCH				*i* S		**Sn**	**11 18 27.6**	**-0.5**
FCH				AML		AML	11 18 30.2	
	comp=N,856nm,0.7s							
PCH	**Pirque**	**1.48**	**131**	*e*P		**Pn**	**11 18 08.8**	**-0.2**
PCH				*i* S		**Sn**	**11 18 28.1**	**-0.2**
CHCH	**Chadas Angostu**	**1.63**	**142**	⇓*i*P		**Pn**	**11 18 11.0**	**0.0**
CHCH				*i* S		**Sn**	**11 18 31.2**	**-0.6**
YECH	**El Yeso**	**1.80**	**125**	*i* P		**Pn**	**11 18 14.4**	**+1.1**
YECH				*i* S		**Sn**	**11 18 37.7**	**+1.7**
CACH	**El Canelo**	**1.80**	**145**	*i* P		**Pn**	**11 18 14.2**	**+0.8**
CACH				*i* S		**Sn**	**11 18 37.7**	**+1.5**
LMEL	**Las Melosas**	**1.83**	**131**	⇑*i*P		**Pn**	**11 18 14.6**	**+0.9**
LMEL				*i* S		**Sn**	**11 18 37.7**	**+0.9**
LMEL	**Las Melosas**	**1.83**	**131**	⇑*i*P		**Pn**	**11 18 14.6**	**+0.9**
LMEL				*i* S		**Sn**	**11 18 37.7**	**+0.9**
LMEL				AML		AML	11 18 41.0	
	comp=N,982nm,0.5s							
LCO	**Las Campanas**	**3.76**	**16**	*e*Pn		**Pn**	**11 18 41.2**	**+0.9**
LCO				*e*Sn		**Sn**	**11 19 33.3**	**+8.9**
PLCA	**Paso Flores**	**8.14**	**173**	Pn		**Pn**	**11 19 39.9**	**-0.5**
	comp=N,0.4nm,0.3s,baz=336,slow=10,SNR=12							
PLCA	**Paso Flores**	**8.14**	**173**	Pn		**Pn**	**11 19 39.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**83.60**	**70**	P		**P**	**11 30 10.4**	**-0.7**
	comp=N,0.8nm,0.9s,baz=246,slow=5.1,SNR=3.7							
BVAR	**Borovoye Array**	**146.18**	**42**	PKPbc		PKPbc	11 37 22.5	+0.3
	comp=N,0.7nm,0.5s,baz=250,slow=2.9,SNR=4.3							
KURK	**Kurchatov**	**151.78**	**41**	PKPbc		PKPbc	11 37 35.8	-0.8
	comp=N,0.9nm,0.6s,baz=305,slow=2.9,SNR=4.4							
ZALV	**Zalesovo Beam**	**153.00**	**31**	PKPbc		PKPbc	11 37 38.7	-0.5
	comp=N,1.4nm,0.9s,baz=321,slow=2.1,SNR=6.7							
MKAR	**Makanchi Array**	**155.74**	**47**	PKPab		PKPab	11 38 02.2	-0.3
	comp=N,0.2nm,0.5s,baz=325,slow=3.1,SNR=3.5							

*IDC **21** 11:18:46.8±0.6,1491N×11992E,h0km,mb4.4/16, mb1 4.5/17,mb1mx4.4/25,mbtmp4.4/17,ML4.1/1,MS3.7/9, Ms1 3.7/9,ms1mx3.4/32,Error ellipse: s-maj=27.8km s-min=13.3km az=72.0*
*BJI **21** 11:18:48.5,1385N×12001E,h89km,mB4.4,mb4.6,Ms4.1, Msz4.0*
*MOS **21** 11:18:51.6±1.0,1483N×11980E,h51km,mb5.0/6,Error ellipse: s-maj=21.1km s-min=10.2km az=118.3*
*ISCJB **21** 11:18:54.0±0.7,1485N±003×11980E±006,h71km±7km, mb4.5/24,Error ellipse: s-maj=9.6km s-min=5.4km az=6.9*
*NEIC **21** 11:18:57.6±1.4,1480N×11984E,h90km±13km,mb4.7/9, Error ellipse: s-maj=11.8km s-min=6.5km az=69.0*

ISC 21 11:18:55.3±0.6,1485N±003×11984E±006,h68km±7km, n78,σ1§10/73,mb4.5/24,1C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SCZP	**Santa Cruz**	**0.93**	**5**	*e*P		**Pn**	**11 19 06.8**	**-6.0**
LUBP	**Lubang**	**1.18**	**160**	*e*P		**Pn**	**11 19 14.6**	**-1.4**
LUBP				*e*S		**Sn**	**11 19 39.1**	**+7.7**
TGY	**Tagaytay City**	**1.30**	**125**	⇑*e*P		**Pn**	**11 19 17.9**	**+0.4**
BOLP	**Bolinao**	**1.53**	**3**	*e*P		**Pn**	**11 19 16.0**	**-4.6**
PGP	**Puerto Galera**	**1.72**	**141**	⇓*e*P		**Pn**	**11 19 23.7**	**+0.6**
BALP	**Baler**	**1.90**	**62**	*e*P		**Pn**	**11 19 23.6**	**-2.0**
BALP				*e*S		**Sn**	**11 19 48.7**	**+0.1**
POLP	**Polilio Island**	**2.04**	**93**	*e*P		**Pn**	**11 19 27.6**	**+0.2**
SJMP	**San Jose**	**2.68**	**152**	*e*P		**Pn**	**11 19 37.7**	**+1.5**
GQP	**Guinayangan**	**2.70**	**110**	⇓*i*P		**Pn**	**11 19 37.0**	**+0.7**
CAUP	**Cauayan**	**2.83**	**42**	*e*P		**Pn**	**11 19 37.3**	**-0.8**
CAUP				*e*S		**Sn**	**11 20 09.1**	**-2.0**
BUSP	**Coron**	**2.85**	**173**	*e*P		**Pn**	**11 19 38.4**	**-0.1**
BUSP				*e*S		**Sn**	**11 20 10.8**	**-0.9**
AUQP	**San Andres**	**3.15**	**118**	*e*P		**Pn**	**11 19 45.3**	**+2.8**
OTRP	**Odiongan**	**3.26**	**139**	*e*P		**Pn**	**11 19 45.5**	**+1.5**
PALP	**Palanan**	**3.33**	**48**	*e*P		**Pn**	**11 19 46.0**	**+1.1**
ENPP	**El Nido**	**3.64**	**186**	*e*P		**Pn**	**11 19 47.9**	**-1.3**
PVCP	**Virac**	**4.37**	**106**	⇓*e*P		**Pn**	**11 20 01.4**	**+2.2**
DAV	**Davao City (W)**	**9.57**	**145**	LR		LR	11 25 45.5	
	comp=Z,831nm,18.9s,baz=1.1,slow=44							
YHNB	**Yeheng**	**9.88**	**8**	*e*P		**Pn**	**11 21 18.4**	**+3.9**
	17nm,0.6s							
QIZ	**Qiongzhong**	**10.43**	**295**	*e*Pn		**Pn**	**11 21 13.3**	**-8.7**
ENH	**Enshi**	**18.06**	**330**	*e*P		**Pn**	**11 23 00.3**	**-1.3**
	0.5nm,0.4s							
KAPI	**Kappang**	**19.73**	**180**	P		**Pn**	**11 23 20.9**	**-0.8**
	0.5nm,0.3s,baz=221,slow=19,SNR=2.6							
KAPI				LR		LR	11 31 55.5	
	comp=Z,66nm,18.4s,baz=234,slow=40							
CM31	**Chiang Mai Arr**	**20.33**	**283**	*e*P		**P**	**11 23 28.3**	**+2.2**
	1.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**20.33**	**283**	P		**P**	**11 23 26.9**	**+0.8**
	4.7nm,0.8s,baz=95,slow=9.2,SNR=40							
CMAR				PcP		PcP	11 27 39.6	+2.6
	0.6nm,0.6s,baz=5.8,slow=0.5,SNR=5.3							
CMAR				LR		LR	11 31 30.6	
	comp=Z,191nm,18.1s,baz=105,slow=37							
CMAR	**Chiang Mai Arr**	**20.33**	**283**	P		**P**	**11 23 27.0**	**+0.9**
CMAR							11 27 39.7	
CMAR	**Chiang Mai Arr**	**20.33**	**283**	P		**P**	**11 23 26.9**	**+0.8**
CMAR				PcP		PcP	11 27 39.6	+2.6
CMAR				LR		LR	11 31 30.6	
XAN	**Xi'an**	**21.51**	**335**	P		**P**	**11 23 40.5**	**+1.9**
XAN				S		**S**	**11 27 27.5**	**-5.7**
XAN				AMB		AMB		
	comp=Z,23nm,3.0s							
XAN				LR		LR		
	comp=N,136nm,13.2s							
XAN				LR		LR		
	comp=E,185nm,14.0s							
XAN				LR		LR		
	comp=Z,444nm,14.9s							
KS15	**Wonju Array Si**	**23.61**	**16**	*e*P		**P**	**11 24 01.5**	**+1.4**
KSRS	**Korea Array**	**23.63**	**16**	P		**P**	**11 23 58.5**	**-1.7**
	comp=Z,3.4nm,0.7s,mb3.8,baz=202,slow=9.9,SNR=11							
KSRS				LR		LR	11 34 05.8	
	comp=Z,134nm,18.8s,baz=312,slow=39							
PSI	**Prapat**	**23.84**	**242**	LR		LR	11 32 38.4	
	comp=Z,113nm,21.4s,baz=182,slow=35							
GUMO	**Guam**	**24.30**	**90**	*e*P		**P**	**11 24 07.4**	**+0.8**
GUMO				pmax		pmax		
	comp=Z,534nm,1.3s,mb5.7							
GUMO	**Guam**	**24.30**	**90**	*e*P		**P**	**11 24 07.4**	**+0.8**
	comp=Z,534nm,1.3s,mb5.7							
SONM	**Songino Array**	**34.73**	**344**	P		**P**	**11 25 38.8**	**+0.1**
	comp=Z,1.3nm,0.8s,mb3.8,baz=171,slow=7.6,SNR=5.9							
SONM				LR		LR	11 40 36.1	
	comp=Z,137nm,18.8s,baz=142,slow=38							
KLR	**Kul'dur**	**35.65**	**13**	*e*P		**P**	**11 25 42.1**	**-4.5**
MBWA	**Marble Bar**	**35.78**	**180**	*e*P		**P**	**11 25 48.3**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0							
PMG	**Port Moresby**	**36.26**	**130**	*e*P		**P**	**11 25 51.2**	**-1.0**
PMG				pmax		pmax		
	comp=Z,43nm,1.4s							
PMG	**Port Moresby**	**36.26**	**130**	*e*P		**P**	**11 25 51.2**	**-1.0**
	comp=Z,43nm,1.4s,mb5.2							
WRAB	**Tennant Creek**	**37.40**	**157**	*e*P		**P**	**11 26 00.9**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.9							
WRAB	**Tennant Creek**	**37.40**	**157**	*e*P		**P**	**11 26 00.9**	**-0.9**
	comp=Z,9.3nm,0.6s,mb4.9							
WRA	**Warramunga Arr**	**37.40**	**157**	P		**P**	**11 26 01.1**	**-0.7**
	comp=Z,7.7nm,0.5s,mb4.9,baz=330,slow=10,SNR=79							
WB2	**Warramunga Ar**	**37.40**	**157**	*e*P		**P**	**11 26 00.8**	**-1.1**
ZAK	**Zakamensk**	**37.90**	**343**	*e*P		**P**	**11 26 14.5**	**+8.8**
ZAK				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
ASAR	**Alice Springs**	**40.67**	**160**	P		**P**	**11 26 29.2**	**+0.1**
	comp=Z,7.9nm,0.5s,mb4.8,baz=336,slow=7.0,SNR=72							
CTAO	**Charters Tower**	**43.36**	**142**	*e*P		**P**	**11 26 47.3**	**-3.8**
CTAO				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.3							
CTAO	**Charters Tower**	**43.36**	**142**	*e*P		**P**	**11 26 47.3**	**-3.8**
	comp=Z,4.8nm,0.8s,mb4.3							
MKAR	**Makanchi Array**	**44.62**	**323**	PcP		PcP	11 28 43.7	+1.1
	comp=Z,1.6nm,0.7s,baz=127,slow=3.6,SNR=4.6							
NWAO	**Narrogin (SRO)**	**47.57**	**183**	*e*P		**P**	**11 27 24.4**	**+0.3**
NWAO				pmax		pmax		
	comp=Z,20nm,1.1s							
NWAO	**Narrogin (SRO)**	**47.57**	**183**	*e*P		**P**	**11 27 24.4**	**+0.3**
	comp=Z,20nm,1.1s,mb4.9							
ZALV	**Zalesovo Beam**	**47.66**	**333**	P		**P**	**11 27 24.0**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.8,baz=107,slow=5.0,SNR=4.9							
ZALV				LR		LR	11 48 21.7	
	comp=Z,76nm,19.7s,baz=130,slow=37							
ZALV	**Zalesovo Beam**	**47.66**	**333**	P		**P**	**11 27 24.0**	**-0.6**
ZALV				LR		LR	11 48 21.7	
PETK	**Petropavlovsk-**	**48.44**	**30**	P		**P**	**11 27 31.3**	**+0.7**
	comp=Z,6.0nm,0.8s,mb4.5,baz=232,slow=3.7,SNR=7.0							
KURK	**Kurchatov**	**48.77**	**326**	P		**P**	**11 27 33.9**	**+0.7**
	comp=Z,3.1nm,0.7s,mb4.3,baz=121,slow=9.2,SNR=7.8							
KURK	**Kurchatov**	**48.77**	**326**	P		**P**	**11 27 33.9**	**+0.7**
NVS	**Novosibirsk**	**48.94**	**333**	*e*P		**P**	**11 27 32.7**	**-1.8**
STKA	**Stephens Creek**	**50.93**	**156**	P		**P**	**11 27 48.4**	**-1.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=333,slow=11,SNR=3.0							
STKA	**Stephens Creek**	**50.93**	**156**	*e*P		**P**	**11 27 47.8**	**-2.0**
	comp=Z,1.0nm,1.0s,mb3.8							
BVAR	**Borovoye Array**	**54.36**	**326**	LR		LR	11 52 52.7	
	comp=Z,124nm,18.5s,baz=168,slow=38							
BRVK	**Borovoye**	**54.43**	**326**	*e*P		**P**	**11 28 15.5**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.6							
BRVK	**Borovoye**	**54.43**	**326**	*e*P		**P**	**11 28 15.5**	**0.0**
	comp=Z,4.6nm,0.8s,mb4.6							
TIXI	**Tiksi**	**57.04**	**3**	*e*P		**P**	**11 28 33.2**	**-0.6**
TIXI				pmax		pmax		
	comp=Z,11nm,0.9s,mb4.9							
TIXI	**Tiksi**	**57.04**	**3**	*e*P		**P**	**11 28 33.2**	**-0.6**
	comp=Z,10nm,0.9s,mb4.9							
AKTK	**Aktyubinsk**	**60.80**	**320**	P		**P**	**11 28 59.6**	**-0.6**
AKTO	**Aktyubinsk**	**60.80**	**320**	P		**P**	**11 28 59.6**	**-0.6**
	comp=Z,0.8nm,0.3s,mb4.2,baz=56,slow=7.3,SNR=3.4							
SPITS	**Spitsbergen Ar**	**78.30**	**348**	P		**P**	**11 30 48.0**	**+0.5**
	comp=Z,9.6nm,0.9s,mb4.5,baz=354,slow=6.9,SNR=8.9							
SPITS	**Spitsbergen Ar**	**78.30**	**348**	P		**P**	**11 30 48.0**	**+0.5**
BUR08	**Bucovina Ar. S**	**82.25**	**317**	*e*P		**P**	**11 31 09.2**	**-0.1**
HFS	**Hagfors**	**85.07**	**331**	P		**P**	**11 31 23.8**	**+0.4**
	comp=Z,2.2nm,0.6s,mb4.3,baz=98,slow=3.0,SNR=8.6							
NOA	**NORSAR Array B**	**85.86**	**332**	P		**P**	**11 31 27.3**	**0.0**
	comp=Z,7.1nm,0.9s,mb4.6,baz=67,slow=4.7,SNR=14							
NOA				LR		LR	12 11 27.5	
	comp=Z,54nm,18.4s,baz=50,slow=37							
GERES	**GERESS Array B**	**89.22**	**321**	P		**P**	**11 31 44.4**	**+0.7**
	comp=Z,1.4nm,0.9s,mb4.0,baz=59,slow=3.6,SNR=6.7							
YKA	**Yellowknife Ar**	**92.04**	**22**	P		**P**	**11 31 57.5**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.4,baz=309,slow=4.4,SNR=30							
YKA	**Yellowknife Ar**	**92.04**	**22**	P		**P**	**11 31 57.5**	**+0.9**
DAVOX	**Davos/Dischmat**	**92.40**	**320**	P		**P**	**11 31 59.4**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.5,baz=22,slow=11,SNR=5.1							
DAVOS	**Davos**	**92.43**	**320**	P		**P**	**11 31 59.4**	**+0.7**
VNA2	**Neumayer--Watz**	**115.65**	**197**	*e*		PKiKP	11 37 31.0	+1.9
	baz=60,slow=1.4							
VNA2				*e*			11 37 33.6	
VNA3	**Neumayer Olymp**	**116.10**	**196**	*e*		PKiKP	11 37 31.8	+1.9
VNA3				*e*			11 37 34.8	
TXAR	**Lajitas Array**	**119.23**	**44**	PKP		PKPdf	11 37 39.2	+1.9
	comp=Z,1.2nm,0.7s,baz=249,slow=0.6,SNR=12							
MCWV	**Mont Chateau**	**122.76**	**18**	*e*PKPdf		PKPdf	11 37 38.5	-5.2
PLCA	**Paso Flores**	**152.67**	**163**	PKPbc		PKPbc	11 38 45.9	+1.4
	comp=Z,2.3nm,0.7s,baz=150,slow=7.0,SNR=6.1							
CPUP	**Villa Florida**	**168.27**	**193**	PKPab		PKPab	11 40 05.3	+2.1
	comp=Z,0.7nm,0.6s,baz=127,slow=5.1,SNR=3.5							

*ISCJB **21** 11:31:55.9±0.8,174S±02×1800W±0.1,h33km,mb4.0/7, Error ellipse: s-maj=28.1km s-min=14.3km az=161.5*
*IDC **21** 11:31:57.2±58.0,1720S×17956E,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.8/17,mbtmp4.0/3,Error ellipse: s-maj=1054.0km s-min=153.2km az=77.0*
*NEIC **21** 11:31:58.0±0.8,1743S×17998E,h35km,mb4.1/5,Error ellipse: s-maj=29.1km s-min=14.8km az=164.0*

LFRS				*e*S		x	12 07 15.6	
CNCH	**Conchagua**	**0.94**	**59**ǁ	*e*P		x	12 07 02.9	
CNCH				*e*S		x	12 07 16.6	
LBRS	**Las Brisas**	**1.01**	**338**	*e*P		x	12 07 04.0	
LBRS				*e*S		x	12 07 18.1	
LFU	**La Fuente**	**1.04**	**335**	*e*P		x	12 07 04.6	
LFU				*e*S		x	12 07 18.5	
CAHU	**Cacacuatique**	**1.06**	**24**ǁ	*e*P		x	12 07 05.2	
CAHU				*e*P		x	12 07 05.2	
BOQS	**Boqueron**	**1.11**	**327**ǁ	*e*P		x	12 07 05.5	
BOQS				*e*S		x	12 07 20.1	
BOQS				*e*S		x	12 07 20.2	
SBLS	**San Blas**	**1.40**	**318**ǁ	*e*P		x	12 07 09.7	
SBLS				*e*S		x	12 07 28.1	
SNJE	**San Jose**	**1.41**	**319**	*e*P		x	12 07 09.4	
SNJE				*e*S		x	12 07 28.2	
CRIN	**San Cristobal**	**1.57**	**93**	*e*P		Pn	12 07 11.6	+0.2
CRIN				*e*S		Sn	12 07 31.4	+0.8
CRIN				AML		AML	12 07 32.9	
	comp=N,369nm,0.3s							
TGUH	**Tegucigalpa,Un**	**1.84**	**47**	*e*P		Pn	12 07 14.0	-1.1
TGUH				ǁ*e*P			12 07 15.6	
COPN	**Copaltepe**	**2.11**	**107**	*e*P		Pn	12 07 19.0	+0.2
CSAN		**2.27**	**105**ǁ	*e*P		Pn	12 07 21.3	+0.3

GUC 21 12:21:54.2±0.6, 2217S×7011W, h48km±3km, MD3.9, ML3.7, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**0.33**	**95**	*e*P	Pn	12 22 04.1	+0.7
MACH				*i* S	Sn	12 22 11.4	+1.5
PB04	**Plate Boundary**	**0.59**	**100**	ǁ*i*P	Pn	12 22 01.7	-4.7
PB04				*i* S	Sn	12 22 07.3	-7.8
PB04				AML	AML	12 22 07.6	
	comp=N,11μm,0.2s						
LVC	**Limon Verde**	**1.20**	**112**	*e*P	Pn	12 22 17.5	+3.0
LVC				*i* S	Sn	12 22 33.4	+3.8
CEN1	**Los Morros**	**1.22**	**184**	*e*P	Pn	12 22 18.3	+3.4
CEN1				*i* S	Sn	12 22 36.9	+6.6
ANCH	**Antofagasta**	**1.54**	**190**	*e*P	Pn	12 22 19.8	+0.7
PSGC	**Pisagua**	**2.56**	**360**	*e*P	Pn	12 22 31.4	-1.7
MNMC	**Miæe Miæ**	**3.06**	**9**ĥ	*e*	Pn	12 23 37.5	+57

*SZGRF **21** 12:40:21.4, 2400S×17897E, h33km, South of Fiji Islands*
*ISCJB **21** 12:41:21.7±0.9, 2217S±006×17947W±008, h542km±12km, mb4.1/22, Error ellipse: s-maj=13.3km s-min=7.7km az=32.2*
*NEIC **21** 12:41:23.4±1.2, 2218S×17946W, h555km±14km, mb4.4/12, Error ellipse: s-maj=13.9km s-min=10.0km az=112.0*
*IDC **21** 12:41:28.8±2.1, 2220S×17971W, h609km±24km, mb3.5/14, mb1 3.7/14, mb1mx3.6/18, mbtmp3.5/14, Error ellipse: s-maj=16.0km s-min=11.8km az=173.0*
ISC 21 12:41:23.1±1.1, 2220S±007×17943W±009, h546km±13km, n114, σ1§21/58, mb4.2/21, 1C-7D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.99**	**43**	P	**P**	**12 43 50.9**	**-0.5**
	1.6nm,0.3s,baz=45,slow=10,SNR=2.3						
AFI				S	**S**	**12 45 48.9**	**-4.2**
	2.2nm,0.3s,baz=34,slow=22,SNR=4.3						
AFI	**Afiamalu**	**10.99**	**43**	*e*P	**P**	**12 43 51.0**	**-0.3**
	61nm,1.1s						
OTAZ	**Otara**	**15.50**	**197**	P	**P**	**12 44 40.0**	**+2.5**
PUZ	**Puketiti**	**15.95**	**187**	P	**P**	**12 44 41.9**	**-0.3**
URZ	**Urewera**	**16.29**	**190**	P	**P**	**12 44 42.6**	**-2.6**
	8.2nm,0.3s,baz=7.6,slow=3.8,SNR=46						
URZ				S	**S**	**12 47 22.5**	**-7.8**
	1.8nm,0.3s,baz=223,slow=22,SNR=12						
URZ	**Urewera**	**16.29**	**190**	P	**P**	**12 44 42.9**	**-2.4**
MWZ	**Matawai**	**16.30**	**189**	P	**P**	**12 44 43.6**	**-1.8**
HIZ	**Hauiti**	**16.99**	**196**	P	**P**	**12 44 53.9**	**+2.2**
BKZ	**Black Stump Fm**	**17.27**	**191**	P	**P**	**12 44 52.4**	**-1.9**
RAEZ	**Rainy Point**	**17.84**	**196**	P	**P**	**12 45 02.6**	**+3.1**
PKE	**Pukeiti**	**17.86**	**197**	P	**P**	**12 45 02.8**	**+3.1**
NEZ	**North Egmont**	**17.90**	**197**	P	**P**	**12 45 03.7**	**+3.7**
BFZ	**Birch Farm**	**18.79**	**190**	P	**P**	**12 45 06.8**	**-1.4**
MRZ	**Mangatainoka R**	**18.89**	**192**	P	**P**	**12 45 08.1**	**-1.0**
QRZ	**Quartz Range**	**19.78**	**198**	P	**P**	**12 45 18.0**	**+0.8**
NNZ	**Nelson**	**19.91**	**196**	P	**P**	**12 45 18.5**	**+0.1**
THZ	**Tophouse**	**20.55**	**197**	P	**P**	**12 45 24.1**	**0.0**
DSZ	**Denniston Nort**	**20.84**	**199**	P	**P**	**12 45 27.0**	**+0.2**
LTZ	**Lake Taylor**	**21.67**	**197**	P	**P**	**12 45 32.9**	**-1.3**
RPZ	**Rata Peaks**	**22.87**	**198**	P	**P**	**12 45 45.4**	**+0.5**
	17nm,0.5s,mb4.9,baz=340,slow=0.9,SNR=18						
JCZ	**Jackson Bay**	**23.91**	**201**	P	**P**	**12 45 54.0**	**-0.2**
ARMA	**Armidale**	**27.15**	**246**	*e*P	**P**	**12 46 24.7**	**+1.7**
CNB	**Canberra Magne**	**30.18**	**237**	*e*P	**P**	**12 46 50.5**	**+1.2**
CTA	**Charters Tower**	**32.04**	**267**	P	**P**	**12 47 05.0**	**-0.4**
	9.1nm,0.6s,mb4.5,baz=91,slow=11,SNR=5.9						
CTA	**Charters Tower**	**32.04**	**267**	*e*	**P**	**12 47 05.0**	**-0.4**
CTAO	**Charters Tower**	**32.04**	**267**	*e*P	**P**	**12 47 04.8**	**-0.6**
	5.7nm,0.6s,mb4.3						
TOO	**Toolangi**	**33.83**	**235**	*e*P	**P**	**12 47 21.0**	**+0.7**
TAU	**Tasmania Unive**	**34.49**	**225**	*e*P	**P**	**12 47 26.2**	**+0.4**
	8.4nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**35.87**	**246**	P	**P**	**12 47 38.1**	**+0.7**
	8.3nm,0.5s,mb4.6,baz=94,slow=11,SNR=53						
STKA	**Stephens Creek**	**35.87**	**246**	*e*P	**P**	**12 47 38.0**	**+0.6**
	7.6nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**35.87**	**246**	*e*P	**P**	**12 47 37.3**	**0.0**
	1.8nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**42.86**	**259**	P	**P**	**12 48 33.2**	**-0.5**
	3.3nm,0.6s,mb4.0,baz=89,slow=8.3,SNR=7.9						
ASAR				PcP	PcP	12 50 11.5	-0.8
	2.3nm,0.6s,baz=98,slow=4.4,SNR=4.6						
ASAR				S	**S**	**12 54 14.3**	**-4.6**
	3.8nm,1.0s,baz=96,slow=15,SNR=11						
WRAB	**Tennant Creek**	**43.07**	**264**	*e*P	**P**	**12 48 34.1**	**-1.3**
	3.0nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**43.07**	**264**	P	**P**	**12 48 34.7**	**-0.7**
	3.1nm,0.3s,mb4.3,baz=95,slow=7.9,SNR=23						
WRA				S	**S**	**12 54 15.5**	**-6.6**
	1.1nm,0.8s,baz=101,slow=14,SNR=3.7						
VNDA	**Vanda**	**56.11**	**185**	P	**P**	**12 50 12.3**	**+2.0**
	2.4nm,0.8s,mb3.5,baz=351,slow=7.6,SNR=7.8						
VNDA				PcP	PcP	12 51 00.9	+0.6
	3.7nm,1.0s,baz=48,slow=0.6,SNR=3.8						
VNDA	**Vanda**	**56.11**	**185**	*e*P	**P**	**12 50 11.8**	**+1.5**
	5.6nm,1.0s,mb3.8						
MBWA	**Marble Bar**	**56.20**	**259**	*e*P	**P**	**12 50 10.3**	**-1.6**
	9.1nm,0.5s,mb4.3						
NWAO	**Narrogin (SRO)**	**56.43**	**244**	*e*P	**P**	**12 50 12.7**	**-0.6**
	0.8nm,0.3s,mb3.4						
CASY	**Casey**	**61.87**	**206**	P	**P**	**12 50 48.1**	**-0.9**
	222nm,1.7s,mb5.3						
QSPA	**South Pole Qui**	**67.88**	**180**	*e*P	**P**	**12 51 27.8**	**+1.1**
	32nm,1.2s,mb4.7						
PETK	**Petropavlovsk-**	**77.57**	**346**	P	**P**	**12 52 23.2**	**+0.6**
	4.6nm,0.8s,mb3.8,baz=116,slow=6.6,SNR=6.7						
MAW	**Mawson**	**79.52**	**200**	P	**P**	**12 52 33.1**	**+0.1**
	4.2nm,0.7s,mb3.9,baz=142,slow=11,SNR=3.3						
NVAR	**Mina Array Bea**	**83.17**	**44**	P	**P**	**12 52 52.8**	**+0.7**
	0.7nm,0.6s,mb3.4,baz=224,slow=8.2,SNR=4.4						
SNAA	**Sanae**	**86.36**	**179**	*e*	**P**	**12 53 05.6**	**-1.5**
SNAA	**Sanae**	**86.36**	**179**	*e*P	**P**	**12 53 05.4**	**-1.7**
	7.2nm,1.4s,mb4.1						
VNA3	**Neumayer Olymp**	**86.54**	**177**	*e*	**P**	**12 53 07.1**	**-0.9**
VNA3				*e*		12 53 11.2	
VNA3				*e*		12 55 17.7	
VNA2	**Neumayer--Watz**	**86.97**	**177**	*e*	**P**	**12 53 09.2**	**-0.8**
VNA2				*e*		12 53 13.3	
VNA2				*e*		12 55 20.4	
VNA1	**Neumayer--Stat**	**87.20**	**177**	*e*	**P**	**12 53 11.0**	**-0.1**
VNA1				*e*		12 53 15.4	
PLCA	**Paso Flores**	**89.07**	**134**	P	**P**	**12 53 21.6**	**+1.1**
	2.3nm,0.8s,mb4.0,baz=202,slow=7.5,SNR=5.7						
TXAR	**Lajitas Array**	**89.08**	**58**	P	**P**	**12 53 22.3**	**+1.7**
	1.7nm,0.9s,mb3.9,baz=216,slow=6.1,SNR=13						
CMAR	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**12 53 23.2**	**+0.8**
	3.7nm,0.8s,mb4.2,baz=134,slow=3.3,SNR=23						
CHTO	**Chiang Mai**	**89.57**	**290**	*e*P	**P**	**12 53 23.8**	**+0.8**
	5.1nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**91.10**	**44**	P	**P**	**12 53 29.8**	**+0.2**
	0.5nm,0.7s,mb3.5,baz=254,slow=3.5,SNR=4.6						
DAWY	**Dawson**	**91.45**	**16**	*e*P	**P**	**12 53 28.6**	**-2.1**
YKA	**Yellowknife Ar**	**98.60**	**25**	P	Pdif	12 54 02.4	-1.2
	0.1nm,0.6s,baz=284,slow=8.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**110.97**	**321**	PKiKP	PKiKP	12 58 51.7	-2.4
	0.5nm,0.4s,baz=68,slow=4.0,SNR=3.6						
MKAR	**Makanchi Array**	**111.38**	**313**	PKiKP	PKiKP	12 58 53.3	-1.8
	0.7nm,0.5s,baz=184,slow=1.0,SNR=18						
ARCES	**ARCESS Array B**	**130.33**	**349**	PKhKP	PKPdf	12 59 29.4	-1.4
	5.1nm,0.8s,baz=45,slow=0.5,SNR=10						
NB2	**NORSAR Subarra**	**140.48**	**352**	PKP	PKPdf	12 59 42.3	-7.5
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**140.48**	**352**	PKP	PKPdf	12 59 51.1	+1.2
	comp=Z,0.7nm,0.5s,baz=14,slow=4.1,SNR=3.2						
AKASG	**Malin Array Be**	**143.81**	**329**	PKP	PKPdf	12 59 53.3	-2.8
	comp=Z,3.2nm,0.4s,baz=42,slow=3.9,SNR=19						
BR131	**Keskin Array S**	**146.94**	**310**	*e*P	PKPdf	13 00 02.6	+0.8
BRTR	**Keskin Array B**	**146.94**	**310**	PKPbc	PKPbc	13 00 03.2	-1.4
	comp=Z,2.8nm,0.6s,baz=136,slow=4.4,SNR=9.6						
KOLS	**Kolonicke sedl**	**148.23**	**332**	*e*PKP	PKPdf	13 00 03.8	+0.3
KOLS				*e*		13 00 07.3	
KOLS	**Kolonicke sedl**	**148.23**	**332**	*e*PKP	PKPdf	13 00 03.8	+0.3
KOLS				*e*		13 00 07.3	
STHS	**Stebnicka Huta**	**148.29**	**334**	*e*PKP	PKPbc	13 00 07.8	0.0
STHS				*e*PP	PP	13 04 05.2	+23
STHS	**Stebnicka Huta**	**148.29**	**334**	*e*PKP	PKPbc	13 00 07.8	0.0
CRVS	**Cervenica-Dubn**	**148.60**	**333**	*e*PKP	PKPbc	13 00 08.3	-0.3
CRVS	**Cervenica-Dubn**	**148.60**	**333**	*e*PKP	PKPbc	13 00 08.3	-0.3
TRPA	**Tarpa**	**148.72**	**331**	ǁ*i*P	PKPbc	13 00 08.0	-0.9
UPC	**Upice**	**149.26**	**341**	*e*PKPbc	PKPbc	13 00 09.9	-0.2
UPC				*ex*	x	13 00 24.5	
DPC	**Dobruska-Polom**	**149.30**	**340**	*e*PKPbc	PKPbc	13 00 10.1	-0.1
KECS	**Kecovo**	**149.33**	**334**	*e*PKP	PKPbc	13 00 10.1	-0.3
KECS				*e*		13 00 18.1	
KECS	**Kecovo**	**149.33**	**334**	*e*PKP	PKPbc	13 00 10.1	-0.3
KECS				*e*		13 00 18.1	
CLL	**Collm**	**149.37**	**345**	*e*PKPbc	PKPbc	13 00 09.8	-0.6
CLL	**Collm**	**149.37**	**345**	ǁ*i*PKPbc	PKPbc	13 00 09.9	-0.5
	comp=Z,16nm,0.6s						
VOIR		**149.38**	**325**	ǁ*i*P	PKPbc	13 00 10.1	-0.5
CLZ	**Clausthal**	**149.45**	**348**	*e*PKPbc	PKPbc	13 00 10.4	-0.1
BRG	**Berggiesshubel**	**149.53**	**343**	*e*PKPbc	PKPbc	13 00 10.3	-0.5
BRG	**Berggiesshubel**	**149.53**	**343**	*i* P	PKPbc	13 00 10.4	-0.3
	comp=Z,14nm,0.6s						
DRGR		**149.62**	**329**	ǁ*i*P	PKPbc	13 00 10.4	-0.7
FBE	**Freiberg**	**149.64**	**344**	*e*PKPbc	PKPbc	13 00 10.8	-0.2
PVCC	**Panska Ves**	**149.67**	**342**	*e*PKPbc	PKPbc	13 00 10.9	-0.2
NEUB	**Neuenburg**	**149.75**	**346**	*e*PKPbc	PKPbc	13 00 11.1	-0.2
ISP	**Isparta**	**149.91**	**308**	ǁ*i*P	PKPbc	13 00 10.5	-1.6
VYHS	**Vyhne**	**149.98**	**335**	*e*PKP	PKPbc	13 00 11.6	-0.3
VYHS				*e*		13 00 19.8	
VYHS	**Vyhne**	**149.98**	**335**	*e*PKP	PKPbc	13 00 11.6	-0.3
VYHS				*e*		13 00 19.8	
KOLL	**Kolacno**	**150.08**	**336**	*e*PKP	PKPbc	13 00 11.9	-0.2
KOLL	**Kolacno**	**150.08**	**336**	*e*PKP	PKPbc	13 00 11.9	-0.2
PRU	**Pruhonice**	**150.16**	**342**	*e*PKPbc	PKPbc	13 00 11.7	-0.6
MOX	**Moxa**	**150.31**	**346**	*e*PKP	PKPbc	13 00 12.0	-0.6
MOX	**Moxa**	**150.31**	**346**	*e*PKPbc	PKPbc	13 00 11.9	-0.7
TANN	**Tannenbergstha**	**150.33**	**345**	*e*PKPbc	PKPbc	13 00 12.2	-0.5
WERD	**Werda**	**150.34**	**345**	*e*PKPbc	PKPbc	13 00 12.3	-0.4
GUNZ	**Gunzen**	**150.41**	**345**	*e*PKPbc	PKPbc	13 00 12.8	0.0
WERN	**Wernitzgruen**	**150.47**	**345**	*e*PKPbc	PKPbc	13 00 13.0	0.0
NKC	**Novy Kostel**	**150.50**	**344**	*e*PKPbc	PKPbc	13 00 12.8	-0.3
NKC	**Novy Kostel**	**150.50**	**344**	*e*PKPbc	PKPbc	13 00 12.9	-0.2
NKC				*ex*	x	13 00 26.7	
GZR	**Gura Zlata**	**150.59**	**327**	ǁ*i*P	PKPbc	13 00 12.4	-1.0
MODS	**Modra-Piesok**	**150.67**	**337**	*e*PKP	PKPbc	13 00 15.3	+1.8
MODS	**Modra-Piesok**	**150.67**	**337**	*e*PKP	PKPbc	13 00 15.3	+1.8
MANZ	**Manzenberg**	**150.81**	**345**	*e*PKPbc	PKPbc	13 00 13.3	-0.5
ROTZ	**Rotzenmuhle**	**150.99**	**344**	*e*PKPbc	PKPbc	13 00 13.6	-0.6
BZS	**Buzias**	**151.00**	**329**	ǁ*i*P	PKPbc	13 00 13.3	-1.1
KHC	**Kasperske Hory**	**151.20**	**342**	*e*PKPbc	PKPbc	13 00 14.2	-0.5
GRF	**Grafenberg Arr**	**151.30**	**346**	*e*PKPbc	PKPbc	13 00 14.7	-0.2
GEC2	**GERESS Array S**	**151.43**	**342**	*e*PKPbc	PKPbc	13 00 14.4	-0.8
GERES	**GERESS Array B**	**151.43**	**342**	PKPbc	PKPbc	13 00 14.6	-0.6
	comp=Z,1.5nm,0.4s,baz=18,slow=2.1,SNR=15						
PKSM	**Moragy**	**151.90**	**333**	ǁ*i*P	PKPbc	13 00 15.6	-0.7
LIC	**Lamto**	**163.23**	**160**	*e*PKP2	PKPab	13 01 18.0	0.0
	comp=Z,24nm,0.9s						
KIC	**Kosan Boka**	**163.44**	**161**	*e*PKP2	PKPab	13 01 19.0	0.0
	comp=Z,35nm,0.8s						
TIC	**Toumodi**	**163.62**	**160**	*e*PKP2	PKPab	13 01 19.7	-0.1
	comp=Z,13nm,0.2s						
DBIC	**Dimbokro**	**163.70**	**160**	PKP	PKPdf	13 00 23.0	-1.6
	comp=Z,2.3nm,0.7s,baz=95,slow=4.1,SNR=5.6						
DBIC				PKPab	PKPab	13 01 20.1	0.0
	comp=Z,2.1nm,0.5s,baz=204,slow=3.5,SNR=5.8						
TORD	**Torodi Ar. Bea**	**170.94**	**187**	PKP	PKPdf	13 00 27.5	-2.1
	comp=Z,1.4nm,0.8s,baz=315,slow=0.9,SNR=8.6						
TORD				PKPab	PKPab	13 01 51.3	-0.7
	comp=Z,2.0nm,0.8s,baz=187,slow=3.3,SNR=11						

*IDC **21** 12:42:11.9±1.4, 172Ss×13873E, h0km, mb4.3/7, mb1 4.5/9, mb1mx4.3/17, mbtmp4.4/9, ML4.7/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/21, Error ellipse: s-maj=64.4km s-min=16.8km az=76.0*
*ISCJB **21** 12:42:15.6±0.7, 191S±005×1384E±0.1, h33km, mb4.2/10, MS3.4/3, Error ellipse: s-maj=20.6km s-min=6.8km az=177.5*
*NEIC **21** 12:42:17.3±0.6, 179Ss×13856E, h35km, mb4.4/6, Error ellipse: s-maj=20.0km s-min=7.8km az=76.0*
ISC 21 12:42:17.1±0.8, 180S±007×1386E±02, h35km, n23, σ0§84/25, mb4.2/10, MS3.4/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**18.51**	**193**	*e*P	**Pn**	**12 46 30.0**	**-0.9**
	21nm,0.6s						
WRAB				*e*Sn	**Sn**	**12 49 48.4**	**-8.4**
WB2	**Warramunga Arr**	**18.52**	**193**	*e*P	**Pn**	**12 46 30.3**	**-0.6**
WB2	**Warramunga Arr**	**18.52**	**193**	*e*P	**Pn**	**12 46 30.4**	**-0.6**
WB2				*e*Sn	**Sn**	**12 49 48.8**	**-8.2**
WRA	**Warramunga Arr**	**18.52**	**193**	P	**Pn**	**12 46 30.7**	**-0.3**
	3.9nm,0.3s,baz=17,slow=12,SNR=186						
WRA				S	**S**	**12 49 49.3**	**-11**
	0.3nm,0.3s,baz=13,slow=22,SNR=4.8						
CTA	**Charters Tower**	**19.65**	**158**	P	**Pn**	**12 46 43.6**	**-0.9**
	0.9nm,0.3s,baz=329,slow=9.9,SNR=11						
CTA				LR	LR	12 54 50.7	
	comp=Z,123nm,18.4s,baz=230,slow=39						
CTA	**Charters Tower**	**19.65**	**158**	*e*P	**Pn**	**12 46 43.7**	**-0.8**
	5.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.62**	**217**	*e*P	**P**	**12 46 54.8**	**+1.2**
	8.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.62**	**217**	*e*P	**P**	**12 46 53.5**	**-0.1**
	13nm,1.2s						
ASAR	**Alice Springs**	**22.22**	**192**	P	**P**	**12 47 11.4**	**+0.7**
	12nm,0.5s,mb4.6,baz=14,slow=11,SNR=340						
ASAR				S	**S**	**12 51 14.4**	**+0.8**
	3.0nm,0.7s,baz=14,slow=24,SNR=7.1						
EIDS	**Eidsvold**	**26.33**	**154**	*e*P	**P**	**12 47 51.6**	**+1.8**
	27nm,1.0s,mb4.7						
MBWA	**Marble Bar**	**26.65**	**222**	*e*P	**P**	**12 47 48.4**	**-4.3**
	9.7nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**30.05**	**175**	P	**P**	**12 48 22.8**	**-0.1**
	4.4nm,0.6s,mb4.4,baz=358,slow=9.8,SNR=2.6						
STKA				LR	LR	13 01 53.6	
	comp=Z,65nm,20.2s,MS3.3,baz=24,slow=39						
STKA	**Stephens Creek**	**30.05**	**175**	*e*P	**P**	**12 48 22.4**	**-0.5**
	1.8nm,1.0s,mb3.8						
KULM	**Kulim**	**38.59**	**281**	*e*P	**P**	**12 49 37.1**	**0.0**
	7.7nm,0.9s,mb4.4						
KSRS	**Korea Array**	**40.30**	**347**	LR	LR	13 06 02.9	
	comp=Z,39nm,18.7s,MS3.3,baz=158,slow=36						
CMAR	**Chiang Mai Arr**	**43.92**	**299**	P	**P**	**12 50 21.4**	**+0.5**
	1.1nm,0.7s,mb3.7,baz=114,slow=7.5,SNR=7.4						
SONM	**Songino Array**	**56.87**	**335**	P	**P**	**12 51 58.7**	**+0.4**
	0.6nm,0.6s,mb3.8,baz=153,slow=7.3,SNR=5.0						
SONM				LR	LR	13 17 30.9	
	comp=Z,44nm,19.0s,MS3.6,baz=2.4,slow=37						
MKAR	**Makanchi Array**	**69.02**	**322**	P	**P**	**12 53 19.9**	**+0.7**
	2.8nm,0.7s,mb4.3,baz=113,slow=8.2,SNR=22						
ZAA0	**Zalesovo Array**	**71.11**	**330**	*e*P	**P**	**12 53 30.0**	**-1.8**
ZALV	**Zalesovo Beam**	**71.11**	**330**	P	**P**	**12 53 31.4**	**-0.4**
	2.0nm,0.6s,mb4.2,baz=118,slow=6.5,SNR=12						
PPT	**Papeete**	**72.10**	**108**	*e*LR	LR	12 53 18.8	
	98nm,26.0s						
KURK	**Kurchatov**	**72.93**	**325**	P	**P**	**12 53 43.0**	**+0.2**
	2.8nm,0.7s,mb4.3,baz=114,slow=5.4,SNR=17						
KURK	**Kurchatov**	**72.93**	**325**	P	**P**	**12 53 43.0**	**+0.2**

*IDC **21** 12:43:48.7±2.0, 153N×12670E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/17, mbtmp3.9/4, Error ellipse: s-maj=213.5km s-min=21.9km az=66.0*
*ISCJB **21** 12:43:54.6±1.4, 15N±02×1263E±0.1, h58km±14km, mb3.9/4, Error ellipse: s-maj=32.8km s-min=12.6km az=42.8*
*DJA **21** 12:43:54, 148N×12634E, h30km, MLv4.1/3*
ISC 21 12:43:53.9±4.8, 15N±01×1263E±01, h28km±38km, n7, σ1§59/8, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**125**	P	**Pn**	**12 44 15.9**	**+0.4**
MNI	**Manado**	**1.50**	**268**	P	**Pn**	**12 44 19.5**	**+0.6**
LBMI	**Labuha**	**2.42**	**151**	P	**Pn**	**12 44 31.2**	**-0.3**
LBMI				S	**Sn**	**12 45 02.1**	**+2.0**
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**12 48 52.0**	**-1.5**
	2.3nm,0.5s,mb3.8,baz=340,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**12 49 23.1**	**-2.0**
	1.0nm,0.4s,mb3.7,baz=356,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**12 53 52.5**	**+0.4**
	0.6nm,0.6s,mb3.8,baz=126,slow=7.7,SNR=5.3						
KURK	**Kurchatov**	**63.41**	**328**	P	**P**	**12 54 21.3**	**+0.5**
	0.8nm,0.4s,mb4.2,baz=130,slow=6.1,SNR=7.5						

*NIED **21** 12:50:00, 32.10N×13050E, h5km, Mw3.3 Best double couple: M0 9.02000×10^13 NP1:φs279.00000°, δ85.00000°, λ-51.00000°. NP2:φs15.00000°, δ39.00000°, λ-172.00000°.*
JMA 21 12:50:31.6, 3208N×13054E, h7km±1km, M3.5, 3C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZO	**Okuchi**	**0.08**	**40**	ǁP	Pg	12 50 33.7	+0.2
JZO				S	Sg	12 50 36.3	+0.4
JTZ	**Takazaki**	**0.50**	**111**	ĥP	Pg	12 50 41.5	+0.3
JTZ				S	Sg	12 50 48.4	+0.7
JSJ	**Shimokoshiki**	**0.81**	**240**	ǁP	Pg	12 50 46.8	-0.3
JNAR	**Kushima--Naru**	**0.83**	**131**	ĥP	Pg	12 50 48.2	+0.6
JTSN	**Tsuno**	**0.83**	**78**	ǁP	Pg	12 50 47.6	0.0
JTA	**Tamana**	**0.88**	**360**	ĥP	Pg	12 50 48.2	-0.3

*NEIC **21** 13:47:53.9, 1725N×10033W, h27km, MD3.8(MEX), After MEX.*
MEX 21 13:47:53.9±0.5, 1725N×10033W, h27km±16km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.21**	**163**	*i* P	Pb	13 47 58.4	-1.5
CAIG				*i* S	Sb	13 48 02.7	-1.2
ACX	**Acapulco**	**0.55**	**134**	*i* P	Pb	13 48 03.3	-1.7
ACX				*i* S	Sb	13 48 10.5	-2.1
ZIIG	**Zihuatanejo**	**1.14**	**288**	*e*P	Pn	13 48 11.9	-2.2
ZIIG				*i* S	Sn	13 48 25.9	-2.9
PNIG	**Pinotepa**	**2.28**	**112**	*e*P	Pn	13 48 27.1	-2.6
PNIG				*i* S	Sn	13 48 54.6	-2.3
UTMO	**Huajuapan**	**2.48**	**76**	*i* P	Pn	13 48 31.5	-1.0
UTMO				*i* S	Sn	13 48 59.4	-2.6

*IDC **21** 13:54:11.5±1.6, 3452N×14186E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.6/25, mbtmp

2.4nm,0.8s,mb3.6,baz=37,slow=5.1,SNR=2.8
STKA LR LR 14 24 26.6
comp=Z,34nm,19.2s,baz=216,slow=38
STKA Stephens Creek 24.01 195 P **P** **14 14 20.8 -1.4**
0.8nm,1.0s,mb3.0
FITZ Fitzroy Crossi 24.23 245 *e*P **P** **14 14 24.0 -0.3**
6.0nm,0.3s,mb4.4
FITZ Fitzroy Crossi 24.23 245 *e*P **P** **14 14 23.7 -0.6**
2.7nm,0.4s,mb3.9
CBIJ Chichi jima 36.08 350 LR LR 14 29 20.8
comp=Z,126nm,19.5s,baz=77,slow=34
URZ Urewera 39.07 143 LR LR 14 30 05.4
comp=Z,368nm,20.6s,baz=30,slow=32
CMAR Chiang Mai Arr 55.93 299 P **P** **14 18 46.0 +0.9**
0.5nm,0.4s,mb3.9,baz=106,slow=4.6,SNR=4.2
PETK Petropavlovsk- 62.01 6 P **P** **14 19 25.9 -0.6**
1.4nm,0.5s,mb4.3,baz=154,slow=7.3,SNR=11
SONM Songino Array 67.49 331 P **P** **14 20 03.1 +0.8**
0.3nm,0.5s,mb3.3,baz=164,slow=5.8,SNR=2.7
VNDA Vanda 69.19 177 LR LR 14 49 17.3
comp=Z,32nm,19.5s,baz=33,slow=35
MKAR Makanchi Array 80.56 320 P **P** **14 21 17.9 -0.6**
0.5nm,0.6s,mb3.5,baz=112,slow=6.6,SNR=3.1
COLD Coldfoot 87.26 20 *e*P **P** **14 21 52.3 +0.1**
4.6nm,0.7s,mb4.5
TORD Torodi Ar. Bea 147.24 281 PKPbc PKPbc 14 28 50.3 +0.2
3.1nm,0.6s,baz=58,slow=3.0,SNR=32
DBIC Dimbokro 153.65 268 PKPbc PKPbc 14 29 05.6 -0.1
0.9nm,0.5s,baz=89,slow=4.5,SNR=4.0

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*NEIC **21** 14:11:01.9, 1941N×6459W, h36km, MD3.6(RSPR), After RSPR.*

RSPR 21 14:11:01.9, 1941N×6459W, h36km±16km, MD3.6/14, MD3.6/14, 10C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.72**	**160**⇑	*e*P		Pn		14 11 14.2	-1.4
ABV	**Anegada**	**0.72**	**160**	*e*S		Sn		14 11 23.5	-1.8
TBVI	**Tortola**	**0.99**	**182**⇑	*i*P		Pn		14 11 17.2	-2.0
STVI	**Saint Thomas**	**1.11**	**198**⇓	*e*P		Pn		14 11 18.8	-2.2
STVI				*e*S		Sn		14 11 31.7	-3.3
CDVI	**St. Croix**	**1.66**	**186**⇓	*e*P		Pn		14 11 28.3	-0.2
CDVI				*e*S		Sn		14 11 47.1	-1.4
HUMP	**Col San Antoni**	**1.74**	**224**⇓	*e*P		Pn		14 11 28.2	-1.4
HUMP				*e*S		Sn		14 11 49.0	-1.5
SJG	**San Juan**	**1.96**	**229**⇑	*e*P		Pn		14 11 31.7	-1.0
SJG				*e*S		Sn		14 11 54.8	-1.3
SJG	**San Juan**	**1.96**	**229**⇑	*e*P		Pn		14 11 31.1	-1.6
SJG				*e*S		Sn		14 11 54.8	-1.4
CELP	**Cerrillos**	**2.31**	**235**⇑	*e*P		Pn		14 11 36.6	-0.8
CELP				*e*S		Sn		14 12 03.6	-1.0
OBIP	**Obispado Ponce**	**2.35**	**235**⇑	*e*P		Pn		14 11 37.0	-1.0
OBIP				*e*S		Sn		14 12 03.9	-1.7
ICM	**Isla Caja Muer**	**2.37**	**231**⇑	*e*P		Pn		14 11 37.9	-0.4
ICM				*e*S		Sn		14 12 05.9	-0.4
LRS	**Lares**	**2.41**	**243**	*e*Pn		Pn		14 11 38.4	-0.4
AGPR	**Aguadilla, PR**	**2.57**	**249**⇑	*e*P		Pn		14 11 40.5	-0.5
AGPR				*e*S		Sn		14 12 09.4	-1.6
GBPR	**Guanica, Bosqu**	**2.60**	**237**⇑	*e*P		Pn		14 11 41.5	0.0
GBPR	**Guanica, Bosqu**	**2.60**	**237**	*e*S		Sn		14 12 09.9	-1.9
LSP	**Las Mesas**	**2.67**	**243**⇑	*e*P		Pn		14 11 42.5	+0.1
LSP				*e*S		Sn		14 12 12.3	-1.2
MPR	**Mayaguez**	**2.70**	**244**	*e*Pn		Pn		14 11 43.1	+0.3
MPR				*e*Sn		Sn		14 12 10.4	-3.8
CRPR	**Cabo Rojo, PR**	**2.77**	**240**⇑	*e*P		Pn		14 11 43.7	0.0
CRPR				*e*S		Sn		14 12 15.1	-0.9
SDDR	**Presa de Saban**	**6.35**	**267**⇓	*e*P		Pn		14 12 34.3	+1.3
GTBY	**Guantanamo Bay**	**9.93**	**275**	Pn		Pn		14 13 24.0	+1.9
	121nm,1.8s								
SDV	**Santo Domingo**	**11.99**	**210**	*e*Pn		Pn		14 13 43.1	-7.3
	6.6nm,1.1s								

IDC 21 14:13:53.2±4.0, 729S×12654E, h436km±53km, mb2.9/1, mb1 2.6/3, mb1mx2.5/15, mbtmp2.5/3, Error ellipse: s-maj=159.9km s-min=20.1km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.68**	**150**	P		P		14 17 00.8	-0.4
	0.2nm,0.3s,baz=323,slow=11,SNR=7.4								
WRA				S		S		14 19 34.8	-1.9
	0.1nm,0.3s,baz=325,slow=22,SNR=4.2								
ASAR	**Alice Springs**	**17.75**	**157**	P		P		14 17 34.1	+0.3
	0.2nm,0.3s,baz=328,slow=8.6,SNR=18								
ASAR				S		S		14 20 36.6	+0.6
	0.0nm,0.3s,baz=341,slow=22,SNR=4.1								
MKAR	**Makanchi Array**	**66.63**	**329**	P		P		14 23 59.0	0.0
	0.8nm,1.1s,baz=132,slow=6.0,SNR=2.9								

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*NEIC **21** 14:17:08.8±0.2, 2021S×17457W, h35km, mb5.2/48, MS4.5/4, Error ellipse: s-maj=7.6km s-min=4.0km az=146.0*
*ISCJB **21** 14:17:12.8±0.2, 2032S×006×17458W±004, h82km, mb4.9/75, Error ellipse: s-maj=8.7km s-min=4.0km az=151.9*
*IDC **21** 14:17:13.9±0.6, 2039S×17450W, h80km±4km, mb4.5/17, mb1 4.7/18, mb1mx4.6/21, mbtmp4.5/18, MS4.0/15, Ms1 4.0/15, ms1mx3.8/24, Error ellipse: s-maj=17.3km s-min=12.1km az=155.0*
*SZGRF **21** 14:17:14.9, 2014S×17438W, h80km, Tonga Islands*
*BJI **21** 14:17:15.4, 2068S×17524W, h79km, mB5.2, mb4.9, Ms5.1, Msz4.4*
*MOS **21** 14:17:17.2±1.1, 1805S×174.12W, h33km, mb5.4/21, MS4.4/4, Error ellipse: s-maj=20.0km s-min=11.1km az=69.9*
ISC 21 14:17:14.6±0.2, 2033S±006×17455W±004, h84km, h84km±1.3km: pP-P, n560, σ0961/448, mb4.9/75, 162C-154D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.91**	**23**	P		**Pn**		**14 18 45.2**	**-8.1**
	15nm,0.3s,baz=166,slow=2.9,SNR=29								
AFI				S		**Sn**		**14 19 53.9**	**-17**
	39nm,0.3s,baz=234,slow=18,SNR=3.9								
RAO	**Raoul Island**	**9.39**	**198**	S		**Sn**		**14 21 04.7**	**-6.3**
	112nm,0.3s,baz=69,slow=22,SNR=6.3								
RAR	**Rarotonga**	**13.85**	**96**	P		**Pn**		**14 20 18.8**	**-8.4**
	9.0nm,0.3s,baz=284,slow=6.6,SNR=40								
RAR				S		Sn		14 22 32.1	-27
	1.4nm,0.3s,baz=34,slow=8.8,SNR=1.8								
RAR				LR		LR		14 25 11.2	
	comp=Z,308nm,18.3s,baz=270,slow=35								
RAR	**Rarotonga**	**13.85**	**96**	*e*Pn		**Pn**		**14 20 18.6**	**-8.5**
DZM	**Mont Dzumac**	**17.81**	**261**	*e*P		**Pn**		**14 21 17.0**	**0.0**
DZM	**Mont Dzumac**	**17.81**	**261**	*e*Pn		**Pn**		**14 21 15.1**	**-1.8**
	109nm,0.9s								
NOUC	**Port Laguerre**	**17.94**	**261**	*e*P		**Pn**		**14 21 20.1**	**+1.5**
URZ	**Urewera**	**19.27**	**200**	P		**Pn**		**14 21 32.1**	**-2.2**
	5.8nm,0.3s,baz=7.5,slow=6.2,SNR=27								
URZ				S		**S**		**14 24 48.7**	**-17**
	0.8nm,0.3s,baz=4.4,slow=10,SNR=3.5								
TBI	**Tubuai**	**23.47**	**102**	*e*LR		LR		14 27 39.0	
	2μm,31.5s,baz=274								
PPT	**Papeete**	**23.77**	**88**	*e*LQ				14 26 53.3	
	1μm,26.0s								
PPT				*e*LR		LR		14 27 41.9	
	3μm,29.8s,baz=256								
PPT	**Papeete**	**23.77**	**88**	P		**P**		**14 22 18.6**	**-1.0**
	62nm,1.0s,mb4.9,baz=150,slow=7.4,SNR=4.5								
PPT				LR		LR		14 28 50.5	
	comp=Z,331nm,19.5s,baz=262,slow=29								
RPZ	**Rata Peaks**	**26.24**	**204**	P		**P**		**14 22 41.1**	**-0.5**
	6.5nm,0.6s,mb4.3,baz=89,slow=1.9,SNR=4.7								
RPZ				S		**S**		**14 27 19.6**	**+12**
	4.5nm,0.8s,baz=109,slow=9.6,SNR=2.3								
HNR	**Honiara**	**26.88**	**290**	LR		LR		14 32 03.9	
	comp=Z,215nm,19.1s,baz=84,slow=33								
ARMA	**Armidale**	**32.06**	**245**	*e*P		**P**		**14 23 34.4**	**+0.9**
CTA	**Charters Tower**	**36.73**	**263**	P		**P**		**14 24 14.4**	**+0.5**
	28nm,0.7s,mb5.3,baz=94,slow=10,SNR=43								
CTA				LR		LR		14 37 43.8	
	comp=Z,242nm,19.2s,baz=73,slow=34								
CTA	**Charters Tower**	**36.73**	**263**	*e*P		**P**		**14 24 14.0**	**+0.1**
	24nm,0.7s,mb5.2								
CTAO	**Charters Tower**	**36.73**	**263**	*e*P		**P**		**14 24 13.8**	**-0.1**
CTAO				pmax		pmax			
	comp=Z,36nm,1.0s,mb5.3								
CTAO	**Charters Tower**	**36.73**	**263**	*e*P		**P**		**14 24 13.8**	**-0.2**
	comp=Z,36nm,1.0s,mb5.3								
RKT	**Rikitea**	**36.79**	**102**	*e*LR		LR		14 33 46.0	
	comp=Z,1μm,31.2s,baz=267								
PMG	**Port Moresby**	**38.48**	**281**	P		**P**		**14 24 28.6**	**-0.2**
	comp=Z,49nm,0.9s,mb5.3,baz=86,slow=4.8,SNR=14								
PMG				LR		LR		14 38 03.2	
	comp=Z,195nm,18.8s,baz=101,slow=32								
PMG	**Port Moresby**	**38.48**	**281**	*e*P		**P**		**14 24 28.2**	**-0.5**
PMG	**Port Moresby**	**38.48**	**281**	*e*P		**P**		**14 24 28.1**	**-0.7**
	comp=Z,70nm,1.0s,mb5.4								
TOO	**Toolangi**	**38.62**	**235**	*e*P		**P**		**14 24 29.6**	**-0.1**
TAU	**Tasmania Unive**	**39.05**	**226**	*e*P		**P**		**14 24 32.1**	**-1.0**
	comp=Z,47nm,1.3s,mb5.2								
STKA	**Stephens Creek**	**40.78**	**244**	P		**P**		**14 24 47.3**	**-0.3**
	comp=Z,15nm,0.9s,mb4.8,baz=88,slow=8.7,SNR=16								
STKA				LR		LR		14 39 39.7	
	comp=Z,206nm,20.0s,baz=278,slow=33								
STKA	**Stephens Creek**	**40.78**	**244**	*e*P		**P**		**14 24 47.1**	**-0.6**
	comp=Z,12nm,0.9s,mb4.7								
STKA	**Stephens Creek**	**40.78**	**244**	*e*P		**P**		**14 24 47.1**	**-0.6**
	comp=Z,5.1nm,1.0s,mb4.3								
COEN	**Coen**	**40.81**	**272**	*e*P		**P**		**14 24 46.8**	**-1.3**
	comp=Z,13nm,0.6s,mb4.9								
COEN				*e*				14 24 58.7	
ASAR	**Alice Springs**	**47.71**	**256**	P		**P**		**14 25 42.0**	**-1.0**
	comp=Z,9.6nm,0.9s,mb4.6,baz=86,slow=7.2,SNR=63								
ASAR				PcP		PcP		14 27 17.2	+6.0
	comp=Z,2.7nm,0.8s,baz=96,slow=4.9,SNR=2.4								
ASAR				S		**S**		**14 32 29.5**	**-3.6**
	comp=Z,1.0nm,1.0s,baz=93,slow=16,SNR=3.8								
WB2	**Warramunga Arr**	**47.82**	**261**	*e*P		**P**		**14 25 42.9**	**-1.1**
WB2				*e*S		**S**		**14 32 30.3**	**-4.5**
WB2	**Warramunga Arr**	**47.82**	**261**	*e*P		**P**		**14 25 42.1**	**-1.9**
WRAB	**Tennant Creek**	**47.82**	**261**	*e*P		**P**		**14 25 42.5**	**-1.5**
WRAB				pmax		pmax			
	comp=Z,68nm,1.6s,mb5.2								
WRAB	**Tennant Creek**	**47.82**	**261**	*e*P		**P**		**14 25 42.5**	**-1.5**
	comp=Z,68nm,1.6s,mb5.2								
WRA	**Warramunga Arr**	**47.83**	**261**	P		**P**		**14 25 42.5**	**-1.6**
	comp=Z,9.6nm,0.2s,mb5.2,baz=93,slow=7.3,SNR=341								
WRA				S		**S**		**14 32 31.9**	**-3.1**
	comp=Z,1.5nm,1.2s,baz=99,slow=14,SNR=3.8								
WRA				LR		LR		14 45 18.1	
	comp=Z,211nm,19.1s,baz=70,slow=35								
GUMO	**Guam**	**52.24**	**307**	*e*P		**P**		**14 26 15.9**	**-1.5**
GUMO				pmax		pmax			
	comp=Z,466nm,1.5s								
GUMO	**Guam**	**52.24**	**307**	*e*P		**P**		**14 26 15.9**	**-1.5**
	comp=Z,466nm,1.5s								
FORT	**Forrest**	**52.33**	**246**	*e*P		**P**		**14 26 17.5**	**-0.5**
	comp=Z,25nm,0.8s,mb5.3								
FITZ	**Fitzroy Crossi**	**56.26**	**261**	*e*		**P**		**14 26 45.9**	**-0.8**
VNDA	**Vanda**	**58.39**	**186**	P		**P**		**14 27 03.3**	**+2.6**
	comp=Z,5.6nm,1.2s,mb4.5,baz=30,slow=6.3,SNR=4.9								
VNDA	**Vanda**	**58.39**	**186**	*e*P		**P**		**14 27 01.6**	**+0.9**
	comp=Z,12nm,1.3s,mb4.8								
MBWA	**Marble Bar**	**61.05**	**257**	*e*P		**P**		**14 27 18.4**	**-1.5**
	comp=Z,9.6nm,0.8s,mb4.9								
KLBR	**Kerberrin**	**61.05**	**244**	*e*P		**P**		**14 27 19.7**	**-0.1**
	comp=Z,2.9nm,0.2s,mb5.0								
CASY	**Casey**	**65.50**	**205**	*e*P		**P**		**14 27 49.4**	**+0.8**
	comp=Z,5.7nm,0.3s,mb4.9								
QSPA	**South Pole Qui**	**69.74**	**180**	*e*P		**P**		**14 28 16.9**	**+1.9**
	comp=Z,36nm,1.1s,mb5.1								
MJAR	**Matsushiro Arr**	**72.04**	**322**	P		**P**		**14 28 29.8**	**+0.2**
	comp=Z,3.4nm,0.6s,mb4.4,baz=154,slow=5.9,SNR=13								
MAJO	**Matsushiro**	**72.04**	**322**	*e*P		**P**		**14 28 29.5**	**0.0**
MAJO				pmax		pmax			
	comp=Z,73nm,2.0s,mb5.2								
MAJO	**Matsushiro**	**72.04**	**322**	*e*P		**P**		**14 28 29.5**	**-0.1**
	comp=Z,73nm,2.0s,mb5.2								
MAT	**Matsushiro**	**72.04**	**322**	P		**P**		**14 28 30.0**	**+0.5**
MAT				*e*S		S		14 37 48.0	+3.3
ASAJ	**Asahikawa**	**75.17**	**330**	P		**P**		**14 28 48.9**	**+1.2**
	comp=Z,17nm,1.0s,mb4.7,baz=326,slow=13,SNR=2.7								
ARVC	**Arvin**	**76.38**	**44**	⇑P		**P**		**14 28 55.0**	**+0.2**
	baz=77								
MURC	**Murrieta**	**76.56**	**46**	⇑P		**P**		**14 28 55.7**	**-0.2**
	baz=77								
BFSC	**Mount Baldy St**	**76.63**	**46**	⇓P		**P**		**14 28 56.0**	**-0.2**
	baz=77								
TPUB	**Ta-pu**	**76.63**	**301**	*e*P		**P**		**14 28 55.0**	**-1.4**
	comp=Z,31nm,0.8s,mb5.1								
VES	**Vestal, Richgr**	**76.65**	**43**	⇓P		**P**		**14 28 55.9**	**-0.4**
	baz=77								
MONP	**Monument Peak**	**76.69**	**47**	⇓P		**P**		**14 28 56.0**	**-0.6**
	baz=77								
DVTC	**Desert V Tower**	**76.78**	**48**	⇓P		**P**		**14 28 56.8**	**-0.3**
	baz=77								
EDW2	**Edwards Air Fo**	**76.79**	**45**	⇓P		**P**		**14 28 56.8**	**-0.3**
	baz=77								
ISA	**Isabella**	**76.94**	**44**	⇑P		**P**		**14 28 58.0**	**+0.1**
	baz=77								
ISA	**Isabella**	**76.94**	**44**	*e*P		**P**		**14 28 58.3**	**+0.4**
ISA				pmax		pmax			
	comp=Z,44nm,1.4s,mb5.0								
ISA	**Isabella**	**76.94**	**44**	*e*P		**P**		**14 28 58.2**	**+0.3**
	comp=Z,44nm,1.4s,mb5.0								
ISA				*e*pP		pP		14 29 20.0	0.0
PETK	**Petropavlovsk-**	**76.99**	**343**	P		**P**		**14 28 57.9**	**+0.1**
	comp=Z,5.6nm,1.0s,mb4.2,baz=120,slow=9.0,SNR=4.5								
PFO	**Pinyon Flat Ob**	**77.08**	**47**	⇓P		**P**		**14 28 58.6**	**-0.1**
	baz=77								
PFO	**Pinyon Flat Ob**	**77.08**	**47**	*e*P		**P**		**14 28 59.1**	**+0.3**
PFO				pmax		pmax			
	comp=Z,21nm,1.2s,mb4.7								
PFO	**Pinyon Flat Ob**	**77.08**	**47**	*e*P		**P**		**14 28 59.1**	**+0.3**
	comp=Z,21nm,1.2s,mb4.8								
YSS	**Yuzh-Sakhalins**	**77.24**	**332**⇑	*i*P		**P**		**14 28 59.5**	**+0.1**
YSS				pmax		pmax			
	comp=Z,51nm,1.7s,mb5.0								
RRX	**Edison Barstow**	**77.44**	**45**	⇓P		**P**		**14 29 00.6**	**-0.2**
	baz=78								
WDC	**Whiskeytown Da**	**77.51**	**38**	*e*P		**P**		**14 29 01.2**	**+0.2**
WDC				pmax		pmax			
	comp=Z,28nm,1.4s,mb4.8								
WDC	**Whiskeytown Da**	**77.51**	**38**	*e*P		**P**		**14 29 01.2**	**+0.2**
	comp=Z,28nm,1.4s,mb4.8								
CWC	**Cottonwood Cre**	**77.66**	**43**	⇓P		**P**		**14 29 01.9**	**0.0**
	baz=78								
BC3	**Big Chuckw Mtn**	**77.79**	**47**	⇓P		**P**		**14 29 02.8**	**0.0**
	baz=78								
MPMC	**Manual Prospec**	**77.81**	**44**	⇓P		**P**		**14 29 02.9**	**+0.1**
	baz=78								
GSC	**Goldstone**	**77.82**	**45**	⇑P		**P**		**14 29 02.8**	**-0.1**
	baz=78								
GSC	**Goldstone**	**77.82**	**45**	*e*P		**P**		**14 29 02.3**	**-0.6**
GSC				pmax		pmax			
	comp=Z,38nm,1.5s,mb4.9								
GSC	**Goldstone**	**77.82**	**45**	*e*P		**P**		**14 29 02.3**	**-0.6**
	comp=Z,38nm,1.5s,mb4.9								
HEC	**Hector,Ludlow**	**77.86**	**46**	⇓P		**P**		**14 29 02.7**	**-0.4**
	baz=78								
GLA	**Glamis**	**77.88**	**48**	⇑P		**P**		**14 29 03.3**	**0.0**
	baz=78								
GLA	**Glamis**	**77.88**	**48**	*e*P		**P**		**14 29 02.9**	**-0.4**
GLA				pmax		pmax			
	comp=Z,31nm,1.2s,mb4.9								
GLA	**Glamis**	**77.88**	**48**	*e*P		**P**		**14 29 02.9**	**-0.4**
	comp=Z,31nm,1.2s,mb4.9								
MTUM	**Tungsten Hills**	**77.89**	**42**	*e*P		**P**		**14 29 03.5**	**+0.2**
MTUM				*e*pP		pP		14 29 25.1	-0.3
WAKR	**Walker**	**78.05**	**41**	*e*P		**P**		**14 29 04.5**	**+0.4**
R06C	**Coleville**	**78.06**	**41**	⇓P		**P**		**14 29 04.3**	**+0.2**
	baz=78								
YBH	**Yreka Blue Hor**	**78.17**	**37**	*e*P		**P**		**14 29 04.9**	**+0.2**
YBH				pmax		pmax			
	comp=Z,29nm,1.4s								
YBH	**Yreka Blue Hor**	**78.17**	**37**	*e*P		**P**		**14 29 04.9**	**+0.2**
	comp=Z,29nm,1.4s,mb4.8								
IRM	**Iron Mountain**	**78.28**	**47**	⇑P		**P**		**14 29 05.5**	**0.0**
	baz=78								
GMRC	**Granite Mounta**	**78.28**	**46**	⇓P		**P**		**14 29 05.4**	**-0.1**
	baz=78								
BEKR	**Beckwourth**	**78.34**	**40**	⇓P		**P**		**14 29 05.7**	**0.0**
	baz=79								
WCN	**Washoe City**	**78.35**	**40**	⇓P		**P**		**14 29 06.0**	**+0.3**
	baz=79								
GRAC	**Grapevine Rang**	**78.45**	**43**	⇓P		**P**		**14 29 06.7**	**+0.4**
	baz=79								
FURC	**Furnace Creek,**	**78.47**	**44**	⇓P		**P**		**14 29 06.3**	**-0.1**
	baz=79								
113A	**Mohawk Valley,**	**78.47**	**49**	⇑P		**P**		**14 29 06.4**	**-0.1**
	baz=79,SNR=7.2								
Y12C	**Blythe**	**78.48**	**47**	⇑P		**P**		**14 29 06.4**	**-0.1**
	baz=79,SNR=5.7								
P06A	**Stead Airport,**	**78.50**	**40**	⇑P		**P**		**14 29 06.5**	**0.0**
	baz=79								
214A	**Organ Pipe Nat**	**78.71**	**50**	⇓P		**P**		**14 29 07.8**	**-0.1**
	baz=79,SNR=8.7								
NVAR	**Mina Array Bea**	**78.71**	**42**	P		**P**		**14 29 07.7**	**0.0**
	comp=Z,9.4nm,0.8s,mb4.6,baz=225,slow=8.7,SNR=47								
NVAR				pP		pP		14 29 29.2	-0.7
	comp=Z,8.3nm,0.7s,baz=225,slow=9.1,SNR=12								
NVAR	**Mina Array Bea**	**78.71**	**42**	P		**P**		**14 29 07.7**	**0.0**
NVAR				pP		pP		14 29 29.2	-0.7
U10A	**Ash Meadows, A**	**78.78**	**44**	⇑P		**P**		**14 29 08.5**	**+0.3**
	baz=79								
R08A	**Mina**	**78.78**	**42**	⇓P		**P**		**14 29 08.3**	**+0.2**
	baz=79								
PAHR	**Pah Rah Range**	**78.83**	**40**	*e*P		**P**		**14 29 08.0**	**-0.3**
	comp=Z,30nm,1.3s,mb5.0								
O06A	**Flanigan**	**78.84**	**40**	⇓P		**P**		**14 29 08.4**	**0.0**
	baz=79								
KSRS	**Korea Array**	**78.94**	**317**	P		**P**		**14 29 11.1**	**+2.1**
	comp=Z,2.2nm,0.6s,mb4.1,baz=134,slow=6.5,SNR=8.8								
KSRS				LR		LR		14 58 23.0	
	comp=Z,46nm,19.9s,baz=100,slow=31								
S09A	**Goldfield**	**78.97**	**43**	⇑P		**P**		**14 29 09.0**	**-0.2**
	baz=79,SNR=7.7								
Y13A	**Salome**	**79.00**	**48**	⇓P		**P**		**14 29 09.3**	**-0.1**
	baz=79,SNR=9.2								
V11A	**Goodsprings**	**79.04**	**45**	⇓P		**P**		**14 29 09.7**	**+0.1**
	baz=79								
I02A	**Mapleton**	**79.07**	**35**	⇓P		**P**		**14 29 09.2**	**-0.3**
	baz=79								
W12A	**Cal Nev Ari**	**79.11**	**46**	⇓P		**P**		**14 29 10.2**	**+0.2**
	baz=79								
TPH	**Tonopah**	**79.18**	**43**	*e*P		**P**		**14 29 10.4**	**+0.1**
TPH				pmax		pmax			
	comp=Z,49nm,1.4s,mb5.1								
TPH	**Tonopah**	**79.18**	**43**	*e*P		**P**		**14 29 10.4**	**+0.1**
	comp=Z,49nm,1.4s,mb5.2								
TPH				*e*pP		pP		14 29 32.4	-0.1
Q08A	**Gabbs**	**79.20**	**42**	⇓P		**P**		**14 29 10.3**	**-0.1**
	baz=80								
N06A	**Buffalo Meadow**	**79.20**	**39**	⇓P		**P**		**14 29 10.3**	**0.0**
	baz=80								
V12A	**Nelson**	**79.37**	**46**	⇑P		**P**		**14 29 11.5**	**+0.1**
	baz=80,SNR=8.7								
Z14A	**Wintersburg**	**79.37**	**49**	⇑P		**P**		**14 29 11.3**	**-0.1**
	baz=80								
R09A	**Tonopah**	**79.37**	**42**	⇓P		**P**		**14 29 11.2**	**-0.1**
	baz=80,SNR=9.9								
O07A	**Toulon**	**79.41**	**40**	⇑P		**P**		**14 29 11.3**	**-0.2**
	baz=80,SNR=12								
X13A	**Yucca**	**79.43**	**47**	⇑P		**P**		**14 29 11.8**	**+0.1**
	baz=80,SNR=9.9								
S10A	**Tonopah Range,**	**79.49**	**43**	⇓P		**P**		**14 29 12.0**	**+0.1**
	baz=80,SNR=12								
SHPR	**Sheep Range**	**79.60**	**45**	*e*P		**P**		**14 29 12.9**	**+0.3**
SHPR				*e*pP		pP		14 29 33.7	-1.2
Y14A	**Wickenburg**	**79.64**	**48**	⇓P		**P**		**14 29 13.0**	**+0.1**
	baz=80,SNR=12								
Q09A	**Carvers**	**79.66**	**42**	⇓P		**P**		**14 29 13.1**	**+0.2**
	baz=80								
MOD	**Modoc**	**79.66**	**38**	*e*P		**P**		**14 29 12.5**	**-0.3**
	comp=Z,21nm,1.3s,mb4.8								
W13A	**Hualapai Mount**	**79.67**	**47**	⇑P		**P**		**14 29 13.4**	**+0.4**
	baz=80,SNR=5.3								
216A	**Three Points,**	**79.70**	**50**	⇑P		**P**		**14 29 13.4**	**+0.1**
	baz=80								
N07B	**Gerlach**	**79.74**	**40**	⇑P		**P**		**14 29 13.1**	**-0.2**
	baz=80								
116A	**Eloy**	**79.82**	**50**	⇓P		**P**		**14 29 13.8**	**-0.1**
	baz=80								
R10A	**Warm Springs**	**79.89**	**43**	⇑P		**P**		**14 29 14.5**	**+0.4**
	baz=80,SNR=16								
O08A	**Rochester Mine**	**79.93**	**40**	⇓P		**P**		**14 29 14.4**	**+0.1**
	baz=80,SNR=12								
U12A	**Valley of Fire**	**79.97**	**45**	⇑P		**P**		**14 29 15.1**	**+0.5**
	baz=80,SNR=5.8								
T11A	**Corn Creek, Al**	**79.98**	**44**	⇓

baz=82
W16A Flagstaff 81.29 48 ⇑P P 14 29 22.3 +0.6
baz=82
219A White Tail Can 81.30 51 ⇑P P 14 29 22.0 +0.1
baz=82,SNR=5.4
R13A O'Grain Ranch, 81.33 44 ⇓P P 14 29 21.8 0.0
baz=82
C03A Quillayute Air 81.37 31 ⇓P P 14 29 22.2 +0.4
baz=82
O11A Cowboy Ranch, 81.37 42 ⇓P P 14 29 22.2 +0.2
baz=82,SNR=7.0
H06A Lindquist Farm 81.44 36 ⇓P P 14 29 21.7 -0.5
baz=82,SNR=5.6
P12A McGill 81.46 42 ⇑P P 14 29 22.4 -0.1
baz=82,SNR=5.5
U15A North Rim 81.48 46 ⇑P P 14 29 23.4 +0.7
baz=82,SNR=16
I07A Izee 81.48 37 ⇓P P 14 29 22.4 -0.1
baz=82
J08A Circle Bar Ran 81.62 38 ⇓P P 14 29 23.0 -0.2
baz=82,SNR=7.9
WUAZ Wupatki 81.62 47 ⇑P P 14 29 23.9 +0.4
baz=82
WUAZ Wupatki 81.62 47 eP P 14 29 23.5 0.0
comp=Z,22nm,1.2s,mb4.9
WUAZ epP pP 14 29 45.8 0.0
S14A Cedar City 81.62 45 ⇓P P 14 29 24.0 +0.6
baz=82
K09A Rome 81.65 39 ⇓P P 14 29 23.3 -0.1
baz=82,SNR=9.0
119A Ashpeak Ranch, 81.66 51 ⇓P P 14 29 24.0 +0.3
baz=82,SNR=6.0
Q13A Wheeler Ranch, 81.73 43 ⇑P P 14 29 24.0 0.0
baz=82,SNR=5.4
T15A Red Dirt Ranch 81.74 46 ⇑P P 14 29 24.4 +0.3
baz=82,SNR=9.1
W17A Winslow 81.85 48 ⇑P P 14 29 25.2 +0.6
baz=82
F06A Goldendale 81.86 35 ⇓P P 14 29 24.8 +0.4
baz=82
I08A Drewsey 81.91 37 ⇑P P 14 29 24.7 -0.1
baz=82
HABR Khabarovsk 81.94 329 eP P 14 29 27.2 +2.4
HABR e*PP pP 14 29 43.8 -3.3
HABR e 14 32 29.8
HABR ePPP 14 34 21.3
HABR eS S 14 39 29.9 -1.8
HABR e*SS sS 14 40 07.0 -2.9
HABR MLR MLR
comp=Z,30nm,20.0s
Z19A T-Link Ranch, 81.95 50 ⇑P P 14 29 25.2 0.0
baz=82
ELK Elko 81.99 41 eP P 14 29 25.2 0.0
ELK pmax pmax
comp=Z,27nm,1.9s
ELK Elko 81.99 41 eP P 14 29 25.2 -0.1
comp=Z,27nm,1.9s,mb4.8
P13A Bates Ranch, G 82.02 43 ⇑P P 14 29 25.7 +0.2
baz=82,SNR=6.2
O12A Currie 82.02 42 ⇑P P 14 29 25.5 +0.1
baz=82
J09A Fry Pan Ranch, 82.03 38 ⇓P P 14 29 25.3 0.0
baz=82,SNR=7.8
M11A Holland Ranch, 82.05 40 ⇓P P 14 29 25.9 +0.4
baz=82
X18A Snowflake 82.10 49 ⇓P P 14 29 26.5 +0.6
baz=82,SNR=5.0
S15A Panguitch 82.11 45 ⇑P P 14 29 26.9 +1.0
baz=82
U16A Tuba City 82.12 47 ⇑P P 14 29 26.7 +0.7
baz=82,SNR=13
G07A Ruggs Ranch, H 82.14 36 ⇑P P 14 29 25.9 0.0
baz=82
N12A Clover Valley, 82.17 41 ⇓P P 14 29 26.0 -0.2
baz=82
K10A MacKenzie Ranc 82.20 39 ⇑P P 14 29 26.2 -0.1
baz=82,SNR=9.3
H08A Prairie City 82.23 37 ⇑P P 14 29 26.5 +0.1
baz=82
Q14A Sevier Lake (B 82.23 44 ⇓P P 14 29 27.1 +0.5
baz=82,SNR=18
MDJ Mudanjiang 82.28 323 P P 14 29 28.8 +2.1
MDJ AP pP 14 29 49.8 +0.8
MDJ XP sP 14 29 57.8 -0.3
MDJ PP PP 14 32 37.0 +0.4
MDJ S S 14 39 40.3 +4.9
MDJ XS sS 14 40 16.0 +2.4
MDJ SS SS 14 45 03.0 +5.1
MDJ AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,79nm,4.1s
MDJ LR LR
comp=N,91nm,36.1s
MDJ LR LR
comp=E,66nm,38.9s
MDJ LR LR
comp=Z,112nm,27.8s
NJ2 Nanjing 82.29 308 eP P 14 29 27.5 +0.4
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
Y19A Nutrioso 82.30 50 ⇑P P 14 29 27.9 +0.8
baz=82,SNR=12
T16A Glen Canyon Da 82.31 46 ⇓P P 14 29 27.8 +0.7
baz=83,SNR=5.5
F07A Phinny Hill Vi 82.40 35 ⇓P P 14 29 27.2 0.0
baz=83
I09A Lost Marbles R 82.42 38 ⇑P P 14 29 27.3 -0.1
baz=83
L11A Cat Creek Ranc 82.50 40 ⇑P P 14 29 27.9 0.0
baz=83,SNR=7.9
X19A St. Johns 82.51 49 ⇑P P 14 29 28.7 +0.6
baz=83,SNR=10
G08A Pilot Rock 82.55 36 ⇓P P 14 29 28.0 0.0
baz=83,SNR=14
W18A Petrified Fore 82.55 48 ⇑P P 14 29 28.7 +0.4
baz=83
C05A Tolt Reservoir 82.64 33 ⇓P P 14 29 28.2 -0.3
baz=83,SNR=5.7
J10A Berg Farm, Mel 82.65 38 ⇓P P 14 29 28.4 -0.2
baz=83
U17A Shonto 82.68 47 ⇑P P 14 29 29.8 +0.8
baz=83,SNR=6.3
MSU Marysvale 82.69 44 eP P 14 29 30.0 +1.0
K11A Parker Ranch, 82.69 39 ⇑P P 14 29 28.8 -0.1
baz=83,SNR=6.1
P14A Drum Mountains 82.70 43 ⇓P P 14 29 29.3 +0.3
baz=83
V18A Ganado 82.72 48 ⇑P P 14 29 29.6 +0.4
baz=83,SNR=14
D06A Cle Elum 82.75 34 ⇑P P 14 29 29.1 +0.1
baz=83
W19A Sanders 82.79 49 ⇓P P 14 29 29.9 +0.3
baz=83,SNR=6.7
T17A Navajo Res., N 82.79 46 ⇓P P 14 29 30.2 +0.7
baz=83,SNR=19
MAW Mawson 82.80 199 LR LR 15 05 08.2
comp=Z,60nm,19.2s,baz=287,slow=35
A04A Legoe Bay, Lum 82.81 32 ⇓P P 14 29 29.4 +0.1
baz=83
Q15A Fillmore 82.82 44 ⇑P P 14 29 29.9 +0.3
baz=83
E07A Sunnyside 82.86 35 ⇓P P 14 29 29.6 0.0
baz=83,SNR=5.4
H09A Durkee 82.88 37 ⇑P P 14 29 29.7 -0.1
baz=83,SNR=7.1
RSW Rattlesnake Hi 82.90 35 eP P 14 29 29.3 -0.5
HAWA Hanford 82.93 35 eP P 14 29 29.4 -0.5
comp=Z,30nm,1.3s,mb5.0
L12A House Creek Ra 82.94 40 ⇓P P 14 29 30.0 -0.1
baz=83
MDW Midway 82.94 35 P P 14 29 30.4 +0.3
F08A Pendleton 82.96 36 ⇑P P 14 29 30.1 -0.1
baz=83,SNR=7.0
M13A Montello 83.01 41 ⇑P P 14 29 30.5 -0.1
baz=83,SNR=11
I10A Payette 83.02 38 ⇑P P 14 29 30.7 +0.2
baz=83
R16A Teasdale 83.03 45 ⇑P P 14 29 31.4 +0.7
baz=83,SNR=7.6
U18A Rough Rock, Ch 83.13 47 ⇑P P 14 29 31.6 +0.3
baz=83,SNR=7.7
S17A Black Ridge (B 83.13 46 ⇓P P 14 29 31.0 -0.3
baz=83,SNR=8.3
G09A Cove 83.19 36 ⇓P P 14 29 31.0 -0.4
baz=84,SNR=6.8
MFID Camas Ranch 83.19 39 ⇑P P 14 29 31.1 -0.3
baz=84,SNR=8.5
BMO Blue Mountains 83.20 37 eP P 14 29 31.3 -0.1
comp=Z,23nm,1.5s,mb4.8
DUG Dugway 83.20 43 ⇑P P 14 29 31.1 -0.5
baz=84
DUG Dugway 83.20 43 eP P 14 29 31.0 -0.6
DUG pmax pmax
comp=Z,20nm,1.4s,mb4.8
DUG Dugway 83.20 43 eP P 14 29 31.0 -0.5
comp=Z,20nm,1.4s,mb4.8
P15A Leamington 83.20 44 ⇓P P 14 29 31.4 -0.1
baz=84
D07A Quincy 83.20 34 ⇑P P 14 29 31.3 -0.1
baz=84
E08A Dider Farm, El 83.24 35 ⇑P P 14 29 31.4 -0.2
baz=84
ETW Entiat 83.28 34 eP P 14 29 31.6 -0.2
K12A Draper Farm, C 83.29 40 ⇓P P 14 29 31.6 -0.4
baz=84
N14A Grayback Hills 83.33 42 ⇑P P 14 29 31.9 -0.3
baz=84
V19A Window Rock 83.34 48 ⇓P P 14 29 32.6 +0.2
baz=84
H10A Noah's Angus R 83.36 37 ⇑P P 14 29 31.7 -0.5
baz=84,SNR=12
F09A S2 Ranch, Elgi 83.38 36 ⇓P P 14 29 31.9 -0.4
baz=84
I11A Placerville 83.41 38 ⇑P P 14 29 32.4 -0.2
baz=84,SNR=11
C07A Waterville 83.47 34 ⇑P P 14 29 32.7 -0.1
baz=84
T18A Mexican Hat 83.50 47 ⇑P P 14 29 33.8 +0.6
baz=84,SNR=67
EPH Ephrata 83.50 34 P P 14 29 32.8 -0.2
J12A Stokes Ranch, 83.53 39 ⇓P P 14 29 33.2 +0.1
baz=84,SNR=13
WTV Waterville 83.53 34 P P 14 29 32.7 -0.3
NLU North Lily Min 83.54 43 eP P 14 29 33.4 +0.1
L13A Double Diamond 83.56 41 ⇑P P 14 29 33.3 0.0
baz=84
G10A Bishop Farm, J 83.57 37 ⇑P P 14 29 32.9 -0.4
baz=84,SNR=10
Q16A Castle Valley 83.57 45 ⇑P P 14 29 34.2 +0.7
baz=84,SNR=6.2
M14A Sheep Mountain 83.59 41 ⇑P P 14 29 33.4 -0.1
baz=84,SNR=15
R17A Hanksville Air 83.61 45 ⇓P P 14 29 33.9 +0.2
baz=84,SNR=19
D08A Wollman Farm, 83.67 35 ⇓P P 14 29 33.5 -0.3
baz=84,SNR=7.3
S18A Hurst Farm, Bl 83.71 46 ⇑P P 14 29 33.7 -0.5
baz=84
TMUT Trail Mountain 83.75 44 eP P 14 29 35.1 +0.7
E09A Wood Farm, Sta 83.75 35 ⇓P P 14 29 33.6 -0.6
baz=84,SNR=5.5
QIZ Qiongzhong 83.76 293 P P 14 29 36.8 +1.9
QIZ S S 14 39 53.6 +2.1
QIZ XS sS 14 40 31.0 +1.3
QIZ LR LR
comp=Z,148nm,35.2s
N15A Stansbury Isla 83.77 42 ⇑P P 14 29 34.2 -0.3
baz=84
K13A Stover Farm, H 83.79 40 ⇑P P 14 29 34.7 +0.2
baz=84,SNR=5.5
H11A Donnelly 83.85 38 ⇑P P 14 29 34.4 -0.4
baz=84,SNR=14
MPU Male Canyon 83.86 43 eP P 14 29 35.7 +0.8
comp=Z,14nm,1.1s,mb4.7
F10A Beach Ranch, E 83.92 36 ⇑P P 14 29 34.5 -0.6
baz=84,SNR=14
T19A Beclabito 83.92 47 ⇓P P 14 29 35.5 +0.2
baz=84,SNR=16
B07A Winthrop 83.94 33 ⇓P P 14 29 34.6 -0.5
baz=84,SNR=5.4
OD2 Odessa Site #2 83.99 34 P P 14 29 35.5 +0.1
D09A Jones Farm, Ri 84.00 35 ⇓P P 14 29 35.2 -0.3
baz=84,SNR=6.2
O16A Springville 84.05 43 ⇓P P 14 29 35.6 -0.3
baz=84
C08A Higginbotham F 84.06 34 ⇓P P 14 29 35.6 -0.1
baz=84
SRU San Rafael 84.10 45 ⇓P P 14 29 36.4 +0.2
baz=84
SRU San Rafael 84.10 45 eP P 14 29 36.3 +0.1
SRU pmax pmax
comp=Z,37nm,1.3s,mb5.0
SRU San Rafael 84.10 45 eP P 14 29 36.3 +0.1
comp=Z,37nm,1.3s,mb5.1
HLID Hailey 84.11 39 ⇓P P 14 29 36.5 +0.3
baz=84
HLID Hailey 84.11 39 eP P 14 29 36.5 +0.3
comp=Z,34nm,1.4s,mb5.0
M15A Larsen Ranch, 84.13 42 ⇓P P 14 29 36.0 -0.3
baz=84
R18A Canyonlands Na 84.14 46 ⇓P P 14 29 36.5 +0.1
baz=84,SNR=41
P17A Butcher Ranch, 84.15 44 ⇑P P 14 29 36.8 +0.4
baz=84,SNR=8.4
J13A Cove Ranch, Pi 84.16 40 ⇓P P 14 29 36.8 +0.4
baz=84,SNR=25
CN2 Changchun 84.18 321 eP P 14 29 39.3 +2.9
CN2 eS S 14 39 58.8 +4.2
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,200nm,3.0s
TXAR Lajitas Array 84.26 56 P P 14 29 36.9 -0.3
comp=Z,7.8nm,1.2s,mb4.4,baz=212,slow=4.4,SNR=34
TXAR pP pP 14 29 59.6 0.0
comp=Z,0.8nm,0.7s,baz=221,slow=8.3,SNR=3.0
TXAR LR LR 14 58 08.9
comp=Z,123nm,21.8s,baz=95,slow=29
B08A Colville Reser 84.28 33 ⇓P P 14 29 36.1 -0.7
baz=85
K14A Jones Ranch, D 84.28 41 ⇑P P 14 29 37.0 -0.1
baz=85,SNR=10
JLU Jordanelle 84.30 43 eP P 14 29 36.8 -0.3
S19A Harvey Farm, M 84.32 46 ⇓P P 14 29 37.4 +0.1
baz=85,SNR=9.2
Q18A Rafter H Ranch 84.35 45 ⇓P P 14 29 37.5 0.0
baz=85,SNR=14
LPM Los Pinos Moun 84.36 50 eP P 14 29 38.3 +0.7
LPM epP pP 14 30 00.8 +0.7
H12A Diamond D Ranc 84.42 38 ⇑P P 14 29 37.6 -0.1
baz=85,SNR=11
N16A Rees Ranch, Co 84.46 43 ⇑P P 14 29 37.8 -0.2
baz=85
L15A Malad City 84.47 41 ⇓P P 14 29 37.5 -0.5
baz=85,SNR=8.2
C09A Chrisman Ranch 84.48 34 ⇓P P 14 29 37.8 -0.1
baz=85
MVCO Mesa Verde 84.48 47 ⇓P P 14 29 37.6 -0.6
baz=85
MVCO Mesa Verde 84.48 47 eP P 14 29 38.3 +0.2
comp=Z,20nm,1.4s,mb4.7
I13A Wildhorse Cree 84.49 39 ⇓P P 14 29 38.3 +0.3
baz=85,SNR=7.7
J14A Carey 84.51 40 ⇑P P 14 29 38.7 +0.5
baz=85,SNR=20
R19A Curley Farm, L 84.51 46 ⇓P P 14 29 38.1 -0.2
baz=85,SNR=5.9
O17A Robinson Place 84.53 44 ⇓P P 14 29 38.9 +0.5
baz=85,SNR=25
D10A Wagner Farm, O 84.56 35 ⇓P P 14 29 37.6 -0.7
baz=85,SNR=6.3
P18A Preston Nutter 84.56 44 ⇓P P 14 29 38.9 +0.4
baz=85,SNR=11
M16A Huntsville 84.57 42 ⇓P P 14 29 38.1 -0.4
baz=85,SNR=8.7
A08A Turner Farm, O 84.68 33 ⇓P P 14 29 38.9 0.0
baz=85,SNR=9.1
H13A Challis 84.78 39 ⇓P P 14 29 39.5 0.0
baz=85,SNR=12
ANMO Albuquerque 84.79 50 dP P 14 29 39.3 -0.5
ANMO Albuquerque 84.79 50 eP P 14 29 39.2 -0.6
comp=Z,36nm,1.3s,mb5.1
PV04 Paradox Valley 84.81 46 eP P 14 29 39.7 -0.1
PV04 epP pP 14 30 02.5 +0.3
Q19A Hogan Spring (84.86 45 ⇓P P 14 29 40.1 +0.1
baz=85,SNR=16
N17A Moffit Pass 84.87 43 ⇑P P 14 29 40.0 0.0
baz=85,SNR=8.0
I14A Mackay 84.90 39 ⇓P P 14 29 40.2 +0.1
baz=85,SNR=9.8
WHN Wuhan 84.98 305 P P 14 29 43.0 +2.2
WHN S S 14 40 02.9 -0.3
WHN LR LR
comp=Z,622nm,37.0s
C10A Spilker Farm, 85.00 35 ⇑P P 14 29 40.1 -0.5
baz=85
GDL2 Guadalupe Moun 85.03 53 eP P 14 29 41.3 +0.2
GDL2 epP pP 14 30 04.2 +0.6
O18A Roosevelt 85.05 44 ⇓P P 14 29 40.9 0.0
baz=85
A09A Danville 85.05 33 ⇑P P 14 29 40.2 -0.5
baz=85
D11A Klaveano Farm, 85.06 36 ⇓P P 14 29 39.8 -1.0
baz=85,SNR=5.6
L16A Fish Haven 85.07 42 ⇑P P 14 29 40.9 -0.1
baz=85
G13A Cobalt 85.10 38 ⇓P P 14 29 40.6 -0.5
baz=85,SNR=9.4
J15A Blackfoot 85.21 40 ⇑P P 14 29 42.2 +0.5
baz=86
M17A Scullys Gap (B 85.26 43 ⇑P P 14 29 41.5 -0.5
baz=86
H14A Leadore 85.33 39 ⇑P P 14 29 42.6 +0.4
baz=86,SNR=7.9
P19A Cripple Cowboy 85.39 45 ⇓P P 14 29 42.5 -0.1
baz=86
K16A Soda Springs 85.42 41 ⇑P P 14 29 42.8 +0.1
baz=86,SNR=7.4
F13A Darby 85.44 38 ⇑P P 14 29 42.4 -0.4
baz=86,SNR=5.4
L17A Cokeville 85.47 42 ⇓P P 14 29 42.2 -0.7
baz=86
Q20A Ridgley Place, 85.50 46 ⇑P P 14 29 42.7 -0.5
baz=86
A10A Northport 85.58 34 ⇓P P 14 29 43.2 -0.2
baz=86
M18A Lyman 85.62 43 ⇓P P 14 29 43.4 -0.3
baz=86,SNR=6.5
KTH Kantishna Hill 85.63 10 eP P 14 29 41.8 -1.5
comp=Z,86nm,1.9s,mb5.4
N18A Larsen Ranch, 85.64 43 ⇓P P 14 29 43.3 -0.5
baz=86,SNR=5.4
O19A Miners Draw (B 85.64 44 ⇑P P 14 29 43.2 -0.7
baz=86
TRF Thorofare Moun 85.65 11 eP P 14 29 40.6 -2.7
comp=Z,18nm,0.7s,mb5.1
R21A Cimarron 85.71 47 ⇓P P 14 29 44.4 +0.1
baz=86,SNR=7.6
H15A Lima 85.76 39 ⇓P P 14 29 44.4 0.0
baz=86,SNR=9.2
K17A Gardner Place, 85.79 41 ⇓P P 14 29 44.2 -0.3
baz=86
RRI2 Red Ridge 85.86 41 eP P 14 29 45.3 +0.4
comp=Z,27nm,1.5s,mb5.0
B11A Sandpoint 85.88 35 ⇑P P 14 29 44.3 -0.5
baz=86,SNR=6.4
L18A Fontenelle, Gr 85.90 42 ⇑P P 14 29 44.5 -0.6
baz=86
E13A Victor 85.90 37 ⇓P P 14 29 44.4 -0.7
baz=86
N19A John Jarvie Ra 85.91 44 ⇑P P 14 29 44.4 -0.8
baz=86
C12B Naegeli Ranch, 85.93 36 ⇑P P 14 29 44.8 -0.3
baz=86
F14A Wisdom 86.01 38 ⇑P P 14 29 45.3 -0.2
baz=86
I16A Newdale 86.05 40 ⇑P P 14 29 45.6 -0.2
baz=86
D13A Huson 86.13 36 ⇑P P 14 29 46.0 -0.1
baz=86
O20A White River Ci 86.14 45 ⇓P P 14 29 46.0 -0.3
baz=86
MCK McKinley 86.14 11 eP P 14 29 45.1 -0.7
MCK pmax pmax
comp=Z,55nm,1.0s,mb5.4
MCK McKinley 86.14 11 eP P 14 29 45.1 -0.7
comp=Z,55nm,1.0s,mb5.0
REDW Red Top Meadow 86.16 41 eP P 14 29 46.2 -0.1
comp=Z,24nm,1.5s,mb4.9
REDW epP pP 14 30 09.2 +0.4
G15A Dillon 86.16 39 ⇑P P 14 29 46.1 -0.3
baz=86,SNR=8.4
A11A Hall Mountain, 86.19 34 ⇑P P 14 29 46.8 +0.4
baz=86,SNR=5.5
DLMT Dillon 86.21 39 eP P 14 29 47.0 +0.5
comp=Z,14nm,1.2s,mb4.8
M19A Rock Springs 86.24 43 ⇓P P 14 29 46.2 -0.6
baz=86
J17A Brown Place, J 86.25 41 ⇑P P 14 29 46.6 -0.2
baz=86
K18A Toltan Ranch, 86.28 42 ⇓P P 14 29 46.8 -0.1
baz=86,SNR=6.8
E14A Clinton 86.28 37 ⇓P P 14 29 46.6 -0.3
baz=87
B12A Libby 86.31 35 ⇑P P 14 29 47.0 0.0
baz=87
IMW Indian Meadow 86.39 40 eP P 14 29 47.2 -0.3
comp=Z,19nm,1.8s,mb4.7
C13A Hot Springs 86.40 36 ⇓P P 14 29 46.9 -0.5
baz=87
MOOW Moose Ponds 86.43 41 eP P 14 29 46.1 -1.6
comp=Z,18nm,1.9s,mb4.7
LOHW Long Hollow 86.44 41 eP P 14 29 46.4 -1.3
comp=Z,45nm,2.1s,mb5.0
N20A Spence Gulch, 86.48 44 ⇓P P 14 29 47.9 -0.1
baz=87
SMCO Snowmass 86.50 46 eP P 14 29 40.1 -8.1
comp=Z,11nm,1.1s,mb4.7
F15A Butte 86.53 38 ⇑P P 14 29 47.6 -0.6
baz=87
A12A Yaak River Ran 86.56 34 ⇑P P 14 29 48.0 -0.1
baz=87
J18A Kendall Valley 86.59 41 ⇑P P 14 29 48.0 -0.5
baz=87,SNR=7.9
G16A Moss Hill, Enn 86.60 39 ⇑P P 14 29 48.3 -0.2
baz=87
QLMT Earthquake Lak 86.60 39 eP P 14 29 49.6 +1.1
I17A Pilgram Creek 86.63 41 ⇓P P 14 29 48.6 0.0
baz=87
H16A Russell Place, 86.64 40 ⇑P P 14 29 49.3 +0.6
baz=87,SNR=7.4
BW06 Boulder Array 86.65 42 ⇑P P 14 29 48.3 -0.5
baz=87
BW06 Boulder Array 86.65 42 eP P 14 29 47.7 -1.0
PDAR Pinedale Array 86.65 42 P P 14 29 48.2 -0.6
comp=Z,2.6nm,0.9s,mb4.2,baz=203,slow=3.3,SNR=17
PDAR pP pP 14 30 10.3 -1.0
comp=Z,1.2nm,0.9s,baz=228,slow=1.8,SNR=3.3
PDAR LR LR 14 59 57.9
comp=Z,94nm,20.5s,baz=266,slow=30
E15A Deer Lodge 86.77 38 ⇓P P 14 29 49.4 +0.1
baz=87
M20A Sweetwater, Wa 86.86 44 ⇓P P 14 29 49.4 -0.4
baz=87
N21A Black Mountain 86.93 44 ⇓P P 14 29 49.8 -0.4
baz=87
BOZ Bozeman (W) 86.93 39 ⇓P P 14 29 49.9 -0.2
baz=87
BOZ Bozeman (W) 86.93 39 eP P 14 29 49.8 -0.3
BOZ pmax pmax
comp=Z,15nm,1.4s,mb4.7
BOZ Bozeman (W) 86.93 39 eP P 14 29 49.8 -0.2
comp=Z,15nm,1.4s,mb4.7
SEY Seymchan 86.98 346 ⇑P P 14 29 48.4 -1.5
F16A Kennard Place, 87.01 39 ⇑P P 14 29 50.3 -0.1
baz=87
PLCA Paso Flores 87.02 132 P P 14 29 51.2 +0.4
comp=Z,8.0nm,1.1s,mb4.6,baz=255,slow=3.7,SNR=6.2
PLCA LR LR 15 04 23.2
comp=Z,101nm,18.5s,baz=81,slow=32
L20A Wamsutter 87.03 43 ⇓P P 14 29 50.7 +0.1
baz=87,SNR=8.1
K19A Absolon Red Bu 87.12 42 ⇑P P 14 29 50.7 -0.4
baz=87
D15A Lincoln 87.19 37 ⇑P P 14 29 50.9 -0.4
baz=88
K20A Yellowstone Ra 87.36 43 ⇑P P 14 29 51.7 -0.5
baz=88
COLA College 87.38 11 ⇓iP P 14 29 51.1 -0.7
COLA College 87.38 11 eP P 14 29 50.5 -1.3
comp=Z,19nm,0.8s,mb5.1
E16A East Helena 87.39 38 ⇑P P 14 29 51.9 -0.3
baz=88
B14A Marquette Ranc 87.51 36 ⇑P P 14 29 52.4 -0.4
baz=88
C15A Salmond Ranch, 87.55 37 ⇓P P 14 29 52.6 -0.4
baz=88
WALA Waterton Lakes 87.56 35 eP P 14 29 53.0 -0.1
comp=Z,17nm,2.0s
L21A Rawlins 87.63 43 ⇓P P 14 29 52.6 -0.9
baz=88

F17A	Fitzpatrick Pl	87.64	39	⇑P		P		14 29 52.9	-0.6	
	baz=88									
N22A	Wattenberg Ran	87.65	45	⇓P		P		14 29 53.3	-0.4	
	baz=88									
PSI	Prapat	87.71	274		LR	LR		15 05 59.7		
	comp=Z,92nm,21.9s,baz=297,slow=33									
A14A	Double T Ranch	87.78	35	⇑P		P		14 29 53.6	-0.5	
	baz=88,SNR=8.1									
B15A	Bradely Ranch,	87.87	36	⇑P		P		14 29 54.3	-0.3	
	baz=88									
G18A	Lazy EL Ranch,	87.98	40	⇑P		P		14 29 54.5	-0.6	
	baz=88									
C16A	Fuhringer Ranc	88.05	37	⇑P		P		14 29 54.7	-0.6	
	baz=88									
SNAA	Sanae	88.06	177		eP	P		14 29 55.6	+0.4	
SNAA					e			14 29 57.3		
SNAA					e			14 30 10.9		
SNAA	Sanae	88.06	177		eP	P		14 29 55.2	0.0	
VNA3	Neumayer Olymp	88.07	175		eP	P		14 29 55.8	+0.6	
VNA3					e			14 29 57.5		
VNA3					e			14 30 08.3		
VNA3					e	pP		14 30 18.4	+0.6	
VNA3					e	pP		14 30 22.8	+5.0	
BJI	Beijing	88.07	314		P	P		14 29 57.3	+1.6	
BJI					SS	SS		14 46 27.1	+3.7	
BJI					AMB	AMB				
	comp=Z,15nm,0.5s,mb5.3									
BJI					LR	LR				
	comp=Z,52nm,29.3s									
A15A	Johnson Ranch,	88.15	36	⇓P		P		14 29 55.5	-0.4	
	baz=88									
F18A	Big Timber	88.20	39	⇓P		P		14 29 55.4	-0.7	
	baz=88									
D17A	Six Diamond Ra	88.30	38	⇑P		P		14 29 56.6	+0.1	
	baz=89									
DAWY	Dawson	88.44	15		eP	P		14 29 57.2	+0.4	
DAWY					epP	pP		14 30 18.7	-0.7	
C17A	Wharram Farm,	88.51	37	⇑P		P		14 29 57.1	-0.5	
	baz=89									
VNA2	Neumayer--Watz	88.55	176		eP	P		14 29 58.3	+0.8	
	baz=210,slow=4.0									
VNA2					e			14 29 59.8		
VNA2					e			14 30 09.7		
VNA2					e			14 30 13.7		
VNA2					e	pP		14 30 20.1	0.0	
VNA2					e	pP		14 30 24.4	+4.3	
EGAK	Eagle	88.64	14		eP	P		14 29 58.1	+0.3	
	comp=Z,33nm,1.3s,mb5.2									
VNA1	Neumayer--Stat	88.75	175		eP	P		14 29 59.6	+1.1	
VNA1					e			14 30 14.6		
VNA1					e	pP		14 30 20.9	-0.2	
A16A	West Butte Ran	88.76	36	⇓P		P		14 29 58.4	-0.3	
	baz=89									
B17A	L&Q Farms, Che	88.85	37	⇑P		P		14 29 58.5	-0.6	
	baz=89									
BILL	Bilibino	89.23	353	⇑	iP	P		14 30 00.6	+0.1	
BILL					pmax	pmax				
	comp=Z,22nm,2.5s,mb4.7									
A17A	Triple J Farms	89.25	36	⇑P		P		14 30 00.6	-0.4	
	baz=90									
GYA	Guiyang	89.40	298	⇑	iP	P		14 30 03.9	+1.6	
GYA					AP	pP		14 30 24.9	0.0	
GYA					XP	sP		14 30 33.4	-0.5	
GYA					PP	PP		14 33 40.3	+5.6	
GYA					PPP			14 35 40.5		
GYA					S	S		14 40 48.8	+3.0	
GYA					XS	sS		14 41 24.3	-0.2	
GYA					AMB	AMB				
	comp=Z,10.0nm,1.0s,mb4.8									
GYA					AMB	AMB				
	comp=Z,80nm,5.7s									
GYA					LR	LR				
	comp=N,320nm,18.0s									
GYA					LR	LR				
	comp=E,250nm,17.6s									
GYA					LR	LR				
	comp=Z,390nm,18.2s									
B18A	Beardsley Farm	89.48	37	⇓P		P		14 30 01.9	-0.2	
	baz=90									
A18A	Metzger Ranch,	89.72	37	⇓P		P		14 30 02.6	-0.6	
	baz=90									
EDM	Edmonton	90.23	32		eP	P		14 30 04.6	-0.9	
XAN	Xi'an	90.63	306		P	P		14 30 09.5	+1.7	
XAN					AP	pP		14 30 31.0	+0.5	
XAN					XP	sP		14 30 39.3	-0.2	
XAN					PPP			14 33 51.5		
XAN					SKS			14 40 34.3		
XAN					S	S		14 41 01.8	+4.9	
XAN					XS	sS		14 41 32.0	-3.7	
XAN					AMB	AMB				
	comp=Z,14nm,1.4s,mb4.9									
XAN					AMB	AMB				
	comp=Z,63nm,5.4s									
XAN					LR	LR				
	comp=N,63nm,25.5s									
XAN					LR	LR				
	comp=E,82nm,35.0s									
XAN					LR	LR				
	comp=Z,154nm,36.0s									
RSSD	Black Hills	90.81	43		eP	P		14 30 08.1	-0.3	
LCO	Las Campanas	91.72	122		eP	P		14 30 13.7	+0.6	
	comp=Z,46nm,1.4s,mb5.5									
KMI	Kunming	92.17	296		P	P		14 30 17.0	+1.8	
KMI					AP	pP		14 30 43.5	+5.7	
KMI					PP	PP		14 34 01.0	+4.3	
KMI					SKS			14 40 40.6		
KMI					S	S		14 41 10.4	-0.8	
KMI					AMB	AMB				
	comp=Z,12nm,0.8s,mb5.2									
KMI					LR	LR				
	comp=Z,151nm,32.8s									
CMAR	Chiang Mai Arr	93.12	288		P	P		14 30 21.6	+1.8	
	comp=Z,8.1nm,1.0s,mb5.0,baz=120,slow=2.8,SNR=44									
CMAR					LR	LR		15 06 03.4		
	comp=Z,52nm,21.6s,baz=283,slow=31									
YAK	Yakutsk	93.19	337	⇑	iP	P		14 30 20.0	+1.0	
YAK					pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.7									
CHTO	Chiang Mai	93.24	289		eP	P		14 30 21.5	+1.2	
CHTO					pmax	pmax				
	comp=Z,9.0nm,1.0s,mb5.0									
CHTO	Chiang Mai	93.24	289		eP	P		14 30 21.5	+1.3	
	comp=Z,9.4nm,1.0s,mb5.1									
INK	Inuvik	93.29	14		eP	P		14 30 19.3	0.0	
YKA	Yellowknife Ar	95.03	24		P	P		14 30 26.8	-0.6	
	comp=Z,2.7nm,0.9s,mb4.7,baz=237,slow=4.1,SNR=25									
YKA					pP	pP		14 30 48.7	-1.4	
	comp=Z,1.8nm,0.7s,baz=239,slow=4.6,SNR=8.6									
YKA	Yellowknife Ar	95.03	24		P	P		14 30 26.8	-0.6	
YKA					pP	pP		14 30 48.7	-1.4	
LZH	Lanzhou	95.26	306		eP	P		14 30 29.3	+0.2	
LZH					AP	pP		14 30 52.0	+0.2	
LZH					XP	sP		14 31 04.5	+3.7	
LZH					PP	PP		14 34 23.0	+2.5	
LZH					AMB	AMB				
	comp=Z,18nm,1.5s,mb5.3									
LZH					AMB	AMB				
	comp=Z,83nm,8.6s									
LZH					LR	LR				
	comp=N,217nm,17.5s									
LZH					LR	LR				
	comp=Z,305nm,19.8s									
ECSD	EROS,Sioux Fal	95.49	45		eP	P		14 30 29.3	-0.7	
ECSD					epP	pP		14 30 51.8	-0.9	
ULN	Ulaanbaatar	97.37	318	⇓	iP	P		14 30 37.9	-0.5	
ULM	Lac du Bonnet	98.42	40		LR	LR		15 08 54.1		
	comp=Z,140nm,18.1s,baz=260,slow=32									
GTA	Gaotai	99.39	308		eP	P		14 30 49.0	+1.3	
GTA					AP	pP		14 31 12.9	+2.5	
GTA					AMB	AMB				
	comp=Z,3.0nm,1.7s,mb4.5									
WMQ	Urumqi	109.27	311		ePDIF	Pdif		14 31 33.8	+2.3	
WMQ					PP	PP		14 36 11.8	+6.3	
WMQ					LR	LR				
	comp=Z,63nm,24.0s									
MKAR	Makanchi Array	113.44	313		PKiKP	PKiKP		14 35 41.8	-0.9	
	comp=Z,0.2nm,0.4s,baz=220,slow=1.2,SNR=5.0									
MKAR	Makanchi Array	113.44	313		iPKIKP	PKiKP		14 35 42.2	-0.5	
KURK	Kurchatov	116.06	317		PKP	PKPdf		14 35 47.0	-0.6	
	comp=Z,0.7nm,0.8s,baz=94,slow=1.8,SNR=4.2									
AAK	Ala-Archa	118.74	308		iPKIKP	PKPdf		14 35 50.3	-2.7	
ARU	Arti	126.88	326		iPKIKP	PKPdf		14 36 07.8	-0.4	
ARU					SS	SS		14 55 01.7	-5.4	
ARCES	ARCESS Array B	129.30	351		PKP	PKPdf		14 36 11.5	-0.9	
	comp=Z,3.6nm,0.8s,baz=0.4,slow=1.1,SNR=12									
ARCES	ARCESS Array B	129.30	351		PKP	PKPdf		14 36 11.5	-1.0	
KIV	Kislovodsk	141.12	316		ePKHKP			14 36 33.0		
KIV					eSS	SS		14 57 58.8	-0.5	
KIV					pmax	pmax				
	comp=Z,3.0nm,0.6s									
AKASG	Malin Array Be	144.36	334		PKP	PKPdf		14 36 38.5	-2.3	
	comp=Z,3.0nm,0.4s,baz=38,slow=4.2,SNR=11									
SIM	Simferopol'	145.89	323		ePKIKP	PKPab		14 36 48.9	+4.0	
SIM					i			14 37 02.1		
SIM					pmax	pmax				
	comp=Z,17nm,1.2s									
BSEG	Bad Segeberg	146.25	355		ePKPbc	PKPbc		14 36 45.3	+0.2	
BSEG					epPKPbc	pPKPbc		14 37 06.8	-1.6	
LVV	L'vov	147.07	338		ePKIKP	PKPab		14 36 52.2	+2.9	
NRDL	Niedersach Rie	147.69	355		ePKPbc	PKPbc		14 36 49.2	0.0	
IBBN	Ibbenburen	148.03	357		ePKPbc	PKPbc		14 36 50.4	+0.3	
CLZ	Clausthal	148.32	354		ePKPbc	PKPbc		14 36 51.0	+0.1	
CLZ					epPKPbc	pPKPbc		14 37 13.4	-0.9	
STHS	Stebnicka Huta	148.36	340		ePKP	pPKPbc		14 37 14.6	+0.1	
KSP	Ksiaz	148.37	347		ePKP	PKPbc		14 36 52.1	+1.0	
KSP	Ksiaz	148.37	347		ePKP	PKPbc		14 36 51.8	+0.7	
BUR08	Bucovina Ar. S	148.40	334		ePKPdf	PKPdf		14 36 48.5	+0.8	
BURAR	Bucovina Array	148.42	334	⇓	iP	PKPab		14 36 54.0	-0.7	
BURAR	Bucovina Array	148.42	334	⇓	iP	PKPab		14 36 54.0	-0.8	
CLL	Collm	148.52	351	⇓	iPKHKP	PKPbc		14 36 51.4	0.0	
CLL					pmax	pmax				
	comp=Z,28nm,1.3s									
CLL	Collm	148.52	351		ePKPbc	PKPbc		14 36 51.2	-0.2	
CLL	Collm	148.52	351	⇓	iPKPbc	PKPbc		14 36 51.4	0.0	
	comp=Z,28nm,1.3s									
CLL					ex	x		14 37 13.0		
UZH	Uzhgorod	148.69	338		ePKHKP	PKPbc		14 36 51.7	-0.2	
CRVS	Cervenica-Dubn	148.73	339		ePKP	PKPbc		14 36 52.9	+0.8	
CRVS					e			14 37 14.2		
UPC	Upice	148.75	347		ePKPbc	PKPbc		14 36 52.4	+0.4	
BRG	Berggiesshubel	148.79	350		ePKHKP	PKPdf		14 36 49.8	+1.6	
BRG					e			14 36 52.3		
BRG					pmax	pmax				
	comp=Z,5.0nm,1.4s									
BRG					pmax	pmax				
	comp=Z,31nm,1.9s									
BRG	Berggiesshubel	148.79	350		ePKPbc	PKPbc		14 36 52.3	+0.2	
BRG	Berggiesshubel	148.79	350		ePKP	PKPdf		14 36 49.8	+1.6	
	comp=Z,7.7nm,1.4s									
BRG					e			14 36 52.3		
	comp=Z,52nm,1.9s									
BRG					e			14 37 15.3		
	comp=Z,29nm,1.6s									
DPC	Dobruska-Polom	148.83	347		ePKPbc	PKPbc		14 36 53.3	+1.0	
DPC					ex	x		14 37 14.6		
OKC	Ostrava-Krasne	148.87	344		ePKPbc	PKPbc		14 36 52.4	0.0	
OKC					ex	x		14 37 15.2		
BUG	Bochum--Univer	148.92	358		ePKPbc	PKPbc		14 36 52.7	+0.2	
PVCC	Panska Ves	149.01	349		ePKPbc	PKPbc		14 36 53.8	+1.1	
PVCC					ex	x		14 37 15.2		
TRPA	Tarpa	149.02	338	⇑	iP	PKPbc		14 36 53.5	+0.7	
BR131	Keskin Array S	149.07	315		ePKPdf	PKPdf		14 36 49.2	+0.2	
BRTR	Keskin Array B	149.07	315		PKPbc	PKPbc		14 36 53.2	0.0	
	comp=Z,1.5nm,0.8s,baz=128,slow=5.6,SNR=7.2									
TIRR	Tirgusor	149.30	327	⇑	iP	PKPab		14 36 59.7	+1.3	
MOX	Moxa	149.36	352		ePKP	PKPbc		14 36 54.1	+0.5	
	comp=Z,31nm,1.6s									
MOX	Moxa	149.36	352		ePKIKP	PKPbc		14 36 54.1	+0.5	
MOX					pmax	pmax				
	comp=Z,31nm,1.6s									
MOX	Moxa	149.36	352		ePKPbc	PKPbc		14 36 53.6	0.0	
MOX					epPKPbc	pPKPbc		14 37 16.4	-0.6	
UBBA	Unterbreizbach	149.37	354		ePKPbc	PKPbc		14 36 53.3	-0.3	
KECS	Kecovo	149.41	340		ePKP	PKPbc		14 36 54.2	+0.4	
KECS					e			14 37 16.4		
TANN	Tannenbergstha	149.47	351		ePKPbc	PKPbc		14 36 54.0	+0.1	
TANN					epPKPbc	pPKPbc		14 37 17.1	-0.2	
PRU	Pruhonice	149.54	348		ePKPbc	PKPbc		14 36 54.7	+0.7	
PRU					ex	x		14 37 16.7		
NKC	Novy Kostel	149.65	351		ePKPbc	PKPbc		14 36 55.1	+0.8	
NKC					ex	x		14 37 17.3		
VYHS	Vyhne	149.91	342		ePKIKP	PKPbc		14 36 55.7	+0.7	
VYHS					e			14 37 04.9		
VYHS	Vyhne	149.91	342		ePKP	PKPbc		14 36 55.7	+0.7	
VYHS					e			14 37 16.9		
MANZ	Manzenberg	149.94	351		ePKPbc	PKPbc		14 36 55.2	+0.2	
MANZ					epPKPbc	pPKPbc		14 37 17.8	-0.7	
KOLL	Kolacno	149.95	343		ePKP	PKPbc		14 36 56.0	+0.9	
TREC	Trest	150.01	347		ePKIKP	PKPbc		14 36 55.8	+0.6	
TREC					e			14 37 05.8		
TREC	Trest	150.01	347		ePKPbc	PKPbc		14 36 55.8	+0.6	
TREC					epPKP	PKPab		14 37 05.8	+4.7	
TREC					ex	x		14 37 18.2		
TNS	Taunus Mts	150.08	356		ePKPbc	PKPbc		14 36 55.7	+0.4	
DRGR		150.08	336	⇑	iP	PKPbc		14 36 56.0	+0.5	
DRGR		150.08	336	⇑	P	PKPbc		14 36 56.0	+0.6	
ROTZ	Rotzenmuhle	150.14	351		ePKPbc	PKPbc		14 36 55.8	+0.3	
ROTZ					epPKPbc	pPKPbc		14 37 18.5	-0.5	
VOIR		150.20	332	⇓	iP	PKPbc		14 36 57.2	+1.4	
VOIR		150.20	332	⇓	P	PKPbc		14 36 57.2	+1.4	
GIVF	Givet	150.29	1		ePKP1	PKPbc		14 36 55.6	-0.3	
	comp=Z,103nm,1.3s									
BAIF	Baives	150.32	2		ePKP1	PKPbc		14 36 55.8	-0.1	
	comp=Z,99nm,1.3s									
GRA1	Grafenberg Arr	150.34	352		ePKPbc	PKPbc		14 36 56.2	+0.2	
GRA1					epPKPbc	pPKPbc		14 37 18.4	-1.1	
GRF	Grafenberg Arr	150.34	352		ePKPbc	PKPbc		14 36 56.2	+0.2	
GRF					epPKPbc	pPKPbc		14 37 18.4	-1.1	
MODS	Modra-Piesok	150.44	344		ePKP	PKPbc		14 36 56.0	-0.3	
MODS					e			14 37 02.0		
KHC	Kasperske Hory	150.54	349		ePKIKP	PKPbc		14 36 56.9	+0.4	
KHC					e			14 37 03.4		
KHC	Kasperske Hory	150.54	349		ePKPbc	PKPbc		14 36 56.9	+0.4	
KHC					ePKPab	PKPab		14 37 03.4	+0.1	
KHC					ex	x		14 37 18.9		
WET	Wettzell	150.64	350		ePKPbc	PKPbc		14 36 57.1	+0.4	
WET					epPKPbc	pPKPbc		14 37 19.1	-1.1	
WLF	Walferdange	150.73	359		ePKPbc	PKPbc		14 36 57.8	+0.9	
WLF					epPKPbc	pPKPbc		14 37 19.8	-0.6	
GEC2	GERESS Array S	150.79	349		ePKPbc	PKPbc		14 36 57.2	+0.1	
GEC2					epPKPbc	pPKPbc		14 37 19.9	-0.7	
GERES	GERESS Array B	150.79	349		PKP	PKPdf		14 36 51.6	+0.2	
	comp=Z,4.2nm,0.9s,baz=253,slow=1.4,SNR=4.5									
GERES					PKPbc	PKPbc		14 36 57.3	+0.2	
	comp=Z,4.4nm,0.9s,baz=42,slow=2.2,SNR=26									
GERES					pPKP	pPKPdf		14 37 13.7	-1.4	
	comp=Z,0.8nm,0.6s,baz=146,slow=0.5,SNR=2.7									
GERES					pPKPbc	pPKPbc		14 37 19.5	-1.1	
	comp=Z,2.3nm,0.6s,baz=17,slow=3.0,SNR=6.5									
GERES	GERESS Array B	150.79	349		PKHKP	PKPdf		14 36 51.6	+0.2	
GERES								14 36 57.3		
GERES								14 37 13.7		
FLN	La Foliniere	151.24	8		ePKP1	PKPbc		14 36 57.3	-0.8	
	comp=Z,93nm,1.3s									
FLN					eMLR	MLR				
	comp=Z,98nm,21.2s									
FLN	La Foliniere	151.24	8		ePKP	PKPbc		14 36 57.3	-0.8	
FLN					LR	LR				
	comp=Z,100nm,21.3s									
SGMF	Saint Gilles	151.40	11		ePKP1	PKPbc		14 36 57.5	-1.0	
	comp=Z,216nm,1.7s									
LDF	La Druitiere	151.45	8		ePKP1	PKPbc		14 36 57.8	-0.8	
	comp=Z,66nm,1.2s									
STU	Stuttgart	151.47	355		ePKPbc	PKPbc		14 36 59.2	+0.5	
BZS	Buzias	151.48	336	⇑	iP	PKPbc		14 36 59.1	+0.3	
BZS	Buzias	151.48	336	⇑	P	PKPbc		14 36 59.1	+0.3	
GRR	Gorron	151.55	9		ePKP1	PKPbc		14 36 58.2	-0.7	
FUR	Furstenfeldbru	151.84	352		ePKPbc	PKPbc		14 36 59.9	+0.4	
MEZF	Maizieres J'vi	151.89	1		ePKP1	PKPbc		14 36 59.5	-0.1	
	comp=Z,130nm,1.7s									
CDF	Champ du Feu	151.95	357		ePKP1	PKPbc		14 36 59.3	-0.5	
	comp=Z,42nm,1.4s									
BFO	Black Forest	151.97	356		ePKPbc	PKPbc		14 36 59.4	-0.4	
PKSM	Moragy	152.01	340	⇓	iP	PKPbc		14 36 59.9	-0.1	
PKSM	Moragy	152.01	340	⇓	P	PKPbc		14 36 59.9	-0.1	
RJOB	Jochberg	152.02	349		ePKPbc	PKPbc		14 37 00.4	+0.5	
HAU	Haudompre	152.38	359		ePKP1	PKPbc		14 37 00.3	-0.5	
HAU					eMLR	MLR				
	comp=Z,92nm,21.0s									
HAU	Haudompre	152.38	359		ePKP	PKPbc		14 37 00.3	-0.5	
HAU					LR	LR				
	comp=Z,90nm,21.0s									
HINF	Hinteralfeld	152.56	358		ePKP1	PKPbc		14 37 00.3	-0.9	
RETA	Reutte	152.57	352	⇑	iPKiKP	PKiKP		14 37 01.7	+0.2	
	comp=Z,11nm,1.4s									
PERS	Pernice	152.60	345		ePKPbc	PKPbc		14 37 01.1	-0.2	
MOTA	Moosalm	152.66	352	⇑	iPKiKP	PKiKP		14 37 01.6	0.0	
	comp=Z,12nm,1.3s									
WTTA	Wattenberg	152.67	351	⇑	iPKiKP	PKiKP		14 37 01.8	+0.2	
	comp=Z,6.7nm,0.9s									
FETA	Feichten	153.03	352	⇑	iPKPbc	PKPbc		14 37 01.6	-0.6	
	comp=Z,6.0nm,1.1s									
LOR	Lormes	153.10	2		ePKP1	PKPbc		14 37 02.0	-0.4	
LOR					eMLR	MLR				
	comp=Z,68nm,21.0s									
LOR	Lormes	153.10	2		ePKP	PKPbc		14 37 02.0	-0.4	
LOR					LR	LR				
	comp=Z,70nm,21.0s									
LEGS	Legarje	153.19	345		ePKPbc	PKPbc		14 37 02.6	0.0	
SSF	Saint Saulge	153.29	3		ePKP1	PKPbc		14 37 02.5	-0.3	
	comp=Z,32nm,1.2s									
LJU	Ljubljana	153.29	346		ePKPbc	PKPbc		14 37 02.7	-0.1	
LJU					epPKPbc	pPKPbc		14 37 24.6	-1.7	
MFF	Saint Martin d	153.40	9		ePKP1	PKPbc		14 37 02.4	-0.6	
	comp=Z,19nm,1.0s									
AVF	Avril sur Loir	153.55	3		ePKP1	PKPbc		14 37 02.5	-0.9	
BOJS	Bojanci	153.62	344		iPKPbc	PKPbc		14 37 04.2	+0.6	
BOJS					epPKPbc	pPKPbc		14 37 25.9	-1.2	
SMF	Signal de Mont	153.72	3		ePKP1	PKPbc		14 37 03.0	-0.7	
CABF	La Chapelle	153.78	359		ePKP1	PKPbc		14 37 04.0	+0.1	
	comp=Z,69nm,1.4s									
TCF	Toulx Ste Croi	153.97	5		ePKP1	PKPbc		14 37 03.4	-0.9	
	comp=Z,46nm,1.5s									
LPG	La Plagne	154.88	358		ePKP1	PKPbc		14 37 06.6	+0.4	
RJF	Les Rejaudoux	154.88	7		ePKP1	PKPbc		14 37 05.6	-0.7	
RJF					eMLR	MLR				
	comp=Z,72nm,18.0s									
RJF	Les Rejaudoux	154.88	7		ePKP	PKPbc		14 37 05.6	-0.7	
RJF					LR	LR				
	comp=Z,70nm,18.0s									
CAF	Calviac	155.31	6		ePKP1	PKPdf		14 37 06.6	+8.5	
DBIC	Dimbokro	163.14	142		PKPab	PKPab		14 37 58.0	-0.4	
	comp=Z,3.8nm,0.9s,baz=201,slow=7.5,SNR=5.1									
TORD	Torodi Ar. Bea	172.00	153		PKP	PKPdf		14 37 13.3	-1.1	
	comp=Z,1.4nm,1.0s,baz=322,slow=4.7,SNR=6.7									
TORD					PKPab	PKPab		14 38 37.1	-0.3	
	comp=Z,4.0nm,1.1s,baz=224,slow=3.7,SNR=9.3									

*ISCJB **21** 14:17:17.5±0.8, 1072N×0066251W×003, h87km±8km, Error ellipse: s-maj=9.9km s-min=5.6km az=175.2*
*FUNV **21** 14:17:18.1, 1075N×6239W, h82km, MW3.1*
*TRN **21** 14:17:21.0, 1083N×6236W, h58km, MD3.2*

ISC 21 14:17:18.4±0.8, 1073N×006×6252W×003, h82km±8km, n12, σ0°99/23, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUIV	Guiria	0.30	105	⇑	iP	Pn	14 17 30.3	-0.5
GUIV					i	Sn	14 17 38.9	-1.1
GUNV	Guanoco	0.70	217		eP	Pn	14 17 35.3	+1.1
GUNV					eS	Sn	14 17 46.8	+0.8
CRUV	Carupano	0.71	266	⇓	iP	Pn	14 17 34.7	+0.4
CRUV					eS	Sn	14 17 46.9	+0.8
TCE	Chacachacare	0.75	92		eP	Pn	14 17 35.7	+1.0
TCE					eS	Sn	14 17 46.0	-0.9
ITEV	Isla Los Testi	0.87	316		eP	Pn	14 17 35.9	-0.2
ITEV					eS	Sn	14 17 48.8	-0.4
TRN	Trinidad (W)	1.10	94		eP	Pn	14 17 39.1	+0.5
TRN					eS	Sn	14 17 52.8	-1.1
TBH	Brigand Hill	1.44	99		eP	Pn	14 17 44.8	+1.8
TBH					eS	Sn	14 18 02.6	+1.0
GRW	Mount Saint Ca	1.65	30		eS	Sn	14 18 06.2	-0.3
CUPV	Cœpira	3.29	259		eP	Pn	14 18 08.7	+1.1
CUPV					eS	Sn	14 18 45.8	0.0
LUEV	Luepa	4.96	168		eP	Pn	14 18 28.8	-1.6
LUEV					eS	Sn	14 19 20.7	-5.8
CAOV	Caicara del Or	5.05	228		eP	Pn	14 18 31.7	0.0
CAOV					eS	Sn	14 19 25.1	-3.8
BAUV	El Baul	5.73	252		eP	Pn	14 18 40.4	-0.5
BAUV					eS	Sn	14 19 42.1	-3.2

*NEIC **21** 14:52:50.3, 17.19N×9533W

KDAK comp=Z,3.3nm,0.3s,baz=292,slow=7.6,SNR=38 S **S** **15 10 14.7 -17**
comp=Z,0.2nm,0.3s,baz=330,slow=17,SNR=3.1
BILL Bilibino 18.34 343 *c i*P **Pn** **15 07 39.3 +1.2**
BILL *e*S **S** **15 11 04.3 -0.1**
BILL pmax pmax
comp=Z,31nm,1.2s
BILL MLR MLR
comp=Z,300nm,16.0s
BILL Bilibino 18.34 343 *e*Pn **Pn** **15 07 39.5 +1.4**
comp=Z,25nm,1.0s
RC01 Rabbit Creek A 18.99 47 *e*P **Pn** **15 07 43.1 -2.9**
comp=Z,16nm,0.8s
CHUM Lake Minchumin 19.02 38 *e*P **Pn** **15 07 45.6 -0.8**
comp=Z,58nm,1.2s
SEY Seymchan 19.22 319⇑ *i*P **Pn** **15 07 47.9 -0.9**
PMR Palmer 19.43 46 *e*P **Pn** **15 07 50.1 -1.1**
PMR pmax pmax
comp=Z,4.0nm,0.7s
PMR Palmer 19.43 46 *e*P **Pn** **15 07 50.1 -1.1**
comp=Z,4.0nm,0.7s
PMR *e*P 15 07 50.3
TRF Thorofare Moun 19.63 40 *e*P **Pn** **15 07 52.0 -1.6**
comp=Z,51nm,1.1s
MCK McKinley 20.30 40 *e*P **P** **15 07 58.3 -0.8**
MCK pmax pmax
comp=Z,24nm,0.8s
MCK McKinley 20.30 40 *e*Pn **P** **15 07 58.2 -0.8**
comp=Z,24nm,0.8s
COLA College 21.20 38 *c i*P **P** **15 08 08.9 0.0**
COLD Coldfoot 21.54 31 *e*P **P** **15 08 12.3 -0.1**
comp=Z,24nm,0.9s,mb4.6
EGAK Eagle 23.84 41 *e*P **P** **15 08 34.0 -2.0**
comp=Z,35nm,0.8s,mb4.8
DAWY Dawson 24.40 43 *e*P **P** **15 08 40.3 -0.9**
YSS Yuzh-Sakhalins 25.10 275⇑ *e*P **P** **15 08 48.0 +0.4**
YSS MLR MLR
comp=Z,500nm,20.0s,MS4.0
YSS Yuzh-Sakhalins 25.10 275 *e*P **P** **15 08 47.7 +0.1**
comp=Z,53nm,1.0s,mb5.0
ASAJ Asahikawa 26.47 270 P **P** **15 08 59.4 -0.6**
comp=Z,17nm,1.0s,mb4.5,baz=344,slow=8.6,SNR=5.5
ASAJ Asahikawa 26.47 270 P **P** **15 08 59.4 -0.6**
ASAJ pmax pmax
comp=Z,17nm,1.0s
INK Inuvik 27.75 35 P **P** **15 09 09.9 -1.3**
comp=Z,1.5nm,0.5s,mb3.9,baz=117,slow=26,SNR=6.6
INK PcP PcP 15 12 26.4 -0.1
comp=Z,0.8nm,0.5s,baz=211,slow=4.0,SNR=4.6
INK Inuvik 27.75 35 *e*P **P** **15 09 11.2 0.0**
HABR Khabarovsk 29.28 283 *e*P **P** **15 09 24.5 -0.6**
HABR *e**PP pP 15 09 36.9 -0.8
HABR *e* 15 10 19.6
HABR *e* 15 12 28.4
HABR *e*S **S** **15 14 15.6 +1.1**
HABR *e*SS SS 15 15 46.7 -33
HABR pmax pmax
comp=Z,29nm,1.8s,mb4.7
HABR pmax pmax
comp=N,6.0nm,0.7s
HABR pmax pmax
comp=E,12nm,1.0s
HABR MLR MLR
comp=Z,18nm,14.0s
YAK Yakutsk 29.36 312 *e*P **P** **15 09 24.4 -1.3**
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.6
YAK pmax pmax
comp=N,1.0nm,0.9s
YAK pmax pmax
comp=E,9.0nm,1.2s
KLR Kul'dur 31.00 286 *e*P **P** **15 09 35.8 -4.5**
KLR pmax pmax
comp=E,43nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s,mb5.1
MJAR Matsushiro Arr 33.52 261 P **P** **15 10 01.9 -0.6**
comp=Z,2.3nm,0.9s,mb4.1,baz=53,slow=7.3,SNR=5.7
MDJ Mudanjiang 34.37 279 P **P** **15 10 08.3 -1.5**
MDJ AP pP 15 10 21.3 -1.2
MDJ XP sP 15 10 27.3 -0.9
MDJ AMB AMB
comp=Z,8.0nm,0.9s,mb4.7
MDJ AMB AMB
comp=Z,96nm,4.5s
MDJ LR LR
comp=N,23nm,18.9s,MS3.5
MDJ LR LR
comp=E,90nm,20.7s,MS3.5
MDJ LR LR
comp=Z,136nm,18.3s,MS3.7
MDJ Mudanjiang 34.37 279 *e*P **P** **15 10 07.7 -2.0**
comp=Z,6.7nm,0.7s,mb4.7
YKA Yellowknife Ar 35.53 46 P **P** **15 10 19.6 +0.1**
comp=Z,12nm,0.9s,mb4.8,baz=283,slow=8.2,SNR=92
YKA PcP PcP 15 12 47.6 +0.1
comp=Z,0.6nm,0.5s,baz=288,slow=3.3,SNR=5.1
B05A Bryant 36.22 72⇑P **P** **15 10 26.3 +0.6**
baz=36
C05A Toit Reservoir 36.73 72⇑P **P** **15 10 29.9 -0.1**
baz=36
LON Longmire 37.10 74 *e*P **P** **15 10 33.2 +0.1**
LON pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
LON Longmire 37.10 74 *e*P **P** **15 10 33.2 +0.1**
comp=Z,6.2nm,0.7s,mb4.5
F04A Amboy 37.12 75⇑P **P** **15 10 33.7 +0.4**
baz=37
B07A Winthrop 37.31 70⇓P **P** **15 10 35.1 +0.3**
baz=37,SNR=6.1
CN2 Changchun 37.35 281 *e*P **P** **15 10 34.3 -1.0**
CN2 *e*S **S** **15 16 15.6 -3.9**
CN2 AMB AMB
comp=Z,12nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.2
CN2 LR LR
comp=E,200nm,15.0s,MS4.2
CN2 LR LR
comp=Z,200nm,17.0s,MS4.0
D06A Cle Elum 37.47 73⇓P **P** **15 10 36.3 +0.1**
baz=37
ETW Entiat 37.58 72 *e*P **P** **15 10 37.8 +0.6**
A08A Turner Farm, O 37.59 69⇓P **P** **15 10 37.1 -0.1**
baz=37,SNR=7.5
C07A Waterville 37.70 71⇑P **P** **15 10 37.9 -0.3**
baz=38,SNR=6.7
B08A Colville Reser 37.82 70⇑P **P** **15 10 39.3 +0.1**
baz=38,SNR=8.8
H04A Detroit Lake 37.89 77⇓P **P** **15 10 40.5 +0.7**
baz=38
BOD Bodaibo 37.90 307 *e*P **P** **15 10 38.8 -0.9**
BOD pmax pmax
comp=Z,32nm,1.0s,mb5.0
A09A Danville 37.98 69⇓P **P** **15 10 40.7 +0.1**
baz=38
D07A Quincy 37.99 72⇓P **P** **15 10 40.9 +0.3**
baz=38,SNR=5.8
HIA Hailar 38.13 292 *e*P **P** **15 10 40.7 -1.1**
HIA pmax pmax
comp=Z,32nm,1.3s
HIA Hailar 38.13 292 *e*P **P** **15 10 40.7 -1.2**
comp=Z,32nm,1.3s,mb4.9
F06A Goldendale 38.20 75⇓P **P** **15 10 42.6 +0.2**
baz=38
C08A Higginbotham F 38.26 71⇑P **P** **15 10 42.9 0.0**
baz=38
E07A Sunnyside 38.37 73⇓P **P** **15 10 43.6 -0.2**
baz=38
B09A Rice 38.49 69⇓P **P** **15 10 44.9 0.0**
baz=38
A10A Northport 38.58 68⇓P **P** **15 10 45.1 -0.4**
baz=38,SNR=5.6
RSW Rattlesnake Hi 38.61 73 *e*P **P** **15 10 46.4 +0.6**
HAWA Hanford 38.64 73 *e*P **P** **15 10 46.4 +0.2**
comp=Z,14nm,0.8s,mb4.7
OD2 Odessa Site #2 38.65 71 *e*P **P** **15 10 45.8 -0.3**
F07A Phinny Hill Vi 38.65 74⇑P **P** **15 10 46.7 +0.5**
baz=38
D08A Wollman Farm, 38.69 72⇓P **P** **15 10 46.2 -0.3**
baz=38,SNR=6.6
C09A Chrisman Ranch 38.71 70⇓P **P** **15 10 46.7 0.0**
baz=38
E08A Dider Farm, El 38.88 73⇑P **P** **15 10 48.0 -0.1**
baz=39,SNR=5.4
H06A Lindquist Farm 39.00 76⇑P **P** **15 10 49.6 +0.5**
baz=39
D09A Jones Farm, Ri 39.05 71⇓P **P** **15 10 49.9 +0.4**
baz=39
EDM Edmonton 39.11 60 *e*P **P** **15 10 49.3 -0.6**
NEW Newport 39.17 69 *e*P **P** **15 10 50.2 -0.3**
NEW pmax pmax
comp=Z,28nm,1.3s
NEW Newport 39.17 69 *e*P **P** **15 10 50.2 -0.3**
comp=Z,28nm,1.3s,mb4.8
A11A Hall Mountain, 39.29 68⇓P **P** **15 10 52.0 +0.5**
baz=39,SNR=18
F08A Pendleton 39.40 73⇑P **P** **15 10 52.8 +0.3**
baz=39
KSRS Korea Array 39.40 271 P **P** **15 10 53.0 +0.4**
comp=Z,8.2nm,0.8s,mb4.5,baz=58,slow=8.4,SNR=21
KSRS Korea Array 39.40 271 P **P** **15 10 53.0 +0.4**
KSRS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
E09A Wood Farm, Sta 39.42 72⇑P **P** **15 10 52.8 +0.2**
baz=39,SNR=8.4
G08A Pilot Rock 39.55 74⇓P **P** **15 10 53.7 0.0**
baz=39
D10A Wagner Farm, O 39.67 71⇓P **P** **15 10 53.7 -1.0**
baz=39,SNR=7.6
A12A Yaak River Ran 39.71 67⇓P **P** **15 10 54.4 -0.6**
baz=39
I07A Izee 39.84 76⇑P **P** **15 10 56.5 +0.3**
baz=40
F09A S2 Ranch, Elgi 39.96 73⇑P **P** **15 10 57.2 +0.1**
baz=40
D11A Klaveano Farm, 40.23 70⇑P **P** **15 10 58.2 -1.2**
baz=40,SNR=5.4
F10A Beach Ranch, E 40.24 72⇑P **P** **15 10 59.2 -0.3**
baz=40
G09A Cove 40.26 74⇓P **P** **15 10 59.6 0.0**
baz=40,SNR=5.4
I08A Drewsey 40.51 76⇑P **P** **15 11 02.3 +0.6**
baz=40
MOD Modoc 40.54 79 *e*P **P** **15 11 03.1 +1.2**
comp=Z,4.5nm,0.8s,mb4.2
G10A Bishop Farm, J 40.66 73⇓P **P** **15 11 02.9 +0.1**
baz=40,SNR=15
WALA Waterton Lakes 40.66 66 *e*P **P** **15 11 03.2 +0.3**
comp=Z,0.7nm,1.0s
B13A Whitefish 40.67 68⇓P **P** **15 11 02.5 -0.5**
baz=40
BSMT Bassoo Peak 40.74 69 *e*P **P** **15 11 04.0 +0.5**
K07A Rock Creek Ran 40.76 78⇑P **P** **15 11 04.2 +0.4**
baz=41
BMO Blue Mountains 40.77 74 *e*P **P** **15 11 03.9 0.0**
comp=Z,33nm,2.1s,mb4.6
J08A Circle Bar Ran 40.86 76⇑P **P** **15 11 05.0 +0.4**
baz=41
F11A Grangeville 40.92 72⇓P **P** **15 11 04.3 -0.8**
baz=41
C13A Hot Springs 40.95 69⇑P **P** **15 11 05.0 -0.3**
baz=41
A14A Double T Ranch 40.99 66⇑P **P** **15 11 05.6 0.0**
baz=41,SNR=28
JTMT Jette 41.09 68 *e*P **P** **15 11 06.4 0.0**
K08A Mann Creek Ran 41.20 77⇑P **P** **15 11 07.5 +0.1**
baz=41
H10A Noah's Angus R 41.25 74⇑P **P** **15 11 08.2 +0.5**
baz=41,SNR=7.8
J09A Fry Pan Ranch, 41.31 76⇓P **P** **15 11 08.7 +0.4**
baz=41
D13A Huson 41.31 69⇑P **P** **15 11 07.5 -0.8**
baz=41
B14A Marquette Ranc 41.37 67⇑P **P** **15 11 08.5 -0.2**
baz=41,SNR=17
A15A Johnson Ranch, 41.38 66⇑P **P** **15 11 08.1 -0.6**
baz=41,SNR=8.3
N06A Buffalo Meadow 41.49 81⇓P **P** **15 11 10.3 +0.5**
baz=41
M07A Soldier Meadow 41.53 79⇑P **P** **15 11 10.8 +0.7**
baz=41,SNR=6.8
H11A Donnelly 41.63 73⇑P **P** **15 11 10.5 -0.5**
baz=41
MSO Missoula 41.75 69 *e*P **P** **15 11 11.8 -0.1**
comp=Z,14nm,1.4s,mb4.4
B15A Bradely Ranch, 41.81 67⇓P **P** **15 11 11.8 -0.5**
baz=42,SNR=24
E13A Victor 41.81 70⇑P **P** **15 11 12.2 -0.1**
baz=42,SNR=6.6
D14A Greenough 41.88 69⇑P **P** **15 11 12.6 -0.3**
baz=42,SNR=11
M08A Happy Creek Ra 41.99 79⇑P **P** **15 11 15.1 +1.2**
baz=42
A16A West Butte Ran 42.05 66⇑P **P** **15 11 13.4 -0.8**
baz=42,SNR=14
C15A Salmond Ranch, 42.05 68⇑P **P** **15 11 14.5 +0.2**
baz=42,SNR=25
F13A Darby 42.06 71⇓P **P** **15 11 14.1 -0.3**
baz=42,SNR=6.3
I11A Placerville 42.09 74⇓P **P** **15 11 14.8 +0.1**
baz=42
K10A MacKenzie Ranc 42.16 76⇑P **P** **15 11 15.7 +0.4**
baz=42
E14A Clinton 42.23 70⇑P **P** **15 11 15.8 0.0**
baz=42,SNR=6.3
B16A M & M Farms, S 42.25 66⇑P **P** **15 11 15.3 -0.6**
baz=42,SNR=11
H12A Diamond D Ranc 42.41 73⇓P **P** **15 11 16.8 -0.5**
baz=42,SNR=6.5
O07A Toulon 42.42 81⇓P **P** **15 11 18.2 +0.8**
baz=42
MFID Camas Ranch 42.45 75⇑P **P** **15 11 17.8 +0.3**
baz=42
D15A Lincoln 42.48 68⇓P **P** **15 11 17.4 -0.3**
baz=42,SNR=7.9
G13A Cobalt 42.49 72⇑P **P** **15 11 17.9 0.0**
baz=42,SNR=13
C16A Fuhringer Ranc 42.54 67⇓P **P** **15 11 18.0 -0.2**
baz=42,SNR=23
A17A Triple J Farms 42.56 65⇑P **P** **15 11 17.8 -0.6**
baz=42,SNR=31
F14A Wisdom 42.62 70⇑P **P** **15 11 19.1 +0.2**
baz=42
K11A Parker Ranch, 42.68 76⇑P **P** **15 11 19.4 0.0**
baz=42
E15A Deer Lodge 42.73 69⇑P **P** **15 11 19.1 -0.7**
baz=42,SNR=5.7
H13A Challis 42.77 72⇑P **P** **15 11 20.0 -0.2**
baz=42
O08A Rochester Mine 42.80 80⇑P **P** **15 11 20.6 +0.2**
baz=43
L10A Juniper Basin 42.80 77⇑P **P** **15 11 20.9 +0.4**
baz=43
B17A L&G Farms, Che 42.83 66⇓P **P** **15 11 20.1 -0.5**
baz=42,SNR=18
J12A Stokes Ranch, 42.98 75⇓P **P** **15 11 22.0 +0.1**
baz=43
D16A Dana Ranch, Ca 43.05 68⇑P **P** **15 11 22.0 -0.4**
baz=43,SNR=6.4
HRY Holter Researc 43.05 68 *e*P **P** **15 11 22.3 -0.1**
A18A Metzger Ranch, 43.06 65⇓P **P** **15 11 21.1 -1.4**
baz=43
F15A Butte 43.13 70⇑P **P** **15 11 22.3 -0.7**
baz=43
LRM Limekiln Ridge 43.16 70 *e*P **P** **15 11 23.4 +0.1**
L11A Cat Creek Ranc 43.19 76⇑P **P** **15 11 24.0 +0.4**
baz=43,SNR=11
C17A Wharram Farm, 43.20 67⇓P **P** **15 11 22.9 -0.6**
baz=43,SNR=14
I13A Wildhorse Cree 43.20 73⇑P **P** **15 11 23.7 0.0**
baz=43,SNR=11
HLID Hailey 43.22 74⇑P **P** **15 11 24.2 +0.4**
baz=43
HLID Hailey 43.22 74 *e*P **P** **15 11 24.4 +0.6**
E16A East Helena 43.24 69⇓P **P** **15 11 23.3 -0.6**
baz=43
H14A Leadore 43.27 72⇓P **P** **15 11 23.9 -0.3**
baz=43,SNR=12
B18A Beardsley Farm 43.37 65⇓P **P** **15 11 24.2 -0.7**
baz=43,SNR=13
K12A Draper Farm, C 43.44 75⇑P **P** **15 11 25.8 +0.2**
baz=43
J13A Cove Ranch, Pi 43.46 74⇑P **P** **15 11 25.7 -0.1**
baz=43,SNR=11
D17A Six Diamond Ra 43.49 67⇑P **P** **15 11 25.6 -0.3**
baz=43,SNR=9.1
G15A Dillon 43.49 71⇓P **P** **15 11 25.7 -0.3**
baz=43,SNR=6.3
EGMT Eagleton 43.57 66⇑P **P** **15 11 26.1 -0.4**
baz=43
EGMT Eagleton 43.57 66 *e*P **P** **15 11 26.6 0.0**
comp=Z,27nm,0.9s,mb5.0
I14A Mackay 43.60 73⇓P **P** **15 11 27.1 +0.2**
baz=43,SNR=11
L12A House Creek Ra 43.65 76⇑P **P** **15 11 27.9 +0.6**
baz=43,SNR=7.8
F16A Kennard Place, 43.67 69⇑P **P** **15 11 26.7 -0.7**
baz=43
H15A Lima 43.70 71⇓P **P** **15 11 27.5 -0.1**
baz=43,SNR=10
BOZ Bozeman (W) 43.74 70⇑P **P** **15 11 27.6 -0.4**
baz=44
BOZ Bozeman (W) 43.74 70 *e*P **P** **15 11 28.1 +0.1**
BOZ pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
BOZ Bozeman (W) 43.74 70 *e*P **P** **15 11 28.1 +0.1**
comp=Z,9.7nm,0.8s,mb4.6
E17A Martinsdale 43.76 68⇓P **P** **15 11 28.2 +0.1**
baz=44,SNR=6.8
NVAR Mina Array Bea 43.81 82 P **P** **15 11 28.9 +0.3**
comp=Z,2.5nm,0.8s,mb4.0,baz=295,slow=8.5,SNR=8.8
G16A Moss Hill, Enn 43.87 70⇑P **P** **15 11 28.5 -0.5**
baz=44,SNR=14
J14A Carey 43.90 74⇓P **P** **15 11 29.4 +0.2**
baz=44
D18A Linhart Farms, 43.98 67⇓P **P** **15 11 29.9 0.0**
baz=44,SNR=12
F17A Fitzpatrick Pl 44.17 69⇓P **P** **15 11 31.5 0.0**
baz=44,SNR=5.8
E18A Harlowton 44.25 68⇑P **P** **15 11 32.0 -0.1**
baz=44,SNR=10.0
ELK Elko 44.33 78 *e*P **P** **15 11 32.2 -0.5**
ELK pmax pmax
comp=Z,5.0nm,0.7s
ELK Elko 44.33 78 *e*P **P** **15 11 32.2 -0.5**
comp=Z,4.5nm,0.7s,mb4.3
N12A Clover Valley, 44.39 77⇓P **P** **15 11 33.7 +0.5**
baz=44
O11A Cowboy Ranch, 44.43 79⇑P **P** **15 11 34.2 +0.6**
baz=44
G17A Pierce Place, 44.44 70⇓P **P** **15 11 33.4 -0.2**
baz=44
H16A Russell Place, 44.48 71⇓P **P** **15 11 34.1 +0.2**
baz=44,SNR=19
J15A Blackfoot 44.51 73⇓P **P** **15 11 34.2 +0.1**
baz=44
M13A Montello 44.63 76⇓P **P** **15 11 35.6 +0.5**
baz=44
F18A Big Timber 44.73 68⇓P **P** **15 11 36.0 +0.1**
baz=44,SNR=5.4
I16A Newdale 44.80 72⇑P **P** **15 11 36.4 -0.1**
baz=44
YNR Norris Junctio 44.81 70 *e*P **P** **15 11 37.4 +0.9**
YFT Old Faithful 44.87 71 *e*P **P** **15 11 38.0 +1.0**
O12A Currie 44.91 78⇑P **P** **15 11 38.7 +1.3**
baz=45
H17A Grant Village 45.05 71⇑P **P** **15 11 39.9 +1.4**
baz=45,SNR=10
IMW Indian Meadow 45.12 71 *e*P **P** **15 11 40.3 +1.3**
comp=Z,12nm,1.0s,mb4.7
G18A Lazy EL Ranch, 45.14 69⇓P **P** **15 11 39.0 -0.1**
baz=45
BJI Beijing 45.18 282 P **P** **15 11 39.0 -0.5**
BJI S **S** **15 18 19.4 +3.8**
BJI AMB AMB
comp=Z,23nm,0.9s,mb5.0
BJI LR LR
comp=N,162nm,23.2s,MS4.1
BJI LR LR
comp=E,218nm,25.6s,MS4.1
BJI LR LR
comp=Z,97nm,22.6s,MS3.7
S10A Tonopah Range, 45.19 82⇑P **P** **15 11 39.7 +0.1**
baz=45
RRI2 Red Ridge 45.20 72 *e*P **P** **15 11 40.9 +1.2**
comp=Z,7.3nm,0.8s,mb4.6
Q11A Duckwater 45.21 80⇓P **P** **15 11 40.2 +0.4**
baz=45
HVU Hansel Valley 45.23 75 *e*P **P** **15 11 41.3 +1.4**
HVU pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
HVU Hansel Valley 45.23 75 *e*P **P** **15 11 41.3 +1.4**
comp=Z,8.7nm,0.6s,mb4.8
P12A McGill 45.29 79⇑P **P** **15 11 41.2 +0.8**
baz=45,SNR=5.4
MOOW Moose Ponds 45.32 71 *e*P **P** **15 11 41.0 +0.4**
comp=Z,36nm,2.5s,mb4.8
I17A Pilgram Creek 45.32 71⇓P **P** **15 11 40.3 -0.3**
baz=45
L15A Malad City 45.33 74⇑P **P** **15 11 40.7 0.0**
baz=45
K16A Soda Springs 45.34 73⇓P **P** **15 11 41.6 +0.9**
baz=45,SNR=19
TPAW Teton Pass 45.34 72 *e*P **P** **15 11 41.9 +1.1**
comp=Z,5.2nm,0.8s,mb4.4
RLMT Red Lodge 45.42 69⇓P **P** **15 11 41.3 -0.1**
baz=45
RLMT Red Lodge 45.42 69 *e*P **P** **15 11 42.2 +0.9**
comp=Z,21nm,1.0s,mb4.9
REDW Red Top Meadow 45.48 72 *e*P **P** **15 11 42.2 +0.4**
comp=Z,6.7nm,1.0s,mb4.4
LOHW Long Hollow 45.48 71 *e*P **P** **15 11 41.6 -0.2**
comp=Z,4.5nm,0.8s,mb4.3
N14A Grayback Hills 45.52 76⇓P **P** **15 11 42.7 +0.5**
baz=45
R11A Troy Canyon, C 45.55 81⇓P **P** **15 11 42.7 +0.2**
baz=45
P13A Bates Ranch, G 45.85 78⇑P **P** **15 11 45.3 +0.4**
baz=46
N15A Stansbury Isla 45.91 76⇓P **P** **15 11 45.3 +0.1**
baz=46
TLY Talaya 45.96 302 *e*P **P** **15 11 46.1 +0.6**
TLY pmax pmax
comp=Z,19nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,207nm,23.0s,MS4.0
J18A Kendall Valley 46.06 72⇑P **P** **15 11 46.4 0.0**
baz=46,SNR=12
ULN Ulaanbaatar 46.13 296⇑ *e*P **P** **15 11 47.3 +0.4**
ULN Ulaanbaatar 46.13 296 *e*P **P** **15 11 46.8 -0.1**
comp=Z,12nm,0.9s,mb4.8
DUG Dugway 46.14 77⇑P **P** **15 11 47.2 0.0**
baz=46
DUG Dugway 46.14 77 *e*P **P** **15 11 46.7 -0.4**
DUG pmax pmax
comp=Z,16nm,1.0s,mb4.9
DUG Dugway 46.14 77 *e*P **P** **15 11 46.6 -0.5**
comp=Z,16nm,1.0s,mb4.9
M16A Huntsville 46.20 75⇓P **P** **15 11 47.7 +0.1**
baz=46,SNR=8.3
FCC Fort Churchill 46.26 46 *e*P **P** **15 11 45.4 -2.4**
comp=Z,3.1nm,2.6s,mb3.8
O15A The Old Anders 46.30 76⇓P **P** **15 11 49.0 +0.6**
baz=46
P14A Drum Mountains 46.35 78⇑P **P** **15 11 49.5 +0.7**
baz=46
K18A Toltan Ranch, 46.38 72⇓P **P** **15 11 49.2 +0.3**
baz=46
T11A Corn Creek, Al 46.47 82⇑P **P** **15 11 49.4 -0.3**
baz=46,SNR=6.3
SONM Songino Array 46.52 297 P **P** **15 11 50.8 +0.8**
comp=Z,5.6nm,0.7s,mb4.6,baz=59,slow=8.9,SNR=34
SONM PcP PcP 15 13 23.6 0.0
comp=Z,3.3nm,0.9s,baz=75,slow=3.1,SNR=4.6
Q14A Sevier Lake (B 46.59 78⇑P **P** **15 11 51.3 +0.7**
baz=46
BW06 Boulder Array 46.59 72⇓P **P** **15 11 50.6 0.0**
baz=46
BW06 Boulder Array 46.59 72 *e*P **P** **15 11 50.9 +0.3**
PDAR Pinedale Array 46.59 72 P **P** **15 11 50.9 +0.2**
comp=Z,17nm,0.8s,mb5.0,baz=303,slow=4.2,SNR=82
M17A Scullys Gap (B 46.69 74⇓P **P** **15 11 51.4 +0.1**
baz=46
GSC Goldstone 46.70 85⇑P **P** **15 11 51.5 0.0**
baz=47
JLU Jordanelle 46.73 75 *e*P **P** **15 11 52.5 +0.7**
NLU North Lily Min 46.74 76 *e*P **P** **15 11 51.7 -0.1**
L18A Fontenelle, Gr 46.80 73⇓P **P** **15 11 52.4 +0.1**
baz=47
ZAK Zakamensk 46.85 301 *e*P **P** **15 11 52.8 +0.3**
ZAK *e* 15 13 25.5
ZAK pmax pmax
comp=Z,25nm,1.2s,mb5.0
P15A Leamington 46.85 77⇓P **P** **15 11 52.6 -0.1**
baz=47
N17A Moffit Pass 46.90 75⇑P **P** **15 11 52.8 -0.3**
baz=47
O16A Springville 46.94 76⇑P **P** **15 11 53.9 +0.6**
baz=47,SNR=5.3
K19A Absolon Red Bu 46.98 71⇓P **P** **15 11 53.6 0.0**

baz=47,SNR=21
M18A Lyman 47.08 74 ⇓P **P 15 11 54.4 0.0**
baz=47
S13A Holt Ranch, En 47.10 80 ⇑P **P 15 11 55.2 +0.6**
baz=47
MOY Mondy 47.37 304 *eP* **P 15 11 57.4 +0.9**
K20A Yellowstone Ra 47.38 71 ⇑P **P 15 11 55.6 -1.2**
baz=47
U12A Valley of Fire 47.40 82 ⇓P **P 15 11 57.3 +0.3**
baz=47
HHC Hu-ho-hao-te 47.51 286 *eP* **P 15 11 58.8 +1.0**
HHC S **S 15 18 45.0 -4.0**
HHC AMB AMB
comp=Z,11nm,1.0s,mb4.8
HHC AMB AMB
comp=Z,100nm,4.3s
HHC LR LR
comp=N,139nm,15.5s,MS4.2
HHC LR LR
comp=E,186nm,20.2s,MS4.2
HHC LR LR
comp=Z,119nm,17.8s,MS3.9
MSU Marysvale 47.56 78 *eP* **P 15 12 00.0 +1.8**
TMUT Trail Mountain 47.67 77 *eP* **P 15 12 00.2 +1.2**
U13A Pakoon Wash 47.77 82 ⇓P **P 15 11 59.4 -0.4**
baz=48
L20A Wamsutter 47.77 72 ⇓P **P 15 11 59.1 -0.7**
baz=48
N19A John Jarvie Ra 47.93 74 ⇑P **P 15 12 00.6 -0.5**
baz=48
P18A Preston Nutter 48.06 76 ⇑P **P 15 12 02.4 +0.3**
baz=48
R16A Teasdale 48.13 78 ⇓P **P 15 12 02.7 +0.1**
baz=48
M20A Sweetwater, Wa 48.17 72 ⇑P **P 15 12 03.2 +0.3**
baz=48,SNR=5.3
SRU San Rafael 48.20 76 ⇑P **P 15 12 03.6 +0.4**
baz=48
SRU San Rafael 48.20 76 *eP* **P 15 12 04.4 +1.2**
SRU pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SRU San Rafael 48.20 76 *eP* **P 15 12 04.4 +1.3**
comp=Z,6.2nm,0.7s,mb4.8
O19A Miners Draw (B 48.33 74 ⇓P **P 15 12 04.6 +0.5**
baz=48,SNR=15
L21A Rawlins 48.37 71 ⇓P **P 15 12 04.2 -0.3**
baz=48,SNR=6.7
Q18A Rafter H Ranch 48.45 76 ⇑P **P 15 12 04.8 -0.3**
baz=48
R17A Hanksville Air 48.52 77 ⇓P **P 15 12 05.6 0.0**
baz=48
N20A Spence Gulch, 48.52 73 ⇑P **P 15 12 05.0 -0.6**
baz=48
NJ2 Nanjing 48.58 272 *eP* **P 15 12 07.8 +1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
U15A North Rim 48.80 80 ⇓P **P 15 12 07.4 -0.4**
baz=49
V14A Boquillas Ranc 48.80 82 ⇓P **P 15 12 08.0 +0.2**
baz=49
P19A Cripple Cowboy 48.82 75 ⇓P **P 15 12 08.3 +0.4**
baz=49,SNR=30
S17A Black Ridge (B 48.95 78 ⇑P **P 15 12 08.0 -1.0**
baz=49
O20A White River Ci 48.96 74 ⇑P **P 15 12 08.8 -0.2**
baz=49,SNR=13
N21A Black Mountain 49.01 73 ⇓P **P 15 12 09.1 -0.3**
baz=49
R18A Canyonlands Na 49.04 77 ⇓P **P 15 12 09.7 0.0**
baz=49,SNR=6.0
RSSD Black Hills 49.05 67 *eP* **P 15 12 08.5 -1.1**
RSSD pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
RSSD Black Hills 49.05 67 *eP* **P 15 12 08.5 -1.1**
comp=Z,4.1nm,0.7s,mb4.6
Q19A Hogan Spring (49.07 76 ⇓P **P 15 12 09.2 -0.7**
baz=49,SNR=10
Y12C Blythe 49.14 85 ⇑P **P 15 12 10.4 0.0**
baz=49
M22A Cedar Creek Ra 49.17 72 ⇑P **P 15 12 10.2 -0.4**
baz=49,SNR=8.2
V15A Kaibab Nationa 49.26 81 ⇑P **P 15 12 11.2 -0.1**
baz=49,SNR=5.4
T17A Navajo Res., N 49.36 79 ⇓P **P 15 12 12.1 +0.1**
baz=49
O21A Pagoda 49.38 73 ⇑P **P 15 12 11.4 -0.7**
baz=49
S18A Hurst Farm, Bl 49.41 78 ⇓P **P 15 12 12.0 -0.5**
baz=49,SNR=7.9
R19A Curley Farm, L 49.49 76 ⇑P **P 15 12 13.0 0.0**
baz=49
N22A Wattenberg Ran 49.63 72 ⇑P **P 15 12 13.2 -0.8**
baz=49
PV04 Paradox Valley 49.64 76 *eP* **P 15 12 14.0 -0.2**
Q20A Ridgley Place, 49.66 75 ⇑P **P 15 12 14.2 -0.1**
baz=49
X14A Yava 49.69 83 ⇓P **P 15 12 14.7 +0.1**
baz=50
T18A Mexican Hat 49.84 78 ⇓P **P 15 12 15.1 -0.6**
baz=50,SNR=6.1
S19A Harvey Farm, M 49.91 77 ⇑P **P 15 12 15.3 -0.9**
baz=50,SNR=5.8
ULM Lac du Bonnet 49.98 56 P **P 15 12 16.1 -0.6**
comp=Z,2.6nm,0.8s,mb4.3,baz=292,slow=5.1,SNR=3.3
ULM LR LR 15 34 58.2
comp=Z,123nm,18.7s,MS3.9,baz=278,slow=38
SMCO Snowmass 50.32 74 *eP* **P 15 12 13.0 -6.4**
Y15A Casa Rosa Ranc 50.38 83 ⇓P **P 15 12 19.8 -0.1**
baz=50
SPB4 Spitsbergen Ar 50.54 356 *eP* **P 15 12 19.6 -0.9**
SPITS Spitsbergen Ar 50.54 356 P **P 15 12 20.4 -0.1**
comp=Z,9.4nm,0.5s,mb5.0,baz=3.8,slow=5.9,SNR=45
T19A Beclabito 50.56 78 ⇑P **P 15 12 21.1 -0.1**
baz=50,SNR=8.4
X16A Lo Mia Camp, P 50.63 82 ⇑P **P 15 12 21.8 +0.1**
baz=50
ISCO Idaho Springs 50.75 73 *eP* **P 15 12 22.6 0.0**
Y16A Circle Bar Ran 50.96 82 ⇑P **P 15 12 23.9 -0.4**
baz=51
115A Sonoran Desert 51.27 84 ⇓P **P 15 12 26.6 0.0**
baz=51
Y17A Roosevelt 51.48 82 ⇓P **P 15 12 28.1 0.0**
baz=51
SDCO Great Sand Dun 52.12 75 *eP* **P 15 12 33.4 +0.5**
comp=Z,6.0nm,0.9s,mb4.5
117A Oracle 52.29 83 ⇑P **P 15 12 33.9 -0.3**
baz=52
TUC Tucson 52.44 83 *eP* **P 15 12 33.3 -2.0**
TUC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
TUC Tucson 52.44 83 *eP* **P 15 12 33.3 -2.0**
comp=Z,3.8nm,0.9s,mb4.3
118A Homack Ranch, 52.73 82 ⇑P **P 15 12 37.1 -0.3**
baz=53
SSLB Suanglung 53.05 262 *eP* **P 15 12 37.9 -2.0**
comp=Z,38nm,1.3s,mb5.2
ANMO Albuquerque 53.36 78 ⇑*iP* **P 15 12 41.7 -0.3**
XAN Xi'an 53.46 281 P **P 15 12 41.6 -1.2**
XAN AP pP 15 12 55.3 -0.8
XAN PP PP 15 14 41.9 -1.5
XAN PPP 15 15 52.0
XAN S **S 15 20 09.1 -2.6**
XAN AMB AMB
comp=Z,7.0nm,1.1s,mb4.5
XAN LR LR
comp=N,28nm,23.8s,MS3.5
XAN LR LR
comp=E,50nm,24.6s,MS3.5
XAN LR LR
comp=Z,100nm,20.9s,MS3.9
318A Bisbee 53.52 84 ⇑P **P 15 12 42.9 -0.4**
baz=53
ECSD EROS,Sioux Fal 53.53 63 *eP* **P 15 12 41.4 -1.8**
comp=Z,5.8nm,0.8s,mb4.6
SUMG Summit 53.53 14 *eP* **P 15 12 41.8 -1.0**
comp=Z,16nm,0.9s,mb5.0
ZALV Zalesovo Beam 53.98 313 P **P 15 12 46.0 -0.4**
comp=Z,1.6nm,0.6s,mb4.1,baz=46,slow=8.5,SNR=6.8
ZALV PcP PcP 15 13 50.0 -1.0
comp=Z,3.3nm,0.8s,baz=25,slow=3.9,SNR=6.4
NVS Novosibirsk 54.13 315 *eP* **P 15 12 46.8 -0.6**
NVS *e* 15 13 50.8
LZH Lanzhou 55.21 286 *eP* **P 15 12 55.0 -0.4**
LZH AP pP 15 13 09.8 +1.0
LZH XP sP 15 13 15.3 +0.9
LZH *e*PP PP 15 14 59.6 +0.6
LZH AMB AMB
comp=Z,23nm,1.4s,mb5.0
LZH AMB AMB
comp=Z,97nm,5.3s
LZH LR LR
comp=E,398nm,16.3s
LZH LR LR
comp=Z,563nm,19.0s,MS4.7
GTA Gaotai 55.41 292 *eP* **P 15 12 57.3 +0.4**
GTA AP pP 15 13 08.3 -2.0
GTA XP sP 15 13 13.1 -2.8
GTA PP PP 15 15 03.3 +2.6
GTA S **S 15 20 36.1 -1.7**
GTA SS SS 15 24 18.8 -3.6
GTA AMB AMB
comp=Z,15nm,0.5s,mb5.3
GTA AMB AMB
comp=Z,89nm,4.8s
GTA LR LR
comp=N,122nm,16.1s,MS4.2
GTA LR LR
comp=E,128nm,17.8s,MS4.2
GTA LR LR
comp=Z,165nm,16.6s,MS4.2
AMTX Amarillo 56.33 75 *eP* **P 15 13 03.9 +0.5**
comp=Z,5.2nm,0.4s,mb4.9
KEV Kevo 57.86 350 *ep* **P 15 13 11.9 -1.9**
WMOK Wichita Mounta 58.18 73 *eP* **P 15 13 14.9 -1.6**
WMOK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
WMOK Wichita Mounta 58.18 73 *eP* **P 15 13 14.9 -1.7**
comp=Z,3.0nm,0.6s,mb4.5
ARCES ARCESS Array B 58.23 350 P **P 15 13 15.8 -0.6**
comp=Z,5.8nm,0.7s,mb4.7,baz=29,slow=8.4,SNR=21
LVZ Lovozero 58.56 346⇑ *eP* **P 15 13 18.5 -0.2**
LVZ pmax pmax
comp=Z,72nm,1.5s,mb5.5
CD2 Chengdu 58.78 282 P **P 15 13 21.3 +0.5**
CD2 AP pP 15 13 37.3 +3.0
CD2 XP sP 15 13 44.3 +4.5
CD2 PCP PcP 15 14 10.8 +0.8
CD2 PP PP 15 15 33.1 +2.2
CD2 S **S 15 21 18.4 -3.9**
CD2 SS SS 15 25 14.3 -1.3
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
CD2 AMB AMB
comp=Z,150nm,5.1s
CD2 LR LR
comp=N,340nm,6.6s
CD2 LR LR
comp=Z,120nm,6.6s
TXAR Lajitas Array 58.92 81 P **P 15 13 21.1 -0.7**
comp=Z,2.1nm,0.8s,mb4.2,baz=296,slow=4.7,SNR=21
KURK Kurchatov 58.98 314⇑ *eP* **P 15 13 21.4 -0.4**
KURK pmax pmax
comp=Z,23nm,1.0s,mb5.2
KURK Kurchatov 58.98 314 *eP* **P 15 13 21.3 -0.6**
comp=Z,13nm,0.6s,mb5.1
WMQ Urumqi 59.24 303 P **P 15 13 24.5 +0.7**
WMQ AP pP 15 13 40.8 +3.5
WMQ AMB AMB
comp=Z,24nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,216nm,4.5s
WMQ LR LR
comp=N,149nm,29.0s,MS4.1
WMQ LR LR
comp=E,127nm,26.0s,MS4.1
WMQ LR LR
comp=Z,164nm,22.0s,MS4.1
MK31 Makanchi Array 59.96 308 *eP* **P 15 13 27.2 -1.5**
MKAR Makanchi Array 59.96 308 P **P 15 13 28.2 -0.5**
comp=Z,5.9nm,0.5s,mb4.8,baz=50,slow=6.2,SNR=118
GYA Guiyang 60.10 276 P **P 15 13 29.3 -0.7**
GYA AP pP 15 13 45.0 +1.5
GYA XP sP 15 13 52.0 +2.9
GYA PP PP 15 15 43.3 +0.6
GYA PPP 15 17 09.1
GYA SCP ScP 15 18 09.3 -2.8
GYA PCS PcS 15 18 15.5 -2.4
GYA S **S 15 21 34.5 -5.0**
GYA XS sS 15 22 01.3 -0.9
GYA SS SS 15 25 33.3 -3.3
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,50nm,6.3s
GYA LR LR
comp=N,350nm,16.5s,MS4.7
GYA LR LR
comp=E,280nm,15.9s,MS4.7
GYA LR LR
comp=Z,340nm,16.3s,MS4.6
SCHQ Schefferville 60.30 38 P **P 15 13 30.4 -0.5**
comp=Z,8.0nm,0.9s,mb4.8,baz=310,slow=7.7,SNR=11
SCHQ Schefferville 60.30 38 *eP* **P 15 13 29.0 -1.9**
comp=Z,26nm,1.3s,mb5.1
JCT Junction City 60.50 77 *eP* **P 15 13 36.0 +3.4**
JCT pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
JCT Junction City 60.50 77 *eP* **P 15 13 36.0 +3.3**
comp=Z,5.6nm,0.5s,mb5.0
BVA0 Borovoye Array 60.88 320 *i* P **P 15 13 34.1 -0.7**
BVA0 pmax pmax
comp=Z,1.0nm,0.9s,mb4.0
BRVK Borovoye 60.90 320 *eP* **P 15 13 33.7 -1.3**
BRVK pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
BRVK Borovoye 60.90 320 *eP* **P 15 13 33.7 -1.3**
comp=Z,9.8nm,1.0s,mb4.9
MIAR Mount Ida 61.41 70 *eP* **P 15 13 37.3 -1.5**
MIAR pmax pmax
comp=Z,14nm,1.1s,mb5.0
MIAR Mount Ida 61.41 70 *eP* **P 15 13 37.3 -1.5**
comp=Z,14nm,1.1s,mb5.0
OLIL Olney 61.64 63 *eP* **P 15 13 39.3 -1.0**
comp=Z,35nm,0.9s,mb5.5
USIN University of 62.42 63 *eP* **P 15 13 45.0 -0.5**
comp=Z,35nm,0.9s,mb5.5
ARU Arti 62.63 328 *c iP* **P 15 13 46.0 -0.6**
ARU *e* 15 16 02.2
ARU *e*S **S 15 22 12.0 +1.2**
ARU *e*SS SS 15 26 14.0 -0.8
ARU pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
ARU Arti 62.63 328 *eP* **P 15 13 46.0 -0.6**
KMI Kunming 63.52 278 P **P 15 13 50.3 -2.6**
KMI AMB AMB
comp=Z,9.0nm,0.5s,mb5.1
JOF Joensuu 63.71 345 *ep* **P 15 13 52.2 -1.4**
comp=Z,14nm,0.6s,mb5.2
JOF Joensuu 63.71 345 *eP* **P 15 13 52.2 -1.4**
JOF pmax pmax
comp=Z,14nm,0.6s,mb5.2
KLMR Klimovskoe 64.07 340 *eP* **P 15 13 55.4 -0.6**
KLMR pmax pmax
comp=Z,32nm,1.1s,mb5.3
KAF Kangasniemi 65.24 347 *ep* **P 15 14 02.3 -1.3**
comp=Z,9.5nm,0.6s,mb5.0,baz=14,slow=5.9
KAF Kangasniemi 65.24 347 *eP* **P 15 14 02.3 -1.3**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
TKM2 Tokmak 2 66.05 309 *eP* **P 15 14 09.3 +0.1**
TKM2 pmax pmax
comp=Z,16nm,1.0s,mb5.0
TKM2 Tokmak 2 66.05 309 P **P 15 14 10.4 +1.3**
SNR=14
TKM2 Tokmak 2 66.05 309 *eP* **P 15 14 09.3 +0.2**
comp=Z,16nm,1.0s,mb5.0
USP Ospenovka 66.32 310 P **P 15 14 11.7 +0.8**
SNR=26
CHMS Chumysh 66.40 310 P **P 15 14 12.7 +1.3**
SNR=5.9
KBK Karagaybulak 66.56 309 P **P 15 14 14.1 +1.6**
SNR=12
AAK Ala-Archa 66.80 310⇑ *eP* **P 15 14 14.4 +0.4**
AAK pmax pmax
comp=Z,13nm,1.3s,mb4.8
AAK Ala-Archa 66.80 310 P **P 15 14 14.6 +0.6**
SNR=14
AAK Ala-Archa 66.80 310 *eP* **P 15 14 13.7 -0.3**
comp=Z,20nm,0.9s,mb5.1
PMG Port Moresby 67.01 216 LR LR 15 37 41.5
comp=Z,44nm,21.8s,MS3.6,baz=145,slow=31
PMG Port Moresby 67.01 216 *eP* **P 15 14 12.7 -2.8**
PMG pmax pmax
comp=Z,36nm,1.5s
PMG Port Moresby 67.01 216 *eP* **P 15 14 12.7 -2.8**
comp=Z,36nm,1.5s,mb5.2
EKS2 Erkin-Say 67.12 310 P **P 15 14 17.5 +1.5**
SNR=11
EKS2 Erkin-Say 67.12 310 *eP* **P 15 14 16.9 +0.9**
comp=Z,26nm,0.9s,mb5.3
LSA Lhasa 67.28 289 P **P 15 14 18.8 +1.6**
LSA Lhasa 67.28 289 *eP* **P 15 14 18.3 +1.1**
LSA pmax pmax
comp=Z,21nm,1.2s,mb5.0
LSA Lhasa 67.28 289 *eP* **P 15 14 18.3 +1.1**
comp=Z,21nm,1.2s,mb5.0
AML Almayashu 67.57 310 P **P 15 14 20.5 +1.6**
SNR=18
AML Almayashu 67.57 310 *eP* **P 15 14 19.9 +1.0**
comp=Z,18nm,0.8s,mb5.2
NB2 NORSAR Subarra 67.81 355 P **P 15 14 19.7 -0.3**
comp=Z,2.9nm,0.6s,mb4.5,baz=7.5,slow=6.5
NOA NORSAR Array B 67.81 355 P **P 15 14 20.0 0.0**
comp=Z,2.1nm,0.5s,mb4.5,baz=8.1,slow=6.3,SNR=27
AB31 Akbulak array 67.94 323 P **P 15 14 20.6 -0.5**
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KK31 Karatay Array 68.33 312 *i* P **P 15 14 24.0 +0.4**
KK31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VSU Vasula 68.67 346⇑ *iP* **P 15 14 25.3 -0.2**
VSU pmax pmax
comp=Z,61nm,1.3s,mb5.4
OBN Obninsk 69.96 339 *ceP* **P 15 14 33.0 -0.5**
OBN pmax pmax
comp=Z,38nm,0.8s,mb5.4
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
OBN Obninsk 69.96 339 *eP* **P 15 14 32.7 -0.7**
comp=Z,52nm,1.0s,mb5.4
CHTO Chiang Mai 70.53 276 *eP* **P 15 14 36.6 -0.9**
CHTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CHTO Chiang Mai 70.53 276 *eP* **P 15 14 36.6 -0.9**
comp=Z,3.4nm,0.9s,mb4.3
CMAR Chiang Mai Arr 70.80 276 P **P 15 14 38.7 -0.4**
comp=Z,2.4nm,0.9s,mb4.1,baz=26,slow=7.1,SNR=17
GUN Gumba 71.70 292 *eP* **P 15 14 45.5 +1.0**
comp=Z,59nm,0.4s,mb5.9
JIRN Jiri 71.71 291 *eP* **P 15 14 45.7 +1.1**
comp=Z,36nm,0.5s,mb5.6
RAMN Ramite 72.00 291 *eP* **P 15 14 46.9 +0.6**
comp=Z,67nm,0.6s,mb5.8
KKN Kakani 72.14 292 *eP* **P 15 14 47.9 +0.7**
comp=Z,36nm,0.5s,mb5.5
KKN Kakani 72.14 292 *eP* **P 15 14 47.9 +0.7**
KKN pmax pmax
comp=Z,36nm,0.5s,mb5.6
PKI Pulchoki 72.23 292 *eP* **P 15 14 48.2 +0.5**
comp=Z,26nm,0.6s,mb5.3
PKI Pulchoki 72.23 292 *eP* **P 15 14 48.2 +0.5**
PKI pmax pmax
comp=Z,26nm,0.6s,mb5.3
PKIN Phulchoki 72.24 292 *eP* **P 15 14 48.1 +0.4**
comp=Z,18nm,0.4s,mb5.3
GKN Gorkha 72.36 293 *eP* **P 15 14 49.0 +0.6**
comp=Z,28nm,0.5s,mb5.5
VRHR Novokhopersk 72.37 334 *eP* **P 15 14 47.8 -0.3**
VRHR pmax pmax
comp=Z,20nm,0.4s,mb5.4
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.5s
DMN Daman 72.38 292 *eP* **P 15 14 49.2 +0.6**
DANN Dangsing 72.61 294 *eP* **P 15 14 50.7 +0.8**
VSR Storozhevoye 72.91 336 *eP* **P 15 14 49.5 -1.8**
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
VSR pmax pmax
comp=E,10.0nm,1.3s
VORD Divnogorie 73.11 336 *eP* **P 15 14 50.9 -1.6**
VORD pmax pmax
comp=Z,70nm,0.4s,mb5.9
VORD pmax pmax
comp=N,210nm,0.6s
VORD pmax pmax
comp=E,310nm,0.4s
KOLN Koldanda 73.14 293 *eP* **P 15 14 53.4 +0.3**
PPT Papeete 73.22 151 *e*LR LR 15 37 13.0
comp=E,141nm,30.2s
BSEG Bad Segeberg 74.94 354 *eP* **P 15 15 03.5 +0.4**
BSEG pmax pmax
comp=Z,24nm,0.9s,mb5.1
BSEG Bad Segeberg 74.94 354 *eP* **P 15 15 03.5 +0.4**
comp=Z,24nm,0.9s,mb5.1
AKASG Malin Array Be 75.65 342 P **P 15 15 07.0 -0.3**
comp=Z,21nm,0.4s,mb5.4,baz=20,slow=6.6,SNR=41
AKASG Malin Array Be 75.65 342 P **P 15 15 07.0 -0.3**
AKBB Malin Array Si 75.65 342 *eP* **P 15 15 06.5 -0.8**
KIEV Kiev 75.66 342 *eP* **P 15 15 06.8 -0.5**
KIEV pmax pmax
comp=Z,48nm,0.9s,mb5.4
KIEV Kiev 75.66 342 *eP* **P 15 15 06.8 -0.5**
comp=Z,48nm,0.9s,mb5.4
KBL Kabul 75.76 308 *eP* **P 15 15 07.6 -0.6**
KBL pmax pmax
comp=Z,30nm,0.9s,mb5.2
KBL Kabul 75.76 308 *eP* **P 15 15 07.6 -0.6**
comp=Z,30nm,0.9s,mb5.2
NRDL Niedersach Rie 76.39 354 *eP* **P 15 15 11.1 -0.3**
comp=Z,16nm,1.1s,mb4.9
IBBN Ibbenburen 76.71 356 *eP* **P 15 15 13.6 +0.4**
comp=Z,42nm,1.2s,mb5.2
CLZ Clausthal 77.02 354 *eP* **P 15 15 15.4 +0.4**
CLZ pmax pmax
comp=Z,21nm,1.0s,mb5.0
CLZ Clausthal 77.02 354 *eP* **P 15 15 15.4 +0.4**
comp=Z,21nm,1.0s,mb5.0
CTA Charters Tower 77.19 213 LR LR 15 43 51.3
comp=Z,46nm,19.8s,MS3.8,baz=54,slow=31
CLL Collm 77.35 352⇓ *iP* **P 15 15 16.7 -0.2**
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 77.35 352 *eP* **P 15 15 16.7 -0.2**
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 77.35 352⇓ *iP* **P 15 15 16.7 -0.2**
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 77.35 352⇓ *iP* **P 15 15 16.7 -0.2**
comp=Z,6.0nm,0.8s,mb4.6
KSP Ksiaz 77.49 350 *eP* **P 15 15 17.8 +0.1**
OJC Ojcow 77.68 348 *eP* **P 15 15 18.8 +0.1**
BRG Berggiesshubel 77.70 352 *i* P **P 15 15 18.3 -0.5**
BRG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BRG Berggiesshubel 77.70 352 *eP* **P 15 15 18.3 -0.5**
comp=Z,10.0nm,1.2s,mb4.6
BRG Berggiesshubel 77.70 352 *i* P **P 15 15 18.3 -0.5**
comp=Z,6.0nm,0.7s,mb4.6
KWP Kalwaria 77.83 346 *eP* **P 15 15 20.6 +1.0**
UPC Upice 77.86 350⇑ *eP* **P 15 15 19.6 -0.1**
DPC Dobruska-Polom 77.98 350⇑ *iP* **P 15 15 20.6 +0.2**
PVCC Panska Ves 77.98 351⇑ *eP* **P 15 15 20.5 +0.1**
UBBA Unterbreizbach 78.07 354 *eP* **P 15 15 20.8 -0.1**
comp=Z,10.0nm,1.4s,mb4.5
MOX Moxa 78.12 353 *eP* **P 15 15 21.0 -0.2**
comp=Z,16nm,1.4s,mb4.8
MOX Moxa 78.12 353 *eP* **P 15 15 21.0 -0.2**
MOX pmax pmax
comp=Z,16nm,1.4s,mb4.8
MOX Moxa 78.12 353 *eP* **P 15 15 21.2 0.0**
comp=Z,11nm,1.1s,mb4.7
STHS Stebnicka Huta 78.26 347 *eP* **P 15 15 22.8 +0.8**
STHS pmax pmax
comp=Z,19nm,1.4s,mb4.8
STHS Stebnicka Huta 78.26 347 *eP* **P 15 15 22.8 +0.8**
comp=Z,18nm,1.4s,mb4.8
OKC Ostrava-Krasne 78.27 349⇑ *eP* **P 15 15 21.9 -0.1**
TANN Tannenbergstha 78.28 352 *eP* **P 15 15 22.2 +0.1**
comp=Z,17nm,1.8s,mb4.7
BEBN Eben Emael 78.30 357 P **P 15 15 22.2 0.0**
NKC Novy Kostel 78.47 352⇑ *eP* **P 15 15 23.2 +0.1**
MEM Membach 78.48 357 P **P 15 15 22.9 -0.3**
comp=Z,12nm,1.2s,mb4.7
KIV Kislovodsk 78.51 331⇑ *iP* **P 15 15 23.7 +0.2**
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.7

KIV MLR MLR
comp=Z,100nm,22.0s,MS4.1
PRU Pruhonice 78.52 351 ⇑*i*P P 15 15 23.1 -0.3
SNF Seneffe 78.63 358 P P 15 15 23.8 -0.2
comp=Z,6.9nm,1.1s,mb4.5
BCLA Clavier 78.69 357 P P 15 15 24.4 +0.1
comp=Z,5.4nm,1.0s,mb4.4
TBI Tubuai 78.70 152 *e*LR LR 15 39 51.5
comp=Z,172nm,23.5s
CRVS Cervenica-Dubn 78.73 346 *i*P P 15 15 25.1 +0.5
CRVS pmax pmax
comp=Z,11nm,0.9s,mb4.8
CRVS Cervenica-Dubn 78.73 346 *i*P P 15 15 25.1 +0.5
comp=Z,10nm,0.9s,mb4.8
MANZ Manzenberg 78.74 353 *e*P P 15 15 24.9 +0.3
comp=Z,7.0nm,1.1s,mb4.5
TNS Taunus Mts 78.75 355 *e*P P 15 15 24.7 0.0
TNS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
TNS Taunus Mts 78.75 355 *e*P P 15 15 24.7 0.0
comp=Z,7.0nm,0.7s,mb4.7
ROTZ Rotzenmuhle 78.95 353 *e*P P 15 15 26.2 +0.4
comp=Z,7.0nm,1.1s,mb4.5
VRAC Vranov 78.97 350 ⇓*i*P P 15 15 26.6 +0.7
VRAC Vranov 78.97 350 ⇓P P 15 15 26.6 +0.8
GIVF Givet 79.03 357 *e*P P 15 15 26.1 -0.1
comp=Z,28nm,0.9s,mb4.9
GIVF Givet 79.03 357 *e*P P 15 15 26.1 -0.1
GIVF pmax pmax
comp=Z,14nm,0.9s,mb4.9
GIVF Givet 79.03 357 *e*P P 15 15 26.1 -0.1
comp=Z,14nm,0.9s,mb4.9
DOU Dourbes 79.04 358 P P 15 15 26.4 +0.1
BAIF Baives 79.08 358 *e*P P 15 15 26.7 +0.2
comp=Z,29nm,0.8s,mb4.9
BAIF Baives 79.08 358 *e*P P 15 15 26.7 +0.2
BAIF pmax pmax
comp=Z,14nm,0.8s,mb4.9
BAIF Baives 79.08 358 *e*P P 15 15 26.7 +0.2
comp=Z,14nm,0.8s,mb5.0
GRA1 Grafenberg Arr 79.10 353 *e*P P 15 15 27.0 +0.4
comp=Z,20nm,1.1s,mb5.0
GRF Grafenberg Arr 79.10 353 *e*P P 15 15 27.0 +0.4
GRF pmax pmax
comp=Z,20nm,1.1s,mb5.0
GRF Grafenberg Arr 79.10 353 *e*P P 15 15 27.0 +0.4
comp=Z,20nm,1.1s,mb5.0
KECS Kecovo 79.28 347 *e*P P 15 15 27.9 +0.3
KECS *e* pP 15 15 42.0 +0.4
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KECS Kecovo 79.28 347 *e*P P 15 15 27.9 +0.3
comp=Z,8.4nm,0.9s,mb4.7
KECS *e* pP 15 15 42.0 +0.4
TRPA Tarpa 79.32 345 ⇑*i*P P 15 15 28.4 +0.6
BUR08 Bucovina Ar. S 79.34 344 *e*P P 15 15 28.5 +0.6
BURAR Bucovina Array 79.36 343 ⇑*i*P P 15 15 28.5 +0.4
WLF Walferdange 79.42 356 P P 15 15 28.7 +0.4
comp=Z,5.6nm,1.1s,mb4.4
WLF Walferdange 79.42 356 *e*P P 15 15 28.7 +0.4
comp=Z,10.0nm,1.0s,mb4.7
KHC Kasperske Hory 79.46 352 ⇑*i*P P 15 15 28.8 +0.2
KOLL Kolacno 79.47 348 *e*P P 15 15 28.4 -0.2
VYHS Vyhne 79.50 348 *i*P P 15 15 29.2 +0.4
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VYHS Vyhne 79.50 348 *i*P P 15 15 29.2 +0.4
comp=Z,5.5nm,1.1s,mb4.4
WET Wettzell 79.51 352 *e*P P 15 15 29.1 +0.3
WET pmax pmax
comp=Z,11nm,1.4s,mb4.6
WET Wettzell 79.51 352 *e*P P 15 15 29.1 +0.3
comp=Z,11nm,1.4s,mb4.6
SMOL Smolenice 79.66 349 *e*P P 15 15 30.4 +0.8
GEC2 GERESS Array S 79.73 351 *e*P P 15 15 30.1 +0.1
GEC2 pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
GEC2 GERESS Array S 79.73 351 *e*P P 15 15 30.1 +0.1
comp=Z,8.0nm,1.2s,mb4.5
GERES GERESS Array B 79.73 351 P P 15 15 30.2 +0.2
comp=Z,2.4nm,0.6s,mb4.3,baz=27,slow=4.9,SNR=22
PSZ Piszkesteto 79.92 347 ⇑P P 15 15 32.0 +0.9
PSZ Piszkesteto 79.92 347 ⇑P P 15 15 32.0 +1.0
ZST Bratislava 80.01 349 *e*P P 15 15 32.6 +1.1
ZST pmax pmax
comp=Z,14nm,1.1s,mb4.8
ZST Bratislava 80.01 349 *e*P P 15 15 32.6 +1.1
comp=Z,14nm,1.1s,mb4.8
CONA Conrad Observa 80.42 350 ⇑*i*P P 15 15 34.5 +0.8
comp=Z,12nm,1.1s,mb4.7
CSNA Conrad Observa 80.42 350 ⇑*i*P P 15 15 34.5 +0.8
comp=Z,11nm,1.1s,mb4.7
FLN La Foliniere 80.42 1 *e*P P 15 15 33.4 -0.3
comp=Z,48nm,1.1s,mb5.1
FLN La Foliniere 80.42 1 *e*P P 15 15 33.4 -0.3
FLN pmax pmax
comp=Z,24nm,1.1s,mb5.0
FLN La Foliniere 80.42 1 *e*P P 15 15 33.4 -0.3
comp=Z,24nm,1.1s,mb5.0
LDF La Druitiere 80.59 1 *e*P P 15 15 34.2 -0.5
comp=Z,17nm,0.7s,mb4.8
LDF La Druitiere 80.59 1 *e*P P 15 15 34.2 -0.5
LDF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LDF La Druitiere 80.59 1 *e*P P 15 15 34.2 -0.5
comp=Z,8.4nm,0.7s,mb4.8
DRGR 80.59 345 ⇑*i*P P 15 15 35.2 +0.5
DRGR 80.59 345 ⇑P P 15 15 35.2 +0.5
MEZF Maizieres J'vi 80.62 357 *e*P P 15 15 35.0 +0.2
comp=Z,88nm,1.3s,mb5.2
MEZF Maizieres J'vi 80.62 357 *e*P P 15 15 35.0 +0.2
comp=Z,88nm,1.3s,mb5.5
CDF Champ du Feu 80.62 356 *e*P P 15 15 34.7 -0.1
comp=Z,11nm,1.0s,mb4.5
CDF Champ du Feu 80.62 356 *e*P P 15 15 34.7 -0.1
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CDF Champ du Feu 80.62 356 *e*P P 15 15 34.7 -0.1
comp=Z,5.6nm,1.0s,mb4.5
BFO Black Forest 80.65 355 *e*P P 15 15 35.1 +0.1
BFO pmax pmax
comp=Z,13nm,1.6s,mb4.6
BFO Black Forest 80.65 355 *e*P P 15 15 35.1 +0.1
comp=Z,13nm,1.6s,mb4.6
VRI Vrincioaia 80.76 342 ⇑*i*P P 15 15 36.7 +1.1
VRI Vrincioaia 80.76 342 ⇑P P 15 15 36.7 +1.0
GRR Gorron 80.79 1 *e*P P 15 15 35.6 -0.1
comp=Z,22nm,0.8s,mb4.9
GRR Gorron 80.79 1 *e*P P 15 15 35.6 -0.1
GRR pmax pmax
comp=Z,11nm,0.8s,mb4.8
GRR Gorron 80.79 1 *e*P P 15 15 35.6 -0.1
comp=Z,11nm,0.8s,mb4.8
ROSF Rostrenen 80.79 3 *e*P P 15 15 35.8 +0.1
SGMF Saint Gilles 80.89 2 *e*P P 15 15 36.2 -0.1
comp=Z,65nm,1.1s,mb5.2
SGMF Saint Gilles 80.89 2 *e*P P 15 15 36.2 -0.1
SGMF pmax pmax
comp=Z,33nm,1.1s,mb5.2
SGMF Saint Gilles 80.89 2 *e*P P 15 15 36.2 -0.1
comp=Z,33nm,1.1s,mb5.2
RJOB Jochberg 80.91 352 *e*P P 15 15 36.8 +0.4
comp=Z,7.0nm,0.9s,mb4.6
TLCR 80.99 340 ⇓*i*P P 15 15 37.3 +0.4
HAU Haudompre 81.07 356 *e*P P 15 15 37.1 -0.1
comp=Z,13nm,0.9s,mb4.6
HAU Haudompre 81.07 356 *e*P P 15 15 37.1 -0.1
HAU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
HAU Haudompre 81.07 356 *e*P P 15 15 37.1 -0.1
comp=Z,6.7nm,0.9s,mb4.6
ARSA Arzberg 81.12 350 ⇑*i*P P 15 15 38.4 +0.8
comp=Z,9.5nm,1.1s,mb4.7
QUIF Quistinic 81.21 3 *e*P P 15 15 38.0 0.0
HINF Hinteralfeld 81.23 356 *e*P P 15 15 37.7 -0.4
comp=Z,9.1nm,1.0s,mb4.4
HINF Hinteralfeld 81.23 356 *e*P P 15 15 37.7 -0.4
HINF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
HINF Hinteralfeld 81.23 356 *e*P P 15 15 37.7 -0.4
comp=Z,4.6nm,1.0s,mb4.4
MOTA Moosalm 81.44 353 ⇑*i*P P 15 15 39.4 +0.2
comp=Z,9.5nm,1.0s,mb4.7
WTTA Wattenberg 81.48 353 ⇑*i*P P 15 15 39.9 +0.5
comp=Z,16nm,1.0s,mb4.9
VOIR 81.50 343 ⇓*i*P P 15 15 41.2 +1.7
VOIR 81.50 343 ⇓P P 15 15 41.2 +1.6
KBA Koelnbreinsper 81.52 351 *i*P P 15 15 40.6 +1.0
comp=Z,37nm,0.9s,mb5.3,SNR=28
HARR Harsova 81.65 341 ⇓*i*P P 15 15 41.3 +0.9
HARR Harsova 81.65 341 ⇓P P 15 15 41.3 +1.0
WRAB Tennant Creek 81.70 224 P P 15 15 43.4 +2.6
WRAB pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
WRAB Tennant Creek 81.70 224 P P 15 15 43.4 +2.6
comp=Z,4.9nm,1.0s,mb4.4
WRA Warramunga Arr 81.72 224 P P 15 15 38.6 -2.2
comp=Z,2.1nm,0.9s,mb4.1,baz=31,slow=5.8,SNR=4.6
SOKA Soboth 81.74 350 ⇑*i*P P 15 15 41.3 +0.5
comp=Z,20nm,1.0s,mb5.0
PKSM Moragy 81.76 348 ⇓*i*P P 15 15 40.8 -0.1
PKSM Moragy 81.76 348 ⇓P P 15 15 40.8 -0.1
TIRR Tirgusor 81.77 340 ⇓*i*P P 15 15 41.3 +0.3
TIRR Tirgusor 81.77 340 ⇓P P 15 15 41.3 +0.3
PERS Pernice 81.78 350 *e*P P 15 15 41.2 +0.2
FETA Feichten 81.79 353 ⇑*i*P P 15 15 41.6 +0.5
comp=Z,14nm,1.1s,mb4.8
LOR Lormes 81.88 358 *e*P P 15 15 41.5 0.0
comp=Z,34nm,1.2s,mb4.8
LOR Lormes 81.88 358 *e*P P 15 15 41.5 0.0
LOR pmax pmax
comp=Z,17nm,1.2s,mb4.8
LOR Lormes 81.88 358 *e*P P 15 15 41.5 0.0
comp=Z,17nm,1.2s,mb4.8
BZS Buzias 81.91 345 ⇑*i*P P 15 15 42.1 +0.4
BZS Buzias 81.91 345 ⇑P P 15 15 42.1 +0.4
ABTA Abfaltersbach 81.92 352 ⇑*i*P P 15 15 42.1 +0.3
comp=Z,12nm,1.0s,mb4.8,SNR=8.6
GZR Gura Zlata 81.94 345 ⇑*i*P P 15 15 42.6 +0.7
OBKA Obir 81.96 350 ⇑*i*P P 15 15 42.9 +0.9
comp=Z,13nm,0.9s,mb4.9
SSF Saint Saulge 82.10 358 *e*P P 15 15 42.7 0.0
comp=Z,21nm,1.1s,mb4.7
SSF Saint Saulge 82.10 358 *e*P P 15 15 42.7 0.0
SSF pmax pmax
comp=Z,11nm,1.1s,mb4.7
SSF Saint Saulge 82.10 358 *e*P P 15 15 42.7 0.0
comp=Z,11nm,1.1s,mb4.7
ROBS Robic 82.33 351 *e*P P 15 15 43.2 -0.7
AVF Avril sur Loir 82.37 358 *e*P P 15 15 44.1 0.0
comp=Z,20nm,1.1s,mb4.7
AVF Avril sur Loir 82.37 358 *e*P P 15 15 44.1 0.0
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
AVF Avril sur Loir 82.37 358 *e*P P 15 15 44.1 0.0
comp=Z,9.8nm,1.1s,mb4.7
TUE Stuetta 82.44 354 *e*P P 15 15 44.2 -0.2
comp=Z,5.8nm,0.8s,mb4.6
CABF La Chapelle 82.47 356 *e*P P 15 15 45.1 +0.5
comp=Z,42nm,1.3s,mb4.9
CABF La Chapelle 82.47 356 *e*P P 15 15 45.1 +0.5
CABF pmax pmax
comp=Z,21nm,1.3s,mb4.9
CABF La Chapelle 82.47 356 *e*P P 15 15 45.1 +0.5
comp=Z,21nm,1.3s,mb4.9
SMF Signal de Mont 82.51 358 *e*P P 15 15 44.8 0.0
comp=Z,30nm,1.0s,mb5.0
SMF Signal de Mont 82.51 358 *e*P P 15 15 44.8 0.0
SMF pmax pmax
comp=Z,15nm,1.0s,mb5.0
SMF Signal de Mont 82.51 358 *e*P P 15 15 44.8 0.0
comp=Z,15nm,1.0s,mb5.0
MFF Saint Martin d 82.58 1 *e*P P 15 15 45.4 +0.2
comp=Z,57nm,1.3s,mb5.2
MFF Saint Martin d 82.58 1 *e*P P 15 15 45.4 +0.2
MFF pmax pmax
comp=Z,29nm,1.3s,mb5.2
MFF Saint Martin d 82.58 1 *e*P P 15 15 45.4 +0.2
comp=Z,29nm,1.3s,mb5.1
BGF Bois d'Agland 82.61 359 *e*P P 15 15 45.4 0.0
BOJS Bojanci 82.88 350 *e*P P 15 15 46.6 -0.1
TCF Toulx Ste Croi 82.89 359 *e*P P 15 15 46.6 -0.2
comp=Z,17nm,1.0s,mb4.8
TCF Toulx Ste Croi 82.89 359 *e*P P 15 15 46.6 -0.2
TCF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
TCF Toulx Ste Croi 82.89 359 *e*P P 15 15 46.6 -0.2
comp=Z,8.6nm,1.0s,mb4.7
LPG La Plagne 83.55 356 *e*P P 15 15 51.6 +1.4
comp=Z,111nm,1.0s,mb4.7
LPG La Plagne 83.55 356 *e*P P 15 15 51.6 +1.4
LPG pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
LPG La Plagne 83.55 356 *e*P P 15 15 51.6 +1.4
comp=Z,5.7nm,1.0s,mb4.7
RJF Les Rejaudoux 83.88 360 *e*P P 15 15 52.0 +0.1
comp=Z,24nm,1.1s,mb4.9
RJF Les Rejaudoux 83.88 360 *e*P P 15 15 52.0 +0.1
RJF pmax pmax
comp=Z,12nm,1.1s,mb4.9
RJF Les Rejaudoux 83.88 360 *e*P P 15 15 52.0 +0.1
comp=Z,12nm,1.1s,mb4.9
BNI Bardonecchia 84.00 356 *e*P P 15 15 47.7 -4.8
BNI pmax pmax
comp=Z,20nm,1.3s,mb5.1
BNI Bardonecchia 84.00 356 *e*P P 15 15 47.7 -4.8
comp=Z,20nm,1.3s,mb5.1
HYB Hyderabad 84.06 290 *i*P P 15 15 53.0 -0.2
FITZ Fitzroy Crossi 84.16 232 ⇑*i*P P 15 15 52.2 -1.4
comp=Z,16nm,0.7s,mb5.2
FITZ Fitzroy Crossi 84.16 232 *e*P P 15 15 52.4 -1.2
comp=Z,10nm,0.8s,mb5.0
FITZ *e* pP 15 16 06.8 -1.0
ORIF Oris-en-Rattie 84.17 356 *e*P P 15 15 54.1 +0.7
LFF La Frestale 84.25 0 *e*P P 15 15 54.1 +0.3
CAF Calviac 84.25 359 *e*P P 15 15 54.1 +0.3
comp=Z,32nm,1.3s,mb5.0
CAF Calviac 84.25 359 *e*P P 15 15 54.1 +0.3
CAF pmax pmax
comp=Z,16nm,1.3s,mb5.0
CAF Calviac 84.25 359 *e*P P 15 15 54.1 +0.3
comp=Z,16nm,1.3s,mb5.0
VIVF Saint-Julien-l 84.27 357 *e*P P 15 15 54.3 +0.4
comp=Z,12nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.27 357 *e*P P 15 15 54.3 +0.4
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.27 357 *e*P P 15 15 54.3 +0.4
comp=Z,6.1nm,0.9s,mb4.7
MBDF Montbardon 84.32 356 *e*P P 15 15 54.9 +0.7
comp=Z,18nm,0.9s,mb4.9
MBDF Montbardon 84.32 356 *e*P P 15 15 54.9 +0.7
MBDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
MBDF Montbardon 84.32 356 *e*P P 15 15 54.9 +0.7
comp=Z,8.9nm,0.9s,mb4.9
BRTR Keskin Array B 85.02 335 P P 15 15 58.1 +0.3
comp=Z,7.1nm,0.9s,mb4.8,baz=62,slow=2.6,SNR=22
BRTR Keskin Array B 85.02 335 *i*P P 15 15 58.0 +0.2
BRTR pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 85.02 335 P P 15 15 58.1 +0.3
LASF Ste Croix 85.08 358 *e*P P 15 15 57.8 -0.2
SMRF Simiane la Rot 85.12 357 *e*P P 15 15 59.1 +0.9
comp=Z,92nm,1.4s,mb5.4
SMRF Simiane la Rot 85.12 357 *e*P P 15 15 59.1 +0.9
comp=Z,92nm,1.4s,mb5.7
ASAR Alice Springs 85.19 222 P P 15 15 57.2 -1.4
comp=Z,1.6nm,0.7s,mb4.2,baz=26,slow=6.0,SNR=20
FRF La Foret Royal 85.49 356 *e*P P 15 15 59.9 -0.2
comp=Z,64nm,1.2s,mb5.3
FRF La Foret Royal 85.49 356 *e*P P 15 15 59.9 -0.2
FRF pmax pmax
comp=Z,32nm,1.2s,mb5.3
FRF La Foret Royal 85.49 356 *e*P P 15 15 59.9 -0.2
comp=Z,32nm,1.2s,mb5.3
MTLF Montolieu 85.84 359 *e*P P 15 16 02.0 +0.2
EPF Esparros 86.16 0 *e*P P 15 16 02.9 -0.5
ETSF Etsaut 86.28 1 *e*P P 15 16 04.3 +0.3
PGF Pioggiola 86.37 354 *e*P P 15 16 04.4 0.0
comp=Z,44nm,1.0s,mb5.4
PGF Pioggiola 86.37 354 *e*P P 15 16 04.4 0.0
PGF pmax pmax
comp=Z,22nm,1.0s,mb5.3
PGF Pioggiola 86.37 354 *e*P P 15 16 04.4 0.0
comp=Z,22nm,1.0s,mb5.3
ESDC Sonseca Array 89.41 4 P P 15 16 19.0 0.0
comp=Z,0.6nm,0.4s,mb4.2,baz=333,slow=4.4,SNR=6.9
STKA Stephens Creek 89.64 213 P P 15 16 18.7 -1.2
comp=Z,4.7nm,0.9s,mb4.8,baz=90,slow=3.0,SNR=3.7
RPN Rapa Nui 99.16 122 LR LR 15 53 00.8
comp=Z,56nm,20.5s,MS4.0,baz=47,slow=30
TORD Torodi Ar. Bea 115.93 359 PKP PKPdf 15 22 04.1 -1.1
comp=Z,0.3nm,0.5s,baz=347,slow=3.5,SNR=2.8
DBIC Dimbokro 122.16 7 PKP PKPdf 15 22 16.3 -1.0
comp=Z,1.2nm,0.5s,baz=302,slow=6.2,SNR=5.4
DBIC Dimbokro 122.16 7 PKP PKPdf 15 22 16.3 -1.0
CPUP Villa Florida 129.85 83 PKP PKPdf 15 22 30.9 -0.6
comp=Z,0.2nm,0.3s,baz=337,slow=6.5,SNR=3.0
TSUM Tsumeb 145.44 331 *e*P PKPdf 15 23 00.3 +0.1
LBTB Lobatse 147.69 315 *e*PKP2 PKPbc 15 23 06.5 -0.2
BOSA Boshof 150.92 312 PKPbc PKPbc 15 23 14.7 0.0
comp=Z,3.9nm,0.7s,baz=45,slow=2.5,SNR=7.7

*CSEM **21** 15:07:14.5±0.0,39.38N×3307E,h2km,MD3.6,Error ellipse: s-maj=1.1km s-min=1.0km az=173.0*
*DDA **21** 15:07:15.4,39.38N×33.10E,h9km±1km,Md3.4*
*ISK **21** 15:07:15.1,39.39N×3307E,h4km,MD3.6*
*ISCJB **21** 15:07:16.2±0.3,3940N±002×3309E±003,h10km,Error ellipse: s-maj=3.4km s-min=3.0km az=172.4*

ISC 21 15:07:16.8±0.3,3940N±002×3308E±003,h10km,n46,
σ0s85/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.50**	**93**	PG	**Pg**	**15 07 24.7**	**-1.8**
LOD	**Lodumlu**	**0.54**	**334**	*e*PG	**Pg**	**15 07 26.2**	**-1.2**
LOD				*e*SG	**Sg**	**15 07 33.9**	**-0.7**
CDAG	**Cicekdag**	**1.03**	**77**	*i*P	**Pg**	**15 07 34.2**	**-2.4**
CDAG				*i*S	**Sg**	**15 07 48.8**	**-1.2**
KIZT	**Kizilcal**	**1.06**	**241**	*e*PG	**Pg**	**15 07 35.6**	**-1.7**
ELDT	**Eldivan**	**1.12**	**14**	*i*P	**Pb**	**15 07 38.0**	**-0.3**
ELDT				*i*S	**Sb**	**15 07 54.0**	**+1.0**
KDHN	**Kadinhani**	**1.15**	**221**	*i*P	**Pb**	**15 07 37.2**	**-1.6**
KDHN				*i*S	**Sb**	**15 07 53.1**	**-0.8**
CANT	**Cankiri**	**1.27**	**19**	*e*PN	**Pn**	**15 07 40.4**	**-0.3**
LADK	**Ladik-KONYA**	**1.32**	**205**	*e*PN	**Pn**	**15 07 40.6**	**-0.7**
LADK				*e*SN	**Sn**	**15 07 59.2**	**+0.3**
KONT	**Konya--Tatoy**	**1.56**	**201**	*e*PN	**Pn**	**15 07 44.8**	**+0.3**
BSTP	**Nigde**	**1.66**	**150**	*i*P	**Pn**	**15 07 45.8**	**-0.2**
BSTP				*i*S	**Sn**	**15 08 10.1**	**+2.8**
ESKT	**Eskisehir**	**1.73**	**275**	*i*P	**Pn**	**15 07 46.3**	**-0.6**
ESKT				*i*S	**Sn**	**15 08 09.2**	**+0.2**
ESKT	**Eskisehir**	**1.73**	**275**	*e*Pn	**Pn**	**15 07 46.4**	**-0.5**
SEYT	**Eskypehyr**	**1.73**	**275**	*i*P	**Pn**	**15 07 46.3**	**-0.6**
SEYT				*i*S	**Sn**	**15 08 09.2**	**+0.2**
YOZ	**Yozgat**	**1.75**	**81**	*e*PN	**Pn**	**15 07 47.3**	**0.0**
NIG	**Nigde**	**1.76**	**137**	*e*PN	**Pn**	**15 07 47.2**	**-0.2**
MDU	**Mudurnu**	**1.78**	**307**	*e*PN	**Pn**	**15 07 48.4**	**+0.7**
TOS	**Tosya**	**1.79**	**24**	*e*PN	**Pn**	**15 07 47.5**	**-0.3**
SAFT	**Safranbolu**	**1.86**	**351**	*e*PN	**Pn**	**15 07 49.2**	**+0.5**
GULT	**Gulveren**	**2.22**	**298**	*e*PN	**Pn**	**15 07 54.1**	**+0.4**
BNN	**Bunyan**	**2.22**	**103**	*e*PN	**Pn**	**15 07 54.3**	**+0.5**
KDZE	**Karadeniz Ereo**	**2.28**	**327**	*e*PN	**Pn**	**15 07 54.8**	**+0.3**
ALT	**Altintas**	**2.33**	**262**	*e*PN	**Pn**	**15 07 55.0**	**-0.2**
EYL	**Eskiyayla**	**2.52**	**298**	*e*PN	**Pn**	**15 07 58.4**	**+0.5**
ISP	**Isparta**	**2.54**	**233**	*e*PN	**Pn**	**15 07 58.2**	**+0.1**
CAVI	**Cavuskoy**	**2.62**	**289**	*e*PN	**Pn**	**15 07 58.7**	**-0.5**
KARA	**Karaisali**	**2.64**	**143**	*e*PN	**Pn**	**15 07 59.2**	**-0.3**
BZK	**Bozkurt**	**2.65**	**15**	*e*PN	**Pn**	**15 07 59.8**	**+0.2**
BCK	**Bucak**	**2.75**	**226**	*e*PN	**Pn**	**15 08 01.0**	**+0.1**
ADVT	**Abdulvahap**	**2.77**	**293**	*e*PN	**Pn**	**15 08 00.8**	**-0.4**
MERS	**Mersin**	**2.77**	**155**	*e*PN	**Pn**	**15 08 01.3**	**0.0**
DIKM	**Dikmen**	**2.79**	**36**	*e*PN	**Pn**	**15 08 02.0**	**+0.4**
TOKT	**Tokat**	**2.82**	**70**	*e*PN	**Pn**	**15 08 03.2**	**+1.2**
KVT	**Kavak**	**2.83**	**53**	*e*PN	**Pn**	**15 08 02.6**	**+0.6**
KOZT	**Kozan**	**2.89**	**131**	*e*PN	**Pn**	**15 08 03.1**	**+0.3**
SARI	**SarD1z-Kayseri**	**2.91**	**103**	*e*PN	**Pn**	**15 08 01.6**	**-1.6**
KHL	**Karahalli**	**2.97**	**250**	*e*PN	**Pn**	**15 08 04.3**	**+0.2**
SVSK	**Karacayir**	**3.07**	**79**	*e*PN	**Pn**	**15 08 06.0**	**+0.7**
GEMT	**Gemlik**	**3.16**	**290**	*e*PN	**Pn**	**15 08 07.2**	**+0.6**
IKL	**Isikli**	**3.19**	**171**	*e*PN	**Pn**	**15 08 08.2**	**+1.2**
KRTS	**Karatas**	**3.36**	**147**	*e*PN	**Pn**	**15 08 09.8**	**+0.5**
ARMT	**Armutlu**	**3.44**	**291**	*e*PN	**Pn**	**15 08 11.1**	**+0.6**
DST	**Dursunbey**	**3.45**	**275**	*e*PN	**Pn**	**15 08 11.1**	**+0.5**
KMRS	**Kahramanmaras**	**3.55**	**121**	*e*PN	**Pn**	**15 08 12.7**	**+0.8**
KULA	**Kula-Manisa**	**3.55**	**257**	*e*PN	**Pn**	**15 08 12.8**	**+0.7**
DARE	**Darende-Malaty**	**3.70**	**95**	*e*PN	**Pn**	**15 08 13.3**	**-0.8**
PTK	**Pertek**	**4.94**	**94**	*e*PN	**Pn**	**15 08 32.6**	**+1.6**

*IDC **21** 15:16:28.9±2.5,5129N×179.12W,h24km±15km,mb4.3/20, mb1 4.4/21,mb1mx4.4/26,mbtmp4.3/21,ML4.5/1,MS3.7/10, Ms1 3.7/10,ms1mx3.4/35,Error ellipse: s-maj=19.6km s-min=12.7km az=163.0*
*MOS **21** 15:16:29.1±0.9,5129N×179.13W,h33km,mb4.9/39,Error ellipse: s-maj=10.4km s-min=5.5km az=98.3*
*ISCJB **21** 15:16:31.5±0.7,5127N±005×179.17W±003,h54km±5km, mb4.7/108,MS3.9/16,Error ellipse: s-maj=8.7km s-min=2.8km az=5.4*
*BJI **21** 15:16:32.4,5173N×17984W,h40km,mB5.0,mb4.8,Ms4.4, Msz4.2*
*NEIC **21** 15:16:33.7±0.6,5132N×17920W,h60km±5km,mb4.6/67, Error ellipse: s-maj=7.6km s-min=3.4km az=179.0*
*SZGRF **21** 15:16:34.0,5160N×17983E,h33km,mb4.6,Rat Islands, Aleutian Islands, United States*

ISC 21 15:16:34.0±0.6,5134N±005×17915W±003,h61km±5km, h46km±1.9km:pP-P,n452,σ0s72/449,mb4.7/108,89C-105D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.63**	**70**	P	**Pn**	**15 16 58.6**	**-1.8**
ADK				S	**Sn**	**15 17 19.9**	**-0.5**
SMY	**Shemya**	**4.39**	**291**	P	**Pn**	**15 17 38.0**	**-0.1**
SMY				S	**Sn**	**15 18 28.9**	**+1.0**
FX1	**Attu Island--F**	**4.98**	**291**	Pn	**Pn**	**15 17 44.5**	**-1.6**
	43nm,0.3s,baz=258,slow=11,SNR=23						
FX1				Sn	**Sn**	**15 18 44.3**	**+2.0**
	9.6nm,0.3s,baz=117,slow=19,SNR=3.1						
FX1				LR	LR	15 19 30.3	
	comp=Z,904nm,20.3s,baz=155,slow=36						
FX1	**Attu Island--F**	**4.98**	**291**	P	**Pn**	**15 17 46.0**	**-0.1**
NIKO	**Nikolski**	**6.54**	**72**	*e*Pn	**Pn**	**15 18 06.7**	**-0.8**
	152nm,0.4s						
SPIA	**Saint Paul Isl**	**7.83**	**38**	P	**Pn**	**15 18 26.7**	**+1.7**
UNV	**Unalaska Valle**	**8.10**	**67**	P	**Pn**	**15 18 28.0**	**-0.8**
PET	**Petropavlovsk**	**13.71**	**286**	*e*P	**Pn**	**15 19 52.7**	**+7.4**
PET				pmax	pmax		
	comp=Z,63nm,1.3s						
PET	**Petropavlovsk**	**13.71**	**286**	*e*Pn	**Pn**	**15 19 52.7**	**+7.4**
	comp=Z,64nm,1.3s						
PETK	**Petropavlovsk-**	**14.29**	**286**	Pn	**Pn**	**15 19 54.8**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=86,slow=16,SNR=7.1						
PETK				Sn	**Sn**	**15 22 20.5**	**-9.2**
	baz=110,slow=13,SNR=2.9						
PETK				LR	LR	15 25 13.0	
	comp=Z,299nm,20.1s,baz=273,slow=37						
PETK	**Petropavlovsk-**	**14.29**	**286**	P	**Pn**	**15 19 54.8**	**+2.0**
PETK						15 22 20.5	
OHAK	**Old Harbor**	**16.15**	**59**	*e*P	**Pn**	**15 20 15.1**	**-1.7**
	comp=Z,18nm,0.4s						
SVW2	**Sparrevohn**	**16.25**	**44**	*e*P	**Pn**	**15 20 23.1**	**+5.1**
KDAK	**Kodiak Island**	**16.63**	**57**	Pn	**Pn**	**15 20 18.1**	**-4.7**
	comp=Z,1.7nm,0.3s,baz=267,slow=14,SNR=26						
BILL	**Bilibino**	**18.20**	**342**	*e*P	**Pn**	**15 20 41.1**	**-0.8**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,400nm,18.0s						
BILL	**Bilibino**	**18.20**	**342**	*e*P	**Pn**	**15 20 42.5**	**+0.5**
	comp=Z,40nm,1.1s						
PPLA	**Purkeypile**	**18.49**	**41**	*e*P	**Pn**	**15 20 47.8**	**+2.4**
	comp=Z,52nm,1.1s						
SEW	**Seward**	**18.74**	**51**	*e*P	**Pn**	**15 20 46.2**	**-2.3**
	comp=Z,22nm,0.8s						
CHUM	**Lake Minchumin**	**18.90**	**38**	*e*P	**Pn**	**15 20 50.4**	**0.0**
	comp=Z,12nm,0.9s						
KTH	**Kantishna Hill**	**19.29**	**40**	*e*P	**Pn**	**15 20 53.7**	**-1.3**
	comp=Z,29nm,0.8s						
TRF	**Thorofare Moun**	**19.50**	**41**	*e*P	**Pn**	**15 20 56.0**	**-1.6**
	comp=Z,31nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.52**	**38**	*e*P	**Pn**	**15 20 56.4**	**-1.3**
	comp=Z,22nm,0.8s						
MCK	**McKinley**	**20.17**	**40**	*e*P	**P**	**15 21 06.8**	**+3.7**
COLA	**College**	**21.08**	**38**	⇑*i*P	**P**	**15 21 13.6**	**+0.8**
COLA	**College**	**21.08**	**38**	*e*P	**P**	**15 21 11.5**	**-1.3**
	comp=Z,12nm,0.8s,mb4

comp=Z,9.7nm,0.6s,mb4.3
COLD Coldfoot 21.40 31 *e*P P 15 21 15.9 -0.3
comp=Z,13nm,1.0s,mb4.2
MENT Mentasta 22.13 45 *e*P P 15 21 26.0 +2.0
EGAK Eagle 23.72 41 *e*P P 15 21 40.1 +0.1
comp=Z,24nm,1.0s,mb4.6
DAWY Dawson 24.28 43 *e*P P 15 21 44.9 -0.3
YSS Yuzh-Sakhalins 25.10 275⇓ *e*P P 15 21 53.5 +0.7
YSS pmax pmax
comp=Z,33nm,1.1s,mb4.8
INK Inuvik 27.62 35 P P 15 22 13.7 -1.5
comp=Z,4.8nm,0.8s,mb4.2,baz=254,slow=11,SNR=14
HABR Khabarovsk 29.27 283 *e*P P 15 22 30.4 +0.4
HABR *e**PP pP 15 22 40.0 -5.0
HABR *e* 15 25 34.5
HABR *e*S S 15 27 20.6 +2.2
HABR *e**SS sS 15 27 39.4 -4.4
HABR *e*SS SS 15 28 47.9 -36
HABR *e* 15 29 17.6
HABR *e* 15 33 07.1
HABR pmax pmax
comp=Z,34nm,2.0s,mb4.7
HABR pmax pmax
comp=N,21nm,2.2s
HABR pmax pmax
comp=E,15nm,1.6s
YAK Yakutsk 29.27 311⇑ *i*P P 15 22 30.7 +0.7
YAK pmax pmax
comp=Z,19nm,2.5s,mb4.4
TIXI Tiksi 30.56 331 *e*P PP 15 23 52.8 +1.9
KLR Kul'dur 30.98 286 *e*P P 15 22 40.6 -4.6
KLR pmax pmax
comp=E,25nm,1.2s
KLR pmax pmax
comp=Z,43nm,1.2s,mb5.2
MJAR Matsushiro Arr 33.56 261 LR LR 15 34 42.9
comp=Z,100nm,21.0s,baz=65,slow=33
MDJ Mudanjiang 34.36 279 P P 15 23 13.3 -1.4
MDJ AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
MDJ AMB AMB
comp=Z,155nm,6.2s
MDJ LR LR
comp=N,54nm,26.0s
MDJ LR LR
comp=E,72nm,26.0s
MDJ LR LR
comp=Z,100nm,30.4s
MDJ Mudanjiang 34.36 279 *e*P P 15 23 13.4 -1.3
comp=Z,12nm,1.1s,mb4.8
YKA Yellowknife Ar 35.42 46 P P 15 23 23.3 -0.3
comp=Z,5.5nm,0.8s,mb4.5,baz=283,slow=8.1,SNR=6.1
YKA ScP ScP 15 29 34.8 +2.5
comp=Z,1.5nm,0.7s,baz=294,slow=3.4,SNR=22
YKA LR LR 15 39 43.1
comp=Z,20nm,18.7s,baz=0.0,slow=39
C05A Tolt Reservoir 36.66 73⇓P P 15 23 35.0 +0.5
baz=37
LON Longmire 37.04 74 *e*P P 15 23 37.2 -0.5
LON pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
LON Longmire 37.04 74 *e*P P 15 23 37.2 -0.4
comp=Z,3.7nm,0.6s,mb4.4
F04A Amboy 37.07 75⇓P P 15 23 38.6 +0.7
baz=37
B07A Winthrop 37.24 71⇑P P 15 23 40.0 +0.6
baz=37
CN2 Changchun 37.34 281 *e*P P 15 23 38.8 -1.4
CN2 *e*S S 15 29 21.4 -2.0
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
ETW Entiat 37.52 72 *e*P P 15 23 42.9 +1.2
C07A Waterville 37.64 72⇓P P 15 23 42.8 +0.1
baz=38
F05A White Salmon 37.68 75⇓P P 15 23 43.4 +0.3
baz=38
B08A Colville Reser 37.76 70⇓P P 15 23 44.2 +0.5
baz=38
BOD Bodaibo 37.82 307 *e*P P 15 23 41.5 -2.6
H04A Detroit Lake 37.84 77⇑P P 15 23 44.7 +0.3
baz=38
A09A Danville 37.91 69⇓P P 15 23 45.5 +0.5
baz=38
D07A Quincy 37.93 72⇓P P 15 23 45.4 +0.2
baz=38
G05A Wamic 38.09 76⇓P P 15 23 47.3 +0.8
baz=38
HIA Hailar 38.09 292 *c i*P P 15 23 45.6 -0.9
HIA Hailar 38.09 292 *e*P P 15 23 44.9 -1.6
comp=Z,14nm,1.0s,mb4.6
B09A Rice 38.42 70⇓P P 15 23 50.1 +0.8
baz=38
A10A Northport 38.51 69⇓P P 15 23 50.3 +0.3
baz=38
RSW Rattlesnake Hi 38.55 73 *e*P P 15 23 51.4 +1.0
HAWA Hanford 38.59 73 *e*P P 15 23 51.5 +0.8
comp=Z,54nm,1.8s,mb5.0
OD2 Odessa Site #2 38.59 71 *e*P P 15 23 53.0 +2.3
F07A Phinny Hill Vi 38.60 74⇑P P 15 23 51.1 +0.3
baz=39
D08A Wollman Farm, 38.62 72⇓P P 15 23 51.2 +0.2
baz=39
H06A Lindquist Farm 38.94 76⇑P P 15 23 53.8 +0.1
baz=39
EDM Edmonton 39.02 61 *e*P P 15 23 54.6 +0.3
NEW Newport 39.10 69 *e*P P 15 23 55.2 +0.2
NEW pmax pmax
comp=Z,8.0nm,0.9s
NEW Newport 39.10 69 *e*P P 15 23 55.2 +0.2
comp=Z,8.2nm,0.9s,mb4.5
A11A Hall Mountain, 39.22 68⇑P P 15 23 56.3 +0.4
baz=39
E09A Wood Farm, Sta 39.35 72⇓P P 15 23 57.4 +0.3
baz=39
KSRS Korea Array 39.42 271 P P 15 23 58.0 +0.3
comp=Z,3.8nm,0.9s,mb4.1,baz=63,slow=8.4,SNR=7.2
KSRS LR LR 15 37 16.2
comp=Z,63nm,21.9s,baz=256,slow=32
G08A Pilot Rock 39.49 74⇓P P 15 23 58.3 0.0
baz=40
D10A Wagner Farm, O 39.60 71⇓P P 15 23 59.2 +0.1
baz=40
I07A Izee 39.79 76⇓P P 15 24 00.8 0.0
baz=40,SNR=6.7
F09A S2 Ranch, Elgi 39.91 73⇓P P 15 24 02.2 +0.5
baz=40
D11A Klaveano Farm, 40.16 71⇓P P 15 24 03.4 -0.4
baz=40
F10A Beach Ranch, E 40.18 73⇓P P 15 24 04.1 +0.2
baz=40
G09A Cove 40.21 74⇓P P 15 24 04.3 +0.1
baz=40
C12B Naegeli Ranch, 40.34 69⇓P P 15 24 05.4 +0.1
baz=40
G10A Bishop Farm, J 40.60 73⇑P P 15 24 06.7 -0.7
baz=41,SNR=7.4
B13A Whitefish 40.60 68⇓P P 15 24 07.3 -0.1
baz=41
BSMT Bassoo Peak 40.67 69 *e*P P 15 24 08.8 +0.8
K07A Rock Creek Ran 40.71 78⇓P P 15 24 08.3 -0.1
baz=41,SNR=5.3
BMO Blue Mountains 40.72 74 *e*P P 15 24 08.9 +0.5
J08A Circle Bar Ran 40.81 77⇑P P 15 24 09.6 +0.3
baz=41
F11A Grangeville 40.86 72⇑P P 15 24 09.9 +0.3
baz=41
C13A Hot Springs 40.88 69⇓P P 15 24 10.1 +0.3
baz=41
A14A Double T Ranch 40.91 67⇓P P 15 24 09.8 -0.1
baz=41,SNR=9.2
K08A Mann Creek Ran 41.15 77⇑P P 15 24 12.2 +0.2
baz=41
WVOR Wild Horse Val 41.23 78 *e*P P 15 24 12.5 -0.1
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
WVOR Wild Horse Val 41.23 78 *e*P P 15 24 12.5 -0.1
comp=Z,8.1nm,1.0s,mb4.3
D13A Huson 41.25 70⇑P P 15 24 13.2 +0.4
baz=41
J09A Fry Pan Ranch, 41.26 76⇑P P 15 24 13.1 +0.2
baz=41
A15A Johnson Ranch, 41.30 66⇓P P 15 24 13.1 -0.1
baz=41
N06A Buffalo Meadow 41.45 81⇑P P 15 24 14.6 +0.1
baz=41
M07A Soldier Meadow 41.49 80⇓P P 15 24 14.9 +0.2
baz=42
H11A Donnelly 41.58 73⇑P P 15 24 15.5 0.0
baz=42
MSO Missoula 41.69 70 *e*P P 15 24 16.8 +0.4
comp=Z,5.9nm,1.0s,mb4.2
B15A Bradely Ranch, 41.73 67⇓P P 15 24 16.1 -0.7
baz=42,SNR=7.7
D14A Greenough 41.81 69⇓P P 15 24 17.3 -0.1
baz=42,SNR=12
M08A Happy Creek Ra 41.94 79⇑P P 15 24 18.7 +0.2
baz=42
A16A West Butte Ran 41.97 66⇑P P 15 24 18.6 0.0
baz=42
C15A Salmond Ranch, 41.98 68⇓P P 15 24 18.8 +0.1
baz=42,SNR=8.2
F13A Darby 42.00 71⇓P P 15 24 19.1 +0.1
baz=42
K10A MacKenzie Ranc 42.11 76⇓P P 15 24 19.8 -0.1
baz=42,SNR=8.6
E14A Clinton 42.17 70⇑P P 15 24 20.3 0.0
baz=42
B16A M & M Farms, S 42.18 66⇓P P 15 24 19.8 -0.5
baz=42,SNR=5.0
H12A Diamond D Ranc 42.35 73⇓P P 15 24 21.5 -0.3
baz=42
O07A Toulon 42.38 81⇓P P 15 24 22.3 +0.2
baz=42
MFID Camas Ranch 42.39 75⇓P P 15 24 22.1 0.0
baz=42
D15A Lincoln 42.41 69⇑P P 15 24 22.1 -0.1
baz=42
G13A Cobalt 42.43 72⇓P P 15 24 22.2 -0.2
baz=42,SNR=9.0
C16A Fuhringer Ranc 42.47 67⇑P P 15 24 22.2 -0.4
baz=42,SNR=9.6
N08A GE Springer Mi 42.48 80⇓P P 15 24 22.5 -0.4
baz=42
A17A Triple J Farms 42.48 65⇑P P 15 24 22.5 -0.3
baz=42,SNR=10
K11A Parker Ranch, 42.63 76⇓P P 15 24 24.1 +0.1
baz=43
E15A Deer Lodge 42.66 69⇓P P 15 24 24.1 -0.2
baz=43
L10A Juniper Basin 42.75 77⇑P P 15 24 24.6 -0.4
baz=43
B17A L&G Farms, Che 42.76 66⇑P P 15 24 25.0 0.0
baz=43,SNR=8.1
N09A Rock Creek Ran 42.81 79⇓P P 15 24 25.6 0.0
baz=43
J12A Stokes Ranch, 42.92 75⇑P P 15 24 26.2 -0.3
baz=43,SNR=5.2
D16A Dana Ranch, Ca 42.98 68⇑P P 15 24 27.0 +0.2
baz=43
A18A Metzger Ranch, 42.98 65⇑P P 15 24 26.2 -0.7
baz=43
HRY Holter Researc 42.98 69 *e*P P 15 24 27.3 +0.4
F15A Butte 43.06 70⇑P P 15 24 27.2 -0.4
baz=43
C17A Wharram Farm, 43.12 67⇑P P 15 24 27.3 -0.7
baz=43,SNR=5.6
L11A Cat Creek Ranc 43.14 76⇑P P 15 24 28.1 -0.1
baz=43,SNR=7.2
I13A Wildhorse Cree 43.15 73⇑P P 15 24 27.8 -0.4
baz=43,SNR=9.4
HLID Hailey 43.16 74⇓P P 15 24 28.6 +0.2
baz=43
HLID Hailey 43.16 74 *e*P P 15 24 28.9 +0.5
comp=Z,5.4nm,0.8s,mb4.3
E16A East Helena 43.17 69⇓P P 15 24 28.4 0.0
baz=43
H14A Leadore 43.21 72⇓P P 15 24 28.4 -0.3
baz=43
B18A Beardsley Farm 43.29 65⇑P P 15 24 29.0 -0.3
baz=43,SNR=7.3
K12A Draper Farm, C 43.39 75⇑P P 15 24 30.5 +0.3
baz=43
J13A Cove Ranch, Pi 43.40 74⇑P P 15 24 30.2 0.0
baz=43,SNR=10.0
D17A Six Diamond Ra 43.42 67⇓P P 15 24 31.3 +0.9
baz=43
G15A Dillon 43.43 71⇑P P 15 24 30.4 -0.1
baz=43
EGMT Eagleton 43.50 66⇑P P 15 24 31.3 +0.3
baz=44
EGMT Eagleton 43.50 66 *e*P P 15 24 31.7 +0.7
I14A Mackay 43.54 73⇓P P 15 24 31.5 +0.1
baz=44,SNR=6.5
L12A House Creek Ra 43.60 76⇑P P 15 24 32.6 +0.7
baz=44
F16A Kennard Place, 43.60 70⇑P P 15 24 32.1 +0.3
baz=44
H15A Lima 43.64 72⇓P P 15 24 32.3 +0.1
baz=44,SNR=5.1
BOZ Bozeman (W) 43.67 70⇓P P 15 24 32.1 -0.4
baz=44
BOZ Bozeman (W) 43.67 70 *e*P P 15 24 32.6 +0.1
E17A Martinsdale 43.69 68⇑P P 15 24 32.4 -0.1
baz=44,SNR=8.3
NVAR Mina Array Bea 43.78 83 P P 15 24 33.0 -0.4
comp=Z,2.3nm,0.8s,mb3.9,baz=296,slow=6.5,SNR=4.4
NVAR ScP ScP 15 30 07.9 +2.7
comp=Z,0.3nm,0.6s,baz=224,slow=8.3,SNR=2.9
NVAR Mina Array Bea 43.78 83 P P 15 24 33.0 -0.4
NVAR ScP ScP 15 30 07.9 +2.7
G16A Moss Hill, Enn 43.80 70⇑P P 15 24 33.0 -0.5
baz=44,SNR=12
J14A Carey 43.84 74⇓P P 15 24 33.5 -0.3
baz=44,SNR=6.2
D18A Linhart Farms, 43.91 67⇑P P 15 24 34.2 -0.1
baz=44
F17A Fitzpatrick Pl 44.10 69⇓P P 15 24 35.4 -0.5
baz=44,SNR=6.3
E18A Harlowton 44.18 68⇓P P 15 24 36.3 -0.2
baz=44,SNR=6.5
L13A Double Diamond 44.29 75⇑P P 15 24 37.7 +0.3
baz=44
N12A Clover Valley, 44.34 78⇓P P 15 24 37.4 -0.5
baz=44,SNR=5.4
G17A Pierce Place, 44.38 70⇓P P 15 24 38.6 +0.5
baz=44
O11A Cowboy Ranch, 44.39 79⇓P P 15 24 38.4 +0.1
baz=44
H16A Russell Place, 44.42 71⇓P P 15 24 37.9 -0.5
baz=44,SNR=9.3
M13A Montello 44.58 76⇑P P 15 24 39.8 0.0
baz=45
F18A Big Timber 44.66 68⇑P P 15 24 40.7 +0.4
baz=45
R09A Tonopah 44.66 82⇓P P 15 24 40.6 +0.2
baz=45
YNR Ibis Junctio 44.75 70 *e*P P 15 24 42.5 +1.4
YFT Old Faithful 44.80 71 *e*P P 15 24 44.3 +2.8
O12A Currie 44.87 78⇑P P 15 24 41.6 -0.5
baz=45,SNR=8.0
H17A Grant Village 44.99 71⇓P P 15 24 43.2 +0.2
baz=45,SNR=5.5
IMW Indian Meadow 45.06 72 *e*P P 15 24 44.7 +1.2
comp=Z,5.4nm,0.8s,mb4.4
RRI2 Red Ridge 45.14 72 *e*P P 15 24 45.6 +1.4
comp=Z,5.9nm,0.8s,mb4.5
S10A Tonopah Range, 45.15 82⇓P P 15 24 44.2 -0.2
baz=45
P12A McGill 45.24 79⇑P P 15 24 45.8 +0.7
baz=45
MOOW Moose Ponds 45.26 72 *e*P P 15 24 46.0 +0.9
K16A Soda Springs 45.28 73⇑P P 15 24 45.6 +0.3
baz=45,SNR=6.8
L15A Malad City 45.28 75⇑P P 15 24 46.1 +0.8
baz=45
RLMT Red Lodge 45.35 69⇑P P 15 24 46.4 +0.6
baz=45
RLMT Red Lodge 45.35 69 *e*P P 15 24 47.3 +1.5
N14A Grayback Hills 45.47 76⇓P P 15 24 47.2 +0.4
baz=46
J17A Brown Place, J 45.50 72⇓P P 15 24 47.2 +0.2
baz=46
R11A Troy Canyon, C 45.51 81⇑P P 15 24 47.3 +0.1
baz=46
P13A Bates Ranch, G 45.80 78⇓P P 15 24 49.7 +0.2
baz=46
L16A Fish Haven 45.85 74⇓P P 15 24 49.7 -0.1
baz=46
TLY Talaya 45.90 302 *e*P P 15 24 50.0 0.0
TLY pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
J18A Kendall Valley 46.00 72⇓P P 15 24 50.6 -0.3
baz=46,SNR=5.6
ULN Ulaanbaatar 46.08 296 *c i*P P 15 24 51.8 +0.3
ULN Ulaanbaatar 46.08 296 *e*P P 15 24 51.6 +0.1
comp=Z,2.7nm,1.4s,mb4.0
DUG Dugway 46.09 77⇑P P 15 24 51.6 -0.1
baz=46
DUG Dugway 46.09 77 *e*P P 15 24 52.3 +0.6
Q13A Wheeler Ranch, 46.11 79⇑P P 15 24 52.1 +0.2
baz=46
M16A Huntsville 46.14 75⇓P P 15 24 52.2 0.0
baz=46
P14A Drum Mountains 46.30 78⇓P P 15 24 53.4 0.0
baz=46
K18A Toltan Ranch, 46.32 72⇓P P 15 24 54.2 +0.7
baz=46
T11A Corn Creek, Al 46.43 82⇑P P 15 24 54.5 +0.1
baz=46
SONM Songino Array 46.46 296 P P 15 24 55.1 +0.6
comp=Z,7.0nm,0.8s,mb4.6,baz=52,slow=8.5,SNR=35
SONM ScP ScP 15 30 19.8 +3.7
comp=Z,0.2nm,0.5s,baz=36,slow=2.8,SNR=3.5
SONM LR LR 15 45 33.1
comp=Z,243nm,18.9s,baz=24,slow=38
BW06 Boulder Array 46.53 72⇑P P 15 24 55.1 -0.1
baz=46
PDAR Pinedale Array 46.53 72 P P 15 24 55.1 0.0
comp=Z,12nm,0.8s,mb4.8,baz=305,slow=3.4,SNR=63
PDAR ScP ScP 15 30 21.0 +4.6
comp=Z,0.6nm,0.9s,baz=354,slow=1.5,SNR=3.9
Q14A Sevier Lake (B 46.54 78⇓P P 15 24 55.2 -0.1
baz=46,SNR=11
JLU Jordanelle 46.68 76 *e*P P 15 24 59.1 +2.8
L18A Fontenelle, Gr 46.74 73⇓P P 15 24 57.1 +0.3
baz=47
ZAK Zakamensk 46.78 301 *e*P P 15 24 55.6 -1.4
ZAK *e* 15 26 29.7
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
K19A Absolon Red Bu 46.92 72⇓P P 15 24 57.5 -0.7
baz=47,SNR=14
M18A Lyman 47.02 74⇑P P 15 24 58.6 -0.3
baz=47
MOY Mondy 47.30 303 *e*P P 15 25 02.4 +1.4
K20A Yellowstone Ra 47.32 71⇓P P 15 25 00.4 -0.9
baz=47
HHC Hu-ho-hao-te 47.49 286 *e*P P 15 25 02.8 +0.2
HHC AP pP 15 25 15.0 -3.3
HHC XP sP 15 25 20.5 -4.7
HHC PCP PcP 15 26 33.9 +2.0
HHC PP PP 15 26 53.0 -1.1
HHC PCS PcS 15 30 28.3 +1.0
HHC *eS S 15 31 50.9 -1.7
HHC XS sS 15 32 12.9 -6.2
HHC SCS ScS 15 34 49.9 -0.5
HHC SS SS 15 35 12.8 -7.8
HHC AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,90nm,4.6s
HHC LR LR
comp=N,106nm,16.6s
HHC LR LR
comp=E,187nm,20.2s
HHC LR LR
comp=Z,143nm,20.2s
MSU Marysvale 47.51 78 *e*P P 15 25 04.0 +1.2
TMUT Trail Mountain 47.62 77 *e*P P 15 25 04.9 +1.2
U13A Pakoon Wash 47.73 82⇑P P 15 25 04.9 +0.3
baz=48
P17A Butcher Ranch, 47.80 76⇑P P 15 25 04.9 -0.1
baz=48
N19A John Jarvie Ra 47.88 74⇓P P 15 25 05.2 -0.5
baz=48
M20A Sweetwater, Wa 48.11 73⇓P P 15 25 07.3 -0.1
baz=48
SRU San Rafael 48.15 77⇓P P 15 25 07.3 -0.5
baz=48
SRU San Rafael 48.15 77 *e*P P 15 25 08.5 +0.7
O19A Miners Draw (B 48.27 74⇑P P 15 25 08.5 -0.2
baz=48,SNR=17
L21A Rawlins 48.31 72⇓P P 15 25 08.5 -0.4
baz=48,SNR=8.1
Q18A Rafter H Ranch 48.40 76⇓P P 15 25 09.4 -0.2
baz=48
R17A Hanksville Air 48.47 77⇓P P 15 25 09.7 -0.5
baz=48
NJ2 Nanjing 48.59 272 *e*P P 15 25 12.3 +1.1
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
U15A North Rim 48.76 81⇑P P 15 25 12.3 -0.1
baz=49
V14A Boquillas Ranc 48.76 82⇑P P 15 25 12.4 -0.2
baz=49
P19A Cripple Cowboy 48.77 75⇑P P 15 25 12.2 -0.4
baz=49,SNR=21
O20A White River Ci 48.91 74⇓P P 15 25 13.2 -0.3
baz=49,SNR=11
S17A Black Ridge (B 48.91 78⇑P P 15 25 13.6 0.0
baz=49
N21A Black Mountain 48.95 73⇓P P 15 25 13.5 -0.5
baz=49
R18A Canyonlands Na 48.99 77⇓P P 15 25 13.9 -0.4
baz=49
Q19A Hogan Spring (49.02 76⇓P P 15 25 13.8 -0.6
baz=49,SNR=9.9
M22A Cedar Creek Ra 49.11 72⇑P P 15 25 14.9 -0.2
baz=49
V15A Kaibab Nationa 49.22 81⇓P P 15 25 16.1 +0.1
baz=49
O21A Pagoda 49.32 73⇑P P 15 25 16.9 +0.2
baz=49
S18A Hurst Farm, Bl 49.37 78⇑P P 15 25 16.6 -0.5
baz=49,SNR=11
R19A Curley Farm, L 49.44 77⇓P P 15 25 17.3 -0.4
baz=49
PV04 Paradox Valley 49.59 76 *e*P P 15 25 19.1 +0.4
Q20A Ridgley Place, 49.61 75⇑P P 15 25 18.8 -0.1
baz=50
X14A Yava 49.66 83⇓P P 15 25 19.1 -0.3
baz=50
T18A Mexican Hat 49.79 78⇓P P 15 25 19.4 -1.0
baz=50,SNR=5.3
S19A Harvey Farm, M 49.86 77⇓P P 15 25 20.1 -0.7
baz=50,SNR=9.5
X15A Humboldt 50.05 82⇑P P 15 25 22.3 0.0
baz=50
SPITS Spitsbergen Ar 50.40 356 P P 15 25 24.0 -0.4
comp=Z,7.6nm,0.6s,mb4.9,baz=33,slow=6.4,SNR=16
R21A Cimarron 50.43 75⇓P P 15 25 24.8 -0.4
baz=50
T19A Beclabito 50.51 78⇓P P 15 25 25.4 -0.4
baz=50,SNR=7.4
ISCO Idaho Springs 50.69 73 *e*P P 15 25 26.2 -0.9
ISCO pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
ISCO Idaho Springs 50.69 73 *e*P P 15 25 26.1 -1.0
comp=Z,2.9nm,0.4s,mb4.6
WHN Wuhan 52.44 274 P P 15 25 39.6 -0.7
118A Homack Ranch, 52.69 83⇑P P 15 25 42.1 0.0
baz=53
218A Dragoon 53.09 83⇓P P 15 25 44.9 -0.1
baz=53
ANMO Albuquerque 53.31 78⇑ *e*P P 15 25 48.9 +2.2
SUMG Summit 53.38 14 *e*P P 15 25 46.5 -0.2
comp=Z,14nm,1.2s,mb4.8
XAN Xi'an 53.45 281 P P 15 25 46.9 -0.8
XAN AP pP 15 25 57.9 -5.7
XAN PP PP 15 27 46.8 -1.5
XAN PPP 15 28 57.3
XAN S S 15 33 15.3 -0.2
XAN AMB AMB
comp=Z,6.0nm,1.1s,mb4.4
XAN LR LR
comp=N,29nm,30.9s
XAN LR LR
comp=E,36nm,25.1s
XAN LR LR
comp=Z,73nm,23.4s
318A Bisbee 53.49 84⇑P P 15 25 48.0 0.0
baz=54
ZALV Zalesovo Beam 53.89 313 PcP PcP 15 26 55.8 +0.5
comp=Z,5.9nm,0.8s,baz=34,slow=3.9,SNR=17
ZALV LR LR 15 49 41.1
comp=Z,66nm,21.1s,baz=251,slow=37
LZH Lanzhou 55.18 286 *e*P P 15 25 59.6 -0.6
LZH AP pP 15 26 12.3 -3.9
LZH XP sP 15 26 17.5 -5.6
LZH *ePP PP 15 28 04.3 +0.5
LZH AMB AMB
comp=Z,21nm,1.4s,mb5.0

LZH AMB AMB
comp=Z,96nm,5.6s
LZH LR LR
comp=E,354nm,16.5s
LZH LR LR
comp=Z,527nm,19.2s
GTA Gaotai 55.37 292 ⇑P **P 15 26 02.1 +0.5**
GTA AP pP 15 26 15.3 -2.3
GTA XP sP 15 26 21.3 -3.2
GTA PP PP 15 28 07.8 +2.3
GTA S **S 15 33 43.5 +2.3**
GTA AMB AMB
comp=Z,13nm,0.5s,mb5.2
GTA AMB AMB
comp=Z,85nm,4.5s
GTA LR LR
comp=N,127nm,15.5s
GTA LR LR
comp=E,104nm,16.1s
GTA LR LR
comp=Z,142nm,14.6s
KEV Kevo 57.71 350 *e*p **P 15 26 16.9 -0.8**
ARCES ARCESS Array B 58.09 350 P **P 15 26 19.9 -0.4**
comp=Z,2.7nm,0.6s,mb4.5,baz=20,slow=7.9,SNR=12
CD2 Chengdu 58.77 282 P **P 15 26 25.8 +0.2**
CD2 AP pP 15 26 38.4 -3.4
CD2 XP sP 15 26 43.6 -5.0
CD2 PCP PcP 15 27 15.3 +0.6
CD2 PP PP 15 28 37.3 +1.5
CD2 PCS PcS 15 31 15.8 -0.8
CD2 S **S 15 34 24.6 -1.5**
CD2 XS sS 15 34 46.3 -7.0
CD2 SS SS 15 38 19.5 -0.1
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,90nm,5.1s
CD2 LR LR
comp=N,150nm,7.8s
CD2 LR LR
comp=Z,200nm,8.4s
TXAR Lajitas Array 58.88 81 P **P 15 26 25.8 -0.7**
comp=Z,3.2nm,0.9s,mb4.4,baz=303,slow=6.0,SNR=17
TXAR LR LR 15 51 49.0
comp=Z,44nm,20.7s,baz=180,slow=36
TXAR Lajitas Array 58.88 81 ⇑P **P 15 26 25.8 -0.7**
TXAR LR LR 15 51 49.0
KURK Kurchatov 58.88 313⇑*e*P **P 15 26 26.2 +0.1**
KURK pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
KURK Kurchatov 58.88 313 *e*P **P 15 26 24.3 -1.8**
comp=Z,7.5nm,0.9s,mb4.7
WMQ Urumqi 59.17 303 *e*P **P 15 26 28.6 +0.3**
WMQ AMB AMB
comp=Z,9.0nm,1.0s,mb4.8
WMQ LR LR
comp=N,73nm,26.0s
WMQ LR LR
comp=E,66nm,26.0s
WMQ LR LR
comp=Z,141nm,22.0s
MKAR Makanchi Array 59.88 308 P **P 15 26 32.3 -0.8**
comp=Z,2.0nm,0.4s,mb4.5,baz=50,slow=6.4,SNR=58
MKAR PcP PcP 15 27 19.1 +0.1
comp=Z,0.8nm,0.5s,baz=26,slow=2.2,SNR=4.6
MKAR LR LR 15 52 42.2
comp=Z,101nm,20.6s,baz=37,slow=36
MKAR Makanchi Array 59.88 308 P **P 15 26 32.3 -0.8**
MKAR 15 27 19.1
GYA Guiyang 60.11 276 P **P 15 26 34.5 -0.4**
GYA AP pP 15 26 47.3 -3.8
GYA XP sP 15 26 52.5 -5.5
GYA PP PP 15 28 48.0 +0.2
GYA PPP 15 30 14.0
GYA SCP ScP 15 31 17.5 +1.8
GYA PCS PcS 15 31 22.0 -0.7
GYA S **S 15 34 39.0 -4.5**
GYA XS sS 15 34 59.5 -11
GYA SS SS 15 38 35.6 -5.2
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,40nm,5.6s
GYA LR LR
comp=N,210nm,16.5s
GYA LR LR
comp=E,130nm,15.7s
GYA LR LR
comp=Z,230nm,16.0s
SCHQ Schefferville 60.17 38 P **P 15 26 33.9 -1.0**
comp=Z,9.8nm,0.9s,mb4.8,baz=300,slow=5.9,SNR=5.6
OLIL Olney 61.56 63 *e*P **P 15 26 45.0 +0.4**
comp=Z,13nm,0.8s,mb5.1
KMI Kunming 63.51 278 P **P 15 26 57.0 -0.8**
KMI AP pP 15 27 11.4 -2.7
KMI XP sP 15 27 16.8 -4.2
KMI PP PP 15 29 19.9 +2.1
KMI S **S 15 35 25.1 -1.4**
KMI XS sS 15 35 47.1 -7.0
KMI SS SS 15 39 33.8 -0.3
KMI AMB AMB
comp=Z,6.0nm,1.3s,mb4.5
KMI AMB AMB
comp=Z,60nm,5.7s
KMI LR LR
comp=N,84nm,23.0s
KMI LR LR
comp=E,95nm,29.0s
KMI LR LR
comp=Z,69nm,21.6s
JOF Joensuu 63.57 345 *e*p **P 15 26 56.2 -1.4**
comp=Z,4.0nm,0.5s,mb4.7
JOF Joensuu 63.57 345 *e*P **P 15 26 56.2 -1.4**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KAF Kangasniemi 65.10 347 *e*p **P 15 27 05.9 -1.7**
comp=Z,6.0nm,0.7s,mb4.7
KAF Kangasniemi 65.10 347 *e*P **P 15 27 05.9 -1.7**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TKM2 Tokmak 2 65.97 309 *e*P **P 15 27 13.5 0.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
TKM2 Tokmak 2 65.97 309 *e*P **P 15 27 13.5 0.0**
comp=Z,4.6nm,0.9s,mb4.5
AAK Ala-Archa 66.72 310⇑*e*P **P 15 27 18.0 -0.3**
AAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
AAK Ala-Archa 66.72 310 *e*P **P 15 27 17.8 -0.6**
comp=Z,8.2nm,0.8s,mb4.8
LSA Lhasa 67.24 289 P **P 15 27 23.3 +1.4**
LSA Lhasa 67.24 289 *e*P **P 15 27 23.0 +1.1**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
LSA Lhasa 67.24 289 *e*P **P 15 27 23.0 +1.1**
comp=Z,8.7nm,0.6s,mb5.0
AML Almayashu 67.48 310 *e*P **P 15 27 24.2 +1.0**
comp=Z,9.8nm,0.9s,mb4.8
NB2 NORSAR Subarra 67.66 355 P **P 15 27 23.3 -0.7**
comp=Z,2.2nm,0.7s,mb4.3,baz=6.8,slow=6.5
NOA NORSAR Array B 67.66 355 P **P 15 27 23.6 -0.4**
comp=Z,2.6nm,0.7s,mb4.4,baz=8.4,slow=6.4,SNR=9.6
OBN Obninsk 69.82 339⇑*e*P **P 15 27 36.8 -0.7**
OBN pmax pmax
comp=Z,16nm,0.8s,mb5.0
OBN MLR MLR
comp=Z,100nm,15.0s
SHL Shillong 69.85 286 *e*P **P 15 27 38.5 +0.3**
CMAR Chiang Mai Arr 70.80 276 P **P 15 27 43.5 -0.6**
comp=Z,1.2nm,0.6s,mb4.0,baz=26,slow=6.6,SNR=11
GUN Gumba 71.66 292 *e*P **P 15 27 50.2 +1.0**
comp=Z,45nm,0.4s,mb5.7
JIRN Jiri 71.67 291 *e*P **P 15 27 50.3 +1.1**
comp=Z,32nm,0.6s,mb5.4
RAMN Ramite 71.96 291 *e*P **P 15 27 51.6 +0.6**
comp=Z,54nm,0.6s,mb5.6
KKN Kakani 72.10 292 *e*P **P 15 27 52.5 +0.7**
comp=Z,23nm,0.5s,mb5.4
KKN Kakani 72.10 292 *e*P **P 15 27 52.5 +0.7**
KKN pmax pmax
comp=Z,23nm,0.5s,mb5.4
PKI Pulchoki 72.19 292 *e*P **P 15 27 53.0 +0.7**
comp=Z,17nm,0.6s,mb5.2
PKI Pulchoki 72.19 292 *e*P **P 15 27 53.0 +0.7**
PKI pmax pmax
comp=Z,17nm,0.6s,mb5.2

PKIN Phulchoki 72.20 292 *e*P **P 15 27 52.9 +0.5**
comp=Z,12nm,0.4s,mb5.2
GKN Gorkha 72.32 293 *e*P **P 15 27 53.5 +0.4**
comp=Z,17nm,0.4s,mb5.3
DMN Daman 72.34 292 *e*P **P 15 27 53.9 +0.7**
DANN Dangsing 72.56 294 *e*P **P 15 27 55.4 +0.9**
comp=Z,33nm,0.8s,mb5.3
KOLN Koldanda 73.09 293 *e*P **P 15 27 58.2 +0.5**
PPT Papeete 73.34 151 *e*LR LR 15 50 12.7
comp=Z,118nm,25.0s
PPT Papeete 73.34 151 LR LR 15 53 42.8
comp=Z,112nm,20.0s,baz=339,slow=30
SMLA Simla 74.13 300 *e*P **P 15 28 03.8 +0.1**
AKASG Malin Array Be 75.51 342 P **P 15 28 10.6 -0.8**
comp=Z,7.5nm,0.6s,mb4.8,baz=20,slow=6.0,SNR=15
AKBB Malin Array Si 75.51 342 *e*P **P 15 28 10.2 -1.2**
KBL Kabul 75.68 308 *e*P **P 15 28 11.1 -1.5**
KBL pmax pmax
comp=Z,13nm,0.8s,mb4.9
KBL Kabul 75.68 308 *e*P **P 15 28 11.1 -1.5**
comp=Z,13nm,0.8s,mb4.9
CLL Collm 77.21 352 *e*P **P 15 28 21.0 +0.1**
BRG Berggiesshubel 77.56 352 *e*P **P 15 28 22.2 -0.7**
BRG pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
BRG Berggiesshubel 77.56 352 *e*P **P 15 28 22.2 -0.7**
comp=Z,6.0nm,1.4s,mb4.3
DPC Dobruska-Polom 77.83 350 *e*P **P 15 28 24.8 +0.4**
STHS Stebnicka Huta 78.12 347 *e*P **P 15 28 26.8 +0.8**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
STHS Stebnicka Huta 78.12 347 *e*P **P 15 28 26.8 +0.8**
comp=Z,6.4nm,1.0s,mb4.5
NKC Novy Kostel 78.32 352 *e*P **P 15 28 27.0 -0.1**
MEM Membach 78.33 357 P **P 15 28 26.8 -0.4**
comp=Z,7.3nm,1.1s,mb4.5
PRU Pruhonice 78.38 351 *e*P **P 15 28 27.9 +0.5**
KOLS Kolonicke sedl 78.44 346 *e*P **P 15 28 26.5 -1.3**
KOLS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KOLS Kolonicke sedl 78.44 346 *e*P **P 15 28 26.5 -1.3**
comp=Z,2.1nm,1.0s,mb4.0
BCLA Clavier 78.54 357 P **P 15 28 28.4 +0.1**
CRVS Cervenica-Dubn 78.59 346 *e*P **P 15 28 28.8 +0.2**
CRVS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
CRVS Cervenica-Dubn 78.59 346 *e*P **P 15 28 28.8 +0.2**
comp=Z,7.0nm,1.1s,mb4.5
TBI Tubuai 78.82 152 *e*LR LR 15 52 52.5
comp=Z,154nm,23.8s
VRAC Vranov 78.83 350⇓*i*P **P 15 28 30.6 +0.6**
VRAC Vranov 78.83 350⇓P **P 15 28 30.6 +0.7**
GIVF Givet 78.88 357 *e*P **P 15 28 30.0 -0.2**
BAIF Baives 78.94 358 *e*P **P 15 28 30.6 +0.1**
comp=Z,29nm,1.0s,mb4.8
BAIF Baives 78.94 358 *e*P **P 15 28 30.6 +0.1**
BAIF pmax pmax
comp=Z,14nm,1.0s,mb4.8
BAIF Baives 78.94 358 *e*P **P 15 28 30.6 +0.1**
comp=Z,14nm,1.0s,mb4.9
GRA1 Grafenberg Arr 78.95 353 *e*P **P 15 28 30.9 +0.3**
comp=Z,7.0nm,1.1s,mb4.5
GRF Grafenberg Arr 78.95 353 *e*P **P 15 28 30.9 +0.3**
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
GRF Grafenberg Arr 78.95 353 *e*P **P 15 28 30.9 +0.3**
comp=Z,7.0nm,1.1s,mb4.5
TREC Trest 78.96 350 *e*P **P 15 28 30.5 -0.2**
AJM Ajmer 79.13 299 *e*P **P 15 28 32.0 0.0**
KECS Kecovo 79.14 347 *i*P **P 15 28 31.8 +0.1**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KECS Kecovo 79.14 347 *i*P **P 15 28 31.8 +0.1**
comp=Z,4.4nm,1.0s,mb4.3
KECS *e*PP PP 15 31 30.6 -0.2
TRPA Tarpa 79.18 345⇓*i*P **P 15 28 32.5 +0.6**
BUR08 Bucovina Ar. S 79.20 344 *e*P **P 15 28 31.9 -0.2**
BURAR Bucovina Array 79.22 343⇑*i*P **P 15 28 32.4 +0.3**
KHC Kasperske Hory 79.31 352 *e*P **P 15 28 32.9 +0.3**
KOLL Kolacno 79.33 348 *e*P **P 15 28 33.2 +0.5**
VYHS Vyhne 79.36 348 *i*P **P 15 28 32.6 -0.2**
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 79.36 348 *i*P **P 15 28 32.6 -0.2**
comp=Z,2.8nm,0.9s,mb4.2
GERES GERESS Array B 79.59 351 P **P 15 28 34.0 -0.1**
comp=Z,1.2nm,0.6s,mb4.0,baz=21,slow=5.2,SNR=13
PSZ Piszkesteto 79.78 347⇓*i*P **P 15 28 36.1 +1.0**
ZST Bratislava 79.87 349 *e*P **P 15 28 36.1 +0.5**
ZST pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ZST Bratislava 79.87 349 *e*P **P 15 28 36.1 +0.5**
comp=Z,7.6nm,0.8s,mb4.7
BHPL Bhopal 80.11 295 *e*P **P 15 28 37.0 -0.3**
FLN La Foliniere 80.27 1 *e*P **P 15 28 37.3 -0.5**
CONA Conrad Observa 80.27 350⇑*i*P **P 15 28 38.4 +0.6**
comp=Z,6.9nm,1.0s,mb4.5
CSNA Conrad Observa 80.27 350⇑*i*P **P 15 28 38.2 +0.4**
comp=Z,6.6nm,1.0s,mb4.5
LDF La Druitiere 80.44 1 *e*P **P 15 28 38.0 -0.7**
comp=Z,18nm,0.8s,mb4.8
LDF La Druitiere 80.44 1 *e*P **P 15 28 38.0 -0.7**
LDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LDF La Druitiere 80.44 1 *e*P **P 15 28 38.0 -0.7**
comp=Z,9.3nm,0.8s,mb4.8
DRGR 80.45 345⇓*i*P **P 15 28 39.0 +0.2**
DRGR 80.45 345⇓P **P 15 28 39.0 +0.2**
MEZF Maizieres J'vi 80.47 357 *e*P **P 15 28 39.0 +0.1**
comp=Z,15nm,1.0s,mb4.6
MEZF Maizieres J'vi 80.47 357 *e*P **P 15 28 39.0 +0.1**
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 80.47 356 *e*P **P 15 28 38.6 -0.3**
VRI Vrincioaia 80.63 342⇑*i*P **P 15 28 39.8 0.0**
VRI Vrincioaia 80.63 342⇑P **P 15 28 39.9 +0.1**
GRR Gorron 80.64 1 *e*P **P 15 28 39.5 -0.3**
PLOR Plostina 80.66 342⇓P **P 15 28 40.6 +0.7**
PLOR Plostina 80.66 342⇓*i*P **P 15 28 40.5 +0.6**
SGMF Saint Gilles 80.74 2 *e*P **P 15 28 40.2 -0.1**
HAU Haudompre 80.92 356 *e*P **P 15 28 40.9 -0.4**
HINF Heimerfeld 81.09 356 *e*P **P 15 28 41.6 -0.6**
WTTA Wattenberg 81.34 353⇑*i*P **P 15 28 43.8 +0.3**
comp=Z,12nm,1.2s,mb4.7
VOIR 81.36 343⇑*i*P **P 15 28 44.8 +1.2**
VOIR 81.36 343⇑P **P 15 28 44.8 +1.1**
KBA Koelnbreinsper 81.37 351⇑*i*P **P 15 28 44.4 +0.7**
comp=Z,28nm,1.2s,mb5.1
HARR Harsova 81.52 341⇓*i*P **P 15 28 44.9 +0.4**
HARR Harsova 81.52 341⇓P **P 15 28 44.9 +0.4**
SOKA Soboth 81.60 350⇑*i*P **P 15 28 45.1 +0.3**
comp=Z,15nm,1.2s,mb4.8
PKSM Moragy 81.62 348⇓*i*P **P 15 28 44.9 -0.1**
PKSM Moragy 81.62 348⇓P **P 15 28 44.9 -0.1**
PERS Pernice 81.63 350 *e*P **P 15 28 44.9 -0.2**
TIRR Tirgusor 81.64 340⇓*i*P **P 15 28 45.3 +0.2**
TIRR Tirgusor 81.64 340⇓P **P 15 28 45.2 +0.1**
FETA Feichten 81.65 353⇑*i*P **P 15 28 45.2 +0.1**
comp=Z,9.6nm,1.1s,mb4.7
LOR Lormes 81.73 358 *e*P **P 15 28 45.3 -0.3**
comp=Z,5.9nm,0.8s,mb4.2
LOR Lormes 81.73 358 *e*P **P 15 28 45.3 -0.3**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LOR Lormes 81.73 358 *e*P **P 15 28 45.3 -0.3**
comp=Z,3.0nm,0.8s,mb4.3
BZS Buzias 81.77 345⇓*i*P **P 15 28 45.9 +0.1**
BZS Buzias 81.77 345⇓P **P 15 28 45.9 +0.1**
ABTA Abfaltersbach 81.78 352⇑*i*P **P 15 28 44.8 -1.1**
comp=Z,6.8nm,1.0s,mb4.5
GZR Gura Zlata 81.80 345⇓*i*P **P 15 28 46.4 +0.4**
GZR Gura Zlata 81.80 345⇓P **P 15 28 46.4 +0.4**
WRAB Tennant Creek 81.82 224 P **P 15 28 44.0 -2.3**
WRAB pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
WRAB Tennant Creek 81.82 224 P **P 15 28 44.0 -2.3**
comp=Z,0.8nm,0.5s,mb3.9
WRA Warramunga Arr 81.83 224 P **P 15 28 44.2 -2.1**
comp=Z,0.5nm,0.5s,mb3.7,baz=32,slow=5.9,SNR=13
SSF Saint Saulge 81.95 358 *e*P **P 15 28 46.5 -0.2**
comp=Z,5.7nm,0.6s,mb4.4
SSF Saint Saulge 81.95 358 *e*P **P 15 28 46.5 -0.2**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SSF Saint Saulge 81.95 358 *e*P **P 15 28 46.5 -0.2**
comp=Z,2.8nm,0.6s,mb4.4

AVF Avril sur Loir 82.22 358 *e*P **P 15 28 47.9 -0.3**
comp=Z,24nm,1.2s,mb4.7
AVF Avril sur Loir 82.22 358 *e*P **P 15 28 47.9 -0.3**
AVF pmax pmax
comp=Z,12nm,1.2s,mb4.7
AVF Avril sur Loir 82.22 358 *e*P **P 15 28 47.9 -0.3**
comp=Z,12nm,1.2s,mb4.7
TUE Stuetta 82.29 354 *e*P **P 15 28 48.6 +0.1**
comp=Z,11nm,1.3s,mb4.6
CABF La Chapelle 82.32 356 *e*P **P 15 28 48.8 +0.1**
comp=Z,30nm,1.1s,mb4.8
CABF La Chapelle 82.32 356 *e*P **P 15 28 48.8 +0.1**
CABF pmax pmax
comp=Z,15nm,1.1s,mb4.8
CABF La Chapelle 82.32 356 *e*P **P 15 28 48.8 +0.1**
comp=Z,15nm,1.1s,mb4.8
AKL Akola 82.34 293 *e*P **P 15 28 49.8 +0.6**
SMF Signal de Mont 82.36 358 *e*P **P 15 28 48.6 -0.3**
comp=Z,12nm,0.8s,mb4.6
SMF Signal de Mont 82.36 358 *e*P **P 15 28 48.6 -0.3**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SMF Signal de Mont 82.36 358 *e*P **P 15 28 48.6 -0.3**
comp=Z,6.1nm,0.8s,mb4.6
MFF Saint Martin d 82.43 1 *e*P **P 15 28 49.3 0.0**
BGF Bois d'Agland 82.47 359 *e*P **P 15 28 49.3 -0.1**
BOJS Bojanci 82.73 350 *i*P **P 15 28 50.6 -0.2**
TCF Toulx Ste Croi 82.74 359 *e*P **P 15 28 50.5 -0.4**
comp=Z,7.6nm,0.8s,mb4.5
TCF Toulx Ste Croi 82.74 359 *e*P **P 15 28 50.5 -0.4**
TCF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TCF Toulx Ste Croi 82.74 359 *e*P **P 15 28 50.5 -0.4**
comp=Z,3.8nm,0.8s,mb4.5
LPL La Plagne 83.39 356 *e*P **P 15 28 55.0 +0.8**
LPG La Plagne 83.41 356 *e*P **P 15 28 55.4 +1.1**
HYB Hyderabad 84.02 290 *i*P **P 15 28 57.5 -0.4**
HYB Hyderabad 84.02 290 *e*P **P 15 28 57.5 -0.4**
ORIF Oris-en-Rattie 84.02 356 *e*P **P 15 28 58.2 +0.7**
LFF La Frestale 84.10 0 *e*P **P 15 28 57.9 0.0**
CAF Calviac 84.11 359 *e*P **P 15 28 58.1 +0.2**
comp=Z,19nm,1.0s,mb4.9
CAF Calviac 84.11 359 *e*P **P 15 28 58.1 +0.2**
CAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
CAF Calviac 84.11 359 *e*P **P 15 28 58.1 +0.2**
comp=Z,9.5nm,1.0s,mb4.9
VIVF Saint-Julien-l 84.12 357 *e*P **P 15 28 58.3 +0.3**
comp=Z,12nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.12 357 *e*P **P 15 28 58.3 +0.3**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 84.12 357 *e*P **P 15 28 58.3 +0.3**
comp=Z,6.0nm,0.9s,mb4.7
MBDF Montbardon 84.17 356 *e*P **P 15 28 58.9 +0.6**
comp=Z,22nm,1.0s,mb4.9
MBDF Montbardon 84.17 356 *e*P **P 15 28 58.9 +0.6**
MBDF pmax pmax
comp=Z,11nm,1.0s,mb4.9
MBDF Montbardon 84.17 356 *e*P **P 15 28 58.9 +0.6**
comp=Z,11nm,1.0s,mb5.0
FITZ Fitzroy Crossi 84.27 232 *e*P **P 15 28 58.3 -0.6**
comp=Z,6.1nm,0.9s,mb4.7
BR131 Keskin Array S 84.89 335 *e*P **P 15 29 01.4 -0.5**
comp=Z,6.5nm,1.0s,mb4.7
BRTR Keskin Array B 84.89 335 P **P 15 29 01.9 -0.1**
comp=Z,5.7nm,0.8s,mb4.7,baz=42,slow=2.5,SNR=18
BRTR Keskin Array B 84.89 335⇑*e*P **P 15 29 02.0 0.0**
SMRF Simiane la Rot 84.97 357 *e*P **P 15 29 03.0 +0.7**
comp=Z,28nm,1.1s,mb5.0
SMRF Simiane la Rot 84.97 357 *e*P **P 15 29 03.0 +0.7**
comp=Z,28nm,1.1s,mb5.3
SBF Sospel 85.00 355 *e*P **P 15 29 02.1 -0.4**
comp=Z,38nm,0.9s,mb5.2
SBF Sospel 85.00 355 *e*P **P 15 29 02.1 -0.4**
SBF pmax pmax
comp=Z,19nm,0.9s,mb5.2
SBF Sospel 85.00 355 *e*P **P 15 29 02.1 -0.4**
comp=Z,19nm,0.9s,mb5.2
ASAR Alice Springs 85.31 222 P **P 15 29 03.2 -0.8**
comp=Z,0.7nm,0.5s,mb4.0,baz=24,slow=5.6,SNR=23
FRF La Foret Royal 85.34 356 *e*P **P 15 29 03.7 -0.5**
LMR La Mourre 85.58 356 *e*P **P 15 29 05.3 0.0**
comp=Z,30nm,0.9s,mb5.2
LMR La Mourre 85.58 356 *e*P **P 15 29 05.3 0.0**
LMR pmax pmax
comp=Z,15nm,0.9s,mb5.2
LMR La Mourre 85.58 356 *e*P **P 15 29 05.3 0.0**
comp=Z,15nm,0.9s,mb5.2
MTLF Montolieu 85.69 359 *e*P **P 15 29 05.8 -0.1**
POO Poona 85.87 295 *e*P **P 15 29 07.2 +0.1**
ETSF Etsaut 86.13 1 *e*P **P 15 29 08.5 +0.4**
PGF Pioggiola 86.22 354 *e*P **P 15 29 08.4 -0.1**
comp=Z,30nm,0.9s,mb5.2
PGF Pioggiola 86.22 354 *e*P **P 15 29 08.4 -0.1**
PGF pmax pmax
comp=Z,15nm,0.9s,mb5.2
PGF Pioggiola 86.22 354 *e*P **P 15 29 08.4 -0.1**
comp=Z,15nm,0.9s,mb5.2
KAD Karad 86.65 294 *e*P **P 15 29 10.6 -0.4**
KAD AMb AMB 15 29 12.5
comp=Z,22nm,1.4s,mb5.2
GOA Goa 88.30 293 *e*P **P 15 29 16.6 -2.3**
GOA AMb AMB 15 29 32.2
comp=Z,35nm,2.1s,mb5.2
ESDC Sonseca Array 89.26 4 P **P 15 29 22.1 -1.1**
comp=Z,0.6nm,0.4s,mb4.2,baz=358,slow=3.3,SNR=5.2
STKA Stephens Creek 89.78 213 P **P 15 29 25.4 +0.1**
comp=Z,7.2nm,1.0s,mb5.0,baz=316,slow=21,SNR=4.9
STKA Stephens Creek 89.78 213 *e*P **P 15 29 23.5 -1.8**
comp=Z,5.0nm,1.5s,mb4.6
TORD Torodi Ar. Bea 115.78 359 PKP PKPdf 15 35 09.0 -0.6
comp=Z,0.3nm,0.5s,baz=340,slow=2.6,SNR=5.7
TORD Torodi Ar. Bea 115.78 359 PKP PKPdf 15 35 09.0 -0.6
DBIC Dimbokro 122.01 7 PKP PKPdf 15 35 21.2 -0.5
comp=Z,1.0nm,0.4s,baz=352,slow=8.9,SNR=6.0
DBIC Dimbokro 122.01 7 PKP PKPdf 15 35 21.2 -0.5
TSUM Tsumeb 145.31 331 *e*PKPbc PKPbc 15 36 03.9 -0.8
LBTB Lobatse 147.60 315 *e*PKP2 PKPbc 15 36 11.1 -0.1
BOSA Boshof 150.84 312 PKPbc PKPbc 15 36 19.7 +0.5
comp=Z,3.5nm,0.5s,baz=61,slow=1.8,SNR=12
VNA3 Neumayer Olymp 159.47 170 *e*PKPdf PKPab 15 37 00.2 -2.1
VNA2 Neumayer--Watz 159.99 172 *e*PKPdf PKPab 15 37 03.1 -1.5

IDC ***21*** *15:27:57.5±3.6, 1232S×16802E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.7/4, Error ellipse: s-maj=119.2km s-min=44.4km az=135.0*

NEIC 21 15:28:02.8±2.2, 1241S×16800E, h35km, mb3.4/1, Error ellipse: s-maj=82.4km s-min=24.7km az=138.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**33.12**	**253**	P	P	15 34 35.5	-0.4
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**33.13**	**253**	P	P	15 34 35.9	-0.1
	0.2nm,0.4s,baz=84,slow=8.9,SNR=4.9						
ASAR	**Alice Springs**	**34.21**	**246**	P	P	15 34 45.8	+0.5
	0.3nm,0.7s,baz=70,slow=10,SNR=6.3						
CMAR	**Chiang Mai Arr**	**74.68**	**293**	P	P	15 39 39.7	+0.4
	0.9nm,0.9s,baz=108,slow=5.8,SNR=5.5						
MKAR	**Makanchi Array**	**96.02**	**316**	P	P	15 41 26.3	-0.1
	0.7nm,0.6s,baz=90,slow=6.2,SNR=4.4						
ARCES	**ARCESS Array B**	**118.20**	**346**	PKP	PKPdf	15 46 45.7	+0.1
	7.8nm,1.1s,baz=48,slow=1.8,SNR=3.6						

NEIC 21 15:38:46.3, 3832S×17597E, h171km, mb3.9/1, After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTZ	**Whakaora**	**0.35**	**182**	P	Pn	15 39 09.8	+0.4
WATZ	**Wairara**	**0.43**	**205**	P	Pn	15 39 10.0	+0.3
RATZ	**Rangitukua**	**0.57**	**196**	P	Pn	15 39 10.4	+0.1
RITZ	**Rihia Road**	**0.66**	**188**	P	Pn	15 39 11.3	+0.5
KATZ	**Kakaramea**	**0.69**	**198**	P	Pn	15 39 11.2	+0.2
WTVZ	**West Tongariro**	**0.85**	**200**	P	Pn	15 39 12.1	+0.1
TWVZ	**Taurewa**	**0.86**	**209**	P	Pn	15 39 12.1	+0.1
HIZ	**Hauiti**	**0.90**	**257**	P	Pn	15 39 12.1	-0.2
URZ	**Urewera**	**0.90**	**87**	P	Pn	15 39 11.8	-0.5
NGZ	**Ngauruhoe**	**0.90**	**199**	P	Pn	15 39 12.7	+0.4
BKZ	**Black Stump Fm**	**0.94**	**154**	P	Pn	15 39 12.8	+0.2
BKZ				S	Sn	15 39 31.7	-1.2

TUVZ	**Tukino**	**0.98 195**	P	Pn	15 39 13.2	+0.3
TUVZ			S	Sn	15 39 33.2	-0.3
FWVZ	**Far West T-bar**	**0.99 199**	P	Pn	15 39 13.2	+0.2
WNVZ	**Wahianoa**	**1.05 196**	P	Pn	15 39 13.6	+0.2
MOVZ	**Moawhango**	**1.10 189**	P	Pn	15 39 13.7	-0.1
MWZ	**Matawai**	**1.23 91**	P	Pn	15 39 15.0	+0.1
VRZ	**Vera Road**	**1.24 229**	P	Pn	15 39 15.1	0.0
KUZ	**Kuaotunu**	**1.58 353**	P	Pn	15 39 17.9	-0.4
WAZ	**Wanganui**	**1.63 208**	P	Pn	15 39 18.6	-0.1
TSZ	**Takapari Road**	**1.74 180**	P	Pn	15 39 19.6	-0.3
PKE	**Pukeiti**	**1.78 240**	P	Pn	15 39 20.6	+0.3
MXZ	**Matakaoa Point**	**2.00 68**	P	Pn	15 39 22.7	0.0
MRZ	**Mangatainoka R**	**2.36 187**	P	Pn	15 39 25.5	-1.2
BFZ	**Birch Farm**	**2.37 175**	P	Pn	15 39 26.0	-0.9
KIW	**Kapiti Island**	**2.67 198**	P	Pn	15 39 28.7	-1.7
MTW	**Mount Morrison**	**2.86 187**	P	Pn	15 39 30.8	-1.9
CAW	**Cannon Point**	**2.87 194**	P	Pn	15 39 31.1	-1.8
MRW	**Makara Radio**	**3.07 198**	P	Pn	15 39 33.2	-2.1
PAWZ	**Paruwai Farm**	**3.09 188**	P	Pn	15 39 33.4	-2.1
MSWZ	**Moikau Station**	**3.14 190**	P	Pn	15 39 34.0	-2.2
SNZO	**South Karori**	**3.14 198**	P	Pn	15 39 33.9	-2.3
TCW	**Tory Channel**	**3.17 204**	P	Pn	15 39 34.5	-2.0
BHW	**Baring Head**	**3.20 195**	P	Pn	15 39 34.5	-2.4
NNZ	**Nelson**	**3.52 214**	P	Pn	15 39 38.2	-2.7
BSWZ	**Blackbirch Sta**	**3.75 205**	P	Pn	15 39 41.6	-2.3
THZ	**Tophouse**	**4.17 213**	P	Pn	15 39 46.6	-2.6
KHZ	**Kahutara**	**4.49 204**	P	Pn	15 39 50.6	-2.8
DSZ	**Denniston Nort**	**4.68 222**	P	Pn	15 39 53.1	-2.8
LTZ	**Lake Taylor**	**5.27 211**	P	Pn	15 39 59.6	-3.9
MQZ	**McQueen's Vall**	**5.94 204**	P	Pn	15 40 07.5	-4.7
RPZ	**Rata Peaks**	**6.55 213**	P	Pn	15 40 16.6	-3.7
FOZ	**Fox Glacier**	**7.07 220**	P	Pn	15 40 23.2	-4.0
ODZ	**Otahua Downs**	**7.81 209**	P	Pn	15 40 33.0	-3.9
JCZ	**Jackson Bay**	**7.91 221**	P	Pn	15 40 34.2	-4.1
WKZ	**Wanaka**	**8.33 216**	P	Pn	15 40 39.4	-4.4

*TAP **21** 16:00:55.4,2451N×122.71E,h100km,ML3.2,D*
*JMA **21** 16:00:55.7±0.1,2459N×122.78E,h94km±1km, M1.8*
*ISCJB **21** 16:00:56.0±0.8,2453N±005×12276E±002,h87km±7km, Error ellipse: s-maj=7.8km s-min=3.3km az=177.6*

ISC 21 16:00:56.5±0.7,2453N±005×12276E±002,h86km±7km, n33,σ0982/58,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.24**	**108**	P		**Pn**	**16 01 09.3**	**+0.1**
YOJ				S		**Sn**	**16 01 19.6**	**+1.0**
TWC	**Suao** baz=281	**0.84**	**275**	*i* P		**Pn**	**16 01 13.6**	**-0.5**
TWC				*i* S		**Sn**	**16 01 26.7**	**-0.5**
IRIF	**Iriomote-Funau** baz=281	**0.90**	**103**	P		**Pn**	**16 01 14.7**	**-0.1**
IRIF				S		**Sn**	**16 01 29.0**	**+0.5**
ENA	**Nanau** baz=260	**0.94**	**264**	P		**Pn**	**16 01 14.9**	**-0.3**
ENA				*e*S		**Sn**	**16 01 29.7**	**+0.5**
TWE	**Neicheng** baz=279	**1.01**	**281**	⇑ *i* P		**Pn**	**16 01 16.1**	**0.0**
TWE				*e*S		**Sn**	**16 01 30.6**	**-0.2**
HATJ	**Hateruma jima**	**1.06**	**116**	S		**Sn**	**16 01 32.2**	**+0.4**
ENTT	**Nioudou** baz=277	**1.10**	**276**	P		**Pn**	**16 01 17.1**	**+0.1**
ENTT				*e*S		**Sn**	**16 01 32.6**	**+0.1**
TWD	**Chiawan** baz=241	**1.16**	**247**	*e*P		**Pn**	**16 01 16.8**	**-1.0**
TWD				S		**Sn**	**16 01 32.7**	**-1.1**
JKRS	**Kuro-shima**	**1.17**	**104**	P		**Pn**	**16 01 18.0**	**0.0**
JKRS				S		**Sn**	**16 01 34.5**	**+0.3**
JIJ	**Ishigaki jima**	**1.27**	**97**	P		**Pn**	**16 01 18.9**	**-0.2**
JIJ				S		**Sn**	**16 01 35.6**	**-0.6**
NNS	**Nan Shan** baz=261	**1.27**	**266**	P		**Pn**	**16 01 18.8**	**-0.4**
NNS				*e*S		**Sn**	**16 01 36.2**	**-0.1**
NSK	**Sanguang** baz=271	**1.29**	**277**	P		**Pn**	**16 01 19.1**	**-0.3**
NSK				S		**Sn**	**16 01 36.5**	**-0.1**
TWS1	**Kuangyinshan** baz=290	**1.35**	**295**	P		**Pn**	**16 01 20.0**	**-0.2**
TWS1				*e*S		**Sn**	**16 01 37.8**	**-0.2**
ESL	**Shilin** baz=239	**1.41**	**240**	*e*P		**Pn**	**16 01 19.7**	**-1.2**
WHF	**Hehuan Shan** baz=259	**1.42**	**254**	P		**Pn**	**16 01 20.7**	**-0.3**
WHF				*e*S		**Sn**	**16 01 39.0**	**-0.6**
TWT	**Tachien** baz=259	**1.48**	**259**	*e*P		**Pn**	**16 01 21.9**	**+0.1**
TWT				*e*S		**Sn**	**16 01 40.9**	**+0.1**
NSTT	**Nanjuang** baz=274	**1.61**	**274**	*e*P		**Pn**	**16 01 23.1**	**-0.3**
NSTT				S		**Sn**	**16 01 44.0**	**+0.1**
EHY	**Hungye** baz=239	**1.67**	**232**	*e*P		**Pn**	**16 01 23.3**	**-1.0**
EHY				*e*S		**Sn**	**16 01 43.1**	**-2.2**
JTJ	**Tarama**	**1.77**	**86**	P		**Pn**	**16 01 25.3**	**-0.2**
JTJ				S		**Sn**	**16 01 47.9**	**+0.3**
TWF1	**Yuli** baz=236	**1.79**	**229**	*e*P		**Pn**	**16 01 24.6**	**-1.1**
TWF1				*e*S		**Sn**	**16 01 46.5**	**-1.5**
SMLT	**Sun Moon Lake** baz=244	**1.82**	**250**	P		**Pn**	**16 01 26.8**	**+0.6**
SMLT				S		**Sn**	**16 01 50.1**	**+1.3**
TWQ1	**Liyutan** baz=264	**1.82**	**265**	*e*S		**Sn**	**16 01 49.6**	**+0.7**
TYC	**Yuchr** baz=246	**1.85**	**251**	*e*P		**Pn**	**16 01 27.3**	**+0.7**
TYC				*e*S		**Sn**	**16 01 50.2**	**+0.7**
CHKT	**Chengkung** baz=215	**1.92**	**222**	*e*S		**Sn**	**16 01 48.2**	**-2.9**
ALS	**Alishan** baz=234	**2.06**	**241**	*e*S		**Sn**	**16 01 55.6**	**+1.1**
ELDTW	**Lidau** baz=231	**2.09**	**230**	*e*P		**Pn**	**16 01 28.2**	**-1.5**
ELDTW				*e*S		**Sn**	**16 01 53.2**	**-1.8**
CHN5	**Tsauling** baz=243	**2.12**	**244**	*e*P		**Pn**	**16 01 31.0**	**+0.8**
CHN5				*e*S		**Sn**	**16 01 56.9**	**+1.0**
STYT	**Tauyuan** baz=230	**2.29**	**234**	*e*P		**Pn**	**16 01 33.4**	**+1.0**
STYT				*e*S		**Sn**	**16 02 00.6**	**+0.7**
CHN4	**Tsaushan** baz=248	**2.31**	**240**	*e*S		**Sn**	**16 02 01.2**	**+0.8**
WTP	**Ta-pu** baz=236	**2.35**	**237**	*e*P		**Pn**	**16 01 34.1**	**+0.9**
WTP				*e*S		**Sn**	**16 02 02.4**	**+1.1**
TWK	**Hsinying** baz=238	**2.44**	**239**	*e*S		**Sn**	**16 02 03.8**	**+0.4**
CHN1	**Nanshi** baz=246	**2.45**	**237**	*e*P		**Pn**	**16 01 35.4**	**+0.9**
CHN1				*e*S		**Sn**	**16 02 04.4**	**+0.7**
SSD	**Sandimen** baz=226	**2.64**	**228**	*e*S		**Sn**	**16 02 09.4**	**+1.0**

*NIED **21** 16:16:00,4290N×14550E,h35km,Mw3.9 Best double couple: M○7.57000×10^14 NP1:⌀=34.00000°,δ66.00000°, λ84.00000°. NP2:⌀=227.00000°,δ25.00000°,λ102.00000°.*
*MOS **21** 16:16:36.3±1.3,4274N×14576E,h43km,mb4.5/1, Error ellipse: s-maj=17.7km s-min=13.3km az=97.0*
*IDC **21** 16:16:38.5±5.5,4275N×14582E,h46km±42km,mb3.9/4, mb1 3.9/6,mb1mx3.5/23,mbtmp3.8/6,ML3.9/2,MS3.4/2, Ms1 3.4/2,ms1mx2.6/44, Error ellipse: s-maj=60.6km s-min=28.4km az=65.0*
*ISCJB **21** 16:16:38.4±1.0,4286N±007×14556E±009,h51km±6km, mb4.0/5, Error ellipse: s-maj=14.5km s-min=7.4km az=136.1*
*NEIC **21** 16:16:39.4,4287N×14552E,h44km,MG4.3(JMA), After JMA.*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*JMA **21** 16:16:39.3±0.1,4287N×14551E,h44km±1km, M4.3*
JMA Felt II J1.

ISC 21 16:16:39.7±1.0,4289N±006×14554E±009,h43km±7km, n25,σ0974/31,mb4.0/5,5D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.50**	**17**	P		**Pn**	**16 16 50.3**	**-0.2**
NEM2				*e*S		**Sn**	**16 16 58.0**	**-0.2**
JAK	**Akkeshi**	**0.63**	**280**	⇓P		**Pn**	**16 16 51.7**	**-0.5**
JAK				*e*S		**Sn**	**16 17 00.7**	**-0.5**
JNK	**Nakash**	**0.92**	**320**	⇓P		**Pn**	**16 16 55.9**	**-0.3**
JNK				*e*S		**Sn**	**16 17 07.4**	**-0.8**
JRA	**Rausu**	**1.09**	**344**	⇓P		**Pn**	**16 16 58.6**	**+0.1**
JRA				*e*S		**Sn**	**16 17 13.1**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**1.17**	**11**	⇓ *i* PN		**Pn**	**16 16 59.7**	**+0.1**
YUK				*i* S		**Sn**	**16 17 13.8**	**-0.5**
YUK	comp=N,570nm,0.3s			pmax	pmax			
YUK	comp=E,380nm,0.3s			pmax	pmax			
YUK	comp=Z,950nm,0.3s			pmax	pmax			
YUK	comp=N,3μm,0.5s			smax				
YUK	comp=E,4μm,0.5s			smax				
YUK	comp=N,5μm,0.8s			smax				
YUK	comp=E,8μm,0.8s			smax				
JOB	**Onbets**	**1.25**	**271**	P		**Pn**	**16 17 00.1**	**-0.6**
JAR	**Ashorobuto**	**1.36**	**288**	⇓P		**Pn**	**16 17 01.8**	**-0.4**
ERM	**Erimo**	**1.97**	**245**	*e*Pn		**Pn**	**16 17 11.6**	**+1.1**
ERM				*e*Sn		**Sn**	**16 17 41.0**	**+7.1**
ASAJ	**Asahikawa**	**2.47**	**301**	P		**Pn**	**16 17 19.1**	**+1.7**
ASAJ	comp=E,27nm,0.3s,baz=133,slow=12,SNR=126			S		**Sn**	**16 17 51.7**	**+5.4**
ASAJ	comp=E,18nm,0.3s,baz=15,slow=28,SNR=10.0							
ASAJ	**Asahikawa**	**2.47**	**301**	PN		**Pn**	**16 17 19.1**	**+1.7**
ASAJ				S		**Sn**	**16 17 51.7**	**+5.4**
ASAJ	comp=Z,27nm,0.3s			pmax	pmax			
ASAJ	comp=N,18nm,0.3s			smax				
MJAR	**Matsushiro Arr**	**8.49**	**224**	P		**Pn**	**16 18 39.3**	**-0.7**
	comp=N,0.4nm,0.3s,baz=24,slow=12,SNR=5.0							
KLR	**Kul'dur**	**11.48**	**308**	*e*PN		**Pn**	**16 19 22.8**	**+1.9**
PET	**Petropavlovsk**	**13.39**	**36**	*e*PN		**Pn**	**16 19 47.7**	**+0.7**
PET	comp=Z,100nm,1.5s			pmax	pmax			
PET	**Petropavlovsk** comp=E,100nm,1.5s	**13.39**	**36**	*e*Pn		**Pn**	**16 19 47.7**	**+0.7**
KSRS	**Korea Array**	**14.52**	**254**	LR	LR		16 25 20.5	
	comp=Z,23nm,21.8s,baz=100,slow=36							
SONM	**Songino Array**	**27.73**	**294**	P		**P**	**16 22 24.4**	**+0.5**
	comp=Z,1.6nm,0.6s,mb3.8,baz=85,slow=8.0,SNR=16							
MKAR	**Makanchi Array**	**43.95**	**298**	P		**P**	**16 24 42.5**	**+0.3**
	comp=Z,1.8nm,0.8s,mb3.9,baz=72,slow=12,SNR=3.7							
JOF	**Joensuu**	**62.30**	**332**	*e*p		**P**	**16 26 56.0**	**-1.0**
	comp=Z,1.2nm,0.4s,mb4.4							
JOF	**Joensuu**	**62.30**	**332**	*e*P		**P**	**16 26 56.0**	**-1.0**
JOF	comp=Z,1.0nm,0.4s,mb4.3			pmax	pmax			
KAF	**Kangasniemi**	**64.55**	**333**	*e*p		**P**	**16 27 11.1**	**-0.8**
NB2	**NORSAR Subarra**	**69.98**	**338**	P		**P**	**16 27 46.2**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=35,slow=5.9							
NOA	**NORSAR Array B**	**69.98**	**338**	P		**P**	**16 27 46.0**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=36,slow=6.2,SNR=7.9							
AKASG	**Malin Array Be**	**71.57**	**323**	P		**P**	**16 27 56.2**	**+0.1**
	comp=Z,1.2nm,0.4s,mb4.2,baz=37,slow=5.8,SNR=6.8							
AKASG	**Malin Array Be**	**71.57**	**323**	P		**P**	**16 27 56.2**	**+0.1**
BORG	**Borgarnes**	**72.21**	**354**	LR	LR		17 00 16.7	
	comp=Z,190nm,18.1s,baz=122,slow=36							

*MOS **21** 16:17:21.4±1.2,022N×12439E,h73km,mb5.1/15, Error ellipse: s-maj=14.7km s-min=7.6km az=116.5*
*ISCJB **21** 16:17:23.2±0.8, 0.11N±004×12439E±005,h91km±8km, mb4.6/59, Error ellipse: s-maj=8.2km s-min=6.2km az=37.2*
*BJI **21** 16:17:24.6,020N×12451E,h97km,mB5.0,mb4.8*
*NEIC **21** 16:17:25.8±0.9, 0.12N×12437E,h102km±8km, mb4.8/22, Error ellipse: s-maj=8.4km s-min=5.2km az=76.0*
*IDC **21** 16:17:25.1±2.2, 0.13N×12430E,h92km±20km, mb4.1/17, mb1 4.2/18,mb1mx4.2/22,mbtmp4.1/18,MS3.0/5, Ms1 3.0/5,ms1mx2.8/29, Error ellipse: s-maj=17.6km s-min=11.8km az=77.0*
*DJA **21** 16:17:26, 000N×12457E,h30km,Mw5.5/2*

ISC 21 16:17:24.8±0.7,008N±004×12441E±004,h90km±7km, h86km±2.5km:pP-P,n111,σ1§03/115,mb4.6/59,2C-4D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.03**	**77**	P		**Pn**	**16 18 10.7**	**0.0**
TNTI				S		**Sn**	**16 18 45.6**	**-0.6**
LBMI	**Labuha**	**3.17**	**103**	P		**Pn**	**16 18 12.1**	**-0.5**
KDI	**Kendari**	**4.39**	**204**	P		**Pn**	**16 18 29.3**	**+0.1**
PCI	**Palu**	**4.68**	**258**	P		**Pn**	**16 18 37.4**	**+4.3**
AAI	**Ambon** 283nm,0.7s,5μm	**5.32**	**135**	P		**Pn**	**16 18 41.9**	**+0.1**
KAPI	**Kappang** 12nm,0.3s,baz=64,slow=5.0,SNR=47	**6.88**	**223**	P		**Pn**	**16 19 04.4**	**+1.4**
KAPI	5.9nm,0.3s,baz=49,slow=20,SNR=2.7			S		**Sn**	**16 20 19.3**	**-0.5**
KAPI	comp=Z,153nm,18.9s,baz=324,slow=42			LR	LR		16 22 12.8	
KAPI	**Kappang**	**6.88**	**223**	*e*Pn		**Pn**	**16 19 03.5**	**+0.5**
DAV	**Davao City (W)** 20nm,0.3s,baz=61,slow=5.6,SNR=7.8	**7.04**	**9**	P		**Pn**	**16 19 10.1**	**+4.9**
DAV	comp=Z,73nm,20.0s,baz=149,slow=32			LR	LR		16 21 08.6	
DAV	**Davao City (W)** 225nm,0.5s	**7.04**	**9**	Pn		**Pn**	**16 19 05.7**	**+0.5**
DAV				LR	LR		16 21 08.6	
FITZ	**Fitzroy Crossi** 29nm,0.9s	**18.11**	**176**	*e*P		**Pn**	**16 21 30.4**	**-0.1**
FITZ	**Fitzroy Crossi** 16nm,0.8s	**18.11**	**176**	*e*P		**Pn**	**16 21 29.9**	**-0.6**
MBWA	**Marble Bar** 35nm,0.6s,mb4.9	**21.60**	**192**	*e*P		**P**	**16 22 08.0**	**+0.6**
WRAB	**Tennant Creek**	**22.14**	**154**	*e*P		**P**	**16 22 14.7**	**+1.4**
WRAB	comp=Z,12nm,0.8s,mb4.3			pmax	pmax			
WRAB	**Tennant Creek** comp=Z,12nm,0.8s,mb4.3	**22.14**	**154**	*e*P		**P**	**16 22 14.7**	**+1.4**
WRA	**Warramunga Arr** comp=Z,4.3nm,0.6s,mb4.0,baz=330,slow=10,SNR=46	**22.15**	**155**	P		**P**	**16 22 13.0**	**-0.3**
WB2	**Warramunga Arr**	**22.15**	**154**	*e*P		**P**	**16 22 14.6**	**+1.2**
WB2	**Warramunga Arr**	**22.15**	**154**	*e*P		**P**	**16 22 14.9**	**+1.5**
QIZ	**Qiongzhong** comp=Z,5.8nm,0.5s,mb4.2	**23.64**	**324**	*e*P		**P**	**16 22 28.6**	**+0.6**
KULM	**Kulim** comp=Z,12nm,1.0s,mb4.2	**24.29**	**283**	*e*P		**P**	**16 22 32.3**	**-1.7**
ASAR	**Alice Springs** comp=Z,2.4nm,0.4s,mb4.0,baz=341,slow=13,SNR=54	**25.34**	**159**	P		**P**	**16 22 44.1**	**+0.7**
ASAR	comp=Z,0.7nm,0.5s,baz=353,slow=2.5,SNR=5.7			PcP	PcP		16 26 15.1	+1.0
ASAR	comp=Z,0.3nm,0.8s,baz=352,slow=3.5,SNR=4.2			ScP	ScP		16 29 45.4	0.0
ASAR	**Alice Springs**	**25.34**	**159**	P		**P**	**16 22 44.2**	**+0.8**
ASAR							16 26 15.1	
PSI	**Prapat** comp=Z,5.5nm,0.8s,mb4.0,baz=123,slow=1.4,SNR=7.5	**25.62**	**276**	P		**P**	**16 22 46.0**	**-0.1**
COCO	**West Island**	**29.96**	**245**	*e*P		**P**	**16 23 25.0**	**+0.1**
COCO	comp=Z,17nm,0.4s,mb5.0			pmax	pmax			
COCO	**West Island** comp=Z,17nm,0.4s,mb5.0	**29.96**	**245**	*e*P		**P**	**16 23 25.0**	**+0.1**
CMAR	**Chiang Mai Arr** comp=Z,2.7nm,0.8s,mb4.0,baz=138,slow=7.7,SNR=27	**30.98**	**308**	P		**P**	**16 23 34.1**	**+0.4**
CMAR	comp=Z,1.8nm,0.7s,baz=168,slow=2.4,SNR=9.0			PcP	PcP		16 26 29.1	+0.9
CMAR	**Chiang Mai Arr**	**30.98**	**308**	*i* P		**P**	**16 23 34.7**	**+1.0**
CMAR	comp=Z,3.0nm,0.8s			pmax	pmax			
CHTO	**Chiang Mai**	**31.17**	**308**	*e*P		**P**	**16 23 35.5**	**0.0**
CHTO	comp=Z,13nm,0.9s,mb4.7			pmax	pmax			
CHTO	**Chiang Mai** comp=Z,13nm,0.9s,mb4.7	**31.17**	**308**	*e*P		**P**	**16 23 35.5**	**+0.1**
GYA	**Guiyang**	**31.31**	**328**	P		**P**	**16 23 37.8**	**+1.3**
GYA				AP		pP	16 23 57.8	+0.6
GYA				XP		sP	16 24 07.8	+0.1
GYA				PP		PP	16 24 45.8	-3.1
GYA				PPP			16 25 02.9	
GYA				S		**S**	**16 28 39.3**	**+2.3**
GYA				XS		sS	16 29 16.0	+3.3
GYA				SCP		ScP	16 30 01.3	-2.7
GYA				PCS		PcS	16 30 11.0	-2.3
GYA	comp=Z,10.0nm,0.7s,mb4.7			AMB		AMB		
GYA	comp=Z,90nm,5.5s			AMB		AMB		
GYA	comp=N,540nm,11.0s			LR		LR		
GYA	comp=E,670nm,10.8s			LR		LR		
GYA	comp=Z,890nm,10.4s			LR		LR		
NJ2	**Nanjing**	**32.23**	**351**	*e*P		**P**	**16 23 44.6**	**0.0**
NJ2	comp=Z,10.0nm,0.5s,mb4.8			AMB		AMB		
KMI	**Kunming**	**32.54**	**322**	P		**P**	**16 23 48.1**	**+0.7**
KMI	comp=Z,69nm,29.4s			LR		LR		
STKA	**Stephens Creek** comp=Z,2.7nm,0.5s,mb4.4,baz=309,slow=12,SNR=9.8	**35.70**	**154**	P		**P**	**16 24 15.8**	**+1.2**
STKA	comp=Z,36nm,19.4s,baz=29,slow=35			LR		LR	16 38 02.4	
STKA	**Stephens Creek** comp=Z,3.7nm,0.8s,mb4.4	**35.70**	**154**	*e*P		**P**	**16 24 15.6**	**+1.0**
STKA	**Stephens Creek** comp=Z,1.1nm,0.8s,mb3.8	**35.70**	**154**	*e*P		**P**	**16 24 14.7**	**+0.1**
CD2	**Chengdu**	**36.39**	**329**	P		**P**	**16 24 21.4**	**+0.8**
CD2				AP		pP	16 24 39.6	-1.9
CD2				PP		PP	16 25 48.0	+2.9
CD2				PCP		PcP	16 26 43.5	+0.3
CD2				S		**S**	**16 29 57.4**	**+1.9**
CD2				XS		sS	16 30 29.3	-2.3
CD2				SS		SS	16 32 28.4	-10
CD2	comp=Z,20nm,0.8s,mb5.1			AMB		AMB		
CD2	comp=Z,110nm,4.1s			AMB		AMB		
CD2	comp=N,320nm,4.0s			LR		LR		
CD2	comp=Z,150nm,4.5s			LR		LR		
XAN	**Xi'an**	**36.77**	**338**	P		**P**	**16 24 23.3**	**-0.5**
XAN				AP		pP	16 24 43.5	-1.2
XAN				PP		PP	16 25 50.0	+0.7
XAN				PPP			16 26 13.3	
XAN				S		**S**	**16 30 03.9**	**+2.7**
XAN	comp=Z,13nm,0.8s,mb4.9			AMB		AMB		
XAN	comp=E,16nm,17.9s			LR		LR		
XAN	comp=Z,21nm,19.1s			LR		LR		
KSRS	**Korea Array** comp=Z,1.7nm,0.5s,mb4.2,baz=181,slow=9.9,SNR=11	**37.33**	**5**	P		**P**	**16 24 28.7**	**+0.3**
KSRS	comp=Z,15nm,21.3s,baz=80,slow=35			LR		LR	16 39 25.0	
MJAR	**Matsushiro Arr** comp=Z,11nm,0.7s,mb4.8,baz=194,slow=8.7,SNR=32	**38.47**	**18**	P		**P**	**16 24 37.7**	**-0.3**
MJAR	comp=Z,30nm,21.1s,baz=55,slow=33			LR		LR	16 38 47.9	
MJAR	**Matsushiro Arr**	**38.47**	**18**	P		**P**	**16 24 37.7**	**-0.3**
MJAR				LR		LR	16 38 47.9	
MAJO	**Matsushiro** comp=Z,15nm,0.6s,mb5.0	**38.47**	**18**	*e*P		**P**	**16 24 37.5**	**-0.5**
MAJO				pmax	pmax			
MAJO	**Matsushiro** comp=Z,16nm,0.6s,mb5.0	**38.47**	**18**	*e*P		**P**	**16 24 37.5**	**-0.5**
MAT	**Matsushiro**	**38.47**	**18**	P		**P**	**16 24 37.5**	**-0.5**
BJI	**Beijing**	**40.47**	**350**	P		**P**	**16 24 55.8**	**+1.2**
BJI	comp=Z,6.0nm,1.0s,mb4.4			AMB		AMB		
BJI	comp=Z,39nm,34.2s			LR		LR		
LZH	**Lanzhou**	**40.61**	**334**	*e*P		**P**	**16 24 57.0**	**+1.2**
LZH				AP		pP	16 25 18.3	+1.3
LZH				XP		sP	16 25 30.0	+2.6
LZH				PP		PP	16 26 35.4	+4.3
LZH	comp=Z,25nm,1.2s,mb4.9			AMB		AMB		
LZH	comp=Z,101nm,5.2s			AMB		AMB		
LZH	comp=E,503nm,13.5s			LR		LR		
LZH	comp=Z,778nm,17.6s			LR		LR		
HHC	**Hu-ho-hao-te**	**42.22**	**345**	*e*P		**P**	**16 25 10.0**	**+1.1**
HHC	comp=Z,14nm,0.9s,mb4.7			AMB		AMB		
HHC	comp=Z,140nm,4.2s			AMB		AMB		
HHC	comp=N,77nm,16.6s			LR		LR		
HHC	comp=E,143nm,14.3s			LR		LR		
HHC	comp=Z,63nm,16.7s			LR		LR		
LSA	**Lhasa**	**43.27**	**316**	P		**P**	**16 25 19.0**	**+1.4**
LSA	**Lhasa**	**43.27**	**316**	*e*P		**P**	**16 25 18.7**	**+1.1**
LSA	comp=Z,8.0nm,0.6s,mb4.6			pmax	pmax			
LSA	**Lhasa** comp=Z,8.4nm,0.6s,mb4.7	**43.27**	**316**	*e*P		**P**	**16 25 18.7**	**+1.1**
CN2	**Changchun**	**43.54**	**1**	*e*P		**P**	**16 25 21.8**	**+2.3**
CN2				*e*S		**S**	**16 31 45.8**	**+4.0**
CN2	comp=Z,10.0nm,0.6s,mb4.7			AMB		AMB		
MDJ	**Mudanjiang**	**44.58**	**5**	P		**P**	**16 25 28.4**	**+0.6**
MDJ				AP		pP	16 25 47.6	-1.8
MDJ	comp=Z,16nm,0.8s,mb4.8			AMB		AMB		
MDJ	comp=Z,79nm,4.0s			AMB		AMB		
RAMN	**Ramite** comp=Z,18nm,0.5s,mb5.1	**45.10**	**309**	*e*P		**P**	**16 25 33.0**	**+0.7**
GTA	**Gaotai**	**45.15**	**333**	*e*P		**P**	**16 25 33.0**	**+0.6**
GTA				AP		pP	16 25 54.8	+0.8
GTA				XP		sP	16 26 07.8	+3.6
GTA				S		**S**	**16 32 08.5**	**+3.2**
GTA				XS		sS	16 32 48.0	+5.7
GTA	comp=Z,18nm,0.6s,mb5.0			AMB		AMB		
GTA	comp=Z,113nm,5.4s			AMB		AMB		
GTA	comp=N,77nm,13.7s			LR		LR		
GTA	comp=E,132nm,16.1s			LR		LR		
GTA	comp=Z,67nm,13.7s			LR		LR		
JIRN	**Jiri** comp=Z,14nm,0.5s,mb4.9	**45.78**	**310**	*e*P		**P**	**16 25 37.9**	**+0.3**
GUN	**Gumba** comp=Z,19nm,0.5s,mb5.0	**46.14**	**310**	*e*P		**P**	**16 25 40.5**	**+0.1**
PKI	**Pulchoki**	**46.33**	**309**	*e*P		**P**	**16 25 41.9**	**-0.1**
PKI	**Pulchoki**	**46.33**	**309**	*e*P		**P**	**16 25 41.9**	**-0.1**
PKIN	**Phulchoki** comp=Z,5.1nm,0.4s,mb4.6	**46.34**	**309**	*e*P		**P**	**16 25 41.9**	**-0.2**
KKN	**Kakani** comp=Z,9.2nm,0.5s,mb4.7	**46.54**	**310**	*e*P		**P**	**16 25 43.9**	**+0.3**
KKN	**Kakani** comp=Z,9.2nm,0.5s,mb4.8	**46.54**	**310**	*e*P		**P**	**16 25 43.9**	**+0.3**
DMN	**Daman** comp=Z,7.5nm,0.6s,mb4.6	**46.59**	**309**	*e*P		**P**	**16 25 43.8**	**-0.1**
GKN	**Gorkha** comp=Z,7.6nm,0.3s,mb4.8	**47.14**	**309**	*e*P		**P**	**16 25 48.0**	**-0.3**
KOLN	**Koldanda** comp=Z,23nm,0.7s,mb5.1	**47.83**	**309**	*e*P		**P**	**16 25 53.6**	**0.0**
DANN	**Dangsing** comp=Z,30nm,0.5s,mb5.3	**47.98**	**309**	*e*P		**P**	**16 25 54.9**	**+0.1**
HYB	**Hyderabad**	**48.30**	**293**	*i* P		**P**	**16 25 56.5**	**-0.9**
HABR	**Khabarovsk**	**49.07**	**9**	*e*P		pP	16 26 18.4	-6.2
HABR				*e*SS		SS	16 36 29.8	-3.4
HIA	**Hailar**	**49.16**	**356

HIA	**Hailar**	**49.16**	**356**	*e*P		**P**	**16 26 03.0**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.6								
YSS	**Yuzh-Sakhalins**	**49.36**	**17**	⇑*i*P		**P**	**16 26 07.1**	**+2.1**
YSS					pmax	pmax			
	comp=Z,46nm,1.9s,mb5.1								
ULN	**Ulaanbaatar**	**49.93**	**345**	*e*P		**P**	**16 26 09.1**	**-0.2**
ULN					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6								
ULN	**Ulaanbaatar**	**49.93**	**345**	*e*P		**P**	**16 26 09.1**	**-0.2**
	comp=Z,6.0nm,0.8s,mb4.6								
SONM	**Songino Array**	**50.08**	**344**	P		**P**	**16 26 09.9**	**-0.6**
	comp=Z,5.9nm,0.6s,mb4.7,baz=157,slow=8.9,SNR=32								
ZAK	**Zakamensk**	**53.26**	**343**	*e*		**P**	**16 26 32.9**	**-1.1**
ZAK					pmax	pmax			
	comp=Z,2.0nm,1.3s,mb4.0								
TLY	**Talaya**	**54.32**	**344**	⇓*i*P		**P**	**16 26 39.2**	**-2.6**
TLY					pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9								
TLY	**Talaya**	**54.32**	**344**	*e*P		**P**	**16 26 39.5**	**-2.3**
	comp=Z,9.7nm,0.6s,mb5.0								
WMQ	**Urumqi**	**54.47**	**328**	*e*P		**P**	**16 26 44.4**	**+1.4**
MOY	**Mondy**	**55.07**	**342**	*e*P		**P**	**16 26 49.6**	**+2.4**
BOD	**Bodaibo**	**58.16**	**353**	⇓*i*P		**P**	**16 27 08.3**	**-0.7**
BOD					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
MKAR	**Makanchi Array**	**59.30**	**328**	P		**P**	**16 27 16.2**	**-0.8**
	comp=Z,6.2nm,0.5s,mb4.9,baz=116,slow=8.4,SNR=4.3								
MKAR	**Makanchi Array**	**59.30**	**328**	*i* P		**P**	**16 27 18.7**	**+1.6**
MKAR					pmax	pmax			
	comp=Z,6.0nm,0.5s								
PETK	**Petropavlovsk-**	**59.66**	**23**	P		**P**	**16 27 20.9**	**+1.5**
	comp=Z,3.5nm,0.6s,mb4.5,baz=179,slow=3.0,SNR=20								
PETK	**Petropavlovsk-**	**59.66**	**23**	P		**P**	**16 27 20.9**	**+1.5**
YAK	**Yakutsk**	**61.92**	**3**	*e*P		**P**	**16 27 34.4**	**-0.2**
YAK					pmax	pmax			
	comp=Z,40nm,0.8s,mb5.5								
YAK					pmax	pmax			
	comp=E,2.0nm,0.9s								
YAK					pmax	pmax			
	comp=N,15nm,1.1s								
YAK	**Yakutsk**	**61.92**	**3**	*e*P		**P**	**16 27 34.8**	**+0.2**
	comp=N,64nm,0.8s,mb5.7								
KBL	**Kabul**	**61.97**	**310**	*e*P		**P**	**16 27 34.0**	**-1.5**
KBL					pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.8								
KBL	**Kabul**	**61.97**	**310**	*e*P		**P**	**16 27 34.0**	**-1.6**
	comp=Z,7.2nm,0.7s,mb4.8								
ZALV	**Zalesovo Beam**	**62.83**	**335**	P		**P**	**16 27 38.5**	**-2.4**
	comp=Z,2.4nm,0.3s,mb4.5,baz=128,slow=5.7,SNR=13								
KURK	**Kurchatov**	**63.62**	**329**	*e*P		**P**	**16 27 45.1**	**-1.0**
KURK					pmax	pmax			
	comp=Z,14nm,0.4s,mb5.1								
KURK	**Kurchatov**	**63.62**	**329**	*e*P		**P**	**16 27 45.1**	**-1.0**
	comp=Z,14nm,0.4s,mb5.2								
NVS	**Novosibirsk**	**64.12**	**335**	*e*P		**P**	**16 27 45.4**	**-3.9**
SEY	**Seymchan**	**66.09**	**14**	⇓*i*P		**P**	**16 28 00.7**	**-1.2**
BRVK	**Borovoye**	**69.22**	**328**	*e*P		**P**	**16 28 20.9**	**-0.9**
TIXI	**Tiksi**	**71.51**	**1**	*e*P		**P**	**16 28 34.7**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.7								
TIXI	**Tiksi**	**71.51**	**1**	*e*P		**P**	**16 28 34.7**	**-0.7**
	comp=Z,7.7nm,0.7s,mb4.6								
BILL	**Bilibino**	**73.65**	**15**	*e*P		**P**	**16 28 48.4**	**+0.2**
BILL				*e*			16 29 05.9		
BILL					pmax	pmax			
	comp=Z,2.0nm,1.5s,mb3.6								
AKTK	**Aktyubinsk**	**75.10**	**323**	P		**P**	**16 28 55.8**	**-1.2**
AKTO	**Aktyubinsk**	**75.10**	**323**	P		**P**	**16 28 55.8**	**-1.2**
	comp=Z,5.8nm,0.5s,mb4.6,baz=104,slow=7.7,SNR=24								
SVE	**Sverdlovsk**	**75.87**	**329**	*e*P		**P**	**16 28 59.8**	**-1.4**
SVE					pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.6								
ARU	**Arti**	**76.80**	**329**	*d i*P		**P**	**16 29 04.9**	**-1.5**
ARU				*e*			16 31 55.4		
ARU					S	S	16 38 45.9	-0.5	
ARU					SS	SS	16 43 41.7	-2.6	
ARU					pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.4								
ARU	**Arti**	**76.80**	**329**	*e*P		**P**	**16 29 05.0**	**-1.4**
ASF	**Jabal al Asfar**	**87.85**	**302**	P		**P**	**16 30 04.5**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=344,slow=7.4,SNR=6.2								
OBN	**Obninsk**	**88.70**	**325**	⇑*i*P		**P**	**16 30 07.4**	**-0.6**
OBN					pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6								
OBN	**Obninsk**	**88.70**	**325**	*e*P		**P**	**16 30 12.9**	**+4.8**
MMAI	**Mount Meron Ar**	**89.12**	**303**	P		**P**	**16 30 10.8**	**+0.2**
	comp=Z,1.1nm,0.5s,mb4.1,baz=54,slow=5.6,SNR=4.6								
BRTR	**Keskin Array B**	**90.55**	**310**	P		**P**	**16 30 15.8**	**-1.2**
	comp=Z,0.8nm,0.8s,mb3.9,baz=131,slow=5.0,SNR=3.6								
JOF	**Joensuu**	**91.35**	**333**	*e*p		**P**	**16 30 17.8**	**-2.4**
	comp=Z,5.3nm,0.7s,mb4.8								
ARCES	**ARCESS Array B**	**93.05**	**340**	P		**P**	**16 30 26.9**	**-1.1**
	comp=Z,3.3nm,0.9s,mb4.7,baz=79,slow=6.3,SNR=5.4								
AKASG	**Malin Array Be**	**93.23**	**321**	P		**P**	**16 30 27.8**	**-1.5**
	comp=Z,0.4nm,0.3s,mb4.2,baz=78,slow=4.7,SNR=3.7								
AKASG	**Malin Array Be**	**93.23**	**321**	P		**P**	**16 30 27.8**	**-1.5**
LSZ	**Lusaka**	**96.03**	**255**	*e*P		**P**	**16 30 43.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**121.75**	**285**	PKP		PKPdf	16 36 09.2	-0.2	
	comp=Z,1.6nm,0.6s,baz=64,slow=1.7,SNR=12								
SCHQ	**Schefferville**	**124.49**	**8**	PKP		PKPdf	16 36 14.1	+0.6	
	comp=Z,1.5nm,0.8s,baz=165,slow=3.8,SNR=3.8								

*NEIC **21** 16:21:28.6±1.6,2355N×12166E,h10km,MG3.4(JMA),*
Error ellipse: s-maj=20.1km s-min=6.7km az=116.0
*ISCJB **21** 16:21:29.9±0.3,2352N±001×12163E±002,h27km±2km,*
Error ellipse: s-maj=3.0km s-min=1.9km az=35.9
*TAP **21** 16:21:30.2,2354N×12155E,h32km,ML3.8,B*
*JMA **21** 16:21:30.9±0.3,2348N×12166E,h65km,M3.4*
ISC 21 16:21:30.2±0.3,2352N±001×12161E±002,h24km±2km,
n75,σ0$76/137,16C-2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TEGC	**Jichi Village**	**0.20**	**340**	P		**Pb**	**16 21 36.6**	**+0.8**
	baz=5.0							
TEGC				*e*S		**Sb**	**16 21 42.0**	**+2.5**
	baz=5.0							
EHY	**Hungye**	**0.27**	**266**	⇑*i*P		**Pb**	**16 21 36.9**	**+0.2**
	baz=271							
EHY				S		**Sb**	**16 21 41.5**	**+0.4**
	baz=271							
YULB	**Yu-li**	**0.32**	**246**	*e*P		**Pb**	**16 21 36.5**	**-1.0**
YULB				*e*S		**Sb**	**16 21 42.4**	**+0.1**
ESL	**Shilin**	**0.33**	**330**	*i* P		**Pb**	**16 21 37.7**	**+0.1**
	baz=331							
ESL				*e*S		**Sb**	**16 21 43.0**	**+0.3**
	baz=331							
TWF1	**Yuli**	**0.34**	**240**	⇑*i*P		**Pb**	**16 21 38.0**	**+0.3**
	baz=243							
TWF1				S		**Sb**	**16 21 43.2**	**+0.4**
	baz=243							
ESF	**Shoufeng Towns**	**0.36**	**344**	*e*P		**Pb**	**16 21 38.2**	**+0.1**
	baz=347							
ESF				*e*S		**Sb**	**16 21 44.4**	**+0.9**
	baz=347							
HWA	**Hwalien**	**0.45**	**359**	P		**Pb**	**16 21 40.2**	**+0.6**
	baz=18							
HWA				*e*S		**Sb**	**16 21 47.2**	**+1.3**
	baz=18							
CHKT	**Chengkung**	**0.48**	**208**	⇑*i*P		**Pb**	**16 21 40.3**	**+0.2**
	baz=188							
CHKT				*e*S		**Sb**	**16 21 47.5**	**+0.8**
	baz=188							
TWD	**Chiawan**	**0.55**	**358**	⇑*i*P		**Pb**	**16 21 41.3**	**0.0**
	baz=352							
TWD				*e*S		**Sb**	**16 21 49.9**	**+1.0**
	baz=352							
YUS	**Yu-Shan**	**0.61**	**267**	⇑*i*P		**Pb**	**16 21 42.3**	**+0.2**
	baz=269							
YUS				S		**Sb**	**16 21 50.1**	**-0.2**
	baz=269							
ELDTW	**Lidau**	**0.64**	**239**	⇑*i*P		**Pb**	**16 21 41.8**	**-0.9**
	baz=236							
ELDTW				*e*S		**Sb**	**16 21 49.8**	**-1.5**
	baz=236							
NACB	**Ninganchiao**	**0.65**	**359**	*e*P		**Pb**	**16 21 41.7**	**-1.2**
SSLB	**Suanglung**	**0.66**	**294**	*e*P		**Pb**	**16 21 41.8**	**-1.2**
SSLB				*e*S		**Sb**	**16 21 49.1**	**-2.7**
WHF	**Hehuan Shan**	**0.69**	**333**	⇑*i*P		**Pb**	**16 21 43.1**	**-0.6**
	baz=338							
WHF				*e*S		**Sb**	**16 21 52.2**	**-0.6**
	baz=338							
ALS	**Alishan**	**0.74**	**269**	⇑*i*P		**Pb**	**16 21 44.4**	**-0.1**
	baz=274							
ALS				S		**Sb**	**16 21 54.2**	**0.0**
	baz=274							
SMLT	**Sun Moon Lake**	**0.74**	**299**	⇑*i*P		**Pb**	**16 21 44.0**	**-0.5**
	baz=300							
SMLT				*e*S		**Sb**	**16 21 54.6**	**+0.3**
	baz=300							
TYC	**Yuchr**	**0.79**	**299**	⇑*i*P		**Pb**	**16 21 44.6**	**-0.7**
	baz=300							
TYC				S		**Sb**	**16 21 55.6**	**+0.1**
	baz=300							
TWT	**Tachien**	**0.83**	**331**	⇑*i*P		**Pb**	**16 21 45.7**	**-0.2**
	baz=334							
TWT				S		**Sb**	**16 21 55.8**	**-0.9**
	baz=334							
TWG	**Pinlang**	**0.86**	**215**	*e*P		**Pb**	**16 21 46.0**	**-0.5**
TWG	**Pinlang**	**0.86**	**215**	*e*P		**Pb**	**16 21 44.6**	**-1.8**
	baz=199							
CHN5	**Tsauling**	**0.86**	**275**	⇑*i*P		**Pb**	**16 21 46.4**	**-0.1**
	baz=274							
CHN5				S		**Sb**	**16 21 58.2**	**+0.6**
	baz=274							
STYT	**Tauyuan**	**0.86**	**246**	⇓*i*P		**Pb**	**16 21 46.0**	**-0.6**
	baz=242							
STYT				*e*S		**Sb**	**16 21 56.9**	**-0.8**
	baz=242							
TTN	**Taitung**	**0.88**	**209**	*e*P		**Pb**	**16 21 46.1**	**-0.6**
	baz=203							
TTN				*e*S		**Sb**	**16 21 58.1**	**0.0**
	baz=203							
ENA	**Nanau**	**0.91**	**7**	*e*P		**Pb**	**16 21 46.3**	**-1.0**
	baz=1.0							
ENA				*e*S		**Sb**	**16 21 59.5**	**+0.5**
	baz=1.0							
WNT	**Mingjian**	**0.92**	**293**	P		**Pb**	**16 21 47.4**	**-0.2**
	baz=293							
WNT				*e*S		**Sb**	**16 21 59.7**	**+0.4**
	baz=293							
TPUB	**Ta-pu**	**0.93**	**256**	*e*P		**Pb**	**16 21 46.9**	**-0.7**
TPUB				*e*S		**Sb**	**16 21 59.6**	**0.0**
NNS	**Nan Shan**	**0.94**	**347**	*e*P		**Pb**	**16 21 47.0**	**-0.8**
	baz=2.0							
NNS				*e*S		**Sb**	**16 21 59.2**	**-0.6**
	baz=2.0							
CHN4	**Tsaushan**	**0.95**	**260**	*e*P		**Pn**	**16 21 47.9**	**-0.1**
	baz=254							
CHN4				S		**Sb**	**16 22 00.7**	**+0.5**
	baz=254							
WTP	**Ta-pu**	**0.96**	**253**	⇑*i*P		**Pn**	**16 21 47.8**	**-0.3**
	baz=250							
WTP				*e*S		**Sb**	**16 22 00.9**	**+0.5**
	baz=250							
WGK	**Gukeng**	**0.98**	**280**	*e*P		**Pn**	**16 21 48.0**	**-0.4**
	baz=279							
WGK				*e*S		**Sb**	**16 22 01.1**	**+0.2**
	baz=279							
CHN2	**Minshiung**	**1.04**	**271**	*e*P		**Pn**	**16 21 49.5**	**+0.2**
	baz=269							
CHN2				*e*S		**Sb**	**16 22 03.6**	**+0.7**
	baz=269							
CHN1	**Nanshi**	**1.05**	**252**	P		**Pn**	**16 21 49.5**	**+0.1**
	baz=249							
CHN1				S		**Sb**	**16 22 03.3**	**+0.2**
	baz=249							
TCU	**Taichung**	**1.06**	**306**	⇑P		**Pn**	**16 21 50.0**	**+0.5**
	baz=307							
TCU				*e*S		**Sb**	**16 22 03.9**	**+0.6**
	baz=307							
TWK	**Hsinying**	**1.06**	**256**	⇓P		**Pn**	**16 21 49.4**	**-0.2**
	baz=254							
TWK				*e*S		**Sb**	**16 22 03.5**	**+0.1**
	baz=254							
CHY	**Chiayi**	**1.09**	**269**	*e*P		**Pn**	**16 21 49.7**	**-0.2**
	baz=267							
CHY				S		**Sb**	**16 22 04.2**	**0.0**
	baz=267							
TWC	**Suao**	**1.10**	**11**	*e*P		**Pn**	**16 21 50.2**	**+0.1**
	baz=28							
TWC				*e*S		**Sn**	**16 22 04.8**	**+0.2**
	baz=28							
ECL	**Taimali**	**1.10**	**213**	*e*P		**Pn**	**16 21 47.6**	**-2.5**
	baz=197							
ECL				*e*S		**Sn**	**16 22 01.0**	**-3.6**
	baz=197							
ENTT	**Nioudou**	**1.11**	**358**	*e*P		**Pn**	**16 21 49.5**	**-0.8**
	baz=4.0							
ENTT				*e*S		**Sn**	**16 22 04.4**	**-0.4**
	baz=4.0							
TWQ1	**Liyutan**	**1.12**	**317**	⇑*i*P		**Pn**	**16 21 51.1**	**+0.7**
	baz=319							
TWQ1				*e*S		**Sn**	**16 22 05.8**	**+0.8**
	baz=319							
YHNB	**Yeheng**	**1.16**	**349**	*e*P		**Pn**	**16 21 49.9**	**-1.1**
NSK	**Sanguang**	**1.17**	**349**	*e*P		**Pn**	**16 21 50.7**	**-0.3**
	baz=354							
NSK				*e*S		**Sn**	**16 22 04.8**	**-1.5**
	baz=354							
SSD	**Sandimen**	**1.19**	**230**	*e*P		**Pn**	**16 21 50.4**	**-0.9**
	baz=224							
SSD				*e*S		**Sn**	**16 22 06.8**	**+0.1**
	baz=224							
TWE	**Neicheng**	**1.19**	**2**	*e*P		**Pn**	**16 21 51.1**	**-0.3**
	baz=9.0							
TWE				*e*S		**Sn**	**16 22 06.2**	**-0.6**
	baz=9.0							
CHN3	**Shinhua**	**1.23**	**249**	*e*P		**Pn**	**16 21 52.1**	**+0.3**
	baz=259							
CHN3				*e*S		**Sn**	**16 22 09.6**	**+1.9**
	baz=259							
NSTT	**Nanjuang**	**1.24**	**333**	*e*P		**Pn**	**16 21 52.4**	**+0.4**
	baz=336							
NSTT				S		**Sn**	**16 22 07.0**	**-0.8**
	baz=336							
WTCT	**Ta-ch'eng**	**1.27**	**286**	*e*P		**Pn**	**16 21 52.0**	**-0.3**
	baz=285							
WTCT				*e*S		**Sn**	**16 22 09.0**	**+0.4**
	baz=285							
WSF	**Szhu**	**1.28**	**275**	*e*P		**Pn**	**16 21 52.5**	**-0.1**
	baz=274							
WSF				*e*S		**Sn**	**16 22 08.7**	**-0.2**
	baz=274							
TWM1	**Shoushan**	**1.30**	**238**	*e*P		**Pn**	**16 21 53.8**	**+1.0**
	baz=233							
TWM1				*e*S		**Sn**	**16 22 12.0**	**+2.6**
	baz=233							
CHN8	**Yiju**	**1.30**	**262**	*e*P		**Pn**	**16 21 52.7**	**-0.1**
	baz=260							
CHN8				*e*S		**Sn**	**16 22 09.5**	**+0.1**
	baz=260							
SGLT	**Jiouru**	**1.30**	**233**	*e*P		**Pn**	**16 21 54.5**	**+1.7**
	baz=228							
TAW	**Tawu**	**1.33**	**210**	*e*P		**Pn**	**16 21 53.6**	**+0.3**
	baz=203							
EAST	**Anshuo**	**1.34**	**212**	*e*P		**Pn**	**16 21 53.5**	**+0.2**
	baz=198							
SCLT	**Jiali**	**1.35**	**255**	*e*P		**Pn**	**16 21 53.5**	**0.0**
	baz=252							
SCLT				*e*S		**Sn**	**16 22 11.8**	**+1.1**
	baz=252							
TAI1	**Yung-k'ang**	**1.36**	**250**	*e*P		**Pn**	**16 21 53.5**	**-0.2**
	baz=247							
HSN	**Hsinchu**	**1.40**	**335**	*e*P		**Pn**	**16 21 53.8**	**-0.4**
	baz=340							
HSN				*e*S		**Sn**	**16 22 12.6**	**+0.6**
	baz=340							
TATO	**Taipei**	**1.45**	**356**	*e*P		**Pn**	**16 21 54.0**	**-0.9**
SCZT	**Fangliau**	**1.47**	**219**	*e*P		**Pn**	**16 21 54.6**	**-0.5**
	baz=200							
SCZT				*e*S		**Sn**	**16 22 14.6**	**+1.1**
	baz=200							
LAY	**Lan-yu**	**1.48**	**182**	*e*P		**Pn**	**16 21 53.4**	**-1.9**
	baz=169							
NCU	**National Centr**	**1.49**	**345**	*e*P		**Pn**	**16 21 55.1**	**-0.4**
	baz=348							
NCU				*e*S		**Sn**	**16 22 14.8**	**+0.6**
	baz=348							
TAP1	**Taipei**	**1.51**	**357**	*e*P		**Pn**	**16 21 55.6**	**-0.1**
	baz=3.0							
TAP1				*e*S		**Sn**	**16 22 14.5**	**-0.1**
	baz=3.0							
TWB1	**Santiao Chiao**	**1.52**	**13**	*e*P		**Pn**	**16 21 56.7**	**+0.9**
	baz=28							
TWB1				S		**Sn**	**16 22 15.3**	**+0.6**
	baz=28							
NWF	**Wu-fen Shan**	**1.55**	**6**	*e*P		**Pn**	**16 21 56.2**	**0.0**
	baz=13							
NWF				*e*S		**Sn**	**16 22 16.1**	**+0.6**
	baz=13							
TWS1	**Kuangyinshan**	**1.58**	**354**	*e*P		**Pn**	**16 21 57.1**	**+0.4**
	baz=12							
TWS1				*e*S		**Sn**	**16 22 16.9**	**+0.5**
	baz=12							
YOJ	**Yonaguni jima**	**1.58**	**54**	P		**Pn**	**16 21 57.2**	**+0.5**
YOJ				S		**Sn**	**16 22 16.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.58**	**54**	*e*P		**Pn**	**16 21 57.6**	**+0.8**
	baz=59							
TWP	**Hsiaoliuchiu**	**1.64**	**225**	*e*P		**Pn**	**16 21 58.2**	**+0.7**
	baz=219							
HEN	**Hengchun**	**1.71**	**208**	*e*P		**Pn**	**16 21 59.4**	**+0.9**
	baz=195							
HEN				*e*S		**Sn**	**16 22 20.7**	**+1.1**
	baz=195							
TWK1	**Hengchun**	**1.74**	**205**	*e*P		**Pn**	**16 21 58.6**	**-0.2**
	baz=200							
TWK1				*e*S		**Sn**	**16 22 20.7**	**+0.4**
	baz=200							
WDGT	**Dungji**	**1.81**	**262**	⇑P		**Pn**	**16 21 59.4**	**-0.5**
	baz=260							
WDGT				*e*S		**Sn**	**16 22 19.9**	**-2.1**
	baz=260							
PNG	**Penghu**	**1.89**	**272**	P		**Pn**	**16 22 00.4**	**-0.6**
	baz=271							
HATJ	**Hateruma jima**	**2.08**	**75**	P		**Pn**	**16 22 03.6**	**+0.1**
HATJ				S		**Sn**	**16 22 28.1**	**-0.5**
IRIF	**Iriomote-Funau**	**2.10**	**67**	P		**Pn**	**16 22 04.3**	**+0.5**
IRIF				S		**Sn**	**16 22 29.8**	**+0.6**
JKRS	**Kuro-shima**	**2.31**	**72**	P		**Pn**	**16 22 07.4**	**+0.7**
JKRS				S		**Sn**	**16 22 34.5**	**+0.2**
JIJ	**Ishigaki jima**	**2.46**	**70**	P		**Pn**	**16 22 08.8**	**0.0**
JIJ				S		**Sn**	**16 22 37.8**	**-0.3**
JTJ	**Tarama**	**3.04**	**68**	P		**Pn**	**16 22 17.1**	**+0.4**
JTJ				S		**Sn**	**16 22 51.9**	**-0.4**

*ISCJB **21** 16:23:52.0±1.0,417N±0.1×82.1E±0.1,h10km,Error ellipse:*
s-maj=19.9km s-min=7.2km az=153.7
*BJI **21** 16:23:55.1,4175N×8183E,h18km,ML3.4*
*NNC **21** 16:23:58.0±2.4,4217N×8178E,h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=38.9km s-min=20.5km az=15.0
ISC 21 16:23:55.6±1.0,417N±01×819E±01,h10km,n6,σ0$18/7,
3C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KNDC	**Almaty**	**3.95**	**294**	⇓Pn		**Pn**	**16 24 56.0**	**-0.2**
	22nm,0.3s							
KNDC				⇑Lg			16 25 56.2	
	39nm,0.5s							
WMQ	**Urumqi**	**4.73**	**62**	*e*PG		**Pn**	**16 25 18.8**	**+12**
WMQ				SG		**Sg**	**16 26 27.5**	**0.0**
WMQ				Smax				
	comp=N,46nm,0.8s							
WMQ				Smax				
	comp=E,47nm,1.1s							
TKM2	**Tokmak 2**	**4.83**	**286**	⇓Pn		**Pn**	**16 25 08.5**	**+0.2**
	comp=E,9.2nm,0.6s							
TKM2				⇑Lg			16 26 24.3	
	comp=E,23nm,0.7s							
KK31	**Karatay Array**	**8.55**	**283**	⇑Pg		Px	16 26 31.2	
	comp=E,0.9nm,0.6s,baz=91,slow=16,SNR=3.6							
KK31				⇓Lg			16 28 22.8	
	comp=E,2.2nm,0.6s,baz=92,slow=28,SNR=4.0							
CHCP	**Chirah Chowk**	**10.58**	**223**	P		**Pn**	**16 26 27.0**	**-0.2**
CEP	**Cherat**	**11.18**	**228**	P		**Pn**	**16 26 35.6**	**+0.2**
CEP				S		**Sn**	**16 28 33.0**	**-7.4**

*ISCJB **21** 16:43:53.4±1.7,266N±004×12700E±008,h9km±10km,*
mb4.6/57,MS3.9/6,Error ellipse: s-maj=13.2km
s-min=7.1km az=166.4
*IDC **21** 16:43:53.9±0.5,267N×12702E,h0km,mb4.5/17,*
mb1 4.5/18,mb1mx4.5/22,mbtmp4.4/18,ML3.8/1,Error
ellipse: s-maj=27.7km s-min=12.3km az=75.0
*BJI **21** 16:43:55.3,231N×12729E,h44km,mB4.9,mb4.5,Ms4.6,*
Msz4.1
*MOS **21** 16:43:56.3±1.3,277N×127.15E,h33km,mb4.9/17,Error*
ellipse: s-maj=19.2km s-min=8.1km az=115.2
*NEIC **21** 16:43:58.5±0.3,268N×12702E,h35km,mb4.8/22,Error*
ellipse: s-maj=11.2km s-min=5.5km az=72.0
ISC 21 16:43:57.3±1.9,264N±005×12703E±008,h24km±13km,
h36km±.8km:pP-P,n90,σ1$05/92,mb4.6/56,MS3.9/6,9C-1D,
Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**10.52**	**224**	Pn		**Pn**	**16 46 27.2**	**+0.5**
	0.7nm,0.3s,baz=274,slow=12,SNR=5.2							
KAKA	**Kakadu**	**16.17**	**161**	*e*P		x	16 46 46.6	
	9.3nm,0.6s							
KNA	**Kununurra**	**18.35**	**175**	*e*P		**Pn**	**16 48 11.4**	**+1.0**
	13nm,0.9s							
FITZ	**Fitzroy Crossi**	**20.65**	**184**	*e*P		**P**	**16 48 36.9**	**+1.4**
	9.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.65**	**184**	*e*P		**P**	**16 48 36.5**	**+1.0**
	4.0nm,0.6s							
NACB	**Ninganchiao**	**22.05**	**347**	*e*P		**P**	**16 48 49.6**	**-0.8**
	14nm,0.6s,mb4.6							
WRAB	**Tennant Creek**	**23.55**	**163**	*e*P		**P**	**16 49 05.6**	**-0.7**
WRAB				pmax		pmax		
	comp=Z,17nm,0.7s,mb4.6							
WRAB	**Tennant Creek**	**23.55**	**163**	*e*P		**P**	**16 49 05.6**	**-0.6**
	comp=Z,17nm,0.7s,mb4.6							
WRA	**Warramunga Arr**	**23.56**	**163**	P		**P**	**16 49 05.6**	**-0.7**
	comp=Z,13nm,0.6s,mb4.6,baz=342,slow=11,SNR=167							
WRA				PcP		PcP	16 52 52.0	+0.7
	comp=Z,0.4nm,0.4s,baz=327,slow=2.5,SNR=6.7							
WRA	**Warramunga Arr**	**23.56**	**163**	*i* P		**P**	**16 49 05.5**	**-0.8**
WRA				pmax		pmax		
	comp=Z,13nm,0.6s							
WB2	**Warramunga Arr**	**23.56**	**163**	⇑*i*P		**P**	**16 49 05.6**	**-0.7**
WB2	**Warramunga Arr**	**23.56**	**163**	*e*P		**P**	**16 49 05.6**	**-0.8**
**MBWA

KSRS PcP PcP 16 53 20.3 +1.4
comp=Z,1.5nm,0.5s,baz=191,slow=2.6,SNR=7.0
XAN Xi'an 35.52 334 P **P** **16 50 51.3 -1.2**
XAN AP pP 16 51 01.8 +2.2
XAN PP PP 16 52 14.3 +0.9
XAN PPP 16 52 34.4
XAN S **S** **16 56 28.0 +1.3**
XAN AMB AMB
comp=Z,5.0nm,0.9s,mb4.4
XAN LR LR
comp=Z,45nm,30.4s,MS3.0
CD2 Chengdu 35.70 324 P **P** **16 50 56.1 +2.1**
CD2 AP pP 16 51 05.8 +4.6
CD2 XP sP 16 51 09.8 +5.7
CD2 PP PP 16 52 17.6 +2.2
CD2 PCP PcP 16 53 23.6 +1.5
CD2 S **S** **16 56 30.5 +0.9**
CD2 XS sS 16 56 46.5 +5.1
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,70nm,4.4s
CD2 LR LR
comp=N,180nm,4.5s
CD2 LR LR
comp=Z,90nm,6.6s
NWAO Narrogin (SRO) 36.57 194 *eP* **P** **16 51 01.7 +0.3**
NWAO pmax pmax
comp=Z,77nm,1.9s
NWAO Narrogin (SRO) 36.57 194 *eP* **P** **16 51 01.7 +0.3**
comp=Z,77nm,1.9s,mb5.2
STKA Stephens Creek 37.01 159 P **P** **16 51 05.5 +0.3**
comp=Z,5.0nm,0.3s,mb4.8,baz=337,slow=8.5,SNR=29
STKA PcP PcP 16 53 26.8 +0.8
comp=Z,3.5nm,0.5s,baz=344,slow=3.3,SNR=7.2
STKA Stephens Creek 37.01 159 *eP* **P** **16 51 05.2 0.0**
comp=Z,6.4nm,0.8s,mb4.5
STKA Stephens Creek 37.01 159 *eP* **P** **16 51 05.6 +0.4**
comp=Z,2.1nm,0.9s,mb4.0
BJI Beijing 38.51 347 P **P** **16 51 18.4 +0.6**
BJI AMB AMB
comp=Z,22nm,1.1s,mb4.8
LZH Lanzhou 39.59 330 *eP* **P** **16 51 28.8 +1.9**
LZH AP pP 16 51 38.5 +4.4
LZH XP sP 16 51 42.6 +5.6
LZH *e*PP PP 16 53 04.5 +6.4
LZH AMB AMB
comp=Z,20nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,78nm,4.8s
LZH LR LR
comp=E,437nm,13.2s
LZH LR LR
comp=Z,583nm,17.4s,MS4.5
HHC Hu-ho-hao-te 40.52 342 *eP* **P** **16 51 36.3 +1.7**
HHC AP pP 16 51 45.9 +4.1
HHC XP sP 16 51 50.1 +5.4
HHC PP PP 16 53 13.4 +5.2
HHC PCP PcP 16 53 38.4 +1.6
HHC PCS PcS 16 57 27.3 0.0
HHC *e*S **S** **16 57 43.4 +1.1**
HHC SCS ScS 17 01 36.8 -2.3
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,152nm,5.2s
HHC LR LR
comp=N,122nm,14.3s,MS4.0
HHC LR LR
comp=E,112nm,15.5s,MS4.0
HHC LR LR
comp=Z,89nm,19.0s,MS3.6
CN2 Changchun 41.01 358 *eP* **P** **16 51 39.6 +1.1**
CN2 *e*S **S** **16 57 50.4 +0.9**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
MDJ Mudanjiang 41.86 3 P **P** **16 51 46.0 +0.5**
MDJ AMB AMB
comp=Z,7.0nm,1.1s,mb4.2
MDJ AMB AMB
comp=Z,70nm,4.8s
LSA Lhasa 43.39 312 P **P** **16 51 58.6 +0.4**
LSA Lhasa 43.39 312 *eP* **P** **16 51 58.5 +0.3**
ASAJ Asahikawa 43.54 16 P **P** **16 51 58.9 -0.3**
comp=Z,8.1nm,0.7s,mb4.5,baz=107,slow=11,SNR=4.1
GTA Gaotai 44.18 329 *eP* **P** **16 52 04.5 +0.1**
GTA AMB AMB
comp=Z,3.0nm,0.9s,mb4.0
RAMN Ramite 45.63 306 *eP* **P** **16 52 16.1 0.0**
comp=Z,16nm,0.7s,mb5.1
JIRN Jiri 46.26 307 *eP* **P** **16 52 20.9 -0.2**
comp=Z,13nm,0.5s,mb5.1
GUN Gumba 46.61 307 *eP* **P** **16 52 23.7 -0.2**
comp=Z,26nm,0.6s,mb5.4
PKI Pulchoki 46.85 306 *eP* **P** **16 52 25.2 -0.5**
PKIN Phulchoki 46.86 306 *eP* **P** **16 52 24.8 -1.0**
comp=Z,3.9nm,0.5s,mb4.6
HIA Hailar 46.87 353 ⇓*iP* **P** **16 52 25.5 0.0**
KKN Kakani 47.04 306 *eP* **P** **16 52 26.6 -0.6**
comp=Z,11nm,0.6s,mb5.0
KKN Kakani 47.04 306 *eP* **P** **16 52 26.6 -0.6**
KKN pmax pmax
comp=Z,11nm,0.6s,mb5.0
DMN Daman 47.11 306 *eP* **P** **16 52 27.0 -0.8**
comp=Z,11nm,0.7s,mb4.9
GKN Gorkha 47.65 306 *eP* **P** **16 52 30.8 -1.2**
comp=Z,9.1nm,0.6s,mb5.0
ULN Ulaanbaatar 48.24 342 *eP* **P** **16 52 37.0 +0.8**
ULN pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ULN Ulaanbaatar 48.24 342 *eP* **P** **16 52 37.0 +0.8**
comp=Z,5.4nm,1.0s,mb4.5
KOLN Koldanda 48.40 305 *eP* **P** **16 52 37.5 -0.2**
comp=Z,29nm,0.6s,mb5.5
SONM Songino Array 48.42 341 P **P** **16 52 38.1 +0.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=156,slow=8.5,SNR=13
SONM PcP PcP 16 54 04.1 +0.4
comp=Z,1.5nm,0.8s,baz=157,slow=3.6,SNR=6.3
DANN Dangsing 48.50 306 *eP* **P** **16 52 37.8 -0.7**
comp=Z,36nm,0.5s,mb5.6
WMQ Urumqi 53.79 325 *eP* **P** **16 53 20.3 +2.3**
PETK Petropavlovsk- 56.32 22 P **P** **16 53 36.5 +0.4**
comp=Z,3.5nm,0.8s,mb4.4,baz=162,slow=4.3,SNR=6.1
PETK Petropavlovsk- 56.32 22 P **P** **16 53 36.5 +0.3**
PET Petropavlovsk 56.61 22 ⇑*iP* **P** **16 53 34.9 -3.3**
PET pmax pmax
comp=Z,26nm,1.0s,mb5.2
MKAR Makanchi Array 58.62 325 P **P** **16 53 52.2 -0.3**
comp=Z,3.5nm,0.5s,mb4.6,baz=120,slow=8.4,SNR=33
MKAR Makanchi Array 58.62 325 P **P** **16 53 52.2 -0.3**
YAK Yakutsk 59.28 1⇑*eP* **P** **16 53 56.7 -0.1**
YAK pmax pmax
comp=Z,17nm,1.1s,mb5.0
AAK Ala-Archa 61.36 318 ⇑*iP* **P** **16 54 13.3 +1.9**
AAK pmax pmax
comp=Z,8.0nm,1.9s,mb4.5
ZALV Zalesovo Beam 61.69 333 P **P** **16 54 12.3 -1.1**
comp=Z,1.2nm,0.5s,mb4.3,baz=137,slow=7.3,SNR=7.3
KBL Kabul 62.42 308 *eP* **P** **16 54 16.6 -2.1**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KBL Kabul 62.42 308 *eP* **P** **16 54 16.6 -2.1**
comp=Z,2.6nm,0.8s,mb4.4
KURK Kurchatov 62.82 328⇑*eP* **P** **16 54 20.3 -0.7**
KURK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KURK Kurchatov 62.82 328 *eP* **P** **16 54 19.8 -1.2**
comp=Z,7.9nm,0.5s,mb5.1
NVS Novosibirsk 62.98 333 *eP* **P** **16 54 19.0 -2.9**
BRVK Borovoye 68.47 327 *eP* **P** **16 54 57.1 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BRVK Borovoye 68.47 327 *eP* **P** **16 54 57.1 -0.3**
comp=Z,4.5nm,0.7s,mb4.6
TIXI Tiksi 68.92 1⇑*eP* **P** **16 54 59.6 -0.3**
TIXI pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
TIXI MLR MLR
comp=Z,100nm,20.0s,MS4.0
TIXI Tiksi 68.92 1 *eP* **P** **16 54 59.5 -0.4**
comp=Z,4.8nm,0.7s,mb4.5
BILL Bilibino 70.53 15 *eP* **P** **16 55 06.1 -3.7**
BILL pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
AKTK Aktyubinsk 74.70 322 P **P** **16 55 35.1 +0.1**
AKTO Aktyubinsk 74.70 322 P **P** **16 55 35.1 +0.1**
comp=Z,7.5nm,0.6s,mb4.8,baz=98,slow=8.3,SNR=36
SVE Sverdlovsk 75.04 329 *eP* **P** **16 55 36.2 -0.7**
SVE pmax pmax
comp=Z,15nm,0.8s,mb5.0
ARU Arti 76.02 328 *c iP* **P** **16 55 41.6 -0.9**
ARU *e* 16 58 30.3
ARU *e*S S 17 05 23.8 -0.4
ARU SS SS 17 10 17.7 +0.5
ARU pmax pmax
comp=Z,11nm,0.8s,mb4.8
ARU Arti 76.02 328 *eP* **P** **16 55 41.2 -1.2**
comp=Z,11nm,0.9s,mb4.8
CHGN Chignik 79.27 33 *eP* **P** **16 55 53.2 -7.4**
VNDA Vanda 82.31 173 P **P** **16 56 17.2 +0.7**
comp=Z,1.7nm,0.8s,mb4.0,baz=312,slow=9.1,SNR=4.7
MAW Mawson 82.84 200 P **P** **16 56 20.8 +1.4**
comp=Z,2.4nm,0.7s,mb4.3,baz=78,slow=9.3,SNR=2.6
KIV Kislovodsk 84.11 314⇑*iP* **P** **16 56 24.5 -1.9**
KIV *e* 16 59 40.0
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.9
OBN Obninsk 88.12 325⇑*iP* **P** **16 56 45.0 -1.0**
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb5.1
ASF Jabal al Asfar 88.73 302 P **P** **16 56 50.6 +1.3**
comp=Z,1.6nm,0.7s,mb4.5,baz=0.0,slow=3.0,SNR=4.5
MMAI Mount Meron Ar 89.95 303 P **P** **16 56 56.4 +1.3**
comp=Z,1.0nm,0.6s,mb4.3,baz=111,slow=11,SNR=3.8
JOF Joensuu 90.28 333 *ep* **P** **16 56 54.4 -1.6**
comp=Z,2.2nm,0.5s,mb4.7
HYT Haines Junctio 90.39 29 *eP* **P** **16 56 53.4 -3.1**
ARCES ARCESS Array B 91.57 340 P **P** **16 57 01.0 -0.9**
comp=Z,3.4nm,0.6s,mb4.8,baz=77,slow=6.4,SNR=12
NOA NORSAR Array B 99.89 334 P Pdif 16 57 38.6 -1.3
comp=Z,1.0nm,0.7s,baz=66,slow=4.6,SNR=2.9
TXAR Lajitas Array 122.02 53 PKP PKPdf 17 02 51.9 +1.3
comp=Z,0.3nm,0.7s,baz=297,slow=1.9,SNR=4.1
TORD Torodi Ar. Bea 123.54 288 PKP PKPdf 17 02 54.0 +0.1
comp=Z,0.8nm,0.8s,baz=42,slow=1.5,SNR=6.5

*ISCJB **21** 16:54:07.3±0.4,5144N±002×16.11E±002,h0km, Error ellipse: s-maj=3.0km s-min=1.8km az=20.8*
*IDC **21** 16:54:08.9±0.9,5147N×1609E,h0km,mb3.5/1,mb1 3.5/7, mb1mx3.3/24,mbtmp3.3/7,ML3.1/6,MS3.3/1,Ms1 3.3/1, ms1mx2.1/42,Error ellipse: s-maj=16.6km s-min=7.5km az=98.0*
*NEIC **21** 16:54:08.4±0.5,5153N×1614E,h5km,ML3.1(SZGRF), Error ellipse: s-maj=6.2km s-min=4.3km az=221.0*
*IPEC **21** 16:54:08.0±0.3,5153N×1620E,h0km,ML2.7/3,Error ellipse: s-maj=2.3km s-min=1.4km az=45.0*
*CSEM **21** 16:54:08.9±0.1,5150N×1615E,h2km,ML3.5/6,Error ellipse: s-maj=2.1km s-min=1.4km az=28.0*
*BGR **21** 16:54:09.2±0.5,5150N×1612E,h1km,ML3.1,Error ellipse: s-maj=6.7km s-min=2.2km az=18.0*
*WAR **21** 16:54:10,5147N×1610E,ML2.8,Mining Induced*
*PRU **21** 16:54:10.1,5145N×1609E,h0km*
*VIE **21** 16:54:10.9±0.3,5136N×1590E,h0km,mb2.6/4,ML3.0/4, Error ellipse: s-maj=2.2km s-min=1.7km az=48.0 82 km WNW of Wroclaw Suspected Mining induced.*

ISC 21 16:54:08.4±0.4,5150N±002×1612E±002,h0km,n75,
σ0:95/151,8C-3D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**		**16 54 21.7**	**+0.5**
KSP				*e*Sg	**Sg**		**16 54 30.5**	**+0.6**
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**		**16 54 21.6**	**+0.4**
KSP				*e*Sg	**Sg**		**16 54 30.5**	**+0.6**
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**		**16 54 21.4**	**+0.2**
KSP				Sg	**Sg**		**16 54 30.5**	**+0.6**
KSP	**Ksiaz**	**0.67**	**171**	⇓*i*Pg	**Pg**		**16 54 21.7**	**+0.5**
KSP				*i*			16 54 22.7	
KSP				*e*Sg	**Sg**		**16 54 30.4**	**+0.5**
UPC	**Upice**	**1.00**	**184**	*e*PG	**Pg**		**16 54 27.6**	**+0.1**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*Pg	**Pg**		**16 54 30.5**	**-0.1**
DPC				*e*Sg	**Sg**		**16 54 47.1**	**+1.4**
DPC	**Dobruska-Polom**	**1.16**	**174**	Pg	**Pg**		**16 54 30.5**	**-0.1**
DPC				*e*Sg	**Sg**		**16 54 45.1**	**-0.6**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	**Pg**		**16 54 30.3**	**-0.3**
DPC				*e*SG	**Sg**		**16 54 44.8**	**-0.9**
PVCC	**Panska Ves**	**1.38**	**226**	Pg	**Pg**		**16 54 34.7**	**-0.2**
PVCC				*e*Sg	**Sg**		**16 54 52.8**	**0.0**
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**		**16 54 34.7**	**-0.2**
PVCC				*e*SG	**Sg**		**16 54 53.6**	**+0.8**
	comp=Z,180nm,0.4s							
BRG	**Berggiesshubel**	**1.51**	**246**	*e*Pn	**Pn**		**16 54 37.0**	**+0.4**
BRG				*e*Sg	**Sg**		**16 54 57.2**	**+0.4**
BRG	**Berggiesshubel**	**1.51**	**246**	Pn	**Pn**		**16 54 35.8**	**-0.8**
BRG				PG	**Pg**		**16 54 37.4**	**+0.1**
BRG				SG	**Sg**		**16 54 57.3**	**+0.5**
	comp=Z,76nm,0.3s							
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	**Pn**		**16 54 39.2**	**-0.7**
RUE				*e*Sn	**Sn**		**16 55 03.5**	**+0.7**
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	**Pn**		**16 54 39.2**	**-0.6**
RUE				*e*Sn	**Sn**		**16 55 03.5**	**+0.7**
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**		**16 54 40.4**	**-0.5**
PRU				*e*PG	**Pg**		**16 54 41.9**	**-1.3**
PRU				*e*SG	**Sg**		**16 55 05.8**	**-1.0**
	comp=Z,37nm,0.4s							
PRU	**Pruhonice**	**1.82**	**214**	*e*Pn	**Pn**		**16 54 40.4**	**-0.5**
PRU				*e*Pg	**Pg**		**16 54 41.9**	**-1.3**
PRU				*e*Sg	**Sg**		**16 55 05.8**	**-1.0**
FBE	**Freiberg**	**1.83**	**253**	*e*Sg	**Sg**		**16 55 06.9**	**-0.4**
RAC	**Raciborz**	**1.94**	**136**	*e*Pg	**Pg**		**16 54 45.5**	**0.0**
RAC				*e*Sg	**Sg**		**16 55 09.6**	**-1.0**
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**		**16 54 42.3**	**-0.6**
CLL				*e*Pg	**Pg**		**16 54 46.0**	**+0.1**
CLL				*e*Sg	**Sg**		**16 55 12.0**	**+0.6**
CLL	**Collm**	**1.96**	**265**	Pg	**Pg**		**16 54 46.0**	**+0.1**
CLL				Sg	**Sg**		**16 55 12.0**	**+0.6**
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**		**16 54 42.0**	**-0.8**
CLL				*e*Pg	**Pg**		**16 54 46.0**	**+0.1**
CLL				*ex*	x		16 54 49.0	
CLL				*ex*	x		16 55 01.0	
CLL				*i* Sg	**Sg**		**16 55 11.3**	**-0.1**
	comp=Z,43nm,0.7s							
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**		**16 54 42.0**	**-0.8**
CLL				*e*Pg	**Pg**		**16 54 46.0**	**+0.1**
CLL				*i* Sg	**Sg**		**16 55 11.3**	**-0.1**
OKC	**Ostrava-Krasne**	**2.11**	**141**	Pg	**Pg**		**16 54 48.1**	**-0.7**
OKC				Sg	**Sg**		**16 55 14.7**	**-1.4**
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pg**		**16 54 48.1**	**-0.7**
OKC				*e*SG	**Sg**		**16 55 14.6**	**-1.5**
VRAC	**Vranov**	**2.22**	**172**	Pn	**Pn**		**16 54 46.2**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=335,slow=14,SNR=13							
VRAC				Lg			16 55 17.9	
	comp=Z,9.0nm,0.3s,baz=266,slow=22,SNR=8.1							
VRAC	**Vranov**	**2.22**	**172**	*e*Pn	**Pn**		**16 54 46.2**	**-0.2**
VRAC				*e*Sg	**Sg**		**16 55 18.3**	**-1.3**
	comp=Z,31nm,0.3s							
TREC	**Trest**	**2.25**	**191**	*e*PN	**Pn**		**16 54 48.0**	**+1.2**
TREC				*e*PG	**Pg**		**16 54 50.5**	**-0.9**
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**		**16 54 49.6**	**0.0**
KRUC				*e*Sg	**Sg**		**16 55 25.4**	**-1.7**
	comp=Z,47nm,0.6s							
TANN	**Tannenbergstha**	**2.56**	**246**	*e*Pn	**Pn**		**16 54 51.2**	**+0.2**
TANN				*e*Sg	**Sg**		**16 55 30.3**	**-0.2**
WERD	**Werda**	**2.63**	**248**	*e*Pn	**Pn**		**16 54 52.1**	**+0.1**
WERD				*e*Sg	**Sg**		**16 55 32.4**	**-0.5**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**		**16 54 52.4**	**+0.1**
NKC				*e*PG	**Pg**		**16 54 58.5**	**-0.7**
NKC				*e*SG	**Sg**		**16 55 34.4**	**+0.9**
	comp=Z,57nm,0.3s							
NKC	**Novy Kostel**	**2.65**	**243**	*e*Pn	**Pn**		**16 54 52.4**	**+0.1**
NKC				*e*Pg	**Pg**		**16 54 58.5**	**-0.7**
NKC				*e*Sg	**Sg**		**16 55 34.4**	**+0.9**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**		**16 54 59.4**	**0.0**
OJC				*e*Sg	**Sg**		**16 55 35.3**	**+1.4**
JAVC	**Velka Javorina**	**2.83**	**159**	*e*Pn	**Pn**		**16 54 55.7**	**+0.9**
JAVC				*e*Sg	**Sg**		**16 55 40.4**	**+1.2**
	comp=Z,39nm,1.0s							
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**		**16 54 55.8**	**+0.3**
KHC				*e*PG	**Pg**		**16 55 01.6**	**-1.9**
KHC				*e*SN	**Sn**		**16 55 29.5**	**-1.3**
KHC				*e*SG	**Sg**		**16 55 39.9**	**-1.0**
	comp=Z,20nm,0.5s							
MGBB	**Grossbuechelbe**	**2.92**	**240**	⇓*i*Pn	**Pn**		**16 54 56.2**	**+0.2**
MANZ	**Manzenberg**	**2.97**	**241**	*e*Pn	**Pn**		**16 54 56.8**	**+0.2**
MANZ				*e*Sg	**Sg**		**16 55 44.2**	**+0.6**
MOX	**Moxa**	**2.97**	**255**	*e*Pn	**Pn**		**16 54 57.0**	**+0.3**
MOX				*e*Pg	**Pg**		**16 55 05.3**	**+0.1**
MOX				*e*Sg	**Sg**		**16 55 44.9**	**+1.2**
MOX	**Moxa**	**2.97**	**255**	*e*PN	**Pn**		**16 54 57.0**	**+0.3**
MOX				*e*PG	**Pg**		**16 55 05.3**	**+0.1**
MOX				*e*SG	**Sg**		**16 55 45.1**	**+1.4**
ROTZ	**Rotzenmuhle**	**3.04**	**237**	*e*Pn	**Pn**		**16 54 58.0**	**+0.3**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**		**16 54 59.3**	**+1.0**
GEC2				*e*Sg	**Sg**		**16 55 45.9**	**-1.4**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**		**16 54 59.3**	**+1.1**
GEC2				*e*Sg	**Sg**		**16 55 45.9**	**-1.4**
GERES	**GERESS Array B**	**3.08**	**211**	Pn	**Pn**		**16 54 58.6**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=28,slow=12,SNR=47							
GERES				Pg	**Pg**		**16 55 05.0**	**-2.4**
	comp=Z,5.6nm,0.3s,baz=30,slow=18,SNR=54							
GERES				Sn	**Sn**		**16 55 33.5**	**-2.3**
	comp=Z,3.7nm,0.3s,baz=36,slow=25,SNR=5.2							
GERES				Lg			16 55 45.4	
	comp=Z,3.3nm,0.3s,baz=33,slow=27,SNR=4.6							
GERES	**GERESS Array B**	**3.08**	**211**	Pg	**Pg**		**16 55 05.0**	**-2.4**
SMOL	**Smolenice**	**3.11**	**164**	*e*PG	**Pg**		**16 55 08.2**	**+0.2**
SMOL				*e*SG	**Sg**		**16 55 50.2**	**+2.0**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**		**16 54 59.1**	**0.0**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**		**16 54 59.1**	**0.0**
MODS	**Modra-Piesok**	**3.22**	**166**	*e*PN	**Pn**		**16 55 02.5**	**+2.3**
MODS				*e*PG	**Pg**		**16 55 09.7**	**-0.4**
MODS				*e*SG	**Sg**		**16 55 53.5**	**+1.7**
KOLL	**Kolacno**	**3.28**	**152**	*e*PN	**Pn**		**16 55 01.0**	**+0.1**
KOLL				*e*PG	**Pg**		**16 55 10.2**	**-1.0**
KOLL				*e*SG	**Sg**		**16 55 53.8**	**+0.2**
KOLL	**Kolacno**	**3.28**	**152**	*e*Pn	**Pn**		**16 55 01.0**	**+0.1**
KOLL				*e*Pg	**Pg**		**16 55 10.2**	**-1.0**
KOLL				*e*Sg	**Sg**		**16 55 53.8**	**+0.2**
ZST	**Bratislava**	**3.37**	**169**	*e*PG	**Pg**		**16 55 10.8**	**-2.2**
ZST				*e*SG	**Sg**		**16 55 57.7**	**+1.0**
ZST	**Bratislava**	**3.37**	**169**	*e*Pg	**Pg**		**16 55 10.9**	**-2.1**
ZST				*e*Sg	**Sg**		**16 55 57.7**	**+1.0**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pg**		**16 55 12.7**	**-0.8**
NIE				*e*S	**Sg**		**16 55 57.5**	**0.0**
VYHS	**Vyhne**	**3.49**	**149**	*e*PN	**Pn**		**16 55 04.3**	**+0.5**
VYHS				*e*PG	**Pg**		**16 55 14.1**	**-1.1**
VYHS				*e*SG	**Sg**		**16 56 00.1**	**-0.2**
VYHS	**Vyhne**	**3.49**	**149**	*e*Pn	**Pn**		**16 55 04.3**	**+0.5**
VYHS				*e*Pg	**Pg**		**16 55 14.1**	**-1.1**
VYHS				*e*Sg	**Sg**		**16 56 00.1**	**-0.2**
CONA	**Conrad Observa**	**3.58**	**183**	⇑*i*Pn	**Pn**		**16 55 05.7**	**+0.5**
	SNR=12							
CONA				⇑*i*Sg	**Sg**		**16 56 04.9**	**+1.5**
	comp=Z,25nm,0.5s							
CSNA	**Conrad Observa**	**3.58**	**183**	⇑*i*Pn	**Pn**		**16 55 05.6**	**+0.5**
CSNA				⇑*i*Sg	**Sg**		**16 56 04.3**	**+0.9**
	comp=Z,9.3nm,0.3s							
CLZ	**Clausthal**	**3.59**	**278**	*e*Sg	**Sg**		**16 56 04.8**	**+1.1**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Sg	**Sg**		**16 56 04.7**	**+0.4**
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P	**Pn**		**16 55 06.0**	**-0.6**
BSD				eLG			16 55 51.2	
MOA	**Molln**	**3.85**	**199**	⇑*i*Pn	**Pn**		**16 55 09.3**	**+0.5**
	SNR=9.1							
MOA				⇑*i*Sg	**Sg**		**16 56 12.2**	**+0.2**
	comp=Z,21nm,0.5s							
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PN	**Pn**		**16 55 11.0**	**+1.7**
STHS				*e*PG	**Pg**		**16 55 23.2**	**+0.4**
STHS				*e*SG	**Sg**		**16 56 16.6**	**+3.5**
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*Pn	**Pn**		**16 55 11.0**	**+1.7**
STHS				*e*Pg	**Pg**		**16 55 23.3**	**+0.5**
STHS				*e*Sg	**Sg**		**16 56 16.6**	**+3.5**
HROE	**Hohe Rhon--Fla**	**3.89**	**258**	⇓*i*Pn	**Pn**		**16 55 09.4**	**+0.1**
KECS	**Kecovo**	**4.13**	**135**	*e*PG	**Pg**		**16 55 26.1**	**-1.4**
KECS				*e*SG	**Sg**		**16 56 19.8**	**-1.3**
KECS	**Kecovo**	**4.13**	**135**	*e*Pg	**Pg**		**16 55 26.1**	**-1.4**
KECS				*e*Sg	**Sg**		**16 56 19.8**	**-1.3**
ARSA	**Arzberg**	**4.28**	**185**	⇑*i*Pn	**Pn**		**16 55 14.8**	**+0.2**
	SNR=6.2							
ARSA				⇑*i*Sg	**Sg**		**16 56 27.2**	**+1.6**
	comp=Z,15nm,0.6s							
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PG	**Pg**		**16 55 31.8**	**+0.9**
CRVS				*e*SG	**Sg**		**16 56 26.6**	**-0.1**
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pg	**Pg**		**16 55 31.8**	**+0.9**
CRVS				*e*Sg	**Sg**		**16 56 26.6**	**-0.1**
DAVOX	**Davos/Dischmat**	**6.25**	**223**	Pn	**Pn**		**16 55 42.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=66,slow=18,SNR=3.7							
DAVOX				Lg			16 57 26.8	
	comp=Z,0.3nm,0.3s,baz=220,slow=23,SNR=4.5							
HFS	**Hagfors**	**8.76**	**352**	Pn	**Pn**		**16 56 15.5**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=185,slow=16,SNR=5.0							
NOA	**NORSAR Array B**	**9.94**	**346**	Pn	**Pn**		**16 56 29.1**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=166,slow=13,SNR=3.7							
ARCES	**ARCESS Array B**	**18.63**	**10**	Pn	**Pn**		**16 58 23.2**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=191,slow=13,SNR=7.3							
MKAR	**Makanchi Array**	**42.21**	**69**	LR	LR		17 21 25.3	
	comp=Z,33nm,18.2s,baz=236,slow=39							
YKA	**Yellowknife Ar**	**59.87**	**336**	P	**P**		**17 04 16.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=33,slow=6.2,SNR=4.3							

*IDC **21** 17:05:01.9±2.3,5163N×1793.6W,h0km,mb4.1/10, mb1 4.3/11,mb1mx3.9/26,mbtmp4.1/11,ML4.3/1,MS3.0/2, Ms1 3.0/2,ms1mx2.5/37,Error ellipse: s-maj=58.8km s-min=21.7km az=13.0*
*ISCJB **21** 17:05:05.1±3.4,5151N±003×1795W±02,h40km±25km, mb4.1/8,Error ellipse: s-maj=45.2km s-min=22.3km az=5.4*
*NEIC **21** 17:05:05.8±3.0,5109N×1793.0W,h51km±21km,mb3.8/2, ML3.7(AEIC),Error ellipse: s-maj=42.0km s-min=21.4km az=180.0*

ISC 21 17:05:06.8±3.4,515N±03×1794W±02,h36km±25km,n21,
σ0:90/19,mb4.1/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.75**	**76**	P	**Pn**		**17 05 34.0**	**-0.6**
ADK				S	**Sn**		**17 05 55.9**	**+0.3**
UNV	**Unalaska Valle**	**8.20**	**68**	*e*Pn	**Pn**		**17 07 03.9**	**+0.9**
PETK	**Petropavlovsk-**	**14.07**	**286**	LR	LR		17 12 07.8	
	comp=Z,18nm,20.1s,baz=236,slow=30							
OHAK	**Old Harbor**	**16.21**	**59**	*e*P	**Pn**		**17 08 49.7**	**-1.8**
	1.8nm,0.3s							
SVW2	**Sparrevohn**	**16.25**	**45**	*e*P	**Pn**		**17 08 55.3**	**+3.3**
KDAK	**Kodiak Island**	**16.68**	**57**	Pn	**Pn**		**17 08 53.5**	**-3.9**
	1.1nm,0.3s,baz=186,slow=12,SNR=21							
KTH	**Kantishna Hill**	**19.28**	**40**	*e*P	**Pn**		**17 09 28.9**	**-0.3**
	6.5nm,0.8s							
PAX	**Paxson**	**21.37**	**44**	P	**P**		**17 09 51.1**	**+0.5**
YKA	**Yellowknife Ar**	**35.43**	**46**	P	**P**		**17 11 58.1**	**-0.7**
	0.9nm,0.5s,

KAMT *e*SG **Sg** **17 44 25.2 +0.7**
LOD Lodumlu 0.62 330 *e*PG **Pg** **17 44 22.7 -0.4**
LOD *e*SG **Sg** **17 44 31.3 +0.1**
CDAG Cicekdag 0.96 73 *i* P **Pg** **17 44 28.9 -0.6**
CDAG *i* S **Sg** **17 44 41.0 -1.1**
KIZT Kizilcal 1.11 245 *e*PN **Pn** **17 44 32.2 -0.6**
KIZT *e*SN **Sn** **17 44 47.9 -0.5**
ELDT Eldivan 1.15 10 *i* P **Pb** **17 44 32.8 -0.4**
ELDT *i* S **Sg** **17 44 49.3 +1.2**
KDHN Kadinhani 1.17 225 *i* P **Pb** **17 44 32.8 -0.6**
KDHN *i* S **Sb** **17 44 49.8 +1.0**
LADK Ladik-KONYA 1.31 209 *e*PN **Pn** **17 44 36.0 +0.4**
KONT Konya--Tatoy 1.54 205 *e*PN **Pn** **17 44 39.2 +0.5**
YOZ Yozgat 1.68 79 *e*PN **Pn** **17 44 41.3 +0.6**
ESKT Eskisehir 1.81 276 *e*PN **Pn** **17 44 42.3 -0.2**

IDC 21 17:59:52.0±1.6, 123N×12669E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=157.5km s-min=23.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.34**	**161**	P		P	18 04 51.2	-0.3
	3.8nm,0.8s,baz=339,slow=11,SNR=29						
ASAR	**Alice Springs**	**25.72**	**165**	P		P	18 05 25.4	+1.2
	0.4nm,0.3s,baz=344,slow=9.2,SNR=25						
ASAR				PcP		PcP	18 08 55.5	+0.8
	0.3nm,0.7s,baz=357,slow=2.1,SNR=6.0						
STKA	**Stephens Creek**	**35.83**	**158**	P		P	18 06 52.0	-1.4
	2.6nm,0.7s,baz=334,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**59.58**	**326**	P		P	18 09 57.2	-0.3
	0.4nm,0.6s,baz=128,slow=6.0,SNR=6.2						

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*CSEM **21** 18:00:18.1±0.3, 41.11N×3392E, h15km, MD2.9, Error ellipse: s-maj=8.5km s-min=5.2km az=37.0*
*ISK **21** 18:00:18.7, 4108N×3389E, h5km, MD2.5*
*ISCJB **21** 18:00:19.4±0.7, 4107N±005×3389E±006, h5km±10km, Error ellipse: s-maj=9.1km s-min=5.5km az=39.4*
*DDA **21** 18:00:19.3, 4104N×3387E, h7km±1km, Md2.9*
ISC 21 18:00:19.9±0.7, 4107N±005×3390E±006, h6km±9km, n6, σ0§52/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOS	**Tosya**	**0.10**	**110**	*e*PG	**Pg**	**18 00 21.5**	**-0.6**
CANT	**Cankiri**	**0.51**	**205**	*e*PG	**Pg**	**18 00 29.5**	**-0.1**
CANT				*e*SG	**Sg**	**18 00 36.8**	**+0.5**
BALT	**Daday**	**0.60**	**320**	*i* P	**Pg**	**18 00 31.4**	**-0.1**
BALT				*i* S	**Sg**	**18 00 40.3**	**+0.9**
CTKT	**Corum**	**0.81**	**123**	*i* P	**Pg**	**18 00 35.0**	**-0.5**
CTKT				*i* S	**Sg**	**18 00 46.8**	**+0.8**
SAFT	**Safranbolu**	**0.93**	**281**	*e*PG	**Pg**	**18 00 37.0**	**-0.8**
SAFT				*e*SG	**Sg**	**18 00 49.7**	**-0.1**
CDAG	**Cicekdag**	**1.49**	**166**	*i* P	**Pn**	**18 00 47.1**	**0.0**
CDAG				*i* S	**Sn**	**18 01 06.8**	**0.0**

IDC 21 18:05:52.0±9.5, 003N×12165E, h200km±95km, mb3.1/4, mb1 3.2/4, mb1mx3.0/18, mbtmp3.1/4, Error ellipse: s-maj=125.5km s-min=18.9km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.42**	**149**	P		P	18 10 43.0	-0.3
	1.7nm,0.5s,baz=324,slow=11,SNR=36						
ASAR	**Alice Springs**	**26.39**	**154**	P		P	18 11 10.7	+0.5
	0.4nm,0.5s,baz=342,slow=15,SNR=11						
ASAR				PcP		PcP	18 14 29.9	-0.6
	0.6nm,1.0s,baz=352,slow=2.2,SNR=4.7						
SONM	**Songino Array**	**49.43**	**347**	P		P	18 14 21.8	+0.1
	0.7nm,0.6s,baz=165,slow=8.9,SNR=5.6						
MKAR	**Makanchi Array**	**57.89**	**329**	P		P	18 15 23.1	+0.1
	0.6nm,0.6s,baz=116,slow=8.2,SNR=4.2						

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*NIED **21** 18:38:00, 44.30N×146.70E, h119km, Mw4.4 Best double couple: M0 4.67000×10^15 NP1:φ§25.00000°, δ§89.00000°, λ=99.00000°. NP2:φ§289.00000°, δ§9.00000°, λ=7.00000°.*
*SKHL **21** 18:38:20.2±3.1, 44.32N×147.02E, h134km±16km, mb6.4/1, mbh5.8/1*
*MOS **21** 18:38:22.4±1.0, 44.51N×146.53E, h119km, mb4.5/29, Error ellipse: s-maj=7.8km s-min=5.6km az=80.8*
*BJI **21** 18:38:22.9, 44.48N×146.55E, h126km, mB4.8, mb4.8*
*ISCJB **21** 18:38:23.1±0.3, 44.46N±003×146.57E±004, h125km±2km, mb4.4/76, Error ellipse: s-maj=5.4km s-min=3.4km az=144.7*
*IDC **21** 18:38:23.9±0.7, 44.56N×146.43E, h116km±6km, mb4.0/24, mb1 4.2/29, mb1mx4.1/34, mbtmp4.1/29, MS3.0/3, Ms1 3.1/3, ms1mx2.7/40, Error ellipse: s-maj=13.2km s-min=8.9km az=139.0*
*NEIC **21** 18:38:24.4±0.6, 44.54N×146.45E, h120km±5km, mb4.5/41, Error ellipse: s-maj=6.1km s-min=3.9km az=149.0*
*JMA **21** 18:38:24.0±0.2, 44.34N×146.71E, h115km±2km, M4.2*
ISC 21 18:38:24.3±0.3, 4450N±003×14654E±004, h120km±2km, h122km±2.5km: pP-P, n220, σ1§09/242, mb4.4/76, 16C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.67**	**226**	⇑*i*	*i*PN	**Pn**	**18 38 42.7**	**-0.7**
YUK					*i* S	**Sn**	**18 38 57.0**	**-0.9**
YUK					pmax	pmax		
	comp=N,2μm,1.0s							
YUK					pmax	pmax		
	comp=E,5μm,1.0s							
YUK					pmax	pmax		
	comp=Z,10μm,1.0s							
YUK					pmax	pmax		
	comp=Z,3μm,0.5s							
YUK					pmax	pmax		
	comp=N,1μm,0.5s							
YUK					pmax	pmax		
	comp=E,1μm,0.5s							
YUK					smax			
	comp=N,28μm,1.5s							
YUK					smax			
	comp=E,20μm,1.5s							
YUK					smax			
	comp=N,7μm,0.5s							
YUK					smax			
	comp=E,6μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**0.67**	**226**	⇑*i*	*i*P	**Pn**	**18 38 42.7**	**-0.7**
YUK				⇑	*i*P		18 38 42.7	
YUK					AMB	AMB	18 38 43.5	
	comp=E,10μm,1.0s							
YUK					AMB	AMB	18 38 43.5	
	comp=E,5μm,2.5s							
YUK					AMB	AMB	18 38 43.5	
	comp=E,6μm,2.5s							
YUK					AMB	AMB	18 38 44.1	
	comp=E,1μm,0.5s							
YUK					AMB	AMB	18 38 44.1	
	comp=E,3μm,0.5s							
YUK					*i* S	**Sn**	**18 38 57.0**	**-0.9**
YUK					A		18 38 59.0	
	comp=E,28μm,1.5s							
YUK					A		18 38 59.0	
	comp=E,20μm,1.5s							
YUK					A		18 38 59.5	
	comp=E,7μm,0.5s							
YUK					A		18 38 59.5	
	comp=E,6μm,0.5s							
JRA	**Rausu**	**1.16**	**241**	⇑	P	**Pn**	**18 38 47.9**	**-0.1**
JRA					*e*S	**Sn**	**18 39 06.4**	**+0.5**
KUR	**Kuril'sk**	**1.20**	**52**	*e*	PN	**Pn**	**18 38 45.0**	**-3.3**
KUR					*i* S	**Sn**	**18 39 04.0**	**-2.6**
KUR					pmax	pmax		
	comp=N,2μm,0.5s							
KUR					pmax	pmax		
	comp=E,2μm,0.5s							
KUR					pmax	pmax		
	comp=Z,3μm,0.5s							
KUR					pmax	pmax		
	comp=N,5μm,1.0s							
KUR					pmax	pmax		
	comp=E,4μm,1.0s							
KUR					pmax	pmax		
	comp=Z,18μm,1.0s							
KUR					smax			
	comp=N,3μm,0.7s							
KUR					smax			
	comp=E,4μm,0.7s							
KUR					smax			
	comp=N,19μm,2.0s							
KUR					smax			
	comp=E,18μm,2.0s							
KUR	**Kuril'sk**	**1.20**	**52**	⇓	*i*P	**Pn**	**18 38 45.0**	**-3.3**
KUR				⇑	*i*P		18 38 45.0	
KUR					AMB	AMB	18 38 45.4	
	comp=E,2μm,0.5s							
KUR					AMB	AMB	18 38 45.4	
	comp=E,2μm,0.5s							
KUR					AMB	AMB	18 38 45.4	
	comp=E,3μm,0.5s							
KUR					AMB	AMB	18 38 46.0	
	comp=E,18μm,1.0s							
KUR					AMB	AMB	18 38 46.0	
	comp=E,5μm,1.0s							
KUR					AMB	AMB	18 38 46.0	
	comp=E,4μm,1.0s							
KUR					*i* S	**Sn**	**18 39 04.0**	**-2.6**
KUR					A		18 39 05.0	
	comp=E,2μm,0.7s							
KUR					A		18 39 05.0	
	comp=E,3μm,0.7s							
NEM2	**Nemuro 2**	**1.27**	**207**	⇑	P	**Pn**	**18 38 47.7**	**-1.5**
NEM2					*e*S	**Sn**	**18 39 04.9**	**-3.1**
JNK	**Nakash**	**1.60**	**236**	⇑	P	**Pn**	**18 38 52.9**	**0.0**
JTKR	**Abashiri--Toko**	**1.96**	**255**	⇑	P	**Pn**	**18 38 57.8**	**+0.5**
JTKR					*e*S	**Sn**	**18 39 23.5**	**+1.1**
JAK	**Akkeshi**	**2.01**	**222**		P	**Pn**	**18 38 57.0**	**-0.9**
JAK					*e*S	**Sn**	**18 39 22.4**	**-1.1**
JAR	**Ashorobuto**	**2.33**	**240**	⇑	P	**Pn**	**18 39 02.6**	**+0.7**
JMP	**Maruseppu**	**2.33**	**259**	⇑	P	**Pn**	**18 39 02.8**	**+0.9**
JMP					*e*S	**Sn**	**18 39 33.0**	**+2.2**
JOB	**Onbets**	**2.53**	**232**		P	**Pn**	**18 39 04.6**	**+0.2**
JOB					*e*S	**Sn**	**18 39 36.5**	**+1.3**
JKK2	**Kamakawa 2**	**2.80**	**258**	⇑	P	**Pn**	**18 39 09.2**	**+1.3**
JKK2					*e*S	**Sn**	**18 39 44.0**	**+2.6**
JSE	**Soyaes**	**2.85**	**281**	⇑	P	**Pn**	**18 39 10.0**	**+1.4**
ASAJ	**Asahikawa**	**2.85**	**264**		P	**Pn**	**18 39 10.4**	**+1.8**
	comp=E,71nm,0.3s,baz=80,slow=19,SNR=242							
ASAJ					LR	LR	18 40 00.2	
	comp=E,369nm,18.5s,baz=90,slow=35							
ASAJ	**Asahikawa**	**2.85**	**264**	⇑	P	**Pn**	**18 39 10.3**	**+1.7**
JCH	**Churui**	**2.98**	**232**		P	**Pn**	**18 39 10.3**	**0.0**
JCH					*e*S	**Sn**	**18 39 46.2**	**+0.5**
JFR	**Furan**	**3.15**	**246**		P	**Pn**	**18 39 13.6**	**+1.1**
JWK2	**Keihoku**	**3.40**	**286**	⇑	P	**Pn**	**18 39 18.7**	**+3.0**
JWK2					*e*S	**Sn**	**18 40 00.6**	**+5.1**
ERM	**Erimo**	**3.50**	**226**	*e*	Pn	**Pn**	**18 39 17.7**	**+0.5**
ERM				*e*	Sn	**Sn**	**18 39 58.8**	**+0.7**
JNBK	**Urakawa-nobuka**	**3.54**	**232**		P	**Pn**	**18 39 16.9**	**-0.8**
YSS	**Yuzh-Sakhalins**	**3.61**	**314**	⇓	*i*PN	**Pn**	**18 39 20.0**	**+1.4**
YSS					*e*S	**Sn**	**18 40 04.0**	**+3.4**
YSS					pmax	pmax		
	comp=Z,80nm,1.0s							
YSS					smax			
	comp=E,180nm,0.9s							
YSS	**Yuzh-Sakhalins**	**3.61**	**314**	⇓	*i*P	**Pn**	**18 39 20.0**	**+1.4**
YSS					AMB	AMB	18 39 21.0	
	comp=E,80nm,1.0s							
YSS					*e*S	**Sn**	**18 40 04.0**	**+3.4**
YSS					A		18 40 06.5	
	comp=E,180nm,0.9s							
YSS	**Yuzh-Sakhalins**	**3.61**	**314**	*e*	Pn	**Pn**	**18 39 20.2**	**+1.6**
UGL	**Uglegorsk**	**5.51**	**328**	*e*	P	**Pn**	**18 39 47.0**	**+3.0**
UGL					AMB	AMB	18 39 47.5	
	comp=E,72nm,0.8s							
TEY	**Ternei**	**7.09**	**278**	*e*	P	**Pn**	**18 40 09.3**	**+3.9**
TEY					AMB	AMB	18 40 10.0	
	comp=E,80nm,0.8s							
TEY					AMB	AMB	18 40 10.0	
	comp=E,50nm,0.8s							
TEY					AMB	AMB	18 40 10.8	
	comp=E,10.0nm,0.6s							
HABR	**Khabarovsk**	**8.86**	**301**	*e*	PN	**Pn**	**18 40 27.9**	**-1.5**
HABR					*e*S	**Sn**	**18 42 07.2**	**-0.1**
HABR					pmax	pmax		
	comp=N,8.0nm,0.8s							
HABR					pmax	pmax		
	comp=E,27nm,1.6s							
HABR					pmax	pmax		
	comp=Z,41nm,1.7s							
SKR	**Severo-Kuril's**	**8.95**	**43**	*e*	PN	**Pn**	**18 40 30.0**	**-0.5**
SKR					*e*S	**Sn**	**18 42 10.3**	**+1.0**
SKR					pmax	pmax		
	comp=E,80nm,0.5s							
SKR					pmax	pmax		
	comp=Z,80nm,0.5s							
SKR					pmax	pmax		
	comp=N,70nm,0.7s							
SKR					smax			
	comp=N,80nm,0.5s							
SKR					smax			
	comp=E,80nm,0.5s							
NKL	**Nikolayevsk**	**9.47**	**338**	*e*	P	**Pn**	**18 40 34.0**	**-3.6**
NKL					AMB	AMB	18 40 38.0	
	comp=E,10.0nm,0.7s							
MJAR	**Matsushiro Arr**	**10.16**	**221**		P	**Pn**	**18 40 44.8**	**-2.1**
	comp=E,2.1nm,0.3s,baz=31,slow=13,SNR=42							
MAJO	**Matsushiro**	**10.16**	**221**	*e*	PN	**Pn**	**18 40 44.7**	**-2.2**
MAJO					pmax	pmax		
	comp=E,31nm,0.6s							
MAJO	**Matsushiro**	**10.16**	**221**	*e*	Pn	**Pn**	**18 40 44.7**	**-2.2**
	comp=E,31nm,0.6s							
MAT	**Matsushiro**	**10.16**	**221**		P	**Pn**	**18 40 44.8**	**-2.1**
MAT					*e*S	**Sn**	**18 42 36.5**	**-2.5**
KLR	**Kul'dur**	**11.17**	**300**	*e*	PN	**Pn**	**18 40 58.6**	**-1.6**
PETK	**Petropavlovsk-**	**11.32**	**36**		P	**Pn**	**18 41 01.2**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=173,slow=10,SNR=27							
PET	**Petropavlovsk**	**11.68**	**39**	*e*	PN	**Pn**	**18 41 06.4**	**-0.5**
MDJ	**Mudanjiang**	**12.09**	**276**		P	**Pn**	**18 41 12.8**	**+0.3**
MDJ					AMB	AMB		
	comp=Z,38nm,0.9s							
MDJ					AMB	AMB		
	comp=Z,107nm,4.5s							
MDJ					LR	LR		
	comp=N,19nm,27.3s							
MDJ					LR	LR		
	comp=E,54nm,30.1s							
MDJ					LR	LR		
	comp=Z,81nm,32.2s							
MDJ	**Mudanjiang**	**12.09**	**276**	*e*	Pn	**Pn**	**18 41 12.9**	**+0.5**
	comp=Z,32nm,0.9s							
JHJ	**Hachijo jima 2**	**12.52**	**207**		P	**Pn**	**18 41 17.0**	**-1.2**
	comp=E,5.2nm,0.3s,baz=126,slow=14,SNR=3.5							
CN2	**Changchun**	**15.15**	**275**	*e*	P	**Pn**	**18 41 50.9**	**-1.0**
CN2					*e*S	**S**	**18 44 33.4**	**-14**
CN2					AMB	AMB		
	comp=Z,20nm,0.7s							
ZEA	**Zeya**	**15.60**	**313**	*e*	P	**Pn**	**18 41 55.0**	**-2.3**
ZEA					AMB	AMB	18 41 56.5	
	comp=Z,37nm,1.4s							
KSRS	**Korea Array**	**15.70**	**250**		P	**Pn**	**18 41 57.6**	**-1.2**
	comp=Z,1.4nm,0.3s,baz=59,slow=13,SNR=39							
KSRS	**Korea Array**	**15.70**	**250**		P	**Pn**	**18 41 57.6**	**-1.2**
KSRS					pmax	pmax		
	comp=Z,1.0nm,0.3s							
HIA	**Hailar**	**18.88**	**294**	*e*	P	**P**	**18 42 32.8**	**-2.2**
DL2	**Dalian**	**19.39**	**262**		P	**P**	**18 42 39.8**	**-0.8**
DL2					AMB	AMB		
	comp=Z,20nm,0.6s							
FX1	**Attu Island--F**	**19.39**	**55**		P	**P**	**18 42 42.2**	**+1.7**
	comp=Z,9.2nm,0.3s,baz=288,slow=3.0,SNR=7.5							
YAK	**Yakutsk**	**20.13**	**337**	*e*	P	**P**	**18 42 47.1**	**-1.4**
YAK				*e*	*PP		18 43 15.2	
YAK				*e*			18 43 20.6	
YAK				*e*	S	**S**	**18 46 25.0**	**-2.7**
YAK				*e*	*SS	sS	18 46 56.6	-7.6
YAK					pmax	pmax		
	comp=E,2.0nm,0.8s							
YAK					pmax	pmax		
	comp=Z,10.0nm,0.8s							
YAK					pmax	pmax		
	comp=N,1.0nm,0.9s							
YAK					smax			
	comp=N,87nm,2.2s							
YAK					smax			
	comp=E,151nm,3.2s							
YAK					MLR	MLR		
	comp=Z,28nm,7.0s							
YAK	**Yakutsk**	**20.13**	**337**	*e*	P	**P**	**18 42 46.6**	**-1.9**
	comp=Z,10nm,0.4s							
YAK				*e*	pP		18 43 15.4	
BJI	**Beijing**	**22.83**	**269**		P	**P**	**18 43 16.1**	**-0.9**
BJI					AMB	AMB		
	comp=Z,49nm,0.8s,mb4.9							
BJI					LR	LR		
	comp=Z,46nm,32.5s							
BJT	**Baijiatuau**	**22.85**	**269**	*e*	P	**P**	**18 43 16.2**	**-1.0**
BJT					pmax	pmax		
	comp=Z,29nm,0.7s							
BJT	**Baijiatuau**	**22.85**	**269**	*e*	P	**P**	**18 43 16.2**	**-1.0**
	comp=Z,29nm,0.7s,mb4.7							
JOW	**Kunigami**	**22.95**	**226**		P	**P**	**18 43 19.9**	**+1.7**
	comp=Z,20nm,0.5s,mb4.7,baz=353,slow=13,SNR=7.1							
BOD	**Bodaibo**	**24.09**	**315**	*e*	P	**P**	**18 43 25.1**	**-3.2**
BOD				*e*			18 43 51.1	
BOD					pmax	pmax		
	comp=Z,7.0nm,1.4s,mb3.8							
NJ2	**Nanjing**	**24.91**	**250**	*e*	P	**P**	**18 43 35.8**	**-0.2**
NJ2					AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8							
BILL	**Bilibino**	**25.77**	**17**	*e*	P	**P**	**18 43 41.6**	**-1.8**
BILL					pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.5							
HHC	**Hu-ho-hao-te**	**25.85**	**274**	*e*	P	**P**	**18 43 45.9**	**+1.5**
HHC					AP	pP	18 44 12.3	+2.1
HHC					XP	sP	18 44 27.3	+3.1
HHC					PP		18 44 32.6	
HHC					PCP	PcP	18 47 11.5	+1.1
HHC				*e*	S	**S**	**18 48 02.3**	**-2.8**
HHC					XS	sS	18 48 50.3	-0.2
HHC					SS		18 49 19.3	
HHC					PCS	PcS	18 50 52.5	+1.3
HHC					SCS	ScS	18 54 27.0	-1.2
HHC					AMB	AMB		
	comp=Z,27nm,1.0s,mb4.6							
HHC					AMB	AMB		
	comp=Z,123nm,5.2s							
BTO	**Baotou**	**27.03**	**275**	*e*	P	**P**	**18 43 56.9**	**+1.8**
ULN	**Ulaanbaatar**	**27.34**	**291**	⇓	*i*P	**P**	**18 43 58.7**	**+1.0**
ULN					*i* *PP	pP	18 44 26.9	+3.3
ULN	**Ulaanbaatar**	**27.34**	**291**	*e*	P	**P**	**18 43 58.4**	**+0.7**
SONM	**Songino Array**	**27.78**	**291**		P	**P**	**18 44 01.8**	**+0.2**
	comp=Z,1.2nm,0.4s,mb3.8,baz=86,slow=8.7,SNR=12							
SONM					ScP	ScP	18 50 44.9	+0.6
	comp=Z,0.5nm,0.8s,baz=22,slow=4.8,SNR=3.9							
SONM					LR	LR	18 56 40.7	
	comp=Z,51nm,18.4s,baz=30,slow=40							
SONM	**Songino Array**	**27.78**	**291**		P	**P**	**18 44 01.8**	**+0.2**
SONM					ScP	ScP	18 50 44.9	+0.6
SONM					LR	LR	18 56 40.7	
WHN	**Wuhan**	**28.87**	**252**		P	**P**	**18 44 11.3**	**-0.2**
XAN	**Xi'an**	**30.69**	**263**		P	**P**	**18 44 27.1**	**-0.5**
XAN					AP	pP	18 44 53.3	-0.5
XAN					PP	PP	18 45 38.3	-0.7
XAN					PPP		18 45 50.8	
XAN					S	**S**	**18 49 20.8**	**-0.6**
XAN					AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.2							
XAN					LR	LR		
	comp=N,21nm,23.9s							
XAN					LR	LR		
	comp=E,15nm,25.6s							
XAN					LR	LR		
	comp=Z,20nm,18.9s							
LZH	**Lanzhou**	**33.31**	**270**	⇑	P	**P**	**18 44 49.1**	**-1.4**
LZH					AP	pP	18 45 16.5	-0.3
LZH					XP	sP	18 45 32.3	+1.7
LZH					PP	PP	18 46 04.6	-3.4
LZH					AMB	AMB		
	comp=Z,23nm,1.5s,mb4.8							
LZH					AMB	AMB		
	comp=Z,95nm,4.9s							
LZH					LR	LR		
	comp=N,403nm,13.3s							
LZH					LR	LR		
	comp=Z,597nm,17.5s							
GTA	**Gaotai**	**34.74**	**278**	*e*	P	**P**	**18 45 04.0**	**+1.2**
GTA					AP	pP	18 45 33.9	+4.6
GTA					XP	sP	18 45 49.4	+6.4
GTA					PCP	PcP	18 45 57.0	-3.1
GTA					SCS	ScS	18 55 03.3	-8.0
GTA					AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.5							
CD2	**Chengdu**	**36.05**	**263**		P	**P**	**18 45 14.3**	**+0.2**
CD2					AP	pP	18 45 42.3	+1.6
CD2					XP	sP	18 45 57.0	+2.6
CD2					PP	PP	18 46 40.4	+2.1
CD2					PCP	PcP	18 47 38.5	+0.8
CD2					S	**S**	**18 50 43.1**	**-1.1**
CD2					XS	sS	18 51 31.8	+1.3
CD2					SS	SS	18 53 13.3	-11
CD2					AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4							
CD2					AMB	AMB		
	comp=Z,120nm,4.7s							
GYA	**Guiyang**	**36.69**	**254**	⇓	*i*P	**P**	**18 45 19.3**	**-0.2**
GYA					AP	pP	18 45 47.3	+1.1
GYA					XP	sP	18 46 01.9	+2.0
GYA					PP	PP	18 46 45.5	+0.1
GYA					PCP	PcP	18 47 44.0	+4.3
GYA					S	**S**	**18 50 47.5**	**-6.5**
GYA					SCP	ScP	18 51 16.4	+1.3
GYA					PCS	PcS	18 51 30.6	+2.7
GYA					SCS	ScS	18 55 21.3	-1.0
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
GYA					AMB	AMB		
	comp=Z,70nm,5.0s							
KDAK	**Kodiak Island**	**39.07**	**48**		P	**P**	**18 45 38.8**	**-0.4**
	comp=Z,12nm,0.9s,mb4.7,baz=317,slow=17,SNR=12							
ZALV	**Zalesovo Beam**	**40.20**	**306**		P	**P**	**18 45 47.9**	**-0.6**
	comp=Z,0.8nm,0.4s,mb3.9,baz=77,slow=9.0,SNR=6.0							
ZALV					PcP	PcP	18 47 50.5	+0.3
	comp=Z,1.5nm,0.4s,baz=86,slow=3.8,SNR=8.4							
KMI	**Kunming**	**40.26**	**256**		P	**P**	**18 45 49.8**	**+0.4**
KMI					AMB	AMB		
	comp=Z,25nm,0.8s,mb5.1							
MCK	**McKinley**	**40.32**	**38**	*e*	P	**P**	**18 45 49.5**	**+0.1**
MCK					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6							
MCK	**McKinley**	**40.32**	**38**	*e*	P	**P**	**18 45 49.5**	**+0.1**
	comp=Z,6.8nm,0.7s,mb4.6							
PMR	**Palmer**	**40.39**	**42**	*e*	P	**P**	**18 45 50.5**	**+0.5**
COLA	**College**	**40.73**	**37**	⇓	*i*P	**P**	**18 45 53.4**	**+0.6**
COLA	**College**	**40.73**	**37**	*e*	P	**P**	**18 45 52.9**	**+0.1**
	comp=Z,3.4nm,0.6s,mb4.3							
WMQ	**Urumqi**	**41.41**	**291**		P	**P**	**18 45 59.5**	**+0.9**
WMQ					AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.3							
DAV	**Davao City (W)**	**41.53**	**212**	*e*	P	**P**	**18 46 00.4**	**+0.6**
	comp=Z,352nm,0.4s							
MK31	**Makanchi Array**	**43.85**	**297**	*e*	P	**P**	**18 46 17.5**	**-0.8**
MKAR	**Makanchi Array**	**43.85**	**297**		P	**P**	**18 46 16.8**	**-1.4**
	comp=Z,1.6nm,0.5s,mb4.0,baz=77,slow=7.6,SNR=23							
MKAR					PcP	PcP	18 48 02.5	+0.1
	comp=Z,0.4nm,0.4s,baz=70,slow=4.5,SNR=5.0							
MKAR					ScP	ScP	18 51 44.3	+1.5
	comp=Z,0.3nm,0.7s,baz=68,slow=4.8,SNR=3.6							
MKAR	**Makanchi Array**	**43.85**	**297**		P	**P**	**18 46 16.8**	**-1.5**
MKAR							18 48 02.5	
KURK	**Kurchatov**	**44.75**	**303**		P	**P**	**18 46 25.0**	**-0.3**
	comp=Z,1.5nm,0.3s,mb4.1,baz=76,slow=8.2,SNR=6.1							
KURK	**Kurchatov**	**44.75**	**303**		P	**P**	**18 46 25.0**	**-0.3**
KUR

CHTO	**Chiang Mai**	**47.08**	**253**	*e*P		**P**	**18 46 44.8**	**+0.8**
CHTO				pmax		pmax			
	comp=Z,21nm,0.8s,mb4.9								
CHTO	**Chiang Mai**	**47.08**	**253**	*e*P		**P**	**18 46 44.8**	**+0.8**
	comp=Z,21nm,0.8s,mb4.9								
CHTO				*e*			18 46 57.9		
CM31	**Chiang Mai Arr**	**47.32**	**252**	*e*P		**P**	**18 46 46.8**	**+0.9**
	comp=Z,7.4nm,0.6s,mb4.6								
CMAR	**Chiang Mai Arr**	**47.32**	**252**	P		**P**	**18 46 46.9**	**+0.9**
	comp=Z,7.2nm,0.7s,mb4.5,baz=42,slow=7.2,SNR=77								
CMAR				LR		LR	19 08 23.0		
	comp=Z,7.6nm,19.5s,baz=210,slow=38								
BVAR	**Borovoye Array**	**48.69**	**309**	P		**P**	**18 46 55.2**	**-0.8**
	comp=Z,0.4nm,0.3s,mb3.8,baz=92,slow=8.3,SNR=7.9								
BVAR				PcP		PcP	18 48 19.7	+0.4	
	comp=Z,1.1nm,0.5s,baz=67,slow=3.4,SNR=5.7								
TKM2	**Tokmak 2**	**49.79**	**295**	*e*P		**P**	**18 47 05.0**	**+0.5**
TKM2				pmax		pmax			
	comp=Z,7.0nm,0.9s,mb4.6								
TKM2	**Tokmak 2**	**49.79**	**295**	*e*P		**P**	**18 47 05.0**	**+0.5**
	comp=Z,6.7nm,0.9s,mb4.6								
DLBC	**Dease Lake**	**50.42**	**43**	P		**P**	**18 47 10.7**	**+1.6**
	comp=Z,2.3nm,0.8s,mb4.2,baz=108,slow=21,SNR=4.8								
DLBC	**Dease Lake**	**50.42**	**43**	P		**P**	**18 47 10.8**	**+1.7**
JIRN	**Jiri**	**50.46**	**272**	*e*P		**P**	**18 47 10.7**	**+0.9**
	comp=Z,13nm,0.3s,mb5.4								
GUN	**Gumba**	**50.54**	**272**	*e*P		**P**	**18 47 11.0**	**+0.6**
	comp=Z,28nm,0.4s								
RAMN	**Ramite**	**50.59**	**271**	*e*P		**P**	**18 47 11.4**	**+0.6**
	comp=Z,49nm,0.3s								
AAK	**Ala-Archa**	**50.64**	**295**	*e*P		**P**	**18 47 10.8**	**-0.1**
AAK				pmax		pmax			
	comp=Z,2.0nm,0.4s,mb4.5								
AAK	**Ala-Archa**	**50.64**	**295**	*e*P		**P**	**18 47 10.8**	**-0.2**
	comp=Z,2.0nm,0.4s,mb4.5								
KKN	**Kakani**	**51.04**	**273**	*e*P		**P**	**18 47 15.0**	**+0.9**
PKI	**Pulchoki**	**51.07**	**272**	*e*P		**P**	**18 47 14.8**	**+0.4**
	comp=Z,16nm,0.6s,mb5.2								
PKI	**Pulchoki**	**51.07**	**272**	*e*P		**P**	**18 47 14.8**	**+0.4**
PKI				pmax		pmax			
	comp=Z,16nm,0.6s,mb5.2								
PKIN	**Phulchoki**	**51.08**	**272**	*e*P		**P**	**18 47 14.8**	**+0.4**
EKS2	**Erkin-Say**	**51.09**	**295**	*e*P		**P**	**18 47 14.0**	**-0.3**
	comp=Z,3.1nm,0.5s,mb4.6								
DMN	**Daman**	**51.27**	**272**	*e*P		**P**	**18 47 16.6**	**+0.8**
	comp=Z,15nm,0.5s,mb5.3								
GKN	**Gorkha**	**51.37**	**273**	*e*P		**P**	**18 47 17.1**	**+0.5**
AML	**Almayashu**	**51.40**	**295**	*e*P		**P**	**18 47 16.9**	**+0.2**
	comp=Z,5.6nm,0.8s,mb4.7								
DANN	**Dangsing**	**51.79**	**274**	*e*P		**P**	**18 47 20.9**	**+1.2**
	comp=Z,44nm,0.3s								
KOLN	**Koldanda**	**52.25**	**274**	*e*P		**P**	**18 47 23.9**	**+0.8**
	comp=Z,17nm,0.3s,mb5.5								
ARU	**Arti**	**53.50**	**316**	*c i*P		**P**	**18 47 31.2**	**-0.7**
ARU				*e*			18 49 34.2		
ARU				*e*S		**S**	**18 54 54.8**	**-0.2**
ARU				SS		SS	18 58 36.3	+0.2	
ARU				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
ARU	**Arti**	**53.50**	**316**	*e*P		**P**	**18 47 30.9**	**-0.9**
	comp=Z,4.6nm,0.9s,mb4.5								
RES	**Resolute Bay**	**54.38**	**17**	P		**P**	**18 47 36.3**	**-1.7**
	comp=Z,1.6nm,0.4s,mb4.4,baz=321,slow=6.5,SNR=9.5								
KAPI	**Kappang**	**54.85**	**213**	P		**P**	**18 47 41.0**	**-1.1**
	comp=Z,5.8nm,0.8s,mb4.7,baz=68,slow=15,SNR=5.1								
YKA	**Yellowknife Ar**	**55.42**	**34**	P		**P**	**18 47 45.8**	**+0.1**
	comp=Z,3.2nm,0.7s,mb4.5,baz=302,slow=7.0,SNR=46								
YKA	**Yellowknife Ar**	**55.42**	**34**	P		**P**	**18 47 45.8**	**+0.1**
KULM	**Kulim**	**55.94**	**240**	*e*P		**P**	**18 47 50.8**	**+0.7**
	comp=Z,8.5nm,0.9s,mb4.8								
KEV	**Kevo**	**57.85**	**339**	*e*p		**P**	**18 48 00.8**	**-2.0**
ARCES	**ARCESS Array B**	**58.39**	**339**	P		**P**	**18 48 05.8**	**-0.7**
	comp=Z,7.7nm,1.1s,mb4.7,baz=45,slow=7.0,SNR=7.0								
KBL	**Kabul**	**58.52**	**289**	*e*P		**P**	**18 48 07.1**	**-0.9**
KBL				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
KBL	**Kabul**	**58.52**	**289**	*e*P		**P**	**18 48 07.1**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.6								
EDM	**Edmonton**	**61.15**	**43**	*e*P		**P**	**18 48 25.7**	**+0.1**
JOF	**Joensuu**	**61.22**	**332**	*e*p		**P**	**18 48 23.8**	**-2.1**
	comp=Z,1.8nm,0.5s,mb4.4								
JOF	**Joensuu**	**61.22**	**332**	*e*P		**P**	**18 48 23.8**	**-2.1**
JOF				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb4.4								
WALA	**Waterton Lakes**	**63.38**	**47**	*e*P		**P**	**18 48 40.8**	**+0.2**
	comp=Z,0.2nm,0.8s								
CTAO	**Charters Tower**	**64.27**	**180**	*e*P		**P**	**18 48 45.9**	**-0.7**
CTAO				pmax		pmax			
	comp=Z,19nm,1.4s,mb4.7								
CTAO	**Charters Tower**	**64.27**	**180**	*e*P		**P**	**18 48 45.9**	**-0.7**
	comp=Z,19nm,1.4s,mb4.7								
SWMT	**Swartz Lake**	**64.30**	**48**	*e*P		**P**	**18 48 48.0**	**+1.4**
OBN	**Obninsk**	**64.45**	**323**	*e*P		**P**	**18 48 47.2**	**-0.2**
OBN				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.3								
WRAB	**Tennant Creek**	**65.08**	**193**	*e*P		**P**	**18 48 50.8**	**-1.0**
WRAB				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
WRAB	**Tennant Creek**	**65.08**	**193**	*e*P		**P**	**18 48 50.8**	**-1.1**
	comp=Z,4.7nm,0.7s,mb4.4								
WB2	**Warramunga Arr**	**65.09**	**193**	*e*P		**P**	**18 48 51.4**	**-0.5**
WRA	**Warramunga Arr**	**65.09**	**193**	P		**P**	**18 48 51.4**	**-0.6**
	comp=Z,5.6nm,0.7s,mb4.5,baz=9.0,slow=6.7,SNR=69								
FCC	**Fort Churchill**	**65.59**	**30**	*e*P		**P**	**18 48 54.2**	**-0.5**
	comp=Z,0.8nm,1.4s,mb3.4								
LRM	**Limekiln Ridge**	**66.19**	**49**	*e*P		**P**	**18 48 60.0**	**+1.2**
HLID	**Hailey**	**66.56**	**51**	*e*P		**P**	**18 49 02.2**	**+1.0**
	comp=Z,2.8nm,1.0s,mb4.0								
BOZ	**Bozeman (W)**	**66.74**	**48**	*e*P		**P**	**18 49 03.8**	**+1.5**
BOZ				*e*		pP	18 49 31.3	-0.5	
BOZ				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.4								
BOZ	**Bozeman (W)**	**66.74**	**48**	*e*P		**P**	**18 49 03.8**	**+1.4**
	comp=Z,4.2nm,0.6s,mb4.5								
BOZ				*e*		pP	18 49 31.3	-0.5	
NVAR	**Mina Array Bea**	**67.55**	**58**	P		**P**	**18 49 09.0**	**+1.4**
	comp=Z,4.4nm,0.7s,mb4.4,baz=289,slow=6.5,SNR=19								
NVAR				pP		pP	18 49 37.0	-0.2	
	comp=Z,1.8nm,0.7s,baz=289,slow=6.5,SNR=3.3								
IMW	**Indian Meadow**	**68.26**	**49**	*e*P		**P**	**18 49 14.3**	**+2.4**
RRI2	**Red Ridge**	**68.41**	**50**	*e*P		**P**	**18 49 14.4**	**+1.6**
	comp=Z,9.4nm,0.8s,mb4.7								
RRI2				*e*pP		pP	18 49 42.7	+0.2	
TPH	**Tonopah**	**68.44**	**58**	*e*P		**P**	**18 49 13.9**	**+0.8**
TPH				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.5								
TPH	**Tonopah**	**68.44**	**58**	*e*P		**P**	**18 49 13.9**	**+0.8**
	comp=Z,5.0nm,0.6s,mb4.5								
MOOW	**Moose Ponds**	**68.46**	**49**	*e*P		**P**	**18 49 15.2**	**+2.0**
TPAW	**Teton Pass**	**68.52**	**50**	*e*P		**P**	**18 49 15.8**	**+2.3**
NB2	**NORSAR Subarra**	**68.74**	**338**	P		**P**	**18 49 13.5**	**-1.1**
	comp=Z,3.8nm,0.6s,mb4.4,baz=32,slow=6.5								
NOA	**NORSAR Array B**	**68.74**	**338**	P		**P**	**18 49 13.4**	**-1.2**
	comp=Z,2.1nm,0.5s,mb4.2,baz=32,slow=6.4,SNR=19								
ASAR	**Alice Springs**	**68.81**	**192**	P		**P**	**18 49 15.8**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=17,slow=7.7,SNR=4.2								
ISA	**Isabella**	**69.22**	**60**	*e*P		**P**	**18 49 17.8**	**-0.2**
DUG	**Dugway**	**69.65**	**53**	*e*P		**P**	**18 49 21.6**	**+1.0**
DUG				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.3								
DUG	**Dugway**	**69.65**	**53**	*e*P		**P**	**18 49 21.6**	**+1.0**
	comp=Z,3.2nm,0.6s,mb4.3								
BW06	**Boulder Array**	**69.76**	**50**	*e*P		**P**	**18 49 22.0**	**+0.8**
PDAR	**Pinedale Array**	**69.76**	**50**	P		**P**	**18 49 21.9**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.2,baz=289,slow=1.6,SNR=20								
PDAR				pP		pP	18 49 50.6	-0.2	
	comp=Z,1.7nm,0.6s,baz=288,slow=2.3,SNR=6.0								
AKASG	**Malin Array Be**	**70.71**	**323**	P		**P**	**18 49 26.2**	**-0.6**
	comp=Z,1.4nm,0.4s,mb4.1,baz=37,slow=6.4,SNR=10.0								
SRU	**San Rafael**	**71.69**	**53**	*e*P		**P**	**18 49 34.3**	**+1.3**
RSSD	**Black Hills**	**71.75**	**46**	*e*P		**P**	**18 49 33.6**	**+0.4**
RSSD				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.2								
RSSD	**Black Hills**	**71.75**	**46**	*e*P		**P**	**18 49 33.6**	**+0.4**
	comp=Z,3.0nm,0.7s,mb4.2								
BUR08	**Bucovina Ar. S**	**74.75**	**323**	*e*P		**P**	**18 49 50.7**	**-0.1**
STHS	**Stebnicka Huta**	**74.99**	**327**	*e*P		**P**	**18 49 53.2**	**+1.1**
STHS				pmax		pmax			
	comp=Z,6.0nm,1.6s,mb4.1								
STHS	**Stebnicka Huta**	**74.99**	**327**	*e*P		**P**	**18 49 53.2**	**+1.1**
	comp=Z,5.5nm,1.6s,mb4.0								
STHS				*e*			18 50 16.3		
STKA	**Stephens Creek**	**76.15**	**184**	P		**P**	**18 49 59.0**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.1,baz=0.0,slow=10,SNR=3.7								
CLL	**Collm**	**76.44**	**332**	*e*P		**P**	**18 50 00.0**	**-0.4**
ANMO	**Albuquerque**	**76.91**	**54**	*e*P		**P**	**18 50 03.7**	**+0.4**
ANMO				pmax		pmax			
	comp=Z,2.0nm,0.8s								
ANMO	**Albuquerque**	**76.91**	**54**	*e*P		**P**	**18 50 03.7**	**+0.4**
	comp=Z,2.2nm,0.8s,mb3.9								
SCHQ	**Schefferville**	**77.06**	**19**	P		**P**	**18 50 03.6**	**-0.1**
	comp=Z,4.1nm,1.0s,mb4.1,baz=256,slow=8.3,SNR=3.8								
ZST	**Bratislava**	**77.58**	**328**	*e*P		**P**	**18 50 08.5**	**+1.7**
ZST				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.3								
ZST	**Bratislava**	**77.58**	**328**	*e*P		**P**	**18 50 08.5**	**+1.7**
	comp=Z,4.6nm,0.7s,mb4.3								
KHC	**Kasperske Hory**	**78.09**	**331**	*e*P		**P**	**18 50 10.0**	**+0.4**
GERES	**GERESS Array B**	**78.29**	**330**	P		**P**	**18 50 10.8**	**+0.1**
	comp=Z,0.6nm,0.4s,mb3.7,baz=40,slow=5.0,SNR=12								
GIVF	**Givet**	**80.06**	**336**	*e*P		**P**	**18 50 19.6**	**-0.7**
BAIF	**Baives**	**80.27**	**336**	*e*P		**P**	**18 50 21.4**	**0.0**
CDF	**Champ du Feu**	**80.81**	**334**	*e*P		**P**	**18 50 24.0**	**-0.3**
MEZF	**Maizieres J'vi**	**81.42**	**335**	*e*P		**P**	**18 50 27.3**	**-0.2**
HAU	**Haudompre**	**81.46**	**334**	*e*P		**P**	**18 50 27.5**	**-0.3**
HINF	**Hinteralfeld**	**81.47**	**334**	*e*P		**P**	**18 50 27.1**	**-0.7**
TXAR	**Lajitas Array**	**82.60**	**56**	P		**P**	**18 50 34.8**	**+0.8**
	comp=Z,1.9nm,0.5s,mb4.2,baz=295,slow=3.5,SNR=41								
TXAR				pP		pP	18 51 04.7	0.0	
	comp=Z,0.9nm,0.5s,baz=299,slow=4.2,SNR=4.9								
FLN	**La Foliniere**	**82.73**	**339**	*e*P		**P**	**18 50 33.6**	**-0.8**
CABF	**La Chapelle**	**82.78**	**334**	*e*P		**P**	**18 50 34.4**	**-0.3**
LOR	**Lormes**	**82.88**	**335**	*e*P		**P**	**18 50 34.6**	**-0.6**
SSF	**Saint Saulge**	**83.17**	**336**	*e*P		**P**	**18 50 36.3**	**-0.4**
	comp=Z,6.4nm,0.7s,mb4.2								
SSF	**Saint Saulge**	**83.17**	**336**	*e*P		**P**	**18 50 36.3**	**-0.4**
SSF				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.2								
SSF	**Saint Saulge**	**83.17**	**336**	*e*P		**P**	**18 50 36.3**	**-0.4**
	comp=Z,3.2nm,0.7s,mb4.3								
GRR	**Gorron**	**83.17**	**339**	*e*P		**P**	**18 50 36.2**	**-0.5**
	comp=Z,10nm,0.7s,mb4.5								
GRR	**Gorron**	**83.17**	**339**	*e*P		**P**	**18 50 36.2**	**-0.5**
GRR				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
GRR	**Gorron**	**83.17**	**339**	*e*P		**P**	**18 50 36.2**	**-0.5**
	comp=Z,5.1nm,0.7s,mb4.5								
SMF	**Signal de Mont**	**83.45**	**335**	*e*P		**P**	**18 50 37.6**	**-0.5**
AVF	**Avril sur Loir**	**83.46**	**336**	*e*P		**P**	**18 50 37.9**	**-0.3**
	comp=Z,4.0nm,0.5s,mb4.2								
AVF	**Avril sur Loir**	**83.46**	**336**	*e*P		**P**	**18 50 37.9**	**-0.3**
AVF				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb4.2								
AVF	**Avril sur Loir**	**83.46**	**336**	*e*P		**P**	**18 50 37.9**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.2								
LPL	**La Plagne**	**83.55**	**333**	*e*P		**P**	**18 50 37.9**	**-0.8**
LPG	**La Plagne**	**83.56**	**333**	*e*P		**P**	**18 50 38.1**	**-0.6**
SGMF	**Saint Gilles**	**83.73**	**340**	*e*P		**P**	**18 50 38.8**	**-0.7**
BGF	**Bois d'Agland**	**83.82**	**336**	*e*P		**P**	**18 50 40.3**	**+0.3**
	comp=Z,4.4nm,0.7s,mb4.4								
BGF	**Bois d'Agland**	**83.82**	**336**	*e*P		**P**	**18 50 40.3**	**+0.3**
BGF				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
BGF	**Bois d'Agland**	**83.82**	**336**	*e*P		**P**	**18 50 40.3**	**+0.3**
	comp=Z,4.7nm,0.7s,mb4.4								
LONY	**Lake Ozonia**	**84.03**	**28**	*e*P		**P**	**18 50 41.4**	**+0.2**
MBDF	**Montbardon**	**84.23**	**332**	*e*P		**P**	**18 50 42.0**	**-0.2**
TCF	**Toulx Ste Croi**	**84.25**	**336**	*e*P		**P**	**18 50 41.8**	**-0.4**
	comp=Z,6.0nm,0.6s,mb4.3								
TCF	**Toulx Ste Croi**	**84.25**	**336**	*e*P		**P**	**18 50 41.8**	**-0.4**
TCF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.3								
TCF	**Toulx Ste Croi**	**84.25**	**336**	*e*P		**P**	**18 50 41.8**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.3								
ORIF	**Oris-en-Rattie**	**84.36**	**333**	*e*P		**P**	**18 50 41.8**	**-1.0**
	comp=Z,8.0nm,0.8s,mb4.3								
ORIF	**Oris-en-Rattie**	**84.36**	**333**	*e*P		**P**	**18 50 41.8**	**-1.0**
ORIF				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.3								
ORIF	**Oris-en-Rattie**	**84.36**	**333**	*e*P		**P**	**18 50 41.8**	**-1.0**
	comp=Z,4.0nm,0.8s,mb4.3								
MFF	**Saint Martin d**	**84.63**	**338**	*e*P		**P**	**18 50 43.1**	**-1.0**
	comp=Z,5.6nm,0.6s,mb4.4								
MFF	**Saint Martin d**	**84.63**	**338**	*e*P		**P**	**18 50 43.1**	**-1.0**
MFF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
MFF	**Saint Martin d**	**84.63**	**338**	*e*P		**P**	**18 50 43.1**	**-1.0**
	comp=Z,2.8nm,0.6s,mb4.4								
RJF	**Les Rejaudoux**	**85.35**	**336**	*e*P		**P**	**18 50 47.7**	**0.0**
CAF	**Calviac**	**85.53**	**336**	*e*P		**P**	**18 50 47.9**	**-0.7**
	comp=Z,6.7nm,0.6s,mb4.4								
CAF	**Calviac**	**85.53**	**336**	*e*P		**P**	**18 50 47.9**	**-0.7**
CAF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
CAF	**Calviac**	**85.53**	**336**	*e*P		**P**	**18 50 47.9**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.4								
LFF	**La Frestale**	**85.91**	**336**	*e*P		**P**	**18 50 49.9**	**-0.6**
VNA2	**Neumayer--Watz**	**150.58**	**197**	*e*PKPdf		PKPbc	18 58 01.3	+0.7	
	baz=128,slow=1.8								
VNA2				*e*			18 58 04.0		
VNA2				*e*			18 58 29.5		
VNA2				*e*			18 58 34.9		
VNA3	**Neumayer Olymp**	**150.78**	**196**	*e*PKPdf		PKPbc	18 58 01.4	+0.4	
VNA3				*e*			18 58 03.7		
VNA3				*e*			18 58 29.3		
VNA3				*e*			18 58 35.1		
VNA1	**Neumayer--Stat**	**150.97**	**197**	*e*PKPdf		PKPbc	18 58 02.7	+1.2	
PLCA	**Paso Flores**	**152.60**	**95**	PKPbc		PKPbc	18 58 06.1	0.0	
	comp=Z,0.8nm,0.5s,baz=278,slow=1.5,SNR=3.8								

*ISCJB **21** 18:39:60.0±1.0,3935N±004×3320E±004,h2km±9km,*
Error ellipse: s-maj=6.8km s-min=5.5km az=150.2
*CSEM **21** 18:39:59.4,3935N×3319E,h4km, MD2.7, After ISK*
*ISK **21** 18:39:59.4,3935N×3319E,h4km, MD2.7*
*DDA **21** 18:40:00.1,3937N×3317E,h7km±2km, Md2.0*

ISC 21 18:40:00.5±0.6,3935N±004×3320E±005,h7km±9km,n8,
σ0°68/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.40**	**87**	*e*PG	**Pg**	**18 40 08.0**	**-0.3**
KAMT				*e*SG	**Sg**	**18 40 14.3**	**+0.7**
LOD	**Lodumlu**	**0.63**	**328**	*e*PG	**Pg**	**18 40 11.9**	**-0.9**
LOD				*e*SG	**Sg**	**18 40 21.7**	**+0.7**
CDAG	**Cicekdag**	**0.95**	**73**	*i*P	**Pg**	**18 40 18.3**	**-0.5**
CDAG				*i*S	**Sg**	**18 40 30.9**	**-0.1**
KIZT	**Kizilcal**	**1.13**	**246**	*e*PN	**Pn**	**18 40 21.5**	**-1.1**
ELDT	**Eldivan**	**1.15**	**9**	*i*P	**Pg**	**18 40 22.3**	**-0.4**
ELDT				*i*S	**Sg**	**18 40 38.5**	**+0.9**
KDHN	**Kadinhani**	**1.18**	**226**	*i*P	**Pg**	**18 40 22.4**	**-0.8**
KDHN				*i*S	**Sg**	**18 40 39.4**	**+0.8**
LADK	**Ladik-KONYA**	**1.32**	**210**	*e*PN	**Pn**	**18 40 25.2**	**-0.1**
LADK				*e*SN	**Sn**	**18 40 44.0**	**+0.9**
KONT	**Konya--Tatoy**	**1.55**	**205**	*e*PN	**Pn**	**18 40 28.6**	**+0.2**

*CSEM **21** 18:58:39.7±0.1,3874N×4308E,h2km,MD3.1,Error*
ellipse: s-maj=2.1km s-min=1.8km az=53.0
*ISCJB **21** 18:58:41.0±0.6,3873N±003×4307E±004,h3km±7km,*
Error ellipse: s-maj=4.9km s-min=4.5km az=178.4
*ISK **21** 18:58:40.8,3875N×4308E,h9km,MD3.1*
*DDA **21** 18:58:43.1,3889N×4295E,h7km±7km, Md2.9*

ISC 21 18:58:41.5±0.5,3872N±003×4308E±004,h5km±6km,n19,
σ0°63/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.28**	**118**	PG	**Pg**	**18 58 47.2**	**+0.4**
VANB				*e*SG	**Sg**	**18 58 51.8**	**+1.3**
TVAN	**Van**	**0.32**	**127**	*i*P	**Pg**	**18 58 47.4**	**-0.4**
VANT	**Van**	**0.37**	**139**	PG	**Pg**	**18 58 47.7**	**-1.0**
VANT				*e*SG	**Sg**	**18 58 53.9**	**+0.4**
TATV	**Tatvan**	**0.67**	**252**	*i*P	**Pg**	**18 58 53.8**	**-0.6**
TATV				*i*S	**Sg**	**18 59 03.6**	**+0.5**
CLDR	**Caldiran**	**0.78**	**57**	PG	**Pg**	**18 58 55.6**	**-0.8**
CLDR				*e*SG	**Sg**	**18 59 07.0**	**+0.4**
AGRB	**Hanur-Agry**	**0.85**	**356**	PG	**Pg**	**18 58 57.5**	**-0.5**
AGRB				*e*SG	**Sg**	**18 59 09.2**	**+0.2**
DYDN	**Diyadin**	**0.95**	**30**	*i*P	**Pg**	**18 58 58.6**	**-1.1**
DYDN				*i*S	**Sg**	**18 59 12.3**	**+0.2**
HKR	**Hakkari**	**1.26**	**155**	*e*PN	**Pn**	**18 59 05.2**	**-0.5**
HAKT	**HAKKARI**	**1.26**	**157**	*i*P	**Pg**	**18 59 10.9**	**+5.2**
HAKT				*i*S	**Sg**	**18 59 32.0**	**+10**
HAKT	**HAKKARI**	**1.26**	**157**	*i*P	**Pg**	**18 59 10.9**	**+5.1**
HAKT				*i*S	**Sg**	**18 59 32.0**	**+10**
BNGL	**BINGOL**	**1.52**	**279**	*i*P	**Pn**	**18 59 09.6**	**+0.2**
BNGL				*i*S	**Sn**	**18 59 29.6**	**0.0**
CUKT	**Cukurca**	**1.53**	**164**	*e*PN	**Pn**	**18 59 09.2**	**-0.4**
HOMI	**Horasan**	**1.60**	**326**	*i*P	**Pn**	**18 59 10.9**	**+0.4**
BEST	**Besiri**	**1.65**	**240**	*i*P	**Pn**	**18 59 11.0**	**-0.1**
BEST				*i*S	**Sn**	**18 59 31.9**	**-0.7**
ERZM	**Erzurum**	**1.78**	**312**	*i*P	**Pn**	**18 59 14.2**	**+1.3**
EZM	**Erzurum**	**1.78**	**312**	*e*PN	**Pn**	**18 59 12.4**	**-0.5**
KARS	**Kars**	**1.89**	**0**	*e*PN	**Pn**	**18 59 14.3**	**-0.1**
PTK	**Pertek**	**2.88**	**275**	*e*PN	**Pn**	**18 59 28.6**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.98**	**265**	*e*PN	**Pn**	**18 59 30.2**	**+0.8**

*IDC **21** 19:02:43.1±1.1,2028S×16869E,h0km,mb4.2/7,*
mb1 4.4/8,mb1mx4.2/16,mbtmp4.3/8, ML3.6/1, MS3.8/12,
Ms1 3.8/12,ms1mx3.5/34, Error ellipse: s-maj=33.2km
s-min=25.5km az=140.0
*ISCJB **21** 19:02:44.4±4.5,2045S±0.1×16872E±0.10,h20km±31km,*
mb4.2/11,MS3.9/12,Error ellipse: s-maj=18.8km
s-min=14.4km az=156.4
*NEIC **21** 19:02:48.0±0.7,2034S×16873E,h35km,mb4.3/5,Error*
ellipse: s-maj=18.0km s-min=15.2km az=129.0

ISC 21 19:02:45.8±4.7,2040S±010×16872E±009,h18km±29km,
n45,σ0°75/24,mb4.2/11,MS3.9/12,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.69**	**232**	*e*Pn	**Pn**	**19 03 27.6**	**-0.6**
NOUC	**Port Laguerre**	**2.82**	**233**	*e*P	**Pn**	**19 03 29.8**	**-0.2**
NOUC				*e*S	**Sn**	**19 04 03.4**	**-0.1**
URZ	**Urewera**	**19.22**	**160**	P	**Pn**	**19 07 10.7**	**+0.8**
	0.2nm,0.3s,baz=48,slow=12,SNR=3.0						
CTA	**Charters Tower**	**21.08**	**267**	P	**P**	**19 07 34.9**	**+5.6**
	12nm,0.9s,mb4.2,baz=97,slow=13,SNR=8.4						
CTA				LR	LR	19 15 09.8	
	comp=Z,177nm,18.4s,MS3.5,baz=83,slow=36						
CTA	**Charters Tower**	**21.08**	**267**	*e*P	**P**	**19 07 35.0**	**+5.7**
	17nm,1.0s,mb4.1						
CTAO	**Charters Tower**	**21.08**	**267**	*e*P	**P**	**19 07 31.1**	**+1.8**
	17nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**26.82**	**239**	P	**P**	**19 08 24.9**	**-0.3**
	6.8nm,0.9s,mb4.2,baz=78,slow=4.3,SNR=5.8						
STKA	**Stephens Creek**	**26.82**	**239**	*e*P	**P**	**19 08 24.9**	**-0.3**
	6.8nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**26.82**	**239**	*e*P	**P**	**19 08 24.8**	**-0.4**
	2.2nm,0.9s,mb3.7						

*DDA **21** 19:14:10.6, 3875N×2578E, h7km±6km, Md2.9*
*THE **21** 19:14:10.4, 3876N×2568E, h9km±1km, ML3.4/1, Error ellipse: s-maj=2.1km s-min=0.7km az=74.0*
ISC 21 19:14:10.2±0.9,**3874N**±003×**2566E**±006,**h14**km±6km,**n14**, σ0:**81**/22,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.47**	**138**	P	**Pg**	**19 14 20.0**	**+0.6**
CHOS				S	**Sg**	**19 14 26.4**	**+0.8**
SIGR	**SIGRI**	**0.50**	**18**	P	**Pg**	**19 14 19.6**	**-0.4**
SIGR				S	**Sg**	**19 14 26.3**	**-0.4**
PRK	**Paraskevi**	**0.70**	**43**	P	**Pg**	**19 14 22.7**	**-1.1**
PRK				S	**Sg**	**19 14 34.0**	**+1.0**
PRK	**Paraskevi**	**0.70**	**43**	*e*PB	**Pg**	**19 14 22.7**	**-1.1**
URLA	**Izmir**	**0.82**	**117**	*i* P	**Pg**	**19 14 26.2**	**+0.1**
URLA				*i* S	**Sg**	**19 14 37.2**	**+0.3**
AYVA	**Ayvalik**	**0.98**	**54**	*i* P	**Pb**	**19 14 28.2**	**-0.8**
AYVA				*i* S	**Sb**	**19 14 41.7**	**-0.1**
BLCB	**Balcova**	**1.14**	**107**	P	**Pb**	**19 14 31.1**	**-0.5**
BLCB				S	**Sb**	**19 14 47.4**	**+1.2**
LIA	**Limnos Island**	**1.22**	**342**	P	**Pn**	**19 14 32.4**	**-0.4**
LIA				S	**Sb**	**19 14 50.0**	**+1.4**
LIA	**Limnos Island**	**1.22**	**342**	*e*PB	**Pb**	**19 14 32.3**	**-0.7**
LOS	**Limnos**	**1.28**	**340**	P	**Pn**	**19 14 33.8**	**+0.2**
LOS				S	**Sb**	**19 14 51.4**	**+1.1**
SMG	**Samos**	**1.38**	**138**	*e*PB	**Pb**	**19 14 34.0**	**-1.7**
SMG	**Samos**	**1.38**	**138**	*e*P	**Pn**	**19 14 34.4**	**-0.6**
APE	**Apeiranthos**	**1.67**	**184**	*e*P	**Pn**	**19 14 39.6**	**+0.7**
ALN	**Alexandroupoli**	**2.18**	**8**	P	**Pn**	**19 14 45.3**	**-0.7**

*ISCJB **21** 19:16:48.6±0.7, 3934N±004×3318E±004, h2km±7km, Error ellipse: s-maj=7.0km s-min=4.5km az=158.2*
*CSEM **21** 19:16:48.1±0.2, 3935N×3320E, h10km, MD2.8, Error ellipse: s-maj=5.6km s-min=3.3km az=163.0*
*ISK **21** 19:16:48.5, 3936N×3318E, h6km, MD2.8*
ISC 21 19:16:49.3±0.6,**3935N**±004×**3319E**±004,**h11**km±8km,**n11**, σ0:**58**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.41**	**86**	PG	**Pg**	**19 16 56.9**	**-0.4**
KAMT				*e*SG	**Sg**	**19 17 03.2**	**+0.6**
LOD	**Lodumlu**	**0.64**	**329**	*e*PG	**Pg**	**19 17 01.1**	**-0.6**
LOD				*e*SG	**Sg**	**19 17 09.9**	**0.0**
LOD	**Lodumlu**	**0.64**	**329**	*e*Sg	**Sg**	**19 17 09.9**	**-0.1**
CDAG	**Cicekdag**	**0.95**	**73**	*i* P	**Pg**	**19 17 07.0**	**-0.7**
CDAG	**Cicekdag**	**0.95**	**73**	*i* P	**Pg**	**19 17 06.9**	**-0.8**
CDAG				*i* S	**Sg**	**19 17 20.7**	**+0.6**
KIZT	**Kizilcal**	**1.12**	**246**	*e*PN	**Pg**	**19 17 11.0**	**+0.2**
KIZT				*e*SN	**Sg**	**19 17 25.7**	**+0.3**
ELDT	**Eldivan**	**1.16**	**9**	*i* P	**Pb**	**19 17 11.1**	**-0.2**
ELDT				*i* S	**Sg**	**19 17 27.1**	**+0.5**
KDHN	**Kadinhani**	**1.18**	**226**	*i* P	**Pb**	**19 17 11.2**	**-0.4**
KDHN	**Kadinhani**	**1.18**	**226**	*i* P	**Pb**	**19 17 11.2**	**-0.4**
KDHN				*i* S	**Sg**	**19 17 27.3**	**+0.2**
ESKT	**Eskisehir**	**1.82**	**276**	*e*P	**Pn**	**19 17 19.5**	**-1.1**
SEYT	**Eskypehyr**	**1.82**	**276**	*e*P	**Pn**	**19 17 19.5**	**-1.1**
SEYT				*i* S	**Sn**	**19 17 44.8**	**+1.1**

*CSEM **21** 19:18:22.9±0.0, 3940N×3306E, h2km, MD3.7, Error ellipse: s-maj=1.3km s-min=1.1km az=22.0*
*ISK **21** 19:18:22.4, 3941N×3307E, h5km, MD3.7, ML3.7*
*DDA **21** 19:18:23.1, 3940N×3310E, h10km±1km, Md3.1*
*ISCJB **21** 19:18:24.1±0.3, 3941N±002×3308E±002, h10km, Error ellipse: s-maj=3.1km s-min=2.8km az=176.2*
ISC 21 19:18:24.1±0.6,**3940N**±002×**3309E**±003,**h2**km±5km,**n51**, σ0:**89**/60,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**93**	PG	**Pg**	**19 18 32.6**	**-0.7**
LOD	**Lodumlu**	**0.55**	**333**	PG	**Pg**	**19 18 34.1**	**-0.6**
LOD				*e*SG	**Sg**	**19 18 42.6**	**+0.7**
CDAG	**Cicekdag**	**1.02**	**77**	*i* P	**Pg**	**19 18 42.2**	**-1.4**
CDAG				*i* S	**Sg**	**19 18 56.8**	**+0.1**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**19 18 44.0**	**-0.6**
KIZT				*e*SG	**Sg**	**19 18 59.5**	**+1.0**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pg**	**19 18 44.0**	**-1.6**
ELDT				*i* S	**Sg**	**19 19 01.4**	**+1.3**
KDHN	**Kadinhani**	**1.16**	**221**	*i* P	**Pn**	**19 18 45.1**	**-2.2**
KDHN				*i* S	**Sn**	**19 19 01.3**	**-2.4**
CANT	**Cankiri**	**1.27**	**18**	*e*PN	**Pn**	**19 18 47.3**	**-1.6**
CANT				*e*SN	**Sn**	**19 19 05.9**	**-0.7**
LADK	**Ladik-KONYA**	**1.32**	**206**	*e*PN	**Pn**	**19 18 48.3**	**-1.2**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*PN	**Pn**	**19 18 52.1**	**-0.6**
BSTP	**Nigde**	**1.65**	**151**	*e*P	**Pn**	**19 18 51.9**	**-2.2**
BSTP				*i* S	**Sn**	**19 19 16.3**	**+0.5**
ESKT	**Eskisehir**	**1.74**	**275**	*i* P	**Pn**	**19 18 54.1**	**-1.2**
ESKT				*i* S	**Sg**	**19 19 20.6**	**+0.7**
ESKT	**Eskisehir**	**1.74**	**275**	*e*Pn	**Pn**	**19 18 54.2**	**-1.1**
SEYT	**Eskypehyr**	**1.74**	**275**	*i* P	**Pn**	**19 18 54.1**	**-1.2**
SEYT				*i* S	**Sg**	**19 19 20.6**	**+0.7**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**19 18 55.1**	**-0.2**
NIG	**Nigde**	**1.75**	**137**	*e*PN	**Pn**	**19 18 55.1**	**-0.3**
TOS	**Tosya**	**1.79**	**23**	*e*PN	**Pn**	**19 18 55.1**	**-0.8**
MDU	**Mudurnu**	**1.79**	**307**	*e*PN	**Pn**	**19 18 56.3**	**+0.3**
SAFT	**Safranbolu**	**1.87**	**351**	*e*PN	**Pn**	**19 18 57.2**	**+0.2**
BNN	**Bunyan**	**2.21**	**103**	*e*PN	**Pn**	**19 19 02.3**	**+0.6**
GULT	**Gulveren**	**2.23**	**298**	*e*PN	**Pn**	**19 19 02.2**	**+0.2**
KDZE	**Karadeniz Ereo**	**2.29**	**327**	*e*PN	**Pn**	**19 19 02.8**	**-0.1**
ALT	**Altintas**	**2.34**	**263**	*e*PN	**Pn**	**19 19 03.4**	**-0.1**
EYL	**Eskiyayla**	**2.54**	**298**	*e*PN	**Pn**	**19 19 06.8**	**+0.5**
ISP	**Isparta**	**2.55**	**233**	*e*PN	**Pn**	**19 19 07.2**	**+0.8**
CAVI	**Cavuskoy**	**2.63**	**289**	*e*PN	**Pn**	**19 19 07.9**	**+0.4**
KARA	**Karaisali**	**2.63**	**143**	*e*PN	**Pn**	**19 19 08.3**	**+0.7**
BZK	**Bozkurt**	**2.65**	**15**	*e*PN	**Pn**	**19 19 08.2**	**+0.4**
BCK	**Bucak**	**2.75**	**226**	*e*PN	**Pn**	**19 19 09.7**	**+0.4**
MERS	**Mersin**	**2.77**	**155**	*e*PN	**Pn**	**19 19 10.2**	**+0.8**
ADVT	**Abdulvahap**	**2.78**	**293**	*e*PN	**Pn**	**19 19 09.9**	**+0.4**
DIKM	**Dikmen**	**2.79**	**36**	*e*PN	**Pn**	**19 19 10.3**	**+0.5**
TOKT	**Tokat**	**2.81**	**70**	*e*PN	**Pn**	**19 19 10.8**	**+0.7**
KVT	**Kavak**	**2.82**	**52**	*e*PN	**Pn**	**19 19 10.9**	**+0.8**
KOZT	**Kozan**	**2.88**	**131**	*e*PN	**Pn**	**19 19 11.7**	**+0.8**
SARI	**SarD1z-Kayseri**	**2.90**	**103**	*e*PN	**Pn**	**19 19 10.2**	**-1.0**
KHL	**Karahalli**	**2.98**	**250**	*e*PN	**Pn**	**19 19 11.6**	**-0.8**
HRT	**Hereke**	**2.98**	**300**	*e*PN	**Pn**	**19 19 11.6**	**-0.8**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**19 19 14.3**	**+0.8**
YLV	**Yalova**	**3.09**	**293**	*e*PN	**Pn**	**19 19 13.2**	**-0.6**
ANTB	**Antalya**	**3.15**	**218**	*e*PN	**Pn**	**19 19 15.4**	**+0.8**
SILT	**Sile**	**3.17**	**305**	*e*PN	**Pn**	**19 19 15.4**	**+0.5**
GEMT	**Gemlik**	**3.17**	**290**	*e*PN	**Pn**	**19 19 14.7**	**-0.3**
IKL	**Isikli**	**3.19**	**171**	*e*PN	**Pn**	**19 19 16.2**	**+1.0**
KRTS	**Karatas**	**3.35**	**147**	*e*PN	**Pn**	**19 19 18.3**	**+0.9**
ARMT	**Armutlu**	**3.45**	**291**	*e*PN	**Pn**	**19 19 19.2**	**+0.4**
DST	**Dursunbey**	**3.46**	**275**	*e*PN	**Pn**	**19 19 19.7**	**+0.8**
ISK	**Istanbul-Kandi**	**3.51**	**300**	*e*PN	**Pn**	**19 19 19.7**	**+0.1**
KMRS	**Kahramanmaras**	**3.54**	**121**	*e*PN	**Pn**	**19 19 21.1**	**+1.1**
KULA	**Kula-Manisa**	**3.56**	**257**	*e*PN	**Pn**	**19 19 20.7**	**+0.4**
DARE	**Darende-Malaty**	**3.69**	**95**	*e*PN	**Pn**	**19 19 21.1**	**-1.0**
GAZ	**Gaziantep**	**3.93**	**123**	*e*PN	**Pn**	**19 19 26.9**	**+1.5**

IDC 21 19:19:18.1±14.0,**071S×13336E**,**h0**km,**mb3.9**/2, **mb1 3.9**/3,**mb1mx3.5**/16,**mbtmp3.7**/3,**ML3.3**/1,**Error ellipse: s-maj=210.1km s-min=119.7km az=160.0**,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.14**	**177**	P	Pn	19 23 43.3	-0.5
	0.1nm,0.3s,baz=356,slow=11,SNR=8.5						
ASAR	**Alice Springs**	**22.83**	**179**	P	P	19 24 23.6	+0.7
	0.9nm,0.5s,baz=354,slow=11,SNR=31						
STKA	**Stephens Creek**	**31.97**	**167**	P	P	19 25 45.0	-0.9
	3.2nm,0.9s,baz=349,slow=10,SNR=2.9						

IDC 21 19:27:21.8±15.0,**027S×13325E**,**h0**km,**mb3.8**/2, **mb1 3.8**/3,**mb1mx3.4**/16,**mbtmp3.6**/3,**ML3.4**/1,**Error ellipse: s-maj=240.5km s-min=119.8km az=161.0**,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.58**	**177**	P	Pn	19 31 51.7	-1.2
	0.1nm,0.3s,baz=356,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**23.27**	**178**	P	P	19 32 31.8	+0.5
	0.8nm,0.5s,baz=354,slow=11,SNR=17						
STKA	**Stephens Creek**	**32.42**	**167**	P	P	19 33 53.1	-0.4
	2.4nm,0.9s,baz=340,slow=12,SNR=2.2						

*ISCJB **21** 19:34:03.6±0.4, 3302N±006×13800E±008, h341km±5km, mb3.3/7, Error ellipse: s-maj=11.1km s-min=8.7km az=142.1*
*JMA **21** 19:34:03.9±0.2, 3313N×13787E, h350km, MS3.1*
*NEIC **21** 19:34:04.3±1.2, 3307N×13840E, h340km±22km, mb3.6/1, Error ellipse: s-maj=68.8km s-min=16.1km az=64.0*
*IDC **21** 19:34:05.1±0.8, 3301N×13781E, h336km±16km, mb3.2/5, mb1 3.2/8, mb1mx3.0/25, mbtmp3.1/8, Error ellipse: s-maj=42.5km s-min=13.5km az=64.0*
ISC 21 19:34:04.8±0.5,**3308N**±007×**13798E**±008,**h337**km±5km, **n29**,σ1:**11**/35,**mb3.3/7**,**Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.89**	**348**	P	**Pn**	**19 34 49.4**	**+0.8**
TK04	**Tokai 4**	**1.31**	**356**	P	**Pn**	**19 34 51.5**	**+1.0**
JHJ	**Hachijo jima 2**	**1.52**	**88**	P	**Pn**	**19 34 53.0**	**+1.3**
	9.2nm,0.3s,baz=69,slow=21,SNR=18						
JHJ				S	**S**	**19 35 31.9**	**+2.7**
	15nm,0.3s,baz=57,slow=23,SNR=6.9						
JHJ2	**Mitsune**	**1.54**	**88**	P	**Pn**	**19 34 53.4**	**+1.6**
JIE	**Ise**	**1.69**	**321**	P	**Pn**	**19 34 52.8**	**+0.1**
JWZ	**Kozaga**	**1.95**	**284**	P	**Pn**	**19 34 53.8**	**-0.7**
JWY	**Kouya**	**2.29**	**300**	P	**Pn**	**19 34 57.0**	**0.0**
JOD2	**Odawara 2**	**2.37**	**23**	P	**Pn**	**19 34 58.7**	**+1.1**
JOD2				*e*S	**S**	**19 35 39.8**	**-0.2**
JYN	**Shimob**	**2.46**	**11**	P	**Pn**	**19 34 59.4**	**+1.1**
JGM	**Miyama**	**2.82**	**339**	P	**Pn**	**19 35 01.5**	**+0.1**
BSO1	**Boso 1**	**2.95**	**57**	P	**Pn**	**19 35 01.3**	**-1.3**
BSO1				*e*S	**S**	**19 35 47.0**	**-2.1**
JRY	**Ryogami san**	**3.03**	**14**	P	**Pn**	**19 35 04.6**	**+1.3**
JRY				*e*S	**S**	**19 35 49.5**	**-0.9**
JAI	**Aioi**	**3.04**	**285**	P	**Pn**	**19 35 02.7**	**-0.7**
JWT	**Wachi**	**3.07**	**317**	P	**Pn**	**19 35 03.3**	**-0.4**
MJAR	**Matsushiro Arr**	**3.46**	**3**	P	**Pn**	**19 35 07.4**	**0.0**
	1.5nm,0.3s,baz=170,slow=9.4,SNR=13						
MAJO	**Matsushiro**	**3.46**	**3**	*e*Pn	**Pn**	**19 35 07.1**	**-0.3**
MAT	**Matsushiro**	**3.46**	**3**	P	**Pn**	**19 35 07.4**	**-0.1**
MAT				S	**S**	**19 35 55.8**	**-2.1**
JTO	**Tosashimizu**	**4.36**	**269**	P	**Pn**	**19 35 16.0**	**-0.8**
JHS	**Saijyo**	**4.47**	**297**	P	**Pn**	**19 35 17.3**	**-0.6**
CBIJ	**Chichi jima**	**6.98**	**147**	P	**Pn**	**19 35 45.4**	**-1.4**
	6.5nm,0.3s,baz=290,slow=23,SNR=8.9						
CBIJ				S	**S**	**19 37 02.9**	**-6.6**
	15nm,0.3s,baz=280,slow=23,SNR=9.8						
KSRS	**Korea Array**	**9.31**	**301**	P	**Pn**	**19 36 14.2**	**-0.1**
	0.5nm,0.3s,baz=114,slow=13,SNR=8.1						
ULN	**Ulaanbaatar**	**27.56**	**312**	*e*P	**P**	**19 39 24.3**	**+2.8**
	1.9nm,0.6s,mb3.5						
SONM	**Songino Array**	**27.96**	**311**	P	**P**	**19 39 28.6**	**+3.5**
	1.7nm,0.8s,mb3.4,baz=119,slow=10,SNR=11						
PMG	**Port Moresby**	**43.14**	**167**	P	**P**	**19 41 30.8**	**-2.5**
MKAR	**Makanchi Array**	**43.96**	**305**	P	**P**	**19 41 39.1**	**-0.3**
	0.4nm,0.4s,mb3.0,baz=87,slow=10,SNR=10.0						
KURK	**Kurchatov**	**46.27**	**311**	P	**P**	**19 41 57.3**	**0.0**
	0.9nm,0.3s,mb3.3,baz=90,slow=9.1,SNR=6.1						
WRA	**Warramunga Arr**	**52.83**	**184**	P	**P**	**19 42 47.1**	**+0.4**
	0.3nm,0.3s,mb3.1,baz=0.5,slow=7.7,SNR=8.0						
ASAR	**Alice Springs**	**56.56**	**184**	P	**P**	**19 43 12.9**	**-0.3**
	0.7nm,1.0s,mb2.9,baz=12,slow=8.8,SNR=4.6						
ARCES	**ARCESS Array B**	**66.70**	**339**	P	**P**	**19 44 20.4**	**+0.6**
	5.4nm,0.9s,mb4.3,baz=35,slow=6.5,SNR=4.2						

*BUC **21** 19:35:20.9±0.7, 4549N×2629E, h137km±7km, MD4.0/3, Error ellipse: s-maj=4.7km s-min=3.5km az=26.0*
*ISCJB **21** 19:35:21.6±0.6, 4548N±003×2634E±005, h126km±6km, Error ellipse: s-maj=5.8km s-min=5.3km az=148.0*
*NEIC **21** 19:35:22.3, 4547N×2630E, h122km, MG3.2(BUC), After BUC.*
*CSEM **21** 19:35:22.3±0.2, 4544N×2625E, h112km±3km, MD2.5, Error ellipse: s-maj=3.7km s-min=2.5km az=43.0*
*SOF **21** 19:35:23.3, 4527N×2617E, h20km, MD2.5*
ISC 21 19:35:22.4±0.7,**4548N**±003×**2634E**±005,**h123**km±7km, **n38**,σ0:**72**/53,**12C-8D**,**Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.28**	**272**	⇑*i*P	**Pn**	**19 35 40.0**	**+0.4**
PLOR	**Plostina**	**0.43**	**30**	*i* S	**Sn**	**19 35 54.2**	**+0.4**
VRI	**Vrincioaia**	**0.47**	**35**	⇓*i*P	**Pn**	**19 35 40.7**	**+0.2**
VRI	**Vrincioaia**	**0.47**	**35**	P	**Pn**	**19 35 40.7**	**+0.2**
ODB	**Odobesti**	**0.58**	**59**	⇓*i*P	**Pn**	**19 35 42.3**	**+1.2**
ODB				*i* S	**Sn**	**19 35 55.4**	**+0.1**
ODB	**Odobesti**	**0.58**	**59**	P	**Pn**	**19 35 42.3**	**+1.1**
VOIR		**0.91**	**268**	⇑*i*P	**Pn**	**19 35 43.3**	**-0.5**
VOIR				*i* S	**Sn**	**19 36 00.1**	**+0.1**
VOIR		**0.91**	**268**	P	**Pn**	**19 35 43.3**	**-0.5**
BUC1	**Bucharest**	**1.15**	**191**	⇓*i*P	**Pn**	**19 35 45.3**	**-0.9**
BUC1				*i* S	**Sn**	**19 36 04.3**	**0.0**
HARR	**Harsova**	**1.37**	**125**	P	**Pn**	**19 35 49.0**	**+0.4**
HARR	**Harsova**	**1.37**	**125**	⇓*i*P	**Pn**	**19 35 48.9**	**+0.3**
HARR				*i* S	**Sn**	**19 36 08.6**	**+0.2**
HARR	**Harsova**	**1.37**	**125**	P	**Pn**	**19 35 49.0**	**+0.4**
MDB	**Medias**	**1.52**	**296**	⇑P	**Pn**	**19 35 49.5**	**-0.7**
MDB	**Medias**	**1.52**	**296**	⇑P	**Pn**	**19 35 49.5**	**-0.7**
CVD	**Cernavoda**	**1.67**	**134**	⇑*i*P	**Pn**	**19 35 52.3**	**+0.3**
CVD				*i* S	**Sn**	**19 36 14.2**	**-0.4**
CVD	**Cernavoda**	**1.67**	**134**	⇑P	**Pn**	**19 35 52.3**	**+0.3**
CVD				S	**Sn**	**19 36 14.2**	**-0.3**
TIRR	**Tirgusor**	**1.79**	**124**	*e*Pn	**Pn**	**19 35 53.5**	**+0.1**
TIRR	**Tirgusor**	**1.79**	**124**	⇑P	**Pn**	**19 35 53.7**	**+0.3**
TIRR	**Tirgusor**	**1.79**	**124**	⇓*i*P	**Pn**	**19 35 53.7**	**+0.3**
TIRR				*i* S	**Sn**	**19 36 16.8**	**-0.2**
TIRR	**Tirgusor**	**1.79**	**124**	*e*Pn	**Pn**	**19 35 53.5**	**+0.1**
TIRR				⇑P		19 35 53.7	
TIRR				*e*Sn	**Sn**	**19 36 14.7**	**-2.3**
TIRR				S	**Sn**	**19 36 16.6**	**-0.5**
IAS	**Iasi**	**1.91**	**26**	⇓*i*P	**Pn**	**19 35 54.5**	**-0.3**
IAS				*i* S	**Sn**	**19 36 18.6**	**-1.1**
IAS	**Iasi**	**1.91**	**26**	⇓P	**Pn**	**19 35 54.5**	**-0.3**
PSN	**Preselentsi**	**2.23**	**143**	P	**Pn**	**19 35 59.6**	**+0.8**
SZH	**Strazhica**	**2.23**	**188**	*e*P	**Pn**	**19 35 58.9**	**0.0**
BURAR	**Bucovina Array**	**2.27**	**340**	⇑P	**Pn**	**19 36 00.3**	**+1.0**
BURAR				S	**Sn**	**19 36 28.8**	**+1.1**
BURAR	**Bucovina Array**	**2.27**	**340**	⇑P	**Pn**	**19 36 00.3**	**+1.0**
BURAR				S	**Sn**	**19 36 28.8**	**+1.1**
KIS	**Kishinev**	**2.29**	**48**	⇓*i*P	**Pn**	**19 35 59.6**	**0.0**
KIS				*i* S	**Sn**	**19 36 26.8**	**-1.3**
BUR08	**Bucovina Ar. S**	**2.30**	**340**	*e*Pn	**Pn**	**19 36 00.2**	**+0.5**
BUR08	**Bucovina Ar. S**	**2.30**	**340**	*e*Pn	**Pn**	**19 36 00.2**	**+0.5**
PRD	**Provadia**	**2.40**	**161**	P	**Pn**	**19 36 01.8**	**+0.8**
GZR	**Gura Zlata**	**2.51**	**269**	P	**Pn**	**19 36 02.8**	**+0.4**
GZR				S	**Sn**	**19 36 32.1**	**-1.1**
GZR	**Gura Zlata**	**2.51**	**269**	P	**Pn**	**19 36 02.8**	**+0.4**
GZR				S	**Sn**	**19 36 32.1**	**-1.1**
DRGR		**2.85**	**299**	⇑*i*P	**Pn**	**19 36 05.7**	**-1.0**
DRGR		**2.85**	**299**	⇑P	**Pn**	**19 36 05.7**	**-1.0**
VTS	**Vitosha**	**3.67**	**219**	P	**Pn**	**19 36 16.5**	**-1.0**
RZN	**Rozhen**	**3.97**	**198**	P	**Pn**	**19 36 21.7**	**+0.1**
BARS	**Barje**	**4.21**	**232**	*e*Pn	**Pn**	**19 36 24.3**	**-0.4**
GRUS	**Gruza**	**4.32**	**250**	*e*Pn	**Pn**	**19 36 27.5**	**+1.3**

*ISCJB **21** 19:36:56.4±0.3, 6293N±003×148.15W±006, h75km±7km, mb3.4/3, Error ellipse: s-maj=4.9km s-min=4.8km az=5.5*
*NEIC **21** 19:36:57.2, 6293N×148.16W, h68km, ML3.5(AEIC), After AEIC.*
*IDC **21** 19:36:58.0±2.8, 6289N×147.84W, h56km±27km, mb3.2/3, mb1 3.6/6, mb1mx3.3/24, mbtmp3.3/6, ML3.3/3, Error ellipse: s-maj=25.2km s-min=20.9km az=126.0*
ISC 21 19:36:57.6±0.3,**6294N**±003×**14815W**±006,**h64**km±8km, **n46**,σ0:**80**/53,**mb3.4**/3,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**0.87**	**336**	P	**Pn**	**19 37 14.4**	**+0.2**
MCK				S	**Sn**	**19 37 27.5**	**+1.1**
TRF	**Thorofare Moun**	**1.10**	**299**	P	**Pn**	**19 37 17.1**	**+0.1**
TRF				S	**Sn**	**19 37 31.8**	**+0.4**
SML	**Sawmill**	**1.14**	**184**	P	**Pn**	**19 37 16.8**	**-0.7**
SML				S	**Sn**	**19 37 31.7**	**-0.6**
GHO	**Glory Hole Cre**	**1.22**	**197**	P	**Pn**	**19 37 18.0**	**-0.7**
PAX	**Paxson**	**1.23**	**87**	P	**Pn**	**19 37 18.8**	**+0.1**
PAX				S	**Sn**	**19 37 34.9**	**+0.5**
KTH	**Kantishna Hill**	**1.40**	**297**	P	**Pn**	**19 37 21.3**	**+0.4**
PMR	**Palmer**	**1.43**	**199**	P	**Pn**	**19 37 20.7**	**-0.7**
KNK	**Knik Glacier**	**1.54**	**185**	P	**Pn**	**19 37 22.9**	**+0.1**
BPAW	**Bear Paw Mtn.**	**1.73**	**314**	P	**Pn**	**19 37 24.8**	**-0.6**
SKT	**Skwentna**	**1.84**	**240**	P	**Pn**	**19 37 26.7**	**-0.2**
PPLA	**Purkeypile**	**1.85**	**271**	P	**Pn**	**19 37 26.9**	**-0.1**
IL1	**Eielson Array**	**1.93**	**16**	P	**Pn**	**19 37 27.8**	**-0.3**
COLA	**College**	**1.95**	**4**	P	**Pn**	**19 37 28.2**	**-0.1**
DOT	**Dot Lake**	**1.98**	**67**	P	**Pn**	**19 37 28.8**	**0.0**
RC01	**Rabbit Creek A**	**2.00**	**203**	P	**Pn**	**19 37 29.5**	**+0.4**
FIB	**Fire Island**	**2.02**	**209**	P	**Pn**	**19 37 30.2**	**+0.9**
MENT	**Mentasta**	**2.03**	**88**	P	**Pn**	**19 37 29.9**	**+0.4**
CHUM	**Lake Minchumin**	**2.10**	**299**	P	**Pn**	**19 37 30.1**	**-0.4**
SLKM	**Skilak Lake**	**2.63**	**203**	P	**Pn**	**19 37 38.5**	**+0.8**
EYAK	**Cordova Ski Ar**	**2.66**	**153**	P	**Pn**	**19 37 37.4**	**-0.6**
BCA3	**Beaver Creek A**	**2.91**	**85**	P	**Pn**	**19 37 41.2**	**-0.2**
SEW	**Seward**	**2.91**	**193**	P	**Pn**	**19 37 41.9**	**+0.4**
RSO	**Redoubt South**	**3.31**	**223**	*e*Pn	**Pn**	**19 37 47.8**	**+0.9**
TT01	**Tatalina**	**3.60**	**273**	P	**Pn**	**19 37 50.1**	**-0.7**
EGAK	**Eagle**	**3.60**	**56**	*e*Pn	**Pn**	**19 37 50.8**	**-0.1**
EGAK				*e*		19 38 16.6	
IM3	**Indian Mountai**	**3.90**	**324**	P	**Pn**	**19 37 54.7**	**-0.3**
SVW2	**Sparrevohn**	**3.96**	**246**	*e*P	**Pn**	**19 37 56.7**	**+0.9**
DAWY	**Dawson**	**4.09**	**70**	P	**Pn**	**19 37 57.8**	**+0.3**
GCSA	**Galena City Sc**	**4.27**	**299**	P	**Pn**	**19 38 00.6**	**+0.7**
COLD	**Coldfoot**	**4.39**	**350**	P	**Pn**	**19 38 02.1**	**+0.4**
BM3	**Burnt Mountain**	**4.74**	**17**	P	**Pn**	**19 38 06.8**	**+0.3**
PNL	**Peninsula**	**5.34**	**124**	*e*Pn	**Pn**	**19 38 14.7**	**0.0**
KDAK	**Kodiak Island**	**5.62**	**205**	P	**Pn**	**19 38 17.2**	**-1.2**
	0.6nm,0.3s,baz=82,slow=15,SNR=16						
KDAK				S	**Sn**	**19 39 16.1**	**-5.5**
	5.2nm,0.3s,baz=322,slow=22,SNR=8.2						
KDAK	**Kodiak Island**	**5.62**	**205**	*e*Pn	**Pn**	**19 38 16.2**	**-2.3**
OHAK	**Old Harbor**	**6.28**	**206**	*e*Pn	**Pn**	**19 38 27.1**	**-0.4**
SKAG	**Skagway**	**7.11**	**114**	*e*P	**Pn**	**19 38 41.4**	**+2.6**
INK	**Inuvik**	**8.09**	**42**	P	**Pn**	**19 38 52.0**	**-0.2**
	0.4nm,0.3s,baz=249,slow=16,SNR=6.4						
INK				S	**Sn**	**19 40 19.4**	**-2.4**
	0.6nm,0.3s,baz=288,slow=20,SNR=4.5						
INK	**Inuvik**	**8.09**	**42**	Pn	**Pn**	**19 38 51.0**	**-1.1**
INK				*e*Sn	**Sn**	**19 40 19.1**	**-2.7**
SIT	**Sitka**	**8.71**	**127**	Pn	**Pn**	**19 39 00.2**	**-0.5**
TNA	**Tin City**	**8.99**	**296**	*e*Pn	**Pn**	**19 39 05.0**	**+0.6**
TNA				*e*Sn	**Sn**	**19 40 41.0**	**-2.9**
YKA	**Yellowknife Ar**	**15.29**	**77**	P	**Pn**	**19 40 28.7**	**-0.6**
	0.2nm,0.3s,baz=286,slow=10,SNR=10						
YKA	**Yellowknife Ar**	**15.29**	**77**	P	**Pn**	**19 40 28.7**	**-0.6**
PDAR	**Pinedale Array**	**30.13**	**114**	P	**P**	**19 43 01.8**	**+0.8**
	0.4nm,0.7s,mb3.3,baz=303,slow

*ISCJB **21** 20:05:06.1±1.5,39.33N×006.33.19E×007, h6km±13km, Error ellipse: s-maj=12.7km s-min=5.7km az=136.1*
*DDA **21** 20:05:06.0, 39.37N×33.16E, h6km±1km, Md2.1*
ISC 21 20:05:06.3±0.7,**3934N**±005×**3318E**±006,**h8**km±10km,**n7, σ0§54/12, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.41**	**86**	*e*PG	**Pg**	**20 05 14.3**	**-0.1**
KAMT				*e*SG	**Sg**	**20 05 20.2**	**+0.4**
CDAG	**Cicekdag**	**0.96**	**73**	*i* P	**Pg**	**20 05 24.1**	**-0.7**
CDAG				*i* S	**Sg**	**20 05 37.4**	**0.0**
KIZT	**Kizilcal**	**1.11**	**246**	*e*PN	**Pn**	**20 05 27.4**	**-0.8**
KIZT				*e*SN	**Sn**	**20 05 43.8**	**+0.1**
ELDT	**Eldivan**	**1.16**	**9**	*i* P	**Pg**	**20 05 28.0**	**-0.6**
ELDT				*i* S	**Sg**	**20 05 44.5**	**+0.8**
KDHN	**Kadinhani**	**1.17**	**226**	*i* P	**Pg**	**20 05 28.1**	**-0.6**
KDHN				*i* S	**Sg**	**20 05 44.4**	**+0.6**
LADK	**Ladik-KONYA**	**1.31**	**209**	*e*PN	**Pn**	**20 05 30.8**	**0.0**
KONT	**Konya--Tatoy**	**1.54**	**205**	*e*PN	**Pn**	**20 05 34.8**	**+0.8**

*JMA **21** 20:22:03.4±0.2,2641N×14078E, h9km, M4.3*
*IDC **21** 20:22:04.5±3.1, 2663N×14294E, h158km±61km, mb3.1/2, mb1 3.3/2, mb1mx2.8/20, mbtmp3.1/2, Error ellipse: s-maj=191.9km s-min=43.4km az=120.0*
ISC 21 20:22:05.7±2.2,**265N**±02×**1414E**±10,**h141**km±48km,**n9, σ0§72/11, mb3.4/2, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**0.73**	**76**	P	**Pn**	**20 22 26.9**	**-0.5**
JHHJ				S	**Sn**	**20 22 43.6**	**-0.3**
CBIJ	**Chichi jima**	**0.96**	**48**	P	**Pn**	**20 22 29.4**	**+0.2**
	86nm,0.3s,baz=114,slow=7.4,SNR=103						
CBIJ				S	**Sn**	**20 22 47.8**	**+0.6**
	167nm,0.3s,baz=273,slow=22,SNR=32						
CBIJ	**Chichi jima**	**0.96**	**48**	P	**Pn**	**20 22 29.3**	**+0.1**
CBIJ				*e*S	**Sn**	**20 22 48.1**	**+0.9**
JRY	**Ryogami san**	**9.77**	**348**	P	**Pn**	**20 24 24.1**	**+1.4**
JAG	**Ashikaga**	**10.08**	**351**	P	**Pn**	**20 24 25.7**	**-1.1**
JHO	**Hitachi**	**10.15**	**356**	P	**Pn**	**20 24 27.1**	**-0.6**
WRA	**Warramunga Arr**	**46.62**	**189**	P	**P**	**20 30 20.1**	**+0.3**
	0.5nm,0.3s,mb3.6,baz=12,slow=8.7,SNR=9.4						
ASAR	**Alice Springs**	**50.35**	**189**	P	**P**	**20 30 48.2**	**0.0**
	0.5nm,1.0s,mb3.1,baz=12,slow=6.8,SNR=3.4						
PLCA	**Paso Flores**	**150.01**	**126**	PKPbc	PKPbc	20 41 33.4	-6.2
	2.0nm,0.9s,baz=292,slow=5.4,SNR=2.9						

*ISK **21** 20:27:03.7, 4076N×4246E, h2km, MD3.2*
*CSEM **21** 20:27:04.2±0.1, 4076N×4245E, h5km, MD3.2, Error ellipse: s-maj=4.1km s-min=2.3km az=23.0*
*ISCJB **21** 20:27:05.3±0.5, 4076N±004×4244E±004, h10km, Error ellipse: s-maj=6.6km s-min=3.7km az=30.9*
*DDA **21** 20:27:05.1, 4074N×4242E, h7km±2km, Md3.2*
ISC 21 20:27:05.2±0.7,**4073N**±004×**4243E**±004,**h2**km±7km,**n20, σ0§78/26, 2C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARS	**Kars**	**0.52**	**103**	*e*PG	**Pg**	**20 27 14.8**	**-0.3**
KARS				*e*SG	**Sg**	**20 27 22.1**	**+0.4**
DDEM	**Demirkent**	**0.54**	**287⇑**	*i*P	**Pg**	**20 27 15.3**	**-0.3**
DDEM				*i* S	**Sg**	**20 27 23.2**	**+0.6**
ARTV	**Artvin**	**0.59**	**320⇓**	*i*P	**Pg**	**20 27 16.8**	**+0.2**
ARTV				*i* S	**Sg**	**20 27 25.1**	**+0.8**
ARTV	**Artvin**	**0.59**	**320**	*i* P	**Pg**	**20 27 16.8**	**+0.2**
ARTV				*i* S	**Sg**	**20 27 25.0**	**+0.7**
HOMI	**Horasan**	**0.80**	**211**	*i* P	**Pg**	**20 27 20.4**	**-0.1**
BCA	**Borcka**	**0.94**	**320**	*e*PG	**Pg**	**20 27 22.3**	**-1.0**
ERZM	**Erzurum**	**1.16**	**225⇑**	*i*P	**Pg**	**20 27 27.6**	**+0.1**
EZM	**Erzurum**	**1.16**	**225**	*e*PN	**Pn**	**20 27 27.5**	**-0.9**
AGRB	**Hanur-Agry**	**1.23**	**160**	*e*PN	**Pn**	**20 27 28.1**	**-1.2**
PZAR	**Pazar-Rize**	**1.25**	**291**	*e*PN	**Pn**	**20 27 28.6**	**-1.0**
DYDN	**Diyadin**	**1.53**	**141**	*i* P	**Pn**	**20 27 34.0**	**+0.6**
DYDN				*i* S	**Sn**	**20 27 55.1**	**+1.2**
DYDN	**Diyadin**	**1.53**	**141**	*i* P	**Pn**	**20 27 34.0**	**+0.5**
DYDN				*i* S	**Sn**	**20 27 55.1**	**+1.2**
GOR	**Gori**	**1.78**	**45**	P	**Pn**	**20 27 35.5**	**-1.4**
CLDR	**Caldiran**	**1.95**	**144**	*e*PN	**Pn**	**20 27 38.9**	**-0.4**
ONI	**Oni**	**2.00**	**22**	P	**Pn**	**20 27 41.0**	**+1.1**
KTUT	**Trabzon**	**2.04**	**278**	*e*PN	**Pn**	**20 27 40.6**	**+0.1**
EZC	**Erzincan**	**2.23**	**245**	*e*PN	**Pn**	**20 27 48.1**	**+5.0**
GUMT	**Gumushane**	**2.27**	**264**	*e*PN	**Pn**	**20 27 44.0**	**+0.4**
DGRG	**David-gareji**	**2.33**	**71**	P	**Pn**	**20 27 48.5**	**+4.0**
PTK	**Pertek**	**2.98**	**233**	*e*PN	**Pn**	**20 27 54.3**	**+0.9**

*TEH **21** 20:51:33.3, 3132N×4940E, h31km, ML3.6*
*THR **21** 20:51:40.4±0.4, 3120N×4931E, h18km±6km, ML3.7*
*NEIC **21** 20:51:40.4, 3120N×4931E, h18km, ML3.7(THR), MN3.6(TEH), After THR.*
*ISCJB **21** 20:51:41.5±0.4, 3142N±003×4933E±003, h10km, mb3.4/8, Error ellipse: s-maj=4.5km s-min=3.7km az=150.6*
*SGS **21** 20:51:44.3, 3125N×4934E, h14km*
*CSEM **21** 20:51:44.1±0.1, 3145N×4944E, h30km, ML3.6, Error ellipse: s-maj=3.4km s-min=1.5km az=118.0*
*IDC **21** 20:51:46.0±6.1, 3152N×4923E, h43km±49km, mb3.3/7, mb1 3.5/9, mb1mx3.4/25, mbtmp3.3/9, ML3.6/2, Error ellipse: s-maj=54.5km s-min=25.0km az=143.0*
ISC 21 20:51:42.4±0.3,**3134N**±003×**4935E**±003,**h10**km,**n78, σ1§30/87, mb3.4/8, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.89**	**329**	*e*Pg	**Pg**	**20 51 59.2**	**-0.4**
SHGR				AML	AML	20 52 16.2	
	comp=E,3μm,0.5s						
SHGR				AML	AML	20 52 16.3	
	comp=N,2μm,0.2s						
SHGR	**Shooshtar-Gavs**	**0.89**	**329**	Pg	**Pg**	**20 51 59.0**	**-0.6**
IPIR	**Pirpir**	**1.88**	**44**	*e*Pn	**Pn**	**20 52 15.7**	**+1.2**
IPIR				*e*Sn	**Sn**	**20 52 37.8**	**-0.4**
IPIR	**Pirpir**	**1.88**	**44**	*e*Pn	**Pn**	**20 52 15.8**	**+1.3**
IPIR				*e*Sn	**Sn**	**20 52 37.8**	**-0.4**
IPIR				*e*		20 52 44.4	
UMR	**Umm Al-Rimmam**	**2.27**	**219**	*e*P	**Pn**	**20 52 22.7**	**+2.8**
	baz=220						
UMR				AML	AML	20 52 54.0	
	comp=Z,197nm,0.6s,baz=220						
IGAR	**Gharneh**	**2.53**	**65**	*e*Pn	**Pn**	**20 52 25.0**	**+1.6**
IGAR	**Gharneh**	**2.53**	**65**	*e*Pn	**Pn**	**20 52 25.0**	**+1.6**
IGAR				*e*		20 53 00.9	
KBD	**Kabd**	**2.59**	**214**	*e*P	**Pn**	**20 52 26.8**	**+2.5**
	baz=215						
KBD				AML	AML	20 53 02.4	
	comp=Z,116nm,0.5s,baz=215						
IKLH	**Kolahrood**	**2.73**	**43**	*e*Pn	**Pn**	**20 52 27.4**	**+1.1**
IKLH				*e*Sn	**Sn**	**20 52 57.4**	**-1.9**
IKLH				*e*		20 53 07.3	
NAY	**Al-Naaiem**	**2.77**	**222**	*e*P	**Pn**	**20 52 29.5**	**+2.8**
	baz=223						
NAY				AML	AML	20 53 13.3	
	comp=Z,55nm,0.6s,baz=223						
RDF	**Al-Radifah**	**2.87**	**213**	*e*P	**Pn**	**20 52 30.5**	**+2.4**
	baz=214						
RDF				AML	AML	20 53 08.8	
	comp=Z,199nm,0.7s,baz=214						
QRN	**Al-Qurain**	**2.87**	**206**	*e*P	**Pn**	**20 52 30.4**	**+2.2**
	baz=207						
QRN				AML	AML	20 53 07.5	
	comp=Z,74nm,0.3s,baz=207						
IZEF	**Zefreh**	**2.97**	**58**	*e*Pn	**Pn**	**20 52 30.5**	**+1.0**
IZEF	**Zefreh**	**2.97**	**58**	*e*Pn	**Pn**	**20 52 30.5**	**+1.0**
IZEF				*e*		20 53 16.9	
ASAO	**Ashtian**	**3.25**	**10**	*e*Pn	**Pn**	**20 52 34.8**	**+1.4**
ASAO				*e*Sg	**Sg**	**20 52 36.2**	**-0.5**
ASAO				AML	AML	20 53 29.6	
	comp=N,133nm,0.6s						
ASAO				AML	AML	20 53 30.3	
	comp=E,117nm,0.6s						
ASAO	**Ashtian**	**3.25**	**10**	*e*Pn	**Pn**	**20 52 34.8**	**+1.4**
	SNR=52						
ASAO				*e*Sg	**Sg**	**20 53 26.2**	**-0.5**
	comp=E,117nm,0.6s,SNR=91						
NASN	**Na'in**	**3.28**	**63**	*e*Pn	**Pn**	**20 52 34.7**	**+0.9**
GHVR	**GHOM**	**3.53**	**27**	*e*Pn	**Pn**	**20 52 38.5**	**+1.2**
GHVR				AML	AML	20 53 42.0	
	comp=N,91nm,0.7s						
GHVR				AML	AML	20 53 42.0	
	comp=E,78nm,0.6s						
ISAD	**Sadrabad**	**3.75**	**80**	*e*Pn	**Pn**	**20 52 39.9**	**-0.3**
ISAD	**Sadrabad**	**3.75**	**80**	*e*Pn	**Pn**	**20 52 40.5**	**+0.3**
ISAD				*e*		20 53 31.0	
IGHG	**Ghaleghazi**	**3.79**	**323**	*e*Pn	**Pn**	**20 52 41.6**	**+0.8**
IGHG	**Ghaleghazi**	**3.79**	**323**	*e*Pn	**Pn**	**20 52 41.6**	**+0.8**
IGHG				*e*		20 54 14.6	
IVIS	**Veis**	**3.81**	**327**	*e*Pn	**Pn**	**20 52 42.0**	**+1.0**
IVIS	**Veis**	**3.81**	**327**	*e*Pn	**Pn**	**20 52 42.7**	**+1.7**
IVIS				*e*Sn	**Sn**	**20 53 24.2**	**-1.7**
IVIS				*e*		20 53 30.9	
ISFB	**Sefidab**	**3.87**	**38**	*e*Pn	**Pn**	**20 52 41.6**	**-0.3**
ISFB	**Sefidab**	**3.87**	**38**	*e*Pn	**Pn**	**20 52 41.6**	**-0.3**
ISFB				*e*		20 53 50.8	
IRAZ	**Razeghan**	**4.08**	**7**	*e*Pn	**Pn**	**20 52 45.6**	**+0.8**
IRAZ	**Razeghan**	**4.08**	**7**	*e*Pn	**Pn**	**20 52 45.6**	**+0.8**
IRAZ				*e*		20 54 02.1	
SNGE	**Sanandaj**	**4.10**	**336**	*e*Pn	**Pn**	**20 52 46.1**	**+1.0**
SNGE				AML	AML	20 53 36.1	
	comp=E,142nm,0.4s						
SNGE				AML	AML	20 53 36.9	
	comp=N,116nm,0.6s						
IVRN	**Varamin**	**4.16**	**28**	*e*Pn	**Pn**	**20 52 45.6**	**-0.2**
IVRN	**Varamin**	**4.16**	**28**	*e*Pn	**Pn**	**20 52 45.6**	**-0.2**
IVRN				*e*		20 52 59.5	
IDHR	**Dehrash**	**4.17**	**324**	*e*Pn	**Pn**	**20 52 47.4**	**+1.4**
IDHR	**Dehrash**	**4.17**	**324**	*e*Pn	**Pn**	**20 52 47.4**	**+1.4**
IDHR				*e*		20 53 41.7	
ICHK	**Chekchek**	**4.40**	**77**	*e*Pn	**Pn**	**20 52 49.0**	**-0.2**
ICHK	**Chekchek**	**4.40**	**77**	*e*Pn	**Pn**	**20 52 49.0**	**-0.2**
ICHK				*e*		20 53 41.2	
IMHD	**Mahdasht**	**4.47**	**14**	*e*Pn	**Pn**	**20 52 49.9**	**-0.3**
IMHD	**Mahdasht**	**4.47**	**14**	*e*Pn	**Pn**	**20 52 49.9**	**-0.3**
IMHD				*e*		20 54 07.7	
IMEH	**Mehriz**	**4.51**	**88**	*e*Pn	**Pn**	**20 52 49.8**	**-0.9**
IMEH	**Mehriz**	**4.51**	**88**	*e*Pn	**Pn**	**20 52 49.8**	**-0.9**
IMEH				*e*		20 53 49.3	
BHD	**Baghdad**	**4.62**	**296**	*e*Pn	**Pn**	**20 52 53.0**	**+0.7**
BHD				*e*Sn	**Sn**	**20 53 47.0**	**+1.0**
IDMV	**Damavand**	**4.78**	**27**	*e*Pn	**Pn**	**20 52 53.6**	**-0.9**
IDMV	**Damavand**	**4.78**	**27**	*e*Pn	**Pn**	**20 52 53.6**	**-0.9**
IDMV				*e*		20 53 12.7	
DAMV	**Damavand**	**4.81**	**26**	*e*Pn	**Pn**	**20 52 56.2**	**+1.4**
ILAS	**Lasjerd**	**5.04**	**36**	*e*Pn	**Pn**	**20 52 57.6**	**-0.4**
ILAS				*e*		20 52 32.4	
IFIR	**Firoozkooh**	**5.15**	**33**	*e*Pn	**Pn**	**20 53 00.1**	**+0.6**
IFIR				*e*		20 54 38.9	
IBAF	**Bafgh**	**5.32**	**86**	*e*Pn	**Pn**	**20 53 01.3**	**-0.6**
IBAF	**Bafgh**	**5.32**	**86**	*e*Pn	**Pn**	**20 53 01.3**	**-0.6**
IBAF				*e*		20 53 01.9	
IPRN	**Peran**	**5.49**	**26**	*e*Pn	**Pn**	**20 53 05.5**	**+1.4**
IPRN				*e*		20 54 43.2	
ISHM	**Shahmirzad**	**5.54**	**35**	*e*Pn	**Pn**	**20 53 05.1**	**+0.3**
ISHM	**Shahmirzad**	**5.54**	**35**	*e*Pn	**Pn**	**20 53 05.1**	**+0.3**
ISHM				*e*		20 54 44.7	
IALA	**Alasht**	**5.54**	**30**	*e*Pn	**Pn**	**20 53 04.9**	**0.0**
IALA	**Alasht**	**5.54**	**30**	*e*Pn	**Pn**	**20 53 04.9**	**0.0**
IALA				*e*		20 54 55.4	
ASYS		**5.80**	**230**	P	**Pn**	**20 53 07.5**	**-1.0**
IKIA	**Kiasar**	**6.05**	**35**	*e*Pn	**Pn**	**20 53 12.2**	**+0.4**
IKIA	**Kiasar**	**6.05**	**35**	*e*Pn	**Pn**	**20 53 12.2**	**+0.4**
IKIA				*e*		20 53 54.7	
SLWS		**6.62**	**170**	P	**Pn**	**20 53 18.6**	**-1.1**
MSL	**Mosul**	**7.23**	**316**	*e*Pn	**Pn**	**20 53 28.0**	**-0.1**
MSL				*e*Sn	**Sn**	**20 54 50.0**	**-0.3**
ISHB	**Shabestar**	**7.57**	**337**	*e*Pn	**Pn**	**20 53 33.7**	**+0.9**
ISHB				*e*		20 54 32.7	
HRDDS		**8.38**	**179**	P	**Pn**	**20 53 43.9**	**-0.1**
LYLS		**9.45**	**192**	S	**Sn**	**20 55 43.0**	**-2.0**
LYLS		**9.45**	**192**	P	**Pn**	**20 53 56.1**	**-2.5**
LYLS		**9.45**	**192**	P	**Pn**	**20 53 56.1**	**-2.5**
LYLS				S	**Sn**	**20 55 43.0**	**-2.0**
ASF	**Jabal al Asfar**	**10.63**	**278**	P	**Pn**	**20 54 13.0**	**-1.7**
	comp=N,0.3nm,0.3s,baz=300,slow=18,SNR=6.9						
ASF				S	**Sn**	**20 56 05.2**	**-8.7**
	comp=N,0.2nm,0.3s,baz=94,slow=15,SNR=2.1						
HRDS	**Abu Rudays**	**14.15**	**263**	P	Px	20 53 43.9	
BRTR	**Keskin Array B**	**15.27**	**308**	P	**Pn**	**20 55 22.9**	**+5.1**
	baz=130,slow=13,SNR=6.5						
AKTK	**Aktyubinsk**	**20.14**	**16**	P	**P**	**20 56 15.2**	**-1.3**
AKTK	**Aktyubinsk**	**20.14**	**16**	P	**P**	**20 56 15.2**	**-1.3**
AKTO	**Aktyubinsk**	**20.14**	**16**	P	**P**	**20 56 15.2**	**-1.3**
	comp=N,0.2nm,0.3s,baz=198,slow=13,SNR=3.5						
MLR	**Muntele Rosu**	**23.04**	**314**	P	**P**	**20 56 46.3**	**-1.3**
	comp=N,2.0nm,0.8s,mb3.6,baz=176,slow=15,SNR=2.7						
AKASG	**Malin Array Be**	**24.45**	**328**	P	**P**	**20 56 58.2**	**-2.9**
	comp=N,0.2nm,0.3s,mb3.0,baz=136,slow=9.2,SNR=5.0						
BVAR	**Borovoye Array**	**26.51**	**29**	P	**P**	**20 57 18.5**	**-1.3**
	comp=N,0.7nm,0.8s,mb3.2,baz=206,slow=9.6,SNR=3.6						
MKAR	**Makanchi Array**	**29.61**	**49**	P	**P**	**20 57 52.1**	**+4.5**
	comp=N,0.6nm,0.8s,mb3.4,baz=251,slow=9.0,SNR=3.5						
GERES	**GERESS Array B**	**32.02**	**313**	P	**P**	**20 58 06.8**	**-1.9**
	comp=N,0.2nm,0.4s,mb3.3,baz=99,slow=6.2,SNR=3.0						
NOA	**NORSAR Array B**	**38.77**	**331**	P	**P**	**20 59 03.8**	**-2.8**
	comp=N,0.5nm,0.6s,mb3.5,baz=124,slow=8.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**47.28**	**259**	P	**P**	**21 00 15.1**	**-1.1**
	comp=N,0.6nm,0.6s,mb3.7,baz=53,slow=8.8,SNR=8.3						
TORD	**Torodi Ar. Bea**	**47.28**	**259**	P	**P**	**21 00 15.1**	**-1.1**
YKA	**Yellowknife Ar**	**85.61**	**353**	P	**P**	**21 04 17.8**	**-2.8**
	comp=N,0.3nm,0.5s,mb3.8,baz=18,slow=6.1,SNR=4.9						
YKA	**Yellowknife Ar**	**85.61**	**353**	P	**P**	**21 04 17.8**	**-2.8**

*MOS **21** 20:57:54.5±1.1, 5216N×15956E, h86km, mb4.3/3, Error ellipse: s-maj=22.8km s-min=10.0km az=84.2*
*ISCJB **21** 20:57:55.8±0.7, 5222N±005×15977E±008, h75km±7km, mb3.6/6, Error ellipse: s-maj=10.0km s-min=5.7km az=39.3*
*KRSC **21** 20:57:56.6±0.6, 5231N×15982E, h59km±58km, ML4.2*
*IDC **21** 20:58:02.4±1.7, 5270N×15932E, h114km±11km, mb3.2/6, mb1 3.5/6, mb1mx3.1/24, mbtmp3.2/6, Error ellipse: s-maj=35.0km s-min=21.7km az=171.0*
ISC 21 20:57:56.9±0.7,**5220N**±005×**15973E**±008,**h64**km±9km, **n33, σ1§01/52, mb3.6/6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.78**	**288**	*i* P	**Pn**	**20 58 12.1**	**-0.3**
RUS				*i* S	**Sn**	**20 58 23.4**	**-0.4**
SPN	**Mys Shipunski**	**0.92**	**11**	*i* P	**Pn**	**20 58 13.6**	**-0.5**
SPN				*i* S	**Sn**	**20 58 25.8**	**-1.0**
NLC	**Nalytchevo**	**1.00**	**347**	*i* P	**Pn**	**20 58 15.2**	**0.0**
NLC				*i* S	**Sn**	**20 58 28.5**	**-0.2**
PET	**Petropavlovsk**	**1.06**	**322**	*e*PN	**Pn**	**20 58 15.2**	**-0.6**
PET				*e*S	**Sn**	**20 58 29.4**	**-0.5**
PET				pmax	pmax		
	comp=Z,86nm,0.2s						
PET				smax			
	comp=N,773nm,0.5s						
PET				smax			
	comp=E,362nm,0.2s						
PET	**Petropavlovsk**	**1.06**	**322**	*i* P	**Pn**	**20 58 15.6**	**-0.2**
PET				*i* S	**Sn**	**20 58 29.1**	**-0.8**
GRL	**Gorelyy**	**1.08**	**290**	*i* P	**Pn**	**20 58 16.8**	**+0.7**
GRL				*i* S	**Sn**	**20 58 31.5**	**+1.2**
AVH	**Avacha**	**1.23**	**331**	*i* P	**Pn**	**20 58 18.3**	**+0.2**
AVH				*i* S	**Sn**	**20 58 34.3**	**+0.4**
PETK	**Petropavlovsk-**	**1.54**	**307**	P	**Pn**	**20 58 22.5**	**+0.4**
	comp=E,15nm,0.3s,baz=107,slow=19,SNR=189						
PETK				S	**Sn**	**20 58 41.7**	**+0.5**
	comp=E,26nm,0.3s,baz=46,slow=51,SNR=20						
MIPR	**Malaya Ipel'ka**	**1.83**	**274**	P	**Pn**	**20 58 26.5**	**+0.4**
GNL	**Ganaly**	**1.85**	**325**	*i* P	**Pn**	**20 58 26.6**	**+0.2**
GNL				*i* S	**Sn**	**20 58 48.9**	**+0.2**
MKZ	**Mys Kozlova**	**2.65**	**26**	*i* P	**Pn**	**20 58 36.1**	**-1.1**
MKZ				*i* S	**Sn**	**20 59 04.8**	**-3.4**
SKR	**Severo-Kuril's**	**2.72**	**238**	*e*PN	**Pn**	**20 58 36.7**	**-1.5**
SKR				*i* S	**Sn**	**20 59 07.5**	**-2.4**
SKR				pmax	pmax		
	comp=E,50nm,0.4s						
SKR				pmax	pmax		
	comp=Z,70nm,0.4s						
SKR				smax			
	comp=N,590nm,0.2s						
SKR				smax			
	comp=E,730nm,0.2s						
TUMR	**Tumrok**	**3.10**	**4**	P	**Pn**	**20 58 44.3**	**+0.9**
TUMR				*i* S	**Sn**	**20 59 18.6**	**-0.6**
KMNR	**Kamenistaya**	**3.58**	**5**	*e*P	**Pn**	**20 58 51.0**	**+1.1**
BZMR	**Bezymyannaya**	**3.77**	**7**	*e*P	**Pn**	**20 58 53.8**	**+1.3**
BZMR				*e*S	**Sn**	**20 59 34.4**	**-1.2**
KPT	**Kopyto**	**3.79**	**4**	*e*P	**Pn**	**20 58 53.3**	**+0.6**
KOZ	**Kozyrevsk**	**3.87**	**1**	*e*P	**Pn**	**20 58 55.4**	**+1.5**
KOZ				*e*S	**Sn**	**20 59 38.0**	**0.0**
KOZR	**Kozyr**	**3.88**	**1**	PN	**Pn**	**20 58 55.4**	**+1.4**
KOZR				S	**Sn**	**20 59 38.0**	**-0.2**
ZLN	**Zelenaya**	**3.88**	**9**	*e*P	**Pn**	**20 58 55.0**	**+1.0**
ZLN				*e*S	**Sn**	**20 59 37.9**	**-0.3**
KRSR	**Krestovskiy**	**4.06**	**7**	*e*P	**Pn**	**20 58 57.0**	**+0.6**
SRDR	**Sredinnyy**	**4.13**	**360**	*e*P	**Pn**	**20 58 58.0**	**+0.6**
KLY	**Klyuchi**	**4.16**	**7**	P	**Pn**	**20 58 58.7**	**+0.9**
KLY				*i* S	**Sn**	**20 59 42.5**	**-2.6**
KBTR	**Krutoberegovo**	**4.41**	**23**	*e*P	**Pn**	**20 59 00.6**	**-0.6**
KBTR				*i* S	**Sn**	**20 59 46.5**	**-4.7**
FX1	**Attu Island--F**	**8.22**	**80**	P	**Pn**	**20 59 53.6**	**+0.3**
	comp=E,6.9nm,0.3s,baz=243,slow=21,SNR=8.7						
FX1				S	**Sn**	**21 01 17.3**	**-7.3**
	comp=E,2.6nm,0.3s,baz=234,slow=22,SNR=5.0						
MJAR	**Matsushiro Arr**	**21.82**	**233**	P	**P**	**21 02 47.3**	**+3.7**
	comp=E,1.4nm,0.6s,mb3.6,baz=21,slow=12,SNR=6.8						
MJAR	**Matsushiro Arr**	**21.82**	**233**	P	**P**	**21 02 47.3**	**+3.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**48.35**	**296**	P	**P**	**21 06 28.1**	**-3.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=63,slow=6.1,SNR=6.4						
BVAR	**Borovoye Array**	**50.78**	**309**	P	**P**	**21 06 45.3**	**-4.8**
	comp=Z,0.2nm,0.3s,mb3.5,baz=60,slow=6.0,SNR=4.1						
PDAR	**Pinedale Array**	**58.16**	**60**	P	**P**	**21 07 44.5**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.8,baz=347,slow=2.5,SNR=5.5						
AKASG	**Malin Array Be**	**69.27**	**329**	P	**P**	**21 08 54.1**	**-2.6**
	comp=Z,0.5nm,0.3s,mb3.9,baz=31,slow=6.9,SNR=3.1						
AKASG	**Malin Array Be**	**69.27**	**329**	P	**P**	**21 08 54.1**	**-2.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**71.20**	**66**	P	**P**	**21 09 09.1**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=300,slow=4.1,SNR=6.1						
TXAR	**Lajitas Array**	**71.20**	**66**	P	**P**	**21 09 09.1**	**+0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*TEH **21** 21:14:22.7, 3822N×5701E, h28km, ML3.5*
*ISCJB **21** 21:14:48.4±1.7, 382N±02×5699E±005, h33km, Error ellipse: s-maj=23.7km s-min=5.8km az=4.0*
ISC 21 21:14:49.6±1.7,**382N**±02×**5703E**±006,**h35**km,**n15, σ1§07/18, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IEMG	**Emamgholi**	**1.52**	**122**	*e*Pn	**Pn**	**21 15 12.4**	**-1.8**
IEMG				*e*		21 15 16.3	
IQHU	**Qucahn**	**1.66**	**133**	*e*Pn	**Pn**	**21 15 14.8**	**-1.3**
IQHU				*e*		21 15 49.8	
IKRD	**Kardeh**	**1.87**	**140**	*e*Pn	**Pn**	**21 15 27.9**	**+8.9**
IKRD				*e*Sn	**Sn**	**21 15 56.6**	**+15**
IKRD				*e*		21 16 05.6	
IAKL	**Akhelmad**	**2.12**	**139**	*e*Pn	**Pn**	**21 15 22.8**	**+0.3**
IAKL				*e*Sn	**Sn**	**21 15 48.1**	**+0.5**
IAKL				*e*		21 15 55.9	
IPAY	**Payeh**	**2.36**	**138**	*e*Pn	**Pn**	**21 15 26.2**	**+0.4**
IPAY				*e*		21 16 05.3	
ISRO	**Mashad**	**2.73**	**134**	*e*Pn	**Pn**	**21 15 31.3**	**+0.5**
ISRO				*e*		21 16 11.3	
IGLO	**Ghaloghah**	**3.08**	**237**	*e*Pn	**Pn**	**21 15 38.2**	**+2.6**
IGLO				*e*		21 16 33.9	
IMYA	**Miami**	**3.09**	**127**	*e*Pn	**Pn**	**21 15 36.4**	**+0.6**
IMYA				*e*		21 16 35.1	
IKIA	**Kiasar**	**3.35**	**234**	*e*Pn	**Pn**	**21 15 39.7**	**+0.4**
IKIA				*e*Sn	**Sn**	**21 16 16.5**	**-1.3**
IKIA				*e*		21 16 42.1	
IANJ	**Anjilo**	**3.72**	**223**	*e*Pn	**Pn**	**21 15 44.5**	**0.0**
IANJ				*e*		21 16 55.0	
ISHM	**Shahmirzad**	**3.84**	**232**	*e*Pn	**Pn**	**21 15 46.9**	**+0.7**
ISHM				*e*		21 16 02.5	
IALA	**Alasht**	**3.99**

KAMT				*e*SG	**Sg**	**21 45 05.5**	**+1.0**
LOD	**Lodumlu**	**0.61**	**331**	PG	**Pg**	**21 45 01.3**	**-0.9**
LOD				*e*SG	**Sg**	**21 45 10.6**	**+0.5**
LOD	**Lodumlu**	**0.61**	**331**	Pg	**Pg**	**21 45 01.3**	**-0.9**
LOD				Sg	**Sg**	**21 45 10.3**	**+0.1**
CDAG	**Cicekdag**	**0.98**	**74**	*i* P	**Pg**	**21 45 08.1**	**-1.2**
CDAG				*i* S	**Sg**	**21 45 21.6**	**-0.4**
KIZT	**Kizilcal**	**1.10**	**245**	*e*PN	**Pg**	**21 45 10.2**	**-1.3**
KIZT				*e*SN	**Sg**	**21 45 27.2**	**+1.4**
ELDT	**Eldivan**	**1.15**	**10**	*e*P	**Pg**	**21 45 11.7**	**-0.9**
ELDT				*i* S	**Sg**	**21 45 28.5**	**+1.0**
KDHN	**Kadinhani**	**1.16**	**224**	*e*P	**Pn**	**21 45 11.9**	**-1.9**
KDHN				*i* S	**Sn**	**21 45 27.6**	**-2.7**
CANT	**Cankiri**	**1.30**	**16**	*e*PN	**Pn**	**21 45 14.8**	**-0.9**
LADK	**Ladik-KONYA**	**1.31**	**208**	*e*PN	**Pn**	**21 45 14.8**	**-1.0**
KONT	**Konya--Tatoy**	**1.54**	**204**	*e*PN	**Pn**	**21 45 18.9**	**-0.1**
NIG	**Nigde**	**1.69**	**137**	*e*PN	**Pn**	**21 45 21.2**	**+0.1**
YOZ	**Yozgat**	**1.70**	**80**	*e*PN	**Pn**	**21 45 21.2**	**0.0**
ESKT	**Eskisehir**	**1.79**	**276**	*i* P	**Pn**	**21 45 22.5**	**+0.1**
ESKT				*i* S	**Sg**	**21 45 51.4**	**+3.3**
ESKT	**Eskisehir**	**1.79**	**276**	*e*Pn	**Pn**	**21 45 22.1**	**-0.4**
SEYT	**Eskypehyr**	**1.79**	**276**	*i* P	**Pn**	**21 45 22.5**	**0.0**
TOS	**Tosya**	**1.80**	**21**	*e*PN	**Pn**	**21 45 21.4**	**-1.3**
MDU	**Mudurnu**	**1.86**	**307**	*e*PN	**Pn**	**21 45 23.4**	**0.0**
SAFT	**Safranbolu**	**1.91**	**349**	*e*PN	**Pn**	**21 45 24.4**	**+0.2**
BNN	**Bunyan**	**2.15**	**103**	*e*PN	**Pn**	**21 45 27.6**	**+0.1**
GULT	**Gulveren**	**2.30**	**299**	*e*PN	**Pn**	**21 45 29.7**	**+0.3**
ALT	**Altintas**	**2.38**	**264**	*e*PN	**Pn**	**21 45 30.8**	**+0.2**
ALT	**Altintas**	**2.38**	**264**	Pn	**Pn**	**21 45 30.7**	**+0.1**
ISP	**Isparta**	**2.56**	**235**	*e*PN	**Pn**	**21 45 33.7**	**+0.6**
KARA	**Karaisali**	**2.57**	**144**	*e*PN	**Pn**	**21 45 33.7**	**+0.5**
CAVI	**Cavuskoy**	**2.69**	**289**	*e*PN	**Pn**	**21 45 35.3**	**+0.5**
MERS	**Mersin**	**2.71**	**156**	*e*PN	**Pn**	**21 45 35.7**	**+0.6**
BCK	**Bucak**	**2.77**	**228**	*e*PN	**Pn**	**21 45 36.6**	**+0.8**
TOKT	**Tokat**	**2.78**	**69**	*e*PN	**Pn**	**21 45 36.8**	**+0.7**
DIKM	**Dikmen**	**2.80**	**34**	*e*PN	**Pn**	**21 45 36.6**	**+0.3**
KVT	**Kavak**	**2.81**	**51**	*e*PN	**Pn**	**21 45 37.2**	**+0.8**
KOZT	**Kozan**	**2.81**	**131**	*e*PN	**Pn**	**21 45 37.0**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.84**	**103**	*e*PN	**Pn**	**21 45 35.7**	**-1.2**
SVSK	**Karacayir**	**3.02**	**78**	*e*PN	**Pn**	**21 45 40.1**	**+0.7**
IKL	**Isikli**	**3.14**	**172**	*e*PN	**Pn**	**21 45 41.8**	**+0.7**
KMRS	**Kahramanmaras**	**3.48**	**121**	*e*PN	**Pn**	**21 45 46.5**	**+0.9**

IDC 21 21:52:00.7±1.7, **414N**×**12387E**, **h0**km, **mb3.7**/4, **mb1 3.9**/4, **mb1mx3.6**/19, **mbtmp3.7**/4, **Error ellipse: s-maj=200.6km s-min=23.4km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.05**	**157**	P	P	21 57 35.4	-0.5
	0.5nm,0.4s,baz=334,slow=11,SNR=15						
ASAR	**Alice Springs**	**29.31**	**161**	P	P	21 58 06.6	+1.4
	0.1nm,0.3s,baz=355,slow=8.8,SNR=8.1						
STKA	**Stephens Creek**	**39.59**	**156**	P	P	21 59 33.3	-0.6
	1.2nm,0.3s,baz=343,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**55.62**	**326**	P	P	22 01 38.3	0.0
	0.7nm,1.0s,baz=122,slow=7.8,SNR=8.6						

*IDC **21** 21:59:48.0*±*2.8, 2668N*×*9731E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.5/4, Error ellipse: s-maj=392.0km s-min=21.5km az=58.0*
*BJI **21** 21:59:51.9, 2645N*×*9684E, h32km, ML3.1, Ms3.2, Msz3.1*
*ISCJB **21** 21:59:52.4*±*4.1, 263N*±*02*×*966E*±*02, h52km*±*40km, mb3.6/5, Error ellipse: s-maj=38.9km s-min=21.9km az=153.8*
*NEIC **21** 21:59:52.8*±*0.8, 2640N*×*9678E, h35km, mb3.9/2, Error ellipse: s-maj=18.7km s-min=9.7km az=200.0*

ISC 21 21:59:54.6±3.5, **264N**±02×**967E**±03, **h54**km±35km, **n18**, σ**0**§**84**/**18**, **mb3.6**/**5**, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.91**	**306**	P	**Pn**	**22 01 21.0**	**+1.5**
LSA	**Lhasa**	**5.91**	**306**	*e*Pn	**Pn**	**22 01 18.8**	**-0.7**
	2.6nm,0.5s						
RAMN	**Ramite**	**9.03**	**276**	*e*P	**Pn**	**22 02 03.6**	**+1.2**
JIRN	**Jiri**	**9.44**	**280**	*e*P	**Pn**	**22 02 08.5**	**+0.6**
	8.7nm,0.3s						
GUN	**Gumba**	**9.74**	**282**	*e*P	**Pn**	**22 02 12.5**	**+0.5**
	13nm,0.3s						
PKI	**Pulchoki**	**10.12**	**279**	*e*P	**Pn**	**22 02 17.7**	**+0.4**
PKIN	**Phulchoki**	**10.13**	**279**	*e*P	**Pn**	**22 02 17.2**	**-0.2**
KKN	**Kakani**	**10.26**	**281**	*e*P	**Pn**	**22 02 19.2**	**+0.1**
DMN	**Daman**	**10.39**	**279**	*e*P	**Pn**	**22 02 21.6**	**+0.6**
GKN	**Gorkha**	**10.84**	**281**	*e*P	**Pn**	**22 02 26.5**	**-0.6**
DANN	**Dangsing**	**11.65**	**283**	*e*P	**Pn**	**22 02 36.0**	**-2.1**
	6.1nm,0.3s						
KOLN	**Koldanda**	**11.74**	**280**	*e*P	**Pn**	**22 02 37.9**	**-1.4**
MKAR	**Makanchi Array**	**23.36**	**335**	P	**P**	**22 04 58.0**	**-0.3**
	0.4nm,0.4s,mb3.2,baz=141,slow=9.6,SNR=14						
KBL	**Kabul**	**25.12**	**296**	*e*P	**P**	**22 05 14.8**	**+0.3**
	4.6nm,0.8s,mb4.1						
KURK	**Kurchatov**	**27.97**	**335**	P	**P**	**22 05 39.2**	**-0.7**
	0.5nm,0.7s,mb3.3,baz=150,slow=10,SNR=2.6						
KURK	**Kurchatov**	**27.97**	**335**	*e*P	**P**	**22 05 41.1**	**+1.2**
	1.5nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**58.77**	**138**	P	**P**	**22 09 47.4**	**0.0**
	0.4nm,0.8s,mb3.5,baz=327,slow=7.5,SNR=4.6						
ASAR	**Alice Springs**	**61.40**	**141**	P	**P**	**22 10 05.2**	**0.0**
	0.3nm,0.4s,mb3.8,baz=326,slow=6.5,SNR=6.8						

*CSEM **21** 22:03:26.6*±*0.1, 3785N*×*3663E, h5km, MD3.1, Error ellipse: s-maj=1.4km s-min=1.3km az=13.0*
*DDA **21** 22:03:26.1, 3788N*×*3665E, h8km*±*1km, Md3.1*
*ISK **21** 22:03:26.4, 3786N*×*3663E, h5km, MD3.4*
*ISCJB **21** 22:03:27.6*±*0.4, 3784N*±*003*×*3664E*±*003, h10km, Error ellipse: s-maj=3.7km s-min=3.5km az=25.8*

ISC 21 22:03:28.1±0.4, **3785N**±003×**3664E**±003, **h10**km, **n28**, σ**1**§**01**/**38**, **1C**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.36**	**221**	⇑*i* P	**Pg**	**22 03 34.0**	**-1.1**
ANDN				*i* S	**Sg**	**22 03 41.3**	**+1.4**
KMRS	**Kahramanmaras**	**0.40**	**149**	*i* Pg	**Pg**	**22 03 34.7**	**-1.3**
KMRS				*e*Sg	**Sg**	**22 03 40.5**	**-0.8**
KMRS				*e*SG	**Sg**	**22 03 40.5**	**-0.8**
KMRS	**Kahramanmaras**	**0.40**	**149**	Pg	**Pg**	**22 03 34.7**	**-1.2**
KOZT	**Kozan**	**0.74**	**240**	*e*PG	**Pg**	**22 03 40.4**	**-2.0**
KOZT				*e*SG	**Sg**	**22 03 52.0**	**-0.1**
GAZ	**Gaziantep**	**0.82**	**146**	*e*PG	**Pg**	**22 03 43.4**	**-0.4**
GAZ				*e*SG	**Sg**	**22 03 55.2**	**+0.8**
SARI	**SarD1z-Kayseri**	**0.83**	**3**	*e*PG	**Pg**	**22 03 37.8**	**-6.3**
SARI				*e*SG	**Sg**	**22 03 45.8**	**-9.0**
GZT	**Gaziantep**	**0.89**	**124**	*i* P	**Pg**	**22 03 43.7**	**-1.5**
GZT				*i* S	**Sg**	**22 03 57.5**	**+0.8**
KUZU	**Kuzuini**	**1.13**	**162**	*i* P	**Pg**	**22 03 49.8**	**0.0**
KUZU				*i* S	**Sg**	**22 04 05.2**	**+0.7**
BNN	**Bunyan**	**1.18**	**328**	*e*PN	**Pn**	**22 03 48.6**	**-2.0**
COBT	**Iskenderun**	**1.36**	**193**	*i* P	**Pn**	**22 03 52.7**	**-0.4**
COBT				*i* S	**Sn**	**22 04 12.7**	**+1.5**
KARA	**Karaisali**	**1.39**	**245**	*e*PN	**Pn**	**22 03 53.2**	**-0.3**
MYA	**Malataya**	**1.49**	**71**	*e*PN	**Pn**	**22 03 54.6**	**-0.3**
NIG	**Nigde**	**1.62**	**280**	*e*PN	**Pn**	**22 03 56.8**	**0.0**
KRTS	**Karatas**	**1.62**	**219**	*e*PN	**Pn**	**22 03 56.6**	**-0.1**
HTY	**Hatay**	**1.77**	**193**	*e*PN	**Pn**	**22 03 58.6**	**-0.1**
URFA	**Urfa**	**1.78**	**103**	*e*PN	**Pn**	**22 03 57.8**	**-1.1**
MERS	**Mersin**	**1.95**	**240**	*e*PN	**Pn**	**22 04 01.1**	**-0.1**
KEMA	**Kemaliye**	**2.03**	**45**	*i* P	**Pn**	**22 04 03.0**	**+0.7**
KEMA				*i* S	**Sn**	**22 04 30.3**	**+2.6**
YOZ	**Yozgat**	**2.06**	**330**	*e*PN	**Pn**	**22 04 03.1**	**+0.4**
SVSK	**Karacayir**	**2.08**	**8**	*e*PN	**Pn**	**22 04 02.8**	**-0.3**
SVRC	**Sivrice-ELAZID**	**2.17**	**75**	*e*PN	**Pn**	**22 04 04.6**	**+0.3**
PTK	**Pertek**	**2.40**	**63**	*e*PN	**Pn**	**22 04 08.1**	**+0.7**
KAMT	**Kaman**	**2.75**	**304**	*e*PN	**Pn**	**22 04 12.3**	**+0.1**
IKL	**Isikli**	**2.86**	**237**	*e*PN	**Pn**	**22 04 14.3**	**+0.6**
EZC	**Erzincan**	**3.12**	**52**	*e*PN	**Pn**	**22 04 14.4**	**-2.9**
KONT	**Konya--Tatoy**	**3.38**	**273**	*e*PN	**Pn**	**22 04 22.0**	**+1.0**
LADK	**Ladik-KONYA**	**3.39**	**277**	*e*PN	**Pn**	**22 04 22.1**	**+1.1**
GUMT	**Gumushane**	**3.42**	**39**	*e*PN	**Pn**	**22 04 22.7**	**+1.3**

*SZGRF **21** 22:04:55.4, 2588N*×*12859E, h33km, mb5.5, MS4.4, Ryukyu Islands, Japan*
*NIED **21** 22:05:00, 2690N*×*12680E, h104km, Mw5.1 Best double couple: M*ₒ*5.91000*×*10¹⁶ NP1:*φₛ*87.00000°, δ68.00000°, λ-130.00000°. NP2:*φₛ*334.00000°, δ45.00000°, λ-32.00000°.*
*BJI **21** 22:05:05.8, 2653N*×*12723E, h110km, mB4.9, mb4.9*
*MOS **21** 22:05:07.1*±*0.9, 2691N*×*12677E, h83km, mb5.2/75, MS4.1/8, Error ellipse: s-maj=7.3km s-min=4.1km az=117.7*
*DJA **21** 22:05:08, 2708N*×*12730E, h80km, Mw5.5/6*
*ISCJB **21** 22:05:10.7*±*0.1, 2685N*±*002*×*12672E*±*002, h111km, mb5.1/216, Error ellipse: s-maj=2.4km s-min=1.7km az=141.0*
*NEIC **21** 22:05:11.6*±*0.1, 2688N*×*12675E, mb5.1/129, MW5.1(NIED), Error ellipse: s-maj=4.3km s-min=3.4km az=158.0*
NEIC Felt [II] at Chatan and Ginowan. Felt on Okinawa. Recorded [1 JMA] on Kume-jima, Okinawa and Yoron-jima.
*IDC **21** 22:05:11.4*±*0.5, 2691N*×*12681E, h108km*±*4km, mb4.7/30, mb1 4.7/33, mb1mx4.7/35, mbtmp4.7/33, MS3.8/22, Ms1 3.8/22, ms1mx3.6/38, Error ellipse: s-maj=11.3km s-min=7.8km az=61.0*
*JMA **21** 22:05:11.3*±*0.2, 2688N*×*12685E, h107km*±*2km, M5.1*
JMA Felt II J1.
*GCMT **21** 22:05:11.6*±*0.2, 2673N*×*12685E, h122km*±*1km, MW5.2/92, Moment Tensor Solution. s69,c114; s92,c166; Duration: 1§0 Moment tensor: Scale 10¹⁶Nm; M*ᵣᵣ*-4.00*±*.16; M*ᵩᵩ*3.50*±*.19; M*ₒₒ*0.49*±*.20; M*ᵣᵩ*-5.70*±*.12; M*ᵩₒ*-3.31*±*.17; M*ₒᵣ*-2.70*±*.12; Best double couple: M*ₒ*7.92200*×*10¹⁶ NP1:*φₛ*329.00000°, δ34.00000°, λ-31.00000°. NP2:*φₛ*85.00000°, δ73.00000°, λ-120.00000°. Principal axes: T 7.0610, Plg23.0000°, Azm198.0000°; N 1.7210, Plg29.0000°, Azm95.0000°; P -8.7840, Plg52.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BGS **21** 22:05:20.6*±*1.5, 2844N*×*125.15E, h110km, mb5.2*

ISC 21 22:05:12.1±0.1, **2683N**±002×**12674E**±002, **h113**km, **h113**km±1.4km; **pP-P**, **n919**, σ**0**§**92**/932, **mb5.1**/215, **154C-179D**, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.51**	**176**	P	**Pn**	**22 05 28.3**	**-0.9**
JKE				*e*S	**Sn**	**22 05 40.9**	**-1.2**
JAGN	**Aguni-jima**	**0.51**	**118**	P	**Pn**	**22 05 27.7**	**-1.5**
JAGN				S	**Sn**	**22 05 39.7**	**-2.4**
NAH1	**Naha**	**1.05**	**126**	P	**Pn**	**22 05 32.5**	**-1.5**
NAH1				*e*S	**Sn**	**22 05 47.7**	**-2.9**
JIH	**Iheya**	**1.11**	**79**	P	**Pn**	**22 05 32.7**	**-1.9**
JIH				S	**Sn**	**22 05 48.2**	**-3.5**
JJT2	**Tamagusuku 2**	**1.14**	**127**	P	**Pn**	**22 05 33.7**	**-1.2**
JJT2				*e*S	**Sn**	**22 05 49.9**	**-2.2**
JOW	**Kunigami**	**1.37**	**90**	P	**Pn**	**22 05 35.5**	**-2.0**
	5μm,0.3s,baz=126,slow=25,SNR=3180						
JOW				S	**Sn**	**22 05 51.7**	**-5.0**
	11μm,0.3s,baz=139,slow=27,SNR=84						
JOW				LR	LR	22 06 08.0	
	comp=Z,5μm,21.9s,baz=0.0,slow=43						
JOW	**Kunigami**	**1.37**	**90**	P	**Pn**	**22 05 35.4**	**-2.1**
JOW				S	**Sn**	**22 05 52.1**	**-4.6**
JTK	**Tokunoshima**	**2.18**	**64**	P	**Pn**	**22 05 45.0**	**-2.4**
JTK				*e*S	**Sn**	**22 06 10.0**	**-4.5**
JOGS	**Gusukube**	**2.39**	**211**	P	**Pn**	**22 05 50.4**	**+0.2**
JOGS				*e*S	**Sn**	**22 06 21.3**	**+1.9**
JMJ	**Miyako jima 2**	**2.40**	**213**	P	**Pn**	**22 05 50.5**	**+0.3**
JMJ				*e*S	**Sn**	**22 06 19.9**	**+0.4**
JTJ	**Tarama**	**2.85**	**221**	P	**Pn**	**22 05 56.2**	**0.0**
JTJ				S	**Sn**	**22 06 28.9**	**-1.3**
JAM	**Amami Oshima**	**2.99**	**58**	P	**Pn**	**22 05 55.3**	**-2.6**
JAM				*e*S	**Sn**	**22 06 28.7**	**-4.6**
JZK	**Kikaishima**	**3.22**	**62**	P	**Pn**	**22 05 59.1**	**-2.0**
JZK				*e*S	**Sn**	**22 06 35.4**	**-3.5**
JIJ	**Ishigaki jima**	**3.40**	**224**	P	**Pn**	**22 06 02.7**	**-0.7**
JIJ				*e*S	**Sn**	**22 06 41.5**	**-1.6**
JKRS	**Kuro-shima**	**3.57**	**224**	P	**Pn**	**22 06 05.4**	**-0.4**
JKRS				*e*S	**Sn**	**22 06 46.6**	**-0.7**
IRIF	**Iriomote-Funau**	**3.69**	**228**	P	**Pn**	**22 06 06.9**	**-0.4**
IRIF				*e*S	**Sn**	**22 06 49.5**	**-0.5**
HATJ	**Hateruma jima**	**3.83**	**225**	P	**Pn**	**22 06 08.9**	**-0.3**
HATJ				*e*S	**Sn**	**22 06 55.5**	**+2.0**
JNN	**Nakanoshima**	**4.08**	**42**	P	**Pn**	**22 06 11.0**	**-1.4**
YOJ	**Yonaguni jima**	**4.11**	**236**	P	**Pn**	**22 06 13.7**	**+0.7**
JMZ	**Minamidaito 2**	**4.14**	**103**	P	**Pn**	**22 06 09.0**	**-4.4**
JMZ				*e*S	**Sn**	**22 06 50.3**	**-11**
JKC	**Kuchinoerabu**	**4.72**	**39**	P	**Pn**	**22 06 19.7**	**-1.4**
TATO	**Taipei**	**5.08**	**250**	⇑P	**Pn**	**22 06 27.7**	**+1.7**
	SNR=13						
TATO	**Taipei**	**5.08**	**250**	*e*Pn	**Pn**	**22 06 28.8**	**+2.8**
YHNB	**Yeheng**	**5.30**	**247**	⇑*i*Pn	**Pn**	**22 06 31.3**	**+2.3**
	1μm,0.8s						
NACB	**Ninganchiao**	**5.35**	**241**	*e*Pn	**Pn**	**22 06 29.0**	**-0.7**
	674nm,0.3s						
YULB	**Yu-li**	**6.01**	**236**	⇑*e*Pn	**Pn**	**22 06 36.3**	**-2.2**
	404nm,0.3s						
YULB				*e*Sn	**Sn**	**22 07 42.9**	**-3.1**
SSLB	**Suanglung**	**6.05**	**241**	*e*Pn	**Pn**	**22 06 38.6**	**-0.5**
	1μm,0.3s						
SSLB				*e*Sn	**Sn**	**22 07 46.2**	**-0.9**
TWG	**Pinlang**	**6.52**	**233**	*e*Pn	**Pn**	**22 06 42.3**	**-3.2**
	595nm,0.3s						
TWG				*e*Sn	**Sn**	**22 07 53.3**	**-5.1**
TPUB	**Ta-pu**	**6.56**	**239**	*e*Pn	**Pn**	**22 06 46.0**	**-0.1**
	691nm,0.3s						
TPUB				*e*Sn	**Sn**	**22 07 59.8**	**+0.3**
QZH	**Quanzhou**	**7.58**	**257**	⇑*i*P	**Pn**	**22 07 01.9**	**+2.1**
QZH				XP		22 07 28.0	
QZH				S	**Sn**	**22 08 27.0**	**+2.9**
QZH				AMB	AMB		
	comp=Z,390nm,1.2s						
QZH				AMB	AMB		
	comp=Z,1μm,2.8s						
QZH				LR	LR		
	comp=N,2μm,5.3s						
QZH				LR	LR		
	comp=E,720nm,3.0s						
QZH				LR	LR		
	comp=Z,1μm,12.6s						
NJ2	**Nanjing**	**8.62**	**309**	*e*P	**Pn**	**22 07 16.3**	**+2.4**
NJ2				XP		22 07 42.0	
NJ2				S	**Sn**	**22 08 51.5**	**+2.1**
NJ2				AMB	AMB		
	comp=Z,50nm,0.9s						
NJ2				AMB	AMB		
	comp=Z,410nm,6.6s						
NJ2				Smax			
	comp=N,120nm,1.0s						
NJ2				Smax			
	comp=E,60nm,1.1s						
NJ2				LR	LR		
	comp=N,460nm,11.4s						
NJ2				LR	LR		
	comp=E,710nm,9.0s						
NJ2				LR	LR		
	comp=Z,710nm,9.0s						
SGCP	**Mt. Cagua**	**9.59**	**208**	*e*P	**Pn**	**22 07 25.2**	**-1.9**
PALP	**Palanan**	**10.51**	**203**	*e*P	**Sn**	**22 09 28.3**	**-7.2**
KSRS	**Korea Array**	**10.64**	**5**	P	**Pn**	**22 07 42.6**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=182,slow=14,SNR=75						
KSRS				S	**Sn**	**22 09 39.7**	**+1.4**
	baz=184,slow=26,SNR=2.9						
KSRS	**Korea Array**	**10.64**	**5**	P	**Pn**	**22 07 42.6**	**+1.4**
KSRS				S	**Sn**	**22 09 39.7**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CAUP	**Cauayan**	**10.85**	**206**	*e*P	**Sn**	**22 09 37.7**	**-5.8**
WHN	**Wuhan**	**11.49**	**292**	P	**Pn**	**22 07 53.5**	**+0.9**
WHN				S	**Sn**	**22 10 02.3**	**+3.2**
WHN				LR	LR		
	comp=Z,1μm,11.6s						
BALP	**Baler**	**12.04**	**205**	*e*P	**Pn**	**22 07 59.1**	**-0.9**
BOLP	**Bolinao**	**12.18**	**213**	*e*P	**Pn**	**22 08 01.5**	**-0.4**
SCZP	**Santa Cruz**	**12.71**	**211**	*e*P	**Pn**	**22 08 08.6**	**-0.1**
GZH	**Guangzhou**	**12.71**	**256**	P	**Pn**	**22 08 03.6**	**-5.2**
GZH				S	**Sn**	**22 10 27.4**	**-1.4**
GZH				LR	LR		
	comp=N,782nm,4.6s						
GZH				LR	LR		
	comp=E,408nm,7.2s						
DL2	**Dalian**	**12.78**	**342**	*i* P	**Pn**	**22 08 10.3**	**+0.7**
DL2				XP		22 08 40.0	
DL2				S	**Sn**	**22 10 31.8**	**+1.6**
DL2				AMB	AMB		
	comp=Z,150nm,0.7s						
DL2				AMB	AMB		
	comp=Z,230nm,5.5s						
POLP	**Polilio Island**	**12.85**	**201**	*e*P	**Pn**	**22 08 10.3**	**-0.3**
JHJ	**Hachijo jima 2**	**12.92**	**58**	P	**Pn**	**22 08 11.2**	**-0.2**
	comp=Z,15nm,0.3s,baz=52,slow=24,SNR=8.3						
JHJ				LR	LR	22 12 40.9	
	comp=Z,175nm,20.6s,baz=290,slow=35						
PVCP	**Virac**	**13.39**	**191**	*e*P	**Pn**	**22 08 17.8**	**+0.2**
MAJO	**Matsushiro**	**13.73**	**42**	*e*P	**Pn**	**22 08 17.3**	**-4.7**
MAT	**Matsushiro**	**13.73**	**42**	P	**Pn**	**22 08 17.6**	**-4.4**
MAT				S	**Sn**	**22 11 01.0**	**+7.7**
MJAR	**Matsushiro Arr**	**13.74**	**42**	P	**Pn**	**22 08 18.6**	**-3.4**
	comp=Z,1.6nm,0.3s,baz=234,slow=14,SNR=13						
MJAR				S	**Sn**	**22 11 03.3**	**+10**
	comp=Z,0.3nm,0.3s,baz=224,slow=8.7,SNR=2.9						
MJAR				LR	LR	22 13 54.1	
	comp=Z,261nm,20.5s,baz=225,slow=38						
CBIJ	**Chichi jima**	**13.78**	**85**	P	**Pn**	**22 08 21.8**	**-0.8**
	comp=Z,9.6nm,0.3s,baz=92,slow=23,SNR=5.5						
CBIJ				LR	LR	22 12 41.3	
	comp=Z,421nm,19.8s,baz=259,slow=33						
LUBP	**Lubang**	**14.38**	**206**	*e*P	**Pn**	**22 08 29.2**	**-1.3**
OTRP	**Odiongan**	**15.06**	**198**	*e*P	**Pn**	**22 08 40.4**	**+1.3**
SNY	**Shenyang**	**15.18**	**351**	⇓P	**Pn**	**22 08 41.8**	**+1.4**
SNY				S	**S**	**22 11 32.0**	**-5.2**
SNY				AMB	AMB		
	comp=Z,33nm,1.4s						
SNY				AMB	AMB		
	comp=Z,1μm,8.6s						
SNY				LR	LR		
	comp=E,922nm,18.2s						
SNY				LR	LR		
	comp=Z,770nm,31.4s						
SJMP	**San Jose**	**15.24**	**201**	*e*P	**Pn**	**22 08 41.7**	**+0.4**
RCP	**Roxas**	**15.65**	**195**	⇓*e*P	**Pn**	**22 08 49.0**	**+2.5**
BJT	**Baijiatuan**	**15.82**	**329**	*e*P	**Pn**	**22 08 51.0**	**+2.7**
BJT				pmax	pmax		
	comp=Z,117nm,0.4s						
BJT	**Baijiatuan**	**15.82**	**329**	*e*P	**Pn**	**22 08 51.0**	**+2.6**
	comp=Z,117nm,0.4s						
BJI	**Beijing**	**15.84**	**329**	P	**Pn**	**22 08 51.1**	**+2.6**
BJI				S	**S**	**22 11 45.5**	**-5.1**
BJI				AMB	AMB		
	comp=Z,126nm,0.7s						
BJI				AMB	AMB		
	comp=Z,1μm,6.1s						
BJI				LR	LR		
	comp=N,609nm,11.1s						
BJI				LR	LR		
	comp=E,390nm,14.2s						
BJI				LR	LR		
	comp=Z,687nm,30.7s						
BUSP	**Coron**	**15.98**	**204**	*e*P	**Pn**	**22 08 50.4**	**-0.1**
GUIM	**Jordan**	**16.59**	**194**	*e*P	**Pn**	**22 09 01.5**	**+3.5**
MSLP	**Maasin**	**16.70**	**186**	*e*P	**Pn**	**22 09 01.4**	**+2.0**
CUYO	**Cuyo Island**	**16.79**	**200**	*e*P	**Pn**	**22 08 55.5**	**-5.0**
XAN	**Xi'an**	**16.95**	**299**	P	**Pn**	**22 09 02.9**	**+0.6**
XAN				XP	sP	22 09 35.3	-1.8
XAN				S	**S**	**22 12 13.4**	**+2.0**
XAN				PCP	PcP	22 13 36.8	-5.4
XAN				SCP	ScP	22 16 59.6	-7.1
XAN				AMB	AMB		
	comp=Z,47nm,1.5s						
XAN				AMB	AMB		
	comp=Z,740nm,7.3s						
CN2	**Changchun**	**16.96**	**357**	*e*P	**Pn**	**22 09 02.9**	**+0.5**
CN2				*e*AP	pP	22 09 18.0	-4.9
CN2				*e*S	**S**	**22 12 07.8**	**-3.7**
CN2				AMB	AMB		
	comp=Z,80nm,1.5s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
ENPP	**El Nido**	**17.00**	**205**	*e*P	**Pn**	**22 09 03.2**	**+0.1**
TBP	**Tagbilaran**	**17.27**	**190**	*e*P	**Pn**	**22 09 07.8**	**+1.5**
QIZ	**Qiongzhong**	**17.39**	**247**	P	**Pn**	**22 09 09.5**	**+1.8**
QIZ				XP	sP	22 09 42.0	0.0
QIZ				S	**S**	**22 12 17.6**	**-4.0**
QIZ				AMB	AMB		
	comp=Z,17nm,1.5s						
BUTP	**Butuan**	**17.80**	**184**	*e*P	**Pn**	**22 09 13.8**	**+1.1**
MDJ	**Mudanjiang**	**17.89**	**7**	P	**Pn**	**22 09 13.5**	**-0.1**
MDJ				XP	sP	22 09 47.5	0.0
MDJ				S	**S**	**22 12 33.6**	**+1.4**
MDJ				PCP	PcP	22 13 43.1	-0.4
MDJ				SCP	ScP	22 17 08.4	0.0
MDJ				PCS	PcS	22 17 19.8	0.0
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,163nm,5.5s						
MDJ				LR	LR		
	comp=N,594nm,32.4s						
MDJ				L

LZH AMB AMB
comp=Z,53nm,1.1s,mb4.8
LZH AMB AMB
comp=Z,325nm,6.2s
LZH LR LR
comp=N,657nm,12.5s
LZH LR LR
comp=Z,762nm,15.2s
KMI Kunming 21.64 271 P **P** **22 09 55.0 +1.6**
KMI AP 22 10 16.8
KMI PP 22 10 24.8
KMI XP sP 22 10 29.9 +1.2
KMI PPP 22 10 36.0
KMI S **S** **22 13 43.8 -2.9**
KMI XS sS 22 14 20.0 -2.2
KMI SS 22 14 28.4
KMI AMB AMB
comp=Z,23nm,1.1s,mb4.4
KMI AMB AMB
comp=Z,292nm,6.7s
KMI LR LR
comp=N,250nm,9.3s
KMI LR LR
comp=E,267nm,9.6s
KMI LR LR
comp=Z,207nm,12.3s
KDM Kudat 21.94 207 ⇓P **P** **22 09 58.8 +2.2**
HABR Khabarovsk 22.55 15 *eP* **P** **22 09 59.0 -3.8**
HABR *e**SP sP 22 10 31.9 -6.4
HABR *e* 22 13 49.7
HABR *e*S **S** **22 13 59.4 -2.0**
HABR *e**SS sS 22 14 34.9 -4.9
HABR *e* 22 21 03.8
KLR Kul'dur 22.70 9 *eP* **P** **22 09 56.2 -8.0**
KLR *e* 22 10 28.8
KLR pmax pmax
comp=N,64nm,1.8s
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,180nm,1.8s,mb5.1
MYLDM Lahad Datu 22.92 202 ⇑P **P** **22 10 09.6 +3.0**
SDKM Sandakan 22.96 205 ⇑P **P** **22 10 07.2 +0.3**
KKM Kota Kinabalu 22.98 208 *eP* **P** **22 10 08.0 +0.9**
comp=Z,328nm,1.4s,mb5.5
KKM Kota Kinabalu 22.98 208 ⇓P **P** **22 10 08.9 +1.8**
HIA Hailar 23.05 348 ⇓*iP* **P** **22 10 05.3 -2.1**
HIA Hailar 23.05 348 *eP* **P** **22 10 04.5 -2.9**
comp=Z,3.8nm,0.4s,mb4.1
YSS Yuzh-Sakhalins 23.73 28 ⇓*eP* **P** **22 10 13.0 -0.7**
YSS *e* 22 14 12.0
YSS pmax pmax
comp=Z,50nm,1.0s,mb4.8
TSM Tawau 23.96 202 ⇑P **P** **22 10 17.5 +1.4**
CHRT Chiangrai 25.67 260 ⇓P **P** **22 10 33.0 +1.4**
comp=Z,105nm,1.0s,mb5.2
GTA Gaotai 25.70 306 ⇓P **P** **22 10 31.4 -0.3**
GTA AP pP 22 10 52.8 -3.3
GTA XP sP 22 11 06.0 -3.2
GTA PP 22 11 15.6
GTA PCP PcP 22 14 00.8 +1.8
GTA S **S** **22 14 51.5 -0.6**
GTA SS 22 16 07.3
GTA SCP ScP 22 17 29.3 +1.1
GTA PCS PcS 22 17 39.9 +0.2
GTA SCS ScS 22 21 15.3 -2.3
GTA AMB AMB
comp=Z,67nm,0.5s,mb5.3
GTA AMB AMB
comp=Z,238nm,8.0s
GTA LR LR
comp=N,392nm,13.7s
GTA LR LR
comp=E,220nm,14.3s
GTA LR LR
comp=Z,376nm,13.1s
ULN Ulaanbaatar 26.05 329 P **P** **22 10 34.4 -0.3**
SNR=36
ULN Ulaanbaatar 26.05 329 *eP* **P** **22 10 34.6 -0.1**
ULN *e* 22 14 00.5
ULN pmax pmax
comp=Z,95nm,1.1s,mb5.1
ULN Ulaanbaatar 26.05 329 *eP* **P** **22 10 34.6 -0.1**
comp=Z,94nm,1.1s,mb5.1
ULN *e*PcP PcP 22 14 00.5 +0.8
ULN *e*ScP ScP 22 17 29.3 +0.3
SONM Songino Array 26.33 328 P **P** **22 10 37.1 -0.2**
comp=Z,38nm,0.4s,mb5.2,baz=142,slow=9.2,SNR=99
SONM PcP PcP 22 14 00.9 +0.6
comp=Z,3.2nm,0.6s,baz=161,slow=2.1,SNR=6.8
SONM ScP ScP 22 17 30.1 +0.2
comp=Z,2.7nm,1.0s,baz=148,slow=2.5,SNR=6.8
SONM LR LR 22 21 15.4
comp=Z,234nm,21.3s,baz=256,slow=37
SONM Songino Array 26.33 328 P **P** **22 10 37.1 -0.2**
SONM 22 14 00.9
CHG Chiang Mai 26.80 259 ⇓P **P** **22 10 42.8 +1.1**
comp=Z,23nm,0.8s,mb4.8
CHTO Chiang Mai 26.80 259 P **P** **22 10 43.3 +1.5**
SNR=14
CHTO Chiang Mai 26.80 259 ⇓*eP* **P** **22 10 42.7 +1.0**
CHTO pmax pmax
comp=Z,79nm,1.8s,mb4.9
CHTO Chiang Mai 26.80 259 ⇓*eP* **P** **22 10 42.7 +1.0**
comp=Z,79nm,1.8s,mb4.9
BTM Bintulu 26.89 211 ⇓P **P** **22 10 44.0 +1.4**
CM31 Chiang Mai Arr 26.93 258 *eP* **P** **22 10 43.3 +0.3**
comp=Z,19nm,1.4s,mb4.4
CMAR Chiang Mai Arr 26.93 258 P **P** **22 10 44.2 +1.2**
comp=Z,4.6nm,0.9s,mb4.0,baz=56,slow=7.8,SNR=30
CMAR PcP PcP 22 14 03.0 +0.7
comp=Z,1.1nm,0.3s,baz=31,slow=2.1,SNR=7.4
CMAR ScP ScP 22 17 33.1 +1.0
comp=Z,0.4nm,0.3s,baz=96,slow=1.1,SNR=4.8
CMAR LR LR 22 22 12.4
comp=Z,58nm,20.7s,baz=75,slow=38
CMAR Chiang Mai Arr 26.93 258 P **P** **22 10 44.2 +1.2**
CMAR 22 14 03.0
CIT Chita 27.05 342 *eP* **P** **22 10 47.0 +3.3**
CIT *e* pP 22 11 11.2 +3.0
SBUM Sibu 27.96 212 ⇓P **P** **22 10 53.7 +1.6**
ZAK Zakamensk 29.58 329 *eP* **P** **22 11 05.7 -0.4**
ZAK *e* 22 14 09.5
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
KSM Kuching 29.75 215 ⇑P **P** **22 11 09.8 +1.9**
TLY Talaya 30.34 331 P **P** **22 11 13.2 +0.4**
SNR=5.7
TLY Talaya 30.34 331 *eP* **P** **22 11 12.6 -0.2**
TLY *e* pP 22 11 40.1 +2.5
TLY *e*S **S** **22 16 07.9 +3.2**
TLY *e*SSS 22 17 55.1
TLY pmax pmax
comp=Z,31nm,1.1s,mb4.8
TLY MLR MLR
comp=Z,126nm,14.0s
TLY Talaya 30.34 331 ⇓*eP* **P** **22 11 12.2 -0.6**
comp=Z,26nm,1.0s,mb4.8
SHL Shillong 31.25 276 *eP* **P** **22 11 22.0 +0.8**
LSA Lhasa 31.41 284 P **P** **22 11 23.8 +1.3**
LSA LR LR
comp=N,179nm,10.8s
LSA LR LR
comp=E,202nm,8.1s
LSA LR LR
comp=Z,335nm,14.2s
LSA Lhasa 31.41 284 *eP* **P** **22 11 23.4 +0.9**
LSA *e* 22 14 14.7
LSA pmax pmax
comp=Z,11nm,0.3s,mb5.1
LSA Lhasa 31.41 284 *eP* **P** **22 11 23.4 +0.9**
comp=Z,11nm,0.3s,mb5.1
LSA *e*PcP PcP 22 14 14.7 +1.2
MOY Mondy 31.52 329 *eP* **P** **22 11 23.0 -0.2**
MOY pmax pmax
comp=Z,4.0nm,1.8s,mb3.9
KULM Kulim 32.84 234 *eP* **P** **22 11 37.1 +1.9**
comp=Z,10nm,1.1s,mb4.6
KULM Kulim 32.84 234 ⇑P **P** **22 11 37.4 +2.2**
IPM Ipoh 33.13 232 ⇑P **P** **22 11 39.3 +1.6**
PETK Petropavlovsk- 34.90 33 P **P** **22 11 52.0 -0.5**
comp=Z,1.5nm,0.3s,mb4.2,baz=29,slow=2.0,SNR=12
PETK PcP PcP 22 14 22.1 -0.7
comp=Z,6.3nm,0.9s,baz=193,slow=5.8,SNR=3.7
PETK LR LR 22 27 12.8
comp=Z,66nm,19.6s,baz=229,slow=38
PETK Petropavlovsk- 34.90 33 P **P** **22 11 52.0 -0.5**
PETK 22 14 22.1
YAK Yakutsk 35.25 2 *eP* pP 22 12 13.0 -7.5
YAK *e**PP sP 22 12 39.8 +6.3
YAK *e* 22 13 42.4
YAK *e* 22 14 22.8
YAK *e*SS SS 22 19 45.1 -13
YAK pmax pmax
comp=Z,13nm,1.0s,mb4.7
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK MLR MLR
comp=Z,98nm,14.0s
PET Petropavlovsk 35.31 34 *eP* **P** **22 11 57.5 +1.4**
PET *e* 22 17 18.9
RAMN Ramite 35.70 280 *eP* **P** **22 11 59.8 +0.1**
comp=Z,28nm,0.4s,mb5.6
WMQ Urumqi 35.70 309 P **P** **22 11 59.3 -0.3**
WMQ AP pP 22 12 25.4 +0.7
WMQ PP PP 22 13 23.4 +0.6
WMQ PPP 22 13 45.0
WMQ S **S** **22 17 27.3 -0.6**
WMQ SCS ScS 22 22 03.8 -2.4
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,90nm,4.5s
WMQ LR LR
comp=N,260nm,20.0s
WMQ LR LR
comp=E,162nm,28.0s
WMQ LR LR
comp=Z,218nm,28.0s
PSI Prapat 35.79 233 P **P** **22 12 01.9 +1.2**
comp=Z,4.5nm,0.7s,mb4.5,baz=340,slow=11,SNR=6.0
PSI PcP PcP 22 14 26.4 +0.3
comp=Z,2.1nm,0.5s,baz=327,slow=6.4,SNR=14
PSI S **S** **22 17 34.2 +4.3**
comp=Z,2.2nm,0.4s,baz=154,slow=20,SNR=5.6
PSI ScP ScP 22 18 02.1 +0.2
comp=Z,2.2nm,0.4s,baz=205,slow=0.9,SNR=4.0
PSI Prapat 35.79 233 P **P** **22 12 01.9 +1.2**
PSI 22 14 26.4
PSI *S* **S** **22 17 34.2 +4.3**
JIRN Jiri 35.95 281 *eP* **P** **22 12 02.2 +0.3**
comp=Z,26nm,0.3s,mb5.6
GUN Gumba 36.19 281 *eP* **P** **22 12 04.2 +0.3**
comp=Z,52nm,0.3s,mb6.0
PKI Pulchoki 36.65 281 *eP* **P** **22 12 07.8 -0.1**
comp=Z,85nm,0.4s,mb6.0
PKIN Phulchoki 36.66 281 *eP* **P** **22 12 07.8 -0.1**
comp=Z,67nm,0.4s,mb6.0
KKN Kakani 36.73 281 *eP* **P** **22 12 08.6 +0.1**
DMN Daman 36.91 281 *eP* **P** **22 12 09.9 -0.2**
GKN Gorkha 37.26 282 *eP* **P** **22 12 12.9 -0.1**
DANN Dangsing 37.98 282 *eP* **P** **22 12 19.4 +0.3**
comp=Z,92nm,0.4s,mb6.0
KOLN Koldanda 38.20 282 *eP* **P** **22 12 21.0 0.0**
MK31 Makanchi Array 40.14 312 ⇓*iP* **P** **22 12 36.0 -0.8**
MK31 *e* 22 14 39.1
MK31 Makanchi Array 40.14 312 ⇓*iP* **P** **22 12 36.0 -0.8**
MK31 *e*PcP PcP 22 14 39.1 +0.1
MK31 *e*ScP ScP 22 18 18.3 +0.5
MKAR Makanchi Array 40.14 312 P **P** **22 12 36.6 -0.2**
comp=Z,30nm,0.5s,mb5.4,baz=89,slow=10,SNR=358
MKAR PcP PcP 22 14 39.5 +0.4
comp=Z,15nm,0.8s,baz=72,slow=4.0,SNR=12
MKAR ScP ScP 22 18 18.0 +0.1
comp=Z,3.4nm,0.8s,baz=100,slow=4.7,SNR=8.7
MKAR LR LR 22 30 05.5
comp=Z,100nm,20.6s,baz=130,slow=37
MKAR Makanchi Array 40.14 312 P **P** **22 12 36.6 -0.2**
MKAR 22 14 39.5
MKAR Makanchi Array 40.14 312 P **P** **22 12 36.6 -0.2**
MKAR PcP PcP 22 14 39.5 +0.4
MKAR ScP ScP 22 18 18.0 +0.1
MKAR LR LR 22 30 05.5
ZAA0 Zalesovo Array 40.97 323 ⇓*eP* **P** **22 12 42.1 -1.3**
ZAA0 *e*pP pP 22 13 10.2 +1.0
ZAA0 *e*PcP PcP 22 14 40.6 -1.0
ZAA0 *e*ScP ScP 22 18 20.0 -1.0
ZALV Zalesovo Beam 40.97 323 P **P** **22 12 42.7 -0.8**
comp=Z,31nm,0.3s,mb5.6,baz=109,slow=8.1,SNR=171
ZALV pP pP 22 13 07.3 -1.8
comp=Z,10.0nm,0.7s,baz=108,slow=8.0,SNR=2.6
ZALV PcP PcP 22 14 41.1 -0.5
comp=Z,5.8nm,0.3s,baz=100,slow=4.4,SNR=9.9
ZALV ScP ScP 22 18 20.4 -0.5
comp=Z,4.6nm,0.8s,baz=114,slow=3.7,SNR=10
ZALV LR LR 22 32 38.3
comp=Z,45nm,18.3s,baz=214,slow=40
ZALV Zalesovo Beam 40.97 323 P **P** **22 12 42.7 -0.8**
ZALV **PP pP 22 13 07.4 -1.7
ZALV 22 14 41.1
ZALV Zalesovo Beam 40.97 323 P **P** **22 12 42.7 -0.8**
ZALV pP pP 22 13 07.3 -1.8
ZALV PcP PcP 22 14 41.1 -0.5
ZALV ScP ScP 22 18 20.4 -0.5
ZALV LR LR 22 32 38.3
PMG Port Moresby 41.11 148 P **P** **22 12 44.3 -0.8**
comp=Z,16nm,0.7s,mb5.0,baz=2.6,slow=5.4,SNR=8.7
PMG Port Moresby 41.11 148 *eP* **P** **22 12 44.3 -0.8**
PMG pmax pmax
comp=Z,19nm,0.7s
PMG Port Moresby 41.11 148 *eP* **P** **22 12 44.3 -0.8**
comp=Z,19nm,0.7s,mb5.0
NVS Novosibirsk 42.17 324 ⇓*iP* **P** **22 12 52.2 -1.1**
NVS *i* pP 22 13 20.6 +1.5
NVS *i* 22 14 34.1
NVS pmax pmax
comp=Z,61nm,2.4s,mb4.9
NVS pmax pmax
comp=N,22nm,2.0s
NVS pmax pmax
comp=E,34nm,2.0s
SMLA Simla 43.30 288 *i* P **P** **22 13 03.0 +0.3**
KURK Kurchatov 43.47 317 P **P** **22 13 03.6 -0.2**
comp=E,318nm,0.4s,mb6.4,SNR=12
KURK Kurchatov 43.47 317 P **P** **22 13 03.2 -0.7**
SNR=12
KURK Kurchatov 43.47 317 P **P** **22 13 03.1 -0.7**
comp=E,16nm,0.4s,mb5.1,baz=105,slow=9.4,SNR=60
KURK pP pP 22 13 30.0 +0.3
comp=E,6.5nm,0.7s,baz=104,slow=8.0,SNR=2.7
KURK PcP PcP 22 14 48.5 -1.4
comp=E,9.2nm,0.8s,baz=110,slow=3.4,SNR=6.3
KURK LR LR 22 32 10.3
comp=E,123nm,20.1s,baz=95,slow=37
KURK Kurchatov 43.47 317 ⇓*iP* **P** **22 13 03.0 -0.8**
KURK *e**PP pP 22 13 29.7 0.0
KURK *e* 22 14 48.5
KURK pmax pmax
comp=Z,138nm,1.8s,mb5.4
KURK Kurchatov 43.47 317 ⇓*iP* **P** **22 13 03.0 -0.9**
comp=Z,138nm,1.8s,mb5.4
KURK *e*pP pP 22 13 29.7 0.0
KURK *e*PcP PcP 22 14 48.5 -1.5
COEN Coen 43.58 157 *eP* **P** **22 13 04.8 -0.2**
comp=Z,54nm,1.0s,mb5.2
COEN *e*pP pP 22 13 30.1 -0.9
KSH Kashi 43.81 300 P **P** **22 13 09.1 +2.4**
KSH AP pP 22 13 34.6 +2.0
KSH XP sP 22 13 47.6 +2.2
KSH PP PP 22 14 54.3 +3.5
KSH PPP 22 15 34.1
KSH SCP ScP 22 18 34.3 +1.6
KSH PCS PcS 22 18 46.0 +1.7
KSH S **S** **22 19 30.3 +1.2**
KSH XS sS 22 20 15.5 +1.7
KSH SS SS 22 22 41.8 -7.2
KSH SCS ScS 22 22 54.3 0.0
KSH AMB AMB
comp=Z,39nm,0.6s,mb5.3
KSH AMB AMB
comp=Z,714nm,3.3s
KSH LR LR
comp=N,741nm,6.2s
KSH LR LR
comp=E,642nm,5.2s
KSH LR LR
comp=Z,875nm,6.1s
TKM2 Tokmak 2 44.24 305 *eP* **P** **22 13 10.8 +0.7**
TKM2 *e**PP pP 22 13 35.6 -0.5
TKM2 *e* 22 14 52.4
TKM2 pmax pmax
comp=Z,22nm,0.6s,mb5.1
TKM2 Tokmak 2 44.24 305 P **P** **22 13 11.2 +1.0**
SNR=28
TKM2 Tokmak 2 44.24 305 *eP* **P** **22 13 10.8 +0.7**
comp=Z,22nm,0.6s,mb5.1
TKM2 *e*pP pP 22 13 35.6 -0.5
TKM2 *e*PcP PcP 22 14 52.4 -0.4
KZA Kyzart 44.45 304 P **P** **22 13 13.7 +1.9**
SNR=6.7
FITZ Fitzroy Crossi 44.68 181 ⇑*iP* **P** **22 13 13.3 -0.5**
comp=Z,21nm,0.6s,mb5.0
FITZ Fitzroy Crossi 44.68 181 *eP* **P** **22 13 13.2 -0.5**
comp=Z,21nm,0.9s,mb4.9
FITZ *e*pP pP 22 13 38.1 -1.6
FITZ *e*PcP PcP 22 14 55.8 +1.3
FITZ *e*ScP ScP 22 18 36.8 +0.4
KBK Karagaybulak 44.70 305 P **P** **22 13 16.2 +2.4**
SNR=11
CHMS Chumysh 44.87 305 P **P** **22 13 16.3 +1.2**
SNR=8.6
TIXI Tiksi 44.87 1 *eP* **P** **22 13 13.4 -1.3**
TIXI *e* 22 14 53.4
TIXI pmax pmax
comp=Z,26nm,1.6s,mb4.7
TIXI Tiksi 44.87 1 *eP* **P** **22 13 13.3 -1.4**
comp=Z,26nm,1.6s,mb4.7
TIXI *e*PcP PcP 22 14 53.4 -1.0
UCH Uchtor 45.00 304 *eP* **P** **22 13 17.6 +1.4**
comp=Z,10nm,0.8s,mb4.6
UCH *e*pP pP 22 13 43.6 +1.4
UCH *e*PcP PcP 22 14 56.9 +1.5
UCH *e*PP PP 22 15 05.6 +2.2
AAK Ala-Archa 45.03 304 P **P** **22 13 17.9 +1.5**
comp=Z,83nm,0.4s,mb5.8,SNR=7.9
AAK Ala-Archa 45.03 304 *eP* **P** **22 13 17.8 +1.4**
AAK *e* 22 14 56.3
AAK pmax pmax
comp=Z,18nm,0.9s,mb4.8
AAK Ala-Archa 45.03 304 P **P** **22 13 16.8 +0.4**
SNR=8.5
AAK Ala-Archa 45.03 304 *eP* **P** **22 13 17.8 +1.4**
comp=Z,18nm,0.9s,mb4.8
AAK *e*PcP PcP 22 14 56.3 +0.8
USP Ospenovka 45.07 305 P **P** **22 13 17.2 +0.5**
SNR=6.8
HYB Hyderabad 45.39 268 *i* P **P** **22 13 21.0 +1.4**
HYB Hyderabad 45.39 268 *eP* **P** **22 13 21.0 +1.4**
AML Almayashu 45.60 304 P **P** **22 13 23.1 +2.2**
SNR=9.0
AML Almayashu 45.60 304 *eP* **P** **22 13 22.5 +1.6**
comp=Z,6.1nm,0.3s,mb4.8
AML *e*PcP PcP 22 14 58.7 +1.2
WRAB Tennant Creek 47.07 170 P **P** **22 13 32.0 -0.5**
comp=Z,318nm,0.8s,mb6.1,SNR=22
WRAB Tennant Creek 47.07 170 *eP* **P** **22 13 32.3 -0.2**
WRAB pmax pmax
comp=Z,45nm,0.9s,mb5.2
WRAB Tennant Creek 47.07 170 *eP* **P** **22 13 32.3 -0.2**
comp=Z,44nm,0.9s,mb5.2
WRA Warramunga Arr 47.08 170 P **P** **22 13 31.9 -0.6**
comp=Z,32nm,0.7s,mb5.2,baz=351,slow=8.2,SNR=129
WRA pP pP 22 13 58.1 -0.7
comp=Z,14nm,0.9s,baz=348,slow=8.2,SNR=5.0
WRA ScP ScP 22 18 45.7 -0.7
comp=Z,1.0nm,0.9s,baz=354,slow=4.9,SNR=3.8
WRA LR LR 22 32 45.1
comp=Z,219nm,20.0s,baz=25,slow=35
WRA Warramunga Arr 47.08 170 P **P** **22 13 31.9 -0.7**
WRA **PP pP 22 13 58.1 -0.7
WRA Warramunga Arr 47.08 170 P **P** **22 13 31.9 -0.6**
WRA pP pP 22 13 58.1 -0.7
WRA ScP ScP 22 18 45.7 -0.7
WRA LR LR 22 32 45.1
WB2 Warramunga Arr 47.08 170 ⇑*iP* **P** **22 13 32.1 -0.5**
WB2 *e* pP 22 13 58.5 -0.3
WB2 Warramunga Arr 47.08 170 *eP* **P** **22 13 32.1 -0.5**
WB2 *e*pP pP 22 13 59.2 +0.3
BILL Bilibino 47.53 19 ⇑*iP* **P** **22 13 34.3 -1.2**
BILL *e* 22 15 02.8
BILL pmax pmax
comp=Z,38nm,1.7s,mb5.0
BILL Bilibino 47.53 19 *eP* **P** **22 13 34.7 -0.8**
comp=Z,60nm,1.7s,mb5.2
BILL *e*pP pP 22 14 03.9 +2.0
BILL *e*PcP PcP 22 15 03.5 -0.3
PALK Pallekele 47.80 255 *eP* **P** **22 13 40.6 +2.2**
PALK pmax pmax
comp=Z,25nm,0.7s,mb5.2
PALK Pallekele 47.80 255 *eP* **P** **22 13 40.6 +2.3**
comp=Z,25nm,0.7s,mb5.2
KK31 Karatay Array 47.98 305 *i* P **P** **22 13 40.1 +0.7**
KK31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.7
MBWA Marble Bar 48.19 189 *eP* **P** **22 13 40.4 -0.7**
comp=Z,7.6nm,0.7s,mb4.6
BVA0 Borovoye Array 48.94 318 *eP* **P** **22 13 46.4 -0.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BVAR Borovoye Array 48.94 318 P **P** **22 13 46.5 -0.1**
comp=Z,9.2nm,0.4s,mb5.1,baz=105,slow=9.4,SNR=90
BVAR PcP PcP 22 15 09.3 +0.2
comp=Z,14nm,0.6s,baz=115,slow=3.5,SNR=14
BVAR ScP ScP 22 18 54.0 +0.1
comp=Z,4.5nm,0.9s,baz=103,slow=4.7,SNR=7.9
BVAR LR LR 22 36 35.7
comp=Z,52nm,20.8s,baz=296,slow=38
BVAR Borovoye Array 48.94 318 P **P** **22 13 46.5 -0.1**
BVAR 22 15 09.3
BRVK Borovoye 49.01 318 P **P** **22 13 47.4 +0.3**
comp=Z,189nm,0.5s,mb6.3,SNR=23
BRVK Borovoye 49.01 318 P **P** **22 13 47.1 -0.1**
SNR=14
BRVK Borovoye 49.01 318 *eP* **P** **22 13 46.4 -0.7**
BRVK *e**PP pP 22 14 12.9 -0.6
BRVK *e* 22 15 09.3
BRVK pmax pmax
comp=Z,87nm,1.6s,mb5.4
BRVK Borovoye 49.01 318 *eP* **P** **22 13 46.4 -0.7**
comp=Z,87nm,1.6s,mb5.4
BRVK *e*pP pP 22 14 12.9 -0.6
BRVK *e*PcP PcP 22 15 09.3 -0.1
BRVK *e*ScP ScP 22 18 54.8 +0.6
POO Poona 49.21 272 ⇑*ix* **P** **22 13 47.5 -1.7**
comp=Z,50nm,1.0s,mb5.4
KBL Kabul 49.64 294 *eP* **P** **22 13 52.5 +0.2**
KBL *e* 22 15 12.5
KBL pmax pmax
comp=Z,84nm,0.8s,mb5.7
KBL Kabul 49.64 294 *eP* **P** **22 13 52.5 +0.2**
comp=Z,84nm,0.8s,mb5.7
KBL *e*PcP PcP 22 15 12.5 +0.4
KBL *e*ScP ScP 22 18 57.4 +0.1
CTA Charters Tower 50.33 156 P **P** **22 13 57.5 0.0**
comp=Z,18nm,1.0s,mb5.0,baz=328,slow=8.6,SNR=13
CTA pP pP 22 14 23.5 -0.5
comp=Z,10nm,0.9s,baz=338,slow=9.8,SNR=4.6
CTA S **S** **22 21 00.9 -1.1**
comp=Z,5.3nm,1.2s,baz=53,slow=16,SNR=2.2
CTA Charters Tower 50.33 156 ⇑*iP* **P** **22 13 57.4 -0.1**
comp=Z,13nm,0.9s,mb4.8
CTA *e* pP 22 14 23.7 -0.3
CTA Charters Tower 50.33 156 P **P** **22 13 57.5 0.0**
CTA pP pP 22 14 23.5 -0.5
CTA S **S** **22 21 00.9 -1.1**
CTAO Charters Tower 50.33 156 *eP* **P** **22 13 57.2 -0.3**
CTAO *e**PP pP 22 14 23.6 -0.4
CTAO pmax pmax
comp=Z,20nm,0.9s,mb5.0
CTAO Charters Tower 50.33 156 *eP* **P** **22 13 57.2 -0.3**
comp=Z,20nm,0.9s,mb5.0
CTAO *e*pP pP 22 14 23.6 -0.5
ASAR Alice Springs 50.68 172 P **P** **22 14 00.1 +0.1**
comp=Z,16nm,0.5s,mb5.3,baz=357,slow=14,SNR=203
ASAR pP pP 22 14 25.9 -0.7
comp=Z,11nm,0.9s,baz=356,slow=6.5,SNR=4.8
ASAR PcP PcP 22 15 16.1 +0.3
comp=Z,4.5nm,0.7s,baz=345,slow=2.6,SNR=4.5
ASAR ScP ScP 22 19 01.5 -0.1
comp=Z,0.7nm,0.9s,baz=354,slow=7.9,SNR=3.2
ASAR Alice Springs 50.68 172 P **P** **22 14 00.1 +0.1**
ASAR **PP pP 22 14 25.9 -0.7
ASAR 22 15 16.2

SVE Sverdlovsk 54.97 322 *e*P **P** **22 14 30.6 -0.7**
SVE pmax pmax
comp=Z,64nm,1.7s,mb5.4
AB31 Akbulak array 55.26 313 P **P** **22 14 33.3 -0.2**
AB31 pmax pmax
comp=Z,18nm,0.6s,mb5.3
TNA Tin City 55.71 27 *e*P **P** **22 14 35.4 -1.0**
comp=Z,115nm,1.6s,mb5.7
ARU Arti 56.09 322 P **P** **22 14 39.3 0.0**
comp=Z,98nm,0.3s,mb6.3,SNR=12
ARU Arti 56.09 322 *c i*P **P** **22 14 38.4 -0.9**
ARU *e* 22 16 41.7
ARU *e*PPP 22 18 02.7
ARU *e*S **S** **22 22 21.4 +2.1**
ARU *e* 22 26 13.1
ARU pmax pmax
comp=Z,50nm,1.7s,mb5.3
ARU Arti 56.09 322 *e*P **P** **22 14 38.5 -0.8**
comp=Z,51nm,1.4s,mb5.4
ARU *e*pP pP 22 15 06.5 +0.1
ARU *e*PcP PcP 22 15 35.5 -0.6
AKTK Aktyubinsk 56.46 314 P **P** **22 14 41.5 -0.5**
AKTK ScP ScP 22 19 26.6 0.0
AKTO Aktyubinsk 56.46 314 P **P** **22 14 41.5 -0.5**
comp=Z,3.2nm,0.3s,mb4.8,baz=51,slow=3.0,SNR=12
AKTO ScP ScP 22 19 26.6 0.0
comp=Z,1.9nm,0.9s,baz=31,slow=9.5,SNR=3.9
EIDS Eidsvold 56.96 154 *e*P **P** **22 14 45.0 -0.8**
comp=Z,6.5nm,0.8s,mb4.7
EIDS *e*pP pP 22 15 12.0 -0.9
ABKT Ailbek 57.84 300 P **P** **22 14 53.1 +1.2**
comp=Z,142nm,0.9s,mb6.0,SNR=13
STKA Stephens Creek 60.08 165 P **P** **22 15 07.1 -0.1**
comp=Z,15nm,0.7s,mb5.2,baz=345,slow=5.6,SNR=32
STKA pP pP 22 15 33.5 -1.1
comp=Z,14nm,0.9s,baz=307,slow=7.2,SNR=5.3
STKA LR LR 22 40 23.2
comp=Z,114nm,18.7s,baz=25,slow=35
STKA Stephens Creek 60.08 165 ⇑ *i*P **P** **22 15 06.8 -0.5**
STKA comp=Z,12nm,0.6s,mb5.1
STKA *e* pP 22 15 33.2 -1.4
STKA Stephens Creek 60.08 165 *e*P **P** **22 15 07.1 -0.2**
comp=Z,22nm,1.8s,mb4.9
STKA *e*pP pP 22 15 33.1 -1.5
NWAO Narrogin (SRO) 60.11 189 LR LR 22 43 48.5
comp=Z,65nm,20.1s,baz=238,slow=38
SVW2 Sparrevohn 60.98 33 *e*P **P** **22 15 13.4 +0.3**
BIDO Bidbid 61.50 283 P **P** **22 15 17.8 +0.5**
SNR=6.4
ARMA Armidale 61.70 156 *e*P **P** **22 15 18.7 +0.4**
SMDO Samad 61.71 283 P **P** **22 15 19.7 +1.0**
SNR=7.8
HOQ Hoqain 62.19 284 P **P** **22 15 22.6 +0.7**
SNR=8.6
CHUM Lake Minchumin 62.30 30 *e*P **P** **22 15 22.0 0.0**
comp=Z,61nm,1.0s,mb5.6
PPLA Purkeypile 62.44 31 *e*P **P** **22 15 23.2 +0.3**
comp=Z,118nm,1.3s,mb5.8
BSY Bisya 62.56 283 P **P** **22 15 25.2 +0.9**
SNR=6.0
KDAK Kodiak Island 62.83 36 P **P** **22 15 24.0 -1.5**
comp=Z,35nm,0.7s,mb6.6,SNR=18
KDAK Kodiak Island 62.83 36 *e*P **P** **22 15 24.7 -0.8**
KDAK pmax pmax
comp=Z,45nm,0.6s,mb5.6
KDAK Kodiak Island 62.83 36 *e*P **P** **22 15 24.7 -0.8**
comp=Z,45nm,0.6s,mb5.6
BPAW Bear Paw Mtn. 62.86 29 *e*P **P** **22 15 25.2 -0.4**
comp=Z,116nm,1.5s,mb5.6
COLD Coldfoot 62.90 26 *e*P **P** **22 15 25.5 -0.3**
comp=Z,20nm,0.9s,mb5.0
KTH Kantishna Hill 62.95 30 *e*P **P** **22 15 25.7 -0.5**
comp=Z,122nm,1.5s,mb5.6
TRF Thorofare Moun 63.24 30 *e*P **P** **22 15 27.6 -0.5**
comp=Z,19nm,0.9s,mb5.0
MCK McKinley 63.81 30 *e*P **P** **22 15 31.0 -0.9**
MCK pmax pmax
comp=Z,76nm,1.0s,mb5.5
MCK McKinley 63.81 30 *e*P **P** **22 15 31.0 -0.9**
comp=Z,76nm,1.0s,mb5.5
RC01 Rabbit Creek A 63.81 33 *e*P **P** **22 15 30.8 -1.1**
comp=Z,67nm,1.2s,mb5.3
PMR Palmer 64.02 32 *e*P **P** **22 15 32.3 -1.0**
PMR pmax pmax
comp=Z,202nm,1.6s,mb5.7
PMR Palmer 64.02 32 *e*P **P** **22 15 32.3 -1.0**
comp=Z,202nm,1.6s,mb5.7
COLA College 64.12 28 ⇑ *i*P **P** **22 15 33.6 -0.3**
COLA College 64.12 28 *e*P **P** **22 15 33.5 -0.4**
comp=Z,21nm,0.7s,mb5.1
PAX Paxson 65.47 30 *e*P **P** **22 15 42.3 -0.4**
PAX pmax pmax
comp=Z,31nm,1.1s,mb5.0
PAX Paxson 65.47 30 *e*P **P** **22 15 42.3 -0.5**
comp=Z,31nm,1.1s,mb5.1
KLMR Klimovskoe 65.63 328 *e*P **P** **22 15 42.0 -1.8**
KLMR pmax pmax
comp=Z,41nm,1.3s,mb5.1
MENT Mentasta 66.26 30 *e*P **P** **22 15 47.5 -0.3**
VRHR Novokhopersk 66.65 317 *e*P **P** **22 15 49.5 -0.9**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
EGAK Eagle 66.94 28 *e*P **P** **22 15 51.4 -0.6**
comp=Z,30nm,0.9s,mb5.1
ONI Oni 67.68 308 P **P** **22 15 58.1 +0.9**
KIV Kislovodsk 67.83 309 P **P** **22 15 59.5 +1.4**
comp=Z,491nm,1.0s,mb6.3,SNR=11
KIV Kislovodsk 67.83 309 P **P** **22 15 59.4 +1.3**
SNR=12
KIV Kislovodsk 67.83 309 *d i*P **P** **22 15 57.9 -0.2**
KIV *i* *PP pP 22 16 25.0 -1.0
KIV pmax pmax
comp=Z,189nm,1.7s,mb5.7
KIV Kislovodsk 67.83 309 *e*P **P** **22 15 59.0 +1.0**
comp=Z,196nm,1.3s,mb5.8
KIV *e*pP pP 22 16 27.7 +1.7
DAWY Dawson 67.87 28 *e*P **P** **22 15 57.8 -0.1**
VORD Divnogorie 68.10 317 *e*P **P** **22 15 58.5 -1.1**
VORD pmax pmax
comp=Z,20nm,1.2s,mb4.8
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,40nm,1.1s
VSR Storozhevoye 68.11 317 *e*P **P** **22 15 58.5 -1.2**
VSR pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
VSR pmax pmax
comp=N,5.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.1s
UMR Umm Al-Rimmam 68.38 293 *e*P **P** **22 16 01.2 -0.5**
baz=293
UMR AMb AMB 22 16 02.4
comp=Z,64nm,0.4s,mb5.8,baz=293
KEV Kevo 68.39 338 *e*p **P** **22 15 59.7 -1.4**
KBS Kingsbay 68.41 349 ⇓ *i*P **P** **22 16 00.7 -0.4**
KBS pmax pmax
comp=Z,33nm,1.2s,mb5.0
QRN Al-Qurain 68.48 292 *e*P **P** **22 16 01.8 -0.6**
baz=292
OBN Obninsk 68.54 322 ⇓ *i*P **P** **22 16 00.1 -2.2**
OBN *i* *PP pP 22 16 26.0 -4.2
OBN pmax pmax
comp=Z,65nm,1.7s,mb5.2
MIB Mutribah 68.60 293 *e*P **P** **22 16 02.5 -0.7**
baz=293
MIB AMb AMB 22 16 03.8
comp=Z,104nm,0.8s,mb5.7,baz=293
RDF Al-Radifah 68.72 292 *e*P **P** **22 16 03.3 -0.6**
baz=292
RDF AMb AMB 22 16 04.5
comp=Z,134nm,0.5s,mb6.0,baz=292
INK Inuvik 68.86 23 *e*P **P** **22 16 03.7 -0.4**
INK pmax pmax
comp=Z,61nm,0.9s
INK Inuvik 68.86 23 *e*P **P** **22 16 03.7 -0.3**
comp=Z,61nm,0.9s,mb5.4
NAY Al-Naaiem 68.87 293 *e*P **P** **22 16 04.1 -0.7**
baz=293
NAY AMb AMB 22 16 05.3
comp=Z,66nm,0.7s,mb5.6,baz=293

JOF Joensuu 68.87 331 *ep* **P** **22 16 00.4 -3.8**
comp=Z,9.3nm,0.8s,mb4.7
JOF Joensuu 68.87 331 *e*P **P** **22 16 00.4 -3.8**
JOF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
ARCES ARCESS Array B 68.96 338 P **P** **22 16 03.3 -1.3**
comp=Z,1.5nm,0.3s,mb4.3,baz=60,slow=7.6,SNR=38
HYT Haines Junctio 69.67 31 *e*P **P** **22 16 09.6 +0.5**
SOC Sochi 70.00 309 *e*P **P** **22 16 08.6 -2.9**
SOC *e**PP pP 22 16 34.3 -5.2
SOC *e* 22 18 47.1
SOC *e*PPP 22 20 31.8
SOC *e*S S 22 25 12.4 -0.5
SOC *e*SSS 22 32 55.6
ALE Alert 70.78 1 P **P** **22 16 15.6 0.0**
comp=Z,169nm,1.0s,mb5.8,SNR=7.0
SKAG Skagway 71.15 32 *e*P **P** **22 16 18.4 +0.3**
comp=Z,44nm,0.9s,mb5.3
ANN Anapa 71.16 311 *e*P **P** **22 16 16.3 -2.2**
ANN *e**PP pP 22 16 41.6 -5.0
ANN *e*S S 22 25 23.9 -2.5
ANN pmax pmax
comp=Z,99nm,1.0s,mb5.6
KAF Kangasniemi 71.33 331 *ep* **P** **22 16 16.6 -2.6**
comp=Z,12nm,0.8s,mb4.8,baz=68,slow=5.7
KAF Kangasniemi 71.33 331 *e*P **P** **22 16 16.6 -2.6**
KAF pmax pmax
comp=Z,12nm,0.8s,mb4.8
VSU Vasula 72.52 327 ⇓ *i*P **P** **22 16 25.8 -0.6**
VSU pmax pmax
comp=Z,86nm,1.3s,mb5.4
SIM Simferopol' 73.32 312 *e*P **P** **22 16 26.1 -5.3**
SIM pmax pmax
comp=Z,41nm,0.8s,mb5.3
DLBC Dease Lake 74.08 32 *e*P **P** **22 16 36.1 +0.5**
AKASG Malin Array Be 74.21 319 P **P** **22 16 35.5 -0.9**
comp=Z,6.9nm,0.3s,mb4.8,baz=56,slow=6.0,SNR=50
AKASG LR LR 22 51 00.3
comp=Z,151nm,21.9s,baz=310,slow=37
AKBB Malin Array Si 74.21 319 *e*P **P** **22 16 35.4 -1.0**
KIEV Kiev 74.22 319 *e*P **P** **22 16 35.2 -1.3**
KIEV pmax pmax
comp=Z,18nm,0.6s,mb5.0
KIEV Kiev 74.22 319 *e*P **P** **22 16 35.2 -1.3**
comp=Z,18nm,0.6s,mb5.0
RES Resolute Bay 75.20 11 *e*P **P** **22 16 40.9 -0.9**
RES pmax pmax
comp=Z,59nm,0.8s,mb5.4
RES Resolute Bay 75.20 11 *e*P **P** **22 16 40.9 -0.9**
comp=Z,59nm,0.8s,mb5.4
BR131 Keskin Array S 75.61 307 *e*P **P** **22 16 45.1 +0.4**
comp=Z,20nm,0.8s,mb4.9
BRTR Keskin Array B 75.61 307 P **P** **22 16 44.9 +0.1**
comp=Z,21nm,0.8s,mb5.0,baz=94,slow=5.0,SNR=87
SUW Suwalki 76.19 324 *e*P **P** **22 16 47.5 -0.2**
SUW Suwalki 76.19 324 *e*P **P** **22 16 47.5 -0.2**
TLCR 76.69 314 ⇑ *i*P **P** **22 16 50.7 0.0**
TLCR 76.69 314 ⇑ P **P** **22 16 50.6 -0.1**
TIRR Tirgusor 77.25 313 ⇑ *i*P **P** **22 16 53.0 -0.9**
HARR Harsova 77.47 314 ⇑ *i*P **P** **22 16 55.5 +0.4**
HARR Harsova 77.47 314 P **P** **22 16 55.7 +0.6**
ODB Odobesti 77.56 315 ⇓ *i*P **P** **22 16 57.6 +2.0**
ODB Odobesti 77.56 315 P **P** **22 16 57.4 +1.8**
HFS Hagfors 77.67 332 P **P** **22 16 54.9 -1.0**
comp=Z,6.0nm,0.3s,mb4.8,baz=69,slow=4.4,SNR=65
VRI Vrincioaia 77.73 315 ⇑ *i*P **P** **22 16 57.9 +1.4**
VRI Vrincioaia 77.73 315 P **P** **22 16 57.6 +1.1**
PSN Preslentsi 77.73 313 *i* P **P** **22 16 57.0 +0.4**
BUR08 Bucovina Ar. S 77.89 317 *e*P **P** **22 16 57.4 0.0**
BURAR Bucovina Array 77.89 317 ⇓ *i*P **P** **22 16 57.3 -0.1**
BURAR Bucovina Array 77.89 317 ⇓ P **P** **22 16 57.4 0.0**
NB2 NORSAR Subarra 78.18 333 P **P** **22 16 57.5 -1.2**
comp=Z,23nm,0.8s,mb5.0,baz=56,slow=5.6
NOA NORSAR Array B 78.18 333 P **P** **22 16 57.5 -1.2**
comp=Z,14nm,0.8s,mb4.8,baz=54,slow=5.6,SNR=42
MLR Muntele Rosu 78.38 315 P **P** **22 16 59.9 -0.2**
comp=Z,21nm,0.9s,mb4.9,baz=12,slow=2.9,SNR=29
MLR LR LR 22 53 03.8
comp=Z,162nm,19.5s,baz=251,slow=37
MLR Muntele Rosu 78.38 315 ⇑ *i*P **P** **22 17 00.5 +0.4**
MLR Muntele Rosu 78.38 315 ⇑ P **P** **22 17 00.5 +0.3**
KWP Kalwaria 78.45 320 *e*P **P** **22 17 01.1 +0.6**
KWP Kalwaria 78.45 320 ⇓ *i*P **P** **22 17 00.8 +0.4**
KWP Kalwaria 78.45 320 *e*P **P** **22 17 01.1 +0.7**
PRD Provadia 78.45 313 *i* P **P** **22 17 00.9 +0.3**
YKA Yellowknife Ar 78.54 25 P **P** **22 17 00.2 -0.5**
comp=Z,8.1nm,0.4s,mb5.0,baz=307,slow=5.2,SNR=182
YKA PKKPbc PKKPbc 22 35 54.3 -2.4
comp=Z,0.4nm,0.5s,baz=122,slow=2.8,SNR=8.0
YKA LR LR 22 51 01.8
comp=Z,9.9nm,21.2s,baz=95,slow=35
YKA Yellowknife Ar 78.54 25 P **P** **22 17 00.2 -0.5**
YKA PKKPbc PKKPbc 22 35 54.4 -2.4
YKA LR LR 22 51 01.8
ISP Isparta 78.61 307 *e*P **P** **22 17 01.0 -0.6**
ISP pmax pmax
comp=Z,28nm,0.8s,mb5.1
ISP Isparta 78.61 307 ⇓ *i*P **P** **22 17 00.3 -1.3**
ISP Isparta 78.61 307 *e*P **P** **22 17 01.0 -0.5**
comp=Z,28nm,0.8s,mb5.2
EIL Elat 78.65 297 P **P** **22 17 02.5 +0.6**
BMR Baia Mare 78.90 318 ⇑ *i*P **P** **22 17 03.9 +1.0**
BMR Baia Mare 78.90 318 P **P** **22 17 04.0 +1.1**
VOIR 78.97 315 ⇓ *i*P **P** **22 17 03.4 0.0**
VOIR 78.97 315 P **P** **22 17 03.7 +0.3**
UZH Uzhgorod 79.16 319 ⇑ *i*P **P** **22 17 03.3 -1.0**
UZH *i* 22 17 07.0
UZH *e* pP 22 17 29.3 -3.7
UZH *i* pP 22 17 36.0 +3.0
TRPA Tarpa 79.25 319 ⇑ *i*P **P** **22 17 04.7 -0.2**
JMB Yambol 79.32 312 *i* P **P** **22 17 06.1 +0.8**
SZH Strazhica 79.39 313 *i* P **P** **22 17 05.5 -0.2**
STHS Stebnicka Huta 79.39 320 *e*P **P** **22 17 06.0 +0.4**
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
STHS Stebnicka Huta 79.39 320 *e*P **P** **22 17 06.0 +0.4**
STHS *e* 22 15 04.3
STHS Stebnicka Huta 79.39 320 *e*P **P** **22 17 06.0 +0.4**
comp=Z,5.9nm,1.2s,mb4.3
CRVS Cervenica-Dubn 79.52 320 *e*P **P** **22 17 06.6 +0.3**
CRVS pmax pmax
comp=Z,52nm,2.0s,mb5.0
CRVS Cervenica-Dubn 79.52 320 *e*P **P** **22 17 06.5 +0.2**
CRVS Cervenica-Dubn 79.52 320 *e*P **P** **22 17 06.6 +0.3**
comp=Z,52nm,2.0s,mb5.0
GKP Gorka Klasztor 79.64 325 *e*P **P** **22 17 07.1 +0.2**
GKP Gorka Klasztor 79.64 325 *e*P **P** **22 17 07.1 +0.2**
KONO Kongsberg 79.65 333 ⇑ *e*P **P** **22 17 06.0 -0.7**
DRGR 79.79 317 ⇓ *i*P **P** **22 17 07.9 +0.1**
DRGR 79.79 317 P **P** **22 17 08.2 +0.5**
OJC Ojcow 79.82 321 *e*P **P** **22 17 08.0 +0.1**
BSD Bornholm Skovb 79.83 327 *i* P **P** **22 17 06.7 -1.1**
BSD pmax pmax
comp=Z,16nm,0.8s,mb4.9
BSD Bornholm Skovb 79.83 327 *i* P **P** **22 17 06.7 -1.1**
comp=Z,16nm,0.8s,mb4.9
NIE Niedzica 79.92 320 *e*P **P** **22 17 08.9 +0.5**
DEV Deva 80.10 316 ⇑ *i*P **P** **22 17 10.0 +0.5**
DEV Deva 80.10 316 ⇑ P **P** **22 17 10.0 +0.6**
KECS Kecovo 80.29 320 *e*P **P** **22 17 10.6 +0.2**
KECS pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
KECS Kecovo 80.29 320 *e*P **P** **22 17 10.6 +0.2**
KECS *e* 22 14 59.4
KECS *e* 22 16 29.1
KECS Kecovo 80.29 320 *e*P **P** **22 17 10.6 +0.2**
comp=Z,6.4nm,1.1s,mb4.4
SUMG Summit 80.34 356 *e*P **P** **22 17 10.5 +0.3**
comp=Z,86nm,0.9s,mb5.6
ALN Alexandroupoli 80.38 311 P **P** **22 17 10.5 -0.6**
GZR Gura Zlata 80.41 316 ⇑ *i*P **P** **22 17 11.5 +0.4**
GZR Gura Zlata 80.41 316 P **P** **22 17 11.4 +0.3**
KDZ Kurdzhali 80.46 312 *i* P **P** **22 17 11.7 +0.2**
COP Copenhagen 80.69 328 *i* P **P** **22 17 12.5 +0.1**
COP pmax pmax
comp=Z,18nm,0.8s,mb5.0
COP Copenhagen 80.69 328 *i* P **P** **22 17 12.5 +0.1**
comp=Z,18nm,0.8s,mb5.0
PGB Panagyurishte 80.87 313 *i* P **P** **22 17 14.1 +0.5**
RZN Rozhen 80.91 312 *i* P **P** **22 17 13.9 0.0**
PSZ Piszkesteto 80.91 319 *e*P **P** **22 17 13.8 0.0**
PSZ pmax pmax
comp=Z,21nm,1.3s,mb4.8
PSZ Piszkesteto 80.91 319 *e*P **P** **22 17 13.8 0.0**

comp=Z,21nm,1.3s,mb4.8
OKC Ostrava-Krasne 80.93 322 *e*P **P** **22 17 13.7 -0.1**
BZS Buzias 81.02 317 ⇑ *i*P **P** **22 17 14.1 -0.3**
BZS Buzias 81.02 317 P **P** **22 17 13.9 -0.4**
VYHS Vyhne 81.23 320 *i* P **P** **22 17 15.7 +0.3**
VYHS pmax pmax
comp=Z,33nm,1.6s,mb4.9
VYHS Vyhne 81.23 320 *i* P **P** **22 17 15.7 +0.3**
comp=Z,33nm,1.6s,mb4.9
KSP Ksiaz 81.42 323 *e*P **P** **22 17 16.5 +0.1**
KSP Ksiaz 81.42 323 ⇓ *e*P **P** **22 17 16.0 -0.4**
KOLL Kolacno 81.44 320 *i* P **P** **22 17 17.2 +0.7**
VTS Vitosha 81.47 313 *i* P **P** **22 17 17.3 +0.5**
MMB Musomiste 81.61 312 *i* P **P** **22 17 17.1 -0.5**
DPC Dobruska-Polom 81.66 323 *e*P **P** **22 17 17.8 +0.1**
UPC Upice 81.75 323 *e*P **P** **22 17 17.5 -0.6**
KKB Krupnik 81.90 313 *i* P **P** **22 17 19.1 0.0**
SMOL Smolenice 82.02 321 *e*P **P** **22 17 20.3 +0.7**
OUR Ouranopolis 82.03 311 P **P** **22 17 19.5 -0.3**
VRAC Vranov 82.07 322 P **P** **22 17 20.4 +0.5**
comp=Z,24nm,0.8s,mb5.0,baz=67,slow=4.5,SNR=20
VRAC Vranov 82.07 322 ⇑ *i*P **P** **22 17 20.5 +0.7**
VRAC Vranov 82.07 322 P **P** **22 17 20.6 +0.8**
MODS Modra-Piesok 82.18 321 *e*P **P** **22 17 21.0 +0.6**
MODS pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
MODS Modra-Piesok 82.18 321 *e*P **P** **22 17 21.0 +0.6**
comp=Z,5.8nm,1.2s,mb4.3
KNT Kendrikon 82.36 312 P **P** **22 17 20.8 -0.7**
ZST Bratislava 82.37 321 *e*P **P** **22 17 21.7 +0.3**
ZST pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
ZST Bratislava 82.37 321 *e*P **P** **22 17 21.7 +0.3**
comp=Z,8.9nm,1.1s,mb4.5
PLG Polygyros 82.38 311 P **P** **22 17 21.1 -0.5**
PLG Polygyros 82.38 311 *i* P **P** **22 17 20.9 -0.7**
PAIG Paliouri 82.43 311 P **P** **22 17 21.1 -0.8**
HORT Hortiatis 82.50 312 P **P** **22 17 21.4 -0.9**
VAY Valandovo 82.50 313 *i* P **P** **22 17 21.1 -1.2**
PVCC Panska Ves 82.51 323 *e*P **P** **22 17 22.1 0.0**
PKSM Moragy 82.52 318 ⇓ *i*P **P** **22 17 22.0 -0.2**
PKSM Moragy 82.52 318 ⇓ P **P** **22 17 22.0 -0.2**
BRG Berggiesshubel 82.65 324 *i* P **P** **22 17 22.9 +0.1**
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
BRG Berggiesshubel 82.65 324 *e*P **P** **22 17 22.7 -0.1**
comp=Z,31nm,1.3s,mb5.0
BRG Berggiesshubel 82.65 324 *i* P **P** **22 17 22.9 0.0**
comp=Z,12nm,1.1s,mb4.7
NLWA Neilton Lookou 82.65 40 ⇑ P **P** **22 17 23.0 +0.1**
baz=82
TREC Trest 82.69 322 *e*P **P** **22 17 23.2 +0.1**
BSEG Bad Segeberg 82.71 328 *e*P **P** **22 17 23.4 +0.3**
BSEG pmax pmax
comp=Z,160nm,1.8s,mb5.5
BSEG Bad Segeberg 82.71 328 *e*P **P** **22 17 23.4 +0.3**
comp=Z,160nm,1.8s,mb5.5
GRG Griva 82.79 312 P **P** **22 17 22.8 -1.0**
A05A Maple Falls 82.80 38 ⇓ P **P** **22 17 23.6 0.0**
baz=82
PRU Pruhonice 82.82 323 *e*P **P** **22 17 23.6 -0.1**
D03A Wishkah Elem. 82.86 40 ⇓ P **P** **22 17 24.6 +0.6**
baz=83
CLL Collm 82.89 325 *e*P **P** **22 17 24.2 +0.1**
comp=Z,26nm,1.0s,mb5.0
CLL Collm 82.89 325 ⇓ *i*P **P** **22 17 23.6 -0.5**
comp=Z,27nm,1.0s,mb5.0
CLL *e*PPS 22 29 00.0
CLL *e*SSSS 22 39 24.0
CLL LmH 22 51 00.0
comp=N,200nm,21.5s
CLL LmH 22 51 00.0
comp=E,200nm,20.0s
CLL LmV 22 58 00.0
comp=Z,200nm,18.9s
THR6 Thira Island, 82.93 307 P **P** **22 17 23.8 -0.8**
A06A Chilliwack 83.08 38 ⇓ P **P** **22 17 24.9 -0.2**
baz=83
LIT Litokhoron 83.15 312 P **P** **22 17 24.5 -1.1**
B05A Bryant 83.19 39 ⇓ P **P** **22 17 26.0 +0.3**
baz=83
CONA Conrad Observa 83.22 321 *i* PcP PcP 22 17 26.5 -3.6
comp=Z,25nm,1.2s,SNR=17
CSNA Conrad Observa 83.22 321 ⇓ *i*P **P** **22 17 26.2 +0.4**
comp=Z,23nm,1.1s,mb4.9
E03A Lebam 83.28 41 ⇑ P **P** **22 17 26.9 +0.7**
baz=83
JCW Jim Creek 83.33 39 P **P** **22 17 26.7 +0.3**
B06A Marblemount 83.40 38 ⇓ P **P** **22 17 26.9 +0.2**
baz=83
RPW Rockport 83.42 39 *e*P **P** **22 17 26.8 -0.1**
comp=Z,6.8nm,0.6s,mb4.7
LAST Lasithi 83.43 306 P **P** **22 17 27.2 0.0**
IVA Berane 83.45 315 ⇓ *i*P **P** **22 17 27.0 -0.1**
LKR Lokris 83.51 310 *i* P **P** **22 17 25.8 -1.7**
KZN Kozani 83.53 312 *i* P **P** **22 17 26.6 -1.0**
PLE Pljevlja 83.54 315 ⇓ *i*P **P** **22 17 27.9 +0.3**
PVY Plav 83.55 315 ⇓ *i*P **P** **22 17 26.9 -0.7**
FNA Florina 83.55 313 P **P** **22 17 26.4 -1.3**
NRDL Niedersach Rie 83.67 327 *e*P **P** **22 17 28.3 +0.3**
comp=Z,96nm,1.7s,mb5.3
TANN Tannenbergstha 83.69 324 *e*P **P** **22 17 28.5 +0.3**
comp=Z,43nm,1.4s,mb5.1
A07A Ashnola River, 83.71 38 ⇑ P **P** **22 17 28.4 +0.1**
baz=84
THL Klokotos Trika 83.73 311 *e*P **P** **22 17 26.7 -1.9**
C05A Tolt Reservoir 83.73 39 ⇑ P **P** **22 17 28.6 +0.1**
baz=84
E04A Onalaska 83.75 41 ⇑ P **P** **22 17 29.2 +0.7**
baz=84
ARSA Arzberg 83.78 320 ⇑ *i*P **P** **22 17 28.9 +0.2**
comp=Z,11nm,1.1s,mb4.6
AGG Agios Georgios 83.78 311 P **P** **22 17 26.3 -2.6**
KOGS Kog 83.80 319 *e*P **P** **22 17 28.4 -0.4**
NKC Novy Kostel 83.80 324 *e*P **P** **22 17 28.9 +0.2**
KHC Kasperske Hory 83.82 323 ⇑ *e*P **P** **22 17 28.6 -0.3**
KHC Kasperske Hory 83.82 323 *e*P **P** **22 17 28.5 -0.4**
KHC *e*PCP PcP 22 17 35.0 +2.3
D05A Enumclaw 83.84 40 ⇓ P **P** **22 17 29.7 +0.7**
baz=84
UPM Unac-Piva 83.91 316 ⇓ *i*P **P** **22 17 28.8 -0.6**
GEC2 GERESS Array S 83.92 322 *e*P **P** **22 17 29.6 +0.2**
GEC2 pmax pmax
comp=Z,26nm,1.0s,mb5.0
GEC2 GERESS Array S 83.92 322 *e*P **P** **22 17 29.6 +0.2**
comp=Z,26nm,1.0s,mb5.0
GERES GERESS Array B 83.92 322 P **P** **22 17 29.2 -0.2**
comp=Z,9.7nm,0.7s,mb4.7,baz=51,slow=4.4,SNR=85
CLZ Clausthal 83.92 326 *e*P **P** **22 17 29.9 +0.6**
CLZ pmax pmax
comp=Z,108nm,1.1s,mb5.6
CLZ Clausthal 83.92 326 *e*P **P** **22 17 29.9 +0.6**
comp=Z,108nm,1.1s,mb5.6
SIVA Sivas 83.98 306 P **P** **22 17 30.3 +0.3**
MOX Moxa 83.99 325 *e*P **P** **22 17 30.0 +0.3**
MOX pmax pmax
comp=Z,65nm,1.9s,mb5.1
MOX Moxa 83.99 325 *e*P **P** **22 17 29.9 +0.2**
comp=Z,42nm,1.5s,mb5.0
MOX Moxa 83.99 325 *e*P **P** **22 17 30.0 +0.3**
comp=Z,65nm,1.9s,mb5.1
NKY Niksic 84.05 315 ⇓ *i*P **P** **22 17 29.5 -0.7**
C06A Tall Timber Ra 84.06 39 ⇓ P **P** **22 17 30.2 +0.1**
baz=84
TTG Pedgorica 84.08 315 ⇓ *i*P **P** **22 17 29.8 -0.6**
G03A Yamhill 84.10 42 ⇑ P **P** **22 17 31.1 +0.7**
baz=84
MANZ Manzenberg 84.12 324 *e*P **P** **22 17 30.7 +0.3**
comp=Z,36nm,1.1s,mb5.1
RCS Mount Rainier- 84.16 40 P **P** **22 17 31.8 +1.2**
B07A Winthrop 84.18 38 ⇓ P **P** **22 17 31.2 +0.5**
baz=84
LON Longmire 84.19 40 *e*P **P** **22 17 30.6 -0.2**
LON pmax pmax
comp=Z,12nm,1.1s,mb4.6
LON Longmire 84.19 40 *e*P **P** **22 17 30.6 -0.2**
comp=Z,12nm,1.1s,mb4.6
EVR Evrytania 84.19 311 *i* P **P** **22 17 30.3 -0.7**
WET Wettzell 84.19 323 *e*P **P** **22 17 31.2 +0.4**
WET pmax pmax
comp=Z,41nm,1.5s,mb5.0
WET Wettzell 84.19 323 *e*P **P** **22 17 31.2 +0.4**
comp=Z,41nm,1.5s,mb5.0
ROTZ Rotzenmuhle 84.19 324 *e*P **P** **22 17 31.4 +0.7**
comp=Z,59nm,1.2s,mb5.3

TIR Tirane 84.25 314 eP P 22 17 30.9 -0.3
TIR pmax pmax
comp=Z,55nm,0.8s,mb5.4
TIR Tirane 84.25 314 eP P 22 17 30.9 -0.3
comp=Z,55nm,0.8s,mb5.4
F04A Amboy 84.28 41 ⇑P P 22 17 31.2 -0.1
baz=84
BRY Bratogost 84.29 315 ⇓iP P 22 17 30.4 -1.0
E05A Randle 84.32 40 ⇓P P 22 17 31.5 +0.1
baz=84
ULC Ulcinj 84.33 314 ⇓iP P 22 17 31.3 -0.3
PERS Pernice 84.35 320 eP P 22 17 31.3 -0.3
WPW White Pass 84.36 40 P P 22 17 32.4 +0.7
A08A Turner Farm, O 84.37 37 ⇓P P 22 17 31.6 0.0
baz=84
SOKA Soboth 84.38 320 ⇑iP P 22 17 31.6 -0.1
comp=Z,16nm,1.0s,mb4.8
BUM Brajici-Budva 84.38 315 ⇓iP P 22 17 31.1 -0.8
H03A Soap Creek Ran 84.44 42 ⇓P P 22 17 32.7 +0.6
baz=84
D06A Cle Elum 84.49 39 ⇓P P 22 17 32.5 +0.2
baz=84
VLI Veliai 84.50 308 eP P 22 17 30.5 -2.1
ETW Entiat 84.55 39 eP P 22 17 32.5 -0.1
comp=Z,57nm,1.2s,mb5.4
ETW epP pP 22 18 01.1 -0.5
HCY Herceg Novi 84.56 315 ⇓iP P 22 17 32.1 -0.6
GVD Gavdhos 84.59 306 eP P 22 17 32.0 -1.1
G04A Mulino 84.64 42 ⇓P P 22 17 33.4 +0.3
baz=84
TBM Table Mountain 84.64 39 P P 22 17 33.3 +0.3
C07A Waterville 84.65 39 ⇓P P 22 17 32.8 -0.3
baz=84
B08A Colville Reser 84.67 38 ⇓P P 22 17 33.4 +0.2
baz=84
UBBA Unterbreizbach 84.72 325 eP P 22 17 33.5 +0.1
comp=Z,24nm,1.0s,mb5.1
A09A Danville 84.72 37 ⇑P P 22 17 33.4 0.0
baz=84
OBKA Obir 84.75 320 ⇓iP P 22 17 33.3 -0.3
comp=Z,10nm,1.1s,mb4.7
GRA1 Grafenberg Arr 84.76 324 eP P 22 17 34.1 +0.5
comp=Z,129nm,1.4s,mb5.7
GRA1 LR LR
comp=Z,100nm,19.4s
GRF Grafenberg Arr 84.76 324 eP P 22 17 34.1 +0.5
GRF pmax pmax
comp=Z,129nm,1.4s,mb5.7
GRF MLR MLR
comp=Z,100nm,19.4s
GRF Grafenberg Arr 84.76 324 eP P 22 17 34.1 +0.5
comp=Z,129nm,1.4s,mb5.7
GRF eL 22 52 39.9
comp=Z,149nm,19.4s
E06A Yakima 84.78 40 ⇑P P 22 17 34.2 +0.4
baz=84
EDM Edmonton 84.79 32 eP P 22 17 33.7 0.0
I03A Eugene 84.83 43 ⇑P P 22 17 34.5 +0.4
baz=85
RLS Riolos of Patr 84.85 310 eP P 22 17 33.5 -0.8
IGT Igoumenitsa 84.87 312 P P 22 17 33.2 -1.2
BOJS Bojanci 84.90 319 eP P 22 17 34.3 0.0
IBBN Ibbenburen 84.92 327 eP P 22 17 34.3 -0.1
comp=Z,105nm,0.9s,mb5.8
VLL Laurance Lake 84.97 41 P P 22 17 35.7 +1.0
ITM Ithomi 84.97 309 iP P 22 17 33.9 -1.0
D07A Quincy 84.98 39 ⇓P P 22 17 35.0 +0.2
baz=85
LJU Ljubljana 85.02 320 eP P 22 17 34.7 -0.3
RJOB Jochberg 85.04 322 eP P 22 17 35.3 +0.2
comp=Z,33nm,0.9s,mb5.3
HOOD Mount Hood Mea 85.06 41 eP P 22 17 35.7 +0.5
comp=Z,41nm,1.0s,mb5.3
H04A Detroit Lake 85.10 42 ⇓P P 22 17 35.2 -0.2
baz=85
KBA Koelnbreinsper 85.11 321 iP P 22 17 35.1 -0.3
comp=Z,28nm,1.6s,mb4.9,SNR=12
C08A Higginbotham F 85.16 38 ⇑P P 22 17 35.7 +0.1
baz=85
MYKA Terra Mystica 85.20 320 ⇓iP P 22 17 35.0 -0.8
comp=Z,10nm,0.9s,mb4.8
PYL PYLOS 85.24 309 P P 22 17 34.6 -1.7
A10A Northport 85.27 37 ⇓P P 22 17 36.4 +0.2
baz=85
B09A Rice 85.28 37 ⇑P P 22 17 36.4 +0.2
baz=85
G05A Wamic 85.31 41 ⇓P P 22 17 36.9 +0.4
baz=85
F06A Goldendale 85.33 40 ⇑P P 22 17 36.3 -0.2
baz=85
CADS Cadrg 85.37 320 eP P 22 17 35.6 -1.1
VLS Valsamata 85.39 311 P P 22 17 35.8 -1.2
VLS Valsamata 85.39 311 iP P 22 17 35.9 -1.1
VOY Vojsko 85.39 320 eP P 22 17 35.8 -1.0
VOY e 22 17 44.2
E07A Sunnyside 85.41 39 ⇓P P 22 17 37.2 +0.3
baz=85
ORE Reay 85.53 336 eP P 22 17 36.0 -1.2
OD2 Odessa Site #2 85.57 38 eP P 22 17 37.4 -0.3
comp=Z,26nm,1.2s,mb5.0
C09A Chrisman Ranch 85.58 38 ⇑P P 22 17 37.5 -0.2
baz=85
FUR Furstenfeldbru 85.62 323 eP P 22 17 38.4 +0.5
FUR pmax pmax
comp=Z,129nm,1.2s,mb5.7
FUR Furstenfeldbru 85.62 323 eP P 22 17 38.4 +0.5
comp=Z,129nm,1.2s,mb5.7
D08A Wollman Farm, 85.65 39 ⇓P P 22 17 37.9 -0.2
baz=85
RSW Rattlesnake Hi 85.65 39 eP P 22 17 38.6 +0.5
comp=Z,56nm,1.4s,mb5.3
RAR Rarotonga 85.67 116 LR LR 22 49 10.6
comp=Z,177nm,22.0s,baz=295,slow=31
HAWA Hanford 85.69 39 eP P 22 17 38.3 0.0
comp=Z,41nm,1.4s,mb5.2
HAWA epP pP 22 18 06.2 -1.1
H05A Madras 85.69 42 ⇑P P 22 17 38.5 +0.2
baz=85
BUG Bochum--Univer 85.70 327 eP P 22 17 38.1 -0.1
comp=Z,46nm,1.1s,mb5.3
G06A Carlson Farm, 85.71 41 ⇑P P 22 17 38.6 +0.2
baz=86
F07A Phinny Hill Vi 85.75 40 ⇑P P 22 17 38.6 +0.1
baz=86
ABTA Abfaltersbach 85.77 321 ⇑iP P 22 17 37.9 -0.8
comp=Z,23nm,1.0s,mb5.1,SNR=13
TNS Taunus Mts 85.87 325 eP P 22 17 39.3 +0.2
TNS pmax pmax
comp=Z,17nm,1.0s,mb4.9
TNS Taunus Mts 85.87 325 eP P 22 17 39.3 +0.2
comp=Z,17nm,1.0s,mb4.9
E08A Dider Farm, El 85.90 39 ⇓P P 22 17 39.4 +0.1
baz=86
A11A Hall Mountain, 85.92 36 ⇑P P 22 17 39.9 +0.6
baz=86
NEW Newport 85.93 37 eP P 22 17 39.5 +0.1
NEW e*PP pP 22 18 08.1 -0.4
NEW pmax pmax
comp=Z,12nm,0.8s
NEW Newport 85.93 37 eP P 22 17 39.5 +0.1
comp=Z,12nm,0.8s,mb4.9
NEW epP pP 22 18 08.1 -0.4
WATA Walderalm 85.95 322 ⇓iP P 22 17 39.1 -0.4
comp=Z,9.0nm,0.5s,mb4.9
WTTA Wattenberg 85.96 322 ⇓iPcP PcP 22 17 39.4 -2.8
comp=Z,37nm,1.2s,SNR=19
D09A Jones Farm, Ri 85.99 38 ⇑P P 22 17 39.8 +0.1
baz=86
MCD Coleburn Disti 86.05 336 eP P 22 17 38.7 -1.1
MVH1 Achvaich 86.14 336 eP P 22 17 38.6 -1.6
H06A Lindquist Farm 86.17 41 ⇓P P 22 17 41.0 +0.3
baz=86
MOTA Moosalm 86.20 322 ⇓iP P 22 17 40.2 -0.6
comp=Z,10nm,0.6s,mb4.9,SNR=13
B11A Sandpoint 86.23 37 ⇓P P 22 17 41.3 +0.4
baz=86
G07A Ruggs Ranch, H 86.25 40 ⇓P P 22 17 41.5 +0.4
baz=86
RETA Reutte 86.31 322 ⇓iPcP PcP 22 17 41.1 -2.6
comp=Z,9.5nm,1.0s,SNR=7.6
STU Stuttgart 86.37 324 eP P 22 17 41.9 +0.3
STU pmax pmax
comp=Z,48nm,1.4s,mb5.2
STU Stuttgart 86.37 324 eP P 22 17 41.4 -0.2
comp=Z,34nm,0.9s,mb5.3
STU Stuttgart 86.37 324 eP P 22 17 41.9 +0.3
comp=Z,48nm,1.4s,mb5.2
BUOR Burton Butte 86.38 44 P P 22 17 42.5 +0.7
E09A Wood Farm, Sta 86.40 39 ⇑P P 22 17 42.1 +0.3
baz=86
F08A Pendleton 86.46 40 ⇑P P 22 17 42.6 +0.5
baz=86
MDO Dochfour 86.56 336 eP P 22 17 40.8 -1.6
D10A Wagner Farm, O 86.56 38 ⇓P P 22 17 42.4 -0.2
baz=86
FETA Feichten 86.60 322 ⇓iPcP PcP 22 17 42.5 -2.5
comp=Z,34nm,1.3s,SNR=14
B12A Libby 86.62 36 ⇑P P 22 17 43.3 +0.4
baz=86
C11A Tepee Creek (N 86.65 37 ⇑P P 22 17 43.4 +0.4
baz=86
G08A Pilot Rock 86.65 40 ⇑P P 22 17 43.2 +0.2
baz=86
I06A Prineville 86.69 42 ⇑P P 22 17 43.8 +0.5
baz=86
LNOR Lincton Mounta 86.70 39 eP P 22 17 43.7 +0.4
LNOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
LNOR Lincton Mounta 86.70 39 eP P 22 17 43.7 +0.5
comp=Z,4.5nm,1.0s,mb4.3
H07A Lands Inn, Kim 86.70 41 ⇓P P 22 17 43.7 +0.4
baz=86
LHEM Herd Peak 86.75 44 P P 22 17 44.1 +0.5
MEM Membach 86.84 327 P P 22 17 43.4 -0.4
KAC Achnashellach 86.86 336 eP P 22 17 42.7 -1.1
DAVA Damuels 86.91 323 ⇓iPcP PcP 22 17 44.0 -2.4
comp=Z,20nm,0.7s
K05A Summer Lake 86.96 43 ⇑P P 22 17 45.2 +0.5
baz=87
E10A Myers Farm, Un 86.99 38 ⇑P P 22 17 44.9 +0.2
baz=87
F09A S2 Ranch, Elgi 87.00 39 ⇑P P 22 17 44.8 0.0
baz=87
ESY Stoneypath 87.02 334 eP P 22 17 43.6 -1.0
I07A Izee 87.03 41 ⇓P P 22 17 45.4 +0.5
baz=87
D11A Klaveano Farm, 87.08 38 ⇑P P 22 17 45.0 -0.1
baz=87
BFO Black Forest 87.10 324 eP P 22 17 45.0 -0.2
BFO pmax pmax
comp=Z,15nm,1.1s,mb4.8
BFO Black Forest 87.10 324 eP P 22 17 45.0 -0.2
comp=Z,15nm,1.1s,mb4.8
WDC Whiskeytown Da 87.12 46 eP P 22 17 45.3 -0.2
WDC pmax pmax
comp=Z,11nm,0.9s,mb4.8
WDC Whiskeytown Da 87.12 46 eP P 22 17 45.2 -0.2
comp=Z,11nm,0.9s,mb4.8
WALA Waterton Lakes 87.13 35 eP P 22 17 45.8 +0.5
comp=Z,1.6nm,1.6s,mb3.7
XSO Sourhope Farm 87.18 334 eP P 22 17 44.6 -0.8
DAVOX Davos/Dischmat 87.21 322 P P 22 17 45.5 -0.2
comp=Z,8.5nm,0.6s,mb4.9,baz=111,slow=1.0,SNR=22
F10A Beach Ranch, E 87.23 39 ⇑P P 22 17 46.0 +0.2
baz=87
H08A Prairie City 87.26 41 ⇓P P 22 17 46.4 +0.4
baz=87
B13A Whitefish 87.27 36 ⇑P P 22 17 46.5 +0.5
baz=87
EBL Broad Law 87.29 334 eP P 22 17 45.0 -0.9
BCLA Clavier 87.31 327 P P 22 17 45.5 -0.6
G09A Cove 87.33 40 ⇑P P 22 17 46.8 +0.4
baz=87
WLF Walferdange 87.38 326 P P 22 17 46.2 -0.3
comp=Z,12nm,0.9s,mb4.8
WLF Walferdange 87.38 326 eP P 22 17 46.3 -0.2
WLF pmax pmax
comp=Z,15nm,0.8s,mb5.0
WLF Walferdange 87.38 326 eP P 22 17 46.1 -0.4
comp=Z,20nm,0.7s,mb5.2
WLF Walferdange 87.38 326 eP P 22 17 46.3 -0.2
comp=Z,15nm,0.8s,mb5.0
EAU Auchinoon 87.39 334 eP P 22 17 45.4 -1.0
TIP Timpagrande 87.42 313 eP P 22 17 46.0 -0.9
comp=Z,7.4nm,0.6s,mb4.8
BSMT Bassoo Peak 87.42 36 eP P 22 17 47.3 +0.5
comp=Z,18nm,1.1s,mb4.9
A14A Double T Ranch 87.43 35 ⇑P P 22 17 47.4 +0.7
baz=87
EAB Aberfoyle 87.48 335 eP P 22 17 45.7 -1.1
UCC Uccle 87.52 328 E 22 17 44.7
J07A Hines 87.55 42 ⇑P P 22 17 47.8 +0.4
baz=87
E11A Bogner Ranch, 87.57 38 ⇓P P 22 17 47.6 +0.2
baz=87
CDF Champ du Feu 87.60 325 eP P 22 17 46.5 -1.0
comp=Z,56nm,1.1s,mb5.2
CDF Champ du Feu 87.60 325 eP P 22 17 46.5 -1.0
CDF pmax pmax
comp=Z,28nm,1.1s,mb5.2
CDF Champ du Feu 87.60 325 eP P 22 17 46.5 -1.0
comp=Z,28nm,1.1s,mb5.2
XAL Allendale 87.62 333 eP P 22 17 46.3 -1.2
C13A Hot Springs 87.64 36 ⇓P P 22 17 48.2 +0.4
baz=87
I08A Drewsey 87.68 41 ⇓P P 22 17 48.1 0.0
baz=87
ESK Eskdalemuir 87.68 334 eP P 22 17 46.6 -1.2
ESK AMb AMB 22 17 50.3
comp=Z,67nm,2.0s,mb5.3
TUE Stuetta 87.69 322 eP P 22 17 47.7 -0.4
comp=Z,90nm,1.6s,mb5.5
G10A Bishop Farm, J 87.70 39 ⇑P P 22 17 48.3 +0.2
baz=87
SNF Seneffe 87.75 327 P P 22 17 47.5 -0.7
GIVF Givet 87.75 327 eP P 22 17 46.2 -2.0
comp=Z,14nm,0.5s,mb5.0
GIVF Givet 87.75 327 eP P 22 17 46.2 -2.0
GIVF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
GIVF Givet 87.75 327 eP P 22 17 46.2 -2.0
comp=Z,7.1nm,0.5s,mb5.0
JTMT Jette 87.75 36 eP P 22 17 48.3 0.0
comp=Z,10nm,0.9s,mb4.9
H09A Durkee 87.76 40 ⇓P P 22 17 48.8 +0.4
baz=88
AQU L'Aquila 87.77 317 eP P 22 17 49.9 +1.4
AQU pmax pmax
comp=Z,25nm,1.0s,mb5.2
AQU L'Aquila 87.77 317 eP P 22 17 49.9 +1.4
comp=Z,25nm,1.0s,mb5.2
A15A Johnson Ranch, 87.78 35 ⇑P P 22 17 48.1 -0.3
baz=88,SNR=14
MOD Modoc 87.79 43 eP P 22 17 48.7 +0.1
comp=Z,20nm,0.9s,mb5.2
BMO Blue Mountains 87.86 40 eP P 22 17 48.8 0.0
BMO pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BMO Blue Mountains 87.86 40 eP P 22 17 48.8 0.0
comp=Z,9.0nm,0.9s,mb4.8
DOU Dourbes 87.87 327 P P 22 17 48.4 -0.4
comp=Z,8.2nm,1.2s,mb4.6
F11A Grangeville 87.88 38 ⇓P P 22 17 48.6 -0.3
baz=88
B14A Marquette Ranc 87.90 35 ⇓P P 22 17 49.9 +0.9
baz=88
K07A Rock Creek Ran 87.98 42 ⇑P P 22 17 49.6 +0.1
baz=88,SNR=10
SWMT Swartz Lake 88.05 36 eP P 22 17 50.1 +0.4
comp=Z,14nm,1.0s,mb5.0
J08A Circle Bar Ran 88.06 41 ⇑P P 22 17 50.2 +0.4
baz=88,SNR=9.5
D13A Huson 88.07 37 ⇓P P 22 17 49.6 -0.2
baz=88
BAIF Baives 88.08 327 eP P 22 17 47.7 -2.1
comp=Z,16nm,0.8s,mb4.8
BAIF Baives 88.08 327 eP P 22 17 47.7 -2.1
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BAIF Baives 88.08 327 eP P 22 17 47.7 -2.1
comp=Z,7.8nm,0.8s,mb4.8
G11A Walters Elk Ra 88.11 39 ⇓P P 22 17 50.0 -0.1
baz=88
I09A Lost Marbles R 88.12 41 ⇑P P 22 17 50.5 +0.4
baz=88
HINF Hinteralfeld 88.19 324 eP P 22 17 48.6 -1.8
FCC Fort Churchill 88.23 20 eP P 22 17 49.3 -1.0
FCC pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
FCC Fort Churchill 88.23 20 eP P 22 17 49.3 -1.0
comp=Z,1.8nm,1.0s,mb4.1
B15A Bradely Ranch, 88.29 35 ⇑P P 22 17 50.8 -0.1
baz=88,SNR=14
L07A Adell 88.31 43 ⇓P P 22 17 51.6 +0.5
baz=88,SNR=12
H10A Noah's Angus R 88.33 40 ⇑P P 22 17 50.9 -0.2
baz=88,SNR=17
HAU Haudompre 88.33 325 eP P 22 17 49.5 -1.5
HAU eMLR MLR
comp=Z,141nm,21.2s
HAU Haudompre 88.33 325 eP P 22 17 49.5 -1.5
HAU LR LR
comp=Z,140nm,21.3s
A16A West Butte Ran 88.37 34 ⇓P P 22 17 50.9 -0.3
baz=88,SNR=22
K08A Mann Creek Ran 88.41 42 ⇓P P 22 17 51.7 +0.1
baz=88,SNR=6.8
LHO Holmfirth 88.42 332 eP P 22 17 50.1 -1.2
CEL Celeste 88.48 313 eP P 22 17 51.4 -0.6
comp=Z,59nm,0.8s,mb5.7
J09A Fry Pan Ranch, 88.49 41 ⇓P P 22 17 52.1 +0.3
baz=88,SNR=11
SLMT Seeley Lake 88.49 36 eP P 22 17 51.9 +0.1
comp=Z,58nm,1.4s,mb5.4
WVOR Wild Horse Val 88.50 42 eP P 22 17 52.3 +0.4
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
WVOR Wild Horse Val 88.50 42 eP P 22 17 52.3 +0.4
comp=Z,7.3nm,1.0s,mb4.7
MSO Missoula 88.51 37 eP P 22 17 52.2 +0.3
comp=Z,11nm,1.1s,mb4.8
D14A Greenough 88.58 36 ⇑P P 22 17 52.0 -0.2
baz=88,SNR=8.1
C15A Salmond Ranch, 88.61 35 ⇓P P 22 17 52.3 -0.1
baz=88,SNR=23
E13A Victor 88.62 37 ⇑P P 22 17 52.6 +0.1
baz=88
FFC Flin Flon 88.64 26 P P 22 17 51.9 -0.4
comp=Z,285nm,0.9s,mb6.3,SNR=21
FFC Flin Flon 88.64 26 eP P 22 17 51.9 -0.4
FFC pmax pmax
comp=Z,51nm,1.0s,mb5.5
FFC Flin Flon 88.64 26 eP P 22 17 51.9 -0.4
comp=Z,51nm,1.0s,mb5.5
B16A M & M Farms, S 88.67 35 ⇓P P 22 17 52.5 -0.1
baz=88,SNR=12
MEZF Maizieres J'vi 88.68 326 eP P 22 17 50.8 -1.9
comp=Z,19nm,0.9s,mb4.8
MEZF Maizieres J'vi 88.68 326 eP P 22 17 50.8 -1.9
comp=Z,19nm,0.9s,mb5.1
H11A Donnelly 88.68 39 ⇑P P 22 17 52.5 -0.2
baz=88
N06A Buffalo Meadow 88.74 44 ⇓P P 22 17 53.2 +0.1
baz=88,SNR=8.8
CWF Charnwood Fore 88.77 331 eP P 22 17 51.8 -1.2
CWF AMb AMB 22 17 53.1
comp=Z,39nm,1.3s,mb5.3
M07A Soldier Meadow 88.78 43 ⇓P P 22 17 53.8 +0.5
baz=88,SNR=6.0
A17A Triple J Farms 88.82 34 ⇑P P 22 17 53.2 -0.1
baz=88,SNR=14
CHMT Chamberlain Mo 88.82 36 eP P 22 17 53.4 0.0
comp=Z,13nm,1.5s,mb4.7
K09A Rome 88.89 42 ⇓P P 22 17 54.4 +0.6
baz=89,SNR=7.8
BEKR Beckwourth 88.91 45 ⇑P P 22 17 53.7 -0.2
baz=89
F13A Darby 88.95 38 ⇑P P 22 17 53.5 -0.5
baz=89
E14A Clinton 89.01 37 ⇓P P 22 17 54.3 0.0
baz=89,SNR=7.5
C16A Fuhringer Ranc 89.04 35 ⇑P P 22 17 54.4 0.0
baz=89,SNR=24
O06A Flanigan 89.07 45 ⇑P P 22 17 54.9 +0.3
baz=89,SNR=8.0
D15A Lincoln 89.13 36 ⇓P P 22 17 54.9 +0.1
baz=89,SNR=5.3
B17A L&G Farms, Che 89.20 34 ⇓P P 22 17 55.3 +0.1
baz=89,SNR=49
M08A Happy Creek Ra 89.23 43 ⇓P P 22 17 56.1 +0.7
baz=89,SNR=5.7
N07B Gerlach 89.25 44 ⇓P P 22 17 56.0 +0.5
baz=89,SNR=6.7
A18A Metzger Ranch, 89.26 33 ⇓P P 22 17 55.3 -0.1
baz=89,SNR=21
SKP1 Kophill 89.27 330 eP P 22 17 54.4 -1.0
L09A Wilkinson Ranc 89.32 42 ⇑P P 22 17 56.8 +1.0
baz=89
K10A MacKenzie Ranc 89.35 41 ⇓P P 22 17 56.5 +0.6
baz=89,SNR=7.3
CABF La Chapelle 89.36 324 eP P 22 17 54.5 -1.4
H12A Diamond D Ranc 89.43 39 ⇓P P 22 17 56.3 0.0
baz=89,SNR=20
G13A Cobalt 89.44 38 ⇑P P 22 17 55.7 -0.6
baz=89
F14A Wisdom 89.46 37 ⇑P P 22 17 57.0 +0.6
baz=89,SNR=7.4
E15A Deer Lodge 89.46 37 ⇑P P 22 17 56.5 +0.1
baz=89,SNR=11
SBD1 Bryn Du 89.47 332 eP P 22 17 55.4 -0.8
MFID Camas Ranch 89.57 40 ⇓P P 22 17 57.6 +0.6
baz=89,SNR=8.4
WCN Washoe City 89.61 45 ⇑P P 22 17 57.2 0.0
baz=89
D16A Dana Ranch, Ca 89.64 36 ⇓P P 22 17 57.5 +0.3
baz=89,SNR=12
B18A Beardsley Farm 89.65 34 ⇓P P 22 17 57.3 +0.1
baz=89,SNR=10.0
WLF1 Llynfaes 89.65 333 eP P 22 17 56.4 -0.7
WLF1 AMb AMB 22 17 59.7
comp=Z,60nm,1.5s,mb5.5
C17A Wharram Farm, 89.66 35 ⇑P P 22 17 56.8 -0.5
baz=89,SNR=14
YLL Llanberis 89.67 333 eP P 22 17 56.7 -0.5
O07A Toulon 89.67 44 ⇑P P 22 17 58.1 +0.6
baz=89,SNR=5.0
HRY Holter Researc 89.70 36 eP P 22 17 57.9 +0.4
comp=Z,19nm,0.6s,mb5.1
LPL La Plagne 89.71 322 eP P 22 17 56.8 -0.8
comp=Z,15nm,0.7s,mb4.9
LPL La Plagne 89.71 322 eP P 22 17 56.8 -0.8
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
LPL La Plagne 89.71 322 eP P 22 17 56.8 -0.8
comp=Z,7.3nm,0.7s,mb4.9
LPG La Plagne 89.71 322 eP P 22 17 56.9 -0.7
comp=Z,40nm,1.2s,mb5.1
LPG La Plagne 89.71 322 eP P 22 17 56.9 -0.7
LPG pmax pmax
comp=Z,20nm,1.2s,mb5.1
LPG La Plagne 89.71 322 eP P 22 17 56.9 -0.7
comp=Z,20nm,1.2s,mb5.1
H13A Challis 89.75 39 ⇓P P 22 17 57.9 +0.1
baz=90,SNR=13
N08A GE Springer Mi 89.77 43 ⇑P P 22 17 58.3 +0.4
baz=90,SNR=12
M09A Marrel Ranch, 89.81 43 ⇑P P 22 17 58.7 +0.6
baz=90
K11A Parker Ranch, 89.84 41 ⇓P P 22 17 58.2 0.0
baz=90
YRE Yr Eifl 89.89 333 eP P 22 17 57.2 -1.0
E16A East Helena 89.90 36 ⇑P P 22 17 58.8 +0.4
baz=90,SNR=5.7
EGMT Eagleton 89.91 34 eP P 22 17 58.5 +0.1
comp=Z,36nm,1.0s,mb5.5
F15A Butte 89.91 37 ⇑P P 22 17 58.9 +0.4
baz=90,SNR=16
LRM Limekiln Ridge 89.95 37 eP P 22 17 59.2 +0.5
comp=Z,311nm,1.7s,mb6.2
L10A Juniper Basin 90.00 42 ⇓P P 22 17 59.5 +0.5
baz=90,SNR=9.7
D17A Six Diamond Ra 90.01 35 ⇑P P 22 17 59.0 +0.1
baz=90,SNR=19
MCH1 Michaelchurch 90.02 332 eP P 22 17 58.2 -0.7
MCH1 AMb AMB 22 17 59.2
comp=Z,55nm,1.4s,mb5.5
O08A Rochester Mine 90.05 44 ⇓P P 22 17 59.8 +0.6
baz=90,SNR=9.4
J12A Stokes Ranch, 90.09 40 ⇓P P 22 17 60.0 +0.6
baz=90,SNR=5.2
LOR Lormes 90.09 325 eP P 22 17 57.4 -1.9
LOR eMLR MLR
comp=Z,104nm,20.8s
LOR Lormes 90.09 325 eP P 22 17 57.4 -1.9
LOR LR LR
comp=Z,100nm,20.8s
N09A Rock Creek Ran 90.10 43 ⇓P P 22 18 00.2 +0.7
baz=90,SNR=5.2
DLMT Dillon 90.16 37 eP P 22 18 00.1 +0.5
comp=Z,46nm,1.3s,mb5.5

MBDF Montbardon 90.19 322 *e*P P 22 17 58.8 -1.0
HGH Gray Hill 90.20 331 *e*P P 22 17 58.7 -1.0
H14A Leadore 90.22 38 ⇓P P 22 17 59.9 0.0
baz=90
I13A Wildhorse Cree 90.24 39 ⇓P P 22 18 00.9 +0.9
baz=90,SNR=23
PGF Pioggiola 90.28 319 *e*P P 22 17 59.0 -1.3
comp=Z,169nm,1.1s,mb5.8
PGF Pioggiola 90.28 319 *e*P P 22 17 59.0 -1.3
PGF pmax pmax
comp=Z,85nm,1.1s,mb5.8
PGF Pioggiola 90.28 319 *e*P P 22 17 59.0 -1.3
comp=Z,84nm,1.1s,mb5.8
HLID Hailey 90.29 40 ⇓P P 22 18 00.6 +0.4
baz=90
HLID Hailey 90.29 40 *e*P P 22 18 01.4 +1.2
comp=Z,21nm,1.3s,mb5.1
G15A Dillon 90.35 37 ⇑P P 22 18 00.9 +0.4
baz=90,SNR=22
SBF Sospel 90.36 321 *e*P P 22 17 59.2 -1.4
L11A Cat Creek Ranc 90.37 41 ⇑P P 22 18 01.7 +1.0
baz=90,SNR=19
E17A Martinsdale 90.38 36 ⇓P P 22 18 01.1 +0.5
baz=90,SNR=24
F16A Kennard Place, 90.41 37 ⇑P P 22 18 01.2 +0.4
baz=90,SNR=6.7
D18A Linhart Farms, 90.43 35 ⇓P P 22 18 01.4 +0.5
baz=90,SNR=5.6
BOZ Bozeman (W) 90.50 37 ⇓P P 22 18 01.5 +0.2
baz=90
BOZ Bozeman (W) 90.50 37 *e*P P 22 18 01.6 +0.4
BOZ pmax pmax
comp=Z,35nm,1.6s,mb5.2
BOZ Bozeman (W) 90.50 37 *e*P P 22 18 01.6 +0.3
comp=Z,35nm,1.6s,mb5.2
SMF Signal de Mont 90.52 325 *e*P P 22 17 59.4 -1.9
comp=Z,39nm,1.2s,mb5.1
SMF Signal de Mont 90.52 325 *e*P P 22 17 59.4 -1.9
SMF pmax pmax
comp=Z,19nm,1.3s,mb5.1
SMF Signal de Mont 90.52 325 *e*P P 22 17 59.4 -1.9
comp=Z,19nm,1.3s,mb5.1
J13A Cove Ranch, Pi 90.53 40 ⇑P P 22 18 02.3 +0.8
baz=90,SNR=13
ORIF Oris-en-Rattie 90.56 322 *e*P P 22 18 00.0 -1.5
ORIF *e*MLR MLR
comp=Z,211nm,22.0s
K12A Draper Farm, C 90.58 40 ⇓P P 22 18 02.3 +0.6
baz=90
I14A Mackay 90.60 39 ⇓P P 22 18 02.6 +0.8
baz=90,SNR=26
H15A Lima 90.61 38 ⇑P P 22 18 02.1 +0.3
baz=90
AVF Avril sur Loir 90.67 325 *e*P P 22 18 00.2 -1.8
comp=Z,3.5nm,0.4s,mb4.6
G16A Moss Hill, Enn 90.68 37 ⇓P P 22 18 02.3 +0.2
baz=90,SNR=9.8
O09A Fish Creek Ran 90.71 44 ⇑P P 22 18 03.3 +1.0
baz=90,SNR=5.2
E18A Harlowton 90.80 35 ⇑P P 22 18 03.3 +0.7
baz=90,SNR=35
M11A Holland Ranch, 90.80 42 ⇓P P 22 18 04.0 +1.3
baz=90,SNR=5.8
N10A Dunphy 90.80 43 ⇑P P 22 18 03.3 +0.6
baz=90
L12A House Creek Ra 90.82 41 ⇓P P 22 18 04.0 +1.2
baz=91,SNR=7.9
F17A Fitzpatrick Pl 90.84 36 ⇓P P 22 18 03.3 +0.5
baz=91,SNR=10
J14A Carey 90.95 39 ⇓P P 22 18 04.7 +1.3
baz=91,SNR=8.6
FRF La Foret Royal 91.00 321 *e*P P 22 18 02.2 -1.4
comp=Z,76nm,1.3s,mb5.4
FRF La Foret Royal 91.00 321 *e*P P 22 18 02.2 -1.4
FRF pmax pmax
comp=Z,38nm,1.3s,mb5.4
FRF La Foret Royal 91.00 321 *e*P P 22 18 02.2 -1.4
comp=Z,38nm,1.3s,mb5.4
NVAR Mina Array Bea 91.04 45 P P 22 18 04.4 +0.5
comp=Z,2.4nm,0.8s,mb4.3,baz=281,slow=3.5,SNR=15
HEX Exmoor 91.04 331 *e*P P 22 18 02.7 -0.9
K13A Stover Farm, H 91.05 40 ⇓P P 22 18 04.8 +1.0
baz=91,SNR=6.2
BGF Bois d'Agland 91.09 325 *e*P P 22 18 01.4 -2.5
QLMT Earthquake Lak 91.14 37 *e*P P 22 18 05.3 +1.1
comp=Z,6.9nm,0.8s,mb4.8
LDF La Druitiere 91.16 328 *e*P P 22 18 01.8 -2.4
G17A Pierce Place, 91.19 37 ⇑P P 22 18 05.0 +0.6
baz=91
FLN La Foliniere 91.21 328 *e*P P 22 18 02.8 -1.6
FLN *e*MLR MLR
comp=Z,135nm,22.0s
FLN La Foliniere 91.21 328 *e*P P 22 18 02.8 -1.6
FLN LR LR
comp=Z,130nm,22.0s
H16A Russell Place, 91.32 37 ⇓P P 22 18 06.0 +1.0
baz=91,SNR=13
M12A Wells 91.33 41 ⇑P P 22 18 06.2 +1.1
baz=91,SNR=13
F18A Big Timber 91.34 36 ⇓P P 22 18 05.3 +0.2
baz=91,SNR=13
L13A Double Diamond 91.48 40 ⇑P P 22 18 07.0 +1.2
baz=91,SNR=11
J15A Blackfoot 91.51 39 ⇓P P 22 18 07.0 +1.1
baz=91
ELK Elko 91.55 42 *e*P P 22 18 07.1 +0.9
ELK pmax pmax
comp=Z,14nm,1.3s
ELK Elko 91.55 42 *e*P P 22 18 07.1 +0.9
comp=Z,14nm,1.3s,mb5.0
N12A Clover Valley, 91.60 42 ⇓P P 22 18 07.5 +1.1
baz=91,SNR=8.0
YNR Norris Junctio 91.62 37 *e*P P 22 18 08.2 +1.7
comp=Z,21nm,1.2s,mb5.2
K14A Jones Ranch, D 91.63 40 ⇑P P 22 18 07.6 +1.1
baz=91,SNR=10
GRR Gorron 91.65 328 *e*P P 22 18 04.4 -2.1
YFT Old Faithful 91.71 37 *e*P P 22 18 09.5 +2.6
comp=Z,30nm,1.0s,mb5.5
I16A Newdale 91.73 38 ⇓P P 22 18 08.1 +1.2
baz=92,SNR=5.7
SMMC Simmler 91.73 49 ⇑P P 22 18 07.4 +0.2
baz=92
M13A Montello 91.81 41 ⇓P P 22 18 08.2 +0.8
baz=92,SNR=8.4
LKWY Lake 91.87 37 *e*P P 22 18 10.1 +2.5
LKWY pmax pmax
comp=Z,15nm,0.9s,mb5.2
LKWY Lake 91.87 37 *e*P P 22 18 10.1 +2.5
comp=Z,15nm,0.9s,mb5.2
H17A Grant Village 91.88 37 ⇑P P 22 18 10.1 +2.4
baz=92,SNR=5.1
R09A Tonopah 91.94 45 ⇓P P 22 18 08.4 +0.3
baz=92
TPH Tonopah 91.94 45 *e*P P 22 18 08.3 +0.2
TPH pmax pmax
comp=Z,14nm,1.1s,mb5.1
TPH Tonopah 91.94 45 *e*P P 22 18 08.3 +0.3
comp=Z,14nm,1.1s,mb5.1
Q10A Clear Creek Ra 92.01 44 ⇑P P 22 18 08.7 +0.3
baz=92
VES Vestal, Richgr 92.04 48 ⇑P P 22 18 08.8 +0.2
baz=92
J16A Bone 92.05 38 ⇑P P 22 18 09.4 +0.9
baz=92,SNR=9.6
PKM Peak Mountain 92.09 49 ⇑P P 22 18 09.3 +0.5
baz=92
RLMT Red Lodge 92.10 36 ⇑P P 22 18 09.3 +0.7
baz=92
RLMT Red Lodge 92.10 36 *e*P P 22 18 09.5 +0.9
comp=Z,49nm,1.5s,mb5.5
O12A Currie 92.14 42 ⇓P P 22 18 09.5 +0.6
baz=92,SNR=15
S09A Goldfield 92.14 45 ⇓P P 22 18 09.1 +0.1
baz=92
RRI2 Red Ridge 92.16 38 *e*P P 22 18 09.8 +0.9
comp=Z,4.8nm,0.7s,mb4.8
M14A Sheep Mountain 92.19 41 ⇑P P 22 18 10.1 +0.9
baz=92,SNR=14
I17A Pilgram Creek 92.20 37 ⇑P P 22 18 10.6 +1.4
baz=92,SNR=6.0
TPAW Teton Pass 92.27 38 *e*P P 22 18 10.7 +1.2
comp=Z,9.8nm,1.0s,mb5.0
PPT Papeete 92.34 108 *e*S S 22 29 04.3 -0.1
comp=Z,41nm,22.2s
PPT Papeete 92.34 108 *e*LR LR 22 47 46.8
comp=Z,185nm,23.0s
PPT Papeete 92.34 108 LR LR 22 53 45.1
comp=Z,176nm,19.0s,baz=286,slow=32
K16A Soda Springs 92.35 39 ⇑P P 22 18 10.9 +1.0
baz=92,SNR=9.9
HVU Hansel Valley 92.35 40 *e*P P 22 18 10.6 +0.7
HVU pmax pmax
comp=Z,13nm,0.9s,mb5.2
HVU Hansel Valley 92.35 40 *e*P P 22 18 10.6 +0.7
comp=Z,13nm,0.9s,mb5.2
R10A Warm Springs 92.39 45 ⇓P P 22 18 10.8 +0.7
baz=92
S10A Tonopah Range, 92.43 45 ⇓P P 22 18 10.7 +0.4
baz=92
L15A Malad City 92.43 40 ⇑P P 22 18 10.8 +0.5
baz=92,SNR=8.3
Q11A Duckwater 92.46 44 ⇓P P 22 18 10.5 +0.1
baz=92
P12A McGill 92.53 43 ⇑P P 22 18 11.3 +0.5
baz=92
SGMF Saint Gilles 92.54 329 *e*P P 22 18 08.4 -2.2
comp=Z,35nm,0.9s,mb5.4
SGMF Saint Gilles 92.54 329 *e*P P 22 18 08.4 -2.2
SGMF pmax pmax
comp=Z,18nm,0.9s,mb5.4
SGMF Saint Gilles 92.54 329 *e*P P 22 18 08.4 -2.2
comp=Z,18nm,0.9s,mb5.4
ISA Isabella 92.55 48 ⇓P P 22 18 10.9 -0.1
baz=92
ISA Isabella 92.55 48 *e*P P 22 18 10.2 -0.7
ISA pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
ISA Isabella 92.55 48 *e*P P 22 18 10.2 -0.8
comp=Z,5.0nm,0.9s,mb4.8
MFF Saint Martin d 92.56 326 *e*P P 22 18 09.4 -1.3
CAF Calviac 92.59 324 *e*P P 22 18 09.1 -1.8
comp=Z,10nm,1.0s,mb4.8
CAF Calviac 92.59 324 *e*P P 22 18 09.1 -1.8
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
CAF Calviac 92.59 324 *e*P P 22 18 09.1 -1.8
comp=Z,5.3nm,1.0s,mb4.8
RJF Les Rejaudoux 92.62 325 *e*P P 22 18 08.9 -2.1
RJF *e*MLR MLR
comp=Z,126nm,17.0s
RJF Les Rejaudoux 92.62 325 *e*P P 22 18 08.9 -2.1
RJF LR LR
comp=Z,130nm,17.0s
O13A Hicks Ranch, I 92.68 42 ⇓P P 22 18 12.1 +0.7
baz=92
N14A Grayback Hills 92.70 41 ⇑P P 22 18 12.2 +0.7
baz=92
M15A Larsen Ranch, 92.74 40 ⇓P P 22 18 12.2 +0.5
baz=92
R11A Troy Canyon, C 92.80 44 ⇑P P 22 18 12.1 0.0
baz=92
ROSF Rostrenen 92.81 329 *e*P P 22 18 09.8 -2.0
Q12A Willow Creek R 92.84 43 ⇑P P 22 18 12.9 +0.7
baz=93
MPMC Manual Prospec 92.96 47 ⇑P P 22 18 12.9 +0.1
baz=93
L16A Fish Haven 92.97 39 ⇓P P 22 18 13.6 +0.9
baz=93
J18A Kendall Valley 92.97 38 ⇓P P 22 18 13.5 +0.8
baz=93
N15A Stansbury Isla 93.06 41 ⇑P P 22 18 14.3 +1.1
baz=93
P13A Bates Ranch, G 93.08 43 ⇑P P 22 18 13.3 0.0
baz=93
FURC Furnace Creek, 93.13 46 ⇓P P 22 18 11.5 -2.1
baz=93
LRMC Laurel Mountai 93.17 48 ⇓P P 22 18 14.2 +0.4
baz=93
M16A Huntsville 93.31 40 ⇓P P 22 18 14.3 0.0
baz=93
EDW2 Edwards Air Fo 93.33 48 ⇓P P 22 18 14.2 -0.3
baz=93
DUG Dugway 93.34 41 ⇓P P 22 18 14.7 +0.3
baz=93
DUG Dugway 93.34 41 *e*P P 22 18 15.1 +0.6
DUG pmax pmax
comp=Z,15nm,1.2s,mb5.2
DUG Dugway 93.34 41 *e*P P 22 18 15.1 +0.6
comp=Z,15nm,1.2s,mb5.2
Q13A Wheeler Ranch, 93.39 43 ⇓P P 22 18 14.8 0.0
baz=93
R12A Ponp Springs, 93.42 44 ⇓P P 22 18 15.2 +0.3
baz=93
BW06 Boulder Array 93.52 38 ⇑P P 22 18 15.1 -0.1
baz=93
BW06 Boulder Array 93.52 38 *e*P P 22 18 14.9 -0.3
comp=Z,5.2nm,0.9s,mb4.9
PDAR Pinedale Array 93.52 38 P P 22 18 15.0 -0.2
comp=Z,4.8nm,0.9s,mb4.8,baz=320,slow=0.9,SNR=29
P14A Drum Mountains 93.57 42 ⇓P P 22 18 15.8 +0.3
baz=93
T11A Corn Creek, Al 93.71 45 ⇑P P 22 18 16.5 +0.3
baz=94
S12A Delamar Landin 93.72 44 ⇓P P 22 18 17.4 +1.1
baz=94
DRV Dumont d'Urvil 93.75 175 S SKSac 22 28 46.0 +7.0
DRV SS SS 22 35 11.0 -25
DRV R 22 50 00.0
M17A Scullys Gap (B 93.75 39 ⇑P P 22 18 16.5 +0.1
baz=94
L18A Fontenelle, Gr 93.81 39 ⇑P P 22 18 17.1 +0.5
baz=94
Q14A Sevier Lake (B 93.82 43 ⇑P P 22 18 17.4 +0.6
baz=94
GSC Goldstone 93.86 47 ⇓P P 22 18 17.6 +0.6
baz=94
K19A Absolon Red Bu 93.87 37 ⇑P P 22 18 16.6 -0.2
baz=94
N17A Moffit Pass 94.01 40 ⇓P P 22 18 17.6 +0.1
baz=94
KEST Kesra 94.22 314 P P 22 18 18.6 0.0
comp=Z,1.2nm,1.0s,mb4.2,baz=201,slow=18,SNR=4.2
KEST LR LR 23 02 50.7
comp=Z,19nm,20.2s,baz=322,slow=37
S13A Holt Ranch, En 94.35 44 ⇑P P 22 18 19.2 0.0
baz=94
Q15A Fillmore 94.36 42 ⇓P P 22 18 19.9 +0.7
baz=94
V11A Goodsprings 94.43 46 ⇓P P 22 18 19.9 +0.4
baz=94
HEC Hector,Ludlow 94.45 47 ⇑P P 22 18 19.7 0.0
baz=94
ULM Lac du Bonnet 94.47 26 P P 22 18 18.2 -1.2
comp=Z,8.6nm,0.8s,mb5.1,baz=311,slow=4.1,SNR=9.1
ULM LR LR 23 06 24.4
comp=Z,57nm,18.6s,baz=340,slow=39
O17A Robinson Place 94.55 40 ⇓P P 22 18 20.4 +0.4
baz=94
N18A Larsen Ranch, 94.64 39 ⇑P P 22 18 20.5 +0.1
baz=94
T13A Saint George 94.67 44 ⇓P P 22 18 20.9 +0.2
baz=94
V12A Nelson 94.87 46 ⇓P P 22 18 22.1 +0.5
baz=95
GMRC Granite Mounta 94.92 47 ⇓P P 22 18 22.2 +0.3
baz=95
O18A Roosevelt 94.92 40 ⇑P P 22 18 22.3 +0.6
baz=95
P17A Butcher Ranch, 95.02 41 ⇑P P 22 18 22.7 +0.5
baz=95
TBI Tubuai 95.06 113 *e*LR LR 22 49 05.1
comp=Z,156nm,30.2s
PFO Pinyon Flat Ob 95.10 48 ⇑P P 22 18 23.0 +0.3
baz=95
Q16A Castle Valley 95.13 42 ⇑P P 22 18 23.3 +0.6
baz=95
P18A Preston Nutter 95.21 41 ⇓P P 22 18 23.6 +0.6
baz=95
R16A Teasdale 95.35 42 ⇑P P 22 18 24.7 +0.9
baz=95
SRU San Rafael 95.39 41 ⇓P P 22 18 24.3 +0.5
baz=95
RSSD Black Hills 95.48 34 *e*P P 22 18 23.7 -0.5
RSSD pmax pmax
comp=Z,23nm,1.6s,mb5.4
RSSD Black Hills 95.48 34 *e*P P 22 18 23.7 -0.5
comp=Z,23nm,1.6s,mb5.4
N20A Spence Gulch, 95.53 39 ⇓P P 22 18 25.2 +0.7
baz=95
MONP Monument Peak 95.55 49 ⇑P P 22 18 25.1 +0.3
baz=95
T15A Red Dirt Ranch 95.62 44 ⇓P P 22 18 25.4 +0.4
baz=95
Q18A Rafter H Ranch 95.62 41 ⇓P P 22 18 24.9 -0.1
baz=95
IRM Iron Mountain 95.63 47 ⇑P P 22 18 25.3 +0.2
baz=95
R17A Hanksville Air 95.73 42 ⇓P P 22 18 25.6 +0.2
baz=96
P19A Cripple Cowboy 95.93 40 ⇓P P 22 18 26.8 +0.4
baz=96
O20A White River Ci 96.02 39 ⇑P P 22 18 26.5 -0.2
baz=96
V14A Boquillas Ranc 96.04 45 ⇓P P 22 18 27.0 +0.1
baz=96
U15A North Rim 96.05 44 ⇓P P 22 18 26.1 -0.8
baz=96
Q19A Hogan Spring (96.22 41 ⇑P P 22 18 27.9 +0.2
baz=96
R18A Canyonlands Na 96.23 41 ⇑P P 22 18 27.9 +0.2
baz=96
W14A Seligman 96.32 45 ⇓P P 22 18 28.2 +0.1
baz=96
V15A Kaibab Nationa 96.51 44 ⇓P P 22 18 29.3 +0.3
baz=96
PV10 Paradox Valley 96.74 41 *e*P P 22 18 30.9 +0.9
Q20A Ridgley Place, 96.78 40 ⇓P P 22 18 30.4 +0.1
baz=96
T18A Mexican Hat 97.07 42 ⇓P P 22 18 31.8 +0.3
baz=97
PV01 Paradox Valley 97.18 41 *e*P P 22 18 31.8 -0.2
comp=Z,567nm,1.2s
X15A Humboldt 97.31 46 ⇑P P 22 18 33.1 +0.4
baz=97
U18A Rough Rock, Ch 97.54 43 ⇑P P 22 18 34.2 +0.5
baz=97
R21A Cimarron 97.61 40 ⇑P P 22 18 34.4 +0.5
baz=97
T19A Beclabito 97.78 42 ⇑P P 22 18 34.7 0.0
baz=98
SCHQ Schefferville 97.84 8 LR LR 23 03 30.0
comp=Z,117nm,18.4s,baz=7.1,slow=36
MVCO Mesa Verde 97.84 41 ⇑P P 22 18 35.6 +0.6
baz=98
ESDC Sonseca Array 99.46 324 P Pdif 22 18 41.2 -0.7
comp=Z,2.5nm,0.7s,baz=25,slow=4.4,SNR=11
TXAR Lajitas Array 106.17 44 Pdiff Pdif 22 19 12.5 +0.7
comp=Z,0.4nm,0.7s,baz=312,slow=8.1,SNR=3.3
TXAR PKiKP PKiKP 22 23 23.8 +0.2
comp=Z,0.5nm,0.9s,baz=198,slow=0.8,SNR=4.2
TORD Torodi Ar. Bea 113.48 300 PKiKP PKiKP 22 23 36.8 -0.8
comp=Z,1.7nm,0.7s,baz=36,slow=1.9,SNR=39
TORD PP PP 22 24 24.7 -5.3
comp=Z,0.9nm,0.8s,baz=47,slow=6.0,SNR=4.6
TORD PKKPbc PKKPbc 22 34 20.2 -1.0
comp=Z,0.4nm,0.7s,baz=246,slow=3.3,SNR=5.0
TORD Torodi Ar. Bea 113.48 300 PKPdf PKiKP 22 23 36.8 -0.8
TORD PP PP 22 24 24.7 -5.3
TORD PKKPbc PKKPbc 22 34 20.2 -1.0
DBIC Dimbokro 122.51 298 PKP PKPdf 22 23 53.7 -1.3
comp=Z,6.3nm,0.7s,baz=81,slow=1.5,SNR=11
KIC Kosan Boka 122.61 298 *e*PKIKP PKPdf 22 23 53.8 -1.4
comp=Z,18nm,0.4s
TIC Toumodi 122.66 298 *e*PKIKP PKPdf 22 23 54.0 -1.3
comp=Z,11nm,0.3s
LIC Lamto 122.92 298 *e*PKIKP PKPdf 22 23 54.3 -1.5
comp=Z,43nm,1.0s
LIC Lamto 122.92 298 ⇑ *i*PKIKP PKPdf 22 23 55.5 -0.3
comp=Z,32nm,1.0s
SNAA Sanae 127.30 198 *e*PKPdf PKPdf 22 24 02.7 +0.3
SNAA *e* 22 24 32.6
SNAA Sanae 127.30 198 *e*PKPdf PKPdf 22 24 02.6 +0.1
SNAA *ep*PKPdf pPKPdf 22 24 31.8 -1.2
VNA2 Neumayer--Watz 128.94 198 *e*PKPdf PKPdf 22 24 06.4 +0.8
baz=57,slow=0.7
VNA2 *e* 22 24 07.6
VNA2 *e* 22 24 37.4
VNA1 Neumayer--Stat 129.34 198 *e*PKPdf PKPdf 22 24 07.2 +0.9
VNA1 *e* 22 24 08.5
VNA1 *e* 22 24 38.0
VNA3 Neumayer Olymp 129.36 197 *e*PKPdf PKPdf 22 24 06.9 +0.5
VNA3 *e* 22 24 08.1
VNA3 *e* 22 24 37.8
SDV Santo Domingo 140.69 28 *e*PKPdf PKPdf 22 24 26.5 -2.8
OTAV Otavalo 143.77 46 *e*PKPdf PKPdf 22 24 32.3 -2.5
USHA Ushuaia 149.90 162 PKPbc PKPbc 22 24 49.4 +0.8
comp=Z,29nm,1.1s,baz=305,slow=2.0,SNR=5.2
NNA Nana 153.37 61 PKPbc PKPbc 22 24 56.8 -1.0
comp=Z,5.1nm,0.3s,baz=297,slow=2.9,SNR=4.7
NNA Nana 153.37 61 *e*PKPdf PKPdf 22 24 50.4 +0.3
NNA *e*PKPbc PKPbc 22 24 57.4 -0.3
PLCA Paso Flores 160.08 138 PKPab PKPab 22 25 38.7 +0.3
comp=Z,1.1nm,0.7s,baz=223,slow=21,SNR=5.1
PLCA Paso Flores 160.08 138 PKP2 PKPab 22 25 38.7 +0.3
PLCA pmax pmax
comp=Z,1.0nm,0.7s
LVC Limon Verde 165.17 77 PKPab PKPab 22 26 02.2 +0.9
comp=Z,3.0nm,0.7s,baz=330,slow=6.3,SNR=3.4
CFAA Coronel Fontan 166.08 114 PKP PKPdf 22 25 03.3 -0.7
comp=Z,0.2nm,0.6s,baz=293,slow=4.6,SNR=3.8
CFAA PKPab PKPab 22 26 04.8 -0.3
comp=Z,0.1nm,0.5s,baz=276,slow=2.1,SNR=3.6
CFAA Coronel Fontan 166.08 114 PKP PKPdf 22 25 03.3 -0.7
CFAA PKPab PKPab 22 26 04.8 -0.3
SIV San Ignacio 166.99 36 PKP PKPdf 22 25 05.5 +0.4
comp=Z,5.9nm,0.9s,baz=109,slow=0.8,SNR=25
SIV pPKP pPKPdf 22 25 34.6 -1.3
comp=Z,1.6nm,0.9s,baz=12,slow=2.2,SNR=2.7
SIV PKPab PKPab 22 26 07.7 -1.6
comp=Z,5.7nm,0.7s,baz=300,slow=3.8,SNR=15
SIV PP PP 22 29 52.7 -4.0
comp=Z,1.3nm,0.9s,baz=29,slow=7.1,SNR=5.8
BDFB Brasilia 167.84 335 PKP PKPdf 22 25 05.5 -0.2
comp=Z,3.4nm,0.9s,baz=183,slow=3.8,SNR=8.4
BDFB PKPab PKPab 22 26 12.1 -0.8
comp=Z,5.8nm,0.8s,baz=12,slow=12,SNR=12

IDC 21 22:16:42.5±0.9, 2060N×12014E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/21, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=49.6km s-min=18.2km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.11**	**20**	P		Pn	22 20 56.2	+0.7
	0.1nm,0.3s,baz=208,slow=14,SNR=3.4							
MKAR	**Makanchi Array**	**40.33**	**319**	P		P	22 24 21.8	+0.1
	0.2nm,0.7s,baz=97,slow=6.0,SNR=3.0							
WRA	**Warramunga Arr**	**42.62**	**160**	P		P	22 24 40.4	-0.3
	2.4nm,0.6s,baz=342,slow=9.1,SNR=25							
ZALV	**Zalesovo Beam**	**42.78**	**330**	P		P	22 24 41.7	0.0
	0.3nm,0.3s,baz=108,slow=9.5,SNR=3.3							
KURK	**Kurchatov**	**44.29**	**323**	P		P	22 24 54.3	+0.5
	0.3nm,0.3s,baz=126,slow=7.3,SNR=4.2							
ASAR	**Alice Springs**	**45.99**	**162**	P		P	22 25 08.2	+0.5
	0.4nm,0.4s,baz=346,slow=7.0,SNR=8.9							
GERES	**GERESS Array B**	**84.99**	**321**	P		P	22 29 19.4	-0.4
	0.4nm,0.8s,baz=65,slow=5.5,SNR=3.2							
YKA	**Yellowknife Ar**	**86.64**	**22**	P		P	22 29 27.2	-0.5
	0.7nm,0.8s,baz=314,slow=4.7,SNR=7.4							

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*CSEM **21** 22:21:49.3±0.1, 3940N×3309E, h2km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.7km az=172.0*
*ISK **21** 22:21:49.8, 3942N×3309E, h5km, MD3.1*
*DDA **21** 22:21:49.8, 3939N×3309E, h5km, Md2.7*
*ISCJB **21** 22:21:50.9±0.4, 3940N±003×3308E±003, h10km, Error ellipse: s-maj=4.7km s-min=3.4km az=155.2*

ISC 21 22:21:50.7±0.6, 3939N±003×3309E±003, h1km±6km, n22, σ0.86/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**93**	PG		**Pg**	**22 21 59.5**	**-0.4**
KAMT				*e*SG		**Sg**	**22 22 06.7**	**+0.5**
LOD	**Lodumlu**	**0.56**	**333**	*e*PG		**Pg**	**22 22 00.9**	**-0.4**
LOD				*e*SG		**Sg**	**22 22 07.9**	**-0.6**
CDAG	**Cicekdag**	**1.02**	**77**	*i* P		**Pg**	**22 22 09.0**	**-1.2**
CDAG				*i* S		**Sg**	**22 22 24.8**	**+1.4**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG		**Pg**	**22 22 10.9**	**-0.3**
KIZT				*e*SG		**Sg**	**22 22 26.1**	**+1.1**
ELDT	**Eldivan**	**1.13**	**13**	*e*P		**Pg**	**22 22 12.3**	**0.0**
ELDT				*i* S		**Sg**	**22 22 28.6**	**+1.8**
KDHN	**Kadinhani**	**1.15**	**221**	*e*P		**Pg**	**22 22 11.0**	**-1.7**
KDHN				*i* S		**Sg**	**22 22 28.6**	**+0.9**
CANT	**Cankiri**	**1.28**	**18**	*e*PN		**Pn**	**22 22 14.6**	**-1.0**
LADK	**Ladik-KONYA**	**1.32**	**206**	*e*PN		**Pn**	**22 22 15.1**	**-1.1**
KONT	**Konya--Tatoy**	**1.55**	**202**	*e*PN		**Pn**	**22 22 19.4**	**0.0**

ESKT	**Eskisehir**	**1.74**	**275**	*e*P	**Pn**	**22 22 22.2 +0.3**
ESKT				*i* S	**Sn**	**22 22 48.3 +3.6**
ESKT	**Eskisehir**	**1.74**	**275**	*e*P	**Pn**	**22 22 22.6 +0.6**
ESKT				*i* S	**Sn**	**22 22 48.3 +3.5**
ESKT	**Eskisehir**	**1.74**	**275**	*e*Pn	**Pn**	**22 22 21.3 -0.7**
SEYT	**Eskypehyr**	**1.74**	**275**	*e*P	**Pn**	**22 22 22.6 +0.6**
SEYT				*i* S	**Sn**	**22 22 48.3 +3.6**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**22 22 21.8 -0.3**
NIG	**Nigde**	**1.75**	**137**	*e*PN	**Pn**	**22 22 22.1 0.0**
BOLV	**Bolvadin**	**1.80**	**249**	*e*P	**Pn**	**22 22 22.6 -0.1**
BOLV				*i* S	**Sn**	**22 22 47.1 +1.0**
BOLV	**Bolvadin**	**1.80**	**249**	*e*P	**Pn**	**22 22 22.5 -0.2**
BOLV				*i* S	**Sn**	**22 22 47.1 +0.9**
BOLV	**Bolvadin**	**1.80**	**249**	*e*P	**Pn**	**22 22 22.5 -0.2**
BOLV				*i* S	**Sn**	**22 22 47.1 +0.9**
MDU	**Mudurnu**	**1.80**	**307**	*e*PN	**Pn**	**22 22 22.4 -0.3**
SAFT	**Safranbolu**	**1.87**	**351**	*e*PN	**Pn**	**22 22 23.4 -0.4**
BNN	**Bunyan**	**2.21**	**103**	*e*PN	**Pn**	**22 22 28.7 +0.2**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**22 22 40.5 +0.3**

ISK ***21*** *22:25:28.9, 3933N×3319E, h5km, MD3.2*
ISCJB ***21*** *22:25:29.3±0.8, 3933N±003×3319E±003, h3km±7km, Error ellipse: s-maj=5.6km s-min=3.8km az=2.0*
CSEM ***21*** *22:25:29.2±0.1, 3932N×3321E, h8km, MD3.2, Error ellipse: s-maj=2.4km s-min=1.6km az=4.0*
DDA ***21*** *22:25:29.1, 3937N×3317E, h5km±2km, Md2.6*
ISC 21 22:25:29.5±0.9, 3932N±004×3318E±003, h2km±8km, n26, σ0°86/37, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.41**	**83**	*e*PG	**Pg**	**22 25 37.4**	**-0.1**
KAMT				*e*SG	**Sg**	**22 25 43.4**	**+0.6**
LOD	**Lodumlu**	**0.65**	**330**	*e*PG	**Pg**	**22 25 41.0**	**-1.0**
LOD				*e*SG	**Sg**	**22 25 50.8**	**+0.3**
CDAG	**Cicekdag**	**0.97**	**71**	⇓*i*P	**Pg**	**22 25 47.3**	**-0.7**
CDAG				*i* S	**Sg**	**22 26 00.2**	**-0.4**
CDAG	**Cicekdag**	**0.97**	**71**	*i* P	**Pg**	**22 25 47.0**	**-1.0**
CDAG				*i* S	**Sg**	**22 26 00.1**	**-0.5**
CDAG	**Cicekdag**	**0.97**	**71**	*i* P	**Pg**	**22 25 47.3**	**-0.8**
CDAG				*i* S	**Sg**	**22 26 00.1**	**-0.5**
KIZT	**Kizilcal**	**1.11**	**247**	*e*PN	**Pn**	**22 25 50.4**	**-1.6**
KIZT				*e*SN	**Sn**	**22 26 06.3**	**-1.5**
KDHN	**Kadinhani**	**1.15**	**227**	*i* P	**Pn**	**22 25 44.0**	**-8.7**
ELDT	**Eldivan**	**1.18**	**9**	*i* P	**Pg**	**22 25 51.2**	**-1.0**
ELDT				*i* S	**Sg**	**22 26 07.6**	**+0.1**
LADK	**Ladik-KONYA**	**1.29**	**210**	*e*PN	**Pn**	**22 25 54.2**	**-0.3**
LADK				*e*SN	**Sn**	**22 26 12.2**	**-0.2**
CANT	**Cankiri**	**1.33**	**14**	*e*PN	**Pn**	**22 25 55.3**	**+0.3**
AVNT	**Avonos**	**1.41**	**112**	*i* P	**Pn**	**22 25 56.3**	**+0.1**
AVNT				*i* S	**Sb**	**22 26 16.3**	**+1.4**
KONT	**Konya--Tatoy**	**1.52**	**205**	*e*PN	**Pn**	**22 25 57.5**	**-0.2**
SGKT	**Sivrigoynuk**	**1.52**	**326**	*i* P	**Pn**	**22 25 57.0**	**-0.8**
NIG	**Nigde**	**1.65**	**137**	*e*PN	**Pn**	**22 25 58.5**	**-1.0**
YOZ	**Yozgat**	**1.68**	**78**	*e*PN	**Pn**	**22 26 00.3**	**+0.3**
ESKT	**Eskisehir**	**1.82**	**277**	*e*P	**Pn**	**22 26 03.8**	**+2.0**
ESKT				*i* S	**Sg**	**22 26 30.7**	**+2.8**
ESKT	**Eskisehir**	**1.82**	**277**	*e*Pn	**Pn**	**22 26 02.0**	**+0.2**
SEYT	**Eskypehyr**	**1.82**	**277**	*e*P	**Pn**	**22 26 03.8**	**+2.0**
BOLV	**Bolvadin**	**1.84**	**252**	*i* P	**Pn**	**22 26 02.2**	**+0.1**
BOLV				*i* S	**Sn**	**22 26 29.5**	**+3.5**
MDU	**Mudurnu**	**1.90**	**308**	*e*PN	**Pn**	**22 26 03.3**	**+0.4**
SAFT	**Safranbolu**	**1.95**	**349**	*e*PN	**Pn**	**22 26 03.8**	**+0.1**
BNN	**Bunyan**	**2.12**	**102**	*e*PN	**Pn**	**22 26 06.0**	**0.0**
GULT	**Gulveren**	**2.33**	**299**	*e*PN	**Pn**	**22 26 09.3**	**+0.4**
ALT	**Altintas**	**2.40**	**265**	*e*PN	**Pn**	**22 26 10.2**	**+0.3**
KOZT	**Kozan**	**2.77**	**131**	*e*PN	**Pn**	**22 26 15.5**	**+0.6**
SVSK	**Karacayir**	**3.00**	**77**	*e*PN	**Pn**	**22 26 18.6**	**+0.4**

NEIC ***21*** *22:35:11.6, 3882S×17837E, h34km, ML4.8(WEL), After WEL.*
NEIC Felt [IV] at Gisborne.
ISCJB ***21*** *22:35:12.0±1.0, 3875S±006×1783E±0.1, h47km±7km, mb4.3/7, MS3.5/3, Error ellipse: s-maj=14.0km s-min=9.0km az=19.5*
IDC ***21*** *22:35:14.9±2.5, 3867S×17817E, h56km±17km, mb4.2/6, mb1 4.3/6, mb1mx4.0/16, mbtmp4.2/6, MS3.5/3, Ms1 3.5/3, ms1mx3.1/25, Error ellipse: s-maj=38.9km s-min=24.0km az=43.0*
ISC 21 22:35:12.4±1.1, 3874S±006×1783E±01, h35km±9km, n86, σ0°78/40, mb4.3/7, MS3.5/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**0.58**	**241**	P	**Pn**	**22 35 23.1**	**-1.1**
PUZ	**Puketiti**	**0.67**	**356**	P	**Pn**	**22 35 24.4**	**-0.9**
MWZ	**Matawai**	**0.74**	**303**	P	**Pn**	**22 35 25.6**	**-0.8**
URZ	**Urewera**	**1.06**	**296**	P	**Pn**	**22 35 32.4**	**+1.5**
	526nm,0.3s,baz=131,slow=3.3,SNR=900						
URZ				S	**Sn**	**22 35 44.8**	**+0.4**
	750nm,0.3s,baz=23,slow=22,SNR=67						
URZ	**Urewera**	**1.06**	**296**	P	**Pn**	**22 35 30.5**	**-0.3**
MXZ	**Matakaoa Point**	**1.17**	**359**	P	**Pn**	**22 35 32.1**	**-0.2**
EDRZ	**Edgecumbe**	**1.39**	**296**	P	**Pn**	**22 35 35.9**	**+0.5**
BKZ	**Black Stump Fm**	**1.49**	**253**	P	**Pn**	**22 35 36.0**	**-0.7**
MARZ	**Manawahe**	**1.50**	**300**	P	**Pn**	**22 35 37.2**	**+0.4**
WIZ	**White Island**	**1.50**	**323**	P	**Pn**	**22 35 36.8**	**0.0**
MKRZ	**Makatiti**	**1.57**	**292**	P	**Pn**	**22 35 38.8**	**+1.0**
LIRZ	**Lichensteins R**	**1.69**	**295**	P	**Pn**	**22 35 39.9**	**+0.5**
UTU	**Utuhina**	**1.76**	**288**	P	**Pn**	**22 35 41.4**	**+1.0**
KARZ	**Kaharoa**	**1.78**	**293**	P	**Pn**	**22 35 40.9**	**+0.2**
WHTZ	**Whakaora**	**1.85**	**271**	P	**Pn**	**22 35 42.0**	**+0.4**
TGRZ	**Tauranga**	**1.91**	**301**	P	**Pn**	**22 35 42.3**	**-0.1**
RITZ	**Rihia Road**	**1.94**	**262**	P	**Pn**	**22 35 43.2**	**+0.4**
RATZ	**Rangitukua**	**2.00**	**265**	P	**Pn**	**22 35 44.1**	**+0.4**
WATZ	**Wairara**	**2.02**	**270**	P	**Pn**	**22 35 44.2**	**+0.2**
KATZ	**Kakaramea**	**2.06**	**263**	P	**Pn**	**22 35 44.8**	**+0.2**
MOVZ	**Moawhango**	**2.11**	**251**	P	**Pn**	**22 35 45.1**	**-0.1**
TUVZ	**Tukino**	**2.15**	**255**	P	**Pn**	**22 35 45.8**	**+0.1**
WTVZ	**West Tongariro**	**2.16**	**259**	P	**Pn**	**22 35 46.0**	**+0.1**
NGZ	**Ngauruhoe**	**2.17**	**257**	P	**Pn**	**22 35 45.7**	**-0.3**
WNVZ	**Wahianoa**	**2.20**	**254**	P	**Pn**	**22 35 46.4**	**-0.1**
DRZ	**Dome Shelter**	**2.21**	**255**	P	**Pn**	**22 35 47.0**	**+0.4**
FWVZ	**Far West T-bar**	**2.22**	**256**	P	**Pn**	**22 35 46.6**	**-0.1**
TSZ	**Takapari Road**	**2.26**	**233**	P	**Pn**	**22 35 44.9**	**-2.3**
HIZ	**Hauiti**	**2.72**	**274**	P	Px	22 35 54.1	
WAZ	**Wanganui**	**2.78**	**248**	P	Px	22 35 54.5	
VRZ	**Vera Road**	**2.81**	**261**	P	Px	22 35 54.9	
MRZ	**Mangatainoka R**	**2.86**	**227**	P	Px	22 35 52.5	
MTW	**Mount Morrison**	**3.25**	**221**	P	Px	22 35 56.4	
KIW	**Kapiti Island**	**3.38**	**230**	P	Px	22 35 59.6	
KAAZ	**Kauri Point**	**3.44**	**303**	P	Px	22 36 04.7	
CAW	**Cannon Point**	**3.44**	**226**	P	Px	22 35 59.7	
PAWZ	**Paruwai Farm**	**3.45**	**219**	P	Px	22 35 58.8	
MSWZ	**Moikau Station**	**3.56**	**220**	P	Px	22 36 00.1	
WEL	**Wellington**	**3.73**	**226**	P	Px	22 36 03.4	
MRW	**Makara Radio**	**3.73**	**227**	P	Px	22 36 03.5	
BHW	**Baring Head**	**3.76**	**224**	P	Px	22 36 03.2	
SNZO	**South Karori**	**3.78**	**226**	P	Px	22 36 03.8	
TCW	**Tory Channel**	**3.97**	**230**	P	Px	22 36 06.9	
WCZ	**Waipu Caves**	**4.22**	**310**	P	Px	22 36 14.5	
BSWZ	**Blackbirch Sta**	**4.52**	**227**	P	Px	22 36 13.7	
NNZ	**Nelson**	**4.53**	**235**	P	Px	22 36 15.0	
QRZ	**Quartz Range**	**4.93**	**243**	P	Px	22 36 20.2	
THZ	**Tophouse**	**5.13**	**232**	P	Px	22 36 21.8	
KHZ	**Kahutara**	**5.17**	**223**	P	Px	22 36 21.5	
DSZ	**Denniston Nort**	**5.82**	**237**	P	Px	22 36 31.8	
LTZ	**Lake Taylor**	**6.12**	**227**	P	Px	22 36 34.9	
WVZ	**Waitaha Valley**	**7.20**	**231**	P	Px	22 36 49.4	
RPZ	**Rata Peaks**	**7.40**	**225**	P	Px	22 36 53.8	
	5.1nm,0.3s,baz=63,slow=1.0,SNR=15						
RPZ				S	Sx	22 38 09.8	
	34nm,0.3s,baz=38,slow=19,SNR=29						
RPZ	**Rata Peaks**	**7.40**	**225**	P	Px	22 36 52.2	
FOZ	**Fox Glacier**	**8.10**	**231**	P	Px	22 37 00.6	
LBZ	**Lake Benmore**	**8.31**	**225**	P	Px	22 37 04.5	
ODZ	**Otahua Downs**	**8.51**	**220**	P	Px	22 37 07.2	
WKZ	**Wanaka**	**9.23**	**226**	P	Px	22 37 15.9	
EAZ	**Earnscleugh**	**9.33**	**223**	P	Px	22 37 19.1	
TUZ	**Tuapeka**	**9.66**	**219**	P	Px	22 37 23.5	
WHZ	**Wether Hill Ro**	**10.49**	**224**	P	Px	22 37 33.9	
STKA	**Stephens Creek**	**30.59**	**272**	P	**P**	**22 41 23.2**	**+0.3**
	1.7nm,0.6s,mb4.1,baz=112,slow=9.6,SNR=3.5						
STKA				LR	LR	22 52 40.9	
	comp=Z,90nm,18.7s,MS3.5,baz=125,slow=34						
CTA	**Charters Tower**	**33.31**	**295**	LR	LR	22 53 03.3	
	comp=Z,57nm,18.1s,MS3.3,baz=58,slow=32						
PMG	**Port Moresby**	**40.40**	**308**	P	**P**	**22 42 47.3**	**+0.1**
	7.2nm,0.7s,mb4.5,baz=135,slow=3.6,SNR=4.6						
PMG	**Port Moresby**	**40.40**	**308**	P	**P**	**22 42 47.3**	**+0.1**
ASAR	**Alice Springs**	**40.45**	**279**	P	**P**	**22 42 46.9**	**-0.8**
	2.8nm,0.5s,mb4.3,baz=131,slow=8.7,SNR=57						
WB2	**Warramunga Arr**	**42.20**	**283**	*e*P	**P**	**22 43 00.6**	**-1.4**
WRA	**Warramunga Arr**	**42.21**	**283**	P	**P**	**22 43 00.8**	**-1.2**
	2.4nm,0.5s,mb4.1,baz=123,slow=7.2,SNR=78						
FITZ	**Fitzroy Crossi**	**49.95**	**279**	*e*P	**P**	**22 44 02.0**	**-1.0**
	8.1nm,1.4s,mb4.6						
QSPA	**South Pole Qui**	**51.39**	**180**	P	**P**	**22 44 15.7**	**+2.6**
	1.2nm,0.2s,mb4.4,baz=201,slow=1.2,SNR=3.3						
KAPI	**Kappang**	**62.59**	**287**	LR	LR	23 14 43.7	
	comp=Z,48nm,19.1s,MS3.7,baz=293,slow=38						
VNA3	**Neumayer Olymp**	**70.18**	**177**	*e*	**P**	**22 46 21.4**	**+0.5**
VNA3				*e*	pP	22 46 32.6	+0.8
VNA3				*e*		22 46 38.2	
VNA2	**Neumayer--Watz**	**70.57**	**178**	*e*	**P**	**22 46 24.3**	**+1.0**
	baz=188,slow=4.5						
VNA2				*e*	pP	22 46 35.6	+1.4
VNA2				*e*		22 46 41.1	
CMAR	**Chiang Mai Arr**	**93.40**	**291**	P	**P**	**22 48 24.5**	**+0.3**
	0.6nm,0.5s,mb4.2,baz=150,slow=2.3,SNR=5.0						
YKA	**Yellowknife Ar**	**114.23**	**28**	PKP	PKiKP	22 53 47.0	0.0
	0.6nm,0.7s,baz=240,slow=1.5,SNR=9.4						
MKAR	**Makanchi Array**	**120.61**	**307**	PKP	PKPdf	22 53 58.5	-1.4
	0.5nm,0.7s,baz=217,slow=1.5,SNR=7.5						
BVAR	**Borovoye Array**	**129.95**	**311**	PKP	PKPdf	22 54 16.9	-0.6
	0.5nm,0.6s,baz=75,slow=1.7,SNR=5.0						
AKTO	**Aktyubinsk**	**137.01**	**306**	PKP	PKPdf	22 54 32.0	+1.2
	0.7nm,0.6s,baz=168,slow=2.9,SNR=3.6						
KEV	**Kevo**	**145.39**	**343**	*e*pkp	PKPdf	22 54 43.7	-1.6
ARCES	**ARCESS Array B**	**145.90**	**343**	PKPbc	PKPbc	22 54 46.7	-0.2
	4.6nm,0.5s,baz=40,slow=4.2,SNR=25						
DBIC	**Dimbokro**	**147.95**	**174**	PKPbc	PKPbc	22 54 52.5	-2.0
	4.4nm,0.9s,baz=149,slow=7.6,SNR=5.2						
JOF	**Joensuu**	**148.68**	**331**	*e*pkp	PKPdf	22 54 52.7	+1.7
	2.9nm,0.6s						
KAF	**Kangasniemi**	**151.01**	**333**	*e*pkp	PKPdf	22 54 58.5	+3.8
	5.1nm,0.6s						
BRTR	**Keskin Array B**	**152.73**	**283**	PKPbc	PKPbc	22 55 04.8	-0.3
	2.3nm,0.9s,baz=142,slow=4.4,SNR=8.0						
TORD	**Torodi Ar. Bea**	**154.34**	**188**	PKPbc	PKPbc	22 55 08.9	-0.4
	0.4nm,0.8s,baz=162,slow=3.5,SNR=6.4						
TORD				PKPab	PKPab	22 55 23.0	-0.4
	1.3nm,0.8s,baz=170,slow=2.8,SNR=6.9						
DAVOX	**Davos/Dischmat**	**168.31**	**317**	PKP	PKPdf	22 55 12.8	-1.9
	3.2nm,0.3s,baz=358,slow=24,SNR=36						

CSEM ***21*** *22:46:36.9±0.1, 4666N×1005E, h20km, ML2.6/5, Error ellipse: s-maj=1.6km s-min=1.2km az=126.0*
ISCJB ***21*** *22:46:37.5±0.4, 4670N±002×1007E±003, h10km, Error ellipse: s-maj=3.0km s-min=2.7km az=30.7*
VIE ***21*** *22:46:37.9±0.2, 4670N×1009E, h9km±3km, mb1.4/4, ML2.0/8, Error ellipse: s-maj=1.1km s-min=0.9km az=43.0*
ROM ***21*** *22:46:37.8±0.2, 4669N×1006E, h10km±2km, Md2.1/10, Ml1.6/5, Error ellipse: s-maj=5.0km s-min=2.0km az=17.0*
ZUR ***21*** *22:46:38.0, 4668N×1005E, h9km±1km, ML2.0/6*
ISC 21 22:46:37.9±0.6, 4669N±002×1006E±003, h16km±7km, n30, σ0°28/54, 11C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVOX	**Davos/Dischmat**	**0.15**	**306**	⇓*i*Pg	**Pg**	**22 46 41.9**	**+0.1**
	695nm,0.3s						
DAVOX				*i* Sg	**Sg**	**22 46 44.3**	**-0.2**
	695nm,0.3s						
DAVOX	**Davos/Dischmat**	**0.15**	**306**	⇓*i*Pg	**Pg**	**22 46 41.9**	**+0.1**
	695nm,0.3s						
DAVOX				Sg	**Sg**	**22 46 44.4**	**-0.1**
DAVOX	**Davos/Dischmat**	**0.15**	**306**	Pg	**Pg**	**22 46 41.9**	**+0.1**
DAVOX				Sg	**Sg**	**22 46 44.4**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**0.16**	**117**	⇑*i*Pg	**Pg**	**22 46 42.0**	**+0.1**
	477nm,0.5s						
FUORN				*i* Sg	**Sg**	**22 46 44.5**	**-0.1**
	477nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**0.16**	**117**	Pg	**Pg**	**22 46 42.0**	**+0.1**
FUORN				Sg	**Sg**	**22 46 44.5**	**-0.1**
BERNI	**Berninapass**	**0.28**	**185**	⇑*i*Pg	**Pg**	**22 46 44.1**	**+0.3**
	433nm,0.2s						
BERNI				*e*Sg	**Sg**	**22 46 47.9**	**0.0**
	433nm,0.2s						
BERNI	**Berninapass**	**0.28**	**185**	⇑*i*Pg	**Pg**	**22 46 44.1**	**+0.3**
	433nm,0.2s						
BERNI				Sg	**Sg**	**22 46 48.0**	**+0.1**
BERNI	**Berninapass**	**0.28**	**185**	Pg	**Pg**	**22 46 44.1**	**+0.3**
BERNI				Sg	**Sg**	**22 46 48.0**	**+0.1**
BRMO	**Bormio**	**0.31**	**135**	Pg	**Pg**	**22 46 44.3**	**0.0**
BRMO				Sg	**Sg**	**22 46 48.5**	**-0.1**
	18nm,0.2s						
BRMO	**Bormio**	**0.31**	**135**	Pg	**Pg**	**22 46 44.3**	**0.0**
BRMO				Sg	**Sg**	**22 46 48.5**	**-0.1**
	18nm,0.2s						
VDL	**Val di Lei**	**0.47**	**244**	⇑*i*Pg	**Pg**	**22 46 47.1**	**-0.1**
	161nm,0.2s						
TUE	**Stuetta**	**0.54**	**246**	Pg	**Pg**	**22 46 48.3**	**-0.2**
TUE				Sg	**Sg**	**22 46 55.7**	**+0.1**
	35nm,0.3s						
TUE	**Stuetta**	**0.54**	**246**	Pg	**Pg**	**22 46 48.3**	**-0.2**
TUE				Sg	**Sg**	**22 46 55.7**	**+0.1**
	35nm,0.3s						
FETA	**Feichten**	**0.57**	**54**	⇑*e*Pg	**Pg**	**22 46 48.9**	**-0.1**
	SNR=55						
FETA				⇓*i*Sg	**Sg**	**22 46 56.4**	**-0.2**
	13nm,0.1s						
DAVA	**Damuels**	**0.61**	**349**	⇓*e*Pg	**Pg**	**22 46 50.0**	**+0.2**
	SNR=6.4						
DAVA				⇑*i*Sg	**Sg**	**22 46 58.4**	**+0.5**
	11nm,0.2s						
MABI	**Malga Bissina**	**0.71**	**153**	Pg	**Pg**	**22 46 51.9**	**+0.2**
MABI				Sg	**Sg**	**22 47 00.8**	**-0.3**
	10.0nm,0.1s						
MABI	**Malga Bissina**	**0.71**	**153**	Pg	**Pg**	**22 46 51.9**	**+0.2**
MABI				Sg	**Sg**	**22 47 00.8**	**-0.3**
	10.0nm,0.1s						
APPI	**Appiano**	**0.83**	**104**	Pg	**Pg**	**22 46 54.5**	**+0.4**
APPI				Sg	**Sg**	**22 47 04.7**	**-0.4**
	23nm,0.2s						
APPI	**Appiano**	**0.83**	**104**	Pg	**Pg**	**22 46 54.5**	**+0.4**
APPI				Sg	**Sg**	**22 47 04.7**	**-0.4**
	23nm,0.2s						
RETA	**Reutte**	**0.93**	**31**	⇑*i*Pg	**Pg**	**22 46 55.9**	**0.0**
RETA				⇑*i*Sg	**Sg**	**22 47 08.3**	**+0.2**
	3.0nm,0.3s						
MOTA	**Moosalm**	**0.97**	**47**	⇑*e*Pg	**Pg**	**22 46 56.2**	**-0.5**
	SNR=9.3						
MOTA				⇓*i*Sg	**Sg**	**22 47 09.4**	**+0.1**
	5.2nm,0.3s						
MOTA	**Moosalm**	**0.97**	**47**	Pg	**Pg**	**22 46 56.2**	**-0.4**
	SNR=9.3						
MOTA				Sg	**Sg**	**22 47 09.4**	**+0.1**
	5.2nm,0.3s						
FUSIO	**Fusio**	**0.99**	**257**	*e*Pg	**Pg**	**22 46 56.5**	**-0.5**
	27nm,0.2s						
MAGA	**Magasa**	**1.00**	**156**	Pg	**Pg**	**22 46 57.5**	**+0.3**
MAGA				Sg	**Sg**	**22 47 10.8**	**+0.6**
	37nm,0.3s						
MAGA	**Magasa**	**1.00**	**156**	Pg	**Pg**	**22 46 57.5**	**+0.3**
MAGA				Sg	**Sg**	**22 47 10.8**	**+0.6**
	37nm,0.3s						
MUGIO	**Muggio**	**1.04**	**223**	*e*Pg	**Pg**	**22 46 57.7**	**-0.3**
	22nm,0.4s						
MUGIO	**Muggio**	**1.04**	**223**	Pg	**Pg**	**22 46 57.8**	**-0.2**
VAI	**Varese**	**1.22**	**228**	Pg	**Pg**	**22 47 01.3**	**0.0**
	9.0nm,0.2s						
VAI	**Varese**	**1.22**	**228**	Pg	**Pg**	**22 47 01.3**	**0.0**
	9.0nm,0.2s						
WTTA	**Wattenberg**	**1.22**	**62**	⇑*i*Pg	**Pg**	**22 47 00.9**	**-0.5**
WTTA				⇑*i*Sg	**Sg**	**22 47 17.6**	**+0.2**
	3.9nm,0.2s						

ISCJB ***21*** *22:54:13.8±0.8, 3705N±004×2920E±003, h6km±5km, Error ellipse: s-maj=7.0km s-min=4.0km az=161.4*
NEIC ***21*** *22:54:13.6, 3707N×2919E, h8km, MD3.4(ISK), After ISK.*
CSEM ***21*** *22:54:13.3±0.1, 3708N×2921E, h5km, ML3.6, Error ellipse: s-maj=2.1km s-min=1.2km az=177.0*
DDA ***21*** *22:54:13.5, 3704N×2921E, h7km±4km, Md3.1, Ml3.6*
ISK ***21*** *22:54:13.8, 3708N×2920E, h8km, MD3.3*
ISC 21 22:54:14.2±0.8, 3704N±004×2920E±003, h7km±5km, n37, σ0°73/47, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**56**	⇑*i*P	**Pg**	**22 54 20.1**	**-0.9**
GOLH				*i* S	**Sg**	**22 54 26.6**	**+0.9**
TURN	**Turunc**	**0.50**	**251**	*i* P	**Pg**	**22 54 28.3**	**+4.4**
TURN				*i* S	**Sg**	**22 54 40.1**	**+10**
DENT	**Denizli**	**0.72**	**350**	*e*PG	**Pg**	**22 54 27.3**	**-0.8**
DENT				*e*SG	**Sg**	**22 54 37.4**	**-0.1**
DENT	**Denizli**	**0.72**	**350**	*e*Pg	**Pg**	**22 54 27.3**	**-0.8**
DENT				Sg	**Sg**	**22 54 37.3**	**-0.2**
DENT	**Denizli**	**0.72**	**350**	Pg	**Pg**	**22 54 27.3**	**-0.8**
DENT				Sg	**Sg**	**22 54 37.3**	**-0.2**
YER	**Yerkesik**	**0.74**	**277**	*e*PG	**Pg**	**22 54 28.6**	**+0.2**
YER				*e*SG	**Sg**	**22 54 38.9**	**+0.9**
YER	**Yerkesik**	**0.74**	**277**	Pg	**Pg**	**22 54 28.1**	**-0.3**
YER				*e*Sg	**Sg**	**22 54 38.9**	**+1.0**
YER	**Yerkesik**	**0.74**	**277**	Pg	**Pg**	**22 54 28.1**	**-0.3**
MLSB	**Milas**	**1.16**	**283**	*e*PN	**Pn**	**22 54 36.0**	**-0.9**
MLSB				*e*SN	**Sn**	**22 54 52.8**	**-0.2**
ANTB	**Antalya**	**1.18**	**96**	*e*PN	**Pn**	**22 54 36.8**	**-0.3**
BCK	**Bucak**	**1.19**	**69**	*e*PN	**Pn**	**22 54 36.4**	**-0.9**
ARG	**Arkhangelos**	**1.19**	**227**	P	**Pb**	**22 54 35.7**	**-1.4**
KHL	**Karahalli**	**1.30**	**11**	*e*PN	**Pn**	**22 54 38.1**	**-0.8**
ISP	**Isparta**	**1.32**	**52**	*e*PN	**Pn**	**22 54 38.9**	**-0.2**
DAT	**Datca**	**1.33**	**257**	*e*PN	**Pn**	**22 54 38.5**	**-0.8**
KHAL	**Karahalli**	**1.35**	**10**	*i* P	**Pn**	**22 54 39.1**	**-0.4**
KHAL				*i* S	**Sb**	**22 54 57.2**	**0.0**
BDRM	**Kayabasi**	**1.40**	**271**	*i* P	**Pn**	**22 54 39.8**	**-0.3**
BDRM				*i* S	**Sb**	**22 54 58.0**	**-0.8**
KULA	**Kula-Manisa**	**1.53**	**344**	*e*PN	**Pn**	**22 54 41.4**	**-0.5**
SMG	**Samos**	**1.99**	**290**	P	**Pn**	**22 54 48.6**	**+0.3**
IZM	**Izmir**	**2.04**	**312**	*e*PN	**Pn**	**22 54 49.1**	**+0.1**
AKS	**Akhisar**	**2.13**	**330**	*e*PN	**Pn**	**22 54 50.1**	**-0.2**
AKS	**Akhisar**	**2.13**	**330**	Pn	**Pn**	**22 54 50.1**	**-0.2**
ALT	**Altintas**	**2.14**	**19**	*e*PN	**Pn**	**22 54 50.0**	**-0.3**
BLCB	**Balcova**	**2.17**	**309**	*e*PN	**Pn**	**22 54 50.6**	**-0.2**
KARP	**Karpathos**	**2.22**	**228**	P	**Pn**	**22 54 53.0**	**+1.6**
DST	**Dursunbey**	**2.60**	**350**	*e*PN	**Pn**	**22 54 56.6**	**-0.1**
KONT	**Konya--Tatoy**	**2.67**	**69**	*e*PN	**Pn**	**22 54 58.0**	**+0.3**
LADK	**Ladik-KONYA**	**2.77**	**64**	*e*PN	**Pn**	**22 54 59.6**	**+0.7**
BALB	**Balikesir**	**2.79**	**339**	*e*PN	**Pn**	**22 54 59.4**	**0.0**
ESKT	**Eskisehir**	**2.80**	**27**	*e*PN	**Pn**	**22 54 59.6**	**+0.3**
ESKT	**Eskisehir**	**2.80**	**27**	Pn	**Pn**	**22 54 59.2**	**-0.2**
KIZT	**Kizilcal**	**2.81**	**48**	*e*PN	**Pn**	**22 55 00.0**	**+0.5**
APE	**Apeiranthos**	**2.93**	**272**	P	**Pn**	**22 55 02.7**	**+1.5**
GEMT	**Gemlik**	**3.39**	**360**	*e*PN	**Pn**	**22 55 08.0**	**+0.5**
ARMT	**Armutlu**	**3.53**	**356**	*e*PN	**Pn**	**22 55 09.9**	**+0.5**
GULT	**Gulveren**	**3.54**	**17**	*e*PN	**Pn**	**22 55 10.1**	**+0.5**
LIA	**Limnos Island**	**4.25**	**313**	P	**Pn**	**22 55 21.3**	**+2.0**

IDC 21 22:56:50.9±2.0, 285N×12742E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=137.6km s-min=25.1km az=67.0, Northern Molucca Sea

| Code | Station Name | Δ° | A

PETK **Petropavlovsk-** 64.29 354 P P 23 08 41.5 -0.3
comp=Z,6.4nm,0.9s,mb4.5,baz=160,slow=9.3,SNR=5.0
PETK **Petropavlovsk-** 64.29 354 P P 23 08 41.5 -0.3
MDJ **Mudanjiang** 64.57 332 P P 23 08 44.3 +0.5
MDJ AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,77nm,3.8s
HABR **Khabarovsk** 65.36 338 eP P 23 08 42.9 -5.9
HABR e 23 09 15.0
HABR e*PP pP 23 09 27.4 -2.3
HABR eS S 23 17 14.2 -4.6
HABR pmax pmax
comp=Z,68nm,2.3s,mb5.1
HABR pmax pmax
comp=N,16nm,1.7s
HABR pmax pmax
comp=E,34nm,2.5s
HABR MLR MLR
comp=Z,14nm,16.0s
CN2 **Changchun** 65.99 329 eP P 23 08 52.6 -0.3
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
KLR **Kul'dur** 67.24 336 eP P 23 08 56.8 -3.9
BJI **Beijing** 68.79 321 P P 23 09 10.4 -0.2
BJI AMB AMB
comp=Z,9.0nm,0.9s,mb4.5
BJI AMB AMB
comp=Z,88nm,4.8s
GYA **Guiyang** 68.83 304 ⇓iP P 23 09 11.6 +0.4
GYA AP pP 23 09 53.4 +0.9
GYA XP sP 23 10 12.4 +1.3
GYA PP PP 23 11 47.8 +2.1
GYA SCP 23 13 20.6
GYA PCS 23 13 38.8
GYA S S 23 17 59.0 -2.3
GYA SCS ScS 23 18 50.8 -4.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,90nm,5.9s
XAN **Xi'an** 70.49 312 P P 23 09 20.8 -0.4
XAN AP pP 23 10 03.3 +0.7
XAN PP PP 23 12 00.9 +1.1
XAN PPP 23 13 45.9
XAN S S 23 18 22.9 +2.5
XAN SS SS 23 22 58.8 +3.3
XAN AMB AMB
comp=Z,11nm,1.3s,mb4.4
XAN AMB AMB
comp=Z,47nm,4.9s
XAN LR LR
comp=E,15nm,19.4s
XAN LR LR
comp=Z,15nm,21.1s
KMI **Kunming** 71.55 301 P P 23 09 29.4 +1.7
KMI AMB AMB
comp=Z,13nm,1.1s,mb4.6
HHC **Hu-ho-hao-te** 72.15 319 eP P 23 09 33.3 +2.3
HHC AP pP 23 10 15.3 +2.7
HHC XP sP 23 10 34.9 +3.7
HHC PP PP 23 12 17.4 +3.5
HHC eS S 23 18 39.0 -0.2
HHC SKS 23 19 14.8
HHC XS sS 23 19 54.1 +2.6
HHC SS SS 23 23 23.4 +2.8
HHC AMB AMB
comp=Z,8.0nm,1.2s,mb4.3
HHC AMB AMB
comp=Z,86nm,3.9s
HHC LR LR
comp=N,143nm,20.2s
HHC LR LR
comp=E,118nm,17.8s
HHC LR LR
comp=Z,82nm,15.5s
CMAR **Chiang Mai Arr** 72.58 293 P P 23 09 34.8 +0.8
comp=Z,4.8nm,0.9s,mb4.2,baz=115,slow=4.3,SNR=19
CMAR pP pP
23 10 10.6 -5.1
comp=Z,0.6nm,0.4s,baz=116,slow=2.9,SNR=1.6
HIA **Hailar** 72.61 330 eP P 23 09 33.4 -0.1
HIA pmax pmax
comp=Z,4.0nm,0.8s
HIA **Hailar** 72.61 330 eP P 23 09 33.4 -0.1
comp=Z,3.9nm,0.8s,mb4.2
CHTO **Chiang Mai** 72.69 294 eP P 23 09 35.1 +0.5
CHTO pmax pmax
comp=Z,15nm,1.5s,mb4.5
CHTO **Chiang Mai** 72.69 294 eP P 23 09 35.1 +0.5
comp=Z,15nm,1.5s,mb4.5
CD2 **Chengdu** 73.00 307 P P 23 09 36.8 +0.6
CD2 PP PP 23 12 24.0 +2.7
CD2 S S 23 18 49.5 +0.3
CD2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
CD2 AMB AMB
comp=Z,80nm,3.9s
LZH **Lanzhou** 75.13 312 ⇑P P 23 09 50.0 +1.6
LZH AP pP 23 10 32.6 +2.2
LZH XP sP 23 10 51.5 +2.6
LZH PP PP 23 12 43.3 +4.1
LZH AMB AMB
comp=Z,19nm,1.2s,mb4.6
LZH AMB AMB
comp=Z,133nm,7.6s
YAK **Yakutsk** 78.22 343 ⇑eP P 23 10 04.0 -1.2
YAK pmax pmax
comp=Z,30nm,1.5s,mb4.7
YAK **Yakutsk** 78.22 343 P P 23 10 05.0 -0.2
comp=Z,14nm,0.9s,mb4.6
ULN **Ulaanbaatar** 78.59 324 eP P 23 10 08.0 +0.5
ULN pmax pmax
comp=Z,11nm,1.0s,mb4.4
ULN **Ulaanbaatar** 78.59 324 eP P 23 10 08.0 +0.5
comp=Z,11nm,1.0s,mb4.5
BILL **Bilibino** 78.85 360 ⇓iP P 23 10 07.5 -1.0
BILL e 23 10 12.4
BILL e*PP pP 23 10 51.5 +0.6
BILL pmax pmax
comp=Z,18nm,1.0s,mb4.7
BILL **Bilibino** 78.85 360 eP P 23 10 08.1 -0.4
comp=Z,18nm,1.1s,mb4.6
SONM **Songino Array** 78.95 324 P P 23 10 09.6 +0.1
comp=Z,3.9nm,1.0s,mb4.0,baz=131,slow=3.8,SNR=16
GTA **Gaotai** 79.42 314 eP P 23 10 13.3 +1.1
GTA AP pP 23 10 58.3 +3.7
GTA XP sP 23 11 17.5 +4.5
GTA AMB AMB
comp=Z,9.0nm,1.1s,mb4.3
BOD **Bodaibo** 80.73 335 eP P 23 10 16.4 -2.4
MCK **McKinley** 81.96 18 eP P 23 10 25.2 +0.1
MCK pmax pmax
comp=Z,13nm,1.0s,mb4.5
MCK **McKinley** 81.96 18 eP P 23 10 25.2 +0.1
comp=Z,13nm,1.0s,mb4.5
ZAK **Zakamensk** 81.98 325 eP P 23 10 25.3 -0.3
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
TLY **Talaya** 82.39 326 ⇓iP P 23 10 26.6 -1.1
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
COLA **College** 83.10 18 eP P 23 10 30.6 -0.5
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.6
COLA **College** 83.10 18 eP P 23 10 30.6 -0.5
comp=Z,11nm,0.8s,mb4.6
YBH **Yreka Blue Hor** 83.51 45 eP P 23 10 34.1 +0.4
YBH pmax pmax
comp=Z,75nm,2.3s
YBH **Yreka Blue Hor** 83.51 45 eP P 23 10 34.1 +0.4
comp=Z,74nm,2.3s,mb5.0
BEKR **Beckwourth** 84.55 48 ⇑P P 23 10 38.9 -0.1
baz=85
ISA **Isabella** 84.65 52 ⇓P P 23 10 39.2 -0.4
baz=85
R06C **Coleville** 84.78 49 ⇓P P 23 10 40.1 -0.1
baz=85
EDW2 **Edwards Air Fo** 84.79 53 ⇓P P 23 10 40.1 -0.2
baz=85
WCN **Washoe City** 84.81 48 ⇑P P 23 10 40.1 -0.2
baz=85
BFSC **Mount Baldy St** 84.87 54 ⇓P P 23 10 40.6 -0.1
baz=85
O06A **Flanigan** 85.03 48 ⇓P P 23 10 40.9 -0.4
baz=85
K05A **Summer Lake** 85.12 45 ⇑P P 23 10 41.9 +0.2
baz=85
EGAK **Eagle** 85.18 20 eP P 23 10 41.1 -0.4
comp=Z,16nm,0.8s,mb4.8
CWC **Cottonwood Cre** 85.19 52 ⇑P P 23 10 41.6 -0.7
baz=85
LRMC **Laurel Mountai** 85.20 53 ⇑P P 23 10 42.3 0.0
baz=85
F04A **Amboy** 85.21 42 ⇑P P 23 10 41.8 -0.3
baz=85
PAHR **Pah Rah Range** 85.21 48 eP P 23 10 42.3 0.0
comp=Z,15nm,1.4s,mb4.5
N06A **Buffalo Meadow** 85.21 47 ⇑P P 23 10 42.2 -0.1
baz=85
MPMC **Manual Prospec** 85.53 52 ⇓P P 23 10 44.1 +0.2
baz=86
NVAR **Mina Array Bea** 85.61 50 P P 23 10 44.1 -0.2
comp=Z,4.4nm,1.0s,mb4.2,baz=232,slow=7.6,SNR=16
O07A **Toulon** 85.72 48 ⇓P P 23 10 44.7 -0.1
baz=86
GSC **Goldstone** 85.84 53 ⇑P P 23 10 45.5 0.0
baz=86
N07B **Gerlach** 85.84 47 ⇑P P 23 10 45.5 +0.1
baz=86
M07A **Soldier Meadow** 85.89 47 ⇑P P 23 10 45.7 +0.1
baz=86
RAMN **Ramite** 85.90 298 eP P 23 10 46.3 +0.3
comp=Z,21nm,1.1s,mb4.8
L07A **Adell** 85.97 46 ⇑P P 23 10 46.0 0.0
baz=86
I06A **Prineville** 85.99 44 ⇓P P 23 10 45.9 -0.2
baz=86
HEC **Hector,Ludlow** 86.09 54 ⇑P P 23 10 46.5 -0.2
baz=86
FURC **Furnace Creek,** 86.13 52 ⇓P P 23 10 47.0 0.0
baz=86
TIXI **Tiksi** 86.17 349 ⇑eP P 23 10 44.6 -1.7
TIXI pmax pmax
comp=Z,10.0nm,1.6s,mb4.3
H06A **Lindquist Farm** 86.17 43 ⇓P P 23 10 46.4 -0.5
baz=86
S09A **Goldfield** 86.22 51 ⇓P P 23 10 47.5 +0.2
baz=86
F06A **Goldendale** 86.22 42 ⇑P P 23 10 46.9 -0.2
baz=86
K07A **Rock Creek Ran** 86.25 45 ⇑P P 23 10 47.4 0.0
baz=86
O08A **Rochester Mine** 86.29 48 ⇓P P 23 10 47.6 0.0
baz=86
C05A **Tolt Reservoir** 86.30 40 ⇓P P 23 10 46.7 -0.7
baz=86
E06A **Yakima** 86.36 41 ⇓P P 23 10 47.4 -0.3
baz=86
JIRN **Jiri** 86.43 299 eP P 23 10 49.0 +0.4
N08A **GE Springer Mi** 86.45 47 ⇓P P 23 10 48.3 -0.1
baz=86
M08A **Happy Creek Ra** 86.48 47 ⇓P P 23 10 48.8 +0.4
baz=87
R09A **Tonopah** 86.48 50 ⇓P P 23 10 48.8 +0.2
baz=87
A05A **Maple Falls** 86.52 39 ⇓P P 23 10 48.4 -0.1
baz=87
GMRC **Granite Mounta** 86.60 54 ⇓P P 23 10 49.5 +0.2
baz=87
H07A **Lands Inn, Kim** 86.64 44 ⇑P P 23 10 49.1 -0.1
baz=87
S10A **Tonopah Range,** 86.75 51 ⇓P P 23 10 49.4 -0.5
baz=87
GUN **Gumba** 86.76 299 eP P 23 10 50.6 +0.4
G07A **Ruggs Ranch, H** 86.79 43 ⇓P P 23 10 49.7 -0.3
baz=87
K08A **Mann Creek Ran** 86.80 46 ⇓P P 23 10 49.8 -0.2
baz=87
IRM **Iron Mountain** 86.84 54 ⇑P P 23 10 50.6 +0.2
baz=87
J08A **Circle Bar Ran** 87.00 45 ⇑P P 23 10 51.0 +0.1
baz=87
V11A **Goodsprings** 87.07 53 ⇑P P 23 10 51.7 +0.2
baz=87
PKI **Pulchoki** 87.08 299 eP P 23 10 51.7 0.0
E07A **Sunnyside** 87.09 42 ⇑P P 23 10 51.1 -0.3
baz=87
PKIN **Phulchoki** 87.09 299 eP P 23 10 51.6 -0.2
comp=Z,5.0nm,0.5s,mb4.6
D07A **Quincy** 87.22 41 ⇓P P 23 10 51.6 -0.4
baz=87
KKN **Kakani** 87.24 299 eP P 23 10 52.4 -0.1
comp=Z,14nm,0.8s,mb4.8
KKN **Kakani** 87.24 299 eP P 23 10 52.4 -0.1
KKN pmax pmax
comp=Z,14nm,0.8s,mb4.8
G08A **Pilot Rock** 87.27 43 ⇑P P 23 10 52.0 -0.2
baz=87
K09A **Rome** 87.32 46 ⇑P P 23 10 52.3 -0.2
baz=87
C07A **Waterville** 87.33 40 ⇑P P 23 10 52.1 -0.4
baz=87
DMN **Daman** 87.35 299 eP P 23 10 53.4 +0.4
comp=Z,45nm,1.1s,mb5.2
SHPR **Sheep Range** 87.46 52 eP P 23 10 53.9 +0.5
J09A **Fry Pan Ranch,** 87.50 45 ⇑P P 23 10 53.1 -0.2
baz=88
B07A **Winthrop** 87.55 40 ⇑P P 23 10 53.4 -0.1
baz=88
F08A **Pendleton** 87.56 43 ⇑P P 23 10 53.4 -0.2
baz=88
A07A **Ashnola River,** 87.59 39 ⇓P P 23 10 53.3 -0.3
baz=88
E08A **Dider Farm, El** 87.59 42 ⇑P P 23 10 53.5 -0.2
baz=88
T11A **Corn Creek, Al** 87.61 52 ⇑P P 23 10 54.4 +0.4
baz=88
R11A **Troy Canyon, C** 87.63 50 ⇑P P 23 10 54.2 +0.1
baz=88
Q11A **Duckwater** 87.72 50 ⇓P P 23 10 54.8 +0.3
baz=88
Y13A **Salome** 87.81 55 ⇓P P 23 10 55.5 +0.5
baz=88
M10A **I.L. Ranch, Tu** 87.82 47 ⇑P P 23 10 54.9 0.0
baz=88
GKN **Gorkha** 87.85 299 eP P 23 10 54.9 -0.5
comp=Z,42nm,1.2s,mb5.2
D08A **Wollman Farm,** 87.86 41 ⇓P P 23 10 54.8 -0.2
baz=88
U12A **Valley of Fire** 87.92 52 ⇓P P 23 10 56.0 +0.5
baz=88
K10A **MacKenzie Ranc** 87.95 46 ⇓P P 23 10 55.8 +0.4
baz=88
S12A **Delamar Landin** 88.00 51 ⇓P P 23 10 56.6 +0.8
baz=88
X13A **Yucca** 88.01 54 ⇑P P 23 10 56.4 +0.4
baz=88
B08A **Colville Reser** 88.01 40 ⇓P P 23 10 55.1 -0.5
baz=88
L10A **Juniper Basin** 88.03 47 ⇓P P 23 10 55.8 -0.1
baz=88
G09A **Cove** 88.06 43 ⇑P P 23 10 56.0 0.0
baz=88
O11A **Cowboy Ranch,** 88.07 49 ⇑P P 23 10 56.4 +0.3
baz=88
W13A **Hualapai Mount** 88.09 54 ⇓P P 23 10 56.8 +0.4
baz=88
214A **Organ Pipe Nat** 88.18 57 ⇑P P 23 10 57.7 +0.8
baz=88
E09A **Wood Farm, Sta** 88.20 42 ⇑P P 23 10 56.6 0.0
baz=88
A08A **Turner Farm, O** 88.25 39 ⇑P P 23 10 56.5 -0.3
baz=88
BMO **Blue Mountains** 88.25 44 eP P 23 10 58.0 +1.1
BMO pmax pmax
comp=Z,13nm,1.6s,mb4.5
BMO **Blue Mountains** 88.25 44 eP P 23 10 58.0 +1.1
comp=Z,14nm,1.6s,mb4.5
D09A **Jones Farm, Ri** 88.26 41 ⇓P P 23 10 56.6 -0.2
baz=88
U13A **Pakoon Wash** 88.37 53 ⇓P P 23 10 57.9 +0.3
baz=88
R12A **Pony Springs,** 88.37 51 ⇑P P 23 10 58.0 +0.4
baz=88
Q12A **Willow Creek R** 88.39 50 ⇑P P 23 10 57.2 -0.5
baz=88,SNR=5.1
P12A **McGill** 88.45 49 ⇓P P 23 10 58.1 +0.2
baz=88
Y14A **Wickenburg** 88.51 55 ⇓P P 23 10 58.6 +0.3
baz=89
G10A **Bishop Farm, J** 88.51 43 ⇑P P 23 10 57.5 -0.5
baz=89
K11A **Parker Ranch,** 88.53 46 ⇓P P 23 10 58.2 -0.1
baz=89
H10A **Noah's Angus R** 88.56 44 ⇓P P 23 10 57.9 -0.4
baz=89
L11A **Cat Creek Ranc** 88.56 47 ⇑P P 23 10 58.6 +0.2
baz=89
T13A **Saint George** 88.57 52 ⇑P P 23 10 58.7 +0.2
baz=89
F10A **Beach Ranch, E** 88.64 43 ⇑P P 23 10 58.1 -0.6
baz=89
A09A **Danville** 88.68 40 ⇑P P 23 10 58.4 -0.4
baz=89
DANN **Dangsing** 88.68 299 eP P 23 10 58.5 -0.8
KOLN **Koldanda** 88.69 298 eP P 23 10 58.6 -0.7
comp=Z,15nm,1.0s,mb4.9
N12A **Clover Valley,** 88.72 48 ⇑P P 23 10 59.2 0.0
baz=89,SNR=5.1
X14A **Yava** 88.73 55 ⇑P P 23 10 59.6 +0.3
baz=89,SNR=6.4
S13A **Holt Ranch, En** 88.75 51 ⇓P P 23 10 59.4 0.0
baz=89,SNR=8.2
W14A **Seligman** 88.76 54 ⇓P P 23 11 00.1 +0.6
baz=89
O12A **Currie** 88.78 49 ⇑P P 23 10 59.4 -0.1
baz=89,SNR=5.4
B09A **Rice** 88.78 40 ⇑P P 23 10 58.9 -0.3
baz=89
R13A **O'Grain Ranch,** 88.82 51 ⇓P P 23 11 00.1 +0.5
baz=89
V14A **Boquillas Ranc** 88.84 54 ⇓P P 23 11 00.5 +0.7
baz=89
MFID **Camas Ranch** 88.86 45 ⇓P P 23 10 59.6 -0.2
baz=89
D10A **Wagner Farm, O** 88.93 42 ⇓P P 23 10 59.8 -0.2
baz=89
M12A **Wells** 88.96 48 ⇓P P 23 11 00.4 +0.1
baz=89
Q13A **Wheeler Ranch,** 88.98 50 ⇓P P 23 11 00.7 +0.3
baz=89
U14A **Mt Trumbull** 88.98 53 ⇑P P 23 11 00.8 +0.3
baz=89,SNR=5.1
Y15A **Casa Rosa Ranc** 89.05 55 ⇑P P 23 11 01.3 +0.4
baz=89
L12A **House Creek Ra** 89.09 47 ⇓P P 23 11 00.7 -0.1
baz=89
H11A **Donnelly** 89.09 44 ⇑P P 23 11 00.5 -0.4
baz=89
P13A **Bates Ranch, G** 89.11 50 ⇑P P 23 11 01.2 +0.1
baz=89,SNR=11
G11A **Walters Elk Ra** 89.12 43 ⇑P P 23 11 00.5 -0.4
baz=89,SNR=5.4
T14A **Hurricane** 89.21 52 ⇓P P 23 11 01.6 +0.1
baz=89
116A **Eloy** 89.24 57 ⇓P P 23 11 02.5 +0.7
baz=89
X15A **Humboldt** 89.26 55 ⇓P P 23 11 02.5 +0.7
baz=89
O13A **Hicks Ranch, I** 89.31 49 ⇑P P 23 11 01.9 0.0
baz=89
J12A **Stokes Ranch,** 89.33 46 ⇓P P 23 11 01.8 -0.2
baz=89,SNR=7.0
A10A **Northport** 89.33 40 ⇑P P 23 11 01.6 -0.2
baz=89
F11A **Grangeville** 89.33 43 ⇑P P 23 11 01.3 -0.6
baz=89
W15A **Williams** 89.40 54 ⇑P P 23 11 03.0 +0.5
baz=90
E11A **Bogner Ranch,** 89.43 43 ⇓P P 23 11 01.6 -0.8
baz=90
WMQ **Urumqi** 89.45 315 eP P 23 11 03.1 +0.6
M13A **Montello** 89.49 48 ⇑P P 23 11 02.6 -0.2
baz=90,SNR=7.2
D11A **Klaveano Farm,** 89.54 42 ⇓P P 23 11 02.6 -0.3
baz=90
Q14A **Sevier Lake (B** 89.55 50 ⇓P P 23 11 03.0 -0.1
baz=90,SNR=12
V15A **Kaibab Nationa** 89.62 54 ⇑P P 23 11 04.0 +0.4
baz=90,SNR=5.4
U15A **North Rim** 89.68 53 ⇑P P 23 11 04.1 +0.4
baz=90,SNR=7.7
Y16A **Circle Bar Ran** 89.73 56 ⇑P P 23 11 04.3 +0.2
baz=90
T15A **Red Dirt Ranch** 89.75 52 ⇓P P 23 11 04.5 +0.5
baz=90
217A **Green Valley** 89.79 58 ⇑P P 23 11 05.1 +0.7
baz=90
C11A **Tepee Creek (N** 89.82 41 ⇑P P 23 11 04.0 -0.2
baz=90
L13A **Double Diamond** 89.84 47 ⇓P P 23 11 04.8 +0.4
baz=90
H12A **Diamond D Ranc** 89.84 45 ⇓P P 23 11 03.8 -0.6
baz=90,SNR=5.6
P14A **Drum Mountains** 89.85 50 ⇑P P 23 11 04.3 -0.2
baz=90,SNR=5.2
X16A **Lo Mia Camp, P** 89.88 55 ⇑P P 23 11 05.4 +0.7
baz=90
HLID **Hailey** 89.89 46 ⇑P P 23 11 04.8 +0.2
baz=90
HLID **Hailey** 89.89 46 eP P 23 11 05.0 +0.4
comp=Z,59nm,2.9s,mb5.0
B11A **Sandpoint** 89.92 41 ⇑P P 23 11 04.5 -0.1
baz=90
W16A **Flagstaff** 89.96 54 ⇓P P 23 11 05.5 +0.4
baz=90
J13A **Cove Ranch, Pi** 90.02 46 ⇑P P 23 11 04.8 -0.4
baz=90,SNR=5.7
A11A **Hall Mountain,** 90.07 40 ⇑P P 23 11 05.0 -0.3
baz=90,SNR=5.5
M14A **Sheep Mountain** 90.12 48 ⇑P P 23 11 05.7 -0.1
baz=90,SNR=6.6
I13A **Wildhorse Cree** 90.19 45 ⇑P P 23 11 06.0 +0.1
baz=90,SNR=8.8
DUG **Dugway** 90.19 49 ⇓P P 23 11 06.1 0.0
baz=90
DUG **Dugway** 90.19 49 eP P 23 11 06.2 +0.1
DUG pmax pmax
comp=Z,55nm,2.8s,mb5.0
DUG **Dugway** 90.19 49 eP P 23 11 06.2 +0.1
comp=Z,54nm,2.8s,mb5.0
Y17A **Roosevelt** 90.20 56 ⇓P P 23 11 06.9 +0.6
baz=90
H13A **Challis** 90.26 45 ⇓P P 23 11 06.2 -0.1
baz=90,SNR=7.2
MSU **Marysvale** 90.26 51 eP P 23 11 07.3 +0.9
318A **Bisbee** 90.40 58 ⇓P P 23 11 08.0 +0.8
baz=90
G13A **Cobalt** 90.42 44 ⇓P P 23 11 06.5 -0.5
baz=90,SNR=5.6
J14A **Carey** 90.46 46 ⇓P P 23 11 07.3 +0.1
baz=90
218A **Dragoon** 90.47 58 ⇑P P 23 11 08.0 +0.5
baz=90
K14A **Jones Ranch, D** 90.51 47 ⇓P P 23 11 07.7 +0.3
baz=91
S16A **Weppner Ranch,** 90.52 52 ⇓P P 23 11 08.4 +0.7
baz=91
F13A **Darby** 90.53 43 ⇑P P 23 11 06.9 -0.6
baz=91,SNR=7.9
I14A **Mackay** 90.66 45 ⇓P P 23 11 08.0 -0.2
baz=91,SNR=5.9
118A **Homack Ranch,** 90.68 57 ⇑P P 23 11 09.0 +0.5
baz=91
R16A **Teasdale** 90.74 51 ⇓P P 23 11 09.3 +0.7
baz=91
M15A **Larsen Ranch,** 90.77 48 ⇓P P 23 11 08.7 0.0
baz=91
D13A **Huson** 90.79 42 ⇑P P 23 11 08.4 -0.3
baz=91
E13A **Victor** 90.80 43 ⇑P P 23 11 08.6 -0.1
baz=91
C13A **Hot Springs** 90.87 42 ⇓P P 23 11 08.6 -0.4
baz=91
H14A **Leadore** 90.89 45 ⇑P P 23 11 09.1 -0.1
baz=91
L15A **Malad City** 90.94 47 ⇓P P 23 11 09.6 +0.1
baz=91
T17A **Navajo Res., N** 90.97 53 ⇓P P 23 11 10.2 +0.4
baz=91
B13A **Whitefish** 91.12 41 ⇓P P 23 11 10.3 +0.1
baz=91
Q16A **Castle Valley** 91.12 51 ⇓P P 23 11 10.7 +0.3
baz=91
E14A **Clinton** 91.26 43 ⇑P P 23 11 10.5 -0.4
baz=91
R17A **Hanksville Air** 91.36 51 ⇑P P 23 11 11.6 0.0
baz=91
H15A **Lima** 91.39 45 ⇑P P 23 11 11.2 -0.3
baz=92,SNR=6.2
D14A **Greenough** 91.42 42 ⇓P P 23 11 11.3 -0.2

	baz=92								
Y19A	**Nutrioso**	**91.55**	**56**	⇑P		**P**	**23 11 12.2**	**-0.3**	
	baz=92								
U18A	**Rough Rock, Ch**	**91.58**	**53**	⇑P		**P**	**23 11 12.9**	**+0.3**	
	baz=92								
G15A	**Dillon**	**91.63**	**44**	⇓P		**P**	**23 11 12.8**	**+0.2**	
	baz=92								
L16A	**Fish Haven**	**91.64**	**48**	⇓P		**P**	**23 11 13.1**	**+0.3**	
	baz=92								
K16A	**Soda Springs**	**91.71**	**47**	⇑P		**P**	**23 11 13.5**	**+0.4**	
	baz=92								
T18A	**Mexican Hat**	**91.73**	**53**	⇑P		**P**	**23 11 13.3**	**0.0**	
	baz=92								
O17A	**Robinson Place**	**91.74**	**50**	⇑P		**P**	**23 11 13.5**	**+0.3**	
	baz=92								
S18A	**Hurst Farm, Bl**	**91.75**	**52**	⇑P		**P**	**23 11 13.7**	**+0.4**	
	baz=92								
F15A	**Butte**	**91.79**	**44**	⇑P		**P**	**23 11 12.9**	**-0.5**	
	baz=92								
J16A	**Bone**	**91.80**	**46**	⇓P		**P**	**23 11 13.6**	**+0.1**	
	baz=92								
E15A	**Deer Lodge**	**91.83**	**43**	⇓P		**P**	**23 11 13.5**	**0.0**	
	baz=92								
B14A	**Marquette Ranc**	**91.89**	**41**	⇑P		**P**	**23 11 13.3**	**-0.4**	
	baz=92								
A14A	**Double T Ranch**	**91.94**	**41**	⇑P		**P**	**23 11 13.8**	**-0.1**	
	baz=92								
R18A	**Canyonlands Na**	**91.98**	**51**	⇑P		**P**	**23 11 14.7**	**+0.3**	
	baz=92								
I16A	**Newdale**	**92.02**	**46**	⇑P		**P**	**23 11 14.3**	**-0.1**	
	baz=92								
D15A	**Lincoln**	**92.06**	**43**	⇑P		**P**	**23 11 14.1**	**-0.5**	
	baz=92								
G16A	**Moss Hill, Enn**	**92.11**	**44**	⇓P		**P**	**23 11 14.7**	**-0.2**	
	baz=92								
C15A	**Salmond Ranch,**	**92.18**	**42**	⇓P		**P**	**23 11 14.8**	**-0.2**	
	baz=92								
BOZ	**Bozeman (W)**	**92.33**	**44**	⇑P		**P**	**23 11 15.7**	**-0.2**	
	baz=92								
BOZ	**Bozeman (W)**	**92.33**	**44**	*e*P		**P**	**23 11 16.6**	**+0.8**	
BOZ				pmax		pmax			
	comp=Z,42nm,2.5s,mb5.0								
BOZ	**Bozeman (W)**	**92.33**	**44**	*e*P		**P**	**23 11 16.6**	**+0.8**	
	comp=Z,42nm,2.5s,mb5.0								
B15A	**Bradely Ranch,**	**92.34**	**41**	⇓P		**P**	**23 11 15.2**	**-0.6**	
	baz=92								
F16A	**Kennard Place,**	**92.36**	**44**	⇓P		**P**	**23 11 16.2**	**+0.2**	
	baz=92								
H16A	**Russell Place,**	**92.38**	**45**	⇑P		**P**	**23 11 16.6**	**+0.5**	
	baz=92								
A15A	**Johnson Ranch,**	**92.39**	**41**	⇓P		**P**	**23 11 15.9**	**-0.1**	
	baz=92								
E16A	**East Helena**	**92.50**	**43**	⇓P		**P**	**23 11 16.4**	**-0.2**	
	baz=93								
Q19A	**Hogan Spring (**	**92.58**	**51**	⇓P		**P**	**23 11 17.2**	**0.0**	
	baz=93								
D16A	**Dana Ranch, Ca**	**92.70**	**43**	⇑P		**P**	**23 11 17.7**	**+0.1**	
	baz=93								
C16A	**Fuhringer Ranc**	**92.75**	**42**	⇓P		**P**	**23 11 17.3**	**-0.4**	
	baz=93								
J18A	**Kendall Valley**	**92.92**	**47**	⇑P		**P**	**23 11 18.5**	**-0.1**	
	baz=93								
F17A	**Fitzpatrick Pl**	**93.05**	**44**	⇑P		**P**	**23 11 19.5**	**+0.3**	
	baz=93								
BW06	**Boulder Array**	**93.16**	**47**	⇓P		**P**	**23 11 19.8**	**+0.1**	
	baz=93								
PDAR	**Pinedale Array**	**93.16**	**47**	P		**P**	**23 11 19.4**	**-0.4**	
	comp=Z,0.3nm,0.5s,mb3.7,baz=8.7,slow=2.0,SNR=5.8								
D17A	**Six Diamond Ra**	**93.30**	**43**	⇑P		**P**	**23 11 20.3**	**0.0**	
	baz=93								
B17A	**L&G Farms, Che**	**93.48**	**42**	⇓P		**P**	**23 11 20.8**	**-0.3**	
	baz=94								
E18A	**Harlowton**	**93.70**	**43**	⇓P		**P**	**23 11 22.3**	**+0.2**	
	baz=94								
ZALV	**Zalesovo Beam**	**93.84**	**324**	P		**P**	**23 11 21.2**	**-1.4**	
	comp=Z,2.4nm,0.7s,mb4.4,baz=101,slow=4.7,SNR=16								
ZALV	**Zalesovo Beam**	**93.84**	**324**	P		**P**	**23 11 21.2**	**-1.4**	
MK31	**Makanchi Array**	**93.86**	**317**	*e*P		**P**	**23 11 22.6**	**-0.2**	
MKAR	**Makanchi Array**	**93.86**	**317**	P		**P**	**23 11 22.4**	**-0.5**	
	comp=Z,5.0nm,0.8s,mb4.7,baz=101,slow=6.2,SNR=43								
MKAR				pP		pP	23 12 00.0	-6.3	
	comp=Z,1.4nm,0.9s,baz=87,slow=6.2,SNR=2.7								
EGMT	**Eagleton**	**94.10**	**42**	⇓P		**P**	**23 11 24.3**	**+0.4**	
	baz=94								
YKA	**Yellowknife Ar**	**94.71**	**27**	P		**P**	**23 11 24.2**	**-2.2**	
	comp=Z,0.9nm,0.7s,mb4.1,baz=256,slow=4.7,SNR=15								
YKA	**Yellowknife Ar**	**94.71**	**27**	P		**P**	**23 11 24.2**	**-2.2**	
TXAR	**Lajitas Array**	**95.36**	**61**	P		**P**	**23 11 29.7**	**-0.4**	
	comp=Z,0.1nm,0.4s,mb3.4,baz=226,slow=6.5,SNR=4.4								
KURK	**Kurchatov**	**96.95**	**320**	⇑*e*P		**P**	**23 11 36.1**	**-0.7**	
KURK				pmax		pmax			
	comp=Z,6.0nm,1.7s,mb4.7								
ARCES	**ARCESS Array B**	**116.44**	**346**	PKP		PKPdf	23 16 46.4	-1.3	
	comp=Z,9.2nm,1.2s,baz=28,slow=2.9,SNR=22								
NOA	**NORSAR Array B**	**126.81**	**345**	PKP		PKPdf	23 17 07.3	-0.5	
	comp=Z,1.1nm,0.8s,baz=41,slow=4.7,SNR=4.2								
CLL	**Collm**	**134.29**	**337**	*e*PKPdf		PKPdf	23 17 23.0	+0.7	
GERES	**GERESS Array B**	**135.91**	**334**	PKP		PKPdf	23 17 25.5	+0.1	
	comp=Z,0.8nm,0.8s,baz=54,slow=2.3,SNR=6.3								
SSF	**Saint Saulge**	**141.23**	**341**	*e*PKIKP		PKPdf	23 17 37.0	+1.8	
	comp=Z,17nm,1.3s								
LPG	**La Plagne**	**141.44**	**337**	*e*PKIKP		PKPdf	23 17 37.9	+2.3	
	comp=Z,24nm,1.5s								
MBDF	**Montbardon**	**142.07**	**336**	*e*PKIKP		PKPdf	23 17 38.8	+2.0	
	comp=Z,18nm,1.1s								
TCF	**Toulx Ste Croi**	**142.33**	**342**	*e*PKIKP		PKPdf	23 17 38.6	+1.4	
VIVF	**Saint-Julien-l**	**142.76**	**338**	*e*PKIKP		PKPdf	23 17 40.3	+2.3	
EPF	**Esparros**	**145.84**	**341**	*e*PKIKP		PKPdf	23 17 41.6	-1.8	
	comp=Z,44nm,1.3s								
ETSF	**Etsaut**	**146.24**	**342**	*e*PKIKP		PKPdf	23 17 46.0	+1.9	
	comp=Z,37nm,1.3s								
KEST	**Kesra**	**147.71**	**323**	PKPbc		PKPbc	23 17 50.0	+0.2	
	comp=Z,2.9nm,0.9s,baz=85,slow=2.3,SNR=6.7								
MVO	**Moncorvo**	**149.40**	**350**	*e*PKPbc		PKPbc	23 17 54.2	+0.2	
PVRL	**Vila Real**	**149.40**	**351**	*e*PKPbc		PKPbc	23 17 54.1	+0.1	
ESDC	**Sonseca Array**	**150.18**	**345**	PKPbc		PKPbc	23 17 55.7	-0.2	
	comp=Z,1.2nm,0.7s,baz=36,slow=2.1,SNR=8.5								
ESDC				PKPab		PKPab	23 18 02.6	+0.2	
	comp=Z,1.3nm,0.7s,baz=12,slow=3.1,SNR=7.7								
MTE	**Manteigas**	**150.23**	**350**	*e*PKPbc		PKPbc	23 17 55.9	-0.1	
PMRV	**Marv??o**	**151.15**	**350**	*e*PKPbc		PKPbc	23 17 58.3	+0.1	
TOA0	**Torodi Ar. Sit**	**164.77**	**280**	*e*PKPdf		PKPdf	23 18 11.7	+2.4	
TORD	**Torodi Ar. Bea**	**164.77**	**280**	PKP		PKPdf	23 18 09.4	0.0	
	comp=Z,0.5nm,0.7s,baz=56,slow=1.4,SNR=3.4								
TORD				PKPab		PKPab	23 19 05.8	-0.3	
	comp=Z,1.3nm,1.1s,baz=68,slow=5.5,SNR=5.6								

*NEIC **21** 23:13:43.1, 1589N×9641W, h20km, MD3.7(MEX), After MEX.*

MEX 21 23:13:43.2±0.8, 1589N×9641W, h20km±19km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**0.31**	**112**	*i* P		Pb	23 13 48.5	-1.5
HUIG				*i* S		Sb	23 13 54.0	-0.7
VHO	**Vista Hermosa**	**1.22**	**345**	*i* P		Pn	23 14 01.4	-3.7
VHO				*i* S		Sb	23 14 17.3	-3.7
OXX	**Oaxaca**	**1.23**	**346**	*i* P		Pn	23 14 02.3	-2.9
OXX				*i* S		Sb	23 14 17.1	-4.1
OXX	**Oaxaca**	**1.23**	**346**	*i* P		Pn	23 14 02.3	-2.9
OXX				*i* S		Sb	23 14 18.7	-2.4
PNIG	**Pinotepa**	**1.73**	**287**	*i* P		Pn	23 14 09.9	-2.3
PNIG				*i* S		Sn	23 14 29.4	-4.3
CMIG	**Matias Romero**	**1.89**	**50**	*i* P		Pn	23 14 11.5	-2.8
CMIG				*i* S		Sn	23 14 33.7	-3.9
UTMO	**Huajuapan**	**2.35**	**325**	*i* P		Pn	23 14 19.0	-1.7
UTMO				*i* S		Sn	23 14 47.1	-1.9

*ISCJB **21** 23:24:28.8±0.6, 133N±0.1×8862W±007, h144km±8km, mb3.4/2, Error ellipse: s-maj=22.4km s-min=4.8km az=29.2*

*CASC **21** 23:24:29.3±2.2, 1266N×8897W, h25km±8km, MD4.0, ML3.2*

*IDC **21** 23:24:30.1±3.6, 1340N×8888W, h138km±28km, mb3.1/2, mb1 3.4/5, mb1mx3.2/22, mbtmp3.2/5, Error ellipse: s-maj=53.4km s-min=22.7km az=22.0*

*INET **21** 23:24:31.1, 1294N×8885W, h15km, ML3.3*

ISC 21 23:24:29.7±0.7, 133N±01×8862W±007, h137km±8km, n33, σ1§20/25, mb3.4/2, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
VSM	**San Miguel**	**0.35**	**75**	*e*P		x	23 24 47.4	
VSM				*e*P		x	23 24 47.8	
SNVI	**San Vicente**	**0.35**	**322**	*e*P		x	23 24 47.0	
SNVI				*e*S		x	23 25 01.2	
BLLM	**Bellamira**	**0.38**	**74**	*e*P		x	23 24 47.5	
LFRS	**El Faro**	**0.52**	**303**	*e*P		x	23 24 47.3	
LFRS				*e*S		x	23 25 01.4	
LBRS	**Las Brisas**	**0.57**	**314**	*e*P		x	23 24 48.1	
CAHU	**Cacacuatique**	**0.58**	**42**	*e*P		x	23 24 48.8	
LFU	**La Fuente**	**0.63**	**310**	*e*P		x	23 24 48.5	
BOQS	**Boqueron**	**0.76**	**302**	*e*P		x	23 24 49.1	
BOQS				*e*S		x	23 25 06.1	
CNCH	**Conchagua**	**0.77**	**94**	*e*P		x	23 24 50.2	
SNJE	**San Jose**	**1.10**	**299**	*e*P		x	23 24 52.0	
SNJE				*e*S		x	23 25 11.9	
SBLS	**San Blas**	**1.10**	**297**	*e*P		x	23 24 52.2	
SBLS				*e*S		x	23 25 10.7	
RTR	**El Retiro**	**1.15**	**299**	*e*P		x	23 24 52.7	
TGUH	**Tegucigalpa,Un**	**1.49**	**61**	*e*P		**Pn**	**23 24 57.8**	**-0.4**
CRIN	**San Cristobal**	**1.65**	**112**	*e*P		**Pn**	**23 25 00.0**	**0.0**
TEL3	**Telica 3**	**1.89**	**114**	*e*P		**Pn**	**23 25 02.4**	**-0.3**
IXG	**Ixpaco**	**1.97**	**295**	*e*P		**Pn**	**23 25 02.5**	**-1.2**
IXG				*e*S		**Sn**	**23 25 28.5**	**-1.2**
MRL	**Marmol**	**2.01**	**329**	*e*P		**Pn**	**23 25 04.4**	**+0.2**
CNGN	**Cerro Negro**	**2.05**	**114**	*e*P		**Pn**	**23 25 03.2**	**-1.4**
CNGN				*e*P			23 25 04.2	
MOMN	**Momotombo**	**2.23**	**114**	*e*P		**Pn**	**23 25 06.8**	**-0.1**
COPN	**Copaltepe**	**2.29**	**120**	*e*P		**Pn**	**23 25 06.0**	**-1.6**
COPN				*e*P			23 25 07.3	
COPN				*e*S		**Sn**	**23 25 35.4**	**-1.2**
COPN				*e*S		**Sn**	**23 25 35.7**	**-0.9**
COPN				AML		AML	23 25 40.8	
	comp=Z,546nm,0.2s							
FUG	**Fuego 3**	**2.43**	**297**	*e*P		**Pn**	**23 25 10.1**	**+0.8**
FUG				*e*S		**Sn**	**23 25 40.3**	**+0.6**
CSAN		**2.43**	**118**	*e*P		**Pn**	**23 25 10.3**	**+0.9**
APYN	**Apoyeque**	**2.47**	**116**	*e*P		**Pn**	**23 25 11.2**	**+1.3**
FG6		**2.51**	**299**	*e*P		**Pn**	**23 25 12.6**	**+2.2**
FG6				*e*S		**Sn**	**23 25 44.4**	**+2.6**
MGAN	**Managua**	**2.60**	**117**	*e*S		**Sn**	**23 25 44.4**	**+0.8**
MGAN				AML		AML	23 25 47.1	
	comp=N,38nm,0.3s							
TICN	**Ticuantepe**	**2.66**	**119**	*e*P		**Pn**	**23 25 13.0**	**+0.6**
TEIG	**Tepich**	**6.86**	**3**	P		**Pn**	**23 26 08.2**	**+0.3**
	comp=N,0.5nm,0.3s,baz=167,slow=19,SNR=5.7							
CMIG	**Matias Romero**	**7.11**	**302**	P		**Pn**	**23 26 09.2**	**-2.0**
	comp=N,0.5nm,0.3s,baz=140,slow=13,SNR=4.2							
CMIG				S		**Sn**	**23 27 23.1**	**-7.5**
	comp=N,0.4nm,0.3s,baz=308,slow=19,SNR=3.8							
CHI2		**17.03**	**119**	*e*P		x	23 24 60.0	
SDV	**Santo Domingo**	**18.19**	**102**	P		**P**	**23 28 34.7**	**+2.6**
	comp=N,0.4nm,0.3s,baz=346,slow=9.0,SNR=4.1							
TXAR	**Lajitas Array**	**21.17**	**321**	P		**P**	**23 29 04.3**	**+0.1**
	comp=N,1.1nm,0.6s,mb3.4,baz=140,slow=10.0,SNR=14							
YKA	**Yellowknife Ar**	**52.47**	**345**	P		**P**	**23 33 26.6**	**-1.5**
	comp=N,0.6nm,0.6s,mb3.4,baz=135,slow=8.4,SNR=12							
WRA	**Warramunga Arr**	**138.41**	**255**	PKP		PKPdf	23 43 40.0	+0.2
	comp=N,0.5nm,0.8s,baz=83,slow=2.6,SNR=5.8							

*IDC **21** 23:49:25.5±0.6, 3813N×6778E, h0km, mb4.0/17, mb1 4.2/22, mb1mx4.2/27, mbtmp4.1/22, ML4.1/4, MS2.9/2, Ms1 3.0/2, ms1mx2.3/33, Error ellipse: s-maj=12.4km s-min=12.0km az=158.0*

*ISCJB **21** 23:49:29.0±0.8, 3827N±003×6792E±004, h36km±8km, mb4.3/40, MS3.2/2, Error ellipse: s-maj=6.3km s-min=4.6km az=149.3*

*MOS **21** 23:49:29.3±1.0, 3841N×6795E, h33km, mb4.7/21, Error ellipse: s-maj=7.3km s-min=5.4km az=100.9*

*BJI **21** 23:49:31.6, 3868N×6814E, h34km, mb4.3, ML3.8*

*NEIC **21** 23:49:31.6±0.9, 3829N×6799E, h46km±9km, mb4.6/15, Error ellipse: s-maj=7.8km s-min=4.7km az=52.0*

*NNC **21** 23:49:33.5±2.5, 3873N×6760E, h33km, mb4.5, mpv4.4, Error ellipse: s-maj=23.0km s-min=14.6km az=12.0*

ISC 21 23:49:30.6±1.4, 3837N±003×6784E±004, h29km±10km, n144, σ1§32/164, mb4.3/40, MS3.2/2, 17C-11D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**3.94**	**165**	*e*Pn		**Pn**	**23 50 31.1**	**+2.1**
KBL				*e*Sn		**Sn**	**23 51 10.7**	**-3.5**
KK31	**Karatay Array**	**5.15**	**22**	Pn		**Pn**	**23 50 46.5**	**+0.9**
	9.5nm,0.6s,baz=213,slow=14,SNR=156							
KK31				⇓Pg		**Pn**	**23 51 00.7**	**+15**
	143nm,0.9s,baz=212,slow=16,SNR=25							
KK31				⇑Lg			23 52 10.4	
	254nm,0.6s,baz=209,slow=30,SNR=10.0							
AML	**Almayashu**	**5.85**	**48**	P		**Pn**	**23 50 56.6**	**+1.4**
	SNR=49							
AML	**Almayashu**	**5.85**	**48**	*e*Pn		**Pn**	**23 50 56.4**	**+1.2**
	56nm,0.5s							
AML				Sn		**Sn**	**23 52 05.7**	**+4.5**
EKS2	**Erkin-Say**	**6.23**	**45**	P		**Pn**	**23 51 02.4**	**+1.9**
	SNR=15							
EKS2	**Erkin-Say**	**6.23**	**45**	*e*Pn		**Pn**	**23 51 01.5**	**+1.0**
	17nm,0.5s							
UCH	**Uchtor**	**6.39**	**51**	*e*Pn		**Pn**	**23 51 04.0**	**+1.3**
	14nm,0.6s							
UCH				*e*Sn		**Sn**	**23 52 17.3**	**+2.6**
CHCP	**Chirah Chowk**	**6.43**	**135**	P		**Pn**	**23 51 05.1**	**+1.8**
KSH	**Kashi**	**6.44**	**77**	*e*P		**Pn**	**23 51 04.4**	**+1.0**
KSH				S		**Sn**	**23 52 18.8**	**+2.9**
KSH				Smax				
	comp=N,294nm,0.6s							
KSH				Smax				
	comp=E,471nm,0.8s							
AAK	**Ala-Archa**	**6.62**	**48**	*e*PN		**Pn**	**23 51 07.4**	**+1.5**
AAK				*e*			23 52 27.9	
AAK				pmax		pmax		
	comp=Z,51nm,0.8s							
AAK	**Ala-Archa**	**6.62**	**48**	P		**Pn**	**23 51 07.8**	**+1.9**
	SNR=30							
AAK	**Ala-Archa**	**6.62**	**48**	*e*Pn		**Pn**	**23 51 07.4**	**+1.5**
	comp=Z,51nm,0.8s							
AAK				*e*Sn		**Sn**	**23 52 27.9**	**+7.6**
KZA	**Kyzart**	**6.77**	**54**	P		**Pn**	**23 51 09.9**	**+2.0**
	SNR=67							
FRU	**Bishkek**	**6.82**	**47**	*e*PN		**Pn**	**23 51 11.0**	**+2.5**
FRU				pmax		pmax		
	comp=Z,100nm,1.8s							
KBK	**Karagaybulak**	**6.90**	**49**	P		**Pn**	**23 51 11.7**	**+2.0**
	SNR=42							
CHMS	**Chumysh**	**7.00**	**46**	P		**Pn**	**23 51 12.4**	**+1.4**
	SNR=11							
USP	**Ospenovka**	**7.03**	**44**	P		**Pn**	**23 51 12.6**	**+1.1**
	SNR=25							
TKM2	**Tokmak 2**	**7.45**	**50**	⇑Pn		**Pn**	**23 51 17.9**	**+0.7**
	comp=Z,16nm,0.4s							
TKM2				⇓Lg			23 53 28.0	
	comp=Z,53nm,0.8s							
TKM2	**Tokmak 2**	**7.45**	**50**	*e*P		**Pn**	**23 51 18.0**	**+0.8**
TKM2				pmax		pmax		
	comp=Z,31nm,0.4s							
TKM2	**Tokmak 2**	**7.45**	**50**	P		**Pn**	**23 51 18.6**	**+1.4**
	SNR=30							
TKM2	**Tokmak 2**	**7.45**	**50**	*e*Pn		**Pn**	**23 51 18.0**	**+0.8**
	comp=Z,30nm,0.4s							
ULHL	**Ulahol**	**7.50**	**56**	P		**Pn**	**23 51 19.3**	**+1.5**
	SNR=21							
THN	**Thein Dam**	**8.74**	**130**	*e*P		**Pn**	**23 51 35.8**	**+0.9**
THN				*e*S		**Sn**	**23 53 06.1**	**-6.3**
DLH	**Dalhousie**	**8.81**	**129**	*e*S		**Sn**	**23 53 12.0**	**-2.3**
SDNR	**Sundarnagar**	**10.15**	**130**	*e*P		**Pn**	**23 51 58.0**	**+3.7**
SDNR				*e*S		**Sn**	**23 53 40.0**	**-7.1**
SMLA	**Simla**	**10.53**	**131**	*i* P		**Pn**	**23 52 02.7**	**+3.2**
SMLA				*i* S		**Sn**	**23 53 48.7**	**-7.7**
SMLA				*ex*		x	23 53 60.0	
	comp=N,294nm,0.3s							
SMLA				*ex*		x	23 54 01.5	
	comp=E,245nm,0.4s							
KHET	**Khetri**	**12.23**	**145**	*e*S		**Sn**	**23 54 28.1**	**-10**
AB01	**Akbulak array**	**12.28**	**335**	⇓Pn		**Pn**	**23 52 20.7**	**-2.6**
	comp=E,7.7nm,0.5s							
AB01				⇑Sn		**Sn**	**23 54 30.5**	**-8.5**
	comp=E,9.4nm,0.5s							
JOSI	**Joshimath**	**12.41**	**125**	*ex*		**Pn**	**23 52 24.6**	**-0.6**
JOSI				*e*S		**Sn**	**23 54 34.5**	**-7.9**
JOSI				AML		AML	23 54 48.9	
	comp=N,63nm,0.7s							
JOSI				AML		AML	23 54 50.8	
	comp=E,68nm,0.8s							

KUDL	**Kundal**	**12.49**	**142**	*e*S		**Sn**	**23 54 34.7**	**-10**	
MK31	**Makanchi Array**	**13.56**	**47**	*e*P		**Pn**	**23 52 40.1**	**-0.7**	
MKAR	**Makanchi Array**	**13.56**	**47**	P		**Pn**	**23 52 40.3**	**-0.5**	
	comp=E,0.5nm,0.3s,baz=239,slow=14,SNR=36								
MKAR				Lg			23 56 41.2		
	comp=E,0.2nm,0.3s,baz=240,slow=18,SNR=3.7								
MKAR	**Makanchi Array**	**13.56**	**47**	*i* P		**Pn**	**23 52 40.2**	**-0.6**	
MKAR				pmax		pmax			
	comp=Z,5.0nm,0.8s								
AKTK	**Aktyubinsk**	**13.94**	**333**	Pn		**Pn**	**23 52 44.1**	**-1.9**	
AKTK				Sn		**Sn**	**23 55 14.0**	**-5.6**	
AKTK				Lg			23 56 51.7		
AKTO	**Aktyubinsk**	**13.94**	**333**	⇑Pn		**Pn**	**23 52 43.7**	**-2.3**	
	comp=Z,1.8nm,0.8s								
AKTO				⇑Sn		**Sn**	**23 55 12.4**	**-7.2**	
	comp=Z,1.7nm,0.7s								
AKTO	**Aktyubinsk**	**13.94**	**333**	Pn		**Pn**	**23 52 44.1**	**-1.9**	
	comp=Z,1.1nm,0.3s,baz=136,slow=14,SNR=21								
AKTO				Sn		**Sn**	**23 55 14.0**	**-5.6**	
	comp=Z,1.5nm,0.3s,baz=349,slow=17,SNR=5.4								
AKTO				Lg			23 56 51.7		
	comp=Z,0.3nm,0.3s,baz=270,slow=22,SNR=2.2								
AKTO	**Aktyubinsk**	**13.94**	**333**	P		**Pn**	**23 52 44.2**	**-1.8**	
AKTO							23 55 14.0		
KURBB	**Kurchatov Arra**	**14.41**	**28**	⇑Pn		**Pn**	**23 52 50.3**	**-2.1**	
	comp=Z,2.7nm,0.9s								
KURBB				⇓Lg			23 57 06.9		
	comp=Z,5.6nm,1.0s								
KURK	**Kurchatov**	**14.52**	**28**	⇑Pn		**Pn**	**23 52 52.9**	**-1.0**	
	comp=Z,11nm,0.9s								
KURK				⇓Lg			23 57 11.3		
	comp=Z,58nm,1.1s								
KURK	**Kurchatov**	**14.52**	**28**	Pn		**Pn**	**23 52 49.9**	**-4.0**	
	comp=Z,0.1nm,0.3s,baz=219,slow=11,SNR=20								
KURK				Lg			23 57 07.3		
	comp=Z,0.1nm,0.3s,baz=246,slow=29,SNR=4.4								
KURK				LR		LR	23 58 49.1		
	comp=Z,28nm,18.5s,baz=195,slow=38								
KURK	**Kurchatov**	**14.52**	**28**	*e*P		**Pn**	**23 52 53.7**	**-0.2**	
KURK				pmax		pmax			
	comp=Z,525nm,2.7s								
KURK	**Kurchatov**	**14.52**	**28**	*e*Pn		**Pn**	**23 52 53.7**	**-0.2**	
	comp=Z,525nm,2.7s								
KURK				Lg			23 57 07.3		
KURK				LR		LR	23 58 49.1		
BVA0	**Borovoye Array**	**14.77**	**6**	⇑Pn		**Pn**	**23 52 55.6**	**-1.6**	
	comp=Z,1.3nm,0.6s,baz=286,slow=47,SNR=55								
BVA0				⇑Sn		**Sn**	**23 55 36.3**	**-3.4**	
	comp=Z,2.1nm,0.9s,baz=202,slow=19,SNR=6.7								
BVAR	**Borovoye Array**	**14.77**	**6**	Pn		**Pn**	**23 52 54.4**	**-2.8**	
	comp=Z,1.5nm,0.3s,baz=180,slow=12,SNR=25								
BVAR				Sn		**Sn**	**23 55 33.1**	**-6.6**	
	comp=Z,1.2nm,0.3s,baz=230,slow=24,SNR=6.1								
BRVK	**Borovoye**	**14.79**	**6**	*e*P		**Pn**	**23 52 56.7**	**-0.8**	
BRVK				*e*			23 55 34.1		
BRVK				pmax		pmax			
	comp=Z,520nm,2.7s								
BRVK	**Borovoye**	**14.79**	**6**	*e*Pn		**Pn**	**23 52 56.6**	**-0.9**	
	comp=Z,520nm,2.7s								
BRVK				*e*Sn		**Sn**	**23 55 34.1**	**-6.1**	
DANN	**Dangsing**	**16.61**	**122**	*e*P		**Pn**	**23 53 17.3**	**-4.0**	
KOLN	**Koldanda**	**16.89**	**124**	*e*P		**Pn**	**23 53 21.4**	**-3.4**	
	comp=Z,18nm,0.6s								
GKN	**Gorkha**	**17.42**	**121**	*e*P		**Pn**	**23 53 27.8**	**-3.7**	
	comp=Z,37nm,0.5s								
KKN	**Kakani**	**17.99**	**121**	*e*P		**Pn**	**23 53 36.5**	**-2.0**	
	comp=Z,51nm,0.6s								
KKN	**Kakani**	**17.99**	**121**	*e*P		**Pn**	**23 53 36.5**	**-2.0**	
KKN				pmax		pmax			
	comp=Z,51nm,0.6s								
DMN	**Daman**	**18.00**	**122**	*e*P		**Pn**	**23 53 35.1**	**-3.4**	
PKIN	**Phulchoki**	**18.21**	**121**	*e*P		**Pn**	**23 53 39.1**	**-2.0**	
	comp=Z,25nm,0.6s								
PKI	**Pulchoki**

comp=Z,2.0nm,0.6s
ULN Ulaanbaatar 29.88 59⇑ eP P 23 55 35.3 0.0
JOF Joensuu 33.00 330 ep P 23 56 02.3 -0.3
CMAR Chiang Mai Arr 33.55 117 P P 23 56 07.0 -1.0
comp=Z,0.7nm,0.3s,mb4.0,baz=295,slow=7.7,SNR=4.5
BOD Bodaibo 35.56 42⇓ iP P 23 56 24.8 0.0
BOD pmax pmax
comp=Z,12nm,0.8s,mb4.9
KEV Kevo 38.14 338 ep P 23 56 46.5 -0.2
HIA Hailar 38.30 56⇑ iP P 23 56 47.6 -0.7
ARCES ARCESS Array B 38.46 338 P P 23 56 50.1 +0.7
comp=Z,3.3nm,0.7s,mb4.2,baz=112,slow=8.0,SNR=8.9
BRG Berggiesshubel 39.49 306 i P P 23 56 59.3 +1.1
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
BRG Berggiesshubel 39.49 306 i P P 23 56 59.3 +1.0
comp=Z,4.3nm,0.7s,mb4.3
GERES GERESS Array B 39.80 303 P P 23 57 02.1 +1.3
comp=Z,0.6nm,0.7s,mb3.4,baz=81,slow=6.1,SNR=5.3
NB2 NORSAR Subarra 41.37 322 P P 23 57 13.4 -0.2
comp=Z,1.8nm,0.6s,mb3.9,baz=98,slow=8.6
NOA NORSAR Array B 41.37 322 P P 23 57 13.3 -0.3
comp=Z,2.8nm,0.7s,mb4.0,baz=97,slow=8.1
NOA LR LR 00 15 59.2
comp=Z,23nm,19.2s,MS3.1,baz=295,slow=38
YAK Yakutsk 43.94 37 eP P 23 57 33.6 -0.9
YAK pmax pmax
comp=Z,15nm,0.8s,mb4.8
CDF Champ du Feu 44.08 303 eP P 23 57 36.5 +0.7
HINF Hinteralfeld 44.47 303 eP P 23 57 39.2 +0.3
TIXI Tiksi 45.02 23⇓ iP P 23 57 42.5 -0.4
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
TIXI Tiksi 45.02 23 eP P 23 57 43.3 +0.3
comp=Z,6.7nm,0.6s,mb4.7
LPG La Plagne 45.03 300 eP P 23 57 44.1 +0.7
LPL La Plagne 45.04 300 eP P 23 57 44.1 +0.6
MBDF Montbardon 45.20 298 eP P 23 57 45.1 +0.3
CABF La Chapelle 45.23 301 eP P 23 57 45.8 +0.8
MEZF Maizieres J'vi 45.52 304 eP P 23 57 48.2 +1.0
comp=Z,13nm,0.7s,mb4.7
MEZF Maizieres J'vi 45.52 304 eP P 23 57 48.2 +1.0
comp=Z,13nm,0.7s,mb5.0
KEST Kesra 46.08 286 P P 23 57 51.9 0.0
comp=Z,0.7nm,0.5s,mb3.9,baz=61,slow=15,SNR=8.7
KBS Kingsbay 46.24 347⇑ iP P 23 57 54.0 +1.5
KBS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 46.62 299 eP P 23 57 56.6 +0.7
KSRS Korea Array 46.66 72 P P 23 57 55.3 -1.1
comp=Z,1.3nm,0.9s,mb3.9,baz=283,slow=7.3,SNR=5.0
KSRS Korea Array 46.66 72 P P 23 57 55.3 -1.1
KSRS pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
SMF Signal de Mont 46.73 302 eP P 23 57 57.1 +0.3
comp=Z,34nm,1.1s,mb4.9
SMF Signal de Mont 46.73 302 eP P 23 57 57.1 +0.3
SMF pmax pmax
comp=Z,17nm,1.1s,mb4.9
SMF Signal de Mont 46.73 302 eP P 23 57 57.1 +0.3
comp=Z,17nm,1.1s,mb4.9
SSF Saint Saulge 46.85 302 eP P 23 57 58.0 +0.3
AVF Avril sur Loir 47.02 302 eP P 23 57 59.4 +0.3
comp=Z,9.1nm,0.8s,mb4.5
AVF Avril sur Loir 47.02 302 eP P 23 57 59.4 +0.3
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
AVF Avril sur Loir 47.02 302 eP P 23 57 59.4 +0.3
comp=Z,4.6nm,0.8s,mb4.5
HYF Humbligny 47.38 303 eP P 23 58 02.5 +0.7
LASF Ste Croix 47.39 298 eP P 23 58 02.2 +0.2
TCF Toulx Ste Croi 47.91 302 eP P 23 58 06.7 +0.7
comp=Z,12nm,0.9s,mb4.6
TCF Toulx Ste Croi 47.91 302 eP P 23 58 06.7 +0.7
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 47.91 302 eP P 23 58 06.7 +0.7
comp=Z,5.8nm,0.9s,mb4.6
LDF La Druitiere 48.85 305 eP P 23 58 13.2 0.0
comp=Z,7.4nm,0.6s,mb4.6
LDF La Druitiere 48.85 305 eP P 23 58 13.2 0.0
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
LDF La Druitiere 48.85 305 eP P 23 58 13.2 0.0
comp=Z,3.7nm,0.6s,mb4.6
FLN La Foliniere 49.04 305 eP P 23 58 14.5 -0.1
comp=Z,18nm,0.9s,mb4.8
FLN La Foliniere 49.04 305 eP P 23 58 14.5 -0.1
FLN pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
FLN La Foliniere 49.04 305 eP P 23 58 14.5 -0.1
comp=Z,8.9nm,0.9s,mb4.8
ETSF Etsaut 50.81 298 eP P 23 58 28.7 +0.5
comp=Z,4.9nm,0.6s,mb4.3
ETSF Etsaut 50.81 298 eP P 23 58 28.7 +0.5
ETSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ETSF Etsaut 50.81 298 eP P 23 58 28.7 +0.5
comp=Z,2.5nm,0.6s,mb4.3
SEY Seymchan 54.28 34⇑ iP P 23 58 53.9 +0.4
ESDC Sonseca Array 54.37 296 P P 23 58 54.7 +0.1
comp=Z,0.2nm,0.3s,mb3.5,baz=61,slow=7.4,SNR=5.3
BILL Bilibino 58.04 26⇑ iP P 23 59 21.0 +0.7
BILL e 23 59 26.5
BILL e 00 00 10.7
BILL e 00 01 31.2
BILL eS S 00 07 19.6 +0.9
BILL pmax pmax
comp=Z,11nm,2.5s,mb4.4
TORD Torodi Ar. Bea 63.30 266 P P 23 59 55.5 -1.4
comp=Z,1.2nm,0.4s,mb4.3,baz=50,slow=6.1,SNR=29
TORD Torodi Ar. Bea 63.30 266 P P 23 59 55.5 -1.4
BOSA Boshof 77.62 218 P P 00 01 23.0 -0.9
comp=Z,1.3nm,0.7s,mb4.0,baz=27,slow=4.5,SNR=3.6
BOSA Boshof 77.62 218 P P 00 01 23.0 -0.9
SCHQ Schefferville 79.37 335 P P 00 01 33.8 +0.4
comp=Z,1.7nm,0.6s,mb4.2,baz=52,slow=11,SNR=6.1
YKA Yellowknife Ar 79.47 1 P P 00 01 34.1 +0.4
comp=Z,1.7nm,0.7s,mb4.1,baz=352,slow=5.7,SNR=29
WRA Warramunga Arr 85.11 120 P P 00 02 02.9 -0.9
comp=Z,1.1nm,0.6s,mb4.2,baz=324,slow=4.7,SNR=13
WRAB Tennant Creek 85.11 120⇓ iP P 00 02 01.5 -2.3
ASAR Alice Springs 87.38 123 P P 00 02 14.2 -0.7
comp=Z,0.5nm,0.6s,mb3.9,baz=311,slow=4.7,SNR=4.9
ULM Lac du Bonnet 90.60 350 P P 00 02 29.1 -0.7
comp=Z,2.0nm,0.5s,mb4.7,baz=6.7,slow=4.3,SNR=3.0
PLCA Paso Flores 148.04 252 PKPbc PKPbc 00 09 13.3 +0.4
comp=Z,2.4nm,0.9s,baz=71,slow=4.2,SNR=3.7

*DJA **21** 23:54:09, 959S×11863E, h50km, MLv5.3/3*
*NEIC **21** 23:54:14.6±10.0, 965S×117.1E, h19km±66km, mb3.4/1, Error ellipse: s-maj=44.4km s-min=9.8km az=70.0*
*ISCJB **21** 23:54:21.3±0.9, 935S×007×11769E±006, h85km±11km, mb3.8/7, Error ellipse: s-maj=11.5km s-min=10.3km az=169.3*
*IDC **21** 23:54:22.0±8.6, 935S×11762E, h76km±77km, mb3.4/6, mb1 3.5/8, mb1mx3.5/19, mbtmp3.4/8, ML3.4/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/14, Error ellipse: s-maj=78.7km s-min=15.3km az=68.0*

ISC 21 23:54:21.9±0.7, 941S±006×11771E±006, h74km±9km, n24, σ1§34/25, mb3.8/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	Kahang-Kahang	2.32	297	P	Pn	23 54 56.7	-1.3
KHKI	Kahang-Kahang	2.32	297	P	Pn	23 54 56.5	-1.5
DNP	Denpasar	2.57	286	P	Pn	23 55 00.4	-1.0
DNP	Denpasar	2.57	286	P	Pn	23 55 00.4	-1.0
IGBI	Denpasar	2.60	283	P	Pn	23 54 59.9	-1.8
NBBI	Negara	3.22	289	P	Pn	23 55 12.0	+1.8
NBBI	Negara	3.22	289	P	Pn	23 55 12.0	+1.8
KAPI	Kappang	4.82	25	P	Pn	23 55 32.8	+0.8
	1.5nm,0.3s,baz=223,slow=8.8,SNR=6.5						
KAPI				S	Sn	23 56 26.4	-0.1
	7.3nm,0.3s,baz=106,slow=21,SNR=14						
KRKI	Karangkates	5.34	283	P	Pn	23 55 41.0	+1.9
	404nm,0.7s,2.1nm						
SJI	Sawahan	6.11	285	P	Pn	23 55 52.0	+2.4
	91nm,0.7s,0.4nm						
SJI	Sawahan	6.11	285	P	Pn	23 55 51.7	+2.1
FITZ	Fitzroy Crossi	11.57	139	ePn	Pn	23 57 01.2	-3.0
FITZ				eSn	Sn	23 58 54.7	-17
WRA	Warramunga Arr	19.18	125	P	Pn	23 58 40.3	-1.0
	0.1nm,0.3s,baz=297,slow=13,SNR=9.9						
WRAB	Tennant Creek	19.18	125	ePn	Pn	23 58 43.4	+2.0
	1.8nm,0.8s						
WB2	Warramunga Arr	19.19	125	eP	Pn	23 58 41.0	-0.5
ASAR	Alice Springs	20.99	134	P	P	23 59 00.2	+0.9
	3.8nm,0.8s,baz=309,slow=9.0,SNR=26						
PSI	Prapat	22.30	302	LR	LR	00 08 14.0	
	comp=Z,30nm,18.6s,baz=209,slow=38						
STKA	Stephens Creek	31.47	139	P	P	00 00 37.8	+1.2
	3.3nm,0.8s,mb4.1,baz=308,slow=12,SNR=3.6						
STKA				LR	LR	00 13 30.6	
	comp=Z,26nm,21.7s,baz=25,slow=36						
SONM	Songino Array	57.87	351	P	P	00 04 07.2	+1.3
	0.3nm,0.7s,mb3.4,baz=168,slow=7.4,SNR=3.2						
MKAR	Makanchi Array	64.25	334	P	P	00 04 48.2	-1.0
	0.3nm,0.4s,mb3.5,baz=150,slow=6.1,SNR=8.2						
MKAR	Makanchi Array	64.25	334	P	P	00 04 48.2	-1.0
ZALV	Zalesovo Beam	68.98	340	P	P	00 05 17.7	-1.4
	0.4nm,0.4s,mb3.6,baz=158,slow=4.2,SNR=2.5						
BVAR	Borovoye Array	74.06	332	P	P	00 05 49.2	-0.6
	0.6nm,0.8s,mb3.4,baz=125,slow=9.3,SNR=3.7						
TIXI	Tiksi	81.23	4	eP	P	00 06 29.0	-0.2
	1.3nm,0.1s,mb4.7						

IDC 22 00:04:20.6±1.5, 2796S×6275E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, Error ellipse: s-maj=71.2km s-min=28.1km az=25.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	63.37	104	P	P	00 14 52.0	0.0
	0.5nm,0.6s,baz=250,slow=6.4,SNR=7.3						
WRA	Warramunga Arr	65.10	100	P	P	00 15 03.5	0.0
	0.9nm,1.0s,baz=250,slow=5.5,SNR=5.1						
TORD	Torodi Ar. Bea	71.84	296	P	P	00 15 45.4	-0.2
	0.2nm,0.7s,baz=116,slow=3.4,SNR=2.5						
MKAR	Makanchi Array	76.48	14	P	P	00 16 11.7	-0.2
	0.2nm,0.8s,baz=234,slow=5.0,SNR=2.5						
YKA	Yellowknife Ar	145.43	358	PKPbc	PKPbc	00 24 00.1	+0.3
	0.4nm,0.6s,baz=352,slow=3.2,SNR=9.5						

DDA 22 00:11:48.1, 3939N×3310E, h8km±1km, Md2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDAG	Cicekdag	1.01	76	i P	Pg	00 12 06.5	-1.1
CDAG				i S	Sg	00 12 20.1	-0.6
CDAG	Cicekdag	1.01	76	i P	Pg	00 12 06.8	-0.7
CDAG				i S	Sg	00 12 22.0	+1.3
KDHN	Kadinhani	1.16	222	i P	Pg	00 12 11.6	+1.2
KDHN				i S	Sg	00 12 26.4	+1.1

*ISCJB **22** 00:21:59.7±0.3, 4930N±002×669E±003, h0km, Error ellipse: s-maj=3.1km s-min=2.3km az=14.8*
*CSEM **22** 00:22:01.9±0.0, 4938N×678E, h1km, ML2.5/25, Error ellipse: s-maj=1.1km s-min=0.7km az=118.0*
*BNS **22** 00:22:01.9±0.6, 4936N×681E, h1km, ML1.6*
*BGR **22** 00:22:02.5±0.5, 4935N×681E, h1km, ML1.9/3, Error ellipse: s-maj=8.9km s-min=5.6km az=35.0*
*LDG **22** 00:22:02.0±0.1, 4938N×678E, h1km, Md2.6/1, Ml2.4/25, Error ellipse: s-maj=1.3km s-min=1.1km az=152.0, Suspected Mining induced.*

ISC 22 00:22:00.6±0.3, 4931N±002×667E±003, h0km, n67, σ1§16/127, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WLF	Walferdange	0.49	316	ePg	Pg	00 22 12.3	+2.4
	SNR=9.3						
WLF				eSg	Sg	00 22 19.2	+2.9
	SNR=3.6						
WLF	Walferdange	0.49	316	P	Pg	00 22 12.4	+2.4
WLF	Walferdange	0.49	316	Pg	Pg	00 22 12.3	+2.3
	SNR=9.3						
WLF				Sg	Sg	00 22 19.2	+2.9
	SNR=3.6						
HILG	Hillesheim	0.98	0	ePg	Pg	00 22 19.5	+0.1
CDF	Champ du Feu	0.99	156	ePg	Pg	00 22 20.5	+1.0
CDF	Champ du Feu	0.99	156	ePn	Pn	00 22 21.1	-0.6
CDF				eSg	Sg	00 22 34.2	+1.9
	16nm,0.2s						
CDF	Champ du Feu	0.99	156	ePn	Pn	00 22 21.1	-0.6
CDF				eSg	Sg	00 22 34.2	+1.9
	7.8nm,0.2s						
BGG	Burgeitz	0.99	26	ePg	Pg	00 22 18.9	-0.7
RFYF	Rerfoy	1.05	229	ePn	Pn	00 22 24.1	+1.6
	baz=44						
RFYF				eSn	Sn	00 22 39.0	+1.2
STB	Steinbach	1.29	5	ePg	Pg	00 22 24.5	-0.7
STB				eSg	Sg	00 22 41.7	-0.2
	10nm,0.7s						
KOE	Koeppel	1.31	31	ePg	Pg	00 22 24.9	-0.8
HAU	Haudompre	1.33	189	ePn	Pn	00 22 27.7	+1.4
HAU				eSn	Sn	00 22 45.2	+0.5
	14nm,0.3s						
HAU	Haudompre	1.33	189	ePn	Pn	00 22 27.7	+1.4
HAU				eSn	Sn	00 22 45.2	+0.5
	7.1nm,0.3s						
MEZF	Maizieres J'vi	1.34	233	ePn	Pn	00 22 27.8	+1.2
	baz=52						
MEZF				eSn	Sn	00 22 45.9	+0.8
	12nm,0.4s						
MEZF	Maizieres J'vi	1.34	233	ePn	Pn	00 22 27.8	+1.2
MEZF				eSn	Sn	00 22 45.9	+0.8
	6.1nm,0.4s						
MEM	Membach	1.37	342	P	Pg	00 22 27.3	+0.5
MEM	Membach	1.37	342	P	Pg	00 22 27.2	+0.4
BCLA	Clavier	1.42	322	P	Pn	00 22 28.3	+0.7
BCLA	Clavier	1.42	322	P	Pn	00 22 28.2	+0.6
GIVF	Givet	1.44	304	ePn	Pn	00 22 28.0	+0.1
GIVF				eSn	Sn	00 22 46.5	-0.9
	23nm,0.4s						
GIVF	Givet	1.44	304	ePn	Pn	00 22 28.0	+0.1
GIVF				eSn	Sn	00 22 46.5	-0.9
	12nm,0.4s						
TNS	Taunus Mts	1.47	51	ePn	Pn	00 22 26.7	-1.6
TNS				ePg	Pg	00 22 28.0	-0.7
	SNR=7.6						
TNS				eSg	Sg	00 22 46.5	-1.2
	SNR=3.4						
TNS	Taunus Mts	1.47	51	Pg	Pg	00 22 28.0	-0.7
	SNR=7.6						
TNS				Sg	Sg	00 22 46.5	-1.2
	SNR=3.4						
BFO	Black Forest	1.47	131	ePn	Pn	00 22 28.9	+0.6
BFO				ePg	Pg	00 22 30.6	+1.8
	SNR=3.4						
BFO				eSg	Sg	00 22 47.6	-0.3
	SNR=8.3						
HINF	Hinteralfeld	1.50	175	ePn	Pn	00 22 30.8	+2.0
HINF				eSn	Sn	00 22 49.0	0.0
	20nm,0.3s						
HINF	Hinteralfeld	1.50	175	ePn	Pn	00 22 30.8	+2.0
HINF				eSn	Sn	00 22 49.0	0.0
	9.9nm,0.3s						
SFTF	Sexfontaines	1.55	225	ePn	Pn	00 22 30.8	+1.4
	baz=48						
SFTF				eSn	Sn	00 22 51.1	+0.9
	6.6nm,0.3s						
SFTF	Sexfontaines	1.55	225	ePn	Pn	00 22 30.8	+1.4
SFTF				eSn	Sn	00 22 51.1	+0.9
	3.3nm,0.3s						
DOU	Dourbes	1.56	301	P	Pn	00 22 30.5	+0.9
DOU	Dourbes	1.56	301	P	Pn	00 22 30.4	+0.9
BAIF	Baives	1.77	296	ePn	Pn	00 22 33.0	+0.6
BAIF				eSn	Sn	00 22 54.7	-0.8
	6.8nm,0.3s						
BAIF	Baives	1.77	296	ePn	Pn	00 22 33.0	+0.6
BAIF				eSn	Sn	00 22 54.7	-0.8
	3.4nm,0.3s						
CABF	La Chapelle	2.73	188	ePn	Pn	00 22 46.2	+0.5
CABF				eSn	Sn	00 23 18.7	-0.7
	11nm,0.7s						
CABF	La Chapelle	2.73	188	ePn	Pn	00 22 46.2	+0.5
CABF				eSn	Sn	00 23 18.7	-0.7
	5.7nm,0.7s						
LOR	Lormes	2.78	224	ePn	Pn	00 22 47.1	+0.8
	baz=49						
LOR				eSn	Sn	00 23 20.0	-0.5
LOR				eSg	Sg	00 23 32.6	+2.8
	2.6nm,0.3s						
LOR	Lormes	2.78	224	ePn	Pn	00 22 47.1	+0.8
LOR				eSn	Sn	00 23 20.0	-0.5
LOR				eSg	Sg	00 23 32.6	+2.8
	1.3nm,0.3s						
SSF	Saint Saulge	3.09	224	ePn	Pn	00 22 51.2	+0.6
SSF				eSn	Sn	00 23 28.1	-0.2
SSF				eSg	Sg	00 23 42.3	+2.4
	5.4nm,0.6s						
SSF	Saint Saulge	3.09	224	ePn	Pn	00 22 51.2	+0.6
SSF				eSn	Sn	00 23 28.1	-0.2
SSF				eSg	Sg	00 23 42.3	+2.4
	2.7nm,0.6s						
SMF	Signal de Mont	3.28	217	ePn	Pn	00 22 53.3	+0.1
SMF				eSn	Sn	00 23 32.3	-0.5
	7.3nm,0.5s						
SMF	Signal de Mont	3.28	217	ePn	Pn	00 22 53.3	+0.1
SMF				eSn	Sn	00 23 32.3	-0.5
	3.7nm,0.5s						
AVF	Avril sur Loir	3.37	223	ePn	Pn	00 22 54.3	-0.1
AVF				eSn	Sn	00 23 34.2	-0.8
	1.2nm,0.3s						
AVF	Avril sur Loir	3.37	223	ePn	Pn	00 22 54.3	-0.1
AVF				eSn	Sn	00 23 34.2	-0.8
	0.6nm,0.3s						
HYF	Humbligny	3.38	234	ePn	Pn	00 22 55.3	+0.7
HYF				eSn	Sn	00 23 34.7	-0.7
BGF	Bois d'Agland	3.77	224	ePn	Pn	00 23 00.3	+0.4
BGF				eSn	Sn	00 23 44.0	-1.0
	4.3nm,0.4s						
BGF	Bois d'Agland	3.77	224	ePn	Pn	00 23 00.3	+0.4
BGF				eSn	Sn	00 23 44.0	-1.0
	2.2nm,0.4s						
LPL	La Plagne	3.80	179	ePn	Pn	00 23 00.3	0.0
LPL				eSn	Sn	00 23 44.4	-1.3
	0.4nm,0.2s						
LPL	La Plagne	3.80	179	ePn	Pn	00 23 00.3	0.0
LPL				eSn	Sn	00 23 44.4	-1.3
	0.2nm,0.2s						
LPG	La Plagne	3.82	179	ePn	Pn	00 23 01.0	+0.4
LPG				eSn	Sn	00 23 44.8	-1.4
	0.3nm,0.2s						
LPG	La Plagne	3.82	179	ePn	Pn	00 23 01.0	+0.4
LPG				eSn	Sn	00 23 44.8	-1.4
	0.2nm,0.2s						
TCF	Toulx Ste Croi	4.27	226	ePn	Pn	00 23 06.8	0.0
TCF				eSn	Sn	00 23 56.0	-1.2
	0.8nm,0.3s						
TCF	Toulx Ste Croi	4.27	226	ePn	Pn	00 23 06.8	0.0
TCF				eSn	Sn	00 23 56.0	-1.2
	0.4nm,0.3s						
ORIF	Oris-en-Rattie	4.43	187	ePn	Pn	00 23 09.5	+0.5
ORIF				eSn	Sn	00 23 59.4	-1.9
	1.3nm,0.5s						
ORIF	Oris-en-Rattie	4.43	187	ePn	Pn	00 23 09.5	+0.5
ORIF				eSn	Sn	00 23 59.4	-1.9
	0.6nm,0.5s						
LDF	La Druitiere	4.54	263	ePn	Pn	00 23 10.6	+0.2
LDF				eSn	Sn	00 24 01.8	-2.0
	1.6nm,0.4s						
LDF	La Druitiere	4.54	263	ePn	Pn	00 23 10.6	+0.2
LDF				eSn	Sn	00 24 01.8	-2.0
	0.8nm,0.4s						
MBDF	Montbardon	4.59	179	eSn	Sn	00 24 03.1	-2.1
	0.8nm,0.3s						
MBDF	Montbardon	4.59	179	eSn	Sn	00 24 03.1	-2.1
	0.4nm,0.3s						
VIVF	Saint-Julien-l	4.67	198	ePn	Pn	00 23 12.7	+0.5
VIVF				eSn	Sn	00 24 05.1	-1.9
	2.0nm,0.5s						
VIVF	Saint-Julien-l	4.67	198	ePn	Pn	00 23 12.7	+0.5
VIVF				eSn	Sn	00 24 05.1	-1.9
	1.0nm,0.5s						
FLN	La Foliniere	4.74	266	ePn	Pn	00 23 13.3	+0.1
FLN				eSn	Sn	00 24 06.5	-2.3
	4.6nm,0.5s						
FLN	La Foliniere	4.74	266	ePn	Pn	00 23 13.3	+0.1
FLN				eSn	Sn	00 24 06.5	-2.3
	2.3nm,0.5s						
MFF	Saint Martin d	5.32	242	ePn	Pn	00 23 21.8	+0.5
MFF				eSn	Sn	00 24 21.0	-2.2
	3.2nm,0.7s						
MFF	Saint Martin d	5.32	242	ePn	Pn	00 23 21.8	+0.5
MFF				eSn	Sn	00 24 21.0	-2.2
	1.6nm,0.7s						
RJF	Les Rejaudoux	5.33	223	ePn	Pn	00 23 21.8	+0.5
RJF				eSn	Sn	00 24 21.2	-2.1
	0.9nm,0.3s						
RJF	Les Rejaudoux	5.33	223	ePn	Pn	00 23 21.8	+0.5
RJF				eSn	Sn	00 24 21.2	-2.1
	0.4nm,0.3s						
LFF	La Frestale	5.96	225	ePn	Pn	00 23 29.6	-0.4
LFF				eSn	Sn	00 24 36.3	-2.6
	2.3nm,0.5s						
LFF	La Frestale	5.96	225	ePn	Pn	00 23 29.6	-0.4
LFF				eSn	Sn	00 24 36.3	-2.6
	1.1nm,0.5s						

*NEIC **22** 00:51:43.8, 3442S×6989W, h8km, ML2.5(GUC), After GUC.*

GUC 22 00:51:43.8±0.9, 3442S×6989W, h8km±11km, MD3.5, ML2.5, 7C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CICH	Cipreses	0.45	283	i P	Pg	00 51 52.7	+0.1
CICH				i S	Sg	00 51 58.9	+0.3
LMEL	Las Melosas	0.63	335	i P	Pg	00 51 55.7	-0.2
LMEL				i S	Sg	00 52 04.9	+0.7
LMEL	Las Melosas	0.63	335	i P	Pg	00 51 55.7	-0.2
LMEL				i S	Sg	00 52 04.9	+0.7
LMEL				AML	AML	00 52 06.1	
	comp=N,730nm,0.3s						
YECH	El Yeso	0.77	348	i P	Pg	00 51 58.4	-0.3
YECH				AML	AML	00 52 11.6	
	comp=N,396nm,0.4s						
CHCH	Chadas Angostu	0.80	307	i P	Pg	00 51 59.0	-0.2
CHCH				i S	Sg	00 52 10.0	+0.4
FCH	Farellones	1.14	343	i P	Pg	00 52 05.2	-0.5
FCH	Farellones	1.14	343	i P	Pg	00 52 04.9	-0.8
FCH				i P		00 52 05.2	
FCH				i S	Sg	00 52 21.5	+0.9
FCH				AML	AML	00 52 22.0	
	comp=E,132nm,0.5s						
CLCH	Cerro Calan	1.16	332	i P	Pg	00 52 05.4	-0.6
CLCH				i S	Sg	00 52 21.8	+0.8
CLCH				AML	AML	00 52 24.9	
	comp=N,254nm,0.7s						
LNV	Longovilo	1.35	290	i P	Pn	00 52 08.2	-0.6
LNV				i S	Sb	00 52 26.5	-0.1
PEL	Peldehue	1.44	332	i P	Pn	00 52 10.4	+0.3
PEL				i S	Sn	00 52 29.7	+0.5
PEL				AML	AML	00 52 35.9	
	comp=E,197nm,0.4s						

*ISCJB **22** 01:02:36.0±2.7, 70N±0.1×944E±02, h94km±24km, mb3.7/10, Error ellipse: s-maj=32.0km s-min=12.9km az=156.4*
*IDC **22** 01:02:35.9±3.8, 698N×9426E, h78km±36km, mb3.4/8, mb1 3.6/10, mb1mx3.4/24, mbtmp3.5/10, Error ellipse: s-maj=33.2km s-min=15.6km az=66.0*
*NEIC **22** 01:02:35.9±1.4, 701N×9428E, h80km±12km, mb4.0/2, Error ellipse: s-maj=18.0km s-min=7.1km az=65.0*

ISC 22 01:02:37.1±2.3, 70N±01×943E±02, h90km±21km, n15, σ0§46/15, mb3.7/10, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.22	132	P	Pn	01 04 07.0	+0.5
	2.1nm,0.3s,baz=320,slow=13,SNR=11						
PSI	Prapat	6.22	132	P	Pn	01 04 07.0	+0.5
CMAR	Chiang Mai Arr	12.20	21	P	Pn	01 05 26.9	-0.9
	0.4nm,0.3s,baz=230,slow=14,SNR=3.8						
FITZ	Fitzroy Crossi	39.74	129	P	P	01 10 01.4	+0.1
	0.5nm,0.5s,mb3.6						
MKAR	Makanchi Array	40.93	347	P	P	01 10 10.9	+0.2
	0.4nm,0.8s,mb3.3,baz=170,slow=8.8,SNR=3.2						
SONM	Songino Array	41.93	12	P	P	01 10 19.9	+1.0
	0.2nm,0.5s,mb3.1,baz=188,slow=8.7,SNR=3.4						
ZALV	Zalesovo Beam	47.40	352	P	P	01 11 02.6	+0.3
	0.8nm,0.3s,mb3.9,baz=169,slow=8.5,SNR=4.9						
WRA	Warramunga

1.7nm,0.5s,mb4.1
WB2 Warramunga Arr 47.64 125 *e*P **P 01 11 03.8 -0.8**
WB2 Warramunga Arr 47.64 125 *e*P **P 01 11 04.6 -0.1**
ASAR Alice Springs 49.24 130 P **P 01 11 16.9 -0.1**
0.8nm,0.3s,mb4.1,baz=304,slow=8.0,SNR=21
BVAR Borovoye Array 49.83 341 P **P 01 11 20.9 0.0**
0.2nm,0.3s,mb3.5,baz=134,slow=10,SNR=3.9
BOSA Boshof 75.31 238 P **P 01 14 10.8 -0.2**
1.5nm,0.6s,mb3.9,baz=83,slow=7.9,SNR=4.6
TORD Torodi Ar. Bea 90.97 283 P **P 01 15 31.7 -0.2**
0.2nm,0.9s,mb3.3,baz=65,slow=4.4,SNR=2.3

CASC 22 01:26:42.2±2.1, 1312N×9046W, h12km±10km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.05**	**0**	*e*P	Pb	01 27 01.8	-0.5
SBLS	**San Blas**	**1.08**	**49**	*e*P	x	01 27 01.6	
SBLS				*e*P	x	01 27 01.7	
SBLS				*e*S	x	01 27 12.4	
RTR	**El Retiro**	**1.11**	**46**	*e*P	x	01 27 02.1	
SNJE	**San Jose**	**1.12**	**48**	*e*P	x	01 27 02.2	
RBDL	**Robledal**	**1.24**	**37**	*e*P	x	01 27 04.2	
PCG	**Pacaya**	**1.27**	**354**	*e*P	Pn	01 27 05.1	-0.7
PCG				*e*S	Sb	01 27 23.6	+1.1
BOQS	**Boqueron**	**1.30**	**62**	*e*P	x	01 27 04.9	
BOQS				*e*P	x	01 27 05.1	
BOQS				*e*S	x	01 27 24.0	
SNET	**Serv Nac Est T**	**1.32**	**65**	*e*P	x	01 27 05.8	
FUG	**Fuego 3**	**1.37**	**344**	*e*P	Pn	01 27 07.0	-0.1
LFRS	**El Faro**	**1.45**	**70**	*e*P	x	01 27 06.8	
LFU	**La Fuente**	**1.45**	**64**	*e*P	x	01 27 07.4	
NBG	**Las Nubes**	**1.46**	**4**	*e*P	Pn	01 27 09.7	+1.3
NBG				*e*S	Sn	01 27 28.7	+1.3
FG6		**1.49**	**344**	*e*P	Pn	01 27 08.5	-0.2
FG6				*e*S	Sn	01 27 27.4	-0.7
LBRS	**Las Brisas**	**1.51**	**66**	*e*P	x	01 27 08.3	
JAT	**Jato**	**1.65**	**316**	*e*P	Pn	01 27 11.1	+0.1
JAT				*e*S	Sn	01 27 31.4	-0.6
SNVI	**San Vicente**	**1.65**	**73**	*e*P	x	01 27 10.1	
MTO2	**Montecristo 2**	**1.66**	**40**	*e*P	x	01 27 10.5	
MRL	**Marmol**	**2.07**	**21**	*e*P	Pn	01 27 18.8	+2.0
VSM	**San Miguel**	**2.15**	**82**	*e*P	x	01 27 18.0	
VSM				*e*S	x	01 27 47.2	
BLLM	**Bellamira**	**2.19**	**81**	*e*P	x	01 27 17.6	
CAHU	**Cacacuatique**	**2.28**	**73**	*e*P	x	01 27 18.8	
CNCH	**Conchagua**	**2.56**	**86**	*e*P	x	01 27 23.0	
CNCH				*e*P	x	01 27 24.1	

MAN 22 01:28:17, 911N×12665E, h32km, mb4.0, ML2.8, MS2.5, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.96**	**197**	||*e*P	Pn	01 28 34.9	+0.6
BIPH				*i* S	Sn	01 28 45.4	-1.5
BUTP	**Butuan**	**1.03**	**262**	*e*P	Pn	01 28 35.0	-0.2
BUTP				*e*S	Sn	01 28 49.9	+1.4
SCPH	**Surigao**	**1.33**	**300**	||*e*P	Pn	01 28 40.6	+1.3
SCPH				*e*S	Sn	01 28 56.6	+0.6
BUKP	**Musuan**	**1.99**	**232**	*e*P	Pn	01 28 51.0	+2.5
BUKP				*e*S	Sn	01 29 13.4	+1.1

MAN 22 01:30:07, 901N×12625E, h1km, mb4.2, ML3.0, MS2.7, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.62**	**267**	*e*P	Pg	01 30 20.2	+1.4
BIPH	**Bislig**	**0.82**	**172**	||*i*P	Pg	01 30 23.1	+0.3
BIPH				*i* S	Sg	01 30 33.7	+0.2
SCPH	**Surigao**	**1.07**	**316**	||*e*P	Pg	01 30 28.9	+1.3
BUKP	**Musuan**	**1.62**	**226**	*e*P	Pn	01 30 39.3	+2.5
BUKP				*e*S	Sn	01 30 59.5	+1.2
PAGZ	**Pagadian**	**3.06**	**248**	*e*P	Pn	01 30 57.1	+0.6

*ISCJB **22** 01:41:18.5±0.7, 3982N±004×2127E±004, h2km±9km, Error ellipse: s-maj=7.0km s-min=5.2km az=31.6*
*CSEM **22** 01:41:18.8±0.2, 3987N×2138E, h12km, ML2.6/5, Error ellipse: s-maj=4.7km s-min=3.8km az=72.0*
*THE **22** 01:41:18.0, 3981N×2125E, h0km±2km, ML2.6/5, Error ellipse: s-maj=2.9km s-min=0.9km az=223.0*
*ATH **22** 01:41:19.9, 3983N×2144E, h2km, MD2.8/4*

ISC 22 01:41:18.9±0.6, 3982N±003×2126E±004, h4km±12km, n13, σ1§12/21, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.36**	**243**	*e*PG	**Pg**	**01 41 28.6**	**+2.9**
JAN	**Janina**	**0.36**	**243**	*e*Pg	**Pg**	**01 41 27.8**	**+2.1**
KZN	**Kozani**	**0.62**	**39**	*e*PG	**Pg**	**01 41 30.5**	**-0.3**
THL	**Klokotos Trika**	**0.63**	**113**	P	**Pg**	**01 41 29.8**	**-1.2**
THL				S	**Sg**	**01 41 40.6**	**+1.4**
THL	**Klokotos Trika**	**0.63**	**113**	*e*Pg	**Pg**	**01 41 29.9**	**-1.1**
THL				S	**Sg**	**01 41 40.6**	**+1.4**
IGT	**Igoumenitsa**	**0.77**	**249**	P	**Pg**	**01 41 31.7**	**-2.0**
IGT				S	**Sg**	**01 41 44.1**	**+0.4**
FNA	**Florina**	**0.97**	**5**	P	**Pg**	**01 41 36.5**	**-0.9**
FNA				S	**Sg**	**01 41 51.2**	**+1.2**
LIT	**Litokhoron**	**0.98**	**73**	P	**Pg**	**01 41 36.2**	**-1.5**
LIT				S	**Sg**	**01 41 51.4**	**+0.9**
EVR	**Evrytania**	**1.00**	**155**	*e*PG	**Pg**	**01 41 38.2**	**+0.2**
KEK	**Kerkira**	**1.13**	**265**	*e*PB	**Pg**	**01 41 44.1**	**+3.5**
AGG	**Agios Georgios**	**1.15**	**134**	P	**Pg**	**01 41 40.1**	**-0.8**
AGG				S	**Sg**	**01 41 56.1**	**+0.3**
BIA	**Bitola**	**1.20**	**2**	P	**Pg**	**01 41 40.6**	**-1.3**
BIA				S	**Sg**	**01 41 57.9**	**+0.5**
GRG	**Griva**	**1.43**	**37**	P	**Pn**	**01 41 45.3**	**-0.3**
GRG				S	**Sb**	**01 42 05.2**	**+0.6**

*ISCJB **22** 02:06:07.3±0.6, 2305±0.1×1146W±0.1, h10km, mb4.3/13, MS4.0/13, Error ellipse: s-maj=18.3km s-min=12.6km az=41.4*
*IDC **22** 02:06:07.3±0.9, 2300S×11452W, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.2/17, mbtmp4.1/9, MS3.9/9, Ms1 3.9/9, ms1mx3.6/27, Error ellipse: s-maj=38.3km s-min=18.5km az=39.0*
*NEIC **22** 02:06:08.6±0.5, 2307S×11462W, h10km, mb4.7/6, MS4.2/6, Error ellipse: s-maj=21.1km s-min=10.2km az=41.0*
*GCMT **22** 02:06:08.6±0.4, 2308S×11449W, h22km±2km, MW5.0/59, Moment Tensor Solution. s19,c20; s59,c82; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mr0.08±.22; Mθθ-3.03±.18; Mφφ2.95±.17; Mrθ0.46±.31; Mrφ-0.34±.15; Mθφ1.44±.35; Best double couple: Mo3.35000×10¹⁶ NP1:ϕs310.00000°, δ67.00000°, λ171.00000°. NP2: ϕs43.00000°, δ82.00000°, λ24.00000°. Principal axes: T 3.5510, Plg22.0000°, Azm269.0000°; N -0.3980, Plg65.0000°, Azm61.0000°; P -3.1490, Plg10.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 02:06:09.0±0.7, 2305±01×1146W±01, h10km, n43, σ0§73/21, mb4.3/13, MS4.0/13, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.30**	**132**	LR	LR	02 09 32.4	
	comp=Z,421nm,18.4s,baz=321,slow=33						
RPN				T		02 13 59.6	
	24nm,0.3s,baz=92,slow=7.3,SNR=6.3						
RKT	**Rikitea**	**18.73**	**266**	*e*LR	LR	02 14 53.7	
	2µm,28.0s,baz=96						
TAOE	**Nuku Hiva Isla**	**28.23**	**296**	*e*LR	LR	02 19 13.0	
	2µm,25.5s						
TBI	**Tubuai**	**31.98**	**262**	*e*LR	LR	02 20 59.8	
	1µm,27.5s,baz=93						
PPT	**Papeete**	**33.18**	**273**	*e*S	**S**	**02 18 04.3**	**-1.5**
	79nm,25.5s						
PPT				*e*LR	LR	02 21 25.1	
	550nm,25.8s,baz=108						
PPT	**Papeete**	**33.18**	**273**	LR	LR	02 22 07.3	
	comp=Z,319nm,21.8s,MS4.0,baz=90,slow=29						
NNA	**Nana**	**37.56**	**80**	PFAKE		02 13 40.0	+16
NNA				LR	LR		
	comp=Z,744nm,22.0s,MS4.4						
ATAH	**Atahualpa**	**38.30**	**71**	P	**P**	**02 13 29.5**	**-0.5**
	comp=Z,3.1nm,0.6s,mb4.2,baz=278,slow=21,SNR=5.8						
ATAH				LR	LR	02 23 20.8	
	comp=Z,43nm,20.2s,MS3.3,baz=93,slow=27						
LCO	**Las Campanas**	**39.75**	**108**	*e*P	**P**	**02 13 42.1**	**+0.1**
	comp=Z,20nm,1.1s,mb4.8						
LCO				LR	LR		
	comp=Z,593nm,21.0s,MS4.4						
PLCA	**Paso Flores**	**40.90**	**126**	P	**P**	**02 13 52.2**	**+0.8**
	comp=Z,3.0nm,1.0s,mb3.9,baz=271,slow=9.1,SNR=4.0						
PLCA	**Paso Flores**	**40.90**	**126**	P	**P**	**02 13 52.2**	**+0.8**
PLCA				LR	LR		
	comp=Z,167nm,18.1s,MS3.9						
CFAA	**Coronel Fontan**	**41.84**	**112**	P	**P**	**02 13 58.7**	**-0.5**
	comp=Z,1.3nm,1.1s,mb3.5,baz=275,slow=6.6,SNR=12						
CFAA				LR	LR	02 26 57.7	
	comp=Z,52nm,20.8s,MS3.4,baz=270,slow=30						
CFAA	**Coronel Fontan**	**41.84**	**112**	P	**P**	**02 13 58.7**	**-0.5**
CFAA				LR	LR	02 26 57.7	
LVC	**Limon Verde**	**42.00**	**99**	P	**P**	**02 14 00.3**	**-0.3**
	comp=Z,6.1nm,1.0s,mb4.2,baz=253,slow=9.2,SNR=7.5						
LVC				LR	LR	02 26 46.9	
	comp=Z,292nm,18.6s,MS4.2,baz=253,slow=30						
LVC	**Limon Verde**	**42.00**	**99**	*e*P	**P**	**02 14 01.0**	**+0.3**
	comp=Z,24nm,1.5s,mb4.6						
LVC				LR	LR		
	comp=Z,712nm,22.0s,MS4.5						
OTAV	**Otavalo**	**42.09**	**62**	*e*P	**P**	**02 14 02.1**	**+0.6**
	comp=Z,11nm,1.4s,mb4.3						
USHA	**Ushuaia**	**46.67**	**145**	LR	LR	02 28 59.5	
	comp=Z,169nm,20.1s,MS4.0,baz=209,slow=29						
LPIG	**La Paz**	**47.03**	**5**	LR	LR	02 29 41.8	
	comp=Z,344nm,19.9s,MS4.3,baz=279,slow=30						
TRQA	**Tornquist**	**47.15**	**121**	*e*P	**P**	**02 14 41.9**	**+0.2**
	comp=Z,8.4nm,0.9s,mb4.7						
TRQA				LR	LR		
	comp=Z,111nm,19.0s,MS3.8						
TEIG	**Tepich**	**50.09**	**33**	PFAKE		02 15 20.0	+16
TEIG				LR	LR		
	comp=Z,149nm,20.0s,MS4.0						
CPUP	**Villa Florida**	**51.81**	**106**	P	**P**	**02 15 15.9**	**-1.5**
	comp=Z,1.9nm,0.8s,mb4.1,baz=246,slow=6.6,SNR=5.4						
CPUP	**Villa Florida**	**51.81**	**106**	*e*P	**P**	**02 15 15.8**	**-1.5**
	comp=Z,12nm,1.1s,mb4.7						
PMSA	**Palmer Station**	**52.98**	**156**	LR	LR	02 32 53.0	
	comp=Z,136nm,18.0s,MS4.0,baz=312,slow=30						
JCT	**Junction City**	**55.07**	**16**	*e*P	**P**	**02 15 41.4**	**+0.3**
	comp=Z,12nm,0.9s,mb4.9						
NVAR	**Mina Array Bea**	**61.23**	**357**	P	**P**	**02 16 24.6**	**+0.6**
	comp=Z,2.8nm,0.7s,mb4.5,baz=187,slow=9.9,SNR=9.4						
BDFB	**Brasilia**	**62.83**	**96**	P	**P**	**02 16 34.0**	**-1.4**
	comp=Z,2.4nm,1.1s,mb4.3,baz=213,slow=14,SNR=4.9						
PDAR	**Pinedale Array**	**65.63**	**4**	P	**P**	**02 16 53.2**	**+0.2**
	comp=Z,1.1nm,0.7s,mb4.0,baz=169,slow=6.6,SNR=12						
VNA3	**Neumayer Olymp**	**73.08**	**161**	*e*	**P**	**02 17 39.4**	**+0.5**
VNA3				*e*		02 17 53.6	
VNA2	**Neumayer--Watz**	**73.88**	**161**	*e*	**P**	**02 17 44.8**	**+1.1**
	baz=248,slow=7.4						
VNA2				*e*		02 17 58.7	
FCC	**Fort Churchill**	**83.24**	**11**	*e*P	**P**	**02 18 35.3**	**+0.1**
YKA	**Yellowknife Ar**	**85.22**	**0**	P	**P**	**02 18 45.1**	**-0.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=176,slow=5.3,SNR=18						
CTA	**Charters Tower**	**90.26**	**248**	LR	LR	02 51 27.7	
	comp=Z,138nm,19.7s,MS4.4,baz=235,slow=30						
TORD	**Torodi Ar. Bea**	**119.06**	**87**	PKP	PKPdf	02 24 57.0	-1.8
	comp=Z,0.5nm,0.9s,baz=311,slow=2.6,SNR=2.6						
SONM	**Songino Array**	**139.09**	**318**	PKP	PKPdf	02 25 34.2	-1.7
	comp=Z,0.7nm,0.9s,baz=50,slow=2.5,SNR=2.5						
AKASG	**Malin Array Be**	**140.64**	**36**	PKP	PKPdf	02 25 37.7	-0.9
	comp=Z,0.1nm,0.3s,baz=320,slow=2.4,SNR=3.3						
ZAA0	**Zalesovo Array**	**145.81**	**340**	*e*PKPbc	PKPbc	02 25 48.6	+0.6
ZALV	**Zalesovo Beam**	**145.81**	**340**	PKPbc	PKPbc	02 25 47.3	-0.7
	comp=Z,1.8nm,0.6s,baz=39,slow=3.8,SNR=11						
ARU	**Arti**	**146.26**	**7**	*e*PKPbc	PKPbc	02 25 49.0	-0.4
CMAR	**Chiang Mai Arr**	**148.32**	**268**	PKPbc	PKPbc	02 25 56.9	+0.6
	comp=Z,4.1nm,0.8s,baz=93,slow=1.1,SNR=19						
BRTR	**Keskin Array B**	**148.41**	**51**	PKPbc	PKPbc	02 25 55.2	-0.7
	comp=Z,2.4nm,1.0s,baz=90,slow=1.2,SNR=8.0						
KURK	**Kurchatov**	**150.50**	**343**	*e*PKPbc	PKPbc	02 26 01.0	+0.3
MK31	**Makanchi Array**	**152.65**	**334**	*e*PKPbc	PKPbc	02 26 05.8	0.0
MKAR	**Makanchi Array**	**152.65**	**334**	PKP	PKPdf	02 25 59.1	+0.3
	comp=Z,0.7nm,0.9s,baz=50,slow=1.9,SNR=5.4						
MKAR				PKPbc	PKPbc	02 26 05.2	-0.6
	comp=Z,2.3nm,0.7s,baz=42,slow=2.3,SNR=18						

*CSEM **22** 02:10:27.4±0.0, 3935N×3320E, h2km, MD3.6, Error ellipse: s-maj=1.0km s-min=0.8km az=11.0*
*DDA **22** 02:10:27.7, 3937N×3317E, h15km, Md3.2*
*ISK **22** 02:10:27.0, 3935N×3319E, h5km, MD3.6*
*ISCJB **22** 02:10:28.9±0.3, 3935N±003×3322E±003, h10km, Error ellipse: s-maj=3.8km s-min=3.1km az=176.8*

ISC 22 02:10:28.6±0.7, 3934N±003×3321E±003, h1km±6km, n45, σ0§70/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.39**	**86**	*e*PG	**Pg**	**02 10 36.2**	**+0.2**
LOD	**Lodumlu**	**0.65**	**328**	*e*PG	**Pg**	**02 10 40.0**	**-0.9**
LOD				*e*SG	**Sg**	**02 10 50.2**	**+0.9**
CDAG	**Cicekdag**	**0.94**	**72**	*i* P	**Pg**	**02 10 46.1**	**-0.6**
CDAG				*i* S	**Sg**	**02 10 59.8**	**+0.9**
KIZT	**Kizilcal**	**1.13**	**246**	*e*PN	**Pn**	**02 10 49.2**	**-2.3**
ELDT	**Eldivan**	**1.16**	**8**	*i* P	**Pg**	**02 10 51.6**	**+0.8**
ELDT				*i* S	**Sg**	**02 11 14.1**	**+8.2**
KDHN	**Kadinhani**	**1.18**	**226**	*i* P	**Pg**	**02 10 50.3**	**-0.9**
KDHN				*i* S	**Sg**	**02 11 07.0**	**+0.4**
CANT	**Cankiri**	**1.30**	**14**	*e*PN	**Pn**	**02 10 52.7**	**-1.1**
LADK	**Ladik-KONYA**	**1.32**	**210**	*e*PN	**Pn**	**02 10 53.0**	**-1.1**
KONT	**Konya--Tatoy**	**1.54**	**206**	*e*PN	**Pn**	**02 10 57.0**	**-0.2**
BSTP	**Nigde**	**1.56**	**153**	*i* P	**Pn**	**02 10 58.1**	**+0.8**
BSTP				*i* S	**Sn**	**02 11 27.8**	**+10**
NIG	**Nigde**	**1.65**	**138**	*e*PN	**Pn**	**02 10 58.6**	**0.0**
YOZ	**Yozgat**	**1.66**	**79**	*e*PN	**Pn**	**02 10 58.8**	**0.0**
TOS	**Tosya**	**1.80**	**20**	*e*PN	**Pn**	**02 10 59.6**	**-1.1**
ESKT	**Eskisehir**	**1.84**	**276**	*i* P	**Pn**	**02 11 01.5**	**+0.3**
ESKT				*i* S	**Sn**	**02 11 25.7**	**+0.6**
ESKT	**Eskisehir**	**1.84**	**276**	*e*Pn	**Pn**	**02 11 01.4**	**+0.2**
SEYT	**Eskypehyr**	**1.84**	**276**	*i* P	**Pn**	**02 11 01.5**	**+0.3**
SEYT				*i* S	**Sn**	**02 11 25.7**	**+0.6**
BOLV	**Bolvadin**	**1.87**	**251**	*i* P	**Pn**	**02 11 00.9**	**-0.7**
BOLV				*i* S	**Sn**	**02 11 26.7**	**+0.9**
MDU	**Mudurnu**	**1.90**	**307**	*e*PN	**Pn**	**02 11 01.6**	**-0.5**
SAFT	**Safranbolu**	**1.94**	**348**	*e*PN	**Pn**	**02 11 02.3**	**-0.3**
BNN	**Bunyan**	**2.11**	**103**	*e*PN	**Pn**	**02 11 05.0**	**+0.1**
GULT	**Gulveren**	**2.34**	**299**	*e*PN	**Pn**	**02 11 08.0**	**-0.2**
KDZE	**Karadeniz Ereo**	**2.39**	**326**	*e*PN	**Pn**	**02 11 08.9**	**+0.2**
ALT	**Altintas**	**2.42**	**264**	*e*PN	**Pn**	**02 11 09.1**	**-0.2**
KARA	**Karaisali**	**2.54**	**144**	*e*PN	**Pn**	**02 11 11.0**	**+0.2**
ISP	**Isparta**	**2.59**	**236**	*e*PN	**Pn**	**02 11 12.0**	**+0.4**
EYL	**Eskiyayla**	**2.65**	**298**	*e*PN	**Pn**	**02 11 12.8**	**+0.4**
MERS	**Mersin**	**2.68**	**157**	*e*PN	**Pn**	**02 11 13.2**	**+0.4**
BZK	**Bozkurt**	**2.68**	**13**	*e*PN	**Pn**	**02 11 13.1**	**+0.3**
CAVI	**Cavuskoy**	**2.73**	**289**	*e*PN	**Pn**	**02 11 13.7**	**+0.2**
TOKT	**Tokat**	**2.75**	**68**	*e*PN	**Pn**	**02 11 14.1**	**+0.4**
KOZT	**Kozan**	**2.77**	**131**	*e*PN	**Pn**	**02 11 14.0**	**-0.1**
KVT	**Kavak**	**2.78**	**50**	*e*PN	**Pn**	**02 11 14.7**	**+0.5**
DIKM	**Dikmen**	**2.78**	**33**	*e*PN	**Pn**	**02 11 14.6**	**+0.4**
BCK	**Bucak**	**2.79**	**228**	*e*PN	**Pn**	**02 11 14.3**	**0.0**
SARI	**SarD1z-Kayseri**	**2.80**	**103**	*e*PN	**Pn**	**02 11 12.9**	**-1.5**
ADVT	**Abdulvahap**	**2.88**	**293**	*e*PN	**Pn**	**02 11 15.6**	**0.0**
SVSK	**Karacayir**	**2.98**	**78**	*e*PN	**Pn**	**02 11 17.0**	**+0.1**
KHL	**Karahalli**	**3.05**	**252**	*e*PN	**Pn**	**02 11 17.9**	**0.0**
HRT	**Hereke**	**3.09**	**300**	*e*PN	**Pn**	**02 11 18.7**	**+0.3**
IKL	**Isikli**	**3.12**	**173**	*e*PN	**Pn**	**02 11 19.5**	**+0.7**
ANTB	**Antalya**	**3.16**	**220**	*e*PN	**Pn**	**02 11 20.0**	**+0.6**
YLV	**Yalova**	**3.19**	**294**	*e*PN	**Pn**	**02 11 20.1**	**+0.3**
KRTS	**Karatas**	**3.25**	**148**	*e*PN	**Pn**	**02 11 21.2**	**+0.5**
KMRS	**Kahramanmaras**	**3.43**	**121**	*e*PN	**Pn**	**02 11 24.2**	**+1.1**
DARE	**Darende-Malaty**	**3.59**	**95**	*e*PN	**Pn**	**02 11 23.7**	**-1.7**

CASC 22 02:13:24.7±1.7, 1270N×8835W, h45km±64km, MD3.5, ML3.1, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.73**	**5**	*e*P	x	02 13 39.2	
VSM				*e*P	x	02 13 39.5	
VSM				*e*S	x	02 13 51.0	
BLLM	**Bellamira**	**0.75**	**8**	*e*P	x	02 13 39.1	
CNCH	**Conchagua**	**0.76**	**41**	*e*P	x	02 13 39.0	
CNCH				*e*P	x	02 13 39.1	
CNCH				*e*S	x	02 13 50.7	
SNVI	**San Vicente**	**1.03**	**332**	*e*P	x	02 13 42.9	
SNVI				*e*P	x	02 13 42.9	
SNVI				*e*S	x	02 13 56.8	
CAHU	**Cacacuatique**	**1.08**	**7**	*e*P	x	02 13 43.7	
CAHU				*e*P	x	02 13 44.0	
LFRS	**El Faro**	**1.16**	**323**	*e*P	x	02 13 44.5	
LFRS				*e*S	x	02 13 58.8	
LBRS	**Las Brisas**	**1.24**	**327**	*e*P	x	02 13 46.3	
LBRS				*e*S	x	02 14 00.8	
LFU	**La Fuente**	**1.29**	**325**	*e*P	x	02 13 46.9	
BOQS	**Boqueron**	**1.38**	**319**	*e*P	x	02 13 48.0	
BOQS				*e*P	x	02 13 48.0	
BOQS				*e*S	x	02 14 06.0	
BOQS				AML	x	02 14 09.8	
	comp=Z,252nm,0.3s						
MIRN	**Miramar**	**1.61**	**99**	*e*P	Pn	02 13 50.2	-0.5
SBLS	**San Blas**	**1.69**	**313**	*e*P	x	02 13 52.4	
SBLS				*e*P	x	02 13 52.5	
SBLS				*e*S	x	02 14 13.4	
SNJE	**San Jose**	**1.69**	**314**	*e*P	x	02 13 52.8	
TGUH	**Tegucigalpa,Un**	**1.71**	**38**	*e*P	Pn	02 13 52.2	+0.2
TGUH				*e*P		02 13 52.5	
RBDL	**Robledal**	**1.92**	**317**	*e*P	x	02 13 56.0	
APYN	**Apoyeque**	**2.00**	**103**	*e*P	Pn	02 13 55.1	-0.9

*ISCJB **22** 02:22:06.0±0.3, 2294S±005×11424W±008, h10km, mb5.3/88, MS4.8/155, Error ellipse: s-maj=10.7km s-min=6.6km az=156.9*
*IDC **22** 02:22:05.4±0.5, 2290S×11433W, h0km, mb4.7/13, mb1 4.9/13, mb1mx4.8/17, mbtmp4.7/13, MS4.4/15, Ms1 4.4/15, ms1mx4.3/19, Error ellipse: s-maj=20.7km s-min=16.2km az=46.0*
*MOS **22** 02:22:06.6±1.2, 2285S×114.18W, h10km, mb5.6/29, MS4.8/33, Error ellipse: s-maj=17.6km s-min=6.9km az=85.4*
*GCMT **22** 02:22:07.5±0.2, 2304S×11436W, h12km, MW5.2/94, Moment Tensor Solution. s63,c89; s94,c159; Duration: 1§0 Moment tensor: Scale 10¹⁷Nm; Mr0.52±.02; Mθθ-0.98±.01; Mφφ0.46±.02; Mrθ-0.21±.04; Mrφ0.15±.01; Mθφ0.18±.05; Best double couple: Mo0.85000×10¹⁷ NP1:ϕs61.00000°, δ49.00000°, λ36.00000°. NP2: ϕs306.00000°, δ64.00000°, λ133.00000°. Principal axes: T 0.6730, Plg51.0000°, Azm266.0000°; N 0.3540, Plg38.0000°, Azm104.0000°; P -1.0270, Plg9.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **22** 02:22:07.5±0.2, 2302S×11429W, h10km, mb5.5/80, MS4.9/135 Error ellipse: s-maj=7.4km s-min=5.1km az=71.0*
*BJI **22** 02:22:08.5, 2300S×11430W, h10km, mB5.5, Ms5.5, Msz5.0*

ISC 22 02:22:07.8±0.3, 2301S±005×11426W±008, h10km, (h8km±.3km:pP-P), n359, σ0§75/193, mb5.3/88, MS4.8/155, 6C-7D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.06**	**134**	LR	LR	02 25 19.5	
	comp=Z,1µm,20.8s,baz=147,slow=31						
RPN				T		02 29 43.5	
	34nm,0.3s,baz=116,slow=22,SNR=11						
RKT	**Rikitea**	**19.06**	**266**	*e*LQ		02 30 07.2	
	4µm,28.2s						
RKT				*e*LR	LR	02 30 40.6	
	3µm,26.8s,baz=94						
TAOE	**Nuku Hiva Isla**	**28.53**	**295**	*e*LR	LR	02 35 02.6	
	5µm,24.9s,baz=129						
TBI	**Tubuai**	**32.31**	**262**	*e*LR	LR	02 36 46.5	
	1µm,26.5s,baz=89						
PPT	**Papeete**	**33.51**	**273**	*e*S	**S**	**02 33 59.7**	**-10**
	119nm,28.2s						
PPT				*e*LR	LR	02 37 23.1	
	1µm,25.5s,baz=103						
PPT	**Papeete**	**33.51**	**273**	LR	LR	02 38 41.3	
	comp=Z,630nm,19.5s,MS4.3,baz=99,slow=30						
NNA	**Nana**	**37.23**	**79**	*e*P	**P**	**02 29 19.8**	**0.0**
	29nm,1.2s,mb5.0						
NNA				LR	LR		
	comp=Z,1µm,21.0s,MS4.6						
LCO	**Las Campanas**	**39.43**	**108**	*e*P	**P**	**02 29 39.0**	**+0.8**
	comp=Z,48nm,1.2s,mb5.1						
LCO				LR	LR		
	comp=Z,1µm,22.0s,MS4.7						
PLCA	**Paso Flores**	**40.64**	**126**	P	**P**	**02 29 49.1**	**+1.0**
	comp=Z,10.0nm,1.1s,mb4.4,baz=274,slow=10,SNR=8.0						
PLCA				LR	LR	02 42 17.0	
	comp=Z,507nm,20.2s,MS4.4,baz=281,slow=30						
PLCA	**Paso Flores**	**40.64**	**126**	*e*P	**P**	**02 29 50.1**	**+2.0**
PLCA				pmax	pmax		
	comp=Z,33nm,1.4s						
PLCA				MLR	MLR		
	comp=Z,653nm,20.0s						
PLCA	**Paso Flores**	**40.64**	**126**	*e*P	**P**	**02 29 50.1**	**+2.0**
	comp=Z,33nm,1.4s,mb4.8						
PLCA				LR	LR		
	comp=Z,653nm,20.0s,MS4.5						
ARE	**Arequipa**	**40.67**	**89**	*e*P	**P**	**02 29 50.0**	**+1.4**
**CFA

JCT	**Junction City**	**54.97**	**15**	*eP*	**P**		**02 31 39.1**	**-0.1**	
JCT				pmax	pmax				
	comp=Z,192nm,1.4s,mb5.9								
JCT				MLR	MLR				
	comp=Z,887nm,21.0s,MS4.8								
JCT	**Junction City**	**54.97**	**15**	*eP*	**P**		**02 31 39.1**	**-0.1**	
	comp=Z,192nm,1.4s,mb5.9								
JCT				LR	LR				
	comp=Z,887nm,21.0s,MS4.8								
TUC	**Tucson**	**55.11**	**4**	*eP*	**P**		**02 31 40.7**	**+0.5**	
TUC				*e*			02 32 42.0		
TUC				pmax	pmax				
	comp=Z,33nm,1.6s,mb5.1								
TUC				MLR	MLR				
	comp=Z,884nm,20.0s,MS4.8								
TUC	**Tucson**	**55.11**	**4**	*eP*	**P**		**02 31 40.8**	**+0.6**	
TUC	**Tucson**	**55.11**	**4**	*eP*	**P**		**02 31 40.6**	**+0.5**	
	comp=Z,32nm,1.6s,mb5.1								
TUC				*e*PcP	PcP		02 32 42.0	+0.5	
TUC				LR	LR				
	comp=Z,884nm,20.0s,MS4.8								
HKT	**Hockley**	**55.56**	**19**	*eP*	**P**		**02 31 43.3**	**-0.1**	
HKT				pmax	pmax				
	comp=Z,160nm,1.6s,mb5.8								
HKT				MLR	MLR				
	comp=Z,1μm,20.0s,MS5.0								
HKT	**Hockley**	**55.56**	**19**	*eP*	**P**		**02 31 43.3**	**-0.1**	
	comp=Z,160nm,1.6s,mb5.8								
HKT				LR	LR				
	comp=Z,1μm,20.0s,MS5.0								
GDL2	**Guadalupe Moun**	**55.71**	**10**	*eP*	**P**		**02 31 44.5**	**+0.1**	
GLA	**Glamis**	**55.75**	**359**	*eP*	**P**		**02 31 46.2**	**+1.4**	
GLA				pmax	pmax				
	comp=Z,110nm,1.8s,mb5.6								
GLA	**Glamis**	**55.75**	**359**	*eP*	**P**		**02 31 44.7**	**-0.1**	
	comp=Z,106nm,1.8s,mb5.6								
PFO	**Pinyon Flat Ob**	**56.34**	**358**	*eP*	**P**		**02 31 48.9**	**-0.1**	
PFO				pmax	pmax				
	comp=Z,27nm,1.3s,mb5.1								
PFO				MLR	MLR				
	comp=Z,655nm,19.0s,MS4.7								
PFO	**Pinyon Flat Ob**	**56.34**	**358**	*eP*	**P**		**02 31 48.9**	**-0.1**	
	comp=Z,27nm,1.3s,mb5.1								
PFO				LR	LR				
	comp=Z,655nm,19.0s,MS4.7								
PASC	**Pasadena Art C**	**56.99**	**356**	*eP*	**P**		**02 31 54.6**	**+1.0**	
	comp=Z,241nm,1.2s,mb6.1								
MWC	**Mount Wilson**	**57.03**	**356**	*eP*	**P**		**02 31 54.7**	**+0.8**	
MWC				pmax	pmax				
	comp=Z,80nm,1.4s,mb5.6								
MWC	**Mount Wilson**	**57.03**	**356**	*eP*	**P**		**02 31 54.7**	**+0.8**	
	comp=Z,80nm,1.4s,mb5.6								
LENM	**Lemitar**	**57.28**	**7**	*eP*	**P**		**02 31 56.2**	**+0.5**	
NATX	**Nacogdoches**	**57.60**	**20**	*eP*	**P**		**02 31 58.2**	**+0.2**	
	comp=Z,182nm,1.4s,mb5.9								
NATX				LR	LR				
	comp=Z,1μm,19.0s,MS5.1								
GSC	**Goldstone**	**58.05**	**358**	*eP*	**P**		**02 32 02.0**	**+1.0**	
GSC				pmax	pmax				
	comp=Z,45nm,1.2s,mb5.4								
GSC	**Goldstone**	**58.05**	**358**	*eP*	**P**		**02 32 01.4**	**+0.4**	
	comp=Z,45nm,1.3s,mb5.3								
ANMO	**Albuquerque**	**58.12**	**8**	*i*/*P*	**P**		**02 32 01.4**	**-0.1**	
ANMO	**Albuquerque**	**58.12**	**8**	*eP*	**P**		**02 32 01.3**	**-0.2**	
	comp=Z,27nm,1.4s,mb5.1								
ANMO				LR	LR				
	comp=Z,1μm,21.0s,MS5.0								
WUAZ	**Wupatki**	**58.27**	**3**	*eP*	**P**		**02 32 02.4**	**-0.2**	
	comp=Z,71nm,1.5s,mb5.5								
WUAZ				LR	LR				
	comp=Z,786nm,21.0s,MS4.8								
ISA	**Isabella**	**58.49**	**356**	*eP*	**P**		**02 32 04.8**	**+0.7**	
ISA				pmax	pmax				
	comp=Z,86nm,1.8s,mb5.5								
ISA	**Isabella**	**58.49**	**356**	*eP*	**P**		**02 32 04.8**	**+0.7**	
	comp=Z,86nm,1.8s,mb5.5								
AMTX	**Amarillo**	**58.80**	**12**	*eP*	**P**		**02 32 05.5**	**-0.8**	
	comp=Z,79nm,1.4s,mb5.5								
AMTX				LR	LR				
	comp=Z,736nm,21.0s,MS4.8								
DAC	**Darwin (Calif)**	**59.05**	**357**	PFAKE			02 32 20.0	+12	
DAC				LR	LR				
	comp=Z,1μm,22.0s,MS5.0								
SDDR	**Presa de Saban**	**59.19**	**49**	PFAKE			02 32 20.0	+11	
SDDR				LR	LR				
	comp=Z,185nm,19.0s,MS4.2								
SHPR	**Sheep Range**	**59.20**	**359**	*eP*	**P**		**02 32 09.9**	**+0.9**	
WMOK	**Wichita Mounta**	**59.28**	**15**	*eP*	**P**		**02 32 08.6**	**-1.0**	
WMOK				pmax	pmax				
	comp=Z,30nm,1.3s,mb5.2								
WMOK				MLR	MLR				
	comp=Z,591nm,19.0s,MS4.7								
WMOK	**Wichita Mounta**	**59.28**	**15**	*eP*	**P**		**02 32 08.6**	**-1.1**	
	comp=Z,30nm,1.3s,mb5.2								
WMOK				LR	LR				
	comp=Z,591nm,19.0s,MS4.7								
VBMS	**Vicksburg**	**59.43**	**23**	PFAKE			02 32 20.0	+9.3	
VBMS				LR	LR				
	comp=Z,367nm,20.0s,MS4.5								
URZ	**Urewera**	**59.73**	**238**	LR	LR		02 51 21.3		
	comp=Z,213nm,19.2s,MS4.3,baz=102,slow=29								
SAO	**San Andreas Ge**	**59.84**	**353**	PFAKE			02 32 30.0	+17	
SAO				LR	LR				
	comp=Z,2μm,21.0s,MS5.1								
MVCO	**Mesa Verde**	**60.15**	**5**	*eP*	**P**		**02 32 15.6**	**0.0**	
	comp=Z,165nm,1.9s,mb5.7								
MVCO				LR	LR				
	comp=Z,1μm,20.0s,MS5.0								
MTUM	**Tungsten Hills**	**60.18**	**356**	*eP*	**P**		**02 32 16.9**	**+1.2**	
MIAR	**Mount Ida**	**60.52**	**20**	*eP*	**P**		**02 32 17.4**	**-0.8**	
MIAR				pmax	pmax				
	comp=Z,56nm,1.5s,mb5.5								
MIAR				MLR	MLR				
	comp=Z,1μm,19.0s,MS5.0								
MIAR	**Mount Ida**	**60.52**	**20**	*eP*	**P**		**02 32 17.4**	**-0.7**	
	comp=Z,56nm,1.5s,mb5.5								
MIAR				LR	LR				
	comp=Z,1μm,19.0s,MS5.0								
TPH	**Tonopah**	**60.83**	**357**	*eP*	**P**		**02 32 21.2**	**+1.0**	
TPH				pmax	pmax				
	comp=Z,194nm,2.3s,mb5.8								
TPH				MLR	MLR				
	comp=Z,592nm,21.0s,MS4.7								
TPH	**Tonopah**	**60.83**	**357**	*eP*	**P**		**02 32 21.2**	**+1.1**	
	comp=Z,194nm,2.3s,mb5.8								
TPH				LR	LR				
	comp=Z,592nm,21.0s,MS4.7								
SDCO	**Great Sand Dun**	**60.99**	**8**	*eP*	**P**		**02 32 21.6**	**+0.3**	
	comp=Z,50nm,1.3s,mb5.5								
SDCO				LR	LR				
	comp=Z,1μm,21.0s,MS4.9								
UALR	**University of**	**61.12**	**21**	*eP*	**P**		**02 32 21.4**	**-0.9**	
	comp=Z,67nm,1.4s,mb5.6								
MVU	**Marysvale**	**61.22**	**2**	PFAKE			02 32 40.0	+17	
MVU				LR	LR				
	comp=Z,856nm,21.0s,MS4.9								
MSU	**Marysvale**	**61.23**	**2**	*eP*	**P**		**02 32 23.6**	**+0.7**	
NVAR	**Mina Array Bea**	**61.23**	**356**	P	**P**		**02 32 22.6**	**-0.3**	
	comp=Z,20nm,1.0s,mb5.2,baz=184,slow=7.4,SNR=62								
MCCM	**Marconi Confer**	**61.37**	**352**	PFAKE			02 32 40.0	+16	
MCCM				LR	LR				
	comp=Z,1μm,22.0s,MS5.0								
WAKR	**Walker**	**61.38**	**355**	*eP*	**P**		**02 32 25.0**	**+1.1**	
LRAL	**Lakeview Retre**	**61.51**	**26**	*eP*	**P**		**02 32 25.0**	**+0.1**	
	comp=Z,174nm,2.0s,mb5.8								
CRPR	**Cabo Rojo, PR**	**61.52**	**53**	*eP*	**P**		**02 32 23.7**	**-1.6**	
	comp=Z,44nm,1.3s,mb5.4								
OXF	**Oxford**	**61.89**	**23**	P	**P**		**02 32 27.1**	**-0.3**	
OXF				pmax	pmax				
	comp=Z,79nm,1.2s,mb5.7								
OXF	**Oxford**	**61.89**	**23**	*eP*	**P**		**02 32 26.5**	**-0.9**	
	comp=Z,79nm,1.2s,mb5.7								
OXF				LR	LR				
	comp=Z,626nm,20.0s,MS4.8								
SRU	**San Rafael**	**61.90**	**3**	*eP*	**P**		**02 32 27.6**	**+0.2**	
SRU				pmax	pmax				
	comp=Z,37nm,1.3s,mb5.3								
SRU	**San Rafael**	**61.90**	**3**	*eP*	**P**		**02 32 27.6**	**+0.2**	
	comp=Z,37nm,1.3s,mb5.3								
HOPS	**Hopland**	**62.23**	**352**	PFAKE			02 32 40.0	+10	
HOPS				LR	LR				
	comp=Z,2μm,21.0s,MS5.2								
SMCO	**Snowmass**	**62.24**	**6**	*eP*	**P**		**02 32 22.1**	**-7.5**	
	comp=Z,37nm,1.5s,mb5.3								
SJG	**San Juan**	**62.29**	**53**	PFAKE			02 32 40.0	+10	
SJG				LR	LR				
	comp=Z,338nm,19.0s,MS4.5								
OHCM	**Honcut**	**62.39**	**354**	*eP*	**P**		**02 32 31.2**	**+0.5**	
BDFB	**Brasilia**	**62.50**	**96**	P	**P**		**02 32 31.4**	**-0.6**	
	comp=Z,11nm,1.1s,mb4.9,baz=275,slow=12,SNR=18								
BDFB				LR	LR		02 56 35.1		
	comp=Z,201nm,20.6s,MS4.3,baz=198,slow=33								
PAHR	**Pah Rah Range**	**62.58**	**356**	*eP*	**P**		**02 32 32.8**	**+0.9**	
	comp=Z,43nm,1.4s,mb5.4								
NLU	**North Lily Min**	**62.67**	**2**	*eP*	**P**		**02 32 33.5**	**+1.0**	
MPU	**Maple Canyon**	**62.75**	**2**	*eP*	**P**		**02 32 33.7**	**+0.6**	
	comp=Z,48nm,1.3s,mb5.5								
DUG	**Dugway**	**62.89**	**1**	*eP*	**P**		**02 32 34.6**	**+0.6**	
DUG				pmax	pmax				
	comp=Z,41nm,1.2s,mb5.4								
DUG				MLR	MLR				
	comp=Z,750nm,19.0s,MS4.9								
DUG	**Dugway**	**62.89**	**1**	*eP*	**P**		**02 32 34.6**	**+0.6**	
	comp=Z,41nm,1.2s,mb5.4								
DUG				LR	LR				
	comp=Z,750nm,19.0s,MS4.9								
GNAR	**Gosnell**	**62.98**	**22**	*eP*	**P**		**02 32 35.1**	**+0.4**	
	comp=Z,4μm,1.9s								
CBKS	**Cedar Bluff**	**62.99**	**13**	*eP*	**P**		**02 32 34.7**	**0.0**	
CBKS				MLR	MLR				
	comp=Z,751nm,19.0s,MS4.9								
ISCO	**Idaho Springs**	**63.00**	**7**	*eP*	**P**		**02 32 34.9**	**+0.1**	
ISCO				pmax	pmax				
	comp=Z,29nm,1.4s,mb5.2								
ISCO				MLR	MLR				
	comp=Z,1μm,19.0s,MS5.0								
ISCO	**Idaho Springs**	**63.00**	**7**	*eP*	**P**		**02 32 34.9**	**+0.1**	
	comp=Z,29nm,1.4s,mb5.2								
ISCO				LR	LR				
	comp=Z,1μm,19.0s,MS5.0								
DAU	**Daniels Canyon**	**63.16**	**3**	*eP*	**P**		**02 32 37.0**	**+1.2**	
BMN	**Battle Mountai**	**63.18**	**357**	*eP*	**P**		**02 32 36.7**	**+0.8**	
BMN	**Battle Mountai**	**63.18**	**357**	*eP*	**P**		**02 32 36.4**	**+0.5**	
	comp=Z,97nm,1.9s,mb5.6								
BMN				LR	LR				
	comp=Z,1μm,21.0s,MS5.0								
JLU	**Jordanelle**	**63.34**	**2**	*eP*	**P**		**02 32 37.4**	**+0.4**	
NOQ	**North Oquirrh**	**63.37**	**2**	*eP*	**P**		**02 32 39.0**	**+1.8**	
	comp=Z,200nm,2.1s,mb5.9								
ELK	**Elko**	**63.44**	**359**	*eP*	**P**		**02 32 38.4**	**+0.8**	
ELK				pmax	pmax				
	comp=Z,57nm,1.8s								
ELK				MLR	MLR				
	comp=Z,1μm,19.0s								
ELK	**Elko**	**63.44**	**359**	*eP*	**P**		**02 32 38.4**	**+0.7**	
	comp=Z,57nm,1.8s,mb5.4								
ELK				LR	LR				
	comp=Z,1μm,19.0s,MS5.0								
PARMO	**Parma**	**63.70**	**22**	*eP*	**P**		**02 32 39.8**	**+0.3**	
WDC	**Whiskeytown Da**	**63.73**	**353**	*eP*	**P**		**02 32 39.1**	**-0.5**	
WDC				pmax	pmax				
	comp=Z,58nm,1.4s,mb5.4								
WDC				MLR	MLR				
	comp=Z,1μm,20.0s,MS5.0								
WDC	**Whiskeytown Da**	**63.73**	**353**	*eP*	**P**		**02 32 39.1**	**-0.5**	
	comp=Z,58nm,1.4s,mb5.4								
WDC				LR	LR				
	comp=Z,1μm,20.0s,MS5.0								
SWET	**Sewanee**	**63.84**	**26**	*eP*	**P**		**02 32 39.6**	**-0.8**	
LBCM	**Butte Creek Ri**	**63.86**	**354**	P	**P**		**02 32 40.6**	**+0.1**	
WVT	**Waverly**	**63.91**	**24**	*eP*	**P**		**02 32 39.5**	**-1.4**	
WVT	**Waverly**	**63.91**	**24**	*eP*	**P**		**02 32 39.4**	**-1.5**	
	comp=Z,44nm,1.6s,mb5.2								
WVT				LR	LR				
	comp=Z,1μm,19.0s,MS5.0								
KSU1	**Kansas State U**	**63.96**	**15**	*eP*	**P**		**02 32 40.9**	**-0.2**	
	comp=Z,68nm,1.2s,mb5.5								
KSU1				LR	LR				
	comp=Z,747nm,20.0s,MS4.9								
KHMM	**Horse Mountain**	**64.17**	**352**	*eP*	**P**		**02 32 44.0**	**+1.6**	
PHWY	**Pilot Hill**	**64.50**	**7**	*eP*	**P**		**02 32 44.6**	**-0.1**	
	comp=Z,16nm,1.2s,mb4.9								
CPCT	**Cooper Cave**	**64.61**	**27**	*eP*	**P**		**02 32 44.8**	**-0.7**	
OGNE	**Ogallala**	**64.64**	**10**	PFAKE			02 33 00.0	+14	
OGNE				LR	LR				
	comp=Z,911nm,20.0s,MS5.0								
FVM	**French Village**	**64.68**	**21**	*eP*	**P**		**02 32 44.7**	**-1.1**	
FVM				pmax	pmax				
	comp=Z,35nm,1.3s,mb5.2								
FVM	**French Village**	**64.68**	**21**	*eP*	**P**		**02 32 44.7**	**-1.2**	
	comp=Z,35nm,1.3s,mb5.2								
RWWY	**Rawlins**	**64.70**	**6**	*eP*	**P**		**02 32 45.5**	**-0.4**	
LAMM	**Antelope Mount**	**64.76**	**353**	P	**P**		**02 32 46.3**	**0.0**	
MOD	**Modoc**	**64.83**	**355**	*eP*	**P**		**02 32 47.0**	**+0.3**	
	comp=Z,60nm,1.3s,mb5.5								
MOD				LR	LR				
	comp=Z,1μm,20.0s,MS5.1								
SIUC	**Southern Illin**	**64.84**	**22**	*eP*	**P**		**02 32 46.5**	**-0.4**	
	comp=Z,134nm,1.5s,mb5.8								
YBH	**Yreka Blue Hor**	**64.89**	**353**	*eP*	**P**		**02 32 47.1**	**0.0**	
YBH				MLR	MLR				
	comp=Z,1μm,19.0s								
KTRM	**Thompson Ridge**	**65.14**	**353**	P	**P**		**02 32 49.4**	**+0.7**	
FUNA	**Funafuti**	**65.17**	**271**	PFAKE			02 33 00.0	+10	
FUNA				LR	LR				
	comp=Z,3μm,19.0s,MS5.5								
WVOR	**Wild Horse Val**	**65.24**	**356**	*eP*	**P**		**02 32 50.1**	**+0.7**	
WVOR				pmax	pmax				
	comp=Z,53nm,1.3s,mb5.4								
WVOR				MLR	MLR				
	comp=Z,1μm,20.0s,MS5.2								
WVOR	**Wild Horse Val**	**65.24**	**356**	*eP*	**P**		**02 32 50.1**	**+0.6**	
	comp=Z,53nm,1.3s,mb5.4								
WVOR				LR	LR				
	comp=Z,1μm,20.0s,MS5.2								
SBA	**Scott Base**	**65.34**	**193**	PFAKE			02 33 00.0	+10	
SBA				LR	LR				
	comp=Z,731nm,20.0s,MS4.9								
AHID	**Auburn Hatcher**	**65.51**	**3**	*eP*	**P**		**02 32 50.8**	**-0.4**	
	comp=Z,26nm,1.4s,mb5.1								
AHID				LR	LR				
	comp=Z,805nm,19.0s,MS4.9								
BW06	**Boulder Array**	**65.59**	**4**	*eP*	**P**		**02 32 50.5**	**-1.2**	
BW06				LR	LR				
	comp=Z,502nm,20.0s,MS4.7								
PDAR	**Pinedale Array**	**65.59**	**4**	P	**P**		**02 32 50.4**	**-1.3**	
	comp=Z,5.4nm,0.6s,mb4.7,baz=167,slow=7.2,SNR=29								
PDAR				LR	LR		02 56 20.0		
	comp=Z,427nm,21.8s,MS4.6,baz=185,slow=31								
USIN	**University of**	**65.60**	**23**	*eP*	**P**		**02 32 51.5**	**-0.4**	
	comp=Z,111nm,1.4s,mb5.7								
HUMO	**Hull Mountain**	**65.78**	**353**	*eP*	**P**		**02 32 53.3**	**+0.4**	
	comp=Z,59nm,1.2s,mb5.5								
HUMO				LR	LR				
	comp=Z,1μm,20.0s,MS5.1								
RRI2	**Red Ridge**	**66.08**	**2**	*eP*	**P**		**02 32 54.2**	**-0.7**	
	comp=Z,56nm,1.5s,mb5.4								
REDW	**Red Top Meadow**	**66.12**	**3**	*eP*	**P**		**02 32 54.6**	**-0.5**	
	comp=Z,36nm,1.6s,mb5.2								
OLIL	**Olney**	**66.14**	**22**	*eP*	**P**		**02 32 55.0**	**-0.3**	
	comp=Z,65nm,1.4s,mb5.5								
SNOW	**Snow King Moun**	**66.22**	**3**	*eP*	**P**		**02 32 55.5**	**-0.2**	
	comp=Z,277nm,2.8s,mb5.8								
TPAW	**Teton Pass**	**66.24**	**3**	*eP*	**P**		**02 32 55.4**	**-0.5**	
	comp=Z,40nm,1.3s,mb5.3								
HLID	**Hailey**	**66.24**	**360**	*eP*	**P**		**02 32 56.4**	**+0.5**	
	comp=Z,28nm,1.1s,mb5.2								
HLID				LR	LR				
	comp=Z,683nm,20.0s,MS4.9								
WCI	**Wyandotte Cave**	**66.34**	**24**	*eP*	**P**		**02 32 54.8**	**-1.8**	
WCI				MLR	MLR				
	comp=Z,903nm,21.0s,MS5.0								
VNDA	**Vanda**	**66.38**	**194**	P	**P**		**02 32 56.9**	**+0.4**	
	comp=Z,3.4nm,1.0s,baz=66,slow=5.7,SNR=4.0								
VNDA				LR	LR		02 55 31.4		
	comp=Z,553nm,19.5s,MS4.8,baz=145,slow=30								
LOHW	**Long Hollow**	**66.38**	**3**	*eP*	**P**		**02 32 56.2**	**-0.5**	
	comp=Z,34nm,1.5s,mb5.2								
MOOW	**Moose Ponds**	**66.51**	**3**	*eP*	**P**		**02 32 56.7**	**-0.9**	
	comp=Z,27nm,1.5s,mb5.1								
IMW	**Indian Meadow**	**66.65**	**3**	*eP*	**P**		**02 32 57.8**	**-0.6**	
	comp=Z,37nm,1.4s,mb5.2								
BLO	**Bloomington**	**67.08**	**23**	*eP*	**P**		**02 33 00.3**	**-1.0**	
LKWY	**Lake**	**67.34**	**3**	PFAKE			02 33 20.0	+17	
LKWY				LR	LR				
	comp=Z,893nm,22.0s,MS4.9								
CNNC	**Cliffs of the**	**67.42**	**32**	PFAKE			02 33 20.0	+16	
CNNC				LR	LR				
	comp=Z,634nm,19.0s,MS4.9								
VIPM	**Ingram Point**	**67.44**	**355**	P	**P**		**02 33 04.0**	**+0.5**	
RSSD	**Black Hills**	**67.46**	**8**	*eP*	**P**		**02 33 03.2**	**-0.4**	
RSSD	**Black Hills**	**67.46**	**8**	*eP*	**P**		**02 33 03.1**	**-0.5**	
	comp=Z,35nm,1.3s,mb5.2								
RSSD				LR	LR				
	comp=Z,2μm,22.0s,MS5.3								
SCIA	**State Center**	**67.47**	**17**	*eP*	**P**		**02 33 03.4**	**-0.3**	
	comp=Z,70nm,1.2s,mb5.6								
SCIA				LR	LR				
	comp=Z,808nm,21.0s,MS4.9								
QLMT	**Earthquake Lak**	**67.56**	**2**	*eP*	**P**		**02 33 04.9**	**+0.6**	
BMO	**Blue Mountains**	**67.59**	**358**	*eP*	**P**		**02 33 04.7**	**+0.3**	
	comp=Z,43nm,1.7s,mb5.2								
BMO				LR	LR				
	comp=Z,800nm,20.0s,MS4.9								
RLMT	**Red Lodge**	**67.96**	**4**	*eP*	**P**		**02 33 06.2**	**-0.5**	
	comp=Z,38nm,1.7s,mb5.1								
RLMT				LR	LR				
	comp=Z,702nm,19.0s,MS4.9								
DLMT	**Dillon**	**68.06**	**1**	*eP*	**P**		**02 33 07.2**	**-0.1**	
	comp=Z,36nm,1.4s,mb5.2								
VTHM	**Trough**	**68.11**	**355**	P	**P**		**02 33 08.5**	**+0.9**	
ECSD	**EROS,Sioux Fal**	**68.37**	**14**	*eP*	**P**		**02 33 08.4**	**-0.9**	
	comp=Z,47nm,1.4s,mb5.3								
ECSD				LR	LR				
	comp=Z,686nm,20.0s,MS4.9								
BOZ	**Bozeman (W)**	**68.37**	**2**	*eP*	**P**		**02 33 08.8**	**-0.5**	
BOZ				MLR	MLR				
	comp=Z,495nm,20.0s,MS4.7								
LRM	**Limekiln Ridge**	**68.52**	**1**	*eP*	**P**		**02 33 10.9**	**+0.6**	
JFWS	**Jewell Farm**	**69.23**	**19**	*eP*	**P**		**02 33 14.1**	**-0.6**	
JFWS	**Jewell Farm**	**69.23**	**19**	*eP*	**P**		**02 33 13.9**	**-0.8**	
	comp=Z,53nm,1.7s,mb5.2								
JFWS				LR	LR				
	comp=Z,966nm,20.0s,MS5.0								
HAWA	**Hanford**	**69.24**	**356**	*eP*	**P**		**02 33 14.6**	**-0.1**	
HAWA				LR	LR				
	comp=Z,918nm,19.0s,MS5.0								
RSW	**Rattlesnake Hi**	**69.25**	**356**	*eP*	**P**		**02 33 15.4**	**+0.7**	
ACSO	**Alum Creek Sta**	**69.34**	**25**	*eP*	**P**		**02 33 14.7**	**-0.8**	
ACSO				LR	LR				
	comp=Z,951nm,21.0s,MS5.0								
MSO	**Missoula**	**69.51**	**0**	*eP*	**P**		**02 33 15.9**	**-0.4**	
	comp=Z,24nm,1.6s,mb4.9								
MSO				LR	LR				
	comp=Z,437nm,20.0s,MS4.7								
CHMT	**Chamberlain Mo**	**69.60**	**1**	*eP*	**P**		**02 33 16.7**	**-0.3**	
SLMT	**Seeley Lake**	**69.93**	**1**	*eP*	**P**		**02 33 18.9**	**0.0**	
MCWV	**Mont Chateau**	**70.14**	**28**	*eP*	**P**		**02 33 20.1**	**-0.4**	
OD2	**Odessa Site #2**	**70.19**	**357**	*eP*	**P**		**02 33 20.5**	**0.0**	
SWMT	**Swartz Lake**	**70.19**	**0**	*eP*	**P**		**02 33 20.9**	**+0.3**	
JTMT	**Jette**	**70.43**	**360**	*eP*	**P**		**02 33 21.9**	**-0.1**	
ETW	**Entiat**	**70.50**	**356**	*eP*	**P**		**02 33 22.8**	**+0.3**	
BSMT	**Bassoo Peak**	**70.53**	**360**	*eP*	**P**		**02 33 22.6**	**0.0**	
YBMT	**Yellow Bay**	**70.55**	**0**	*eP*	**P**		**02 33 23.9**	**+1.2**	
WTV	**Waterville**	**70.57**	**356**	P	**P**		**02 33 23.0**	**+0.1**	
NLWA	**Neilton Lookou**	**70.61**	**353**	PFAKE			02 33 30.0	+6.9	
NLWA				LR	LR				
	comp=Z,850nm,20.0s,MS5.0								
EGMT	**Eagleton**	**70.82**	**3**	*eP*	**P**		**02 33 24.7**	**+0.3**	
	comp=Z,87nm,1.5s,mb5.5								
EGMT				LR	LR				
	comp=Z,829nm,21.0s,MS5.0								
AAM	**Ann Arbor**	**70.87**	**24**	*eP*	**P**		**02 33 24.5**	**-0.3**	
AAM				pmax	pmax				
	comp=Z,82nm,1.5s,mb5.4								
AAM	**Ann Arbor**	**70.87**	**24**	*eP*	**P**		**02 33 24.5**	**-0.3**	
	comp=Z,82nm,1.5s,mb5.4								
NEW	**Newport**	**70.99**	**358**	*eP*	**P**		**02 33 25.5**	**+0.1**	
NEW				pmax	pmax				
	comp=Z,52nm,1.6s								
NEW				MLR	MLR				
	comp=Z,1μm,19.0s								
NEW	**Newport**	**70.99**	**358**	*eP*	**P**		**02 33 25.5**	**+0.1**	
	comp=Z,52nm,1.6s,mb5.2								
NEW				LR	LR				
	comp=Z,1μm,19.0s,MS5.2								
JCW	**Jim Creek**	**71.21**	**355**	*eP*	**P**		**02 33 26.7**	**0.0**	
SDMD	**Soldier's Deli**	**71.27**	**30**	*eP*	**P**		**02 33 28.2**	**+0.8**	
RPW	**Rockport**	**71.43**	**355**	*eP*	**P**		**02 33 28.1**	**0.0**	
ALLY	**Allegheny Colle**	**71.68**	**26**	*eP*	**P**		**02 33 29.6**	**-0.1**	
WALA	**Waterton Lakes**	**71.74**	**0**	*eP*	**P**		**02 33 30.1**	**+0.1**	
SSPA	**Standing Stone**	**71.80**	**28**	*eP*	**P**		**02 33 30.2**	**-0.2**	
**ERP

SYO Syowa Base 86.30 171 ↓↓ *e*PcP PcP 02 34 47.8 -4.3
SCHQ Schefferville 87.50 25 LR LR 03 11 47.6
comp=Z,423nm,18.8s,MS4.9,baz=247,slow=34
SCHQ Schefferville 87.50 25 PFAKE 02 35 10.0 +15
SCHQ LR LR
comp=Z,581nm,19.0s,MS5.0
PMR Palmer 88.85 344 *e*P **P** **02 35 00.8 -0.8**
DAWY Dawson 88.99 349 *e*P **P** **02 35 02.4 +0.2**
STKA Stephens Creek 89.27 236 P **P** **02 35 03.7 -0.9**
comp=Z,14nm,1.1s,mb5.2,baz=113,slow=6.6,SNR=5.8
STKA LR LR 03 09 36.4
comp=Z,184nm,18.0s,MS4.5,baz=24,slow=32
STKA Stephens Creek 89.27 236 *e*P **P** **02 35 04.1 -0.5**
comp=Z,9.6nm,1.1s,mb5.0
MAW Mawson 89.63 179 LR LR 03 11 15.8
comp=Z,729nm,19.1s,MS5.1,baz=181,slow=33
SVW2 Sparrevohn 90.20 341 *e*P **P** **02 35 06.5 -1.5**
CTA Charters Tower 90.57 248 *e*P **P** **02 35 10.7 -0.1**
comp=Z,7.7nm,1.1s,mb5.0
CTAO Charters Tower 90.57 248 PFAKE 02 35 20.0 +9.2
CTAO LR LR
comp=Z,139nm,19.0s,MS4.4
MCK McKinley 90.63 345 *e*P **P** **02 35 09.4 -0.5**
MCK pmax pmax
comp=Z,57nm,1.5s,mb5.7
MCK McKinley 90.63 345 *e*P **P** **02 35 09.4 -0.5**
comp=Z,58nm,1.5s,mb5.7
KTH Kantishna Hill 90.95 344 *e*P **P** **02 35 11.1 -0.3**
comp=Z,158nm,1.4s,mb6.2
PMG Port Moresby 94.16 258 PFAKE 02 35 40.0 +12
PMG LR LR
comp=Z,217nm,20.0s,MS4.6
ASAR Alice Springs 99.15 240 P **P** **02 35 48.8 -1.2**
comp=Z,0.6nm,1.0s,mb4.1,baz=158,slow=6.0,SNR=3.9
WRAB Tennant Creek 100.63 243 PFAKE 02 36 10.0 +14
WRAB LR LR
comp=Z,260nm,20.0s,MS4.7
WRA Warramunga Arr 100.63 243 P Pdif 02 35 55.4 -0.6
comp=Z,0.2nm,0.5s,baz=109,slow=4.7,SNR=2.4
NWAO Narrogin (SRO) 105.79 223 PFAKE 02 40 40.0 +7.8
NWAO LR LR
comp=Z,345nm,22.0s,MS4.9
BILL Bilibino 107.27 337 PFAKE 02 40 40.0 +6.3
BILL LR LR
comp=Z,350nm,19.0s,MS4.9
DBIC Dimbokro 110.42 91 PFAKE 02 40 50.0 +8.8
DBIC LR LR
comp=Z,181nm,21.0s,MS4.6
MBWA Marble Bar 111.48 234 PFAKE 02 40 50.0 +6.9
MBWA LR LR
comp=Z,443nm,20.0s,MS5.0
ERM Erimo 114.13 307 PFAKE 02 41 00.0 +13
ERM LR LR
comp=Z,257nm,20.0s,MS4.8
MAJO Matsushiro 117.00 300 PFAKE 02 41 00.0 +6.9
MAJO LR LR
comp=Z,257nm,21.0s,MS4.8
LBTB Lobatse 118.40 138 PFAKE 02 41 10.0 +14
LBTB LR LR
comp=Z,121nm,19.0s,MS4.5
TORD Torodi Ar. Bea 118.73 87 PKP PKPdf 02 40 55.5 -1.6
comp=Z,1.8nm,1.0s,baz=317,slow=1.0,SNR=7.4
TORD PP PP 02 42 14.4 -0.9
comp=Z,3.3nm,1.2s,baz=249,slow=5.4,SNR=7.1
TORD Torodi Ar. Bea 118.73 87 PKP PKPdf 02 40 55.5 -1.6
TORD PP PP 02 42 14.4 -0.9
ESLA Sonseca Array 119.59 56 PFAKE 02 41 10.0 +12
ESLA LR LR
comp=Z,1μm,19.0s,MS5.6
TIXI Tiksi 120.04 341 ↑↑ *i*PKIKP PKPdf 02 40 56.2 -1.7
TIXI MLR MLR
comp=Z,100nm,16.0s,MS4.5
TIXI Tiksi 120.04 341 PFAKE 02 41 10.0 +12
TIXI LR LR
comp=Z,267nm,21.0s,MS4.9
KAPI Kappang 120.37 249 PFAKE 02 41 10.0 +10
KAPI LR LR
comp=Z,172nm,20.0s,MS4.7
HABR Khabarovsk 120.45 314 *e*P Pdif 02 37 23.4 -0.7
HABR *i* 02 40 58.8
HABR *e*PS PS 02 52 16.7 -0.4
HABR *e*SS SS 02 58 53.6 -1.7
HABR *e*SSS 03 03 22.3
HABR MLR MLR
comp=Z,117nm,19.0s,MS4.5
YAK Yakutsk 122.25 330 *e*PKIKP PKPdf 02 41 00.5 -1.9
YAK pmax pmax
comp=Z,15nm,1.0s
YAK Yakutsk 122.25 330 PFAKE 02 41 10.0 +7.6
YAK LR LR
comp=Z,215nm,21.0s,MS4.8
MDJ Mudanjiang 124.20 309 PKP PKPdf 02 41 05.5 -1.2
MDJ SKS SKSdf 02 48 18.3 -0.4
MDJ PP PP
comp=Z,114nm,5.4s
MDJ LR LR
comp=Z,102nm,28.4s,MS4.3
MDJ Mudanjiang 124.20 309 PFAKE 02 41 20.0 +13
MDJ LR LR
comp=Z,158nm,20.0s,MS4.7
TAM Tamanrasset 124.89 78 *e*PKIKP PKPdf 02 41 09.1 +0.4
KSRS Korea Array 125.28 300 PKP PKPdf 02 41 08.4 -0.6
comp=Z,3.0nm,0.8s,baz=114,slow=1.5,SNR=10
WLF Walferdange 126.77 44 PFAKE 02 41 20.0 +8.5
WLF LR LR
comp=Z,356nm,19.0s,MS5.1
LSZ Lusaka 127.10 132 PFAKE 02 41 20.0 +6.8
LSZ LR LR
comp=Z,190nm,19.0s,MS4.8
BNI Bardonecchia 127.59 50 PFAKE 02 41 20.0 +6.8
BNI LR LR
comp=Z,437nm,21.0s,MS5.1
ARCES ARCESS Array B 127.68 17 PKP PKPdf 02 41 09.3 -3.4
comp=Z,6.0nm,1.0s,baz=31,slow=11,SNR=3.0
HFS Hagfors 128.33 30 PKhKP 02 41 09.4
comp=Z,1.2nm,0.4s,baz=283,slow=8.7,SNR=37
HFS PP PP 02 43 18.8 +0.2
comp=Z,2.0nm,0.7s,baz=211,slow=2.6,SNR=3.6
BFO Black Forest 128.37 46 PFAKE 02 41 30.0 +15
BFO LR LR
comp=Z,311nm,19.0s,MS5.0
STU Stuttgart 128.87 45 *e*PKPdf PKPdf 02 41 15.7 +0.2
CLZ Clausthal 129.03 41 *e*PKPdf PKPdf 02 41 17.2 +1.5
TUE Stuetta 129.30 48 PFAKE 02 41 30.0 +14
TUE LR LR
comp=Z,611nm,19.0s,MS5.3
YHNB Yeheng 129.38 284 PFAKE 02 41 30.0 +13
YHNB LR LR
comp=Z,156nm,20.0s,MS4.7
GRA1 Grafenberg Arr 130.01 44 *e*PKPdf PKPdf 02 41 18.3 +0.7
GRA1 LR LR
comp=Z,200nm,18.6s,MS4.8
GRF Grafenberg Arr 130.01 44 *e*PKPdf PKPdf 02 41 18.3 +0.7
GRF *e*L 03 37 56.0
comp=Z,232nm,18.6s
VLC Villacollemand 130.31 51 PFAKE 02 41 30.0 +12
VLC LR LR
comp=Z,150nm,20.0s,MS4.7
HIA Hailar 130.42 316 *i* PKIKP PKPdf 02 41 16.9 -1.5
HIA Hailar 130.42 316 PFAKE 02 41 30.0 +12
HIA LR LR
comp=Z,222nm,19.0s,MS4.9
MANZ Manzenberg 130.51 43 *e*PKPdf PKPdf 02 41 19.7 +1.1
WERD Werda 130.53 42 *e*PKPdf PKPdf 02 41 19.8 +1.2
GUNZ Gunzen 130.56 43 *e*PKPdf PKPdf 02 41 19.6 +0.9
WERN Wernitzgruen 130.61 43 *e*PKPdf PKPdf 02 41 19.7 +0.9
TANN Tannenbergstha 130.63 43 *e*PKPdf PKPdf 02 41 19.5 +0.7
CLL Collm 130.75 41 *e*PKPdf PKPdf 02 41 19.0 0.0
CLL *e*SS SS 03 01 18.0 +14
CLL LmV 03 40 00.0
comp=Z,100nm,18.0s
BOD Bodaibo 131.04 328 *e*PKIKP PKPdf 02 41 17.0 -2.3
BOD pmax pmax
comp=Z,12nm,1.4s
WET Wettzell 131.18 44 *e*PKPdf PKPdf 02 41 20.1 +0.2
BRG Berggiesshubel 131.44 42 *e*PKIKP PKPdf 02 41 21.7 +1.4
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG Berggiesshubel 131.44 42 *e*P PKPdf 02 41 21.7 +1.4
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 131.63 44 ↑↑ *i*PKIKP PKPdf 02 41 20.9 +0.2
GERES GERESS Array B 131.78 44 PKP PKPdf 02 41 18.0 -3.0
comp=Z,0.4nm,0.7s,baz=222,slow=1.8,SNR=6.6
GERES PP PP 02 43 43.8 +2.4
comp=Z,3.3nm,1.3s,baz=302,slow=7.7,SNR=5.0

TRI Trieste 132.46 48 PFAKE 02 41 30.0 +7.6
TRI LR LR
comp=Z,253nm,22.0s,MS4.9
AQU L'Aquila 132.70 53 PFAKE 02 41 30.0 +7.0
AQU LR LR
comp=Z,299nm,21.0s,MS5.0
VRAC Vranov 133.50 43 PKP PKPdf 02 41 22.6 -1.6
comp=Z,0.8nm,0.5s,baz=283,slow=0.6,SNR=4.2
WDD Wield Dalam 134.07 62 PFAKE 02 41 40.0 +14
WDD LR LR
comp=Z,213nm,20.0s,MS4.9
BJI Beijing 134.40 304 PKP PKPdf 02 41 27.1 +0.9
BJI LR LR
comp=N,155nm,26.0s,MS4.8
BJI LR LR
comp=E,163nm,22.8s,MS4.8
BJI LR LR
comp=Z,76nm,27.4s,MS4.3
BJT Baijiatuan 134.41 304 PFAKE 02 41 40.0 +14
BJT LR LR
comp=Z,172nm,21.0s,MS4.8
CUC Castrocucco 134.79 56 PFAKE 02 41 40.0 +13
CUC LR LR
comp=Z,382nm,20.0s,MS5.1
CEL Celeste 135.03 58 PFAKE 02 41 40.0 +13
CEL LR LR
comp=Z,317nm,19.0s,MS5.1
PSZ Piszkesteto 136.00 44 PFAKE 02 41 40.0 +11
PSZ LR LR
comp=Z,196nm,21.0s,MS4.8
TIR Tirane 137.63 53 PFAKE 02 41 40.0 +7.8
TIR LR LR
comp=Z,81nm,19.0s,MS4.5
HHC Hu-ho-hao-te 137.76 306 *e*PKP PKPdf 02 41 31.0 -1.5
HHC PP PP 02 44 22.5 +2.8
HHC PKS 02 45 05.0
HHC SKS SKSdf 02 48 36.3 -7.0
HHC SKKS SKKSac 02 51 08.1 -6.1
HHC SS SS 03 02 26.1 -3.4
HHC PP PP
comp=Z,41nm,3.8s
HHC LR LR
comp=N,128nm,15.5s,MS5.0
HHC LR LR
comp=E,144nm,15.5s,MS5.0
HHC LR LR
comp=Z,136nm,17.8s,MS4.7
QIZ Qiongzhong 138.75 273 PFAKE 02 41 50.0 +15
QIZ LR LR
comp=Z,133nm,20.0s,MS4.7
ULN Ulaanbaatar 138.88 317 *i* PKIKP PKPdf 02 41 35.0 +0.7
ULN Ulaanbaatar 138.88 317 *e*PKPdf PKPdf 02 41 35.2 +0.9
ULN LR LR
comp=Z,249nm,20.0s,MS5.0
TLY Talaya 139.18 324 PFAKE 02 41 50.0 +15
TLY LR LR
comp=Z,195nm,20.0s,MS4.8
SONM Songino Array 139.31 318 PKP PKPdf 02 41 34.3 -0.7
comp=Z,5.5nm,1.1s,baz=134,slow=1.3,SNR=15
SONM PP PP 02 44 25.1 -3.7
comp=Z,1.6nm,1.2s,baz=64,slow=6.8,SNR=4.9
ZAK Zakamensk 140.03 323 *e*PKIKP PKPdf 02 41 30.5 -5.8
ZAK pmax pmax
comp=Z,8.0nm,1.4s
KIEV Kiev 140.43 36 PFAKE 02 41 50.0 +13
KIEV LR LR
comp=Z,97nm,21.0s,MS4.5
AKASG Malin Array Be 140.43 36 PKhKP 02 41 29.8
comp=Z,0.5nm,0.4s,baz=281,slow=3.1,SNR=5.0
AKASG PKP PKPdf 02 41 36.0 -1.0
comp=Z,2.2nm,0.7s,baz=279,slow=2.4,SNR=12
AKASG PP PP 02 44 34.9 -0.7
comp=Z,0.2nm,0.3s,baz=315,slow=6.5,SNR=4.3
AKASG Malin Array Be 140.43 36 PKIKP PKPdf 02 41 36.0 -1.0
AKASG 02 44 34.9
AKASG Malin Array Be 140.43 36 PKP PKPdf 02 41 36.0 -1.0
AKASG PP PP 02 44 34.9 -0.7
MOY Mondy 140.60 326 *e*PKIKP PKPdf 02 41 37.7 +0.4
MLR Muntele Rosu 140.74 45 PKhKP 02 41 30.0
comp=Z,3.6nm,1.0s,baz=320,slow=6.5,SNR=3.1
XAN Xi'an 140.76 296 PKP PKPdf 02 41 37.9 -0.3
XAN PP PP 02 44 41.8 +3.3
XAN PPP 02 47 47.9
XAN SKKS SKKSac 02 51 31.8 -0.4
XAN SS SS 03 03 06.6 +1.2
XAN LR LR
comp=E,48nm,22.1s
XAN LR LR
comp=Z,78nm,22.8s,MS4.4
OBN Obninsk 141.29 27 ↓↓ *i*PKIKP PKPdf 02 41 39.0 +0.6
OBN *e* 02 41 47.4
OBN *e* 02 44 37.1
OBN pmax pmax
comp=Z,72nm,1.7s
OBN MLR MLR
comp=Z,200nm,15.0s,MS5.0
OBN Obninsk 141.29 27 PFAKE 02 41 50.0 +12
OBN LR LR
comp=Z,566nm,22.0s,MS5.3
PSI Prapat 142.10 243 PKhKP 02 41 34.5
comp=Z,3.6nm,0.8s,baz=167,slow=17,SNR=4.8
GYA Guiyang 142.78 284 PKP PKPdf 02 41 41.3 -0.7
GYA PKS 02 45 15.8
GYA PPP 02 48 02.4
GYA SKS SKSdf 02 48 46.8 -5.3
GYA SKKS SKKSac 02 51 37.8 -6.5
GYA PP PP
comp=Z,210nm,6.3s
GYA LR LR
comp=N,390nm,20.1s,MS5.2
GYA LR LR
comp=E,310nm,22.9s,MS5.2
GYA LR LR
comp=Z,490nm,20.0s,MS5.3
LZH Lanzhou 144.61 300 ↑↑ PKP PKPdf 02 41 43.5 -1.4
LZH PP PP 02 45 04.3 +2.6
LZH SKS SKSdf 02 48 47.6 -6.9
LZH SKKS SKKSac 02 51 49.0 -5.3
LZH *e*SS SS 03 03 46.3 -3.4
LZH PP PP
comp=Z,193nm,5.6s
LZH LR LR
comp=N,275nm,18.2s
LZH LR LR
comp=Z,407nm,20.1s,MS5.2
VSR Storozhevoye 145.13 29 *e*PKIKP PKPdf 02 41 43.6 -1.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.0s
CD2 Chengdu 145.34 291 PKP PKPdf 02 41 46.3 -0.1
CD2 PP PP 02 45 10.4 +4.1
CD2 PKS 02 45 21.0
CD2 SKS SKSdf 02 48 54.5 -1.3
CD2 SKKS SKKSac 02 51 59.4 +0.7
CD2 SS SS 03 04 00.4 +1.9
CD2 PP PP
comp=Z,110nm,5.7s
CD2 LR LR
comp=N,330nm,8.5s
CD2 LR LR
comp=Z,100nm,10.2s,MS4.9
VORD Divnogorie 145.36 30 *e*PKIKP PKPdf 02 41 44.9 -0.8
VORD pmax pmax
comp=Z,50nm,1.1s
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,50nm,0.6s
NVS Novosibirsk 145.63 342 *e*PKP2 PKPdf 02 41 43.1 -3.0
NVS pmax pmax
comp=N,35nm,1.8s
NVS pmax pmax
comp=Z,200nm,1.8s
NVS pmax pmax
comp=E,77nm,1.5s
ZAA0 Zalesovo Array 145.92 340 *e*PKPbc PKPbc 02 41 47.1 -0.1
ZALV Zalesovo Beam 145.92 340 PKPbc PKPbc 02 41 45.7 -1.6
comp=E,25nm,1.0s,baz=38,slow=2.6,SNR=62
SVE Sverdlovsk 146.02 5 ↓↓ *i*PKP2 PKPab 02 41 46.3 -1.7
SVE *e*PPP 02 48 48.6
SVE pmax pmax
comp=Z,108nm,1.8s
SVE MLR MLR
comp=Z,638nm,25.0s,MS5.3
SIM Simferopol' 146.18 42 *de*PKIKP PKPdf 02 41 46.0 -1.3
SIM pmax pmax
comp=Z,24nm,1.1s
ARU Arti 146.21 7 *i* PKP2 PKPab 02 41 47.2 -1.5
ARU MLR MLR
comp=Z,365nm,22.0s,MS5.1
ARU Arti 146.21 7 *e*PKPbc PKPbc 02 41 47.0 -1.0
ARU LR LR
comp=Z,422nm,19.0s,MS5.2
KMI Kunming 146.22 281 PKP PKPdf 02 41 46.8 -1.2
KMI XPKP 02 41 51.3
KMI PP PP 02 45 13.4 +1.7
KMI PPP 02 48 29.1
KMI SS SS 03 04 09.3 +0.4
KMI SSS 03 09 39.1
KMI LR LR
comp=Z,45nm,26.8s,MS4.1
VRHR Novokhopersk 146.30 28 *e*PKP2 PKPab 02 41 48.2 -1.1
VRHR pmax pmax
comp=Z,10.0nm,0.4s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.4s
ISP Isparta 146.44 56 *e*PKP2 PKPab 02 41 49.9 -0.4
ISP MLR MLR
comp=Z,180nm,19.0s,MS4.9
GTA Gaotai 146.83 308 PKP PKPdf 02 41 49.8 +1.2
GTA APKP 02 41 54.0
GTA XPKP 02 41 56.3
GTA PP PP 02 45 18.5 +3.9
GTA SKS SKSdf 02 48 54.5 -3.1
GTA SKKS SKKSac 02 52 08.5 +1.8
GTA PP PP
comp=Z,196nm,7.4s
GTA LR LR
comp=N,189nm,20.2s,MS5.1
GTA LR LR
comp=E,234nm,16.6s,MS5.1
GTA LR LR
comp=Z,184nm,17.2s,MS4.9
BR131 Keskin Array S 148.15 51 *e*PKPbc PKPbc 02 41 54.0 0.0
BRTR Keskin Array B 148.15 51 PKPbc PKPbc 02 41 52.8 -1.2
comp=Z,12nm,1.1s,baz=222,slow=1.7,SNR=32
CHRT Chiangrai 148.20 271 ↑↑ P PKPbc 02 41 54.5 -0.3
comp=Z,145nm,1.2s
ANN Anapa 148.26 40 *i* PKP2 PKPbc 02 41 53.9 -0.3
ANN pmax pmax
comp=Z,214nm,6.1s
CMAR Chiang Mai Arr 148.66 268 PKP PKPdf 02 41 51.9 -0.3
comp=Z,16nm,0.8s,baz=98,slow=1.1,SNR=26
CMAR PKPbc PKPbc 02 41 56.4 +0.4
comp=Z,16nm,0.8s,baz=85,slow=1.0,SNR=72
CHG Chiang Mai 148.74 269 ↓↓ P PKPbc 02 41 55.4 -0.8
comp=Z,37nm,1.1s
CHTO Chiang Mai 148.74 269 *e*PKP2 PKPbc 02 41 56.2 0.0
CHTO MLR MLR
comp=Z,104nm,20.0s,MS4.6
CSS Prodhromos 149.39 60 *e*PKPbc PKPbc 02 41 57.4 +0.1
CSS LR LR
comp=Z,122nm,20.0s,MS4.7
BRVK Borovoye 149.80 355 *e*PKP2 PKPbc 02 41 57.4 -0.4
BRVK MLR MLR
comp=Z,332nm,22.0s,MS5.1
BVAR Borovoye Array 149.83 354 PKP PKPdf 02 41 52.6 -0.5
comp=Z,14nm,0.6s,baz=334,slow=1.1,SNR=52
BVAR PKPbc PKPbc 02 41 56.2 -1.6
comp=Z,14nm,0.6s,baz=337,slow=1.1,SNR=58
KURK Kurchatov 150.58 343 PKP PKPdf 02 41 52.7 -1.6
comp=Z,2.6nm,0.3s,baz=14,slow=1.4,SNR=31
KURK PKPbc PKPbc 02 41 58.7 -1.0
comp=Z,47nm,1.1s,baz=21,slow=2.2,SNR=61
KURK Kurchatov 150.58 343 ↑↑ *i*PKIKP PKPdf 02 41 53.4 -0.9
KURK Kurchatov 150.58 343 PKP PKPdf 02 41 52.7 -1.6
KURK *e*PKPbc PKPbc 02 41 58.7 -1.1
KURK LR LR
comp=Z,310nm,19.0s,MS5.1
MSEY Mahe Island 150.71 159 PFAKE 02 42 10.0 +14
MSEY LR LR
comp=Z,163nm,19.0s,MS4.8
EIL Elat 151.68 70 PKPbc PKPbc 02 42 02.1 -0.9
comp=Z,5.9nm,0.8s,baz=71,slow=3.5,SNR=4.2
KIV Kislovodsk 151.78 37 ↑↑ *i*PKIKP PKPbc 02 42 02.0 -0.8
KIV *e* 02 45 39.4
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 151.78 37 PFAKE 02 42 10.0 +14
KIV LR LR
comp=Z,169nm,18.6s,MS4.9
AKTK Aktyubinsk 151.97 11 PKP PKPdf 02 41 56.1 -0.3
AKTK PKPbc PKPbc 02 42 01.4 -1.6
AKTO Aktyubinsk 151.97 11 PKP PKPdf 02 41 56.1 -0.3
comp=Z,5.3nm,1.0s,baz=40,slow=3.5,SNR=5.8
AKTO PKPbc PKPbc 02 42 01.4 -1.6
comp=Z,13nm,1.0s,baz=314,slow=2.2,SNR=20
MALT Malatya 152.13 51 PFAKE 02 42 10.0 +13
MALT LR LR
comp=Z,144nm,21.0s,MS4.8
WMQ Urumqi 152.47 324 PKP PKPdf 02 41 57.1 -0.3
WMQ PKP2 PKPab 02 42 15.8 +1.3
WMQ PKS 02 45 30.3
WMQ PP PP 02 45 48.8 +2.2
WMQ SKS SKSdf 02 49 02.1 -2.7
WMQ PPP 02 49 18.4
WMQ SKKS SKKSac 02 52 36.5 -1.0
WMQ SS SS 03 05 16.3 0.0
WMQ LR LR
comp=N,111nm,44.0s,MS4.5
WMQ LR LR
comp=E,117nm,42.0s,MS4.5
WMQ LR LR
comp=Z,157nm,23.0s
MK31 Makanchi Array 152.78 335 *e*PKIKP PKPbc 02 42 03.3 -1.6
MKAR Makanchi Array 152.78 335 PKP PKPdf 02 41 57.4 -0.4
comp=Z,6.5nm,1.1s,baz=17,slow=1.6,SNR=27
MKAR PKPbc PKPbc 02 42 02.7 -2.2
comp=Z,8.4nm,0.6s,baz=33,slow=2.0,SNR=82
MKAR Makanchi Array 152.78 335 PKP PKPdf 02 41 57.4 -0.4
MKAR PKPbc PKPbc 02 42 02.7 -2.2
LSA Lhasa 156.31 292 *e*PKIKP PKPdf 02 42 05.0 +1.8
LSA MLR MLR
comp=Z,142nm,20.0s,MS4.8
TKM2 Tokmak 2 158.52 340 *e*PKIKP PKPdf 02 42 06.1 +0.5
TKM2 *e* 02 42 39.1
TKM2 MLR MLR
comp=Z,306nm,20.0s,MS5.1
FRU Bishkek 158.90 342 *e*PKP2 PKPab 02 42 41.0 -1.0
FRU pmax pmax
comp=Z,97nm,2.2s
AAK Ala-Archa 159.12 342 *e*PKIKP PKPdf 02 42 07.3 +1.0
AAK MLR MLR
comp=Z,246nm,20.0s,MS5.0
EKS2 Erkin-Say 159.29 343 *e*PKPdf PKPdf 02 42 07.2 +0.7
EKS2 *e*PKPab PKPab 02 42 43.5 -0.2
EKS2 LR LR
comp=Z,331nm,20.0s,MS5.2
UCH Uchtor 159.49 341 PFAKE 02 42 20.0 +13
UCH LR LR
comp=Z,149nm,20.0s,MS4.8
AML Almayashu 159.81 343 *e*PKPdf PKPdf 02 42 08.5 +1.4
AML LR LR
comp=Z,262nm,20.0s,MS5.1
KBL Kabul 168.16 347 *e*PKIKP PKPdf 02 42 12.4 -2.6

CSEM ***22*** *02:51:34.6±0.1,3855N×44.19E,h2km,MD2.8,Error ellipse: s-maj=2.4km s-min=1.4km az=95.0*
ISK ***22*** *02:51:34.6,3854N×44.19E,h5km,MD2.8*
ISCJB ***22*** *02:51:35.5±1.4,3853N±005×4424E±009,h10km,Error ellipse: s-maj=10.7km s-min=7.0km az=18.2*
ISC 22 02:51:34.1±2.0,3851N±006×443E±01,h1km±10km,n10,
σ0s87/14,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.71**	**333**	*e*PG	**Pg**	**02 51 48.0**	**+0.2**
CLDR				*e*SG	**Sg**	**02 51 58.0**	**+0.9**
TVAN	**Van**	**0.73**	**272**	*i* P	**Pg**	**02 51 48.1**	**0.0**
TVAN	**Van**	**0.73**	**272**	*i* P	**Pg**	**02 51 48.1**	**0.0**
TVAN				*i* S	**Sg**	**02 51 58.8**	**+1.2**
VANT	**Van**	**0.75**	**265**	*e*PG	**Pn**	**02 51 50.1**	**-1.7**
VANB	**Van**	**0.75**	**277**	*e*PG	**Pg**	**02 51 47.8**	**-0.7**

VANB				*e*SG	**Sg**	**02 51 57.6**	**-0.6**
HAKT	**HAKKARI**	**1.07**	**208**	*i* P	**Pg**	**02 52 02.1**	**+7.5**
DYDN	**Diyadin**	**1.15**	**334**	*i* P	**Pg**	**02 51 55.3**	**-0.9**
DYDN	**Diyadin**	**1.15**	**334**	*i* P	**Pg**	**02 51 55.3**	**-0.9**
DYDN				*i* S	**Sn**	**02 52 13.8**	**+0.1**
CUKT	**Cukurca**	**1.39**	**205**	*e*PN	**Pn**	**02 52 01.9**	**+1.4**
AGRB	**Hanur-Agry**	**1.50**	**316**	*e*PN	**Pn**	**02 52 02.1**	**+0.1**

IDC 22 03:10:57.8±5.3, 116S×14902E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=192.7km s-min=31.8km az=100.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.55**	**217**	P	P	03 16 10.3	0.0
	1.5nm,0.4s,baz=40,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.75**	**212**	P	P	03 16 39.5	+0.2
	1.3nm,0.5s,baz=40,slow=7.2,SNR=15						
MKAR	**Makanchi Array**	**75.12**	**319**	P	P	03 22 43.1	+1.3
	0.8nm,1.1s,baz=110,slow=7.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**145.53**	**292**	PKPbc	PKPbc	03 30 36.9	-2.3
	0.6nm,1.0s,baz=69,slow=2.7,SNR=3.4						

*ISCJB **22** 03:29:28.1±0.6, 3023N×005×1390E±02, h446km±7km, mb3.2/7, Error ellipse: s-maj=23.3km s-min=6.3km az=167.2*

*IDC **22** 03:29:28.4±0.9, 3019N×138 60E, h430km±11km, mb3.0/7, mb1 3.2/10, mb1mx3.0/24, mbtmp3.0/10, Error ellipse: s-maj=31.5km s-min=12.5km az=86.0*

*NEIC **22** 03:29:28.8, 3034N×139 41E, h466km, MG3.7(JMA), After JMA.*

ISC 22 03:29:29.4±0.6, 3024N±005×1391E±02, h438km±7km, n23, σ1♀13/37, mb3.2/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.93**	**12**	P	**P**	**03 30 36.6**	**+1.8**
JHJ2				*e*S	**S**	**03 31 27.9**	**-0.2**
JHJ	**Hachijo jima 2**	**2.93**	**12**	P	**P**	**03 30 36.2**	**+1.3**
	19nm,0.3s,baz=64,slow=23,SNR=7.5						
JHJ				S	**S**	**03 31 28.6**	**+0.5**
	13nm,0.3s,baz=243,slow=19,SNR=3.1						
CBIJ	**Chichi jima**	**4.16**	**138**	P	**P**	**03 30 45.0**	**-0.3**
	7.3nm,0.3s,baz=308,slow=22,SNR=5.5						
CBIJ				S	**S**	**03 31 44.3**	**-2.6**
	40nm,0.3s,baz=285,slow=22,SNR=18						
CBIJ	**Chichi jima**	**4.16**	**138**	P	**P**	**03 30 45.4**	**+0.1**
CBIJ				*e*S	**S**	**03 31 45.4**	**-1.5**
JHHJ	**Haha-jima-NKT**	**4.52**	**142**	P	**P**	**03 30 49.0**	**+0.4**
JHHJ				S	**S**	**03 31 53.2**	**+0.1**
BSO1	**Boso 1**	**4.69**	**20**	P	**P**	**03 30 50.7**	**+0.7**
BSO1				S	**S**	**03 31 55.6**	**-0.1**
BSO3	**Boso 3**	**4.71**	**15**	P	**P**	**03 30 53.0**	**+2.8**
BSO3				*e*S	**S**	**03 31 55.0**	**-1.1**
BSO4	**Boso 4**	**4.85**	**12**	P	**P**	**03 30 53.2**	**+1.6**
BSO4				S	**S**	**03 31 58.0**	**-0.7**
JOD2	**Odawara 2**	**5.01**	**0**	P	**P**	**03 30 53.2**	**+0.1**
JOD2				*e*S	**S**	**03 32 00.5**	**-0.9**
JNY	**Yasuok**	**5.20**	**349**	P	**P**	**03 30 56.3**	**+1.3**
JNY				*e*S	**S**	**03 32 05.0**	**+0.1**
JYT	**Yasato**	**6.04**	**9**	P	**P**	**03 31 03.0**	**-0.6**
JYT				*e*S	**S**	**03 32 16.2**	**-4.4**
JAG	**Ashikaga**	**6.17**	**3**	P	**P**	**03 31 04.0**	**-0.9**
JAG				S	**S**	**03 32 16.8**	**-6.3**
MJAR	**Matsushiro Arr**	**6.32**	**354**	P	**P**	**03 31 05.0**	**-1.5**
	0.9nm,0.3s,baz=172,slow=11,SNR=6.2						
MAJO	**Matsushiro**	**6.33**	**354**	*e*P	**P**	**03 31 06.4**	**-0.1**
JHO	**Hitachi**	**6.47**	**11**	P	**P**	**03 31 09.1**	**+1.0**
JHO				*e*S	**S**	**03 32 25.3**	**-3.5**
JFK	**Kawauchi**	**7.26**	**11**	P	**P**	**03 31 17.3**	**+0.8**
JFK				*e*S	**S**	**03 32 41.2**	**-3.1**
MKAR	**Makanchi Array**	**46.38**	**307**	P	**P**	**03 37 11.2**	**-3.4**
	0.3nm,0.6s,mb2.8,baz=94,slow=9.9,SNR=4.1						
WRA	**Warramunga Arr**	**50.10**	**186**	P	**P**	**03 37 41.4**	**-1.3**
	0.8nm,0.4s,mb3.4,baz=1.3,slow=7.7,SNR=16						
CTA	**Charters Tower**	**50.51**	**171**	P	**P**	**03 37 45.6**	**-0.2**
	0.8nm,0.4s,mb3.3,baz=340,slow=12,SNR=2.3						
ASAR	**Alice Springs**	**53.83**	**186**	P	**P**	**03 38 09.1**	**-0.6**
	0.5nm,0.5s,mb3.0,baz=14,slow=13,SNR=12						
ARCES	**ARCESS Array B**	**69.67**	**340**	P	**P**	**03 39 52.9**	**-0.3**
	3.3nm,1.0s,mb3.8,baz=55,slow=5.9,SNR=6.0						
YKA	**Yellowknife Ar**	**70.68**	**28**	P	**P**	**03 40 00.2**	**+1.0**
	0.3nm,0.8s,mb2.9,baz=296,slow=6.1,SNR=4.9						
PDAR	**Pinedale Array**	**83.87**	**44**	P	**P**	**03 41 13.3**	**+1.5**
	0.3nm,0.8s,mb3.0,baz=302,slow=5.2,SNR=2.2						

IDC 22 04:20:05.7±4.4, 2364S×11267W, h0km, mb3.8/3, mb1 4.2/3, mb1mx3.9/13, mbtmp3.8/3, MS3.6/5, Ms1 3.6/5, ms1mx3.1/16, Error ellipse: s-maj=405.8km s-min=79.2km az=100.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPT	**Papeete**	**35.00**	**273**	LR	LR	04 35 46.8	
	comp=Z,109nm,21.5s,baz=253,slow=27						
PLCA	**Paso Flores**	**39.10**	**126**	LR	LR	04 40 22.3	
	comp=Z,133nm,21.1s,baz=87,slow=31						
ROSC	**El Rosal**	**46.91**	**58**	LR	LR	04 43 31.1	
	comp=Z,31nm,20.6s,baz=21,slow=30						
CPUP	**Villa Florida**	**49.92**	**105**	LR	LR	04 46 46.5	
	comp=Z,72nm,20.0s,baz=72,slow=32						
BDFB	**Brasilia**	**60.99**	**95**	LR	LR	04 52 58.6	
	comp=Z,38nm,18.1s,baz=7.8,slow=32						
NVAR	**Mina Array Bea**	**61.96**	**355**	P	P	04 30 27.8	+0.4
	0.7nm,0.7s,baz=186,slow=8.1,SNR=5.8						
PDAR	**Pinedale Array**	**66.13**	**3**	P	P	04 30 54.4	-0.3
	0.4nm,0.7s,baz=188,slow=4.6,SNR=4.2						
YKA	**Yellowknife Ar**	**85.84**	**359**	P	P	04 32 47.5	+0.9
	0.8nm,1.1s,baz=178,slow=5.7,SNR=6.5						
ZALV	**Zalesovo Beam**	**146.99**	**341**	PKPbc	PKPbc	04 39 49.0	-0.9
	0.4nm,0.3s,baz=49,slow=4.3,SNR=3.0						
MKAR	**Makanchi Array**	**153.95**	**336**	PKPbc	PKPbc	04 40 06.8	-0.2
	0.5nm,0.7s,baz=15,slow=1.2,SNR=6.1						

*MOS **22** 04:50:38.3±2.2, 1692S×17424W, h33km, mb5.4/23, MS4.3/4, Error ellipse: s-maj=11.3km s-min=9.8km az=74.9*

*BJI **22** 04:50:41.6, 1720S×174.10W, h84km, mB5.2, mb5.0, Ms5.2, Msz4.8*

*ISCJB **22** 04:50:42.0±0.2, 1723S±005×174.09W±005, h85km, mb4.9/69, Error ellipse: s-maj=8.8km s-min=5.1km az=135.3*

*GCMT **22** 04:50:43.7±0.2, 1709S×17348W, h93km±2km, MW5.1/87, Moment Tensor Solution. s61,c95; s87,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.18; $M_{\theta\theta}$1.99±.18; $M_{\phi\phi}$-1.68±.17; $M_{r\theta}$-1.27±.11; $M_{r\phi}$3.02±.16; $M_{\theta\phi}$-5.04±.09; Best double couple: $M_0$6.29000×10^{16} NP1:$\phi_1$284.00000°, δ34.00000°, λ-3.00000°. NP2: $\phi_2$16.00000°, δ88.00000°, λ-124.00000°. Principal axes: T 6.2240, Plg34.0000°, Azm135.0000°; N 0.1360, Plg34.0000°, Azm17.0000°; P -6.3550, Plg37.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **22** 04:50:43.6±0.2, 1722S×17408W, mb5.0/40 Error ellipse: s-maj=12.0km s-min=6.1km az=137.0*

*IDC **22** 04:50:43.1±0.6, 1714S×17402W, h83km±4km, mb4.6/14, mb1 4.8/14, mb1mx4.7/16, mbtmp4.6/14, MS3.9/20, Ms1 3.9/20, ms1mx3.8/25, Error ellipse: s-maj=17.0km s-min=13.0km az=128.0*

*SZGRF **22** 04:50:47.1, 1649S×17348W, h93km, Tonga Islands*

*DJA **22** 04:50:56, 1780S×174.92W, h142km, Mw6.0/7*

ISC 22 04:50:43.7±0.2, 1725S±005×17408W±005, h87km, h87km±.8km: pP-P, n311, σ0.598/141, mb4.9/69, 21C-15D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.07**	**109**	P	**Pn**	**04 53 53.8**	**-5.3**
	11nm,0.3s,baz=265,slow=7.9,SNR=17						
RAR				S	**Sn**	**04 56 17.2**	**-17**
	1.4nm,0.3s,baz=75,slow=19,SNR=3.2						
RAR				LR	LR	04 57 02.2	
	comp=Z,554nm,21.9s,baz=273,slow=27						
RAR	**Rarotonga**	**14.07**	**109**	*e*Pn	**Pn**	**04 53 54.0**	**-5.2**
RAR				Sn	**Sn**	**04 56 23.3**	**-11**
DZM	**Mont Dzumac**	**18.96**	**252**	*e*P	**Pn**	**04 55 00.2**	**+0.6**
	49nm,0.8s						
PUZ	**Puketiti**	**21.81**	**196**	P	**P**	**04 55 28.5**	**-0.2**
URZ	**Urewera**	**22.31**	**199**	P	**P**	**04 55 33.3**	**-0.7**
	81nm,0.5s,mb5.3,baz=343,slow=2.8,SNR=53						
URZ				S	**S**	**04 59 31.6**	**-2.0**
	17nm,0.7s,baz=158,slow=19,SNR=6.0						
URZ	**Urewera**	**22.31**	**199**	P	**P**	**04 55 32.6**	**-1.4**
HIZ	**Hauiti**	**23.30**	**202**	P	**P**	**04 55 45.2**	**+1.4**
PPT	**Papeete**	**23.38**	**94**	*e*LQ		04 59 59.5	
	870nm,31.8s						
PPT				*e*LR	LR	05 01 03.7	
	2μm,30.2s,baz=266						
PPT	**Papeete**	**23.38**	**94**	LR	LR	05 03 00.3	
	comp=Z,156nm,22.0s,baz=265,slow=32						
TBI	**Tubuai**	**23.85**	**109**	*e*LQ		05 00 36.2	
	1μm,33.5s						
TBI				*e*LR	LR	05 01 27.4	
	2μm,31.5s,baz=291						
SNZO	**South Karori**	**25.85**	**200**	*e*P	**P**	**04 56 05.9**	**-1.1**
QRZ	**Quartz Range**	**26.18**	**203**	P	**P**	**04 56 09.8**	**-0.3**
HNR	**Honiara**	**26.42**	**284**	P	**P**	**04 56 14.3**	**+1.9**
	32nm,0.4s,mb5.1,baz=230,slow=4.3,SNR=3.6						
HNR				LR	LR	05 04 01.6	
	comp=Z,366nm,21.4s,baz=107,slow=30						
RPZ	**Rata Peaks**	**29.23**	**202**	P	**P**	**04 56 42.2**	**+5.0**
	49nm,0.5s,mb5.4,baz=127,slow=0.6,SNR=20						
JCZ	**Jackson Bay**	**30.41**	**205**	P	**P**	**04 56 46.3**	**-1.4**
EIDS	**Eidsvold**	**33.37**	**250**	*e*P	**P**	**04 57 13.4**	**-0.5**
	7.3nm,0.7s,mb4.7						
ARMA	**Armidale**	**33.85**	**241**	*e*P	**P**	**04 57 18.3**	**+0.3**
TAOE	**Nuku Hiva Isla**	**34.04**	**80**	*e*LR	LR	05 07 28.8	
	3μm,24.4s						
RKT	**Rikitea**	**37.08**	**106**	*e*LR	LR	05 07 31.7	
	1μm,30.8s,baz=292						
CNB	**Canberra Magne**	**37.12**	**234**	*e*P	**P**	**04 57 45.4**	**-0.5**
CTA	**Charters Tower**	**37.63**	**259**	LR	LR	05 11 11.4	
	comp=Z,165nm,19.9s,baz=53,slow=33						
CTA	**Charters Tower**	**37.63**	**259**	*e*P	**P**	**04 57 49.7**	**-0.7**
	19nm,0.7s,mb5.0						
CTAO	**Charters Tower**	**37.63**	**259**	*i*P	**P**	**04 57 49.7**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.1						
CTAO	**Charters Tower**	**37.63**	**259**	*i*P	**P**	**04 57 49.6**	**-0.8**
	comp=Z,26nm,0.8s,mb5.1						
PMG	**Port Moresby**	**38.46**	**277**	*e*P	**P**	**04 57 59.0**	**+1.6**
PMG				pmax	pmax		
	comp=Z,35nm,1.1s						
PMG	**Port Moresby**	**38.46**	**277**	*e*P	**P**	**04 57 59.0**	**+1.5**
	comp=Z,35nm,1.1s,mb5.1						
TOO	**Toolangi**	**40.81**	**232**	*e*P	**P**	**04 58 15.8**	**-0.9**
COEN	**Coen**	**41.24**	**268**	*e*P	**P**	**04 58 20.9**	**+0.4**
	comp=Z,21nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**42.57**	**241**	P	**P**	**04 58 31.3**	**+0.1**
	comp=Z,66nm,0.6s,mb5.5,baz=90,slow=9.6,SNR=100						
STKA				LR	LR	05 13 07.5	
	comp=Z,158nm,21.6s,baz=272,slow=32						
STKA	**Stephens Creek**	**42.57**	**241**	*e*P	**P**	**04 58 31.1**	**0.0**
	comp=Z,63nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**42.57**	**241**	*e*P	**P**	**04 58 31.0**	**-0.1**
	comp=Z,28nm,1.1s,mb4.9						
WB2	**Warramunga Arr**	**48.80**	**258**	*e*P	**P**	**04 59 19.1**	**-1.3**
WB2	**Warramunga Arr**	**48.80**	**258**	*e*P	**P**	**04 59 19.4**	**-1.0**
WB2				*e*PcP	PcP	05 00 45.1	+1.0
WRAB	**Tennant Creek**	**48.80**	**258**	P	**P**	**04 59 19.0**	**-1.4**
	comp=Z,322nm,0.6s,SNR=56						
WRAB	**Tennant Creek**	**48.80**	**258**	*e*P	**P**	**04 59 19.3**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.4						
WRAB	**Tennant Creek**	**48.80**	**258**	*e*P	**P**	**04 59 19.3**	**-1.1**
	comp=Z,36nm,0.7s,mb5.4						
WRA	**Warramunga Arr**	**48.81**	**258**	P	**P**	**04 59 19.1**	**-1.4**
	comp=Z,16nm,0.3s,mb5.3,baz=97,slow=7.0,SNR=239						
WRA				pP	pP	04 59 41.5	-0.2
	comp=Z,3.2nm,0.7s,baz=94,slow=8.4,SNR=1.5						
WRA				PcP	PcP	05 00 44.3	+0.2
	comp=Z,8.2nm,0.9s,baz=95,slow=3.8,SNR=6.3						
WRA				LR	LR	05 18 36.3	
	comp=Z,217nm,21.7s,baz=80,slow=34						
WRA	**Warramunga Arr**	**48.81**	**258**	P	**P**	**04 59 19.1**	**-1.4**
WRA						05 00 44.3	
ASAR	**Alice Springs**	**48.94**	**253**	P	**P**	**04 59 20.9**	**-0.5**
	comp=Z,126nm,0.5s,baz=89,slow=8.3,SNR=1704						
ASAR				PcP	PcP	05 00 45.0	+0.4
	comp=Z,1.7nm,0.6s,baz=98,slow=4.6,SNR=4.0						
ASAR				S	**S**	**05 06 16.8**	**-2.5**
	comp=Z,1.1nm,0.7s,baz=80,slow=14,SNR=6.1						
GUMO	**Guam**	**50.81**	**305**	LR	LR	05 15 48.3	
	comp=Z,187nm,20.8s,baz=96,slow=30						
FORT	**Forrest**	**54.02**	**244**	*e*P	**P**	**04 59 58.2**	**-1.0**
	comp=Z,23nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**57.21**	**259**	*e*P	**P**	**05 00 21.7**	**-0.6**
	comp=Z,5.7nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**57.21**	**259**	*e*P	**P**	**05 00 21.8**	**-0.5**
	comp=Z,9.9nm,1.0s,mb4.8						
SBA	**Scott Base**	**61.36**	**185**	*e*P	**P**	**05 00 52.3**	**+2.4**
SBA				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
SBA	**Scott Base**	**61.36**	**185**	*e*P	**P**	**05 00 52.3**	**+2.4**
	comp=Z,37nm,1.3s,mb5.2						
VNDA	**Vanda**	**61.48**	**186**	P	**P**	**05 00 52.5**	**+1.8**
	comp=Z,4.9nm,0.6s,mb4.7,baz=2.2,slow=5.7,SNR=19						
VNDA				LR	LR	05 20 07.1	
	comp=Z,92nm,22.0s,baz=16,slow=29						
MBWA	**Marble Bar**	**62.24**	**255**	*e*P	**P**	**05 00 56.0**	**-0.8**
	comp=Z,46nm,1.3s,mb5.3						
KLBR	**Kellerberrin**	**62.81**	**243**	*e*P	**P**	**05 00 59.7**	**-0.7**
	comp=Z,36nm,0.7s,mb5.4						
NWAO	**Narrogin (SRO)**	**63.16**	**241**	*e*P	**P**	**05 01 03.1**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,14nm,0.9s						
NWAO	**Narrogin (SRO)**	**63.16**	**241**	*e*P	**P**	**05 01 03.1**	**+0.4**
	comp=Z,14nm,0.9s,mb4.9						
MUN	**Mundaring**	**64.09**	**242**	*e*P	**P**	**05 01 08.8**	**-0.1**
MJAR	**Matsushiro Arr**	**69.94**	**321**	P	**P**	**05 01 44.2**	**-1.5**
	comp=Z,6.2nm,0.8s,mb4.5,baz=159,slow=5.8,SNR=12						
MJAR				LR	LR	05 26 59.7	
	comp=Z,86nm,20.1s,baz=170,slow=31						
PETK	**Petropavlovsk-**	**74.19**	**343**	P	**P**	**05 02 10.0**	**-0.7**
	comp=Z,20nm,0.8s,mb4.9,baz=126,slow=8.9,SNR=23						
PETK				LR	LR	05 32 36.7	
	comp=Z,45nm,19.8s,baz=314,slow=34						
ISA	**Isabella**	**74.42**	**44**	P	**P**	**05 02 12.4**	**0.0**
ISA				*e**PP	pP	05 02 34.5	-0.6
ISA				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.0						
ISA	**Isabella**	**74.42**	**44**	P	**P**	**05 02 12.4**	**-0.1**
	comp=Z,40nm,1.4s,mb5.0						
ISA				*e*pP	pP	05 02 34.5	-0.6
YSS	**Yuzh-Sakhalins**	**74.77**	**331**	*i*P	**P**	**05 02 14.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**74.77**	**331**	*e*P	**P**	**05 02 14.6**	**+0.5**
	comp=Z,45nm,1.2s,mb5.1						
WDC	**Whiskeytown Da**	**74.83**	**38**	*e*pP	pP	05 02 38.4	+1.1
MTUM	**Tungsten Hills**	**75.34**	**43**	*e*P	**P**	**05 02 18.1**	**+0.4**
MTUM				*e*pP	pP	05 02 41.2	+0.8
GSC	**Goldstone**	**75.34**	**45**	*e*P	**P**	**05 02 17.0**	**-0.8**
GSC				*e**PP	pP	05 02 40.2	-0.3
GSC				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
GSC	**Goldstone**	**75.34**	**45**	*e*P	**P**	**05 02 17.0**	**-0.8**
	comp=Z,23nm,1.3s,mb4.8						
GSC				*e*pP	pP	05 02 40.2	-0.3
WAKR	**Walker**	**75.45**	**41**	*e*P	**P**	**05 02 18.3**	**0.0**
WAKR				*e*pP	pP	05 02 41.9	+0.8
YBH	**Yreka Blue Hor**	**75.46**	**37**	*e*P	**P**	**05 02 18.3**	**0.0**
YBH				*e**PP	pP	05 02 40.5	-0.5
YBH				pmax	pmax		
	comp=Z,25nm,1.2s						
YBH	**Yreka Blue Hor**	**75.46**	**37**	*e*P	**P**	**05 02 18.3**	**+0.1**
	comp=Z,25nm,1.2s,mb4.8						
YBH				*e*pP	pP	05 02 40.5	-0.5
HUMO	**Hull Mountain**	**75.88**	**36**	*e*P	**P**	**05 02 21.4**	**+0.8**
	comp=Z,30nm,1.4s,mb4.8						
HUMO				*e*pP	pP	05 02 43.6	+0.3
NVAR	**Mina Array Bea**	**76.13**	**42**	P	**P**	**05 02 21.5**	**-0.7**
	comp=Z,5.6nm,0.9s,mb4.3,baz=226,slow=8.3,SNR=18						
NVAR				pP	pP	05 02 43.2	-1.7
	comp=Z,13nm,0.9s,baz=229,slow=10,SNR=11						
PAHR	**Pah Rah Range**	**76.20**	**40**	*e*P	**P**	**05 02 22.9**	**+0.3**
	comp=Z,23nm,1.2s,mb4.8						
PAHR				*e*pP	pP	05 02 45.1	-0.1
TPH	**Tonopah**	**76.62**	**43**	*e*P	**P**	**05 02 24.2**	**-0.8**
TPH				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.0						
TPH				*e*pP	pP	05 02 47.4	-0.3
MOD	**Modoc**	**76.97**	**38**	*e*pP	pP	05 02 48.8	-0.8
KSRS	**Korea Array**	**77.03**	**316**	P	**P**	**05 02 28.4**	**+1.1**
	comp=Z,12nm,1.0s,mb4.6,baz=131,slow=6.2,SNR=24						
KSRS				LR	LR	05 34 48.0	
	comp=Z,49nm,18.4s,baz=288,slow=34						
SHPR	**Sheep Range**	**77.12**	**45**	*e*P	**P**	**05 02 28.2**	**+0.5**
SHPR				*e*pP	pP	05 02 51.3	+0.7
TUC	**Tucson**	**78.06**	**51**	*e*P	**P**	**05 02 33.4**	**+0.3**
TUC				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.8						
TUC	**Tucson**	**78.06**	**51**	*e*P	**P**	**05 02 33.4**	**+0.3**
	comp=Z,29nm,1.4s,mb4.8						
TUC				*e*pP	pP	05 02 55.2	-0.7
WVOR	**Wild Horse Val**	**78.28**	**39**	*e*P	**P**	**05 02 33.6**	**-0.5**
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
WVOR	**Wild Horse Val**	**78.28**	**39**	*e*P	**P**	**05 02 33.5**	**-0.5**
	comp=Z,11nm,1.1s,mb4.5						
WVOR				*e*pP	pP	05 02 56.3	-0.7
WUAZ	**Wupatki**	**79.22**	**48**	*e*P	**P**	**05 02 40.6**	**+1.1**
	comp=Z,9.3nm,1.2s,mb4.5						
WUAZ				*e*pP	pP	05 03 01.9	-0.4
ELK	**Elko**	**79.39**	**41**	*e*P	**P**	**05 02 39.9**	**-0.3**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ELK	**Elko**	**79.39**	**41**	*e*P	**P**	**05 02 39.9**	**-0.3**
	comp=Z,4.0nm,1.0s,mb4.2						
ELK				*e*pP	pP	05 03 02.1	-1.1
HABR	**Khabarovsk**	**79.55**	**328**	*e*P	**P**	**05 02 39.1**	**-1.8**
HABR				*e*		05 05 38.5	
HABR				*e*PPP		05 07 27.6	
HABR				*e*S	S	05 12 41.1	+5.6
HABR				*e*		05 13 02.3	
HABR				*e*SS	SS	05 17 49.9	+4.1
HABR				MLR	MLR		
	comp=Z,70nm,16.0s						
HABR				MLR	MLR		
	comp=Z,56nm,15.0s						
MDJ	**Mudanjiang**	**80.09**	**323**	P	**P**	**05 02 44.6**	**+0.7**
MDJ				PCP	PcP	05 02 51.5	+0.5
MDJ				PP	PP	05 05 46.5	-0.9
MDJ				S	S	05 12 46.1	+4.7
MDJ				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,109nm,5.9s						
MDJ				LR	LR		
	comp=N,95nm,37.8s						
MDJ				LR	LR		
	comp=E,114nm,38.9s						
MDJ				LR	LR		
	comp=Z,204nm,36.2s						
HAWA	**Hanford**	**80.16**	**35**	*e*P	**P**	**05 02 47.0**	**+2.8**
	comp=Z,22nm,1.4s,mb4.8						
HAWA				*e*pP	pP	05 03 07.6	+0.4
MSU	**Marysvale**	**80.19**	**45**	*e*P	**P**	**05 02 45.2**	**+0.6**
MSU				*e*pP	pP	05 03 07.4	-0.2
ETW	**Entiat**	**80.48**	**34**	*e*P	**P**	**05 02 46.7**	**+0.8**
BMO	**Blue Mountains**	**80.49**	**37**	*e*P	**P**	**05 02 45.2**	**-0.8**
BMO				pmax	pmax		
	comp=Z,48nm,2.2s,mb4.9						
BMO	**Blue Mountains**	**80.49**	**37**	*e*P	**P**	**05 02 45.2**	**-0.8**
	comp=Z,48nm,2.2s,mb4.9						
BMO				*e*pP	pP	05 03 07.2	-1.8
NJ2	**Nanjing**	**80.76**	**308**	*e*P	**P**	**05 02 50.1**	**+2.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
PMR	**Palmer**	**81.05**	**12**	*e*P	**P**	**05 02 47.8**	**-0.9**
PMR				*e*		05 02 54.5	
PMR				pmax	pmax		
	comp=Z,43nm,1.8s,mb5.0						
PMR	**Palmer**	**81.05**	**12**	*e*P	**P**	**05 02 47.8**	**-0.8**
	comp=Z,43nm,1.8s,mb5.0						
PMR				*e*PcP	PcP	05 02 54.5	-0.3
TMUT	**Trail Mountain**	**81.24**	**44**	*e*P	**P**	**05 02 49.9**	**-0.4**
TMUT				*e*pP	pP	05 03 13.6	+0.4
MPU	**Maple Canyon**	**81.33**	**44**	*e*P	**P**	**05 02 49.9**	**-0.8**
	comp=Z,7.3nm,1.0s,mb4.5						
MPU				*e*pP	pP	05 03 15.4	+1.7
HLID	**Hailey**	**81.46**	**39**	*e*P	**P**	**05 02 50.8**	**-0.5**
	comp=Z,13nm,1.1s,mb4.7						
HLID				*e*pP	pP	05 03 13.5	-0.7
KLR	**Kul'dur**	**81.71**	**328**	*e*P	**P**	**05 02 49.0**	**-3.4**
CN2	**Changchun**	**82.09**	**320**	*e*P	**P**	**05 02 54.8**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
PV01	**Paradox Valley**	**82.46**	**46**	*e*P	**P**	**05 02 56.6**	**0.0**
	comp=Z,1μm,1.5s						
PV01				*e*pP	pP	05 03 18.8	-0.9
ANMO	**Albuquerque**	**82.48**	**50**	*i*P	**P**	**05 02 56.4**	**-0.4**
ANMO	**Albuquerque**	**82.48**	**50**	*e*P	**P**	**05 02 56.8**	**0.0**
ANMO				pmax	pmax		
	comp=Z,

comp=Z,82nm,33.2s
EDM Edmonton 87.39 32 *e*pP pP 05 03 42.6 -1.7
PSI Prapat 87.96 274 LR LR 05 39 44.8
comp=Z,48nm,19.9s,baz=183,slow=33
HIA Hailar 88.28 323 *e*P **P** **05 03 25.5 +0.2**
HIA pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 88.28 323 *e*P **P** **05 03 25.5 +0.3**
comp=Z,17nm,1.0s,mb5.0
GYA Guiyang 88.34 298⇓ *i*P **P** **05 03 27.6 +1.5**
GYA PP PP 05 06 58.8 +3.8
GYA PPP 05 08 57.6
GYA S S 05 14 09.4 +4.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,70nm,5.1s
GYA LR LR
comp=N,350nm,17.1s
GYA LR LR
comp=E,230nm,18.0s
GYA LR LR
comp=Z,420nm,17.4s
PLCA Paso Flores 88.75 132 P **P** **05 03 29.0 +1.1**
comp=Z,0.8nm,0.5s,mb4.0,baz=250,slow=3.9,SNR=5.2
PLCA LR LR 05 37 38.5
comp=Z,83nm,18.2s,baz=262,slow=32
PLCA Paso Flores 88.75 132 P **P** **05 03 29.0 +1.1**
PLCA LR LR 05 37 38.5
XAN Xi'an 89.18 306 P **P** **05 03 31.3 +1.4**
XAN PP PP 05 07 01.9 +0.2
XAN PPP 05 09 05.3
XAN AMB AMB
comp=Z,15nm,1.3s,mb4.9
XAN LR LR
comp=Z,161nm,33.1s
CLNS Chul'man 89.53 331 *e*P **P** **05 03 29.5 -1.5**
CLNS *e* 05 07 12.1
CLNS *e* 05 14 11.0
CLNS pmax pmax
comp=Z,25nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,12nm,0.9s
CLNS pmax pmax
comp=N,12nm,1.1s
CLNS pmax pmax
comp=N,3.0nm,0.8s
CLNS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
CLNS pmax pmax
comp=E,5.0nm,1.1s
HHC Hu-ho-hao-te 89.80 313 *e*P **P** **05 03 33.8 +1.1**
HHC PP PP 05 07 07.9 +1.5
HHC *e*S S 05 14 20.3 +2.7
HHC SS SS 05 20 21.8 +4.7
HHC AMB AMB
comp=Z,15nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,104nm,5.3s
HHC LR LR
comp=N,134nm,16.7s
HHC LR LR
comp=E,107nm,19.0s
HHC LR LR
comp=Z,105nm,17.8s
YAK Yakutsk 90.55 337*c* *i*P **P** **05 03 34.1 -1.5**
YAK pmax pmax
comp=Z,20nm,1.3s,mb5.1
SYO Syowa Base 90.67 192⇑ *e*P **P** **05 03 35.8 -0.4**
VNA3 Neumayer Olymp 91.08 175 *e*P **P** **05 03 38.8 +0.7**
VNA3 *e* 05 03 41.9
VNA3 *e* pP 05 04 02.7 +1.2
SNAA Sanae 91.10 177 *e*P **P** **05 03 38.6 +0.4**
SNAA *e* 05 03 41.8
SNAA *e* pP 05 04 02.5 +0.9
SNAA Sanae 91.10 177 *e*P **P** **05 03 38.5 +0.3**
KMI Kunming 91.24 296 P **P** **05 03 41.8 +2.1**
KMI PP PP 05 07 20.6 +2.4
KMI AMB AMB
comp=Z,19nm,0.9s,mb5.2
KMI LR LR
comp=N,146nm,24.2s
KMI LR LR
comp=E,163nm,22.9s
KMI LR LR
comp=Z,152nm,31.4s
VNA2 Neumayer--Watz 91.57 176 *e*P **P** **05 03 41.6 +1.2**
baz=194,slow=4.6
VNA2 *e* 05 03 44.4
VNA2 *e* pP 05 04 05.5 +1.8
VNA1 Neumayer--Stat 91.77 175 *e*P **P** **05 03 42.2 +0.9**
VNA1 *e* 05 03 45.2
VNA1 *e* pP 05 04 07.1 +2.4
YKA Yellowknife Ar 92.04 24 P **P** **05 03 40.9 -1.6**
comp=Z,0.6nm,0.8s,mb3.9,baz=236,slow=4.2,SNR=8.0
YKA pP pP 05 04 04.8 -1.1
comp=Z,1.0nm,1.0s,baz=231,slow=4.2,SNR=3.6
CD2 Chengdu 92.22 302 P **P** **05 03 45.0 +0.9**
CD2 PP PP 05 07 28.0 +2.2
CD2 S S 05 14 43.0 +3.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.3
CD2 AMB AMB
comp=Z,110nm,5.0s
CD2 LR LR
comp=N,290nm,4.3s
CD2 LR LR
comp=Z,100nm,6.0s
CMAR Chiang Mai Arr 92.58 288 P **P** **05 03 46.8 +0.7**
comp=Z,11nm,1.1s,mb5.1,baz=104,slow=3.1,SNR=33
CMAR LR LR 05 40 02.6
comp=Z,35nm,21.9s,baz=267,slow=32
CMAR Chiang Mai Arr 92.58 288⇑ *e*P **P** **05 03 47.7 +1.7**
CHTO Chiang Mai 92.68 289 *e*P **P** **05 03 47.9 +1.4**
CHTO pmax pmax
comp=Z,12nm,1.1s,mb5.1
CHTO Chiang Mai 92.68 289 *e*P **P** **05 03 47.9 +1.4**
comp=Z,12nm,1.1s,mb5.1
LZH Lanzhou 93.79 306⇓ P **P** **05 03 52.5 +1.2**
LZH PP PP 05 07 41.5 +3.5
LZH *e*S S 05 14 57.0 +3.3
LZH AMB AMB
comp=Z,17nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,83nm,8.9s
LZH LR LR
comp=N,278nm,17.2s
LZH LR LR
comp=Z,321nm,19.6s
CFAA Coronel Fontan 93.95 125 LR LR 05 39 32.6
comp=Z,28nm,20.1s,baz=286,slow=31
ULN Ulaanbaatar 95.38 318⇑ *e*P **P** **05 03 58.4 +0.2**
ULM Lac du Bonnet 95.77 39 LR LR 05 39 41.0
comp=Z,126nm,18.8s,baz=228,slow=31
SONM Songino Array 95.78 318 P **P** **05 03 59.8 -0.3**
comp=Z,1.1nm,0.9s,mb4.3,baz=84,slow=2.3,SNR=4.5
SONM PP PP 05 07 57.8 +4.7
comp=Z,1.9nm,1.2s,baz=124,slow=7.9,SNR=4.6
SONM LR LR 05 45 41.2
comp=Z,55nm,18.2s,baz=42,slow=34
SONM Songino Array 95.78 318 P **P** **05 03 59.8 -0.3**
SONM 05 07 57.8
TIXI Tiksi 96.60 344⇑ *e*P **P** **05 04 02.3 -0.9**
TIXI pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
GTA Gaotai 97.82 309 *e*P **P** **05 04 10.9 +1.4**
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.9
ZALV Zalesovo Beam 110.27 322 PKiKP PKiKP 05 09 04.2 -1.1
comp=Z,0.9nm,0.4s,baz=230,slow=1.2,SNR=4.1
ZALV PP PP 05 09 45.6 +4.4
comp=Z,0.5nm,0.3s,baz=90,slow=6.5,SNR=3.7
NVS Novosibirsk 111.21 323 *e*P Pdif 05 05 03.6 -5.3
MK31 Makanchi Array 111.65 314 *e*PKiKP PKiKP 05 09 07.1 -1.0
MKAR Makanchi Array 111.65 314 PKiKP PKiKP 05 09 07.2 -0.9
comp=Z,0.7nm,0.5s,baz=165,slow=0.7,SNR=12
MKAR PP PP 05 09 54.2 +2.9
comp=Z,0.6nm,0.9s,baz=96,slow=8.7,SNR=4.2
MKAR Makanchi Array 111.65 314 PKPdf PKiKP 05 09 07.2 -0.9
MKAR PP PP 05 09 54.2 +2.9
KURK Kurchatov 114.09 318 PKiKP PKiKP 05 09 11.8 -0.8
comp=Z,0.9nm,0.6s,baz=82,slow=1.8,SNR=3.9
KURK PP PP 05 10 09.9 +1.4
comp=Z,0.6nm,0.3s,baz=94,slow=5.4,SNR=5.8
KURK Kurchatov 114.09 318 PKPdf PKiKP 05 09 11.8 -0.8
KURK PP PP 05 10 09.9 +1.4
BVAR Borovoye Array 118.93 321 PKP PKPdf 05 09 21.1 -0.8
comp=Z,2.7nm,0.6s,baz=206,slow=0.7,SNR=14
ARU Arti 124.56 328 *i* PKiKP PKPdf 05 09 32.5 -0.1
ARU 05 11 16.1
ARU 05 16 35.0
ARU SS SS 05 28 10.0 +3.5
KEV Kevo 125.92 351 *e*PKiKP PKPdf 05 09 33.6 -1.3
ARCES ARCESS Array B 126.34 352 PKP PKPdf 05 09 34.6 -1.0
comp=Z,4.2nm,0.9s,baz=352,slow=3.9,SNR=7.6
AKTK Aktyubinsk 127.02 321 PKP PKPdf 05 09 37.3 -0.2
AKTO Aktyubinsk 127.02 321 PKP PKPdf 05 09 37.3 -0.2
comp=Z,0.5nm,0.5s,baz=3.2,slow=1.9,SNR=3.7
BOSA Boshof 130.72 203 PKP PKPdf 05 09 46.2 +0.9
comp=Z,2.2nm,0.7s,baz=315,slow=20,SNR=5.6
AKASG Malin Array Be 141.77 336 PKhKP 05 10 00.8
comp=Z,1.2nm,0.5s,baz=36,slow=3.0,SNR=4.6
LVV L'vov 144.38 340 *e*PKiKP PKPdf 05 10 07.9 -1.8
KWP Kalwaria 144.97 341 *e*PKP PKPdf 05 10 10.7 +0.1
KWP Kalwaria 144.97 341⇓ *i*P PKP PKPdf 05 10 10.0 -0.7
KWP Kalwaria 144.97 341 *e*PKP PKPdf 05 10 10.7 0.0
IBBN Ibbenburen 144.99 358 *e*PKPbc PKPdf 05 10 09.2 -1.4
OJC Ojcow 145.27 344 *e*PKP PKPdf 05 10 10.2 -1.0
CLZ Clausthal 145.31 355 *e*PKPbc PKPbc 05 10 10.4 -0.7
KSP Ksiaz 145.47 348 *e*PKP PKPdf 05 10 11.3 -0.2
KSP Ksiaz 145.47 348⇓ *e*PKP PKPdf 05 10 11.5 0.0
CLL Collm 145.56 352⇓ *i*PKP2 PKPab 05 10 11.0 -1.2
CLL pmax pmax
comp=Z,70nm,2.0s
CLL Collm 145.56 352 *e*PKPbc PKPbc 05 10 10.9 -1.0
CLL Collm 145.56 352⇓ *i*PKPdf PKPdf 05 10 11.0 -0.6
comp=Z,70nm,2.0s
STHS Stebnicka Huta 145.60 342 *e*PKP PKPdf 05 10 12.3 +0.5
RAC Raciborz 145.79 346 *e*PKiKP PKPdf 05 10 13.3 +1.2
BURAR Bucovina Array 145.82 337⇑ *i*P PKPdf 05 10 12.2 0.0
BURAR Bucovina Array 145.82 337⇑ P PKPdf 05 10 12.2 0.0
BRG Berggiesshubel 145.85 351 *e*PKiKP PKPdf 05 10 12.3 +0.1
BRG pmax pmax
comp=Z,25nm,1.8s
BRG Berggiesshubel 145.85 351 *e*PKPbc PKPbc 05 10 11.9 -0.9
BRG *ep*PKPbc pPKPbc 05 10 37.5 +0.7
BRG Berggiesshubel 145.85 351 *e*PKP PKPdf 05 10 12.3 +0.1
comp=Z,42nm,1.8s
UPC Upice 145.85 349 *e*PKP PKPdf 05 10 12.7 +0.5
NIE Niedzica 145.86 343 *e*PKP PKPdf 05 10 13.4 +1.2
DPC Dobruska-Polom 145.94 348 *e*PKP PKPdf 05 10 13.2 +0.9
DPC *ex* x 05 10 38.2
UZH Uzhgorod 145.97 340 *e*PKiKP PKPdf 05 10 12.0 -0.4
CRVS Cervenica-Dubn 145.99 342 *e*PKP PKPdf 05 10 12.7 +0.2
OKC Ostrava-Krasne 146.03 346 *e*PKP PKPdf 05 10 13.1 +0.6
OKC *ex* x 05 10 38.4
PVCC Panska Ves 146.09 350 *e*PKP PKPdf 05 10 13.2 +0.6
PVCC *ex* x 05 10 38.6
TLCR 146.19 330⇑ *i*P PKPdf 05 10 14.3 +1.4
TLCR 146.19 330⇑ P PKPdf 05 10 14.3 +1.4
UBBA Unterbreizbach 146.35 355 *e*PKPbc PKPbc 05 10 13.8 -0.5
MOX Moxa 146.38 353 *e*PKP PKPdf 05 10 13.9 +0.8
comp=Z,43nm,1.7s
MOX *e* 05 10 39.6
MOX Moxa 146.38 353 *e*PKiKP PKPdf 05 10 13.9 +0.8
MOX pmax pmax
comp=Z,43nm,1.7s
MOX Moxa 146.38 353 *e*PKPbc PKPbc 05 10 13.8 -0.6
MOX *ep*PKPbc pPKPbc 05 10 39.3 +0.8
TANN Tannenbergstha 146.50 352 *e*PKPbc PKPbc 05 10 14.6 -0.2
TANN *ep*PKPbc pPKPbc 05 10 39.9 +1.1
UCC Uccle 146.51 2 PKPbc PKPbc 05 10 14.6 -0.2
UCC APKP 05 10 38.7
PRU Pruhonice 146.61 350 *e*PKP PKPdf 05 10 14.7 +1.2
PRU *ex* x 05 10 39.2
NKC Novy Kostel 146.68 352 *e*PKP PKPdf 05 10 15.1 +1.5
NKC *ex* x 05 10 40.0
MEM Membach 146.72 360 PKPbc PKPbc 05 10 15.3 -0.2
SNF Seneffe 146.80 2 PKPbc PKPbc 05 10 15.4 -0.3
VRAC Vranov 146.87 347⇑ *i*P PKPbc 05 10 17.4 +1.5
VRAC Vranov 146.87 347⇑ P PKPbc 05 10 17.4 +1.5
BCLA Clavier 146.91 1 PKPbc PKPbc 05 10 15.0 -1.0
BCLA APKP 05 10 40.7
MANZ Manzenberg 146.97 353 *e*PKPbc PKPbc 05 10 15.8 -0.3
HARR Harsova 146.98 331⇑ *i*P PKPbc 05 10 16.9 +0.5
HARR Harsova 146.98 331 P PKPbc 05 10 16.8 +0.5
VYHS Vyhne 147.10 344 *e*PKP PKPdf 05 10 15.8 +1.5
VYHS *e*PP PP 05 13 56.6 +15
TREC Trest 147.11 348 *e*PKP PKPbc 05 10 17.2 +0.6
KOLL Kolacno 147.14 345 *e*PKP PKPbc 05 10 16.6 -0.1
BR131 Keskin Array S 147.14 319 *e*PKPbc PKPbc 05 10 17.3 +0.3
BRTR Keskin Array B 147.14 319 PKPbc PKPbc 05 10 16.9 0.0
comp=Z,17nm,0.9s,baz=129,slow=3.0,SNR=33
ROTZ Rotzenmuhle 147.17 352 *e*PKPbc PKPbc 05 10 16.5 -0.2
ROTZ *ep*PKPbc pPKPbc 05 10 41.6 +0.8
GIVF Givet 147.22 1 *e*PKP1 PKPbc 05 10 16.1 -0.7
DOU Dourbes 147.22 2 PKPbc PKPbc 05 10 16.8 -0.1
DOU APKP 05 10 41.9
BAIF Baives 147.24 2 *e*PKP1 PKPbc 05 10 16.4 -0.5
comp=Z,64nm,1.3s
PSZ Piszkesteto 147.34 342 PKiKP PKPbc 05 10 17.0 -0.2
GRF Grafenberg Arr 147.36 354 *e*PKPbc PKPbc 05 10 16.8 -0.4
GRF *ep*PKPbc pPKPbc 05 10 42.2 +0.9
ABH Alteburg 147.42 358 PKP PKPbc 05 10 17.2 -0.2
DRGR 147.43 338⇓ *i*P PKPbc 05 10 17.3 -0.2
DRGR 147.43 338 P PKPbc 05 10 17.6 0.0
SMOL Smolenice 147.43 346 *e*PKP PKPbc 05 10 19.1 +1.6
KHC Kasperske Hory 147.60 351 *e*PKHKP PKPdf 05 10 15.0 -0.2
KHC *e* 05 10 16.9
KHC Kasperske Hory 147.60 351 *e*PKP PKPdf 05 10 15.0 -0.2
KHC *ex* x 05 10 16.9
KHC *ex* x 05 10 42.2
RUP Ruppelstein 147.62 359 PKiKP PKPbc 05 10 17.9 0.0
TOD Tromm 147.64 356 PKiKP PKPbc 05 10 17.9 -0.1
WLF Walferdange 147.67 360 PKPbc PKPbc 05 10 18.7 +0.6
WLF APKPbc 05 10 42.1
WLF Walferdange 147.67 360 *e*PKPbc PKPbc 05 10 17.9 -0.2
WLF *ep*PKPbc pPKPbc 05 10 44.2 +2.0
WLF Walferdange 147.67 360 *e*PKPbc PKPbc 05 10 18.6 +0.5
VOIR 147.67 334⇑ P PKPbc 05 10 19.2 +1.0
VOIR 147.67 334 P PKPbc 05 10 19.0 +0.8
WET Wettzell 147.69 351 *e*PKPbc PKPbc 05 10 18.0 -0.2
ZST Bratislava 147.81 346 *e*PKP PKPbc 05 10 18.3 -0.2
GEC2 GERESS Array S 147.86 350 *e*PKPbc PKPbc 05 10 18.2 -0.4
GERES GERESS Array B 147.86 350 PKPbc PKPbc 05 10 18.4 -0.2
comp=Z,1.7nm,0.6s,baz=21,slow=2.5,SNR=19
GERES *ep*PKPbc pPKPbc 05 10 41.7 -1.0
comp=Z,1.9nm,0.7s,baz=29,slow=3.0,SNR=4.6
ROSF Rostrenen 148.10 12 *e*PKP1 PKPbc 05 10 17.9 -1.4
FLN La Foliniere 148.14 8 *e*PKP1 PKPbc 05 10 18.4 -1.0
comp=Z,20nm,0.6s
FLN *e*MLR MLR
comp=Z,77nm,17.8s
FLN La Foliniere 148.14 8 *e*PKP PKPbc 05 10 18.4 -1.0
FLN LR LR
comp=Z,80nm,17.8s
SGMF Saint Gilles 148.31 11 *e*PKP1 PKPbc 05 10 18.6 -1.2
LANF Langenberg 148.32 358 PKP PKPbc 05 10 19.7 -0.1
CONA Conrad Observa 148.34 347 *i* PKPbc PKPbc 05 10 20.2 +0.3
comp=Z,32nm,1.4s,SNR=12
LDF La Druitiere 148.35 8 *e*PKP1 PKPbc 05 10 18.8 -1.1
comp=Z,17nm,0.8s
STU Stuttgart 148.45 356 *e*PKPbc PKPbc 05 10 20.2 0.0
GRR Gorron 148.45 9 *e*PKP1 PKPbc 05 10 19.3 -0.9
comp=Z,31nm,0.8s
QUIF Quistinic 148.52 12 *e*PKP1 PKPbc 05 10 19.1 -1.3
GZR Gura Zlata 148.60 337⇓ *i*P PKPbc 05 10 20.2 -0.5
GZR Gura Zlata 148.60 337 P PKPbc 05 10 20.9 +0.2
MEZF Maizieres J'vi 148.82 1 *e*PKP1 PKPbc 05 10 20.7 -0.4
comp=Z,35nm,1.1s
BZS Buzias 148.83 338⇑ *i*P PKPbc 05 10 20.7 -0.6
BZS Buzias 148.83 338 P PKPbc 05 10 21.3 0.0
FUR Furstenfeldbru 148.86 353 *e*PKPbc PKPbc 05 10 20.8 -0.4
CDF Champ du Feu 148.90 358 *e*PKP1 PKPbc 05 10 20.8 -0.5
comp=Z,29nm,1.1s
BFO Black Forest 148.94 357 *e*PKPbc PKPbc 05 10 20.8 -0.6
RJOB Jochberg 149.08 351 *e*PKPbc PKPbc 05 10 21.2 -0.6
ECH Echery 149.10 358 PKP PKPbc 05 10 20.8 -1.0
THEF They Montfort 149.11 360 PKP PKPbc 05 10 21.5 -0.4
PKSM Moragy 149.25 343⇓ *i*P PKPbc 05 10 21.7 -0.6
PKSM Moragy 149.25 343 P PKPbc 05 10 22.1 -0.1
HAU Haudompre 149.33 359 *e*PKP1 PKPbc 05 10 21.8 -0.6
comp=Z,20nm,0.8s
HAU *e*MLR MLR
comp=Z,68nm,20.8s
HAU Haudompre 149.33 359 *e*PKP PKPbc 05 10 21.8 -0.6
HAU LR LR
comp=Z,70nm,20.8s
FELD Feldberg im Sc 149.41 357 PKP PKPbc 05 10 20.3 -2.3
MOF Molkenrain 149.47 358 PKP PKPbc 05 10 21.7 -1.1
HINF Hinteralfeld 149.51 359 *e*PKP1 PKPbc 05 10 22.0 -0.9
comp=Z,7.0nm,0.6s
RETA Reutte 149.59 354 *i* PKPbc PKPbc 05 10 22.8 -0.3
comp=Z,13nm,1.1s,SNR=7.0
KBA Koelnbreinsper 149.63 350⇑ *i*PKPbc PKPbc 05 10 22.7 -0.5
comp=Z,4.4nm,0.5s,SNR=7.5
WATA Walderalm 149.64 352⇑ *i*PKPbc PKPbc 05 10 22.6 -0.6
comp=Z,6.8nm,0.5s
MOTA Moosalm 149.69 353⇓ *i*PKPbc PKPbc 05 10 22.9 -0.4
comp=Z,12nm,0.8s,SNR=11
WTTA Wattenberg 149.70 352 *i* PKPbc PKPbc 05 10 23.3 0.0
comp=Z,25nm,0.9s,SNR=16
PERS Pernice 149.72 347 *i* PKPbc PKPbc 05 10 22.8 -0.6
CSS Prodhromos 149.87 311 *e*PKPbc PKPbc 05 10 25.0 +0.8
DAVA Damuels 149.87 355⇓ *i*PKPbc PKPbc 05 10 23.7 -0.1
comp=Z,20nm,0.8s
HYF Humbligny 149.94 4 *e*PKP1 PKPbc 05 10 23.6 -0.4
LOMF Lomont 149.97 359 PKP PKPbc 05 10 24.1 +0.1
LOR Lormes 150.02 3 *e*PKP1 PKPbc 05 10 23.6 -0.5
comp=Z,14nm,0.6s
LOR *e*MLR MLR
comp=Z,68nm,22.2s
LOR Lormes 150.02 3 *e*PKP PKPdf 05 10 23.6 +4.5
LOR LR LR
comp=Z,70nm,22.3s
FETA Feichten 150.05 353⇓ *i*PKPbc PKPbc 05 10 24.1 -0.1
comp=Z,18nm,1.2s,SNR=7.6
ABTA Abfaltersbach 150.09 351⇓ *i*PKPbc PKPbc 05 10 23.4 -0.9
comp=Z,32nm,1.3s,SNR=13
SSF Saint Saulge 150.21 3 *e*PKP1 PKPbc 05 10 24.1 -0.5
comp=Z,59nm,1.2s
ISP Isparta 150.23 318⇑ *i*P PKPbc 05 10 24.4 -0.6
ISP Isparta 150.23 318⇑ P PKPbc 05 10 24.4 -0.5
MFF Saint Martin d 150.30 8 *e*PKP1 PKPbc 05 10 24.0 -0.8
comp=Z,12nm,0.7s
LJU Ljubljana 150.41 348 *i* PKPbc PKPbc 05 10 24.8 -0.3
AVF Avril sur Loir 150.47 4 *e*PKP1 PKPbc 05 10 24.4 -0.8
comp=Z,17nm,0.9s
VOY Vojsko 150.54 349 *e*PKPbc PKPbc 05 10 24.8 -0.6
SMF Signal de Mont 150.64 3 *e*PKP1 PKPbc 05 10 24.7 -0.9
JAVS Javornik 150.65 348 *i* PKPdf PKPdf 05 10 18.9 -1.3
JAVS *i* PKPbc PKPbc 05 10 25.0 -0.6
JAVS *i* 05 10 50.8
BGF Bois d'Agland 150.67 4 *e*PKP1 PKPbc 05 10 25.1 -0.6
comp=Z,28nm,0.8s
CABF La Chapelle 150.72 360 *e*PKP1 PKPbc 05 10 25.9 +0.1
comp=Z,44nm,0.8s
TUE Stuetta 150.72 355 *e*PKPbc PKPbc 05 10 26.4 +0.6
BOJS Bojanci 150.77 346 *i* PKPdf PKPdf 05 10 20.7 +0.3
BOJS *i* PKPbc PKPbc 05 10 26.0 0.0
BOJS *i* PKPab PKPab 05 10 34.6 +1.4
BOJS *i* 05 10 51.2
TCF Toulx Ste Croi 150.88 5 *e*PKP1 PKPbc 05 10 25.4 -0.8
comp=Z,22nm,0.9s
SKDS Skadanscina 150.99 348 *i* PKPbc PKPbc 05 10 25.8 -0.7
AGO Saint Agoulin 151.19 4 PKP PKPbc 05 10 26.6 -0.3
PLDF La Plantade 151.30 3 PKP PKPbc 05 10 27.3 +0.1
PYM Petit Puy Mans 151.48 4 PKP PKPbc 05 10 27.5 -0.1
RJF Les Rejaudoux 151.79 7 *e*PKP1 PKPbc 05 10 27.4 -0.9
comp=Z,18nm,1.0s
RJF *e*MLR MLR
comp=Z,78nm,19.2s
LPL La Plagne 151.81 359 *e*PKP1 PKPbc 05 10 28.7 +0.3
comp=Z,8.2nm,0.7s
LPG La Plagne 151.83 359 *e*PKP1 PKPbc 05 10 28.9 +0.5
comp=Z,28nm,1.1s
LBL Lubilhac 152.01 4 PKP PKPbc 05 10 28.0 -0.9
LFF La Frestale 152.05 8 *e*PKP1 PKPbc 05 10 28.1 -0.9
comp=Z,14nm,0.7s
ORIF Oris-en-Rattie 152.42 0 *e*PKP1 PKPbc 05 10 29.4 -0.4
comp=Z,20nm,1.1s
ORIF *e*MLR MLR
comp=Z,75nm,17.8s
VIVF Saint-Julien-l 152.46 2 *e*PKP1 PKPbc 05 10 29.5 -0.4
MBDF Montbardon 152.60 359 *e*PKP1 PKPbc 05 10 30.0 -0.2
comp=Z,7.1nm,0.6s
TORD Torodi Ar. Bea 174.23 134 PKP PKPdf 05 10 42.9 -1.2
comp=Z,1.8nm,0.7s,baz=343,slow=1.4,SNR=10
TORD pPKP pPKPdf 05 11 07.7 -0.9
comp=Z,2.3nm,1.0s,baz=307,slow=1.5,SNR=4.8
TORD PKPab PKPab 05 12 15.4 -0.9
comp=Z,3.4nm,1.0s,baz=257,slow=4.1,SNR=9.5
TORD pPKPab pPKPab 05 12 39.9 +0.1
comp=Z,4.1nm,1.2s,baz=245,slow=3.5,SNR=4.8

NEIC ***22*** *04:58:29.1, 1539N×9476W, h17km, MD4.0(MEX), After MEX.*

MEX 22 04:58:29.3±0.8, 1539N×9476W, h16km±11km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.35**	**286**	*i* P		Pn	04 58 49.1	-4.4
HUIG				*i* S		Sn	04 59 06.1	-4.9
PCIG		**1.52**	**78**	*i* P		Pn	04 58 52.6	-3.2
PCIG				*i* S		Sn	04 59 09.1	-6.2
CMIG	**Matias Romero**	**1.69**	**356**	*i* P		Pn	04 58 55.3	-2.9
CMIG				*i* S		Sn	04 59 13.6	-6.0
CMIG	**Matias Romero**	**1.69**	**356**	*i* P		Pn	04 58 55.7	-2.5
CMIG				*i* S		Sn	04 59 13.1	-6.5
TGIG		**2.10**	**49**	*i* P		Pn	04 59 01.4	-2.4
TGIG				*i* S		Sn	04 59 25.0	-4.5
SCX	**San Cristobal**	**2.44**	**57**	*e*P		Pn	04 59 05.4	-3.2
SCX				*i* S		Sn	04 59 32.7	-5.4
THIG		**2.46**	**101**	*e*P		Pn	04 59 05.9	-2.9
THIG				*i* S		Sn	04 59 33.6	-4.9
VHO	**Vista Hermosa**	**2.52**	**312**	*i* P		Pn	04 59 08.2	-1.4
VHO				*i* S		Sn	04 59 36.2	-3.9
CCIG	**Comitan**	**2.68**	**70**	*i* P		Pn	04 59 09.7	-2.1
CCIG				*i* S		Sn	04 59 39.8	-4.1
PNIG	**Pinotepa**	**3.39**	**288**	*i* P		Pn	04 59 19.0	-2.5
PNIG				*i* S		Sn	04 59 57.4	-4.0
UTMO	**Huajuapan**	**3.79**	**310**	*i* P		Pn	04 59 24.9	-2.2
UTMO				*i* S		Sn	05 00 07.7	-3.6
PPM	**Popocatepetl**	**5.19**	**315**	*e*P		Pn	04 59 44.6	-1.7
PPM				*i* S		Sn	05 00 43.8	-2.2

NNC 22 05:03:28.7±8.6, 3719N×7096E, h178km±137km, mb2.7, mpv3.7, 2C-4D, Error ellipse: s-maj=84.6km s-min=45.2km az=22.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.92**	**357**	P		Pn	05 04 55.2	+0.8
	2.4nm,0.2s,baz=180,slow=13,SNR=139							
KK31				⇓S		Sn	05 06 02.5	+0.5
	1.8nm,0.3s,baz=181,slow=18,SNR=7.4							
TKM2	**Tokmak 2**	**6.74**	**30**	⇑P		Pn	05 05 03.7	-1.5
	2.3nm,0.5s							
TKM2				⇓S		Sn	05 06 23.1	+1.7
	1.4nm,0.7s							
AB09	**Akbulak array**	**14.48**	**330**	⇓P		Pn	05 06 48.1	+2.8
	0.6nm,0.3s							
AB09				⇑S		Sn	05 09 23.6	-2.9
	3.2nm,1.1s							
AKTO	**Aktyubinsk**	**16.17**	**329**	⇓P		Pn	05 07 10.8	+4.8
	1.3nm,1.5s							

ISCJB ***22*** *05:10:20.3±0.8, 5028N±006×1920E±004, h0km, Error ellipse: s-maj=8.6km s-min=3.7km az=9.3*

PRU ***22*** *05:10:22.0, 5027N×1922E, h0km*

ISC 22 05:10:21.3±0.8, 5027N±006×1923E±004, h0km, n9, σ1§10/15, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.37**	**97**	*e*Pg		**Pg**	**05 10 28.3**	**-0.1**
OJC				*e*Sg		**Sg**	**05 10 33.0**	**-0.2**
OKC	**Ostrava-Krasne**	**0.82**	**239**	*e*PG		**Pg**	**05 10 37.4**	**+0.4**
OKC				*e*SG		**Sg**	**05 10 48.6**	**+1.0**
NIE	**Niedzica**	**1.10**	**140**	*e*Pg		**Pg**	**05 10 42.4**	**0.0**
NIE				*e*Sg		**Sg**	**05 10 56.8**	**+0.1**
STHS	**Stebnicka Huta**	**1.56**	**122**	*e*PN		**Pn**	**05 10 50.2**	**-0.1**
STHS				*e*SN		**Sn**	**05 11 13.4**	**+2.3**
KOLL	**Kolacno**	**1.77**	**198**	*e*SN		**Sn**	**05 11 16.8**	**+0.4**
KOLL	**Kolacno**	**1.77**	**198**	*e*Sn		**Sn**	**05 11 16.8**	**+0.4**
VYHS	**Vyhne**	**1.79**	**188**	*e*PN		**Pn**	**05 10 52.0**	**-1.5**

VYHS			*e*SN	**Sn**	**05 11 14.0**	**-2.9**
DPC	**Dobruska-Polom**	**1.86 274**	*e*PG	**Pg**	**05 10 55.7**	**-1.4**
DPC			*e*SG	**Sg**	**05 11 20.5**	**-0.7**
	comp=Z,5.4nm,0.5s					
UPC	**Upice**	**2.07 278**	*e*SG	**Sg**	**05 11 29.4**	**+1.5**

BJI **22** *05:17:43.7, 1074S×7451W, h34km, mB5.3, Ms5.0, Msz5.0*
ISCJB **22** *05:17:44.1±1.2, 1068S±005×7474W±006, h44km±12km, mb4.3/26, MS4.1/5, Error ellipse: s-maj=11.4km s-min=7.3km az=153.2*
IDC **22** *05:17:46.4±2.1, 1083S×7481W, h54km±21km, mb3.7/13, mb1 4.0/17, mb1mx3.9/24, mbtmp3.9/17, ML4.5/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/31, Error ellipse: s-maj=21.1km s-min=13.1km az=55.0*
NEIC **22** *05:17:46.1±0.8, 1080S×7480W, h49km±8km, mb4.5/19, Error ellipse: s-maj=9.3km s-min=5.8km az=59.0*

ISC 22 05:17:45.7±0.9**, 1072S**±005×**7473W**±006**, h41**km±9km**, n66, σ0s84/50, mb4.3/26, MS4.1/5, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.42**	**239**	P	**Pn**	**05 18 22.4**	**-0.5**
	135nm,0.3s,baz=56,slow=16,SNR=137						
NNA				S	**Sn**	**05 18 52.2**	**+0.9**
	499nm,0.3s,baz=169,slow=21,SNR=24						
NNA	**Nana**	**2.42**	**239**	*e*Pn	**Pn**	**05 18 22.3**	**-0.6**
NNA				*e*Sn	**Sn**	**05 18 51.7**	**+0.5**
ATAH	**Atahualpa**	**5.18**	**315**	P	**Pn**	**05 19 01.3**	**+0.6**
	18nm,0.3s,baz=129,slow=6.5,SNR=70						
ATAH				S	**Sn**	**05 19 58.5**	**-0.7**
	15nm,0.3s,baz=352,slow=20,SNR=4.1						
OTAV	**Otavalo**	**11.50**	**341**	*e*Pn	**Pn**	**05 20 27.8**	**+0.3**
LVC	**Limon Verde**	**13.07**	**156**	LR	LR	05 26 02.9	
	comp=Z,156nm,19.1s,baz=315,slow=38						
SIV	**San Ignacio**	**14.28**	**113**	P	**Pn**	**05 21 05.7**	**+0.3**
	baz=312,slow=14						
ROSC	**El Rosal**	**15.48**	**1**	P	**Pn**	**05 21 24.6**	**+3.3**
	0.8nm,0.3s,baz=107,slow=19,SNR=2.7						
SDV	**Santo Domingo**	**19.90**	**12**	P	**Pn**	**05 22 14.3**	**-1.6**
	3.2nm,0.4s,baz=194,slow=22,SNR=12						
SDV	**Santo Domingo**	**19.90**	**12**	*e*P	**Pn**	**05 22 14.6**	**-1.2**
	11nm,0.6s						
CFAA	**Coronel Fontan**	**21.63**	**165**	P	**P**	**05 22 31.9**	**-0.6**
	0.8nm,0.6s,mb3.3,baz=344,slow=9.5,SNR=16						
CFAA	**Coronel Fontan**	**21.63**	**165**	P	**P**	**05 22 31.9**	**-0.6**
CPUP	**Villa Florida**	**22.61**	**136**	P	**P**	**05 22 41.2**	**-1.8**
	2.4nm,0.6s,mb3.8,baz=308,slow=9.9,SNR=11						
CPUP	**Villa Florida**	**22.61**	**136**	*e*P	**P**	**05 22 42.2**	**-0.8**
	12nm,0.7s,mb4.4						
PCRV	**Puerto La Cruz**	**23.06**	**26**	LR	LR	05 32 37.9	
	comp=Z,224nm,19.6s,MS3.6,baz=194,slow=38						
BDFB	**Brasilia**	**26.45**	**104**	P	**P**	**05 23 20.3**	**+1.2**
	0.5nm,0.6s,mb3.2,baz=256,slow=19,SNR=2.3						
BDFB				LR	LR	05 35 05.0	
	comp=Z,36nm,18.1s,MS3.0,baz=124,slow=39						
PLCA	**Paso Flores**	**30.11**	**174**	P	**P**	**05 23 49.9**	**-1.6**
	2.8nm,0.7s,mb4.1,baz=342,slow=11,SNR=10.0						
PLCA	**Paso Flores**	**30.11**	**174**	*e*P	**P**	**05 23 51.0**	**-0.5**
	2.7nm,0.8s,mb4.0						
BLO	**Bloomington**	**50.84**	**348**	*e*P	**P**	**05 26 40.8**	**-1.6**
	9.0nm,0.5s,mb5.0						
BINY	**Binghamton**	**52.67**	**359**	*e*P	**P**	**05 26 56.5**	**+0.6**
	6.0nm,0.5s,mb4.8						
ANMO	**Albuquerque**	**54.46**	**328**	*e*P	**P**	**05 27 09.5**	**+0.3**
	3.8nm,1.3s,mb4.2						
SDCO	**Great Sand Dun**	**56.17**	**331**	*e*P	**P**	**05 27 21.4**	**0.0**
	3.6nm,0.7s,mb4.5						
PV01	**Paradox Valley**	**57.99**	**329**	*e*P	**P**	**05 27 35.6**	**+1.2**
	245nm,0.6s						
RKT	**Rikitea**	**58.58**	**249**	*e*LR	LR	05 27 41.1	
	182nm,26.0s						
DUG	**Dugway**	**61.73**	**328**	*e*P	**P**	**05 28 00.5**	**+0.5**
	3.0nm,0.8s,mb4.5						
BW06	**Boulder Array**	**62.03**	**332**	*e*P	**P**	**05 28 01.6**	**-0.3**
	5.8nm,1.2s,mb4.6						
PDAR	**Pinedale Array**	**62.03**	**332**	P	**P**	**05 28 01.6**	**-0.3**
	0.6nm,0.5s,mb4.0,baz=126,slow=9.9,SNR=12						
RRI2	**Red Ridge**	**63.31**	**331**	*e*P	**P**	**05 28 10.8**	**+0.3**
	6.1nm,0.8s,mb4.8						
ULM	**Lac du Bonnet**	**63.47**	**345**	P	**P**	**05 28 10.3**	**-1.0**
	3.8nm,0.5s,mb4.8,baz=154,slow=5.3,SNR=6.9						
ULM	**Lac du Bonnet**	**63.47**	**345**	*e*P	**P**	**05 28 09.7**	**-1.7**
	8.3nm,1.0s,mb4.8						
IMW	**Indian Meadow**	**63.54**	**332**	*e*P	**P**	**05 28 12.6**	**+0.6**
	3.5nm,0.6s,mb4.6						
NVAR	**Mina Array Bea**	**63.59**	**323**	P	**P**	**05 28 12.2**	**-0.3**
	0.4nm,0.7s,mb3.6,baz=116,slow=6.8,SNR=3.8						
HLID	**Hailey**	**64.99**	**329**	P	**P**	**05 28 21.7**	**+0.2**
	1.6nm,0.6s,mb4.2						
BOZ	**Bozeman (W)**	**65.19**	**332**	*e*P	**P**	**05 28 22.5**	**-0.2**
	1.8nm,0.9s,mb4.1						
MSO	**Missoula**	**67.14**	**332**	*e*P	**P**	**05 28 35.4**	**+0.2**
	5.0nm,1.2s,mb4.4						
DBIC	**Dimbokro**	**71.67**	**79**	P	**P**	**05 29 02.7**	**-1.2**
	2.0nm,0.5s,mb4.3,baz=203,slow=1.9,SNR=6.9						
DBIC	**Dimbokro**	**71.67**	**79**	*e*P	**P**	**05 29 03.1**	**-0.8**
	20nm,1.5s,mb4.8						
EDM	**Edmonton**	**71.70**	**337**	*e*P	**P**	**05 29 02.6**	**-0.7**
VNA3	**Neumayer Olymp**	**72.00**	**162**	*e*P	**P**	**05 29 05.2**	**+0.3**
VNA3				*e*		05 29 13.0	
VNA3				*e*	pP	05 29 18.9	+1.8
VNA1	**Neumayer--Stat**	**72.24**	**161**	*e*P	**P**	**05 29 07.3**	**+1.0**
VNA1				*e*		05 29 13.0	
VNA2	**Neumayer--Watz**	**72.60**	**161**	*e*P	**P**	**05 29 08.6**	**+0.2**
	baz=290,slow=6.9						
VNA2				*e*		05 29 14.9	
VNA2				*e*	pP	05 29 20.4	-0.2
SNAA	**Sanae**	**74.22**	**162**	*e*P	**P**	**05 29 18.0**	**0.0**
SNAA				*e*		05 29 23.9	
SNAA	**Sanae**	**74.22**	**162**	*e*P	**P**	**05 29 17.7**	**-0.2**
	5.4nm,0.7s,mb4.6						
YKA	**Yellowknife Ar**	**79.25**	**342**	P	**P**	**05 29 45.7**	**-0.7**
	1.1nm,0.6s,mb4.0,baz=136,slow=6.2,SNR=20						
TOA0	**Tordoi Ar. Sit**	**79.46**	**74**	*e*P	**P**	**05 29 48.2**	**-0.4**
TORD	**Tordoi Ar. Bea**	**79.46**	**74**	P	**P**	**05 29 48.0**	**-0.5**
	1.5nm,0.4s,mb4.2,baz=249,slow=4.3,SNR=27						
ESDC	**Sonseca Array**	**82.40**	**47**	P	**P**	**05 30 04.7**	**+1.0**
	0.7nm,0.5s,mb3.8,baz=256,slow=5.1,SNR=9.0						
ESDC	**Sonseca Array**	**82.40**	**47**	P	**P**	**05 30 04.7**	**+1.0**
TAM	**Tamanrasset**	**85.28**	**66**	*e*P	**P**	**05 30 20.2**	**+1.3**
	2.9nm,1.1s,mb4.3						
INK	**Inuvik**	**88.98**	**341**	*e*P	**P**	**05 30 35.3**	**-0.4**
	11nm,1.4s,mb5.0						
GERES	**GERESS Array B**	**96.95**	**42**	P	**P**	**05 31 14.5**	**+1.6**
	0.2nm,0.4s,mb3.9,baz=250,slow=2.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**133.90**	**17**	PKP	PKPdf	05 36 58.5	+0.1
	0.6nm,0.4s,baz=270,slow=1.5,SNR=4.3						
ASAR	**Alice Springs**	**135.81**	**219**	PKP	PKPdf	05 37 02.0	-0.8
	1.0nm,0.8s,baz=131,slow=2.2,SNR=7.1						
WRA	**Warramunga Arr**	**138.19**	**223**	PKP	PKPdf	05 37 07.0	-0.3
	1.0nm,0.6s,baz=129,slow=2.0,SNR=9.2						
SONM	**Songino Array**	**143.00**	**359**	PKP	PKPdf	05 37 11.6	-3.6
	0.3nm,0.4s,baz=353,slow=3.0,SNR=4.5						
WMQ	**Urumqi**	**143.68**	**22**	*e*PKP	PKPdf	05 37 16.9	+0.4
FITZ	**Fitzroy Crossi**	**145.00**	**215**	*e*P	PKPab	05 37 18.3	-0.6
	6.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**145.00**	**215**	*e*PKPdf	PKPdf	05 37 18.3	-1.3
KSRS	**Korea Array**	**146.48**	**326**	PKPbc	PKPbc	05 37 21.6	-1.3
	0.8nm,0.4s,baz=55,slow=2.9,SNR=4.3						
HHC	**Hu-ho-hao-te**	**149.49**	**351**	*e*PKP	PKPdf	05 37 24.4	-2.0
HHC				PKP2	PKPab	05 37 35.5	-0.2
HHC				PKS		05 40 57.9	
HHC				*e*PP	PP	05 41 05.0	+2.7
HHC				SKS	SKSdf	05 44 26.6	-4.8
HHC				PP	PP		
	comp=Z,106nm,4.9s						
HHC				LR	LR		
	comp=N,97nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=E,111nm,19.0s,MS4.8						
HHC				LR	LR		
	comp=Z,103nm,16.7s,MS4.7						
GTA	**Gaotai**	**151.02**	**9**	*e*PKP	PKPdf	05 37 23.1	-5.7
LZH	**Lanzhou**	**154.72**	**3**	*e*PKP	PKPdf	05 37 33.6	-0.7
LZH				APKP		05 37 46.5	
LZH				PKP2	PKPab	05 37 59.5	+1.8
LZH				LR	LR		
	comp=N,129nm,18.3s						
LZH				LR	LR		
	comp=Z,195nm,20.1s,MS4.9						
NJ2	**Nanjing**	**155.34**	**331**	*e*PKP	PKPdf	05 37 35.1	-0.2
XAN	**Xi'an**	**156.55**	**352**	PKP	PKPdf	05 37 36.0	-0.9
XAN				APKP		05 37 46.8	
XAN				SKS	SKSdf	05 44 36.9	-3.1
XAN				LR	LR		
	comp=E,19nm,18.7s						
XAN				LR	LR		
	comp=Z,43nm,20.3s,MS4.3						
CD2	**Chengdu**	**159.87**	**4**	PKP	PKPdf	05 37 40.3	-0.7
GYA	**Guiyang**	**164.29**	**355**	*e*PKP	PKPdf	05 37 42.8	-2.8
GYA				APKP		05 37 55.3	
GYA				XPKP		05 38 02.8	
GYA				PKP2	PKPab	05 38 40.1	+0.7
GYA				PKS		05 41 16.0	
GYA				PP	PP	05 42 25.3	+1.4
GYA				PP	PP		
	comp=Z,80nm,8.7s						
KMI	**Kunming**	**165.48**	**9**	PKP	PKPdf	05 37 45.3	-1.3
KMI				APKP		05 37 57.9	
KMI				XPKP		05 38 02.3	
KMI				PKP2	PKPab	05 38 45.1	+0.4
KMI				PP	PP	05 42 33.1	+2.9

ISCJB **22** *05:31:47.0±0.5, 1722S±008×174.1W±0.1, h33km, mb4.7/30, MS4.1/8, Error ellipse: s-maj=14.7km s-min=10.2km az=22.9*
BJI **22** *05:31:48.1, 1683S×17387W, h40km, mB5.2, mb5.0, Ms5.2, Msz4.8*
IDC **22** *05:31:53.4±0.8, 1723S×174.12W, h76km±6km, mb4.2/15, mb1 4.4/15, mb1mx4.3/20, mbtmp4.2/15, MS3.7/5, Ms1 3.7/5, ms1mx3.2/26, Error ellipse: s-maj=20.7km s-min=14.0km az=134.0*
NEIC **22** *05:31:53.4±0.5, 1722S×174.14W, mb4.7/8, Error ellipse: s-maj=16.4km s-min=10.5km az=137.0*

ISC 22 05:31:53.2±3.1**, 1731S**±008×**1741W**±01**, h74**km±26km**, h34**km±9km**:pP-P, n91, σ1s09/44, mb4.6**/30**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.07**	**108**	P	Px	05 35 04.3	
	6.4nm,0.3s,baz=258,slow=9.6,SNR=12						
RAR				S	Sx	05 37 26.0	
	1.4nm,0.3s,baz=12,slow=20,SNR=4.1						
RAR				LR	LR	05 38 57.6	
	comp=Z,355nm,18.2s,baz=288,slow=30						
RAR	**Rarotonga**	**14.07**	**108**	*e*Pn	Px	05 35 04.2	
	73nm,0.8s						
URZ	**Urewera**	**22.25**	**199**	P	**P**	**05 36 43.7**	**-0.2**
	14nm,0.3s,mb4.7,baz=308,slow=3.7,SNR=15						
URZ				S	**S**	**05 40 43.6**	**-0.7**
	9.3nm,0.7s,baz=235,slow=21,SNR=5.8						
PPT	**Papeete**	**23.39**	**94**	*e*LR	LR	05 42 14.4	
	514nm,29.8s						
PPT	**Papeete**	**23.39**	**94**	LR	LR	05 42 55.4	
	comp=Z,223nm,20.4s,baz=84,slow=28						
TBI	**Tubuai**	**23.86**	**109**	*e*LQ		05 41 29.5	
	302nm,35.0s						
TBI				*e*LR	LR	05 42 35.6	
	499nm,31.8s						
HNR	**Honiara**	**26.41**	**284**	LR	LR	05 45 23.6	
	comp=Z,168nm,19.1s,baz=250,slow=31						
RPZ	**Rata Peaks**	**29.17**	**202**	P	**P**	**05 37 52.4**	**+4.9**
	5.9nm,0.3s,mb4.6,baz=37,slow=8.5,SNR=4.2						
ARMA	**Armidale**	**33.81**	**241**	*e*P	**P**	**05 38 29.2**	**+0.8**
RKT	**Rikitea**	**37.09**	**106**	*e*LR	LR	05 48 41.6	
	263nm,30.5s						
CTA	**Charters Tower**	**37.60**	**259**	P	**P**	**05 39 00.3**	**-0.6**
	7.3nm,0.8s,mb4.6,baz=96,slow=9.7,SNR=12						
CTA	**Charters Tower**	**37.60**	**259**	*e*P	**P**	**05 39 00.3**	**-0.6**
	5.5nm,0.8s,mb4.4						
CTA	**Charters Tower**	**37.60**	**259**	P	**P**	**05 39 00.3**	**-0.6**
CTAO	**Charters Tower**	**37.60**	**259**	*e*P	**P**	**05 39 00.2**	**-0.8**
	7.0nm,0.7s,mb4.6						
PMG	**Port Moresby**	**38.44**	**277**	P	**P**	**05 39 07.1**	**-1.1**
	5.6nm,0.5s,mb4.6,baz=105,slow=6.8,SNR=4.9						
COEN	**Coen**	**41.22**	**268**	*e*P	**P**	**05 39 31.9**	**+0.7**
	7.9nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**42.52**	**242**	P	**P**	**05 39 41.8**	**+0.2**
	17nm,0.8s,mb4.8,baz=92,slow=8.9,SNR=23						
STKA	**Stephens Creek**	**42.52**	**242**	*e*P	**P**	**05 39 42.0**	**+0.4**
	17nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**42.52**	**242**	*e*P	**P**	**05 39 41.8**	**+0.2**
	4.7nm,1.0s,mb4.2						
WB2	**Warramunga Arr**	**48.77**	**258**	*e*P	**P**	**05 40 30.1**	**-0.9**
WB2	**Warramunga Arr**	**48.77**	**258**	*e*P	**P**	**05 40 29.9**	**-1.1**
WRAB	**Tennant Creek**	**48.77**	**258**	*e*P	**P**	**05 40 29.9**	**-1.1**
	12nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**48.78**	**258**	P	**P**	**05 40 30.0**	**-1.1**
	8.7nm,0.8s,mb4.8,baz=94,slow=7.9,SNR=59						
ASAR	**Alice Springs**	**48.91**	**253**	P	**P**	**05 40 31.6**	**-0.4**
	36nm,0.7s,mb5.4,baz=89,slow=8.1,SNR=403						
ASAR				S	**S**	**05 47 27.6**	**-3.1**
	0.6nm,0.8s,baz=95,slow=15,SNR=4.6						
VNDA	**Vanda**	**61.42**	**186**	P	**P**	**05 42 03.1**	**+1.9**
	2.3nm,0.8s,mb4.2,baz=11,slow=7.8,SNR=7.4						
MBWA	**Marble Bar**	**62.20**	**255**	*e*P	**P**	**05 42 06.3**	**-1.2**
	18nm,1.2s,mb5.0						
MJAR	**Matsushiro Arr**	**69.97**	**321**	P	**P**	**05 42 55.4**	**-1.4**
	3.0nm,0.8s,mb4.2,baz=160,slow=5.7,SNR=7.4						
MJAR				LR	LR	06 06 12.5	
	comp=Z,33nm,21.8s,baz=140,slow=30						
PETK	**Petropavlovsk-**	**74.23**	**343**	P	**P**	**05 43 21.1**	**-0.9**
	7.7nm,0.8s,mb4.5,baz=119,slow=6.9,SNR=8.0						
NVAR	**Mina Array Bea**	**76.19**	**42**	P	**P**	**05 43 32.1**	**-1.4**
	1.3nm,0.9s,mb3.7,baz=222,slow=10,SNR=7.0						
NVAR				pP	pP	05 43 54.2	+0.9
	4.1nm,0.8s,baz=228,slow=10.0,SNR=11						
KSRS	**Korea Array**	**77.05**	**316**	P	**P**	**05 43 39.5**	**+1.1**
	5.4nm,1.0s,mb4.2,baz=126,slow=6.2,SNR=9.0						
MDJ	**Mudanjiang**	**80.12**	**323**	P	**P**	**05 43 56.4**	**+1.3**
MDJ				S	S	05 53 59.9	+6.1
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,130nm,4.6s						
NJ2	**Nanjing**	**80.78**	**308**	*e*P	**P**	**05 43 59.6**	**+0.7**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**84.12**	**42**	P	**P**	**05 44 15.0**	**-1.1**
	comp=Z,0.9nm,0.9s,mb3.6,baz=197,slow=4.5,SNR=5.1						
PDAR				pP	pP	05 44 37.2	+1.1
	comp=Z,2.2nm,0.9s,baz=226,slow=3.2,SNR=6.5						
COLA	**College**	**84.35**	**11**	*e*P	**P**	**05 44 15.4**	**-1.3**
	comp=Z,19nm,1.4s,mb4.7						
BILL	**Bilibino**	**86.30**	**353**	*e*P	**P**	**05 44 25.2**	**-1.2**
	comp=Z,7.2nm,1.2s,mb4.5						
PSI	**Prapat**	**87.94**	**274**	P	**P**	**05 44 35.8**	**+0.2**
	comp=Z,4.9nm,0.6s,mb4.7,baz=212,slow=6.4,SNR=7.6						
GYA	**Guiyang**	**88.34**	**298**	P	**P**	**05 44 38.8**	**+1.6**
GYA				AP	pP	05 44 49.3	-8.2
GYA				XP	sP	05 44 52.8	-13
GYA				PP	PP	05 48 09.8	+3.9
GYA				SKS		05 55 03.1	
GYA				S	S	05 55 20.5	+3.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,50nm,5.7s						
GYA				LR	LR		
	comp=N,490nm,19.1s						
GYA				LR	LR		
	comp=E,450nm,20.0s						
GYA				LR	LR		
	comp=Z,460nm,20.4s						
PLCA	**Paso Flores**	**88.73**	**132**	LR	LR	06 18 59.8	
	comp=Z,55nm,18.1s,baz=76,slow=32						
XAN	**Xi'an**	**89.20**	**306**	P	**P**	**05 44 40.9**	**-0.1**
XAN				AP	pP	05 44 51.3	-10
XAN				PP	PP	05 48 12.5	-0.1
XAN				S	S	05 55 29.8	+5.3
XAN				SS	SS	06 01 26.3	+5.8
XAN				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.4						
XAN				LR	LR		
	comp=Z,37nm,21.9s						
HHC	**Hu-ho-hao-te**	**89.83**	**313**	*e*P	**P**	**05 44 44.4**	**+0.6**
HHC				AP	pP	05 44 54.8	-9.3
HHC				XP	sP	05 44 58.8	-13
HHC				PP	PP	05 48 19.9	+2.4
HHC				AMB	AMB		
	comp=Z,12nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,76nm,4.4s						
HHC				LR	LR		
	comp=N,87nm,17.8s						
HHC				LR	LR		
	comp=E,132nm,16.6s						
HHC				LR	LR		
	comp=Z,65nm,17.8s						
VNA3	**Neumayer Olymp**	**91.03**	**175**	*e*P	**P**	**05 44 49.2**	**+0.3**
VNA3				*e*		05 44 53.1	
VNA3				*e*		05 44 57.0	
SNAA	**Sanae**	**91.05**	**177**	*e*P	**P**	**05 44 48.6**	**-0.4**
SNAA				*e*		05 44 52.6	
SNAA				*e*		05 44 56.4	
SNAA	**Sanae**	**91.05**	**177**	*e*P	**P**	**05 44 48.2**	**-0.8**
	comp=Z,2.9nm,0.9s,mb4.4						
KMI	**Kunming**	**91.25**	**296**	P	**P**	**05 44 53.0**	**+2.2**
KMI				AP	pP	05 45 03.3	-7.8
KMI				XP	sP	05 45 06.5	-13
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
VNA2	**Neumayer--Watz**	**91.52**	**176**	*e*P	**P**	**05 44 51.6**	**+0.4**
VNA2				*e*		05 44 54.8	
VNA2				*e*		05 44 58.8	
YKA	**Yellowknife Ar**	**92.10**	**24**	P	**P**	**05 44 53.9**	**+0.1**
	comp=Z,0.2nm,0.7s,mb3.5,baz=236,slow=4.5,SNR=4.3						
YKA				pP	pP	05 45 13.3	-0.9
	comp=Z,0.2nm,0.8s,baz=223,slow=5.6,SNR=2.8						
YKA	**Yellowknife Ar**	**92.10**	**24**	P	**P**	**05 44 53.9**	**+0.1**
YKA				pP	pP	05 45 13.3	-0.9
CD2	**Chengdu**	**92.23**	**302**	P	**P**	**05 44 56.5**	**+1.3**
CD2				AP	pP	05 45 07.1	-8.4
CD2				XP	sP	05 45 11.0	-13
CD2				PP	PP	05 48 40.3	+3.6
CD2				SKS		05 55 25.5	
CD2				S	S	05 55 54.9	+2.6
CD2				XS	sS	05 56 12.6	-15
CD2				SS	SS	06 02 10.0	+5.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.3						
CD2				AMB	AMB		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,210nm,8.1s						
CD2				LR	LR		
	comp=Z,180nm,9.7s						
CMAR	**Chiang Mai Arr**	**92.58**	**288**	P	**P**	**05 44 58.2**	**+1.2**
	comp=Z,1.0nm,0.3s,mb4.6,baz=101,slow=2.8,SNR=12						
LZH	**Lanzhou**	**93.81**	**306**	*e*P	**P**	**05 45 04.5**	**+2.1**
LZH				AP	pP	05 45 15.3	-7.4
LZH				XP	sP	05 45 19.0	-12
LZH				*e*PP	PP	05 48 53.8	+4.8
LZH				AMB	AMB		
	comp=Z,17nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,87nm,5.6s						
LZH				LR	LR		
	comp=E,208nm,15.0s						
LZH				LR	LR		
	comp=Z,309nm,17.4s						
MKAR	**Makanchi Array**	**111.67**	**314**	PKiKP	PKiKP	05 50 18.4	-0.8
	comp=Z,0.5nm,0.8s,baz=5.2,slow=1.3,SNR=4.0						
CLL	**Collm**	**145.61**	**352**	*i* PKPbc	PKPbc	05 51 21.8	-1.4
	comp=Z,7.0nm,1.0s						
CLL				*i* (PKiKP)		05 51 24.8	
STHS	**Stebnicka Huta**	**145.64**	**342**	*e*PKP	PKPdf	05 51 23.7	+0.7
KOLS	**Kolonicke sed**	**145.76**	**341**	*e*PKP	PKPbc	05 51 25.4	+1.7
BUR08	**Bucovina Ar. S**	**145.84**	**337**	*e*PKPdf	PKPdf	05 51 24.1	+0.7
BRG	**Berggiesshubel**	**145.90**	**351**	*i* P	PKPdf	05 51 22.9	-0.5
	comp=Z,5.2nm,1.2s						
CRVS	**Cervenica-Dubn**	**146.04**	**342**	*e*PKP	PKPbc	05 51 25.7	+1.1
VRAC	**Vranov**	**146.92**	**347**	PKPbc	PKPbc	05 51 26.9	-0.3
	comp=Z,2.4nm,0.7s,baz=11,slow=6.8,SNR=3.7						
VYHS	**Vyhne**	**147.15**	**344**	*e*PKP	PKPbc	05 51 27.8	0.0
BR131	**Keskin Array S**	**147.17**	**319**	*e*PKPdf	PKPbc	05 51 27.8	-0.4
BRTR	**Keskin Array B**	**147.17**	**319**	PKPbc	PKPbc	05 51 28.0	-0.2
	comp=Z,5.6nm,0.8s,baz=127,slow=2.4,SNR=17						
GIVF	**Givet**	**147.27**	**1**	*e*PKP1	PKPbc	05 51 27.5	-0.6
MLR	**Muntele Rosu**	**147.29**	**334**	PKPbc	PKPbc	05 51 28.5	+0.2
	comp=Z,2.7nm,0.9s,baz=314,slow=10,SNR=4.5						
BAIF	**Baives**	**147.30**	**2**	*e*PKP1	PKPbc	05 51 27.7	-0.5
	comp=Z,22nm,1.1s						
KHC	**Kasperske Hory**	**147.65**	**351**	*e*PKP	PKPbc	05 51 28.5	-0.7
GERES	**GERESS Array B**	**147.91**	**350**	PKPbc	PKPbc	05 51 29.3	-0.6
	comp=Z,0.8nm,0.7s,baz=358,slow=3.1,SNR=7.7						
FLN	**La Foliniere**	**148.20**	**8**	*e*PKP1	PKPbc	05 51 29.8	-0.8
ASF	**Jabal al Asfar**	**148.34**	**304**	PKPbc	PKPbc	05 51 31.9	+0.4
	comp=Z,2.7nm,0.9s,baz=238,slow=1.8,SNR=4.4						
LDF	**La Druitiere**	**148.41**	**8**	*e*PKP1	PKPbc	05 51 30.3	-0.9
GRR	**Gorron**	**148.51**	**9**	*e*PKP1	PKPbc	05 51 30.6	-0.9
	comp=Z,54nm,1.2s						
QUIF	**Quistinic**	**148.58**	**12**	*e*PKP1	PKPbc	05 51 30.5	-1.1
CDF	**Champ du Feu**	**148.96**	**358**	*e*PKP1	PKPbc	05 51 32.1	-0.5
	comp=Z,6.7nm,0.8s						
MMAI	**Mount Meron Ar**	**149.19**	**306**	PKPbc	PKPbc	05 51 33.3	-0.4

SJI	**Sawahan**	**14.43**	**240**	P	**Pn**	**05 48 04.7**	**+8.6**
	29nm,1.1s						
WRAB	**Tennant Creek**	**21.73**	**154**	*eP*	**P**	**05 49 21.4**	**+1.8**
	5.7nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**21.74**	**154**	P	**P**	**05 49 19.6**	**0.0**
	2.2nm,0.7s,mb3.6,baz=331,slow=11,SNR=8.9						
WB2	**Warramunga Arr**	**21.74**	**154**	P	**P**	**05 49 21.0**	**+1.3**
COEN	**Coen**	**23.02**	**126**	*eP*	**P**	**05 49 32.6**	**-0.2**
	5.4nm,0.7s,mb4.0						
IPM	**Ipoh**	**23.74**	**282**	P	**P**	**05 49 40.1**	**+0.6**
PMG	**Port Moresby**	**24.45**	**112**	P	**P**	**05 49 46.9**	**+1.1**
	5.5nm,0.4s,mb4.2,baz=248,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**24.90**	**159**	P	**P**	**05 49 51.1**	**+1.3**
	1.6nm,0.6s,mb3.6,baz=339,slow=9.5,SNR=22						
ASAR				pP		05 50 11.6	
	3.7nm,0.7s,baz=339,slow=11,SNR=13						
PSI	**Prapat**	**25.55**	**277**	P	**P**	**05 49 54.4**	**-1.6**
	1.8nm,0.3s,mb4.0,baz=158,slow=14,SNR=4.2						
CMAR	**Chiang Mai Arr**	**31.19**	**308**	P	**P**	**05 50 46.2**	**+0.2**
	2.1nm,0.5s,mb4.1,baz=136,slow=7.3,SNR=9.1						
CHTO	**Chiang Mai**	**31.39**	**309**	*eP*	**P**	**05 50 48.1**	**+0.2**
	2.6nm,0.6s,mb4.1						
JHJ	**Hachijo jima 2**	**36.44**	**22**	LR	LR	06 04 34.5	
	comp=Z,65nm,19.2s,baz=284,slow=33						
KSRS	**Korea Array**	**37.86**	**5**	P	**P**	**05 51 44.7**	**+1.4**
	1.5nm,0.6s,mb4.0,baz=181,slow=9.1,SNR=2.5						
MJAR	**Matsushiro Arr**	**39.01**	**18**	P	**P**	**05 51 54.2**	**+1.3**
	0.9nm,0.5s,mb3.9,baz=194,slow=9.5,SNR=4.5						
HHC	**Hu-ho-hao-te**	**42.70**	**346**	*eP*	**P**	**05 52 23.6**	**+0.5**
HHC				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,76nm,3.8s						
RAMN	**Ramite**	**45.34**	**310**	*eP*	**P**	**05 52 44.8**	**+0.4**
	comp=Z,14nm,0.5s,mb4.9						
GTA	**Gaotai**	**45.55**	**333**	*eP*	**P**	**05 52 47.0**	**+1.1**
GTA				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.5						
GUN	**Gumba**	**46.38**	**311**	*eP*	**P**	**05 52 52.2**	**-0.4**
	comp=Z,13nm,0.4s,mb5.0						
DMN	**Daman**	**46.81**	**310**	*eP*	**P**	**05 52 55.3**	**-0.7**
GKN	**Gorkha**	**47.37**	**310**	*eP*	**P**	**05 52 59.7**	**-0.6**
	comp=Z,6.9nm,0.3s,mb4.8						
KOLN	**Koldanda**	**48.06**	**309**	*eP*	**P**	**05 53 05.4**	**-0.2**
DANN	**Dangsing**	**48.22**	**310**	*eP*	**P**	**05 53 06.7**	**-0.1**
	comp=Z,22nm,0.6s,mb5.2						
ULN	**Ulaanbaatar**	**50.40**	**345**	*eP*	**P**	**05 53 24.2**	**+1.1**
	comp=Z,9.1nm,1.0s,mb4.7						
SONM	**Songino Array**	**50.55**	**344**	P	**P**	**05 53 23.2**	**-0.9**
	comp=Z,5.5nm,0.8s,mb4.7,baz=159,slow=7.3,SNR=34						
SONM				ScP	ScP	05 58 29.3	+2.5
	comp=Z,0.2nm,0.6s,baz=174,slow=5.7,SNR=3.7						
MKAR	**Makanchi Array**	**59.66**	**328**	P	**P**	**05 54 28.9**	**-0.8**
	comp=Z,9.2nm,0.4s,mb5.2,baz=124,slow=7.7,SNR=140						
MKAR				ScP	ScP	05 59 08.1	+1.3
	comp=Z,0.7nm,0.9s,baz=104,slow=3,SNR=4.3						
TKM2	**Tokmak 2**	**61.33**	**321**	*eP*	**P**	**05 54 42.5**	**+1.3**
	comp=Z,3.7nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**61.88**	**320**	*eP*	**P**	**05 54 46.9**	**+1.9**
	comp=Z,2.4nm,0.6s,mb4.4						
KBL	**Kabul**	**62.20**	**310**	*eP*	**P**	**05 54 46.0**	**-1.2**
	comp=Z,4.0nm,0.5s,mb4.7						
ZAA0	**Zalesovo Array**	**63.25**	**335**	*eP*	**P**	**05 54 52.4**	**-1.4**
ZALV	**Zalesovo Beam**	**63.25**	**335**	P	**P**	**05 54 51.8**	**-1.9**
	comp=Z,2.8nm,0.5s,mb4.5,baz=131,slow=4.5,SNR=11						
KURK	**Kurchatov**	**64.00**	**330**	*eP*	**P**	**05 54 57.3**	**-1.5**
	comp=Z,28nm,0.6s,mb5.3						
BRVK	**Borovoye**	**69.60**	**329**	*eP*	**P**	**05 55 34.8**	**+0.6**
	comp=Z,8.7nm,1.1s,mb4.5						
AKTK	**Aktyubinsk**	**75.44**	**323**	P	**P**	**05 56 08.6**	**-0.4**
AKTO	**Aktyubinsk**	**75.44**	**323**	P	**P**	**05 56 08.6**	**-0.4**
	comp=Z,1.5nm,0.5s,mb4.0,baz=97,slow=7.9,SNR=8.3						
BRTR	**Keskin Array B**	**90.78**	**310**	P	**P**	**05 57 25.9**	**-2.2**
	comp=Z,0.3nm,0.2s,mb4.0,baz=80,slow=3.4,SNR=8.7						
ARCES	**ARCESS Array B**	**93.49**	**340**	P	**P**	**05 57 39.2**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.4,baz=78,slow=4.7,SNR=4.3						
LSZ	**Lusaka**	**95.76**	**255**	*eP*	**P**	**05 57 51.2**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.7						
TORD	**Torodi Ar. Bea**	**121.76**	**285**	PKP	PKPdf	06 03 19.9	+0.6
	comp=Z,0.2nm,0.3s,baz=126,slow=1.6,SNR=6.8						

IDC 22 05:47:48.5±2.6, 1745S×17758E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/15, mbtmp3.9/6, MS3.7/3, Ms1 3.8/3, ms1mx3.2/20, Error ellipse: s-maj=130.2km s-min=26.4km az=153.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPT	**Papeete**	**31.30**	**95**	LR	LR	06 03 07.0	
	comp=Z,188nm,18.7s,baz=274,slow=29						
WRA	**Warramunga Arr**	**40.96**	**259**	P	P	05 55 32.3	-0.9
	0.4nm,0.6s,baz=91,slow=8.6,SNR=3.9						
ASAR	**Alice Springs**	**41.24**	**254**	P	P	05 55 36.5	+0.9
	0.5nm,0.3s,baz=86,slow=9.5,SNR=6.6						
VNDA	**Vanda**	**60.61**	**184**	LR	LR	06 20 08.6	
	comp=Z,68nm,19.2s,baz=113,slow=32						
NVAR	**Mina Array Bea**	**81.79**	**46**	P	P	06 00 10.1	+0.7
	1.4nm,1.0s,baz=240,slow=7.1,SNR=3.4						
CMAR	**Chiang Mai Arr**	**85.14**	**291**	P	P	06 00 26.7	-0.3
	0.8nm,0.3s,baz=116,slow=4.1,SNR=3.5						
CMAR				LR	LR	06 36 16.7	
	comp=Z,35nm,21.2s,baz=180,slow=34						
SONM	**Songino Array**	**90.73**	**320**	P	P	06 00 54.8	+1.6
	0.5nm,0.9s,baz=123,slow=5.5,SNR=3.7						
YKA	**Yellowknife Ar**	**95.54**	**26**	P	P	06 01 14.5	-0.5
	0.5nm,0.9s,baz=255,slow=4.9,SNR=3.2						
GERES	**GERESS Array B**	**146.05**	**341**	PKPbc	PKPbc	06 07 28.7	-1.5
	0.1nm,0.2s,baz=38,slow=5.0,SNR=2.9						

*CSEM **22** 05:53:55.9±0.2, 3939N×3318E, h8km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.6km az=143.0*
*ISK **22** 05:53:55.7, 3940N×3317E, h5km, MD2.9*
*ISCJB **22** 05:53:56.9±0.6, 39.36N±005°×33.19E±005, h10km, Error ellipse: s-maj=7.6km s-min=4.5km az=148.4*
*DDA **22** 05:53:56.6, 39.35N×3319E, h7km±1km, Md2.7*
ISC 22 05:53:56.5±1.0, 3936N±005°×3315E±006, h4km±13km, n9, σ0s81/13, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.43**	**88**	*e*PG	**Pg**	**05 54 04.6**	**-0.3**
KAMT				*e*SG	**Sg**	**05 54 10.6**	**+0.2**
LOD	**Lodumlu**	**0.61**	**331**	*e*PG	**Pg**	**05 54 07.4**	**-0.9**
CDAG	**Cicekdag**	**0.98**	**74**	*i* P	**Pg**	**05 54 14.0**	**-1.3**
CDAG				*i* S	**Sg**	**05 54 28.6**	**+0.6**
KIZT	**Kizilcal**	**1.10**	**245**	*e*PN	**Pn**	**05 54 17.6**	**-1.1**
ELDT	**Eldivan**	**1.15**	**10**	*i* P	**Pb**	**05 54 18.4**	**-0.5**
ELDT				*i* S	**Sg**	**05 54 35.1**	**+1.6**
KDHN	**Kadinhani**	**1.16**	**224**	*i* P	**Pb**	**05 54 19.1**	**0.0**
KDHN				*i* S	**Sb**	**05 54 35.8**	**+1.2**
LADK	**Ladik-KONYA**	**1.31**	**208**	*e*PN	**Pn**	**05 54 21.4**	**-0.1**
KONT	**Konya--Tatoy**	**1.54**	**204**	*e*PN	**Pn**	**05 54 25.4**	**+0.7**
YOZ	**Yozgat**	**1.70**	**80**	*e*PN	**Pn**	**05 54 26.7**	**-0.3**

IDC 22 05:56:04.7±3.1, 2028S×16837E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.9/14, mbtmp3.8/3, MS3.7/5, Ms1 3.7/5, ms1mx3.4/18, Error ellipse: s-maj=135.4km s-min=36.3km az=150.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOUC	**Port Laguerre**	**2.65**	**226**	*e*P	Pn	05 56 49.4	+0.7
NOUC				*e*S	Sn	05 57 23.8	+2.3
CTA	**Charters Tower**	**20.76**	**267**	LR	LR	06 06 45.5	
	comp=Z,98nm,18.8s,baz=80,slow=31						
STKA	**Stephens Creek**	**26.60**	**239**	LR	LR	06 12 27.9	
	comp=Z,175nm,18.8s,baz=25,slow=37						
RAR	**Rarotonga**	**29.79**	**97**	LR	LR	06 11 16.4	
	comp=Z,163nm,21.1s,baz=236,slow=31						
WRA	**Warramunga Arr**	**31.92**	**265**	P	P	06 02 32.3	0.0
	0.8nm,0.7s,baz=94,slow=8.0,SNR=4.8						
WRA				LR	LR	06 15 03.8	
	comp=Z,179nm,20.2s,baz=105,slow=36						
ASAR	**Alice Springs**	**32.09**	**259**	P	P	06 02 33.8	0.0
	2.1nm,0.7s,baz=86,slow=8.8,SNR=24						
TBI	**Tubuai**	**39.18**	**102**	*e*LR	LR	06 14 29.5	
	114nm,27.5s						
PPT	**Papeete**	**39.80**	**93**	*e*LQ		06 13 02.1	
	345nm,27.0s						
PPT				*e*LR	LR	06 14 21.3	
	189nm,27.5s						
PPT	**Papeete**	**39.80**	**93**	LR	LR	06 15 25.8	
	comp=Z,133nm,19.9s,baz=255,slow=29						

SONM	**Songino Array**	**87.56**	**323**	P	P	06 08 54.0	-0.5
	0.2nm,0.4s,baz=113,slow=5.3,SNR=3.6						
ARCES	**ARCESS Array B**	**125.85**	**345**	PKP	PKPdf	06 15 06.9	-0.9
	4.4nm,1.0s,baz=20,slow=2.9,SNR=2.6						
GERES	**GERESS Array B**	**145.00**	**330**	PKPbc	PKPbc	06 15 42.4	-0.8
	0.4nm,0.8s,baz=23,slow=5.3,SNR=2.7						
DAVOX	**Davos/Dischmat**	**148.26**	**331**	PKPbc	PKPbc	06 15 54.1	+1.3
	0.9nm,0.5s,baz=225,slow=10.0,SNR=2.9						

*CSEM **22** 06:15:33.1, 3335N×3568E, h31km, ML2.8, After GRAL*
*GII **22** 06:15:33.6±1.0, 3350N×3564E, h0km, ML2.0/3, EXPLOSION*
*GRAL **22** 06:15:33.1±0.3, 3335N×3568E, h31km±4km, MD2.8*
*ISCJB **22** 06:15:35.5±0.5, 3346N±003°×3556E±005, h0km, Error ellipse: s-maj=6.6km s-min=4.0km az=19.5*
ISC 22 06:15:35.9±0.5, 3346N±003°×3557E±005, h0km, n13, σ0s73/17, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matirih**	**0.20**	**279**	*e*P	**Pg**	**06 15 40.4**	**+0.6**
RCY	**Rachaya**	**0.21**	**83**	*e*P	**Pg**	**06 15 39.1**	**-0.9**
RCY				*e*S	**Sg**	**06 15 43.6**	**+0.8**
KSDI	**Kefar Szold**	**0.28**	**163**	Pg	**Pg**	**06 15 40.9**	**-0.3**
KSDI				Sg	**Sg**	**06 15 45.9**	**+1.1**
BHL	**Bhannes**	**0.45**	**9**	*e*P	**Pg**	**06 15 43.8**	**-0.8**
BHL				*e*S	**Sg**	**06 15 51.6**	**+1.1**
MMC3	**Mount Meron ar**	**0.46**	**196**	Pg	**Pg**	**06 15 44.7**	**0.0**
MMA1	**Mount Meron ar**	**0.46**	**197**	Pg	**Pg**	**06 15 44.6**	**-0.1**
MMA0B	**Mount Meron ar**	**0.46**	**197**	Pg	**Pg**	**06 15 45.4**	**+0.6**
MMC5	**Mount Meron ar**	**0.47**	**196**	Pg	**Pg**	**06 15 44.6**	**-0.2**
MMC4	**Mount Meron ar**	**0.47**	**195**	Pg	**Pg**	**06 15 44.6**	**-0.3**
HWQ	**Hawqa**	**0.88**	**21**	*e*P	**Pg**	**06 15 52.4**	**-0.4**
OFRI	**'Ofer**	**0.97**	**210**	Pg	**Pg**	**06 15 54.2**	**-0.2**
HMDT	**Nahal Hemdat**	**1.20**	**182**	Pg	**Pg**	**06 15 57.7**	**-1.3**
SLTI	**Sal'it**	**1.29**	**200**	Pn	**Pn**	**06 16 00.5**	**-0.7**
SLTI				Sn	**Sn**	**06 16 20.2**	**+1.0**

*IDC **22** 07:11:04.9±0.4, 241S×13909E, h0km, mb5.6/22, mb1 5.5/26, mb1mx5.5/27, mbtmp5.6/26, ML5.5/3, MS6.0/15, Ms1 6.1/15, ms1mx5.9/25, Error ellipse: s-maj=16.1km s-min=10.5km az=77.0*
*BJI **22** 07:11:07.3, 248S×13929E, h37km, mB6.3, mb5.6, Ms6.0, Msz5.9*
*ISCJB **22** 07:11:08.7±0.1, 239S±002°×13911E±002, h34km, mb5.9/190, MS6.1/236, Error ellipse: s-maj=3.6km s-min=2.8km az=39.1*
*MOS **22** 07:11:08.8±1.1, 235S×13906E, h33km, mb6.1/53, Error ellipse: s-maj=8.4km s-min=4.8km az=112.3*
*NEIC **22** 07:11:08.1±0.1, 241S×13907E, h20km, mb6.0/114, MS6.1/189, MW6.1, Error ellipse: s-maj=5.6km s-min=4.4km az=62.0, Moment Tensor Solution. s70 Moment tensor: Scale 10^18Nm; Mrr0.60; Mθθ0.62; Mφφ-1.22; Mrθ-0.72; Mθφ0.89; Mφr-0.38; Best double couple: Mo1.60000×10^18 NP1:ϕs196.00000°, δ66.00000°, λ149.00000°. NP2:ϕs300.00000°, δ62.00000°, λ28.00000°. Principal axes: T 1.6200, Plg38.0000°, Azm156.0000°; N -0.0400, Plg51.0000°, Azm341.0000°; P -1.5800, Plg2.0000°, Azm248.0000°;*
NEIC Felt [IV] at Jayapura and Sarmi; [III] at Sentani and Wamena.
*GCMT **22** 07:11:09.1±0.1, 221S×139.18E, h18km, MW6.2/117, Moment Tensor Solution. s114, c261; s117, c377; Duration: 3s1 Moment tensor: Scale 10^18Nm; Mrr1.32±.01; Mθθ0.52±.01; Mφφ-1.84±.01; Mrθ-1.53±.05; Mθφ1.24±.01; Mφr-0.12±.04; Best double couple: Mo2.56000×10^18 NP1:ϕs190.00000°, δ51.00000°, λ147.00000°. NP2:ϕs302.00000°, δ65.00000°, λ44.00000°. Principal axes: T 2.6710, Plg48.0000°, Azm163.0000°; N -0.2220, Plg41.0000°, Azm325.0000°; P -2.4490, Plg9.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*DJA **22** 07:11:10, 252S×13908E, h16km, Mw6.4/41*
ISC 22 07:11:10.8±0.1, 237S±002°×13911E±002, h36km, h36km±1.3km: pP-P, n860, σ1s15/508, mb5.9/188, MS6.1/236, 34C-35D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.60**	**95**	P	**Pn**	**07 11 35.5**	**-1.1**
BAKI	**Biak**	**3.22**	**291**	P	**Pn**	**07 11 56.9**	**-2.1**
MMPI	**Merauke**	**6.19**	**168**	P	**Pn**	**07 12 41.7**	**+2.0**
	9µm,0.9s,51nm						
SWI	**Sorong**	**7.99**	**281**	P	**Pn**	**07 13 05.9**	**+1.4**
	967nm,0.7s,3.3nm						
MSAI	**Masohi**	**10.22**	**264**	P	**Pn**	**07 13 36.3**	**+1.3**
	511nm,1.0s,5µm						
PMG	**Port Moresby**	**10.62**	**131**	Pn	**Pn**	**07 13 41.5**	**+0.9**
	8.0nm,0.3s,baz=319,slow=9.1,SNR=108						
PMG				Sn	**Sn**	**07 15 51.9**	**+13**
	2.8nm,0.3s,baz=240,slow=20,SNR=1.5						
PMG	**Port Moresby**	**10.62**	**131**	P	**Pn**	**07 13 41.5**	**+0.9**
PMG						07 15 51.9	
PMG				pmax	pmax		
	comp=Z,8.0nm,0.3s						
PMG				smax			
	comp=N,3.0nm,0.3s						
PMG	**Port Moresby**	**10.62**	**131**	*e*Pn	**Pn**	**07 13 41.0**	**+0.4**
PMG	**Port Moresby**	**10.62**	**131**	P	**Pn**	**07 13 42.0**	**+1.4**
	comp=N,4µm,1.1s						
LBMI	**Labuha**	**11.73**	**278**	P	**Pn**	**07 13 58.1**	**+2.3**
	comp=N,2µm,1.4s						
TNTI	**Ternate**	**12.15**	**285**	P	**Pn**	**07 14 03.2**	**+1.7**
	comp=N,1µm,1.5s						
COEN	**Coen**	**12.19**	**161**	*e*Pn	**Pn**	**07 14 00.7**	**-1.4**
	comp=N,404nm,0.8s						
COEN	**Coen**	**12.19**	**161**	P	**Pn**	**07 14 00.2**	**-1.9**
	comp=N,182nm,1.1s,comp=N,3µm						
MNI	**Manado**	**14.76**	**285**	P	**Pn**	**07 14 36.4**	**-0.8**
	comp=N,757nm,1.2s						
SGSI	**Sangihe**	**14.85**	**294**	P	**Pn**	**07 14 40.1**	**+1.8**
	comp=N,1µm,0.8s						
DAV	**Davao City (W)**	**16.44**	**305**	P	**Pn**	**07 15 01.2**	**+2.3**
	SNR=35						
DAV	**Davao City (W)**	**16.44**	**305**	Pn	**Pn**	**07 14 57.4**	**-1.5**
	comp=N,78nm,0.3s,baz=70,slow=5.1,SNR=9.2						
DAV				Sn	**Sn**	**07 18 15.9**	**+15**
	baz=41,slow=20,SNR=1.6						
DAV	**Davao City (W)**	**16.44**	**305**	P	**Pn**	**07 14 55.4**	**-3.6**
DAV	**Davao City (W)**	**16.44**	**305**	Pn	**Pn**	**07 14 57.4**	**-1.5**
DAV				*e*P		07 15 00.8	
DAV				Sn	**Sn**	**07 18 15.9**	**+15**
DAV	**Davao City (W)**	**16.44**	**305**	P	**Pn**	**07 15 01.5**	**+2.5**
	comp=N,764nm,1.5s						
BIPH	**Bislig**	**16.48**	**310**	*e*P	**Pn**	**07 14 56.9**	**-2.5**
KDI	**Kendari**	**16.54**	**264**	P	**Pn**	**07 15 00.4**	**+0.2**
	comp=N,716nm,1.1s						
GUMO	**Guam**	**16.85**	**20**	Pn	**Pn**	**07 15 04.8**	**+0.7**
	comp=N,8.2nm,0.3s,baz=190,slow=10,SNR=5.7						
GUMO				LR	LR	07 21 04.9	
	comp=N,41µm,19.0s,baz=202,slow=36						
GUMO	**Guam**	**16.85**	**20**	P	**Pn**	**07 15 04.8**	**+0.7**
GUMO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,41µm,19.0s						
GUMO	**Guam**	**16.85**	**20**	*e*P	**Pn**	**07 15 07.1**	**+3.0**
	comp=Z,2µm,1.2s						
GUMO	**Guam**	**16.85**	**20**	P	**Pn**	**07 15 08.3**	**+4.2**
	comp=Z,2µm,1.4s						
BUKP	**Musuan**	**17.32**	**306**	*e*P	**Pn**	**07 15 10.0**	**0.0**
WRAB	**Tennant Creek**	**18.06**	**195**	P	**Pn**	**07 15 19.7**	**+0.6**
	comp=Z,5µm,0.6s,SNR=24						
WRAB	**Tennant Creek**	**18.06**	**195**	*e*P	**Pn**	**07 15 15.1**	**-4.0**
WRAB				pmax	pmax		
	comp=Z,710nm,0.8s						
WRAB	**Tennant Creek**	**18.06**	**195**	*e*P	**Pn**	**07 15 14.7**	**-4.3**
	comp=Z,712nm,0.8s						
WRAB	**Tennant Creek**	**18.06**	**195**	P	**Pn**	**07 15 14.6**	**-4.5**
	comp=Z,958nm,0.9s						
WB2	**Warramunga Arr**	**18.07**	**195**	*e*P	**Pn**	**07 15 14.3**	**-4.9**
WB2				*e*S	S	07 18 23.5	-21
WB2	**Warramunga Arr**	**18.07**	**195**	*e*P	**Pn**	**07 15 18.1**	**-1.1**
WRA	**Warramunga Arr**	**18.08**	**195**	P	**Pn**	**07 15 14.8**	**-4.4**
	comp=Z,4.1nm,0.3s,baz=15,slow=12,SNR=85						
WRA				S	**S**	**07 18 26.5**	**-18**
	comp=Z,2.9nm,0.3s,baz=14,slow=22,SNR=4.2						
SCPH	**Surigao**	**18.16**	**312**	*e*P	**Pn**	**07 15 20.0**	**-0.4**
PAGZ	**Pagadian**	**18.69**	**303**	*e*P	**Pn**	**07 15 26.4**	**-0.3**
MSLP	**Maasin**	**18.86**	**311**	*e*P	**Pn**	**07 15 27.5**	**-1.3**
CTA	**Charters Tower**	**18.94**	**159**	P	**Pn**	**07 15 27.9**	**-1.9**
	comp=Z,4.6nm,0.3s,baz=336,slow=12,SNR=70						
CTA	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**07 15 28.2**	**-1.5**
	comp=Z,158nm,0.8s						
CTA				*e*S	**S**	**07 19 05.0**	**+3.0**
CTAO	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**07 15 28.4**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,236nm,0.9s						
CTAO	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**07 15 28.4**	**-1.3**
	comp=Z,236nm,0.9s						
CTAO	**Charters Tower**	**18.94**	**159**	P	**Pn**	**07 15 28.9**	**-0.8**
	comp=Z,352nm,0.8s						
PCI	**Palu**	**19.32**	**274**	P	**Pn**	**07 15 35.3**	**+0.9**
	comp=Z,2µm,1.3s						
PLP	**Palo**	**19.45**	**314**	*e*P	**Pn**	**07 15 32.0**	**-3.9**
KAPI	**Kappang**	**19.50**	**262**	P	**Pn**	**07 15 37.4**	**+0.9**
	comp=Z,2µm,1.2s,SNR=9.6						
KAPI	**Kappang**	**19.50**	**262**	P	**Pn**	**07 15 37.3**	**+0.9**
	SNR=16						
KAPI	**Kappang**	**19.50**	**262**	P	**Pn**	**07 15 33.4**	**-3.0**
	comp=Z,5.1nm,0.3s,baz=100,slow=7.0,SNR=12						
KAPI	**Kappang**	**19.50**	**262**	*e*P	**Pn**	**07 15 36.3**	**-0.2**
	comp=Z,527nm,1.2s						
KAPI	**Kappang**	**19.50**	**262**	P	**Pn**	**07 15 37.9**	**+1.4**
	comp=Z,298nm,1.6s,comp=Z,6µm						
LLP	**Lapu-Lapu**	**19.65**	**310**	*e*P	**Pn**	**07 15 40.4**	**+2.1**
FITZ	**Fitzroy Crossi**	**20.47**	**219**	*i* P	**P**	**07 15 44.0**	**-1.6**
	comp=Z,642nm,0.9s						
FITZ				*e*S	**S**	**07 19 13.1**	**-20**
FITZ	**Fitzroy Crossi**	**20.47**	**219**	*e*P	**P**	**07 15 44.2**	**-1.3**
	comp=Z,386nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.47**	**219**	P	**P**	**07 15 44.0**	**-1.6**
	comp=Z,1µm,1.1s						
CNP	**Catarman**	**20.60**	**316**	*e*P	**P**	**07 15 44.1**	**-2.9**
GUIM	**Jordan**	**20.91**	**308**	*e*P	**P**	**07 15 49.7**	**-0.6**
BMNI	**Bima**	**21.22**	**252**	P	**P**	**07 15 51.6**	**-2.2**
	comp=Z,318nm,0.8s,comp=Z,6µm,mb5.7						
RCP	**Roxas**	**21.36**	**311**	*e*P	**P**	**07 15 55.0**	**-0.2**
PVCP	**Virac**	**21.72**	**317**	*e*P	**P**	**07 15 56.0**	**-3.1**
KALP	**Kalibo**	**21.75**	**310**	*e*P	**P**	**07 16 03.9**	**+4.5**
ASAR	**Alice Springs**	**21.76**	**193**	P	**P**	**07 15 57.8**	**-1.7**
	comp=Z,207nm,0.8s,mb5.6,baz=24,slow=10,SNR=560						
ASAR				S	**S**	**07 20 00.8**	**+2.6**
	comp=Z,108nm,0.9s,baz=13,slow=21,SNR=4.2						
HNR	**Honiara**	**21.87**	**110**	P	**P**	**07 15 58.8**	**-1.9**
	comp=Z,520nm,1.0s,mb5.9,baz=212,slow=4.1,SNR=16						
HNR				S	**S**	**07 19 55.4**	**-5.1**
	comp=Z,30nm,0.5s,baz=78,slow=20,SNR=1.4						
HNR	**Honiara**	**21.87**	**110**	P	**P**	**07 15 58.8**	**-1.9**
HNR				S	**S**	**07 19 55.4**	**-5.1**
HNR				pmax	pmax		
	comp=Z,520nm,1.0s,mb5.9						
HNR				smax			
	comp=N,30nm,0.5s						
HNR	**Honiara**	**21.87**	**110**	*e*P	**P**	**07 15 58.3**	**-2.4**
	comp=N,993nm,0.8s,mb6.3						
HNR				LR	LR		
	comp=Z,33µm,20.0s,MS5.7						
MYLDM	**Lahad Datu**	**21.91**	**290**	P	**P**	**07 16 02.5**	**+1.3**
MYLDM	**Lahad Datu**	**21.91**	**290**	P	**P**	**07 16 03.0**	**+1.8**
	comp=Z,2µm,1.4s,mb6.3						
SMKI	**Samarinda**	**21.98**	**275**	P	**P**	**07 16 04.2**	**+2.3**
	comp=Z,2µm,1.2s,mb6.4						
TSM	**Tawau**	**22.23**	**287**	P	**P**	**07 16 06.5**	**+1.9**
CUYO	**Cuyo Island**	**22.29**	**306**	*e*P	**P**	**07 16 05.3**	**+0.2**
OTRP	**Odiongan**	**22.42**	**311**	*e*P	**P**	**07 16 05.1**	**-1.4**
AUQP	**San Andres**	**22.56**	**314**	*e*P	**P**	**07 16 08.8**	**+0.7**
GQP	**Guinayangan**	**23.12**	**315**	*e*P	**P**	**07 16 12.6**	**-1.3**
SJMP	**San Jose**	**23.16**	**310**	*e*P	**P**	**07 16 13.8**	**-0.6**
SDKM	**Sandakan**	**23.29**	**290**	P	**P**	**07 16 16.8**	**+1.0**
BUSP	**Coron**	**23.61**	**308**	*e*P	**P**	**07 16 16.9**	**-1.8**
PPR	**Puerto Princes**	**23.62**	**301**	P	**P**	**07 16 20.0**	**+1.1**
ENPP	**El Nido**	**23.78**	**305**	*e*P	**P**	**07 16 19.3**	**-1.0**
PGP	**Puerto Galera**	**23.94**	**312**	*i* P	**P**	**07 16 21.3**	**-0.6**
BATP	**Bataraza**	**23.97**	**298**	*e*P	**P**	**07 16 22.3**	**+0.2**
**PO

comp=Z,151nm,1.6s,comp=Z,7μm,mb5.6
YHNB Yeheng 31.92 328 *e*P **P 07 17 33.2 0.0**
comp=Z,954nm,1.9s,mb6.3
YHNB LR LR
comp=Z,22μm,20.0s,MS5.8
TATO Taipei 32.11 329 *e*P **P 07 17 38.0 +3.1**
comp=Z,581nm,1.5s,mb6.2
TATO LR LR
comp=Z,14μm,19.0s,MS5.7
DBJI Dramaga 32.52 262 P **P 07 17 45.4 +6.8**
comp=Z,127nm,1.7s,mb5.6
PPBI Pangkal Pinang 32.95 270 P **P 07 17 43.0 +0.6**
comp=Z,180nm,1.2s,comp=Z,3μm,mb5.9
DZM Mont Dzumac 33.00 129 *e*P **P 07 17 42.1 -0.6**
DZM Mont Dzumac 33.00 129 *e*P **P 07 17 42.2 -0.4**
comp=Z,139nm,0.6s,mb6.1
QZH Quanzhou 33.67 325 ⇓*i*P **P 07 17 47.3 -1.1**
QZH S **S 07 23 06.8 -2.4**
QZH AMB AMB
comp=Z,330nm,1.0s,mb6.2
QZH AMB AMB
comp=Z,6μm,4.8s
QZH LR LR
comp=N,9μm,13.4s,MS5.9
QZH LR LR
comp=E,13μm,13.6s,MS5.9
QZH LR LR
comp=Z,29μm,17.0s,MS6.1
TARA Tarawa 34.01 84 *e*P **P 07 17 50.7 -0.9**
comp=Z,630nm,1.3s,mb6.4
TARA LR LR
comp=Z,22μm,21.0s,MS5.9
CAN Canberra 34.05 165 P **P 07 17 52.2 +0.6**
CAN Canberra 34.05 165 *e*P **P 07 17 53.0 +1.4**
comp=Z,243nm,1.0s,mb6.1
CNB Canberra Magne 34.13 165 *e*P **P 07 17 52.7 +0.3**
CNB *e*S S 07 22 46.7 -29
XMIS Christmas Isla 34.18 255 *e*P **P 07 17 51.1 -2.0**
XMIS Christmas Isla 34.18 255 P **P 07 18 00.7 +7.6**
HKC Hong Kong Obse 34.56 317 ⇓P **P 07 17 56.0 -0.2**
HKC S **S 07 23 22.0 -1.0**
JHJ Hachijo jima 2 35.30 1 LR LR 07 29 26.2
comp=Z,28μm,20.5s,MS6.0,baz=188,slow=31
KLBR Kellerberrin 35.36 212 *e*P **P 07 18 02.8 -0.2**
comp=Z,168nm,1.1s,mb5.9
MYKOM Kota Tinggi 35.49 276 ⇓P **P 07 18 04.0 -0.5**
MYKOM Kota Tinggi 35.49 276 P **P 07 18 04.6 +0.1**
comp=Z,235nm,1.2s,comp=Z,4μm,mb6.0
TOO Toolangi 35.52 171 ⇑*i*P **P 07 18 05.0 +0.7**
TOO *e*S **S 07 23 32.8 -4.6**
GZH Guangzhou 35.65 317 P **P 07 18 06.3 +0.7**
GZH S **S 07 23 41.0 +1.2**
GZH LR LR
comp=N,7μm,20.4s,MS5.6
GZH LR LR
comp=E,8μm,17.8s,MS5.6
GZH LR LR
comp=Z,17μm,18.2s,MS5.8
QIZ Qiongzhong 35.78 308 P **P 07 18 05.9 -0.9**
QIZ AP pP 07 18 16.5 -0.7
QIZ S **S 07 23 44.3 +2.4**
QIZ XS sS 07 23 59.3 +0.2
QIZ AMB AMB
comp=Z,138nm,1.2s,mb5.8
QIZ LR LR
comp=N,15μm,20.1s
QIZ LR LR
comp=Z,14μm,22.9s,MS5.7
QIZ Qiongzhong 35.78 308 *e*P **P 07 18 05.2 -1.6**
comp=Z,293nm,1.3s,mb6.0
QIZ LR LR
comp=Z,15μm,19.0s,MS5.8
KGM Kluang 36.05 277 ⇓P **P 07 18 10.7 +1.5**
KSI Kapahiang 36.49 267 P **P 07 18 15.6 +2.6**
comp=Z,384nm,1.2s,mb6.2
MUN Mundaring 36.50 214 *e*P **P 07 18 12.6 -0.2**
MUN *e*S **S 07 23 49.0 -3.6**
NWAO Narrogin (SRO) 36.68 212 P **P 07 18 14.9 +0.7**
SNR=13
NWAO Narrogin (SRO) 36.68 212 P **P 07 18 13.6 -0.6**
comp=Z,131nm,0.9s,mb5.7,baz=41,slow=9.0,SNR=60
NWAO PcP PcP 07 20 36.5 -0.1
comp=Z,60nm,0.6s,baz=104,slow=4.0,SNR=5.7
NWAO S **S 07 23 54.5 -0.8**
comp=Z,22nm,1.1s,baz=254,slow=19,SNR=1.9
NWAO Narrogin (SRO) 36.68 212 *e*P **P 07 18 14.6 +0.3**
NWAO pmax pmax
comp=Z,184nm,1.1s
NWAO MLR MLR
comp=Z,93μm,21.0s
NWAO Narrogin (SRO) 36.68 212 *e*P **P 07 18 14.6 +0.3**
comp=Z,184nm,1.1s,mb5.8
NWAO LR LR
comp=Z,93μm,21.0s,MS6.5
KTGM Kuala Trenggan 36.74 282 ⇓P **P 07 18 15.8 +0.7**
RGRI Rengat 36.82 273 P **P 07 18 19.8 +4.0**
comp=Z,490nm,1.1s,mb6.2
SSE Sheshan 37.40 334 P **P 07 18 20.8 +0.4**
SSE AP pP 07 18 28.8 -2.0
SSE PP PP 07 19 47.0 +0.7
SSE S **S 07 24 07.6 +1.3**
SSE XS sS 07 24 23.4 -0.1
SSE AMB AMB
comp=Z,66nm,1.2s,mb5.3
SSE AMB AMB
comp=Z,1μm,6.3s
SSE LR LR
comp=N,7μm,18.6s,MS5.8
SSE LR LR
comp=E,14μm,18.6s,MS5.8
SSE LR LR
comp=Z,16μm,20.2s,MS5.8
FRIM Kepong 37.88 278 ⇑P **P 07 18 25.4 +0.6**
PDSI Padang 38.66 271 P **P 07 18 29.6 -1.8**
comp=Z,440nm,1.3s,comp=Z,5μm,mb6.0
IPM Ipoh 38.66 280 ⇑P **P 07 18 31.7 +0.3**
IPM Ipoh 38.66 280 P **P 07 18 30.6 -0.8**
comp=Z,316nm,1.2s,comp=Z,5μm,mb5.9
MJAR Matsushiro Arr 38.72 359 P **P 07 18 29.6 -1.8**
comp=Z,17nm,0.6s,mb5.0,baz=176,slow=9.0,SNR=32
MJAR PcP PcP 07 20 43.4 +0.6
comp=Z,24nm,1.0s,baz=181,slow=3.5,SNR=9.3
MJAR S **S 07 24 27.8 +1.7**
comp=Z,0.7nm,0.3s,baz=244,slow=17,SNR=2.5
MJAR LR LR 07 32 30.3
comp=Z,16μm,21.2s,MS5.8,baz=155,slow=33
MJAR Matsushiro Arr 38.72 359 P **P 07 18 29.6 -1.9**
MJAR 07 20 43.4
MJAR S **S 07 24 27.8 +1.7**
MJAR Matsushiro Arr 38.72 359 P **P 07 18 29.6 -1.8**
MJAR PcP PcP 07 20 43.4 +0.6
MJAR S **S 07 24 27.8 +1.7**
MJAR LR LR 07 32 30.4
MAJO Matsushiro 38.72 359 *e*P **P 07 18 29.6 -1.9**
MAJO pmax pmax
comp=Z,60nm,0.7s,mb5.4
MAJO MLR MLR
comp=Z,17μm,21.0s,MS5.8
MAJO Matsushiro 38.72 359 *e*P **P 07 18 29.6 -1.9**
comp=Z,60nm,0.7s,mb5.4
MAJO LR LR
comp=Z,17μm,21.0s,MS5.8
MAT Matsushiro 38.72 359 P **P 07 18 29.0 -2.5**
MAT S **S 07 24 30.0 +3.8**
PPI Padang Panjang 38.75 272 P **P 07 18 30.7 -1.4**
comp=Z,479nm,1.0s,mb6.2
NJ2 Nanjing 39.26 332 *e*P **P 07 18 37.4 +1.3**
NJ2 AP pP 07 18 47.1 +0.6
NJ2 XP sP 07 18 51.1 +0.3
NJ2 PP PP 07 20 12.0 +5.4
NJ2 S **S 07 24 36.5 +2.1**
NJ2 XS sS 07 24 56.0 +4.3
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb5.1
NJ2 AMB AMB
comp=Z,3μm,8.8s
NJ2 LR LR
comp=N,7μm,26.7s,MS5.7
NJ2 LR LR
comp=E,12μm,23.9s,MS5.7
NJ2 LR LR
comp=Z,12μm,24.9s,MS5.6
SNG Songkhla 39.57 284 P **P 07 18 38.0 -0.9**
comp=Z,980nm,1.1s,mb6.5
FUNA Funafuti 40.34 100 *e*P **P 07 18 46.0 +0.6**
comp=Z,862nm,1.2s,mb6.4
FUNA *e* pP 07 18 57.0 +1.2
FUNA LR LR
comp=Z,19μm,20.0s,MS5.9
WHN Wuhan 40.36 326 P **P 07 18 46.0 +0.8**
WHN S **S 07 24 55.0 +4.0**
WHN LR LR
comp=N,9μm,19.7s,MS6.0
WHN LR LR
comp=E,16μm,14.9s,MS6.0
WHN LR LR
comp=Z,18μm,24.2s
KKTK Khon Kaen 40.38 299 P **P 07 18 45.0 -0.6**
comp=Z,1μm,0.5s,mb6.9
PSI Prapat 40.50 277 P **P 07 18 45.2 -1.4**
comp=Z,248nm,1.0s,mb5.8,baz=108,slow=2.9,SNR=54
PSI PcP PcP 07 20 48.8 -0.3
comp=Z,40nm,0.7s,baz=14,slow=7.8,SNR=5.2
PSI S **S 07 24 47.0 -6.6**
comp=Z,3.5nm,0.7s,baz=218,slow=19,SNR=2.3
MOO Moorlands 40.55 171 *e*P **P 07 18 47.9 +1.3**
MOO *e*S **S 07 24 47.0 -6.4**
KSRS Korea Array 40.96 346 P **P 07 18 49.3 -0.8**
comp=Z,19nm,0.8s,mb4.8,baz=159,slow=8.7,SNR=34
KSRS PcP PcP 07 20 50.8 +0.8
comp=Z,27nm,1.0s,baz=166,slow=4.1,SNR=9.8
KSRS LR LR 07 32 55.7
comp=Z,19μm,21.9s,MS5.9,baz=158,slow=32
KSRS Korea Array 40.96 346 P **P 07 18 49.3 -0.8**
KSRS 07 20 50.8
KSRS pmax pmax
comp=Z,19nm,0.8s,mb4.8
KSRS pmax pmax
comp=Z,27nm,1.0s,mb4.8
TAU Tasmania Unive 41.02 171 P **P 07 18 51.6 +1.1**
comp=Z,1μm,1.1s,mb6.4,SNR=11
TAU Tasmania Unive 41.02 171 *e*P **P 07 18 51.4 +0.9**
TAU pmax pmax
comp=Z,712nm,1.7s,mb6.0
TAU MLR MLR
comp=Z,73μm,22.0s,MS6.5
TAU Tasmania Unive 41.02 171 *e*P **P 07 18 51.4 +0.9**
comp=Z,712nm,1.7s,mb6.0
TAU LR LR
comp=Z,73μm,22.0s,MS6.5
NNT Nongplab 41.83 292 P **P 07 18 57.5 -0.1**
GYA Guiyang 42.47 315 ⇓*i*P **P 07 19 02.8 +0.2**
GYA AP pP 07 19 12.8 -0.3
GYA XP sP 07 19 16.6 -0.8
GYA PP PP 07 20 45.1 +3.6
GYA PPP 07 21 19.0
GYA SCP ScP 07 24 41.3 -2.1
GYA PCS PcS 07 24 45.1 -2.2
GYA S **S 07 25 24.0 +1.6**
GYA XS sS 07 25 40.5 +0.8
GYA SS SS 07 28 29.5 -3.2
GYA AMB AMB
comp=Z,190nm,1.0s,mb5.7
GYA AMB AMB
comp=Z,1μm,6.0s
GYA LR LR
comp=N,6μm,18.0s,MS5.7
GYA LR LR
comp=E,7μm,17.6s,MS5.7
GYA LR LR
comp=Z,8μm,16.5s,MS5.7
NST Nakhon Sawan 42.51 296 P **P 07 19 02.0 -1.1**
COCO West Island 42.99 255 *e*P **P 07 19 08.0 +0.9**
COCO pmax pmax
comp=Z,462nm,1.3s,mb6.0
COCO MLR MLR
comp=Z,7μm,21.0s,MS5.5
COCO West Island 42.99 255 *e*P **P 07 19 08.0 +1.0**
comp=Z,462nm,1.3s,mb6.0
COCO LR LR
comp=Z,7μm,21.0s,MS5.5
COCO West Island 42.99 255 P **P 07 19 09.6 +2.5**
comp=Z,201nm,1.1s,mb5.8
TIA Tai'an 43.52 334 *e*P **P 07 19 11.6 +0.6**
TIA S **S 07 25 41.0 +3.5**
TIA SS SS 07 28 50.0 -3.1
TIA LR LR
comp=E,3μm,15.0s
DL2 Dalian 44.12 340 *i*P **P 07 19 14.8 -0.9**
DL2 S **S 07 25 49.6 +3.4**
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
DL2 AMB AMB
comp=Z,2μm,7.6s
DL2 LR LR
comp=N,4μm,20.7s
DL2 LR LR
comp=Z,5μm,24.1s,MS5.4
ERM Erimo 44.33 4 *e*P **P 07 19 18.9 +1.6**
ERM pmax pmax
comp=Z,103nm,1.4s,mb5.4
ERM MLR MLR
comp=Z,16μm,21.0s,MS5.9
ERM Erimo 44.33 4 *e*P **P 07 19 18.9 +1.6**
comp=Z,103nm,1.4s,mb5.4
ERM LR LR
comp=Z,16μm,21.0s,MS5.9
BSI Banda Aceh 44.46 280 P **P 07 19 18.2 -0.7**
comp=Z,207nm,1.3s,comp=Z,3μm,mb5.7
CHRT Chiangrai 44.48 302 ⇓P **P 07 19 18.0 -0.9**
comp=Z,1μm,1.0s,mb6.6
KMI Kunming 44.61 310 P **P 07 19 21.0 +1.1**
KMI XP sP 07 19 36.0 +1.3
KMI PP PP 07 21 06.8 +2.3
KMI PPP 07 21 46.8
KMI S **S 07 25 54.5 +0.8**
KMI XS sS 07 26 12.1 +1.0
KMI SS SS 07 29 06.8 -7.8
KMI SSS 07 30 04.3
KMI AMB AMB
comp=Z,146nm,1.4s,mb5.6
KMI AMB AMB
comp=Z,4μm,8.5s
KMI LR LR
comp=N,9μm,18.5s,MS5.9
KMI LR LR
comp=E,10μm,20.6s,MS5.9
KMI LR LR
comp=Z,15μm,22.3s,MS5.9
CM31 Chiang Mai Arr 44.62 299 *e*P **P 07 19 20.0 0.0**
comp=Z,53nm,0.6s,mb5.5
CM31 LR LR
comp=Z,9μm,22.0s,MS5.6
CMAR Chiang Mai Arr 44.62 299 P **P 07 19 19.6 -0.5**
comp=Z,100nm,0.8s,mb5.7,baz=120,slow=6.8,SNR=124
CMAR S **S 07 25 53.1 -0.9**
comp=Z,1.1nm,0.3s,baz=344,slow=9.4,SNR=2.5
CMAR LR LR 07 36 17.0
comp=Z,17μm,19.6s,MS6.0,baz=292,slow=34
CMAR Chiang Mai Arr 44.62 299 P **P 07 19 19.6 -0.5**
CMAR S **S 07 25 53.2 -0.8**
CHG Chiang Mai 44.76 300 ⇓P **P 07 19 20.5 -0.7**
comp=Z,173nm,0.9s,mb5.9
CHTO Chiang Mai 44.76 300 *e*P **P 07 19 20.3 -0.9**
CHTO pmax pmax
comp=Z,163nm,1.0s,mb5.8
CHTO MLR MLR
comp=Z,11μm,20.0s,MS5.8
CHTO Chiang Mai 44.76 300 *e*P **P 07 19 20.3 -0.8**
comp=Z,163nm,1.0s,mb5.8
CHTO LR LR
comp=Z,11μm,20.0s,MS5.8
XAN Xi'an 46.03 325 P **P 07 19 29.8 -1.2**
XAN AP pP 07 19 39.8 -1.8
XAN XP sP 07 19 43.8 -2.1
XAN PP PP 07 21 16.5 -3.0
XAN S **S 07 26 07.8 -6.2**
XAN AMB AMB
comp=Z,43nm,1.5s,mb5.2
XAN AMB AMB
comp=Z,1μm,5.9s
XAN LR LR
comp=N,3μm,24.3s
XAN LR LR
comp=E,6μm,18.3s
XAN LR LR
comp=Z,17μm,23.6s,MS5.9
SNY Shenyang 46.20 344 P **P 07 19 31.0 -1.2**
SNY S **S 07 26 14.8 -1.3**
SNY XS sS 07 26 36.5 +2.9
SNY AMB AMB
comp=Z,50nm,1.9s,mb5.1
SNY AMB AMB
comp=Z,4μm,8.2s
SNY LR LR
comp=N,12μm,19.1s
SNY LR LR
comp=Z,17μm,20.1s,MS6.0
ASAJ Asahikawa 46.38 3 P **P 07 19 33.6 0.0**
comp=Z,31nm,0.9s,mb5.2,baz=242,slow=13,SNR=7.2
ASAJ LR LR 07 39 54.5
comp=Z,8μm,18.9s,MS5.7,baz=83,slow=37
ASAJ Asahikawa 46.38 3 P **P 07 19 33.6 0.0**
ASAJ pmax pmax
comp=Z,31nm,0.9s
ASAJ MLR MLR
comp=Z,8μm,18.9s
YUK Yuzh-Kuril'sk 46.59 7 *e*P **P 07 19 39.0 +3.8**
YUK *e* 07 21 23.0
YUK *e*S **S 07 26 36.0 +14**
YUK pmax pmax
comp=Z,5μm,7.0s
YUK MLR MLR
comp=N,9μm,20.0s,MS5.8
YUK MLR MLR
comp=Z,9μm,20.0s,MS5.7
YUK MLR MLR
comp=E,3μm,15.0s,MS5.8
BJT Baijiatuau 47.13 336 *e*P **P 07 19 39.7 +0.2**
BJT pmax pmax
comp=Z,200nm,1.0s
BJT MLR MLR
comp=Z,20μm,19.0s
BJT Baijiatuau 47.13 336 *e*P **P 07 19 39.7 +0.2**
comp=Z,200nm,1.0s,mb6.0
BJT LR LR
comp=Z,20μm,19.0s,MS6.1
BJI Beijing 47.15 336 P **P 07 19 39.4 -0.3**
BJI PP PP 07 21 34.3 +3.4
BJI S **S 07 26 28.5 -1.3**
BJI AMB AMB
comp=Z,86nm,1.9s,mb5.4
BJI AMB AMB
comp=Z,2μm,6.9s
BJI LR LR
comp=N,14μm,21.6s,MS6.0
BJI LR LR
comp=E,7μm,21.0s,MS6.0
BJI LR LR
comp=Z,14μm,28.6s
CD2 Chengdu 47.20 317 P **P 07 19 40.1 -0.2**
CD2 AP pP 07 19 50.4 -0.5
CD2 XP sP 07 19 53.8 -1.4
CD2 PCP PcP 07 21 12.0 +0.6
CD2 PP PP 07 21 33.0 +1.5
CD2 PCS PcS 07 25 06.3 -0.3
CD2 S **S 07 26 28.6 -2.3**
CD2 AMB AMB
comp=Z,180nm,1.5s,mb5.8
CD2 AMB AMB
comp=Z,6μm,9.2s
CD2 LR LR
comp=N,14μm,17.4s
CD2 LR LR
comp=Z,13μm,19.2s,MS5.9
MDJ Mudanjiang 47.55 351 P **P 07 19 43.1 +0.4**
MDJ AP pP 07 19 52.1 -1.2
MDJ PCP PcP 07 21 13.4 +1.1
MDJ S **S 07 26 35.6 +0.3**
MDJ AMB AMB
comp=Z,51nm,1.6s,mb5.3
MDJ AMB AMB
comp=Z,3μm,9.3s
MDJ LR LR
comp=E,8μm,27.7s
MDJ LR LR
comp=Z,11μm,26.2s,MS5.7
MDJ Mudanjiang 47.55 351 *e*P **P 07 19 42.9 +0.3**
comp=Z,102nm,1.0s,mb5.8
MDJ LR LR
comp=Z,18μm,20.0s,MS6.0
CN2 Changchun 47.57 347 ⇑P **P 07 19 42.9 0.0**
CN2 *e*S **S 07 26 29.4 -6.3**
CN2 AMB AMB
comp=Z,50nm,1.3s,mb5.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,15μm,21.0s,MS6.0
CN2 LR LR
comp=E,11μm,21.0s,MS6.0
CN2 LR LR
comp=Z,19μm,21.0s,MS6.0
RAO Raoul Island 48.79 128 PFAKE 07 20 00.0 +7.4
RAO LR LR
comp=Z,9μm,19.0s,MS5.8
YSS Yuzh-Sakhalins 49.22 3 ⇑*i*P **P 07 19 55.0 -0.5**
YSS *e*PPP 07 22 42.0
YSS *e*S **S 07 26 56.0 -2.8**
YSS *e* 07 29 44.0
YSS *e*SS SS 07 30 24.0 -6.8
YSS *e*SSS 07 31 48.0
YSS pmax pmax
comp=N,1μm,7.0s
YSS pmax pmax
comp=Z,2μm,7.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,140nm,1.0s,mb6.0
YSS MLR MLR
comp=N,6μm,16.0s
YSS MLR MLR
comp=Z,6μm,16.0s,MS5.7
YSS Yuzh-Sakhalins 49.22 3 *e*P **P 07 19 55.2 -0.3**
comp=Z,112nm,1.0s,mb5.8
HHC Hu-ho-hao-te 49.81 333 *e*P **P 07 20 01.1 +0.9**
HHC AP pP 07 20 10.9 0.0
HHC XP sP 07 20 14.9 -0.2
HHC PCP PcP 07 21 22.8 +2.2
HHC PP PP 07 21 56.1 +0.9
HHC SCP ScP 07 25 14.6 +1.0
HHC PCS PcS 07 25 17.9 +0.6
HHC S **S 07 27 05.0 -2.4**
HHC XS sS 07 27 22.6 -2.4
HHC SCS ScS 07 29 47.8 -1.2
HHC SS SS 07 30 34.3 -6.2
HHC AMB AMB
comp=Z,71nm,1.2s,mb5.6
HHC AMB AMB
comp=Z,4μm,7.0s
HHC LR LR
comp=N,9μm,19.0s,MS6.0
HHC LR LR
comp=E,9μm,17.8s,MS6.0
HHC LR LR
comp=Z,15μm,19.0s,MS6.0
AFI Afiamalu 49.84 106 PFAKE 07 20 10.0 +9.2
AFI LR LR
comp=Z,14μm,20.0s,MS6.0
SNZO South Karori 50.27 145 *e*P **P 07 20 02.4 -1.3**
comp=Z,109nm,1.1s,mb5.8
SNZO LR LR
comp=Z,19μm,22.0s,MS6.1
BTO Baotou 50.35 331 *e*P **P 07 20 03.3 -0.9**
BTO S **S 07 27 05.4 -9.4**
BTO AMB AMB
comp=Z,42nm,2.3s,mb5.1
LZH Lanzhou 50.45 323 ⇓P **P 07 20 05.4 +0.3**
LZH AP pP 07 20 15.3 -0.5
LZH XP sP 07 20 19.3 -0.8
LZH PP PP 07 22 02.1 +1.0
LZH S **S 07 27 16.5 0.0**
LZH XS sS 07 27 33.0 -1.1
LZH SS SS 07 30 47.8 -3.1
LZH AMB AMB
comp=Z,445nm,1.3s,mb6.3
LZH AMB AMB
comp=Z,3μm,8.9s
LZH LR LR
comp=N,7μm,14.9s
LZH LR LR
comp=Z,14μm,18.3s,MS6.0
HABR Khabarovsk 50.76 357 *de*P **P 07 20 06.4 -0.8**
HABR *e**PP pP 07 20 15.2 -2.7
HABR *e**SP sP 07 20 19.4 -2.8
HABR *e* 07 21 23.9

HABR *e* 07 22 04.8
HABR *e*PPP 07 23 02.1
HABR *e*S **S** **07 27 20.9 +0.6**
HABR *e**SS sS 07 27 36.7 -1.2
HABR *e* 07 29 54.1
HABR *e*SSS 07 32 29.4
HABR pmax pmax
comp=Z,114nm,1.3s,mb5.6
HABR pmax pmax
comp=E,16nm,0.3s
HABR pmax pmax
comp=N,67nm,1.0s
HABR MLR MLR
comp=E,7μm,16.0s,MS5.8
HABR MLR MLR
comp=N,3μm,14.0s,MS5.8
HABR MLR MLR
comp=Z,5μm,17.0s,MS5.6
HABR MLR MLR
comp=Z,7μm,16.0s
IMP **Imphal** **51.46 304** *e*P **P** **07 20 14.0 +1.1**
MIDW **Midway** **51.68 51** *e*P **P** **07 20 14.3 -0.2**
comp=Z,361nm,1.2s,mb6.2
MIDW LR LR
comp=Z,15μm,19.0s,MS6.0
KLR **Kul'dur** **51.79 354** *e*P **P** **07 20 11.0 -3.9**
KLR *e*S **S** **07 27 31.0 -3.4**
KLR *e* 07 29 57.0
KLR pmax pmax
comp=N,2μm,8.0s
KLR pmax pmax
comp=Z,5μm,8.0s
KLR MLR MLR
comp=E,4μm,14.0s
KLR MLR MLR
comp=Z,10μm,14.0s,MS6.0
SHL **Shillong** **53.47 304** *i* P **P** **07 20 27.0 -0.8**
SHL *i* S **S** **07 27 59.0 +0.7**
HIA **Hailar** **54.10 344** *e*P **P** **07 20 32.3 +0.4**
HIA *e* pP 07 20 45.0 +2.3
HIA pmax pmax
comp=Z,174nm,1.3s
HIA MLR MLR
comp=Z,17μm,20.0s
HIA **Hailar** **54.10 344** *e*P **P** **07 20 32.3 +0.3**
comp=Z,174nm,1.3s,mb5.8
HIA *e* pP 07 20 45.0 +2.3
HIA LR LR
comp=Z,17μm,20.0s,MS6.1
MCQ **Macquarie Isla** **54.44 166** *e*P **P** **07 20 35.8 +1.5**
MCQ **Macquarie Isla** **54.44 166** *e*P **P** **07 20 36.0 +1.7**
comp=Z,3μm,1.0s,mb7.1
TURI **Tura** **54.75 304** *ex* x 07 21 26.0
TURI *ex* x 07 21 35.0
SKR **Severo-Kuril's** **54.82 13** *e*P **P** **07 20 37.5 +0.4**
SKR *e*S **S** **07 28 20.0 +4.4**
SKR *e* 07 30 25.0
SKR *e*SS SS 07 32 04.0 +4.6
SKR pmax pmax
comp=Z,5μm,6.0s
SKR pmax pmax
comp=N,3μm,10.0s
SKR pmax pmax
comp=E,3μm,6.0s
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.2
SKR smax
comp=E,9μm,20.0s
SKR smax
comp=N,12μm,18.0s
GTA **Gaotai** **55.04 323** ⇓P **P** **07 20 39.1 +0.1**
GTA AP pP 07 20 51.3 +1.5
GTA XP sP 07 20 54.9 +0.9
GTA PP PP 07 22 44.5 +2.0
GTA S **S** **07 28 18.8 -0.1**
GTA PS 07 28 33.9
GTA XS sS 07 28 36.3 -0.5
GTA SS SS 07 32 03.5 +0.2
GTA AMB AMB
comp=Z,51nm,1.2s,mb5.4
GTA AMB AMB
comp=Z,2μm,7.1s
GTA LR LR
comp=N,6μm,16.3s,MS5.8
GTA LR LR
comp=E,5μm,18.1s,MS5.8
GTA LR LR
comp=Z,7μm,16.9s,MS5.8
CAL **Calcutta** **55.36 299** *e*P **P** **07 20 40.8 -0.8**
CAL *ex* x 07 27 51.9
LSA **Lhasa** **55.81 309** P **P** **07 20 45.3 +0.6**
LSA S **S** **07 28 22.8 -6.9**
LSA LR LR
comp=E,6μm,22.2s
LSA LR LR
comp=Z,8μm,23.2s,MS5.7
LSA **Lhasa** **55.81 309** *e*P **P** **07 20 45.7 +1.0**
LSA pmax pmax
comp=Z,196nm,1.0s,mb6.1
LSA MLR MLR
comp=Z,8μm,22.0s,MS5.7
LSA **Lhasa** **55.81 309** *e*P **P** **07 20 45.7 +0.9**
comp=Z,196nm,1.0s,mb6.1
LSA LR LR
comp=Z,8μm,22.0s,MS5.7
BWNR **Bhubaneshwar** **56.89 296** *e*P **P** **07 20 53.3 +0.7**
BWNR *e*S **S** **07 28 42.7 -1.5**
ULN **Ulaanbaatar** **57.33 335** ⇓P **P** **07 20 56.5 +1.4**
SNR=75
ULN **Ulaanbaatar** **57.33 335** *e*P **P** **07 20 55.6 +0.5**
ULN pmax pmax
comp=Z,92nm,0.9s,mb5.8
ULN **Ulaanbaatar** **57.33 335** *e*P **P** **07 20 55.6 +0.4**
comp=Z,92nm,0.9s,mb5.8
ULN **Ulaanbaatar** **57.33 335** P **P** **07 20 55.6 +0.5**
PETK **Petropavlovsk-** **57.44 13** P **P** **07 20 56.0 +0.2**
comp=Z,6.4nm,0.8s,mb4.7,baz=152,slow=4.7,SNR=8.6
PETK LR LR 07 42 06.3
comp=Z,9μm,21.7s,MS5.8,baz=200,slow=32
PET **Petropavlovsk** **57.59 14** *d* *i*P **P** **07 20 59.6 +2.8**
PET *e* 07 21 49.7
PET *e*S **S** **07 28 54.1 +1.9**
PET *e*SS SS 07 32 44.7 +1.9
PET pmax pmax
comp=Z,2μm,7.7s
PET pmax pmax
comp=Z,3μm,5.6s
PET pmax pmax
comp=Z,64nm,1.2s,mb5.5
PET **Petropavlovsk** **57.59 14** *e*P **P** **07 20 58.2 +1.4**
PET LR LR
comp=Z,8μm,21.0s,MS5.8
SONM **Songino Array** **57.59 334** P **P** **07 20 57.5 +0.6**
comp=Z,8.5nm,0.5s,mb5.0,baz=153,slow=8.0,SNR=40
SONM LR LR 07 45 58.2
comp=Z,17μm,19.4s,MS6.2,baz=138,slow=36
BOK **Bokaro** **57.90 300** *e*P **P** **07 20 59.5 -0.1**
CIT **Chita** **58.35 342** *e*P **P** **07 21 03.4 +1.2**
CIT *e* 07 21 09.9
CIT *e* 07 21 52.2
CIT *e* 07 29 05.3
CIT pmax pmax
comp=Z,503nm,2.2s,mb6.2
RAMN **Ramite** **58.38 304** *e*P **P** **07 21 02.9 -0.1**
comp=Z,1μm,1.2s,mb6.8
VIS **Vishakhapatnam** **58.46 292** *e*P **P** **07 21 03.0 -0.6**
JIRN **Jiri** **58.98 304** *e*P **P** **07 21 07.2 +0.1**
comp=Z,605nm,1.0s,mb6.6
PALK **Pallekele** **59.06 280** *e*P **P** **07 21 08.2 +0.3**
PALK pmax pmax
comp=Z,44nm,0.9s,mb5.5
PALK **Pallekele** **59.06 280** *e*P **P** **07 21 08.2 +0.3**
comp=Z,44nm,0.9s,mb5.5
GUN **Gumba** **59.33 304** *e*P **P** **07 21 09.5 0.0**
comp=Z,655nm,0.9s,mb6.7
PKI **Pulchoki** **59.59 304** *e*P **P** **07 21 10.9 -0.5**
comp=Z,555nm,1.2s,mb6.5
PKI **Pulchoki** **59.59 304** *e*P **P** **07 21 10.9 -0.5**
PKI pmax pmax
comp=Z,555nm,1.2s,mb6.5
KKN **Kakani** **59.78 304** *e*P **P** **07 21 12.4 -0.2**
comp=Z,771nm,0.9s,mb6.7
KKN **Kakani** **59.78 304** *e*P **P** **07 21 12.4 -0.2**
KKN pmax pmax
comp=Z,771nm,0.9s,mb6.7

DMN **Daman** **59.86 304** *e*P **P** **07 21 12.9 -0.3**
comp=Z,516nm,0.8s,mb6.6
NRGR **Nerungri** **59.99 351** *i* P **P** **07 21 14.4 +0.9**
NRGR S **S** **07 29 26.1 +2.8**
NRGR smax
comp=N,43nm,0.8s
CLNS **Chul'man** **60.13 351** *e*P **P** **07 21 14.3 -0.2**
CLNS *e**PP pP 07 21 23.8 -1.6
CLNS *e* 07 21 59.9
CLNS *e* 07 23 23.3
CLNS *e*S **S** **07 29 26.7 +1.6**
CLNS pmax pmax
comp=Z,65nm,0.8s,mb5.7
CLNS pmax pmax
comp=N,61nm,0.9s
CLNS pmax pmax
comp=E,22nm,0.9s
CLNS pmax pmax
comp=Z,21nm,1.3s,mb5.0
CLNS pmax pmax
comp=N,21nm,1.2s
CLNS pmax pmax
comp=E,21nm,1.2s
CLNS smax
comp=E,2μm,12.0s
CLNS smax
comp=N,743nm,14.2s
CLNS MLR MLR
comp=Z,4μm,14.0s,MS5.7
CLNS MLR MLR
comp=N,3μm,16.0s,MS5.7
CLNS MLR MLR
comp=E,3μm,15.0s,MS5.7
GKN **Gorkha** **60.38 304** *e*P **P** **07 21 16.4 -0.4**
comp=E,1μm,0.9s,mb6.9
MDRS **Chennai** **60.38 286** *ex* x 07 21 35.2
MDRS *ex* x 07 23 11.2
ZAK **Zakamensk** **60.85 335** ⇓*i*P **P** **07 21 19.8 +0.3**
ZAK *e* 07 22 03.9
ZAK *e* 07 29 30.3
ZAK pmax pmax
comp=Z,191nm,1.2s,mb6.1
KOLN **Koldanda** **61.17 304** *e*P **P** **07 21 21.8 -0.3**
comp=Z,658nm,1.0s,mb6.7
DANN **Dangsing** **61.23 304** *e*P **P** **07 21 22.1 -0.4**
comp=Z,516nm,0.8s,mb6.7
TLY **Talaya** **61.67 336** P **P** **07 21 26.6 +1.6**
comp=Z,518nm,1.1s,mb6.6,SNR=29
TLY **Talaya** **61.67 336** P **P** **07 21 26.4 +1.4**
SNR=54
TLY **Talaya** **61.67 336** *d* *i*P **P** **07 21 24.9 -0.1**
TLY *e*S **S** **07 29 47.6 +2.6**
TLY *e* 07 31 12.8
TLY pmax pmax
comp=Z,153nm,1.4s,mb5.9
TLY MLR MLR
comp=Z,10μm,20.0s,MS6.0
TLY **Talaya** **61.67 336** *e*P **P** **07 21 26.0 +1.0**
comp=Z,186nm,1.3s,mb6.1
TLY LR LR
comp=Z,11μm,21.0s,MS6.0
RAR **Rarotonga** **62.28 113** P **P** **07 21 30.1 +0.4**
comp=Z,39nm,1.1s,mb5.4,baz=258,slow=9.4,SNR=3.0
RAR **Rarotonga** **62.28 113** *e*P **P** **07 21 32.4 +2.6**
RAR pmax pmax
comp=Z,150nm,1.5s
RAR **Rarotonga** **62.28 113** *e*P **P** **07 21 30.6 +0.8**
comp=Z,85nm,1.4s,mb5.7
RAR LR LR
comp=Z,5μm,20.0s,MS5.7
KOD **Kodaikanal** **62.62 283** *e*P **P** **07 21 31.9 -0.3**
MOY **Mondy** **62.78 334** *e*P **P** **07 21 33.0 +0.6**
MOY pmax pmax
comp=Z,54nm,2.6s,mb5.2
HYB **Hyderabad** **62.83 291** *e*P **P** **07 21 33.0 -0.4**
HYB *e*S **S** **07 29 58.0 -2.7**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.7
HYB **Hyderabad** **62.83 291** *i* P **P** **07 21 33.0 -0.4**
comp=Z,60nm,1.0s,mb5.7
HYB *e* pP 07 21 44.5 +0.1
HYB *e*PP PP 07 23 53.5 +1.5
HYB *e*S **S** **07 29 58.0 -2.7**
HYB *e*ScS ScS 07 31 22.0 -1.9
HYB **Hyderabad** **62.83 291** *e*P **P** **07 21 33.0 -0.4**
comp=Z,60nm,1.0s,mb5.7
HYB *e*S **S** **07 29 58.0 -2.7**
JBP **Jabalpur** **62.89 297** *e*P **P** **07 21 33.3 -0.5**
JBP *ex* x 07 29 52.4
NGP **Nagpur** **63.21 295** *e*P **P** **07 21 33.7 -2.2**
NGP *ex* x 07 21 49.2
comp=Z,243nm,1.8s
NGP *e*S **S** **07 30 04.0 -1.5**
BOD **Bodaibo** **63.29 345** *e*P **P** **07 21 35.9 +0.2**
BOD pmax pmax
comp=Z,93nm,1.6s,mb5.7
XMAS **Kiritimati** **63.58 87** *e*P **P** **07 21 40.0 +1.5**
comp=Z,254nm,1.0s,mb6.2
DRV **Dumont d'Urvil** **64.17 180** P pP 07 21 51.0 -1.4
DRV S 07 30 28.0
DRV L 07 37 00.0
DRV R 07 42 00.0
PTH **Pithoragarh** **64.56 304** *e*P **P** **07 21 46.1 +1.4**
YAK **Yakutsk** **64.63 355** *d* *i*P **P** **07 21 44.4 0.0**
YAK *e**PP pP 07 21 54.1 -1.3
YAK *e* 07 22 16.6
YAK *e* 07 24 08.8
YAK *e*PPP 07 25 37.8
YAK *e*S **S** **07 30 22.3 +0.7**
YAK *e**SS sS 07 30 38.2 -1.5
YAK *e* 07 31 32.1
YAK *e*SS SS 07 34 26.4 -6.5
YAK pmax pmax
comp=Z,197nm,1.0s,mb6.1
YAK pmax pmax
comp=N,55nm,1.2s
YAK pmax pmax
comp=E,12nm,0.8s
YAK pmax pmax
comp=Z,568nm,4.7s
YAK pmax pmax
comp=E,427nm,6.8s
YAK pmax pmax
comp=N,634nm,4.8s
YAK smax
comp=N,3μm,8.6s
YAK smax
comp=E,5μm,12.8s
YAK **Yakutsk** **64.63 355** *e*P **P** **07 21 44.8 +0.3**
comp=E,237nm,0.7s,mb6.3
YAK *e* pP 07 21 54.8 -0.6
AKL **Akola** **64.96 294** *e*P **P** **07 21 46.3 -1.1**
WMQ **Urumqi** **65.00 321** P **P** **07 21 47.3 +0.1**
WMQ AP pP 07 21 58.8 +0.6
WMQ PCP PcP 07 22 19.8 -0.2
WMQ PP PP 07 24 12.4 +1.8
WMQ PPP 07 25 46.8
WMQ S S 07 30 25.0 -1.8
WMQ XS sS 07 30 43.0 -1.9
WMQ PS 07 30 49.8
WMQ SCS ScS 07 31 35.5 -4.0
WMQ SS SS 07 34 39.3 0.0
WMQ AMB AMB
comp=Z,392nm,1.0s,mb6.4
WMQ AMB AMB
comp=Z,5μm,7.6s
WMQ LR LR
comp=N,7μm,17.0s,MS6.0
WMQ LR LR
comp=E,4μm,14.5s,MS6.0
WMQ LR LR
comp=Z,4μm,24.0s
BHPL **Bhopal** **65.18 297** *e*P **P** **07 21 46.9 -2.0**
MNGI **Mangalore** **65.58 285** *e*P **P** **07 21 51.0 -0.6**
ADK **Adak** **65.69 28** *e*P **P** **07 21 51.8 +0.3**
ADK LR LR
comp=Z,13μm,21.0s,MS6.1
HVS **Khovu-Aksy** **65.79 331** *e*P **P** **07 21 53.1 +0.9**
HON **Honolulu** **65.81 65** *e*P **P** **07 21 54.3 +1.4**
HON *e* 07 22 00.8
HON **Honolulu** **65.81 65** *e*P **P** **07 21 54.2 +1.3**
KIP **Kipapa** **65.82 65** *e*P **P** **07 21 54.2 +1.2**
KIP **Kipapa** **65.82 65** *e*P **P** **07 21 55.2 +2.2**
comp=Z,194nm,1.0s,mb6.1
KIP LR LR
comp=Z,9μm,19.0s,MS6.0
DDI **Dehra Dun** **66.58 304** *e*P **P** **07 21 55.0 -2.7**
DDI *e*S S 07 30 47.0 +0.4
CASY **Casey** **66.89 192** *e*P **P** **07 21 58.3 -0.6**
CASY **Casey** **66.89 192** *e*P **P** **07 21 58.6 -0.4**
comp=Z,156nm,1.1s,mb6.0
CASY LR LR
comp=Z,18μm,19.0s,MS6.3
KAD **Karad** **66.90 290** *e*P **P** **07 21 58.4 -1.5**
GOA **Goa** **66.93 288** ⇑*i*P **P** **07 22 00.4 +0.2**
GOA *i* x x 07 30 48.1
POO **Poona** **67.44 291** *e*P **P** **07 22 02.0 -1.3**
SMLA **Simla** **67.55 305** *i* P **P** **07 22 03.9 0.0**
SMLA *ex* x 07 22 05.7
comp=Z,140nm,0.4s
SMLA *i* S S 07 30 57.9 -0.4
POHA **Pohakuloa** **67.75 68** *e*P **P** **07 22 08.2 +2.8**
comp=Z,150nm,1.0s,mb6.0
POHA LR LR
comp=Z,15μm,19.0s,MS6.2
SDNR **Sundarnagar** **67.82 305** *e*P **P** **07 22 06.0 +0.4**
BHK **Bhakra** **68.25 305** *e*P **P** **07 22 09.4 +1.1**
AJM **Ajmer** **68.42 300** *e*P **P** **07 22 09.3 -0.2**
AJM AMb AMB 07 22 22.8
comp=Z,242nm,1.2s,mb6.1
DLH **Dalhousie** **68.95 306** *e*P **P** **07 22 11.0 -1.6**
DLH *ex* x 07 23 30.0
THN **Thein Dam** **69.12 306** *e*P **P** **07 22 12.1 -1.5**
MKAR **Makanchi Array** **69.77 322** P **P** **07 22 17.5 +0.1**
comp=Z,92nm,0.8s,mb5.8,baz=98,slow=7.8,SNR=423
MKAR PKP2bc 07 50 24.3
comp=Z,1.3nm,0.9s,baz=298,slow=2.6,SNR=4.4
MKAR **Makanchi Array** **69.77 322** P **P** **07 22 17.5 +0.1**
MKAR ⇑*e* 07 50 24.3
KSH **Kashi** **71.14 313** P **P** **07 22 28.3 +2.4**
KSH AP pP 07 22 38.5 +1.5
KSH XP sP 07 22 42.8 +1.6
KSH PCP PcP 07 22 48.4 +2.5
KSH PP PP 07 25 08.3 +4.2
KSH PPP 07 26 49.9
KSH S S 07 31 41.3 +0.9
KSH XS sS 07 31 57.8 -0.9
KSH SKS 07 32 23.3
KSH SCS ScS 07 32 26.4 -1.3
KSH SS SS 07 36 17.0 +2.4
KSH AMB AMB
comp=Z,323nm,1.2s,mb6.1
KSH AMB AMB
comp=Z,10μm,7.3s
KSH LR LR
comp=N,7μm,13.7s,MS6.2
KSH LR LR
comp=E,6μm,11.9s,MS6.2
KSH LR LR
comp=Z,13μm,19.5s
NIL **Nilore** **71.45 307** *e*P **P** **07 22 30.2 +2.3**
NIL *e* 07 22 54.7
NIL pmax pmax
comp=Z,55nm,1.1s,mb5.4
PPT **Papeete** **71.47 108** *e*P **P** **07 22 27.5 -0.8**
comp=Z,117nm,1.2s,mb5.7
PPT *e*S S 07 31 44.3 -0.7
comp=Z,8μm,28.2s
PPT **Papeete** **71.47 108** *e*LR LR 07 44 18.8
comp=Z,18μm,23.5s,baz=270
PPT **Papeete** **71.47 108** LR LR 07 51 40.9
comp=Z,3μm,18.9s,MS5.6,baz=268,slow=34
PPT **Papeete** **71.47 108** *e*P **P** **07 22 27.5 -0.8**
PPT *e*S S 07 31 44.3 -0.7
PPT pmax pmax
comp=Z,117nm,1.2s
PAE **Paea** **71.48 108** *e*P **P** **07 22 27.2 -1.2**
comp=Z,786nm,1.2s,mb6.5
PAE **Paea** **71.48 108** *e*P **P** **07 22 27.2 -1.2**
PAE pmax pmax
comp=Z,786nm,1.2s,mb6.5
TIAR **Tiarei** **71.69 108** *e*P **P** **07 22 28.9 -0.8**
AAA **Alma-Ata** **71.78 317** *i* P **P** **07 22 30.1 +0.4**
AAA *i* S S 07 31 47.6 +0.1
AAA pmax pmax
comp=Z,6μm,8.5s
AAA smax
comp=E,5μm,13.5s
AAA MLR MLR
comp=Z,5μm,20.0s,MS5.8
AAA **Alma-Ata** **71.78 317** *e*P **P** **07 22 30.0 +0.3**
TVO **Taravao** **71.80 108** *e*P **P** **07 22 29.7 -0.6**
comp=Z,1μm,1.3s,mb6.7
UNV **Unalaska Valle** **71.84 30** *e*P **P** **07 22 29.8 0.0**
comp=Z,88nm,1.0s,mb5.6
ZAA0 **Zalesovo Array** **71.85 330** *e*P **P** **07 22 28.8 -1.0**
ZALV **Zalesovo Beam** **71.85 330** P **P** **07 22 28.8 -1.1**
comp=Z,45nm,0.6s,mb5.6,baz=110,slow=6.2,SNR=73
ZALV LR LR 07 52 52.6
comp=Z,6μm,21.0s,MS5.8,baz=127,slow=35
ULHL **Ulahol** **71.89 316** P **P** **07 22 32.0 +1.6**
SNR=22
TBI **Tubuai** **72.02 114** *e*PP PP 07 25 09.9 -2.0
comp=Z,768nm,28.2s
TBI *e*S S 07 31 49.8 -1.3
comp=Z,5μm,29.0s
TBI *e*SS SS 07 36 25.2 -3.4
comp=Z,4μm,33.0s
TBI *e*LQ 07 41 35.6
comp=Z,27μm,37.8s
TBI *e*LR LR 07 44 23.8
comp=Z,17μm,29.5s
TBI **Tubuai** **72.02 114** *e*P **P** **07 22 30.3 -1.2**
comp=Z,227nm,1.0s,mb6.1
TBI *e*PP PP 07 25 09.9 -2.0
TBI *e*S S 07 31 49.8 -1.3
TBI *e*SS SS 07 36 25.2 -3.4
TBI *e*LQ 07 41 35.6
BHJ **Bhuj** **72.16 295** *e*P **P** **07 22 32.9 +0.6**
BHJ AMb AMB 07 22 46.9
comp=Z,274nm,1.6s,mb5.9
KZA **Kyzart** **72.53 316** P **P** **07 22 35.6 +1.4**
SNR=99
TKM2 **Tokmak 2** **72.58 316** P **P** **07 22 35.4 +1.0**
SNR=6.0
TKM2 **Tokmak 2** **72.58 316** *e*P **P** **07 22 34.7 +0.2**
comp=Z,86nm,0.7s,mb5.8
TKM2 LR LR
comp=Z,7μm,22.0s,MS5.9
BILL **Bilibino** **72.76 10** ⇑*i*P **P** **07 22 35.4 +0.4**
BILL *i* pP 07 22 45.9 -0.3
BILL *i* 07 25 17.0
BILL *i* S S 07 32 01.6 +3.7
BILL *i* SS SS 07 36 46.6 +8.4
BILL pmax pmax
comp=Z,23nm,1.3s,mb5.0
BILL **Bilibino** **72.76 10** *e*P **P** **07 22 35.2 +0.2**
comp=Z,53nm,1.3s,mb5.3
BILL LR LR
comp=Z,5μm,20.0s,MS5.8
KBK **Karagaybulak** **72.93 316** P **P** **07 22 38.4 +1.8**
SNR=53
PMOR **Pomariorio Ree** **72.97 105** *e*P **P** **07 22 36.3 -1.0**
UCH **Uchtor** **73.09 315** P **P** **07 22 40.2 +2.7**
SNR=31
UCH **Uchtor** **73.09 315** *e*P **P** **07 22 39.1 +1.6**
comp=Z,92nm,1.0s,mb5.7
UCH LR LR
comp=Z,3μm,22.0s,MS5.5
NVS **Novosibirsk** **73.10 330** *e*P **P** **07 22 36.9 -0.4**
NVS *e*S S 07 31 59.5 -2.7
NVS pmax pmax
comp=Z,900nm,2.6s,mb6.2
NVS pmax pmax
comp=N,685nm,3.2s
NVS pmax pmax
comp=E,628nm,2.5s
NVS smax
comp=N,70nm,2.5s
NVS smax
comp=E,132nm,2.5s
CHMS **Chumysh** **73.19 316** P **P** **07 22 39.0 +1.0**
SNR=44
FRU **Bishkek** **73.22 316** ⇑*i*P **P** **07 22 39.0 +0.7**
FRU *e* 07 32 06.0
FRU pmax pmax
comp=Z,210nm,1.2s,mb5.9
VAH **Vaihoa** **73.23 105** *e*P **P** **07 22 37.6 -1.3**
AAK **Ala-Archa** **73.24 316** P **P** **07 22 40.0 +1.6**
comp=Z,766nm,1.2s,mb6.5,SNR=28

AAK Ala-Archa 73.24 316 P **P** **07 22 39.3 +0.9**
SNR=89
AAK Ala-Archa 73.24 316⇑*e*P **P** **07 22 38.9 +0.5**
AAK pmax pmax
comp=Z,55nm,1.6s,mb5.2
AAK Ala-Archa 73.24 316 P **P** **07 22 38.8 +0.4**
SNR=38
AAK Ala-Archa 73.24 316 *e*P **P** **07 22 38.8 +0.4**
comp=Z,225nm,1.2s,mb6.0
AAK LR LR
comp=Z,5μm,22.0s,MS5.8
USP Ospenovka 73.45 316 P **P** **07 22 40.2 +0.6**
SNR=12
AML Almayashu 73.64 315 P **P** **07 22 41.8 +1.1**
SNR=149
AML Almayashu 73.64 315 *e*P **P** **07 22 41.7 +1.0**
comp=Z,389nm,1.1s,mb6.2
AML LR LR
comp=Z,6μm,20.0s,MS5.9
KURK Kurchatov 73.67 325 P **P** **07 22 40.8 +0.1**
comp=Z,2μm,1.0s,mb6.9,SNR=45
KURK Kurchatov 73.67 325 P **P** **07 22 40.5 -0.3**
comp=Z,125nm,0.9s,mb5.8,baz=111,slow=4.4,SNR=60
KURK Kurchatov 73.67 325 P **P** **07 22 40.5 -0.2**
KURK pmax pmax
comp=Z,125nm,0.9s,mb5.8
KURK Kurchatov 73.67 325 *e*P **P** **07 22 40.3 -0.4**
comp=Z,294nm,1.0s,mb6.2
KURK LR LR
comp=Z,5μm,20.0s,MS5.8
EKS2 Erkin-Say 73.75 316 P **P** **07 22 41.9 +0.6**
SNR=109
EKS2 Erkin-Say 73.75 316 *e*P **P** **07 22 41.8 +0.4**
comp=Z,191nm,1.1s,mb5.9
EKS2 LR LR
comp=Z,6μm,20.0s,MS5.9
TIXI Tiksi 74.19 357*d i*P **P** **07 22 42.1 -1.3**
TIXI pmax pmax
comp=Z,55nm,2.5s,mb5.0
TIXI Tiksi 74.19 357 *e*P **P** **07 22 42.4 -1.0**
comp=Z,32nm,0.8s,mb5.3
TIXI LR LR
comp=Z,10μm,20.0s,MS6.1
KBL Kabul 75.05 307 P **P** **07 22 49.0 -0.1**
KBL pmax pmax
comp=Z,130nm,0.7s,mb6.0
KBL Kabul 75.05 307 *e*P **P** **07 22 48.6 -0.6**
comp=Z,134nm,0.7s,mb6.0
SDPT Sand Point 75.64 31 *e*P **P** **07 22 53.0 +1.0**
comp=Z,217nm,0.7s,mb6.2
VNDA Vanda 76.08 175 P **P** **07 22 53.2 -1.0**
comp=Z,13nm,0.5s,mb5.1,baz=321,slow=5.9,SNR=34
VNDA LR LR 07 59 02.3
comp=Z,34μm,18.1s,MS6.7,baz=348,slow=38
VNDA Vanda 76.08 175 P **P** **07 22 53.6 -0.6**
VNDA pmax pmax
comp=Z,52nm,0.8s
VNDA Vanda 76.08 175 *e*P **P** **07 22 53.5 -0.7**
comp=Z,52nm,0.8s,mb5.5
KK31 Karatay Array 76.17 315 *i* P **P** **07 22 55.2 -0.2**
KK31 pmax pmax
comp=Z,133nm,0.9s,mb5.9
SBA Scott Base 76.84 174 *e*P **P** **07 23 00.1 +1.5**
comp=Z,60nm,0.9s,mb5.5
SBA LR LR
comp=Z,8μm,19.0s,MS6.0
CHGN Chignik 77.10 30 *e*P **P** **07 23 01.5 +1.2**
TNA Tin City 77.70 20 *e*P **P** **07 23 03.9 +0.5**
comp=Z,88nm,1.2s,mb5.6
BVA0 Borovoye Array 79.27 325 *i* P **P** **07 23 12.0 -0.4**
BVA0 pmax pmax
comp=Z,66nm,1.2s,mb5.4
BVAR Borovoye Array 79.27 325 P **P** **07 23 12.3 -0.1**
comp=Z,90nm,0.6s,mb5.9,baz=117,slow=6.9,SNR=277
BVAR Borovoye Array 79.27 325 P **P** **07 23 12.3 -0.1**
BVAR pmax pmax
comp=Z,90nm,0.6s
BRVK Borovoye 79.34 325 P **P** **07 23 13.6 +0.8**
comp=Z,1μm,0.9s,mb6.9,SNR=44
BRVK Borovoye 79.34 325 P **P** **07 23 14.2 +1.4**
SNR=111
BRVK Borovoye 79.34 325 *e*P **P** **07 23 13.0 +0.2**
BRVK pmax pmax
comp=Z,225nm,0.8s,mb6.2
BRVK MLR MLR
comp=Z,5μm,20.0s,MS5.8
BRVK Borovoye 79.34 325 *e*P **P** **07 23 12.9 +0.2**
comp=Z,225nm,0.8s,mb6.2
BRVK LR LR
comp=Z,5μm,20.0s,MS5.8
OHAK Old Harbor 80.06 31 *e*P **P** **07 23 17.9 +1.3**
comp=Z,299nm,1.1s,mb6.1
SVW2 Sparrevohn 80.39 27 *e*P **P** **07 23 19.5 +1.2**
TAOE Nuku Hiva Isla 80.49 99 *e*S S 07 33 23.1 -1.4
comp=Z,28μm,32.7s
TAOE *e*SS SS 07 38 35.6 -1.7
comp=Z,16μm,27.0s
TAOE *e*LQ 07 44 55.5
comp=Z,42μm,35.1s
TAOE *e*LR LR 07 48 18.0
comp=Z,40μm,22.4s,baz=276
KDAK Kodiak Island 80.61 30 P **P** **07 23 20.0 +0.5**
comp=Z,972nm,1.4s,mb6.5,SNR=23
KDAK Kodiak Island 80.61 30 *e*P **P** **07 23 20.0 +0.5**
KDAK pmax pmax
comp=Z,222nm,1.1s,mb6.0
KDAK MLR MLR
comp=Z,12μm,22.0s,MS6.2
KDAK Kodiak Island 80.61 30 *e*P **P** **07 23 20.0 +0.4**
comp=Z,222nm,1.1s,mb6.0
KDAK LR LR
comp=Z,12μm,22.0s,MS6.2
WBK Wadi Bani Khal 81.81 293 P **P** **07 23 27.8 +1.1**
SNR=15
PPLA Purkeypile 82.55 25 *e*P **P** **07 23 29.8 +0.1**
comp=Z,542nm,1.7s,mb6.3
PPLA *e* pP 07 23 42.1 +1.1
MAW Mawson 82.59 202 P **P** **07 23 29.2 -0.6**
comp=Z,76nm,0.6s,mb5.9,baz=76,slow=6.0,SNR=69
MAW LR LR 07 58 38.7
comp=Z,29μm,18.9s,MS6.7,baz=68,slow=35
MAW Mawson 82.59 202 P **P** **07 23 29.4 -0.4**
MAW pmax pmax
comp=Z,75nm,0.7s
MAW Mawson 82.59 202 *e*P **P** **07 23 28.5 -1.3**
comp=Z,63nm,0.6s,mb5.8
MAW *e*S S 07 33 42.6 -1.5
MAW Mawson 82.59 202 *e*P **P** **07 23 29.3 -0.6**
comp=Z,15nm,0.6s,mb5.2
MAW LR LR
comp=Z,44μm,19.0s,MS6.8
JMDO Jabal Madar 82.59 293 ⇑P **P** **07 23 31.1 +0.3**
SNR=9.6
BIDO Bidbid 82.68 294 P **P** **07 23 31.6 +0.3**
SNR=28
SMDO Samad 82.71 293 P **P** **07 23 32.3 +0.9**
SNR=20
CHUM Lake Minchumin 82.84 25 *e*P **P** **07 23 30.9 -0.2**
comp=Z,229nm,0.8s,mb6.3
FIB Fire Island 82.87 27 *e*P **P** **07 23 31.7 +0.3**
comp=Z,109nm,0.7s,mb6.0
SEW Seward 82.89 29 *e*P **P** **07 23 30.8 -0.7**
comp=Z,288nm,1.3s,mb6.2
RC01 Rabbit Creek A 83.05 28 *e*P **P** **07 23 31.2 -1.1**
comp=Z,158nm,0.7s,mb6.2
KTH Kantishna Hill 83.31 25 *e*P **P** **07 23 33.0 -0.6**
comp=Z,297nm,1.3s,mb6.2
HOQ Hoqain 83.43 294 P **P** **07 23 36.1 +0.9**
SNR=45
BSY Bisya 83.46 293 P **P** **07 23 35.9 +0.6**
SNR=15
BPAW Bear Paw Mtn. 83.46 25 *e*P **P** **07 23 33.9 -0.5**
comp=Z,249nm,1.7s,mb6.0
MSEY Mahe Island 83.47 266 PFAKE 07 23 40.0 +4.5
MSEY LR LR
comp=Z,3μm,19.0s,MS5.7
PMR Palmer 83.48 27 *e*P **P** **07 23 34.0 -0.5**
PMR pmax pmax
comp=Z,281nm,1.3s,mb6.1
PMR Palmer 83.48 27 *e*P **P** **07 23 34.0 -0.5**
comp=Z,281nm,1.3s,mb6.1
TRF Thorofare Moun 83.55 25 *e*P **P** **07 23 34.1 -0.7**
comp=Z,73nm,0.9s,mb5.8
TRF *e* 07 23 49.6
ARQ Araqi 84.13 294 P **P** **07 23 39.6 +0.9**
SNR=23
MCK McKinley 84.21 25 *e*P **P** **07 23 37.5 -0.7**
comp=Z,212nm,1.1s,mb6.2
ABKT Ailbek 84.34 308 P **P** **07 23 40.1 +0.6**
comp=Z,2μm,1.2s,mb7.0,SNR=39
BANOM Banah 84.56 296 P **P** **07 23 41.7 +0.8**
SNR=56
HATD Hatta, Dubai 84.62 295 P **P** **07 23 41.2 0.0**
SNR=40
AB31 Akbulak array 84.72 320 P **P** **07 23 39.9 -1.2**
AB31 pmax pmax
comp=Z,95nm,0.7s,mb6.0
COLD Coldfoot 84.79 22 *e*P **P** **07 23 42.0 +0.9**
comp=Z,85nm,1.0s,mb5.8
COLA College 84.99 24 P **P** **07 23 41.2 -0.9**
COLA pmax pmax
comp=Z,140nm,1.1s,mb6.0
COLA College 84.99 24 *e*P **P** **07 23 41.0 -1.1**
comp=Z,136nm,1.1s,mb6.0
COLA LR LR
comp=Z,7μm,20.0s,MS6.1
RKT Rikitea 85.32 113 *e*PP PP 07 27 00.9 -2.1
comp=Z,876nm,27.5s
RKT *e*S S 07 34 11.8 -1.5
comp=Z,4μm,35.2s
RKT *e*SS SS 07 39 49.0 +0.4
comp=Z,3μm,30.0s
RKT *e*LQ 07 46 44.4
comp=Z,11μm,42.5s
RKT *e*LR LR 07 51 04.4
comp=Z,10μm,25.2s,baz=270
PAX Paxson 85.50 26 P **P** **07 23 44.8 +0.1**
PAX Paxson 85.50 26 *e*P **P** **07 23 44.6 -0.1**
comp=Z,128nm,1.1s,mb6.1
SVE Sverdlovsk 85.67 327⇓*e*P **P** **07 23 46.0 +0.3**
SVE *e* 07 27 05.8
SVE *e*PPP 07 28 58.2
SVE *e*S S 07 34 09.0 -6.4
SVE *e*SSS 07 43 27.4
SVE pmax pmax
comp=Z,97nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,6μm,21.0s,MS6.0
RBK Rabkut 85.85 288 ⇑P **P** **07 23 47.1 -0.3**
SNR=6.7
AKTK Aktyubinsk 86.14 321 P **P** **07 23 48.0 -0.2**
AKTO Aktyubinsk 86.14 321 P **P** **07 23 48.0 -0.2**
comp=Z,22nm,0.9s,mb5.4,baz=94,slow=6.0,SNR=31
AKTO Aktyubinsk 86.14 321 P **P** **07 23 48.0 -0.2**
AKTO pmax pmax
comp=Z,22nm,0.9s,mb5.4
MENT Mentasta 86.28 27 *e*P **P** **07 23 49.3 +0.7**
WHFO Wadi Hawf 86.29 288 ⇓P **P** **07 23 49.2 -0.4**
SNR=7.8
ABTO Aybut 86.71 287 P **P** **07 23 52.6 +0.9**
SNR=11
ARU Arti 86.73 327*d i*P **P** **07 23 49.7 -1.2**
ARU *e* 07 27 14.1
ARU *e*S SKSac 07 34 12.8 -2.1
ARU *e*SS SS 07 40 11.6 +3.8
ARU pmax pmax
comp=Z,86nm,1.2s,mb5.9
ARU MLR MLR
comp=Z,4μm,21.0s,MS5.8
ARU Arti 86.73 327 *e*P **P** **07 23 49.4 -1.5**
comp=Z,120nm,0.9s,mb6.1
ARU LR LR
comp=Z,4μm,20.0s,MS5.8
QSPA South Pole Qui 87.57 180 PFAKE 07 24 00.0 +5.4
QSPA LR LR
comp=Z,34μm,20.0s,MS6.8
PNL Peninsula 87.73 30 *e*P **P** **07 23 55.2 -0.5**
comp=Z,174nm,1.0s,mb6.2
EGAK Eagle 87.75 25 *e*P **P** **07 23 56.0 +0.3**
comp=Z,325nm,1.2s,mb6.4
EGAK LR LR
comp=Z,8μm,21.0s,MS6.1
SOKR Solikamsk 88.13 330⇓*i*P **P** **07 23 57.5 -0.1**
SOKR S S 07 34 24.2 -15
SOKR SS SS 07 40 33.3 +5.3
SOKR pmax pmax
comp=Z,7μm,18.2s
SOKR MLR MLR
comp=Z,7μm,19.0s,MS6.1
DAWY Dawson 88.39 26 *e*P **P** **07 23 59.3 +0.5**
PTCN Pitcairn Islan 89.73 115 PFAKE 07 24 20.0 +14
PTCN LR LR
comp=Z,4μm,21.0s,MS5.8
SKAG Skagway 89.76 31 *e*P **P** **07 24 06.0 +0.7**
comp=Z,272nm,1.3s,mb6.4
ABPO Ambohimpanom 91.02 251 PFAKE 07 24 20.0 +8.0
ABPO LR LR
comp=Z,3μm,19.0s,MS5.8
INK Inuvik 91.21 22 PKiKP PKiKP 07 29 04.4 +0.2
comp=Z,1.6nm,0.6s,baz=238,slow=8.2,SNR=4.5
INK PKKPbc PKKPbc 07 41 35.1 -2.2
comp=Z,2.5nm,0.7s,baz=45,slow=1.6,SNR=11
INK Inuvik 91.21 22 *e*P **P** **07 24 11.1 -0.8**
comp=Z,47nm,1.1s,mb5.7
SYO Syowa Base 91.22 201⇑*e*P **P** **07 24 10.0 -1.9**
SYO Syowa Base 91.22 201⇑*i*PcP PcP 07 24 11.8 -1.0
SYO Syowa Base 91.22 201⇑*i*sP sP 07 24 23.5 -3.9
UMR Umm Al-Rimmam 92.37 299 *e*P **P** **07 24 16.3 -1.8**
baz=299
UMR AMb AMB 07 24 29.9
comp=Z,111nm,1.1s,mb6.1,baz=299
DLBC Dease Lake 92.46 32 *e*P **P** **07 24 18.5 +0.7**
RDF Al-Radifah 92.50 299 *e*P **P** **07 24 16.6 -2.1**
baz=299
RDF AMb AMB 07 24 32.4
comp=Z,150nm,1.4s,mb6.2,baz=299
MIB Mutribah 92.70 300 *e*P **P** **07 24 18.1 -1.6**
baz=300
MIB AMb AMB 07 24 30.8
comp=Z,167nm,1.1s,mb6.4,baz=300
MAK Makhachkala 92.78 313 *e*P **P** **07 24 19.3 -0.4**
MAK *i* 07 28 03.6
MAK *i* PPP 07 30 08.0
MAK *i* S SKSac 07 34 49.7 -1.2
MAK *e*SP SP 07 36 38.5 +4.7
MAK *i* PS PS 07 36 41.5 +2.8
MAK pmax pmax
comp=Z,309nm,2.1s,mb6.4
NAY Al-Naaiem 92.78 299 *e*P **P** **07 24 18.4 -1.5**
baz=299
NAY AMb AMB 07 24 33.6
comp=Z,119nm,1.0s,mb6.3,baz=299
DGRG David-gareji 94.36 311 P **P** **07 24 28.6 +1.6**
BHD Baghdad 95.25 303 *e*P **P** **07 24 32.0 +0.7**
ONI Oni 95.77 312 P **P** **07 24 36.1 +2.7**
MSL Mosul 96.23 306 *e*P **P** **07 24 35.0 -0.7**
MSL *e*SKS 07 35 08.0
MSL *e*S SKSac 07 35 24.0 +14
KIV Kislovodsk 96.27 314⇓*e*P **P** **07 24 42.9 +7.3**
KIV *e* pP 07 24 53.9 +6.8
KIV *i* 07 28 32.6
KIV *e*PPP 07 30 36.9
KIV *i* 07 35 09.3
KIV *i* 07 35 56.7
KIV pmax pmax
comp=Z,19nm,1.3s,mb5.4
KIV Kislovodsk 96.27 314⇑*i*P **P** **07 24 34.5 -1.1**
KIV LR LR
comp=Z,4μm,19.0s,MS5.9
NLWA Neilton Lookou 96.49 43 PFAKE 07 24 50.0 +13
NLWA LR LR
comp=Z,4μm,20.0s,MS5.9
VRHR Novokhopersk 96.55 321 *e*P **P** **07 24 35.4 -1.3**
VRHR *e* 07 35 07.7
VRHR *e*S S 07 35 54.9 -0.1
VRHR *e*SS SS 07 42 41.5 +12
VRHR pmax pmax
comp=Z,40nm,0.9s,mb5.8
VRHR pmax pmax
comp=N,20nm,1.0s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR MLR MLR
comp=Z,4μm,22.0s,MS5.9
VRHR MLR MLR
comp=N,4μm,24.0s,MS6.0
VRHR MLR MLR
comp=E,4μm,23.0s,MS6.0
KLMR Klimovskoe 96.74 331 *e*P **P** **07 24 34.1 -3.3**
KLMR pmax pmax
comp=Z,74nm,1.3s,mb6.0
KHMM Horse Mountain 96.96 49 *e*P **P** **07 24 41.4 +2.5**
COR Corvallis 97.06 46 PFAKE 07 24 50.0 +11
COR LR LR
comp=Z,6μm,21.0s,MS6.1
HUMO Hull Mountain 97.44 48 *e*P **P** **07 24 41.4 +0.4**
comp=Z,14nm,0.9s,mb5.4
HUMO LR LR
comp=Z,6μm,20.0s,MS6.1
HOPS Hopland 97.56 51 PFAKE 07 24 50.0 +8.4
HOPS LR LR
comp=Z,9μm,20.0s,MS6.2
LVZ Lovozero 97.61 338 PFAKE 07 24 50.0 +8.8
LVZ LR LR
comp=Z,4μm,20.0s,MS5.9
YBH Yreka Blue Hor 97.68 48 PFAKE 07 24 50.0 +7.9
YBH LR LR
comp=Z,6μm,20.0s,MS6.0
JCW Jim Creek 97.74 42 *e*P **P** **07 24 43.2 +1.1**
MCCM Marconi Confer 97.76 52 PFAKE 07 24 50.0 +7.5
MCCM LR LR
comp=Z,4μm,20.0s,MS6.0
WDC Whiskeytown Da 97.88 50 *e*P **P** **07 24 43.7 +0.7**
WDC Whiskeytown Da 97.88 50 *e*P **P** **07 24 43.6 +0.6**
comp=Z,28nm,1.2s,mb5.7
WDC LR LR
comp=Z,9μm,19.0s,MS6.3
VOR Voronezh 98.00 322 *e*P **P** **07 24 42.0 -1.3**
VOR pmax pmax
comp=Z,140nm,1.8s,mb6.2
VORD Divnogorie 98.02 321 *e*P **P** **07 24 41.8 -1.6**
VORD *e*S S 07 36 01.1 -6.5
VORD *e*SP SP 07 37 36.0 +5.2
VORD *e*SS SS 07 42 55.4 +5.4
VORD pmax pmax
comp=Z,20nm,0.8s,mb5.7
VORD pmax pmax
comp=N,70nm,0.9s
VORD pmax pmax
comp=E,50nm,0.8s
VORD smax
comp=N,600nm,4.6s
VORD smax
comp=Z,430nm,4.1s
VORD smax
comp=E,410nm,4.2s
VORD MLR MLR
comp=N,4μm,20.0s,MS6.0
VORD MLR MLR
comp=Z,4μm,20.0s,MS5.8
VORD MLR MLR
comp=E,3μm,21.0s,MS6.0
VSR Storozhevoye 98.08 321 *e*P **P** **07 24 42.1 -1.5**
VSR *e* 07 35 15.7
VSR *e*S S 07 36 04.1 -4.0
VSR *e*SP SP 07 37 35.9 +4.5
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb5.4
VSR pmax pmax
comp=E,5.0nm,0.4s
VSR smax
comp=N,310nm,4.1s
VSR smax
comp=E,290nm,4.6s
VSR smax
comp=Z,170nm,4.6s
VSR MLR MLR
comp=Z,1μm,19.0s,MS5.4
VSR MLR MLR
comp=N,2μm,21.0s,MS5.8
VSR MLR MLR
comp=E,3μm,21.0s,MS5.8
APA Apatity 98.15 338⇑*i*P **P** **07 24 41.8 -1.8**
APA *i* 07 24 58.3
APA *i* 07 35 18.0
APA *e*S S 07 36 03.0 -5.0
APA *i* PS PS 07 37 36.0 -0.5
APA pmax pmax
comp=Z,130nm,1.5s,mb6.2
APA pmax pmax
comp=Z,2μm,4.5s
APA MLR MLR
comp=Z,8μm,25.0s,MS6.1
MOS Moscow 98.42 326 *e*P **P** **07 24 42.6 -2.5**
MOS *e* 07 28 44.2
MOS *e* 07 35 22.9
MOS *e*SS SS 07 42 53.1 -2.1
MOS pmax pmax
comp=Z,102nm,1.1s,mb6.3
MOS MLR MLR
comp=E,8μm,21.0s
MOS MLR MLR
comp=Z,8μm,21.0s,MS6.2
MOS Moscow 98.42 326 *e*P **P** **07 24 42.3 -2.8**
SOC Sochi 98.44 314 *e*P **P** **07 24 39.3 -6.2**
SOC *e* 07 28 49.3
SOC *e*S SKSac 07 35 14.0 -6.8
SOC *e*PS PS 07 37 30.6 -10
SOC *e*SS SS 07 43 06.4 +10
OHCM Honcut 98.78 51 *e*P **P** **07 24 47.8 +0.7**
ETW Entiat 98.87 42 *e*P **P** **07 24 46.8 -0.5**
comp=Z,18nm,0.9s,mb5.6
SAO San Andreas Ge 98.98 53 PFAKE 07 25 00.0 +12
SAO LR LR
comp=Z,6μm,19.0s,MS6.1
KBS Kingsbay 99.03 351 *e* **P** **07 24 54.5 +7.1**
KBS *e*PP PP 07 28 54.8 +5.3
KBS *e*SKS 07 35 23.1
KBS *e*SS SS 07 43 05.1 +2.3
KBS AMS AMS 08 06 25.6
comp=Z,5μm,19.3s,MS6.0
KBS Kingsbay 99.03 351 PFAKE 07 25 00.0 +13
KBS LR LR
comp=Z,5μm,21.0s,MS6.0
OBN Obninsk 99.11 325⇑*i*P **P** **07 24 46.9 -1.3**
OBN *i* *PP pP 07 24 55.2 -4.4
OBN *e* 07 28 57.7
OBN PPP 07 31 02.0
OBN *e* 07 35 23.5
OBN *e* 07 36 16.3
OBN *i* PS PS 07 44 46.6 -2.8
OBN *i* SS SS 07 43 09.4 +4.5
OBN pmax pmax
comp=Z,59nm,1.2s,mb6.0
OBN MLR MLR
comp=Z,6μm,20.0s,MS6.1
OBN Obninsk 99.11 325 *e*P **P** **07 24 46.7 -1.5**
comp=Z,161nm,1.5s,mb6.3
OBN LR LR
comp=Z,7μm,22.0s,MS6.1
MOD Modoc 99.46 48 *e*P **P** **07 24 50.5 +0.4**
comp=Z,21nm,1.0s,mb5.6
MOD LR LR
comp=Z,4μm,19.0s,MS6.0
RSW Rattlesnake Hi 99.50 43 *e*P **P** **07 24 49.0 -1.2**
comp=Z,6.4nm,0.7s,mb5.2
HAWA Hanford 99.55 43 PFAKE 07 25 00.0 +10
HAWA LR LR
comp=Z,5μm,19.0s,MS6.0
YKA Yellowknife Ar 99.58 27 P Pdif 07 24 49.6 -0.7
comp=Z,14nm,1.0s,baz=286,slow=4.6,SNR=71
YKA PP PP 07 28 59.0 +5.0
comp=Z,2.5nm,1.0s,baz=283,slow=7.1,SNR=5.1
YKA PKiKP PKiKP 07 29 18.8 -0.2
comp=Z,1.6nm,0.6s,baz=300,slow=1.9,SNR=12
YKA PKKPbc PKKPbc 07 41 10.3 -4.3
comp=Z,3.4nm,0.6s,baz=102,slow=2.7,SNR=44
YKA LR LR 08 07 09.4
comp=Z,594nm,20.1s,MS5.1,baz=30,slow=34
YKA Yellowknife Ar 99.58 27 P Pdif 07 24 49.6 -0.7
YKA 07 28 59.0
YKA pmax pmax
comp=Z,14nm,1.0s
YKA pmax pmax
comp=Z,3.0nm,1.0s
KEV Kevo 99.75 341 *e*P Pdif 07 24 47.7 -3.3
comp=Z,7.9nm,0.7s
KEV LR LR
comp=Z,7μm,22.0s,MS6.1
MALT Malatya 99.85 308 PFAKE 07 25 00.0 +8.5
MALT LR LR
comp=Z,3μm,20.0s,MS5.8
ANN Anapa 99.95 315 *e*P Pdif 07 24 55.5 +3.6
ANN *e* 07 35 26.5
ANN *e*SS SS 07 43 31.0 +14

ANN pmax pmax
comp=Z,106nm,1.3s,mb6.1
BJO Bjornoya 100.00 346 *e*PP PP 07 29 04.3 +7.5
BJO *e*SS SS 07 43 19.2 +2.9
JOF Joensuu 100.16 334 *e*p Pdif 07 24 50.8 -2.0
comp=Z,9.6nm,0.6s
JOF Joensuu 100.16 334 *e*P Pdif 07 24 50.8 -2.0
JOF pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 100.32 341 P Pdif 07 24 52.0 -1.6
comp=Z,20nm,0.7s,baz=77,slow=7.0,SNR=40
ARCES PKiKP PKiKP 07 29 21.0 +0.8
comp=Z,5.3nm,0.8s,baz=113,slow=0.9,SNR=8.1
ARCES ARCESS Array B 100.32 341 P Pdif 07 24 52.0 -1.6
ARCES pmax pmax
comp=Z,20nm,0.7s
ARCES pmax pmax
comp=Z,5.0nm,0.9s
PAHR Pah Rah Range 100.36 50 *e*Pdif Pdif 07 24 55.4 +1.7
WVOR Wild Horse Val 100.64 47 *e*P Pdif 07 24 55.4 +0.4
WVOR *e* 07 29 02.5
WVOR pmax pmax
comp=Z,21nm,1.1s
WVOR Wild Horse Val 100.64 47 *e*Pdif Pdif 07 24 55.4 +0.5
comp=Z,21nm,1.1s
WVOR *e*PP PP 07 29 02.5 -0.2
NEW Newport 100.92 41 PFAKE 07 25 10.0 +14
NEW LR LR
comp=Z,6μm,20.0s,MS6.1
KTK1 Kautokeino 101.27 341 *e*SKS 07 35 28.9
KTK1 *e*SS SS 07 43 35.9 +1.7
RES Resolute Bay 101.28 13 PKKPbc PKKPbc 07 41 08.3 -1.8
comp=Z,2.0nm,0.7s,baz=110,slow=5.4,SNR=7.7
RES Resolute Bay 101.28 13 *e*P Pdif 07 24 56.8 -1.0
BMO Blue Mountains 101.29 45 PFAKE 07 25 10.0 +12
BMO LR LR
comp=Z,4μm,20.0s,MS5.9
NVAR Mina Array Bea 101.33 51 P Pdif 07 24 59.0 +0.9
comp=Z,3.7nm,0.8s,baz=259,slow=5.7,SNR=18
NVAR PP PP 07 29 08.1 0.0
comp=Z,5.2nm,1.1s,baz=259,slow=7.2,SNR=5.1
NVAR PKKPbc PKKPbc 07 41 04.6 -4.2
comp=Z,0.6nm,0.6s,baz=137,slow=3.4,SNR=4.0
NVAR Mina Array Bea 101.33 51 P Pdif 07 24 59.0 +0.9
NVAR PP PP 07 29 08.1 0.0
NVAR PKKPbc PKKPbc 07 41 04.6 -4.2
BMN Battle Mountai 101.93 49 PFAKE 07 25 10.0 +9.3
BMN LR LR
comp=Z,5μm,20.0s,MS6.1
DAC Darwin (Calif) 102.11 54 PFAKE 07 25 10.0 +8.5
DAC LR LR
comp=Z,10μm,19.0s,MS6.3
SNAA Sanae 102.12 192 *e*Pdiff Pdif 07 25 00.4 -1.2
SNAA *e* 07 25 04.2
SNAA *e* 07 25 11.7
SNAA *e* 07 25 17.2
SNAA *e* 07 29 14.4
SNAA *e* 07 29 19.0
SNAA Sanae 102.12 192 *e*P Pdif 07 25 00.8 -0.8
SNAA pmax pmax
comp=Z,11nm,1.1s
SNAA Sanae 102.12 192 *e*Pdif Pdif 07 25 00.8 -0.8
comp=Z,11nm,1.1s
SNAA *e* 07 29 07.0
TPH Tonopah 102.21 52 PFAKE 07 25 10.0 +8.0
TPH LR LR
comp=Z,6μm,19.0s,MS6.2
SIM Simferopol' 102.27 315 P Pdif 07 25 01.0 -1.2
SIM 07 29 13.2
SIM 07 35 36.2
SIM pmax pmax
comp=Z,20nm,0.9s
SIM pmax pmax
comp=Z,140nm,9.3s
TRO Tromso 102.38 342 *e*PP PP 07 29 16.1 +1.3
TRO *e*SKS 07 35 38.0
TRO *e*SS SS 07 43 53.9 +4.4
TRO AMS AMS 08 15 03.1
comp=Z,7μm,18.8s,MS6.2
BSMT Bassoo Peak 102.53 42 *e*Pdif Pdif 07 25 04.8 +1.4
comp=Z,20nm,1.4s
KAF Kangasniemi 102.61 334 *e*p Pdif 07 25 01.8 -2.0
comp=Z,28nm,1.0s
KAF Kangasniemi 102.61 334 *e*P Pdif 07 25 01.8 -2.0
KAF pmax pmax
comp=Z,29nm,1.0s
MSO Missoula 103.29 42 PFAKE 07 25 20.0 +13
MSO LR LR
comp=Z,4μm,19.0s,MS6.0
ELK Elko 103.39 49 PFAKE 07 25 20.0 +13
ELK LR LR
comp=Z,8μm,19.0s,MS6.2
BR131 Keskin Array S 103.40 310 *e*Pdif Pdif 07 25 05.8 -1.4
comp=Z,2.4nm,0.6s
BR131 LR LR
comp=Z,2μm,19.0s,MS5.6
BRTR Keskin Array B 103.40 310 Pdiff Pdif 07 25 06.2 -1.1
comp=Z,3.7nm,0.8s,baz=121,slow=3.7,SNR=20
BRTR PP PP 07 29 27.0 +3.5
comp=Z,3.8nm,0.9s,baz=94,slow=7.0,SNR=6.6
BRTR Keskin Array B 103.40 310 P Pdif 07 25 06.2 -1.1
BRTR 07 29 27.0
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR pmax pmax
comp=Z,4.0nm,0.9s
HLID Hailey 103.54 46 *e*Pdif Pdif 07 25 09.9 +2.1
comp=Z,21nm,1.6s
HLID LR LR
comp=Z,6μm,19.0s,MS6.2
VNA2 Neumayer--Watz 103.60 191 *e*Pdiff Pdif 07 25 09.5 +1.4
VNA2 *e* 07 25 12.1
VNA2 *e* 07 25 18.4
VNA2 *e* 07 25 23.9
VNA2 *e* 07 29 30.0
VNA2 *e* 07 29 34.1
VNA3 Neumayer Olymp 103.74 190 *e*Pdiff Pdif 07 25 09.3 +0.5
VNA3 *e* 07 25 12.1
VNA3 *e* 07 25 18.8
VNA3 *e* 07 25 23.4
VNA3 *e* 07 29 29.3
VNA3 *e* 07 29 35.1
VNA1 Neumayer--Stat 103.99 191 *e*Pdiff Pdif 07 25 09.0 -0.9
VNA1 *e* 07 25 12.5
VNA1 *e* 07 25 19.6
VNA1 *e* 07 25 25.4
VNA1 *e* 07 29 27.7
CSS Prodhromos 104.28 305 PFAKE 07 25 20.0 +8.8
CSS LR LR
comp=Z,3μm,21.0s,MS5.8
AKASG Malin Array Be 104.35 322 Pdiff Pdif 07 25 10.6 -0.9
comp=Z,3.1nm,0.7s,baz=61,slow=4.8,SNR=15
AKASG PKiKP PKiKP 07 29 29.8 +1.9
comp=Z,4.1nm,0.9s,baz=67,slow=2.2,SNR=5.7
AKASG Malin Array Be 104.35 322 P Pdif 07 25 10.6 -0.9
AKASG *i* 07 29 29.8
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 104.35 322 Pdif Pdif 07 25 10.6 -0.9
AKBB Malin Array Si 104.35 322 *e*P Pdif 07 25 11.5 0.0
KIEV Kiev 104.36 322 *e*P Pdif 07 25 10.4 -1.1
KIEV pmax pmax
comp=Z,36nm,1.4s
KIEV MLR MLR
comp=Z,5μm,22.0s,MS6.0
KIEV Kiev 104.36 322 *e*Pdif Pdif 07 25 10.4 -1.2
comp=Z,36nm,1.4s
KIEV LR LR
comp=Z,5μm,22.0s,MS6.0
DAG Danmarks Havn 104.65 355⇑ *i*P Pdif 07 25 11.0 -1.8
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 104.65 355⇑ *i*P Pdif 07 25 11.0 -1.8
comp=Z,5.9nm,0.9s
BOZ Bozeman (W) 105.10 43 PFAKE 07 29 40.0 +10
BOZ LR LR
comp=Z,4μm,21.0s,MS5.9
DUG Dugway 105.30 49 P Pdif 07 25 19.9 +4.2
DUG pmax pmax
comp=Z,14nm,1.3s
DUG Dugway 105.30 49 *e*Pdif Pdif 07 25 19.0 +3.3
comp=Z,14nm,1.4s
DUG *e*PKP PKiKP 07 29 30.6 +0.5
DUG LR LR
comp=Z,6μm,20.0s,MS6.1
KIS Kishinev 105.50 318 *e*P Pdif 07 25 23.0 +6.4
KIS *e* 07 29 40.0
KIS *e* 07 37 14.0
KIS *e*PS SP 07 38 42.0 -8.3
KIS pmax pmax
comp=Z,1μm,10.0s
KIS Kishinev 105.50 318 *e*PKP PKiKP 07 29 25.0 -5.2
KIS Kishinev 105.50 318 *i* PP PP 07 29 40.0 +1.2
comp=Z,1μm,10.0s
KIS *e*SKS SKSac 07 36 00.0 +5.7
KIS *e*SKKS SKKSac 07 36 50.0 +9.1
KIS *e*S Sdif 07 37 14.0 +4.0
KIS Kishinev 105.50 318 *e*PS SP 07 38 42.0 -8.3
KIS LRM 08 16 20.0
comp=Z,3μm,19.0s
RRI2 Red Ridge 105.80 46 *e*Pdif Pdif 07 25 21.4 +3.5
comp=Z,16nm,1.4s
EGMT Eagleton 105.80 41 PFAKE 07 29 40.0 +9.3
EGMT LR LR
comp=Z,7μm,21.0s,MS6.2
MVU Marysvale 106.05 51 PFAKE 07 29 40.0 +8.5
MVU LR LR
comp=Z,5μm,21.0s,MS6.0
AHID Auburn Hatcher 106.08 46 PFAKE 07 29 40.0 +8.6
AHID LR LR
comp=Z,5μm,22.0s,MS6.0
ISP Isparta 106.11 309 PFAKE 07 29 40.0 +8.4
ISP LR LR
comp=Z,2μm,21.0s,MS5.7
LKWY Lake 106.18 44 PFAKE 07 29 40.0 +8.4
LKWY LR LR
comp=Z,8μm,20.0s,MS6.2
RLMT Red Lodge 106.84 43 PFAKE 07 29 40.0 +7.2
RLMT LR LR
comp=Z,5μm,19.0s,MS6.1
SUW Suwalki 106.92 326 *e*PKP Pdif 07 25 22.9 0.0
SUW LMZ 08 15 48.2
comp=Z,7μm,21.9s
BW06 Boulder Array 107.18 46 PFAKE 07 29 40.0 +6.5
BW06 LR LR
comp=Z,4μm,20.0s,MS5.9
PDAR Pinedale Array 107.18 46 Pdiff Pdif 07 25 28.1 +4.0
comp=Z,1.5nm,0.8s,baz=235,slow=3.1,SNR=8.7
PDAR PKiKP PKiKP 07 29 35.2 +1.8
comp=Z,0.9nm,0.8s,baz=240,slow=1.0,SNR=5.2
PDAR PKKPbc PKKPbc 07 40 51.1 -0.2
comp=Z,1.3nm,0.8s,baz=106,slow=5.5,SNR=6.3
NSS Namsos 107.33 339 *e*PP PP 07 29 57.8 +6.1
NSS AMS AMS 08 14 10.9
comp=Z,9μm,23.7s,MS6.2
BUR08 Bucovina Ar. S 107.71 320 *e*Pdif Pdif 07 25 25.6 -0.8
LVV L'vov 107.80 322 *e*P Pdif 07 25 25.0 -1.8
LVV *e*PPP 07 32 11.0
LVV *e* 07 35 58.0
LVV *i* PS PS 07 39 08.0 -11
RPN Rapa Nui 107.97 119 PFAKE 07 29 50.0 +15
RPN LR LR
comp=Z,3μm,19.0s,MS5.9
FFC Flin Flon 108.28 32 PFAKE 07 29 50.0 +15
FFC LR LR
comp=Z,5μm,20.0s,MS6.1
KWP Kalwaria 108.67 322 PFAKE 07 29 50.0 +14
KWP LR LR
comp=Z,8μm,22.0s,MS6.2
MVCO Mesa Verde 109.18 51 PFAKE 07 29 50.0 +13
MVCO LR LR
comp=Z,4μm,20.0s,MS6.0
UZH Uzhgorod 109.26 321 *e*P Pdif 07 25 30.0 -3.3
UZH *e* 07 30 06.0
UZH *e* 07 36 12.0
UZH *i* PS PS 07 39 27.0 -6.8
UZH *i* 07 40 26.0
UZH *i* SS SS 07 45 20.0 -4.4
LSZ Lusaka 109.49 253 *e*PKP PKiKP 07 29 39.7 +1.2
LSZ LR LR
comp=Z,3μm,20.0s,MS5.9
NB2 NORSAR Subarra 109.55 336 P Pdif 07 25 33.5 -1.1
comp=Z,9.4nm,1.0s,baz=58,slow=4.6
NOA NORSAR Array B 109.55 336 Pdiff Pdif 07 25 33.6 -0.9
comp=Z,3.7nm,0.8s,baz=60,slow=4.6,SNR=8.0
NOA NORSAR Array B 109.55 336 P Pdif 07 25 33.7 -0.9
NOA pmax pmax
comp=Z,4.0nm,0.9s
BOSA Boshof 109.62 239 PKiKP PKiKP 07 29 38.8 +0.3
comp=Z,2.6nm,0.6s,baz=114,slow=6.2,SNR=7.4
BOSA Boshof 109.62 239 PKPdf PKiKP 07 29 38.8 +0.3
BOSA LR LR
comp=Z,3μm,19.0s,MS5.9
STHS Stebnicka Huta 109.64 322 PDIF Pdif 07 25 39.0 +4.0
STHS *e* 07 29 09.0
STHS Stebnicka Huta 109.64 322 *e*Pdif Pdif 07 25 39.0 +4.0
STHS *e* 07 29 09.0
CRVS Cervenica-Dubn 109.69 322 PDIF Pdif 07 25 36.5 +1.3
CRVS *e* 07 30 24.3
CRVS Cervenica-Dubn 109.69 322 *i* Pdif Pdif 07 25 36.5 +1.3
CRVS *e* 07 30 24.3
NAO01 NORSAR Array S 109.79 336 PFAKE 07 29 50.0 +12
NAO01 LR LR
comp=Z,8μm,22.0s,MS6.3
MOL Molde 110.08 338 *e*PP PP 07 30 11.2 -0.5
MOL AMS AMS 08 15 54.8
comp=Z,9μm,30.0s,MS6.2
LBTB Lobatse 110.15 242 *e*PKiKP PKiKP 07 29 40.4 +0.8
LBTB MLR MLR
comp=Z,4μm,19.0s,MS6.0
NIE Niedzica 110.21 322 *e*PKiKP PKiKP 07 29 42.0 +3.1
NIE Niedzica 110.21 322 *i* PKiKP PKiKP 07 29 42.0 +3.1
OJC Ojcow 110.23 323 *e*PKiKP PKiKP 07 29 39.7 +0.8
OJC *e*SKSac SKSac 07 36 15.0 +0.5
OJC *e*SP SP 07 39 39.9 +1.7
OJC L 08 22 57.8
comp=Z,5.0nm,18.7s
OJC Ojcow 110.23 323 *i* PKiKP PKiKP 07 29 39.7 +0.8
OJC *e* 07 36 15.0
OJC *e*SP SP 07 39 39.0 +0.8
OJC Ojcow 110.23 323 *e*PKPdf PKiKP 07 29 39.7 +0.8
OJC *e*SKSac SKSac 07 36 15.0 +0.5
OJC *e*SP SP 07 39 39.0 +0.8
OJC LR LR
comp=Z,5μm,18.7s,MS6.1
RSSD Black Hills 110.70 43 *e*PKiKP PKiKP 07 29 40.4 +0.4
RSSD MLR MLR
comp=Z,5μm,20.0s,MS6.1
ISCO Idaho Springs 110.78 48 PFAKE 07 29 50.0 +10
ISCO LR LR
comp=Z,10μm,19.0s,MS6.4
BSD Bornholm Skovb 110.87 329 *i* P PP 07 30 17.2 -0.4
comp=Z,16nm,1.0s
BSD
comp=Z,6μm,20.0s
PMSA Palmer Station 110.89 170 PFAKE 07 29 50.0 +10
PMSA LR LR
comp=Z,8μm,19.0s,MS6.3
KONO Kongsberg 110.99 335 *e*PP PP 07 30 17.4 -0.9
KONO AMS AMS 08 18 51.2
comp=Z,11μm,19.0s,MS6.5
KONO Kongsberg 110.99 335 PFAKE 07 29 50.0 +10
KONO LR LR
comp=Z,14μm,20.0s,MS6.5
PSZ Piszkesteto 111.01 321 PFAKE 07 29 50.0 +10
PSZ LR LR
comp=Z,7μm,21.0s,MS6.2
IDI Anoyia 111.04 307 PKiKP PKiKP 07 29 42.6 +1.6
comp=Z,7.1nm,0.6s,baz=219,slow=7.8,SNR=5.3
ANMO Albuquerque 111.28 53 PFAKE 07 29 50.0 +8.6
ANMO LR LR
comp=Z,6μm,19.0s,MS6.2
OKC Ostrava-Krasne 111.36 323 *e*SP SP 07 39 46.1 -2.5
OKC AMS AMS 08 22 20.0
comp=Z,4μm,17.0s
SDCO Great Sand Dun 111.39 50 PFAKE 07 29 50.0 +8.5
SDCO LR LR
comp=Z,6μm,19.0s,MS6.2
VYHS Vyhne 111.45 322 PDIF Pdif 07 25 48.1 +5.0
VYHS *e* 07 29 24.0
VYHS *e* 07 30 21.2
VYHS Vyhne 111.45 322 *e*Pdif Pdif 07 25 48.1 +5.0
VYHS *e* 07 29 24.0
VYHS *e* 07 30 21.2
KSP Ksiaz 112.03 325 *e*PKP Pdif 07 25 47.1 +1.5
KSP LMZ 08 19 26.1
comp=Z,8μm,22.8s
KSP Ksiaz 112.03 325 *e*P Pdif 07 25 46.3 +0.7
KSP *e* 07 30 26.7
KSP *e* 07 36 22.5
KSP *e*SP SP 07 39 53.0 -1.7
KSP *e*SS SS 07 46 16.0 +15
KSP Ksiaz 112.03 325 *e*Pdif Pdif 07 25 46.3 +0.7
KSP *e*PP PP 07 30 26.7 +0.6
KSP *e*SKS SKSac 07 36 22.5 +0.6
KSP *e*SP SP 07 39 53.0 -1.7
KSP *e*SS SS 07 46 16.0 +15
KSP LR LR
comp=Z,10μm,22.4s,MS6.3
DPC Dobruska-Polom 112.22 324 *e*PDIF Pdif 07 25 50.1 +3.6
DPC *e*PKP PKiKP 07 29 45.0 +2.3
DPC *e*PP PP 07 30 24.4 -3.1
DPC *e*SP SP 07 39 54.0 -2.5
DPC AMS AMS 08 21 10.0
comp=Z,7μm,19.5s
SUR Sutherland 112.27 234 PFAKE 07 29 50.0 +6.6
SUR LR LR
comp=Z,5μm,19.0s,MS6.1
BER Bergen 112.27 337 *e*PP PP 07 30 35.3 +7.9
BER AMS AMS 08 18 46.0
comp=Z,7μm,26.1s,MS6.1
MODS Modra-Piesok 112.46 322 PDIF Pdif 07 25 47.8 +0.3
MODS Modra-Piesok 112.46 322 *e*Pdif Pdif 07 25 47.8 +0.3
OGNE Ogallala 113.08 46 PFAKE 07 29 50.0 +5.3
OGNE LR LR
comp=Z,4μm,20.0s,MS6.0
PVCC Panska Ves 113.16 325 *e*PDIF Pdif 07 25 51.6 +1.0
PVCC *e*PKP PKiKP 07 29 44.3 -0.2
PVCC *e*SP SP 07 39 59.1 -6.0
PVCC AMS AMS 08 18 10.0
comp=Z,5μm,20.5s
TREC Trest 113.16 324 *e*PDIF Pdif 07 25 51.9 +1.3
TREC *e*PKP PKiKP 07 29 46.1 +1.6
TREC *e*PP PP 07 30 31.4 -2.8
TREC *e*SP SP 07 39 57.7 -7.5
TREC AMS AMS 08 21 20.0
comp=Z,5μm,17.8s
TIR Tirane 113.24 314 PFAKE 07 29 50.0 +5.1
TIR LR LR
comp=Z,4μm,22.0s,MS6.0
BRG Berggiesshubel 113.36 326 *e*PKIKP PKiKP 07 29 46.6 +1.7
BRG 07 36 30.0
BRG 07 40 08.0
BRG SS SS 07 46 34.0 +15
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG pmax pmax
comp=Z,32nm,1.8s
BRG MLR MLR
comp=N,3μm,18.6s,MS6.1
BRG MLR MLR
comp=E,3μm,18.2s,MS6.1
BRG MLR MLR
comp=Z,5μm,18.2s,MS6.2
BRG Berggiesshubel 113.36 326 *e*PP PP 07 30 41.1 +5.6
BRG *e*SP SP 07 40 03.4 -3.5
BRG Berggiesshubel 113.36 326 *e*PDIF Pdif 07 25 52.0 +0.4
comp=Z,4.7nm,1.3s
BRG Berggiesshubel 113.36 326 *e*P Pdif 07 25 58.5 +7.0
comp=Z,38nm,2.1s
BRG Berggiesshubel 113.36 326 *e*PKP PKiKP 07 29 46.6 +1.8
comp=Z,6.3nm,1.0s
BRG PP PP 07 30 30.7 -4.8
comp=Z,53nm,1.8s
BRG *e* 07 33 12.0
BRG SKS SKSac 07 36 30.0 +2.9
BRG S Sdif 07 38 18.0 +2.5
BRG PKKP SP 07 40 08.0 +1.1
BRG SS SS 07 46 34.0 +15
BRG
comp=N,5μm,18.6s
BRG
comp=E,5μm,18.2s
BRG
comp=Z,8μm,18.2s
BRG Berggiesshubel 113.36 326 *e*Pdif Pdif 07 25 52.0 +0.4
BRG *e*PKP PKiKP 07 29 46.6 +1.8
BRG PP PP 07 30 30.7 -4.8
BRG *e* 07 33 12.0
BRG SKS SKSac 07 36 30.0 +2.9
BRG S Sdif 07 38 18.0 +2.5
BRG PKKP PKKPbc 07 40 08.0 -24
BRG SS SS 07 46 34.0 +15
BRG LR LR
comp=Z,5μm,18.2s,MS6.2
PRU Pruhonice 113.41 325 *e*PDIF Pdif 07 25 53.1 +1.3
PRU *e*PKP PKiKP 07 29 46.2 +1.2
PRU *ex* x 07 30 17.7
PRU *e*PP PP 07 30 36.1 +0.2
PRU *e*SKS SKSac 07 36 29.1 +1.7
PRU *e*SP SP 07 40 03.6 -3.8
PRU AMS AMS 08 21 30.0
comp=Z,6μm,21.6s
ULM Lac du Bonnet 113.55 35 PKiKP PKiKP 07 29 44.8 -0.5
comp=Z,3.6nm,0.6s,baz=245,slow=2.2,SNR=6.2
CLL Collm 113.68 326 *e*P Pdif 07 25 56.0 +3.1
CLL *e* 07 30 35.0
CLL *e* 07 36 31.0
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL MLR MLR
comp=Z,14μm,19.3s,MS6.6
CLL Collm 113.68 326 *e*PP PP 07 30 41.9 +4.1
CLL *e*SP SP 07 40 06.7 -3.1
CLL Collm 113.68 326 *e*Pdif Pdif 07 25 54.0 +1.1
CLL Lm 07 22 00.0
comp=N,7μm,19.0s
CLL Lm 07 22 00.0
comp=E,5μm,18.5s
CLL Lm 07 22 00.0
comp=Z,14μm,19.3s
CLL *es*Pdif 07 26 01.0
CLL *e*PKiKP PKiKP 07 29 47.0 +1.5
comp=Z,6.0nm,1.0s
CLL *es*PKiKP 07 29 54.0
CLL *e*PP PP 07 30 35.0 -2.8
CLL *es*PP 07 30 48.0
CLL *es*PPP 07 33 14.0
CLL *e*SKSac SKSac 07 36 31.0 +2.6
CLL *e*SKKSac SKKSac 07 37 42.0 +4.7
CLL *e*Sdif Sdif 07 38 24.0 +5.8
CLL *e*PS PS 07 40 06.0 -9.0
CLL *e*SS SS 07 46 20.0 -2.9
CLL *e*SSS 07 50 42.0
CLL *ex* x 07 52 30.0
CLL Collm 113.68 326 *e*Pdif Pdif 07 25 56.0 +3.1
CLL *e*PKPdf PKiKP 07 29 48.0 +2.5
CLL *e*PP PP 07 30 35.0 -2.8
CLL *e*PKS 07 33 14.0
CLL *e*SKS SKSac 07 36 31.0 +2.6
CLL LR LR
comp=Z,14μm,19.3s,MS6.6
BSEG Bad Segeberg 113.78 330 *e*PP PP 07 30 43.6 +5.2
KHC Kasperske Hory 114.36 324 *e*P Pdif 07 25 57.4 +1.4
KHC *e* 07 30 40.7
KHC MLR MLR
comp=Z,7μm,19.3s,MS6.3
KHC Kasperske Hory 114.36 324 *e*Pdif Pdif 07 25 57.4 +1.4
KHC *e*PKPdf PKiKP 07 29 46.2 -0.7
KHC *e* 07 29 48.5
KHC *e* 07 30 16.9
KHC *e* 07 30 40.7
KHC *e* 07 40 02.7
KHC LR LR
comp=Z,7μm,19.3s,MS6.3
TANN Tannenbergstha 114.40 326 *e*PP PP 07 30 49.4 +6.5
TANN *e*SP SP 07 40 13.9 -2.6
GEC2 GERESS Array S 114.41 324 *e*PP PP 07 30 47.8 +4.7
GEC2 *e*SP SP 07 40 11.7 -5.0
GERES GERESS Array B 114.41 324 PKiKP PKiKP 07 29 47.2 +0.2
comp=Z,4.4nm,0.6s,baz=70,slow=1.1,SNR=30
GERES GERESS Array B 114.41 324 *i* PKiKP PKiKP 07 29 47.2 +0.3
GERES pmax pmax
comp=Z,4.0nm,0.6s
AGMN Agassiz Refuge 114.43 37 PFAKE 07 30 00.0 +13
AGMN LR LR
comp=Z,10μm,21.0s,MS6.4
NKC Novy Kostel 114.50 326 *e*PDIF Pdif 07 25 57.1 +0.5
NKC *e*SP SP 07 40 13.6 -3.7
NKC AMS AMS 08 23 20.0

comp=Z,8µm,18.0s
NKC Novy Kostel 114.50 326 *e*Pdif Pdif 07 25 57.1 +0.5
NKC *e*SP SP 07 40 13.6 -3.7
PERS Pernice 114.50 321 *i* PKPdf PKiKP 07 29 47.9 +0.7
NRDL Niedersach Rie 114.65 328 *e*PP PP 07 30 51.5 +7.0
NRDL *e*SP SP 07 40 16.3 -2.2
WET Wettzell 114.76 324 *e*PP PP 07 30 50.7 +5.2
WET *e*SP SP 07 40 17.4 -2.4
MOX Moxa 114.77 326 *e*PKP Pdif 07 25 57.0 -0.8
comp=Z,33nm,2.0s
MOX *e* 07 29 50.8
MOX
comp=Z,8µm,20.0s
MOX Moxa 114.77 326 *e*P Pdif 07 25 57.0 -0.8
MOX pmax pmax
comp=Z,33nm,2.0s
MOX MLR MLR
comp=Z,8µm,20.0s,MS6.3
MOX Moxa 114.77 326 *e*PP PP 07 30 51.5 +6.0
MOX *e*SP SP 07 40 14.3 -5.4
MANZ Manzenberg 114.81 325 *e*PP PP 07 30 51.5 +5.7
MANZ *e*SP SP 07 40 14.7 -5.5
CLZ Clausthal 114.84 328 *e*PP PP 07 30 52.4 +6.5
CLZ *e*SP SP 07 40 18.3 -2.1
ROTZ Rotzenmuhle 114.86 325 *e*PP PP 07 30 51.9 +5.8
ROTZ *e*SP SP 07 40 14.7 -5.9
BOJS Bojanci 114.88 320 *i* PKPdf PKiKP 07 29 47.0 -0.9
AMTX Amarillo 115.10 52 PFAKE 07 30 00.0 +11
AMTX LR LR
comp=Z,3µm,19.0s,MS5.9
LJU Ljubljana 115.12 321 *i* PKPdf PKiKP 07 29 49.9 +1.5
CBKS Cedar Bluff 115.43 48 PFAKE 07 30 00.0 +11
CBKS LR LR
comp=Z,6µm,19.0s,MS6.2
GRA1 Grafenberg Arr 115.45 325 *e*Pdif Pdif 07 26 03.8 +3.0
GRA1 *e*PP PP 07 30 55.3 +5.0
GRA1 *e*SP SP 07 40 19.6 -6.5
GRA1 *e*SP SP 07 40 27.9 +1.8
GRA1 *e*SS SS 07 46 50.4 +4.1
GRA1 LR LR
comp=Z,8µm,19.4s,MS6.3
GRF Grafenberg Arr 115.45 325 *e*P Pdif 07 26 03.8 +3.0
GRF *e* 07 30 55.3
GRF *e*SP SP 07 40 19.6 -6.5
GRF *e*SP SP 07 40 27.9 +1.8
GRF *e*SS SS 07 46 50.4 +4.1
GRF Grafenberg Arr 115.45 325 *e*Pdiff Pdif 07 26 03.8 +3.0
GRF *e*PP PP 07 30 55.3 +5.0
GRF *e*SP SP 07 40 19.6 -6.5
GRF *e*SP SP 07 40 27.9 +1.8
GRF *e*SS SS 07 46 50.4 +4.1
GRF *e*L 08 24 23.7
comp=Z,8µm,19.4s
RJOB Jochberg 115.45 323 *e*PP PP 07 30 56.5 +6.1
RJOB *e*SP SP 07 40 23.9 -2.3
JAVS Javornik 115.48 321 *i* PKPdf PKPdf 07 29 50.1 +1.0
UBBA Unterbreizbach 115.57 327 *e*PP PP 07 30 56.5 +5.4
UBBA *e*SP SP 07 40 21.9 -5.1
TRI Trieste 115.75 321 PFAKE 07 30 00.0 +10
TRI LR LR
comp=Z,5µm,19.0s,MS6.1
ECSD EROS,Sioux Fal 115.86 42 *e*PKPdf PKPdf 07 29 48.4 -1.6
ECSD LR LR
comp=Z,4µm,21.0s,MS6.0
IBBN Ibbenburen 115.96 329 *e*PP PP 07 30 59.5 +5.7
IBBN *e*SP SP 07 40 28.6 -1.9
ABTA Abfaltersbach 116.07 322⇑ *i* PKPdf PKPdf 07 29 49.3 -1.0
comp=Z,10nm,0.6s
FUR Furstenfeldbru 116.16 324 *e*PP PP 07 31 02.0 +6.7
FUR *e*SP SP 07 40 30.4 -2.2
BORG Borgarnes 116.17 351 PFAKE 07 30 00.0 +10
BORG LR LR
comp=Z,2µm,19.0s,MS5.8
TIP Timpagrande 116.20 313 *e*PKPdf PKPdf 07 29 50.0 -0.7
TIP LR LR
comp=Z,3µm,22.0s,MS5.9
CUC Castrocucco 116.60 314 *e*PKPdf PKPdf 07 29 51.4 0.0
CUC LR LR
comp=Z,2µm,20.0s,MS5.7
MOTA Moosalm 116.65 323⇑ *i* PKPdf PKPdf 07 29 49.5 -1.8
comp=Z,10nm,0.6s
BUG Bochum--Univer 116.69 329 *e*PP PP 07 31 04.8 +5.9
BUG *e*SP SP 07 40 35.3 -1.9
TNS Taunus Mts 116.73 327 *e*PP PP 07 31 06.2 +7.0
TNS *e*SP SP 07 40 35.6 -2.0
FETA Feichten 117.03 323⇓ *i* PKiKP PKiKP 07 29 52.6 +0.5
comp=Z,6.9nm,0.7s
STU Stuttgart 117.06 325 *e*PP PP 07 31 07.8 +6.2
STU *e*SP SP 07 40 35.5 -5.2
CEL Celeste 117.14 312 PFAKE 07 30 00.0 +7.5
CEL LR LR
comp=Z,3µm,22.0s,MS5.9
EYMN Ely 117.18 36 *e*PKPdf PKPdf 07 29 52.0 -0.3
EYMN LR LR
comp=Z,6µm,21.0s,MS6.2
AQU L'Aquila 117.38 317 PFAKE 07 30 00.0 +7.1
AQU LR LR
comp=Z,4µm,21.0s,MS6.0
DAVA Damuels 117.41 324⇑ *i* PKiKP PKiKP 07 29 52.4 -0.4
comp=Z,22nm,0.8s
WMOK Wichita Mounta 117.43 52 *e*PKIKP PKPdf 07 29 54.3 +1.1
KSU1 Kansas State U 117.62 47 *e*PKPdf PKPdf 07 29 53.6 +0.2
KSU1 LR LR
comp=Z,4µm,22.0s,MS6.0
SPAK Spaichingen-Ko 117.64 325 PKP PKPdf 07 29 55.1 +1.9
LANF Langenberg 117.74 326 PKP PKPdf 07 29 53.5 +0.2
RUP Ruppelstein 117.76 327 PKIKP PKPdf 07 29 53.5 +0.1
JCT Junction City 117.78 57 *e*PKIKP PKPdf 07 29 53.2 -0.8
JCT MLR MLR
comp=Z,6µm,19.0s,MS6.2
BFO Black Forest 117.78 325 *e*PKIKP PKPdf 07 29 53.6 +0.1
BFO MLR MLR
comp=Z,7µm,19.0s,MS6.3
BFO Black Forest 117.78 325 *e*PP PP 07 31 11.6 +5.0
BFO *e*SP SP 07 40 45.3 -2.0
TUE Stuetta 118.13 323 *e*PKPdf PKPdf 07 29 54.4 +0.2
TUE LR LR
comp=Z,6µm,19.0s,MS6.3
FELD Feldberg im Sc 118.21 325 PKP PKPdf 07 29 53.7 -0.6
WLF Walferdange 118.27 327 *e*PP PP 07 31 16.6 +6.7
WLF *e*SP SP 07 40 49.7 -1.9
WLF Walferdange 118.27 327 PFAKE 07 30 00.0 +5.6
WLF LR LR
comp=Z,7µm,22.0s,MS6.3
CDF Champ du Feu 118.34 326 *e*PKIKP PKPdf 07 29 52.4 -2.1
VLC Villacollemand 118.58 320 PFAKE 07 30 00.0 +4.9
VLC LR LR
comp=Z,6µm,21.0s,MS6.2
BBS Basel-Blauen 118.71 325 PKIKP PKPdf 07 29 55.1 -0.2
TSUM Tsumeb 118.71 247 *e*PKPdf PKPdf 07 29 55.6 -0.5
MOF Molkenrain 118.72 325 PKP PKPdf 07 29 54.6 -0.7
GIVF Givet 118.73 328 *e*PKIKP PKPdf 07 29 53.9 -1.3
SCIA State Center 118.89 42 PFAKE 07 30 10.0 +14
SCIA LR LR
comp=Z,5µm,20.0s,MS6.2
HINF Hinteralfeld 118.90 325 *e*PKIKP PKPdf 07 29 53.6 -2.0
comp=Z,22nm,0.6s
WDD Wield Dalam 118.99 310 PFAKE 07 30 10.0 +14
WDD LR LR
comp=Z,2µm,21.0s,MS5.7
ESK Eskdalemuir 119.06 336 PFAKE 07 30 10.0 +14
ESK LR LR
comp=Z,9µm,21.0s,MS6.4
BAIF Baives 119.08 329 *e*PKIKP PKPdf 07 29 53.9 -2.0
HAU Haudompre 119.08 326 *e*PKIKP PKPdf 07 29 54.1 -1.9
comp=Z,26nm,0.6s
HAU *e*MLR MLR
comp=Z,9µm,21.0s,MS6.0
HAU Haudompre 119.08 326 *e*PKPdf PKPdf 07 29 54.1 -1.9
HAU LR LR
comp=Z,9µm,21.0s,MS6.3
LOMF Lomont 119.16 325 PKP PKPdf 07 29 57.2 +1.1
THEF They Montfort 119.16 326 PKP PKPdf 07 29 56.8 +0.7
MEZF Maizieres J'vi 119.53 327 *e*PKIKP PKPdf 07 29 55.4 -1.4
CABF La Chapelle 119.98 324 *e*PKIKP PKPdf 07 29 55.3 -2.4
comp=Z,31nm,0.6s
KVTX Kingsville 120.13 59 PFAKE 07 30 10.0 +11
KVTX LR LR
comp=Z,4µm,19.0s,MS6.1
LPG La Plagne 120.18 323 *e*PKIKP PKPdf 07 29 56.9 -1.3
comp=Z,16nm,0.6s
LPL La Plagne 120.18 323 *e*PKIKP PKPdf 07 29 56.8 -1.4
comp=Z,24nm,0.6s
PGF Pioggiola 120.22 319 *e*PKIKP PKPdf 07 29 56.6 -1.7
comp=Z,41nm,0.6s
JFWS Jewell Farm 120.39 40 *e*PKIKP PKPdf 07 29 56.6 -2.1
JFWS MLR MLR
comp=Z,5µm,22.0s,MS6.1
BNI Bardonecchia 120.45 323 *e*PKIKP PKPdf 07 29 59.0 +0.3
BNI MLR MLR
comp=Z,9µm,21.0s,MS6.4
MBDF Montbardon 120.57 322 *e*PKIKP PKPdf 07 29 57.6 -1.3
comp=Z,23nm,0.7s
SBF Sospel 120.59 321 *e*PKIKP PKPdf 07 29 57.1 -1.9
comp=Z,40nm,0.7s
LOR Lormes 120.89 326 *e*PKIKP PKPdf 07 29 57.7 -1.8
comp=Z,14nm,0.7s
LOR *e*MLR MLR
comp=Z,8µm,20.0s,MS6.0
LOR Lormes 120.89 326 *e*PKPdf PKPdf 07 29 57.7 -1.8
LOR LR LR
comp=Z,8µm,20.0s,MS6.3
ORIF Oris-en-Rattie 121.01 323 *e*PKIKP PKPdf 07 29 58.1 -1.7
comp=Z,24nm,0.6s
ORIF *e*MLR MLR
comp=Z,7µm,21.0s,MS6.0
SSF Saint Saulge 121.20 326 *e*PKIKP PKPdf 07 29 58.6 -1.5
comp=Z,15nm,0.7s
HKT Hockley 121.23 56 PFAKE 07 30 10.0 +9.3
HKT LR LR
comp=Z,4µm,19.0s,MS6.0
FRF La Foret Royal 121.24 321 *e*PKIKP PKPdf 07 29 58.5 -1.8
comp=Z,30nm,0.6s
SMF Signal de Mont 121.25 325 *e*PKIKP PKPdf 07 29 58.3 -1.9
comp=Z,14nm,0.7s
LMR La Mourre 121.44 321 *e*PKIKP PKPdf 07 29 58.8 -1.9
comp=Z,34nm,0.7s
AVF Avril sur Loir 121.45 326 *e*PKIKP PKPdf 07 29 58.5 -2.1
comp=Z,9.6nm,0.7s
MIAR Mount Ida 121.54 50 *e*PKIKP PKPdf 07 30 00.7 -0.4
MIAR MLR MLR
comp=Z,8µm,20.0s,MS6.3
NATX Nacogdoches 121.64 54 PFAKE 07 30 10.0 +8.6
NATX LR LR
comp=Z,5µm,21.0s,MS6.1
SMRF Simiane la Rot 121.69 322 *e*PKIKP PKPdf 07 30 00.0 -1.1
comp=Z,33nm,0.6s
PLDF La Plantade 121.76 325 PKP PKPdf 07 30 01.4 +0.2
VIVF Saint-Julien-l 121.77 323 *e*PKIKP PKPdf 07 29 59.6 -1.6
comp=Z,19nm,0.7s
BGF Bois d'Agland 121.86 326 *e*PKIKP PKPdf 07 29 59.9 -1.5
comp=Z,35nm,0.8s
AGO Saint Agoulin 122.00 325 PKP PKPdf 07 30 02.6 +1.0
LDF La Druitiere 122.22 329 *e*PKIKP PKPdf 07 30 00.3 -1.7
PYM Petit Puy Mans 122.24 325 PKP PKPdf 07 30 02.3 +0.2
FLN La Foliniere 122.29 330 *e*PKIKP PKPdf 07 30 00.3 -1.8
comp=Z,12nm,0.5s
FLN *e*MLR MLR
comp=Z,11µm,21.2s,MS6.2
FLN La Foliniere 122.29 330 *e*PKPdf PKPdf 07 30 00.3 -1.8
FLN LR LR
comp=Z,11µm,21.3s,MS6.5
TCF Toulx Ste Croi 122.38 326 *e*PKIKP PKPdf 07 30 01.0 -1.4
comp=Z,35nm,0.7s
LBL Lubilhac 122.40 324 PKP PKPdf 07 30 01.6 -0.8
UALR University of 122.40 50 *e*PKPdf PKPdf 07 30 01.4 -1.4
FVM French Village 122.52 45 *e*PKIKP PKPdf 07 30 01.0 -1.9
LASF Ste Croix 122.68 323 *e*PKIKP PKPdf 07 30 01.5 -1.5
GRR Gorron 122.72 329 *e*PKIKP PKPdf 07 30 01.3 -1.7
comp=Z,15nm,0.6s
GLMI Grayling 122.87 36 PFAKE 07 30 10.0 +6.7
GLMI LR LR
comp=Z,8µm,21.0s,MS6.3
KEST Kesra 122.95 312 PKP PKPdf 07 30 04.5 +0.7
comp=Z,5.5nm,0.8s,baz=322,slow=9.3,SNR=11
CAF Calviac 123.26 325 *e*PKIKP PKPdf 07 30 02.9 -1.2
RJF Les Rejaudoux 123.35 325 *e*PKIKP PKPdf 07 30 02.9 -1.4
RJF *e*MLR MLR
comp=Z,9µm,20.5s,MS6.1
RJF Les Rejaudoux 123.35 325 *e*PKPdf PKPdf 07 30 02.9 -1.4
RJF LR LR
comp=Z,9µm,20.5s,MS6.4
MFF Saint Martin d 123.48 327 *e*PKIKP PKPdf 07 30 02.3 -2.2
comp=Z,42nm,1.1s
SCHQ Schefferville 123.60 18 PKP PKPdf 07 30 04.4 0.0
comp=Z,20nm,0.6s,baz=32,slow=3.4,SNR=27
SCHQ Schefferville 123.60 18 *e*PKPdf PKPdf 07 30 02.0 -2.4
SCHQ LR LR
comp=Z,6µm,22.0s,MS6.2
SGMF Saint Gilles 123.67 330 *e*PKIKP PKPdf 07 30 02.9 -1.9
comp=Z,16nm,0.6s
OLIL Olney 123.81 44 *e*PKPdf PKPdf 07 30 05.0 -0.4
ROSF Rostrenen 123.97 331 *e*PKIKP PKPdf 07 30 03.5 -1.8
LFF La Frestale 124.01 325 *e*PKIKP PKPdf 07 30 04.3 -1.2
comp=Z,53nm,1.1s
MTLF Montolieu 124.08 323 *e*PKIKP PKPdf 07 30 04.1 -1.6
comp=Z,34nm,0.9s
ABSA Djebel Ababsia 124.10 313 P PKPdf 07 30 09.5 +3.5
QUIF Quistinic 124.20 330 *e*PKIKP PKPdf 07 30 04.4 -1.4
EFI East Falkland 124.21 167 PFAKE 07 30 20.0 +14
EFI LR LR
comp=Z,8µm,19.0s,MS6.4
BLO Bloomington 124.68 43 *e*PKIKP PKPdf 07 30 06.4 -0.6
OXF Oxford 124.73 49 *e*PKIKP PKPdf 07 30 07.1 -0.1
OXF MLR MLR
comp=Z,5µm,20.0s,MS6.2
VBMS Vicksburg 124.78 52 PFAKE 07 30 20.0 +13
VBMS LR LR
comp=Z,7µm,19.0s,MS6.3
AAM Ann Arbor 124.87 38 PFAKE 07 30 20.0 +13
AAM LR LR
comp=Z,8µm,19.0s,MS6.4
WVT Waverly 125.20 46 *e*PKIKP PKPdf 07 30 08.5 +0.4
WVT *e* 07 31 53.7
WCI Wyandotte Cave 125.30 43 *e*PKIKP PKPdf 07 30 08.8 +0.6
EPF Esparros 125.38 324 *e*PKIKP PKPdf 07 30 07.0 -1.2
comp=Z,13nm,0.7s
ETOS Mallorca 125.66 319 PKP PKPdf 07 30 10.5 +1.7
EBIE Bielsa 125.70 323 PKP PKPdf 07 30 12.3 +3.5
EPOB Poblet 125.90 322 PKP PKPdf 07 30 09.5 +0.2
ETSF Etsaut 125.99 324 *e*PKIKP PKPdf 07 30 08.8 -0.6
comp=Z,33nm,0.9s
ACSO Alum Creek Sta 126.44 40 *e*PKPdf PKPdf 07 30 09.7 -0.6
ACSO LR LR
comp=Z,5µm,19.0s,MS6.2
ESAC San Caprasio 126.63 323 PKP PKPdf 07 30 11.5 +0.8
ABA Alger-Bouzarea 127.02 316 P PKPdf 07 30 17.4 +5.8
ADJB Djebel Djouab 127.06 315 P PKPdf 07 30 14.8 +3.2
LRAL Lakeview Retre 127.17 49 *e*PKPdf PKPdf 07 30 09.6 -2.3
LRAL LR LR
comp=Z,7µm,20.0s,MS6.3
ERPA Erie 127.18 36 PFAKE 07 30 20.0 +8.3
ERPA LR LR
comp=Z,9µm,22.0s,MS6.4
ECRI Cripan 127.30 325 PKIKP PKPdf 07 30 13.1 +1.2
ELAN Lanestosa 127.43 326 PKP PKPdf 07 30 12.8 +0.6
BRAL Brewton 127.96 52 PFAKE 07 30 20.0 +6.5
BRAL LR LR
comp=Z,5µm,21.0s,MS6.2
ETOR Torete 128.13 323 PKIKP PKPdf 07 30 13.7 +0.1
ECHE Chera 128.19 321 PKIKP PKPdf 07 30 16.0 +2.3
TKL Tuckaleechee C 128.32 45 *e*PKIKP PKPdf 07 30 13.1 -1.0
EARI Arriondas 128.36 327 PKP PKPdf 07 30 16.2 +2.3
MCWV Mont Chateau 128.75 38 PFAKE 07 30 20.0 +5.2
MCWV LR LR
comp=Z,8µm,20.0s,MS6.4
ETOB Tobarra 129.10 320 PKP PKPdf 07 30 15.4 -0.1
NCB Newcomb 129.13 31 PFAKE 07 30 30.0 +15
NCB LR LR
comp=Z,6µm,20.0s,MS6.3
PLCA Paso Flores 129.28 151 PKP PKPdf 07 30 15.3 -0.4
comp=Z,11nm,0.9s,baz=229,slow=3.6,SNR=11
PLCA Paso Flores 129.28 151 *e*PKPdf PKPdf 07 30 15.2 -0.6
PLCA LR LR
comp=Z,5µm,20.0s,MS6.2
SSPA Standing Stone 129.34 36 *e*PKPdf PKPdf 07 30 15.1 -0.7
SSPA LR LR
comp=Z,8µm,21.0s,MS6.4
EPON Pontenova 129.38 328 PKP PKPdf 07 30 17.9 +2.0
BINY Binghamton 129.41 34 PFAKE 07 30 30.0 +14
BINY LR LR
comp=Z,6µm,19.0s,MS6.3
GUD Guadarrama 129.49 324 PKIKP PKPdf 07 30 16.7 +0.5
GOGA Godfrey 129.64 47 PFAKE 07 30 30.0 +13
GOGA LR LR
comp=Z,7µm,21.0s,MS6.3
EVIA Vianos 129.71 321 PKIKP PKPdf 07 30 18.8 +2.2
BLA Blacksburg 129.79 41 *e*PKIKP PKPdf 07 30 16.5 -0.3
BLA MLR MLR
comp=Z,5µm,20.0s,MS6.2
ESDC Sonseca Array 129.99 323 PKP PKPdf 07 30 16.4 -0.8
comp=Z,1.6nm,0.6s,baz=20,slow=2.0,SNR=14
ESDC PP PP 07 32 24.8 -4.0
comp=Z,2.5nm,0.9s,baz=51,slow=7.6,SNR=4.4
ESDC Sonseca Array 129.99 323 PKP PKPdf 07 30 16.4 -0.8
ESDC PP PP 07 32 24.8 -4.0
ESLA Sonseca Array 129.99 323 *e*PKPdf PKPdf 07 30 19.4 +2.3
ESLA LR LR
comp=Z,23µm,20.0s,MS6.9
ERUA La Rua 130.02 327 PKIKP PKPdf 07 30 18.8 +1.7
LBNH Lisbon 130.08 29 PFAKE 07 30 30.0 +13
LBNH LR LR
comp=Z,5µm,19.0s,MS6.2
PAB San Pablo 130.30 323 PFAKE 07 30 30.0 +12
PAB LR LR
comp=Z,4µm,19.0s,MS6.2
STS Santiago 130.42 329 PKIKP PKPdf 07 30 18.6 +0.8
ENIJ Nijar 130.49 319 PKIKP PKPdf 07 30 20.3 +2.1
TEIG Tepich 130.49 65 PFAKE 07 30 30.0 +11
TEIG LR LR
comp=Z,4µm,20.0s,MS6.1
PAYG Puerto Ayora 130.52 93 PFAKE 07 30 30.0 +11
PAYG LR LR
comp=Z,6µm,19.0s,MS6.3
PKME Peaks-Kenny Pk 130.53 26 *e*PKPdf PKPdf 07 30 17.8 -0.1
PKME LR LR
comp=Z,6µm,22.0s,MS6.3
EQES Quesada 130.56 320 PKP PKPdf 07 30 18.3 +0.1
TAM Tamanrasset 130.66 298 *e*PKIKP PKPdf 07 30 18.2 -0.7
MVO Moncorvo 130.80 326 *e*PKPdf PKPdf 07 30 18.5 -0.1
MVO Moncorvo 130.80 326 *e*PP PP 07 32 44.5 +11
MVO *e*SS SS 07 50 12.9 +12
MVO *e*LR LR 08 18 20.5
comp=Z,6µm,22.0s
EBAN Banos Encina 130.80 321 PKIKP PKPdf 07 30 20.1 +1.4
ELOB Lobios 130.88 328 PKP PKPdf 07 30 20.8 +2.1
PCAB Cabril 130.97 327 *e*PKPdf PKPdf 07 30 19.7 +0.8
EBER Berja 130.98 319 PKP PKPdf 07 30 21.4 +2.3
CBN Corbin 131.16 38 PFAKE 07 30 30.0 +11
CBN LR LR
comp=Z,5µm,21.0s,MS6.2
ECOG Cogollos-Vega 131.19 320 PKIKP PKPdf 07 30 19.8 +0.3
EADA Adamuz 131.29 322 PKP PKPdf 07 30 21.8 +2.1
EGUA Guajares 131.45 320 PKIKP PKPdf 07 30 20.6 +0.6
ERON Agron 131.50 320 PKIKP PKPdf 07 30 21.8 +1.7
MTE Manteigas 131.60 326 *e*PKPdf PKPdf 07 30 21.4 +1.2
MTE Manteigas 131.60 326 *e*PP PP 07 32 49.0 +10
MTE *e*SS SS 07 50 20.8 +10
MTE *e*LR LR 08 18 22.0
comp=Z,6µm,22.0s
MTE Manteigas 131.60 326 PFAKE 07 30 30.0 +10
MTE LR LR
comp=Z,7µm,22.0s,MS6.3
ELOJ Sierra Loja 131.65 320 PKIKP PKPdf 07 30 21.0 +0.7
PCBR Castelo Branco 131.94 325 *e*PKPdf PKPdf 07 30 22.3 +1.5
PMRV Marv??o 132.17 325 *e*PKPdf PKPdf 07 30 24.4 +3.1
PMRV Marv??o 132.17 325 *e*PP PP 07 32 54.8 +12
PMRV *e*SS SS 07 50 48.9 +31
PMRV *e*LR LR 08 20 35.9
comp=Z,6µm,18.0s
NHSC New Hope 132.18 46 PFAKE 07 30 30.0 +8.5
NHSC LR LR
comp=Z,7µm,19.0s,MS6.4
CNNC Cliffs of the 132.59 42 PFAKE 07 30 30.0 +7.8
CNNC LR LR
comp=Z,7µm,22.0s,MS6.3
TRIS Tristan da Cun 132.62 211 PFAKE 07 30 30.0 +7.8
TRIS LR LR
comp=Z,8µm,19.0s,MS6.4
PESTR Estremoz 132.66 324 *e*PKPdf PKPdf 07 30 24.9 +2.7
PESTR Estremoz 132.66 324 *e*PP PP 07 32 51.6 +5.7
PESTR *e*SS SS 07 50 56.9 +33
PESTR *e*LR LR 08 16 12.4
comp=Z,5µm,18.0s
TGUH Tegucigalpa,Un 132.75 73 PFAKE 07 30 30.0 +7.0
TGUH LR LR
comp=Z,5µm,19.0s,MS6.2
PBAR Barrancos 132.79 323 *e*PKPdf PKPdf 07 30 26.0 +3.5
PBAR Barrancos 132.79 323 *e*PP PP 07 32 50.6 +3.8
PBAR *e*SS SS 07 50 36.4 +11
PBAR *e*LR LR 08 19 13.6
comp=Z,6µm,22.0s
EMIN Mina Concepcio 132.83 323 PKP PKPdf 07 30 24.9 +2.3
ESPR Espera 132.90 321 PKP PKPdf 07 30 22.5 -0.3
EVO Evora 133.13 324 *e*PKIKP PKPdf 07 30 22.3 -0.8
comp=Z,17nm,0.7s
EVO *e*MLR MLR
comp=Z,6µm,19.8s,MS6.0
EVO Evora 133.13 324 *e*PKPdf PKPdf 07 30 25.5 +2.4
SFS San Fernando 133.37 321 PFAKE 07 30 30.0 +6.4
SFS LR LR
comp=Z,10µm,20.0s,MS6.5
PBEJ Beja 133.38 324 *e*PKPdf PKPdf 07 30 26.2 +2.6
PMAFR Mafra 133.57 326 *e*PP PP 07 32 57.7 +6.0
PMAFR *e*SS SS 07 50 45.4 +11
PMAFR *e*LR LR 08 19 25.3
comp=Z,6µm,24.0s
DWPF Disney 133.63 52 PFAKE 07 30 30.0 +5.7
DWPF LR LR
comp=Z,5µm,20.0s,MS6.2
PVAQ Vaqueiros 133.70 323 *e*PKPdf PKPdf 07 30 25.6 +1.4
PVAQ Vaqueiros 133.70 323 *e*PP PP 07 32 59.2 +6.5
PVAQ *e*SS SS 07 50 30.7 -5.7
PVAQ *e*LR LR 08 19 15.5
comp=Z,5µm,18.0s
PBDV Barranco-do-Ve 133.93 323 *e*PP PP 07 32 59.1 +5.0
PBDV *e*SS SS 07 50 58.6 +19
PBDV *e*LR LR 08 20 44.7
comp=Z,5µm,20.0s
PTEO Sao Teotonio 134.21 324 *e*PKPdf PKPdf 07 30 29.1 +3.9
MORF Marmelete 134.32 324 *e*PP PP 07 33 12.1 +16
MORF *e*SS SS 07 51 02.5 +19
MORF *e*LR LR 08 19 40.4
comp=Z,6µm,18.0s
RTC Rabat Centre 135.31 319 PFAKE 07 30 40.0 +13
RTC LR LR
comp=Z,3µm,20.0s,MS6.0
TORD Torodi Ar. Bea 136.55 287 PKhKP 07 30 19.2
comp=Z,2.3nm,0.6s,baz=75,slow=2.6,SNR=18
TORD PKP PKPdf 07 30 28.9 -1.2
comp=Z,36nm,0.6s,baz=56,slow=1.3,SNR=26
TORD Torodi Ar. Bea 136.55 287 PKP PKPdf 07 30 28.9 -1.2
LCO Las Campanas 137.69 140 *e*PKPdf PKPdf 07 30 31.5 -0.4
LCO LR LR
comp=Z,3µm,19.0s,MS6.1
LPA La Plata 139.61 158 *ce*PKP PKPdf 07 30 33.0 -2.3
LPA *e*PP PP 07 33 29.0 -0.1
LPA
comp=Z,11µm,19.0s
BCIP Isla Barro Col 140.69 78 PFAKE 07 30 50.0 +12
BCIP LR LR
comp=Z,6µm,20.0s,MS6.3
SHEL Horse Pasture 140.78 241 *e*PKIKP PKPdf 07 30 34.3 -3.5
NNA Nana 141.53 113 *e*PKPdf PKPdf 07 30 35.1 -4.1
NNA LR LR
comp=Z,4µm,19.0s,MS6.2
CMLA Cha da Macela 142.06 340 *e*PP PP 07 33 34.9 -9.1
CMLA *e*SKKS SKKSac 07 40 23.9 -12
CMLA *e*SKKS SKKSac 07 40 23.9 -12
CMLA *e*SS SS 07 51 54.0 -20
CMLA *e*SS SS 07 52 05.5 -8.8
CMLA *e*LQ 08 09 32.0
CMLA *e*LR LR 08 18 14.8
OTAV Otavalo 142.39 93 PFAKE 07 30 50.0 +9.1
OTAV LR LR
comp=Z,3µm,19.0s,MS6.0
BBSR BB Station 142.70 34 PFAKE 07 30 50.0 +9.1
BBSR LR LR
comp=Z,4µm,19.0s,MS6.2
LVC Limon Verde 143.06 134 *e*PKPdf PKPdf 07 30 39.5 -2.3
LVC LR LR
comp=Z,4µm,19.0s,MS6.2
CFTV Fuerteventura 143.61 318 PKP PKPdf 07 30 42.4 -0.2
KIC Kosan Beka 143.75 277 *e*PKP1 PKPdf 07 30 39.6 -3.6
comp=Z,387nm,0.7s
DBIC Dimbokro 143.84 278 PKP PKPdf 07 30 40.6 -2.8
comp=Z,83nm,0.6s,baz=72,slow=4.1,SNR=54
DBIC Dimbokro 143.84 278 PKIKP PKPdf 07 30 40.6 -2.8
DBIC pmax pmax
comp=Z,83nm,0.6s
DBIC Dimbokro 143.84 278 *e*PKPdf PKPdf 07 30 39.6 -3.8
DBIC LR LR

comp=Z,3µm,19.0s,MS6.1
TIC Toumodi 144.00 278 *e*PKP1 PKPdf 07 30 40.0 -3.7
comp=Z,346nm,0.8s
LIC Lamto 144.04 277 *e*PKP1 PKPdf 07 30 40.5 -3.3
comp=Z,430nm,1.0s
LIC Lamto 144.04 277 *e*PKIKP PKPdf 07 30 40.2 -3.6
comp=Z,296nm,0.9s
LIC *e*MLR MLR
comp=Z,5µm,19.5s,MS6.0
LIC Lamto 144.04 277 *e*PKPdf PKPdf 07 30 40.2 -3.6
LIC LR LR
comp=Z,2µm,19.5s,MS6.0
ARE Arequipa 144.45 123 *e*PKIKP PKPdf 07 30 43.0 -1.3
EOSO Osorio 144.81 319 PKP PKPdf 07 30 42.4 -2.3
EBAJ Bajamar 145.00 320 PKP PKPdf 07 30 49.4 +4.4
CCAN Las Canadas 145.39 320 PKP PKPdf 07 30 46.0 +0.3
EGOM La Gomera 145.81 321 PKP PKPdf 07 30 44.4 -2.1
EHIG Higuera 145.91 322 PKP PKPdf 07 30 44.0 -2.6
SDDR Presa de Saban 145.97 59 *e*PKPdf PKPdf 07 30 47.1 +0.2
SDDR LR LR
comp=Z,4µm,19.0s,MS6.2
ROSC El Rosal 146.54 85 PKPbc PKPbc 07 30 48.2 -1.3
comp=Z,74nm,0.6s,baz=107,slow=20,SNR=12
CHIE El Hierro 146.59 321 PKP PKPdf 07 30 47.1 -0.6
CPUP Villa Florida 147.34 152 PKPbc PKPbc 07 30 48.9 -2.5
comp=Z,15nm,0.7s,baz=211,slow=1.8,SNR=20
CPUP Villa Florida 147.34 152 *e*PKPdf PKPdf 07 30 49.1 0.0
CPUP *e*PKPbc PKPbc 07 30 52.0 +0.6
CPUP LR LR
comp=Z,1µm,20.0s,MS5.7
SDV Santo Domingo 149.72 76 *e*PKPdf PKPdf 07 30 52.2 -1.1
SDV *e*PKPbc PKPbc 07 30 57.8 -0.2
SDV LR LR
comp=Z,3µm,19.0s,MS6.0
AGPR Aguadilla, PR 149.73 56 *e*PKPdf PKPbc 07 30 55.3 -2.6
CRPR Cabo Rojo, PR 149.95 57 *e*PKPdf PKPdf 07 30 54.3 +0.8
CRPR *e*PKPbc PKPbc 07 30 58.1 -0.3
ICM Isla Caja Muer 150.50 57 *e*PKPbc PKPbc 07 30 59.3 -0.4
SJG San Juan 150.70 56 *e*PKIKP PKPdf 07 30 54.8 +0.2
SJG *e* 07 30 59.8
SJG MLR MLR
comp=Z,4µm,20.0s
CBYP Canovanas 150.87 55 *e*PKPdf PKPbc 07 30 56.5 -4.1
CBYP *e*PKPbc PKPbc 07 31 00.3 -0.2
MTP Monte Pirata 151.20 55 *e*PKPdf PKPbc 07 30 56.5 -4.8
MTP *e*PKPbc PKPbc 07 31 01.2 -0.1
GRGR Grenville 157.25 64 PFAKE 07 31 10.0 +6.0
GRGR LR LR
comp=Z,4µm,20.0s,MS6.2
BBGH Gun Hill 158.65 59 PFAKE 07 31 20.0 +14
BBGH LR LR
comp=Z,7µm,22.0s,MS6.4
BDFB Brasilia 160.77 159 PKP PKPdf 07 31 08.0 -0.1
comp=Z,5.9nm,0.7s,baz=326,slow=1.4,SNR=18
BDFB Brasilia 160.77 159 PKP PKPdf 07 31 08.0 -0.1
BDFB LR LR
comp=Z,7µm,19.0s
RCBR Riachuelo 170.45 211 PFAKE 07 31 30.0 +14
RCBR LR LR
comp=Z,7µm,20.0s

IDC ***22*** *07:26:41.6±0.7,232S×139.17E,h0km,mb4.3/12, mb1 4.5/14,mb1mx4.4/19,mbtmp4.3/14,ML3.7/2, Error ellipse: s-maj=28.5km s-min=15.9km az=73.0*
ISCJB ***22*** *07:26:45.7±0.4,234S±005×13925E±009,h33km, mb4.5/29,MS5.1/6, Error ellipse: s-maj=13.7km s-min=6.2km az=165.0*
NEIC ***22*** *07:26:47.8±0.4,228S×139.13E,h35km,mb4.7/11, Error ellipse: s-maj=14.1km s-min=7.0km az=73.0*
BJI ***22*** *07:26:47.2,212S×13939E,h29km,mB5.4,mb4.8,Ms5.1, Msz4.7*
ISC 22 07:26:48.9±1.5,238S±006×1392E±01,h46km±17km, h37km±2.2km:pP-P,n49,σ1s25/47,mb4.6/28,MS5.1/6, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.55**	**132**	Pn		**Pn**	**07 29 17.0**	**-0.6**
	0.4nm,0.3s,baz=194,slow=16,SNR=2.5							
PMG	**Port Moresby**	**10.55**	**132**	*e*Pn		**Pn**	**07 29 18.4**	**+0.8**
COEN	**Coen**	**12.16**	**161**	*e*Pn		**Pn**	**07 29 39.3**	**-0.3**
WRAB	**Tennant Creek**	**18.08**	**195**	*e*P		**Pn**	**07 30 58.5**	**+1.7**
	16nm,0.8s							
WB2	**Warramunga Arr**	**18.09**	**195**	*e*P		**Pn**	**07 30 56.7**	**-0.2**
WRA	**Warramunga Arr**	**18.09**	**195**	P		**Pn**	**07 30 55.9**	**-1.0**
	0.9nm,0.3s,baz=13,slow=11,SNR=19							
WRA				S		**S**	**07 34 10.3**	**-12**
	0.2nm,0.3s,baz=11,slow=21,SNR=5.1							
ASAR	**Alice Springs**	**21.78**	**193**	P		**P**	**07 31 35.8**	**-1.1**
	18nm,0.7s,mb4.6,baz=18,slow=11,SNR=19							
ASAR				S		**S**	**07 35 34.5**	**-0.8**
	4.6nm,1.0s,baz=16,slow=28,SNR=4.4							
KKM	**Kota Kinabalu**	**24.43**	**290**	*e*P		**P**	**07 32 03.7**	**+0.1**
	16nm,0.8s,mb4.5							
EIDS	**Eidsvold**	**25.56**	**154**	*e*P		**P**	**07 32 16.4**	**+2.7**
STKA	**Stephens Creek**	**29.43**	**176**	P		**P**	**07 32 47.3**	**-1.0**
	5.9nm,0.7s,mb4.4,baz=332,slow=8.5,SNR=5.2							
STKA	**Stephens Creek**	**29.43**	**176**	*e*P		**P**	**07 32 48.2**	**0.0**
	10nm,1.6s,mb4.3							
FORT	**Forrest**	**30.15**	**199**	*e*P		**P**	**07 32 55.5**	**+0.8**
	19nm,0.7s,mb4.9							
NWAO	**Narrogin (SRO)**	**36.72**	**212**	*e*P		**P**	**07 33 54.4**	**+2.7**
	106nm,1.6s,mb5.4							
MJAR	**Matsushiro Arr**	**38.73**	**359**	P		**P**	**07 34 06.8**	**-1.9**
	0.3nm,0.3s,mb3.5,baz=175,slow=14,SNR=3.9							
MJAR	**Matsushiro Arr**	**38.73**	**359**	P		**P**	**07 34 06.8**	**-1.9**
NJ2	**Nanjing**	**39.31**	**332**	*e*P		**P**	**07 34 14.3**	**+0.7**
NJ2					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5							
PSI	**Prapat**	**40.59**	**277**	P		**P**	**07 34 22.8**	**-1.8**
	comp=Z,13nm,0.9s,mb4.6,baz=19,slow=18,SNR=7.7							
PSI	**Prapat**	**40.59**	**277**	P		**P**	**07 34 22.8**	**-1.8**
GYA	**Guiyang**	**42.54**	**315**	P		**P**	**07 34 43.5**	**+3.2**
GYA					AP	pP	07 34 53.3	+0.5
GYA					XP	sP	07 34 57.5	-0.7
GYA					PP	PP	07 36 22.0	+2.4
GYA					SCP	ScP	07 40 20.4	+0.8
GYA					S	**S**	**07 41 02.5**	**+2.8**
GYA					XS	sS	07 41 18.3	-2.3
GYA					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
GYA					AMB	AMB		
	comp=Z,80nm,4.9s							
GYA					LR	LR		
	comp=N,560nm,17.0s,MS4.6							
GYA					LR	LR		
	comp=E,470nm,16.6s,MS4.6							
GYA					LR	LR		
	comp=Z,650nm,17.5s,MS4.6							
KMI	**Kunming**	**44.68**	**310**	P		**P**	**07 34 59.1**	**+1.5**
KMI					AMB	AMB		
	comp=Z,12nm,0.7s,mb4.8							
CMAR	**Chiang Mai Arr**	**44.70**	**299**	P		**P**	**07 34 56.5**	**-1.4**
	comp=Z,4.4nm,0.8s,mb4.3,baz=119,slow=6.6,SNR=20							
CHTO	**Chiang Mai**	**44.84**	**300**	*e*P		**P**	**07 34 58.5**	**-0.5**
	comp=Z,12nm,1.3s,mb4.5							
XAN	**Xi'an**	**46.09**	**324**	P		**P**	**07 35 06.0**	**-2.6**
XAN					AP	pP	07 35 18.4	-2.8
XAN					PP	PP	07 36 57.9	+0.5
XAN					AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3							
XAN					LR	LR		
	comp=E,2µm,20.4s							
XAN					LR	LR		
	comp=Z,3µm,24.0s,MS5.2							
CD2	**Chengdu**	**47.27**	**317**	P		**P**	**07 35 20.3**	**+2.4**
CD2					AP	pP	07 35 30.1	-0.4
CD2					XP	sP	07 35 34.0	-1.9
CD2					PCP	PcP	07 36 50.9	+2.3
CD2					PP	PP	07 37 10.8	+1.5
CD2					PCS	PcS	07 40 45.3	+1.4
CD2					AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0							
CD2					AMB	AMB		
	comp=Z,6µm,11.7s							
CD2					LR	LR		
	comp=N,2µm,14.4s							
CD2					LR	LR		
	comp=Z,2µm,17.4s,MS5.1							
MDJ	**Mudanjiang**	**47.57**	**351**	P		**P**	**07 35 20.8**	**+0.9**
MDJ					AMB	AMB		
	comp=Z,9.0nm,2.2s,mb4.4							
HHC	**Hu-ho-hao-te**	**49.86**	**333**	*e*P		**P**	**07 35 38.3**	**+0.7**
HHC					AP	pP	07 35 48.1	-2.3
HHC					XP	sP	07 35 52.0	-3.7
HHC					PCP	PcP	07 36 58.9	+1.2
HHC					PP	PP	07 37 33.3	+0.5
HHC					PCS	PcS	07 40 54.9	+0.4
HHC					AMB	AMB		
	comp=Z,19nm,0.8s,mb5.2							
HHC					AMB	AMB		
	comp=Z,2µm,7.3s							
HHC					LR	LR		
	comp=N,4µm,15.5s,MS5.5							
HHC					LR	LR		
	comp=E,1µm,14.3s,MS5.5							
HHC					LR	LR		
	comp=Z,4µm,15.5s,MS5.5							
LZH	**Lanzhou**	**50.51**	**323**	*e*P		**P**	**07 35 43.3**	**+0.6**
LZH					AP	pP	07 35 53.5	-1.9
LZH					XP	sP	07 35 57.0	-3.7
LZH					*e*PP	PP	07 37 40.0	+1.1
LZH					*e*S	**S**	**07 42 53.1**	**-0.5**
LZH					XS	sS	07 43 10.3	-4.6
LZH					*e*SS	SS	07 46 24.5	-3.8
LZH					AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8							
LZH					AMB	AMB		
	comp=Z,97nm,6.5s							
LZH					LR	LR		
	comp=N,405nm,15.3s							
LZH					LR	LR		
	comp=Z,617nm,18.2s,MS4.7							
GTA	**Gaotai**	**55.10**	**323**	*e*P		**P**	**07 36 23.3**	**+6.8**
GTA					AMB	AMB		
	comp=Z,4.0nm,0.5s,mb4.7							
ULN	**Ulaanbaatar**	**57.37**	**335**	*e*P		**P**	**07 36 33.9**	**+1.4**
	comp=Z,6.8nm,1.3s,mb4.5							
SONM	**Songino Array**	**57.63**	**334**	P		**P**	**07 36 33.3**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=155,slow=7.2,SNR=2.8							
WMQ	**Urumqi**	**65.06**	**321**	*e*P		**P**	**07 37 27.4**	**+2.8**
WMQ					LR	LR		
	comp=N,2µm,23.0s,MS5.3							
WMQ					LR	LR		
	comp=E,1µm,24.0s,MS5.3							
WMQ					LR	LR		
	comp=Z,2µm,23.0s,MS5.1							
MKAR	**Makanchi Array**	**69.83**	**322**	P		**P**	**07 37 54.2**	**-0.5**
	comp=Z,3.1nm,0.7s,mb4.3,baz=110,slow=7.7,SNR=16							
MKAR	**Makanchi Array**	**69.83**	**322**	P		**P**	**07 37 54.2**	**-0.5**
ZALV	**Zalesovo Beam**	**71.90**	**330**	P		**P**	**07 38 06.0**	**-1.2**
	comp=Z,1.8nm,0.6s,mb4.2,baz=108,slow=7.6,SNR=6.0							
AAK	**Ala-Archa**	**73.31**	**316**	P		**P**	**07 38 16.7**	**+0.9**
KURK	**Kurchatov**	**73.73**	**325**	P		**P**	**07 38 17.5**	**-0.6**
	comp=Z,3.2nm,0.8s,mb4.3,baz=114,slow=5.6,SNR=8.1							
KURK	**Kurchatov**	**73.73**	**325**	*e*P		**P**	**07 38 17.2**	**-0.9**
	comp=Z,46nm,0.8s,mb5.5							
KBL	**Kabul**	**75.12**	**307**	*e*P		**P**	**07 38 25.6**	**-1.0**
	comp=Z,5.5nm,0.7s,mb4.6							
BVAR	**Borovoye Array**	**79.32**	**325**	P		**P**	**07 38 48.8**	**-0.9**
	comp=Z,4.3nm,0.6s,mb4.6,baz=110,slow=7.8,SNR=15							
BRVK	**Borovoye**	**79.39**	**325**	*e*P		**P**	**07 38 49.7**	**-0.3**
	comp=Z,5.8nm,0.8s,mb4.6							
CHUM	**Lake Minchumin**	**82.81**	**25**	*e*P		**P**	**07 39 07.8**	**-0.2**
	comp=Z,13nm,0.8s,mb5.0							
AKTK	**Aktyubinsk**	**86.20**	**321**	P		**P**	**07 39 25.1**	**-0.3**
AKTO	**Aktyubinsk**	**86.20**	**321**	P		**P**	**07 39 25.1**	**-0.3**
	comp=Z,0.8nm,0.5s,mb4.2,baz=120,slow=5.3,SNR=3.6							
YKA	**Yellowknife Ar**	**99.55**	**27**	P		Pdif	07 40 26.8	-0.3
	comp=Z,0.5nm,0.8s,baz=284,slow=4.8,SNR=3.3							
TORD	**Torodi Ar. Bea**	**136.63**	**287**	PKP		PKPdf	07 46 07.5	+0.3
	comp=Z,0.9nm,0.7s,baz=64,slow=1.9,SNR=4.9							
TORD	**Torodi Ar. Bea**	**136.63**	**287**	PKP		PKPdf	07 46 07.5	+0.3
DBIC	**Dimbokro**	**143.93**	**278**	PKP		PKPdf	07 46 17.1	-3.3
	comp=Z,1.8nm,0.6s,baz=137,slow=2.5,SNR=3.8							
ROSC	**El Rosal**	**146.45**	**85**	PKPbc		PKPbc	07 46 24.9	-1.3
	comp=Z,5.7nm,0.6s,baz=270,slow=20,SNR=2.3							
CPUP	**Villa Florida**	**147.29**	**152**	PKPbc		PKPbc	07 46 26.8	-1.5
	comp=Z,0.3nm,0.3s,baz=216,slow=8.7,SNR=2.8							

BJI ***22*** *07:33:17.0,329S×13948E,h35km,mB6.3,mb4.8,Ms5.1, Msz4.9*
IDC ***22*** *07:33:20.3±0.7,226S×13905E,h0km,mb4.5/11, mb1 4.7/13,mb1mx4.6/17,mbtmp4.5/13,ML4.6/2, Error ellipse: s-maj=29.7km s-min=14.3km az=74.0*
ISCJB ***22*** *07:33:22.2±1.6,224S±004×13909E±005,h18km±11km, mb4.8/49,MS5.0/5, Error ellipse: s-maj=8.9km s-min=6.6km az=156.7*
DJA ***22*** *07:33:24,209S×139.15E,h20km,mb5.2/8*
MOS ***22*** *07:33:24.0±1.3,225S×13894E,h33km,mb5.0/17, Error ellipse: s-maj=14.4km s-min=8.1km az=111.4*
NEIC ***22*** *07:33:26.4±0.3,225S×13897E,h35km,mb4.9/24, Error ellipse: s-maj=11.6km s-min=7.0km az=75.0*
NEIC Felt [II] at Jayapura.
ISC 22 07:33:26.9±1.0,228S±005×13916E±005,h42km±10km, h37km±1.8km:pP-P,n121,σ1s35/118,mb4.8/49,MS5.0/5, 2C-3D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.56**	**98**	P		**Pn**	**07 33 50.7**	**-1.5**
BAKI	**Biak**	**3.24**	**290**	P		**Pn**	**07 34 10.7**	**-4.6**
MMPI	**Merauke**	**6.26**	**169**	P		**Pn**	**07 34 58.2**	**+1.4**
	771nm,0.8s,5.3nm							
PMG	**Port Moresby**	**10.64**	**132**	Pn		**Pn**	**07 35 59.0**	**+2.1**
	1.1nm,0.3s,baz=321,slow=6.2,SNR=12							
PMG	**Port Moresby**	**10.64**	**132**	*e*Pn		**Pn**	**07 35 59.7**	**+2.8**
PMG	**Port Moresby**	**10.64**	**132**	P		**Pn**	**07 35 59.7**	**+2.8**
	114nm,1.1s							
COEN	**Coen**	**12.26**	**161**	*e*Pn		**Pn**	**07 36 17.5**	**-1.5**
COEN	**Coen**	**12.26**	**161**	P		**Pn**	**07 36 17.1**	**-1.9**
KAKA	**Kakadu**	**12.31**	**212**	*e*P		x	07 35 14.3	
	58nm,0.4s							
KAKA					*e*S	x	07 37 31.9	
KAKA	**Kakadu**	**12.31**	**212**	P		x	07 35 15.3	
KDI	**Kendari**	**16.60**	**264**	P		**Pn**	**07 37 14.9**	**-1.9**
	25nm,2.2s							
WRAB	**Tennant Creek**	**18.16**	**195**	*e*P		**Pn**	**07 37 37.8**	**+1.8**
WRAB	**Tennant Creek**	**18.16**	**195**	*e*P		**Pn**	**07 37 36.5**	**+0.5**
	53nm,0.9s							
WRAB	**Tennant Creek**	**18.16**	**195**	P		**Pn**	**07 37 37.9**	**+1.9**
WB2	**Warramunga Arr**	**18.17**	**195**	*e*P		**Pn**	**07 37 34.8**	**-1.3**
WB2	**Warramunga Arr**	**18.17**	**195**	*e*P		**Pn**	**07 37 34.9**	**-1.2**
WRA	**Warramunga Arr**	**18.17**	**195**	P		**Pn**	**07 37 33.6**	**-2.6**
	2.0nm,0.3s,baz=18,slow=12,SNR=36							
WRA				S		**S**	**07 40 48.8**	**-13**
	0.8nm,0.3s,baz=8.5,slow=22,SNR=4.0							
CTA	**Charters Tower**	**19.00**	**159**	P		**Pn**	**07 37 44.2**	**-2.0**
	1.1nm,0.3s,baz=330,slow=9.1,SNR=11							
CTA	**Charters Tower**	**19.00**	**159**	*e*P		**Pn**	**07 37 46.7**	**+0.5**
	10nm,0.8s							
CTAO	**Charters Tower**	**19.00**	**159**	*e*P		**Pn**	**07 37 46.6**	**+0.4**
CTAO					pmax	pmax		
	comp=Z,25nm,1.0s							
CTAO	**Charters Tower**	**19.00**	**159**	*e*P		**Pn**	**07 37 46.6**	**+0.4**
	comp=Z,25nm,1.0s							
CTAO					*e*Pn	**Pn**	**07 37 47.3**	**+1.1**
CTAO	**Charters Tower**	**19.00**	**159**	P		**Pn**	**07 37 47.1**	**+0.9**
PCI	**Palu**	**19.36**	**274**	P		**Pn**	**07 37 51.5**	**+0.9**
	comp=Z,433nm,1.1s							
FITZ	**Fitzroy Crossi**	**20.57**	**219**	*e*P		**P**	**07 38 01.6**	**-0.7**
	comp=Z,30nm,0.9s							
FITZ	**Fitzroy Crossi**	**20.57**	**219**	*e*P		**P**	**07 38 04.0**	**+1.7**
	comp=Z,24nm,0.9s							
FITZ	**Fitzroy Crossi**	**20.57**	**219**	P		**P**	**07 38 03.3**	**+1.0**
HNR	**Honiara**	**21.85**	**110**	*e*P		**P**	**07 38 20.7**	**+4.6**
HNR					pmax	pmax		
	comp=Z,113nm,1.0s,mb5.2							
HNR	**Honiara**	**21.85**	**110**	*e*P		**P**	**07 38 20.7**	**+4.6**
	comp=Z,113nm,1.0s,mb5.2							
ASAR	**Alice Springs**	**21.86**	**193**	P		**P**	**07 38 14.6**	**-1.5**
	comp=Z,19nm,0.7s,mb4.6,baz=24,slow=9.6,SNR=27							
ASAR				S		**S**	**07 42 12.9**	**-2.5**
	comp=Z,12nm,1.0s,baz=15,slow=25,SNR=5.4							
MYLDM	**Lahad Datu**	**21.93**	**290**	⇑P		**P**	**07 38 19.8**	**+2.8**
MYLDM	**Lahad Datu**	**21.93**	**290**	P		**P**	**07 38 14.7**	**-2.3**
	comp=Z,75nm,1.4s,mb4.9							
SMKI	**Samarinda**	**22.02**	**274**	P		**P**	**07 38 19.7**	**+1.7**
	comp=Z,140nm,1.1s,mb5.3							
TSM	**Tawau**	**22.25**	**287**	⇓P		**P**	**07 38 22.3**	**+1.9**
SDKM	**Sandakan**	**23.31**	**290**	⇑P		**P**	**07 38 34.0**	**+2.4**
KHKI	**Kahang-Kahang**	**24.21**	**255**	P		**P**	**07 38 39.7**	**-0.1**
	comp=Z,62nm,1.0s,mb5.0							
BBKI	**Banjar Baru**	**24.32**	**267**	P		**P**	**07 38 42.6**	**+1.7**
EIDS	**Eidsvold**	**25.66**	**154**	*e*P		**P**	**07 38 55.7**	**+2.7**
	comp=Z,46nm,0.8s,mb5.1							
MBWA	**Marble Bar**	**26.65**	**224**	*e*P		**P**	**07 39 02.4**	**+0.4**
	comp=Z,91nm,1.6s,mb5.1							
MBWA	**Marble Bar**	**26.65**	**224**	P		**P**	**07 39 03.5**	**+1.6**
SBUM	**Sibu**	**27.34**	**280**	⇓P		**P**	**07 39 09.8**	**+1.5**
KSM	**Kuching**	**29.09**	**277**	*e*P		**P**	**07 39 23.9**	**0.0**
	comp=Z,9.9nm,0.5s,mb4.8							
STKA	**Stephens Creek**	**29.52**	**176**	P		**P**	**07 39 26.9**	**-0.5**
	comp=Z,12nm,0.7s,mb4.8,baz=19,slow=9.4,SNR=20							
STKA	**Stephens Creek**	**29.52**	**176**	*e*P		**P**	**07 39 26.3**	**-1.1**
	comp=Z,11nm,0.6s,mb4.8							
STKA	**Stephens Creek**	**29.52**	**176**	*e*P		**P**	**07 39 26.9**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.0							
FORT	**Forrest**	**30.23**	**199**	*e*P		**P**	**07 39 33.5**	**-0.2**
	comp=Z,48nm,0.8s,mb5.3							
FORT	**Forrest**	**30.23**	**199**	*e*P		**P**	**07 39 34.8**	**+1.1**
	comp=Z,56nm,0.8s,mb5.3							
ARMA	**Armidale**	**30.37**	**158**	*e*P		**P**	**07 39 37.4**	**+2.4**
CNB	**Canberra Magne**	**34.20**	**165**	*e*P		**P**	**07 40 08.7**	**+0.2**
KLBR	**Kellerberrin**	**35.46**	**212**	*e*P		**P**	**07 40 18.2**	**-1.2**
	comp=Z,24nm,0.9s,mb5.1							
NWAO	**Narrogin (SRO)**	**36.77**	**212**	*e*P		**P**	**07 40 30.9**	**+0.3**
NWAO					pmax	pmax		
	comp=Z,15nm,1.0s							
NWAO	**Narrogin (SRO)**	**36.77**	**212**	*e*P		**P**	**07 40 30.9**	**+0.3**
	comp=Z,15nm,1.0s,mb4.8							
MJAR	**Matsushiro Arr**	**38.64**	**359**	P		**P**	**07 40 44.2**	**-2.1**
	comp=Z,0.9nm,0.5s,mb3.8,baz=178,slow=9.3,SNR=4.7							
NJ2	**Nanjing**	**39.21**	**332**	*e*P		**P**	**07 40 51.9**	**+0.8**
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
PSI	**Prapat**	**40.54**	**277**	P		**P**	**07 41 00.2**	**-2.3**
	comp=Z,34nm,0.9s,mb5.0,baz=118,slow=3.1,SNR=16							
GYA	**Guiyang**	**42.44**	**314**	P		**P**	**07 41 19.3**	**+1.4**
GYA					AP	pP	07 41 29.4	-0.2
GYA					XP	sP	07 41 33.5	-1.1
GYA					PP	PP	07 43 01.3	+4.4
GYA					PPP		07 43 34.0	
GYA					S	**S**	**07 47 38.5**	**+1.5**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5							
GYA					LR	LR		
	comp=N,1µm,17.0s,MS4.9							
GYA					LR	LR		
	comp=E,780nm,17.3s,MS4.9							
GYA					LR	LR		
	comp=Z,980nm,18.0s,MS4.7							
KMI	**Kunming**	**44.59**	**310**	P		**P**	**07 41 38.1**	**+2.9**
KMI					AMB	AMB		
	comp=Z,18nm,0.6s,mb5.1							
CMAR	**Chiang Mai Arr**	**44.62**	**299**	P		**P**	**07 41 34.5**	**-1.1**
	comp=Z,7.4nm,0.9s,mb4.5,baz=120,slow=6.5,SNR=16							
CHTO	**Chiang Mai**	**44.76**	**300**	*e*P		**P**	**07 41 35.2**	**-1.5**
CHTO					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5							
CHTO	**Chiang Mai**	**44.76**	**300**	*e*P		**P**	**07 41 35.2**	**-1.5**
	comp=Z,8.8nm,1.0s,mb4.5							
XAN	**Xi'an**	**45.99**	**324**	P		**P**	**07 41 44.9**	**-1.3**
XAN					AP	pP	07 41 56.3	-1.7
XAN					PP	PP	07 43 35.5	+0.8
XAN					S	**S**	**07 48 30.9**	**+2.5**
XAN					AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.3							
XAN					LR	LR		
	comp=E,2µm,26.2s							
XAN					LR	LR		
	comp=Z,2µm,22.3s,MS5.0							
BJI	**Beijing**	**47.09**	**336**	P		**P**	**07 41 57.8**	**+3.1**
BJI					AMB	AMB		
	comp=Z,11nm,1.5s,mb4.6							
CD2	**Chengdu**	**47.17**	**317**	P		**P**	**07 41 55.1**	**-0.4**
CD2					AP	pP	07 42 05.0	-2.4
CD2					XP	sP	07 42 09.4	-2.9
CD2					PCP	PcP	07 43 27.1	+0.4
CD2					PP	PP	07 43 45.5	-1.3
CD2					PCS	PcS	07 47 20.5	-1.4
CD2					S	**S**	**07 48 44.1**	**-1.4**
CD2					AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3							
CD2					AMB	AMB		
	comp=Z,6µm,10.9s							
CD2					LR	LR		
	comp=N,1µm,13.8s							
CD2					LR	LR		
	comp=Z,1µm,13.2s,MS5.0							
MDJ	**Mudanjiang**	**47.47**	**351**	P		**P**	**07 41 59.9**	**+2.3**
MDJ					AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8							
MDJ					AMB	AMB		
	comp=Z,3µm,14.8s							
HHC	**Hu-ho-hao-te**	**49.76**	**333**	*e*P		**P**	**07 42 16.1**	**+0.8**
HHC					AP	pP	07 42 25.6	-1.6
HHC					XP	sP	07 42 30.4	-1.7
HHC					PP	PP	07 44 11.3	+1.0
HHC					PCS	PcS	07 47 32.8	+0.3
HHC					*e*S	**S**	**07 49 22.1**	**+0.5**
HHC					AMB	AMB		
	comp=Z,22nm,1.0s,mb5.1							
HHC					AMB	AMB		
	comp=Z,8µm,8.3s							
HHC					LR	LR		
	comp=N,1µm,14.3s,MS5.2							
HHC					LR	LR		
	comp=E,1µm,15.5s,MS5.2							
HHC					LR	LR		
	comp=Z,1µm,17.8s,MS4.9							
KLR	**Kul'dur**	**51.71**	**354**	*e*P		**P**	**07 42 28.7**	**-1.1**
SHL	**Shillong**	**53.47**	**304**	*e*P		**P**	**07 42 41.0**	**-2.2**
HIA	**Hailar**	**54.03**	**344**	*e*P		**P**	**07 42 38.9**	**-8.0**
GTA	**Gaotai**	**55.00**	**323**	*e*P		**P**	**07 42 55.3**	**+1.2**
GTA					AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5							
ULN	**Ulaanbaatar**	**57.27**	**335**	*e*P		**P**	**07 43 05.3

SNR=12
AML Almayashu 73.61 315 *e*P **P** 07 44 56.2 +0.2
comp=Z,18nm,1.0s,mb5.0
KURK Kurchatov 73.63 325 *e*P **P** 07 44 55.2 -0.7
KURK pmax pmax
comp=Z,13nm,0.9s,mb4.9
KURK Kurchatov 73.63 325 *e*P **P** 07 44 55.2 -0.7
comp=Z,13nm,0.9s,mb4.9
EKS2 Erkin-Say 73.72 316 P **P** 07 44 56.9 +0.3
SNR=9.6
EKS2 Erkin-Say 73.72 316 *e*P **P** 07 44 56.7 +0.1
comp=Z,13nm,1.0s,mb4.8
TIXI Tiksi 74.11 357 *e*P **P** 07 44 54.5 -3.8
KBL Kabul 75.04 307 *e*P **P** 07 45 03.3 -1.2
KBL pmax pmax
comp=Z,15nm,1.0s,mb4.9
KBL Kabul 75.04 307 *e*P **P** 07 45 03.3 -1.2
comp=Z,15nm,1.0s,mb4.9
VNDA Vanda 76.16 175 P **P** 07 45 10.0 -0.1
comp=Z,3.9nm,0.7s,mb4.5,baz=308,slow=6.5,SNR=12
VNDA Vanda 76.16 175 *e*P **P** 07 45 10.6 +0.5
VNDA pmax pmax
comp=Z,4.0nm,0.7s
VNDA Vanda 76.16 175 *e*P **P** 07 45 10.6 +0.5
comp=Z,3.9nm,0.7s,mb4.5
BRVK Borovoye 79.29 325 *e*P **P** 07 45 27.5 -0.5
BRVK pmax pmax
comp=Z,16nm,0.8s,mb5.0
BRVK Borovoye 79.29 325 *e*P **P** 07 45 27.5 -0.4
comp=Z,16nm,0.8s,mb5.0
CHUM Lake Minchumin 82.74 25 *e*P **P** 07 45 46.4 +0.3
comp=Z,19nm,1.0s,mb5.1
PMR Palmer 83.38 27 *e*P **P** 07 45 50.0 +0.6
PMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
PMR Palmer 83.38 27 *e*P **P** 07 45 50.0 +0.5
comp=Z,9.7nm,1.0s,mb4.8
MCK McKinley 84.11 25 *e*P **P** 07 45 54.2 +1.1
MCK pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
MCK McKinley 84.11 25 *e*P **P** 07 45 54.2 +1.1
comp=Z,5.8nm,0.6s,mb4.9
AKTK Aktyubinsk 86.11 321 P **P** 07 46 02.6 -0.8
AKTO Aktyubinsk 86.11 321 P **P** 07 46 02.6 -0.8
comp=Z,2.2nm,0.7s,mb4.5,baz=116,slow=6.5,SNR=6.3
ARU Arti 86.69 327 *d* iP **P** 07 46 02.4 -3.7
ARU S S 07 56 25.5 -15
ARU SS SS 08 02 21.1 -1.0
ARU pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
ARU Arti 86.69 327 *e*P **P** 07 46 04.9 -1.2
comp=Z,12nm,0.2s,mb5.8
EGAK Eagle 87.66 25 *e*P **P** 07 46 10.8 +0.2
comp=Z,13nm,1.0s,mb5.1
DAWY Dawson 88.29 26 *e*P **P** 07 46 14.5 +0.8
YKA Yellowknife Ar 99.48 27 P **P** 07 47 04.8 -0.2
comp=Z,0.5nm,0.8s,mb4.1,baz=285,slow=4.8,SNR=4.0
ARCES ARCESS Array B 100.26 341 P Pdif 07 47 07.3 -1.4
comp=Z,5.1nm,0.9s,baz=76,slow=5.5,SNR=6.7
TORD Torodi Ar. Bea 106.57 287 PKP PKPdf 07 52 44.8 -0.8
comp=Z,1.9nm,0.7s,baz=68,slow=2.3,SNR=12
DBIC Dimbokro 143.87 278 PKP PKPdf 07 52 56.1 -2.7
comp=Z,3.3nm,0.5s,baz=18,slow=3.0,SNR=15
DBIC Dimbokro 143.87 278 *e*PKPdf PKPdf 07 52 56.2 -2.6
ROSC El Rosal 146.48 85 PKPbc PKPbc 07 53 04.6 -0.1
comp=Z,4.8nm,0.5s,baz=284,slow=4.2,SNR=4.0
CPUP Villa Florida 147.39 152 PKPbc PKPbc 07 53 07.1 +0.1
comp=Z,0.6nm,0.5s,baz=243,slow=6.8,SNR=3.2
SDV Santo Domingo 149.65 76 *e*PKPdf PKPdf 07 53 10.5 +2.0
SDV *e*PKPbc PKPbc 07 53 13.9 +0.7

*NEIC **22** 07:34:45.9, 15.73N×94.54W, h45km, MD3.9(MEX), After MEX.*
MEX 22 07:34:46.1±0.7, 15.75N×94.54W, h41km±32km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.27**	**92**	*i* P	Pn	07 35 05.9	-1.5
PCIG				*i* S	Sn	07 35 21.3	-2.0
CMIG	**Matias Romero**	**1.38**	**346**	*i* P	Pn	07 35 07.4	-1.5
CMIG				*i* S	Sn	07 35 24.0	-1.8
HUIG	**Huatulco**	**1.51**	**271**	*i* P	Pn	07 35 09.3	-1.4
HUIG				*i* S	Sn	07 35 26.5	-2.6
TGIG		**1.70**	**53**	*e*P	Pn	07 35 11.7	-1.6
TGIG				*i* S	Sn	07 35 30.9	-3.0
SCX	**San Cristobal**	**2.08**	**62**	*e*P	Pn	07 35 16.3	-2.1
SCX				*i* S	Sn	07 35 39.8	-3.3
THIG		**2.35**	**111**	*e*P	Pn	07 35 21.9	-0.3
THIG				*i* S	Sn	07 35 47.0	-2.8
CCIG	**Comitan**	**2.37**	**77**	*e*P	Pn	07 35 21.5	-1.0
CCIG				*i* S	Sn	07 35 48.3	-2.0
VHO	**Vista Hermosa**	**2.48**	**302**	*i* P	Pn	07 35 22.7	-1.4
VHO				*i* S	Sn	07 35 52.8	-0.3
VHO	**Vista Hermosa**	**2.48**	**302**	*i* P	Pn	07 35 22.7	-1.4
VHO				*i* S	Sn	07 35 53.3	+0.2
PNIG	**Pinotepa**	**3.51**	**281**	*e*P	Pn	07 35 36.9	-1.2
PNIG				*i* S	Sn	07 36 15.2	-3.3
UTMO	**Huajuapan**	**3.75**	**304**	*i* P	Pn	07 35 40.5	-1.0
UTMO				*i* S	Sn	07 36 22.9	-1.5
PPM	**Popocatepetl**	**5.11**	**311**	*e*P	Pn	07 36 00.6	+0.4
PPM				*i* S	Sn	07 36 58.3	+0.4

IDC 22 07:45:25.4±5.2, 220S×139.43E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=206.2km s-min=29.1km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.32**	**195**	P	Pn	07 49 41.4	+0.2
	0.1nm,0.3s,baz=17,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**22.00**	**194**	P	P	07 50 21.4	0.0
	0.5nm,0.7s,baz=24,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**69.83**	**322**	P	P	07 56 38.0	+0.1
	0.4nm,0.7s,baz=115,slow=6.8,SNR=3.2						

IDC 22 07:48:54.5±4.8, 234S×139.14E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/14, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=192.3km s-min=30.3km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.12**	**195**	P	Pn	07 53 08.7	+1.1
	0.2nm,0.3s,baz=18,slow=13,SNR=6.6						
ASAR	**Alice Springs**	**21.80**	**193**	P	P	07 53 48.0	-0.2
	0.8nm,0.8s,baz=8.8,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**69.76**	**322**	P	P	08 00 06.5	0.0
	0.4nm,0.7s,baz=115,slow=6.8,SNR=3.9						

IDC 22 07:49:44.4±5.2, 224S×139.36E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/14, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=206.6km s-min=29.9km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.27**	**195**	P	Pn	07 53 59.1	-0.3
	0.3nm,0.3s,baz=16,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**21.95**	**193**	P	P	07 54 40.0	+0.3
	1.8nm,0.6s,baz=28,slow=12,SNR=8.4						
MKAR	**Makanchi Array**	**69.81**	**322**	P	P	08 00 56.8	+0.1
	1.4nm,1.1s,baz=116,slow=5.5,SNR=4.6						

IDC 22 07:53:39.8±2.1, 012N×96.72E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.6/22, mbtmp3.6/6, ML3.9/2, MS4.2/1, Ms1 4.2/1, ms1mx3.9/35, Error ellipse: s-maj=60.2km s-min=23.4km az=62.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.46**	**40**	Pn	Pn	07 54 34.2	-0.7
	1.6nm,0.3s,baz=250,slow=11,SNR=4.5						
PSI				LR	LR	07 56 02.3	
	comp=Z,4μm,18.8s,baz=20,slow=42						
CMAR	**Chiang Mai Arr**	**18.36**	**7**	P	Pn	07 57 57.1	+1.2
	0.5nm,0.3s,baz=191,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**41.89**	**121**	P	P	08 01 32.0	-0.3
	0.8nm,0.9s,baz=301,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**43.14**	**126**	P	P	08 01 42.6	+0.2
	0.5nm,0.6s,baz=302,slow=8.2,SNR=6.3						
MKAR	**Makanchi Array**	**48.17**	**347**	P	P	08 02 21.9	+0.1
	0.4nm,0.6s,baz=161,slow=8.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**54.55**	**351**	P	P	08 03 08.8	-0.8
	0.5nm,0.3s,baz=178,slow=5.2,SNR=3.6						

*IDC **22** 08:14:06.3±1.1, 3693N×6994E, h0km, mb3.5/6, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML3.5/4, Error ellipse: s-maj=23.1km s-min=21.5km az=108.0*
*NNC **22** 08:14:13.1±2.1, 3766N×6945E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=17.5km s-min=15.1km az=123.0*
*ISCJB **22** 08:14:14.3±0.8, 3735N±005×6983E±010, h77km±10km, mb3.3/6, Error ellipse: s-maj=13.1km s-min=7.3km az=19.4*
*NEIC **22** 08:14:14.8±1.1, 3728N×6990E, h64km±12km, Error ellipse: s-maj=16.6km s-min=10.9km az=110.0*
ISC 22 08:14:15.1±0.9, 3729N±006×6978E±010, h69km±10km, n27, σ1°39/31, mb3.3/6, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.81**	**192**	*e*Pn	**Pn**	08 14 58.2	**+0.5**
KBL				*e*Sn	**Sn**	08 15 35.1	**+4.7**
AML	**Almayashu**	**5.70**	**31**	P	**Pn**	08 15 37.5	**+0.5**
	SNR=25						
KK31	**Karatay Array**	**5.83**	**5**	⇑Pn	**Pn**	08 15 39.1	**+0.3**
	1.8nm,0.5s,baz=180,slow=12,SNR=36						
KK31				⇓Sn	**Sn**	08 16 46.8	**+2.6**
	2.8nm,0.5s,baz=193,slow=22,SNR=4.2						
KK31				⇓Lg		08 17 08.7	
	5.8nm,0.6s,baz=182,slow=30,SNR=3.7						
KZA	**Kyzart**	**6.37**	**40**	P	**Pn**	08 15 46.4	**+0.1**
	SNR=6.8						
AAK	**Ala-Archa**	**6.45**	**33**	P	**Pn**	08 15 47.7	**+0.4**
	SNR=17						
AAK	**Ala-Archa**	**6.45**	**33**	*e*Pn	**Pn**	08 15 47.5	**+0.2**
CHMS	**Chumysh**	**6.85**	**32**	P	**Pn**	08 15 53.2	**+0.4**
	SNR=11						
USP	**Ospenovka**	**6.97**	**30**	P	**Pn**	08 15 54.6	**+0.1**
	SNR=20						
ULHL	**Ulahol**	**7.02**	**43**	P	**Pn**	08 15 54.6	**-0.5**
	SNR=8.2						
TKM2	**Tokmak 2**	**7.17**	**37**	⇓Pn	**Pn**	08 15 57.1	**-0.1**
	14nm,0.7s						
TKM2				⇑Sn	**Sn**	08 17 19.7	**+2.5**
	4.7nm,0.8s						
TKM2				⇓Lg		08 17 58.3	
	17nm,1.9s						
TKM2	**Tokmak 2**	**7.17**	**37**	P	**Pn**	08 15 57.0	**-0.2**
	SNR=14						
TKM2	**Tokmak 2**	**7.17**	**37**	*e*Pn	**Pn**	08 15 56.7	**-0.5**
MKAR	**Makanchi Array**	**13.27**	**40**	Pn	**Pn**	08 17 17.9	**-2.4**
	0.2nm,0.3s,baz=224,slow=12,SNR=8.7						
MKAR	**Makanchi Array**	**13.27**	**40**	Pn	**Pn**	08 17 17.9	**-2.4**
AB09	**Akbulak array**	**13.94**	**332**	⇑Pn	**Pn**	08 17 27.0	**-2.1**
	1.1nm,0.5s						
AB09				⇑Sn	**Sn**	08 19 54.1	**-8.0**
	3.2nm,1.3s						
KURK	**Kurchatov**	**14.83**	**22**	Pn	**Pn**	08 17 37.8	**-2.9**
	0.0nm,0.3s,baz=215,slow=12,SNR=4.0						
AKTK	**Aktyubinsk**	**15.61**	**331**	Pn	**Pn**	08 17 49.6	**-1.1**
AKTO	**Aktyubinsk**	**15.61**	**331**	⇑Pn	**Pn**	08 17 49.6	**-1.1**
	1.5nm,1.3s						
AKTO	**Aktyubinsk**	**15.61**	**331**	Pn	**Pn**	08 17 49.6	**-1.1**
	0.1nm,0.3s,baz=127,slow=16,SNR=3.7						
BVAR	**Borovoye Array**	**15.74**	**1**	Pn	**Pn**	08 17 54.0	**+1.7**
	0.5nm,0.3s,baz=165,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**19.63**	**27**	P	**Pn**	08 18 37.5	**-2.2**
	0.5nm,0.3s,baz=220,slow=9.8,SNR=7.2						
SONM	**Songino Array**	**28.70**	**57**	P	**P**	08 20 06.5	**+1.1**
	0.2nm,0.3s,mb3.2,baz=249,slow=10,SNR=3.4						
NOA	**NORSAR Array B**	**43.16**	**323**	P	**P**	08 22 10.3	**+1.9**
	1.3nm,0.8s,mb3.7,baz=96,slow=8.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**64.77**	**268**	P	**P**	08 24 47.9	**+1.4**
	0.6nm,0.8s,mb3.5,baz=37,slow=6.7,SNR=3.9						
YKA	**Yellowknife Ar**	**80.50**	**2**	P	**P**	08 26 22.2	**+3.2**
	0.1nm,0.4s,mb3.0,baz=352,slow=5.1,SNR=4.1						
WRA	**Warramunga Arr**	**83.24**	**121**	P	**P**	08 26 33.0	**-1.1**
	0.2nm,0.7s,mb3.1,baz=303,slow=3.7,SNR=3.8						
ASAR	**Alice Springs**	**85.51**	**124**	P	**P**	08 26 44.9	**-0.6**
	0.3nm,0.8s,mb3.3,baz=305,slow=3.3,SNR=2.9						

*BJI **22** 08:30:18.5, 66.19N×162.13W, h5km, mB4.7, mb4.7, Ms4.7, Msz4.5*
*ISCJB **22** 08:30:20.7±0.3, 6609N±006×16189W±007, h10km, mb4.1/11, MS4.6/2, Error ellipse: s-maj=8.2km s-min=3.8km az=14.9*
*NEIC **22** 08:30:21.1, 66.14N×161.93W, h10km, ML4.2(AEIC), After AEIC.*
*IDC **22** 08:30:23.6±1.0, 66.30N×161.92W, h0km, mb3.7/9, mb1 4.0/12, mb1mx3.8/28, mbtmp3.8/12, ML3.6/1, Error ellipse: s-maj=25.5km s-min=15.4km az=35.0*
ISC 22 08:30:22.9±0.3, 6606N±006×16195W±007, h10km, n46, σ1°14/50, mb4.1/11, MS4.6/2, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCSA	**Galena City Sc**	**2.50**	**120**	P	**Pn**	08 31 02.6	**-0.9**
GCSA				S	**Sn**	08 31 34.1	**+0.2**
TNA	**Tin City**	**2.51**	**261**	P	**Pn**	08 31 02.7	**-1.0**
TNA				S	**Sn**	08 31 33.5	**-0.8**
IM3	**Indian Mountai**	**3.35**	**88**	P	**Pn**	08 31 13.7	**-1.5**
TT01	**Tatalina**	**4.08**	**138**	P	**Pn**	08 31 24.6	**-0.6**
CHUM	**Lake Minchumin**	**4.64**	**114**	P	**Pn**	08 31 32.5	**-0.3**
CHUM				S	**Sn**	08 32 27.5	**+0.8**
GAMB	**Gambell**	**4.74**	**246**	P	**Pn**	08 31 34.1	**-0.1**
COLD	**Coldfoot**	**4.82**	**71**	P	**Pn**	08 31 34.3	**-1.0**
BPAW	**Bear Paw Mtn.**	**5.04**	**108**	P	**Pn**	08 31 38.0	**-0.4**
PPLA	**Purkeypile**	**5.28**	**122**	P	**Pn**	08 31 41.6	**0.0**
KTH	**Kantishna Hill**	**5.34**	**113**	P	**Pn**	08 31 42.5	**0.0**
TRF	**Thorofare Moun**	**5.63**	**112**	P	**Pn**	08 31 46.6	**+0.1**
SVW2	**Sparrevohn**	**5.74**	**147**	P	**Pn**	08 31 48.0	**+0.1**
COLA	**College**	**5.99**	**95**	P	**Pn**	08 31 51.0	**-0.4**
MCK	**McKinley**	**6.01**	**107**	P	**Pn**	08 31 51.5	**-0.2**
SKT	**Skwentna**	**6.14**	**127**	P	**Pn**	08 31 53.7	**+0.3**
IL1	**Eielson Array**	**6.42**	**95**	P	**Pn**	08 31 56.4	**-0.8**
BM3	**Burnt Mountain**	**7.00**	**71**	P	**Pn**	08 32 03.4	**-1.8**
FIB	**Fire Island**	**7.18**	**128**	P	**Pn**	08 32 07.7	**0.0**
PMR	**Palmer**	**7.22**	**122**	*e*P	**Pn**	08 32 09.0	**+0.7**
RC01	**Rabbit Creek A**	**7.38**	**127**	*e*Pn	**Pn**	08 32 09.4	**-1.0**
	22nm,0.4s						
PAX	**Paxson**	**7.75**	**106**	P	**Pn**	08 32 14.8	**-0.7**
MENT	**Mentasta**	**8.45**	**103**	*e*Pn	**Pn**	08 32 26.6	**+1.5**
EGAK	**Eagle**	**8.75**	**89**	*e*Pn	**Pn**	08 32 27.8	**-1.4**
	15nm,0.9s						
BCA3	**Beaver Creek A**	**9.17**	**100**	P	**Pn**	08 32 33.8	**-1.1**
KDAK	**Kodiak Island**	**9.39**	**148**	Pn	**Pn**	08 32 40.2	**+2.2**
	0.5nm,0.3s,baz=344,slow=15,SNR=4.4						
DAWY	**Dawson**	**9.71**	**91**	P	**Pn**	08 32 40.8	**-1.6**
INK	**Inuvik**	**11.21**	**66**	Pn	**Pn**	08 33 03.1	**+0.3**
	0.3nm,0.3s,baz=288,slow=14,SNR=17						
INK	**Inuvik**	**11.21**	**66**	*e*Pn	**Pn**	08 33 03.1	**+0.3**
	5.4nm,0.5s						
BILL	**Bilibino**	**12.48**	**294**	*e*Pn	**Pn**	08 33 20.1	**0.0**
	3.6nm,0.6s						
DLBC	**Dease Lake**	**16.54**	**102**	Pn	**Pn**	08 34 17.4	**+2.9**
	0.4nm,0.3s,baz=280,slow=6.4,SNR=12						
YKA	**Yellowknife Ar**	**20.45**	**78**	P	**P**	08 35 02.2	**+2.2**
	1.5nm,0.7s,baz=307,slow=12,SNR=18						
YKA	**Yellowknife Ar**	**20.45**	**78**	P	**P**	08 35 02.2	**+2.2**
RES	**Resolute Bay**	**22.72**	**39**	P	**P**	08 35 25.2	**+1.0**
	0.9nm,0.3s,mb3.7,baz=256,slow=16,SNR=4.8						
FRB	**Frobisher Bay**	**36.20**	**49**	P	**P**	08 37 25.0	**-0.1**
	1.9nm,0.7s,mb4.1,baz=327,slow=8.3,SNR=6.5						
PDAR	**Pinedale Array**	**36.77**	**103**	P	**P**	08 37 33.0	**+2.9**
	1.6nm,0.9s,mb3.9,baz=335,slow=6.3,SNR=11						
NVAR	**Mina Array Bea**	**37.15**	**116**	P	**P**	08 37 35.4	**+2.0**
	2.7nm,0.9s,mb4.1,baz=305,slow=7.7,SNR=12						
NVAR	**Mina Array Bea**	**37.15**	**116**	P	**P**	08 37 35.4	**+2.0**
SONM	**Songino Array**	**48.19**	**295**	P	**P**	08 39 04.7	**+1.9**
	0.7nm,0.7s,mb3.8,baz=38,slow=7.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**50.12**	**315**	P	**P**	08 39 18.0	**+0.5**
	0.6nm,0.5s,mb3.9,baz=100,slow=3.5,SNR=2.8						
HHC	**Hu-ho-hao-te**	**52.13**	**286**	*e*P	**P**	08 39 30.5	**-2.3**
HHC				AP	pP	08 39 35.1	-0.9
HHC				XP	sP	08 39 38.5	+1.3
HHC				PP	PP	08 41 28.3	-2.5
HHC				S	**S**	08 46 50.8	**-5.9**
HHC				SCS	ScS	08 49 17.0	-5.4
HHC				SS	SS	08 50 24.9	-8.4
HHC				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,435nm,10.3s						
HHC				LR	LR		
	comp=N,285nm,15.5s,MS4.6						
HHC				LR	LR		
	comp=E,268nm,14.3s,MS4.6						
HHC				LR	LR		
	comp=Z,372nm,15.5s,MS4.5						
MKAR	**Makanchi Array**	**57.21**	**313**	P	**P**	08 40 11.0	**+1.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=55,slow=6.4,SNR=4.2						
WMQ	**Urumqi**	**58.19**	**307**	*e*P	**P**	08 40 17.3	**+0.8**
WMQ				LR	LR		
	comp=N,264nm,17.0s,MS4.6						
WMQ				LR	LR		
	comp=E,306nm,17.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,480nm,17.0s,MS4.7						
AKASG	**Malin Array Be**	**63.26**	**352**	P	**P**	08 40 52.4	**+1.5**
	comp=Z,0.3nm,0.3s,mb3.8,baz=0.7,slow=5.7,SNR=2.1						
CD2	**Chengdu**	**63.87**	**287**	P	**P**	08 40 54.3	**-0.9**
GYA	**Guiyang**	**66.69**	**283**	P	**P**	08 41 12.0	**-1.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI	**Kunming**	**69.44**	**285**	P	**P**	08 41 31.3	**+0.5**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						

IDC 22 08:40:23.6±4.6, 581S×150.05E, h0km, mb3.8/3, mb1 4.2/4, mb1mx3.8/16, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=138.6km s-min=28.8km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.58**	**219**	Pn	Pn	08 41 36.1	+2.0
	34nm,0.3s,baz=342,slow=6.4,SNR=19						
WRA	**Warramunga Arr**	**20.75**	**226**	P	P	08 45 04.3	-1.7
	1.0nm,0.3s,baz=51,slow=11,SNR=22						
ASAR	**Alice Springs**	**23.59**	**220**	P	P	08 45 36.1	-0.3
	1.2nm,0.4s,baz=54,slow=8.7,SNR=16						
MKAR	**Makanchi Array**	**79.30**	**320**	P	P	08 52 31.6	+0.5
	1.3nm,0.8s,baz=117,slow=7.0,SNR=11						

*IDC **22** 08:48:33.2±1.9, 2.16S×138.73E, h0km, mb4.1/2, mb1 4.2/5, mb1mx4.0/17, mbtmp4.1/5, ML3.7/3, Error ellipse: s-maj=51.9km s-min=24.6km az=60.0*
*ISCJB **22** 08:48:35.7±1.5, 2.1S±0.1×138.8E±0.1, h33km, mb4.0/2, Error ellipse: s-maj=24.0km s-min=17.2km az=39.4*
*NEIC **22** 08:48:37.5±0.7, 2.06S×138.76E, h35km, mb3.9/2, Error ellipse: s-maj=18.6km s-min=11.2km az=71.0*
ISC 22 08:48:41.6±4.8, 22S±02×139E±03, h82km±64km, n11, σ0°71/9, mb4.0/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.86**	**131**	Pn	**Pn**	08 51 14.3	**+0.2**
	0.6nm,0.3s,baz=311,slow=3.8,SNR=4.0						
WRAB	**Tennant Creek**	**18.15**	**194**	*e*P	**Pn**	08 52 48.2	**0.0**
	5.5nm,0.6s						
WB2	**Warramunga Arr**	**18.16**	**194**	*e*P	**Pn**	08 52 48.3	**0.0**
WB2	**Warramunga Arr**	**18.16**	**194**	*e*P	**Pn**	08 52 50.0	**+1.7**
WRA	**Warramunga Arr**	**18.16**	**194**	P	**Pn**	08 52 46.8	**-1.5**
	0.6nm,0.3s,baz=17,slow=12,SNR=16						
CTA	**Charters Tower**	**19.14**	**159**	P	**Pn**	08 52 59.9	**-0.2**
	0.2nm,0.3s,baz=5.3,slow=12,SNR=2.9						
FITZ	**Fitzroy Crossi**	**20.46**	**219**	*e*P	**P**	08 53 13.1	**+0.5**
	4.9nm,1.0s						
ASAR	**Alice Springs**	**21.86**	**192**	P	**P**	08 53 27.9	**+0.4**
	5.5nm,0.8s,mb3.9,baz=25,slow=10,SNR=26						
CMAR	**Chiang Mai Arr**	**44.38**	**299**	P	**P**	08 56 44.1	**-0.2**
	1.1nm,0.3s,mb4.1,baz=87,slow=3.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	**136.32**	**287**	PKP	PKPdf	09 07 57.0	+2.2
	0.4nm,0.7s,baz=84,slow=1.8,SNR=3.0						
DBIC	**Dimbokro**	**143.63**	**278**	PKP	PKPdf	09 08 09.4	+1.4
	2.4nm,0.8s,baz=88,slow=2.4,SNR=4.4						

*NIED **22** 08:51:00, 34.40N×140.40E, h80km, Mw4.5 Best double couple: M0 6.70000×10^15 NP1:φs150.00000°, δ76.00000°, λ-134.00000°. NP2:φs45.00000°, δ46.00000°, λ-20.00000°.*
*BJI **22** 08:51:36.2, 3466N×141.17E, h101km, mB5.0, mb4.6*
*ISCJB **22** 08:51:40.9±0.3, 3440N±003×14032E±003, h95km±2km, mb4.4/81, Error ellipse: s-maj=4.8km s-min=4.7km az=44.6*
*JMA **22** 08:51:40.8±0.1, 3439N×140.39E, h87km±2km, M4.5 Broadband fault plane solution: P waves. NP1: φs34.00000°, δ46.00000°, λ-39.00000°. NP2:φs153.00000°, δ63.00000°, λ-129.00000°. Principal axes: T Plg10.0000°, Azm270.0000°; N Plg34.0000°, Azm173.0000°; P Plg54.0000°, Azm14.0000°;*
JMA Felt II J1.
*IDC **22** 08:51:42.5±0.4, 3435N×14022E, h101km±4km, mb4.1/18, mb1 4.3/20, mb1mx4.2/25, mbtmp4.1/20 Error ellipse: s-maj=11.0km s-min=5.9km az=91.0*
*NEIC **22** 08:51:43.7±0.4, 3458N×14024E, mb4.5/46, MW4.5(NIED), Error ellipse: s-maj=10.6km s-min=5.3km az=180.0*
NEIC Recorded [2 JMA] in Shizuoka and [1 JMA] in Chiba, Kanagawa and Tokyo Prefectures. Recorded [2 JMA] on O-shima and Miyake-jima; [1 JMA] on Hachijo-jima, Kozu-shima and Mikura-jima.
*MOS **22** 08:51:45.4±0.9, 3505N×140.28E, h111km, mb4.5/42, Error ellipse: s-maj=10.1km s-min=5.9km az=101.9*
ISC 22 08:51:41.7±0.3, 3440N±003×14033E±003, h89km±2km, h103km±1.5km; pP-P, n179, σ1°01/207, mb4.4/81, 13C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.43**	**20**	⇓P	**Pn**	08 51 55.0	**-0.8**
BSO4	**Boso 4**	**0.59**	**1**	P	**Pn**	08 51 56.8	**-0.3**
BSO4				S	**Sn**	08 52 10.6	**+2.0**
BSO1	**Boso 1**	**0.59**	**64**	P	**Pn**	08 51 55.5	**-1.6**
TATJ	**Tateyama 2**	**0.73**	**330**	⇓P	**Pn**	08 51 58.5	**+0.1**
TATJ				S	**Sn**	08 52 11.9	**+1.0**
JMY	**Miyakejima3**	**0.75**	**245**	⇓P	**Pn**	08 51 58.3	**-0.3**
JMY	

MAJO eSn Sn 08 52 58.2 +1.9
MAT Matsushiro 2.75 322 P Pn 08 52 24.0 +0.1
MAT eS Sn 08 52 54.8 -1.5
CBIJ Chichi jima 7.45 167 P Pn 08 53 23.9 -3.7
comp=N,174nm,0.3s,baz=23,slow=1.6,SNR=86
CBIJ S Sn 08 54 45.8 -4.8
comp=N,91nm,0.3s,baz=257,slow=22,SNR=8.0
ERM Erimo 7.92 15 ePn Pn 08 53 31.6 -2.4
ERM eSn Sn 08 54 54.0 -8.0
ASAJ Asahikawa 9.87 10 P Pn 08 53 56.1 -4.3
comp=N,7.0nm,0.3s,baz=224,slow=13,SNR=51
ASAJ Asahikawa 9.87 10 P Pn 08 53 56.2 -4.3
ASAJ pmax pmax
comp=Z,7.0nm,0.3s
KSRS Korea Array 10.51 290 P Pn 08 54 11.1 +1.7
comp=Z,0.8nm,0.3s,baz=105,slow=14,SNR=20
KSRS Korea Array 10.51 290 P Pn 08 54 11.1 +1.8
KSRS pmax pmax
comp=Z,1.0nm,0.3s
YUK Yuzh-Kuril'sk 10.54 22 P Pn 08 54 04.9 -4.7
YUK eS Sn 08 55 53.7 -12
YUK smax
comp=E,150nm,0.5s
YUK smax
comp=N,350nm,0.4s
YSS Yuzh-Sakhalins 12.68 8⇑ *i*P Pn 08 54 34.0 -4.5
YSS pmax pmax
comp=N,30nm,0.6s
YSS pmax pmax
comp=Z,40nm,0.6s
YSS Yuzh-Sakhalins 12.68 8 ePn Pn 08 54 34.3 -4.2
JOW Kunigami 12.82 237 P Pn 08 54 46.1 +5.6
comp=Z,2.3nm,0.3s,baz=54,slow=22,SNR=5.0
MDJ Mudanjiang 13.14 324 P Pn 08 54 42.9 -1.7
MDJ XP 08 55 09.3
MDJ S Sn 08 57 04.1 -4.7
MDJ AMB AMB
comp=Z,6.0nm,1.3s
MDJ AMB AMB
comp=Z,373nm,11.8s
HABR Khabarovsk 14.61 346 eP Pn 08 54 56.4 -7.2
HABR eS Sn 08 57 30.0 -14
HABR MLR MLR
comp=Z,167nm,11.0s
KLR Kul'dur 16.12 339 eP Pn 08 55 15.9 -6.9
NJ2 Nanjing 18.12 269 eP Pn 08 55 52.5 +5.1
NJ2 AMB AMB
comp=Z,10.0nm,0.9s
YHNB Yeheng 19.10 245 eP Pn 08 55 57.0 -2.2
comp=Z,8.2nm,0.5s
HIA Hailar 21.26 321 eP P 08 56 15.6 -4.9
PETK Petropavlovsk- 22.42 28 P P 08 56 31.4 -1.3
comp=Z,2.7nm,0.6s,mb3.7,baz=238,slow=6.5,SNR=6.9
PETK Petropavlovsk- 22.42 28 P P 08 56 31.4 -1.3
HHC Hu-ho-hao-te 23.61 294 eP P 08 56 44.1 -0.3
HHC AP 08 57 05.1
HHC XP sP 08 57 17.0 +2.5
HHC eS S 09 00 44.4 -7.8
HHC AMB AMB
comp=Z,17nm,0.7s,mb4.5
HHC AMB AMB
comp=Z,418nm,7.4s
HHC LR LR
comp=N,243nm,13.9s
HHC LR LR
comp=E,250nm,12.9s
HHC LR LR
comp=Z,309nm,12.9s
CLNS Chul'man 24.79 340 eP P 08 56 54.4 -0.6
CLNS pmax pmax
comp=Z,14nm,0.8s,mb4.4
CLNS pmax pmax
comp=N,10.0nm,0.8s
CLNS pmax pmax
comp=E,3.0nm,0.8s
XAN Xi'an 25.92 278 P P 08 57 03.5 -2.0
XAN AP pP 08 57 28.8 +3.2
XAN PP 08 57 52.9
XAN S S 09 01 29.5 +0.3
XAN SS 09 02 50.9
XAN AMB AMB
comp=Z,10.0nm,0.6s,mb4.4
XAN LR LR
comp=N,106nm,26.6s
XAN LR LR
comp=E,188nm,24.8s
XAN LR LR
comp=Z,316nm,22.9s
ULN Ulaanbaatar 28.21 309 eP P 08 57 26.8 +1.0
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.3
ULN Ulaanbaatar 28.21 309 eP P 08 57 26.8 +1.0
comp=Z,8.5nm,0.8s,mb4.3
YAK Yakutsk 28.47 349 eP P 08 57 26.7 -1.3
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.5
SONM Songino Array 28.62 308 P P 08 57 29.6 +0.1
comp=Z,5.4nm,0.8s,mb4.2,baz=107,slow=8.2,SNR=35
SONM ScP ScP 09 04 09.1 -2.3
comp=Z,0.3nm,0.7s,baz=141,slow=2.8,SNR=3.8
BOD Bodaibo 29.35 331 eP P 08 57 34.5 -1.3
BOD pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
LZH Lanzhou 29.74 284 eP P 08 57 40.5 +1.0
LZH AP pP 08 58 02.8 +2.9
LZH ePP PP 08 58 40.8 -7.3
LZH AMB AMB
comp=Z,19nm,1.4s,mb4.5
LZH AMB AMB
comp=Z,85nm,5.2s
LZH LR LR
comp=N,371nm,13.2s
LZH LR LR
comp=Z,456nm,17.5s
GYA Guiyang 29.98 264 P P 08 57 45.3 +3.5
GYA AP pP 08 58 08.4 +6.3
GYA XP sP 08 58 22.8 +10
GYA PP PP 08 58 45.3 -5.6
GYA S S 09 02 33.3 +0.1
GYA XS sS 09 03 14.0 +5.6
GYA SCP ScP 09 04 15.9 -0.3
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 Chengdu 30.88 274 P P 08 57 53.0 +3.3
CD2 AP pP 08 58 15.0 +5.0
CD2 XP sP 08 58 26.8 +6.4
CD2 PP PP 08 58 57.8 -3.1
CD2 S S 09 02 48.0 +0.8
CD2 XS sS 09 03 26.4 +4.0
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
CD2 AMB AMB
comp=Z,320nm,11.6s
CD2 LR LR
comp=N,520nm,13.2s
CD2 LR LR
comp=Z,580nm,15.0s
ZAK Zakamensk 31.30 312 eP P 08 57 53.2 +0.1
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
TLY Talaya 31.47 315 eP P 08 57 56.7 +2.1
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
TLY Talaya 31.47 315 eP P 08 57 56.4 +1.8
comp=Z,7.4nm,0.9s,mb4.4
GTA Gaotai 32.59 291 eP P 08 58 03.6 -0.9
GTA AMB AMB
comp=Z,5.0nm,0.8s,mb4.4
KMI Kunming 33.76 264 P P 08 58 17.3 +2.4
KMI AP pP 08 58 40.6 +5.2
KMI XP sP 08 58 53.8 +8.1
KMI AMB AMB
comp=Z,9.0nm,1.0s,mb4.5
BILL Bilibino 36.80 16 eP P 08 58 39.2 -1.2
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
HVS Khovu-Aksy 37.40 311 eP P 08 58 45.6 -0.1
HVS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
TIXI Tiksi 37.81 354⇑ eP P 08 58 46.9 -2.0
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TIXI Tiksi 37.81 354 eP P 08 58 48.1 -0.8
comp=Z,5.2nm,0.6s,mb4.5
CMAR Chiang Mai Arr 40.02 257 P P 08 59 07.3 -0.7
comp=Z,0.7nm,0.4s,mb3.9,baz=28,slow=6.3,SNR=2.5
CMAR Chiang Mai Arr 40.02 257 P P 08 59 07.3 -0.7
CMAR pmax pmax
comp=Z,1.0nm,0.4s
WMQ Urumqi 41.30 299 eP P 08 59 18.3 0.0
WMQ AMB AMB
comp=Z,11nm,1.3s,mb4.5
WMQ AMB AMB
comp=Z,399nm,3.0s
ZAA0 Zalesovo Array 43.08 314 eP P 08 59 31.6 -1.0
ZALV Zalesovo Beam 43.08 314 P P 08 59 32.4 -0.3
comp=Z,3.2nm,0.4s,mb4.4,baz=100,slow=7.7,SNR=14
ZALV PcP PcP 09 01 19.9 -1.0
comp=Z,2.6nm,0.5s,baz=94,slow=2.2,SNR=6.6
ZALV Zalesovo Beam 43.08 314 P P 08 59 32.4 -0.2
ZALV 09 01 20.0
ZALV pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
PMG Port Moresby 44.04 170 eP P 08 59 50.5 +10
PMG pmax pmax
comp=Z,40nm,0.9s
PMG Port Moresby 44.04 170 eP P 08 59 50.5 +10
comp=Z,40nm,0.9s,mb5.2
NVS Novosibirsk 44.06 316 eP P 08 59 38.1 -2.4
MKAR Makanchi Array 44.82 304 P P 08 59 45.9 -0.7
comp=Z,2.7nm,0.5s,mb4.2,baz=86,slow=9.2,SNR=37
MKAR Makanchi Array 44.82 304 *i* P P 08 59 45.9 -0.7
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 44.82 304 P P 08 59 45.9 -0.7
KURK Kurchatov 46.90 310 eP P 09 00 02.3 -0.6
KURK pmax pmax
comp=Z,11nm,0.7s,mb4.7
KURK Kurchatov 46.90 310 eP P 09 00 02.2 -0.7
comp=Z,11nm,0.7s,mb4.7
KDAK Kodiak Island 49.66 40 P P 09 00 23.3 -0.7
comp=Z,12nm,0.8s,mb4.9,baz=262,slow=6.3,SNR=5.2
TKM2 Tokmak 2 50.15 300 eP P 09 00 28.6 +0.7
TKM2 pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
TKM2 Tokmak 2 50.15 300 eP P 09 00 28.6 +0.6
comp=Z,3.0nm,0.5s,mb4.5
AAK Ala-Archa 51.00 300⇑ eP P 09 00 34.9 +0.5
AAK Ala-Archa 51.00 300 eP P 09 00 34.6 +0.2
comp=Z,2.5nm,0.7s,mb4.3
MCK McKinley 51.32 33 eP P 09 00 36.1 -0.3
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MCK McKinley 51.32 33 eP P 09 00 36.1 -0.3
comp=Z,7.4nm,0.8s,mb4.8
AML Almayashu 51.70 300 eP P 09 00 40.9 +1.3
comp=Z,12nm,0.7s,mb5.0
BRVK Borovoye 51.78 314 eP P 09 00 40.2 +0.2
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BRVK Borovoye 51.78 314 eP P 09 00 40.1 +0.1
comp=Z,5.7nm,0.8s,mb4.7
COLA College 51.78 31 eP P 09 00 39.9 +0.1
COLA pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
COLA College 51.78 31 eP P 09 00 39.9 +0.1
comp=Z,5.4nm,0.7s,mb4.7
WRAB Tennant Creek 54.33 187 eP P 09 00 57.1 -1.9
WRAB pmax pmax
comp=Z,19nm,1.4s,mb4.9
WRAB Tennant Creek 54.33 187 eP P 09 00 57.1 -1.9
comp=Z,19nm,1.4s,mb4.9
WRA Warramunga Arr 54.34 187 P P 09 00 57.8 -1.3
comp=Z,4.6nm,0.6s,mb4.7,baz=3.8,slow=7.7,SNR=44
WRA Warramunga Arr 54.34 187 P P 09 00 57.8 -1.2
WRA pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 57.14 26 P P 09 01 18.7 +0.2
comp=Z,5.1nm,0.6s,mb4.7,baz=296,slow=7.8,SNR=34
INK Inuvik 57.14 26 P P 09 01 18.7 +0.2
INK pmax pmax
comp=Z,5.0nm,0.6s
INK Inuvik 57.14 26 eP P 09 01 18.5 0.0
comp=Z,4.8nm,0.8s,mb4.6
ARU Arti 57.77 319 *d* iP P 09 01 22.2 -1.0
ARU *PP pP 09 01 46.4 +1.1
ARU *e* 09 03 28.9
ARU eS S 09 09 11.5 -3.6
ARU eSS SS 09 13 00.2 -6.1
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.9
ARU Arti 57.77 319 eP P 09 01 22.4 -0.8
comp=Z,7.1nm,0.7s,mb4.8
ASAR Alice Springs 58.06 187 P P 09 01 24.4 -1.1
comp=Z,0.7nm,0.5s,mb4.0,baz=18,slow=12,SNR=13
ASAR Alice Springs 58.06 187 P P 09 01 24.4 -1.1
ASAR pmax pmax
comp=Z,1.0nm,0.5s
RES Resolute Bay 65.37 14 eP P 09 02 13.4 -0.6
RES pmax pmax
comp=Z,18nm,1.3s,mb4.7
RES Resolute Bay 65.37 14 eP P 09 02 13.4 -0.6
comp=Z,18nm,1.3s,mb4.7
ARCES ARCESS Array B 66.15 340 P P 09 02 18.6 -0.6
comp=Z,1.6nm,0.7s,mb4.0,baz=54,slow=6.7,SNR=5.5
ARCES ARCESS Array B 66.15 340 P P 09 02 18.6 -0.5
ARCES pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 66.53 29 P P 09 02 21.1 -0.5
comp=Z,3.2nm,0.9s,mb4.2,baz=299,slow=6.3,SNR=39
YKA pP pP 09 02 47.7 +3.4
comp=Z,0.3nm,0.4s,baz=298,slow=6.3,SNR=2.2
YKA Yellowknife Ar 66.53 29 P P 09 02 21.1 -0.5
YKA pP pP 09 02 47.7 +3.4
JOF Joensuu 67.88 332 *e*p P 09 02 28.4 -1.7
comp=Z,2.5nm,0.4s,mb4.4
JOF Joensuu 67.88 332 eP P 09 02 28.4 -1.7
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
MAK Makhachkala 69.39 308 P P 09 02 47.6 +7.7
MAK *i* 09 05 18.6
MAK pmax pmax
comp=Z,294nm,1.4s
MAK MLR MLR
comp=Z,933nm,17.0s
OBN Obninsk 69.68 323 P P 09 02 40.0 -1.4
OBN *e*PP pP 09 03 06.9 +2.6
OBN 09 05 18.0
OBN S S 09 11 34.0 -8.8
OBN SS SS 09 16 13.0 +1.3
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
OBN MLR MLR
comp=Z,700nm,18.0s
JCW Jim Creek 69.92 45 eP P 09 02 43.7 +0.7
KAF Kangasniemi 70.25 333 ep P 09 02 42.8 -2.0
comp=Z,4.0nm,0.6s,mb4.4
KAF Kangasniemi 70.25 333 eP P 09 02 42.8 -2.0
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
FINES FINESS Array B 70.73 332 eP P 09 02 46.1 -1.7
EDM Edmonton 71.97 37 eP P 09 02 55.5 +0.2
KIV Kislovodsk 71.97 311⇓ eP P 09 02 56.8 +1.3
KIV *e*PP pP 09 03 18.9 +0.4
KIV 09 05 34.0
KIV *e*PPP 09 07 19.7
KIV SS SS 09 16 36.0 -11
KIV pmax pmax
comp=Z,11nm,0.7s,mb4.8
NEW Newport 72.64 43 eP P 09 02 59.8 +0.3
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 72.64 43 eP P 09 02 59.8 +0.3
comp=Z,4.0nm,0.7s,mb4.4
YBH Yreka Blue Hor 72.67 51 eP P 09 03 01.1 +1.4
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 72.67 51 eP P 09 03 01.1 +1.4
comp=Z,7.5nm,0.9s,mb4.5
SUMG Summit 73.31 360 eP P 09 03 03.8 +0.8
comp=Z,9.4nm,0.9s,mb4.6
WALA Waterton Lakes 73.99 41 eP P 09 03 07.8 +0.5
comp=Z,0.2nm,0.7s
MOD Modoc 74.12 50 eP P 09 03 08.8 +0.6
comp=Z,5.4nm,0.7s,mb4.4
BMO Blue Mountains 74.38 46 eP P 09 03 10.3 +0.7
comp=Z,3.3nm,0.8s,mb4.1
ANN Anapa 74.72 314 eP P 09 03 10.0 -1.7
ANN *PP pP 09 03 41.1 +6.3
ANN pmax pmax
comp=Z,59nm,1.2s,mb5.2
AKASG Malin Array Be 75.84 322 P P 09 03 17.1 -0.9
comp=Z,3.9nm,0.5s,mb4.4,baz=49,slow=6.0,SNR=20
AKASG Malin Array Be 75.84 322 *i* P P 09 03 17.1 -0.9
AKASG pmax pmax
comp=Z,4.0nm,0.5s
KIEV Kiev 75.85 322 eP P 09 03 17.0 -1.0
KIEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KIEV Kiev 75.85 322 eP P 09 03 17.0 -1.1
comp=Z,4.1nm,0.6s,mb4.3
NB2 NORSAR Subarra 76.27 337 P P 09 03 19.6 -0.6
comp=Z,1.9nm,0.6s,mb4.0,baz=42,slow=5.9
NOA NORSAR Array B 76.27 337 P P 09 03 19.7 -0.6
comp=Z,5.2nm,0.9s,mb4.3,baz=41,slow=5.7,SNR=12
NOA pP pP 09 03 45.2 +1.8
comp=Z,1.1nm,0.9s,baz=41,slow=5.6,SNR=2.0
NOA NORSAR Array B 76.27 337 P P 09 03 19.7 -0.5
NOA *PP pP 09 03 45.3 +1.9
NOA pmax pmax
comp=Z,5.0nm,0.9s
FFC Flin Flon 76.40 32 eP P 09 03 20.7 -0.4
FFC pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
FFC Flin Flon 76.40 32 eP P 09 03 20.7 -0.4
comp=Z,3.8nm,0.6s,mb4.3
WAKR Walker 76.50 53 eP P 09 03 23.4 +1.4
LRM Limekiln Ridge 76.66 43 eP P 09 03 23.3 +0.6
comp=Z,75nm,0.9s,mb5.4
LRM e pP 09 03 49.9 +4.0
FCC Fort Churchill 76.75 26 eP P 09 03 22.1 -0.9
comp=Z,0.3nm,1.3s
HLID Hailey 76.82 46 eP P 09 03 24.5 +0.8
comp=Z,2.9nm,0.8s,mb4.1
EGMT Eagleton 76.84 40 eP P 09 03 23.9 +0.2
DLMT Dillon 76.84 44 eP P 09 03 24.6 +0.8
comp=Z,8.6nm,0.7s,mb4.6
DLMT e pP 09 03 50.0 +3.1
BOZ Bozeman (W) 77.23 43 eP P 09 03 26.8 +0.9
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BOZ Bozeman (W) 77.23 43 eP P 09 03 26.8 +0.9
comp=Z,4.6nm,0.8s,mb4.3
NVAR Mina Array Bea 77.29 52 P P 09 03 27.7 +1.3
comp=Z,7.1nm,0.8s,mb4.5,baz=281,slow=5.6,SNR=45
NVAR pP pP 09 03 53.9 +4.3
comp=Z,5.5nm,0.7s,baz=290,slow=5.7,SNR=10
ELK Elko 77.94 49 eP P 09 03 31.0 +1.1
ELK pmax pmax
comp=Z,2.0nm,0.5s
ELK Elko 77.94 49 eP P 09 03 31.0 +1.1
comp=Z,2.3nm,0.5s,mb4.2
IMW Indian Meadow 78.67 44 eP P 09 03 35.6 +1.7
comp=Z,8.4nm,0.8s,mb4.6
IMW e pP 09 04 01.2 +3.9
DCID1 Drake Creek 78.70 45 eP P 09 03 36.0 +1.9
comp=Z,10nm,0.9s,mb4.7
RRI2 Red Ridge 78.78 45 eP P 09 03 35.9 +1.3
comp=Z,5.5nm,1.0s,mb4.3
MOOW Moose Ponds 78.87 44 eP P 09 03 36.1 +1.1
comp=Z,2.3nm,0.7s,mb4.1
RLMT Red Lodge 78.87 43 eP P 09 03 36.3 +1.3
comp=Z,113nm,2.7s,mb5.2
LOHW Long Hollow 79.03 44 eP P 09 03 36.8 +0.9
comp=Z,3.1nm,1.0s,mb4.1
SNOW Snow King Moun 79.03 45 eP P 09 03 37.6 +1.7
comp=Z,5.5nm,0.8s,mb4.4
DUG Dugway 79.76 48 eP P 09 03 40.1 +0.2
DUG e pP 09 04 07.3 +4.0
DUG pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
DUG Dugway 79.76 48 eP P 09 03 40.1 +0.1
comp=Z,2.5nm,0.6s,mb4.2
DUG e pP 09 04 07.3 +4.0
BUR08 Bucovina Ar. S 79.82 322 eP P 09 03 39.9 -0.2
BR131 Keskin Array S 79.93 311 eP P 09 03 40.3 -0.6
comp=Z,1.5nm,0.8s,mb3.9
BRTR Keskin Array B 79.93 311 P P 09 03 41.0 +0.1
comp=Z,1.7nm,0.8s,mb3.9,baz=113,slow=3.6,SNR=8.6
BRTR pP pP 09 04 06.5 +2.3
comp=Z,0.5nm,0.6s,baz=148,slow=5.8,SNR=1.8
BRTR Keskin Array B 79.93 311 *i* P P 09 03 41.0 +0.1
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BW06 Boulder Array 80.15 45 eP P 09 03 42.1 +0.1
comp=Z,2.1nm,0.7s,mb4.1
PDAR Pinedale Array 80.15 45 P P 09 03 42.5 +0.4
comp=Z,2.7nm,0.7s,mb4.2,baz=274,slow=2.6,SNR=29
PDAR pP pP 09 04 08.3 +2.9
comp=Z,1.5nm,0.8s,baz=354,slow=3.0,SNR=4.7
SRU San Rafael 81.82 48 eP P 09 03 51.5 +0.6
SRU pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SRU San Rafael 81.82 48 eP P 09 03 51.5 +0.5
comp=Z,6.1nm,0.8s,mb4.5
RWWY Rawlins 82.19 44 eP P 09 03 53.0 +0.2
comp=Z,7.2nm,0.8s,mb4.5
RWWY e pP 09 04 18.7 +2.4
RSSD Black Hills 82.39 41 eP P 09 03 53.8 0.0
RSSD pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
RSSD Black Hills 82.39 41 eP P 09 03 53.8 0.0
comp=Z,1.5nm,0.6s,mb4.0
CLL Collm 82.94 330 eP P 09 03 55.0 -1.5
CLL pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
CLL Collm 82.94 330 eP P 09 03 56.0 -0.5
comp=Z,4.0nm,0.6s,mb4.4
PV10 Paradox Valley 83.19 48 eP P 09 03 59.2 +1.1
comp=Z,439nm,0.9s
PV10 e pP 09 04 25.6 +4.1
PHWY Pilot Hill 83.44 44 eP P 09 03 59.9 +0.5
comp=Z,1.8nm,0.4s,mb4.2
WUAZ Wupatki 83.49 51 eP P 09 04 00.2 +0.5
comp=Z,3.2nm,0.9s,mb4.2
PV01 Paradox Valley 83.63 48 eP P 09 04 00.7 +0.4
comp=Z,660nm,1.0s
KHC Kasperske Hory 84.32 328⇑ eP P 09 04 03.6 0.0
KHC Kasperske Hory 84.32 328 eP P 09 04 02.5 -1.1
ISCO Idaho Springs 84.33 45 eP P 09 04 04.8 +0.9
ISCO pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
ISCO Idaho Springs 84.33 45 eP P 09 04 04.8 +0.9
comp=Z,3.1nm,1.0s,mb4.1
GERES GERESS Array B 84.48 328 P P 09 04 03.8 -0.7
comp=Z,1.5nm,0.5s,mb4.0,baz=42,slow=5.6,SNR=19
GERES GERESS Array B 84.48 328 P P 09 04 03.8 -0.6
GERES pmax pmax
comp=Z,2.0nm,0.5s
SDCO Great Sand Dun 85.73 46 eP P 09 04 11.0 +0.1
comp=Z,1.9nm,0.8s,mb4.1
ANMO Albuquerque 86.97 49⇑ eP P 09 04 17.9 +0.9
SCHQ Schefferville 88.11 15 P P 09 04 21.5 -0.6
comp=Z,4.4nm,0.9s,mb4.5,baz=71,slow=6.6,SNR=4.5
WMOK Wichita Mounta 91.76 45 eP P 09 04 39.2 -0.3
WMOK pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
WMOK Wichita Mounta 91.76 45 eP P 09 04 39.2 -0.4
comp=Z,1.9nm,0.6s,mb4.5
TORD Torodi Ar. Bea 118.52 313 PKP PKPdf 09 10 17.9 -1.7
comp=Z,0.4nm,0.5s,baz=38,slow=1.6,SNR=5.8

NEIC 22 09:22:19.8, 3661S×17812E, h12km, ML3.9(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.96**	**171**	P	Pg	09 22 38.6	+0.2
MXZ				S	Sg	09 22 50.2	-0.7
WIZ	**White Island**	**1.18**	**219**	P	Pn	09 22 40.4	-1.7
WIZ				S	Sb	09 22 54.0	-3.4
PUZ	**Puketiti**	**1.46**	**176**	P	Pn	09 22 44.7	-1.3
MWZ	**Matawai**	**1.79**	**195**	P	Pn	09 22 48.7	-1.7
MWZ				S	Sn	09 23 07.6	-5.5
MARZ	**Manawahe**	**1.79**	**220**	P	Pn	09 22 48.6	-2.0
URZ	**Urewera**	**1.83**	**206**	P	Pn	09 22 48.9	-2.2
KUZ	**Kuaotunu**	**1.94**	**265**	P	Pn	09 22 52.3	-0.2
MKAZ	**Moumakai**	**2.42**	**257**	P	Pn	09 22 58.8	-0.4
KNZ	**Kokohu**	**2.43**	**188**	P	Pn	09 22 56.1	-3.2
MOVZ	**Moawhango**	**3.36**	**213**	P	Pn	09 23 09.5	-2.6
WNVZ	**Wahianoa**	**3.37**	**216**	P	Pn	09 23 11.3	-0.9
WAZ	**Wanganui**	**4.00**	**217**	P	Pn	09 23 19.2	-1.6
BFZ	**Birch Farm**	**4.32**	**199**	P	Pn	09 23 19.4	-5.9
MRZ	**Mangatainoka R**	**4.51**	**205**	P	Pn	09 23 21.7	-6.2
CAW	**Cannon Point**	**5.08**	**207**	P	Pn	09 23 29.7	-6.1
SNZO	**South Karori**	**5.40**	**209**	P	Pn	09 23 33.3	-6.7

NNZ	**Nelson**	**5.90**	**217**	P	Pn	09 23 41.8 -5.2
QRZ	**Quartz Range**	**6.07**	**224**	P	Pn	09 23 43.6 -5.7
THZ	**Tophouse**	**6.55**	**217**	P	Pn	09 23 49.4 -6.5

*IGQ **22** 09:22:55.1, 175S×7771W, h206km±3km, Mb4.2, Ms4.0, Error ellipse: s-maj=5.0km s-min=3.4km az=32.4*
*IDC **22** 09:22:57.3±2.1, 149S×7755W, h165km±23km, mb3.4/8, mb1 3.6/11, mb1mx3.4/24, mbtmp3.5/11, Error ellipse: s-maj=26.3km s-min=13.7km az=77.0*
*ISCJB **22** 09:22:58.3±0.4, 153S±004×778W±0.1, h191km±5km, mb3.7/8, Error ellipse: s-maj=17.1km s-min=6.8km az=178.2*
*NEIC **22** 09:22:58.7±0.7, 149S×7747W, h175km±11km, Error ellipse: s-maj=20.0km s-min=8.6km az=82.0*

ISC 22 09:22:59.2±0.4, 152S±004×777W±01, h185km±5km, n43, σ0§82/45, mb3.7/8, 3C-17D, Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.70**	**276**	⇓P			**Pn**	**09 23 25.1**	**-0.5**
ULBA	**Ulba**	**0.70**	**276**	⇓S			**Sn**	**09 23 45.3**	**-0.5**
RUN5	**Runtun**	**0.73**	**278**	⇓P			**Pn**	**09 23 25.1**	**-0.5**
RUN5	**Runtun**	**0.73**	**278**	⇓S			**Sn**	**09 23 45.2**	**-0.8**
PATA	**Patacocha**	**0.73**	**271**	⇓P			**Pn**	**09 23 25.3**	**-0.3**
PATA	**Patacocha**	**0.73**	**271**	⇓S			**Sn**	**09 23 45.6**	**-0.4**
ARRY	**Arrayan**	**0.75**	**271**	⇓P			**Pn**	**09 23 25.1**	**-0.7**
ARRY	**Arrayan**	**0.75**	**271**	⇓S			**Sn**	**09 23 45.3**	**-0.9**
JUI6	**Juive**	**0.77**	**277**	P			**Pn**	**09 23 25.1**	**-0.8**
PISA	**Pisayambo**	**0.82**	**304**	⇑P			**Pn**	**09 23 26.5**	**+0.3**
PISA	**Pisayambo**	**0.82**	**304**	⇑S			**Sn**	**09 23 48.7**	**+1.6**
IGUA	**Igualata**	**0.93**	**272**	P			**Pn**	**09 23 26.7**	**-0.2**
TAMB	**Tambo**	**1.05**	**321**	⇓P			**Pn**	**09 23 28.2**	**+0.4**
VC1	**Cotopaxi 1**	**1.12**	**321**	⇓P			**Pn**	**09 23 28.9**	**+0.5**
ANTI	**Antisana**	**1.16**	**337**	⇓P			**Pn**	**09 23 29.4**	**+0.8**
QIL2	**Quilotoa**	**1.37**	**298**	P			**Pn**	**09 23 31.1**	**+0.7**
LAV3	**Lava3-Reventad**	**1.42**	**3**	⇓P			**Pn**	**09 23 31.3**	**+0.4**
CONE	**Cono NE Rev Vo**	**1.44**	**3**	⇓P			**Pn**	**09 23 31.8**	**+0.7**
GGP	**Refugio Guagua**	**1.61**	**326**	⇓P			**Pn**	**09 23 33.1**	**+0.5**
TERV	**Terraza Guagua**	**1.61**	**326**	P			**Pn**	**09 23 33.2**	**+0.6**
PINO	**Pino**	**1.63**	**326**	⇓P			**Pn**	**09 23 33.4**	**+0.5**
PINO	**Pino**	**1.63**	**326**	⇓S			**Sn**	**09 24 02.9**	**+4.0**
OTAV	**Otavalo**	**1.90**	**337**	⇓*i*Pn			**Pn**	**09 23 35.8**	**+0.2**
OTAV				*e*Sn			**Sn**	**09 24 03.2**	**-0.6**
COTA	**Cotacachi**	**1.95**	**341**	⇑P			**Pn**	**09 23 37.2**	**+1.1**
JAMA	**Jama**	**2.80**	**297**	P			**Pn**	**09 23 44.9**	**-0.7**
CHIS	**Cerro-Chispas-**	**3.06**	**279**	P			**Pn**	**09 23 45.9**	**-2.8**
ATAH	**Atahualpa**	**5.49**	**187**	P			**Pn**	**09 24 20.3**	**+0.7**
	8.4nm,0.3s,baz=16,slow=8.1,SNR=38								
ATAH				S			**Sn**	**09 25 23.8**	**+0.9**
	6.5nm,0.3s,baz=132,slow=20,SNR=12								
NNA	**Nana**	**10.43**	**175**	P			**Pn**	**09 25 24.2**	**0.0**
	1.1nm,0.3s,baz=327,slow=15,SNR=3.6								
NNA				S			**Sn**	**09 27 09.2**	**-11**
	1.4nm,0.3s,baz=4.4,slow=13,SNR=4.2								
BCIP	**Isla Barro Col**	**10.83**	**349**	Pn			**Pn**	**09 25 29.1**	**-0.3**
SDV	**Santo Domingo**	**12.51**	**34**	P			**Pn**	**09 25 49.3**	**-1.8**
	0.8nm,0.3s,baz=271,slow=6.8,SNR=9.2								
SDV	**Santo Domingo**	**12.51**	**34**	P			**Pn**	**09 25 49.3**	**-1.8**
SDV				*e*Pn			**Pn**	**09 25 50.9**	**-0.2**
SIV	**San Ignacio**	**21.81**	**132**	P			**P**	**09 27 35.3**	**-1.6**
	1.1nm,0.5s,mb3.6,baz=293,slow=10.0,SNR=10								
LVC	**Limon Verde**	**22.64**	**158**	P			**P**	**09 27 45.6**	**+1.1**
	2.6nm,0.5s,mb3.9,baz=332,slow=5.0,SNR=6.1								
LVC	**Limon Verde**	**22.64**	**158**	P			**P**	**09 27 45.6**	**+1.1**
TEIG	**Tepich**	**23.97**	**335**	P			**P**	**09 27 57.9**	**+1.2**
	1.2nm,0.4s,mb3.8,baz=324,slow=17,SNR=3.0								
CFAA	**Coronel Fontan**	**31.23**	**164**	P			**P**	**09 29 02.0**	**+0.7**
	0.4nm,0.3s,mb3.6,baz=336,slow=22,SNR=19								
PLCA	**Paso Flores**	**39.56**	**171**	P			**P**	**09 30 12.3**	**0.0**
	2.1nm,0.9s,mb3.8,baz=353,slow=9.1,SNR=4.7								
PLCA	**Paso Flores**	**39.56**	**171**	P			**P**	**09 30 12.3**	**0.0**
YKA	**Yellowknife Ar**	**69.65**	**343**	P			**P**	**09 33 48.0**	**-0.2**
	0.2nm,0.4s,mb3.2,baz=138,slow=5.8,SNR=8.8								
DBIC	**Dimbokro**	**73.16**	**83**	P			**P**	**09 34 09.6**	**-0.6**
	1.4nm,0.5s,mb4.0,baz=257,slow=5.4,SNR=4.4								
TORD	**Torodi Ar. Bea**	**80.03**	**76**	P			**P**	**09 34 47.8**	**-0.9**
	0.6nm,0.3s,mb3.6,baz=283,slow=5.9,SNR=20								
ASAR	**Alice Springs**	**140.36**	**229**	PKhKP				09 41 59.8	
	0.5nm,0.8s,baz=128,slow=3.8,SNR=4.7								
WRA	**Warramunga Arr**	**142.02**	**234**	PKhKP				09 42 03.4	
	0.2nm,0.3s,baz=116,slow=3.0,SNR=6.6								

IDC 22 09:26:26.2±5.7, 215S×13887E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/14, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=234.2km s-min=30.2km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.23**	**194**	P			Pn	09 30 40.9	+0.1
	0.2nm,0.3s,baz=16,slow=12,SNR=4.0								
ASAR	**Alice Springs**	**45.22**	**192**	P			P	09 31 21.4	+0.2
	0.5nm,0.7s,baz=20,slow=12,SNR=5.3								
MKAR	**Makanchi Array**	**69.44**	**322**	P			P	09 37 36.3	0.0
	0.3nm,0.7s,baz=121,slow=6.6,SNR=4.4								

NNC 22 09:44:14.3±1.2, 5128N×7555E, h0km, mb2.5, mpv2.0, 11C-2D, Error ellipse: s-maj=41.3km s-min=8.8km az=29.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.00**	**108**	⇑Pn			Pn	09 44 48.5	-0.8
	0.2nm,0.2s								
KURBB				⇑Lg				09 45 21.0	
	3.1nm,0.9s								
KURBB	**Kurchatov Arra**	**2.00**	**108**	⇑Pn			Pn	09 44 48.5	-0.8
	0.2nm,0.2s								
KURBB				⇑Lg				09 45 21.0	
	3.1nm,0.9s								
KURK	**Kurchatov**	**2.02**	**105**	⇑Pn			Pn	09 44 49.3	-0.3
	4.8nm,1.3s								
KURK				⇑Lg				09 45 18.5	
	8.2nm,0.8s								
KURK	**Kurchatov**	**2.02**	**105**	⇑Pn			Pn	09 44 49.3	-0.3
	4.8nm,1.3s								
KURK				⇑Lg				09 45 18.5	
	8.2nm,0.8s								
BVA0	**Borovoye Array**	**3.63**	**301**	Pn			Pn	09 45 11.3	-0.3
	0.2nm,0.6s,baz=117,slow=20,SNR=5.1								
BVA0				⇑Sn			Sn	09 45 57.0	+1.9
	1.0nm,1.1s,baz=116,slow=28,SNR=6.7								
MK31	**Makanchi Array**	**6.31**	**133**	⇑Sn			Sn	09 47 07.9	+6.7
	0.7nm,0.7s								
MK31				⇓Lg				09 47 36.4	
	2.6nm,0.8s,baz=325,slow=26,SNR=6.0								
MK31	**Makanchi Array**	**6.31**	**133**	⇑Sn			Sn	09 47 07.9	+6.7
	0.7nm,0.7s								
MK31				⇓Lg				09 47 36.4	
	2.6nm,0.8s,baz=325,slow=26,SNR=6.0								

*ISCJB **22** 09:55:58.0±0.6, 3613N±003×6963E±008, h136km±10km, Error ellipse: s-maj=10.8km s-min=5.0km az=171.5*
*NEIC **22** 09:56:00.2±0.7, 3605N×7005E, h82km, 23km, mb4.5/4, Error ellipse: s-maj=19.1km s-min=5.7km az=93.0*
*BJI **22** 09:56:01.5, 3629N×6978E, h106km*
*NNC **22** 09:56:03.8±4.9, 3662N×6934E, h119km±58km, mb3.4, mpv3.9, Error ellipse: s-maj=37.1km s-min=24.8km az=18.0*

ISC 22 09:55:59.3±0.6, 3612N±003×6968E±009, h129km±9km, n42, σ0§96/53, 6C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.65**	**198**	*e*Pn			**Pn**	**09 56 28.7**	**-0.5**
KBL				*e*Sn			**Sn**	**09 56 52.0**	**+0.2**
KSH	**Kashi**	**6.03**	**54**	*e*P			**Pn**	**09 57 27.4**	**+1.2**
KSH				S			**Sn**	**09 58 39.9**	**+6.0**
KSH				Smax					
	comp=N,209nm,0.4s								
KSH				Smax					
	comp=E,332nm,1.0s								
THN	**Thein Dam**	**6.20**	**125**	*e*P			**Pn**	**09 57 28.9**	**+0.3**
THN				*e*S			**Sn**	**09 58 30.3**	**-7.9**
DLH	**Dalhousie**	**6.31**	**123**	*e*P			**Pn**	**09 57 31.0**	**+1.0**
DLH				*ex*			x	09 58 41.0	
AML	**Almayashu**	**6.77**	**26**	P			**Pn**	**09 57 36.2**	**0.0**
	SNR=69								
AML	**Almayashu**	**6.77**	**26**	⇓*i*Pn			**Pn**	**09 57 36.0**	**-0.1**
	comp=E,37nm,0.5s								
AML				*e*Sn			**Sn**	**09 58 50.0**	**-1.7**
KK31	**Karatay Array**	**7.01**	**5**	⇑P			**Pn**	**09 57 38.6**	**-0.7**
	comp=E,2.3nm,0.4s,baz=192,slow=16,SNR=6.6								
KK31				⇓S			**Sn**	**09 58 51.7**	**-5.8**
	comp=E,21nm,0.8s,baz=196,slow=19,SNR=12								
UCH	**Uchtor**	**7.17**	**30**	*e*Pn			**Pn**	**09 57 42.5**	**+1.0**
	comp=E,4.3nm,0.5s								
UCH				*e*Sn			**Sn**	**09 58 57.1**	**-4.2**
EKS2	**Erkin-Say**	**7.27**	**25**	P			**Pn**	**09 57 42.5**	**-0.4**
	SNR=16								
EKS2	**Erkin-Say**	**7.27**	**25**	*e*Pn			**Pn**	**09 57 42.6**	**-0.2**
	comp=E,8.4nm,0.4s								
KZA	**Kyzart**	**7.36**	**34**	P			**Pn**	**09 57 44.9**	**+0.7**
	SNR=24								
AAK	**Ala-Archa**	**7.50**	**28**	P			**Pn**	**09 57 46.5**	**+0.6**
	SNR=19								
AAK	**Ala-Archa**	**7.50**	**28**	*e*Pn			**Pn**	**09 57 46.0**	**+0.1**
	comp=E,15nm,0.3s								
AAK				*e*Sn			**Sn**	**09 59 10.0**	**+0.6**
SDNR	**Sundarnagar**	**7.62**	**125**	*e*P			**Pn**	**09 57 48.0**	**+0.4**
SDNR				*ex*			x	09 59 10.0	
CHMS	**Chumysh**	**7.91**	**28**	P			**Pn**	**09 57 51.3**	**-0.2**
	SNR=10								
ULHL	**Ulahol**	**7.96**	**38**	P			**Pn**	**09 57 52.2**	**0.0**
	SNR=18								
SMLA	**Simla**	**7.98**	**126**	*i*P			**Pn**	**09 57 53.2**	**+0.7**
SMLA				*e*S			**Sn**	**09 59 13.8**	**-7.5**
SMLA				*ex*			x	09 59 20.7	
	comp=E,439nm,0.3s								
SMLA				*ex*			x	09 59 22.4	
	comp=N,489nm,0.4s								
USP	**Ospenovka**	**8.05**	**26**	P			**Pn**	**09 57 53.2**	**-0.2**
	SNR=13								
TKM2	**Tokmak 2**	**8.19**	**32**	⇓P			**Pn**	**09 57 55.2**	**-0.1**
	comp=N,4.5nm,0.4s								
TKM2				⇑S			**Sn**	**09 59 24.7**	**-1.4**
	comp=N,7.8nm,0.8s								
TKM2	**Tokmak 2**	**8.19**	**32**	P			**Pn**	**09 57 55.2**	**-0.1**
	SNR=20								
TKM2	**Tokmak 2**	**8.19**	**32**	*e*Pn			**Pn**	**09 57 55.1**	**-0.2**
	comp=N,11nm,0.5s								
DDI	**Dehra Dun**	**9.09**	**127**	*e*P			**Pn**	**09 58 06.0**	**-1.4**
DDI				*ex*			x	09 59 42.5	
KHET	**Khetri**	**9.55**	**145**	*e*S			**Sn**	**09 59 50.0**	**-9.2**
KUDL	**Kundal**	**9.82**	**142**	*e*S			**Sn**	**09 59 56.8**	**-9.0**
JOSI	**Joshimath**	**9.95**	**121**	*e*P			**Pn**	**09 58 19.9**	**+0.9**
JOSI				*e*S			**Sn**	**09 59 59.0**	**-10**
JOSI					AML		AML	10 00 11.0	
	comp=E,118nm,0.6s								
JOSI					AML		AML	10 00 11.9	
	comp=N,162nm,0.7s								
DANN	**Dangsing**	**14.20**	**119**	*e*P			**Pn**	**09 59 13.1**	**-1.5**
MK31	**Makanchi Array**	**14.24**	**38**	P			**Pn**	**09 59 14.6**	**-0.3**
	comp=N,2.2nm,0.6s,baz=223,slow=12,SNR=36								
KOLN	**Koldanda**	**14.44**	**121**	*e*P			**Pn**	**09 59 16.3**	**-1.4**
AB31	**Akbulak array**	**14.94**	**335**	P			**Pn**	**09 59 20.7**	**-3.0**
	comp=N,4.6nm,0.5s,baz=149,slow=13,SNR=77								
AB31				S			Sn	10 01 54.6	-14
	comp=N,0.8nm,0.3s,baz=153,slow=23,SNR=4.5								
GKN	**Gorkha**	**15.03**	**118**	*e*P			**Pn**	**09 59 24.1**	**-1.0**
DMN	**Daman**	**15.60**	**119**	*e*P			**Pn**	**09 59 31.4**	**-0.7**
KKN	**Kakani**	**15.62**	**118**	*e*P			**Pn**	**09 59 32.1**	**-0.2**
PKI	**Pulchoki**	**15.84**	**118**	*e*P			**Pn**	**09 59 35.4**	**+0.3**
	comp=N,20nm,0.5s								
KURBB	**Kurchatov Arra**	**15.85**	**21**	⇑P			**Pn**	**09 59 36.7**	**+1.7**
	comp=N,0.8nm,0.7s								
KURK	**Kurchatov**	**15.96**	**21**	⇑P			**Pn**	**09 59 37.6**	**+1.2**
	comp=N,7.4nm,1.2s								
KURK	**Kurchatov**	**15.96**	**21**	*e*Pn			**Pn**	**09 59 38.7**	**+2.4**
	comp=N,7.9nm,1.3s								
GUN	**Gumba**	**15.98**	**116**	*e*P			**Pn**	**09 59 37.0**	**+0.2**
JIRN	**Jiri**	**16.35**	**116**	*e*P			**Pn**	**09 59 41.7**	**+0.4**
	comp=N,17nm,0.4s								
AKTO	**Aktyubinsk**	**16.61**	**333**	⇑P			**Pn**	**09 59 43.0**	**-1.4**
	comp=N,1.8nm,0.9s								
AKTO				⇓S			**S**	**10 02 39.6**	**-10**
	comp=N,1.8nm,1.3s								
BVA0	**Borovoye Array**	**16.91**	**1**	⇑P			**Pn**	**09 59 49.4**	**+1.3**
	comp=N,0.6nm,0.7s,baz=0.0,slow=0.1,SNR=5.6								
RAMN	**Ramite**	**17.06**	**118**	*e*P			**Pn**	**09 59 50.5**	**+0.5**
	comp=N,17nm,0.6s								
GTA	**Gaotai**	**24.00**	**73**	*e*P			**P**	**10 01 06.9**	**+5.0**

IDC 22 10:01:29.5±61.0, 2306S×17664W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.9/3, Error ellipse: s-maj=1118.0km s-min=175.2km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.90**	**247**	P			P	10 08 48.4	-0.1
	2.7nm,0.8s,baz=101,slow=10,SNR=3.8								
ASAR	**Alice Springs**	**45.22**	**259**	P			P	10 09 48.8	0.0
	0.7nm,0.8s,baz=97,slow=7.7,SNR=6.1								
WRA	**Warramunga Arr**	**45.55**	**264**	P			P	10 09 51.3	-0.1
	0.8nm,0.5s,baz=102,slow=8.2,SNR=8.4								

*TEH **22** 10:04:20.2, 2882N×5835E, h6km, ML3.8*
*IDC **22** 10:04:33.3±2.4, 2802N×5861E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.5/28, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=57.9km s-min=20.4km az=153.0*
*THR **22** 10:04:39.7±1.3, 2868N×5810E, h14km±16km, ML3.6*
*KISR **22** 10:04:40.3, 2853N×5758E, h11km, ML4.2*
*CSEM **22** 10:04:40.4±0.4, 2901N×5787E, h15km, ML4.2, Error ellipse: s-maj=13.9km s-min=8.7km az=150.0*

ISC 22 10:04:41.1±0.9, 2889N±005×5816E±004, h17km±6km, n25, σ1§32/33, mb3.6/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**1.64**	**312**	*e*Pg			**Pg**	**10 05 11.8**	**-0.8**
KRBR					AML		AML	10 05 42.6	
	comp=N,684nm,0.5s								
IBND	**Bandar-abas**	**2.03**	**225**	*e*Pn			**Pn**	**10 05 15.9**	**+1.4**
IBND	**Bandar-abas**	**2.03**	**225**	*e*Pn			**Pn**	**10 05 15.9**	**+1.4**
IBND				*e*Sg			**Sg**	**10 05 46.0**	**-0.4**
IBND				*e*				10 05 57.5	
BNDS	**Bandar-Abbas**	**2.30**	**230**	*e*Pg			**Pn**	**10 05 18.3**	**+0.1**
BNDS					AML		AML	10 06 03.6	
	comp=N,413nm,0.5s								
BNDS	**Bandar-Abbas**	**2.30**	**230**	*e*Pn			**Pn**	**10 05 18.2**	**-0.1**
	SNR=52								
BNDS				*e*Sg			**Sn**	**10 05 48.5**	**+2.3**
	SNR=90								
ZHSF	**Zahedan**	**2.40**	**72**	*e*Pn			**Pn**	**10 05 23.0**	**+3.4**
ZHSF				*e*Sg			**Sg**	**10 05 58.2**	**0.0**
IBAF	**Bafgh**	**3.50**	**321**	*e*Sg			**Sg**	**10 06 34.4**	**+0.7**
IBAF	**Bafgh**	**3.50**	**321**	*e*Sg			**Sg**	**10 06 34.4**	**+0.7**
IBAF				*e*				10 06 47.3	
IKOO	**Kooshah**	**3.60**	**11**	*e*Pn			**Pn**	**10 05 36.8**	**+0.7**
IKOO				*e*				10 05 42.9	
ITEG	**Tejag**	**4.02**	**7**	*e*Pn			**Pn**	**10 05 42.8**	**+0.8**
ITEG	**Tejag**	**4.02**	**7**	*e*Pn			**Pn**	**10 05 42.8**	**+0.8**
ITEG				*e*				10 05 49.2	
UMR	**Umm Al-Rimmam**	**9.15**	**277**	*e*P			**Pn**	**10 06 51.8**	**-0.6**
UMR				*e*S			**Sn**	**10 08 30.8**	**-4.2**
UMR	**Umm Al-Rimmam**	**9.15**	**277**	*e*P			**Pn**	**10 06 51.8**	**-0.6**
	baz=279								
UMR				*e*S			**Sn**	**10 08 30.8**	**-4.2**
	baz=279								
UMR					AML		AML	10 08 35.1	
	comp=Z,16nm,0.3s,baz=279								
RDF	**Al-Radifah**	**9.30**	**273**	*e*P			**Pn**	**10 06 53.7**	**-0.7**
	baz=275								
RDF				*e*S			**Sn**	**10 08 33.2**	**-5.5**
	baz=275								
RDF					AML		AML	10 08 34.8	
	comp=Z,11nm,0.4s,baz=275								
MIB	**Mutribah**	**9.49**	**278**	*e*P			**Pn**	**10 06 56.5**	**-0.5**
MIB				*e*S			**Sn**	**10 08 38.8**	**-4.5**
MIB	**Mutribah**	**9.49**	**278**	*e*P			**Pn**	**10 06 56.5**	**-0.5**
	baz=281								
MIB				*e*S			**Sn**	**10 08 38.8**	**-4.5**
	baz=281								
MIB					AML		AML	10 08 40.1	
	comp=Z,9.0nm,0.6s,baz=281								
ASF	**Jabal al Asfar**	**18.60**	**285**	P			**Pn**	**10 08 59.1**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=161,slow=3.8,SNR=2.8								
AKTO	**Aktyubinsk**	**21.52**	**360**	P			**P**	**10 09 33.7**	**+4.6**
	comp=Z,1.2nm,0.5s,mb3.5,baz=170,slow=6.1,SNR=4.9								
BRTR	**Keskin Array B**	**22.89**	**305**	P			**P**	**10 09 46.7**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=120,slow=8.8,SNR=2.3								
BVAR	**Borovoye Array**	**25.75**	**17**	P			**P**	**10 10 12.6**	**+2.0**
	comp=Z,1.1nm,0.7s,mb3.5,baz=189,slow=7.5,SNR=5.5								
MKAR	**Makanchi Array**	**25.96**	**40**	P			**P**	**10 10 11.9**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.4,baz=223,slow=8.4,SNR=9.7								
KURK	**Kurchatov**	**26.70**	**30**	P			**P**	**10 10 17.3**	**-2.0**
	comp=Z,0.3nm,0.3s,mb3.2,baz=229,slow=8.5,SNR=2.6								
ZALV	**Zalesovo Beam**	**31.69**	**30**	P			**P**	**10 11 03.2**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.7,baz=240,slow=8.1,SNR=3.0								
TORD	**Torodi Ar. Bea**	**54.51**	**266**	P			**P**	**10 14 06.2**	**-2.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=62,slow=6.9,SNR=16								
YKA	**Yellowknife Ar**	**88.75**	**357**	P			**P**	**10 17 31.6**	**-1.9**
	comp=Z,0.2nm,0.6s,mb3.6,baz=356,slow=5.6,SNR=4.9								

*CRAAG **22** 10:15:18.9, 3653N×153E, Ml3.9*
*ISCJB **22** 10:15:19.7±0.7, 3653N±004×163E±004, h22km±9km, Error ellipse: s-maj=6.8km s-min=5.3km az=162.2*
*NEIC **22** 10:15:19.6, 3637N×180E, h16km, MG3.7(MDD), After MDD.*
*CSEM **22** 10:15:19.2±0.1, 3649N×161E, h16km±1km, ML3.9, Error ellipse: s-maj=3.8km s-min=2.4km az=13.0*
*MDD **22** 10:15:21.1±0.8, 3644N×166E, h15km±9km, mb3.7/19, Error ellipse: s-maj=7.2km s-min=6.0km az=15.0, PRXIMO*

ISC 22 10:15:20.4±0.7, 3649N±004×168E±004, h19km±6km, n51, σ1§17/75, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.24**	**212**	P			**Pg**	**10 15 25.1**	**-0.9**
ECHA	**Ech Chlef**	**0.43**	**217**	P			**Pg**	**10 15 28.2**	**-1.0**
ECHF	**Ech Chlef**	**0.44**	**220**	P			**Pg**	**10 15 28.2**	**-1.1**
EANR	**'Ain N'Sour**	**0.72**	**221**	P			**Pb**	**10 15 33.7**	**-0.5**
EMHD	**Djebel Mahouad**	**1.06**	**106**	P			**Pb**	**10 15 40.3**	**+0.2**
ABA	**Alger-Bouzarea**	**1.13**	**74**	P			**Pn**	**10 15 41.2**	**+0.1**
ETRT	**Tiaret**	**1.14**	**196**	P			**Pn**	**10 15 41.9**	**+0.6**
OJGS	**Djebel Guires**	**1.24**	**218**	P			**Pn**	**10 15 40.0**	**-2.7**
OJBR	**Djebel Berber**	**1.42**	**230**	P			**Pn**	**10 15 40.0**	**-5.0**
ADJB	**Djebel Djouab**	**1.46**	**103**	P			**Pn**	**10 15 46.5**	**+0.9**
AKET	**Djebel Ketaf**	**1.83**	**103**	P			**Pn**	**10 15 47.3**	**-3.4**
EIBI	**Ibiza**	**2.54**	**354**	P			**Pn**	**10 16 01.2**	**+0.6**
	3.8nm,0.2s,SNR=32								
EIBI				S			**Sn**	**10 16 31.2**	**+0.2**
	24nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**2.54**	**354**	P			**Pn**	**10 16 01.2**	**+0.7**
	3.8nm,0.2s,SNR=32								
EIBI				S			**Sn**	**10 16 29.3**	**-1.6**
	24nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**2.54**	**354**	P			**Pn**	**10 16 01.2**	**+0.7**
EIBI				S			**Sn**	**10 16 31.2**	**+0.2**
EBEN	**Beniarda**	**2.68**	**326**	P			**Pn**	**10 16 03.0**	**+0.6**
	5.1nm,0.3s,SNR=9.2								
EBEN				S			**Sn**	**10 16 34.2**	**-0.1**
	2.7nm,0.2s,SNR=7.9								
EBEN	**Beniarda**	**2.68**	**326**	P			**Pn**	**10 16 03.0**	**+0.6**
	5.1nm,0.3s,SNR=9.2								
EBEN				S			**Sn**	**10 16 34.2**	**-0.1**
	2.7nm,0.2s,SNR=7.9								
ETOB	**Tobarra**	**3.35**	**311**	P			**Pn**	**10 16 12.7**	**+1.1**
	0.5nm,0.1s,SNR=7.9								
ETOB				S			**Sn**	**10 16 52.2**	**+1.4**
	SNR=7.9								
ETOB	**Tobarra**	**3.35**	**311**	P			**Pn**	**10 16 12.7**	**+1.1**
	0.5nm,0.1s,SNR=7.9								
ETOB				S			**Sn**	**10 16 52.2**	**+1.4**
	SNR=7.9								
ETOS	**Mallorca**	**3.39**	**15**	P			**Pn**	**10 16 12.1**	**-0.1**
	1.1nm,0.2s,SNR=7.9								
ETOS				S			**Sn**	**10 16 51.1**	**-0.7**
	5.4nm,0.2s,SNR=7.9								
ETOS	**Mallorca**	**3.39**	**15**	P			**Pn**	**10 16 12.1**	**-0.1**
	1.1nm,0.2s,SNR=7.9								
ETO

ellipse: s-maj=92.8km s-min=37.1km az=82.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.45**	**123**	Pn	Pn	10 24 10.4	-0.5
	0.2nm,0.3s,baz=312,slow=12,SNR=6.7						
DBIC	**Dimbokro**	**17.53**	**154**	P	Pn	10 24 25.0	+0.5
	0.2nm,0.3s,baz=328,slow=13,SNR=3.3						
KEST	**Kesra**	**22.96**	**51**	P	P	10 25 25.1	+0.4
	3.2nm,1.1s,baz=243,slow=14,SNR=4.1						
KURK	**Kurchatov**	**73.42**	**42**	P	P	10 31 52.5	-0.2
	0.4nm,0.5s,baz=284,slow=6.4,SNR=3.7						
MKAR	**Makanchi Array**	**76.91**	**45**	P	P	10 32 12.9	+0.1
	0.2nm,0.5s,baz=290,slow=5.3,SNR=5.3						

NNC 22 10:23:06.1±3.1, 4170N×8207E, h0km, mb3.8, mpv3.6, 5C-5D, Error ellipse: s-maj=31.5km s-min=20.7km az=137.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.95**	**286**	⇑P	Pn	10 24 23.3	+1.6
	2.7nm,0.4s						
TKM2				⇓Lg		10 25 38.0	
	14nm,0.7s						
MK31	**Makanchi Array**	**5.09**	**2**	⇓P	Pn	10 24 25.9	+2.3
	3.2nm,0.2s,baz=193,slow=13,SNR=112						
MK31				⇑Lg		10 25 46.0	
	13nm,0.7s,baz=181,slow=28,SNR=8.8						
KURBB	**Kurchatov Arra**	**9.25**	**346**	⇓P	Pn	10 25 21.0	+0.3
	0.2nm,0.5s						
KURBB				⇑Sn	Sn	10 27 09.2	+3.9
	0.6nm,0.6s						
KURBB				⇓Lg		10 27 58.9	
	1.5nm,0.7s						
KURK	**Kurchatov**	**9.33**	**346**	⇑P	Pn	10 25 21.1	-0.6
	3.5nm,1.2s						
KURK				⇓Sn	Sn	10 27 09.0	+1.8
	1.9nm,0.7s						
KURK				⇑Lg		10 28 01.4	
	5.6nm,0.7s						

*NIED **22** 10:39:00, 3720N×13930E, h8km, Mw3.9 Best double couple: M0 7.57000×10^14 NP1:ϕs214.00000°, δ55.00000°, λ45.00000°. NP2:ϕs94.00000°, δ54.00000°, λ136.00000°.*
*IDC **22** 10:39:12.8±0.6, 3726N×13923E, h0km, mb4.0/10, mb1 4.2/12, mb1mx4.0/26, mbtmp4.0/12, ML3.5/2, Error ellipse: s-maj=21.0km s-min=9.5km az=129.0*
*ISCJB **22** 10:39:13.4±0.5, 3722N±003.0×13928E±003.0, h13km±3km, mb4.0/10, Error ellipse: s-maj=4.8km s-min=4.3km az=141.5*
*NEIC **22** 10:39:14.0, 3723N×13929E, h5km, MG4.4(JMA), After JMA.*
NEIC Recorded [3 JMA] in Niigata; [2 JMA] in Fukushima and Gumma; [1 JMA] in Tochigi Prefectures.
*JMA **22** 10:39:13.9, 3723N×13929E, h5km±3km, M4.4 Broadband fault plane solution: P waves. NP1: ϕs101.00000°, δ67.00000°, λ157.00000°. NP2: ϕs200.00000°, δ69.00000°, λ25.00000°. Principal axes: T Plg32.0000°, Azm61.0000°; N Plg58.0000°, Azm238.0000°; P Plg1.0000°, Azm330.0000°;*
JMA Felt III J1.

ISC 22 10:39:14.0±0.4, 3721N±003×13927E±003, h5km±4km, n26, σ1§00/33, mb4.0/10, 3C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.21**	**281**	⇑P	**Pg**	**10 39 18.3**	**+0.2**
JHK				S	**Sg**	**10 39 21.3**	**+0.5**
JFY	**Yanaizu**	**0.40**	**60**	⇑P	**Pg**	**10 39 21.3**	**-0.4**
JFY				S	**Sg**	**10 39 26.3**	**-0.6**
JKT	**Katashina**	**0.44**	**182**	⇓P	**Pg**	**10 39 22.8**	**+0.3**
JKT				*e*S	**Sg**	**10 39 29.1**	**+0.8**
JIZZ	**Izumozaki**	**0.55**	**306**	⇓P	**Pg**	**10 39 25.5**	**+0.9**
JIZZ				*e*S	**Sg**	**10 39 34.3**	**+2.5**
JSB	**Shiboa**	**0.57**	**115**	⇓P	**Pg**	**10 39 25.4**	**+0.4**
JSB				*e*S	**Sg**	**10 39 33.1**	**+0.7**
JNS	**Sasagawa**	**0.61**	**3**	⇓P	**Pg**	**10 39 24.9**	**-0.8**
JNS				S	**Sg**	**10 39 32.7**	**-0.9**
JAG	**Ashikaga**	**0.80**	**169**	⇓P	**Pg**	**10 39 29.6**	**+0.3**
JFT	**Otama**	**0.90**	**70**	⇑P	**Pg**	**10 39 30.5**	**-0.8**
MJAR	**Matsushiro Arr**	**1.08**	**232**	Pg	**Pg**	**10 39 34.0**	**-0.8**
	110nm,0.3s,baz=30,slow=17,SNR=609						
MJAR				Lg		10 39 47.9	
	98nm,0.3s,baz=40,slow=29,SNR=13						
MAJO	**Matsushiro**	**1.08**	**232**	*e*Pg	**Pg**	**10 39 34.4**	**-0.4**
MAJO				*e*Sg	**Sg**	**10 39 46.6**	**-2.2**
MAT	**Matsushiro**	**1.08**	**232**	P	**Pg**	**10 39 34.3**	**-0.5**
MAT				S	**Sg**	**10 39 48.1**	**-0.7**
JHJ	**Hachijo jima 2**	**4.10**	**174**	Pn	**Pn**	**10 40 18.4**	**+1.1**
	21nm,0.3s,baz=252,slow=20,SNR=4.3						
ERM	**Erimo**	**5.66**	**31**	*e*Pn	**Pn**	**10 40 40.3**	**+1.6**
ASAJ	**Asahikawa**	**7.35**	**19**	Pn	**Pn**	**10 41 03.0**	**+1.2**
	0.5nm,0.3s,baz=204,slow=10.0,SNR=4.1						
KSRS	**Korea Array**	**9.04**	**275**	Pn	**Pn**	**10 41 27.6**	**+2.4**
	3.7nm,0.3s,baz=88,slow=14,SNR=39						
KURK	**Kurchatov**	**44.47**	**308**	P	**P**	**10 47 25.4**	**-0.5**
	0.8nm,0.6s,mb3.6,baz=81,slow=7.5,SNR=2.6						
KDAK	**Kodiak Island**	**48.11**	**42**	P	**P**	**10 47 53.8**	**-0.6**
	5.2nm,0.4s,mb4.9,baz=72,slow=2.7,SNR=7.4						
BVAR	**Borovoye Array**	**49.19**	**312**	P	**P**	**10 48 03.1**	**+0.4**
	0.9nm,0.8s,mb3.9,baz=78,slow=13,SNR=3.4						
KAKA	**Kakadu**	**50.07**	**189**	*e*P	x	10 48 52.3	
	22nm,0.6s						
WRA	**Warramunga Arr**	**57.03**	**186**	P	**P**	**10 48 59.6**	**-1.2**
	1.1nm,0.4s,mb4.2,baz=0.2,slow=7.5,SNR=16						
ASAR	**Alice Springs**	**60.76**	**186**	P	**P**	**10 49 27.6**	**+1.0**
	0.5nm,0.6s,mb3.9,baz=16,slow=13,SNR=14						
YKA	**Yellowknife Ar**	**64.51**	**30**	P	**P**	**10 49 50.2**	**-1.0**
	0.5nm,0.7s,mb3.7,baz=305,slow=6.8,SNR=13						
AKASG	**Malin Array Be**	**73.10**	**321**	P	**P**	**10 50 43.6**	**-1.4**
	1.2nm,0.7s,mb3.9,baz=49,slow=6.2,SNR=4.0						
NOA	**NORSAR Array B**	**73.35**	**336**	P	**P**	**10 50 45.2**	**-1.1**
	1.8nm,0.9s,mb4.0,baz=42,slow=5.8,SNR=3.3						
NVAR	**Mina Array Bea**	**76.24**	**52**	P	**P**	**10 51 04.0**	**+0.5**
	1.7nm,0.7s,mb4.1,baz=291,slow=5.3,SNR=13						
PDAR	**Pinedale Array**	**78.75**	**44**	P	**P**	**10 51 17.5**	**+0.1**
	1.5nm,0.6s,mb4.1,baz=270,slow=1.5,SNR=14						

*CSEM **22** 10:43:01.4, 3937N×3304E, h7km, MD3.1, After ISK*
*ISK **22** 10:43:01.4, 3937N×3304E, h7km, MD3.1*

DDA 22 10:43:00.9, 3943N×3317E, h7km±1km, Md2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.55**	**325**	*e*PG	Pg	10 43 12.5	+0.9
LOD				*e*SG	Sg	10 43 21.5	+2.7
CDAG	**Cicekdag**	**0.95**	**78**	*i* P	Pg	10 43 19.2	+0.2
CDAG				*i* S	Sg	10 43 33.4	+2.0
CDAG	**Cicekdag**	**0.95**	**78**	*i* P	Pg	10 43 19.1	+0.1
CDAG				*i* S	Sg	10 43 32.6	+1.3
ELDT	**Eldivan**	**1.07**	**10**	*i* P	Pg	10 43 22.4	+0.9
ELDT				*i* S	Sg	10 43 38.2	+2.8
ELDT	**Eldivan**	**1.07**	**10**	*i* P	Pg	10 43 22.8	+1.3
ELDT				*i* S	Sg	10 43 40.0	+4.6
KDHN	**Kadinhani**	**1.23**	**222**	*i* P	Pb	10 43 24.0	-0.4
CORM	**Corum**	**1.35**	**56**	*e*PN	Pn	10 43 28.3	+2.3
LADK	**Ladik-KONYA**	**1.38**	**207**	*e*PN	Pn	10 43 26.1	-0.5
KONT	**Konya--Tatoy**	**1.62**	**203**	*e*PN	Pn	10 43 29.9	+0.1
BSTP	**Nigde**	**1.65**	**153**	*i* P	Pn	10 43 31.1	+0.8
BSTP				*i* S	Sn	10 43 54.1	+2.4
BSTP	**Nigde**	**1.65**	**153**	*i* P	Pn	10 43 32.0	+1.8
YOZ	**Yozgat**	**1.67**	**82**	*e*PN	Pn	10 43 34.0	+3.5
TOS	**Tosya**	**1.73**	**22**	*e*PN	Pn	10 43 33.6	+2.2
BNN	**Bunyan**	**2.16**	**105**	*e*PN	Pn	10 43 40.0	+2.7
SVSK	**Karacayir**	**2.99**	**79**	*e*PN	Pn	10 43 52.8	+4.1

IDC 22 10:47:57.0±4.4, 598S×12807E, h387km±72km, mb3.2/1, mb1 3.9/3, mb1mx3.1/16, mbtmp3.7/3, 1C, Error ellipse: s-maj=106.9km s-min=62.7km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**9.74**	**176**	*e*P	Pn	10 50 12.8	+0.8
	6.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**12.28**	**191**	*e*P	P	10 50 38.6	-1.7
	6.0nm,1.5s						
WRA	**Warramunga Arr**	**15.16**	**157**	P	P	10 51 12.3	+0.5
	5.9nm,0.3s,baz=335,slow=11,SNR=147						
WRA				S	S	10 53 52.8	-0.3
	0.1nm,0.3s,baz=336,slow=20,SNR=5.9						
WB2	**Warramunga Arr**	**15.16**	**157**	⇑*i*P	P	10 51 12.3	+0.5
WB2				*e*S	S	10 53 52.0	-1.2
COEN	**Coen**	**16.84**	**119**	*e*P	P	10 51 31.1	+1.1
	1.5nm,1.3s						
ASAR	**Alice Springs**	**18.46**	**163**	P	P	10 51 47.0	0.0
	2.4nm,0.3s,baz=344,slow=12,SNR=187						
ASAR				S	S	10 54 58.2	+0.8
	0.1nm,0.3s,baz=346,slow=22,SNR=4.9						
STKA	**Stephens Creek**	**28.70**	**156**	P	P	10 53 20.2	-0.1
	1.7nm,0.7s,baz=315,slow=10.0,SNR=4.7						

*ISCJB **22** 11:02:10.0±1.7, 513N±02.0×17933W±007, h60km±11km, mb3.9/8, Error ellipse: s-maj=36.2km s-min=7.4km az=0.3*
*NEIC **22** 11:02:09.6±1.8, 5105N×17926W, h48km±11km, ML3.6(AEIC), Error ellipse: s-maj=34.8km s-min=7.9km az=177.0*
*IDC **22** 11:02:11.4±3.0, 5153N×179.19W, h49km±21km, mb3.6/8, mb1 3.9/10, mb1mx3.6/26, mbtmp3.7/10, ML3.3/2, Error ellipse: s-maj=54.0km s-min=14.2km az=2.0*

ISC 22 11:02:11.0±1.8, 512N±02×17928W±007, h55km±11km, n17, σ1§03/19, mb3.9/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.75**	**67**	P	**Pn**	**11 02 37.0**	**-1.9**
ADK				S	**Sn**	**11 03 01.1**	**+1.0**
GSTR	**Great Sitkin T**	**2.19**	**65**	*e*Pn	**Pn**	**11 02 45.0**	**+0.2**
SMY	**Shemya**	**4.37**	**293**	P	**Pn**	**11 03 14.5**	**-0.1**
FX1	**Attu Island--F**	**4.96**	**293**	P	**Pn**	**11 03 21.4**	**-1.3**
	1.9nm,0.3s,baz=55,slow=24,SNR=6.5						
FX1				S	**Sn**	**11 04 19.3**	**+0.6**
	1.5nm,0.3s,baz=270,slow=18,SNR=1.9						
FX1	**Attu Island--F**	**4.96**	**293**	P	**Pn**	**11 03 22.6**	**-0.1**
SPIA	**Saint Paul Isl**	**7.98**	**38**	P	**Pn**	**11 04 05.2**	**+1.2**
KDAK	**Kodiak Island**	**16.76**	**57**	P	**Pn**	**11 05 57.9**	**-3.8**
	1.0nm,0.3s,baz=273,slow=4.5,SNR=18						
KTH	**Kantishna Hill**	**19.44**	**40**	*e*P	**Pn**	**11 06 33.4**	**-0.7**
	14nm,0.8s						
YKA	**Yellowknife Ar**	**35.56**	**46**	P	**P**	**11 09 01.8**	**-0.5**
	0.9nm,0.6s,mb3.9,baz=282,slow=7.8,SNR=16						
YKA				ScP	ScP	11 15 12.6	+1.7
	0.2nm,0.7s,baz=294,slow=2.9,SNR=3.9						
YKA	**Yellowknife Ar**	**35.56**	**46**	P	**P**	**11 09 01.8**	**-0.5**
YKA				ScP	ScP	11 15 12.7	+1.7
NVAR	**Mina Array Bea**	**43.87**	**82**	P	**P**	**11 10 12.1**	**+0.5**
	0.4nm,0.6s,mb3.3,baz=299,slow=6.6,SNR=3.8						
SONM	**Songino Array**	**46.45**	**296**	P	**P**	**11 10 32.1**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=39,slow=9.6,SNR=3.7						
PDAR	**Pinedale Array**	**46.64**	**72**	P	**P**	**11 10 34.2**	**+0.7**
	2.9nm,0.6s,mb4.4,baz=305,slow=3.7,SNR=36						
MKAR	**Makanchi Array**	**59.90**	**308**	P	**P**	**11 12 10.1**	**-0.7**
	0.4nm,0.3s,mb3.9,baz=46,slow=6.6,SNR=17						
BVAR	**Borovoye Array**	**60.82**	**320**	P	**P**	**11 12 18.1**	**+1.2**
	0.5nm,0.6s,mb3.9,baz=46,slow=6.1,SNR=3.3						
CMAR	**Chiang Mai Arr**	**70.73**	**276**	P	**P**	**11 13 22.4**	**+1.2**
	0.9nm,0.4s,mb4.1,baz=111,slow=8.7,SNR=6.0						
AKASG	**Malin Array Be**	**75.61**	**342**	P	**P**	**11 13 47.2**	**-2.2**
	0.3nm,0.3s,mb3.7,baz=20,slow=6.6,SNR=3.1						

MAN 22 11:02:51.868N×12679E, h1km, mb4.2, ML3.0, MS2.8, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.65**	**220**	⇓*i*P	Pg	11 03 02.6	-0.9
BIPH				*i* S	Sg	11 03 11.2	-0.7
BUTP	**Butuan**	**1.19**	**284**	*e*P	Pg	11 03 15.3	+1.6
BUTP				*e*S	Sg	11 03 32.9	+3.8
SCPH	**Surigao**	**1.68**	**311**	⇓*e*P	Pn	11 03 22.3	+0.7
BUKP	**Musuan**	**1.88**	**245**	*e*P	Pn	11 03 25.8	+1.4
BUKP				*e*S	Sn	11 03 50.5	+1.7

*NEIC **22** 11:07:27.5±2.7, 460N×9473E, h64km±23km, mb4.4/3, Error ellipse: s-maj=33.1km s-min=8.4km az=59.0*
*IDC **22** 11:07:28.1±3.7, 476N×9487E, h63km±32km, mb3.8/14, mb1 4.0/16, mb1mx3.8/26, mbtmp3.8/16, ML4.2/2, MS3.0/2, Ms1 3.1/2, ms1mx2.8/43, Error ellipse: s-maj=35.0km s-min=12.4km az=56.0*
*ISCJB **22** 11:07:29.1±2.1, 480N±009×950E±01, h88km±18km, mb4.1/19, Error ellipse: s-maj=22.4km s-min=9.2km az=141.7*

ISC 22 11:07:30.1±2.0, 480N±010×950E±01, h80km±18km, n34, σ0§71/35, mb4.1/19, 1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.43**	**117**	P	**Pn**	**11 08 34.6**	**-0.3**
	8.4nm,0.3s,baz=302,slow=11,SNR=11						
PSI				S	**Sn**	**11 09 26.1**	**+0.9**
	2.5nm,0.3s,baz=330,slow=22,SNR=3.8						
PSI				LR	LR	11 10 44.0	
	comp=Z,213nm,19.4s,baz=27,slow=43						
KULM	**Kulim**	**5.69**	**85**	⇓*i*Pn	**Pn**	**11 08 51.2**	**-0.9**
	15nm,0.5s						
KULM				*e*Sn	**Sn**	**11 09 55.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**14.12**	**16**	P	**Pn**	**11 10 47.5**	**+1.2**
	0.4nm,0.3s,baz=210,slow=12,SNR=31						
CMAR				LR	LR	11 16 33.5	
	comp=Z,46nm,20.8s,baz=235,slow=38						
CHTO	**Chiang Mai**	**14.46**	**15**	*e*Pn	**Pn**	**11 10 55.0**	**+4.2**
	5.6nm,1.0s						
RAMN	**Ramite**	**23.43**	**341**	*e*P	**P**	**11 12 32.4**	**+0.2**
JIRN	**Jiri**	**24.22**	**341**	*e*P	**P**	**11 12 39.2**	**-0.2**
PKI	**Pulchoki**	**24.40**	**339**	*e*P	**P**	**11 12 40.7**	**-0.4**
DMN	**Daman**	**24.55**	**339**	*e*P	**P**	**11 12 42.6**	**+0.2**
GUN	**Gumba**	**24.55**	**340**	*e*P	**P**	**11 12 42.0**	**-0.5**
GKN	**Gorkha**	**25.08**	**338**	*e*P	**P**	**11 12 46.8**	**-0.4**
KOLN	**Koldanda**	**25.27**	**336**	*e*P	**P**	**11 12 48.4**	**-0.6**
	29nm,1.0s,mb4.7						
DANN	**Dangsing**	**25.72**	**337**	*e*P	**P**	**11 12 52.6**	**-0.5**
	19nm,0.7s,mb4.7						
AML	**Almayashu**	**41.72**	**336**	*e*P	**P**	**11 15 11.7**	**+0.5**
	5.6nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**41.83**	**337**	*e*P	**P**	**11 15 13.4**	**+1.3**
	2.9nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**43.24**	**347**	P	**P**	**11 15 23.2**	**-0.2**
	2.2nm,0.7s,mb4.0,baz=162,slow=8.1,SNR=21						
MKAR	**Makanchi Array**	**43.24**	**347**	P	**P**	**11 15 23.2**	**-0.3**
SONM	**Songino Array**	**43.98**	**11**	P	**P**	**11 15 29.1**	**-0.2**
	0.8nm,0.7s,mb3.6,baz=186,slow=10,SNR=6.4						
SONM				PcP	PcP	11 17 14.5	+0.7
	0.6nm,0.6s,baz=193,slow=4.0,SNR=3.0						
KSRS	**Korea Array**	**44.30**	**38**	P	**P**	**11 15 31.8**	**-0.3**
	0.6nm,0.5s,mb3.5,baz=231,slow=8.7,SNR=4.2						
WRA	**Warramunga Arr**	**45.86**	**124**	P	**P**	**11 15 44.8**	**+0.1**
	9.1nm,0.7s,mb4.6,baz=302,slow=9.1,SNR=50						
WRA				PcP	PcP	11 17 21.0	+0.2
	0.4nm,0.6s,baz=293,slow=4.4,SNR=3.2						
WRAB	**Tennant Creek**	**45.86**	**124**	*e*P	**P**	**11 15 44.9**	**+0.2**
	8.1nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**47.36**	**128**	P	**P**	**11 15 56.4**	**0.0**
	3.5nm,0.7s,mb4.2,baz=299,slow=8.0,SNR=52						
KURK	**Kurchatov**	**47.77**	**346**	P	**P**	**11 15 58.8**	**-0.3**
	4.1nm,0.7s,mb4.4,baz=169,slow=7.0,SNR=6.1						
ZAAO	**Zalesovo Array**	**49.69**	**352**	*e*P	**P**	**11 16 13.9**	**+0.2**
ZALV	**Zalesovo Beam**	**49.69**	**352**	P	**P**	**11 16 13.9**	**+0.1**
	1.8nm,0.4s,mb4.4,baz=175,slow=7.3,SNR=15						
BVAR	**Borovoye Array**	**52.14**	**341**	P	**P**	**11 16 32.0**	**-0.2**
	1.0nm,0.5s,mb4.1,baz=148,slow=6.7,SNR=7.2						
AKTK	**Aktyubinsk**	**55.02**	**332**	P	**P**	**11 16 54.6**	**+1.3**
AKTO	**Aktyubinsk**	**55.02**	**332**	P	**P**	**11 16 54.6**	**+1.3**
	0.5nm,0.3s,mb4.0,baz=108,slow=19,SNR=3.0						
STKA	**Stephens Creek**	**57.42**	**133**	P	**P**	**11 17 10.6**	**-0.2**
	2.6nm,1.1s,mb4.2,baz=308,slow=12,SNR=2.9						
BRTR	**Keskin Array B**	**65.05**	**312**	P	**P**	**11 18 00.9**	**-1.3**
	0.9nm,0.7s,mb3.7,baz=118,slow=7.0,SNR=6.4						
AKASG	**Malin Array Be**	**71.06**	**322**	P	**P**	**11 18 38.0**	**-1.6**
	0.7nm,0.5s,mb3.8,baz=93,slow=5.5,SNR=4.0						
ARCES	**ARCESS Array B**	**78.41**	**340**	P	**P**	**11 19 21.2**	**-0.5**
	3.8nm,0.9s,mb4.1,baz=81,slow=7.5,SNR=4.8						
ARCES	**ARCESS Array B**	**78.41**	**340**	P	**P**	**11 19 21.2**	**-0.5**
GERES	**GERESS Array B**	**80.65**	**319**	P	**P**	**11 19 35.3**	**+1.1**
	1.2nm,0.8s,mb3.8,baz=94,slow=5.5,SNR=9.5						
CPUP	**Villa Florida**	**145.94**	**228**	PKPbc	PKPbc	11 27 00.9	-0.4
	1.5nm,0.6s,baz=110,slow=3.7,SNR=4.5						

*ISCJB **22** 11:12:41.2±0.4, 5143N±002×632E±004, h0km, Error ellipse: s-maj=4.1km s-min=2.2km az=43.7*
*NEIC **22** 11:12:41.9, 5154N×680E, h1km, ML2.8(LDG), After LDG.*
*LDG **22** 11:12:41.9±0.2, 5154N×680E, h1km, Ml2.8/18, Error ellipse: s-maj=3.6km s-min=3.6km az=59.0, Suspected Mining induced.*
*BUG **22** 11:12:44.1, 5142N×655E, h1km, ML2.0*
*BNS **22** 11:12:44.9±0.9, 5153N×655E, h1km, ML2.1*
*CSEM **22** 11:12:44.5±0.1, 5152N×648E, h1km, ML2.9/19, Error ellipse: s-maj=1.9km s-min=1.3km az=129.0*
*BGR **22** 11:12:44.6±0.7, 5146N×651E, h1km, ML2.2/2, Error ellipse: s-maj=11.1km s-min=4.4km az=129.0*

ISC 22 11:12:42.8±0.4, 5148N±002×638E±003, h0km, n84, σ1§45/153, 2C-1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.12**	**74**	Pg	**Pg**	**11 12 45.3**	**+0.2**
BRHE				Sg	**Sg**	**11 12 46.2**	**-0.5**
RODG	**Roetgen-Dahlhe**	**0.36**	**201**	*e*Sg	**Sg**	**11 13 00.1**	**+5.8**
	292nm,0.6s						
LAUG	**Laupendahl**	**0.38**	**110**	*e*Pg	**Pg**	**11 12 50.4**	**+0.4**
LAUG				*i* Sg	**Sg**	**11 12 55.1**	**+0.3**
	97nm,0.5s						
WTSB	**Winterswijk**	**0.55**	**28**	*e*Pg	**Pg**	**11 12 55.3**	**+2.0**
	10nm,0.4s						
WTSB				*e*Sg	**Sg**	**11 13 01.4**	**+1.0**
BUG	**Bochum--Univer**	**0.56**	**94**	*e*Pg	**Pg**	**11 12 53.5**	**+0.1**
BUG				Sg	**Sg**	**11 13 00.4**	**-0.2**
BNS	**Bensberg**	**0.72**	**136**	⇓*e*Pg	**Pg**	**11 12 58.0**	**+1.5**
HGN	**Heimansgroeve**	**0.77**	**202**	*e*Pn	**Pn**	**11 13 00.9**	**0.0**
	3.8nm,0.3s						
HGN	**Heimansgroeve**	**0.77**	**202**	⇑*i*Pg	**Pg**	**11 13 02.4**	**+4.8**
	58nm,0.2s						
HGN				*e*Sn	**Sg**	**11 13 12.2**	**+4.6**
HGN				*e*Sg	**Sg**	**11 13 14.6**	**+7.0**
HGN	**Heimansgroeve**	**0.77**	**202**	⇑*i*Pg	**Pg**	**11 13 02.4**	**+4.8**
	58nm,0.2s						
HOBG	**Hohbusch**	**0.78**	**130**	*e*Pg	**Pg**	**11 12 58.9**	**+1.2**
HOBG	**Hohbusch**	**0.78**	**130**	Pg	**Pg**	**11 12 58.8**	**+1.1**
BEBN	**Eben Emael**	**0.82**	**213**	P	**Pg**	**11 13 02.3**	**+3.9**
DREG	**Dreilaegerbach**	**0.83**	**187**	*e*Pg	**Pg**	**11 13 01.3**	**+2.7**
DREG				*e*Sg	**Sg**	**11 13 14.1**	**+4.9**
	97nm,0.4s						
KLL	**Kalltalsperre**	**0.84**	**183**	*e*Pg	**Pg**	**11 13 01.3**	**+2.5**
KLL				*e*Sg	**Sg**	**11 13 14.3**	**+4.6**
	39nm,0.2s						
MEM	**Membach**	**0.91**	**195**	P	**Pg**	**11 13 02.5**	**+2.4**
MEM	**Membach**	**0.91**	**195**	P	**Pg**	**11 13 02.4**	**+2.3**
STB	**Steinbach**	**0.94**	**162**	*e*Pg	**Pg**	**11 13 03.1**	**+2.4**
STB				*e*Sg	**Sg**	**11 13 16.6**	**+3.8**
	57nm,0.4s						
IBBN	**Ibbenburen**	**1.19**	**45**	*e*Pg	**Pg**	**11 13 06.1**	**+0.6**
IBBN				*e*Sg	**Sg**	**11 13 21.3**	**+0.5**
	SNR=4.2						
HILG	**Hillesheim**	**1.21**	**171**	*e*Pg	**Pg**	**11 13 08.1**	**+2.2**
HILG				*e*Sg	**Sg**	**11 13 24.2**	**+2.7**
	53nm,0.4s						
BCLA	**Clavier**	**1.27**	**213**	P	**Pg**	**11 13 09.6**	**+2.7**
BGG	**Burgeitz**	**1.41**	**154**	*e*Pg	**Pg**	**11 13 10.0**	**+0.1**
BGG				*e*Sg	**Sg**	**11 13 29.7**	**+1.5**
	15nm,0.5s						
GIVF	**Givet**	**1.70**	**216**	*e*Pg	**Pg**	**11 13 17.2**	**+1.9**
GIVF				*e*Sg	**Sg**	**11 13 41.7**	**+4.4**
	32nm,0.3s						
GIVF	**Givet**	**1.70**	**216**	*e*Pg	**Pg**	**11 13 17.2**	**+1.9**
GIVF				*e*Sg	**Sg**	**11 13 41.7**	**+4.4**
	16nm,0.3s						
GIVF	**Givet**	**1.70**	**216**	*e*Pn	**Pn**	**11 13 13.7**	**+0.1**
GIVF				*e*Pg	**Pg**	**11 13 17.2**	**+1.9**
GIVF				*e*Sg	**Sg**	**11 13 41.7**	**+4.4**
DOU	**Dourbes**	**1.79**	**220**	P	**Pn**	**11 13 17.7**	**+2.8**
DOU	**Dourbes**	**1.79**	**220**	P	**Pn**	**11 13 17.6**	**+2.7**
TNS	**Taunus Mts**	**1.82**	**133**	*e*Pg	**Pg**	**11 13 16.8**	**-0.8**
WLF	**Walferdange**	**1.83**	**185**	*e*Pg	**Pg**	**11 13 19.2**	**+1.5**
WLF				*e*Sg	**Sg**	**11 13 42.3**	**+0.9**
	SNR=5.8						
WLF	**Walferdange**	**1.83**	**185**	P	**Pn**	**11 13 19.1**	**+3.8**
WLF	**Walferdange**	**1.83**	**185**	*e*Pn	**Pn**	**11 13 19.1**	**+3.7**
WLF	**Walferdange**	**1.83**	**185**	Pg	**Pg**	**11 13 19.2**	**+1.5**
WLF				Sg	**Sg**	**11 13 42.3**	**+0.9**
	SNR=5.8						
WLF				*e*Sn	**Sn**	**11 13 42.6**	**+3.5**
WLF	**Walferdange**	**1.83**	**185**	*e*Pn	**Pn**	**11 13 19.1**	**+3.8**
WLF				*e*S

SSF				*e*Sn		**Sn**	**11 14 51.1**	**-1.6**
SSF				*e*Sg		**Sg**	**11 15 18.0**	**+0.9**
	3.3nm,0.5s							
HYF	**Humbligny**	**4.88**	**212**	*e*Pn		**Pn**	**11 13 57.1**	**-0.1**
HYF				*e*Sg		**Sg**	**11 15 19.3**	**0.0**
CABF	**La Chapelle**	**4.88**	**182**	*e*Pn		**Pn**	**11 13 55.7**	**-1.6**
CABF				*e*Sn		**Sn**	**11 14 49.0**	**-5.5**
	3.0nm,0.5s							
CABF	**La Chapelle**	**4.88**	**182**	*e*Pn		**Pn**	**11 13 55.7**	**-1.6**
CABF				*e*Sn		**Sn**	**11 14 49.0**	**-5.5**
	1.5nm,0.5s							
LDF	**La Druitiere**	**5.09**	**238**	*e*Pn		**Pn**	**11 14 00.8**	**+0.6**
LDF				*e*Sn		**Sn**	**11 14 59.5**	**-0.2**
	5.0nm,0.6s							
LDF	**La Druitiere**	**5.09**	**238**	*e*Pn		**Pn**	**11 14 00.8**	**+0.6**
LDF				*e*Sn		**Sn**	**11 14 59.5**	**-0.2**
	2.5nm,0.6s							
AVF	**Avril sur Loir**	**5.10**	**204**	*e*Pn		**Pn**	**11 13 59.7**	**-0.6**
AVF				*e*Sn		**Sn**	**11 14 55.0**	**-4.9**
	1.3nm,0.5s							
AVF	**Avril sur Loir**	**5.10**	**204**	*e*Pn		**Pn**	**11 13 59.7**	**-0.6**
AVF				*e*Sn		**Sn**	**11 14 55.0**	**-4.9**
	0.6nm,0.5s							
SMF	**Signal de Mont**	**5.12**	**200**	*e*Pn		**Pn**	**11 13 59.6**	**-1.0**
SMF				*e*Sn		**Sn**	**11 14 56.8**	**-3.6**
SMF				*e*Sg		**Sg**	**11 15 26.9**	**-0.3**
	2.4nm,0.3s							
SMF	**Signal de Mont**	**5.12**	**200**	*e*Pn		**Pn**	**11 13 59.6**	**-1.0**
SMF				*e*Sn		**Sn**	**11 14 56.8**	**-3.6**
SMF				*e*Sg		**Sg**	**11 15 26.9**	**-0.3**
	1.2nm,0.3s							
FLN	**La Foliniere**	**5.19**	**241**	*e*Pn		**Pn**	**11 14 02.3**	**+0.8**
FLN				*e*Sn		**Sn**	**11 15 03.1**	**+1.1**
	2.0nm,0.3s							
FLN	**La Foliniere**	**5.19**	**241**	*e*Pn		**Pn**	**11 14 02.3**	**+0.8**
FLN				*e*Sn		**Sn**	**11 15 03.1**	**+1.1**
	1.0nm,0.3s							
BGF	**Bois d'Agland**	**5.45**	**207**	*e*Pn		**Pn**	**11 14 05.6**	**+0.5**
BGF				*e*Sn		**Sn**	**11 15 05.6**	**-2.9**
	7.6nm,0.4s							
BGF	**Bois d'Agland**	**5.45**	**207**	*e*Pn		**Pn**	**11 14 05.6**	**+0.5**
BGF				*e*Sn		**Sn**	**11 15 05.6**	**-2.9**
	3.8nm,0.4s							
GRR	**Gorron**	**5.61**	**239**	*e*Sn		**Sn**	**11 15 10.4**	**-2.0**
TCF	**Toulx Ste Croi**	**5.88**	**210**	*e*Pn		**Pn**	**11 14 10.5**	**-0.6**
TCF				*e*Pg		**Pg**	**11 14 34.2**	**-1.2**
LPL	**La Plagne**	**5.97**	**178**	*e*Pn		**Pn**	**11 14 10.2**	**-2.2**
LPG	**La Plagne**	**6.00**	**178**	*e*Pn		**Pn**	**11 14 10.4**	**-2.2**
MFF	**Saint Martin d**	**6.50**	**224**	*e*Sn		**Sn**	**11 15 31.2**	**-3.2**
	1.5nm,0.4s							
MFF	**Saint Martin d**	**6.50**	**224**	*e*Sn		**Sn**	**11 15 31.2**	**-3.2**
	0.8nm,0.4s							
ORIF	**Oris-en-Rattie**	**6.58**	**183**	*e*Pn		**Pn**	**11 14 18.6**	**-2.0**
VIVF	**Saint-Julien-l**	**6.73**	**190**	*e*Pn		**Pn**	**11 14 21.3**	**-1.4**
MBDF	**Montbardon**	**6.76**	**178**	*e*Pn		**Pn**	**11 14 20.8**	**-2.4**
RJF	**Les Rejaudoux**	**6.98**	**210**	*e*Pn		**Pn**	**11 14 26.0**	**-0.1**
CAF	**Calviac**	**7.17**	**205**	*e*Pn		**Pn**	**11 14 32.7**	**+4.0**
LFF	**La Frestale**	**7.55**	**212**	*e*Pn		**Pn**	**11 14 32.5**	**-1.5**
LASF	**Ste Croix**	**7.60**	**194**	*e*Pn		**Pn**	**11 14 33.0**	**-1.7**

NEIC ***22*** *11:14:47.0, 1659N×9937W, h16km, MD3.5(MEX), After MEX.*

MEX 22 11:14:47.0±0.8, 1659N×9937W, h16km±8km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
ACX	**Acapulco**	**0.60**	**298**	*i* P	Pg	11	14 56.9	-1.9
ACX				*i* S	Sg	11	15 03.5	-3.3
CAIG	**El Cayaco**	**0.98**	**298**	*i* P	Pb	11	15 02.8	-2.7
CAIG				*i* S	Sb	11	15 15.0	-3.2
PNIG	**Pinotepa**	**1.21**	**99**	*e*P	Pn	11	15 04.8	-4.3
PNIG				*i* S	Sb	11	15 20.4	-4.4
UTMO	**Huajuapan**	**1.94**	**50**	*e*P	Pn	11	15 16.1	-3.1
UTMO				*i* S	Sn	11	15 39.7	-3.6
PPM	**Popocatepetl**	**2.57**	**16**	*e*P	Pn	11	15 25.4	-2.4
PPM				*i* S	Sn	11	15 55.2	-3.6

ISCJB ***22*** *11:15:31.7±1.8, 206S±02×1779W±02, h416km±28km, mb3.2/4, Error ellipse: s-maj=42.1km s-min=18.6km az=36.2*

IDC ***22*** *11:15:32.7±2.1, 2059S×17768W, h430km±25km, mb2.9/4, mb1 3.3/6, mb1mx3.1/17, mbtmp3.1/6, Error ellipse: s-maj=37.2km s-min=16.9km az=136.0*

ISC 22 11:15:32.2±1.9, 206S±02×1778W±03, h414km±31km, n10, σ1§30/7, mb3.2/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
AFI	**Afiamalu**	**8.75**	**42**	P	**P**	**11**	**17 37.2**	**+1.5**
	3.1nm,0.3s,baz=48,slow=6.4,SNR=6.6							
AFI				S	**S**	**11**	**19 15.9**	**-1.2**
	1.3nm,0.3s,baz=311,slow=19,SNR=3.5							
URZ	**Urewera**	**18.18**	**193**	P	**P**	**11**	**19 17.7**	**-0.2**
	1.6nm,0.3s,baz=217,slow=2.2,SNR=9.0							
ASAR	**Alice Springs**	**44.72**	**257**	P	**P**	**11**	**23 05.5**	**-1.3**
	0.3nm,0.4s,mb3.0,baz=97,slow=8.2,SNR=7.6							
ASAR				PcP	PcP	11	24 40.2	-0.6
	0.4nm,0.6s,baz=99,slow=3.5,SNR=6.9							
WRA	**Warramunga Arr**	**44.81**	**262**	P	**P**	**11**	**23 07.8**	**+0.2**
	0.2nm,0.3s,mb3.0,baz=96,slow=7.5,SNR=3.5							
PDAR	**Pinedale Array**	**88.86**	**43**	P	**P**	**11**	**27 40.8**	**+0.1**
	0.6nm,0.9s,mb3.3,baz=256,slow=3.6,SNR=3.7							
CMAR	**Chiang Mai Arr**	**90.35**	**289**	P	**P**	**11**	**27 49.0**	**+0.8**
	0.8nm,0.6s,mb3.7,baz=104,slow=2.9,SNR=5.0							
BVAR	**Borovoye Array**	**119.27**	**320**	PKP	PKPdf	11	33 30.9	-1.9
	0.4nm,0.3s,baz=85,slow=5.3,SNR=4.2							
AKASG	**Malin Array Be**	**143.18**	**331**	PKP	PKPdf	11	34 14.1	-3.6
	1.2nm,0.5s,baz=43,slow=4.2,SNR=12							
MMAI	**Mount Meron Ar**	**148.04**	**300**	PKPbc	PKPbc	11	34 29.4	-0.9
	1.0nm,0.5s,baz=60,slow=4.0,SNR=4.7							
GERES	**GERESS Array B**	**150.32**	**345**	PKPbc	PKPbc	11	34 33.7	-1.6
	0.2nm,0.4s,baz=22,slow=1.4,SNR=3.7							

IDC ***22*** *11:17:41.2±4.8, 3575N×7072E, h44km±43km, mb3.7/11, mb1 3.9/15, mb1mx3.7/27, mbtmp3.7/15, ML3.8/4, Error ellipse: s-maj=29.1km s-min=18.5km az=10.0*

ISCJB ***22*** *11:17:46.0±0.4, 3590N±003×7102E±005, h114km±6km, mb3.8/11, Error ellipse: s-maj=6.7km s-min=4.3km az=161.0*

NEIC ***22*** *11:17:46.4±0.7, 3579N×7109E, h112km±9km, mb3.5/1, Error ellipse: s-maj=9.5km s-min=6.1km az=62.0*

NNC ***22*** *11:17:53.6±5.5, 3653N×7044E, h116km±66km, mb3.5, mpv4.4, Error ellipse: s-maj=42.2km s-min=26.8km az=21.0*

ISC 22 11:17:47.3±0.4, 3588N±003×7101E±005, h114km±6km, n60, σ1§38/74, mb3.8/11, 8C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
KBL	**Kabul**	**2.10**	**231**	⇑*i*Pn	**Pn**	**11**	**18 20.9**	**-0.8**
KBL				*e*Sn	**Sn**	**11**	**18 47.5**	**-0.5**
CEP	**Cherat**	**2.18**	**160**	⇑P	**Pn**	**11**	**18 24.2**	**+1.4**
CEP				S	**Sn**	**11**	**18 52.0**	**+2.1**
CHCP	**Chirah Chowk**	**2.89**	**139**	P	**Pn**	**11**	**18 33.9**	**+2.0**
THN	**Thein Dam**	**5.20**	**130**	*e*P	**Pn**	**11**	**19 03.4**	**+0.6**
THN				*ex*	**Sn**	**11**	**20 02.7**	**+1.1**
DLH	**Dalhousie**	**5.29**	**128**	*e*P	**Pn**	**11**	**19 05.0**	**+1.0**
DLH				*ex*	**Sn**	**11**	**20 04.0**	**+0.3**
BHK	**Bhakra**	**6.33**	**133**	*e*S	**Sn**	**11**	**20 26.2**	**-2.9**
AML	**Almayashu**	**6.58**	**18**	P	**Pn**	**11**	**19 21.5**	**+0.1**
	SNR=38							
AML	**Almayashu**	**6.58**	**18**	*e*Pn	**Pn**	**11**	**19 21.4**	**0.0**
	42nm,0.5s							
SDNR	**Sundarnagar**	**6.61**	**130**	*e*P	**Pn**	**11**	**19 23.0**	**+1.0**
SDNR				*e*S	**Sn**	**11**	**20 31.0**	**-4.9**
UCH	**Uchtor**	**6.89**	**22**	*e*Pn	**Pn**	**11**	**19 28.0**	**+2.3**
SMLA	**Simla**	**6.99**	**131**	*i* P	**Pn**	**11**	**19 27.1**	**0.0**
SMLA				*e*S	**Sn**	**11**	**20 40.1**	**-5.0**
KZA	**Kyzart**	**7.01**	**27**	P	**Pn**	**11**	**19 27.8**	**+0.5**
	SNR=13							
EKS2	**Erkin-Say**	**7.10**	**17**	P	**Pn**	**11**	**19 28.4**	**0.0**
	SNR=14							
EKS2	**Erkin-Say**	**7.10**	**17**	*e*Pn	**Pn**	**11**	**19 28.4**	**-0.1**
	10nm,0.6s							
EKS2				*e*Sn	**Sn**	**11**	**20 47.6**	**+0.1**
KK31	**Karatay Array**	**7.22**	**357**	⇑P	**Pn**	**11**	**19 28.4**	**-1.7**
	18nm,0.5s,baz=179,slow=11,SNR=290							
KK31				⇑S	**Sn**	**11**	**20 42.6**	**-7.9**
	11nm,0.3s,baz=198,slow=24,SNR=14							
AAK	**Ala-Archa**	**7.26**	**21**	P	**Pn**	**11**	**19 30.9**	**+0.3**
	SNR=20							
AAK	**Ala-Archa**	**7.26**	**21**	*e*Pn	**Pn**	**11**	**19 31.1**	**+0.4**
	16nm,0.4s							
KBK	**Karagaybulak**	**7.42**	**23**	P	**Pn**	**11**	**19 34.4**	**+1.6**
	SNR=6.0							
CHMS	**Chumysh**	**7.67**	**21**	P	**Pn**	**11**	**19 36.5**	**+0.3**
	SNR=10							
USP	**Ospenovka**	**7.85**	**19**	P	**Pn**	**11**	**19 38.2**	**-0.4**
	SNR=11							
TKM2	**Tokmak 2**	**7.87**	**25**	⇑P	**Pn**	**11**	**19 39.7**	**+0.7**
	13nm,0.6s							
TKM2				⇓S	**Sn**	**11**	**21 05.1**	**-1.2**
	13nm,1.4s							
TKM2	**Tokmak 2**	**7.87**	**25**	P	**Pn**	**11**	**19 39.4**	**+0.4**
	SNR=32							
TKM2	**Tokmak 2**	**7.87**	**25**	*e*Pn	**Pn**	**11**	**19 39.6**	**+0.7**
	17nm,0.5s							
DDI	**Dehra Dun**	**8.10**	**131**	*e*P	**Pn**	**11**	**19 42.0**	**-0.1**
KHET	**Khetri**	**8.78**	**151**	*e*S	**Sn**	**11**	**21 20.4**	**-8.2**
KHET				AML	AML	11	21 24.8	
	comp=E,36nm,0.3s							
KHET				AML	AML	11	21 25.4	
	comp=N,41nm,0.3s							
JOSI	**Joshimath**	**8.91**	**124**	*e*P	**Pn**	**11**	**19 53.8**	**+0.7**
JOSI				*e*S	**Sn**	**11**	**21 26.3**	**-5.4**
KUDL	**Kundal**	**9.01**	**147**	*e*P	**Pn**	**11**	**19 53.8**	**-0.6**
KUDL				*e*S	**Sn**	**11**	**21 26.5**	**-7.5**
KUDL				AML	AML	11	21 33.3	
	comp=E,36nm,0.4s							
KUDL				AML	AML	11	21 34.1	
	comp=N,37nm,0.3s							
DANN	**Dangsing**	**13.15**	**121**	*e*P	**Pn**	**11**	**20 47.7**	**-1.9**
KOLN	**Koldanda**	**13.40**	**124**	*e*P	**Pn**	**11**	**20 51.4**	**-1.5**
MK31	**Makanchi Array**	**13.79**	**34**	⇑P	**Pn**	**11**	**20 58.0**	**+0.2**
	comp=N,0.8nm,0.5s,baz=223,slow=16,SNR=3.5							
MKAR	**Makanchi Array**	**13.79**	**34**	P	**Pn**	**11**	**20 56.9**	**-0.9**
	comp=N,0.1nm,0.3s,baz=217,slow=15,SNR=4.6							
GKN	**Gorkha**	**13.97**	**120**	*e*P	**Pn**	**11**	**20 58.0**	**-2.3**
PKI	**Pulchoki**	**14.78**	**120**	*e*P	**Pn**	**11**	**21 09.5**	**-1.0**
GUN	**Gumba**	**14.91**	**118**	*e*P	**Pn**	**11**	**21 10.7**	**-1.5**
JIRN	**Jiri**	**15.28**	**118**	*e*P	**Pn**	**11**	**21 15.3**	**-1.5**
AB31	**Akbulak array**	**15.63**	**332**	P	**Pn**	**11**	**21 18.1**	**-2.9**
	comp=N,18nm,0.4s,baz=144,slow=14,SNR=318							
AB31				S	S	11	23 58.3	-23
	comp=N,3.9nm,0.3s,baz=153,slow=24,SNR=11							
KURBB	**Kurchatov Arra**	**15.70**	**18**	⇑P	**Pn**	**11**	**21 24.1**	**+2.2**
	comp=N,0.5nm,0.6s							
KURK	**Kurchatov**	**15.81**	**18**	P	**Pn**	**11**	**21 20.9**	**-2.4**
	comp=N,0.1nm,0.3s,baz=209,slow=10,SNR=17							
KURK	**Kurchatov**	**15.81**	**18**	P	**Pn**	**11**	**21 21.3**	**-1.9**
	comp=N,2.9nm,1.0s							
RAMN	**Ramite**	**15.99**	**119**	*e*P	**Pn**	**11**	**21 23.2**	**-2.5**
BVA0	**Borovoye Array**	**17.14**	**359**	⇓P	**Pn**	**11**	**21 38.5**	**-1.1**
	comp=N,0.2nm,0.5s,baz=169,slow=11,SNR=8.3							
BVAR	**Borovoye Array**	**17.14**	**359**	P	**Pn**	**11**	**21 38.1**	**-1.5**
	comp=N,0.5nm,0.3s,baz=167,slow=12,SNR=7.7							
AKTK	**Aktyubinsk**	**17.32**	**331**	P	**Pn**	**11**	**21 40.8**	**-1.0**
AKTK				S	**S**	**11**	**24 41.1**	**-14**
AKTO	**Aktyubinsk**	**17.32**	**331**	⇓P	**Pn**	**11**	**21 40.9**	**-0.8**
	comp=N,3.2nm,0.7s							
AKTO				⇑S	**S**	**11**	**24 39.6**	**-15**
	comp=N,0.5nm,0.6s							
AKTO	**Aktyubinsk**	**17.32**	**331**	P	**Pn**	**11**	**21 40.8**	**-1.0**
	comp=N,1.8nm,0.3s,baz=145,slow=14,SNR=56							
AKTO				S	**S**	**11**	**24 41.1**	**-14**
	comp=N,0.6nm,0.3s,baz=116,slow=20,SNR=6.8							
ZAA0	**Zalesovo Array**	**20.47**	**24**	*e*P	**P**	**11**	**22 16.6**	**+0.9**
ZALV	**Zalesovo Beam**	**20.47**	**24**	P	**P**	**11**	**22 16.1**	**+0.4**
	comp=N,0.6nm,0.3s,baz=221,slow=11,SNR=16							
SONM	**Songino Array**	**28.68**	**54**	P	**P**	**11**	**23 36.5**	**+3.3**
	comp=N,0.4nm,0.6s,mb3.2,baz=271,slow=8.1,SNR=4.1							
BRTR	**Keskin Array B**	**29.64**	**289**	P	**P**	**11**	**23 41.2**	**-0.6**
	comp=N,0.7nm,0.7s,mb3.4,baz=93,slow=7.4,SNR=4.3							
JOF	**Joensuu**	**36.41**	**330**	*e*p	**P**	**11**	**24 41.5**	**+1.2**
	comp=N,3.1nm,0.3s,mb4.7							
ARCES	**ARCESS Array B**	**41.72**	**338**	P	**P**	**11**	**25 26.5**	**+2.0**
	comp=N,1.7nm,0.6s,mb4.0,baz=117,slow=7.1,SNR=8.4							
NB2	**NORSAR Subarra**	**44.88**	**323**	P	**P**	**11**	**25 50.6**	**+0.7**
	comp=Z,1.6nm,0.6s,mb3.9,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.88**	**323**	P	**P**	**11**	**25 51.0**	**+1.0**
	comp=Z,1.6nm,0.8s,mb3.8,baz=98,slow=7.9,SNR=4.2							
NOA	**NORSAR Array B**	**44.88**	**323**	P	**P**	**11**	**25 51.0**	**+1.0**
KSRS	**Korea Array**	**45.07**	**70**	P	**P**	**11**	**25 55.1**	**+3.3**
	comp=Z,0.6nm,0.4s,mb3.6,baz=275,slow=6.9,SNR=4.9							
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P	**P**	**11**	**28 19.2**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.6,baz=48,slow=5.6,SNR=7.7							
INK	**Inuvik**	**74.51**	**9**	P	**P**	**11**	**29 15.6**	**+2.8**
	comp=Z,2.2nm,0.5s,mb4.2,baz=339,slow=6.1,SNR=22							
WRA	**Warramunga Arr**	**81.66**	**122**	P	**P**	**11**	**29 55.7**	**+2.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=325,slow=5.0,SNR=5.0							
YKA	**Yellowknife Ar**	**81.86**	**3**	P	**P**	**11**	**29 55.1**	**+1.7**
	comp=Z,0.9nm,0.4s,mb4.0,baz=350,slow=5.4,SNR=29							
ASAR	**Alice Springs**	**83.89**	**125**	P	**P**	**11**	**30 07.2**	**+2.8**
	comp=Z,0.7nm,0.7s,mb3.6,baz=310,slow=5.5,SNR=9.8							

IDC 22 11:36:08.1±4.7, 226S×13867E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.5/14, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=194.1km s-min=28.2km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
WRA	**Warramunga Arr**	**18.08**	**193**	P	Pn	11	40 22.5	+1.6
	0.3nm,0.3s,baz=17,slow=13,SNR=5.9							
ASAR	**Alice Springs**	**21.78**	**192**	P	P	11	41 01.4	-0.2
	1.0nm,0.9s,baz=21,slow=11,SNR=4.2							
MKAR	**Makanchi Array**	**69.41**	**322**	P	P	11	47 17.8	-0.1
	0.3nm,0.7s,baz=120,slow=8.5,SNR=3.2							

IDC 22 11:41:18.9±1.1, 316N×14558E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.9/17, mbtmp3.8/8, Error ellipse: s-maj=37.9km s-min=21.6km az=105.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
WRA	**Warramunga Arr**	**25.48**	**205**	P	P	11	46 48.9	0.0
	2.5nm,0.9s,baz=28,slow=11,SNR=7.5							
ASAR	**Alice Springs**	**28.99**	**203**	P	P	11	47 20.4	-0.1
	0.6nm,0.8s,baz=38,slow=6.1,SNR=5.8							
CMAR	**Chiang Mai Arr**	**48.08**	**292**	P	P	11	50 00.8	+0.1
	0.4nm,0.4s,baz=97,slow=5.8,SNR=3.7							
PETK	**Petropavlovsk-**	**50.78**	**9**	P	P	11	50 19.9	-0.8
	5.0nm,1.0s,baz=163,slow=10,SNR=2.8							
SONM	**Songino Array**	**55.81**	**329**	P	P	11	50 58.4	+0.6
	0.8nm,0.8s,baz=136,slow=5.6,SNR=5.1							
MKAR	**Makanchi Array**	**69.62**	**319**	P	P	11	52 30.0	-0.1
	0.6nm,0.8s,baz=98,slow=10,SNR=3.6							
YKA	**Yellowknife Ar**	**91.75**	**27**	P	P	11	54 28.6	+0.4
	0.1nm,0.6s,baz=286,slow=4.7,SNR=4.1							
NVAR	**Mina Array Bea**	**92.85**	**51**	P	P	11	54 34.5	+0.6
	0.5nm,0.7s,baz=255,slow=3.5,SNR=4.2							

NEIC ***22*** *11:41:41.8±0.9, 1972S×7020W, h10km, Error ellipse: s-maj=15.5km s-min=10.6km az=76.0*

IDC ***22*** *11:41:41.6±1.0, 1974S×7046W, h40km±6km, mb3.7/4, mb1 4.0/7, mb1mx3.7/19, mbtmp3.9/7, ML4.8/3, Error ellipse: s-maj=32.1km s-min=22.3km az=44.0*

ISCJB ***22*** *11:41:43.1±1.0, 1965S±006×702W±0.1, h54km±12km, mb3.7/5, Error ellipse: s-maj=20.5km s-min=7.8km az=157.8*

ISC 22 11:41:44.7±0.9, 1967S±006×702W±01, h56km±11km, n14, σ1§01/13, mb3.8/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
LVC	**Limon Verde**	**3.17**	**158**	Pn	**Pn**	**11**	**42 30.6**	**-1.5**
	16nm,0.3s,baz=350,slow=9.6,SNR=61							
LVC				Sn	**Sn**	**11**	**43 08.8**	**+0.1**
	30nm,0.3s,baz=260,slow=23,SNR=6.9							
LVC	**Limon Verde**	**3.17**	**158**	Pn	**Pn**	**11**	**42 30.6**	**-1.5**
LVC				Sn	**Sn**	**11**	**43 08.8**	**+0.1**
ARE	**Arequipa**	**3.41**	**339**	*e*P	**Pn**	**11**	**42 36.0**	**+0.5**
ARE				*i* S	**Sn**	**11**	**43 14.5**	**-0.2**
SIV	**San Ignacio**	**9.44**	**69**	Pn	**Pn**	**11**	**43 58.2**	**+0.1**
	4.0nm,0.3s,baz=265,slow=10,SNR=70							
CPUP	**Villa Florida**	**13.59**	**122**	Pn	**Pn**	**11**	**44 54.5**	**-0.1**
	0.8nm,0.3s,baz=284,slow=12,SNR=6.2							
PLCA	**Paso Flores**	**21.00**	**181**	P	**P**	**11**	**46 25.4**	**+2.0**
	1.6nm,0.7s,baz=347,slow=7.9,SNR=3.4							
BDFB	**Brasilia**	**21.53**	**83**	P	**P**	**11**	**46 31.1**	**+1.8**
	1.0nm,0.5s,mb3.5,baz=246,slow=15,SNR=4.5							
TORD	**Torodi Ar. Bea**	**77.91**	**71**	P	**P**	**11**	**53 36.1**	**-1.1**
	1.5nm,0.5s,mb4.2,baz=247,slow=5.6,SNR=34							
TORD				pP	pP	11	53 49.9	-3.0
	1.4nm,0.6s,baz=252,slow=5.2,SNR=4.1							
TSUM	**Tsumeb**	**81.74**	**107**	P	**P**	**11**	**53 57.0**	**-0.9**
	0.5nm,0.4s,mb3.8,baz=244,slow=2.9,SNR=4.3							
YKA	**Yellowknife Ar**	**89.06**	**341**	P	**P**	**11**	**54 33.0**	**-0.3**
	0.2nm,0.7s,mb3.6,baz=134,slow=5.0,SNR=6.1							
YKA				pP	pP	11	54 43.4	-5.8
	0.4nm,0.6s,baz=134,slow=4.8,SNR=6.3							
ASAR	**Alice Springs**	**130.92**	**210**	PKP	PKPdf	12	00 47.4	-3.3
	0.7nm,1.1s,baz=133,slow=1.9,SNR=4.5							
WRA	**Warramunga Arr**	**133.86**	**213**	PKP	PKPdf	12	00 54.6	-1.7
	0.3nm,0.5s,baz=152,slow=1.9,SNR=2.9							
MKAR	**Makanchi Array**	**144.83**	**33**	PKPbc	PKPdf	12	01 14.8	-0.6
	1.9nm,0.7s,baz=345,slow=3.0,SNR=21							
MKAR				pPKPbc		12	01 25.7	
	1.1nm,0.7s,baz=309,slow=2.7,SNR=5.5							
SONM	**Songino Array**	**151.77**	**5**	PKPbc	PKPbc	12	01 32.7	-0.3
	0.5nm,0.6s,baz=2.6,slow=1.7,SNR=4.3							

MOS ***22*** *11:42:12.3±1.4, 5312N×10789E, h6km, mb4.3/1, Error ellipse: s-maj=25.7km s-min=15.5km az=138.6*

BYKL 22 11:42:13.6±0.2, 5312N×10782E, h11km±19km, 4C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
OGRR	**Ongureny**	**0.54**	**346**	*e*PG	Pg	11	42 23.8	-0.3
OGRR				*e*S	Sg	11	42 31.1	-0.2
OGRR	**Ongureny**	**0.54**	**346**	⇑*i*Pg	Pg	11	42 23.7	-0.4
OGRR				*i* Sg	Sg	11	42 31.0	-0.3
OGRR				Pmax				
	118nm,0.3s							
OGRR				Smax				
	426nm,0.3s							
ZRHB	**Zarechye**	**0.70**	**216**	⇓*i*Pg	Pg	11	42 26.9	-0.2
ZRHB				*e*Sg	Sg	11	42 36.1	-0.1
ZRHB				Pmax				
	56nm,0.2s							
ZRHB				Smax				
	624nm,0.4s							
TRTB	**Turuntaevo**	**0.90**	**187**	⇑*i*Pg	Pg	11	42 29.7	-1.2
TRTB				*e*Pb	Pb	11	42 31.5	+0.3
TRTB				*e*Sg	Sg	11	42 41.7	-0.9
TRTB				*e*Sb	Sb	11	42 45.4	+2.3
TRTB				max				
	111nm,0.2s							
TRTB				max				
	1μm,0.2s							
TRG	**Tyrgan**	**0.96**	**249**	*e*PG	Pg	11	42 30.8	-1.3
TRG				*e*		11	42 44.4	
TRG				pmax	pmax			
	comp=Z,101nm,0.1s							
TRG				smax				
	comp=N,999nm,0.3s							
TRG	**Tyrgan**	**0.96**	**249**	*e*Pg	Pg	11	42 30.8	-1.3
TRG				⇑*i*Pb	Pb	11	42 33.0	+0.8
TRG				*i* Sg	Sg	11	42 44.4	-0.2
TRG				max				
	comp=N,99nm,0.1s							
TRG				Smax				
	comp=N,989nm,0.3s							
FFNB	**Fofonovo**	**1.25**	**211**	*e*Pg	Pg	11	42 36.0	-1.6
FFNB				*e*Pb	Pb	11	42 36.9	-0.3
FFNB				*e*Sg	Sg	11	42 52.9	-1.0
FFNB				max				
	comp=N,361nm,0.2s							
FFNB				Smax				
	comp=N,1μm,0.2s							
UUDB	**Ulan-Yde**	**1.26**	**184**	⇑*i*Pg	Pg	11	42

ARS				*e*Sn	Sn	11 43 48.7	-0.7		
ARS				*e*Sg	Sg	11 43 59.8	-6.4		
ARS				Pmax					
	comp=E,39nm,0.6s								
ARS				Smax					
	comp=E,380nm,0.8s								
CIT	**Chita**	**3.67**	**105**	*e*Sg	Sg	11 44 08.0	-3.2		
CIT				Smax					
	comp=E,253nm,0.4s								
YOA	**Uoyan**	**3.78**	**35**	*e*Sg	Sg	11 44 12.0	-2.8		
YOA				Smax					
	comp=E,114nm,1.0s								
ZAK	**Zakamensk**	**3.93**	**228**	*e*Pn	Pn	11 43 13.5	-0.3		
ZAK				*e*Pg	Pg	11 43 23.6	-5.3		
ZAK				*e*		11 43 35.7			
ZAK				*e*Sg	Sg	11 44 16.5	-3.3		
ZAK				max					
	comp=E,7.0nm,0.9s								
ZAK				Smax					
	comp=E,24nm,0.3s								
UKT	**Uakit**	**4.15**	**53**	*e*Pn	Pn	11 43 16.6	-0.2		
UKT				*e*Pg	Pg	11 43 27.2	-5.8		
UKT				*e*		11 43 35.0			
UKT				*e*Sn	Sn	11 44 05.0	-0.2		
UKT				*e*Sg	Sg	11 44 21.2	-5.4		
UKT				max					
	comp=E,6.0nm,1.3s								
UKT				Smax					
	comp=E,43nm,1.5s								
MOY	**Mondy**	**4.43**	**254**	*e*Pn	Pn	11 43 23.1	+2.5		
MOY				*e*Pg	Pg	11 43 32.0	-6.3		
MOY				*e*		11 44 15.3			
MOY				*e*Sg	Sg	11 44 29.4	-6.2		
MOY				Pmax					
	comp=E,9.0nm,0.7s								
MOY				Smax					
	comp=E,106nm,0.8s								
KPC	**Khapcheranga**	**4.45**	**138**	*e*Pn	Pn	11 43 20.7	-0.3		
KPC				*e*Pg	Pg	11 43 32.2	-6.7		
KPC				*e*Sn	Sn	11 44 09.5	-3.3		
KPC				*e*Sg	Sg	11 44 30.8	-5.7		
KPC				*e*SgSg		11 44 33.7			
KPC				Pmax					
	comp=E,13nm,0.4s								
KPC				max					
	comp=E,76nm,0.8s								
SVKR	**Severomuysk**	**4.49**	**46**	*e*Sg	Sg	11 44 32.8	-4.8		
SVKR				Smax					
	comp=E,110nm,1.6s								
ORL	**Orlik**	**4.89**	**266**	*e*PN	Pn	11 43 29.2	+2.2		
ORL				*e*		11 43 43.5			
ORL				*e*S	Sn	11 44 24.5	+1.0		
ORL				*e*		11 44 45.2			
ORL				pmax	pmax				
	comp=Z,7.0nm,0.5s								
ORL				smax					
	comp=N,46nm,1.0s								
ORL	**Orlik**	**4.89**	**266**	*e*Pn	Pn	11 43 29.4	+2.4		
ORL				*e*		11 43 36.0			
ORL				*e*Pg	Pg	11 43 41.2	-6.0		
ORL				*e*		11 44 25.5			
ORL				*e*Sg	Sg	11 44 45.2	-5.3		
ORL				Pmax					
	comp=N,5.0nm,0.8s								
ORL				Smax					
	comp=N,46nm,0.8s								
NLYR	**Nelyaty**	**5.67**	**50**	*e*Sg	Sg	11 45 11.1	-4.4		
NLYR				Smax					
	comp=N,52nm,1.2s								
BOD	**Bodaibo**	**5.88**	**34**	*e*Sg	Sg	11 45 13.4	-8.6		
BOD				Smax					
	comp=N,12nm,1.1s								
CRS	**Chara**	**7.10**	**54**	*e*	Pn	11 44 28.3	+31		
CRS				*e*Sg	Sg	11 45 54.8	-6.5		
CRS				Smax					
	comp=N,35nm,1.7s								
TDJR	**Todzha**	**7.15**	**269**	*e*Sn	Sn	11 45 18.7	-0.4		
TDJR				*e*Sg	Sg	11 45 55.1	-7.8		
TUP	**Tupik**	**7.31**	**75**	*e*PN	Pn	11 44 00.9	+0.7		
TUP				*e*		11 44 24.7			
TUP	**Tupik**	**7.31**	**75**	*e*Pn	Pn	11 44 00.8	+0.6		
TUP				*e*		11 44 13.1			
TUP				*e*Pg	Pg	11 44 24.5	-8.9		
TUP				*e*Sg	Sg	11 45 59.9	-8.1		
TUP				Pmax					
	comp=N,3.0nm,1.0s								
TUP				Smax					
	comp=N,48nm,1.1s								

IDC 22 11:46:18.2±4.3, 211S×13972E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/14, mbtmp3.6/3, ML3.7/1, MS3.1/1, Ms1 3.0/1, ms1mx2.5/20, Error ellipse: s-maj=166.4km s-min=29.7km az=86.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.48**	**196**	P	Pn	11 50 35.5	-0.4
	0.3nm,0.3s,baz=18,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**22.16**	**194**	P	P	11 51 15.5	-0.3
	1.3nm,0.7s,baz=24,slow=10,SNR=5.0						
STKA	**Stephens Creek**	**29.66**	**177**	LR	LR	12 04 42.2	
	comp=Z,35nm,19.0s,baz=200,slow=37						
MKAR	**Makanchi Array**	**69.94**	**322**	P	P	11 57 31.7	+0.4
	0.5nm,0.6s,baz=116,slow=7.4,SNR=5.8						

MOS ***22*** *12:12:22.0±0.9, 230S×139.12E, h33km, mb5.0/14, Error ellipse: s-maj=14.9km s-min=7.2km az=108.6*
ISCJB ***22*** *12:12:23.4±0.7, 233S±004×139.18E±004, h42km±7km, mb4.9/59, MS4.7/8, Error ellipse: s-maj=6.6km s-min=5.5km az=140.7*
DJA ***22*** *12:12:23, 221S×13926E, h10km, Mw5.3/9*
BJI ***22*** *12:12:25.1, 230S×13920E, h51km, mB5.1, mb4.8, Ms5.0, Msz4.8*
NEIC ***22*** *12:12:26.1±1.3, 232S×139.15E, h51km±12km, mb5.1/27, Error ellipse: s-maj=7.2km s-min=6.5km az=218.0*
NEIC Felt [II] at Jayapura.
IDC ***22*** *12:12:26.7±3.1, 237S×139.11E, h60km±29km, mb4.3/13, mb1 4.4/16, mb1mx4.4/19, mbtmp4.4/16, ML4.3/3, MS4.4/2, Ms1 4.3/2, ms1mx3.8/22, Error ellipse: s-maj=22.8km s-min=9.8km az=84.0*
ISC 22 12:12:26.4±0.7, 233S±004×13922E±004, h52km±7km, h46km±2.4km; pP-P, n129, σ1§15/136, mb4.9/58, MS4.7/8, 2C-1D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.50**	**97**	P	**Pn**	**12 12 46.9**	**-4.0**
JAY				S	**Sn**	**12 13 08.5**	**-0.9**
BAKI	**Biak**	**3.31**	**290**	P	**Pn**	**12 13 11.9**	**-3.8**
BAKI				S	**Sn**	**12 13 53.6**	**-0.2**
MMPI	**Merauke**	**6.21**	**169**	P	**Pn**	**12 13 57.2**	**+1.7**
	921nm,1.1s,4.9nm						
PMG	**Port Moresby**	**10.57**	**132**	P	**Pn**	**12 14 57.2**	**+1.9**
	1.7nm,0.3s,baz=315,slow=8.7,SNR=17						
PMG	**Port Moresby**	**10.57**	**132**	*e*P	**Pn**	**12 14 56.3**	**+1.0**
PMG	**Port Moresby**	**10.57**	**132**	*e*Pn	**Pn**	**12 14 56.6**	**+1.3**
PMG	**Port Moresby**	**10.57**	**132**	P	**Pn**	**12 14 57.2**	**+1.9**
	213nm,1.0s,2μm						
AAI	**Ambon**	**11.09**	**263**	P	**Pn**	**12 15 02.5**	**+0.1**
COEN	**Coen**	**12.20**	**161**	*e*Pn	**Pn**	**12 15 17.0**	**-0.5**
	35nm,0.7s						
COEN	**Coen**	**12.20**	**161**	P	**Pn**	**12 15 17.3**	**-0.2**
	36nm,1.0s						
DAV	**Davao City (W)**	**16.50**	**305**	LR	LR	12 23 29.0	
	comp=Z,598nm,18.4s,baz=236,slow=40						
KDI	**Kendari**	**16.65**	**264**	P	**Pn**	**12 16 17.2**	**+0.9**
	60nm,1.2s,1μm						
WRAB	**Tennant Creek**	**18.13**	**195**	*e*P	**Pn**	**12 16 33.2**	**-1.3**
WRAB				*e*		12 19 48.0	
WRAB				pmax	pmax		
	comp=Z,56nm,0.8s						
WRAB	**Tennant Creek**	**18.13**	**195**	*e*P	**Pn**	**12 16 33.2**	**-1.3**
	comp=Z,56nm,0.8s						
WRAB				*e*Sn	**Sn**	**12 19 48.0**	**-8.1**
WRAB	**Tennant Creek**	**18.13**	**195**	P	**Pn**	**12 16 33.2**	**-1.3**
	comp=Z,104nm,0.9s,comp=Z,886nm						
WB2	**Warramunga Arr**	**18.14**	**195**	*e*P	**Pn**	**12 16 30.3**	**-4.3**
WB2				*e*S	**S**	**12 19 43.2**	**-16**
WRA	**Warramunga Arr**	**18.14**	**195**	P	**Pn**	**12 16 33.4**	**-1.3**
	comp=Z,2.6nm,0.3s,baz=17,slow=12,SNR=28						
WRA				S	**S**	**12 19 43.4**	**-16**
	comp=Z,0.2nm,0.3s,baz=9.4,slow=22,SNR=4.4						
CTA	**Charters Tower**	**18.94**	**159**	P	**Pn**	**12 16 43.0**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=343,slow=14,SNR=12						
CTA	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**12 16 41.5**	**-2.8**
	comp=Z,13nm,0.7s						
CTAO	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**12 16 43.2**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,39nm,1.2s						
CTAO	**Charters Tower**	**18.94**	**159**	*e*P	**Pn**	**12 16 43.2**	**-1.1**
	comp=Z,39nm,1.2s						
CTAO				Sn	**Sn**	**12 20 24.6**	**+8.9**
CTAO	**Charters Tower**	**18.94**	**159**	P	**Pn**	**12 16 46.1**	**+1.8**
	comp=Z,36nm,1.5s						
PCI	**Palu**	**19.42**	**274**	P	**Pn**	**12 16 52.5**	**+2.4**
	comp=Z,187nm,1.2s,comp=Z,2μm						
KAPI	**Kappang**	**19.60**	**262**	P	**Pn**	**12 16 52.3**	**0.0**
	comp=Z,0.5nm,0.3s,baz=119,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**20.57**	**219**	*e*P	**P**	**12 16 58.2**	**-2.7**
	comp=Z,60nm,1.2s						
FITZ				*e*S	**S**	**12 20 40.8**	**-7.4**
FITZ	**Fitzroy Crossi**	**20.57**	**219**	*e*P	**P**	**12 16 59.8**	**-1.1**
	comp=Z,72nm,1.4s						
FITZ				*e*S	**S**	**12 20 40.3**	**-7.9**
FITZ	**Fitzroy Crossi**	**20.57**	**219**	P	**P**	**12 17 02.7**	**+1.8**
	comp=Z,95nm,1.4s						
HNR	**Honiara**	**21.78**	**110**	P	**P**	**12 17 14.4**	**+0.3**
	comp=Z,134nm,0.8s,mb5.4,baz=257,slow=3.4,SNR=8.2						
HNR	**Honiara**	**21.78**	**110**	*e*P	**P**	**12 17 14.8**	**+0.7**
HNR				pmax	pmax		
	comp=Z,131nm,0.8s,mb5.4						
HNR	**Honiara**	**21.78**	**110**	*e*P	**P**	**12 17 14.8**	**+0.7**
	comp=Z,131nm,0.8s,mb5.4						
ASAR	**Alice Springs**	**21.82**	**193**	P	**P**	**12 17 13.2**	**-1.2**
	comp=Z,8.7nm,0.5s,mb4.4,baz=15,slow=11,SNR=58						
ASAR				S	**S**	**12 21 10.3**	**-2.5**
	comp=Z,3.3nm,0.9s,baz=20,slow=14,SNR=3.2						
MYLDM	**Lahad Datu**	**22.00**	**290**	P	**P**	**12 17 22.0**	**+5.6**
	comp=Z,107nm,1.5s,comp=Z,2μm,mb5.1						
KHKI	**Kahang-Kahang**	**24.25**	**255**	P	**P**	**12 17 41.7**	**+3.0**
	comp=Z,88nm,1.1s,comp=Z,990nm,mb5.1						
BBKI	**Banjar Baru**	**24.37**	**267**	P	**P**	**12 17 43.8**	**+3.9**
	comp=Z,257nm,1.6s,comp=Z,4μm,mb5.4						
EIDS	**Eidsvold**	**25.60**	**154**	*e*P	**P**	**12 17 52.4**	**+1.6**
	comp=Z,124nm,1.0s,mb5.4						
MBWA	**Marble Bar**	**26.66**	**224**	*e*P	**P**	**12 18 00.3**	**-0.2**
	comp=Z,44nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**26.66**	**224**	P	**P**	**12 18 00.8**	**+0.3**
CBIJ	**Chichi jima**	**29.39**	**5**	P	**P**	**12 18 24.1**	**-0.7**
	comp=Z,45nm,0.8s,mb5.3,baz=80,slow=23,SNR=5.9						
STKA	**Stephens Creek**	**29.47**	**176**	P	**P**	**12 18 25.7**	**+0.2**
	comp=Z,10nm,0.8s,mb4.6,baz=334,slow=7.6,SNR=14						
STKA				LR	LR	12 31 29.5	
	comp=Z,1μm,19.6s,MS4.5,baz=349,slow=39						
STKA	**Stephens Creek**	**29.47**	**176**	*e*P	**P**	**12 18 24.4**	**-1.1**
	comp=Z,10.0nm,1.2s,mb4.4						
FORT	**Forrest**	**30.20**	**199**	*e*P	**P**	**12 18 32.5**	**+0.6**
	comp=Z,36nm,0.6s,mb5.3						
FORT	**Forrest**	**30.20**	**199**	*e*P	**P**	**12 18 32.7**	**+0.7**
	comp=Z,62nm,0.9s,mb5.3						
ARMA	**Armidale**	**30.31**	**158**	*e*P	**P**	**12 18 35.3**	**+2.4**
CNB	**Canberra Magne**	**34.15**	**165**	*e*P	**P**	**12 19 07.9**	**+1.4**
KLBR	**Kellerberrin**	**35.45**	**213**	*e*P	**P**	**12 19 16.9**	**-0.9**
	comp=Z,66nm,1.8s,mb5.3						
TOO	**Toolangi**	**35.54**	**171**	*e*P	**P**	**12 19 19.2**	**+0.7**
MJAR	**Matsushiro Arr**	**38.68**	**359**	P	**P**	**12 19 42.9**	**-2.2**
	comp=Z,1.9nm,0.7s,mb4.0,baz=176,slow=9.1,SNR=8.8						
MJAR				PcP	PcP	12 21 56.2	-0.1
	comp=Z,3.4nm,0.9s,baz=188,slow=2.9,SNR=6.9						
MJAR	**Matsushiro Arr**	**38.68**	**359**	P	**P**	**12 19 42.9**	**-2.2**
MJAR				PcP	PcP	12 21 56.2	-0.1
KULM	**Kulim**	**39.26**	**281**	*e*P	**P**	**12 19 49.3**	**-1.0**
	comp=Z,50nm,1.5s,mb5.0						
KSRS	**Korea Array**	**40.95**	**346**	P	**P**	**12 20 03.8**	**-0.2**
	comp=Z,2.7nm,0.9s,mb3.9,baz=157,slow=7.8,SNR=6.1						
KSRS				PcP	PcP	12 22 02.2	-1.3
	comp=Z,3.8nm,0.9s,baz=168,slow=3.6,SNR=8.3						
GYA	**Guiyang**	**42.51**	**314**	P	**P**	**12 20 17.6**	**+0.7**
GYA				AP	pP	12 20 32.8	+2.1
GYA				XP	sP	12 20 37.3	+0.5
GYA				PP	PP	12 22 01.3	+4.9
GYA				PCP	PcP	12 22 12.8	+3.9
GYA				SCP	ScP	12 25 56.9	+1.3
GYA				S	**S**	**12 26 38.5**	**+2.8**
GYA				XS	sS	12 26 57.3	-1.6
GYA				SS	SS	12 29 40.8	-6.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,520nm,19.0s,MS4.6						
GYA				LR	LR		
	comp=E,480nm,17.3s,MS4.6						
GYA				LR	LR		
	comp=Z,580nm,18.0s,MS4.5						
KMI	**Kunming**	**44.66**	**310**	P	**P**	**12 20 36.6**	**+2.4**
KMI				AMB	AMB		
	comp=Z,14nm,1.4s,mb4.6						
CMAR	**Chiang Mai Arr**	**44.69**	**299**	P	**P**	**12 20 34.3**	**-0.3**
	comp=Z,6.0nm,0.7s,mb4.5,baz=119,slow=6.4,SNR=31						
CMAR				PcP	PcP	12 22 17.6	+1.1
	comp=Z,2.7nm,1.0s,baz=145,slow=2.1,SNR=4.4						
CHTO	**Chiang Mai**	**44.83**	**300**	*e*P	**P**	**12 20 35.1**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
CHTO	**Chiang Mai**	**44.83**	**300**	*e*P	**P**	**12 20 35.1**	**-0.5**
	comp=Z,21nm,1.5s,mb4.8						
XAN	**Xi'an**	**46.06**	**324**	P	**P**	**12 20 44.4**	**-0.8**
XAN				AP	pP	12 20 57.6	-1.5
XAN				PP	PP	12 22 34.8	+0.8
XAN				S	**S**	**12 27 29.8**	**+2.8**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
XAN				LR	LR		
	comp=N,576nm,21.8s,MS4.6						
XAN				LR	LR		
	comp=E,454nm,19.5s,MS4.6						
XAN				LR	LR		
	comp=Z,953nm,19.9s,MS4.7						
BJI	**Beijing**	**47.16**	**336**	P	**P**	**12 20 55.1**	**+1.5**
BJI				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.8						
CD2	**Chengdu**	**47.24**	**317**	P	**P**	**12 20 54.5**	**0.0**
CD2				AP	pP	12 21 07.0	-1.4
CD2				XP	sP	12 21 12.3	-2.2
CD2				PCP	PcP	12 22 25.1	-0.1
CD2				PP	PP	12 22 45.5	-0.5
CD2				S	**S**	**12 27 44.0**	**-0.1**
CD2				XS	sS	12 28 05.6	-1.9
CD2				SS	SS	12 31 05.8	-6.4
CD2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
CD2				AMB	AMB		
	comp=Z,100nm,4.7s						
CD2				LR	LR		
	comp=N,360nm,12.1s						
CD2				LR	LR		
	comp=Z,430nm,13.4s,MS4.6						
MDJ	**Mudanjiang**	**47.52**	**351**	P	**P**	**12 20 59.0**	**+2.6**
MDJ				AP	pP	12 21 09.9	-0.5
MDJ				PP	PP	12 22 50.4	+2.1
MDJ				PCS	PcS	12 26 22.8	+1.7
MDJ				S	**S**	**12 27 51.5**	**+3.9**
MDJ				XS	sS	12 28 11.9	+0.9
MDJ				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,55nm,6.4s						
MDJ				LR	LR		
	comp=N,395nm,23.1s,MS4.5						
MDJ				LR	LR		
	comp=E,373nm,22.6s,MS4.5						
MDJ				LR	LR		
	comp=Z,569nm,24.7s,MS4.5						
CN2	**Changchun**	**47.56**	**346**	*e*P	**P**	**12 21 00.6**	**+3.9**
YSS	**Yuzh-Sakhalins**	**49.17**	**3**	*e*P	**P**	**12 21 07.2**	**-1.9**
YSS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
HHC	**Hu-ho-hao-te**	**49.83**	**333**	*e*P	**P**	**12 21 15.8**	**+1.6**
HHC				AP	pP	12 21 28.1	-0.1
HHC				XP	sP	12 21 33.4	-0.8
HHC				PP	PP	12 23 11.8	+2.4
HHC				PCS	PcS	12 26 31.1	+0.1
HHC				*e*S	**S**	**12 28 22.0**	**+1.9**
HHC				XS	sS	12 28 43.1	-0.6
HHC				SS	SS	12 31 51.3	-2.2
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,93nm,5.2s						
LZH	**Lanzhou**	**50.49**	**323**	*e*P	**P**	**12 21 18.5**	**-0.8**
LZH				AP	pP	12 21 31.1	-2.2
LZH				XP	sP	12 21 36.3	-3.0
LZH				*e*PP	PP	12 23 15.4	-0.1
LZH				*e*S	**S**	**12 28 27.6**	**-1.9**
LZH				XS	sS	12 28 48.5	-4.6
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,102nm,6.5s						
LZH				LR	LR		
	comp=N,437nm,15.0s						
LZH				LR	LR		
	comp=Z,659nm,18.1s,MS4.7						
HABR	**Khabarovsk**	**50.73**	**356**	*e*P	**P**	**12 21 18.6**	**-2.2**
HABR				*e**SP	sP	12 21 29.9	-11
HABR				*e*		12 22 34.5	
HABR				*e*S	**S**	**12 28 31.6**	**-0.8**
HABR				*e**SS	sS	12 28 48.2	-7.8
HABR				*e*		12 31 05.6	
HABR				*e*SS	SS	12 32 05.3	-2.3
HABR				*e*SSS		12 33 38.1	
HABR				MLR	MLR		
	comp=Z,216nm,14.0s,MS4.3						
KLR	**Kul'dur**	**51.76**	**354**	*e*P	**P**	**12 21 29.7**	**+1.1**
HIA	**Hailar**	**54.09**	**344**	*e*P	**P**	**12 21 46.8**	**+1.1**
GTA	**Gaotai**	**55.07**	**323**	*e*P	**P**	**12 21 53.4**	**+0.4**
GTA				AP	pP	12 22 05.3	-2.0
GTA				XP	sP	12 22 10.5	-2.7
GTA				S	**S**	**12 29 33.5**	**+1.6**
GTA				XS	sS	12 29 54.5	-1.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.5s,mb4.3						
GTA				AMB	AMB		
	comp=Z,130nm,5.7s						
GTA				LR	LR		
	comp=N,3μm,20.4s,MS5.5						
GTA				LR	LR		
	comp=E,3μm,18.9s,MS5.5						
GTA				LR	LR		
	comp=Z,3μm,16.2s,MS5.4						
LSA	**Lhasa**	**55.87**	**309**	P	**P**	**12 21 59.4**	**+0.4**
LSA	**Lhasa**	**55.87**	**309**	*e*P	**P**	**12 21 57.9**	**-1.1**
	comp=Z,9.5nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	**57.34**	**335**	*e*P	**P**	**12 22 09.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.8						
ULN	**Ulaanbaatar**	**57.34**	**335**	*e*P	**P**	**12 22 09.6**	**+0.6**
	comp=Z,13nm,1.4s,mb4.8						
SONM	**Songino Array**	**57.59**	**334**	P	**P**	**12 22 10.5**	**-0.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=155,slow=6.5,SNR=6.5						
RAMN	**Ramite**	**58.45**	**304**	*e*P	**P**	**12 22 17.2**	**0.0**
JIRN	**Jiri**	**59.04**	**304**	*e*P	**P**	**12 22 21.3**	**-0.1**
	comp=Z,60nm,1.2s,mb5.5						
GUN	**Gumba**	**59.39**	**304**	*e*P	**P**	**12 22 22.9**	**-0.9**
	comp=Z,112nm,1.3s,mb5.7						
KKN	**Kakani**	**59.84**	**304**	*e*P	**P**	**12 22 26.7**	**-0.2**
	comp=Z,62nm,0.9s,mb5.7						
KKN	**Kakani**	**59.84**	**304**	*e*P	**P**	**12 22 26.7**	**-0.2**
KKN				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.6						
DMN	**Daman**	**59.92**	**304**	*e*P	**P**	**12 22 27.2**	**-0.2**
	comp=Z,54nm,0.9s,mb5.6						
GKN	**Gorkha**	**60.45**	**304**	*e*P	**P**	**12 22 30.7**	**-0.3**
	comp=Z,67nm,1.1s,mb5.6						
ZAK	**Zakamensk**	**60.86**	**335**	*e*P	**P**	**12 22 32.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.8						
KOLN	**Koldanda**	**61.23**	**303**	*e*P	**P**	**12 22 36.1**	**-0.3**
	comp=Z,36nm,0.9s,mb5.5						
DANN	**Dangsing**	**61.29**	**304**	*e*P	**P**	**12 22 36.6**	**-0.2**
	comp=Z,56nm,0.9s,mb5.7						
TLY	**Talaya**	**61.68**	**336**	*e*P	**P**	**12 22 38.5**	**-0.4**
TLY				*e*S	**S**	**12 31 09.9**	**+12**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
MOY	**Mondy**	**62.79**	**334**	*e*P	**P**	**12 22 46.7**	**+0.4**
BOD	**Bodaibo**	**63.28**	**345**	*e*P	**P**	**12 22 48.4**	**-1.0**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.5						
YAK	**Yakutsk**	**64.60**	**355**	*e*P	**P**	**12 23 02.2**	**+4.2**
YAK				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,12nm,1.5s						
WMQ	**Urumqi**	**65.03**	**321**	*e*P	**P**	**12 23 02.0**	**+0.8**
MKAR	**Makanchi Array**	**69.80**	**322**	P	**P**	**12 23 31.3**	**0.0**
	comp=N,6.9nm,0.7s,mb4.7,baz=107,slow=7.2,SNR=42						
ZAA0	**Zalesovo Array**	**71.86**	**330**	*e*P	**P**	**12 23 42.8**	**-0.9**
ZALV	**Zalesovo Beam**	**71.86**	**330**	P	**P**	**12 23 42.5**	**-1.2**
	comp=N,3.2nm,0.7s,mb4.4,baz=100,slow=6.2,SNR=8.4						
ZALV	**Zalesovo Beam**	**71.86**	**330**	P	**P**	**12 23 42.5**	**-1.2**
BILL	**Bilibino**	**72.71**	**10**	*e*P	**P**	**12 23 49.3**	**+0.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
NVS	**Novosibirsk**	**73.12**	**330**	*e*P	**P**	**12 23 48.4**	**-2.7**
NVS				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.9						
NVS				pmax	pmax		
	comp=N,26nm,1.8s						
NVS				pmax	pmax		
	comp=E,17nm,1.5s						
AAK	**Ala-Archa**	**73.28**	**316**	*e*P	**P**	**12 23 52.6**	**+0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**73.28**	**316**	*e*P	**P**	**12 23 52.6**	**+0.2**
	comp=Z,9.9nm,1.0s,mb4.7						
AML	**Almayashu**	**73.68**	**315**	*e*P	**P**	**12 23 55.8**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9						
KURK	**Kurchatov**	**73.70**	**325**	P	**P**	**12 23 53.5**	**-1.2**
	comp=Z,5.6nm,0.8s,mb4.5,baz=115,slow=5.1,SNR=14						
KURK	**Kurchatov**	**73.70**	**325**	*e*P	**P**	**12 23 54.1**	**-0.5**
EKS2	**Erkin-Say**	**73.79**	**316**	*e*P	**P**	**12 23 55.7**	**+0.3**
	comp=Z,11nm,0.8s,mb4.8						
TIXI	**Tiksi**	**74.16**	**357**	*e*P	**P**	**12 23 55.3**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
KBL	**Kabul**	**75.11**	**307**	*e*P	**P**	**12 24 03.1**	**-0.1**
KBL				p

	comp=Z,5.0nm,1.7s,mb4.8							
YKA	**Yellowknife Ar**	**99.50**	**27**	P			12 26 03.2	
	comp=Z,1.7nm,1.0s,baz=288,slow=4.9,SNR=14							
YKA	**Yellowknife Ar**	**99.50**	**27**	P			12 26 03.2	
ARCES	**ARCESS Array B**	**100.32**	**341**	P		Pdif	12 26 05.5	-1.8
	comp=Z,3.3nm,0.8s,baz=67,slow=6.7,SNR=6.8							
MDT	**Midelt**	**134.51**	**316**	PKP		PKPdf	12 31 39.3	-0.1
	comp=Z,2.4nm,0.8s,baz=273,slow=8.4,SNR=3.9							
KIC	**Kosan Boka**	**143.85**	**278**	*e*PKP1		PKPdf	12 31 53.6	-3.4
	comp=Z,48nm,1.0s							
DBIC	**Dimbokro**	**143.93**	**278**	PKP		PKPdf	12 31 54.1	-3.0
	comp=Z,6.9nm,0.7s,baz=63,slow=5.0,SNR=16							
TIC	**Toumodi**	**144.10**	**278**	*e*PKP1		PKPdf	12 31 54.5	-2.9
	comp=Z,38nm,0.2s							
LIC	**Lamto**	**144.14**	**277**	*e*PKP1		PKPdf	12 31 54.6	-2.9
	comp=Z,58nm,1.4s							
CPUP	**Villa Florida**	**147.33**	**152**	PKPbc		PKPbc	12 32 04.4	-0.6
	comp=Z,0.3nm,0.3s,baz=187,slow=8.3,SNR=2.8							
SIV	**San Ignacio**	**152.91**	**133**	PKPbc		PKPbc	12 32 18.8	0.0
	comp=Z,1.9nm,0.9s,baz=195,slow=3.3,SNR=8.7							

HLW ***22*** *12:18:37.9, 29.91N×36.67E, h15km, Mb2.6*
SGS ***22*** *12:18:38.3, 30.19N×36.28E, h7km*
ISCJB ***22*** *12:18:39.7±0.7, 29.89N±0.003×36.26E±0.005, h0km, Error ellipse: s-maj=7.0km s-min=4.1km az=153.3*
GII ***22*** *12:18:40.4±1.1, 29.87N×36.19E, h0km, ML2.1/3, EXPLOSION*
CSEM ***22*** *12:18:40.4±1.1, 29.82N×36.29E, h10km, ML2.6, Error ellipse: s-maj=25.8km s-min=8.8km az=63.0*

ISC 22 12:18:39.9±0.7, 29.88N±0.003×36.30E±0.005, h0km, n26, σ0.79/31, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**262**	**Pg**	**Pg**	**12 19 00.5**	**-0.3**
ZFRI	**Zfri**	**1.18**	**305**	**Pg**	**Pg**	**12 19 01.1**	**-1.4**
ZFRI				Sg	**Sg**	**12 19 18.7**	**+1.0**
EIL	**Elat**	**1.19**	**260**	Pg	**Pg**	**12 19 01.9**	**-0.8**
MBRI	**Mt Berech**	**1.20**	**266**	Pg	**Pg**	**12 19 02.2**	**-0.8**
MBRI				Sg	**Sg**	**12 19 19.5**	**+1.0**
PRNI	**Paran**	**1.21**	**293**	Pg	**Pg**	**12 19 02.3**	**-0.8**
JLOS		**1.34**	**212**	P	**Pg**	**12 19 05.2**	**-0.4**
JLOS		**1.34**	**212**	P	**Pg**	**12 19 05.2**	**-0.4**
JLOS				S	**Sg**	**12 19 22.9**	**-0.1**
KRMI	**Paran Flat**	**1.38**	**280**	Pg	**Pg**	**12 19 05.3**	**-1.1**
KRMI				Sg	**Sg**	**12 19 25.0**	**+0.7**
RMNI	**Mount Ramon**	**1.50**	**299**	Pn	**Pn**	**12 19 07.8**	**-0.3**
MZDA	**Masada**	**1.63**	**331**	Pn	**Pn**	**12 19 10.3**	**+0.4**
TBKS	**Tabuk**	**1.67**	**173**	S	**Sn**	**12 19 34.2**	**+1.7**
TBKS	**Tabuk**	**1.67**	**173**	P	**Pn**	**12 19 10.5**	**+0.1**
BDAS	**Al Bad'**	**1.79**	**216**	S	**Sn**	**12 19 36.4**	**+1.1**
BDAS	**Al Bad'**	**1.79**	**216**	P	**Pn**	**12 19 11.1**	**-0.9**
YTIR	**Yattir**	**1.79**	**326**	Pn	**Pn**	**12 19 12.4**	**+0.3**
RTMI	**Retamim**	**1.81**	**311**	Pn	**Pn**	**12 19 13.0**	**+0.6**
DSI	**Dead Sea**	**1.86**	**335**	Pn	**Pn**	**12 19 13.8**	**+0.9**
HNKL	**Nakhl**	**2.01**	**272**	P	**Pn**	**12 19 15.8**	**+0.7**
RSHS		**2.05**	**220**	P	**Pn**	**12 19 14.4**	**-1.2**
HKAT	**Jabal Katrina**	**2.43**	**237**	P	**Pn**	**12 19 20.4**	**-0.4**
TR2		**2.70**	**237**	P	**Pn**	**12 19 24.1**	**-0.5**
TR2		**2.70**	**237**	P	**Pn**	**12 19 24.1**	**-0.4**
	351nm,0.2s						
AMAG	**Maghara**	**2.78**	**287**	P	**Pn**	**12 19 24.9**	**-0.7**
AMAG				S	**Sn**	**12 20 00.3**	**+0.5**
SUZ		**3.01**	**270**	P	**Pn**	**12 19 29.6**	**+0.8**
SUZ		**3.01**	**270**	P	**Pn**	**12 19 29.6**	**+0.8**
	471nm,0.2s						
BIDS	**Bi'r al Bayda'**	**3.06**	**169**	P	**Pn**	**12 19 29.5**	**0.0**

IDC ***22*** *12:26:13.5±0.4, 2.09N×96.78E, h0km, mb5.2/39, mb1 5.2/41, mb1mx5.2/42, mbtmp5.2/41, ML4.7/2, MS5.7/27, Ms1 5.7/27, ms1mx5.6/34, Error ellipse: s-maj=12.7km s-min=8.6km az=43.0*
BJI ***22*** *12:26:15.1, 1.90N×96.82E, h33km, mB6.2, mb5.4, Ms6.2, Msz6.0*
ISCJB ***22*** *12:26:17.1±0.1, 2.14N±0.002×96.81E±0.002, h31km, mb5.5/250, MS5.9/236, Error ellipse: s-maj=3.5km s-min=2.4km az=23.7*
NEIC ***22*** *12:26:17.5±0.2, 2.09N×96.81E, h23km, mb5.6/125, ME5.8, MS5.9/181, MW5.8, Error ellipse: s-maj=6.3km s-min=4.3km az=220.0, Moment Tensor Solution. s85 Moment tensor: Scale 10^17 Nm; Mrr=4.27; Mθθ=-2.63; Mφφ=-1.64; Mrθ=4.58; Mrφ=1.72; Mθφ=-3.83; Best double couple: Ms=7.20000×10^17 NP1:φs=129.00000°, δ=73.00000°, λ=91.00000°. NP2:φs=305.00000°, δ=17.00000°, λ=86.00000°. Principal axes: T 7.4200, Plg=62.0000°, Azm=41.0000°; N -0.3500, Plg=1.0000°, Azm=308.0000°; P -7.0700, Plg=27.0000°, Azm=218.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
MOS ***22*** *12:26:17.3±1.1, 2.14N×96.84E, h33km, mb5.8/100, MS5.7/57 Error ellipse: s-maj=7.1km s-min=3.7km az=119.4*
GCMT ***22*** *12:26:18.6±0.1, 1.92N×96.58E, h25km, MW6.1/87, Moment Tensor Solution. s87,c152; s79,c190; Duration: 2s3 Moment tensor: Scale 10^18 Nm; Mrr=0.51±.01; Mθθ=-0.32±.01; Mφφ=-0.19±.01; Mrθ=1.16±.02; Mθφ=0.33±.01; Mφr=-1.44±.03; Best double couple: M0=1.93000×10^18 NP1:φs=295.00000°, δ=9.00000°, λ=65.00000°. NP2:φs=141.00000°, δ=82.00000°, λ=94.00000°. Principal axes: T 1.9030, Plg=53.0000°, Azm=55.0000°; N 0.0540, Plg=4.0000°, Azm=320.0000°; P -1.9560, Plg=37.0000°, Azm=227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
SZGRF ***22*** *12:26:20.6, 2.13N×96.21E, h33km, mb5.5, MS5.5, Northern Sumatera, Indonesia*
DJA ***22*** *12:26:21, 2.15N×96.85E, h40km, Mw5.8/26*

ISC 22 12:26:19.2±0.1, 213N±0.002×9679E±0.002, h33km, h33km±.8km: pP-P, n919, σ1.914/779, mb5.5/250, MS5.9/236, 68C-39D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.24**	**73**	Pn	**Pn**	**12 26 53.7**	**-0.3**
	46nm,0.3s,baz=267,slow=6.1,SNR=83						
PSI				Sn	**Sn**	**12 27 24.5**	**+4.0**
	276nm,0.3s,baz=270,slow=6.4,SNR=10						
PSI				LR	LR	12 27 47.6	
	comp=Z,130μm,21.7s,baz=131,slow=42						
PSI	**Prapat**	**2.24**	**73**	P	**Pn**	**12 26 53.7**	**-0.3**
PSI						12 27 24.5	
PSI	**Prapat**	**2.24**	**73**	Pn	**Pn**	**12 26 53.7**	**-0.3**
PSI				Sn	**Sn**	**12 27 24.5**	**+4.0**
PSI				LR	LR	12 27 47.6	
BSI	**Banda Aceh**	**3.66**	**336**	P	**Pn**	**12 27 12.2**	**-1.4**
PPI	**Padang Panjang**	**4.43**	**125**	P	**Pn**	**12 27 24.8**	**+0.7**
PDSI	**Padang**	**4.75**	**129**	P	**Pn**	**12 27 28.3**	**-0.3**
IPM	**Ipoh**	**4.84**	**61**	⇓P	**Pn**	**12 27 31.4**	**+1.6**
IPM	**Ipoh**	**4.84**	**61**	P	**Pn**	**12 27 30.5**	**+0.8**
FRIM	**Kepong**	**4.96**	**77**	⇓P	**Pn**	**12 27 32.4**	**+1.0**
KULM	**Kulim**	**4.98**	**51**	⇓P	**Pn**	**12 27 33.3**	**+1.7**
KULM	**Kulim**	**4.98**	**51**	P	**Pn**	**12 27 32.7**	**+1.1**
SNG	**Songkhla**	**6.31**	**37**	P	**Pn**	**12 27 49.0**	**-0.9**
	2μm,1.1s						
KGM	**Kluang**	**6.53**	**91**	⇓P	**Pn**	**12 27 54.5**	**+1.4**
MYKOM	**Kota Tinggi**	**7.07**	**93**	⇓P	**Pn**	**12 28 01.1**	**+0.7**
MYKOM	**Kota Tinggi**	**7.07**	**93**	P	**Pn**	**12 28 01.2**	**+0.8**
	379nm,2.1s,9μm6.7nm						
KTGM	**Kuala Trenggan**	**7.09**	**63**	⇓P	**Pn**	**12 28 01.8**	**+1.1**
KSI	**Kapahiang**	**8.16**	**135**	P	**Pn**	**12 28 16.3**	**+0.9**
	664nm,0.8s						
PPBI	**Pangkal Pinang**	**10.27**	**114**	P	**Pn**	**12 28 47.2**	**+2.8**
	248nm,1.2s,4μm						
KLI	**Kotabumi**	**10.64**	**131**	P	**Pn**	**12 28 58.2**	**+8.8**
NNT	**Nongplab**	**10.80**	**16**	P	**Pn**	**12 28 54.0**	**+2.4**
TPI	**Tanjungpandan**	**11.90**	**114**	P	**Pn**	**12 29 08.3**	**+1.6**
	101nm,1.9s,3μm						
DBJI	**Dramaga**	**13.16**	**131**	P	**Pn**	**12 29 24.0**	**0.0**
	152nm,0.9s,5μm						
KSM	**Kuching**	**13.53**	**93**	⇓P	**Pn**	**12 29 29.6**	**+0.6**
KSM	**Kuching**	**13.53**	**93**	P	**Pn**	**12 29 32.3**	**+3.3**
	226nm,1.3s,6μm						
NST	**Nakhon Sawan**	**13.86**	**14**	P	**Pn**	**12 29 33.1**	**-0.3**
LEM	**Lembang**	**14.00**	**130**	P	**Pn**	**12 29 34.4**	**-1.0**
	201nm,1.1s						

COCO	**West Island**	**14.22**	**180**	*e*Pn		**Pn**	**12 29 36.4**	**-2.0**
COCO	**West Island**	**14.22**	**180**	P		**Pn**	**12 29 38.2**	**-0.2**
	107nm,1.8s							
XMIS	**Christmas Isla**	**15.32**	**145**	*e*Pn		Px	12 30 09.4	
UBT	**Ubonrachathani**	**15.36**	**31**	⇑P		**Pn**	**12 29 58.0**	**+4.4**
	278nm,0.5s							
SBUM	**Sibu**	**15.43**	**89**	⇓P		**Pn**	**12 29 55.6**	**+1.0**
SBUM	**Sibu**	**15.43**	**89**	P		**Pn**	**12 29 55.2**	**+0.7**
	213nm,1.3s,8μm							
BTM	**Bintulu**	**16.32**	**86**	⇑P		**Pn**	**12 30 07.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**16.37**	**7**	Pn		**Pn**	**12 30 05.6**	**-1.0**
	3.2nm,0.3s,baz=200,slow=13,SNR=79							
CMAR				LR		LR	12 36 42.8	
	comp=Z,41μm,20.6s,baz=192,slow=38							
CHG	**Chiang Mai**	**16.72**	**7**	⇑P		**Pn**	**12 30 10.2**	**-0.8**
	162nm,1.0s							
CHTO	**Chiang Mai**	**16.72**	**7**	P		**Pn**	**12 30 10.4**	**-0.6**
	SNR=137							
CHTO	**Chiang Mai**	**16.72**	**7**	*e*P		**Pn**	**12 30 09.7**	**-1.3**
CHTO				pmax		pmax		
	comp=Z,320nm,1.4s							
CHTO	**Chiang Mai**	**16.72**	**7**	*e*Pn		**Pn**	**12 30 09.7**	**-1.4**
	comp=Z,318nm,1.4s							
PALK	**Pallekele**	**16.82**	**288**	*e*P		**Pn**	**12 30 13.6**	**+1.2**
PALK				pmax		pmax		
	comp=Z,163nm,1.0s							
PALK	**Pallekele**	**16.82**	**288**	*e*Pn		**Pn**	**12 30 13.6**	**+1.3**
	comp=Z,163nm,1.0s							
PALK	**Pallekele**	**16.82**	**288**	P		**Pn**	**12 30 15.7**	**+3.3**
	comp=Z,98nm,1.5s,comp=Z,2μm							
PLKI	**Palangkaraya**	**17.69**	**104**	P		**Pn**	**12 30 24.9**	**+1.7**
	comp=Z,617nm,1.0s,comp=Z,7μm							
SJI	**Sawahan**	**17.87**	**123**	P		**Pn**	**12 30 24.5**	**-0.9**
	comp=Z,109nm,1.5s,comp=Z,3μm							
CHRT	**Chiangrai**	**17.88**	**9**	⇑P		**Pn**	**12 30 25.0**	**-0.5**
	comp=Z,1μm,1.0s							
BBKI	**Banjar Baru**	**18.88**	**107**	P		**Pn**	**12 30 38.7**	**+0.9**
	comp=Z,570nm,1.3s							
KMMI	**Kalianget**	**19.42**	**118**	P		**Pn**	**12 30 49.3**	**+5.1**
MDRS	**Chennai**	**19.65**	**304**	⇓*ix*		**Pn**	**12 30 50.2**	**+3.3**
MDRS				*ex*		x	12 30 50.2	
VIS	**Vishakhapatnam**	**20.37**	**320**	*e*P		**P**	**12 30 54.7**	**+1.6**
VIS				AMb		AMB	12 31 00.7	
	comp=Z,217nm,0.7s							
VIS				*i* x		x	12 34 30.1	
KDM	**Kudat**	**20.54**	**76**	⇓P		**P**	**12 30 55.9**	**+0.8**
SDKM	**Sandakan**	**20.66**	**80**	⇓P		**P**	**12 30 57.1**	**+0.7**
TRD	**Trivandrum**	**20.73**	**289**	⇑*ex*		**P**	**12 31 00.0**	**+2.9**
TRD				*ex*		x	12 34 43.0	
KOD	**Kodaikanal**	**20.81**	**294**	*e*P		**P**	**12 30 59.8**	**+1.8**
KOD				AMb		AMB	12 31 20.0	
	comp=Z,188nm,1.7s							
BWNR	**Bhubaneshwar**	**21.00**	**330**	*e*P		**P**	**12 31 00.0**	**0.0**
BWNR				*ex*		x	12 34 50.1	
QIZ	**Qiongzhong**	**21.11**	**36**	P		**P**	**12 31 01.5**	**+0.3**
QIZ				AP			12 31 10.6	
QIZ				XP		sP	12 31 14.8	+0.7
QIZ				S		**S**	**12 34 50.8**	**-3.7**
QIZ				XS		sS	12 35 04.9	-3.6
QIZ				SS			12 35 22.0	
QIZ				LR		LR		
	comp=N,47μm,20.1s,MS6.0							
QIZ				LR		LR		
	comp=E,36μm,19.8s,MS6.0							
QIZ				LR		LR		
	comp=Z,41μm,15.6s,MS5.9							
QIZ	**Qiongzhong**	**21.11**	**36**	*e*P		**P**	**12 31 02.0**	**+0.8**
	comp=Z,114nm,1.0s,mb5.2							
QIZ				LR		LR		
	comp=Z,34μm,19.0s,MS5.8							
TSM	**Tawau**	**21.16**	**84**	⇑P		**P**	**12 31 01.6**	**-0.3**
KHKI	**Kahang-Kahang**	**21.47**	**119**	P		**P**	**12 31 08.8**	**+3.7**
	comp=Z,322nm,0.8s,comp=Z,4μm,mb5.7							
MYLDM	**Lahad Datu**	**21.88**	**81**	⇓P		**P**	**12 31 10.8**	**+1.3**
MYLDM	**Lahad Datu**	**21.88**	**81**	P		**P**	**12 31 10.7**	**+1.2**
	comp=Z,791nm,1.7s,mb5.9							
CAL	**Calcutta**	**21.89**	**339**	*e*P		**P**	**12 31 09.4**	**-0.1**
CAL				*ex*		x	12 35 13.7	
IMP	**Imphal**	**22.69**	**353**	*e*P		**P**	**12 31 18.0**	**-0.1**
IMP				*ex*		x	12 35 24.0	
PCI	**Palu**	**23.24**	**97**	P		**P**	**12 31 24.4**	**+0.4**
	comp=Z,512nm,1.9s,comp=Z,6μm,mb5.6							
HYB	**Hyderabad**	**23.49**	**311**	*e*P		**P**	**12 31 27.5**	**+1.1**
HYB				*e*S		**S**	**12 35 40.0**	**+2.2**
HYB				pmax		pmax		
	comp=Z,77nm,0.8s,mb5.2							
HYB	**Hyderabad**	**23.49**	**311**	*i* P		**P**	**12 31 27.5**	**+1.1**
	comp=Z,77nm,0.8s,mb5.2							
HYB				*e*S		**S**	**12 35 38.0**	**+0.2**
HYB				LR		LR	12 39 48.0	
	comp=Z,31nm,20.0s							
HYB	**Hyderabad**	**23.49**	**311**	*e*P		**P**	**12 31 27.5**	**+1.1**
	comp=Z,77nm,0.8s,mb5.2							
HYB				*e*S		**S**	**12 35 40.0**	**+2.2**
HYB				*e*			12 39 48.0	
KMI	**Kunming**	**23.57**	**14**	P		**P**	**12 31 27.3**	**+0.2**
KMI				AP			12 31 35.3	
KMI				XP		sP	12 31 38.9	-1.5
KMI				PP			12 32 02.8	
KMI				PPP			12 32 13.4	
KMI				S		**S**	**12 35 42.3**	**+3.2**
KMI				XS		sS	12 35 55.4	+0.8
KMI				AMB		AMB		
	comp=Z,118nm,2.0s,mb5.0							
KMI				AMB		AMB		
	comp=Z,5μm,9.0s							
KMI				LR		LR		
	comp=N,29μm,13.3s,MS6.0							
KMI				LR		LR		
	comp=E,28μm,14.8s,MS6.0							
KMI				LR		LR		
	comp=Z,32μm,14.8s,MS5.9							
SHL	**Shillong**	**23.78**	**349**	⇑*i*P		**P**	**12 31 26.0**	**-3.0**
SHL				*i* S		**S**	**12 35 43.0**	**+0.6**
BOK	**Bokaro**	**23.99**	**335**	*e*P		**P**	**12 31 30.3**	**-0.6**
BOK				AMb		AMB	12 31 36.9	
	comp=Z,466nm,0.8s,mb6.0							
KAPI	**Kappang**	**24.02**	**107**	P		**P**	**12 31 31.2**	**-0.1**
	comp=Z,629nm,0.6s,mb6.2,SNR=9.7							
KAPI	**Kappang**	**24.02**	**107**	P		**P**	**12 31 29.0**	**-2.3**
	comp=Z,57nm,0.7s,mb5.1,baz=117,slow=19,SNR=34							
KAPI	**Kappang**	**24.02**	**107**	*e*P		**P**	**12 31 29.5**	**-1.8**
	comp=Z,584nm,1.5s,mb5.8							
KAPI				LR		LR		
	comp=Z,30μm,22.0s,MS5.7							
KAPI	**Kappang**	**24.02**	**107**	P		**P**	**12 31 31.7**	**+0.4**
	comp=Z,154nm,2.1s,comp=Z,2μm,mb5.0							
MNGI	**Mangalore**	**24.25**	**297**	*i* P		**P**	**12 31 33.1**	**-0.3**
MNGI				*ex*		x	12 31 48.1	
	comp=Z,282nm,1.6s							
MNGI				*i* x		x	12 35 42.2	
BUSP	**Coron**	**25.20**	**66**	*e*P		**P**	**12 31 41.3**	**-0.8**
LATR	**Latur**	**25.60**	**311**	*ex*		x	12 31 50.0	
NGP	**Nagpur**	**25.62**	**319**	*e*P		**P**	**12 31 45.8**	**0.0**
NGP				AMb		AMB	12 31 53.7	
	comp=Z,144nm,2.2s,mb5.1							
NGP				*e*S		**S**	**12 36 13.1**	**+1.1**
LUBP	**Lubang**	**25.90**	**62**	*e*P		**P**	**12 31 48.7**	**+0.2**
GYA	**Guiyang**	**25.99**	**21**	⇑*i*P		**P**	**12 31 47.5**	**-1.6**
GYA				AP		pP	12 31 59.8	+1.3
GYA				XP		sP	12 32 06.4	+3.9
GYA				PP			12 32 33.3	
GYA				PPP			12 32 44.0	
GYA				S		**S**	**12 36 17.1**	**-0.6**
GYA				XS		sS	12 36 34.5	+1.1
GYA				SS			12 37 27.9	
GYA				SSS			12 37 45.3	
GYA				AMB		AMB		
	comp=Z,130nm,0.8s,mb5.5							
GYA				AMB		AMB		
	comp=Z,3μm,8.2s							
GYA				LR		LR		
	comp=N,22μm,17.8s,MS6.0							
GYA				LR		LR		
	comp=E,29μm,16.8s,MS6.0							
GYA				LR		LR		
	comp=Z,32μm,17.4s,MS5.9							
SJMP	**San Jose**	**26.20**	**66**	*e*P		**P**	**12 31 50.8**	**-0.4**
HKC	**Hong Kong Obse**	**26.23**	**39**	⇑*i*P		**P**	**12 31 50.0**	**-1.3**
GOA	**Goa**	**26.24**	**302**	*e*P		**P**	**12 31 51.5**	**0.0**
GOA				AMb		AMB	12 32 05.3	
	comp=Z,218nm,2.8s,mb5.2							
GOA				*i* x		x	12 36 07.7	
JBP	**Jabalpur**	**26.51**	**323**	*e*P		**P**	**12 31 54.8**	**+0.9**
JBP				*e*S		**S**	**12 36 25.9**	**-0.2**

KDI	**Kendari**	**26.52**	**103**	P		**P**	**12 31 53.7**	**-0.3**
	comp=Z,120nm,0.9s,comp=Z,3μm,mb5.4							
RAMN	**Ramite**	**26.55**	**339**	*e*P		**P**	**12 31 55.2**	**+1.1**
	comp=Z,498nm,0.8s,mb6.1							
AKL	**Akola**	**26.70**	**315**	*e*P		**P**	**12 31 58.1**	**+2.5**
AKL				AMb		AMB	12 32 13.8	
	comp=Z,214nm,1.4s,mb5.5							
KAD	**Karad**	**26.85**	**306**	*e*P		**P**	**12 31 57.1**	**+0.2**
KAD				AMb		AMB	12 32 10.4	
	comp=Z,52nm,0.7s,mb5.2							
KAD				*i* S		**S**	**12 36 35.4**	**+3.9**
OTRP	**Odiongan**	**26.99**	**67**	*e*P		**P**	**12 31 58.1**	**-0.2**
ALBI	**Allahabad**	**27.20**	**329**	*e*P		**P**	**12 32 00.0**	**0.0**
JIRN	**Jiri**	**27.34**	**339**	*e*P		**P**	**12 32 02.1**	**+0.8**
	comp=Z,535nm,0.8s,mb6.1							
RCP	**Roxas**	**27.40**	**69**	⇓*e*P		**P**	**12 32 02.5**	**+0.6**
PKI	**Pulchoki**	**27.55**	**338**	*e*P		**P**	**12 32 03.7**	**+0.6**
	comp=Z,236nm,0.9s,mb5.8							
PKI	**Pulchoki**	**27.55**	**338**	*e*P		**P**	**12 32 03.7**	**+0.6**
PKI				pmax		pmax		
	comp=Z,236nm,0.9s,mb5.8							
GUN	**Gumba**	**27.68**	**339**	*e*P		**P**	**12 32 05.0**	**+0.7**
	comp=Z,416nm,0.7s,mb6.2							
DMN	**Daman**	**27.70**	**337**	*e*P		**P**	**12 32 05.0**	**+0.6**
	comp=Z,323nm,1.0s,mb5.9							
POO	**Poona**	**27.77**	**307**	*e*P		**P**	**12 32 05.1**	**-0.1**
POO				AMb		AMB	12 32 20.5	
	comp=Z,85nm,1.1s,mb5.3							
KKN	**Kakani**	**27.79**	**338**	*e*P		**P**	**12 32 05.7**	**+0.4**
	comp=Z,644nm,1.2s,mb6.1							
KKN	**Kakani**	**27.79**	**338**	*e*P		**P**	**12 32 05.7**	**+0.4**
KKN				pmax		pmax		
	comp=Z,644nm,1.2s,mb6.1							
LSA	**Lhasa**	**27.94**	**349**	P		**P**	**12 32 07.3**	**+0.7**
LSA				S		**S**	**12 36 49.4**	**+0.9**
LSA				LR		LR		
	comp=E,14μm,25.7s							
LSA				LR		LR		
	comp=Z,24μm,24.2s,MS5.7							
LSA	**Lhasa**	**27.94**	**349**	*e*P		**P**	**12 32 07.4**	**+0.8**
LSA				pmax		pmax		
	comp=Z,91nm,0.6s,mb5.6							
LSA				MLR		MLR		
	comp=Z,13μm,20.0s,MS5.5							
LSA	**Lhasa**	**27.94**	**349**	*e*P		**P**	**12 32 07.4**	**+0.8**
	comp=Z,91nm,0.6s,mb5.6							
LSA				LR		LR		
	comp=Z,13μm,20.0s,MS5.5							
TBP	**Tagbilaran**	**27.94**	**73**	*e*P		**P**	**12 32 06.3**	**-0.5**
MNI	**Manado**	**28.05**	**91**	P		pP	12 32 17.9	+0.6
BHPL	**Bhopal**	**28.16**	**320**	*e*P		**P**	**12 32 10.2**	**+1.6**
BHPL				AMb		AMB	12 32 22.3	
	comp=Z,114nm,0.9s,mb5.5							
GKN	**Gorkha**	**28.23**	**337**	*e*P		**P**	**12 32 09.7**	**+0.5**
	comp=Z,683nm,1.1s,mb6.2							
KOLN	**Koldanda**	**28.45**	**335**	*e*P		**P**	**12 32 11.9**	**+0.7**
	comp=Z,296nm,0.8s,mb6.0							
CAUP	**Cauayan**	**28.68**	**58**	*e*P		**P**	**12 32 12.5**	**-0.9**
BUKP	**Musuan**	**28.73**	**78**	*e*P		**P**	**12 32 13.9**	**+0.1**
DANN	**Dangsing**	**28.89**	**336**	*e*P		**P**	**12 32 15.8**	**+0.7**
	comp=Z,698nm,1.1s,mb6.3							
MSLP	**Maasin**	**29.00**	**73**	*e*P		**P**	**12 32 15.4**	**-0.8**
DAV	**Davao City (W)**	**29.11**	**79**	P		**P**	**12 32 16.8**	**-0.5**
	comp=Z,92nm,0.4s,mb5.8,baz=107,slow=10.0,SNR=3.9							
DAV	**Davao City (W)**	**29.11**	**79**	⇑*i*P		**P**	**12 32 15.4**	**-1.9**
DAV	**Davao City (W)**	**29.11**	**79**	P		**P**	**12 32 16.8**	**-0.5**
DAV				LR		LR		
	comp=Z,15μm,19.0s,MS5.6							
PVCP	**Virac**	**29.36**	**66**	*e*P		**P**	**12 32 21.5**	**+2.0**
CD2	**Chengdu**	**29.38**	**12**	P		**P**	**12 32 18.3**	**-1.1**
CD2				AP		pP	12 32 27.3	-1.6
CD2				XP		sP	12 32 31.8	-1.1
CD2				PP		PP	12 33 15.6	-11
CD2				PCP		PcP	12 35 22.4	-2.8
CD2				S		**S**	**12 37 10.0**	**-1.1**
CD2				XS		sS	12 37 30.8	+4.0
CD2				SS		SS	12 38 49.4	-27
CD2				AMB		AMB		
	comp=Z,130nm,0.6s,mb5.8							
CD2				AMB		AMB		
	comp=Z,3μm,11.6s							
CD2				LR		LR		
	comp=N,61μm,17.4s							
CD2				LR		LR		
	comp=Z,27μm,22.2s,MS5.8							
BIPH	**Bislig**	**30.05**	**77**	⇑*i*P		**P**	**12 32 24.8**	**-0.8**
QZH	**Quanzhou**	**30.94**	**41**	⇑*i*P		**P**	**12 32 33.0**	**-0.3**
QZH				PP		PP	12 33 39.3	-4.2
QZH				S		**S**	**12 37 37.8**	**+2.1**
QZH				AMB		AMB		
	comp=Z,70nm,1.0s,mb5.5							
QZH				AMB		AMB		
	comp=Z,4μm,8.4s							
QZH				LR		LR		
	comp=N,64μm,15.1s,MS6.5							
QZH				LR		LR		
	comp=

FITZ Fitzroy Crossi 34.80 126 *e*P **P** **12 33 04.7 -2.5**
comp=Z,62nm,0.9s,mb5.5
FITZ *e*S **S** **12 38 29.9 -6.1**
FITZ Fitzroy Crossi 34.80 126 *e*P **P** **12 33 05.6 -1.5**
comp=Z,52nm,1.0s,mb5.4
FITZ Fitzroy Crossi 34.80 126 P **P** **12 33 06.7 -0.5**
comp=Z,104nm,1.0s,comp=Z,2µm,mb5.7
BHK Bhakra 34.91 329 *ex* pP 12 33 16.2 -1.3
DLH Dalhousie 36.03 329 *e*P **P** **12 33 17.0 -0.5**
DLH *ex* x 12 33 49.0
THN Thein Dam 36.08 329 *e*P **P** **12 33 16.1 -1.8**
THN *ex* x 12 39 01.2
NJ2 Nanjing 36.30 33 *e*P **P** **12 33 20.3 +0.4**
NJ2 AP pP 12 33 29.8 +0.3
NJ2 XP sP 12 33 33.8 +0.4
NJ2 PP PP 12 34 43.3 +0.4
NJ2 S **S** **12 38 58.0 -0.7**
NJ2 XS sS 12 39 15.5 +1.0
NJ2 SS SS 12 41 22.0 -16
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
NJ2 AMB AMB
comp=Z,640nm,7.8s
NJ2 LR LR
comp=N,10µm,20.2s,MS5.9
NJ2 LR LR
comp=E,20µm,22.3s,MS5.9
NJ2 LR LR
comp=Z,20µm,23.3s,MS5.8
SSE Sheshan 36.91 36 P **P** **12 33 24.8 -0.2**
SSE PP PP 12 34 56.4 +6.9
SSE AMB AMB
comp=Z,25nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,1µm,6.8s
SSE LR LR
comp=N,36µm,15.9s,MS6.3
SSE LR LR
comp=E,18µm,16.3s,MS6.3
SSE LR LR
comp=Z,51µm,16.3s,MS6.4
GTA Gaotai 37.21 4 ⇑P **P** **12 33 27.4 -0.1**
GTA AP pP 12 33 37.5 +0.4
GTA XP sP 12 33 42.5 +1.4
GTA PP PP 12 34 55.1 +2.3
GTA PCP PcP 12 35 45.8 -1.1
GTA S **S** **12 39 11.4 -0.9**
GTA XS sS 12 39 27.8 -0.3
GTA SCP ScP 12 39 30.3 -1.5
GTA SS SS 12 41 45.1 -11
GTA AMB AMB
comp=Z,115nm,0.8s,mb5.8
GTA AMB AMB
comp=Z,3µm,6.5s
GTA LR LR
comp=N,8µm,23.2s,MS5.6
GTA LR LR
comp=E,10µm,25.9s,MS5.6
GTA LR LR
comp=Z,9µm,25.3s,MS5.4
KAKA Kakadu 38.34 114 *e*P x 12 32 34.0
comp=Z,101nm,0.7s
MUN Mundaring 38.60 153 *e*P pP 12 33 49.7 +0.8
MUN *e*S **S** **12 39 34.9 +1.4**
TIA Tai'an 38.79 27 *e*P **P** **12 33 40.0 -0.8**
TIA S **S** **12 39 32.0 -4.3**
TIA LR LR
comp=E,6µm,12.0s
JOW Kunigami 38.92 48 P **P** **12 33 42.1 0.0**
comp=E,34nm,0.6s,mb5.3,baz=274,slow=12,SNR=22
KLBR Kellerberrin 39.00 151 *e*P **P** **12 33 50.9 +8.2**
comp=E,113nm,1.2s,mb5.5
NWAO Narrogin (SRO) 39.86 153 P **P** **12 33 50.5 +0.7**
comp=E,40nm,1.0s,mb5.1,baz=305,slow=14,SNR=3.5
NWAO LR LR 12 49 41.3
comp=E,18µm,21.3s,MS5.9,baz=327,slow=35
NWAO Narrogin (SRO) 39.86 153 P **P** **12 33 50.5 +0.7**
NWAO LR LR 12 49 41.3
BTO Baotou 40.13 16 *e*P **P** **12 33 51.0 -1.0**
BTO S **S** **12 39 47.9 -8.5**
HHC Hu-ho-hao-te 40.80 17 *e*P **P** **12 33 58.1 +0.6**
HHC AP pP 12 34 07.8 +0.6
HHC XP sP 12 34 12.0 +0.9
HHC PP PP 12 35 36.9 +5.0
HHC PCP PcP 12 35 59.3 +1.1
HHC PCS PcS 12 39 48.1 -0.8
HHC *e*S **S** **12 40 07.1 +0.9**
HHC XS sS 12 40 22.5 +0.3
HHC SS SS 12 43 03.3 -4.9
HHC SCS ScS 12 43 58.5 -1.8
HHC AMB AMB
comp=Z,114nm,1.6s,mb5.2
HHC AMB AMB
comp=Z,4µm,6.5s
HHC LR LR
comp=N,18µm,14.3s,MS6.1
HHC LR LR
comp=E,10µm,15.5s,MS6.1
HHC LR LR
comp=Z,16µm,14.3s,MS6.0
KBL Kabul 41.33 324 *e*P **P** **12 34 02.1 +0.1**
KBL pmax pmax
comp=Z,37nm,0.8s,mb5.1
KBL Kabul 41.33 324 *e*P **P** **12 34 02.1 +0.1**
comp=Z,37nm,0.8s,mb5.1
BJT Baijiatuan 41.62 23 *e*P **P** **12 34 05.3 +1.0**
BJT *e**PP pP 12 34 13.7 -0.3
BJT pmax pmax
comp=Z,109nm,0.6s
BJT MLR MLR
comp=Z,9µm,19.0s
BJT Baijiatuan 41.62 23 *e*P **P** **12 34 05.3 +1.1**
comp=Z,109nm,0.6s,mb5.7
BJT *e*pP pP 12 34 13.7 -0.2
BJT LR LR
comp=Z,9µm,19.0s,MS5.7
BJI Beijing 41.64 23 P **P** **12 34 04.9 +0.5**
BJI PP PP 12 35 42.5 +1.4
BJI S **S** **12 40 20.0 +1.2**
BJI XS sS 12 40 36.8 +2.0
BJI AMB AMB
comp=Z,62nm,0.8s,mb5.3
BJI AMB AMB
comp=Z,3µm,5.1s
BJI LR LR
comp=N,27µm,17.6s,MS6.2
BJI LR LR
comp=E,11µm,21.5s,MS6.2
BJI LR LR
comp=Z,13µm,17.6s,MS5.8
KSH Kashi 41.76 336 *e*P **P** **12 34 06.4 +1.0**
KSH PP PP 12 35 47.8 +5.4
KSH PCP PcP 12 35 59.6 -1.8
KSH PPP 12 36 21.4
KSH SCP ScP 12 39 42.0 -7.4
KSH PCS PcS 12 39 50.0 -2.8
KSH S **S** **12 40 20.3 -0.3**
KSH SS SS 12 43 24.5 -2.8
KSH SCS ScS 12 43 58.8 -7.4
KSH AMB AMB
comp=Z,185nm,0.8s,mb5.8
KSH AMB AMB
comp=Z,6µm,4.9s
KSH LR LR
comp=N,35µm,17.0s,MS6.4
KSH LR LR
comp=E,32µm,17.2s,MS6.4
KSH LR LR
comp=Z,36µm,18.6s,MS6.3
MSEY Mahe Island 41.82 261 PFAKE 12 34 20.0 +14
MSEY LR LR
comp=Z,10µm,20.0s,MS5.7
WBK Wadi Bani Khal 41.96 302 ⇑P pP 12 34 17.5 +0.5
SNR=10
WMQ Urumqi 42.30 350 P **P** **12 34 10.0 +0.3**
WMQ XP sP 12 34 24.3 +0.9
WMQ PP PP 12 35 52.1 +4.0
WMQ PCP PcP 12 36 04.0 +1.0
WMQ PPP 12 36 23.3
WMQ S **S** **12 40 28.4 +0.1**
WMQ XS sS 12 40 44.8 +0.4
WMQ AMB AMB
comp=Z,65nm,1.4s,mb5.1
WMQ AMB AMB
comp=Z,3µm,5.0s
WMQ LR LR
comp=N,6µm,25.0s,MS5.8
WMQ LR LR
comp=E,14µm,25.0s,MS5.8
WMQ LR LR
comp=Z,6µm,21.0s,MS5.5
JMDO Jabal Madar 42.60 301 P pP 12 34 23.1 +0.8
SNR=5.8
WRA Warramunga Arr 42.88 123 P **P** **12 34 13.3 -1.5**
comp=Z,41nm,0.7s,mb5.3,baz=300,slow=9.1,SNR=97
WRA LR LR 12 55 34.2
comp=Z,7µm,18.9s,MS5.6,baz=280,slow=41
WRAB Tennant Creek 42.88 123 P **P** **12 34 13.0 -1.8**
comp=Z,448nm,0.7s,mb6.3,SNR=54
WRAB Tennant Creek 42.88 123 *e*P **P** **12 34 13.5 -1.3**
comp=Z,125nm,0.9s,mb5.6
WRAB LR LR
comp=Z,12µm,22.0s,MS5.7
WRAB Tennant Creek 42.88 123 P **P** **12 34 13.5 -1.3**
comp=Z,154nm,1.3s,comp=Z,2µm,mb5.6
WB2 Warramunga Arr 42.89 123 *e*P **P** **12 34 13.2 -1.7**
WB2 *e*S S 12 40 14.4 -23
SMDO Samad 42.92 302 P pP 12 34 25.9 +1.1
SNR=8.9
BIDO Bidbid 43.04 303 P **P** **12 34 17.7 +1.6**
SNR=12
DL2 Dalian 43.06 29 ⇑P **P** **12 34 15.8 -0.2**
DL2 PP PP 12 35 59.3 +2.8
DL2 S **S** **12 40 39.1 -0.7**
DL2 SS SS 12 43 43.8 -9.2
DL2 AMB AMB
comp=Z,80nm,0.7s,mb5.6
DL2 AMB AMB
comp=Z,1µm,7.1s
DL2 LR LR
comp=N,7µm,18.0s
DL2 LR LR
comp=Z,11µm,19.8s,MS5.8
BSY Bisya 43.52 301 ⇓P pP 12 34 30.4 +0.7
SNR=11
HOQ Hoqain 43.75 302 ⇓P pP 12 34 31.8 +0.2
SNR=10
ULHL Ulahol 43.99 338 P **P** **12 34 24.1 +0.7**
SNR=34
JAY Jayapura 44.15 96 P **P** **12 34 24.7 -0.5**
comp=Z,108nm,1.2s,comp=Z,2µm,mb5.5
KZA Kyzart 44.22 337 P **P** **12 34 26.5 +1.2**
SNR=34
FORT Forrest 44.25 140 *e*P **P** **12 34 26.0 +0.3**
comp=Z,109nm,0.6s,mb5.8
FORT Forrest 44.25 140 *e*P **P** **12 34 26.0 +0.3**
ASAR Alice Springs 44.28 128 P **P** **12 34 24.9 -1.2**
comp=Z,20nm,0.6s,mb5.0,baz=298,slow=7.4,SNR=181
ASAR PcP PcP 12 36 10.5 +0.3
comp=Z,5.9nm,0.8s,baz=309,slow=5.9,SNR=2.3
RBK Rabkut 44.51 293 ⇑P pP 12 34 38.9 +1.2
SNR=8.3
AAA Alma-Ata 44.62 339 *i* P **P** **12 34 27.5 -1.0**
AAA *e*S **S** **12 40 58.2 -4.2**
AAA pmax pmax
comp=Z,5µm,3.4s
AAA smax
comp=N,9µm,5.8s
AAA MLR MLR
comp=Z,12µm,18.0s,MS5.8
AAA Alma-Ata 44.62 339 *e*P **P** **12 34 28.0 -0.5**
UCH Uchtor 44.64 336 P **P** **12 34 32.5 +3.9**
SNR=8.2
TKM2 Tokmak 2 44.81 338 *i* P **P** **12 34 30.5 +0.5**
TKM2 pmax pmax
comp=Z,270nm,1.4s,mb5.9
TKM2 Tokmak 2 44.81 338 P **P** **12 34 30.3 +0.3**
SNR=68
KBK Karagaybulak 44.83 337 P **P** **12 34 31.5 +1.3**
SNR=53
AML Almayashu 44.89 336 P **P** **12 34 31.6 +0.9**
SNR=74
AAK Ala-Archa 44.99 337 P **P** **12 34 32.5 +1.1**
comp=Z,489nm,1.3s,mb6.2,SNR=17
AAK Ala-Archa 44.99 337 ⇑P **P** **12 34 34.8 +3.4**
SNR=67
AAK Ala-Archa 44.99 337 ⇑*e*P **P** **12 34 32.7 +1.3**
AAK pmax pmax
comp=Z,75nm,1.4s,mb5.3
AAK MLR MLR
comp=Z,7µm,18.0s,MS5.7
AAK Ala-Archa 44.99 337 P **P** **12 34 33.6 +2.2**
SNR=33
AAK Ala-Archa 44.99 337 *e*P **P** **12 34 32.2 +0.8**
AAK LR LR
comp=Z,15µm,19.0s,MS6.0
AAK Ala-Archa 44.99 337 P **P** **12 34 32.3 +0.9**
comp=Z,72nm,2.0s,comp=Z,2µm,mb5.2
WHFO Wadi Hawf 45.01 293 P pP 12 34 42.3 +0.6
SNR=9.7
FRU Bishkek 45.11 337 ⇑*i*P **P** **12 34 32.0 -0.4**
FRU *i* 12 34 38.0
FRU *e* 12 41 11.0
FRU pmax pmax
comp=Z,370nm,2.4s,mb5.8
FRU MLR MLR
comp=Z,14µm,18.0s,MS5.9
CHMS Chumysh 45.20 337 P **P** **12 34 33.5 +0.4**
SNR=24
HATD Hatta, Dubai 45.23 304 ⇑P pP 12 34 43.7 +0.3
SNR=17
EKS2 Erkin-Say 45.30 336 P **P** **12 34 35.0 +1.1**
SNR=53
ABTO Aybut 45.30 292 P pP 12 34 44.9 +0.8
SNR=6.5
KSRS Korea Array 45.33 35 P **P** **12 34 33.5 -0.8**
comp=Z,32nm,0.8s,mb5.2,baz=226,slow=9.0,SNR=80
KSRS LR LR 12 55 33.7
comp=Z,17µm,18.8s,MS6.0,baz=219,slow=39
USP Ospenovka 45.52 337 P **P** **12 34 36.1 +0.5**
SNR=126
MKAR Makanchi Array 46.25 346 P **P** **12 34 41.2 -0.1**
comp=Z,158nm,0.7s,mb6.1,baz=163,slow=7.0,SNR=406
MKAR LR LR 12 58 01.3
comp=Z,11µm,20.9s,MS5.8,baz=161,slow=41
SNY Shenyang 46.28 28 ⇑P **P** **12 34 39.8 -1.8**
SNY S **S** **12 41 29.1 +2.7**
SNY XS sS 12 41 39.4 -3.1
SNY SS SS 12 44 41.3 -11
SNY AMB AMB
comp=Z,60nm,0.6s,mb5.7
SNY AMB AMB
comp=Z,2µm,7.6s
SNY LR LR
comp=N,22µm,18.4s
SNY LR LR
comp=Z,19µm,18.2s,MS6.1
SONM Songino Array 46.28 9 P **P** **12 34 41.8 +0.2**
comp=Z,70nm,0.7s,mb5.7,baz=190,slow=8.5,SNR=174
SONM PcP PcP 12 36 17.0 +0.4
comp=Z,14nm,0.6s,baz=197,slow=4.2,SNR=5.5
SONM ScP ScP 12 40 08.6 +0.9
comp=Z,1.8nm,0.9s,baz=205,slow=6.4,SNR=2.7
SONM LR LR 12 57 13.0
comp=Z,13µm,20.8s,MS5.9,baz=188,slow=40
SONM Songino Array 46.28 9 P **P** **12 34 41.8 +0.2**
SONM 12 36 17.0
ULN Ulaanbaatar 46.42 10 ⇓P **P** **12 34 41.2 -1.4**
SNR=38
ULN Ulaanbaatar 46.42 10 *e*P **P** **12 34 42.6 0.0**
ULN LR LR
comp=Z,11µm,20.0s,MS5.8
ULN Ulaanbaatar 46.42 10 P **P** **12 34 42.8 +0.2**
comp=Z,104nm,1.9s,comp=Z,3µm,mb5.5
KK31 Karatay Array 47.05 334 *i* P **P** **12 34 47.5 -0.1**
KK31 pmax pmax
comp=Z,37nm,0.6s,mb5.5
ZAK Zakamensk 48.40 6 ⇑*i*P **P** **12 34 58.0 +0.1**
ZAK *e* 12 41 57.2
ZAK pmax pmax
comp=Z,52nm,1.1s,mb5.5
COEN Coen 48.67 111 *e*P **P** **12 34 59.2 -1.4**
comp=Z,38nm,0.8s,mb5.5
COEN Coen 48.67 111 P **P** **12 34 59.2 -1.5**
comp=Z,37nm,0.8s,comp=Z,863nm,mb5.4
CN2 Changchun 48.68 28 ⇑P **P** **12 34 59.3 -0.9**
CN2 PP PP 12 36 51.9 -1.6
CN2 *e*S **S** **12 41 54.6 -5.8**
CN2 AMB AMB
comp=Z,40nm,0.7s,mb5.6
CN2 AMB AMB
comp=Z,2µm,5.0s
CN2 LR LR
comp=N,13µm,21.0s,MS6.0
CN2 LR LR
comp=E,14µm,21.0s,MS6.0
CN2 LR LR
comp=Z,12µm,21.0s,MS5.8
GUMO Guam 48.87 74 LR LR 12 55 37.9
comp=Z,7µm,20.2s,MS5.6,baz=244,slow=36
GUMO Guam 48.87 74 PFAKE 12 35 10.0 +7.8
GUMO LR LR
comp=Z,7µm,20.0s,MS5.7
MOY Mondy 49.49 3 *e*P **P** **12 35 06.3 0.0**
MOY pmax pmax
comp=Z,36nm,3.6s
TLY Talaya 49.72 6 P **P** **12 35 09.9 +1.9**
comp=Z,279nm,0.7s,mb6.4,SNR=11
TLY Talaya 49.72 6 ⇓P **P** **12 35 06.5 -1.5**
SNR=18
TLY Talaya 49.72 6*c* *i*P **P** **12 35 08.6 +0.6**
TLY *e* 12 37 06.0
TLY *e*S **S** **12 42 17.1 +2.4**
TLY *e*PS 12 42 33.2
TLY *e* 12 44 56.9
TLY pmax pmax
comp=Z,49nm,0.8s,mb5.6
TLY MLR MLR
comp=Z,16µm,17.0s,MS6.1
TLY Talaya 49.72 6 *e*P **P** **12 35 08.8 +0.8**
TLY LR LR
comp=Z,18µm,19.0s,MS6.1
CBIJ Chichi jima 50.04 56 P **P** **12 35 09.2 -1.7**
comp=Z,108nm,0.6s,mb6.0,baz=91,slow=16,SNR=7.6
CBIJ LR LR 12 55 17.9
comp=Z,5µm,20.6s,MS5.5,baz=227,slow=35
ABKT Ailbek 50.24 320 P **P** **12 35 12.4 +0.1**
comp=Z,538nm,0.7s,mb6.7,SNR=10.0
VAN Vannovskaya 50.26 320 ⇓*i*P **P** **12 35 16.0 +3.6**
VAN *i* S **S** **12 42 22.0 -0.8**
IRK Irkutsk 50.34 6 ⇓*i*P **P** **12 35 13.2 +0.5**
IRK *e*S **S** **12 42 28.7 +5.3**
IRK pmax pmax
comp=Z,247nm,2.3s,mb5.8
KURK Kurchatov 50.80 345 P **P** **12 35 16.4 +0.2**
comp=Z,711nm,0.9s,mb6.6,SNR=62
KURK Kurchatov 50.80 345 ⇓P **P** **12 35 17.6 +1.4**
SNR=78
KURK Kurchatov 50.80 345 P **P** **12 35 13.8 -2.4**
comp=Z,44nm,0.5s,mb5.6,baz=164,slow=6.8,SNR=127
KURK S **S** **12 42 37.1 +7.3**
comp=Z,2.9nm,0.8s,baz=157,slow=10.0,SNR=3.6
KURK Kurchatov 50.80 345 *e*P **P** **12 35 16.2 0.0**
KURK LR LR
comp=Z,10µm,20.0s,MS5.8
HIA Hailar 50.91 19 ⇑*i*P **P** **12 35 17.0 -0.1**
HIA LR LR
comp=Z,17µm,19.0s,MS6.1
MDJ Mudanjiang 51.27 30 P **P** **12 35 19.0 -0.9**
MDJ AP pP 12 35 28.0 -1.8
MDJ XP sP 12 35 31.8 -1.9
MDJ PCP PcP 12 36 33.9 -0.8
MDJ S **S** **12 42 38.6 +2.0**
MDJ AMB AMB
comp=Z,67nm,2.2s,mb5.2
MDJ AMB AMB
comp=Z,2µm,9.0s
MDJ LR LR
comp=N,12µm,18.2s,MS6.2
MDJ LR LR
comp=E,17µm,19.0s,MS6.2
MDJ LR LR
comp=Z,29µm,16.5s,MS6.4
MDJ Mudanjiang 51.27 30 *e*P **P** **12 35 20.3 +0.4**
comp=Z,47nm,0.9s,mb5.4
MDJ LR LR
comp=Z,12µm,19.0s,MS6.0
MAJO Matsushiro 51.30 43 *e*P **P** **12 35 19.5 -0.8**
MAJO LR LR
comp=Z,10µm,20.0s,MS5.8
MAT Matsushiro 51.30 43 P **P** **12 35 19.3 -1.0**
MAT *e*S **S** **12 42 42.0 +4.8**
MJAR Matsushiro Arr 51.30 43 P **P** **12 35 19.7 -0.6**
comp=Z,14nm,0.7s,mb5.0,baz=198,slow=8.1,SNR=47
MJAR ScP ScP 12 40 31.2 +1.9
comp=Z,0.5nm,0.5s,baz=186,slow=2.5,SNR=4.2
MJAR LR LR 12 58 03.7
comp=Z,10µm,20.0s,MS5.8,baz=230,slow=37
PMG Port Moresby 51.47 104 P **P** **12 35 21.2 -0.7**
comp=Z,152nm,0.6s,mb6.1,baz=305,slow=3.8,SNR=86
PMG Port Moresby 51.47 104*c* *i*P **P** **12 35 21.0 -0.9**
PMG pmax pmax
comp=Z,140nm,0.7s
PMG MLR MLR
comp=Z,7µm,25.0s
PMG Port Moresby 51.47 104 *e*P **P** **12 35 21.1 -0.8**
PMG LR LR
comp=Z,6µm,20.0s,MS5.6
PMG Port Moresby 51.47 104 P **P** **12 35 21.1 -0.8**
comp=Z,250nm,0.8s,comp=Z,3µm,mb6.2
CIT Chita 51.67 13 *e*P **P** **12 35 23.5 +0.8**
CIT *e* pP 12 35 31.7 -0.9
CIT *e* 12 35 40.8
CIT *e* 12 42 45.8
LBOS 52.23 286 ⇓*e*P **P** **12 35 29.5 +1.9**
ZAA0 Zalesovo Array 52.59 351 *e*P **P** **12 35 29.4 -0.1**
ZALV Zalesovo Beam 52.59 351 P **P** **12 35 29.5 0.0**
comp=Z,174nm,0.6s,mb6.2,baz=180,slow=5.9,SNR=278
ZALV S **S** **12 42 56.0 +1.7**
comp=Z,2.1nm,0.6s,baz=167,slow=15,SNR=4.3
ZALV LR LR 13 03 42.8
comp=Z,6µm,19.3s,MS5.7,baz=173,slow=43
ZALV Zalesovo Beam 52.59 351 P **P** **12 35 29.5 0.0**
ZALV S **S** **12 42 56.0 +1.7**
ZALV Zalesovo Beam 52.59 351 P **P** **12 35 29.5 0.0**
ZALV S **S** **12 42 56.0 +1.7**
ZALV LR LR 13 03 42.8
ABPO Ambohimpanom 53.03 244 *e*P **P** **12 35 32.9 -0.6**
ABPO *e**PP pP 12 35 44.3 +0.9
ABPO pmax pmax
comp=Z,56nm,1.3s,mb5.3
ABPO MLR MLR
comp=Z,11µm,20.0s,MS5.9
ABPO Ambohimpanom 53.03 244 *e*P **P** **12 35 32.9 -0.5**
comp=Z,56nm,1.3s,mb5.3
ABPO *e*pP pP 12 35 44.3 +0.9
ABPO LR LR
comp=Z,11µm,20.0s,MS5.9
CTA Charters Tower 53.29 117 P **P** **12 35 34.9 -0.4**
comp=Z,47nm,0.8s,mb5.5,baz=290,slow=8.0,SNR=49
CTA LR LR 13 02 23.0
comp=Z,10µm,18.8s,MS5.9,baz=16,slow=41
CTA Charters Tower 53.29 117 *e*P **P** **12 35 34.8 -0.5**
comp=Z,37nm,0.8s,mb5.4
CTA *e*S **S** **12 43 05.3 +0.3**
CTAO Charters Tower 53.29 117 *e*P **P** **12 35 34.9 -0.4**
comp=Z,63nm,0.9s,mb5.5
CTAO LR LR
comp=Z,10µm,19.0s,MS5.9
CTAO Charters Tower 53.29 117 P **P** **12 35 35.2 -0.1**
comp=Z,114nm,1.2s,comp=Z,2µm,mb5.7
QRN Al-Qurain 53.50 305 *e*P **P** **12 35 35.9 -0.8**
baz=305
QRN AMb AMB 12 35 50.3
comp=Z,218nm,1.8s,mb5.8,baz=305
NVS Novosibirsk 53.70 350 ⇑*i*P **P** **12 35 37.0 -0.7**
NVS *i* S **S** **12 43 05.7 -3.8**
NVS pmax pmax
comp=N,115nm,1.3s
NVS pmax pmax
comp=Z,239nm,1.3s,mb6.0
NVS pmax pmax
comp=E,95nm,1.4s
NVS smax
RDF Al-Radifah 53.86 305 *e*P **P** **12 35 38.9 -0.5**
baz=305
RDF AMb AMB 12 35 50.6
comp=Z,122nm,1.3s,mb5.7,baz=305
ADE Adelaide 53.87 137 *e*P **P** **12 35 39.8 +0.5**
NAY Al-Naaiem 54.23 305 *e*P **P** **12 35 41.5 -0.6**
baz=305
NAY AMb AMB 12 35 53.0
comp=Z,65nm,0.9s,mb5.6,baz=305
STKA Stephens Creek 54.28 132 P **P** **12 35 42.3 -0.1**
comp=Z,23nm,0.9s,mb5.1,baz=307,slow=8.0,SNR=17
STKA LR LR 13 01 00.8
comp=Z,10µm,21.6s,MS5.8,baz=299,slow=38

STKA	**Stephens Creek**	**54.28**	**132**	*e*	P		**P**	**12 35 42.0**	**-0.4**
	comp=Z,30nm,0.8s,mb5.3								
MIB	**Mutribah**	**54.34**	**306**	*e*	P		**P**	**12 35 42.5**	**-0.4**
	baz=306								
MIB					AMb		AMB	12 36 08.4	
	comp=Z,280nm,1.0s,mb6.2,baz=306								
BVA0	**Borovoye Array**	**55.24**	**341**	*i*	P		**P**	**12 35 47.8**	**-1.2**
BVA0					pmax	pmax			
	comp=Z,17nm,1.1s,mb5.0								
BVAR	**Borovoye Array**	**55.24**	**341**		P		**P**	**12 35 48.3**	**-0.7**
	comp=Z,43nm,0.7s,mb5.6,baz=142,slow=8.6,SNR=134								
BRVK	**Borovoye**	**55.31**	**341**		P		**P**	**12 35 49.1**	**-0.3**
	comp=Z,432nm,0.7s,mb6.6,SNR=21								
BRVK	**Borovoye**	**55.31**	**341**	‖	P		**P**	**12 35 52.0**	**+2.5**
	SNR=36								
BRVK	**Borovoye**	**55.31**	**341**	*e*	P		**P**	**12 35 48.9**	**-0.5**
	comp=Z,86nm,0.9s,mb5.8								
BRVK					LR	LR			
	comp=Z,14μm,20.0s,MS6.0								
KLR	**Kul'dur**	**55.62**	**27**	*e*	P		**P**	**12 35 48.2**	**-3.6**
KLR				*e*	S		**S**	**12 43 36.0**	**+0.5**
KLR				*e*	SS		SS	12 47 25.5	+4.4
KLR					pmax	pmax			
	comp=E,1μm,3.8s								
KLR					pmax	pmax			
	comp=Z,2μm,3.8s								
KLR					pmax	pmax			
	comp=N,1μm,7.0s								
KLR					pmax	pmax			
	comp=E,1μm,7.0s								
KLR					pmax	pmax			
	comp=Z,4μm,7.0s								
KLR					smax				
	comp=N,2μm,9.0s								
KLR					smax				
	comp=E,1μm,9.0s								
KLR					MLR	MLR			
	comp=N,24μm,15.0s								
KLR					MLR	MLR			
	comp=Z,47μm,15.0s,MS6.7								
AB31	**Akbulak array**	**56.51**	**332**		P		**P**	**12 35 57.2**	**-0.9**
AB31					pmax	pmax			
	comp=Z,223nm,1.1s,mb6.1								
HABR	**Khabarovsk**	**56.66**	**30**	*i*	P		**P**	**12 35 58.4**	**-0.8**
HABR				*e*	*PP		pP	12 36 06.3	-2.9
HABR				*e*				12 36 53.8	
HABR				*e*				12 38 04.0	
HABR				*e*	PPP			12 39 18.4	
HABR				*e*	S		**S**	**12 43 47.9**	**-1.4**
HABR				*e*	*SS		sS	12 44 03.3	-2.5
HABR				*e*				12 45 44.7	
HABR					pmax	pmax			
	comp=E,30nm,0.6s								
HABR					pmax	pmax			
	comp=Z,33nm,0.5s,mb5.6								
HABR					pmax	pmax			
	comp=N,10.0nm,0.5s								
HABR					MLR	MLR			
	comp=E,6μm,15.0s,MS6.0								
HABR					MLR	MLR			
	comp=Z,8μm,17.0s,MS5.9								
HABR					MLR	MLR			
	comp=N,6μm,16.0s,MS6.0								
BOD	**Bodaibo**	**57.18**	**11**	*e*	P		**P**	**12 36 02.2**	**-0.5**
BOD					pmax	pmax			
	comp=Z,74nm,1.2s,mb5.6								
ERM	**Erimo**	**57.43**	**40**		P		**P**	**12 36 06.9**	**+2.1**
	comp=Z,368nm,1.4s,mb6.2,SNR=8.0								
ERM	**Erimo**	**57.43**	**40**		P		**P**	**12 36 07.7**	**+2.9**
ERM					pmax	pmax			
	comp=Z,80nm,1.1s,mb5.7								
ERM	**Erimo**	**57.43**	**40**	*e*	P		**P**	**12 36 05.7**	**+0.9**
	comp=Z,80nm,1.1s,mb5.7								
ERM					LR	LR			
	comp=Z,6μm,19.0s,MS5.8								
AKTK	**Aktyubinsk**	**58.23**	**332**		P		**P**	**12 36 09.1**	**-1.1**
AKTO	**Aktyubinsk**	**58.23**	**332**		P		**P**	**12 36 09.1**	**-1.1**
	comp=Z,33nm,0.9s,mb5.4,baz=152,slow=6.4,SNR=25								
NRGR	**Nerungri**	**58.78**	**18**	*e*	P		**P**	**12 36 16.9**	**+2.9**
NRGR					S		**S**	**12 44 22.1**	**+5.2**
NRGR					smax				
	comp=N,35nm,0.5s								
CLNS	**Chul'man**	**58.99**	**18**	*e*	P		**P**	**12 36 15.8**	**+0.4**
CLNS				*e*	*PP		pP	12 36 23.4	-2.0
CLNS				*e*				12 37 02.9	
CLNS				*e*				12 38 24.9	
CLNS				*e*	S		**S**	**12 44 22.8**	**+3.3**
CLNS				*e*				12 46 04.1	
CLNS					pmax	pmax			
	comp=Z,33nm,0.9s,mb5.4								
CLNS					pmax	pmax			
	comp=E,11nm,0.8s								
CLNS					pmax	pmax			
	comp=N,14nm,0.8s								
CLNS					pmax	pmax			
	comp=E,10.0nm,1.2s								
CLNS					pmax	pmax			
	comp=Z,11nm,1.2s,mb4.8								
CLNS					pmax	pmax			
	comp=N,11nm,1.1s								
CLNS					smax				
	comp=E,846nm,15.9s								
CLNS					smax				
	comp=N,1μm,12.1s								
CLNS					MLR	MLR			
	comp=E,11μm,16.0s,MS6.2								
CLNS					MLR	MLR			
	comp=Z,15μm,14.0s,MS6.3								
CLNS					MLR	MLR			
	comp=N,8μm,14.0s,MS6.2								
EIDS	**Eidsvold**	**59.21**	**121**	*e*	P		**P**	**12 36 16.9**	**-0.6**
	comp=N,39nm,0.8s,mb5.5								
MAK	**Makhachkala**	**59.76**	**320**	*e*	P		**P**	**12 36 20.3**	**-0.7**
MAK				*e*				12 37 06.0	
MAK				*i*				12 38 37.3	
MAK				*e*	PPP			12 39 57.9	
MAK				*i*	S		**S**	**12 44 28.6**	**-1.4**
MAK				*i*				12 46 09.4	
MAK					pmax	pmax			
	comp=Z,375nm,1.6s,mb6.2								
YSS	**Yuzh-Sakhalins**	**59.83**	**35**α	*i*	P		**P**	**12 36 21.0**	**-0.4**
YSS				*e*	*SP		sP	12 36 34.0	-1.3
YSS				*e*				12 38 36.0	
YSS				*e*	S		**S**	**12 44 31.0**	**+0.3**
YSS					pmax	pmax			
	comp=Z,3μm,8.0s								
YSS					pmax	pmax			
	comp=N,1μm,6.0s								
YSS					pmax	pmax			
	comp=E,1μm,8.0s								
YSS					pmax	pmax			
	comp=E,30nm,1.0s								
YSS					pmax	pmax			
	comp=Z,130nm,1.0s,mb5.9								
YSS					MLR	MLR			
	comp=Z,6μm,19.0s,MS5.8								
YSS					MLR	MLR			
	comp=N,4μm,20.0s,MS5.8								
YSS					MLR	MLR			
	comp=E,5μm,18.0s,MS5.8								
YSS	**Yuzh-Sakhalins**	**59.83**	**35**	*e*	P		**P**	**12 36 22.1**	**+0.7**
	comp=E,167nm,1.1s,mb6.0								
YSS					epP		pP	12 36 29.7	-1.8
YSS					esP		sP	12 36 34.2	-1.1
YSS					LR	LR			
	comp=Z,2μm,20.0s,MS5.2								
HAKT	**HAKKARI**	**60.04**	**313**	*i*	P		**P**	**12 36 28.8**	**+5.7**
YUK	**Yuzh-Kuril'sk**	**60.16**	**39**	*e*	P		**P**	**12 36 23.0**	**-0.7**
YUK				*e*				12 38 38.0	
YUK					S		**S**	**12 44 39.0**	**+4.0**
YUK				*e*	PS			12 44 53.0	
YUK				*e*	SS		SS	12 48 34.0	+1.4
YUK					pmax	pmax			
	comp=Z,110nm,0.5s,mb6.1								
YUK					pmax	pmax			
	comp=Z,5μm,4.0s								
YUK					MLR	MLR			
	comp=N,8μm,16.0s,MS6.3								
YUK					MLR	MLR			
	comp=E,17μm,16.0s,MS6.3								
YUK					MLR	MLR			
	comp=Z,16μm,16.0s,MS6.3								
DGRG	**David-gareji**	**60.47**	**318**		P		**P**	**12 36 24.5**	**-1.4**
DYDN	**Diyadin**	**60.83**	**315**	*i*	P		**P**	**12 36 27.5**	**-1.0**
ARMA	**Armidale**	**61.41**	**126**	*e*	P		**P**	**12 36 33.6**	**+1.1**
ARMA				*e*	S		**S**	**12 44 56.0**	**+4.4**
TATV	**Tatvan**	**61.45**	**313**	*i*	P		**P**	**12 36 31.8**	**-0.8**
GOR	**Gori**	**61.56**	**318**		P		**P**	**12 36 32.8**	**-0.4**
SVE	**Sverdlovsk**	**61.68**	**338**‖	*e*	P		**P**	**12 36 33.3**	**-0.5**
SVE				*e*				12 38 58.4	
SVE				*e*	PPP			12 40 20.9	
SVE				*e*	S		**S**	**12 44 54.5**	**+0.5**
SVE				*e*	SS		SS	12 48 56.9	+0.9
SVE					pmax	pmax			
	comp=Z,169nm,1.2s,mb6.0								
SVE					MLR	MLR			
	comp=Z,10μm,22.0s,MS5.9								
ARU	**Arti**	**62.17**	**337**		P		**P**	**12 36 36.3**	**-0.8**
	comp=Z,366nm,1.3s,mb6.3,SNR=11								
ARU	**Arti**	**62.17**	**337**c	*i*	P		**P**	**12 36 36.2**	**-0.9**
ARU				*e*				12 37 15.7	
ARU				*e*	PPP			12 40 21.0	
ARU				*e*	S		**S**	**12 44 59.0**	**-1.3**
ARU				*e*				12 46 24.3	
ARU				*e*	SSS			12 51 53.8	
ARU					pmax	pmax			
	comp=Z,43nm,1.0s,mb5.5								
ARU					MLR	MLR			
	comp=Z,8μm,21.0s,MS5.9								
ARU	**Arti**	**62.17**	**337**	*e*	P		**P**	**12 36 36.2**	**-0.9**
	comp=Z,94nm,1.1s,mb5.8								
ARU					LR	LR			
	comp=Z,9μm,22.0s,MS5.9								
ONI	**Oni**	**62.25**	**318**		P		**P**	**12 36 40.2**	**+2.3**
HOMI	**Horasan**	**62.29**	**315**	*i*	P		**P**	**12 36 37.0**	**-1.3**
BNGL	**BINGOL**	**62.43**	**313**	*i*	P		**P**	**12 36 42.0**	**+2.8**
ARTV	**Artvin**	**62.72**	**316**	*i*	P		**P**	**12 36 43.1**	**+2.0**
DDEM	**Demirkent**	**62.73**	**316**	*i*	P		**P**	**12 36 36.3**	**-4.8**
DIYA	**Diyarbakir**	**62.82**	**312**	*i*	P		**P**	**12 36 41.5**	**-0.4**
KOPT	**Kop Dagi**	**63.29**	**314**	*i*	P		**P**	**12 36 44.3**	**-0.6**
KIV	**Kislovodsk**	**63.34**	**319**	*i*	P		**P**	**12 36 52.9**	**+7.7**
	comp=Z,578nm,1.1s,mb6.6,SNR=5.9								
KIV	**Kislovodsk**	**63.34**	**319**κ	*i*	P		**P**	**12 36 48.1**	**+2.9**
KIV				*e*	*PP		pP	12 37 03.2	+7.9
KIV				*e*				12 37 23.3	
KIV				*e*				12 39 11.0	
KIV				*i*	S		**S**	**12 45 14.1**	**-1.3**
KIV				*i*				12 45 30.7	
KIV				*i*				12 46 38.9	
KIV				*i*	SS		SS	12 49 18.5	-4.0
KIV					pmax	pmax			
	comp=Z,41nm,1.0s,mb5.5								
KIV					MLR	MLR			
	comp=Z,3μm,19.0s,MS5.4								
KIV	**Kislovodsk**	**63.34**	**319**	*e*	P		**P**	**12 36 45.0**	**-0.2**
	comp=Z,163nm,1.1s,mb6.1								
KIV					LR	LR			
	comp=Z,3μm,20.0s,MS5.5								
ASF	**Jabal al Asfar**	**63.60**	**305**		P		**P**	**12 36 46.9**	**-0.2**
	comp=Z,4.3nm,0.6s,mb4.6,baz=334,slow=6.0,SNR=9.0								
ASF					LR	LR		13 03 26.7	
	comp=Z,1μm,21.0s,MS5.0,baz=190,slow=35								
TAU	**Tasmania Unive**	**63.79**	**141**		PFAKE			12 37 00.0	+12
TAU					LR	LR			
	comp=Z,6μm,20.0s,MS5.8								
ELZG	**Elazig**	**63.85**	**312**	*i*	P		**P**	**12 36 44.3**	**-4.3**
HNR	**Honiara**	**63.95**	**101**		P		**P**	**12 36 49.4**	**-0.3**
	comp=Z,29nm,0.3s,mb5.7,baz=104,slow=5.6,SNR=5.3								
HNR	**Honiara**	**63.95**	**101**	*e*	P		**P**	**12 36 49.3**	**-0.4**
HNR					pmax	pmax			
	comp=Z,472nm,1.2s,mb6.4								
HNR					MLR	MLR			
	comp=Z,3μm,22.0s,MS5.4								
HNR	**Honiara**	**63.95**	**101**	*e*	P		**P**	**12 36 49.3**	**-0.5**
	comp=Z,472nm,1.2s,mb6.4								
HNR					LR	LR			
	comp=Z,3μm,22.0s,MS5.4								
ATAB	**Bozova**	**64.03**	**311**	*i*	P		**P**	**12 36 51.5**	**+1.7**
MALT	**Malatya**	**64.20**	**312**		PFAKE			12 37 00.0	+9.0
MALT					LR	LR			
	comp=Z,4μm,21.0s,MS5.6								
KEMA	**Kemaliye**	**64.47**	**313**	*i*	P		**P**	**12 36 51.1**	**-1.6**
GZT	**Gaziantep**	**64.55**	**311**	*i*	P		**P**	**12 36 52.9**	**-0.3**
AKCD	**Akcadag**	**64.58**	**312**	*i*	P		**P**	**12 36 50.1**	**-3.3**
EIL	**Elat**	**64.62**	**302**		P		**P**	**12 36 53.8**	**-0.1**
	comp=Z,16nm,0.7s,mb5.2,baz=268,slow=2.3,SNR=13								
EIL					LR	LR		13 04 57.1	
	comp=Z,8μm,18.9s,MS5.9,baz=298,slow=36								
YAK	**Yakutsk**	**64.65**	**16**	*i*	P		**P**	**12 36 52.6**	**-0.8**
YAK				*e*	*PP		pP	12 37 02.3	-1.3
YAK				*e*				12 37 26.1	
YAK				*e*				12 39 13.4	
YAK				*e*	PPP			12 40 45.3	
YAK				*e*	S		**S**	**12 45 30.5**	**-0.5**
YAK				*e*	*SS		sS	12 45 47.6	-0.1
YAK				*e*				12 46 41.3	
YAK				*e*	SS		SS	12 49 40.4	-1.8
YAK					pmax	pmax			
	comp=E,36nm,1.6s								
YAK					pmax	pmax			
	comp=Z,120nm,0.9s,mb5.9								
YAK					pmax	pmax			
	comp=N,46nm,1.6s								
YAK					pmax	pmax			
	comp=Z,721nm,6.0s								
YAK					pmax	pmax			
	comp=N,396nm,6.0s								
YAK					pmax	pmax			
	comp=E,243nm,5.6s								
YAK					smax				
	comp=N,2μm,3.9s								
YAK					smax				
	comp=E,1μm,8.9s								
YAK					MLR	MLR			
	comp=Z,21μm,17.0s,MS6.4								
YAK					MLR	MLR			
	comp=E,13μm,18.0s,MS6.3								
YAK					MLR	MLR			
	comp=N,10μm,14.0s,MS6.3								
YAK	**Yakutsk**	**64.65**	**16**	*e*	P		**P**	**12 36 52.6**	**-0.8**
	comp=N,130nm,0.6s,mb6.1								
YAK					epP		pP	12 37 01.1	-2.5
YAK					LR	LR			
	comp=Z,13μm,22.0s,MS6.1								
KUZU	**Kuzuini**	**64.74**	**310**	*i*	P		**P**	**12 36 49.5**	**-5.1**
MMAI	**Mount Meron Ar**	**65.03**	**306**		P		**P**	**12 36 57.0**	**+0.5**
	comp=Z,8.8nm,0.6s,mb4.9,baz=95,slow=7.6,SNR=22								
BHL	**Bhannes**	**65.06**	**307**	*e*	P		**P**	**12 37 00.5**	**+3.9**
SOKR	**Solikamsk**	**65.08**	**339**c	*i*	P		**P**	**12 36 56.5**	**+0.3**
SOKR					S		S	12 45 34.3	-2.0
SOKR					SS		SS	12 49 50.5	+1.6
SOKR					pmax	pmax			
	comp=Z,40nm,0.7s,mb5.6								
SOKR					MLR	MLR			
	comp=Z,10μm,21.0s,MS6.0								
SOC	**Sochi**	**65.16**	**318**	*e*	P		**P**	**12 36 57.4**	**+0.3**
SOC				*e*	*PP		pP	12 37 05.7	-1.5
SOC				*e*				12 37 29.9	
SOC				*e*				12 39 16.1	
SOC				*e*	PPP			12 40 58.4	
SOC				*e*	S		S	12 45 33.6	-4.3
SOC				*e*	*SS		sS	12 45 51.0	-3.6
SOC				*e*				12 46 47.8	
SOC				*e*	SS		SS	12 49 52.1	+1.2
SOC					pmax	pmax			
	comp=Z,52nm,0.9s,mb5.6								
SOC					pmax	pmax			
	comp=Z,541nm,7.4s								
SOC					MLR	MLR			
	comp=Z,950nm,15.0s,MS5.1								
ANDN	**Andirin**	**65.54**	**311**	*i*	P		**P**	**12 37 00.8**	**+1.1**
TOKA	**Tokat**	**66.28**	**313**	*i*	P		**P**	**12 37 01.8**	**-2.6**
AVNT	**Avonos**	**67.01**	**311**	*i*	P		**P**	**12 37 07.0**	**-2.1**
VRHR	**Novokhopersk**	**67.13**	**326**	*e*	P		**P**	**12 37 10.3**	**+0.7**
VRHR				*i*	*PP		pP	12 37 18.2	-1.6
VRHR				*e*				12 39 36.8	
VRHR				*e*	S		S	12 45 59.1	-2.5
VRHR					pmax	pmax			
	comp=Z,20nm,0.5s,mb5.4								
VRHR					pmax	pmax			
	comp=N,6.0nm,0.3s								
VRHR					pmax	pmax			
	comp=E,20nm,0.5s								
VRHR					pmax	pmax			
	comp=Z,400nm,3.0s								
VRHR					pmax	pmax			
	comp=N,390nm,3.7s								
VRHR					pmax	pmax			
	comp=E,380nm,3.7s								
VRHR					smax				
	comp=N,780nm,3.6s								
VRHR					smax				
	comp=Z,120nm,1.3s								
VRHR					smax				
	comp=E,530nm,2.6s								
VRHR					MLR	MLR			
	comp=Z,7μm,20.0s,MS5.9								
VRHR					MLR	MLR			
	comp=N,4μm,19.0s,MS6.0								
VRHR					MLR	MLR			
	comp=E,10μm,23.0s,MS6.0								
ANN	**Anapa**	**67.14**	**318**	*e*	P		**P**	**12 37 07.1**	**-2.7**
ANN				*e*	S		S	12 45 58.2	-3.7
ANN					pmax	pmax			
	comp=Z,60nm,1.6s,mb5.4								
ANN					MLR	MLR			
	comp=N,6μm,19.0s,MS5.8								
ANN					MLR	MLR			
	comp=E,2μm,19.0s,MS5.8								
ANN					MLR	MLR			
	comp=Z,3μm,19.0s,MS5.5								
CSS	**Prodhromos**	**67.18**	**307**	*e*	P		**P**	**12 37 10.1**	**-0.2**
	comp=Z,81nm,1.3s,mb5.6								
CTKT	**Corum**	**67.60**	**313**	*i*	P		**P**	**12 37 12.1**	**-0.7**
BR131	**Keskin Array S**	**68.19**	**312**	*e*	P		**P**	**12 37 15.4**	**-1.1**
	comp=Z,22nm,0.8s,mb5.2								
BR131					LR	LR			
	comp=Z,3μm,22.0s,MS5.4								
BRTR	**Keskin Array B**	**68.19**	**312**		P		**P**	**12 37 15.4**	**-1.1**
	comp=Z,11nm,0.7s,mb5.0,baz=133,slow=6.7,SNR=24								
BRTR					LR	LR		13 08 06.0	
	comp=Z,3μm,22.0s,MS5.5,baz=219,slow=37								
BRTR	**Keskin Array B**	**68.19**	**312**	*i*	P		**P**	**12 37 15.5**	**-1.0**
BRTR					pmax	pmax			
	comp=Z,11nm,0.7s								
BRTR	**Keskin Array B**	**68.19**	**312**		P		**P**	**12 37 15.4**	**-1.1**
BRTR					LR	LR		13 08 06.0	
VORD	**Divnogorie**	**68.40**	**325**	*e*	P		**P**	**12 37 18.9**	**+1.3**
VORD				*e*	S		S	12 46 10.3	-6.5
VORD				*e*	PPS			12 46 46.1	
VORD					pmax	pmax			
	comp=Z,30nm,0.6s,mb5.5								
VORD					pmax	pmax			
	comp=N,50nm,0.7s								
VORD					pmax	pmax			
	comp=E,20nm,0.6s								
VORD					smax				
	comp=E,700nm,4.5s								
VORD					smax				
	comp=Z,270nm,4.1s								
VORD					smax				
	comp=N,620nm,4.7s								
VORD					MLR	MLR			
	comp=N,4μm,21.0s,MS5.8								
VORD					MLR	MLR			
	comp=E,4μm,21.0s,MS5.8								
VORD					MLR	MLR			
	comp=Z,5μm,21.0s,MS5.7								
ELDT	**Eldivan**	**68.56**	**313**	*i*	P		**P**	**12 37 15.8**	**-3.0**
VSR	**Storozhevoye**	**68.58**	**325**	*e*	P		**P**	**12 37 18.8**	**+0.1**
VSR				*e*	*PP		pP	12 37 27.3	-1.6
VSR				*e*	S		S	12 46 12.9	-6.0
VSR					pmax	pmax			
	comp=N,6.0nm,0.6s								
VSR					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8								
VSR					pmax	pmax			
	comp=E,7.0nm,0.5s								
VSR					smax				
	comp=N,450nm,4.8s								
VSR					smax				
	comp=Z,90nm,3.2s								
VSR					smax				
	comp=E,290nm,4.8s								
VSR					MLR	MLR			
	comp=Z,1μm,21.0s,MS5.1								
VSR					MLR	MLR			
	comp=N,2μm,20.0s,MS5.6								
VSR					MLR	MLR			
	comp=E,3μm,20.0s,MS5.6								
VOR	**Voronezh**	**68.78**	**326**	*e*	P		**P**	**12 37 21.0**	**+1.1**
VOR				*e*	S		S	12 46 22.0	+0.7
VOR					pmax	pmax			
	comp=Z,240nm,1.8s,mb5.8								
BALT	**Daday**	**68.88**	**314**	*i*	P		**P**	**12 37 19.9**	**-0.9**
CASY	**Casey**	**68.96**	**174**		PFAKE			12 37 30.0	+9.3
CASY					LR	LR			
	comp=Z,7μm,19.0s,MS5.9								
SKR	**Severo-Kuril's**	**69.35**	**36**	*e*	P		**P**	**12 37 23.0**	**-0.5**
SKR				*e*	pP		pP	12 37 32.5	-1.2
SKR				*e*			pP	12 37 34.0	+0.3
SKR				*e*	S		S	12 46 52.0	+24
SKR				*e*				12 47 18.0	
SKR					pmax	pmax			
	comp=Z,5μm,6.0s								
SKR					pmax	pmax			
	comp=Z,90nm,0.7s,mb5.8								
SKR					MLR	MLR			
	comp=Z,8μm,16.0s,MS6.1								
SKR					MLR	MLR			
	comp=N,5μm,14.0s,MS6.1								
SKR					MLR	MLR			
	comp=E,5μm,14.0s,MS6.1								
SIM	**Simferopol'**	**69.41**	**318**d	*e*	P		**P**	**12 37 23.6**	**-0.4**
SIM				*e*	S		S	12 46 23.5	-5.5
SIM					pmax	pmax			
	comp=Z,45nm,1.0s,mb5.3								
SIM					pmax	pmax			
	comp=Z,590nm,14.0s								
SGKT	**Sivrigoynuk**	**69.58**	**313**	*i*	P		**P**	**12 37 21.3**	**-3.9**
BOLV	**Bolvadin**	**69.94**	**311**	*i*	P		**P**	**12 37 26.2**	**-1.3**
LSZ	**Lusaka**	**69.98**	**253**	*e*	P		**P**	**12 37 27.9**	**-0.2**
LSZ				*e*	*PP		pP	12 37 38.1	-0.2
LSZ					pmax	pmax			
	comp=Z,58nm,1.5s,mb5.3								
LSZ					MLR	MLR			
	comp=Z,13μm,20.0s,MS6.2								
LSZ	**Lusaka**	**69.98**	**253**	*e*	P		**P**	**12 37 27.9**	**-0.2**
	comp=Z,58nm,1.5s,mb5.3								
LSZ				*e*	pP		pP	12 37 38.1	-0.2
LSZ					LR	LR			
	comp=Z,13μm,20.0s,MS6.2								
ISP	**Isparta**	**70.07**	**310**		P		**P**	**12 37 29.7**	**+1.4**
ISP	**Isparta**	**70.07**	**310**	‖	*P		**P**	**12 37 29.1**	**+0.8**
ESKT	**Eskisehir**	**70.21**	**311**	*i*	P		**P**	**12 37 24.8**	**-4.3**
HENT	**Hendek**	**70.50**	**313**	*i*	P		**P**	**12 37 28.5**	**-2.3**
BORA	**Eskisehir**	**70.60**	**312**	*i*	P		**P**	**12 37 30.0**	**-1.4**
KHAL	**Karahalli**	**70.97**	**310**	*i*	P		**P**	**12 37 31.0**	**-2.8**
GDZ	**Gediz**	**71.14**	**311**	*i*	P		**P**	**12 37 33.9**	**-0.9**
PETK	**Petropavlovsk-**	**71.20**	**34**		P		**P**	**12 37 34.1**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.6,baz=310,slow=1.2,SNR=19								
PETK					LR	LR		13 12 51.1	
	comp=Z,7μm,18.0s,MS5.9,baz=249,slow=39								
TURN	**Turunc**	**71.35**	**308**	*i*	P		**P**	**12 37 37.2**	**+1.2**
ARG	**Arkhangelos**	**71.59**	**307**	*e*	P		**P**	**12 37 37.0**	**-0.5**
OBN	**Obninsk**	**71.62**	**328**‖	*e*	P		**P**	**12 37 36.2**	**-1.1**
OBN				*e*	pP		pP	12 37 45.8	-1.7
OBN				*i*	S		S	12 46 51.7	-2.7
OBN				*e*				12 47 44.2	
OBN					pmax	pmax			
	comp=Z,30nm,0.6s,mb5.4								
OBN					MLR	MLR			
	comp=Z,5μm,19.0s,MS5.8								
OBN	**Obninsk**	**71.62**	**328**	*e*	P		**P**	**12 37 36.5**	**-0.8**
	comp=Z,67nm,0.8s,mb5.6								
OBN					LR	LR			
	comp=Z,5

DZM	**Mont Dzumac**	**72.03**	**114**	*e*P		pP	12 37 49.9	-0.8
	comp=Z,50nm,1.3s								
KARP	**Karpathos**	**72.24**	**307**	*e*P		**P**	**12 37 40.5**	**-0.9**
BDRM	**Kayabasi**	**72.29**	**308**	*i* P		**P**	**12 37 46.9**	**+5.2**
TIXI	**Tiksi**	**72.35**	**10**⇑	*e*P		**P**	**12 37 39.9**	**-1.5**
TIXI					pmax	pmax			
	comp=Z,35nm,0.8s,mb5.3								
TIXI	**Tiksi**	**72.35**	**10**	*e*P		**P**	**12 37 40.3**	**-1.1**
	comp=Z,35nm,0.6s,mb5.5								
TIXI					LR	LR			
	comp=Z,9µm,19.0s,MS6.1								
GCAM	**G?zelcaml?**	**72.58**	**309**	*i* P		**P**	**12 37 42.6**	**-0.8**
KLMR	**Klimovskoe**	**72.74**	**334**	*e*P		**P**	**12 37 42.4**	**-1.5**
KLMR					pmax	pmax			
	comp=Z,155nm,1.7s,mb5.7								
BLCB	**Balcova**	**72.86**	**310**	P		**P**	**12 37 44.3**	**-0.8**
TLCR		**73.08**	**317**⇑	*i*P		**P**	**12 37 46.2**	**0.0**
TLCR		**73.08**	**317**⇑⇑	P		**P**	**12 37 46.2**	**0.0**
PSN	**Preselentsi**	**73.15**	**315**	*e*P		**P**	**12 37 55.4**	**+8.7**
TIRR	**Tirgusor**	**73.17**	**316**	P		**P**	**12 37 46.1**	**-0.7**
TIRR	**Tirgusor**	**73.17**	**316**	*i*P		**P**	**12 37 45.9**	**-0.9**
TIRR	**Tirgusor**	**73.17**	**316**	*e*P		**P**	**12 37 46.0**	**-0.8**
	comp=Z,102nm,1.3s,mb5.6								
SART	**Tekirdag**	**73.22**	**312**	*i* P		**P**	**12 37 42.6**	**-4.5**
NPS	**Neapolis**	**73.44**	**306**	*e*P		**P**	**12 37 50.0**	**+1.5**
MAW	**Mawson**	**73.51**	**193**	LR		LR	13 03 32.5	
	comp=Z,5µm,21.7s,MS5.8,baz=36,slow=30								
KIS	**Kishinev**	**73.53**	**319**	*e*PcP		PcP	12 38 06.0	+1.3
KIS				*e*S		S	12 47 05.0	-12
HARR	**Harsova**	**73.56**	**316**	*i*P		**P**	**12 37 48.5**	**-0.6**
HARR	**Harsova**	**73.56**	**316**	P		**P**	**12 37 48.8**	**-0.3**
PRD	**Provadia**	**73.59**	**314**	*e*P		**P**	**12 37 57.0**	**+7.7**
PRK	**Paraskevi**	**73.62**	**310**	*e*P		pP	12 37 59.0	-0.8
LBTB	**Lobatse**	**73.93**	**243**	*e*P		**P**	**12 37 51.3**	**-0.3**
LBTB				*e**PP		pP	12 38 02.1	+0.2
LBTB					pmax	pmax			
	comp=Z,85nm,1.3s,mb5.5								
LBTB					MLR	MLR			
	comp=Z,13µm,21.0s,MS6.2								
LBTB	**Lobatse**	**73.93**	**243**	*e*P		**P**	**12 37 51.3**	**-0.3**
	comp=Z,85nm,1.3s,mb5.5								
LBTB				*e*pP		pP	12 38 02.1	+0.2
LBTB					LR	LR			
	comp=Z,13µm,21.0s,MS6.2								
JMB	**Yambol**	**74.02**	**314**	P		**P**	**12 37 56.1**	**+4.3**
JMB	**Yambol**	**74.02**	**314**	*e*P		**P**	**12 38 00.2**	**+8.4**
ALN	**Alexandroupoli**	**74.10**	**312**	P		**P**	**12 37 51.1**	**-1.2**
AKASG	**Malin Array Be**	**74.28**	**322**	P		**P**	**12 37 51.5**	**-1.6**
	comp=Z,24nm,0.7s,mb5.2,baz=92,slow=5.1,SNR=30								
AKASG					LR	LR	13 17 10.7		
	comp=Z,3µm,20.3s,MS5.5,baz=140,slow=41								
KIEV	**Kiev**	**74.28**	**322**	*e*P		**P**	**12 37 51.9**	**-1.3**
KIEV					pmax	pmax			
	comp=Z,41nm,0.8s,mb5.4								
KIEV					MLR	MLR			
	comp=Z,3µm,21.0s,MS5.6								
KIEV	**Kiev**	**74.28**	**322**	*e*P		**P**	**12 37 51.9**	**-1.3**
	comp=Z,41nm,0.8s,mb5.4								
KIEV					LR	LR			
	comp=Z,3µm,21.0s,MS5.6								
VAM	**Vamos**	**74.60**	**306**	*e*P		**P**	**12 37 55.0**	**-0.3**
SZH	**Strazhica**	**74.66**	**314**	*e*P		**P**	**12 37 54.2**	**-1.3**
VRI	**Vrincioaia**	**74.66**	**317**⇑	*i*P		**P**	**12 37 55.8**	**+0.3**
VRI	**Vrincioaia**	**74.66**	**317**	P		**P**	**12 37 55.5**	**0.0**
DIM	**Dimitrovgrad**	**74.70**	**313**	*e*P		**P**	**12 37 57.0**	**+1.2**
PLOR	**Plostina**	**74.71**	**317**⇑	*i*P		**P**	**12 37 58.7**	**+3.0**
KDZ	**Kurdzhali**	**74.71**	**313**	*e*P		**P**	**12 38 03.4**	**+7.5**
BOSA	**Boshof**	**74.88**	**240**	P		**P**	**12 37 56.4**	**-0.7**
	comp=Z,7.6nm,0.8s,mb4.7,baz=90,slow=4.5,SNR=17								
BOSA					LR	LR	13 07 48.3		
	comp=Z,8µm,19.0s,MS6.0,baz=61,slow=33								
BOSA	**Boshof**	**74.88**	**240**	*e*P		**P**	**12 37 57.1**	**0.0**
BOSA				*e**PP		pP	12 38 07.5	+0.1
BOSA					pmax	pmax			
	comp=Z,151nm,1.6s,mb5.7								
BOSA					MLR	MLR			
	comp=Z,8µm,19.0s,MS6.0								
BOSA	**Boshof**	**74.88**	**240**	*e*P		**P**	**12 37 57.1**	**0.0**
	comp=Z,151nm,1.6s,mb5.7								
BOSA				*e*pP		pP	12 38 07.5	+0.1
BOSA					LR	LR			
	comp=Z,8µm,19.0s,MS6.0								
MLR	**Muntele Rosu**	**75.11**	**317**	P		**P**	**12 37 57.8**	**-0.3**
	comp=Z,12nm,0.8s,mb4.9,baz=98,slow=2.5,SNR=15								
DRV	**Dumont d'Urvil**	**75.15**	**164**	P		**P**	**12 38 03.0**	**+5.2**
DRV				S		S	12 47 35.0	+1.1
DRV				SS		SS	12 52 25.0	+1.4
DRV				L			12 57 00.0	
DRV				R			13 01 00.0	
RZN	**Rozhen**	**75.24**	**313**	*e*P		**P**	**12 38 00.4**	**+1.5**
PLD	**Plovdiv**	**75.32**	**313**	P		**P**	**12 37 53.9**	**-5.5**
PAIG	**Paliouri**	**75.71**	**311**	P		**P**	**12 37 59.8**	**-1.8**
VOIR		**75.72**	**316**⇑	*i*P		**P**	**12 38 00.6**	**-1.0**
VOIR		**75.72**	**316**	P		**P**	**12 38 02.5**	**+0.9**
MMB	**Musomiste**	**75.95**	**312**	*e*P		**P**	**12 38 01.5**	**-1.4**
PLG	**Polygyros**	**75.96**	**311**	P		**P**	**12 37 59.5**	**-3.5**
LTK	**Loutraki**	**75.96**	**309**	P		**P**	**12 38 07.7**	**+4.6**
BURAR	**Bucovina Array**	**76.06**	**319**	*i*P		**P**	**12 38 04.3**	**+0.8**
BURAR	**Bucovina Array**	**76.06**	**319**	P		**P**	**12 38 04.1**	**+0.6**
BUR08	**Bucovina Ar. S**	**76.08**	**319**	*e*P		**P**	**12 38 04.0**	**+0.4**
BUR08				*e*pP		pP	12 38 14.3	+0.4
SOH	**Sokhos**	**76.10**	**311**	P		**P**	**12 38 01.7**	**-2.1**
TARA	**Tarawa**	**76.10**	**89**	PFAKE			12 38 10.0	+5.6
TARA					LR	LR			
	comp=Z,3µm,20.0s,MS5.6								
HORT	**Hortiatis**	**76.25**	**311**	P		**P**	**12 38 01.8**	**-2.9**
KKB	**Krupnik**	**76.47**	**312**	*e*P		**P**	**12 38 06.4**	**+0.5**
PUL	**Pulkovo**	**76.49**	**331**	*e*P		**P**	**12 38 06.5**	**+0.9**
KNT	**Kendrikon**	**76.49**	**312**	P		**P**	**12 38 12.7**	**+6.6**
VTS	**Vitosha**	**76.50**	**313**	P		pP	12 38 18.4	+2.0
VTS	**Vitosha**	**76.50**	**313**	*e*P		sP	12 38 21.1	+0.9
AGG	**Agios Georgios**	**76.60**	**310**	P		**P**	**12 38 00.8**	**-5.9**
LIT	**Litokhoron**	**76.64**	**311**	P		**P**	**12 38 03.4**	**-3.5**
ITM	**Ithomi**	**76.67**	**308**	*e*P		**P**	**12 38 09.0**	**+1.9**
VAY	**Valandovo**	**76.76**	**312**	P		**P**	**12 38 04.7**	**-2.9**
PYL	**PYLOS**	**76.78**	**307**	P		**P**	**12 38 05.2**	**-2.5**
GRG	**Griva**	**76.83**	**311**	P		**P**	**12 38 03.6**	**-4.4**
THL	**Klokotos Trika**	**76.92**	**310**	P		**P**	**12 38 05.8**	**-2.7**
EVR	**Evrytania**	**76.99**	**309**	*e*P		**P**	**12 38 11.0**	**+2.1**
JOF	**Joensuu**	**77.14**	**335**	*e*p		**P**	**12 38 07.6**	**-1.6**
	comp=Z,19nm,0.7s,mb5.1								
JOF	**Joensuu**	**77.14**	**335**	*e*P		**P**	**12 38 07.6**	**-1.6**
JOF					pmax	pmax			
	comp=Z,19nm,0.7s,mb5.1								
GZR	**Gura Zlata**	**77.28**	**316**⇑	*i*P		**P**	**12 38 12.4**	**+2.0**
GZR	**Gura Zlata**	**77.28**	**316**⇑⇑	P		**P**	**12 38 12.4**	**+2.0**
LVV	**L'vov**	**77.29**	**321**	*e*P		**P**	**12 38 10.3**	**-0.1**
LVV				*e*		pP	12 38 21.3	+0.6
LVV				*e*			12 41 10.1	
LVV				*e*S		S	12 47 54.1	-4.0
LVV				*e*SS		SS	12 53 00.7	+4.0
LVV	**L'vov**	**77.29**	**321**	*e*P		**P**	**12 38 10.0**	**-0.4**
DRGR		**77.57**	**317**⇓	*i*P		**P**	**12 38 12.2**	**+0.2**
DRGR		**77.57**	**317**	P		**P**	**12 38 14.1**	**+2.1**
FNA	**Florina**	**77.58**	**311**	P		**P**	**12 38 09.8**	**-2.4**
LVZ	**Lovozero**	**77.83**	**340**	P		**P**	**12 38 12.8**	**-0.2**
	comp=Z,585nm,0.6s,mb6.7,SNR=19								
VLS	**Valsamata**	**77.84**	**308**	*e*P		**P**	**12 38 11.5**	**-2.2**
VSU	**Vasula**	**77.84**	**330**	*e*P		**P**	**12 38 15.1**	**+1.8**
VSU	**Vasula**	**77.84**	**330**	*e*P		**P**	**12 38 15.2**	**+1.9**
TRPA	**Tarpa**	**77.93**	**319**	*i*P		**P**	**12 38 13.9**	**-0.1**
KWP	**Kalwaria**	**78.10**	**320**	*e*P		**P**	**12 38 14.4**	**-0.4**
KWP	**Kalwaria**	**78.10**	**320**	*e*P		**P**	**12 38 14.4**	**-0.5**
APA	**Apatity**	**78.12**	**339**	*i*P		**P**	**12 38 15.0**	**+0.4**
APA				*i*		pP	12 38 26.4	+1.4
APA				*i* S		S	12 48 06.0	-0.4
APA				*e*PS			12 48 46.0	
APA					pmax	pmax			
	comp=Z,36nm,0.8s,mb5.3								
APA					pmax	pmax			
	comp=Z,2µm,5.0s								
APA					MLR	MLR			
	comp=Z,7µm,20.0s,MS6.0								
BZS	**Buzias**	**78.12**	**316**	⇑P		**P**	**12 38 16.1**	**+1.0**
UZH	**Uzhgorod**	**78.18**	**319**	*e*P		**P**	**12 38 19.5**	**+4.2**
UZH				*i*			12 38 26.0	
UZH				*e*			12 41 21.0	
UZH				*i* S		S	12 48 10.2	+2.4
UZH				*i*			12 48 22.0	
UZH				*e*SS		SS	12 53 08.0	-2.1
UZH	**Uzhgorod**	**78.18**	**319**	*e*P		**P**	**12 38 18.0**	**+2.7**
KOLS	**Kolonicke sedl**	**78.25**	**320**	*i* P		**P**	**12 38 14.9**	**-0.8**
KEK	**Kerkira**	**78.64**	**310**	*e*P		**P**	**12 38 20.0**	**+1.9**
SUW	**Suwalki**	**78.68**	**325**	*e*P		**P**	**12 38 17.2**	**-0.8**
SUW	**Suwalki**	**78.68**	**325**	*e*P		**P**	**12 38 17.2**	**-0.8**
CRVS	**Cervenica-Dubn**	**78.77**	**319**	*i* P		**P**	**12 38 18.1**	**-0.5**
CRVS					pmax	pmax			
	comp=Z,61nm,1.4s,mb5.3								
CRVS	**Cervenica-Dubn**	**78.77**	**319**	*i* P		**P**	**12 38 18.1**	**-0.5**
	comp=Z,61nm,1.4s,mb5.3								
CRVS				*e*S		S	12 48 04.5	-10
TIR	**Tirane**	**78.78**	**312**	P		**P**	**12 38 15.2**	**-3.6**
TIR					pmax	pmax			
	comp=Z,34nm,1.0s,mb5.2								
TIR					MLR	MLR			
	comp=Z,3µm,21.0s,MS5.5								
TIR	**Tirane**	**78.78**	**312**	P		**P**	**12 38 15.2**	**-3.6**
	comp=Z,34nm,1.0s,mb5.2								
TIR					LR	LR			
	comp=Z,3µm,21.0s,MS5.5								
PVY	**Plav**	**78.86**	**313**⇑	*i*P		**P**	**12 38 19.5**	**+0.3**
IVA	**Berane**	**78.95**	**313**	*e*P		**P**	**12 38 20.4**	**+0.7**
STHS	**Stebnicka Huta**	**79.00**	**320**	*i* P		**P**	**12 38 20.6**	**+0.8**
STHS					pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9								
STHS	**Stebnicka Huta**	**79.00**	**320**	*i* P		**P**	**12 38 20.6**	**+0.8**
	comp=Z,13nm,0.8s,mb4.9								
KAF	**Kangasniemi**	**79.08**	**333**	*e*p		**P**	**12 38 18.5**	**-1.5**
	comp=Z,46nm,0.6s,mb5.6,baz=104,slow=5.1								
KAF	**Kangasniemi**	**79.08**	**333**	*e*P		**P**	**12 38 18.5**	**-1.5**
KAF					pmax	pmax			
	comp=Z,46nm,0.6s,mb5.6								
ULC	**Ulcinj**	**79.31**	**312**	*e*P		**P**	**12 38 22.4**	**+0.7**
SUR	**Sutherland**	**79.32**	**237**	P		pP	12 38 32.0	-0.3
SNR=5.6									
SUR	**Sutherland**	**79.32**	**237**	*e*P		**P**	**12 38 25.8**	**+3.8**
	comp=Z,49nm,0.9s,mb5.4								
SUR					LR	LR			
	comp=Z,10µm,21.0s,MS6.1								
TTG	**Podgorica**	**79.36**	**313**⇑	*i*P		**P**	**12 38 22.6**	**+0.6**
PLE	**Pljevlja**	**79.38**	**314**⇑	*i*P		**P**	**12 38 21.9**	**-0.1**
NKY	**Niksic**	**79.60**	**313**⇑	*i*P		**P**	**12 38 23.7**	**+0.4**
BUM	**Brajici-Budva**	**79.61**	**312**⇑	*i*P		**P**	**12 38 24.2**	**+0.8**
PSZ	**Piszkesteto**	**79.65**	**318**	P		**P**	**12 38 25.5**	**+2.1**
PSZ	**Piszkesteto**	**79.65**	**318**⇑	*e*P		**P**	**12 38 23.1**	**-0.3**
PSZ	**Piszkesteto**	**79.65**	**318**⇓	*i*P		**P**	**12 38 23.3**	**-0.1**
BEL	**Belsk**	**79.69**	**322**	*e*P		**P**	**12 38 27.6**	**+4.0**
UPM	**Unac-Piva**	**79.71**	**313**⇑	*i*P		**P**	**12 38 22.3**	**-1.6**
HCY	**Herceg Novi**	**79.92**	**313**⇑	*i*P		**P**	**12 38 24.8**	**-0.2**
BRY	**Bratogost**	**79.94**	**313**	*e*P		**P**	**12 38 23.2**	**-1.9**
OJC	**Ojcow**	**80.05**	**321**	*e*P		**P**	**12 38 25.5**	**0.0**
OJC				*e*pP		pP	12 38 36.9	+1.0
OJC				*e*S		S	12 48 26.2	-1.4
OJC				*e*SKKSac		SKKSac	12 48 42.7	+0.3
OJC				L			13 18 57.3	
	comp=Z,4.3nm,20.9s								
OJC	**Ojcow**	**80.05**	**321**	*e*P		**P**	**12 38 25.5**	**0.0**
OJC				*e**PP		pP	12 38 36.9	+1.0
OJC				*e*S		S	12 48 26.2	-1.4
BUD	**Budapest**	**80.17**	**318**⇑	*e*P		**P**	**12 38 29.4**	**+3.2**
VYHS	**Vyhne**	**80.43**	**319**	*i* P		**P**	**12 38 29.2**	**+1.6**
VYHS					pmax	pmax			
	comp=Z,44nm,2.3s,mb5.0								
VYHS	**Vyhne**	**80.43**	**319**	*i* P		**P**	**12 38 29.2**	**+1.6**
	comp=Z,44nm,2.3s,mb5.0								
VYHS				*e*S		S	12 48 27.0	-4.6
BILL	**Bilibino**	**80.45**	**21**⇑	*i*P		**P**	**12 38 25.9**	**-1.4**
BILL				*i*		pP	12 38 36.3	-1.4
BILL				*i*			12 38 44.5	
BILL				*i*			12 41 35.5	
BILL				*i* S		S	12 48 31.3	+0.1
BILL					pmax	pmax			
	comp=Z,32nm,1.6s,mb5.0								
BILL					MLR	MLR			
	comp=Z,16µm,19.0s,MS6.4								
BILL	**Bilibino**	**80.45**	**21**	*e*P		**P**	**12 38 26.8**	**-0.6**
	comp=Z,179nm,1.8s,mb5.7								
BILL					LR	LR			
	comp=Z,9µm,21.0s,MS6.1								
TSUM	**Tsumeb**	**80.51**	**250**	*e*P		**P**	**12 38 29.0**	**+0.4**
	comp=Z,18nm,1.1s,mb4.9								
TSUM					LR	LR			
	comp=Z,4µm,19.0s,MS5.8								
STON	**Ston**	**80.56**	**313**	P		**P**	**12 38 29.9**	**+1.4**
STON	**Ston**	**80.56**	**313**	*i* P		**P**	**12 38 29.9**	**+1.4**
SYO	**Syowa Base**	**80.75**	**198**⇓	*e*P		**P**	**12 38 30.4**	**+1.5**
SYO	**Syowa Base**	**80.75**	**198**⇓	*i*pP		pP	12 38 37.6	-1.7
TIP	**Timpagrande**	**80.93**	**309**	*e*P		**P**	**12 38 30.7**	**+0.2**
	comp=Z,42nm,1.3s,mb5.2								
TIP					LR	LR			
	comp=Z,2µm,22.0s,MS5.5								
LTRZ	**Laterza**	**81.00**	**311**	P		**P**	**12 38 32.2**	**+1.3**
	comp=Z,29nm,1.2s,mb5.1								
OKC	**Ostrava-Krasne**	**81.05**	**320**	*e*P		**P**	**12 38 30.6**	**-0.3**
OKC				*e*x		x	12 38 39.9	
OKC				*e*S		S	12 48 38.4	+0.3
OKC					AMS	AMS	13 19 30.0		
	comp=Z,2µm,19.0s								
OKC	**Ostrava-Krasne**	**81.05**	**320**	*e*P		**P**	**12 38 30.6**	**-0.3**
OKC				*e*		pP	12 38 39.9	-1.4
OKC				*e*SKS			12 48 38.4	
KEV	**Kevo**	**81.10**	**341**	*e*P		**P**	**12 38 29.2**	**-1.6**
	comp=Z,27nm,0.7s,mb5.3								
KEV					LR	LR			
	comp=Z,6µm,20.0s,MS6.0								
MODS	**Modra-Piesok**	**81.44**	**318**	*e*P		**P**	**12 38 33.0**	**0.0**
MODS				*i* S		S	12 48 41.3	-0.9
ARCES	**ARCESS Array B**	**81.53**	**340**	P		**P**	**12 38 31.2**	**-1.9**
	comp=Z,26nm,0.7s,mb5.3,baz=99,slow=7.2,SNR=59								
ARCES					LR	LR	13 17 52.4		
	comp=Z,7µm,19.9s,MS6.0,baz=118,slow=38								
ARE0	**ARCESS Array S**	**81.53**	**340**	*e*P		**P**	**12 38 33.4**	**+0.3**
CEL	**Celeste**	**81.53**	**308**	*e*P		**P**	**12 38 35.7**	**+1.9**
	comp=Z,86nm,0.9s,mb5.7								
CEL					LR	LR			
	comp=Z,2µm,21.0s,MS5.4								
ZST	**Bratislava**	**81.54**	**318**	*e*P		**P**	**12 38 35.8**	**+2.3**
ZST					pmax	pmax			
	comp=Z,28nm,0.7s,mb5.3								
ZST	**Bratislava**	**81.54**	**318**	*e*P		**P**	**12 38 35.8**	**+2.3**
	comp=Z,28nm,0.7s,mb5.3								
PTRP	**Pietrapertosa**	**81.57**	**310**	P		**P**	**12 38 34.2**	**+0.3**
CUC	**Castrocucco**	**81.72**	**310**	*e*P		**P**	**12 38 34.9**	**+0.2**
	comp=Z,32nm,0.9s,mb5.3								
CUC					LR	LR			
	comp=Z,3µm,19.0s,MS5.6								
SISC	**Sisak**	**81.76**	**315**	P		**P**	**12 38 36.3**	**+1.5**
SISC	**Sisak**	**81.76**	**315**	*i* P		**P**	**12 38 36.3**	**+1.5**
SOP	**Sopron**	**81.85**	**318**⇑	*e*PcP		**P**	**12 38 30.4**	**-4.8**
VRAC	**Vranov**	**81.99**	**319**	P		**P**	**12 38 34.6**	**-1.4**
	comp=Z,4.6nm,0.8s,mb4.5,baz=41,slow=9.3,SNR=5.0								
VRAC	**Vranov**	**81.99**	**319**⇑	*i*P		**P**	**12 38 37.7**	**+1.8**
VRAC	**Vranov**	**81.99**	**319**	*e*P		**P**	**12 38 37.4**	**+1.5**
SGO	**Sicignano**	**82.14**	**310**	P		**P**	**12 38 38.8**	**+1.9**
	comp=Z,72nm,1.2s,mb5.5								
KTK1	**Kautokeino**	**82.17**	**340**	*e*P		**P**	**12 38 36.7**	**+0.3**
KTK1					AMS	AMS	13 21 23.9		
	comp=N,5µm,20.7s								
DPC	**Dobruska-Polom**	**82.28**	**320**	*e*P		**P**	**12 38 37.4**	**0.0**
DPC				*e*x		x	12 38 46.3	
DPC				*e*SKS			12 48 50.7	
DPC					AMS	AMS	13 20 50.0		
	comp=N,2µm,18.2s								
SNZO	**South Karori**	**82.34**	**132**	PFAKE			12 38 50.0	+12
SNZO					LR	LR			
	comp=Z,7µm,22.0s,MS6.0								
CONA	**Conrad Observa**	**82.34**	**318**⇑	*i*P		**P**	**12 38 37.1**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9,SNR=6.2								
CSNA	**Conrad Observa**	**82.34**	**318**⇑	*i*P		**P**	**12 38 37.2**	**-0.5**
	comp=Z,15nm,0.9s,mb4.9								
KSP	**Ksiaz**	**82.35**	**321**	*e*P		**P**	**12 38 37.3**	**-0.4**
KSP	**Ksiaz**	**82.35**	**321**	*e*P		**P**	**12 38 37.5**	**-0.2**
KSP				*e**PP		pP	12 38 46.8	-1.3
KSP				*e*S		S	12 48 49.2	-2.2
KSP	**Ksiaz**	**82.35**	**321**	*e*P		**P**	**12 38 37.5**	**-0.2**
KSP				*e*pP		pP	12 38 46.8	-1.3
KSP				*e*S		S	12 48 49.2	-2.2
KSP					LR	LR			
	comp=Z,6µm,21.4s,MS6.0								
CSSN	**Cassano Irpino**	**82.38**	**311**	P		**P**	**12 38 39.9**	**+1.8**
	comp=Z,67nm,1.0s,mb5.5								
WDD	**Wield Dalam**	**82.49**	**306**	PFAKE			12 38 50.0	+11
WDD					LR	LR			
	comp=Z,3µm,19.0s,MS5.7								
UPC	**Upice**	**82.49**	**321**	*e*P		**P**	**12 38 40.7**	**+2.2**
UPC				*e*x		x	12 38 47.4	
ARSA	**Arzberg**	**82.51**	**317**⇑	*i*P		**P**	**12 38 38.5**	**-0.2**
	comp=Z,30nm,0.9s,mb5.3,SNR=7.2								
VAE	**Valguarnera**	**82.66**	**307**	P		**P**	**12 38 40.7**	**+1.1**
	comp=Z,5.9nm,0.3s,mb5.1,baz=106,slow=19,SNR=2.2								
TREC	**Trest**	**82.71**	**319**	*e*P		**P**	**12 38 39.3**	**-0.4**
TREC				*e*x		x	12 38 48.1	
TREC				*e*SKS			12 48 55.9	
TREC					AMS	AMS	13 22 20.0		
	comp=Z,3µm,17.7s								
NVLJ	**Novalja**	**82.75**	**314**	P		**P**	**12 38 38.0**	**-1.9**
NVLJ	**Novalja**	**82.75**	**314**	*i* P		**P**	**12 38 38.0**	**-1.9**
SOKA	**Soboth**	**82.80**	**317**⇑	*i*P		**P**	**12 38 39.9**	**-0.2**
	comp=Z,49nm,1.2s,mb5.4								
FUNA	**Funafuti**	**82.81**	**99**	PFAKE			12 38 50.0	+9.1
FUNA					LR	LR			
	comp=Z,2µm,19.0s,MS5.6								
RNI2	**Rionero Sannit**	**83.09**	**312**	P		**P**	**12 38 43.4**	**+1.6**
PRU	**Pruhonice**	**83.39**	**320**	*e*P		**P**	**12 38 43.1**	**0.0**
PRU				*e*		pP	12 38 51.9	-1.7
PRU				*e*			12 49 02.1	
PRU				*e*			12 54 34.0	
PRU					MLR	MLR			
	comp=Z,3µm,20.9s,MS5.7								
PRU	**Pruhonice**	**83.39**	**320**	*e*P		**P**	**12 38 43.1**	**0.0**
PRU				*e*x		x	12 38 51.9	
PRU				*e*x		x	12 42 05.0	
PRU				*e*S		S	12 49 02.1	+0.1
PRU				*e*SS		SS	12 54 34.0	+6.3
PRU					AMS	AMS	13 21 40.0		
	comp=Z,3µm,20.9s								
MOA	**Molln**	**83.40**	**318**⇑	*i*P		**P**	**12 38 42.4**	**-0.9**
	comp=Z,16nm,0.8s,mb5.1								
PVCC	**Panska Ves**	**83.41**	**320**	*e*P		**P**	**12 38 42.9**	**-0.4**
PVCC				*e*x		x	12 38 53.3	
PVCC				*e*S		S	12 49 02.5	+0.2
PVCC					AMS	AMS	13 25 10.0		
	comp=Z,3µm,17.8s								
VOY	**Vojsko**	**83.54**	**316**	*e*(P)		**P**	**12 38 43.3**	**-0.7**
VOY				*e*			12 38 45.6	
VOY				*e*		pP	12 38 53.6	-0.8
VOY				*e*			12 39 07.0	
TERO	**Teramo**	**83.55**	**312**	P		**P**	**12 38 46.8**	**+2.7**
	comp=Z,48nm,1.2s,mb5.5								
AOI	**Ancona**	**83.60**	**313**	P		**P**	**12 38 46.1**	**+1.7**
	comp=Z,181nm,2.1s,mb5.8								
TRI	**Trieste**	**83.61**	**316**	*e*P		**P**	**12 38 43.5**	**-0.9**
TRI					pmax	pmax			
	comp=Z,22nm,0.9s,mb5.3								
TRI					MLR	MLR			
	comp=Z,2µm,20.0s,MS5.5								
TRI	**Trieste**	**83.61**	**316**	*e*P		**P**	**12 38 43.5**	**-0.9**
	comp=Z,22nm,0.9s,mb5.3								
TRI					LR	LR			
	comp=Z,2µm,20.0s,MS5.5								
BSD	**Bornholm Skovb**	**83.61**	**325**	*i* P		**P**	**12 38 43.6**	**-0.6**
BSD				*i* S		S	12 48 55.3	-8.8
BSD					pmax	pmax			
	comp=Z,30nm,0.9s,mb5.4								
BSD					MLR	MLR			
	comp=Z,3µm,18.0s,MS5.7								
BSD	**Bornholm Skovb**	**83.61**	**325**	*i* P		**P**	**12 38 43.6**	**-0.6**
	comp=Z,30nm,0.9s,mb5.4								
BSD				*i* S		S	12 48 55.3	-8.8
BSD									
	comp=

WET Wettzell 84.41 319 *e*P P **12 38 47.7 -0.7**
WET pmax pmax
comp=Z,31nm,1.0s,mb5.4
WET Wettzell 84.41 319 *e*P P **12 38 47.7 -0.7**
comp=Z,31nm,1.0s,mb5.4
CLL Collm 84.46 321 *e*P P **12 38 48.0 -0.6**
CLL *e**PP pP 12 38 58.0 -1.0
CLL *e*S S 12 49 09.0 -3.7
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CLL MLR MLR
comp=Z,2µm,20.6s,MS5.6
CLL Collm 84.46 321 *e*P P **12 38 48.1 -0.5**
comp=Z,30nm,1.2s,mb5.3
CLL Collm 84.46 321 *e*P P **12 38 48.0 -0.6**
CLL *i* Pmax 12 38 51.0
comp=Z,8.0nm,0.9s
CLL *e*pP pP 12 38 58.0 -1.0
CLL *e*sP sP 12 39 01.0 -1.8
CLL *e*x x 12 39 17.0
CLL *e*PP PP 12 42 12.0 +8.1
CLL *e*PPP 12 44 06.0
CLL *e*S S 12 49 13.0 +0.3
comp=N,3µm,24.7s
CLL *e*S S 12 49 13.0 +0.3
comp=E,500nm,20.5s
CLL *e*PS 12 50 06.0
CLL *e*SS SS 12 54 54.0 +11
CLL *e*SSS 12 58 14.0
CLL *e*SSSS 13 01 10.0
CLL LmV 13 26 00.0
comp=Z,2µm,20.6s
CLL Collm 84.46 321 *e*P P **12 38 48.0 -0.6**
comp=Z,8.0nm,0.9s,mb4.8
CLL *i* 12 38 51.0
CLL *e*pP pP 12 38 58.0 -1.0
CLL *e*S S 12 49 09.0 -3.7
CLL LR LR
comp=Z,2µm,20.6s,MS5.6
RGN Rugen 84.48 324 *e*P P **12 38 57.0 +8.3**
comp=Z,97nm,1.3s,mb5.8
BJO Bjornoya 84.65 345 *e*P P **12 38 54.1 +5.0**
BJO *e*S S 12 49 15.4 +1.5
BJO AMS AMS 13 21 06.0
comp=Z,6µm,21.6s,MS5.9
BJO1 Bjornoya 84.70 345 *e*P P **12 38 54.1 +4.8**
BJO1 LR LR
comp=Z,6µm,21.6s,MS5.9
HFS Hagfors 84.72 330 P P **12 38 50.9 +1.2**
comp=Z,9.6nm,0.8s,mb5.0,baz=100,slow=6.2,SNR=13
NKC Novy Kostel 84.75 320 *e*P P **12 38 48.5 -1.6**
NKC *ex* x 12 38 59.1
NKC *e*S S 12 49 16.5 +0.8
NKC AMS AMS 13 24 10.0
comp=Z,2µm,18.8s
NKC Novy Kostel 84.75 320 *e*P P **12 38 48.5 -1.6**
NKC *e* pP 12 38 59.1 -1.4
NKC *e*SKS 12 49 16.5
TANN Tannenbergstha 84.75 320 *e*P P **12 38 49.8 -0.3**
comp=Z,21nm,1.2s,mb5.1
ROTZ Rotzenmuhle 84.88 320 *e*P P **12 38 50.7 0.0**
comp=Z,29nm,0.9s,mb5.4
SFI Santa Sofia 84.88 314 P P **12 38 55.5 +4.6**
MANZ Manzenberg 84.95 320 *e*P P **12 38 51.0 -0.1**
comp=Z,64nm,1.1s,mb5.7
MOR8 Moi Rana 84.97 336 *e*P P **12 38 50.2 -0.6**
COP Copenhagen 85.06 326 *i* P P **12 38 53.1 +1.6**
COP *i* S S 12 49 18.7 +0.1
COP pmax pmax
comp=Z,21nm,0.9s,mb5.3
COP MLR MLR
comp=Z,2µm,19.0s,MS5.4
COP Copenhagen 85.06 326 *i* P P **12 38 53.1 +1.6**
comp=Z,21nm,0.9s,mb5.3
COP *i* S S 12 49 18.7 +0.1
COP
comp=Z,1µm,19.0s
CTI Castel Tesino 85.10 316 P P **12 38 52.1 +0.2**
WTTA Wattenberg 85.15 317 *i*P P **12 38 51.0 -1.2**
comp=Z,32nm,0.8s,mb5.5,SNR=7.5
WATA Walderalm 85.19 317 *i*P P **12 38 51.3 -1.1**
comp=Z,15nm,0.6s,mb5.3,SNR=9.4
MOX Moxa 85.30 320 *e*P P **12 38 52.7 -0.1**
comp=Z,55nm,1.8s,mb5.4
MOX
comp=Z,2µm,20.0s
MOX Moxa 85.30 320 *e*P P **12 38 52.7 -0.1**
MOX pmax pmax
comp=Z,55nm,1.8s,mb5.4
MOX MLR MLR
comp=Z,2µm,20.0s,MS5.4
MOX Moxa 85.30 320 *e*P P **12 38 52.4 -0.4**
comp=Z,22nm,1.4s,mb5.1
MIDW Midway 85.34 62 PFAKE 12 39 00.0 +6.4
MIDW LR LR
comp=Z,3µm,20.0s,MS5.7
FNVD Fontana Vidola 85.41 314 P P **12 38 57.6 +4.0**
comp=Z,212nm,2.0s,mb5.9
GRA1 Grafenberg Arr 85.51 319 *e*P P **12 38 53.8 -0.1**
comp=Z,50nm,0.9s,mb5.7
GRA1 *e*S S 12 49 24.9 +1.6
GRA1 *e*ScS ScS 12 49 31.4 -1.7
GRA1 *e*SS SS 12 54 59.6 +0.5
GRA1 *e*SSS 12 58 36.6
GRA1 LR LR
comp=Z,2µm,20.6s,MS5.5
GRF Grafenberg Arr 85.51 319 *e*P P **12 38 53.8 -0.1**
GRF *e*S S 12 49 24.9 +1.6
GRF *e*SS SS 12 54 59.6 +0.5
GRF pmax pmax
comp=Z,50nm,0.9s,mb5.7
GRF Grafenberg Arr 85.51 319 *e*P P **12 38 53.8 -0.1**
comp=Z,50nm,0.9s,mb5.7
GRF *e*S S 12 49 24.9 +1.6
GRF *e*ScS ScS 12 49 31.4 -1.7
GRF *e*SS SS 12 54 59.6 +0.5
GRF *e*SSS 12 58 36.6
GRF *e*L 13 23 51.4
comp=Z,2µm,20.6s
LOF Lofoten 85.52 338 *e*P P **12 38 56.0 +2.4**
LOF Lofoten 85.52 338 *e*P P **12 38 56.2 +2.7**
MOTA Moosalm 85.52 317 *i*P P **12 38 52.7 -1.3**
comp=Z,28nm,0.8s,mb5.5,SNR=9.0
RETA Reutte 85.75 317 *i*P P **12 38 54.3 -0.9**
comp=Z,38nm,0.8s,mb5.7,SNR=8.2
FETA Feichten 85.76 317 *i*P P **12 38 54.9 -0.3**
comp=Z,18nm,0.9s,mb5.3,SNR=9.6
NSS Namsos 85.86 334 *e*P P **12 38 54.1 -1.2**
NSS AMS AMS 13 25 28.8
comp=Z,4µm,20.8s,MS5.8
MABI Malga Bissina 85.89 316 P P **12 38 59.5 +3.6**
comp=Z,39nm,1.2s,mb5.5
VLC Villacollemand 85.94 314 PFAKE 12 39 10.0 +14
VLC LR LR
comp=Z,2µm,22.0s,MS5.6
SPITS Spitsbergen Ar 85.97 348 P P **12 38 56.8 +1.2**
comp=Z,22nm,0.7s,mb5.5,baz=343,slow=6.1,SNR=18
SPB4 Spitsbergen Ar 85.97 348 *e*P P **12 38 54.5 -1.2**
BRMO Bormio 86.00 316 P P **12 38 59.7 +3.3**
comp=Z,63nm,1.6s,mb5.6
NB2 NORSAR Subarra 86.00 331 P P **12 38 55.3 -0.8**
comp=Z,17nm,0.8s,mb5.3,baz=97,slow=5.1
NOA NORSAR Array B 86.00 331 P P **12 38 54.5 -1.6**
comp=Z,12nm,0.7s,mb5.2,baz=94,slow=5.1,SNR=30
NOA LR LR 13 22 02.2
comp=Z,6µm,20.4s,MS6.0,baz=100,slow=39
CLZ Clausthal 86.12 322 *e*P P **12 38 56.2 -0.7**
CLZ pmax pmax
comp=Z,36nm,1.3s,mb5.4
CLZ Clausthal 86.12 322 *e*P P **12 38 56.2 -0.7**
comp=Z,36nm,1.3s,mb5.4
NAO01 NORSAR Array S 86.15 331 *e*P P **12 38 56.8 0.0**
comp=Z,24nm,1.0s,mb5.4
NAO01 LR LR
comp=Z,7µm,19.0s,MS6.1
ADK Adak 86.19 38 PFAKE 12 39 10.0 +13
ADK LR LR
comp=Z,3µm,21.0s,MS5.6
BSEG Bad Segeberg 86.21 324 *e*P P **12 38 56.9 -0.4**
BSEG pmax pmax
comp=Z,58nm,1.2s,mb5.7
BSEG Bad Segeberg 86.21 324 *e*P P **12 38 56.9 -0.4**
comp=Z,58nm,1.2s,mb5.7
NRDL Niedersach Rie 86.30 322 *e*P P **12 38 57.5 -0.2**
comp=Z,49nm,1.2s,mb5.6
UBBA Unterbreizbach 86.33 321 *e*P P **12 38 57.9 0.0**
comp=Z,7.0nm,0.8s,mb4.9
DAVOX Davos/Dischmat 86.34 317 P P **12 38 58.4 +0.3**
comp=Z,30nm,0.7s,mb5.7,baz=104,slow=3.6,SNR=44
DAVA Damuels 86.35 317 *i*P P **12 38 57.9 -0.2**
comp=Z,55nm,0.9s,mb5.8
KEST Kesra 86.69 305 P P **12 39 01.6 +1.5**
comp=Z,5.2nm,1.0s,mb4.7,baz=351,slow=8.5,SNR=5.9
KEST LR LR 13 19 09.4
comp=Z,2µm,20.0s,MS5.4,baz=27,slow=37
TUE Stuetta 86.70 316 *e*P P **12 39 02.7 +2.9**
comp=Z,36nm,1.1s,mb5.5
TUE LR LR
comp=Z,3µm,19.0s,MS5.7
KONO Kongsberg 86.75 329 *e*P P **12 39 02.3 +2.5**
KONO *e* 12 49 34.8
KONO *e*SS SS 12 55 19.0 +2.3
KONO AMS AMS 13 23 52.2
comp=Z,4µm,20.9s,MS5.8
KONO Kongsberg 86.75 329 *e*P P **12 39 00.1 +0.3**
KONO Kongsberg 86.75 329 *e*P P **12 38 59.9 +0.1**
comp=Z,58nm,1.1s,mb5.7
KONO LR LR
comp=Z,5µm,20.0s,MS5.9
VNDA Vanda 86.81 169 P P **12 39 00.4 +0.6**
comp=Z,1.7nm,0.8s,mb4.3,baz=338,slow=3.1,SNR=5.1
VNDA LR LR 13 15 01.0
comp=Z,6µm,18.9s,MS6.0,baz=308,slow=34
VNDA Vanda 86.81 169 *e*P P **12 38 59.6 -0.2**
VNDA pmax pmax
comp=Z,28nm,1.3s
VNDA MLR MLR
comp=Z,6µm,19.0s
VNDA Vanda 86.81 169 *e*P P **12 38 59.6 -0.1**
comp=Z,28nm,1.3s,mb5.3
VNDA LR LR
comp=Z,6µm,19.0s,MS6.0
STU Stuttgart 86.82 319 *e*P P **12 39 01.1 +0.7**
STU *e**PP pP 12 39 10.8 -0.1
STU pmax pmax
comp=Z,12nm,0.6s,mb5.3
STU Stuttgart 86.82 319 *e*P P **12 39 01.1 +0.7**
comp=Z,16nm,0.6s,mb5.4
STU *e*pP pP 12 39 10.8 -0.1
KBS Kingsbay 86.93 349 *e*P P **12 39 01.2 +0.9**
KBS *e* 12 49 35.7
KBS AMS AMS 13 23 44.3
comp=Z,7µm,17.4s,MS6.1
PGF Pioggiola 86.94 312 *e*P P **12 39 00.2 -0.9**
comp=Z,183nm,1.5s,mb5.8
PGF Pioggiola 86.94 312 *e*P P **12 39 00.2 -0.9**
PGF pmax pmax
comp=Z,92nm,1.5s,mb5.8
PGF Pioggiola 86.94 312 *e*P P **12 39 00.2 -0.9**
comp=Z,92nm,1.5s,mb5.8
TOD Tromm 87.08 319 *e*P P **12 39 03.3 +1.6**
SPAK Spaichingen-Ko 87.09 318 *e*P P **12 39 03.3 +1.6**
TNS Taunus Mts 87.31 320 *e*P P **12 39 02.4 -0.4**
TNS pmax pmax
comp=Z,40nm,1.1s,mb5.6
TNS Taunus Mts 87.31 320 *e*P P **12 39 02.4 -0.4**
comp=Z,40nm,1.1s,mb5.6
BFO Black Forest 87.40 318 *e*P P **12 39 02.3 -0.9**
BFO pmax pmax
comp=Z,27nm,1.0s,mb5.4
BFO Black Forest 87.40 318 *e*P P **12 39 02.3 -0.9**
comp=Z,27nm,1.0s,mb5.4
FELD Feldberg im Sc 87.62 318 *e*P P **12 39 06.8 +2.5**
IBBN Ibbenburen 87.74 322 *e*P P **12 39 04.8 +0.1**
comp=Z,118nm,1.5s,mb5.9
LANF Langenberg 87.74 319 *e*P P **12 39 06.6 +1.8**
MOL Molde 87.78 332 AMS AMS 13 23 43.8
comp=Z,5µm,18.2s,MS6.0
SBA Scott Base 87.91 169 PFAKE 12 39 10.0 +4.9
SBA LR LR
comp=Z,5µm,19.0s,MS5.9
SBF Sospel 88.07 314 *e*P P **12 39 05.3 -1.2**
comp=Z,139nm,1.2s,mb5.8
SBF Sospel 88.07 314 *e*P P **12 39 05.3 -1.2**
SBF pmax pmax
comp=Z,69nm,1.2s,mb5.8
SBF Sospel 88.07 314 *e*P P **12 39 05.3 -1.2**
comp=Z,69nm,1.2s,mb5.8
CDF Champ du Feu 88.10 318 *e*P P **12 39 05.3 -1.3**
comp=Z,34nm,1.1s,mb5.2
CDF Champ du Feu 88.10 318 *e*P P **12 39 05.3 -1.3**
CDF pmax pmax
comp=Z,17nm,1.1s,mb5.2
CDF Champ du Feu 88.10 318 *e*P P **12 39 05.3 -1.3**
comp=Z,17nm,1.1s,mb5.2
ECH Echery 88.18 318 *e*P P **12 39 08.9 +2.0**
RUP Ruppelstein 88.22 319 *e*P P **12 39 06.3 -0.8**
CMAH Djebel Manchou 88.24 306 P pP 12 39 19.6 +1.6
WTSB Winterswijk 88.33 322 *e*P P **12 39 10.0 +2.5**
comp=Z,35nm,0.7s,mb5.7
HINF Hinteralfeld 88.39 318 *e*P P **12 39 07.2 -0.8**
LOMF Lomont 88.42 317 *e*P P **12 39 08.9 +0.8**
LPG La Plagne 88.52 315 *e*P P **12 39 08.0 -0.6**
comp=Z,89nm,1.1s,mb5.7
LPG La Plagne 88.52 315 *e*P P **12 39 08.0 -0.6**
LPG pmax pmax
comp=Z,44nm,1.1s,mb5.7
LPG La Plagne 88.52 315 *e*P P **12 39 08.0 -0.6**
comp=Z,44nm,1.1s,mb5.7
MBDF Montbardon 88.53 315 *e*P P **12 39 08.2 -0.5**
comp=Z,35nm,1.1s,mb5.3
MBDF Montbardon 88.53 315 *e*P P **12 39 08.2 -0.5**
MBDF pmax pmax
comp=Z,18nm,1.1s,mb5.3
MBDF Montbardon 88.53 315 *e*P P **12 39 08.2 -0.5**
comp=Z,18nm,1.1s,mb5.3
LPL La Plagne 88.54 315 *e*P P **12 39 09.0 +0.3**
comp=Z,67nm,0.9s,mb5.7
LPL La Plagne 88.54 315 *e*P P **12 39 09.0 +0.3**
LPL pmax pmax
comp=Z,33nm,0.9s,mb5.7
LPL La Plagne 88.54 315 *e*P P **12 39 09.0 +0.3**
comp=Z,33nm,0.9s,mb5.7
OG01 Vacheresse 88.55 316 *e*P P **12 39 10.5 +1.8**
BNI Bardonecchia 88.59 315 PFAKE 12 39 20.0 +11
BNI LR LR
comp=Z,3µm,22.0s,MS5.6
RSL Roselend 88.61 315 *e*P P **12 39 09.7 +0.7**
FRF La Foret Royal 88.65 313 *e*P P **12 39 08.5 -0.8**
comp=Z,149nm,1.4s,mb5.8
FRF La Foret Royal 88.65 313 *e*P P **12 39 08.5 -0.8**
FRF pmax pmax
comp=Z,75nm,1.4s,mb5.8
FRF La Foret Royal 88.65 313 *e*P P **12 39 08.5 -0.8**
comp=Z,75nm,1.4s,mb5.8
HAU Haudompre 88.73 318 *e*P P **12 39 08.3 -1.2**
comp=Z,62nm,0.9s,mb5.6
HAU *e*MLR MLR
comp=Z,3µm,21.2s,MS5.3
HAU Haudompre 88.73 318 *e*P P **12 39 08.3 -1.2**
HAU pmax pmax
comp=Z,31nm,0.9s,mb5.6
HAU MLR MLR
comp=Z,3µm,21.3s,MS5.6
HAU Haudompre 88.73 318 *e*P P **12 39 08.3 -1.2**
comp=Z,31nm,0.9s,mb5.6
HAU LR LR
comp=Z,3µm,21.3s,MS5.6
LMR La Mourre 88.76 313 *e*P P **12 39 08.9 -0.9**
comp=Z,142nm,1.4s,mb5.8
LMR La Mourre 88.76 313 *e*P P **12 39 08.9 -0.9**
LMR pmax pmax
comp=Z,71nm,1.4s,mb5.8
LMR La Mourre 88.76 313 *e*P P **12 39 08.9 -0.9**
comp=Z,71nm,1.4s,mb5.8
WLF Walferdange 88.81 319 P P **12 39 12.1 +2.2**
comp=Z,22nm,1.6s,mb5.2
WLF Walferdange 88.81 319 *e*P P **12 39 12.4 +2.5**
WLF pmax pmax
comp=Z,49nm,1.3s,mb5.7
WLF MLR MLR
comp=Z,2µm,19.0s,MS5.6
WLF Walferdange 88.81 319 *e*P P **12 39 12.4 +2.5**
comp=Z,49nm,1.3s,mb5.7
WLF LR LR
comp=Z,2µm,19.0s,MS5.6
MEM Membach 88.87 320 P P **12 39 10.5 +0.4**
comp=Z,26nm,1.3s,mb5.4
BER Bergen 88.89 330 *e*P P **12 39 10.9 +0.9**
BER *e*SKS 12 49 41.7
BER *e*SS SS 12 55 49.5 +1.6
BER AMS AMS 13 23 45.5
comp=Z,4µm,20.1s,MS5.8
HGN Heimansgroeve 88.91 321 *e*P P **12 39 11.2 +0.9**
comp=Z,19nm,2.5s,mb5.0
CABF La Chapelle 88.95 316 *e*P P **12 39 10.0 -0.6**
comp=Z,62nm,1.1s,mb5.6
CABF La Chapelle 88.95 316 *e*P P **12 39 10.0 -0.6**
CABF pmax pmax
comp=Z,31nm,1.1s,mb5.5
CABF La Chapelle 88.95 316 *e*P P **12 39 10.0 -0.6**
comp=Z,31nm,1.1s,mb5.5
THEF They Montfort 88.96 318 *e*P P **12 39 08.9 -1.7**
CASM Ain Smara 89.00 306 P pP 12 39 21.0 -0.6
CTEI Djebel Teioual 89.07 306 P pP 12 39 23.0 +1.1
ORIF Oris-en-Rattie 89.16 315 *e*P P **12 39 11.0 -0.6**
comp=Z,48nm,1.1s,mb5.4
ORIF *e*MLR MLR
comp=Z,2µm,21.5s,MS5.3
ORIF Oris-en-Rattie 89.16 315 *e*P P **12 39 11.0 -0.6**
ORIF pmax pmax
comp=Z,24nm,1.1s,mb5.4
ORIF Oris-en-Rattie 89.16 315 *e*P P **12 39 11.0 -0.6**
comp=Z,24nm,1.1s,mb5.4
BCLA Clavier 89.33 320 P P **12 39 13.8 +1.5**
comp=Z,25nm,1.6s,mb5.3
SMRF Simiane la Rot 89.41 314 *e*P P **12 39 12.6 -0.2**
DFRA Djebel Bou Aff 89.48 306 P pP 12 39 25.4 +1.6
MEZF Maizieres J'vi 89.58 318 *e*P P **12 39 12.8 -0.7**
comp=Z,212nm,1.7s,mb5.9
MEZF Maizieres J'vi 89.58 318 *e*P P **12 39 12.8 -0.7**
comp=Z,212nm,1.7s,mb6.2
GIVF Givet 89.65 320 *e*P P **12 39 13.2 -0.6**
comp=Z,70nm,1.2s,mb5.6
GIVF Givet 89.65 320 *e*P P **12 39 13.2 -0.6**
GIVF pmax pmax
comp=Z,35nm,1.2s,mb5.6
GIVF Givet 89.65 320 *e*P P **12 39 13.2 -0.6**
comp=Z,35nm,1.2s,mb5.6
DOU Dourbes 89.80 320 P P **12 39 14.7 +0.2**
UCC Uccle 89.91 321 P P **12 39 16.8 +1.8**
SNF Seneffe 89.97 320 P P **12 39 17.9 +2.6**
comp=Z,17nm,1.0s,mb5.3
VIVF Saint-Julien-l 90.02 315 *e*P P **12 39 14.9 -0.8**
comp=Z,41nm,1.1s,mb5.4
VIVF Saint-Julien-l 90.02 315 *e*P P **12 39 14.9 -0.8**
VIVF pmax pmax
comp=Z,21nm,1.1s,mb5.4
VIVF Saint-Julien-l 90.02 315 *e*P P **12 39 14.9 -0.8**
comp=Z,20nm,1.1s,mb5.4
BAIF Baives 90.05 320 *e*P P **12 39 15.4 -0.3**
comp=Z,97nm,0.9s,mb5.8
BAIF Baives 90.05 320 *e*P P **12 39 15.4 -0.3**
BAIF pmax pmax
comp=Z,48nm,0.9s,mb5.8
BAIF Baives 90.05 320 *e*P P **12 39 15.4 -0.3**
comp=Z,48nm,0.9s,mb5.8
NVL N'lazarevskaya 90.32 199 P pP 12 39 25.8 -1.2
NVL S S 12 50 02.8 -5.5
NVL pmax pmax
comp=Z,74nm,1.3s,mb5.9
MAIT Maitri 90.35 199 *e*P P **12 39 18.1 +1.5**
LOR Lormes 90.44 317 *e*P P **12 39 16.9 -0.7**
comp=Z,142nm,1.3s,mb5.8
LOR *e*MLR MLR
comp=Z,3µm,20.8s,MS5.4
LOR Lormes 90.44 317 *e*P P **12 39 16.9 -0.7**
LOR pmax pmax
comp=Z,71nm,1.3s,mb5.8
LOR MLR MLR
comp=Z,3µm,20.8s,MS5.7
LOR Lormes 90.44 317 *e*P P **12 39 16.9 -0.7**
comp=Z,71nm,1.3s,mb5.8
LOR LR LR
comp=Z,3µm,20.8s,MS5.7
SMF Signal de Mont 90.50 317 *e*P P **12 39 16.9 -0.9**
comp=Z,94nm,1.2s,mb5.7
SMF Signal de Mont 90.50 317 *e*P P **12 39 16.9 -0.9**
SMF pmax pmax
comp=Z,47nm,1.2s,mb5.7
SMF Signal de Mont 90.50 317 *e*P P **12 39 16.9 -0.9**
comp=Z,47nm,1.2s,mb5.7
LASF Ste Croix 90.64 314 *e*P P **12 39 18.3 -0.3**
comp=Z,116nm,1.4s,mb5.7
PLDF La Plantade 90.69 316 *e*P P **12 39 19.6 +0.8**
SSF Saint Saulge 90.70 317 *e*P P **12 39 18.2 -0.6**
comp=Z,105nm,1.5s,mb5.7
SSF Saint Saulge 90.70 317 *e*P P **12 39 18.2 -0.6**
SSF pmax pmax
comp=Z,53nm,1.5s,mb5.7
SSF Saint Saulge 90.70 317 *e*P P **12 39 18.2 -0.6**
comp=Z,53nm,1.5s,mb5.7
AVF Avril sur Loir 90.82 317 *e*P P **12 39 18.5 -0.9**
comp=Z,77nm,1.1s,mb5.6
AVF Avril sur Loir 90.82 317 *e*P P **12 39 18.5 -0.9**
AVF pmax pmax
comp=Z,38nm,1.1s,mb5.6
AVF Avril sur Loir 90.82 317 *e*P P **12 39 18.5 -0.9**
comp=Z,38nm,1.1s,mb5.6
LBL Lubilhac 91.00 315 *e*P P **12 39 19.4 -0.8**
AGO Saint Agoulin 91.03 316 *e*P P **12 39 19.4 -0.9**
PYM Petit Puy Mans 91.13 316 *e*P P **12 39 20.1 -0.7**
BGF Bois d'Agland 91.19 316 *e*P P **12 39 20.7 -0.4**
comp=Z,199nm,1.3s,mb6.0
BGF Bois d'Agland 91.19 316 *e*P P **12 39 20.7 -0.4**
BGF pmax pmax
comp=Z,99nm,1.3s,mb6.0
BGF Bois d'Agland 91.19 316 *e*P P **12 39 20.7 -0.4**
comp=Z,99nm,1.3s,mb6.0
HYF Humbligny 91.27 317 *e*P P **12 39 21.3 -0.1**
MENF Mencas 91.32 321 *e*P P **12 39 23.0 +1.4**
TCF Toulx Ste Croi 91.65 316 *e*P P **12 39 23.0 -0.2**
comp=Z,85nm,1.3s,mb5.6
TCF Toulx Ste Croi 91.65 316 *e*P P **12 39 23.0 -0.2**
TCF pmax pmax
comp=Z,43nm,1.3s,mb5.6
TCF Toulx Ste Croi 91.65 316 *e*P P **12 39 23.0 -0.2**
comp=Z,42nm,1.3s,mb5.6
CAF Calviac 91.86 315 *e*P P **12 39 24.0 -0.2**
comp=Z,72nm,1.2s,mb5.6
CAF Calviac 91.86 315 *e*P P **12 39 24.0 -0.2**
CAF pmax pmax
comp=Z,36nm,1.2s,mb5.6
CAF Calviac 91.86 315 *e*P P **12 39 24.0 -0.2**
comp=Z,36nm,1.2s,mb5.6
MTLF Montolieu 91.88 313 *e*P P **12 39 24.0 -0.4**
comp=Z,162nm,1.6s,mb5.8
MTLF Montolieu 91.88 313 *e*P P **12 39 24.0 -0.4**
MTLF pmax pmax
comp=Z,81nm,1.6s,mb5.8
MTLF Montolieu 91.88 313 *e*P P **12 39 24.0 -0.4**
comp=Z,81nm,1.6s,mb5.8
AFI Afiamalu 91.90 104 PFAKE 12 39 30.0 +5.0
AFI LR LR
comp=Z,2µm,22.0s,MS5.4
QSPA South Pole Qui 92.06 180 PFAKE 12 39 30.0 +5.6
QSPA LR LR
comp=Z,7µm,19.0s,MS6.1
RJF Les Rejaudoux 92.22 315 *e*P P **12 39 25.7 -0.2**
comp=Z,69nm,1.2s,mb5.6
RJF *e*MLR MLR
comp=Z,2µm,20.5s,MS5.3
RJF Les Rejaudoux 92.22 315 *e*P P **12 39 25.7 -0.2**
RJF pmax pmax
comp=Z,35nm,1.2s,mb5.6
RJF MLR MLR
comp=Z,2µm,20.5s,MS5.6
RJF Les Rejaudoux 92.22 315 *e*P P **12 39 25.7 -0.2**
comp=Z,35nm,1.2s,mb5.6
RJF LR LR
comp=Z,2µm,20.5s,MS5.6
LFF La Frestale 92.80 315 *e*P P **12 39 28.4 -0.2**
comp=Z,106nm,1.3s,mb5.8
LFF La Frestale 92.80 315 *e*P P **12 39 28.4 -0.2**
LFF pmax pmax
comp=Z,53nm,1.3s,mb5.8
LFF La Frestale 92.80 315 *e*P P **12 39 28.4 -0.2**
comp=Z,53nm,1.3s,mb5.8
LDF La Druitiere 93.00 319 *e*P P **12 39 28.7 -0.7**
comp=Z,175nm,1.5s,mb6.0
LDF La Druitiere 93.00 319 *e*P P **12 39 28.7 -0.7**
LDF pmax pmax
comp=Z,87nm,1.5s,mb6.0
LDF La Druitiere 93.00 319 *e*P P **12 39 28.7 -0.7**
comp=Z,87nm,1.5s,mb6.0
FLN La Foliniere 93.21 319 *e*P P **12 39 29.6 -0.8**
comp=Z,87nm,1.2s,mb5.8

FLN eMLR MLR
comp=Z,2µm,22.5s,MS5.3
FLN La Foliniere 93.21 319 eP **P** **12 39 29.6 -0.8**
FLN pmax pmax
comp=Z,44nm,1.2s,mb5.8
FLN MLR MLR
comp=Z,2µm,22.5s,MS5.6
FLN La Foliniere 93.21 319 eP **P** **12 39 29.6 -0.8**
comp=Z,44nm,1.2s,mb5.8
FLN LR LR
comp=Z,2µm,22.5s,MS5.6
MFF Saint Martin d 93.24 317 eP **P** **12 39 29.7 -0.8**
comp=Z,57nm,1.0s,mb5.7
MFF Saint Martin d 93.24 317 eP **P** **12 39 29.7 -0.8**
MFF pmax pmax
comp=Z,28nm,1.0s,mb5.7
MFF Saint Martin d 93.24 317 eP **P** **12 39 29.7 -0.8**
comp=Z,28nm,1.0s,mb5.7
EPF Esparros 93.28 313 eP **P** **12 39 29.6 -1.2**
comp=Z,68nm,1.6s,mb5.5
EPF Esparros 93.28 313 eP **P** **12 39 29.6 -1.2**
EPF pmax pmax
comp=Z,34nm,1.6s,mb5.5
EPF Esparros 93.28 313 eP **P** **12 39 29.6 -1.2**
comp=Z,34nm,1.6s,mb5.5
GRR Gorron 93.50 319 eP **P** **12 39 31.1 -0.6**
comp=Z,113nm,1.4s,mb5.8
GRR Gorron 93.50 319 eP **P** **12 39 31.1 -0.6**
GRR pmax pmax
comp=Z,57nm,1.4s,mb5.8
GRR Gorron 93.50 319 eP **P** **12 39 31.1 -0.6**
comp=Z,56nm,1.4s,mb5.8
DAG Danmarks Havn 93.61 348⇓ *i*P **P** **12 39 32.7 +1.0**
DAG pmax pmax
comp=Z,11nm,0.7s,mb5.4
DAG MLR MLR
comp=Z,5µm,21.0s,MS6.0
DAG Danmarks Havn 93.61 348⇓ *i*P **P** **12 39 32.7 +1.0**
comp=Z,11nm,0.7s,mb5.4
DAG e 12 42 52.0
DAG
comp=Z,5µm,21.0s
ESK Eskdalemuir 93.95 326 PFAKE 12 39 40.0 +6.4
ESK LR LR
comp=Z,3µm,19.0s,MS5.8
ETSF Etsaut 93.95 313 eP **P** **12 39 32.9 -1.0**
comp=Z,54nm,1.1s,mb5.6
ETSF Etsaut 93.95 313 eP **P** **12 39 32.9 -1.0**
ETSF pmax pmax
comp=Z,27nm,1.1s,mb5.6
ETSF Etsaut 93.95 313 eP **P** **12 39 32.9 -1.0**
comp=Z,27nm,1.1s,mb5.6
TORD Torodi Ar. Bea 94.48 283 P **P** **12 39 37.0 +0.1**
comp=Z,2.2nm,0.8s,mb4.7,baz=93,slow=5.6,SNR=13
TORD PKKP PKKPbc 12 56 39.0 +3.2
comp=Z,1.1nm,1.1s,baz=320,slow=4.2,SNR=4.4
TORD LR LR 13 20 58.8
comp=Z,6µm,19.1s,MS6.1,baz=90,slow=35
ALE Alert 94.94 357 P **P** **12 39 37.0 -0.7**
comp=Z,88nm,0.7s,mb6.3,SNR=7.5
SNAA Sanae 95.04 198⇑ eP **P** **12 39 42.4 +4.2**
SNAA Sanae 95.04 198 eP **P** **12 39 47.1 +8.8**
comp=Z,11nm,1.1s,mb5.2
ROSF Rostrenen 95.11 319 eP **P** **12 39 38.2 -0.9**
comp=Z,251nm,1.9s,mb6.0
ROSF Rostrenen 95.11 319 eP **P** **12 39 38.2 -0.9**
ROSF pmax pmax
comp=Z,125nm,1.9s,mb6.0
ROSF Rostrenen 95.11 319 eP **P** **12 39 38.2 -0.9**
comp=Z,125nm,1.9s,mb6.0
VNA2 Neumayer--Watz 96.62 199 eP **P** **12 39 47.6 +2.1**
baz=104,slow=3.8
VNA2 e pP 12 39 57.6 +1.6
VNA2 e 12 40 00.3
ESDC Sonseca Array 96.92 310 P **P** **12 39 46.8 -0.8**
comp=Z,0.3nm,0.5s,mb4.0,baz=83,slow=4.2,SNR=2.9
ESDC LR LR 13 26 31.8
comp=Z,2µm,20.4s,MS5.6,baz=95,slow=37
ESLA Sonseca Array 96.92 310 PFAKE 12 40 00.0 +12
ESLA LR LR
comp=Z,13µm,20.0s,MS6.4
VNA1 Neumayer--Stat 96.96 199 eP pP 12 39 59.8 +2.3
VNA1 e 12 40 02.2
PAB San Pablo 97.23 310 PFAKE 12 40 00.0 +11
PAB LR LR
comp=Z,3µm,21.0s,MS5.7
VNA3 Neumayer Olymp 97.26 198 eP pP 12 40 01.7 +2.8
VNA3 e 12 40 04.7
COLA College 98.60 23 PFAKE 12 40 00.0 +5.5
COLA LR LR
comp=Z,3µm,20.0s,MS5.8
MVO Moncorvo 98.97 312 ePP PP 12 44 00.4 +1.6
MVO eS S 12 51 27.7 +2.4
MVO eSS SS 12 58 19.7 +6.9
MVO eLQ 13 11 49.0
MVO eLR LR 13 19 55.9
comp=Z,2µm,20.0s
KDAK Kodiak Island 99.06 31 PFAKE 12 40 10.0 +13
KDAK LR LR
comp=Z,5µm,19.0s,MS6.0
MTE Manteigas 99.50 311 eS S 12 51 32.3 +2.5
MTE eSS SS 12 58 31.1 +11
MTE eLQ 13 11 51.3
MTE eLR LR 13 23 13.3
comp=Z,3µm,22.0s
MTE Manteigas 99.50 311 PFAKE 12 40 10.0 +11
MTE LR LR
comp=Z,2µm,19.0s,MS5.7
PBAR Barrancos 99.53 309 ePP PP 12 44 06.1 +3.0
PBAR eS S 12 51 26.2 -3.9
PBAR eSS SS 12 58 31.5 +11
PBAR eLR LR 13 16 05.8
comp=Z,3µm,20.0s
PMRV Marv??o 99.57 310 ePP PP 12 44 12.1 +8.7
PMRV eS S 12 51 28.1 -2.3
PMRV eSS SS 12 58 26.1 +4.8
PMRV eLR LR 13 22 20.9
comp=Z,2µm,20.0s
BORG Borgarnes 99.71 337 PFAKE 12 40 10.0 +10
BORG LR LR
comp=Z,6µm,20.0s,MS6.1
PESTR Estremoz 99.83 310 ePP PP 12 44 13.9 +8.6
PESTR eS S 12 51 29.5 -3.1
PESTR eSS SS 12 58 29.5 +4.6
PESTR eLR LR 13 20 34.0
comp=Z,2µm,20.0s
RTC Rabat Centre 100.10 305 PFAKE 12 40 10.0 +8.6
RTC LR LR
comp=Z,2µm,19.0s,MS5.5
PVAQ Vaqueiros 100.19 308 ePP PP 12 43 55.8 -12
PVAQ eS Sdif 12 51 38.5 +3.6
PVAQ eSS SS 12 58 38.4 +8.3
PVAQ eLR LR 13 17 23.7
comp=Z,3µm,22.0s
PBDV Barranco-do-Ve 100.39 308 eP Pdif 12 40 09.5 +6.8
PBDV Barranco-do-Ve 100.39 308 ePP PP 12 44 12.3 +2.6
PBDV eS Sdif 12 51 36.0 -0.5
PBDV eSS SS 12 58 35.6 +2.7
PBDV eLR LR 13 16 34.2
comp=Z,2µm,18.0s
MORF Marmelete 100.94 308 ePP PP 12 44 20.4 +6.5
MORF eS Sdif 12 51 40.9 -0.2
MORF eSS SS 12 58 48.9 +8.4
MORF eLR LR 13 21 08.9
comp=Z,2µm,22.0s
MENT Mentasta 101.09 24 ePdif Pdif 12 40 05.8 0.0
PMAFR Mafra 101.10 310 ePP PP 12 44 07.4 -7.6
PMAFR eS Sdif 12 51 43.9 +1.4
PMAFR eSS SS 12 58 48.2 +5.6
PMAFR eLR LR 13 19 28.5
comp=Z,2µm,18.0s
EGAK Eagle 101.19 22 PFAKE 12 40 20.0 +14
EGAK LR LR
comp=Z,5µm,19.0s,MS6.1
DBIC Dimbokro 101.31 277 PFAKE 12 40 20.0 +13
DBIC LR LR
comp=Z,3µm,20.0s,MS5.8
RAR Rarotonga 103.30 111 PFAKE 12 40 30.0 +14
RAR LR LR
comp=Z,3µm,22.0s,MS5.8
KIP Kipapa 103.34 68 PFAKE 12 40 30.0 +14
KIP LR LR
comp=Z,2µm,19.0s,MS5.7
XMAS Kiritimati 105.67 87 PFAKE 12 44 50.0 +10
XMAS LR LR
comp=Z,3µm,22.0s,MS5.8
POHA Pohakuloa 105.87 69 PFAKE 12 44 50.0 +9.5
POHA LR LR
comp=Z,2µm,19.0s,MS5.7
TRIS Tristan da Cun 106.48 232 PFAKE 12 44 50.0 +8.8
TRIS LR LR
comp=Z,3µm,19.0s,MS5.9
YKA Yellowknife Ar 111.31 15 Pdiff Pdif 12 40 52.8 +1.6
comp=Z,0.2nm,0.6s,baz=321,slow=4.4,SNR=5.6
TBI Tubuai 112.61 114 ePP PP 12 45 34.3 -5.8
comp=Z,290nm,27.0s
TBI eSdif Sdif 12 53 11.1 -7.3
comp=Z,1µm,27.5s
TBI Tubuai 112.61 114 ePS PS 12 55 19.0 +3.8
comp=Z,1µm,28.5s
TBI eSS SS 13 01 24.6 +4.6
comp=Z,2µm,26.5s
TBI Tubuai 112.61 114 eLQ 13 14 06.1
comp=Z,5µm,32.5s
TBI eLR LR 13 18 31.4
comp=Z,5µm,23.5s
PPT Papeete 113.16 108 ePdif Pdif 12 40 53.6 -5.9
comp=Z,181nm,27.2s
PPT Papeete 113.16 108 ePP PP 12 45 33.9 -10
comp=Z,402nm,27.0s
PPT eSdif Sdif 12 53 21.3 -1.7
comp=Z,2µm,26.2s
PPT Papeete 113.16 108 ePS PS 12 55 18.6 -1.8
comp=Z,3µm,28.0s
PPT Papeete 113.16 108 eLQ 13 14 22.7
comp=Z,7µm,31.2s
PPT eLR LR 13 18 52.0
comp=Z,4µm,23.0s
PMSA Palmer Station 115.96 189 PFAKE 12 45 10.0 +12
PMSA LR LR
comp=Z,4µm,21.0s,MS6.0
NLWA Neilton Lookou 119.22 30 PFAKE 12 45 20.0 +15
NLWA LR LR
comp=Z,3µm,21.0s,MS5.8
FFC Flin Flon 121.26 13 ePKIKP PKPdf 12 45 07.7 -1.1
FFC MLR MLR
comp=Z,4µm,19.0s,MS6.1
COR Corvallis 121.37 33 PFAKE 12 45 20.0 +11
COR LR LR
comp=Z,736nm,21.0s,MS5.3
SCHQ Schefferville 121.65 349 PKP PKPdf 12 45 08.1 -1.5
comp=Z,5.1nm,0.7s,baz=326,slow=1.5,SNR=8.0
NEW Newport 121.79 26 PFAKE 12 45 20.0 +10
NEW LR LR
comp=Z,3µm,19.0s,MS6.0
HAWA Hanford 122.06 29 PFAKE 12 45 20.0 +9.4
HAWA LR LR
comp=Z,3µm,20.0s,MS6.0
HUMO Hull Mountain 122.85 34 ePKPdf PKPdf 12 45 13.0 +0.8
HUMO LR LR
comp=Z,3µm,19.0s,MS5.9
YBH Yreka Blue Hor 123.56 35 PFAKE 12 45 20.0 +6.4
YBH LR LR
comp=Z,2µm,20.0s,MS5.8
BMO Blue Mountains 124.25 29 PFAKE 12 45 20.0 +5.2
BMO LR LR
comp=Z,2µm,20.0s,MS5.8
MSO Missoula 124.27 25 ePKPdf PKPdf 12 45 14.3 -0.6
MSO LR LR
comp=Z,3µm,22.0s,MS5.9
WDC Whiskeytown Da 124.40 36 PFAKE 12 45 30.0 +15
WDC LR LR
comp=Z,3µm,22.0s,MS5.9
MOD Modoc 124.79 33 PFAKE 12 45 30.0 +14
MOD LR LR
comp=Z,2µm,20.0s,MS5.9
EGMT Eagleton 124.95 21 ePKPdf PKPdf 12 45 15.7 -0.4
EGMT LR LR
comp=Z,5µm,21.0s,MS6.2
HOPS Hopland 125.08 38 PFAKE 12 45 30.0 +13
HOPS LR LR
comp=Z,2µm,20.0s,MS5.8
WVOR Wild Horse Val 125.32 32 ePKIKP PKPdf 12 45 17.7 +0.7
WVOR MLR MLR
comp=Z,3µm,21.0s,MS5.9
RKT Rikitea 125.72 117 ePP PP 12 47 05.9 -4.6
comp=Z,284nm,28.0s
RKT eSdif Sdif 12 54 59.7 -8.1
comp=Z,606nm,28.5s
RKT Rikitea 125.72 117 ePS PS 12 57 10.4 -2.6
comp=Z,929nm,29.2s
RKT eSS SS 13 04 18.8 +10
comp=Z,2µm,31.0s
RKT Rikitea 125.72 117 eLQ 13 19 26.3
comp=Z,3µm,36.8s
RKT eLR LR 13 24 20.1
comp=Z,4µm,24.5s
MCCM Marconi Confer 125.72 38 PFAKE 12 45 30.0 +12
MCCM LR LR
comp=Z,3µm,20.0s,MS5.9
DLMT Dillon 126.00 25 ePKPdf PKPdf 12 45 18.3 +0.1
BOZ Bozeman (W) 126.18 24 PFAKE 12 45 30.0 +11
BOZ LR LR
comp=Z,3µm,21.0s,MS6.0
EFI East Falkland 126.31 199 PFAKE 12 45 30.0 +11
EFI LR LR
comp=Z,3µm,20.0s,MS5.9
HLID Hailey 126.59 28 PFAKE 12 45 30.0 +11
HLID LR LR
comp=Z,3µm,20.0s,MS6.0
ULM Lac du Bonnet 126.71 10 PKP PKPdf 12 45 18.2 -1.2
comp=Z,13nm,0.7s,baz=360,slow=3.2,SNR=14
SAO San Andreas Ge 127.47 39 PFAKE 12 45 30.0 +8.7
SAO LR LR
comp=Z,2µm,21.0s,MS5.8
BMN Battle Mountai 127.49 33 PFAKE 12 45 30.0 +8.8
BMN LR LR
comp=Z,2µm,21.0s,MS5.7
RLMT Red Lodge 127.56 23 PFAKE 12 45 30.0 +8.8
RLMT LR LR
comp=Z,5µm,19.0s,MS6.2
LKWY Lake 127.56 24 PFAKE 12 45 30.0 +8.8
LKWY LR LR
comp=Z,7µm,21.0s,MS6.3
RRI2 Red Ridge 128.16 26 ePKPdf PKPdf 12 45 22.9 +0.5
LOHW Long Hollow 128.25 25 ePKPdf PKPdf 12 45 22.9 +0.4
NVAR Mina Array Bea 128.28 35 PKP PKPdf 12 45 21.0 -1.8
comp=Z,1.2nm,0.6s,baz=284,slow=3.6,SNR=5.0
ELK Elko 128.30 31 PFAKE 12 45 30.0 +7.3
ELK LR LR
comp=Z,3µm,22.0s,MS6.0
SNOW Snow King Moun 128.31 25 ePKPdf PKPdf 12 45 23.7 +1.1
REDW Red Top Meadow 128.35 26 ePKPdf PKPdf 12 45 22.9 +0.2
AGMN Agassiz Refuge 128.59 11 PFAKE 12 45 30.0 +7.0
AGMN LR LR
comp=Z,5µm,20.0s,MS6.2
AHID Auburn Hatcher 128.72 26 PFAKE 12 45 30.0 +6.5
AHID LR LR
comp=Z,3µm,19.0s,MS6.0
TPH Tonopah 129.14 35 PFAKE 12 45 30.0 +5.6
TPH LR LR
comp=Z,2µm,19.0s,MS5.7
BW06 Boulder Array 129.39 25 PFAKE 12 45 30.0 +5.3
BW06 LR LR
comp=Z,3µm,20.0s,MS6.0
PDAR Pinedale Array 129.39 25 PKP PKPdf 12 45 24.6 -0.1
comp=Z,2.1nm,0.6s,baz=207,slow=1.9,SNR=18
PTCN Pitcairn Islan 129.42 121 PFAKE 12 45 40.0 +15
PTCN LR LR
comp=Z,3µm,20.0s,MS6.0
EYMN Ely 129.61 7 PFAKE 12 45 30.0 +5.0
EYMN LR LR
comp=Z,7µm,20.0s,MS6.3
DUG Dugway 129.94 30 ePKIKP PKPdf 12 45 26.6 +0.7
DUG MLR MLR
comp=Z,2µm,21.0s,MS5.8
DAC Darwin (Calif) 130.15 37 PFAKE 12 45 40.0 +14
DAC LR LR
comp=Z,3µm,20.0s,MS6.0
RSSD Black Hills 130.33 20 PFAKE 12 45 40.0 +14
RSSD LR LR
comp=Z,1µm,20.0s,MS5.5
PKME Peaks-Kenny Pk 131.22 347 PFAKE 12 45 40.0 +12
PKME LR LR
comp=Z,3µm,19.0s,MS6.0
RWWY Rawlins 131.25 24 ePKPdf PKPdf 12 45 28.7 +0.4
MVU Marysvale 131.53 31 PFAKE 12 45 40.0 +11
MVU LR LR
comp=Z,2µm,22.0s,MS5.8
PFO Pinyon Flat Ob 132.63 38 PFAKE 12 45 40.0 +8.8
PFO LR LR
comp=Z,2µm,20.0s,MS5.9
RCBR Riachuelo 132.67 264 PFAKE 12 45 40.0 +8.2
RCBR LR LR
comp=Z,2µm,19.0s,MS5.8
LBNH Lisbon 132.75 349 PFAKE 12 45 40.0 +8.9
LBNH LR LR
comp=Z,3µm,19.0s,MS6.0
ECSD EROS,Sioux Fal 132.79 13 ePKPdf PKPdf 12 45 31.1 0.0
ECSD LR LR
comp=Z,5µm,20.0s,MS6.2
GLMI Grayling 133.24 1 PFAKE 12 45 40.0 +8.0
GLMI LR LR
comp=Z,5µm,19.0s,MS6.3
ISCO Idaho Springs 133.50 24 PFAKE 12 45 40.0 +7.4
ISCO LR LR
comp=Z,4µm,20.0s,MS6.2
WUAZ Wupatki 134.22 32 ePKPdf PKPdf 12 45 35.9 +1.8
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.9
MVCO Mesa Verde 134.37 28 ePKPdf PKPdf 12 45 37.6 +3.3
MVCO LR LR
comp=Z,4µm,22.0s,MS6.1
JFWS Jewell Farm 134.72 7 PFAKE 12 45 40.0 +5.2
JFWS LR LR
comp=Z,7µm,20.0s,MS6.3
SCIA State Center 135.24 11 PFAKE 12 45 50.0 +14
SCIA LR LR
comp=Z,5µm,20.0s,MS6.2
SDCO Great Sand Dun 135.28 25 PFAKE 12 45 50.0 +14
SDCO LR LR
comp=Z,4µm,22.0s,MS6.1
BINY Binghamton 135.40 352 PFAKE 12 45 50.0 +14
BINY LR LR
comp=Z,4µm,20.0s,MS6.1
AAM Ann Arbor 135.78 0 PFAKE 12 45 50.0 +13
AAM LR LR
comp=Z,7µm,20.0s,MS6.4
ERPA Erie 135.87 357 PFAKE 12 45 50.0 +13
ERPA LR LR
comp=Z,4µm,19.0s,MS6.2
CBKS Cedar Bluff 136.51 19 PFAKE 12 45 50.0 +12
CBKS LR LR
comp=Z,3µm,20.0s,MS6.1
TUC Tucson 136.93 35 ePKIKP PKPdf 12 45 42.2 +3.0
TUC MLR MLR
comp=Z,2µm,21.0s,MS5.8
ANMO Albuquerque 137.16 28 ePKIKP PKPdf 12 45 40.3 +0.7
ANMO MLR MLR
comp=Z,4µm,20.0s
KSU1 Kansas State U 137.16 15 ePKPdf PKPdf 12 45 40.6 +1.1
KSU1 LR LR
comp=Z,4µm,21.0s,MS6.2
SSPA Standing Stone 137.17 354 PFAKE 12 45 50.0 +11
SSPA LR LR
comp=Z,749nm,20.0s,MS5.4
ACSO Alum Creek Sta 137.85 360 PFAKE 12 45 50.0 +9.3
ACSO LR LR
comp=Z,5µm,19.0s,MS6.2
MCWV Mont Chateau 138.31 356 PFAKE 12 45 50.0 +8.4
MCWV LR LR
comp=Z,5µm,19.0s,MS6.3
TRQA Tornquist 139.28 206 PFAKE 12 45 50.0 +6.6
TRQA LR LR
comp=Z,3µm,19.0s,MS6.0
AMTX Amarillo 139.31 24 PFAKE 12 45 50.0 +6.4
AMTX LR LR
comp=Z,3µm,21.0s,MS6.0
CBN Corbin 139.51 353 PFAKE 12 45 50.0 +6.2
CBN LR LR
comp=Z,4µm,20.0s,MS6.1
WCI Wyandotte Cave 139.75 4 PFAKE 12 45 50.0 +5.8
WCI LR LR
comp=Z,952nm,19.0s,MS5.6
PLCA Paso Flores 139.90 195 PKP PKPdf 12 45 44.1 -0.3
comp=Z,4.8nm,1.2s,baz=160,slow=5.9,SNR=4.0
SIUC Southern Illin 139.97 7 ePKPdf PKPdf 12 45 47.2 +2.5
WMOK Wichita Mounta 140.53 20 PFAKE 12 46 00.0 +14
WMOK LR LR
comp=Z,3µm,21.0s,MS6.0
BLA Blacksburg 140.78 356 PFAKE 12 46 00.0 +14
BLA LR LR
comp=Z,7µm,21.0s,MS6.4
BBSR BB Station 141.47 334 PFAKE 12 46 00.0 +12
BBSR LR LR
comp=Z,2µm,22.0s,MS5.8
WVT Waverly 141.70 6 ePKHKP 12 45 41.9
WVT MLR MLR
comp=Z,5µm,21.0s,MS6.2
MIAR Mount Ida 142.25 14 ePKHKP 12 45 43.1
MIAR MLR MLR
comp=Z,4µm,20.0s,MS6.2
CNNC Cliffs of the 142.50 353 PFAKE 12 46 00.0 +11
CNNC LR LR
comp=Z,8µm,20.0s,MS6.5
BDFB Brasilia 142.81 247 PKP PKPdf 12 45 49.5 -0.8
comp=Z,1.4nm,0.6s,baz=288,slow=20,SNR=2.6
OXF Oxford 143.09 9 PFAKE 12 46 00.0 +10
OXF LR LR
comp=Z,4µm,21.0s,MS6.2
JCT Junction City 143.92 25 ePKIKP PKPdf 12 45 49.5 -2.4
JCT MLR MLR
comp=Z,3µm,20.0s,MS6.1
NATX Nacogdoches 144.59 17 ePKPdf PKPdf 12 45 51.8 -1.3
NATX LR LR
comp=Z,3µm,20.0s,MS6.1
GOGA Godfrey 144.66 0 ePKIKP PKPdf 12 45 52.4 -0.7
GOGA MLR MLR
comp=Z,3µm,19.0s,MS6.1
RPN Rapa Nui 144.72 137 PFAKE 12 46 00.0 +6.6
RPN LR LR
comp=Z,2µm,21.0s,MS5.9
NHSC New Hope 144.84 356 PFAKE 12 46 00.0 +6.5
NHSC LR LR
comp=Z,4µm,22.0s,MS6.2
LRAL Lakeview Retre 144.85 6 ePKPdf PKPdf 12 45 51.9 -1.5
LRAL LR LR
comp=Z,3µm,19.0s,MS6.1
VBMS Vicksburg 145.15 11 ePKPbc PKPbc 12 45 53.7 +0.2
VBMS LR LR
comp=Z,4µm,19.0s,MS6.2
CPUP Villa Florida 145.40 224 PKPbc PKPbc 12 45 54.0 -0.5
comp=Z,9.6nm,0.6s,baz=101,slow=2.4,SNR=16
CPUP Villa Florida 145.40 224 ePKP PKPdf 12 45 54.0 -0.6
HKT Hockley 145.90 20 ePKP2 PKPab 12 45 55.9 -0.5
HKT MLR MLR
comp=Z,1µm,21.0s,MS5.6
MAIG Mazatlaan 146.17 41 eP PKPdf 12 45 57.5 +1.5
BRAL Brewton 146.85 6 PFAKE 12 46 10.0 +13
BRAL LR LR
comp=Z,5µm,22.0s,MS6.3
KVTX Kingsville 147.29 25 ePKPbc PKPbc 12 45 58.4 -1.7
KVTX LR LR
comp=Z,3µm,21.0s,MS6.0
CFAA Coronel Fontan 147.45 204 PKPbc PKPbc 12 45 58.5 -2.0
comp=Z,1.8nm,0.7s,baz=156,slow=2.8,SNR=20
CJM Chamela 149.64 44 eP PKPdf 12 46 03.3 +1.5
DWPF Disney 149.89 357 PFAKE 12 46 10.0 +8.0
DWPF LR LR
comp=Z,987nm,20.0s,MS5.6
LCO Las Campanas 150.73 203 ePKPbc PKPbc 12 46 09.0 +0.2
LCO LR LR
comp=Z,2µm,20.0s,MS5.9
BBGH Gun Hill 152.05 303 PFAKE 12 46 20.0 +14
BBGH LR LR
comp=Z,4µm,20.0s,MS6.2
ZIIG Zihuatanejo 153.39 42 eP PKPbc 12 46 11.9 -3.2
SJG San Juan 153.79 321 PFAKE 12 46 20.0 +12
SJG LR LR
comp=Z,7µm,21.0s,MS6.4
SIV San Ignacio 154.20 236 PKP PKPdf 12 46 04.9 -3.8
comp=Z,0.9nm,0.7s,baz=196,slow=19,SNR=4.0
SIV PKPbc PKPbc 12 46 15.8 -1.1
comp=Z,5.5nm,0.9s,baz=150,slow=1.7,SNR=12
GRGR Grenville 154.32 304 PFAKE 12 46 20.0 +11
GRGR LR LR
comp=Z,2µm,21.0s,MS6.0
LVC Limon Verde 155.35 213 ePKPbc PKPdf 12 46 19.5 +9.4
SDDR Presa de Saban 155.97 331 ePKPab PKPab 12 46 38.2 +0.2
SDDR LR LR
comp=Z,4µm,21.0s,MS6.2
TEIG Tepich 157.24 12 PKPab PKPab 12 46 43.0 -0.4
comp=Z,9.5nm,0.7s,baz=5.2,slow=8.2,SNR=4.8
TEIG Tepich 157.24 12 PFAKE 12 46 20.0 +7.3
TEIG LR LR
comp=Z,3µm,22.0s,MS6.1

CMIG	**Matias Romero**	**157.70**	**31**	PKPab	PKPab	12 46 45.5	0.0			
	comp=Z,2.4nm,0.6s,baz=2.8,slow=2.7,SNR=4.7									
SDV	**Santo Domingo**	**163.36**	**311**	PFAKE		12 46 30.0	+10			
SDV				LR	LR					
	comp=Z,2μm,22.0s									
TGUH	**Tegucigalpa,Un**	**163.43**	**14**	PFAKE		12 46 30.0	+10			
TGUH				LR	LR					
	comp=Z,3μm,22.0s									
BCIP	**Isla Barro Col**	**168.29**	**343**	PFAKE		12 46 30.0	+6.4			
BCIP				LR	LR					
	comp=Z,3μm,19.0s									
ROSC	**El Rosal**	**168.74**	**308**	PKP	PKPdf	12 46 22.5	-1.5			
	comp=Z,2.7nm,0.3s,baz=107,slow=19,SNR=1.7									
OTAV	**Otavalo**	**174.69**	**296**	*e*PKPdf	PKPdf	12 46 28.1	+1.3			

ISCJB ***22*** *12:33:34.3±2.4, 2257S±005×707W±0.1, h9km±14km, mb4.3/5, Error ellipse: s-maj=19.5km s-min=7.6km az=179.7*

IDC ***22*** *12:33:34.8±1.0, 2251S×7076W, h0km, mb4.4/5, mb1 4.3/8, mb1mx4.2/17, mbtmp4.3/8, ML4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx3.0/20, Error ellipse: s-maj=25.1km s-min=14.6km az=7.0*

NEIC ***22*** *12:33:37.2±3.1, 2265S×7063W, h7km±21km, mb3.9/1, Error ellipse: s-maj=19.9km s-min=10.7km az=100.0*

ISC 22 12:33:38.3±2.5, 2262S±005×706W±01, h19km±14km, h19km±3km: pP-P, n20, σ0§92/19, mb4.3/5, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.56**	**90**	Pg		**Pg**	**12 34 07.3**	**-1.1**
	288nm,0.3s,baz=257,slow=13,SNR=1.113							
LVC				Lg			12 34 29.6	
	1μm,0.3s,baz=57,slow=9.2,SNR=29							
ARE	**Arequipa**	**6.18**	**352**	*e*P		**Pn**	**12 35 10.0**	**+1.4**
ARE				*e*S		**Sn**	**12 36 18.0**	**-0.7**
LCO	**Las Campanas**	**6.37**	**181**	*e*Pn		**Pn**	**12 35 09.8**	**-1.3**
	30nm,0.4s							
CFAA	**Coronel Fontan**	**9.20**	**167**	Pn		**Pn**	**12 35 50.8**	**+0.9**
	0.1nm,0.3s,baz=345,slow=14,SNR=5.1							
CFAA				Sn		**Sn**	**12 37 39.0**	**+6.1**
	baz=221,slow=18,SNR=2.4							
CFAA				LR		LR	12 39 21.8	
	comp=Z,31nm,19.1s,baz=329,slow=37							
SIV	**San Ignacio**	**11.15**	**55**	Pn		**Pn**	**12 36 18.2**	**+1.4**
	2.8nm,0.3s,baz=248,slow=12,SNR=44							
CPUP	**Villa Florida**	**12.64**	**110**	Pn		**Pn**	**12 36 39.1**	**+2.0**
	0.3nm,0.3s,baz=269,slow=13,SNR=4.9							
CPUP				LR		LR	12 41 43.4	
	comp=Z,133nm,19.4s,baz=276,slow=38							
TRQA	**Tornquist**	**17.08**	**156**	*e*Pn		**Pn**	**12 37 36.0**	**0.0**
	9.3nm,0.9s							
PLCA	**Paso Flores**	**18.06**	**180**	P		**Pn**	**12 37 49.1**	**+1.0**
	0.1nm,0.3s,baz=341,slow=10,SNR=3.6							
BDFB	**Brasilia**	**22.43**	**76**	P		**P**	**12 38 35.2**	**-0.8**
	2.8nm,0.5s,mb4.0,baz=243,slow=16,SNR=8.2							
VNA3	**Neumayer Olymp**	**59.53**	**161**	*e*		**P**	**12 43 39.6**	**-0.4**
VNA3				*e*		pP	12 43 45.4	-0.7
VNA3				*e*			12 43 52.0	
VNA1	**Neumayer--Stat**	**59.77**	**160**	*e*		**P**	**12 43 42.0**	**+0.4**
VNA1				*e*		pP	12 43 47.5	-0.3
VNA2	**Neumayer--Watz**	**60.13**	**160**	*e*		**P**	**12 43 43.8**	**-0.3**
	baz=297,slow=8.9							
VNA2				*e*		pP	12 43 49.1	-1.1
VNA2				*e*			12 43 56.9	
SNAA	**Sanae**	**61.75**	**161**	*e*		**P**	**12 43 54.3**	**-0.8**
SNAA				*e*		pP	12 43 59.8	-1.4
DBIC	**Dimbokro**	**70.56**	**74**	P		**P**	**12 44 51.5**	**-1.0**
	2.6nm,0.5s,mb4.5,baz=214,slow=5.7,SNR=9.3							
TORD	**Torodi Ar. Bea**	**79.21**	**71**	P		**P**	**12 45 42.4**	**-0.2**
	6.4nm,0.6s,mb4.7,baz=254,slow=5.3,SNR=68							
BOSA	**Boshof**	**84.31**	**118**	P		**P**	**12 46 09.2**	**-0.1**
	2.5nm,0.7s,mb4.5,baz=286,slow=4.8,SNR=6.7							
YKA	**Yellowknife Ar**	**91.72**	**341**	P		**P**	**12 46 44.0**	**+0.1**
	0.7nm,0.6s,mb4.2,baz=143,slow=4.1,SNR=7.5							
ZALV	**Zalesovo Beam**	**143.62**	**24**	PKP		PKPdf	12 53 08.2	-3.3
	1.5nm,0.5s,baz=243,slow=1.7,SNR=4.9							
MKAR	**Makanchi Array**	**147.45**	**36**	PKPbc		PKPbc	12 53 21.2	+0.4
	2.6nm,0.6s,baz=309,slow=3.1,SNR=16							
SONM	**Songino Array**	**154.72**	**5**	PKPbc		PKPbc	12 53 38.6	+0.6
	0.4nm,0.7s,baz=318,slow=1.9,SNR=2.8							

NNC ***22*** *12:43:37.8±2.7, 3915N×7795E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=26.0km s-min=12.3km az=150.0*

BJI ***22*** *12:43:43.3, 3944N×7793E, h11km, ML3.8*

ISCJB ***22*** *12:43:45.2±1.9, 398N±0.1×777E±0.1, h10km, Error ellipse: s-maj=18.3km s-min=12.6km az=137.6*

ISC 22 12:43:47.0±2.0, 397N±01×776E±01, h10km, n12, σ0§94/16, 7C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.26**	**261**	⇓*i*PG		**Pn**	**12 44 09.9**	**-0.7**
KSH				SG		**Sn**	**12 44 32.1**	**+4.5**
KSH				Smax				
	comp=N,5μm,0.3s							
KSH				Smax				
	comp=E,4μm,0.4s							
ULHL	**Ulahol**	**2.71**	**338**	P		**Pg**	**12 44 38.9**	**0.0**
	SNR=11							
KZA	**Kyzart**	**2.93**	**324**	P		**Pg**	**12 44 43.3**	**+0.1**
	SNR=37							
KNDC	**Almaty**	**3.51**	**353**	⇑Pg		**Pg**	**12 44 55.1**	**+0.8**
	comp=E,48nm,0.7s							
KNDC				⇑Lg			12 45 48.7	
	comp=E,303nm,0.6s							
TKM2	**Tokmak 2**	**3.52**	**336**	⇑Pn		**Pn**	**12 44 45.7**	**+4.1**
	comp=E,4.5nm,1.1s							
TKM2				⇑Pg		**Pg**	**12 44 53.0**	**-1.3**
	comp=E,5.9nm,0.4s							
TKM2				⇓Lg			12 45 47.4	
	comp=E,57nm,0.6s							
TKM2	**Tokmak 2**	**3.52**	**336**	P		**Pg**	**12 44 53.3**	**-1.1**
	SNR=7.0							
KBK	**Karagaybulak**	**3.53**	**327**	P		**Pg**	**12 44 53.7**	**-1.0**
	SNR=10							
AAK	**Ala-Archa**	**3.72**	**322**	P		**Pg**	**12 44 58.8**	**+0.6**
	SNR=7.4							
USP	**Ospenovka**	**4.22**	**328**	P		**Sg**	**12 46 09.0**	**+6.5**
	SNR=6.0							
KK31	**Karatay Array**	**6.29**	**305**	⇓Pn		**Pn**	**12 45 21.5**	**+1.7**
	comp=E,0.2nm,0.5s,baz=40,slow=16,SNR=4.1							
KK31				⇓Pg		**Pg**	**12 45 43.5**	**-3.9**
	comp=E,1.0nm,0.3s,baz=129,slow=16,SNR=11							
KK31				⇓Lg			12 47 11.9	
	comp=E,4.4nm,0.5s,baz=124,slow=25,SNR=5.3							
MK31	**Makanchi Array**	**7.85**	**24**	⇓Pn		**Pn**	**12 45 41.3**	**+0.1**
	comp=E,0.4nm,0.3s,baz=203,slow=12,SNR=22							
MK31				⇑Sn		**Sn**	**12 47 19.4**	**+9.4**
	comp=E,1.5nm,0.5s							
KURBB	**Kurchatov Arra**	**10.91**	**3**	⇑Pn		**Pn**	**12 46 22.4**	**-0.6**
KURBB				⇑Lg			12 49 41.9	
	comp=E,1.7nm,0.8s							

IDC 22 12:45:59.1±8.7, 251S×13849E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/14, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=373.6km s-min=29.9km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.79**	**193**	P		Pn	12 50 07.2	-1.1
	0.1nm,0.3s,baz=14,slow=13,SNR=4.9							
ASAR	**Alice Springs**	**21.49**	**192**	P		P	12 50 50.3	+0.7
	1.1nm,0.7s,baz=20,slow=11,SNR=13							
MKAR	**Makanchi Array**	**69.50**	**322**	P		P	12 57 09.6	+0.1
	0.7nm,0.7s,baz=134,slow=6.9,SNR=5.6							

IDC ***22*** *13:00:20.4±3.0, 2.16N×9629E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.8/5, ML4.1/1, MS4.2/2, Ms1 4.2/2, ms1mx3.9/33, Error ellipse: s-maj=113.7km s-min=28.3km az=62.0*

ISCJB ***22*** *13:00:23.6±1.1, 22N±0.1×966E±0.1, h33km, mb4.0/6, Error ellipse: s-maj=17.3km s-min=14.1km az=136.8*

NEIC ***22*** *13:00:26.4±1.4, 225N×9674E, h35km, mb4.4/2, Error ellipse: s-maj=29.0km s-min=17.3km az=68.0*

ISC 22 13:00:25.6±1.1, 22N±01×966E±01, h35km, n10, σ1§02/9, mb4.0/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.44**	**75**	LR		LR	13 02 05.0	
	comp=Z,1μm,18.1s,baz=114,slow=39							
KULM	**Kulim**	**5.13**	**53**	*e*Pn		**Pn**	**13 01 36.8**	**-3.1**
KULM				*e*Sn		**Sn**	**13 02 38.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**16.36**	**8**	Pn		**Pn**	**13 04 13.8**	**+1.0**
	0.3nm,0.3s,baz=198,slow=11,SNR=18							
QIZ	**Qiongzhong**	**21.21**	**37**	*e*P		**P**	**13 05 08.4**	**-0.1**
	42nm,1.5s,mb4.5							
WRAB	**Tennant Creek**	**43.09**	**122**	*e*P		**P**	**13 08 21.7**	**-1.1**
	4.9nm,1.2s,mb4.1							
ASAR	**Alice Springs**	**44.49**	**127**	P		**P**	**13 08 35.6**	**+1.7**
	0.3nm,0.8s,mb3.1,baz=304,slow=8.1,SNR=4.7							
MKAR	**Makanchi Array**	**46.16**	**346**	P		**P**	**13 08 46.3**	**-0.4**
	1.4nm,0.8s,mb4.0,baz=159,slow=7.3,SNR=8.5							
SONM	**Songino Array**	**46.28**	**9**	P		**P**	**13 08 47.6**	**-0.1**
	0.7nm,0.5s,mb3.9,baz=190,slow=9.2,SNR=6.4							
KURK	**Kurchatov**	**50.70**	**345**	LR		LR	13 35 20.5	
	comp=Z,633nm,19.4s,baz=335,slow=42							
ZALV	**Zalesovo Beam**	**52.51**	**351**	P		**P**	**13 09 35.0**	**-0.2**
	1.7nm,0.6s,mb4.2,baz=176,slow=7.0,SNR=9.6							

ISCJB ***22*** *13:12:24.7±4.5, 220N±0.1×1428E±0.2, h304km±46km, mb3.5/10, Error ellipse: s-maj=36.4km s-min=18.5km az=178.8*

NEIC ***22*** *13:12:24.9±3.5, 2200N×14281E, h294km±35km, Error ellipse: s-maj=26.4km s-min=12.8km az=86.0*

IDC ***22*** *13:12:27.5±5.0, 2197N×14281E, h319km±51km, mb3.3/10, mb1 3.4/11, mb1mx3.2/23, mbtmp3.2/11, Error ellipse: s-maj=28.7km s-min=13.7km az=87.0*

ISC 22 13:12:26.6±4.1, 220N±01×1428E±02, h309km±42km, n13, σ0§66/13, mb3.5/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.05**	**346**	P		**P**	**13 15 42.5**	**-1.1**
	0.4nm,0.3s,baz=161,slow=10,SNR=5.0							
KSRS	**Korea Array**	**20.07**	**324**	P		**P**	**13 16 38.5**	**+0.9**
	4.1nm,0.4s,baz=147,slow=9.1,SNR=25							
ASAJ	**Asahikawa**	**22.08**	**360**	P		**P**	**13 16 57.0**	**+0.7**
	14nm,1.1s,mb4.2,baz=136,slow=32,SNR=4.8							
SONM	**Songino Array**	**38.89**	**320**	P		**P**	**13 19 23.2**	**+0.4**
	0.9nm,0.4s,mb3.5,baz=125,slow=6.8,SNR=10							
WRA	**Warramunga Arr**	**42.47**	**192**	P		**P**	**13 19 52.1**	**0.0**
	1.2nm,0.6s,mb3.3,baz=9.0,slow=8.5,SNR=8.9							
ASAR	**Alice Springs**	**46.18**	**191**	P		**P**	**13 20 21.1**	**-0.2**
	0.4nm,0.6s,mb2.9,baz=17,slow=9.3,SNR=5.8							
ZALV	**Zalesovo Beam**	**53.77**	**322**	P		**P**	**13 21 16.7**	**-0.8**
	0.6nm,0.4s,mb3.3,baz=101,slow=7.7,SNR=4.9							
MKAR	**Makanchi Array**	**54.24**	**313**	P		**P**	**13 21 21.6**	**+0.6**
	0.4nm,0.5s,mb3.0,baz=92,slow=7.5,SNR=5.9							
YKA	**Yellowknife Ar**	**76.38**	**28**	P		**P**	**13 23 41.4**	**-0.4**
	0.5nm,0.5s,mb3.5,baz=292,slow=5.9,SNR=11							
YKA	**Yellowknife Ar**	**76.38**	**28**	P		**P**	**13 23 41.4**	**-0.4**
ARCES	**ARCESS Array B**	**78.54**	**341**	P		**P**	**13 23 53.8**	**+0.1**
	3.5nm,1.1s,mb4.0,baz=73,slow=8.1,SNR=8.3							
JOF	**Joensuu**	**79.91**	**334**	*e*p		**P**	**13 24 00.1**	**-1.0**
	2.1nm,0.5s,mb4.1							
NVAR	**Mina Array Bea**	**83.26**	**51**	P		**P**	**13 24 19.8**	**+0.8**
	0.4nm,0.6s,mb3.4,baz=265,slow=6.2,SNR=3.2							

NEIC ***22*** *13:15:20.3, 1640N×9500W, h73km, MD3.9(MEX), After MEX.*

MEX 22 13:15:20.1±0.6, 1641N×9501W, h76km±9km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.68**	**10**	*i*P		Pn	13 15 33.9	-1.4
CMIG				*i*S		Sn	13 15 44.9	-1.6
HUIG	**Huatulco**	**1.24**	**239**	*i*P		Pn	13 15 40.1	-1.8
HUIG				*i*S		Sn	13 15 56.7	-1.5
VHO	**Vista Hermosa**	**1.78**	**292**	*e*P		Pn	13 15 47.9	-1.1
VHO				*i*S		Sn	13 16 09.9	-0.9
TGIG		**1.84**	**78**	*e*P		Pn	13 15 48.3	-1.5
TGIG				*i*S		Sn	13 16 10.2	-2.2
PCIG		**1.86**	**112**	*i*P		Pn	13 15 48.9	-1.1
PCIG				*i*S		Sn	13 16 11.3	-1.4
CCIG	**Comitan**	**2.76**	**92**	*e*P		Pn	13 16 01.8	-0.3
CCIG				*i*S		Sn	13 16 34.4	-0.1
CCIG	**Comitan**	**2.76**	**92**	*e*P		Pn	13 16 01.8	-0.3
CCIG				*i*S		Sn	13 16 35.4	+1.0
PNIG	**Pinotepa**	**2.99**	**270**	*i*P		Pn	13 16 04.8	-0.5
PNIG				*i*S		Sn	13 16 39.0	-1.2
UTMO	**Huajuapan**	**3.02**	**298**	*i*P		Pn	13 16 04.8	-0.8
UTMO				*i*S		Sn	13 16 40.9	+0.1
PPM	**Popocatepetl**	**4.34**	**308**	*e*P		Pn	13 16 24.1	+0.5
PPM				*i*S		Sn	13 17 13.3	+0.3

IDC 22 13:23:51.2±3.7, 1811S×17519W, h156km±148km, mb3.9/3, mb1 4.0/4, mb1mx3.5/17, mbtmp3.8/4, ML1.9/1, Error ellipse: s-maj=351.5km s-min=30.3km az=123.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.31**	**39**	P		Pn	13 25 10.6	+1.7
	2.3nm,0.3s,baz=102,slow=22,SNR=7.1							
AFI				S		Sn	13 26 09.1	-0.5
	10nm,0.3s,baz=37,slow=21,SNR=13							
WRA	**Warramunga Arr**	**47.61**	**259**	P		P	13 32 11.4	-0.3
	1.3nm,0.4s,baz=97,slow=7.4,SNR=18							
ASAR	**Alice Springs**	**47.69**	**254**	P		P	13 32 12.2	-0.1
	7.0nm,0.5s,baz=91,slow=8.2,SNR=197							
MJAR	**Matsushiro Arr**	**69.94**	**321**	P		P	13 34 45.6	+0.1
	1.1nm,0.7s,baz=149,slow=7.0,SNR=4.2							

IDC ***22*** *13:33:24.7±0.7, 4176N×8192E, h0km, mb4.0/11, mb1 4.1/17, mb1mx4.0/30, mbtmp4.0/17, ML3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.8/38, Error ellipse: s-maj=19.0km s-min=12.6km az=68.0*

BJI ***22*** *13:33:26.9, 4174N×8176E, h15km, mb4.0, ML4.1*

ISCJB ***22*** *13:33:27.9±0.4, 4179N±004×8191E±004, h33km, mb4.0/14, Error ellipse: s-maj=5.6km s-min=4.1km az=176.5*

MOS ***22*** *13:33:28.5±1.0, 4187N×8183E, h33km, mb4.2/10, Error ellipse: s-maj=13.1km s-min=7.8km az=106.2*

NEIC ***22*** *13:33:30.0±0.5, 4182N×8185E, h35km, mb4.3/1, Error ellipse: s-maj=8.6km s-min=7.1km az=208.0*

NNC ***22*** *13:33:30.4±3.8, 4215N×8172E, h0km, mb4.2, mpv4.2, Error ellipse: s-maj=38.1km s-min=15.7km az=134.0*

ISC 22 13:33:27.0±1.0, 4177N±004×8188E±004, h10km±7km, n76, σ1§41/94, mb4.0/14, 12C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.91**	**293**	⇓Pn		**Pn**	**13 34 29.5**	**+2.5**
	121nm,0.5s							
KNDC				⇑Lg			13 35 23.4	
	464nm,0.8s							
AAA	**Alma-Ata**	**3.94**	**294**	*e*PN		**Pb**	**13 34 35.5**	**-1.0**
AAA				*e*S		**Sb**	**13 35 26.9**	**+2.7**
AAA				pmax	pmax			
	comp=Z,189nm,0.5s							
AAA				smax				
	comp=Z,355nm,0.7s							
ULHL	**Ulahol**	**4.23**	**278**	P		**Pn**	**13 34 32.7**	**+1.3**
	SNR=5.5							
WMQ	**Urumqi**	**4.75**	**62**	P		**Pn**	**13 34 42.4**	**+3.9**
WMQ				PG		**Pg**	**13 34 54.8**	**-3.0**
WMQ				S		**Sn**	**13 35 39.1**	**+5.5**
WMQ				SG		**Sg**	**13 36 00.5**	**+1.2**
WMQ				Smax				
	comp=N,214nm,0.8s							
WMQ				Smax				
	comp=E,312nm,1.0s							
TKM2	**Tokmak 2**	**4.79**	**286**	⇓Pn		**Pn**	**13 34 40.8**	**+1.6**
	comp=E,48nm,1.0s							
TKM2				⇑Lg			13 35 52.8	
	comp=E,85nm,0.7s							
TKM2	**Tokmak 2**	**4.79**	**286**	P		**Pn**	**13 34 41.0**	**+1.7**
	SNR=7.0							
TKM2	**Tokmak 2**	**4.79**	**286**	*e*Pn		**Pn**	**13 34 40.5**	**+1.3**
TKM2				Sn		**Sn**	**13 35 37.1**	**+2.3**
KZA	**Kyzart**	**4.95**	**276**	P		**Pn**	**13 34 43.5**	**+2.0**
	SNR=6.9							
KSH	**Kashi**	**5.03**	**245**	*e*PG		**Pb**	**13 34 52.0**	**-3.0**
KSH				SG		**Sb**	**13 35 59.9**	**+4.5**
KSH				Smax				
	comp=N,394nm,0.6s							
KSH				Smax				
	comp=E,670nm,0.8s							
MK31	**Makanchi Array**	**5.03**	**3**	⇑Pn		**Pn**	**13 34 44.2**	**+1.8**
	comp=E,6.4nm,0.3s							
MK31				⇑Sn		**Sn**	**13 35 42.4**	**+1.8**
	comp=E,46nm,0.8s							
MK31				⇓Lg			13 36 02.4	
	comp=E,131nm,0.5s							
MKAR	**Makanchi Array**	**5.03**	**3**	Pn		**Pn**	**13 34 43.8**	**+1.3**
	comp=E,14nm,0.3s,baz=187,slow=14,SNR=352							
MKAR				Sn		**Sn**	**13 35 36.1**	**-4.5**
	comp=E,8.7nm,0.3s,baz=168,slow=17,SNR=4.5							
MKAR				Lg			13 36 03.5	
	comp=E,23nm,0.3s,baz=187,slow=28,SNR=7.1							
MKAR				LR	LR		13 37 04.0	
	comp=E,170nm,21.1s,baz=214,slow=44							
KBK	**Karagaybulak**	**5.22**	**282**	P		**Pn**	**13 34 46.8**	**+1.7**
	SNR=27							
FRU	**Bishkek**	**5.49**	**284**	*e*PN		**Pb**	**13 35 03.0**	**+0.1**
FRU				*e*S		**Sb**	**13 36 17.0**	**+8.3**
FRU				pmax	pmax			
	comp=Z,42nm,1.6s							
FRU				smax				
	comp=E,250nm,1.4s							
UCH	**Uchtor**	**5.51**	**277**	*e*Pn		**Pn**	**13 34 49.7**	**+0.7**
	comp=E,18nm,0.6s							
UCH				*e*Sn		**Sb**	**13 36 03.5**	**-5.7**
AAK	**Ala-Archa**	**5.55**	**281**	*e*PN		**Pn**	**13 34 50.3**	**+0.7**
AAK				pmax	pmax			
	comp=Z,21nm,0.4s							
AAK	**Ala-Archa**	**5.55**	**281**	P		**Pn**	**13 34 51.6**	**+2.0**
	SNR=7.0							
AAK	**Ala-Archa**	**5.55**	**281**	*e*Pn		**Pn**	**13 34 50.3**	**+0.7**
	comp=Z,21nm,0.4s							
AAK				*e*Sn		**Sg**	**13 36 20.9**	**-4.2**
USP	**Ospenovka**	**5.65**	**288**	P		**Pn**	**13 34 51.9**	**+0.9**
	SNR=14							
EKS2	**Erkin-Say**	**6.08**	**281**	*e*Pn		**Pn**	**13 34 57.2**	**+0.3**
	comp=Z,31nm,0.6s							
EKS2				*e*Sn		**Sg**	**13 36 35.0**	**-7.1**
AML	**Almayashu**	**6.11**	**276**	P		**Pg**	**13 35 21.9**	**-2.1**
	SNR=9.5							
AML	**Almayashu**	**6.11**	**276**	*e*Pn		**Pn**	**13 34 57.2**	**-0.1**
	comp=Z,37nm,0.7s							
AML				*e*Sn		**Sg**	**13 36 32.3**	**-11**
KK31	**Karatay Array**	**8.51**	**283**	⇓Pg		Px	13 36 02.3	
	comp=Z,10nm,0.9s,baz=89,slow=16,SNR=11							
KK31				⇑Lg			13 37 54.8	
	comp=Z,7.9nm,0.6s,baz=91,slow=27,SNR=5.5							
KURBB	**Kurchatov Arra**	**9.15**	**346**	⇑Pn		**Pn**	**13 35 42.2**	**+3.3**
	comp=Z,1.5nm,0.6s							
KURBB				⇑Lg			13 38 14.5	
	comp=Z,16nm,0.7s							
KURK	**Kurchatov**	**9.22**	**347**	⇓Pn		**Pn**	**13 35 42.2**	**+2.2**
	comp=Z,12nm,0.6s							
KURK				⇓Sn		**Sn**	**13 37 23.6**	**-0.1**
	comp=Z,12nm,0.7s							
KURK				⇑Lg			13 38 16.6	
	comp=Z,64nm,1.2s							
KURK	**Kurchatov**	**9.22**	**347**	Pn		**Pn**	**13 35 39.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=170,slow=12,SNR=10							
KURK				Sn		**Sn**	**13 37 23.6**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=154,slow=24,SNR=4.1							
KURK				Lg			13 38 14.3	
	comp=Z,0.5nm,0.3s,baz=164,slow=29,SNR=3.8							
KURK	**Kurchatov**	**9.22**	**347**	P		**Pn**	**13 35 40.2**	**+0.2**
KURK				pmax	pmax			
	comp=Z,13nm,0.6s							
KURK	**Kurchatov**	**9.22**	**347**	*e*Pn		**Pn**	**13 35 39.8**	**-0.2**
	comp=Z,18nm,0.7s							
KURK				*e*Sn		**Sn**	**13 37 29.8**	**+6.1**
CHCP	**Chirah Chowk**	**10.58**	**223**	P		**Pn**	**13 35 58.8**	**+0.1**
CEP	**Cherat**	**11.18**	**228**	P		**Pn**	**13 36 07.5**	**+0.7**
ZAA0	**Zalesovo Array**	**12.34**	**8**	*e*Pn		**Pn**	**13 36 22.0**	**-0.6**
ZAA0				*e*Sn		**Sn**	**13 38 28.0**	**-12**
ZALV	**Zalesovo Beam**	**12.34**	**8**	Pn		**Pn**	**13 36 21.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=192,slow=14,SNR=4.8							
ZALV				Lg			13 39 55.0	
	comp=Z,0.4nm,0.3s,baz=196,slow=30,SNR=2.6							
ZALV	**Zalesovo Beam**	**12.34**	**8**	Pn		**Pn**	**13 36 21.9**	**-0.7**
ZALV				Lg			13 39 55.0	
NVS	**Novosibirsk**	**13.11**	**3**	*e*P		**Pn**	**13 36 36.1**	**+3.0**
NVS				*e*			13 38 56.5	
BVA0	**Borovoye Array**	**13.66**	**329**	⇑Pn		**Pn**	**13 36 46.9**	**+6.2**
	comp=Z,0.4nm,0.6s,baz=143,slow=14,SNR=6.3							
BVA0				⇑Lg			13 40 37.0	
	comp=Z,4.4nm,1.2s,baz=131,slow=25,SNR=3.6							
BVA0	**Borovoye Array**	**13.66**	**329**	P		**Pn**	**13 36 46.8**	**+6.2**
BVAR	**Borovoye Array**	**13.66**	**329**	Pn		**Pn**	**13 36 39.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=134,slow=10,SNR=3.9							
BRVK	**Borovoye**	**13.73**	**329**	*e*P		**Pn**	**13 36 42.2**	**+0.7**
BRVK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
BRVK	**Borovoye**	**13.73**	**329**	*e*Pn		**Pn**	**13 36 42.2**	**+0.7**
	comp=Z,6.2nm,0.9s							
GTA	**Gaotai**	**13.84**	**94**	*e*P		**Pn**	**13 36 48.6**	**+5.5**
GTA				AP			13 36 53.3	
GTA				XP			13 36 56.0	
GTA				S		**Sn**	**13 39 14.8**	**-1.9**
GTA				LG2			13 40 50.3	
GTA				AMB	AMB			
	comp=Z,2.0nm,0.7s							
**LSA

INK	**Inuvik**	**67.08**	**14**	P	**P**	**13 44 19.1**	**-0.9**		
INK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
KDAK	**Kodiak Island**	**70.88**	**27**	P	**P**	**13 44 43.5**	**-0.3**		
	comp=Z,6.6nm,0.8s,mb4.6,baz=104,slow=19,SNR=5.0								
TORD	**Torodi Ar. Bea**	**74.08**	**274**	P	**P**	**13 45 02.3**	**-1.2**		
	comp=Z,0.9nm,0.5s,mb3.9,baz=45,slow=5.4,SNR=12								
YKA	**Yellowknife Ar**	**75.24**	**8**	P	**P**	**13 45 08.4**	**-1.1**		
	comp=Z,1.3nm,0.6s,mb4.0,baz=340,slow=5.8,SNR=20								
YKA	**Yellowknife Ar**	**75.24**	**8**	P	**P**	**13 45 08.4**	**-1.1**		
YKA				pmax	pmax				
	comp=Z,1.0nm,0.6s								
WRA	**Warramunga Arr**	**78.24**	**130**	P	**P**	**13 45 27.4**	**+0.5**		
	comp=Z,1.2nm,0.8s,mb3.9,baz=327,slow=5.6,SNR=5.5								
WRA	**Warramunga Arr**	**78.24**	**130**	P	**P**	**13 45 27.4**	**+0.5**		
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**80.96**	**133**	P	**P**	**13 45 41.9**	**+0.2**		
	comp=Z,1.0nm,0.8s,mb3.8,baz=324,slow=5.9,SNR=5.9								
ASAR	**Alice Springs**	**80.96**	**133**	P	**P**	**13 45 41.9**	**+0.2**		
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								

*IDC **22** 13:43:08.8±0.7,5131N×179.10W,h0km,mb4.0/15, mb1 4.1/16,mb1mx4.0/28,mbtmp4.0/16,ML4.1/1, Error ellipse: s-maj=22.8km s-min=16.1km az=160.0*
*BJI **22** 13:43:09.6,5130N×17890W,h30km,mB5.1,mb4.7,Ms4.6, Ms2.4*
*MOS **22** 13:43:11.7±1.3,5123N×17883W,h33km,mb4.2/11,Error ellipse: s-maj=16.7km s-min=13.3km az=85.2*
*NEIC **22** 13:43:13.6±0.6,5127N×17893W,h30km,mb4.7/7, ML4.2(AEIC),Error ellipse: s-maj=17.4km s-min=7.1km az=167.0*
*ISCJB **22** 13:43:14.9±1.1,514N±01×17895W±008,h57km±9km, mb4.2/26,MS4.3/2,Error ellipse: s-maj=19.0km s-min=7.6km az=170.0*

ISC 22 13:43:16.3±1.0,514N±01×17892W±008,h54km±8km, h45km±1.6km:pP-P,n62,σ1s09/62,mb4.2/26,MS4.3/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.49**	**69**	P	**Pn**	**13 43 39.7**	**-1.0**
ADK				S	**Sn**	**13 44 00.3**	**+1.3**
SMY	**Shemya**	**4.52**	**290**	P	**Pn**	**13 44 23.2**	**+1.1**
FX1	**Attu Island--F**	**5.11**	**290**	Pn	**Pn**	**13 44 28.2**	**-2.0**
	2.8nm,0.3s,baz=247,slow=6.7,SNR=16						
FX1				Sn	**Sn**	**13 45 36.7**	**+9.0**
	6.1nm,0.3s,baz=273,slow=23,SNR=5.3						
FX1	**Attu Island--F**	**5.11**	**290**	P	**Pn**	**13 44 30.6**	**+0.4**
NIKO	**Nikolski**	**6.40**	**71**	P	**Pn**	**13 44 49.2**	**+1.4**
SDPT	**Sand Point**	**11.71**	**63**	*eP*	**Pn**	**13 46 00.5**	**+0.1**
	176nm,1.1s						
OHAK	**Old Harbor**	**16.01**	**59**	*eP*	**Pn**	**13 46 55.5**	**-2.2**
	155nm,2.2s						
KDAK	**Kodiak Island**	**16.50**	**57**	Pn	**Pn**	**13 47 01.1**	**-2.6**
	0.7nm,0.3s,baz=117,slow=23,SNR=13						
BILL	**Bilibino**	**18.22**	**342**	*eP*	**Pn**	**13 47 30.9**	**+6.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KTH	**Kantishna Hill**	**19.18**	**40**	*eP*	**Pn**	**13 47 36.0**	**-0.5**
	comp=Z,14nm,0.8s						
BPAW	**Bear Paw Mtn.**	**19.41**	**38**	*eP*	**Pn**	**13 47 38.2**	**-1.0**
	comp=Z,5.2nm,0.8s						
PAX	**Paxson**	**21.25**	**44**	*eP*	**P**	**13 47 58.8**	**+1.3**
PAX				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
PAX	**Paxson**	**21.25**	**44**	*eP*	**P**	**13 47 58.8**	**+1.3**
	comp=Z,5.8nm,0.8s,mb4.0						
INK	**Inuvik**	**27.52**	**35**	P	**P**	**13 48 56.7**	**-0.5**
	comp=Z,0.8nm,0.8s,mb3.4,baz=261,slow=20,SNR=3.6						
INK	**Inuvik**	**27.52**	**35**	P	**P**	**13 48 56.7**	**-0.5**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLR	**Kul'dur**	**31.11**	**286**	*eP*	**P**	**13 49 24.8**	**-4.5**
MDJ	**Mudanjiang**	**34.50**	**279**	P	**P**	**13 49 57.0**	**-1.9**
MDJ				AP	pP	13 50 08.0	-4.7
MDJ				AMB	AMB		
	comp=Z,5.0nm,2.6s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,397nm,13.9s						
YKA	**Yellowknife Ar**	**35.30**	**46**	P	**P**	**13 50 04.6**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=282,slow=8.6,SNR=7.8						
YKA				PcP	PcP	13 52 35.8	+1.1
	comp=Z,0.2nm,0.5s,baz=301,slow=2.6,SNR=4.7						
YKA	**Yellowknife Ar**	**35.30**	**46**	P	**P**	**13 50 04.6**	**-0.9**
YKA						13 52 35.8	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**35.30**	**46**	P	**P**	**13 50 04.6**	**-0.9**
YKA				PcP	PcP	13 52 35.9	+1.1
NVAR	**Mina Array Bea**	**43.63**	**83**	P	**P**	**13 51 17.4**	**+2.2**
	comp=Z,0.3nm,0.8s,mb3.1,baz=7.4,slow=17,SNR=2.7						
PDAR	**Pinedale Array**	**46.39**	**72**	P	**P**	**13 51 37.9**	**+0.9**
	comp=Z,1.7nm,0.6s,mb4.2,baz=308,slow=3.6,SNR=28						
SONM	**Songino Array**	**46.59**	**297**	P	**P**	**13 51 38.3**	**-0.2**
	comp=Z,1.1nm,0.9s,mb3.8,baz=40,slow=12,SNR=5.5						
SONM	**Songino Array**	**46.59**	**297**	P	**P**	**13 51 38.3**	**-0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SPITS	**Spitsbergen Ar**	**50.38**	**356**	P	**P**	**13 52 08.9**	**+1.6**
	comp=Z,2.7nm,0.5s,mb4.5,baz=58,slow=7.0,SNR=8.2						
SPITS	**Spitsbergen Ar**	**50.38**	**356**	P	**P**	**13 52 08.9**	**+1.6**
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SPITS	**Spitsbergen Ar**	**50.38**	**356**	P	**P**	**13 52 08.9**	**+1.6**
XAN	**Xi'an**	**53.59**	**281**	P	**P**	**13 52 29.8**	**-1.9**
XAN				AP	pP	13 52 41.3	-4.9
XAN				PP	PP	13 54 30.5	-2.0
XAN				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3						
XAN				LR	LR		
	comp=E,153nm,19.7s						
XAN				LR	LR		
	comp=Z,197nm,20.3s,MS4.2						
ZALV	**Zalesovo Beam**	**53.99**	**313**	PcP	PcP	13 53 38.5	-0.3
	comp=Z,0.5nm,0.3s,baz=96,slow=6.0,SNR=3.7						
LZH	**Lanzhou**	**55.32**	**286**	*eP*	**P**	**13 52 44.0**	**-0.2**
LZH				AP	pP	13 52 56.8	-2.0
LZH				XP	sP	13 53 02.1	-2.8
LZH				*e*PP	PP	13 54 49.3	+1.3
LZH				AMB	AMB		
	comp=Z,15nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,89nm,6.5s						
LZH				LR	LR		
	comp=N,213nm,16.0s						
LZH				LR	LR		
	comp=Z,365nm,17.9s,MS4.5						
GTA	**Gaotai**	**55.50**	**292**	*eP*	**P**	**13 52 46.5**	**+1.0**
GTA				AP	pP	13 52 59.5	-0.6
GTA				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.9						
ARCES	**ARCESS Array B**	**58.09**	**350**	P	**P**	**13 53 02.9**	**-0.5**
	comp=Z,12nm,1.2s,mb4.8,baz=27,slow=8.1,SNR=4.2						
ARCES	**ARCESS Array B**	**58.09**	**350**	P	**P**	**13 53 02.9**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,12nm,1.2s						
KURK	**Kurchatov**	**58.98**	**314**	P	**P**	**13 53 09.7**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.7,baz=43,slow=6.7,SNR=3.7						
KURK	**Kurchatov**	**58.98**	**314**	P	**P**	**13 53 09.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
GYA	**Guiyang**	**60.25**	**276**	P	**P**	**13 53 18.4**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**60.85**	**320**	P	**P**	**13 53 22.8**	**+0.2**
	comp=Z,0.7nm,0.5s,mb4.0,baz=55,slow=5.4,SNR=5.4						
BVAR	**Borovoye Array**	**60.85**	**320**	P	**P**	**13 53 22.8**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**63.59**	**345**	*ep*	**P**	**13 53 39.0**	**-1.8**
	comp=Z,1.4nm,0.5s,mb4.2						
JOF	**Joensuu**	**63.59**	**345**	*eP*	**P**	**13 53 39.0**	**-1.8**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
KMI	**Kunming**	**63.65**	**278**	P	**P**	**13 53 41.6**	**-0.2**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.9						
CMAR	**Chiang Mai Arr**	**70.94**	**276**	P	**P**	**13 54 27.1**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=20,slow=6.6,SNR=5.3						
GUN	**Gumba**	**71.79**	**292**	*eP*	**P**	**13 54 34.2**	**+1.2**
	comp=Z,15nm,0.5s,mb5.2						
JIRN	**Jiri**	**71.80**	**292**	*eP*	**P**	**13 54 34.3**	**+1.3**
RAMN	**Ramite**	**72.09**	**291**	*eP*	**P**	**13 54 35.6**	**+0.8**
	comp=Z,13nm,0.5s,mb5.1						
KKN	**Kakani**	**72.23**	**292**	*eP*	**P**	**13 54 36.5**	**+0.9**
PKI	**Pulchoki**	**72.32**	**292**	*eP*	**P**	**13 54 36.9**	**+0.8**
GKN	**Gorkha**	**72.44**	**293**	*eP*	**P**	**13 54 37.5**	**+0.6**
DMN	**Daman**	**72.47**	**292**	*eP*	**P**	**13 54 37.6**	**+0.6**
DANN	**Dangsing**	**72.69**	**294**	*eP*	**P**	**13 54 39.5**	**+1.2**
	comp=Z,17nm,0.9s,mb5.0						
AKASG	**Malin Array Be**	**75.54**	**342**	P	**P**	**13 54 54.1**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=18,slow=5.7,SNR=4.9						
AKASG	**Malin Array Be**	**75.54**	**342**	P	**P**	**13 54 54.1**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CTA	**Charters Tower**	**77.42**	**213**	P	**P**	**13 55 04.2**	**-1.3**
	comp=Z,3.3nm,0.8s,mb4.3,baz=56,slow=5.1,SNR=3.7						
CTA	**Charters Tower**	**77.42**	**213**	P	**P**	**13 55 04.2**	**-1.2**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**79.22**	**344**	*eP*	**P**	**13 55 14.8**	**-0.4**
BRTR	**Keskin Array B**	**84.93**	**335**	P	**P**	**13 55 45.8**	**+0.6**
	comp=Z,1.4nm,0.9s,mb4.1,baz=21,slow=5.3,SNR=4.1						
BRTR	**Keskin Array B**	**84.93**	**335**	P	**P**	**13 55 45.8**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**85.42**	**222**	P	**P**	**13 55 47.5**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.8,baz=28,slow=5.3,SNR=9.2						
ASAR	**Alice Springs**	**85.42**	**222**	P	**P**	**13 55 47.5**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**89.87**	**213**	P	**P**	**13 56 08.3**	**-0.5**
	comp=Z,1.0nm,0.3s,mb4.6,baz=324,slow=19,SNR=3.4						
STKA	**Stephens Creek**	**89.87**	**213**	P	**P**	**13 56 08.3**	**-0.5**
BOSA	**Boshof**	**150.93**	**312**	PKPbc	PKPbc	14 03 03.5	+1.0
	comp=Z,1.6nm,0.7s,baz=186,slow=7.8,SNR=4.6						

*BJI **22** 13:51:30.3,4179N×8179E,h15km,ML3.3*
*NNC **22** 13:51:31.4±7.7,4199N×8197E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=98.2km s-min=29.7km az=143.0*
*ISCJB **22** 13:51:33.2±1.8,420N±02×8178E±009,h10km,Error ellipse: s-maj=25.4km s-min=8.7km az=172.2*

ISC 22 13:51:36.5±2.1,420N±02×8193E±008,h10km,n6,σ1s30/8, 6C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**4.60**	**65**	*eP*	**Pn**	**13 52 46.0**	**-0.1**
WMQ				S	**Sn**	**13 53 42.3**	**+2.8**
WMQ				SG	**Sg**	**13 54 03.1**	**-1.1**
WMQ				Smax			
	comp=N,40nm,0.9s						
WMQ				Smax			
	comp=E,69nm,0.9s						
TKM2	**Tokmak 2**	**4.77**	**283**	⇑Pn	**Pn**	**13 52 44.1**	**-4.4**
	comp=E,8.7nm,0.7s						
TKM2				⇓Lg		13 53 59.5	
	comp=E,22nm,0.8s						
MK31	**Makanchi Array**	**4.78**	**3**	⇑Pn	**Pn**	**13 52 46.5**	**-2.0**
	comp=E,1.3nm,0.3s						
MK31				⇑Lg		13 54 05.7	
	comp=E,15nm,0.5s						
KK31	**Karatay Array**	**8.50**	**281**	⇑Pn	**Pn**	**13 53 39.3**	**-0.3**
	comp=E,2.1nm,0.8s,baz=77,slow=12,SNR=6.6						
KK31				⇓Lg		13 55 57.7	
	comp=E,2.8nm,0.7s,baz=90,slow=27,SNR=5.2						
KURBB	**Kurchatov Arra**	**8.92**	**346**	⇓Pn	**Pn**	**13 53 46.3**	**+0.9**
	comp=E,0.8nm,1.3s						
KURBB				⇑Lg		13 56 18.4	
	comp=E,2.5nm,0.7s						
KURK	**Kurchatov**	**8.99**	**346**	⇑Pn	**Pn**	**13 53 47.3**	**+0.9**
	comp=E,7.8nm,1.9s						
KURK				⇓Lg		13 56 18.1	
	comp=E,16nm,1.1s						

IDC 22 14:16:04.0±8.7,630S×14875E,h40km±71km,mb3.2/1, mb1 3.8/3,mb1mx3.4/16,mbtmp3.6/3,ML3.5/2,Error ellipse: s-maj=99.7km s-min=50.2km az=115.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.46**	**207**	P	Pn	14 16 56.3	+0.8
	11nm,0.3s,baz=35,slow=5.9,SNR=29						
PMG				S	Sn	14 17 35.6	+0.4
	9.0nm,0.3s,baz=19,slow=23,SNR=14						
WRA	**Warramunga Arr**	**19.49**	**225**	P	Pn	14 20 28.0	-1.3
	0.3nm,0.3s,baz=49,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**22.41**	**218**	P	P	14 20 59.0	-0.1
	0.8nm,0.5s,baz=57,slow=9.3,SNR=21						
TORD	**Torodi Ar. Bea**	**146.85**	**284**	PKPbc	PKPbc	14 35 42.3	-0.8
	0.5nm,0.5s,baz=60,slow=3.3,SNR=10						

*ISCJB **22** 14:21:32.5±1.9,201S±05×178.1W±03,h500km,mb3.6/7, Error ellipse: s-maj=77.2km s-min=16.3km az=150.9*
*NEIC **22** 14:21:33.4±5.3,2027S×17804W,h507km±57km,Error ellipse: s-maj=77.9km s-min=19.6km az=150.0*
*IDC **22** 14:21:34.3±7.1,2029S×17807W,h516km±72km,mb3.2/7, mb1 3.5/7,mb1mx3.2/16,mbtmp3.2/7,Error ellipse: s-maj=71.7km s-min=28.0km az=146.0*

ISC 22 14:21:33.4±1.8,202S±05×1781W±03,h500km,n14, σ0s79/10,mb3.6/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.43**	**264**	P	**P**	**14 27 30.9**	**+0.7**
	2.2nm,0.3s,mb4.1,baz=88,slow=11,SNR=6.1						
CTA	**Charters Tower**	**33.43**	**264**	P	**P**	**14 27 30.9**	**+0.7**
ASAR	**Alice Springs**	**44.50**	**256**	P	**P**	**14 28 59.5**	**-0.4**
	2.9nm,0.5s,mb3.9,baz=94,slow=7.4,SNR=45						
ASAR				PcP	PcP	14 30 31.1	-1.7
	0.5nm,0.6s,baz=86,slow=3.5,SNR=4.2						
WRA	**Warramunga Arr**	**44.55**	**262**	P	**P**	**14 28 59.6**	**-0.8**
	1.3nm,0.3s,mb3.8,baz=97,slow=7.5,SNR=22						
KHU	**Kahuku**	**44.97**	**31**	P	**P**	**14 29 03.5**	**0.0**
PETK	**Petropavlovsk-**	**75.95**	**345**	P	**P**	**14 32 27.5**	**-0.6**
	1.0nm,0.7s,mb3.5,baz=123,slow=7.9,SNR=5.2						
PETK	**Petropavlovsk-**	**75.95**	**345**	P	**P**	**14 32 27.5**	**-0.6**
NVAR	**Mina Array Bea**	**80.87**	**43**	P	**P**	**14 32 55.9**	**+1.0**
	0.2nm,0.6s,mb2.8,baz=228,slow=4.7,SNR=3.7						
PDAR	**Pinedale Array**	**88.81**	**43**	P	**P**	**14 33 32.5**	**-1.0**
	0.6nm,1.1s,mb3.3,baz=190,slow=2.5,SNR=3.5						
CMAR	**Chiang Mai Arr**	**89.92**	**290**	P	**P**	**14 33 40.5**	**+1.2**
	0.6nm,0.6s,mb3.6,baz=110,slow=3.4,SNR=4.4						
AKASG	**Malin Array Be**	**142.70**	**331**	PKhKP		14 40 04.6	
	2.0nm,0.5s,baz=44,slow=4.3,SNR=10						
MMAI	**Mount Meron Ar**	**147.58**	**300**	PKPbc	PKPbc	14 40 20.9	-0.6
	0.5nm,0.4s,baz=83,slow=6.0,SNR=4.7						
CLL	**Collm**	**147.75**	**347**	*e*PKpbc	PKPbc	14 40 21.0	-0.3
GERES	**GERESS Array B**	**149.88**	**344**	PKPbc	PKPbc	14 40 25.6	-1.0
	0.1nm,0.4s,baz=72,slow=4.3,SNR=4.6						

*BJI **22** 14:23:13.4,172N×9707E,h33km,mB5.0,mb4.7*
*ISCJB **22** 14:23:14.8±0.7,195N±008×9669E±007,h27km,mb4.2/18, Error ellipse: s-maj=13.6km s-min=7.6km az=38.4*
*IDC **22** 14:23:16.9±0.8,195N×9674E,h27km±3km,mb4.0/10, mb1 4.1/12,mb1mx3.9/24,mbtmp4.0/12,ML3.4/2,MS3.2/1, Ms1 3.2/1,ms1mx3.0/34,Error ellipse: s-maj=25.9km s-min=12.3km az=49.0*
*NEIC **22** 14:23:16.9±0.6,195N×9676E,mb4.4/6,Error ellipse: s-maj=13.1km s-min=7.9km az=49.0*
*DJA **22** 14:23:22,274N×9702E,h10km,MLv4.3/6*

ISC 22 14:23:17.1±0.7,197N±008×9670E±007,h29km, h29km±.4km:pP-P,n34,σ0s82/32,mb4.2/18,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.37**	**70**	Pn	**Pn**	**14 23 54.0**	**0.0**
	1.6nm,0.3s,baz=266,slow=5.9,SNR=29						
PSI				LR	LR	14 24 46.5	
	comp=Z,505nm,21.6s,baz=175,slow=39						
BSI	**Banda Aceh**	**3.77**	**338**	P	**Pn**	**14 24 11.6**	**-1.8**
PPI	**Padang Panjang**	**4.41**	**123**	P	Px	14 24 32.3	
PDSI	**Padang**	**4.72**	**127**	P	Px	14 24 40.4	
IPM	**Ipoh**	**4.99**	**60**	P	**Pn**	**14 24 30.7**	**+0.7**
KULM	**Kulim**	**5.14**	**50**	*e*Pn	**Pn**	**14 24 31.4**	**-0.8**
	57nm,0.9s						
KULM	**Kulim**	**5.14**	**50**	P	**Pn**	**14 24 32.3**	**+0.1**
MYKOM	**Kota Tinggi**	**7.15**	**91**	P	**Pn**	**14 25 00.4**	**+0.6**
	35nm,1.1s,0.1nm						
SBUM	**Sibu**	**15.51**	**88**	P	**Pn**	**14 26 54.5**	**+0.5**
	17nm,2.6s						
CMAR	**Chiang Mai Arr**	**16.53**	**7**	Pn	**Pn**	**14 27 07.8**	**+0.8**
	0.2nm,0.3s,baz=198,slow=11,SNR=44						
CHTO	**Chiang Mai**	**16.89**	**7**	*e*Pn	**Pn**	**14 27 09.9**	**-1.5**
	4.3nm,0.9s						
MYLDM	**Lahad Datu**	**21.99**	**81**	P	**P**	**14 28 09.7**	**+0.6**
	51nm,1.6s,mb4.7						
SHL	**Shillong**	**23.92**	**349**	*eP*	**P**	**14 28 28.0**	**-0.7**
SHL				*eP*		14 30 08.0	
LSA	**Lhasa**	**28.08**	**350**	*eP*	**P**	**14 29 06.5**	**+0.2**
	2.2nm,0.6s,mb4.0						
LSA				*e*	pP	14 29 14.2	-0.5
LZH	**Lanzhou**	**34.59**	**10**	*eP*	**P**	**14 30 03.3**	**-0.2**
LZH				AP	pP	14 30 11.0	-1.0
LZH				XP	sP	14 30 15.3	-0.2
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.1s						
GTA	**Gaotai**	**37.37**	**4**	*eP*	**P**	**14 30 27.0**	**-0.3**
GTA				AP	pP	14 30 35.9	0.0
GTA				XP	sP	14 30 38.4	-1.0
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**42.86**	**122**	P	**P**	**14 31 12.5**	**-0.7**
	comp=Z,1.4nm,0.8s,mb3.7,baz=301,slow=9.0,SNR=24						
WRA				pP	pP	14 31 20.5	-1.4
	comp=Z,3.5nm,0.9s,baz=302,slow=9.3,SNR=9.4						
WRAB	**Tennant Creek**	**42.87**	**122**	*eP*	**P**	**14 31 12.1**	**-1.0**
	comp=Z,7.9nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**44.25**	**127**	P	**P**	**14 31 24.8**	**+0.5**
	comp=Z,1.8nm,1.0s,mb3.8,baz=304,slow=7.1,SNR=10						
ASAR				pP	pP	14 31 32.9	-0.1
	comp=Z,1.5nm,0.9s,baz=294,slow=7.3,SNR=6.9						
TKM2	**Tokmak 2**	**44.92**	**338**	*eP*	**P**	**14 31 31.0**	**+1.6**
	comp=Z,7.3nm,1.4s,mb4.3						
TKM2				*ep*P	pP	14 31 38.9	+0.9
AAK	**Ala-Archa**	**45.10**	**337**	*eP*	**P**	**14 31 32.4**	**+1.7**
	comp=Z,7.9nm,1.4s,mb4.3						
AAK	**Ala-Archa**	**45.10**	**337**	P	**P**	**14 31 35.7**	**+5.0**
KSRS	**Korea Array**	**45.51**	**35**	P	**P**	**14 31 33.2**	**-0.9**
	comp=Z,2.6nm,0.9s,mb4.2,baz=220,slow=9.6,SNR=7.0						
KSRS				pP	pP	14 31 41.6	-1.2
	comp=Z,2.5nm,0.9s,baz=213,slow=9.0,SNR=5.5						
MKAR	**Makanchi Array**	**46.38**	**346**	P	**P**	**14 31 41.4**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.3,baz=161,slow=7.7,SNR=22						
MKAR				pP	pP	14 31 49.4	-0.1
	comp=Z,2.7nm,0.8s,baz=164,slow=7.1,SNR=7.8						
SONM	**Songino Array**	**46.45**	**9**	P	**P**	**14 31 41.8**	**+0.5**
	comp=Z,2.1nm,0.8s,mb4.2,baz=192,slow=9.2,SNR=13						
SONM				pP	pP	14 31 50.2	+0.1
	comp=Z,2.4nm,0.9s,baz=194,slow=8.1,SNR=7.6						
KURK	**Kurchatov**	**50.93**	**345**	*eP*	**P**	**14 32 15.9**	**+0.3**
	comp=Z,17nm,1.5s,mb4.8						
KURK				*ep*P	pP	14 32 24.7	+0.2
PMG	**Port Moresby**	**51.52**	**104**	P	**P**	**14 32 20.8**	**0.0**
	comp=Z,10nm,0.7s,mb4.9,baz=256,slow=6.8,SNR=6.6						
ZAA0	**Zalesovo Array**	**52.73**	**351**	*eP*	**P**	**14 32 28.8**	**-0.2**
ZAA0				*ep*P	pP	14 32 37.6	-0.3
ZALV	**Zalesovo Beam**	**52.73**	**351**	P	**P**	**14 32 28.9**	**-0.1**
	comp=Z,5.3nm,0.6s,mb4.6,baz=176,slow=6.7,SNR=24						
ZALV				pP	pP	14 32 37.0	-0.9
	comp=Z,5.6nm,0.8s,baz=180,slow=6.3,SNR=7.2						
ZALV	**Zalesovo Beam**	**52.73**	**351**	P	**P**	**14 32 28.9**	**-0.1**
ZALV				pP	pP	14 32 37.0	-0.9
CTA	**Charters Tower**	**53.29**	**117**	P	**P**	**14 32 32.2**	**-1.6**
	comp=Z,2.3nm,1.0s,mb4.1,baz=307,slow=9.0,SNR=4.2						
CTA	**Charters Tower**	**53.29**	**117**	P	**P**	**14 32 32.2**	**-1.6**
BRTR	**Keskin Array B**	**68.23**	**312**	P	**P**	**14 34 15.5**	**+0.3**
	comp=Z,0.5nm,0.8s,mb3.6,baz=148,slow=6.8,SNR=3.2						
BRTR				pP	pP	14 34 24.7	+0.4
	comp=Z,0.9nm,0.9s,baz=96,slow=6.2,SNR=3.5						
GERES	**GERESS Array B**	**83.91**	**319**	P	**P**	**14 35 45.3**	**+1.0**
	comp=Z,0.2nm,0.6s,mb3.4,baz=132,slow=5.4,SNR=3.3						
GERES				pP	pP	14 35 53.3	-0.4
	comp=Z,0.8nm,0.9s,baz=98,slow=6.9,SNR=4.3						

*ISCJB **22** 14:24:55.9±0.6,194N±009×9677E±008,h27km,mb4.4/24, Error ellipse: s-maj=15.0km s-min=8.4km az=42.9*
*BJI **22** 14:24:56.5,203N×9642E,h25km,mB5.0,mb4.8*
*IDC **22** 14:24:57.4±0.9,193N×9669E,h26km±3km,mb4.1/12, mb1 4.2/14,mb1mx4.0/24,mbtmp4.1/14,ML4.3/1,Error ellipse: s-maj=28.0km s-min=12.1km az=52.0*
*NEIC **22** 14:24:57.8±0.5,195N×9677E,mb4.6/11,Error ellipse: s-maj=11.7km s-min=6.4km az=223.0*

ISC 22 14:24:58.2±0.6,195N±009×9680E±008,h28km, h28km±.6km:pP-P,n37,σ0s76/36,mb4.4/24,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.29**	**68**	Pn	**Pn**	**14 25 35.1**

ZAA0	**Zalesovo Array**	**52.76**	**351**	*e*P		**P**		**14 34 09.0**	**-1.4**
ZAA0				*e*pP		pP		14 34 17.9	-1.2
ZALV	**Zalesovo Beam**	**52.76**	**351**	P		**P**		**14 34 09.7**	**-0.7**
	comp=Z,8.2nm,0.5s,mb4.9,baz=179,slow=6.8,SNR=18								
ZALV				pP		pP		14 34 17.9	-1.2
	comp=Z,4.8nm,0.5s,baz=172,slow=7.3,SNR=7.2								
CTA	**Charters Tower**	**53.20**	**117**	P		**P**		**14 34 14.6**	**+0.4**
	comp=Z,2.6nm,0.7s,mb4.3,baz=279,slow=9.3,SNR=3.8								
CTA				pP		pP		14 34 23.1	+0.2
	comp=Z,3.1nm,0.9s,baz=312,slow=4.1,SNR=3.2								
BRTR	**Keskin Array B**	**68.31**	**312**	P		**P**		**14 35 55.8**	**-1.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=116,slow=5.6,SNR=4.9								
TIXI	**Tiksi**	**72.52**	**10**	*e*P		**P**		**14 36 20.2**	**-1.8**
	comp=Z,2.0nm,0.6s,mb4.2								
TIXI				*e*pP		pP		14 36 30.0	-1.0
ARCES	**ARCESS Array B**	**81.70**	**340**	P		**P**		**14 37 13.5**	**0.0**
	comp=Z,4.1nm,1.1s,mb4.3,baz=76,slow=6.4,SNR=6.2								
ARCES				pP		pP		14 37 22.2	-0.5
	comp=Z,1.0nm,0.5s,baz=85,slow=7.1,SNR=2.1								
ARCES	**ARCESS Array B**	**81.70**	**340**	P		**P**		**14 37 13.5**	**0.0**
ARCES				pP		pP		14 37 22.2	-0.5
GERES	**GERESS Array B**	**83.99**	**319**	P		**P**		**14 37 26.0**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.7,baz=67,slow=4.5,SNR=4.0								
RRI2	**Red Ridge**	**128.31**	**26**	*e*PKPdf		PKPdf		14 44 02.7	+0.4

BJI ***22*** *14:59:35.1,2.10N×9670E,h35km,mb4.6,Ms4.1,Msz4.0*
ISCJB ***22*** *14:59:38.7±1.7,23N±0.1×967E±0.1,h48km±13km,mb4.1/7, Error ellipse: s-maj=25.9km s-min=9.1km az=138.6*
NEIC ***22*** *14:59:38.1±0.8,208N×9666E,h35km, Error ellipse: s-maj=15.1km s-min=10.3km az=46.0*
IDC ***22*** *14:59:39.1±7.0,2.11N×9670E,h42km±55km,mb3.8/7, mb1 3.9/9,mb1mx3.7/22,mbtmp3.8/9,ML3.7/2, Error ellipse: s-maj=72.3km s-min=18.2km az=59.0*
DJA ***22*** *14:59:43,255N×9664E,h40km,ML v4.2/6*

ISC 22 14:59:40.6±1.6,23N±01×967E±01,h45km±12km,n19, σ1§17/20,mb4.1/7,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**2.30**	**78**	P		**Pn**	**15 00 14.7**	**-1.4**
	5.6nm,0.3s,baz=268,slow=10.0,SNR=16							
BSI	**Banda Aceh**	**3.44**	**336**	P		**Pn**	**15 00 30.2**	**-1.5**
BSI				S		**Sn**	**15 01 11.2**	**0.0**
PPI	**Padang Panjang**	**4.64**	**127**	P		**Pn**	**15 00 53.8**	**+5.6**
IPM	**Ipoh**	**4.84**	**64**	P		**Pn**	**15 00 50.8**	**-0.2**
KULM	**Kulim**	**4.94**	**53**	*e*Pn		**Pn**	**15 00 51.6**	**-0.7**
	40nm,0.6s							
PDSI	**Padang**	**4.97**	**130**	P		**Pn**	**15 00 54.2**	**+1.5**
	27nm,1.1s,1μm0.3nm							
RGRI	**Rengat**	**6.25**	**115**	P		**Pn**	**15 01 18.0**	**+7.6**
MYKOM	**Kota Tinggi**	**7.19**	**94**	P		**Pn**	**15 01 26.5**	**+3.2**
CMAR	**Chiang Mai Arr**	**16.19**	**8**	P		**Pn**	**15 03 26.6**	**+1.6**
	0.2nm,0.3s,baz=197,slow=12,SNR=45							
GTA	**Gaotai**	**37.02**	**4**	*e*P		**P**	**15 06 46.4**	**+0.4**
GTA				AP		pP	15 06 53.1	-5.0
GTA				XP		sP	15 06 55.9	-7.5
GTA				AMB		AMB		
	comp=Z,7.0nm,0.8s,mb4.5							
GTA				LR		LR		
	comp=N,204nm,21.7s							
GTA				LR		LR		
	comp=E,100nm,20.5s							
GTA				LR		LR		
	comp=Z,251nm,19.0s							
WRA	**Warramunga Arr**	**43.08**	**123**	P		**P**	**15 07 34.0**	**-2.6**
	comp=Z,1.3nm,0.6s,mb3.9,baz=301,slow=9.2,SNR=13							
ASAR	**Alice Springs**	**44.49**	**128**	P		**P**	**15 07 45.5**	**-2.3**
	comp=Z,0.6nm,0.8s,mb3.4,baz=302,slow=8.1,SNR=9.1							
KSRS	**Korea Array**	**45.24**	**36**	P		**P**	**15 07 53.3**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.9,baz=223,slow=7.9,SNR=5.7							
MKAR	**Makanchi Array**	**46.03**	**346**	P		**P**	**15 08 00.0**	**+0.3**
	comp=Z,4.5nm,0.7s,mb4.5,baz=166,slow=7.7,SNR=31							
SONM	**Songino Array**	**46.11**	**9**	P		**P**	**15 08 00.9**	**+0.6**
	comp=Z,1.0nm,0.4s,mb4.1,baz=188,slow=9.1,SNR=12							
ZAA0	**Zalesovo Array**	**52.37**	**351**	*e*P		**P**	**15 08 48.1**	**+0.1**
ZALV	**Zalesovo Beam**	**52.37**	**351**	P		**P**	**15 08 48.2**	**+0.1**
	comp=Z,4.4nm,0.4s,baz=180,slow=7.4,SNR=26							
ZALV	**Zalesovo Beam**	**52.37**	**351**	P		**P**	**15 08 48.2**	**+0.1**
ARCES	**ARCESS Array B**	**81.31**	**340**	P		**P**	**15 11 52.1**	**+0.3**
	comp=Z,3.7nm,1.0s,mb4.2,baz=64,slow=5.5,SNR=6.6							

JMA 22 15:20:24.2±0.4,4502N×14783E,h176km,M3.5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.23**	**223**	P		Pn	15 21 03.9	+0.3
NEM2				*e*S		Sn	15 21 34.2	+0.2
JAK	**Akkeshi**	**3.03**	**229**	P		Pn	15 21 13.3	+0.3
JAK				*e*S		Sn	15 21 51.5	+0.5
JAR	**Ashorobuto**	**3.39**	**241**	P		Pn	15 21 18.0	+0.6
JCH	**Churui**	**4.03**	**235**	P		Pn	15 21 25.2	-0.3
JCH				*e*S		Sn	15 22 11.3	-2.0
JNBK	**Urakawa-nobuka**	**4.59**	**235**	P		Pn	15 21 31.3	-1.4
JKB	**Kayabe**	**5.85**	**240**	P		Pn	15 21 47.1	-2.1
JKB				*e*S		Sn	15 22 50.9	-5.0
JOT	**Ohata**	**6.15**	**236**	P		Pn	15 21 50.7	-2.3
JOT				*e*S		Sn	15 22 56.6	-6.3

ATH ***22*** *15:38:33.9,3850N×2343E,h35km±5km,MD2.6/4,ML2.4*
ISCJB ***22*** *15:38:34.2±0.5,3857N±002×2358E±004,h13km±5km, Error ellipse: s-maj=5.8km s-min=3.5km az=171.1*
CSEM ***22*** *15:38:34.2±0.1,3859N×2357E,h12km,ML2.4, Error ellipse: s-maj=1.7km s-min=0.8km az=71.0*
THE ***22*** *15:38:35.0,3859N×2356E,h11km±1km,ML2.3/2, Error ellipse: s-maj=1.5km s-min=0.8km az=287.0*

ISC 22 15:38:34.8±0.5,3857N±002×2359E±004,h15km±4km,n16, σ0§64/30,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LKR	**Lokris**	**0.47**	**280**	P		**Pg**	**15 38 43.1**	**-1.1**
LKR				S		**Sg**	**15 38 50.4**	**-0.1**
LKR	**Lokris**	**0.47**	**280**	*e*Pb		**Pg**	**15 38 43.0**	**-1.2**
LKR				S		**Sg**	**15 38 50.4**	**-0.1**
PTL	**Penteli**	**0.56**	**158**	*e*PN		**Pg**	**15 38 45.6**	**-0.2**
PTL				*e*SN		**Sg**	**15 38 53.7**	**+0.3**
PTL	**Penteli**	**0.56**	**158**	*e*Pn		**Pg**	**15 38 45.6**	**-0.2**
PTL				*e*Sn		**Sg**	**15 38 53.4**	**0.0**
ATH	**Athens Observa**	**0.60**	**171**	*e*PN		**Pg**	**15 38 46.0**	**-0.6**
ATH				*e*SN		**Sg**	**15 38 54.9**	**+0.2**
AOS	**Alonnisos**	**0.64**	**20**	P		**Pg**	**15 38 46.7**	**-0.6**
AOS				S		**Sg**	**15 38 56.9**	**+1.1**
LTK	**Loutraki**	**0.73**	**222**	P		**Pg**	**15 38 48.4**	**-0.7**
LTK				S		**Sg**	**15 38 59.7**	**+0.9**
NEO	**Neokhori**	**0.79**	**339**	*e*PN		**Pg**	**15 38 50.0**	**-0.1**
NEO				*e*SN		**Sg**	**15 39 02.0**	**+1.5**
XOR	**Xorichti**	**0.85**	**339**	P		**Pg**	**15 38 50.8**	**-0.5**
XOR				S		**Sg**	**15 39 02.0**	**-0.6**
AGG	**Agios Georgios**	**1.08**	**295**	P		**Pg**	**15 38 55.2**	**-0.5**
AGG				S		**Sg**	**15 39 10.2**	**+0.3**
DID	**Didima**	**1.10**	**195**	P		**Pg**	**15 38 55.2**	**-0.8**
DID				S		**Sg**	**15 39 11.5**	**+1.2**
PAIG	**Paliouri**	**1.36**	**3**	P		**Pn**	**15 38 59.1**	**0.0**
PAIG				S		**Sn**	**15 39 16.9**	**+0.1**
THL	**Klokotos Trika**	**1.58**	**309**	P		**Pn**	**15 39 02.6**	**+0.4**
THL				S		**Sn**	**15 39 22.5**	**+0.2**
LIT	**Litokhoron**	**1.75**	**331**	P		**Pn**	**15 39 04.5**	**0.0**
OUR	**Ouranopolis**	**1.79**	**10**	P		**Pn**	**15 39 05.1**	**+0.1**
PLG	**Polygyros**	**1.81**	**356**	P		**Pn**	**15 39 05.8**	**+0.5**
PLG				S		**Sn**	**15 39 27.1**	**-0.8**

IDC ***22*** *15:42:27.3±9.8,1901N×14538E,h242km±120km,mb3.4/4, mb1 3.5/5,mb1mx3.1/21,mbtmp3.3/5, Error ellipse: s-maj=124.2km s-min=19.4km az=78.0*

NEIC 22 15:42:26.6±6.3,1903N×14552E,h242km±66km,mb4.5/4, 1C,Error ellipse: s-maj=36.9km s-min=10.3km az=100.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.60**	**341**	P		P	15 46 26.2	+0.1
	0.4nm,0.3s,baz=167,slow=10,SNR=8.2							
MJAR	**Matsushiro Arr**	**18.60**	**341**	P		P	15 46 26.2	+0.1
WRAB	**Tennant Creek**	**40.24**	**196**	*e*P		P	15 49 39.6	-0.5
	4.1nm,0.6s							
WB2	**Warramunga Arr**	**40.25**	**196**	↑*i*P		P	15 49 40.1	-0.1
WRA	**Warramunga Arr**	**40.25**	**196**	P		P	15 49 40.7	+0.4
	3.1nm,0.5s,baz=18,slow=9.0,SNR=53							
FITZ	**Fitzroy Crossi**	**41.75**	**209**	*e*P		P	15 49 52.4	0.0
	2.9nm,0.3s							
SONM	**Songino Array**	**42.78**	**321**	P		P	15 50 00.7	+0.3
	0.3nm,0.5s,baz=107,slow=9.2,SNR=2.8							
ASAR	**Alice Springs**	**43.92**	**195**	P		P	15 50 09.8	+0.1
	1.6nm,0.6s,baz=15,slow=7.4,SNR=40							
STKA	**Stephens Creek**	**50.75**	**184**	P		P	15 51 02.4	+0.3
	1.2nm,0.6s,baz=45,slow=8.6,SNR=3.5							
STKA	**Stephens Creek**	**50.75**	**184**	P		P	15 51 02.4	+0.3
FIB	**Fire Island**	**61.16**	**30**	P		P	15 52 15.9	+0.5
	63nm,0.8s							
PMR	**Palmer**	**61.75**	**30**	*e*P		P	15 52 18.7	-0.6
	52nm,2.1s							

BJI ***22*** *15:50:57.0,2569N×14204E,h15km,mB4.8,mb4.6,Ms4.0, Msz3.9*
IDC ***22*** *15:51:00.0±0.7,2554N×14142E,h0km,mb4.0/8, mb1 4.3/8,mb1mx4.0/17,mbtmp4.0/8,MS3.5/3,Ms1 3.5/3, ms1mx3.0/24,Error ellipse: s-maj=25.4km s-min=15.3km az=101.0*
ISCJB ***22*** *15:51:02.4±0.5,2553N±006×1413E±0.1,h33km,mb4.2/18, MS3.7/2,Error ellipse: s-maj=14.2km s-min=7.8km az=19.3*
NEIC ***22*** *15:51:05.2±0.6,2554N×14122E,h35km,mb4.5/6,Error ellipse: s-maj=21.2km s-min=14.0km az=77.0*

ISC 22 15:51:01.4±6.4,2555N±006×1414E±01,h11km±40km,n28, σ1§10/26,mb4.2/18,MS3.7/2,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.69**	**24**	Pn		**Pn**	**15 51 30.7**	**-0.2**
	119nm,0.3s,baz=258,slow=22,SNR=121							
CBIJ				Sn		**Sn**	**15 51 52.8**	**+0.2**
	146nm,0.3s,baz=214,slow=22,SNR=24							
MJAR	**Matsushiro Arr**	**11.29**	**347**	LR		LR	15 57 42.2	
	comp=Z,281nm,19.0s,baz=190,slow=36							
KSRS	**Korea Array**	**16.50**	**319**	Pn		**Pn**	**15 54 57.4**	**+4.6**
	0.2nm,0.3s,baz=135,slow=12,SNR=21							
KSRS				LR		LR	16 00 27.4	
	comp=Z,100nm,19.1s,baz=175,slow=34							
WHN	**Wuhan**	**24.36**	**288**	*e*P		**P**	**15 56 22.6**	**+3.1**
LZH	**Lanzhou**	**33.74**	**297**	*e*P		**P**	**15 57 42.0**	**-0.9**
LZH				AP		pP	15 57 48.0	+1.7
LZH				XP		sP	15 57 50.1	+2.5
LZH				AMB		AMB		
	comp=Z,19nm,1.4s,mb4.8							
LZH				AMB		AMB		
	comp=Z,97nm,5.0s							
ULN	**Ulaanbaatar**	**34.98**	**318**	*e*P		**P**	**15 57 53.7**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.5							
SONM	**Songino Array**	**35.37**	**318**	P		**P**	**15 57 57.0**	**+0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=130,slow=8.7,SNR=11							
SONM				LR		LR	16 12 47.7	
	comp=Z,90nm,19.7s,MS3.5,baz=90,slow=37							
GTA	**Gaotai**	**37.38**	**302**	*e*P		**P**	**15 58 14.4**	**+0.2**
GTA				AP		pP	15 58 20.1	+2.5
GTA				XP		sP	15 58 23.3	+4.4
GTA				AMB		AMB		
	comp=Z,5.0nm,1.3s,mb4.2							
GTA				AMB		AMB		
	comp=Z,83nm,4.8s							
GTA				LR		LR		
	comp=N,112nm,16.1s,MS3.9							
GTA				LR		LR		
	comp=E,111nm,15.2s,MS3.9							
GTA				LR		LR		
	comp=Z,117nm,12.8s,MS3.9							
CMAR	**Chiang Mai Arr**	**39.86**	**269**	P		**P**	**15 58 37.2**	**+1.9**
	comp=Z,0.5nm,0.7s,mb3.4,baz=56,slow=9.8,SNR=4.4							
WRAB	**Tennant Creek**	**45.73**	**189**	*e*P		**P**	**15 59 22.5**	**-0.2**
	comp=Z,11nm,0.8s,mb4.8							
WB2	**Warramunga Arr**	**45.73**	**189**	*e*P		**P**	**15 59 22.4**	**-0.4**
WRA	**Warramunga Arr**	**45.74**	**189**	P		**P**	**15 59 22.4**	**-0.4**
	comp=Z,14nm,0.9s,mb4.9,baz=8.9,slow=8.6,SNR=80							
ASAR	**Alice Springs**	**49.46**	**189**	P		**P**	**15 59 52.1**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.1,baz=16,slow=12,SNR=15							
MKAR	**Makanchi Array**	**50.93**	**311**	P		**P**	**16 00 02.8**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=91,slow=9.3,SNR=13							
KURK	**Kurchatov**	**53.58**	**315**	*e*P		**P**	**16 00 19.2**	**-3.1**
	comp=Z,5.9nm,1.2s,mb4.4							
STKA	**Stephens Creek**	**57.10**	**180**	P		**P**	**16 00 47.3**	**-0.5**
	comp=Z,3.6nm,0.9s,mb4.4,baz=344,slow=7.4,SNR=2.4							
AML	**Almayashu**	**57.21**	**305**	*e*P		**P**	**16 00 48.1**	**-0.5**
	comp=Z,2.6nm,1.0s,mb4.2							
FIB	**Fire Island**	**57.58**	**32**	*e*P		**P**	**16 00 50.9**	**+0.1**
	comp=Z,132nm,1.1s							
BRVK	**Borovoye**	**58.77**	**318**	*e*P		**P**	**16 00 59.0**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.3							
KBL	**Kabul**	**62.09**	**297**	*e*P		**P**	**16 01 22.9**	**+0.5**
	comp=Z,7.7nm,0.9s,mb4.8							
YKA	**Yellowknife Ar**	**73.83**	**28**	P		**P**	**16 02 35.8**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=295,slow=6.0,SNR=19							
YKA	**Yellowknife Ar**	**73.83**	**28**	P		**P**	**16 02 35.8**	**0.0**
JOF	**Joensuu**	**76.15**	**334**	*ep*		**P**	**16 02 46.3**	**-2.8**
NVAR	**Mina Array Bea**	**82.03**	**51**	P		**P**	**16 03 24.4**	**+2.6**
	comp=Z,0.4nm,0.7s,mb3.5,baz=284,slow=3.6,SNR=4.6							
NOA	**NORSAR Array B**	**84.78**	**338**	P		**P**	**16 03 32.0**	**-3.5**
	comp=Z,0.9nm,0.7s,mb4.0,baz=45,slow=5.1,SNR=3.4							
PDAR	**Pinedale Array**	**85.81**	**44**	P		**P**	**16 03 44.9**	**+3.9**
	comp=Z,1.3nm,1.0s,mb4.1,baz=270,slow=3.0,SNR=5.6							
PLCA	**Paso Flores**	**149.46**	**128**	PKPbc		PKPbc	16 10 51.2	+0.5
	comp=Z,3.6nm,1.0s,baz=259,slow=2.6,SNR=4.6							
PLCA	**Paso Flores**	**149.46**	**128**	PKPbc		PKPbc	16 10 51.2	+0.5

IGQ 22 15:52:40.4,206S×7973W,h36km±2km,Mb4.3,Ms4.1, 1C-13D,Error ellipse: s-maj=4.6km s-min=1.4km az=97.4,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IGUA	**Igualata**	**1.23**	**63**	↓P		Pn	15 53 03.7	+2.6
BIL2	**Estacion Bilba**	**1.36**	**64**	↓P		Pn	15 53 05.9	+2.9
BIL2	**Estacion Bilba**	**1.36**	**64**	↓S		Sn	15 53 23.8	+3.9
ARRY	**Arrayan**	**1.39**	**67**	P		Pn	15 53 05.3	+2.1
PATA	**Patacocha**	**1.41**	**67**	↓P		Pn	15 53 06.2	+2.6
JUI6	**Juive**	**1.41**	**64**	↓P		Pn	15 53 06.3	+2.7
JUI6	**Juive**	**1.41**	**64**	↓S		Sn	15 53 25.2	+4.3
CHIS	**Cerro-Chispas-**	**1.41**	**315**	P		Pn	15 53 06.3	+2.7
CHIS	**Cerro-Chispas-**	**1.41**	**315**	S		Sn	15 53 26.7	+5.7
RETU	**Refugio**	**1.42**	**65**	P		Pn	15 53 06.6	+2.9
QIL2	**Quilotoa**	**1.43**	**35**	↓P		Pn	15 53 06.0	+2.1
RUN5	**Runtun**	**1.45**	**64**	↓P		Pn	15 53 06.8	+2.7
ULBA	**Ulba**	**1.45**	**66**	↓P		Pn	15 53 07.0	+2.8
PISA	**Pisayambo**	**1.67**	**54**	P		Pn	15 53 09.7	+2.6
CAMI	**Rancho Maria**	**1.84**	**42**	↓P		Pn	15 53 12.8	+3.4
JAMA	**Jama**	**1.84**	**345**	P		Pn	15 53 11.1	+1.5
TAMB	**Tambo**	**1.92**	**45**	P		Pn	15 53 13.4	+2.8
VC1	**Cotopaxi 1**	**1.93**	**43**	↓P		Pn	15 53 13.9	+3.1
TERV	**Terraza Guagua**	**2.18**	**31**	P		Pn	15 53 17.4	+3.2
GGP	**Refugio Guagua**	**2.19**	**31**	↓P		Pn	15 53 17.4	+3.1
PINO	**Pino**	**2.19**	**31**	↓P		Pn	15 53 17.4	+3.0
ANTI	**Antisana**	**2.24**	**45**	P		Pn	15 53 17.6	+2.6
COTA	**Cotacachi**	**2.75**	**30**	↑P		Pn	15 53 25.0	+2.9
LAV3	**Lava3-Reventad**	**2.86**	**47**	P		Pn	15 53 23.9	+0.4
CONE	**Cono NE Rev Vo**	**2.87**	**47**	P		Pn	15 53 25.9	+2.1

BJI ***22*** *16:32:07.4,642S×10249E,h35km,mB5.0,mb4.9,Ms4.6, Msz4.3*
DJA ***22*** *16:32:14,565S×10232E,h10km,Mw5.2/10*
ISCJB ***22*** *16:32:14.6±0.7,567S±004×10238E±004,h45km±5km, mb4.8/59,MS3.9/16,Error ellipse: s-maj=8.8km s-min=5.2km az=136.7*
MOS ***22*** *16:32:14.8±1.1,532S×10267E,h33km,mb4.9/17,Error ellipse: s-maj=17.4km s-min=7.7km az=111.3*
NEIC ***22*** *16:32:15.9±0.3,558S×10245E,h35km,mb5.1/22,Error ellipse: s-maj=10.9km s-min=5.3km az=51.0*
IDC ***22*** *16:32:16.2±0.8,549S×10246E,h35km±3km,mb4.3/12, mb1 4.4/14,mb1mx4.3/20,mbtmp4.3/14,ML3.9/2,MS3.8/7, Ms1 3.8/7,ms1mx3.5/28,Error ellipse: s-maj=31.1km s-min=10.3km az=51.0*

ISC 22 16:32:16.6±0.6,564S±004×10239E±004,h43km±5km, h39km±1.7km:pP-P,n157,σ1§26/147,mb4.8/59,MS3.9/16, 10C-10D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	**Kapahiang**	**1.99**	**6**	P		**Pn**	**16 32 46.6**	**-1.2**
KLI	**Kotabumi**	**2.57**	**73**	P		**Pn**	**16 32 56.1**	**+0.3**

PMBI	**Palembang**	**3.59**	**41**	P		**Pn**		**16 33 09.7**	**-0.1**
SBJI	**Serang**	**3.75**	**97**	P		**Pn**		**16 33 12.2**	**+0.2**
JMBI	**JAMBI**	**4.17**	**17**	P		**Pn**		**16 33 20.2**	**+2.4**
DBJI	**Dramaga**	**4.43**	**102**	P		**Pn**		**16 33 21.1**	**-0.2**
CBJI	**Citeko**	**4.50**	**100**	P		**Pn**		**16 33 24.8**	**+2.5**
PDSI	**Padang**	**5.08**	**338**	P		**Pn**		**16 33 28.8**	**-1.5**
	454nm,0.4s,4.7nm								
PPBI	**Pangkal Pinang**	**5.09**	**47**	P		**Pn**		**16 33 30.0**	**-0.4**
	130nm,1.2s,2μm1.0nm								
RGRI	**Rengat**	**5.26**	**359**	P		**Pn**		**16 33 38.2**	**+5.5**
LEM	**Lembang**	**5.33**	**103**	P		**Pn**		**16 33 35.3**	**+1.7**
	416nm,0.8s,6μm1.7nm								
PPI	**Padang Panjang**	**5.52**	**339**	P		**Pn**		**16 33 35.2**	**-1.2**
	175nm,1.1s,5μm1.6nm								
XMIS	**Christmas Isla**	**5.79**	**146**	↓*e*P		**Pn**		**16 33 33.9**	**-6.1**
XMIS	**Christmas Isla**	**5.79**	**146**	P		**Pn**		**16 33 33.9**	**-6.1**
MYKOM	**Kota Tinggi**	**7.53**	**11**	↓P		**Pn**		**16 34 06.0**	**+2.1**
MYKOM	**Kota Tinggi**	**7.53**	**11**	P		**Pn**		**16 34 06.2**	**+2.3**
	65nm,0.6s,692nm0.3nm								
KGM	**Kluang**	**7.67**	**7**	↑P		**Pn**		**16 34 07.6**	**+1.8**
GSI	**Gunungsitoli**	**8.41**	**325**	P		**Pn**		**16 34 13.5**	**-2.5**
	81nm,0.4s,2μm								
COCO	**West Island**	**8.51**	**220**	*e*Pn		**Pn**		**16 34 16.8**	**-0.5**
COCO	**West Island**	**8.51**	**220**	P		**Pn**		**16 34 17.2**	**-0.1**
	609nm,0.9s,1.5nm								
FRIM	**Kepong**	**8.86**	**355**	↑P		**Pn**		**16 34 25.6**	**+3.5**
PSI	**Prapat**	**9.08**	**337**	Pn		**Pn**		**16 34 20.9**	**-4.2**
	1.5nm,0.3s,baz=156,slow=9.4,SNR=6.0								
SJI	**Sawahan**	**9.54**	**103**	P		**Pn**		**16 34 31.4**	**-0.1**
	148nm,1.1s,2μm								
IPM	**Ipoh**	**10.15**	**352**	↓P		**Pn**		**16 34 43.9**	**+4.1**
IPM	**Ipoh**	**10.15**	**352**	P		**Pn**		**16 34 47.1**	**+7.3**
KRKI	**Karangkates**	**10.29**	**105**	P		**Pn**		**16 34 40.6**	**-1.2**
	216nm,1.0s								
KSM	**Kuching**	**10.61**	**48**	↓P		**Pn**		**16 34 53.2**	**+7.1**
KTGM	**Kuala Trenggan**	**10.92**	**4**	↓P		**Pn**		**16 34 55.2**	**+4.7**
KULM	**Kulim**	**11.00**	**351**	*e*Pn		**Pn**		**16 34 49.4**	**-2.1**
	16nm,0.8s								
KULM	**Kulim**	**11.00**	**351**	↓P		**Pn**		**16 34 52.2**	**+0.7**
KMMI	**Kalianget**	**11.59**	**98**	P		**Pn**		**16 35 00.1**	**+0.6**
	193nm,1.0s								
PLKI	**Palangkaraya**	**12.02**	**74**	P		**Pn**		**16 35 04.4**	**-1.0**
	157nm,0.6s								
SBUM	**Sibu**	**12.69**	**51**	P		**Pn**		**16 35 17.0**	**+2.4**
SBUM	**Sibu**	**12.69**	**51**	P		**Pn**		**16 35 16.7**	**+2.1**
	47nm,1.3s,465nm								
BSI	**Banda Aceh**	**13.14**	**327**	P		**Pn**		**16 35 20.9**	**+0.2**
	58nm,1.0s,2μm								
KHKI	**Kahang-Kahang**	**13.39**	**102**	P		**Pn**		**16 35 29.5**	**+5.3**
BTM	**Bintulu**	**13.83**	**51**	↑P		**Pn**		**16 35 26.0**	**-4.1**
KAPI	**Kappang**	**17.30**	**89**	P		**Pn**		**16 36 13.6**	**-1.5**
	0.3nm,0.3s,baz=286,slow=19,SNR=7.6								
TSM	**Tawau**	**18.34**	**58**	↓P		**Pn**		**16 36 28.9**	**+1.0**
SDKM	**Sandakan**	**18.55**	**53**	↑P		**Pn**		**16 36 29.5**	**-1.0**
KDM	**Kudat**	**19.06**	**49**	↑P		**Pn**		**16 36 34.3**	**-2.3**
MYLDM	**Lahad Datu**	**19.35**	**57**	↓P		**Pn**		**16 36 40.1**	**0.0**
MYLDM	**Lahad Datu**	**19.35**	**57**	P		**Pn**		**16 36 41.0**	**+1.0**
	78nm,1.4s								
NST	**Nakhon Sawan**	**21.30**	**354**	P		**P**		**16 36 58.0**	**-1.7**
MBWA	**Marble Bar**	**22.81**	**134**	*e*P		**P**		**16 37 15.6**	**-0.3**
	9.2nm,0.9s,mb4.2								
CM31	**Chiang Mai Arr**	**24.19**	**352**	*e*P		**P**		**16 37 28.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**24.19**	**352**	P		**P**		**16 37 28.4**	**-0.8**
	12nm,0.6s,m

GUN	**Gumba**	**36.97**	**335**	*e*P		**P**		**16 39 22.8**	**+0.9**	
	comp=Z,74nm,0.6s,mb5.7									
KKN	**Kakani**	**37.12**	**334**	*e*P		**P**		**16 39 23.7**	**+0.5**	
	comp=Z,40nm,0.6s,mb5.4									
KKN	**Kakani**	**37.12**	**334**	*e*P		**P**		**16 39 23.7**	**+0.5**	
KKN					pmax	pmax				
	comp=Z,40nm,0.6s,mb5.4									
GKN	**Gorkha**	**37.58**	**334**	*e*P		**P**		**16 39 27.6**	**+0.5**	
	comp=Z,72nm,1.0s,mb5.4									
KOLN	**Koldanda**	**37.85**	**332**	*e*P		**P**		**16 39 30.6**	**+1.2**	
	comp=Z,65nm,0.8s,mb5.4									
DANN	**Dangsing**	**38.27**	**333**	*e*P		**P**		**16 39 33.7**	**+0.8**	
	comp=Z,86nm,0.6s,mb5.7									
XAN	**Xi'an**	**39.95**	**8**	P		**P**		**16 39 44.8**	**-2.0**	
XAN				AP		pP		16 39 54.8	-3.9	
XAN				XP		sP		16 39 58.6	-5.2	
XAN				PP		PP		16 41 21.5	+2.1	
XAN				S		**S**		**16 45 46.6**	**-2.6**	
XAN				AMB		AMB				
	comp=Z,18nm,0.8s,mb4.8									
XAN				AMB		AMB				
	comp=Z,57nm,4.0s									
XAN				LR		LR				
	comp=N,116nm,17.4s,MS3.9									
XAN				LR		LR				
	comp=E,107nm,19.5s,MS3.9									
XAN				LR		LR				
	comp=Z,206nm,15.5s,MS4.1									
NJ2	**Nanjing**	**40.63**	**22**	*e*P		**P**		**16 39 54.1**	**+1.5**	
NJ2				AMB		AMB				
	comp=Z,10.0nm,0.7s,mb4.5									
LZH	**Lanzhou**	**41.53**	**2**	*e*P		**P**		**16 39 59.0**	**-0.9**	
LZH				AP		pP		16 40 08.9	-2.9	
LZH				XP		sP		16 40 13.0	-3.9	
LZH				*e*PP		PP		16 41 39.3	+2.8	
LZH				*e*S		**S**		**16 46 14.6**	**+1.9**	
LZH				AMB		AMB				
	comp=Z,29nm,1.2s,mb4.8									
LZH				AMB		AMB				
	comp=Z,135nm,5.0s									
LZH				LR		LR				
	comp=N,637nm,13.2s									
LZH				LR		LR				
	comp=Z,809nm,17.5s,MS4.7									
PMG	**Port Moresby**	**44.52**	**98**	*e*P		**P**		**16 40 23.8**	**-0.6**	
PMG					pmax	pmax				
	comp=Z,13nm,0.9s									
PMG	**Port Moresby**	**44.52**	**98**	*e*P		**P**		**16 40 23.8**	**-0.7**	
	comp=Z,13nm,0.9s,mb4.8									
GTA	**Gaotai**	**44.89**	**357**	*e*P		**P**		**16 40 27.3**	**+0.4**	
GTA				AP		pP		16 40 38.9	0.0	
GTA				XP		sP		16 40 44.0	0.0	
GTA				PP		PP		16 42 15.1	+2.6	
GTA				S		**S**		**16 47 02.5**	**+0.7**	
GTA				XS		sS		16 47 19.3	-2.5	
GTA				AMB		AMB				
	comp=Z,9.0nm,0.8s,mb4.7									
GTA				AMB		AMB				
	comp=Z,70nm,4.8s									
GTA				LR		LR				
	comp=N,126nm,24.4s,MS4.1									
GTA				LR		LR				
	comp=E,215nm,21.4s,MS4.1									
GTA				LR		LR				
	comp=Z,237nm,20.8s,MS4.1									
CTA	**Charters Tower**	**44.94**	**113**	P		**P**		**16 40 28.7**	**+1.0**	
	comp=Z,2.7nm,0.6s,mb4.2,baz=264,slow=6.3,SNR=4.1									
CTA				sP		sP		16 40 42.8	-2.0	
	comp=Z,7.6nm,0.8s,baz=291,slow=8.8,SNR=5.0									
CTAO	**Charters Tower**	**44.94**	**113**	*e*P		sP		16 40 43.4	-1.4	
CTAO	**Charters Tower**	**44.94**	**113**	*e*pP		sP		16 40 43.4	-1.4	
STKA	**Stephens Creek**	**44.97**	**130**	P		**P**		**16 40 29.2**	**+1.4**	
	comp=Z,14nm,0.7s,mb4.9,baz=306,slow=8.1,SNR=26									
STKA				sP		sP		16 40 43.0	-1.8	
	comp=Z,10nm,0.7s,baz=302,slow=9.3,SNR=7.2									
STKA				LR		LR		16 59 53.1		
	comp=Z,88nm,18.1s,MS3.7,baz=207,slow=37									
STKA	**Stephens Creek**	**44.97**	**130**	*e*P		**P**		**16 40 27.5**	**-0.3**	
	comp=Z,9.8nm,0.6s,mb4.8									
STKA	**Stephens Creek**	**44.97**	**130**	*e*P		**P**		**16 40 29.1**	**+1.4**	
	comp=Z,80nm,2.8s,mb5.1									
HHC	**Hu-ho-hao-te**	**47.03**	**10**	*e*P		**P**		**16 40 43.8**	**+0.1**	
HHC				AP		pP		16 40 53.5	-2.3	
HHC				XP		sP		16 40 57.5	-3.4	
HHC				PCP		PcP		16 42 15.0	-0.4	
HHC				PP		PP		16 42 33.9	-1.0	
HHC				PCS		PcS		16 46 08.6	-1.8	
HHC				*e*S		**S**		**16 47 33.0**	**+0.5**	
HHC				XS		sS		16 47 50.3	-2.3	
HHC				SCS		ScS		16 50 31.8	-2.7	
HHC				SS		SS		16 50 54.0	-6.1	
HHC				AMB		AMB				
	comp=Z,22nm,1.2s,mb5.0									
HHC				AMB		AMB				
	comp=Z,99nm,3.9s									
HHC				LR		LR				
	comp=N,266nm,13.1s,MS4.4									
HHC				LR		LR				
	comp=E,134nm,13.1s,MS4.4									
HHC				LR		LR				
	comp=Z,230nm,16.3s,MS4.2									
BJI	**Beijing**	**47.20**	**14**	P		**P**		**16 40 42.8**	**-2.3**	
BJI				S		**S**		**16 47 40.3**	**+5.3**	
BJI				AMB		AMB				
	comp=Z,13nm,0.7s,mb5.0									
BJI				LR		LR				
	comp=N,227nm,20.9s,MS4.3									
BJI				LR		LR				
	comp=E,203nm,16.6s,MS4.3									
BJI				LR		LR				
	comp=Z,103nm,19.9s,MS3.8									
KSRS	**Korea Array**	**49.04**	**27**	P		**P**		**16 40 58.5**	**-0.9**	
	comp=Z,2.1nm,0.5s,mb4.4,baz=226,slow=7.6,SNR=17									
WMQ	**Urumqi**	**50.99**	**346**	P		**P**		**16 41 15.5**	**+1.4**	
WMQ				AMB		AMB				
	comp=Z,38nm,1.0s,mb5.3									
WMQ				AMB		AMB				
	comp=Z,115nm,4.0s									
WMQ				LR		LR				
	comp=N,66nm,25.0s,MS3.6									
WMQ				LR		LR				
	comp=E,30nm,28.0s,MS3.6									
WMQ				LR		LR				
	comp=Z,60nm,32.0s,MS3.4									
SONM	**Songino Array**	**53.37**	**3**	P		**P**		**16 41 32.1**	**+0.4**	
	comp=Z,22nm,0.7s,mb5.2,baz=182,slow=9.0,SNR=171									
SONM				sP		sP		16 41 46.9	-2.0	
	comp=Z,15nm,0.6s,baz=183,slow=8.3,SNR=11									
ULN	**Ulaanbaatar**	**53.44**	**4**	*e*P		**P**		**16 41 32.2**	**+0.1**	
ULN					pmax	pmax				
	comp=Z,11nm,0.8s,mb4.8									
ULN	**Ulaanbaatar**	**53.44**	**4**	*e*P		**P**		**16 41 32.2**	**0.0**	
	comp=Z,11nm,0.8s,mb4.8									
CN2	**Changchun**	**53.44**	**21**	*e*P		**P**		**16 41 30.3**	**-2.0**	
CN2				AMB		AMB				
	comp=Z,10.0nm,0.8s,mb4.8									
MJAR	**Matsushiro Arr**	**53.70**	**36**	P		**P**		**16 41 31.8**	**-2.6**	
	comp=Z,0.8nm,0.6s,mb3.8,baz=321,slow=13,SNR=4.8									
TKM2	**Tokmak 2**	**54.11**	**336**	*e*P		**P**		**16 41 37.7**	**+0.6**	
TKM2					pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9									
TKM2	**Tokmak 2**	**54.11**	**336**	*e*P		**P**		**16 41 37.6**	**+0.5**	
	comp=Z,10nm,0.6s,mb4.9									
AAK	**Ala-Archa**	**54.33**	**335**	*e*P		**P**		**16 41 39.6**	**+0.8**	
AAK					pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4									
AAK	**Ala-Archa**	**54.33**	**335**	*e*P		**P**		**16 41 39.6**	**+0.9**	
	comp=Z,4.0nm,0.8s,mb4.4									
EKS2	**Erkin-Say**	**54.66**	**334**	*e*P		**P**		**16 41 41.6**	**+0.4**	
	comp=Z,11nm,0.7s,mb5.0									
MKAR	**Makanchi Array**	**55.17**	**343**	P		**P**		**16 41 44.8**	**+0.1**	
	comp=Z,6.0nm,0.5s,mb4.9,baz=146,slow=7.8,SNR=71									
MKAR				sP		sP		16 41 59.3	-2.8	
	comp=Z,7.1nm,0.5s,baz=151,slow=8.2,SNR=13									
MKAR	**Makanchi Array**	**55.17**	**343**	*i* P		**P**		**16 41 44.7**	**-0.1**	
MKAR					pmax	pmax				
	comp=Z,6.0nm,0.5s									
MKAR	**Makanchi Array**	**55.17**	**343**	P		**P**		**16 41 44.8**	**0.0**	
MKAR				*SP		sP		16 41 59.3	-2.8	
MDJ	**Mudanjiang**	**55.68**	**23**	P		**P**		**16 41 50.8**	**+2.3**	
MDJ				AP		pP		16 41 59.3	-1.5	
MDJ				XP		sP		16 42 03.4	-2.4	
MDJ				PCP		PcP		16 42 49.3	+1.8	
MDJ				S		**S**		**16 49 36.9**	**+5.1**	
MDJ				AMB		AMB				
	comp=Z,5.0nm,2.1s,mb4.2									
MDJ				AMB		AMB				
	comp=Z,72nm,5.3s									
ZAK	**Zakamensk**	**55.80**	**1**	*e*P		**P**		**16 41 48.1**	**-1.2**	
ZAK				*e*		pP		16 42 02.2	+0.6	
ZAK					pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.4									
KK31	**Karatay Array**	**56.47**	**332**	*i* P		**P**		**16 41 55.6**	**+1.5**	
KK31					pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.4									
HIA	**Hailar**	**56.74**	**14**	*e*P		**P**		**16 41 54.8**	**-1.2**	
MOY	**Mondy**	**57.10**	**359**	*e*P		sP		16 42 12.8	-3.0	
KURK	**Kurchatov**	**59.76**	**343**	*e*P		**P**		**16 42 17.2**	**+0.2**	
KURK					pmax	pmax				
	comp=Z,15nm,1.2s,mb4.9									
KURK	**Kurchatov**	**59.76**	**343**	*e*P		**P**		**16 42 17.2**	**+0.2**	
	comp=Z,15nm,1.2s,mb4.9									
KLR	**Kul'dur**	**60.34**	**22**	*e*P		**P**		**16 42 13.7**	**-7.3**	
ZAA0	**Zalesovo Array**	**61.18**	**348**	*e*P		**P**		**16 42 25.8**	**-0.9**	
ZALV	**Zalesovo Beam**	**61.18**	**348**	P		**P**		**16 42 26.4**	**-0.2**	
	comp=Z,8.1nm,0.5s,mb5.1,baz=173,slow=5.1,SNR=38									
ZALV				pP		pP		16 42 36.0	-3.1	
	comp=Z,5.7nm,0.5s,baz=160,slow=4.7,SNR=7.8									
ZALV				sP		sP		16 42 41.8	-2.3	
	comp=Z,26nm,0.8s,baz=169,slow=6.1,SNR=16									
ZALV				LR		LR		17 12 15.4		
	comp=Z,56nm,18.3s,MS3.8,baz=152,slow=39									
ZALV	**Zalesovo Beam**	**61.18**	**348**	P		**P**		**16 42 26.5**	**-0.2**	
ZALV				*PP		pP		16 42 36.0	-3.1	
ZALV				*SP		sP		16 42 41.8	-2.3	
NVS	**Novosibirsk**	**62.35**	**348**	*e*P		**P**		**16 42 42.2**	**+7.7**	
NVS				*e*				16 50 56.0		
NVS					pmax	pmax				
	comp=Z,8.0nm,1.0s,mb4.8									
NVS					pmax	pmax				
	comp=N,8.0nm,1.1s									
NVS					pmax	pmax				
	comp=E,5.0nm,1.0s									
YSS	**Yuzh-Sakhalins**	**63.37**	**30**	*e*P		**P**		**16 42 39.6**	**-1.8**	
YSS				*e*		pP		16 42 51.7	-2.2	
BOD	**Bodaibo**	**63.95**	**7**	*e*P		**P**		**16 42 43.6**	**-1.4**	
BOD					pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.6									
BVA0	**Borovoye Array**	**64.41**	**339**	P		**P**		**16 42 47.3**	**-0.9**	
BVA0					pmax	pmax				
	comp=Z,1.0nm,0.9s,mb3.9									
BRVK	**Borovoye**	**64.47**	**339**	*e*P		**P**		**16 42 48.2**	**-0.4**	
BRVK					pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.8									
BRVK	**Borovoye**	**64.47**	**339**	*e*P		**P**		**16 42 48.2**	**-0.4**	
	comp=Z,7.1nm,0.7s,mb4.8									
AB31	**Akbulak array**	**65.96**	**331**	P		**P**		**16 42 57.7**	**-0.6**	
AB31					pmax	pmax				
	comp=Z,20nm,0.6s,mb5.3									
MAW	**Mawson**	**67.39**	**195**	LR		LR		17 06 30.5		
	comp=Z,101nm,18.2s,MS4.1,baz=283,slow=30									
YAK	**Yakutsk**	**70.68**	**13**	*e*P		pP		16 43 40.6	+0.3	
YAK					pmax	pmax				
	comp=Z,27nm,0.9s,mb5.2									
YAK	**Yakutsk**	**70.68**	**13**	*e*pP		pP		16 43 40.8	+0.5	
SVE	**Sverdlovsk**	**70.94**	**337**	*e*P		pP		16 43 40.4	-1.6	
SVE					pmax	pmax				
	comp=Z,15nm,0.9s,mb4.9									
ARU	**Arti**	**71.48**	**336**	*c i* P		**P**		**16 43 32.5**	**-0.1**	
ARU				*e*				16 46 09.2		
ARU				*e*PPP				16 47 49.3		
ARU				*e*S		S		16 42 48.2	+0.3	
ARU				*e*SS		SS		16 57 25.1	+1.4	
ARU					pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5									
ARU	**Arti**	**71.48**	**336**	*e*P		**P**		**16 43 36.0**	**+3.5**	
	comp=Z,9.9nm,0.7s,mb4.8									
URZ	**Urewera**	**74.53**	**128**	LR		LR		17 14 40.8		
	comp=Z,59nm,19.8s,MS3.9,baz=350,slow=34									
PET	**Petropavlovsk**	**75.17**	**31**	*e*P		**P**		**16 43 58.0**	**+3.7**	
PET					pmax	pmax				
	comp=Z,28nm,0.9s,mb5.2									
BR131	**Keskin Array S**	**77.53**	**313**	*e*P		**P**		**16 44 08.5**	**+0.4**	
BR131				*e*pP		pP		16 44 29.2	+8.3	
BRTR	**Keskin Array B**	**77.53**	**313**	P		**P**		**16 44 08.4**	**+0.3**	
	comp=Z,1.7nm,0.8s,mb4.0,baz=136,slow=6.8,SNR=7.8									
BRTR				pP		pP		16 44 18.8	-2.1	
	comp=Z,1.8nm,0.7s,baz=137,slow=7.3,SNR=4.7									
TIXI	**Tiksi**	**79.08**	**8**	*e*P		**P**		**16 44 13.2**	**-2.7**	
TIXI					pmax	pmax				
	comp=Z,2.0nm,1.0s,mb4.0									
OBN	**Obninsk**	**81.13**	**328**	P		**P**		**16 44 33.0**	**+5.7**	
OBN				*e*		pP		16 44 45.3	+5.1	
KLMR	**Klimovskoe**	**82.13**	**334**	P		pP		16 44 45.1	-0.3	
KLMR					pmax	pmax				
	comp=Z,21nm,1.4s,mb4.9									
AKASG	**Malin Array Be**	**83.81**	**322**	P		**P**		**16 44 41.2**	**-0.2**	
	comp=Z,1.3nm,0.7s,mb4.2,baz=91,slow=4.6,SNR=5.3									
AKASG	**Malin Array Be**	**83.81**	**322**	*i* P		**P**		**16 44 41.2**	**-0.2**	
AKASG					pmax	pmax				
	comp=Z,1.0nm,0.7s									
VRI	**Vrincioaia**	**84.13**	**317**	⇓ *i* P		**P**		**16 44 33.5**	**-10**	
QSPA	**South Pole Qui**	**84.34**	**180**	LR		LR		17 19 30.7		
	comp=Z,56nm,20.0s,MS4.0,baz=51,slow=34									
BURAR	**Bucovina Array**	**85.55**	**319**	⇑ *i* P		**P**		**16 44 52.7**	**+2.4**	
BUR08	**Bucovina Ar. S**	**85.57**	**319**	*e*P		**P**		**16 44 51.4**	**+1.0**	
BZS	**Buzias**	**87.57**	**316**	⇑ *i* P		**P**		**16 44 53.2**	**-7.0**	
ARCES	**ARCESS Array B**	**90.69**	**340**	P		**P**		**16 45 17.6**	**+3.3**	
	comp=Z,6.7nm,1.1s,mb4.9,baz=99,slow=5.5,SNR=4.9									
GERES	**GERESS Array B**	**93.34**	**319**	pP		pP		16 45 38.5	-1.6	
	comp=Z,0.3nm,0.6s,baz=108,slow=4.3,SNR=2.5									
RUE	**Ruedersdorf**	**93.59**	**322**	*e*P		**P**		**16 45 25.6**	**-2.5**	
	comp=Z,22nm,0.5s,mb5.8									
HRY	**Holter Researc**	**129.58**	**30**	*e*PP		PP		16 53 25.6	-5.3	
AMTX	**Amarillo**	**143.38**	**34**	*e*PP		PP		16 55 02.2	+4.7	
GDL2	**Guadalupe Moun**	**143.63**	**40**	*e*PP		PP		16 55 08.1	+8.8	
WCI	**Wyandotte Cave**	**146.62**	**12**	*e*PKHKP				16 51 46.6		
JCT	**Junction City**	**147.65**	**38**	*e*PKP2		PKPbc		16 51 55.4	-1.7	
MIAR	**Mount Ida**	**147.67**	**25**	*e*PKP2		PKPab		16 51 58.7	-0.6	
WVT	**Waverly**	**148.24**	**16**	*e*PKIKP		PKPdf		16 51 55.3	+0.1	
TKL	**Tuckaleechee C**	**149.60**	**10**	PKPbc		PKPbc		16 52 01.8	-0.2	
	comp=Z,2.1nm,0.6s,baz=27,slow=4.5,SNR=3.0									

CSEM **22** *16:44:20.2, 39.39N×33.15E, h5km, MD3.2, After ISK*
ISK **22** *16:44:20.2, 39.39N×33.15E, h5km, MD3.2*
DDA **22** *16:44:20.7, 39.34N×33.20E, h5km, Md2.4*
ISCJB **22** *16:44:21.4±0.5, 39.40N±0.004×33.15E±0.004, h10km, Error ellipse: s-maj=5.6km s-min=4.3km az=167.3*
ISC 22 16:44:21.4±0.6**, 3937N**±0.004×**3314E**±0.004**, h6**km±7km**, n14, σ0.985/19, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAMT	**Kaman**	**0.44**	**90**	PG		**Pg**	**16 44 29.2**	**-0.7**
KAMT				*e*SG		**Sg**	**16 44 35.2**	**-0.5**
LOD	**Lodumlu**	**0.60**	**331**	*e*PG		**Pg**	**16 44 31.8**	**-1.2**
LOD				*e*SG		**Sg**	**16 44 40.8**	**+0.1**
CDAG	**Cicekdag**	**0.98**	**75**	*i* P		**Pg**	**16 44 39.2**	**-1.1**
CDAG				*i* S		**Sg**	**16 44 53.8**	**+0.7**
KIZT	**Kizilcal**	**1.10**	**244**	*e*PN		**Pn**	**16 44 41.6**	**-1.7**
ELDT	**Eldivan**	**1.14**	**11**	*i* P		**Pg**	**16 44 43.1**	**-0.2**
ELDT				*i* S		**Sg**	**16 45 00.3**	**+2.1**
KDHN	**Kadinhani**	**1.17**	**224**	*i* P		**Pg**	**16 44 43.8**	**0.0**
KDHN				*i* S		**Sg**	**16 45 00.2**	**+1.4**
LADK	**Ladik-KONYA**	**1.31**	**208**	*e*PN		**Pn**	**16 44 46.5**	**+0.2**
CORM	**Corum**	**1.40**	**54**	*e*PN		**Pn**	**16 44 47.2**	**-0.3**
KONT	**Konya--Tatoy**	**1.55**	**204**	*e*PN		**Pn**	**16 44 49.8**	**+0.3**
NIG	**Nigde**	**1.70**	**137**	*e*PN		**Pn**	**16 44 52.1**	**+0.5**
YOZ	**Yozgat**	**1.71**	**80**	*e*PN		**Pn**	**16 44 51.6**	**0.0**
ESKT	**Eskisehir**	**1.78**	**276**	*e*PN		**Pn**	**16 44 52.3**	**-0.5**
BNN	**Bunyan**	**2.17**	**103**	*e*PN		**Pn**	**16 44 58.5**	**+0.5**
SVSK	**Karacayir**	**3.03**	**78**	*e*PN		**Pn**	**16 45 10.6**	**+0.8**

NIED **22** *16:58:00, 44.30N×146.70E, h110km, Mw4.0 Best double couple: M0 1.18000×10^15 NP1:φs=30.00000°, δ=89.00000°, λ=-100.00000°. NP2:φs=293.00000°, δ=10.00000°, λ=-7.00000°.*
ISCJB **22** *16:58:30.5±0.4, 44.40N±0.004×146.71E±0.006, h125km±3km, mb4.1/19, Error ellipse: s-maj=8.3km s-min=5.2km az=140.0*
MOS **22** *16:58:30.5±0.9, 44.48N×146.63E, h126km, mb3.9/8, Error ellipse: s-maj=12.2km s-min=10.3km az=65.9*
BJI **22** *16:58:30.0, 44.91N×146.42E, h101km, mB4.9, mb4.5*
JMA **22** *16:58:32.0±0.2, 44.34N×146.70E, h116km±2km, M3.6*
NEIC **22** *16:58:32.2±0.8, 44.49N×146.53E, h121km±7km, mb4.7/4,*
Error ellipse: s-maj=11.5km s-min=7.3km az=140.0
IDC **22** *16:58:33.2±2.0, 44.50N×146.51E, h129km±18km, mb3.4/12, mb1 3.7/17, mb1mx3.6/25, mbtmp3.5/17, Error ellipse: s-maj=17.3km s-min=12.4km az=132.0*
ISC 22 16:58:31.7±0.4**, 4438N**±0.004×**14671E**±0.006**, h118**km±3km**, n73, σ0.994/84, mb4.1**/19**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.70**	**241**	⇑ *i* PN		**Pn**	**16 58 50.8**	**-0.1**
YUK				*i* S		**Sn**	**16 59 05.0**	**-0.3**
YUK				pmax	pmax			
	comp=Z,4μm,0.8s							
YUK				pmax	pmax			
	comp=Z,850nm,0.2s							
YUK				smax				
	comp=N,12μm,1.2s							
YUK				smax				
	comp=E,5μm,0.8s							
YUK				smax				
	comp=N,3μm,0.5s							
YUK				smax				
	comp=E,2μm,0.5s							
KUR	**Kuril'sk**	**1.18**	**44**	⇓ *i* PN		**Pn**	**16 58 53.9**	**-1.5**
KUR				*e*S		**Sn**	**16 59 13.0**	**-0.4**
JRA	**Rausu**	**1.23**	**249**	P		**Pn**	**16 58 55.9**	**0.0**
JRA				*e*S		**Sn**	**16 59 14.4**	**+0.1**
NEM2	**Nemuro 2**	**1.24**	**215**	P		**Pn**	**16 58 55.7**	**-0.3**
NEM2				*e*S		**Sn**	**16 59 13.6**	**-0.8**
JNK	**Nakash**	**1.65**	**242**	P		**Pn**	**16 59 00.9**	**+0.2**
JAK	**Akkeshi**	**2.02**	**227**	P		**Pn**	**16 59 05.0**	**-0.2**
JAK				*e*S		**Sn**	**16 59 29.6**	**-1.2**
JTKR	**Abashiri--Toko**	**2.06**	**259**	P		**Pn**	**16 59 05.8**	**0.0**
JTKR				*e*S		**Sn**	**16 59 31.5**	**-0.3**
JAR	**Ashorobuto**	**2.39**	**244**	P		**Pn**	**16 59 10.8**	**+0.8**
JMP	**Maruseppu**	**2.44**	**262**	P		**Pn**	**16 59 10.8**	**+0.2**
JMP				*e*S		**Sn**	**16 59 40.8**	**+0.3**
JOB	**Onbets**	**2.56**	**236**	P		**Pn**	**16 59 12.8**	**+0.7**
JOB				*e*S		**Sn**	**16 59 44.0**	**+0.8**
JKK2	**Kamakawa 2**	**2.90**	**261**	P		**Pn**	**16 59 17.2**	**+0.6**
JKK2				*e*S		**Sn**	**16 59 51.7**	**+0.6**
ASAJ	**Asahikawa**	**2.97**	**266**	P		**Pn**	**16 59 18.4**	**+0.9**
	comp=E,21nm,0.3s,baz=84,slow=18,SNR=112							
ASAJ	**Asahikawa**	**2.97**	**266**	P		**Pn**	**16 59 18.3**	**+0.8**
ASAJ	**Asahikawa**	**2.97**	**266**	PN		**Pn**	**16 59 18.4**	**+0.9**
ASAJ				pmax	pmax			
	comp=Z,21nm,0.3s							
JSE	**Soyaes**	**3.00**	**283**	P		**Pn**	**16 59 17.7**	**-0.2**
JCH	**Churui**	**3.01**	**235**	P		**Pn**	**16 59 18.5**	**+0.5**
JCH				*e*S		**Sn**	**16 59 53.7**	**-0.1**
JFR	**Furan**	**3.22**	**249**	P		**Pn**	**16 59 22.0**	**+1.2**
ERM	**Erimo**	**3.52**	**229**	*e*Pn		**Pn**	**16 59 25.3**	**+0.6**
ERM				*e*Sn		**Sn**	**17 00 02.5**	**-3.2**
JWK2	**Keihoku**	**3.55**	**287**	P		**Pn**	**16 59 27.0**	**+1.9**
JNBK	**Urakawa-nobuka**	**3.57**	**235**	P		**Pn**	**16 59 25.0**	**-0.5**
JHR	**Hokuryu**	**3.65**	**262**	P		**Pn**	**16 59 28.4**	**+1.9**
YSS	**Yuzh-Sakhalins**	**3.78**	**314**	⇑ *e*PN		**Pn**	**16 59 28.0**	**-0.2**
YSS				*e*S		**Sn**	**17 00 13.2**	**+1.2**
YSS				pmax	pmax			
	comp=Z,30nm,1.0s							
YSS				smax				
	comp=E,120nm,1.2s							
YSS	**Yuzh-Sakhalins**	**3.78**	**314**	*e*Pn		**Pn**	**16 59 27.3**	**-0.9**
MJAR	**Matsushiro Arr**	**10.16**	**222**	P		**Pn**	**17 00 53.9**	**-0.4**
	comp=E,0.6nm,0.3s,baz=31,slow=13,SNR=18							
MJAR	**Matsushiro Arr**	**10.16**	**222**	*e*PN		**Pn**	**17 00 54.4**	**+0.1**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MAT	**Matsushiro**	**10.16**	**222**	P		**Pn**	**17 00 53.5**	**-0.8**
PETK	**Petropavlovsk-**	**11.34**	**36**	P		**Pn**	**17 01 09.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=205,slow=7.8,SNR=9.6							
PETK	**Petropavlovsk-**	**11.34**	**36**	P		**Pn**	**17 01 09.3**	**-0.6**
KLR	**Kul'dur**	**11.34**	**301**	*e*PN		**Pn**	**17 01 07.0**	**-2.9**
MDJ	**Mudanjiang**	**12.23**	**277**	P		**Pn**	**17 01 18.1**	**-3.7**
MDJ				AMB		AMB		
	comp=Z,9.0nm,2.4s							
MDJ				AMB		AMB		
	comp=Z,74nm,3.8s							
MDJ	**Mudanjiang**	**12.23**	**277**	*e*Pn		**Pn**	**17 01 19.4**	**-2.4**
	comp=Z,20nm,1.2s							
KSRS	**Korea Array**	**15.78**	**250**	P

AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**78.45**	**330**	P	**P**	**17 10 18.3**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.2,baz=38,slow=5.2,SNR=5.6						
CPUP	**Villa Florida**	**153.53**	**55**	PKPbc	PKPbc	17 18 14.0	-2.2
	comp=Z,0.6nm,0.4s,baz=349,slow=1.5,SNR=5.5						

IDC ***22*** *17:42:40.9±0.9, 228S×139.15E, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.1/17, mbtmp4.1/11, ML4.2/2, MS3.5/2, Ms1 3.4/2, ms1mx2.9/22, Error ellipse: s-maj=36.7km s-min=15.5km az=71.0*

ISCJB ***22*** *17:42:44.3±1.1, 231S±004×139.13E±006, h36km±11km, mb4.3/27, Error ellipse: s-maj=9.4km s-min=6.9km az=173.2*

DJA ***22*** *17:42:48, 230S×139 33E, h40km, mb4.4/5*

NEIC ***22*** *17:42:48.3±1.5, 235S×139 02E, h56km±14km, mb4.4/21, Error ellipse: s-maj=11.4km s-min=8.2km az=62.0*

ISC 22 17:42:47.3±1.2, 233S±006×139 07E±007, h43km±12km, n58, σ0§97/57, mb4.3/27, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.65**	**96**	P	**Pn**	**17 43 08.7**	**-5.0**
JAY				S	**Sn**	**17 43 29.4**	**-4.3**
BAKI	**Biak**	**3.17**	**291**	P	**Pn**	**17 43 35.0**	**+0.4**
BAKI				S	**Sn**	**17 44 21.3**	**+10**
PMG	**Port Moresby**	**10.69**	**131**	Pn	**Pn**	**17 45 19.6**	**+1.8**
	0.7nm,0.3s,baz=0.7,slow=4.7,SNR=9.2						
PMG	**Port Moresby**	**10.69**	**131**	Pn	**Pn**	**17 45 19.6**	**+1.8**
PMG				*e*Pn	**Pn**	**17 45 19.9**	**+2.0**
PMG	**Port Moresby**	**10.69**	**131**	P	**Pn**	**17 45 19.9**	**+2.1**
	28nm,1.1s						
KAKA	**Kakadu**	**12.23**	**212**	*e*P	x	17 44 36.1	
	60nm,1.5s						
KAKA				*e*S	x	17 46 53.2	
KAKA	**Kakadu**	**12.23**	**212**	P	x	17 44 36.8	
COEN	**Coen**	**12.25**	**161**	*e*Pn	**Pn**	**17 45 38.3**	**-0.9**
	6.5nm,0.6s						
COEN	**Coen**	**12.25**	**161**	P	**Pn**	**17 45 38.0**	**-1.2**
	6.2nm,1.2s						
WRAB	**Tennant Creek**	**18.09**	**194**	*e*Pn	**Pn**	**17 46 55.7**	**+0.3**
	23nm,0.9s						
WRAB				*e*Sn	**Sn**	**17 50 08.2**	**-8.4**
WRAB	**Tennant Creek**	**18.09**	**194**	P	**Pn**	**17 46 57.1**	**+1.6**
	26nm,0.9s						
WB2	**Warramunga Arr**	**18.10**	**194**	*e*P	**Pn**	**17 46 55.4**	**-0.2**
WB2	**Warramunga Arr**	**18.10**	**194**	*e*Pn	**Pn**	**17 46 55.3**	**-0.3**
WB2				*e*Sn	**Sn**	**17 50 13.3**	**-3.5**
WRA	**Warramunga Arr**	**18.11**	**194**	P	**Pn**	**17 46 54.0**	**-1.6**
	1.1nm,0.3s,baz=20,slow=12,SNR=26						
WRA				S	**S**	**17 50 12.1**	**-8.8**
	0.2nm,0.3s,baz=13,slow=23,SNR=4.5						
CTA	**Charters Tower**	**19.00**	**159**	P	**Pn**	**17 47 05.7**	**-0.7**
	0.3nm,0.3s,baz=321,slow=11,SNR=6.6						
CTA				LR	LR	17 54 56.3	
	comp=Z,113nm,18.9s,baz=178,slow=39						
CTAO	**Charters Tower**	**19.00**	**159**	*e*P	**Pn**	**17 47 05.6**	**-0.8**
PCI	**Palu**	**19.27**	**274**	P	**Pn**	**17 47 13.4**	**+3.6**
	60nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.47**	**219**	*e*P	**P**	**17 47 21.9**	**+0.4**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.47**	**219**	P	**P**	**17 47 21.6**	**+0.1**
ASAR	**Alice Springs**	**21.79**	**193**	P	**P**	**17 47 35.6**	**0.0**
	7.7nm,0.5s,mb4.4,baz=26,slow=11,SNR=52						
MYLDM	**Lahad Datu**	**21.86**	**290**	P	**P**	**17 47 43.5**	**+7.0**
HNR	**Honiara**	**21.93**	**110**	*e*P	**P**	**17 47 38.2**	**+1.0**
	41nm,0.9s,mb4.9						
EIDS	**Eidsvold**	**25.67**	**154**	*e*P	**P**	**17 48 15.0**	**+1.8**
	17nm,0.9s,mb4.6						
MBWA	**Marble Bar**	**26.55**	**224**	*e*P	**P**	**17 48 21.3**	**0.0**
	20nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**29.49**	**176**	P	**P**	**17 48 47.4**	**+0.1**
	5.1nm,0.8s,mb4.3,baz=359,slow=7.8,SNR=9.6						
STKA				LR	LR	18 00 52.0	
	comp=Z,89nm,20.2s,baz=199,slow=37						
STKA	**Stephens Creek**	**29.49**	**176**	*e*P	**P**	**17 48 46.9**	**-0.4**
	3.3nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**29.49**	**176**	*e*P	**P**	**17 48 46.8**	**-0.5**
	1.5nm,0.9s,mb3.7						
STKA				LR	LR	18 00 52.0	
FORT	**Forrest**	**30.15**	**199**	*e*P	**P**	**17 48 54.7**	**+1.5**
	32nm,0.7s,mb5.2						
YHNB	**Yeheng**	**31.86**	**328**	P	**P**	**17 49 03.6**	**-4.8**
NWAO	**Narrogin (SRO)**	**36.69**	**212**	*e*P	**P**	**17 49 50.8**	**+0.7**
	9.3nm,0.9s,mb4.6						
MAJO	**Matsushiro**	**38.68**	**359**	*e*P	**P**	**17 50 01.9**	**-4.9**
	7.9nm,0.9s,mb4.4						
KULM	**Kulim**	**39.11**	**281**	*e*P	**P**	**17 50 10.7**	**-0.2**
	6.5nm,0.9s,mb4.4						
PSI	**Prapat**	**40.45**	**277**	P	**P**	**17 50 21.8**	**-0.2**
	6.0nm,0.6s,mb4.5,baz=81,slow=7.0						
CM31	**Chiang Mai Arr**	**44.56**	**299**	*e*P	**P**	**17 50 54.8**	**-0.5**
	7.0nm,1.0s,mb4.5						
CMAR	**Chiang Mai Arr**	**44.56**	**299**	P	**P**	**17 50 56.0**	**+0.7**
	1.9nm,0.8s,mb4.0,baz=118,slow=6.6,SNR=17						
CHTO	**Chiang Mai**	**44.70**	**300**	*e*P	**P**	**17 50 55.8**	**-0.6**
	1.8nm,0.9s,mb3.9						
LSA	**Lhasa**	**55.75**	**309**	*e*P	**P**	**17 52 19.1**	**-0.9**
ULN	**Ulaanbaatar**	**57.27**	**335**	P	**P**	**17 52 29.5**	**-0.9**
	2.4nm,1.0s,mb4.2						
SONM	**Songino Array**	**57.53**	**334**	P	**P**	**17 52 33.0**	**+0.8**
	0.4nm,0.4s,mb3.8,baz=147,slow=8.6,SNR=2.7						
MKAR	**Makanchi Array**	**69.71**	**322**	P	**P**	**17 53 53.1**	**+0.5**
	2.7nm,0.8s,mb4.2,baz=109,slow=8.5,SNR=19						
ZALV	**Zalesovo Beam**	**71.79**	**330**	P	**P**	**17 54 03.5**	**-1.5**
	0.6nm,0.3s,mb3.9,baz=117,slow=8.5,SNR=5.0						
TKM2	**Tokmak 2**	**72.51**	**316**	*e*P	**P**	**17 54 10.6**	**+0.9**
	2.7nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**73.18**	**316**	P	**P**	**17 54 13.6**	**-0.1**
	3.5nm,1.1s,mb4.2						
AML	**Almayashu**	**73.57**	**315**	*e*P	**P**	**17 54 17.2**	**+1.2**
	3.8nm,0.8s,mb4.4						
KURK	**Kurchatov**	**73.61**	**325**	P	**P**	**17 54 16.3**	**+0.3**
	2.4nm,0.8s,mb4.2,baz=112,slow=5.6,SNR=12						
KURK	**Kurchatov**	**73.61**	**325**	*e*P	**P**	**17 54 15.7**	**-0.3**
	2.8nm,0.7s,mb4.3						
EKS2	**Erkin-Say**	**73.69**	**316**	*e*P	**P**	**17 54 17.3**	**+0.7**
	3.3nm,0.8s,mb4.3						
KBL	**Kabul**	**74.99**	**307**	*e*P	**P**	**17 54 24.1**	**-0.3**
	7.4nm,1.3s,mb4.5						
VNDA	**Vanda**	**76.13**	**175**	P	**P**	**17 54 29.9**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=332,slow=6.7,SNR=5.6						
VNDA	**Vanda**	**76.13**	**175**	*e*P	**P**	**17 54 29.4**	**-0.7**
	3.7nm,1.2s,mb4.2						
BRVK	**Borovoye**	**79.28**	**325**	*e*P	**P**	**17 54 47.6**	**-0.4**
	6.0nm,0.8s,mb4.6						
ARU	**Arti**	**86.67**	**327**	P	**P**	**17 55 24.1**	**-2.1**
	2.8nm,0.9s,mb4.5						
QSPA	**South Pole Qui**	**87.61**	**180**	*e*P	**P**	**17 55 30.2**	**-0.2**
	1.4nm,0.6s,mb4.4						
TOA0	**Torodi Ar. Sit**	**136.49**	**287**	*e*PKPdf	PKPdf	18 02 05.3	-0.3
TORD	**Torodi Ar. Bea**	**136.49**	**287**	PKP	PKPdf	18 02 05.0	-0.5
	1.1nm,0.7s,bac=65,slow=1.8,SNR=7.1						
DBIC	**Dimbokro**	**143.79**	**278**	PKP	PKPdf	18 02 16.3	-2.5
	4.0nm,0.8s,baz=96,slow=3.9,SNR=5.7						
DBIC	**Dimbokro**	**143.79**	**278**	*e*PKPdf	PKPdf	18 02 15.7	-3.2
DBIC				PKP	PKPdf	18 02 16.3	-2.5
SDV	**Santo Domingo**	**149.75**	**76**	PKPbc	PKPbc	18 02 33.6	0.0
	4.5nm,0.8s,baz=312,slow=8.2,SNR=7.6						

CSEM ***22*** *17:47:36.6±0.1, 3844N×3907E, h15km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.7km az=1.0*

ISK ***22*** *17:47:36.8, 3845N×3906E, h3km, MD2.9*

ISCJB ***22*** *17:47:37.6±0.6, 3840N±004×3906E±005, h9km±6km, Error ellipse: s-maj=6.8km s-min=6.2km az=37.9*

DDA ***22*** *17:47:37.6, 3840N×3906E, h7km±3km, Md3.1*

ISC 22 17:47:37.8±0.8, 3843N±004×3907E±005, h12km±7km, n11, σ0§59/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.10**	**314**	*i* P	**Pg**	**17 47 40.9**	**+0.2**
ELZG				*i* S	**Sg**	**17 47 43.1**	**+0.5**
ELZG	**Elazig**	**0.10**	**314**	*i* P	**Pg**	**17 47 40.8**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.19**	**105**	*e*PG	**Pg**	**17 47 41.7**	**-0.3**
SVRC				*e*SG	**Sg**	**17 47 45.2**	**+0.5**
MYA	**Malataya**	**0.52**	**259**	*e*PG	**Pg**	**17 47 47.5**	**-0.5**
PTK	**Pertek**	**0.53**	**28**	*e*PG	**Pg**	**17 47 47.4**	**-0.7**
AKCD	**Akcadag**	**0.92**	**262**	*i* P	**Pg**	**17 47 54.6**	**-0.9**
AKCD				*i* S	**Sg**	**17 48 07.5**	**+0.1**
KEMA	**Kemaliye**	**0.95**	**332**	*i* P	**Pg**	**17 47 55.6**	**-0.6**
KEMA				*i* S	**Sg**	**17 48 09.4**	**+0.7**
URFA	**Urfa**	**1.01**	**192**	*e*PG	**Pg**	**17 47 57.2**	**0.0**
GZT	**Gaziantep**	**1.60**	**229**	*i* P	**Pg**	**17 48 09.2**	**+0.6**
GZT				*e*S	**Sg**	**17 48 29.2**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.88**	**278**	*e*PN	**Pg**	**17 48 13.6**	**-0.3**
KMRS	**Kahramanmaras**	**1.95**	**242**	*e*PN	**Pn**	**17 48 12.0**	**+1.2**

BJI ***22*** *17:47:57.1, 3100N×131.97E, h31km, mB4.7, mb4.1*

NIED ***22*** *17:48:00, 3130N×131.70E, h32km, Mw4.9 Best double couple: M0 2.45000×10^16 NP1:φ§17.00000°, δ82.00000°, λ69.00000°. NP2:φ§267.00000°, δ22.00000°, λ159.00000°.*

ISCJB ***22*** *17:48:03.0±0.7, 3133N±004×131.67E±006, h50km±4km, mb4.0/21, Error ellipse: s-maj=9.5km s-min=6.0km az=20.1*

NEIC ***22*** *17:48:03.1±2.4, 3146N×131.40E, h25km±19km, mb4.4/9, Error ellipse: s-maj=13.4km s-min=7.5km az=138.0*

JMA ***22*** *17:48:03.1±0.1, 3133N×131.70E, h24km±1km, M4.4*

JMA Felt II J1.

IDC ***22*** *17:48:04.6±3.8, 3141N×131.38E, h37km±34km, mb3.6/11, mb1 3.7/13, mb1mx3.6/24, mbtmp3.6/13, ML3.4/2, Error ellipse: s-maj=21.6km s-min=19.7km az=121.0*

ISC 22 17:48:03.7±0.9, 3132N±003×131.63E±005, h34km±5km, n42, σ1§16/50, mb4.0/21, 8C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.37**	**304**	⇓P	**Pb**	**17 48 11.6**	**-0.9**
JNAR				S	**Sb**	**17 48 18.0**	**-0.5**
JTSR	**Tashiro 2**	**0.62**	**256**	⇑P	**Pn**	**17 48 16.2**	**+0.1**
JTSR				S	**Sb**	**17 48 25.7**	**+0.7**
JTZ	**Takazaki**	**0.74**	**322**	⇑P	**Pn**	**17 48 17.3**	**-0.5**
JTZ				*e*S	**Sn**	**17 48 28.1**	**+0.2**
JTN	**Tanegashima 3**	**0.86**	**220**	⇑P	**Pn**	**17 48 20.0**	**+0.6**
JTN				*e*S	**Sn**	**17 48 33.1**	**+2.3**
JTSN	**Tsuno**	**0.93**	**353**	⇑P	**Pn**	**17 48 20.1**	**-0.3**
JTSN				S	**Sn**	**17 48 33.3**	**+0.8**
JSU	**Suzuyama**	**1.02**	**281**	⇑P	**Pn**	**17 48 22.1**	**+0.5**
JSU				*e*S	**Sn**	**17 48 36.8**	**+2.1**
JZO	**Okuchi**	**1.20**	**313**	⇑P	**Pn**	**17 48 24.5**	**+0.4**
JZO				*e*S	**Sn**	**17 48 40.7**	**+1.5**
JIU2	**Izumi 2**	**1.41**	**331**	⇑P	**Pn**	**17 48 27.6**	**+0.7**
JKC	**Kuchinoerabu**	**1.50**	**236**	P	**Pn**	**17 48 28.7**	**+0.5**
JOW	**Kunigami**	**5.35**	**214**	Pn	**Pn**	**17 49 22.6**	**+1.5**
	2.7nm,0.3s,baz=93,slow=17,SNR=4.3						
JOW				Sn	**Sn**	**17 50 19.7**	**-1.8**
	1.9nm,0.3s,baz=133,slow=19,SNR=3.1						
KSRS	**Korea Array**	**6.84**	**334**	Pn	**Pn**	**17 49 43.6**	**+2.0**
	0.1nm,0.3s,baz=158,slow=13,SNR=3.9						
MAJO	**Matsushiro**	**7.55**	**45**	*e*Pn	**Pn**	**17 49 51.7**	**+0.4**
MJAR	**Matsushiro Arr**	**7.55**	**45**	Pn	**Pn**	**17 49 52.6**	**+1.3**
	0.4nm,0.3s,baz=243,slow=18,SNR=6.3						
YHNB	**Yeheng**	**11.22**	**236**	Pn	**Pn**	**17 50 38.8**	**-2.9**
SSLB	**Suanglung**	**12.07**	**234**	Pn	**Pn**	**17 50 53.7**	**+0.4**
XAN	**Xi'an**	**19.30**	**284**	P	**Pn**	**17 52 25.8**	**-1.1**
XAN				AP	pP	17 52 35.4	+0.6
XAN				AMB	AMB		
	comp=Z,4.0nm,1.0s						
LZH	**Lanzhou**	**23.56**	**289**	⇑P	**P**	**17 53 11.0**	**-0.2**
LZH				AP		17 53 20.9	
LZH				XP	sP	17 53 25.0	0.0
LZH				AMB	AMB		
	comp=Z,23nm,1.1s,mb4.5						
LZH				AMB	AMB		
	comp=Z,87nm,4.1s						
ULN	**Ulaanbaatar**	**24.98**	**318**	*e*P	**P**	**17 53 23.2**	**-0.7**
	comp=Z,14nm,1.1s,mb4.4						
SONM	**Songino Array**	**25.34**	**318**	P	**P**	**17 53 26.1**	**-1.1**
	comp=Z,6.6nm,0.9s,mb4.2,baz=131,slow=9.1,SNR=22						
GTA	**Gaotai**	**27.07**	**296**	*e*P	**P**	**17 53 42.5**	**-0.5**
GTA				AP	pP	17 53 51.4	-1.4
GTA				XP	sP	17 53 55.3	-1.7
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.0						
TLY	**Talaya**	**28.92**	**323**	P	**P**	**17 53 56.3**	**-3.0**
CMAR	**Chiang Mai Arr**	**32.17**	**254**	P	**P**	**17 54 27.6**	**-0.8**
	comp=Z,0.9nm,0.9s,mb3.6,baz=56,slow=5.5,SNR=4.9						
MKAR	**Makanchi Array**	**40.63**	**307**	P	**P**	**17 55 39.1**	**-1.1**
	comp=Z,0.4nm,0.5s,mb3.3,baz=95,slow=10,SNR=7.0						
KURK	**Kurchatov**	**43.40**	**312**	P	**P**	**17 56 01.8**	**-1.0**
	comp=Z,2.3nm,0.9s,mb3.9,baz=99,slow=8.9,SNR=8.1						
KURK	**Kurchatov**	**43.40**	**312**	*e*P	**P**	**17 56 01.1**	**-1.6**
	comp=Z,6.4nm,1.1s,mb4.3						
TKM2	**Tokmak 2**	**45.40**	**301**	*e*P	**P**	**17 56 18.5**	**-0.3**
	comp=Z,2.1nm,0.7s,mb4.1						
AAK	**Ala-Archa**	**46.23**	**301**	P	**P**	**17 56 24.9**	**-0.5**
AML	**Almayashu**	**46.87**	**300**	*e*P	**P**	**17 56 30.8**	**+0.3**
	comp=Z,4.2nm,0.9s,mb4.4						
BRVK	**Borovoye**	**48.69**	**315**	*e*P	**P**	**17 56 43.1**	**-1.3**
	comp=Z,1.9nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**51.03**	**177**	P	**P**	**17 57 03.3**	**+0.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=352,slow=8.4,SNR=4.5						
ARU	**Arti**	**55.35**	**320**	P	**P**	**17 57 31.7**	**-2.2**
	comp=Z,3.9nm,0.8s,mb4.5						
JOF	**Joensuu**	**67.06**	**331**	*e*p	**P**	**17 58 51.7**	**-1.4**
	comp=Z,3.0nm,0.7s,mb4.4						
KIV	**Kislovodsk**	**68.34**	**309**	P	**P**	**17 59 02.8**	**+1.3**
	comp=Z,13nm,1.1s,mb4.9						
KAF	**Kangasniemi**	**69.50**	**331**	*e*p	**P**	**17 59 14.9**	**+6.5**
	comp=Z,2.0nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**72.67**	**26**	P	**P**	**17 59 28.6**	**+1.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=304,slow=5.9,SNR=5.2						
AKASG	**Malin Array Be**	**73.61**	**320**	P	**P**	**17 59 32.3**	**-1.0**
	comp=Z,0.5nm,0.3s,mb3.9,baz=62,slow=5.5,SNR=4.1						
NB2	**NORSAR Subarra**	**76.06**	**334**	P	**P**	**17 59 45.2**	**-2.1**
	comp=Z,2.1nm,0.9s,mb4.1,baz=47,slow=5.9						
NOA	**NORSAR Array B**	**76.06**	**334**	P	**P**	**17 59 45.8**	**-1.6**
	comp=Z,1.2nm,0.8s,mb3.9,baz=49,slow=5.8,SNR=4.2						
BR131	**Keskin Array S**	**76.26**	**308**	P	**P**	**17 59 48.6**	**-0.3**
	comp=Z,1.5nm,0.9s,mb3.9						
BRTR	**Keskin Array B**	**76.26**	**308**	P	**P**	**17 59 48.9**	**0.0**
	comp=Z,1.4nm,1.0s,mb3.9,baz=110,slow=5.4,SNR=7.7						
NVAR	**Mina Array Bea**	**84.86**	**48**	P	**P**	**18 00 37.0**	**+2.0**
	comp=Z,0.3nm,0.5s,mb3.6,baz=288,slow=4.4,SNR=3.0						
PDAR	**Pinedale Array**	**87.35**	**40**	P	**P**	**18 00 48.4**	**+1.2**
	comp=Z,0.5nm,0.9s,mb3.7,baz=265,slow=5.2,SNR=2.9						

CSEM ***22*** *17:48:36.5±0.1, 3955N×4127E, h2km, MD3.0, Error ellipse: s-maj=4.6km s-min=3.3km az=164.0*

ISCJB ***22*** *17:48:38.5±0.7, 3959N±004×4129E±006, h5km±8km, Error ellipse: s-maj=7.7km s-min=5.4km az=25.8*

DDA ***22*** *17:48:38.3, 3963N×4121E, h7km±3km, Md3.0*

ISK ***22*** *17:48:38.1, 3960N×4125E, h11km, MD3.0*

ISC 22 17:48:39.0±0.7, 3960N±004×4129E±006, h8km±7km, n9, σ0§90/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EZM	**Erzurum**	**0.31**	**11**	*e*PG	**Pg**	**17 48 44.9**	**-0.2**
ERZM	**Erzurum**	**0.31**	**11**	*i* P	**Pg**	**17 48 44.7**	**-0.4**
ERZM				*i* S	**Sg**	**17 48 49.1**	**-0.1**
HOMI	**Horasan**	**0.65**	**47**	*i* P	**Pg**	**17 48 51.2**	**-0.3**
HOMI				*i* S	**Sg**	**17 49 00.7**	**+0.6**
BNGL	**BINGOL**	**0.66**	**189**	*i* P	**Pg**	**17 48 51.5**	**-0.1**
BNGL				*i* S	**Sg**	**17 49 00.7**	**+0.6**
KOPT	**Kop Dagi**	**0.74**	**305**	*i* P	**Pg**	**17 48 51.2**	**-2.0**
KOPT				*i* S	**Sg**	**17 49 04.9**	**+2.2**
EZC	**Erzincan**	**1.14**	**278**	*e*PN	**Pn**	**17 49 05.2**	**+3.9**
AGRB	**Hanur-Agry**	**1.32**	**90**	*e*PN	**Pn**	**17 49 03.4**	**-0.3**
AGRB				*e*SN	**Sn**	**17 49 21.9**	**+0.4**
DDEM	**Demirkent**	**1.34**	**15**	*i* P	**Pn**	**17 49 04.4**	**+0.5**
PTK	**Pertek**	**1.63**	**245**	*e*PN	**Pn**	**17 49 07.1**	**-0.9**

BJI ***22*** *17:49:03.7, 3109N×131.76E, h34km, mB4.9, mb4.8, Ms4.7, Msz4.6*

ISCJB ***22*** *17:49:05.6±0.2, 3126N±002×131.55E±003, h32km, mb4.7/87, MS4.7/29, Error ellipse: s-maj=3.7km s-min=3.3km az=138.9*

MOS ***22*** *17:49:05.8±1.3, 3136N×131.34E, h33km, mb5.0/41, MS4.6/11, Error ellipse: s-maj=9.3km s-min=5.9km az=103.8*

JMA ***22*** *17:49:06.8±0.1, 3133N×131.69E, h21km±1km, M4.8*

JMA Felt II J1.

IDC ***22*** *17:49:07.8±0.4, 3140N×131.29E, h33km±2km, mb4.2/22, mb1 4.3/25, mb1mx4.3/29, mbtmp4.2/25, ML3.7/3, MS4.6/17, Ms1 4.6/17, ms1mx4.2/37, Error ellipse: s-maj=13.4km s-min=10.4km az=92.0*

NEIC ***22*** *17:49:08.0±1.9, 3138N×131.40E, h34km±13km, mb4.9/54, MW4.9(NIED), Error ellipse: s-maj=5.5km s-min=4.4km az=140.0*

NEIC Felt at Miyazaki. Recorded [2 JMA] in Kagoshima and Miyazaki; [1 JMA] in Kumamoto and Oita Prefectures.

GCMT ***22*** *17:49:08.0±0.4, 3122N×131.61E, h41km±1km, MW4.9/48, Moment Tensor Solution. s30,c43; s48,c68; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.11±.19; Mθθ-1.14±.13; Mφφ-0.96±.13; Mrθ0.91±.11; Mrφ-2.20±.09; Mθφ0.83±.10; Best double couple: M0 2.95200×10^16 NP1:φ§225.00000°, δ33.00000°, λ88.00000°. NP2: φ§47.00000°, δ57.00000°, λ91.00000°. Principal axes: T 2.3800, Plg78.0000°, Azm322.0000°; N 1.1490, Plg1.0000°, Azm226.0000°; P -3.5230, Plg12.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***22*** *17:49:10.0, 3157N×131.58E, h31km, mb4.9, MS5.1, Kyushu, Japan*

DJA ***22*** *17:49:13, 3135N×130 08E, h10km, mb5.2/9*

ISC 22 17:49:08.0±0.2, 3134N±003×131 51E±003, h34km±6km: pP-P, n239, σ1§16/243, mb4.7/87, MS4.7/29, 15C-7D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.27**	**313**	⇓P	**Pb**	**17 49 15.1**	**-0.3**
JNAR				S	**Sb**	**17 49 21.2**	**+0.7**
JTSR	**Tashiro 2**	**0.53**	**251**	⇑P	**Pb**	**17 49 19.8**	**+0.8**
JTSR				*e*S	**Sb**	**17 49 29.1**	**+2.4**
JTZ	**Takazaki**	**0.66**	**328**	⇑P	**Pn**	**17 49 21.2**	**+0.2**
JTZ				S	**Sn**	**17 49 31.9**	**+1.7**
JTN	**Tanegashima 3**	**0.82**	**214**	P	**Pn**	**17 49 24.2**	**+1.1**
JTN				S	**Sn**	**17 49 36.9**	**+2.8**
JTSN	**Tsuno**	**0.90**	**360**	⇑P	**Pn**	**17 49 23.6**	**-0.7**
JTSN				*e*S	**Sn**	**17 49 36.4**	**+0.3**
JSU	**Suzuyama**	**0.91**	**281**	⇑P	**Pn**	**17 49 25.6**	**+1.2**
JSU				*e*S	**Sn**	**17 49 40.4**	**+4.0**
JZO	**Okuchi**	**1.11**	**316**	P	**Pn**	**17 49 28.4**	**+1.3**
JZO				S	**Sn**	**17 49 44.5**	**+3.2**
JIU2	**Izumi 2**	**1.34**	**334**	P	**Pn**	**17 49 31.8**	**+1.6**
JIU2				S	**Sn**	**17 49 50.1**	**+3.2**
JOW	**Kunigami**	**5.31**	**213**	Pn	**Pn**	**17 50 25.2**	**+0.4**
	9.5nm,0.3s,baz=131,slow=26,SNR=6.4						
JOW				Sn	**Sn**	**17 51 24.2**	**-0.6**
	8.3nm,0.3s,baz=19,slow=28,SNR=5.6						
KSRS	**Korea Array**	**6.78**	**335**	Pn	**Pn**	**17 50 44.9**	**-0.1**
	0.4nm,0.3s,baz=147,slow=16,SNR=10						
KSRS				LR	LR	17 53 41.9	
	comp=Z,4μm,19.3s,baz=154,slow=41						
JHJ	**Hachijo jima 2**	**7.23**	**74**	LR	LR	17 53 49.2	
	comp=Z,392nm,20.4s,baz=288,slow=38						
MAJO	**Matsushiro**	**7.61**	**45**	*e*P	**Pn**	**17 50 55.6**	**-0.8**
MAT	**Matsushiro**	**7.61**	**45**	P	**Pn**	**17 50 55.5**	**-0.9**
MAT				*e*S	**Sn**	**17 52 24.9**	**+3.5**
MJAR	**Matsushiro Arr**	**7.61**	**45**	Pn	**Pn**	**17 50 56.3**	**-0.1**
	1.6nm,0.3s,baz=241,slow=12,SNR=14						
MJAR	**Matsushiro Arr**	**7.61**	**45**	P	**Pn**	**17 50 56.3**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SSE	**Sheshan**	**8.84**	**271**	P	**Pn**	**17 51 17.1**	**+3.8**
SSE				AMB	AMB		
	comp=Z,60nm,0.8s						
SSE				AMB	AMB		
	comp=Z,154nm,4.2s						
SSE				LR	LR		
	comp=N,2μm,11.3s						
SSE				LR	LR		
	comp=E,966nm,11.8s						
SSE				LR	LR		
	comp=Z,3μm,14.4s						
CBIJ	**Chichi jima**	**10.24**	**112**	LR	LR	17 55 38.8	
	comp=Z,1μm,18.3s,baz=275,slow=38						
NJ2	**Nanjing**	**10.80**	**277**	*e*P	**Pn**	**17 51 45.1**	**+4.9**
NJ2				AP		17 51 52.3	
NJ2				PP		17 51 53.9	
NJ2				XP		17 51 57.0	
NJ2				S	**Sn**	**17 53 40.0**	**+0.1**
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,490nm,4.8s						
NJ2				LR	LR		
	comp=N,720nm,16.9s						
NJ2				LR	LR

YSS MLR MLR
comp=E,500nm,15.0s
YSS Yuzh-Sakhalins 17.84 26 Pn **Pn 17 53 13.9 +0.6**
comp=E,44nm,1.4s
HHC Hu-ho-hao-te 18.67 306 *e*P **Pn 17 53 23.9 +0.4**
HHC AP pP 17 53 31.8 -0.1
HHC XP sP 17 53 36.5 +0.3
HHC PP 17 53 40.1
HHC *e*S **Sn 17 56 44.8 -6.5**
HHC PCP PcP 17 57 54.3 +3.9
HHC AMB AMB
comp=Z,24nm,1.1s
HHC AMB AMB
comp=Z,414nm,5.0s
HHC LR LR
comp=N,2μm,14.3s
HHC LR LR
comp=E,3μm,16.1s
HHC LR LR
comp=Z,4μm,16.1s
XAN Xi'an 19.20 284 P **Pn 17 53 29.5 -0.5**
XAN AP pP 17 53 37.9 +0.2
XAN XP sP 17 53 42.4 +0.4
XAN S **Sn 17 57 02.3 -1.8**
XAN XS sS 17 57 14.9 -3.8
XAN SS 17 57 30.5
XAN AMB AMB
comp=Z,29nm,1.1s
XAN AMB AMB
comp=Z,238nm,7.7s
XAN LR LR
comp=N,428nm,17.5s
XAN LR LR
comp=E,2μm,15.1s
XAN LR LR
comp=Z,3μm,15.3s
BTO Baotou 19.66 304 *e*P **Pn 17 53 31.9 -3.5**
HIA Hailar 19.98 337 *e*P **Pn 17 53 36.8 -2.4**
HIA pmax pmax
comp=Z,82nm,1.3s
HIA Hailar 19.98 337 *e*P **Pn 17 53 36.8 -2.4**
comp=Z,82nm,1.3s
GUMO Guam 21.52 142 LR LR 18 01 38.3
comp=Z,556nm,19.8s,MS4.0,baz=77,slow=35
GYA Guiyang 22.27 264⇓ *i*P **P 17 54 02.3 +0.2**
GYA AP 17 54 12.6
GYA XP sP 17 54 16.9 +1.5
GYA PP 17 54 30.3
GYA S **S 17 57 58.8 -6.7**
GYA XS sS 17 58 13.0 -6.9
GYA SS 17 58 37.9
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,140nm,4.5s
GYA LR LR
comp=N,640nm,13.8s,MS4.3
GYA LR LR
comp=E,610nm,14.8s,MS4.3
GYA LR LR
comp=Z,750nm,12.4s,MS4.3
QIZ Qiongzhong 23.07 243 P **P 17 54 10.9 +0.2**
QIZ S **S 17 58 15.8 -3.6**
QIZ XS sS 17 58 31.3 -3.9
QIZ LR LR
comp=N,730nm,15.7s,MS4.3
QIZ LR LR
comp=E,652nm,19.0s,MS4.3
QIZ LR LR
comp=Z,1μm,16.4s,MS4.4
LZH Lanzhou 23.46 289⇑ P **P 17 54 14.8 +0.3**
LZH AP 17 54 24.0
LZH XP sP 17 54 28.3 +0.4
LZH PP 17 54 48.0
LZH S **S 17 58 21.5 -3.9**
LZH XS sS 17 58 35.3 -6.0
LZH AMB AMB
comp=Z,91nm,1.1s,mb5.1
LZH AMB AMB
comp=Z,357nm,5.2s
LZH LR LR
comp=E,2μm,12.0s
LZH LR LR
comp=Z,2μm,14.5s,MS4.8
CD2 Chengdu 23.74 276 P **P 17 54 16.3 -0.9**
CD2 AP 17 54 25.5
CD2 XP sP 17 54 29.4 -1.5
CD2 PP 17 54 49.0
CD2 PCP PcP 17 58 02.3 +1.9
CD2 S **S 17 58 24.1 -6.0**
CD2 XS sS 17 58 39.4 -6.6
CD2 AMB AMB
comp=Z,110nm,1.2s,mb5.2
CD2 AMB AMB
comp=Z,180nm,5.1s
CD2 LR LR
comp=N,2μm,10.8s
CD2 LR LR
comp=Z,2μm,10.8s,MS4.9
CIT Chita 24.51 333 *e*P **P 17 54 20.2 -3.7**
CIT *e* 17 54 32.2
CIT *e* 17 54 56.0
ULN Ulaanbaatar 24.89 319 *e*P **P 17 54 26.8 -0.7**
ULN *e* 17 54 39.7
ULN pmax pmax
comp=Z,80nm,1.1s,mb5.2
ULN Ulaanbaatar 24.89 319 *e*P **P 17 54 26.8 -0.7**
comp=Z,80nm,1.1s,mb5.2
ULN *e* 17 54 39.7
SONM Songino Array 25.25 318 P **P 17 54 30.4 -0.3**
comp=Z,36nm,0.9s,mb4.9,baz=132,slow=9.3,SNR=38
SONM LR LR 18 05 53.6
comp=Z,3μm,18.5s,MS4.8,baz=92,slow=40
SONM Songino Array 25.25 318 P **P 17 54 30.4 -0.3**
SONM pmax pmax
comp=Z,36nm,0.9s
SONM MLR MLR
comp=Z,3μm,18.5s
KMI Kunming 26.05 263 P **P 17 54 40.0 +1.8**
KMI AP pP 17 54 43.3 -4.5
KMI PP 17 55 22.8
KMI PPP 17 55 34.5
KMI S **S 17 59 10.8 +3.7**
KMI AMB AMB
comp=Z,9.0nm,0.8s,mb4.3
KMI AMB AMB
comp=Z,148nm,6.7s
KMI LR LR
comp=N,816nm,16.4s,MS4.6
KMI LR LR
comp=E,1μm,15.1s,MS4.6
KMI LR LR
comp=Z,1μm,15.4s,MS4.6
GTA Gaotai 26.96 296 *e*P **P 17 54 45.9 -0.4**
GTA AP pP 17 54 55.9 -0.1
GTA XP sP 17 54 59.8 -0.3
GTA PP 17 55 32.9
GTA S **S 17 59 21.8 +0.5**
GTA XS sS 17 59 35.1 -2.3
GTA SS 18 00 34.6
GTA AMB AMB
comp=Z,23nm,1.0s,mb4.7
GTA AMB AMB
comp=Z,161nm,5.3s
GTA LR LR
comp=N,822nm,12.8s,MS4.6
GTA LR LR
comp=E,824nm,14.0s,MS4.6
GTA LR LR
comp=Z,1μm,14.6s,MS4.7
TLY Talaya 28.84 323 P **P 17 55 04.5 +1.6**
TLY pmax pmax
comp=Z,12nm,1.1s,mb4.5
TLY Talaya 28.84 323 P **P 17 55 04.5 +1.5**
comp=Z,12nm,1.1s,mb4.5
PETK Petropavlovsk- 28.86 33 P **P 17 55 03.7 +0.6**
comp=Z,7.7nm,1.0s,mb4.4,baz=189,slow=3.6,SNR=4.0
PETK Petropavlovsk- 28.86 33 P **P 17 55 03.7 +0.6**
BOD Bodaibo 29.08 341 *e*P **P 17 55 03.6 -1.4**
BOD pmax pmax
comp=Z,4.0nm,1.8s,mb3.9
CHRT Chiangrai 30.70 256⇓ P **P 17 55 20.0 +0.3**
YAK Yakutsk 30.73 358 *e*P **P 17 55 25.9 +6.4**
YAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
YAK Yakutsk 30.73 358 P **P 17 55 24.1 +4.7**
comp=Z,12nm,0.8s,mb4.8
CHG Chiang Mai 31.90 255⇓ P **P 17 55 30.3 0.0**
comp=Z,17nm,0.9s,mb4.9
CHTO Chiang Mai 31.90 255 *e*P **P 17 55 30.0 -0.3**
CHTO pmax pmax
comp=Z,17nm,1.0s,mb4.8
CHTO Chiang Mai 31.90 255 *e*P **P 17 55 30.0 -0.3**
comp=Z,17nm,1.0s,mb4.8
CM31 Chiang Mai Arr 32.07 254 *e*P **P 17 55 31.5 -0.4**
comp=Z,9.5nm,1.0s,mb4.6
CMAR Chiang Mai Arr 32.07 254 P **P 17 55 31.9 0.0**
comp=Z,4.8nm,0.9s,mb4.3,baz=53,slow=6.1,SNR=24
CMAR PcP PcP 17 58 21.9 +1.0
comp=Z,2.5nm,0.8s,baz=29,slow=2.1,SNR=12
CMAR Chiang Mai Arr 32.07 254 P **P 17 55 31.9 0.0**
CMAR 17 58 21.9
CMAR pmax pmax
comp=Z,5.0nm,0.9s
LSA Lhasa 34.67 278 P **P 17 55 53.8 -0.6**
LSA LR LR
comp=N,370nm,20.8s,MS4.5
LSA LR LR
comp=E,690nm,18.9s,MS4.5
LSA LR LR
comp=Z,1μm,20.1s,MS4.6
LSA Lhasa 34.67 278 *e*P **P 17 55 55.4 +1.0**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LSA Lhasa 34.67 278 *e*P **P 17 55 55.4 +0.9**
comp=Z,5.3nm,0.8s,mb4.5
SHL Shillong 35.17 271 *e*P **P 17 55 59.0 +0.2**
KSM Kuching 35.84 218 *e*P **P 17 56 04.7 +0.1**
comp=Z,9.4nm,0.9s,mb4.7
WMQ Urumqi 36.48 303 P **P 17 56 08.8 -1.0**
WMQ AP pP 17 56 18.5 -1.1
WMQ PP PP 17 57 32.4 -0.7
WMQ PPP 17 57 51.9
WMQ S **S 18 01 46.6 -2.9**
WMQ SCP ScP 18 02 16.4 -0.8
WMQ SCS ScS 18 06 20.9 -2.6
WMQ AMB AMB
comp=Z,17nm,1.4s,mb4.8
WMQ AMB AMB
comp=Z,119nm,3.0s
WMQ LR LR
comp=N,234nm,18.0s,MS4.6
WMQ LR LR
comp=E,952nm,18.0s,MS4.6
WMQ LR LR
comp=Z,1μm,18.0s,MS4.8
KULM Kulim 38.84 235 *e*P **P 17 56 30.4 +0.4**
comp=Z,13nm,1.0s,mb4.6
RAMN Ramite 39.26 275 *e*P **P 17 56 33.5 0.0**
JIRN Jiri 39.41 277 *e*P **P 17 56 35.4 +0.7**
comp=Z,13nm,0.4s,mb5.0
GUN Gumba 39.60 277 *e*P **P 17 56 36.8 +0.5**
comp=Z,75nm,0.7s,mb5.5
PKI Pulchoki 40.09 277 *e*P **P 17 56 40.5 +0.1**
ZALV Zalesovo Beam 40.15 318 P **P 17 56 38.5 -1.9**
comp=Z,0.4nm,0.3s,mb3.6,baz=115,slow=10.0,SNR=6.3
ZALV PcP PcP 17 58 43.4 -0.9
comp=Z,0.7nm,0.4s,baz=180,slow=1.4,SNR=3.8
ZALV LR LR 18 14 47.4
comp=Z,878nm,18.7s,MS4.6,baz=114,slow=38
ZALV Zalesovo Beam 40.15 318 P **P 17 56 38.5 -1.9**
ZALV PcP PcP 17 58 43.4 -0.9
ZALV LR LR 18 14 47.5
DMN Daman 40.34 277 *e*P **P 17 56 42.4 0.0**
comp=Z,12nm,0.7s,mb4.8
TIXI Tiksi 40.39 359⇑ *e*P **P 17 56 41.3 -1.0**
TIXI pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
TIXI Tiksi 40.39 359 *e*P **P 17 56 41.5 -0.8**
comp=Z,4.8nm,1.0s,mb4.2
MKAR Makanchi Array 40.53 307 P **P 17 56 42.9 -0.8**
comp=Z,3.2nm,0.7s,mb4.1,baz=90,slow=11,SNR=30
MKAR PcP PcP 17 58 45.1 -0.6
comp=Z,2.1nm,0.9s,baz=82,slow=3.3,SNR=3.7
MKAR ScP ScP 18 02 32.5 0.0
comp=Z,2.0nm,0.9s,baz=98,slow=2.5,SNR=6.6
MKAR LR LR 18 15 15.3
comp=Z,1μm,18.6s,MS4.8,baz=99,slow=39
GKN Gorkha 40.63 278 *e*P **P 17 56 44.4 -0.4**
comp=Z,7.2nm,0.4s,mb4.6
NVS Novosibirsk 41.27 319 *e*P **P 17 56 47.8 -1.9**
DANN Dangsing 41.27 278 *e*P **P 17 56 50.8 +0.7**
comp=Z,36nm,0.5s,mb5.3
KOLN Koldanda 41.57 278 *e*P **P 17 56 52.9 +0.3**
comp=Z,19nm,0.7s,mb4.8
PSI Prapat 41.82 234 P **P 17 56 54.5 -0.2**
comp=Z,6.9nm,0.4s,mb4.6,baz=203,slow=7.3,SNR=7.4
PSI Prapat 41.82 234 P **P 17 56 54.5 -0.2**
PSI pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
PSI Prapat 41.82 234 P **P 17 56 54.5 -0.2**
BILL Bilibino 41.93 19*d i*P **P 17 56 55.8 +0.9**
BILL *i* pP 17 57 05.2 +0.3
BILL pmax pmax
comp=Z,21nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.3
BILL Bilibino 41.93 19 *e*P **P 17 56 55.4 +0.4**
comp=Z,21nm,1.1s,mb4.7
PMG Port Moresby 43.20 157 P **P 17 57 05.8 0.0**
KURK Kurchatov 43.30 312 P **P 17 57 03.9 -2.5**
comp=Z,16nm,0.9s,mb4.7,baz=100,slow=9.2,SNR=24
KURK ScP ScP 18 02 43.6 0.0
comp=Z,0.8nm,0.8s,baz=94,slow=3.6,SNR=3.5
KURK LR LR 18 17 14.7
comp=Z,1μm,18.5s,MS4.9,baz=95,slow=39
KURK Kurchatov 43.30 312 *e*P **P 17 57 05.0 -1.3**
KURK *e* 17 57 23.2
KURK pmax pmax
comp=Z,26nm,1.0s,mb4.9
KURK Kurchatov 43.30 312 *e*P **P 17 57 05.0 -1.3**
comp=Z,26nm,1.0s,mb4.9
KURK *e* 17 57 23.2
TKM2 Tokmak 2 45.29 301 *e*P **P 17 57 22.3 -0.1**
TKM2 pmax pmax
comp=Z,32nm,1.2s,mb5.0
TKM2 Tokmak 2 45.29 301 P **P 17 57 22.6 +0.3**
SNR=16
TKM2 Tokmak 2 45.29 301 *e*P **P 17 57 22.3 0.0**
comp=Z,32nm,1.2s,mb5.0
KZA Kyzart 45.62 300 P **P 17 57 25.4 +0.4**
SNR=6.2
KBK Karagaybulak 45.79 301 P **P 17 57 26.5 +0.1**
SNR=8.7
CHMS Chumysh 45.91 301 P **P 17 57 27.0 -0.2**
SNR=5.2
USP Ospennovka 46.07 302 P **P 17 57 28.1 -0.4**
SNR=6.6
AAK Ala-Archa 46.13 301 *e*P **P 17 57 28.1 -0.9**
AAK pmax pmax
comp=Z,19nm,1.5s,mb4.8
AAK Ala-Archa 46.13 301 *e*P **P 17 57 28.1 -0.8**
comp=Z,19nm,1.5s,mb4.8
UCH Uchtor 46.15 300 *e*P **P 17 57 29.6 +0.5**
comp=Z,14nm,1.1s,mb4.8
EKS2 Erkin-Say 46.65 301 *e*P **P 17 57 32.4 -0.7**
comp=Z,4.4nm,1.0s,mb4.3
AML Almayashu 46.77 300 P **P 17 57 34.7 +0.7**
SNR=11
AML Almayashu 46.77 300 *e*P **P 17 57 34.2 +0.2**
comp=Z,27nm,1.1s,mb5.1
BRVK Borovoye 48.60 315 *e*P **P 17 57 46.8 -1.3**
BRVK pmax pmax
comp=Z,16nm,0.6s,mb5.2
BRVK Borovoye 48.60 315 *e*P **P 17 57 46.8 -1.2**
comp=Z,16nm,0.6s,mb5.2
WRAB Tennant Creek 51.05 177 *e*P **P 17 58 06.1 -0.8**
WRAB pmax pmax
comp=Z,11nm,1.0s,mb4.7
WRAB Tennant Creek 51.05 177 *e*P **P 17 58 06.1 -0.8**
comp=Z,11nm,1.0s,mb4.7
WRA Warramunga Arr 51.06 177 P **P 17 58 06.7 -0.3**
comp=Z,1.3nm,0.7s,mb3.9,baz=351,slow=8.4,SNR=6.8
WRA Warramunga Arr 51.06 177 P **P 17 58 06.7 -0.3**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WB2 Warramunga Arr 51.06 177 *e*P **P 17 58 06.7 -0.3**
KBL Kabul 51.78 291 *e*P **P 17 58 12.3 -0.1**
KBL *e* pP 17 58 20.9 -1.7
KBL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KBL Kabul 51.78 291 *e*P **P 17 58 12.3 -0.1**
comp=Z,7.0nm,0.9s,mb4.6
KBL *e* pP 17 58 20.9 -1.6
CTA Charters Tower 53.06 163 P **P 17 58 22.4 +0.5**
comp=Z,6.8nm,0.8s,mb4.6,baz=360,slow=8.0,SNR=8.3
CTA pP pP 17 58 32.5 +0.4
comp=Z,12nm,0.9s,baz=348,slow=9.8,SNR=8.8
CTA Charters Tower 53.06 163 P **P 17 58 22.4 +0.5**
CTA *PP pP 17 58 32.5 +0.5
CTA pmax pmax
comp=Z,7.0nm,0.9s
CTA pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 53.06 163 *e*P **P 17 58 22.3 +0.4**
CTAO *e* pP 17 58 32.0 0.0
CTAO pmax pmax
comp=Z,15nm,1.0s,mb4.9
CTAO Charters Tower 53.06 163 *e*P **P 17 58 22.3 +0.5**
comp=Z,15nm,1.0s,mb4.9
CTAO *e* pP 17 58 32.0 -0.1
MBWA Marble Bar 53.41 194 P **P 17 58 23.6 -0.8**
comp=Z,11nm,1.1s,mb4.7
SVE Sverdlovsk 54.09 320⇑ *e*P **P 17 58 28.4 -0.7**
SVE *e*PPP 18 01 46.5
SVE *e*SS SS 18 09 38.4 -6.1
SVE *e*SSS 18 11 35.6
SVE pmax pmax
comp=Z,15nm,1.0s,mb4.9
SVE MLR MLR
comp=Z,429nm,15.0s,MS4.6
ASAR Alice Springs 54.74 177 P **P 17 58 34.1 0.0**
comp=Z,1.0nm,0.6s,mb4.0,baz=12,slow=11,SNR=8.4
ASAR pP pP 17 58 44.1 -0.2
comp=Z,2.7nm,1.0s,baz=360,slow=6.5,SNR=6.6
ASAR Alice Springs 54.74 177 P **P 17 58 34.1 0.0**
ASAR *PP pP 17 58 44.1 -0.2
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR pmax pmax
comp=Z,3.0nm,1.0s
ARU Arti 55.27 320*c i*P **P 17 58 36.1 -1.5**
ARU *e*PPP 18 01 52.2
ARU *e*S **S 18 06 06.7 -12**
ARU pmax pmax
comp=Z,22nm,1.0s,mb5.1
ARU Arti 55.27 320 *e*P **P 17 58 36.0 -1.6**
comp=Z,20nm,1.0s,mb5.1
AKTO Aktyubinsk 56.40 313 LR LR 18 24 50.3
comp=Z,782nm,19.4s,MS4.8,baz=68,slow=38
KDAK Kodiak Island 56.73 38 P **P 17 58 48.0 0.0**
comp=Z,11nm,0.8s,mb4.9,baz=286,slow=13,SNR=4.0
KDAK pP pP 17 58 59.1 +0.8
comp=Z,12nm,0.7s,baz=335,slow=6.6,SNR=3.1
MCK McKinley 57.83 31 P **P 17 58 56.7 +1.0**
MCK *e* pP 17 59 05.3 -0.7
COLA College 58.17 30 *e*P **P 17 59 01.1 +3.0**
MENT Mentasta 60.27 32 *e*P **P 17 59 14.4 +1.8**
INK Inuvik 63.07 25 P **P 17 59 31.6 +0.2**
comp=Z,2.1nm,0.7s,mb4.4,baz=302,slow=6.0,SNR=4.3
INK pP pP 17 59 42.2 +0.4
comp=Z,5.2nm,1.0s,baz=271,slow=7.9,SNR=4.1
INK Inuvik 63.07 25 P **P 17 59 31.6 +0.2**
INK *PP pP 17 59 42.3 +0.5
INK pmax pmax
comp=Z,2.0nm,0.7s
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 63.07 25 *e*P **P 17 59 31.4 -0.1**
comp=Z,9.3nm,1.1s,mb4.8
INK *e* pP 17 59 42.3 +0.5
STKA Stephens Creek 63.59 170 P **P 17 59 34.9 -0.4**
comp=Z,3.0nm,0.8s,mb4.4,baz=345,slow=12,SNR=3.5
STKA Stephens Creek 63.59 170 *e*P **P 17 59 35.5 +0.3**
comp=Z,0.9nm,0.7s,mb3.9
KLMR Klimovskoe 64.10 327 *e*P **P 17 59 43.6 +5.2**
KLMR pmax pmax
comp=Z,19nm,1.6s,mb4.9
VRHR Novokhopersk 66.25 316 *e*P **P 17 59 50.6 -1.8**
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,30nm,0.7s
ARCES ARCESS Array B 66.33 338 P **P 17 59 51.3 -1.3**
comp=E,2.8nm,0.8s,mb4.3,baz=68,slow=7.2,SNR=2.6
ARCES LR LR 18 33 50.7
comp=E,418nm,18.6s,MS4.7,baz=278,slow=40
ARCES ARCESS Array B 66.33 338 P **P 17 59 51.3 -1.3**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,418nm,18.6s
JOF Joensuu 66.99 331 *ep* **P 17 59 54.4 -2.6**
comp=Z,6.9nm,0.7s,mb4.8
JOF Joensuu 66.99 331 *e*P **P 17 59 54.4 -2.6**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
OBN Obninsk 67.59 322⇑ *e*P **P 17 59 59.8 -1.1**
OBN *e* pP 18 00 07.7 -3.6
OBN *e* 18 00 33.1
OBN pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.6
VSR Storozhevoye 67.64 317 *e*P **P 17 59 59.0 -2.3**
VSR pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,6.0nm,0.8s
VORD Divnogorie 67.66 317 *e*P **P 17 59 58.0 -3.5**
VORD pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
VORD pmax pmax
comp=N,9.0nm,0.6s
VORD pmax pmax
comp=E,5.0nm,0.4s
KIV Kislovodsk 68.24 309*c i*P **P 18 00 04.4 -0.8**
KIV 18 00 29.0
KIV pmax pmax
comp=Z,33nm,1.6s,mb5.1
KIV MLR MLR
comp=Z,300nm,17.0s,MS4.6
KIV Kislovodsk 68.24 309 *e*P **P 18 00 04.6 -0.7**
comp=Z,22nm,1.0s,mb5.2
KAF Kangasniemi 69.43 331 *ep* **P 18 00 09.8 -2.5**
comp=Z,5.6nm,0.7s,mb4.6
KAF Kangasniemi 69.43 331 *e*P **P 18 00 09.8 -2.5**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
FINES FINESS Array B 69.85 330 *e*P **P 18 00 12.0 -2.9**
RES Resolute Bay 69.99 12 *e*P **P 18 00 15.2 -0.4**
RES *e* pP 18 00 25.9 -0.1
RES pmax pmax
comp=Z,16nm,0.9s,mb5.0
RES Resolute Bay 69.99 12 *e*P **P 18 00 15.2 -0.3**
comp=Z,16nm,0.9s,mb5.0
RES *e* pP 18 00 25.9 -0.1
UMR Umm Al-Rimmam 70.45 293 *e*P **P 18 00 18.3 -0.9**
baz=293
UMR AMb AMB 18 00 19.5
comp=Z,67nm,0.9s,mb5.6,baz=293
MIB Mutribah 70.64 294 *e*P **P 18 00 19.3 -1.0**
baz=293
MIB AMb AMB 18 00 20.5
comp=Z,78nm,0.9s,mb5.6,baz=293
RDF Al-Radifah 70.85 293 *e*P **P 18 00 20.7 -0.9**
baz=292
RDF AMb AMB 18 00 22.1
comp=Z,68nm,1.4s,mb5.4,baz=292
NAY Al-Naaiem 70.95 293 *e*P **P 18 00 21.2 -1.0**
baz=293
NAY AMb AMB 18 00 22.9
comp=Z,66nm,1.0s,mb5.5,baz=293
ANN Anapa 71.33 311 *e*P **P 18 00 21.6 -2.6**
ANN pmax pmax
comp=Z,50nm,1.6s,mb5.2
YKA Yellowknife Ar 72.69 26 P **P 18 00 32.4 +0.4**
comp=Z,1.8nm,0.8s,mb4.0,baz=306,slow=5.6,SNR=17
YKA pP pP 18 00 42.7 +0.2
comp=Z,2.9nm,0.8s,baz=306,slow=5.6,SNR=9.6
YKA Yellowknife Ar 72.69 26 P **P 18 00 32.4 +0.4**
YKA *PP pP 18 00 42.7 +0.2
YKA pmax pmax

comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 72.69 26 P P 18 00 32.4 +0.4
YKA pP pP 18 00 42.7 +0.2
AKASG Malin Array Be 73.52 320 P P 18 00 35.5 -1.7
comp=Z,2.7nm,0.5s,mb4.4,baz=51,slow=6.5,SNR=13
AKASG pP pP 18 00 45.6 -2.1
comp=Z,4.5nm,0.6s,baz=54,slow=6.3,SNR=7.9
AKASG LR LR 18 35 44.2
comp=Z,639nm,18.7s,MS4.9,baz=65,slow=38
AKASG Malin Array Be 73.52 320 P P 18 00 35.5 -1.7
AKASG *PP pP 18 00 45.6 -2.1
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,639nm,18.7s
AKASG Malin Array Be 73.52 320 P P 18 00 35.5 -1.7
AKASG pP pP 18 00 45.6 -2.1
AKASG LR LR 18 35 44.2
SUW Suwalki 74.99 325 P P 18 00 45.0 -0.6
NB2 NORSAR Subarra 75.99 334 P P 18 00 49.0 -2.3
comp=Z,9.4nm,0.9s,mb4.7,baz=50,slow=6.2
NB2 NORSAR Subarra 75.99 334 P P 18 00 48.9 -2.4
comp=Z,10nm,0.9s,mb4.8,baz=48,slow=5.9
NOA NORSAR Array B 75.99 334 P P 18 00 49.6 -1.6
comp=Z,4.4nm,0.8s,mb4.4,baz=49,slow=5.7,SNR=10
NOA pP pP 18 00 59.6 -2.2
comp=Z,6.1nm,0.8s,baz=50,slow=5.7,SNR=8.0
NOA LR LR 18 37 29.3
comp=Z,299nm,18.5s,MS4.6,baz=45,slow=38
NOA NORSAR Array B 75.99 334 P P 18 00 49.7 -1.6
NOA *PP pP 18 00 59.6 -2.2
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA MLR MLR
comp=Z,299nm,18.5s
BR131 Keskin Array S 76.17 308 *eP* **P 18 00 51.7 -1.0**
comp=Z,4.4nm,0.8s,mb4.4
BRTR Keskin Array B 76.17 308 P P 18 00 52.3 -0.4
comp=Z,7.4nm,1.0s,mb4.6,baz=95,slow=4.2,SNR=19
BRTR pP pP 18 01 01.9 -1.3
comp=Z,6.4nm,0.8s,baz=77,slow=5.3,SNR=9.8
BRTR Keskin Array B 76.17 308 P P 18 00 52.3 -0.4
BRTR *PP pP 18 01 02.0 -1.2
BRTR pmax pmax
comp=Z,7.0nm,1.0s
BUR08 Bucovina Ar. S 77.36 318 *eP* **P 18 00 58.2 -1.1**
BURAR Bucovina Array 77.37 318⇑*iP* **P 18 00 58.4 -0.9**
OJC Ojcow 78.85 323 *eP* **P 18 01 07.2 -0.3**
DRGR 79.25 319⇑*iP* **P 18 01 08.1 -1.6**
NEW Newport 79.82 39 P P 18 01 14.2 +1.4
NEW *e* pP 18 01 24.5 +1.1
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 79.82 39 P P 18 01 14.2 +1.4
comp=Z,6.6nm,0.9s,mb4.6
NEW *e* pP 18 01 24.5 +1.1
WDC Whiskeytown Da 81.01 48 P P 18 01 19.9 +0.6
WDC *e* pP 18 01 30.9 +0.9
WDC pmax pmax
comp=Z,15nm,1.2s,mb4.8
WDC Whiskeytown Da 81.01 48 P P 18 01 19.9 +0.6
comp=Z,15nm,1.2s,mb4.8
WDC *e* pP 18 01 30.9 +1.0
WALA Waterton Lakes 81.04 37 P P 18 01 19.1 -0.2
URZ Urewera 81.25 145 LR LR 18 31 13.9
comp=Z,62nm,21.6s,MS3.9,baz=343,slow=31
PVCC Panska Ves 81.31 325 *eP* **P** 18 01 30.4 -1.0
CLL Collm 81.57 326⇓*eP* **P 18 01 19.0 -3.1**
CLL *i* pP 18 01 30.9 -1.8
CLL pmax pmax
comp=Z,15nm,1.4s,mb4.7
CLL MLR MLR
comp=Z,900nm,19.0s,MS5.2
CLL Collm 81.57 326 *i* P **P 18 01 21.9 -0.2**
comp=Z,15nm,1.4s,mb4.7
CLL ⇓*ip* pP 18 01 30.9 -1.8
comp=Z,12nm,1.0s
CLL *e*S S 18 11 30.0 -1.6
CLL *e*PPS 18 12 36.0
CLL *e*SS SS 18 17 00.0 +12
CLL *e*SSS 18 20 48.0
CLL Lm 18 41 00.0
comp=N,700nm,18.8s
CLL Lm 18 41 00.0
comp=E,300nm,19.7s
CLL Lm 18 41 00.0
comp=Z,900nm,19.0s
CLL Collm 81.57 326 *eP* **P 18 01 19.0 -3.1**
comp=Z,15nm,1.4s,mb4.7
CLL *i* pP 18 01 30.9 -1.8
CLL LR LR
comp=Z,900nm,19.0s,MS5.2
JTMT Jette 81.66 38 P P 18 01 23.2 +0.6
JTMT *e* pP 18 01 34.6 +1.3
PRU Pruhonice 81.67 324 *eP* **P** 18 01 32.5 -0.8
BMO Blue Mountains 81.73 42 *eP* **P 18 01 23.3 +0.2**
BMO *e* pP 18 01 34.0 +0.3
BMO pmax pmax
comp=Z,16nm,1.3s,mb4.8
BMO Blue Mountains 81.73 42 *eP* **P 18 01 23.3 +0.3**
comp=Z,16nm,1.3s,mb4.8
BMO *e* pP 18 01 34.0 +0.3
PKSM Moragy 81.86 320⇑*iP* **P 18 01 21.5 -2.2**
SWMT Swartz Lake 81.95 39 *eP* **P 18 01 24.6 +0.5**
comp=Z,5.0nm,1.0s,mb4.4
SWMT *e* pP 18 01 35.7 +0.8
NKC Novy Kostel 82.54 326 *eP* pP 18 01 36.6 -1.3
FCC Fort Churchill 82.55 22 *eP* **P 18 01 27.0 -0.1**
FCC *e* pP 18 01 36.7 -1.0
KHC Kasperske Hory 82.70 324 *eP* pP 18 01 39.4 +0.7
FFC Flin Flon 82.75 28 *eP* **P 18 01 27.9 -0.3**
FFC *e* pP 18 01 37.9 -0.9
FFC pmax pmax
comp=Z,20nm,1.6s,mb4.9
FFC Flin Flon 82.75 28 *eP* **P 18 01 27.9 -0.3**
comp=Z,20nm,1.6s,mb4.9
FFC *e* pP 18 01 37.9 -0.9
GERES GERESS Array B 82.83 324 P P 18 01 27.8 -0.9
comp=Z,0.6nm,0.7s,mb3.7,baz=61,slow=4.6,SNR=4.4
GERES LR LR 18 43 03.6
comp=Z,835nm,18.1s,MS5.2,baz=62,slow=39
GERES GERESS Array B 82.83 324 P P 18 01 27.8 -0.9
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,835nm,18.1s
GRA1 Grafenberg Arr 83.49 326 *eP* **P 18 01 32.6 +0.5**
comp=Z,7.0nm,1.0s,mb4.7
GRA1 *e*pP pP 18 01 41.7 -1.1
GRA1 LR LR
comp=Z,800nm,19.0s,MS5.1
GRF Grafenberg Arr 83.49 326 *eP* **P 18 01 32.6 +0.5**
GRF *e**PP pP 18 01 41.7 -1.1
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GRF MLR MLR
comp=Z,800nm,19.0s,MS5.1
GRF Grafenberg Arr 83.49 326 *eP* **P 18 01 32.6 +0.5**
comp=Z,7.0nm,1.0s,mb4.7
GRF *e*pP pP 18 01 41.7 -1.1
GRF *e*L 18 42 59.7
comp=Z,827nm,19.0s
PERS Pernice 83.51 322 *i* P **P 18 01 32.8 +0.5**
LRM Limekiln Ridge 83.84 39 P P 18 01 35.9 +1.9
comp=Z,201nm,1.6s
LRM *e* pP 18 01 44.4 -0.3
DLMT Dillon 84.05 40 *eP* **P 18 01 35.2 +0.1**
comp=Z,24nm,1.2s,mb5.2
DLMT *e* pP 18 01 45.1 -0.7
BOJS Bojanci 84.16 321 *iP* **P 18 01 43.6 +8.0**
HLID Hailey 84.17 42 *eP* **P 18 01 36.7 +1.0**
comp=Z,11nm,1.3s,mb4.8
HLID *e* pP 18 01 46.4 0.0
VISS Visnje 84.19 321 *i* P **P 18 01 35.9 +0.1**
BMN Battle Mountai 84.41 46 P P 18 01 39.4 +2.4
BMN *e* pP 18 01 48.7 +1.0
BMN pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
BMN Battle Mountai 84.41 46 P P 18 01 39.4 +2.4
comp=Z,7.9nm,1.1s,mb4.8
BMN *e* pP 18 01 48.7 +1.0
JAVS Javornik 84.55 321 *i* P **P 18 01 36.1 -1.5**
NVAR Mina Array Bea 84.93 48 P P 18 01 40.8 +1.1
comp=Z,1.2nm,0.7s,mb4.1,baz=275,slow=4.4,SNR=7.6
NVAR pP pP 18 01 51.6 +1.2
comp=Z,4.4nm,0.9s,baz=281,slow=4.3,SNR=12
TPH Tonopah 85.82 48 P P 18 01 45.6 +1.5
TPH *e* pP 18 01 55.4 +0.6
TPH pmax pmax
comp=Z,25nm,1.3s,mb5.3
TPH Tonopah 85.82 48 P P 18 01 45.6 +1.5
comp=Z,25nm,1.3s,mb5.3
TPH *e* pP 18 01 55.4 +0.6
RLMT Red Lodge 86.00 38 *eP* **P 18 01 46.8 +1.9**
comp=Z,28nm,1.6s,mb5.2
RLMT *e* pP 18 01 56.6 +1.0
MOOW Moose Ponds 86.11 40 *eP* **P 18 01 47.2 +1.8**
comp=Z,62nm,2.9s,mb5.3
MOOW *e* pP 18 01 57.1 +1.0
ISA Isabella 86.45 50 P P 18 01 47.7 +0.4
ISA *e* pP 18 01 57.1 -0.9
ISA pmax pmax
comp=Z,7.0nm,1.4s,mb4.7
ISA Isabella 86.45 50 P P 18 01 47.7 +0.4
comp=Z,6.6nm,1.4s,mb4.7
ISA *e* pP 18 01 57.1 -0.9
DUG Dugway 87.21 44 P P 18 01 49.5 -1.4
DUG *e* pP 18 02 01.7 +0.1
DUG pmax pmax
comp=Z,18nm,1.5s,mb5.1
DUG Dugway 87.21 44 P P 18 01 49.5 -1.4
comp=Z,18nm,1.5s,mb5.1
DUG *e* pP 18 02 01.7 +0.1
PDAR Pinedale Array 87.40 40 P P 18 01 52.8 +1.0
comp=Z,1.3nm,0.8s,mb4.2,baz=329,slow=0.5,SNR=8.3
PDAR pP pP 18 02 04.5 +1.9
comp=Z,2.6nm,0.9s,baz=322,slow=1.2,SNR=8.1
ULM Lac du Bonnet 88.58 28 P P 18 01 57.2 0.0
comp=Z,5.7nm,0.8s,mb5.0,baz=295,slow=6.0,SNR=8.1
ULM pP pP 18 02 08.0 0.0
comp=Z,9.5nm,0.9s,baz=317,slow=5.5,SNR=7.1
ULM Lac du Bonnet 88.58 28 P P 18 01 57.2 0.0
ULM pP pP 18 02 08.0 0.0
RSSD Black Hills 89.40 36 *eP* **P 18 02 02.7 +1.5**
RSSD *e* pP 18 02 12.0 0.0
RSSD pmax pmax
comp=Z,28nm,1.6s,mb5.3
RSSD Black Hills 89.40 36 *eP* **P 18 02 02.7 +1.4**
comp=Z,28nm,1.6s,mb5.3
RSSD *e* pP 18 02 12.0 0.0
PPT Papeete 89.91 111 *e*LR LR 18 30 59.7
comp=Z,178nm,22.5s
PPT Papeete 89.91 111 LR LR 18 40 30.1
comp=Z,145nm,19.5s,MS4.4,baz=64,slow=34
PHWY Pilot Hill 90.64 39 *eP* **P 18 02 08.6 +1.5**
comp=Z,15nm,1.1s,mb5.2
PV04 Paradox Valley 90.68 43 *eP* **P 18 02 08.8 +1.5**
PV04 *e* pP 18 02 19.5 +1.5
SCHQ Schefferville 92.74 11 LR LR 18 48 50.4
comp=Z,222nm,18.0s,MS4.7,baz=349,slow=39
TBI Tubuai 93.11 115 *e*LR LR 18 32 35.3
comp=Z,212nm,24.0s
KEST Kesra 94.00 316 LR LR 18 52 19.9
comp=Z,170nm,18.1s,MS4.5,baz=272,slow=40
ANMO Albuquerque 94.45 44⇑*eP* **P 18 02 25.2 +0.4**
ESDC Sonseca Array 98.14 327 LR LR 18 53 34.6
comp=Z,323nm,18.5s,MS4.8,baz=20,slow=40
TORD Torodi Ar. Bea 114.63 305 PKP PKiKP 18 07 43.7 -1.6
comp=Z,0.3nm,0.6s,baz=27,slow=1.1,SNR=6.4
TORD Torodi Ar. Bea 114.63 305 PKP PKiKP 18 07 43.7 -1.6
DBIC Dimbokro 123.74 304 PKP PKPdf 18 08 01.6 -1.3
comp=Z,2.3nm,0.7s,baz=78,slow=1.8,SNR=4.2
DBIC Dimbokro 123.74 304 PKIKP PKPdf 18 08 01.6 -1.3
DBIC pmax pmax
comp=Z,2.0nm,0.7s
VNA2 Neumayer--Watz 134.49 198 *e*PKPdf PKPdf 18 08 22.7 +1.1
baz=94,slow=2.0
VNA2 *e* 18 08 34.0
SDV Santo Domingo 134.73 32 PKP PKPdf 18 08 24.2 +0.4
comp=Z,1.9nm,0.7s,baz=3.6,slow=16,SNR=3.3
SDV pPKP pPKPdf 18 08 34.8 0.0
comp=Z,3.8nm,0.7s,baz=50,slow=5.2,SNR=4.1
VNA3 Neumayer Olymp 134.86 197 *e*PKPdf PKPdf 18 08 23.0 +0.8
VNA3 *e* 18 08 34.1
SIV San Ignacio 160.89 40 PKP PKPdf 18 09 05.5 +0.3
comp=Z,0.7nm,0.8s,baz=159,slow=14,SNR=5.8
SIV pPKP pPKPdf 18 09 16.5 +0.3
comp=Z,1.5nm,0.8s,baz=311,slow=0.9,SNR=4.4

ZUR ***22*** *17:58:17.5, 47.18N×1128E, h10km, ML2.2/4*
VIE ***22*** *17:58:17.2±0.2, 47.17N×1130E, h12km±2km, mb1.8/12, ML2.7/16, Error ellipse: s-maj=1.0km s-min=0.7km az=9.0*
CSEM ***22*** *17:58:17.5±0.1, 47.05N×11.41E, h2km, ML2.8/26, Error ellipse: s-maj=2.1km s-min=1.6km az=4.0*
ISCJB ***22*** *17:58:18.1±0.2, 47.18N±002×1123E±002, h20km±3km, Error ellipse: s-maj=3.1km s-min=2.1km az=16.5*
ROM ***22*** *17:58:18.7±0.1, 47.15N×1128E, h11km, Md2.6/8, Ml2.2/7, Error ellipse: s-maj=0.7km s-min=0.2km az=161.0*
BGR ***22*** *17:58:19.1±0.4, 47.16N×1135E, h10km, ML2.5, Error ellipse: s-maj=5.6km s-min=4.4km az=177.0*
LDG ***22*** *17:58:20.6±0.1, 47.07N×1128E, h10km, Ml2.5/27, Error ellipse: s-maj=2.2km s-min=1.3km az=50.0*
NEIC ***22*** *17:58:20.6, 47.07N×1128E, h10km, ML2.5(LDG), ML2.5(SZGRF), After LDG.*
PRU ***22*** *17:58:21.2, 47.27N×1147E, h4km*

ISC 22 17:58:17.6±0.2, 4718N±001×1129E±001, h13km±2km, n131, σ1s12/245, 20C-10D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
					Op	ISC	
SQTA	**Sankt Quirin**	**0.07**	**308**	⇓*i*Pg		**Pg**	**17 58 20.2**	**0.0**
MOTA	**Moosalm**	**0.21**	**323**	⇓*e*Pg		**Pg**	**17 58 22.4**	**+0.2**
	50nm,0.1s,SNR=460							
MOTA				⇑*i*Sg		**Sg**	**17 58 25.5**	**+0.1**
	155nm,0.1s							
WATA	**Walderalm**	**0.25**	**50**	*e*Pg		**Pg**	**17 58 23.1**	**+0.2**
	150nm,0.1s,SNR=406							
WATA				⇑*i*Sg		**Sg**	**17 58 26.2**	**-0.3**
	147nm,0.1s							
WTTA	**Wattenberg**	**0.25**	**69**	*e*Pg		**Pg**	**17 58 22.8**	**-0.1**
WTTA	**Wattenberg**	**0.25**	**69**	*e*Pg		**Pg**	**17 58 23.1**	**+0.2**
	80nm,0.1s,SNR=512							
WTTA				⇑*i*Sg		**Sg**	**17 58 26.5**	**0.0**
	127nm,0.1s							
WTTA	**Wattenberg**	**0.25**	**69**	Pg		**Pg**	**17 58 22.8**	**-0.1**
WTTA				Sg		**Sg**	**17 58 26.5**	**+0.1**
	127nm,0.1s							
SCE	**Schlegeis**	**0.32**	**115**	⇑*i*Pg		**Pg**	**17 58 24.1**	**+0.1**
SCE				⇑*i*Sg		**Sg**	**17 58 28.3**	**-0.1**
FETA	**Feichten**	**0.41**	**248**	*e*Pg		**Pg**	**17 58 26.1**	**+0.3**
	34nm,0.1s,SNR=22							
FETA				⇑*i*Sg		**Sg**	**17 58 31.7**	**+0.4**
	42nm,0.1s							
RETA	**Reutte**	**0.48**	**311**	*e*Pg		**Pg**	**17 58 26.7**	**-0.3**
	7.6nm,0.1s,SNR=28							
RETA				⇑*i*Sg		**Sg**	**17 58 33.0**	**-0.3**
	63nm,0.2s							
APPI	**Appiano**	**0.70**	**184**	Pg		**Pg**	**17 58 31.6**	**+0.4**
APPI				Sg		**Sg**	**17 58 40.7**	**+0.4**
	53nm,0.3s							
APPI	**Appiano**	**0.70**	**184**	Pg		**Pg**	**17 58 31.6**	**+0.4**
APPI				Sg		**Sg**	**17 58 40.7**	**+0.4**
	53nm,0.3s							
OBER	**Oberstdorf**	**0.72**	**289**	⇓*i*Pg		**Pg**	**17 58 31.9**	**+0.4**
OBER				⇓*i*Sg		**Sg**	**17 58 42.1**	**+1.1**
SEST	**Monte Rota**	**0.76**	**124**	Pg		**Pg**	**17 58 32.7**	**+0.3**
SEST				Sg		**Sg**	**17 58 43.2**	**+0.8**
	90nm,0.3s							
SEST	**Monte Rota**	**0.76**	**124**	Pg		**Pg**	**17 58 32.7**	**+0.3**
SEST				Sg		**Sg**	**17 58 43.2**	**+0.8**
	90nm,0.3s							
AFL	**Alpe Faloria**	**0.89**	**136**	⇓*i*Pg		**Pg**	**17 58 35.2**	**+0.5**
AFL				*i* Sg		**Sg**	**17 58 44.5**	**-1.9**
AFL	**Alpe Faloria**	**0.89**	**136**	*i* Pg		**Pg**	**17 58 35.2**	**+0.5**
AFL				*i* Sg		**Sg**	**17 58 44.5**	**-1.8**
FUORN	**Ofenpass-Fuorn**	**0.90**	**232**	⇑*i*Pg		**Pg**	**17 58 34.9**	**0.0**
	116nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**0.90**	**232**	Pg		**Pg**	**17 58 35.1**	**+0.2**
FUORN				Sg		**Sg**	**17 58 47.5**	**+0.9**
FUORN	**Ofenpass-Fuorn**	**0.90**	**232**	Pg		**Pg**	**17 58 35.1**	**+0.2**
FUORN				Sg		**Sg**	**17 58 47.5**	**+0.9**
ABTA	**Abfaltersbach**	**0.94**	**117**	*e*Pg		**Pg**	**17 58 35.6**	**-0.1**
	1.8nm,0.0s,SNR=28							
ABTA				⇓*i*Sg		**Sg**	**17 58 47.7**	**-0.2**
	60nm,0.2s							
BRMO	**Bormio**	**0.94**	**222**	Pg		**Pg**	**17 58 35.5**	**-0.3**
BRMO				Sg		**Sg**	**17 58 48.0**	**-0.1**
	43nm,0.5s							
BRMO	**Bormio**	**0.94**	**222**	Pg		**Pg**	**17 58 35.5**	**-0.3**
BRMO				Sg		**Sg**	**17 58 48.0**	**-0.1**
	43nm,0.5s							
DAVA	**Damuels**	**0.97**	**277**	*e*Pn		**Pn**	**17 58 36.1**	**-0.8**
DAVA				*e*Sg		**Sg**	**17 58 53.4**	**+4.5**
DAVA	**Damuels**	**0.97**	**277**⇑	*e*Pg		**Pg**	**17 58 36.0**	**-0.2**
	59nm,0.2s,SNR=124							
DAVA				⇑*i*Sg		**Sg**	**17 58 49.8**	**+0.9**
	138nm,0.2s							
DAVA	**Damuels**	**0.97**	**277**	Pg		**Pg**	**17 58 36.0**	**-0.3**
	59nm,0.2s,SNR=124							
DAVA				Sg		**Sg**	**17 58 53.4**	**+4.5**
FUR	**Furstenfeldbru**	**0.99**	**359**	*e*Pn		**Pn**	**17 58 37.5**	**+0.3**
FUR				*e*Sg		**Sg**	**17 58 53.1**	**+3.4**
FUR	**Furstenfeldbru**	**0.99**	**359**	*e*Pn		**Pn**	**17 58 37.5**	**+0.3**
FUR				*e*Sg		**Sg**	**17 58 53.1**	**+3.5**
DAVOX	**Davos/Dischmat**	**1.04**	**248**⇑	*i*Pg		**Pg**	**17 58 37.4**	**-0.3**
	145nm,0.2s							
DAVOX	**Davos/Dischmat**	**1.04**	**248**	Pg		**Pg**	**17 58 37.3**	**-0.4**
FAU	**Forcella Aurin**	**1.06**	**153**⇓	*i*Pg		**Pg**	**17 58 37.8**	**-0.1**
FAU				*i* Sg		**Sg**	**17 58 49.7**	**-2.0**
CSMI	**Casera Mimoias**	**1.15**	**125**⇑	*i*Pg		**Pg**	**17 58 39.7**	**+0.1**
CSMI				*i* Sg		**Sg**	**17 58 54.5**	**0.0**
CTI	**Castel Tesino**	**1.16**	**168**	Pg		**Pg**	**17 58 39.6**	**-0.2**
CTI				Sg		**Sg**	**17 58 55.7**	**+0.9**
	52nm,0.2s							
CTI	**Castel Tesino**	**1.16**	**168**	Pg		**Pg**	**17 58 39.6**	**-0.2**
CTI				Sg		**Sg**	**17 58 55.7**	**+0.9**
	52nm,0.2s							
BERNI	**Berninapass**	**1.16**	**229**⇓	*i*Pg		**Pg**	**17 58 39.5**	**-0.4**
	71nm,0.4s							
RJOB	**Jochberg**	**1.17**	**61**⇑	*i*Pg		**Pg**	**17 58 39.7**	**-0.3**
RJOB				*e*Pn		**Pn**	**17 58 39.9**	**+0.2**
RJOB				*e*Sg		**Sg**	**17 58 57.8**	**+2.6**
RJOB	**Jochberg**	**1.17**	**61**	Pn		**Pn**	**17 58 39.9**	**+0.3**
RJOB				Sg		**Sg**	**17 58 57.8**	**+2.6**
FVI	**Forni Avoltri**	**1.17**	**119**	Pg		**Pg**	**17 58 40.1**	**-0.1**
FVI				Sg		**Sg**	**17 58 55.6**	**+0.2**
	71nm,0.2s							
FVI	**Forni Avoltri**	**1.17**	**119**	Pg		**Pg**	**17 58 40.1**	**-0.1**
FVI				Sg		**Sg**	**17 58 55.6**	**+0.2**
	71nm,0.2s							
LIENZ	**Kamor/St.Gall**	**1.23**	**276**	*e*Pg		**Pg**	**17 58 41.5**	**+0.2**
	159nm,0.4s							
LIENZ	**Kamor/St.Gall**	**1.23**	**276**	*i* PmP			17 58 43.6	
	159nm,0.4s							
MABI	**Malga Bissina**	**1.24**	**206**	Pg		**Pg**	**17 58 41.3**	**-0.2**
MABI				Sg		**Sg**	**17 58 56.9**	**-0.7**
	21nm,0.4s							
MABI	**Malga Bissina**	**1.24**	**206**	Pg		**Pg**	**17 58 41.3**	**-0.2**
MABI				Sg		**Sg**	**17 58 56.9**	**-0.7**
	21nm,0.4s							
BGLD	**Berchtesgaden**	**1.26**	**67**⇑	*i*Pg		**Pg**	**17 58 41.6**	**-0.3**
VARN	**Col Varnada, M**	**1.31**	**154**⇑	*i*Pg		**Pg**	**17 58 42.4**	**-0.4**
VARN				*i* Sg		**Sg**	**17 58 59.5**	**-0.3**
ZOU	**Zoufplan**	**1.31**	**118**⇑	*i*Pg		**Pg**	**17 58 42.3**	**-0.5**
ZOU				*i* Sg		**Sg**	**17 58 59.1**	**-0.6**
KBA	**Koelnbreinsper**	**1.41**	**93**	*e*Pn		**Pn**	**17 58 43.6**	**+0.7**
KBA				*e*Sg		**Sg**	**17 59 01.7**	**-1.1**
KBA	**Koelnbreinsper**	**1.41**	**93**⇑	*e*Pn		**Pn**	**17 58 42.9**	**0.0**
	4.7nm,0.1s,SNR=12							
KBA				⇑*i*Sn		**Sn**	**17 59 01.6**	**+0.3**
KBA	**Koelnbreinsper**	**1.41**	**93**	Pn		**Pn**	**17 58 42.9**	**0.0**
	4.7nm,0.1s,SNR=12							
KBA				Sg		**Sg**	**17 59 01.7**	**-1.1**
PLRO	**Paularo**	**1.42**	**116**	*e*Pg		**Pg**	**17 58 44.5**	**-0.3**
PLRO				*e*Sg		**Sg**	**17 59 02.5**	**-0.7**
PLRO	**Paularo**	**1.42**	**116**	*e*Pg		**Pg**	**17 58 44.5**	**-0.4**
PLRO				*e*Sg		**Sg**	**17 59 02.5**	**-0.8**
MAGA	**Magasa**	**1.47**	**198**	Pg		**Pg**	**17 58 45.8**	**-0.1**
	71nm,0.3s							
MAGA	**Magasa**	**1.47**	**198**	Pg		**Pg**	**17 58 45.8**	**-0.1**
	71nm,0.3s							
TUE	**Stuetta**	**1.51**	**243**	*e*Pn		**Pn**	**17 58 45.1**	**+0.8**
TUE				*e*Sn		**Sn**	**17 59 06.8**	**+2.9**
TUE	**Stuetta**	**1.51**	**243**	*e*Pn		**Pn**	**17 58 45.1**	**+0.8**
TUE				*e*Sn		**Sn**	**17 59 06.8**	**+2.9**
PTCC	**Patocco-Chiusa**	**1.61**	**118**	Pg		**Pg**	**17 58 48.1**	**-0.4**
	9.0nm,0.2s							
PTCC	**Patocco-Chiusa**	**1.61**	**118**	Pg		**Pg**	**17 58 48.1**	**-0.4**
	9.0nm,0.2s							
MYKA	**Terra Mystica**	**1.70**	**108**⇑	*i*Pg		**Pg**	**17 58 49.9**	**-0.3**
	5.3nm,0.3s							
COLI	**Coloredo**	**1.78**	**125**⇓	*e*Pg		**Pg**	**17 58 52.4**	**+0.8**
COLI				*e*Sg		**Sg**	**17 59 15.2**	**+0.6**
TEOL	**Teolo**	**1.83**	**172**	*e*Pg		**Pg**	**17 58 52.5**	**-0.3**
TEOL				*e*Sg		**Sg**	**17 59 17.5**	**+0.9**
MOA	**Molln**	**2.13**	**70**⇑	*e*Pg		**Pg**	**17 58 57.4**	**-1.0**
	2.3nm,0.1s,SNR=20							
MOA				⇓*i*Sg		**Sg**	**17 59 26.2**	**+0.3**
	8.1nm,0.2s							
MOA	**Molln**	**2.13**	**70**	Pg		**Pg**	**17 58 57.4**	**-0.9**
	2.3nm,0.1s,SNR=20							
MOA				Sg		**Sg**	**17 59 26.2**	**+0.3**
	8.1nm,0.2s							
WET	**Wettzell**	**2.24**	**28**	*e*Pn		**Pn**	**17 58 55.6**	**+1.2**
WET	**Wettzell**	**2.24**	**28**	*e*Pn		**Pn**	**17 58 55.6**	**+1.2**
BFO	**Black Forest**	**2.31**	**301**	*e*Pn		**Pn**	**17 58 58.2**	**+2.8**
BFO				*e*Sg		**Sg**	**17 59 32.2**	**+0.4**
BFO	**Black Forest**	**2.31**	**301**	*e*Pn		**Pn**	**17 58 56.6**	**+1.3**
BFO				*e*Pn		**Pn**	**17 58 58.2**	**+2.9**
BFO				*e*Pg		**Pg**	**17 59 03.3**	**+1.5**
BFO				*e*Sg		**Sg**	**17 59 31.4**	**-0.4**
BFO				*e*Sg		**Sg**	**17 59 32.2**	**+0.4**
GEC2	**GERESS Array S**	**2.33**	**43**	*e*Pn		**Pn**	**17 58 57.1**	**+1.5**
GEC2				*e*Sg		**Sg**	**17 59 32.7**	**+0.4**
GEC2	**GERESS Array S**	**2.33**	**43**	*e*Pn		**Pn**	**17 58 57.1**	**+1.5**
GEC2				*e*Sg		**Sg**	**17 59 32.7**	**+0.4**
KHC	**Kasperske Hory**	**2.48**	**37**	*e*PN		**Pn**	**17 59 00.9**	**+3.2**
KHC				*e*PG		**Pg**	**17 59 04.1**	**-1.1**
KHC				*e*SN		**Sn**	**17 59 28.6**	**+0.7**
KHC				*e*SG		**Sg**	**17 59 36.0**	**-1.4**
	comp=Z,11nm,0.3s							
GRA1	**Grafenberg Arr**	**2.52**	**359**	Pg		**Pg**	**17 59 05.5**	**-0.4**
GRA1				Sg		**Sg**	**17 59 39.2**	**+0.7**
GRA1	**Grafenberg Arr**	**2.52**	**359**	*e*Pg		**Pg**	**17 59 05.5**	**-0.4**
GRA1				*e*Sg		**Sg**	**17 59 39.2**	**+0.7**
GRF	**Grafenberg Arr**	**2.52**	**359**	*e*Pg		**Pg**	**17 59 05.5**	**-0.4**
GRF				*e*Sg		**Sg**	**17 59 39.2**	**+0.7**
ROTZ	**Rotzenmuhle**	**2.66**	**13**	*e*Sg		**Sg**	**17 59 41.5**	**-1.6**
MANZ	**Manzenberg**	**2.87**	**11**	*e*Sg		**Sg**	**17 59 49.6**	**0.0**
CDF	**Champ du Feu**	**2.98**	**296**	*e*Pn		**Pn**	**17 59 06.8**	**+2.3**
CDF				*e*Sn		**Sn**	**17 59 40.1**	**0.0**
	comp=Z,5.0nm,0.2s							
CDF	**Champ du Feu**	**2.98**	**296**	*e*Pn		**Pn**	**17 59 06.8**	**+2.3**
CDF				*e*Sn		**Sn**	**17 59 40.1**	**0.0**
	comp=Z,2.5nm,0.2s							
HINF	**Hinteralfeld**	**3.08**	**284**	*e*Pn		**Pn**	**17 59 08.0**	**+2.1**
HINF				*e*Sn		**Sn**	**17 59 42.3**	**-0.2**
HINF				*e*Sg		**Sg**	**17 59 56.4**	**0.0**
	comp=Z,7.8nm,0.5s							
HINF	**Hinteralfeld**	**3.08**	**284**	*e*Pn		**Pn**	**17 59 08.0**	**+2.1**
HINF				*e*Sn		**Sn**	**17 59 42.3**	**-0.2**
HINF				*e*Sg		**Sg**	**17 59 56.4**	**0.0**
	comp=Z,3.9nm,0.5s							
NKC	**Novy Kostel**	**3.15**	**14**	*e*PG		**Pg**	**17 59 17.3**	**-0.7**
NKC				*e*SG		**Sg**	**17 59 57.4**	**-1.5**
	comp=Z,6.5nm,0.3s							
WERN	**Wernitzgruen**	**3.20**	**13**	*e*Sg		**Sg**	**18 00 01.1**	**+0.9**
GUNZ	**Gunzen**	**3.26**

CABF	**La Chapelle**	**3.61**	**263**	*e*Pn	**Pn**	**17 59 14.4**	**+1.1**
CABF				*e*Sg	**Sg**	**18 00 13.0**	**-0.6**
	comp=Z,2.9nm,0.3s						
CABF	**La Chapelle**	**3.61**	**263**	*e*Pn	**Pn**	**17 59 14.4**	**+1.1**
CABF				*e*Sg	**Sg**	**18 00 13.0**	**-0.6**
	comp=Z,1.5nm,0.3s						
MBDF	**Montbardon**	**3.99**	**234**	*e*Pn	**Pn**	**17 59 19.1**	**+0.6**
MBDF				*e*Sn	**Sn**	**18 00 02.7**	**-2.4**
	comp=Z,1.3nm,0.4s						
MBDF	**Montbardon**	**3.99**	**234**	*e*Pn	**Pn**	**17 59 19.1**	**+0.6**
MBDF				*e*Sn	**Sn**	**18 00 02.7**	**-2.4**
	comp=Z,0.6nm,0.4s						
PVCC	**Panska Ves**	**3.99**	**32**	*e*SG	**Sg**	**18 00 22.7**	**-3.0**
	comp=Z,6.4nm,0.3s						
BRG	**Berggiesshubel**	**4.09**	**24**	SG	**Sg**	**18 00 25.5**	**-3.4**
	comp=Z,2.5nm,0.4s						
RFYF	**Reffroy**	**4.17**	**293**	*e*Pn	**Pn**	**17 59 22.8**	**+1.8**
RFYF				*e*Sn	**Sn**	**18 00 08.7**	**-0.9**
SBF	**Sospel**	**4.28**	**221**	*e*Pn	**Pn**	**17 59 22.6**	**+0.2**
SBF				*e*Sn	**Sn**	**18 00 09.2**	**-3.0**
	comp=Z,8.0nm,0.5s						
SBF	**Sospel**	**4.28**	**221**	*e*Pn	**Pn**	**17 59 22.6**	**+0.2**
SBF				*e*Sn	**Sn**	**18 00 09.2**	**-3.0**
	comp=Z,4.0nm,0.5s						
CLL	**Collm**	**4.29**	**15**	*e*Sg	**Sg**	**18 00 34.0**	**-1.1**
SFTF	**Sexfontaines**	**4.35**	**286**	*e*Pn	**Pn**	**17 59 25.1**	**+1.8**
SFTF				*e*Sn	**Sn**	**18 00 12.6**	**-1.3**
SFTF				*e*Sg	**Sg**	**18 00 37.2**	**+0.1**
	comp=Z,3.2nm,0.3s						
SFTF	**Sexfontaines**	**4.35**	**286**	*e*Pn	**Pn**	**17 59 25.1**	**+1.8**
SFTF				*e*Sg	**Sg**	**18 00 37.2**	**+0.1**
	comp=Z,1.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.39**	**241**	*e*Pn	**Pn**	**17 59 24.2**	**+0.2**
ORIF				*e*Sn	**Sn**	**18 00 12.2**	**-2.8**
	comp=Z,2.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.39**	**241**	*e*Pn	**Pn**	**17 59 24.2**	**+0.2**
ORIF				*e*Sn	**Sn**	**18 00 12.2**	**-2.8**
	comp=Z,1.0nm,0.4s						
MEZF	**Maizieres J'vi**	**4.41**	**290**	*e*Pn	**Pn**	**17 59 25.8**	**+1.6**
MEZF				*e*Sn	**Sn**	**18 00 14.3**	**-1.0**
	comp=Z,2.4nm,0.4s						
DPC	**Dobruska-Polom**	**4.60**	**44**	*e*SG	**Sg**	**18 00 41.9**	**-3.3**
LOR	**Lormes**	**5.07**	**274**	*e*Pn	**Pn**	**17 59 34.6**	**+1.4**
LOR				*e*Sn	**Sn**	**18 00 29.4**	**-2.2**
LOR				*e*Sg	**Sg**	**18 00 58.9**	**-1.2**
	comp=Z,1.2nm,0.3s						
LOR	**Lormes**	**5.07**	**274**	*e*Pn	**Pn**	**17 59 34.6**	**+1.4**
LOR				*e*Sn	**Sn**	**18 00 29.4**	**-2.2**
LOR				*e*Sg	**Sg**	**18 00 58.9**	**-1.2**
	comp=Z,0.6nm,0.3s						
SMF	**Signal de Mont**	**5.13**	**267**	*e*Pn	**Pn**	**17 59 35.3**	**+1.2**
SMF				*e*Sn	**Sn**	**18 00 30.9**	**-2.3**
	comp=Z,0.8nm,0.3s						
SMF	**Signal de Mont**	**5.13**	**267**	*e*Pn	**Pn**	**17 59 35.3**	**+1.2**
SMF				*e*Sn	**Sn**	**18 00 30.9**	**-2.3**
	comp=Z,0.4nm,0.3s						
VIVF	**Saint-Julien-l**	**5.16**	**246**	*e*Pn	**Pn**	**17 59 35.2**	**+0.7**
VIVF				*e*Sn	**Sn**	**18 00 30.7**	**-3.2**
	comp=Z,1.3nm,0.4s						
VIVF	**Saint-Julien-l**	**5.16**	**246**	*e*Pn	**Pn**	**17 59 35.2**	**+0.7**
VIVF				*e*Sn	**Sn**	**18 00 30.7**	**-3.2**
	comp=Z,0.6nm,0.4s						
GIVF	**Givet**	**5.19**	**307**	*e*Pn	**Pn**	**17 59 36.8**	**+1.9**
GIVF				*e*Sn	**Sn**	**18 00 33.6**	**-1.1**
	comp=Z,3.5nm,0.3s						
GIVF	**Givet**	**5.19**	**307**	*e*Pn	**Pn**	**17 59 36.8**	**+1.9**
GIVF				*e*Sn	**Sn**	**18 00 33.6**	**-1.1**
	comp=Z,1.8nm,0.3s						
SSF	**Saint Saulge**	**5.32**	**272**	*e*Pn	**Pn**	**17 59 37.8**	**+1.1**
SSF				*e*Sn	**Sn**	**18 00 35.3**	**-2.4**
SSF				*e*Sg	**Sg**	**18 01 06.6**	**-1.6**
	comp=Z,0.8nm,0.3s						
SSF	**Saint Saulge**	**5.32**	**272**	*e*Pn	**Pn**	**17 59 37.8**	**+1.1**
SSF				*e*Sn	**Sn**	**18 00 35.3**	**-2.4**
SSF				*e*Sg	**Sg**	**18 01 06.6**	**-1.6**
	comp=Z,0.4nm,0.3s						
AVF	**Avril sur Loir**	**5.45**	**269**	*e*Pn	**Pn**	**17 59 39.8**	**+1.4**
AVF				*e*Sn	**Sn**	**18 00 38.3**	**-2.7**
	comp=Z,0.3nm,0.3s						
AVF	**Avril sur Loir**	**5.45**	**269**	*e*Pn	**Pn**	**17 59 39.8**	**+1.4**
AVF				*e*Sn	**Sn**	**18 00 38.3**	**-2.7**
	comp=Z,0.2nm,0.3s						
BAIF	**Baives**	**5.51**	**304**	*e*Pn	**Pn**	**17 59 40.9**	**+1.6**
BAIF				*e*Sn	**Sn**	**18 00 41.2**	**-1.3**
	comp=Z,0.8nm,0.4s						
BAIF	**Baives**	**5.51**	**304**	*e*Pn	**Pn**	**17 59 40.9**	**+1.6**
BAIF				*e*Sn	**Sn**	**18 00 41.2**	**-1.3**
	comp=Z,0.4nm,0.4s						
BGF	**Bois d'Agland**	**5.83**	**267**	*e*Pn	**Pn**	**17 59 44.7**	**+1.1**
BGF				*e*Sn	**Sn**	**18 00 47.3**	**-3.0**
	comp=Z,1.1nm,0.3s						
BGF	**Bois d'Agland**	**5.83**	**267**	*e*Pn	**Pn**	**17 59 44.7**	**+1.1**
BGF				*e*Sn	**Sn**	**18 00 47.3**	**-3.0**
	comp=Z,0.6nm,0.3s						
HYF	**Humbligny**	**5.89**	**274**	*e*Pn	**Pn**	**17 59 45.8**	**+1.2**
HYF				*e*Sn	**Sn**	**18 00 49.2**	**-2.8**
LASF	**Ste Croix**	**6.07**	**242**	*e*Pn	**Pn**	**17 59 47.6**	**+0.7**
LASF				*e*Sn	**Sn**	**18 00 52.1**	**-4.1**
	comp=Z,1.1nm,0.3s						
TCF	**Toulx Ste Croi**	**6.31**	**265**	*e*Pn	**Pn**	**17 59 51.1**	**+0.9**
TCF				*e*Sn	**Sn**	**18 00 58.7**	**-3.4**
	comp=Z,0.9nm,0.4s						
CAF	**Calviac**	**6.80**	**254**	*e*Pn	**Pn**	**17 59 57.7**	**+0.6**
CAF				*e*Sn	**Sn**	**18 01 10.0**	**-4.4**
	comp=Z,0.6nm,0.3s						
RJF	**Les Rejaudoux**	**7.03**	**258**	*e*Pn	**Pn**	**18 00 01.0**	**+0.8**
RJF				*e*Sn	**Sn**	**18 01 15.6**	**-4.4**
	comp=Z,1.0nm,0.4s						
MFF	**Saint Martin d**	**7.86**	**270**	*e*Pn	**Pn**	**18 00 12.3**	**+0.8**
MFF				*e*Sn	**Sn**	**18 01 36.0**	**-4.3**
MFF				*e*Sg	Sn	18 02 26.1	+46
	comp=Z,0.3nm,0.3s						
MFF	**Saint Martin d**	**7.86**	**270**	*e*Sn	**Sn**	**18 01 36.0**	**-4.3**
MFF				*e*Sg	Sn	18 02 26.1	+46
	comp=Z,0.2nm,0.3s						
FLN	**La Foliniere**	**8.06**	**286**	*e*Pn	**Pn**	**18 00 15.3**	**+1.0**
FLN				*e*Sn	**Sn**	**18 01 41.3**	**-4.0**
	comp=Z,1.1nm,0.3s						
GRR	**Gorron**	**8.28**	**283**	*e*Sn	**Sn**	**18 01 46.4**	**-4.1**
	comp=Z,0.4nm,0.2s						
GRR	**Gorron**	**8.28**	**283**	*e*Sn	**Sn**	**18 01 46.4**	**-4.1**
	comp=Z,0.2nm,0.2s						

IDC ***22*** *17:59:42.7±1.8,5*40*S×154*05*E,h0km,mb3.6/4,Error ellipse: s-maj=57.5km s-min=28.2km az=111.0*
NEIC ***22*** *17:59:43.5±0.7,554S×154*08*E,h10km,mb4.3/7,Error ellipse: s-maj=15.6km s-min=15.1km az=84.0*
ISCJB ***22*** *17:59:45.0±0.7,56S±01×154*3*E±01,h33km,mb4.0/11, Error ellipse: s-maj=16.1km s-min=14.7km az=150.4*
ISC 22 17:59:45.5±7.6,55S±02×1542E±01,h23km±57km,n16, σ0§57/17,mb4.0/11,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.90**	**125**	*e*Pn	**Pn**	**18 01 25.3**	**0.0**
PMG	**Port Moresby**	**8.01**	**240**	Pn	**Pn**	**18 01 40.7**	**+0.2**
	baz=45,slow=14						
PMG				Sn	**Sn**	**18 03 04.5**	**-5.9**
	baz=337,slow=18						
PMG	**Port Moresby**	**8.01**	**240**	*e*Pn	**Pn**	**18 01 35.1**	**-5.4**
PMG				*e*Sn	**Sn**	**18 03 04.1**	**-6.3**
WRAB	**Tennant Creek**	**24.08**	**232**	*e*P	**P**	**18 05 00.1**	**+0.8**
	1.7nm,0.7s,mb3.6						
WRA	**Warramunga Arr**	**24.09**	**232**	P	**P**	**18 04 58.5**	**-0.9**
	0.5nm,0.7s,mb3.0,baz=54,slow=9.7,SNR=5.9						
WRA				PcP	PcP	18 08 41.5	+0.8
	0.3nm,0.6s,baz=52,slow=2.4,SNR=5.1						
ASAR	**Alice Springs**	**26.64**	**225**	P	**P**	**18 05 22.4**	**-0.1**
	0.5nm,0.9s,mb3.1,baz=55,slow=9.3,SNR=6.1						
ASAR				PcP	PcP	18 08 48.6	+2.2
	0.4nm,0.8s,baz=77,slow=2.2,SNR=4.9						
STKA	**Stephens Creek**	**28.79**	**203**	*e*P	**P**	**18 05 41.5**	**-0.3**
	3.6nm,1.5s,mb3.9						
CMAR	**Chiang Mai Arr**	**59.44**	**295**	P	**P**	**18 09 47.0**	**+0.1**
	1.4nm,0.8s,mb4.0,baz=118,slow=5.7,SNR=12						
MKAR	**Makanchi Array**	**81.77**	**319**	P	**P**	**18 12 02.6**	**+0.2**
	0.8nm,0.7s,mb3.8,baz=97,slow=7.6,SNR=10						
ZALV	**Zalesovo Beam**	**82.50**	**326**	P	**P**	**18 12 05.7**	**-0.4**
	baz=105,slow=5.1						
QSPA	**South Pole Qui**	**84.48**	**180**	*e*P	**P**	**18 12 19.5**	**+3.6**
	15nm,1.6s,mb4.9						
KURK	**Kurchatov**	**85.17**	**322**	*e*P	**P**	**18 12 19.7**	**-0.2**
	3.7nm,1.1s,mb4.4						
TKM2	**Tokmak 2**	**85.42**	**314**	*e*P	**P**	**18 12 21.8**	**+0.6**
	2.0nm,0.5s,mb4.5						
AAK	**Ala-Archa**	**86.16**	**313**	*e*P	**P**	**18 12 25.1**	**+0.1**
	1.9nm,0.7s,mb4.4						
BRVK	**Borovoye**	**90.70**	**323**	P	**P**	**18 12 45.7**	**-0.6**
	1.2nm,0.9s,mb4.2						
TORD	**Torodi Ar. Bea**	**151.86**	**288**	PKPbc	PKPbc	18 19 39.8	+0.3
	0.6nm,0.6s,baz=47,slow=2.5,SNR=5.6						

ISCJB ***22*** *18:08:40.4±0.4,2498N±006×9661E±004,h10km,mb3.8/9, Error ellipse: s-maj=9.3km s-min=4.4km az=13.1*
IDC ***22*** *18:08:41.8±0.9,2502N×9667E,h0km,mb3.8/7,mb1 3.9/8, mb1mx3.6/24,mbtmp3.8/8,ML4.0/1,Error ellipse: s-maj=84.7km s-min=15.0km az=63.0*
BJI ***22*** *18:08:42.9,2500N×9632E,h10km,mb4.0,ML3.4,Ms3.6, Msz3.4*
NEIC ***22*** *18:08:43.3±0.6,2485N×9637E,h10km,mb4.0/2,Error ellipse: s-maj=15.8km s-min=7.3km az=221.0*
ISC 22 18:08:42.8±0.4,2486N±005×9653E±004,h10km,n28, σ1§21/35,mb3.8/9,1C,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.36**	**269**	*e*P	**Pn**	**18 09 23.0**	**+1.5**
IMP				*e*S	**Sn**	**18 09 51.0**	**+0.5**
SHL	**Shillong**	**4.26**	**280**	*e*P	**Pn**	**18 09 49.0**	**+1.3**
SHL				*e*S	**Sn**	**18 10 38.0**	**+0.4**
KMI	**Kunming**	**5.65**	**86**	PG	**Pg**	**18 10 29.8**	**-1.1**
KMI				SG	**Sg**	**18 11 44.3**	**+0.2**
KMI				Smax			
	comp=N,21nm,1.1s						
KMI				Smax			
	comp=E,20nm,1.3s						
KMI				LR	LR		
	comp=N,404nm,8.3s						
KMI				LR	LR		
	comp=E,385nm,10.7s						
KMI				LR	LR		
	comp=Z,497nm,14.9s						
CHRT	**Chiangrai**	**5.81**	**148**	P	**Pn**	**18 10 10.0**	**+1.0**
	comp=Z,276nm,1.0s						
CHG	**Chiang Mai**	**6.42**	**159**	⇑P	**Pg**	**18 10 42.6**	**-3.2**
	comp=Z,10nm,0.9s						
CHTO	**Chiang Mai**	**6.42**	**159**	*e*Pn	**Pn**	**18 10 18.8**	**+1.3**
	comp=Z,10nm,0.9s						
CHTO				*e*Pg	**Pg**	**18 10 42.5**	**-3.3**
CHTO				*e*Sg	**Sg**	**18 12 08.0**	**-1.1**
CM31	**Chiang Mai Arr**	**6.76**	**160**	*e*Pn	**Pn**	**18 10 30.4**	**+8.3**
	comp=Z,4.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.76**	**160**	Pn	**Pn**	**18 10 24.0**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=334,slow=13,SNR=13						
CMAR				Pg	**Pg**	**18 10 50.0**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=346,slow=18,SNR=5.7						
CMAR				Lg		18 12 22.1	
	comp=Z,0.4nm,0.3s,baz=333,slow=29,SNR=5.8						
LSA	**Lhasa**	**6.79**	**316**	*e*Pn	**Pn**	**18 10 24.5**	**+2.1**
	comp=Z,5.2nm,0.5s						
LSA				*e*Sn	**Sn**	**18 11 32.0**	**-7.8**
RAMN	**Ramite**	**9.18**	**285**	*e*P	**Pn**	**18 10 56.6**	**+1.4**
JIRN	**Jiri**	**9.69**	**289**	*e*P	**Pn**	**18 11 02.3**	**+0.1**
GUN	**Gumba**	**10.02**	**290**	*e*P	**Pn**	**18 11 05.5**	**-1.2**
	comp=Z,14nm,0.4s						
PKI	**Pulchoki**	**10.34**	**288**	*e*P	**Pn**	**18 11 10.2**	**-1.0**
KKN	**Kakani**	**10.50**	**289**	*e*P	**Pn**	**18 11 13.1**	**-0.3**
DMN	**Daman**	**10.61**	**287**	*e*P	**Pn**	**18 11 13.8**	**-1.1**
GKN	**Gorkha**	**11.10**	**289**	*e*P	**Pn**	**18 11 19.7**	**-1.9**
DANN	**Dangsing**	**11.94**	**290**	*e*P	**Pn**	**18 11 30.0**	**-3.1**
KOLN	**Koldanda**	**11.95**	**287**	*e*P	**Pn**	**18 11 30.4**	**-2.8**
MKAR	**Makanchi Array**	**24.66**	**336**	P	**P**	**18 14 03.7**	**+0.1**
	comp=Z,4.8nm,0.7s,mb4.2,baz=146,slow=8.5,SNR=33						
AAK	**Ala-Archa**	**25.37**	**320**	*e*Pn	**P**	**18 14 10.4**	**+0.4**
	comp=Z,2.1nm,0.7s,mb3.8						
KBL	**Kabul**	**25.68**	**298**	*e*P	**P**	**18 14 12.6**	**-0.4**
	comp=Z,2.9nm,0.8s,mb3.9						
KURK	**Kurchatov**	**29.28**	**336**	P	**P**	**18 14 44.1**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.7,baz=143,slow=9.5,SNR=9.6						
ZALV	**Zalesovo Beam**	**30.34**	**346**	P	**P**	**18 14 54.7**	**+0.3**
	comp=Z,0.8nm,0.4s,mb3.8,baz=165,slow=9.0,SNR=6.2						
ZALV	**Zalesovo Beam**	**30.34**	**346**	P	**P**	**18 14 54.7**	**+0.3**
WRA	**Warramunga Arr**	**57.77**	**137**	P	**P**	**18 18 34.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=324,slow=7.7,SNR=5.1						
ARCES	**ARCESS Array B**	**60.31**	**337**	P	**P**	**18 18 51.8**	**+0.5**
	comp=Z,2.4nm,0.9s,mb4.2,baz=80,slow=8.8,SNR=4.8						
ASAR	**Alice Springs**	**60.33**	**140**	P	**P**	**18 18 53.0**	**+1.0**
	comp=Z,0.4nm,0.8s,mb3.5,baz=321,slow=7.0,SNR=7.1						
GERES	**GERESS Array B**	**67.12**	**315**	P	**P**	**18 19 36.8**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=74,slow=7.1,SNR=4.4						

MAN 22 18:13:15,1611N×11953E,h25km,mb4.7,ML3.6,MS3.5, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.46**	**53**	*e*P	Pb	18 13 25.3	+0.7
BOLP				*e*S	Sb	18 13 31.0	0.0
SCZP	**Santa Cruz**	**0.49**	**132**	*e*P	Pb	18 13 26.2	+1.2
SCZP				*e*S	Sb	18 13 34.0	+2.1
BCPH	**Baguio City Da**	**1.04**	**75**	⇓*e*P	Pn	18 13 33.0	-1.1
BCPH				*i* S	Sb	18 13 46.0	-1.7
PCPH	**Palayan**	**1.60**	**110**	*e*P	Pn	18 13 41.1	-0.6
PCPH				*e*S	Sn	18 14 01.6	+0.1
ABRA	**Dolores**	**1.91**	**36**	*e*P	Pn	18 13 46.9	+1.0
ABRA				*e*S	Sn	18 14 10.2	+1.1
BALP	**Baler**	**2.00**	**100**	*e*P	Pn	18 13 48.2	+1.0
BALP				*e*S	Sn	18 14 13.1	+1.6
CAUP	**Cauayan**	**2.35**	**69**	*e*P	Pn	18 13 55.9	+3.8
LUBP	**Lubang**	**2.46**	**164**	*e*P	Pn	18 13 56.6	+3.1
SJMP	**San Jose**	**3.94**	**157**	*e*P	Pn	18 14 17.6	+3.8
BUSP	**Coron**	**4.13**	**171**	*e*P	Pn	18 14 17.7	+1.2
ENPP	**El Nido**	**4.87**	**181**	*e*P	Pn	18 14 27.8	+1.0

IDC ***22*** *18:24:45.7±1.4,349S×12772E,h0km,mb3.7/4,mb1 3.8/5, mb1mx3.7/17,mbtmp3.7/5,ML2.8/1,Error ellipse: s-maj=165.3km s-min=23.4km az=69.0*
ISCJB ***22*** *18:24:53.2±0.9,384S±007×12730E±010,h83km±11km, mb3.6/3,Error ellipse: s-maj=16.8km s-min=10.3km az=156.8*
DJA ***22*** *18:24:53,370S×12722E,h10km,MLv3.7/6*
ISC 22 18:24:54.5±0.8,384S±007×12731E±009,h75km±11km, n10,σ1§28/12,mb3.6/3,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.89**	**80**	P	**Pn**	**18 25 10.2**	**-1.8**
AAI				S	**Sn**	**18 25 26.2**	**+1.3**
LBMI	**Labuha**	**3.19**	**3**	P	**Pn**	**18 25 43.2**	**+0.8**
LBMI				S	**Sn**	**18 26 20.1**	**+0.8**
TNTI	**Ternate**	**4.58**	**1**	P	**Pn**	**18 25 59.7**	**-1.7**
KDI	**Kendari**	**4.69**	**268**	P	**Pn**	**18 26 03.6**	**+0.8**
MNI	**Manado**	**5.80**	**335**	P	**Pn**	**18 26 17.3**	**-0.8**
WRA	**Warramunga Arr**	**17.41**	**157**	P	**Pn**	**18 28 51.1**	**-1.5**
	0.0nm,0.3s,baz=340,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**20.71**	**163**	P	**P**	**18 29 31.1**	**+2.2**
	4.2nm,0.8s,baz=343,slow=11,SNR=57						
SONM	**Songino Array**	**54.64**	**343**	P	**P**	**18 34 16.7**	**+1.2**
	1.1nm,1.0s,mb3.8,baz=134,slow=4.3,SNR=4.3						
MKAR	**Makanchi Array**	**64.14**	**327**	P	**P**	**18 35 21.3**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=119,slow=8.1,SNR=5.5						
ZALV	**Zalesovo Beam**	**67.59**	**334**	P	**P**	**18 35 41.7**	**-1.4**
	0.6nm,0.5s,mb3.7,baz=112,slow=3.4,SNR=3.7						

IDC 22 19:18:04.4±49.0,1608S×17444W,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.8/16,mbtmp4.2/3,Error ellipse: s-maj=924.4km s-min=169.6km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.83**	**240**	P	P	19 26 04.7	+0.3
	2.4nm,0.9s,baz=101,slow=10,SNR=6.1						
WRA	**Warramunga Arr**	**48.72**	**257**	P	P	19 26 50.8	-0.4
	0.7nm,0.5s,baz=95,slow=7.1,SNR=24						
ASAR	**Alice Springs**	**48.95**	**252**	P	P	19 26 52.9	0.0
	6.4nm,0.6s,baz=88,slow=8.4,SNR=155						

ISCJB ***22*** *19:46:34.4±0.7,3932N±003×3317E±003,h2km±6km, Error ellipse: s-maj=4.6km s-min=3.2km az=157.6*
CSEM ***22*** *19:46:34.2±0.0,3932N×3317E,h5km,MD3.5,Error ellipse: s-maj=0.8km s-min=0.7km az=176.0*
DDA ***22*** *19:46:34.6,3937N×3313E,h6km±1km,Md2.4*
ISK ***22*** *19:46:34.4,3932N×3317E,h5km,MD3.5*
ISC 22 19:46:35.2±0.6,3933N±003×3318E±003,h4km±4km,n40, σ0§65/51,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.42**	**84**	PG	**Pg**	**19 46 43.1**	**0.0**
KAMT				*e*SG	**Sg**	**19 46 49.4**	**+0.8**
LOD	**Lodumlu**	**0.65**	**330**	*e*PG	**Pg**	**19 46 46.5**	**-1.1**
CDAG	**Cicekdag**	**0.97**	**72**	*i* P	**Pg**	**19 46 53.1**	**-0.7**
CDAG				*i* S	**Sg**	**19 47 06.5**	**+0.1**
CDAG	**Cicekdag**	**0.97**	**72**	*i* P	**Pg**	**19 46 53.1**	**-0.7**
CDAG				*i* S	**Sg**	**19 47 06.4**	**0.0**
KIZT	**Kizilcal**	**1.10**	**247**	*e*PN	**Pn**	**19 46 55.6**	**-1.8**
KIZT				*e*SN	**Sn**	**19 47 11.7**	**-1.4**
KDHN	**Kadinhani**	**1.16**	**226**	*i* P	**Pg**	**19 46 56.4**	**-0.9**
KDHN				*i* S	**Sg**	**19 47 12.7**	**+0.4**
ELDT	**Eldivan**	**1.18**	**9**	*e*P	**Pg**	**19 46 56.5**	**-1.3**
ELDT				*i* S	**Sg**	**19 47 13.0**	**-0.1**
LADK	**Ladik-KONYA**	**1.29**	**210**	*e*PN	**Pn**	**19 46 59.4**	**-0.6**
LADK				*e*SN	**Sn**	**19 47 17.4**	**-0.3**
CANT	**Cankiri**	**1.32**	**15**	*e*PN	**Pn**	**19 46 59.9**	**-0.5**
CANT				*e*SN	**Sn**	**19 47 18.9**	**+0.4**
CORM	**Corum**	**1.41**	**52**	*e*PN	**Pn**	**19 47 00.7**	**-0.9**
KONT	**Konya--Tatoy**	**1.52**	**205**	*e*PN	**Pn**	**19 47 02.7**	**-0.4**
NIG	**Nigde**	**1.65**	**137**	*e*PN	**Pn**	**19 47 04.9**	**-0.1**
YOZ	**Yozgat**	**1.69**	**79**	*e*PN	**Pn**	**19 47 05.4**	**0.0**
ESKT	**Eskisehir**	**1.81**	**277**	*i* P	**Pn**	**19 47 07.6**	**+0.4**
ESKT				*i* S	**Sg**	**19 47 34.7**	**+1.2**
ESKT	**Eskisehir**	**1.81**	**277**	*e*Pn	**Pn**	**19 47 07.0**	**-0.2**
SEYT	**Eskypehyr**	**1.81**	**277**	*i* P	**Pn**	**19 47 07.6**	**+0.4**
SEYT				*i* S	**Sg**	**19 47 34.7**	**+1.3**
TOS	**Tosya**	**1.83**	**20**	*e*PN	**Pn**	**19 47 07.4**	**+0.1**
BOLV	**Bolvadin**	**1.84**	**251**	*e*P	**Pn**	**19 47 07.5**	**0.0**
BOLV				*i* S	**Sg**	**19 47 35.2**	**+0.9**
MDU	**Mudurnu**	**1.89**	**308**	*e*PN	**Pn**	**19 47 08.2**	**0.0**
SAFT	**Safranbolu**	**1.95**	**349**	*e*PN	**Pn**	**19 47 09.1**	**0.0**
BNN	**Bunyan**	**2.13**	**102**	*e*PN	**Pn**	**19 47 11.7**	**+0.2**
GULT	**Gulveren**	**2.33**	**299**	*e*PN	**Pn**	**19 47 14.5**	**+0.3**
ALT	**Altintas**	**2.40**	**264**	*e*PN	**Pn**	**19 47 15.1**	**-0.1**
KARA	**Karaisali**	**2.54**	**144**	*e*PN	**Pn**	**19 47 17.3**	**+0.2**
ISP	**Isparta**	**2.56**	**236**	*e*PN	**Pn**	**19 47 17.5**	**+0.1**
EYL	**Eskiyayla**	**2.63**	**299**	*e*PN	**Pn**	**19 47 19.0**	**+0.6**
MERS	**Mersin**	**2.67**	**156**	*e*PN	**Pn**	**19 47 19.3**	**+0.3**
CAVI	**Cavuskoy**	**2.71**	**290**	*e*PN	**Pn**	**19 47 19.8**	**+0.3**
BCK	**Bucak**	**2.76**	**228**	*e*PN	**Pn**	**19 47 20.5**	**+0.4**
TOKT	**Tokat**	**2.78**	**68**	*e*PN	**Pn**	**19 47 20.7**	**+0.3**
KOZT	**Kozan**	**2.78**	**131**	*e*PN	**Pn**	**19 47 20.9**	**+0.4**
DIKM	**Dikmen**	**2.81**	**34**	*e*PN	**Pn**	**19 47 21.5**	**+0.6**
KVT	**Kavak**	**2.81**	**51**	*e*PN	**Pn**	**19 47 21.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.82**	**102**	*e*PN	**Pn**	**19 47 19.7**	**-1.3**
ADVT	**Abdulvahap**	**2.87**	**294**	*e*PN	**Pn**	**19 47 22.0**	**+0.4**
SVSK	**Karacayir**	**3.01**	**77**	*e*PN	**Pn**	**19 47 24.2**	**+0.7**
KHL	**Karahalli**	**3.02**	**252**	*e*PN	**Pn**	**19 47 23.9**	**+0.1**
IKL	**Isikli**	**3.11**	**172**	*e*PN	**Pn**	**19 47 25.4**	**+0.4**
YLV	**Yalova**	**3.18**	**294**	*e*PN	**Pn**	**19 47 26.5**	**+0.6**
KMRS	**Kahramanmaras**	**3.44**	**121**	*e*PN	**Pn**	**19 47 30.4**	**+0.8**

IDC ***22*** *19:49:38.4±2.6,555S×10234E,h0km,mb3.5/8,mb1 3.6/8, mb1mx3.5/21,mbtmp3.5/8,Error ellipse: s-maj=113.5km s-min=19.7km az=52.0*
ISCJB ***22*** *19:49:41.1±0.7,56S±01×1023E±01,h33km,mb3.5/8, Error ellipse: s-maj=20.7km s-min=14.3km az=174.0*
NEIC ***22*** *19:49:43.5±0.5,554S×10236E,h35km,Error ellipse: s-maj=15.6km s-min=10.9km az=83.0*
**ISC 22 19:49:43.6±0.7,55S±01×1024E±01,

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=290						
WHF	**Hehuan Shan**	**1.37**	**283**	eP	**Pn**	**20 04 18.1**	**-0.2**
	baz=273						
JIJ	**Ishigaki jima**	**1.39**	**68**	P	**Pn**	**20 04 19.4**	**+0.8**
JIJ				S	**Sn**	**20 04 36.8**	**0.0**
TWF1	**Yuli**	**1.40**	**250**	P	**Pn**	**20 04 17.9**	**-0.8**
	baz=232						
TWT	**Tachien**	**1.47**	**286**	eP	**Pn**	**20 04 20.2**	**+0.5**
	baz=277						
NSK	**Sanguang**	**1.49**	**304**	eP	**Pn**	**20 04 20.8**	**+0.7**
	baz=308						
SMLT	**Sun Moon Lake**	**1.67**	**271**	eP	**Pn**	**20 04 21.9**	**-0.5**
	baz=261						
ELDTW	**Lidau**	**1.70**	**248**	eP	**Pn**	**20 04 21.9**	**-0.9**
	baz=242						
TYC	**Yuchr**	**1.71**	**272**	eP	**Pn**	**20 04 23.1**	**+0.1**
	baz=271						
NSTT	**Nanjuang**	**1.75**	**297**	eP	**Pn**	**20 04 25.3**	**+1.7**
	baz=299						
ALS	**Alishan**	**1.79**	**259**	eP	**Pn**	**20 04 24.5**	**+0.4**
	baz=247						
TWG	**Pinlang**	**1.83**	**236**	eP	**Pn**	**20 04 23.2**	**-1.5**
	baz=241						
TWQ1	**Liyutan**	**1.85**	**286**	eP	**Pn**	**20 04 25.5**	**+0.6**
	baz=286						
CHN5	**Tsauling**	**1.89**	**263**	eP	**Pn**	**20 04 26.1**	**+0.6**
	baz=260						
STYT	**Tauyuan**	**1.93**	**250**	eP	**Pn**	**20 04 25.8**	**-0.2**
	baz=236						
WTP	**Ta-pu**	**2.03**	**253**	eP	**Pn**	**20 04 27.4**	**0.0**
	baz=239						
CHN1	**Nanshi**	**2.12**	**252**	eP	**Pn**	**20 04 30.2**	**+1.6**
	baz=248						
SSD	**Sandimen**	**2.22**	**241**	eP	**Pn**	**20 04 30.4**	**+0.5**
	baz=229						

*BJI **22** 20:25:47.2, 7940N×300E, h10^{km}, mB5.0, mb4.7, Ms4.8, Msz4.6*
*CSEM **22** 20:25:47.5±0.0, 7936N×282E, h2^{km}, mb4.7/69, Ms3.2, Error ellipse: s-maj=1.9km s-min=1.2km az=49.0*
*BER **22** 20:25:49.9, 7970N×403E, h10^{km}, MD2.7, ML3.3, ML3.7(NAO)*
*IDC **22** 20:25:49.5±0.5, 7939N×299E, h0^{km}, mb4.2/16, mb1 4.4/20, mb1mx4.3/27, mbtmp4.3/20, ML4.3/4, MS3.7/23, Ms1 3.7/23, ms1mx3.6/36, Error ellipse: s-maj=14.1km s-min=11.6km az=27.0*
*MOS **22** 20:25:49.3±0.9, 7929N×268E, h10^{km}, mb4.7/56, Error ellipse: s-maj=32.4km s-min=4.0km az=92.4*
*ISCJB **22** 20:25:49.4±0.2, 7936N±003×31E±01, h10^{km}, mb4.6/107, MS3.7/32, Error ellipse: s-maj=4.1km s-min=3.2km az=139.2*
*NAO **22** 20:25:50.3, 7987N×484E, h33^{km}, mb4.1*
*NEIC **22** 20:25:51.3±0.2, 7937N×303E, h10^{km}, mb4.6/72, Error ellipse: s-maj=4.3km s-min=3.0km az=52.0*
*SZGRF **22** 20:26:23.7, 7600N×127E, h33^{km}, mb4.2, Greenland Sea*
ISC 22 20:25:51.5±0.2**, 7935N**±002×**31E**±01**, h10**^{km}**, (h14**^{km}±1.8^{km}**:pP-P), n352,** σ1^{s}**01**/359**, mb4.6**/107**, MS3.7**/32**, 16C-12D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.73**	**100**	Pg	**Pn**	**20 26 17.9**	**-3.6**
KBS				Lg		20 26 36.8	
KBS	**Kingsbay**	**1.73**	**100**	eP	**Pn**	**20 26 17.9**	**-3.7**
KBS				eS	**Sn**	**20 26 36.9**	**-6.7**
KBS				AML	AML	20 26 40.7	
	comp=Z,1μm,0.3s						
KBS	**Kingsbay**	**1.73**	**100**	eP	**Pn**	**20 26 17.9**	**-3.6**
	SNR=50						
KBS	**Kingsbay**	**1.73**	**100**	ePn	**Pn**	**20 26 17.6**	**-3.9**
KBS				eSn	**Sn**	**20 26 36.2**	**-7.4**
SPA0	**Spitsbergen Ar**	**2.85**	**108**	Pn	**Pn**	**20 26 34.6**	**-2.3**
	baz=310,slow=11						
SPA0				Sn	**Sn**	**20 27 05.4**	**-5.8**
	baz=322,slow=22						
SPITS	**Spitsbergen Ar**	**2.85**	**108**	Pn	**Pn**	**20 26 34.6**	**-2.3**
	baz=155,slow=6.1,SNR=5183						
SPITS				Sn	**Sn**	**20 27 09.0**	**-2.1**
	baz=135,slow=53,SNR=10.0						
SPITS				LR	LR	20 27 46.7	
	comp=Z,2μm,18.3s,baz=55,slow=41						
SPITS	**Spitsbergen Ar**	**2.85**	**108**	P	**Pn**	**20 26 34.6**	**-2.3**
SPITS						20 27 09.0	
SPITS				MLR	MLR		
	comp=Z,2μm,18.3s						
HSP	**Hornsund**	**3.47**	**126**	ePn	**Pn**	**20 26 42.5**	**-2.9**
HSP				eSn	**Sn**	**20 27 20.6**	**-5.9**
DAG	**Danmarks Havn**	**5.17**	**251**⇓	iP	**Pn**	**20 27 05.9**	**-2.8**
DAG				pmax	pmax		
	comp=Z,35nm,0.6s						
DAG	**Danmarks Havn**	**5.17**	**251**⇓	iP	**Pn**	**20 27 05.9**	**-2.8**
	comp=Z,35nm,0.6s						
HOPEN	**Hopen**	**5.38**	**111**	eP	**Pn**	**20 27 07.8**	**-3.7**
HOPEN				eS	**Sn**	**20 28 05.2**	**-8.2**
BJO1	**Bjornoya**	**6.03**	**135**	eP	**Pn**	**20 27 19.4**	**-1.1**
BJO1	**Bjornoya**	**6.03**	**135**	eP	**Pn**	**20 27 19.4**	**-1.1**
BJO1				eS	**Sn**	**20 28 24.1**	**-5.3**
BJO	**Bjornoya**	**6.05**	**135**	eP	**Pn**	**20 27 19.4**	**-1.4**
BJO				eS	**Sn**	**20 28 24.1**	**-5.9**
BJO				AML	AML	20 28 25.6	
	comp=Z,29nm,0.4s						
JNW	**Jan Mayen West**	**8.84**	**205**	eP	**Pn**	**20 27 57.6**	**-1.3**
JMIC	**Jan Mayen**	**8.88**	**205**	Pn	**Pn**	**20 27 55.9**	**-3.7**
	comp=Z,35nm,0.3s,baz=352,slow=2.0,SNR=13						
JMIC				Sn	**Sn**	**20 29 31.9**	**-7.6**
	comp=Z,15nm,0.3s,baz=180,slow=11,SNR=6.4						
JMIC				LR	LR	20 30 46.4	
	comp=Z,94nm,19.2s,baz=74,slow=33						
JMIC	**Jan Mayen**	**8.88**	**205**	Pn	**Pn**	**20 27 55.9**	**-3.7**
JMIC				Sn	**Sn**	**20 29 31.9**	**-7.6**
JMI	**Jan Mayen**	**8.96**	**206**	eP	**Pn**	**20 27 59.4**	**-1.3**
JMI	**Jan Mayen**	**8.96**	**206**	eP	**Pn**	**20 27 59.3**	**-1.3**
	SNR=47						
KEV	**Kevo**	**11.39**	**134**	ep	**Pn**	**20 28 32.0**	**-1.9**
	comp=Z,11nm,0.5s						
KEV	**Kevo**	**11.39**	**134**	eP	**Pn**	**20 28 32.0**	**-1.9**
KEV				pmax	pmax		
	comp=Z,11nm,0.5s						
ARA0	**ARCESS Array S**	**11.40**	**137**	Pn	**Pn**	**20 28 32.3**	**-1.8**
	baz=348,slow=10						
ARA0				Sn	**Sn**	**20 30 31.6**	**-10**
	baz=353,slow=22						
ARCES	**ARCESS Array B**	**11.40**	**137**	Pn	**Pn**	**20 28 32.0**	**-2.0**
	comp=Z,1.5nm,0.3s,baz=350,slow=12,SNR=49						
ARCES				Sn	**Sn**	**20 30 29.2**	**-12**
	comp=Z,1.3nm,0.3s,baz=347,slow=20,SNR=3.5						
ARCES				LR	LR	20 32 38.1	
	comp=Z,420nm,21.6s,baz=349,slow=36						
ARE0	**ARCESS Array S**	**11.40**	**137**	ePn	**Pn**	**20 28 30.4**	**-3.7**
ARE0				eSn	**Sn**	**20 30 23.3**	**-18**
LOF	**Lofoten**	**11.61**	**160**	ePn	**Pn**	**20 28 40.7**	**+3.8**
KTK1	**Kautokeino**	**11.62**	**142**	eSn	**Sn**	**20 30 43.1**	**-3.5**
SUMG	**Summit**	**11.81**	**258**	ePn	**Pn**	**20 28 35.7**	**-3.8**
SUMG	**Summit**	**11.81**	**258**	ePn	**Pn**	**20 28 35.7**	**-3.9**
SUMG				eSn	**Sn**	**20 30 37.8**	**-13**
LVZ	**Lovozero**	**14.20**	**126**	eP	**Pn**	**20 29 09.6**	**-2.6**
APA	**Apatity**	**14.32**	**128**⇓	iP	**Pn**	**20 29 11.0**	**-2.8**
APA				pmax	pmax		
	comp=Z,18nm,1.2s						
JOF	**Joensuu**	**18.45**	**137**	ep	**Pn**	**20 30 03.0**	**-3.7**
	comp=Z,6.3nm,0.7s						
JOF	**Joensuu**	**18.45**	**137**	eP	**Pn**	**20 30 03.0**	**-3.7**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NB2	**NORSAR Subarra**	**18.57**	**168**	P	**Pn**	**20 30 08.9**	**+0.7**
	comp=Z,14nm,1.2s,baz=356,slow=11						
NB2	**NORSAR Subarra**	**18.57**	**168**	P	**Pn**	**20 30 08.9**	**+0.8**
	baz=351,slow=11						
NOA	**NORSAR Array B**	**18.57**	**168**	P	**Pn**	**20 30 07.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=351,slow=12,SNR=9.3						
NOA				LR	LR	20 36 01.8	
	comp=Z,164nm,21.7s,baz=355,slow=33						
KAF	**Kangasniemi**	**18.64**	**145**	ep	**Pn**	**20 30 07.0**	**-2.1**
	comp=Z,10nm,0.6s						
KAF	**Kangasniemi**	**18.64**	**145**	eP	**Pn**	**20 30 07.0**	**-2.1**
KAF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FIA0	**FINESS Array S**	**19.27**	**145**	P	**Pn**	**20 30 16.4**	**-0.2**
	baz=344,slow=10						
HFS	**Hagfors**	**19.58**	**164**	P	**Pn**	**20 30 19.4**	**-1.1**
	comp=Z,1.9nm,0.3s,baz=10,slow=9.0,SNR=75						
HFS				LR	LR	20 36 44.0	
	comp=Z,278nm,18.5s,baz=71,slow=33						
HFS	**Hagfors**	**19.58**	**164**	P	**Pn**	**20 30 20.0**	**-0.5**
	baz=11,slow=10						
RES	**Resolute Bay**	**19.89**	**309**	P	**Pn**	**20 30 18.4**	**-5.7**
	comp=Z,1.9nm,0.3s,baz=39,slow=11,SNR=34						
RES				LR	LR	20 37 57.0	
	comp=Z,424nm,19.0s,baz=40,slow=37						
RES	**Resolute Bay**	**19.89**	**309**	P	**Pn**	**20 30 18.4**	**-5.7**
RES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
RES				MLR	MLR		
	comp=Z,424nm,19.0s						
RES	**Resolute Bay**	**19.89**	**309**	eP	**Pn**	**20 30 18.3**	**-5.8**
	comp=Z,18nm,0.6s						
KONO	**Kongsberg**	**19.90**	**170**⇑	eP	**Pn**	**20 30 24.3**	**+0.1**
KONO	**Kongsberg**	**19.90**	**170**	eP	**Pn**	**20 30 22.9**	**-1.3**
	comp=Z,30nm,1.1s						
KLMR	**Klimovskoe**	**21.56**	**128**	eP	**P**	**20 30 39.6**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
VSU	**Vasula**	**22.26**	**146**⇓	eP	**P**	**20 30 48.6**	**+0.5**
EKA	**Eskdalemuir Ar**	**24.21**	**189**	P	**P**	**20 31 06.0**	**-1.7**
	comp=Z,2.0nm,0.8s,mb3.6,baz=1.4,slow=8.6,SNR=7.3						
EKA	**Eskdalemuir Ar**	**24.21**	**189**	P	**P**	**20 31 06.0**	**-1.7**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ESK	**Eskdalemuir**	**24.23**	**189**	P	**P**	**20 31 07.6**	**-0.3**
	comp=Z,116nm,1.8s,mb5.0						
ESK	**Eskdalemuir**	**24.23**	**189**	P	**P**	**20 31 07.6**	**-0.2**
	comp=Z,116nm,1.8s,mb5.0						
FRB	**Frobisher Bay**	**25.03**	**274**	P	**P**	**20 31 14.2**	**-0.8**
	comp=Z,11nm,0.7s,mb4.5,baz=21,slow=9.4,SNR=23						
FRB				LR	LR	20 41 12.0	
	comp=Z,324nm,19.4s,MS3.8,baz=274,slow=37						
FRB	**Frobisher Bay**	**25.03**	**274**	P	**P**	**20 31 14.2**	**-0.9**
FRB				pmax	pmax		
	comp=Z,11nm,0.7s						
FRB				MLR	MLR		
	comp=Z,324nm,19.4s						
TIXI	**Tiksi**	**26.17**	**36**⇑	eP	**P**	**20 31 27.5**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.7						
TIXI	**Tiksi**	**26.17**	**36**	P	**P**	**20 31 26.0**	**+0.6**
TIXI	**Tiksi**	**26.17**	**36**	P	**P**	**20 31 26.0**	**+0.7**
SUW	**Suwalki**	**26.32**	**153**	eP	**P**	**20 31 25.9**	**-1.0**
SUW				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
SUW	**Suwalki**	**26.32**	**153**	eP	**P**	**20 31 25.9**	**-1.0**
	comp=Z,8.8nm,0.8s,mb4.3						
OBN	**Obninsk**	**26.70**	**135**⇑	eP	**P**	**20 31 30.3**	**0.0**
OBN				e		20 31 38.5	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
OBN				MLR	MLR		
	comp=Z,300nm,21.0s,MS3.8						
BRG	**Berggiesshubel**	**28.84**	**166**	eP	**P**	**20 31 50.4**	**+1.0**
BRG				e		20 31 59.0	
BRG				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.9						
BRG	**Berggiesshubel**	**28.84**	**166**	e(P)	**P**	**20 31 50.4**	**+1.0**
	comp=Z,7.3nm,1.5s,mb4.2						
BRG				e		20 31 59.0	
	comp=Z,14nm,1.6s						
SVE	**Sverdlovsk**	**28.88**	**106**⇓	eP	**P**	**20 31 50.9**	**+1.2**
SVE				eS	**S**	**20 36 48.5**	**+9.0**
SVE				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
SVE				MLR	MLR		
	comp=Z,243nm,13.0s,MS4.0						
ARU	**Arti**	**28.89**	**109**d	iP	**P**	**20 31 50.8**	**+1.0**
ARU				e		20 32 40.0	
ARU				eS	**S**	**20 36 41.7**	**+2.1**
ARU				eSS	SS	20 38 03.7	-38
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ARU	**Arti**	**28.89**	**109**	eP	**P**	**20 31 49.7**	**-0.1**
	comp=Z,12nm,1.1s,mb4.5						
MOX	**Moxa**	**28.98**	**169**	eP	**P**	**20 31 51.7**	**+1.1**
	comp=Z,7.0nm,1.1s,mb4.3						
MOX	**Moxa**	**28.98**	**169**	eP	**P**	**20 31 51.7**	**+1.1**
MOX				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
PVCC	**Panska Ves**	**29.22**	**165**	eP	**P**	**20 31 55.9**	**+3.1**
BAIF	**Baives**	**29.41**	**179**	eP	**P**	**20 31 54.5**	**0.0**
NKC	**Novy Kostel**	**29.42**	**168**	eP	**P**	**20 31 55.8**	**+1.3**
PRU	**Pruhonice**	**29.76**	**165**	eP	**P**	**20 31 58.8**	**+1.3**
OJC	**Ojcow**	**29.83**	**158**	eP	**P**	**20 31 58.8**	**+0.6**
GRA1	**Grafenberg Arr**	**29.91**	**169**	eP	**P**	**20 31 59.5**	**+0.6**
	comp=Z,6.0nm,1.1s,mb4.2						
GRF	**Grafenberg Arr**	**29.91**	**169**	eP	**P**	**20 31 59.5**	**+0.6**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
GRF	**Grafenberg Arr**	**29.91**	**169**	eP	**P**	**20 31 59.5**	**+0.6**
	comp=Z,6.0nm,1.1s,mb4.2						
OKC	**Ostrava-Krasne**	**30.11**	**160**	eP	**P**	**20 32 00.2**	**-0.4**
AKASG	**Malin Array Be**	**30.17**	**146**	P	**P**	**20 32 00.3**	**-0.9**
	comp=Z,4.5nm,0.6s,mb4.3,baz=349,slow=9.6,SNR=16						
AKASG	**Malin Array Be**	**30.17**	**146**	i P	**P**	**20 32 01.0**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	**30.17**	**146**	eP	**P**	**20 32 00.6**	**-0.6**
AKBB	**Malin Array Si**	**30.17**	**146**	eP	**P**	**20 32 00.6**	**-0.6**
INK	**Inuvik**	**30.48**	**330**	eP	**P**	**20 32 02.7**	**-1.0**
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
INK	**Inuvik**	**30.48**	**330**	eP	**P**	**20 32 02.7**	**-1.0**
	comp=Z,7.8nm,1.0s,mb4.4						
INK	**Inuvik**	**30.48**	**330**	eP	**P**	**20 32 02.7**	**-1.1**
	comp=Z,7.8nm,1.0s,mb4.4						
VRAC	**Vranov**	**30.54**	**162**	eP	**P**	**20 32 05.7**	**+1.2**
VRAC	**Vranov**	**30.54**	**162**⇑	iP	**P**	**20 32 06.1**	**+1.6**
VRAC	**Vranov**	**30.54**	**162**	⇑P	**P**	**20 32 06.0**	**+1.6**
KWP	**Kalwaria**	**30.64**	**155**	eP	**P**	**20 32 06.7**	**+1.4**
NIE	**Niedzica**	**30.67**	**158**	eP	**P**	**20 32 06.9**	**+1.3**
FLN	**La Foliniere**	**30.73**	**185**	eP	**P**	**20 32 06.1**	**-0.1**
FLN				eMLR	MLR		
	comp=Z,93nm,19.0s,MS3.2						
FLN	**La Foliniere**	**30.73**	**185**	eP	**P**	**20 32 06.1**	**-0.1**
FLN				LR	LR		
	comp=Z,90nm,19.0s,MS3.4						
STHS	**Stebnicka Huta**	**30.74**	**157**	i P	**P**	**20 32 08.1**	**+1.9**
STHS				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
STHS	**Stebnicka Huta**	**30.74**	**157**	i P	**P**	**20 32 08.1**	**+1.9**
	comp=Z,13nm,0.9s,mb4.8						
STHS	**Stebnicka Huta**	**30.74**	**157**	i P	**P**	**20 32 08.1**	**+1.9**
STHS				e		21 45 59.4	
VSR	**Storozhevoye**	**30.86**	**134**	eP	**P**	**20 32 06.4**	**-0.8**
VSR				pmax	pmax		
	comp=N,2.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
VSR				pmax	pmax		
	comp=E,2.0nm,0.6s						
GERES	**GERESS Array B**	**30.86**	**166**	P	**P**	**20 32 08.4**	**+1.1**
	comp=E,1.3nm,0.8s,mb3.8,baz=12,slow=7.0,SNR=11						
GERES				LR	LR	20 43 36.0	
	comp=E,101nm,19.5s,MS3.5,baz=92,slow=34						
GERES	**GERESS Array B**	**30.86**	**166**	P	**P**	**20 32 08.4**	**+1.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				MLR	MLR		
	comp=Z,101nm,19.5s						
LDF	**La Druitiere**	**30.90**	**184**	eP	**P**	**20 32 07.4**	**-0.2**
MEZF	**Maizieres J'vi**	**30.97**	**177**	eP	**P**	**20 32 08.8**	**+0.5**
CDF	**Champ du Feu**	**31.09**	**175**	eP	**P**	**20 32 09.2**	**-0.1**
GRR	**Gorron**	**31.11**	**185**	eP	**P**	**20 32 08.5**	**-1.0**
	comp=Z,7.2nm,0.6s,mb4.3						
GRR	**Gorron**	**31.11**	**185**	eP	**P**	**20 32 08.5**	**-1.0**
GRR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
GRR	**Gorron**	**31.11**	**185**	eP	**P**	**20 32 08.5**	**-1.0**
	comp=Z,3.6nm,0.6s,mb4.3						
VORD	**Divnogorie**	**31.12**	**134**	eP	**P**	**20 32 08.9**	**-0.6**
VORD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
VORD				pmax	pmax		
	comp=N,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,20nm,1.0s						
CRVS	**Cervenica-Dubn**	**31.26**	**156**	i P	**P**	**20 32 12.3**	**+1.5**
	comp=E,142nm,3.7s						
CRVS	**Cervenica-Dubn**	**31.26**	**156**	i P	**P**	**20 32 12.3**	**+1.5**
	comp=E,142nm,3.7s						
SGMF	**Saint Gilles**	**31.28**	**187**	eP	**P**	**20 32 10.7**	**-0.3**
VRHR	**Novokhopersk**	**31.31**	**131**	eP	**P**	**20 32 11.0**	**-0.3**
VRHR				pmax	pmax		
	comp=N,5.0nm,0.8s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
HAU	**Haudompre**	**31.48**	**176**	eP	**P**	**20 32 12.4**	**-0.4**
HAU				eMLR	MLR		
	comp=Z,79nm,20.8s,MS3.1						
HAU	**Haudompre**	**31.48**	**176**	eP	**P**	**20 32 12.4**	**-0.4**
HAU				LR	LR		
	comp=Z,80nm,20.8s,MS3.4						
VYHS	**Vyhne**	**31.49**	**160**	i P	**P**	**20 32 14.0**	**+1.2**
MODS	**Modra-Piesok**	**31.51**	**162**	i P	**P**	**20 32 15.0**	**+2.0**
MODS				pmax	pmax		
	comp=Z,53nm,3.5s						
MODS	**Modra-Piesok**	**31.51**	**162**	i P	**P**	**20 32 15.0**	**+2.0**
	comp=Z,53nm,3.5s						
MODS	**Modra-Piesok**	**31.51**	**162**	i P	**P**	**20 32 15.0**	**+2.0**
	comp=Z,53nm,3.5s						
ZST	**Bratislava**	**31.68**	**162**	i P	**P**	**20 32 16.1**	**+1.6**
ZST				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.6						
ZST	**Bratislava**	**31.68**	**162**	i P	**P**	**20 32 16.1**	**+1.6**
	comp=Z,3.6nm,0.4s,mb4.5						
ZST	**Bratislava**	**31.68**	**162**	i P	**P**	**20 32 16.1**	**+1.6**
	comp=Z,3.6nm,0.4s,mb4.5						
HINF	**Hinteralfeld**	**31.68**	**175**	eP	**P**	**20 32 15.1**	**+0.6**
	comp=Z,12nm,1.1s,mb4.3						
HINF	**Hinteralfeld**	**31.68**	**175**	eP	**P**	**20 32 15.1**	**+0.6**
HINF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
HINF	**Hinteralfeld**	**31.68**	**175**	eP	**P**	**20 32 15.1**	**+0.6**
	comp=Z,6.0nm,1.1s,mb4.3						
TRPA	**Tarpa**	**32.11**	**155**⇑	iP	**P**	**20 32 19.7**	**+1.4**
PSZ	**Piszkesteto**	**32.13**	**159**	eP	**P**	**20 32 17.4**	**-1.1**
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
PSZ	**Piszkesteto**	**32.13**	**159**	eP	**P**	**20 32 17.4**	**-1.1**
	comp=Z,8.7nm,1.0s,mb4.5						
PSZ	**Piszkesteto**	**32.13**	**159**	eP	**P**	**20 32 17.4**	**-1.1**
	comp=Z,8.7nm,1.0s,mb4.5						
HYF	**Humbligny**	**32.20**	**181**	eP	**P**	**20 32 19.1**	**0.0**
LOR	**Lormes**	**32.20**	**179**	eP	**P**	**20 32 19.0**	**-0.1**
	comp=Z,4.2nm,0.7s,mb4.1						
LOR				eMLR	MLR		
	comp=Z,96nm,19.0s,MS3.2						
LOR	**Lormes**	**32.20**	**179**	eP	**P**	**20 32 19.0**	**-0.1**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LOR				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
LOR	**Lormes**	**32.20**	**179**	eP	**P**	**20 32 19.0**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.1						
LOR				LR	LR		
	comp=Z,100nm,19.0s,MS3.5						
SSF	**Saint Saulge**	**32.41**	**179**	eP	**P**	**20 32 20.8**	**-0.1**
	comp=Z,9.8nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**32.41**	**179**	eP	**P**	**20 32 20.8**	**-0.1**
SSF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**32.41**	**179**	eP	**P**	**20 32 20.8**	**-0.1**
	comp=Z,4.9nm,1.0s,mb4.3						
BILL	**Bilibino**	**32.50**	**12**	eP	**P**	**20 32 25.7**	**+4.2**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.6						
BILL	**Bilibino**	**32.50**	**12**	eP	**P**	**20 32 19.0**	**-2.6**
	comp=Z,17nm,1.6s,mb4.7						
AVF	**Avril sur Loir**	**32.68**	**180**	eP	**P**	**20 32 23.2**	**-0.1**
	comp=Z,8.1nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**32.68**	**180**	eP	**P**	**20 32 23.2**	**-0.1**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**32.68**	**180**	eP	**P**	**20 32 23.2**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.4						
BUR08	**Bucovina Ar. S**	**32.82**	**152**	eP	**P**	**20 32 24.7**	**+0.2**
BUR08	**Bucovina Ar. S**	**32.82**	**152**	eP	**P**	**20 32 24.7**	**+0.3**
SMF	**Signal de Mont**	**32.83**	**179**	eP	**P**	**20 32 24.2**	**-0.4**
BURAR	**Bucovina Array**	**32.85**	**152**⇓	iP	**P**	**20 32 25.9**	**+1.2**
BURAR	**Bucovina Array**	**32.85**	**152**	⇓P	**P**	**20 32 25.9**	**+1.2**
CABF	**La Chapelle**	**32.88**	**176**	eP	**P**	**20 32 25.2**	**+0.2**
MFF	**Saint Martin d**	**32.89**	**184**	eP	**P**	**20 32 24.7**	**-0.4**
	comp=Z,8.4nm,0.8s,mb4.4						
MFF	**Saint Martin d**	**32.89**	**184**	eP	**P**	**20 32 24.7**	**-0.4**
MFF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MFF	**Saint Martin d**	**32.89**	**184**	eP	**P**	**20 32 24.7**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.4						
BGF	**Bois d'Agland**	**32.91**	**180**	eP	**P**	**20 32 25.4**	**+0.1**
	comp=Z,26nm,0.8s,mb4.9						
BGF	**Bois d'Agland**	**32.91**	**180**	eP	**P**	**20 32 25.4**	**+0.1**
BGF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
BGF	**Bois d'Agland**	**32.91**	**180**	eP	**P**	**20 32 25.4**	**+0.1**
	comp=Z,13nm,0.8s,mb4.9						
SCHQ	**Schefferville**	**33.03**	**265**	LR	LR	20 45 49.5	
	comp=Z,186nm,21.2s,MS3.8,baz=20,slow=36						
TCF	**Toulx Ste Croi**	**33.18**	**181**	eP	**P**	**20 32 27.6**	**-0.1**
	comp=Z,14nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**33.18**	**181**	eP	**P**	**20 32 27.6**	**-0.1**
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**33.18**	**181**	eP	**P**	**20 32 27.6**	**-0.1**
	comp=Z,7.2nm,0.9s,mb4.6						
DRGR		**33.46**	**155**⇓	iP	**P**	**20 32 31.4**	**+1.3**
DRGR		**33.46**	**155**	⇓P	**P**	**20 32 31.4**	**+1.4**
PKSM	**Moragy**	**33.75**	**160**⇑	iP	**P**	**20 32 34.0**	**+1.4**
PKSM	**Moragy**	**33.75**	**160**	⇑P	**P**	**20 32 34.0**	**+1.3**
YKA	**Yellowknife Ar**	**33.90**	**313**	LR	LR	20 45 36.0	
	comp=Z,24nm,20.0s,MS2.9,baz=305,slow=35						
LPL	**La Plagne**	**33.98**	**175**	eP	**P**	**20 32 34.9**	**+0.3**
LPG	**La Plagne**	**34.00**	**175**	eP	**P**	**20 32 35.2**	**+0.4**
RJF	**Les Rejaudoux**	**34.17**	**182**	eP	**P**	**20 32 36.3**	**0.0**
	comp=Z,26nm,0.9s,mb4.8						
RJF				eMLR	MLR		
	comp=Z,51nm,19.5s,MS3.0						
RJF	**Les Rejaudoux**	**34.17**	**182**	eP	**P**	**20 32 36.3**	**0.0**
RJF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
RJF				MLR	MLR		
	comp=Z,50nm,19.5s,MS3.2						
RJF	**Les Rejaudoux**	**34.17**	**182**	eP	**P**	**20 32 36.3**	**0.0**
	comp=Z,13nm,0.9s,mb4.9						
RJF				LR	LR		
	comp=Z,50nm,19.5s,MS3.2						
BRVK	**Borovoye**	**34.22**	**98**	eP	**P**	**20 32 37.6**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BRVK	**Borovoye**	**34.22**	**98**	eP	**P**	**20 32 37.6**	**+1.0**
	comp=Z,9.0nm,0.8s,mb4.8						
BRVK	**Borovoye**	**34.22**	**98**	eP	**P**	**20 32 37.6**	**+1.0**
	comp=Z,9.0nm,0.8s,mb4.8						
FCC	**Fort Churchill**	**34.26**	**293**	eP	**P**	**20 32 36.5**	**-0.5**
	comp=Z,0.1nm,1.0s						
FCC	**Fort Churchill**	**34.26**	**293**	eP	**P**	**20 32 36.5**	**-0.5**
	comp=Z,0.1nm,1.0s						
LFF	**La Frestale**	**34.54**	**183**	eP	**P**	**20 32 39.5**	**0.0**
	comp=Z,10nm,0.8s,mb4.5						
LFF	**La Frestale**	**34.54**	**183**	eP	**P**	**20 32 39.5**	**0.0**
LFF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LFF	**La Frestale**	**34.54**	**183**	eP	**P**	**20 32 39.5**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.5						
BZS	**Buzias**	**34.54**	**157**⇓	iP	**P**	**20 32 40.8**	**+1.3**
BZS	**Buzias**	**34.54**	**157**	⇓P	**P**	**20 32 40.8**	**+1.2**
CAF	**Calviac**	**34.55**	**181**	eP	**P**	**20 32 38.9**	**-0.6**
EGAK	**Eagle**	**34.61**	**334**	eP	**P**	**20 32 39.8**	**-0.1**
	comp=Z,11nm,1.1s,mb4.7						
EGAK	**Eagle**	**34.61**	**334**	eP	**P**	**20 32 39.8**	**-0.1**
	comp=Z,11nm,1.1s,mb4.7						
NVS	**Novosibirsk**	**34.93**	**85**	eP	**P**	**20 32 42.6**	**-0.1**
NVS				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
NVS				pmax	pmax		
	comp=N,11nm,1.6s						
VOIR		**34.99**	**153**⇑	iP	**P**	**20 32 44.5**	**+1.1**
VOIR		**34.99**	**153**	⇑P	**P**	**20 32 44.5**	**+1.1**
COLA	**College**	**35.01**	**339**	P	**P**	**20 32 44.1**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
COLA	**College**	**35.01**	**339**	P	**P**	**20 32 44.0**	**+0.6**
	comp=Z,3.0nm,0.7s,mb4.3						
COLA	**College**	**35.01**	**339**	P	**P**	**20 32 44.0**	**+0.7**
	comp=Z,3.0nm,0.7s,mb4.3						

DAWY Dawson 35.16 332 *e*P P 20 32 44.2 -0.5
DAWY Dawson 35.16 332 *e*P P 20 32 44.2 -0.4
YAK Yakutsk 35.49 41 *e*P P 20 32 45.8 -1.7
YAK pmax pmax
comp=Z,12nm,1.0s,mb4.8
YAK pmax pmax
comp=N,10.0nm,1.7s
YAK Yakutsk 35.49 41 *e*P P 20 32 46.4 -1.1
comp=N,8.4nm,0.9s,mb4.7
YAK Yakutsk 35.49 41 *e*P P 20 32 46.4 -1.1
comp=N,8.4nm,0.9s,mb4.7
FRF La Foret Royal 35.93 176 *e*P P 20 32 50.6 -0.9
ZALV Zalesovo Beam 36.07 84 P P 20 32 52.5 0.0
comp=N,1.5nm,0.5s,mb4.1,baz=343,slow=9.3,SNR=7.4
ZALV PcP PcP 20 35 17.2 -1.0
comp=N,0.4nm,0.3s,baz=308,slow=3.6,SNR=4.5
ZALV LR LR 20 52 27.3
comp=N,87nm,18.6s,MS3.5,baz=74,slow=44
ZALV Zalesovo Beam 36.07 84 P P 20 32 52.5 0.0
ZALV 20 35 17.2
ZALV pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ZALV MLR MLR
comp=Z,87nm,18.6s,MS3.5
TIRR Tirgusor 36.27 149⇑*i*P P 20 32 54.8 +0.4
TIRR Tirgusor 36.27 149 ⇑P P 20 32 54.8 +0.4
EPF Esparros 36.45 183 *e*P P 20 32 55.9 0.0
comp=Z,16nm,0.9s,mb4.7
EPF Esparros 36.45 183 *e*P P 20 32 55.9 0.0
EPF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
EPF Esparros 36.45 183 *e*P P 20 32 55.9 0.0
comp=Z,8.2nm,0.9s,mb4.7
ETSF Etsaut 36.60 184 *e*P P 20 32 57.5 +0.3
ANN Anapa 36.93 138 *e*P P 20 32 59.8 -0.2
PGF Pioggiola 36.99 173 *e*P P 20 33 00.8 +0.3
BOD Bodaibo 37.40 55 *e*P P 20 33 02.3 -1.5
BOD pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
KURK Kurchatov 38.00 91 LR LR 20 52 42.8
comp=Z,134nm,18.7s,MS3.8,baz=355,slow=42
KURK Kurchatov 38.00 91 *e*P P 20 33 09.4 +0.4
KURK pmax pmax
comp=Z,17nm,0.9s,mb4.8
KURK Kurchatov 38.00 91 *e*P P 20 33 09.4 +0.4
comp=Z,17nm,0.9s,mb4.8
KURK Kurchatov 38.00 91 *e*P P 20 33 09.4 +0.4
comp=Z,17nm,0.9s,mb4.8
ESDC Sonseca Array 39.89 188 P P 20 33 25.6 +0.7
comp=Z,1.5nm,0.5s,mb3.9,baz=0.6,slow=8.4,SNR=20
ESDC Sonseca Array 39.89 188 P P 20 33 25.6 +0.7
PAB San Pablo 40.03 189 *e*P P 20 33 26.9 +0.8
PAB pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
PAB San Pablo 40.03 189 *e*P P 20 33 26.9 +0.8
comp=Z,2.9nm,0.6s,mb4.2
PAB San Pablo 40.03 189 *e*P P 20 33 26.9 +0.9
comp=Z,2.9nm,0.6s,mb4.2
MOY Mondy 41.17 70 *e*P P 20 33 36.6 +1.2
BRTR Keskin Array B 41.49 144 LR LR 20 52 20.3
comp=Z,62nm,19.3s,MS3.5,baz=311,slow=38
BRTR Keskin Array B 41.49 144 *i* P P 20 33 47.4 +9.2
BRTR pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 42.45 89 P P 20 33 46.4 +0.5
comp=Z,8.8nm,0.6s,mb4.6,baz=338,slow=6.5,SNR=104
MKAR LR LR 20 56 23.0
comp=Z,94nm,18.7s,MS3.7,baz=352,slow=43
MKAR Makanchi Array 42.45 89 *i* P P 20 33 46.4 +0.5
MKAR pmax pmax
comp=Z,9.0nm,0.6s
AVNT Avonos 42.56 143 *i* P P 20 33 49.2 +2.3
ULM Lac du Bonnet 42.72 291 P P 20 33 47.6 -0.4
comp=Z,4.7nm,0.9s,mb4.2,baz=13,slow=5.5,SNR=5.3
ULM LR LR 20 51 43.4
comp=Z,330nm,21.2s,MS4.2,baz=14,slow=36
KEST Kesra 43.80 173 LR LR 20 49 17.0
comp=Z,34nm,21.5s,MS3.2,baz=299,slow=32
AGMN Agassiz Refuge 44.60 290 *e*P P 20 34 02.6 -0.6
comp=Z,7.5nm,1.1s,mb4.4
AGMN Agassiz Refuge 44.60 290 *e*P P 20 34 02.6 -0.5
comp=Z,7.5nm,1.1s,mb4.4
EKS2 Erkin-Say 44.86 99 *e*P P 20 34 05.8 +0.4
comp=Z,2.7nm,0.8s,mb4.1
EKS2 Erkin-Say 44.86 99 *e*P P 20 34 05.8 +0.4
comp=Z,2.7nm,0.8s,mb4.1
TKM2 Tokmak 2 44.95 97 *e*P P 20 34 07.4 +1.4
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
TKM2 Tokmak 2 44.95 97 *e*P P 20 34 07.4 +1.4
comp=Z,3.8nm,0.8s,mb4.3
TKM2 Tokmak 2 44.95 97 *e*P P 20 34 07.4 +1.4
comp=Z,3.8nm,0.8s,mb4.3
AAK Ala-Archa 45.02 99⇑*e*P P 20 34 08.4 +1.8
AAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
AAK MLR MLR
comp=Z,100nm,22.0s,MS3.7
AAK Ala-Archa 45.02 99 *e*P P 20 34 08.4 +1.8
comp=Z,6.6nm,0.8s,mb4.5
AAK Ala-Archa 45.02 99 *e*P P 20 34 08.4 +1.8
comp=Z,6.6nm,0.8s,mb4.5
AML Almayashu 45.36 100 *e*P P 20 34 11.7 +2.4
comp=Z,8.9nm,0.6s,mb4.8
AML Almayashu 45.36 100 *e*P P 20 34 11.7 +2.3
comp=Z,8.9nm,0.6s,mb4.8
SONM Songino Array 45.80 66 P P 20 34 13.0 +0.3
comp=Z,0.9nm,0.6s,mb3.9,baz=338,slow=8.4,SNR=7.1
SONM LR LR 20 55 51.6
comp=Z,90nm,18.9s,MS3.7,baz=352,slow=39
SONM Songino Array 45.80 66 P P 20 34 13.0 +0.3
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,90nm,18.9s
ULN Ulaanbaatar 45.88 66⇑*e*P P 20 34 13.9 +0.6
ULN Ulaanbaatar 45.88 66 *e*P P 20 34 13.8 +0.5
comp=Z,13nm,1.2s,mb4.7
ULN Ulaanbaatar 45.88 66 *e*P P 20 34 13.8 +0.5
comp=Z,13nm,1.2s,mb4.7
WMQ Urumqi 46.33 85 *e*P P 20 34 18.0 +1.1
WMQ AMB AMB
comp=Z,9.0nm,1.2s,mb4.6
WMQ AMB AMB
comp=Z,154nm,4.0s
WMQ LR LR
comp=N,64nm,21.0s,MS4.1
WMQ LR LR
comp=E,200nm,19.0s,MS4.1
WMQ LR LR
comp=Z,75nm,17.0s,MS3.7
WALA Waterton Lakes 46.81 306 *e*P P 20 34 20.1 -0.5
comp=Z,0.2nm,0.8s
WALA Waterton Lakes 46.81 306 *e*P P 20 34 20.1 -0.5
comp=Z,0.2nm,0.8s
PETK Petropavlovsk- 46.96 21 LR LR 20 52 00.2
comp=Z,52nm,21.5s,MS3.5,baz=162,slow=34
NEW Newport 48.05 309 *e*P P 20 34 30.7 +0.4
NEW pmax pmax
comp=Z,7.0nm,1.1s
NEW Newport 48.05 309 *e*P P 20 34 30.7 +0.4
comp=Z,7.0nm,1.1s,mb4.6
NEW Newport 48.05 309 *e*P P 20 34 30.7 +0.4
comp=Z,7.0nm,1.1s,mb4.6
BSMT Bassoo Peak 48.11 307 *e*P P 20 34 30.8 0.0
comp=Z,4.3nm,0.9s,mb4.5
BSMT Bassoo Peak 48.11 307 *e*P P 20 34 30.8 0.0
comp=Z,4.3nm,0.9s,mb4.5
MSO Missoula 48.98 306 *e*P P 20 34 37.3 -0.2
comp=Z,12nm,1.3s,mb4.8
MSO Missoula 48.98 306 *e*P P 20 34 37.4 -0.1
comp=Z,12nm,1.3s,mb4.8
MSO *e*PcP PcP 20 35 54.9 -6.4
ECSD EROS,Sioux Fal 49.15 289 *e*P P 20 34 38.4 -0.4
comp=Z,17nm,0.9s,mb5.1
ECSD EROS,Sioux Fal 49.15 289 *e*P P 20 34 38.4 -0.4
comp=Z,17nm,0.9s,mb5.1
LRM Limekiln Ridge 49.74 304 *e*P P 20 34 43.2 -0.1
comp=Z,75nm,1.3s,mb5.6
LRM Limekiln Ridge 49.74 304 *e*P P 20 34 43.2 -0.1
comp=Z,75nm,1.3s,mb5.6
RLMT Red Lodge 49.92 301 *e*P P 20 34 44.9 +0.2
comp=Z,28nm,1.7s,mb5.0
RLMT Red Lodge 49.92 301 *e*P P 20 34 44.9 +0.2
comp=Z,28nm,1.7s,mb5.0
RSSD Black Hills 50.05 296 *e*P P 20 34 45.3 -0.3
RSSD pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
RSSD Black Hills 50.05 296 *e*P P 20 34 45.3 -0.3
comp=Z,5.5nm,1.2s,mb4.5
RSSD Black Hills 50.05 296 *e*P P 20 34 45.3 -0.3
comp=Z,5.5nm,1.2s,mb4.5
IMW Indian Meadow 51.38 302 *e*P P 20 34 56.6 +0.9
comp=Z,10nm,0.9s,mb4.8
IMW Indian Meadow 51.38 302 *e*P P 20 34 56.6 +0.9
comp=Z,10nm,0.9s,mb4.8
MOOW Moose Ponds 51.50 302 *e*P P 20 34 56.5 -0.1
comp=Z,7.7nm,1.2s,mb4.5
MOOW Moose Ponds 51.50 302 *e*P P 20 34 56.5 0.0
comp=Z,7.7nm,1.2s,mb4.5
LOHW Long Hollow 51.61 302 *e*P P 20 34 57.9 +0.5
comp=Z,4.2nm,1.0s,mb4.3
LOHW Long Hollow 51.61 302 *e*P P 20 34 57.9 +0.5
comp=Z,4.2nm,1.0s,mb4.3
REDW Red Top Meadow 51.89 302 *e*P P 20 34 59.7 +0.2
comp=Z,24nm,1.7s,mb4.8
REDW Red Top Meadow 51.89 302 *e*P P 20 34 59.7 +0.2
comp=Z,24nm,1.7s,mb4.8
RRI2 Red Ridge 51.98 303 *e*P P 20 35 00.6 +0.4
comp=Z,16nm,1.2s,mb4.8
HLID Hailey 52.25 305 P P 20 35 01.9 -0.2
comp=Z,42nm,1.3s,mb5.2
HLID Hailey 52.25 305 P P 20 35 01.9 -0.3
comp=Z,42nm,1.3s,mb5.2
PDAR Pinedale Array 52.27 301 P P 20 35 02.0 -0.3
comp=Z,2.5nm,1.1s,mb4.1,baz=22,slow=4.8,SNR=12
PDAR PcP PcP 20 36 16.4 +2.9
comp=Z,1.0nm,1.0s,baz=309,slow=9.1,SNR=3.6
PDAR LR LR 20 58 04.6
comp=Z,185nm,18.8s,MS4.2,baz=194,slow=37
PDAR Pinedale Array 52.27 301 P P 20 35 02.0 -0.3
MDJ Mudanjiang 52.51 46 P P 20 35 01.3 -2.8
MDJ S S 20 42 28.0 -2.1
MDJ AMB AMB
comp=Z,7.0nm,2.5s,mb4.2
MDJ AMB AMB
comp=Z,87nm,4.7s
GTA Gaotai 52.82 75 P P 20 35 07.3 +0.9
GTA AP pP 20 35 10.5 +0.9
GTA XP sP 20 35 13.9 +3.1
GTA PP PP 20 37 07.6 +2.2
GTA S S 20 42 34.3 -0.1
GTA XS sS 20 42 42.0 +2.4
GTA SS SS 20 46 11.4 -1.0
GTA AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
GTA AMB AMB
comp=Z,50nm,5.6s
GTA LR LR
comp=N,116nm,16.9s,MS4.2
GTA LR LR
comp=E,156nm,16.1s,MS4.2
GTA LR LR
comp=Z,90nm,20.8s,MS3.8
HHC Hu-ho-hao-te 53.46 64 *e*P P 20 35 10.9 -0.2
HHC AP pP 20 35 15.3 +1.0
HHC XP sP 20 35 18.1 +2.6
HHC PP PP 20 37 12.3 +1.1
HHC *e*S S 20 42 38.5 -4.6
HHC SS SS 20 46 16.8 -5.7
HHC AMB AMB
comp=Z,9.0nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,75nm,5.0s
HHC LR LR
comp=N,133nm,15.5s,MS4.3
HHC LR LR
comp=E,164nm,14.3s,MS4.3
HHC LR LR
comp=Z,120nm,16.7s,MS4.0
BJI Beijing 55.00 60 P P 20 35 20.9 -1.5
BJI AMB AMB
comp=Z,9.0nm,0.4s,mb5.2
BJI LR LR
comp=N,137nm,22.5s
BJI LR LR
comp=E,331nm,16.3s
ELK Elko 55.13 305 *e*P P 20 35 23.4 +0.1
ELK pmax pmax
comp=Z,4.0nm,1.0s
ELK Elko 55.13 305 *e*P P 20 35 23.4 +0.1
comp=Z,3.7nm,1.0s,mb4.4
ELK Elko 55.13 305 *e*P P 20 35 23.4 +0.1
comp=Z,3.7nm,1.0s,mb4.4
DUG Dugway 55.29 303 *e*P P 20 35 23.9 -0.6
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
DUG Dugway 55.29 303 *e*P P 20 35 23.9 -0.6
comp=Z,3.7nm,1.0s,mb4.4
DUG Dugway 55.29 303 *e*P P 20 35 23.9 -0.6
comp=Z,3.7nm,1.0s,mb4.4
SMCO Snowmass 55.35 297 *e*P P 20 35 17.1 -7.8
comp=Z,11nm,1.0s,mb4.8
NLU North Lily Min 55.41 302 *e*P P 20 35 25.3 0.0
comp=Z,5.7nm,0.9s,mb4.6
NLU North Lily Min 55.41 302 *e*P P 20 35 25.3 0.0
comp=Z,5.7nm,0.9s,mb4.6
TMUT Trail Mountain 55.92 301 *e*P P 20 35 29.5 +0.5
comp=Z,10nm,1.0s,mb4.8
TMUT Trail Mountain 55.92 301 *e*P P 20 35 29.5 +0.5
comp=Z,10nm,1.0s,mb4.8
PV04 Paradox Valley 56.43 299 *e*P P 20 35 33.0 +0.3
PV04 Paradox Valley 56.43 299 *e*P P 20 35 33.0 +0.3
SDCO Great Sand Dun 56.50 296 *e*P P 20 35 32.5 -0.7
comp=Z,3.4nm,1.0s,mb4.3
SDCO Great Sand Dun 56.50 296 *e*P P 20 35 32.5 -0.7
comp=Z,3.4nm,1.0s,mb4.3
TAM Tamanrasset 56.63 177 *e*P P 20 35 35.8 +1.6
TAM pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
TAM Tamanrasset 56.63 177 *e*P P 20 35 35.8 +1.6
comp=Z,1.1nm,0.4s,mb4.2
TAM Tamanrasset 56.63 177 *e*P P 20 35 35.8 +1.5
comp=Z,1.1nm,0.4s,mb4.2
LZH Lanzhou 56.77 72 *e*P P 20 35 35.0 -0.1
LZH AP pP 20 35 39.8 +1.5
LZH XP sP 20 35 42.1 +2.6
LZH PP PP 20 37 42.3 +1.4
LZH AMB AMB
comp=Z,22nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,126nm,6.1s
LZH LR LR
comp=N,458nm,15.4s
LZH LR LR
comp=Z,703nm,18.0s,MS4.8
MSU Marysvale 56.84 302 *e*P P 20 35 36.5 +0.9
MSU pmax pmax
comp=Z,11nm,1.1s,mb4.8
MSU Marysvale 56.84 302 *e*P P 20 35 36.5 +0.9
comp=Z,11nm,1.1s,mb4.8
MSU Marysvale 56.84 302 *e*P P 20 35 36.5 +1.0
comp=Z,11nm,1.1s,mb4.8
MVCO Mesa Verde 57.52 298 *e*P P 20 35 40.8 +0.4
comp=Z,6.3nm,1.1s,mb4.6
MVCO Mesa Verde 57.52 298 *e*P P 20 35 40.8 +0.4
comp=Z,6.3nm,1.1s,mb4.6
MIAR Mount Ida 57.53 284 *e*P P 20 35 39.2 -1.3
MIAR pmax pmax
comp=Z,20nm,1.4s,mb5.0
MIAR Mount Ida 57.53 284 *e*P P 20 35 39.2 -1.3
comp=Z,20nm,1.4s,mb4.9
MIAR Mount Ida 57.53 284 *e*P P 20 35 39.2 -1.3
comp=Z,20nm,1.4s,mb4.9
NVAR Mina Array Bea 57.86 308 P P 20 35 42.5 -0.2
comp=Z,2.7nm,1.0s,mb4.2,baz=18,slow=5.2,SNR=13
NVAR Mina Array Bea 57.86 308 P P 20 35 42.5 -0.3
WMOK Wichita Mounta 58.28 289 *e*P P 20 35 44.2 -1.5
WMOK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
WMOK Wichita Mounta 58.28 289 *e*P P 20 35 44.2 -1.5
comp=Z,6.3nm,1.0s,mb4.6
WMOK Wichita Mounta 58.28 289 *e*P P 20 35 44.2 -1.6
comp=Z,6.3nm,1.0s,mb4.6
KSRS Korea Array 59.31 49 P P 20 35 52.1 -0.8
comp=Z,4.2nm,0.8s,mb4.5,baz=120,slow=35,SNR=7.1
KSRS LR LR 21 01 02.4
comp=Z,25nm,20.3s,MS3.3,baz=345,slow=36
KSRS Korea Array 59.31 49 P P 20 35 52.1 -0.8
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KSRS MLR MLR
comp=Z,25nm,20.3s,MS3.3
WUAZ Wupatki 59.64 301 *e*P P 20 35 55.6 +0.4
comp=Z,7.9nm,0.8s,mb4.8
XAN Xi'an 59.65 68 P P 20 35 54.8 -0.5
XAN AP pP 20 35 57.3 -1.2
XAN PP PP 20 38 05.3 -1.2
XAN S S 20 44 04.1 -1.1
XAN SS SS 20 48 00.5 +0.4
XAN AMB AMB
comp=Z,2.0nm,0.7s,mb4.3
XAN LR LR
comp=E,61nm,22.6s
XAN LR LR
comp=Z,62nm,18.8s,MS3.8
DANN Dangsing 60.61 93 *e*P P 20 36 02.8 +0.9
comp=Z,51nm,0.9s,mb5.7
LSA Lhasa 60.67 86 P P 20 36 03.8 +1.5
LSA Lhasa 60.67 86 *e*P P 20 36 03.5 +1.2
LSA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
LSA Lhasa 60.67 86 *e*P P 20 36 03.5 +1.2
comp=Z,8.3nm,0.9s,mb4.9
LSA Lhasa 60.67 86 *e*P P 20 36 03.5 +1.2
comp=Z,8.3nm,0.9s,mb4.9
GSC Goldstone 60.70 306 *e*P P 20 36 02.8 +0.4
GSC pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
GSC Goldstone 60.70 306 *e*P P 20 36 02.8 +0.4
comp=Z,4.2nm,1.0s,mb4.5
GSC Goldstone 60.70 306 *e*P P 20 36 02.8 +0.4
comp=Z,4.2nm,1.0s,mb4.5
GKN Gorkha 61.11 93 *e*P P 20 36 05.5 +0.2
KOLN Koldanda 61.15 94 *e*P P 20 36 06.2 +0.6
GUN Gumba 61.44 91 *e*P P 20 36 08.6 +1.1
comp=Z,40nm,1.1s,mb5.5
KKN Kakani 61.44 92 *e*P P 20 36 08.4 +0.9
comp=Z,67nm,0.8s,mb5.8
KKN Kakani 61.44 92 *e*P P 20 36 08.4 +0.9
KKN pmax pmax
comp=Z,67nm,0.8s,mb5.8
MJAR Matsushiro Arr 61.56 40 P P 20 36 08.0 -0.3
comp=Z,4.1nm,1.0s,mb4.5,baz=341,slow=6.1,SNR=8.5
MJAR Matsushiro Arr 61.56 40 P P 20 36 08.0 -0.2
MJAR pmax pmax
comp=Z,4.0nm,1.0s
DMN Daman 61.59 92 *e*P P 20 36 09.4 +0.9
comp=Z,37nm,1.1s,mb5.5
PKI Pulchoki 61.68 92 *e*P P 20 36 09.9 +0.7
JIRN Jiri 61.74 91 *e*P P 20 36 10.7 +1.2
comp=Z,39nm,1.0s,mb5.5
CD2 Chengdu 61.80 73 P P 20 36 10.0 +0.1
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,100nm,4.5s
RAMN Ramite 62.51 91 *e*P P 20 36 14.6 -0.1
comp=Z,26nm,0.8s,mb5.4
TUC Tucson 62.69 299 *e*P P 20 36 15.4 -0.5
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
TUC Tucson 62.69 299 *e*P P 20 36 15.4 -0.5
comp=Z,6.2nm,1.1s,mb4.7
TUC Tucson 62.69 299 *e*P P 20 36 15.4 -0.5
comp=Z,6.2nm,1.1s,mb4.7
TORD Torodi Ar. Bea 66.22 181 P P 20 36 39.2 +0.1
comp=Z,5.8nm,0.6s,mb4.8,baz=356,slow=6.1,SNR=66
TORD LR LR 21 03 37.8
comp=Z,34nm,19.5s,MS3.6,baz=300,slow=34
GYA Guiyang 66.66 72 P P 20 36 42.5 +0.7
GYA PCP PcP 20 37 12.4 +1.5
GYA PP PP 20 39 10.3 +2.1
GYA SCP 20 41 13.8
GYA S S 20 45 31.8 -1.2
GYA SKS 20 46 35.4
GYA SS SS 20 49 49.3 -0.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,5.0s
GYA LR LR
comp=N,440nm,19.8s,MS4.8
GYA LR LR
comp=E,310nm,18.8s,MS4.8
GYA LR LR
comp=Z,450nm,19.4s,MS4.7
KMI Kunming 67.26 76 P P 20 36 45.3 -0.4
KMI AP pP 20 36 50.8 +1.9
KMI XP sP 20 36 52.9 +2.8
KMI PP PP 20 39 16.9 +3.4
KMI S S 20 45 39.3 -1.0
KMI XS sS 20 45 46.3 +0.7
KMI SS SS 20 49 59.5 +0.4
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.5
KMI AMB AMB
comp=Z,51nm,3.7s
KMI LR LR
comp=N,96nm,27.9s
KMI LR LR
comp=E,101nm,20.0s
KMI LR LR
comp=Z,101nm,25.3s,MS3.9
HYB Hyderabad 70.31 101 *e*P P 20 37 04.5 -0.3
HYB Hyderabad 70.31 101 *i* P P 20 37 04.5 -0.3
CHTO Chiang Mai 72.72 81 *e*P P 20 37 18.1 -1.2
CHTO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CHTO Chiang Mai 72.72 81 *e*P P 20 37 18.1 -1.2
comp=Z,6.8nm,0.9s,mb4.6
CHTO Chiang Mai 72.72 81 *e*P P 20 37 18.1 -1.2
comp=Z,6.8nm,0.9s,mb4.6
DBIC Dimbokro 72.76 188 P P 20 37 19.2 -0.3
comp=Z,1.8nm,0.7s,mb4.1,baz=326,slow=12,SNR=3.7
DBIC Dimbokro 72.76 188 P P 20 37 19.2 -0.3
DBIC pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 72.76 188 *e*P P 20 37 18.9 -0.6
comp=Z,2.7nm,0.8s,mb4.2
DBIC Dimbokro 72.76 188 *e*P P 20 37 18.9 -0.6
comp=Z,2.7nm,0.8s,mb4.2
TIC Toumodi 72.79 188 *e*P P 20 37 18.2 -1.5
comp=Z,8.3nm,0.2s,mb5.3
KIC Kosan Boka 73.06 188 *e*P P 20 37 20.9 -0.4
comp=Z,57nm,0.9s,mb5.5
CMAR Chiang Mai Arr 73.07 81 P P 20 37 20.7 -0.7
comp=Z,4.7nm,0.9s,mb4.4,baz=341,slow=7.0,SNR=36
CMAR LR LR 21 16 25.8
comp=Z,41nm,18.5s,MS3.7,baz=110,slow=42
CMAR Chiang Mai Arr 73.07 81 *i* P P 20 37 20.7 -0.7
CMAR pmax pmax
comp=Z,5.0nm,0.9s
LIC Lamto 73.20 188 *e*P P 20 37 21.8 -0.4
comp=Z,31nm,1.0s,mb5.2
LIC Lamto 73.20 188⇑*i*P P 20 37 22.2 0.0
comp=Z,25nm,1.0s,mb4.8
LIC Lamto 73.20 188⇑*i*P P 20 37 22.2 0.0
comp=Z,13nm,1.0s,mb4.8
ROSC El Rosal 82.93 259 LR LR 21 14 22.5
comp=Z,56nm,18.5s,MS4.0,baz=24,slow=35
ASAR Alice Springs 120.25 53 PKP PKPdf 20 44 39.9 -1.9
comp=Z,0.4nm,0.9s,baz=13,slow=2.4,SNR=3.8
VNA1 Neumayer--Stat 149.94 188 *e*PKPdf PKPbc 20 45 40.6 +0.9
VNA1 *e* 20 45 43.0
VNA1 *e* 20 45 49.0
VNA2 Neumayer--Watz 150.20 187 *e*PKPdf PKPbc 20 45 40.6 +0.3
baz=345,slow=2.7
VNA2 *e* 20 45 42.8
VNA2 *e* 20 45 49.4
VNA3 Neumayer Olymp 150.57 188 *e*PKPdf PKPbc 20 45 41.4 +0.2
VNA3 *e* 20 45 43.8
VNA3 *e* 20 45 50.1
SNAA Sanae 150.87 184 *e*PKPdf PKPbc 20 45 42.4 +0.6
SNAA *e* 20 45 44.6
SNAA *e* 20 45 50.2
SNAA Sanae 150.87 184 *e*PKPbc PKPbc 20 45 42.1 +0.3
SNAA *e*PKPab PKPab 20 45 50.0 +0.7

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*DJA **22** 20:27:12, 421S×13798E, h531km, MLv4.9/3*
*ISCJB **22** 20:27:57.1±1.0, 324S±008×13827E±009, h68km±16km, mb3.4/3, Error ellipse: s-maj=16.8km s-min=9.9km az=140.6*
*IDC **22** 20:27:59.7±1.7, 325S×138.19E, h72km±8km, mb3.4/4, mb1 3.8/6, mb1mx3.5/14, mbtmp3.6/6, Error ellipse: s-maj=61.9km s-min=16.8km az=68.0*
*NEIC **22** 20:27:59.5±2.5, 329S×13797E, h65km±28km, mb4.1/2,*

Error ellipse: s-maj=20.5km s-min=15.6km az=85.0
ISC 22 20:27:58.1±1.0,**324S**±008×**13829E**±009,**h59**km±16km,
n14,σ0§**80**/**14**,**mb3.5**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.52**	**73**	P	**Pn**	**20 28 36.0**	**-0.6**
BAKI	**Biak**	**2.98**	**313**	P	**Pn**	**20 28 43.5**	**+0.6**
BAKI				S	**Sn**	**20 29 17.7**	**+0.2**
PMG	**Port Moresby** 10nm,0.8s	**10.73**	**125**	*e*Pn	**Pn**	**20 30 33.8**	**+4.7**
KAKA	**Kakadu** 12nm,0.5s	**11.05**	**211**	*e*P	x	20 29 33.3	
KAKA				*e*S	x	20 31 30.1	
WRAB	**Tennant Creek** 16nm,0.8s	**17.03**	**193**	*e*Pn	**Pn**	**20 31 52.2**	**-0.1**
WB2	**Warramunga Arr**	**17.04**	**193**	*e*P	**Pn**	**20 31 51.6**	**-0.8**
WRA	**Warramunga Arr** 1.1nm,0.3s,baz=18,slow=12,SNR=33	**17.04**	**193**	P	**Pn**	**20 31 51.5**	**-0.9**
CTA	**Charters Tower** 0.2nm,0.3s,baz=339,slow=12,SNR=6.0	**18.46**	**156**	P	**Pn**	**20 32 10.8**	**+1.0**
CTAO	**Charters Tower** 8.7nm,1.1s	**18.46**	**156**	P	**Pn**	**20 32 10.9**	**+1.1**
FITZ	**Fitzroy Crossi** 7.2nm,1.1s	**19.28**	**219**	*e*P	**Pn**	**20 32 19.5**	**-0.1**
ASAR	**Alice Springs** 9.0nm,0.8s,baz=21,slow=11,SNR=87	**20.75**	**191**	P	**P**	**20 32 35.0**	**+1.1**
STKA	**Stephens Creek** 1.0nm,0.7s,mb3.6,baz=334,slow=10,SNR=4.3	**28.66**	**174**	P	**P**	**20 33 49.7**	**+0.5**
STKA				sP	sP	20 34 14.6	+3.7
CMAR	**Chiang Mai Arr** 1.4nm,0.6s,baz=333,slow=9.7,SNR=1.6	**44.34**	**301**	P	**P**	**20 36 01.1**	**-1.6**
CMAR				pP	pP	20 36 20.6	+2.7
MKAR	**Makanchi Array** 0.9nm,0.8s,baz=119,slow=6.5,SNR=6.2	**69.95**	**323**	P	**P**	**20 39 03.7**	**+0.6**
MKAR				pP	pP	20 39 22.8	+3.4
	0.4nm,0.5s,baz=114,slow=8.0,SNR=3.2						

*IDC **22** 20:34:04.9±1.6,9.15S×113.88E,h0km,mb3.7/4,mb1 3.9/5, mb1mx3.6/18,mbtmp3.8/5,ML3.6/1,Error ellipse: s-maj=51.5km s-min=23.0km az=52.0*
*ISCJB **22** 20:34:17.9±0.7,87S±0.1×11458E±006,h114km±6km, mb3.6/4,Error ellipse: s-maj=17.5km s-min=10.5km az=175.1*
*DJA **22** 20:34:19,887S×11453E,h76km,MLv3.8/5*
ISC 22 20:34:18.8±0.7,**87S**±0.1×**11458E**±006,**h106**km±6km,**n11**, σ0§**78**/13,**mb3.6**/4,**Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBBI	**Negara**	**0.35**	**7**	P	**Pn**	**20 34 33.6**	**-0.7**
NBBI				S	**Sn**	**20 34 46.1**	**+0.1**
IGBI	**Denpasar**	**0.57**	**100**	P	**Pn**	**20 34 34.4**	**-1.3**
DNP	**Denpasar**	**0.62**	**86**	P	**Pn**	**20 34 37.3**	**+1.2**
KRKI	**Karangkates**	**2.18**	**285**	P	**Pn**	**20 34 54.1**	**+0.2**
SJI	**Sawahan**	**2.95**	**289**	P	**Pn**	**20 35 04.0**	**0.0**
BMNI	**Bima**	**4.07**	**88**	P	**Pn**	**20 35 19.9**	**+0.8**
KAPI	**Kappang** 1.0nm,0.3s,baz=240,slow=12,SNR=12	**6.32**	**55**	Pn	**Pn**	**20 35 50.8**	**+1.3**
KAPI				Sn	**Sn**	**20 36 59.4**	**-0.9**
	baz=60,slow=20,SNR=2.0						
WRA	**Warramunga Arr** 1.6nm,0.6s,mb3.5,baz=295,slow=11,SNR=4.6	**22.13**	**122**	P	**P**	**20 39 04.9**	**-1.1**
ASAR	**Alice Springs** 1.8nm,0.5s,mb3.6,baz=304,slow=9.4,SNR=14	**23.73**	**131**	P	**P**	**20 39 21.6**	**+0.2**
STKA	**Stephens Creek** 0.6nm,0.3s,mb3.9,baz=316,slow=10.0,SNR=6.4	**34.06**	**136**	P	**P**	**20 40 53.4**	**+0.3**
MKAR	**Makanchi Array** 0.3nm,0.7s,mb3.5,baz=153,slow=4.2,SNR=3.4	**62.30**	**336**	P	**P**	**20 44 29.5**	**-0.2**

*MOS **22** 20:41:32.0±0.9,4932N×15682E,h148km,mb4.2/1,Error ellipse: s-maj=87.9km s-min=13.6km az=77.2*
*KRSC **22** 20:41:45.0±0.5,5046N×15698E,h111km±110km,ML4.0*
ISC 22 20:41:46.0±1.6,**504N**±01×**1568E**±03,**h96**km±27km,**n12**, σ0§**83**/19,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.55**	**308**	*e*PN	**Pn**	**20 42 01.2**	**-0.5**
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
MIPR	**Malaya Ipel'ka**	**1.93**	**359**	*i* P	**Pn**	**20 42 17.2**	**-0.3**
MIPR				*i* S	**Sn**	**20 42 41.2**	**-0.2**
RUS	**Russkaya**	**2.35**	**27**	*i* P	**Pn**	**20 42 23.3**	**+0.4**
RUS				*i* S	**Sn**	**20 42 52.1**	**+0.9**
PET	**Petropavlovsk**	**2.92**	**23**	*e*PN	**Pn**	**20 42 32.6**	**+2.1**
PET				pmax	pmax		
	comp=Z,12nm,0.2s						
PET	**Petropavlovsk**	**2.92**	**23**	P	**Pn**	**20 42 31.1**	**+0.6**
PET				*i* S	**Sn**	**20 43 05.2**	**+0.4**
AVH	**Avacha**	**3.16**	**22**	*i* P	**Pn**	**20 42 35.3**	**+1.6**
AVH				*e*S	**Sn**	**20 43 10.8**	**+0.3**
NLC	**Nalytchevo**	**3.24**	**28**	*e*P	**Pn**	**20 42 34.3**	**-0.5**
NLC				*i* S	**Sn**	**20 43 10.7**	**-1.8**
SPN	**Mys Shipunski**	**3.41**	**35**	P	**Pn**	**20 42 37.7**	**+0.6**
SPN				*i* S	**Sn**	**20 43 16.3**	**-0.2**
GNL	**Ganaly**	**3.43**	**12**	*i* P	**Pn**	**20 42 37.7**	**+0.4**
MKZ	**Mys Kozlova**	**5.18**	**34**	*e*P	**Pn**	**20 43 00.1**	**-0.9**
MKZ				*i* S	**Sn**	**20 43 54.9**	**-4.6**
KMNR	**Kamenistaya**	**5.80**	**20**	P	**Pn**	**20 43 09.0**	**-0.4**
KBTR	**Krutoberegovo**	**6.89**	**29**	P	**Pn**	**20 43 23.3**	**-0.9**

*IDC **22** 20:42:43.5±3.5,208S×10083E,h0km,mb3.6/6,mb1 3.8/6, mb1mx3.6/21,mbtmp3.6/6,MS2.8/2,Ms1 2.9/2, ms1mx2.6/29,Error ellipse: s-maj=164.3km s-min=20.7km az=55.0*
*ISCJB **22** 20:42:48.1±1.4,2.19S±0.10×1005E±0.1,h61km±12km, mb3.8/5,Error ellipse: s-maj=25.6km s-min=8.5km az=146.1*
*DJA **22** 20:42:48,2.15S×10050E,h20km,MLv4.2/6*
ISC 22 20:42:49.5±1.4,**217S**±009×**1005E**±01,**h51**km±12km,**n14**, σ0§**92**/15,**mb3.8**/5,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.25**	**358**	P	**Pn**	**20 43 08.8**	**-1.9**
PDSI				S	**Sn**	**20 43 25.8**	**-0.7**
PPI	**Padang Panjang**	**1.71**	**357**	P	**Pn**	**20 43 16.4**	**-0.5**
PPI				S	**Sn**	**20 43 38.7**	**+1.1**
KSI	**Kapahiang**	**2.56**	**125**	P	**Pn**	**20 43 29.9**	**+1.4**
RGRI	**Rengat**	**2.58**	**45**	P	**Pn**	**20 43 29.5**	**+0.7**
JMBI	**JAMBI**	**3.19**	**80**	P	**Pn**	**20 43 37.1**	**-0.1**
GSI	**Gunungsitoli**	**4.52**	**320**	P	**Pn**	**20 43 55.8**	**+0.3**
KLI	**Kotabumi**	**5.11**	**122**	P	**Pn**	**20 44 03.6**	**+0.1**
PSI	**Prapat** comp=Z,96nm,21.3s,baz=23,slow=45	**5.18**	**342**	LR	LR	20 46 33.3	
CMAR	**Chiang Mai Arr** 0.3nm,0.5s,baz=180,slow=7.8,SNR=4.9	**20.56**	**356**	P	**P**	**20 47 23.7**	**-0.3**
CMAR				LR	LR	20 55 23.1	
	comp=Z,24nm,18.1s,baz=185,slow=37						
WRA	**Warramunga Arr** 0.2nm,0.3s,mb3.4,baz=304,slow=10,SNR=5.1	**37.48**	**121**	P	**P**	**20 49 58.0**	**-0.4**
ASAR	**Alice Springs** 0.6nm,0.6s,mb3.5,baz=308,slow=7.8,SNR=7.0	**38.75**	**126**	P	**P**	**20 50 07.2**	**-1.9**
MKAR	**Makanchi Array** 0.6nm,0.6s,mb3.7,baz=159,slow=8.7,SNR=8.8	**51.33**	**344**	P	**P**	**20 51 49.5**	**+0.9**
KURK	**Kurchatov** 1.6nm,0.7s,mb4.1,baz=159,slow=6.9,SNR=3.1	**55.91**	**343**	P	**P**	**20 52 22.2**	**+0.2**
ZALV	**Zalesovo Beam** 0.7nm,0.3s,mb4.2,baz=165,slow=6.0,SNR=3.0	**57.43**	**349**	P	**P**	**20 52 33.7**	**+0.9**

*IDC **22** 20:53:18.7±2.2,242S×139.27E,h0km,mb3.6/5,mb1 3.8/6, mb1mx3.6/15,mbtmp3.6/6,ML4.0/1,Error ellipse: s-maj=85.8km s-min=21.4km az=78.0*
*ISCJB **22** 20:53:21.3±1.9,24S±0.1×1394E±04,h33km,mb3.6/5, Error ellipse: s-maj=63.7km s-min=14.5km az=172.0*
*NEIC **22** 20:53:23.7±1.5,244S×13928E,h35km,mb3.9/2,Error ellipse: s-maj=54.4km s-min=12.9km az=82.0*
ISC 22 20:53:23.7±1.9,**24S**±01×**1393E**±05,**h35**km,**n9**,σ0§**92**/8, **mb3.6**/5,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek** 4.3nm,0.6s	**18.05**	**195**	*e*Pn	**Pn**	**20 57 32.6**	**+0.8**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=17,slow=13,SNR=16	**18.06**	**195**	P	**Pn**	**20 57 30.9**	**-1.1**
ASAR	**Alice Springs** 1.2nm,0.4s,mb3.7,baz=27,slow=11,SNR=22	**21.74**	**193**	P	**P**	**20 58 13.5**	**+1.3**
STKA	**Stephens Creek** 2.1nm,0.8s,mb3.9,baz=319,slow=14,SNR=3.3	**29.36**	**176**	P	**P**	**20 59 22.4**	**-1.0**
CMAR	**Chiang Mai Arr** 0.3nm,0.6s,mb3.3,baz=107,slow=5.3,SNR=3.4	**44.81**	**299**	P	**P**	**21 01 33.8**	**-0.9**
MKAR	**Makanchi Array** 0.3nm,0.5s,mb3.5,baz=101,slow=7.5,SNR=6.2	**69.93**	**322**	P	**P**	**21 04 31.7**	**+0.3**
KURK	**Kurchatov** 0.4nm,0.6s,mb3.5,baz=109,slow=4.6,SNR=3.7	**73.83**	**325**	P	**P**	**21 04 55.5**	**+0.8**
KURK	**Kurchatov** 1.7nm,1.0s,mb3.9	**73.83**	**325**	*e*P	**P**	**21 04 55.0**	**+0.3**
TORD	**Torodi Ar. Bea** 0.3nm,0.8s,baz=43,slow=2.6,SNR=3.1	**136.74**	**287**	PKP	PKPdf	21 12 44.1	+0.6

*ISCJB **22** 21:07:54.1±0.2,4934N±001×671E±002,h0km,Error ellipse: s-maj=1.9km s-min=1.5km az=22.3*
*BGR **22** 21:07:56.7±0.4,4937N×687E,h1km,ML2.5/4,Error ellipse: s-maj=5.6km s-min=4.4km az=27.0*
*STR **22** 21:07:56.2±0.3,4938N×681E,h1km,Ml2.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **22** 21:07:56.5,4934N×684E,h0km*
*CSEM **22** 21:07:56.8±0.0,4938N×683E,h1km,ML3.1/29,Error ellipse: s-maj=0.8km s-min=0.6km az=127.0*
*NEIC **22** 21:07:57.0,4938N×681E,h1km,ML2.6(SZGRF), ML3.0(LDG),After LDG.*
*LDG **22** 21:07:57.0±0.0,4938N×681E,h1km,Ml3.0/31,Error ellipse: s-maj=0.9km s-min=0.8km az=165.0,Suspected Mining induced.*
*BNS **22** 21:07:58.0±0.7,4943N×679E,h1km±9km,ML2.3*
ISC 22 21:07:55.1±0.2,**49360N**±0010×**675E**±002,**h0**km,**n123**, σ1§**14**/250,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.40**	**30**	Pg	**Pg**	**21 08 03.7**	**+1.0**
RUP				Sg	**Sg**	**21 08 08.7**	**+0.8**
WLF	**Walferdange**	**0.49**	**308**	*e*Pg	**Pg**	**21 08 07.2**	**+2.6**
WLF				*e*Sg	**Sg**	**21 08 14.0**	**+2.9**
	SNR=3.1						
WLF	**Walferdange**	**0.49**	**308**	P	**Pg**	**21 08 07.3**	**+2.6**
WLF	**Walferdange**	**0.49**	**308**	Pg	**Pg**	**21 08 07.2**	**+2.6**
WLF				*e*Sg	**Sg**	**21 08 15.0**	**+4.0**
WLF	**Walferdange**	**0.49**	**308**	*e*Pg	**Pg**	**21 08 07.3**	**+2.7**
WLF				*e*Sg	**Sg**	**21 08 15.0**	**+4.0**
ABH	**Alteburg**	**0.74**	**44**	Pg	**Pg**	**21 08 09.5**	**+0.3**
ABH				Sg	**Sg**	**21 08 18.1**	**-0.7**
LANF	**Langenberg**	**0.79**	**118**	Pg	**Pg**	**21 08 09.8**	**-0.5**
LANF				Sg	**Sg**	**21 08 22.3**	**+1.8**
KTD	**Kalmit**	**0.87**	**92**	Pg	**Pg**	**21 08 12.9**	**+1.0**
KTD				Sg	**Sg**	**21 08 24.0**	**+0.8**
BGG	**Burgeitz**	**0.93**	**24**	*e*Pg	**Pg**	**21 08 13.8**	**+0.9**
HILG	**Hillesheim**	**0.93**	**357**	*e*Pg	**Pg**	**21 08 14.5**	**+1.5**
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pn	**Pn**	**21 08 16.3**	**-0.2**
CDF				*e*Sg	**Sg**	**21 08 29.1**	**+1.6**
	53nm,0.2s						
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pn	**Pn**	**21 08 16.3**	**-0.2**
CDF				*e*Sg	**Sg**	**21 08 29.1**	**+1.6**
	26nm,0.2s						
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pg	**Pg**	**21 08 15.2**	**+0.7**
CDF				*e*Pn	**Pn**	**21 08 16.3**	**-0.2**
CDF				*e*Sg	**Sg**	**21 08 29.1**	**+1.6**
RFYF	**Reffroy** baz=48	**1.11**	**229**	*e*Pn	**Pn**	**21 08 18.8**	**+0.8**
RFYF				*e*Sn	**Sn**	**21 08 33.4**	**-0.6**
	96nm,0.3s						
RFYF	**Reffroy**	**1.11**	**229**	*e*Pn	**Pn**	**21 08 18.8**	**+0.8**
RFYF				*e*Sn	**Sn**	**21 08 33.4**	**-0.6**
	48nm,0.3s						
ECH	**Echery**	**1.18**	**167**	Pg	**Pg**	**21 08 18.9**	**+1.2**
ECH				Sg	**Sg**	**21 08 35.1**	**+2.2**
ECH	**Echery**	**1.18**	**167**	Pg	**Pg**	**21 08 18.9**	**+1.2**
ECH				*e*Sg	**Sg**	**21 08 35.0**	**+2.1**
ECH	**Echery**	**1.18**	**167**	*e*Pg	**Pg**	**21 08 19.4**	**+1.8**
ECH				*e*Sg	**Sg**	**21 08 35.0**	**+2.1**
STB	**Steinbach**	**1.24**	**3**	*e*Pg	**Pg**	**21 08 19.8**	**+1.0**
STB				*e*Sg	**Sg**	**21 08 35.4**	**+0.5**
	70nm,0.5s						
KOE	**Koeppel**	**1.24**	**30**	*e*Pg	**Pg**	**21 08 19.7**	**+0.8**
THEF	**They Montfort**	**1.24**	**204**	Pg	**Pg**	**21 08 20.2**	**+1.3**
THEF				Sg	**Sg**	**21 08 37.5**	**+2.5**
KLL	**Kalltalsperre**	**1.32**	**348**	*e*Pg	**Pg**	**21 08 20.5**	**+0.1**
LIBD	**Limburg**	**1.34**	**155**	Pg	**Pg**	**21 08 21.7**	**+1.0**
LIBD				Sg	**Sg**	**21 08 39.4**	**+1.4**
MEM	**Membach**	**1.34**	**339**	P	**Pg**	**21 08 21.1**	**+0.3**
MEM	**Membach**	**1.34**	**339**	P	**Pg**	**21 08 21.0**	**+0.2**
DREG	**Dreilaegerbach**	**1.35**	**346**	*e*Pg	**Pg**	**21 08 21.1**	**+0.2**
TOD	**Tromm**	**1.36**	**79**	Pg	**Pg**	**21 08 20.1**	**-1.1**
TOD				Sg	**Sg**	**21 08 38.8**	**-0.1**
HAU	**Haudompre**	**1.38**	**191**	*e*Pn	**Pn**	**21 08 22.2**	**+0.6**
HAU				*e*Sn	**Sn**	**21 08 40.1**	**-0.5**
	71nm,0.3s						
HAU	**Haudompre**	**1.38**	**191**	*e*Pn	**Pn**	**21 08 22.2**	**+0.6**
HAU				*e*Sn	**Sn**	**21 08 40.1**	**-0.5**
	36nm,0.3s						
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pn	**Pn**	**21 08 20.8**	**-1.1**
TNS				*e*Pg	**Pg**	**21 08 21.9**	**0.0**
TNS				*e*Sg	**Sg**	**21 08 40.4**	**+0.4**
	SNR=3.6						
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pn	**Pn**	**21 08 20.8**	**-1.1**
TNS				*e*Sg	**Sg**	**21 08 41.3**	**+1.3**
MEZF	**Maizieres J'vi** baz=55	**1.41**	**233**	*e*Pn	**Pn**	**21 08 22.9**	**+0.9**
MEZF				*e*Sn	**Sn**	**21 08 41.4**	**+0.1**
	38nm,0.3s						
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pn	**Pn**	**21 08 22.9**	**+0.9**
MEZF				*e*Sn	**Sn**	**21 08 41.4**	**+0.1**
	19nm,0.3s						
BCLA	**Clavier**	**1.42**	**319**	P	**Pn**	**21 08 22.8**	**+0.7**
GIVF	**Givet**	**1.46**	**301**	*e*Pn	**Pn**	**21 08 23.5**	**+0.9**
GIVF				*e*Sn	**Sn**	**21 08 41.8**	**-0.6**
	52nm,0.2s						
GIVF	**Givet**	**1.46**	**301**	*e*Pn	**Pn**	**21 08 23.5**	**+0.9**
GIVF				*e*Sn	**Sn**	**21 08 41.8**	**-0.6**
	26nm,0.2s						
BFO	**Black Forest**	**1.47**	**134**	*e*Pn	**Pn**	**21 08 23.3**	**+0.5**
BFO				*e*Pg	**Pg**	**21 08 24.1**	**+0.9**
BFO				*e*Sg	**Sg**	**21 08 42.7**	**+0.5**
	SNR=6.2						
BFO	**Black Forest**	**1.47**	**134**	*e*Pn	**Pn**	**21 08 23.6**	**+0.8**
BFO				*e*Sg	**Sg**	**21 08 42.9**	**+0.7**
BFO				*e*Sn	**Sn**	**21 08 43.1**	**+0.4**
HGN	**Heimansgroeve** 7.5nm,0.1s	**1.50**	**340**	*e*Pn	**Pn**	**21 08 23.7**	**+0.4**
HGN	**Heimansgroeve** 16nm,0.1s	**1.50**	**340**	*e*Pg	**Pg**	**21 08 25.1**	**+1.2**
HGN				*e*Sg	**Sg**	**21 08 43.2**	**-0.2**
HGN	**Heimansgroeve** 16nm,0.1s	**1.50**	**340**	*e*Pg	**Pg**	**21 08 25.1**	**+1.2**
HGN				*e*Sg	**Sg**	**21 08 43.2**	**-0.1**
MOF	**Molkenrain**	**1.53**	**170**	Pg	**Pg**	**21 08 25.4**	**+0.9**
MOF				Sg	**Sg**	**21 08 45.4**	**+1.1**
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pn	**Pn**	**21 08 24.4**	**+0.5**
HINF				*e*Sn	**Sn**	**21 08 44.0**	**-0.6**
	120nm,0.3s						
HINF	**Hinteralfeld**	**1.55**	**177**	*e*Pn	**Pn**	**21 08 24.4**	**+0.5**
HINF				*e*Sn	**Sn**	**21 08 44.0**	**-0.6**
	60nm,0.3s						
DOU	**Dourbes**	**1.58**	**299**	P	**Pn**	**21 08 25.5**	**+1.1**
BEBN	**Eben Emael**	**1.60**	**335**	P	**Pn**	**21 08 24.4**	**-0.2**
BEBN	**Eben Emael**	**1.60**	**335**	P	**Pn**	**21 08 24.3**	**-0.3**
SFTF	**Sexfontaines** baz=45	**1.62**	**225**	*e*Pn	**Pn**	**21 08 25.7**	**+0.8**
SFTF				*e*Sn	**Sn**	**21 08 46.5**	**+0.1**
	42nm,0.5s						
SFTF	**Sexfontaines**	**1.62**	**225**	*e*Pn	**Pn**	**21 08 25.7**	**+0.8**
SFTF				*e*Sn	**Sn**	**21 08 46.5**	**+0.1**
	21nm,0.5s						
HOBG	**Hohbusch**	**1.67**	**13**	*e*Pg	**Pg**	**21 08 26.2**	**-0.9**
FELD	**Feldberg im Sc**	**1.70**	**150**	Pg	**Pg**	**21 08 28.0**	**+0.3**
FELD				Sg	**Sg**	**21 08 51.1**	**+1.3**
STU	**Stuttgart** SNR=4.3	**1.71**	**109**	*e*Sg	**Sg**	**21 08 46.8**	**-3.3**
BAIF	**Baives**	**1.79**	**294**	*e*Pn	**Pn**	**21 08 28.3**	**+1.0**
BAIF	**Baives**	**1.79**	**294**	*e*Pg	**Pg**	**21 08 31.1**	**+1.6**
BAIF				*e*Sn	**Sn**	**21 08 50.3**	**-0.4**
	42nm,0.4s						
BAIF	**Baives**	**1.79**	**294**	*e*Pg	**Pg**	**21 08 31.1**	**+1.6**
BAIF				*e*Sn	**Sn**	**21 08 50.3**	**-0.4**
	21nm,0.4s						
SPAK	**Spaichingen-Ko**	**1.84**	**132**	Pg	**Pg**	**21 08 30.8**	**+0.3**
SPAK				Sg	**Sg**	**21 08 56.5**	**+2.2**
SNF	**Seneffe**	**1.97**	**307**	P	**Pn**	**21 08 31.3**	**+1.6**
SNF	**Seneffe**	**1.97**	**307**	P	**Pn**	**21 08 31.2**	**+1.5**
BUG	**Bochum--Univer** SNR=2.5	**2.11**	**9**	*e*Sg	**Sg**	**21 09 02.4**	**-0.5**
UCC	**Uccle**	**2.11**	**314**	P	**Pn**	**21 08 37.8**	**+6.2**
UBBA	**Unterbreizbach** SNR=2.1	**2.55**	**54**	*e*Sg	**Sg**	**21 09 15.8**	**-1.3**
WTSB	**Winterswijk** 7.7nm,0.5s	**2.61**	**1**	*e*Pg	**Pg**	**21 08 46.6**	**+1.5**
WTSB				*i* Sg	**Sg**	**21 09 17.8**	**-1.1**
CABF	**La Chapelle**	**2.79**	**189**	*e*Pn	**Pn**	**21 08 41.4**	**+0.5**
CABF				*e*Sn	**Sn**	**21 09 13.8**	**-1.4**
CABF				*e*Sg	**Sg**	**21 09 25.6**	**+1.0**
	45nm,0.8s						
CABF	**La Chapelle**	**2.79**	**189**	*e*Pn	**Pn**	**21 08 41.4**	**+0.5**
CABF				*e*Sn	**Sn**	**21 09 13.8**	**-1.4**
CABF				*e*Sg	**Sg**	**21 09 25.6**	**+1.0**
	22nm,0.8s						
LOR	**Lormes** baz=46	**2.85**	**224**	*e*Pn	**Pn**	**21 08 41.8**	**0.0**
LOR				*e*Sn	**Sn**	**21 09 15.8**	**-0.9**
LOR				*e*Sg	**Sg**	**21 09 27.6**	**+1.0**
	25nm,0.6s						
LOR	**Lormes**	**2.85**	**224**	*e*Pn	**Pn**	**21 08 41.8**	**0.0**
LOR				*e*Sn	**Sn**	**21 09 15.8**	**-0.9**
LOR				*e*Sg	**Sg**	**21 09 27.6**	**+1.0**
	13nm,0.6s						
GRA1	**Grafenberg Arr** SNR=3.4	**2.93**	**82**	Pg	**Pg**	**21 08 50.7**	**-0.6**
GRA1				Sg	**Sg**	**21 09 29.0**	**-0.3**
GRF	**Grafenberg Arr**	**2.93**	**82**	*e*Pg	**Pg**	**21 08 50.7**	**-0.6**
GRF				*e*Sg	**Sg**	**21 09 29.0**	**-0.3**
	SNR=3.4						
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**21 08 46.0**	**-0.1**
SSF				*e*Sn	**Sn**	**21 09 23.3**	**-1.2**
SSF				*e*Sg	**Sg**	**21 09 37.3**	**+0.6**
	22nm,0.6s						
SSF	**Saint Saulge**	**3.16**	**225**	*e*Pn	**Pn**	**21 08 46.0**	**-0.1**
SSF				*e*Sn	**Sn**	**21 09 23.3**	**-1.2**
SSF				*e*Sg	**Sg**	**21 09 37.3**	**+0.6**
	11nm,0.6s						
SMF	**Signal de Mont**	**3.35**	**217**	*e*Pn	**Pn**	**21 08 48.2**	**-0.4**
SMF				*e*Sn	**Sn**	**21 09 27.4**	**-1.6**
SMF				*e*Sg	**Sg**	**21 09 43.0**	**+0.4**
	15nm,0.4s						
SMF	**Signal de Mont**	**3.35**	**217**	*e*Pn	**Pn**	**21 08 48.2**	**-0.4**
SMF				*e*Sn	**Sn**	**21 09 27.4**	**-1.6**
SMF				*e*Sg	**Sg**	**21 09 43.0**	**+0.4**
	7.4nm,0.4s						
TUE	**Stuetta**	**3.38**	**148**	*e*Pn	**Pn**	**21 08 51.3**	**+2.3**
TUE	**Stuetta**	**3.38**	**148**	*e*Pn	**Pn**	**21 08 51.3**	**+2.3**
CLZ	**Clausthal**	**3.39**	**42**	*e*Pn	**Pn**	**21 08 48.4**	**-0.8**
CLZ	**Clausthal**	**3.39**	**42**	Pn	**Pn**	**21 08 48.4**	**-0.8**
MOX	**Moxa**	**3.39**	**66**	*e*Pg	**Pg**	**21 08 58.1**	**-2.1**
MOX				*e*Sg	**Sg**	**21 09 42.0**	**-2.1**
	SNR=1.7						
MOX	**Moxa**	**3.39**	**66**	*e*PG	**Pg**	**21 08 58.2**	**-1.9**
MOX				*e*SG	**Sg**	**21 09 44.9**	**+0.9**
MOX	**Moxa**	**3.39**	**66**	*e*Pg	**Pg**	**21 08 58.2**	**-1.9**
MOX				Sg	**Sg**	**21 09 42.0**	**-2.0**
	SNR=1.7						
MOX	**Moxa**	**3.39**	**66**	*e*Pg	**Pg**	**21 08 58.2**	**-1.9**
MOX				*e*Sg	**Sg**	**21 09 44.9**	**+0.9**
AVF	**Avril sur Loir**	**3.44**	**223**	*e*Pn	**Pn**	**21 08 49.6**	**-0.3**
AVF				*e*Sn	**Sn**	**21 09 29.5**	**-1.7**
AVF				*e*Sg	**Sg**	**21 09 46.1**	**+0.7**
	26nm,0.9s						
AVF	**Avril sur Loir**	**3.44**	**223**	*e*Pn	**Pn**	**21 08 49.6**	**-0.3**
AVF				*e*Sn	**Sn**	**21 09 29.5**	**-1.7**
AVF				*e*Sg	**Sg**	**21 09 46.1**	**+0.7**
	13nm,0.9s						
HYF	**Humbligny**	**3.45**	**234**	*e*Pn	**Pn**	**21 08 49.5**	**-0.6**
HYF				*e*Sg	**Sg**	**21 09 46.4**	**+0.5**
WERD	**Werda** SNR=2.1	**3.75**	**71**	*e*Sg	**Sg**	**21 09 51.3**	**-4.3**
NKC	**Novy Kostel**	**3.79**	**75**	*e*PG	**Pg**	**21 09 06.5**	**-1.3**
NKC				*e*SG	**Sg**	**21 09 54.6**	**-2.3**
	comp=Z,13nm,0.6s						
BGF	**Bois d'Agland**	**3.84**	**225**	*e*Pn	**Pn**	**21 08 55.4**	**0.0**
BGF				*e*Sn	**Sn**	**21 09 39.3**	**-1.9**
BGF				*e*Sg	**Sg**	**21 09 58.7**	**+0.3**
	comp=Z,29nm,0.4s						
BGF	**Bois d'Agland**	**3.84**	**225**	*e*Pn	**Pn**	**21 08 55.4**	**0.0**
BGF				*e*Sn	**Sn**	**21 09 39.3**	**-1.9**
BGF				*e*Sg	**Sg**	**21 09 58.7**	**+0.3**
	comp=Z,15nm,0.4s						
LPL	**La Plagne**	**3.85**	**180**	*e*Pn	**Pn**	**21 08 55.9**	**+0.4**
LPL				*e*Sn	**Sn**	**21 09 39.2**	**-2.2**
LPL				*e*Sg	**Sg**	**21 09 58.5**	**-0.1**
	comp=Z,1.0nm,0.3s						
LPL	**La Plagne**	**3.85**	**180**	*e*Pn	**Pn**	**21 08 55.9**	**+0.4**
LPL				*e*Sn	**

GRR				*e*Sn	**Sn**	**21 10 09.6**	**-3.0**
	comp=Z,4.8nm,0.3s						
MFF	**Saint Martin d**	**5.39**	**242**	*e*Pn	**Pn**	**21 09 16.7**	**0.0**
MFF				*e*Sn	**Sn**	**21 10 16.2**	**-3.2**
	comp=Z,3.3nm,0.5s						
MFF	**Saint Martin d**	**5.39**	**242**	*e*Pn	**Pn**	**21 09 16.7**	**0.0**
MFF				*e*Sn	**Sn**	**21 10 16.2**	**-3.2**
	comp=Z,1.6nm,0.5s						
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*Pn	**Pn**	**21 09 17.0**	**+0.2**
RJF				*e*Sn	**Sn**	**21 10 16.4**	**-3.2**
	comp=Z,1.3nm,0.4s						
RJF	**Les Rejaudoux**	**5.40**	**223**	*e*Pn	**Pn**	**21 09 17.0**	**+0.2**
RJF				*e*Sn	**Sn**	**21 10 16.4**	**-3.2**
	comp=Z,0.6nm,0.4s						
CAF	**Calviac**	**5.47**	**218**	*e*Pn	**Pn**	**21 09 17.3**	**-0.5**
CAF				*e*Sn	**Sn**	**21 10 18.3**	**-3.0**
	comp=Z,2.2nm,0.4s						
CAF	**Calviac**	**5.47**	**218**	*e*Pn	**Pn**	**21 09 17.3**	**-0.5**
CAF				*e*Sn	**Sn**	**21 10 18.3**	**-3.0**
	comp=Z,1.1nm,0.4s						
LASF	**Ste Croix**	**5.65**	**202**	*e*Pn	**Pn**	**21 09 20.3**	**0.0**
LASF				*e*Sn	**Sn**	**21 10 22.3**	**-3.5**
	comp=Z,1.9nm,0.6s						
LASF	**Ste Croix**	**5.65**	**202**	*e*Pn	**Pn**	**21 09 20.3**	**0.0**
LASF				*e*Sn	**Sn**	**21 10 22.3**	**-3.5**
	comp=Z,0.9nm,0.6s						
SGMF	**Saint Gilles**	**6.25**	**263**	*e*Pn	**Pn**	**21 09 28.4**	**-0.1**
SGMF				*e*Sn	**Sn**	**21 10 36.4**	**-4.1**
	comp=Z,2.6nm,0.4s						
SGMF	**Saint Gilles**	**6.25**	**263**	*e*Pn	**Pn**	**21 09 28.4**	**-0.1**
SGMF				*e*Sn	**Sn**	**21 10 36.4**	**-4.1**
	comp=Z,1.3nm,0.4s						
ROSF	**Rostrenen**	**6.70**	**265**	*e*Pn	**Pn**	**21 09 34.6**	**0.0**
ROSF				*e*Sn	**Sn**	**21 10 47.4**	**-4.1**
	comp=Z,2.3nm,0.4s						
ROSF	**Rostrenen**	**6.70**	**265**	*e*Pn	**Pn**	**21 09 34.6**	**0.0**
ROSF				*e*Sn	**Sn**	**21 10 47.4**	**-4.1**
	comp=Z,1.1nm,0.4s						
QUIF	**Quistinic**	**6.73**	**261**	*e*Pn	**Pn**	**21 09 35.2**	**+0.1**
QUIF				*e*Sn	**Sn**	**21 10 47.3**	**-5.1**
	comp=Z,3.6nm,0.4s						
QUIF	**Quistinic**	**6.73**	**261**	*e*Pn	**Pn**	**21 09 35.2**	**+0.1**
QUIF				*e*Sn	**Sn**	**21 10 47.3**	**-5.1**
	comp=Z,1.8nm,0.4s						

IDC 22 21:15:19.3±2.9, 579S×13071E, h0km, mb3.7/1, mb1 3.7/3, mb1mx3.4/14, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=203.2km s-min=31.2km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.51**	**166**	Pn	Pn	21 18 46.6	+0.6
	0.3nm,0.3s,baz=348,slow=11,SNR=8.8						
WRA				Sn	Sn	21 21 12.0	-16
	0.3nm,0.3s,baz=339,slow=21,SNR=4.6						
ASAR	**Alice Springs**	**18.04**	**171**	P	Pn	21 19 31.3	-0.3
	0.1nm,0.3s,baz=354,slow=9.4,SNR=15						
MKAR	**Makanchi Array**	**67.61**	**326**	P	P	21 26 18.0	+0.1
	0.4nm,0.6s,baz=117,slow=8.0,SNR=6.1						

*ISCJB **22** 21:22:11.0±0.3, 4591N±002×1080E±002, h10km, Error ellipse: s-maj=2.8km s-min=2.0km az=162.8*
*LDG **22** 21:22:12.9±0.2, 4593N×1084E, h10km, Ml2.2/14, Error ellipse: s-maj=3.5km s-min=1.8km az=105.0*
*ROM **22** 21:22:12.5±0.2, 4592N×1085E, h8km±2km, Md2.4/12, Ml1.9/8, Error ellipse: s-maj=2.4km s-min=2.3km az=148.0*
*ZUR **22** 21:22:12.9, 4592N×1084E, h10km, ML1.8/2*
*VIE **22** 21:22:13.7±0.4, 4600N×1090E, h8km, mb1.6/6, ML2.5/11, Error ellipse: s-maj=2.6km s-min=1.4km az=17.0 20 km WSW of Trento*

ISC 22 21:22:12.2±0.3, 4591N±002×1080E±002, h10km, n52, σ1℗23/83, 12C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAGA	**Magasa**	**0.18**	**223**	Pg	**Pg**	**21 22 17.6**	**+1.6**
MAGA				Sg	**Sg**	**21 22 21.0**	**+2.4**
MABI	**Malga Bissina**	**0.25**	**306**	Pg	**Pg**	**21 22 18.6**	**+1.3**
MABI				Sg	**Sg**	**21 22 22.6**	**+1.9**
	115nm,0.1s						
SALO	**Salr**	**0.35**	**214**	Pg	**Pg**	**21 22 20.4**	**+1.4**
SALO				Sg	**Sg**	**21 22 26.4**	**+2.7**
	70nm,0.3s						
CTI	**Castel Tesino**	**0.61**	**76**	Pg	**Pg**	**21 22 24.0**	**+0.1**
CTI				Sg	**Sg**	**21 22 31.5**	**-0.4**
	49nm,0.3s						
APPI	**Appiano**	**0.64**	**27**	Pg	**Pg**	**21 22 25.2**	**+0.6**
APPI				Sg	**Sg**	**21 22 33.3**	**+0.2**
	109nm,0.4s						
BRMO	**Bormio**	**0.64**	**332**	Pg	**Pg**	**21 22 25.6**	**+1.0**
BRMO				Sg	**Sg**	**21 22 34.2**	**+1.1**
	25nm,0.1s						
CGRP	**Cima Grappa**	**0.70**	**92**	⇓*i*Pg	**Pg**	**21 22 26.1**	**+0.5**
CGRP				*i* Sg	**Sg**	**21 22 34.3**	**-0.4**
BERNI	**Berninapass**	**0.74**	**313**	⇓*i*Pg	**Pg**	**21 22 27.5**	**+1.0**
	62nm,0.2s						
BERNI	**Berninapass**	**0.74**	**313**	Pg	**Pg**	**21 22 27.6**	**+1.1**
MDI	**Monti di Nese**	**0.78**	**261**	Pg	**Pg**	**21 22 28.5**	**+1.4**
	23nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.81**	**332**	*e*Pg	**Pg**	**21 22 28.5**	**+0.8**
	45nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.81**	**332**	Pg	**Pg**	**21 22 28.6**	**+0.9**
TEOL	**Teolo**	**0.82**	**132**	⇓*i*Pg	**Pg**	**21 22 28.3**	**+0.4**
TEOL				*i* Sg	**Sg**	**21 22 39.9**	**+1.4**
VARN	**Col Varnada, M**	**0.91**	**84**	⇑*i*Pg	**Pg**	**21 22 29.5**	**-0.2**
VARN				*i* Sg	**Sg**	**21 22 41.0**	**-0.5**
DAVOX	**Davos/Dischmat**	**1.08**	**324**	⇓*i*Pg	**Pg**	**21 22 33.6**	**+0.6**
	37nm,0.3s						
VDL	**Val di Lei**	**1.10**	**302**	*e*Pg	**Pg**	**21 22 33.8**	**+0.4**
	49nm,0.7s						
FETA	**Feichten**	**1.12**	**357**	⇑*i*Pg	**Pg**	**21 22 34.2**	**+0.6**
FETA				⇓*i*Sg	**Sg**	**21 22 48.1**	**-0.1**
	5.2nm,0.2s						
CAE	**Caneva**	**1.14**	**84**	*e*Pg	**Pg**	**21 22 35.2**	**+1.1**
CAE				*e*Sg	**Sg**	**21 22 49.2**	**+0.2**
TUE	**Stuetta**	**1.16**	**300**	Pg	**Pg**	**21 22 34.9**	**+0.5**
TUE				Sg	**Sg**	**21 22 50.2**	**+0.7**
	24nm,0.3s						
MUGIO	**Muggio**	**1.23**	**271**	*e*Pn	**Pn**	**21 22 36.3**	**+0.9**
	71nm,0.2s						
SEST	**Monte Rota**	**1.29**	**49**	Pg	**Pg**	**21 22 37.1**	**+0.1**
	31nm,0.8s						
SCE	**Schlegeis**	**1.29**	**29**	⇑*i*Sg	**Sg**	**21 22 53.4**	**-0.4**
SCE				⇑*i*Pg	**Pg**	**21 22 36.9**	**-0.1**
VAI	**Varese**	**1.42**	**269**	Pg	**Pg**	**21 22 40.1**	**+0.7**
	9.0nm,0.2s						
ABTA	**Abfaltersbach**	**1.45**	**54**	⇑*i*Pg	**Pg**	**21 22 39.6**	**-0.4**
ABTA				⇓*i*Sg	**Sg**	**21 22 57.9**	**-0.9**
	1.8nm,0.1s						
MOTA	**Moosalm**	**1.45**	**8**	⇑*i*Pg	**Pg**	**21 22 39.4**	**-0.6**
MOTA				⇑*i*Sg	**Sg**	**21 22 58.5**	**-0.4**
	1.7nm,0.1s						
WTTA	**Wattenberg**	**1.47**	**23**	⇓*i*Pg	**Pg**	**21 22 40.2**	**-0.2**
WTTA				⇓*i*Sg	**Sg**	**21 22 58.9**	**-0.7**
	15nm,0.3s						
DAVA	**Damuels**	**1.52**	**336**	⇑*i*Pg	**Pg**	**21 22 41.7**	**+0.4**
DAVA				⇓*i*Sg	**Sg**	**21 23 02.1**	**+1.1**
	4.0nm,0.3s						
WATA	**Walderalm**	**1.52**	**20**	⇑*i*Pg	**Pg**	**21 22 41.2**	**-0.2**
WATA				⇑*i*Sg	**Sg**	**21 23 00.7**	**-0.5**
	4.6nm,0.1s						
KBA	**Koelnbreinsper**	**2.11**	**55**	⇑*i*Pg	**Pg**	**21 22 52.0**	**-0.6**
KBA				⇑*i*Sg	**Sg**	**21 23 19.1**	**-0.8**
	3.0nm,0.3s						
LPG	**La Plagne**	**2.87**	**263**	*e*Pn	**Pn**	**21 22 57.8**	**-0.1**
LPG	**La Plagne**	**2.87**	**263**	*e*P	**Pn**	**21 23 00.3**	**+2.4**
LPG				*e*Sn	**Sn**	**21 23 30.6**	**-1.9**
	1.7nm,0.6s						
LPL	**La Plagne**	**2.88**	**264**	*e*Pn	**Pn**	**21 22 58.0**	**0.0**
LPL				*e*Sn	**Sn**	**21 23 30.4**	**-2.3**
	1.3nm,0.3s						
MBDF	**Montbardon**	**3.08**	**249**	*e*Pn	**Pn**	**21 23 00.3**	**-0.5**
MBDF				*e*Sn	**Sn**	**21 23 35.1**	**-2.6**
	2.6nm,0.6s						
SBF	**Sospel**	**3.15**	**231**	*e*Pn	**Pn**	**21 23 00.6**	**-1.1**
SBF				*e*Sn	**Sn**	**21 23 36.8**	**-2.5**
	2.8nm,0.3s						
HINF	**Hinteralfeld**	**3.32**	**307**	*e*Pn	**Pn**	**21 23 03.2**	**-0.9**
HINF	**Hinteralfeld**	**3.32**	**307**	*e*P	**Pn**	**21 23 06.9**	**+2.8**
HINF				*e*Sn	**Sn**	**21 23 40.2**	**-3.3**
	2.5nm,0.3s						
CABF	**La Chapelle**	**3.35**	**284**	*e*Pn	**Pn**	**21 23 03.8**	**-0.7**
CABF				*e*Sn	**Sn**	**21 23 41.2**	**-3.0**
	1.1nm,0.5s						
CDF	**Champ du Feu**	**3.48**	**317**	*e*Pn	**Pn**	**21 23 05.2**	**-1.0**
CDF	**Champ du Feu**	**3.48**	**317**	*e*P	**Pn**	**21 23 08.5**	**+2.3**
CDF				*e*Sn	**Sn**	**21 23 43.3**	**-4.1**
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.61**	**256**	*e*P	**Pn**	**21 23 10.6**	**+2.6**
HAU	**Haudompre**	**3.70**	**306**	*e*P	**Pn**	**21 23 11.6**	**+2.2**
HAU				*e*Sn	**Sn**	**21 23 49.5**	**-3.5**
	2.4nm,0.4s						
FRF	**La Foret Royal**	**3.78**	**233**	*e*Sn	**Sn**	**21 23 52.5**	**-2.4**
	1.7nm,0.4s						
LMR	**La Mourre**	**4.00**	**232**	*e*Sn	**Sn**	**21 23 58.2**	**-2.2**
	1.7nm,0.4s						
SMRF	**Simiane la Rot**	**4.18**	**244**	*e*P	**Pn**	**21 23 18.5**	**+2.5**
SMRF				*e*Sn	**Sn**	**21 24 01.6**	**-3.3**
	1.0nm,0.5s						
VIVF	**Saint-Julien-l**	**4.45**	**259**	*e*Pn	**Pn**	**21 23 18.6**	**-1.0**
VIVF				*e*Sn	**Sn**	**21 24 07.6**	**-3.7**
	0.4nm,0.3s						
SMF	**Signal de Mont**	**4.88**	**281**	*e*Pn	**Pn**	**21 23 24.8**	**-0.8**
SMF				*e*Sn	**Sn**	**21 24 17.9**	**-4.2**
	2.6nm,0.5s						
LOR	**Lormes**	**4.98**	**288**	*e*Pn	**Pn**	**21 23 25.8**	**-1.1**
LOR				*e*Sn	**Sn**	**21 24 20.3**	**-4.1**
	1.6nm,0.4s						
SSF	**Saint Saulge**	**5.17**	**286**	*e*Pn	**Pn**	**21 23 28.4**	**-1.1**
AVF	**Avril sur Loir**	**5.24**	**282**	*e*Pn	**Pn**	**21 23 29.5**	**-0.9**
BGF	**Bois d'Agland**	**5.56**	**280**	*e*Pn	**Pn**	**21 23 34.7**	**-0.2**
HYF	**Humbligny**	**5.79**	**287**	*e*Pn	**Pn**	**21 23 37.3**	**-0.7**
BAIF	**Baives**	**6.07**	**316**	*e*Pn	**Pn**	**21 23 40.4**	**-1.5**

*NEIC **22** 21:52:27.8, 1831N×6855W, h111km, MD3.5(RSPR), After RSPR.*

RSPR 22 21:52:27.8, 1831N×6855W, h111km±2km, MD3.5/9, MD3.5/9, 8C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.38**	**83**	⇑*e*P	Pn	21 52 53.3	0.0
AGPR	**Aguadilla, PR**	**1.38**	**83**	*e*S	Sn	21 53 12.4	-0.2
AGPR	**Aguadilla, PR**	**1.38**	**83**	*e*Pn	Pn	21 52 53.8	+0.6
AGPR				*e*Sn	Sn	21 53 15.5	+2.9
LSP	**Las Mesas**	**1.40**	**95**	⇑*e*P	Pn	21 52 53.3	-0.2
LSP				*e*S	Sn	21 53 13.3	+0.2
CRPR	**Cabo Rojo, PR**	**1.41**	**102**	⇑*e*P	Pn	21 52 52.9	-0.7
CRPR	**Cabo Rojo, PR**	**1.41**	**102**	*e*S	Sn	21 53 12.9	-0.2
CRPR	**Cabo Rojo, PR**	**1.41**	**102**	*e*Pn	Pn	21 52 52.7	-0.9
CRPR				*e*Sn	Sn	21 53 13.2	+0.1
LRS	**Lares**	**1.62**	**90**	⇓*e*P	Pn	21 52 55.6	-0.5
LRS				*e*S	Sn	21 53 17.3	-0.4
CELP	**Cerrillos**	**1.89**	**97**	⇑*e*P	Pn	21 52 59.5	0.0
CELP				*e*S	Sn	21 53 24.1	+0.5
SJG	**San Juan**	**2.29**	**94**	⇑*e*P	Pn	21 53 04.5	-0.1
SJG				*e*S	Sn	21 53 32.7	-0.1
CPD	**Cerro la Pandu**	**2.52**	**96**	⇑*e*P	Pn	21 53 07.0	-0.6
CPD				*e*S	Sn	21 53 39.3	+1.1
CBYP	**Canovanas**	**2.56**	**90**	⇑*e*P	Pn	21 53 08.1	0.0
CBYP				*e*S	Sn	21 53 39.8	+0.7
HUMP	**Col San Antoni**	**2.58**	**93**	*e*S	Sn	21 53 39.8	+0.4
HUMP	**Col San Antoni**	**2.58**	**93**	⇓*e*P	Pn	21 53 08.4	+0.1
MTP	**Monte Pirata**	**2.86**	**94**	⇑*e*P	Pn	21 53 11.7	-0.3
MTP	**Monte Pirata**	**2.86**	**94**	*e*S	Sn	21 53 46.2	+0.2
MTP	**Monte Pirata**	**2.86**	**94**	*e*Pn	Sn	21 53 11.4	-0.6
MTP				*e*Sn	Sn	21 53 46.7	+0.6

*ISK **22** 22:04:34.9, 3792N×3093E, h5km, MD3.5*
*DDA **22** 22:04:35.7, 3796N×3096E, h21km±3km, Md3.3*
*CSEM **22** 22:04:35.3±0.1, 3791N×3093E, h2km, MD3.5, Error ellipse: s-maj=1.5km s-min=1.4km az=93.0*
*ISCJB **22** 22:04:36.5±0.4, 3789N±003×3094E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.7km az=158.6*

ISC 22 22:04:36.2±0.3, 3791N±003×3094E±003, h1km±5km, n34, σ1℗04/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.35**	**259**	*e*PG	**Pg**	**22 04 42.1**	**-0.8**
ISP				*e*SG	**Sg**	**22 04 48.2**	**+0.7**
BCK	**Bucak**	**0.53**	**212**	*e*PG	**Pg**	**22 04 56.1**	**-0.3**
BOLV	**Bolvadin**	**0.81**	**0**	*i* P	**Pg**	**22 04 50.7**	**-0.9**
BOLV				*i* S	**Sg**	**22 05 02.5**	**+0.4**
ANTB	**Antalya**	**1.04**	**193**	*e*PG	**Pg**	**22 04 56.1**	**+0.1**
KDHN	**Kadinhani**	**1.11**	**56**	*i* P	**Pg**	**22 04 56.3**	**-1.1**
KDHN				*i* S	**Sg**	**22 05 13.7**	**+2.0**
KONT	**Konya--Tatoy**	**1.12**	**88**	*e*PN	**Pn**	**22 04 57.4**	**-1.6**
LADK	**Ladik-KONYA**	**1.16**	**75**	*e*PN	**Pn**	**22 04 58.1**	**-1.5**
KHL	**Karahalli**	**1.19**	**291**	*e*PN	**Pn**	**22 04 58.7**	**-1.3**
KIZT	**Kizilcal**	**1.21**	**37**	*e*PN	**Pn**	**22 04 58.6**	**-1.7**
KHAL	**Karahalli**	**1.23**	**292**	*i* P	**Pg**	**22 04 57.6**	**-2.3**
KHAL				*i* S	**Sg**	**22 05 17.9**	**+2.1**
GOLH	**Golhisar**	**1.29**	**239**	*i* P	**Pg**	**22 05 01.1**	**+0.2**
GOLH				*i* S	**Sg**	**22 05 21.4**	**+3.8**
ALT	**Altintas**	**1.31**	**330**	*e*PN	**Pn**	**22 05 00.2**	**-1.5**
DENT	**Denizli**	**1.52**	**265**	*e*PN	**Pn**	**22 05 04.3**	**-0.2**
DENT	**Denizli**	**1.52**	**265**	*e*Pn	**Pn**	**22 05 04.3**	**-0.3**
ESKT	**Eskisehir**	**1.61**	**357**	*i* P	**Pn**	**22 05 04.8**	**-0.9**
ESKT				*i* S	**Sn**	**22 05 26.9**	**-0.3**
ESKT	**Eskisehir**	**1.61**	**357**	*e*Pn	**Pn**	**22 05 04.8**	**-0.9**
SEYT	**Eskypehyr**	**1.61**	**357**	*i* P	**Pn**	**22 05 04.8**	**-0.9**
SEYT				*i* S	**Sn**	**22 05 26.9**	**-0.2**
GDZ	**Gediz**	**1.64**	**316**	*i* P	**Pn**	**22 05 05.2**	**-1.0**
GDZ				*i* S	**Sn**	**22 05 29.2**	**+1.2**
GDZ	**Gediz**	**1.64**	**316**	*i* P	**Pn**	**22 05 05.2**	**-1.0**
GDZ				*i* S	**Sn**	**22 05 29.2**	**+1.2**
KULA	**Kula-Manisa**	**1.90**	**289**	*e*PN	**Pn**	**22 05 09.7**	**-0.1**
BORA	**Eskisehir**	**2.00**	**349**	*i* P	**Pn**	**22 05 10.3**	**-0.9**
BORA				*i* S	**Sn**	**22 05 36.4**	**-0.4**
YER	**Yerkesik**	**2.25**	**251**	*e*PN	**Pn**	**22 05 14.8**	**+0.2**
CAVI	**Cavuskoy**	**2.44**	**340**	*e*PN	**Pn**	**22 05 17.8**	**+0.6**
GULT	**Gulveren**	**2.54**	**353**	*e*PN	**Pn**	**22 05 19.1**	**+0.5**
MDU	**Mudurnu**	**2.56**	**5**	*e*PN	**Pn**	**22 05 19.5**	**+0.7**
KAMT	**Kaman**	**2.61**	**55**	*e*PN	**Pn**	**22 05 20.3**	**+0.7**
ADVT	**Abdulvahap**	**2.69**	**340**	*e*PN	**Pn**	**22 05 21.2**	**+0.6**
IKL	**Isikli**	**2.76**	**126**	*e*PN	**Pn**	**22 05 22.3**	**+0.7**
GEMT	**Gemlik**	**2.87**	**332**	*e*PN	**Pn**	**22 05 23.7**	**+0.6**
YLV	**Yalova**	**2.92**	**336**	*e*PN	**Pn**	**22 05 24.4**	**+0.6**
MERS	**Mersin**	**3.04**	**109**	*e*PN	**Pn**	**22 05 26.4**	**+1.0**
ARMT	**Armutlu**	**3.10**	**329**	*e*PN	**Pn**	**22 05 27.1**	**+0.8**
KARA	**Karaisali**	**3.33**	**100**	*e*PN	**Pn**	**22 05 30.6**	**+1.2**
CORM	**Corum**	**3.66**	**51**	*e*PN	**Pn**	**22 05 35.1**	**+1.2**

*ISCJB **22** 22:23:41.5±0.5, 5148N±003×16.10E±003, h0km, Error ellipse: s-maj=3.8km s-min=2.5km az=16.0*
*IPEC **22** 22:23:41.3±0.2, 5164N×1620E, h0km, ML2.0/2, Error ellipse: s-maj=1.5km s-min=1.5km az=175.0*
*PRU **22** 22:23:43.8, 5150N×16.11E, h0km*
*WAR **22** 22:23:43.6, 5155N×1612E, Mw2.6*
*CSEM **22** 22:23:43.3±0.1, 5152N×1609E, h0km, ML3.3/11, Error ellipse: s-maj=2.6km s-min=1.6km az=10.0*
*NEIC **22** 22:23:43.0±0.6, 5151N×1612E, h5km, ML2.7(SZGRF), Error ellipse: s-maj=6.7km s-min=4.3km az=30.0*
*VIE **22** 22:23:45.5±0.4, 5136N×1592E, h0km, mb2.2/3, ML2.7/3, Error ellipse: s-maj=3.7km s-min=2.6km az=94.0 81 km WNW of Wroclaw Suspected Mining induced.*

ISC 22 22:23:42.5±0.5, 5154N±003×1611E±003, h0km, n36, σ0℗86/72, 3C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**22 23 56.6**	**+0.6**
KSP				*e*Sg	**Sg**	**22 24 06.2**	**+1.1**
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**22 23 56.5**	**+0.5**
KSP				*e*Sg	**Sg**	**22 24 06.4**	**+1.3**
KSP	**Ksiaz**	**0.70**	**171**	⇓*i*Pg	**Pg**	**22 23 56.6**	**+0.6**
KSP				*e*Sg	**Sg**	**22 24 06.4**	**+1.3**
UPC	**Upice**	**1.03**	**184**	*e*PG	**Pg**	**22 24 02.7**	**+0.4**
UPC				*e*SG	**Sg**	**22 24 16.3**	**+0.6**
	comp=Z,32nm,0.2s						
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**22 24 05.4**	**0.0**
DPC				*e*SG	**Sg**	**22 24 21.3**	**+0.4**
	comp=Z,25nm,0.2s						
PVCC	**Panska Ves**	**1.40**	**225**	*e*PG	**Pg**	**22 24 09.1**	**-0.3**
PVCC				*e*SG	**Sg**	**22 24 28.1**	**+0.5**
	comp=Z,111nm,0.2s						
BRG	**Berggiesshubel**	**1.52**	**245**	PN	**Pn**	**22 24 10.8**	**-0.1**
BRG				PG	**Pg**	**22 24 11.5**	**-0.1**
BRG				SG	**Sg**	**22 24 32.2**	**+0.9**
	comp=Z,72nm,0.3s						
RUE	**Ruedersdorf**	**1.72**	**304**	*e*Pn	**Pn**	**22 24 16.0**	**+2.3**
PRU	**Pruhonice**	**1.84**	**213**	*e*PG	**Pg**	**22 24 17.0**	**-0.8**
PRU				*e*SG	**Sg**	**22 24 41.6**	**-0.1**
	comp=Z,20nm,0.3s						
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**22 24 16.0**	**-1.0**
CLL				*e*Pg	**Pg**	**22 24 20.0**	**-0.1**
CLL				*i* x	x	22 24 23.1	
CLL				*i* Sg	**Sg**	**22 24 45.2**	**-0.3**
	comp=Z,12nm,0.4s						
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**22 24 16.0**	**-1.0**
CLL				*e*Pg	**Pg**	**22 24 20.0**	**-0.1**
CLL				*i* Sg	**Sg**	**22 24 45.2**	**-0.3**
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*Pn	**Pn**	**22 24 18.9**	**-0.5**
OKC	**Ostrava-Krasne**	**2.14**	**142**	Pg	**Pg**	**22 24 23.0**	**-0.5**
OKC				*e*Sg	**Sg**	**22 24 50.1**	**-1.0**
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	**Pg**	**22 24 23.0**	**-0.5**
OKC				*e*SG	**Sg**	**22 24 49.4**	**-1.7**
	comp=Z,17nm,0.3s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**22 24 21.1**	**+0.1**
VRAC				*e*Sg	**Sg**	**22 24 54.5**	**-0.3**
	comp=Z,10nm,0.2s						
TREC	**Trest**	**2.28**	**190**	*e*PN	**Pn**	**22 24 22.4**	**+1.0**
TREC				*e*PG	**Pg**	**22 24 25.3**	**-0.9**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn	**Pn**	**22 24 24.8**	**+0.6**
KRUC				*e*Sg	**Sg**	**22 25 01.8**	**-0.5**
	comp=Z,4.5nm,0.2s						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**22 24 27.2**	**+0.6**
NKC				*e*PG	**Pg**	**22 24 32.8**	**-0.7**
NKC				*e*SG	**Sg**	**22 25 08.4**	**+0.4**
	comp=Z,30nm,0.3s						
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**22 24 33.9**	**0.0**
OJC				*e*Sg	**Sg**	**22 25 09.6**	**+1.0**
OJC	**Ojcow**	**2.68**	**118**	*e*Pn	**Pn**	**22 24 26.0**	**-0.9**
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**22 24 33.9**	**0.0**
OJC				*e*Sg	**Sg**	**22 25 09.6**	**+1.0**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**22 24 29.5**	**-0.5**
KHC				*e*PG	**Pg**	**22 24 35.7**	**-2.5**
KHC				*ex*	x	22 25 05.0	
KHC				*e*SG	**Sg**	**22 25 14.3**	**-1.5**
	comp=Z,8.9nm,0.3s						
MOX	**Moxa**	**2.97**	**254**	*e*Pg	**Pg**	**22 24 38.9**	**-0.6**
MOX				*e*Sg	**Sg**	**22 25 19.4**	**+1.4**
MOX				*e*SG	**Sg**	**22 25 19.4**	**+1.4**
MOX	**Moxa**	**2.97**	**254**	*e*PG	**Pg**	**22 24 38.9**	**-0.6**
GEC2	**GERESS Array S**	**3.11**	**211**	*e*Pn	**Pn**	**22 24 33.5**	**+0.7**
GEC2				*e*Sg	**Sg**	**22 25 21.0**	**-1.3**
WET	**Wettzell**	**3.17**	**222**	*e*Pn	**Pn**	**22 24 33.6**	**0.0**
MODS	**Modra-Piesok**	**3.25**	**166**	*e*PG	**Pg**	**22 24 43.8**	**-1.1**
MODS				*e*SG	**Sg**	**22 25 27.7**	**+0.7**
KOLL	**Kolacno**	**3.31**	**153**	*e*Pn	**Pn**	**22 24 35.3**	**-0.2**
KOLL				*e*PG	**Pg**	**22 24 45.8**	**-0.1**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**22 24 37.7**	**-0.7**
VYHS				*e*PG	**Pg**	**22 24 47.2**	**-2.7**
CLZ	**Clausthal**	**3.58**	**277**	*e*Pn	**Pn**	**22 24 39.6**	**+0.3**
CONA	**Conrad Observa**	**3.62**	**183**	⇑*i*Pn	**Pn**	**22 24 40.8**	**+1.0**
CONA				⇓*i*Sg	**Sg**	**22 25 38.9**	**+0.3**
	comp=Z,9.0nm,0.4s						
CSNA	**Conrad Observa**	**3.62**	**183**	⇓*i*Pn	**Pn**	**22 24 40.5**	**+0.7**
CSNA				⇓*i*Sg	**Sg**	**22 25 39.0**	**+0.4**
	comp=Z,7.2nm,0.3s						
GRA1	**Grafenberg Arr**	**3.62**	**241**	*e*Pn	**Pn**	**22 24 39.6**	**-0.2**
GRA1				*e*Sg	**Sg**	**22 25 39.8**	**+1.0**
BSD	**Bornholm Skovb**

12nm,0.6s
WRAB Tennant Creek 19.11 160 P **Pn** **22 41 32.7 -1.7**
21nm,1.5s
WRAB Tennant Creek 19.11 160 P **Pn** **22 41 31.1 -3.3**
21nm,1.5s
WRA Warramunga Arr 19.12 160 P **Pn** **22 41 32.5 -1.9**
1.5nm,0.3s,baz=343,slow=12,SNR=7.3
WRA S **S** **22 45 00.5 -7.9**
0.2nm,0.3s,baz=341,slow=21,SNR=7.0
WRA LR LR 22 49 23.7
comp=Z,88nm,20.8s,baz=330,slow=38
WB2 Warramunga Arr 19.12 160 ⇓*iP* **Pn** **22 41 31.4 -3.1**
WB2 Warramunga Arr 19.12 160 *eP* **Pn** **22 41 32.4 -2.2**
COEN Coen 19.57 128 *eP* **Pn** **22 41 38.6 -1.3**
12nm,0.5s
COEN Coen 19.57 128 *eP* **Pn** **22 41 39.0 -0.9**
17nm,0.6s
COEN Coen 19.57 128 P **Pn** **22 41 39.9 0.0**
18nm,1.2s
COEN Coen 19.57 128 P **Pn** **22 41 38.4 -1.5**
MBWA Marble Bar 20.57 201 *eP* **P** **22 41 49.8 +0.5**
PMG Port Moresby 20.91 112 P **P** **22 41 50.5 -2.5**
5.5nm,0.8s,baz=274,slow=19,SNR=3.0
ASAR Alice Springs 22.49 165 P **P** **22 42 08.9 -0.8**
11nm,0.6s,mb4.4,baz=344,slow=11,SNR=99
ASAR PcP PcP 22 46 04.2 +1.0
1.3nm,0.7s,baz=3.7,slow=2.6,SNR=5.4
ASAR S **S** **22 46 09.0 -5.9**
5.5nm,0.9s,baz=346,slow=22,SNR=16
CTA Charters Tower 25.72 136 P **P** **22 42 42.8 +2.2**
3.5nm,0.7s,mb4.0,baz=317,slow=10,SNR=8.7
CTA Charters Tower 25.72 136 *eP* **P** **22 42 42.7 +2.1**
3.9nm,1.1s,mb3.9
CTAO Charters Tower 25.72 136 *eP* **P** **22 42 43.0 +2.4**
CTAO pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
CTAO Charters Tower 25.72 136 *eP* **P** **22 42 43.0 +2.4**
comp=Z,3.6nm,0.7s,mb4.0
CTAO Charters Tower 25.72 136 P **P** **22 42 45.4 +4.8**
YHNB Yeheng 27.09 348 *eP* **P** **22 42 52.5 -0.4**
comp=Z,9.5nm,0.7s,mb4.4
IPM Ipoh 27.22 284 P Px 22 43 05.8
PSI Prapat 28.96 279 P **P** **22 43 09.2 -0.6**
comp=Z,4.3nm,0.8s,mb4.2,baz=169,slow=4.6,SNR=5.3
STKA Stephens Creek 32.62 157 P **P** **22 43 43.6 +1.8**
comp=Z,3.1nm,0.9s,mb4.2,baz=328,slow=21,SNR=6.6
STKA LR LR 22 57 53.9
comp=Z,60nm,18.4s,MS3.3,baz=21,slow=38
WHN Wuhan 34.63 340 ⇑P **P** **22 44 00.0 +0.7**
CMAR Chiang Mai Arr 34.64 307 P **P** **22 43 59.6 +0.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=137,slow=7.5,SNR=21
GYA Guiyang 34.66 326 ⇑*iP* **P** **22 44 00.6 +1.0**
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
CHTO Chiang Mai 34.84 308 *eP* **P** **22 44 01.6 +0.4**
CHTO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CHTO Chiang Mai 34.84 308 *eP* **P** **22 44 01.6 +0.3**
comp=Z,9.5nm,1.0s,mb4.7
CHTO Chiang Mai 34.84 308 P **P** **22 44 02.2 +1.0**
comp=Z,15nm,0.9s,mb4.9
KMI Kunming 36.04 320 P **P** **22 44 13.3 +1.8**
KMI AMB AMB
comp=Z,10.0nm,1.4s,mb4.5
KSRS Korea Array 39.17 1 P **P** **22 44 37.2 -0.7**
comp=Z,1.6nm,0.8s,mb3.8,baz=180,slow=9.7,SNR=4.8
KSRS PcP PcP 22 46 48.0 +1.2
comp=Z,1.4nm,0.8s,baz=195,slow=3.5,SNR=4.0
KSRS LR LR 22 58 41.1
comp=Z,34nm,21.2s,MS3.1,baz=5.0,slow=33
MJAR Matsushiro Arr 39.54 14 P **P** **22 44 38.8 -2.1**
comp=Z,1.1nm,0.7s,mb3.7,baz=179,slow=7.3,SNR=3.4
MJAR PcP PcP 22 46 48.5 +0.5
comp=Z,2.5nm,0.9s,baz=174,slow=2.2,SNR=5.2
MJAR LR LR 23 01 19.3
comp=Z,5.3nm,18.9s,MS2.4,baz=195,slow=37
MJAR Matsushiro Arr 39.54 14 P **P** **22 44 38.8 -2.1**
MJAR PcP PcP 22 46 48.5 +0.5
XAN Xi'an 39.81 336 P **P** **22 44 42.6 -0.7**
XAN AP pP 22 44 50.0 -3.8
XAN AMB AMB
comp=Z,12nm,1.2s,mb4.5
XAN AMB AMB
comp=Z,40nm,4.1s
LZH Lanzhou 43.78 332 ⇓**P** **P** **22 45 15.4 -0.3**
LZH AP pP 22 45 24.5 -1.8
LZH XP sP 22 45 28.6 -2.0
LZH AMB AMB
comp=Z,25nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,69nm,4.1s
SHL Shillong 43.99 311 *eP* **P** **22 45 19.0 +1.5**
LSA Lhasa 46.85 315 P **P** **22 45 42.3 +2.2**
LSA Lhasa 46.85 315 *eP* **P** **22 45 42.4 +2.3**
LSA pmax pmax
comp=Z,29nm,0.8s,mb5.3
LSA Lhasa 46.85 315 *eP* **P** **22 45 42.4 +2.2**
comp=Z,29nm,0.8s,mb5.3
GTA Gaotai 48.35 331 P **P** **22 45 52.1 +0.5**
GTA AP pP 22 46 01.1 -1.3
GTA XP sP 22 46 05.3 -1.4
GTA AMB AMB
comp=Z,11nm,0.9s,mb4.9
RAMN Ramite 48.76 309 *eP* **P** **22 45 55.6 +0.6**
comp=Z,42nm,0.6s
JIRN Jiri 49.42 310 *eP* **P** **22 46 00.9 +0.8**
comp=Z,22nm,0.7s,mb5.3
GUN Gumba 49.79 310 *eP* **P** **22 46 03.5 +0.7**
comp=Z,33nm,0.8s,mb5.4
PKI Pulchoki 49.99 309 *eP* **P** **22 46 04.8 +0.5**
KKN Kakani 50.19 309 *eP* **P** **22 46 06.0 +0.1**
DMN Daman 50.24 309 *eP* **P** **22 46 06.8 +0.5**
comp=Z,21nm,0.8s,mb5.2
GKN Gorkha 50.79 309 *eP* **P** **22 46 10.5 +0.1**
comp=Z,26nm,0.8s,mb5.2
KOLN Koldanda 51.49 308 *eP* **P** **22 46 15.0 -0.7**
comp=Z,52nm,0.9s,mb5.5
DANN Dangsing 51.64 309 *eP* **P** **22 46 17.3 +0.5**
comp=Z,55nm,0.7s
ULN Ulaanbaatar 52.70 343 *eP* **P** **22 46 24.3 0.0**
ULN pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ULN Ulaanbaatar 52.70 343 *eP* **P** **22 46 24.3 0.0**
comp=Z,5.0nm,0.9s,mb4.4
ULN Ulaanbaatar 52.70 343 P **P** **22 46 24.2 -0.1**
comp=Z,8.0nm,1.2s,mb4.5
SONM Songino Array 52.87 342 P **P** **22 46 25.0 -0.5**
comp=Z,3.0nm,0.9s,mb4.2,baz=150,slow=9.1,SNR=19
ZAK Zakamensk 56.09 342 *eP* **P** **22 46 44.1 -4.8**
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.1
PETK Petropavlovsk- 60.38 20 P **P** **22 47 19.9 +1.1**
comp=Z,5.1nm,0.6s,mb4.7,baz=228,slow=2.5,SNR=10
BOD Bodaibo 60.53 352 *eP* **P** **22 47 18.5 -1.2**
BOD pmax pmax
comp=Z,3.0nm,1.4s,mb4.2
MKAR Makanchi Array 62.64 327 P **P** **22 47 33.9 -0.3**
comp=Z,12nm,0.8s,mb5.1,baz=117,slow=8.0,SNR=84
YAK Yakutsk 63.80 1 *eP* **P** **22 47 40.9 -0.7**
YAK pmax pmax
comp=Z,16nm,0.8s,mb5.1
YAK Yakutsk 63.80 1 *eP* **P** **22 47 41.3 -0.3**
comp=Z,17nm,0.8s,mb5.1
TKM2 Tokmak 2 64.51 320 *eP* **P** **22 47 46.9 +0.2**
TKM2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TKM2 Tokmak 2 64.51 320 *eP* **P** **22 47 46.9 +0.2**
comp=Z,5.9nm,0.7s,mb4.7
AAK Ala-Archa 65.08 319 *eP* **P** **22 47 50.8 +0.4**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
AAK Ala-Archa 65.08 319 *eP* **P** **22 47 50.8 +0.4**
comp=Z,4.2nm,0.8s,mb4.5
AAK Ala-Archa 65.08 319 P **P** **22 47 51.0 +0.6**
comp=Z,4.3nm,0.9s,mb4.5
EKS2 Erkin-Say 65.56 319 *eP* **P** **22 47 54.0 +0.5**
comp=Z,7.5nm,0.8s,mb4.8
KBL Kabul 65.62 309 *eP* **P** **22 47 53.9 -0.2**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 65.62 309 *eP* **P** **22 47 53.9 -0.2**
comp=Z,3.7nm,0.6s,mb4.6
ZALV Zalesovo Beam 65.96 334 P **P** **22 47 54.0 -1.8**
comp=Z,2.2nm,0.8s,mb4.2,baz=108,slow=4.8,SNR=8.5
ZALV Zalesovo Beam 65.96 334 P **P** **22 47 54.0 -1.8**
KURK Kurchatov 66.92 329 *eP* **P** **22 48 00.8 -1.1**
comp=Z,12nm,0.7s,mb5.1,baz=129,slow=5.9,SNR=42
KURK Kurchatov 66.92 329 *eP* **P** **22 48 01.2 -0.7**
NVS Novosibirsk 67.24 334 *eP* **P** **22 48 00.4 -3.6**
BVAR Borovoye Array 72.47 328 P **P** **22 48 35.2 -0.9**
comp=Z,4.0nm,0.8s,mb4.4,baz=132,slow=8.9,SNR=23
BRVK Borovoye 72.54 328 *eP* **P** **22 48 35.9 -0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRVK Borovoye 72.54 328 *eP* **P** **22 48 35.9 -0.7**
comp=Z,2.0nm,0.8s,mb4.1
VNDA Vanda 77.76 173 P **P** **22 49 06.6 +0.3**
comp=Z,2.8nm,0.8s,mb4.2,baz=327,slow=3.4,SNR=5.9
VNDA LR LR 23 25 02.7
comp=Z,44nm,18.4s,MS3.8,baz=333,slow=37
AKTK Aktyubinsk 78.56 322 P **P** **22 49 10.3 -0.8**
AKTO Aktyubinsk 78.56 322 P **P** **22 49 10.3 -0.8**
comp=Z,6.8nm,0.8s,mb4.6,baz=108,slow=6.5,SNR=26
KDAK Kodiak Island 86.23 32 P **P** **22 49 52.3 +1.3**
comp=Z,10nm,0.8s,mb5.1,baz=347,slow=18,SNR=4.3
QSPA South Pole Qui 88.03 180 P **P** **22 50 00.1 +0.8**
comp=Z,6.4nm,0.9s,mb4.8,baz=338,slow=3.4,SNR=13
YKA Yellowknife Ar 104.27 25 Pdiff Pdif 22 51 14.0 +0.3
comp=Z,0.3nm,0.7s,baz=289,slow=3.7,SNR=4.6
YKA Yellowknife Ar 104.27 25 Pdif Pdif 22 51 14.0 +0.3
TORD Torodi Ar. Bea 125.26 285 PKP PKPdf 22 56 10.8 -0.6
comp=Z,0.6nm,0.7s,baz=52,slow=1.8,SNR=5.0
CPUP Villa Florida 151.53 171 PKPbc PKPbc 22 57 05.8 +1.3
comp=Z,4.6nm,0.8s,baz=144,slow=1.7,SNR=13
NNA Nana 152.14 120 PKPbc PKPbc 22 57 07.8 +1.6
comp=Z,4.3nm,0.6s,baz=229,slow=3.8,SNR=4.1

NEIC ***22*** *22:48:41.9, 1623N×9832W, h6km, MD3.9(MEX), After MEX.*

MEX 22 22:48:41.8±0.7, 1622N×9832W, h6km±5km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.25**	**47**	*i* P		Pg	22 48 45.9	-0.9
PNIG				*i* S		Sg	22 48 50.3	+0.3
ACX	**Acapulco**	**1.66**	**293**	*i* P		Pn	22 49 07.8	-3.7
ACX				*i* S		Sn	22 49 28.4	-4.9
UTMO	**Huajuapan**	**1.68**	**17**	*i* P		Pn	22 49 08.3	-3.4
UTMO				*i* S		Sn	22 49 28.9	-4.7
VHO	**Vista Hermosa**	**1.74**	**61**	*i* P		Pn	22 49 10.2	-2.4
VHO				*i* S		Sn	22 49 30.9	-4.3
OXX	**Oaxaca**	**1.75**	**60**	*i* P		Pn	22 49 10.1	-2.7
OXX				*i* S		Sn	22 49 29.9	-5.6
CAIG	**El Cayaco**	**2.04**	**294**	*i* P		Pn	22 49 13.8	-3.0
CAIG				*i* S		Sn	22 49 38.4	-4.3
HUIG	**Huatulco**	**2.17**	**102**	*eP*		Pn	22 49 16.6	-2.0
HUIG				*i* S		Sn	22 49 39.7	-6.1
TPIG	**Tehuac#an**	**2.37**	**23**	*eP*		Pn	22 49 18.8	-2.5
TPIG				*i* S		Sn	22 49 47.2	-3.5
PLIG	**Platanillo**	**2.44**	**333**	*eP*		Pn	22 49 19.4	-2.9
PLIG				*i* S		Sn	22 49 46.8	-5.6
PPM	**Popocatepetl**	**2.85**	**354**	*i* S		Sn	22 49 59.2	-3.3
MZVM		**3.08**	**344**	*i* P		Pn	22 49 28.4	-2.6
MZVM				*i* S		Sn	22 50 04.4	-3.8
ZIIG	**Zihuatanejo**	**3.31**	**295**	*eP*		Pn	22 49 31.3	-3.0
ZIIG				*i* S		Sn	22 50 09.2	-4.8
ZIIG	**Zihuatanejo**	**3.31**	**295**	*eP*		Pn	22 49 31.3	-3.0
ZIIG				*i* S		Sn	22 50 08.7	-5.4
IIO	**Organos**	**3.38**	**353**	*eP*		Pn	22 49 32.5	-2.6
IIO				*i* S		Sn	22 50 13.6	-2.0
IIO	**Organos**	**3.38**	**353**	*eP*		Pn	22 49 32.5	-2.6
IIO				*i* S		Sn	22 50 11.4	-4.2
CMIG	**Matias Romero**	**3.40**	**75**	*eP*		Pn	22 49 32.6	-2.9
CMIG				*i* S		Sn	22 50 11.4	-4.8
PTVM	**Pico Tres Padr**	**3.44**	**347**	*eP*		Pn	22 49 33.2	-2.8
PTVM				*i* S		Sn	22 50 14.4	-2.7
PTVM	**Pico Tres Padr**	**3.44**	**347**	*eP*		Pn	22 49 33.2	-2.8
PTVM				*i* S		Sn	22 50 12.9	-4.3
LVIG	**Laguna Verde**	**3.92**	**27**	*eP*		Pn	22 49 41.6	-1.0
LVIG				*i* S		Sn	22 50 28.1	-1.0

NEIC 22 22:49:47.3, 3889S×17834E, h33km, ML3.9(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.54**	**256**	P		Pn	22 49 57.9	-0.5
PUZ	**Puketiti**	**0.82**	**355**	P		Pn	22 50 01.7	-0.8
PUZ				S		Sn	22 50 11.7	-1.7
MWZ	**Matawai**	**0.84**	**311**	P		Pn	22 50 01.5	-1.3
URZ	**Urewera**	**1.15**	**303**	P		Pn	22 50 06.0	-1.1
MXZ	**Matakaoa Point**	**1.32**	**359**	P		Pn	22 50 09.2	-0.2
BKZ	**Black Stump Fm**	**1.47**	**259**	P		Pn	22 50 11.0	-0.4
EDRZ	**Edgecumbe**	**1.48**	**301**	P		Pn	22 50 11.4	-0.2
MARZ	**Manawahe**	**1.59**	**304**	P		Pn	22 50 12.7	-0.4
WIZ	**White Island**	**1.63**	**326**	P		Pn	22 50 12.7	-1.0
MKRZ	**Makatiti**	**1.65**	**296**	P		Pn	22 50 15.0	+1.1
TGRZ	**Tauranga**	**2.00**	**305**	P		Pn	22 50 17.9	-0.9
MOVZ	**Moawhango**	**2.08**	**255**	P		Pn	22 50 20.1	+0.3
TUVZ	**Tukino**	**2.12**	**259**	P		Pn	22 50 20.9	+0.4
NGZ	**Ngauruhoe**	**2.15**	**261**	P		Pn	22 50 20.9	+0.1
WTVZ	**West Tongariro**	**2.15**	**263**	P		Pn	22 50 21.1	+0.2
WNVZ	**Wahianoa**	**2.18**	**258**	P		Pn	22 50 21.2	0.0
TSZ	**Takapari Road**	**2.18**	**237**	P		Pn	22 50 20.2	-1.0
FWVZ	**Far West T-bar**	**2.20**	**260**	P		Pn	22 50 21.7	+0.2
BFZ	**Birch Farm**	**2.41**	**221**	P		Pn	22 50 22.4	-2.0
WAZ	**Wanganui**	**2.74**	**251**	P		Pn	22 50 30.0	+1.1
HIZ	**Hauiti**	**2.75**	**277**	P		Pn	22 50 29.3	+0.2
MRZ	**Mangatainoka R**	**2.77**	**229**	P		Pn	22 50 27.6	-1.7
VRZ	**Vera Road**	**2.80**	**264**	P		Pn	22 50 29.7	0.0
KUZ	**Kuaotunu**	**2.98**	**315**	P		Pn	22 50 30.6	-1.6
MKAZ	**Moumakai**	**3.07**	**304**	P		Pn	22 50 32.7	-0.8
MTW	**Mount Morrison**	**3.14**	**223**	P		Pn	22 50 31.7	-2.8
KIW	**Kapiti Island**	**3.29**	**232**	P		Pn	22 50 34.7	-1.8
NEZ	**North Egmont**	**3.33**	**262**	P		Pn	22 50 37.8	+0.8
PAWZ	**Paruwai Farm**	**3.34**	**221**	P		Pn	22 50 34.3	-2.9
CAW	**Cannon Point**	**3.35**	**228**	P		Pn	22 50 35.2	-2.1
MSWZ	**Moikau Station**	**3.46**	**222**	P		Pn	22 50 35.7	-3.1
BHW	**Baring Head**	**3.66**	**225**	P		Pn	22 50 38.7	-2.9
SNZO	**South Karori**	**3.69**	**228**	*ePn*		Pn	22 50 42.2	+0.3
SNZO				*eSn*		Sn	22 51 21.1	-3.2
TCW	**Tory Channel**	**3.89**	**232**	P		Pn	22 50 42.3	-2.4
NNZ	**Nelson**	**4.46**	**237**	P		Pn	22 50 50.4	-2.2
QRZ	**Quartz Range**	**4.87**	**245**	P		Pn	22 50 55.0	-3.2
THZ	**Tophouse**	**5.05**	**234**	P		Pn	22 50 57.9	-2.7

IDC 22 23:04:04.9±6.3, 708S×12504E, h517km±93km, mb2.9/5, mb1 3.0/7, mb1mx2.9/17, mbtmp2.8/7, Error ellipse: s-maj=93.9km s-min=24.4km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.65**	**146**	P		P	23 07 20.5	-1.1
	0.4nm,0.3s,baz=325,slow=10,SNR=5.2							
ASAR	**Alice Springs**	**18.56**	**154**	P		P	23 07 50.0	+0.5
	0.4nm,0.3s,baz=332,slow=9.5,SNR=30							
STKA	**Stephens Creek**	**29.11**	**150**	P		P	23 09 23.6	0.0
	1.1nm,0.3s,baz=301,slow=12,SNR=3.0							
CMAR	**Chiang Mai Arr**	**36.15**	**315**	P		P	23 10 23.4	-0.1
	0.6nm,0.7s,baz=150,slow=7.0,SNR=4.7							
SONM	**Songino Array**	**57.10**	**345**	P		P	23 13 02.2	+0.6
	0.2nm,0.4s,baz=142,slow=4.9,SNR=3.3							
MKAR	**Makanchi Array**	**65.68**	**329**	P		P	23 13 58.1	+0.3
	0.7nm,0.6s,baz=126,slow=7.6,SNR=12							
ZALV	**Zalesovo Beam**	**69.56**	**336**	P		P	23 14 20.9	-0.6
	0.6nm,0.4s,baz=150,slow=6.1,SNR=3.3							

IDC 22 23:14:06.1±4.4, 224S×13880E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/14, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=195.2km s-min=29.2km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.16**	**211**	*eP*		x	23 31 04.0	
	12nm,0.5s							
KAKA				*eS*		x	23 33 09.4	
WRA	**Warramunga Arr**	**18.13**	**194**	P		Pn	23 18 18.5	-1.1
	0.3nm,0.3s,baz=16,slow=12,SNR=4.8							
ASAR	**Alice Springs**	**21.82**	**192**	P		P	23 19 01.0	+0.8
	1.0nm,0.7s,baz=20,slow=9.6,SNR=14							
MKAR	**Makanchi Array**	**69.47**	**322**	P		P	23 25 16.5	+0.1
	0.7nm,0.8s,baz=111,slow=6.1,SNR=5.3							
TORD	**Torodi Ar. Bea**	**136.21**	**287**	PKP		PKPdf	23 33 29.9	-0.8
	0.4nm,0.9s,baz=84,slow=2.0,SNR=2.8							

BJI ***22*** *23:29:12.9, 237S×12782E, h35km, mB4.9, mb4.7, Ms4.4, Msz4.0*
ISCJB ***22*** *23:29:18.7±0.7, 200S±004×12751E±006, h57km±7km, mb4.6/33, MS3.8/11, Error ellipse: s-maj=10.8km s-min=5.1km az=154.1*
NEIC ***22*** *23:29:18.6±0.3, 189S×12756E, h35km, mb4.8/18, Error ellipse: s-maj=9.8km s-min=4.8km az=57.0*
DJA ***22*** *23:29:19, 204S×12752E, h20km, MLv4.6/8*
IDC ***22*** *23:29:21.2±3.1, 203S×12753E, h65km±28km, mb4.0/11, mb1 4.2/13, mb1mx4.1/19, mbtmp4.1/13, ML4.4/2, MS3.7/11, Ms1 3.7/11, ms1mx3.5/22, Error ellipse: s-maj=25.8km s-min=10.5km az=73.0*

ISC 22 23:29:19.6±0.7, 198S±005×12755E±006, h46km±7km, h35km±1.2km: pP-P, n78, σ0s93/76, mb4.6/33, MS3.8/11, 3C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.33**	**358**	P		**Pn**	**23 29 41.0**	**-0.8**
AAI	**Ambon**	**1.81**	**159**	P		**Pn**	**23 29 49.6**	**+1.2**
MSAI	**Masohi**	**1.93**	**135**	P		**Pn**	**23 29 51.5**	**+1.5**
TNTI	**Ternate**	**2.74**	**356**	P		**Pn**	**23 30 01.6**	**+0.5**
MNI	**Manado**	**4.35**	**321**	P		**Pn**	**23 30 28.4**	**+5.2**
KDI	**Kendari**	**5.30**	**248**	P		**Pn**	**23 30 35.6**	**-0.7**
	50nm,0.5s,3μm0.2nm							
PCI	**Palu**	**7.79**	**278**	P		**Pn**	**23 31 09.1**	**-1.3**
	260nm,1.1s,2μm0.7nm							
KAPI	**Kappang**	**8.35**	**249**	P		**Pn**	**23 31 18.2**	**+0.1**
	2.2nm,0.3s,baz=88,slow=9.8,SNR=20							
KAPI					LR	LR	23 34 22.8	
	comp=Z,819nm,19.1s,baz=87,slow=36							
KAPI	**Kappang**	**8.35**	**249**	P		**Pn**	**23 31 17.8**	**-0.3**
	28nm,1.4s,0.1nm							
MYLDM	**Lahad Datu**	**11.50**	**308**	P		**Pn**	**23 32 06.3**	**+5.0**
	50nm,1.6s							
FITZ	**Fitzroy Crossi**	**16.13**	**187**	*eP*		**Pn**	**23 33 04.8**	**+1.5**
	10nm,0.6s							
FITZ	**Fitzroy Crossi**	**16.13**	**187**	*eP*		**Pn**	**23 33 04.3**	**+1.0**
	6.9nm,0.8s							
SJI	**Sawahan**	**16.73**	**249**	P		**Pn**	**23 33 19.5**	**+8.6**
KSM	**Kuching**	**17.58**	**281**	*eP*		**Pn**	**23 33 22.4**	**+0.9**
	51nm,1.2s							
WRAB	**Tennant Creek**	**19.04**	**160**	*eP*		**Pn**	**23 33 37.7**	**-1.5**
	22nm,0.9s							
WRAB	**Tennant Creek**	**19.04**	**160**	P		**Pn**	**23 33 38.2**	**-0.9**
WRA	**Warramunga Arr**	**19.05**	**160**	P		**Pn**	**23 33 37.6**	**-1.6**
	1.7nm,0.3s,baz=337,slow=11,SNR=25							
WRA					S	**S**	**23 37 04.0**	**-7.9**
	0.4nm,0.3s,baz=341,slow=20,SNR=5.4							
WRA					LR	LR	23 41 37.8	
	comp=Z,219nm,19.4s,baz=335,slow=39							
WB2	**Warramunga Arr**	**19.05**	**160**	*eP*		**Pn**	**23 33 36.9**	**-2.3**
WB2				*eS*		**S**	**23 37 05.6**	**-6.4**
WB2	**Warramunga Arr**	**19.05**	**160**	*eP*		**Pn**	**23 33 37.8**	**-1.4**
COEN	**Coen**	**19.50**	**128**	⇑*iP*		**Pn**	**23 33 43.4**	**-1.2**
	25nm,0.9s							
COEN	**Coen**	**19.50**	**128**	*eP*		**Pn**	**23 33 44.1**	**-0.5**
	106nm,1.3s							
ASAR	**Alice Springs**	**22.42**	**165**	P		**P**	**23 34 14.3**	**-0.2**
	20nm,0.7s,mb4.7,baz=346,slow=10,SNR=130							
ASAR					S	**S**	**23 38 14.9**	**-3.5**
	7.3nm,1.0s,baz=345,slow=22,SNR=18							
GUMO	**Guam**	**23.11**	**48**	LR		LR	23 42 07.9	
	comp=Z,168nm,21.9s,MS3.5,baz=240,slow=33							
CTA	**Charters Tower**	**25.65**	**136**	P		**P**	**23 34 48.0**	**+2.8**
	7.1nm,0.9s,mb4.2,baz=324,slow=12,SNR=8.3							
CTA	**Charters Tower**	**25.65**	**136**	*eP*		**P**	**23 34 47.4**	**+2.2**
	7.4nm,1.1s,mb4.1							
CTA	**Charters Tower**	**25.65**	**136**	P		**P**	**23 34 48.0**	**+2.8**
CTAO	**Charters Tower**	**25.65**	**136**	*eP*		**P**	**23 34 47.2**	**+2.0**
	33nm,1.4s,mb4.7							
FORT	**Forrest**	**28.65**	**179**	*eP*		**P**	**23 35 11.4**	**-0.6**
	10nm,0.7s,mb4.7							
PSI	**Prapat**	**29.01**	**279**	P		**P**	**23 35 14.9**	**-0.5**
	1.9nm,0.5s,mb4.1,baz=112,slow=15,SNR=3.3							
STKA	**Stephens Creek**	**32.55**	**157**	P		**P**	**23 35 47.4**	**+0.9**
	2.1nm,0.5s,mb4.3,baz=345,slow=6.6,SNR=5.1							
STKA					LR	LR	23 49 28.6	
	comp=Z,105nm,19.9s,MS3.5,baz=15,slow=37							
WHN	**Wuhan**	**34.70**	**340**	P		**P**	**23 36 06.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**34.71**	**307**	P		**P**	**23 36 05.8**	**+0.4**
	4.2nm,1.1s,mb4.3,baz=136,slow=7.8,SNR=17							
GYA	**Guiyang**	**34.73**	**326**	⇑*iP*		**P**	**23 36 06.0**	**+0.5**
GYA					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
CHTO	**Chiang Mai**	**34.90**	**308**	*eP*		**P**	**23 36 07.0**	**-0.1**
	comp=Z,11nm,1.0s,mb4.7							
KMI	**Kunming**	**36.11**	**320**	P		**P**	**23 36 18.5**	**+1.1**
KMI					AMB	AMB		
	comp=Z,12nm,1.8s,mb4.5							
KSRS	**Korea Array**	**39.23**	**0**	P		**P**	**23 36 42.6**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.4,baz=198,slow=32,SNR=3.6							
KSRS					LR	LR	23 51 23.0	
	comp=Z,124nm,19.9s,MS3.7,baz=177,slow=34							
MJAR	**Matsushiro Arr**	**39.59**	**14**	P		**P**	**23 36 44.9**	**-1.6**
	comp=Z,1.2nm,0.7s,mb3.7,baz=188,slow=11,SNR=3.7							
MJAR					LR	LR	23 50 02.0	
	comp=Z,124nm,21.7s,MS3.7,baz=205,slow=31							
XAN	**Xi'an**	**39.89**	**336**	P		**P**	**23 36 47.6**	**-1.5**
XAN					AP	pP	23 36 57.5	-4.0
XAN					AMB	AMB		
	comp=Z,13nm,1.2s,mb4.5							
LZH	**Lanzhou**	**43.85**	**332**	⇑P		**P**	**23 37 21.9**	**+0.5**
LZH					AP	pP	23 37 32.0	-2.0
LZH					XP	sP	23 37 36.8	-2.6
LZH					AMB	AMB		
	comp=Z,25nm,1.2s,mb4.8							
LZH					AMB	AMB		
	comp=Z,98nm,6.7s							
LZH					LR	LR		
	comp=E,274nm,15.6s							
LZH					LR	LR		
	comp=Z,505nm,17.0s,MS4.5							
LSA	**Lhasa**	**46.92**	**315**	P		**P**	**23 37 47.6**	**+1.7**
LSA	**Lhasa**	**46.92**	**315**	*eP*		**P**	**23 37 47.4**	**+1.5**
	comp=Z,24nm,0.9s,mb5.1							
GTA	**Gaotai**	**48.42**	**331**	*eP*		**P**	**23 37 57.8**	**+0.5**
GTA					AP	pP	23 38 07.1	-3.0
GTA					XP	sP	23 38 11.1	-4.3
GTA					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8							
GTA					AMB	AMB		

comp=Z,5.7nm,0.8s,mb4.7
AAK Ala-Archa 65.16 319 *e*P **P 23 39 56.6 +0.6**
comp=Z,5.1nm,1.1s,mb4.5
AML Almayashu 65.45 319 P **P 23 39 59.0 +1.1**
SNR=9.5
AML Almayashu 65.45 319 *e*P **P 23 39 58.1 +0.2**
comp=Z,14nm,1.0s,mb4.9
USP Ospenovka 65.46 320 P **P 23 39 57.6 -0.3**
SNR=19
EKS2 Erkin-Say 65.64 319 P **P 23 39 59.8 +0.7**
SNR=8.7
EKS2 Erkin-Say 65.64 319 *e*P **P 23 39 59.6 +0.5**
comp=Z,9.3nm,1.0s,mb4.8
KBL Kabul 65.69 309 *e*P **P 23 39 59.5 -0.1**
comp=Z,5.0nm,0.9s,mb4.5
ZAA0 Zalesovo Array 66.03 334 *e*P **P 23 39 59.9 -1.4**
ZALV Zalesovo Beam 66.03 334 P **P 23 39 60.0 -1.4**
comp=Z,6.7nm,0.9s,mb4.3,baz=119,slow=5.2,SNR=9.1
ZALV Zalesovo Beam 66.03 334 P **P 23 39 60.0 -1.4**
KURK Kurchatov 66.99 329 *e*P **P 23 40 06.4 -1.2**
comp=Z,18nm,0.9s,mb5.1
VNDA Vanda 77.70 173 P **P 23 41 12.5 +1.5**
comp=Z,1.5nm,0.8s,mb4.0,baz=298,slow=10,SNR=3.5
VNDA LR LR 00 11 26.8
comp=Z,73nm,21.1s,MS4.0,baz=353,slow=32
VNDA Vanda 77.70 173 P **P 23 41 12.5 +1.5**
VNDA LR LR 00 11 26.8
AKTK Aktyubinsk 78.63 322 P **P 23 41 16.1 -0.6**
AKTO Aktyubinsk 78.63 322 P **P 23 41 16.1 -0.6**
comp=Z,4.9nm,0.8s,mb4.5,baz=108,slow=6.6,SNR=16
MAW Mawson 78.73 201 LR LR 00 10 36.8
comp=Z,86nm,21.0s,MS4.1,baz=219,slow=32
BOSA Boshof 99.83 241 LR LR 00 21 04.7
comp=Z,48nm,20.1s,MS4.0,baz=300,slow=31
TORD Torodi Ar. Bea 125.31 285 PKP PKPdf 23 48 17.2 +0.8
comp=Z,0.7nm,0.8s,baz=66,slow=2.1,SNR=5.3
CPUP Villa Florida 151.46 171 PKPbc PKPbc 23 49 10.3 +1.0
comp=Z,7.0nm,1.0s,baz=204,slow=1.7,SNR=12

IDC ***22*** *23:47:31.5±0.7, 4174N×8177E, h0km, mb4.1/15, mb1 4.2/21, mb1mx4.1/30, mbtmp4.0/21, ML3.7/6, MS2.9/4, Ms1 2.9/4, ms1mx2.6/31, Error ellipse: s-maj=17.6km s-min=11.6km az=69.0*
ISCJB ***22*** *23:47:31.7±0.3, 4177N±003×8173E±004, h10km, mb4.1/19, MS3.0/2, Error ellipse: s-maj=5.0km s-min=4.3km az=158.6*
BJI ***22*** *23:47:34.1, 4169N×8191E, h22km, mB4.4, mb3.9, ML4.2, Ms3.8, Msz3.6*
MOS ***22*** *23:47:34.6±1.2, 4180N×8179E, h33km, mb4.4/16, Error ellipse: s-maj=9.6km s-min=6.5km az=111.0*
NEIC ***22*** *23:47:37.7±1.0, 4183N×8187E, h46km±8km, mb4.4/5, Error ellipse: s-maj=11.3km s-min=7.7km az=152.0*
NNC ***22*** *23:47:39.1±5.4, 4175N×8135E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=47.4km s-min=30.8km az=131.0*

ISC 22 23:47:33.5±0.3, 4175N±003×8170E±003, h10km, n102, σ1§42/127, mb4.1/19, MS3.0/2, 10C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KNDC	**Almaty**	**3.79**	**294**	⇑Pn		**Pn**	**23 48 36.2**	**+4.2**
KNDC	170nm,0.5s			⇓Lg			23 49 35.2	
	430nm,0.8s							
AAA	**Alma-Ata**	**3.83**	**295**	*e*PN		**Pn**	**23 48 41.9**	**+10**
AAA				*e*S		**Sn**	**23 49 33.4**	**+16**
AAA				pmax	pmax			
	comp=Z,228nm,0.7s							
AAA				smax				
	comp=Z,531nm,0.6s							
ULHL	**Ulahol**	**4.09**	**279**	P		**Pn**	**23 48 39.2**	**+3.2**
	SNR=21							
TKM2	**Tokmak 2**	**4.67**	**286**	⇑Pn		**Pn**	**23 48 47.2**	**+3.2**
	comp=Z,50nm,0.5s							
TKM2				⇑Lg			23 50 01.1	
	comp=Z,176nm,0.7s							
TKM2	**Tokmak 2**	**4.67**	**286**	P		**Pn**	**23 48 47.2**	**+3.2**
	SNR=81							
TKM2	**Tokmak 2**	**4.67**	**286**	*i*Pn		**Pn**	**23 48 47.4**	**+3.4**
TKM2				*e*Sn		**Sg**	**23 50 01.1**	**-2.3**
KZA	**Kyzart**	**4.82**	**276**	P		**Pn**	**23 48 50.0**	**+3.9**
	SNR=8.9							
WMQ	**Urumqi**	**4.87**	**63**	P		**Pn**	**23 48 48.3**	**+1.5**
WMQ				PG		**Pg**	**23 49 00.8**	**-6.0**
WMQ				S		**Sn**	**23 49 45.5**	**+2.3**
WMQ				SG		**Sg**	**23 50 07.3**	**-2.6**
WMQ				Smax				
	comp=N,221nm,1.0s							
WMQ				Smax				
	comp=E,198nm,1.3s							
WMQ				LR	LR			
	comp=N,316nm,22.0s							
WMQ				LR	LR			
	comp=E,196nm,16.0s							
WMQ				LR	LR			
	comp=Z,216nm,14.0s							
KSH	**Kashi**	**4.89**	**245**	P		**Pn**	**23 48 52.4**	**+5.3**
KSH				SG		**Sg**	**23 50 07.8**	**-2.8**
KSH				Smax				
	comp=N,979nm,1.0s							
KSH				Smax				
	comp=E,862nm,0.6s							
MKAR	**Makanchi Array**	**5.06**	**5**	Pn		**Pn**	**23 48 50.5**	**+1.3**
	comp=E,6.1nm,0.3s,baz=186,slow=13,SNR=212							
MKAR				Sn		**Sn**	**23 49 42.8**	**-4.9**
	comp=E,5.7nm,0.3s,baz=189,slow=25,SNR=5.2							
MKAR				Lg			23 50 11.3	
	comp=E,12nm,0.3s,baz=189,slow=30,SNR=6.5							
MKAR	**Makanchi Array**	**5.06**	**5**	Pn		**Pn**	**23 48 50.5**	**+1.3**
MKAR				Sn		**Sn**	**23 49 42.8**	**-4.9**
MKAR				Lg			23 50 11.3	
KBK	**Karagaybulak**	**5.09**	**282**	P		**Pn**	**23 48 53.2**	**+3.4**
	SNR=44							
CHMS	**Chumysh**	**5.29**	**286**	P		**Pg**	**23 49 09.6**	**-5.2**
	SNR=6.3							
FRU	**Bishkek**	**5.36**	**284**	*e*PN		**Pg**	**23 49 12.5**	**-3.6**
FRU				*e*S		**Sg**	**23 50 21.0**	**-4.5**
FRU				pmax	pmax			
	comp=Z,75nm,1.2s							
FRU				smax				
	comp=E,420nm,1.4s							
UCH	**Uchtor**	**5.38**	**277**	*e*Pn		**Pb**	**23 49 05.3**	**-2.1**
AAK	**Ala-Archa**	**5.42**	**282**	*e*PN		**Pn**	**23 48 57.3**	**+3.0**
AAK				*e*			23 50 23.3	
AAK				pmax	pmax			
	comp=Z,36nm,0.6s							
AAK	**Ala-Archa**	**5.42**	**282**	P		**Pn**	**23 48 58.2**	**+3.9**
	SNR=11							
AAK	**Ala-Archa**	**5.42**	**282**	*e*Pn		**Pn**	**23 48 57.3**	**+3.0**
	comp=Z,36nm,0.6s							
AAK				*e*Sn		**Sg**	**23 50 23.2**	**-4.2**
USP	**Ospenovka**	**5.53**	**288**	P		**Pn**	**23 48 58.4**	**+2.6**
	SNR=22							
EKS2	**Erkin-Say**	**5.95**	**281**	P		**Pg**	**23 49 25.0**	**-2.4**
	SNR=6.8							
EKS2	**Erkin-Say**	**5.95**	**281**	*e*Pn		**Pn**	**23 49 05.7**	**+4.1**
	comp=Z,40nm,0.6s							
EKS2				*e*Sn		**Sg**	**23 50 41.7**	**-2.7**
AML	**Almayashu**	**5.98**	**276**	P		**Pg**	**23 49 23.6**	**-4.3**
	SNR=7.1							
AML	**Almayashu**	**5.98**	**276**	*e*Pn		**Pn**	**23 49 08.7**	**+6.7**
	comp=Z,40nm,0.6s							
AML				*e*Sn		**Sg**	**23 50 39.8**	**-5.6**
KK31	**Karatay Array**	**8.38**	**283**	⇑Pg		Px	23 50 10.2	
	comp=Z,4.2nm,0.6s,baz=92,slow=15,SNR=8.2							
KK31				⇑Lg			23 51 58.9	
	comp=Z,12nm,0.5s,baz=91,slow=28,SNR=6.0							
KURBB	**Kurchatov Arra**	**9.14**	**347**	Pn		**Pn**	**23 49 55.7**	**+10**
KURBB				Sn		**Sn**	**23 51 34.3**	**+6.2**
KURBB				Lg			23 52 23.6	
KURK	**Kurchatov**	**9.21**	**348**	⇑Pn		**Pn**	**23 49 57.1**	**+11**
	comp=Z,24nm,1.0s							
KURK				⇑Sn		**Sn**	**23 51 38.7**	**+8.8**
	comp=Z,27nm,0.8s							
KURK				⇑Lg			23 52 25.5	
	comp=Z,118nm,1.0s							
KURK	**Kurchatov**	**9.21**	**348**	Pn		**Pn**	**23 49 47.6**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=171,slow=13,SNR=11							
KURK				Sn		**Sn**	**23 51 30.0**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=145,slow=23,SNR=3.9							
KURK				Lg			23 52 20.8	
	comp=Z,0.3nm,0.3s,baz=165,slow=29,SNR=3.6							
KURK				LR		LR	23 53 36.3	
	comp=Z,169nm,18.2s,baz=165,slow=40							
KURK	**Kurchatov**	**9.21**	**348**	P		**Pn**	**23 49 47.6**	**+1.3**
KURK							23 51 30.0	
CHCP	**Chirah Chowk**	**10.48**	**222**	P		**Pn**	**23 50 05.4**	**+1.7**
CEP	**Cherat**	**11.07**	**227**	P		**Pn**	**23 50 13.2**	**+1.4**
CEP				S		**Sn**	**23 52 14.0**	**-1.5**
SMLA	**Simla**	**11.21**	**200**	*i*P		**Pn**	**23 50 15.0**	**+1.2**
SMLA				*i*S		**Sn**	**23 52 14.6**	**-4.5**
SMLA				*i*S		**Sn**	**23 52 16.6**	**-2.5**
SMLA				*ex*		x	23 52 17.1	
	comp=N,110nm,0.4s							
SMLA				*ex*		x	23 52 20.9	
	comp=E,273nm,0.4s							
KBL	**Kabul**	**12.28**	**238**	*e*P		**Pn**	**23 50 29.8**	**+1.4**
KBL				*e*			23 52 50.4	
KBL				pmax	pmax			
	comp=Z,5.0nm,0.4s							
KBL	**Kabul**	**12.28**	**238**	*e*Pn		**Pn**	**23 50 29.8**	**+1.4**
	comp=Z,4.6nm,0.4s							
KBL				*e*Sn		**Sn**	**23 52 50.4**	**+5.1**
ZAA0	**Zalesovo Array**	**12.38**	**9**	*e*Pn		**Pn**	**23 50 28.8**	**-0.8**
ZAA0				*e*Sn		**Sn**	**23 52 51.2**	**+3.8**
ZALV	**Zalesovo Beam**	**12.38**	**9**	Pn		**Pn**	**23 50 30.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=193,slow=12,SNR=7.6							
ZALV				Lg			23 54 01.9	
	comp=Z,0.2nm,0.3s,baz=193,slow=25,SNR=2.9							
ZALV				LR		LR	23 55 40.2	
	comp=Z,25nm,21.3s,baz=135,slow=40							
ZALV	**Zalesovo Beam**	**12.38**	**9**	Pn		**Pn**	**23 50 30.4**	**+0.8**
ZALV				Lg			23 54 01.9	
ZALV				LR		LR	23 55 40.2	
NVS	**Novosibirsk**	**13.14**	**4**	*e*P		**Pn**	**23 50 43.2**	**+3.3**
NVS				*e*			23 53 03.2	
BVA0	**Borovoye Array**	**13.61**	**330**	⇓Pn		**Pn**	**23 50 45.9**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=139,slow=12,SNR=7.2							
BVA0				⇓Sn		**Sn**	**23 53 18.2**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=143,slow=22,SNR=4.2							
BVA0				⇓Lg			23 54 44.1	
	comp=Z,5.2nm,1.1s,baz=126,slow=23,SNR=3.8							
BVAR	**Borovoye Array**	**13.61**	**330**	Pn		**Pn**	**23 50 45.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=142,slow=14,SNR=6.2							
BVAR				Lg			23 54 43.3	
	comp=Z,0.3nm,0.3s,baz=146,slow=27,SNR=4.0							
BVAR				LR		LR	23 56 28.6	
	comp=Z,33nm,19.4s,baz=343,slow=39							
BRVK	**Borovoye**	**13.68**	**330**	*e*P		**Pn**	**23 50 49.3**	**+2.0**
BRVK				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BRVK	**Borovoye**	**13.68**	**330**	*e*Pn		**Pn**	**23 50 49.2**	**+2.0**
	comp=Z,4.4nm,0.6s							
BRVK				Sn		**Sn**	**23 53 39.4**	**+20**
GTA	**Gaotai**	**13.97**	**94**	*e*P		**Pn**	**23 50 51.4**	**0.0**
GTA				XP			23 50 58.3	
GTA				PP			23 51 01.9	
GTA				S		**Sn**	**23 53 20.8**	**-5.6**
GTA				LG1			23 54 31.9	
GTA				LG2			23 54 58.9	
GTA				AMB	AMB			
	comp=Z,2.0nm,0.8s							
GTA				LR	LR			
	comp=N,207nm,8.9s							
GTA				LR	LR			
	comp=E,160nm,9.8s							
GTA				LR	LR			
	comp=Z,81nm,8.3s							
MOY	**Mondy**	**16.49**	**46**	*e*P		**Pn**	**23 51 28.7**	**+4.0**
AB31	**Akbulak array**	**16.96**	**304**	Pn		**Pn**	**23 51 30.2**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=104,slow=11,SNR=6.3							
AB31	**Akbulak array**	**16.96**	**304**	P		**Pn**	**23 51 28.7**	**-1.9**
AB31				pmax	pmax			
	comp=Z,8.0nm,0.8s							
ZAK	**Zakamensk**	**17.24**	**53**	*e*P		**Pn**	**23 51 32.2**	**-1.9**
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
LZH	**Lanzhou**	**18.12**	**101**	*e*P		**Pn**	**23 51 43.5**	**-1.6**
LZH				AP	pP		23 51 48.3	0.0
LZH				XP	sP		23 51 52.0	+2.4
LZH				PP			23 51 58.6	
LZH				AMB	AMB			
	comp=Z,18nm,1.0s							
LZH				AMB	AMB			
	comp=Z,73nm,4.1s							
LZH				LR	LR			
	comp=E,276nm,8.5s							
LZH				LR	LR			
	comp=Z,359nm,10.3s							
SONM	**Songino Array**	**18.51**	**62**	P		**Pn**	**23 51 48.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=265,slow=9.3,SNR=18							
AKTK	**Aktyubinsk**	**18.51**	**306**	P		**Pn**	**23 51 49.7**	**-0.1**
AKTO	**Aktyubinsk**	**18.51**	**306**	⇓Pn		**Pn**	**23 51 49.2**	**-0.6**
	comp=Z,0.3nm,0.5s							
AKTO	**Aktyubinsk**	**18.51**	**306**	P		**Pn**	**23 51 49.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=101,slow=13,SNR=14							
ULN	**Ulaanbaatar**	**18.95**	**63**	*e*P		**Pn**	**23 51 53.5**	**-1.7**
ULN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
ULN	**Ulaanbaatar**	**18.95**	**63**	*e*P		**Pn**	**23 51 54.2**	**-1.0**
ULN	**Ulaanbaatar**	**18.95**	**63**	*e*P		**Pn**	**23 51 53.5**	**-1.8**
	comp=Z,4.3nm,0.9s							
SVE	**Sverdlovsk**	**20.27**	**325**	*e*P		**P**	**23 52 09.7**	**+0.8**
SVE				*e*			23 52 27.6	
SVE				*e*S		**S**	**23 55 50.5**	**-5.5**
SVE				pmax	pmax			
	comp=Z,8.0nm,0.9s							
ARU	**Arti**	**20.95**	**322**	*e*P		**P**	**23 52 16.3**	**+0.1**
ARU				*e*			23 52 36.6	
ARU				S		**S**	**23 56 08.6**	**-0.9**
ARU				SS			23 56 29.4	
ARU				pmax	pmax			
	comp=Z,18nm,1.0s							
ARU	**Arti**	**20.95**	**322**	*e*P		**P**	**23 52 15.7**	**-0.6**
	comp=Z,17nm,0.9s							
XAN	**Xi'an**	**22.76**	**101**	P		**P**	**23 52 37.9**	**+2.1**
XAN				AMB	AMB			
	comp=Z,3.0nm,0.8s,mb3.8							
XAN				AMB	AMB			
	comp=Z,48nm,3.5s							
BOD	**Bodaibo**	**25.99**	**41**	*e*P		**P**	**23 53 05.7**	**-0.4**
BOD				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.0							
CMAR	**Chiang Mai Arr**	**27.49**	**142**	P		**P**	**23 53 19.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=328,slow=6.7,SNR=3.6							
CMAR	**Chiang Mai Arr**	**27.49**	**142**	P		**P**	**23 53 19.9**	**-0.1**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ANN	**Anapa**	**32.07**	**291**	*e*P		**P**	**23 53 58.8**	**-1.6**
ANN				*e*S		**S**	**23 59 08.8**	**-3.5**
KSRS	**Korea Array**	**35.54**	**81**	LR		LR	00 10 15.2	
	comp=Z,29nm,18.5s,MS3.1,baz=130,slow=38							
JOF	**Joensuu**	**36.08**	**323**	*e*p		**P**	**23 54 34.5**	**-0.4**
	comp=Z,3.3nm,0.7s,mb4.4							
JOF	**Joensuu**	**36.08**	**323**	*e*P		**P**	**23 54 34.5**	**-0.4**
JOF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
BRTR	**Keskin Array B**	**36.10**	**283**	P		**P**	**23 54 35.9**	**+0.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=97,slow=7.7,SNR=10							
BRTR	**Keskin Array B**	**36.10**	**283**	*e*P		**P**	**23 54 36.9**	**+1.6**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
HABR	**Khabarovsk**	**37.59**	**61**	*e*P		**P**	**23 54 40.9**	**-7.0**
HABR				*e**PP		pP	23 54 53.2	+2.2
HABR				*e*S		**S**	**00 00 27.7**	**-9.4**
HABR				*e**SS		sS	00 00 47.4	+5.2
HABR				*e*SS		SS	00 03 09.3	-12
HABR				*e*			00 04 54.4	
HABR				MLR	MLR			
	comp=Z,18nm,15.0s,MS3.0							
HABR				MLR	MLR			
	comp=Z,21nm,15.0s							
TIXI	**Tiksi**	**37.78**	**22**	*e*P		**P**	**23 54 46.9**	**-2.3**
TIXI				pmax	pmax			
	comp=Z,1.0nm,1.0s							
KAF	**Kangasniemi**	**38.25**	**321**	*e*p		**P**	**23 54 57.5**	**+4.2**
ARCES	**ARCESS Array B**	**39.87**	**333**	P		**P**	**23 55 06.5**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.0,baz=95,slow=6.6,SNR=14							
ARCES	**ARCESS Array B**	**39.87**	**333**	P		**P**	**23 55 06.6**	**-0.2**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NIE	**Niedzica**	**42.57**	**302**	*e*P		**P**	**23 55 30.9**	**+1.7**
HFS	**Hagfors**	**44.39**	**318**	P		**P**	**23 55 43.6**	**-0.1**
	comp=Z,3.0nm,0.5s,mb4.3,baz=107,slow=9.5,SNR=23							
HFS	**Hagfors**	**44.39**	**318**	P		**P**	**23 55 43.6**	**-0.1**
HFS				pmax	pmax			
	comp=Z,3.0nm,0.5s							
NB2	**NORSAR Subarra**	**45.48**	**320**	P		**P**	**23 55 52.2**	**-0.2**
	comp=Z,2.6nm,0.5s,mb4.3,baz=80,slow=7.9							
NOA	**NORSAR Array B**	**45.48**	**320**	P		**P**	**23 55 51.8**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.0,baz=83,slow=7.2,SNR=12							
NOA	**NORSAR Array B**	**45.48**	**320**	*e*P		**P**	**23 55 52.3**	**-0.1**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CLL	**Collm**	**46.60**	**306**	*e*P		**P**	**23 56 02.0**	**+0.6**
CLL				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
CLL	**Collm**	**46.60**	**306**	*e*P		**P**	**23 56 02.0**	**+0.6**
	comp=Z,3.0nm,0.7s,mb4.3							
GERES	**GERESS Array B**	**46.90**	**303**	P		**P**	**23 56 03.8**	**0.0**
	comp=Z,0.4nm,0.6s,baz=60,slow=8.1,SNR=6.4							
DAVOX	**Davos/Dischmat**	**50.03**	**302**	P		**P**	**23 56 28.6**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.2,baz=114,slow=7.2,SNR=5.3							
LPG	**La Plagne**	**52.53**	**301**	*e*P		**P**	**23 56 47.7**	**+1.0**
	comp=Z,10nm,0.9s,mb4.4							
LPG	**La Plagne**	**52.53**	**301**	*e*P		**P**	**23 56 47.7**	**+1.0**
LPG				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
LPG	**La Plagne**	**52.53**	**301**	*e*P		**P**	**23 56 47.7**	**+1.0**
	comp=Z,5.3nm,0.9s,mb4.5							
LPL	**La Plagne**	**52.54**	**301**	*e*P		**P**	**23 56 47.7**	**+0.9**
	comp=Z,10nm,0.8s,mb4.5							
LPL	**La Plagne**	**52.54**	**301**	*e*P		**P**	**23 56 47.7**	**+0.9**
LPL				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
LPL	**La Plagne**	**52.54**	**301**	*e*P		**P**	**23 56 47.7**	**+0.9**
	comp=Z,5.3nm,0.8s,mb4.5							
SMF	**Signal de Mont**	**53.89**	**304**	*e*P		**P**	**23 56 56.2**	**-0.5**
AVF	**Avril sur Loir**	**54.13**	**304**	*e*P		**P**	**23 56 57.5**	**-1.0**
ESDC	**Sonseca Array**	**62.25**	**300**	P		**P**	**23 57 55.1**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.7,baz=64,slow=8.4,SNR=4.8							
TORD	**Torodi Ar. Bea**	**73.95**	**273**	P		**P**	**23 59 08.9**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.2,baz=43,slow=4.9,SNR=26							
YKA	**Yellowknife Ar**	**75.28**	**8**	P		**P**	**23 59 15.2**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.1,baz=341,slow=5.7,SNR=34							
YKA	**Yellowknife Ar**	**75.28**	**8**	P		**P**	**23 59 15.2**	**-0.9**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**78.33**	**130**	P		**P**	**23 59 33.7**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.0,baz=330,slow=5.6,SNR=7.3							
WRA	**Warramunga Arr**	**78.33**	**130**	*i*P		**P**	**23 59 34.5**	**+0.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**81.05**	**133**	P		**P**	**23 59 48.8**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=331,slow=5.4,SNR=11							
ASAR	**Alice Springs**	**81.05**	**133**	P		**P**	**23 59 48.8**	**+0.2**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
DBIC	**Dimbokro**	**83.04**	**273**	P		**P**	**23 59 58.8**	**-0.6**
	comp=Z,1.9nm,0.8s,mb4.2,baz=74,slow=5.7,SNR=3.0							
DBIC	**Dimbokro**	**83.04**	**273**	P		**P**	**23 59 58.8**	**-0.6**
DBIC				pmax	pmax			
	comp=Z,2.0nm,0.8s							
PDAR	**Pinedale Array**	**95.25**	**8**	P		**P**	**00 00 56.5**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.9,baz=310,slow=3.4,SNR=3.1							
NVAR	**Mina Array Bea**	**98.14**	**16**	P		**P**	**00 01 08.4**	**-2.1**
	comp=Z,0.5nm,0.9s,mb4.0,baz=17,slow=6.6,SNR=3.6							

ISCJB ***23*** *00:17:47.3±3.1, 58S±01.1×1465E±02, h58km±32km, mb3.7/5, MS2.9/1, Error ellipse: s-maj=31.1km s-min=23.0km az=173.5*
IDC ***23*** *00:17:49.2±4.7, 580S×14662E, h66km±49km, mb3.4/4, mb1 3.7/7, mb1mx3.5/17, mbtmp3.6/7, ML3.7/3, MS3.1/2, Ms1 3.0/2, ms1mx2.4/21, Error ellipse: s-maj=59.3km s-min=30.4km az=84.0*
NEIC ***23*** *00:17:49.4±1.9, 579S×14654E, h62km±19km, mb3.6/2, Error ellipse: s-maj=22.0km s-min=15.4km az=99.0*

ISC 23 00:17:49.6±2.8, 58S±01×1465E±02, h60km±28km, n15, σ0§46/17, mb3.6/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**3.63**	**169**	P		**Pn**	**00 18 43.5**	**+0.2**
	11nm,0.3s,baz=300,slow=9.1,SNR=24							
PMG				S		**Sn**	**00 19 24.5**	**-0.5**
	2.6nm,0.3s,baz=235,slow=0.3,SNR=5.5							
PMG				LR		LR	00 20 33.2	
	comp=Z,221nm,18.7s,baz=101,slow=45							
PMG	**Port Moresby**	**3.63**	**169**	P		**Pn**	**00 18 43.5**	**+0.2**
PMG				S		**Sn**	**00 19 24.5**	**-0.5**
PMG				LR		LR	00 20 33.2	
COEN	**Coen**	**8.72**	**202**	*e*P		**Pn**	**00 19 53.7**	**+0.6**
COEN				*e*S		**Sn**	**00 21 24.1**	**-5.9**
	4.2nm,0.3s							
COEN	**Coen**	**8.72**	**202**	*e*Pn		**Pn**	**00 19 54.0**	**+0.9**
	12nm,0.5s							
CTA	**Charters Tower**	**14.19**	**181**	P		**Pn**	**00 21 07.1**	**-0.4**
	0.6nm,0.3s,baz=6.5,slow=16,SNR=4.3							
CTAO	**Charters Tower**	**14.19**	**181**	*e*Pn		**Pn**	**00 21 07.5**	**-0.1**
WRAB	**Tennant Creek**	**18.33**	**219**	*e*P		**Pn**	**00 21 59.4**	**-0.3**
	1.0nm,0.4s							
WB2	**Warramunga Arr**	**18.34**	**219**	*e*P		**Pn**	**00 21 59.6**	**-0.2**
WRA	**Warramunga Arr**	**18.34**	**219**	P		**Pn**	**00 21 59.4**	**-0.5**
	0.4nm,0.3s,baz=43,slow=11,SNR=5.1							
ASAR	**Alice Springs**	**21.48**	**213**	P		**P**	**00 22 33.9**	**+0.5**
	0.8nm,0.5s,mb3.3,baz=33,slow=8.7,SNR=9.2							
FITZ	**Fitzroy Crossi**	**23.73**	**237**	*e*P		**P**	**00 22 56.8**	**+0.4**
	1.9nm,0.5s,mb3.8							
STKA	**Stephens Creek**	**26.32**	**189**	P		**P**	**00 23 20.3**	**+0.4**
	1.2nm,0.6s,mb3.6,baz=24,slow=18,SNR=4.0							
STKA				LR		LR	00 35 13.9	
	comp=Z,36nm,18.9s,baz=198,slow=40							
CMAR	**Chiang Mai Arr**	**52.71

KAF	**Kangasniemi**	**148.01**	**336**	*e*p		PKPdf	00 50 24.7	+0.8
BRTR	**Keskin Array B**	**152.05**	**290**	PKPbc		PKPbc	00 50 36.3	-1.4
	0.2nm,0.6s,baz=52,slow=2.4,SNR=3.6							

IGQ ***23*** *01:16:03.6,208S×8128W,h12km±10km,Mb4.7,Ms4.6, Error ellipse: s-maj=7.9km s-min=3.2km az=172.6*
IDC ***23*** *01:16:06.9±0.7,171S×8062W,h0km,mb3.6/8,mb1 3.9/12, mb1mx3.8/23,mbtmp3.8/12,ML3.8/4,MS3.4/2,Ms1 3.3/2, ms1mx2.7/24,Error ellipse: s-maj=29.3km s-min=15.2km az=57.0*
ISCJB ***23*** *01:16:12.3±1.1,188S×004×8095W×008,h54km±9km, mb3.9/15,MS3.2/2,Error ellipse: s-maj=13.2km s-min=6.4km az=162.7*
NEIC ***23*** *01:16:12.9±1.5,194S×8080W,h48km±14km,mb4.2/7, Error ellipse: s-maj=16.6km s-min=9.3km az=71.0*

ISC 23 01:16:13.5±1.1,191S×005×8092W±008,h50km±9km, h45km±2.1km:pP-P,n60,σ1§10/59,mb3.9/15,MS3.2/2, 7C-5D,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**0.88**	**13**	P	**Pn**	**01 16 25.3**	**-4.3**
CHIS				S	**Sn**	**01 16 39.9**	**-1.5**
JAMA	**Jama**	**1.79**	**24**	P	**Pn**	**01 16 40.3**	**-1.7**
JAMA	**Jama**	**1.79**	**24**	S	**Sn**	**01 17 04.2**	**+0.7**
QIL2	**Quilotoa**	**2.26**	**63**	P	**Pn**	**01 16 47.0**	**-1.4**
IGUA	**Igualata**	**2.32**	**80**	⇑P	**Pn**	**01 16 48.8**	**-0.4**
BIL2	**Estacion Bilba**	**2.46**	**79**	P	**Pn**	**01 16 51.6**	**+0.5**
ARRY	**Arrayan**	**2.50**	**81**	P	**Pn**	**01 16 50.9**	**-0.8**
JUI6	**Juive**	**2.50**	**79**	P	**Pn**	**01 16 51.6**	**-0.1**
RETU	**Refugio**	**2.52**	**80**	⇑P	**Pn**	**01 16 52.3**	**+0.3**
PATA	**Patacocha**	**2.52**	**81**	P	**Pn**	**01 16 51.7**	**-0.3**
RUN5	**Runtun**	**2.55**	**79**	⇑P	**Pn**	**01 16 52.5**	**+0.2**
ULBA	**Ulba**	**2.56**	**80**	⇑P	**Pn**	**01 16 52.6**	**+0.2**
PISA	**Pisayambo**	**2.67**	**72**	⇓P	**Pn**	**01 16 55.5**	**+1.3**
PISA	**Pisayambo**	**2.67**	**72**	⇓S	**Sn**	**01 17 32.8**	**+7.5**
CAMI	**Rancho Maria**	**2.71**	**63**	⇑P	**Pn**	**01 16 55.8**	**+1.2**
VC1	**Cotopaxi 1**	**2.82**	**63**	P	**Pn**	**01 16 57.1**	**+1.0**
TAMB	**Tambo**	**2.83**	**65**	P	**Pn**	**01 16 56.9**	**+0.7**
TERV	**Terraza Guagua**	**2.89**	**53**	P	**Pn**	**01 16 56.7**	**-0.4**
GGP	**Refugio Guagua**	**2.90**	**53**	⇑P	**Pn**	**01 16 56.5**	**-0.7**
PINO	**Pino**	**2.90**	**53**	⇓P	**Pn**	**01 16 56.3**	**-0.8**
ANTI	**Antisana**	**3.12**	**62**	P	**Pn**	**01 17 01.5**	**+1.3**
OTAV	**Otavalo**	**3.27**	**49**	*e*Pn	**Pn**	**01 17 00.6**	**-1.6**
OTAV				*e*Sn	**Sn**	**01 17 41.6**	**+1.7**
COTA	**Cotacachi**	**3.42**	**49**	⇑P	**Pn**	**01 17 04.7**	**+0.5**
LAV3	**Lava3-Reventad**	**3.75**	**61**	⇓P	**Pn**	**01 17 13.0**	**+4.1**
CONE	**Cono NE Rev Vo**	**3.76**	**61**	⇓P	**Pn**	**01 17 13.2**	**+4.3**
ATAH	**Atahualpa**	**5.65**	**154**	Pn	**Pn**	**01 17 36.6**	**+1.6**
	2.2nm,0.3s,baz=0.8,slow=4.6,SNR=15						
ATAH				Sn	**Sn**	**01 18 42.0**	**+3.5**
	2.0nm,0.3s,baz=67,slow=14,SNR=2.9						
ROSC	**El Rosal**	**9.41**	**44**	Pn	**Pn**	**01 18 27.4**	**+0.8**
	0.7nm,0.3s,baz=297,slow=18,SNR=1.9						
NNA	**Nana**	**2.20**		Pn	**Pn**	**01 18 43.4**	**-2.1**
	2.2nm,0.3s,baz=307,slow=6.8,SNR=5.3						
NNA				Sn	**Sn**	**01 20 39.8**	**-5.1**
	1.7nm,0.3s,baz=212,slow=20,SNR=4.8						
NNA	**Nana**	**10.80**	**158**	*e*Pn	**Pn**	**01 18 43.1**	**-2.4**
NNA				Sn	**Sn**	**01 20 39.9**	**-5.1**
SDV	**Santo Domingo**	**14.84**	**44**	Pn	**Pn**	**01 19 34.0**	**-6.4**
	0.2nm,0.3s,baz=320,slow=9.7,SNR=3.1						
PCRV	**Puerto La Cruz**	**20.18**	**53**	P	**P**	**01 20 41.3**	**-2.8**
	0.2nm,0.3s,baz=17,slow=11,SNR=2.2						
PCRV				LR	LR	01 28 52.6	
	comp=Z,86nm,22.0s,MS3.1,baz=330,slow=39						
LVC	**Limon Verde**	**23.66**	**151**	P	**P**	**01 21 19.8**	**-0.7**
	1.7nm,0.9s,mb3.5,baz=168,slow=13,SNR=2.0						
LVC	**Limon Verde**	**23.66**	**151**	*e*P	**P**	**01 21 20.2**	**-0.3**
	3.2nm,0.6s,mb3.9						
SIV	**San Ignacio**	**24.05**	**127**	P	**P**	**01 21 23.2**	**-1.0**
	0.8nm,0.7s,mb3.3,baz=317,slow=11,SNR=3.7						
BDFB	**Brasilia**	**35.19**	**115**	LR	LR	01 39 33.0	
	comp=Z,63nm,18.9s,MS3.4,baz=127,slow=40						
TXAR	**Lajitas Array**	**37.94**	**327**	P	**P**	**01 23 26.4**	**+0.1**
	0.2nm,0.6s,mb3.0,baz=152,slow=6.0,SNR=3.4						
TXAR				PcP	PcP	01 25 42.5	+1.0
	0.2nm,0.5s,baz=148,slow=4.3,SNR=2.9						
AMTX	**Amarillo**	**41.46**	**334**	*e*P	**P**	**01 23 54.5**	**-1.0**
	2.9nm,0.6s,mb4.1						
ANMO	**Albuquerque**	**43.79**	**329**	*e*P	**P**	**01 24 16.5**	**+2.1**
	1.2nm,0.6s,mb3.8						
SDCO	**Great Sand Dun**	**45.55**	**332**	*e*P	**P**	**01 24 30.2**	**+1.8**
	2.6nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**51.42**	**333**	P	**P**	**01 25 13.8**	**+0.3**
	0.4nm,0.8s,mb3.4,baz=113,slow=11,SNR=4.1						
NVAR	**Mina Array Bea**	**52.90**	**323**	P	**P**	**01 25 25.9**	**+1.4**
	0.5nm,0.7s,mb3.6,baz=121,slow=7.9,SNR=4.8						
ULM	**Lac du Bonnet**	**53.52**	**348**	P	**P**	**01 25 28.1**	**-0.9**
	7.1nm,0.6s,mb4.8,baz=155,slow=8.0,SNR=11						
HLID	**Hailey**	**54.33**	**330**	*e*P	**P**	**01 25 35.9**	**+0.9**
	2.2nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	**69.10**	**344**	P	**P**	**01 27 12.4**	**-1.6**
	0.6nm,0.8s,mb3.6,baz=140,slow=5.7,SNR=9.1						
LIC	**Lamto**	**76.20**	**83**	*e*P	**P**	**01 27 57.1**	**-0.1**
	10.0nm,0.6s,mb5.0						
TIC	**Toumodi**	**76.23**	**83**	*e*P	**P**	**01 27 57.4**	**0.0**
	45nm,1.3s						
DBIC	**Dimbokro**	**76.39**	**83**	P	**P**	**01 27 56.7**	**-1.7**
	3.6nm,0.7s,mb4.4,baz=249,slow=6.3,SNR=7.0						
DBIC	**Dimbokro**	**76.39**	**83**	*e*P	**P**	**01 27 58.0**	**-0.3**
	3.7nm,0.7s,mb4.4						
KIC	**Kosan Boka**	**76.49**	**83**	*e*P	**P**	**01 27 58.9**	**0.0**
	33nm,0.8s						
VNA3	**Neumayer Olymp**	**82.23**	**162**	*e*	**P**	**01 28 29.6**	**+0.6**
VNA3				*e*		01 28 37.5	
VNA3				*e*	pP	01 28 43.4	0.0
VNA1	**Neumayer--Stat**	**82.50**	**161**	*e*	**P**	**01 28 30.8**	**+0.4**
VNA1				*e*		01 28 38.1	
VNA1				*e*	pP	01 28 42.9	-2.0
VNA2	**Neumayer--Watz**	**82.85**	**161**	*e*	**P**	**01 28 32.9**	**+0.7**
	baz=302,slow=5.5						
VNA2				*e*		01 28 39.5	
VNA2				*e*	pP	01 28 46.6	-0.1
TORD	**Torodi Ar. Bea**	**83.25**	**77**	P	**P**	**01 28 33.9**	**-1.5**
	0.3nm,0.5s,mb3.6,baz=289,slow=4.6,SNR=9.1						
SNAA	**Sanae**	**84.45**	**162**	*e*	**P**	**01 28 40.5**	**+0.1**
SNAA				*e*		01 28 47.1	
SNAA				*e*	pP	01 28 52.2	-2.7
SNAA	**Sanae**	**84.45**	**162**	*e*P	**P**	**01 28 40.6**	**+0.2**
	1.7nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**127.54**	**226**	PKP	PKPdf	01 35 16.9	+3.2
	1.6nm,0.7s,baz=28,slow=11,SNR=4.2						
KURK	**Kurchatov**	**128.38**	**16**	PKP	PKPdf	01 35 14.8	+0.2
	0.4nm,0.8s,baz=328,slow=2.7,SNR=4.0						
MKAR	**Makanchi Array**	**132.96**	**16**	PKP	PKPdf	01 35 24.1	+0.6
	0.3nm,0.8s,baz=294,slow=3.7,SNR=2.3						
ASAR	**Alice Springs**	**137.65**	**231**	PKP	PKPdf	01 35 32.0	-0.9
	0.7nm,0.7s,baz=113,slow=1.9,SNR=7.8						
WRA	**Warramunga Arr**	**139.16**	**236**	PKP	PKPdf	01 35 36.5	+0.7
	0.5nm,0.3s,baz=109,slow=2.0,SNR=2.7						

NEIC ***23*** *01:44:27.5±2.3,3696N×7198E,h181km±14km,mb3.9/1, Error ellipse: s-maj=27.1km s-min=14.3km az=175.0*
IDC ***23*** *01:44:30.2±7.0,3707N×7198E,h204km±57km,mb3.1/5, mb1 3.1/10,mb1mx3.0/26,mbtmp3.0/10,Error ellipse: s-maj=51.2km s-min=26.0km az=176.0*
NNC ***23*** *01:44:31.7±16.0,3739N×7141E,h147km±233km,mb2.9, mpv3.8,Error ellipse: s-maj=181.3km s-min=94.7km az=23.0*
ISCJB ***23*** *01:44:34.6±2.2,377N±02×719E±0.1,h221km±15km, mb3.2/5,Error ellipse: s-maj=26.8km s-min=14.5km az=14.4*

ISC 23 01:44:35.9±2.3,377N±02×719E±01,h213km±15km,n30, σ0§99/34,mb3.2/5,2C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.65**	**16**	P	**Pn**	**01 45 46.4**	**+0.4**
	SNR=79						
AML	**Almayashu**	**4.65**	**16**	*e*Pn	**Pn**	**01 45 45.9**	**-0.1**
	74nm,0.4s						
AML				*e*Sn	**S**	**01 46 40.4**	**-1.1**
UCH	**Uchtor**	**4.96**	**23**	P	**S**	**01 46 49.9**	**+1.3**
	SNR=8.9						
UCH	**Uchtor**	**4.96**	**23**	*e*Pn	**Pn**	**01 45 49.6**	**-0.3**
	2.4nm,0.3s						
UCH				*e*Sn	**S**	**01 46 49.1**	**+0.6**
EKS2	**Erkin-Say**	**5.17**	**15**	P	**Pn**	**01 45 53.0**	**+0.4**
	SNR=27						
EKS2	**Erkin-Say**	**5.17**	**15**	*e*Pn	**Pn**	**01 45 52.6**	**+0.1**
	19nm,0.6s						
EKS2				*e*Sn	**S**	**01 46 48.8**	**-4.7**
AAK	**Ala-Archa**	**5.32**	**21**	P	**Pn**	**01 45 55.1**	**+0.6**
	SNR=39						
AAK	**Ala-Archa**	**5.32**	**21**	*e*Pn	**Pn**	**01 45 54.6**	**+0.1**
	22nm,0.4s						
KBK	**Karagabulak**	**5.48**	**24**	P	**Pn**	**01 45 57.2**	**+0.7**
	SNR=18						
KK31	**Karatay Array**	**5.52**	**349**	Pn	**Pn**	**01 45 56.8**	**-0.3**
	1.8nm,0.3s,baz=169,slow=12,SNR=56						
KK31				⇓Sn	**S**	**01 47 00.1**	**-1.4**
	8.6nm,0.5s,baz=177,slow=23,SNR=5.9						
ULHL	**Ulahol**	**5.63**	**35**	P	**Pn**	**01 45 57.8**	**-0.7**
	SNR=10						
CHMS	**Chumysh**	**5.73**	**21**	P	**Pn**	**01 46 00.0**	**+0.3**
	SNR=6.4						
USP	**Ospenovka**	**5.91**	**19**	P	**Pn**	**01 46 02.4**	**+0.4**
	SNR=6.5						
TKM2	**Tokmak 2**	**5.94**	**27**	⇑Pn	**Pn**	**01 46 02.1**	**-0.2**
	8.7nm,0.5s						
TKM2	**Tokmak 2**	**5.94**	**27**	P	**Pn**	**01 46 02.4**	**0.0**
	SNR=18						
TKM2	**Tokmak 2**	**5.94**	**27**	*e*Pn	**Pn**	**01 46 02.1**	**-0.3**
	13nm,0.6s						
MKAR	**Makanchi Array**	**11.90**	**37**	P	**Pn**	**01 47 18.4**	**-0.6**
	0.1nm,0.3s,baz=194,slow=11,SNR=5.1						
KURK	**Kurchatov**	**13.88**	**18**	P	**Pn**	**01 47 44.9**	**+1.3**
	0.1nm,0.3s,baz=206,slow=11,SNR=3.4						
AB09	**Akbulak array**	**14.46**	**327**	⇑P	**Pn**	**01 47 49.0**	**-1.8**
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**15.38**	**357**	P	**Pn**	**01 48 03.3**	**+1.5**
	0.3nm,0.3s,baz=163,slow=9.7,SNR=5.3						
AKTK	**Aktyubinsk**	**16.16**	**326**	P	**P**	**01 48 12.5**	**+2.0**
AKTO	**Aktyubinsk**	**16.16**	**326**	⇓P	**P**	**01 48 11.3**	**+0.8**
	0.8nm,0.9s						
AKTO	**Aktyubinsk**	**16.16**	**326**	P	**P**	**01 48 12.5**	**+2.0**
	0.8nm,0.3s,baz=131,slow=9.7,SNR=11						
ZALV	**Zalesovo Beam**	**18.53**	**25**	P	**P**	**01 48 36.7**	**+0.4**
	0.3nm,0.3s,baz=207,slow=9.3,SNR=9.7						
ZALV	**Zalesovo Beam**	**18.53**	**25**	P	**P**	**01 48 36.7**	**+0.4**
SONM	**Songino Array**	**27.06**	**57**	P	**P**	**01 49 57.5**	**-0.9**
	0.2nm,0.6s,mb3.0,baz=259,slow=0.7,SNR=2.6						
ARCES	**ARCESS Array B**	**40.34**	**337**	P	**P**	**01 51 52.4**	**+0.1**
	4.2nm,1.0s,mb3.8,baz=118,slow=9.9,SNR=11						
NOA	**NORSAR Array B**	**43.89**	**322**	P	**P**	**01 52 20.2**	**-0.8**
	1.4nm,0.9s,mb3.3,baz=96,slow=7.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**66.48**	**269**	P	**P**	**01 54 58.2**	**-4.7**
	0.2nm,0.8s,mb2.8,baz=30,slow=7.9,SNR=3.1						
YKA	**Yellowknife Ar**	**80.03**	**3**	P	**P**	**01 56 19.5**	**-1.7**
	0.2nm,0.5s,mb3.0,baz=350,slow=5.2,SNR=7.0						

BJI ***23*** *01:47:22.8,373S×10031E,h10km,mB4.7,mb4.6*
IDC ***23*** *01:47:27.1±1.0,312S×10026E,h0km,mb4.2/14, mb1 4.3/15,mb1mx4.2/24,mbtmp4.2/15,ML4.3/1,MS3.5/5, Ms1 3.5/5,ms1mx3.1/28,Error ellipse: s-maj=37.3km s-min=13.8km az=52.0*
ISCJB ***23*** *01:47:30.2±0.6,318S±008×1003E±0.1,h33km,mb4.3/25, MS3.5/5,Error ellipse: s-maj=18.1km s-min=7.7km az=148.6*
NEIC ***23*** *01:47:30.1±6.4,313S×10031E,h18km±37km,mb4.4/9, Error ellipse: s-maj=27.0km s-min=6.4km az=51.0*
DJA ***23*** *01:47:36,292S×9987E,h30km,MLv4.6/3*

ISC 23 01:47:32.9±0.7,311S±009×1004E±01,h35km,n42, σ1§02/36,mb4.3/25,MS3.5/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**2.19**	**2**	P	**Pn**	**01 48 06.8**	**0.0**
KSI	**Kapahiang**	**2.27**	**104**	P	Px	01 48 20.3	
PPI	**Padang Panjang**	**2.64**	**0**	P	**Pn**	**01 48 13.5**	**+0.5**
PPI				S	**Sn**	**01 48 47.7**	**+4.0**
GSI	**Gunungsitoli**	**5.21**	**327**	P	**Pn**	**01 48 47.6**	**-0.8**
KULM	**Kulim**	**8.35**	**2**	*e*Pn	**Pn**	**01 49 31.1**	**-0.4**
	16nm,0.9s						
KAPI	**Kappang**	**19.41**	**96**	P	**Pn**	**01 51 55.8**	**-1.7**
	0.9nm,0.3s,baz=264,slow=12,SNR=5.8						
CMAR	**Chiang Mai Arr**	**21.48**	**356**	P	**P**	**01 52 17.2**	**-1.4**
	3.8nm,0.7s,mb3.8,baz=187,slow=9.7,SNR=19						
CHTO	**Chiang Mai**	**21.83**	**356**	*e*P	**P**	**01 52 20.9**	**-1.5**
	4.5nm,0.9s,mb3.9						
LSA	**Lhasa**	**33.80**	**345**	P	**P**	**01 54 11.1**	**-0.6**
LSA	**Lhasa**	**33.80**	**345**	*e*P	**P**	**01 54 13.1**	**+1.4**
	7.8nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**37.10**	**119**	P	**P**	**01 54 40.6**	**+0.3**
	1.9nm,0.5s,mb4.2,baz=297,slow=8.7,SNR=10						
WRA				LR	LR	02 12 10.7	
	comp=Z,61nm,20.2s,MS3.4,baz=215,slow=40						
WRAB	**Tennant Creek**	**37.11**	**119**	*e*P	**P**	**01 54 40.5**	**+0.2**
	3.0nm,0.5s,mb4.4						
XAN	**Xi'an**	**37.82**	**12**	P	**P**	**01 54 46.0**	**-0.1**
XAN				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.8						
XAN				AMB	AMB		
	comp=Z,58nm,4.3s						
ASAR	**Alice Springs**	**38.29**	**125**	P	**P**	**01 54 51.1**	**+0.8**
	comp=Z,2.9nm,0.6s,mb4.2,baz=300,slow=7.9,SNR=22						
ASAR				PcP	PcP	01 57 02.6	-1.3
	comp=Z,0.3nm,0.7s,baz=301,slow=2.7,SNR=4.6						
GTA	**Gaotai**	**42.31**	**359**	*e*P	**P**	**01 55 25.4**	**+2.1**
GTA				AP	pP	01 55 28.9	-4.7
GTA				XP	sP	01 55 30.4	-7.4
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb3.9						
HHC	**Hu-ho-hao-te**	**44.93**	**12**	*e*P	**P**	**01 55 46.3**	**+2.0**
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,53nm,5.7s						
KSRS	**Korea Array**	**47.78**	**30**	P	**P**	**01 56 05.2**	**-1.5**
	comp=Z,1.7nm,0.8s,mb4.1,baz=215,slow=9.5,SNR=5.1						
KSRS				LR	LR	02 18 35.1	
	comp=Z,18nm,18.7s,MS3.1,baz=53,slow=39						
CTA	**Charters Tower**	**47.78**	**114**	P	**P**	**01 56 06.8**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.3,baz=285,slow=8.0,SNR=6.1						
CTAO	**Charters Tower**	**47.78**	**114**	*e*P	**P**	**01 56 07.7**	**+0.5**
	comp=Z,2.9nm,0.7s,mb4.4						
WMQ	**Urumqi**	**48.09**	**348**	P	**P**	**01 56 11.0**	**+1.9**
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**48.13**	**131**	P	**P**	**01 56 10.0**	**+0.4**
	comp=Z,1.6nm,0.7s,mb4.2,baz=280,slow=12,SNR=5.5						
STKA				LR	LR	02 18 12.7	
	comp=Z,77nm,20.6s,MS3.7,baz=205,slow=38						
STKA	**Stephens Creek**	**48.13**	**131**	P	**P**	**01 56 10.0**	**+0.4**
STKA				LR	LR	02 18 12.7	
TKM2	**Tokmak 2**	**51.00**	**337**	*e*P	**P**	**01 56 31.9**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.5						
SONM	**Songino Array**	**51.01**	**5**	P	**P**	**01 56 32.0**	**+0.7**
	comp=Z,3.8nm,0.8s,mb4.4,baz=185,slow=9.0,SNR=33						
SONM				PcP	PcP	01 57 47.7	+0.8
	comp=Z,1.4nm,0.6s,baz=190,slow=3.7,SNR=6.0						
ULN	**Ulaanbaatar**	**51.10**	**6**	*e*P	**P**	**01 56 32.9**	**+1.0**
	comp=Z,5.5nm,1.1s,mb4.4						
AML	**Almayashu**	**51.13**	**335**	*e*P	**P**	**01 56 32.6**	**+0.4**
	comp=Z,2.3nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**51.53**	**335**	*e*P	**P**	**01 56 35.9**	**+0.6**
	comp=Z,4.8nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**52.20**	**344**	P	**P**	**01 56 40.0**	**-0.2**
	comp=Z,5.2nm,0.7s,mb4.6,baz=149,slow=8.4,SNR=50						
MJAR	**Matsushiro Arr**	**52.90**	**38**	P	**P**	**01 56 44.7**	**-0.8**
	comp=Z,5.2nm,1.2s,mb4.3,baz=190,slow=12,SNR=4.5						
KURK	**Kurchatov**	**56.77**	**344**	P	**P**	**01 57 12.2**	**-1.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=162,slow=6.7,SNR=11						
KURK	**Kurchatov**	**56.77**	**344**	*e*P	**P**	**01 57 12.4**	**-0.9**
	comp=Z,5.4nm,1.0s,mb4.5						
ZAA0	**Zalesovo Array**	**58.32**	**349**	*e*P	**P**	**01 57 24.1**	**-0.1**
ZALV	**Zalesovo Beam**	**58.32**	**349**	P	**P**	**01 57 23.6**	**-0.5**
	comp=Z,4.7nm,0.8s,mb4.6,baz=160,slow=4.7,SNR=25						
BVAR	**Borovoye Array**	**61.35**	**340**	P	**P**	**01 57 44.3**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.2,baz=235,slow=39,SNR=3.7						
EIL	**Elat**	**70.44**	**303**	LR	LR	02 26 54.5	
	comp=Z,26nm,19.4s,MS3.5,baz=57,slow=34						
BRTR	**Keskin Array B**	**74.35**	**313**	P	**P**	**01 59 05.2**	**-1.9**
	comp=Z,0.9nm,0.6s,mb3.9,baz=137,slow=7.9,SNR=7.8						
ARCES	**ARCESS Array B**	**87.64**	**340**	P	**P**	**02 00 17.4**	**+0.2**
	comp=Z,3.2nm,1.0s,mb4.5,baz=111,slow=6.3,SNR=2.8						
ARCES				LR	LR	02 46 35.5	
	comp=Z,44nm,20.0s,MS3.9,baz=40,slow=40						
WCI	**Wyandotte Cave**	**144.52**	**9**	*e*PKPdf	PKPdf	02 07 04.8	-1.2
TXAR	**Lajitas Array**	**145.33**	**39**	PKPbc	PKPbc	02 07 09.0	+1.4
	comp=Z,4.6nm,0.7s,baz=303,slow=0.6,SNR=50						
MIAR	**Mount Ida**	**146.13**	**21**	*e*PKPbc	PKPbc	02 07 10.1	+0.2
WVT	**Waverly**	**146.28**	**12**	*e*PKPbc	PKPbc	02 07 10.2	-0.1
JCT	**Junction City**	**146.75**	**33**	*e*PKPbc	PKPbc	02 07 12.2	+0.4

MEX 23 01:49:20.4±0.4,1680N×9962W,h6km±4km,MD3.5,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.29**	**284**	*i* P	Pg	01 49 25.8	-0.3
ACX				*i* S	Sg	01 49 29.9	-0.1
CAIG	**El Cayaco**	**0.67**	**292**	*i* P	Pg	01 49 32.6	-0.7
CAIG				*i* S	Sg	01 49 41.6	-0.4
PNIG	**Pinotepa**	**1.49**	**105**	*e*P	Pn	01 49 44.2	-3.6
PNIG				*i* S	Sn	01 50 01.5	-6.0
UTMO	**Huajuapan**	**2.02**	**59**	*e*P	Pn	01 49 51.9	-3.1
UTMO				*i* S	Sn	01 50 16.0	-4.6

ISCJB ***23*** *02:07:57.4±8.1,176S±02×1736W±02,h5km±52km, mb4.0/5,Error ellipse: s-maj=40.2km s-min=18.9km az=38.6*
IDC ***23*** *02:07:58.5±0.9,1764S×17352W,h0km,mb3.9/5, mb1 4.2/6,mb1mx3.9/19,mbtmp3.9/6,ML1.9/1,Error ellipse: s-maj=42.0km s-min=21.4km az=136.0*

ISC 23 02:08:01.8±5.7,175S±01×1736W±02,h25km±41km,n12, σ1§01/11,mb4.0/5,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.97**	**26**	Pn	**Pn**	**02 09 01.6**	**+0.5**
	4.0nm,0.3s,baz=354,slow=20,SNR=5.0						
AFI				Sn	**Sn**	**02 09 44.4**	**-2.5**
	17nm,0.3s,baz=108,slow=22,SNR=9.7						
RAR	**Rarotonga**	**13.52**	**108**	Pn	**Pn**	**02 11 05.2**	**-6.9**
	1.2nm,0.3s,baz=212,slow=11,SNR=6.1						
URZ	**Urewera**	**22.23**	**200**	P	**P**	**02 12 56.0**	**-0.6**
	3.5nm,0.3s,mb4.2,baz=141,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**49.24**	**259**	P	**P**	**02 16 48.7**	**0.0**
	1.1nm,0.4s,mb4.3,baz=97,slow=6.5,SNR=7.9						
ASAR	**Alice Springs**	**49.34**	**254**	P	**P**	**02 16 49.4**	**0.0**
	2.9nm,0.6s,mb4.5,baz=89,slow=8.5,SNR=44						
ASAR				PcP	PcP	02 18 14.2	+2.3
	0.5nm,0.9s,baz=107,slow=3.6,SNR=4.4						
NVAR	**Mina Array Bea**	**75.99**	**42**	P	**P**	**02 19 48.3**	**+1.5**
	0.4nm,0.7s,mb3.5,baz=224,slow=8.4,SNR=3.8						
PDAR	**Pinedale Array**	**83.93**	**42**	P	**P**	**02 20 30.7**	**+1.0**
	0.4nm,0.7s,mb3.6,baz=219,slow=8.8,SNR=3.5						
VNA3	**Neumayer Olymp**	**90.78**	**175**	*e*	**P**	**02 21 01.8**	**-0.6**
VNA3				*e*		02 21 05.0	
VNA2	**Neumayer--Watz**	**91.28**	**175**	*e*	**P**	**02 21 04.1**	**-0.6**
	baz=194,slow=4.0						
VNA1	**Neumayer--Stat**	**91.48**	**175**	*e*	**P**	**02 21 10.2**	**+4.6**
VNA1				*e*		02 21 13.3	
GERES	**GERESS Array B**	**148.19**	**351**	PKPbc	PKPbc	02 27 47.5	+2.0
	0.3nm,0.6s,baz=22,slow=5.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**173.70**	**133**	PKPab	PKPab	02 29 38.8	-0.8
	0.2nm,0.6s,baz=290,slow=4.4,SNR=4.1						

TAP ***23*** *02:12:42.5,2348N×120 40E,h10km,ML3.4, B*
ISCJB ***23*** *02:12:43.5±0.3,2348N±001×12038E±002,h14km±2km, Error ellipse: s-maj=2.8km s-min=2.4km az=17.8*
NEIC ***23*** *02:12:44.0±3.0,2344N×12054E,h20km±9km,ML4.0(TAP), Error ellipse: s-maj=45.8km s-min=12.5km az=92.0*
NEIC Recorded [3 TAP] in Chia-i and [1 TAP] in Chang-hua, T'ai-nan and Yun-lin Counties.

**ISC 23 02:12:43.4±0.3,2348N±001×12

baz=277
PNG eS Sg 02 13 07.7 -0.6
baz=277
SSD Sandimen 0.77 162 eP Pb 02 12 58.3 0.0
baz=151
SSD eS Sg 02 13 09.8 +1.3
baz=151
YULB Yu-li 0.85 96 ePn Pn 02 12 58.4 -2.2
YULB eSn Sn 02 13 09.6 -3.1
TWF1 Yuli 0.85 98⇑iP Pb 02 12 59.3 -0.5
baz=110
TWF1 eS Sb 02 13 11.0 +0.1
baz=110
EHY Hungye 0.87 88⇑iP Pb 02 12 59.6 -0.4
baz=95
EHY eS Sb 02 13 12.2 +0.9
baz=95
TWG Pinlang 0.91 136 ePn Pn 02 13 00.2 -1.3
TWG eSn Sn 02 13 13.5 -0.8
TWG Pinlang 0.91 136 eP Pb 02 13 00.4 -0.4
baz=127
TWG S Sb 02 13 13.5 +0.8
baz=127
TWQ1 Liyutan 0.94 23 eP Pb 02 13 00.8 -0.4
baz=21
TWQ1 eS Sb 02 13 13.5 +0.1
baz=21
ESL Shilin 1.02 71 eP Pb 02 13 02.0 -0.7
baz=70
ESL eS Sb 02 13 16.4 +0.5
baz=70
WHF Hehuan Shan 1.05 51 eP Pb 02 13 02.6 -0.5
baz=49
WHF eS Sb 02 13 17.1 +0.5
baz=49
TWT Tachien 1.06 43 eP Pb 02 13 02.4 -1.0
baz=41
TWT eS Sb 02 13 16.5 -0.5
baz=41
SCZT Fangliau 1.12 169 eP Pb 02 13 04.5 +0.1
baz=171
HWA Hwalien 1.23 66 eP Pn 02 13 06.0 +0.2
baz=64
TWD Chiawan 1.27 62 eP Pn 02 13 06.3 -0.1
baz=48
TWD eS Sb 02 13 22.6 -0.2
baz=48
NACB Ninganchiao 1.31 58 ePn Pn 02 13 06.7 -0.3
NACB eSn Sn 02 13 23.9 -0.2
NNS Nan Shan 1.32 43 eP Pn 02 13 06.7 -0.4
baz=41
NSK Sanguang 1.49 37 eP Pn 02 13 09.0 -0.5
baz=35
NSK eS Sn 02 13 29.4 +0.9
baz=35
YHNB Yeheng 1.50 37 ePn Pn 02 13 08.8 -0.7
YHNB eSn Sn 02 13 28.3 -0.4
ENA Nanau 1.56 53 eP Pn 02 13 11.2 +0.8
baz=51
ENA eS Sn 02 13 32.3 +1.9
baz=51
ENTT Nioudou 1.58 43 eP Pn 02 13 11.0 +0.2
baz=25
TWE Neicheng 1.71 43 eP Pn 02 13 13.2 +0.7
baz=29
TWE eS Sn 02 13 37.1 +3.2
baz=29
TWC Suao 1.75 50 eP Pn 02 13 14.4 +1.4
baz=48
TWC eS Sn 02 13 38.4 +3.4
baz=48
KNM Kinmen 2.01 298 eP Pn 02 13 19.7 +3.1
baz=295

*CSEM **23** 02:29:01.9±0.1,3162N×5059E,h10km,ML2.4, Error ellipse: s-maj=3.9km s-min=2.1km az=150.0*
*ISCJB **23** 02:29:02.6±0.8,3157N±006×5054E±007,h10km, Error ellipse: s-maj=9.5km s-min=7.4km az=139.4*
*THR **23** 02:29:02.0±0.9,3141N×5063E,h36km±16km, ML2.9*
*KISR **23** 02:29:08.6,31.35N×5021E,h40km,ML2.4*

ISC 23 02:29:03.2±0.8,3152N±006×5054E±007,h10km,n10, σ1§46/15,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.59**	**292**	*e*P	**Pn**	**02 29 31.2**	**-0.2**
SHGR				*e*Sg	**Sg**	**02 29 55.0**	**+0.6**
SHGR				AML	AML	02 30 03.2	
	comp=N,120nm,0.7s						
SHGR				AML	AML	02 30 03.3	
	comp=E,120nm,0.5s						
SHGR	**Shooshtar-Gavs** SNR=54	**1.59**	**292**	*e*P	**Pn**	**02 29 29.3**	**-2.2**
SHGR	SNR=100			*e*Sg	**Sg**	**02 29 55.0**	**+0.5**
NASN	**Na'in**	**2.31**	**56**	*e*Pn	**Pn**	**02 29 39.9**	**-1.5**
GHVR	**GHOM**	**3.02**	**12**	*e*Pn	**Pn**	**02 29 51.2**	**+0.1**
ASAO	**Ashtian**	**3.05**	**352**	*e*P	**Pn**	**02 29 51.3**	**-0.2**
ASAO				AML	AML	02 30 52.6	
	comp=N,26nm,0.3s						
UMR	**Umm Al-Rimmam** baz=231	**3.12**	**232**	*e*P	**Pn**	**02 29 53.7**	**+1.2**
UMR				AML	AML	02 30 42.1	
	comp=Z,21nm,0.4s,baz=231						
MIB	**Mutribah** baz=239	**3.24**	**239**	*e*P	**Pn**	**02 29 55.2**	**+1.0**
MIB				*e*S	**Sn**	**02 30 30.5**	**-2.3**
MIB				AML	AML	02 30 42.1	
	comp=Z,16nm,0.5s,baz=239						
KBD	**Kabd**	**3.39**	**227**	*e*P	**Pn**	**02 29 57.6**	**+1.4**
NAY	**Al-Naaiem** baz=231	**3.63**	**232**	*e*P	**Pn**	**02 30 01.0**	**+1.5**
NAY				*e*S	**Sn**	**02 30 40.2**	**-2.4**
	baz=231						
NAY				AML	AML	02 30 42.5	
	comp=Z,6.0nm,0.5s,baz=231						
RDF	**Al-Radifah** baz=224	**3.65**	**226**	*e*P	**Pn**	**02 30 01.7**	**+1.9**
RDF				*e*S	**Sn**	**02 30 41.0**	**-2.0**
	baz=224						
RDF				AML	AML	02 30 47.2	
	comp=Z,9.0nm,0.4s,baz=224						

*NEIC **23** 02:30:06.9, 1663N×6203W, h106km, MD4.1(RSPR), After RSPR.*
*RSPR **23** 02:30:06.9, 1663N×6203W, h106km±10km*
*ISCJB **23** 02:30:07.8±1.3, 1678N±008×6211W±0.1, h140km±13km, Error ellipse: s-maj=19.4km s-min=8.7km az=141.2*
*TRN **23** 02:30:07.5, 1677N×6215W, h139km, MD3.4, M3.2(FDF)*

ISC 23 02:30:08.0±1.4,1679N±008×6208W±010,h144km±12km, n13,σ0§54/19,6C-2D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.33**	**39**⇑	*e*P	**Pn**	**02 30 29.0**	**+1.0**
BPA				*e*S	**Sn**	**02 30 43.3**	**+0.1**
LZG	**Guadaloupe-1**	**0.70**	**156**	*e*P	**Pn**	**02 30 29.8**	**-0.2**
LZG				*e*S	**Sn**	**02 30 46.0**	**-0.6**
SCG	**Saint Claude**	**0.84**	**153**⇓	*i*P	**Pn**	**02 30 30.9**	**0.0**
ANWB	**Willy Bob**	**0.92**	**18**	*e*Pn	**Pn**	**02 30 31.6**	**+0.1**
ANWB				*e*Sn	**Sn**	**02 30 49.7**	**+0.1**
DEG	**La Desirade**	**1.08**	**116**	*e*P	**Pn**	**02 30 32.9**	**-0.1**
DEG				*e*S	**Sn**	**02 30 51.0**	**-1.0**
MGG	**Marie-Galante**	**1.13**	**140**	*e*P	**Pn**	**02 30 33.6**	**+0.2**
DWS	**Wesley**	**1.42**	**149**	*e*P	**Pn**	**02 30 36.9**	**+0.6**
DWS				*e*S	**Sn**	**02 30 58.6**	**+0.7**
STVI	**Saint Thomas**	**3.15**	**300**⇑	*e*P	**Pn**	**02 30 56.4**	**-0.7**
MTP	**Monte Pirata**	**3.56**	**292**⇓	*e*P	**Pn**	**02 31 01.8**	**-0.6**
CPD	**Cerro la Pandu**	**3.87**	**289**⇑	*e*P	**Pn**	**02 31 05.6**	**-0.8**
CBYP	**Canovanas**	**3.90**	**293**⇑	*e*P	**Pn**	**02 31 06.6**	**-0.1**
CBYP				*e*S	**Sn**	**02 31 53.0**	**+0.7**
CRPR	**Cabo Rojo, PR**	**4.96**	**285**⇑	*e*P	**Pn**	**02 31 21.0**	**+0.3**
LSP	**Las Mesas**	**4.97**	**287**⇑	*e*P	**Pn**	**02 31 21.4**	**+0.4**

NEIC 23 02:33:30.1,3890S×17837E,h40km,ML3.7(WEL),After WEL.,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.56**	**257**	P	Pn	02 33 41.1	-0.5
PUZ	**Puketiti**	**0.83**	**354**	P	Pn	02 33 44.6	-0.7
MWZ	**Matawai**	**0.87**	**310**	P	Pn	02 33 45.1	-0.7
URZ	**Urewera**	**1.18**	**303**	P	Pn	02 33 49.8	-0.2
MXZ	**Matakaoa Point**	**1.33**	**358**	P	Pn	02 33 52.3	+0.1
BKZ	**Black Stump Fm**	**1.49**	**259**	P	Pn	02 33 54.1	-0.2
EDRZ	**Edgecumbe**	**1.50**	**301**	P	Pn	02 33 54.9	+0.3
MOVZ	**Moawhango**	**2.10**	**255**	P	Pn	02 34 03.2	+0.5
TUVZ	**Tukino**	**2.15**	**259**	P	Pn	02 34 03.7	+0.3
NGZ	**Ngauruhoe**	**2.17**	**262**	P	Pn	02 34 04.1	+0.4
TSZ	**Takapari Road**	**2.19**	**237**	P	Pn	02 34 02.0	-2.0
WNVZ	**Wahianoa**	**2.20**	**258**	P	Pn	02 34 04.3	+0.2
FWVZ	**Far West T-bar**	**2.22**	**260**	P	Pn	02 34 04.6	+0.2
BFZ	**Birch Farm**	**2.42**	**222**	P	Pn	02 34 04.5	-2.6
MRZ	**Mangatainoka R**	**2.78**	**230**	P	Pn	02 34 10.0	-2.1
MTW	**Mount Morrison**	**3.15**	**223**	P	Pn	02 34 13.5	-3.7
KIW	**Kapiti Island**	**3.31**	**233**	P	Pn	02 34 17.6	-1.7
PAWZ	**Paruwai Farm**	**3.35**	**221**	P	Pn	02 34 16.5	-3.4
CAW	**Cannon Point**	**3.36**	**228**	P	Pn	02 34 17.9	-2.2
MSWZ	**Moikau Station**	**3.47**	**223**	P	Pn	02 34 17.8	-3.7
TCW	**Tory Channel**	**3.90**	**232**	P	Pn	02 34 25.0	-2.4
NNZ	**Nelson**	**4.47**	**237**	P	Pn	02 34 33.6	-1.7
QRZ	**Quartz Range**	**4.89**	**245**	P	Pn	02 34 38.1	-2.9

*MAN **23** 02:41:44, 574N×126.18E, h123km, mb4.3, ML3.1, MS2.9*
*ISCJB **23** 02:41:45.5±0.7, 574N±007×1259E±0.1, h132km±7km, mb3.8/11, Error ellipse: s-maj=20.8km s-min=10.6km az=169.3*
*NEIC **23** 02:41:46.3±0.9, 576N×12583E, h122km±8km, mb4.0/4, Error ellipse: s-maj=27.6km s-min=8.2km az=68.0*
*IDC **23** 02:41:46.3±1.1, 572N×12577E, h121km±10km, mb3.6/8, mb1 3.7/8, mb1mx3.5/21, mbtmp3.6/8, Error ellipse: s-maj=46.9km s-min=13.8km az=71.0*

ISC 23 02:41:46.6±0.7,574N±007×1259E±01,h123km±7km,n24, σ0§86/27,mb3.8/11,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.01**	**290**⇓⇓	*e*P	**Pn**	**02 42 07.9**	**-1.1**
GSPH				*e*S	**Sn**	**02 42 25.3**	**-0.6**
DAV	**Davao City (W)**	**1.36**	**347**	P	**Pn**	**02 42 11.9**	**-0.8**
	188nm,0.3s,baz=247,slow=2.8,SNR=24						
DAV				S	**Sn**	**02 42 31.9**	**-0.8**
	546nm,0.3s,baz=73,slow=21,SNR=28						
KCP	**Kidapawan**	**1.50**	**328**⇑	*e*P	**Pn**	**02 42 14.7**	**+0.4**
KCP				*e*S	**Sn**	**02 42 36.3**	**+1.0**
CTBH	**Cotabato--PC H**	**2.21**	**312**⇑	*i*P	**Pn**	**02 42 23.0**	**+0.1**
CTBH				*i* S	Px	02 42 28.8	
BUKP	**Musuan**	**2.29**	**339**	*e*P	**Pn**	**02 42 24.3**	**+0.4**
BUKP				*e*S	**Sn**	**02 42 54.0**	**+1.6**
BUTP	**Butuan**	**3.23**	**355**	*e*P	**Pn**	**02 42 32.7**	**-3.3**
PAGZ	**Pagadian**	**3.27**	**310**	*e*P	**Pn**	**02 42 37.7**	**+1.2**
MSLP	**Maasin**	**4.49**	**347**	*e*P	**Pn**	**02 42 52.7**	**-0.1**
COEN	**Coen**	**26.01**	**139**	*e*P	**P**	**02 47 08.0**	**-0.3**
	2.4nm,0.5s,mb3.9						
WRAB	**Tennant Creek**	**26.83**	**162**	*e*P	**P**	**02 47 17.1**	**+1.5**
	2.2nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**26.83**	**162**	P	**P**	**02 47 15.1**	**-0.5**
	0.6nm,0.9s,mb3.1,baz=334,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**30.25**	**165**	P	**P**	**02 47 46.5**	**+0.6**
	0.4nm,0.6s,mb3.2,baz=344,slow=7.5,SNR=9.0						
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**02 49 12.1**	**+0.4**
	1.0nm,0.5s,mb3.9,baz=333,slow=13,SNR=3.0						
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**02 49 12.1**	**+0.4**
PETK	**Petropavlovsk-**	**53.91**	**23**	P	**P**	**02 50 57.5**	**+0.4**
	4.2nm,0.8s,mb4.5,baz=202,slow=1.6,SNR=3.5						
MKAR	**Makanchi Array**	**55.45**	**325**	P	**P**	**02 51 08.3**	**-0.1**
	0.6nm,0.5s,mb3.9,baz=126,slow=6.8,SNR=14						
MKAR	**Makanchi Array**	**55.45**	**325**	P	**P**	**02 51 08.3**	**-0.1**
KURK	**Kurchatov**	**59.62**	**327**	P	**P**	**02 51 36.2**	**-1.2**
	0.9nm,0.6s,mb4.0,baz=130,slow=6.6,SNR=5.8						
KURK	**Kurchatov**	**59.62**	**327**	*e*P	**P**	**02 51 36.8**	**-0.7**
	1.5nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	**65.20**	**327**	P	**P**	**02 52 14.0**	**-0.6**
	0.5nm,0.5s,mb3.6,baz=140,slow=7.8,SNR=4.6						
BRVK	**Borovoye**	**65.27**	**327**	*e*P	**P**	**02 52 14.2**	**-0.8**
	0.9nm,0.5s,mb3.9						
YKA	**Yellowknife Ar**	**98.02**	**24**	P	**P**	**02 55 08.7**	**+0.1**
	0.4nm,0.7s,mb4.1,baz=300,slow=4.9,SNR=10.0						
YKA	**Yellowknife Ar**	**98.02**	**24**	P	**P**	**02 55 08.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**121.50**	**289**	PKP	PKPdf	03 00 26.7	+0.2
	0.3nm,0.9s,baz=53,slow=2.3,SNR=3.3						

IDC 23 02:45:16.3±1.2,3908N×11048E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.5/22,mbtmp3.6/6,ML2.8/1,Error ellipse: s-maj=38.6km s-min=19.9km az=80.0,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.24**	**343**	Pn	Pn	02 47 31.3	+0.6
	0.1nm,0.3s,baz=161,slow=13,SNR=12						
SONM				Lg		02 50 10.0	
	0.1nm,0.3s,baz=163,slow=28,SNR=6.7						
MKAR	**Makanchi Array**	**21.95**	**300**	P	P	02 50 12.3	+0.9
	1.4nm,1.0s,baz=95,slow=16,SNR=6.6						
CMAR	**Chiang Mai Arr**	**22.86**	**209**	P	P	02 50 21.0	-0.3
	2.4nm,0.7s,baz=14,slow=10,SNR=10						
ARCES	**ARCESS Array B**	**52.29**	**334**	P	P	02 54 28.2	-0.8
	2.6nm,0.8s,baz=87,slow=6.6,SNR=3.3						
ASAR	**Alice Springs**	**66.16**	**157**	P	P	02 56 05.9	+0.4
	0.3nm,0.6s,baz=336,slow=6.6,SNR=4.0						
YKA	**Yellowknife Ar**	**72.49**	**20**	P	P	02 56 44.6	+0.2
	0.3nm,0.8s,baz=326,slow=6.1,SNR=5.1						

*MOS **23** 03:24:11.1±1.3,5465N×11221E,h15km,mb4.3/1, Error ellipse: s-maj=41.5km s-min=20.1km az=97.6*

BYKL 23 03:24:10.4±0.2,5473N×11229E,h16km±26km,7C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.67**	**283**⇑	*i*PG	Pg	03 24 22.5	-1.0
YLYR				*e*		03 24 31.2	
YLYR				pmax	pmax		
	comp=Z,275nm,0.1s						
YLYR				smax			
	comp=E,684nm,0.3s						
YLYR	**Ulyunkhan**	**0.67**	**283**⇑	*i*Pg	Pg	03 24 22.5	-1.0
	comp=E,50nm,0.3s						
YLYR				⇓⇓*i*Pg	Pg	03 24 22.5	-1.0
	comp=E,310nm,0.3s						
YLYR				⇑*i*Pg	Pg	03 24 22.5	-1.0
	comp=E,340nm,0.3s						
YLYR				*i* Sg	Sg	03 24 31.5	-0.9
YLYR				Pmax			
	comp=E,272nm,0.2s						
YLYR				Smax			
	comp=E,678nm,0.3s						
UKT	**Uakit**	**1.08**	**45**	*e*Pg	Pg	03 24 29.5	-1.8
UKT				*e*Pb	Pb	03 24 32.1	+1.4
UKT				*i* Sg	Sg	03 24 44.0	-1.4
UKT				*e*Sb	Sb	03 24 48.6	+4.1
UKT				max			
	comp=E,21nm,0.2s						
UKT				max			
	comp=E,183nm,0.5s						
KMO	**Kumora**	**1.32**	**332**	*e*PG	Pg	03 24 33.7	-2.0
KMO	**Kumora**	**1.32**	**332**⇑	*i*Pg	Pg	03 24 33.7	-2.0
KMO				*i* Sg	Sg	03 24 51.2	-1.7
KMO				*e*Sb	Sb	03 24 54.2	+2.9
KMO				Pmax			
	comp=E,84nm,0.4s						
KMO				max			
	comp=E,315nm,1.0s						
YOA	**Uoyan**	**1.44**	**347**	*e*PN	Pn	03 24 38.2	+2.4
YOA				*e*		03 24 56.8	
YOA				pmax	pmax		
	comp=Z,116nm,0.2s						
YOA				smax			
	comp=N,788nm,0.4s						
YOA	**Uoyan**	**1.44**	**347**	*e*Pg	Pg	03 24 36.5	-1.6
YOA				*e*Sg	Sg	03 24 55.5	-1.4
YOA				Pmax			
	comp=N,121nm,0.3s						
YOA				Smax			
	comp=N,832nm,0.8s						
SVKR	**Severomuysk**	**1.57**	**27**	*e*PN	Pn	03 24 39.5	+2.0
SVKR				*e*		03 25 01.1	
SVKR				pmax	pmax		
	comp=Z,155nm,0.7s						
SVKR				smax			
	comp=E,499nm,0.4s						
SVKR	**Severomuysk**	**1.57**	**27**⇑	*i*Pg	Pg	03 24 40.2	-0.3
SVKR				*e*Sg	Sg	03 25 01.6	+0.7
SVKR				Pmax			
	comp=E,11nm,0.5s						
SVKR				Smax			
	comp=E,54nm,1.5s						
SYVR	**Suvo**	**1.72**	**232**	*e*Pg	Pg	03 24 40.8	-2.7
SYVR				*e*Sg	Sg	03 25 04.6	-1.2
SYVR				*e*		03 25 09.2	
SYVR				Pmax			
	comp=E,38nm,0.5s						
SYVR				max			
	comp=E,165nm,1.2s						
NIZ	**Nizh Angarsk**	**1.89**	**305**⇑	*i*PN	Pn	03 24 43.8	+1.8
NIZ				*e*		03 25 09.3	
NIZ				pmax	pmax		
	comp=Z,59nm,0.3s						
NIZ				smax			
	comp=E,210nm,0.3s						
NIZ	**Nizh Angarsk**	**1.89**	**305**⇑	*i*Pg	Pg	03 24 43.8	-2.9
NIZ				*e*Sg	Sg	03 25 09.2	-2.0
NIZ				Pmax			
	comp=E,59nm,0.4s						
NIZ				Smax			
	comp=E,210nm,0.3s						
MXMB	**Maximikha**	**2.56**	**236**	*e*Pg	Pg	03 24 56.6	-2.8
MXMB				*e*Sn	Sn	03 25 25.5	+3.6
MXMB				*e*Sg	Sg	03 25 31.3	-1.2
MXMB				Pmax			
	comp=E,23nm,0.4s						
MXMB				Smax			
	comp=E,160nm,0.8s						
NLYR	**Nelyaty**	**2.62**	**46**	*e*Pn	Pn	03 24 53.4	+1.4
NLYR				*e*Pg	Pg	03 24 57.5	-3.1
NLYR				*e*		03 24 59.8	
NLYR				*e*Sn	Sn	03 25 25.8	+2.4
NLYR				*i* Sg	Sg	03 25 31.9	-2.6
NLYR				max			
	comp=E,29nm,0.7s						
NLYR				Smax			
	comp=E,101nm,1.1s						
CIT	**Chita**	**2.82**	**164**	*e*Sg	Sg	03 25 37.8	-3.0
CIT				Smax			
	comp=E,247nm,0.2s						
OGRR	**Ongureny**	**2.97**	**250**	*e*Pn	Pn	03 24 58.0	+1.3
OGRR				*e*Pg	Pg	03 25 02.1	-5.1
OGRR				*e*Sn	Sn	03 25 34.5	+2.6
OGRR				*e*Sg	Sg	03 25 41.5	-4.1
OGRR				Pmax			
	comp=E,15nm,1.0s						
OGRR				Smax			
	comp=E,61nm,1.2s						
BOD	**Bodaibo**	**3.24**	**16**	*e*	Pn	03 25 10.8	+10
BOD				*i* Sg	Sg	03 25 49.4	-5.0
BOD				Smax			
	comp=E,45nm,0.6s						
TRTB	**Turuntaevo**	**3.75**	**230**	*e*Pg	Pg	03 25 17.3	-4.8
TRTB				*e*Sg	Sg	03 26 06.9	-3.6
TRTB				Pmax			
	comp=E,7.0nm,1.0s						
TRTB				Smax			
	comp=E,26nm,0.5s						
UUDB	**Ulan-Yde**	**3.99**	**226**	*i* Sg	Sg	03 26 13.7	-4.7
UUDB				Smax			
	comp=E,44nm,1.7s						
CRS	**Chara**	**4.01**	**55**	*e*Pn	Pn	03 25 13.0	+1.9
CRS				*e*		03 25 24.0	
CRS				*i* Sg	Sg	03 26 14.4	-4.7
CRS				Smax			
	comp=E,49nm,1.4s						
TRG	**Tyrgan**	**4.04**	**243**	*e*Pn	Pn	03 25 10.1	-1.4
TRG				*e*		03 25 21.1	
TRG				*e*Sn	Sn	03 26 00.1	+1.6
TRG				*e*Sg	Sg	03 26 15.0	-5.1
TRG				Smax			
	comp=E,33nm,1.1s						
FFNB	**Fofonovo**	**4.26**	**233**	*e*Sg	Sg	03 26 22.4	-4.7
FFNB				Smax			
	comp=E,84nm,0.5s						
HRMR	**Khuramsha**	**4.47**	**228**	*e*Pg	Pg	03 25 31.2	-4.7
HRMR				*e*		03 26 18.8	
HRMR				*e*Sg	Sg	03 26 30.2	-3.5
HRMR				Smax			
	comp=E,94nm,0.9s						
TUP	**Tupik**	**4.47**	**91**	*e*Pn	Pn	03 25 18.2	+0.8
TUP				*e*Pg	Pg	03 25 30.2	-5.7
TUP				*e*Sg	Sg	03 26 28.2	-5.6
TUP				Pmax			
	comp=E,8.0nm,0.4s						
TUP				Smax			
	comp=E,45nm,0.6s						
KPC	**Khapcheranga**	**5.04**	**179**	*e*Pn	Pn	03 25 25.7	+0.5
KPC				*e*Pg	Pg	03 25 40.7	-6.0
KPC				*e*Sn	Sn	03 26 23.8	+0.9
KPC				*e*Sg	Sg	03 26 46.3	-5.6
KPC				Pmax			
	comp=E,4.0nm,0.5s						
KPC				Smax			
	comp=E,35nm,1.2s						
IRK	**Irkutsk**	**5.40**	**246**	*e*Sg	Sg	03 26 57.2	-6.3
IRK				Smax			
	comp=E,112nm,0.4s						
TLY	**Talaya**	**6.03**	**243**	*e*Sg	Sg	03 27 16.5	-7.1
TLY				Smax			
	comp=E,9.0nm,0.5s						
ARS	**Arshan**	**6.55**	**249**	*e*Sg	Sg	03 27 32.5	-7.8
ARS				Smax			
	comp=E,30nm,0.6s						
ZAK	**Zakamensk**	**7.01**	**235**	*e*PG	Pn	03 26 35.0	+43
ZAK				*e*		03 27 52.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MOY	**Mondy**	**7.45**	**250**	*e*Sg	Sn	03 28 00.0	+38
MOY				Smax			
	comp=Z,6.0nm,1.3s						
ORL	**Orlik**	**7.74**	**259**	*e*Sg	Sn	03 28 07.9	+38
ORL				Smax			
	comp=Z,15nm,1.8s						

*NEIC **23** 03:36:44.3±0.6,2361N×9464E,h100km±6km, mb3.9/1, Error ellipse: s-maj=15.2km s-min=5.6km az=225.0*
*IDC **23** 03:36:45.6±0.8,2362N×9478E,h112km±7km, mb3.6/15, mb1 3.8/16,mb1mx3.6/26,mbtmp3.6/16,MS3.4/1, Ms1 3.4/1,ms1mx2.5/22,Error ellipse: s-maj=31.6km s-min=10.8km az=56.0*
*ISCJB **23** 03:36:48.7±1.0,2400N±010×9437E±005,h129km±6km, mb3.8/16,Error ellipse: s-maj=16.1km s-min=7.7km az=11.0*

ISC 23 03:36:45.8±0.8,2362N±008×9443E±006,h107km±6km, h112km±4.3km±pP-P,n39,σ1§19/49,mb3.9/16, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.24**	**339**	*i* P	**Pn**	**03 37 10.0**	**+0.6**
IMP				*i* S	**Sn**	**03 37 26.0**	**-1.3**
SHL	**Shillong**	**3.02**	**310**	*i* PN	**Pn**	**03 37 33.5**	**+1.5**
SHL				*e*SN	**Sn**	**03 38 07.0**	**-0.6**
CHTO	**Chiang Mai**	**6.37**	**138**	*e*Pn	**Pn**	**03 38 14.8**	**-2.5**
	5.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**6.64**	**140**	P	**Pn**	**03 38 16.7**	**-4.2**
	1.2nm,0.3s,baz=314,slow=13,SNR=16						
LSA	**Lhasa**	**6.73**	**335**	*e*Pn	**Pn**	**03 38 22.7**	**+0.7**
	14nm,0.3s						
LSA				*e*Sn	**Sn**	**03 39 32.7**	**-4.5**
TAPN	**Taplejung**	**7.12**	**303**	*e*Sn	**Sn**	**03 39 43.0**	**-3.6**
	43nm,0.3s						
ODAN	**Odare**	**7.14**	**298**	*e*Pn	**Pn**	**03 38 29.5**	**+1.8**
ODAN				*e*Sn	**Sn**	**03 39 48.2**	**+0.9**
	151nm,0.4s						
JIRN	**Jiri**	**8.45**	**300**	*e*Pn	**Pn**	**03 38 46.3**	**+0.9**
JIRN				*e*Sn	**Sn**	**03 40 17.5**	**-1.6**
	94nm,0.3s						
GUN	**Gumba**	**8.81**	**301**	*e*Pn	**Pn**	**03 38 50.4**	**+0.1**
GUN				*e*Sn	**Sn**	**03 40 23.7**	**-4.1**
	48nm,0.3s						
PKI	**Pulchoki**	**9.04**	**298**	*e*Pn	**Pn**	**03 38 54.9**	**+1.4**
PKI				*e*Sn	**Sn**	**03 40 33.2**	**-0.3**
	25nm,0.4s						
PKIN	**Phulchoki**	**9.05**	**298**	*e*Pn	**Pn**	**03 38 54.9**	**+1.3**
PKIN				*e*Sn	**Sn**	**03 40 33.3**	**-0.5**
	30nm,0.4s						

KKN	Kakani	9.24	299	ePn	Pn	03 38 56.8	+0.7
KKN				eSn	Sn	03 40 36.2	-2.0
	42nm,0.4s						
DMN	Daman	9.30	297	ePn	Pn	03 38 58.3	+1.3
DMN				eSn	Sn	03 40 39.0	-0.8
	23nm,0.3s						
GKN	Gorkha	9.84	298	ePn	Pn	03 39 04.6	+0.3
GKN				eSn	Sn	03 40 50.1	-2.8
	62nm,0.3s						
KOLN	Koldanda	10.60	295	ePn	Pn	03 39 16.7	+2.0
KOLN				eSn	Sn	03 41 10.9	-0.5
	16nm,0.2s						
DANN	Dangsing	10.69	298	ePn	Pn	03 39 16.3	+0.5
DANN				eSn	Sn	03 41 11.0	-2.5
	20nm,0.3s						
MKAR	Makanchi Array	25.10	340	P	P	03 42 01.0	+0.5
	1.4nm,0.5s,mb3.7,baz=151,slow=10,SNR=36						
MKAR				pP	pP	03 42 26.6	+2.8
	1.5nm,0.5s,baz=149,slow=9.3,SNR=5.2						
KURK	Kurchatov	29.71	340	P	P	03 42 41.6	+0.1
	0.3nm,0.4s,mb3.2,baz=148,slow=9.4,SNR=4.0						
KURK				pP	pP	03 43 07.3	+2.1
	0.6nm,0.6s,baz=147,slow=9.3,SNR=3.4						
ZALV	Zalesovo Beam	31.14	349	P	P	03 42 53.7	-0.5
	0.5nm,0.3s,mb3.7,baz=156,slow=8.6,SNR=2.6						
BVAR	Borovoye Array	34.56	334	P	P	03 43 23.7	-0.3
	0.6nm,0.5s,mb3.7,baz=130,slow=13,SNR=6.2						
AKTK	Aktyubinsk	38.89	323	P	P	03 44 02.2	+1.5
AKTO	Aktyubinsk	38.89	323	P	P	03 44 02.2	+1.5
	0.3nm,0.3s,mb3.6,baz=97,slow=12,SNR=4.6						
ASF	Jabal al Asfar	51.05	293	P	P	03 45 40.5	+3.2
	2.6nm,0.8s,mb4.3,baz=217,slow=19,SNR=5.9						
BRTR	Keskin Array B	53.22	303	P	P	03 45 54.7	+1.5
	0.7nm,0.5s,mb4.0,baz=132,slow=10,SNR=9.6						
JOF	Joensuu	57.04	331	ep	P	03 46 19.8	-0.5
	2.1nm,0.5s,mb4.4						
WRA	Warramunga Arr	58.21	135	P	P	03 46 27.4	-1.7
	2.5nm,0.6s,mb4.4,baz=322,slow=7.4,SNR=21						
WRA				pP	pP	03 46 52.8	-2.2
	0.8nm,0.7s,baz=325,slow=7.5,SNR=3.4						
WRA				LR	LR	04 11 58.2	
	comp=Z,32nm,20.9s,baz=220,slow=36						
KAF	Kangasniemi	59.18	329	ep	P	03 46 34.3	-1.0
KEV	Kevo	60.26	338	ep	P	03 46 42.0	-0.5
ASAR	Alice Springs	60.65	138	P	P	03 46 44.5	-1.3
	2.3nm,0.5s,mb4.5,baz=322,slow=6.9,SNR=72						
ASAR				pP	pP	03 47 10.1	-1.9
	0.6nm,0.6s,baz=320,slow=7.0,SNR=3.4						
ARCES	ARCESS Array B	60.73	338	P	P	03 46 45.0	-0.7
	3.0nm,0.8s,mb4.4,baz=77,slow=5.2,SNR=5.4						
NB2	NORSAR Subarra	66.37	328	P	P	03 47 22.1	-0.9
	comp=Z,1.1nm,0.5s,mb3.9,baz=84,slow=6.5						
NOA	NORSAR Array B	66.37	328	P	P	03 47 22.2	-0.7
	comp=Z,1.2nm,0.6s,mb3.9,baz=84,slow=6.4,SNR=5.1						
GERES	GERESS Array B	66.63	315	P	P	03 47 25.1	+0.3
	comp=Z,1.8nm,0.9s,mb3.9,baz=70,slow=6.0,SNR=11						
ESDC	Sonseca Array	81.37	309	P	P	03 48 50.9	+0.1
	comp=Z,0.4nm,0.7s,mb3.4,baz=54,slow=4.7,SNR=3.7						
BOSA	Boshof	84.44	236	P	P	03 49 07.2	+0.5
	comp=Z,1.3nm,0.4s,mb4.1,baz=52,slow=3.8,SNR=7.6						
TORD	Torodi Ar. Bea	87.28	283	P	P	03 49 21.2	+0.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=71,slow=4.7,SNR=7.6						
BDFB	Brasilia	143.83	276	PKP	PKPdf	03 56 07.5	-1.7
	comp=Z,0.9nm,0.8s,baz=115,slow=14,SNR=4.4						
CPUP	Villa Florida	154.28	258	PKPbc	PKPbc	03 56 32.5	-1.5
	comp=Z,0.2nm,0.3s,baz=105,slow=2.1,SNR=2.9						
CPUP	Villa Florida	154.28	258	PKPbc	PKPbc	03 56 32.5	-1.5

IDC 23 03:46:41.8±2.8, 2701S×13702E, h0 km, mb1 3.3/3, mb1mx3.2/14, mbtmp3.1/3, ML3.1/3, Error ellipse: s-maj=43.6km s-min=20.6km az=54.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	4.37	319	Pn	Pn	03 47 50.5	+1.1
	0.8nm,0.3s,baz=141,slow=14,SNR=28						
ASAR				Sn	Sn	03 48 40.9	-0.1
	0.7nm,0.3s,baz=139,slow=23,SNR=4.4						
ASAR				Lg		03 48 60.0	
	0.9nm,0.3s,baz=140,slow=22,SNR=4.8						
STKA	Stephens Creek	6.28	142	Pn	Pn	03 48 15.4	-0.3
	0.2nm,0.3s,baz=310,slow=15,SNR=4.6						
STKA				Sn	Sn	03 49 20.1	-8.0
	0.8nm,0.3s,baz=280,slow=10,SNR=4.0						
WRA	Warramunga Arr	7.46	340	Pn	Pn	03 48 31.5	-0.4
	0.3nm,0.3s,baz=156,slow=12,SNR=9.1						
WRA				Sn	Sn	03 49 53.5	-3.7
	0.2nm,0.3s,baz=164,slow=24,SNR=3.4						
WRA				Lg		03 50 39.5	
	0.4nm,0.3s,baz=163,slow=29,SNR=3.9						

NEIC 23 03:55:30.1, 3893S×17848E, h36 km, ML3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	Kokohu	0.64	261	P	Pn	03 55 42.1	-0.5
PUZ	Puketiti	0.87	348	P	Pn	03 55 45.7	-0.2
MWZ	Matawai	0.95	308	P	Pn	03 55 46.7	-0.2
URZ	Urewera	1.27	301	P	Pn	03 55 51.1	-0.1
BKZ	Black Stump Fm	1.57	261	P	Pn	03 55 55.7	+0.3

NEIC 23 03:57:07.3, 3904S×17845E, h77 km, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	Kokohu	0.60	272	P	Pn	03 57 19.5	-2.2
PUZ	Puketiti	0.98	351	P	Pn	03 57 24.4	-1.5
MWZ	Matawai	1.01	314	P	Pn	03 57 24.3	-1.9
MWZ				S	Sn	03 57 35.2	-5.2
URZ	Urewera	1.31	306	P	Pn	03 57 28.6	-1.4
MXZ	Matakaoa Point	1.48	356	P	Pn	03 57 31.7	-0.5
MXZ				S	Sn	03 57 49.3	-1.7
BKZ	Black Stump Fm	1.53	265	P	Pn	03 57 32.3	-0.5
EDRZ	Edgecumbe	1.63	304	P	Pn	03 57 33.2	-1.0
WIZ	White Island	1.81	326	P	Pn	03 57 35.4	-1.1
MOVZ	Moawhango	2.13	259	P	Pn	03 57 41.1	+0.3
KATZ	Kakaramea	2.15	271	P	Pn	03 57 41.0	0.0
TUVZ	Tukino	2.19	263	P	Pn	03 57 41.9	+0.3
NGZ	Ngauruhoe	2.22	266	P	Pn	03 57 42.2	+0.2
WTVZ	West Tongariro	2.23	267	P	Pn	03 57 42.4	+0.3
WNVZ	Wahianoa	2.23	262	P	Pn	03 57 42.5	+0.3
FWVZ	Far West T-bar	2.26	264	P	Pn	03 57 42.8	+0.2
TWVZ	Taurewa	2.35	268	P	Pn	03 57 43.4	-0.3
WAZ	Wanganui	2.78	254	P	Pn	03 57 51.1	+1.6
MTW	Mount Morrison	3.10	226	P	Pn	03 57 52.2	-1.7
MKAZ	Moumakai	3.23	306	P	Pn	03 57 54.8	-0.9
KIW	Kapiti Island	3.27	235	P	Pn	03 57 55.5	-0.8
PAWZ	Paruwai Farm	3.29	224	P	Pn	03 57 54.8	-1.7
CAW	Cannon Point	3.32	230	P	Pn	03 57 55.5	-1.3
NEZ	North Egmont	3.39	265	P	Pn	03 57 59.3	+1.4
MSWZ	Moikau Station	3.41	225	P	Pn	03 57 56.1	-2.0
PKE	Pukeiti	3.48	266	P	Pn	03 58 00.3	+1.3
NWEZ	Newall Road	3.57	265	P	Pn	03 58 01.4	+1.1
MRW	Makara Radio	3.61	232	P	Pn	03 57 59.3	-1.5
BHW	Baring Head	3.62	228	P	Pn	03 57 58.9	-2.1
SNZO	South Karori	3.66	230	P	Pn	03 57 59.7	-1.8
TCW	Tory Channel	3.87	235	P	Pn	03 58 02.7	-1.6
BSWZ	Blackbirch Sta	4.40	231	P	Pn	03 58 09.6	-1.9
QRZ	Quartz Range	4.89	247	P	Pn	03 58 16.2	-2.0
KHZ	Kahutara	5.03	226	P	Pn	03 58 18.3	-1.9
DSZ	Denniston Nort	5.75	240	P	Pn	03 58 27.7	-2.3
ODZ	Otahua Downs	8.35	222	P	Pn	03 59 03.6	-1.8
TUZ	Tuapeka	9.49	220	P	Pn	03 59 19.9	-1.1

MAN 23 04:13:05, 1360N×12052E, h26 km, mb4.6, ML3.5, MS3.4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.30	296	eP	Pb	04 13 14.2	+2.1
LUBP				eS	Sb	04 13 20.9	+4.1
PGP	Puerto Galera	0.43	103	eP	Pb	04 13 08.7	-5.5
TGY	Tagaytay City	0.64	39	eP	Pb	04 13 19.0	+1.4
TGY				eS	Sb	04 13 29.7	+3.5
SJMP	San Jose	1.28	153	eP	Pn	04 13 27.1	-0.1
SJMP				eS	Sn	04 13 43.6	+0.1
BUSP	Coron	1.62	191	eP	Pn	04 13 33.3	+1.4
BUSP				eS	Sn	04 13 54.6	+2.7
POLP	Polilio Island	1.77	51	eP	Pn	04 13 35.8	+1.8
OTRP	Odiongan	1.91	130	eP	Pn	04 13 36.2	+0.3
OTRP				eS	Sn	04 13 57.6	-1.6
BALP	Baler	2.36	26	eP	Pn	04 13 46.2	+4.2

ISCJB 23 04:25:13.9±1.2, 233N×02×943E±02, h108 km±18 km, mb3.6/3, Error ellipse: s-maj=52.6km s-min=14.4km az=42.8
IDC 23 04:25:17.4±7.1, 2334N×9459E, h120 km±49 km, mb3.3/3, mb1 3.4/4, mb1mx3.0/21, mbtmp3.2/4, Error ellipse: s-maj=184.6km s-min=32.6km az=32.0
ISC 23 04:25:15.3±1.1, 233N±02×943E±02, h104 km±16 km, n6, σ1§50/8, mb3.6/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	1.49	347	i P	Pn	04 25 43.0	+1.5
IMP				i S	Sn	04 26 01.0	-0.5
SHL	Shillong	3.13	316	i PN	Pn	04 26 03.8	+0.9
SHL				eSN	Sn	04 26 38.0	-1.6
CMAR	Chiang Mai Arr	6.50	137	P	Pn	04 26 48.4	-0.1
	0.6nm,0.3s,baz=318,slow=15,SNR=4.5						
WRA	Warramunga Arr	58.09	135	P	P	04 34 57.0	-1.0
	0.4nm,0.4s,mb3.8,baz=321,slow=7.5,SNR=8.1						
ASAR	Alice Springs	60.51	138	P	P	04 35 14.1	-0.6
	0.5nm,0.4s,mb3.9,baz=320,slow=7.0,SNR=12						
TORD	Torodi Ar. Bea	87.24	283	P	P	04 37 52.1	+1.4
	0.4nm,1.1s,mb3.3,baz=45,slow=4.6,SNR=2.5						

ISCJB 23 04:36:50.8±1.8, 24S±01×1244W±03, h10 km, mb4.2/18, MS3.5/9, Error ellipse: s-maj=51.8km s-min=17.5km az=165.4
IDC 23 04:36:51.6±2.0, 232S×1243W, h0 km, mb3.8/6, mb1 4.2/6, mb1mx4.0/17, mbtmp3.8/6, MS3.5/9, Ms1 3.5/9, ms1mx3.2/26, Error ellipse: s-maj=79.4km s-min=25.5km az=74.0
NEIC 23 04:36:53.0±0.9, 237S×1243W, h10 km, mb4.4/14, Error ellipse: s-maj=28.1km s-min=11.0km az=80.0
ISC 23 04:36:53.4±1.8, 24S±01×1243W±03, h10 km, n33, σ0§58/23, mb4.2/18, MS3.5/9, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKT	Rikitea	23.09	206	eLR	LR	04 47 35.0	
	227nm,26.5s						
PPT	Papeete	29.06	237	eLR	LR	04 50 05.6	
	105nm,25.8s						
TBI	Tubuai	32.08	227	eLR	LR	04 51 39.4	
	108nm,27.0s						
TUC	Tucson	36.78	19	eP	P	04 44 01.5	+0.1
	5.5nm,1.3s,mb4.2						
TXAR	Lajitas Array	37.20	31	P	P	04 44 05.0	+0.1
	1.5nm,1.1s,mb3.8,baz=205,slow=12,SNR=7.4						
TXAR				LR	LR	04 56 15.3	
	comp=Z,77nm,21.6s,MS3.5,baz=315,slow=31						
JCT	Junction City	40.16	34	eP	P	04 44 29.7	-0.1
	11nm,1.2s,mb4.5						
ANMO	Albuquerque	40.71	23	eP	P	04 44 34.7	+0.3
	6.8nm,1.2s,mb4.2						
NVAR	Mina Array Bea	40.96	7	P	P	04 44 36.5	+0.2
	0.8nm,0.9s,mb3.3,baz=190,slow=8.9,SNR=6.0						
NVAR				PcP	PcP	04 46 36.9	+0.3
	1.3nm,1.0s,baz=189,slow=5.4,SNR=5.2						
NVAR	Mina Array Bea	40.96	7	P	P	04 44 36.5	+0.2
NVAR				PcP	PcP	04 46 36.9	+0.3
MVCO	Mesa Verde	42.02	19	eP	P	04 44 45.7	+0.7
	14nm,1.2s,mb4.5						
HKT	Hockley	42.10	38	eP	P	04 44 46.2	+0.5
	20nm,1.6s,mb4.5						
AMTX	Amarillo	42.70	28	eP	P	04 44 50.0	-0.6
	7.9nm,1.0s,mb4.4						
SDCO	Great Sand Dun	43.54	22	eP	P	04 44 57.8	+0.4
	10nm,1.4s,mb4.4						
DUG	Dugway	43.64	13	eP	P	04 44 59.2	+1.1
	7.7nm,1.4s,mb4.2						
WVOR	Wild Horse Val	44.88	6	P	P	04 45 08.7	+0.7
	7.0nm,1.3s,mb4.3						
HLID	Hailey	46.57	10	eP	P	04 45 21.5	+0.1
	2.7nm,1.1s,mb4.1						
MIAR	Mount Ida	46.69	35	eP	P	04 45 21.9	-0.7
	6.7nm,0.9s,mb4.6						
PDAR	Pinedale Array	46.85	15	P	P	04 45 22.9	-0.7
	0.6nm,0.9s,mb3.5,baz=153,slow=6.1,SNR=4.8						
PDAR				PcP	PcP	04 46 56.1	-0.4
	2.7nm,1.3s,baz=199,slow=5.3,SNR=3.4						
PDAR				LR	LR	05 01 50.8	
	comp=Z,137nm,18.8s,MS3.9,baz=222,slow=32						
NNA	Nana	47.97	104	LR	LR	05 00 58.5	
	comp=Z,20nm,22.0s,MS3.0,baz=216,slow=30						
RSSD	Black Hills	49.71	19	eP	P	04 45 44.9	-0.7
	5.7nm,1.3s,mb4.4						
ULM	Lac du Bonnet	57.81	21	LR	LR	05 08 22.8	
	comp=Z,130nm,19.4s,MS4.0,baz=329,slow=33						
CFAA	Coronel Fontan	60.18	125	LR	LR	05 05 55.7	
	comp=Z,10nm,19.5s,MS3.0,baz=230,slow=29						
PLCA	Paso Flores	61.60	136	P	P	04 47 12.1	+0.8
	2.8nm,1.0s,mb4.3,baz=296,slow=9.4,SNR=3.6						
PLCA				LR	LR	05 06 39.7	
	comp=Z,86nm,18.9s,MS3.9,baz=195,slow=29						
PLCA	Paso Flores	61.60	136	eP	P	04 47 11.6	+0.4
	3.6nm,1.0s,mb4.5						
PLCA				LR	LR	05 06 39.6	
YKA	Yellowknife Ar	65.10	5	P	P	04 47 33.0	-0.9
	3.4nm,0.9s,mb4.4,baz=188,slow=6.3,SNR=53						
YKA				LR	LR	05 10 51.1	
	comp=Z,9.7nm,19.0s,MS3.0,baz=50,slow=31						
YKA	Yellowknife Ar	65.10	5	P	P	04 47 33.0	-0.9
YKA				LR	LR	05 10 51.1	
FCC	Fort Churchill	65.48	17	eP	P	04 47 35.8	-0.7
CPUP	Villa Florida	68.35	117	P	P	04 47 55.0	-0.5
	0.4nm,0.5s,mb3.7,baz=223,slow=5.2,SNR=3.4						
CPUP	Villa Florida	68.35	117	eP	P	04 47 55.2	-0.2
	9.0nm,0.9s,mb4.8						
BDFB	Brasilia	76.16	105	LR	LR	05 19 10.1	
	comp=Z,22nm,18.6s,MS3.5,baz=181,slow=33						
PETK	Petropavlovsk-	84.69	324	LR	LR	05 18 34.5	
	comp=Z,40nm,20.1s,MS3.8,baz=206,slow=30						
BRTR	Keskin Array B	137.75	26	PKP	PKPdf	04 56 18.3	-0.1
	0.8nm,0.8s,baz=315,slow=0.8,SNR=4.7						
ASF	Jabal al Asfar	145.47	29	PKPbc	PKPbc	04 56 32.0	-0.4
	1.4nm,0.7s,baz=50,slow=8.9,SNR=4.0						

IDC 23 04:49:22.8±11.0, 392N×3263W, h0 km, mb3.7/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.7/3, MS3.4/3, Ms1 3.3/3, ms1mx2.9/29, Error ellipse: s-maj=414.5km s-min=39.5km az=14.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	Dimbokro	27.79	83	P	P	04 55 13.8	0.0
	2.7nm,0.9s,baz=240,slow=8.1,SNR=3.0						
DBIC				LR	LR	05 03 23.9	
	comp=Z,44nm,19.1s,baz=176,slow=30						
TORD	Torodi Ar. Bea	35.12	73	P	P	04 56 18.3	0.0
	1.5nm,0.9s,baz=267,slow=7.9,SNR=8.9						
TORD				LR	LR	05 08 50.8	
	comp=Z,52nm,19.6s,baz=260,slow=33						
PLCA	Paso Flores	56.36	214	LR	LR	05 22 54.9	
	comp=Z,42nm,18.0s,baz=169,slow=36						
YKA	Yellowknife Ar	82.83	332	P	P	05 01 48.8	+0.1
	0.1nm,0.5s,baz=98,slow=5.6,SNR=4.2						

ISCJB 23 05:02:22.6±0.9, 3938N±003×3311E±004, h6 km±8 km, Error ellipse: s-maj=5.6km s-min=4.5km az=19.0
CSEM 23 05:02:22.2±0.0, 3938N×3311E, h8 km, MD3.6, Error ellipse: s-maj=1.2km s-min=1.0km az=17.0
DDA 23 05:02:22.6, 3937N×3318E, h5 km±2 km, Md2.6
ISK 23 05:02:22.5, 3938N×3311E, h9 km, MD3.6
ISC 23 05:02:23.2±0.9, 3938N±003×3312E±004, h6 km±7 km, n41, σ0§52/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	Kaman	0.46	91	ePG	Pg	05 02 32.0	0.0
LOD	Lodumlu	0.58	332	ePG	Pg	05 02 33.9	-0.4
LOD				eSG	Sg	05 02 42.5	+0.6
KIZT	Kizilcal	1.09	243	ePG	Pg	05 02 43.7	-0.3
CANT	Cankiri	1.28	17	ePN	Pn	05 02 47.1	-0.6
LADK	Ladik-KONYA	1.32	207	ePN	Pn	05 02 47.2	-0.9
CORM	Corum	1.41	55	ePN	Pn	05 02 48.7	-0.8
KONT	Konya--Tatoy	1.55	203	ePN	Pn	05 02 51.7	+0.4
NIG	Nigde	1.72	137	ePN	Pn	05 02 53.5	-0.2
YOZ	Yozgat	1.72	81	ePN	Pn	05 02 53.5	-0.2
ESKT	Eskisehir	1.76	275	ePN	Pn	05 02 52.9	-1.4
TOS	Tosya	1.79	22	ePN	Pn	05 02 54.5	-0.2
MDU	Mudurnu	1.82	307	ePN	Pn	05 02 55.2	+0.1
SAFT	Safranbolu	1.89	350	ePN	Pn	05 02 55.6	-0.4
BNN	Bunyan	2.19	103	ePN	Pn	05 03 00.5	+0.4
GULT	Gulveren	2.26	299	ePN	Pn	05 03 00.9	-0.3
KDZE	Karadeniz Ereo	2.32	327	ePN	Pn	05 03 01.7	-0.2
ALT	Altintas	2.36	263	ePN	Pn	05 03 01.8	-0.7
ISP	Isparta	2.56	234	ePN	Pn	05 03 05.9	+0.7
EYL	Eskiyayla	2.57	298	ePN	Pn	05 03 05.6	+0.2
KARA	Karaisali	2.60	144	ePN	Pn	05 03 06.0	+0.1
CAVI	Cavuskoy	2.66	289	ePN	Pn	05 03 06.5	0.0
BZK	Bozkurt	2.66	14	ePN	Pn	05 03 06.8	+0.2
MERS	Mersin	2.74	156	ePN	Pn	05 03 07.7	0.0
BCK	Bucak	2.76	227	ePN	Pn	05 03 07.7	-0.3
DIKM	Dikmen	2.79	35	ePN	Pn	05 03 08.7	+0.2
TOKT	Tokat	2.80	69	ePN	Pn	05 03 09.0	+0.5
ADVT	Abdulvahap	2.81	293	ePN	Pn	05 03 08.3	-0.3
ADVT	Abdulvahap	2.81	293	ePn	Pn	05 03 08.3	-0.3
KVT	Kavak	2.81	52	ePN	Pn	05 03 09.1	+0.4
KOZT	Kozan	2.85	131	ePN	Pn	05 03 09.5	+0.4
SARI	SarD1z-Kayseri	2.87	103	ePN	Pn	05 03 08.1	-1.4
KHL	Karahalli	3.00	251	ePN	Pn	05 03 11.8	+0.5
HRT	Hereke	3.02	300	ePN	Pn	05 03 12.2	+0.8
SVSK	Karacayir	3.04	79	ePN	Pn	05 03 12.4	+0.6
YLV	Yalova	3.11	294	ePN	Pn	05 03 13.6	+0.8
IKL	Isikli	3.17	172	ePN	Pn	05 03 13.8	+0.2
SILT	Sile	3.20	305	ePN	Pn	05 03 14.1	+0.1
GEMT	Gemlik	3.20	290	ePN	Pn	05 03 14.0	0.0
ARMT	Armutlu	3.48	291	ePN	Pn	05 03 17.8	-0.1
KMRS	Kahramanmaras	3.51	121	ePN	Pn	05 03 18.8	+0.6
KULA	Kula-Manisa	3.58	257	ePN	Pn	05 03 20.0	+0.7

ISK 23 05:15:02.7, 3936N×3830E, h3 km, MD3.1
CSEM 23 05:15:03.4±0.1, 3935N×3834E, h10 km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.6km az=58.0
ISCJB 23 05:15:04.2±0.7, 3935N±004×3834E±004, h12 km±7 km, Error ellipse: s-maj=7.6km s-min=5.7km az=167.6
DDA 23 05:15:04.2, 3932N×3829E, h8 km±2 km, Md2.9
ISC 23 05:15:04.7±0.7, 3937N±005×3836E±005, h13 km±6 km, n16, σ0§89/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMA	Kemaliye	0.14	135	i P	Pg	05 15 07.8	-0.5
KEMA				i S	Sg	05 15 10.9	+0.1
PTK	Pertek	0.93	121	ePG	Pg	05 15 22.0	-0.7
PTK				eSG	Sg	05 15 36.4	+1.4
ELZG	Elazig	1.00	151	i P	Pg	05 15 22.8	-1.2
ELZG				i S	Sg	05 15 37.7	+0.7
MYA	Malataya	1.04	177	ePG	Pg	05 15 23.6	-1.3
MYA				eSG	Sg	05 15 38.3	-0.2
AKCD	Akcadag	1.13	198	i P	Pg	05 15 25.0	-1.5
AKCD				i S	Sg	05 15 42.0	+0.9
EZC	Erzincan	1.19	71	ePG	Pn	05 15 20.8	-6.2
SVSK	Karacayir	1.19	298	ePN	Pn	05 15 25.4	-1.6
SVRC	Sivrice-ELAZID	1.24	143	ePN	Pn	05 15 27.6	-0.1
GUMT	Gumushane	1.39	38	ePN	Pn	05 15 30.3	+0.6
SARI	SarD1z-Kayseri	1.47	242	ePN	Pg	05 15 35.2	+2.2
ESPY	Espiye-Giresun	1.57	10	ePN	Pn	05 15 32.6	+0.4
PINB	Pinarbasi	1.68	246	i P	Pn	05 15 34.3	+0.6
PINB				i S	Sg	05 15 58.9	+0.2
BNN	Bunyan	2.02	256	ePN	Pn	05 15 38.3	-0.2
KMRS	Kahramanmaras	2.19	212	ePN	Pn	05 15 40.9	+0.1
YOZ	Yozgat	2.37	277	ePN	Pn	05 15 43.1	-0.1
KVT	Kavak	2.46	315	ePN	Pn	05 15 44.9	+0.3

ISCJB 23 05:17:59.6±0.8, 48N±01×363E±01, h10 km, mb4.1/12, MS3.2/8, Error ellipse: s-maj=20.7km s-min=16.4km az=31.8
IDC 23 05:17:59.6±1.0, 472N×3628E, h0 km, mb3.8/10, mb1 3.9/10, mb1mx3.8/24, mbtmp3.8/10, MS3.3/8, Ms1 3.3/8, ms1mx3.1/29, Error ellipse: s-maj=25.9km s-min=22.7km az=153.0
NEIC 23 05:18:01.5±0.6, 476N×3623E, h10 km, mb4.6/2, Error ellipse: s-maj=17.4km s-min=13.2km az=121.0
ISC 23 05:18:01.8±0.8, 48N±01×363E±01, h10 km, n20, σ0§72/13, mb4.1/12, MS3.2/8, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	Lusaka	21.47	202	P	P	05 22 51.4	+0.8
	1.8nm,0.8s,mb3.5,baz=31,slow=10,SNR=4.4						
LSZ				LR	LR	05 31 00.3	
	comp=Z,22nm,21.3s,MS2.5,baz=90,slow=36						
EIL	Elat	24.79	357	LR	LR	05 32 04.4	
	comp=Z,40nm,18.1s,MS3.0,baz=224,slow=34						
MMAI	Mount Meron Ar	28.11	358	LR	LR	05 35 11.8	
	comp=Z,19nm,18.0s,MS2.7,baz=150,slow=37						
BRTR	Keskin Array B	34.87	356	P	P	05 24 53.6	+0.3
	1.4nm,1.0s,mb3.8,baz=178,slow=16,SNR=6.2						
BRTR				PcP	PcP	05 27 25.2	-1.0
	0.9nm,0.9s,baz=103,slow=2.7,SNR=4.1					

TCW	**Tory Channel**	**3.77 230**	P		Pn	05 20 25.3	-2.9
QRZ	**Quartz Range**	**4.73 244**	P		Pn	05 20 38.7	-2.7
THZ	**Tophouse**	**4.93 232**	P		Pn	05 20 40.9	-3.2
LTZ	**Lake Taylor**	**5.92 227**	P		Pn	05 20 54.6	-3.0
MQZ	**McQueen's Vall**	**6.35 219**	P		Pn	05 20 59.4	-4.2
ODZ	**Otahua Downs**	**8.31 220**	P		Pn	05 21 26.7	-3.7

IDC 23 05:19:52.1±2.2, 203S×12734E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=190.6km s-min=25.7km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.08**	**159**	P	Pn	05 24 16.3	-0.7
	0.2nm,0.3s,baz=341,slow=12,SNR=5.4						
ASAR	**Alice Springs**	**22.43**	**164**	P	P	05 24 53.0	+0.3
	0.8nm,0.7s,baz=346,slow=11,SNR=17						
MKAR	**Makanchi Array**	**62.64**	**327**	P	P	05 30 18.3	0.0
	0.3nm,0.3s,baz=116,slow=8.9,SNR=6.6						

*ISCJB **23** 05:33:27.2±0.6, 24.16S±0.05×67.04W±0.08, h169km±10km, mb3.5/3, Error ellipse: s-maj=11.5km s-min=8.4km az=174.0*

*IDC **23** 05:33:28.2±1.2, 24.17S×67.00W, h164km±13km, mb3.5/3, mb1 3.5/8, mb1mx3.3/20, mbtmp3.4/8, Error ellipse: s-maj=21.4km s-min=16.6km az=50.0*

*NEIC **23** 05:33:28.1±0.7, 24.22S×66.98W, h164km±9km, mb4.6/2, Error ellipse: s-maj=12.9km s-min=9.1km az=107.0*

*GUC **23** 05:33:30.5±0.7, 23.94S×67.58W, h214km±6km, ML4.6*

ISC 23 05:33:28.1±0.6, 2416S±0.05×6702W±0.08, h161km±10km, n27, σ1$12/37, mb3.5/3, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.65**	**319**	*eP*	**Pn**	**05 34 04.2**	**+4.0**
SPCH				*eS*	**Sn**	**05 34 30.0**	**+5.4**
LVC	**Limon Verde**	**2.32**	**311**	P	**Pn**	**05 34 09.9**	**+2.2**
	20nm,0.3s,baz=126,slow=7.3,SNR=158						
LVC				S	**Sn**	**05 34 39.5**	**+1.4**
	31nm,0.3s,baz=32,slow=23,SNR=6.0						
LVC	**Limon Verde**	**2.32**	**311**	P	**Pn**	**05 34 09.9**	**+2.2**
LVC				S	**Sn**	**05 34 39.5**	**+1.4**
PECH	**Pedro de Valdi**	**2.89**	**302**	*eP*	**Pn**	**05 34 15.6**	**+1.0**
PECH				*eS*	**Sn**	**05 34 49.7**	**-0.8**
PECH				AML	AML	05 34 51.2	
	comp=N,3μm,0.2s						
CEN1	**Los Morros**	**3.01**	**284**	*iP*	**Pn**	**05 34 17.1**	**+1.0**
CEN1				*eS*	**Sn**	**05 34 53.1**	**0.0**
CEN1				AML	AML	05 34 56.0	
	comp=N,459nm,0.6s						
ANCH	**Antofagasta**	**3.13**	**278**	*eP*	**Pn**	**05 34 19.3**	**+1.7**
ANCH				*eS*	**Sn**	**05 34 54.9**	**-1.1**
MECH	**Mejillones**	**3.31**	**288**	*eP*	**Pn**	**05 34 20.6**	**+0.8**
TOCH	**Tocopilla**	**3.58**	**304**	*eP*	**Pn**	**05 34 22.8**	**-0.4**
TOCH				*eS*	**Sn**	**05 35 02.8**	**-3.2**
TOCH				AML	AML	05 35 07.6	
	comp=N,943nm,0.1s						
PB01	**Plate Boundary**	**3.85**	**323**	*eP*	**Pn**	**05 34 27.5**	**+0.8**
PB01				*eS*	**Sn**	**05 35 10.4**	**-2.0**
PB01				AML	AML	05 35 14.6	
	comp=N,440nm,0.3s						
MNMC	**Miæe Miæ**	**5.55**	**334**	*eP*	**Pn**	**05 34 48.9**	**-0.1**
MNMC				*eS*	**Sn**	**05 35 49.5**	**-2.8**
LCO	**Las Campanas**	**5.84**	**213**	*ePn*	**Pn**	**05 34 51.0**	**-1.8**
	comp=N,17nm,0.3s						
CFAA	**Coronel Fontan**	**7.49**	**188**	P	**Pn**	**05 35 14.3**	**-0.3**
	comp=N,0.1nm,0.3s,baz=8.5,slow=13,SNR=12						
CFAA				S	**Sn**	**05 36 33.5**	**-5.0**
	comp=N,0.1nm,0.3s,baz=120,slow=20,SNR=6.2						
CFAA	**Coronel Fontan**	**7.49**	**188**	P	**Pn**	**05 35 14.3**	**-0.3**
CFAA				S	**Sn**	**05 36 33.5**	**-5.0**
CPUP	**Villa Florida**	**9.04**	**106**	P	**Pn**	**05 35 34.2**	**-1.0**
	comp=N,0.2nm,0.3s,baz=267,slow=12,SNR=4.0						
SIV	**San Ignacio**	**9.86**	**36**	P	**Pn**	**05 35 46.0**	**-0.2**
	baz=227,slow=14						
SIV				S	**Sn**	**05 37 24.0**	**-12**
	comp=N,0.1nm,0.3s,baz=219,slow=14,SNR=2.7						
TRQA	**Tornquist**	**14.51**	**164**	*ePn*	**Pn**	**05 36 44.8**	**-1.0**
PLCA	**Paso Flores**	**16.79**	**189**	P	**Pn**	**05 37 13.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=356,slow=8.3,SNR=4.4						
BDFB	**Brasilia**	**19.77**	**68**	P	**P**	**05 37 46.5**	**+0.7**
	comp=N,0.9nm,0.3s,baz=235,slow=17,SNR=57						
BDFB	**Brasilia**	**19.77**	**68**	*eP*	**P**	**05 37 46.4**	**+0.5**
	comp=N,11nm,0.6s						
VNA3	**Neumayer Olymp**	**57.01**	**161**	*e*	**P**	**05 42 57.2**	**+0.7**
VNA2	**Neumayer--Watz**	**57.57**	**160**	*e*	**P**	**05 43 01.3**	**+0.8**
	baz=290,slow=6.8						
TORD	**Torodi Ar. Bea**	**76.65**	**69**	P	**P**	**05 45 01.2**	**-0.4**
	comp=N,1.1nm,0.6s,mb3.7,baz=262,slow=5.9,SNR=18						
TORD	**Torodi Ar. Bea**	**76.65**	**69**	P	**P**	**05 45 01.2**	**-0.4**
BOSA	**Boshof**	**80.68**	**117**	P	**P**	**05 45 23.5**	**0.0**
	comp=N,2.6nm,1.0s,mb3.8,baz=269,slow=6.3,SNR=3.5						
YKA	**Yellowknife Ar**	**94.27**	**340**	P	**P**	**05 46 28.1**	**-0.3**
	comp=N,0.1nm,0.7s,mb3.1,baz=129,slow=4.0,SNR=2.9						
MKAR	**Makanchi Array**	**146.66**	**40**	PKPbc	PKPbc	05 52 50.0	-0.7
	comp=N,0.4nm,0.6s,baz=292,slow=3.9,SNR=6.9						
MKAR	**Makanchi Array**	**146.66**	**40**	PKPbc	PKPbc	05 52 50.0	-0.7

*IDC **23** 05:44:08.6±2.0, 2.32S×139.20E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.8/14, mbtmp3.8/7, ML4.0/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/25, Error ellipse: s-maj=82.0km s-min=20.8km az=80.0*

*ISCJB **23** 05:44:11.5±1.4, 234S±0.08×1392E±0.03, h33km, mb3.7/6, MS3.2/2, Error ellipse: s-maj=45.7km s-min=11.4km az=176.0*

*NEIC **23** 05:44:13.7±0.8, 235S×139.20E, h35km, mb3.8/2, Error ellipse: s-maj=30.0km s-min=7.9km az=87.0*

ISC 23 05:44:13.8±1.4, 236S±0.08×1392E±0.03, h35km, n15, σ0$38/10, mb3.7/6, MS3.2/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**18.10**	**195**	*eP*	**Pn**	**05 48 22.7**	**+0.1**
	4.4nm,0.5s						
WB2	**Warramunga Arr**	**18.10**	**195**	*eP*	**Pn**	**05 48 22.9**	**+0.3**
WRA	**Warramunga Arr**	**18.11**	**195**	P	**Pn**	**05 48 21.9**	**-0.8**
	0.5nm,0.3s,baz=17,slow=12,SNR=22						
WRA				LR	LR	05 55 35.0	
	comp=Z,46nm,19.7s,baz=10.0,slow=38						
KAPI	**Kappang**	**19.57**	**262**	LR	LR	05 56 17.1	
	comp=Z,23nm,21.3s,baz=294,slow=37						
FITZ	**Fitzroy Crossi**	**20.53**	**219**	*eP*	**P**	**05 48 49.7**	**+0.3**
	2.5nm,0.7s						
ASAR	**Alice Springs**	**21.79**	**193**	P	**P**	**05 49 02.8**	**-0.1**
	0.7nm,0.4s,mb3.4,baz=25,slow=10,SNR=23						
STKA	**Stephens Creek**	**29.45**	**176**	P	**P**	**05 50 14.6**	**+0.2**
	1.0nm,0.6s,mb3.7,baz=5.7,slow=10,SNR=2.8						
KSRS	**Korea Array**	**40.97**	**346**	LR	LR	06 06 33.6	
	comp=Z,22nm,18.8s,MS3.0,baz=145,slow=33						
CMAR	**Chiang Mai Arr**	**44.68**	**299**	P	**P**	**05 52 23.5**	**-0.2**
	0.7nm,0.4s,mb3.8,baz=121,slow=6.6,SNR=7.0						
PETK	**Petropavlovsk-**	**57.41**	**13**	LR	LR	06 20 46.6	
	comp=Z,29nm,18.0s,MS3.4,baz=255,slow=38						
SONM	**Songino Array**	**57.61**	**334**	P	**P**	**05 54 00.4**	**+0.2**
	0.2nm,0.2s,mb3.7,baz=156,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**69.80**	**322**	P	**P**	**05 55 21.1**	**+0.4**
	0.7nm,0.6s,mb3.8,baz=102,slow=7.8,SNR=8.2						
ZALV	**Zalesovo Beam**	**71.87**	**330**	P	**P**	**05 55 32.6**	**-0.5**
	0.5nm,0.5s,mb3.7,baz=101,slow=7.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**136.62**	**287**	PKP	PKPdf	06 03 33.6	+0.2
	0.6nm,0.7s,baz=95,slow=1.7,SNR=3.5						
DBIC	**Dimbokro**	**143.91**	**278**	PKhKP		06 03 42.4	
	1.3nm,0.6s,baz=112,slow=4.7,SNR=3.3						

*IDC **23** 06:06:00.1±7.6, 36.38N×71.30E, h148km±68km, mb3.0/4, mb1 3.2/9, mb1mx3.0/26, mbtmp3.0/9, Error ellipse: s-maj=42.9km s-min=26.9km az=21.0*

*ISCJB **23** 06:06:03.7±0.5, 36.75N±0.03×71.37E±0.06, h179km±7km, mb3.1/3, Error ellipse: s-maj=8.1km s-min=5.2km az=172.0*

*NEIC **23** 06:06:04.7±0.6, 36.68N×71.32E, h184km±8km, mb4.1/8, Error ellipse: s-maj=9.8km s-min=5.7km az=70.0*

*NNC **23** 06:06:09.9±3.9, 37.14N×71.22E, h179km±39km, mb2.5, mpv3.7, Error ellipse: s-maj=34.3km s-min=22.5km az=19.0*

ISC 23 06:06:04.5±0.5, 3676N±0.03×7134E±0.06, h177km±6km, n29, σ1$17/37, mb3.1/3, 4C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.89**	**221**	*ePn*	**Pn**	**06 06 52.1**	**+0.4**
KBL				*eSn*	**Sn**	**06 07 27.4**	**-0.9**
AML	**Almayashu**	**5.67**	**18**	*ePn*	**Pn**	**06 07 27.6**	**+0.7**
	22nm,0.5s						
AML				*eSn*	**Sn**	**06 08 30.0**	**-1.9**
EKS2	**Erkin-Say**	**6.19**	**17**	*ePn*	**Pn**	**06 07 35.0**	**+1.2**
	2.6nm,0.6s						
EKS2				*eSn*	**Sn**	**06 08 41.5**	**-2.8**
AAK	**Ala-Archa**	**6.35**	**22**	*ePn*	**Pn**	**06 07 37.3**	**+1.3**
	5.5nm,0.4s						
AAK				*eSn*	**Sn**	**06 08 47.8**	**-0.2**
KK31	**Karatay Array**	**6.37**	**355**	⇓P	**Pn**	**06 07 37.3**	**+1.1**
	4.7nm,0.3s,baz=174,slow=11,SNR=193						
KK31				⇑Sn	**Sn**	**06 08 46.1**	**-2.4**
	3.1nm,0.4s,baz=178,slow=23,SNR=4.3						
TKM2	**Tokmak 2**	**6.97**	**27**	⇓P	**Pn**	**06 07 45.6**	**+1.4**
	1.0nm,0.3s						
TKM2				⇑Sn	**Sn**	**06 09 01.3**	**-1.4**
	2.0nm,0.7s						
TKM2	**Tokmak 2**	**6.97**	**27**	*eP*	**Pn**	**06 07 45.0**	**+0.9**
	2.3nm,0.5s						
MKAR	**Makanchi Array**	**12.93**	**36**	P	**Pn**	**06 09 02.2**	**+0.6**
	0.1nm,0.3s,baz=203,slow=11,SNR=3.8						
DANN	**Dangsing**	**13.41**	**125**	*eP*	**Pn**	**06 09 07.4**	**-0.5**
	5.5nm,0.3s						
KOLN	**Koldanda**	**13.70**	**127**	*eP*	**Pn**	**06 09 10.6**	**-0.9**
	4.7nm,0.3s						
KKN	**Kakani**	**14.79**	**123**	*eP*	**Pn**	**06 09 25.9**	**+0.8**
	13nm,0.6s						
DMN	**Daman**	**14.79**	**124**	*eP*	**Pn**	**06 09 24.8**	**-0.3**
KURK	**Kurchatov**	**14.90**	**18**	P	**Pn**	**06 09 27.6**	**+1.4**
	0.1nm,0.3s,baz=208,slow=11,SNR=3.7						
KURK	**Kurchatov**	**14.90**	**18**	P	**Pn**	**06 09 27.7**	**+1.5**
	1.4nm,0.5s						
AB09	**Akbulak array**	**15.01**	**330**	⇑P	**Pn**	**06 09 28.3**	**+0.7**
	0.7nm,0.6s						
AB09				⇓S	**S**	**06 12 10.1**	**-4.4**
	1.9nm,0.9s						
PKI	**Pulchoki**	**15.02**	**124**	*eP*	**Pn**	**06 09 28.7**	**+0.8**
	10.0nm,0.5s						
GUN	**Gumba**	**15.12**	**122**	*eP*	**Pn**	**06 09 29.2**	**+0.1**
	6.8nm,0.4s						
JIRN	**Jiri**	**15.49**	**122**	*eP*	**Pn**	**06 09 33.2**	**-0.5**
	20nm,0.5s						
BVA0	**Borovoye Array**	**16.28**	**358**	P	**Pn**	**06 09 43.7**	**+0.7**
	0.2nm,0.9s,baz=156,slow=10,SNR=6.6						
BVAR	**Borovoye Array**	**16.28**	**358**	P	**Pn**	**06 09 43.4**	**+0.4**
	0.3nm,0.3s,baz=155,slow=9.6,SNR=7.2						
AKTK	**Aktyubinsk**	**16.70**	**329**	P	**Pn**	**06 09 49.1**	**+1.1**
AKTO	**Aktyubinsk**	**16.70**	**329**	⇑P	**Pn**	**06 09 49.0**	**+0.9**
	0.9nm,0.9s						
AKTO				⇓S	**S**	**06 12 50.8**	**-1.6**
	0.4nm,0.9s						
AKTO	**Aktyubinsk**	**16.70**	**329**	P	**Pn**	**06 09 49.1**	**+1.1**
	0.6nm,0.3s,baz=138,slow=9.9,SNR=10						
TAPN	**Taplejung**	**16.73**	**119**	*eP*	**Pn**	**06 09 48.8**	**+0.1**
	6.4nm,0.5s						
ZALV	**Zalesovo Beam**	**19.57**	**24**	P	**P**	**06 10 20.1**	**+1.5**
	0.2nm,0.3s,baz=208,slow=11,SNR=4.6						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**06 16 30.6**	**-1.5**
	0.4nm,1.0s,mb3.2,baz=53,slow=4.6,SNR=4.0						
YKA	**Yellowknife Ar**	**80.98**	**3**	P	**P**	**06 17 59.8**	**+1.0**
	0.1nm,0.5s,baz=349,slow=5.4,SNR=4.8						
WRA	**Warramunga Arr**	**81.90**	**122**	P	**P**	**06 18 02.3**	**-1.9**
	0.4nm,0.7s,mb3.2,baz=328,slow=4.9,SNR=4.4						
ASAR	**Alice Springs**	**84.18**	**125**	P	**P**	**06 18 14.1**	**-1.8**
	0.2nm,0.5s,mb3.1,baz=310,slow=4.7,SNR=6.5						

*ISCJB **23** 06:16:36.0±1.1, 235S±0.02×1798W±0.02, h500km, mb4.0/8, Error ellipse: s-maj=24.2km s-min=21.2km az=8.7*

*IDC **23** 06:16:38.2±3.2, 2351S×179.77W, h516km±31km, mb3.4/6, mb1 3.6/7, mb1mx3.3/18, mbtmp3.4/7, Error ellipse: s-maj=40.4km s-min=27.3km az=165.0*

ISC 23 06:16:36.8±1.1, 235S±0.02×1797W±0.02, h500km, n15, σ0$61/12, mb4.0/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.98**	**190**	P	**P**	**06 19 46.6**	**-0.1**
	0.7nm,0.3s,baz=72,slow=20,SNR=3.5						
EIDS	**Eidsvold**	**26.63**	**260**	*eP*	**P**	**06 21 35.4**	**+0.6**
CTA	**Charters Tower**	**31.73**	**269**	*eP*	**P**	**06 22 20.0**	**+0.8**
	8.5nm,0.4s,mb4.5						
PMG	**Port Moresby**	**34.60**	**288**	P	**P**	**06 22 44.1**	**+0.5**
	6.4nm,0.6s,mb4.2,baz=152,slow=7.6,SNR=4.8						
STKA	**Stephens Creek**	**35.12**	**248**	P	**P**	**06 22 48.1**	**+0.4**
	2.8nm,0.6s,mb3.9,baz=96,slow=8.6,SNR=8.8						
STKA	**Stephens Creek**	**35.12**	**248**	*eP*	**P**	**06 22 48.1**	**+0.4**
	2.7nm,0.7s,mb3.8						
ASAR	**Alice Springs**	**42.36**	**260**	P	**P**	**06 23 46.5**	**-0.2**
	4.1nm,0.6s,mb4.0,baz=93,slow=7.6,SNR=78						
ASAR				ScP	ScP	06 28 29.4	-2.2
	0.6nm,1.0s,baz=96,slow=5.2,SNR=5.6						
WB2	**Warramunga Arr**	**42.68**	**266**	*eP*	**P**	**06 23 48.3**	**-0.9**
WRA	**Warramunga Arr**	**42.69**	**266**	P	**P**	**06 23 48.6**	**-0.7**
	2.3nm,0.3s,mb4.1,baz=90,slow=5.9,SNR=107						
FITZ	**Fitzroy Crossi**	**51.12**	**265**	*eP*	**P**	**06 24 53.4**	**+0.3**
	5.7nm,0.8s,mb4.0						
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**06 28 40.2**	**-1.1**
	0.9nm,0.4s,mb4.0,baz=116,slow=2.1,SNR=4.9						
TXAR	**Lajitas Array**	**89.99**	**58**	P	**P**	**06 28 43.2**	**+0.4**
	0.2nm,0.7s,mb3.1,baz=212,slow=5.0,SNR=2.6						
AKASG	**Malin Array Be**	**144.76**	**328**	PKP	PKPdf	06 35 14.9	-1.2
	1.2nm,0.5s,baz=39,slow=4.1,SNR=7.5						
BRTR	**Keskin Array B**	**147.53**	**308**	PKPbc	PKPbc	06 35 23.2	-1.3
	0.4nm,0.6s,baz=108,slow=1.5,SNR=3.4						
BRTR				PKPab	PKPab	06 35 27.6	-0.7
	0.8nm,0.6s,baz=100,slow=1.6,SNR=6.3						
MMAI	**Mount Meron Ar**	**147.76**	**295**	PKPbc	PKPbc	06 35 25.5	+0.2
	1.4nm,0.5s,baz=100,slow=4.4,SNR=3.3						

*ISCJB **23** 06:26:35.9±0.4, 680N±0.04×7300W±0.04, h169km±4km, mb3.5/10, Error ellipse: s-maj=9.0km s-min=5.1km az=136.2*

*IDC **23** 06:26:36.7±0.6, 676N×72.97W, h158km±6km, mb3.3/9, mb1 3.5/12, mb1mx3.4/23, mbtmp3.4/12, Error ellipse: s-maj=12.7km s-min=7.0km az=132.0*

*FUNV **23** 06:26:36.5, 681N×73.16W, h173km, MW4.1*

*NEIC **23** 06:26:37.0±0.6, 676N×7302W, h161km±8km, mb4.3/3, Error ellipse: s-maj=10.9km s-min=8.6km az=121.0*

ISC 23 06:26:36.9±0.4, 679N±004×7299W±004, h163km±4km, n38, σ0$82/44, mb3.5/10, 16D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.26**	**32**	*iP*	**Pn**	**06 27 05.8**	**+0.7**
CAPV				*eS*	**Sn**	**06 27 27.3**	**+0.5**
ROSC	**El Rosal**	**2.34**	**215**	P	**Pn**	**06 27 17.5**	**+0.7**
	156nm,0.3s,baz=87,slow=12,SNR=222						
ROSC				S	**Sn**	**06 27 47.4**	**-0.1**
	142nm,0.3s,baz=234,slow=19,SNR=13						
SOCV	**Socops**	**2.58**	**55**	*iP*	**Pn**	**06 27 20.6**	**+0.9**
SOCV				*eS*	**Sn**	**06 27 52.4**	**-0.4**
VIGV	**El Vigia**	**2.60**	**38**	*iP*	**Pn**	**06 27 20.4**	**+0.6**
VIGV				*eS*	**Sn**	**06 27 53.1**	**0.0**
SDV	**Santo Domingo**	**3.13**	**48**	P	**Pn**	**06 27 27.3**	**+0.9**
	183nm,0.3s,baz=233,slow=5.7,SNR=1281						
SDV				S	**Sn**	**06 28 05.1**	**+0.4**
	55nm,0.3s,baz=276,slow=21,SNR=13						
ELOV	**Elorza**	**3.49**	**86**	*iP*	**Pn**	**06 27 32.2**	**+1.3**
ELOV				*eS*	**Sn**	**06 28 13.3**	**+0.5**
VIRV	**Villa del Rosa**	**3.73**	**9**	*iP*	**Pn**	**06 27 32.5**	**-1.6**
VIRV				*eS*	**Sn**	**06 28 14.9**	**-3.7**
QARV	**Quebrada Arrib**	**4.18**	**36**	*iP*	**Pn**	**06 27 40.2**	**+0.4**
QARV				*eS*	**Sn**	**06 28 25.5**	**-3.5**
SANV	**Sanarito**	**4.35**	**52**	*iP*	**Pn**	**06 27 42.2**	**+0.1**
CURV	**Curarigua**	**4.38**	**43**	*iP*	**Pn**	**06 27 42.5**	**0.0**
DABV	**Dabajuro**	**4.72**	**29**	*iP*	**Pn**	**06 27 46.6**	**-0.2**
TEPV	**Terepaima**	**4.91**	**50**	*iP*	**Pn**	**06 27 49.4**	**+0.1**
SIQV	**Siquisique**	**4.96**	**39**	*iP*	**Pn**	**06 27 49.1**	**-0.9**
BAUV	**El Baul**	**5.35**	**66**	*iP*	**Pn**	**06 27 54.2**	**-0.9**
MONV	**Montecano**	**5.93**	**30**	*iP*	**Pn**	**06 28 01.5**	**-1.4**
TURV	**Turiamo**	**6.26**	**54**	*iP*	**Pn**	**06 28 07.3**	**+0.1**
CAOV	**Caicara del Or**	**6.64**	**85**	*iP*	**Pn**	**06 28 11.4**	**-0.8**
MERV	**Las Mercedes**	**7.06**	**69**	*eP*	**Pn**	**06 28 16.9**	**-0.9**
CUPV	**Cœpira**	**7.83**	**65**	*iP*	**Pn**	**06 28 27.2**	**-0.8**
OTAV	**Otavalo**	**8.49**	**220**	*ePn*	**Pn**	**06 28 35.7**	**-1.0**
	5.5nm,0.6s						
OTAV				*eSn*	**Sn**	**06 30 10.8**	**-0.7**
PCRV	**Puerto La Cruz**	**8.92**	**67**	P	**Pn**	**06 28 42.5**	**0.0**
	2.4nm,0.3s,baz=263,slow=3.4,SNR=24						
PCRV				S	**Sn**	**06 30 21.8**	**0.0**
	2.3nm,0.3s,baz=172,slow=15,SNR=2.9						
SDDR	**Presa de Saban**	**12.23**	**8**	*ePn*	**Pn**	**06 29 26.6**	**+0.7**
	20nm,0.9s						
TEIG	**Tepich**	**19.96**	**313**	P	**P**	**06 30 57.6**	**+1.0**
	0.9nm,0.3s,baz=316,slow=16,SNR=7.0						
SIV	**San Ignacio**	**25.52**	**153**	P	**P**	**06 31 50.6**	**0.0**
	1.3nm,0.7s,mb3.6,baz=335,slow=14,SNR=8.9						
BDFB	**Brasilia**	**33.30**	**132**	P	**P**	**06 33 00.6**	**+1.3**
	1.8nm,0.6s,mb4.0,baz=283,slow=17,SNR=12						
TXAR	**Lajitas Array**	**36.58**	**312**	P	**P**	**06 33 28.2**	**+0.8**
	0.2nm,0.4s,mb3.1,baz=124,slow=8.9,SNR=12						
TXAR	**Lajitas Array**	**36.58**	**312**	P	**P**	**06 33 28.2**	**+0.8**
SCHQ	**Schefferville**	**48.16**	**5**	P	**P**	**06 35 01.6**	**+1.2**
	2.1nm,0.5s,mb4.0,baz=52,slow=19,SNR=8.1						
PDAR	**Pinedale Array**	**48.18**	**324**	P	**P**	**06 35 01.6**	**+0.8**
	0.3nm,0.6s,mb3.1,baz=119,slow=7.4,SNR=3.5						
ISA	**Isabella**	**50.57**	**311**	*eP*	**P**	**06 35 17.8**	**-1.2**
	2.4nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**63.34**	**340**	P	**P**	**06 36 48.6**	**+0.3**
	0.4nm,0.4s,mb3.6,baz=132,slow=6.5,SNR=23						
YKA				pP	pP	06 37 24.8	-1.9
	0.4nm,0.6s,baz=132,slow=6.7,SNR=5.7						
DBIC	**Dimbokro**	**67.61**	**86**	P	**P**	**06 37 16.7**	**0.0**
	1.1nm,0.6s,mb3.8,baz=255,slow=7.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**73.62**	**78**	P	**P**	**06 37 52.2**	**-0.9**
	0.1nm,0.3s,mb3.0,baz=289,slow=5.8,SNR=4.5						
GERES	**GERESS Array B**	**82.76**	**42**	P	**P**	**06 38 41.9**	**-0.7**
	0.3nm,0.7s,mb3.1,baz=289,slow=6.1,SNR=2.9						
MKAR	**Makanchi Array**	**122.31**	**20**	PKP	PKPdf	06 45 12.9	+0.2
	0.2nm,0.3s,baz=305,slow=2.7,SNR=7.9						
SONM	**Songino Array**	**125.61**	**1**	PKP	PKPdf	06 45 20.2	+1.1
	0.3nm,0.4s,baz=21,slow=2.0,SNR=2.4						
ASAR	**Alice Springs**	**149.20**	**234**	PKP	PKPdf	06 46 02.7	+0.1
	0.6nm,0.5s,baz=119,slow=3.2,SNR=3.7						
ASAR				PKPbc	PKPbc	06 46 06.8	-0.2
	0.8nm,0.7s,baz=120,slow=3.3,SNR=17						
WRA	**Warramunga Arr**	**150.44**	**241**	PKP	PKPdf	06 46 05.8	+1.1
	0.7nm,0.4s,baz=107,slow=2.5,SNR=4.2						
WRA				PKPbc	PKPbc	06 46 10.2	+0.1
	0.8nm,0.4s,baz=108,slow=2.6,SNR=17						

*ISCJB **23** 06:44:12.6±1.4, 472N±02×1525E±02, h71km±14km, mb3.5/5, Error ellipse: s-maj=36.4km s-min=9.1km az=137.9*

*MOS **23** 06:44:12.6±2.6, 4728N×15275E, h66km, mb4.0/1, Error ellipse: s-maj=40.9km s-min=16.3km az=56.7*

*IDC **23** 06:44:16.4±3.0, 4723N×15284E, h87km±27km, mb3.3/5, mb1 3.5/8, mb1mx3.2/22, mbtmp3.3/8, MS3.5/1, Ms1 3.5/1, ms1mx2.4/18, Error ellipse: s-maj=39.6km s-min=19.9km az=130.0*

ISC 23 06:44:14.2±1.2, 472N±02×1525E±02, h68km±12km, n26, σ1$25/30, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.77**	**241**	PN	**Pn**	**06 45 08.0**	**-1.8**
KUR				S	**Sn**	**06 46 02.5**	**+10**
KUR				smax			
	comp=N,150nm,0.4s						
KUR				smax			
	comp=E,80nm,0.4s						
NEM2	**Nemuro 2**	**6.11**	**234**	P	**Pn**	**06 45 41.7**	**-0.1**
NEM2				*eS*	**Sn**	**06 46 49.5**	**-0.8**
JNK	**Nakash**	**6.56**	**240**	P	**Pn**	**06 45 50.3**	**+2.3**
PETK	**Petropavlovsk-**	**6.82**	**27**	P	**Pn**	**06 45 50.2**	**-1.2**
	comp=E,0.2nm,0.3s,baz=182,slow=11,SNR=8.2						
JAK	**Akkeshi**	**6.94**	**236**	P	**Pn**	**06 45 52.9**	**-0.2**
JAK				*eS*	**Sn**	**06 47 09.0**	**-1.5**
JAR	**Ashorobuto**	**7.29**	**241**	P	**Pn**	**06 46 00.6**	**+2.6**
JAR				*eS*	**Sn**	**06 47 24.4**	**+5.2**
JOB	**Onbets**	**7.49**	**239**	P	**Pn**	**06 46 02.1**	**+1.5**
J

*IDC **23** 08:08:52.0±1.3, 5585N×16244E, h0[km], mb3.5/4, mb1 3.9/6, mb1mx3.6/25, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=26.6km s-min=17.4km az=19.0*
*ISCJB **23** 08:08:54.7±0.5, 5570N±003×16234E±006, h38[km]±9[km], mb3.5/4, Error ellipse: s-maj=5.7km s-min=4.4km az=12.4*
*KRSC **23** 08:08:54.9±0.4, 5573N×16221E, h42[km]±41[km], ML4.4*
*MOS **23** 08:08:54.3±0.5, 5571N×16241E, h32[km], mb4.6/1, Error ellipse: s-maj=22.4km s-min=10.4km az=73.5*
*NEIC **23** 08:08:57.4±0.8, 5564N×16235E, h45[km], Error ellipse: s-maj=26.6km s-min=10.3km az=147.0*

ISC 23 08:08:54.7±0.8, 5572N±003×16228E±005, h21[km]±7[km], n29, σ0§88/51, mb3.5/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KBTR	**Krutoberegovo**	**0.58**	**31**	*i* P		**Pb**	**08 09 06.7**	**+0.5**
KBTR				*i* S		**Sb**	**08 09 14.9**	**+0.9**
ZLN	**Zelenaya**	**0.88**	**291**	*i* P		**Pb**	**08 09 11.2**	**-0.1**
ZLN				*i* S		**Sb**	**08 09 23.2**	**+0.6**
BZMR	**Bezymyannaya**	**1.03**	**283**	*i* P		**Pn**	**08 09 13.6**	**-0.3**
BZMR				*i* S		**Sb**	**08 09 26.3**	**-0.6**
KRSR	**Krestovskiy**	**1.09**	**298**	*i* P		**Pn**	**08 09 13.3**	**-1.3**
KRSR				*i* S		**Sb**	**08 09 27.0**	**-1.5**
KLY	**Klyuchi**	**1.09**	**304**	*i* P		**Pn**	**08 09 12.1**	**-2.6**
KLY				*i* S		**Sb**	**08 09 24.6**	**-4.0**
SRKR	**Sorokina**	**1.13**	**327**	*i* P		**Pn**	**08 09 14.5**	**-0.7**
SRKR				*i* S		**Sb**	**08 09 29.1**	**-0.5**
KMNR	**Kamenistaya**	**1.15**	**273**	*i* P		**Pn**	**08 09 15.8**	**+0.2**
KMNR				*i* S		**Sb**	**08 09 30.6**	**+0.2**
KPT	**Kopyto**	**1.19**	**283**	*i* P		**Pn**	**08 09 16.1**	**+0.1**
KPT				*i* S		**Sb**	**08 09 31.1**	**-0.2**
MKZ	**Mys Kozlova**	**1.20**	**195**	*i* P		**Pn**	**08 09 15.6**	**-0.6**
MKZ				*i* S		**Sn**	**08 09 30.5**	**-1.4**
TUMR	**Tumrok**	**1.29**	**251**	*i* P		**Pn**	**08 09 17.9**	**+0.5**
TUMR				*i* S		**Sn**	**08 09 34.9**	**+1.0**
KOZR	**Kozyr**	**1.39**	**286**	PN		**Pn**	**08 09 19.3**	**+0.6**
KOZR				S		**Sn**	**08 09 37.5**	**+1.1**
KOZ	**Kozyrevsk**	**1.40**	**285**	*i* P		**Pn**	**08 09 19.3**	**+0.4**
KOZ				*i* S		**Sn**	**08 09 37.5**	**+0.8**
SRDR	**Sredinnyy**	**1.56**	**294**	*i* P		**Pn**	**08 09 21.3**	**+0.2**
SRDR				*i* S		**Sn**	**08 09 39.9**	**-0.7**
SPN	**Mys Shipunski**	**2.94**	**208**	*e*P		**Pn**	**08 09 39.6**	**-0.4**
SPN				*i* S		**Sn**	**08 10 13.2**	**-1.4**
NLC	**Nalytchevo**	**3.07**	**215**	*e*P		**Pn**	**08 09 42.0**	**+0.1**
NLC				*i* S		**Sn**	**08 10 17.6**	**-0.3**
AVH	**Avacha**	**3.21**	**222**	*i* P		**Pn**	**08 09 45.1**	**+1.3**
AVH				*e*S		**Sn**	**08 10 21.3**	**0.0**
GNL	**Ganaly**	**3.23**	**233**	*i* P		**Pn**	**08 09 45.1**	**+1.0**
PET	**Petropavlovsk**	**3.43**	**220**	*e*PN		**Pn**	**08 09 47.8**	**+1.0**
PET				*e*S		**Sn**	**08 10 28.3**	**+1.5**
PET				pmax	pmax			
	comp=Z,79nm,0.6s							
PET				smax				
	comp=N,143nm,0.8s							
PET	**Petropavlovsk**	**3.43**	**220**	*e*P		**Pn**	**08 09 48.0**	**+1.2**
PET				*i* S		**Sn**	**08 10 27.3**	**+0.5**
PET	**Petropavlovsk**	**3.43**	**220**	*e*Pn		**Pn**	**08 09 47.5**	**+0.7**
PET				*e*Sn		**Sn**	**08 10 31.6**	**+4.8**
PETK	**Petropavlovsk-**	**3.74**	**228**	Pn		**Pn**	**08 09 52.4**	**+1.3**
	comp=N,2.1nm,0.3s,baz=58,slow=17,SNR=35							
PETK				Sn		**Sn**	**08 10 42.5**	**+8.1**
	comp=N,1.3nm,0.3s,baz=62,slow=20,SNR=2.8							
RUS	**Russkaya**	**3.97**	**216**	*e*P		**Pn**	**08 09 54.5**	**+0.3**
RUS				*i* S		**Sn**	**08 10 39.5**	**-0.5**
FX1	**Attu Island--F**	**6.97**	**110**	Pn		**Pn**	**08 10 35.6**	**+0.1**
	comp=N,1.7nm,0.3s,baz=16,slow=6.7,SNR=9.5							
FX1				Sn		**Sn**	**08 11 50.8**	**-3.3**
	comp=N,3.8nm,0.3s,baz=128,slow=23,SNR=8.7							
YKA	**Yellowknife Ar**	**40.39**	**45**	P		**P**	**08 16 29.6**	**-0.9**
	comp=N,0.4nm,0.7s,mb3.3,baz=300,slow=8.2,SNR=6.8							
YKA				PcP	PcP		08 18 31.4	-1.8
	comp=N,0.1nm,0.5s,baz=309,slow=3.4,SNR=4.0							
YKA	**Yellowknife Ar**	**40.39**	**45**	P		**P**	**08 16 29.6**	**-0.9**
YKA				PcP	PcP		08 18 31.4	-1.8
NVAR	**Mina Array Bea**	**53.70**	**73**	P		**P**	**08 18 16.1**	**+1.3**
	comp=N,0.3nm,0.7s,mb3.3,baz=289,slow=6.6,SNR=3.6							
PDAR	**Pinedale Array**	**55.17**	**64**	P		**P**	**08 18 25.3**	**0.0**
	comp=N,0.4nm,0.9s,mb3.5,baz=335,slow=4.0,SNR=3.4							
TXAR	**Lajitas Array**	**68.48**	**69**	P		**P**	**08 19 54.9**	**-0.2**
	comp=N,0.7nm,0.6s,mb3.8,baz=296,slow=3.9,SNR=10							
TXAR	**Lajitas Array**	**68.48**	**69**	P		**P**	**08 19 54.9**	**-0.2**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							

CASC 23 08:22:37.0±2.2, 1355N×9077W, h19[km]±8[km], MD3.5, 5C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PCG	**Pacaya**	**0.86**	**11**	*e*P		Pb	08 22 53.4	+0.1
FUG	**Fuego 3**	**0.90**	**356**	*e*P		Pb	08 22 53.2	-0.8
FG6		**1.01**	**354**	*e*P		Pb	08 22 54.9	-1.0
NBG	**Las Nubes**	**1.11**	**22**	*e*P		Pn	08 22 58.9	+1.3
NBG				*e*S		Sb	08 23 15.0	+3.2
JAT	**Jato**	**1.14**	**312**	*e*P		Pn	08 22 56.2	-1.7
RTR	**El Retiro**	**1.15**	**72**⇑	*e*P		x	08 22 57.9	
RTR				*e*S		x	08 23 13.2	
SBLS	**San Blas**	**1.15**	**75**	*e*P		x	08 22 57.6	
SBLS			⇑	*e*P		x	08 22 57.7	
SBLS				*e*S		x	08 23 13.6	
SNJE	**San Jose**	**1.18**	**74**⇑	*e*P		x	08 22 58.1	
RBDL	**Robledal**	**1.20**	**62**	*e*P		x	08 22 58.6	
RBDL				*e*S		x	08 23 14.1	
BOQS	**Boqueron**	**1.46**	**82**	*e*P		x	08 23 02.2	
BOQS			⇑	*e*P		x	08 23 02.5	
BOQS				*e*S		x	08 23 22.0	
SNET	**Serv Nac Est T**	**1.50**	**85**	*e*P		x	08 23 03.7	
SNET				*e*S		x	08 23 22.8	
LFRS	**El Faro**	**1.67**	**87**⇑	*e*P		x	08 23 05.5	
LFRS				*e*S		x	08 23 27.0	
LBRS	**Las Brisas**	**1.69**	**83**	*e*P		x	08 23 06.6	
SNVI	**San Vicente**	**1.88**	**88**	*e*P		x	08 23 08.4	
SNVI				*e*P		x	08 23 08.5	
BLLM	**Bellamira**	**2.47**	**92**	*e*P		x	08 23 17.2	
CNCH	**Conchagua**	**2.87**	**95**	*e*P		x	08 23 22.1	
CNCH				*e*S		x	08 23 57.5	

*IDC **23** 08:27:18.7±4.9, 1434S×16667E, h0[km], mb4.0/4, mb1 4.2/4, mb1mx3.9/17, mbtmp4.0/4, Error ellipse: s-maj=131.5km s-min=38.4km az=116.0*
*ISCJB **23** 08:27:22.7±2.4, 1445±02×1665E±03, h33[km], mb3.9/4, Error ellipse: s-maj=48.2km s-min=22.8km az=163.8*

ISC 23 08:27:24.8±2.4, 1445±02×1666E±03, h35[km], n5, σ0§16/6, mb3.9/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DZM	**Mont Dzumac**	**7.66**	**181**	*e*P		**Pn**	**08 29 14.0**	**+0.2**
DZM				*e*S		**Sn**	**08 30 33.6**	**-5.8**
STKA	**Stephens Creek**	**28.70**	**228**	P		**P**	**08 33 18.7**	**-0.1**
	3.6nm,0.5s,mb4.4,baz=54,slow=8.0,SNR=28							
WRA	**Warramunga Arr**	**31.24**	**255**	P		**P**	**08 33 41.3**	**-0.1**
	0.7nm,0.6s,mb3.6,baz=85,slow=8.6,SNR=7.8							
ASAR	**Alice Springs**	**32.15**	**248**	P		**P**	**08 33 49.5**	**+0.2**
	1.1nm,0.4s,mb4.1,baz=78,slow=9.4,SNR=36							
SONM	**Songino Array**	**81.80**	**324**	P		**P**	**08 39 40.0**	**-0.1**
	0.3nm,0.6s,mb3.4,baz=123,slow=5.3,SNR=2.8							

*IDC **23** 08:49:10.7±0.8, 675S×155.13E, h28[km]±4[km], mb4.0/10, mb1 4.2/12, mb1mx4.1/18, mbtmp4.0/12, ML3.6/2, MS3.7/11, Ms1 3.7/11, ms1mx3.4/30, Error ellipse: s-maj=27.3km s-min=14.4km az=128.0*
*NEIC **23** 08:49:11.4±0.3, 668S×15508E, mb4.6/7, Error ellipse: s-maj=9.5km s-min=7.7km az=119.0*
*ISCJB **23** 08:49:12.7±1.9, 67S±01×15504E±005, h52[km]±18[km], mb4.4/19, MS3.7/8, Error ellipse: s-maj=17.4km s-min=8.3km az=175.3*

ISC 23 08:49:15.1±1.5, 68S±01×15514E±007, h63[km]±14[km], n44, σ0§66/35, mb4.4/19, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HNR	**Honiara**	**5.42**	**119**	Pn		**Pn**	**08 50 34.2**	**+0.8**
	4.0nm,0.3s,baz=283,slow=19,SNR=2.5							
HNR				Sn		**Sn**	**08 51 39.7**	**+5.2**
	5.3nm,0.3s,baz=279,slow=19,SNR=2.3							
HNR				LR		LR	08 52 32.8	
	comp=Z,621nm,21.6s,baz=278,slow=37							
PMG	**Port Moresby**	**8.31**	**251**	Pn		**Pn**	**08 51 11.4**	**-1.5**
	2.0nm,0.3s,baz=41,slow=10.0,SNR=5.4							
PMG				Sn		**Sn**	**08 52 47.0**	**+1.7**
	4.1nm,0.3s,baz=75,slow=19,SNR=11							
PMG				LR		LR	08 54 15.0	
	comp=Z,439nm,20.7s,baz=279,slow=36							
CTA	**Charters Tower**	**15.76**	**212**	Pn		**Pn**	**08 52 52.5**	**-0.7**
	0.3nm,0.3s,baz=31,slow=14,SNR=7.1							
CTA				LR		LR	08 58 12.4	
	comp=Z,250nm,20.3s,baz=48,slow=34							
CTA	**Charters Tower**	**15.76**	**212**	Pn		**Pn**	**08 52 52.5**	**-0.7**
CTA				LR		LR	08 58 12.4	
CTAO	**Charters Tower**	**15.76**	**212**	*e*Pn		**Pn**	**08 52 53.1**	**-0.1**
	12nm,1.2s							
GUMO	**Guam**	**22.69**	**333**	LR		LR	09 01 41.6	
	comp=Z,70nm,20.2s,baz=116,slow=33							
WRAB	**Tennant Creek**	**24.02**	**235**	*e*P		**P**	**08 54 24.2**	**-0.1**
	4.9nm,0.6s,mb4.1							
WB2	**Warramunga Arr**	**24.02**	**235**	*e*P		**P**	**08 54 24.2**	**-0.1**
WRA	**Warramunga Arr**	**24.03**	**235**	P		**P**	**08 54 24.0**	**-0.3**
	1.6nm,0.3s,mb3.9,baz=61,slow=9.1,SNR=34							
WRA				PcP		PcP	08 58 05.2	+0.2
	0.8nm,0.4s,baz=61,slow=2.5,SNR=10							
WRA				S		**S**	**08 58 41.1**	**+3.8**
	1.3nm,1.2s,baz=56,slow=14,SNR=5.3							
ASAR	**Alice Springs**	**26.39**	**228**	P		**P**	**08 54 45.2**	**-0.6**
	1.0nm,0.5s,mb3.6,baz=61,slow=9.1,SNR=46							
STKA	**Stephens Creek**	**27.95**	**205**	P		**P**	**08 54 59.0**	**-0.7**
	1.2nm,0.8s,mb3.6,baz=51,slow=13,SNR=2.6							
STKA				LR		LR	09 06 26.3	
	comp=Z,209nm,18.2s,baz=295,slow=37							
FITZ	**Fitzroy Crossi**	**30.85**	**246**	*e*P		**P**	**08 55 25.3**	**-0.3**
	1.5nm,0.4s,mb4.2							
RPZ	**Rata Peaks**	**39.32**	**162**	LR		LR	09 11 24.8	
	comp=Z,185nm,19.5s,baz=61,slow=34							
MJAR	**Matsushiro Arr**	**45.96**	**341**	LR		LR	09 14 06.8	
	comp=Z,48nm,21.2s,baz=95,slow=33							
PPT	**Papeete**	**54.91**	**107**	*e*LR		LR	09 14 43.3	
	48nm,23.2s							
PETK	**Petropavlovsk-**	**59.73**	**2**	P		**P**	**08 59 12.0**	**-1.1**
	2.9nm,0.8s,mb4.3,baz=143,slow=5.3,SNR=7.8							
PETK				LR		LR	09 24 23.8	
	comp=Z,37nm,18.2s,baz=321,slow=35							
CMAR	**Chiang Mai Arr**	**60.84**	**295**	P		**P**	**08 59 21.4**	**+0.1**
	6.5nm,0.8s,mb4.8,baz=112,slow=5.1,SNR=26							
CHTO	**Chiang Mai**	**60.95**	**296**	*e*P		**P**	**08 59 22.6**	**+0.5**
	7.9nm,1.2s,mb4.7							
SONM	**Songino Array**	**69.26**	**327**	P		**P**	**09 00 15.0**	**-0.4**
	0.9nm,0.6s,mb3.9,baz=141,slow=4.5,SNR=7.5							
TAPN	**Taplejung**	**73.43**	**301**	*e*P		**P**	**09 00 41.4**	**+0.4**
ODAN	**Odare**	**73.56**	**300**	*e*P		**P**	**09 00 42.2**	**+0.4**
	20nm,0.5s,mb5.3							
RAMN	**Ramite**	**74.27**	**300**	*e*P		**P**	**09 00 46.0**	**+0.1**
	6.5nm,0.4s,mb5.0							
JIRN	**Jiri**	**74.81**	**301**	*e*P		**P**	**09 00 49.6**	**+0.5**
	6.5nm,0.4s,mb4.9							
GUN	**Gumba**	**75.15**	**301**	*e*P		**P**	**09 00 51.3**	**+0.3**
PKI	**Pulchoki**	**75.45**	**301**	*e*P		**P**	**09 00 53.1**	**+0.3**
KKN	**Kakani**	**75.62**	**301**	*e*P		**P**	**09 00 53.9**	**+0.1**
	12nm,0.5s,mb5.1							
DMN	**Daman**	**75.72**	**301**	*e*P		**P**	**09 00 54.9**	**+0.6**
GKN	**Gorkha**	**76.23**	**301**	*e*P		**P**	**09 00 57.3**	**+0.1**
KOLN	**Koldanda**	**77.05**	**300**	*e*P		**P**	**09 01 01.9**	**0.0**
DANN	**Dangsing**	**77.07**	**301**	*e*P		**P**	**09 01 01.7**	**-0.2**
	5.6nm,0.5s,mb4.8							
MKAR	**Makanchi Array**	**83.36**	**319**	P		**P**	**09 01 34.2**	**-1.2**
	0.6nm,0.5s,mb3.9,baz=97,slow=6.2,SNR=5.2							
MAW	**Mawson**	**84.61**	**203**	P		**P**	**09 01 41.9**	**+0.5**
	1.9nm,0.6s,mb4.4,baz=95,slow=11,SNR=5.2							
KURK	**Kurchatov**	**86.78**	**322**	LR		LR	09 43 50.3	
	comp=Z,17nm,19.1s,baz=300,slow=38							
BBB	**Bella Bella**	**87.30**	**37**	LR		LR	09 32 17.4	
	comp=Z,248nm,20.6s,baz=285,slow=30							
INK	**Inuvik**	**89.51**	**21**	*e*P		**P**	**09 02 05.0**	**+0.1**
	4.6nm,0.4s,mb5.2							
NVAR	**Mina Array Bea**	**91.50**	**52**	P		**P**	**09 02 15.8**	**+0.9**
	1.4nm,1.0s,mb4.2,baz=249,slow=4.7,SNR=5.5							
NVAR				pP		pP	09 02 25.5	-7.2
	0.9nm,0.9s,baz=258,slow=5.9,SNR=4.4							
BVAR	**Borovoye Array**	**92.24**	**323**	LR		LR	09 42 24.0	
	comp=Z,23nm,19.4s,baz=218,slow=35							
YKA	**Yellowknife Ar**	**96.11**	**28**	P		**P**	**09 02 35.2**	**-0.4**
	0.7nm,0.6s,mb4.3,baz=266,slow=4.5,SNR=31							
YKA				pP		pP	09 02 44.6	-8.6
	1.4nm,0.8s,baz=266,slow=4.5,SNR=9.8							
YKA	**Yellowknife Ar**	**96.11**	**28**	P		**P**	**09 02 35.2**	**-0.4**
YKA				pP		pP	09 02 44.6	-8.6
BOSA	**Boshof**	**120.24**	**231**	PKP		PKPdf	09 08 00.0	+0.3
	1.4nm,0.9s,baz=172,slow=4.7,SNR=3.5							
BDFB	**Brasilia**	**148.00**	**134**	PKPbc		PKPbc	09 08 53.8	-0.6
	1.8nm,0.6s,baz=139,slow=25,SNR=9.3							
MDT	**Midelt**	**148.01**	**327**	PKPbc		PKPbc	09 08 54.5	+0.5
	0.7nm,0.5s,baz=133,slow=17,SNR=6.2							
TORD	**Torodi Ar. Bea**	**153.11**	**286**	PKPbc		PKPbc	09 09 05.0	-1.7
	1.0nm,0.5s,baz=37,slow=2.3,SNR=13							
TORD				pPKPbc		PKPab	09 09 15.0	-3.4
	2.4nm,0.8s,baz=47,slow=3.4,SNR=8.5							
TORD	**Torodi Ar. Bea**	**153.11**	**286**	PKPbc		PKPbc	09 09 05.0	-1.7
TORD				pPKPbc		PKPab	09 09 15.0	-3.4

*CSEM **23** 09:23:41.7±0.1, 3761N×36.15E, h2[km], MD3.4, Error ellipse: s-maj=1.8km s-min=1.4km az=165.0*
*ISK **23** 09:23:41.6, 3762N×36.15E, h5[km], MD3.2*
*ISCJB **23** 09:23:42.8±0.6, 3763N±003×36.16E±003, h5[km]±5[km], Error ellipse: s-maj=4.7km s-min=3.6km az=7.4*
*DDA **23** 09:23:42.6, 3766N×3622E, h18[km]±2[km], Md3.4*

ISC 23 09:23:43.3±0.5, 3762N±003×3616E±003, h7[km]±4[km], n31, σ0§85/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ANDN	**Andirin**	**0.15**	**104**	*i* P		**Pg**	**09 23 46.2**	**-0.3**
ANDN				*i* S		**Sg**	**09 23 48.9**	**+0.3**
KOZT	**Kozan**	**0.30**	**243**	PG		**Pg**	**09 23 48.5**	**-0.6**
KOZT				*e*SG		**Sg**	**09 23 53.9**	**+0.7**
KMRS	**Kahramanmaras**	**0.60**	**101**	PG		**Pg**	**09 23 54.2**	**-0.6**
KMRS				*e*SG		**Sg**	**09 24 03.6**	**+1.0**
CEYT	**Ceyhan**	**0.69**	**209**	*e*PG		**Pg**	**09 23 55.9**	**-0.7**
GAZ	**Gaziantep**	**0.95**	**118**	*e*PG		**Pg**	**09 24 01.5**	**0.0**
KARA	**Karaisali**	**0.95**	**248**	*e*PG		**Pg**	**09 24 00.8**	**-0.8**
PINB	**Pinarbasi**	**1.07**	**10**	*i* P		**Pg**	**09 24 02.2**	**-1.8**
PINB				*i* S		**Sg**	**09 24 19.3**	**+1.4**
COBT	**Iskenderun**	**1.10**	**176**	*i* P		**Pg**	**09 24 04.8**	**+0.5**
COBT				*i* S		**Sg**	**09 24 20.3**	**+1.7**
KUZU	**Kuzuini**	**1.11**	**139**	*i* P		**Pg**	**09 24 04.6**	**-0.1**
KUZU				*i* S		**Sg**	**09 24 19.1**	**0.0**
SARI	**SarD1z-Kayseri**	**1.14**	**22**	*e*PG		**Pg**	**09 23 58.3**	**-6.9**
GZT	**Gaziantep**	**1.15**	**103**	*i* P		**Pg**	**09 24 04.5**	**-0.8**
GZT				*i* S		**Sg**	**09 24 19.5**	**-0.7**
KRTS	**Karatas**	**1.22**	**211**	*e*PN		**Pn**	**09 24 06.1**	**-0.6**
BNN	**Bunyan**	**1.26**	**349**	*e*PN		**Pn**	**09 24 05.8**	**-1.4**
NIG	**Nigde**	**1.32**	**292**	*e*PN		**Pn**	**09 24 07.8**	**-0.4**
MERS	**Mersin**	**1.51**	**241**	*e*PN		**Pn**	**09 24 10.4**	**-0.3**
AKCD	**Akcadag**	**1.55**	**64**	*i* P		**Pn**	**09 24 08.6**	**-2.6**
AKCD				*i* S		**Sn**	**09 24 31.6**	**+0.1**
AVNT	**Avonos**	**1.55**	**319**	*i* P		**Pn**	**09 24 11.2**	**-0.1**
AVNT				*i* S		**Sn**	**09 24 31.7**	**+0.1**
AVNT	**Avonos**	**1.55**	**319**	*i* P		**Pn**	**09 24 11.1**	**-0.2**
AVNT				*i* S		**Sn**	**09 24 31.7**	**+0.1**
ATAB	**Bozova**	**1.70**	**94**	*i* P		**Pn**	**09 24 12.9**	**-0.5**
ATAB				*i* S		**Sn**	**09 24 34.2**	**-1.2**
DARE	**Darende-Malaty**	**1.86**	**44**	*e*PN		**Pn**	**09 24 09.3**	**-6.2**
MYA	**Malataya**	**1.92**	**68**	*e*PN		**Pn**	**09 24 16.4**	**0.0**
URFA	**Urfa**	**2.12**	**94**	*e*PN		**Pn**	**09 24 20.0**	**+0.9**
YOZ	**Yozgat**	**2.12**	**342**	*e*PN		**Pn**	**09 24 19.8**	**+0.6**
SVSK	**Karacayir**	**2.39**	**16**	*e*PN		**Pn**	**09 24 23.6**	**+0.8**
ELZG	**Elazig**	**2.40**	**68**	*i* P		**Pn**	**09 24 23.9**	**+1.0**
ELZG				*i* S		**Sn**	**09 24 58.2**	**+5.8**
IKL	**Isikli**	**2.41**	**236**	*e*PN		**Pn**	**09 24 23.6**	**+0.5**
KEMA	**Kemaliye**	**2.46**	**47**	*i* P		**Pn**	**09 24 24.6**	**+0.7**
KEMA				*i* S		**Sn**	**09 25 01.6**	**+7.5**
KEMA	**Kemaliye**	**2.46**	**47**	*i* P		**Pn**	**09 24 24.5**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.60**	**72**	*e*PN		**Pn**	**09 24 26.2**	**+0.6**
CORM	**Corum**	**2.82**	**335**	*e*PN		**Pn**	**09 24 29.9**	**+1.1**
PTK	**Pertek**	**2.84**	**62**	*e*PN		**Pn**	**09 24 29.8**	**+0.7**

IDC 23 09:51:08.4±2.1, 2094N×14341E, h0[km], mb3.6/3, mb1 3.9/3, mb1mx3.6/21, mbtmp3.6/3, Error ellipse: s-maj=270.0km s-min=25.8km az=109.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.59**	**193**	P		P	09 58 58.9	+0.7
	0.4nm,0.3s,baz=13,slow=8.5,SNR=13							
ASAR	**Alice Springs**	**45.30**	**192**	P		P	09 59 27.2	-0.9
	0.2nm,0.4s,baz=15,slow=6.8,SNR=7.7							
YKA	**Yellowknife Ar**	**77.02**	**28**	P		P	10 03 03.0	+0.1
	0.5nm,0.5s,baz=291,slow=5.5,SNR=17							

*NIED **23** 09:53:00, 4150N×142.10E, h47[km], Mw4.8 Best double couple: M0 1.69000×10[16] NP1:φ±23.00000°, δ71.00000°, λ93.00000°. NP2:φ±193.00000°, δ20.00000°, λ81.00000°.*
*BJI **23** 09:53:01.4, 4151N×142.85E, h38[km], mB4.9, mb4.7, Ms4.3, Msz4.1*
*ISCJB **23** 09:53:10.0±0.3, 4152N±002×14202E±003, h64[km]±2[km], mb4.7/82, Error ellipse: s-maj=4.8km s-min=3.1km az=34.4*
*JMA **23** 09:53:10.2±0.1, 4150N×14204E, h64[km]±2[km], M4.5 Broadband fault plane solution: P waves. NP1: φ±192.00000°, δ19.00000°, λ78.00000°. NP2:φ±24.00000°, δ71.00000°, λ94.00000°. Principal axes: T Plg64.0000°, Azm301.0000°; N Plg4.0000°, Azm203.0000°; P Plg26.0000°, Azm111.0000°;*
JMA Felt III J1.
*MOS **23** 09:53:10.0±0.8, 4167N×14197E, h56[km], mb4.9/46, MS4.1/18 Error ellipse: s-maj=8.5km s-min=4.9km az=106.9*
*NEIC **23** 09:53:11.2±0.7, 4160N×14204E, h59[km]±6[km], mb4.8/36, MW4.8(NIED), Error ellipse: s-maj=8.0km s-min=4.7km az=144.0*
NEIC Felt [III] at Misawa, Honshu. Recorded [3 JMA] in Aomori, [2 JMA] in Iwate and [1 JMA] in Miyagi Prefectures, Honshu. Also recorded [2 JMA] in southwestern Hokkaido and [1 JMA] in the Tomakomai area and in south-central Hokkaido.
*IDC **23** 09:53:11.9±1.6, 4154N×14208E, h73[km]±13[km], mb4.1/21, mb1 4.2/25, mb1mx4.2/28, mbtmp4.1/25, MS3.9/24, Ms1 3.9/24, ms1mx3.8/31, Error ellipse: s-maj=14.0km s-min=9.7km az=121.0*
*GCMT **23** 09:53:11.2±0.3, 4154N×142.18E, h62[km]±2[km], MW4.9/63, Moment Tensor Solution. s33,c38; s63,c97; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr1.93±.13; Mθθ0.27±.11; Mφφ-2.19±.11; Mrθ0.87±.07; Mφθ-1.11±.09; Mφr1.12±.07; Best double couple: M0 2.69600×10[16] NP1:φ±186.00000°, δ31.00000°, λ66.00000°. NP2: φ±33.00000°, δ62.00000°, λ104.00000°. Principal axes: T 2.3960, Plg70.0000°, Azm333.0000°; N 0.6050, Plg12.0000°, Azm206.0000°; P -2.9950, Plg16.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 09:53:10.8±0.3, 4153N±002×14205E±004, h58[km]±2[km], h28[km]±4.8[km]:pP-P, n262, σ0§98/278, mb4.7/82, MS4.0/44, 15C-22D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JOT	**Ohata**	**0.77**	**259**	⇓P		**Pn**	**09 53 25.4**	**-0.4**
JOT				*e*S		**Sn**	**09 53 36.8**	**0.0**
JKB	**Kayabe**	**0.84**	**296**	⇓P		**Pn**	**09 53 26.3**	**-0.4**
JKB				*e*S		**Sn**	**09 53 38.8**	**+0.3**
JNBK	**Urakawa-nobuka**	**0.92**	**35**	⇑P		**Pn**	**09 53 27.2**	**-0.4**
ERM	**Erimo**	**0.96**	**59**	*d*iP		**Pn**	**09 53 28.1**	**-0.1**
ERM	**Erimo**	**0.96**	**59**	*e*Pn		**Pn**	**09 53 28.2**	**0.0**
JEM	**Erimo**	**0.96**	**59**	⇑P		**Pn**	**09 53 28.1**	**-0.1**
JEM				*e*S		**Sn**	**09 53 41.7**	**+0.6**
JTM	**Tenmabayashi**	**1.05**	**225**	⇓P		**Pn**	**09 53 29.1**	**-0.3**
JTM				S		**Sn**	**09 53 42.7**	**-0.5**
JNB	**Noboribetsu**	**1.21**	**321**	⇓P		**Pn**	**09 53 30.9**	**-0.6**
JNB				*e*S		**Sn**	**09 53 45.7**	**-1.2**
JANG	**Nango**	**1.22**	**200**	P		**Pn**	**09 53 30.8**	**-0.9**
JANG				S		**Sn

MDJ S **Sn** **09 57 21.0 +7.9**
MDJ AMB AMB
comp=Z,29nm,1.0s
MDJ AMB AMB
comp=Z,91nm,4.7s
MDJ LR LR
comp=E,642nm,17.9s
MDJ LR LR
comp=Z,917nm,18.1s
KLR Kul'dur 10.57 320 *e*P **Pn** **09 55 38.1 -1.3**
KLR pmax pmax
comp=E,33nm,1.4s
KLR pmax pmax
comp=Z,28nm,1.4s
KSRS Korea Array 11.65 254 P **Pn** **09 55 57.7 +3.5**
comp=Z,2.0nm,0.3s,baz=65,slow=14,SNR=32
KSRS S **Sn** **09 58 10.2 +7.5**
comp=Z,1.7nm,0.3s,baz=69,slow=25,SNR=9.4
KSRS LR LR 09 59 58.2
comp=Z,476nm,21.6s,baz=50,slow=35
KSRS Korea Array 11.65 254 P **Pn** **09 55 57.7 +3.5**
KSRS S **Sn** **09 58 10.2 +7.6**
KSRS pmax pmax
comp=Z,2.0nm,0.3s
KSRS smax
comp=N,2.0nm,0.3s
KSRS MLR MLR
comp=Z,476nm,21.6s
CN2 Changchun 12.44 286 *e*P **Pn** **09 56 09.8 +4.9**
CN2 *e*S **Sn** **09 58 34.3 +13**
CN2 AMB AMB
comp=Z,10.0nm,0.5s
CN2 AMB AMB
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,390nm,16.0s
CN2 LR LR
comp=E,740nm,16.0s
CN2 LR LR
comp=Z,820nm,18.0s
PETK Petropavlovsk- 15.67 37 P **Pn** **09 56 46.4 -1.3**
comp=Z,0.2nm,0.3s,baz=216,slow=10,SNR=5.2
PETK LR LR 10 02 50.8
comp=Z,225nm,21.9s,baz=234,slow=37
CLNS Chul'man 18.90 330 *e*P **Pn** **09 57 26.8 -0.7**
CLNS *e*S **S** **10 00 53.0 -4.9**
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=Z,20nm,0.8s
CLNS pmax pmax
comp=E,14nm,0.9s
CLNS smax
comp=E,134nm,13.9s
CLNS smax
comp=N,89nm,12.8s
CLNS MLR MLR
comp=Z,258nm,14.0s
CLNS MLR MLR
comp=E,110nm,14.0s
CLNS MLR MLR
comp=N,180nm,14.0s
BJI Beijing 19.63 274 P **Pn** **09 57 32.8 -3.6**
BJI AMB AMB
comp=Z,18nm,1.1s
BJI AMB AMB
comp=Z,119nm,5.0s
BJI LR LR
comp=N,287nm,11.5s
BJI LR LR
comp=E,527nm,12.6s
BJI LR LR
comp=Z,538nm,27.7s
SSE Sheshan 19.73 245 P **Pn** **09 57 34.9 -2.7**
SSE S **S** **10 01 08.6 -6.3**
SSE XS sS 10 01 31.8 -3.6
SSE AMB AMB
comp=Z,27nm,0.8s
SSE AMB AMB
comp=Z,103nm,4.5s
SSE LR LR
comp=N,106nm,15.3s
SSE LR LR
comp=E,237nm,15.3s
SSE LR LR
comp=Z,238nm,19.0s
YAK Yakutsk 21.84 344 *e*P **P** **09 57 54.3 -3.8**
YAK *e* 09 58 14.8
YAK *e*S **S** **10 01 50.9 -4.9**
YAK *e* 10 01 55.5
YAK *e*SSS 10 02 31.6
YAK pmax pmax
comp=Z,24nm,0.9s,mb4.6
YAK pmax pmax
comp=N,14nm,1.1s
YAK smax
comp=N,21nm,1.6s
YAK smax
comp=E,33nm,1.9s
YAK MLR MLR
comp=Z,211nm,19.0s,MS3.6
YAK MLR MLR
comp=N,175nm,18.0s,MS3.6
YAK MLR MLR
comp=E,135nm,17.0s,MS3.6
YAK Yakutsk 21.84 344 *e*P **P** **09 57 54.6 -3.5**
comp=E,23nm,0.7s,mb4.7
SEY Seymchan 22.30 12⇑ *e*P **P** **09 57 59.7 -3.2**
HHC Hu-ho-hao-te 22.90 278 *e*P **P** **09 58 07.8 -1.8**
HHC AP 09 58 14.8
HHC XP sP 09 58 18.5 -11
HHC PP 09 58 36.1
HHC *e*S **S** **10 02 08.3 -6.7**
HHC PCS PcS 10 05 38.5 +1.4
HHC AMB AMB
comp=Z,10.0nm,0.8s,mb4.3
HHC AMB AMB
comp=Z,123nm,3.8s
HHC LR LR
comp=N,150nm,11.9s,MS4.0
HHC LR LR
comp=E,293nm,13.9s,MS4.0
HHC LR LR
comp=Z,341nm,14.9s,MS3.9
FX1 Attu Island--F 23.80 51 P **P** **09 58 16.8 -1.2**
comp=Z,4.1nm,0.5s,mb4.1,baz=220,slow=17,SNR=2.9
FX1 LR LR 10 08 00.9
comp=Z,110nm,19.2s,MS3.3,baz=282,slow=37
FX1 Attu Island--F 23.80 51 P **P** **09 58 16.8 -1.2**
FX1 pmax pmax
comp=Z,4.0nm,0.5s
FX1 MLR MLR
comp=Z,110nm,19.2s
BOD Bodaibo 24.14 322 *e*P **P** **09 58 19.0 -2.0**
BOD pmax pmax
comp=Z,6.0nm,0.9s,mb4.0
WHN Wuhan 24.84 253 P **P** **09 58 27.4 -0.3**
WHN *e*S **S** **10 02 46.4 0.0**
WHN LR LR
comp=Z,751nm,15.5s,MS4.3
ULN Ulaanbaatar 25.52 296 *e*P **P** **09 58 33.4 -0.3**
ULN pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
ULN Ulaanbaatar 25.52 296 *e*P **P** **09 58 33.4 -0.3**
comp=Z,7.9nm,1.0s,mb4.2
SONM Songino Array 25.96 296 P **P** **09 58 38.3 +0.6**
comp=Z,6.4nm,0.6s,mb4.3,baz=88,slow=7.9,SNR=41
SONM LR LR 10 09 35.4
comp=Z,403nm,18.5s,MS4.0,baz=217,slow=38
SONM Songino Array 25.96 296 P **P** **09 58 38.3 +0.6**
SONM pmax pmax
comp=Z,6.0nm,0.6s
SONM MLR MLR
comp=Z,403nm,18.5s
XAN Xi'an 27.11 265 P **P** **09 58 49.6 +1.4**
XAN AP pP 09 58 54.9 -7.6
XAN AMB AMB
comp=Z,6.0nm,0.6s,mb4.3
XAN AMB AMB
comp=Z,16nm,3.0s
XAN LR LR
comp=N,128nm,13.3s,MS3.8
XAN LR LR
comp=E,133nm,17.3s,MS3.8
XAN LR LR
comp=Z,329nm,17.6s,MS4.0
GUMO Guam 27.94 174 LR LR 10 09 21.7
comp=Z,180nm,19.2s,MS3.7,baz=266,slow=35
TLY Talaya 27.97 304 *e*P **P** **09 58 56.1 +0.4**
TLY pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
TLY MLR MLR
comp=Z,247nm,16.0s,MS3.9
TLY Talaya 27.97 304 *e*P **P** **09 58 55.6 -0.1**
comp=Z,11nm,1.2s,mb4.3
ZAK Zakamensk 28.10 302⇑ *i*P **P** **09 58 56.3 -0.5**
ZAK *e* 09 59 19.0
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.1
BILL Bilibino 29.59 18 *i*P **P** **09 59 09.2 -0.7**
BILL *e* 10 02 12.8
BILL pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
BILL MLR MLR
comp=Z,200nm,18.0s,MS3.8
BILL Bilibino 29.59 18 *e*P **P** **09 59 09.8 -0.1**
comp=Z,3.2nm,0.5s,mb4.3
MOY Mondy 29.62 304 *e*P **P** **09 59 10.9 +0.6**
LZH Lanzhou 30.09 272 *e*P **P** **09 59 15.0 +0.3**
LZH AP pP 09 59 24.1 -5.0
LZH XP sP 09 59 28.3 -7.6
LZH PP PP 10 00 12.6 -11
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,83nm,4.8s
LZH LR LR
comp=N,512nm,13.7s
LZH LR LR
comp=Z,743nm,17.8s,MS4.4
TIXI Tiksi 30.90 352 *i*P **P** **09 59 19.1 -2.3**
TIXI MLR MLR
comp=Z,100nm,22.0s,MS3.4
GTA Gaotai 31.98 280⇑ *e*P **P** **09 59 31.5 +0.3**
GTA AP pP 09 59 40.0 -5.7
GTA XP sP 09 59 43.3 -9.2
GTA S **S** **10 04 40.0 +1.5**
GTA AMB AMB
comp=Z,7.0nm,1.3s,mb4.3
GTA AMB AMB
comp=Z,65nm,4.5s
GTA LR LR
comp=N,196nm,15.6s,MS4.1
GTA LR LR
comp=E,268nm,15.6s,MS4.1
GTA LR LR
comp=Z,377nm,15.9s,MS4.2
CD2 Chengdu 32.43 263 P **P** **09 59 36.3 +1.0**
CD2 AP pP 09 59 46.4 -3.3
CD2 XP sP 09 59 50.3 -6.2
CD2 PP PP 10 00 44.8 -4.5
CD2 S **S** **10 04 47.3 +1.6**
CD2 XS sS 10 05 03.9 -6.3
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,120nm,6.1s
CD2 LR LR
comp=N,290nm,5.4s
CD2 LR LR
comp=Z,220nm,5.7s
GYA Guiyang 32.71 254 *e*P **P** **09 59 40.3 +2.5**
GYA AP pP 09 59 48.8 -3.4
GYA XP sP 09 59 53.4 -5.6
GYA PP PP 10 00 50.3 -2.2
GYA S **S** **10 04 52.8 +2.6**
GYA XS sS 10 05 07.5 -7.2
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,110nm,4.8s
GYA LR LR
comp=N,540nm,17.9s,MS4.4
GYA LR LR
comp=E,410nm,17.8s,MS4.4
GYA LR LR
comp=Z,550nm,18.4s,MS4.3
KMI Kunming 36.34 256 P **P** **10 00 11.4 +2.2**
KMI AP pP 10 00 19.3 -4.5
KMI XP sP 10 00 22.6 -8.0
KMI PP PP 10 01 34.3 +1.6
KMI S **S** **10 05 49.0 +2.8**
KMI AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
KMI AMB AMB
comp=Z,164nm,3.5s
KMI LR LR
comp=N,199nm,22.0s,MS4.0
KMI LR LR
comp=E,187nm,22.0s,MS4.0
KMI LR LR
comp=Z,215nm,23.6s,MS3.9
ZAA0 Zalesovo Array 39.38 308 *e*P **P** **10 00 34.0 -0.5**
ZALV Zalesovo Beam 39.38 308 P **P** **10 00 34.1 -0.4**
comp=Z,14nm,0.7s,mb4.8,baz=89,slow=8.1,SNR=38
ZALV LR LR 10 17 51.0
comp=Z,212nm,18.6s,MS4.0,baz=79,slow=38
ZALV Zalesovo Beam 39.38 308 P **P** **10 00 34.1 -0.4**
ZALV pmax pmax
comp=Z,14nm,0.7s,mb4.8
ZALV MLR MLR
comp=Z,212nm,18.6s,MS4.0
WMQ Urumqi 39.43 292 P **P** **10 00 35.0 0.0**
WMQ AMB AMB
comp=Z,19nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,183nm,3.6s
WMQ LR LR
comp=N,111nm,18.0s,MS4.1
WMQ LR LR
comp=E,252nm,19.0s,MS4.1
WMQ LR LR
comp=Z,276nm,18.0s,MS4.1
NVS Novosibirsk 40.22 310 *e*P **P** **10 00 40.3 -1.1**
NVS pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
NVS pmax pmax
comp=E,6.0nm,1.1s
MK31 Makanchi Array 42.30 298 *e*P **P** **10 00 58.0 -0.5**
MK31 *e*pP pP 10 01 03.8 -10
MKAR Makanchi Array 42.30 298 P **P** **10 00 57.3 -1.2**
comp=E,4.2nm,0.6s,mb4.2,baz=84,slow=11,SNR=40
MKAR LR LR 10 19 41.8
comp=E,199nm,19.1s,MS4.0,baz=270,slow=38
MKAR Makanchi Array 42.30 298 P **P** **10 00 57.3 -1.2**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR MLR MLR
comp=Z,199nm,19.1s
LSA Lhasa 42.48 271 P **P** **10 01 00.9 +0.7**
CHTO Chiang Mai 43.03 252 *e*P **P** **10 01 05.9 +1.1**
CHTO pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
CHTO Chiang Mai 43.03 252 *e*P **P** **10 01 05.8 +1.0**
comp=Z,7.4nm,1.0s,mb4.4
CMAR Chiang Mai Arr 43.27 251 P **P** **10 01 06.4 -0.3**
comp=Z,1.5nm,0.3s,mb4.1,baz=33,slow=7.9,SNR=3.3
CMAR LR LR 10 19 53.9
comp=Z,100nm,18.6s,MS3.8,baz=59,slow=37
CMAR Chiang Mai Arr 43.27 251 P **P** **10 01 06.4 -0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR MLR MLR
comp=Z,100nm,18.6s
KURK Kurchatov 43.67 305 *e*P **P** **10 01 08.8 -0.8**
KURK pmax pmax
comp=Z,31nm,1.2s,mb4.9
KURK Kurchatov 43.67 305 *e*P **P** **10 01 08.8 -0.8**
comp=Z,31nm,1.2s,mb4.9
KTH Kantishna Hill 43.80 37 *e*P **P** **10 01 11.6 +1.1**
comp=Z,13nm,0.9s,mb4.7
COLD Coldfoot 44.02 31 *e*P **P** **10 01 13.2 +1.1**
comp=Z,9.3nm,1.3s,mb4.3
MCK McKinley 44.67 36 *e*P **P** **10 01 18.1 +0.7**
MCK pmax pmax
comp=Z,112nm,2.6s,mb5.2
MCK McKinley 44.67 36 *e*P **P** **10 01 18.1 +0.7**
comp=Z,112nm,2.6s,mb5.2
COLA College 45.06 35‖ *e*P **P** **10 01 20.8 +0.3**
TAPN Taplejung 46.28 270 *e*P **P** **10 01 31.4 +0.8**
ODAN Odare 46.78 270 *e*P **P** **10 01 35.2 +0.6**
JIRN Jiri 47.26 271 *e*P **P** **10 01 39.4 +1.2**
comp=Z,19nm,0.4s,mb5.4
RAMN Ramite 47.33 270 *e*P **P** **10 01 39.0 +0.2**
comp=Z,89nm,0.9s,mb5.7
GUN Gumba 47.36 272 *e*P **P** **10 01 39.7 +0.7**
comp=Z,47nm,0.4s,mb5.8
KKN Kakani 47.87 272 *e*P **P** **10 01 43.7 +0.7**
comp=Z,59nm,0.9s,mb5.6
KKN Kakani 47.87 272 *e*P **P** **10 01 43.7 +0.7**
KKN pmax pmax
comp=Z,59nm,0.9s,mb5.6
PKI Pulchoki 47.89 272 *e*P **P** **10 01 43.4 +0.2**
BRVK Borovoye 48.06 310 *e*P **P** **10 01 44.3 +0.2**
BRVK pmax pmax
comp=Z,21nm,1.3s,mb5.0
BRVK Borovoye 48.06 310 *e*P **P** **10 01 44.2 +0.1**
comp=Z,21nm,1.3s,mb5.0
DMN Daman 48.10 272 *e*P **P** **10 01 45.6 +0.8**
GKN Gorkha 48.24 273 *e*P **P** **10 01 45.9 +0.1**
comp=Z,27nm,0.5s,mb5.5
DANN Dangsing 48.72 274 *e*P **P** **10 01 49.9 +0.4**
comp=Z,122nm,0.6s
AAK Ala-Archa 48.91 295 *i*P **P** **10 01 50.8 0.0**
AAK pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
AAK MLR MLR
comp=Z,200nm,30.0s,MS3.9
KOLN Koldanda 49.14 273 *e*P **P** **10 01 53.0 +0.2**
INK Inuvik 50.19 29 P **P** **10 02 00.6 +0.4**
comp=Z,8.6nm,0.7s,mb4.9,baz=298,slow=6.0,SNR=23
INK Inuvik 50.19 29 P **P** **10 02 00.6 +0.4**
INK pmax pmax
comp=Z,9.0nm,0.7s
INK Inuvik 50.19 29 *e*P **P** **10 02 00.6 +0.5**
PMG Port Moresby 50.90 174 LR LR 10 19 18.1
comp=Z,77nm,21.4s,MS3.7,baz=249,slow=31
SVE Sverdlovsk 52.17 317 *e*P **P** **10 02 13.9 -1.2**
SVE *e*S **S** **10 09 43.6 +8.5**
SVE pmax pmax
comp=Z,13nm,0.9s,mb4.9
SVE MLR MLR
comp=Z,523nm,18.0s,MS4.6
HNR Honiara 53.31 158 LR LR 10 23 01.6
comp=Z,169nm,19.4s,MS4.1,baz=342,slow=34
ARU Arti 53.38 317*c i*P **P** **10 02 23.5 -0.6**
ARU *e* 10 04 23.7
ARU *e*S **S** **10 09 53.0 +1.4**
ARU *e*SS SS 10 13 33.9 +2.3
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.7
ARU MLR MLR
comp=Z,406nm,18.0s,MS4.5
ARU Arti 53.38 317 *e*P **P** **10 02 23.1 -1.0**
comp=Z,25nm,1.5s,mb4.9
AKTK Aktyubinsk 56.11 310 P **P** **10 02 43.8 -0.1**
AKTO Aktyubinsk 56.11 310 P **P** **10 02 43.8 -0.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=66,slow=13,SNR=7.8
AKTO Aktyubinsk 56.11 310 P **P** **10 02 43.8 -0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
RES Resolute Bay 58.14 15 *e*P **P** **10 02 57.3 -0.6**
RES pmax pmax
comp=Z,12nm,0.9s,mb4.9
RES Resolute Bay 58.14 15 *e*P **P** **10 02 57.3 -0.5**
comp=Z,12nm,0.9s,mb4.9
KEV Kevo 59.44 339 *e*p **P** **10 03 06.9 0.0**
YKA Yellowknife Ar 59.70 32 P **P** **10 03 08.6 -0.3**
comp=Z,0.8nm,0.4s,mb4.1,baz=307,slow=6.7,SNR=30
YKA Yellowknife Ar 59.70 32 P **P** **10 03 08.6 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 59.98 339 P **P** **10 03 09.5 -1.2**
comp=Z,5.4nm,0.9s,mb4.6,baz=36,slow=6.3,SNR=10
ARCES LR LR 10 31 50.1
comp=Z,124nm,18.5s,MS4.1,baz=28,slow=39
ARCES ARCESS Array B 59.98 339 P **P** **10 03 09.5 -1.2**
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES MLR MLR
comp=Z,124nm,18.5s
KLMR Klimovskoe 60.26 327 *e*P **P** **10 03 09.8 -2.9**
KLMR pmax pmax
comp=Z,23nm,1.7s,mb4.9
CTA Charters Tower 61.42 176 LR LR 10 28 36.1
comp=Z,49nm,18.0s,MS3.7,baz=180,slow=35
WRAB Tennant Creek 61.56 188‖ *e*P **P** **10 03 20.2 -1.7**
WRA Warramunga Arr 61.57 188 P **P** **10 03 20.4 -1.6**
comp=Z,2.3nm,0.3s,mb4.7,baz=6.3,slow=6.9,SNR=24
WRA Warramunga Arr 61.57 188 P **P** **10 03 20.4 -1.6**
WRA pmax pmax
comp=Z,2.0nm,0.4s
JOF Joensuu 62.26 331 *e*p **P** **10 03 24.3 -1.9**
comp=Z,4.9nm,0.5s,mb4.9
JOF Joensuu 62.26 331 *e*P **P** **10 03 24.3 -1.9**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
KAF Kangasniemi 64.56 332 *e*p **P** **10 03 39.6 -1.8**
comp=Z,3.7nm,0.5s,mb4.7
KAF Kangasniemi 64.56 332 *e*P **P** **10 03 39.6 -1.8**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
VRHR Novokhopersk 64.73 317 *e*P **P** **10 03 42.5 -0.2**
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=E,5.0nm,0.5s
OBN Obninsk 64.82 322 *e*P **P** **10 03 42.5 -0.7**
OBN pmax pmax
comp=Z,19nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.3
ASAR Alice Springs 65.30 188 P **P** **10 03 45.6 -0.9**
comp=Z,2.6nm,0.8s,mb4.3,baz=2.3,slow=6.2,SNR=28
ASAR Alice Springs 65.30 188 P **P** **10 03 45.7 -0.9**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
VSR Storozhevoye 65.91 318 *e*P **P** **10 03 50.0 -0.3**
VSR pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.5s
VORD Divnogorie 66.00 318 *e*P **P** **10 03 50.0 -0.9**
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
VORD pmax pmax
comp=E,5.0nm,0.5s
SUMG Summit 66.20 0 *e*P **P** **10 03 52.6 +0.8**
comp=E,290nm,3.0s
KIV Kislovodsk 68.37 310 *e*P **P** **10 04 05.8 -0.3**
KIV pmax pmax
comp=Z,37nm,1.1s,mb5.3
KIV MLR MLR
comp=Z,127nm,17.0s,MS4.2
KIV Kislovodsk 68.37 310 *e*P **P** **10 04 06.5 +0.4**
comp=Z,38nm,1.1s,mb5.3
FCC Fort Churchill 69.78 27 *e*P **P** **10 04 15.2 +0.7**
comp=Z,0.5nm,1.5s
NB2 NORSAR Subarra 70.25 337 P **P** **10 04 16.4 -0.9**
comp=Z,3.5nm,0.5s,mb4.5,baz=36,slow=6.5
NOA NORSAR Array B 70.25 337 P **P** **10 04 16.6 -0.7**
comp=Z,4.7nm,0.9s,mb4.4,baz=41,slow=5.9,SNR=22
NOA LR LR 10 38 07.9
comp=Z,117nm,19.4s,MS4.2,baz=0.0,slow=38
NOA NORSAR Array B 70.25 337 P **P** **10 04 16.6 -0.7**
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA MLR MLR
comp=Z,117nm,19.4s
ANN Anapa 70.80 313 *e*P **P** **10 04 18.4 -2.6**
ANN *e**PP pP 10 04 34.0 -2.9
ANN *e* pP 10 04 38.5 +1.6
ANN *e*PPP 10 08 37.5
ANN *e*S S 10 13 28.0 -3.3
ANN pmax pmax
comp=Z,64nm,1.1s,mb5.5
AKASG Malin Array Be 71.07 322 P **P** **10 04 21.6 -0.9**
comp=Z,4.7nm,0.5s,mb4.7,baz=43,slow=6.3,SNR=34
AKASG Malin Array Be 71.07 322 *i*P **P** **10 04 21.6 -0.9**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
KIEV Kiev 71.08 322 *e*P **P** **10 04 21.7 -0.9**
KIEV pmax pmax

comp=Z,4.0nm,0.6s,mb4.5
KIEV Kiev 71.08 322 *e*P P **10 04 21.7 -0.9**
comp=Z,4.0nm,0.6s,mb4.5
NVAR Mina Array Bea 71.94 55 P P **10 04 28.6 +0.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=287,slow=6.1,SNR=11
IMW Indian Meadow 72.69 46 *e*P P **10 04 35.0 +2.6**
comp=Z,5.2nm,1.0s,mb4.4
STKA Stephens Creek 73.04 180 P P **10 04 34.3 0.0**
comp=Z,2.8nm,0.8s,mb4.2,baz=340,slow=9.3,SNR=4.1
STKA LR LR 10 35 53.8
comp=Z,55nm,19.3s,MS3.9,baz=25,slow=35
UMR Umm Al-Rimmam 74.06 295 *e*P P **10 04 39.9 -0.8**
baz=295
UMR AMb AMB 10 04 41.1
comp=Z,47nm,0.8s,mb5.5,baz=295
MIB Mutribah 74.16 296 *e*P P **10 04 39.9 -1.4**
baz=296
MIB AMb AMB 10 04 42.8
comp=Z,51nm,1.2s,mb5.3,baz=296
PDAR Pinedale Array 74.19 47 P P **10 04 41.2 0.0**
comp=Z,1.6nm,0.7s,mb4.1,baz=276,slow=1.8,SNR=16
PDAR LR LR 10 36 07.8
comp=Z,100nm,18.9s,MS4.1,baz=124,slow=35
QRN Al-Qurain 74.43 295 *e*P P **10 04 41.6 -1.2**
baz=294
QRN AMb AMB 10 04 48.9
comp=Z,108nm,1.4s,mb5.6,baz=294
RDF Al-Radifah 74.57 295 *e*P P **10 04 42.5 -1.1**
baz=295
RDF AMb AMB 10 04 51.2
comp=Z,66nm,1.2s,mb5.4,baz=295
NAY Al-Naaiem 74.57 295 *e*P P **10 04 42.1 -1.6**
baz=295
NAY AMb AMB 10 04 46.2
comp=Z,18nm,1.7s,mb4.7,baz=295
BUR08 Bucovina Ar. S 75.09 321 *e*P P **10 04 46.5 +0.1**
BURAR Bucovina Array 75.11 321 ⇓*i*P P **10 04 46.7 +0.3**
ULM Lac du Bonnet 75.50 34 LR LR 10 41 47.3
comp=Z,78nm,20.7s,MS4.0,baz=12,slow=39
STHS Stebnicka Huta 75.58 325 *i* P P **10 04 50.0 +0.9**
STHS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
STHS Stebnicka Huta 75.58 325 *i* P P **10 04 50.0 +0.9**
STHS Stebnicka Huta 75.58 325 *i* P P **10 04 50.0 +0.9**
comp=Z,3.2nm,0.6s,mb4.4
OJC Ojcow 75.60 326 *e*P P **10 04 49.1 -0.1**
VRI Vrincioaia 75.64 319 ⇑*i*P P **10 04 51.3 +1.8**
VRI Vrincioaia 75.64 319 ⇑P P **10 04 51.3 +1.8**
TIRR Tirgusor 75.80 317 ⇓*i*P pP 10 05 04.3 -2.2
CRVS Cervenica-Dubn 75.87 324 *i* P P **10 04 51.7 +1.0**
CRVS pmax pmax
comp=Z,34nm,2.9s,mb4.8
CRVS Cervenica-Dubn 75.87 324 *i* P P **10 04 51.7 +1.0**
comp=Z,34nm,2.9s,mb4.8
BRTR Keskin Array B 76.26 311 P P **10 04 53.1 0.0**
comp=Z,2.7nm,0.8s,mb4.2,baz=84,slow=3.5,SNR=14
BRTR LR LR 10 44 06.6
comp=Z,57nm,19.5s,MS3.9,baz=212,slow=40
BRTR Keskin Array B 76.26 311 *i* P P **10 04 53.2 +0.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
OKC Ostrava-Krasne 75.58 326 *e*P P **10 04 55.4 +0.7**
VOIR 76.76 320 ⇑*i*P P **10 04 57.0 +1.1**
VOIR 76.76 320 ⇑P P **10 04 57.0 +1.1**
DRGR 76.88 322 ⇓*i*P P **10 04 56.9 +0.4**
DRGR 76.88 322 ⇓P P **10 04 56.9 +0.5**
DPC Dobruska-Polom 76.92 328 *e*P P **10 04 57.3 +0.6**
DPC *e*pP pP 10 05 13.8 +1.0
UPC Upice 76.93 328 *e*P P **10 04 57.6 +0.9**
UPC *e*sP sP 10 05 17.4 -1.8
VYHS Vyhne 77.32 325 *i* P P **10 04 59.1 +0.2**
BRG Berggiesshubel 77.45 329 *e*P P **10 05 01.2 +1.6**
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
BRG Berggiesshubel 77.45 329 *e*(P) P **10 05 01.2 +1.6**
comp=Z,4.7nm,1.2s,mb4.3
CLL Collm 77.45 330 *i* P P **10 05 00.0 +0.4**
CLL pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CLL MLR MLR
comp=Z,200nm,19.4s,MS4.5
CLL Collm 77.45 330 *i* P P **10 05 00.0 +0.4**
comp=Z,7.0nm,0.8s,mb4.6
CLL Lm 10 41 00.0
comp=Z,200nm,19.4s
PVCC Panska Ves 77.48 329 *e*P P **10 05 01.2 +1.4**
NWAO Narrogin (SRO) 77.53 201 LR LR 10 38 29.6
comp=Z,51nm,21.1s,MS3.8,baz=150,slow=35
VRAC Vranov 77.63 327 ⇓*i*P P **10 05 00.6 0.0**
VRAC Vranov 77.63 327 ⇓P P **10 05 00.7 0.0**
GZR Gura Zlata 77.88 321 ⇑*i*P P **10 05 02.5 +0.4**
GZR Gura Zlata 77.88 321 ⇑P P **10 05 02.5 +0.3**
PRU Pruhonice 77.92 328 *e*P P **10 05 03.1 +0.9**
MODS Modra-Piesok 78.07 326 *i* P P **10 05 04.4 +1.3**
MODS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
MODS Modra-Piesok 78.07 326 *i* P P **10 05 04.4 +1.3**
comp=Z,1.9nm,1.0s,mb4.0
TREC Trest 78.09 327 *e*P P **10 05 03.9 +0.7**
BZS Buzias 78.26 322 ⇑*i*P P **10 05 04.4 +0.2**
BZS Buzias 78.26 322 ⇑P P **10 05 04.4 +0.2**
KHC Kasperske Hory 78.98 328 *e*P P **10 05 08.1 0.0**
PKSM Moragy 79.16 324 ⇓*i*P P **10 05 09.8 +0.7**
PKSM Moragy 79.16 324 ⇓P P **10 05 09.8 +0.7**
GERES GERESS Array B 79.16 328 P P **10 05 09.0 -0.1**
comp=Z,0.6nm,0.4s,mb3.8,baz=38,slow=6.4,SNR=12
GERES LR LR 10 40 43.1
comp=Z,93nm,20.0s,MS4.1,baz=288,slow=36
GERES GERESS Array B 79.16 328 P P **10 05 09.0 -0.1**
GERES pmax pmax
comp=Z,1.0nm,0.4s
GERES MLR MLR
comp=Z,93nm,20.0s
GROS Grobnik 80.32 326 *i* P P **10 05 15.1 -0.4**
SCHQ Schefferville 80.89 16 P P **10 05 16.2 -2.1**
comp=Z,3.6nm,0.8s,mb4.4,baz=304,slow=11,SNR=4.4
SCHQ LR LR 10 40 50.7
comp=Z,110nm,21.9s,MS4.2,baz=332,slow=35
STU Stuttgart 80.94 331 *e*P P **10 05 20.1 +1.4**
STU pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
STU Stuttgart 80.94 331 *e*P P **10 05 20.1 +1.4**
comp=Z,10nm,0.8s,mb4.8
BOJS Bojanci 81.19 325 *e*P P **10 05 19.4 -0.6**
JAVS Javornik 81.38 326 *e*P P **10 05 20.9 -0.2**
CDF Champ du Feu 81.94 331 *e*P P **10 05 24.5 +0.5**
HINF Hinteralfeld 82.60 331 *e*P P **10 05 27.4 0.0**
HAU Haudompre 82.62 332 *e*P P **10 05 27.7 +0.2**
HAU *e*MLR MLR
comp=Z,136nm,19.2s,MS4.0
HAU Haudompre 82.62 332 *e*P P **10 05 27.7 +0.2**
HAU LR LR
comp=Z,140nm,19.3s,MS4.3
CABF La Chapelle 83.90 331 *e*P P **10 05 34.5 +0.3**
LOR Lormes 84.12 333 *e*P P **10 05 34.7 -0.6**
LOR *e*MLR MLR
comp=Z,198nm,21.0s,MS4.2
LOR Lormes 84.12 333 *e*P P **10 05 34.7 -0.6**
LOR LR LR
comp=Z,200nm,21.0s,MS4.5
FLN La Foliniere 84.21 336 *e*P P **10 05 35.3 -0.4**
FLN *e*MLR MLR
comp=Z,191nm,20.8s,MS4.2
FLN La Foliniere 84.21 336 *e*P P **10 05 35.3 -0.4**
FLN LR LR
comp=Z,190nm,20.8s,MS4.5
LDF La Druitiere 84.25 336 *e*P P **10 05 35.6 -0.3**
SSF Saint Saulge 84.42 333 *e*P P **10 05 36.6 -0.2**
comp=Z,7.7nm,0.9s,mb4.5
SSF Saint Saulge 84.42 333 *e*P P **10 05 36.6 -0.2**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SSF Saint Saulge 84.42 333 *e*P P **10 05 36.6 -0.2**
comp=Z,3.8nm,0.9s,mb4.5
LPL La Plagne 84.59 330 *e*P P **10 05 37.8 +0.1**
LPG La Plagne 84.60 330 *e*P P **10 05 38.0 +0.3**
comp=Z,28nm,0.9s,mb5.1
LPG La Plagne 84.60 330 *e*P P **10 05 38.0 +0.3**
LPG pmax pmax
comp=Z,14nm,0.9s,mb5.1
LPG La Plagne 84.60 330 *e*P P **10 05 38.0 +0.3**
comp=Z,14nm,0.9s,mb5.1
GRR Gorron 84.66 336 *e*P P **10 05 38.7 +0.7**
SMF Signal de Mont 84.66 333 *e*P P **10 05 37.6 -0.4**
AVF Avril sur Loir 84.71 333 *e*P P **10 05 37.9 -0.3**
comp=Z,9.9nm,0.6s,mb4.8
AVF Avril sur Loir 84.71 333 *e*P P **10 05 37.9 -0.3**
AVF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
AVF Avril sur Loir 84.71 333 *e*P P **10 05 37.9 -0.3**
comp=Z,4.9nm,0.6s,mb4.8
MBDF Montbardon 85.25 330 *e*P P **10 05 41.0 0.0**
comp=Z,7.4nm,0.6s,mb4.7
MBDF Montbardon 85.25 330 *e*P P **10 05 41.0 0.0**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
MBDF Montbardon 85.25 330 *e*P P **10 05 41.0 0.0**
comp=Z,3.7nm,0.6s,mb4.7
SGMF Saint Gilles 85.28 337 *e*P P **10 05 40.9 -0.2**
ORIF Oris-en-Rattie 85.42 330 *e*P P **10 05 41.8 0.0**
comp=Z,15nm,0.9s,mb4.8
ORIF *e*MLR MLR
comp=Z,102nm,21.5s,MS3.9
ORIF Oris-en-Rattie 85.42 330 *e*P P **10 05 41.8 0.0**
ORIF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 85.42 330 *e*P P **10 05 41.8 0.0**
comp=Z,7.6nm,0.9s,mb4.8
ROSF Rostrenen 85.42 338 *e*P P **10 05 41.7 -0.1**
TCF Toulx Ste Croi 85.53 333 *e*P P **10 05 43.2 +0.8**
PMOR Pomariorio Ree 85.55 114 *e*T 11 39 12.1
comp=Z,12nm,0.2s
SBF Sospel 85.72 329 *e*P P **10 05 42.9 -0.5**
QUIF Quistinic 85.77 337 *e*P P **10 05 43.2 -0.3**
VIVF Saint-Julien-l 85.91 331 *e*P P **10 05 45.0 +0.7**
comp=Z,15nm,0.9s,mb4.9
VIVF Saint-Julien-l 85.91 331 *e*P P **10 05 45.0 +0.7**
VIVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
VIVF Saint-Julien-l 85.91 331 *e*P P **10 05 45.0 +0.7**
comp=Z,7.4nm,0.9s,mb4.9
MFF Saint Martin d 86.03 335 *e*P P **10 05 44.8 0.0**
comp=Z,17nm,1.0s,mb5.0
MFF Saint Martin d 86.03 335 *e*P P **10 05 44.8 0.0**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
MFF Saint Martin d 86.03 335 *e*P P **10 05 44.8 0.0**
comp=Z,8.6nm,1.0s,mb4.9
PPT Papeete 86.22 117 *e*LR LR 10 32 34.9
comp=Z,296nm,26.8s
PPT Papeete 86.22 117 *e*T 11 40 28.0
comp=Z,4.3nm,0.3s
PPT Papeete 86.22 117 LR LR 10 37 20.1
comp=Z,239nm,21.5s,MS4.6,baz=269,slow=31
FRF La Foret Royal 86.28 329 *e*P P **10 05 45.9 -0.3**
RJF Les Rejaudoux 86.63 333 *e*P P **10 05 47.5 -0.3**
RJF *e*MLR MLR
comp=Z,194nm,21.0s,MS4.2
RJF Les Rejaudoux 86.63 333 *e*P P **10 05 47.5 -0.3**
RJF LR LR
comp=Z,190nm,21.0s,MS4.5
CAF Calviac 86.77 333 *e*P P **10 05 48.6 +0.1**
comp=Z,14nm,0.8s,mb5.0
CAF Calviac 86.77 333 *e*P P **10 05 48.6 +0.1**
CAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
CAF Calviac 86.77 333 *e*P P **10 05 48.6 +0.1**
comp=Z,6.8nm,0.8s,mb4.9
TXAR Lajitas Array 87.00 53 P P **10 05 49.9 0.0**
comp=Z,0.7nm,0.8s,mb3.9,baz=254,slow=3.0,SNR=6.9
TXAR Lajitas Array 87.00 53 P P **10 05 49.9 0.0**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
LFF La Frestale 87.21 334 *e*P P **10 05 50.6 0.0**
comp=Z,22nm,0.9s,mb5.1
LFF La Frestale 87.21 334 *e*P P **10 05 50.6 0.0**
LFF pmax pmax
comp=Z,11nm,0.9s,mb5.1
LFF La Frestale 87.21 334 *e*P P **10 05 50.6 0.0**
comp=Z,11nm,0.9s,mb5.1
ETSF Etsaut 89.45 333 *e*P P **10 06 01.4 +0.1**
TBI Tubuai 90.41 121 *e*LR LR 10 34 33.7
comp=Z,193nm,35.0s
TBI Tubuai 90.41 121 *e*T 11 45 37.6
comp=Z,11nm,0.3s
KEST Kesra 91.74 323 LR LR 10 52 23.1
comp=Z,75nm,18.2s,MS4.2,baz=255,slow=39
ESDC Sonseca Array 93.47 334 P P **10 06 19.0 -1.0**
comp=Z,0.2nm,0.4s,mb3.9,baz=25,slow=4.2,SNR=5.9
ESDC LR LR 10 48 11.6
comp=Z,127nm,21.6s,MS4.3,baz=110,slow=35
BDFB Brasilia 152.78 22 PKPab PKPab 10 13 12.1 -0.2
comp=Z,0.4nm,0.4s,baz=339,slow=27,SNR=4.5
CPUP Villa Florida 157.97 53 PKPab PKPab 10 13 33.2 -1.2
comp=Z,0.2nm,0.3s,baz=312,slow=6.9,SNR=3.1

*ISCJB **23** 09:57:28.7±1.2, 35.94N×007.68E±0.2, h33km, Error ellipse: s-maj=18.8km s-min=7.7km az=156.2*
*NNC **23** 09:57:41.9±5.8, 37.14N×69.06E, h0km, mb3.7, mpv3.9, Error ellipse: s-maj=60.2km s-min=36.1km az=172.0*
ISC 23 09:57:31.2±1.2, 3595N±007×687E±02, h35km, n13, σ1§01/15, 2C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.27**	**10**	Pn	**Pn**	**09 59 15.0**	**+0.1**
	0.8nm,0.3s,baz=192,slow=13,SNR=28						
KK31				⇑Lg		10 00 52.7	
	2.1nm,0.5s,baz=189,slow=22,SNR=3.7						
AML	**Almayashu**	**7.29**	**31**	P	**Pn**	**09 59 14.5**	**-0.5**
	SNR=20						
KZA	**Kyzart**	**7.95**	**38**	P	**Pn**	**09 59 24.0**	**-0.2**
	SNR=7.0						
AAK	**Ala-Archa**	**8.04**	**32**	P	**Pn**	**09 59 25.6**	**+0.3**
	SNR=8.3						
CHMS	**Chumysh**	**8.44**	**32**	P	**Pn**	**09 59 30.2**	**-0.7**
	SNR=8.3						
USP	**Ospenovka**	**8.56**	**30**	P	**Pn**	**09 59 33.8**	**+1.3**
	SNR=9.2						
TKM2	**Tokmak 2**	**8.76**	**35**	⇓Pn	**Pn**	**09 59 34.0**	**-1.3**
	13nm,0.5s						
TKM2				⇓Lg		10 01 44.3	
	6.2nm,0.6s						
TKM2	**Tokmak 2**	**8.76**	**35**	P	**Pn**	**09 59 36.2**	**+0.9**
	SNR=20						
KHET	**Khetri**	**9.90**	**141**	*e*P	**Pn**	**09 59 48.9**	**-2.0**
KHET				*ex*	x	10 00 52.1	
KHET				*e*S	**Sn**	**10 01 55.3**	**+15**
KUDL	**Kundal**	**10.20**	**138**	*e*P	**Pn**	**09 59 47.0**	**-8.1**
KUDL				*ex*	x	10 00 54.9	
KUDL				*e*S	**Sn**	**10 01 49.5**	**+1.2**
AB09	**Akbulak array**	**14.78**	**337**	⇑P	**Pn**	**10 00 56.8**	**-0.7**
	1.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.41**	**335**	⇓P	**Pn**	**10 01 20.3**	**+1.7**
	0.6nm,1.2s						
BVA0	**Borovoye Array**	**17.11**	**3**	P	**Pn**	**10 01 26.8**	**-0.6**
	0.1nm,0.6s,baz=170,slow=10,SNR=7.6						

*CSEM **23** 10:51:08.9±0.1, 3751N×3573E, h10km, MD2.7, Error ellipse: s-maj=1.9km s-min=1.6km az=14.0*
*ISCJB **23** 10:51:09.7±0.6, 3753N±003×3569E±003, h6km±5km, Error ellipse: s-maj=5.3km s-min=4.6km az=1.6*
*DDA **23** 10:51:09.4, 3751N×3572E, h7km±3km, Md2.9*
*ISK **23** 10:51:09.2, 3755N×3572E, h8km, MD2.7*
ISC 23 10:51:10.0±0.5, 3753N±003×3569E±004, h8km±5km, n15, σ1§82/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.12**	**116**	*e*PG	**Pg**	**10 51 12.0**	**-0.7**
KOZT				*e*SG	**Sg**	**10 51 14.2**	**-0.3**
ANDN	**Andirin**	**0.52**	**84**	*i* P	**Pg**	**10 51 20.0**	**-0.1**
ANDN				*i* S	**Sg**	**10 51 28.5**	**+1.6**
CEYT	**Ceyhan**	**0.52**	**175**	*e*PG	**Pg**	**10 51 20.2**	**0.0**
CEYT				*e*SG	**Sg**	**10 51 28.4**	**+1.5**
KARA	**Karaisali**	**0.58**	**242**	*e*PG	**Pg**	**10 51 21.0**	**-0.1**
KARA				*e*SG	**Sg**	**10 51 29.9**	**+1.3**
KMRS	**Kahramanmaras**	**0.96**	**91**	*e*PG	**Pg**	**10 51 27.1**	**-1.3**
NIG	**Nigde**	**1.03**	**304**	*e*PG	**Pg**	**10 51 29.9**	**0.0**
COBT	**Iskenderun**	**1.11**	**156**	*i* P	**Pg**	**10 51 30.1**	**-1.1**
COBT				*i* S	**Sg**	**10 51 45.3**	**-0.3**
MERS	**Mersin**	**1.15**	**235**	*e*PN	**Pn**	**10 51 31.7**	**-0.6**
PINB	**Pinarbasi**	**1.27**	**26**	*i* P	**Pn**	**10 51 33.6**	**-0.5**
PINB				*i* S	**Sb**	**10 51 52.4**	**+1.6**
PINB	**Pinarbasi**	**1.27**	**26**	*i* P	**Pn**	**10 51 33.6**	**-0.5**
PINB				*i* S	**Sb**	**10 51 52.3**	**+1.5**
BNN	**Bunyan**	**1.32**	**5**	*e*PN	**Pn**	**10 51 34.1**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.39**	**34**	*e*PG	**Pg**	**10 51 29.5**	**-7.2**
AVNT	**Avonos**	**1.41**	**332**	*i* P	**Pn**	**10 51 36.0**	**0.0**
AVNT				*i* S	**Sb**	**10 51 54.6**	**-0.1**
GZT	**Gaziantep**	**1.50**	**96**	*i* P	**Pn**	**10 51 36.7**	**-0.5**
GZT				*i* S	**Sn**	**10 51 57.8**	**+0.8**
MYA	**Malataya**	**2.30**	**69**	*e*PN	**Pn**	**10 51 48.1**	**-0.1**

*IDC **23** 11:00:02.4±4.6, 34.39N×134.91E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.2/23, mbtmp3.3/3, Error ellipse: s-maj=156.5km s-min=33.3km az=124.0*
*ISCJB **23** 11:00:10.9±0.5, 3428N±004×13573E±004, h73km±4km, mb3.6/2, Error ellipse: s-maj=5.9km s-min=5.2km az=166.2*
*JMA **23** 11:00:12.3±0.1, 3429N×13575E, h65km±1km, M3.2 Broadband fault plane solution: P waves. NP1: φs=148.00000°, δ34.00000°, λ-67.00000°. NP2: φs=301.00000°, δ59.00000°, λ-105.00000°. Principal axes: T Plg13.0000°, Azm42.0000°; N Plg13.0000°, Azm309.0000°; P Plg72.0000°, Azm176.0000°;*
JMA Felt I J1.
ISC 23 11:00:11.9±0.5, 3428N±003×13572E±004, h66km±5km, n18, σ0§33/32, mb3.6/2, 6C-8D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWY	**Kouya**	**0.12**	**239**	⇓P	**Pn**	**11 00 22.3**	**+0.6**
JWY				S	**Sn**	**11 00 29.1**	**+0.2**
JHE	**Heguri**	**0.37**	**356**	⇓P	**Pn**	**11 00 23.3**	**+0.1**
JHE				S	**Sn**	**11 00 31.3**	**-0.2**
JKN2	**Miekihoku**	**0.46**	**95**	⇓P	**Pn**	**11 00 24.1**	**+0.1**
JKN2				S	**Sn**	**11 00 32.6**	**-0.2**
JWM	**Minabe**	**0.53**	**215**	⇑P	**Pn**	**11 00 24.7**	**+0.1**
JWM				S	**Sn**	**11 00 33.6**	**-0.3**
JAJ2	**Tsuna**	**0.70**	**282**	⇑P	**Pn**	**11 00 26.9**	**+0.4**
JAJ2				S	**Sn**	**11 00 37.7**	**+0.4**
TSUJ	**Tsu 2**	**0.72**	**53**	⇑P	**Pn**	**11 00 26.7**	**-0.1**
TSUJ				S	**Sn**	**11 00 37.1**	**-0.6**
JWZ	**Kozaga**	**0.75**	**180**	⇑P	**Pn**	**11 00 27.3**	**+0.2**
JWZ				S	**Sn**	**11 00 38.2**	**-0.1**
JIE	**Ise**	**0.83**	**82**	⇓P	**Pn**	**11 00 28.1**	**+0.1**
JIE				S	**Sn**	**11 00 39.6**	**-0.3**
JKS	**Kasai**	**1.00**	**314**	⇓P	**Pn**	**11 00 30.5**	**+0.3**
JKS				S	**Sn**	**11 00 43.5**	**-0.4**
JWT	**Wachi**	**1.03**	**346**	⇓P	**Pn**	**11 00 30.7**	**+0.1**
JWT				S	**Sn**	**11 00 44.2**	**-0.3**
JAI	**Aioi**	**1.16**	**245**	⇑P	**Pn**	**11 00 32.7**	**+0.5**
JKY	**Yasaka**	**1.44**	**340**	⇓P	**Pn**	**11 00 36.2**	**+0.3**
JKY				S	**Sn**	**11 00 54.1**	**+0.2**
JAD	**Aida**	**1.44**	**298**	⇓P	**Pn**	**11 00 36.0**	**+0.1**
JAD				S	**Sn**	**11 00 53.3**	**-0.6**
JJS	**Sakaide**	**1.48**	**274**	⇑P	**Pn**	**11 00 36.6**	**+0.1**
JJS				S	**Sn**	**11 00 54.4**	**-0.6**
MAT	**Matsushiro**	**3.04**	**41**	P	**Pn**	**11 00 57.7**	**+0.2**
MAT				*e*S	**Sn**	**11 01 33.3**	**+0.6**
MJAR	**Matsushiro Arr**	**3.04**	**41**	Pn	**Pn**	**11 00 57.5**	**0.0**
	3.6nm,0.3s,baz=233,slow=14,SNR=72						
WRA	**Warramunga Arr**	**53.94**	**182**	P	**P**	**11 09 28.6**	**-0.1**
	0.5nm,0.5s,mb3.8,baz=357,slow=7.7,SNR=8.1						
ASAR	**Alice Springs**	**57.65**	**182**	P	**P**	**11 09 54.9**	**-0.5**
	0.2nm,0.6s,mb3.4,baz=13,slow=13,SNR=4.3						

*ISK **23** 11:07:13.4, 3674N×4248E, h5km, ML3.7*
*CSEM **23** 11:07:14.2±0.3, 3677N×4250E, h5km, MD3.7, Error ellipse: s-maj=9.5km s-min=2.7km az=163.0*
*ISCJB **23** 11:07:17.5±0.9, 3696N±008×4241E±004, h10km, Error ellipse: s-maj=12.2km s-min=4.5km az=173.9*
*DDA **23** 11:07:17.2, 3687N×4188E, h14km, Md3.7*
ISC 23 11:07:17.9±1.4, 3703N±008×4241E±004, h2km±9km, n23, σ1§19/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	**0.98**	**77**	*e*PG	**Pg**	**11 07 33.9**	**-2.9**
CUKT				*e*SG	**Sg**	**11 07 50.3**	**+0.7**
HAKT	**HAKKARI**	**1.17**	**62**	*i* P	**Pg**	**11 07 45.0**	**+4.8**
HAKT				*i* S	**Sg**	**11 08 05.0**	**+10**
HKR	**Hakkari**	**1.20**	**62**	*e*PN	**Pn**	**11 07 38.7**	**-3.0**
HKR				*e*SN	**Sn**	**11 07 58.9**	**+0.3**
BEST	**Besiri**	**1.25**	**314**	*i* P	**Pg**	**11 07 37.3**	**-4.6**
BEST				*i* S	**Sg**	**11 07 58.1**	**-0.1**
MARD	**Mardin**	**1.33**	**283**	*i* P	**Pg**	**11 07 35.3**	**-8.2**
MARD				*i* S	**Sg**	**11 07 54.4**	**-6.4**
VANB	**Van**	**1.75**	**26**	*e*PN	**Pn**	**11 07 49.3**	**0.0**
DIY	**Diyarbakir**	**1.94**	**297**	*e*PN	**Pn**	**11 07 51.5**	**-0.5**
DIYA	**Diyarbakir**	**2.03**	**297**	*i* P	**Pn**	**11 07 47.8**	**-5.4**
DIYA				*i* S	**Sn**	**11 08 13.3**	**-5.8**
BNGL	**BINGOL**	**2.17**	**333**	*i* P	**Pn**	**11 07 52.7**	**-2.4**
BNGL				*i* S	**Sn**	**11 08 28.0**	**+5.5**
AGRB	**Hanur-Agry**	**2.59**	**10**	*e*PN	**Pn**	**11 08 01.8**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.81**	**300**	*e*PN	**Pn**	**11 08 04.1**	**+0.3**
URFA	**Urfa**	**2.89**	**279**	*e*PN	**Pn**	**11 08 03.7**	**-1.3**
EZM	**Erzurum**	**2.99**	**344**	*e*PN	**Pn**	**11 08 07.7**	**+1.3**
PTK	**Pertek**	**3.03**	**309**	*e*PN	**Pn**	**11 08 07.8**	**+0.9**
ELZG	**Elazig**	**3.08**	**299**	*i* P	**Pn**	**11 08 00.6**	**-7.1**
ELZG				*i* S	**Sn**	**11 08 43.4**	**-1.7**
EZC	**Erzincan**	**3.40**	**324**	*e*PN	**Pn**	**11 08 13.8**	**+4.4**
MYA	**Malataya**	**3.42**	**294**	*e*PN	**Pn**	**11 08 12.5**	**+0.2**
GZT	**Gaziantep**	**3.88**	**276**	*i* P	**Pn**	**11 08 18.4**	**-0.3**
GZT				*i* S	**Sn**	**11 09 12.5**	**+7.7**
DARE	**Darende-Malaty**	**4.11**	**299**	*e*PN	**Pn**	**11 08 23.0**	**+1.2**
KUZU	**Kuzuini**	**4.28**	**268**	*i* P	**Pn**	**11 08 25.1**	**+0.9**
KUZU				*i* S	**Sn**	**11 09 02.7**	**-12**
KMRS	**Kahramanmaras**	**4.42**	**278**	*e*PN	**Pn**	**11 08 26.1**	**+0.1**
SARI	**SarD1z-Kayseri**	**4.81**	**292**	*e*PN	**Pn**	**11 08 34.5**	**+3.1**
KOZT	**Kozan**	**5.27**	**277**	*e*PN	**Pn**	**11 08 37.9**	**+0.1**

IDC 23 11:22:36.6±8.3, 5539S×12626W, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.8/13, mbtmp4.0/2, MS3.8/10, Ms1 3.7/10, ms1mx3.4/24, Error ellipse: s-maj=381.4km s-min=107.8km az=128.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USHA	**Ushuaia**	**32.26**	**113**	LR	LR	11 38 07.5	
	comp=Z,129nm,18.1s,baz=74,slow=29						
RKT	**Rikitea**	**32.87**	**345**	*e*LR	LR	11 38 03.8	
	180nm,24.2s						
RKT	**Rikitea**	**32.87**	**345**	*e*T		12 04 13.4	
	3.3nm,0.2s						
TBI	**Tubuai**	**36.33**	**322**	*e*LR	LR	11 39 36.8	
	163nm,27.8s						
TBI	**Tubuai**	**36.33**	**322**	*e*T		12 09 06.7	
	59nm,0.4s						
PLCA	**Paso Flores**	**38.91**	**92**	LR	LR	11 41 14.0	
	comp=Z,52nm,19.7s,baz=29,slow=29						
PPT	**Papeete**	**41.74**	**325**	*e*LR	LR	11 42 07.2	
	181nm,26.5s						
PPT	**Papeete**	**41.74**	**325**	LR	LR	11 42 34.9	
	comp=Z,94nm,20.6s,baz=182,slow=29						
VAH	**Vaihoa**	**43.33**	**329**	*e*T		12 17 37.5	
	24nm,0.3s						
PMOR	**Pomariorio Ree**	**43.63**	**329**	*e*T		12 18 16.3	
	5.5nm,0.3s						
VNA3	**Neumayer Olymp**	**46.02**	**156**	*e*	P	11 30 51.5	-10
VNA3				*e*		11 31 00.2	
VNA2	**Neumayer--Watz**	**46.76**	**157**	*e*	P	11 30 57.7	-9.2
	baz=218,slow=8.8						
VNA2				*e*		11 31 05.3	
CPUP	**Villa Florida**	**56.88**	**89**	LR	LR	11 52 12.4	
	comp=Z,59nm,19.0s,baz=22,slow=31						
MAW	**Mawson**	**57.13**	**184**	LR	LR	11 54 58.3	
	comp=Z,136nm,20.0s,baz=307,slow=34						
STKA	**Stephens Creek**	**65.58**	**249**	LR	LR	11 58 39.7	
	comp=Z,57nm,19.4s,baz=137,slow=33						
CTA	**Charters Tower**	**72.31**	**260**	LR	LR	12 02 12.3	
	comp=Z,40nm,19.4s,baz=49,slow=33						
ASAR	**Alice Springs**	**76.21**	**248**	P	P	11 34 26.8	+0.2
	0.8nm,0.8s,baz=153,slow=5.8,SNR=10						
WRA	**Warramunga Arr**	**79.00**	**251**	P	P	11 34 42.6	+0.4
	1.4nm,0.8s,baz=147,slow=4.8,SNR=11						
BOSA	**Boshof**	**92.85**	**155**	LR	LR	12 16 19.3	
	comp=Z,56nm,18.4

MKAR	**Makanchi Array**	**160.23**	**256**	PKPab	PKPab	11 43 16.4	-0.9
	0.4nm,0.8s,baz=126,slow=6.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**162.04**	**278**	PKPab	PKPab	11 43 24.6	-0.5
	0.5nm,0.4s,baz=90,slow=4.4,SNR=3.7						

NIED ***23*** *11:50:00,22.70N×120.60E,h35km,Mw4.2 Best double couple: M₀2.36000×10¹⁵ NP1:φs240.00000°,δ81.00000°, λ-115.00000°. NP2:φs133.00000°,δ27.00000°, λ-20.00000°.*

IDC ***23*** *11:50:20.9±1.1,231.1N×120.99E,h0km,mb3.4/5, mb1 3.6/5,mb1mx3.5/20,mbtmp3.4/5,MS3.0/2,Ms1 3.0/2, ms1mx2.6/23,Error ellipse: s-maj=70.1km s-min=22.7km az=66.0*

JMA ***23*** *11:50:21.9±0.3,22.75N×120.60E,h34km,M4.0*

TAP ***23*** *11:50:22.3,23.10N×120.67E,h8km,ML4.2,B*

NEIC ***23*** *11:50:22.5±1.3,23.07N×120.67E,h7km±8km,ML4.7(TAP), Error ellipse: s-maj=14.8km s-min=7.8km az=70.0*

NEIC Recorded [4 TAP] in Kao-hsiung, [3 TAP] in Chia-i and [1 TAP] in P'ing-tung, T'ai-nan and T'ai-tung Counties.

ISCJB ***23*** *11:50:23.4±0.2,2308N±001×12069E±002,h7km±2km, mb3.4/5,Error ellipse: s-maj=2.5km s-min=2.1km az=156.1*

ISC 23 11:50:23.7±0.2,**2308N**±001×**12068E**±002,**h6**km±2km,**n80,** σ1§**22**/130,**mb3.4**/5,**14C-21D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan**	**0.11**	**41**	⇓*iP*	**Pg**	**11 50 25.4**	**-0.7**
	baz=53						
CHN1	**Nanshi**	**0.17**	**307**	⇑*iP*	**Pg**	**11 50 26.5**	**-0.8**
	baz=302						
CHN1				*e*S	**Sg**	**11 50 29.3**	**-0.3**
	baz=302						
WTP	**Ta-pu**	**0.18**	**340**	⇑*iP*	**Pg**	**11 50 26.4**	**-0.9**
	baz=341						
TPUB	**Ta-pu**	**0.22**	**348**	*e*Pg	**Pg**	**11 50 26.9**	**-1.3**
TPUB				*e*Sg	**Sg**	**11 50 31.3**	**+0.1**
TWK	**Hsinying**	**0.26**	**317**	⇑*iP*	**Pg**	**11 50 28.2**	**-0.5**
	baz=315						
TWK				*e*S	**Sg**	**11 50 32.7**	**+0.6**
	baz=315						
CHN4	**Tsaushan**	**0.28**	**344**	⇑*iP*	**Pg**	**11 50 28.8**	**-0.4**
	baz=345						
CHN4				*i* S	**Sg**	**11 50 33.9**	**+0.9**
	baz=345						
CHN3	**Shinhua**	**0.29**	**269**	⇓P	**Pg**	**11 50 30.1**	**+0.7**
	baz=264						
CHN3				S	**Sg**	**11 50 36.5**	**+3.2**
	baz=264						
ELDTW	**Lidau**	**0.33**	**71**	⇓*iP*	**Pg**	**11 50 29.9**	**-0.3**
	baz=76						
ELDTW				*e*S	**Sg**	**11 50 34.9**	**+0.5**
	baz=76						
SSD	**Sandimen**	**0.34**	**188**	⇑*iP*	**Pg**	**11 50 30.1**	**-0.1**
	baz=173						
SSD				*e*S	**Sg**	**11 50 35.1**	**+0.5**
	baz=173						
TWM1	**Shoushan**	**0.35**	**223**	⇓*iP*	**Pg**	**11 50 31.6**	**+1.1**
	baz=206						
SGLT	**Jiouru**	**0.39**	**206**	⇓*iP*	**Pg**	**11 50 32.7**	**+1.4**
	baz=192						
TAI1	**Yung-k'ang**	**0.42**	**265**	⇑P	**Pg**	**11 50 33.5**	**+1.6**
	baz=276						
TAI1				*e*S	**Sg**	**11 50 41.6**	**+4.3**
	baz=276						
ALS	**Alishan**	**0.44**	**15**	⇓*iP*	**Pg**	**11 50 31.8**	**-0.5**
	baz=29						
ALS				*e*S	**Sg**	**11 50 38.9**	**+0.8**
	baz=29						
TWG	**Pinlang**	**0.44**	**125**	⇓*i*Pg	**Pg**	**11 50 32.3**	**0.0**
TWG				*e*Sg	**Sg**	**11 50 39.7**	**+1.6**
TWG	**Pinlang**	**0.44**	**125**	⇑*iP*	**Pg**	**11 50 32.6**	**+0.3**
	baz=121						
TWG				*i* S	**Sg**	**11 50 39.2**	**+1.1**
	baz=121						
SCLT	**Jiali**	**0.46**	**282**	*e*P	**Pg**	**11 50 33.2**	**+0.6**
	baz=294						
SCLT				*e*S	**Sg**	**11 50 42.7**	**+4.1**
	baz=294						
CHY	**Chiayi**	**0.48**	**331**	⇑P	**Pg**	**11 50 32.9**	**-0.1**
	baz=331						
CHY				*e*S	**Sg**	**11 50 40.7**	**+1.5**
	baz=331						
YUS	**Yu-Shan**	**0.48**	**32**	⇓*iP*	**Pg**	**11 50 32.7**	**-0.3**
	baz=37						
YUS				S	**Sg**	**11 50 39.4**	**+0.1**
	baz=37						
CHN2	**Minshiung**	**0.49**	**337**	⇓*iP*	**Pg**	**11 50 33.2**	**0.0**
	baz=339						
CHN2				*e*S	**Sg**	**11 50 41.3**	**+1.7**
	baz=339						
CHN8	**Yiju**	**0.51**	**302**	⇓P	**Pg**	**11 50 33.5**	**0.0**
	baz=300						
CHN8				*e*S	**Sg**	**11 50 43.0**	**+2.9**
	baz=300						
CHN5	**Tsauling**	**0.52**	**360**	⇓*iP*	**Pg**	**11 50 33.1**	**-0.6**
	baz=4.0						
TTN	**Taitung**	**0.54**	**127**	*e*P	**Pg**	**11 50 34.6**	**+0.5**
	baz=120						
TTN				*e*S	**Sg**	**11 50 43.6**	**+2.5**
	baz=120						
ECL	**Taimali**	**0.54**	**152**	P	**Pg**	**11 50 33.8**	**-0.4**
	baz=156						
ECL				*e*S	**Sg**	**11 50 41.5**	**+0.2**
	baz=156						
WGK	**Gukeng**	**0.61**	**350**	*e*P	**Pg**	**11 50 35.1**	**-0.4**
	baz=352						
WGK				*e*S	**Sg**	**11 50 45.4**	**+1.9**
	baz=352						
KAU	**Kaohsiung**	**0.61**	**214**	*e*P	**Pg**	**11 50 35.9**	**+0.3**
	baz=226						
TWF1	**Yuli**	**0.63**	**64**	⇓*iP*	**Pg**	**11 50 35.3**	**-0.5**
	baz=68						
TWF1				*e*S	**Sg**	**11 50 43.7**	**-0.4**
	baz=68						
CHKT	**Chengkung**	**0.63**	**88**	⇑*iP*	**Pg**	**11 50 36.7**	**+0.8**
	baz=84						
CHKT				S	**Sg**	**11 50 46.8**	**+2.7**
	baz=84						
YULB	**Yu-li**	**0.65**	**61**	*e*Pg	**Pg**	**11 50 34.9**	**-1.3**
YULB				*e*Sg	**Sg**	**11 50 42.3**	**-2.4**
WSF	**Szhu**	**0.70**	**323**	P	**Pg**	**11 50 37.0**	**-0.2**
	baz=323						
WSF				*e*S	**Sg**	**11 50 47.8**	**+1.5**
	baz=323						
SCZT	**Fangliau**	**0.71**	**184**	⇑P	**Pg**	**11 50 37.0**	**-0.4**
	baz=174						
EAST	**Anshuo**	**0.71**	**167**	⇑*e*P	**Pg**	**11 50 36.8**	**-0.6**
	baz=166						
EHY	**Hungye**	**0.73**	**54**	⇓*iP*	**Pg**	**11 50 37.0**	**-0.8**
	baz=66						
EHY				S	**Sg**	**11 50 47.7**	**+0.5**
	baz=66						
TAW	**Tawu**	**0.75**	**164**	*e*P	**Pg**	**11 50 37.5**	**-0.6**
	baz=169						
TAW				*e*S	**Sg**	**11 50 49.3**	**+1.6**
	baz=169						
SSLB	**Suanglung**	**0.75**	**20**	⇑*i*Pg	**Pg**	**11 50 36.6**	**-1.5**
SSLB				*e*Sg	**Sg**	**11 50 46.6**	**-1.3**
WNT	**Mingjian**	**0.80**	**0**	⇓*iP*	**Pg**	**11 50 38.7**	**-0.3**
	baz=4.0						
WNT				*e*S	**Sg**	**11 50 50.3**	**+0.9**
	baz=4.0						
SMLT	**Sun Moon Lake**	**0.82**	**14**	⇓*iP*	**Pg**	**11 50 39.0**	**-0.6**
	baz=25						
SMLT				*e*S	**Sg**	**11 50 51.4**	**+1.0**
	baz=25						
TYC	**Yuchr**	**0.84**	**11**	⇓*iP*	**Pg**	**11 50 39.4**	**-0.4**
	baz=15						
TYC				S	**Sg**	**11 50 52.2**	**+1.5**
	baz=15						
WTCT	**Ta-ch'eng**	**0.86**	**335**	*e*P	**Pg**	**11 50 39.1**	**-1.2**
	baz=336						
WTCT				*e*S	**Sg**	**11 50 51.4**	**-0.2**
	baz=336						
ESL	**Shilin**	**1.01**	**43**	P	**Pg**	**11 50 41.8**	**-1.3**
	baz=47						
ESL				*e*S	**Sg**	**11 50 56.0**	**-0.1**
	baz=47						
TCU	**Taichung**	**1.06**	**360**	*e*P	**Pg**	**11 50 42.9**	**-1.2**
	baz=347						
HEN	**Hengchun**	**1.07**	**177**	⇓P	**Pg**	**11 50 44.7**	**+0.4**
	baz=168						
HEN				*e*S	**Sg**	**11 51 01.9**	**+3.7**
	baz=168						
TWK1	**Hengchun**	**1.14**	**174**	*e*P	**Pg**	**11 50 44.7**	**-0.8**
	baz=167						
TWK1				*e*S	**Sg**	**11 51 03.8**	**+3.4**
	baz=167						
PNG	**Penghu**	**1.14**	**295**	*e*P	**Pg**	**11 50 43.1**	**-2.6**
	baz=294						
PNG				*e*S	**Sg**	**11 50 59.2**	**-1.3**
	baz=294						
WHF	**Hehuan Shan**	**1.19**	**27**	⇓*e*P	**Pg**	**11 50 45.0**	**-1.6**
	baz=19						
WHF				*e*S	**Sg**	**11 51 03.8**	**+1.8**
	baz=19						
HWA	**Hwalien**	**1.23**	**43**	*e*P	**Pg**	**11 50 46.7**	**-0.7**
	baz=48						
TWT	**Tachien**	**1.25**	**21**	⇓*e*P	**Pg**	**11 50 45.7**	**-2.1**
	baz=25						
TWT				*e*S	**Sg**	**11 51 03.5**	**-0.6**
	baz=25						
TWQ1	**Liyutan**	**1.27**	**4**	⇑*i*P	**Pn**	**11 50 47.0**	**-1.1**
	baz=9.0						
TWQ1				*e*S	**Sg**	**11 51 04.8**	**+0.3**
	baz=9.0						
TWD	**Chiawan**	**1.30**	**40**	*e*P	**Pn**	**11 50 47.7**	**-0.9**
	baz=45						
TWD				*e*S	**Sg**	**11 51 04.9**	**-0.8**
	baz=45						
LAY	**Lan-yu**	**1.31**	**142**	*e*P	**Pn**	**11 50 46.6**	**-2.1**
	baz=128						
NACB	**Ninganchiao**	**1.38**	**37**	⇑*i*Pn	**Pn**	**11 50 47.8**	**-1.8**
NACB				*e*Sn	**Sn**	**11 51 05.9**	**-2.2**
NNS	**Nan Shan**	**1.50**	**25**	⇓*iP*	**Pn**	**11 50 50.2**	**-1.0**
	baz=21						
NNS				*e*S	**Sn**	**11 51 11.6**	**+0.5**
	baz=21						
NSTT	**Nanjuang**	**1.57**	**11**	*e*P	**Pn**	**11 50 50.8**	**-1.4**
	baz=16						
NSTT				*e*S	**Sn**	**11 51 13.9**	**+0.9**
	baz=16						
ENA	**Nanau**	**1.66**	**36**	*e*P	**Pn**	**11 50 51.5**	**-1.9**
	baz=54						
NSK	**Sanguang**	**1.71**	**21**	⇓P	**Pn**	**11 50 53.6**	**-0.5**
	baz=9.0						
NSK				*e*S	**Sn**	**11 51 18.8**	**+2.6**
	baz=9.0						
YHNB	**Yeheng**	**1.71**	**22**	*e*Pn	**Pn**	**11 50 53.4**	**-0.7**
YHNB				*e*Sn	**Sn**	**11 51 12.8**	**-3.4**
HSN	**Hsinchu**	**1.73**	**9**	*e*P	**Pn**	**11 50 55.1**	**+0.6**
	baz=357						
ENTT	**Nioudou**	**1.75**	**27**	*e*P	**Pn**	**11 50 54.8**	**0.0**
	baz=24						
ENTT				*e*S	**Sn**	**11 51 20.4**	**+3.0**
	baz=24						
TWC	**Suao**	**1.86**	**35**	*e*P	**Pn**	**11 50 56.0**	**-0.2**
	baz=53						
TWC				*e*S	**Sn**	**11 51 22.6**	**+2.5**
	baz=53						
TWE	**Neicheng**	**1.87**	**29**	*e*P	**Pn**	**11 50 56.7**	**+0.4**
	baz=34						
TWE				*e*S	**Sn**	**11 51 23.8**	**+3.6**
	baz=34						
NCU	**National Centr**	**1.94**	**14**	*e*P	**Pn**	**11 50 58.1**	**+0.9**
	baz=2.0						
ILA	**Ilan**	**1.94**	**30**	*e*P	**Pn**	**11 50 57.2**	**-0.1**
	baz=26						
ILA				*e*S	**Sn**	**11 51 25.2**	**+3.1**
	baz=26						
TATO	**Taipei**	**2.03**	**21**	*e*Pn	**Pn**	**11 50 58.3**	**-0.2**
TAP1	**Taipei**	**2.10**	**21**	*e*P	**Pn**	**11 51 02.1**	**+2.6**
	baz=26						
NWF	**Wu-fen Shan**	**2.22**	**27**	*e*P	**Pn**	**11 51 03.0**	**+1.8**
	baz=15						
NWF				*e*S	**Sn**	**11 51 32.0**	**+3.0**
	baz=15						
TWB1	**Santiao Chiao**	**2.26**	**32**	*e*P	**Pn**	**11 51 01.9**	**+0.2**
	baz=52						
TWB1				*e*S	**Sn**	**11 51 32.8**	**+2.9**
	baz=52						
KNM	**Kinmen**	**2.45**	**303**	*e*P	**Pn**	**11 51 02.9**	**-1.4**
	baz=304						
YOJ	**Yonaguni jima**	**2.54**	**57**	P	**Pn**	**11 51 05.9**	**+0.3**
YOJ				S	**Sn**	**11 51 38.6**	**+1.8**
YOJ	**Yonaguni jima**	**2.54**	**57**	*e*P	**Pn**	**11 51 04.7**	**-0.8**
	baz=73						
IRIF	**Iriomote-Funau**	**3.06**	**65**	P	**Pn**	**11 51 12.8**	**+0.1**
IRIF				S	**Sn**	**11 51 51.5**	**+1.8**
JKRS	**Kuro-shima**	**3.26**	**69**	P	**Pn**	**11 51 15.3**	**-0.2**
JIJ	**Ishigaki jima**	**3.42**	**67**	P	**Pn**	**11 51 17.6**	**-0.1**
JIJ				S	**Sn**	**11 51 58.9**	**+0.3**
JTJ	**Tarama**	**4.00**	**66**	*e*S	**Sn**	**11 52 13.6**	**+0.8**
KSRS	**Korea Array**	**15.62**	**22**	LR	LR	12 00 44.5	
	comp=Z,40nm,20.2s,baz=157,slow=40						
SONM	**Songino Array**	**27.21**	**339**	LR	LR	12 08 07.5	
	comp=Z,50nm,19.6s,baz=318,slow=39						
MKAR	**Makanchi Array**	**38.82**	**317**	P	**P**	**11 57 48.8**	**-0.7**
	0.4nm,0.7s,mb3.3,baz=112,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**40.92**	**328**	P	**P**	**11 58 05.8**	**-1.0**
	1.0nm,0.7s,mb3.5,baz=144,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.92**	**328**	P	**P**	**11 58 05.8**	**-1.0**
WRA	**Warramunga Arr**	**44.79**	**162**	P	**P**	**11 58 35.6**	**-2.9**
	0.3nm,0.5s,mb3.4,baz=344,slow=8.6,SNR=5.8						
ASAR	**Alice Springs**	**48.21**	**164**	P	**P**	**11 59 03.4**	**-1.9**
	0.4nm,0.8s,mb3.5,baz=347,slow=6.8,SNR=5.0						
YKA	**Yellowknife Ar**	**84.16**	**23**	P	**P**	**12 02 53.3**	**-2.3**
	0.1nm,0.5s,mb3.2,baz=308,slow=5.0,SNR=5.5						

IDC 23 11:54:07.7±2.1,**689S×12948E,h0km,mb3.5**/1,**mb1 3.2**/3, **mb1mx3.1**/15,**mbtmp3.1**/3,**ML2.8**/2,**Error ellipse: s-maj=128.6km s-min=32.3km az=68.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.81**	**160**	Pn	Pn	11 57 23.7	-1.1
	0.0nm,0.3s,baz=339,slow=12,SNR=4.4						
WRA				Sn	Sn	11 59 51.2	-7.8
	0.1nm,0.3s,baz=327,slow=23,SNR=6.2						
ASAR	**Alice Springs**	**17.21**	**166**	P	Pn	11 58 10.8	+1.1
	0.0nm,0.3s,baz=341,slow=9.0,SNR=4.3						
MKAR	**Makanchi Array**	**67.85**	**327**	P	P	12 05 07.9	+0.1
	0.2nm,0.3s,baz=119,slow=7.5,SNR=6.9						

IDC ***23*** *11:57:41.0±1.2, 1005N×124.26E,h0km,mb3.6/5, mb1 3.6/5,mb1mx3.4/20,mbtmp3.6/5,Error ellipse: s-maj=85.4km s-min=27.6km az=65.0*

MAN ***23*** *11:57:44,991N×123.68E,h15km,mb4.9,ML3.9,MS3.9*

MAN INTENSITY III - ARGAO, CEBU, LAMACAN; INTENSITY I - SIBUNGA SOUTHERN CEBU.

ISCJB ***23*** *11:57:45.8±0.7,988N±006×123.65E±004,h46km±9km, mb3.6/5,Error ellipse: s-maj=9.2km s-min=7.0km az=1.3*

ISC 23 11:57:45.2±2.4,**988N**±006×**12366E**±004,**h22**km±21km, **n14**,σ0§**94**/18,**mb3.6**/5,**1D,Negros**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**1.21**	**78**	*e*P	**Pn**	**11 58 06.3**	**-0.4**
MSLP				*e*S	**Sn**	**11 58 23.2**	**+0.9**
GUIM	**Jordan**	**1.29**	**305**	*e*P	**Pn**	**11 58 06.6**	**-1.3**
GUIM				*e*S	**Sn**	**11 58 25.3**	**+0.7**
OCLP	**Ormoc**	**1.49**	**38**	*e*P	**Pn**	**11 58 10.1**	**-0.5**
OCLP				*e*S	**Sn**	**11 58 28.9**	**-0.6**
PLP	**Palo**	**1.82**	**45**	⇓*e*P	**Pn**	**11 58 14.8**	**-0.3**
PLP				*e*S	**Sn**	**11 58 38.1**	**+0.5**
PAGZ	**Pagadian**	**2.03**	**188**	*e*P	**Pn**	**11 58 17.3**	**-0.8**
BUKP	**Musuan**	**2.42**	**145**	*e*P	**Pn**	**11 58 25.8**	**+2.4**
CUYO	**Cuyo Island**	**2.78**	**291**	*e*P	**Pn**	**11 58 28.9**	**+0.5**
OTRP	**Odiongan**	**2.95**	**327**	*e*P	**Pn**	**11 58 31.4**	**+0.7**
PVCP	**Virac**	**3.73**	**7**	*e*P	**Pn**	**11 58 41.5**	**0.0**
ASAR	**Alice Springs**	**34.81**	**163**	P	**P**	**12 04 33.8**	**-0.6**
	0.4nm,1.0s,mb3.3,baz=338,slow=7.3,SNR=4.1						
MKAR	**Makanchi Array**	**50.81**	**324**	P	**P**	**12 06 44.8**	**+0.8**
	0.7nm,0.8s,mb3.7,baz=128,slow=7.9,SNR=6.7						
MKAR				PcP	PcP	12 08 00.2	-0.4
	0.3nm,0.8s,baz=113,slow=2.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**53.77**	**333**	P	**P**	**12 07 05.5**	**-0.2**
	0.3nm,0.4s,mb3.6,baz=114,slow=5.2,SNR=2.7						
KURK	**Kurchatov**	**54.96**	**327**	P	**P**	**12 07 15.3**	**+0.8**
	0.8nm,0.6s,mb3.9,baz=122,slow=7.8,SNR=9.4						
YKA	**Yellowknife Ar**	**95.15**	**23**	P	**P**	**12 11 04.2**	**-2.3**
	0.2nm,0.8s,mb3.6,baz=293,slow=4.5,SNR=3.5						

IDC 23 12:09:33.1±3.5,**068S×13510E,h0km,mb3.5**/2,**mb1 3.7**/3, **mb1mx3.4**/16,**mbtmp3.5**/3,**Error ellipse:**

s-maj=165.8km s-min=27.6km az=78.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.16**	**182**	P	Pn	12 13 58.4	-0.7
	0.2nm,0.3s,baz=0.5,slow=11,SNR=16						
ASAR	**Alice Springs**	**22.88**	**183**	P	P	12 14 38.2	-0.1
	0.9nm,0.6s,baz=12,slow=11,SNR=12						
MKAR	**Makanchi Array**	**66.00**	**323**	P	P	12 20 21.7	+0.3
	0.2nm,0.4s,baz=101,slow=9.0,SNR=4.9						

CASC 23 12:14:00.1±2.3,**1205N×8783W,h22**km±12km,**MD3.6, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.00**	**49**	*e*P	Pb	12 14 18.1	-0.7
CRIN				*e*S	Sb	12 14 34.2	+2.7
MIRN	**Miramar**	**1.16**	**70**	*e*P	Pn	12 14 20.2	-0.9
COPN	**Copaltepe**	**1.22**	**84**	*e*P	Pn	12 14 20.8	-1.1
COPN				*e*P		12 14 21.0	
CNCH	**Conchagua**	**1.22**	**360**	*e*P	x	12 14 21.7	
CNCH				*e*P	x	12 14 21.8	
CNCH				*e*S	x	12 14 37.9	
CNCH				*e*S	x	12 14 38.8	
MOMN	**Momotombo**	**1.31**	**74**	*e*P	Pn	12 14 22.9	-0.2
CSAN		**1.39**	**84**	*e*P	Pn	12 14 23.6	-0.5
BLLM	**Bellamira**	**1.45**	**344**	*e*P	x	12 14 25.0	
APYN	**Apoyeque**	**1.46**	**82**	*e*P	Pn	12 14 24.2	-1.0
MGAN	**Managua**	**1.55**	**86**	*e*P	Pn	12 14 26.0	-0.4
TICN	**Ticuantepe**	**1.56**	**90**	*e*P	Pn	12 14 27.4	+0.8
CAHU	**Cacacuatique**	**1.75**	**348**	*e*P	x	12 14 30.2	
CAHU				*e*S	x	12 14 52.8	
LFRS	**El Faro**	**1.98**	**323**	*e*P	x	12 14 34.0	
TGUH	**Tegucigalpa,Un**	**2.07**	**15**	*e*P	Pn	12 14 34.0	+0.3

CSEM ***23*** *12:24:52.3±0.6,2975N×3642E,h2km,ML2.8,Error ellipse: s-maj=14.0km s-min=5.8km az=79.0*

ISCJB ***23*** *12:24:53.3±1.0,2987N±004×3626E±007,h0km,Error ellipse: s-maj=9.3km s-min=5.8km az=162.6*

GII ***23*** *12:24:54.7±0.8,2988N×3615E,h0km,ML1.9/2, EXPLOSION*

SGS ***23*** *12:24:54.7,3002N×3624E,h11km*

HLW ***23*** *12:24:54.0,2974N×3664E,h22km,Mb2.8*

ISC 23 12:24:53.4±1.0,**2986N**±004×**3630E**±007,**h0**km,**n21,** σ0§**78**/24,**3C-1D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.10**	**263**	Pg	**Pg**	**12 25 14.7**	**+0.3**
HRFI	**Mount Harif**	**1.11**	**279**	Pg	**Pg**	**12 25 14.0**	**-0.8**
MBRI	**Mt Berech**	**1.21**	**267**	Pg	**Pg**	**12 25 15.9**	**-0.7**
PRNI	**Paran**	**1.23**	**294**	Pg	**Pg**	**12 25 16.1**	**-0.8**
JLOS		**1.33**	**212**	P	**Pg**	**12 25 18.7**	**-0.2**
JLOS		**1.33**	**212**	P	**Pg**	**12 25 18.7**	**-0.2**
JLOS				S	**Sg**	**12 25 36.7**	**+0.6**
KRMI	**Paran Flat**	**1.39**	**281**	Pg	**Pg**	**12 25 19.2**	**-0.9**
KRMI				Sg	**Sg**	**12 25 37.9**	**-0.3**
HBST	**Basata**	**1.51**	**245**	P	**Pn**	**12 25 21.7**	**0.0**
TBKS	**Tabuk**	**1.65**	**173**	P	**Pn**	**12 25 23.9**	**+0.3**
MZDA	**Masada**	**1.65**	**331**	Pn	**Pn**	**12 25 23.9**	**+0.2**
BDAS	**Al Bad'**	**1.77**	**217**	S	**Sn**	**12 25 50.0**	**+1.4**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**12 25 25.0**	**-0.4**
DSI	**Dead Sea**	**1.88**	**335**	Pn	**Pn**	**12 25 27.6**	**+0.8**
HNKL	**Nakhl**	**2.02**	**272**	⇓P	**Pn**	**12 25 29.4**	**+0.7**
HNKL				S	**Sn**	**12 25 56.1**	**+1.5**
RSHS		**2.04**	**221**	P	**Pn**	**12 25 28.0**	**-1.0**
HKAT	**Jabal Katrina**	**2.42**	**237**	⇑*e*P	**Pn**	**12 25 34.0**	**-0.2**
RSH		**2.48**	**297**	P	**Pn**	**12 25 36.7**	**+1.6**
TR2		**2.69**	**238**	⇑*e*P	**Pn**	**12 25 37.7**	**-0.3**
SHRM		**2.73**	**225**	P	**Pn**	**12 25 37.8**	**-0.8**
TR1		**2.77**	**229**	P	**Pn**	**12 25 38.3**	**-0.8**
HRSH	**Kfar Ka'horesh**	**2.96**	**343**	⇑*e*P	**Pn**	**12 25 36.7**	**-4.9**

BJI ***23*** *12:56:09.1,402S×3893E,h5km,mB5.3,mb5.1,Ms5.0, Msz4.6*

SZGRF ***23*** *12:56:10.4,398S×4032E,h33km,mb4.8,Kenya*

MOS ***23*** *12:56:11.2±1.0,398S×3917E,h10km,mb5.1/47,MS4.1/9, Error ellipse: s-maj=8.6km s-min=4.8km az=99.4*

IDC ***23*** *12:56:11.3±0.5,406S×3917E,h0km,mb4.6/20, mb1 4.7/22,mb1mx4.6/28,mbtmp4.6/22,ML4.2/2,MS4.0/11, Ms1 4.0/11,ms1mx3.8/34,Error ellipse: s-maj=17.1km s-min=13.8km az=115.0*

ISCJB ***23*** *12:56:11.7±0.2,399S±003×3919E±004,h13km, mb4.9/102,MS4.2/28,Error ellipse: s-maj=5.4km s-min=3.9km az=17.5*

GCMT ***23*** *12:56:13.0±0.4,408S×3945E,h13km±1km,MW4.9/48, Moment Tensor Solution. s30,c42; s48,c70; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=-2.20±.15; Mθθ2.32±.13; Mθφ=-0.12±.13; Mrθ=-0.33±.29; Mθφ=-1.33±.10; Mφr=0.00±.30; Best double couple: M₀2.57500×10¹⁶ NP1:φs299.00000°,δ42.00000°,λ-82.00000°. NP2: φs109.00000°,δ49.00000°,λ-97.00000°. Principal axes: T 2.9220, Plg3.0000°, Azm204.0000°; N -0.6950, Plg5.0000°, Azm113.0000°; P -2.2290, Plg84.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***23*** *12:56:13.0±0.2,404S×3925E,h10km,mb5.1/56 Error ellipse: s-maj=5.1km s-min=4.7km az=223.0*

NEIC Felt [IV] at Nairobi. Felt at Arushi and Moshi, Tanzania.

DJA ***23*** *12:56:19,395S×3895E,h46km,mb5.0/16*

ISC 23 12:56:12.6±2.0,**403S**±003×**3922E**±004,**h6**km±12km, **h13**km±.8km:**pP-P,n268,**σ0§**89**/266,**mb4.9**/102,**MS4.2**/28, **12C-12D,Kenya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**9.13**	**292**	Pn	**Pn**	**12 58 22.3**	**-2.7**
	609nm,0.5s,SNR=27						
MBAR	**Mbarara**	**9.13**	**292**	*e*Pn	**Pn**	**12 58 24.9**	**-0.1**
LSZ	**Lusaka**	**15.58**	**223**	Pn	**Pn**	**12 59 51.1**	**-1.9**
	0.7nm,0.3s,baz=43,slow=11,SNR=77						
LSZ				Sn	**Sn**	**13 02 44.4**	**-1.6**
	1.3nm,0.3s,baz=68,slow=12,SNR=3.5						
LSZ				Lg		13 04 15.0	
	4.1nm,0.3s,baz=

PRYS Parys 25.43 205 *e*P **P** 13 01 41.4 +0.1
PRYS AMb AMB 13 01 51.8
comp=Z,53nm,1.5s,mb4.8
TSUM Tsumeb 25.95 233 P **P** **13 01 44.1 -2.0**
comp=Z,2.6nm,0.8s,mb3.8,baz=71,slow=4.0,SNR=5.4
TSUM Lg 13 09 45.1
comp=Z,26nm,1.0s,baz=298,slow=13,SNR=3.4
TSUM Tsumeb 25.95 233 *e*P **P** **13 01 46.4 +0.3**
comp=Z,12nm,1.0s,mb4.4
SEK Senekal 26.56 203 *e*P **P** **13 01 51.7 +0.2**
SWZ Schweizer 26.57 209 *e*P **P** **13 01 51.4 -0.2**
SWZ AMb AMB 13 02 37.3
comp=Z,66nm,2.2s,mb4.8
BOSA Boshof 27.82 207 P **P** **13 02 00.6 -2.3**
comp=Z,8.8nm,0.8s,mb4.5,baz=44,slow=11,SNR=13
BOSA Lg 13 10 32.7
comp=Z,13nm,0.9s,baz=294,slow=19,SNR=2.3
BOSA LR LR 13 13 58.5
comp=Z,354nm,18.3s,MS4.0,baz=229,slow=38
BOSA Boshof 27.82 207 *e*P **P** **13 02 02.9 +0.1**
BOSA pmax pmax
comp=Z,14nm,0.8s,mb4.6
BOSA Boshof 27.82 207 *e*P **P** **13 02 02.9 +0.1**
comp=Z,14nm,0.8s,mb4.6
HVD Gariep Dam 29.43 205 *e*P **P** **13 02 16.8 -0.3**
UPI Upington 29.62 213 *e*P **P** **13 02 19.2 +0.4**
UPI AMb AMB 13 03 12.9
comp=Z,29nm,2.3s,mb4.6
TOA0 Torodi Ar. Sit 40.98 295 *e*P **P** **13 03 56.5 -0.2**
TORD Torodi Ar. Bea 40.98 295 P **P** **13 03 56.9 +0.1**
comp=Z,3.8nm,0.8s,mb4.1,baz=111,slow=10,SNR=24
TORD PcP PcP 13 05 57.2 +0.1
comp=Z,5.1nm,0.8s,baz=105,slow=4.5,SNR=12
TORD LR LR 13 21 04.7
comp=Z,322nm,18.6s,MS4.2,baz=125,slow=36
TORD Torodi Ar. Bea 40.98 295 P **P** **13 03 56.9 +0.1**
TORD PcP PcP 13 05 57.2 +0.1
TORD LR LR 13 21 04.7
MALT Malatya 42.14 359 *e*P **P** **13 04 07.6 +1.8**
MALT pmax pmax
comp=Z,22nm,1.3s,mb4.6
MALT Malatya 42.14 359 *e*P **P** **13 04 07.6 +1.8**
comp=Z,22nm,1.3s,mb4.6
TAM Tamanrasset 42.35 311 *e*P **P** **13 04 09.8 +2.0**
TAM pmax pmax
comp=Z,9.0nm,1.3s,mb4.2
TAM Tamanrasset 42.35 311 *e*P **P** **13 04 09.8 +2.0**
comp=Z,9.0nm,1.3s,mb4.2
BRTR Keskin Array B 43.84 354 P **P** **13 04 20.4 +0.8**
comp=Z,11nm,0.8s,mb4.6,baz=172,slow=10.0,SNR=73
BRTR PcP PcP 13 06 06.2 +0.2
comp=Z,2.4nm,1.0s,baz=164,slow=2.3,SNR=3.8
BRTR Keskin Array B 43.84 354 *i* P **P** **13 04 20.5 +0.9**
BRTR pmax pmax
comp=Z,11nm,0.8s
HYB Hyderabad 44.29 60 *i* P **P** **13 04 22.5 -1.1**
HYB Hyderabad 44.29 60 *e*P **P** **13 04 22.5 -1.1**
DBIC Dimbokro 45.26 283 P **P** **13 04 29.9 -1.5**
comp=Z,2.1nm,0.7s,mb4.0,baz=86,slow=10,SNR=3.6
DBIC PcP PcP 13 06 11.3 -0.2
comp=Z,3.2nm,0.8s,baz=296,slow=1.5,SNR=4.0
DBIC LR LR 13 23 48.5
comp=Z,212nm,20.7s,MS4.1,baz=97,slow=37
DBIC Dimbokro 45.26 283 P **P** **13 04 30.0 -1.4**
DBIC 13 06 11.4
LIC Lamto 45.34 283 *e*P **P** **13 04 31.6 -0.4**
comp=Z,43nm,1.3s,mb4.8
LIC *e*MLR MLR
comp=Z,371nm,20.5s,MS4.0
LIC Lamto 45.34 283 *e*P **P** **13 04 31.6 -0.4**
comp=Z,21nm,1.3s,mb4.8
LIC LR LR
comp=Z,190nm,20.5s,MS4.0
KBL Kabul 47.55 34 *e*P **P** **13 04 49.5 +0.5**
KBL pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
KBL Kabul 47.55 34 *e*P **P** **13 04 49.5 +0.5**
comp=Z,8.1nm,1.1s,mb4.7
KIV Kislovodsk 47.87 3 *e*P **P** **13 04 52.0 +0.6**
KIV pmax pmax
comp=Z,16nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,179nm,17.0s,MS4.1
ANN Anapa 48.64 358 *e*P **P** **13 04 55.7 -1.6**
ANN *e**PP pP 13 04 59.3 +0.1
ANN *e* 13 06 21.1
ANN *e* 13 06 51.4
ANN *e*S **S** **13 11 59.5 -0.2**
ANN *e*SS SS 13 15 30.0 -0.1
ANN *e*SSS 13 16 45.2
ANN pmax pmax
comp=Z,78nm,1.5s,mb5.5
ANN MLR MLR
comp=Z,212nm,11.0s,MS4.4
ANN MLR MLR
comp=N,175nm,12.0s
ANN MLR MLR
comp=E,46nm,6.0s
SIM Simferopol' 48.97 355 P **P** **13 04 54.0 -5.9**
SIM pmax pmax
comp=Z,12nm,1.0s,mb4.9
SIM MLR MLR
comp=Z,80nm,15.7s,MS3.8
GOF Gofitskoye 48.99 4 *e*P **P** **13 04 58.2 -1.8**
GOF pmax pmax
comp=Z,120nm,1.0s,mb5.9
TIRR Tirgusor 49.23 350 P **P** **13 05 02.6 +0.7**
TIRR Tirgusor 49.23 350⇑ *i*P **P** **13 05 02.4 +0.5**
TIRR Tirgusor 49.23 350 *e*P **P** **13 05 02.3 +0.4**
comp=Z,27nm,1.4s,mb5.1
HARR Harsova 49.55 349⇑ *i*P **P** **13 05 05.5 +1.3**
HARR Harsova 49.55 349 P **P** **13 05 05.2 +0.9**
MLR Muntele Rosu 50.70 348 LR LR 13 30 22.0
comp=Z,113nm,18.1s,MS3.9,baz=176,slow=40
VOIR 50.84 347⇑ *i*P **P** **13 05 14.8 +0.7**
VOIR 50.84 347 P **P** **13 05 15.1 +1.0**
PLOR Plostina 50.91 349 P **P** **13 05 16.0 +1.5**
VRI Vrincioaia 50.91 349⇑ *i*P **P** **13 05 15.8 +1.3**
VRI Vrincioaia 50.91 349 P **P** **13 05 15.9 +1.3**
GZR Gura Zlata 51.34 345⇓ *i*P **P** **13 05 18.3 +0.4**
GZR Gura Zlata 51.34 345 P **P** **13 05 18.6 +0.8**
BZS Buzias 51.86 344⇑ *i*P **P** **13 05 21.5 -0.2**
BZS Buzias 51.86 344⇑⇑ P **P** **13 05 21.5 -0.2**
DRGR 52.67 346⇓⇓ *i*P **P** **13 05 28.4 +0.7**
BURAR Bucovina Array 52.88 348⇓⇓ *i*P **P** **13 05 30.9 +1.7**
BURAR Bucovina Array 52.88 348⇓⇓ P **P** **13 05 30.9 +1.6**
BUR08 Bucovina Ar. S 52.91 348 *e*P **P** **13 05 31.0 +1.5**
KOLN Koldanda 53.17 51 *e*P **P** **13 05 30.9 -0.9**
comp=Z,80nm,1.0s,mb5.6
PKSM Morągy 53.25 342⇓ *i*P **P** **13 05 32.0 0.0**
PKSM Morągy 53.25 342⇓⇓ P **P** **13 05 32.0 0.0**
DANN Dangsing 53.58 50 *e*P **P** **13 05 34.2 -0.6**
comp=Z,75nm,0.9s,mb5.6
TRPA Tarpa 53.96 346⇓⇓ *i*P **P** **13 05 37.5 +0.3**
GKN Gorkha 54.09 51 *e*P **P** **13 05 37.5 -1.0**
comp=Z,76nm,1.0s,mb5.6
DMN Daman 54.27 52 *e*P **P** **13 05 39.2 -0.6**
comp=Z,36nm,0.9s,mb5.3
PSZ Piszkesteto 54.44 344 *e*P **P** **13 05 40.6 -0.1**
PSZ pmax pmax
comp=Z,11nm,1.1s,mb4.7
PSZ Piszkesteto 54.44 344 *e*P **P** **13 05 40.6 -0.1**
comp=Z,11nm,1.1s,mb4.7
UZH Uzhgorod 54.49 346 *e*P **P** **13 05 40.7 -0.3**
PKI Pulchoki 54.49 52 *e*P **P** **13 05 40.3 -1.1**
KKN Kakani 54.49 52 *e*P **P** **13 05 40.9 -0.6**
comp=Z,36nm,0.9s,mb5.3
KKN Kakani 54.49 52 *e*P **P** **13 05 40.9 -0.6**
KKN pmax pmax
comp=Z,36nm,0.9s,mb5.3
CRVS Cervenica-Dubn 54.94 346 *i* P **P** **13 05 45.0 +0.7**
CRVS pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CRVS Cervenica-Dubn 54.94 346 *i* P **P** **13 05 45.0 +0.7**
comp=Z,8.9nm,0.9s,mb4.8
GUN Gumba 55.02 52 *e*P **P** **13 05 44.6 -0.7**
comp=Z,92nm,1.0s,mb5.8
VSR Storozhevoye 55.03 360 *e*P **P** **13 05 43.8 -1.1**
VSR pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.4s
JIRN Jiri 55.14 52 *e*P **P** **13 05 45.3 -0.9**
comp=E,26nm,0.9s,mb5.3
RAMN Ramite 55.15 53 *e*P **P** **13 05 45.5 -0.8**
comp=E,20nm,1.0s,mb5.1
AKASG Malin Array Be 55.19 352 P **P** **13 05 45.3 -0.8**
comp=E,2.0nm,0.7s,mb4.3,baz=176,slow=6.3,SNR=10
AKASG PcP PcP 13 06 45.5 -1.6
comp=E,0.6nm,0.5s,baz=172,slow=4.1,SNR=4.1
LVV L'vov 55.22 348 *e*P **P** **13 05 44.5 -1.8**
VYHS Vyhne 55.26 344 *i* P **P** **13 05 46.5 -0.1**
VYHS pmax pmax
comp=Z,50nm,3.2s
VYHS Vyhne 55.26 344 *i* P **P** **13 05 46.5 -0.1**
comp=Z,50nm,3.2s
KWP Kalwaria 55.33 347 *e*P **P** **13 05 47.7 +0.6**
KWP Kalwaria 55.33 347 *e*P **P** **13 05 47.7 +0.6**
STHS Stebnicka Huta 55.47 346 *i* P **P** **13 05 48.7 +0.6**
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
STHS Stebnicka Huta 55.47 346 *i* P **P** **13 05 48.7 +0.6**
comp=Z,7.4nm,0.8s,mb4.8
AML Almayashu 55.59 31 P **P** **13 05 49.8 +0.6**
SNR=6.7
AML Almayashu 55.59 31 *e*P **P** **13 05 49.6 +0.5**
comp=Z,26nm,1.3s,mb5.1
NIE Niedzica 55.71 345 *e*P **P** **13 05 50.4 +0.6**
ODAN Odare 55.74 54 *e*P **P** **13 05 49.7 -0.8**
comp=Z,56nm,1.0s,mb5.5
TAPN Taplejung 56.21 53 *e*P **P** **13 05 53.4 -0.5**
comp=Z,77nm,1.0s,mb5.7
AAK Ala-Archa 56.37 31⇓ *e*P **P** **13 05 54.2 -0.5**
AAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
AAK MLR MLR
comp=Z,100nm,28.0s,MS3.8
AAK Ala-Archa 56.37 31 P **P** **13 05 55.9 +1.2**
SNR=7.3
AAK Ala-Archa 56.37 31 *e*P **P** **13 05 54.1 -0.6**
comp=Z,18nm,1.2s,mb5.0
MBDF Montbardon 56.56 333 *e*P **P** **13 05 57.0 +1.0**
comp=Z,64nm,1.5s,mb5.1
MBDF Montbardon 56.56 333 *e*P **P** **13 05 57.0 +1.0**
MBDF pmax pmax
comp=Z,32nm,1.5s,mb5.1
MBDF Montbardon 56.56 333 *e*P **P** **13 05 57.0 +1.0**
comp=Z,32nm,1.5s,mb5.1
OJC Ojcow 56.57 345 *e*P **P** **13 05 55.6 -0.4**
AKTK Aktyubinsk 56.62 14 P **P** **13 05 55.7 -0.6**
AKTK LR LR 13 35 58.0
AKTO Aktyubinsk 56.62 14 P **P** **13 05 55.7 -0.6**
comp=Z,15nm,0.8s,mb5.1,baz=201,slow=7.4,SNR=42
AKTO LR LR 13 35 58.0
comp=Z,109nm,18.8s,MS4.0,baz=45,slow=42
KBK Karagaybulak 56.62 31 P **P** **13 05 57.2 +0.7**
SNR=12
OKC Ostrava-Krasne 56.67 344 *e*P **P** **13 05 56.8 +0.1**
OKC *e*pP pP 13 06 00.8 +2.2
OKC Ostrava-Krasne 56.67 344 *e*P **P** **13 05 56.8 +0.1**
OKC *e* 13 06 00.8
USP Ospenovka 56.83 30 P **P** **13 05 58.2 +0.3**
SNR=6.0
TREC Trest 56.97 342 *e*P **P** **13 05 59.2 +0.4**
TKM2 Tokmak 2 57.14 31 *e*P **P** **13 06 00.8 +0.6**
TKM2 pmax pmax
comp=Z,28nm,1.1s,mb5.2
TKM2 Tokmak 2 57.14 31 P **P** **13 06 00.6 +0.4**
SNR=11
TKM2 Tokmak 2 57.14 31 *e*P **P** **13 06 00.8 +0.6**
comp=Z,28nm,1.1s,mb5.2
GERES GERESS Array B 57.16 340 P **P** **13 05 59.1 -1.0**
comp=Z,1.2nm,0.8s,mb4.0,baz=136,slow=6.5,SNR=9.2
GERES LR LR 13 30 41.2
comp=Z,69nm,20.0s,MS3.8,baz=93,slow=36
KHC Kasperske Hory 57.45 340 *e*P **P** **13 06 01.9 -0.3**
DPC Dobruska-Polom 57.65 343 *e*P **P** **13 06 02.8 -0.8**
DPC *e*pP pP 13 06 07.1 +1.6
DPC Dobruska-Polom 57.65 343 *e*P **P** **13 06 02.8 -0.8**
DPC *e* 13 06 07.1
MTLF Montolieu 57.76 329 *e*P **P** **13 06 04.5 0.0**
comp=Z,35nm,1.3s,mb4.9
MTLF Montolieu 57.76 329 *e*P **P** **13 06 04.5 0.0**
MTLF pmax pmax
comp=Z,18nm,1.3s,mb4.9
MTLF Montolieu 57.76 329 *e*P **P** **13 06 04.5 0.0**
comp=Z,18nm,1.3s,mb4.9
PRU Pruhonice 57.87 341 *e*P **P** **13 05 59.8 -5.4**
UPC Upice 57.88 343 *e*P **P** **13 06 04.4 -0.8**
UPC *e*pP pP 13 06 09.4 +2.2
UPC Upice 57.88 343 *e*P **P** **13 06 04.4 -0.8**
UPC *e* 13 06 09.4
KSP Ksiaz 58.09 343 *e*P **P** **13 06 06.8 +0.1**
KSP Ksiaz 58.09 343 *e*P **P** **13 06 06.0 -0.7**
CABF La Chapelle 58.31 334 *e*P **P** **13 06 07.7 -0.6**
comp=Z,21nm,1.1s,mb4.8
CABF La Chapelle 58.31 334 *e*P **P** **13 06 07.7 -0.6**
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.8
CABF La Chapelle 58.31 334 *e*P **P** **13 06 07.7 -0.6**
comp=Z,11nm,1.1s,mb4.8
GRA1 Grafenberg Arr 58.74 339 *e*P **P** **13 06 09.1 -2.2**
comp=Z,19nm,1.8s,mb4.8
GRF Grafenberg Arr 58.74 339 *e*P **P** **13 06 09.1 -2.2**
GRF pmax pmax
comp=Z,19nm,1.8s,mb4.8
GRF Grafenberg Arr 58.74 339 *e*P **P** **13 06 09.1 -2.2**
comp=Z,19nm,1.8s,mb4.8
BRG Berggiesshubel 58.83 342 *e*P **P** **13 06 14.4 +2.5**
BRG pmax pmax
comp=Z,8.0nm,2.0s,mb4.4
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
BRG Berggiesshubel 58.83 342 *e*(P) **P** **13 06 14.4 +2.5**
comp=Z,14nm,1.9s,mb4.7
BRG *e* 13 06 50.5
comp=Z,4.7nm,1.1s
ESDC Sonseca Array 58.87 322 P **P** **13 06 12.9 +0.6**
comp=Z,4.0nm,0.8s,mb4.5,baz=131,slow=6.2,SNR=19
ESDC LR LR 13 30 11.7
comp=Z,124nm,18.9s,MS4.0,baz=0.0,slow=35
SHL Shillong 58.91 57 *e*P **P** **13 06 13.5 +0.6**
ETSF Etsaut 58.93 327 *e*P **P** **13 06 13.2 +0.4**
comp=Z,43nm,1.2s,mb5.0
ETSF Etsaut 58.93 327 *e*P **P** **13 06 13.2 +0.4**
ETSF pmax pmax
comp=Z,21nm,1.2s,mb5.0
ETSF Etsaut 58.93 327 *e*P **P** **13 06 13.2 +0.4**
comp=Z,22nm,1.2s,mb5.0
CAF Calviac 58.96 330 *e*P **P** **13 06 13.5 +0.6**
comp=Z,49nm,1.2s,mb5.1
CAF Calviac 58.96 330 *e*P **P** **13 06 13.5 +0.6**
CAF pmax pmax
comp=Z,24nm,1.2s,mb5.1
CAF Calviac 58.96 330 *e*P **P** **13 06 13.5 +0.6**
comp=Z,24nm,1.2s,mb5.1
OBN Obninsk 58.98 358 *e*P **P** **13 06 12.2 -0.6**
OBN *i* 13 07 01.4
OBN pmax pmax
comp=Z,17nm,0.8s,mb5.1
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.1
CDF Champ du Feu 59.21 336 *e*P **P** **13 06 14.1 -0.4**
SMF Signal de Mont 59.35 332 *e*P **P** **13 06 15.2 -0.4**
comp=Z,23nm,1.0s,mb4.8
SMF Signal de Mont 59.35 332 *e*P **P** **13 06 15.2 -0.4**
SMF pmax pmax
comp=Z,12nm,1.0s,mb4.9
SMF Signal de Mont 59.35 332 *e*P **P** **13 06 15.2 -0.4**
comp=Z,12nm,1.0s,mb4.9
SUW Suwalki 59.37 349 *e*P **P** **13 06 15.2 -0.3**
SUW Suwalki 59.37 349 *e*P **P** **13 06 15.2 -0.3**
RJF Les Rejaudoux 59.50 330 *e*P **P** **13 06 17.1 +0.5**
comp=Z,43nm,1.1s,mb5.1
RJF *e*MLR MLR
comp=Z,222nm,21.0s,MS4.0
RJF Les Rejaudoux 59.50 330 *e*P **P** **13 06 17.1 +0.5**
RJF pmax pmax
comp=Z,22nm,1.1s,mb5.1
RJF MLR MLR
comp=Z,220nm,21.0s,MS4.3
RJF Les Rejaudoux 59.50 330 *e*P **P** **13 06 17.1 +0.5**
comp=Z,22nm,1.1s,mb5.1
RJF LR LR
comp=Z,220nm,21.0s,MS4.3
CLL Collm 59.51 341 *e*P **P** **13 06 13.0 -3.6**
CLL *i* 13 07 00.0
CLL MLR MLR
comp=Z,300nm,20.3s,MS4.4
CLL Collm 59.51 341 *e*P **P** **13 06 16.0 -0.6**
CLL Collm 59.51 341 *e*P **P** **13 06 13.0 -3.6**
CLL *i* PcP PcP 13 07 00.0 -4.0
CLL LR LR
comp=Z,300nm,20.3s,MS4.4
LFF La Frestale 59.63 329 *e*P **P** **13 06 18.1 +0.5**
comp=Z,45nm,1.1s,mb5.1
LFF La Frestale 59.63 329 *e*P **P** **13 06 18.1 +0.5**
LFF pmax pmax
comp=Z,23nm,1.1s,mb5.1
LFF La Frestale 59.63 329 *e*P **P** **13 06 18.1 +0.5**
comp=Z,23nm,1.1s,mb5.1
AVF Avril sur Loir 59.69 332 *e*P **P** **13 06 17.7 -0.2**
comp=Z,54nm,1.5s,mb5.1
AVF Avril sur Loir 59.69 332 *e*P **P** **13 06 17.7 -0.2**
AVF pmax pmax
comp=Z,27nm,1.5s,mb5.1
AVF Avril sur Loir 59.69 332 *e*P **P** **13 06 17.7 -0.2**
comp=Z,27nm,1.5s,mb5.0
BGF Bois d'Agland 59.75 332 *e*P **P** **13 06 18.4 +0.1**
comp=Z,18nm,0.9s,mb4.8
BGF Bois d'Agland 59.75 332 *e*P **P** **13 06 18.4 +0.1**
BGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BGF Bois d'Agland 59.75 332 *e*P **P** **13 06 18.4 +0.1**
comp=Z,9.1nm,0.9s,mb4.8
LOR Lormes 59.81 333 *e*P **P** **13 06 18.5 -0.2**
LOR *e*MLR MLR
comp=Z,128nm,18.5s,MS3.8
LOR Lormes 59.81 333 *e*P **P** **13 06 18.5 -0.2**
LOR LR LR
comp=Z,130nm,18.5s,MS4.1
SSF Saint Saulge 59.81 333 *e*P **P** **13 06 18.3 -0.5**
comp=Z,12nm,1.1s,mb4.5
SSF Saint Saulge 59.81 333 *e*P **P** **13 06 18.3 -0.5**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
SSF Saint Saulge 59.81 333 *e*P **P** **13 06 18.3 -0.5**
comp=Z,6.1nm,1.1s,mb4.5
TCF Toulx Ste Croi 59.86 331 *e*P **P** **13 06 19.8 +0.7**
comp=Z,53nm,1.1s,mb5.2
TCF Toulx Ste Croi 59.86 331 *e*P **P** **13 06 19.8 +0.7**
TCF pmax pmax
comp=Z,27nm,1.1s,mb5.2
TCF Toulx Ste Croi 59.86 331 *e*P **P** **13 06 19.8 +0.7**
comp=Z,27nm,1.1s,mb5.2
LSA Lhasa 59.95 52 P **P** **13 06 20.8 +0.7**
LSA Lhasa 59.95 52 *e*P **P** **13 06 20.8 +0.7**
LSA pmax pmax
comp=Z,35nm,1.3s,mb5.2
LSA Lhasa 59.95 52 *e*P **P** **13 06 20.8 +0.8**
comp=Z,35nm,1.3s,mb5.2
MEZF Maizieres J'vi 60.21 335 *e*P **P** **13 06 21.6 +0.2**
WLF Walferdange 60.65 336 P **P** **13 06 25.2 +0.8**
comp=Z,17nm,2.4s,mb4.7
MFF Saint Martin d 61.23 330 *e*P **P** **13 06 28.7 +0.2**
comp=Z,30nm,1.3s,mb5.0
MFF Saint Martin d 61.23 330 *e*P **P** **13 06 28.7 +0.2**
MFF pmax pmax
comp=Z,15nm,1.3s,mb5.0
MFF Saint Martin d 61.23 330 *e*P **P** **13 06 28.7 +0.2**
comp=Z,15nm,1.3s,mb5.0
GIVF Givet 61.53 336 *e*P **P** **13 06 30.3 -0.1**
BCLA Clavier 61.58 336 P **P** **13 06 31.1 +0.4**
comp=Z,15nm,2.3s,mb4.7
DOU Dourbes 61.62 335 P **P** **13 06 32.1 +1.1**
comp=Z,9.4nm,2.7s,mb4.4
DOU AP pP 13 06 34.4 +1.4
BAIF Baives 61.76 335 *e*P **P** **13 06 31.8 -0.1**
UCC Uccle 62.26 336 P **P** **13 06 35.7 +0.5**
ARU Arti 62.30 12 P **P** **13 06 34.7 -0.8**
comp=Z,155nm,1.0s,mb6.1,SNR=8.5
ARU Arti 62.30 12 *d* *i*P **P** **13 06 34.6 -0.9**
ARU *e* 13 07 11.7
ARU *e* 13 08 49.4
ARU *e*S **S** **13 15 02.5 +0.5**
ARU SS SS 13 19 03.2 -2.3
ARU pmax pmax
comp=Z,55nm,1.7s,mb5.4
ARU Arti 62.30 12 *e*P **P** **13 06 34.3 -1.2**
comp=Z,30nm,1.0s,mb5.4
BRVK Borovoye 62.61 21 P **P** **13 06 37.2 -0.4**
comp=Z,65nm,1.3s,mb5.6,SNR=7.6
BRVK Borovoye 62.61 21 *e*P **P** **13 06 36.6 -1.0**
BRVK pmax pmax
comp=Z,22nm,1.3s,mb5.1
BRVK Borovoye 62.61 21 *e*P **P** **13 06 36.6 -0.9**
comp=Z,22nm,1.3s,mb5.1
BVAR Borovoye Array 62.62 21 LR LR 13 39 27.4
comp=Z,185nm,18.6s,MS4.3,baz=97,slow=41
FLN La Foliniere 62.90 332 *e*P **P** **13 06 39.2 -0.4**
FLN *e*MLR MLR
comp=Z,164nm,20.8s,MS3.9
FLN La Foliniere 62.90 332 *e*P **P** **13 06 39.2 -0.4**
FLN LR LR
comp=Z,160nm,20.8s,MS4.2
CMAR Chiang Mai Arr 62.91 67 P **P** **13 06 40.5 +0.3**
comp=Z,7.4nm,0.8s,mb4.8,baz=259,slow=7.8,SNR=58
CHTO Chiang Mai 63.00 67 *e*P **P** **13 06 40.5 -0.4**
CHTO pmax pmax
comp=Z,15nm,1.2s,mb5.0
CHTO Chiang Mai 63.00 67 *e*P **P** **13 06 40.5 -0.4**
comp=Z,15nm,1.2s,mb5.0
SVE Sverdlovsk 63.12 13⇓ *e*P **P** **13 06 40.3 -0.6**
SVE pmax pmax
comp=Z,21nm,1.1s,mb5.2
MKAR Makanchi Array 63.26 32 P **P** **13 06 41.7 -0.3**
comp=Z,17nm,0.8s,mb5.2,baz=228,slow=6.6,SNR=111
MKAR Makanchi Array 63.26 32 *i* P **P** **13 06 41.7 -0.4**
MKAR pmax pmax
comp=Z,17nm,0.8s
MKAR Makanchi Array 63.26 32 P **P** **13 06 41.7 -0.3**
SGMF Saint Gilles 63.56 330 *e*P **P** **13 06 43.7 -0.3**
comp=Z,52nm,1.2s,mb5.1
SGMF Saint Gilles 63.56 330 *e*P **P** **13 06 43.7 -0.3**
SGMF pmax pmax
comp=Z,26nm,1.2s,mb5.1
SGMF Saint Gilles 63.56 330 *e*P **P** **13 06 43.7 -0.3**
comp=Z,26nm,1.2s,mb5.1
QUIF Quistinic 63.64 330 *e*P **P** **13 06 44.4 -0.1**
comp=Z,48nm,1.1s,mb5.1
QUIF Quistinic 63.64 330 *e*P **P** **13 06 44.4 -0.1**
QUIF pmax pmax
comp=Z,24nm,1.1s,mb5.1
QUIF Quistinic 63.64 330 *e*P **P** **13 06 44.4 -0.1**
comp=Z,24nm,1.1s,mb5.1
KURK Kurchatov 64.14 27 P **P** **13 06 47.1 -0.7**
comp=Z,150nm,0.9s,mb6.0,SNR=19
KURK Kurchatov 64.14 27 *e*P **P** **13 06 47.5 -0.3**
KURK pmax pmax
comp=Z,24nm,0.9s,mb5.2
KURK Kurchatov 64.14 27 *e*P **P** **13 06 47.5 -0.3**
comp=Z,24nm,0.9s,mb5.2
WMQ Urumqi 64.50 37 P **P** **13 06 51.0 +0.7**
WMQ AP pP 13 06 54.8 +2.5
WMQ PCP PcP 13 07 25.5 +1.0
WMQ PP PP 13 09 15.0 +2.7
WMQ S **S** **13 15 28.0 -1.9**
WMQ XS sS 13 15 35.0 +1.8
WMQ SCS ScS 13 16 45.1 -0.3
WMQ AMB AMB
comp=Z,28nm,1.0s,mb5.2
WMQ AMB AMB
comp=Z,91nm,4.2s
WMQ LR LR
comp=N,98nm,21.0s
WMQ LR LR
comp=E,74nm,32.0s
WMQ LR LR
comp=Z,78nm,28.0s
KLMR Klimovskoe 64.69 0 *e*P **P** **13 06 46.7 -4.5**
KLMR pmax pmax
comp=Z,38nm,1.5s,mb5.2
SYO Syowa Base 64.88 180⇓⇓ *e*P **P** **13 06 52.6 +0.3**
SOKR Solikamsk 64.91 10⇑ *i*P **P** **13 06 53.5 +0.8**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb5.0
KAF Kangasniemi 66.70 353 *e*p **P** **13 07 02.0 -2.1**
comp=Z,4.3nm,0.8s,mb4.5
KAF Kangasniemi 66.70 353 *e*P **P** **13 07 02.0 -2.1**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
JOF Joensuu 67.04 356 *e*p **P** **13 07 04.7 -1.6**
comp=Z,3.8nm,0.8s,mb4.5
JOF Joensuu 67.04 356 *e*P **P** **13 07 04.7 -1.6**
JOF pmax pmax

comp=Z,4.0nm,0.8s,mb4.5
KMI Kunming 68.06 61 P **P** **13 07 14.3 +0.8**
KMI AP pP 13 07 18.0 +2.5
KMI XP sP 13 07 19.4 +3.2
KMI PP PP 13 09 47.3 +3.5
KMI S S 13 16 14.4 +0.5
KMI XS sS 13 16 19.0 +1.9
KMI AMB AMB
comp=Z,12nm,1.6s,mb4.7
KMI AMB AMB
comp=Z,87nm,3.1s
KMI LR LR
comp=N,174nm,24.0s,MS4.3
KMI LR LR
comp=E,195nm,27.0s,MS4.3
KMI LR LR
comp=Z,200nm,13.5s
NB2 NORSAR Subarra 68.43 346 P **P** **13 07 14.2 -0.9**
comp=Z,2.0nm,0.8s,mb4.2,baz=151,slow=6.2
NOA NORSAR Array B 68.43 346 P **P** **13 07 14.5 -0.6**
comp=Z,3.8nm,1.0s,mb4.4,baz=146,slow=6.4,SNR=6.1
NOA LR LR 13 39 24.6
comp=Z,72nm,18.9s,MS3.9,baz=10.0,slow=38
ZAA0 Zalesovo Array 69.13 27 *eP* **P** **13 07 18.4 -1.2**
ZALV Zalesovo Beam 69.13 27 P **P** **13 07 18.6 -1.1**
comp=Z,10nm,0.8s,mb4.8,baz=235,slow=5.2,SNR=42
GTA Gaotai 70.41 46 ⇓P **P** **13 07 28.5 +0.7**
GTA AP pP 13 07 31.9 +2.1
GTA XP sP 13 07 33.5 +3.0
GTA PP PP 13 10 07.1 +3.3
GTA S S 13 16 41.3 +0.1
GTA XS sS 13 16 48.3 +3.8
GTA AMB AMB
comp=Z,22nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,113nm,3.8s
GTA LR LR
comp=N,146nm,18.9s,MS4.4
GTA LR LR
comp=E,99nm,17.1s,MS4.4
GTA LR LR
comp=Z,188nm,19.2s,MS4.4
CD2 Chengdu 70.56 55 P **P** **13 07 28.6 -0.3**
CD2 AP pP 13 07 33.3 +2.4
CD2 PCP PcP 13 07 49.8 -0.3
CD2 PP PP 13 10 07.1 +1.8
CD2 S S 13 16 40.6 -2.6
CD2 XS sS 13 16 48.8 +2.3
CD2 SKS 13 17 25.8
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,150nm,4.7s
CD2 LR LR
comp=N,480nm,8.6s
CD2 LR LR
comp=Z,200nm,11.4s,MS4.6
GYA Guiyang 71.82 61 ⇑*iP* **P** **13 07 37.6 +1.0**
GYA PCP PcP 13 07 55.4 -0.2
GYA PP PP 13 10 18.9 +2.7
GYA PPP 13 12 02.4
GYA S S 13 16 55.8 -2.2
GYA SKS 13 17 36.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,130nm,5.2s
GYA LR LR
comp=N,580nm,20.9s,MS4.9
GYA LR LR
comp=E,450nm,19.8s,MS4.9
GYA LR LR
comp=Z,560nm,20.4s,MS4.8
LZH Lanzhou 72.22 50 ⇑P **P** **13 07 39.0 +0.1**
LZH AP pP 13 07 43.8 +2.9
LZH XP sP 13 07 46.1 +4.5
LZH PP PP 13 10 22.3 +2.8
LZH *e*S S 13 17 00.3 -2.0
LZH XS sS 13 17 08.1 +2.5
LZH AMB AMB
comp=Z,23nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,112nm,6.0s
LZH LR LR
comp=E,359nm,15.2s
LZH LR LR
comp=Z,572nm,18.0s,MS4.9
SNAA Sanae 72.51 193 *eP* **P** **13 07 41.2 +1.3**
SNAA *e* 13 07 45.5
SNAA *e* 13 07 51.7
SNAA Sanae 72.51 193 *eP* **P** **13 07 41.4 +1.5**
SNAA pmax pmax
comp=Z,7.0nm,0.9s
SNAA Sanae 72.51 193 *eP* **P** **13 07 41.4 +1.5**
comp=Z,7.0nm,0.9s,mb4.6
VNA2 Neumayer--Watz 73.07 194 *eP* **P** **13 07 45.1 +1.9**
baz=35,slow=5.6
VNA2 *e* 13 07 49.2
VNA2 *e* 13 07 55.4
VNA1 Neumayer--Stat 73.11 195 *eP* **P** **13 07 45.6 +2.1**
VNA1 *e* 13 07 50.1
VNA1 *e* 13 07 56.3
VNA3 Neumayer Olymp 73.84 195 *eP* **P** **13 07 49.1 +1.3**
VNA3 *e* 13 07 53.7
VNA3 *e* 13 07 59.7
ARCES ARCESS Array B 74.01 355 P **P** **13 07 48.7 0.0**
comp=Z,8.2nm,0.9s,mb4.7,baz=153,slow=3.7,SNR=12
ARCES ARCESS Array B 74.01 355 P **P** **13 07 48.7 0.0**
XAN Xi'an 75.62 54 P **P** **13 07 58.6 -0.2**
XAN AP pP 13 08 01.9 +1.1
XAN PP PP 13 10 47.9 -0.5
XAN S S 13 17 40.8 +0.2
XAN AMB AMB
comp=Z,13nm,1.0s,mb4.8
XAN LR LR
comp=N,45nm,20.4s,MS4.4
XAN LR LR
comp=E,193nm,23.9s,MS4.4
XAN LR LR
comp=Z,222nm,25.8s,MS4.3
ZAK Zakamensk 76.96 36 *eP* **P** **13 08 02.5 -3.5**
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
SONM Songino Array 77.93 39 P **P** **13 08 12.7 +1.1**
comp=Z,4.8nm,1.0s,mb4.4,baz=245,slow=5.5,SNR=27
ULN Ulaanbaatar 78.36 40 *eP* **P** **13 08 14.7 +0.8**
ULN *e* 13 08 18.7
ULN pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ULN Ulaanbaatar 78.36 40 *eP* **P** **13 08 14.7 +0.8**
comp=Z,4.2nm,0.9s,mb4.4
ULN *e* 13 08 18.7
WHN Wuhan 79.31 58 ⇑P **P** **13 08 20.9 +1.3**
HHC Hu-ho-hao-te 79.40 47 *eP* **P** **13 08 21.3 +1.5**
HHC AP pP 13 08 25.8 +4.0
HHC XP sP 13 08 28.4 +5.9
HHC PP PP 13 11 22.5 +2.5
HHC *e*S S 13 18 20.3 -1.1
HHC XS sS 13 18 28.5 +3.8
HHC SCS ScS 13 18 40.3 -3.5
HHC AMB AMB
comp=Z,48nm,1.2s,mb5.3
HHC AMB AMB
comp=Z,190nm,5.0s
HHC LR LR
comp=N,186nm,20.2s,MS4.6
HHC LR LR
comp=E,130nm,15.5s,MS4.6
HHC LR LR
comp=Z,243nm,16.7s,MS4.6
BJI Beijing 82.64 49 P **P** **13 08 36.9 -0.2**
BJI S S 13 18 54.8 -0.4
BJI AMB AMB
comp=Z,7.0nm,0.5s,mb5.0
BJI AMB AMB
comp=Z,94nm,3.5s
BJI LR LR
comp=N,201nm,25.4s,MS4.5
BJI LR LR
comp=E,191nm,26.0s,MS4.5
BJI LR LR
comp=Z,342nm,37.1s
NJ2 Nanjing 83.37 57 *eP* **P** **13 08 41.1 0.0**
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.6
BOD Bodaibo 85.35 31 *eP* **P** **13 08 49.2 -1.3**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
QSPA South Pole Qui 86.02 180 P **P** **13 08 54.8 +1.2**
comp=Z,9.4nm,1.1s,mb4.9,baz=241,slow=3.6,SNR=7.4
QSPA South Pole Qui 86.02 180 *eP* **P** **13 08 54.2 +0.7**
comp=Z,20nm,1.3s,mb5.2
CN2 Changchun 90.04 46 *eP* **P** **13 09 13.8 +0.4**
ASAR Alice Springs 92.69 114 P **P** **13 09 26.3 +0.1**
comp=Z,2.8nm,0.7s,mb4.8,baz=264,slow=4.7,SNR=20
WRA Warramunga Arr 93.45 110 P **P** **13 09 29.7 -0.1**
comp=Z,9.4nm,0.9s,mb5.2,baz=271,slow=3.1,SNR=70
WRA LR LR 13 48 13.1
comp=Z,110nm,18.4s,MS4.3,baz=235,slow=33
WRAB Tennant Creek 93.46 110 P **P** **13 09 30.3 +0.5**
comp=Z,86nm,0.8s,mb6.2,SNR=6.7
WRAB Tennant Creek 93.46 110 *eP* **P** **13 09 29.8 0.0**
WRAB pmax pmax
comp=Z,11nm,0.8s,mb5.3
WRAB Tennant Creek 93.46 110 *eP* **P** **13 09 29.8 0.0**
comp=Z,11nm,0.8s,mb5.3
TIXI Tiksi 93.69 19⇑*eP* **P** **13 09 29.7 0.0**
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
TIXI Tiksi 93.69 19 *eP* **P** **13 09 29.5 -0.3**
comp=Z,3.8nm,0.3s,mb5.3
YAK Yakutsk 93.75 28⇑*eP* **P** **13 09 29.8 -0.4**
YAK pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
CPUP Villa Florida 94.09 243 P **P** **13 09 33.7 +1.1**
comp=Z,3.7nm,0.9s,mb4.8,baz=104,slow=5.6,SNR=8.7
CPUP Villa Florida 94.09 243 *eP* **P** **13 09 34.5 +1.9**
CPUP *e* 13 09 38.5
CPUP pmax pmax
comp=Z,21nm,1.0s
CPUP Villa Florida 94.09 243 *eP* **P** **13 09 34.5 +1.9**
comp=Z,21nm,1.0s,mb5.5
CPUP *e* 13 09 38.5
KLR Kul'dur 94.68 41 *eP* **P** **13 09 30.2 -4.6**
STKA Stephens Creek 98.35 123 P **P** **13 09 51.9 0.0**
comp=Z,2.3nm,0.8s,mb4.8,baz=294,slow=10.0,SNR=3.6
YKA Yellowknife Ar 118.52 347 PKP PKPdf 13 15 00.5 -0.6
comp=Z,0.9nm,0.8s,baz=26,slow=2.0,SNR=16
PDAR Pinedale Array 132.49 329 PKP PKPdf 13 15 29.8 +1.4
comp=Z,1.5nm,1.1s,baz=343,slow=1.5,SNR=6.7
TXAR Lajitas Array 136.77 310 PKP PKPdf 13 15 37.4 +0.5
comp=Z,1.2nm,0.9s,baz=191,slow=1.3,SNR=3.9
NVAR Mina Array Bea 140.10 332 PKhKP 13 15 36.9
comp=Z,1.8nm,0.9s,baz=54,slow=5.4,SNR=12
NVAR PKP PKPdf 13 15 43.2 +0.5
comp=Z,1.4nm,0.8s,baz=105,slow=1.2,SNR=7.8
NVAR Mina Array Bea 140.10 332 PKP PKPdf 13 15 43.2 +0.5

BJI ***23*** *13:10:20.5,962S×124.25E,h110km,mB5.3,mb5.3*
ISCJB ***23*** *13:10:26.2±0.2,896S±003×123.71E±004,h106km, mb5.4/108, Error ellipse: s-maj=5.6km s-min=3.5km az=153.5*
MOS ***23*** *13:10:27.4±1.1, 8.72S×123.71E, h107km, mb5.5/48, Error ellipse: s-maj=10.3km s-min=5.9km az=119.6*
IDC ***23*** *13:10:27.9±1.5, 8.89S×123.75E, h104km±12km, mb5.0/27, mb1 4.9/27, mb1mx4.9/28, mbtmp5.0/27, MS4.2/13, Ms1 4.2/13, ms1mx4.0/25, Error ellipse: s-maj=12.4km s-min=8.8km az=68.0*
GCMT ***23*** *13:10:28.5±0.1, 9.11S×123.86E, h116km±1km, MW5.3/89, Moment Tensor Solution. s76,c116; s89,c162; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr 0.07±.02; Mθθ 0.31±.02; Mφφ 0.23±.03; Mrθ 0.85±.01; Mθφ 0.29±.03; Mφr 0.47±.02; Best double couple: M0 1.04900×10^17 NP1: φ332.00000°, δ22.00000°, λ177.00000°. NP2: φ65.00000°, δ89.00000°, λ68.00000°. Principal axes: T 1.1040, Plg42.0000°, Azm314.0000°; N -0.1100, Plg22.0000°, Azm65.0000°; P -0.9940, Plg40.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***23*** *13:10:28.5±0.9, 8.92S×123.74E, h111km±7km, mb5.5/48, MW5.2 Error ellipse: s-maj=6.5km s-min=4.0km az=53.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^16 Nm; Mrr 1.49; Mθθ 2.70; Mφφ -1.22; Mrθ 8.35; Mθφ 2.42; Mφr 2.82; Best double couple: M0 9.40000×10^16 NP1: φ340.00000°, δ10.00000°, λ-122.00000°. NP2: φ253.00000°, δ82.00000°, λ-85.00000°. Principal axes: T 10.4000, Plg36.0000°, Azm338.0000°; N -2.3000, Plg5.0000°, Azm71.0000°; P -8.1000, Plg52.0000°, Azm168.0000°;*
NEIC Felt [III] at Kefamenanu, Timor. Felt at Darwin, Australia.
DJA ***23*** *13:10:30, 9.41S×123.50E, h104km, Mw5.5/25*

ISC 23 13:10:28.1±0.2, 901S±003×12372E±004, h108km, h108km±3.5km; pP-P, n390, σ1915/321, mb5.4/107, 20C-19D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.59**	**315**	Pn	**Pn**	**13 11 51.9**	**+3.0**
	2μm,0.7s,SNR=61						
KAPI	**Kappang**	**5.59**	**315**	P	**Pn**	**13 11 51.0**	**+2.0**
	22nm,0.3s,baz=157,slow=7.4,SNR=76						
KAPI				S	**Sn**	**13 12 50.9**	**-1.0**
	13nm,0.3s,baz=199,slow=21,SNR=1.7						
KAPI	**Kappang**	**5.59**	**315**	*e*Pn	**Pn**	**13 11 51.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**9.22**	**169**	*e*P	**Pn**	**13 12 34.5**	**-3.7**
	289nm,0.3s						
FITZ				*e*S	**Sn**	**13 14 10.0**	**-10**
FITZ	**Fitzroy Crossi**	**9.22**	**169**	*e*Pn	**Pn**	**13 12 34.6**	**-3.6**
	7.2nm,0.6s						
FITZ				*e*Sn	**Sn**	**13 14 09.5**	**-11**
KAKA	**Kakadu**	**9.32**	**114**	*e*P	x	13 11 35.4	
	346nm,0.4s						
KAKA				*e*S	x	13 12 52.6	
MBWA	**Marble Bar**	**12.67**	**197**	*e*Pn	**Pn**	**13 13 22.2**	**-2.3**
MBWA				*e*Sn	**Sn**	**13 15 35.9**	**-8.1**
TSM	**Tawau**	**14.45**	**336**	⇑P	**Pn**	**13 13 52.7**	**+5.2**
WRA	**Warramunga Arr**	**14.95**	**138**	P	**Pn**	**13 13 49.0**	**-4.9**
	9.3nm,0.3s,baz=317,slow=13,SNR=334						
WRA				S	**Sn**	**13 16 22.0**	**-17**
	45nm,0.3s,baz=308,slow=23,SNR=35						
WRA				LR	LR	13 20 17.9	
	comp=Z,2μm,18.1s,baz=315,slow=39						
WRA	**Warramunga Arr**	**14.95**	**138**	*i* P	**Pn**	**13 13 49.0**	**-4.8**
WRA				pmax	pmax		
	comp=Z,83nm,0.6s						
WRAB	**Tennant Creek**	**14.95**	**138**	Pn	**Pn**	**13 13 49.0**	**-4.8**
	comp=Z,4μm,0.6s						
WRAB	**Tennant Creek**	**14.95**	**138**	*c i*P	**Pn**	**13 13 49.6**	**-4.2**
WRAB	**Tennant Creek**	**14.95**	**138**	*e*Pn	**Pn**	**13 13 49.6**	**-4.3**
WRAB				*e*		13 13 56.6	
WRAB				*e*Sn	**Sn**	**13 16 22.7**	**-16**
WB2	**Warramunga Arr**	**14.96**	**138**	*e*P	**Pn**	**13 13 49.1**	**-4.8**
WB2	**Warramunga Arr**	**14.96**	**138**	*e*Pn	**Pn**	**13 13 49.6**	**-4.3**
WB2				*e*Sn	**Sn**	**13 16 23.7**	**-15**
MYLDM	**Lahad Datu**	**15.03**	**340**	⇓P	**Pn**	**13 14 01.0**	**+6.1**
SDKM	**Sandakan**	**15.94**	**336**	⇓P	**Pn**	**13 14 11.5**	**+5.1**
DAV	**Davao City (W)**	**16.08**	**7**	LR	LR	13 20 05.2	
	comp=Z,790nm,19.9s,slow=36						
BTM	**Bintulu**	**16.11**	**318**	⇑P	**Pn**	**13 14 13.4**	**+5.0**
SBUM	**Sibu**	**16.16**	**314**	⇓P	**Pn**	**13 14 12.0**	**+3.0**
KKM	**Kota Kinabalu**	**16.72**	**333**	*e*Pn	**Pn**	**13 14 18.9**	**+2.9**
	comp=Z,280nm,0.5s						
KKM	**Kota Kinabalu**	**16.72**	**333**	⇑P	**Pn**	**13 14 19.8**	**+3.8**
PAGZ	**Pagadian**	**16.75**	**359**	*e*P	**Pn**	**13 14 19.9**	**+3.6**
BUKP	**Musuan**	**16.83**	**5**	*e*P	**Pn**	**13 14 19.5**	**+2.2**
KSM	**Kuching**	**16.95**	**307**	*e*P	**Pn**	**13 14 20.4**	**+1.7**
	comp=Z,157nm,0.6s						
KSM	**Kuching**	**16.95**	**307**	⇓P	**Pn**	**13 14 21.8**	**+3.1**
KDM	**Kudat**	**17.25**	**336**	⇓P	**Pn**	**13 14 26.7**	**+4.3**
ASAR	**Alice Springs**	**17.53**	**147**	P	**Pn**	**13 14 23.8**	**-1.9**
	comp=Z,9.9nm,0.3s,baz=326,slow=12,SNR=735						
ASAR				S	**S**	**13 17 24.9**	**-16**
	comp=Z,9.4nm,0.3s,baz=315,slow=21,SNR=7.0						
XMIS	**Christmas Isla**	**17.87**	**264**	*e*P	**Pn**	**13 14 28.3**	**-1.6**
	comp=Z,743nm,0.7s						
BATP	**Bataraza**	**18.65**	**341**	*e*P	**P**	**13 14 42.6**	**+5.0**
MSLP	**Maasin**	**19.05**	**3**	*e*P	**P**	**13 14 44.2**	**+2.2**
GUIM	**Jordan**	**19.54**	**357**	*e*P	**P**	**13 14 49.4**	**+2.0**
OTRP	**Odiongan**	**21.30**	**355**	*e*P	**P**	**13 15 06.3**	**+0.1**
SJMP	**San Jose**	**21.49**	**353**	*e*P	**P**	**13 15 10.1**	**+1.8**
FORT	**Forrest**	**22.03**	**170**	⇓ *i*P	**P**	**13 15 13.0**	**-0.9**
	comp=Z,278nm,0.6s,mb5.8						
FORT				*e*S	**S**	**13 19 08.5**	**-1.6**
FORT	**Forrest**	**22.03**	**170**	*e*P	**P**	**13 15 12.8**	**-1.0**
	comp=Z,371nm,0.7s,mb5.8						
PVCP	**Virac**	**22.46**	**1**	*e*P	**P**	**13 15 18.1**	**-0.4**
MYKOM	**Kota Tinggi**	**22.52**	**298**	⇑P	**P**	**13 15 20.4**	**+1.1**
LUBP	**Lubang**	**22.86**	**351**	*e*P	**P**	**13 15 23.5**	**+1.0**
KGM	**Kluang**	**23.10**	**297**	⇓P	**P**	**13 15 26.4**	**+1.7**
PMG	**Port Moresby**	**23.14**	**93**	P	**P**	**13 15 25.3**	**+0.2**
	comp=Z,28nm,0.7s,mb4.7,baz=278,slow=4.5,SNR=20						
PMG				S	**S**	**13 19 25.6**	**-2.9**
	comp=Z,8.7nm,0.8s,baz=332,slow=3.5,SNR=1.9						
PMG	**Port Moresby**	**23.14**	**93**	*d* P	**P**	**13 15 26.1**	**+1.0**
PMG	**Port Moresby**	**23.14**	**93**	*e*P	**P**	**13 15 25.8**	**+0.6**
	comp=Z,84nm,1.0s,mb5.0						
KLBR	**Kellerberrin**	**23.14**	**193**	⇓ *i*P	**P**	**13 15 24.3**	**-0.6**
	comp=Z,155nm,0.9s,mb5.3						
KLBR				*e*S	**S**	**13 19 36.0**	**+7.8**
POLP	**Polilio Island**	**23.65**	**356**	*e*P	**P**	**13 15 29.6**	**-0.1**
MUN	**Mundaring**	**23.89**	**196**	*e*P	**P**	**13 15 31.3**	**-0.5**
MUN				*e*S	**S**	**13 19 54.0**	**+14**
CTA	**Charters Tower**	**24.40**	**119**	P	**P**	**13 15 37.3**	**+0.8**
	comp=Z,85nm,0.8s,mb5.2,baz=294,slow=11,SNR=115						
CTA				S	**S**	**13 19 48.7**	**0.0**
	comp=Z,6.6nm,0.7s,baz=245,slow=22,SNR=2.5						
CTA				LR	LR	13 26 49.5	
	comp=Z,590nm,18.1s,baz=300,slow=40						
CTA	**Charters Tower**	**24.40**	**119**	P	**P**	**13 15 37.3**	**+0.8**
CTA				S	**S**	**13 19 48.7**	**0.0**
CTA				pmax	pmax		
	comp=Z,85nm,0.8s						
CTA				smax			
	comp=N,7.0nm,0.7s						
CTA				MLR	MLR		
	comp=Z,590nm,18.1s						
CTA	**Charters Tower**	**24.40**	**119**	*e*P	**P**	**13 15 37.1**	**+0.6**
	comp=Z,61nm,0.7s,mb5.0						
CTA	**Charters Tower**	**24.40**	**119**	P	**P**	**13 15 37.3**	**+0.8**
CTA				S	**S**	**13 19 48.7**	**0.0**
CTA				LR	LR	13 26 49.5	
CTAO	**Charters Tower**	**24.40**	**119**	*e*P	**P**	**13 15 36.8**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,94nm,0.8s,mb5.2						
CTAO	**Charters Tower**	**24.40**	**119**	*e*P	**P**	**13 15 36.8**	**+0.3**
	comp=Z,94nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**24.54**	**193**	P	**P**	**13 15 38.2**	**+0.5**
	SNR=7.6						
NWAO	**Narrogin (SRO)**	**24.54**	**193**	P	**P**	**13 15 37.4**	**-0.4**
	comp=Z,133nm,0.9s,mb5.4,baz=26,slow=7.8,SNR=198						
NWAO				S	**S**	**13 19 51.4**	**+0.7**
	comp=Z,39nm,1.1s,baz=102,slow=13,SNR=2.4						
NWAO	**Narrogin (SRO)**	**24.54**	**193**	P	**P**	**13 15 37.4**	**-0.3**
NWAO				S	**S**	**13 19 51.4**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,133nm,0.9s						
NWAO				smax			
	comp=N,39nm,1.2s						
NWAO	**Narrogin (SRO)**	**24.54**	**193**	*e*P	**P**	**13 15 37.2**	**-0.5**
	comp=N,172nm,1.1s,mb5.4						
BALP	**Baler**	**24.68**	**355**	*e*P	**P**	**13 15 39.9**	**+0.8**
SCZP	**Santa Cruz**	**24.92**	**351**	*e*P	**P**	**13 15 40.9**	**-0.3**
KTGM	**Kuala Trenggan**	**24.98**	**304**	⇓P	**P**	**13 15 43.8**	**+1.9**
FRIM	**Kepong**	**25.16**	**298**	⇑P	**P**	**13 15 45.0**	**+1.4**
CAUP	**Cauayan**	**25.86**	**356**	*e*P	**P**	**13 15 51.4**	**+1.6**
IPM	**Ipoh**	**26.30**	**300**	⇓P	**P**	**13 15 53.5**	**-0.3**
COCO	**West Island**	**26.61**	**261**	*e*P	**P**	**13 15 56.7**	**+0.1**
COCO				pmax	pmax		
	comp=Z,739nm,1.8s,mb5.9						
COCO	**West Island**	**26.61**	**261**	*e*P	**P**	**13 15 56.7**	**+0.1**
	comp=Z,739nm,1.8s,mb5.9						
KULM	**Kulim**	**27.03**	**301**	*e*P	**P**	**13 15 59.6**	**-0.9**
	comp=Z,17nm,0.6s,mb4.7						
KULM	**Kulim**	**27.03**	**301**	⇓P	**P**	**13 15 59.9**	**-0.5**
PSI	**Prapat**	**27.36**	**294**	P	**P**	**13 16 02.3**	**-1.1**
	comp=Z,27nm,0.7s,mb4.9,baz=88,slow=11,SNR=12						
PSI	**Prapat**	**27.36**	**294**	P	**P**	**13 16 02.3**	**-1.1**
PSI				pmax	pmax		
	comp=Z,27nm,0.7s,mb4.9						
SNG	**Songkhla**	**28.09**	**304**	P	**P**	**13 16 10.0**	**+0.2**
STKA	**Stephens Creek**	**28.16**	**146**	P	**P**	**13 16 10.8**	**+0.5**
	comp=Z,22nm,0.3s,mb5.1,baz=313,slow=9.2,SNR=80						
STKA				LR	LR	13 28 06.3	
	comp=Z,805nm,21.6s,baz=258,slow=38						
STKA	**Stephens Creek**	**28.16**	**146**	⇓ *i*P	**P**	**13 16 10.8**	**+0.5**
	comp=Z,30nm,0.8s,mb4.9						
STKA				*e*S	sS	13 21 28.8	-0.5
STKA	**Stephens Creek**	**28.16**	**146**	*e*P	**P**	**13 16 10.8**	**+0.6**
	comp=Z,36nm,1.4s,mb4.7						
ADE	**Adelaide**	**29.25**	**154**	*e*P	**P**	**13 16 20.1**	**+0.2**
QIZ	**Qiongzhong**	**31.04**	**334**	P	**P**	**13 16 35.9**	**0.0**
QIZ				XP	sP	13 17 18.8	+6.6
QIZ				S	**S**	**13 21 30.6**	**-2.6**
QIZ				XS	sS	13 22 18.9	+4.0
QIZ				AMB	AMB		
	comp=Z,27nm,1.6s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,264nm,8.0s						
KKTK	**Khon Kaen**	**32.59**	**321**	P	**P**	**13 16 50.5**	**+1.0**
ARMA	**Armidale**	**33.65**	**133**	*e*P	**P**	**13 17 00.7**	**+2.1**
NST	**Nakhon Sawan**	**33.87**	**316**	P	**P**	**13 17 02.0**	**+1.3**
	comp=Z,125nm,0.5s,mb6.0						
TOO	**Toolangi**	**34.57**	**149**	*e*P	**P**	**13 17 08.4**	**+1.9**
TOO				*e*		13 18 28.3	
CAN	**Canberra**	**34.91**	**142**	*e*P	**P**	**13 17 11.0**	**+1.6**
CAN				pmax	pmax		
	comp=Z,362nm,1.8s,mb5.9						
CAN	**Canberra**	**34.91**	**142**	*e*P	**P**	**13 17 11.0**	**+1.6**
	comp=Z,362nm,1.8s,mb5.9						
CNB	**Canberra Magne**	**35.13**	**142**	*e*P	**P**	**13 17 12.7**	**+1.4**
RIV	**Riverview**	**35.31**	**138**	*e*P	**P**	**13 17 14.9**	**+2.0**
HNR	**Honiara**	**35.75**	**94**	P	**P**	**13 17 17.1**	**+0.2**
	comp=Z,52nm,0.8s,mb5.5,baz=227,slow=3.1,SNR=5.8						
HNR				LR	LR	13 32 37.2	
	comp=Z,184nm,20.9s,baz=278,slow=37						
JOW	**Kunigami**	**35.90**	**7**	P	**P**	**13 17 16.5**	**-1.5**
	comp=Z,18nm,0.3s,mb5.5,baz=75,slow=22,SNR=6.7						
CMAR	**Chiang Mai Arr**	**36.65**	**318**	P	**P**	**13 17 25.1**	**+0.7**
	comp=Z,78nm,0.7s,mb5.8,baz=148,slow=7.1,SNR=243						
CMAR				PcP	PcP	13 19 46.6	+1.3
	comp=Z,4.3nm,0.6s,baz=170,slow=3.2,SNR=5.5						
CMAR				ScP	ScP	13 23 21.9	-0.4
	comp=Z,3.2nm,0.9s,baz=169,slow=3.0,SNR=12						
CMAR				LR	LR	13 32 27.9	
	comp=Z,289nm,21.5s,baz=137,slow=36						
CMAR	**Chiang Mai Arr**	**36.65**	**318**	*i* P	**P**	**13 17 25.1**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,78nm,0.7s						
CHG	**Chiang Mai**	**36.90**	**319**	⇑P	**P**	**13 17 27.0**	**+0.4**
	comp=Z,156nm,0.7s,mb6.0						
CHTO	**Chiang Mai**	**36.90**	**319**	P	**P**	**13 17 28.0**	**+1.4**
	SNR=60						
CHTO	**Chiang Mai**	**36.90**	**319**	*e*P	**P**	**13 17 26.8**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,308nm,1.3s,mb6.1						
CHTO	**Chiang Mai**	**36.90**	**319**	*e*P	**P**	**13 17 26.8**	**+0.2**
	comp=Z,308nm,1.3s,mb6.1						
CHRT	**Chiangrai**	**37.14**	**321**	⇑P	**P**	**13 17 29.5**	**+0.9**
	comp=Z,1μm,0.8s						
GYA	**Guiyang**	**38.96**	**335**⇑ *i*P		**P**	**13 17 45.3**	**+1.6**
GYA				AP	pP	13 18 12.9	+4.6
GYA				PP	PP	13 19 22.3	+7.0
GYA				PPP		13 19 50.3	
GYA				S	**S**	**13 23 37.3**	**+2.8**
GYA				XS	sS	13 24 24.4	+7.4
GYA				SS	SS	13 26 27.9	-3.0
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,150nm,4.7s						
GYA				LR	LR		
	comp=N,2μm,15.9s						
GYA				LR	LR		
	comp=E,850nm,14.8s						
GYA				LR	LR		
	comp=Z,1μm,15.4s						
TAU	**Tasmania Unive**	**39.59**	**153**	*e*P	**P**	**13 17 49.7**	**+0.9**
TAU				pmax	pmax		
	comp=Z,112nm,1.3s,mb5.5						
TAU	**Tasmania Unive**	**39.59**	**153**	*e*P	**P**	**13 17 49.7**	**+0.8**
	comp=Z,112nm,1.3s,mb5.5						
KMI	**Kunming**	**39.61**	**329**	P	**P**	**13 17 50.8**	**+1.6**
KMI				AP	pP	13 18 17.8	+4.0
KMI				XP	sP	13 18 31.6	+5.5
KMI				PP	PP	13 19 29.1	+6.7
KMI				PPP		13 19 57.8	
KMI				S	**S**	**13 23 43.6**	**-0.8**
KMI				XS	sS	13 24 32.8	+5.8
KMI				SSS		13 27 20.8	

KMI AMB AMB
comp=Z,51nm,1.5s,mb5.1
KMI AMB AMB
comp=Z,343nm,3.3s
KMI LR LR
comp=N,202nm,17.5s
KMI LR LR
comp=E,203nm,20.5s
KMI LR LR
comp=Z,485nm,35.7s
SSE Sheshan 39.95 357 P **P** **13 17 52.3 +0.4**
SSE AP pP 13 18 13.3 -3.3
SSE XP sP 13 18 24.8 -4.0
SSE S **S** **13 23 53.1 +3.8**
SSE AMB AMB
comp=Z,356nm,0.8s,mb6.2
SSE AMB AMB
comp=Z,203nm,4.6s
SSE LR LR
comp=N,246nm,20.8s
SSE LR LR
comp=E,30nm,20.8s
SSE LR LR
comp=E,418nm,21.1s
CBIJ Chichi jima 40.11 26 P **P** **13 17 51.1 -2.2**
comp=E,73nm,0.5s,mb5.8,baz=266,slow=23,SNR=10
WHN Wuhan 40.34 347 ⇓P **P** **13 17 55.8 +0.6**
WHN AMB AMB
comp=Z,126nm,1.0s,mb5.7
WHN AMB AMB
comp=Z,361nm,11.0s
WHN LR LR
comp=Z,590nm,17.9s
NJ2 Nanjing 41.10 354 *e*P **P** **13 18 02.6 +1.3**
NJ2 AMB AMB
comp=Z,40nm,0.8s,mb5.3
DZM Mont Dzumac 43.01 113 *e*P **P** **13 18 16.2 -0.9**
CD2 Chengdu 44.07 335 P **P** **13 18 25.3 -0.1**
CD2 AP pP 13 18 50.8 +0.3
CD2 XP sP 13 19 03.8 +1.2
CD2 PCP PcP 13 20 08.6 -0.4
CD2 PP PP 13 20 11.3 +1.0
CD2 PCS PcS 13 24 00.5 -1.8
CD2 S **S** **13 24 49.5 -0.5**
CD2 XS sS 13 25 34.3 +1.2
CD2 AMB AMB
comp=Z,100nm,0.6s,mb5.7
CD2 AMB AMB
comp=Z,280nm,6.9s
CD2 LR LR
comp=N,410nm,10.5s
CD2 LR LR
comp=Z,360nm,7.8s
XAN Xi'an 45.06 343 P **P** **13 18 32.3 -1.0**
XAN AMB AMB
comp=Z,53nm,0.7s,mb5.4
XAN AMB AMB
comp=Z,131nm,5.5s
XAN LR LR
comp=N,81nm,16.5s
XAN LR LR
comp=E,282nm,16.8s
XAN LR LR
comp=Z,385nm,19.6s
PALK Pallekele 45.82 289 P **P** **13 18 39.3 -0.3**
comp=Z,85nm,0.7s,mb5.6,SNR=5.4
PALK Pallekele 45.82 289 *e*P **P** **13 18 38.5 -1.1**
PALK pmax pmax
comp=Z,14nm,0.6s,mb4.9
PALK Pallekele 45.82 289 *e*P **P** **13 18 38.5 -1.1**
comp=Z,14nm,0.6s,mb4.9
SHL Shillong 46.28 319 *e*P **P** **13 18 43.0 0.0**
SHL *ex* x 13 24 06.0
KSRS Korea Array 46.39 5 P **P** **13 18 43.1 -0.5**
comp=Z,2.9nm,0.5s,baz=185,slow=9.0,SNR=15
KSRS PcP PcP 13 20 17.4 +0.5
comp=Z,3.8nm,0.8s,baz=181,slow=3.3,SNR=9.0
KSRS LR LR 13 36 40.3
comp=Z,106nm,21.8s,baz=31,slow=34
KSRS Korea Array 46.39 5 P **P** **13 18 43.2 -0.4**
KSRS 13 20 17.4
MAJO Matsushiro 47.31 16 *e*P **P** **13 18 49.4 -1.5**
MAJO pmax pmax
comp=Z,37nm,0.9s,mb5.1
MAJO Matsushiro 47.31 16 *e*P **P** **13 18 49.4 -1.5**
comp=Z,37nm,0.9s,mb5.1
MAT Matsushiro 47.31 16 P **P** **13 18 49.6 -1.3**
MAT *e*S **S** **13 25 31.6 -4.8**
MJAR Matsushiro Arr 47.31 16 P **P** **13 18 49.6 -1.3**
comp=Z,20nm,0.7s,mb5.0,baz=189,slow=9.0,SNR=58
MJAR Matsushiro Arr 47.31 16 P **P** **13 18 49.6 -1.3**
MJAR pmax pmax
comp=Z,20nm,0.7s
VIS Vishakhapatnam 47.93 304 *e*P **P** **13 18 54.5 -1.4**
VIS AMb AMB 13 18 58.7
comp=Z,56nm,0.8s,mb5.4
LZH Lanzhou 48.61 338 ⇑P **P** **13 19 01.4 +0.6**
LZH AP pP 13 19 24.5 -1.8
LZH XP sP 13 19 36.1 -2.2
LZH PP PP 13 20 56.3 +1.4
LZH *e*S **S** **13 25 57.3 +2.6**
LZH SS SS 13 29 25.3 -1.1
LZH AMB AMB
comp=Z,59nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,395nm,7.8s
LZH LR LR
comp=N,405nm,15.6s
LZH LR LR
comp=Z,667nm,18.0s
BJT Baijiatuau 49.28 352 *e*P **P** **13 19 05.0 -0.9**
BJT pmax pmax
comp=Z,33nm,0.5s
BJT Baijiatuau 49.28 352 *e*P **P** **13 19 05.0 -0.9**
comp=Z,32nm,0.5s,mb5.5
BOK Bokaro 49.29 312 *e*P **P** **13 19 05.0 -1.4**
BOK AMb AMB 13 19 10.5
comp=Z,85nm,1.0s,mb5.6
BJI Beijing 49.30 352 P **P** **13 19 04.8 -1.3**
BJI S **S** **13 26 07.5 +3.3**
BJI AMB AMB
comp=Z,60nm,1.2s,mb5.4
BJI AMB AMB
comp=Z,275nm,3.9s
BJI LR LR
comp=N,177nm,24.8s
BJI LR LR
comp=E,215nm,25.2s
BJI LR LR
comp=Z,336nm,27.4s
LSA Lhasa 49.64 322 P **P** **13 19 10.1 +1.2**
LSA AMB AMB
comp=Z,280nm,0.8s,mb6.2
LSA Lhasa 49.64 322 *e*P **P** **13 19 09.9 +1.1**
LSA pmax pmax
comp=Z,183nm,0.6s,mb6.2
LSA Lhasa 49.64 322 *e*P **P** **13 19 09.9 +1.1**
comp=Z,183nm,0.6s,mb6.2
ODAN Odare 50.14 316 *e*P **P** **13 19 12.8 +0.2**
comp=Z,499nm,0.5s
TAPN Taplejung 50.24 317 *e*P **P** **13 19 13.8 +0.4**
comp=Z,550nm,0.5s
SNY Shenyang 50.59 360 ⇑P **P** **13 19 14.3 -1.5**
SNY *e*S **S** **13 26 20.3 -1.8**
SNY AMB AMB
comp=Z,18nm,0.6s,mb5.3
SNY LR LR
comp=N,248nm,9.6s
SNY LR LR
comp=E,218nm,14.1s
SNY LR LR
comp=Z,216nm,16.2s
RAMN Ramite 50.73 316 *e*P **P** **13 19 17.6 +0.4**
HHC Hu-ho-hao-te 50.86 348 *e*P **P** **13 19 16.8 -1.0**
HHC AP pP 13 19 40.5 -3.0
HHC PCP PcP 13 20 31.3 -1.7
HHC PP PP 13 21 15.1 -0.2
HHC SCP ScP 13 24 17.0 -2.5
HHC SS SS 13 29 59.0 -3.3
HHC AMB AMB
comp=Z,25nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,233nm,4.6s
HHC LR LR
comp=N,169nm,15.5s
HHC LR LR
comp=E,135nm,15.5s
HHC LR LR
comp=Z,192nm,16.7s
JIRN Jiri 51.47 316 *e*P **P** **13 19 23.2 +0.6**
comp=Z,788nm,0.6s
HYB Hyderabad 51.78 300 *e*P **P** **13 19 23.0 -2.2**
HYB pmax pmax
comp=Z,62nm,0.8s,mb5.7
HYB Hyderabad 51.78 300 *i* P **P** **13 19 23.0 -2.2**
comp=Z,62nm,0.8s,mb5.7
HYB Hyderabad 51.78 300 *e*P **P** **13 19 23.0 -2.2**
comp=Z,62nm,0.8s,mb5.7
GUN Gumba 51.84 316 *e*P **P** **13 19 25.8 +0.4**
comp=Z,677nm,0.5s
PKI Pulchoki 51.95 316 *e*P **P** **13 19 26.3 +0.1**
comp=Z,920nm,0.5s
KKN Kakani 52.17 316 *e*P **P** **13 19 27.9 0.0**
DMN Daman 52.18 315 *e*P **P** **13 19 28.1 +0.2**
comp=Z,323nm,0.5s,mb6.6
CN2 Changchun 52.59 2 *e*P **P** **13 19 30.3 -0.3**
CN2 *e*AP pP 13 19 54.0 -2.3
CN2 *e*XP sP 13 20 05.3 -3.0
CN2 *e*S **S** **13 26 50.9 +1.5**
CN2 SS SS 13 30 30.3 +0.9
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CN2 AMB AMB
comp=Z,80nm,4.0s
GKN Gorkha 52.75 316 *e*P **P** **13 19 32.1 0.0**
comp=Z,783nm,0.5s
GTA Gaotai 53.04 337 ⇑*i*P **P** **13 19 34.8 +0.7**
GTA AP pP 13 20 02.8 +3.0
GTA XP sP 13 20 16.6 +4.8
GTA S **S** **13 26 56.3 +0.5**
GTA XS sS 13 27 47.8 +7.7
GTA SS SS 13 30 41.8 +5.0
GTA AMB AMB
comp=Z,24nm,0.6s,mb5.4
GTA AMB AMB
comp=Z,320nm,5.4s
GTA LR LR
comp=N,104nm,18.6s
GTA LR LR
comp=E,120nm,21.6s
GTA LR LR
comp=Z,144nm,18.9s
ALBI Allahabad 53.19 311 *ex* x 13 19 32.5
KOLN Koldanda 53.33 315 *e*P **P** **13 19 36.3 -0.1**
comp=Z,421nm,0.6s
DANN Dangsing 53.57 315 *e*P **P** **13 19 38.3 +0.2**
comp=Z,989nm,0.5s
MDJ Mudanjiang 53.64 5 P **P** **13 19 38.0 -0.3**
MDJ XP sP 13 20 19.8 +3.7
MDJ PP PP 13 21 40.0 -0.3
MDJ SCP ScP 13 24 30.8 -0.7
MDJ PCS PcS 13 24 42.8 +0.4
MDJ S **S** **13 27 03.4 -0.3**
MDJ XS sS 13 27 49.0 +0.9
MDJ AMB AMB
comp=Z,71nm,1.0s,mb5.7
MDJ AMB AMB
comp=Z,136nm,2.8s,mb5.5
MDJ LR LR
comp=N,157nm,34.3s
MDJ LR LR
comp=Z,186nm,35.6s
MDJ Mudanjiang 53.64 5 *e*P **P** **13 19 37.5 -0.8**
comp=Z,56nm,0.9s,mb5.6
RPZ Rata Peaks 53.66 139 P **P** **13 19 39.5 +0.9**
comp=Z,125nm,0.9s,mb6.0,baz=290,slow=2.3,SNR=23
RPZ LR LR 13 41 38.6
comp=Z,393nm,18.9s,baz=279,slow=35
ERM Erimo 53.81 18 *e*P **P** **13 19 40.5 +0.9**
SNZO South Karori 55.19 135 *e*P **P** **13 19 49.8 0.0**
comp=Z,101nm,1.1s,mb5.8
BHPL Bhopal 55.48 306 *e*P **P** **13 19 50.1 -1.9**
BHPL AMb AMB 13 19 54.1
comp=Z,82nm,1.1s,mb5.7
KAD Karad 55.50 298 *e*P **P** **13 19 50.2 -2.1**
KAD AMb AMB 13 19 53.8
comp=Z,36nm,0.8s,mb5.4
URZ Urewera 55.96 130 P **P** **13 19 55.8 +0.5**
comp=Z,28nm,1.0s,mb5.3,baz=325,slow=4.5,SNR=8.2
POO Poona 56.30 299 *e*P **P** **13 19 55.6 -2.3**
HABR Khabarovsk 58.10 9 *e*P **P** **13 20 08.3 -1.8**
HABR *e**PP pP 13 20 30.3 -6.0
HABR *e* 13 22 17.8
HABR *e*S **S** **13 28 04.4 +1.6**
HABR *e* 13 29 49.2
HABR *e*SS SS 13 31 58.0 +1.8
HABR MLR MLR
comp=Z,31nm,15.0s
HIA Hailar 58.13 357 *e*P **P** **13 20 09.1 -1.2**
HIA pmax pmax
comp=Z,82nm,1.3s
HIA Hailar 58.13 357 *e*P **P** **13 20 09.1 -1.2**
comp=Z,82nm,1.3s,mb5.6
YSS Yuzh-Sakhalins 58.24 15 *e*P **P** **13 20 14.0 +2.9**
KLR Kul'dur 58.42 6 *e*P **P** **13 20 07.8 -4.5**
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.3
ULN Ulaanbaatar 58.52 347 P **P** **13 20 13.3 +0.3**
SNR=20
ULN Ulaanbaatar 58.52 347 *c* *i*P **P** **13 20 12.8 -0.2**
ULN Ulaanbaatar 58.52 347 *e*P **P** **13 20 12.8 -0.3**
comp=Z,58nm,1.1s,mb5.5
DRV Dumont d'Urvil 58.64 172 P **P** **13 20 07.0 -6.6**
DRV S **S** **13 28 19.0 +10**
DRV L 13 35 00.0
DRV R 13 38 00.0
SONM Songino Array 58.64 346 P **P** **13 20 13.6 -0.3**
comp=Z,18nm,0.4s,mb5.4,baz=158,slow=8.4,SNR=141
SONM Songino Array 58.64 346 P **P** **13 20 13.6 -0.3**
SONM pmax pmax
comp=Z,18nm,0.4s
DDI Dehra Dun 58.75 314 *e*P **P** **13 20 11.6 -3.4**
AJM Ajmer 59.27 308 *e*P **P** **13 20 17.3 -1.3**
AJM AMb AMB 13 20 19.8
comp=Z,115nm,0.7s,mb6.0
SMLA Simla 59.84 314 *i* P **P** **13 20 22.3 -0.1**
SMLA *ex* x 13 20 23.9
comp=Z,2μm,0.4s
SMLA *i* x x 13 28 20.1
SDNR Sundarnagar 60.18 314 *e*P **P** **13 20 25.0 +0.2**
CIT Chita 61.41 353 *e*P **P** **13 20 29.0 -3.7**
DLH Dalhousie 61.47 315 *e*P **P** **13 20 32.0 -1.5**
THN Thein Dam 61.59 314 *e*P **P** **13 20 31.8 -2.5**
ZAK Zakamensk 61.77 345 *e*P **P** **13 20 34.0 -1.1**
ZAK pmax pmax
comp=Z,23nm,1.2s,mb5.1
WMQ Urumqi 61.91 331 P **P** **13 20 36.8 +0.6**
WMQ XP sP 13 21 16.8 +2.3
WMQ PP PP 13 22 56.3 +2.5
WMQ S **S** **13 28 49.4 -2.3**
WMQ XS sS 13 29 39.4 +2.3
WMQ SCS ScS 13 30 13.1 -4.7
WMQ AMB AMB
comp=Z,55nm,1.5s,mb5.4
WMQ AMB AMB
comp=Z,91nm,3.4s
WMQ LR LR
comp=N,191nm,26.0s
WMQ LR LR
comp=E,193nm,26.0s
WMQ LR LR
comp=Z,233nm,28.0s
TLY Talaya 62.88 346 P **P** **13 20 42.4 -0.1**
comp=Z,196nm,1.2s,mb5.9,SNR=8.5
TLY Talaya 62.88 346 P **P** **13 20 42.9 +0.4**
SNR=10
TLY Talaya 62.88 346 *e*P **P** **13 20 42.1 -0.4**
TLY *e* 13 21 17.0
TLY *e*S **S** **13 28 55.4 -8.1**
TLY *e*SSS 13 35 48.7
TLY pmax pmax
comp=Z,53nm,1.4s,mb5.3
TLY MLR MLR
comp=Z,97nm,14.0s
TLY Talaya 62.88 346 *e*P **P** **13 20 42.0 -0.5**
comp=Z,54nm,1.2s,mb5.3
IRK Irkutsk 63.26 347 *e*P **P** **13 20 44.1 -0.9**
IRK *e* 13 21 21.1
IRK pmax pmax
comp=Z,71nm,2.1s,mb5.2
MOY Mondy 63.53 344 *e*P **P** **13 20 47.2 +0.4**
MOY pmax pmax
comp=Z,9.0nm,1.9s,mb4.3
NRGR Nerungri 65.44 1 *i* P **P** **13 21 00.3 +1.2**
NRGR S S 13 29 46.5 +12
NRGR smax
comp=N,20nm,0.5s
KSH Kashi 65.47 321 P **P** **13 21 01.4 +1.7**
KSH AP pP 13 21 31.0 +4.6
KSH PP PP 13 23 28.4 +3.2
KSH PPP 13 25 04.8
KSH SCP 13 25 21.8
KSH PCS 13 25 34.5
KSH S S 13 29 33.8 -2.2
KSH XS sS 13 30 26.9 +5.0
KSH SCS ScS 13 30 40.9 -4.4
KSH AMB AMB
comp=Z,510nm,1.1s,mb6.3
KSH LR LR
comp=N,489nm,4.8s
KSH LR LR
comp=E,513nm,5.0s
KSH LR LR
comp=Z,663nm,5.0s
CLNS Chul'man 65.62 1 *e*P **P** **13 21 00.3 0.0**
CLNS *e**PP pP 13 21 25.4 -1.6
CLNS *e*S S 13 29 57.4 +20
CLNS pmax pmax
comp=Z,110nm,1.3s,mb5.5
CLNS pmax pmax
comp=N,87nm,1.6s
CLNS pmax pmax
comp=E,19nm,0.9s
MKAR Makanchi Array 66.69 330 P **P** **13 21 07.3 0.0**
comp=E,34nm,0.4s,mb5.5,baz=137,slow=6.7,SNR=490
MKAR PKP2bc 13 49 38.2
comp=E,0.4nm,0.8s,baz=299,slow=5.4,SNR=3.6
MKAR LR LR 13 53 26.1
comp=E,82nm,19.0s,baz=131,slow=39
MKAR Makanchi Array 66.69 330 ⇑*e*P **P** **13 21 07.3 0.0**
MKAR Makanchi Array 66.69 330 P **P** **13 21 07.3 0.0**
MKAR ⇑*e* 13 49 38.2
MKAR LR LR 13 53 26.1
BOD Bodaibo 67.07 354 *e*P **P** **13 21 08.9 -0.6**
BOD *e* 13 30 09.5
BOD pmax pmax
comp=Z,65nm,1.1s,mb5.4
KZA Kyzart 67.44 323 P **P** **13 21 13.3 +1.1**
SNR=37
KBL Kabul 67.44 313 *e*P **P** **13 21 11.9 -0.5**
KBL pmax pmax
comp=Z,99nm,0.5s,mb5.9
KBL Kabul 67.44 313 *e*P **P** **13 21 11.9 -0.5**
comp=Z,99nm,0.5s,mb5.9
TKM2 Tokmak 2 67.74 324 *e*P **P** **13 21 14.2 +0.1**
TKM2 pmax pmax
comp=Z,88nm,1.1s,mb5.5
TKM2 Tokmak 2 67.74 324 P **P** **13 21 14.5 +0.4**
SNR=26
TKM2 Tokmak 2 67.74 324 *e*P **P** **13 21 14.2 +0.1**
comp=Z,88nm,1.1s,mb5.5
KBK Karagaybulak 67.96 323 P **P** **13 21 16.0 +0.5**
SNR=45
UCH Uchtor 67.97 323 *e*P **P** **13 21 17.2 +1.7**
comp=Z,14nm,1.0s,mb4.7
AAK Ala-Archa 68.22 323 P **P** **13 21 17.4 +0.3**
comp=Z,633nm,0.7s,mb6.6,SNR=63
AAK Ala-Archa 68.22 323 P **P** **13 21 18.1 +1.0**
SNR=18
AAK Ala-Archa 68.22 323 *c* *i*P **P** **13 21 17.5 +0.4**
AAK Ala-Archa 68.22 323 P **P** **13 21 17.8 +0.8**
SNR=59
AAK Ala-Archa 68.22 323 *e*P **P** **13 21 17.4 +0.3**
comp=Z,52nm,0.4s,mb5.7
CHMS Chumysh 68.28 323 P **P** **13 21 17.1 -0.4**
SNR=14
PETK Petropavlovsk- 68.30 21 P **P** **13 21 17.4 +0.1**
comp=Z,64nm,1.2s,mb5.3,baz=307,slow=2.7,SNR=40
PETK LR LR 13 48 34.0
comp=Z,49nm,20.5s,baz=30,slow=34
PETK Petropavlovsk- 68.30 21 P **P** **13 21 17.4 +0.1**
PETK LR LR 13 48 34.0
AML Almayashu 68.41 322 P **P** **13 21 19.0 +0.8**
SNR=53
AML Almayashu 68.41 322 *e*P **P** **13 21 18.7 +0.4**
comp=Z,58nm,0.6s,mb5.6
AML *e* pP 13 21 50.3 +5.1
PET Petropavlovsk 68.58 22 *e*P **P** **13 21 18.8 -0.3**
PET *e*S S 13 30 04.5 -8.4
PET pmax pmax
comp=Z,53nm,1.2s,mb5.2
PET MLR MLR
comp=Z,100nm,21.0s
PET Petropavlovsk 68.58 22 ⇓*e*P **P** **13 21 19.4 +0.3**
USP Ospenovka 68.59 324 P **P** **13 21 19.4 +0.1**
SNR=42
EKS2 Erkin-Say 68.66 323 P **P** **13 21 20.5 +0.7**
SNR=23
EKS2 Erkin-Say 68.66 323 *e*P **P** **13 21 20.0 +0.2**
comp=Z,64nm,0.9s,mb5.5
EKS2 *e* pP 13 21 45.6 -1.2
EKS2 *e* pP 13 21 51.1 +4.4
ZAA0 Zalesovo Array 70.80 337 *e*P **P** **13 21 31.3 -1.4**
ZALV Zalesovo Beam 70.80 337 P **P** **13 21 31.4 -1.3**
comp=Z,62nm,0.4s,mb5.8,baz=132,slow=5.3,SNR=270
ZALV PKPPKP 13 49 28.4
comp=Z,0.4nm,0.4s,baz=308,slow=5.5,SNR=3.6
MAW Mawson 70.84 201 P **P** **13 21 34.1 +1.3**
comp=Z,16nm,0.9s,mb4.9,baz=84,slow=17,SNR=15
MAW LR LR 13 49 45.1
comp=Z,223nm,19.9s,baz=242,slow=33
MAW Mawson 70.84 201 *e*P **P** **13 21 33.9 +1.1**
comp=Z,16nm,1.1s,mb4.8
MAW Mawson 70.84 201 *e*P **P** **13 21 33.9 +1.1**
comp=Z,9.2nm,1.3s,mb4.5
KK31 Karatay Array 70.89 322 *i* P **P** **13 21 33.3 -0.2**
KK31 pmax pmax
comp=Z,17nm,0.5s,mb5.1
YAK Yakutsk 70.98 3 *e*P **P** **13 21 31.6 -2.0**
YAK *e* 13 21 51.8
YAK *e**PP pP 13 21 56.7 -4.0
YAK *e* 13 24 08.3
YAK *e*PPP 13 25 52.1
YAK *e*S S 13 30 36.3 -4.3
YAK *e**SS sS 13 31 17.6 -9.5
YAK *e*SS SS 13 35 06.9 -9.0
YAK pmax pmax
comp=Z,171nm,0.9s,mb5.9
YAK pmax pmax
comp=N,78nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK pmax pmax
comp=Z,133nm,4.3s
YAK pmax pmax
comp=N,90nm,5.1s
YAK pmax pmax
comp=E,62nm,4.1s
YAK smax
comp=N,155nm,2.5s
YAK smax
comp=E,115nm,2.7s
YAK Yakutsk 70.98 3 *e*P **P** **13 21 33.1 -0.5**
comp=E,202nm,0.8s,mb6.0
KURK Kurchatov 71.15 332 P **P** **13 21 34.3 -0.6**
comp=E,862nm,0.6s,SNR=99
KURK Kurchatov 71.15 332 P **P** **13 21 34.8 0.0**
SNR=58
KURK Kurchatov 71.15 332 *e*P **P** **13 21 34.3 -0.6**
KURK pmax pmax
comp=Z,144nm,0.9s,mb5.8
KURK Kurchatov 71.15 332 *e*P **P** **13 21 34.3 -0.5**
comp=Z,144nm,0.9s,mb5.8
VNDA Vanda 71.28 172 P **P** **13 21 36.0 +0.7**
comp=Z,8.0nm,1.0s,mb4.5,baz=327,slow=6.7,SNR=11
VNDA LR LR 13 52 38.7
comp=Z,307nm,18.7s,baz=325,slow=35
VNDA Vanda 71.28 172 *e*P **P** **13 21 35.7 +0.4**
comp=Z,26nm,1.4s,mb4.9
SMDO Samad 71.69 298 P **P** **13 21 38.0 -0.7**
SNR=7.8
BIDO Bidbid 71.77 298 P **P** **13 21 39.1 -0.1**
SNR=12
NVS Novosibirsk 72.08 337 *i* P **P** **13 21 40.2 -0.2**
NVS *i* S S 13 30 45.7 -7.9
NVS pmax pmax
comp=N,92nm,1.4s

NVS pmax pmax
comp=Z,127nm,1.4s,mb5.6
NVS pmax pmax
comp=E,68nm,1.2s
NVS smax
comp=N,26nm,2.1s
NVS smax
comp=E,22nm,2.1s
HOQ Hoqain 72.50 298 ⇑P **P 13 21 43.3 -0.2**
SNR=7.3
HATD Hatta, Dubai 73.91 299 P **P 13 21 52.1 +0.3**
SNR=6.0
WHFO Wadi Hawf 74.05 292 P **P 13 21 51.9 -0.8**
SNR=8.0
ABTO Aybut 74.34 291 P **P 13 21 54.4 -0.1**
SNR=5.2
ABPO Ambohimpanom 74.41 253 *eP* **P 13 21 56.8 +1.9**
ABPO *e* 13 22 04.1
ABPO pmax pmax
comp=Z,27nm,0.6s,mb5.2
ABPO Ambohimpanom 74.41 253 *eP* **P 13 21 56.8 +1.9**
comp=Z,27nm,0.6s,mb5.2
ABPO *e* 13 22 04.1
OPO Ambohidratompo 74.49 253 P **P 13 21 57.1 +1.8**
comp=Z,26nm,0.6s,mb5.1,baz=84,slow=4.3,SNR=58
SEY Seymchan 75.04 13⇓ *eP* **P 13 21 56.1 -1.4**
BVA0 Borovoye Array 76.57 330 *i P* **P 13 22 05.8 -0.6**
BVA0 pmax pmax
comp=Z,42nm,1.6s,mb4.9
BRVK Borovoye 76.64 330 P **P 13 22 06.7 -0.1**
comp=Z,340nm,1.1s,mb6.0,SNR=28
BRVK Borovoye 76.64 330 P **P 13 22 06.8 -0.1**
SNR=35
BRVK Borovoye 76.64 330 *eP* **P 13 22 06.0 -0.8**
BRVK pmax pmax
comp=Z,110nm,1.2s,mb5.5
BRVK Borovoye 76.64 330 *eP* **P 13 22 06.0 -0.8**
comp=Z,110nm,1.2s,mb5.5
SYO Syowa Base 79.54 201⇑ *eP* **P 13 22 22.4 -0.2**
AB31 Akbulak array 80.31 323 P **P 13 22 26.1 -1.0**
AB31 pmax pmax
comp=Z,15nm,0.5s,mb5.1
TIXI Tiksi 80.56 2⇑ *eP* **P 13 22 25.6 -2.4**
TIXI Tiksi 80.56 2 *eP* **P 13 22 26.5 -1.5**
comp=Z,67nm,1.0s,mb5.4
QSPA South Pole Qui 80.98 180 P **P 13 22 31.6 +1.4**
comp=Z,21nm,0.8s,mb5.0,baz=317,slow=1.7,SNR=57
QSPA South Pole Qui 80.98 180 *eP* **P 13 22 31.5 +1.3**
comp=Z,54nm,1.2s,mb5.2
AKTK Aktyubinsk 81.94 324 P **P 13 22 35.1 -0.6**
AKTO Aktyubinsk 81.94 324 P **P 13 22 35.1 -0.6**
comp=Z,23nm,0.6s,mb5.2,baz=113,slow=6.0,SNR=37
AKTO Aktyubinsk 81.94 324 P **P 13 22 35.1 -0.6**
AKTO pmax pmax
comp=Z,23nm,0.6s,mb5.2
QRN Al-Qurain 82.05 301 *eP* **P 13 22 36.5 -0.3**
baz=301
QRN AMb AMB 13 22 40.9
comp=Z,184nm,0.5s,mb6.2,baz=301
RDF Al-Radifah 82.41 301 *eP* **P 13 22 38.3 -0.4**
baz=301
RDF AMb AMB 13 22 40.4
comp=Z,146nm,1.2s,mb5.7,baz=301
UMR Umm Al-Rimmam 82.43 301 *eP* **P 13 22 38.2 -0.6**
baz=301
BILL Bilibino 82.56 15 *eP* **P 13 22 38.1 -0.4**
BILL *i* 13 25 48.0
BILL pmax pmax
comp=Z,21nm,1.7s,mb4.7
BILL Bilibino 82.56 15 P **P 13 22 38.0 -0.5**
comp=Z,16nm,1.2s,mb4.7
NAY Al-Naaiem 82.75 301 *eP* **P 13 22 39.9 -0.6**
baz=301
NAY AMb AMB 13 22 44.3
comp=Z,67nm,0.7s,mb5.6,baz=301
MIB Mutribah 82.81 302 *eP* **P 13 22 40.3 -0.4**
baz=302
MIB AMb AMB 13 22 42.3
comp=Z,90nm,0.8s,mb5.7,baz=302
SVE Sverdlovsk 83.35 330⇓ *eP* **P 13 22 42.3 -0.6**
SVE *eS* S 13 32 58.8 +4.0
SVE pmax pmax
comp=Z,82nm,1.1s,mb5.5
TBI Tubuai 83.58 113 *e*LR LR 13 48 55.3
comp=Z,250nm,34.0s
ARU Arti 84.19 330 P **P 13 22 46.0 -1.2**
comp=Z,382nm,1.5s,mb6.0,SNR=16
ARU Arti 84.19 330 *c i*P **P 13 22 46.2 -1.0**
ARU **PP pP 13 23 14.5 -0.6
ARU *e* 13 25 59.4
ARU *e*PPP 13 27 54.3
ARU *eS* S 13 33 00.9 -2.4
ARU *e*SS SS 13 38 39.4 +4.3
ARU pmax pmax
comp=Z,67nm,1.0s,mb5.4
ARU Arti 84.19 330 *eP* **P 13 22 46.1 -1.0**
comp=Z,168nm,1.4s,mb5.7
PPT Papeete 84.21 107 *eS* S 13 33 03.1 -2.0
comp=Z,80nm,26.5s
PPT *e*SS SS 13 38 44.9 +8.2
comp=Z,52nm,27.8s
PPT Papeete 84.21 107 *e*LR LR 13 49 30.6
comp=Z,491nm,38.8s
PPT Papeete 84.21 107 LR LR 13 52 34.9
comp=Z,172nm,20.9s,baz=249,slow=30
BHD Baghdad 86.09 304 *eP* **P 13 23 03.0 +5.8**
SOKR Solikamsk 86.38 332 *d i*P **P 13 22 58.5 +0.5**
SOKR pmax pmax
comp=Z,70nm,1.8s,mb5.3
DGRG David-gareji 87.29 313 P **P 13 23 04.2 +1.4**
MTA Mtatsminda 87.77 313 P **P 13 23 05.4 +0.3**
MSL Mosul 87.82 307 *eP* **P 13 23 05.0 -0.5**
ONI Oni 88.95 313 P **P 13 23 08.6 -2.1**
KIV Kislovodsk 89.80 314 *eP* **P 13 23 14.7 +0.1**
KIV pmax pmax
comp=Z,19nm,1.1s,mb5.1
GOF Gofitskoye 89.80 316⇓ *i*P **P 13 23 13.0 -1.6**
MALT Malatya 91.85 308 *eP* **P 13 23 23.8 -0.5**
MALT pmax pmax
comp=Z,24nm,1.2s,mb5.3
MALT Malatya 91.85 308 *eP* **P 13 23 23.8 -0.5**
comp=Z,24nm,1.2s,mb5.3
ASF Jabal al Asfar 92.07 302 P **P 13 23 26.0 +0.6**
comp=Z,2.5nm,0.4s,mb4.8,baz=272,slow=3.2,SNR=5.3
ASF Jabal al Asfar 92.07 302 P **P 13 23 26.0 +0.6**
ASF pmax pmax
comp=Z,3.0nm,0.4s
SNAA Sanae 92.21 195 *eP* **P 13 23 26.8 +1.5**
SNAA *e* 13 23 37.7
SNAA Sanae 92.21 195 *eP* **P 13 23 26.8 +1.5**
SNAA pmax pmax
comp=Z,29nm,1.0s
SNAA Sanae 92.21 195 *eP* **P 13 23 26.8 +1.5**
comp=Z,29nm,1.0s,mb5.5
LSZ Lusaka 92.93 254 *eP* **P 13 23 31.1 +1.3**
LSZ pmax pmax
comp=Z,28nm,0.5s,mb5.8
LSZ Lusaka 92.93 254 *eP* **P 13 23 31.1 +1.3**
comp=Z,28nm,0.5s,mb5.8
LSZ *e* 13 23 38.5
BOSA Boshof 93.08 241 P **P 13 23 31.6 +1.4**
comp=Z,2.8nm,0.4s,mb4.9,baz=96,slow=5.2,SNR=20
BOSA Boshof 93.08 241 P **P 13 23 31.7 +1.4**
BOSA pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
BOSA Boshof 93.08 241 *eP* **P 13 23 31.4 +1.2**
comp=Z,10nm,0.7s,mb5.3
BOSA *e* 13 23 41.1
VORD Divnogorie 93.44 321 *eP* **P 13 23 30.1 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
VORD pmax pmax
comp=N,3.0nm,0.5s
VORD pmax pmax
comp=E,9.0nm,0.6s
MMAI Mount Meron Ar 93.44 303 P **P 13 23 31.7 -0.1**
comp=E,2.0nm,0.4s,mb4.8,baz=86,slow=7.8,SNR=4.9
LBTB Lobatse 93.51 244 *eP* **P 13 23 33.6 +1.3**
LBTB pmax pmax
comp=Z,21nm,1.3s,mb5.3
LBTB Lobatse 93.51 244 *eP* **P 13 23 33.6 +1.3**
comp=Z,21nm,1.3s,mb5.3
VSR Storozhevoye 93.56 321 *eP* **P 13 23 30.5 -1.3**
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb5.0
VSR pmax pmax
comp=E,5.0nm,0.5s
ANN Anapa 93.66 315 *eP* **P 13 23 40.9 +8.4**
ANN *e**PP pP 13 24 04.9 +4.2
ANN pmax pmax
comp=Z,50nm,1.5s,mb5.6
VNA2 Neumayer--Watz 93.82 194 *eP* **P 13 23 33.7 +1.0**
baz=130,slow=4.3
VNA2 *e* 13 23 42.4
VNA3 Neumayer Olymp 94.14 194 *eP* **P 13 23 35.4 +1.2**
VNA3 *e* 13 23 44.6
VNA1 Neumayer--Stat 94.22 194 *eP* **P 13 23 36.3 +1.7**
VNA1 *e* 13 23 45.2
KLMR Klimovskoe 94.98 331 *eP* **P 13 23 35.0 -3.1**
KLMR pmax pmax
comp=Z,24nm,1.3s,mb5.5
OBN Obninsk 95.69 325 *eP* **P 13 23 40.7 -0.8**
OBN *i* pP 13 24 11.7 +1.9
OBN *i* 13 27 32.6
OBN *e*S SKSac 13 34 10.2 +2.6
OBN pmax pmax
comp=Z,57nm,1.0s,mb6.0
BRTR Keskin Array B 95.75 309 P **P 13 23 40.9 -1.3**
comp=Z,3.6nm,0.7s,mb4.9,baz=116,slow=5.6,SNR=14
BRTR PP PP 13 27 27.4 -7.9
comp=Z,1.3nm,0.8s,baz=108,slow=7.9,SNR=4.4
BRTR Keskin Array B 95.75 309 *i* P **P 13 23 40.9 -1.3**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 99.05 332 *ep* **P 13 23 53.5 -3.0**
comp=Z,1.9nm,0.7s,mb4.7
JOF Joensuu 99.05 332 *eP* **P 13 23 53.5 -3.0**
JOF pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
AKASG Malin Array Be 99.75 320 P Pdif 13 23 58.4 -1.5
comp=Z,1.4nm,0.4s,baz=83,slow=4.2,SNR=18
AKASG PP PP 13 27 56.4 -9.3
comp=Z,1.0nm,0.6s,baz=78,slow=6.8,SNR=3.9
AKASG Malin Array Be 99.75 320 *i* P Pdif 13 23 58.4 -1.5
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 99.76 320 *eP* Pdif 13 23 58.6 -1.3
KIEV pmax pmax
comp=Z,17nm,1.4s,mb5.5
KIEV Kiev 99.76 320 *e*Pdif Pdif 13 23 58.6 -1.3
comp=Z,17nm,1.4s
KEV Kevo 100.72 339 *ep* Pdif 13 24 01.3 -2.9
comp=Z,6.3nm,0.8s
KEV Kevo 100.72 339 *eP* Pdif 13 24 01.3 -2.9
KEV pmax pmax
comp=Z,6.0nm,0.8s
ARCES ARCESS Array B 101.26 339 P Pdif 13 24 04.8 -1.8
comp=Z,4.8nm,0.9s,baz=86,slow=5.8,SNR=15
ARCES PKiKP PKiKP 13 28 29.7 -0.5
comp=Z,1.9nm,0.8s,baz=34,slow=0.5,SNR=7.2
ARCES ARCESS Array B 101.26 339 P Pdif 13 24 04.8 -1.8
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES pmax pmax
comp=Z,2.0nm,0.8s
KAF Kangasniemi 101.38 332 *ep* Pdif 13 24 03.7 -3.4
comp=Z,1.7nm,0.5s
KAF Kangasniemi 101.38 332 *eP* Pdif 13 24 03.7 -3.4
KAF pmax pmax
comp=Z,2.0nm,0.5s
MLR Muntele Rosu 101.81 315 P Pdif 13 24 08.9 -0.1
comp=Z,1.4nm,0.6s,baz=220,slow=5.6,SNR=4.6
MLR PP PP 13 28 08.8 -13
comp=Z,3.8nm,0.9s,baz=132,slow=6.4,SNR=4.3
MLR Muntele Rosu 101.81 315 P Pdif 13 24 08.9 -0.1
MLR pmax pmax
comp=Z,1.0nm,0.6s
MLR pmax pmax
comp=Z,4.0nm,1.0s
TSUM Tsumeb 102.04 248 P Pdif 13 24 13.0 +3.0
comp=Z,0.7nm,0.5s,baz=262,slow=21,SNR=6.5
BUR08 Bucovina Ar. S 102.33 317 *e*Pdif Pdif 13 24 11.1 -0.3
OKC Ostrava-Krasne 106.88 319 *e*PP PP 13 28 58.5 -0.2
DPC Dobruska-Polom 107.98 320 *e*PP PP 13 29 02.4 -4.4
UPC Upice 108.16 320 *e*PP PP 13 29 10.0 +1.9
NB2 NORSAR Subarra108.66 332 P PKiKP 13 28 38.4 -5.6
comp=Z,1.2nm,0.7s,baz=79,slow=7.9
NOA NORSAR Array B108.66 332 PKKPab PKKPab 13 40 02.7 -3.7
comp=Z,1.4nm,0.8s,baz=134,slow=4.9,SNR=3.3
TREC Trest 108.66 319 *e*PP PP 13 29 08.3 -3.5
CRES Cresnjev 109.13 315 *e*PP PP 13 29 14.3 -1.0
PRU Pruhonice 109.17 320 *e*PP PP 13 29 15.7 +0.3
BRG Berggiesshubel 109.40 321 *e*P PP 13 29 13.8 -3.2
comp=Z,23nm,2.0s
LJU Ljubljana 109.75 316 *e*PP PP 13 29 18.7 -1.0
GERES GERESS Array B 109.89 319 PKiKP PKiKP 13 28 46.7 0.0
comp=Z,0.5nm,0.6s,baz=208,slow=0.9,SNR=5.6
GERES PP PP 13 29 19.9 -0.7
comp=Z,1.3nm,0.6s,baz=82,slow=5.7,SNR=7.2
GERES PKKPab PKKPab 13 40 02.0 +0.9
comp=Z,0.9nm,0.8s,baz=241,slow=4.4,SNR=5.7
CLL Collm 109.91 321 *e*(PP) PP 13 29 17.0 -3.7
KHC Kasperske Hory 109.92 319 *e*PP PP 13 29 18.8 -2.1
GRF Grafenberg Arr 111.34 320 *e*PP PP 13 29 28.8 -2.2
YKA Yellowknife Ar 112.25 25 PKiKP PKiKP 13 28 50.2 -0.6
comp=Z,0.7nm,0.3s,baz=293,slow=2.1,SNR=40
YKA SKP 13 32 13.6
comp=Z,0.2nm,0.6s,baz=289,slow=2.1,SNR=4.4
YKA PKKPbc PKKPbc 13 39 42.5 -1.7
comp=Z,0.4nm,0.6s,baz=110,slow=3.8,SNR=12
YKA Yellowknife Ar 112.25 25 *i* PKiKP PKiKP 13 28 50.2 -0.5
YKA pmax pmax
comp=Z,1.0nm,0.4s
YKA Yellowknife Ar 112.25 25 PKPdf PKiKP 13 28 50.2 -0.6
YKA SKP 13 32 13.7
YKA PKKPbc PKKPbc 13 39 42.5 -1.7
CDF Champ du Feu 114.15 319 *e*PKP1 PKiKP 13 28 55.1 +0.3
HINF Hinteralfeld 114.57 319 *e*PKP1 PKiKP 13 28 55.6 0.0
HAU Haudompre 114.86 319 *e*PKP1 PKiKP 13 28 56.1 -0.1
SBF Sospel 115.08 314 *e*PKP1 PKiKP 13 28 57.2 +0.5
LPG La Plagne 115.20 316 *e*PKP1 PKiKP 13 28 57.5 +0.6
LPL La Plagne 115.20 316 *e*PKP1 PKiKP 13 28 57.2 +0.3
GIVF Givet 115.24 321 *e*PKP1 PKiKP 13 28 57.1 +0.2
MBDF Montbardon 115.36 315 *e*PKP1 PKiKP 13 28 57.7 +0.5
CABF La Chapelle 115.38 317 *e*PKP1 PKiKP 13 28 57.4 +0.2
comp=Z,5.8nm,0.6s
MEZF Maizieres J'vi 115.56 320 *e*PKP1 PKiKP 13 28 57.7 +0.2
BAIF Baives 115.64 322 *e*PKP1 PKiKP 13 28 57.8 +0.2
LMR La Mourre 115.85 314 *e*PKP1 PKPdf 13 28 58.1 -0.1
ORIF Oris-en-Rattie 115.93 316 *e*PKP1 PKPdf 13 28 58.3 0.0
comp=Z,1.8nm,0.4s
SMRF Simiane la Rot 116.37 315 *e*PKP1 PKPdf 13 28 59.2 0.0
EDM Edmonton 116.57 34 *e*PKIKP PKPdf 13 28 59.0 -0.3
LOR Lormes 116.67 319 *e*PKP1 PKPdf 13 28 59.1 -0.6
comp=Z,1.9nm,0.5s
VIVF Saint-Julien-l 116.78 316 *e*PKP1 PKPdf 13 28 59.8 -0.2
SMF Signal de Mont 116.86 318 *e*PKP1 PKPdf 13 29 00.2 +0.1
SSF Saint Saulge 116.97 318 *e*PKP1 PKPdf 13 29 00.3 0.0
comp=Z,5.9nm,0.5s
AVF Avril sur Loir 117.14 318 *e*PKP1 PKPdf 13 29 00.2 -0.4
comp=Z,2.8nm,0.5s
NVAR Mina Array Bea 117.40 51 PKP PKPdf 13 29 02.8 +1.4
comp=Z,0.7nm,0.5s,baz=262,slow=2.4,SNR=8.2
BGF Bois d'Agland 117.54 318 *e*PKP1 PKPdf 13 29 01.7 +0.3
TCF Toulx Ste Croi 118.05 318 *e*PKP1 PKPdf 13 29 02.8 +0.4
CAF Calviac 118.54 316 *e*PKP1 PKPdf 13 29 03.8 +0.4
comp=Z,5.5nm,0.5s
LDF La Druitiere 118.79 321 *e*PKP1 PKPdf 13 29 04.5 +0.8
RJF Les Rejaudoux 118.80 317 *e*PKP1 PKPdf 13 29 04.1 +0.2
MTLF Montolieu 118.88 315 *e*PKP1 PKPdf 13 29 03.8 -0.3
FLN La Foliniere 118.95 321 *e*PKP1 PKPdf 13 29 04.9 +0.9
HLID Hailey 119.08 45 *e*PKPdf PKPdf 13 29 05.8 +1.4
GRR Gorron 119.32 321 *e*PKP1 PKPdf 13 29 05.2 +0.4
comp=Z,5.7nm,0.5s
LFF La Frestale 119.44 317 *e*PKP1 PKPdf 13 29 05.6 +0.5
MFF Saint Martin d 119.49 319 *e*PKP1 PKPdf 13 29 05.0 -0.1
comp=Z,7.5nm,0.6s
EPF Esparros 120.29 315 *e*PKP1 PKPdf 13 29 06.7 -0.1
DUG Dugway 121.15 48 *e*PKIKP PKPdf 13 29 09.1 +0.6
REDW Red Top Meadow 121.61 44 *e*PKPdf PKPdf 13 29 10.5 +1.1
SNOW Snow King Moun 121.64 44 *e*PKPdf PKPdf 13 29 09.9 +0.6
FCC Fort Churchill 122.65 22 *e*PKIKP PKPdf 13 29 09.9 -0.9
PDAR Pinedale Array 122.70 45 PKP PKPdf 13 29 12.3 +0.9
comp=Z,1.8nm,0.8s,baz=70,slow=1.6,SNR=14
PDAR PKKPbc PKKPbc 13 39 07.1 +0.8
comp=Z,0.7nm,0.4s,baz=115,slow=6.6,SNR=11
TOA0 Torodi Ar. Sit 123.06 280 *e*PKPdf PKPdf 13 29 12.9 0.0
TORD Torodi Ar. Bea 123.06 280 PKP PKPdf 13 29 13.1 +0.2
comp=Z,7.1nm,0.6s,baz=61,slow=2.0,SNR=113
WUAZ Wupatki 123.44 53 *e*PKPdf PKPdf 13 29 13.9 +0.8
ESDC Sonseca Array 124.40 312 PKP PKPdf 13 29 15.5 +0.7
ESDC PP PP 13 30 59.6 -2.2
comp=Z,1.1nm,0.7s,baz=68,slow=6.0,SNR=5.3
MVCO Mesa Verde 125.23 51 *e*PKPdf PKPdf 13 29 17.7 +1.2
RSSD Black Hills 125.89 41 *e*PKIKP PKPdf 13 29 17.1 -0.4
ULM Lac du Bonnet 127.44 31 PKP PKPdf 13 29 20.2 0.0
comp=Z,2.3nm,0.4s,baz=298,slow=6.7,SNR=5.5
PLCA Paso Flores 128.78 166 PKP PKPdf 13 29 24.9 +1.7
comp=Z,2.7nm,1.1s,baz=322,slow=21,SNR=2.2
PLCA Paso Flores 128.78 166 PKIKP PKPdf 13 29 24.9 +1.7
PLCA pmax pmax
comp=Z,3.0nm,1.1s
DBIC Dimbokro 129.04 271 PKP PKPdf 13 29 25.1 +0.7
comp=Z,5.1nm,0.4s,baz=79,slow=1.8,SNR=24
DBIC SKPbc 13 32 35.2
comp=Z,2.6nm,0.4s,baz=98,slow=4.6,SNR=5.9
DBIC Dimbokro 129.04 271 PKIKP PKPdf 13 29 25.2 +0.8
DBIC pmax pmax
comp=Z,5.0nm,0.4s
DBIC pmax pmax
comp=N,3.0nm,0.4s
DBIC Dimbokro 129.04 271 *e*PKPdf PKPdf 13 29 24.7 +0.3
LIC Lamto 129.16 271 *e*PKIKP PKPdf 13 29 25.0 +0.4
comp=N,11nm,0.4s
TXAR Lajitas Array 131.29 59 PKIKP PKPdf 13 29 29.6 +1.4
comp=N,1.2nm,0.8s,baz=204,slow=2.1,SNR=3.5
TXAR SKPbc SKPbc 13 32 43.5 0.0
comp=N,11nm,1.0s,baz=274,slow=3.5,SNR=44
TXAR Lajitas Array 131.29 59 PKIKP PKPdf 13 29 29.7 +1.5
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR pmax pmax
comp=N,11nm,1.0s
SCHQ Schefferville 133.53 8 PKP PKPdf 13 29 32.8 +1.1
comp=N,3.7nm,0.3s,baz=332,slow=1.9,SNR=32
SCHQ SKPbc SKPbc 13 32 48.5 -2.0
comp=N,7.2nm,1.0s,baz=32,slow=3.5,SNR=4.1
JCT Junction City 134.18 56 *e*PKIKP PKPdf 13 29 34.9 +1.2
LRAL Lakeview Retre 142.92 45 *e*PKPpre PKPdf 13 29 47.2
CPUP Villa Florida 144.85 178 PKP PKPdf 13 29 53.7 +0.5
comp=N,22nm,0.7s,baz=164,slow=2.7,SNR=104
CPUP SKPbc SKPbc 13 33 22.3 -0.7
comp=N,11nm,1.1s,baz=167,slow=3.0,SNR=4.1
CPUP Villa Florida 144.85 178 PKIKP PKPdf 13 29 53.7 +0.5
CPUP 13 33 22.3
CPUP pmax pmax
comp=Z,22nm,0.7s
CPUP pmax pmax
comp=N,11nm,1.1s
CPUP Villa Florida 144.85 178 *e*PKPdf PKPdf 13 29 53.5 +0.3
CPUP *e* 13 30 27.1
GOGA Godfrey 145.11 42 *e*PKIKP PKPdf 13 29 52.6 -0.8
LVC Limon Verde 146.22 159 *e*PKPbc PKPbc 13 29 58.5 +1.7
TEIG Tepich 147.16 67 *e*PKPbc PKPbc 13 29 59.9 +0.3
ARE Arequipa 150.55 149 PKIKP PKPbc 13 30 10.0 +1.7
BDFB Brasilia 154.17 199 PKPbc PKPbc 13 30 17.5 +1.1
comp=N,0.6nm,0.3s,baz=180,slow=20,SNR=4.8

ISCJB ***23*** *13:24:11.0±2.0, 167S±08×1795W±04, h481km±32km, mb3.4/6, Error ellipse: s-maj=132.2km s-min=18.9km az=152.9*
NEIC ***23*** *13:24:12.5±1.3, 1678S×179.39W, h489km±21km, Error ellipse: s-maj=84.5km s-min=12.5km az=152.0*
IDC ***23*** *13:24:12.2±2.4, 1690S×179.32W, h486km±36km, mb3.1/6, mb1 3.4/7, mb1mx3.2/18, mbtmp3.1/7, Error ellipse: s-maj=96.7km s-min=15.5km az=152.0*

ISC 23 13:24:12.4±1.8, 168S±08×1794W±04, h486km±31km, n10, σ0 21/9, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.89**	**70**	P		**P**	**13 26 07.2**	**-0.2**
	5.5nm,0.3s,baz=222,slow=20,SNR=11						
AFI	**Afiamalu**	**7.89**	**70**	*e*P		**P**	**13 26 07.5**	**+0.2**
STKA	**Stephens Creek**	**38.36**	**240**	P		**P**	**13 30 50.6**	**-0.3**
	2.7nm,0.5s,mb3.9,baz=93,slow=10,SNR=13						
STKA	**Stephens Creek**	**38.36**	**240**	*e*P		**P**	**13 30 50.8**	**-0.2**
WRA	**Warramunga Arr**	**43.91**	**258**	P		**P**	**13 31 35.4**	**0.0**
	0.3nm,0.4s,mb3.1,baz=94,slow=7.8,SNR=11						
ASAR	**Alice Springs**		**44.20**	**253**	P		**P**	**13 31 37.9**	**+0.4**
	5.8nm,0.6s,mb4.2,baz=88,slow=8.1,SNR=48						
TXAR	**Lajitas Array**	**86.20**	**58**	P		**P**	**13 36 02.1**	**+0.2**
	0.3nm,0.8s,mb3.0,baz=200,slow=9.6,SNR=3.6						
PDAR	**Pinedale Array**	**87.19**	**44**	P		**P**	**13 36 06.2**	**0.0**
	0.5nm,1.0s,mb3.2,baz=224,slow=2.5,SNR=2.3						
YKA	**Yellowknife Ar**	**93.70**	**25**	P		**P**	**13 36 35.7**	**-0.2**
	0.1nm,0.7s,mb3.0,baz=252,slow=5.1,SNR=3.2						
GERES	**GERESS Array B**	**146.26**	**344**	PKPbc	PKPbc		13 42 57.9	+0.1
	0.4nm,0.6s,baz=35,slow=5.6,SNR=4.6						

IDC 23 13:25:11.4±4.5, 238S×13879E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/14, mbtmp3.3/3, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/10, Error ellipse: s-maj=182.8km s-min=29.6km az=87.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.99**	**194**	P		Pn	13 29 21.8	-1.3
	0.2nm,0.3s,baz=18,slow=13,SNR=8.1						
ASAR	**Alice Springs**	**21.68**	**192**	P		P	13 30 05.0	+1.1
	0.3nm,0.4s,baz=6.5,slow=11,SNR=4.8						
KSRS	**Korea Array**	**40.89**	**347**	LR		LR	13 50 53.7	
	comp=Z,62nm,18.1s,baz=345,slow=38						
MKAR	**Makanchi Array**	**69.58**	**322**	P		P	13 36 22.3	-0.1
	0.2nm,0.7s,baz=118,slow=8.5,SNR=4.4						

GUC 23 13:41:42.9±1.1, 3261S×6871W, h20km±8km, MD4.0, ML3.2, 1C-2D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**1.51**	**241**⇓	*i*P		Pn	13 42 08.9	+0.2
FCH				*i* S		Sn	13 42 27.7	-0.1
FCH				AML	AML		13 42 29.6	
	comp=N,358nm,0.4s						
YECH	**El Yeso**	**1.56**	**227**⇑	*i*P		Pn	13 42 09.1	-0.4
YECH				*e*S		Sn	13 42 29.0	-0.1
YECH				AML	AML		13 42 29.9	
	comp=N,971nm,0.3s						
CLCH	**Cerro Calan**	**1.73**	**242**	*e*P		Pn	13 42 12.6	+0.9
CLCH				*e*S		Sn	13 42 34.8	+1.6
CLCH				AML	AML		13 42 36.9	
	comp=N,340nm,0.4s						
PEL	**Peldehue**	**1.75**	**252**	*e*P		Pn	13 42 12.8	+0.8
PEL				*e*S		Sn	13 42 34.8	+1.2
PEL				AML	AML		13 42 36.0	
	comp=N,380nm,0.6s						
LMEL	**Las Melosas**	**1.76**	**225**⇓	*e*P		Pn	13 42 12.9	+0.7
LMEL				*e*S		Sn	13 42 35.7	+1.7
LMEL				AML	AML		13 42 36.9	
	comp=N,396nm,0.7s						
CHCH	**Chadas Angostu**	**2.10**	**230**	*e*P		Pn	13 42 18.2	+1.3
CHCH				*e*S		Sn	13 42 45.1	+2.9
CACH	**El Canelo**	**2.18**	**226**	*e*P		Pn	13 42 19.5	+1.5

ISCJB ***23*** *13:45:24.1±1.2, 280S±002×36.11E±003, h0km±7km, mb5.3/206, MS4.6/63, Error ellipse: s-maj=4.9km s-min=3.9km az=164.3*
BJI ***23*** *13:45:25.2, 255S×3604E, h7km, mB5.4, mb5.3, Ms5.0, Msz4.8*
MOS ***23*** *13:45:25.5±1.1, 275S×3612E, h10km, mb5.4/80, MS4.5/26, Error ellipse: s-maj=8.7km s-min=3.3km az=105.3*
IDC ***23*** *13:45:25.9±0.4, 276S×3618E, h0km, mb5.0/24, mb1 5.0/25, mb1mx5.0/28, mbtmp4.9/25, ML4.8/1, MS4.5/21, Ms1 4.5/21, ms1mx4.4/27, Error ellipse: s-maj=15.0km s-min=11.8km az=94.0*
STR ***23*** *13:45:27.8±0.0, 2.10S×37.10E, Mb5.2, Ms4.6, Error ellipse: s-maj=0.0km s-min=0.0km az=138.0*
GCMT ***23*** *13:45:27.4±0.2, 275S×3610E, h12km, MW5.2/87, Moment Tensor Solution. s58,c93; s87,c159; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.72±.02; Mθθ0.64±.02; Mφφ0.08±.02; Mrθ0.20±.04; Mrφ-0.27±.01; Mθφ-0.17±.04; Best double couple: M0.77700×10^17 NP1:φs106.00000°, δ56.00000°, λ-100.00000°. NP2: φs298.00000°, δ55.00000°, λ-83.00000°. Principal axes: T 0.7840, Plg9.0000°, Azm23.0000°; N -0.0160,*

Plg6.0000°, Azm114.0000°; P -0.7690, Plg79.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NEIC **23** 13:45:27.4±0.2, 278.5×3620E, h10km, mb5.3/121, MS4.6/23, MW5.3 Error ellipse: s-maj=6.2km s-min=4.6km az=53.0, Moment Tensor Solution. s12 Moment tensor: Scale 10^{17}Nm; Mrr0.00; Mθθ 0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M₀1.00000×10^{17} NP1:ϕs170.00000°, δ50.00000°, λ.8.00000°. NP2: ϕs75.00000°, δ84.00000°, λ140.00000°. Principal axes: T 1.1600, Plg31.0000°, Azm24.0000°; N -0.3800, Plg49.0000°, Azm247.0000°; P -0.7800, Plg22.0000°, Azm129.0000°;*

NEIC Felt at Arusha and Moshi. Also felt at Nairobi, Kenya.

*DJA **23** 13:45:29, 295S×36.13E, h10km, Mw5.6/8*

*SZGRF **23** 13:45:32.1, 200S×37.35E, h12km, mb4.1, Kenya*

ISC 23 13:45:28.8±1.4,**285S**±002×**3614E**±003,**h18**km±8km, **h14**km±1.3km:**pP-P,n599,**σ1s**21**/592,**mb5.2**/206,**MS4.6**/63, **37C-20D,Tanzania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**5.84**	**292**	Pn	**Pn**	**13 46 50.0**	**-4.5**
	3μm,0.7s						
MBAR	**Mbarara**	**5.84**	**292**	*d iP*	**Pn**	**13 46 49.1**	**-5.4**
LSZ	**Lusaka**	**14.63**	**212**	P	**Pn**	**13 48 54.3**	**-0.6**
	SNR=14						
LSZ	**Lusaka**	**14.63**	**212**	Pn	**Pn**	**13 48 51.7**	**-3.2**
	8.1nm,0.3s,baz=30,slow=14,SNR=55						
LSZ				Sn	**Sn**	**13 51 26.8**	**-10**
	8.1nm,0.3s,baz=66,slow=17,SNR=3.7						
LSZ				Lg		13 52 58.7	
	53nm,0.3s,baz=315,slow=16,SNR=8.2						
LSZ	**Lusaka**	**14.63**	**212**	*e*P	**Pn**	**13 48 51.0**	**-3.9**
LSZ				pmax	pmax		
	comp=Z,161nm,1.0s						
LSZ	**Lusaka**	**14.63**	**212**	*e*Pn	**Pn**	**13 48 51.0**	**-4.0**
	comp=Z,161nm,1.0s						
SLAT	**Slait**	**18.89**	**350**	*i* P	**Pn**	**13 49 49.8**	**+0.8**
SLAT				AMb	AMB	13 50 18.9	
SLAT				*i* S	**Sn**	**13 53 23.5**	**+3.2**
OPO	**Ambohidratompo**	**19.01**	**146**	P	**Pn**	**13 49 51.8**	**+1.3**
	comp=Z,2.7nm,0.3s,baz=315,slow=7.0,SNR=26						
OPO				S	**Sn**	**13 53 11.5**	**-12**
	comp=Z,0.6nm,0.3s,baz=306,slow=17,SNR=2.0						
MSEY	**Mahe Island**	**19.38**	**96**	Pn	**Pn**	**13 49 55.1**	**0.0**
	comp=Z,410nm,1.0s,SNR=6.1						
MSEY	**Mahe Island**	**19.38**	**96**	*e*P	**Pn**	**13 49 53.3**	**-1.8**
MSEY				pmax	pmax		
	comp=Z,83nm,1.1s						
MSEY	**Mahe Island**	**19.38**	**96**	*e*P	**Pn**	**13 49 53.3**	**-1.8**
	comp=Z,83nm,1.1s						
ABPO	**Ambohimpanom**	**19.39**	**147**	Pn	**Pn**	**13 49 56.5**	**+1.4**
	comp=Z,568nm,1.1s,SNR=20						
ABPO	**Ambohimpanom**	**19.39**	**147**	*e*P	**Pn**	**13 49 56.0**	**+0.9**
ABPO				pmax	pmax		
	comp=Z,135nm,1.1s						
ABPO	**Ambohimpanom**	**19.39**	**147**	*e*P	**Pn**	**13 49 56.0**	**+0.9**
	comp=Z,135nm,1.1s						
MSNA	**Messina**	**20.27**	**197**	*e*P	**P**	**13 50 04.1**	**+0.6**
MSNA				AMb	AMB	13 50 09.7	
	comp=Z,248nm,1.4s						
SLR	**Silverton**	**23.98**	**198**	⇑*iP*	**P**	**13 50 42.6**	**+0.2**
SLR				AMb	AMB	13 50 45.4	
	comp=Z,247nm,1.2s,mb5.5						
LBTB	**Lobatse**	**24.27**	**204**	*e*P	**P**	**13 50 44.5**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.2						
LBTB				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.3						
LBTB	**Lobatse**	**24.27**	**204**	*e*P	**P**	**13 50 44.5**	**-0.5**
	comp=Z,93nm,0.9s,mb5.2						
LBTB				LR	LR		
	comp=Z,1μm,20.0s,MS4.3						
TSUM	**Tsumeb**	**24.36**	**227**	P	**P**	**13 50 45.5**	**-0.5**
	comp=Z,23nm,0.9s,mb4.6,baz=33,slow=8.3,SNR=46						
TSUM				S	**S**	**13 55 04.4**	**-0.4**
	comp=Z,26nm,0.9s,baz=39,slow=12,SNR=2.7						
TSUM				Lg		13 57 59.4	
	comp=Z,54nm,0.7s,baz=137,slow=21,SNR=2.3						
KSR	**Koster**	**24.54**	**200**	*e*P	**P**	**13 50 47.5**	**0.0**
KSR				AMb	AMB	13 50 57.1	
	comp=Z,263nm,1.3s,mb5.6						
ERPM	**east rand prop**	**24.56**	**197**	*e*P	**P**	**13 50 46.4**	**-1.3**
ERPM				⇑*iP*		13 50 47.6	
ERPM				AMb	AMB	13 50 49.6	
	comp=Z,330nm,1.6s,mb5.6						
POGA	**Pongola**	**24.77**	**190**	⇑*iP*	**P**	**13 50 49.7**	**+0.2**
POGA				AMb	AMB	13 50 51.6	
	comp=Z,160nm,1.3s,mb5.4						
PRYS	**Parys**	**25.38**	**199**	*e*P	**P**	**13 50 54.4**	**-0.7**
PRYS				⇑*iP*		13 50 55.5	
PRYS				AMb	AMB	13 50 57.5	
	comp=Z,226nm,1.2s,mb5.6						
ABTO	**Aybut**	**26.26**	**40**	⇓P	**P**	**13 51 05.2**	**+2.0**
	SNR=6.2						
SWZ	**Schweizer**	**26.32**	**202**	⇑*iP*	**P**	**13 51 03.9**	**+0.3**
SWZ				AMb	AMB	13 51 04.9	
	comp=Z,514nm,1.0s,mb6.0						
SEK	**Senekal**	**26.60**	**197**	⇑*iP*	**P**	**13 51 06.6**	**+0.4**
BOSA	**Boshof**	**27.64**	**201**	P	**P**	**13 51 15.5**	**-0.1**
	comp=Z,119nm,0.8s,mb5.6,baz=24,slow=8.8,SNR=167						
BOSA				S	**S**	**13 55 56.0**	**-0.7**
	comp=Z,11nm,0.8s,baz=313,slow=14,SNR=1.8						
BOSA				Lg		13 59 29.0	
	comp=Z,43nm,0.8s,baz=264,slow=11,SNR=2.1						
BOSA				LR	LR	14 02 28.5	
	comp=Z,5μm,18.2s,MS5.1,baz=115,slow=37						
BOSA	**Boshof**	**27.64**	**201**	*e*P	**P**	**13 51 15.3**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
BOSA				MLR	MLR		
	comp=Z,3μm,19.0s,MS4.9						
BOSA	**Boshof**	**27.64**	**201**	*e*P	**P**	**13 51 15.3**	**-0.3**
	comp=Z,20nm,1.0s,mb4.7						
BOSA				LR	LR		
	comp=Z,3μm,19.0s,MS4.9						
KSD	**Kokstad**	**28.27**	**192**	*e*P	**P**	**13 51 21.4**	**+0.3**
KSD				AMb	AMB	13 52 22.3	
	comp=Z,238nm,1.4s,mb5.6						
UPI	**Upington**	**29.07**	**208**	*e*P	**P**	**13 51 27.9**	**-0.4**
UPI				AMb	AMB	13 51 29.0	
	comp=Z,64nm,0.9s,mb5.3						
HVD	**Gariep Dam**	**29.39**	**199**	⇑*iP*	**P**	**13 51 31.7**	**+0.6**
BSY	**Bisya**	**32.70**	**38**	P	**P**	**13 52 02.1**	**+1.7**
	SNR=18						
SUR	**Sutherland**	**32.72**	**204**	P	**P**	**13 52 01.0**	**+0.6**
	comp=Z,672nm,0.8s,SNR=26						
SUR	**Sutherland**	**32.72**	**204**	P	**P**	**13 52 01.1**	**+0.7**
	comp=Z,66nm,0.8s,mb5.6,baz=29,slow=6.9,SNR=49						
SUR				S	**S**	**13 57 20.8**	**+4.6**
	comp=Z,12nm,1.0s,baz=139,slow=21,SNR=1.9						
SUR	**Sutherland**	**32.72**	**204**	*e*P	**P**	**13 52 01.1**	**+0.6**
	comp=Z,203nm,1.3s,mb5.9						
SUR				LR	LR		
	comp=Z,3μm,21.0s,MS4.9						
JMDO	**Jabal Madar**	**32.99**	**39**	P	**P**	**13 52 05.3**	**+2.4**
	SNR=5.6						
HOQ	**Hoqain**	**33.40**	**37**	P	**P**	**13 52 09.2**	**+2.7**
	SNR=13						
SMDO	**Samad**	**33.46**	**39**	⇑P	**P**	**13 52 09.2**	**+2.2**
	SNR=28						
WBK	**Wadi Bani Khal**	**33.72**	**40**	P	**P**	**13 52 12.2**	**+2.9**
	SNR=8.6						
BIDO	**Bidbid**	**33.85**	**38**	P	**P**	**13 52 12.0**	**+1.6**
	SNR=14						
BHD	**Baghdad**	**36.76**	**12**	*e*P	**P**	**13 52 45.0**	**+10**
TOA0	**Torodi Ar. Sit**	**37.70**	**296**	*e*P	**P**	**13 52 41.7**	**-1.9**
TORD	**Torodi Ar. Bea**	**37.70**	**296**	P	**P**	**13 52 41.9**	**-1.7**
	comp=Z,18nm,1.0s,mb4.7,baz=112,slow=6.9,SNR=70						
TORD				PcP	PcP	13 55 01.3	+0.5
	comp=Z,10nm,0.9s,baz=87,slow=3.3,SNR=6.7						
TORD				S	**S**	**13 58 35.0**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=126,slow=9.4,SNR=2.5						
TORD				Lg		14 05 00.9	
	comp=Z,3.5nm,1.0s,baz=120,slow=13,SNR=9.2						
TORD				LR	LR	14 09 35.6	
	comp=Z,416nm,19.0s,MS4.3,baz=115,slow=38						
TORD	**Torodi Ar. Bea**	**37.70**	**296**	P	**P**	**13 52 41.9**	**-1.7**
TORD				PcP	PcP	13 55 01.3	+0.5
TORD				S	**S**	**13 58 35.0**	**+1.7**
TORD				Lg		14 05 00.9	
TORD				LR	LR	14 09 35.6	
TAM	**Tamanrasset**	**39.26**	**312**	*e*P	**P**	**13 52 57.3**	**+0.7**
TAM				pmax	pmax		
	comp=Z,48nm,1.8s,mb4.9						
TAM	**Tamanrasset**	**39.26**	**312**	*e*P	**P**	**13 52 57.3**	**+0.7**
	comp=Z,48nm,1.8s,mb4.9						
MSL	**Mosul**	**39.58**	**9**	*e*P	**P**	**13 53 03.0**	**+3.9**
TURN	**Turunc**	**40.13**	**351**	*i* P	**P**	**13 53 04.4**	**+0.7**
THR1	**Thera Island**	**40.27**	**347**	P	**P**	**13 53 07.2**	**+2.4**
THR6	**Thira Island,**	**40.27**	**347**	P	**P**	**13 53 07.6**	**+2.8**
THR3	**Thira Island,**	**40.32**	**347**	P	**P**	**13 53 05.8**	**+0.6**
THR5	**Thira Island,**	**40.34**	**347**	P	**P**	**13 53 08.0**	**+2.6**
GOLH	**Golhisar**	**40.34**	**352**	*i* P	**P**	**13 53 07.2**	**+1.8**
THR4	**Thira Island,**	**40.37**	**347**	P	**P**	**13 53 08.9**	**+3.3**
BDRM	**Kayabasi**	**40.52**	**349**	*i* P	**P**	**13 53 09.8**	**+2.9**
HAKT	**HAKKARI**	**40.81**	**9**	*i* P	**P**	**13 53 18.1**	**+8.8**
ISP	**Isparta**	**40.82**	**353**	P	**P**	**13 53 09.1**	**-0.2**
ISP	**Isparta**	**40.82**	**353**	*c iP*	**P**	**13 53 09.5**	**+0.2**
APE	**Apeiranthos**	**40.92**	**347**	*i* P	**P**	**13 53 12.1**	**+1.9**
AKCD	**Akcadag**	**40.97**	**2**	⇑*iP*	**P**	**13 53 13.2**	**+2.6**
MALT	**Malatya**	**41.01**	**3**	P	**P**	**13 53 11.4**	**+0.5**
MALT				pmax	pmax		
	comp=Z,32nm,1.4s,mb4.8						
MALT				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.7						
MALT	**Malatya**	**41.01**	**3**	P	**P**	**13 53 11.4**	**+0.5**
	comp=Z,32nm,1.4s,mb4.8						
MALT				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
GCAM	**G?zelcaml?**	**41.18**	**349**	*i* P	**P**	**13 53 12.7**	**+0.4**
AVNT	**Avonos**	**41.44**	**358**	*i* P	**P**	**13 53 17.3**	**+2.9**
KHAL	**Karahalli**	**41.47**	**352**	*i* P	**P**	**13 53 15.3**	**+0.7**
PYL	**PYLOS**	**41.75**	**343**	P	**P**	**13 53 13.9**	**-3.1**
BLCB	**Balcova**	**41.88**	**349**	P	**P**	**13 53 19.0**	**+1.0**
DID	**Didima**	**41.90**	**345**	P	**P**	**13 53 17.4**	**-0.8**
URLA	**Izmir**	**41.94**	**349**	*i* P	**P**	**13 53 17.8**	**-0.7**
DBIC	**Dimbokro**	**42.00**	**283**	P	**P**	**13 53 18.0**	**-1.4**
	comp=Z,14nm,0.8s,mb4.6,baz=85,slow=9.6,SNR=26						
DBIC				PP	PP	13 54 51.8	-5.0
	comp=Z,18nm,0.9s,baz=87,slow=11,SNR=5.5						
DBIC				S	**S**	**13 59 40.2**	**+2.4**
	comp=Z,2.0nm,0.9s,baz=185,slow=18,SNR=2.5						
DBIC				Lg		14 07 29.8	
	comp=Z,1.1nm,0.9s,baz=170,slow=23,SNR=1.7						
DBIC				LR	LR	14 10 45.9	
	comp=Z,370nm,19.0s,MS4.3,baz=76,slow=36						
DBIC	**Dimbokro**	**42.00**	**283**	*e*P	**P**	**13 53 17.6**	**-1.8**
DBIC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,444nm,19.0s						
DBIC	**Dimbokro**	**42.00**	**283**	*e*P	**P**	**13 53 17.6**	**-1.9**
	comp=Z,10nm,0.8s,mb4.5						
DBIC				LR	LR		
	comp=Z,444nm,19.0s,MS4.4						
CHOS	**Chios island**	**42.07**	**348**	P	**P**	**13 53 21.5**	**+1.9**
LIC	**Lamto**	**42.08**	**282**	*e*P	**P**	**13 53 17.6**	**-2.5**
	comp=Z,33nm,0.8s,mb4.7						
LIC				*e*MLR	MLR		
	comp=Z,424nm,18.5s,MS4.1						
LIC	**Lamto**	**42.08**	**282**	*e*P	**P**	**13 53 17.6**	**-2.5**
	comp=Z,17nm,0.8s,mb4.7						
LIC				LR	LR		
	comp=Z,210nm,18.5s,MS4.0						
GDZ	**Gediz**	**42.18**	**352**	*i* P	**P**	**13 53 20.8**	**+0.4**
AKHS	**Akhisar**	**42.22**	**350**	⇑*iP*	**P**	**13 53 21.9**	**+1.1**
CDAG	**Cicekdag**	**42.29**	**358**	*i* P	**P**	**13 53 22.2**	**+0.8**
CDAG	**Cicekdag**	**42.29**	**358**	*i* P	**P**	**13 53 21.0**	**-0.4**
BRTR	**Keskin Array B**	**42.42**	**357**	P	**P**	**13 53 22.2**	**-0.2**
	comp=Z,4.6nm,0.8s,mb4.2,baz=170,slow=10,SNR=16						
BRTR				PcP	PcP	13 55 16.1	+0.6
	comp=Z,8.7nm,0.8s,baz=186,slow=6.4,SNR=9.5						
BRTR	**Keskin Array B**	**42.42**	**357**	⇑*eP*	**P**	**13 53 25.3**	**+2.9**
LTK	**Loutraki**	**42.46**	**345**	P	**P**	**13 53 22.3**	**-0.4**
KAD	**Karad**	**42.54**	**61**	*eP*	**P**	**13 53 22.3**	**-1.4**
DYDN	**Diyadin**	**42.75**	**9**	*i* P	**P**	**13 53 29.5**	**+4.4**
POO	**Poona**	**42.77**	**59**	*eP*	**P**	**13 53 26.2**	**+0.6**
POO				AMb	AMB	13 53 27.6	
	comp=Z,28nm,1.1s,mb4.9						
BORA	**Eskisehir**	**42.84**	**354**	*i* P	**P**	**13 53 27.4**	**+1.6**
PRK	**Paraskevi**	**42.86**	**349**	P	**P**	**13 53 26.3**	**+0.3**
SIGR	**SIGRI**	**42.91**	**348**	P	**P**	**13 53 27.8**	**+1.4**
HOMI	**Horasan**	**43.01**	**6**	*i* P	**P**	**13 53 30.0**	**+2.8**
LKR	**Lokris**	**43.04**	**345**	P	**P**	**13 53 27.1**	**-0.3**
KOD	**Kodaikanal**	**43.15**	**72**	*eP*	**P**	**13 53 28.7**	**0.0**
ELDT	**Eldivan**	**43.20**	**357**	*i* P	**P**	**13 53 28.3**	**-0.4**
VLS	**Valsamata**	**43.28**	**342**	P	**P**	**13 53 28.2**	**-1.2**
AOS	**Alonnisos**	**43.31**	**346**	P	**P**	**13 53 29.9**	**+0.3**
AGG	**Agios Georgios**	**43.56**	**344**	P	**P**	**13 53 31.4**	**-0.3**
XOR	**Xorichti**	**43.66**	**345**	P	**P**	**13 53 30.8**	**-1.7**
LIA	**Limnos Island**	**43.71**	**348**	P	**P**	**13 53 33.2**	**+0.4**
HENT	**Hendek**	**43.72**	**354**	*i* P	**P**	**13 53 34.9**	**+2.0**
LOS	**Limnos**	**43.77**	**348**	P	**P**	**13 53 32.1**	**-1.2**
DDEM	**Demirkent**	**43.83**	**6**	*i* P	**P**	**13 53 34.5**	**+0.7**
PAIG	**Paliouri**	**44.08**	**346**	P	**P**	**13 53 35.4**	**-0.4**
SART	**Tekirdag**	**44.09**	**350**	*i* P	**P**	**13 53 36.6**	**+0.7**
ARTV	**Artvin**	**44.14**	**6**	*i* P	**P**	**13 53 39.5**	**+3.2**
THL	**Klokotos Trika**	**44.16**	**344**	P	**P**	**13 53 30.6**	**-5.8**
BALT	**Daday**	**44.24**	**357**	*i* P	**P**	**13 53 34.6**	**-2.4**
ELBA	**Catalca**	**44.34**	**352**	*i* P	**P**	**13 53 39.1**	**+1.2**
OUR	**Ouranopolis**	**44.39**	**347**	P	**P**	**13 53 41.1**	**+2.8**
ALN	**Alexandroupoli**	**44.50**	**349**	P	**P**	**13 53 36.5**	**-2.7**
LIT	**Litokhoron**	**44.53**	**345**	P	**P**	**13 53 38.7**	**-0.8**
PLG	**Polygyros**	**44.55**	**346**	P	**P**	**13 53 37.9**	**-1.7**
IGT	**Igoumenitsa**	**44.61**	**343**	P	**P**	**13 53 39.7**	**-0.3**
HORT	**Hortiatis**	**44.85**	**346**	P	**P**	**13 53 41.8**	**-0.2**
DGRG	**David-gareji**	**44.88**	**10**	P	**P**	**13 53 46.1**	**+3.9**
DGRG				S	SS	14 04 11.7	+31
THE	**Thessaloniki**	**44.92**	**346**	P	**P**	**13 53 41.7**	**-0.8**
SOH	**Sokhos**	**45.00**	**346**	P	**P**	**13 53 42.7**	**-0.5**
MTA	**Mtatsminda**	**45.02**	**9**	P	**P**	**13 53 45.1**	**+1.8**
MTA				S	SS	14 04 04.3	+21
GRG	**Griva**	**45.36**	**345**	P	**P**	**13 53 45.8**	**-0.2**
KNT	**Kendrikon**	**45.43**	**346**	P	**P**	**13 53 46.3**	**-0.3**
FNA	**Florina**	**45.47**	**344**	P	**P**	**13 53 46.9**	**0.0**
TIP	**Timpagrande**	**45.47**	**339**	*eP*	**P**	**13 53 49.9**	**+3.0**
	comp=Z,25nm,1.2s,mb4.9						
RZN	**Rozhen**	**45.53**	**348**	*eP*	**P**	**13 53 47.9**	**+0.6**
MMB	**Musomiste**	**45.65**	**347**	*eP*	**P**	**13 53 45.5**	**-2.8**
VAY	**Valandovo**	**45.66**	**346**	P	**P**	**13 53 48.2**	**-0.2**
ONI	**Oni**	**45.70**	**8**	P	**P**	**13 53 50.0**	**+1.3**
ONI				S	SS	14 04 14.0	+18
BIA	**Bitola**	**45.70**	**344**	P	**P**	**13 53 47.9**	**-0.8**
KEST	**Kesra**	**45.84**	**329**	P	**P**	**13 53 51.1**	**+1.2**
	comp=Z,4.0nm,0.9s,mb4.3,baz=27,slow=4.9,SNR=7.0						
KEST				LR	LR	14 14 01.8	
	comp=Z,503nm,19.1s,MS4.5,baz=120,slow=38						
JMB	**Yambol**	**45.93**	**350**	P	**P**	**13 53 53.7**	**+3.2**
PLD	**Plovdiv**	**45.93**	**348**	P	**P**	**13 53 50.5**	**0.0**
PLD	**Plovdiv**	**45.93**	**348**	*eP*	**P**	**13 53 51.4**	**+0.9**
OHR	**Ohrid**	**45.93**	**344**	P	**P**	**13 53 50.5**	**0.0**
SOC	**Sochi**	**46.33**	**4**	*eP*	**P**	**13 53 49.9**	**-3.7**
SOC				*eS*	**S**	**14 00 37.7**	**-2.3**
SOC				MLR	MLR		
	comp=Z,274nm,11.0s,MS4.5						
AKL	**Akola**	**46.40**	**58**	*eP*	**P**	**13 53 54.4**	**-0.2**
TIR	**Tirane**	**46.42**	**343**	P	**P**	**13 53 54.2**	**-0.2**
HYB	**Hyderabad**	**46.42**	**63**	*i* P	**P**	**13 53 53.5**	**-1.3**
CUC	**Castrocucco**	**46.53**	**338**	*eP*	**P**	**13 53 56.6**	**+1.4**
	comp=Z,63nm,1.4s,mb5.3						
CUC				*e*		13 54 07.3	
SKO	**Skopje**	**46.56**	**345**	P	**P**	**13 53 55.9**	**+0.4**
MAK	**Makhachkala**	**46.74**	**11**	P	**P**	**13 53 49.1**	**-7.7**
MAK				*e*PPP		13 56 30.2	
MAK				S	**S**	**14 00 39.2**	**-6.7**
MAK				pmax	pmax		
	comp=Z,250nm,1.4s,mb6.0						
MAK				MLR	MLR		
	comp=Z,1μm,14.0s,MS5.0						
KIV	**Kislovodsk**	**46.96**	**6**	*eP*	**P**	**13 54 00.4**	**+1.8**
KIV				*e*		13 55 31.4	
KIV				*eS*	**S**	**14 00 51.0**	**+2.0**
KIV				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
KIV				MLR	MLR		
	comp=Z,453nm,17.0s,MS4.5						
AJM	**Ajmer**	**47.26**	**49**	*eP*	**P**	**13 54 02.1**	**+0.8**
AJM				AMb	AMB	13 54 07.4	
	comp=Z,78nm,1.9s,mb5.3						
TIRR	**Tirgusor**	**47.60**	**353**	⇓*iP*	**P**	**13 54 04.9**	**+1.4**
TIRR	**Tirgusor**	**47.60**	**353**	*eP*	**P**	**13 54 02.5**	**-1.1**
	comp=Z,49nm,1.9s,mb5.2						
BHPL	**Bhopal**	**47.86**	**55**	*eP*	**P**	**13 54 06.2**	**+0.2**
HARR	**Harsova**	**47.89**	**352**	P	**P**	**13 54 08.8**	**+3.0**
NGP	**Nagpur**	**48.31**	**58**	*eP*	**P**	**13 54 07.6**	**-1.9**
KBL	**Kabul**	**48.37**	**37**	P	**P**	**13 54 09.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
KBL	**Kabul**	**48.37**	**37**	P	**P**	**13 54 09.7**	**0.0**
	comp=Z,22nm,1.0s,mb5.1						
VOIR		**49.08**	**350**	⇑*iP*	**P**	**13 54 15.0**	**+0.1**
VOIR		**49.08**	**350**	P	**P**	**13 54 17.1**	**+2.2**
PLOR	**Plostina**	**49.21**	**351**	P	**P**	**13 54 19.4**	**+3.5**
VRI	**Vrincioaia**	**49.22**	**351**	⇓*iP*	**P**	**13 54 16.4**	**+0.4**
VRI	**Vrincioaia**	**49.22**	**351**	P	**P**	**13 54 18.9**	**+2.9**
GZR	**Gura Zlata**	**49.48**	**348**	⇓*iP*	**P**	**13 54 18.1**	**+0.1**
GZR	**Gura Zlata**	**49.48**	**348**	P	**P**	**13 54 18.0**	**0.0**
AQU	**L'Aquila**	**49.48**	**338**	P	**P**	**13 54 19.5**	**+1.4**
AQU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
AQU	**L'Aquila**	**49.48**	**338**	P	**P**	**13 54 19.5**	**+1.5**
	comp=Z,13nm,1.0s,mb4.9						
BZS	**Buzias**	**49.95**	**347**	⇑*iP*	**P**	**13 54 21.8**	**+0.2**
BZS	**Buzias**	**49.95**	**347**	⇑P	**P**	**13 54 21.8**	**+0.2**
DRGR		**50.83**	**348**	⇑*iP*	**P**	**13 54 28.4**	**+0.2**
DRGR		**50.83**	**348**	P	**P**	**13 54 28.7**	**+0.5**
BURAR	**Bucovina Array**	**51.16**	**351**	⇑*iP*	**P**	**13 54 31.8**	**+1.1**
BURAR	**Bucovina Array**	**51.16**	**351**	⇑P	**P**	**13 54 31.8**	**+1.2**
BUR08	**Bucovina Ar. S**	**51.19**	**351**	*eP*	**P**	**13 54 31.1**	**+0.2**
PKSM	**Moragy**	**51.25**	**344**	⇑*iP*	**P**	**13 54 31.5**	**+0.1**
PKSM	**Moragy**	**51.25**	**344**	P	**P**	**13 54 31.4**	**0.0**
THN	**Thein Dam**	**51.34**	**44**	*eP*	**P**	**13 54 31.3**	**-1.1**
PGF	**Pioggiola**	**51.42**	**334**	*eP*	**P**	**13 54 31.6**	**-1.2**
	comp=Z,250nm,1.7s,mb5.6						
PGF	**Pioggiola**	**51.42**	**334**	*eP*	**P**	**13 54 31.6**	**-1.2**
PGF				pmax	pmax		
	comp=Z,125nm,1.7s,mb5.6						
PGF	**Pioggiola**	**51.42**	**334**	*eP*	**P**	**13 54 31.6**	**-1.2**
	comp=Z,125nm,1.7s,mb5.6						
BOJS	**Bojanci**	**51.60**	**341**	*eP*	**P**	**13 54 34.2**	**+0.2**
SMLA	**Simla**	**51.63**	**46**	*eP*	**P**	**13 54 34.4**	**-0.1**
SMLA				AMb	AMB	13 54 39.7	
	comp=Z,106nm,2.4s,mb5.3						
GCIS	**Gornji Cirnik**	**51.80**	**342**	*eP*	**P**	**13 54 36.2**	**+0.7**
DDI	**Dehra Dun**	**51.84**	**47**	*eP*	**P**	**13 54 33.5**	**-2.6**
LEGS	**Legarje**	**51.97**	**342**	*eP*	**P**	**13 54 39.0**	**+2.2**
SKDS	**Skadanscina**	**52.04**	**340**	*eP*	**P**	**13 54 38.5**	**+1.2**
KOGS	**Kog**	**52.14**	**343**	*eP*	**P**	**13 54 38.5**	**+0.5**
TRPA	**Tarpa**	**52.14**	**348**	⇓*iP*	**P**	**13 54 38.8**	**+0.8**
TRI	**Trieste**	**52.27**	**340**	*eP*	**P**	**13 54 38.3**	**-0.7**
TRI				pmax	pmax		
	comp=Z,260nm,2.1s,mb5.8						
TRI				MLR	MLR		
	comp=Z,354nm,19.0s,MS4.4						
TRI	**Trieste**	**52.27**	**340**	*eP*	**P**	**13 54 38.2**	**-0.7**
	comp=Z,260nm,2.1s,mb5.8						
TRI				LR	LR		
	comp=Z,354nm,19.0s,MS4.4						
BUD	**Budapest**	**52.32**	**345**	⇓*eP*	**P**	**13 54 42.1**	**+2.7**
MDT	**Midelt**	**52.37**	**316**	P	**P**	**13 54 41.0**	**+0.9**
	comp=Z,4.6nm,0.8s,mb4.5,baz=122,slow=12,SNR=7.3						
MDT				PcP	PcP	13 55 52.1	+1.1
	comp=Z,4.5nm,1.0s,baz=113,slow=8.1,SNR=2.6						
MDT				LR	LR	14 18 39.6	
	comp=Z,716nm,20.5s,MS4.7,baz=323,slow=38						
ZAVS	**Zavodnje**	**52.50**	**342**	*eP*	**P**	**13 54 43.0**	**+2.3**
VOY	**Vojsko**	**52.51**	**341**	*eP*	**P**	**13 54 40.3**	**-0.5**
VOY				*e*	pP	13 54 43.6	-2.9
VOY				*e*		13 54 48.9	
VOY				*e*		13 54 54.2	
PSZ	**Piszkesteto**	**52.52**	**346**	⇓*eP*	**P**	**13 54 43.5**	**+2.7**
PSZ	**Piszkesteto**	**52.52**	**346**	⇓*iP*	**P**	**13 54 41.5**	**+0.7**
PSZ	**Piszkesteto**	**52.52**	**346**	*

comp=E,65nm,1.4s,mb5.4
MBDF Montbardon 54.13 334 *e*P **P** **13 54 52.3 -0.5**
comp=E,64nm,1.0s,mb5.2
MBDF Montbardon 54.13 334 *e*P **P** **13 54 52.3 -0.5**
MBDF pmax pmax
comp=Z,32nm,1.0s,mb5.2
MBDF Montbardon 54.13 334 *e*P **P** **13 54 52.3 -0.5**
comp=Z,32nm,1.0s,mb5.2
ERON Agron 54.32 321 P **P** **13 54 56.7 +2.5**
comp=Z,3.9nm,1.2s,mb4.2
ECOG Cogollos-Vega 54.33 321 P **P** **13 54 57.9 +3.6**
ECOG pmax pmax
comp=Z,11nm,0.8s,mb4.8
ECOG Cogollos-Vega 54.33 321 P **P** **13 54 57.9 +3.6**
comp=Z,10nm,0.8s,mb4.8
EQES Quesada 54.34 322 P **P** **13 54 57.3 +2.8**
comp=Z,24nm,0.9s,mb5.1
WTTA Wattenberg 54.35 340⇓ *i*P **P** **13 54 53.9 -0.4**
SNR=13
RJOB Jochberg 54.37 341 *e*P **P** **13 54 52.8 -1.6**
comp=Z,57nm,1.6s,mb5.2
BNI Bardonecchia 54.43 335 *e*P **P** **13 54 55.7 +0.8**
BNI pmax pmax
comp=Z,71nm,1.4s,mb5.4
BNI MLR MLR
comp=Z,534nm,20.0s,MS4.6
BNI Bardonecchia 54.43 335 *e*P **P** **13 54 55.6 +0.7**
comp=Z,71nm,1.4s,mb5.4
BNI LR LR
comp=Z,534nm,20.0s,MS4.6
FETA Feichten 54.46 339⇑ *i*P **P** **13 54 54.5 -0.6**
comp=Z,34nm,1.8s,mb5.0,SNR=6.8
TUE Stuetta 54.51 338 *e*P **P** **13 54 56.5 +1.0**
comp=Z,188nm,1.9s,mb5.8
EVIA Vianos 54.53 323 P **P** **13 54 56.6 +0.8**
EVIA pmax pmax
comp=Z,243nm,2.7s,mb5.8
EVIA Vianos 54.53 323 P **P** **13 54 56.6 +0.8**
comp=Z,243nm,2.7s,mb5.8
DAVOX Davos/Dischmat 54.57 338 P **P** **13 54 56.3 +0.5**
comp=Z,5.0nm,0.7s,mb4.6,baz=139,slow=8.5,SNR=11
DAVOX LR LR 14 19 55.6
comp=Z,353nm,19.3s,MS4.5,baz=241,slow=38
ELOJ Sierra Loja 54.62 321 P **P** **13 54 56.6 +0.2**
ELOJ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ELOJ Sierra Loja 54.62 321 P **P** **13 54 56.6 +0.2**
comp=Z,9.4nm,0.8s,mb4.9
VRAC Vranov 54.64 344⇓ *i*P **P** **13 54 56.0 -0.3**
VRAC Vranov 54.64 344 ⇓P **P** **13 54 56.0 -0.3**
ORIF Oris-en-Rattie 54.67 334 *e*P **P** **13 54 55.7 -1.0**
comp=Z,26nm,1.1s,mb4.9
ORIF *e*MLR MLR
comp=Z,794nm,21.8s,MS4.5
ORIF Oris-en-Rattie 54.67 334 *e*P **P** **13 54 55.7 -1.0**
ORIF pmax pmax
comp=Z,13nm,1.1s,mb4.9
ORIF Oris-en-Rattie 54.67 334 *e*P **P** **13 54 55.7 -1.0**
comp=Z,13nm,1.1s,mb4.9
OJC Ojcow 54.70 347 *e*P **P** **13 54 56.3 -0.5**
OKC Ostrava-Krasne 54.73 346 *e*P **P** **13 54 58.3 +1.3**
LPG La Plagne 54.76 335 *e*P **P** **13 54 56.8 -0.5**
comp=Z,89nm,1.3s,mb5.3
LPG La Plagne 54.76 335 *e*P **P** **13 54 56.8 -0.5**
LPG pmax pmax
comp=Z,44nm,1.3s,mb5.3
LPG La Plagne 54.76 335 *e*P **P** **13 54 56.8 -0.5**
comp=Z,44nm,1.3s,mb5.3
LPL La Plagne 54.78 335 *e*P **P** **13 54 56.7 -0.8**
comp=Z,49nm,1.0s,mb5.2
LPL La Plagne 54.78 335 *e*P **P** **13 54 56.7 -0.8**
LPL pmax pmax
comp=Z,24nm,1.0s,mb5.2
LPL La Plagne 54.78 335 *e*P **P** **13 54 56.7 -0.8**
comp=Z,24nm,1.0s,mb5.2
KOLN Koldanda 54.87 53 *e*P **P** **13 54 57.1 -1.3**
comp=Z,170nm,1.1s,mb6.0
TREC Trest 54.93 344 *e*P **P** **13 54 57.5 -1.0**
TREC *e*PCP PcP 13 56 00.3 0.0
TREC AMS AMS 14 23 40.0
comp=Z,600nm,19.0s
ELUQ Luque 54.94 321 P **P** **13 54 58.3 -0.5**
ELUQ pmax pmax
comp=Z,15nm,1.2s,mb4.9
ELUQ Luque 54.94 321 P **P** **13 54 58.3 -0.4**
comp=Z,15nm,1.2s,mb4.9
LASF Ste Croix 54.94 332 *e*P **P** **13 54 58.1 -0.6**
comp=Z,151nm,1.9s,mb5.4
BBTS Babate 54.99 290 LR LR 14 19 17.8
comp=Z,570nm,19.4s,MS4.7,baz=79,slow=37
DAVA Damuels 54.99 338⇓ *i*P **P** **13 54 58.5 -0.4**
comp=Z,55nm,1.4s,mb5.4,SNR=9.9
EJIF Jimena Fronter 55.04 319 P **P** **13 54 59.9 +0.3**
EJIF pmax pmax
comp=Z,37nm,2.1s,mb5.0
EJIF Jimena Fronter 55.04 319 P **P** **13 54 59.9 +0.4**
comp=Z,37nm,2.1s,mb5.0
GEC2 GERESS Array S 55.05 342 *e*P **P** **13 54 58.3 -1.1**
GEC2 *e* 13 57 05.2
GEC2 pmax pmax
comp=Z,81nm,1.3s,mb5.6
GEC2 GERESS Array S 55.05 342 *e*P **P** **13 54 58.3 -1.1**
comp=Z,81nm,1.3s,mb5.6
GEC2 *e*PP PP 13 57 05.2 +2.4
GERES GERESS Array B 55.05 342 P **P** **13 54 59.2 -0.1**
comp=Z,17nm,1.0s,mb5.0,baz=145,slow=7.3,SNR=41
GERES LR LR 14 19 42.1
comp=Z,266nm,21.1s,MS4.3,baz=232,slow=37
BOK Bokaro 55.16 58 *e*P **P** **13 54 60.0 -0.6**
BOK AMb AMB 13 55 04.1
comp=Z,35nm,0.9s,mb5.4
VIVF Saint-Julien-l 55.16 333 *e*P **P** **13 54 59.7 -0.5**
MTLF Montolieu 55.18 330 *e*P **P** **13 54 59.6 -0.8**
DANN Dangsing 55.25 52 *e*P **P** **13 54 59.8 -1.4**
comp=Z,147nm,0.9s,mb6.0
FUR Furstenfeldbru 55.25 340 *e*P **P** **13 54 59.3 -1.5**
FUR pmax pmax
comp=Z,114nm,1.9s,mb5.6
FUR Furstenfeldbru 55.25 340 *e*P **P** **13 54 59.3 -1.5**
comp=Z,114nm,1.9s,mb5.6
KHC Kasperske Hory 55.34 342 *e*P **P** **13 55 00.4 -1.1**
KHC *e*pP pP 13 55 02.5 -4.7
KHC AMS AMS 14 23 40.0
comp=Z,400nm,15.5s
EADA Adamuz 55.50 321 P **P** **13 55 04.9 +2.1**
comp=Z,12nm,0.9s,mb4.9
ESPR Espera 55.54 319 P **P** **13 55 06.2 +3.0**
comp=Z,16nm,0.9s,mb5.0
SSB Saint Sauveur 55.55 333 *e*P **P** **13 55 03.6 +0.6**
SSB Saint Sauveur 55.55 333 P **P** **13 55 03.1 +0.1**
SSB pmax pmax
comp=Z,99nm,1.8s,mb5.5
SSB Saint Sauveur 55.55 333 P **P** **13 55 03.1 +0.1**
comp=Z,99nm,1.8s,mb5.5
WET Wettzell 55.57 342 *e*P **P** **13 55 01.4 -1.7**
WET *e* 13 56 02.4
WET pmax pmax
comp=Z,45nm,1.5s,mb5.3
WET Wettzell 55.57 342 *e*P **P** **13 55 01.4 -1.7**
comp=Z,45nm,1.5s,mb5.3
WET *e*PcP PcP 13 56 02.4 -0.4
DPC Dobruska-Polom 55.66 345 *e*P **P** **13 55 02.9 -0.8**
DPC *ex* x 13 56 03.9
ETOR Torete 55.69 325 P **P** **13 55 04.5 +0.4**
ETOR pmax pmax
comp=Z,7.0nm,1.9s,mb4.4
ETOR Torete 55.69 325 P **P** **13 55 04.5 +0.3**
comp=Z,7.1nm,1.9s,mb4.4
EBIE Bielsa 55.77 328 P **P** **13 55 05.3 +0.7**
comp=Z,11nm,0.9s,mb4.9
GKN Gorkha 55.79 53 *e*P **P** **13 55 03.4 -1.7**
comp=Z,255nm,1.0s,mb6.2
KSH Kashi 55.80 37 *e*P **P** **13 55 07.4 +2.4**
KSH AP pP 13 55 11.8 +1.1
KSH XP sP 13 55 14.3 +1.4
KSH PCP PcP 13 56 06.3 +2.4
KSH PP PP 13 57 13.3 +3.6
KSH PPP 13 58 27.9
KSH SCP ScP 14 00 03.8 +1.4
KSH S **S** **14 02 51.8 +0.4**
KSH XS sS 14 02 59.8 -1.0
KSH SCS ScS 14 04 52.3 -1.3
KSH AMB AMB
comp=Z,60nm,0.6s,mb5.8
KSH AMB AMB
comp=Z,544nm,5.6s
KSH LR LR
comp=N,2µm,10.9s,MS5.7
KSH LR LR
comp=E,3µm,10.9s,MS5.7
KSH LR LR
comp=Z,3µm,12.6s,MS5.6
PRU Pruhonice 55.82 343 *e*P **P** **13 55 03.2 -1.7**
PRU *ex* x 13 56 03.7
UPC Upice 55.89 345 *e*P **P** **13 55 06.4 +1.1**
UPC *ex* x 13 56 05.1
EPF Esparros 55.91 329 *e*P **P** **13 55 05.2 -0.5**
comp=Z,136nm,1.9s,mb5.4
EPF Esparros 55.91 329 *e*P **P** **13 55 05.2 -0.5**
EPF pmax pmax
comp=Z,68nm,1.9s,mb5.3
EPF Esparros 55.91 329 *e*P **P** **13 55 05.2 -0.5**
comp=Z,68nm,1.9s,mb5.3
CABF La Chapelle 55.93 335 *e*P **P** **13 55 04.2 -1.5**
DMN Daman 56.01 54 *e*P **P** **13 55 05.3 -1.3**
comp=Z,218nm,1.4s,mb6.0
LABF Labassere 56.06 329 *e*P **P** **13 55 07.5 +0.8**
ESLA Sonseca Array 56.06 323 *e*P **P** **13 55 06.4 -0.4**
comp=Z,5.0nm,1.0s,mb4.5
ESDC Sonseca Array 56.06 323 P **P** **13 55 06.5 -0.4**
comp=Z,12nm,0.8s,mb5.0,baz=127,slow=6.9,SNR=28
ESDC PcP PcP 13 56 05.8 +0.9
comp=Z,3.2nm,0.8s,baz=135,slow=4.3,SNR=4.7
ESDC Sonseca Array 56.06 323 P **P** **13 55 07.0 +0.1**
comp=Z,10.0nm,0.6s,mb4.9
COLF Collangettes 56.11 333 *e*P **P** **13 55 07.9 +0.8**
KSP Ksiaz 56.12 345 *e*P **P** **13 55 09.0 +2.1**
KSP Ksiaz 56.12 345 *e*P **P** **13 55 08.9 +1.9**
KSP *e*PcP PcP 13 56 06.0 +1.2
FELD Feldberg im Sc 56.19 338 *e*P **P** **13 55 07.2 -0.3**
LOMF Lomont 56.22 336 *e*P **P** **13 55 07.9 +0.1**
AML Almayashu 56.22 33 P **P** **13 55 10.8 +2.9**
SNR=9.8
AML Almayashu 56.22 33 *e*P **P** **13 55 07.0 -0.9**
comp=Z,32nm,0.9s,mb5.3
KKN Kakani 56.22 54 *e*P **P** **13 55 06.8 -1.4**
comp=Z,63nm,0.8s,mb5.7
KKN Kakani 56.22 54 *e*P **P** **13 55 06.8 -1.4**
KKN pmax pmax
comp=Z,63nm,0.8s,mb5.7
PKI Pulchoki 56.23 54 *e*P **P** **13 55 06.8 -1.5**
ETSF Etsaut 56.29 328 *e*P **P** **13 55 07.7 -0.7**
comp=Z,29nm,0.7s,mb5.1
ETSF Etsaut 56.29 328 *e*P **P** **13 55 07.7 -0.7**
ETSF pmax pmax
comp=Z,15nm,0.7s,mb5.1
ETSF Etsaut 56.29 328 *e*P **P** **13 55 07.7 -0.7**
comp=Z,14nm,0.7s,mb5.1
PVCC Panska Ves 56.30 344 *e*P **P** **13 55 09.5 +1.2**
REYF Montagne du Re 56.32 328 *e*P **P** **13 55 09.8 +1.2**
ROTZ Rotzenmuhle 56.33 342 *e*P **P** **13 55 07.1 -1.4**
comp=Z,65nm,1.6s,mb5.4
CAF Calviac 56.43 331 *e*P **P** **13 55 09.0 -0.3**
comp=Z,135nm,1.7s,mb5.4
CAF Calviac 56.43 331 *e*P **P** **13 55 09.0 -0.3**
CAF pmax pmax
comp=Z,68nm,1.7s,mb5.4
CAF Calviac 56.43 331 *e*P **P** **13 55 09.0 -0.3**
comp=Z,68nm,1.7s,mb5.4
BFO Black Forest 56.44 338 *e*P **P** **13 55 08.4 -0.9**
BFO pmax pmax
comp=Z,86nm,1.7s,mb5.5
BFO Black Forest 56.44 338 *e*P **P** **13 55 08.4 -0.9**
comp=Z,86nm,1.7s,mb5.5
ATE Arette 56.49 328 *e*P **P** **13 55 10.4 +0.6**
STU Stuttgart 56.49 339 *e*P **P** **13 55 09.5 -0.2**
STU pmax pmax
comp=Z,132nm,1.8s,mb5.7
STU Stuttgart 56.49 339 *e*P **P** **13 55 08.9 -0.8**
comp=Z,136nm,1.9s,mb5.7
STU Stuttgart 56.49 339 *e*P **P** **13 55 09.5 -0.2**
comp=Z,132nm,1.8s,mb5.7
MOF Molkenrain 56.50 337 *e*P **P** **13 55 09.8 0.0**
MANZ Manzenberg 56.55 342 *e*P **P** **13 55 08.5 -1.6**
comp=Z,50nm,1.4s,mb5.3
GRA1 Grafenberg Arr 56.58 341 *e*P **P** **13 55 09.0 -1.3**
comp=Z,98nm,1.7s,mb5.6
GRA1 *e*pP pP 13 55 12.3 -3.7
GRA1 *e*PcP PcP 13 56 07.0 +0.3
GRA1 *e*PP PP 13 57 16.4 0.0
GRA1 LR LR
comp=Z,200nm,21.5s,MS4.2
GRF Grafenberg Arr 56.58 341 *e*P **P** **13 55 09.0 -1.3**
GRF *e**PP pP 13 55 12.3 -3.7
GRF *e* 13 56 07.0
GRF *e* 13 57 16.4
GRF pmax pmax
comp=Z,98nm,1.7s,mb5.6
GRF MLR MLR
comp=Z,200nm,21.5s,MS4.2
GRF Grafenberg Arr 56.58 341 *e*P **P** **13 55 09.0 -1.3**
comp=Z,98nm,1.7s,mb5.6
GRF *e*pP pP 13 55 12.3 -3.7
GRF *e*PcP PcP 13 56 07.0 +0.3
GRF *e*PP PP 13 57 16.4 0.0
GRF *e*L 14 18 57.2
comp=Z,175nm,21.5s
HINF Hinteralfeld 56.59 337 *e*P **P** **13 55 09.0 -1.4**
comp=Z,181nm,1.8s,mb5.5
HINF Hinteralfeld 56.59 337 *e*P **P** **13 55 09.0 -1.4**
HINF pmax pmax
comp=Z,90nm,1.8s,mb5.5
HINF Hinteralfeld 56.59 337 *e*P **P** **13 55 09.0 -1.4**
comp=Z,90nm,1.8s,mb5.5
EMIN Mina Concepcio 56.59 320 P **P** **13 55 09.5 -1.2**
comp=Z,35nm,0.9s,mb5.4
PYM Petit Puy Mans 56.60 333 *e*P **P** **13 55 12.3 +1.8**
EKS2 Erkin-Say 56.63 33 *e*P **P** **13 55 10.3 -0.4**
comp=Z,6.4nm,0.8s,mb4.7
EKS2 LR LR
comp=Z,478nm,21.0s,MS4.6
NKC Novy Kostel 56.66 342 *e*P **P** **13 55 10.7 -0.2**
NKC *e*PCP PcP 13 56 05.8 -1.2
UCH Uchtor 56.73 33 *e*P **P** **13 55 14.3 +2.8**
comp=Z,4.6nm,0.8s,mb4.6
GUN Gumba 56.75 54 *e*P **P** **13 55 10.6 -1.4**
comp=Z,294nm,1.2s,mb6.2
AGO Saint Agoulin 56.78 333 *e*P **P** **13 55 13.1 +1.3**
BRG Berggiesshubel 56.79 343 *e*P **P** **13 55 10.0 -1.7**
comp=Z,45nm,1.9s,mb5.2
BRG *e*PcP PcP 13 56 08.0 +0.6
BRG Berggiesshubel 56.79 343 *e*P **P** **13 55 11.9 +0.1**
comp=Z,14nm,1.8s,mb4.7
BRG *e* 13 56 08.1
comp=Z,14nm,1.3s
BRG *e* 13 57 09.1
comp=Z,28nm,1.8s
GUD Guadarrama 56.79 324 P **P** **13 55 10.2 -1.8**
GUD pmax pmax
comp=Z,176nm,2.4s,mb5.7
GUD Guadarrama 56.79 324 P **P** **13 55 10.2 -1.8**
comp=Z,176nm,2.4s,mb5.7
ECH Echery 56.79 337 *e*P **P** **13 55 11.6 -0.2**
ECH Echery 56.79 337 *e*P **P** **13 55 11.0 -0.8**
ECH pmax pmax
comp=Z,67nm,1.6s,mb5.4
ECH Echery 56.79 337 *e*P **P** **13 55 11.0 -0.8**
comp=Z,67nm,1.6s,mb5.4
TANN Tannenbergstha 56.82 342 *e*P **P** **13 55 10.8 -1.2**
comp=Z,130nm,2.1s,mb5.6
JIRN Jiri 56.90 54 *e*P **P** **13 55 11.4 -1.6**
comp=Z,64nm,0.8s,mb5.7
CDF Champ du Feu 56.91 337 *e*P **P** **13 55 11.2 -1.4**
comp=Z,132nm,1.6s,mb5.4
CDF Champ du Feu 56.91 337 *e*P **P** **13 55 11.2 -1.4**
CDF pmax pmax
comp=Z,66nm,1.6s,mb5.4
CDF Champ du Feu 56.91 337 *e*P **P** **13 55 11.2 -1.4**
comp=Z,66nm,1.6s,mb5.4
SMF Signal de Mont 56.91 334 *e*P **P** **13 55 11.7 -1.0**
comp=Z,152nm,1.6s,mb5.5
SMF Signal de Mont 56.91 334 *e*P **P** **13 55 11.7 -1.0**
SMF pmax pmax
comp=Z,76nm,1.6s,mb5.5
SMF Signal de Mont 56.91 334 *e*P **P** **13 55 11.7 -1.0**
comp=Z,76nm,1.6s,mb5.5
HAU Haudompre 56.94 337 *e*P **P** **13 55 11.5 -1.4**
comp=Z,32nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,398nm,18.2s,MS4.2
HAU Haudompre 56.94 337 *e*P **P** **13 55 11.5 -1.4**
HAU pmax pmax
comp=Z,16nm,0.9s,mb5.0
HAU MLR MLR
comp=Z,400nm,18.3s,MS4.5
HAU Haudompre 56.94 337 *e*P **P** **13 55 11.5 -1.4**
comp=Z,16nm,0.9s,mb5.0
HAU LR LR
comp=Z,400nm,18.3s,MS4.5
RAMN Ramite 56.95 55 *e*P **P** **13 55 11.9 -1.5**
RJF Les Rejaudoux 56.97 331 *e*P **P** **13 55 12.8 -0.3**
comp=Z,268nm,1.8s,mb5.7
RJF *e*MLR MLR
comp=Z,618nm,19.8s,MS4.4
RJF Les Rejaudoux 56.97 331 *e*P **P** **13 55 12.8 -0.3**
RJF pmax pmax
comp=Z,134nm,1.8s,mb5.7
RJF MLR MLR
comp=Z,620nm,19.8s,MS4.7
RJF Les Rejaudoux 56.97 331 *e*P **P** **13 55 12.8 -0.3**
comp=Z,134nm,1.8s,mb5.7
RJF LR LR
comp=Z,620nm,19.8s,MS4.7
EGRO El Granado 56.98 319 P **P** **13 55 12.8 -0.6**
comp=Z,18nm,3.8s
ELIZ Elizondo 56.98 328 P **P** **13 55 13.5 +0.2**
ELIZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ELIZ Elizondo 56.98 328 P **P** **13 55 13.5 +0.2**
comp=Z,4.7nm,0.7s,mb4.6
AAK Ala-Archa 57.00 33 P **P** **13 55 16.6 +3.2**
comp=Z,88nm,1.3s,mb5.6,SNR=6.1
AAK Ala-Archa 57.00 33⇑ *e*P **P** **13 55 15.3 +1.9**
AAK pmax pmax
comp=Z,17nm,1.6s,mb4.8
AAK MLR MLR
comp=Z,600nm,24.0s,MS4.6
AAK Ala-Archa 57.00 33 P **P** **13 55 15.8 +2.4**
SNR=7.6
AAK Ala-Archa 57.00 33 *e*P **P** **13 55 13.0 -0.4**
comp=Z,13nm,0.8s,mb5.0
AAK LR LR
comp=Z,558nm,19.0s,MS4.7
EALK Alkurruntz 57.01 328 P **P** **13 55 11.5 -2.0**
comp=Z,8.5nm,0.9s,mb4.8
KZA Kyzart 57.04 34 P **P** **13 55 17.0 +3.2**
SNR=6.5
PVAQ Vaqueiros 57.06 319 *e*LR LR 14 16 32.5
comp=Z,503nm,18.0s
PBAR Barrancos 57.06 320 *e*P **P** **13 55 16.7 +2.7**
comp=Z,28nm,1.7s,mb5.0
LFF La Frestale 57.08 331 *e*P **P** **13 55 13.4 -0.5**
LANF Langenberg 57.17 338 *e*P **P** **13 55 14.6 +0.1**
AVF Avril sur Loir 57.24 334 *e*P **P** **13 55 14.0 -1.0**
comp=Z,174nm,1.6s,mb5.5
AVF Avril sur Loir 57.24 334 *e*P **P** **13 55 14.0 -1.0**
AVF pmax pmax
comp=Z,87nm,1.6s,mb5.5
AVF Avril sur Loir 57.24 334 *e*P **P** **13 55 14.0 -1.0**
comp=Z,87nm,1.6s,mb5.5
KBK Karagaybulak 57.26 33 P **P** **13 55 18.2 +2.9**
SNR=24
THEF They Montfort 57.26 336 *e*P **P** **13 55 15.2 0.0**
MOX Moxa 57.28 342 *e*P **P** **13 55 14.0 -1.3**
comp=Z,64nm,1.9s,mb5.3
MOX *e* 13 56 09.5
MOX
comp=Z,300nm,20.0s
MOX Moxa 57.28 342 *e*P **P** **13 55 14.0 -1.3**
MOX *e* 13 56 09.5
MOX pmax pmax
comp=Z,64nm,1.9s,mb5.3
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.4
MOX Moxa 57.28 342 *e*P **P** **13 55 13.9 -1.4**
comp=Z,67nm,1.8s,mb5.4
MOX *e*PcP PcP 13 56 09.9 +0.5
BGF Bois d'Agland 57.29 333 *e*P **P** **13 55 14.5 -0.9**
comp=Z,39nm,1.1s,mb5.1
BGF Bois d'Agland 57.29 333 *e*P **P** **13 55 14.5 -0.9**
BGF pmax pmax
comp=Z,20nm,1.0s,mb5.1
BGF Bois d'Agland 57.29 333 *e*P **P** **13 55 14.5 -0.9**
comp=Z,20nm,1.0s,mb5.1
TOD Tromm 57.33 339 *e*P **P** **13 55 15.0 -0.6**
TCF Toulx Ste Croi 57.38 333 *e*P **P** **13 55 15.8 -0.2**
comp=Z,314nm,1.6s,mb5.8
TCF Toulx Ste Croi 57.38 333 *e*P **P** **13 55 15.8 -0.2**
TCF pmax pmax
comp=Z,157nm,1.6s,mb5.8
TCF Toulx Ste Croi 57.38 333 *e*P **P** **13 55 15.8 -0.2**
comp=Z,157nm,1.6s,mb5.8
SSF Saint Saulge 57.38 334 *e*P **P** **13 55 14.8 -1.2**
comp=Z,81nm,1.7s,mb5.2
SSF Saint Saulge 57.38 334 *e*P **P** **13 55 14.8 -1.2**
SSF pmax pmax
comp=Z,41nm,1.7s,mb5.2
SSF Saint Saulge 57.38 334 *e*P **P** **13 55 14.8 -1.2**
comp=Z,41nm,1.7s,mb5.2
CHMS Chumysh 57.38 33 P **P** **13 55 18.1 +2.0**
SNR=8.2
EBAD Badajoz 57.39 321 P **P** **13 55 14.7 -1.6**
comp=Z,20nm,1.0s,mb5.1
LOR Lormes 57.39 334 *e*P **P** **13 55 15.0 -1.1**
comp=Z,122nm,1.5s,mb5.4
LOR *e*MLR MLR
comp=Z,286nm,19.2s,MS4.1
LOR Lormes 57.39 334 *e*P **P** **13 55 15.0 -1.1**
LOR pmax pmax
comp=Z,61nm,1.5s,mb5.4
LOR MLR MLR
comp=Z,290nm,19.3s,MS4.4
LOR Lormes 57.39 334 *e*P **P** **13 55 15.0 -1.1**
comp=Z,61nm,1.5s,mb5.4
LOR LR LR
comp=Z,290nm,19.3s,MS4.4
USP Ospenovka 57.43 33 P **P** **13 55 18.0 +1.6**
SNR=8.7
CLL Collm 57.45 343 *e*P **P** **13 55 15.0 -1.4**
CLL *e* 13 56 07.0
CLL pmax pmax
comp=Z,49nm,1.6s,mb5.3
CLL pmax pmax
comp=Z,23nm,1.5s,mb5.0
CLL MLR MLR
comp=Z,300nm,20.3s,MS4.4
CLL Collm 57.45 343 *e*P **P** **13 55 14.6 -1.8**
comp=Z,50nm,1.6s,mb5.3
CLL Collm 57.45 343 *e*P **P** **13 55 15.0 -1.4**
comp=Z,49nm,1.6s,mb5.3
CLL *e*PcP PcP 13 56 07.0 -3.0
comp=Z,23nm,1.5s
CLL *e*PP PP 13 57 20.0 -4.1
CLL *e*(SS) 14 07 12.0
CLL LV 14 20 00.0
comp=Z,300nm,20.3s
CLL Collm 57.45 343 *e*P **P** **13 55 15.0 -1.4**
comp=Z,49nm,1.6s,mb5.3
CLL *e*PcP PcP 13 56 07.0 -3.0
CLL LR LR
comp=Z,300nm,20.3s,MS4.4
ODAN Odare 57.57 56 *e*P **P** **13 55 16.8 -1.0**
comp=Z,61nm,1.2s,mb5.5
MORF Marmelete 57.63 318 *e*LR LR 14 18 12.8
comp=Z,354nm,18.0s
SUW Suwalki 57.68 351 *e*P **P** **13 55 18.1 +0.1**
SUW Suwalki 57.68 351 *e*P **P** **13 55 18.1 +0.1**
OBN Obninsk 57.76 0 *e*P **P** **13 55 19.3 +0.8**
OBN *i* 13 56 10.4
OBN *i* S **S** **14 03 22.9 +6.3**
OBN pmax pmax
comp=Z,15nm,0.5s,mb5.3
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.3
TKM2 Tokmak 2 57.79 33 *e*P **P** **13 55 17.8 -1.2**
TKM2 pmax pmax
comp=Z,53nm,1.0s,mb5.5
TKM2 Tokmak 2 57.79 33 P **P** **13 55 21.4 +2.4**
SNR=11
TKM2 Tokmak 2 57.79 33 *e*P **P** **13 55 17.8 -1.3**
comp=Z,52nm,1.0s,mb5.5
PESTR Estremoz 57.82 320 *e*P **P** **13 55 18.8 -0.5**
comp=Z,43nm,1.2s,mb5.3
PESTR *e*LR LR 14 17 29.1
comp=Z,568nm,16.0s
MEZF Maizieres J'vi 57.86 336 *e*P **P** **13 55 18.8 -0.5**
comp=Z,386nm,1.8s,mb5.8
MEZF Maizieres J'vi 57.86 336 *e*P **P** **13 55 18.8 -0.5**
comp=Z,386nm,1.8s,mb6.1

EVO Evora 57.90 320 *e*P **P 13 55 19.1 -0.7**
comp=Z,42nm,0.9s,mb5.2
EVO *e*MLR MLR
comp=Z,679nm,19.8s,MS4.5
EVO Evora 57.90 320 *e*P **P 13 55 20.1 +0.3**
comp=Z,41nm,1.9s,mb5.1
HYF Humbligny 57.92 334 *e*P **P 13 55 18.9 -0.9**
TNS Taunus Mts 57.98 339 *e*P **P 13 55 19.1 -1.0**
TNS pmax pmax
comp=Z,88nm,1.6s,mb5.5
TNS Taunus Mts 57.98 339 *e*P **P 13 55 19.1 -1.0**
comp=Z,88nm,1.6s,mb5.5
ABH Alteburg 58.01 339 *e*P **P 13 55 20.2 -0.2**
PMRV Marv??o 58.02 321 *e*P **P 13 55 21.3 +0.6**
comp=Z,27nm,0.9s,mb5.3
PMRV *e*LQ 14 15 40.0
PMRV *e*LR LR 14 17 22.4
comp=Z,533nm,16.0s
TAPN Taplejung 58.02 55 *e*P **P 13 55 19.7 -1.2**
comp=Z,77nm,1.0s,mb5.7
RUP Ruppelstein 58.05 338 *e*P **P 13 55 20.6 0.0**
RUE Ruedersdorf 58.27 344 *e*P **P 13 55 20.8 -1.4**
comp=Z,26nm,0.9s,mb5.3
PCBR Castelo Branco 58.31 321 *e*P **P 13 55 23.3 +0.6**
comp=Z,27nm,2.0s,mb4.9
WLF Walferdange 58.36 338 P **P 13 55 21.8 -1.0**
comp=Z,38nm,2.0s,mb5.1
WLF Walferdange 58.36 338 P **P 13 55 23.7 +0.9**
WLF pmax pmax
comp=Z,21nm,1.1s,mb5.1
WLF Walferdange 58.36 338 *e*P **P 13 55 22.0 -0.8**
comp=Z,135nm,1.8s,mb5.7
WLF Walferdange 58.36 338 P **P 13 55 23.7 +0.9**
comp=Z,21nm,1.1s,mb5.1
MTE Manteigas 58.68 322 *e*LQ 14 15 43.6
MTE *e*LR LR 14 18 21.9
comp=Z,1µm,16.0s
MFF Saint Martin d 58.71 331 *e*P **P 13 55 24.6 -0.7**
comp=Z,147nm,1.7s,mb5.4
MFF Saint Martin d 58.71 331 *e*P **P 13 55 24.6 -0.7**
MFF pmax pmax
comp=Z,73nm,1.7s,mb5.4
MFF Saint Martin d 58.71 331 *e*P **P 13 55 24.6 -0.7**
comp=Z,73nm,1.7s,mb5.4
CLZ Clausthal 58.71 342 *e*P **P 13 55 24.1 -1.2**
CLZ *e* 13 56 14.8
CLZ pmax pmax
comp=Z,50nm,2.0s,mb5.2
CLZ Clausthal 58.71 342 *e*P **P 13 55 24.1 -1.2**
comp=Z,50nm,2.0s,mb5.2
CLZ *e*PcP PcP 13 56 14.8 -0.2
MVO Moncorvo 58.83 323 *e*P **P 13 55 26.6 +0.3**
comp=Z,32nm,1.3s,mb5.2
MVO *e*LQ 14 15 37.3
MVO *e*LR LR 14 17 58.3
comp=Z,476nm,14.0s
PMAFR Mafra 58.95 320 *e*LR LR 14 18 36.1
comp=Z,453nm,18.0s
MEM Membach 59.18 338 P **P 13 55 28.6 +0.1**
comp=Z,30nm,2.3s,mb4.9
GIVF Givet 59.22 337 *e*P **P 13 55 27.6 -1.2**
comp=Z,127nm,1.5s,mb5.4
GIVF Givet 59.22 337 *e*P **P 13 55 27.6 -1.2**
GIVF pmax pmax
comp=Z,63nm,1.5s,mb5.4
GIVF Givet 59.22 337 *e*P **P 13 55 27.6 -1.2**
comp=Z,63nm,1.5s,mb5.4
BCLA Clavier 59.29 338 P **P 13 55 29.2 -0.1**
comp=Z,56nm,2.1s,mb5.2
DOU Dourbes 59.30 337 P **P 13 55 30.7 +1.3**
PVRL Vila Real 59.31 323 *e*P **P 13 55 31.4 +1.8**
HGN Heimansgroeve 59.33 338 *e*P **P 13 55 28.6 -1.0**
comp=Z,39nm,2.4s,mb5.0
HGN Heimansgroeve 59.33 338 *e*S **S 14 03 44.3 +7.1**
HGN Heimansgroeve 59.33 338 *e*SS SS 14 07 42.3 +10
NRDL Niedersach Rie 59.36 342 *e*P **P 13 55 29.0 -0.7**
comp=Z,101nm,1.7s,mb5.6
BUG Bochum--Univer 59.41 339 *e*P **P 13 55 29.4 -0.7**
comp=Z,102nm,1.5s,mb5.6
BAIF Baives 59.43 337 *e*P **P 13 55 28.9 -1.4**
comp=Z,123nm,1.8s,mb5.3
BAIF Baives 59.43 337 *e*P **P 13 55 28.9 -1.4**
BAIF pmax pmax
comp=Z,61nm,1.8s,mb5.3
BAIF Baives 59.43 337 *e*P **P 13 55 28.9 -1.4**
comp=Z,62nm,1.8s,mb5.3
SNF Seneffe 59.75 337 P **P 13 55 32.6 +0.1**
comp=Z,54nm,2.0s,mb5.2
UCC Uccle 59.95 337 P **P 13 55 33.6 -0.2**
comp=Z,60nm,2.0s,mb5.3
IBBN Ibbenburen 59.96 340 *e*P **P 13 55 33.3 -0.6**
comp=Z,94nm,1.5s,mb5.6
WTSB Winterswijk 60.01 340 *e*P **P 13 55 33.9 -0.3**
comp=Z,118nm,2.0s,mb5.6
LDF La Druitiere 60.15 333 *e*P **P 13 55 34.1 -1.1**
comp=Z,118nm,1.4s,mb5.4
LDF La Druitiere 60.15 333 *e*P **P 13 55 34.1 -1.1**
LDF pmax pmax
comp=Z,59nm,1.4s,mb5.4
LDF La Druitiere 60.15 333 *e*P **P 13 55 34.1 -1.1**
comp=Z,59nm,1.4s,mb5.4
GRR Gorron 60.33 333 *e*P **P 13 55 35.3 -1.2**
comp=Z,134nm,1.5s,mb5.5
GRR Gorron 60.33 333 *e*P **P 13 55 35.3 -1.2**
GRR pmax pmax
comp=Z,67nm,1.5s,mb5.5
GRR Gorron 60.33 333 *e*P **P 13 55 35.3 -1.2**
comp=Z,67nm,1.5s,mb5.5
BSD Bornholm Skovb 60.36 346 *i* P **P 13 55 36.5 -0.1**
BSD pmax pmax
comp=Z,25nm,0.9s,mb5.2
BSD Bornholm Skovb 60.36 346 *i* P **P 13 55 36.5 -0.1**
comp=Z,25nm,0.9s,mb5.2
FLN La Foliniere 60.43 333 *e*P **P 13 55 36.0 -1.2**
FLN *e*MLR MLR
comp=Z,481nm,22.2s,MS4.3
FLN La Foliniere 60.43 333 *e*P **P 13 55 36.0 -1.2**
FLN LR LR
comp=Z,480nm,22.3s,MS4.6
BSEG Bad Segeberg 60.54 343 *e*P **P 13 55 36.6 -1.2**
BSEG *e* 13 56 22.3
BSEG pmax pmax
comp=Z,98nm,1.6s,mb5.7
BSEG Bad Segeberg 60.54 343 *e*P **P 13 55 36.6 -1.2**
comp=Z,98nm,1.6s,mb5.7
BSEG *e*PcP PcP 13 56 22.3 0.0
MENF Mencas 60.64 336 *e*P **P 13 55 38.8 +0.2**
WIT Witteveen 60.75 340 *e*P **P 13 55 42.3 +3.0**
comp=Z,432nm,1.9s,mb6.3
SHL Shillong 60.88 59 *e*P **P 13 55 41.0 +0.3**
SGMF Saint Gilles 61.03 331 *e*P **P 13 55 40.0 -1.3**
comp=Z,149nm,1.5s,mb5.6
SGMF Saint Gilles 61.03 331 *e*P **P 13 55 40.0 -1.3**
SGMF pmax pmax
comp=Z,74nm,1.5s,mb5.6
SGMF Saint Gilles 61.03 331 *e*P **P 13 55 40.0 -1.3**
comp=Z,74nm,1.5s,mb5.6
QUIF Quistinic 61.09 331 *e*P **P 13 55 40.9 -0.8**
comp=Z,85nm,1.4s,mb5.4
QUIF Quistinic 61.09 331 *e*P **P 13 55 40.9 -0.8**
QUIF pmax pmax
comp=Z,43nm,1.4s,mb5.4
QUIF Quistinic 61.09 331 *e*P **P 13 55 40.9 -0.8**
comp=Z,42nm,1.4s,mb5.4
ROSF Rostrenen 61.44 331 *e*P **P 13 55 42.4 -1.6**
comp=Z,132nm,1.6s,mb5.5
ROSF Rostrenen 61.44 331 *e*P **P 13 55 42.4 -1.6**
ROSF pmax pmax
comp=Z,66nm,1.6s,mb5.5
ROSF Rostrenen 61.44 331 *e*P **P 13 55 42.4 -1.6**
comp=Z,66nm,1.6s,mb5.5
LSA Lhasa 61.71 54 P **P 13 55 45.8 -0.5**
LSA S **S 14 04 02.8 -5.7**
LSA AMB AMB
comp=Z,20nm,1.3s,mb5.1
LSA AMB AMB
comp=Z,140nm,4.6s
LSA LR LR
comp=N,250nm,21.4s,MS4.6
LSA LR LR
comp=E,410nm,20.2s,MS4.6
LSA LR LR
comp=Z,650nm,21.4s,MS4.8
LSA Lhasa 61.71 54 *e*P **P 13 55 45.9 -0.4**
LSA pmax pmax
comp=Z,52nm,1.5s,mb5.4
LSA Lhasa 61.71 54 *e*P **P 13 55 45.9 -0.3**
comp=Z,52nm,1.5s,mb5.4
ARU Arti 61.84 14 P **P 13 55 45.3 -1.3**
comp=Z,216nm,1.6s,mb6.0,SNR=6.3
ARU Arti 61.84 14 *d i*P **P 13 55 45.3 -1.3**
ARU *e* 13 56 26.4
ARU *e* 13 58 03.5
ARU *e*PPP 13 59 26.9
ARU *e*S **S 14 04 10.4 +1.2**
ARU *e*SS SS 14 08 13.4 +1.9
ARU pmax pmax
comp=Z,87nm,1.7s,mb5.6
ARU MLR MLR
comp=Z,762nm,20.0s,MS4.8
ARU Arti 61.84 14 *e*P **P 13 55 45.4 -1.2**
comp=Z,103nm,1.5s,mb5.7
BRVK Borovoye 62.64 22 P **P 13 55 53.9 +1.9**
SNR=6.5
BRVK Borovoye 62.64 22 *e*P **P 13 55 53.0 +1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BRVK MLR MLR
comp=Z,490nm,20.0s,MS4.7
BRVK Borovoye 62.64 22 *e*P **P 13 55 53.0 +1.0**
comp=Z,9.2nm,1.1s,mb4.8
BRVK LR LR
comp=Z,490nm,20.0s,MS4.7
SVE Sverdlovsk 62.71 15⇑ *e*P **P 13 55 52.1 -0.3**
SVE *e*S **S 14 04 16.5 -3.6**
SVE *e* 14 05 42.0
SVE pmax pmax
comp=Z,61nm,1.5s,mb5.5
SVE MLR MLR
comp=Z,635nm,16.0s,MS4.9
KLMR Klimovskoe 63.57 2 *e*P **P 13 55 55.7 -2.3**
KLMR pmax pmax
comp=Z,92nm,1.7s,mb5.5
MKAR Makanchi Array 63.92 33 P **P 13 55 59.2 -1.5**
comp=Z,30nm,0.9s,mb5.3,baz=231,slow=6.8,SNR=45
MKAR PcP PcP 13 56 35.0 -1.2
comp=Z,3.8nm,0.7s,baz=232,slow=7.0,SNR=2.0
MKAR LR LR 14 27 36.3
comp=Z,502nm,18.3s,MS4.7,baz=240,slow=40
MKAR Makanchi Array 63.92 33 P **P 13 55 59.2 -1.5**
MKAR 13 56 35.0
MKAR Makanchi Array 63.92 33 P **P 13 55 59.2 -1.5**
MKAR PcP PcP 13 56 35.0 -1.2
MKAR LR LR 14 27 36.3
SOKR Solikamsk 64.32 11 *c i*P **P 13 56 06.6 +3.6**
SOKR pmax pmax
comp=Z,80nm,1.7s,mb5.5
SOKR MLR MLR
comp=Z,500nm,17.0s,MS4.8
KURK Kurchatov 64.52 28 P **P 13 56 03.3 -1.2**
comp=Z,201nm,0.9s,mb6.2,SNR=6.4
KURK Kurchatov 64.52 28 P **P 13 56 07.0 +2.5**
SNR=14
KURK Kurchatov 64.52 28⇑ *e*P **P 13 56 03.6 -0.9**
KURK pmax pmax
comp=Z,18nm,1.7s,mb4.8
KURK MLR MLR
comp=Z,2µm,25.0s,MS5.1
KURK Kurchatov 64.52 28 *e*P **P 13 56 02.7 -1.8**
comp=Z,37nm,1.0s,mb5.4
HFS Hagfors 65.21 348 P **P 13 56 08.9 +0.1**
comp=Z,8.5nm,0.9s,mb4.8,baz=156,slow=7.5,SNR=9.2
KAF Kangasniemi 65.22 355 *e*p **P 13 56 07.7 -1.1**
comp=Z,24nm,0.9s,mb5.2
KAF Kangasniemi 65.22 355 *e*P **P 13 56 07.7 -1.1**
KAF pmax pmax
comp=Z,24nm,0.9s,mb5.2
CMAR Chiang Mai Arr 65.31 68 P **P 13 56 09.9 -0.4**
comp=Z,23nm,1.0s,mb5.2,baz=258,slow=7.7,SNR=142
CMAR LR LR 14 26 35.3
comp=Z,143nm,18.7s,MS4.2,baz=63,slow=38
CMAR Chiang Mai Arr 65.31 68 P **P 13 56 09.9 -0.4**
CMAR LR LR 14 26 35.3
CHG Chiang Mai 65.38 68 ⇓P **P 13 56 09.8 -0.9**
comp=Z,2.8nm,1.2s,mb4.2
CHTO Chiang Mai 65.38 68 P **P 13 56 10.4 -0.4**
SNR=18
CHTO Chiang Mai 65.38 68 *e*P **P 13 56 09.9 -0.8**
CHTO pmax pmax
comp=Z,30nm,1.1s,mb5.2
CHTO Chiang Mai 65.38 68 *e*P **P 13 56 09.9 -0.9**
comp=Z,30nm,1.1s,mb5.2
WMQ Urumqi 65.45 39 P **P 13 56 10.4 -0.3**
WMQ AP pP 13 56 14.0 -2.5
WMQ PCP PcP 13 56 41.5 -1.1
WMQ PP PP 13 58 37.8 +2.9
WMQ PPP 14 00 11.8
WMQ S S 14 04 54.0 -0.6
WMQ XS sS 14 05 00.6 -3.6
WMQ SCS ScS 14 06 02.8 -2.7
WMQ AMB AMB
comp=Z,55nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,384nm,5.5s
WMQ LR LR
comp=N,287nm,18.0s,MS4.7
WMQ LR LR
comp=E,400nm,23.0s,MS4.7
WMQ LR LR
comp=Z,382nm,26.0s,MS4.5
JOF Joensuu 65.69 358 *e*p **P 13 56 09.8 -2.1**
comp=Z,6.0nm,0.7s,mb4.7
JOF Joensuu 65.69 358 *e*P **P 13 56 09.8 -2.1**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
NST Nakhon Sawan 65.88 72 P **P 13 56 14.0 0.0**
SYO Syowa Base 66.09 179⇑ *i*P **P 13 56 15.0 +0.6**
SYO Syowa Base 66.09 179⇓ *i*pP pP 13 56 19.2 -1.0
NOA NORSAR Array B 66.56 347 P **P 13 56 17.5 0.0**
comp=Z,4.9nm,0.9s,mb4.5,baz=151,slow=6.0,SNR=6.2
NOA LR LR 14 26 26.9
comp=Z,137nm,21.8s,MS4.1,baz=115,slow=37
MAW Mawson 67.21 169 P **P 13 56 22.9 +1.4**
comp=Z,47nm,0.8s,mb5.5,baz=323,slow=7.2,SNR=41
MAW LR LR 14 22 53.9
comp=Z,378nm,18.8s,MS4.6,baz=333,slow=33
MAW Mawson 67.21 169 *e*P **P 13 56 22.6 +1.1**
MAW pmax pmax
comp=Z,11nm,0.9s
MAW Mawson 67.21 169 *e*P **P 13 56 22.8 +1.3**
comp=Z,38nm,0.8s,mb5.5
MAW Mawson 67.21 169 *e*P **P 13 56 22.6 +1.1**
comp=Z,11nm,0.9s,mb4.9
NVS Novosibirsk 69.33 27 *e*P **P 13 56 33.6 -1.4**
NVS pmax pmax
comp=N,57nm,1.6s
NVS pmax pmax
comp=E,19nm,1.6s
NVS pmax pmax
comp=Z,74nm,1.6s,mb5.4
ZAA0 Zalesovo Array 69.51 28 *e*P **P 13 56 33.9 -2.2**
ZALV Zalesovo Beam 69.51 28 P **P 13 56 34.0 -2.2**
comp=Z,16nm,0.9s,mb5.0,baz=243,slow=4.8,SNR=37
ZALV LR LR 14 30 43.1
comp=Z,575nm,18.2s,MS4.9,baz=240,slow=39
CMLA Cha da Macela 69.78 312 *e*LR LR 14 18 32.8
KMI Kunming 70.20 62 P **P 13 56 39.3 -1.7**
KMI AP pP 13 56 48.6 +1.7
KMI XP sP 13 56 52.6 +3.6
KMI PP PP 13 59 16.3 -0.3
KMI PPP 14 00 58.8
KMI S S 14 05 50.0 -2.2
KMI SS SS 14 10 25.6 +2.9
KMI SSS 14 13 31.9
KMI AMB AMB
comp=Z,19nm,1.5s,mb4.8
KMI AMB AMB
comp=Z,144nm,4.3s
KMI LR LR
comp=N,220nm,21.0s
KMI LR LR
comp=E,186nm,29.9s
KMI LR LR
comp=Z,262nm,29.9s
GTA Gaotai 71.83 47 ⇓P **P 13 56 49.9 -0.7**
GTA AP pP 13 56 53.5 -3.0
GTA XP sP 13 56 55.0 -3.6
GTA S S 14 06 09.0 -1.5
GTA XS sS 14 06 17.8 -2.4
GTA SS SS 14 10 48.3 +1.3
GTA AMB AMB
comp=Z,14nm,1.3s,mb4.7
GTA AMB AMB
comp=Z,197nm,4.5s
GTA LR LR
comp=N,236nm,18.6s,MS4.7
GTA LR LR
comp=E,297nm,21.6s,MS4.7
GTA LR LR
comp=Z,462nm,18.0s,MS4.8
CD2 Chengdu 72.44 56 P **P 13 56 53.8 -0.7**
CD2 PCP PcP 13 57 11.6 -0.7
CD2 PP PP 13 59 37.3 +1.5
CD2 S S 14 06 18.4 +0.4
CD2 SKS 14 06 55.3
CD2 SS SS 14 10 59.4 +2.5
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,130nm,4.4s
CD2 LR LR
comp=N,300nm,16.2s
CD2 LR LR
comp=Z,300nm,10.8s
ARCES ARCESS Array B 72.60 356 P **P 13 56 53.4 -1.2**
comp=Z,8.3nm,0.7s,mb4.8,baz=170,slow=6.1,SNR=25
ARCES LR LR 14 30 36.3
comp=Z,319nm,19.3s,MS4.6,baz=175,slow=37
KEV Kevo 72.72 357 *e*p **P 13 56 53.3 -2.0**
comp=Z,5.2nm,0.6s,mb4.6
KEV Kevo 72.72 357 *e*P **P 13 56 53.3 -2.0**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
SNAA Sanae 72.99 192 *e*P **P 13 56 59.1 +2.1**
SNAA *e* pP 13 57 05.5 +2.7
SNAA Sanae 72.99 192 *e*P **P 13 56 58.8 +1.8**
SNAA pmax pmax
comp=Z,61nm,1.6s
SNAA Sanae 72.99 192 *e*P **P 13 56 58.8 +1.8**
comp=Z,61nm,1.6s,mb5.3
VNA2 Neumayer--Watz 73.46 194 *e*P **P 13 57 02.3 +2.6**
VNA2 *e* pP 13 57 08.0 +2.4
VNA2 *e* 13 57 11.0
VNA1 Neumayer--Stat 73.48 194 *e*P **P 13 57 02.9 +3.1**
VNA1 *e* pP 13 57 08.5 +2.8
VNA1 *e* 13 57 11.5
LZH Lanzhou 73.86 51⇑ P **P 13 57 02.8 0.0**
LZH AP pP 13 57 06.1 -2.5
LZH XP sP 13 57 07.3 -3.5
LZH PP PP 13 59 49.8 +2.0
LZH S S 14 06 32.5 -1.4
LZH XS sS 14 06 40.3 -3.3
LZH SS SS 14 11 20.1 +1.8
LZH AMB AMB
comp=Z,52nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,245nm,7.3s
LZH LR LR
comp=N,612nm,14.5s
LZH LR LR
comp=Z,769nm,18.0s,MS5.0
GYA Guiyang 73.94 62⇑ *i*P **P 13 57 04.8 +1.4**
GYA PCP PcP 13 57 22.0 +3.2
GYA PP PP 13 59 52.4 +3.7
GYA PPP 14 01 37.3
GYA S S 14 06 36.9 +1.8
GYA SKS 14 07 07.1
GYA SS SS 14 11 23.0 +3.1
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,160nm,5.6s
GYA LR LR
comp=N,1µm,20.4s,MS5.3
GYA LR LR
comp=E,850nm,19.7s,MS5.3
GYA LR LR
comp=Z,1µm,20.0s,MS5.3
VNA3 Neumayer Olymp 74.22 194 *e*P **P 13 57 06.4 +2.2**
VNA3 *e* pP 13 57 12.2 +2.1
VNA3 *e* 13 57 15.2
KSM Kuching 74.27 88 *e*P **P 13 57 05.6 -0.1**
comp=Z,71nm,1.1s,mb5.5
MOY Mondy 76.95 35 *e*P **P 13 57 20.9 +0.7**
XAN Xi'an 77.41 54 P **P 13 57 22.3 -0.9**
XAN AP pP 13 57 26.5 -2.6
XAN PP PP 14 00 17.0 -0.8
XAN S S 14 07 08.9 -4.3
XAN SKS 14 07 29.0
XAN SS SS 14 12 08.5 -3.7
XAN AMB AMB
comp=Z,17nm,0.9s,mb5.0
XAN AMB AMB
comp=Z,141nm,6.8s
XAN LR LR
comp=N,141nm,14.2s,MS4.7
XAN LR LR
comp=E,228nm,13.7s,MS4.7
XAN LR LR
comp=Z,268nm,14.2s,MS4.7
ZAK Zakamensk 77.85 37 *e*P **P 13 57 24.9 -0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
GIRL Giralia 77.92 112 *e*P **P 13 57 27.2 +0.9**
comp=Z,653nm,1.0s,mb6.5
TLY Talaya 78.50 36 P **P 13 57 30.0 +1.2**
SNR=5.0
TLY Talaya 78.50 36 *e*P **P 13 57 29.1 +0.3**
TLY *e*S S 14 07 34.4 +10
TLY *e*SS SS 14 12 33.4 +5.5
TLY pmax pmax
comp=Z,19nm,1.4s,mb4.8
TLY MLR MLR
comp=Z,624nm,14.0s,MS5.1
SONM Songino Array 79.00 40 P **P 13 57 32.6 +1.0**
comp=Z,9.2nm,0.8s,mb4.7,baz=254,slow=4.8,SNR=30
SONM LR LR 14 33 25.6
comp=Z,366nm,21.0s,MS4.7,baz=236,slow=36
ULN Ulaanbaatar 79.43 40 P **P 13 57 34.4 +0.4**
SNR=6.2
ULN Ulaanbaatar 79.43 40 *d i*P **P 13 57 33.9 -0.1**
ULN Ulaanbaatar 79.43 40 *e*P **P 13 57 33.8 -0.2**
comp=Z,11nm,0.9s,mb4.8
ULN LR LR
comp=Z,317nm,19.0s,MS4.7
BTO Baotou 79.68 48 *e*P **P 13 57 35.8 +0.3**
MORW Morawa 79.80 119 *e*P **P 13 57 36.3 -0.1**
comp=Z,35nm,1.4s,mb5.1
HHC Hu-ho-hao-te 80.88 48 *e*P **P 13 57 42.9 +0.9**
HHC AP pP 13 57 46.3 -1.6
HHC XP sP 13 57 49.5 -0.6
HHC PP PP 14 00 50.3 +3.7
HHC *e*S S 14 07 50.1 +0.2
HHC SKS 14 07 55.9
HHC AMB AMB
comp=Z,52nm,0.8s,mb5.5
HHC AMB AMB
comp=Z,189nm,4.9s
HHC LR LR
comp=N,248nm,19.0s,MS4.7
HHC LR LR
comp=E,239nm,20.2s,MS4.7
HHC LR LR
comp=Z,319nm,16.7s,MS4.8
NWAO Narrogin (SRO) 80.98 123 *e*P **P 13 57 42.6 -0.2**
comp=Z,64nm,0.7s,mb5.7
CASY Casey 81.15 157 *e*P **P 13 57 44.7 +1.7**
comp=Z,66nm,1.3s,mb5.4
CASY LR LR
comp=Z,594nm,20.0s,MS4.9
WHN Wuhan 81.31 59 ⇓P **P 13 57 44.3 -0.2**
MEEK Meekatharra 82.01 116 *e*P **P 13 57 48.2 -0.1**
comp=Z,37nm,1.2s,mb5.2
MBWA Marble Bar 83.01 111 *e*P **P 13 57 53.7 +0.1**
BDFB Brasilia 83.61 255 P **P 13 57 58.4 +1.6**
comp=Z,6.0nm,1.0s,mb4.7,baz=61,slow=10,SNR=16
BDFB LR LR 14 31 10.5
comp=Z,174nm,18.4s,MS4.5,baz=113,slow=33
BJI Beijing 84.20 49 P **P 13 57 59.4 +0.1**
BJI S S 14 08 24.0 +0.1
BJI SS SS 14 13 53.4 0.0
BJI AMB AMB
comp=Z,17nm,1.3s,mb5.0
BJI AMB AMB
comp=Z,94nm,3.9s
BJI LR LR

	comp=N,235nm,18.8s								
BJI					LR	LR			
	comp=E,263nm,13.2s								
BJI					LR	LR			
	comp=Z,262nm,25.1s								
TIA	**Tai'an**	**84.40**	**53**	*eP*	**P**		**13 58 00.4**	**-0.1**	
DAG	**Danmarks Havn**	**85.15**	**349⇑**	*eP*	**P**		**13 58 03.1**	**-0.3**	
DAG				pmax	pmax				
	comp=Z,94nm,1.5s,mb5.7								
DAG	**Danmarks Havn**	**85.15**	**349⇑**	*iP*	**P**		**13 58 03.1**	**-0.3**	
	comp=Z,94nm,1.5s,mb5.7								
DAG	**Danmarks Havn**	**85.15**	**349⇑**	*eP*	**P**		**13 58 03.1**	**-0.3**	
	comp=Z,94nm,1.5s,mb5.7								
NJ2	**Nanjing**	**85.33**	**58**	*eP*	**P**		**13 58 05.6**	**+0.4**	
NJ2				AMB	AMB				
	comp=Z,120nm,1.1s,mb5.9								
BOD	**Bodaibo**	**85.95**	**32**	*eP*	**P**		**13 58 06.7**	**-1.0**	
BOD				pmax	pmax				
	comp=Z,32nm,0.9s,mb5.5								
QSPA	**South Pole Qui**	**87.19**	**180**	LR	LR		14 33 22.5		
	comp=Z,433nm,20.5s,MS4.8,baz=75,slow=33								
QSPA	**South Pole Qui**	**87.19**	**180**	*eP*	**P**		**13 58 14.1**	**+0.7**	
QSPA									
	comp=Z,487nm,21.0s,MS4.9								
SUMG	**Summit**	**88.11**	**343**	*eP*	**P**		**13 58 17.6**	**-0.3**	
	comp=Z,122nm,2.0s,mb5.8								
FITZ	**Fitzroy Crossi**	**88.65**	**108**	*eP*	**P**		**13 58 21.6**	**0.0**	
	comp=Z,14nm,0.8s,mb5.3								
FITZ	**Fitzroy Crossi**	**88.65**	**108**	*eP*	**P**		**13 58 21.7**	**0.0**	
	comp=Z,17nm,1.1s,mb5.3								
CPUP	**Villa Florida**	**91.86**	**244**	P	**P**		**13 58 38.5**	**+2.0**	
	comp=Z,8.8nm,1.0s,mb5.0,baz=80,slow=4.9,SNR=14								
CPUP	**Villa Florida**	**91.86**	**244**	*eP*	**P**		**13 58 38.0**	**+1.5**	
CPUP				pmax	pmax				
	comp=Z,61nm,1.2s								
CPUP	**Villa Florida**	**91.86**	**244**	*eP*	**P**		**13 58 38.0**	**+1.5**	
	comp=Z,61nm,1.2s,mb5.8								
KSRS	**Korea Array**	**93.13**	**53**	LR	LR		14 46 52.9		
	comp=Z,97nm,18.1s,MS4.3,baz=31,slow=40								
TIXI	**Tiksi**	**93.55**	**18⇑**	*eP*	**P**		**13 58 42.2**	**-1.0**	
TIXI				pmax	pmax				
	comp=Z,22nm,1.9s,mb5.3								
TIXI	**Tiksi**	**93.55**	**18**	*eP*	**P**		**13 58 42.0**	**-1.3**	
	comp=Z,20nm,1.4s,mb5.3								
YAK	**Yakutsk**	**94.16**	**28**	*iP*	**P**		**13 58 45.8**	**-0.5**	
MDJ	**Mudanjiang**	**94.44**	**46**	P	**P**		**13 58 47.3**	**-0.7**	
MDJ				AP	pP		13 58 50.5	-3.5	
MDJ				XP	sP		13 58 51.8	-4.3	
MDJ				PP	PP		14 02 37.4	+1.9	
MDJ				S	S		14 09 54.1	-5.5	
MDJ				XS	sS		14 10 04.6	-4.9	
MDJ				PS	PS		14 11 15.5	-1.6	
MDJ				AMB	AMB				
	comp=Z,17nm,1.0s,mb5.4								
MDJ				AMB	AMB				
	comp=Z,133nm,3.6s								
MDJ				LR	LR				
	comp=N,114nm,18.3s,MS4.5								
MDJ				LR	LR				
	comp=E,135nm,21.6s,MS4.5								
MDJ				LR	LR				
	comp=Z,175nm,18.9s,MS4.5								
MDJ	**Mudanjiang**	**94.44**	**46**	P	**P**		**13 58 47.3**	**-0.7**	
	comp=Z,266nm,1.2s,mb5.5								
VNDA	**Vanda**	**94.51**	**170**	LR	LR		14 38 21.0		
	comp=Z,366nm,20.1s,MS4.8,baz=228,slow=34								
TRQA	**Tornquist**	**94.65**	**232**	*eP*	**P**		**13 58 51.3**	**+2.2**	
	comp=Z,19nm,1.1s,mb5.4								
TRQA				LR	LR				
	comp=Z,793nm,22.0s,MS5.1								
KLR	**Kul'dur**	**95.81**	**41**	*eP*	**P**		**13 58 49.2**	**-4.9**	
ASAR	**Alice Springs**	**95.97**	**114**	P	**P**		**13 58 55.0**	**-0.4**	
	comp=Z,3.4nm,0.9s,mb4.8,baz=267,slow=4.4,SNR=26								
WRA	**Warramunga Arr**	**96.74**	**110**	P	**P**		**13 58 58.4**	**-0.6**	
	comp=Z,6.5nm,0.8s,mb5.1,baz=270,slow=2.8,SNR=60								
WRA				PP	PP		14 02 52.0	-1.9	
	comp=Z,1.2nm,1.1s,baz=268,slow=7.8,SNR=5.2								
WB2	**Warramunga Arr**	**96.75**	**110**	*eP*	**P**		**13 58 58.5**	**-0.5**	
WRAB	**Tennant Creek**	**96.75**	**110**	P	**P**		**13 58 58.8**	**-0.2**	
	comp=Z,78nm,0.7s,mb6.2,SNR=6.8								
WRAB	**Tennant Creek**	**96.75**	**110**	*cP*	**P**		**13 58 59.1**	**+0.1**	
WRAB	**Tennant Creek**	**96.75**	**110**	*eP*	**P**		**13 58 58.7**	**-0.3**	
	comp=Z,20nm,1.3s,mb5.4								
WRAB				LR	LR				
	comp=Z,203nm,21.0s,MS4.6								
HABR	**Khabarovsk**	**98.04**	**42**	*eP*	**P**		**13 59 03.5**	**-0.7**	
HABR				*e*SP	sP		13 59 06.6	-5.7	
HABR				*e*			14 03 00.9		
HABR				*e*PPP			14 05 06.1		
HABR				*e*S	SKSac		14 09 41.2	0.0	
HABR				*e*SS	SS		14 17 12.6	+0.2	
HABR				*e*SSS			14 20 59.8		
HABR				MLR	MLR				
	comp=Z,59nm,18.0s,MS4.1								
HABR				MLR	MLR				
	comp=Z,93nm,21.0s								
SCHQ	**Schefferville**	**99.78**	**325**	LR	LR		14 43 31.1		
	comp=Z,190nm,20.3s,MS4.6,baz=30,slow=35								
YKA	**Yellowknife Ar**	**116.63**	**345**	PKP	PKPdf		14 04 11.0	-0.6	
	comp=Z,0.7nm,0.7s,baz=24,slow=1.9,SNR=9.9								
YKA				PP	PP		14 05 20.0	+1.5	
	comp=Z,1.6nm,1.1s,baz=25,slow=7.9,SNR=8.1								
YKA				PKKPbc	PKKPbc		14 14 39.3	-2.0	
	comp=Z,0.4nm,0.9s,baz=216,slow=3.0,SNR=5.5								
YKA	**Yellowknife Ar**	**116.63**	**345**	PKIKP	PKPdf		14 04 11.0	-0.6	
YKA							14 05 20.1		
YKA	**Yellowknife Ar**	**116.63**	**345**	PKP	PKPdf		14 04 11.0	-0.6	
YKA				PP	PP		14 05 20.1	+1.5	
YKA				PKKPbc	PKKPbc		14 14 39.3	-2.0	
MCK	**McKinley**	**119.14**	**3**	*e*PKIKP	PKPdf		14 04 16.7	+0.4	
EGMT	**Eagleton**	**126.28**	**332**	*e*PKPdf	PKPdf		14 04 31.3	+0.8	
WMOK	**Wichita Mounta**	**127.50**	**313**	*e*PKIKP	PKPdf		14 04 32.2	-1.1	
PDAR	**Pinedale Array**	**129.86**	**327**	PKP	PKPdf		14 04 37.9	+0.3	
	comp=Z,4.4nm,1.1s,baz=98,slow=3.3,SNR=13								
TXAR	**Lajitas Array**	**133.65**	**309**	PKhKP			14 04 41.9		
	comp=Z,0.7nm,0.9s,baz=161,slow=8.0,SNR=5.3								
TXAR				PKP	PKPdf		14 04 47.0	+1.9	
	comp=Z,2.6nm,1.0s,baz=180,slow=1.3,SNR=12								
WUAZ	**Wupatki**	**135.71**	**321**	*e*PKPdf	PKPdf		14 04 51.7	+2.9	
NVAR	**Mina Array Bea**	**137.58**	**330**	PKhKP			14 04 41.4		
	comp=Z,1.7nm,0.9s,baz=68,slow=3.1,SNR=8.6								
NVAR				PKP	PKPdf		14 04 51.5	-0.6	
	comp=Z,5.4nm,1.0s,baz=84,slow=1.8,SNR=11								
RKT	**Rikitea**	**152.77**	**198**	*e*LR	LR		14 56 34.3		
	comp=Z,441nm,37.8s								
TBI	**Tubuai**	**153.40**	**168**	*e*LR	LR		14 56 36.9		
	comp=Z,404nm,33.0s								
PPT	**Papeete**	**158.95**	**165**	*e*LR	LR		14 59 18.3		
	comp=Z,284nm,23.5s								

*ISCJB **23** 13:53:06.9±1.5, 176S±08×1787W±04, h592km±26km, mb3.9/7, Error ellipse: s-maj=138.7km s-min=17.1km az=153.9*
*NEIC **23** 13:53:07.7±1.1, 1776S×17857W, h593km±16km, mb3.9/3, Error ellipse: s-maj=89.7km s-min=11.5km az=154.0*
*IDC **23** 13:53:08.9±17.0, 1774S×17858W, h610km±232km, mb3.2/5, mb1 3.4/5, mb1mx3.1/18, mbtmp3.2/5, Error ellipse: s-maj=96.7km s-min=64.4km az=148.0*

ISC 23 13:53:07.7±1.5, 177S±08×1786W±04, h589km±24km, n12, σ0≋39/12, mb3.9/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**7.60**	**61**	P		**P**	**13 55 02.9**	**0.0**
CTA	**Charters Tower**	**33.26**	**260**	P		**P**	**13 58 58.7**	**+0.8**
	1.6nm,0.5s,mb3.9,baz=104,slow=11,SNR=5.5							
CTA	**Charters Tower**	**33.26**	**260**	P		**P**	**13 58 58.7**	**+0.8**
CTAO	**Charters Tower**	**33.26**	**260**	*eP*		**P**	**13 58 58.7**	**+0.8**
	1.9nm,0.6s,mb3.9							
STKA	**Stephens Creek**	**38.54**	**241**	P		**P**	**13 59 41.3**	**+0.1**
	2.2nm,0.5s,mb4.0,baz=83,slow=11,SNR=11							
WB2	**Warramunga Arr**	**44.44**	**259**	*eP*		**P**	**14 00 27.4**	**-0.4**
WRAB	**Tennant Creek**	**44.44**	**259**	*eP*		**P**	**14 00 27.3**	**-0.5**
	2.3nm,0.4s,mb4.1							
WRA	**Warramunga Arr**	**44.45**	**259**	P		**P**	**14 00 27.7**	**-0.2**
	1.8nm,0.3s,mb4.1,baz=94,slow=7.5,SNR=61							
ASAR	**Alice Springs**	**44.64**	**254**	P		**P**	**14 00 29.4**	**+0.1**
	7.4nm,0.5s,mb4.4,baz=89,slow=8.6,SNR=150							
NVAR	**Mina Array Bea**	**79.42**	**44**	P		**P**	**14 04 13.6**	**-0.2**
	0.4nm,0.7s,mb2.9,baz=224,slow=8.3,SNR=4.1							
NVAR	**Mina Array Bea**	**79.42**	**44**	P		**P**	**14 04 13.6**	**-0.2**
HLID	**Hailey**	**84.61**	**41**	P		**P**	**14 04 40.3**	**+0.3**
	4.4nm,1.4s,mb3.9							

*ISCJB **23** 15:29:20.3±2.0, 155S±04×1798W±02, h435km±27km, mb3.3/9, Error ellipse: s-maj=62.1km s-min=16.7km az=154.9*
*IDC **23** 15:29:21.8±2.6, 1565S×17972W, h446km±34km, mb2.9/8, mb1 3.3/9, mb1mx3.2/18, mbtmp3.0/9, Error ellipse: s-maj=54.1km s-min=14.7km az=154.0*
*NEIC **23** 15:29:22.3±1.4, 1561S×17974W, h453km±20km, mb3.7/1, Error ellipse: s-maj=43.8km s-min=12.1km az=155.0*

ISC 23 15:29:21.8±2.0, 156S±04×1798W±02, h442km±28km, n14, σ0≋60/11, mb3.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**7.91**	**79**	P		**P**	**15 31 15.9**	**-0.3**
	4.0nm,0.3s,baz=274,slow=17,SNR=7.7							
AFI	**Afiamalu**	**7.91**	**79**	*eP*		**P**	**15 31 16.4**	**+0.2**
STKA	**Stephens Creek**	**38.67**	**238**	P		**P**	**15 36 06.8**	**+0.8**
	1.5nm,0.9s,mb3.3,baz=90,slow=7.1,SNR=3.3							
WRA	**Warramunga Arr**	**43.82**	**257**	P		**P**	**15 36 46.4**	**-0.9**
	0.1nm,0.4s,mb2.5,baz=96,slow=6.2,SNR=9.9							
ASAR	**Alice Springs**	**44.22**	**252**	P		**P**	**15 36 50.2**	**-0.1**
	1.2nm,0.3s,mb3.6,baz=86,slow=8.3,SNR=28							
MJAR	**Matsushiro Arr**	**65.27**	**324**	P		**P**	**15 39 19.4**	**+0.7**
	1.3nm,0.8s,mb3.6,baz=146,slow=5.2,SNR=3.8							
NVAR	**Mina Array Bea**	**78.67**	**45**	P		**P**	**15 40 37.4**	**+0.4**
	0.6nm,0.7s,mb3.3,baz=225,slow=8.1,SNR=5.1							
HLID	**Hailey**	**83.75**	**42**	*eP*		**P**	**15 41 03.4**	**+0.2**
	1.0nm,0.6s,mb3.7							
TXAR	**Lajitas Array**	**85.87**	**58**	P		**P**	**15 41 14.3**	**+0.4**
PDAR	**Pinedale Array**	**86.58**	**44**	P		**P**	**15 41 16.6**	**-0.4**
	0.4nm,0.8s,mb3.2,baz=204,slow=2.0,SNR=3.0							
YKA	**Yellowknife Ar**	**92.77**	**25**	P		**P**	**15 41 44.3**	**-1.0**
	0.2nm,0.7s,mb3.2,baz=246,slow=4.0,SNR=4.8							
ARCES	**ARCESS Array B**	**123.80**	**350**	PKP		PKPdf	15 47 26.3	-1.5
	3.1nm,1.0s,baz=98,slow=3.7,SNR=3.5							
ARCES	**ARCESS Array B**	**123.80**	**350**	PKP		PKPdf	15 47 26.3	-1.5
GERES	**GERESS Array B**	**145.03**	**344**	PKPbc		PKPbc	15 48 07.6	-0.6
	0.4nm,0.5s,baz=12,slow=5.0,SNR=6.1							

IDC 23 15:31:26.2±66.0, 1658S×16780E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=1112.0km s-min=115.8km az=69.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**28.23**	**233**	P		P	15 37 21.8	+0.8
	0.7nm,0.4s,baz=71,slow=11,SNR=4.3							
WRA	**Warramunga Arr**	**31.92**	**259**	P		P	15 37 53.4	-0.4
	0.3nm,0.3s,baz=90,slow=8.4,SNR=8.2							
ASAR	**Alice Springs**	**32.54**	**252**	P		P	15 37 59.0	-0.2
	0.6nm,0.4s,baz=82,slow=8.9,SNR=6.6							

JMA 23 15:42:00.9±0.2, 4358N×14760E, h31km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.37**	**262**	P		Pn	15 42 24.7	+0.9
NEM2				*e*S		Sn	15 42 42.0	+1.1
JRA	**Rausu**	**1.83**	**282**	P		Pn	15 42 31.2	+1.0
JRA				*e*S		Sn	15 42 53.4	+1.1
JNK	**Nakash**	**2.09**	**271**	P		Pn	15 42 34.6	+0.8
JNK				*e*S		Sn	15 42 59.8	+1.0
JAK	**Akkeshi**	**2.20**	**256**	P		Pn	15 42 36.2	+1.0
JAK				*e*S		Sn	15 43 02.5	+1.1
JTKR	**Abashiri--Toko**	**2.70**	**280**	P		Pn	15 42 43.6	+1.4
JTKR				*e*S		Sn	15 43 16.7	+2.9
JAR	**Ashorobuto**	**2.80**	**266**	P		Pn	15 42 45.1	+1.5
JAR				*e*S		Sn	15 43 18.1	+1.8
JOB	**Onbets**	**2.83**	**257**	P		Pn	15 42 45.3	+1.3
JOB				*e*S		Sn	15 43 18.7	+1.7
JMP	**Maruseppu**	**3.10**	**279**	P		Pn	15 42 49.6	+2.0
JCH	**Churui**	**3.25**	**254**	P		Pn	15 42 50.7	+1.0
JCH				*e*S		Sn	15 43 28.5	+1.2
JKK2	**Kamakawa 2**	**3.53**	**276**	P		Pn	15 42 55.6	+2.1
JEM	**Erimo**	**3.62**	**246**	P		Pn	15 42 57.8	+3.0
JFR	**Furan**	**3.67**	**265**	P		Pn	15 42 57.9	+2.4
JNBK	**Urakawa-nobuka**	**3.79**	**252**	P		Pn	15 42 58.3	+1.2
JEW	**Eniwo**	**4.56**	**263**	P		Pn	15 43 10.2	+2.6

*MOS **23** 15:47:20.2±1.2, 4.13N×12530E, h177km, mb4.8/21, Error ellipse: s-maj=13.9km s-min=6.4km az=115.0*
*ISCJB **23** 15:47:21.6±0.3, 405N±002×12546E±003, h190km±3km, mb4.7/90, Error ellipse: s-maj=5.7km s-min=3.6km az=163.6*
*IDC **23** 15:47:22.6±0.8, 405N×12522E, h182km±7km, mb4.3/30, mb1 4.4/32, mb1mx4.4/33, mbtmp4.4/32, Error ellipse: s-maj=12.9km s-min=6.7km az=76.0*
*BJI **23** 15:47:22.4, 4.10N×12530E, h182km, mB4.9, mb4.7*
*NEIC **23** 15:47:22.5±0.8, 406N×12527E, h183km±8km, mb4.9/40, Error ellipse: s-maj=7.6km s-min=4.7km az=64.0*
*DJA **23** 15:47:24, 380N×12548E, h158km, Mw5.1/13*

ISC 23 15:47:22.6±0.3, 404N±002×12544E±003, h184km±3km, h189km±2.0km: pP-P, n235, σ1≋25/224, mb4.7/90, 14C-12D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**0.36**	**165**	P		**Pn**	**15 47 45.0**	**-2.4**
GSPH	**General Santos**	**2.09**	**347**	*i* P		**Pn**	**15 47 59.6**	**-1.4**
MNI	**Manado**	**2.64**	**193**	P		**Pn**	**15 48 06.5**	**-0.7**
KCP	**Kidapawan**	**2.97**	**353⇓**	*e*P		**Pn**	**15 48 13.3**	**+2.2**
KCP				*e*S		**Sn**	**15 48 52.9**	**+3.8**
DAV	**Davao City (W)**	**3.02**	**3**	P		**Pn**	**15 48 11.7**	**0.0**
	82nm,0.3s,baz=128,slow=3.5,SNR=41							
DAV				S		**Sn**	**15 48 51.1**	**+1.1**
	137nm,0.3s,baz=64,slow=21,SNR=8.0							
DAV	**Davao City (W)**	**3.02**	**3**	*eP*		**Pn**	**15 48 11.2**	**-0.4**
DAV	**Davao City (W)**	**3.02**	**3**	P		**Pn**	**15 48 11.8**	**+0.1**
CTBH	**Cotabato--PC H**	**3.38**	**340**	*iP*		**Pn**	**15 48 14.8**	**-1.3**
TNTI	**Ternate**	**3.77**	**149**	P		**Pn**	**15 48 19.2**	**-1.8**
BUKP	**Musuan**	**3.83**	**354**	*eP*		**Pn**	**15 48 20.7**	**-1.0**
PAGZ	**Pagadian**	**4.30**	**332**	*eP*		**Pn**	**15 48 26.5**	**-1.2**
ZMPH	**Zamboanga City**	**4.43**	**311⇑**	*eP*		**Pn**	**15 48 29.0**	**-0.4**
IPIL	**Ipil**	**4.69**	**323**	*eP*		**Pn**	**15 48 32.2**	**-0.4**
BUTP	**Butuan**	**4.90**	**2**	*eP*		**Pn**	**15 48 35.2**	**-0.2**
LBMI	**Labuha**	**5.08**	**156**	P		**Pn**	**15 48 36.2**	**-1.5**
LBMI				S		**Sn**	**15 49 32.4**	**-4.4**
MSLP	**Maasin**	**6.08**	**355**	*eP*		**Pn**	**15 48 49.8**	**-1.0**
MYLDM	**Lahad Datu**	**7.00**	**280**	⇓P		**Pn**	**15 49 05.2**	**+2.4**
MYLDM	**Lahad Datu**	**7.00**	**280**	P		**Pn**	**15 49 04.8**	**+2.0**
	102nm,1.1s,2μm0.5nm							
OCLP	**Ormoc**	**7.02**	**353**	*eP*		**Pn**	**15 49 03.0**	**0.0**
PCI	**Palu**	**7.44**	**229**	P		**Pn**	**15 49 10.0**	**+1.4**
	38nm,1.3s,754nm0.2nm							
TSM	**Tawau**	**7.55**	**272**	⇓P		**Pn**	**15 49 10.7**	**+0.7**
AAI	**Amboan**	**8.15**	**160**	P		**Pn**	**15 49 16.9**	**-1.0**
	712nm,0.8s,9μm3.3nm							
AAI				S		**Sn**	**15 50 41.3**	**-8.2**
	712nm,0.8s,9μm3.3nm							
SDKM	**Sandakan**	**8.36**	**281**	⇑P		**Pn**	**15 49 21.4**	**+0.7**
KDI	**Kendari**	**8.43**	**200**	P		**Pn**	**15 49 18.6**	**-2.9**
	117nm,0.8s,945nm							
KKM	**Kota Kinabalu**	**9.40**	**283**	⇓P		**Pn**	**15 49 34.5**	**+0.2**
PVCP	**Virac**	**9.58**	**352**	*eP*		**Pn**	**15 49 37.7**	**+1.1**
KAPI	**Kappang**	**10.63**	**212**	P		**Pn**	**15 49 49.8**	**-0.5**
	5.1nm,0.3s,baz=30,slow=9.5,SNR=46							
KAPI	**Kappang**	**10.63**	**212**	*eP*		**Pn**	**15 49 49.7**	**-0.7**
	119nm,0.8s							
KAPI	**Kappang**	**10.63**	**212**	P		**Pn**	**15 49 49.5**	**-0.9**
	92nm,1.0s,641nm							
BAKI	**Biak**	**11.86**	**116**	P		**Pn**	**15 50 08.3**	**+2.0**
	385nm,1.0s,4μm							

BBKI	**Banjar Baru**	**12.95**	**235**	P		**Pn**	**15 50 22.1**	**+2.1**	
	80nm,1.6s,3μm								
PLKI	**Palangkaraya**	**13.06**	**242**	P		**Pn**	**15 50 27.6**	**+6.1**	
SBUM	**Sibu**	**13.29**	**264**	⇑P		**Pn**	**15 50 26.1**	**+1.7**	
SBUM	**Sibu**	**13.29**	**264**	P		**Pn**	**15 50 25.8**	**+1.4**	
	108nm,0.8s,921nm								
KSM	**Kuching**	**15.32**	**261**	*eP*		**Pn**	**15 50 52.1**	**+2.5**	
	98nm,0.8s								
KSM	**Kuching**	**15.32**	**261**	⇑P		**Pn**	**15 50 52.7**	**+3.2**	
KSM	**Kuching**	**15.32**	**261**	P		**Pn**	**15 50 52.0**	**+2.4**	
	144nm,0.7s,2μm								
JAY	**Jayapura**	**16.59**	**113**	P		**Pn**	**15 51 07.0**	**+2.1**	
SJI	**Sawahan**	**17.96**	**229**	P		**Pn**	**15 51 20.1**	**-1.1**	
	40nm,0.6s,1μm								
TPI	**Tanjungpandan**	**19.01**	**249**	P		**P**	**15 51 31.8**	**+1.2**	
	142nm,1.0s,1μm								
QIZ	**Qiongzhong**	**21.31**	**316**	P		**P**	**15 51 55.1**	**0.0**	
QIZ				PP			15 52 29.3		
QIZ				XP		sP	15 52 49.9	0.0	
QIZ				S		**S**	**15 55 35.1**	**-5.4**	
QIZ				AMB		AMB			
	comp=Z,34nm,1.0s,mb4.6								
MYKOM	**Kota Tinggi**	**21.67**	**265**	⇑P		**P**	**15 52 01.3**	**+2.3**	
MYKOM	**Kota Tinggi**	**21.67**	**265**	P		**P**	**15 51 59.6**	**+0.6**	
FITZ	**Fitzroy Crossi**	**22.00**	**179**	*eP*		**P**	**15 52 00.5**	**-1.8**	
	comp=Z,59nm,0.4s,mb5.4								
FITZ				*e*S		**S**	**15 55 49.5**	**-2.3**	
FITZ	**Fitzroy Crossi**	**22.00**	**179**	*eP*		**P**	**15 52 00.7**	**-1.6**	
	comp=Z,30nm,0.5s,mb5.0								
KGM	**Kluang**	**22.18**	**265**	⇓P		**P**	**15 52 05.7**	**+1.7**	
KTGM	**Kuala Trenggan**	**22.26**	**274**	⇓P		**P**	**15 52 06.6**	**+1.8**	
FRIM	**Kepong**	**23.77**	**269**	⇑P		**P**	**15 52 19.9**	**+1.3**	
IPM	**Ipoh**	**24.35**	**272**	⇑P		**P**	**15 52 25.4**	**+1.6**	
KULM	**Kulim**	**24.73**	**274**	*eP*		**P**	**15 52 27.7**	**+0.4**	
	comp=Z,149nm,1.2s,mb5.4								
KULM	**Kulim**	**24.73**	**274**	⇓P		**P**	**15 52 29.5**	**+2.2**	
SNG	**Songkhla**	**24.89**	**278**	P		**P**	**15 52 31.0**	**+2.3**	
KKTK	**Khon Kaen**	**25.35**	**300**	P		**P**	**15 52 33.5**	**+0.7**	
WRAB	**Tennant Creek**	**25.38**	**160**	*eP*		**P**	**15 52 32.8**	**-0.2**	
WRAB				*e*S		**S**	**15 56 42.3**	**-3.6**	
WRAB				pmax	pmax				
	comp=Z,32nm,0.6s,mb5.0								
WRAB	**Tennant Creek**	**25.38**	**160**	*eP*		**P**	**15 52 32.8**	**-0.2**	
	comp=Z,32nm,0.6s,mb5.0								
WRAB				*e*S		**S**	**15 56 42.3**	**-3.5**	
WRA	**Warramunga Arr**	**25.39**	**160**	P		**P**	**15 52 32.8**	**-0.2**	
	comp=Z,47nm,0.9s,mb5.0,baz=330,slow=11,SNR=172								
WRA				S		**S**	**15 56 42.2**	**-3.8**	
	comp=Z,14nm,0.9s,baz=335,slow=17,SNR=14								
WRA				ScP		ScP	15 59 23.1	+0.4	
	comp=Z,2.7nm,0.6s,baz=346,slow=3.1,SNR=4.6								
WRA	**Warramunga Arr**	**25.39**	**160**	P		**P**	**15 52 32.8**	**-0.3**	
WRA				S		**S**	**15 56 42.2**	**-3.7**	
WB2	**Warramunga Arr**	**25.39**	**160**	*eP*		**P**	**15 52 32.7**	**-0.4**	
PMG	**Port Moresby**	**25.44**	**122**	P		**P**	**15 52 34.6**	**+1.0**	
	comp=Z,14nm,0.6s,mb4.7,baz=1.8,slow=4.8,SNR=15								
PMG	**Port Moresby**	**25.44**	**122**	*dP*		**P**	**15 52 34.3**	**+0.7**	
PMG	**Port Moresby**	**25.44**	**122**	*eP*		**P**	**15 52 34.7**	**+1.0**	
	comp=Z,57nm,1.3s,mb4.9								
WHN	**Wuhan**	**28.37**	**340**	P		**P**	**15 53 00.3**	**+0.7**	
NJ2	**Nanjing**	**28.55**	**348**	*eP*		**P**	**15 53 03.1**	**+2.0**	
GYA	**Guiyang**	**28.64**	**323⇓**	*iP*		**P**	**15 53 04.3**	**+2.3**	
GYA				AP		pP	15 53 41.8	+1.9	
GYA				XP		sP	15 54 03.6	+2.4	
GYA				PP		PP	15 54 05.8	-4.8	
GYA				PCP		PcP	15 56 11.4	+3.1	
GYA				S		**S**	**15 57 38.0**	**+0.9**	
GYA				XS		sS	15 58 44.5	+0.1	
GYA				SCP		ScP	15 59 33.8	+1.4	
GYA				PCS		PcS	15 59 52.1	+1.0	
GYA				SCS		ScS	16 03 26.5	+0.3	
GYA				AMB		AMB			
	comp=Z,20nm,0.7s,mb5.0								
GYA				AMB		AMB			
	comp=Z,120nm,4.3s								
ASAR	**Alice Springs**	**28.75**	**164**	P		**P**	**15 53 03.3**	**+0.3**	
	comp=Z,14nm,0.6s,mb4.8,baz=339,slow=6.9,SNR=178								
ASAR				S		**S**	**15 57 36.9**	**-2.0**	
	comp=Z,6.2nm,0.9s,baz=332,slow=9.7,SNR=7.2								

MJAR **Matsushiro Arr 34.42 18** P **P** **15 53 52.4 -0.1**
comp=Z,16nm,0.8s,mb4.8,baz=196,slow=9.1,SNR=36
FORT Forrest 34.71 176 *e*P **P** **15 53 55.1 +0.1**
comp=Z,27nm,0.6s,mb5.1
FORT *e*S **S** **15 59 07.7 -3.6**
KLBR Kellerberrin 36.18 191 *e*P **P** **15 54 05.8 -1.7**
comp=Z,58nm,1.7s,mb4.9
BJI Beijing 36.80 348 P **P** **15 54 14.3 +1.6**
BJI S **S** **15 59 47.0 +3.9**
BJI AMB AMB
comp=Z,5.0nm,0.4s,mb4.5
BJI AMB AMB
comp=Z,77nm,5.0s
BJI LR LR
comp=N,141nm,16.5s
BJI LR LR
comp=E,200nm,14.3s
BJI LR LR
comp=Z,70nm,18.5s
MUN Mundaring 36.88 193 *e*P **P** **15 54 12.7 -0.7**
NWAO Narrogin (SRO) 37.58 191 P **P** **15 54 19.3 0.0**
comp=Z,5.3nm,0.6s,mb4.3,baz=325,slow=7.4,SNR=5.8
LZH Lanzhou 37.59 331 ⇑P **P** **15 54 20.0 +0.6**
LZH AP pP 15 54 57.8 -0.7
LZH XP sP 15 55 18.0 -1.5
LZH PP PP 15 55 54.3 +5.0
LZH PCP PcP 15 56 33.8 +0.5
LZH S **S** **15 59 56.0 +0.9**
LZH XS sS 16 01 02.1 -1.8
LZH AMB AMB
comp=Z,27nm,1.3s,mb4.7
LZH AMB AMB
comp=Z,152nm,5.4s
LZH LR LR
comp=N,295nm,13.2s
LZH LR LR
comp=Z,407nm,17.5s
EIDS Eidsvold 38.39 141 *e*P **P** **15 54 26.4 +0.2**
comp=Z,18nm,0.8s,mb4.8
HHC Hu-ho-hao-te 38.72 343 *e*P **P** **15 54 29.6 +0.9**
HHC AP pP 15 55 09.9 +2.0
HHC XP sP 15 55 31.4 +2.5
HHC PP PP 15 56 06.6 +5.1
HHC PCP PcP 15 56 36.8 +0.1
HHC AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
HHC AMB AMB
comp=Z,124nm,4.8s
HHC LR LR
comp=N,143nm,13.1s
HHC LR LR
comp=E,126nm,14.3s
HHC LR LR
comp=Z,104nm,11.9s
STKA Stephens Creek 38.88 158 P **P** **15 54 31.2 +0.9**
comp=Z,25nm,0.6s,mb5.0,baz=311,slow=14,SNR=10
STKA PP PP 15 56 00.8 -2.6
comp=Z,17nm,0.8s,baz=326,slow=11,SNR=5.9
STKA ScP ScP 16 00 09.0 +0.7
comp=Z,4.6nm,1.0s,baz=322,slow=5.0,SNR=3.8
STKA Stephens Creek 38.88 158 *e*P **P** **15 54 31.3 +1.0**
comp=Z,14nm,0.4s,mb5.0
STKA *e* 15 55 26.3
STKA *e*PP PP 15 55 58.1 -5.4
STKA *e*S **S** **16 00 14.4 -0.2**
STKA Stephens Creek 38.88 158 *e*P **P** **15 54 31.2 +1.0**
comp=Z,6.7nm,0.8s,mb4.3
MDJ Mudanjiang 40.58 5 P **P** **15 54 45.3 +1.3**
MDJ AMB AMB
comp=Z,12nm,0.9s,mb4.5
MDJ AMB AMB
comp=Z,70nm,3.3s
LSA Lhasa 41.27 312 P **P** **15 54 51.0 +1.0**
GTA Gaotai 42.18 330 ⇑P **P** **15 54 57.3 +0.1**
GTA AP pP 15 55 35.6 -1.3
GTA XP sP 15 55 55.5 -2.2
GTA AMB AMB
comp=Z,9.0nm,1.8s,mb4.1
GTA AMB AMB
comp=Z,84nm,4.2s
GTA LR LR
comp=N,112nm,14.7s
GTA LR LR
comp=E,164nm,15.9s
GTA LR LR
comp=Z,148nm,16.5s
ARMA Armidale 42.44 146 *e*P **P** **15 55 01.5 +2.1**
TAPN Taplejung 42.80 307 *e*P **P** **15 55 02.2 -0.2**
comp=Z,36nm,0.8s,mb5.1
ODAN Odare 42.84 306 *e*P **P** **15 55 02.3 -0.4**
comp=Z,46nm,0.7s,mb5.2
RAMN Ramite 43.52 306 *e*P **P** **15 55 07.9 -0.3**
comp=Z,23nm,0.6s,mb5.0
JIRN Jiri 44.15 306 *e*P **P** **15 55 12.9 -0.2**
comp=Z,30nm,0.6s,mb5.1
GUN Gumba 44.50 306 *e*P **P** **15 55 15.7 -0.3**
comp=Z,26nm,0.5s,mb5.1
PKI Pulchoki 44.74 306 *e*P **P** **15 55 17.1 -0.8**
KKN Kakani 44.94 306 *e*P **P** **15 55 18.6 -0.8**
comp=Z,17nm,0.5s,mb4.9
KKN Kakani 44.94 306 *e*P **P** **15 55 18.6 -0.8**
KKN pmax pmax
comp=Z,17nm,0.5s,mb4.9
CAN Canberra 44.97 152 *e*P **P** **15 55 22.0 +2.5**
CAN pmax pmax
comp=Z,12nm,0.6s,mb4.7
CAN Canberra 44.97 152 *e*P **P** **15 55 21.9 +2.5**
comp=Z,12nm,0.6s,mb4.7
DMN Daman 45.00 306 *e*P **P** **15 55 19.2 -0.7**
HABR Khabarovsk 45.03 9 *e*P **P** **15 55 18.5 -1.3**
HABR *e**PP pP 15 56 00.5 +0.5
HABR *e**SP sP 15 56 21.2 +0.5
HABR *e* 15 56 56.4
HABR *e* 15 57 07.8
HABR *e*PPP 15 57 52.0
HABR *e*S **S** **16 01 43.5 -0.8**
HABR *e**SS sS 16 02 56.1 +1.3
HABR *e* 16 04 52.4
HABR *e*SS SS 16 05 08.0 -2.0
HABR pmax pmax
comp=N,15nm,1.1s
HABR pmax pmax
comp=Z,48nm,1.7s,mb4.8
HABR pmax pmax
comp=E,8.0nm,0.8s
CNB Canberra Magne 45.13 152 *e*P **P** **15 55 22.9 +2.1**
KLR Kul'dur 45.35 6 *e*P **P** **15 55 18.7 -3.5**
KLR *e* 15 56 55.2
TOO Toolangi 45.40 158 *e*P **P** **15 55 24.2 +1.3**
GKN Gorkha 45.54 306 *e*P **P** **15 55 23.2 -0.9**
comp=E,14nm,0.5s,mb4.8
KOLN Koldanda 46.29 305 *e*P **P** **15 55 29.7 -0.3**
comp=E,45nm,0.5s,mb5.4
DANN Dangsing 46.39 306 *e*P **P** **15 55 30.3 -0.5**
comp=E,81nm,0.6s,mb5.5
ULN Ulaanbaatar 46.44 343 *e*P **P** **15 55 30.1 -0.7**
ULN pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
ULN Ulaanbaatar 46.44 343 *e*P **P** **15 55 30.1 -0.7**
comp=Z,5.4nm,1.0s,mb4.1
SONM Songino Array 46.61 342 P **P** **15 55 31.5 -0.6**
comp=Z,2.4nm,0.6s,mb4.0,baz=157,slow=8.5,SNR=18
SONM PcP PcP 15 57 03.2 +0.3
comp=Z,9.5nm,0.8s,baz=160,slow=3.4,SNR=29
SONM ScP ScP 16 00 39.7 +0.5
comp=Z,0.8nm,0.8s,baz=140,slow=3.7,SNR=3.3
SONM Songino Array 46.61 342 P **P** **15 55 31.5 -0.6**
SONM 15 57 03.2
HYB Hyderabad 47.80 290 *i* P **P** **15 55 41.5 -0.3**
HYB Hyderabad 47.80 290 *e*P **P** **15 55 41.5 -0.3**
ZAK Zakamensk 49.82 342 *e*P **P** **15 55 55.8 -0.8**
MOY Mondy 51.66 341 *e*P **P** **15 56 11.9 +1.5**
WMQ Urumqi 51.74 326 P **P** **15 56 11.3 +0.2**
WMQ AMB AMB
comp=Z,11nm,1.6s,mb4.2
BOD Bodaibo 54.38 353 *e*P **P** **15 56 29.5 -0.7**
PETK Petropavlovsk- 55.64 23 P **P** **15 56 40.5 +1.3**
comp=Z,8.0nm,0.8s,mb4.6,baz=172,slow=5.2,SNR=9.4
PETK PcP PcP 15 57 37.0 +0.5
comp=Z,5.8nm,0.9s,baz=194,slow=1.2,SNR=4.4
MK31 Makanchi Array 56.57 326 *e*P **P** **15 56 45.2 -0.8**
MKAR Makanchi Array 56.57 326 P **P** **15 56 45.1 -0.9**
comp=Z,7.5nm,0.8s,mb4.6,baz=124,slow=8.2,SNR=71
MKAR PcP PcP 15 57 39.5 -0.8
comp=Z,3.1nm,0.5s,baz=146,slow=2.8,SNR=9.4
MKAR ScP ScP 16 01 21.4 -0.9
comp=Z,3.4nm,0.6s,baz=115,slow=5.0,SNR=14
MKAR Makanchi Array 56.57 326 P **P** **15 56 45.1 -0.9**
MKAR 15 57 39.5
MKAR Makanchi Array 56.57 326 P **P** **15 56 45.1 -0.9**
MKAR PcP PcP 15 57 39.5 -0.8
MKAR ScP ScP 16 01 21.4 -0.9
YAK Yakutsk 57.95 2 *e*P **P** **15 56 54.8 -0.5**
YAK *e**PP pP 15 57 37.9 +0.3
YAK *e* 15 57 44.9
YAK *e* 15 59 06.2
YAK *e*PPP 16 00 26.3
YAK *e*S **S** **16 04 39.1 -1.5**
YAK *e* 16 06 23.7
YAK *e*SS SS 16 08 34.6 -0.2
YAK *e*SSS 16 11 07.3
YAK pmax pmax
comp=Z,51nm,1.0s,mb5.3
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=Z,11nm,1.7s,mb4.4
YAK pmax pmax
comp=N,28nm,2.2s
YAK pmax pmax
comp=E,30nm,2.3s
YAK smax
comp=N,90nm,2.5s
YAK smax
comp=E,13nm,1.6s
YAK Yakutsk 57.95 2 *e*P **P** **15 56 55.6 +0.3**
comp=E,46nm,0.8s,mb5.4
AAK Ala-Archa 59.27 318 ⇑*e*P **P** **15 57 02.0 -2.8**
AAK pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
AML Almayashu 59.59 317 *e*P **P** **15 57 07.1 +0.1**
comp=Z,8.6nm,0.8s,mb4.6
ZALV Zalesovo Beam 59.73 334 P **P** **15 57 06.0 -1.7**
comp=Z,4.3nm,0.7s,mb4.4,baz=121,slow=5.7,SNR=18
KBL Kabul 60.31 308 *e*P **P** **15 57 11.2 -0.9**
KBL pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
KBL Kabul 60.31 308 *e*P **P** **15 57 11.2 -0.9**
comp=Z,7.5nm,0.7s,mb4.6
KURK Kurchatov 60.79 328 P **P** **15 57 13.9 -1.1**
comp=Z,12nm,0.7s,mb4.8,baz=129,slow=6.3,SNR=68
KURK ScP ScP 16 01 39.1 -1.7
comp=Z,1.4nm,0.8s,baz=128,slow=3.1,SNR=4.0
KURK Kurchatov 60.79 328 *e*P **P** **15 57 13.8 -1.2**
KURK pmax pmax
comp=Z,61nm,1.3s,mb5.3
KURK Kurchatov 60.79 328 *e*P **P** **15 57 13.8 -1.2**
comp=Z,61nm,1.3s,mb5.3
NVS Novosibirsk 61.02 334 *i* P **P** **15 57 14.5 -2.0**
NVS *i* S **S** **16 05 16.7 -3.6**
NVS pmax pmax
comp=N,11nm,1.5s
NVS pmax pmax
comp=Z,13nm,1.5s,mb4.5
NVS pmax pmax
comp=E,9.0nm,1.4s
NVS smax
comp=N,17nm,2.0s
NVS smax
comp=E,29nm,2.4s
SEY Seymchan 62.03 14 ⇑*e*P **P** **15 57 24.0 +0.9**
RPZ Rata Peaks 62.76 144 P **P** **15 57 30.1 +1.8**
comp=E,13nm,1.0s,mb4.7,baz=237,slow=14,SNR=3.2
BVAR Borovoye Array 66.36 327 P **P** **15 57 50.6 -0.9**
comp=E,3.1nm,0.6s,mb4.3,baz=145,slow=8.8,SNR=27
BVAR ScP
comp=E,0.7nm,0.8s,baz=104,slow=6.1,SNR=2.9
BRVK Borovoye 66.43 327 *e*P **P** **15 57 50.5 -1.4**
BRVK pmax pmax
comp=Z,17nm,1.2s,mb4.8
BRVK Borovoye 66.43 327 *e*P **P** **15 57 50.5 -1.4**
comp=Z,17nm,1.2s,mb4.8
TIXI Tiksi 67.56 1 *d i*P **P** **15 57 57.2 -1.5**
TIXI pmax pmax
comp=Z,44nm,1.3s,mb5.0
TIXI Tiksi 67.56 1 *e*P **P** **15 57 57.9 -0.8**
comp=Z,51nm,1.1s,mb5.2
BILL Bilibino 69.59 15 *i* P **P** **15 58 11.3 0.0**
BILL *e**PP pP 15 58 56.8 +1.8
BILL *i* SS SS 16 11 39.2 +3.5
BILL pmax pmax
comp=Z,11nm,1.3s,mb4.4
BILL Bilibino 69.59 15 *e*P **P** **15 58 11.5 +0.2**
comp=Z,9.3nm,1.2s,mb4.4
SVE Sverdlovsk 73.03 329 ⇑*e*P **P** **15 58 32.3 +0.2**
SVE pmax pmax
comp=Z,14nm,1.0s,mb4.7
UNV Unalaska Valle 73.91 35 *e*P **P** **15 58 38.3 +1.0**
comp=Z,28nm,0.8s,mb5.0
ARU Arti 73.99 328 *d i*P **P** **15 58 35.7 -2.0**
ARU *e*PPP 16 03 07.1
ARU *e*S S 16 07 53.1 -1.6
ARU *e*SS SS 16 12 35.2 -8.1
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.6
ARU Arti 73.99 328 *e*P **P** **15 58 35.8 -1.9**
comp=Z,6.9nm,0.6s,mb4.6
QRN Al-Qurain 77.13 298 *e*P **P** **15 58 54.9 -1.2**
baz=298
QRN AMb AMB 15 58 56.5
comp=Z,120nm,0.9s,mb5.5,baz=298
UMR Umm Al-Rimmam 77.34 299 *e*P **P** **15 58 55.8 -1.6**
baz=299
UMR AMb AMB 15 58 57.0
comp=Z,51nm,0.7s,mb5.3,baz=299
KBD Kabd 77.34 299 *e*P **P** **15 58 55.8 -1.6**
baz=299
KBD AMb AMB 15 58 57.7
comp=Z,45nm,0.9s,mb5.1,baz=299
MIB Mutribah 77.68 299 *e*P **P** **15 58 57.5 -1.7**
baz=299
MIB AMb AMB 15 58 59.1
comp=Z,76nm,0.8s,mb5.4,baz=299
NAY Al-Naaiem 77.74 299 *e*P **P** **15 58 57.7 -1.8**
baz=299
NAY AMb AMB 15 58 59.3
comp=Z,35nm,0.8s,mb5.0,baz=299
OPO Ambohidratompo 80.18 250 P **P** **15 59 13.2 +0.2**
comp=Z,3.3nm,1.0s,mb3.9
KDAK Kodiak Island 82.32 32 P **P** **15 59 24.9 +1.4**
comp=Z,15nm,0.7s,mb4.8
CHUM Lake Minchumin 82.98 26 *e*P **P** **15 59 28.6 +1.8**
comp=Z,34nm,1.3s,mb4.9
VRHR Novokhopersk 82.99 321 *e*P **P** **15 59 27.2 +0.1**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb4.9
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.6s
KTH Kantishna Hill 83.57 27 *e*P **P** **15 59 30.8 +1.0**
comp=E,58nm,1.9s,mb5.0
BPAW Bear Paw Mtn. 83.58 26 *e*P **P** **15 59 31.5 +1.6**
comp=E,18nm,0.8s,mb4.9
MAW Mawson 83.60 200 P **P** **15 59 30.1 +0.3**
comp=E,9.2nm,0.8s,mb4.6,baz=59,slow=5.5,SNR=12
MAW Mawson 83.60 200 *e*P **P** **15 59 30.3 +0.5**
MAW pmax pmax
comp=Z,7.0nm,1.4s
MAW Mawson 83.60 200 *e*P **P** **15 59 30.2 +0.5**
comp=Z,6.8nm,1.4s,mb4.2
VNDA Vanda 83.89 173 P **P** **15 59 31.8 +0.6**
comp=Z,6.2nm,0.9s,mb4.3,baz=327,slow=5.6,SNR=20
VNDA Vanda 83.89 173 *e*P **P** **15 59 32.0 +0.8**
VNDA pmax pmax
comp=Z,6.0nm,1.0s
VNDA Vanda 83.89 173 *e*P **P** **15 59 32.0 +0.9**
comp=Z,6.2nm,1.0s,mb4.3
RC01 Rabbit Creek A 83.98 29 *e*P **P** **15 59 32.8 +0.9**
comp=Z,9.5nm,0.4s,mb4.9
COLD Coldfoot 84.11 23 *e*P **P** **15 59 34.8 +2.4**
comp=Z,30nm,1.0s,mb5.0
KLMR Klimovskoe 84.50 331 *e*P **P** **15 59 32.8 -1.8**
KLMR pmax pmax
comp=Z,23nm,0.9s,mb4.9
VSR Storozhevoye 84.54 321 *e*P **P** **15 59 34.3 -0.6**
VSR pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.4s
ANN Anapa 85.76 314 *e*P **P** **15 59 44.2 +3.0**
ANN *e**PP pP 16 00 31.8 +5.2
ANN *e*S S 16 09 52.5 -5.9
ANN pmax pmax
comp=Z,51nm,1.1s,mb5.2
OBN Obninsk 86.07 325 *e*P **P** **15 59 41.6 -0.8**
OBN *i* *PP pP 16 00 29.9 +2.0
OBN *i* 16 00 43.8
OBN pmax pmax
comp=Z,18nm,0.7s,mb4.9
ASF Jabal al Asfar 86.64 302 P **P** **15 59 45.6 -0.2**
comp=Z,9.8nm,0.9s,mb4.7
JOF Joensuu 88.32 333 *e*p **P** **15 59 50.4 -2.6**
comp=Z,6.6nm,0.7s,mb4.6
EIL Elat 88.45 299 P **P** **15 59 54.7 +0.3**
comp=Z,7.4nm,0.8s,mb4.6
BRTR Keskin Array B 88.83 310 P **P** **15 59 54.8 -1.2**
comp=Z,2.0nm,0.7s,mb4.2,baz=121,slow=4.6,SNR=6.3
BRTR Keskin Array B 88.83 310 *i* P **P** **15 59 55.4 -0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 89.72 340 P **P** **15 59 58.5 -0.9**
comp=Z,5.7nm,0.8s,mb4.5,baz=83,slow=5.3,SNR=10
SPB4 Spitsbergen Ar 89.93 349 *e*P **P** **16 00 01.2 +0.8**
INK Inuvik 90.35 21 P **P** **16 00 01.5 -0.9**
comp=Z,2.5nm,0.9s,mb4.1,baz=267,slow=11,SNR=3.1
INK Inuvik 90.35 21 P **P** **16 00 01.5 -0.9**
KAF Kangasniemi 90.73 332 *e*p **P** **16 00 01.6 -2.7**
comp=Z,2.2nm,0.6s,mb4.4
KAF Kangasniemi 90.73 332 *e*P **P** **16 00 01.6 -2.7**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
AKASG Malin Array Be 90.84 321 P **P** **16 00 02.7 -2.4**
comp=Z,1.0nm,0.5s,mb4.1,baz=69,slow=4.9,SNR=6.3
AKASG Malin Array Be 90.84 321 *i* P **P** **16 00 03.7 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
SYO Syowa Base 92.25 201 ⇑*e*P **P** **16 00 10.2 -0.9**
BUR08 Bucovina Ar. S 93.92 318 *e*P **P** **16 00 18.7 -0.7**
QSPA South Pole Qui 93.94 180 *e*P **P** **16 00 19.6 +0.9**
comp=Z,4.6nm,0.9s,mb4.6
DLBC Dease Lake 94.14 31 P **P** **16 00 21.8 +1.6**
comp=Z,4.4nm,0.8s,mb4.7
DLBC Dease Lake 94.14 31 P **P** **16 00 21.8 +1.6**
RES Resolute Bay 97.74 10 P **P** **16 00 36.4 +0.3**
comp=Z,2.5nm,0.9s,mb4.7,baz=315,slow=5.0,SNR=7.5
RES Resolute Bay 97.74 10 P **P** **16 00 36.4 +0.3**
NOA NORSAR Array B 97.94 333 P **P** **16 00 35.4 -1.9**
comp=Z,1.5nm,0.8s,mb4.5,baz=69,slow=4.6,SNR=5.1
NOA NORSAR Array B 97.94 333 P **P** **16 00 35.4 -1.9**
LSZ Lusaka 98.03 255 P **P** **16 00 37.0 -1.7**
comp=Z,1.6nm,0.6s,mb4.6,baz=91,slow=5.4,SNR=3.8
LSZ PKiKP PKiKP 16 05 12.0 +0.9
comp=Z,1.1nm,0.5s,baz=224,slow=6.0,SNR=3.6
YKA Yellowknife Ar 99.75 24 PKKPbc PKKPbc 16 17 04.5 -3.6
comp=Z,0.7nm,0.7s,baz=117,slow=2.4,SNR=12
GERES GERESS Array B 101.04 321 P Pdif 16 00 51.1 -0.2
comp=Z,0.5nm,0.7s,baz=92,slow=4.0,SNR=6.2
GERES PKiKP PKiKP 16 05 16.2 +0.6
comp=Z,0.4nm,0.5s,baz=48,slow=2.0,SNR=5.3
NVAR Mina Array Bea 107.66 48 Pdiff Pdif 16 01 21.8 +1.1
comp=Z,0.6nm,0.7s,baz=268,slow=6.2,SNR=3.4
NVAR PKiKP PKiKP 16 05 30.2 +2.0
comp=Z,0.5nm,0.6s,baz=270,slow=0.5,SNR=4.7
NVAR PKKPbc PKKPbc 16 16 44.0 +0.3
comp=Z,0.9nm,0.7s,baz=136,slow=4.9,SNR=7.4
NVAR PKKPab PKKPab 16 16 56.7 -1.5
comp=Z,0.5nm,0.6s,baz=119,slow=3.7,SNR=4.4
NVAR Mina Array Bea 107.66 48 Pdif Pdif 16 01 21.8 +1.1
NVAR PKPdf PKiKP 16 05 30.2 +2.0
NVAR PKKPbc PKKPbc 16 16 44.0 +0.3
NVAR PKKPab PKKPab 16 16 56.7 -1.5
ELK Elko 109.01 44 PKiKP PKiKP 16 05 31.9 +1.4
comp=Z,0.8nm,0.7s,baz=174,slow=23,SNR=3.5
PFO Pinyon Flat Ob 110.72 52 PKKP PKKPdf 16 16 50.5 -0.3
comp=Z,2.2nm,0.5s,baz=297,slow=9.8,SNR=4.9
PDAR Pinedale Array 111.97 41 PKiKP PKiKP 16 05 37.6 +1.5
comp=Z,0.3nm,0.7s,baz=69,slow=34,SNR=3.4
PDAR PKKPbc PKKPbc 16 16 27.4 -2.6
comp=Z,0.6nm,0.6s,baz=118,slow=5.6,SNR=5.5
PDAR PKKPab PKKPab 16 16 37.2 -1.9
comp=Z,2.3nm,0.7s,baz=120,slow=6.0,SNR=16
ULM Lac du Bonnet 115.31 28 PKP PKPdf 16 05 41.9 -0.4
ANMO Albuquerque 117.76 47 PKP PKPdf 16 05 49.2 +1.7
comp=Z,2.2nm,0.6s,baz=99,slow=0.8,SNR=2.8
MVO Moncorvo 117.56 321 *e*PKPdf PKPdf 16 05 46.8 -0.1
comp=Z,2.5nm,0.8s,baz=112,slow=2.3,SNR=5.4
ANMO Albuquerque 117.76 47 PKP PKPdf 16 05 49.2 +1.7
PVRL Vila Real 117.92 322 *e*PKPdf PKPdf 16 05 48.6 +1.0
MTE Manteigas 118.31 321 *e*PKPdf PKPdf 16 05 49.3 +0.9
PCBR Castelo Branco 118.58 320 *e*PKPdf PKPdf 16 05 49.5 +0.6
PMRV Marv??o 118.75 320 *e*PKPdf PKPdf 16 05 49.9 +0.7
PESTR Estremoz 119.19 319 *e*PKPdf PKPdf 16 05 50.5 +0.4
PBAR Barrancos 119.20 318 *e*PKPdf PKPdf 16 05 50.6 +0.5
PBEJ Beja 119.83 319 *e*PKPdf PKPdf 16 05 52.4 +1.0
SCHQ Schefferville 120.46 8 PKP PKPdf 16 05 51.9 -0.2
comp=Z,3.8nm,0.6s,baz=29,slow=2.1,SNR=4.3
MORF Marmelete 120.74 318 *e*PKPdf PKPdf 16 05 53.6 +0.5
TOA0 Torodi Ar. Sit 121.60 288 *e*PKPdf PKPdf 16 05 54.5 -0.8
TORD Torodi Ar. Bea 121.60 288 PKP PKPdf 16 05 54.7 -0.6
comp=Z,7.3nm,0.7s,baz=50,slow=1.9,SNR=51
TORD PKKPab PKKPab 16 15 57.7 +1.0
comp=Z,0.3nm,0.5s,baz=288,slow=3.7,SNR=4.4
TXAR Lajitas Array 122.43 51 PKP PKPdf 16 05 57.8 +1.2
comp=Z,1.2nm,0.7s,baz=178,slow=1.5,SNR=13
TXAR PKKPab PKKPab 16 15 51.8 -1.4
comp=Z,0.2nm,0.6s,baz=130,slow=6.7,SNR=5.1
WMOK Wichita Mounta 123.31 43 *e*PKIKP PKPdf 16 05 58.8 +0.7
DBIC Dimbokro 129.25 282 PKP PKPdf 16 06 10.5 +0.5
comp=Z,4.8nm,0.6s,baz=57,slow=3.3,SNR=11
DBIC SKPbc 16 09 15.3
comp=Z,1.6nm,0.8s,baz=18,slow=6.4,SNR=3.2
DBIC Dimbokro 129.25 282 PKP PKPdf 16 06 10.5 +0.5
DBIC SKPbc 16 09 15.3
PLCA Paso Flores 140.73 161 PKhKP 16 06 25.3
comp=Z,1.4nm,0.7s,baz=273,slow=3.1,SNR=3.4
PLCA PKP PKPdf 16 06 31.4 +0.8
comp=Z,2.5nm,0.6s,baz=222,slow=4.1,SNR=8.4
PLCA Paso Flores 140.73 161 PKP 16 06 25.3
PLCA PKP PKPdf 16 06 31.4 +0.8
TRQA Tornquist 145.47 170 *e*PKP PKPdf 16 06 40.2 +1.1
LCO Las Campanas 150.82 150 *e*PKPbc PKPbc 16 06 55.5 +1.6
CPUP Villa Florida 157.68 173 PKP PKPdf 16 06 57.9 +0.2
comp=Z,1.6nm,0.8s,baz=124,slow=1.5,SNR=6.1
CPUP PKPab PKPab 16 07 32.0 +1.3
comp=Z,2.9nm,0.7s,baz=162,slow=2.7,SNR=9.7
CPUP Villa Florida 157.68 173 *e*PKPdf PKPdf 16 06 58.0 +0.2
BDFB Brasilia 166.79 209 PKPab PKPab 16 08 10.6 -0.2
comp=Z,1.1nm,0.5s,baz=2.7,slow=26,SNR=3.6

IDC ***23*** *15:48:44.3*$_{s}$*1.1,354*S_{v}*9986E,h0*^{km}*,mb4.4/13, mb1 4.5/14,mb1mx4.3/23,mbtmp4.4/14,ML3.4/1,MS3.6/5, Ms1 3.6/5,ms1mx3.2/25,Error ellipse: s-maj=46.6km s-min=16.8km az=52.0*
BJI ***23*** *15:48:45.6,389*S_{v}*10069E,h36*^{km}*,mB4.7,mb4.9*
DJA ***23*** *15:48:46,348*S_{v}*9973E,h22*^{km}*,MLv4.6/5*
ISCJB ***23*** *15:48:48.*0_{s}*0.6,3*$40S_{v}$*008*$_{s}$*10003*E_{v}*008,h33*^{km}*, mb4.5/21,MS3.6/4,Error ellipse: s-maj=14.2km s-min=6.8km az=44.5*
NEIC ***23*** *15:48:50.4*$_{s}$*0.5,337*S_{v}*10008E,h35*^{km}*,mb4.7/3,Error ellipse: s-maj=22.4km s-min=8.7km az=57.0*
ISC 23 15:48:50.2$_{s}$**0.6,338**S_{v}**008**$\times$**10005E**$_{v}$**008,h35**^{km}**,n48,**
σ1§09/39,mb4.5/21,MS3.6/4,1C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**2.49**	**9**	P	**Pn**	**Pn**	**15 49 26.4**	**-1.9**
KSI	**Kapahiang**	**2.55**	**96**	P	**Pn**	**Pn**	**15 49 29.2**	**+0.1**
PPI	**Padang Panjang**	**2.93**	**7**	P	**Pn**	**Pn**	**15 49 33.4**	**-0.9**
KLI	**Kotabumi**	**5.01**	**107**	P	**Pn**	**Pn**	**15 50 09.0**	**+6.0**
GSI	**Gunungsitoli** 49nm,0.8s,0.3nm	**5.27**	**332**	P	**Pn**	**Pn**	**15 50 04.1**	**-2.5**
PSI	**Prapat** 0.8nm,0.3s,baz=343,slow=18,SNR=2.5	**6.24**	**350**	Pn	**Pn**	**Pn**	**15 50 17.6**	**-2.4**
MYKOM	**Kota Tinggi**	**6.39**	**37**	P	**Pn**	**Pn**	**15 50 23.1**	**+1.2**
DBJI	**Dramaga**	**7.38**	**116**	P	**Pn**	**Pn**	**15 50 33.1**	**-2.4**
CBJI	**Citeko**	**7.41**	**114**	P	**Pn**	**Pn**	**15 50 36.3**	**+0.3**
LEM	**Lembang**	**8.27**	**115**	P	**Pn**	**Pn**	**15 50 46.9**	**-0.9**
BBKI	**Banjar Baru**	**14.76**	**91**	P	**Pn**	**Pn**	**15 52 18.5**	**+1.8**
KAPI	**Kappang** comp=Z,112nm,18.5s,baz=157,slow=42	**19.71**	**95**	LR	LR	LR	16 02 33.0	
CM31	**Chiang Mai Arr**	**21.73**	**357**	*e*P	**P**	**Pn**	**15 53 39.2**	**+0.6**

15nm,1.3s,mb4.3
CMAR Chiang Mai Arr 21.73 357 P **P** **15 53 37.7 -0.9**
9.0nm,0.8s,mb4.3,baz=187,slow=10,SNR=30
CMAR LR LR 16 03 46.1
comp=Z,95nm,20.1s,MS3.2,baz=155,slow=41
WRA Warramunga Arr 37.27 119 P **P** **15 55 57.7 -1.3**
2.1nm,0.5s,mb4.2,baz=288,slow=8.1,SNR=3.8
XAN Xi'an 38.15 12 P **P** **15 56 06.4 +0.2**
XAN AMB AMB
comp=Z,28nm,0.7s,mb5.1
XAN AMB AMB
comp=Z,63nm,7.5s
ASAR Alice Springs 38.41 125 P **P** **15 56 08.9 +0.2**
comp=Z,4.2nm,0.7s,mb4.3,baz=301,slow=8.3,SNR=5.1
ASAR Alice Springs 38.41 125 P **P** **15 56 08.9 +0.2**
GTA Gaotai 42.58 360⇑*eP* **P** **15 56 49.3 +6.5**
GTA AP pP 15 56 53.4 +0.3
GTA XP sP 15 56 56.1 -1.2
GTA AMB AMB
comp=Z,9.0nm,1.0s,mb4.5
HHC Hu-ho-hao-te 45.26 12 *eP* **P** **15 57 05.4 +1.1**
HHC AMB AMB
comp=Z,13nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,137nm,4.5s
CTA Charters Tower 47.98 114 P **P** **15 57 26.1 +0.1**
comp=Z,4.5nm,0.7s,mb4.6,baz=282,slow=6.3,SNR=3.7
KSRS Korea Array 48.18 30 LR LR 16 19 50.5
comp=Z,31nm,20.9s,MS3.3,baz=205,slow=39
WMQ Urumqi 48.29 348 P **P** **15 57 29.8 +1.9**
WMQ AMB AMB
comp=Z,26nm,1.0s,mb5.2
AML Almayashu 51.23 335 *eP* **P** **15 57 51.6 +1.2**
comp=Z,6.8nm,0.7s,mb4.7
SONM Songino Array 51.30 5 P **P** **15 57 52.3 +1.5**
comp=Z,5.2nm,0.6s,mb4.7,baz=187,slow=8.3,SNR=14
SONM PcP PcP 15 59 06.0 +0.6
comp=Z,1.2nm,0.6s,baz=191,slow=4.3,SNR=3.5
ULN Ulaanbaatar 51.40 6 *eP* **P** **15 57 52.7 +1.2**
EKS2 Erkin-Say 51.63 335 *eP* **P** **15 57 54.4 +1.0**
comp=Z,10nm,0.7s,mb4.9
CN2 Changchun 52.22 23 *eP* **P** **15 57 57.4 -0.4**
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
MK31 Makanchi Array 52.37 345 *eP* **P** **15 57 59.4 +0.6**
MKAR Makanchi Array 52.37 345 P **P** **15 57 59.5 +0.7**
comp=Z,5.8nm,0.6s,mb4.7,baz=147,slow=8.0,SNR=7.8
KURK Kurchatov 56.94 344 P **P** **15 58 31.9 0.0**
comp=Z,4.4nm,0.9s,mb4.5,baz=163,slow=6.9,SNR=5.6
ZAA0 Zalesovo Array 58.53 350 *eP* **P** **15 58 42.9 0.0**
ZALV Zalesovo Beam 58.53 350 P **P** **15 58 43.0 +0.1**
comp=Z,6.7nm,0.7s,mb4.8,baz=179,slow=5.9,SNR=14
BVAR Borovoye Array 61.49 340 P **P** **15 59 02.6 -0.7**
comp=Z,3.0nm,0.6s,mb4.6,baz=142,slow=8.2,SNR=7.0
MAW Mawson 68.97 194 LR LR 16 23 53.7
comp=Z,87nm,19.6s,MS4.0,baz=353,slow=31
BRTR Keskin Array B 74.29 313 P **P** **16 00 23.2 -0.9**
comp=Z,2.1nm,0.7s,mb4.2,baz=125,slow=6.5,SNR=5.2
BOSA Boshof 75.04 241 LR LR 16 29 27.2
comp=Z,56nm,19.2s,MS3.9,baz=226,slow=33
TIXI Tiksi 77.20 9 *eP* **P** **16 00 39.1 -1.1**
AKASG Malin Array Be 80.60 322 P **P** **16 00 58.4 -0.8**
comp=Z,0.6nm,0.5s,mb3.8,baz=112,slow=3.8,SNR=4.4
AKASG Malin Array Be 80.60 322 P **P** **16 00 58.4 -0.8**
BUR08 Bucovina Ar. S 82.34 319 *eP* **P** **16 01 09.3 +0.8**
ARCES ARCESS Array B 87.78 340 P **P** **16 01 35.8 +0.5**
comp=Z,2.4nm,0.8s,mb4.5,baz=103,slow=4.0,SNR=2.5
GERES GERESS Array B 90.12 319 P **P** **16 01 47.1 +0.3**
comp=Z,0.6nm,0.7s,mb4.5,baz=105,slow=4.7,SNR=6.5
NVAR Mina Array Bea 130.62 40 PKP PKPdf 16 07 58.5 +0.6
comp=Z,0.5nm,0.6s,baz=275,slow=1.8,SNR=4.1
WMOK Wichita Mounta 144.23 27 *ePKP* PKPdf 16 08 20.4 -2.6
TXAR Lajitas Array 145.75 39 PKPbc PKPbc 16 08 26.9 +0.6
comp=Z,2.1nm,0.7s,baz=216,slow=1.3,SNR=39
JCT Junction City 147.16 33 *ePKPbc* PKPbc 16 08 30.3 -0.1
TKL Tuckaleechee C 147.69 6 PKPbc PKPbc 16 08 30.6 -1.0
comp=Z,4.2nm,0.9s,baz=72,slow=15,SNR=4.2

PGC ***23*** *15:54:40.3±0.0, 5069N×101°95W, h0km, ML3.7/1, Mn3.2*
PGC 32km Nne of Esterhazy, Sk Manitoba Province, Canada
Felt (I) in Yarbo, Esterhazy and Tantallon.
NEIC ***23*** *15:54:41.1, 5069N×101°95W, h1km, MN3.2(PGC), After PGC.*
NEIC Felt at Esterhazy, Tantallon and Yarbo, Saskatchewan.
IDC ***23*** *15:54:42.1±1.1, 5063N×101°82W, h0km, mb2.7/1, mb1 3.8/5, mb1mx3.5/26, mbtmp3.5/5, ML3.8/2, Error ellipse: s-maj=17.4km s-min=9.8km az=175.0*
ISC 23 15:54:40.4±1.2, 5064N±005×10177W±005, h13km±8km, n19,σ1§71/31, 4D, Manitoba

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.79**	**94**	Pn	**Pn**	**15 55 41.7**	**+3.3**
	0.8nm,0.3s,baz=276,slow=16,SNR=9.3						
ULM				Pg	**Pg**	**15 55 49.9**	**-3.1**
	4.2nm,0.3s,baz=282,slow=15,SNR=14						
ULM				Lg		15 56 39.7	
	15nm,0.3s,baz=2.5,slow=8.8,SNR=12						
ULM	**Lac du Bonnet**	**3.79**	**94**	⇑Pn	**Pn**	**15 55 41.6**	**+3.2**
ULM				⇓Pg	**Pg**	**15 55 51.1**	**-1.8**
ULM				⇑Sg	**Sg**	**15 56 41.6**	**-0.4**
ULM	**Lac du Bonnet**	**3.79**	**94**	*e*Pn	**Pn**	**15 55 41.8**	**+3.4**
ULM				*e*Pg	**Pg**	**15 55 52.7**	**-0.3**
ULM				*e*Sg	**Sg**	**15 56 41.4**	**-0.6**
EGMT	**Eagleton**	**5.84**	**246**	*e*Pn	**Pn**	**15 56 08.7**	**+2.1**
	40nm,0.8s						
RSSD	**Black Hills**	**6.70**	**194**	*e*Pn	**Pn**	**15 56 20.8**	**+2.4**
RSSD				*e*Sg	**Sg**	**15 58 12.8**	**-2.4**
EYMN	**Ely**	**7.24**	**108**	*e*Pn	**Pn**	**15 56 28.8**	**+3.0**
EYMN				*e*Sn	**Sn**	**15 57 48.0**	**+0.3**
ECSD	**EROS,Sioux Fal**	**7.74**	**151**	*e*Pn	**Pn**	**15 56 33.9**	**+1.1**
ECSD				*e*Sn	**Sn**	**15 57 58.8**	**-1.5**
LDIO	**Lac des Isle M**	**8.00**	**96**	⇑Sn	**Sn**	**15 58 05.5**	**-1.0**
WALA	**Waterton Lakes**	**8.01**	**263**	⇓Pn	**Pn**	**15 56 35.9**	**-0.4**
WALA				⇓Sn	**Sn**	**15 58 04.1**	**-2.6**
WALA	**Waterton Lakes**	**8.01**	**263**	*e*Pn	**Pn**	**15 56 35.9**	**-0.4**
BOZ	**Bozeman (W)**	**8.27**	**237**	*e*Pg	Px	15 57 12.3	
BOZ				*e*Sg	Sx	15 58 57.2	
NSKO	**Neskantaga (La**	**8.79**	**74**	⇓Pn	**Pn**	**15 56 48.2**	**+1.2**
NSKO				⇑Sn	**Sn**	**15 58 22.2**	**-3.7**
PDAR	**Pinedale Array**	**9.51**	**217**	Pn	**Pn**	**15 56 58.9**	**+1.9**
	0.2nm,0.3s,baz=40,slow=13,SNR=6.8						
PDAR				Lg		15 59 30.7	
	0.6nm,0.3s,baz=48,slow=22,SNR=4.5						
KSU1	**Kansas State U**	**12.10**	**160**	*e*Pn	**Pn**	**15 57 33.4**	**+1.1**
KSU1				*e*Sn	**Sn**	**15 59 45.9**	**-1.1**
YKA	**Yellowknife Ar**	**13.79**	**334**	Pn	**Pn**	**15 57 53.5**	**-1.8**
	0.4nm,0.3s,baz=140,slow=13,SNR=34						
YKA				Sn	**Sn**	**16 00 14.9**	**-13**
	0.2nm,0.3s,baz=136,slow=24,SNR=8.2						
YKA				Lg		16 01 41.4	
	baz=144,slow=26,SNR=2.9						
YKA	**Yellowknife Ar**	**13.79**	**334**	Pn	**Pn**	**15 57 53.5**	**-1.9**
YKA				Sn	**Sn**	**16 00 14.9**	**-13**
YKA				Lg		16 01 41.4	
TKL	**Tuckaleechee C**	**19.83**	**132**	P	**Pn**	**15 59 15.2**	**+2.9**
TKL	**Tuckaleechee C**	**19.83**	**132**	*e*P	**Pn**	**15 59 15.0**	**+2.7**
TXAR	**Lajitas Array**	**21.32**	**185**	P	**P**	**15 59 31.0**	**+4.1**
	0.2nm,0.6s,baz=3.2,slow=11,SNR=4.4						

IDC ***23*** *16:07:34.0±6.8, 3622N×7053E, h166km±62km, mb3.4/7, mb1 3.5/10, mb1mx3.2/25, mbtmp3.3/10, Error ellipse: s-maj=33.7km s-min=19.9km az=24.0*
ISCJB ***23*** *16:07:36.6±0.5, 3651N±003×7068E±007, h191km±6km, mb3.6/6, Error ellipse: s-maj=9.0km s-min=4.1km az=163.0*
NEIC ***23*** *16:07:37.6±0.7, 3649N×7059E, h190km±7km, mb4.5/11, Error ellipse: s-maj=9.9km s-min=5.6km az=65.0*
MOS ***23*** *16:07:37.1±0.9, 3647N×7058E, h202km, mb4.5/4, Error ellipse: s-maj=17.4km s-min=9.8km az=85.1*
NNC ***23*** *16:07:41.5±3.4, 3689N×7055E, h173km±39km, mb3.0, mpv4.7, Error ellipse: s-maj=31.0km s-min=19.6km az=8.0*
ISC 23 16:07:37.4±0.5, 3651N±003×7068E±007, h183km±6km, n61,σ1§16/73, mb3.6/6, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.38**	**215**	*e*PN	**Pn**	**16 08 19.8**	**+0.8**
CEP	**Cherat**	**2.87**	**159**	⇑P	**Pn**	**16 08 26.5**	**+1.9**
CEP				S	**Sn**	**16 09 00.0**	**-1.3**
CHCP	**Chirah Chowk**	**3.55**	**143**	⇑P	**Pn**	**16 08 35.0**	**+2.0**
THN	**Thein Dam**	**5.82**	**133**	*e*P	**Pn**	**16 09 01.9**	**-0.2**
THN				*e*S	**Sn**	**16 10 07.4**	**-1.3**
DLH	**Dalhousie**	**5.89**	**131**	*e*P	**Pn**	**16 09 03.0**	**0.0**
DLH				*e*S	**Sn**	**16 10 09.0**	**-1.4**
AML	**Almayashu**	**6.08**	**22**	P	**Pn**	**16 09 06.0**	**+0.7**
	SNR=106						
AML	**Almayashu**	**6.08**	**22**	*e*P	**Pn**	**16 09 06.0**	**+0.7**
	84nm,0.4s						
AML				*e*S	**Sn**	**16 10 13.0**	**-1.6**
UCH	**Uchtor**	**6.43**	**26**	*e*P	**Pn**	**16 09 10.9**	**+1.0**
	5.0nm,0.3s						
UCH				*e*S	**Sn**	**16 10 20.6**	**-2.4**
KK31	**Karatay Array**	**6.58**	**359**	P	**Pn**	**16 09 11.8**	**-0.2**
	18nm,0.3s,baz=180,slow=13,SNR=807						
KK31				⇓S	**Sn**	**16 10 21.9**	**-4.7**
	2.5nm,0.3s,baz=183,slow=22,SNR=5.6						
EKS2	**Erkin-Say**	**6.59**	**20**	P	**Pn**	**16 09 12.3**	**+0.3**
	SNR=16						
EKS2	**Erkin-Say**	**6.59**	**20**	*e*P	**Pn**	**16 09 12.6**	**+0.5**
	15nm,0.5s						
AAK	**Ala-Archa**	**6.78**	**25**	*e*PN	**Pn**	**16 09 15.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,14nm,0.3s						
AAK	**Ala-Archa**	**6.78**	**25**	P	**Pn**	**16 09 15.4**	**+0.9**
	SNR=17						
AAK	**Ala-Archa**	**6.78**	**25**	*e*P	**Pn**	**16 09 15.4**	**+0.8**
	comp=Z,14nm,0.3s						
KBK	**Karagaybulak**	**6.96**	**27**	P	**Pn**	**16 09 18.0**	**+1.1**
	SNR=17						
CHMS	**Chumysh**	**7.19**	**25**	P	**Pn**	**16 09 20.5**	**+0.5**
	SNR=12						
USP	**Ospenovka**	**7.35**	**22**	P	**Pn**	**16 09 22.0**	**0.0**
	SNR=5.9						
TKM2	**Tokmak 2**	**7.43**	**29**	⇓P	**Pn**	**16 09 23.4**	**+0.3**
	comp=Z,19nm,0.4s						
TKM2				⇑S	**Sn**	**16 10 45.3**	**-1.5**
	comp=Z,9.6nm,1.1s						
TKM2	**Tokmak 2**	**7.43**	**29**	*e*PN	**Pn**	**16 09 23.5**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,35nm,0.4s						
TKM2	**Tokmak 2**	**7.43**	**29**	P	**Pn**	**16 09 24.0**	**+0.9**
	SNR=21						
TKM2	**Tokmak 2**	**7.43**	**29**	*e*P	**Pn**	**16 09 23.5**	**+0.4**
	comp=Z,35nm,0.4s						
SMLA	**Simla**	**7.61**	**133**	*i* P	**Pn**	**16 09 25.6**	**0.0**
SMLA				*i* S	**Sn**	**16 10 47.8**	**-3.4**
SMLA				*i* S	**Sn**	**16 10 48.2**	**-3.0**
SMLA				*ex*	x	16 10 50.0	
	comp=N,376nm,0.4s						
SMLA				*ex*	x	16 10 51.0	
	comp=E,295nm,0.5s						
KLP	**Kalpa**	**8.01**	**126**	*e*P	**Pn**	**16 09 30.9**	**+0.2**
KLP				*e*S	**Sn**	**16 10 56.6**	**-4.1**
KLP				AML	AML	16 10 59.8	
	comp=E,107nm,0.5s						
KLP				AML	AML	16 11 04.2	
	comp=N,98nm,0.7s						
KHET	**Khetri**	**9.46**	**151**	*e*P	**Pn**	**16 09 47.4**	**-2.6**
KHET				*e*S	**Sn**	**16 11 25.1**	**-10**
JOSI	**Joshimath**	**9.49**	**126**	*e*P	**Pn**	**16 09 50.6**	**+0.4**
JOSI				*e*S	**Sn**	**16 11 30.8**	**-5.3**
MK31	**Makanchi Array**	**13.43**	**37**	*e*P	**Pn**	**16 10 41.5**	**+0.8**
MKAR	**Makanchi Array**	**13.43**	**37**	P	**Pn**	**16 10 42.0**	**+1.3**
	comp=N,0.3nm,0.3s,baz=219,slow=15,SNR=17						
DANN	**Dangsing**	**13.71**	**123**	*e*P	**Pn**	**16 10 44.2**	**-0.2**
	comp=N,7.1nm,0.4s						
KOLN	**Koldanda**	**13.98**	**125**	*e*P	**Pn**	**16 10 46.3**	**-1.4**
	comp=N,7.3nm,0.5s						
GKN	**Gorkha**	**14.53**	**122**	*e*P	**Pn**	**16 10 55.3**	**+0.8**
AB09	**Akbulak array**	**14.96**	**332**	⇑P	**Pn**	**16 10 58.1**	**-1.6**
	comp=N,1.3nm,0.4s						
DMN	**Daman**	**15.10**	**122**	*e*P	**Pn**	**16 11 02.6**	**+1.1**
KKN	**Kakani**	**15.10**	**121**	*e*P	**Pn**	**16 11 02.0**	**+0.4**
	comp=N,11nm,0.5s						
KKN	**Kakani**	**15.10**	**121**	*e*P	**Pn**	**16 11 02.0**	**+0.4**
KKN				pmax	pmax		
	comp=Z,11nm,0.5s						
KURK	**Kurchatov**	**15.30**	**19**	P	**Pn**	**16 11 00.9**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=212,slow=9.8,SNR=3.7						
PKI	**Pulchoki**	**15.33**	**121**	*e*P	**Pn**	**16 11 05.6**	**+1.2**
GUN	**Gumba**	**15.45**	**119**	*e*P	**Pn**	**16 11 07.8**	**+2.0**
JIRN	**Jiri**	**15.82**	**120**	*e*P	**Pn**	**16 11 10.9**	**+0.6**
	comp=Z,7.6nm,0.3s						
BVA0	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**16 11 19.1**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=163,slow=12,SNR=8.4						
BVAR	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**16 11 19.2**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=166,slow=11,SNR=11						
RAMN	**Ramite**	**16.54**	**121**	*e*P	**Pn**	**16 11 19.1**	**0.0**
	comp=Z,6.0nm,0.5s						
AKTK	**Aktyubinsk**	**16.64**	**331**	P	**Pn**	**16 11 19.7**	**-0.3**
AKTO	**Aktyubinsk**	**16.64**	**331**	⇑P	**Pn**	**16 11 20.0**	**0.0**
	comp=Z,0.5nm,0.8s						
AKTO	**Aktubinsk**	**16.64**	**331**	P	**Pn**	**16 11 19.7**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=140,slow=11,SNR=5.9						
TAPN	**Taplejung**	**17.08**	**118**	*e*P	**Pn**	**16 11 26.9**	**+1.4**
	comp=Z,6.5nm,0.6s						
ODAN	**Odare**	**17.15**	**119**	*e*P	**Pn**	**16 11 27.5**	**+1.2**
ZAA0	**Zalesovo Array**	**20.01**	**25**	*e*P	**P**	**16 11 56.0**	**+0.3**
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**16 11 56.4**	**+0.7**
	comp=Z,2.0nm,0.3s,baz=220,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**16 11 56.4**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**35.73**	**330**	*ep*	**P**	**16 14 18.0**	**-0.1**
	comp=Z,0.7nm,0.4s,mb3.6						
JOF	**Joensuu**	**35.73**	**330**	*e*P	**P**	**16 14 18.0**	**-0.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**16 15 02.2**	**0.0**
	comp=Z,4.5nm,1.0s,mb4.0,baz=107,slow=8.8,SNR=7.8						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**16 15 02.2**	**0.0**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NB2	**NORSAR Subarra**	**44.22**	**323**	P	**P**	**16 15 27.2**	**-0.7**
	comp=Z,1.4nm,0.4s,mb3.9,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.22**	**323**	P	**P**	**16 15 27.4**	**-0.5**
	comp=Z,1.8nm,0.5s,mb4.0,baz=97,slow=7.7,SNR=9.5						
NOA	**NORSAR Array B**	**44.22**	**323**	P	**P**	**16 15 27.5**	**-0.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.46**	**268**	P	**P**	**16 17 58.4**	**-2.7**
	comp=Z,0.5nm,0.5s,mb3.6,baz=46,slow=5.7,SNR=9.7						
YKA	**Yellowknife Ar**	**81.24**	**2**	P	**P**	**16 19 32.5**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=352,slow=5.3,SNR=7.5						
YKA	**Yellowknife Ar**	**81.24**	**2**	P	**P**	**16 19 32.5**	**+0.1**
WRA	**Warramunga Arr**	**82.22**	**122**	P	**P**	**16 19 36.2**	**-1.9**
	comp=Z,0.4nm,0.6s,mb3.2,baz=324,slow=4.7,SNR=6.9						
ASAR	**Alice Springs**	**84.47**	**125**	P	**P**	**16 19 48.1**	**-1.5**
	comp=Z,0.3nm,0.6s,mb3.2,baz=309,slow=4.8,SNR=8.8						

IDC ***23*** *16:54:05.7±1.0, 2477N×12253E, h0km, mb3.3/6, mb1 3.5/6, mb1mx3.4/21, mbtmp3.3/6, Error ellipse: s-maj=58.7km s-min=19.9km az=67.0*
NEIC ***23*** *16:54:14.8±1.8, 2459N×12229E, h74km±15km, MG3.0(JMA), Error ellipse: s-maj=32.8km s-min=10.3km az=78.0*
ISCJB ***23*** *16:54:15.6±0.3, 2461N±002×122.19E±002, h82km±3km, mb3.2/6, Error ellipse: s-maj=4.2km s-min=2.8km az=158.6*
TAP ***23*** *16:54:16.4, 2457N×122.12E, h76km, ML4.0, C*
JMA ***23*** *16:54:16.7±0.3, 2470N×12222E, h75km, M3.0*
ISC 23 16:54:16.4±0.3, 2460N±002×12219E±002, h78km±3km, n66,σ0§83/120, mb3.2/6, 5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.31**	**272**	⇓*i*P	**Pn**	**16 54 28.3**	**-0.2**
	baz=279						
TWC				*i* S	**Sn**	**16 54 36.9**	**-0.6**
	baz=279						
ILA	**Ilan**	**0.43**	**292**	P	**Pn**	**16 54 29.5**	**+0.2**
	baz=303						
ILA				S	**Sn**	**16 54 39.2**	**+0.2**
	baz=303						
ENA	**Nanau**	**0.44**	**247**	*i* P	**Pn**	**16 54 29.4**	**-0.1**
	baz=244						
ENA				*i* S	**Sn**	**16 54 39.0**	**-0.1**
	baz=244						
TWB1	**Santiao Chiao**	**0.44**	**336**	⇓*i*P	**Pn**	**16 54 29.5**	**0.0**
	baz=348						
TWB1				*i* S	**Sn**	**16 54 38.8**	**-0.4**
	baz=348						
TWE	**Neicheng**	**0.49**	**284**	⇓*i*P	**Pn**	**16 54 30.1**	**+0.2**
	baz=298						
TWE				*i* S	**Sn**	**16 54 39.2**	**-0.6**
	baz=298						
ENTT	**Nioudou**	**0.57**	**274**	⇓*i*P	**Pn**	**16 54 30.9**	**+0.4**
	baz=277						
ENTT				S	**Sn**	**16 54 40.9**	**-0.1**
	baz=277						
NWF	**Wu-fen Shan**	**0.60**	**322**	⇓*i*P	**Pn**	**16 54 31.1**	**+0.2**
	baz=321						
NWF				S	**Sn**	**16 54 41.5**	**0.0**
	baz=321						
NACB	**Ninganchiao**	**0.69**	**232**	*e*Pn	**Pn**	**16 54 30.5**	**-1.3**
NACB				*e*Sn	**Sn**	**16 54 41.8**	**-1.3**
TATO	**Taipei**	**0.74**	**301**	*e*Pn	**Pn**	**16 54 32.0**	**-0.3**
TATO				*e*Sn	**Sn**	**16 54 43.8**	**-0.3**
YHNB	**Yeheng**	**0.74**	**276**	*e*Pn	**Pn**	**16 54 32.0**	**-0.3**
YHNB				*e*Sn	**Sn**	**16 54 44.3**	**+0.1**
TAP1	**Taipei**	**0.74**	**306**	P	**Pn**	**16 54 32.4**	**0.0**
	baz=310						
TAP1				S	**Sn**	**16 54 43.8**	**-0.4**
	baz=310						
TWD	**Chiawan**	**0.75**	**226**	P	**Pn**	**16 54 31.6**	**-0.8**
	baz=220						
TWD				*e*S	**Sn**	**16 54 43.3**	**-1.0**
	baz=220						
NNS	**Nan Shan**	**0.76**	**258**	P	**Pn**	**16 54 32.6**	**+0.1**
	baz=255						
NNS				S	**Sn**	**16 54 44.1**	**-0.4**
	baz=255						
NSK	**Sanguang**	**0.76**	**276**	P	**Pn**	**16 54 32.7**	**+0.2**
	baz=278						
NSK				S	**Sn**	**16 54 44.3**	**-0.2**
	baz=278						
YOJ	**Yonaguni jima**	**0.76**	**100**	P	**Pn**	**16 54 32.7**	**+0.1**
YOJ				*e*S	**Sn**	**16 54 44.6**	**0.0**
HWA	**Hwalien**	**0.82**	**221**	*e*P	**Pn**	**16 54 32.8**	**-0.4**
	baz=211						
HWA				S	**Sn**	**16 54 45.7**	**0.0**
	baz=211						
TWY	**Chenhua**	**0.86**	**322**	*e*P	**Pn**	**16 54 34.0**	**+0.3**
	baz=326						
TWY				*e*S	**Sn**	**16 54 46.9**	**+0.4**
	baz=326						
WHF	**Hehuan Shan**	**0.95**	**242**	*e*P	**Pn**	**16 54 34.8**	**+0.1**
	baz=241						
WHF				*e*S	**Sn**	**16 54 48.5**	**0.0**
	baz=241						
NCU	**National Centr**	**0.98**	**292**	*e*P	**Pn**	**16 54 35.2**	**+0.2**
	baz=284						
NCU				*e*S	**Sn**	**16 54 49.3**	**+0.3**
	baz=284						
TWT	**Tachien**	**0.98**	**250**	*e*P	**Pn**	**16 54 35.8**	**+0.7**
	baz=244						
TWT				*e*S	**Sn**	**16 54 49.1**	**0.0**
	baz=244						
ESL	**Shilin**	**1.04**	**221**	*e*P	**Pn**	**16 54 34.6**	**-1.2**
	baz=228						
ESL				*e*S	**Sn**	**16 54 48.4**	**-2.0**
	baz=228						
NSTT	**Nanjuang**	**1.08**	**272**	*e*P	**Pn**	**16 54 36.4**	**+0.1**
	baz=273						
NSTT				*e*S	**Sn**	**16 54 51.5**	**+0.4**
	baz=273						
HSN	**Hsinchu**	**1.12**	**281**	*e*P	**Pn**	**16 54 36.9**	**0.0**
	baz=284						
HSN				*e*S	**Sn**	**16 54 52.0**	**-0.2**
	baz=284						
TWQ1	**Liyutan**	**1.31**	**259**	*e*P	**Pn**	**16 54 39.4**	**+0.2**
	baz=259						
TWQ1				*e*S	**Sn**	**16 54 56.0**	**-0.4**
	baz=259						
EHY	**Hungye**	**1.35**	**216**	*e*P	**Pn**	**16 54 38.0**	**-1.7**
	baz=222						
SMLT	**Sun Moon Lake**	**1.38**	**239**	*e*P	**Pn**	**16 54 40.7**	**+0.7**
	baz=233						
SMLT				*e*S	**Sn**	**16 54 58.0**	**+0.2**
	baz=233						
SSLB	**Suanglung**	**1.39**	**235**	*e*Pn	**Pn**	**16 54 39.9**	**-0.3**
TYC	**Yuchr**	**1.40**	**241**	*e*P	**Pn**	**16 54 40.9**	**+0.6**
	baz=236						
TYC				*e*S	**Sn**	**16 54 59.0**	**+0.7**
	baz=236						
IRIF	**Iriomote-Funau**	**1.43**	**100**	P	**Pn**	**16 54 40.6**	**-0.1**
IRIF				S	**Sn**	**16 54 59.1**	**0.0**
TCU	**Taichung**	**1.45**	**252**	*e*P	**Pn**	**16 54 41.6**	**+0.6**
	baz=261						
TCU				*e*S	**Sn**	**16 54 59.8**	**+0.3**
	baz=261						
YULB	**Yu-li**	**1.45**	**214**	*e*Pn	**Pn**	**16 54 38.9**	**-2.1**
TWF1	**Yuli**	**1.48**	**213**	P	**Pn**	**16 54 39.9**	**-1.5**
	baz=221						
WNT	**Mingjian**	**1.55**	**243**	*e*P	**Pn**	**16 54 43.5**	**+1.3**
	baz=253						
WNT				*e*S	**Sn**	**16 55 02.3**	**+0.5**
	baz=253						
HATJ	**Hateruma jima**	**1.57**	**110**	P	**Pn**	**16 54 43.4**	**+0.8**
HATJ				*e*S	**Sn**	**16 55 03.2**	**+0.8**
YUS	**Yu-Shan**	**1.58**	**226**	*e*P	**Pn**	**16 54 43.3**	**+0.6**
	baz=217						
YUS				*e*S	**Sn**	**16 55 02.1**	**-0.4**
	baz=217						
ALS	**Alishan**	**1.67**	**230**	*e*P	**Pn**	**16 54 44.9**	**+1.1**
	baz=220						
ALS				*e*S	**Sn**	**16 55 05.5**	**+1.0**
	baz=220						
CHKT	**Chengkung**	**1.67**	**207**	P	**Pn**	**16 54 42.4**	**-1.5**
	baz=196						
CHKT				*e*S	**Sn**	**16 55 01.3**	**-3.4**
	baz=196						
JKRS	**Kuro-shima**	**1.70**	**102**	P	**Pn**	**16 54 44.9**	**+0.7**
JKRS				*e*S	**Sn**	**16 55 05.9**	**+0.5**
CHN5	**Tsauling**	**1.70**	**234**	*e*P	**Pn**	**16 54 45.0**	**+0.7**
	baz=243						
CHN5				*e*S	**Sn**	**16 55 05.5**	**+0.1**
	baz=243						
WGK	**Gukeng**	**1.74**	**239**	*e*P	**Pn**	**16 54 45.7**	**+0.9**
	baz=249

	baz=206								
CHN1	**Nanshi**		**2.07**	**227**	*e*P		**Pn**	16 54 50.4	**+1.2**
	baz=225								
CHN1					*e*S		**Sn**	16 55 14.7	**+0.5**
	baz=225								
JTJ	**Tarama**		**2.29**	**88**	P		**Pn**	16 54 53.1	**+1.0**
JTJ					*e*S		**Sn**	16 55 20.7	**+1.3**
ECL	**Taimali**		**2.29**	**210**	P		**Pn**	16 54 50.5	**-1.7**
	baz=204								
ECL					*e*S		**Sn**	16 55 16.4	**-3.1**
	baz=204								
SSD	**Sandimen**		**2.33**	**218**	*e*P		**Pn**	16 54 53.6	**+0.9**
	baz=216								
SSD					*e*S		**Sn**	16 55 21.9	**+1.5**
	baz=216								
LAY	**Lan-yu**		**2.62**	**193**	*e*P		**Pn**	16 54 54.8	**-1.8**
	baz=193								
SCZT	**Fangliau**		**2.64**	**213**	*e*P		**Pn**	16 54 57.0	**+0.1**
	baz=221								
SCZT					*e*S		**Sn**	16 55 29.5	**+1.5**
	baz=221								
SONM	**Songino Array**		**26.35**	**336**	P		**P**	16 59 43.7	**-1.3**
	0.2nm,0.7s,mb2.7,baz=143,slow=10,SNR=4.3								
MKAR	**Makanchi Array**		**38.68**	**315**	P		**P**	17 01 32.1	**-0.3**
	0.2nm,0.4s,mb3.3,baz=101,slow=9.4,SNR=5.2								
WRA	**Warramunga Arr**		**45.83**	**164**	P		**P**	17 02 30.0	**-0.6**
	0.9nm,0.6s,mb3.7,baz=346,slow=8.6,SNR=11								
BVAR	**Borovoye Array**		**47.94**	**320**	P		**P**	17 02 46.0	**-0.8**
	0.2nm,0.5s,mb3.2,baz=120,slow=8.5,SNR=2.8								
ASAR	**Alice Springs**		**49.31**	**166**	P		**P**	17 02 57.4	**-0.2**
	0.2nm,0.5s,mb3.3,baz=350,slow=6.7,SNR=6.3								
YKA	**Yellowknife Ar**		**82.23**	**23**	P		**P**	17 06 27.0	**-1.7**
	0.1nm,0.5s,mb2.9,baz=310,slow=4.8,SNR=2.7								

IDC 23 *17:36:08.6±1.1,1290N×14558E,h0km,mb3.5/8, mb1 3.7/8,mb1mx3.6/23,mbtmp3.5/8,Error ellipse: s-maj=33.5km s-min=17.2km az=68.0*
ISCJB 23 17:36:14.3±2.8,129N±0.1×1455E±0.3,h54km±19km, mb3.6/8,Error ellipse: s-maj=45.8km s-min=20.4km az=173.4
NEIC 23 17:36:14.1±0.8,1290N×14547E,h35km,Error ellipse: s-maj=27.2km s-min=12.8km az=77.0

ISC 23 17:36:10.3±3.9,129N±01×1456E±02,h12km±23km,n12, σ0ş75/13,mb3.6/8,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
GUMO	**Guam**		**1.03**	**313**	Pn	**Pn**	**17**	**36**	**30.3 -0.3**
	87nm,0.3s,baz=148,slow=11,SNR=43								
GUMO					Sn	**Sn**	**17**	**36**	**45.1 0.0**
	214nm,0.3s,baz=180,slow=20,SNR=14								
GUMO	**Guam**		**1.03**	**313**	*e*P	**Pb**	**17**	**36**	**30.0 -0.2**
GUMO					*e*S	**Sb**	**17**	**36**	**44.4 +0.7**
WRA	**Warramunga Arr**		**34.46**	**199**	P	**P**	**17**	**42**	**57.7 -0.4**
	0.5nm,0.6s,mb3.6,baz=21,slow=9.7,SNR=13								
ASAR	**Alice Springs**		**38.09**	**198**	P	**P**	**17**	**43**	**30.4 +1.2**
	0.5nm,0.9s,mb3.2,baz=19,slow=14,SNR=4.7								
CMAR	**Chiang Mai Arr**		**45.21**	**283**	P	**P**	**17**	**44**	**27.3 -0.4**
	0.8nm,0.5s,mb3.8,baz=78,slow=7.1,SNR=7.3								
SONM	**Songino Array**		**47.74**	**325**	P	**P**	**17**	**44**	**48.0 +0.8**
	0.3nm,0.6s,mb3.5,baz=132,slow=6.2,SNR=3.6								
MKAR	**Makanchi Array**		**62.52**	**316**	P	**P**	**17**	**46**	**33.7 -0.2**
	0.3nm,0.5s,mb3.7,baz=87,slow=8.0,SNR=6.5								
KURK	**Kurchatov**		**65.61**	**320**	P	**P**	**17**	**46**	**52.7 -1.4**
	0.4nm,0.7s,mb3.6,baz=103,slow=6.9,SNR=3.9								
BVAR	**Borovoye Array**		**70.95**	**322**	P	**P**	**17**	**47**	**26.7 -0.8**
	0.5nm,0.6s,mb3.7,baz=113,slow=8.0,SNR=5.4								
YKA	**Yellowknife Ar**		**83.14**	**27**	P	**P**	**17**	**48**	**36.9 +1.0**
	0.3nm,0.6s,mb3.5,baz=287,slow=5.3,SNR=8.4								
YKA	**Yellowknife Ar**		**83.14**	**27**	P	**P**	**17**	**48**	**36.9 +1.0**
DBIC	**Dimbokro**		**144.84**	**302**	PKP	PKPdf	17	55	47.5 -0.8
	2.1nm,0.7s,baz=61,slow=2.2,SNR=4.7								

DDA 23 17:44:04.8,3694N×3231E,h9km±3km,Md3.7
ISK 23 17:44:06.1,3703N×3241E,h3km,MD3.3,ML3.3
NEIC 23 17:44:06.0,3703N×3241E,h3km,MD3.6(ISK),After ISK.
CSEM 23 17:44:06.9±0.1,3704N×3241E,h10km,Mw3.2,Error ellipse: s-maj=1.4km s-min=1.1km az=30.0
ISCJB 23 17:44:07.1±0.9,3699N±002×3240E±003,h9km±7km, Error ellipse: s-maj=4.7km s-min=3.5km az=166.3
HLW 23 17:44:07.8,37.19N×32.17E,h22km,Mb3.1
NIC 23 17:44:11.1±0.5,3691N×3264E,h60km,ML3.3,MW3.2

ISC 23 17:44:07.9±0.8,3699N±002×3242E±003,h9km±6km,n58, σ0ş97/70,6C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
KONT	**Konya--Tatoy**		**0.96**	**357**	*e*PG	**Pg**	**17**	**44**	**24.7 -1.6**
KONT					*e*SG	**Sg**	**17**	**44**	**38.3 -0.5**
LADK	**Ladik-KONYA**		**1.21**	**358**	*e*PN	**Pn**	**17**	**44**	**29.1 -1.9**
LADK					*e*SN	**Sn**	**17**	**44**	**45.9 -1.6**
IKL	**Isikli**		**1.26**	**126**	*e*PN	**Pn**	**17**	**44**	**30.6 -1.1**
ANTB	**Antalya**		**1.42**	**267**	*e*PN	**Pn**	**17**	**44**	**33.4 -0.4**
BCK	**Bucak**		**1.54**	**288**	*e*PN	**Pn**	**17**	**44**	**35.0 -0.4**
KDHN	**Kadinhani**		**1.55**	**351**	⇓*i*P	**Pn**	**17**	**44**	**35.2 -0.4**
KDHN					*i* S	**Sn**	**17**	**44**	**56.6 +0.7**
KDHN	**Kadinhani**		**1.55**	**351**	*i* P	**Pn**	**17**	**44**	**35.1 -0.5**
BSTP	**Nigde**		**1.65**	**54**	*e*P	**Pn**	**17**	**44**	**38.3 +1.2**
BSTP	**Nigde**		**1.65**	**54**	⇑*i*P	**Pn**	**17**	**44**	**38.4 +1.3**
MERS	**Mersin**		**1.69**	**93**	*e*PN	**Pn**	**17**	**44**	**37.5 -0.1**
ISP	**Isparta**		**1.74**	**300**	*e*PN	**Pn**	**17**	**44**	**37.7 -0.6**
ISP	**Isparta**		**1.74**	**300**	*e*Pn	**Pn**	**17**	**44**	**38.1 -0.2**
ISP					*e*Sn	**Sn**	**17**	**44**	**50.3 -10**
ALFC	**Alevga**		**1.83**	**175**	P	**Pn**	**17**	**44**	**38.7 -0.8**
	6.3nm,0.3s								
ALFC					S	**Sn**	**17**	**45**	**01.7 -1.1**
LEF	**Lefka**		**1.90**	**168**	*e*PN	**Pn**	**17**	**44**	**40.9 +0.4**
MAMC	**Mammari**		**1.93**	**160**	P	**Pn**	**17**	**44**	**40.7 -0.1**
LFK	**Lefkose**		**1.93**	**152**	*e*PN	**Pn**	**17**	**44**	**41.3 +0.4**
KIZT	**Kizilcal**		**1.94**	**347**	*e*PN	**Pn**	**17**	**44**	**40.2 -0.7**
EREN	**Erenkoy**		**2.03**	**135**	*e*PN	**Pn**	**17**	**44**	**42.9 +0.7**
NIG	**Nigde**		**2.07**	**57**	*e*PN	**Pn**	**17**	**44**	**43.2 +0.4**
PPCY	**Paphos**		**2.10**	**182**	P	**Pn**	**17**	**44**	**43.7 +0.5**
KARA	**Karaisali**		**2.12**	**82**	*e*PN	**Pn**	**17**	**44**	**43.5 0.0**
CSS	**Prodhromos**		**2.15**	**160**	P	**Pn**	**17**	**44**	**42.8 -1.1**
CSS					S	**Sn**	**17**	**45**	**08.0 -2.7**
SZAC	**Souni-Zanaja**		**2.26**	**170**	P	**Pn**	**17**	**44**	**48.0 +2.6**
GOLH	**Golhisar**		**2.30**	**277**	*e*P	**Pn**	**17**	**44**	**47.7 +1.8**
GOLH					*e*S	**Sg**	**17**	**45**	**22.2 +0.5**
PHNC	**Paralimni**		**2.37**	**146**	P	**Pn**	**17**	**44**	**48.6 +1.7**
	2.1nm,0.4s								
PHNC					S	**Sn**	**17**	**45**	**22.1 +6.0**
KRTS	**Karatas**		**2.41**	**99**	*e*PN	**Pn**	**17**	**44**	**48.1 +0.6**
KAMT	**Kaman**		**2.59**	**23**	*e*PN	**Pn**	**17**	**44**	**49.7 -0.1**
AVNT	**Avonos**		**2.63**	**46**	*e*P	**Pn**	**17**	**44**	**51.0 +0.5**
AVNT					*e*S	**Sg**	**17**	**45**	**28.1 -4.3**
KHL	**Karahalli**		**2.66**	**301**	*e*PN	**Pn**	**17**	**44**	**50.6 -0.3**
CEYT	**Ceyhan**		**2.66**	**89**	*e*PN	**Pn**	**17**	**44**	**51.3 +0.4**
KHAL	**Karahalli**		**2.70**	**302**	*e*P	**Pn**	**17**	**44**	**51.6 +0.1**
ALT	**Altintas**		**2.75**	**319**	*e*PN	**Pn**	**17**	**44**	**51.7 -0.5**
KOZT	**Kozan**		**2.76**	**79**	*e*PN	**Pn**	**17**	**44**	**52.8 +0.5**
DENT	**Denizli**		**2.80**	**287**	*e*PN	**Pn**	**17**	**44**	**53.0 +0.1**
ESKT	**Eskisehir**		**2.81**	**334**	*e*PN	**Pn**	**17**	**44**	**52.8 -0.2**
ESKT	**Eskisehir**		**2.81**	**334**	*e*P	**Pn**	**17**	**44**	**52.4 -0.6**
ESKT	**Eskisehir**		**2.81**	**334**	⇑*i*P	**Pn**	**17**	**44**	**52.9 -0.1**
SEYT	**Eskypehyr**		**2.81**	**334**	*e*P	**Pn**	**17**	**44**	**52.4 -0.6**
SEYT					*i* S	**Sn**	**17**	**45**	**21.2 -5.8**
LOD	**Lodumlu**		**2.91**	**5**	*e*PN	**Pn**	**17**	**44**	**54.2 -0.1**
CDAG	**Cicekdag**		**3.05**	**30**	*e*P	**Pn**	**17**	**44**	**56.6 +0.5**
CDAG	**Cicekdag**		**3.05**	**30**	⇑*i*P	**Pn**	**17**	**44**	**56.9 +0.7**
CDAG	**Cicekdag**		**3.05**	**30**	*e*P	**Pn**	**17**	**44**	**56.7 +0.5**
CDAG					*i* S	**Sn**	**17**	**45**	**31.6 -1.2**
HTY	**Hatay**		**3.12**	**105**	*e*PN	**Pn**	**17**	**44**	**57.9 +0.7**
BNN	**Bunyan**		**3.29**	**54**	*e*PN	**Pn**	**17**	**44**	**59.9 +0.4**
YER	**Yerkesik**		**3.31**	**274**	*e*PN	**Pn**	**17**	**45**	**00.3 +0.4**
KULA	**Kula-Manisa**		**3.35**	**298**	*e*PN	**Pn**	**17**	**45**	**00.6 +0.2**
ELDT	**Eldivan**		**3.58**	**12**	⇑*i*P	**Pn**	**17**	**45**	**05.2 +1.6**
MDU	**Mudurnu**		**3.60**	**345**	*e*PN	**Pn**	**17**	**45**	**04.0 +0.2**
CORM	**Corum**		**3.63**	**28**	*e*PN	**Pn**	**17**	**45**	**04.5 +0.4**
GULT	**Gulveren**		**3.75**	**337**	*e*PN	**Pn**	**17**	**45**	**06.0 +0.2**
SARI	**SarD1z-Kayseri**		**3.78**	**62**	*e*PN	**Pn**	**17**	**45**	**03.0 -3.4**
CAVI	**Cavuskoy**		**3.79**	**329**	*e*PN	**Pn**	**17**	**45**	**06.7 +0.3**
YLV	**Yalova**		**4.29**	**327**	*e*PN	**Pn**	**17**	**45**	**14.5 +1.2**
HRSH	**Kfar Ka'horesh**		**4.88**	**150**	⇓P	**Pg**	**17**	**45**	**39.9 -1.5**
RSH			**6.11**	**169**	P	**Pn**	**17**	**45**	**39.9 +1.6**
AMAG	**Maghara**		**6.36**	**174**	⇓P	**Pn**	**17**	**45**	**42.6 +0.8**
AMAG					S	**Sn**	**17**	**46**	**52.6 -1.9**
HMAT	**Matruh**		**7.35**	**218**	⇑*e*P	**Pn**	**17**	**45**	**54.1 -1.3**
HFRF	**Wahat Farafira**		**10.41**	**201**	⇑P	**Pn**	**17**	**46**	**37.7 +0.4**

ISCJB 23 18:18:25.4±0.9,1941S±008×69.1W±0.1,h115km±13km, mb3.6/3,Error ellipse: s-maj=20.8km s-min=9.7km az=154.5
IDC 23 18:18:27.0±3.4,1931S×69.11W,h113km±31km,mb3.4/3, mb1 3.4/6,mb1mx3.2/20,mbtmp3.3/6,MS3.5/1,Ms1 3.5/1, ms1mx2.2/26,Error ellipse: s-maj=44.8km s-min=32.7km az=147.0
NEIC 23 18:18:29.5±1.0,1944S×6871W,h35km,Error ellipse: s-maj=16.3km s-min=13.7km az=49.0

ISC 23 18:18:26.7±0.9,1941S±007×691W±01,h113km±12km,n9, σ0ş95/10,mb3.6/3,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
LVC	**Limon Verde**		**3.19**	**177**	P	**Pn**	**18**	**19**	**17.7 +2.4**
	2.7nm,0.3s,baz=338,slow=8.5,SNR=36								
LVC					S	**Sn**	**18**	**19**	**51.7 -1.2**
	6.4nm,0.3s,baz=41,slow=20,SNR=7.9								
ARE	**Arequipa**		**3.71**	**322**	*e*P	**Pn**	**18**	**19**	**28.0 +5.7**
ARE					*e*S	**Sn**	**18**	**20**	**05.0 -0.3**
SIV	**San Ignacio**		**8.37**	**67**	P	**Pn**	**18**	**20**	**25.3 0.0**
	1.1nm,0.3s,baz=271,slow=12,SNR=31								
CPUP	**Villa Florida**		**12.85**	**125**	P	**Pn**	**18**	**21**	**24.5 -0.7**
	0.3nm,0.3s,baz=281,slow=16,SNR=3.3								
BDFB	**Brasilia**		**20.45**	**83**	P	**P**	**18**	**22**	**59.6 +4.2**
	0.9nm,0.5s,baz=243,slow=17,SNR=5.4								
USHA	**Ushuaia**		**35.36**	**179**	LR	LR	18	40	10.6
	comp=Z,78nm,21.2s,baz=189,slow=37								
DBIC	**Dimbokro**		**68.33**	**74**	P	**P**	**18**	**29**	**16.5 +0.1**
	1.7nm,0.8s,mb4.0,baz=214,slow=9.9,SNR=3.0								
TORD	**Torodi Ar. Bea**		**76.83**	**71**	P	**P**	**18**	**30**	**07.1 +0.4**
	1.3nm,0.9s,mb3.6,baz=250,slow=5.4,SNR=15								
YKA	**Yellowknife Ar**		**89.16**	**341**	P	**P**	**18**	**31**	**08.7 -0.4**
	0.1nm,0.5s,mb3.1,baz=133,slow=5.2,SNR=3.0								
YKA					pP	pP	18	31	38.5 +0.1
	0.2nm,0.7s,baz=136,slow=4.7,SNR=7.3								

NEIC 23 18:29:25.9,4583N×2633E,h200km,MG3.7(BUC),After BUC.
ISCJB 23 18:29:32.7±0.8,4554N±004×2647E±005,h132km±7km, Error ellipse: s-maj=6.1km s-min=5.3km az=20.7
BUC 23 18:29:32.8±0.7,4554N×2647E,h136km±6km,MD4.0/3, Error ellipse: s-maj=4.6km s-min=3.5km az=41.0

ISC 23 18:29:33.3±0.9,4555N±004×2648E±005,h131km±8km, n33,σ0ş58/52,15C-11D,Romania

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
VRI	**Vrincioaia**		**0.36**	**29**	⇑*i*P	**Pn**	**18**	**29**	**52.0 +0.2**
VRI					*i* S	**Sn**	**18**	**30**	**06.0 +0.1**
VRI	**Vrincioaia**		**0.36**	**29**	P	**Pn**	**18**	**29**	**52.1 +0.3**
MLR	**Muntele Rosu**		**0.38**	**262**	⇑*i*P	**Pn**	**18**	**29**	**52.5 +0.6**
ISR	**Istrita**		**0.43**	**174**	⇑*i*P	**Pn**	**18**	**29**	**52.9 +0.7**
ODB	**Odobesti**		**0.47**	**60**	⇑*i*P	**Pn**	**18**	**29**	**53.4 +1.1**
ODB	**Odobesti**		**0.47**	**60**	P	**Pn**	**18**	**29**	**53.4 +1.1**
GHRR			**0.83**	**51**	⇑*i*P	**Pn**	**18**	**29**	**55.4 +0.6**
GHRR					*i* S	**Sn**	**18**	**30**	**11.4 +0.3**
VOIR			**1.01**	**264**	⇑*i*P	**Pn**	**18**	**29**	**56.3 -0.1**
VOIR					*i* S	**Sn**	**18**	**30**	**13.2 -0.7**
VOIR			**1.01**	**264**	⇑P	**Pn**	**18**	**29**	**56.3 0.0**
VOIR					S	**Sn**	**18**	**30**	**13.2 -0.7**
VARR			**1.02**	**70**	⇑*i*P	**Pn**	**18**	**29**	**56.5 0.0**
VARR					*i* S	**Sn**	**18**	**30**	**13.7 -0.4**
CFR	**Carcaliu**		**1.23**	**107**	⇑*i*P	**Pn**	**18**	**29**	**58.7 +0.2**
CFR					S	**Sn**	**18**	**30**	**17.2 -0.5**
BUC1	**Bucharest**		**1.24**	**195**	⇑*i*P	**Pn**	**18**	**29**	**58.4 -0.3**
BUC1					*i* S	**Sn**	**18**	**30**	**18.1 +0.1**
BUC1	**Bucharest**		**1.24**	**195**	P	**Pn**	**18**	**29**	**59.5 +0.8**
HARR	**Harsova**		**1.34**	**129**	⇓*i*P	**Pn**	**18**	**30**	**00.1 +0.4**
HARR					*i* S	**Sn**	**18**	**30**	**19.7 -0.1**
HARR	**Harsova**		**1.34**	**129**	P	**Pn**	**18**	**30**	**00.2 +0.5**
CVD	**Cernavoda**		**1.66**	**138**	⇓*i*P	**Pn**	**18**	**30**	**03.2 0.0**
CVD					*i* S	**Sn**	**18**	**30**	**25.7 -0.4**
CVD	**Cernavoda**		**1.66**	**138**	⇑P	**Pn**	**18**	**30**	**03.2 0.0**
CVD					S	**Sn**	**18**	**30**	**25.7 -0.4**
TLCR			**1.69**	**102**	⇓*i*P	**Pn**	**18**	**30**	**03.8 +0.2**
TLCR					*i* S	**Sn**	**18**	**30**	**26.6 -0.1**
TLCR			**1.69**	**102**	⇑P	**Pn**	**18**	**30**	**03.8 +0.2**
TLCR					S	**Sn**	**18**	**30**	**26.6 0.0**
TIRR	**Tirgusor**		**1.75**	**128**	⇓*i*P	**Pn**	**18**	**30**	**04.7 +0.3**
TIRR					*i* S	**Sn**	**18**	**30**	**27.6 -0.5**
TIRR	**Tirgusor**		**1.75**	**128**	P	**Pn**	**18**	**30**	**04.7 +0.3**
ZIMR			**2.05**	**203**	⇓*i*P	**Pn**	**18**	**30**	**08.0 +0.1**
ZIMR					*i* S	**Sn**	**18**	**30**	**34.2 -0.2**
ZIMR			**2.05**	**203**	⇓P	**Pn**	**18**	**30**	**08.0 +0.1**
ZIMR					S	**Sn**	**18**	**30**	**34.2 -0.3**
KIS	**Kishinev**		**2.18**	**47**	*e*S	**Sn**	**18**	**30**	**35.0 -2.2**
BURAR	**Bucovina Array**		**2.24**	**338**	⇓*i*P	**Pn**	**18**	**30**	**10.9 +0.6**
BURAR					*i* S	**Sn**	**18**	**30**	**39.2 +0.5**
BURAR	**Bucovina Array**		**2.24**	**338**	⇓P	**Pn**	**18**	**30**	**10.8 +0.6**
BURAR					S	**Sn**	**18**	**30**	**39.2 +0.5**
BUR08	**Bucovina Ar. S**		**2.27**	**338**	*e*Pn	**Pn**	**18**	**30**	**10.7 +0.1**
GZR	**Gura Zlata**		**2.61**	**268**	⇓*i*P	**Pn**	**18**	**30**	**15.2 +0.3**
GZR					*i* S	**Sn**	**18**	**30**	**46.0 -0.9**
GZR	**Gura Zlata**		**2.61**	**268**	⇑P	**Pn**	**18**	**30**	**15.2 +0.3**
GZR					S	**Sn**	**18**	**30**	**46.0 -0.8**
DRGR			**2.90**	**297**	⇓*i*P	**Pn**	**18**	**30**	**17.7 -0.9**
DRGR			**2.90**	**297**	⇑P	**Pn**	**18**	**30**	**17.7 -0.9**
BZS	**Buzias**		**3.41**	**273**	⇑*i*P	**Pn**	**18**	**30**	**24.8 -0.5**
BZS	**Buzias**		**3.41**	**273**	⇓P	**Pn**	**18**	**30**	**24.8 -0.5**

NEIC 23 18:36:44.9±1.4,382N×12778E,h35km,mb3.8/1,Error ellipse: s-maj=171.0km s-min=13.0km az=70.0

IDC 23 18:36:40.6±1.3,358N×12709E,h0km,mb3.4/5,mb1 3.6/5, mb1mx3.4/19,mbtmp3.4/5,Error ellipse: s-maj=124.9km s-min=19.4km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
WRAB	**Tennant Creek**		**24.43**	**163**	*e*P	P	**18**	**42**	**00.7 -0.5**
	2.1nm,0.7s								
WRA	**Warramunga Arr**		**24.43**	**163**	P	P	18	42	01.5 +0.3
	2.4nm,0.7s,baz=343,slow=10,SNR=18								
ASAR	**Alice Springs**		**27.88**	**167**	P	P	18	42	32.1 -0.2
	0.3nm,0.8s,baz=344,slow=7.3,SNR=6.7								
SONM	**Songino Array**		**47.55**	**341**	P	P	18	45	16.9 -0.9
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.5								
MKAR	**Makanchi Array**		**57.88**	**325**	P	P	18	46	34.1 -0.3
	0.3nm,0.6s,baz=122,slow=8.8,SNR=2.4								
KURK	**Kurchatov**		**62.06**	**327**	P	P	18	47	04.1 +1.2
	0.2nm,0.5s,baz=126,slow=7.1,SNR=2.7								

IDC 23 18:43:41.7±2.9,528S×15357E,h0km,mb3.1/3,mb1 3.5/4, mb1mx3.4/17,mbtmp3.3/4,ML2.9/1,MS2.7/1,Ms1 2.7/1, ms1mx2.3/10,Error ellipse: s-maj=80.6km s-min=36.4km az=114.0
ISCJB 23 18:43:43.3±1.8,54S±003×1536E±003,h33km,mb3.5/5, Error ellipse: s-maj=54.5km s-min=13.2km az=135.9
NEIC 23 18:43:44.6±1.2,530S×15383E,h35km,mb4.4/2,Error ellipse: s-maj=47.4km s-min=18.6km az=133.0

ISC 23 18:43:45.6±1.6,53S±03×1536E±03,h35km,n8,σ1ş46/7, mb3.5/5,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
PMG	**Port Moresby**		**7.57**	**237**	Pn	**Pn**	**18**	**45**	**33.7 +0.2**
	1.0nm,0.3s,baz=41,slow=9.3,SNR=4.8								
PMG					Sn	**Sn**	**18**	**46**	**56.6 -1.6**
	1.1nm,0.3s,baz=234,slow=19,SNR=5.2								
PMG					LR	LR	18	48	05.8
	comp=Z,50nm,18.5s,baz=254,slow=35								
WRA	**Warramunga Arr**		**23.72**	**230**	P	**P**	**18**	**48**	**57.1 +2.5**
	0.2nm,0.6s,mb2.7,baz=52,slow=9.7,SNR=2.6								
ASAR	**Alice Springs**		**26.33**	**224**	P	**P**	**18**	**49**	**18.4 +0.1**
	0.2nm,0.8s,mb2.7,baz=65,slow=9.3,SNR=3.5								
CMAR	**Chiang Mai Arr**		**58.78**	**295**	P	**P**	**18**	**53**	**42.4 +1.7**
	0.3nm,0.6s,mb3.5,baz=122,slow=6.6,SNR=4.5								
TRF	**Thorofare Moun**		**80.35**	**22**	*e*P	**P**	**18**	**55**	**50.5 -2.4**
	1.1nm,0.4s,mb4.1								
AAK	**Ala-Archa**		**85.56**	**313**	*e*P	**P**	**18**	**56**	**20.1 -0.2**
	3.8nm,0.9s,mb4.6								
TEIG	**Tepich**		**118.20**	**70**	*e*PKPdf	PKPdf	19	02	28.6 -1.3
TORD	**Torodi Ar. Bea**		**151.19**	**288**	PKPbc	PKPbc	19	03	37.5 +1.2
	0.3nm,0.5s,baz=78,slow=1.9,SNR=9.1								

IDC 23 18:51:12.6±1.3,3656N×8471E,h0km,mb3.2/3,mb1 3.5/8, mb1mx3.4/26,mbtmp3.4/8,ML3.5/5,Error ellipse: s-maj=37.1km s-min=18.7km az=62.0
ISCJB 23 18:51:14.5±0.8,3658N±006×8453E±008,h33km,mb3.1/3, Error ellipse: s-maj=9.5km s-min=7.9km az=14.3
BJI 23 18:51:14.8,3655N×8456E,h30km,mb3.5,ML3.7
NEIC 23 18:51:16.9±0.7,3660N×8459E,h35km,Error ellipse: s-maj=12.1km s-min=9.5km az=65.0

ISC 23 18:51:16.5±0.8,3653N±006×8463E±008,h35km,n14, σ1ş12/17,mb3.1/3,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
					Op	ISC	h	m	s ISC
WMQ	**Urumqi**		**7.65**	**17**	*e*P	**Pn**	**18**	**53**	**09.3 +4.0**
WMQ					Smax				
	comp=N,11nm,0.9s								
WMQ					Smax				
	comp=E,20nm,0.8s								
TKM2	**Tokmak 2**		**9.44**	**315**	*e*Pn	**Pn**	**18**	**53**	**29.1 -0.7**
	comp=E,4.1nm,0.6s								
MK31	**Makanchi Array**		**10.40**	**351**	*e*Pn	**Pn**	**18**	**53**	**42.9 -0.2**
MK31					*e*Sn	**Sn**	**18**	**55**	**39.3 +1.0**
MKAR	**Makanchi Array**		**10.40**	**351**	Pn	**Pn**	**18**	**53**	**43.0 -0.1**
	comp=E,0.7nm,0.3s,baz=166,slow=13,SNR=34								
MKAR					Sn	**Sn**	**18**	**55**	**40.2 +1.9**
	comp=E,0.3nm,0.3s,baz=171,slow=19,SNR=5.0								
MKAR					Lg		18	56	49.3
	comp=E,0.2nm,0.3s,baz=179,slow=24,SNR=3.7								
KBL	**Kabul**		**12.85**	**266**	*e*Pn	**Pn**	**18**	**54**	**15.8 -0.8**
	comp=E,1.0nm,0.6s								
KBL					*e*Sn	**Sn**	**18**	**56**	**38.4 0.0**
KURK	**Kurchatov**		**14.82**	**345**	Pn	**Pn**	**18**	**54**	**40.4 -3.0**
	comp=E,0.1nm,0.3s,baz=169,slow=12,SNR=6.5								
KURK	**Kurchatov**		**14.82**	**345**	*e*Pn	**Pn**	**18**	**54**	**41.9 -1.5**
	comp=E,4.7nm,1.1s								
ZAA0	**Zalesovo Array**		**17.42**	**0**	*e*Pn	**Pn**	**18**	**55**	**15.5 -1.0**
ZALV	**Zalesovo Beam**		**17.42**	**0**	P	**Pn**	**18**	**55**	**15.7 -0.8**
	comp=E,0.3nm,0.3s,baz=180,slow=14,SNR=11								
BVAR	**Borovoye Array**		**19.28**	**333**	P	**Pn**	**18**	**55**	**39.1 -0.1**
	comp=E,0.2nm,0.3s,baz=139,slow=12,SNR=11								
SONM	**Songino Array**		**19.62**	**48**	P	**Pn**	**18**	**55**	**41.8 -1.5**
	comp=E,0.1nm,0.3s,baz=240,slow=8.3,SNR=2.5								
CMAR	**Chiang Mai Arr**		**21.98**	**141**	P	**P**	**18**	**56**	**08.1 +0.6**
	comp=E,0.4nm,0.8s,mb2.9,baz=330,slow=10,SNR=4.4								
BRTR	**Keskin Array B**		**39.80**	**291**	P	**P**	**18**	**58**	**47.7 +1.6**
	comp=E,0.4nm,0.6s,mb3.3,baz=73,slow=7.0,SNR=4

IGT	**Igoumenitsa**	**0.62**	**187**	P		**Pg**	**19 44 45.5**	**-1.2**
IGT				S		**Sg**	**19 44 54.8**	**+0.1**
KEK	**Kerkira**	**0.65**	**228**	*e*PB		**Pg**	**19 44 46.0**	**-1.2**
KEK				*e*SB		**Sg**	**19 44 57.0**	**+1.4**
KEK	**Kerkira**	**0.65**	**228**	*e*Pg		**Pg**	**19 44 46.0**	**-1.2**
KEK				*e*Sb		**Sg**	**19 44 57.2**	**+1.6**
FNA	**Florina**	**0.97**	**48**	P		**Pg**	**19 44 52.4**	**-1.0**
FNA				S		**Sg**	**19 45 07.2**	**+1.3**
OHR	**Ohrid**	**1.01**	**16**	P		**Pg**	**19 44 53.8**	**-0.4**
OHR				S		**Sg**	**19 45 09.1**	**+1.9**
OHR	**Ohrid**	**1.01**	**16**	*e*Pg		**Pg**	**19 44 55.4**	**+1.2**
OHR				S		**Sg**	**19 45 09.1**	**+1.9**
OHR	**Ohrid**	**1.01**	**16**	*e*Pg		**Pg**	**19 44 55.5**	**+1.3**
OHR	**Ohrid**	**1.01**	**16**	P		**Pg**	**19 44 53.8**	**-0.4**
OHR				S		**Sg**	**19 45 09.5**	**+2.3**
KZN	**Kozani**	**1.04**	**81**	*e*PG		**Pg**	**19 44 51.4**	**-3.5**
BIA	**Bitola**	**1.11**	**38**	P		**Pg**	**19 44 54.2**	**-1.9**
BIA				S		**Sn**	**19 45 13.1**	**-0.5**
BIA	**Bitola**	**1.11**	**38**	*e*Pn		**Pg**	**19 44 55.1**	**-1.0**
BIA				S		**Sn**	**19 45 13.1**	**-0.5**
BIA	**Bitola**	**1.11**	**38**	P		**Pg**	**19 44 54.6**	**-1.5**
BIA				S		**Sn**	**19 45 13.1**	**-0.5**
TIR	**Tirane**	**1.27**	**341**	P		**Pg**	**19 44 58.7**	**-0.6**
TIR				S		**Sg**	**19 45 16.4**	**+0.6**
TIR	**Tirane**	**1.27**	**341**	*e*PN		**Pb**	**19 45 01.5**	**+1.8**
TIR				*i* SN		**Sn**	**19 45 24.3**	**+6.7**
THL	**Klokotos Trika**	**1.36**	**115**	P		**Pg**	**19 44 59.6**	**-1.2**
THL				S		**Sg**	**19 45 19.7**	**+1.3**
THL	**Klokotos Trika**	**1.36**	**115**	*e*Pb		**Pb**	**19 45 00.6**	**-0.5**
THL				S		**Sg**	**19 45 19.7**	**+1.3**
KRUS	**Krusevo**	**1.37**	**27**	*e*Pn		**Pn**	**19 45 00.4**	**-0.8**
LIT	**Litokhoron**	**1.59**	**91**	P		**Pn**	**19 45 02.7**	**-1.5**
LIT				S		**Sn**	**19 45 24.7**	**-0.6**
EVR	**Evrytania**	**1.63**	**138**	*e*PN		**Pn**	**19 45 05.2**	**+0.4**
EVR				*e*SN		**Sn**	**19 45 29.5**	**+3.1**
EVR	**Evrytania**	**1.63**	**138**	*e*Pn		**Pn**	**19 45 05.2**	**+0.4**
EVR				*e*Sn		**Sn**	**19 45 29.7**	**+3.3**
GRG	**Griva**	**1.71**	**61**	P		**Pn**	**19 45 05.5**	**-0.4**
GRG				S		**Sn**	**19 45 29.3**	**+0.9**
AGG	**Agios Georgios**	**1.85**	**127**	P		**Pn**	**19 45 07.9**	**+0.1**
AGG				S		**Sn**	**19 45 31.6**	**-0.3**
VLS	**Valsamata**	**1.97**	**176**	P		**Pn**	**19 45 08.6**	**-0.8**
VLS				S		**Sn**	**19 45 34.5**	**-0.3**
VLS	**Valsamata**	**1.97**	**176**	*e*PB		**Pn**	**19 45 08.1**	**-1.3**
VLS	**Valsamata**	**1.97**	**176**	*e*Pb		**Pn**	**19 45 08.5**	**-0.9**
VLS				S		**Sn**	**19 45 34.5**	**-0.3**
SKO	**Skopje**	**1.98**	**23**	*e*Pn		**Pn**	**19 45 08.0**	**-1.6**
VAY	**Valandovo**	**2.01**	**54**	P		**Pn**	**19 45 08.9**	**-1.1**
VAY				S		**Sn**	**19 45 36.4**	**+0.6**
VAY	**Valandovo**	**2.01**	**54**	*e*Pn		**Pn**	**19 45 11.8**	**+1.8**
VAY				S		**Sn**	**19 45 36.4**	**+0.6**
VAY	**Valandovo**	**2.01**	**54**	*e*Pn		**Pn**	**19 45 11.8**	**+1.9**
HORT	**Hortiatis**	**2.09**	**77**	P		**Pn**	**19 45 10.8**	**-0.4**
HORT				S		**Sn**	**19 45 38.2**	**+0.3**
KNT	**Kendrikon**	**2.14**	**61**	P		**Pn**	**19 45 11.2**	**-0.6**
RLS	**Riolos of Patr**	**2.24**	**158**	*e*PN		**Pn**	**19 45 14.1**	**+1.0**
XOR	**Xorichti**	**2.27**	**109**	P		**Pn**	**19 45 13.4**	**-0.2**
NEO	**Neokhori**	**2.32**	**110**	*e*PN		**Pn**	**19 45 14.7**	**+0.5**
PLG	**Polygyros**	**2.32**	**83**	P		**Pn**	**19 45 14.1**	**-0.2**
PLG				S		**Sn**	**19 45 43.9**	**+0.3**
PLG	**Polygyros**	**2.32**	**83**	*e*Pg		**Pn**	**19 45 14.9**	**+0.6**
PLG				S		**Sn**	**19 45 43.9**	**+0.3**
LKR	**Lokris**	**2.49**	**126**	P		**Pn**	**19 45 15.7**	**-0.9**
PAIG	**Paliouri**	**2.51**	**94**	P		**Pn**	**19 45 16.4**	**-0.5**
PAIG				S		**Sn**	**19 45 47.7**	**-0.4**
OUR	**Ouranopolis**	**2.73**	**85**	P		**Pn**	**19 45 19.7**	**-0.2**
LTK	**Loutraki**	**2.90**	**136**	P		**Pn**	**19 45 22.0**	**0.0**
LTK				S		**Sn**	**19 45 58.0**	**+0.2**
ITM	**Ithomi**	**3.19**	**158**	*e*PB		**Pn**	**19 45 27.2**	**+1.0**
ITM	**Ithomi**	**3.19**	**158**	*e*Pn		**Pn**	**19 45 27.0**	**+0.8**
PTL	**Penteli**	**3.40**	**127**	*e*PB		**Pn**	**19 45 30.8**	**+1.7**
PTL	**Penteli**	**3.40**	**127**	*e*Pb		**Pn**	**19 45 31.1**	**+2.0**
PYL	**PYLOS**	**3.41**	**162**	P		**Pn**	**19 45 28.6**	**-0.6**
DID	**Didima**	**3.43**	**139**	P		**Pn**	**19 45 29.0**	**-0.5**
DID				S		**Sn**	**19 46 11.6**	**+0.7**

NIED ***23*** *19:48:00.2, 26.50N×142.10E, h47km, Mw4.0 Best double couple: M0 1.10000×10^15 NP1: φ 189.00000°, δ 72.00000°, λ 95.00000°. NP2: φ 353.00000°, δ 18.00000°, λ 75.00000°.*
MOS ***23*** *19:48:05.7±1.2, 26.36N×141.97E, h33km, mb4.4/10, Error ellipse: s-maj=23.1km s-min=11.0km az=116.8*
ISCJB ***23*** *19:48:09.1±0.7, 26.46N±0.05×141.9E±0.1, h58km±7km, mb4.3/22, MS3.1/3, Error ellipse: s-maj=15.9km s-min=7.7km az=168.6*
IDC ***23*** *19:48:09.3±1.7, 26.43N×141.78E, h43km±16km, mb3.8/13, mb1 4.1/13, mb1mx4.0/20, mbtmp3.8/13, MS3.1/4, Ms1 3.2/4, ms1mx2.8/26, Error ellipse: s-maj=23.6km s-min=14.9km az=87.0*
JMA ***23*** *19:48:10.7, 26.47N×142.09E, h55km, M4.4*
NEIC ***23*** *19:48:11.8±1.8, 26.44N×141.81E, h67km±15km, mb4.9/8, MW4.0(NIED), Error ellipse: s-maj=11.6km s-min=9.6km az=99.0*

ISC 23 19:48:10.1±0.7, 26.41N±0.05×141.99E±0.10, h56km±6km, n57, σ0 9 96/60, mb4.3/22, MS3.1/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**0.27**	**37**	P	**Pn**	**19 48 19.5**	**-0.1**
JHHJ				S	**Sn**	**19 48 25.6**	**-0.8**
CBIJ	**Chichi jima**	**0.70**	**14**	P	**Pn**	**19 48 23.9**	**-0.2**
	157nm,0.3s,baz=203,slow=3.4,SNR=111						
CBIJ				S	**Sn**	**19 48 33.9**	**-0.5**
	662nm,0.3s,baz=270,slow=20,SNR=65						
CBIJ	**Chichi jima**	**0.70**	**14**	P	**Pn**	**19 48 23.8**	**-0.3**
CBIJ				S	**Sn**	**19 48 33.9**	**-0.5**
BSO4	**Boso 4**	**8.67**	**351**	S	**Sn**	**19 51 48.2**	**-0.8**
JOD2	**Odawara 2**	**9.17**	**345**	P	**Pn**	**19 50 20.6**	**+1.0**
JHU	**Hanno**	**9.69**	**347**	P	**Pn**	**19 50 28.9**	**+2.1**
JHU				S	**Sn**	**19 52 13.5**	**-0.6**
JRY	**Ryogami san**	**9.93**	**345**	P	**Pn**	**19 50 32.0**	**+1.9**
JRY				S	**Sn**	**19 52 20.2**	**+0.2**
MJAR	**Matsushiro Arr**	**10.60**	**343**	P	**Pn**	**19 50 39.6**	**+0.4**
	0.7nm,0.3s,baz=149,slow=10,SNR=12						
MJAR	**Matsushiro Arr**	**10.60**	**343**	P	**Pn**	**19 50 39.6**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**16.22**	**316**	P	**Pn**	**19 51 55.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=140,slow=13,SNR=2.7						
KSRS				LR	LR	19 57 14.7	
	comp=Z,47nm,19.1s,baz=125,slow=34						
SONM	**Songino Array**	**35.09**	**317**	P	**P**	**19 54 57.2**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=124,slow=8.4,SNR=13						
SONM				LR	LR	20 09 39.8	
	comp=Z,28nm,19.2s,MS3.0,baz=25,slow=37						
MIDW	**Midway**	**36.03**	**78**	P	**P**	**19 55 03.1**	**-3.0**
	comp=Z,87nm,0.8s						
HNR	**Honiara**	**39.67**	**152**	LR	LR	20 10 17.6	
	comp=Z,88nm,18.2s,MS3.6,baz=44,slow=33						
CMAR	**Chiang Mai Arr**	**40.42**	**268**	P	**P**	**19 55 43.6**	**+0.5**
	comp=Z,0.6nm,0.4s,mb3.7,baz=70,slow=5.7,SNR=11						
CMAR				LR	LR	20 14 37.6	
	comp=Z,11nm,18.0s,MS2.7,baz=300,slow=40						
LSA	**Lhasa**	**44.70**	**286**	*e*P	**P**	**19 56 17.9**	**+0.2**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
LSA	**Lhasa**	**44.70**	**286**	*e*P	**P**	**19 56 17.9**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.8						
TIXI	**Tiksi**	**45.87**	**354**	*e*P	**P**	**19 56 27.0**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
TIXI	**Tiksi**	**45.87**	**354**	*e*P	**P**	**19 56 27.0**	**+0.6**
	comp=Z,1.6nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	**46.67**	**190**	P	**P**	**19 56 33.7**	**+0.5**
	comp=Z,9.4nm,0.5s,mb5.0,baz=12,slow=8.8,SNR=66						
WRA	**Warramunga Arr**	**46.67**	**190**	P	**P**	**19 56 33.7**	**+0.5**
WRA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TAPN	**Taplejung**	**48.10**	**284**	*e*P	**P**	**19 56 44.5**	**+0.1**
ODAN	**Odare**	**48.48**	**283**	*e*P	**P**	**19 56 47.3**	**-0.1**
	comp=Z,10nm,0.5s,mb5.2						
RAMN	**Ramite**	**49.15**	**284**	*e*P	**P**	**19 56 52.3**	**-0.2**
	comp=Z,5.8nm,0.5s,mb4.9						
JIRN	**Jiri**	**49.35**	**285**	*e*P	**P**	**19 56 54.5**	**+0.5**
	comp=Z,6.0nm,0.4s,mb5.0						
GUN	**Gumba**	**49.57**	**285**	*e*P	**P**	**19 56 56.3**	**+0.6**
ZALV	**Zalesovo Beam**	**49.89**	**320**	P	**P**	**19 56 56.5**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.8,baz=101,slow=7.5,SNR=2.5						
KKN	**Kakani**	**50.12**	**285**	*e*P	**P**	**19 56 59.3**	**-0.5**
DMN	**Daman**	**50.30**	**285**	*e*P	**P**	**19 57 00.8**	**-0.5**
ASAR	**Alice Springs**	**50.40**	**190**	P	**P**	**19 57 01.6**	**-0.2**
	comp=Z,0.7nm,0.4s,mb4.1,baz=19,slow=9.5,SNR=36						
ASAR	**Alice Springs**	**50.40**	**190**	P	**P**	**19 57 01.6**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GKN	**Gorkha**	**50.63**	**286**	*e*P	**P**	**19 57 03.0**	**-0.7**
MK31	**Makanchi Array**	**50.78**	**310**	*e*P	**P**	**19 57 02.3**	**-2.2**
MKAR	**Makanchi Array**	**50.78**	**310**	P	**P**	**19 57 02.7**	**-1.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=86,slow=10,SNR=21						
MKAR	**Makanchi Array**	**50.78**	**310**	P	**P**	**19 57 02.7**	**-1.8**
DANN	**Dangsing**	**51.31**	**286**	*e*P	**P**	**19 57 09.1**	**+0.3**
	comp=Z,9.6nm,0.5s,mb5.0						
KOLN	**Koldanda**	**51.57**	**286**	*e*P	**P**	**19 57 10.7**	**-0.1**
	comp=Z,8.8nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**57.96**	**180**	P	**P**	**19 57 57.2**	**+0.5**
	comp=Z,1.6nm,0.5s,mb4.3,baz=349,slow=7.5,SNR=13						
YKA	**Yellowknife Ar**	**72.82**	**28**	P	**P**	**19 59 33.9**	**+1.5**
	comp=Z,2.0nm,0.5s,mb4.3,baz=295,slow=6.3,SNR=41						
YKA	**Yellowknife Ar**	**72.82**	**28**	P	**P**	**19 59 33.9**	**+1.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**72.82**	**28**	P	**P**	**19 59 33.9**	**+1.5**
KEV	**Kevo**	**73.57**	**341**	*e*p	**P**	**19 59 37.4**	**+0.7**
ARCES	**ARCESS Array B**	**74.13**	**341**	P	**P**	**19 59 41.4**	**+1.4**
	comp=Z,2.2nm,0.5s,mb4.4,baz=71,slow=8.1,SNR=17						
ARCES	**ARCESS Array B**	**74.13**	**341**	P	**P**	**19 59 41.4**	**+1.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**75.62**	**334**	*e*p	**P**	**19 59 47.6**	**-1.1**
	comp=Z,3.2nm,0.5s,mb4.5						
JOF	**Joensuu**	**75.62**	**334**	*e*P	**P**	**19 59 47.6**	**-1.1**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**78.01**	**334**	*e*p	**P**	**20 00 01.5**	**-0.7**
	comp=Z,3.0nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**78.01**	**334**	*e*P	**P**	**20 00 01.5**	**-0.7**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
NVAR	**Mina Array Bea**	**81.08**	**52**	P	**P**	**20 00 21.7**	**+2.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=299,slow=6.1,SNR=3.8						
NVAR	**Mina Array Bea**	**81.08**	**52**	P	**P**	**20 00 21.7**	**+2.3**
AKASG	**Malin Array Be**	**83.06**	**324**	P	**P**	**20 00 28.8**	**-0.8**
	comp=Z,0.7nm,0.5s,mb4.0,baz=53,slow=5.2,SNR=3.5						
AKASG	**Malin Array Be**	**83.06**	**324**	P	**P**	**20 00 28.8**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**83.06**	**324**	P	**P**	**20 00 28.8**	**-0.8**
NB2	**NORSAR Subarra**	**84.18**	**338**	P	**P**	**20 00 34.9**	**-0.1**
	comp=Z,0.6nm,0.5s,mb4.0,baz=49,slow=4.8						
NOA	**NORSAR Array B**	**84.18**	**338**	P	**P**	**20 00 34.8**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.3,baz=45,slow=4.9,SNR=5.6						
NOA	**NORSAR Array B**	**84.18**	**338**	P	**P**	**20 00 34.8**	**-0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**92.00**	**329**	P	**P**	**20 01 12.3**	**-0.5**
	comp=Z,0.1nm,0.4s,mb3.5,baz=48,slow=6.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**124.90**	**311**	PKP	PKPdf	20 07 04.5	-0.1
	comp=Z,0.1nm,0.5s,baz=11,slow=2.2,SNR=2.7						

IDC ***23*** *19:55:13.9±1.8, 1593S×17282W, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.9/18, mbtmp3.7/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/21, Error ellipse: s-maj=133.5km s-min=20.8km az=149.0*
NEIC ***23*** *19:55:15.7±0.7, 1530S×173.07W, h10km, mb4.4/5, Error ellipse: s-maj=36.6km s-min=13.1km az=138.0*
ISCJB ***23*** *19:55:17.2±0.7, 153S±0.2×173.1W±0.2, h33km, mb3.9/11, Error ellipse: s-maj=34.2km s-min=8.6km az=136.9*

ISC 23 19:55:19.2±0.6, 152S±0.2×1730W±0.2, h35km, n16, σ1 9 48/17, mb3.9/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.78**	**43**	Pn	**Pn**	**19 55 45.4**	**-2.1**
	16nm,0.3s,baz=22,slow=11,SNR=18						
AFI				Sn	**Sn**	**19 56 07.5**	**-1.4**
	41nm,0.3s,baz=232,slow=24,SNR=12						
AFI				LR	LR	19 56 45.9	
	comp=Z,268nm,19.9s,baz=312,slow=41						
AFI	**Afiamalu**	**1.78**	**43**	*e*Pn	**Pn**	**19 55 45.2**	**-2.3**
AFI				*e*Sn	**Sn**	**19 56 06.4**	**-2.5**
STKA	**Stephens Creek**	**44.44**	**240**	P	**P**	**20 03 25.9**	**-1.0**
	1.2nm,0.6s,mb3.8,baz=61,slow=9.3,SNR=5.3						
STKA				LR	LR	20 18 53.4	
	comp=Z,44nm,20.5s,baz=25,slow=32						
STKA	**Stephens Creek**	**44.44**	**240**	*e*P	**P**	**20 03 26.0**	**-0.9**
	0.5nm,0.9s,mb3.2						
WRAB	**Tennant Creek**	**50.22**	**257**	*e*P	**P**	**20 04 12.2**	**0.0**
	3.5nm,1.3s,mb4.2						
WRA	**Warramunga Arr**	**50.23**	**257**	P	**P**	**20 04 11.6**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=94,slow=7.1,SNR=7.9						
ASAR	**Alice Springs**	**50.51**	**252**	P	**P**	**20 04 13.7**	**-0.6**
	1.3nm,0.5s,mb4.1,baz=89,slow=7.8,SNR=25						
VNDA	**Vanda**	**63.59**	**186**	P	**P**	**20 05 44.3**	**-1.7**
	2.2nm,1.1s,mb4.1						
CASY	**Casey**	**70.72**	**205**	*e*P	**P**	**20 06 31.6**	**+0.2**
	22nm,1.2s,mb5.0						
NVAR	**Mina Array Bea**	**73.96**	**42**	P	**P**	**20 06 54.0**	**+3.0**
	0.5nm,0.6s,mb3.6,baz=225,slow=9.6,SNR=4.1						
TXAR	**Lajitas Array**	**80.22**	**56**	P	**P**	**20 07 27.9**	**+1.5**
	0.4nm,0.7s,mb3.5,baz=226,slow=6.2,SNR=3.5						
TXAR	**Lajitas Array**	**80.22**	**56**	P	**P**	**20 07 27.9**	**+1.5**
TNA	**Tin City**	**80.63**	**2**	*e*P	**P**	**20 07 27.8**	**0.0**
	9.7nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	**81.89**	**42**	P	**P**	**20 07 37.5**	**+2.5**
	0.5nm,0.9s,mb3.5,baz=205,slow=3.1,SNR=3.8						
YKA	**Yellowknife Ar**	**89.79**	**23**	P	**P**	**20 08 15.8**	**+2.1**
	0.1nm,0.6s,mb3.4,baz=238,slow=5.2,SNR=3.3						
BRTR	**Keskin Array B**	**146.24**	**321**	PKPbc	PKPbc	20 15 00.0	+3.7
	1.4nm,1.0s,baz=122,slow=1.6,SNR=5.5						

NEIC ***23*** *20:33:00.5±4.7, 2271N×121.37E, h10km, Error ellipse: s-maj=47.5km s-min=14.6km az=160.0*
ISCJB ***23*** *20:33:05.0±0.3, 2287N±0.02×121.18E±0.02, h10km, Error ellipse: s-maj=3.1km s-min=2.0km az=23.9*
TAP ***23*** *20:33:05.3, 2291N×121.08E, h10km, ML3.5, B*

ISC 23 20:33:05.2±0.4, 2288N±0.02×12117E±0.02, h9km±2km, n57, σ1 9 09/99, 12C-8D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**0.11**	**240**	*e*P	**Pg**	**20 33 07.1**	**-0.8**
TWG				*e*S	**Sg**	**20 33 10.0**	**+0.3**
TWG	**Pinlang**	**0.11**	**240**	⇓*i*P	**Pg**	**20 33 08.3**	**+0.5**
	baz=187						
TWG				*i* S	**Sg**	**20 33 10.3**	**+0.6**
	baz=187						
TTN	**Taitung**	**0.12**	**191**	⇑*i*P	**Pg**	**20 33 10.2**	**+2.2**
	baz=160						
TTN				S	**Sg**	**20 33 14.4**	**+4.4**
	baz=160						
CHKT	**Chengkung**	**0.28**	**38**	⇓*i*P	**Pg**	**20 33 12.6**	**+1.6**
	baz=54						
CHKT				*e*S	**Sg**	**20 33 17.8**	**+3.0**
	baz=54						
ECL	**Taimali**	**0.34**	**216**	⇓*i*P	**Pg**	**20 33 11.9**	**-0.1**
	baz=201						
ECL				*e*S	**Sg**	**20 33 16.2**	**-0.4**
	baz=201						
ELDTW	**Lidau**	**0.34**	**335**	⇑*i*P	**Pg**	**20 33 11.5**	**-0.5**
	baz=357						
ELDTW				*i* S	**Sg**	**20 33 15.1**	**-1.5**
	baz=357						
STYT	**Tauyuan**	**0.48**	**307**	⇑*i*P	**Pg**	**20 33 13.6**	**-0.9**
	baz=310						
STYT				S	**Sg**	**20 33 19.2**	**-1.7**
	baz=310						
TWF1	**Yuli**	**0.49**	**13**	⇓*i*P	**Pg**	**20 33 14.3**	**-0.5**
	baz=12						
TWF1				*i* S	**Sg**	**20 33 21.5**	**+0.3**
	baz=12						
SSD	**Sandimen**	**0.52**	**256**	⇓*i*P	**Pg**	**20 33 14.1**	**-1.2**
	baz=249						
SSD				*e*S	**Sg**	**20 33 18.9**	**-3.1**
	baz=249						
YULB	**Yu-li**	**0.53**	**13**	*e*P	**Pg**	**20 33 14.3**	**-1.2**
YULB				*e*S	**Sg**	**20 33 22.3**	**-0.2**
EAST	**Anshuo**	**0.57**	**212**	*e*P	**Pg**	**20 33 15.9**	**-0.4**
	baz=189						
TAW	**Tawu**	**0.57**	**206**	*e*P	**Pg**	**20 33 16.1**	**-0.3**
	baz=190						
TAW				*e*S	**Sg**	**20 33 24.3**	**+0.4**
	baz=190						
WTP	**Ta-pu**	**0.63**	**306**	⇑*i*P	**Pg**	**20 33 17.1**	**-0.4**
	baz=307						
WTP				*e*S	**Sg**	**20 33 25.3**	**-0.5**
	baz=307						
EHY	**Hungye**	**0.64**	**12**	⇑P	**Pg**	**20 33 17.7**	**0.0**
	baz=10.0						
EHY				S	**Sg**	**20 33 25.8**	**-0.3**
	baz=10.0						
YUS	**Yu-Shan**	**0.64**	**342**	⇑*i*P	**Pg**	**20 33 17.3**	**-0.4**
	baz=357						
YUS				S	**Sg**	**20 33 24.7**	**-1.4**
	baz=357						
SGLT	**Jiouru**	**0.65**	**257**	*e*P	**Pg**	**20 33 17.4**	**-0.4**
	baz=254						
TPUB	**Ta-pu**	**0.66**	**310**	*e*P	**Pg**	**20 33 17.3**	**-0.6**
TPUB				*e*S	**Sg**	**20 33 26.6**	**+0.1**
CHN1	**Nanshi**	**0.67**	**298**	⇑P	**Pg**	**20 33 18.1**	**-0.1**
	baz=306						
CHN1				S	**Sg**	**20 33 27.3**	**+0.3**
	baz=306						
TWM1	**Shoushan**	**0.69**	**266**	*e*P	**Pg**	**20 33 18.9**	**+0.2**
	baz=259						
CHN4	**Tsaushan**	**0.71**	**312**	⇑*i*P	**Pg**	**20 33 18.8**	**-0.3**
	baz=321						
CHN4				S	**Sg**	**20 33 28.2**	**-0.2**
	baz=321						
SCZT	**Fangliau**	**0.71**	**226**	⇓*i*P	**Pg**	**20 33 18.6**	**-0.4**
	baz=224						
SCZT				S	**Sg**	**20 33 28.0**	**-0.4**
	baz=224						
ALS	**Alishan**	**0.72**	**332**	⇑*i*P	**Pg**	**20 33 18.6**	**-0.5**
	baz=341						
ALS				*e*S	**Sg**	**20 33 27.6**	**-0.8**
	baz=341						
TWK	**Hsinying**	**0.74**	**302**	*e*P	**Pg**	**20 33 19.0**	**-0.5**
	baz=303						
TWK				S	**Sg**	**20 33 29.2**	**0.0**
	baz=303						
CHN3	**Shinhua**	**0.77**	**285**	*e*P	**Pg**	**20 33 21.1**	**+0.9**
	baz=284						
CHN3				*e*S	**Sg**	**20 33 32.9**	**+2.7**
	baz=284						
CHN5	**Tsauling**	**0.85**	**328**	⇑*i*P	**Pg**	**20 33 21.2**	**-0.5**
	baz=331						
CHN5				*e*S	**Sg**	**20 33 32.1**	**-0.7**
	baz=331						
KAU	**Kaohsiung**	**0.85**	**249**	*e*P	**Pg**	**20 33 23.9**	**+2.2**
	baz=238						
TAI1	**Yung-k'ang**	**0.89**	**281**	*e*P	**Pg**	**20 33 23.2**	**+0.9**
	baz=280						
CHN2	**Minshiung**	**0.92**	**316**	*e*P	**Pg**	**20 33 22.8**	**-0.1**
	baz=318						
CHN2				S	**Sg**	**20 33 35.9**	**+1.0**
	baz=318						
CHY	**Chiayi**	**0.93**	**312**	⇑P	**Pg**	**20 33 22.9**	**-0.2**
	baz=314						
CHY				*e*S	**Sg**	**20 33 35.4**	**+0.2**
	baz=314						
SSLB	**Suanglung**	**0.93**	**348**	*e*Pn	**Pn**	**20 33 21.9**	**-2.6**
SSLB				*e*Sn	**Sn**	**20 33 34.8**	**-3.2**
SCLT	**Jiali**	**0.95**	**289**	*e*P	**Pg**	**20 33 23.8**	**+0.3**
	baz=300						
SCLT				*e*S	**Sg**	**20 33 38.1**	**+2.2**
	baz=300						
HEN	**Hengchun**	**0.95**	**205**	*e*P	**Pg**	**20 33 24.0**	**+0.4**
	baz=188						
ESL	**Shilin**	**0.96**	**14**	P	**Pg**	**20 33 23.5**	**-0.3**
	baz=27						
ESL				*e*S	**Sg**	**20 33 34.7**	**-1.7**
	baz=27						
WGK	**Gukeng**	**0.98**	**325**	P	**Pg**	**20 33 23.9**	**-0.2**
	baz=328						
WGK				*e*S	**Sg**	**20 33 38.7**	**+1.7**
	baz=328						
TWK1	**Hengchun**	**0.99**	**200**	*e*P	**Pg**	**20 33 24.9**	**+0.7**
	baz=182						
CHN8	**Yiju**	**1.00**	**298**	*e*P	**Pg**	**20 33 23.7**	**-0.8**
	baz=312						
CHN8				*e*S	**Sg**	**20 33 38.7**	**+1.2**
	baz=312						
SMLT	**Sun Moon Lake**	**1.03**	**346**	⇓P	**Pg**	**20 33 24.5**	**-0.6**
	baz=356						
SMLT				*e*S	**Sg**	**20 33 39.8**	**+1.2**
	baz=356						
TYC	**Yuchr**	**1.06**	**344

GRG	**Griva**	**0.40**	**200**	P	**Pg**	**20 39 44.7**	**-0.2**
GRG				S	**Sg**	**20 39 49.7**	**-0.4**
THE	**Thessaloniki**	**0.76**	**157**	P	**Pg**	**20 39 51.1**	**-0.7**
THE				S	**Sg**	**20 40 01.7**	**+0.1**
SOH	**Sokhos**	**0.78**	**131**	P	**Pg**	**20 39 51.4**	**-0.7**
SOH				S	**Sg**	**20 40 02.5**	**+0.3**
HORT	**Hortiatis**	**0.84**	**152**	P	**Pg**	**20 39 52.8**	**-0.4**
HORT				S	**Sg**	**20 40 04.4**	**+0.4**
BIA	**Bitola**	**1.00**	**252**	*e*Pg	**Pg**	**20 39 55.3**	**-1.0**
BIA				*e*Sg	**Sg**	**20 40 09.9**	**+0.6**
BIA	**Bitola**	**1.00**	**252**	*e*Pg	**Pg**	**20 39 55.4**	**-0.9**
BIA				*e*Sg	**Sg**	**20 40 09.9**	**+0.7**
BIA				*e*Lg		20 40 11.2	
	comp=N,5.4nm,0.2s						
BIA				*e*Lg		20 40 11.8	
	comp=E,4.3nm,0.2s						
KRUS	**Krusevo**	**1.00**	**272**	*i* Pg	**Pg**	**20 39 55.3**	**-1.1**
KRUS				*i* Sg	**Sg**	**20 40 10.3**	**+0.9**
KRUS	**Krusevo**	**1.00**	**272**	*i* Pg	**Pg**	**20 39 55.4**	**-1.0**
KRUS				*i* Sg	**Sg**	**20 40 10.3**	**+1.0**
KRUS				*e*Lg		20 40 11.3	
	comp=N,3.0nm,0.2s						
KRUS				*e*Lg		20 40 12.1	
	comp=E,3.3nm,0.3s						
SKO	**Skopje**	**1.06**	**307**	*e*Pg	**Pg**	**20 39 57.6**	**+0.1**
SKO				*i* Sg	**Sg**	**20 40 12.3**	**+1.0**
SKO	**Skopje**	**1.06**	**307**	*e*Pg	**Pg**	**20 39 57.6**	**+0.1**
SKO				*i* Sg	**Sg**	**20 40 12.3**	**+1.0**
PLG	**Polygyros**	**1.17**	**145**	P	**Pg**	**20 39 59.0**	**-0.5**
PLG				S	**Sg**	**20 40 16.3**	**+1.7**
OUR	**Ouranopolis**	**1.46**	**133**	P	**Pn**	**20 40 04.2**	**-0.2**
PAIG	**Paliouri**	**1.64**	**149**	P	**Pn**	**20 40 06.2**	**-0.6**
PAIG				S	**Sn**	**20 40 28.7**	**+0.4**

*DDA **23** 20:42:01.7, 39.36N×33.18E, h6$^{km}_{\pm}$1^{km}, Md2.6*
*CSEM **23** 20:42:02.0±0.1, 39.30N×33.26E, h19$^{km}_{\pm}$1^{km}, MD3.0, Error ellipse: s-maj=2.8km s-min=2.1km az=154.0*
*ISK **23** 20:42:02.0, 39.28N×33.24E, h15^{km}, MD3.0*
*ISCJB **23** 20:42:03.1±0.7, 39.32N±005°×33.23E±007, h21$^{km}_{\pm}$9^{km}, Error ellipse: s-maj=11.4km s-min=6.8km az=41.4*
ISC 23 20:42:02.9±0.9,**3932N**±005°×**3323E**±006,**h16**$^{km}_{\pm}$7^{km},**n11**, σ0§**66**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.38**	**83**	*e*PG	**Pg**	**20 42 10.1**	**-0.5**
KAMT				*e*SG	**Sg**	**20 42 16.2**	**+0.4**
LOD	**Lodumlu**	**0.67**	**328**	*e*PG	**Pg**	**20 42 16.5**	**+0.4**
CDAG	**Cicekdag**	**0.93**	**71**	*i* P	**Pb**	**20 42 19.8**	**-0.9**
CDAG				*i* S	**Sb**	**20 42 34.0**	**+1.2**
CDAG	**Cicekdag**	**0.93**	**71**	*i* P	**Pb**	**20 42 19.8**	**-0.9**
CDAG				*i* S	**Sb**	**20 42 34.0**	**+1.2**
KIZT	**Kizilcal**	**1.14**	**248**	*e*PN	**Pn**	**20 42 23.8**	**-0.4**
ELDT	**Eldivan**	**1.18**	**7**	*i* P	**Pn**	**20 42 23.8**	**-0.9**
ELDT				*i* S	**Sb**	**20 42 40.1**	**+0.3**
KDHN	**Kadinhani**	**1.18**	**228**	*i* P	**Pn**	**20 42 24.8**	**+0.1**
KDHN				*i* S	**Sb**	**20 42 41.2**	**+1.3**
LADK	**Ladik-KONYA**	**1.31**	**211**	*e*PN	**Pn**	**20 42 26.0**	**-0.5**
CORM	**Corum**	**1.38**	**51**	*e*PN	**Pn**	**20 42 27.7**	**+0.2**
KONT	**Konya--Tatoy**	**1.53**	**207**	*e*PN	**Pn**	**20 42 29.1**	**-0.5**
YOZ	**Yozgat**	**1.65**	**78**	*e*PN	**Pn**	**20 42 31.0**	**-0.1**

*IDC **23** 20:50:49.6±4.9, 31.35S×179.83W, h359$^{km}_{\pm}$44^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/16, mbtmp3.4/5, Error ellipse: s-maj=52.4km s-min=24.9km az=25.0*
*NEIC **23** 20:50:53.8±3.0, 31.91S×179.83W, h414$^{km}_{\pm}$31^{km}, Error ellipse: s-maj=40.1km s-min=19.2km az=199.0*
ISC 23 20:50:56.5±2.7,**320S**±02°×**1795E**±02,**h388**$^{km}_{\pm}$18^{km},**n34**, σ0§**94**/27,**mb3.6/4**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**6.19**	**189**	P	**Pn**	**20 52 30.8**	**+0.2**
PUZ				S	**S**	**20 53 46.2**	**-1.1**
MWZ	**Matawai**	**6.57**	**194**	P	**Pn**	**20 52 35.8**	**+1.0**
URZ	**Urewera**	**6.59**	**196**	P	**Pn**	**20 52 35.6**	**+0.6**
	3.6nm,0.3s,baz=277,slow=3.2,SNR=26						
URZ				S	**S**	**20 53 56.8**	**+1.4**
	12nm,0.3s,baz=90,slow=23,SNR=28						
URZ	**Urewera**	**6.59**	**196**	P	**Pn**	**20 52 35.6**	**+0.6**
KNZ	**Kokohu**	**7.21**	**191**	P	**Pn**	**20 52 42.0**	**0.0**
BKZ	**Black Stump Fm**	**7.60**	**198**	P	**Pn**	**20 52 43.2**	**-3.3**
FWVZ	**Far West T-bar**	**7.96**	**203**	P	**Pn**	**20 52 52.2**	**+1.6**
WNVZ	**Wahianoa**	**8.01**	**202**	P	**Pn**	**20 52 51.5**	**+0.3**
TSZ	**Takapari Road**	**8.58**	**198**	P	**Pn**	**20 52 57.0**	**-0.8**
BFZ	**Birch Farm**	**9.10**	**196**	P	**Pn**	**20 53 04.1**	**+0.3**
MRZ	**Mangatainoka R**	**9.25**	**199**	P	**Pn**	**20 53 04.6**	**-0.9**
CAW	**Cannon Point**	**9.81**	**200**	P	**Pn**	**20 53 11.0**	**-1.0**
TCW	**Tory Channel**	**10.15**	**203**	P	**Pn**	**20 53 15.6**	**-0.4**
NNZ	**Nelson**	**10.47**	**206**	P	**Pn**	**20 53 18.8**	**-0.9**
QRZ	**Quartz Range**	**10.48**	**210**	P	**Pn**	**20 53 20.3**	**+0.4**
THZ	**Tophouse**	**11.12**	**206**	P	**Pn**	**20 53 26.8**	**-0.5**
CTA	**Charters Tower**	**31.99**	**284**	P	**P**	**20 56 48.4**	**-0.1**
	1.4nm,0.3s,mb3.7,baz=92,slow=8.8,SNR=7.9						
STKA	**Stephens Creek**	**32.05**	**260**	P	**P**	**20 56 51.2**	**+2.3**
	2.1nm,0.6s,mb3.7,baz=106,slow=9.1,SNR=12						
STKA	**Stephens Creek**	**32.05**	**260**	P	**P**	**20 56 51.2**	**+2.3**
ASAR	**Alice Springs**	**40.91**	**270**	P	**P**	**20 58 02.5**	**-0.5**
	0.6nm,0.5s,mb3.2,baz=105,slow=7.2,SNR=11						
WRA	**Warramunga Arr**	**42.04**	**275**	P	**P**	**20 58 11.0**	**-1.1**
	1.0nm,0.3s,mb3.6,baz=111,slow=8.0,SNR=13						
SNAA	**Sanae**	**76.66**	**179**	*e*	**P**	**21 02 04.7**	**-0.5**
VNA3	**Neumayer Olymp**	**76.89**	**177**	*e*	**P**	**21 02 06.2**	**-0.3**
VNA3				*e*		21 02 08.1	
VNA2	**Neumayer--Watz**	**77.30**	**178**	*e*	**P**	**21 02 08.8**	**+0.1**
	baz=193,slow=5.1						
VNA2				*e*		21 02 10.9	
VNA1	**Neumayer--Stat**	**77.54**	**177**	*e*	**P**	**21 02 11.4**	**+1.3**
MKAR	**Makanchi Array**	**117.11**	**310**	PKP	PKPdf	21 08 51.7	-4.0
	0.4nm,0.6s,baz=142,slow=1.1,SNR=6.8						
ARCES	**ARCESS Array B**	**139.61**	**346**	PKhKP		21 09 26.1	
	4.8nm,1.0s,baz=45,slow=3.1,SNR=7.4						
ARCES				PKP	PKPdf	21 09 32.2	-5.3
	2.9nm,0.8s,baz=31,slow=2.1,SNR=5.0						
JOF	**Joensuu**	**143.01**	**336**	*e*pkp	PKPdf	21 09 36.5	-7.3
	1.0nm,0.5s						
KAF	**Kangasniemi**	**145.23**	**338**	*e*pkp	PKPdf	21 09 42.5	-5.2
	4.1nm,0.6s						
NB2	**NORSAR Subarra**	**149.90**	**349**	PKP	PKPdf	21 09 56.1	+0.7
	comp=Z,1.5nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.90**	**349**	PKPbc	PKPdf	21 09 56.4	+1.0
	comp=Z,1.6nm,0.5s,baz=16,slow=4.2,SNR=6.7						
AKASG	**Malin Array Be**	**151.14**	**319**	PKPbc	PKPdf	21 09 59.8	+2.2
	comp=Z,1.7nm,0.5s,baz=63,slow=2.3,SNR=7.8						
BRTR	**Keskin Array B**	**151.37**	**295**	PKPbc	PKPdf	21 10 01.0	+2.6
	comp=Z,0.6nm,0.6s,baz=114,slow=4.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**161.18**	**187**	PKPab	PKPab	21 10 56.3	-1.1
	comp=Z,0.4nm,0.6s,baz=175,slow=4.4,SNR=6.9						

NEIC 23 20:54:20.7, 3990S×17708E, h28^{km}, ML3.7(WEL), **After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.86**	**328**	P	Pn	20 54 35.4	-1.5
TSZ	**Takapari Road**	**0.88**	**259**	P	Pn	20 54 35.9	-1.2
BFZ	**Birch Farm**	**1.01**	**219**	P	Pn	20 54 38.2	-0.8
MOVZ	**Moawhango**	**1.14**	**295**	P	Pn	20 54 39.6	-1.1
MOVZ				S	Sn	20 54 53.4	-2.0
HATZ	**Hinemaiaia**	**1.27**	**322**	P	Pn	20 54 41.5	-1.0
TUVZ	**Tukino**	**1.27**	**299**	P	Pn	20 54 42.1	-0.4
WNVZ	**Wahianoa**	**1.28**	**296**	P	Pn	20 54 42.5	-0.2
RITZ	**Rihia Road**	**1.32**	**314**	P	Pn	20 54 43.3	+0.1
DRZ	**Dome Shelter**	**1.33**	**298**	P	Pn	20 54 43.5	+0.2
FWVZ	**Far West T-bar**	**1.34**	**298**	P	Pn	20 54 43.1	-0.5
NGZ	**Ngauruhoe**	**1.35**	**302**	P	Pn	20 54 43.4	-0.3
MRZ	**Mangatainoka R**	**1.38**	**236**	P	Pn	20 54 43.1	-0.9
WTVZ	**West Tongariro**	**1.39**	**304**	P	Pn	20 54 44.3	+0.1
KATZ	**Kakaramea**	**1.42**	**310**	P	Pn	20 54 44.6	+0.1
RATZ	**Rangitukua**	**1.45**	**315**	P	Pn	20 54 45.5	+0.5
WHTZ	**Whakaora**	**1.51**	**324**	P	Pn	20 54 45.1	-0.7
TWVZ	**Taurewa**	**1.52**	**303**	P	Pn	20 54 45.7	-0.2
WATZ	**Wairara**	**1.58**	**318**	P	Pn	20 54 47.7	+0.8
MTW	**Mount Morrison**	**1.74**	**223**	P	Pn	20 54 47.1	-1.9
EDRZ	**Edgecumbe**	**1.81**	**351**	P	Pn	20 54 48.8	-1.2
KIW	**Kapiti Island**	**1.92**	**239**	P	Pn	20 54 50.2	-1.2
PAWZ	**Paruwai Farm**	**1.94**	**220**	P	Pn	20 54 50.1	-1.7
CAW	**Cannon Point**	**1.95**	**231**	P	Pn	20 54 50.4	-1.5
HIZ	**Hauiti**	**2.21**	**308**	P	Pn	20 54 55.2	-0.3
MRW	**Makara Radio**	**2.25**	**233**	P	Pn	20 54 54.3	-1.7
NEZ	**North Egmont**	**2.39**	**284**	P	Pn	20 55 02.7	+4.8
TCW	**Tory Channel**	**2.51**	**238**	P	Pn	20 54 57.8	-1.8
MXZ	**Matakaoa Point**	**2.52**	**23**	P	Pn	20 54 58.8	-1.0
BSWZ	**Blackbirch Sta**	**3.03**	**232**	P	Pn	20 55 04.5	-2.3
THZ	**Tophouse**	**3.67**	**238**	P	Pn	20 55 13.1	-2.5
MQZ	**McQueen's Vall**	**5.04**	**220**	P	Pn	20 55 31.1	-3.3
ODZ	**Otahua Downs**	**7.00**	**221**	P	Pn	20 55 58.8	-2.5

IDC 23 21:18:30.0±1.8,**021S**×**13046E**,**h0**^{km},**mb3.4/2**,**mb1 3.7/4**, **mb1mx3.4/17**,**mbtmp3.5/4**,**ML3.5/2**,**Error ellipse: s-maj=58.1km s-min=25.8km az=70.0**,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.71**	**246**	Pn	Pn	21 21 19.4	+1.0
	0.4nm,0.3s,baz=31,slow=16,SNR=3.1						
WRA	**Warramunga Arr**	**19.98**	**169**	P	Pn	21 23 03.4	-2.3
	0.1nm,0.3s,baz=348,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**23.55**	**172**	P	P	21 23 42.6	+0.2
	1.3nm,0.6s,baz=347,slow=9.9,SNR=9.4						
MKAR	**Makanchi Array**	**62.90**	**325**	P	P	21 28 58.0	0.0
	0.2nm,0.7s,baz=122,slow=7.1,SNR=3.1						

IDC 23 22:14:19.0±4.2,**1539S**×**16661E**,**h0**^{km},**mb4.1**/4, **mb1 4.1**/5,**mb1mx3.8**/18,**mbtmp4.1**/5,**ML4.0**/1,**Error ellipse: s-maj=82.4km s-min=51.8km az=106.0**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**19.90**	**285**	P	Pn	22 18 51.6	-2.3
	1.2nm,0.3s,baz=96,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**28.08**	**230**	P	P	22 20 11.6	-0.9
	1.0nm,0.4s,baz=67,slow=13,SNR=4.0						
WRA	**Warramunga Arr**	**31.05**	**257**	P	P	22 20 39.7	+0.8
	0.7nm,0.4s,baz=87,slow=9.0,SNR=4.5						
ASAR	**Alice Springs**	**31.85**	**250**	P	P	22 20 46.4	+0.5
	0.2nm,0.6s,baz=77,slow=9.3,SNR=3.5						
MKAR	**Makanchi Array**	**97.24**	**316**	P	P	22 27 53.7	0.0
	0.3nm,0.8s,baz=104,slow=6.1,SNR=3.5						

*IDC **23** 22:26:01.0±1.3, 27.1N×127.07E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx4.0/19, mbtmp4.1/8, Error ellipse: s-maj=164.8km s-min=16.2km az=67.0*
*ISCJB **23** 22:26:04.2±0.8, 27.7N±02°×127.0E±04, h33^{km}, mb4.0/9, Error ellipse: s-maj=62.9km s-min=10.6km az=160.5*
*NEIC **23** 22:26:06.0±0.5, 27.3N×127.17E, h35^{km}, mb3.5/2, Error ellipse: s-maj=42.2km s-min=7.6km az=71.0*
ISC 23 22:26:06.1±0.8,**27N**±02°×**1272E**±04,**h35**^{km},**n15**, σ0§**42**/15, **mb4.0/9**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.75**	**184**	*e*P	**P**	**22 30 44.2**	**+0.3**
	2.4nm,0.8s						
WRA	**Warramunga Arr**	**23.60**	**163**	P	**P**	**22 31 13.9**	**-0.1**
	5.8nm,0.4s,mb4.3,baz=343,slow=11,SNR=26						
WB2	**Warramunga Arr**	**23.61**	**163**	*e*P	**P**	**22 31 13.6**	**-0.5**
ASAR	**Alice Springs**	**27.04**	**166**	P	**P**	**22 31 45.5**	**+0.3**
	0.7nm,0.5s,mb3.4,baz=353,slow=7.9,SNR=18						
STKA	**Stephens Creek**	**37.04**	**159**	P	**P**	**22 33 12.9**	**+0.2**
	1.0nm,0.3s,mb4.1,baz=345,slow=8.0,SNR=6.2						
SONM	**Songino Array**	**48.38**	**341**	P	**P**	**22 34 45.4**	**+0.9**
	0.5nm,0.7s,mb3.7,baz=154,slow=6.4,SNR=3.8						
MK31	**Makanchi Array**	**58.62**	**325**	*e*P	**P**	**22 35 58.9**	**-0.8**
MKAR	**Makanchi Array**	**58.62**	**325**	P	**P**	**22 35 59.7**	**0.0**
	0.6nm,0.4s,mb4.0,baz=121,slow=8.6,SNR=11						
MKAR	**Makanchi Array**	**58.62**	**325**	P	**P**	**22 35 59.7**	**0.0**
KURK	**Kurchatov**	**62.81**	**328**	P	**P**	**22 36 28.1**	**-0.1**
	0.9nm,0.4s,mb4.3,baz=132,slow=6.0,SNR=7.8						
AKTK	**Aktyubinsk**	**74.71**	**322**	P	**P**	**22 37 42.5**	**+0.2**
AKTO	**Aktyubinsk**	**74.71**	**322**	P	**P**	**22 37 42.5**	**+0.2**
	1.6nm,0.6s,mb4.1,baz=101,slow=7.9,SNR=6.9						
MAW	**Mawson**	**82.96**	**200**	*e*P	**P**	**22 38 26.9**	**-0.2**
	0.2nm,0.6s,mb3.3						
ARCES	**ARCESS Array B**	**91.53**	**340**	P	**P**	**22 39 08.3**	**-0.5**
	4.6nm,1.0s,mb4.8,baz=52,slow=6.5,SNR=4.6						
ARCES	**ARCESS Array B**	**91.53**	**340**	P	**P**	**22 39 08.3**	**-0.5**

*CSEM **23** 22:29:13.7, 39.74N×32.21E, h7^{km}, MD2.9, After ERD*
DDA 23 22:29:13.7, 3974N×3221E, h7^{km},**Md2.9**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**1.20**	**51**	*i* P	Pg	22 29 37.3	+0.6
ELDT				*i* S	Sg	22 29 54.2	+2.0
ELDT	**Eldivan**	**1.20**	**51**	*i* P	Pg	22 29 36.9	+0.2
ELDT				*i* S	Sg	22 29 53.1	+0.9
ELDT	**Eldivan**	**1.20**	**51**	*i* P	Pg	22 29 36.9	+0.2
ELDT				*i* S	Sg	22 29 53.1	+0.9
KDHN	**Kadinhani**	**1.22**	**183**	*i* P	Pb	22 29 39.3	+2.2
KDHN				*i* S	Sg	22 29 54.4	+1.5
KDHN	**Kadinhani**	**1.22**	**183**	*i* P	Pb	22 29 38.0	+0.9
KDHN				*i* S	Sg	22 29 53.4	+0.5
KDHN	**Kadinhani**	**1.22**	**183**	*i* P	Pb	22 29 38.0	+0.9
KDHN				*i* S	Sg	22 29 53.4	+0.5
CTKT	**Corum**	**2.17**	**65**	*i* P	Pn	22 29 48.3	-1.9
AVNT	**Avonos**	**2.27**	**114**	*i* P	Pn	22 29 43.2	-8.4

*BJI **23** 22:37:04.3, 53.40N×164.70W, h10^{km}, mB5.1, mb4.7, Ms4.5, Ms2.4*
*IDC **23** 22:37:06.1±0.7, 53.35N×164.73W, h0^{km}, mb4.4/32, mb1 4.5/35, mb1mx4.5/39, mbtmp4.4/35, ML4.2/3, MS3.7/4, Ms1 3.8/4, ms1mx3.3/35, Error ellipse: s-maj=21.5km s-min=10.1km az=180.0*
*ISCJB **23** 22:37:08.3±1.1, 53.35N±005°×164.61W±004, h22$^{km}_{\pm}$6^{km}, mb4.6/101, MS4.0/9, Error ellipse: s-maj=9.1km s-min=4.3km az=1.7*
*MOS **23** 22:37:09.9±1.0, 53.39N×164.66W, h33^{km}, mb5.0/41, Error ellipse: s-maj=10.6km s-min=5.9km az=95.6*
*NEIC **23** 22:37:10.3±1.1, 53.39N×164.66W, h25$^{km}_{\pm}$7^{km}, mb4.8/53, ML4.1(AEIC), ML4.3(PMR), Error ellipse: s-maj=6.2km s-min=3.0km az=182.0*
ISC 23 22:37:09.4±1.4,**5337N**±005°×**16463W**±004,**h17**$^{km}_{\pm}$8^{km}, **h14**$^{km}_{\pm}$1.0^{km}:**pP-P**,**n248**, σ0§**88**/251,**mb4.6**/101,**MS4.0**/9, **21C-12D**,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.02**	**319**	P	**Pb**	**22 37 30.0**	**+1.4**
AKUT				S	**Sb**	**22 37 47.0**	**+5.3**
AKLV	**Akutan Long Va**	**1.12**	**316**	P	**Pn**	**22 37 31.1**	**+0.9**
AKGG	**Akutan Green G**	**1.16**	**316**	P	**Pn**	**22 37 31.9**	**+1.1**
UNV	**Unalaska Valle**	**1.21**	**294**	P	**Pn**	**22 37 31.8**	**+0.3**
UNV				S	**Sb**	**22 37 50.3**	**+3.1**
FALS	**False Pass**	**1.66**	**25**	P	**Pn**	**22 37 38.1**	**+0.5**
OKCD	**Okmok Cone D**	**2.08**	**273**	P	**Pn**	**22 37 43.3**	**-0.1**
OKCE	**Okmok Cone E**	**2.12**	**273**	P	**Pn**	**22 37 44.1**	**+0.2**
NIKO	**Nikolski**	**2.57**	**263**	P	**Pn**	**22 37 49.3**	**-0.9**
SDPT	**Sand Point**	**3.14**	**49**	P	**Pn**	**22 37 57.5**	**-0.4**
CHGN	**Chignik**	**4.64**	**48**	P	**Pn**	**22 38 18.1**	**-0.5**
KDAK	**Kodiak Island**	**8.13**	**52**	Pn	**Pn**	**22 39 04.8**	**-1.7**
	7.1nm,0.3s,baz=215,slow=7.4,SNR=35						
KDAK				Sn	**Sn**	**22 40 31.3**	**-6.5**
	1.0nm,0.3s,baz=142,slow=19,SNR=5.5						
SVW2	**Sparrevohn**	**9.16**	**29**	*e*P	**Pn**	**22 39 21.2**	**+0.6**
MCK	**McKinley**	**13.19**	**32**	P	**Pn**	**22 40 14.6**	**-0.9**
MCK				pmax	pmax		
	comp=Z,10μm,1.2s						
MCK	**McKinley**	**13.19**	**32**	Pn	**Pn**	**22 40 14.6**	**-0.9**
	comp=Z,18μm,1.2s						
FX1	**Attu Island--F**	**13.34**	**277**	Pn	**Pn**	**22 40 18.6**	**+0.9**
	comp=Z,4.2nm,0.3s,baz=165,slow=19,SNR=29						
FX1				LR	LR	22 44 58.2	
	comp=Z,182nm,20.8s,baz=310,slow=36						
COLA	**College**	**14.33**	**30**	P	**Pn**	**22 40 30.3**	**-0.9**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
COLA	**College**	**14.33**	**30**	Pn	**Pn**	**22 40 30.3**	**-0.9**
	comp=Z,12nm,1.0s						
COLD	**Coldfoot**	**15.56**	**21**	*e*Pn	**Pn**	**22 40 48.9**	**+1.3**
	comp=Z,62nm,1.2s						
EGAK	**Eagle**	**16.49**	**37**	*e*Pn	**Pn**	**22 41 01.0**	**+1.5**
	comp=Z,14nm,0.9s						
DAWY	**Dawson**	**16.79**	**40**	*e*Pn	**Pn**	**22 41 02.0**	**-1.4**
SKAG	**Skagway**	**17.22**	**58**	*e*Pn	**Pn**	**22 41 08.5**	**-0.2**
DLBC	**Dease Lake**	**19.90**	**61**	P	**Pn**	**22 41 38.9**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=260,slow=7.9,SNR=6.1						
DLBC	**Dease Lake**	**19.90**	**61**	P	**Pn**	**22 41 38.9**	**-2.4**
BILL	**Bilibino**	**20.16**	**328**	*e*P	**P**	**22 41 46.0**	**+3.6**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BILL				MLR	MLR		
	comp=Z,300nm,15.0s,MS3.8						
BILL	**Bilibino**	**20.16**	**328**	*e*Pn	**P**	**22 41 42.2**	**-0.3**
	comp=Z,3.7nm,0.6s						
PETK	**Petropavlovsk-**	**22.38**	**285**	P	**P**	**22 42 05.5**	**-0.9**
	comp=Z,5.1nm,0.6s,mb4.2,baz=80,slow=13,SNR=12						
YKA	**Yellowknife Ar**	**27.41**	**51**	P	**P**	**22 42 53.7**	**+0.2**
	comp=Z,2.7nm,0.5s,mb4.0,baz=269,slow=7.7,SNR=63						
YKA	**Yellowknife Ar**	**27.41**	**51**	P	**P**	**22 42 53.7**	**+0.2**
EDM	**Edmonton**	**30.11**	**69**	*e*P	**P**	**22 43 18.3**	**+0.6**
YBH	**Yreka Blue Hor**	**30.16**	**96**	P	**P**	**22 43 18.2**	**0.0**
	comp=Z,2.6nm,0.8s,mb4.0,baz=223,slow=10,SNR=3.9						
PAHR	**Pah Rah Range**	**33.40**	**96**	*e*P	**P**	**22 43 48.3**	**+1.6**
	comp=Z,8.7nm,1.0s,mb4.6						
YAK	**Yakutsk**	**34.68**	**311⇑**	*e*P	**P**	**22 43 56.5**	**-1.1**
YAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
NVAR	**Mina Array Bea**	**34.86**	**96**	P	**P**	**22 44 00.7**	**+1.3**
	comp=Z,3.4nm,0.8s,mb4.3,baz=293,slow=7.8,SNR=20						
ELK	**Elko**	**35.23**	**91**	*e*P	**P**	**22 44 03.8**	**+1.3**
ELK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ELK	**Elko**	**35.23**	**91**	*e*P	**P**	**22 44 03.8**	**+1.2**
	comp=Z,8.5nm,0.9s,mb4.7						
HVU	**Hansel Valley**	**36.08**	**87**	*e*P	**P**	**22 44 11.1**	**+1.3**
HVU				pmax	pmax		
	comp=Z,101nm,3.0s						
HVU	**Hansel Valley**	**36.08**	**87**	*e*P	**P**	**22 44 11.1**	**+1.3**
	comp=Z,101nm,3.0s						
SPUT	**South Promonto**	**36.56**	**88**	*e*P	**P**	**22 44 16.5**	**+2.6**
DUG	**Dugway**	**37.02**	**89**	*e*P	**P**	**22 44 18.7**	**+0.8**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
DUG	**Dugway**	**37.02**	**89**	*e*P	**P**	**22 44 18.7**	**+0.8**
	comp=Z,10.0nm,1.1s,mb4.6						
PDAR	**Pinedale Array**	**37.41**	**84**	P	**P**	**22 44 21.6**	**+0.4**
	comp=Z,1.4nm,0.8s,mb3.8,baz=304,slow=3.9,SNR=8.4						
GSC	**Goldstone**	**37.85**	**99**	*e*P	**P**	**22 44 25.8**	**+0.9**
GSC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
GSC	**Goldstone**	**37.85**	**99**	*e*P	**P**	**22 44 25.8**	**+0.9**
	comp=Z,7.7nm,1.1s,mb4.3						
FCC	**Fort Churchill**	**38.07**	**53**	*e*P	**P**	**22 44 26.6**	**+0.1**
	comp=Z,0.3nm,1.0s						
MSU	**Marysvale**	**38.47**	**91**	*e*P	**P**	**22 44 31.4**	**+1.3**
TMUT	**Trail Mountain**	**38.55**	**89**	*e*P	**P**	**22 44 32.4**	**+1.6**
SRU	**San Rafael**	**39.08**	**89**	*e*P	**P**	**22 44 36.2**	**+1.0**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
SRU	**San Rafael**	**39.08**	**89**	*e*P	**P**	**22 44 36.2**	**+1.0**
	comp=Z,3.7nm,0.7s,mb4.2						
WUAZ	**Wupatki**	**40.94**	**94**	*e*P	**P**	**22 44 51.8**	**+1.1**
	comp=Z,8.3nm,0.8s,mb4.4						
ULM	**Lac du Bonnet**	**41.13**	**65**	P	**P**	**22 44 51.1**	**-1.0**
	comp=Z,5.0nm,0.8s,mb4.2,baz=331,slow=7.8,SNR=4.9						
MJAR	**Matsushiro Arr**	**42.58**	**270**	P	**P**	**22 45 03.5

XAN LR LR
comp=E,42nm,18.8s
XAN LR LR
comp=Z,54nm,21.1s,MS3.7
GTA Gaotai 62.53 300⇓ *e*P **P** **22 47 31.4 -0.4**
GTA AP pP 22 47 35.1 -2.3
GTA S **S** **22 55 57.6 -0.8**
GTA XS sS 22 56 05.6 -2.0
GTA SS SS 23 00 04.9 +3.1
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.4
GTA AMB AMB
comp=Z,116nm,5.7s
GTA LR LR
comp=N,118nm,15.9s,MS4.3
GTA LR LR
comp=E,131nm,15.6s,MS4.3
GTA LR LR
comp=Z,135nm,15.6s,MS4.2
LZH Lanzhou 62.84 294 *e*P **P** **22 47 34.1 +0.2**
LZH AP pP 22 47 38.8 -0.7
LZH XP sP 22 47 42.3 +0.7
LZH *e*PP PP 22 49 53.9 +2.1
LZH AMB AMB
comp=Z,16nm,1.4s,mb5.0
LZH AMB AMB
comp=Z,87nm,5.8s
LZH LR LR
comp=N,157nm,16.5s
LZH LR LR
comp=Z,231nm,18.6s,MS4.4
JOF Joensuu 63.38 352 *e*p **P** **22 47 35.8 -1.3**
comp=Z,4.6nm,0.4s,mb5.0
KURK Kurchatov 63.48 321 P **P** **22 47 38.2 +0.3**
comp=Z,1.9nm,0.6s,mb4.4,baz=50,slow=10,SNR=15
SVE Sverdlovsk 64.10 334⇑ *e*P **P** **22 47 42.1 +0.2**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.9
BVAR Borovoye Array 64.50 327 P **P** **22 47 44.6 0.0**
comp=Z,5.4nm,0.7s,mb4.7,baz=51,slow=6.3,SNR=22
BVAR PcP PcP 22 48 18.6 -0.1
comp=Z,1.3nm,0.5s,baz=38,slow=4.7,SNR=4.1
BRVK Borovoye 64.51 327 *e*P **P** **22 47 44.4 -0.3**
BRVK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
BRVK Borovoye 64.51 327 *e*P **P** **22 47 44.4 -0.3**
comp=Z,7.9nm,0.9s,mb4.7
KAF Kangasniemi 64.54 354 *e*p **P** **22 47 43.3 -1.4**
comp=Z,3.5nm,0.4s,mb4.7
KAF Kangasniemi 64.54 354 *e*P **P** **22 47 43.3 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
ARU Arti 64.98 335 *c i*P **P** **22 47 47.0 -0.7**
ARU *e* 22 50 08.3
ARU *e*S **S** **22 56 29.1 +0.8**
ARU *e*SS SS 23 00 45.4 +6.3
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.8
ARU Arti 64.98 335 *e*P **P** **22 47 47.2 -0.5**
comp=Z,9.0nm,0.5s,mb5.1
MK31 Makanchi Array 65.15 316 *e*P **P** **22 47 47.9 -1.0**
MKAR Makanchi Array 65.15 316 P **P** **22 47 47.8 -1.1**
comp=Z,1.4nm,0.3s,mb4.5,baz=44,slow=6.3,SNR=54
MKAR LR LR 23 17 10.2
comp=Z,76nm,19.6s,MS3.9,baz=177,slow=37
NB2 NORSAR Subarra 65.89 2 P **P** **22 47 53.2 -0.3**
comp=Z,0.2nm,0.6s,baz=2.2,slow=6.2
NOA NORSAR Array B 65.89 2 P **P** **22 47 53.1 -0.4**
comp=Z,2.4nm,0.8s,mb4.3,baz=360,slow=6.3,SNR=4.9
HFS Hagfors 66.84 1 P **P** **22 47 59.1 -0.5**
comp=Z,2.7nm,0.4s,mb4.6,baz=26,slow=2.5,SNR=22
GYA Guiyang 68.47 286 P **P** **22 48 11.8 +1.4**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
OBN Obninsk 70.47 347 *e*P **P** **22 48 22.2 -0.1**
OBN *e* 22 48 49.5
OBN pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
AKTK Aktyubinsk 70.52 333 P **P** **22 48 22.9 +0.3**
AKTO Aktyubinsk 70.52 333 P **P** **22 48 22.9 +0.3**
comp=Z,13nm,0.7s,mb5.0,baz=63,slow=9.3
EKA Eskdalemuir Ar 70.59 11 P **P** **22 48 23.5 +0.5**
comp=Z,3.4nm,0.8s,mb4.3,baz=338,slow=4.6,SNR=6.0
USP Ospenovka 71.21 319 P **P** **22 48 27.4 +0.5**
SNR=6.5
KBK Karagaybulak 71.54 318 P **P** **22 48 29.6 +0.6**
SNR=6.8
AAK Ala-Archa 71.74 318 *e*P **P** **22 48 30.6 +0.4**
AAK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AAK Ala-Archa 71.74 318 P **P** **22 48 30.9 +0.6**
SNR=7.0
AAK Ala-Archa 71.74 318 *e*P **P** **22 48 30.6 +0.4**
comp=Z,5.2nm,0.9s,mb4.5
EKS2 Erkin-Say 72.00 319 P **P** **22 48 32.8 +1.0**
SNR=7.5
EKS2 Erkin-Say 72.00 319 *e*P **P** **22 48 32.4 +0.6**
comp=Z,11nm,1.0s,mb4.7
AML Almayashu 72.48 318 P **P** **22 48 35.9 +1.2**
SNR=6.5
AML Almayashu 72.48 318 *e*P **P** **22 48 34.6 0.0**
comp=Z,9.6nm,0.9s,mb4.7
LSA Lhasa 74.54 299 P **P** **22 48 47.6 +0.6**
LSA Lhasa 74.54 299 *e*P **P** **22 48 48.0 +1.0**
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LSA Lhasa 74.54 299 *e*P **P** **22 48 48.0 +1.0**
comp=Z,7.2nm,0.8s,mb4.7
AKASG Malin Array Be 75.65 351 P **P** **22 48 52.4 -0.6**
comp=Z,1.8nm,0.4s,mb4.3,baz=8.6,slow=5.5,SNR=11
BAIF Baives 76.52 7 *e*P **P** **22 48 57.7 -0.3**
GIVF Givet 76.52 7 *e*P **P** **22 48 57.6 -0.4**
DPC Dobruska-Polom 76.66 359 *e*P **P** **22 48 59.1 +0.4**
STHS Stebnicka Huta 77.47 356 *i* P **P** **22 49 04.7 +1.4**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
STHS Stebnicka Huta 77.47 356 *i* P **P** **22 49 04.7 +1.4**
comp=Z,4.7nm,1.1s,mb4.3
LDF La Druitiere 77.57 10 *e*P **P** **22 49 03.1 -0.8**
comp=Z,24nm,1.1s,mb4.7
LDF La Druitiere 77.57 10 *e*P **P** **22 49 03.1 -0.8**
LDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
LDF La Druitiere 77.57 10 *e*P **P** **22 49 03.1 -0.8**
comp=Z,12nm,1.1s,mb4.7
VRAC Vranov 77.70 359⇑ *i*P **P** **22 49 05.6 +1.0**
VRAC Vranov 77.70 359⇑ P **P** **22 49 05.6 +1.0**
KHC Kasperske Hory 77.87 1 *d i*P **P** **22 49 06.0 +0.5**
KHC Kasperske Hory 77.87 1 *e*P **P** **22 49 05.9 +0.4**
CRVS Cervenica-Dubn 77.98 356 *i* P **P** **22 49 06.2 0.0**
GERES GERESS Array B 78.16 1 P **P** **22 49 07.6 +0.5**
comp=Z,0.7nm,0.7s,mb3.7,baz=358,slow=4.3,SNR=7.2
TAPN Taplejung 78.22 300 *e*P **P** **22 49 07.6 -0.3**
CDF Champ du Feu 78.36 5 *e*P **P** **22 49 08.1 -0.2**
VYHS Vyhne 78.47 358 *e*P **P** **22 49 09.9 +1.0**
TRPA Tarpa 78.70 355⇑ *i*P **P** **22 49 10.8 +0.7**
GUN Gumba 78.71 302 *e*P **P** **22 49 10.5 -0.1**
JIRN Jiri 78.75 301 *e*P **P** **22 49 11.1 +0.3**
comp=Z,17nm,0.3s,mb5.4
ODAN Odare 78.78 300 *e*P **P** **22 49 10.5 -0.5**
HINF Hinteralfeld 78.93 6 *e*P **P** **22 49 10.9 -0.6**
BUR08 Bucovina Ar. S 79.02 353 *e*P **P** **22 49 12.0 +0.1**
BURAR Bucovina Array 79.05 353⇑ *i*P **P** **22 49 12.2 +0.1**
BURAR Bucovina Array 79.05 353⇑ P **P** **22 49 12.2 +0.1**
CONA Conrad Observa 79.08 360⇑ *i*P **P** **22 49 13.2 +0.9**
comp=Z,7.8nm,1.8s,mb4.3
CSNA Conrad Observa 79.08 360⇑ *i*P **P** **22 49 13.2 +0.9**
comp=Z,7.8nm,1.9s,mb4.3
KKN Kakani 79.11 302 *e*P **P** **22 49 12.6 -0.2**
comp=Z,3.9nm,0.3s,mb4.8
KKN Kakani 79.11 302 *e*P **P** **22 49 12.6 -0.2**
KKN pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
RAMN Ramite 79.12 301 *e*P **P** **22 49 12.2 -0.6**
comp=Z,49nm,1.1s,mb5.3
CMAR Chiang Mai Arr 79.15 286 P **P** **22 49 12.6 -0.5**
comp=Z,2.0nm,0.7s,mb4.2,baz=18,slow=5.3,SNR=19
CMAR LR LR 23 28 47.0
comp=Z,39nm,18.0s,MS3.8,baz=130,slow=39
CMAR Chiang Mai Arr 79.15 286⇑ *e*P **P** **22 49 13.0 -0.1**
PKI Pulchoki 79.22 302 *e*P **P** **22 49 13.3 -0.1**
GKN Gorkha 79.26 303 *e*P **P** **22 49 13.3 -0.3**
LOR Lormes 79.26 8 *e*P **P** **22 49 13.0 -0.3**
DMN Daman 79.35 302 *e*P **P** **22 49 14.0 -0.1**
comp=Z,7.6nm,0.6s,mb4.8
DANN Dangsing 79.42 304 *e*P **P** **22 49 14.7 +0.3**
comp=Z,52nm,0.8s,mb5.5
SSF Saint Saulge 79.44 8 *e*P **P** **22 49 13.9 -0.3**
comp=Z,7.8nm,0.5s,mb4.6
SSF Saint Saulge 79.44 8 *e*P **P** **22 49 13.9 -0.3**
SSF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
SSF Saint Saulge 79.44 8 *e*P **P** **22 49 13.9 -0.3**
comp=Z,3.9nm,0.5s,mb4.6
MFF Saint Martin d 79.53 11 *e*P **P** **22 49 14.5 -0.3**
comp=Z,26nm,1.1s,mb4.8
MFF Saint Martin d 79.53 11 *e*P **P** **22 49 14.5 -0.3**
MFF pmax pmax
comp=Z,13nm,1.1s,mb4.8
MFF Saint Martin d 79.53 11 *e*P **P** **22 49 14.5 -0.3**
comp=Z,13nm,1.1s,mb4.8
AVF Avril sur Loir 79.69 8 *e*P **P** **22 49 15.1 -0.5**
comp=Z,13nm,0.9s,mb4.6
AVF Avril sur Loir 79.69 8 *e*P **P** **22 49 15.1 -0.5**
AVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
AVF Avril sur Loir 79.69 8 *e*P **P** **22 49 15.1 -0.5**
comp=Z,6.7nm,0.9s,mb4.6
BGF Bois d'Agland 79.88 9 *e*P **P** **22 49 16.3 -0.3**
comp=Z,12nm,0.9s,mb4.5
BGF Bois d'Agland 79.88 9 *e*P **P** **22 49 16.3 -0.3**
BGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BGF Bois d'Agland 79.88 9 *e*P **P** **22 49 16.3 -0.3**
comp=Z,5.8nm,0.9s,mb4.5
SMF Signal de Mont 79.88 8 *e*P **P** **22 49 16.1 -0.5**
comp=Z,30nm,1.1s,mb4.8
SMF Signal de Mont 79.88 8 *e*P **P** **22 49 16.1 -0.5**
SMF pmax pmax
comp=Z,15nm,1.1s,mb4.8
SMF Signal de Mont 79.88 8 *e*P **P** **22 49 16.1 -0.5**
comp=Z,15nm,1.1s,mb4.8
FETA Feichten 79.91 3⇑ *i*P **P** **22 49 17.8 +1.0**
comp=Z,3.9nm,0.9s,mb4.5
KBA Koelnbreinsper 79.92 1⇑ *i*P **P** **22 49 18.1 +1.3**
comp=Z,9.0nm,0.9s,mb4.7
KOLN Koldanda 79.97 303 *e*P **P** **22 49 17.2 -0.3**
comp=Z,23nm,1.0s,mb5.0
DRGR 80.02 355⇓ *i*P **P** **22 49 17.7 +0.3**
DRGR 80.02 355⇓ P **P** **22 49 17.7 +0.3**
DAVOS Davos 80.06 4 P **P** **22 49 18.9 +1.3**
CABF La Chapelle 80.09 6 *e*P **P** **22 49 17.9 +0.2**
comp=Z,10.0nm,0.9s,mb4.4
CABF La Chapelle 80.09 6 *e*P **P** **22 49 17.9 +0.2**
CABF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CABF La Chapelle 80.09 6 *e*P **P** **22 49 17.9 +0.2**
comp=Z,5.0nm,0.9s,mb4.4
TCF Toulx Ste Croi 80.09 9 *e*P **P** **22 49 17.3 -0.5**
DAVOX Davos/Dischmat 80.12 4 P **P** **22 49 18.9 +1.0**
comp=Z,2.6nm,0.8s,mb4.2,baz=332,slow=2.9,SNR=8.0
KIV Kislovodsk 80.26 340 *e*P **P** **22 49 19.6 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
OBKA Obir 80.50 1⇑ *i*P **P** **22 49 20.7 +0.7**
comp=Z,9.8nm,0.8s,mb4.8
PKSM Moragy 80.76 358⇑ *i*P **P** **22 49 21.3 -0.1**
PKSM Moragy 80.76 358⇑ P **P** **22 49 21.3 -0.1**
KBL Kabul 80.86 318 *e*P **P** **22 49 21.1 -1.1**
KBL pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KBL Kabul 80.86 318 *e*P **P** **22 49 21.1 -1.0**
comp=Z,7.0nm,1.0s,mb4.5
RJF Les Rejaudoux 80.99 10 *e*P **P** **22 49 22.1 -0.5**
comp=Z,8.3nm,0.8s,mb4.4
RJF Les Rejaudoux 80.99 10 *e*P **P** **22 49 22.1 -0.5**
RJF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
RJF Les Rejaudoux 80.99 10 *e*P **P** **22 49 22.1 -0.5**
comp=Z,4.2nm,0.8s,mb4.4
MLR Muntele Rosu 81.11 352 P **P** **22 49 26.5 +3.3**
comp=Z,0.8nm,0.5s,mb3.9,baz=1.1,slow=12,SNR=7.4
VOIR 81.23 353⇑ *i*P **P** **22 49 24.8 +0.9**
VOIR 81.23 353⇑ P **P** **22 49 24.8 +0.9**
BZS Buzias 81.25 356⇓ *i*P **P** **22 49 24.3 +0.3**
LFF La Frestale 81.27 10 *e*P **P** **22 49 23.9 -0.2**
comp=Z,23nm,1.0s,mb4.8
LFF La Frestale 81.27 10 *e*P **P** **22 49 23.9 -0.2**
LFF pmax pmax
comp=Z,12nm,1.0s,mb4.8
LFF La Frestale 81.27 10 *e*P **P** **22 49 23.9 -0.2**
comp=Z,12nm,1.0s,mb4.8
GZR Gura Zlata 81.41 355⇓ *i*P **P** **22 49 25.2 +0.3**
GZR Gura Zlata 81.41 355⇓ P **P** **22 49 25.2 +0.3**
CAF Calviac 81.42 10 *e*P **P** **22 49 24.8 -0.1**
comp=Z,12nm,1.0s,mb4.5
CAF Calviac 81.42 10 *e*P **P** **22 49 24.8 -0.1**
CAF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CAF Calviac 81.42 10 *e*P **P** **22 49 24.8 -0.1**
comp=Z,6.3nm,1.0s,mb4.5
BNI Bardonecchia 81.68 6 *e*P **P** **22 49 28.5 +2.2**
BNI pmax pmax
comp=Z,24nm,1.3s,mb5.0
BNI Bardonecchia 81.68 6 *e*P **P** **22 49 28.5 +2.2**
comp=Z,24nm,1.3s,mb5.0
VIVF Saint-Julien-I 81.73 8 *e*P **P** **22 49 26.5 0.0**
comp=Z,23nm,1.1s,mb4.7
VIVF Saint-Julien-I 81.73 8 *e*P **P** **22 49 26.5 0.0**
VIVF pmax pmax
comp=Z,12nm,1.1s,mb4.7
VIVF Saint-Julien-I 81.73 8 *e*P **P** **22 49 26.5 0.0**
comp=Z,12nm,1.1s,mb4.7
ORIF Oris-en-Rattie 81.76 7 *e*P **P** **22 49 26.6 -0.1**
comp=Z,12nm,0.9s,mb4.6
ORIF Oris-en-Rattie 81.76 7 *e*P **P** **22 49 26.6 -0.1**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 81.76 7 *e*P **P** **22 49 26.6 -0.1**
comp=Z,6.3nm,0.9s,mb4.5
TIRR Tirgusor 81.91 351⇓ *i*P **P** **22 49 27.6 +0.1**
TIRR Tirgusor 81.91 351⇓ P **P** **22 49 27.6 +0.1**
MBDF Montbardon 82.01 6 *e*P **P** **22 49 27.0 -1.0**
comp=Z,25nm,0.9s,mb4.8
MBDF Montbardon 82.01 6 *e*P **P** **22 49 27.0 -1.0**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb4.9
MBDF Montbardon 82.01 6 *e*P **P** **22 49 27.0 -1.0**
comp=Z,13nm,0.9s,mb4.8
LASF Ste Croix 82.43 8 *e*P **P** **22 49 29.1 -1.2**
SJPF Ste Jean 82.84 12 *e*P **P** **22 49 31.8 -0.6**
MTLF Montolieu 83.01 10 *e*P **P** **22 49 33.1 -0.2**
comp=Z,17nm,1.0s,mb4.7
MTLF Montolieu 83.01 10 *e*P **P** **22 49 33.1 -0.2**
MTLF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MTLF Montolieu 83.01 10 *e*P **P** **22 49 33.1 -0.2**
comp=Z,8.3nm,1.0s,mb4.7
ETSF Etsaut 83.14 12 *e*P **P** **22 49 34.2 +0.3**
AQU L'Aquila 84.64 1 *e*P **P** **22 49 43.2 +1.6**
AQU pmax pmax
comp=Z,14nm,0.9s,mb5.1
AQU L'Aquila 84.64 1 *e*P **P** **22 49 43.2 +1.5**
comp=Z,14nm,0.9s,mb5.1
ESDC Sonseca Array 85.84 15 P **P** **22 49 47.6 0.0**
comp=Z,1.2nm,0.7s,mb4.3,baz=344,slow=4.6,SNR=10
BR131 Keskin Array S 85.94 346 *e*P **P** **22 49 48.8 +0.6**
BRTR Keskin Array B 85.94 346 P **P** **22 49 48.8 +0.6**
comp=Z,4.9nm,0.9s,mb4.8,baz=47,slow=2.9,SNR=27
BRTR Keskin Array B 85.94 346⇑ *e*P **P** **22 49 48.7 +0.5**
MALT Malatya 86.53 342⇓ *i*P **P** **22 49 51.1 0.0**
MALT Malatya 86.53 342⇓ P **P** **22 49 51.1 0.0**
KEST Kesra 91.11 5 P **P** **22 50 12.6 -0.3**
comp=Z,0.9nm,0.8s,mb4.1,baz=80,slow=12,SNR=5.4
HYB Hyderabad 91.14 302 *i* P **P** **22 50 13.5 +0.3**
HYB Hyderabad 91.14 302 *e*P **P** **22 50 13.5 +0.3**
IDI Anoyia 91.33 352 P **P** **22 50 12.7 -1.1**
comp=Z,2.0nm,0.8s,mb4.5,baz=338,slow=11,SNR=3.3
MMAI Mount Meron Ar 92.23 343 P **P** **22 50 17.3 -0.7**
comp=Z,3.6nm,0.8s,mb4.7,baz=19,slow=5.3,SNR=6.7
ASF Jabal al Asfar 92.78 342 P **P** **22 50 21.4 +0.8**
comp=Z,0.7nm,0.5s,mb4.4,baz=225,slow=3.7,SNR=3.7
ASAR Alice Springs 93.27 234 P **P** **22 50 20.9 -1.8**
comp=Z,2.3nm,1.1s,mb4.5,baz=46,slow=3.5,SNR=7.1
RPN Rapa Nui 93.38 133 LR LR 23 25 06.9
comp=Z,53nm,18.7s,MS4.0,baz=5.3,slow=31
TORD Torodi Ar. Bea 112.72 14 PKiKP PKiKP 22 55 43.5 -1.6
comp=Z,0.3nm,0.5s,baz=341,slow=2.2,SNR=5.4
TORD Torodi Ar. Bea 112.72 14 PKPdf PKiKP 22 55 43.5 -1.6
BOSA Boshof 154.22 340 PKPbc PKPbc 22 57 07.2 -0.7
comp=Z,2.1nm,1.0s,baz=63,slow=2.3,SNR=3.5
BOSA PKPab PKPab 22 57 21.0 -0.8
comp=Z,4.1nm,0.7s,baz=5.5,slow=3.6,SNR=6.5

ISCJB ***23*** *22:46:39.8±0.7, 1751S±0.009×6939W±0.006, h141km±9km, mb3.8/5, Error ellipse: s-maj=15.9km s-min=9.4km az=12.6*
IDC ***23*** *22:46:40.2±0.2, 1754S×6942W, h130km±19km, mb3.6/6, mb1 3.6/9, mb1mx3.4/21, mbtmp3.6/9, Error ellipse: s-maj=22.4km s-min=17.8km az=2.0*
NEIC ***23*** *22:46:40.8±0.7, 1755S×6943W, h138km±9km, Error ellipse: s-maj=13.8km s-min=9.7km az=216.0*

ISC 23 22:46:40.8±0.7, 1753S±0.009×6940W±0.006, h136km±9km, n12, σ0.964/16, mb3.8/5, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**2.26**	**298**⇑	*i*P	**Pn**	**22 47 19.4**	**+1.1**
ARE				*e*S	**Sn**	**22 47 47.0**	**-0.1**
LVC	**Limon Verde**	**5.08**	**175**	P	**Pn**	**22 47 55.1**	**+0.1**
	2.4nm,0.3s,baz=352,slow=9.8,SNR=40						
LVC				S	**Sn**	**22 48 48.0**	**-4.9**
	21nm,0.3s,baz=121,slow=22,SNR=41						
LVC	**Limon Verde**	**5.08**	**175**	*e*Pn	**Pn**	**22 47 55.2**	**+0.2**
LVC				*e*Sn	**Sn**	**22 48 39.3**	**-14**
SIV	**San Ignacio**	**8.12**	**80**	P	**Pn**	**22 48 36.5**	**+0.5**
	1.0nm,0.3s,baz=276,slow=10,SNR=12						
SIV				S	**Sn**	**22 50 05.8**	**-0.5**
	0.3nm,0.3s,baz=346,slow=20,SNR=7.9						
NNA	**Nana**	**9.06**	**306**	P	**Pn**	**22 48 47.0**	**-1.6**
	4.3nm,0.3s,baz=137,slow=12,SNR=11						
BDFB	**Brasilia**	**20.58**	**88**	P	**P**	**22 51 09.2**	**0.0**
	0.9nm,0.4s,baz=252,slow=20,SNR=7.3						
PLCA	**Paso Flores**	**23.14**	**182**	P	**P**	**22 51 34.6**	**-0.4**
	1.2nm,0.7s,mb3.4,baz=359,slow=11,SNR=4.1						
DBIC	**Dimbokro**	**68.11**	**75**	P	**P**	**22 57 26.7**	**+0.1**
	3.8nm,0.8s,mb4.2,baz=245,slow=10,SNR=7.3						
ULM	**Lac du Bonnet**	**71.41**	**342**	P	**P**	**22 57 46.7**	**+0.7**
	1.8nm,0.6s,mb4.0,baz=163,slow=11,SNR=2.6						
ULM	**Lac du Bonnet**	**71.41**	**342**	P	**P**	**22 57 46.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**76.50**	**71**	P	**P**	**22 58 16.3**	**-0.1**
	1.9nm,0.5s,mb4.0,baz=262,slow=4.6,SNR=18						
YKA	**Yellowknife Ar**	**87.31**	**341**	P	**P**	**22 59 11.9**	**+0.1**
	0.2nm,0.4s,mb3.3,baz=133,slow=4.8,SNR=7.9						

GUC 23 22:54:37.8±0.5, 3365S×7034W, h18km±2km, MD3.9, ML2.9, 5C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJCH	**San Jose de Ma**	**0.02**	**319**⇑	*i*P	**Pg**	**22 54 40.8**	**-0.1**
SJCH				*i*S	**Sg**	**22 54 42.7**	**-0.2**
SJCH				AML	AML	**22 54 43.0**	
	comp=E,6μm,0.2s						
PCH	**Pirque**	**0.15**	**283**⇑	*i*P	**Pg**	**22 54 41.9**	**-0.1**
YECH	**El Yeso**	**0.21**	**93**⇑	*i*P	**Pg**	**22 54 43.0**	**+0.1**
YECH				*i*S	**Sg**	**22 54 47.4**	**+1.0**
YECH				AML	AML	**22 54 47.9**	
	comp=N,3μm,0.3s						
LMEL	**Las Melosas**	**0.22**	**150**	*e*P	**Pg**	**22 54 43.1**	**0.0**
LMEL				*i*S	**Sg**	**22 54 46.9**	**+0.3**
LMEL				AML	AML	**22 54 47.6**	
	comp=N,8μm,0.2s						
ANTU	**Antumapu**	**0.26**	**289**	*e*P	**Pg**	**22 54 43.3**	**-0.3**
ANTU				*i*S	**Sg**	**22 54 47.2**	**-0.3**
ANTU				AML	AML	**22 54 47.6**	
	comp=N,3μm,0.3s						
CLCH	**Cerro Calan**	**0.30**	**327**	*e*P	**Pg**	**22 54 44.3**	**-0.1**
CLCH				*i*S	**Sg**	**22 54 49.0**	**+0.2**
CLCH				AML	AML	**22 54 51.8**	
	comp=E,984nm,0.7s						
FCH	**Farellones**	**0.33**	**7**⇓	*i*P	**Pg**	**22 54 44.9**	**+0.2**
FCH				*i*S	**Sg**	**22 54 49.6**	**+0.2**
FCH				AML	AML	**22 54 50.7**	
	comp=N,2μm,0.2s						
SAN	**Santiago**	**0.34**	**307**	*e*P	**Pg**	**22 54 44.6**	**-0.3**
SAN				*e*S	**Sg**	**22 54 49.2**	**-0.5**
TACH	**Talagante**	**0.50**	**270**⇑	*i*P	**Pg**	**22 54 47.3**	**-0.5**
CACH	**El Canelo**	**0.51**	**205**⇓	*i*P	**Pg**	**22 54 48.1**	**0.0**
PEL	**Peldehue**	**0.58**	**330**⇑	*i*P	**Pg**	**22 54 49.1**	**-0.2**
PEL				*i*S	**Sg**	**22 54 57.2**	**-0.1**
PEL				AML	AML	**22 54 57.9**	
	comp=E,1μm,0.3s						
LNV	**Longovilo**	**0.94**	**251**⇓	*i*P	**Pb**	**22 54 54.4**	**-1.2**

IDC 23 22:59:15.5±2.4, 2343S×14756E, h0km, mb1 3.9/4, mb1mx3.6/14, mbtmp3.7/4, ML3.7/4, Error ellipse: s-maj=30.9km s-min=19.7km az=90.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**3.54**	**340**	Pn	Pn	**23 00 12.8**	**+1.2**
	3.5nm,0.3s,baz=149,slow=16,SNR=20						
CTA				Lg		**23 01 06.3**	
	24nm,0.3s,baz=57,slow=23,SNR=15						
STKA	**Stephens Creek**	**9.94**	**211**	Pn	Pn	**23 01 38.2**	**-1.4**
	0.4nm,0.3s,baz=37,slow=18,SNR=6.2						
STKA				Sn	Sn	**23 03 25.6**	**-6.2**
	0.9nm,0.3s,baz=288,slow=22,SNR=7.3						
STKA				Lg		**23 04 31.5**	
	1.2nm,0.3s,baz=12,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**12.53**	**266**	Pn	Pn	**23 02 16.1**	**+1.0**
	0.5nm,0.3s,baz=90,slow=14,SNR=32						
ASAR				Sn	Sn	**23 04 34.6**	**-0.9**
	0.3nm,0.3s,baz=94,slow=24,SNR=4.9						
ASAR				Lg		**23 05 54.6**	
	0.0nm,0.3s,baz=83,slow=29,SNR=3.7						
WRA	**Warramunga Arr**	**12.77**	**283**	Pn	Pn	**23 02 18.6**	**+0.3**
	0.4nm,0.3s,baz=92,slow=12,SNR=7.1						
WRA				Sn	Sn	**23 04 36.9**	**-4.4**
	0.5nm,0.3s,baz=140,slow=30,SNR=4.8						
WRA				Lg		**23 06 02.0**	
	0.3nm,0.3s,baz=100,slow=28,SNR=5.2						
TORD	**Torodi Ar. Bea**	**146.09**	**259**	PKPbc	PKPbc	**23 18 57.5**	**-0.8**
	0.4nm,0.6s,baz=110,slow=3.0,SNR=3.5						

ISCJB ***23*** *23:07:25.3±1.7, 2328S±0.005×7059W±0.008, h13km±10km, mb4.3/9, MS3.6/2, Error ellipse: s-maj=13.0km s-min=7.0km az=15.6*
NEIC ***23*** *23:07:28.7±2.1, 2327S×7059W, h22km±15km, mb4.3/2, Error ellipse: s-maj=12.1km s-min=7.3km az=98.0*
IDC ***23*** *23:07:29.4±0.7, 2327S×7052W, h24km±3km, mb4.1/8, mb1 4.1/12, mb1mx4.0/20, mbtmp4.0/12, ML3.9/4, MS3.4/4, Ms1 3.4/4, ms1mx3.0/33, Error ellipse: s-maj=20.2km s-min=12.9km az=159.0*

ISC 23 23:07:25.9±1.7, 2326S±0.004×7071W±0.006, h6km±10km, h28km±.9km: pP-P, n41, σ1§01/36, mb4.3/9, MS3.6/2, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.78**	**69**	Pg	**Pg**	**23 07 59.4**	**-0.7**
	798nm,0.3s,baz=250,slow=10,SNR=1860						
LVC				Lg		**23 08 21.9**	
	2μm,0.3s,baz=345,slow=14,SNR=42						
LVC	**Limon Verde**	**1.78**	**69**⇑	*i*Pn	**Pn**	**23 07 59.3**	**+2.1**
LVC				*e*S	**Sn**	**23 08 21.1**	**+1.0**
LVC				Lg		**23 08 21.9**	
LCO	**Las Campanas**	**5.73**	**180**	*e*Pn	**Pn**	**23 08 51.6**	**+0.1**
	277nm,1.2s						
LCO				*e*Sn	**Sn**	**23 09 57.1**	**-0.6**
ARE	**Arequipa**	**6.80**	**354**	*e*P	**Pn**	**23 09 07.0**	**+0.7**
ARE				*e*S	**Sn**	**23 10 22.0**	**-2.1**
CFAA	**Coronel Fontan**	**8.60**	**166**	Pn	**Pn**	**23 09 30.1**	**-0.9**
	0.2nm,0.3s,baz=350,slow=12,SNR=10						
CFAA				Sn	**Sn**	**23 11 15.8**	**+7.5**
	0.3nm,0.3s,baz=348,slow=20,SNR=3.8						
CFAA				LR	LR	**23 12 59.6**	
	comp=Z,51nm,19.9s,baz=332,slow=39						
CFAA	**Coronel Fontan**	**8.60**	**166**	Pn	**Pn**	**23 09 30.1**	**-0.9**
CFAA				Sn	**Sn**	**23 11 15.8**	**+7.5**
CFAA				LR	LR	**23 12 59.6**	
SIV	**San Ignacio**	**11.60**	**53**	Pn	**Pn**	**23 10 11.7**	**-0.5**
	1.4nm,0.3s,baz=242,slow=12,SNR=22						
SIV				Sn	**Sn**	**23 12 22.9**	**+0.8**
	0.1nm,0.3s,baz=294,slow=20,SNR=3.1						
CPUP	**Villa Florida**	**12.53**	**107**	Pn	**Pn**	**23 10 25.9**	**+1.0**
	0.3nm,0.3s,baz=265,slow=15,SNR=3.2						
CPUP				LR	LR	**23 15 37.6**	
	comp=Z,368nm,20.4s,baz=270,slow=40						
CPUP	**Villa Florida**	**12.53**	**107**	*e*Pn	**Pn**	**23 10 23.9**	**-1.0**
CPUP				L

TRQA	**Tornquist** 9.7nm,0.7s	**16.54**	**155**	*e*Pn		**Pn**	**23 11 18.8**	**+0.3**
PLCA	**Paso Flores** 0.1nm,0.3s,baz=307,slow=10,SNR=2.8	**17.43**	**180**	P		**Pn**	**23 11 32.4**	**+2.8**
BDFB	**Brasilia** 4.0nm,1.0s,mb3.8,baz=207,slow=17,SNR=8.3	**22.68**	**75**	P		**P**	**23 12 27.5**	**-0.8**
BDFB				LR		LR	23 22 58.6	
	comp=Z,58nm,19.1s,MS3.0,baz=75,slow=41							
BDFB	**Brasilia**	**22.68**	**75**	*e*P		**P**	**23 12 27.4**	**-0.9**
BDFB				LR		LR	23 22 58.6	
VNA3	**Neumayer Olymp**	**58.97**	**161**	*e*		**P**	**23 17 26.0**	**+0.2**
VNA3				*e*			23 17 33.7	
VNA3				*e*			23 17 37.6	
VNA2	**Neumayer--Watz** baz=290,slow=7.6	**59.56**	**160**	*e*		**P**	**23 17 30.3**	**+0.3**
VNA2				*e*			23 17 38.0	
VNA2				*e*			23 17 41.6	
TXAR	**Lajitas Array** 0.6nm,0.8s,mb3.8,baz=136,slow=9.4,SNR=3.8	**61.15**	**327**	P		**P**	**23 17 43.1**	**+1.8**
SNAA	**Sanae**	**61.18**	**160**	*e*		**P**	**23 17 40.8**	**-0.2**
SNAA				*e*			23 17 48.6	
SNAA				*e*			23 17 52.1	
SNAA	**Sanae** 4.0nm,0.9s,mb4.5	**61.18**	**160**	*e*P		**P**	**23 17 41.0**	**0.0**
LIC	**Lamto** 50nm,2.0s	**70.47**	**74**	*e*P		**P**	**23 18 41.0**	**-0.9**
TIC	**Toumodi** 5.3nm,0.2s	**70.67**	**74**	*e*P		**P**	**23 18 42.3**	**-0.8**
KIC	**Kosan Boka** 24nm,0.8s	**70.79**	**74**	*e*P		**P**	**23 18 42.9**	**-0.9**
DBIC	**Dimbokro** 7.8nm,0.8s,mb4.7,baz=217,slow=6.7,SNR=15	**70.83**	**74**	P		**P**	**23 18 43.4**	**-0.6**
DBIC				pP		pP	23 18 51.8	+5.8
	3.9nm,0.7s,baz=223,slow=7.0,SNR=4.7							
DBIC				sP		sP	23 18 54.3	+7.7
	1.5nm,0.7s,baz=224,slow=8.5,SNR=4.5							
PPT	**Papeete** comp=Z,93nm,19.2s,MS4.1,baz=95,slow=29	**73.31**	**258**	LR		LR	23 43 07.1	
PDAR	**Pinedale Array** 0.2nm,0.4s,mb3.4,baz=129,slow=9.7,SNR=3.6	**74.82**	**331**	P		**P**	**23 19 08.9**	**+1.9**
SYO	**Syowa Base**	**75.45**	**160**	*e*P		**P**	**23 19 09.3**	**-1.1**
TOA0	**Torodi Ar. Sit**	**79.51**	**71**	*e*P		**P**	**23 19 33.5**	**-0.5**
TOA0				*e*			23 19 44.1	
TORD	**Torodi Ar. Bea** 10nm,0.8s,mb4.8,baz=255,slow=5.0,SNR=55	**79.51**	**71**	P		**P**	**23 19 33.4**	**-0.6**
TORD				pP		pP	23 19 42.0	+6.0
	5.8nm,0.7s,baz=251,slow=4.9,SNR=12							
TORD				sP		sP	23 19 44.4	+7.7
	1.2nm,0.5s,baz=260,slow=5.8,SNR=12							
TORD	**Torodi Ar. Bea**	**79.51**	**71**	P		**P**	**23 19 33.4**	**-0.6**
TORD				pP		pP	23 19 42.0	+6.0
TORD				sP		sP	23 19 44.4	+7.7
MAW	**Mawson** 4.7nm,0.6s,mb4.7,baz=212,slow=5.7,SNR=13	**83.13**	**164**	P		**P**	**23 19 53.1**	**+0.7**
BOSA	**Boshof** 1.9nm,0.4s,mb4.6,baz=269,slow=5.2,SNR=9.1	**84.09**	**118**	P		**P**	**23 19 57.8**	**-0.3**
YKA	**Yellowknife Ar** 1.1nm,0.7s,mb4.3,baz=136,slow=4.4,SNR=27	**92.29**	**341**	P		**P**	**23 20 36.8**	**+0.4**
YKA				pP		pP	23 20 44.6	+6.2
	0.4nm,0.6s,baz=140,slow=4.5,SNR=3.8							
ASAR	**Alice Springs** 0.6nm,0.6s,baz=129,slow=1.3,SNR=9.5	**127.58**	**209**	PKP		PKPdf	23 26 32.6	-0.1
ASAR				pPKP		pPKPdf	23 26 41.4	+6.6
	0.4nm,0.7s,baz=126,slow=1.9,SNR=2.7							
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=154,slow=1.7,SNR=4.0	**130.60**	**212**	PKP		PKPdf	23 26 38.4	-0.2
ZAA0	**Zalesovo Array**	**144.24**	**25**	*e*PKPdf		PKPdf	23 27 01.5	-1.0
ZALV	**Zalesovo Beam** 4.5nm,0.8s,baz=304,slow=3.4,SNR=14	**144.24**	**25**	PKP		PKPdf	23 27 01.5	-1.0
ZALV	**Zalesovo Beam**	**144.24**	**25**	PKP		PKPdf	23 27 01.5	-1.0
AML	**Almayashu**	**144.95**	**49**	*e*PKPdf		PKPdf	23 27 04.8	+0.6
MK31	**Makanchi Array**	**148.03**	**36**	*e*PKPdf		PKPdf	23 27 09.8	+0.6
MK31				*e*PKPbc		PKPbc	23 27 12.7	+0.4
MKAR	**Makanchi Array** 3.6nm,0.7s,baz=279,slow=1.1,SNR=37	**148.03**	**36**	PKP		PKPdf	23 27 10.2	+1.0
MKAR				PKPbc		PKPbc	23 27 12.6	+0.3
	3.7nm,0.7s,baz=318,slow=3.0,SNR=27							
MJAR	**Matsushiro Arr** 3.6nm,1.1s,baz=107,slow=3.4,SNR=3.1	**151.77**	**305**	pPKPbc		PKPab	23 27 31.0	+0.3
SONM	**Songino Array** 0.6nm,0.8s,baz=319,slow=4.3,SNR=3.7	**155.37**	**5**	PKP		PKPdf	23 27 21.2	+1.0

*CSEM **23** 23:17:31.8±0.1, 3936N×3313E, h12km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.2km az=138.0*
*ISCJB **23** 23:17:32.4±1.0, 3935N±004×3312E±005, h3km±8km, Error ellipse: s-maj=6.8km s-min=5.5km az=144.3*
*ISK **23** 23:37:32.0, 3937N×3311E, h12km, MD2.8*
ISC 23 23:17:33.1±0.8, 3936N±004×3313E±005, h10km±8km, n11, σ0s79/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.46**	**89**	*e*PG	**Pg**	**23 17 41.7**	**-0.3**
KAMT				*e*SG	**Sg**	**23 17 48.7**	**+0.7**
LOD	**Lodumlu**	**0.60**	**332**	*e*PG	**Pg**	**23 17 43.5**	**-1.1**
LOD				*e*SG	**Sg**	**23 17 53.0**	**+0.4**
CDAG	**Cicekdag**	**1.00**	**74**	*i* P	**Pg**	**23 17 51.5**	**-0.8**
CDAG	**Cicekdag**	**1.00**	**74**	*i* P	**Pg**	**23 17 51.5**	**-0.8**
CDAG				*i* S	**Sg**	**23 18 06.3**	**+1.0**
KDHN	**Kadinhani**	**1.15**	**224**	*i* P	**Pb**	**23 17 55.2**	**+0.2**
KDHN				*i* S	**Sb**	**23 18 11.6**	**+1.6**
ELDT	**Eldivan**	**1.15**	**11**	*i* P	**Pb**	**23 17 55.3**	**+0.2**
ELDT	**Eldivan**	**1.15**	**11**	*i* P	**Pb**	**23 17 55.3**	**+0.2**
ELDT				*i* S	**Sb**	**23 18 11.0**	**+0.9**
LADK	**Ladik-KONYA**	**1.30**	**207**	*e*PN	**Pn**	**23 17 56.5**	**-0.8**
CORM	**Corum**	**1.42**	**54**	*e*PN	**Pn**	**23 17 58.3**	**-0.6**
KONT	**Konya--Tatoy**	**1.54**	**203**	*e*PN	**Pn**	**23 17 59.7**	**-0.8**
KONT				*e*SN	**Sn**	**23 18 20.8**	**+0.3**
YOZ	**Yozgat**	**1.72**	**80**	*e*PN	**Pn**	**23 18 02.3**	**-0.8**

IDC 23 23:24:39.8±27.0, 2292S×17348W, h0km, mb4.3/4, mb1 4.4/4, mb1mx4.0/17, mbtmp4.3/4, Error ellipse: s-maj=493.3km s-min=147.3km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** 6.5nm,0.4s,baz=90,slow=11	**37.49**	**267**	P	P	23 31 56.2	+0.8
STKA	**Stephens Creek** 1.1nm,0.4s,baz=96,slow=11,SNR=5.0	**40.63**	**247**	P	P	23 32 20.6	-1.0
ASAR	**Alice Springs** 0.6nm,0.4s,baz=90,slow=6.8,SNR=15.5	**48.10**	**258**	P	P	23 33 21.2	-0.3
WRA	**Warramunga Arr** 1.7nm,0.3s,baz=101,slow=8.5,SNR=39	**48.46**	**263**	P	P	23 33 24.6	+0.2

IDC 23 23:39:52.5±16.0, 1669S×1358W, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.9/3, MS3.9/2, Ms1 3.9/2, ms1mx3.3/39, Error ellipse: s-maj=587.7km s-min=131.1km az=89.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto** 34nm,1.3s	**24.29**	**21**	*e*P	P	23 45 11.9	+0.2
KIC	**Kosan Boka** 93nm,1.4s	**24.52**	**22**	*e*P	P	23 45 14.0	+0.2
TIC	**Toumodi** 8.5nm,0.2s	**24.69**	**21**	*e*P	P	23 45 15.6	+0.3
DBIC	**Dimbokro** 2.6nm,0.9s,baz=188,slow=13,SNR=5.2	**24.77**	**21**	P	P	23 45 16.2	+0.2
TORD	**Torodi Ar. Bea** 1.9nm,0.8s,baz=214,slow=8.8,SNR=10	**33.27**	**28**	P	P	23 46 31.7	-0.1
LSZ	**Lusaka** comp=Z,244nm,20.3s,baz=193,slow=33	**40.13**	**94**	LR	LR	00 02 07.9	
USHA	**Ushuaia** comp=Z,57nm,18.7s,baz=46,slow=32	**56.49**	**215**	LR	LR	00 09 45.8	
BRTR	**Keskin Array B** 0.5nm,0.9s,baz=211,slow=4.5,SNR=4.6	**71.32**	**37**	P	P	23 51 14.3	+0.3

*TIR **23** 23:41:40.9±0.9, 4019N×2009E, h0km±999km*
*ATH **23** 23:41:42.0, 4020N×1969E, h13km±5km, MD3.3/8*
*CSEM **23** 23:41:42.7±0.2, 4014N×1970E, h5km, MD3.3, Error ellipse: s-maj=3.6km s-min=2.6km az=63.0*
*NEIC **23** 23:41:42.3, 4018N×1969E, h14km, MD3.3(ATH), After ATH.*
*ISCJB **23** 23:41:42.6±0.8, 4006N±003×1964E±005, h7km±5km, Error ellipse: s-maj=6.4km s-min=3.8km az=153.8*
*THE **23** 23:41:43.7, 4010N×1972E, h3km±2km, ML3.0/6, Error ellipse: s-maj=4.2km s-min=1.1km az=258.0*
ISC 23 23:41:43.8±0.6, 4006N±003×1968E±005, h10km±5km, n42, σ1s21/65, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.30**	**125**	*e*PG	**Pg**	**23 41 49.2**	**-0.7**
SRN				*i* SG	**Sg**	**23 41 54.1**	**+0.1**
KEK	**Kerkira**	**0.36**	**165**	*e*PB	**Pg**	**23 41 52.0**	**+1.2**
KEK				*e*SB	**Sg**	**23 41 59.0**	**+3.4**
KEK	**Kerkira**	**0.36**	**165**	*e*Pb	**Pg**	**23 41 52.0**	**+1.2**
KEK				*e*Sb	**Sg**	**23 41 59.1**	**+3.5**
VLO	**Vlora**	**0.43**	**341**	*e*PG	**Pg**	**23 41 54.4**	**+2.1**
VLO				*i* SG	**Sg**	**23 42 03.4**	**+5.3**
IGT	**Igoumenitsa**	**0.73**	**136**	P	**Pg**	**23 41 56.9**	**-0.9**
IGT				S	**Sg**	**23 42 08.3**	**+1.0**
JAN	**Janina**	**0.99**	**114**	*e*PB	**Pb**	**23 42 00.7**	**-2.3**
JAN	**Janina**	**0.99**	**114**	*e*Pb	**Pb**	**23 42 00.9**	**-2.1**
TIR	**Tirane**	**1.30**	**6**	*e*PG	**Pg**	**23 42 09.4**	**+0.7**
TIR				*i* SG	**Sg**	**23 42 30.2**	**+4.6**
TIR	**Tirane**	**1.30**	**6**	*e*Pn	**Pn**	**23 42 05.3**	**-2.7**
TIR	**Tirane**	**1.30**	**6**	P	**Pn**	**23 42 07.6**	**-0.4**
TIR				S	**Sb**	**23 42 24.8**	**-0.3**
TIR	**Tirane**	**1.30**	**6**	*e*Pn	**Pn**	**23 42 05.3**	**-2.8**
TIR				*e*S	**Sb**	**23 42 28.2**	**+3.1**
OHR	**Ohrid**	**1.36**	**39**	P	**Pn**	**23 42 07.3**	**-1.5**
OHR				S	**Sb**	**23 42 26.5**	**-0.2**
OHR	**Ohrid**	**1.36**	**39**	*e*Pn	**Pn**	**23 42 08.0**	**-0.8**
OHR				S	**Sb**	**23 42 26.5**	**-0.2**
OHR	**Ohrid**	**1.36**	**39**	*e*Pn	**Pn**	**23 42 08.0**	**-0.8**
FNA	**Florina**	**1.49**	**60**	P	**Pn**	**23 42 09.2**	**-1.4**
FNA				S	**Sn**	**23 42 30.3**	**+0.2**
BIA	**Bitola**	**1.58**	**52**	P	**Pn**	**23 42 10.3**	**-1.6**
BIA				S	**Sn**	**23 42 32.2**	**-0.3**
BIA	**Bitola**	**1.58**	**52**	*i* Pn	**Pn**	**23 42 10.6**	**-1.3**
BIA				S	**Sn**	**23 42 32.2**	**-0.3**
BIA	**Bitola**	**1.58**	**52**	*i* Pn	**Pn**	**23 42 10.6**	**-1.3**
KZN	**Kozani**	**1.62**	**80**	*e*PB	**Pb**	**23 42 12.0**	**-1.9**
KRUS	**Krusevo**	**1.77**	**42**	*i* Pn	**Pn**	**23 42 15.9**	**+1.3**
THL	**Klokotos Trika**	**1.87**	**105**	P	**Pn**	**23 42 16.6**	**+0.8**
THL				S	**Sn**	**23 42 39.8**	**+0.3**
THL	**Klokotos Trika**	**1.87**	**105**	*e*Pn	**Pn**	**23 42 16.6**	**+0.8**
THL				S	**Sn**	**23 42 39.8**	**+0.3**
EVR	**Evrytania**	**2.00**	**124**	*e*PG	**Pg**	**23 42 20.4**	**-1.8**
EVR				*e*SN	**Sn**	**23 42 45.9**	**+3.0**
EVR	**Evrytania**	**2.00**	**124**	*e*Pg	**Pg**	**23 42 20.1**	**-2.1**
EVR				*e*Sn	**Sn**	**23 42 45.9**	**+3.0**
VLS	**Valsamata**	**2.01**	**159**	P	**Pn**	**23 42 17.8**	**0.0**
VLS	**Valsamata**	**2.01**	**159**	*e*PB	**Pb**	**23 42 18.7**	**-1.7**
VLS	**Valsamata**	**2.01**	**159**	*e*Pb	**Pb**	**23 42 18.9**	**-1.5**
LIT	**Litokhoron**	**2.16**	**88**	P	**Pn**	**23 42 20.1**	**+0.2**
LIT				S	**Sn**	**23 42 48.0**	**+1.3**
GRG	**Griva**	**2.26**	**66**	P	**Pn**	**23 42 21.6**	**+0.3**
GRG				S	**Sn**	**23 42 49.4**	**+0.1**
AGG	**Agios Georgios**	**2.30**	**116**	P	**Pn**	**23 42 22.6**	**+0.8**
AGG				S	**Sn**	**23 42 51.1**	**+1.0**
RLS	**Riolos of Patr**	**2.43**	**145**	*e*PB	**Pb**	**23 42 24.8**	**-2.9**
RLS	**Riolos of Patr**	**2.43**	**145**	*e*Pb	**Pb**	**23 42 24.4**	**-3.3**
VAY	**Valandovo**	**2.54**	**59**	*e*Pn	**Pn**	**23 42 20.0**	**-5.1**
VAY	**Valandovo**	**2.54**	**59**	*e*Pn	**Pn**	**23 42 20.1**	**-5.0**
HORT	**Hortiatis**	**2.67**	**77**	P	**Pn**	**23 42 26.7**	**-0.2**
PLG	**Polygyros**	**2.90**	**83**	*e*PB	**Pb**	**23 42 31.0**	**-4.7**
PLG	**Polygyros**	**2.90**	**83**	*e*Pb	**Pb**	**23 42 31.6**	**-4.1**
STON	**Ston**	**3.18**	**333**	*e*Pn	**Pn**	**23 42 34.0**	**0.0**
STON				Sn	**Sn**	**23 43 12.0**	**+0.1**
STON	**Ston**	**3.18**	**333**	*e*Pn	**Pn**	**23 42 34.0**	**+0.1**
STON				Sn	**Sn**	**23 43 11.9**	**0.0**
BARS	**Barje**	**3.19**	**30**	*e*Pn	**Pn**	**23 42 34.4**	**+0.3**
BZS	**Buzias**	**5.74**	**14**	*e*Pn	**Pn**	**23 43 10.8**	**+1.8**
NVLJ	**Novalja**	**5.74**	**323**	*e*Pn	**Pn**	**23 43 10.1**	**+1.0**
NVLJ				Sn	**Sn**	**23 44 13.6**	**-1.4**

*ISCJB **23** 23:47:49.4±0.5, 1695S±0.10×1436W±0.009, h10km, mb4.3/20, MS4.2/26, Error ellipse: s-maj=16.7km s-min=9.7km az=140.8*
*IDC **23** 23:47:49.6±0.6, 1699S×1432W, h0km, mb4.2/15, mb1 4.4/15, mb1mx4.3/22, mbtmp4.2/15, MS4.1/26, Ms1 4.1/26, ms1mx4.1/33, Error ellipse: s-maj=25.0km s-min=14.6km az=139.0*
*NEIC **23** 23:47:51.0±0.4, 1693S×1436W, h10km, mb4.8/4, Error ellipse: s-maj=14.3km s-min=9.4km az=147.0*
*GCMT **23** 23:47:51.0±0.3, 1707S×14.18W, h12km, MW5.0/64, Moment Tensor Solution. s18,c24; s64,c98; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.52±.09; Mθθ=0.62±.09; Mφφ=1.90±.08; Mrθ=-2.60±.32; Mrφ=-1.62±.07; Mθφ=-2.01±.28; Best double couple: Mw=3.97900×10^16 NP1:ϕs=118.00000°, δ51.00000°, λ=-139.00000°. NP2: ϕs=359.00000°, δ59.00000°, λ=-47.00000°. Principal axes: T 3.0170, Plg5.0000°, Azm60.0000°; N 1.9190, Plg36.0000°, Azm154.0000°; P -4.9400, Plg54.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 23 23:47:51.2±0.5, 1705S±01×1438W±009, h10km, n41, σ0s87/24, mb4.3/20, MS4.2/26, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo** 17nm,0.8s,mb4.5	**23.79**	**295**	*e*P	**P**	**23 53 03.3**	**-1.0**
LIC	**Lamto** 66nm,1.2s,mb5.0	**24.81**	**23**	*e*P	**P**	**23 53 13.8**	**+0.1**
KIC	**Kosan Boka** 224nm,1.2s	**25.04**	**23**	*e*P	**P**	**23 53 15.9**	**+0.1**
TIC	**Toumodi** 231nm,1.2s	**25.20**	**22**	*e*P	**P**	**23 53 17.4**	**+0.2**
DBIC	**Dimbokro** 24nm,1.1s,mb4.7,baz=179,slow=12,SNR=16	**25.29**	**23**	P	**P**	**23 53 17.9**	**-0.1**
DBIC				LR	LR	00 00 46.9	
	comp=Z,440nm,20.4s,MS4.0,baz=271,slow=31						
TSUM	**Tsumeb** comp=Z,368nm,21.5s,MS4.0,baz=292,slow=32	**30.45**	**99**	LR	LR	00 03 46.7	
BBTS	**Babate** comp=Z,169nm,20.6s,MS3.7,baz=203,slow=31	**31.48**	**356**	LR	LR	00 04 10.7	
BDFB	**Brasilia** 1.6nm,0.8s,mb3.9,baz=43,slow=16,SNR=5.7	**32.29**	**267**	P	**P**	**23 54 21.7**	**+1.2**
BDFB				LR	LR	00 04 44.4	
	comp=Z,384nm,21.5s,MS4.1,baz=170,slow=31						
TOA0	**Torodi Ar. Sit**	**33.86**	**29**	*e*P	**P**	**23 54 33.3**	**-0.8**
TOA0				*e*		23 54 40.3	
TORD	**Torodi Ar. Bea** 12nm,0.9s,mb4.8,baz=212,slow=7.3,SNR=47	**33.86**	**29**	P	**P**	**23 54 33.8**	**-0.4**
TORD				LR	LR	00 06 07.3	
	comp=Z,758nm,19.3s,MS4.4,baz=205,slow=32						
BOSA	**Boshof** comp=Z,300nm,18.1s,MS4.2,baz=284,slow=32	**38.18**	**115**	LR	LR	00 08 03.7	
CPUP	**Villa Florida** 4.1nm,0.9s,mb4.1,baz=74,slow=8.3,SNR=9.9	**40.84**	**249**	P	**P**	**23 55 34.1**	**+0.7**
CPUP				LR	LR	00 11 03.0	
	comp=Z,303nm,18.2s,MS4.2,baz=84,slow=34						
CPUP	**Villa Florida** 9.8nm,0.7s,mb4.5	**40.84**	**249**	*e*P	**P**	**23 55 33.9**	**+0.5**
CPUP				LR	LR	00 11 03.0	
LSZ	**Lusaka** 5.0nm,1.1s,mb4.1,baz=272,slow=9.2,SNR=5.0	**40.87**	**94**	P	**P**	**23 55 34.8**	**+1.1**
SIV	**San Ignacio** 2.3nm,0.9s,mb4.0,baz=72,slow=7.4,SNR=7.4	**44.71**	**264**	P	**P**	**23 56 05.8**	**+0.9**
SIV				PcP	PcP	23 57 47.1	-0.2
	1.8nm,1.0s,baz=83,slow=5.8,SNR=8.7						
CFAA	**Coronel Fontan** 0.3nm,0.7s,mb3.3,baz=69,slow=11,SNR=3.5	**50.75**	**243**	P	**P**	**23 56 51.0**	**-0.7**
PLCA	**Paso Flores** comp=Z,426nm,18.9s,MS4.5,baz=68,slow=33	**53.61**	**232**	LR	LR	00 17 33.7	
KEST	**Kesra** 2.1nm,0.9s,mb4.2,baz=204,slow=2.8,SNR=5.3	**57.01**	**23**	P	**P**	**23 57 38.9**	**+1.7**
KEST				LR	LR	00 22 05.5	
	comp=Z,87nm,18.5s,MS3.9,baz=273,slow=36						
ESDC	**Sonseca Array** 0.8nm,0.9s,mb3.8,baz=228,slow=6.2,SNR=3.4	**57.16**	**10**	P	**P**	**23 57 38.1**	**-0.1**
ESDC				LR	LR	00 18 24.4	
	comp=Z,138nm,20.5s,MS4.0,baz=350,slow=32						
VAE	**Valguarnera** comp=Z,393nm,18.9s,MS4.6,baz=275,slow=34	**60.54**	**26**	LR	LR	00 22 09.5	
SDV	**Santo Domingo** 7.0nm,0.8s,mb4.8	**61.26**	**290**	*e*P	**P**	**23 58 07.3**	**+0.3**
ROSC	**El Rosal** comp=Z,253nm,19.3s,MS4.4,baz=23,slow=34	**63.05**	**285**	LR	LR	00 23 34.0	
IDI	**Anoyia** comp=Z,82nm,18.4s,MS4.0,baz=189,slow=34	**63.92**	**35**	LR	LR	00 24 17.9	
EIL	**Elat**	**66.41**	**46**	LR	LR	00 25 57.0	
	comp=Z,157nm,18.1s,MS4.3,baz=262,slow=34						
DAVOX	**Davos/Dischmat** comp=Z,181nm,18.9s,MS4.3,baz=242,slow=33	**67.09**	**18**	LR	LR	00 24 51.1	
MMAI	**Mount Meron Ar** comp=Z,68nm,19.0s,MS3.9,baz=230,slow=34	**68.77**	**43**	LR	LR	00 26 43.1	
ASF	**Jabal al Asfar** comp=Z,101nm,18.8s,MS4.1,baz=90,slow=34	**69.25**	**45**	LR	LR	00 26 55.7	
MAW	**Mawson** 2.2nm,0.9s,mb4.1,baz=290,slow=13,SNR=3.5	**69.60**	**156**	P	**P**	**23 58 59.9**	**-0.3**
MAW				LR	LR	00 21 15.6	
	comp=Z,119nm,20.4s,MS4.1,baz=134,slow=29						
GERES	**GERESS Array B** 0.5nm,0.8s,mb3.5,baz=188,slow=3.9,SNR=5.1	**70.10**	**19**	P	**P**	**23 59 03.3**	**-0.2**
GERES				LR	LR	00 29 34.1	
	comp=Z,216nm,20.1s,MS4.4,baz=108,slow=36						
VRAC	**Vranov** comp=Z,186nm,20.7s,MS4.3,baz=222,slow=34	**71.45**	**21**	LR	LR	00 28 49.8	
BRTR	**Keskin Array B** 3.2nm,1.0s,mb4.2,baz=214,slow=4.3,SNR=2.1	**71.98**	**37**	P	**P**	**23 59 16.7**	**+1.6**
BRTR				LR	LR	00 29 38.1	
	comp=Z,73nm,20.0s,MS4.0,baz=248,slow=35						
MLR	**Muntele Rosu** 7.2nm,1.1s,mb4.5,baz=252,slow=3.2,SNR=7.4	**72.10**	**29**	P	**P**	**23 59 15.2**	**-0.5**
AKASG	**Malin Array Be** 0.7nm,0.4s,mb3.9,baz=223,slow=7.4,SNR=5.1	**77.46**	**27**	P	**P**	**23 59 45.5**	**-1.1**
AKASG				LR	LR	00 34 24.0	
	comp=Z,82nm,18.9s,MS4.1,baz=300,slow=36						
HFS	**Hagfors** comp=Z,187nm,18.2s,MS4.5,baz=74,slow=35	**80.11**	**14**	LR	LR	00 34 23.4	
NOA	**NORSAR Array B** comp=Z,95nm,18.6s,MS4.2,baz=330,slow=34	**80.39**	**12**	LR	LR	00 32 48.8	
SCHQ	**Schefferville** 28nm,1.7s,mb5.1	**84.20**	**333**	P	**P**	**00 00 21.1**	**-1.4**
VNDA	**Vanda** 1.9nm,1.0s,mb4.3,baz=291,slow=3.1,SNR=3.4	**85.70**	**179**	P	**P**	**00 00 28.4**	**-1.5**
VNDA				LR	LR	00 33 03.5	
	comp=Z,112nm,20.2s,MS4.2,baz=142,slow=32						
ARCES	**ARCESS Array B** comp=Z,127nm,18.1s,MS4.4,baz=111,slow=36	**90.74**	**13**	LR	LR	00 42 18.0	
TXAR	**Lajitas Array** 0.6nm,1.0s,mb4.1,baz=134,slow=5.4,SNR=3.9	**97.52**	**298**	P	**P**	**00 01 26.2**	**+0.3**
SONM	**Songino Array** 0.8nm,1.1s,baz=297,slow=0.6,SNR=2.7	**122.96**	**44**	PKhKP		00 06 44.9	
SONM				PKP	PKPdf	00 06 48.1	+0.3
	0.8nm,1.1s,baz=323,slow=0.7,SNR=4.2						
ASAR	**Alice Springs** 1.1nm,1.0s,baz=204,slow=1.7,SNR=6.8	**129.11**	**142**	PKP	PKPdf	00 06 59.8	-0.6

*NEIC **23** 23:48:34.8, 4626N×7732W, h18km, MN3.6(OTT), After OTT.*
NEIC Felt at Chalk River, Deep River, Pembroke and Petawawa, Ontario.
OTT 23 23:48:34.7±0.1, 4626N×7731W, h18km, MN3.6/18, 1C-3D, Southern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLO	**Chalk River**	**0.22**	**192**	⇑PG	**Pg**	**23 48 40.1**	**+0.1**
CRLO				SG	**Sg**	**23 48 43.6**	**0.0**
CRLO	**Chalk River**	**0.22**	**192**	P	**Pg**	**23 48 40.1**	**+0.1**
CRLO				S	**Sg**	**23 48 43.6**	**0.0**
LSQ1	**Lac Sinclair,**	**0.93**	**120**	⇓PG	**Pg**	**23 48 51.6**	**-1.3**
LSQ1				SG	**Sg**	**23 49 03.7**	**-1.5**
GRQ	**Grand Remous**	**1.06**	**70**	⇓PG	**Pg**	**23 48 55.1**	**-0.3**
GRQ				SG	**Sg**	**23 49 10.2**	**+0.8**
GRQ				Trac		**23 49 11.7**	
	comp=Z,300nm,0.2s						
GRQ	**Grand Remous**	**1.06**	**70**	P	**Pb**	**23 48 55.1**	**+0.5**
GRQ				S	**Sb**	**23 49 10.3**	**+2.1**
EEO	**Eldee**	**1.28**	**288**	⇓PG	**Pg**	**23 48 57.6**	**-1.8**
EEO				SG	**Sg**	**23 49 14.9**	**-1.2**
EEO				Trac		**23 49 17.3**	
	comp=Z,239nm,0.1s						
EEO	**Eldee**	**1.28**	**288**	P	**Pn**	**23 48 57.6**	**0.0**
EEO				S	**Sb**	**23 49 14.9**	**+0.6**
GAC	**Glen Almond**	**1.39**	**113**	PN	**Pn**	**23 48 58.8**	**-0.5**
GAC				PG	**Pg**	**23 48 59.4**	**-2.2**
GAC				SN	**Sn**	**23 49 17.4**	**+0.2**
GAC				Trac		**23 49 18.6**	
	comp=Z,125nm,0.1s						
GAC	**Glen Almond**	**1.39**	**113**	Pg	**Pg**	**23 48 59.4**	**-2.2**
GAC				Sn	**Sn**	**23 49 17.4**	**+0.2**
OTT	**Ottawa**	**1.41**	**127**	PG	**Pg**	**23 49 01.8**	**-0.1**
OTT				SG	**Sg**	**23 49 17.1**	**-3.3**
OTT				SG	**Sg**	**23 49 19.6**	**-0.7**
OTT				Trac		**23 49 21.5**	
	comp=Z,249nm,0.1s						
OTT	**Ottawa**	**1.41**	**127**	Pg	**Pg**	**23 49 01.8**	**-0.1**
OTT				Sg	**Sg**	**23 49 17.1**	**-3.3**
ORHO	**Orleans, Herit**	**1.48**	**122**	SN	**Sn**	**23 49 19.6**	**+0.4**
BELQ	**Belleterre**	**1.48**	**321**	PG	**Pg**	**23 49 01.9**	**-1.4**
BELQ				SG	**Sg**	**23 49 22.2**	**-0.4**

comp=Z,43nm,0.1s
DPQ Saint Jean 3.16 81 Pn Pn 23 49 23.1 -0.5
DPQ Sn Sn 23 49 59.6 -1.2
DPQ Lg 23 50 13.1
ACTO Acton 3.29 217 P Pn 23 49 24.2 -1.1
ACTO S Sn 23 50 02.3 -1.6
EFO Effingham 3.47 205 PN Pn 23 49 25.7 -2.1
EFO SN Sn 23 50 04.0 -4.3
EFO LG 23 50 18.4
EFO Trac 23 50 23.2
comp=Z,78nm,0.2s
EFO Effingham 3.47 205 Pn Pn 23 49 25.7 -2.1
EFO Sn Sn 23 50 04.0 -4.3
EFO Lg 23 50 18.4
BUF Buffalo 3.51 199 *e*P Pn 23 49 32.0 +3.7
BUF *e*S Sn 23 50 18.6 +9.3
PRNY Paleo Inst,Ith 3.83 171 P Pn 23 49 31.9 -0.9
PRNY S Sn 23 50 15.4 -1.9
CNQ Baie Comeau 6.93 61 PN Pn 23 50 13.0 -2.3
CNQ SN Sn 23 51 28.6 -5.0
CNQ LG 23 52 08.2
CNQ Trac 23 52 14.7
comp=Z,18nm,0.3s
CNQ Baie Comeau 6.93 61 Pn Pn 23 50 13.0 -2.3
CNQ Lg 23 51 28.6
MNQ Manicouagan 7.11 50 PN Pn 23 50 15.8 -2.0
MNQ SN Sn 23 51 34.3 -3.9
MNQ LG 23 52 17.5
MNQ Trac 23 52 22.9
comp=Z,27nm,0.4s
MNQ Manicouagan 7.11 50 Pn Pn 23 50 15.8 -2.0
MNQ Sn Sn 23 51 34.3 -3.9
MNQ Lg 23 52 17.5
LG4Q La Grande 4 7.67 15 PN Pn 23 50 25.0 -0.4
LG4Q Trac 23 52 36.1
comp=Z,12nm,0.3s
SMQ Clarke City 8.12 57 PN Pn 23 50 29.6 -2.0
SMQ SN Sn 23 51 57.8 -5.0
SMQ Trac 23 52 54.0
comp=Z,9.1nm,0.3s
SMQ Clarke City 8.12 57 Pn Pn 23 50 29.6 -2.0
SMQ Sn Sn 23 51 57.8 -5.0
EYMN Ely 9.82 285 *e*Pn Pn 23 50 51.6 -3.3
EYMN *e*Sn Sn 23 52 37.8 -6.8

*DDA **23** 23:55:08.1,3752N×3570E,h24km±1km,Md4.0*
*NEIC **23** 23:55:08.3,3751N×3574E,h5km,ML4.1(ISK),After ISK.*
*CSEM **23** 23:55:08.6±0.1,3753N×3576E,h5km,ML4.1,Error ellipse: s-maj=1.2km s-min=1.1km az=115.0*
*ISCJB **23** 23:55:08.9±0.3,3750N±002×3573E±002,h10km±2km, mb3.9/9,Error ellipse: s-maj=2.9km s-min=2.7km az=14.0*
*ISK **23** 23:55:08.3,3753N×3572E,h4km,ML4.1*
*IDC **23** 23:55:08.6±1.1,3749N×3576E,h0km,mb3.5/5, mb1 3.7/13,mb1mx3.6/29,mbtmp3.6/13,ML3.6/8,MS3.2/5, Ms1 3.2/5,ms1mx2.9/35,Error ellipse: s-maj=18.5km s-min=14.0km az=59.0*
ISC 23 23:55:09.6±0.4,3748N±002×3576E±002,h8km±2km,n110, σ1°19/136,mb3.9/9,5C-5D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.06**	**92**	PG	**Pg**	**23 55 10.6**	**-0.7**
KOZT				*e*SG	**Sg**	**23 55 13.1**	**+0.5**
CEYT	**Ceyhan**	**0.47**	**181**	*e*PG	**Pg**	**23 55 19.2**	**+0.5**
CEYT				*e*SG	**Sg**	**23 55 27.1**	**+2.2**
ANDN	**Andirin**	**0.48**	**78**	*i*P	**Pg**	**23 55 19.0**	**+0.1**
ANDN				*i* S	**Sg**	**23 55 26.9**	**+1.8**
KARA	**Karaisali**	**0.60**	**249**	*e*PG	**Pg**	**23 55 19.9**	**-1.4**
KARA				*e*SG	**Sg**	**23 55 29.0**	**-0.1**
KMRS	**Kahramanmaras**	**0.91**	**88**	*e*PG	**Pg**	**23 55 26.4**	**-0.7**
KRTS	**Karatas**	**0.96**	**199**	*e*PG	**Pg**	**23 55 28.5**	**+0.4**
COBT	**Iskenderun**	**1.04**	**157**	*i*P	**Pg**	**23 55 28.6**	**-1.0**
COBT				*i* S	**Sg**	**23 55 41.3**	**-1.8**
COBT	**Iskenderun**	**1.04**	**157**	*i* P	**Pg**	**23 55 28.6**	**-1.0**
COBT				*i* S	**Sg**	**23 55 41.3**	**-1.8**
NIG	**Nigde**	**1.10**	**305**	*e*PG	**Pg**	**23 55 28.5**	**-2.4**
MERS	**Mersin**	**1.16**	**239**	*e*PN	**Pn**	**23 55 30.6**	**-1.6**
GAZ	**Gaziantep**	**1.20**	**105**	*e*PN	**Pn**	**23 55 31.9**	**-0.8**
KUZU	**Kuzuini**	**1.27**	**124**	*i*P	**Pn**	**23 55 33.2**	**-0.4**
KUZU				*i* S	**Sb**	**23 55 50.2**	**-0.1**
KUZU	**Kuzuini**	**1.27**	**124**	*i* P	**Pn**	**23 55 33.2**	**-0.4**
KUZU				*i* S	**Sb**	**23 55 50.2**	**0.0**
PINB	**Pinarbasi**	**1.30**	**23**	*i*P	**Pn**	**23 55 31.8**	**-2.2**
PINB				*i* S	**Sb**	**23 55 51.9**	**+0.8**
PINB	**Pinarbasi**	**1.30**	**23**	*i* P	**Pn**	**23 55 31.8**	**-2.2**
PINB				*i* S	**Sb**	**23 55 51.8**	**+0.7**
BNN	**Bunyan**	**1.37**	**3**	*e*PN	**Pn**	**23 55 33.4**	**-1.6**
BNN	**Bunyan**	**1.37**	**3**	Pn	**Pn**	**23 55 33.1**	**-2.0**
BSTP	**Nigde**	**1.39**	**290**	*i* P	**Pn**	**23 55 34.0**	**-1.3**
HTY	**Hatay**	**1.39**	**167**	*e*PN	**Pn**	**23 55 35.6**	**+0.3**
HTY	**Hatay**	**1.39**	**167**	Pn	**Pn**	**23 55 34.1**	**-1.2**
SARI	**SarD1z-Kayseri**	**1.41**	**32**	*e*PG	**Pg**	**23 55 28.5**	**-8.1**
GZT	**Gaziantep**	**1.44**	**95**	*i*P	**Pn**	**23 55 35.1**	**-1.0**
GZT				*i* S	**Sn**	**23 55 58.0**	**+2.8**
AVNT	**Avonos**	**1.48**	**331**	*i*P	**Pn**	**23 55 34.4**	**-2.2**
AVNT				*i* S	**Sn**	**23 55 53.7**	**-2.4**
AKCD	**Akcadag**	**1.90**	**64**	*i*P	**Pn**	**23 55 41.9**	**-0.3**
AKCD				*i* S	**Sn**	**23 56 08.3**	**+1.9**
ATAB	**Bozova**	**2.02**	**90**	*i*P	**Pn**	**23 55 42.4**	**-1.5**
ATAB				*i* S	**Sn**	**23 56 08.5**	**-0.8**
IKL	**Isikli**	**2.08**	**234**	*e*PN	**Pn**	**23 55 45.5**	**+0.7**
IKL	**Isikli**	**2.08**	**234**	Pn	**Pn**	**23 55 44.2**	**-0.6**
DARE	**Darende-Malaty**	**2.18**	**47**	*e*PN	**Pn**	**23 55 40.5**	**-5.7**
YOZ	**Yozgat**	**2.18**	**351**	*e*PN	**Pn**	**23 55 46.4**	**+0.2**
MALT	**Malatya**	**2.27**	**68**	*e*PN	**Pn**	**23 55 47.4**	**-0.1**
MALT	**Malatya**	**2.27**	**68**	*e*Pn	**Pn**	**23 55 47.4**	**0.0**
MALT				*e*Sn	**Sn**	**23 56 14.7**	**-0.8**
MALT	**Malatya**	**2.27**	**68**	*e*Pn	**Pn**	**23 55 46.7**	**-0.7**
MALT				*e*Sn	**Sn**	**23 56 14.7**	**-0.8**
MYA	**Malataya**	**2.27**	**67**	*e*PN	**Pn**	**23 55 48.2**	**+0.8**
EREN	**Erenkoy**	**2.33**	**214**	*e*PN	**Pn**	**23 55 48.5**	**+0.2**
CDAG	**Cicekdag**	**2.40**	**333**	*i*P	**Pn**	**23 55 48.5**	**-0.7**
CDAG				*i* S	**Sn**	**23 56 20.8**	**+2.0**
URFA	**Urfa**	**2.44**	**90**	*e*PN	**Pn**	**23 55 50.4**	**+0.7**
KAMT	**Kaman**	**2.48**	**320**	*e*PN	**Pn**	**23 55 50.3**	**+0.1**
SVSK	**Karacayir**	**2.62**	**21**	*e*PN	**Pn**	**23 55 52.5**	**+0.3**
KONT	**Konya--Tatoy**	**2.73**	**281**	*e*PN	**Pn**	**23 55 54.3**	**+0.5**
KONT	**Konya--Tatoy**	**2.73**	**281**	Pn	**Pn**	**23 55 54.8**	**+1.0**
LADK	**Ladik-KONYA**	**2.78**	**326**	*e*PN	**Pn**	**23 55 54.8**	**+0.3**
BRTR	**Keskin Array B**	**2.79**	**324**	Pn	**Pn**	**23 55 54.4**	**-0.2**
	3.8nm,0.3s,baz=156,slow=14,SNR=67						
BRTR				Pg	**Pg**	**23 55 58.5**	**-4.6**
	6.4nm,0.3s,baz=157,slow=14,SNR=41						
BRTR				Lg		23 56 36.2	
	9.3nm,0.3s,baz=146,slow=26,SNR=9.0						
BRTR	**Keskin Array B**	**2.79**	**324**	Pn	**Pn**	**23 55 54.3**	**-0.2**
BR131	**Keskin Array S**	**2.79**	**324**	*e*Pn	**Pn**	**23 55 54.5**	**0.0**
BR131	**Keskin Array S**	**2.79**	**324**	*e*Pg	**Pg**	**23 56 01.5**	**-1.6**
BR131	**Keskin Array S**	**2.79**	**324**	*e*Pn	**Pn**	**23 55 54.5**	**-0.1**
BR131				*e*Pg	**Pg**	**23 56 01.5**	**-1.6**
BR131				*e*Sn	**Sn**	**23 56 29.7**	**+1.3**
BR131				*e*Sg	**Sg**	**23 56 39.8**	**+0.6**
KEMA	**Kemaliye**	**2.79**	**49**	*i* P	**Pn**	**23 55 54.1**	**-0.5**
CORM	**Corum**	**2.83**	**342**	*e*PN	**Pn**	**23 55 55.3**	**+0.2**
LFK	**Lefkose**	**2.84**	**220**	*e*PN	**Pn**	**23 55 55.6**	**+0.4**
PHNC	**Paralimni**	**2.84**	**210**	P	**Pn**	**23 55 59.1**	**+3.8**
	7.5nm,0.7s						
TOKT	**Tokat**	**2.90**	**12**	*e*PN	**Pn**	**23 55 56.5**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.94**	**71**	*e*PN	**Pn**	**23 55 57.5**	**+0.8**
KDHN	**Kadinhani**	**3.06**	**291**	*i* P	**Pn**	**23 55 58.6**	**+0.4**
MAMC	**Mammari**	**3.09**	**222**	P	**Pn**	**23 55 59.1**	**+0.4**
CSS	**Prodhromos**	**3.19**	**219**	*e*Pn	**Pn**	**23 55 59.4**	**-0.7**
CSS				*e*Sn	**Sn**	**23 56 39.2**	**+0.9**
CSS	**Prodhromos**	**3.19**	**219**	*e*Pn	**Pn**	**23 55 59.4**	**-0.6**
CSS				*e*Sn	**Sn**	**23 56 39.2**	**+0.9**
PTK	**Pertek**	**3.19**	**63**	*e*PN	**Pn**	**23 56 00.2**	**+0.1**
HWQ	**Hawqa**	**3.20**	**177**	*e*Pn	**Pn**	**23 56 01.5**	**+1.2**
LEF	**Lefka**	**3.31**	**225**	*e*PN	**Pn**	**23 56 03.0**	**+1.4**
LEF	**Lefka**	**3.31**	**225**	Pn	**Pn**	**23 56 02.9**	**+1.2**
LEF	**Lefka**	**3.31**	**225**	Pn	**Pn**	**23 56 02.9**	**+1.2**
LOD	**Lodumlu**	**3.36**	**317**	*e*PN	**Pn**	**23 56 03.1**	**+0.7**
KIZT	**Kizilcal**	**3.36**	**296**	*e*PN	**Pn**	**23 56 02.9**	**+0.5**
ALFC	**Alevga**	**3.45**	**229**	P	**Pn**	**23 56 01.5**	**-2.1**
	5.1nm,0.6s						
ELDT	**Eldivan**	**3.51**	**330**	*i*P	**Pn**	**23 56 04.1**	**-0.3**
ELDT				*i* P		23 56 04.7	
ELDT				*i* S	**Sn**	**23 56 56.7**	**+11**
ELDT	**Eldivan**	**3.51**	**330**	*i* P	**Pn**	**23 56 04.7**	**+0.2**
CANT	**Cankiri**	**3.54**	**333**	*e*PN	**Pn**	**23 56 05.5**	**+0.7**
BHL	**Bhannes**	**3.57**	**181**	*e*Pn	**Pn**	**23 56 05.6**	**+0.2**
SZAC	**Souni-Zanaja**	**3.58**	**221**	P	**Pn**	**23 56 07.6**	**+2.2**
KVT	**Kavak**	**3.60**	**3**	*e*PN	**Pn**	**23 56 06.4**	**+0.7**
PPCY	**Paphos**	**3.79**	**228**	P	**Pn**	**23 56 09.7**	**+1.4**
TOS	**Tosya**	**3.79**	**340**	*e*PN	**Pn**	**23 56 09.3**	**+0.9**
EZC	**Erzincan**	**3.90**	**53**	*e*PN	**Pn**	**23 56 06.4**	**-3.5**
ILGA	**Ilgaz**	**3.90**	**337**	*i* P	**Pn**	**23 56 09.7**	**-0.2**
BCK	**Bucak**	**4.11**	**271**	*e*PN	**Pn**	**23 56 13.8**	**+1.0**
ANTB	**Antalya**	**4.12**	**263**	*e*PN	**Pn**	**23 56 13.9**	**+1.1**
ESPY	**Espiye-Giresun**	**4.13**	**33**	*e*PN	**Pn**	**23 56 14.2**	**+1.2**
GUMT	**Gumushane**	**4.15**	**43**	*e*PN	**Pn**	**23 56 14.0**	**+0.7**
DIKM	**Dikmen**	**4.18**	**355**	*e*PN	**Pn**	**23 56 14.9**	**+1.2**
ISP	**Isparta**	**4.18**	**277**	*e*PN	**Pn**	**23 56 14.8**	**+1.2**
ISP	**Isparta**	**4.18**	**277**	*e*Pn	**Pn**	**23 56 13.4**	**-0.2**
ESKT	**Eskisehir**	**4.35**	**299**	*e*PN	**Pn**	**23 56 16.8**	**+0.7**
SAFT	**Safranbolu**	**4.44**	**329**	*e*PN	**Pn**	**23 56 18.4**	**+1.1**
MMAI	**Mount Meron Ar**	**4.47**	**184**	Pn	**Pn**	**23 56 18.7**	**+1.1**
	13nm,0.3s,baz=357,slow=14,SNR=53						
MMAI				Sn	**Sn**	**23 57 07.0**	**-2.8**
	6.6nm,0.3s,baz=3.4,slow=12,SNR=3.0						
ASF	**Jabal al Asfar**	**5.38**	**170**	Pn	**Pn**	**23 56 33.9**	**+3.7**
	0.4nm,0.3s,baz=17,slow=2.4,SNR=6.9						
ASF				Lg		23 57 55.3	
	0.8nm,0.3s,baz=229,slow=19,SNR=3.0						
ASF				LR	LR	23 58 54.5	
	comp=Z,322nm,18.6s,baz=352,slow=42						
EIL	**Elat**	**7.82**	**185**	Pn	**Pn**	**23 57 05.6**	**+1.9**
	0.3nm,0.3s,baz=51,slow=13,SNR=3.6						
EIL				LR	LR	23 59 45.1	
	comp=Z,67nm,21.2s,baz=84,slow=35						
BHD	**Baghdad**	**8.20**	**118**	*e*P	**Pn**	**23 56 59.0**	**-10**
BHD				*e*S	**Sn**	**23 58 27.5**	**-14**
IDI	**Anoyia**	**9.03**	**259**	Pn	**Pn**	**23 57 21.2**	**+0.9**
	1.7nm,0.3s,baz=81,slow=9.6,SNR=21						
MLR	**Muntele Rosu**	**10.86**	**320**	Pn	**Pn**	**23 57 47.3**	**+2.0**
	0.0nm,0.3s,baz=133,slow=19,SNR=1.9						
MLR				LR	LR	00 01 56.7	
	comp=Z,104nm,19.7s,baz=251,slow=38						
BUR08	**Bucovina Ar. S**	**12.78**	**326**	*e*Pn	**Pn**	**23 58 12.6**	**+1.1**
BUR08	**Bucovina Ar. S**	**12.78**	**326**	*e*Pn	**Pn**	**23 58 12.6**	**+1.0**
AKASG	**Malin Array Be**	**14.02**	**343**	Pn	**Pn**	**23 58 29.4**	**+1.0**
	0.4nm,0.3s,baz=156,slow=10,SNR=3.9						
VRAC	**Vranov**	**18.21**	**317**	P	**Pn**	**23 59 24.1**	**+1.5**
	0.1nm,0.3s,baz=128,slow=9.0,SNR=4.9						
VRAC				LR	LR	00 07 34.9	
	comp=Z,86nm,20.8s,baz=18,slow=41						
GERES	**GERESS Array B**	**19.62**	**312**	P	**Pn**	**23 59 38.2**	**-1.4**
	0.1nm,0.3s,baz=98,slow=11,SNR=3.5						
GERES				LR	LR	00 07 07.4	
	comp=Z,108nm,18.7s,baz=277,slow=37						
AKTK	**Aktyubinsk**	**20.50**	**44**	P	**P**	**23 59 46.8**	**-1.1**
AKTO	**Aktyubinsk**	**20.50**	**44**	P	**P**	**23 59 46.8**	**-1.1**
	2.1nm,0.8s,baz=257,slow=11,SNR=4.9						
DAVOX	**Davos/Dischmat**	**21.24**	**304**	P	**P**	**23 59 56.1**	**+0.1**
	1.3nm,0.7s,mb3.4,baz=132,slow=16,SNR=3.0						
MBDF	**Montbardon**	**22.93**	**298**	*e*P	**P**	**00 00 12.2**	**-1.8**
	20nm,1.1s,mb4.2						
LPG	**La Plagne**	**23.07**	**299**	*e*P	**P**	**00 00 14.6**	**-0.8**
LPL	**La Plagne**	**23.08**	**300**	*e*P	**P**	**00 00 14.9**	**-0.7**
CDF	**Champ du Feu**	**23.40**	**307**	*e*P	**P**	**00 00 14.7**	**-4.3**
HAU	**Haudompre**	**23.89**	**305**	*e*P	**P**	**00 00 20.5**	**-3.1**
MEZF	**Maizieres J'vi**	**24.85**	**306**	*e*P	**P**	**00 00 29.9**	**-2.5**
	30nm,1.2s,mb4.4						
SMF	**Signal de Mont**	**25.26**	**301**	*e*P	**P**	**00 00 34.0**	**-2.1**
	26nm,1.2s,mb4.3						
LOR	**Lormes**	**25.36**	**303**	*e*P	**P**	**00 00 33.9**	**-3.1**
	7.7nm,0.8s,mb4.0						
AVF	**Avril sur Loir**	**25.61**	**302**	*e*P	**P**	**00 00 38.2**	**-1.1**
	12nm,1.0s,mb4.1						
MKAR	**Makanchi Array**	**35.29**	**60**	P	**P**	**00 02 05.0**	**+0.2**
	0.7nm,0.8s,mb3.6,baz=287,slow=6.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**38.84**	**240**	P	**P**	**00 02 34.2**	**-1.1**
	1.0nm,1.0s,mb3.5,baz=21,slow=11,SNR=10						
TORD	**Torodi Ar. Bea**	**38.84**	**240**	P	**P**	**00 02 34.2**	**-1.1**
SONM	**Songino Array**	**51.28**	**55**	P	**P**	**00 04 13.9**	**0.0**
	0.4nm,0.7s,mb3.5,baz=300,slow=6.2,SNR=4.0						

*ISCJB **24** 00:06:45.5±1.5,187S±02×1784W±0.2,h534km±22km, mb3.4/6,Error ellipse: s-maj=38.2km s-min=16.4km az=146.5*
*IDC **24** 00:06:46.7±2.1,1865S×17830W,h541km±26km,mb3.3/5, mb1 3.6/7,mb1mx3.3/18,mbtmp3.3/7,Error ellipse: s-maj=32.6km s-min=15.3km az=148.0*
*NEIC **24** 00:06:46.9±1.1,1865S×17834W,h544km±14km,mb3.5/2, Error ellipse: s-maj=27.9km s-min=11.9km az=146.0*
ISC 24 00:06:46.6±1.4,187S±02×1783W±02,h535km±20km,n14, σ0°74/12,mb3.4/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.88**	**54**	P	**P**	**00 08 42.5**	**-0.3**
	2.7nm,0.3s,baz=6.0,slow=1.6,SNR=5.7						
AFI	**Afiamalu**	**7.88**	**54**	*e*Pn	**P**	**00 08 43.1**	**+0.4**
URZ	**Urewera**	**19.92**	**191**	P	**P**	**00 10 42.2**	**-0.4**
	1.3nm,0.3s,baz=110,slow=17,SNR=6.3						
STKA	**Stephens Creek**	**38.33**	**242**	P	**P**	**00 13 24.8**	**+3.0**
	2.5nm,0.5s,mb4.0,baz=96,slow=9.1,SNR=10						
STKA	**Stephens Creek**	**38.33**	**242**	*e*P	**P**	**00 13 25.2**	**+3.4**
	0.3nm,0.4s,mb3.2						
WRAB	**Tennant Creek**	**44.56**	**260**	*e*P	**P**	**00 14 10.6**	**-0.6**
	1.7nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**44.57**	**260**	P	**P**	**00 14 10.7**	**-0.6**
	1.5nm,0.5s,mb3.8,baz=95,slow=6.8,SNR=20						
ASAR	**Alice Springs**	**44.66**	**255**	P	**P**	**00 14 12.7**	**+0.7**
	14nm,0.6s,baz=88,slow=8.3,SNR=287						
MBWA	**Marble Bar**	**57.96**	**256**	*e*P	**P**	**00 15 48.0**	**-0.3**
NVAR	**Mina Array Bea**	**79.92**	**44**	P	**P**	**00 17 59.8**	**-0.2**
	0.1nm,0.3s,mb2.6,baz=230,slow=9.3,SNR=5.0						
TXAR	**Lajitas Array**	**86.34**	**58**	P	**P**	**00 18 32.9**	**+0.6**
	0.4nm,0.7s,mb3.2,baz=219,slow=6.4,SNR=6.4						
PDAR	**Pinedale Array**	**87.85**	**43**	P	**P**	**00 18 38.9**	**-0.3**
	0.4nm,0.5s,mb3.4,baz=230,slow=2.8,SNR=4.4						
GERES	**GERESS Array B**	**149.36**	**345**	PKPbc	PKPbc	00 25 31.4	-1.3
	0.4nm,0.5s,baz=21,slow=1.9,SNR=7.1						
DAVOX	**Davos/Dischmat**	**151.16**	**348**	PKPbc	PKPbc	00 25 38.0	-1.4
	0.7nm,0.5s,baz=312,slow=14,SNR=4.4						

*ISCJB **24** 00:08:17.5±1.4,3936N±006×3316E±007,h1km±13km, Error ellipse: s-maj=12.0km s-min=6.0km az=136.1*
*DDA **24** 00:08:17.9,3937N×3314E,h7km±1km,Md2.1*
*ISK **24** 00:08:17.6,3934N×3318E,h8km,MD2.8*
ISC 24 00:08:18.2±0.7,3936N±005×3316E±006,h9km±9km,n8, σ0°31/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.43**	**89**	*e*PG	**Pg**	**00 08 26.2**	**-0.3**
KAMT				*e*SG	**Sg**	**00 08 32.4**	**+0.2**
KIZT	**Kizilcal**	**1.11**	**245**	*e*PN	**Pg**	**00 08 39.2**	**-0.3**
ELDT	**Eldivan**	**1.14**	**10**	*e*P	**Pg**	**00 08 39.9**	**-0.3**
ELDT				*i* S	**Sg**	**00 08 55.3**	**+0.3**
KDHN	**Kadinhani**	**1.17**	**224**	*e*P	**Pb**	**00 08 40.1**	**-0.5**
KDHN				*i* S	**Sg**	**00 08 56.4**	**+0.5**
LADK	**Ladik-KONYA**	**1.32**	**208**	*e*PN	**Pn**	**00 08 42.7**	**0.0**
CORM	**Corum**	**1.39**	**54**	*e*PN	**Pn**	**00 08 44.1**	**+0.3**
KONT	**Konya--Tatoy**	**1.55**	**204**	*e*PN	**Pn**	**00 08 46.1**	**+0.2**
YOZ	**Yozgat**	**1.69**	**80**	*e*PN	**Pn**	**00 08 47.7**	**-0.1**

*CSEM **24** 00:11:25.0±0.1,3750N×3569E,h2km,MD3.1,Error ellipse: s-maj=2.0km s-min=1.6km az=16.0*
*DDA **24** 00:11:25.5,3755N×3573E,h5km±3km,Md3.1*
*ISK **24** 00:11:25.6,3749N×3570E,h5km,MD3.1*
*ISCJB **24** 00:11:26.2±0.4,3748N±003×3568E±003,h10km,Error ellipse: s-maj=4.0km s-min=3.7km az=14.5*
ISC 24 00:11:26.0±0.5,3750N±003×3568E±003,h1km±5km,n22, σ0°84/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.12**	**99**	PG	**Pg**	**00 11 28.0**	**-0.4**
KOZT				*e*SG	**Sg**	**00 11 30.1**	**+0.2**
CEYT	**Ceyhan**	**0.49**	**173**	*e*PG	**Pg**	**00 11 35.7**	**+0.3**
ANDN	**Andirin**	**0.54**	**81**	*i* P	**Pg**	**00 11 35.9**	**-0.4**
ANDN				*i* S	**Sg**	**00 11 36.1**	**-7.2**
KARA	**Karaisali**	**0.55**	**244**	*e*PG	**Pg**	**00 11 36.7**	**+0.1**
KARA				*e*SG	**Sg**	**00 11 45.2**	**+1.5**
KRTS	**Karatas**	**0.96**	**195**	*e*PG	**Pg**	**00 11 44.4**	**0.0**
KMRS	**Kahramanmaras**	**0.97**	**89**	*e*PG	**Pg**	**00 11 44.4**	**-0.3**
NIG	**Nigde**	**1.04**	**306**	*e*PG	**Pg**	**00 11 46.2**	**+0.2**
COBT	**Iskenderun**	**1.08**	**155**	*i* P	**Pg**	**00 11 47.0**	**+0.3**
COBT				*i* S	**Sg**	**00 12 01.1**	**+0.3**
COBT	**Iskenderun**	**1.08**	**155**	*i* P	**Pg**	**00 11 47.0**	**+0.2**
COBT				*i* S	**Sg**	**00 12 01.1**	**+0.3**
MERS	**Mersin**	**1.12**	**236**	*e*PN	**Pn**	**00 11 47.4**	**-1.4**
PINB	**Pinarbasi**	**1.31**	**26**	*i* P	**Pg**	**00 11 49.6**	**-1.5**
PINB				*i* S	**Sg**	**00 12 10.0**	**+2.0**
KUZU	**Kuzuini**	**1.33**	**123**	*i* P	**Pg**	**00 11 50.2**	**-1.3**
KUZU				*i* S	**Sg**	**00 12 08.7**	**-0.1**
BNN	**Bunyan**	**1.36**	**6**	*e*PN	**Pn**	**00 11 51.4**	**-0.6**
HTY	**Hatay**	**1.43**	**165**	*e*PN	**Pn**	**00 11 52.5**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.43**	**34**	*e*PN	**Pn**	**00 11 47.1**	**-5.9**
AVNT	**Avonos**	**1.43**	**333**	*i* P	**Pn**	**00 11 52.0**	**-1.1**
AVNT				*i* S	**Sg**	**00 12 11.7**	**-0.4**
GZT	**Gaziantep**	**1.51**	**95**	*i* P	**Pn**	**00 11 53.2**	**-0.9**
GZT				*i* S	**Sb**	**00 12 16.5**	**+2.1**
AKCD	**Akcadag**	**1.94**	**65**	*i* P	**Pn**	**00 11 59.9**	**-0.2**
AKCD				*i* S	**Sn**	**00 12 25.8**	**+0.6**
IKL	**Isikli**	**2.03**	**232**	*e*PN	**Pn**	**00 12 01.7**	**+0.3**
MALT	**Malatya**	**2.32**	**69**	*e*PN	**Pn**	**00 12 05.7**	**+0.4**
CDAG	**Cicekdag**	**2.35**	**335**	*i* P	**Pn**	**00 12 06.1**	**+0.3**
CDAG				*i* S	**Sn**	**00 12 40.7**	**+5.4**
KAMT	**Kaman**	**2.42**	**321**	*e*PN	**Pn**	**00 12 07.5**	**+0.9**

*CSEM **24** 00:14:27.2,3669N×3619E,h7km,MD2.7,After ERD*
DDA 24 00:14:27.2,3669N×3619E,h7km±6km,Md2.7,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COBT	**Iskenderun**	**0.17**	**163**	*i* P	Pg	00 14 31.1	+0.3
COBT				*i* S	Sg	00 14 35.1	+2.0
KUZU	**Kuzuini**	**0.71**	**83**	*i* P	Pg	00 14 41.4	+0.4
KUZU				*i* S	Sg	00 14 50.4	+0.2
ANDN	**Andirin**	**0.90**	**8**	*i* P	Pg	00 14 45.3	+0.8
ANDN				*i* S	Sg	00 14 54.5	-1.8
GZT	**Gaziantep**	**1.28**	**58**	*i* P	Pn	00 14 52.6	+1.0
GZT				*i* S	Sb	00 15 10.8	+2.4

IDC 24 00:37:47.5±2.7,5290N×17863W,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.4/25,mbtmp3.6/4,ML2.5/1,Error ellipse: s-maj=121.0km s-min=19.4km az=176.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**4.97**	**273**	Pn	Pn	00 39 02.2	-1.1
	0.7nm,0.3s,baz=66,slow=20,SNR=3.8						
FX1				Sn	Sn	00 40 05.1	+3.7
	0.8nm,0.3s,baz=241,slow=19,SNR=2.7						
PDAR	**Pinedale Array**	**45.76**	**74**	P	P	00 46 10.5	+0.2
	0.7nm,0.5s,baz=330,slow=3.3,SNR=11						
SONM	**Songino Array**	**46.08**	**295**	P	P	00 46 12.3	-0.5
	0.2nm,0.3s,baz=44,slow=6.4,SNR=2.7						
BRTR	**Keskin Array B**	**83.61**	**336**	P	P	00 50 18.1	+0.7
	0.4nm,0.7s,baz=38,slow=4.7,SNR=3.8						

*IDC **24** 00:40:11.9±0.9,1075N×12509E,h0km,mb3.9/10, mb1 4.0/10,mb1mx3.9/21,mbtmp3.9/10,MS3.8/3, Ms1 3.8/3,ms1mx3.1/32,Error ellipse: s-maj=45.5km s-min=18.1km az=68.0*
*MAN **24** 00:40:12,1066N×12491E,h1km,mb4.7,ML3.6,MS3.6*
MAN INTENSITY III - ABUYOG, DULAG, LEYTE; INTENSITY II - PALO, TANAUAN, LEYTE.
*ISCJB **24** 00:40:14.4±0.6,1070N±003×12494E±005,h28km±4km, mb3.9/10,MS3.9/3,Error ellipse: s-maj=8.3km s-min=4.7km az=180.0*
*NEIC **24** 00:40:16.9±0.5,1079N×12513E,h35km,mb4.2/1,Error ellipse: s-maj=28.8km s-min=8.3km az=69.0*
*NEIC Felt [III

YOZ	**Yozgat**	**1.73**	**81**	*e*PN	**Pn**	**00 54 30.1**	**+0.4**
NIG	**Nigde**	**1.74**	**137**	*e*PN	**Pn**	**00 54 30.2**	**+0.3**
ESKT	**Eskisehir**	**1.75**	**275**	*e*P	**Pn**	**00 54 29.7**	**-0.3**
ESKT				*i* S	**Sn**	**00 54 54.6**	**+1.6**
SEYT	**Eskypehyr**	**1.75**	**275**	*e*P	**Pn**	**00 54 29.7**	**-0.3**
SEYT				*i* S	**Sn**	**00 54 54.6**	**+1.6**
TOS	**Tosya**	**1.78**	**23**	*e*PN	**Pn**	**00 54 29.9**	**-0.5**
MDU	**Mudurnu**	**1.80**	**307**	*e*PN	**Pn**	**00 54 30.7**	**-0.1**
SAFT	**Safranbolu**	**1.87**	**350**	*e*PN	**Pn**	**00 54 31.4**	**-0.3**
BNN	**Bunyan**	**2.20**	**104**	*e*PN	**Pn**	**00 54 36.8**	**+0.6**
GULT	**Gulveren**	**2.25**	**298**	*e*PN	**Pn**	**00 54 36.7**	**-0.1**
ALT	**Altintas**	**2.35**	**263**	*e*PN	**Pn**	**00 54 38.2**	**-0.1**
KARA	**Karaisali**	**2.63**	**144**	*e*PN	**Pn**	**00 54 42.7**	**+0.6**
KOZT	**Kozan**	**2.87**	**131**	*e*PN	**Pn**	**00 54 45.9**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.89**	**103**	*e*PN	**Pn**	**00 54 44.6**	**-1.1**
SVSK	**Karacayir**	**3.05**	**79**	*e*PN	**Pn**	**00 54 48.5**	**+0.7**

*ISCJB **24** 01:02:10.4±0.6, 4561N±005×14737E±008, h189km±5km, mb3.9/24, Error ellipse: s-maj=9.1km s-min=8.2km az=178.3*
*MOS **24** 01:02:11.1±1.1, 4571N×14727E, h197km, mb4.5/12, Error ellipse: s-maj=13.3km s-min=9.7km az=81.9*
*NEIC **24** 01:02:12.2±1.0, 4572N×14734E, h192km±9km, mb4.0/1, Error ellipse: s-maj=13.4km s-min=9.4km az=139.0*
*IDC **24** 01:02:12.8±1.8, 4573N×147.16E, h195km±17km, mb3.4/17, mb1 3.6/21, mb1mx3.6/27, mbtmp3.4/21, Error ellipse: s-maj=14.4km s-min=11.3km az=148.0*

ISC 24 01:02:11.2±0.6, 4564N±005×14737E±008, h182km±5km, n78, σ1°18/76, mb3.9/24, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.93**	**214**	*e*P	**Pn**	**01 02 47.6**	**-0.1**
YUK				*e*S	**Sn**	**01 03 16.5**	**+0.7**
YUK				pmax	pmax		
	comp=Z,380nm,0.3s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,1μm,0.5s						
YUK				smax			
	comp=E,470nm,0.5s						
JRA	**Rausu**	**2.34**	**224**	P	**Pn**	**01 02 52.2**	**+0.1**
NEM2	**Nemuro 2**	**2.56**	**208**	P	**Pn**	**01 02 52.7**	**-2.0**
NEM2				*e*S	**Sn**	**01 03 22.9**	**-5.4**
JNK	**Nakash**	**2.80**	**224**	P	**Pn**	**01 02 57.6**	**+0.1**
JTKR	**Abashiri--Toko**	**2.98**	**237**	P	**Pn**	**01 03 00.3**	**+0.7**
JAK	**Akkeshi**	**3.27**	**217**	P	**Pn**	**01 03 02.3**	**-0.9**
JAK				*e*S	**Sn**	**01 03 39.9**	**-3.7**
YSS	**Yuzh-Sakhalins**	**3.46**	**294**	⇑*e*PN	**Pn**	**01 03 06.5**	**+1.0**
YSS				*e*S	**Sn**	**01 03 48.7**	**+0.8**
YSS				pmax	pmax		
	comp=E,40nm,0.6s						
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS	**Yuzh-Sakhalins**	**3.46**	**294**	*e*Pn	**Pn**	**01 03 07.6**	**+2.1**
JAR	**Ashorobuto**	**3.49**	**229**	P	**Pn**	**01 03 07.0**	**+1.1**
ASAJ	**Asahikawa**	**3.72**	**248**	P	**Pn**	**01 03 10.8**	**+1.9**
	comp=Z,2.1nm,0.3s,baz=73,slow=14,SNR=5.6						
ASAJ	**Asahikawa**	**3.72**	**248**	PN	**Pn**	**01 03 10.8**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JWK2	**Keihoku**	**3.87**	**267**	P	**Pn**	**01 03 13.9**	**+3.3**
JCH	**Churui**	**4.18**	**225**	P	**Pn**	**01 03 14.2**	**-0.5**
JCH				*e*S	**Sn**	**01 04 00.4**	**-3.9**
JNBK	**Urakawa-nobuka**	**4.73**	**226**	P	**Pn**	**01 03 20.3**	**-1.4**
ERM	**Erimo**	**4.74**	**222**	*e*PN	**Pn**	**01 03 22.0**	**+0.2**
JKB	**Kayabe**	**5.93**	**233**	P	**Pn**	**01 03 35.9**	**-1.3**
JOT	**Ohata**	**6.27**	**229**	P	**Pn**	**01 03 39.5**	**-2.2**
JOSM	**Okushiri--Mats**	**6.73**	**241**	P	**Pn**	**01 03 47.7**	**0.0**
JMK	**Ichinoseki**	**8.09**	**216**	*e*S	**Sn**	**01 05 27.3**	**-9.0**
HABR	**Khabarovsk**	**8.88**	**293**	*e*PN	**Pn**	**01 04 14.9**	**-0.9**
HABR				*e*S	**Sn**	**01 05 54.5**	**-0.4**
PETK	**Petropavlovsk-**	**10.05**	**38**	P	**Pn**	**01 04 31.7**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=206,slow=7.9,SNR=6.7						
PETK	**Petropavlovsk-**	**10.05**	**38**	P	**Pn**	**01 04 31.7**	**+0.5**
MJAR	**Matsushiro Arr**	**11.41**	**220**	P	**Pn**	**01 04 49.8**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=15,slow=21,SNR=6.2						
MJAR	**Matsushiro Arr**	**11.41**	**220**	PN	**Pn**	**01 04 49.8**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**16.67**	**247**	P	**Pn**	**01 05 53.5**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=54,slow=12,SNR=5.8						
KSRS	**Korea Array**	**16.67**	**247**	*e*P	**Pn**	**01 05 56.2**	**+1.8**
YAK	**Yakutsk**	**19.34**	**334**	*e*P	**P**	**01 06 21.1**	**-1.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
BILL	**Bilibino**	**24.50**	**17**	⇑*e*P	**P**	**01 07 14.3**	**+1.0**
BILL				*e*S	**S**	**01 11 18.7**	**-1.2**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
SONM	**Songino Array**	**27.94**	**289**	P	**P**	**01 07 45.0**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.2,baz=79,slow=7.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**40.01**	**305**	PcP	PcP	01 11 29.0	-0.1
	comp=Z,0.5nm,0.4s,baz=93,slow=2.9,SNR=5.3						
MKAR	**Makanchi Array**	**43.88**	**296**	P	**P**	**01 09 58.9**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.4,baz=75,slow=7.8,SNR=5.4						
MKAR				PcP	PcP	01 11 42.6	+0.6
	comp=Z,0.6nm,0.6s,baz=98,slow=3.3,SNR=5.4						
KURK	**Kurchatov**	**44.63**	**302**	P	**P**	**01 10 04.8**	**-0.4**
	comp=Z,1.2nm,0.4s,mb3.9,baz=72,slow=8.2,SNR=12						
KURK	**Kurchatov**	**44.63**	**302**	P	**P**	**01 10 04.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
CMAR	**Chiang Mai Arr**	**48.23**	**252**	P	**P**	**01 10 32.6**	**-1.1**
	comp=Z,0.7nm,0.3s,mb3.7,baz=43,slow=7.6,SNR=3.7						
CMAR	**Chiang Mai Arr**	**48.23**	**252**	P	**P**	**01 10 32.6**	**-1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**48.45**	**308**	P	**P**	**01 10 33.4**	**-1.4**
	comp=Z,0.5nm,0.6s,mb3.3,baz=86,slow=5.9,SNR=4.1						
BVAR				PcP	PcP	01 11 58.9	+0.8
	comp=Z,0.6nm,0.5s,baz=14,slow=1.8,SNR=4.8						
BVAR	**Borovoye Array**	**48.45**	**308**	P	**P**	**01 10 33.4**	**-1.4**
BVAR						01 11 58.9	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TAPN	**Taplejung**	**50.15**	**270**	*e*P	**P**	**01 10 50.0**	**+1.9**
	comp=Z,5.1nm,0.4s,mb4.5						
JIRN	**Jiri**	**51.02**	**271**	*e*P	**P**	**01 10 56.2**	**+1.6**
GUN	**Gumba**	**51.09**	**272**	*e*P	**P**	**01 10 56.1**	**+1.0**
	comp=Z,10nm,0.4s,mb4.8						
RAMN	**Ramite**	**51.17**	**270**	*e*P	**P**	**01 10 56.9**	**+1.2**
	comp=Z,21nm,0.6s,mb4.9						
GKN	**Gorkha**	**51.90**	**273**	*e*P	**P**	**01 11 02.3**	**+1.1**
	comp=Z,8.4nm,0.4s,mb4.7						
DANN	**Dangsing**	**52.31**	**274**	*e*P	**P**	**01 11 05.7**	**+1.6**
	comp=Z,12nm,0.4s,mb4.9						
KOLN	**Koldanda**	**52.77**	**273**	*e*P	**P**	**01 11 08.8**	**+1.3**
YKA	**Yellowknife Ar**	**54.15**	**35**	P	**P**	**01 11 17.1**	**+0.1**
	comp=Z,0.8nm,0.5s,mb3.7,baz=302,slow=7.1,SNR=29						
YKA				PcP	PcP	01 12 19.5	+0.4
	comp=Z,0.3nm,0.5s,baz=306,slow=3.5,SNR=5.4						
ARCES	**ARCESS Array B**	**57.53**	**339**	P	**P**	**01 11 39.1**	**-1.9**
	comp=Z,3.0nm,0.8s,mb4.2,baz=27,slow=11,SNR=5.5						
ARCES	**ARCESS Array B**	**57.53**	**339**	P	**P**	**01 11 39.1**	**-1.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JOF	**Joensuu**	**60.49**	**332**	*e*p	**P**	**01 11 59.2**	**-2.2**
KAF	**Kangasniemi**	**62.70**	**333**	*e*p	**P**	**01 12 12.7**	**-3.4**
	baz=40,slow=6.4						
WRA	**Warramunga Arr**	**66.33**	**193**	P	**P**	**01 12 39.6**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=12,slow=6.8,SNR=7.7						
WRA	**Warramunga Arr**	**66.33**	**193**	*e*P	**P**	**01 12 40.3**	**+0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**66.45**	**59**	P	**P**	**01 12 42.3**	**+1.5**
	comp=Z,1.3nm,0.6s,mb3.9,baz=300,slow=7.3,SNR=12						
NB2	**NORSAR Subarra**	**67.90**	**339**	P	**P**	**01 12 48.2**	**-1.3**
	comp=Z,5.1nm,0.9s,mb4.2,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**67.90**	**339**	P	**P**	**01 12 48.2**	**-1.3**
	comp=Z,1.4nm,0.6s,mb3.9,baz=31,slow=6.3,SNR=10						
NOA	**NORSAR Array B**	**67.90**	**339**	P	**P**	**01 12 48.2**	**-1.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**67.90**	**339**	P	**P**	**01 12 48.2**	**-1.3**
PDAR	**Pinedale Array**	**68.57**	**50**	P	**P**	**01 12 55.0**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.0,baz=283,slow=1.3,SNR=17						
ASAR	**Alice Springs**	**70.05**	**193**	P	**P**	**01 13 03.5**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.5,baz=7.7,slow=6.0,SNR=9.3						
ASAR	**Alice Springs**	**70.05**	**193**	P	**P**	**01 13 03.6**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**70.16**	**323**	P	**P**	**01 13 01.1**	**-2.5**
	comp=Z,1.6nm,0.5s,mb4.0,baz=35,slow=5.3,SNR=5.0						
AKASG	**Malin Array Be**	**70.16**	**323**	*e*P	**P**	**01 13 02.1**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CLL	**Collm**	**75.71**	**332**	*i* P	**P**	**01 13 35.5**	**-0.7**
CLL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
CLL	**Collm**	**75.71**	**332**	*i* P	**P**	**01 13 35.5**	**-0.7**
	comp=Z,3.0nm,1.0s,mb3.9						
BRTR	**Keskin Array B**	**76.36**	**313**	P	**P**	**01 13 39.4**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.3,baz=121,slow=1.8,SNR=4.2						
BRTR	**Keskin Array B**	**76.36**	**313**	*e*P	**P**	**01 13 41.0**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KHC	**Kasperske Hory**	**77.39**	**331**	*e*P	**P**	**01 13 45.7**	**0.0**
GERES	**GERESS Array B**	**77.59**	**331**	P	**P**	**01 13 46.0**	**-0.8**
	comp=Z,0.4nm,0.7s,mb3.2,baz=28,slow=6.0,SNR=5.5						
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**	**01 14 09.0**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.7,baz=294,slow=3.8,SNR=16						
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**	**01 14 09.0**	**+0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ESDC	**Sonseca Array**	**91.26**	**338**	P	**P**	**01 14 55.6**	**-0.1**
	comp=Z,0.1nm,0.4s,mb3.2,baz=43,slow=3.7,SNR=2.6						
DBIC	**Dimbokro**	**122.30**	**327**	PKP	PKPdf	01 20 43.3	-1.5
	comp=Z,0.7nm,0.4s,baz=333,slow=2.3,SNR=3.8						
DBIC	**Dimbokro**	**122.30**	**327**	PKIKP	PKPdf	01 20 43.3	-1.6
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BDFB	**Brasilia**	**147.42**	**28**	PKPbc	PKPbc	01 21 34.1	+0.4
	comp=Z,0.4nm,0.5s,baz=355,slow=19,SNR=3.5						
SNAA	**Sanae**	**150.30**	**198**	*e*PKPdf	PKPdf	01 21 36.6	+2.7
VNA2	**Neumayer--Watz**	**151.84**	**197**	*e*PKPdf	PKPbc	01 21 43.4	+0.5
	baz=109,slow=0.9						
VNA3	**Neumayer Olymp**	**152.04**	**196**	*e*PKPdf	PKPbc	01 21 42.4	-0.9
PLCA	**Paso Flores**	**152.10**	**94**	PKPbc	PKPbc	01 21 45.2	+0.8
	comp=Z,1.4nm,0.6s,baz=230,slow=9.2,SNR=3.4						
PLCA	**Paso Flores**	**152.10**	**94**	PKIKP	PKPbc	01 21 45.2	+0.8
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*ISCJB **24** 01:35:51.9±0.4, 5899S±006×256W±02, h10km, mb4.5/17, MS3.4/7, Error ellipse: s-maj=12.0km s-min=7.9km az=157.4*
*NEIC **24** 01:35:59.8±2.6, 5904S×2565W, h62km±23km, mb4.4/7, Error ellipse: s-maj=13.7km s-min=10.8km az=216.0*
*IDC **24** 01:36:02.8±6.6, 5897S×2589W, h85km±58km, mb4.0/10, mb1 4.1/10, mb1mx4.0/17, mbtmp4.0/10, MS3.5/8, Ms1 3.5/8, ms1mx3.3/23, Error ellipse: s-maj=25.7km s-min=15.2km az=76.0*

ISC 24 01:35:53.8±6.6, 5901S±009×256W±02, h10km±43km, n44, σ0°72/31, mb4.4/17, MS3.4/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.74**	**155**	*e*P	**Pn**	**01 39 08.6**	**+0.2**
VNA1				*e*S	**Sn**	**01 41 31.0**	**-10**
VNA3	**Neumayer Olymp**	**13.92**	**158**	*e*P	**Pn**	**01 39 10.2**	**-0.6**
VNA3				*e*S	**Sn**	**01 41 30.0**	**-15**
VNA2	**Neumayer--Watz**	**14.14**	**155**	*e*P	**Pn**	**01 39 13.4**	**-0.4**
	baz=326,slow=14						
VNA2				*e*S	**Sn**	**01 41 37.1**	**-13**
SNAA	**Sanae**	**15.70**	**153**	*e*P	**Pn**	**01 39 34.3**	**-0.4**
SNAA				*e*S	Sn	01 42 13.6	-15
SNAA	**Sanae**	**15.70**	**153**	*e*Pn	**Pn**	**01 39 34.7**	**0.0**
	23nm,0.5s						
SNAA				*e*Sn	**Sn**	**01 42 15.6**	**-13**
PMSA	**Palmer Station**	**18.75**	**236**	LR	LR	01 45 45.0	
	comp=Z,147nm,19.4s,baz=211,slow=31						
USHA	**Ushuaia**	**23.42**	**262**	P	**P**	**01 41 03.4**	**+0.7**
	6.5nm,0.7s,mb4.2,baz=113,slow=14,SNR=4.1						
USHA				LR	LR	01 47 36.3	
	comp=Z,176nm,18.2s,MS3.6,baz=79,slow=30						
QSPA	**South Pole Qui**	**31.23**	**180**	P	**P**	**01 42 14.1**	**+1.3**
	7.8nm,0.5s,mb4.8,baz=210,slow=2.4,SNR=86						
TRQA	**Tornquist**	**31.31**	**296**	*e*P	**P**	**01 42 14.9**	**+1.0**
PLCA	**Paso Flores**	**33.41**	**283**	P	**P**	**01 42 31.6**	**-0.7**
	2.2nm,0.8s,mb4.2,baz=161,slow=12,SNR=4.0						
PLCA				LR	LR	01 54 39.8	
	comp=Z,74nm,18.4s,MS3.4,baz=301,slow=34						
PLCA	**Paso Flores**	**33.41**	**283**	*e*P	**P**	**01 42 32.3**	**0.0**
	1.1nm,0.5s,mb4.0						
PLCA				LR	LR	01 54 39.8	
MAW	**Mawson**	**37.29**	**141**	LR	LR	01 56 44.4	
	comp=Z,92nm,18.7s,MS3.6,baz=73,slow=33						
CPUP	**Villa Florida**	**39.41**	**312**	P	**P**	**01 43 22.6**	**-0.9**
	0.9nm,0.7s,mb3.6,baz=127,slow=4.3,SNR=3.6						
CPUP				LR	LR	01 56 49.9	
	comp=Z,50nm,18.2s,MS3.4,baz=48,slow=32						
CFAA	**Conel Fontan**	**39.53**	**295**	P	**P**	**01 43 24.1**	**-0.5**
	1.1nm,0.7s,mb3.7,baz=152,slow=7.2,SNR=13						
CFAA				LR	LR	01 57 55.2	
	comp=Z,12nm,20.4s,MS2.7,baz=180,slow=33						
VNDA	**Vanda**	**43.65**	**182**	P	**P**	**01 43 58.9**	**+1.1**
	4.8nm,0.6s,mb4.4,baz=183,slow=6.5,SNR=28						
VNDA				LR	LR	02 00 29.8	
	comp=Z,118nm,19.0s,MS3.8,baz=344,slow=34						
VNDA	**Vanda**	**43.65**	**182**	*e*P	**P**	**01 43 59.0**	**+1.3**
	4.4nm,0.5s,mb4.4						
VNDA				LR	LR	02 00 29.8	
BDFB	**Brasilia**	**46.35**	**330**	P	**P**	**01 44 19.3**	**-0.5**
	0.6nm,0.4s,mb3.8,baz=177,slow=17,SNR=5.3						
BDFB				LR	LR	02 00 55.1	
	comp=Z,37nm,19.9s,MS3.3,baz=259,slow=32						
LBTB	**Lobatse**	**49.17**	**69**	*e*P	**P**	**01 44 41.9**	**+0.2**
	0.6nm,0.6s,mb3.8						
TSUM	**Tsumeb**	**50.50**	**57**	*e*P	**P**	**01 44 52.7**	**+0.8**
	3.0nm,0.7s,mb4.3						
LSZ	**Lusaka**	**58.75**	**66**	*e*P	**P**	**01 45 51.9**	**+0.1**
	1.9nm,0.6s,mb4.3						
LIC	**Lamto**	**67.09**	**22**	*e*P	**P**	**01 46 47.2**	**0.0**
	16nm,0.6s,mb5.2						
KIC	**Kosan Boka**	**67.28**	**23**	*e*P	**P**	**01 46 48.4**	**0.0**
	48nm,1.2s,mb5.4						
TIC	**Toumodi**	**67.50**	**22**	*e*P	**P**	**01 46 49.7**	**-0.1**
	5.0nm,0.2s,mb5.2						
DBIC	**Dimbokro**	**67.56**	**22**	P	**P**	**01 46 49.6**	**-0.6**
	3.2nm,0.6s,mb4.5,baz=185,slow=6.9,SNR=14						
DBIC	**Dimbokro**	**67.56**	**22**	*e*P	**P**	**01 46 50.2**	**+0.1**
	2.4nm,0.6s,mb4.4						
TOA0	**Torodi Ar. Sit**	**75.26**	**28**	*e*P	**P**	**01 47 37.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**75.26**	**28**	P	**P**	**01 47 37.0**	**+0.4**
	8.9nm,0.6s,mb4.9,baz=198,slow=6.3,SNR=132						
STKA	**Stephens Creek**	**88.83**	**169**	P	**P**	**01 48 47.1**	**-0.7**
	2.0nm,0.6s,mb4.6,baz=163,slow=3.0,SNR=5.1						
ASAR	**Alice Springs**	**95.91**	**161**	P	**P**	**01 49 18.6**	**-2.0**
	1.6nm,0.6s,mb4.6,baz=185,slow=4.1,SNR=23						
PDAR	**Pinedale Array**	**122.58**	**300**	PKP	PKPdf	01 54 46.6	-1.9
	0.2nm,0.4s,baz=120,slow=4.9,SNR=5.0						
ULM	**Lac du Bonnet**	**122.94**	**314**	PKP	PKPdf	01 54 46.9	-2.0
	1.4nm,0.5s,baz=131,slow=4.0,SNR=3.1						
ULM	**Lac du Bonnet**	**122.94**	**314**	PKP	PKPdf	01 54 46.9	-2.0
NOA	**NORSAR Array B**	**123.09**	**20**	PKP	PKPdf	01 54 47.1	-1.8
	1.3nm,0.8s,baz=197,slow=1.6,SNR=2.9						
CMAR	**Chiang Mai Arr**	**123.24**	**111**	PKP	PKPdf	01 54 49.9	-0.6
	0.8nm,0.3s,baz=226,slow=4.0,SNR=6.1						
NVAR	**Mina Array Bea**	**123.27**	**290**	PKP	PKPdf	01 54 49.7	-0.3
	0.2nm,0.5s,baz=100,slow=4.7,SNR=3.4						
NVAR	**Mina Array Bea**	**123.27**	**290**	PKP	PKPdf	01 54 49.7	-0.3
KAF	**Kangasniemi**	**127.25**	**28**	*e*pkp	PKPdf	01 54 49.4	-7.4
JOF	**Joensuu**	**129.17**	**30**	*e*pkp	PKPdf	01 54 57.1	-3.4
ARCES	**ARCESS Array B**	**133.38**	**22**	PKP	PKPdf	01 55 07.5	-0.7
	3.9nm,0.9s,baz=220,slow=1.7,SNR=7.0						
MKAR	**Makanchi Array**	**136.99**	**73**	PKhKP		01 55 05.8	
	0.2nm,0.5s,baz=219,slow=3.1,SNR=3.1						
MKAR				PKP	PKPdf	01 55 15.9	+0.2
	0.5nm,0.9s,baz=240,slow=2.4,SNR=4.3						
YKA	**Yellowknife Ar**	**138.90**	**315**	PKhKP		01 55 11.0	
	0.1nm,0.5s,baz=118,slow=3.6,SNR=5.3						
YKA				PKP	PKPdf	01 55 17.7	-1.0
	4.0nm,0.6s,baz=126,slow=2.3,SNR=73						
YKA	**Yellowknife Ar**	**138.90**	**315**	PKP		01 55 11.0	
YKA				PKP	PKPdf	01 55 17.7	-1.0
ZALV	**Zalesovo Beam**	**142.86**	**67**	PKP	PKPdf	01 55 22.6	-3.5
	0.7nm,0.3s,baz=264,slow=3.0,SNR=4.4						
SONM	**Songino Array**	**149.97**	**90**	PKP	PKPdf	01 55 36.9	-1.4
	0.2nm,0.4s,baz=189,slow=5.5,SNR=2.7						
SONM				PKPbc	PKPbc	01 55 42.7	-0.5
	3.4nm,0.8s,baz=222,slow=3.1,SNR=22						

*ISCJB **24** 01:49:51.0±2.7, 134S±04×1120W±07, h10km, mb3.7/7, MS3.9/12, Error ellipse: s-maj=105.7km s-min=16.4km az=151.6*
*IDC **24** 01:49:52.0±2.5, 1336S×11184W, h0km, mb3.7/7, mb1 4.1/7, mb1mx4.0/15, mbtmp3.7/7, MS3.9/13, Ms1 3.9/13, ms1mx3.7/23, Error ellipse: s-maj=103.1km s-min=20.7km az=61.0*
*NEIC **24** 01:49:53.8±1.3, 1333S×11178W, h10km, mb4.4/1, Error ellipse: s-maj=57.3km s-min=14.1km az=61.0*

ISC 24 01:49:53.1±2.7, 134S±04×1120W±07, h10km, n24, σ0°67/9, mb3.7/7, MS3.9/12, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**13.84**	**170**	LR	LR	01 57 00.1	
	comp=Z,849nm,19.9s,baz=108,slow=31						
RKT	**Rikitea**	**23.84**	**243**	*e*LQ		01 59 46.1	
	234nm,26.2s						
RKT				*e*LR	LR	02 00 55.7	
	491nm,27.0s						
ATAH	**Atahualpa**	**33.62**	**82**	LR	LR	02 06 48.5	
	comp=Z,177nm,20.3s,MS3.8,baz=42,slow=30						
CMIG	**Matias Romero**	**34.71**	**30**	LR	LR	02 06 57.5	
	comp=Z,38nm,21.4s,MS3.1,baz=16,slow=30						
PPT	**Papeete**	**36.43**	**259**	*e*LR	LR	02 06 37.0	
	199nm,27.8s						
TBI	**Tubuai**	**36.82**	**249**	*e*LR	LR	02 06 54.2	
	362nm,28.0s						
LPIG	**La Paz**	**37.34**	**2**	LR	LR	02 07 02.7	
	comp=Z,77nm,21.7s,MS3.5,baz=263,slow=28						
ROSC	**El Rosal**	**41.55**	**67**	LR	LR	02 11 58.5	
	comp=Z,36nm,18.9s,MS3.3,baz=13,slow=32						
TXAR	**Lajitas Array**	**43.27**	**11**	P	**P**	**01 57 55.6**	**+0.7**
	0.4nm,0.8s,mb3.2,baz=189,slow=5.0,SNR=3.7						
TXAR				LR	LR	02 12 45.2	
	comp=Z,106nm,18.2s,MS3.8,baz=305,slow=32						
CFAA	**Coronel Fontan**	**43.92**	**122**	P	**P**	**01 57 59.8**	**-0.5**
	0.6nm,0.9s,mb3.3,baz=288,slow=5.3,SNR=6.2						
PLCA	**Paso Flores**	**45.20**	**135**	P	**P**	**01 58 10.9**	**+0.5**
	2.5nm,0.8s,mb4.1,baz=262,slow=11,SNR=3.8						
PLCA				LR	LR	02 12 18.4	
	comp=Z,332nm,18.8s,MS4.3,baz=281,slow=30						
RAR	**Rarotonga**	**46.15**	**253**	LR	LR	02 12 19.7	
	comp=Z,194nm,19.9s,MS3.9,baz=70,slow=29						
NVAR	**Mina Array Bea**	**51.93**	**354**	P	**P**	**01 59 02.9**	**+0.8**
	2.3nm,0.9s,mb4.1,baz=178,slow=9.3,SNR=10						
CPUP	**Villa Florida**	**52.61**	**113**	P	**P**	**01 59 07.5**	**0.0**
	3.8nm,1.0s,mb4.3,baz=226,slow=6.5,SNR=3.7						
CPUP				LR	LR	02 16 41.0	
	comp=Z,142nm,20.4s,MS4.0,baz=57,slow=31						
CPUP	**Villa Florida**	**52.61**	**113**	*e*P	**P**	**01 59 07.6**	**+0.1**
	4.5nm,1.0s,mb4.3						
PDAR	**Pinedale Array**	**55.97**	**2**	P	**P**	**01 59 30.4**	**-1.2**
	0.5nm,0.7s,mb3.7,baz=153,slow=9.2,SNR=5.0						
URZ	**Urewera**	**66.88**	**234**	LR	LR	02 23 52.1	
	comp=Z,106nm,18.5s,MS4.1,baz=28,slow=30						
RPZ	**Rata Peaks**	**71.46**	**228**	LR	LR	02 24 16.4	
	comp=Z,171nm,21.2s,MS4.3,baz=255,slow=29						
YKA	**Yellowknife Ar**	**75.71**	**359**	P	**P**	**02 01 37.9**	**-0.4**
	0.5nm,0.9s,mb3.4,baz=179,

	191nm,0.4s							
CAFR	**Castel Frentan**	**0.82**	**293**	Pg	**Pg**	01 59 02.6	**0.0**	
	1µm,0.4s							
CAFR	**Castel Frentan**	**0.82**	**293**	Pg	**Pg**	01 59 02.6	**0.0**	
	1µm,0.4s							
PTRJ	**Pietraroja**	**0.83**	**229**	Pg	**Pg**	01 59 01.2	**-1.4**	
PTRJ				Sg	**Sg**	01 59 14.7	**+1.1**	
	166nm,0.4s							
PTRJ	**Pietraroja**	**0.83**	**229**	Pg	**Pg**	01 59 01.2	**-1.4**	
PTRJ				Sg	**Sg**	01 59 14.7	**+1.1**	
	166nm,0.4s							
MRB1	**Monte Rocchett**	**0.83**	**201**	Pg	**Pg**	01 59 02.1	**-0.6**	
MRB1				Sg	**Sg**	01 59 14.1	**+0.4**	
	487nm,0.5s							
MRB1	**Monte Rocchett**	**0.83**	**201**	Pg	**Pg**	01 59 02.1	**-0.6**	
MRB1				Sg	**Sg**	01 59 14.1	**+0.4**	
	487nm,0.5s							
MIDA	**Miranda**	**0.87**	**253**	Pg	**Pg**	01 59 02.4	**-1.1**	
MIDA				Sg	**Sg**	01 59 15.1	**+0.1**	
	297nm,0.4s							
MIDA	**Miranda**	**0.87**	**253**	Pg	**Pg**	01 59 02.4	**-1.1**	
MIDA				Sg	**Sg**	01 59 15.1	**+0.1**	
	297nm,0.4s							
CAFE	**Carife**	**0.88**	**186**	Pg	**Pg**	01 59 03.0	**-0.7**	
CAFE				Sg	**Sg**	01 59 15.5	**+0.2**	
	452nm,0.3s							
CAFE	**Carife**	**0.88**	**186**	Pg	**Pg**	01 59 03.0	**-0.7**	
CAFE				Sg	**Sg**	01 59 15.5	**+0.2**	
	452nm,0.3s							
SGG	**Gregorio Mates**	**0.90**	**235**	Pg	**Pg**	01 59 02.9	**-1.2**	
	172nm,0.4s							
SGG	**Gregorio Mates**	**0.90**	**235**	Pg	**Pg**	01 59 02.9	**-1.2**	
	172nm,0.4s							
RNI2	**Rionero Sannit**	**0.93**	**258**	Pg	**Pg**	01 59 03.7	**-0.9**	
RNI2				Sg	**Sg**	01 59 17.5	**+0.7**	
	314nm,0.3s							
RNI2	**Rionero Sannit**	**0.93**	**258**	Pg	**Pg**	01 59 03.7	**-0.9**	
RNI2				Sg	**Sg**	01 59 17.5	**+0.7**	
	314nm,0.3s							
VULT	**Monte Vulture**	**0.97**	**169**	Pg	**Pg**	01 59 04.5	**-0.8**	
VULT				Sg	**Sg**	01 59 18.8	**+0.8**	
	930nm,0.2s							
VULT	**Monte Vulture**	**0.97**	**169**	Pg	**Pg**	01 59 04.5	**-0.8**	
VULT				Sg	**Sg**	01 59 18.8	**+0.8**	
	930nm,0.2s							
VAGA	**Valle Agricola**	**0.98**	**240**	Pg	**Pg**	01 59 04.3	**-1.2**	
	292nm,0.4s							
VAGA	**Valle Agricola**	**0.98**	**240**	Pg	**Pg**	01 59 04.3	**-1.2**	
	292nm,0.4s							
SNAL	**S. Angelo Dei**	**0.99**	**187**	Pg	**Pg**	01 59 04.3	**-1.3**	
SNAL				Sg	**Sg**	01 59 18.9	**+0.3**	
	311nm,0.2s							
SNAL	**S. Angelo Dei**	**0.99**	**187**	Pg	**Pg**	01 59 04.3	**-1.3**	
SNAL				Sg	**Sg**	01 59 18.9	**+0.3**	
	311nm,0.2s							
MRVN	**Minervino Murg**	**1.05**	**143**	Pg	**Pg**	01 59 05.2	**-1.6**	
	145nm,0.2s							
MRVN	**Minervino Murg**	**1.05**	**143**	Pg	**Pg**	01 59 05.2	**-1.6**	
	145nm,0.2s							
CERA	**Filignano**	**1.05**	**254**	Pg	**Pg**	01 59 05.3	**-1.6**	
	252nm,0.5s							
CERA	**Filignano**	**1.05**	**254**	Pg	**Pg**	01 59 05.3	**-1.6**	
	252nm,0.5s							
PALZ	**Palazzo San Ge**	**1.06**	**155**	Pg	**Pg**	01 59 05.5	**-1.5**	
PALZ				Sg	**Sg**	01 59 21.4	**+0.5**	
	288nm,0.5s							
PALZ	**Palazzo San Ge**	**1.06**	**155**	Pg	**Pg**	01 59 05.5	**-1.5**	
PALZ				Sg	**Sg**	01 59 21.4	**+0.5**	
	288nm,0.5s							
CSSN	**Cassano Irpino**	**1.07**	**194**	Pg	**Pg**	01 59 05.8	**-1.5**	
CSSN	**Cassano Irpino**	**1.07**	**194**	Pg	**Pg**	01 59 05.8	**-1.5**	
INTR	**Introdacqua**	**1.09**	**276**	Pg	**Pg**	01 59 06.2	**-1.5**	
INTR				Sg	**Sg**	01 59 22.3	**+0.3**	
	1µm,0.5s							
INTR	**Introdacqua**	**1.09**	**276**	Pg	**Pg**	01 59 06.2	**-1.5**	
INTR				Sg	**Sg**	01 59 22.3	**+0.3**	
	1µm,0.5s							
MCRV	**Calabrutti - M**	**1.13**	**188**	Pg	**Pn**	01 59 06.4	**-1.1**	
	551nm,0.2s							
MCRV	**Calabrutti - M**	**1.13**	**188**	Pg	**Pn**	01 59 06.4	**-1.1**	
	551nm,0.2s							
SDI	**San Donato**	**1.18**	**261**	Pg	**Pg**	01 59 08.2	**-1.1**	
SDI				Sg	**Sg**	01 59 24.8	**+0.1**	
SDI	**San Donato**	**1.18**	**261**	Pg	**Pg**	01 59 08.2	**-1.1**	
SDI				Sg	**Sg**	01 59 24.8	**+0.1**	
VCEL	**Villa Celiera**	**1.23**	**294**	Pg	**Pg**	01 59 09.1	**-1.3**	
	278nm,0.3s							
VCEL	**Villa Celiera**	**1.23**	**294**	Pg	**Pg**	01 59 09.1	**-1.3**	
	278nm,0.3s							
POFI	**Posta Fibreno**	**1.25**	**262**	Pg	**Pg**	01 59 09.1	**-1.5**	
POFI				Sg	**Sg**	01 59 26.6	**-0.4**	
	127nm,0.6s							
POFI	**Posta Fibreno**	**1.25**	**262**	Pg	**Pg**	01 59 09.1	**-1.5**	
POFI				Sg	**Sg**	01 59 26.6	**-0.4**	
	127nm,0.6s							
VVLD	**Villa Vallelon**	**1.30**	**269**	Pg	**Pn**	01 59 09.6	**-0.3**	
	401nm,0.4s							
VVLD	**Villa Vallelon**	**1.30**	**269**	Pg	**Pn**	01 59 09.6	**-0.3**	
	401nm,0.4s							
SGO	**Sicignano**	**1.34**	**182**	Pg	**Pn**	01 59 10.5	**0.0**	
	129nm,0.6s							
SGO	**Sicignano**	**1.34**	**182**	Pg	**Pn**	01 59 10.5	**0.0**	
	129nm,0.6s							
MODR	**Mondragone**	**1.35**	**236**	Pg	**Pn**	01 59 10.1	**-0.4**	
	47nm,0.9s							
MODR	**Mondragone**	**1.35**	**236**	Pg	**Pn**	01 59 10.1	**-0.4**	
	47nm,0.9s							
AMUR	**Altamura**	**1.36**	**137**	Pg	**Pn**	01 59 09.8	**-1.0**	
	166nm,0.2s							
AMUR	**Altamura**	**1.36**	**137**	Pg	**Pn**	01 59 09.8	**-1.0**	
	166nm,0.2s							
FAGN	**Fagnano**	**1.37**	**286**	Pg	**Pn**	01 59 12.1	**+1.2**	
	522nm,0.5s							
FAGN	**Fagnano**	**1.37**	**286**	Pg	**Pn**	01 59 12.1	**+1.2**	
	522nm,0.5s							
CDRU	**Civita di Ruta**	**1.42**	**182**	Pg	**Pn**	01 59 10.9	**-0.5**	
	84nm,0.4s							
CDRU	**Civita di Ruta**	**1.42**	**182**	Pg	**Pn**	01 59 10.9	**-0.5**	
	84nm,0.4s							
SG1	**Sgolgore (BA)**	**1.45**	**137**	*e*Pg	**Pn**	01 59 11.4	**-0.6**	
SG1				*e*Sg	**Sg**	01 59 32.8	**-0.6**	
PTQR	**Pietraquaria**	**1.47**	**275**	Pg	**Pn**	01 59 12.0	**-0.2**	
	288nm,0.9s							
PTQR	**Pietraquaria**	**1.47**	**275**	Pg	**Pn**	01 59 12.0	**-0.2**	
	288nm,0.9s							
PTRP	**Pietrapertosa**	**1.48**	**159**	Pg	**Pn**	01 59 11.8	**-0.5**	
	194nm,0.9s							
PTRP	**Pietrapertosa**	**1.48**	**159**	Pg	**Pn**	01 59 11.8	**-0.5**	
	194nm,0.9s							
TERO	**Teramo**	**1.49**	**299**	Pg	**Pn**	01 59 13.1	**+0.6**	
	97nm,0.4s							
TERO	**Teramo**	**1.49**	**299**	Pg	**Pn**	01 59 13.1	**+0.6**	
	97nm,0.4s							
AQU	**L'Aquila**	**1.53**	**288**	*e*Pn	**Pg**	01 59 14.7	**-1.2**	
AQU				*e*Sn	**Sg**	01 59 34.6	**-1.2**	
AQU	**L'Aquila**	**1.53**	**288**	*e*Pn	**Pg**	01 59 14.7	**-1.3**	
AQU				*e*Sn	**Sg**	01 59 34.6	**-1.2**	
AQU	**L'Aquila**	**1.53**	**288**	Pg	**Pg**	01 59 14.8	**-1.1**	
	62nm,0.4s							
MIGL	**Miglionico**	**1.53**	**148**	Pg	**Pn**	01 59 12.4	**-0.6**	
	391nm,0.4s							
MIGL	**Miglionico**	**1.53**	**148**	Pg	**Pn**	01 59 12.4	**-0.6**	
	391nm,0.4s							
CAMP	**Campotosto**	**1.58**	**294**	Pg	**Pn**	01 59 14.7	**+0.9**	
	15nm,0.4s							
CAMP	**Campotosto**	**1.58**	**294**	Pg	**Pn**	01 59 14.7	**+0.9**	
	15nm,0.4s							
CMPR	**Campora**	**1.59**	**182**	Pg	**Pn**	01 59 13.4	**-0.4**	
	92nm,0.6s							
CMPR	**Campora**	**1.59**	**182**	Pg	**Pn**	01 59 13.4	**-0.4**	
	92nm,0.6s							
MCEL	**Monticello**	**1.61**	**168**	Pg	**Pn**	01 59 13.5	**-0.7**	
	94nm,0.8s							
MCEL	**Monticello**	**1.61**	**168**	Pg	**Pn**	01 59 13.5	**-0.7**	
	94nm,0.8s							
OFFI	**Offida**	**1.61**	**310**	Pg	**Pn**	01 59 15.7	**+1.5**	
OFFI	**Offida**	**1.61**	**310**	Pg	**Pn**	01 59 15.7	**+1.5**	
GIUL	**Giuliano Di Ro**	**1.62**	**258**	Pg	**Pn**	01 59 14.1	**-0.1**	
	89nm,1.0s							
GIUL	**Giuliano Di Ro**	**1.62**	**258**	Pg	**Pn**	01 59 14.1	**-0.1**	
	89nm,1.0s							
LTRZ	**Laterza**	**1.70**	**139**	Pg	**Pn**	01 59 14.6	**-0.8**	
	151nm,0.2s							
LTRZ	**Laterza**	**1.70**	**139**	Pg	**Pn**	01 59 14.6	**-0.8**	
	151nm,0.2s							
FIAM	**Fiamignano**	**1.71**	**283**	Pg	**Pn**	01 59 17.2	**+1.7**	
	109nm,0.7s							
FIAM	**Fiamignano**	**1.71**	**283**	Pg	**Pn**	01 59 17.2	**+1.7**	
	109nm,0.7s							
CRAC	**Craco**	**1.74**	**152**	Pg	**Pn**	01 59 15.2	**-0.7**	
	226nm,0.5s							
CRAC	**Craco**	**1.74**	**152**	Pg	**Pn**	01 59 15.2	**-0.7**	
	226nm,0.5s							
SIRI	**Monte Sirino -**	**1.76**	**167**	Pg	**Pn**	01 59 15.5	**-0.7**	
	72nm,0.6s							
SIRI	**Monte Sirino -**	**1.76**	**167**	Pg	**Pn**	01 59 15.5	**-0.7**	
	72nm,0.6s							
MGR	**Morigerati**	**1.77**	**175**	Pg	**Pn**	01 59 16.4	**+0.1**	
	118nm,0.6s							
MGR	**Morigerati**	**1.77**	**175**	Pg	**Pn**	01 59 16.4	**+0.1**	
	118nm,0.6s							
CERT	**Cerreto**	**1.78**	**272**	Pg	**Pn**	01 59 17.3	**+0.9**	
	66nm,0.7s							
CERT	**Cerreto**	**1.78**	**272**	Pg	**Pn**	01 59 17.3	**+0.9**	
	66nm,0.7s							
SCHR	**S. Chirico Rap**	**1.79**	**162**	Pg	**Pn**	01 59 15.7	**-0.9**	
	35nm,0.6s							
SCHR	**S. Chirico Rap**	**1.79**	**162**	Pg	**Pn**	01 59 15.7	**-0.9**	
	35nm,0.6s							
BULG	**Bulgheria - Ca**	**1.82**	**180**	Pg	**Pn**	01 59 16.9	**-0.2**	
	86nm,0.5s							
BULG	**Bulgheria - Ca**	**1.82**	**180**	Pg	**Pn**	01 59 16.9	**-0.2**	
	86nm,0.5s							
LNSS	**Leonessa**	**1.86**	**293**	Pg	**Pn**	01 59 19.0	**+1.4**	
	184nm,0.4s							
LNSS	**Leonessa**	**1.86**	**293**	Pg	**Pn**	01 59 19.0	**+1.4**	
	184nm,0.4s							
NRCA	**Norcia**	**1.91**	**300**	Pg	**Pn**	01 59 19.5	**+1.3**	
	21nm,0.2s							
NRCA	**Norcia**	**1.91**	**300**	Pg	**Pn**	01 59 19.5	**+1.3**	
	21nm,0.2s							
CUC	**Castrocucco**	**1.94**	**170**	*e*Pn	**Pn**	01 59 19.1	**+0.4**	
CUC				*e*Sn	**Sg**	01 59 51.9	**+2.9**	
CUC	**Castrocucco**	**1.94**	**170**	*e*Pn	**Pn**	01 59 19.1	**+0.5**	
CUC				*e*Sn	**Sg**	01 59 51.9	**+2.9**	
STON	**Ston**	**1.98**	**60**	*e*Pn	**Pn**	01 59 19.2	**0.0**	
STON				Pg	**Pg**	01 59 23.4	**-1.2**	
STON				Sn	**Sn**	01 59 43.7	**+0.1**	
STON	**Ston**	**1.98**	**60**	*e*Pn	**Pn**	01 59 19.2	**0.0**	
STON	**Ston**	**1.98**	**60**	Pg	**Pg**	01 59 23.4	**-1.2**	
STON				Sn	**Sn**	01 59 43.7	**+0.1**	
MNS	**Montasola**	**2.05**	**284**	Pg	**Pn**	01 59 22.0	**+1.8**	
	47nm,0.7s							
MNS	**Montasola**	**2.05**	**284**	Pg	**Pn**	01 59 22.0	**+1.8**	
	47nm,0.7s							
CESI	**CESI - Serrava**	**2.13**	**302**	Pg	**Pn**	01 59 22.7	**+1.5**	
	39nm,0.7s							
PIEI	**Pieia**	**2.65**	**309**	Pg	**Pn**	01 59 29.1	**+0.7**	
	117nm,2.0s							
PIEI	**Pieia**	**2.65**	**309**	Pg	**Pn**	01 59 29.1	**+0.7**	
	117nm,2.0s							
NVLJ	**Novalja**	**2.68**	**352**	*e*Pn	**Pn**	01 59 28.9	**+0.1**	
TIP	**Timpagrande**	**2.92**	**158**	*e*Pn	**Pn**	01 59 33.5	**+1.3**	
TIP	**Timpagrande**	**2.92**	**158**	*e*Pn	**Pn**	01 59 33.5	**+1.4**	
BOJS	**Bojanci**	**3.60**	**359**	*i* Pn	**Pn**	01 59 42.4	**+0.9**	
SKDS	**Skadanscina**	**3.77**	**345**	*i* Pn	**Pn**	01 59 43.5	**-0.3**	
VISS	**Visnje**	**3.92**	**355**	*i* Pn	**Pn**	01 59 46.5	**+0.7**	
VOY	**Vojsko**	**4.26**	**346**	*e*Pn	**Pg**	02 00 04.8	**-3.3**	
VOY				*e*Sn	**Sn**	02 00 39.1	**-0.7**	
VLC	**Villacollemand**	**4.29**	**303**	*e*Pn	**Pn**	01 59 52.0	**+1.1**	
VLC	**Villacollemand**	**4.29**	**303**	*e*Pn	**Pn**	01 59 52.0	**+1.1**	

*ISK **24** 02:09:57.7, 3750N×3630E, h7km, MD3.5*
*CSEM **24** 02:09:57.6±0.1, 3751N×3631E, h8km, MD3.3, Error ellipse: s-maj=1.6km s-min=1.3km az=162.0*
*ISCJB **24** 02:09:58.3±0.5, 3749N±002×3628E±003, h5km±4km, Error ellipse: s-maj=4.2km s-min=3.4km az=157.7*
*DDA **24** 02:09:58.2, 3752N×3631E, h15km±1km, Md3.3*

ISC 24 02:09:58.8±0.4**, 3750N**±002×**3629E**±003**, h7**km±3km**, n33,** σ0°**83**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
ANDN	**Andirin**	**0.09**	**31**	*i* P	**Pg**	**02**	**10 00.9**	**-0.1**
ANDN				*i* S	**Sg**	**02**	**10 03.0**	**+0.6**
KOZT	**Kozan**	**0.36**	**267**	PG	**Pg**	**02**	**10 05.0**	**-0.9**
KOZT				eSG	**Sg**	**02**	**10 11.4**	**+0.7**
KMRS	**Kahramanmaras**	**0.49**	**89**	PG	**Pg**	**02**	**10 07.0**	**-1.3**
CEYT	**Ceyhan**	**0.65**	**221**	*e*PG	**Pg**	**02**	**10 11.1**	**-0.2**
GAZ	**Gaziantep**	**0.81**	**114**	*e*PG	**Pg**	**02**	**10 13.9**	**-0.5**
KUZU	**Kuzuini**	**0.96**	**139**	*i* P	**Pg**	**02**	**10 17.3**	**0.0**
KUZU				*i* S	**Sg**	**02**	**10 29.8**	**0.0**
COBT	**Iskenderun**	**0.98**	**181**	*i* P	**Pg**	**02**	**10 16.7**	**-0.9**
COBT				*i* S	**Sg**	**02**	**10 32.0**	**+1.7**
KARA	**Karaisali**	**1.01**	**257**	*e*PG	**Pg**	**02**	**10 17.6**	**-0.6**
KARA				*e*SG	**Sg**	**02**	**10 32.3**	**+1.1**
GZT	**Gaziantep**	**1.03**	**98**	*i* P	**Pg**	**02**	**10 17.8**	**-0.8**
GZT				*i* S	**Sg**	**02**	**10 33.7**	**+1.8**
KRTS	**Karatas**	**1.18**	**218**	*e*PN	**Pn**	**02**	**10 20.7**	**-1.0**
PINB	**Pinarbasi**	**1.18**	**4**	*i* P	**Pg**	**02**	**10 20.3**	**-1.2**
PINB				*i* S	**Sg**	**02**	**10 37.9**	**+1.1**
SARI	**SarD1z-Kayseri**	**1.22**	**15**	*e*PG	**Pg**	**02**	**10 15.5**	**-6.7**
SARI				*e*SG	**Sg**	**02**	**10 29.0**	**-9.1**
HTY	**Hatay**	**1.38**	**185**	*e*PN	**Pn**	**02**	**10 24.1**	**-0.4**
BNN	**Bunyan**	**1.39**	**346**	*e*PN	**Pn**	**02**	**10 23.8**	**-0.9**
BNN				*e*SN	**Sn**	**02**	**10 43.2**	**-0.2**
NIG	**Nigde**	**1.46**	**295**	*e*PN	**Pn**	**02**	**10 25.2**	**-0.3**
AKCD	**Akcadag**	**1.52**	**58**	*i* P	**Pn**	**02**	**10 26.0**	**-0.4**
AKCD				*i* S	**Sn**	**02**	**10 48.2**	**+1.7**
MERS	**Mersin**	**1.54**	**246**	*e*PN	**Pn**	**02**	**10 26.5**	**-0.2**
ATAB	**Bozova**	**1.60**	**90**	*i* P	**Pn**	**02**	**10 26.1**	**-1.4**
ATAB				*i* S	**Sn**	**02**	**10 49.6**	**+1.2**
MALT	**Malatya**	**1.88**	**64**	*e*PN	**Pn**	**02**	**10 31.5**	**+0.1**
DARE	**Darende-Malaty**	**1.88**	**39**	*e*PN	**Pn**	**02**	**10 24.9**	**-6.5**
DARE				*e*SN	**Sn**	**02**	**10 44.0**	**-11**
MYA	**Malataya**	**1.88**	**63**	*e*PN	**Pn**	**02**	**10 30.7**	**-0.7**
URFA	**Urfa**	**2.02**	**91**	*e*PN	**Pn**	**02**	**10 32.6**	**-0.7**
YOZ	**Yozgat**	**2.27**	**341**	*e*PN	**Pn**	**02**	**10 36.3**	**-0.4**
IKL	**Isikli**	**2.44**	**240**	*e*PN	**Pn**	**02**	**10 39.4**	**+0.4**
KEMA	**Kemaliye**	**2.48**	**44**	*i* P	**Pn**	**02**	**10 41.1**	**+1.6**
SVSK	**Karacayir**	**2.48**	**13**	*e*PN	**Pn**	**02**	**10 39.4**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.54**	**69**	*e*PN	**Pn**	**02**	**10 40.0**	**-0.5**
EREN	**Erenkoy**	**2.60**	**222**	*e*PN	**Pn**	**02**	**10 41.7**	**+0.4**
KAMT	**Kaman**	**2.75**	**314**	*e*PN	**Pn**	**02**	**10 43.8**	**+0.5**
PTK	**Pertek**	**2.81**	**59**	*e*PN	**Pn**	**02**	**10 43.9**	**-0.3**
CORM	**Corum**	**2.97**	**335**	*e*PN	**Pn**	**02**	**10 46.7**	**+0.3**
LFK	**Lefkose**	**3.14**	**226**	*e*PN	**Pn**	**02**	**10 49.1**	**+0.5**
KONT	**Konya--Tatoy**	**3.14**	**279**	*e*PN	**Pn**	**02**	**10 49.6**	**+0.8**

*LDG **24** 02:32:43.7, 1510N×6149W, h160km*
*ISCJB **24** 02:32:45.5±0.2, 1500N±002×6124W±003, h172km±1km, mb4.3/52, Error ellipse: s-maj=4.8km s-min=2.6km az=160.8*
*TRN **24** 02:32:45.2, 1504N×6110W, h170km, MD4.3, M3.8(FDF)*
TRN Felt I-II Martinique.
*BJI **24** 02:32:46.9, 1500N×6130W, h169km, mB5.1*
*NEIC **24** 02:32:46.9±0.1, 1499N×6132W, h169km±1km, mb4.6/34, MD4.3(TRN), Error ellipse: s-maj=3.8km s-min=2.5km az=54.0*
NEIC Felt [II] on Martinique.
*IDC **24** 02:32:46.0±0.4, 1504N×6139W, h159km±2km, mb3.8/20, mb1 4.0/21, mb1mx4.0/23, mbtmp3.8/21, Error ellipse: s-maj=11.1km s-min=6.4km az=82.0*

ISC 24 02:32:46.8±0.2**, 1499N**±002×**6127W**±003**, h166**km±1km**, n164,** σ0°**85**/211**, mb4.3**/52**, 20C-18D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
DSHT	**Scott's Head**	**0.24**	**336**	*e*P	**Pn**	**02**	**33 10.0**	**+0.9**
DSHT				*e*S	**Sn**	**02**	**33 26.6**	**+0.3**
DSTT	**Stowe**	**0.26**	**353**	*e*P	**Pn**	**02**	**33 07.2**	**-1.9**
DSTT				*e*S	**Sn**	**02**	**33 26.9**	**+0.6**
DSTT	**Stowe**	**0.26**	**353**	*i* P	**Pn**	**02**	**33 10.2**	**+1.1**
DSTT				*e*S	**Sn**	**02**	**33 26.9**	**+0.6**
DFBT	**Forest Bistro**	**0.26**	**342**	*e*P	**Pn**	**02**	**33 09.9**	**+0.8**
DFBT				*e*S	**Sn**	**02**	**33 26.5**	**+0.1**
FDF	**Fort de France**	**0.28**	**156**	*i* P	**Pn**	**02**	**33 09.5**	**+0.3**
FDF				*i* S	**Sn**	**02**	**33 26.0**	**-0.4**
FDF	**Fort de France**	**0.28**	**156**	*e*Pn	**Pn**	**02**	**33 09.4**	**+0.2**
FDF				*e*Sn	**Sn**	**02**	**33 27.1**	**+0.7**
DPMT	**Pointe Michel**	**0.29**	**339**	*e*P	**Pn**	**02**	**33 10.1**	**+0.9**
DPMT				*e*S	**Sn**	**02**	**33 26.9**	**+0.5**
DLPL	**La Plaine**	**0.34**	**4**	*e*P	**Pn**	**02**	**33 09.1**	**-0.3**
DLPL				*e*S	**Sn**	**02**	**33 26.7**	**0.0**
MDN	**Morne-Daniel**	**0.34**	**340**	*e*P	**Pn**	**02**	**33 09.3**	**-0.1**
MDN				*e*S	**Sn**	**02**	**33 27.5**	**+0.8**
MDN	**Morne-Daniel**	**0.34**	**340**	*e*P	**Pn**	**02**	**33 10.4**	**+1.0**
MDN				*e*S	**Sn**	**02**	**33 27.5**	**+0.8**
BIM	**Bigot**	**0.51**	**158**	*i* P	**Pn**	**02**	**33 10.2**	**+0.2**
BIM				*i* S	**Sn**	**02**	**33 28.0**	**+0.2**
MVM	**Montagne Vaucl**	**0.57**	**140**	*i* P	**Pn**	**02**	**33 10.4**	**+0.1**
DWS	**Wesley**	**0.57**	**356**	*e*P	**Pn**	**02**	**33 10.9**	**+0.6**
DWS				*e*S	**Sn**	**02**	**33 28.3**	**-0.2**
DWS	**Wesley**	**0.57**	**356**	*e*P	**Pn**	**02**	**33 11.2**	**+0.9**
DWS				*e*S	**Sn**	**02**	**33 28.3**	**-0.2**
MGG	**Marie-Galante**	**0.92**	**357**	*i* P	**Pn**	**02**	**33 12.0**	**-0.5**
TBG	**Guadaloupe-3**	**0.93**	**337**	*i* P	**Pn**	**02**	**33 12.2**	**-0.3**
SLW	**Petit Monier**	**1.02**	**162**	*i* P	**Pn**	**02**	**33 13.2**	**-0.1**
SLW				*e*S	**Sn**	**02**	**33 32.3**	**-1.3**
SLW				*i* S	**Sn**	**02**	**33 33.0**	**-0.6**
SLW	**Petit Monier**	**1.02**	**162**	*i* P	**Pn**	**02**	**33 13.2**	**-0.1**
SLW				*e*S	**Sn**	**02**	**33 32.3**	**-1.3**
HMG	**Houelmont**	**1.07**	**337**	*i* P	**Pn**	**02**	**33 13.5**	**-0.1**
HMG				*i* S	**Sn**	**02**	**33 32.0**	**-2.4**
DOG	**Dongo Capester**	**1.09**	**342**	*i* P	**Pn**	**02**	**33 13.6**	**-0.2**
SCG	**Saint Claude**	**1.10**	**339**	*i* P	**Pn**	**02**	**33 13.9**	**0.0**
SLPE	**Piton Saint Es**	**1.17**	**167**	*e*P	**Pn**	**02**	**33 14.6**	**0.0**
SLPE				*e*S	**Sn**	**02**	**33 36.3**	**+0.4**
SLPE	**Piton Saint Es**	**1.17**	**167**	*e*P	**Pn**	**02**	**33 14.6**	**0.0**
SLPE				*e*S	**Sn**	**02**	**33 33.2**	**-2.7**
SLB	**Belfond**	**1.18**	**169**	*i* P	**Pn**	**02**	**33 14.7**	**+0.1**
SLDE	**Delcer**	**1.20**	**170**	*e*P	**Pn**	**02**	**33 15.0**	**+0.2**
SLDE				*e*S	**Sn**	**02**	**33 36.2**	**-0.1**
SLDE	**Delcer**	**1.20**	**170**	*e*P	**Pn**	**02**	**33 15.0**	**+0.2**
SLDE				*e*S	**Sn**	**02**	**33 33.5**	**-2.8**
LZG	**Guadaloupe-1**	**1.24**	**337**	*i* P	**Pn**	**02**	**33 14.9**	**-0.2**
SFG	**Saint Francois**	**1.26**	**3**	*i* P	**Pn**	**02**	**33 14.9**	**-0.7**
MCLT	**Moule a Chique**	**1.31**	**166**	*i* P	**Pn**	**02**	**33 15.9**	**-0.1**
MCLT				*e*S	**Sn**	**02**	**33 37.8**	**-0.4**
DEG	**La Desirade**	**1.33**	**9**	*i* P	**Pn**	**02**	**33 14.9**	**-1.0**
SSV	**Crater Summit**	**1.66**	**177**	*i* P	**Pn**	**02**	**33 19.5**	**+0.3**
SSV				*e*S	**Sn**	**02**	**33 44.8**	**+0.6**
SVV	**Soufriere Volc**	**1.67**	**178**	*i* P	**Pn**	**02**	**33 19.7**	**+0.4**
SVV				*e*S	**Sn**	**02**	**33 45.4**	**+1.0**
SVB	**Belmont**	**1.71**	**179**	*e*P	**Pn**	**02**	**33 20.2**	**+0.4**
SVB				*e*S	**Sn**	**02**	**33 45.3**	**0.0**
FCV	**Fort Charlotte**	**1.82**	**179**	*e*P	**Pn**	**02**	**33 20.9**	**-0.2**
FCV				*e*S	**Sn**	**02**	**33 46.8**	**-0.7**
BPA	**Boggy Peak**	**2.12**	**345**	*i* P	**Pn**	**02**	**33 23.9**	**-0.3**
BPA				*e*S	**Sn**	**02**	**33 51.3**	**-1.9**
BPA	**Boggy Peak**	**2.12**	**345**	*i* P	**Pn**	**02**	**33 23.9**	**-0.3**
BPA				*e*S	**Sn**	**02**	**33 49.8**	**-3.4**
BBGH	**Gun Hill**	**2.48**	**138**	*e*Pn	**Pn**	**02**	**33 29.7**	**+1.2**
BBGH				*e*Sn	**Sn**	**02**	**34 00.1**	**-0.6**
BBSP	**Saint Philip**	**2.57**	**137**	*e*P	**Pn**	**02**	**33 28.7**	**-0.9**
BBSP				*e*S	**Sn**	**02**	**33 59.3**	**-3.4**
BBSP	**Saint Philip**	**2.57**	**137**	*e*P	**Pn**	**02**	**33 30.6**	**+1.

ANMO	**Albuquerque** 4.7nm,1.2s,mb4.0	**45.08**	**305**	*e*P		**P**	**02 40 46.4**	**0.0**
SDCO	**Great Sand Dun** 2.9nm,0.8s,mb4.0	**45.12**	**309**	*e*P		**P**	**02 40 46.1**	**-0.5**
ISCO	**Idaho Springs** 2.8nm,0.7s,mb4.0	**45.87**	**311**	*e*P		**P**	**02 40 52.6**	**+0.2**
TUC	**Tucson**	**48.08**	**300**	*e*P		**P**	**02 41 09.6**	**-0.2**
WUAZ	**Wupatki** 8.5nm,0.8s,mb4.4	**49.13**	**304**	*e*P		**P**	**02 41 18.3**	**+0.6**
SRU	**San Rafael** 2.8nm,0.6s,mb4.1	**49.29**	**309**	*e*P		**P**	**02 41 18.9**	**+0.1**
PDAR	**Pinedale Array** 5.1nm,0.6s,mb4.3,baz=118,slow=8.9,SNR=40	**49.65**	**314**	P		**P**	**02 41 20.9**	**-0.6**
BW06	**Boulder Array** 5.5nm,0.8s,mb4.2	**49.65**	**314**	*e*P		**P**	**02 41 20.9**	**-0.6**
RLMT	**Red Lodge** 8.5nm,1.1s,mb4.3	**50.25**	**317**	*e*P		**P**	**02 41 26.1**	**+0.1**
JLU	**Jordanelle**	**50.37**	**311**	*e*P		**P**	**02 41 27.3**	**+0.4**
RRI2	**Red Ridge** 66nm,2.6s,mb4.8	**51.06**	**314**	*e*P		**P**	**02 41 32.2**	**+0.2**
DUG	**Dugway**	**51.27**	**310**	*e*P		**P**	**02 41 33.6**	**-0.1**
QLMT	**Earthquake Lak**	**51.60**	**316**	*e*P		**P**	**02 41 37.2**	**+1.2**
EGMT	**Eagleton** 17nm,1.0s,mb4.6	**51.64**	**320**	*e*P		**P**	**02 41 36.6**	**+0.3**
HRY	**Holter Researc**	**52.48**	**318**	*e*P		**P**	**02 41 42.4**	**-0.1**
LRM	**Limekiln Ridge**	**52.60**	**317**	*e*P		**P**	**02 41 43.9**	**+0.5**
TRQA	**Tornquist** 38nm,2.1s,mb4.8	**52.77**	**181**	*e*P		**P**	**02 41 44.0**	**-0.6**
NVAR	**Mina Array Bea** 3.3nm,0.7s,mb4.2,baz=102,slow=6.9,SNR=29	**55.10**	**307**	P		**P**	**02 42 01.7**	**0.0**
ESDC	**Sonseca Array** 0.9nm,0.5s,mb3.9,baz=265,slow=7.1,SNR=18	**55.51**	**52**	P		**P**	**02 42 05.6**	**+1.0**
EDM	**Edmonton**	**55.77**	**325**	*e*P		**P**	**02 42 05.2**	**-1.0**
DBIC	**Dimbokro** 1.5nm,0.4s,mb4.1,baz=260,slow=3.8,SNR=9.3	**55.90**	**92**	P		**P**	**02 42 08.4**	**+0.6**
PLCA	**Paso Flores** 1.9nm,0.6s,mb4.1,baz=356,slow=9.8,SNR=5.2	**56.10**	**188**	P		**P**	**02 42 08.2**	**-0.4**
NEW	**Newport**	**56.38**	**318**	*e*P		**P**	**02 42 09.6**	**-1.0**
QUIF	**Quistinic**	**57.74**	**42**	*e*P		**P**	**02 42 21.1**	**+0.9**
SJPF	**Ste Jean**	**58.10**	**48**	*e*P		**P**	**02 42 24.0**	**+1.2**
SUMG	**Summit** 11nm,1.0s,mb4.6	**59.10**	**8**	*e*P		**P**	**02 42 30.1**	**+0.9**
EPF	**Esparros** 5.4nm,0.5s,mb4.3	**59.22**	**49**	*e*P		**P**	**02 42 31.7**	**+1.2**
EPF	**Esparros** 2.7nm,0.5s,mb4.3	**59.22**	**49**	*e*P		**P**	**02 42 31.7**	**+1.2**
GRR	**Gorron**	**59.36**	**42**	*e*P		**P**	**02 42 31.7**	**+0.3**
MFF	**Saint Martin d**	**59.47**	**45**	*e*P		**P**	**02 42 32.7**	**+0.5**
FLN	**La Foliniere**	**59.68**	**42**	*e*P		**P**	**02 42 34.1**	**+0.5**
YKA	**Yellowknife Ar** 6.3nm,0.6s,mb4.7,baz=105,slow=7.4,SNR=110	**60.29**	**335**	P		**P**	**02 42 36.1**	**-1.4**
MTLF	**Montolieu**	**60.62**	**49**	*e*P		**P**	**02 42 40.4**	**+0.3**
CAF	**Calviac**	**60.72**	**47**	*e*P		**P**	**02 42 41.1**	**+0.4**
TORD	**Torodi Ar. Bea** 1.3nm,0.4s,mb4.1,baz=288,slow=6.9,SNR=48	**60.92**	**83**	P		**P**	**02 42 42.6**	**+0.1**
TCF	**Toulx Ste Croi** 8.0nm,0.8s,mb4.3	**61.02**	**45**	*e*P		**P**	**02 42 42.9**	**+0.2**
TCF	**Toulx Ste Croi** 4.0nm,0.8s,mb4.3	**61.02**	**45**	*e*P		**P**	**02 42 42.9**	**+0.2**
BGF	**Bois d'Agland** 22nm,1.1s,mb4.6	**61.50**	**45**	*e*P		**P**	**02 42 46.0**	**+0.1**
BGF	**Bois d'Agland** 11nm,1.1s,mb4.6	**61.50**	**45**	*e*P		**P**	**02 42 46.0**	**+0.1**
AVF	**Avril sur Loir** 4.0nm,0.6s,mb4.1	**61.88**	**45**	*e*P		**P**	**02 42 48.4**	**-0.1**
AVF	**Avril sur Loir** 2.0nm,0.6s,mb4.1	**61.88**	**45**	*e*P		**P**	**02 42 48.4**	**-0.1**
SSF	**Saint Saulge** 8.3nm,1.0s,mb4.2	**62.02**	**44**	*e*P		**P**	**02 42 49.3**	**-0.1**
SSF	**Saint Saulge** 4.2nm,1.0s,mb4.2	**62.02**	**44**	*e*P		**P**	**02 42 49.3**	**-0.1**
SMF	**Signal de Mont** 12nm,1.1s,mb4.3	**62.19**	**45**	*e*P		**P**	**02 42 50.4**	**-0.1**
SMF	**Signal de Mont** 5.8nm,1.1s,mb4.3	**62.19**	**45**	*e*P		**P**	**02 42 50.4**	**-0.1**
LOR	**Lormes** 7.7nm,0.7s,mb4.3	**62.29**	**44**	*e*P		**P**	**02 42 51.1**	**-0.1**
LOR	**Lormes** 3.8nm,0.7s,mb4.3	**62.29**	**44**	*e*P		**P**	**02 42 51.1**	**-0.1**
MEZF	**Maizieres J'vi** 6.0nm,0.5s,mb4.4	**63.25**	**43**	*e*P		**P**	**02 42 57.6**	**+0.1**
MEZF	**Maizieres J'vi** 6.0nm,0.5s,mb4.7	**63.25**	**43**	*e*P		**P**	**02 42 57.6**	**+0.1**
CABF	**La Chapelle**	**63.73**	**45**	*e*P		**P**	**02 43 00.9**	**+0.2**
CDF	**Champ du Feu**	**64.71**	**43**	*e*P		**P**	**02 43 06.7**	**-0.4**
KEST	**Kesra** 1.8nm,0.8s,mb4.0,baz=74,slow=19,SNR=15	**65.77**	**57**	P		**P**	**02 43 15.6**	**+1.4**
NB2	**NORSAR Subarra** comp=Z,2.2nm,0.9s,mb3.9,baz=263,slow=6.5	**68.52**	**30**	P		**P**	**02 43 31.4**	**+0.4**
NOA	**NORSAR Array B** comp=Z,1.5nm,0.8s,mb3.8,baz=263,slow=6.5,SNR=5.4	**68.52**	**30**	P		**P**	**02 43 31.9**	**+0.9**
GERES	**GERESS Array B** comp=Z,0.7nm,0.6s,mb3.5,baz=267,slow=5.3,SNR=7.9	**68.99**	**43**	P		**P**	**02 43 34.2**	**+0.1**
ARCES	**ARCESS Array B** comp=Z,2.9nm,0.9s,mb3.9,baz=290,slow=5.0,SNR=8.4	**74.94**	**21**	P		**P**	**02 44 09.3**	**+0.2**
ARCES	**ARCESS Array B**	**74.94**	**21**	P		**P**	**02 44 09.3**	**+0.2**
KAF	**Kangasniemi** comp=Z,2.3nm,0.4s,mb4.2	**75.75**	**29**	*e*p		**P**	**02 44 12.9**	**-1.0**
IDI	**Anoyia** comp=Z,3.3nm,0.6s,mb4.1,baz=281,slow=16,SNR=7.4	**78.42**	**56**	P		**P**	**02 44 30.7**	**+1.3**
AKASG	**Malin Array Be** comp=Z,0.4nm,0.4s,mb3.4,baz=326,slow=36,SNR=3.1	**78.87**	**40**	P		**P**	**02 44 30.5**	**-1.0**
BRTR	**Keskin Array B** comp=Z,1.3nm,0.6s,mb3.8,baz=273,slow=4.9,SNR=11	**84.27**	**51**	P		**P**	**02 45 00.5**	**+0.5**
WMQ	**Urumqi**	**114.96**	**24**	*e*PKP	PKiKP		02 51 07.3	-0.8
CN2	**Changchun**	**121.17**	**354**	*e*PKP	PKPdf		02 51 20.1	+0.1
HHC	**Hu-ho-hao-te**	**124.05**	**7**	*e*PKP	PKPdf		02 51 23.3	-2.4
HHC				XPKP			02 52 22.6	
HHC				PP	PP		02 53 11.3	+0.9
HHC				PKS			02 54 58.3	
HHC				SKS	SKSdf		02 58 17.4	-4.7
HHC				SKKS	SKKSac		02 59 47.9	-6.0
HHC	comp=Z,108nm,7.9s			PP	PP			
HHC	comp=N,153nm,13.1s			LR	LR			
HHC	comp=E,170nm,11.9s			LR	LR			
HHC	comp=Z,156nm,16.6s			LR	LR			
LZH	**Lanzhou**	**127.28**	**15**	*e*PKP	PKPdf		02 51 31.0	-1.0
XAN	**Xi'an**	**130.36**	**11**	PKP	PKPdf		02 51 37.8	-0.1
XAN				XPKP			02 52 36.9	
XAN				PP	PP		02 53 56.0	+4.0
XAN				PPP			02 56 45.5	
XAN				SKS	SKSdf		02 58 31.5	-2.6
XAN				SKKS	SKKSac		03 00 30.5	-3.2
XAN				SS	SS		03 11 05.0	+0.1
XAN	comp=E,60nm,19.2s			LR	LR			
XAN	comp=Z,49nm,20.4s			LR	LR			
CD2	**Chengdu**	**132.15**	**17**	PKP	PKPdf		02 51 40.4	-1.0
GYA	**Guiyang**	**137.16**	**16**	*e*PDIF	Pdif		02 48 57.3	-0.8
GYA				PKP	PKPdf		02 51 48.9	-2.0
GYA				XPKP			02 52 52.4	
GYA				PP	PP		02 54 39.8	+4.5
GYA	comp=Z,80nm,8.4s			PP	PP			
WRA	**Warramunga Arr** comp=Z,0.8nm,0.6s,baz=100,slow=4.2,SNR=9.2	**164.32**	**249**	PKPab	PKPab		02 53 25.8	-0.5

IDC 24 02:54:38.2±5.0, 236S×13906E, h0km, mb3.1/2, mb1 3.3/2, mb1mx3.2/13, mbtmp3.2/2, ML3.5/1, Error ellipse: s-maj=202.0km s-min=28.2km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=16,slow=12,SNR=3.5	**18.07**	**194**	P	Pn	02 58 51.2	+0.4
ASAR	**Alice Springs** 0.5nm,0.5s,baz=17,slow=9.7,SNR=13	**21.76**	**193**	P	P	02 59 31.5	-0.1
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=120,slow=6.5,SNR=2.5	**69.72**	**322**	P	P	03 05 50.1	+0.1

*ISCJB **24** 03:44:24.6±0.6, 2325N×1440E±02, h32km, mb3.8/13, Error ellipse: s-maj=21.2km s-min=8.5km az=161.0*
*IDC **24** 03:44:26.4±0.6, 2329N×1442OE, h31km±4km, mb3.7/13, mb1 3.9/16, mb1mx3.9/23, mbtmp3.7/16, ML4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.0/37, Error ellipse: s-maj=20.8km s-min=12.8km az=79.0*

*NEIC **24** 03:44:26.4±0.5, 2328N×1440.9E, Error ellipse: s-maj=18.3km s-min=10.3km az=79.0*

ISC 24 03:44:26.6±0.6, 2327N±008×1441E±02, h34km, h34km±.8km:pP-P, n19, σ0§73/19, mb3.8/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima** 18nm,0.3s,baz=253,slow=20,SNR=7.4	**4.17**	**336**	Pn	**Pn**	**03 45 26.7**	**-1.3**
CBIJ	13nm,0.3s,baz=88,slow=16,SNR=3.2			Sn	**Sn**	**03 46 15.9**	**+0.3**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=140,slow=7.9,SNR=3.6	**14.16**	**340**	Pn	**Pn**	**03 47 44.3**	**-0.5**
KSRS	**Korea Array** 0.3nm,0.3s,baz=127,slow=12,SNR=8.0	**19.81**	**319**	P	**Pn**	**03 48 56.0**	**+0.1**
KSRS	0.2nm,0.3s,baz=131,slow=12,SNR=6.6			pP	pP	03 49 04.9	+1.7
KSRS	comp=Z,28nm,19.3s,baz=150,slow=33			LR	LR	03 55 24.7	
SONM	**Songino Array** 0.5nm,0.4s,mb3.6,baz=123,slow=7.6,SNR=6.1	**38.68**	**319**	P	**P**	**03 51 47.2**	**+0.1**
WRA	**Warramunga Arr** 0.9nm,0.6s,mb3.6,baz=18,slow=9.1,SNR=12	**43.99**	**193**	P	**P**	**03 52 31.4**	**+0.5**
WRA	0.6nm,0.5s,baz=13,slow=8.5,SNR=4.3			pP	pP	03 52 40.5	-0.4
ASAR	**Alice Springs** 0.2nm,0.4s,mb3.5,baz=14,slow=8.0,SNR=8.4	**47.69**	**193**	P	**P**	**03 52 59.7**	**-0.3**
ASAR	0.3nm,0.5s,baz=17,slow=14,SNR=3.9			pP	pP	03 53 10.4	+0.3
ZALV	**Zalesovo Beam** 0.9nm,0.4s,mb4.0,baz=88,slow=9.0,SNR=4.6	**53.51**	**321**	P	**P**	**03 53 44.0**	**+0.4**
ZALV	0.6nm,0.4s,baz=93,slow=7.6,SNR=3.4			pP	pP	03 53 53.7	-0.1
ZALV	**Zalesovo Beam**	**53.51**	**321**	P	**P**	**03 53 44.0**	**+0.4**
ZALV				pP	pP	03 53 53.7	-0.1
MKAR	**Makanchi Array** 0.9nm,0.8s,mb3.7,baz=86,slow=8.5,SNR=7.9	**54.26**	**312**	P	**P**	**03 53 50.4**	**+1.1**
MKAR	0.8nm,0.8s,baz=98,slow=7.9,SNR=2.8			pP	pP	03 54 00.2	+0.8
MKAR	0.2nm,0.4s,baz=79,slow=6.7,SNR=4.7			PcP	PcP	03 54 54.3	+1.1
STKA	**Stephens Creek** 1.1nm,0.4s,mb4.2,baz=320,slow=18,SNR=4.4	**54.89**	**183**	P	**P**	**03 53 53.0**	**-0.8**
YKA	**Yellowknife Ar** 0.6nm,0.8s,mb3.6,baz=292,slow=5.8,SNR=5.7	**74.69**	**28**	P	**P**	**03 56 01.7**	**-0.8**
YKA	0.3nm,0.5s,baz=296,slow=5.9,SNR=6.3			pP	pP	03 56 11.1	-1.9
ARCES	**ARCESS Array B** 2.9nm,0.8s,mb4.2,baz=69,slow=11,SNR=4.3	**77.70**	**342**	P	**P**	**03 56 20.8**	**+1.3**
NVAR	**Mina Array Bea** 0.8nm,0.7s,mb3.8,baz=278,slow=5.6,SNR=7.3	**81.53**	**52**	P	**P**	**03 56 40.8**	**-0.1**
NVAR	1.6nm,0.8s,baz=251,slow=4.5,SNR=6.5			pP	pP	03 56 50.9	-0.7
NVAR	**Mina Array Bea**	**81.53**	**52**	P	**P**	**03 56 40.8**	**-0.1**
NVAR				pP	pP	03 56 50.9	-0.7
PDAR	**Pinedale Array** 0.3nm,0.9s,mb3.5,baz=203,slow=8.3,SNR=3.0	**85.70**	**45**	P	**P**	**03 57 02.6**	**+0.3**
NOA	**NORSAR Array B** 0.9nm,0.6s,mb4.2,baz=45,slow=4.9,SNR=3.0	**87.78**	**339**	P	**P**	**03 57 11.1**	**-0.9**
BRTR	**Keskin Array B** 0.2nm,0.4s,mb3.8,baz=99,slow=2.9,SNR=2.9	**89.86**	**314**	P	**P**	**03 57 21.7**	**-0.6**
TXAR	**Lajitas Array** 0.2nm,0.6s,mb3.7,baz=299,slow=0.9,SNR=3.1	**96.47**	**54**	P	**P**	**03 57 54.0**	**+1.1**
PLCA	**Paso Flores** 1.8nm,0.9s,baz=330,slow=4.7,SNR=4.2	**146.14**	**129**	PKPbc	PKPbc	04 04 04.3	+1.0

*NEIC **24** 03:45:01.9, 18.13N×68.12W, h95km, MD3.3(RSPR), After RSPR.*

RSPR 24 03:45:01.9, 1813N×6812W, h95km±2km, MD3.3/6, MD3.3/6, 8C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**0.97**	**97**	*e*P	Pn	03 45 21.5	0.0
CRPR				*e*S	Sn	03 45 36.3	0.0
LSP	**Las Mesas**	**0.98**	**87**	*e*P	Pn	03 45 20.9	-0.8
LSP				*e*S	Sn	03 45 36.0	-0.6
AGPR	**Aguadilla, PR**	**1.01**	**70**	*e*P	Pn	03 45 21.8	-0.3
AGPR				*e*S	Sn	03 45 37.2	0.0
CELP	**Cerrillos**	**1.46**	**92**	*e*P	Pn	03 45 26.8	-0.6
CELP				*e*S	Sn	03 45 46.1	-0.7
ICM	**Isla Caja Muer**	**1.54**	**99**	*e*P	Pn	03 45 27.6	-0.8
ICM				*e*S	Sn	03 45 48.4	+0.1
SJG	**San Juan**	**1.87**	**90**	*e*P	Pn	03 45 32.4	-0.2
SJG				*e*S	Sn	03 45 56.0	+0.1
CPD	**Cerro la Pandu**	**2.10**	**92**	*e*Pn	Pn	03 45 35.5	0.0
CPD				*e*Sn	Sn	03 45 59.6	-1.6
CBYP	**Canovanas**	**2.15**	**86**	*e*P	Pn	03 45 35.8	-0.4
CBYP				*e*S	Sn	03 46 02.2	-0.4
HUMP	**Col San Antoni**	**2.16**	**89**	*e*P	Pn	03 45 36.0	-0.3
HUMP				*e*S	Sn	03 46 02.7	+0.1
MTP	**Monte Pirata**	**2.44**	**90**	*e*P	Pn	03 45 39.9	-0.2
MTP				*e*S	Sn	03 46 09.3	0.0

*IDC **24** 04:31:52.9±2.7, 4605N×15280E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=67.7km s-min=36.9km az=176.0*
*ISCJB **24** 04:31:57.9±4.7, 464N±02×1526E±03, h33km±34km, mb3.7/4, Error ellipse: s-maj=50.6km s-min=11.7km az=139.5*
*MOS **24** 04:31:58.8±1.3, 4653N×15265E, h41km, mb4.1/3, Error ellipse: s-maj=51.1km s-min=26.6km az=68.3*
*NEIC **24** 04:32:00.2±1.5, 4642N×15286E, h35km, Error ellipse: s-maj=41.9km s-min=14.8km az=138.0*

ISC 24 04:32:00.4±2.1, 464N±02×1527E±03, h39km±17km, n10, σ1§09/11, mb3.7/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-** 0.3nm,0.3s,baz=172,slow=12,SNR=14	**7.46**	**24**	Pn	**Pn**	**04 33 46.0**	**-0.6**
PETK	**Petropavlovsk-**	**7.46**	**24**	Pn	**Pn**	**04 33 46.0**	**-0.6**
ERM	**Erimo**	**8.14**	**241**	*e*Pn	**Pn**	**04 33 57.9**	**+1.9**
ERM				*e*Sn	**Sn**	**04 35 25.4**	**-1.3**
MKAR	**Makanchi Array** 0.8nm,0.8s,mb3.7,baz=69,slow=6.6,SNR=6.6	**46.87**	**297**	P	**P**	**04 40 25.6**	**-0.9**
MKAR	**Makanchi Array**	**46.87**	**297**	P	**P**	**04 40 25.6**	**-0.8**
MKAR	comp=Z,1.0nm,0.8s			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,0.6nm,0.7s,mb3.7,baz=37,slow=6.7,SNR=2.8	**68.48**	**341**	P	**P**	**04 42 59.0**	**+1.0**
NOA	**NORSAR Array B**	**68.48**	**341**	P	**P**	**04 42 59.0**	**+0.9**
NOA	comp=Z,1.0nm,0.7s			pmax	pmax		
HFS	**Hagfors** comp=Z,0.8nm,0.3s,mb4.1,baz=72,slow=4.8,SNR=7.5	**68.70**	**339**	P	**P**	**04 43 00.2**	**+0.8**
HFS	**Hagfors**	**68.70**	**339**	P	**P**	**04 43 00.2**	**+0.8**
HFS	comp=Z,1.0nm,0.3s			pmax	pmax		
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,mb3.3,baz=303,slow=4.7,SNR=4.6	**77.91**	**60**	P	**P**	**04 43 53.4**	**-0.8**

*ISCJB **24** 04:56:31.6±0.5, 1965N±005×6784W±005, h10km, mb3.5/9, Error ellipse: s-maj=8.3km s-min=3.9km az=44.1*
*IDC **24** 04:56:31.9±0.7, 1957N×6787W, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.7/23, mbtmp3.7/12, ML3.4/3, Error ellipse: s-maj=23.3km s-min=16.2km az=47.0*
*RSPR **24** 04:56:34.6, 1970N×6785W, h9km±2km, MD3.9/19, MD3.9/19*
*NEIC **24** 04:56:34.6, 1970N×6785W, h9km, MD3.9(RSPR), After RSPR.*

ISC 24 04:56:33.1±0.5, 1959N±005×6784W±005, h10km, n47, σ0§80/62, mb3.5/9, 16C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.31**	**148**	*e*P	**Pn**	**04 56 55.6**	**-1.9**
AGPR				*e*S	**Sb**	**04 57 14.9**	**+0.2**
AGP	**Aguadilla**	**1.35**	**151**	*e*Pb	**Pb**	**04 56 56.0**	**-2.4**
MPR	**Mayaguez**	**1.52**	**154**	*e*P	**Pn**	**04 57 00.1**	**-0.3**
LSP	**Las Mesas**	**1.58**	**153**	*e*P	**Pn**	**04 57 01.1**	**0.0**
LSP				*e*S	**Sn**	**04 57 21.9**	**+0.4**
LRS	**Lares**	**1.60**	**144**	*e*P	**Pn**	**04 57 01.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.72**	**156**	*e*P	**Pn**	**04 57 03.5**	**+0.5**
CRPR				*e*S	**Sn**	**04 57 26.0**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.85**	**150**	*e*S	**Sn**	**04 57 28.5**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.85**	**150**	*e*P	**Pn**	**04 57 04.9**	**+0.1**
CELP	**Cerrillos**	**1.92**	**141**	*e*P	**Pn**	**04 57 05.9**	**0.0**
CELP				*e*S	**Sn**	**04 57 30.4**	**+0.3**
OBIP	**Obispado Ponce**	**1.93**	**143**	*e*P	**Pn**	**04 57 05.9**	**-0.1**
OBIP				*e*S	**Sn**	**04 57 30.7**	**+0.4**
ICM	**Isla Caja Muer**	**2.10**	**143**	*e*S	**Sn**	**04 57 34.9**	**+0.4**
ICM	**Isla Caja Muer**	**2.10**	**143**	*e*P	**Pn**	**04 57 08.4**	**+0.1**
ICM	**Isla Caja Muer**	**2.10**	**143**	*e*Pn	**Pn**	**04 57 08.8**	**+0.5**
ICM				*e*Sn	**Sn**	**04 57 38.4**	**+4.0**
SJG	**San Juan**	**2.17**	**132**	*e*P	**Pn**	**04 57 09.5**	**+0.2**
SJG	**San Juan**	**2.17**	**132**	*e*P	**Pn**	**04 57 09.7**	**+0.4**
SJG				*e*S	**Sn**	**04 57 36.6**	**+0.3**
SJG	**San Juan**	**2.17**	**132**	*e*Pn	**Pn**	**04 57 09.0**	**-0.3**
SJG				*e*Sn	**Sn**	**04 57 40.1**	**+3.9**
CBYP	**Canovanas**	**2.29**	**125**	*e*P	**Pn**	**04 57 10.9**	**0.0**
CBYP	**Canovanas**	**2.29**	**125**	*e*Pn	**Pn**	**04 57 10.4**	**-0.5**
HUMP	**Col San Antoni**	**2.37**	**127**	*e*P	**Pn**	**04 57 12.0**	**0.0**
HUMP	**Col San Antoni**	**2.37**	**127**	*e*S	**Sn**	**04 57 41.3**	**+0.1**
HUMP	**Col San Antoni**	**2.37**	**127**	*e*Pn	**Pn**	**04 57 11.6**	**-0.4**
HUMP				*e*S	**Sn**	**04 57 41.3**	**+0.1**
CPD	**Cerro la Pandu**	**2.39**	**130**	*e*P	**Pn**	**04 57 12.3**	**0.0**
CPD	**Cerro la Pandu**	**2.39**	**130**	*e*Pn	**Pn**	**04 57 11.9**	**-0.3**
CPD				*e*Sn	**Sn**	**04 57 42.1**	**+0.4**
MTP	**Monte Pirata**	**2.63**	**124**	*e*P	**Pn**	**04 57 15.5**	**0.0**
MTP	**Monte Pirata**	**2.63**	**124**	*e*S	**Sn**	**04 57 47.2**	**-0.2**
MTP	**Monte Pirata**	**2.63**	**124**	*e*Pn	**Pn**	**04 57 15.2**	**-0.3**
MTP				*e*S	**Sn**	**04 57 47.2**	**-0.2**
STVI	**Saint Thomas**	**3.00**	**114**	*e*P	**Pn**	**04 57 20.5**	**-0.1**
TBVI	**Tortola**	**3.27**	**110**	*e*P	**Pn**	**04 57 24.4**	**0.0**
TBVI				*e*S	**Sn**	**04 58 02.8**	**-0.5**
SDDR	**Presa de Saban**	**3.31**	**260**	*e*P	**Pn**	**04 57 24.3**	**-0.7**
SDDR	**Presa de Saban**	**3.31**	**260**	*e*Pn	**Pn**	**04 57 24.9**	**-0.1**
CDVI	**St. Croix**	**3.44**	**122**	*e*P	**Pn**	**04 57 26.8**	**0.0**
CDVI				*e*Pb	**Pb**	**04 57 31.8**	**-2.4**
GRTK	**Grand Turk**	**3.63**	**302**	*e*Pn	**Pn**	**04 57 28.3**	**-1.1**
PCRV	**Puerto La Cruz** 1.0nm,0.3s,baz=15,slow=4.0,SNR=5.8	**9.86**	**161**	Pn	**Pn**	**04 58 55.8**	**+0.8**
PCRV	0.3nm,0.3s,baz=315,slow=19,SNR=2.2			Sn	**Sn**	**05 00 37.3**	**-8.4**
SDV	**Santo Domingo** 0.9nm,0.3s,baz=30,slow=8.1,SNR=18	**10.98**	**195**	Pn	**Pn**	**04 59 09.2**	**-1.1**
SDV	0.3nm,0.3s,baz=239,slow=3.4,SNR=2.1			Sn	**Sn**	**05 01 00.0**	**-13**
ROSC	**El Rosal** 0.6nm,0.3s,baz=91,slow=16,SNR=4.5	**15.95**	**204**	Pn	**Pn**	**05 00 18.2**	**+0.5**
TXAR	**Lajitas Array** 0.4nm,0.7s,mb3.5,baz=106,slow=8.3,SNR=5.8	**33.91**	**294**	P	**P**	**05 03 16.4**	**0.0**
TXAR	**Lajitas Array**	**33.91**	**294**	P	**P**	**05 03 16.4**	**0.0**
ARE	**Arequipa**	**36.01**	**186**	*e*P	**P**	**05 03 41.0**	**+6.5**
BDFB	**Brasilia** 0.7nm,0.7s,mb3.5,baz=336,slow=20,SNR=3.4	**40.07**	**149**	P	**P**	**05 04 10.9**	**+2.1**
PDAR	**Pinedale Array** 0.4nm,0.9s,mb3.1,baz=92,slow=13,SNR=3.1	**41.95**	**313**	P	**P**	**05 04 25.4**	**+1.3**
CPUP	**Villa Florida** 0.2nm,0.4s,mb3.4,baz=0.0,slow=11,SNR=2.6	**46.77**	**167**	P	**P**	**05 05 02.3**	**-0.5**
NVAR	**Mina Array Bea** 0.2nm,0.5s,mb3.3,baz=116,slow=8.1,SNR=2.9	**47.34**	**305**	P	**P**	**05 05 07.6**	**+0.4**
YKA	**Yellowknife Ar** 0.2nm,0.8s,mb3.1,baz=119,slow=7.8,SNR=3.8	**53.48**	**335**	P	**P**	**05 05 53.1**	**-0.2**
ESDC	**Sonseca Array** 0.5nm,0.8s,mb3.6,baz=274,slow=7.5,SNR=4.9	**57.84**	**55**	P	**P**	**05 06 26.6**	**+1.6**
DBIC	**Dimbokro** 1.1nm,0.6s,mb4.2,baz=259,slow=3.2,SNR=3.2	**62.36**	**93**	P	**P**	**05 06 55.9**	**-0.6**
TORD	**Torodi Ar. Bea** 0.6nm,0.6s,mb3.8,baz=279,slow=5.9,SNR=9.7	**66.64**	**84**	P	**P**	**05 07 25.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**66.64**	**84**	P	**P**	**05 07 25.2**	**+0.7**

*IDC **24** 05:00:32.9±7.6, 3490S×17859E, h163km±48km, mb3.6/3, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, MS3.9/1, Ms1 3.9/1, ms1mx2.7/20, Error ellipse: s-maj=81.7km s-min=21.3km az=49.0*
*NEIC **24** 05:00:36.0, 3533S×17895E, h203km, MG4.5(WEL), After WEL.*

ISC 24 05:00:40.1±1.4, 356S±01×1781E±02, h211km±10km, n34, σ0§97/37, mb3.6/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.99**	**175**	P	**Pn**	**05 01 17.9**	**-1.3**
MXZ				S	**S**	**05 01 49.7**	**-0.3**
PUZ	**Puketiti**	**2.50**	**177**	P	**Pn**	**05 01 23.3**	**-1.2**
PUZ				S	**S**	**05 02 00.9**	**+1.4**
MWZ	**Matawai**	**2.79**	**189**	P	**Pn**	**05 01 28.8**	**+1.0**
URZ	**Urewera** 6.2nm,0.3s,baz=49,slow=1.5,SNR=25	**2.79**	**196**	P	**Pn**	**05 01 29.0**	**+1.3**
URZ	35nm,0.3s,baz=304,slow=23,SNR=20			S	**S**	**05 02 10.3**	**+5.0**
URZ	**Urewera**	**2.79**	**196**	P	**Pn**	**

TPIG	**Tehuac#an**	**2.96**	**295**	*i* P	Pn	05 44 21.1	-0.9
TPIG				*i* S	Sn	05 44 55.3	-2.6
THIG		**3.13**	**135**	*eP*	Pn	05 44 22.5	-1.7
UTMO	**Huajuapan**	**3.18**	**283**	*eP*	Pn	05 44 23.9	-0.9
UTMO				*i* S	Sn	05 45 01.7	-1.2
PNIG	**Pinotepa**	**3.52**	**258**	*i* P	Pn	05 44 26.2	-3.0
PNIG				*i* S	Sn	05 45 08.1	-2.6
PPM	**Popocatepetl**	**4.32**	**297**	*i* P	Pn	05 44 41.4	+1.6
PLIG	**Platanillo**	**4.88**	**285**	*i* P	Pn	05 44 46.8	-0.4
MEIG	**Mezcala**	**4.90**	**280**	*i* P	Pn	05 44 46.6	-0.9
CAIG	**El Cayaco**	**5.47**	**270**	*i* P	Pn	05 44 52.3	-2.8
TEIG	**Tepich**	**6.68**	**62**	*i* P	Pn	05 45 07.0	-4.2

IDC ***24*** *05:46:53.7±2.9, 2676N×5669E, h0km, mb3.4/4, mb1 3.4/4, mb1mx3.3/24, mbtmp3.4/4, Error ellipse: s-maj=76.8km s-min=26.4km az=156.0*

ISCJB ***24*** *05:46:56.8±1.9, 2731N±004×567E±0.1, h0km±13km, mb3.4/4, Error ellipse: s-maj=15.2km s-min=6.5km az=0.6*

CSEM ***24*** *05:46:59.3±0.2, 2744N×5657E, h10km, ML3.6/3, Error ellipse: s-maj=5.7km s-min=3.6km az=92.0*

THR ***24*** *05:47:01.3±0.7, 2759N×5635E, h14km±5km, ML3.2*

ISC 24 05:46:58.1±2.1, 2729N±004×567E±01, h1km±14km, n15, σ0§85/17, mb3.4/4, 1C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.45**	**284**	*e*	P	**g**	**Pg**	**05 47 06.7**	**-0.1**
BNDS							AML	AML	05 47 20.5
	comp=E,4μm,0.4s								
BANOM	**Banah**	**1.40**	**194**		P		**Pn**	**05 47 24.5**	**-0.3**
	SNR=184								
BANOM	**Banah**	**1.40**	**194**		Pn		**Pn**	**05 47 24.8**	**0.0**
BANOM					Sn		**Sn**	**05 47 43.4**	**-0.5**
NAZ	**Nazwa, Dubai**	**2.46**	**202**		Pn		**Pn**	**05 47 40.8**	**+1.4**
HATD	**Hatta, Dubai**	**2.50**	**191**		Pn		**Pn**	**05 47 40.3**	**+0.4**
	SNR=5.5								
KRBR	**Kerman**	**2.69**	**2**	*e*	Pn		**Pn**	**05 47 42.7**	**+0.2**
KRBR				*e*	Sg		**Sn**	**05 48 16.9**	**+1.2**
FAQ	**Al Faqa, Dubai**	**2.71**	**201**		Pn		**Pn**	**05 47 43.3**	**+0.5**
	SNR=22								
ASUD	**Al Ashush, Dub**	**2.91**	**205**		Pn		**Pn**	**05 47 46.7**	**+1.1**
	SNR=11								
GHIR	**Ghir-Karzin**	**3.41**	**288**	*e*	Pn		**Pn**	**05 47 51.3**	**-1.1**
GHIR					AML		AML	05 49 08.9	
	comp=N,63nm,0.4s								
GHIR					AML		AML	05 49 09.7	
	comp=E,79nm,0.8s								
BIDO	**Bidbid**	**3.98**	**160**	⇑	P		**Pn**	**05 47 59.4**	**-0.9**
	SNR=9.3								
WBK	**Wadi Bani Khal**	**5.11**	**155**	⇓	P		**Pn**	**05 48 15.7**	**-0.1**
	SNR=7.3								
BRTR	**Keskin Array B**	**22.78**	**309**		P		**P**	**05 52 01.4**	**-0.7**
	comp=E,0.3nm,0.6s,mb3.0,baz=124,slow=13,SNR=2.7								
MKAR	**Makanchi Array**	**28.03**	**39**		P		**P**	**05 52 49.1**	**-1.7**
	comp=E,0.2nm,0.5s,mb3.2,baz=230,slow=9.4,SNR=2.8								
ZALV	**Zalesovo Beam**	**33.73**	**30**		P		**P**	**05 53 41.5**	**+0.6**
	comp=E,0.6nm,0.3s,mb4.0,baz=227,slow=12,SNR=2.5								
TORD	**Torodi Ar. Bea**	**53.08**	**266**		P		**P**	**05 56 13.1**	**-4.4**
	comp=E,0.2nm,0.5s,mb3.3,baz=62,slow=7.2,SNR=4.7								

IDC 24 05:52:05.0±2.9, 9025×11973E, h0km, mb4.1/1, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=63.4km s-min=19.5km az=60.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.98**	**0**		Pn		Pn	05 53 07.9	+0.6
	3.8nm,0.3s,baz=167,slow=12,SNR=4.9								
KAPI					Sn		Sn	05 53 54.5	-0.2
	2.9nm,0.3s,baz=205,slow=14,SNR=3.9								
WRA	**Warramunga Arr**	**17.82**	**129**		P		Pn	05 56 16.3	+1.8
	0.2nm,0.3s,baz=304,slow=12,SNR=18								
WRA					S		Sn	05 59 34.9	+1.0
	0.2nm,0.3s,baz=308,slow=25,SNR=5.3								
ASAR	**Alice Springs**	**19.90**	**139**		P		Pn	05 56 39.1	-0.7
	0.2nm,0.3s,baz=314,slow=9.1,SNR=22								
NWAO	**Narrogin (SRO)**	**23.91**	**185**		LR		LR	06 06 52.2	
	comp=Z,53nm,18.0s,baz=228,slow=37								
STKA	**Stephens Creek**	**30.48**	**141**		P		P	05 58 18.6	-1.2
	2.4nm,1.0s,baz=308,slow=12,SNR=2.9								

CSEM ***24*** *05:58:24.4±0.1, 3886N×2688E, h5km, MD2.8, Error ellipse: s-maj=3.6km s-min=2.5km az=79.0*

ISK ***24*** *05:58:24.6, 3886N×2690E, h5km, MD2.7*

ISCJB ***24*** *05:58:25.5±0.8, 3890N±004×2697E±006, h6km±8km, Error ellipse: s-maj=7.5km s-min=5.9km az=13.7*

DDA ***24*** *05:58:25.2, 3892N×2703E, h7km±6km, Md2.8*

ISC 24 05:58:25.8±0.8, 3889N±004×2695E±006, h10km±7km, n12, σ1§16/19, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.47**	**334**	*e*	P		**Pg**	**05 58 29.8**	**-5.2**
AYVA				*e*	S		**Sg**	**05 58 41.1**	**-0.1**
AYVA				*e*	S		**Sg**	**05 58 47.1**	**+6.0**
BLCB	**Balcova**	**0.51**	**172**	*e*	PG		**Pg**	**05 58 34.8**	**-0.8**
BLCB				*e*	SG		**Sg**	**05 58 41.4**	**-1.0**
IZM	**Izmir**	**0.55**	**154**	*e*	PG		**Pg**	**05 58 35.5**	**-0.9**
URLA	**Izmir**	**0.60**	**208**	*e*	P		**Pg**	**05 58 39.6**	**+2.3**
URLA				*e*	S		**Sg**	**05 58 48.2**	**+3.0**
URLA	**Izmir**	**0.60**	**208**	*e*	S		**Sg**	**05 58 48.2**	**+3.0**
AKS	**Akhisar**	**0.67**	**90**	*e*	PG		**Pg**	**05 58 39.3**	**+0.5**
AKS				*e*	SG		**Sg**	**05 58 48.8**	**+1.2**
EZN	**Ezine**	**1.06**	**333**	*e*	PG		**Pg**	**05 58 44.8**	**-1.3**
GCAM	**G?zelcaml?**	**1.21**	**169**	*i*	P		**Pb**	**05 58 47.7**	**-0.9**
GCAM				*e*	S		**Sb**	**05 59 05.0**	**+0.7**
MANT	**Manisa**	**1.32**	**107**	*i*	P		**Pn**	**05 58 50.4**	**+0.2**
MANT				*e*	S		**Sb**	**05 59 06.0**	**-1.5**
MANT	**Manisa**	**1.32**	**107**	*i*	P		**Pn**	**05 58 50.3**	**+0.1**
KULA	**Kula-Manisa**	**1.39**	**105**	*e*	PN		**Pn**	**05 58 51.4**	**+0.3**
DST	**Dursunbey**	**1.48**	**61**	*e*	PN		**Pn**	**05 58 53.6**	**+1.1**

IDC ***24*** *06:05:36.8±0.6, 2673S×17590W, h0km, mb4.3/12, mb1 4.5/13, mb1mx4.5/16, mbtmp4.3/13, ML4.1/1, MS3.8/8, Ms1 3.8/8, ms1mx3.4/29, Error ellipse: s-maj=21.2km s-min=14.1km az=167.0*

ISCJB ***24*** *06:05:40.2±0.5, 2685±0.1×17590W±009, h33km, mb4.4/19, MS3.8/7, Error ellipse: s-maj=15.0km s-min=11.6km az=170.1*

NEIC ***24*** *06:05:41.7±0.4, 2679S×17584W, h35km, mb4.6/10, Error ellipse: s-maj=14.4km s-min=10.5km az=152.0*

ISC 24 06:05:37.3±3.1, 2678S±010×17584W±009, h5km±19km, h10km±.3km:pP-P, n49, σ0§96/39, mb4.4/19, MS3.8/7, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.89**	**206**		Pn		**Pn**	**06 08 40.6**	**-0.6**
	1.0nm,0.3s,baz=53,slow=9.3,SNR=3.8								
URZ					Sn		**Sn**	**06 10 56.1**	**-9.1**
	2.6nm,0.3s,baz=241,slow=23,SNR=13								
AFI	**Afiamalu**	**13.36**	**17**		Pn		**Pn**	**06 08 42.3**	**-5.4**
	1.6nm,0.3s,baz=173,slow=16,SNR=2.8								
AFI					Sn		**Sn**	**06 10 57.0**	**-20**
	1.5nm,0.3s,baz=61,slow=20,SNR=2.3								
RAR	**Rarotonga**	**15.69**	**73**		LR		LR	06 14 04.0	
	comp=Z,295nm,21.3s,baz=125,slow=32								
DZM	**Mont Dzumac**	**16.80**	**282**	*e*	P		**Pn**	**06 09 39.4**	**+6.0**
	18nm,0.9s								
TBI	**Tubuai**	**24.12**	**88**	*e*	LQ			06 15 11.9	
	353nm,26.5s								
TBI				*e*	LR		LR	06 16 16.9	
	365nm,28.2s								
PPT	**Papeete**	**25.95**	**75**	*e*	LR		LR	06 17 16.5	
	370nm,25.5s								
PPT	**Papeete**	**25.95**	**75**		LR		LR	06 19 17.6	
	comp=Z,259nm,19.1s,MS3.8,baz=188,slow=32								
HNR	**Honiara**	**28.67**	**302**		LR		LR	06 21 14.0	
	comp=Z,176nm,19.3s,MS3.7,baz=64,slow=33								
CTA	**Charters Tower**	**35.32**	**273**		P		**P**	**06 12 34.5**	**+0.8**
	3.2nm,0.5s,mb4.5,baz=112,slow=11,SNR=13								
CTA					LR		LR	06 23 40.8	
	comp=Z,187nm,21.5s,MS3.8,baz=96,slow=31								
CTA	**Charters Tower**	**35.32**	**273**	*eP*			**P**	**06 12 35.0**	**+1.4**
	5.2nm,0.7s,mb4.6								
CTAO	**Charters Tower**	**35.32**	**273**	*eP*			**P**	**06 12 34.6**	**+1.0**
	8.2nm,0.8s,mb4.7								
STKA	**Stephens Creek**	**37.28**	**252**		P		**P**	**06 12 51.4**	**+1.0**
	1.1nm,0.4s,mb4.0,baz=86,slow=13,SNR=9.7								
STKA					LR		LR	06 25 22.4	
	comp=Z,114nm,19.9s,MS3.7,baz=30,slow=32								
STKA	**Stephens Creek**	**37.28**	**252**	*eP*			**P**	**06 12 51.2**	**+0.9**
	0.3nm,0.5s,mb3.4								
STKA					LR		LR	06 25 22.4	
COEN	**Coen**	**40.31**	**280**	*eP*			**P**	**06 13 16.6**	**+0.7**
	4.2nm,0.6s,mb4.3								
ASAR	**Alice Springs**	**45.34**	**262**		P		**P**	**06 13 55.9**	**-0.7**
	1.2nm,0.8s,mb3.8,baz=97,slow=6.5,SNR=19								
ASAR					S		**S**	**06 20 37.5**	**-0.5**
	0.7nm,1.0s,baz=99,slow=15,SNR=4.7								
WB2	**Warramunga Arr**	**46.00**	**268**	*eP*			**P**	**06 14 01.5**	**-0.4**
WRAB	**Tennant Creek**	**46.00**	**268**	*eP*			**P**	**06 14 00.8**	**-1.1**
	6.4nm,0.6s,mb4.7								
WRA	**Warramunga Arr**	**46.01**	**268**		P		**P**	**06 14 00.5**	**-1.5**
	2.9nm,0.5s,mb4.5,baz=108,slow=6.0,SNR=60								
WRA					S		**S**	**06 20 47.9**	**+0.1**
	0.8nm,1.0s,baz=111,slow=16,SNR=4.5								
FORT	**Forrest**	**48.91**	**251**	*e*	P		**P**	**06 14 23.9**	**-0.5**
	16nm,0.6s,mb5.2								
VNDA	**Vanda**	**51.88**	**186**		P		**P**	**06 14 48.2**	**+2.0**
	0.6nm,0.4s,mb3.9,baz=346,slow=6.5,SNR=9.0								
VNDA	**Vanda**	**51.88**	**186**		P		**P**	**06 14 48.2**	**+2.0**
FITZ	**Fitzroy Crossi**	**54.38**	**266**	*eP*			**P**	**06 15 03.7**	**-1.8**
	8.0nm,0.8s,mb4.7								
FITZ	**Fitzroy Crossi**	**54.38**	**266**	*eP*			**P**	**06 15 05.2**	**-0.4**
	2.8nm,0.9s,mb4.2								
MAW	**Mawson**	**76.35**	**200**		P		**P**	**06 17 28.5**	**+1.4**
	4.2nm,0.6s,mb4.6,baz=116,slow=6.3,SNR=12								
MAW	**Mawson**	**76.35**	**200**	*eP*			**P**	**06 17 28.4**	**+1.3**
	1.2nm,0.7s,mb3.9								
MJAR	**Matsushiro Arr**	**76.41**	**323**		P		**P**	**06 17 29.3**	**+1.5**
	2.0nm,0.8s,mb4.1,baz=156,slow=6.3,SNR=3.8								
SNAA	**Sanae**	**81.70**	**178**	*e*			**P**	**06 17 56.1**	**-0.2**
SNAA					*e*			06 18 08.1	
SNAA					*e*			06 18 10.0	
SNAA					*e*			06 18 21.3	
SNAA	**Sanae**	**81.70**	**178**	*eP*			**P**	**06 17 56.1**	**-0.2**
	12nm,1.0s,mb4.8								
VNA3	**Neumayer Olymp**	**81.77**	**176**	*e*			**P**	**06 17 56.4**	**-0.3**
VNA3					*e*		pP	06 17 59.5	+1.2
VNA3					*e*			06 18 09.8	
VNA3					*e*			06 18 11.9	
VNA2	**Neumayer--Watz**	**82.23**	**176**	*e*			**P**	**06 17 59.3**	**+0.2**
	baz=212,slow=3.0								
VNA2					*e*		pP	06 18 02.1	+1.4
VNA2					*e*			06 18 12.9	
VNA2					*e*			06 18 14.8	
VNA2					*e*			06 18 26.9	
VNA1	**Neumayer--Stat**	**82.44**	**176**	*e*			**P**	**06 18 00.6**	**+0.3**
VNA1					*e*		pP	06 18 03.7	+1.8
VNA1					*e*			06 18 12.8	
VNA1					*e*			06 18 14.7	
VNA1					*e*			06 18 24.6	
KSRS	**Korea Array**	**82.88**	**318**		P		**P**	**06 18 04.7**	**+1.8**
	1.0nm,0.5s,mb4.2,baz=128,slow=4.8,SNR=4.1								
KSRS					LR		LR	06 48 52.4	
	comp=Z,46nm,21.8s,MS3.8,baz=161,slow=31								
PLCA	**Paso Flores**	**83.56**	**132**		P		**P**	**06 18 05.8**	**-0.8**
	3.3nm,0.9s,mb4.4,baz=338,slow=6.1,SNR=4.7								
PLCA					LR		LR	06 49 00.0	
	comp=Z,39nm,18.4s,MS3.8,baz=206,slow=31								
PLCA	**Paso Flores**	**83.56**	**132**		P		**P**	**06 18 05.8**	**-0.8**
PLCA					LR		LR	06 49 00.0	
NVAR	**Mina Array Bea**	**84.29**	**42**		P		**P**	**06 18 10.0**	**-0.1**
	3.0nm,1.0s,mb4.4,baz=220,slow=8.3,SNR=13								
NVAR	**Mina Array Bea**	**84.29**	**42**		P		**P**	**06 18 10.0**	**-0.1**
PSI	**Prapat**	**87.00**	**275**		LR		LR	06 54 45.5	
	comp=Z,76nm,19.5s,MS4.1,baz=343,slow=34								
TXAR	**Lajitas Array**	**88.82**	**56**		P		**P**	**06 18 32.6**	**+0.1**
	2.6nm,0.9s,mb4.6,baz=208,slow=8.3,SNR=25								
ANMO	**Albuquerque**	**89.82**	**50**	*eP*			**P**	**06 18 36.5**	**-0.7**
	4.8nm,1.4s,mb4.6								
PDAR	**Pinedale Array**	**92.20**	**42**		P		**P**	**06 18 48.1**	**+0.1**
	0.9nm,0.9s,mb4.1,baz=228,slow=3.8,SNR=6.4								
RSSD	**Black Hills**	**96.31**	**44**	*eP*			**P**	**06 19 05.4**	**-1.4**
	3.7nm,1.0s,mb4.8								
MKAR	**Makanchi Array**	**116.87**	**311**		PKP		PKPdf	06 24 22.3	-0.5
	0.6nm,0.8s,baz=101,slow=2.9,SNR=4.8								
NB2	**NORSAR Subarra**	**145.41**	**354**		PKP		PKPbc	06 25 14.9	-0.8
	comp=Z,0.5nm,0.8s,baz=15,slow=3.8								
NOA	**NORSAR Array B**	**145.41**	**354**		PKPbc		PKPbc	06 25 15.1	-0.6
	comp=Z,6.1nm,0.9s,baz=8.1,slow=2.3,SNR=7.9								
MALT	**Malatya**	**149.08**	**300**	*e*	PKPbc		PKPbc	06 25 25.7	-1.1
AKASG	**Malin Array Be**	**149.41**	**328**		PKP		PKPdf	06 25 24.0	+1.2
	comp=Z,0.5nm,0.4s,baz=42,slow=2.4,SNR=6.8								
AKASG					PKPbc		PKPbc	06 25 26.8	-0.3
	comp=Z,0.4nm,0.3s,baz=40,slow=3.2,SNR=7.3								
BR131	**Keskin Array S**	**152.31**	**305**	*e*	PKPbc		PKPbc	06 25 34.0	-0.3
BRTR	**Keskin Array B**	**152.31**	**305**		PKPbc		PKPbc	06 25 34.0	-0.4
	comp=Z,1.8nm,0.9s,baz=123,slow=1.0,SNR=9.6								
BRTR					PKPab		PKPab	06 25 45.5	+1.1
	comp=Z,1.9nm,0.9s,baz=95,slow=1.4,SNR=8.3								
TORD	**Torodi Ar. Bea**	**166.24**	**170**		PKPab		PKPab	06 26 45.0	0.0
	comp=Z,6.0nm,0.9s,baz=182,slow=4.2,SNR=22								

GUC 24 06:07:36.0±0.5, 2270S×6673W, h275km±7km, ML4.3, 2C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.02**	**272**	⇑	*i* P		Pn	06 08 23.1	+2.4
LVC					*i* S		S	06 08 59.1	+2.9
LVC					AML		AML	06 09 00.0	
	comp=E,46nm,0.4s								
PB04	**Plate Boundary**	**2.59**	**279**	⇓	*i* P		Pn	06 08 35.1	+9.1
PB04					*i* S		S	06 09 19.9	+14
PB04					AML		AML	06 09 22.3	
	comp=N,273nm,0.3s								
PB01	**Plate Boundary**	**3.05**	**302**	*eP*			Pn	06 08 32.9	+2.3
PB01					*i* S		S	06 09 16.8	+2.7
PB01					AML		AML	06 09 18.6	
	comp=N,239nm,0.3s								
CEN1	**Los Morros**	**3.27**	**257**	⇑	*i* P		Pn	06 08 37.5	+4.5
CEN1					*i* S		S	06 09 24.2	+6.1
CEN1					AML		AML	06 09 27.9	
	comp=N,118nm,0.4s								
TOCH	**Tocopilla**	**3.27**	**280**	*i*	S		S	06 09 20.7	+2.5
TOCH					AML		AML	06 09 24.0	
	comp=N,497nm,0.1s								
ANCH	**Antofagasta**	**3.53**	**253**	*i*	S		S	06 09 26.0	+2.8
ANCH					AML		AML	06 09 28.7	
	comp=N,581nm,0.1s								
HMBC	**Humberston**	**3.81**	**309**	*eP*			Pn	06 08 40.5	+1.7
HMBC					*i* S		S	06 09 30.3	+1.4

NEIC ***24*** *06:10:50.8, 4039N×19.12E, h45km, MD3.7(ATH), After ATH.*

ROM ***24*** *06:10:51.2±0.3, 4056N×1964E, h10km, Ml2.9/11, Error ellipse: s-maj=3.6km s-min=2.0km az=51.0*

ATH ***24*** *06:10:51.3, 4034N×1915E, h57km±6km, MD3.7/7*

ISCJB ***24*** *06:10:51.8±0.6, 4038N±002×1948E±002, h5km±5km, Error ellipse: s-maj=3.4km s-min=2.9km az=40.7*

PDG ***24*** *06:10:52.7±0.4, 4047N×1946E, h7km±1km, ML2.9/10, Error ellipse: s-maj=0.9km s-min=1.7km az=0.0*

TIR ***24*** *06:10:52.0±2.1, 4061N×1950E, h2km±8km*

THE ***24*** *06:10:53.3, 4036N×1947E, h15km±5km, ML3.6/3, Error ellipse: s-maj=7.6km s-min=1.0km az=264.0*

CSEM ***24*** *06:10:54.7±0.1, 4029N×1956E, h40km, MD3.7, Error ellipse: s-maj=1.9km s-min=1.4km az=4.0*

ISC 24 06:10:53.0±0.6, 4037N±002×1950E±003, h10km±4km, n94, σ0§86/131, 5C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.69**	**160**	*eP*			**Pg**	**06 11 07.3**	**+0.9**
KEK	**Kerkira**	**0.69**	**160**	*eP*			**Pg**	**06 11 06.6**	**+0.2**
KEK				*e*	S		**Sg**	**06 11 19.8**	**+4.3**
KEK	**Kerkira**	**0.69**	**160**		Pg		**Pg**	**06 11 06.7**	**+0.3**
KEK					Sg		**Sg**	**06 11 19.8**	**+4.3**
SCTE	**Santa Cesarea**	**0.84**	**250**		Pg		**Pg**	**06 11 10.3**	**+1.1**
SCTE					Sg		**Sg**	**06 11 23.9**	**+3.8**
SCTE	**Santa Cesarea**	**0.84**	**250**		Pg		**Pg**	**06 11 10.3**	**+1.1**
SCTE					Sg		**Sg**	**06 11 23.9**	**+3.8**
TIR	**Tirane**	**1.02**	**16**		P		**Pg**	**06 11 13.0**	**+0.4**
TIR					S		**Sg**	**06 11 27.5**	**+1.7**
TIR	**Tirane**	**1.02**	**16**	*e*	PG		**Pg**	**06 11 13.0**	**+0.4**
TIR				*i*	SG		**Sg**	**06 11 24.4**	**-1.4**
TIR	**Tirane**	**1.02**	**16**		P		**Pg**	**06 11 13.2**	**+0.6**
TIR					S		**Sg**	**06 11 27.5**	**+1.7**
IGT	**Igoumenitsa**	**1.05**	**142**		P		**Pg**	**06 11 12.4**	**-0.8**
IGT					S		**Sg**	**06 11 27.9**	**+1.0**
OHR	**Ohrid**	**1.24**	**53**		P		**Pn**	**06 11 14.8**	**-1.6**
OHR					S		**Sb**	**06 11 33.2**	**+0.7**
OHR	**Ohrid**	**1.24**	**53**	*i*	Pn		**Pn**	**06 11 14.7**	**-1.7**
OHR					S		**Sb**	**06 11 33.2**	**+0.7**
OHR	**Ohrid**	**1.24**	**53**	*i*	Pn		**Pn**	**06 11 14.7**	**-1.6**
JAN	**Janina**	**1.26**	**124**	*eP*			**Pn**	**06 11 16.6**	**-0.1**
JAN				*e*	S		**Sb**	**06 11 34.9**	**+1.8**
FNA	**Florina**	**1.49**	**73**		P		**Pn**	**06 11 19.4**	**-0.5**
FNA					S		**Sn**	**06 11 39.0**	**-0.4**
BIA	**Bitola**	**1.54**	**64**		P		**Pn**	**06 11 19.6**	**-0.9**
BIA					S		**Sn**	**06 11 40.5**	**0.0**
BIA	**Bitola**	**1.54**	**64**	*i*	Pn		**Pn**	**06 11 20.1**	**-0.4**
BIA					S		**Sn**	**06 11 40.5**	**0.0**
BIA	**Bitola**	**1.54**	**64**	*i*	Pn		**Pn**	**06 11 20.1**	**-0.3**
ULC	**Ulcinj**	**1.60**	**353**	⇑	*i* Pg		**Pn**	**06 11 20.3**	**-1.1**
ULC					*e*	Sg	**Sg**	**06 11 43.5**	**-1.1**
KRUS	**Krusevo**	**1.66**	**53**	*i*	Pn		**Pn**	**06 11 22.5**	**+0.3**
KRUS	**Krusevo**	**1.66**	**53**	*i*	Pn		**Pn**	**06 11 22.6**	**+0.3**
KZN	**Kozani**	**1.74**	**91**	*eP*			**Pn**	**06 11 24.3**	**+1.0**
NOCI	**Noci**	**1.90**	**284**		Pg		**Pn**	**06 11 25.8**	**+0.3**
	50nm,0.3s								
NOCI	**Noci**	**1.90**	**284**		Pg		**Pn**	**06 11 25.8**	**+0.3**
	50nm,0.3s								
BUM	**Brajici-Budva**	**1.98**	**347**	⇑	*i* Pn		**Pn**	**06 11 26.5**	**-0.1**
BUM					*e*	Sn	**Sn**	**06 11 52.5**	**+1.0**
BUM	**Brajici-Budva**	**1.98**	**347**	*eP*			**Pn**	**06 11 26.5**	**-0.1**
BUM					*i*	SN	**Sn**	**06 11 52.5**	**+1.0**
LTRZ	**Laterza**	**2.05**	**277**		Pg		**Pn**	**06 11 27.1**	**-0.5**
	52nm,0.3s								
LTRZ	**Laterza**	**2.05**	**277**		Pg		**Pn**	**06 11 27.1**	**-0.5**
	52nm,0.3s								
PDG	**Podgorica**	**2.07**	**355**	*e*	PN		**Pn**	**06 11 28.0**	**+0.2**
PDG					*i*	SN	**Sn**	**06 11 54.2**	**+0.6**
PDG	**Podgorica**	**2.07**	**355**	⇓	*i* Pn		**Pn**	**06 11 28.0**	**+0.2**
PDG					*e*	Sn	**Sn**	**06 11 54.2**	**+0.6**
TTG	**Podgorica**	**2.07**	**355**	⇓	*i* Pn		**Pn**	**06 11 28.0**	**+0.2**
TTG					*e*	Sn	**Sn**	**06 11 54.2**	**+0.6**
THL	**Klokotos Trika**	**2.10**	**112**	*eP*			**Pn**	**06 11 28.4**	**+0.2**
THL	**Klokotos Trika**	**2.10**	**112**		P		**Pn**	**06 11 27.9**	**-0.3**
SGI	**Sgolgore (BA)**	**2.19**	**283**	*ePn*			**Pn**	**06 11 29.3**	**-0.2**
HCY	**Herceg Novi**	**2.21**	**340**	⇓	*i* Pn		**Pn**	**06 11 29.5**	**-0.2**
HCY					*e*	Sn	**Sn**	**06 11 58.4**	**+1.3**
HCY	**Herceg Novi**	**2.21**	**340**	*i*	PN		**Pn**	**06 11 29.7**	**0.0**
HCY					*i*	SN	**Sn**	**06 11 58.5**	**+1.4**
PVY	**Plav**	**2.25**	**9**	⇑	*i* Pn		**Pn**	**06 11 30.3**	**0.0**
PVY					*e*	Sn	**Sn**	**06 12 00.1**	**+1.9**
PVY	**Plav**	**2.25**	**9**	*eP*			**Pn**	**06 11 30.0**	**-0.3**
PVY					*i*	SN	**Sn**	**06 12 00.1**	**+1.9**
AMUR	**Altamura**	**2.27**	**285**		Pg		**Pn**	**06 11 30.1**	**-0.4**
	33nm,0.3s								
AMUR	**Altamura**	**2.27**	**285**		Pg		**Pn**	**06 11 30.1**	**-0.4**
	33nm,0.3s								
GRG	**Griva**	**2.29**	**74**		P		**Pn**	**06 11 29.9**	**-0.9**
EVR	**Evrytania**	**2.30**	**128**	*eP*			**Pn**	**06 11 30.8**	**-0.2**
EVR	**Evrytania**	**2.30**	**128**	*eP*			**Pn**	**06 11 32.8**	**+1.8**
LIT	**Litokhoron**	**2.31**	**96**		P		**Pn**	**06 11 30.9**	**-0.2**
CRAC	**Craco**	**2.34**	**271**		Pg		**Pn**	**06 11 32.4**	**+0.9**
	81nm,0.6s								
CRAC	**Craco**	**2.34**	**271**		Pg		**Pn**	**06 11 32.4**	**+0.9**
	81nm,0.6s								
MIGL	**Migl

*ISCJB **24** 06:45:36.1±1.3, 4301N±005×7601E±007, h11km±8km, Error ellipse: s-maj=9.3km s-min=7.6km az=33.6*
*NNC **24** 06:45:36.1±0.9, 4313N×7594E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=38.1km s-min=4.8km az=139.0*
*KNET **24** 06:45:36.5±0.9, 4296N×7595E, h20km±5km, ml1.9, Error ellipse: s-maj=7.1km s-min=2.8km az=44.0*

ISC 24 06:45:37.0±1.1, 4298N±006×7595E±007, h15km±7km, n9, σ0§65/15, 6C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**0.27**	**258**	⇑P	**Pg**	**06 45 42.8**	**+0.1**
	39nm,0.3s						
TKM2				⇑S	**Sg**	**06 45 47.2**	**+0.6**
	92nm,0.3s						
TKM2	**Tokmak 2**	**0.27**	**258**	P	**Pg**	**06 45 42.9**	**+0.1**
	64nm,0.1s,SNR=671						
TKM2				⇓S	**Sg**	**06 45 47.3**	**+0.7**
	465nm,0.1s						
ULHL	**Ulahol**	**0.76**	**164**	P	**Pg**	**06 45 51.1**	**-0.7**
	26nm,0.2s,SNR=114						
ULHL				⇑S	**Sg**	**06 46 01.5**	**-0.3**
	14nm,0.1s						
KBK	**Karagaybulak**	**0.81**	**247**	⇑P	**Pg**	**06 45 52.4**	**-0.3**
	11nm,0.2s,SNR=21						
KBK				⇓S	**Sg**	**06 46 03.8**	**+0.5**
	83nm,0.2s						
CHMS	**Chumysh**	**0.88**	**272**	⇓P	**Pb**	**06 45 53.2**	**-0.9**
	4.1nm,0.1s,SNR=7.9						
KZA	**Kyzart**	**1.04**	**210**	⇑P	**Pb**	**06 45 56.6**	**-0.1**
	6.2nm,0.1s,SNR=8.2						
KZA				⇑S	**Sb**	**06 46 10.9**	**+0.8**
	13nm,0.2s						
USP	**Ospenovka**	**1.10**	**286**	⇓P	**Pb**	**06 45 57.0**	**-0.8**
	5.1nm,0.2s,SNR=21						
USP				⇓S	**Sb**	**06 46 11.9**	**-0.1**
	25nm,0.2s						
KK31	**Karatay Array**	**3.99**	**274**	⇓Pg	**Pg**	**06 46 48.8**	**-4.6**
	1.1nm,0.8s,baz=91,slow=15,SNR=8.6						
KK31				⇓Lg		06 47 40.4	
	1.1nm,0.4s,baz=88,slow=28,SNR=8.9						
MK31	**Makanchi Array**	**5.90**	**48**	Pn	**Pn**	**06 47 05.2**	**+1.3**
	0.3nm,0.3s,baz=222,slow=15,SNR=7.0						
MK31				⇓Lg		06 48 45.0	
	0.7nm,0.6s						

*ISK **24** 07:17:43.5, 37.17N×3632E, h2km, MD2.9*
*CSEM **24** 07:17:46.0±0.5, 3770N×3621E, h5km, MD2.9, Error ellipse: s-maj=14.0km s-min=9.3km az=152.0*
*ISCJB **24** 07:17:47.9±0.8, 3753N±009×3629E±005, h10km±5km, Error ellipse: s-maj=15.1km s-min=6.1km az=172.9*
*DDA **24** 07:17:49.0, 3760N×3639E, h7km±3km, Md2.9*

ISC 24 07:17:48.0±0.8, 3755N±010×3629E±005, h11km±5km, n6, σ1§20/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.05**	**54**	*i* P	**Pg**	**07 17 50.2**	**0.0**
ANDN				*i* S	**Sg**	**07 17 52.2**	**+0.4**
KOZT	**Kozan**	**0.38**	**260**	*e*PG	**Pg**	**07 17 54.0**	**-1.4**
KOZT				*e*SG	**Sg**	**07 18 02.0**	**+1.6**
KMRS	**Kahramanmaras**	**0.48**	**95**	*e*PG	**Pg**	**07 17 55.6**	**-1.8**
KMRS				*e*SG	**Sg**	**07 18 04.2**	**+0.3**
GZT	**Gaziantep**	**1.03**	**100**	*i* P	**Pb**	**07 18 07.5**	**-0.3**
GZT				*i* S	**Sg**	**07 18 21.5**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.17**	**16**	*e*PN	**Pn**	**07 18 07.9**	**-2.3**
AKCD	**Akcadag**	**1.49**	**59**	*i* P	**Pn**	**07 18 16.3**	**+1.7**
AKCD				*i* S	**Sn**	**07 18 34.8**	**+0.9**

*CSEM **24** 07:31:15.2±0.3, 3740N×2067E, h2km, ML3.1/1, Error ellipse: s-maj=7.0km s-min=2.6km az=63.0*
*THE **24** 07:31:16.7, 3747N×2066E, h2km±2km, ML3.1/1, Error ellipse: s-maj=4.5km s-min=0.8km az=240.0*
*ATH **24** 07:31:17.2, 3760N×2085E, h38km, MD3.6/3*

ISC 24 07:31:14.5±1.9, 3738N±006×204E±02, h23km±15km, n11, σ0§81/18, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.81**	**13**	P	**Pb**	**07 31 30.1**	**+0.1**
VLS				S	**Sb**	**07 31 40.0**	**-0.6**
VLS	**Valsamata**	**0.81**	**13**	*e*PN	**Pb**	**07 31 30.1**	**+0.1**
VLS				*e*SN	**Sn**	**07 31 40.2**	**-1.7**
VLS	**Valsamata**	**0.81**	**13**	*e*Pn	**Pb**	**07 31 30.1**	**+0.1**
VLS				*e*Sn	**Sn**	**07 31 40.6**	**-1.3**
RLS	**Riolos of Patr**	**1.11**	**52**	*e*PN	**Pn**	**07 31 30.2**	**-4.4**
PYL	**PYLOS**	**1.21**	**113**	P	**Pn**	**07 31 36.2**	**+0.2**
PYL				S	**Sn**	**07 31 50.9**	**-0.8**
ITM	**Ithomi**	**1.27**	**99**	*e*PN	**Pn**	**07 31 35.7**	**-1.1**
LTK	**Loutraki**	**2.17**	**72**	P	**Pn**	**07 31 49.0**	**-0.2**
LTK				S	**Sn**	**07 32 15.3**	**0.0**
AGG	**Agios Georgios**	**2.26**	**43**	P	**Pn**	**07 31 51.9**	**+1.5**
AGG				S	**Sn**	**07 32 18.3**	**+0.8**
DID	**Didima**	**2.30**	**86**	P	**Pn**	**07 31 51.1**	**+0.1**
DID				S	**Sn**	**07 32 18.6**	**+0.1**
LKR	**Lokris**	**2.44**	**58**	P	**Pn**	**07 31 53.2**	**+0.2**
XOR	**Xorichti**	**2.98**	**48**	P	**Pn**	**07 32 01.7**	**+1.3**

*ISCJB **24** 07:31:33.5±1.5, 3511N±006×2722E±007, h3km±8km, Error ellipse: s-maj=13.1km s-min=5.6km az=137.8*
*CSEM **24** 07:31:35.7±0.2, 3514N×2703E, h1km±1km, MD3.7, Error ellipse: s-maj=3.6km s-min=1.5km az=144.0*
*THE **24** 07:31:36.9, 3509N×2702E, h0km±3km, Error ellipse: s-maj=7.9km s-min=1.2km az=129.0*
*DDA **24** 07:31:38.1, 3530N×2707E, h10km, Md3.2*
*ATH **24** 07:31:38.3, 3572N×2690E, h5km, MD3.7/3*

ISC 24 07:31:33.1±1.9, 3505N±008×2725E±008, h2km±9km, n16, σ0§69/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.51**	**352**	*e*PG	**Pg**	**07 31 43.6**	**+0.8**
KARP				*e*SG	**Sg**	**07 31 48.6**	**-0.7**
KARP	**Karpathos**	**0.51**	**352**	*e*Pg	**Pg**	**07 31 43.6**	**+0.8**
KARP				*e*Sb	**Sg**	**07 31 49.6**	**+0.3**
ZKR	**Zakros**	**0.85**	**275**	P	**Pg**	**07 31 49.8**	**+0.5**
ZKR				S	**Sg**	**07 32 00.8**	**+0.4**
NPS	**Neapolis**	**1.36**	**280**	*e*PG	**Pg**	**07 31 59.5**	**+0.4**
LAST	**Lasithi**	**1.46**	**275**	P	**Pn**	**07 32 00.9**	**+0.6**
LAST				S	**Sb**	**07 32 18.6**	**-1.2**
THR1	**Thera Island**	**1.97**	**313**	P	**Pn**	**07 32 07.8**	**+0.4**
THR6	**Thira Island,**	**2.00**	**311**	P	**Pn**	**07 32 08.2**	**+0.5**
SIVA	**Sivas**	**2.00**	**270**	P	**Pn**	**07 32 08.2**	**+0.4**
BDRM	**Kayabasi**	**2.02**	**4**	*i* P	**Pn**	**07 32 08.0**	**-0.1**
BDRM				*i* S	**Sg**	**07 32 37.9**	**-0.2**
BDRM	**Kayabasi**	**2.02**	**4**	*i* P	**Pn**	**07 32 08.0**	**-0.1**
BDRM				*i* S	**Sg**	**07 32 37.8**	**-0.2**
THR3	**Thira Island,**	**2.03**	**313**	P	**Pn**	**07 32 08.6**	**+0.4**
THR5	**Thira Island,**	**2.06**	**312**	P	**Pn**	**07 32 09.3**	**+0.6**
TURN	**Turunc**	**2.13**	**31**	*i* P	**Pn**	**07 32 09.2**	**-0.4**
VAM	**Vamos**	**2.52**	**279**	*e*PG	**Pg**	**07 32 19.5**	**-1.9**
KARN	**Karanos**	**2.75**	**278**	P	**Pn**	**07 32 17.5**	**-0.6**
GOLH	**Golhisar**	**2.88**	**40**	*i* P	**Pb**	**07 32 24.6**	**-0.5**

IDC 24 07:33:54.9±5.5, 266S×9922E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.7/3, Error ellipse: s-maj=265.8km s-min=26.9km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.34**	**119**	P	P	07 41 16.7	-1.2
	0.3nm,0.5s,baz=293,slow=8.1,SNR=7.5						
ASAR	**Alice Springs**	**39.51**	**125**	P	P	07 41 28.5	+0.9
	0.5nm,0.5s,baz=302,slow=8.1,SNR=15						
MKAR	**Makanchi Array**	**51.46**	**345**	P	P	07 43 01.9	+0.1
	1.0nm,0.6s,baz=149,slow=7.7,SNR=9.0						

*CSEM **24** 07:34:34.5±0.1, 3938N×3313E, h5km, MD3.2, Error ellipse: s-maj=3.2km s-min=2.6km az=174.0*
*DDA **24** 07:34:34.9, 3941N×3309E, h9km±1km, Md2.4*
*ISK **24** 07:34:34.8, 3939N×3312E, h5km, MD3.2*
*ISCJB **24** 07:34:35.0±0.9, 3936N±003×3311E±003, h2km±8km, Error ellipse: s-maj=5.9km s-min=4.5km az=173.1*

ISC 24 07:34:35.6±0.6, 3936N±003×3311E±004, h5km±6km, n19, σ0§74/27, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.47**	**89**	*e*PG	**Pg**	**07 34 43.6**	**-1.1**
KAMT				*e*SG	**Sg**	**07 34 51.5**	**+0.7**
LOD	**Lodumlu**	**0.59**	**333**	*e*PG	**Pg**	**07 34 46.7**	**-0.2**
LOD				*e*SG	**Sg**	**07 34 54.2**	**-0.4**
CDAG	**Cicekdag**	**1.01**	**75**	*i* P	**Pg**	**07 34 54.1**	**-1.0**
CDAG				*i* S	**Sg**	**07 35 08.8**	**+0.6**
KIZT	**Kizilcal**	**1.07**	**244**	*e*PN	**Pn**	**07 34 56.2**	**-1.0**
KIZT				*e*SN	**Sn**	**07 35 11.6**	**-0.8**
KDHN	**Kadinhani**	**1.14**	**223**	*i* P	**Pg**	**07 34 57.3**	**-0.1**
KDHN				*i* S	**Sg**	**07 35 13.2**	**+1.0**
KDHN	**Kadinhani**	**1.14**	**223**	*i* S	**Sg**	**07 35 13.2**	**+1.0**
ELDT	**Eldivan**	**1.15**	**12**	*i* P	**Pg**	**07 34 56.5**	**-1.2**
ELDT				*i* S	**Sg**	**07 35 13.5**	**+0.9**
LADK	**Ladik-KONYA**	**1.30**	**207**	*e*PN	**Pn**	**07 35 00.0**	**-0.4**
CORM	**Corum**	**1.43**	**55**	*e*PN	**Pn**	**07 35 01.7**	**-0.5**
KONT	**Konya--Tatoy**	**1.53**	**203**	*e*PN	**Pn**	**07 35 03.4**	**-0.2**
NIG	**Nigde**	**1.72**	**136**	*e*PN	**Pn**	**07 35 06.5**	**+0.3**
YOZ	**Yozgat**	**1.74**	**80**	*e*PN	**Pn**	**07 35 06.5**	**+0.1**
ESKT	**Eskisehir**	**1.75**	**276**	*i* P	**Pn**	**07 35 07.5**	**+0.8**
ESKT				*i* S	**Sn**	**07 35 28.6**	**-0.8**
SEYT	**Eskypehyr**	**1.75**	**276**	*i* P	**Pn**	**07 35 07.4**	**+0.8**
SEYT				*i* S	**Sn**	**07 35 28.6**	**-0.8**
MDU	**Mudurnu**	**1.82**	**308**	*e*PN	**Pn**	**07 35 08.6**	**+0.9**
BNN	**Bunyan**	**2.19**	**103**	*e*PN	**Pn**	**07 35 12.3**	**-0.4**
GULT	**Gulveren**	**2.26**	**299**	*e*PN	**Pn**	**07 35 14.7**	**+1.1**
ALT	**Altintas**	**2.35**	**263**	*e*PN	**Pn**	**07 35 15.7**	**+0.9**
SVSK	**Karacayir**	**3.06**	**78**	*e*PN	**Pn**	**07 35 25.3**	**+0.7**

*MOS **24** 07:41:59.9±1.0, 5392N×16145E, h6km, mb5.1/92, MS4.2/18, Error ellipse: s-maj=7.5km s-min=4.3km az=89.6*
*IDC **24** 07:42:00.1±0.4, 5394N×16150E, h0km, mb4.7/30, mb1 4.9/32, mb1mx4.8/35, mbtmp4.7/32, ML4.9/2, MS4.1/18, Ms1 4.1/18, ms1mx3.9/36, Error ellipse: s-maj=13.6km s-min=9.7km az=176.0*
*KRSC **24** 07:42:01.5±0.1, 5378N×16162E, h5km±5km, ML5.2*
*ISCJB **24** 07:42:03.9±0.1, 5378N±002×16160E±003, h35km, mb4.9/197, MS4.3/35, Error ellipse: s-maj=3.1km s-min=2.3km az=143.9*
*SZGRF **24** 07:42:03.2, 5295N×16059E, h42km, mb5.1, Off east coast of Kamchatka Peninsula, Russia*
*BJI **24** 07:42:03.1, 5443N×161.15E, h22km, mB5.1, mb4.9, Ms4.8, Msz4.6*
*NEIC **24** 07:42:05.9±0.1, 5389N×16140E, mb5.0/127, Error ellipse: s-maj=4.6km s-min=2.7km az=167.0*
*DJA **24** 07:42:15, 54.19N×163.06E, h142km, mb4.9/11*

ISC 24 07:42:06.1±0.1, 5381N±002×16149E±003, h37km, h37km±4km: pP-P, n473, σ1§01/498, mb4.9/197, MS4.3/35, 18C-21D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.76**	**11**	*e*P	**Pn**	**07 42 16.9**	**-3.4**
MKZ				*i* S	**Sn**	**07 42 27.0**	**-3.5**
SPN	**Mys Shipunski**	**1.13**	**231**	*e*P	**Pn**	**07 42 23.9**	**-1.4**
KII	**Karymskiy**	**1.23**	**281**	*e*P	**Pn**	**07 42 26.4**	**-0.3**
NLC	**Nalytchevo**	**1.43**	**244**	*e*P	**Pn**	**07 42 28.7**	**-0.8**
TUMR	**Tumrok**	**1.67**	**333**	*e*P	**Pn**	**07 42 32.9**	**+0.1**
TUMR				*i* S	**Sn**	**07 42 55.0**	**+2.1**
AVH	**Avacha**	**1.73**	**253**	*i* P	**Pn**	**07 42 34.0**	**+0.4**
PET	**Petropavlovsk**	**1.87**	**246**	*i*PN	**Pn**	**07 42 35.4**	**-0.1**
PET				*e*S	**Sn**	**07 42 59.9**	**+2.0**
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				smax			
	comp=E,8μm,1.9s						
PET				smax			
	comp=N,8μm,0.7s						
PET				smax			
	comp=E,5μm,0.7s						
PET	**Petropavlovsk**	**1.87**	**246**	*e*P	**Pn**	**07 42 35.2**	**-0.3**
PET				*i* S	**Sn**	**07 42 58.8**	**+0.9**
PET	**Petropavlovsk**	**1.87**	**246**	⇓*e*Pn	**Pn**	**07 42 35.1**	**-0.4**
KMNR	**Kamenistaya**	**2.08**	**340**	*e*P	**Pn**	**07 42 39.4**	**+1.0**
KMNR				*i* S	**Sn**	**07 43 06.3**	**+3.3**
GNL	**Ganaly**	**2.11**	**268**	*i* P	**Pn**	**07 42 40.2**	**+1.4**
BZMR	**Bezymyannaya**	**2.21**	**345**	*e*P	**Pn**	**07 42 41.4**	**+1.3**
BZMR				*i* S	**Sn**	**07 43 09.8**	**+3.7**
KIRR	**Kirishev**	**2.25**	**343**	*e*P	**Pn**	**07 42 41.7**	**+1.0**
KIRR				*i* S	**Sn**	**07 43 10.7**	**+3.6**
ZLN	**Zelenaya**	**2.25**	**350**	*e*P	**Pn**	**07 42 41.5**	**+0.8**
RUS	**Russkaya**	**2.26**	**234**	*e*P	**Pn**	**07 42 41.7**	**+0.8**
RUS				*i* S	**Sn**	**07 43 10.9**	**+3.4**
KPT	**Kopyto**	**2.28**	**342**	*e*P	**Pn**	**07 42 41.8**	**+0.7**
KPT				*i* S	**Sn**	**07 43 12.4**	**+4.4**
PETK	**Petropavlovsk-**	**2.37**	**254**	Pn	**Pn**	**07 42 43.4**	**+1.0**
	comp=E,241nm,0.3s,baz=73,slow=17,SNR=698						
PETK				Sn	**Sn**	**07 43 17.5**	**+7.2**
	comp=E,167nm,0.3s,baz=8.8,slow=20,SNR=11						
PETK				LR	LR	07 43 53.0	
	comp=E,4μm,18.1s,baz=177,slow=47						
PETK	**Petropavlovsk-**	**2.37**	**254**	PN	**Pn**	**07 42 43.4**	**+1.0**
PETK						07 43 17.5	
PETK	**Petropavlovsk-**	**2.37**	**254**	Pn	**Pn**	**07 42 43.4**	**+1.0**
PETK				Sn	**Sn**	**07 43 17.5**	**+7.2**
PETK				LR	LR	07 43 53.0	
GRL	**Gorelyy**	**2.41**	**240**	*e*P	**Pn**	**07 42 44.0**	**+1.1**
GRL				*i* S	**Sn**	**07 43 14.4**	**+3.2**
KOZ	**Kozyrevsk**	**2.44**	**338**	*e*P	**Pn**	**07 42 44.4**	**+1.1**
KOZ				*i* S	**Sn**	**07 43 15.2**	**+3.4**
KOZR	**Kozyr**	**2.44**	**339**	PN	**Pn**	**07 42 44.4**	**+1.1**
KOZR				S	**Sn**	**07 43 15.2**	**+3.3**
KRSR	**Krestovskiy**	**2.47**	**348**	*e*P	**Pn**	**07 42 44.3**	**+0.6**
KRSR				*i* S	**Sn**	**07 43 14.8**	**+2.2**
KBTR	**Krutoberegovo**	**2.52**	**17**	*e*P	**Pn**	**07 42 43.3**	**-1.1**
KBTR				*i* S	**Sn**	**07 43 13.2**	**-0.7**
KLY	**Klyuchi**	**2.55**	**349**	*e*P	**Pn**	**07 42 45.0**	**+0.1**
KLY				*i* S	**Sn**	**07 43 17.1**	**+2.4**
SRDR	**Sredinnyy**	**2.71**	**339**	*e*P	**Pn**	**07 42 47.7**	**+0.7**
SRDR				*i* S	**Sn**	**07 43 20.9**	**+2.4**
SRKR	**Sorokina**	**2.85**	**356**	*e*P	**Pn**	**07 42 49.6**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.24**	**244**	*e*P	**Pn**	**07 42 56.0**	**+1.6**
MIPR				*i* S	**Sn**	**07 43 35.5**	**+3.8**
SKR	**Severo-Kuril's**	**4.55**	**229**	*e*PN	**Pn**	**07 43 11.5**	**-0.8**
SKR				S	**Sn**	**07 44 07.5**	**+3.6**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				smax			
	comp=N,2μm,0.9s						
SKR				smax			
	comp=E,980nm,0.9s						
SKR				smax			
	comp=N,3μm,2.0s						
SKR				smax			
	comp=E,3μm,2.0s						
SKR				MLR	MLR		
	comp=N,5μm,14.0s						
SKR				MLR	MLR		
	comp=E,3μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
FX1	**Attu Island--F**	**7.05**	**93**	Pn	**Pn**	**07 43 42.0**	**-4.6**
	comp=Z,82nm,0.3s,baz=308,slow=6.2,SNR=153						
FX1				Sn	**Sn**	**07 44 55.9**	**-10**
	comp=Z,56nm,0.3s,baz=72,slow=22,SNR=7.2						
SMY	**Shemya**	**7.64**	**93**	*e*PN	**Pn**	**07 43 51.2**	**-3.5**
SEY	**Seymchan**	**10.31**	**336**	*e*PN	**Pn**	**07 44 31.4**	**+0.2**
UGL	**Uglegorsk**	**13.00**	**256**	PN	**Pn**	**07 45 13.0**	**+5.0**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				MLR	MLR		
	comp=E,1μm,18.0s						
UGL				MLR	MLR		
	comp=Z,3μm,18.0s						
UGL				MLR	MLR		
	comp=N,700nm,20.0s						
YSS	**Yuzh-Sakhalins**	**13.76**	**248**	⇓*e*P	**Pn**	**07 45 20.8**	**+2.4**
YSS				*e*S	**Sn**	**07 47 52.0**	**+2.3**
YSS				MLR	MLR		
	comp=E,1μm,15.0s						
YSS				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS				MLR	MLR		
	comp=N,1μm,17.0s						
BILL	**Bilibino**	**14.46**	**7**	⇓*e*P	**Pn**	**07 45 25.0**	**-2.8**
BILL				*e*S	**Sn**	**07 48 05.6**	**-0.9**
BILL				pmax	pmax		
	comp=Z,14nm,1.3s						
BILL				MLR	MLR		
	comp=Z,800nm,16.0s						
BILL	**Bilibino**	**14.46**	**7**	*e*Pn	**Pn**	**07 45 30.3**	**+2.6**
	comp=Z,14nm,0.7s						
ASAJ	**Asahikawa**	**15.70**	**240**	Pn	**Pn**	**07 45 44.1**	**-0.1**
	comp=Z,6.3nm,0.3s,baz=79,slow=12,SNR=35						
ASAJ	**Asahikawa**	**15.70**	**240**	P	**Pn**	**07 45 44.2**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ERM	**Erimo**	**16.98**	**233**	Pn	**Pn**	**07 45 57.5**	**-3.0**
	comp=Z,1μm,0.5s,SNR=11						
ERM	**Erimo**	**16.98**	**233**	*e*P	**Pn**	**07 45 58.2**	**-2.3**
ERM	**Erimo**	**16.98**	**233**	*e*P	**Pn**	**07 45 57.6**	**-2.9**
	comp=Z,95nm,0.6s						
HABR	**Khabarovsk**	**17.37**	**263**	*e*P	**Pn**	**07 46 08.4**	**+3.0**
HABR				*e*S	**S**	**07 49 18.6**	**-6.3**
HABR				MLR	MLR		
	comp=Z,326nm,12.0s						
YAK	**Yakutsk**	**18.62**	**309**	*e*P	**Pn**	**07 46 18.0**	**-2.5**
YAK				*e*		07 49 46.4	
YAK				pmax	pmax		
	comp=Z,52nm,0.8s						
YAK				pmax	pmax		
	comp=E,38nm,1.5s						
YAK				pmax	pmax		
	comp=N,13nm,1.5s						
YAK				MLR	MLR		
	comp=Z,1μm,19.0s						
YAK				MLR	MLR		
	comp=N,485nm,14.0s						
YAK				MLR	MLR		
	comp=E,676nm,12.0s						
YAK	**Yakutsk**	**18.62**	**309**	*e*P	**Pn**	**07 46 19.0**	**-1.5**
	comp=E,79nm,0.8s						
KLR	**Kul'dur**	**18.99**	**268**	*e*P	**Pn**	**07 46 21.8**	**-3.2**
KLR				pmax	pmax		
	comp=E,160nm,1.8s						
KLR				pmax	pmax		
	comp=Z,120nm,1.8s						
KLR				MLR	MLR		
	comp=E,1μm,15.0s						
KLR				MLR	MLR		
	comp=Z,1μm,15.0s						
TNA	**Tin City**	**19.16**	**40**	*e*P	**Pn**	**07 46 25.8**	**-1.2**
	comp=Z,25nm,1.1s						
CLNS	**Chul'man**	**20.88**	**293**	*e*P	**P**	**07 46 43.1**	**-1.5**
CLNS				*e*S	**S**	**07 50 33.1**	**-2.0**
CLNS				*e*		07 50 50.7	
CLNS				*e*SS		07 51 21.5	
CLNS				pmax	pmax		
	comp=Z,40nm,1.1s						
CLNS				pmax	pmax		
	comp=E,41nm,1.1s						
CLNS				pmax	pmax		
	comp=N,29nm,1.1s						
CLNS				smax			
	comp=N,95nm,12.1s						
CLNS				smax			
	comp=E,172nm,12.5s						
CLNS				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.4						
CLNS				MLR	MLR		
	comp=E,732nm,13.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,170nm,13.0s,MS4.2						
NRGR	**Nerungri**	**20.99**	**293**	*e*P	**P**	**07 46 47.1**	**+1.3**
NRGR				S	**S**	**07 50 32.1**	**-5.3**
NRGR				smax			
	comp=N,25nm,0.5s						
MDJ	**Mudanjiang**	**22.61**	**259**	P	**P**	**07 47 02.4**	**-0.8**
MDJ				AP		07 47 10.0	
MDJ				XP	sP	07 47 14.0	-3.5
MDJ				PCP	PcP	07 50 56.8	+1.8
MDJ				S	**S**	**07 51 05.6**	**-3.0**
MDJ				SCP	ScP	07 54 32.0	+2.6
MDJ				PCS	PcS	07 54 34.9	+1.2
MDJ				SCS	ScS	07 58 17.6	+2.9
MDJ				AMB	AMB		
	comp=Z,24nm,0.9s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,220nm,5.5s						
MDJ				LR	LR		
	comp=N,375nm,16.6s,MS4.2						
MDJ				LR	LR		
	comp=E,574nm,16.6s,MS4.2						
MDJ				LR	LR		
	comp=Z,654nm,13.6s,MS4.2						
MDJ	**Mudanjiang**	**22.61**	**259**	*e*P	**P**	**07 47 01.8**	**-1.3**
	comp=Z,29nm,0.8s,mb4.8						
TIXI	**Tiksi**	**22.79**	**334**	*e*P	**P**	**07 47 02.3**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,33nm,1.2s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.1						
TIXI	**Tiksi**	**22.79**	**334**	*e*P	**P**	**07 47 02.7**	**-2.1**
	comp=Z,27nm,1.0s,mb4.6						
MAJO	**Matsushiro**	**23.65**	**233**	*e*P	**P**	**07 47 14.8**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,247nm,0.9s,mb5.6						
MAJO	**Matsushiro**	**23.65**	**233**	*e*P	**P**	**07 47 14.8**	**+1.0**
	comp=Z,247nm,0.9s,mb5.6						
MJAR	**Matsushiro Arr**	**23.65**	**233**	P	**P**	**07 47 14.2**	**+0.4**
	comp=Z,100nm,0.8s,mb5.3,baz=20,slow=10,SNR=127						
MJAR				LR	LR	07 58 02.9	
	comp=Z,268nm,18.2s,MS3.8,baz=20,slow=41						
MJAR	**Matsushiro Arr**	**23.65**	**233**	P	**P**	**07 47 14.2**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,100nm,0.9s						
MJAR				MLR	MLR		
	comp=Z,269nm,18.2s						
SVW2	**Sparrevohn**	**23.83**	**55**	*e*P	**P**	**07 47 14.3**	**-1.0**
OHAK	**Old Harbor**	**25.47**	**64**	*e*P	**P**	**07 47 28.1**	**-2.0**
CN2	**Changchun**	**25.50**	**262**	*e*P	**P**	**07 47 30.0**	**-0.6**
CN2				*e*AP	pP	07 47 39.3	-1.7
CN2				*e*XP	sP	07 47 43.3	-2.2
CN2				*e*S	**S**	**07 51 51.9**	**-3.4**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,560nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=E,910nm,19.0s,MS4.4						
CN2				LR	LR		
	comp=Z,1μm,18.0s,MS4.4						
KDAK	**Kodiak Island**	**25.73**	**62**	P	**P**	**07 47 30.1**	**-2.4**
	comp=Z,7.5nm,0.8s,mb4.3,baz=326,slow=5.7,SNR=5.8						
KDAK		

EGAK **Eagle** 30.16 46 *e*P P **07 48 10.1 -2.0**
comp=Z,22nm,0.8s,mb5.0
EGAK *e*pP pP 07 48 19.9 -2.7
DL2 Dalian 30.82 257 P P **07 48 17.3 -0.8**
DL2 *e*S S **07 53 17.3 -1.7**
DL2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
DL2 LR LR
comp=N,410nm,15.9s
DL2 LR LR
comp=Z,350nm,14.1s,MS4.2
DAWY Dawson 31.02 47 *e*P P **07 48 18.8 -0.9**
DAWY *e* pP 07 48 28.4 -1.8
BJI Beijing 33.27 264 P P **07 48 39.1 -0.5**
BJI S S **07 53 56.8 -0.3**
BJI AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
BJI AMB AMB
comp=Z,129nm,4.9s
BJI LR LR
comp=N,846nm,15.9s,MS4.7
BJI LR LR
comp=E,729nm,14.4s,MS4.7
BJI LR LR
comp=Z,537nm,18.3s,MS4.3
ULN Ulaanbaatar 34.15 283 *e*P P **07 48 46.0 -1.2**
TLY Talaya 34.25 291 *e*P P **07 48 47.1 -0.9**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TLY MLR MLR
comp=Z,667nm,17.0s,MS4.4
TLY Talaya 34.25 291 *e*P P **07 48 47.6 -0.4**
comp=Z,5.4nm,0.9s,mb4.5
TLY *e*pP pP 07 48 58.8 +0.3
SONM Songino Array 34.55 283 P P **07 48 49.7 -1.0**
comp=Z,1.3nm,0.7s,mb4.0,baz=55,slow=8.4,SNR=12
SONM PcP PcP 07 51 25.3 +0.7
comp=Z,5.0nm,0.7s,baz=76,slow=1.3,SNR=12
SONM ScP ScP 07 55 10.1 +3.5
comp=Z,1.3nm,1.1s,baz=98,slow=3.0,SNR=3.6
SONM LR LR 08 04 18.9
comp=Z,646nm,18.5s,MS4.4,baz=183,slow=39
HHC Hu-ho-hao-te 35.49 269 *e*P P **07 48 58.8 0.0**
HHC AP pP 07 49 08.3 -1.1
HHC XP sP 07 49 12.3 -1.5
HHC PP PP 07 50 18.8 -0.8
HHC PCP PcP 07 51 28.8 +1.3
HHC S S **07 54 28.6 -2.7**
HHC XS sS 07 54 46.1 -2.7
HHC PCS PcS 07 55 13.8 -0.7
HHC SS SS 07 56 49.3 -17
HHC SCS ScS 07 59 12.6 -2.1
HHC AMB AMB
comp=Z,12nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,221nm,5.6s
HHC LR LR
comp=N,331nm,14.3s,MS4.4
HHC LR LR
comp=E,334nm,13.1s,MS4.4
HHC LR LR
comp=Z,606nm,13.1s,MS4.5
NJ2 Nanjing 37.28 252 *e*P P **07 49 18.3 +4.1**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
WHN Wuhan 40.96 255 P P **07 49 44.0 -0.9**
WHN S S **07 55 59.9 +5.7**
WHN LR LR
comp=N,915nm,14.2s
WHN LR LR
comp=E,795nm,25.2s
WHN LR LR
comp=Z,1µm,13.6s,MS4.9
YKA Yellowknife Ar 42.07 44 P P **07 49 52.5 -1.1**
comp=Z,0.7nm,0.7s,baz=298,slow=8.0,SNR=10.0
YKA Yellowknife Ar 42.07 44 P P **07 49 52.5 -1.1**
RES Resolute Bay 42.34 23 *e*P P **07 49 56.3 +0.6**
RES pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
RES Resolute Bay 42.34 23 *e*P P **07 49 56.2 +0.5**
comp=Z,6.6nm,0.9s,mb4.3
RES *e*pP pP 07 50 05.5 -1.0
YULB Yu-li 42.77 241 *e*P P **07 50 00.0 +0.3**
comp=Z,13nm,0.7s,mb4.8
YULB *e* 07 50 16.4
ZALV Zalesovo Beam 43.09 303 P P **07 49 59.0 -3.0**
comp=Z,1.0nm,0.4s,mb3.9,baz=53,slow=5.7,SNR=6.6
ZALV PP PP 07 51 38.9 -3.3
comp=Z,0.4nm,0.3s,baz=46,slow=6.2,SNR=2.8
ZALV LR LR 08 09 35.2
comp=Z,484nm,18.1s,MS4.4,baz=65,slow=38
ZALV Zalesovo Beam 43.09 303 P P **07 49 59.0 -3.0**
ZALV 07 51 38.9
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
ZALV MLR MLR
comp=Z,484nm,18.1s,MS4.4
LZH Lanzhou 43.18 270 *e*P P **07 50 02.3 -0.7**
LZH AP pP 07 50 11.0 -2.7
LZH XP sP 07 50 13.5 -4.6
LZH PP PP 07 51 45.1 +1.6
LZH PCP PcP 07 51 53.0 +1.1
LZH *e*S S **07 56 28.0 +1.2**
LZH XS sS 07 56 40.0 -4.6
LZH SS SS 07 59 34.0 -6.2
LZH AMB AMB
comp=Z,40nm,1.6s,mb4.9
LZH AMB AMB
comp=Z,180nm,5.7s
LZH LR LR
comp=E,876nm,15.1s
LZH LR LR
comp=Z,969nm,16.3s,MS4.8
GTA Gaotai 43.35 277 ⇑P P **07 50 03.6 -0.7**
GTA AP pP 07 50 13.5 -1.6
GTA XP sP 07 50 17.4 -2.1
GTA PCP PcP 07 51 53.6 +1.2
GTA S S **07 56 27.8 -1.6**
GTA XS sS 07 56 44.3 -2.8
GTA SS SS 07 59 34.3 -9.2
GTA AMB AMB
comp=Z,7.0nm,0.9s,mb4.4
GTA AMB AMB
comp=Z,187nm,4.2s
GTA LR LR
comp=N,643nm,15.3s,MS4.8
GTA LR LR
comp=E,720nm,16.2s,MS4.8
GTA LR LR
comp=Z,606nm,14.4s,MS4.6
NVS Novosibirsk 43.40 304 *i* P P **07 50 01.4 -3.1**
NVS pmax pmax
comp=Z,23nm,1.1s,mb4.8
NVS pmax pmax
comp=N,5.0nm,0.6s
NVS pmax pmax
comp=E,6.0nm,0.5s
SPITS Spitsbergen Ar 46.56 351 P P **07 50 28.3 -1.1**
comp=E,37nm,1.0s,mb5.3,baz=14,slow=4.0,SNR=8.1
SPITS Spitsbergen Ar 46.56 351 P P **07 50 28.3 -1.1**
SPITS pmax pmax
comp=Z,37nm,1.0s
SPB4 Spitsbergen Ar 46.56 351 *e*P P **07 50 27.8 -1.6**
SPB4 *e*pP pP 07 50 40.1 -0.1
CD2 Chengdu 46.87 265 P P **07 50 32.4 +0.1**
CD2 AP pP 07 50 42.4 -0.8
CD2 XP sP 07 50 46.3 -1.3
CD2 PCP PcP 07 52 05.8 +1.1
CD2 PP PP 07 52 22.5 -0.2
CD2 PCS PcS 07 55 59.3 -0.4
CD2 S S **07 57 18.9 -1.4**
CD2 XS sS 07 57 35.4 -2.8
CD2 SS SS 08 00 36.9 -10
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.4
CD2 AMB AMB
comp=Z,160nm,4.9s
CD2 LR LR
comp=N,770nm,17.8s
CD2 LR LR
comp=Z,730nm,16.7s,MS4.7
WMQ Urumqi 47.52 290 P P **07 50 36.3 -0.9**
WMQ AP pP 07 50 47.3 -0.8
WMQ AMB AMB
comp=Z,20nm,1.0s,mb5.1
WMQ LR LR
comp=N,231nm,17.0s,MS4.4
WMQ LR LR
comp=E,302nm,17.0s,MS4.4
WMQ LR LR
comp=Z,565nm,17.0s,MS4.6
ETW Entiat 47.55 64 *e*P P **07 50 35.9 -1.5**
comp=Z,33nm,1.0s,mb5.3
EDM Edmonton 47.67 54 *e*P P **07 50 38.2 0.0**
EDM *e*pP pP 07 50 48.4 -0.7
KURK Kurchatov 48.06 302 P P **07 50 39.3 -2.1**
comp=Z,64nm,0.7s,mb5.8,SNR=6.6
KURK Kurchatov 48.06 302 P P **07 50 39.5 -1.9**
comp=Z,4.3nm,0.6s,mb4.7,baz=58,slow=7.6,SNR=16
KURK PcP PcP 07 52 07.9 -0.7
comp=Z,1.4nm,0.8s,baz=55,slow=8.2,SNR=3.9
KURK Kurchatov 48.06 302 P P **07 50 39.5 -1.9**
KURK 07 52 07.9
KURK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KURK Kurchatov 48.06 302 *e*P P **07 50 39.1 -2.2**
comp=Z,9.2nm,0.9s,mb4.8
HOOD Mount Hood Mea 48.26 67 *e*P P **07 50 43.0 0.0**
comp=Z,24nm,0.9s,mb5.2
HOOD *e*pP pP 07 50 52.4 -1.4
GYA Guiyang 48.47 258 P P **07 50 45.3 +0.5**
GYA AP pP 07 50 56.8 +1.2
GYA XP sP 07 51 01.3 +1.3
GYA PP PP 07 52 39.6 +2.1
GYA PPP 07 53 30.4
GYA SCP ScP 07 56 03.8 +1.8
GYA PCS PcS 07 56 08.9 +2.3
GYA SS SS 08 01 08.4 -4.5
GYA AMB AMB
comp=Z,30nm,0.7s,mb5.4
GYA AMB AMB
comp=Z,140nm,5.2s
GYA LR LR
comp=N,940nm,17.6s,MS4.9
GYA LR LR
comp=E,780nm,17.8s,MS4.9
GYA LR LR
comp=Z,980nm,18.4s,MS4.8
OD2 Odessa Site #2 48.54 63 *e*P P **07 50 43.7 -1.4**
comp=Z,19nm,1.0s,mb5.1
OD2 *e*pP pP 07 50 54.6 -1.3
MK31 Makanchi Array 48.59 296 *e*P P **07 50 43.1 -2.4**
MKAR Makanchi Array 48.59 296 P P **07 50 43.0 -2.5**
comp=Z,3.9nm,0.7s,mb4.6,baz=54,slow=7.0,SNR=19
MKAR Makanchi Array 48.59 296 P P **07 50 43.1 -2.4**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
RSW Rattlesnake Hi 48.70 65 *e*P P **07 50 46.1 -0.2**
comp=Z,25nm,1.1s,mb5.2
RSW *e*pP pP 07 50 56.0 -1.2
HAWA Hanford 48.73 65 *e*P P **07 50 46.1 -0.5**
comp=Z,57nm,1.9s,mb5.3
HAWA *e*pP pP 07 50 56.6 -0.8
NEW Newport 48.82 61 *e*P P **07 50 46.3 -0.9**
NEW pmax pmax
comp=Z,14nm,1.1s
NEW Newport 48.82 61 *e*P P **07 50 46.3 -1.0**
comp=Z,14nm,1.1s,mb4.9
NEW *e*pP pP 07 50 56.9 -1.3
WALA Waterton Lakes 49.97 59 *e*P P **07 50 55.5 -0.5**
comp=Z,0.9nm,0.9s,mb3.8
WALA *e*pP pP 07 51 06.1 -0.8
YBH Yreka Blue Hor 50.00 71 *e*P P **07 50 57.0 +0.7**
YBH pmax pmax
comp=Z,8.0nm,0.8s
YBH Yreka Blue Hor 50.00 71 *e*P P **07 50 57.0 +0.8**
comp=Z,7.6nm,0.8s,mb4.8
YBH *e*pP pP 07 51 08.2 +1.0
BVAR Borovoye Array 50.59 309 P P **07 50 58.0 -2.6**
comp=Z,6.2nm,0.6s,mb4.7,baz=59,slow=7.6,SNR=36
BVAR PcP PcP 07 52 17.1 -0.7
comp=Z,0.9nm,0.5s,baz=66,slow=3.6,SNR=3.7
BVAR Borovoye Array 50.59 309 P P **07 50 58.0 -2.6**
BVAR 07 52 17.1
BVAR pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 50.62 309 *e*P P **07 50 58.8 -2.1**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
BRVK Borovoye 50.62 309 *e*P P **07 50 58.8 -2.1**
comp=Z,8.9nm,0.7s,mb4.8
BMO Blue Mountains 50.92 65 *e*P P **07 51 03.1 -0.1**
comp=Z,26nm,1.5s,mb4.9
BMO *e*pP pP 07 51 13.1 -1.0
MOD Modoc 51.23 70 *e*P P **07 51 06.2 +0.6**
comp=Z,19nm,0.9s,mb5.0
MOD *e*pP pP 07 51 16.4 -0.1
MSO Missoula 51.40 61 *e*P P **07 51 07.5 +0.7**
comp=Z,13nm,1.2s,mb4.7
MSO *e*pP pP 07 51 16.8 -0.9
KMI Kunming 51.77 261 P P **07 51 10.5 +0.7**
KMI AP pP 07 51 20.1 -0.6
KMI XP sP 07 51 24.1 -1.0
KMI PP PP 07 53 09.6 +2.0
KMI S S **07 58 26.9 -2.2**
KMI XS sS 07 58 45.5 -1.6
KMI SS SS 08 02 03.3 -2.3
KMI AMB AMB
comp=Z,19nm,0.9s,mb5.0
KMI AMB AMB
comp=Z,90nm,4.1s
KMI LR LR
comp=N,364nm,14.7s,MS4.7
KMI LR LR
comp=E,370nm,17.0s,MS4.7
KMI LR LR
comp=Z,375nm,14.7s,MS4.5
WVOR Wild Horse Val 51.80 68 *e*P P **07 51 09.6 -0.2**
WVOR pmax pmax
comp=Z,11nm,1.1s,mb4.7
WVOR Wild Horse Val 51.80 68 *e*P P **07 51 09.6 -0.2**
comp=Z,11nm,1.1s,mb4.7
WVOR *e*pP pP 07 51 20.3 -0.4
FCC Fort Churchill 52.40 40 *e*P P **07 51 13.2 -0.8**
comp=Z,0.2nm,0.7s
FCC *e*pP pP 07 51 23.9 -1.1
QIZ Qiongzhong 52.48 249 P P **07 51 17.8 +2.7**
QIZ AP pP 07 51 27.8 +1.7
QIZ S S **07 58 43.4 +4.5**
QIZ AMB AMB
comp=Z,56nm,1.1s,mb5.4
QIZ LR LR
comp=E,339nm,16.0s
QIZ LR LR
comp=Z,308nm,13.6s,MS4.5
EGMT Eagleton 52.74 57 *e*P P **07 51 17.6 +0.8**
comp=Z,11nm,0.9s,mb4.8
EGMT *e*pP pP 07 51 26.4 -1.3
ARCES ARCESS Array B 52.86 342 P P **07 51 15.6 -1.8**
comp=Z,5.0nm,0.8s,mb4.5,baz=30,slow=9.8,SNR=4.5
ARCES ARCESS Array B 52.86 342 P P **07 51 15.6 -1.7**
ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES ARCESS Array B 52.86 342 P P **07 51 15.6 -1.8**
SUMG Summit 53.14 7 *e*P P **07 51 19.4 +0.1**
comp=Z,55nm,1.1s,mb5.4
SUMG *e*pP pP 07 51 31.3 +0.9
PAHR Pah Rah Range 53.23 71 *e*P P **07 51 21.3 +0.9**
comp=Z,109nm,2.2s,mb5.4
HLID Hailey 53.33 64 *e*P P **07 51 21.4 +0.3**
comp=Z,7.6nm,1.0s,mb4.6
HLID *e*pP pP 07 51 31.2 -0.9
ARU Arti 53.43 318 *d*iP P **07 51 20.5 -1.2**
ARU *e* 07 53 18.8
ARU *e*S S **07 58 51.5 +0.5**
ARU SS SS 08 02 28.9 -1.7
ARU pmax pmax
comp=Z,21nm,1.0s,mb5.0
ARU Arti 53.43 318 *e*P P **07 51 20.8 -0.9**
comp=Z,16nm,0.6s,mb5.1
ARU *e*pP pP 07 51 31.4 -1.3
BMN Battle Mountai 53.94 69 *e*P P **07 51 26.2 +0.6**
BMN pmax pmax
comp=Z,12nm,0.9s,mb4.8
BMN Battle Mountai 53.94 69 *e*P P **07 51 26.2 +0.5**
comp=Z,12nm,0.9s,mb4.8
BMN *e*pP pP 07 51 36.5 -0.1
WAKR Walker 54.03 72 *e*P P **07 51 27.2 +0.9**
QLMT Earthquake Lak 54.04 61 *e*P P **07 51 26.5 +0.2**
comp=Z,13nm,1.0s,mb4.8
QLMT *e*pP pP 07 51 37.2 -0.1
YNR Norris Junctio 54.51 61 *e*P P **07 51 30.2 +0.5**
comp=Z,20nm,1.3s,mb5.0
YNR *e*pP pP 07 51 41.6 +0.9
YFT Old Faithful 54.61 61 *e*P P **07 51 32.0 +1.6**
comp=Z,19nm,1.0s,mb5.1
YFT *e*pP pP 07 51 42.1 +0.7
NVAR Mina Array Bea 54.72 71 P P **07 51 32.1 +0.8**
comp=Z,3.2nm,0.6s,mb4.5,baz=300,slow=7.1,SNR=37
DAV Davao City (W) 54.89 225 LR LR 08 16 31.6
comp=Z,93nm,19.0s,MS3.9,baz=267,slow=38
IMW Indian Meadow 54.94 62 *e*P P **07 51 33.6 +0.8**
comp=Z,22nm,1.2s,mb5.1
IMW *e*pP pP 07 51 44.0 +0.2
RLMT Red Lodge 54.96 60 *e*P P **07 51 33.8 +0.8**
comp=Z,30nm,1.0s,mb5.3
RLMT *e*pP pP 07 51 44.1 +0.1
MOOW Moose Ponds 55.14 62 *e*P P **07 51 34.8 +0.5**
comp=Z,8.2nm,1.0s,mb4.7
MOOW *e*pP pP 07 51 45.3 0.0
LSA Lhasa 55.22 274 P P **07 51 37.0 +2.0**
LSA Lhasa 55.22 274 *e*P P **07 51 36.6 +1.6**
LSA pmax pmax
comp=Z,22nm,0.8s,mb5.2
LSA Lhasa 55.22 274 *e*P P **07 51 36.6 +1.5**
comp=Z,22nm,0.8s,mb5.2
LOHW Long Hollow 55.31 62 *e*P P **07 51 36.3 +0.8**
comp=Z,17nm,1.1s,mb5.0
LOHW *e*pP pP 07 51 47.0 +0.4
MTUM Tungsten Hills 55.32 73 *e*P P **07 51 36.7 +1.0**
MTUM *e*pP pP 07 51 47.4 +0.7
AAK Ala-Archa 55.51 297 P P **07 51 35.0 -2.0**
comp=Z,54nm,0.8s,mb5.6,SNR=5.2
AAK Ala-Archa 55.51 297 *e*P P **07 51 36.0 -1.0**
AAK pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
AAK Ala-Archa 55.51 297 *e*P P **07 51 36.0 -1.0**
comp=Z,6.1nm,0.7s,mb4.7
TPH Tonopah 55.57 71 *e*P P **07 51 38.4 +0.9**
TPH pmax pmax
comp=Z,25nm,0.9s,mb5.2
TPH Tonopah 55.57 71 *e*P P **07 51 38.4 +0.9**
comp=Z,25nm,0.9s,mb5.2
TPH *e*pP pP 07 51 48.3 -0.3
EKS2 Erkin-Say 55.87 297 *e*P P **07 51 37.4 -2.1**
comp=Z,7.0nm,0.8s,mb4.7
SPUT South Promonto 55.93 65 *e*P P **07 51 40.7 +0.6**
comp=Z,2.4nm,0.7s,mb4.3
SPUT *e*pP pP 07 51 51.0 -0.1
BW06 Boulder Array 56.45 62 *e*P P **07 51 44.3 +0.6**
comp=Z,21nm,1.1s,mb5.1
BW06 *e*pP pP 07 51 54.6 -0.1
PDAR Pinedale Array 56.45 62 P P **07 51 44.2 +0.5**
comp=Z,2.3nm,0.8s,mb4.2,baz=318,slow=2.5,SNR=19
PDAR LR LR 08 16 13.4
comp=Z,264nm,19.0s,MS4.3,baz=328,slow=36
DUG Dugway 56.52 66 *e*P P **07 51 45.1 +0.9**
DUG pmax pmax
comp=Z,32nm,1.0s,mb5.3
DUG Dugway 56.52 66 *e*P P **07 51 45.1 +0.9**
comp=Z,32nm,1.0s,mb5.3
DUG *e*pP pP 07 51 55.1 -0.2
KLMR Klimovskoe 56.74 330 *e*P P **07 51 44.7 -0.8**
KLMR pmax pmax
comp=Z,21nm,0.8s,mb5.2
JLU Jordanelle 56.97 65 *e*P P **07 51 48.7 +1.3**
comp=Z,2.4nm,1.0s,mb4.2
JLU *e*pP pP 07 51 58.7 +0.2
NLU North Lily Min 57.09 66 P P **07 51 48.9 +0.6**
comp=Z,22nm,0.9s,mb5.2
NLU *e*pP pP 07 51 59.6 +0.2
DAU Daniels Canyon 57.21 65 *e*P P **07 51 50.5 +1.4**
DAU *e*pP pP 07 52 00.9 +0.8
JOF Joensuu 57.26 335 *e*p P **07 51 47.5 -1.7**
comp=Z,16nm,0.7s,mb5.2
JOF Joensuu 57.26 335 *e*P P **07 51 47.5 -1.7**
JOF pmax pmax
comp=Z,16nm,0.7s,mb5.2
MPU Maple Canyon 57.28 66 *e*P P **07 51 50.4 +0.7**
comp=Z,32nm,1.1s,mb5.3
MPU *e*pP pP 07 52 00.6 -0.1
ULM Lac du Bonnet 57.72 48 LR LR 08 19 25.3
comp=Z,167nm,21.9s,MS4.1,baz=211,slow=39
GSC Goldstone 57.78 73 *e*P P **07 51 53.6 +0.4**
GSC pmax pmax
comp=Z,23nm,1.3s,mb5.0
GSC Goldstone 57.78 73 *e*P P **07 51 53.5 +0.3**
comp=Z,23nm,1.3s,mb5.0
GSC *e*pP pP 07 52 03.8 -0.5
MWC Mount Wilson 57.84 75 *e*P P **07 51 54.1 +0.4**
MWC pmax pmax
comp=Z,13nm,1.2s,mb4.8
MWC Mount Wilson 57.84 75 *e*P P **07 51 54.1 +0.5**
comp=Z,13nm,1.2s,mb4.8
MWC *e*pP pP 07 52 04.4 -0.4
SHPR Sheep Range 57.84 71 *e*P P **07 51 54.2 +0.5**
SHPR *e*pP pP 07 52 04.5 -0.2
AKTK Aktyubinsk 57.95 313 P P **07 51 53.5 -0.6**
AKTK PcP PcP 07 52 45.8 -0.2
AKTO Aktyubinsk 57.95 313 P P **07 51 53.5 -0.6**
comp=Z,2.7nm,0.5s,mb4.5,baz=65,slow=5.3,SNR=8.3
AKTO PcP PcP 07 52 45.8 -0.2
comp=Z,5.3nm,0.7s,baz=75,slow=4.1,SNR=5.3
AKTO Aktyubinsk 57.95 313 P P **07 51 53.6 -0.6**
AKTO 07 52 45.8
AKTO pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
TMUT Trail Mountain 58.03 66 *e*P P **07 51 55.7 +0.8**
comp=Z,19nm,0.8s,mb5.2
TMUT *e*pP pP 07 52 06.0 +0.1
MSU Marysvale 58.06 67 *e*P P **07 51 56.3 +1.2**
MSU pmax pmax
comp=Z,14nm,1.1s,mb4.9
MSU Marysvale 58.06 67 *e*P P **07 51 56.3 +1.1**
comp=Z,14nm,1.1s,mb4.9
MSU *e*pP pP 07 52 06.6 +0.4
RSSD Black Hills 58.31 58 *e*P P **07 51 57.2 +0.4**
RSSD pmax pmax
comp=Z,12nm,0.8s,mb5.0
RSSD Black Hills 58.31 58 *e*P P **07 51 57.2 +0.4**
comp=Z,12nm,0.8s,mb5.0
RSSD *e*pP pP 07 52 07.6 -0.3
SRU San Rafael 58.53 66 *e*P P **07 51 59.0 +0.6**
SRU pmax pmax
comp=Z,33nm,0.8s,mb5.4
SRU San Rafael 58.53 66 *e*P P **07 51 59.0 +0.6**
comp=Z,33nm,0.8s,mb5.4
SRU *e*pP pP 07 52 09.4 -0.1
CHTO Chiang Mai 58.86 259 *e*P P **07 52 01.5 +0.6**
CHTO pmax pmax
comp=Z,53nm,0.7s,mb5.7
CHTO Chiang Mai 58.86 259 *e*P P **07 52 01.5 +0.6**
comp=Z,53nm,0.7s,mb5.7
LDFC Landfair 58.90 72 *e*P P **07 52 01.6 +0.6**
comp=Z,33nm,1.0s,mb5.3
LDFC *e*pP pP 07 52 11.7 -0.5
TAPN Taplejung 58.98 275 *e*P P **07 52 02.3 +0.6**
comp=Z,42nm,0.8s,mb5.5
CMAR Chiang Mai Arr 59.14 259 P P **07 52 03.4 +0.5**
comp=Z,42nm,0.8s,mb5.5,baz=25,slow=6.7,SNR=10.0
CMAR PcP PcP 07 52 52.1 +1.0
comp=Z,4.2nm,0.7s,baz=7.2,slow=3.3,SNR=4.3
CMAR LR LR 08 19 55.6
comp=Z,226nm,19.6s,MS4.3,baz=50,slow=38
CMAR Chiang Mai Arr 59.14 259 P P **07 52 03.4 +0.5**
CMAR 07 52 52.2
CMAR pmax pmax
comp=Z,42nm,0.8s
CMAR MLR MLR
comp=Z,226nm,19.6s
KAF Kangasniemi 59.15 337 *e*p P **07 52 00.9 -1.4**
comp=Z,15nm,0.7s,mb5.1,baz=28,slow=6.5
KAF Kangasniemi 59.15 337 *e*P P **07 52 00.9 -1.4**
KAF pmax pmax
comp=Z,15nm,0.7s,mb5.1
GUN Gumba 59.65 277 *e*P P **07 52 06.6 +0.3**
comp=Z,20nm,0.7s,mb5.3
JIRN Jiri 59.65 276 *e*P P **07 52 06.5 +0.2**
comp=Z,21nm,0.8s,mb5.2
RAMN Ramite 59.94 275 *e*P P **07 52 08.5 +0.2**
comp=Z,38nm,0.6s,mb5.6
KKN Kakani 60.09 277 *e*P P **07 52 09.4 +0.1**
PKI Pulchoki 60.17 277 *e*P P **07 52 09.9 0.0**
GKN Gorkha 60.31 278 *e*P P **07 52 11.1 +0.3**
DMN Daman 60.33 277 *e*P P **07 52 10.9 0.0**
comp=Z,23nm,0.8s,mb5.2

DANN Dangsing 60.56 279 *e*P **P** **07 52 12.8 +0.2**
comp=Z,18nm,0.7s,mb5.3
ISCO Idaho Springs 60.64 62 *e*P **P** **07 52 14.8 +1.9**
ISCO pmax pmax
comp=Z,17nm,1.1s,mb5.1
ISCO Idaho Springs 60.64 62 *e*P **P** **07 52 14.8 +1.8**
comp=Z,17nm,1.1s,mb5.1
ISCO *e*pP pP 07 52 24.6 +0.5
WUAZ Wupatki 60.67 69 *e*P **P** **07 52 14.5 +1.3**
comp=Z,38nm,1.4s,mb5.3
WUAZ *e*pP pP 07 52 24.9 +0.5
MVCO Mesa Verde 61.01 66 *e*P **P** **07 52 16.4 +0.9**
comp=Z,12nm,0.8s,mb5.1
MVCO *e*pP pP 07 52 26.0 -0.6
KOLN Koldanda 61.09 278 *e*P **P** **07 52 16.0 -0.1**
comp=Z,15nm,0.7s,mb5.2
MOS Moscow 61.50 328 *e*P pP 07 52 30.4 +0.7
MOS pmax pmax
comp=Z,45nm,1.2s,mb5.5
VSU Vasula 62.26 335 *e*P **P** **07 52 22.0 -1.5**
VSU pmax pmax
comp=Z,31nm,1.3s,mb5.3
OBN Obninsk 62.36 328⇓ *e*P **P** **07 52 24.0 -0.3**
OBN *e* 07 54 38.1
OBN pmax pmax
comp=Z,16nm,0.7s,mb5.3
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.6
NB2 NORSAR Subarra 63.08 344 P **P** **07 52 28.2 -0.8**
comp=Z,31nm,0.8s,mb5.5,baz=21,slow=6.9
NOA NORSAR Array B 63.08 344 P **P** **07 52 27.9 -1.1**
comp=Z,21nm,0.8s,mb5.3,baz=20,slow=6.6,SNR=36
NOA NORSAR Array B 63.08 344 P **P** **07 52 27.9 -1.1**
NOA pmax pmax
comp=Z,21nm,0.8s
ANMO Albuquerque 63.79 66*d i*P **P** **07 52 35.1 +1.0**
ANMO pmax pmax
comp=Z,2.0nm,1.3s
ANMO Albuquerque 63.79 66 *e*P **P** **07 52 35.1 +1.1**
comp=Z,8.7nm,0.9s,mb4.8
ANMO *e*pP pP 07 52 45.1 -0.2
PMG Port Moresby 64.14 196 LR LR 08 15 03.5
comp=Z,68nm,21.6s,MS3.8,baz=147,slow=31
PMG Port Moresby 64.14 196 *e*P **P** **07 52 36.7 +0.3**
PMG pmax pmax
comp=Z,15nm,1.2s
PMG Port Moresby 64.14 196 *e*P **P** **07 52 36.6 +0.2**
comp=Z,11nm,1.1s,mb4.8
KBL Kabul 64.31 294 *e*P **P** **07 52 35.1 -2.4**
KBL pmax pmax
comp=Z,13nm,1.0s,mb4.9
KBL Kabul 64.31 294 *e*P **P** **07 52 35.1 -2.4**
comp=Z,13nm,1.0s,mb4.9
VSR Storozhevoye 64.75 324 *e*P **P** **07 52 39.7 -0.4**
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,3.0nm,0.7s
VORD Divnogorie 64.92 324 *e*P **P** **07 52 40.6 -0.6**
VORD pmax pmax
comp=E,100nm,0.5s
VORD pmax pmax
comp=Z,40nm,0.5s,mb5.7
VORD pmax pmax
comp=N,100nm,0.4s
KSM Kuching 66.91 238 *e*P **P** **07 52 56.2 +1.7**
comp=N,23nm,1.0s,mb5.2
SUW Suwalki 67.13 335 *e*P **P** **07 52 54.8 -0.5**
SUW Suwalki 67.13 335 *e*P **P** **07 52 54.8 -0.6**
WMOK Wichita Mounta 68.03 61 *e*P **P** **07 53 01.4 +0.1**
WMOK pmax pmax
comp=Z,11nm,0.8s,mb4.9
WMOK Wichita Mounta 68.03 61 *e*P **P** **07 53 01.4 +0.1**
comp=Z,11nm,0.8s,mb5.0
WMOK *e*pP pP 07 53 11.0 -1.6
AKASG Malin Array Be 68.42 330 P **P** **07 53 02.6 -0.9**
comp=Z,11nm,0.8s,mb4.9,baz=29,slow=6.0,SNR=28
AKASG Malin Array Be 68.42 330 P **P** **07 53 02.6 -0.9**
AKASG pmax pmax
comp=Z,11nm,0.8s
KIEV Kiev 68.43 330 *e*P **P** **07 53 02.6 -1.0**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KIEV Kiev 68.43 330 *e*P **P** **07 53 02.6 -1.0**
comp=Z,6.6nm,0.8s,mb4.7
COEN Coen 69.29 199 *e*P **P** **07 53 09.5 +0.2**
comp=Z,14nm,0.9s,mb4.9
COEN *e*pP pP 07 53 21.8 +1.3
KIV Kislovodsk 69.48 317 *e*P **P** **07 53 09.7 -0.5**
KIV *e* 07 53 31.9
KIV *e*S S 08 02 16.3 +1.6
KIV pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIV MLR MLR
comp=Z,299nm,18.0s,MS4.6
TXAR Lajitas Array 69.59 68 P **P** **07 53 10.4 -0.7**
comp=Z,2.5nm,0.8s,mb4.2,baz=300,slow=5.0,SNR=19
TXAR Lajitas Array 69.59 68 P **P** **07 53 10.4 -0.8**
TXAR pmax pmax
comp=Z,3.0nm,0.8s
BEL Belsk 69.72 335 *e*P **P** **07 53 12.3 +0.8**
BSEG Bad Segeberg 69.99 342 *e*P **P** **07 53 13.0 -0.2**
BSEG pmax pmax
comp=Z,17nm,1.1s,mb4.9
BSEG Bad Segeberg 69.99 342 *e*P **P** **07 53 13.0 -0.2**
comp=Z,17nm,1.1s,mb4.9
EKA Eskdalemuir Ar 70.49 351 P **P** **07 53 15.3 -0.9**
comp=Z,3.1nm,0.7s,mb4.4,baz=19,slow=5.2,SNR=10
EKA Eskdalemuir Ar 70.49 351 P **P** **07 53 15.3 -0.9**
EKA pmax pmax
comp=Z,3.0nm,0.7s
JCT Junction City 70.80 65 *e*P **P** **07 53 17.7 -0.8**
JCT pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
JCT Junction City 70.80 65 *e*P **P** **07 53 17.7 -0.8**
comp=Z,9.9nm,1.0s,mb4.7
JCT *e*pP pP 07 53 28.8 -1.1
MIAR Mount Ida 70.83 58 *e*P **P** **07 53 18.3 -0.4**
MIAR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MIAR Mount Ida 70.83 58 *e*P **P** **07 53 18.3 -0.4**
comp=Z,8.1nm,0.8s,mb4.7
MIAR *e*pP pP 07 53 28.5 -1.5
NRDL Niedersach Rie 71.41 342 *e*P **P** **07 53 21.8 0.0**
comp=Z,18nm,1.3s,mb4.8
OJC Ojcow 71.45 335 *e*P **P** **07 53 22.2 +0.1**
KSP Ksiaz 71.70 338 *e*P **P** **07 53 23.9 +0.3**
KSP Ksiaz 71.70 338 *e*P **P** **07 53 23.7 0.0**
KSP *e*pP pP 07 53 34.9 -0.1
PSI Prapat 71.82 249 P **P** **07 53 24.4 -0.5**
comp=Z,5.3nm,0.7s,mb4.6,baz=65,slow=3.7,SNR=3.8
PSI LR LR 08 25 31.9
comp=Z,95nm,18.8s,MS4.1,baz=28,slow=36
PSI Prapat 71.82 249 P **P** **07 53 24.4 -0.5**
PSI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
PSI MLR MLR
comp=Z,95nm,18.8s,MS4.1
STHS Stebnicka Huta 71.82 334 *i* P **P** **07 53 25.2 +0.8**
STHS pmax pmax
comp=Z,17nm,0.9s,mb5.0
STHS Stebnicka Huta 71.82 334 *i* P **P** **07 53 25.1 +0.7**
STHS Stebnicka Huta 71.82 334 *i* P **P** **07 53 25.2 +0.8**
comp=Z,17nm,0.9s,mb5.0
CLL Collm 71.97 340⇑ *i*P **P** **07 53 24.8 -0.5**
CLL pmax pmax
comp=Z,35nm,1.1s,mb5.2
CLL Collm 71.97 340 *e*P **P** **07 53 24.7 -0.6**
comp=Z,34nm,1.1s,mb5.2
CLL Collm 71.97 340⇑ *i*P **P** **07 53 24.8 -0.5**
comp=Z,35nm,1.1s,mb5.2
CLL *i* pP pP 07 53 36.6 0.0
CLL *i* PcP PcP 07 53 44.2 +0.5
CLL Collm 71.97 340⇑ *i*P **P** **07 53 24.8 -0.5**
comp=Z,35nm,1.1s,mb5.2
CLL *i* pP 07 53 36.6 0.0
CLZ Clausthal 71.98 342 *e*P **P** **07 53 25.6 +0.3**
CLZ pmax pmax
comp=Z,39nm,1.2s,mb5.2
CLZ Clausthal 71.98 342 *e*P **P** **07 53 25.6 +0.3**
comp=Z,39nm,1.2s,mb5.2
HYB Hyderabad 71.99 275 *i* P **P** **07 53 25.5 -0.4**
HYB Hyderabad 71.99 275 *e*P **P** **07 53 25.5 -0.4**
NIE Niedzica 72.06 335 *e*P **P** **07 53 26.6 +0.8**

DPC Dobruska-Polom 72.16 337 *e*P **P** **07 53 26.8 +0.4**
DPC *e*pP pP 07 53 37.3 -0.4
BRG Berggiesshubel 72.19 339 *i* P **P** **07 53 26.3 -0.3**
BRG pmax pmax
comp=Z,15nm,1.3s,mb4.8
BRG Berggiesshubel 72.19 339 *e*P **P** **07 53 25.8 -0.8**
comp=Z,24nm,1.3s,mb5.0
BRG Berggiesshubel 72.19 339 *i* P **P** **07 53 26.3 -0.3**
comp=Z,24nm,1.3s,mb5.0
CRVS Cervenica-Dubn 72.24 334 *i* P **P** **07 53 27.3 +0.4**
CRVS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CRVS Cervenica-Dubn 72.24 334 *i* P **P** **07 53 27.2 +0.3**
CRVS Cervenica-Dubn 72.24 334 *i* P **P** **07 53 27.3 +0.4**
comp=Z,8.0nm,0.9s,mb4.7
UZH Uzhgorod 72.26 333 *e*P **P** **07 53 26.7 -0.3**
BUR08 Bucovina Ar. S 72.34 331 *e*P **P** **07 53 27.6 0.0**
BURAR Bucovina Array 72.36 331⇓ *i*P **P** **07 53 27.6 -0.1**
BURAR Bucovina Array 72.36 331⇓ *i*P **P** **07 53 27.6 -0.1**
PVCC Panska Ves 72.38 339 *e*P **P** **07 53 28.0 +0.3**
PVCC *e*pP pP 07 53 38.6 -0.5
TRPA Tarpa 72.65 333⇑ *i*P **P** **07 53 29.9 +0.5**
MOX Moxa 72.88 340 *e*P **P** **07 53 30.7 0.0**
comp=Z,23nm,1.3s,mb5.0
MOX *e* pP 07 53 42.2 +0.1
MOX Moxa 72.88 340 *e*P **P** **07 53 30.7 0.0**
MOX *e* pP 07 53 42.2 +0.1
MOX pmax pmax
comp=Z,23nm,1.3s,mb5.0
MOX Moxa 72.88 340 *e*P **P** **07 53 30.6 -0.1**
comp=Z,20nm,1.2s,mb4.9
TANN Tannenbergstha 72.93 340 *e*P **P** **07 53 30.8 -0.2**
comp=Z,12nm,1.3s,mb4.7
VRAC Vranov 73.07 337 P **P** **07 53 31.7 -0.2**
comp=Z,14nm,0.9s,mb4.9,baz=15,slow=9.3,SNR=5.5
VRAC Vranov 73.07 337⇑ *i*P **P** **07 53 32.5 +0.7**
VRAC Vranov 73.07 337 P **P** **07 53 32.8 +0.9**
VYHS Vyhne 73.29 335 *i* P **P** **07 53 33.5 +0.4**
MANZ Manzenberg 73.41 340 *e*P **P** **07 53 33.6 -0.2**
comp=Z,16nm,1.4s,mb4.8
TLCR 73.44 327⇓ *i*P **P** **07 53 34.2 +0.1**
TLCR 73.44 327⇓ P **P** **07 53 34.2 +0.1**
PSZ Piszkesteto 73.55 334 P **P** **07 53 35.5 +0.8**
PSZ Piszkesteto 73.55 334⇓ *i*P **P** **07 53 35.3 +0.6**
PSZ Piszkesteto 73.55 334 *e*P **P** **07 53 35.2 +0.5**
comp=Z,8.2nm,0.9s,mb4.7
PSZ *e*pP pP 07 53 47.3 +1.2
ROTZ Rotzenmuhle 73.60 340 *e*P **P** **07 53 35.2 +0.3**
comp=Z,25nm,1.3s,mb5.0
MODS Modra-Piesok 73.78 336 *i* P **P** **07 53 37.3 +1.3**
HGN Heimansgroeve 73.79 344 *e*P **P** **07 53 26.8 -9.2**
comp=Z,12nm,3.0s
DRGR 73.83 332⇓ *i*P **P** **07 53 36.5 +0.2**
DRGR 73.83 332 P **P** **07 53 36.2 -0.1**
GRA1 Grafenberg Arr 73.87 340 *e*P **P** **07 53 36.8 +0.3**
comp=Z,32nm,1.5s,mb5.0
GRA1 *e*pP pP 07 53 48.7 +0.8
GRF Grafenberg Arr 73.87 340 *e*P **P** **07 53 36.8 +0.3**
GRF *e**PP pP 07 53 48.7 +0.8
GRF pmax pmax
comp=Z,32nm,1.5s,mb5.0
GRF Grafenberg Arr 73.87 340 *e*P **P** **07 53 36.8 +0.3**
GRF *e**PP pP 07 53 48.7 +0.8
GRF pmax pmax
comp=Z,32nm,1.5s,mb5.0
GRF Grafenberg Arr 73.87 340 *e*P **P** **07 53 36.8 +0.3**
comp=Z,32nm,1.5s,mb5.0
GRF *e*pP pP 07 53 48.7 +0.8
KHC Kasperske Hory 73.91 339 *e*P **P** **07 53 37.0 +0.2**
KHC *e*pP pP 07 53 47.5 -0.7
MEM Membach 73.93 344 P **P** **07 53 37.1 +0.2**
MEM AP pP 07 53 47.2 -1.0
comp=Z,18nm,1.0s
ZST Bratislava 73.99 336 *i* P **P** **07 53 38.1 +0.9**
ZST pmax pmax
comp=Z,14nm,1.1s,mb4.8
ZST Bratislava 73.99 336 *i* P **P** **07 53 38.1 +0.9**
comp=Z,14nm,1.1s,mb4.8
SWET Sewanee 73.99 52 *e*P **P** **07 53 37.0 -0.5**
SWET *e*pP pP 07 53 46.8 -2.1
WET Wettzell 74.05 339 *e*P **P** **07 53 37.5 -0.1**
WET pmax pmax
comp=Z,19nm,1.2s,mb4.9
WET Wettzell 74.05 339 *e*P **P** **07 53 37.5 -0.1**
comp=Z,19nm,1.2s,mb4.9
GEC2 GERESS Array S 74.16 339 *e*P **P** **07 53 38.0 -0.2**
GEC2 pmax pmax
comp=Z,13nm,1.2s,mb4.7
GEC2 GERESS Array S 74.16 339 *e*P **P** **07 53 38.0 -0.2**
comp=Z,13nm,1.2s,mb4.7
GERES GERESS Array B 74.16 339 P **P** **07 53 37.2 -1.0**
comp=Z,3.7nm,0.8s,mb4.3,baz=35,slow=4.9,SNR=28
GERES LR LR 08 31 24.9
comp=Z,201nm,18.9s,MS4.4,baz=20,slow=40
GERES GERESS Array B 74.16 339 P **P** **07 53 37.2 -1.0**
GERES pmax pmax
comp=Z,4.0nm,0.8s
GERES MLR MLR
comp=Z,201nm,18.9s
HARR Harsova 74.17 328⇓ *i*P **P** **07 53 38.5 +0.2**
HARR Harsova 74.17 328 P **P** **07 53 38.7 +0.4**
TIRR Tirgusor 74.22 327 P **P** **07 53 38.8 +0.1**
TIRR Tirgusor 74.22 327⇓ *i*P **P** **07 53 38.7 0.0**
TIRR Tirgusor 74.22 327 *e*P **P** **07 53 38.4 -0.3**
comp=Z,28nm,1.1s,mb5.1
VOIR 74.38 330⇓ *i*P **P** **07 53 40.6 +1.0**
VOIR 74.38 330 P **P** **07 53 40.1 +0.5**
CONA Conrad Observa 74.53 337⇑ *i*P **P** **07 53 41.2 +0.7**
comp=Z,24nm,1.5s,mb4.9,SNR=10
CSNA Conrad Observa 74.53 337⇑ *i*P **P** **07 53 41.1 +0.7**
comp=Z,21nm,1.5s,mb4.8
GIVF Givet 74.61 345 *e*P **P** **07 53 40.4 -0.4**
comp=Z,21nm,0.8s,mb4.8
GIVF Givet 74.61 345 *e*P **P** **07 53 40.4 -0.4**
GIVF pmax pmax
comp=Z,11nm,0.8s,mb4.8
GIVF Givet 74.61 345 *e*P **P** **07 53 40.4 -0.4**
comp=Z,10nm,0.8s,mb4.8
BAIF Baives 74.75 345 *e*P **P** **07 53 41.3 -0.3**
comp=Z,25nm,0.9s,mb4.8
BAIF Baives 74.75 345 *e*P **P** **07 53 41.3 -0.3**
BAIF pmax pmax
comp=Z,12nm,0.9s,mb4.8
BAIF Baives 74.75 345 *e*P **P** **07 53 41.3 -0.3**
comp=Z,12nm,0.9s,mb4.8
CTA Charters Tower 74.76 195 LR LR 08 26 06.1
comp=Z,88nm,19.5s,MS4.1,baz=231,slow=35
CTA Charters Tower 74.76 195 *e*P **P** **07 53 42.2 +0.3**
comp=Z,6.6nm,0.9s,mb4.6
CTAO Charters Tower 74.76 195 *e*P **P** **07 53 42.3 +0.4**
GZR Gura Zlata 75.09 331⇓ *i*P **P** **07 53 43.8 +0.1**
GZR Gura Zlata 75.09 331 P **P** **07 53 43.8 +0.2**
BZS Buzias 75.21 332⇑ *i*P **P** **07 53 43.8 -0.6**
BZS Buzias 75.21 332 P **P** **07 53 44.4 0.0**
ARSA Arzberg 75.25 337⇑ *i*P **P** **07 53 45.5 +0.9**
comp=Z,20nm,1.6s,mb4.8
RJOB Jochberg 75.40 339 *e*P **P** **07 53 46.0 +0.6**
PKSM Moragy 75.45 334⇓ *i*P **P** **07 53 45.5 -0.3**
PKSM Moragy 75.45 334 P **P** **07 53 45.3 -0.5**
CDF Champ du Feu 75.84 343 *e*P **P** **07 53 47.9 0.0**
comp=Z,24nm,0.8s,mb4.9
CDF Champ du Feu 75.84 343 *e*P **P** **07 53 47.9 0.0**
CDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
CDF Champ du Feu 75.84 343 *e*P **P** **07 53 47.9 0.0**
comp=Z,12nm,0.8s,mb4.9
SOKA Soboth 75.90 337⇓ *i*P **P** **07 53 48.8 +0.5**
comp=Z,26nm,1.4s,mb5.0
KBA Koelnbreinsper 75.91 338 *i* P **P** **07 53 49.6 +1.3**
comp=Z,30nm,1.0s,mb5.2,SNR=9.8
MALT Malatya 75.96 317 P **P** **07 53 49.9 +1.1**
MALT Malatya 75.96 317⇓ *i*P **P** **07 53 49.8 +1.0**
MALT Malatya 75.96 317 *e*P **P** **07 53 49.2 +0.4**
comp=Z,15nm,1.1s,mb4.8
MALT *e*pP pP 07 54 01.4 +1.1
WATA Walderalm 76.04 339⇑ *i*P **P** **07 53 49.7 +0.6**
comp=Z,12nm,1.0s,mb4.8
ECH Echery 76.05 343 *e*P **P** **07 53 48.8 -0.3**
ECH *e**PP pP 07 54 00.9 +0.4
ECH pmax pmax
comp=Z,18nm,1.4s,mb4.8
ECH Echery 76.05 343 *e*P **P** **07 53 48.8 -0.3**
comp=Z,18nm,1.4s,mb4.8
ECH *e*pP pP 07 54 00.9 +0.3
WTTA Wattenberg 76.10 339⇑ *i*P **P** **07 53 50.3 +0.9**

comp=Z,30nm,1.6s,mb5.0
MEZF Maizieres J'vi 76.13 344 *e*P **P** **07 53 48.9 -0.7**
comp=Z,16nm,0.5s,mb4.9
MEZF Maizieres J'vi 76.13 344 *e*P **P** **07 53 48.9 -0.7**
comp=Z,16nm,0.5s,mb5.2
MOTA Moosalm 76.13 340⇑ *i*P **P** **07 53 49.9 +0.3**
comp=Z,9.7nm,0.9s,mb4.7,SNR=7.1
OBKA Obir 76.17 337⇑ *i*P **P** **07 53 50.5 +0.7**
comp=Z,36nm,1.4s,mb5.1
HAU Haudompre 76.39 343 *e*P **P** **07 53 50.7 -0.4**
comp=Z,11nm,0.7s,mb4.6
HAU Haudompre 76.39 343 *e*P **P** **07 53 50.7 -0.4**
HAU pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
HAU Haudompre 76.39 343 *e*P **P** **07 53 50.7 -0.4**
comp=Z,5.3nm,0.7s,mb4.6
ABTA Abfaltersbach 76.40 339⇑ *i*P **P** **07 53 51.5 +0.4**
comp=Z,18nm,1.3s,mb4.8
DAVA Damuels 76.43 341⇑ *i*P **P** **07 53 52.5 +1.2**
comp=Z,12nm,1.5s,mb4.6
HINF Hinteralfeld 76.49 343 *e*P **P** **07 53 51.2 -0.4**
FETA Feichten 76.52 340⇑ *i*P **P** **07 53 52.4 +0.6**
comp=Z,15nm,1.1s,mb4.8,SNR=9.1
BR131 Keskin Array S 76.59 321 *e*P **P** **07 53 52.7 +0.3**
comp=Z,6.2nm,0.8s,mb4.6
BR131 *e*pP pP 07 54 03.8 0.0
BRTR Keskin Array B 76.59 321 P **P** **07 53 52.3 -0.1**
comp=Z,8.1nm,0.9s,mb4.7,baz=46,slow=3.6,SNR=35
BRTR LR LR 08 30 46.8
comp=Z,94nm,20.2s,MS4.1,baz=231,slow=38
BRTR Keskin Array B 76.59 321 P **P** **07 53 52.3 -0.1**
BRTR pmax pmax
comp=Z,8.0nm,0.9s
BRTR MLR MLR
comp=Z,94nm,20.2s
FLN La Foliniere 76.67 348 *e*P **P** **07 53 51.8 -0.8**
comp=Z,34nm,0.7s,mb5.1
FLN La Foliniere 76.67 348 *e*P **P** **07 53 51.8 -0.8**
FLN pmax pmax
comp=Z,17nm,0.7s,mb5.1
FLN La Foliniere 76.67 348 *e*P **P** **07 53 51.8 -0.8**
comp=Z,17nm,0.7s,mb5.1
LDF La Druitiere 76.79 348 *e*P **P** **07 53 52.4 -0.9**
DAVOS Davos 76.88 340 P **P** **07 53 54.6 +0.8**
DAVOX Davos/Dischmat 76.92 340 P **P** **07 53 54.5 +0.5**
comp=Z,4.4nm,0.8s,mb4.5,baz=13,slow=5.0,SNR=9.5
WRAB Tennant Creek 77.08 206 P **P** **07 53 55.2 +0.1**
comp=Z,118nm,0.8s,mb5.9,SNR=5.8
WRAB Tennant Creek 77.08 206 *e*P **P** **07 53 55.1 0.0**
comp=Z,25nm,1.0s,mb5.1
WRAB *e*pP pP 07 54 07.9 +1.4
GRR Gorron 77.08 348 *e*P **P** **07 53 54.4 -0.6**
comp=Z,64nm,0.9s,mb5.2
GRR Gorron 77.08 348 *e*P **P** **07 53 54.4 -0.6**
GRR pmax pmax
comp=Z,32nm,0.9s,mb5.2
GRR Gorron 77.08 348 *e*P **P** **07 53 54.4 -0.6**
comp=Z,32nm,0.9s,mb5.2
WB2 Warramunga Arr 77.09 206 *e*P **P** **07 53 55.3 +0.1**
WB2 *e*PCP PcP 07 54 05.2 -0.7
WB2 Warramunga Arr 77.09 206 *e*P **P** **07 53 55.2 0.0**
WB2 *e*pP pP 07 54 07.8 +1.2
WRA Warramunga Arr 77.09 206 P **P** **07 53 55.4 +0.2**
comp=Z,9.6nm,0.7s,mb4.8,baz=20,slow=6.2,SNR=62
WRA LR LR 08 24 40.3
comp=Z,52nm,20.6s,MS3.8,baz=75,slow=33
TUE Stuetta 77.32 341 *e*P **P** **07 53 57.0 +0.7**
comp=Z,19nm,0.7s,mb5.1
TUE *e*pP pP 07 54 08.9 +1.1
ROSF Rostrenen 77.41 350 *e*P **P** **07 53 56.7 -0.1**
comp=Z,21nm,0.8s,mb4.8
ROSF Rostrenen 77.41 350 *e*P **P** **07 53 56.7 -0.1**
ROSF pmax pmax
comp=Z,11nm,0.8s,mb4.8
ROSF Rostrenen 77.41 350 *e*P **P** **07 53 56.7 -0.1**
comp=Z,11nm,0.8s,mb4.8
SGMF Saint Gilles 77.42 349 *e*P **P** **07 53 56.4 -0.4**
comp=Z,37nm,0.8s,mb5.1
SGMF Saint Gilles 77.42 349 *e*P **P** **07 53 56.4 -0.4**
SGMF pmax pmax
comp=Z,19nm,0.8s,mb5.1
SGMF Saint Gilles 77.42 349 *e*P **P** **07 53 56.4 -0.4**
comp=Z,19nm,0.8s,mb5.1
LOR Lormes 77.52 345 *e*P **P** **07 53 57.1 -0.3**
comp=Z,29nm,0.7s,mb5.0
LOR Lormes 77.52 345 *e*P **P** **07 53 57.1 -0.3**
LOR pmax pmax
comp=Z,15nm,0.7s,mb5.0
LOR Lormes 77.52 345 *e*P **P** **07 53 57.1 -0.3**
comp=Z,15nm,0.7s,mb5.0
SSF Saint Saulge 77.78 345 *e*P **P** **07 53 58.5 -0.4**
comp=Z,18nm,0.8s,mb4.8
SSF Saint Saulge 77.78 345 *e*P **P** **07 53 58.5 -0.4**
SSF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SSF Saint Saulge 77.78 345 *e*P **P** **07 53 58.5 -0.4**
comp=Z,9.1nm,0.8s,mb4.8
CABF La Chapelle 77.79 343 *e*P **P** **07 53 59.1 +0.2**
comp=Z,16nm,0.8s,mb4.8
CABF La Chapelle 77.79 343 *e*P **P** **07 53 59.1 +0.2**
CABF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CABF La Chapelle 77.79 343 *e*P **P** **07 53 59.1 +0.2**
comp=Z,7.9nm,0.8s,mb4.7
QUIF Quistinic 77.82 350 *e*P **P** **07 53 58.2 -0.9**
comp=Z,27nm,0.8s,mb4.9
QUIF Quistinic 77.82 350 *e*P **P** **07 53 58.2 -0.9**
QUIF pmax pmax
comp=Z,14nm,0.8s,mb4.9
QUIF Quistinic 77.82 350 *e*P **P** **07 53 58.2 -0.9**
comp=Z,14nm,0.8s,mb4.9
FITZ Fitzroy Crossi 77.96 215 *e*P **P** **07 54 01.0 +0.9**
comp=Z,30nm,1.0s,mb5.2
FITZ *e*PCP PcP 07 54 10.7 +1.0
FITZ Fitzroy Crossi 77.96 215 *e*P **P** **07 54 00.7 +0.5**
comp=Z,24nm,1.1s,mb5.0
AVF Avril sur Loir 78.06 345 *e*P **P** **07 54 00.3 -0.2**
comp=Z,19nm,0.7s,mb4.9
AVF Avril sur Loir 78.06 345 *e*P **P** **07 54 00.3 -0.2**
AVF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
AVF Avril sur Loir 78.06 345 *e*P **P** **07 54 00.3 -0.2**
comp=Z,9.6nm,0.7s,mb4.8
SMF Signal de Mont 78.13 344 *e*P **P** **07 54 00.4 -0.4**
comp=Z,24nm,1.0s,mb4.8
SMF Signal de Mont 78.13 344 *e*P **P** **07 54 00.4 -0.4**
SMF pmax pmax
comp=Z,12nm,1.0s,mb4.8
SMF Signal de Mont 78.13 344 *e*P **P** **07 54 00.4 -0.4**
comp=Z,12nm,1.0s,mb4.8
BGF Bois d'Agland 78.37 345 *e*P **P** **07 54 01.9 -0.3**
comp=Z,16nm,0.7s,mb4.8
BGF Bois d'Agland 78.37 345 *e*P **P** **07 54 01.9 -0.3**
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BGF Bois d'Agland 78.37 345 *e*P **P** **07 54 01.9 -0.3**
comp=Z,8.3nm,0.7s,mb4.8
TCF Toulx Ste Croi 78.73 346 *e*P **P** **07 54 04.0 -0.1**
comp=Z,15nm,0.8s,mb4.7
TCF Toulx Ste Croi 78.73 346 *e*P **P** **07 54 04.0 -0.1**
TCF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 78.73 346 *e*P **P** **07 54 04.0 -0.1**
comp=Z,7.4nm,0.8s,mb4.7
PALK Pallekele 78.73 267 *e*P **P** **07 54 04.3 -0.3**
PALK *e**PP pP 07 54 15.9 -0.2
PALK pmax pmax
comp=Z,18nm,0.8s,mb5.0
PALK Pallekele 78.73 267 *e*P **P** **07 54 04.3 -0.3**
comp=Z,18nm,0.8s,mb5.0
PALK *e*pP pP 07 54 15.9 -0.1
LPL La Plagne 78.73 342 *e*P **P** **07 54 05.2 +1.0**
comp=Z,21nm,0.6s,mb4.9
LPL La Plagne 78.73 342 *e*P **P** **07 54 05.2 +1.0**
LPL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
LPL La Plagne 78.73 342 *e*P **P** **07 54 05.2 +1.0**
comp=Z,10nm,0.6s,mb4.9
LPG La Plagne 78.75 342 *e*P **P** **07 54 05.5 +1.2**
comp=Z,28nm,0.7s,mb5.2
LPG La Plagne 78.75 342 *e*P **P** **07 54 05.5 +1.2**
LPG pmax pmax
comp=Z,14nm,0.7s,mb5.0
LPG La Plagne 78.75 342 *e*P **P** **07 54 05.5 +1.2**
comp=Z,14nm,0.7s,mb5.0
MFF Saint Martin d 78.75 347 *e*P **P** **07 54 04.1 -0.2**
comp=Z,24nm,0.8s,mb4.9

MFF	**Saint Martin d**	**78.75**	**347**	*eP*	**P**	**07 54 04.1**	**-0.2**
MFF				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
MFF	**Saint Martin d**	**78.75**	**347**	*eP*	**P**	**07 54 04.1**	**-0.2**
	comp=Z,12nm,0.8s,mb4.9							
UMR	**Umm Al-Rimmam**	**79.23**	**306**	*eP*	**P**	**07 54 06.0**	**-1.2**
	baz=306							
UMR				AMb	AMB	07 54 07.8		
	comp=Z,36nm,1.1s,mb5.2,baz=306							
ISP	**Isparta**	**79.40**	**323**	*eP*	**P**	**07 54 07.2**	**-0.8**
ISP				pmax	pmax			
	comp=Z,28nm,1.6s,mb4.9							
ORIF	**Oris-en-Rattie**	**79.46**	**343**	*eP*	**P**	**07 54 07.9**	**-0.3**
	comp=Z,17nm,0.7s,mb4.8							
ORIF	**Oris-en-Rattie**	**79.46**	**343**	*eP*	**P**	**07 54 07.9**	**-0.3**
ORIF				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.8							
ORIF	**Oris-en-Rattie**	**79.46**	**343**	*eP*	**P**	**07 54 07.9**	**-0.3**
	comp=Z,8.6nm,0.7s,mb4.8							
MBDF	**Montbardon**	**79.49**	**342**	*eP*	**P**	**07 54 08.1**	**-0.2**
	comp=Z,22nm,0.8s,mb4.8							
MBDF	**Montbardon**	**79.49**	**342**	*eP*	**P**	**07 54 08.1**	**-0.2**
MBDF				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.8							
MBDF	**Montbardon**	**79.49**	**342**	*eP*	**P**	**07 54 08.1**	**-0.2**
	comp=Z,11nm,0.8s,mb4.8							
KBD	**Kabd**	**79.56**	**306**	*eP*	**P**	**07 54 08.4**	**-0.5**
	baz=305							
KBD				AMb	AMB	07 54 20.9		
	comp=Z,40nm,1.0s,mb5.3,baz=305							
NAY	**Al-Naaiem**	**79.71**	**306**	*eP*	**P**	**07 54 09.1**	**-0.8**
	baz=306							
NAY				AMb	AMB	07 54 19.0		
	comp=Z,30nm,2.0s,mb4.9,baz=306							
VIVF	**Saint-Julien-l**	**79.73**	**343**	*eP*	**P**	**07 54 08.9**	**-0.7**
	comp=Z,38nm,1.2s,mb4.9							
VIVF	**Saint-Julien-l**	**79.73**	**343**	*eP*	**P**	**07 54 08.9**	**-0.7**
VIVF				pmax	pmax			
	comp=Z,19nm,1.2s,mb4.9							
VIVF	**Saint-Julien-l**	**79.73**	**343**	*eP*	**P**	**07 54 08.9**	**-0.7**
	comp=Z,19nm,1.2s,mb4.9							
RJF	**Les Rejaudoux**	**79.79**	**346**	*eP*	**P**	**07 54 09.1**	**-0.9**
RDF	**Al-Radifah**	**79.83**	**306**	*eP*	**P**	**07 54 09.4**	**-1.0**
	baz=305							
RDF				AMb	AMB	07 54 10.9		
	comp=Z,132nm,1.2s,mb5.7,baz=305							
CAF	**Calviac**	**80.08**	**345**	*eP*	**P**	**07 54 12.2**	**+0.7**
	comp=Z,22nm,0.8s,mb4.8							
CAF	**Calviac**	**80.08**	**345**	*eP*	**P**	**07 54 12.2**	**+0.7**
CAF				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.8							
CAF	**Calviac**	**80.08**	**345**	*eP*	**P**	**07 54 12.2**	**+0.7**
	comp=Z,11nm,0.8s,mb4.8							
LFF	**La Frestale**	**80.26**	**346**	*eP*	**P**	**07 54 11.6**	**-0.9**
LASF	**Ste Croix**	**80.63**	**344**	*eP*	**P**	**07 54 13.8**	**-0.7**
ASAR	**Alice Springs**	**80.76**	**205**	P	**P**	**07 54 16.1**	**+0.9**
	comp=Z,10nm,0.9s,mb4.8,baz=15,slow=5.5,SNR=79							
ASAR	**Alice Springs**	**80.76**	**205**	P	**P**	**07 54 16.1**	**+0.9**
ASAR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
PGF	**Pioggiola**	**81.15**	**340**	*eP*	**P**	**07 54 16.6**	**-0.7**
	comp=Z,74nm,0.9s,mb5.3							
PGF	**Pioggiola**	**81.15**	**340**	*eP*	**P**	**07 54 16.6**	**-0.7**
PGF				pmax	pmax			
	comp=Z,37nm,0.9s,mb5.3							
PGF	**Pioggiola**	**81.15**	**340**	*eP*	**P**	**07 54 16.6**	**-0.7**
	comp=Z,37nm,0.9s,mb5.3							
MTLF	**Montolieu**	**81.51**	**345**	*eP*	**P**	**07 54 19.1**	**-0.6**
MMAI	**Mount Meiron Ar**	**81.77**	**317**	P	**P**	**07 54 20.8**	**0.0**
	comp=Z,17nm,0.9s,mb5.0,baz=34,slow=6.1,SNR=18							
ASF	**Jabal al Asfar**	**81.89**	**315**	P	**P**	**07 54 21.7**	**+0.3**
	comp=Z,15nm,0.9s,mb4.9,baz=240,slow=0.6,SNR=22							
ASF	**Jabal al Asfar**	**81.89**	**315**	P	**P**	**07 54 21.7**	**+0.3**
ASF				pmax	pmax			
	comp=Z,15nm,0.9s							
EPF	**Esparros**	**82.19**	**346**	*eP*	**P**	**07 54 21.8**	**-1.0**
SJPF	**Ste Jean**	**82.32**	**347**	*eP*	**P**	**07 54 22.3**	**-1.2**
ETSF	**Etsaut**	**82.44**	**347**	*eP*	**P**	**07 54 23.7**	**-0.4**
	comp=Z,16nm,0.8s,mb4.7							
ETSF	**Etsaut**	**82.44**	**347**	*eP*	**P**	**07 54 23.7**	**-0.4**
ETSF				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7							
ETSF	**Etsaut**	**82.44**	**347**	*eP*	**P**	**07 54 23.7**	**-0.4**
	comp=Z,7.8nm,0.8s,mb4.7							
PPT	**Papeete**	**82.53**	**133**	LR	LR	08 26 55.1		
	comp=Z,235nm,18.7s,MS4.6,baz=22,slow=33							
MBWA	**Marble Bar**	**82.88**	**219**	*eP*	**P**	**07 54 25.9**	**-0.5**
	comp=Z,6.0nm,0.8s,mb4.7							
PBRG	**Braganca**	**84.22**	**351**	*epP*	pP	07 54 45.5	+0.7	
PVRL	**Vila Real**	**84.83**	**352**	*eP*	**P**	**07 54 37.1**	**+0.7**
	comp=Z,41nm,1.6s,mb5.3							
PVRL				*epP*	pP	07 54 48.0	+0.1	
MVO	**Moncorvo**	**84.89**	**351**	*eP*	**P**	**07 54 37.4**	**+0.8**
	comp=Z,24nm,1.2s,mb5.2							
MVO				*epP*	pP	07 54 48.3	+0.1	
MTE	**Manteigas**	**85.69**	**352**	*eP*	**P**	**07 54 41.5**	**+0.8**
MTE				*epP*	pP	07 54 52.6	+0.4	
ESDC	**Sonseca Array**	**86.05**	**349**	P	**P**	**07 54 41.9**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.6,baz=5.6,slow=5.0,SNR=15							
ESLA	**Sonseca Array**	**86.05**	**349**	*eP*	**P**	**07 54 42.9**	**+0.4**
	comp=Z,10nm,1.4s,mb4.9							
ESLA				*epP*	pP	07 54 54.9	+0.9	
PCBR	**Castelo Branco**	**86.24**	**352**	*eP*	**P**	**07 54 44.8**	**+1.4**
PCBR				*epP*	pP	07 54 55.1	+0.1	
STKA	**Stephens Creek**	**87.06**	**197**	P	**P**	**07 54 47.3**	**+0.1**
	comp=Z,5.8nm,0.9s,mb4.8,baz=343,slow=6.9,SNR=8.0							
STKA				LR	LR	08 34 40.6		
	comp=Z,102nm,18.3s,MS4.3,baz=25,slow=36							
STKA	**Stephens Creek**	**87.06**	**197**	*eP*	**P**	**07 54 47.9**	**+0.7**
	comp=Z,4.8nm,0.9s,mb4.7							
STKA	**Stephens Creek**	**87.06**	**197**	*eP*	**P**	**07 54 47.7**	**+0.6**
	comp=Z,1.8nm,1.1s,mb4.2							
PESTR	**Estremoz**	**87.21**	**351**	*epP*	pP	07 54 58.8	-1.0	
KEST	**Kesra**	**87.62**	**338**	P	**P**	**07 54 48.5**	**-1.7**
	comp=Z,1.4nm,0.7s,mb4.3,baz=352,slow=2.7,SNR=4.6							
PBAR	**Barrancos**	**87.85**	**351**	*eP*	**P**	**07 54 50.9**	**-0.3**
PBAR				*epP*	pP	07 55 02.2	-0.7	
PLCA	**Paso Flores**	**143.19**	**91**	PKhKP	PKPdf	08 01 35.1	-0.2	
	comp=Z,1.2nm,0.8s,baz=332,slow=16,SNR=3.4							
QSPA	**South Pole Qui**	**143.56**	**180**	PKhKP		08 01 30.9		
	comp=Z,1.8nm,0.8s,baz=36,slow=1.3,SNR=7.7							
QSPA	**South Pole Qui**	**143.56**	**180**	PKP		08 01 30.9		
SUR	**Sutherland**	**144.82**	**291**	PKP	PKPdf	08 01 40.0	+1.7	
	comp=Z,10nm,0.9s,baz=48,slow=22,SNR=4.5							
SYO	**Syowa Base**	**149.77**	**217**	*e*PKPbc	PKPbc	08 01 49.2	-1.0	

TAP 24 07:59:18.0, 2174N×12195E, h19km, ML3.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.48**	**309**	*i* P	Pg	07 59 27.8	0.0
	baz=309						
LAY				S	Sg	07 59 35.0	+0.7
	baz=309						
TSEB	**Hengchuen, Pin**	**0.99**	**280**	*e*P	Pb	07 59 36.8	+0.3
	baz=279						
TWK1	**Hengchun**	**1.08**	**281**	*e*P	Pb	07 59 38.6	+0.4
	baz=281						
HEN	**Hengchun**	**1.16**	**283**	*e*P	Pn	07 59 40.9	+1.7
	baz=298						
ECL	**Taimali**	**1.26**	**313**	*e*P	Pn	07 59 41.6	+1.0
	baz=313						
SCZT	**Fangliau**	**1.39**	**297**	*e*P	Pn	07 59 41.8	-0.6
	baz=297						
SSD	**Sandimen**	**1.58**	**310**	*e*P	Pn	07 59 46.3	+1.3
	baz=310						
TWF1	**Yuli**	**1.72**	**339**	*e*P	Pn	07 59 47.6	+0.7
	baz=340						
TWM1	**Shoushan**	**1.78**	**308**	*e*P	Pn	07 59 52.1	+4.3
	baz=308						
STYT	**Tauyuan**	**1.80**	**322**	*e*P	Pn	07 59 48.5	+0.5
	baz=332						
EHY	**Hungye**	**1.85**	**342**	*e*P	Pn	07 59 48.9	+0.1
	baz=342						
WTP	**Ta-pu**	**1.94**	**321**	*e*P	Pn	07 59 52.6	+2.6
	baz=321						
WTP				*e*S	Sn	08 00 20.0	+6.1
	baz=321						
CHN1	**Nanshi**	**1.95**	**318**	P	Pn	07 59 52.0	+1.9
	baz=318						
CHN1				*e*S	Sn	08 00 19.2	+5.2
	baz=318						
YUS	**Yu-Shan**	**1.97**	**332**	*e*P	Pn	07 59 51.8	+1.4
	baz=341						
TWK	**Hsinying**	**2.04**	**319**	*e*P	Pn	07 59 55.2	+3.9
	baz=319						
CHN4	**Tsaushan**	**2.04**	**322**	*e*P	Pn	07 59 53.8	+2.5
	baz=323						
CHN4				*e*S	Sn	08 00 22.5	+6.3
	baz=323						
ALS	**Alishan**	**2.06**	**329**	*e*P	Pn	07 59 54.9	+3.4
	baz=338						
CHN5	**Tsauling**	**2.19**	**328**	*e*P	Pn	07 59 55.9	+2.5
	baz=328						
CHN5				*e*S	Sn	08 00 26.6	+6.6
	baz=328						
SMLT	**Sun Moon Lake**	**2.34**	**336**	*e*P	Pn	07 59 58.3	+2.8
	baz=347						
TYC	**Yuchr**	**2.38**	**335**	*e*P	Pn	07 59 58.9	+2.9
	baz=347						
TYC				*e*S	Sn	08 00 30.2	+5.5
	baz=347						

IDC 24 08:08:57.7±1.9, 981S×12481E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=203.2km s-min=32.1km az=56.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.64**	**139**	Pn	Pn	08 12 12.6	0.0
	0.1nm,0.3s,baz=321,slow=14,SNR=8.4						
WRA				Sn	Sn	08 14 38.7	-6.3
	0.2nm,0.3s,baz=306,slow=21,SNR=5.2						
ASAR	**Alice Springs**	**16.29**	**149**	Pn	Pn	08 12 48.1	+0.1
	0.1nm,0.3s,baz=318,slow=11,SNR=14						
ASAR				Sn	Sn	08 15 43.5	-6.0
	0.1nm,0.3s,baz=314,slow=20,SNR=4.2						
MKAR	**Makanchi Array**	**67.90**	**330**	P	P	08 19 58.2	+0.1
	0.2nm,0.5s,baz=140,slow=7.9,SNR=3.8						

KRSC 24 08:43:46.6±1.1, 5293N×16230E, h10km±10km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.39**	**278**	*e*S	Sb	08 44 31.0	+0.7
MKZ	**Mys Kozlova**	**1.66**	**348**	*e*S	Sn	08 44 37.2	0.0
NLC	**Nalytchevo**	**1.80**	**279**	*e*P	Pn	08 44 18.4	+0.8
NLC				*e*S	Sn	08 44 41.4	+0.9
AVH	**Avacha**	**2.17**	**280**	*e*P	Pn	08 44 24.0	+1.2
AVH				*e*S	Sn	08 44 51.1	+1.4
RUS	**Russkaya**	**2.36**	**259**	*e*P	Pn	08 44 26.1	+0.8
RUS				*e*S	Sn	08 44 55.4	+1.1
GNL	**Ganaly**	**2.73**	**288**	*e*P	Pn	08 44 32.4	+2.1
GNL				*e*S	Sn	08 45 06.0	+2.7
KMNR	**Kamenistaya**	**3.08**	**338**	*e*P	Pn	08 44 35.8	+0.6
ZLN	**Zelenaya**	**3.21**	**345**	*e*S	Sn	08 45 16.9	+1.5

*ISCJB **24** 09:02:03.1±1.8, 235S±0.1×1799W±0.1, h466km±25km, mb4.1/14, Error ellipse: s-maj=19.4km s-min=9.6km az=138.7*

*NEIC **24** 09:02:04.9±1.1, 2359S×17990W, h473km±15km, mb4.8/3, Error ellipse: s-maj=13.5km s-min=9.1km az=146.0*

*IDC **24** 09:02:06.2±1.8, 2361S×17989W, h488km±19km, mb3.6/11, mb1 3.8/13, mb1mx3.6/21, mbtmp3.6/13, Error ellipse: s-maj=18.7km s-min=14.9km az=159.0*

ISC 24 09:02:05.1±1.5, 236S±01×1799W±01, h473km±21km, n26, σ0 73/27, mb4.1/14, 3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.31**	**40**	P	**P**	**09 04 46.9**	**-0.3**
	3.5nm,0.3s,baz=45,slow=13,SNR=6.6						
AFI				S	**S**	**09 06 55.5**	**-5.4**
	1.4nm,0.3s,baz=51,slow=21,SNR=6.2						
URZ	**Urewera**	**14.86**	**189**	P	**P**	**09 05 13.7**	**-0.4**
	0.7nm,0.3s,baz=266,slow=8.9,SNR=5.7						
URZ				S	**S**	**09 07 42.7**	**-7.4**
	0.3nm,0.3s,baz=159,slow=20,SNR=4.2						
RPZ	**Rata Peaks**	**21.43**	**198**	P	**P**	**09 06 18.2**	**+0.3**
	12nm,0.6s,mb4.6,baz=29,slow=3.4,SNR=5.8						
ARMA	**Armidale**	**26.23**	**249**	‖ *iP*	**P**	**09 07 02.7**	**+1.7**
CNB	**Canberra Magne**	**29.10**	**239**	*eP*	**P**	**09 07 27.2**	**+1.1**
CTA	**Charters Tower**	**31.57**	**270**	P	**P**	**09 07 49.1**	**+1.4**
	18nm,0.5s,mb4.8,baz=96,slow=11,SNR=59						
CTA	**Charters Tower**	**31.57**	**270**	‖ *iP*	**P**	**09 07 49.2**	**+1.5**
	14nm,0.4s,mb4.7						
CTAO	**Charters Tower**	**31.57**	**270**	*eP*	**P**	**09 07 48.0**	**+0.2**
	12nm,0.4s,mb4.7						
TOO	**Toolangi**	**32.70**	**237**	*eP*	**P**	**09 07 57.4**	**+0.2**
PMG	**Port Moresby**	**34.48**	**289**	P	**P**	**09 08 12.4**	**-0.2**
	12nm,0.8s,mb4.3,baz=117,slow=3.2,SNR=6.2						
STKA	**Stephens Creek**	**34.93**	**248**	P	**P**	**09 08 16.4**	**+0.3**
	3.2nm,0.5s,mb4.0,baz=89,slow=14,SNR=10						
STKA	**Stephens Creek**	**34.93**	**248**	*eP*	**P**	**09 08 16.2**	**+0.1**
	3.1nm,0.8s,mb3.8						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**09 09 15.4**	**+0.1**
	11nm,0.8s,mb4.3,baz=96,slow=7.5,SNR=176						
ASAR				ScP	ScP	09 14 01.7	-2.5
	1.9nm,0.8s,baz=109,slow=4.2,SNR=13						
WB2	**Warramunga Arr**	**42.51**	**266**	‖ *iP*	**P**	**09 09 17.6**	**-0.4**
WB2	**Warramunga Arr**	**42.51**	**266**	*eP*	**P**	**09 09 17.4**	**-0.6**
WRAB	**Tennant Creek**	**42.51**	**266**	*eP*	**P**	**09 09 17.3**	**-0.7**
	8.5nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**42.52**	**266**	P	**P**	**09 09 17.7**	**-0.4**
	14nm,0.6s,mb4.5,baz=103,slow=8.2,SNR=150						
WRA				ScP	ScP	09 14 03.6	-2.1
	1.5nm,0.9s,baz=104,slow=4.0,SNR=6.8						
FORT	**Forrest**	**46.51**	**249**	*eP*	**P**	**09 09 47.6**	**-1.3**
	60nm,0.6s,mb5.2						
FORT	**Forrest**	**46.51**	**249**	*eP*	**P**	**09 09 47.6**	**-1.2**
	44nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**50.95**	**265**	*eP*	**P**	**09 10 22.0**	**-0.1**
	10nm,0.6s,mb4.3						
VNDA	**Vanda**	**54.71**	**185**	P	**P**	**09 10 47.9**	**-0.3**
	0.9nm,0.8s,mb3.2,baz=342,slow=8.4,SNR=3.9						
NWAO	**Narrogin (SRO)**	**55.45**	**245**	P	**P**	**09 10 52.9**	**-1.3**
	4.6nm,0.7s,mb3.9,baz=105,slow=17,SNR=5.6						
NVAR	**Mina Array Bea**	**84.45**	**44**	P	**P**	**09 13 47.7**	**+0.7**
	0.5nm,0.7s,mb3.2,baz=217,slow=6.6,SNR=3.7						
TXAR	**Lajitas Array**	**90.18**	**58**	P	**P**	**09 14 14.9**	**+0.5**
	0.7nm,0.7s,mb3.6,baz=214,slow=6.6,SNR=10						
PDAR	**Pinedale Array**	**92.39**	**44**	P	**P**	**09 14 24.0**	**-0.2**
	0.4nm,0.7s,mb3.5,baz=224,slow=3.8,SNR=3.8						
BRTR	**Keskin Array B**	**147.46**	**308**	PKPbc	PKPbc	09 20 54.2	-1.1
	0.5nm,0.6s,baz=41,slow=3.7,SNR=3.1						

*ISCJB **24** 09:10:37.4±0.7, 27.16S±0.08×175.9W±0.1, h47km, mb4.4/13, MS3.9/6, Error ellipse: s-maj=16.9km s-min=9.6km az=26.9*

*IDC **24** 09:10:38.7±0.9, 2703S×17585W, h42km±5km, mb4.2/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.2/12, ML3.9/1, MS3.9/6, Ms1 3.9/6, ms1mx3.6/18, Error ellipse: s-maj=37.5km s-min=16.4km az=156.0*

*NEIC **24** 09:10:39.5±2.7, 27.14S×17588W, h55km±23km, mb4.8/4, Error ellipse: s-maj=20.9km s-min=15.0km az=185.0*

ISC 24 09:10:39.4±0.7, 2710S±008×1759W±01, h49km, h49km±2.0km: pP-P, n38, σ0 83/26, mb4.4/13, MS3.9/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.58**	**206**	P	**Pn**	**09 13 36.7**	**+1.0**
	0.7nm,0.3s,baz=300,slow=20,SNR=5.7						
URZ				S	**Sn**	**09 15 53.5**	**-0.7**
	2.0nm,0.3s,baz=308,slow=20,SNR=11						
AFI	**Afiamalu**	**13.68**	**17**	P	**Pn**	**09 13 37.1**	**-14**
	5.2nm,0.3s,baz=66,slow=14,SNR=6.8						
AFI				S	Sn	09 15 53.0	-28
	3.3nm,0.3s,baz=216,slow=19,SNR=4.7						
RAR	**Rarotonga**	**15.85**	**72**	P	**Pn**	**09 14 05.1**	**-14**
	4.1nm,0.3s,baz=214,slow=8.0,SNR=7.7						
DZM	**Mont Dzumac**	**16.80**	**283**	*e*Pn	**Pn**	**09 14 31.1**	**-0.2**
	34nm,1.2s						
RPZ	**Rata Peaks**	**19.65**	**209**	P	**Pn**	**09 15 01.1**	**-4.7**
	0.6nm,0.3s,baz=351,slow=19,SNR=2.2						
TBI	**Tubuai**	**24.21**	**87**	*e*LQ		09 20 03.0	
	278nm,30.5s						
TBI				*e*LR	LR	09 21 29.2	
	434nm,28.0s,baz=265						
PPT	**Papeete**	**26.10**	**74**	*e*LQ		09 21 04.9	
	442nm,24.8s						
PPT				*e*LR	LR	09 22 18.2	
	431nm,26.5s						
PPT	**Papeete**	**26.10**	**74**	LR	LR	09 24 22.5	
	comp=Z,87nm,18.5s,MS3.3,baz=128,slow=32						
HNR	**Honiara**	**28.78**	**303**	LR	LR	09 26 58.6	
	comp=Z,171nm,18.6s,MS3.7,baz=105,slow=34						
CTA	**Charters Tower**	**35.26**	**273**	P	**P**	**09 17 30.1**	**+0.5**
	6.5nm,0.4s,mb4.9,baz=98,slow=11,SNR=13						
CTA	**Charters Tower**	**35.26**	**273**	*eP*	**P**	**09 17 30.1**	**+0.5**
	5.7nm,0.4s,mb4.8						
CTAO	**Charters Tower**	**35.26**	**273**	*eP*	**P**	**09 17 29.8**	**+0.2**
	5.5nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**37.12**	**252**	P	**P**	**09 17 46.7**	**+1.3**
	1.8nm,0.6s,mb4.1,baz=100,slow=17,SNR=6.9						
STKA				LR	LR	09 32 45.8	
	comp=Z,244nm,18.1s,MS4.0,baz=30,slow=36						
STKA	**Stephens Creek**	**37.12**	**252**	*eP*	**P**	**09 17 48.0**	**+2.7**
	2.8nm,1.2s,mb4.0						
STKA	**Stephens Creek**	**37.12**	**252**	P	**P**	**09 17 46.7**	**+1.3**
STKA				LR	LR	09 32 45.8	
RKT	**Rikitea**	**37.17**	**93**	*e*LR	LR	09 27 14.6	
	267nm,32.8s,baz=265						
PMG	**Port Moresby**	**39.03**	**290**	LR	LR	09 32 20.9	
	comp=Z,192nm,18.9s,MS4.0,baz=147,slow=33						
ASAR	**Alice Springs**	**45.23**	**263**	P	**P**	**09 18 51.9**	**-0.1**
	1.4nm,0.4s,mb4.2,baz=103,slow=7.0,SNR=40						
WB2	**Warramunga Arr**	**45.92**	**268**	*eP*	**P**	**09 18 56.8**	**-0.7**
WB2	**Warramunga Arr**	**45.92**	**268**	*eP*	**P**	**09 18 56.9**	**-0.6**
WB2				*epP*	pP	09 19 10.8	+0.1
WRAB	**Tennant Creek**	**45.92**	**268**	*eP*	**P**	**09 18 56.8**	**-0.8**
	7.8nm,0.5s,mb4.9						
WRA	**Warramunga Arr**	**45.93**	**268**	P	**P**	**09 18 56.9**	**-0.7**
	5.5nm,0.4s,mb4.8,baz=107,slow=5.9,SNR=102						
WRA				pP	pP	09 19 10.2	-0.6
	9.1nm,0.7s,baz=108,slow=7.5,SNR=14						
WRA				LR	LR	09 38 35.6	
	comp=Z,102nm,18.1s,MS3.8,baz=195,slow=36						
FITZ	**Fitzroy Crossi**	**54.29**	**266**	*eP*	**P**	**09 20 00.2**	**-0.8**
	8.2nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**54.29**	**266**	*eP*	**P**	**09 20 01.0**	**0.0**
	7.8nm,0.9s,mb4.6						
FITZ				*epP*	pP	09 20 14.2	-0.3
MJAR	**Matsushiro Art**	**76.63**	**324**	P	**P**	**09 22 23.9**	**-1.0**
	3.2nm,0.8s,mb4.3,baz=160,slow=4.9,SNR=5.4						
MJAR				pP	pP	09 22 37.6	-1.3
	4.3nm,1.0s,baz=167,slow=5.5,SNR=4.9						
ASAJ	**Asahikawa**	**80.40**	**331**	P	**P**	**09 22 45.8**	**+0.3**
	11nm,0.8s,mb4.8,baz=267,slow=2.5,SNR=5.6						
KSRS	**Korea Array**	**83.06**	**318**	P	**P**	**09 23 00.8**	**+1.1**
	1.0nm,0.6s,mb4.0,baz=134,slow=5.3,SNR=5.9						
KSRS				LR	LR	09 59 28.2	
	comp=Z,128nm,18.0s,MS4.3,baz=305,slow=35						
NVAR	**Mina Array Bea**	**84.57**	**42**	P	**P**	**09 23 07.3**	**-0.1**
	1.8nm,1.0s,mb4.1,baz=225,slow=8.4,SNR=7.4						
TXAR	**Lajitas Array**	**89.06**	**56**	P	**P**	**09 23 29.6**	**+0.2**
	1.7nm,1.0s,mb4.3,baz=213,slow=6.0,SNR=10						
TXAR				pP	pP	09 23 41.8	-2.0
	1.1nm,0.8s,baz=209,slow=7.2,SNR=7.0						
PDAR	**Pinedale Array**	**92.48**	**42**	P	**P**	**09 23 43.9**	**-1.1**
	0.2nm,0.7s,mb3.6,baz=204,slow=3.3,SNR=3.5						
CMAR	**Chiang Mai Arr**	**94.06**	**289**	P	**P**	**09 23 54.2**	**+1.4**
	0.9nm,0.3s,mb4.6,baz=112,slow=2.4,SNR=3.6						
MKAR	**Makanchi Array**	**117.02**	**311**	PKP	PKPdf	09 29 17.9	-0.7
	0.5nm,0.5s,baz=108,slow=2.7,SNR=5.0						
MKAR				pPKP	pPKPdf	09 29 31.0	-2.4
	0.8nm,0.7s,baz=62,slow=2.9,SNR=4.7						
MKAR	**Makanchi Array**	**117.02**	**311**	PKP	PKPdf	09 29 17.9	-0.7
MKAR				pPKP	pPKPdf	09 29 31.0	-2.4
BVAR	**Borovoye Array**	**125.27**	**317**	PKP	PKPdf	09 29 34.6	+0.4
	0.4nm,0.3s,baz=64,slow=3.8,SNR=4.6						
BVAR				pPKP	pPKPdf	09 29 47.8	-1.3
	1.1nm,0.7s,baz=126,slow=2.6,SNR=5.3						
NB2	**NORSAR Subarra**	**145.72**	**354**	PKP	PKPdf	09 30 11.7	-0.1
	comp=Z,4.3nm,0.8s,baz=9.0,slow=4.1						
NOA	**NORSAR Array B**	**145.72**	**354**	PKPbc	PKPbc	09 30 11.7	-0.6
	comp=Z,9.7nm,0.9s,baz=9.3,slow=2.5,SNR=11						
NOA				pPKPbc	pPKPbc	09 30 24.6	-2.3
	comp=Z,4.8nm,0.7s,baz=7.2,slow=2.4,SNR=6.0						
AKASG	**Malin Array Be**	**149.64**	**328**	PKPbc	PKPbc	09 30 22.4	-0.9
	comp=Z,2.5nm,0.6s,baz=41,slow=3.5,SNR=11						
BRTR	**Keskin Array B**	**152.43**	**305**	PKPbc	PKPbc	09 30 30.7	+0.5
	comp=Z,0.9nm,0.4s,baz=104,slow=2.5,SNR=9.0						
BRTR	

LSZ	**Lusaka**	**45.36**	**43**	P	**P**	**09 29 06.8**	**-0.6**
	8.7nm,1.1s,mb4.5,baz=202,slow=7.3,SNR=7.3						
LSZ				LR	LR	09 45 48.8	
	comp=Z,1μm,19.7s,MS4.8,baz=166,slow=33						
PLCA	**Paso Flores**	**46.31**	**257**	P	**P**	**09 29 13.3**	**-1.5**
	6.6nm,0.9s,mb4.5,baz=155,slow=7.6,SNR=10						
PLCA				LR	LR	09 45 57.0	
	comp=Z,210nm,19.6s,MS4.1,baz=137,slow=33						
PLCA	**Paso Flores**	**46.31**	**257**	P	**P**	**09 29 13.3**	**-1.5**
PLCA				LR	LR	09 45 57.0	
VNDA	**Vanda**	**48.41**	**175**	P	**P**	**09 29 31.1**	**+0.5**
	14nm,0.9s,mb5.0,baz=207,slow=6.6,SNR=34						
VNDA				LR	LR	09 49 41.3	
	comp=Z,670nm,18.3s,MS4.7,baz=182,slow=36						
CPUP	**Villa Florida**	**48.72**	**282**	P	**P**	**09 29 33.1**	**-0.5**
	8.1nm,0.9s,mb4.8,baz=112,slow=6.8,SNR=14						
CPUP				LR	LR	09 47 18.0	
	comp=Z,182nm,18.1s,MS4.1,baz=136,slow=33						
CPUP	**Villa Florida**	**48.72**	**282**	*e*P	**P**	**09 29 32.7**	**-0.9**
	34nm,0.9s,mb5.4						
CPUP				*e*pP	pP	09 29 41.6	+4.9
CPUP				LR	LR	09 47 18.0	
BDFB	**Brasilia**	**52.15**	**299**	P	**P**	**09 29 59.8**	**+0.1**
	4.8nm,0.8s,mb4.5,baz=139,slow=8.5,SNR=12						
BDFB				LR	LR	09 47 37.0	
	comp=Z,118nm,21.3s,MS3.9,baz=187,slow=31						
LVC	**Limon Verde**	**58.32**	**275**	*e*P	**P**	**09 30 44.7**	**+0.5**
	21nm,1.1s,mb5.1						
LIC	**Lamto**	**60.01**	**357**	*e*P	**P**	**09 30 55.9**	**+0.1**
	34nm,1.1s,mb5.3						
KIC	**Kosan Boka**	**60.13**	**357**	*e*P	**P**	**09 30 58.7**	**+2.0**
	68nm,1.5s,mb5.5						
TIC	**Toumodi**	**60.42**	**357**	*e*P	**P**	**09 30 58.6**	**0.0**
	6.3nm,0.2s,mb5.3						
DBIC	**Dimbokro**	**60.45**	**357**	P	**P**	**09 30 57.8**	**-1.0**
	7.1nm,1.1s,mb4.6,baz=139,slow=7.9,SNR=6.2						
DBIC				LR	LR	09 50 28.3	
	comp=Z,220nm,19.5s,MS4.3,baz=162,slow=30						
TOA0	**Torodi Ar. Sit**	**66.93**	**4**	*e*P	**P**	**09 31 40.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**66.93**	**4**	P	**P**	**09 31 41.2**	**-0.3**
	2.1nm,0.8s,mb4.2,baz=197,slow=4.9,SNR=12						
TORD				LR	LR	09 54 59.6	
	comp=Z,326nm,19.2s,MS4.6,baz=160,slow=31						
TAM	**Tamanrasset**	**76.73**	**7**	*e*P	**P**	**09 32 41.6**	**+1.3**
	15nm,1.4s,mb4.7						
ROSC	**El Rosal**	**83.47**	**287**	LR	LR	10 08 30.8	
	comp=Z,202nm,20.3s,MS4.5,baz=26,slow=34						
STKA	**Stephens Creek**	**88.98**	**150**	P	**P**	**09 33 43.2**	**-0.6**
	3.3nm,0.9s,mb4.7,baz=200,slow=5.9,SNR=5.4						
STKA				LR	LR	10 11 27.9	
	comp=Z,115nm,19.9s,MS4.3,baz=206,slow=34						
KEST	**Kesra**	**89.90**	**9**	P	**P**	**09 33 49.2**	**+1.5**
	2.4nm,0.9s,mb4.5,baz=220,slow=4.0,SNR=6.3						
KEST				LR	LR	10 13 12.5	
	comp=Z,63nm,18.4s,MS4.1,baz=232,slow=35						
ESDC	**Sonseca Array**	**93.28**	**359**	P	**P**	**09 34 04.4**	**+1.1**
	0.1nm,0.3s,mb3.7,baz=190,slow=6.9,SNR=4.1						
ESDC				LR	LR	10 10 16.3	
	comp=Z,104nm,20.1s,MS4.3,baz=335,slow=32						
ASAR	**Alice Springs**	**93.96**	**140**	P	**P**	**09 34 06.6**	**-0.5**
	1.8nm,1.1s,mb4.4,baz=192,slow=3.6,SNR=5.7						
BRTR	**Keskin Array B**	**98.31**	**27**	LR	LR	10 19 03.5	
	comp=Z,130nm,18.5s,MS4.5,baz=173,slow=36						
TXAR	**Lajitas Array**	**119.67**	**280**	PKP	PKPdf	09 39 38.4	-0.4
	1.6nm,1.1s,baz=343,slow=2.8,SNR=6.0						
MKAR	**Makanchi Array**	**123.22**	**55**	PKP	PKPdf	09 39 43.6	-1.4
	2.8nm,1.0s,baz=251,slow=3.7,SNR=8.3						
GTA	**Gaotai**	**127.31**	**72**	*e*PKP	PKPdf	09 39 53.4	+0.2
GTA				XPKP		09 39 58.6	
PDAR	**Pinedale Array**	**132.45**	**288**	PKP	PKPdf	09 40 01.9	-0.9
	1.9nm,1.0s,baz=163,slow=1.5,SNR=9.1						
SONM	**Songino Array**	**136.37**	**68**	PKP	PKPdf	09 40 08.2	-1.8
	0.9nm,0.8s,baz=268,slow=1.5,SNR=4.9						
YKA	**Yellowknife Ar**	**144.95**	**312**	PKP	PKPdf	09 40 23.0	-1.9
	24nm,0.9s,baz=105,slow=3.8,SNR=249						
MJAR	**Matsushiro Arr**	**147.72**	**106**	PKPbc	PKPbc	09 40 32.5	-0.9
	7.2nm,1.1s,baz=205,slow=4.0,SNR=7.5						
DLBC	**Dease Lake**	**151.20**	**300**	PKPbc	PKPbc	09 40 41.4	+0.1
	8.3nm,1.0s,baz=288,slow=0.9,SNR=5.2						

*ISCJB **24** 09:24:27.7±0.7,4085N±004×31.14E±006,h12km±8km, Error ellipse: s-maj=8.4km s-min=6.1km az=28.1*
*CSEM **24** 09:24:27.2±0.1,4084N×3116E,h15km,MD2.6, Error ellipse: s-maj=1.6km s-min=1.1km az=123.0*
*ISK **24** 09:24:27.2,4084N×3118E,h16km,MD2.6*
ISC 24 09:24:28.0±0.7,4085N±004×3115E±005,h16km±8km,n7, σ0§50/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.19**	**262**	*i* P	**Pg**	**09 24 31.9**	**-0.6**
MDU	**Mudurnu**	**0.39**	**172**	*e*PG	**Pg**	**09 24 35.1**	**-0.8**
MDU				*e*SG	**Sg**	**09 24 41.2**	**0.0**
KDZE	**Karadeniz Ereo**	**0.52**	**26**	*e*PG	**Pg**	**09 24 38.1**	**-0.1**
KDZE				*e*SG	**Sg**	**09 24 45.6**	**+0.4**
GULT	**Gulveren**	**0.64**	**229**	*e*PG	**Pg**	**09 24 40.3**	**-0.2**
GULT				*e*SG	**Sg**	**09 24 50.0**	**+1.1**
SGKT	**Sivrigoynuk**	**0.74**	**111**	*i* P	**Pg**	**09 24 42.4**	**-0.1**
SGKT				*i* S	**Sg**	**09 24 52.8**	**+0.5**
SILT	**Sile**	**1.18**	**285**	*e*PN	**Pn**	**09 24 49.7**	**-0.1**
SAFT	**Safranbolu**	**1.23**	**71**	*e*PN	**Pn**	**09 24 50.4**	**-0.1**

KRSC 24 09:25:23.6±0.2,5375N×16177E,h5km±5km,ML3.6,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.81**	**358**	*e*P	Pg	09 25 39.3	+0.2
MKZ				*e*S	Sg	09 25 51.4	+1.8
SPN	**Mys Shipunski**	**1.23**	**239**	P	Pg	09 25 48.0	+0.8
SPN				*i* S	Sg	09 26 05.1	+1.9
NLC	**Nalytchevo**	**1.56**	**249**	P	Pn	09 25 53.3	+1.3
NLC				*i* S	Sn	09 26 14.2	+1.7
TUMR	**Tumrok**	**1.81**	**329**	*e*P	Pn	09 25 55.4	+0.1
TUMR				*e*S	Sn	09 26 19.0	+0.5
AVH	**Avacha**	**1.88**	**256**	P	Pn	09 25 56.6	+0.3
AVH				*i* S	Sn	09 26 21.5	+1.2
PET	**Petropavlovsk**	**2.00**	**250**	*e*P	Pn	09 25 59.8	+1.8
PET				*e*S	Sn	09 26 25.7	+2.3
KMNR	**Kamenistaya**	**2.20**	**337**	*e*P	Pn	09 26 01.8	+1.1
KMNR				*e*S	Sn	09 26 29.1	+0.9
GNL	**Ganaly**	**2.27**	**270**	*e*P	Pn	09 26 02.5	+0.7
GNL				*e*S	Sn	09 26 31.5	+1.4
BZGR	**Bezymyannyi-Gr**	**2.28**	**345**	*e*P	Pn	09 26 02.2	+0.4
ZLN	**Zelenaya**	**2.34**	**347**	P	Pn	09 26 03.7	+1.0
ZLN				*i* S	Sn	09 26 33.4	+1.7
KIRR	**Kirishev**	**2.36**	**340**	*e*P	Pn	09 26 05.2	+2.3
KIRR				*i* S	Sn	09 26 34.8	+2.6
RUS	**Russkaya**	**2.37**	**237**	P	Pn	09 26 03.9	+0.9
RUS				*i* S	Sn	09 26 33.0	+0.6
KPT	**Kopyto**	**2.40**	**339**	*e*P	Pn	09 26 05.3	+1.9
KBTR	**Krutoberegovo**	**2.54**	**13**	P	Pn	09 26 06.1	+0.7
KBTR				*i* S	Sn	09 26 37.9	+1.3
KOZ	**Kozyrevsk**	**2.56**	**335**	*e*P	Pn	09 26 07.4	+1.7
KOZ				*i* S	Sn	09 26 39.3	+2.2
KRSR	**Krestovskiy**	**2.57**	**345**	*e*P	Pn	09 26 08.9	+3.1
KLY	**Klyuchi**	**2.65**	**346**	*e*P	Pn	09 26 08.6	+1.7
KLY				*e*S	Sn	09 26 42.1	+2.8
SRDR	**Sredinnyy**	**2.83**	**336**	*e*P	Pn	09 26 11.0	+1.6
SRDR				*e*S	Sn	09 26 45.2	+1.4
SRKR	**Sorokina**	**2.93**	**353**	P	Pn	09 26 13.0	+2.2
SRKR				*i* S	Sn	09 26 49.1	+2.8

*ISCJB **24** 09:30:09.8±0.4,276S±006×36.1E±0.1,h10km,mb4.2/22, MS4.3/2, Error ellipse: s-maj=15.2km s-min=7.5km az=19.5*
*IDC **24** 09:30:09.7±0.6,285S×3615E,h0km,mb4.2/15, mb1 4.3/16,mb1mx4.1/25,mbtmp4.1/16,ML4.3/1,MS3.9/1, Ms1 3.8/1,ms1mx3.2/25, Error ellipse: s-maj=20.3km s-min=15.2km az=122.0*
*NEIC **24** 09:30:11.3±0.5,290S×3615E,h10km,mb4.7/1, Error ellipse: s-maj=17.0km s-min=10.7km az=115.0*
*PRE **24** 09:30:12.7±2.5,289S×3615E,h10km,mb4.4*
*BJI **24** 09:30:15.9,268S×3682E,h20km,mB5.4,mb4.5,Ms5.0, Msz4.6*
ISC 24 09:30:11.7±0.4,280S±006×361E±01,h10km,n35, σ1§18/33,mb4.2/22,MS4.3/2,Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**14.64**	**212**	Pn	**Pn**	**09 33 37.3**	**-1.7**
	1.5nm,0.3s,baz=36,slow=11,SNR=9.7						
LSZ				Sn	**Sn**	**09 36 12.3**	**-9.2**
	0.6nm,0.3s,baz=110,slow=19,SNR=2.4						
LSZ				Lg		09 37 45.4	
	2.7nm,0.3s,baz=129,slow=18,SNR=7.1						
MSNA	**Messina**	**20.30**	**196**	*e*P	**P**	**09 34 48.8**	**+0.9**
MSNA				AMb	AMB	09 34 55.0	
	comp=Z,24nm,2.3s						
SLR	**Silverton**	**24.01**	**198**	*e*P	**P**	**09 35 28.2**	**+1.4**
TSUM	**Tsumeb**	**24.36**	**227**	P	**P**	**09 35 30.7**	**+0.6**
	comp=Z,1.9nm,0.8s,mb3.6,baz=24,slow=10.0,SNR=3.5						
KSR	**Koster**	**24.57**	**200**	*e*P	**P**	**09 35 33.1**	**+1.2**
KSR				AMb	AMB	09 35 45.8	
	comp=Z,38nm,2.2s,mb4.5						
ERPM	**east rand prop**	**24.59**	**197**	*e*P	**P**	**09 35 32.1**	**-0.1**
ERPM				AMb	AMB	09 35 39.3	
	comp=Z,18nm,2.6s,mb4.2						
PRYS	**Parys**	**25.41**	**198**	*e*P	**P**	**09 35 40.0**	**+0.4**
PRYS				AMb	AMB	09 35 43.2	
	comp=Z,24nm,1.6s,mb4.5						
SWZ	**Schweizer**	**26.34**	**202**	*e*P	**P**	**09 35 48.3**	**+0.3**
SEK	**Senekal**	**26.64**	**197**	*e*P	**P**	**09 35 51.4**	**+0.7**
BOSA	**Boshof**	**27.67**	**201**	P	**P**	**09 35 59.0**	**-1.0**
	comp=Z,7.3nm,0.8s,mb4.4,baz=137,slow=22,SNR=11						
BOSA				LR	LR	09 46 56.8	
	comp=Z,285nm,21.6s,MS3.8,baz=309,slow=36						
BOSA	**Boshof**	**27.67**	**201**	P	**P**	**09 35 59.0**	**-1.0**
BOSA				LR	LR	09 46 56.8	
SUR	**Sutherland**	**32.74**	**204**	P	**P**	**09 36 44.3**	**-0.5**
	comp=Z,8.9nm,0.8s,mb4.7,baz=52,slow=10,SNR=3.1						
TORD	**Torodi Ar. Bea**	**37.63**	**296**	P	**P**	**09 37 26.0**	**-1.2**
	comp=Z,2.1nm,1.0s,mb3.8,baz=115,slow=7.0,SNR=8.1						
TORD				PcP	PcP	09 39 45.0	0.0
	comp=Z,2.1nm,0.8s,baz=92,slow=3.3,SNR=7.1						
IDI	**Anoyia**	**39.31**	**345**	P	**P**	**09 37 44.1**	**+3.0**
	comp=Z,2.8nm,0.6s,mb4.2,baz=195,slow=6.1,SNR=3.9						
DBIC	**Dimbokro**	**41.94**	**283**	P	**P**	**09 38 02.2**	**-1.0**
	comp=Z,3.2nm,0.9s,mb3.9,baz=68,slow=7.7,SNR=4.2						
DBIC	**Dimbokro**	**41.94**	**283**	P	**P**	**09 38 02.2**	**-1.0**
BRTR	**Keskin Array B**	**42.38**	**357**	P	**P**	**09 38 08.0**	**+1.8**
	comp=Z,0.3nm,0.4s,mb3.3,baz=171,slow=8.8,SNR=4.5						
BRTR				PcP	PcP	09 39 59.8	+0.2
	comp=Z,1.4nm,0.8s,baz=212,slow=5.1,SNR=5.7						
GERES	**GERESS Array B**	**54.99**	**342**	P	**P**	**09 39 43.3**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.9,baz=130,slow=6.1,SNR=6.8						
KHC	**Kasperske Hory**	**55.28**	**342**	*e*P	**P**	**09 39 45.0**	**-0.3**
ESDC	**Sonseca Array**	**56.00**	**323**	P	**P**	**09 39 51.7**	**+1.1**
	comp=Z,1.7nm,0.8s,mb4.1,baz=133,slow=6.7,SNR=7.9						
TKM2	**Tokmak 2**	**57.78**	**34**	*e*P	**P**	**09 40 03.0**	**-0.1**
	comp=Z,8.9nm,1.0s,mb4.8						
MK31	**Makanchi Array**	**63.91**	**34**	*e*P	**P**	**09 40 43.8**	**-1.1**
MKAR	**Makanchi Array**	**63.91**	**34**	P	**P**	**09 40 43.8**	**-1.1**
	comp=Z,5.1nm,0.9s,mb4.6,baz=230,slow=5.0,SNR=12						
CMAR	**Chiang Mai Arr**	**65.34**	**68**	P	**P**	**09 40 54.6**	**-0.1**
	comp=Z,1.5nm,0.4s,mb4.4,baz=256,slow=7.7,SNR=11						
ZALV	**Zalesovo Beam**	**69.49**	**28**	P	**P**	**09 41 18.2**	**-2.1**
	comp=Z,0.8nm,0.3s,mb4.1,baz=232,slow=7.3,SNR=6.8						
GTA	**Gaotai**	**71.83**	**47**	*e*P	**P**	**09 41 37.9**	**+3.0**
GTA				AP	pP	09 41 41.4	+3.2
GTA				XP	sP	09 41 43.0	+3.6
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
ARCES	**ARCESS Array B**	**72.55**	**356**	P	**P**	**09 41 37.5**	**-1.1**
	comp=Z,3.8nm,0.9s,mb4.3,baz=79,slow=6.4,SNR=4.3						
SONM	**Songino Array**	**78.99**	**40**	P	**P**	**09 42 16.8**	**+0.9**
	comp=Z,1.0nm,0.9s,mb3.8,baz=233,slow=3.2,SNR=5.3						
HHC	**Hu-ho-hao-te**	**80.88**	**48**	*e*P	**P**	**09 42 28.3**	**+2.0**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,157nm,5.4s						
HHC				LR	LR		
	comp=N,184nm,13.1s,MS4.8						
HHC				LR	LR		
	comp=E,208nm,13.1s,MS4.8						
HHC				LR	LR		
	comp=Z,164nm,10.7s,MS4.7						
ASAR	**Alice Springs**	**96.04**	**114**	P	**P**	**09 43 38.8**	**-1.3**
	comp=Z,0.4nm,0.8s,mb3.9,baz=274,slow=4.2,SNR=3.7						
ASAR	**Alice Springs**	**96.04**	**114**	P	**P**	**09 43 38.8**	**-1.3**
WRA	**Warramunga Arr**	**96.80**	**110**	P	**P**	**09 43 42.3**	**-1.3**
	comp=Z,0.8nm,0.7s,mb4.3,baz=267,slow=2.8,SNR=11						
PDAR	**Pinedale Array**	**129.79**	**327**	PKP	PKPdf	09 49 22.7	+1.0
	comp=Z,0.5nm,0.9s,baz=68,slow=4.0,SNR=3.6						
TXAR	**Lajitas Array**	**133.58**	**309**	PKP	PKPdf	09 49 31.1	+1.7
	comp=Z,0.2nm,0.8s,baz=27,slow=2.8,SNR=3.3						
NVAR	**Mina Array Bea**	**137.51**	**330**	PKP	PKPdf	09 49 38.4	+2.0
	comp=Z,0.7nm,0.8s,baz=142,slow=3.1,SNR=4.0						

*CSEM **24** 10:08:03.2,1192N×4406E,h9km,ML3.7, After DHMR*
DHMR 24 10:08:03.2±0.9,1192N×4406E,h9km±14km,ML3.7,2D, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.24**	**46**	*i* P	Pn	10 08 25.6	-1.1
ADEN				*i* S	Sb	10 08 43.8	+1.0
ADEN	**Aden**	**1.24**	**46**	*i* P	Pn	10 08 25.6	-1.0
ADEN				*i* S	Sb	10 08 43.8	+1.0
ADEN				AML	AML	10 08 51.3	
	comp=E,2μm,0.8s						
UDYN	**Al 'Udayn**	**2.04**	**357**	⇓*i* P	Pn	10 08 39.3	+1.6
UDYN				*i* S	Sn	10 09 06.9	+3.7
UDYN	**Al 'Udayn**	**2.04**	**357**	⇓*i* P	Pn	10 08 39.3	+1.6
UDYN				*i* S	Sn	10 09 06.9	+3.6
UDYN				AML	AML	10 09 12.3	
	comp=N,942nm,0.5s						
HNSH	**Hunish Island**	**2.20**	**323**	*i* P	Pn	10 08 41.8	+1.9
HNSH				*i* S	Sn	10 09 11.5	+4.2
HNSH				AML	AML	10 09 23.3	
	comp=E,459nm,0.7s						
LBOS		**2.26**	**31**	*i* P	Pn	10 08 42.9	+2.2
LBOS				*i* S	Sn	10 09 14.1	+5.4
ZUQR	**Zugar Island**	**2.42**	**328**	*i* P	Pn	10 08 45.4	+2.5
ZUQR				*i* S	Sn	10 09 17.3	+4.6
ZUQR	**Zugar Island**	**2.42**	**328**	*i* P	Pn	10 08 45.4	+2.5
ZUQR				*i* S	Sn	10 09 17.3	+4.7
ZUQR				AML	AML	10 09 26.3	
	comp=E,589nm,0.7s						
ZQRN	**Zuqar Island**	**2.48**	**328**	*i* P	Pn	10 08 46.0	+2.2
ZQRN				*i* S	Sn	10 09 19.4	+5.1
ZQRN				AML	AML	10 09 27.3	
BDHA	**Al Bayda'**	**2.51**	**36**	*i* P	Pn	10 08 46.2	+2.0
BDHA				*i* S	Sn	10 09 20.8	+5.8
BDHA	**Al Bayda'**	**2.51**	**36**	*i* P	Pn	10 08 46.2	+1.9
BDHA				*i* S	Sn	10 09 20.8	+5.7
BDHA				AML	AML	10 09 26.5	
	comp=N,779nm,0.5s						

GUC 24 10:22:59.0±0.7,2305S×7091W,h34km±2km,MD4.3, ML3.5,4C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.42**	**97**	⇓*i* P	Pb	10 23 07.9	-0.7
MECH				*i* S	Sb	10 23 14.6	-0.5
MECH				AML	AML	10 23 20.8	
	comp=E,4μm,0.4s						
CEN1	**Los Morros**	**0.73**	**117**	⇑*i* P	Pn	10 23 12.6	-0.3
CEN1				*i* S	Sn	10 23 23.2	+0.4
ANCH	**Antofagasta**	**0.77**	**144**	⇓*i* P	Pn	10 23 13.2	-0.2
ANCH				*i* S	Sn	10 23 23.8	-0.1
TOCH	**Tocopilla**	**1.16**	**34**	⇑*i* P	Pn	10 23 19.4	+0.6
TOCH				*i* S	Sn	10 23 34.8	+1.5
TOCH				AML	AML	10 23 40.4	
	comp=E,1μm,0.3s						
PECH	**Pedro de Valdi**	**1.22**	**68**	*e*P	Pn	10 23 20.6	+0.9
PECH				*i* S	Sn	10 23 36.9	+1.9
PECH				AML	AML	10 23 39.7	
	comp=N,4μm,0.3s						
MACH	**Maria Elena**	**1.36**	**51**	*e*P	Pn	10 23 22.9	+1.4
MACH				*i* S	Sn	10 23 41.1	+2.7
PB04	**Plate Boundary**	**1.53**	**59**	*e*P	Pn	10 23 17.3	-6.6
PB04				*i* S	Sn	10 23 31.0	-11
PB04				AML	AML	10 23 34.6	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**1.89**	**77**	⇑*i* P	Pn	10 23 31.5	+2.6
LVC				*i* S	Sn	10 23 56.2	+4.7
LVC				AML	AML	10 24 00.6	
	comp=E,469nm,0.5s						
PB01	**Plate Boundary**	**2.40**	**34**	⇑*i* P	Pn	10 23 37.4	+1.6
PB01				AML	AML	10 24 19.7	

comp=E,330nm,0.4s

*NIED **24** 10:39:00,3700N×13990E,h5km,Mw3.7 Best double couple: M0 4.34000×10^14 NP1:φs42.00000°,δ79.00000°, λ105.00000°. NP2:φs169.00000°,δ18.00000°,λ38.00000°.*
*IDC **24** 10:39:26.6±1.4,3695N×13990E,h0km,mb3.5/3, mb1 3.7/6,mb1mx3.5/25,mbtmp3.7/6,ML3.3/3, Error ellipse: s-maj=19.7km s-min=17.5km az=7.0*
*ISCJB **24** 10:39:27.6±0.5,3696N±003×13987E±004,h18km±5km, mb3.5/3, Error ellipse: s-maj=5.9km s-min=5.7km az=31.3*
*JMA **24** 10:39:28.2,3699N×13982E,h8km±1km,M3.6 Broadband fault plane solution: P waves. NP1: φs173.00000°,δ45.00000°,λ76.00000°. NP2:φs13.00000°, δ47.00000°,λ104.00000°. Principal axes: T Plg80.0000°, Azm357.0000°; N Plg10.0000°, Azm183.0000°; P Plg1.0000°, Azm93.0000°;*
JMA Felt IV J1.
ISC 24 10:39:28.0±0.5,3697N±003×13984E±004,h8km±4km,n16, σ0§76/23,mb3.5/3,1C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSB	**Shiboa**	**0.07**	**91**	⇑P	**Pg**	**10 39 30.4**	**+0.4**
JSB				S	**Sg**	**10 39 32.0**	**+0.6**
JFY	**Yanaizu**	**0.45**	**347**	⇓P	**Pg**	**10 39 36.7**	**0.0**
JFY				S	**Sg**	**10 39 42.5**	**-0.1**
JKT	**Katashina**	**0.51**	**247**	⇓P	**Pg**	**10 39 38.1**	**+0.2**
JAG	**Ashikaga**	**0.62**	**210**	P	**Pg**	**10 39 40.2**	**+0.2**
JFT	**Otama**	**0.68**	**36**	⇓P	**Pg**	**10 39 41.2**	**+0.1**
JHK	**Hiroka**	**0.71**	**293**	⇓P	**Pg**	**10 39 41.6**	**-0.1**
JHK				S	**Sg**	**10 39 50.5**	**-0.5**
JFK	**Kawauchi**	**0.92**	**64**	⇓P	**Pg**	**10 39 45.4**	**-0.3**
JFK				*e*S	**Sg**	**10 39 57.2**	**-0.4**
JNS	**Sasagawa**	**0.94**	**334**	⇓P	**Pg**	**10 39 45.7**	**-0.4**
JNS				S	**Sg**	**10 39 57.7**	**-0.7**
MJAR	**Matsushiro Arr**	**1.37**	**252**	Pg	**Pg**	**10 39 53.5**	**-0.9**
	37nm,0.3s,baz=70,slow=18,SNR=169						
MJAR				Lg		10 40 11.3	
	9.8nm,0.3s,baz=126,slow=29,SNR=5.7						
MAT	**Matsushiro**	**1.38**	**252**	P	**Pn**	**10 39 53.8**	**+0.4**
MAT				*e*S	**Sb**	**10 40 12.6**	**+1.0**
JHJ	**Hachijo jima 2**	**3.84**	**181**	Pn	**Pn**	**10 40 26.4**	**-1.0**
	12nm,0.3s,baz=24,slow=20,SNR=3.4						
JHJ				Sn	**Sn**	**10 41 11.8**	**-0.9**
	14nm,0.3s,baz=75,slow=20,SNR=2.7						
ASAJ	**Asahikawa**	**7.44**	**16**	Pn	**Pn**	**10 41 18.4**	**+1.7**
	0.3nm,0.3s,baz=329,slow=19,SNR=3.9						
KSRS	**Korea Array**	**9.52**	**276**	Pn	**Pn**	**10 41 47.5**	**+2.3**
	0.4nm,0.3s,baz=88,slow=15,SNR=4.5						
SONM	**Songino Array**	**26.78**	**304**	P	**P**	**10 45 07.2**	**-1.0**
	0.6nm,0.8s,mb3.2,baz=92,slow=7.6,SNR=3.0						
WRA	**Warramunga Arr**	**56.84**	**186**	P	**P**	**10 49 13.1**	**+0.1**
	1.0nm,0.8s,mb3.9,baz=2.5,slow=7.5,SNR=13						
ASAR	**Alice Springs**	**60.57**	**186**	P	**P**	**10 49 38.7**	**-0.2**
	0.3nm,0.8s,mb3.5,baz=18,slow=12,SNR=3.9						

*MOS **24** 10:43:45.9±1.0,2661S×17607W,h33km,mb5.3/12, Error ellipse: s-maj=14.2km s-min=11.8km az=41.8*
*BJI **24** 10:43:46.3,2652S×17539W,h45km,mB5.6,mb5.2,Ms5.4, Msz5.0*
*ISCJB **24** 10:43:46.4±0.3,2679S±006×17604W±006,h43km, mb5.2/48,MS4.4/25, Error ellipse: s-maj=8.9km s-min=6.8km az=154.1*
*IDC **24** 10:43:47.7±0.5,2676S×17594W,h40km±3km,mb4.6/15, mb1 4.8/15,mb1mx4.7/17,mbtmp4.6/15,MS4.2/18, Ms1 4.2/18,ms1mx4.1/25, Error ellipse: s-maj=16.6km s-min=14.5km az=154.0*
*GCMT **24** 10:43:48.2±0.4,2648S×17536W,h16km±1km,MW5.0/58, Moment Tensor Solution. s25,c28; s58,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.36±.23; Mθθ-0.69±.18; Mφφ3.05±.15; Mrθ1.16±.59; Mθφ1.16±.11; Mφr-1.94±.40; Best double couple: M0 3.75700×10^16 NP1:φs224.00000°,δ39.00000°,λ-40.00000°. NP2: φs348.00000°,δ66.00000°,λ-121.00000°. Principal axes: T 3.8080, Plg15.0000°, Azm101.0000°; N -0.0960, Plg28.0000°, Azm2.0000°; P -3.7070, Plg57.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **24** 10:43:48.2±0.2,2668S×17607W,h45km,mb5.2/21 Error ellipse: s-maj=8.8km s-min=6.6km az=153.0*
*BGS **24** 10:43:52.3±2.2,2668S×17607W,h40km,mb5.2(NEIC)*
*DJA **24** 10:44:13,2603S×17730W,h188km,Mw5.4/5*
**ISC 24 10:43:48.2±0.3,2677S±006×17600W±006,h45km, h45km±1.0km:pP-P,n255,σ1§10/119,mb5.2/48,MS4.4/25,

PMG LR LR 11 04 09.2
comp=Z,378nm,20.4s,MS4.2,baz=299,slow=31
PMG Port Moresby 38.85 289 *e*P **P** **10 51 08.4 -1.0**
PMG *e**PP pP 10 51 21.5 0.0
PMG pmax pmax
comp=Z,19nm,0.9s
PMG Port Moresby 38.85 289 *e*P **P** **10 51 08.4 -1.0**
comp=Z,19nm,0.9s,mb4.8
PMG *e*pP pP 10 51 21.5 0.0
COEN Coen 40.17 280 *e*P **P** **10 51 20.5 +0.2**
comp=Z,41nm,0.8s,mb5.2
ASAR Alice Springs 45.20 262 P **P** **10 52 00.2 -0.8**
comp=Z,7.1nm,0.5s,mb4.7,baz=101,slow=6.8,SNR=142
ASAR PcP PcP 10 53 41.2 +0.5
comp=Z,2.2nm,0.5s,baz=122,slow=4.3,SNR=6.0
WB2 Warramunga Arr 45.86 268 ǁ *i*P **P** **10 52 05.1 -1.2**
WB2 Warramunga Arr 45.86 268 *e*P **P** **10 52 05.1 -1.2**
WB2 *e*pP pP 10 52 18.7 +0.1
WRAB Tennant Creek 45.86 268 P **P** **10 52 05.0 -1.4**
comp=Z,469nm,0.9s,SNR=39
WRAB Tennant Creek 45.86 268 *e*P **P** **10 52 05.2 -1.2**
WRAB *e**PP pP 10 52 18.9 +0.2
WRAB pmax pmax
comp=Z,42nm,0.6s,mb5.5
WRAB Tennant Creek 45.86 268 *e*P **P** **10 52 05.2 -1.1**
comp=Z,42nm,0.6s,mb5.5
WRAB *e*pP pP 10 52 18.9 +0.2
WRA Warramunga Arr 45.87 268 P **P** **10 52 05.4 -1.0**
comp=Z,34nm,0.6s,mb5.4,baz=108,slow=6.1,SNR=136
WRA pP pP 10 52 18.8 0.0
comp=Z,34nm,0.9s,baz=109,slow=7.3,SNR=11
WRA S **S** **10 58 47.4 -0.3**
comp=Z,0.6nm,0.8s,baz=105,slow=14,SNR=3.0
WRA LR LR 11 11 25.3
comp=Z,167nm,19.6s,MS4.0,baz=145,slow=36
WRA Warramunga Arr 45.87 268 P **P** **10 52 05.4 -1.0**
WRA *PP pP 10 52 18.8 +0.1
WRA S **S** **10 58 47.4 -0.3**
FORT Forrest 48.77 251 *e*P **P** **10 52 27.4 -1.5**
comp=Z,44nm,0.5s,mb5.8
FORT Forrest 48.77 251 *e*P **P** **10 52 27.6 -1.3**
comp=Z,62nm,0.6s,mb5.8
SBA Scott Base 51.78 185 *e*P **P** **10 52 53.3 +2.3**
SBA *e**PP pP 10 53 02.8 -0.7
VNDA Vanda 51.88 186 P **P** **10 52 50.8 -0.9**
comp=Z,2.4nm,0.9s,mb4.1,baz=24,slow=8.5,SNR=5.9
VNDA LR LR 11 10 17.6
comp=Z,127nm,19.6s,MS4.0,baz=15,slow=31
FITZ Fitzroy Crossi 54.24 266 *e*P **P** **10 53 09.3 -0.6**
comp=Z,31nm,0.6s,mb5.4
FITZ *i* pP 10 53 23.8 +1.3
FITZ Fitzroy Crossi 54.24 266 *e*P **P** **10 53 08.8 -1.1**
KLBR Kellerberrin 57.26 248 *e*P **P** **10 53 30.5 -0.9**
comp=Z,27nm,0.8s,mb5.3
KLBR *e* pP 10 53 40.9 -3.2
NWAO Narrogin (SRO) 57.39 247 LR LR 11 18 35.1
comp=Z,341nm,18.1s,MS4.5,baz=322,slow=36
MUN Mundaring 58.45 247 *e*P **P** **10 53 38.9 -0.9**
MBWA Marble Bar 58.46 261 *e*P **P** **10 53 39.1 -0.9**
comp=Z,13nm,0.8s,mb5.0
CASY Casey 59.16 207 *e*P **P** **10 53 44.9 +0.8**
CASY *i* pP 10 53 58.0 +1.2
CASY Casey 59.16 207 *e*P **P** **10 53 44.5 +0.3**
CASY *e*pP pP 10 53 57.9 +1.1
QSPA South Pole Qui 63.33 180 P **P** **10 54 13.3 +1.2**
comp=Z,20nm,0.9s,mb5.2,baz=41,slow=1.9,SNR=42
QSPA South Pole Qui 63.33 180 P **P** **10 54 13.3 +1.2**
KSM Kuching 76.14 279 *e*P **P** **10 55 32.0 -0.1**
comp=Z,20nm,0.9s,mb5.0
MAW Mawson 76.31 200 LR LR 11 28 11.5
comp=Z,197nm,19.5s,MS4.4,baz=5.0,slow=35
MAW Mawson 76.31 200 *e*P **P** **10 55 33.2 +1.1**
MAW pmax pmax
comp=Z,3.0nm,0.6s
MAW Mawson 76.31 200 *e*P **P** **10 55 33.2 +1.1**
comp=Z,7.5nm,0.2s,mb5.3
MAW Mawson 76.31 200 *e*P **P** **10 55 33.2 +1.2**
comp=Z,2.8nm,0.6s,mb4.4
MJAR Matsushiro Arr 76.32 324 P **P** **10 55 32.2 -0.3**
comp=Z,17nm,0.8s,mb5.0,baz=162,slow=5.6,SNR=27
MJAR LR LR 11 24 59.1
comp=Z,123nm,19.4s,MS4.2,baz=125,slow=32
MJAR Matsushiro Arr 76.32 324 P **P** **10 55 32.2 -0.3**
MJAR LR LR 11 24 59.0
MAJO Matsushiro 76.32 324 *e*P **P** **10 55 33.1 +0.6**
MAJO pmax pmax
comp=Z,23nm,0.9s,mb5.1
MAJO Matsushiro 76.32 324 *e*P **P** **10 55 33.1 +0.6**
comp=Z,24nm,0.9s,mb5.1
MAT Matsushiro 76.32 324 P **P** **10 55 31.4 -1.1**
NACB Ninganchiao 78.71 304 *e*P **P** **10 55 45.7 -0.4**
comp=Z,140nm,1.4s,mb5.7
TPUB Ta-pu 78.92 303 *e*P **P** **10 55 46.4 -0.9**
comp=Z,63nm,0.9s,mb5.5
YHNB Yeheng 79.16 305 *e*P **P** **10 55 46.2 -2.3**
ASAJ Asahikawa 80.08 331 P **P** **10 55 53.9 +0.8**
comp=Z,39nm,0.8s,mb5.4,baz=213,slow=5.7,SNR=24
SYO Syowa Base 81.03 192ǁ *e*P **P** **10 55 56.6 -1.4**
SYO Syowa Base 81.03 192ǁ *e*P SS 11 11 19.3 +1.8
AKUT Akutan 81.05 6 *e*P **P** **10 55 57.6 -0.4**
LPIG La Paz 81.11 57 LR LR 11 26 23.8
comp=Z,177nm,19.0s,MS4.4,baz=24,slow=32
SNAA Sanae 81.72 178 *e*P **P** **10 56 01.1 -0.5**
SNAA *e* 10 56 03.6
SNAA *e* pP 10 56 13.7 -1.1
SNAA Sanae 81.72 178 *c i*P **P** **10 56 01.4 -0.2**
SNAA pmax pmax
comp=Z,15nm,1.0s
SNAA Sanae 81.72 178 *e*P **P** **10 56 01.2 -0.3**
comp=Z,12nm,0.9s,mb4.8
VNA3 Neumayer Olymp 81.79 176 *e*P **P** **10 56 01.3 -0.7**
VNA3 *e* 10 56 04.0
VNA3 *e* pP 10 56 14.0 -1.2
VNA2 Neumayer--Watz 82.25 176 *e*P **P** **10 56 04.4 0.0**
baz=204,slow=2.2
VNA2 *e* 10 56 06.5
VNA2 *e* pP 10 56 16.8 -0.8
YSS Yuzh-Sakhalins 82.29 333ǁ *e*P **P** **10 56 05.8 +1.1**
YSS *e* pP 10 56 17.2 -0.8
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.4
YSS pmax pmax
comp=E,70nm,1.1s
VNA1 Neumayer--Stat 82.47 176 *e*P **P** **10 56 05.5 0.0**
VNA1 *e* 10 56 07.6
VNA1 *e* pP 10 56 18.0 -0.7
PETK Petropavlovsk- 82.77 344 P **P** **10 56 06.8 -0.3**
comp=E,7.5nm,0.8s,mb4.8,baz=122,slow=6.3,SNR=6.6
PETK LR LR 11 32 48.2
comp=E,101nm,18.7s,MS4.2,baz=51,slow=36
KSRS Korea Array 82.77 318 P **P** **10 56 08.6 +1.0**
comp=E,7.4nm,0.8s,mb4.8,baz=128,slow=5.4,SNR=16
KSRS LR LR 11 32 37.8
comp=E,142nm,18.8s,MS4.4,baz=11,slow=35
GSC Goldstone 83.29 45 *e*P **P** **10 56 10.1 -0.1**
GSC *e**PP pP 10 56 22.4 -1.1
PLCA Paso Flores 83.67 133 P **P** **10 56 11.6 -0.8**
comp=E,9.0nm,1.2s,mb4.8,baz=264,slow=2.1,SNR=5.6
PLCA LR LR 11 23 40.3
comp=E,103nm,21.8s,MS4.2,baz=78,slow=29
WAKR Walker 83.75 41 *e*P **P** **10 56 12.7 +0.2**
LDFC Landfair 84.23 46 *e*P **P** **10 56 15.5 +0.5**
comp=E,32nm,1.4s,mb5.2
LDFC *e*pP pP 10 56 27.9 -0.4
NVAR Mina Array Bea 84.38 42 P **P** **10 56 15.4 -0.3**
comp=E,5.8nm,1.1s,mb4.6,baz=222,slow=8.6,SNR=22
TPH Tonopah 84.80 43 *e*P **P** **10 56 17.5 -0.3**
TPH *e**PP pP 10 56 30.3 -0.8
SHPR Sheep Range 85.08 45 *e*P **P** **10 56 19.8 +0.5**
NJ2 Nanjing 85.27 309 *e*P **P** **10 56 20.3 0.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.2
TUC Tucson 85.46 50 *e*P **P** **10 56 21.3 0.0**
TUC *e**PP pP 10 56 34.0 -0.6
KULM Kulim 86.44 278 *e*P **P** **10 56 27.8 +1.1**
comp=Z,39nm,1.2s,mb5.5
KULM *e*pP pP 10 56 40.5 +0.6
MDJ Mudanjiang 86.67 324 P **P** **10 56 27.8 +0.8**
MDJ AP pP 10 56 40.5 +0.2
MDJ XP sP 10 56 44.8 -0.5
MDJ PP PP 10 59 49.0 -1.0
MDJ S S 11 07 02.4 +1.8
MDJ SS SS 11 12 44.9 +1.5
MDJ AMB AMB
comp=Z,18nm,1.2s,mb5.2
MDJ AMB AMB
comp=Z,147nm,9.7s
MDJ LR LR
comp=N,71nm,20.8s,MS4.2
MDJ LR LR
comp=E,63nm,17.2s,MS4.2
MDJ LR LR
comp=Z,152nm,20.1s,MS4.4
HABR Khabarovsk 86.77 330 *de*P **P** **10 56 25.8 -1.5**
HABR *e**PP pP 10 56 39.2 -1.5
HABR *e*S S 11 06 47.5 -14
HABR *e* 11 07 06.6
HABR *e*SSS 11 16 14.0
HABR MLR MLR
comp=Z,129nm,18.0s,MS4.4
HABR MLR MLR
comp=Z,181nm,22.0s
WUAZ Wupatki 86.93 48 *e*P **P** **10 56 28.9 +0.5**
WUAZ *e*pP pP 10 56 41.2 -0.6
WHN Wuhan 87.61 306 *e*P **P** **10 56 34.0 +2.1**
WHN AP pP 10 56 47.3 +2.1
CN2 Changchun 88.35 322 *e*P **P** **10 56 35.3 +0.2**
CN2 *e*AP pP 10 56 48.8 +0.4
CN2 *e*XP sP 10 56 53.6 +0.2
CN2 *e*S S 11 07 15.3 -1.5
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb5.0
CN2 AMB AMB
comp=Z,300nm,6.0s
KLR Kul'dur 88.82 329 *e*P **P** **10 56 34.7 -2.4**
TXAR Lajitas Array 88.93 56 P **P** **10 56 37.6 -0.6**
comp=Z,4.0nm,0.9s,mb4.8,baz=210,slow=8.5,SNR=37
TXAR pP pP 10 56 50.4 -1.2
comp=Z,6.2nm,0.8s,baz=209,slow=7.2,SNR=22
HVU Hansel Valley 89.78 42 *e*P **P** **10 56 41.7 -0.1**
ANMO Albuquerque 89.93 50 *e*P **P** **10 56 42.8 +0.1**
OD2 Odessa Site #2 90.02 35 *e*P **P** **10 56 42.7 -0.1**
PMR Palmer 90.69 12 *e*P **P** **10 56 45.7 +0.2**
PMR *e**PP pP 10 56 58.2 -0.7
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb5.2
PMR Palmer 90.69 12 *e*P **P** **10 56 45.7 +0.1**
comp=Z,7.9nm,0.6s,mb5.2
PMR *e*pP pP 10 56 58.2 -0.8
GYA Guiyang 91.31 299 P **P** **10 56 49.3 0.0**
GYA AP pP 10 57 04.1 +1.4
GYA XP sP 10 57 09.4 +1.7
GYA PP PP 11 00 29.8 +2.4
GYA PPP 11 02 30.8
GYA SKS 11 07 15.4
GYA S S 11 07 43.3 -1.7
GYA XS sS 11 08 04.6 -2.9
GYA PS PS 11 09 01.0 +1.7
GYA SS SS 11 13 50.8 -0.7
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,140nm,5.3s
GYA LR LR
comp=N,840nm,21.6s,MS5.2
GYA LR LR
comp=E,680nm,22.8s,MS5.2
GYA LR LR
comp=Z,580nm,21.4s,MS5.0
BJI Beijing 91.60 315 P **P** **10 56 50.9 +0.5**
BJI S S 11 07 48.8 +1.7
BJI SS SS 11 13 57.5 +2.3
BJI AMB AMB
comp=Z,17nm,0.7s,mb5.5
BJI AMB AMB
comp=Z,244nm,3.8s
BJI LR LR
comp=N,332nm,28.8s,MS4.8
BJI LR LR
comp=E,295nm,25.3s,MS4.8
BJI LR LR
comp=Z,91nm,21.6s,MS4.2
NST Nakhon Sawan 91.62 287 P **P** **10 56 54.0 +3.0**
REDW Red Top Meadow 91.86 41 *e*P **P** **10 56 51.4 -0.1**
MOOW Moose Ponds 92.14 41 *e*P **P** **10 56 55.3 +2.6**
TRF Thorofare Moun 92.19 11 *e*P **P** **10 56 52.1 -0.4**
comp=Z,19nm,0.8s,mb5.5
PDAR Pinedale Array 92.29 42 P **P** **10 56 52.5 -1.0**
comp=Z,1.7nm,1.0s,mb4.3,baz=194,slow=2.6,SNR=9.8
PDAR pP pP 10 57 06.0 -0.8
comp=Z,1.8nm,0.9s,baz=205,slow=3.1,SNR=7.7
PDAR LR LR 11 33 51.7
comp=Z,271nm,18.9s,MS4.7,baz=313,slow=33
JCT Junction City 92.40 57 *e*P **P** **10 56 52.7 -1.6**
JCT *e**PP pP 10 57 05.8 -1.9
JCT pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
JCT Junction City 92.40 57 *e*P **P** **10 56 52.7 -1.6**
comp=Z,10nm,1.3s,mb5.0
JCT *e*pP pP 10 57 05.8 -1.9
NNA Nana 92.68 105 LR LR 11 27 58.0
comp=Z,99nm,21.1s,MS4.2,baz=321,slow=29
MCK McKinley 92.69 12 *e*P **P** **10 56 59.4 +4.6**
SEY Seymchan 92.87 346ǁ *i*P **P** **10 56 55.2 -0.4**
SEY *e**PP pP 10 57 08.4 -0.6
MENT Mentasta 93.02 14 *e*P **P** **10 56 56.7 +0.4**
HRY Holter Researc 93.27 38 *e*P **P** **10 57 00.4 +2.5**
XAN Xi'an 93.35 307 P **P** **10 57 00.8 +2.2**
XAN AP pP 10 57 11.1 -0.9
XAN PP PP 11 00 42.9 -0.5
XAN S S 11 08 03.4 +0.5
XAN SS SS 11 14 21.6 +1.0
XAN AMB AMB
comp=Z,4.0nm,0.8s,mb4.9
XAN LR LR
comp=N,21nm,19.4s,MS4.2
XAN LR LR
comp=E,83nm,18.6s,MS4.2
XAN LR LR
comp=Z,148nm,27.9s
ATAH Atahualpa 93.62 100 LR LR 11 31 35.9
comp=Z,190nm,18.2s,MS4.6,baz=205,slow=31
KMI Kunming 93.78 296 P **P** **10 57 03.9 +3.1**
KMI AP pP 10 57 16.8 +2.6
KMI XP sP 10 57 22.9 +3.7
KMI PP PP 11 00 52.8 +5.9
KMI S S 11 08 04.5 -2.6
KMI XS sS 11 08 26.8 -2.9
KMI SS SS 11 14 27.5 +0.4
KMI SSS 11 18 08.3
KMI AMB AMB
comp=Z,11nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,97nm,4.0s
KMI LR LR
comp=N,176nm,19.3s,MS4.6
KMI LR LR
comp=E,134nm,18.4s,MS4.6
KMI LR LR
comp=Z,118nm,23.4s,MS4.3
CMAR Chiang Mai Arr 93.89 289 P **P** **10 57 03.0 +1.6**
comp=Z,4.3nm,0.7s,mb5.0,baz=138,slow=3.8,SNR=15
COLA College 93.93 12 *d i*P **P** **10 56 59.8 -0.7**
CHG Chiang Mai 94.05 289 P **P** **10 57 04.4 +2.2**
CHTO Chiang Mai 94.05 289 *e*P **P** **10 57 04.3 +2.1**
HIA Hailar 94.82 324 *e*P **P** **10 57 04.7 -0.3**
DAWY Dawson 94.97 15 *e*P **P** **10 57 05.8 +0.5**
HHC Hu-ho-hao-te 95.00 313 *e*P **P** **10 57 05.9 -0.1**
HHC AP pP 10 57 19.0 -0.4
HHC XP sP 10 57 24.5 +0.1
HHC PP PP 11 00 56.8 +0.7
HHC SKS 11 07 35.6
HHC S S 11 08 12.5 -4.6
HHC XS sS 11 08 36.4 -3.2
HHC SS SS 11 14 42.6 -1.3
HHC AMB AMB
comp=Z,16nm,1.0s,mb5.4
HHC AMB AMB
comp=Z,215nm,5.0s
HHC LR LR
comp=N,210nm,14.3s,MS4.8
HHC LR LR
comp=E,150nm,19.0s,MS4.8
HHC LR LR
comp=Z,160nm,15.5s,MS4.6
BILL Bilibino 95.44 353ǁ *e*P **P** **10 57 07.2 -0.1**
BILL *e* 11 01 00.3
BILL *e*S SKSac 11 07 38.4 -0.6
BILL pmax pmax
comp=Z,12nm,1.7s,mb5.0
CD2 Chengdu 95.67 302 P **P** **10 57 10.1 +0.8**
CD2 AP pP 10 57 23.6 +0.9
CD2 PP PP 11 01 04.3 +2.8
CD2 SKS 11 07 41.1
CD2 S S 11 08 20.8 -2.5
CD2 XS sS 11 08 43.8 -2.1
CD2 SS SS 11 14 54.0 +0.3
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.8
CD2 AMB AMB
comp=Z,180nm,5.1s
CD2 LR LR
comp=N,400nm,5.9s
CD2 LR LR
comp=Z,330nm,7.1s
LZH Lanzhou 97.98 306 *e*P **P** **10 57 20.6 +0.9**
LZH AP pP 10 57 31.0 -2.1
LZH XP sP 10 57 37.8 -0.2
LZH *e*PP PP 11 01 22.0 +2.7
LZH *e*S S 11 08 41.1 -1.9
LZH XS sS 11 09 02.4 -3.2
LZH SS SS 11 15 27.0 +0.8
LZH AMB AMB
comp=Z,14nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,136nm,7.9s
LZH LR LR
comp=E,476nm,15.4s
LZH LR LR
comp=Z,961nm,16.6s,MS5.4
YKA Yellowknife Ar 101.42 25 P Pdif 10 57 33.3 -1.5
comp=Z,0.1nm,0.6s,baz=232,slow=4.0,SNR=5.7
SONM Songino Array 101.64 318 P Pdif 10 57 35.8 -0.1
comp=Z,0.2nm,0.7s,baz=70,slow=6.3,SNR=3.8
HVS Khovu-Aksy 110.54 318 *i* PKIKP PKiKP 11 02 15.9 +0.5
WMQ Urumqi 112.34 309 *e*PKP PKiKP 11 02 19.4 +0.3
ZALV Zalesovo Beam 116.46 319 PKP PKPdf 11 02 26.2 -0.5
comp=Z,2.6nm,0.7s,baz=101,slow=1.5,SNR=7.4
ZALV pPKP pPKPdf 11 02 38.5 -2.0
comp=Z,3.6nm,0.8s,baz=176,slow=1.4,SNR=4.2
MKAR Makanchi Array 116.75 311 PKP PKPdf 11 02 26.9 -0.5
comp=Z,3.6nm,0.6s,baz=90,slow=1.1,SNR=9.2
MKAR pPKP pPKPdf 11 02 39.7 -1.6
comp=Z,3.6nm,0.7s,baz=64,slow=2.8,SNR=5.6
MKAR Makanchi Array 116.75 311 PKP PKPdf 11 02 26.9 -0.5
MKAR pPKP pPKPdf 11 02 39.7 -1.6
NVS Novosibirsk 117.52 320 *e*PKIKP PKPdf 11 02 27.4 -1.2
NVS pmax pmax
comp=N,3.0nm,1.1s
NVS pmax pmax
comp=E,8.0nm,1.1s
NVS pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 119.77 315 PKP PKPdf 11 02 32.4 -0.7
comp=Z,3.8nm,0.6s,baz=98,slow=1.8,SNR=7.4
KURK pPKP pPKPdf 11 02 45.2 -1.8
comp=Z,4.9nm,0.8s,baz=103,slow=2.1,SNR=6.9
KURK Kurchatov 119.77 315 PKP PKPdf 11 02 32.4 -0.7
KURK pPKP pPKPdf 11 02 45.2 -1.8
TKM2 Tokmak 2 120.75 306 *e*PKIKP PKPdf 11 02 35.2 -0.1
TKM2 *e* 11 02 48.3
BOSA Boshof 121.28 202 PKP PKPdf 11 02 36.4 -0.5
comp=Z,7.6nm,1.0s,baz=155,slow=2.9,SNR=3.8
AAK Ala-Archa 121.51 305ǁ *i*PKIKP PKPdf 11 02 37.0 +0.3
KBL Kabul 124.35 295 *e*PKIKP PKPdf 11 02 43.4 +0.9
KBL *e* 11 02 56.2
BVAR Borovoye Array 124.98 318 PKP PKPdf 11 02 42.8 -0.3
comp=Z,5.6nm,0.8s,baz=75,slow=1.7,SNR=14
BVAR pPKP pPKPdf 11 02 55.4 -1.4
comp=Z,6.0nm,0.7s,baz=48,slow=2.2,SNR=12
BRVK Borovoye 125.04 318 *e*PKIKP PKPdf 11 02 42.9 -0.3
ARU Arti 131.34 323 *i* PKIKP PKPdf 11 02 55.0 -0.1
ARU 11 05 12.4
ARU SS SS 11 22 39.0 -4.4
AKTK Aktyubinsk 132.87 315 PKP PKPdf 11 02 58.3 +0.2
AKTK pPKP pPKPdf 11 03 11.1 -0.9
AKTO Aktyubinsk 132.87 315 PKP PKPdf 11 02 58.3 +0.2
comp=Z,3.7nm,0.7s,baz=13,slow=0.7,SNR=17
AKTO pPKP pPKPdf 11 03 11.1 -0.9
comp=Z,4.4nm,0.7s,baz=358,slow=0.6,SNR=8.9
ARCES ARCESS Array B 135.39 349 PKP PKPdf 11 03 02.1 -0.2
comp=Z,4.3nm,0.7s,baz=22,slow=1.3,SNR=7.9
JOF Joensuu 139.63 341 *e*pkp PKPdf 11 03 01.4 -8.9
KAF Kangasniemi 141.65 343 *e*pkp PKPdf 11 03 06.2 -7.8
OBN Obninsk 143.09 329ǁ *i*PKIKP PKPdf 11 03 14.6 -2.2
OBN pmax pmax
comp=Z,33nm,1.7s
VSR Storozhevoye 143.90 322 *e*PKIKP PKPdf 11 03 16.7 -1.6
VSR pmax pmax
comp=Z,2.0nm,0.6s
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.4s
KIV Kislovodsk 144.47 309 *e*PKIKP PKPdf 11 03 19.3 -0.3
KIV pmax pmax
comp=Z,17nm,1.0s
BHD Baghdad 144.60 290 *e*PKP PKPdf 11 03 22.0 +1.9
NB2 NORSAR Subarra145.39 354 PKP PKPdf 11 03 20.3 -0.3
comp=Z,59nm,0.9s,baz=8.5,slow=3.8
NB2 NORSAR Subarra145.39 354 PKP PKPdf 11 03 20.3 -0.3
baz=8.5,slow=3.8
NOA NORSAR Array B145.39 354 PKPbc PKPbc 11 03 20.1 -0.4
comp=Z,32nm,0.9s,baz=6.9,slow=2.4,SNR=45
MSL Mosul 145.53 296 *e*PKP PKPdf 11 03 23.0 +1.4
HFS Hagfors 145.99 351 PKPbc PKPbc 11 03 21.8 -0.6
comp=Z,15nm,0.6s,baz=64,slow=3.4,SNR=61
KONO Kongsberg 146.90 355 *i* PKP2 PKPbc 11 03 24.6 -0.5
IDID Didziasalis 147.03 336 *e*P PKPbc 11 03 26.1 +0.4
ISAL Salakas 147.04 337 *e*P PKPbc 11 03 27.8 +2.2
IIGN Ignalina 147.18 337 *e*P PKPbc 11 03 26.6 +0.5
ANN Anapa 147.75 313 *i* PKP2 PKPbc 11 03 28.2 +0.2
ANN pmax pmax
comp=Z,46nm,0.9s
KAC Achnashellach 148.58 10 *e*P PKPbc 11 03 30.3 +0.6
KPL Plockton 148.68 10 *e*P PKPbc 11 03 30.0 0.0
MDO Dochfour 148.77 9 *e*P PKPbc 11 03 29.9 -0.4
MALT Malatya 148.95 300ǁ *i*P PKPbc 11 03 32.8 +1.5
MALT Malatya 148.95 300 *e*PKPbc PKPbc 11 03 32.5 +1.2
KAR1 Arisaig 149.06 10 *e*P PKPbc 11 03 30.3 -0.7
SUW Suwalki 149.32 338 *e*PKP PKPbc 11 03 31.3 -0.4
SUW Suwalki 149.32 338 *e*PKP PKPbc 11 03 31.3 -0.4
AKASG Malin Array Be 149.32 328 PKPbc PKPbc 11 03 31.6 -0.3
comp=Z,14nm,0.7s,baz=42,slow=3.4,SNR=23
AKASG pPKPbc pPKPbc 11 03 44.2 -1.4
comp=Z,18nm,0.8s,baz=40,slow=3.6,SNR=7.8
AKBB Malin Array Si 149.32 328 *e*PKP2 PKPbc 11 03 31.2 -0.6
KIEV Kiev 149.33 328 *e*PKP2 PKPbc 11 03 31.5 -0.4
SIM Simferopol' 149.84 315 *e*PKIKP PKPdf 11 03 27.2 -1.3
SIM pmax pmax
comp=Z,40nm,1.1s
EAB Aberfoyle 149.99 9 *e*P PKPbc 11 03 32.6 -0.7
EBH Black Hill 150.05 8 *e*P PKPbc 11 03 32.7 -0.8
EDI Edinburgh 150.41 8 P PKPbc 11 03 33.9 -0.4
EDI Edinburgh 150.41 8 *e*P PKPbc 11 03 33.9 -0.4
ESY Stoneypath 150.48 8 *e*P PKPbc 11 03 34.0 -0.5
EBL Broad Law 150.57 8 *e*P PKPbc 11 03 34.4 -0.3
BSD Bornholm Skovb 150.58 347 *i* PKIKP PKPbc 11 03 34.6 -0.1
BSD pmax pmax
comp=Z,18nm,1.1s
BSD Bornholm Skovb 150.58 347 *i* P PKPbc 11 03 34.6 -0.1
comp=Z,18nm,1.1s
XSO Sourhope Farm 150.94 7 *e*P PKPbc 11 03 34.9 -0.7
EKA Eskdalemuir Ar 150.99 8 PKPbc PKPbc 11 03 35.1 -0.5
comp=Z,4.7nm,0.7s,baz=336,slow=1.5,SNR=13
EKA PKPab PKPab 11 03 42.7 -0.5
comp=Z,4.1nm,0.7s,baz=345,slow=2.7,SNR=8.6
GAL1 Galloway 151.21 10 *e*P PKPbc 11 03 34.5 -1.7
XAL Allendale 151.56 8 *e*P PKPbc 11 03 35.6 -1.4
KIS Kishinev 151.89 322ǁ *i*PKIKP PKPbc 11 03 38.0 0.0
KIS pmax pmax
comp=Z,110nm,1.2s
KIS Kishinev 151.89 322ǁ *i* UNK PKPbc 11 03 38.0 0.0
KIS XM 11 03 39.0
comp=Z,100nm,1.2s
BR131 Keskin Array S 152.19 305 *e*PKPbc PKPbc 11 03 39.4 +0.4
BRTR Keskin Array B 152.19 305 PKP PKPdf 11 03 31.8 -0.5
comp=Z,0.7nm,0.5s,baz=134,slow=3.6,SNR=4.1
BRTR PKPbc PKPbc 11 03 39.2 +0.3
comp=Z,5.3nm,0.6s,baz=116,slow=2.9,SNR=24
BRTR PKPab PKPab 11 03 49.8 +1.0
comp=Z,12nm,0.8s,baz=104,slow=3.4,SNR=17
BRTR Keskin Array B 152.19 305 PKIKP PKPdf 11 03 31.8 -0.5

BRTR							11 03 39.3	
LVV	**L'vov**	**152.30**	**331**	*e*PKIKP	PKPbc		11 03 39.1	+0.2
LHO	**Holmfirth**	**152.90**	**8**	*e*P	PKPdf		11 03 36.2	+3.4
KWP	**Kalwaria**	**152.99**	**333**	*e*PKP	PKPbc		11 03 41.1	+0.7
KWP	**Kalwaria**	**152.99**	**333**	⇑*i*P	PKPbc		11 03 41.3	+0.9
BUR08	**Bucovina Ar. S**	**153.34**	**327**	*e*PKPbc	PKPbc		11 03 40.6	-0.7
BURAR	**Bucovina Array**	**153.35**	**327**	⇑*i*P	PKPbc		11 03 43.3	+2.0
TIRR	**Tirgusor**	**153.59**	**318**	⇑*i*P	PKPdf		11 03 30.3	-3.9
OJC	**Ojcow**	**153.63**	**337**	*e*PKP	PKPbc		11 03 41.8	0.0
VRI	**Vrincioaia**	**153.72**	**322**	⇑*i*P	PKPbc		11 03 45.0	+2.9
HARR	**Harsova**	**153.75**	**319**	⇑*i*P	PKPbc		11 03 43.2	+1.0
STHS	**Stebnicka Huta**	**153.75**	**334**	*e*PKP	PKPab		11 03 55.0	0.0
PLOR	**Plostina**	**153.78**	**322**	⇑*i*P	PKPbc		11 03 46.4	+4.1
UZH	**Uzhgorod**	**153.94**	**332**	*e*PKIKP	PKPdf		11 03 34.5	0.0
UZH				*e*			11 03 43.5	
UZH				*e*			11 03 51.7	
CRVS	**Cervenica-Dubn**	**154.07**	**333**	*e*PKP	PKPab		11 03 56.5	+0.1
KSP	**Ksiaz**	**154.19**	**342**	*e*PKP	PKPbc		11 03 44.1	+1.1
KSP	**Ksiaz**	**154.19**	**342**	*e*PKIKP	PKPbc		11 03 43.5	+0.5
KSP				*e*			11 03 57.4	
OKC	**Ostrava-Krasne**	**154.52**	**338**	*e*PKPab	PKPab		11 03 58.8	+0.5
CLL	**Collm**	**154.56**	**347**	*i* PKPbc	PKPbc		11 03 43.8	+0.1
	comp=Z,27nm,1.7s							
CLL				*i* (sPKPdf)			11 03 54.0	
CLL				*i* PKPab	PKPab		11 03 57.8	-0.6
	comp=Z,21nm,1.3s							
CLL				*i* (sPKPbc)			11 04 05.1	
	comp=Z,13nm,0.8s							
UPC	**Upice**	**154.57**	**342**	*e*PKPbc	PKPbc		11 03 45.0	+1.2
UPC				*e*PKPab	PKPab		11 03 59.2	+0.7
DPC	**Dobruska-Polom**	**154.63**	**341**	*e*PKIKP	PKPbc		11 03 44.8	+0.9
DPC				*e*			11 03 58.9	
DPC	**Dobruska-Polom**	**154.63**	**341**	*e*PKPbc	PKPbc		11 03 44.8	+0.9
DPC				*e*PKPab	pPKPbc		11 03 58.9	+1.2
DPC				*ep*PKP	pPKPab		11 04 11.6	-0.6
BRG	**Berggiesshubel**	**154.76**	**345**	*e*PKIKP	PKPbc		11 03 44.5	+0.3
BRG				*e*			11 03 54.1	
BRG				pmax	pmax			
	comp=Z,7.0nm,1.2s							
BRG	**Berggiesshubel**	**154.76**	**345**	*e*PKP	PKPbc		11 03 44.5	+0.4
	comp=Z,12nm,1.2s							
BRG				*e*			11 03 54.1	
	comp=Z,7.5nm,1.1s							
BRG				*e*			11 04 09.1	
	comp=Z,9.4nm,1.0s							
VOIR		**154.90**	**323**	⇑*i*P	PKPdf		11 03 40.0	+4.0
DRGR		**155.14**	**328**	⇓*i*P	PKPdf		11 03 45.3	+9.1
VYHS	**Vyhne**	**155.42**	**336**	*e*PKP	PKPab		11 04 01.3	-0.9
PRU	**Pruhonice**	**155.44**	**343**	*e*PKPab	PKPab		11 04 02.3	+0.1
NKC	**Novy Kostel**	**155.69**	**347**	*e*PKPab	PKPab		11 04 03.1	-0.1
NKC				*ex*	x		11 04 10.1	
SMOL	**Smolenice**	**155.90**	**338**	*e*PKP	PKPab		11 04 05.2	+1.0
GZR	**Gura Zlata**	**156.11**	**326**	⇑*i*P	PKPdf		11 03 42.3	+4.7
ZST	**Bratislava**	**156.28**	**338**	*e*PKP	PKPab		11 04 06.7	+0.8
BCLA	**Clavier**	**156.36**	**358**	PKPab	PKPab		11 04 05.7	-0.4
BCLA					APKPab		11 04 18.6	
GRF	**Grafenberg Arr**	**156.44**	**348**	*e*PKPab	PKPab		11 04 06.8	+0.3
GRF				*e*			11 04 13.8	
KHC	**Kasperske Hory**	**156.47**	**344**	*i* PKIKP	PKPdf		11 03 36.2	-1.7
KHC	**Kasperske Hory**	**156.47**	**344**	*e*PKPab	PKPab		11 04 07.1	+0.5
KHC				*ep*PKP	pPKPab		11 04 18.8	-1.3
GIVF	**Givet**	**156.69**	**359**	*e*PKP2	PKPab		11 04 05.9	-1.6
GERES	**GERESS Array B**	**156.70**	**344**	PKP	PKPdf		11 03 37.4	-0.8
	comp=Z,0.3nm,0.5s,baz=180,slow=4.8,SNR=3.5							
GERES				PKPab	PKPab		11 04 08.1	+0.5
	comp=Z,1.1nm,0.9s,baz=35,slow=3.3,SNR=5.3							
BAIF	**Baives**	**156.74**	**360**	*e*PKP2	PKPab		11 04 07.2	-0.5
	comp=Z,64nm,1.3s							
PKSM	**Moragy**	**157.37**	**333**	⇑*i*P	PKPdf		11 03 39.3	+0.1
FLN	**La Foliniere**	**157.76**	**8**	*e*PKP2	PKPab		11 04 11.1	-1.1
	comp=Z,21nm,0.7s							
LIC	**Lamto**	**157.83**	**156**	*e*P	pPKPab		11 04 25.0	-1.9
	comp=Z,25nm,1.0s							
LIC	**Lamto**	**157.83**	**156**	*e*PKP2	pPKPab		11 04 24.8	-2.1
	comp=Z,19nm,1.0s							
LDF	**La Druitiere**	**157.97**	**7**	*e*PKP2	PKPab		11 04 11.9	-1.2
	comp=Z,28nm,0.8s							
KIC	**Kosan Boka**	**158.06**	**156**	*e*P	pPKPab		11 04 26.3	-1.6
	comp=Z,50nm,1.1s							
TIC	**Toumodi**	**158.22**	**155**	*e*P	pPKPab		11 04 26.9	-1.7
	comp=Z,8.6nm,0.2s							
CDF	**Champ du Feu**	**158.24**	**354**	*e*PKP2	PKPab		11 04 13.7	-0.6
DBIC	**Dimbokro**	**158.31**	**156**	PKP	PKPdf		11 03 41.2	-0.1
	comp=Z,2.2nm,0.8s,baz=164,slow=2.7,SNR=3.2							
VISS	**Visnje**	**159.13**	**338**	*i* PKPdf	PKPab		11 04 18.0	-0.2
VISS				*i*			11 04 30.7	
BOJS	**Bojanci**	**159.25**	**337**	*i* PKPdf	PKPab		11 04 18.5	-0.3
JAVS	**Javornik**	**159.29**	**340**	*i* PKPdf	PKPab		11 04 18.6	-0.3
LOR	**Lormes**	**159.54**	**0**	*e*PKP2	PKPab		11 04 19.0	-0.9
SSF	**Saint Saulge**	**159.74**	**1**	*e*PKP2	PKPab		11 04 20.1	-0.7
	comp=Z,38nm,1.2s							
MFF	**Saint Martin d**	**159.93**	**8**	*e*PKP2	PKPab		11 04 20.7	-0.9
	comp=Z,62nm,1.3s							
AVF	**Avril sur Loir**	**160.01**	**1**	*e*PKP2	PKPab		11 04 21.0	-1.0
	comp=Z,16nm,0.9s							
SMF	**Signal de Mont**	**160.16**	**0**	*e*PKP2	PKPab		11 04 21.8	-0.8
	comp=Z,38nm,1.1s							
TCF	**Toulx Ste Croi**	**160.47**	**4**	*e*PKP2	PKPab		11 04 23.0	-1.0
RJF	**Les Rejaudoux**	**161.39**	**6**	*e*PKP2	PKPab		11 04 26.9	-1.2
	comp=Z,19nm,1.0s							
LFF	**La Frestale**	**161.68**	**7**	*e*PKP2	PKPab		11 04 28.4	-0.9
	comp=Z,24nm,0.8s							
CAF	**Calviac**	**161.81**	**4**	*e*PKP2	PKPab		11 04 29.0	-0.9
ESDC	**Sonseca Array**	**165.51**	**25**	PKPab	PKPab		11 04 45.7	-0.7
	comp=Z,2.0nm,0.8s,baz=318,slow=4.1,SNR=9.5							
TORD	**Torodi Ar. Bea**	**166.28**	**170**	PKP	PKPdf		11 03 48.6	-0.7
	comp=Z,3.2nm,1.1s,baz=278,slow=0.7,SNR=9.1							
TORD				PKPab	PKPab		11 04 50.5	+0.2
	comp=Z,7.4nm,0.9s,baz=182,slow=3.9,SNR=20							
MDT	**Midelt**	**170.39**	**49**	PKP	PKPdf		11 03 52.3	+0.8
	comp=Z,1.9nm,1.0s,baz=82,slow=0.6,SNR=4.3							

TAP 24 10:57:23.7, 2116N×12178E, h182km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.90**	**346**	*e*P	Pn	10 57 50.0	-0.9
	baz=350						
LAY				*e*S	Sn	10 58 10.6	-1.5
	baz=350						
TSEB	**Hengchuen, Pin**	**1.10**	**312**	*e*P	Pn	10 57 51.7	-0.7
	baz=307						
TSEB				*e*S	Sn	10 58 15.7	+1.2
	baz=307						
TWK1	**Hengchun**	**1.20**	**311**	P	Pn	10 57 53.7	+0.6
	baz=310						
TWK1				S	Sn	10 58 15.7	-0.3
	baz=310						
HEN	**Hengchun**	**1.28**	**311**	*e*S	Sn	10 58 17.1	-0.2
	baz=302						
SCZT	**Fangliau**	**1.62**	**318**	*e*P	Pn	10 57 58.1	+1.1
	baz=322						
SCZT				*e*S	Sn	10 58 21.9	-0.9
	baz=322						
TWG	**Pinlang**	**1.78**	**338**	*e*P	Pn	10 57 57.4	-1.2
	baz=331						
TWG				*e*S	Sn	10 58 23.1	-2.6
	baz=331						
SSD	**Sandimen**	**1.90**	**326**	P	Pn	10 58 00.3	+0.4
	baz=331						
SSD				*e*S	Sn	10 58 26.9	-1.1
	baz=331						
TWM1	**Shoushan**	**2.08**	**323**	*e*P	Pn	10 58 03.9	+2.2
	baz=323						
TWM1				*e*S	Sn	10 58 35.3	+4.0
	baz=323						
ELDTW	**Lidau**	**2.14**	**341**	*e*S	Sn	10 58 32.6	+0.1
	baz=336						
STYT	**Tauyuan**	**2.21**	**335**	*e*P	Pn	10 58 03.6	+0.4
	baz=334						
STYT				*e*S	Sn	10 58 32.9	-1.0
	baz=334						
TWF1	**Yuli**	**2.23**	**348**	*e*P	Pn	10 58 06.0	+2.6
	baz=343						
CHN1	**Nanshi**	**2.32**	**330**	*e*P	Pn	10 58 05.5	+0.9
	baz=336						
WTP	**Ta-pu**	**2.34**	**333**	P	Pn	10 58 05.1	+0.4
	baz=332						
TWK	**Hsinying**	**2.41**	**330**	*e*S	Sn	10 58 37.7	-0.4
	baz=336						
YUS	**Yu-Shan**	**2.44**	**342**	*e*S	Sn	10 58 38.7	+0.1
	baz=336						
CHN4	**Tsaushan**	**2.44**	**333**	*e*S	Sn	10 58 37.4	-1.3
	baz=333						
ALS	**Alishan**	**2.51**	**339**	*e*P	Pn	10 58 07.0	+0.4
	baz=339						
ALS				*e*S	Sn	10 58 39.6	-0.4
	baz=339						
CHN5	**Tsauling**	**2.63**	**337**	P	Pn	10 58 08.2	+0.2
	baz=333						
CHN5				*e*S	Sn	10 58 40.4	-2.2
	baz=333						
TYC	**Yuchr**	**2.86**	**343**	*e*P	Pn	10 58 08.4	-2.4
	baz=342						
WHF	**Hehuan Shan**	**3.01**	**351**	*e*P	Pn	10 58 13.5	+1.0
	baz=356						

*ISCJB **24** 11:12:45.2±0.4, 964N±005×8422W±004, h65km±4km, mb3.7/8, Error ellipse: s-maj=9.8km s-min=4.7km az=30.4*
*NEIC **24** 11:12:46.3, 965N×8423W, h42km, mb4.4/1, MD4.5(CASC), After CASC.*
NEIC Felt at Curridabat.
*CASC **24** 11:12:46.4±1.4, 964N×84.19W, h43km±7km, MD3.8, ML3.1, mb4.4(NEIC)*
*IDC **24** 11:12:49.1±4.3, 10.10N×84.13W, h70km±34km, mb3.5/7, mb1 3.8/9, mb1mx3.6/21, mbtmp3.6/9, ML4.1/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/21, Error ellipse: s-maj=53.2km s-min=22.0km az=20.0*

ISC 24 11:12:46.2±0.4, 963N±005×8421W±004, h57km±4km, n52, σ0.9/96/52, mb3.7/8, 5C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QCR	**Quepos**	**0.21**	**169**	⇓*i*P	Pn	**11 12 54.4**	**-1.1**
SJS	**Escuela Geolog**	**0.34**	**26**	⇑*e*P	Pn	**11 12 55.4**	**-1.0**
SJS				*e*S	Sn	**11 13 02.4**	**-1.4**
PRS1	**Puriscal**	**0.36**	**344**	⇑*i*P	Pn	**11 12 54.5**	**-2.2**
BUS	**Buena Vista**	**0.45**	**100**	*e*P	Pn	**11 12 57.0**	**-0.4**
CGA2	**Cerro Gallo 2**	**0.46**	**326**	⇑*i*P	Pn	**11 12 56.3**	**-1.2**
URSC	**Urasca**	**0.47**	**65**	⇓*i*P	Pn	**11 12 57.1**	**-0.5**
JCR	**Jicaral**	**0.92**	**284**	⇓*e*P	Pn	**11 13 02.6**	**-0.5**
JCR				*e*S	Sn	**11 13 15.3**	**-0.2**
FORC	**Fortuna**	**0.94**	**331**	⇑*i*P	Pn	**11 13 03.3**	**-0.1**
BAR1		**0.96**	**114**	⇑*e*P	Pn	**11 13 04.0**	**+0.3**
TRTC	**Tortuguero**	**1.05**	**27**	⇓*e*P	Pn	**11 13 05.0**	**+0.1**
TRTC				*e*S	Sn	**11 13 19.4**	**+0.6**
CUI	**Cuipilapa**	**1.39**	**317**	*i* P	Pn	**11 13 09.6**	**+0.2**
ACR	**Cerro Adams**	**1.42**	**133**	⇓*e*P	Pn	**11 13 09.7**	**-0.1**
ACR				*e*S	Sn	**11 13 28.8**	**+1.5**
LIM1	**Limonal**	**1.48**	**316**	*i* P	Pn	**11 13 10.5**	**-0.1**
VCR	**Vista de Mar**	**1.49**	**289**	*e*P	Pn	**11 13 10.1**	**-0.6**
SSN	**San Juan del S**	**2.32**	**316**	*e*P	Pn	**11 13 22.0**	**0.0**
SSN				*e*S	Sn	**11 13 51.1**	**+1.7**
CONN	**Concepcion**	**2.37**	**324**	*e*P	Pn	**11 13 23.0**	**+0.3**
APON	**Apoyo**	**2.91**	**321**	*e*P	Pn	**11 13 31.5**	**+1.3**
TICN	**Ticuantepe**	**3.10**	**320**	*e*P	Pn	**11 13 33.5**	**+0.8**
WILN	**Americas 2**	**3.18**	**322**	*e*P	Pn	**11 13 33.2**	**-0.5**
MGAN	**Managua**	**3.20**	**321**	*e*P	Pn	**11 13 34.1**	**0.0**
MGAN				AML	AML	11 14 29.3	
	comp=E,20nm,0.8s						
XAVN	**Gruta Xavier**	**3.25**	**320**	*e*P	Pn	**11 13 35.6**	**+0.8**
HUEN		**3.31**	**324**	*e*P	Pn	**11 13 35.5**	**-0.1**
APYN	**Apoyeque**	**3.33**	**321**	*e*P	Pn	**11 13 36.5**	**+0.6**
CSAN		**3.34**	**320**	*e*P	Pn	**11 13 36.6**	**+0.6**
COPN	**Copaltepe**	**3.45**	**317**	*e*P	Pn	**11 13 37.6**	**+0.1**
MOMN	**Momotombo**	**3.58**	**320**	*e*P	Pn	**11 13 40.3**	**+1.0**
MIRN	**Miraflor**	**3.72**	**319**	*e*P	Pn	**11 13 42.1**	**+0.9**
CNGN	**Cerro Negro**	**3.75**	**320**	*e*P	Pn	**11 13 42.9**	**+1.3**
TEL3	**Telica 3**	**3.90**	**319**	*e*P	Pn	**11 13 44.6**	**+0.9**
CRIN	**San Cristobal**	**4.13**	**318**	*e*P	Pn	**11 13 47.2**	**+0.3**
BCIP	**Isla Barro Col**	**4.34**	**96**	*e*P	Pn	**11 13 50.9**	**+1.3**
CNCH	**Conchagua**	**5.07**	**316**	*e*P	x	11 14 00.7	
TGUH	**Tegucigalpa,Un**	**5.32**	**326**	*e*P	Pn	**11 14 03.8**	**+0.6**
TGUH	**Tegucigalpa,Un**	**5.32**	**326**	*e*P	Pn	**11 14 03.7**	**+0.5**
	comp=E,138nm,0.7s						
ROSC	**El Rosal**	**10.88**	**115**	LR	LR	11 20 02.4	
	comp=E,38nm,20.3s,baz=279,slow=39						
TEIG	**Tepich**	**11.24**	**340**	LR	LR	11 19 28.8	
	comp=E,141nm,21.3s,baz=167,slow=37						
CHI2		**11.51**	**115**	*e*P	x	11 13 47.5	
LAPE	**La Pedrera**	**12.66**	**98**	*i* P	x	11 13 12.7	
CMIG	**Matias Romero**	**12.76**	**307**	P	Pn	**11 15 44.5**	**-0.4**
	comp=E,2.4nm,0.3s,baz=122,slow=11,SNR=27						
CMIG				S	Sn	**11 18 05.0**	**-0.4**
	comp=E,0.3nm,0.3s,baz=253,slow=18,SNR=2.8						
CMIG	**Matias Romero**	**12.76**	**307**	P	Pn	**11 15 44.5**	**-0.4**
CMIG				S	Sn	**11 18 05.0**	**-0.4**
SDV	**Santo Domingo**	**13.42**	**92**	P	Pn	**11 15 55.9**	**+2.0**
	comp=E,0.4nm,0.3s,baz=266,slow=8.9,SNR=7.5						
LRAL	**Lakeview Retre**	**23.43**	**354**	*e*P	P	**11 17 50.0**	**-0.4**
	comp=E,13nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**26.76**	**320**	P	P	**11 18 20.1**	**-0.7**
	comp=E,0.4nm,0.4s,mb3.3,baz=142,slow=9.3,SNR=10						
TXAR				PcP	PcP	11 21 43.8	+1.0
	comp=E,0.3nm,0.7s,baz=151,slow=5.7,SNR=4.7						
PDAR	**Pinedale Array**	**39.76**	**330**	P	P	**11 20 11.7**	**-1.7**
	comp=E,0.2nm,0.4s,mb3.2,baz=118,slow=9.4,SNR=2.5						
ULM	**Lac du Bonnet**	**41.63**	**349**	P	P	**11 20 25.9**	**-2.7**
	comp=E,3.8nm,0.7s,mb4.2,baz=176,slow=9.5,SNR=5.5						
ULM				LR	LR	11 38 38.6	
	comp=E,136nm,19.8s,baz=329,slow=38						
NVAR	**Mina Array Bea**	**41.91**	**319**	P	P	**11 20 31.9**	**+0.7**
	comp=E,0.3nm,0.4s,mb3.2,baz=129,slow=7.1,SNR=4.7						
SCHQ	**Schefferville**	**47.15**	**14**	P	P	**11 21 11.5**	**-1.2**
	comp=E,0.9nm,0.4s,mb4.0,baz=256,slow=11,SNR=5.6						
YKA	**Yellowknife Ar**	**57.17**	**344**	P	P	**11 22 24.7**	**-2.2**
	comp=E,0.6nm,0.6s,mb3.8,baz=141,slow=6.8,SNR=15						
YKA	**Yellowknife Ar**	**57.17**	**344**	P	P	**11 22 24.7**	**-2.2**
ESDC	**Sonseca Array**	**76.43**	**51**	P	P	**11 24 29.8**	**-0.1**
	comp=E,1.0nm,0.7s,mb3.9,baz=276,slow=5.3,SNR=6.9						
ASAR	**Alice Springs**	**141.05**	**244**	PKhKP		11 32 06.0	
	comp=E,0.1nm,0.5s,baz=106,slow=3.0,SNR=3.0						
ASAR				PKP	PKPdf	11 32 10.5	-0.4
	comp=E,0.4nm,0.8s,baz=110,slow=3.0,SNR=4.8						
WRA	**Warramunga Arr**	**141.44**	**250**	PKhKP		11 32 07.7	
	comp=E,0.4nm,0.7s,baz=102,slow=2.6,SNR=7.3						
WRA				PKP	PKPdf	11 32 11.4	-0.2
	comp=E,0.6nm,0.9s,baz=100,slow=2.7,SNR=4.9						

*ISCJB **24** 11:14:16.5±0.6, 3754N±002×3573E±002, h2km±5km, Error ellipse: s-maj=4.0km s-min=3.3km az=175.1*
*CSEM **24** 11:14:16.1±0.1, 3755N×3576E, h5km, MD3.8, Error ellipse: s-maj=1.7km s-min=1.3km az=37.0*
*DDA **24** 11:14:16.3, 3756N×3569E, h23km±2km, Md3.7*
*ISK **24** 11:14:16.3, 3754N×3573E, h5km, MD3.8, ML3.8*

ISC 24 11:14:17.1±0.5, 3753N±002×3573E±003, h1km±4km, n61, σ0.9/97/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.09**	**124**	PG	**Pg**	**11 14 18.8**	**0.0**
KOZT				SG	**Sg**	**11 14 20.6**	**+0.6**
ANDN	**Andirin**	**0.49**	**84**	*i* P	**Pg**	**11 14 26.8**	**+0.3**
ANDN				*i* S	**Sg**	**11 14 36.3**	**+3.5**
KARA	**Karaisali**	**0.60**	**244**	PG	**Pg**	**11 14 28.1**	**-0.5**
KARA				eSG	**Sg**	**11 14 36.8**	**+0.4**
KMRS	**Kahramanmaras**	**0.93**	**91**	*e*PG	**Pg**	**11 14 34.4**	**-0.5**
KMRS				eSG	**Sg**	**11 14 47.9**	**+1.0**
KRTS	**Karatas**	**1.00**	**197**	*e*PG	**Pg**	**11 14 36.2**	**0.0**
NIG	**Nigde**	**1.06**	**303**	*e*PG	**Pg**	**11 14 36.6**	**-0.8**
COBT	**Iskenderun**	**1.09**	**157**	*i* P	**Pg**	**11 14 36.6**	**-1.5**
MERS	**Mersin**	**1.17**	**236**	*e*PN	**Pn**	**11 14 39.0**	**-1.6**
MERS				eSN	**Sn**	**11 14 55.7**	**-1.6**
GAZ	**Gaziantep**	**1.23**	**106**	*e*PN	**Pn**	**11 14 40.4**	**-1.1**
PINB	**Pinarbasi**	**1.26**	**25**	*i* P	**Pg**	**11 14 40.3**	**-1.0**
PINB				*i* S	**Sg**	**11 15 01.8**	**+4.2**
KUZU	**Kuzuini**	**1.31**	**125**	*i* P	**Pg**	**11 14 41.3**	**-1.0**
KUZU				*i* S	**Sg**	**11 15 00.2**	**+0.9**
BNN	**Bunyan**	**1.32**	**4**	*e*PN	**Pn**	**11 14 41.2**	**-1.5**
BNN				eSN	**Sn**	**11 14 60.0**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.38**	**33**	*e*PG	**Pg**	**11 14 36.6**	**-6.8**
AVNT	**Avonos**	**1.42**	**331**	*i* P	**Pn**	**11 14 42.7**	**-1.4**
AVNT				*i* S	**Sg**	**11 15 02.1**	**-0.7**
HTY	**Hatay**	**1.45**	**167**	*e*PN	**Pn**	**11 14 43.7**	**-0.7**
GZT	**Gaziantep**	**1.47**	**96**	*i* P	**Pn**	**11 14 43.5**	**-1.3**
AKCD	**Akcadag**	**1.89**	**66**	*i* P	**Pn**	**11 14 50.1**	**-0.4**
AKCD				*i* S	**Sn**	**11 15 19.1**	**+4.1**
ATAB	**Bozova**	**2.04**	**91**	*i* P	**Pn**	**11 14 56.2**	**+3.6**
IKL	**Isikli**	**2.09**	**232**	*e*PN	**Pn**	**11 14 53.3**	**+0.1**
YOZ	**Yozgat**	**2.13**	**351**	*e*PN	**Pn**	**11 14 54.1**	**+0.3**
DARE	**Darende-Malaty**	**2.16**	**48**	*e*PN	**Pn**	**11 14 48.3**	**-6.0**
MALT	**Malatya**	**2.27**	**69**	*e*PN	**Pn**	**11 14 56.4**	**+0.6**
MYA	**Malataya**	**2.27**	**69**	*e*PN	**Pn**	**11 14 55.8**	**0.0**
CDAG	**Cicekdag**	**2.34**	**333**	*i* P	**Pn**	**11 14 57.2**	**+0.4**
CDAG				*i* S	**Sn**	**11 15 31.4**	**+5.1**
EREN	**Erenkoy**	**2.36**	**213**	*e*PN	**Pn**	**11 14 57.5**	**+0.5**
URFA	**Urfa**	**2.46**	**91**	*e*PN	**Pn**	**11 14 57.5**	**-0.9**
SVSK	**Karacayir**	**2.58**	**22**	*e*PN	**Pn**	**11 14 59.6**	**-0.4**
KONT	**Konya--Tatoy**	**2.70**	**280**	*e*PN	**Pn**	**11 15 01.6**	**-0.1**
ELZG	**Elazig**	**2.74**	**68**	*i* P	**Pn**	**11 15 02.4**	**+0.1**
LADK	**Ladik-KONYA**	**2.75**	**285**	*e*PN	**Pn**	**11 15 02.9**	**+0.6**
KEMA	**Kemaliye**	**2.78**	**51**	*i* P	**Pn**	**11 15 02.0**	**-0.7**
CORM	**Corum**	**2.78**	**342**	*e*PN	**Pn**	**11 15 02.5**	**-0.3**
TOKA	**Tokat**	**2.85**	**12**	*i* P	**Pn**	**11 15 03.6**	**-0.1**
TOKT	**Tokat**	**2.86**	**13**	*e*PN	**Pn**	**11 15 03.3**	**-0.5**
LFK	**Lefkose**	**2.86**	**219**	*e*PN	**Pn**	**11 15 04.5**	**+0.6**
PHNC	**Paralimni**	**2.87**	**209**	P	**Pn**	**11 15 06.2**	**+2.2**
	6.5nm,0.7s						
SVRC	**Sivrice-ELAZID**	**2.95**	**72**	*e*PN	**Pn**	**11 15 04.5**	**-0.5**
KDHN	**Kadinhani**	**3.02**	**290**	*i* P	**Pn**	**11 15 06.7**	**+0.6**
KDHN	**Kadinhani**	**3.02**	**290**	*i* P	**Pn**	**11 15 07.4**	**+1.3**
KDHN				*i* S	**Sn**	**11 15 53.4**	**+10**
MAMC	**Mammari**	**3.11**	**221**	P	**Pn**	**11 15 10.7**	**+3.4**
PTK	**Pertek**	**3.19**	**64**	*e*PN	**Pn**	**11 15 08.3**	**-0.1**
LOD	**Lodumlu**	**3.31**	**316**	*e*PN	**Pn**	**11 15 10.0**	**0.0**
KIZT	**Kizilcal**	**3.32**	**295**	*e*PN	**Pn**	**11 15 10.8**	**+0.6**
LEF	**Lefka**	**3.33**	**224**	*e*PN	**Pn**	**11 15 10.4**	**+0.1**
ELDT	**Eldivan**	**3.46**	**329**	*i* P	**Pn**	**11 15 13.4**	**+1.4**
ALFC	**Alevga**	**3.47**	**228**	P	**Pn**	**11 15 09.5**	**-2.7**
	3.7nm,0.4s						
CANT	**Cankiri**	**3.48**	**332**	*e*PN	**Pn**	**11 15 12.9**	**+0.5**
KVT	**Kavak**	**3.55**	**4**	*e*PN	**Pn**	**11 15 14.1**	**+0.8**
SZAC	**Souni-Zanaja**	**3.60**	**221**	P	**Pn**	**11 15 15.4**	**+1.3**
TOS	**Tosya**	**3.74**	**340**	*e*PN	**Pn**	**11 15 15.8**	**-0.2**
ILGA	**Ilgaz**	**3.85**	**337**	*i* P	**Pn**	**11 15 18.6**	**+1.1**
EZC	**Erzincan**	**3.89**	**54**	*e*PN	**Pn**	**11 15 13.7**	**-4.3**
GUMT	**Gumushane**	**4.13**	**44**	*e*PN	**Pn**	**11 15 21.6**	**+0.3**
ESKT	**Eskisehir**	**4.31**	**299**	*i* P	**Pn**	**11 15 20.8**	**-3.0**
SEYT	**Eskypehyr**	**4.31**	**299**	*i* P	**Pn**	**11 15 20.8**	**-3.0**
SAFT	**Safranbolu**	**4.39**	**328**	*e*PN	**Pn**	**11 15 25.8**	**+0.9**
MDU	**Mudurnu**	**4.58**	**311**	*e*PN	**Pn**	**11 15 28.7**	**+1.2**
BZK	**Bozkurt**	**4.62**	**344**	*e*PN	**Pn**	**11 15 29.1**	**+1.1**
ELL	**Elmali**	**4.72**	**262**	*e*PN	**Pn**	**11 15 30.0**	**+0.6**
GULT	**Gulveren**	**4.99**	**307**	*e*PN	**Pn**	**11 15 34.1**	**+1.0**
EZM	**Erzurum**	**5.00**	**60**	*e*PN	**Pn**	**11 15 34.1**	**+0.9**

IDC 24 11:35:02.9±0.9, 015N×12351E, h157km±94km, mb3.1/4, mb1 3.2/4, mb1mx3.0/17, mbtmp3.1/4, Error ellipse: s-maj=230.7km s-min=22.9km az=61.0, Minahassa Peninsula, Sulawesi

| Code | Station Name | Δ° | AZ° | Phase ID | | Time | Res |
|---|---|---|---|---|---|---

ASAR				S		**S**	**12 41 54.4**	**+1.3**
	1.3nm,0.8s,baz=348,slow=20,SNR=9.0								
PMG	**Port Moresby**	**21.65**	**104**	P		**P**	**12 38 43.4**	**-0.1**
	2.8nm,0.5s,mb4.0,baz=292,slow=4.2,SNR=4.1								
STKA	**Stephens Creek**	**30.84**	**153**	P		**P**	**12 40 05.4**	**+0.7**
	1.1nm,0.5s,mb3.5,baz=330,slow=10,SNR=6.5								
MJAR	**Matsushiro Arr**	**42.57**	**15**	P		**P**	**12 41 40.3**	**-1.6**
	0.8nm,0.7s,mb3.2,baz=193,slow=8.6,SNR=2.9								
SONM	**Songino Array**	**54.99**	**344**	P		**P**	**12 43 14.5**	**-0.1**
	0.8nm,0.9s,mb3.0,baz=156,slow=5.8,SNR=4.6								
PETK	**Petropavlovsk-**	**63.49**	**21**	P		**P**	**12 44 12.7**	**+0.8**
	4.3nm,1.1s,mb3.9,baz=180,slow=4.3,SNR=6.3								
MKAR	**Makanchi Array**	**64.05**	**328**	P		**P**	**12 44 15.4**	**-0.1**
	2.1nm,0.7s,mb3.8,baz=124,slow=8.5,SNR=16								
MKAR				PcP		PcP	12 44 47.4	+0.8	
	0.6nm,0.5s,baz=76,slow=5.1,SNR=4.6								
BVAR	**Borovoye Array**	**73.91**	**329**	P		**P**	**12 45 15.2**	**-0.1**
	0.5nm,0.4s,mb3.5,baz=133,slow=9.2,SNR=6.3								
TORD	**Torodi Ar. Bea**	**124.30**	**283**	PKP		PKPdf	12 52 36.4	+0.9	
	0.3nm,0.4s,baz=70,slow=2.3,SNR=5.3								
CPUP	**Villa Florida**	**149.05**	**174**	PKPbc		PKPbc	12 53 25.1	+0.2	
	0.5nm,0.5s,baz=214,slow=7.3,SNR=2.8								

*IDC **24** 12:39:01.0±9.1, 1199S×166.19E, h58km±64km, mb3.8/6, mb1 3.9/7, mb1mx3.7/18, mbtmp3.9/7, ML4.7/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/26, Error ellipse: s-maj=62.4km s-min=30.2km az=93.0*

IDC 24 12:39:01.2±4.9, 120S±02×1662E±03, h58km±35km, n13, σ0°46/10, mb3.9/6, MS3.3/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.64**	**292**	P		**Pn**	**12 40 36.3**	**+0.1**
	17nm,0.3s,baz=150,slow=7.4,SNR=8.2							
HNR				S		**Sn**	**12 41 50.5**	**-0.1**
	5.0nm,0.3s,baz=185,slow=18,SNR=3.0							
HNR				LR		LR	12 42 57.2	
	comp=Z,199nm,18.7s,baz=115,slow=36							
HNR	**Honiara**	**6.64**	**292**	P		**Pn**	**12 40 36.3**	**+0.1**
HNR				S		**Sn**	**12 41 50.5**	**-0.1**
HNR				LR		LR	12 42 57.2	
PMG	**Port Moresby**	**18.88**	**276**	LR		LR	12 49 21.4	
	comp=Z,100nm,19.1s,baz=3.9,slow=33							
CTA	**Charters Tower**	**20.77**	**245**	LR		LR	12 50 02.7	
	comp=Z,110nm,18.2s,MS3.3,baz=68,slow=32							
AFI	**Afiamalu**	**21.55**	**98**	LR		LR	12 50 24.7	
	comp=Z,134nm,20.3s,MS3.3,baz=185,slow=32							
STKA	**Stephens Creek**	**30.08**	**225**	P		**P**	**12 45 05.3**	**+0.2**
	2.2nm,1.0s,mb3.9,baz=41,slow=11,SNR=3.1							
STKA				LR		LR	12 56 50.4	
	comp=Z,84nm,20.0s,MS3.4,baz=25,slow=36							
WRA	**Warramunga Arr**	**31.59**	**251**	P		**P**	**12 45 18.6**	**0.0**
	1.2nm,0.6s,mb3.9,baz=85,slow=9.1,SNR=7.9							
WRA				PcP		PcP	12 48 09.9	-0.2	
	0.7nm,0.8s,baz=86,slow=2.8,SNR=6.7								
ASAR	**Alice Springs**	**32.78**	**245**	P		**P**	**12 45 28.6**	**-0.4**
	1.3nm,0.6s,mb4.0,baz=69,slow=9.6,SNR=17								
ASAR				PcP		PcP	12 48 12.9	-0.3	
	0.9nm,0.8s,baz=72,slow=2.0,SNR=7.8								
CMAR	**Chiang Mai Arr**	**72.89**	**294**	P		**P**	**12 50 25.7**	**+1.1**
	0.6nm,0.7s,mb3.6,baz=76,slow=3.8,SNR=4.8								
CMAR				LR		LR	13 23 44.4		
	comp=Z,18nm,18.9s,MS3.4,baz=5.0,slow=37								
SONM	**Songino Array**	**79.68**	**324**	P		**P**	**12 51 02.4**	**-0.2**
	0.5nm,0.7s,mb3.5,baz=136,slow=7.2,SNR=4.1								
MKAR	**Makanchi Array**	**94.50**	**317**	P		**P**	**12 52 14.7**	**-0.6**
	1.0nm,0.5s,mb4.5,baz=86,slow=6.0,SNR=8.0								
TORD	**Torodi Ar. Bea**	**164.82**	**276**	PKPab		PKPab	12 59 54.9	-1.0	
	0.7nm,1.0s,baz=81,slow=4.4,SNR=3.5								
DBIC	**Dimbokro**	**169.71**	**240**	PKPab		PKPab	13 00 15.3	-2.1	
	1.6nm,0.8s,baz=123,slow=1.8,SNR=3.5								

IDC 24 13:08:02.1±2.6, 228S×13999E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.7/4, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/26, Error ellipse: s-maj=106.4km s-min=26.0km az=82.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.40**	**197**	P		Pn	13 12 17.7	-1.2	
	0.4nm,0.3s,baz=20,slow=12,SNR=28								
HNR	**Honiara**	**21.07**	**111**	LR		LR	13 19 21.8		
	comp=Z,51nm,18.2s,baz=310,slow=32								
ASAR	**Alice Springs**	**22.06**	**195**	P		P	13 12 58.2	-0.5	
	0.9nm,0.6s,baz=23,slow=11,SNR=23								
STKA	**Stephens Creek**	**29.48**	**177**	P		P	13 14 08.6	+0.6	
	1.0nm,0.8s,baz=352,slow=7.1,SNR=3.3								
MKAR	**Makanchi Array**	**70.24**	**322**	P		P	13 19 17.5	+0.4	
	0.3nm,0.6s,baz=112,slow=8.9,SNR=3.1								

IDC 24 13:15:45.4±1.9, 786S×12388E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=268.5km s-min=30.2km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**9.71**	**120**	*eP*		x	13 17 09.5		
	7.0nm,0.4s								
KAKA				*eS*		x	13 18 45.5		
FITZ	**Fitzroy Crossi**	**10.32**	**171**	*eP*		Pn	13 18 19.2	+4.3	
	6.6nm,1.9s								
FITZ				*eS*		Sn	13 20 04.2	-7.2	
WRA	**Warramunga Arr**	**15.72**	**141**	Pn		Pn	13 19 27.6	-0.7	
	0.2nm,0.3s,baz=317,slow=15,SNR=11								
WRA				Sn		Sn	13 22 08.6	-15	
	0.1nm,0.3s,baz=318,slow=24,SNR=4.7								
WB2	**Warramunga Arr**	**15.73**	**141**	*eP*		Pn	13 19 30.7	+2.3	
WB2				*eS*		Sn	13 22 07.0	-17	
ASAR	**Alice Springs**	**18.43**	**150**	P		Pn	13 20 02.8	+0.3	
	0.1nm,0.3s,baz=328,slow=12,SNR=17								
ASAR				S		Sn	13 23 15.6	-13	
	0.1nm,0.3s,baz=316,slow=21,SNR=6.0								
MKAR	**Makanchi Array**	**65.77**	**330**	P		P	13 26 32.3	+0.1	
	0.4nm,0.7s,baz=129,slow=6.4,SNR=5.5								

*NEIC **24** 13:26:39.8±1.0, 4632N×15277E, h10km, Error ellipse: s-maj=25.6km s-min=20.0km az=157.0*

*ISCJB **24** 13:26:47.6±1.0, 469N±0.1×1529E±02, h58km±10km, mb3.9/11, MS3.3/1, Error ellipse: s-maj=28.2km s-min=7.7km az=139.4*

*MOS **24** 13:26:49.9±1.3, 47.11N×152.82E, h71km, mb4.1/6, Error ellipse: s-maj=22.6km s-min=11.8km az=63.4*

IDC 24 13:26:53.2±2.8, 4720N×15280E, h87km±25km, mb3.5/12, mb1 3.7/14, mb1mx3.5/26, mbtmp3.5/14, MS3.4/1, Ms1 3.4/1, ms1mx2.5/29, Error ellipse: s-maj=33.4km s-min=15.2km az=161.0

ISC 24 13:26:50.9±0.9, 469N±01×1527E±02, h71km±9km, n45, σ1§42/50, mb3.8/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.37**	**29**	*e*PN		**Pn**	**13 27 50.5**	**-4.2**
SKR				*eS*		**Sn**	**13 28 36.6**	**-7.7**
SKR				pmax		pmax		
	comp=Z,80nm,0.5s							
SKR				smax				
	comp=N,90nm,0.5s							
SKR				smax				
	comp=E,80nm,0.5s							
SKR				smax				
	comp=Z,90nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.63**	**242**	PN		**Pn**	**13 28 13.4**	**+1.4**
NEM2	**Nemuro 2**	**6.10**	**237**	P		**Pn**	**13 28 17.2**	**-1.1**
NEM2				*eS*		**Sn**	**13 29 23.1**	**-3.5**
JRA	**Rausu**	**6.14**	**244**	P		**Pn**	**13 28 21.2**	**+2.3**
JNK	**Nakash**	**6.57**	**242**	P		**Pn**	**13 28 25.7**	**+0.9**
JTKR	**Abashiri--Toko**	**6.88**	**248**	P		**Pn**	**13 28 30.9**	**+1.9**
JAK	**Akkeshi**	**6.93**	**238**	P		**Pn**	**13 28 18.1**	**-1.6**
JAK				*eS*		**Sn**	**13 29 43.1**	**-3.8**
PETK	**Petropavlovsk-**	**6.96**	**25**	P		**Pn**	**13 28 28.7**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=193,slow=10,SNR=7.1								
PET	**Petropavlovsk**	**7.20**	**30**	PN		**Pn**	**13 28 34.9**	**+1.6**
JAR	**Ashorobuto**	**7.31**	**244**	P		**Pn**	**13 28 36.2**	**+1.3**
JOB	**Onbets**	**7.49**	**241**	*e*S		**Sn**	**13 29 58.2**	**-2.6**
ASAJ	**Asahikawa**	**7.66**	**252**	P		**Pn**	**13 28 43.2**	**+3.6**
	comp=Z,0.5nm,0.3s,baz=76,slow=14,SNR=3.8								
ASAJ	**Asahikawa**	**7.66**	**252**	P		**Pn**	**13 28 43.2**	**+3.6**
ASAJ	**Asahikawa**	**7.66**	**252**	PN		**Pn**	**13 28 43.3**	**+3.7**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
JKK2	**Kamakawa 2**	**7.67**	**250**	P		**Pn**	**13 28 42.4**	**+2.6**
JCH	**Churui**	**7.94**	**241**	P		**Pn**	**13 28 42.9**	**-0.6**
JCH				*eS*		**Sn**	**13 30 07.3**	**-4.5**
JBT2	**Biratori 2**	**8.46**	**244**	P		**Pn**	**13 28 51.6**	**+1.0**
JNBK	**Urakawa-nobuka**	**8.50**	**241**	P		**Pn**	**13 28 50.7**	**-0.5**
JNB	**Noboribetsu**	**9.45**	**246**	P		**Pn**	**13 29 04.1**	**0.0**
JNB				*eS*		**Sn**	**13 30 46.0**	**-2.6**
JKB	**Kayabe**	**9.77**	**243**	P		**Pn**	**13 29 07.4**	**-1.1**
JKB				*eS*		**Sn**	**13 30 50.5**	**-6.0**
JYM2	**Yakumo 2**	**10.05**	**246**	P		**Pn**	**13 29 12.1**	**-0.3**
JANG	**Nango**	**10.44**	**235**	*e*S		**Sn**	**13 31 04.7**	**-8.1**
KSRS	**Korea Array**	**20.61**	**252**	P		**P**	**13 31 27.1**	**+2.9**
	comp=Z,1.2nm,0.6s,baz=60,slow=10,SNR=5.3								
KSRS	**Korea Array**	**20.61**	**252**	P		**P**	**13 31 27.1**	**+3.0**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**31.04**	**289**	LR		LR	13 46 37.2		
	comp=Z,71nm,20.7s,baz=218,slow=38								
KURK	**Kurchatov**	**47.06**	**303**	P		**P**	**13 35 14.7**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.5,baz=70,slow=8.5,SNR=4.2								
KURK	**Kurchatov**	**47.06**	**303**	P		**P**	**13 35 14.7**	**-0.3**
KURK				pmax		pmax		
	comp=Z,1.0nm,0.6s,mb3.7							
BVAR	**Borovoye Array**	**50.55**	**309**	P		**P**	**13 35 43.3**	**+1.5**
	comp=Z,1.2nm,1.0s,mb3.9,baz=15,slow=6.2,SNR=3.7								
BVAR				PcP		PcP	13 36 57.9	-0.7	
	comp=Z,0.3nm,0.5s,baz=106,slow=3.8,SNR=3.7								
BVAR	**Borovoye Array**	**50.55**	**309**	P		**P**	**13 35 43.3**	**+1.6**
BVAR							13 36 57.9		
BVAR				pmax		pmax		
	comp=Z,1.0nm,1.0s							
YKA	**Yellowknife Ar**	**50.94**	**37**	P		**P**	**13 35 43.8**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=296,slow=7.2,SNR=8.7								
YKA				PcP		PcP	13 36 58.2	-1.5	
	comp=Z,0.5nm,0.9s,baz=298,slow=3.7,SNR=4.2								
YKA	**Yellowknife Ar**	**50.94**	**37**	P		**P**	**13 35 43.8**	**-0.7**
YKA							13 36 58.2		
YKA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
YKA	**Yellowknife Ar**	**50.94**	**37**	P		**P**	**13 35 43.9**	**-0.6**
YKA				PcP		PcP	13 36 58.2	-1.5	
CMAR	**Chiang Mai Arr**	**52.16**	**256**	P		**P**	**13 35 55.9**	**+1.7**
	comp=Z,0.4nm,0.3s,mb3.9,baz=37,slow=8.0,SNR=5.4								
NVAR	**Mina Array Bea**	**62.58**	**62**	P		**P**	**13 37 07.6**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=296,slow=6.4,SNR=3.8								
PDAR	**Pinedale Array**	**64.85**	**54**	P		**P**	**13 37 21.4**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=332,slow=2.5,SNR=6.0								
NB2	**NORSAR Subarra**	**67.98**	**341**	P		**P**	**13 37 41.5**	**-0.3**
	comp=Z,3.8nm,0.8s,mb4.3,baz=29,slow=6.5								
NOA	**NORSAR Array B**	**67.98**	**341**	P		**P**	**13 37 40.8**	**-1.0**
	comp=Z,2.1nm,0.7s,mb4.1,baz=27,slow=6.4,SNR=4.9								
NOA	**NORSAR Array B**	**67.98**	**341**	P		**P**	**13 37 40.8**	**-1.0**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
AKASG	**Malin Array Be**	**71.26**	**326**	P		**P**	**13 37 59.9**	**-2.3**
	comp=Z,2.0nm,0.4s,mb4.3,baz=35,slow=6.1,SNR=7.2								
AKASG	**Malin Array Be**	**71.26**	**326**	P		**P**	**13 37 59.9**	**-2.3**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.4s							
TXAR	**Lajitas Array**	**77.63**	**60**	P		**P**	**13 38 39.2**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.6,baz=296,slow=4.5,SNR=14								
TXAR	**Lajitas Array**	**77.63**	**60**	P		**P**	**13 38 39.2**	**-0.3**
TXAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**78.09**	**316**	P		**P**	**13 38 42.5**	**+0.7**
	comp=Z,0.8nm,0.8s,mb3.5,baz=59,slow=4.8,SNR=4.2								
BRTR	**Keskin Array B**	**78.09**	**316**	P		**P**	**13 38 42.5**	**+0.7**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**78.19**	**334**	P		**P**	**13 38 42.1**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.3,baz=34,slow=5.0,SNR=3.6								

*ISCJB **24** 13:33:12.6±1.7, 632S±009×128.1E±0.1, h328km±19km, mb3.4/3, Error ellipse: s-maj=21.2km s-min=13.2km az=159.0*

*NEIC **24** 13:33:14.2±2.5, 637S×128.06E, h324km±30km, mb4.3/2, Error ellipse: s-maj=19.0km s-min=12.7km az=177.0*

IDC 24 13:33:18.3±4.4, 646S×128.09E, h373km±52km, mb3.1/3, mb1 3.2/6, mb1mx3.0/17, mbtmp3.1/6, Error ellipse: s-maj=35.8km s-min=13.8km az=72.0

ISC 24 13:33:16.5±1.4, 652S±008×1281E±01, h347km±16km, n17, σ0°70/22, mb3.4/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNA	**Kununurra**	**9.20**	**176**	*e*P		**Pn**	**13 35 24.9**	**-0.1**
	5.6nm,0.2s							
KNA				*e*S		**S**	**13 37 09.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**11.76**	**192**	*e*P		**Pn**	**13 35 55.2**	**-0.3**
	7.5nm,0.6s							
FITZ				*e*S		**S**	**13 38 13.6**	**+7.0**
FITZ	**Fitzroy Crossi**	**11.76**	**192**	*e*P		**Pn**	**13 35 55.1**	**-0.4**
	5.3nm,0.8s							
WRAB	**Tennant Creek**	**14.66**	**156**	*e*P		**P**	**13 36 27.8**	**+0.2**
WRA	**Warramunga Arr**	**14.66**	**156**	P		**P**	**13 36 28.0**	**+0.4**
	0.6nm,0.3s,baz=336,slow=12,SNR=47								
WRA				S		**S**	**13 39 05.4**	**-0.7**
	0.3nm,0.3s,baz=334,slow=20,SNR=10								
WB2	**Warramunga Arr**	**14.67**	**156**	*e*P		**P**	**13 36 28.0**	**+0.3**
WB2				*e*S		**S**	**13 39 04.7**	**-1.5**
WB2	**Warramunga Arr**	**14.67**	**156**	*e*P		**P**	**13 36 27.7**	**+0.1**
COEN	**Coen**	**16.58**	**118**	*e*P		**P**	**13 36 47.7**	**-0.8**
	28nm,0.8s							
MBWA	**Marble Bar**	**16.66**	**208**	*e*P		**P**	**13 36 49.6**	**+0.3**
ASAR	**Alice Springs**	**17.95**	**162**	P		**P**	**13 37 04.0**	**+0.9**
	0.9nm,0.3s,baz=345,slow=9.8,SNR=140								
ASAR				S		**S**	**13 40 12.0**	**+1.1**
	0.3nm,0.3s,baz=348,slow=26,SNR=15								
PMG	**Port Moresby**	**19.10**	**100**	P		**P**	**13 37 15.8**	**+0.4**
	1.0nm,0.3s,baz=231,slow=19,SNR=5.8								
PMG	**Port Moresby**	**19.10**	**100**	*e*P		**P**	**13 37 15.6**	**+0.1**
CTA	**Charters Tower**	**22.20**	**129**	P		**P**	**13 37 45.6**	**+0.7**
	2.8nm,0.7s,mb3.6,baz=308,slow=13,SNR=7.7								
STKA	**Stephens Creek**	**28.21**	**155**	P		**P**	**13 38 39.1**	**+0.6**
	1.7nm,0.7s,mb3.4,baz=330,slow=8.1,SNR=4.7								
STKA	**Stephens Creek**	**28.21**	**155**	*e*P		**P**	**13 38 39.4**	**+0.9**
STKA	**Stephens Creek**	**28.21**	**155**	P		**P**	**13 38 39.1**	**+0.6**
MKAR	**Makanchi Array**	**66.79**	**328**	P		**P**	**13 43 30.5**	**-1.0**
	0.2nm,0.5s,mb3.1,baz=115,slow=7.8,SNR=2.1								

*NEIC **24** 13:38:22.3, 14.13N×92.47W, h16km, MD4.0(MEX), After MEX.*

MEX 24 13:38:21.7±0.9, 1410N×9246W, h20km±44km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.82**	**13**	*i* P		Pb	13 38 34.0	-3.3	
THIG				*i* S		Sb	13 38 45.1	-2.9	
PCIG		**1.75**	**335**	*i* P		Pn	13 38 48.5	-2.5	
PCIG				*i* S		Sn	13 39 07.8	-4.9	
CCIG	**Comitan**	**2.19**	**8**	*i* P		Pn	13 38 55.5	-1.5	
CCIG				*i* S		Sn	13 39 20.6	-2.9	
TGIG		**2.74**	**347**	*e*P		Pn	13 39 02.8	-1.7	
TGIG				*i* S		Sn	13 39 33.1	-4.0	
CMIG	**Matias Romero**	**3.78**	**322**	*i* P		Pn	13 39 17.3	-1.6	
CMIG				*i* S		Sn	13 39 59.5	-3.3	
HUIG	**Huatulco**	**3.90**	**296**	*i* P		Pn	13 39 18.4	-2.1	
HUIG				*i* S		Sn	13 40 01.9	-3.8	
HUIG	**Huatulco**	**3.90**	**296**	*i* P		Pn	13 39 18.1	-2.4	
TEIG	**Tepich**	**7.28**	**33**	*i* P		Pn	13 41 26.2	-3.0	
TEIG	**Tepich**	**7.28**	**33**	*i* P		Pn	13 40 02.4	-4.7	

*ISCJB **24** 13:41:26.1±0.9, 1479N×006×9297W×004, h55km±8km, mb3.5/4, Error ellipse: s-maj=10.8km s-min=6.7km az=0.3*

IDC 24 13:41:28.3±6.2, 1509N×9257W, h66km±35km, mb3.3/4, mb1 3.8/7, mb1mx3.5/24, mbtmp3.6/7, ML4.1/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/20, Error ellipse: s-maj=59.6km s-min=17.0km az=176.0

*NEIC **24** 13:41:28.1, 1477N×9295W, h54km, mb3.5/2, MD4.4(MEX), After MEX.*

*MEX **24** 13:41:28.2±0.9, 1479N×9293W, h56km±14km, MD4.2*

ISC 24 13:41:27.3±0.9, 1481N±006×9293W±004, h49km±9km, n20, σ0°92/32, mb3.5/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.65**	**82**	*i* P		**Pn**	**13 41 39.7**	**-0.5**
THIG				*i* S		**Sn**	**13 41 49.8**	**+0.1**
PCIG		**0.93**	**342**	*i* P		**Pn**	**13 41 44.3**	**+0.3**
PCIG				*i* S		**Sn**	**13 41 56.3**	**0.0**
CCIG	**Comitan**	**1.65**	**27**	*i* P		**Pn**	**13 41 54.1**	**+0.4**
CCIG				*i* S		**Sn**	**13 42 14.8**	**+1.0**
SCX	**San Cristobal**	**1.93**	**8**	*i* P		**Pn**	**13 41 58.6**	**+0.9**
SCX				*i* S		**Sn**	**13 42 19.7**	**-1.1**
TGIG		**1.96**	**355**	*i* P		**Pn**	**13 41 57.2**	**-0.8**
TGIG				*i* S		**Sn**	**13 42 20.9**	**-0.6**
CMIG	**Matias Romero**	**2.94**	**321**	P		**Pn**	**13 42 12.0**	**+0.5**
	8.8nm,0.3s,baz=133,slow=12,SNR=13								
CMIG				S		**Sn**	**13 42 48.5**	**+2.8**
	27nm,0.3s,baz=174,slow=13,SNR=5.3								
CMIG	**Matias Romero**	**2.94**	**321**	*i* P		**Pn**	**13 42 11.8**	**+0.3**
CMIG				*i* S		**Sn**	**13 42 44.6**	**-1.1**
HUIG	**Huatulco**	**3.21**	**288**	*i* P		**Pn**	**13 42 16.1**	**+0.9**
HUIG				*i* S		**Sn**	**13 42 50.4**	**-1.9**
VHO	**Vista Hermosa**	**4.29**	**302**	*i* P		**Pn**	**13 42 29.4**	**-0.7**
VHO				*i* S		**Sn**	**13 43 20.0**	**+1.1**
PNIG	**Pinotepa**	**5.25**	**288**	*i* P		**Pn**	**13 42 43.6**	**+0.4**
PNIG				*i* S		**Sn**	**13 43 42.4**	**-0.1**
TEIG	**Tepich**	**6.97**	**39**	P		**Pn**	**13 43 03.2**	**-3.7**
	9.3nm,0.3s,baz=259,slow=4.5,SNR=31								
TEIG				S		**Sn**	**13 44 15.5**	**-9.3**
	3.7nm,0.3s,baz=0.0,slow=20,SNR=2.9								
TEIG				LR		LR	13 45 34.6		
	comp=Z,54nm,20.6s,baz=311,slow=38								
TEIG	**Tepich**	**6.97**	**39**	P		**Pn**	**13 43 03.2**	**-3.7**
TEIG				S		**Sn**	**13 44 15.5**	**-9.3**
TEIG				LR		LR	13 45 34.6		
TXAR	**Lajitas Array**	**17.53**	**327**	P		**Pn**	**13 45 29.5**	**+1.4**
	0.1nm,0.3s,baz=154,slow=10,SNR=16								
ANMO	**Albuquerque**	**23.46**	**331**	P		**P**	**13 46 31.1**	**-1.4**
	0.8nm,0.6s,mb3.3,baz=157,slow=12,SNR=4.6								
ANMO	**Albuquerque**	**23.46**	**331**	P		**P**	**13 46 31.4**	**-1.1**
	1.0nm,0.8s,mb3.3								
ELK	**Elko**	**32.32**	**327**	P		**P**	**13 47 52.0**	**+0.4**
	0.5nm,0.6s,mb3.5,baz=108,slow=6.4,SNR=3.3								
NVAR	**Mina Array Bea**	**32.48**	**321**	P		**P**	**13 47 53.8**	**+0.7**
	1.2nm,0.6s,baz=134,slow=7.7,SNR=12								
HLID	**Hailey**	**34.03**	**332**	*e*P		**P**	**13 48 06.1**	**-0.5**
	0.7nm,0.7s,mb3.7								
YKA	**Yellowknife Ar**	**50.03**	**347**	P		**P**	**13 50 12.5**	**-4.1**
	0.3nm,0.6s,mb3.5,baz=152,slow=7.3,SNR=6.3								
YKA	**Yellowknife Ar**	**50.03**	**347**	P		**P**	**13 50 12.5**	**-4.1**

IDC 24 14:08:54.4±4.5, 1974S×17554W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, Error ellipse: s-maj=147.9km s-min=74.4km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.20**	**244**	P		P	14 16 33.7	+1.0	
	1.7nm,0.9s,baz=58,slow=9.5,SNR=2.8								
ASAR	**Alice Springs**	**46.95**	**256**	P		P	14 17 27.1	-0.2	
	1.0nm,0.6s,baz=89,slow=8.0,SNR=32								
ASAR				PcP		PcP	14 18 58.2	-1.7	
	0.3nm,0.9s,baz=102,slow=4.1,SNR=4.2								
WRA	**Warramunga Arr**	**47.00**	**261**	P		P	14 17 27.1	-0.6	
	0.5nm,0.4s,baz=97,slow=7.9,SNR=22								
CMAR	**Chiang Mai Arr**	**92.05**	**289**	P		P	14 22 07.3	+1.4	
	0.4nm,0.4s,baz=116,slow=2.4,SNR=4.2								

*ISCJB **24** 14:27:01.8±0.3, 155S±004×7760W±006, h192km±3km, mb4.3/29, Error ellipse: s-maj=10.2km s-min=5.8km az=168.6*

*IGQ **24** 14:27:01.4, 156S×7775W, h198km±3km, Mb4.5, Ms4.3, Error ellipse: s-maj=4.7km s-min=2.6km az=40.0*

IDC 24 14:27:01.3±1.4, 142S×7738W, h175km±13km, mb3.9/16, mb1 4.1/18, mb1mx4.0/24, mbtmp4.0/18, MS3.1/1, Ms1 3.1/1, ms1mx2.4/26, Error ellipse: s-maj=18.5km s-min=8.4km az=60.0

*BJI **24** 14:27:02.5, 160S×7760W, h178km, mB5.3*

*NEIC **24** 14:27:02.5±0.8, 157S×7757W, h188km±8km, mb4.5/15, Error ellipse: s-maj=12.3km s-min=6.7km az=67.0*

**ISC 24 14:27:02.6

TXAR					ScP	ScP	14 39 49.5	-1.3		
ANMO	**Albuquerque**	**45.28**	**326**	*e*P	**P**		**14 35 02.6**	**+0.8**		
	14nm,0.6s,mb4.8									
TUC	**Tucson**	**46.06**	**320**	*e*P	**P**		**14 35 07.9**	**-0.2**		
	3.8nm,0.8s,mb4.1									
SDCO	**Great Sand Dun**	**46.87**	**329**	*e*P	**P**		**14 35 15.2**	**+1.0**		
	12nm,1.0s,mb4.5									
WUAZ	**Wupatki**	**48.55**	**323**	*e*P	**P**		**14 35 28.1**	**+1.0**		
	14nm,0.9s,mb4.6									
LDFC	**Landfair**	**50.60**	**320**	*e*P	**P**		**14 35 43.6**	**+0.9**		
	5.9nm,0.8s,mb4.3									
EYMN	**Ely**	**50.78**	**348**	*e*P	**P**		**14 35 41.6**	**-2.1**		
PDAR	**Pinedale Array**	**52.69**	**331**	P	**P**		**14 35 58.0**	**0.0**		
	1.5nm,0.6s,mb3.9,baz=127,slow=9.0,SNR=16									
PDAR					PcP	PcP	14 37 04.8	-0.5		
	1.6nm,0.8s,baz=142,slow=6.6,SNR=6.2									
ULM	**Lac du Bonnet**	**53.95**	**346**	P	**P**		**14 36 05.3**	**-1.6**		
	3.8nm,0.5s,mb4.4,baz=161,slow=8.3,SNR=5.5									
ULM					PcP	PcP	14 37 08.1	-1.7		
	1.6nm,0.5s,baz=94,slow=4.0,SNR=3.1									
ULM	**Lac du Bonnet**	**53.95**	**346**	P	**P**		**14 36 05.3**	**-1.6**		
ULM					PcP	PcP	14 37 08.1	-1.7		
NVAR	**Mina Array Bea**	**54.67**	**321**	P	**P**		**14 36 13.4**	**+0.9**		
	1.8nm,0.5s,mb4.0,baz=128,slow=7.1,SNR=16									
NVAR					PcP	PcP	14 37 13.1	+0.2		
	1.1nm,0.7s,baz=130,slow=4.4,SNR=4.7									
NVAR	**Mina Array Bea**	**54.67**	**321**	P	**P**		**14 36 13.4**	**+0.9**		
NVAR					PcP	PcP	14 37 13.1	+0.2		
SCHQ	**Schefferville**	**56.90**	**7**	P	**P**		**14 36 25.3**	**-2.6**		
	1.2nm,0.5s,mb4.0,baz=207,slow=14,SNR=3.6									
YKA	**Yellowknife Ar**	**69.72**	**343**	P	**P**		**14 37 50.8**	**-1.2**		
	1.9nm,0.6s,mb4.0,baz=139,slow=5.7,SNR=45									
YKA	**Yellowknife Ar**	**69.72**	**343**	P	**P**		**14 37 50.8**	**-1.2**		
LIC	**Lamto**	**72.84**	**83**	*e*P	**P**		**14 38 10.7**	**-1.0**		
	29nm,1.6s,mb4.8									
TIC	**Toumodi**	**72.87**	**83**	*e*P	**P**		**14 38 10.7**	**-1.2**		
	8.8nm,0.3s,mb5.0									
DBIC	**Dimbokro**	**73.03**	**83**	P	**P**		**14 38 12.2**	**-0.6**		
	5.2nm,0.9s,mb4.3,baz=262,slow=3.8,SNR=7.6									
KIC	**Kosan Boka**	**73.13**	**83**	*e*P	**P**		**14 38 12.5**	**-0.9**		
	26nm,0.6s,mb5.1									
TORD	**Torodi Ar. Bea**	**79.91**	**76**	P	**P**		**14 38 49.9**	**-1.6**		
	0.6nm,0.4s,mb3.6,baz=285,slow=5.6,SNR=18									
TORD	**Torodi Ar. Bea**	**79.91**	**76**	P	**P**		**14 38 49.9**	**-1.6**		
VNA3	**Neumayer Olymp**	**81.53**	**162**	*e*P	**P**		**14 38 59.0**	**0.0**		
VNA3				*e*			14 39 05.4			
VNA3				*e*			14 39 11.7			
VNA3				*e*		pP	14 39 46.4	+2.1		
VNA1	**Neumayer--Stat**	**81.77**	**162**	*e*P	**P**		**14 39 01.0**	**+0.8**		
VNA2	**Neumayer--Watz**	**82.13**	**162**	*e*P	**P**		**14 39 02.0**	**-0.1**		
VNA2				*e*			14 39 08.0			
VNA2				*e*			14 39 14.3			
VNA2				*e*		pP	14 39 49.5	+2.0		
SNAA	**Sanae**	**83.75**	**162**	*e*P	**P**		**14 39 09.9**	**-0.5**		
SNAA				*e*			14 39 15.8			
KTH	**Kantishna Hill**	**84.03**	**334**	*e*P	**P**		**14 39 11.5**	**-0.4**		
	11nm,0.8s,mb4.6									
BPAW	**Bear Paw Mtn.**	**84.20**	**335**	*e*P	**P**		**14 39 12.3**	**-0.5**		
	20nm,0.9s,mb4.8									
TAM	**Tamanrasset**	**84.24**	**67**	*e*P	**P**		**14 39 14.4**	**+0.6**		
	4.9nm,1.0s,mb4.2									
QSPA	**South Pole Qui**	**88.50**	**180**	*e*P	**P**		**14 39 34.5**	**+1.1**		
	19nm,0.9s,mb5.0									
VNDA	**Vanda**	**94.83**	**191**	P	**P**		**14 40 03.8**	**+1.0**		
	0.9nm,0.7s,mb4.1,baz=154,slow=6.5,SNR=6.6									
ZALV	**Zalesovo Beam**	**125.81**	**13**	PKP		PKPdf	14 45 41.1	-1.0		
	2.7nm,0.6s,baz=242,slow=3.2,SNR=8.3									
STKA	**Stephens Creek**	**130.17**	**225**	PKP		PKPdf	14 45 50.9	-0.3		
	3.4nm,0.8s,baz=282,slow=1.1,SNR=6.9									
STKA	**Stephens Creek**	**130.17**	**225**	*e*P		PKPdf	14 45 50.7	-0.5		
	3.4nm,0.9s									
MKAR	**Makanchi Array**	**131.65**	**18**	PKP		PKPdf	14 45 52.6	-0.9		
	0.8nm,0.5s,baz=333,slow=2.9,SNR=8.1									
CTA	**Charters Tower**	**131.96**	**241**	PKP		PKPdf	14 45 53.4	-1.4		
	3.1nm,0.7s,baz=140,slow=3.9,SNR=14									
CTA	**Charters Tower**	**131.96**	**241**	*e*P		PKPdf	14 45 54.4	-0.4		
	2.1nm,0.6s									
MJAR	**Matsushiro Arr**	**132.00**	**321**	PKP		PKPdf	14 45 53.2	-1.3		
	0.5nm,0.5s,baz=90,slow=1.1,SNR=4.2									
CN2	**Changchun**	**133.22**	**337**	*e*PKP		PKPdf	14 45 58.9	+2.3		
SONM	**Songino Array**	**133.78**	**356**	PKP		PKPdf	14 45 56.7	-0.7		
	1.0nm,0.6s,baz=333,slow=1.5,SNR=8.5									
WMQ	**Urumqi**	**135.93**	**15**	*e*PKP		PKPdf	14 46 01.0	-0.6		
KSRS	**Korea Array**	**137.26**	**330**	PKP		PKPdf	14 46 03.8	-0.6		
	2.2nm,0.6s,baz=20,slow=1.9,SNR=12									
BJI	**Beijing**	**139.71**	**344**	PKP		PKPdf	14 46 08.8	+0.1		
HHC	**Hu-ho-hao-te**	**140.03**	**349**	*e*PKP		PKPdf	14 46 11.3	+2.0		
HHC				XPKP			14 47 10.0			
HHC				PP		PP	14 49 13.5	+6.8		
HHC				PKS			14 49 45.6			
HHC				SKS		SKSdf	14 53 03.5	+1.3		
HHC				SKKS		SKKSac	14 55 44.8	+1.5		
HHC				SS		SS	15 07 16.4	+3.6		
HHC				PP		PP				
	comp=Z,107nm,8.7s									
HHC				LR		LR				
	comp=N,244nm,15.5s									
HHC				LR		LR				
	comp=E,155nm,14.3s									
HHC				LR		LR				
	comp=Z,115nm,15.5s									
ASAR	**Alice Springs**	**140.43**	**229**	PKhKP			14 46 02.7			
	comp=Z,1.0nm,0.5s,baz=124,slow=3.7,SNR=29									
ASAR				PKP		PKPdf	14 46 09.6	-0.9		
	comp=Z,2.7nm,0.7s,baz=113,slow=2.1,SNR=20									
WB2	**Warramunga Arr**	**142.09**	**234**	*e*P			14 46 08.0			
WRA	**Warramunga Arr**	**142.10**	**234**	PKhKP			14 46 07.9			
	comp=Z,3.1nm,0.7s,baz=116,slow=2.8,SNR=48									
WRA				PKP		PKPdf	14 46 12.6	-1.0		
	comp=Z,3.3nm,0.7s,baz=114,slow=2.2,SNR=22									
WRA				SKP			14 49 32.2			
	comp=Z,0.7nm,0.7s,baz=115,slow=2.4,SNR=5.9									
GTA	**Gaotai**	**142.25**	**3**	*e*PKP		PKPdf	14 46 13.3	0.0		
GTA				APKP			14 46 55.4			
GTA				XPKP			14 47 13.6			
LZH	**Lanzhou**	**145.62**	**358**	*e*PKP		PKPab	14 46 20.0	-0.3		
LZH				PKP		PKPdf	14 46 22.0	+2.7		
LZH				APKP			14 47 05.0			
LZH				XPKP			14 47 21.0			
XAN	**Xi'an**	**147.12**	**350**	PKP		PKPbc	14 46 23.3	-1.0		
XAN				APKP			14 47 05.5			
XAN				PP			14 49 55.3			
XAN				SKS		SKSdf	14 53 13.5	+0.2		
XAN				SS		SS	15 08 40.6	+6.4		
XAN				LR		LR				
	comp=N,31nm,23.1s									
XAN				LR		LR				
	comp=E,40nm,18.5s									
XAN				LR		LR				
	comp=Z,75nm,23.1s									
DANN	**Dangsing**	**147.94**	**32**	*e*P		PKPbc	14 46 26.4	-0.3		
	comp=Z,67nm,0.8s									
KOLN	**Koldanda**	**148.32**	**33**	*e*P		PKPbc	14 46 26.8	-0.8		
	comp=Z,14nm,0.8s									
GKN	**Gorkha**	**148.68**	**31**	*e*P		PKPbc	14 46 28.2	-0.4		
	comp=Z,32nm,0.9s									
KNA	**Kununurra**	**148.79**	**236**	*e*P		PKPbc	14 46 28.2	-0.9		
	comp=Z,15nm,0.5s									
KKN	**Kakani**	**149.19**	**31**	*e*P		PKPbc	14 46 29.6	-0.2		
	comp=Z,28nm,0.6s									
DMN	**Daman**	**149.24**	**31**	*e*P		PKPbc	14 46 29.8	-0.2		
	comp=Z,21nm,0.4s									
GUN	**Gumba**	**149.39**	**30**	*e*P		PKPbc	14 46 30.4	+0.1		
PKI	**Pulchoki**	**149.43**	**31**	*e*P		PKPbc	14 46 29.8	-0.6		
	comp=Z,18nm,0.7s									
JIRN	**Jiri**	**149.75**	**29**	*e*P		PKPbc	14 46 30.9	-0.3		
	comp=Z,8.9nm,0.4s									
FITZ	**Fitzroy Crossi**	**149.93**	**228**	*e*P		PKPbc	14 46 31.0	-0.9		
	comp=Z,16nm,0.8s									
RAMN	**Ramite**	**150.54**	**30**	*e*P		PKPbc	14 46 32.7	-0.4		
TAPN	**Taplejung**	**150.74**	**28**	*e*P		PKPbc	14 46 33.4	-0.2		
	comp=Z,23nm,0.5s									
CD2	**Chengdu**	**150.78**	**358**	PKP		PKPdf	14 46 28.1	+0.2		
ODAN	**Odare**	**151.00**	**29**	*e*P		PKPbc	14 46 33.8	-0.4		
	comp=Z,19nm,0.6s									
GYA	**Guiyang**	**154.91**	**351**	*e*PKP		PKPdf	14 46 32.0	-2.0		
GYA				PKP2		PKPab	14 47 01.3	+2.6		
GYA				APKP			14 47 18.9			
GYA				XPKP			14 47 38.6			
GYA				PKS			14 50 05.8			
GYA				PP		PP	14 50 39.0	+5.3		
GYA				PP		PP				
	comp=Z,70nm,8.4s									
KMI	**Kunming**	**156.57**	**359**	PKP		PKPdf	14 46 34.3	-1.9		
KMI				APKP			14 47 21.6			
KMI				XPKP			14 47 39.8			
KMI				LR		LR				
	comp=Z,35nm,29.4s									
CMAR	**Chiang Mai Arr**	**162.87**	**11**	PKP		PKPdf	14 46 43.2	-0.2		
	comp=Z,1.0nm,0.8s,baz=294,slow=1.7,SNR=5.5									

IDC 24 14:28:59.6±75.0, 1534S×16527E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/17, mbtmp4.1/3, Error ellipse: s-maj=1254.0km s-min=104.1km az=65.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.14**	**229**	P	P	14 34 44.8	+0.2
	4.0nm,0.5s,baz=43,slow=8.3,SNR=23						
WRA	**Warramunga Arr**	**29.80**	**257**	P	P	14 35 08.4	-0.1
	0.7nm,0.9s,baz=89,slow=8.7,SNR=4.9						
ASAR	**Alice Springs**	**30.65**	**249**	P	P	14 35 15.9	0.0
	1.3nm,0.4s,baz=78,slow=9.2,SNR=60						

*ISK **24** 14:41:23.1, 3487N×2654E, h30km, MD3.6*
*THE **24** 14:41:24.7, 3471N×27.14E, h0km±1km, Error ellipse: s-maj=3.0km s-min=0.6km az=139.0*
*ISCJB **24** 14:41:25.7±1.6, 347N±0.1×2724E±006, h32km±10km, Error ellipse: s-maj=18.0km s-min=6.8km az=163.1*
*CSEM **24** 14:41:26.7±0.3, 3498N×27.12E, h10km, MD3.7, Error ellipse: s-maj=8.0km s-min=2.2km az=170.0*
*ATH **24** 14:41:31.5, 3543N×2695E, h5km, MD3.7/4*
ISC 24 14:41:25.4±1.7, 347N±01×2724E±006, h21km±10km, n17, σ1§03/23, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.83**	**356**	*e*PG	**Pb**	**14 41 35.6**	**-5.5**
ZKR	**Zakros**	**0.93**	**295**	P	**Pb**	**14 41 41.8**	**-0.9**
ZKR				S	**Sb**	**14 41 55.2**	**+0.6**
NPS	**Neapolis**	**1.44**	**293**	*e*PB	**Pb**	**14 41 52.3**	**+0.8**
LAST	**Lasithi**	**1.51**	**287**	P	**Pn**	**14 41 50.4**	**-0.8**
LAST				S	**Sn**	**14 42 10.5**	**+0.3**
ARG	**Arkhangelos**	**1.66**	**26**	*e*PB	**Pb**	**14 41 55.3**	**0.0**
DAT	**Datca**	**2.02**	**8**	*e*PN	**Pn**	**14 41 56.5**	**-1.7**
DAT				*e*SN	**Sn**	**14 42 20.2**	**-2.6**
THR1	**Thera Island**	**2.19**	**319**	P	**Pn**	**14 42 00.3**	**-0.3**
THR1				S	**Sn**	**14 42 28.2**	**+1.1**
THR6	**Thira Island,**	**2.22**	**318**	P	**Pn**	**14 42 00.6**	**-0.3**
THR3	**Thira Island,**	**2.25**	**319**	P	**Pn**	**14 42 00.9**	**-0.5**
THR5	**Thira Island,**	**2.29**	**318**	P	**Pn**	**14 42 02.1**	**+0.2**
DALT	**Dalyan (Mudla)**	**2.34**	**29**	*e*PN	**Pn**	**14 42 03.6**	**+1.0**
DALT				*e*SN	**Sn**	**14 42 33.0**	**+2.3**
YER	**Yerkesik**	**2.56**	**19**	*e*PN	**Pn**	**14 42 05.0**	**-0.5**
YER				*e*SN	**Sn**	**14 42 35.8**	**-0.2**
VAM	**Vamos**	**2.58**	**286**	*e*PN	**Pn**	**14 42 12.5**	**+6.6**
APE	**Apeiranthos**	**2.72**	**330**	P	**Pn**	**14 42 07.9**	**+0.1**
ELL	**Elmali**	**2.97**	**46**	*e*PN	**Pn**	**14 42 14.2**	**+3.0**
CHOS	**Chios island**	**3.78**	**346**	P	**Pn**	**14 42 22.7**	**+0.3**
KULA	**Kula-Manisa**	**3.96**	**16**	*e*PN	**Pn**	**14 42 24.1**	**-0.7**

*ISCJB **24** 14:49:16.4±0.9, 3856N±004×4160E±004, h5km±7km, Error ellipse: s-maj=6.6km s-min=5.2km az=162.8*
*DDA **24** 14:49:16.1, 3856N×4158E, h7km±1km, Md3.5*
*CSEM **24** 14:49:16.3±0.1, 3845N×4169E, h15km, MD2.9, Error ellipse: s-maj=5.2km s-min=1.7km az=161.0*
*ISK **24** 14:49:17.4, 3838N×4172E, h22km, MD2.9*
ISC 24 14:49:16.7±0.9, 3854N±004×4159E±004, h5km±7km, n13, σ0§98/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.53**	**94**	*i* P	**Pg**	**14 49 26.8**	**-0.1**
TATV				*i* S	**Sg**	**14 49 34.7**	**+0.9**
BNGL	**BINGOL**	**0.54**	**320**	*i* P	**Pg**	**14 49 26.1**	**-0.9**
BNGL				*i* S	**Sg**	**14 49 34.1**	**+0.1**
DIV	**Diyarbakir**	**1.26**	**239**	*e*PN	**Pn**	**14 49 40.5**	**-0.3**
DIV				*e*SN	**Sn**	**14 49 57.0**	**-1.1**
DIYA	**Diyarbakir**	**1.31**	**242**	*i* P	**Pn**	**14 49 40.9**	**-0.7**
ERZM	**Erzurum**	**1.37**	**353**	*i* P	**Pn**	**14 49 41.4**	**-1.0**
MARD	**Mardin**	**1.39**	**208**	*i* P	**Pn**	**14 49 42.6**	**0.0**
MARD				*i* S	**Sb**	**14 50 01.6**	**+0.7**
VANB	**Van**	**1.41**	**87**	*e*PN	**Pn**	**14 49 41.5**	**-1.4**
AGRB	**Hanur-Agry**	**1.50**	**46**	*e*PN	**Pn**	**14 49 43.8**	**-0.4**
AGRB				*e*SN	**Sn**	**14 50 04.2**	**+0.1**
HOMI	**Horasan**	**1.52**	**9**	*i* P	**Pn**	**14 49 43.6**	**-0.8**
HOMI				*i* S	**Sn**	**14 50 07.5**	**+2.9**
PTK	**Pertek**	**1.76**	**282**	*e*PN	**Pn**	**14 49 48.7**	**+0.9**
SVRC	**Sivrice-ELAZID**	**1.80**	**266**	*e*PN	**Pn**	**14 49 49.0**	**+0.6**
MYA	**Malataya**	**2.50**	**266**	*e*PN	**Pn**	**14 49 59.5**	**+1.6**
GUMT	**Gumushane**	**2.52**	**320**	*e*PN	**Pn**	**14 50 01.9**	**+3.7**

IDC 24 15:21:35.9±1.4, 2520N×9819E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=174.0km s-min=28.5km az=52.0, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.00**	**334**	P	P	15 26 60.0	-1.4
	0.2nm,0.5s,baz=139,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**57.00**	**139**	P	P	15 31 23.4	-0.2
	0.4nm,0.7s,baz=320,slow=7.5,SNR=5.6						
GERES	**GERESS Array B**	**67.96**	**315**	P	P	15 32 37.7	+1.1
	0.6nm,0.7s,baz=69,slow=3.6,SNR=3.1						

*LDG **24** 15:24:05.5±0.3, 1428S×16655E, h10km, Mb4.1/1, Error ellipse: s-maj=42.8km s-min=8.3km az=85.0*
*NOU **24** 15:24:07.9±0.3, 1445S×16794E, h30km, MD3.8, ML3.1*
*ISCJB **24** 15:24:10.1±1.5, 1474S±006×16698E±009, h66km±12km, mb4.4/20, Error ellipse: s-maj=15.9km s-min=8.6km az=157.4*
*IDC **24** 15:24:11.1±0.8, 1460S×16701E, h61km±5km, mb4.1/15, mb1 4.2/16, mb1mx4.1/21, mbtmp4.2/16, MS3.8/8, Ms1 3.8/8, ms1mx3.5/21, Error ellipse: s-maj=18.2km s-min=13.7km az=68.0*
*NEIC **24** 15:24:11.1±0.4, 1461S×167.10E, mb4.6/6, Error ellipse: s-maj=10.6km s-min=8.3km az=69.0*
ISC 24 15:24:11.5±1.2, 1468S±006×16698E±009, h65km±10km, h60km±2.5km:pP-P, n88, σ1§09/47, mb4.5/20, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.37**	**184**	*e*P	**Pn**	**15 25 56.4**	**-0.1**
DZM				*e*S	**Sn**	**15 27 16.9**	**-1.8**
NOUC	**Port Laguerre**	**7.42**	**185**	*e*P	**Pn**	**15 25 57.5**	**+0.5**
NOUC				*e*S	**Sn**	**15 27 18.6**	**-1.1**
NOUC				AMP		15 27 26.7	
	comp=Z,24nm,3.2s						
NORM	**Noumea**	**7.53**	**184**	*e*P	**Pn**	**15 25 58.9**	**+0.3**
ONTRN	**Noumea**	**7.61**	**184**	*e*P	**Pn**	**15 26 00.2**	**+0.5**
HNR	**Honiara**	**8.63**	**306**	P	**Pn**	**15 26 14.5**	**+0.7**
	comp=Z,25nm,0.3s,baz=176,slow=3.7,SNR=9.0						
HNR				S	**Sn**	**15 27 46.9**	**-2.8**
	comp=Z,9.3nm,0.3s,baz=180,slow=20,SNR=2.5						
HNR				LR	LR	15 28 27.7	
	comp=Z,47nm,20.5s,baz=154,slow=30						
HNR	**Honiara**	**8.63**	**306**	*e*Pn	**Pn**	**15 26 14.2**	**+0.4**
HNR				P		15 26 14.5	
HNR				S	**Sn**	**15 27 46.9**	**-2.8**
HNR				LR	LR	15 28 27.7	
EIDS	**Eidsvold**	**18.32**	**232**	*e*P	**Pn**	**15 28 23.2**	**+2.0**
PMG	**Port Moresby**	**20.08**	**283**	P	**P**	**15 28 41.8**	**+2.0**
	comp=Z,24nm,1.0s,baz=106,slow=7.3,SNR=10						
CTA	**Charters Tower**	**20.50**	**252**	P	**P**	**15 28 46.5**	**+2.2**
	comp=Z,9.9nm,0.8s,baz=88,slow=13,SNR=13						
CTA				LR	LR	15 35 27.5	
	comp=Z,176nm,19.2s,baz=62,slow=33						
CTA	**Charters Tower**	**20.50**	**252**	*e*P	**P**	**15 28 46.6**	**+2.3**
	comp=Z,7.1nm,0.8s						
CTAO	**Charters Tower**	**20.50**	**252**	*e*P	**P**	**15 28 46.3**	**+1.9**
	comp=Z,8.2nm,0.8s						
AFI	**Afiamalu**	**20.60**	**91**	LR	LR	15 34 50.2	
	comp=Z,15nm,21.2s,baz=160,slow=31						
ARMA	**Armidale**	**21.09**	**219**	*e*P	**P**	**15 28 54.1**	**+3.4**
COEN	**Coen**	**23.08**	**269**	P	**P**	**15 29 12.1**	**+0.2**
URZ	**Urewera**	**25.14**	**161**	P	**P**	**15 29 31.7**	**+1.2**
	comp=Z,35nm,0.8s,mb5.0,baz=63,slow=5.0,SNR=11						
URZ				LR	LR	15 37 28.8	
	comp=Z,148nm,19.2s,baz=329,slow=32						
STKA	**Stephens Creek**	**28.82**	**229**	P	**P**	**15 30 04.7**	**+1.0**
	comp=Z,11nm,0.9s,mb4.6,baz=36,slow=6.8,SNR=15						
STKA				PcP	PcP	15 33 12.2	0.0
	comp=Z,1.8nm,0.7s,baz=33,slow=2.7,SNR=3.0						
STKA				LR	LR	15 41 37.1	
	comp=Z,127nm,18.6s,baz=31,slow=36						
STKA	**Stephens Creek**	**28.82**	**229**	*e*P	**P**	**15 30 04.9**	**+1.2**
	comp=Z,7.8nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**28.82**	**229**	*e*P	**P**	**15 30 04.8**	**+1.2**
STKA				PcP	PcP	15 33 12.2	0.0
STKA				LR	LR	15 41 37.1	
RPZ	**Rata Peaks**	**29.15**	**174**	P	**P**	**15 30 07.0**	**+0.5**
	comp=Z,18nm,0.8s,mb4.9,baz=48,slow=3.7,SNR=9.0						
RPZ				LR	LR	15 40 12.4	
	comp=Z,201nm,21.2s,baz=170,slow=33						
WB2	**Warramunga Arr**	**31.56**	**256**	*e*P	**P**	**15 30 26.5**	**-1.5**
WRA	**Warramunga Arr**	**31.57**	**256**	P	**P**	**15 30 27.1**	**-1.1**
	comp=Z,4.4nm,0.9s,mb4.3,baz=86,slow=9.2,SNR=44						
WRA				pP	pP	15 30 43.2	-0.7
	comp=Z,1.9nm,0.6s,baz=86,slow=9.2,SNR=5.9						
WRA				PcP	PcP	15 33 19.6	+0.1
	comp=Z,2.0nm,0.8s,baz=80,slow=3.0,SNR=9.7						
ASAR	**Alice Springs**	**32.43**	**249**	P	**P**	**15 30 35.0**	**-0.6**
	comp=Z,3.8nm,0.8s,mb4.3,baz=71,slow=9.6,SNR=51						
ASAR				pP	pP	15 30 52.0	+0.6
	comp=Z,2.0nm,0.6s,baz=74,slow=9.7,SNR=4.8						
ASAR				PcP	PcP	15 33 20.9	-0.8
	comp=Z,1.2nm,0.7s,baz=81,slow=2.9,SNR=7.4						
FORT	**Forrest**	**39.09**	**239**	*e*P	**P**	**15 31 33.0**	**+0.5**
	comp=Z,20nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**39.75**	**259**	*e*P	**P**	**15 31 38.1**	**-0.1**
	comp=Z,15nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**39.75**	**259**	*e*P	**P**	**15 31 37.9**	**-0.3**
	comp=Z,8.7nm,0.8s,mb4.5						
PPT	**Papeete**	**41.77**	**100**	*e*LR	LR	15 44 06.2	
	comp=Z,59nm,28.5s						
PPT	**Papeete**	**41.77**	**100**	LR	LR	15 46 28.2	
	comp=Z,88nm,19.0s,baz=109,slow=32						
TBI	**Tubuai**	**41.94**	**109**	*e*LR	LR	15 44 10.3	
	comp=Z,159nm,31.5s						
KLBR	**Kellerberrin**	**47.89**	**241**	*e*P	**P**	**15 32 42.7**	**-0.7**
	comp=Z,37nm,1.6s,mb5.2						
MUN	**Mundaring**	**49.25**	**240**	*e*P	**P**	**15 32 53.5**	**-0.3**
MJAR	**Matsushiro Arr**	**57.73**	**333**	P	**P**	**15 33 54.4**	**-1.3**
	comp=Z,0.9nm,0.4s,mb4.1,baz=235,slow=14,SNR=5.1						
MJAR				LR	LR	15 57 18.2	
	comp=Z,64nm,18.4s,baz=285,slow=34						
VNDA	**Vanda**	**62.91**	**181**	P	**P**	**15 34 30.4**	**-0.1**
	comp=Z,2.3nm,0.7s,mb4.4,baz=3.7,slow=6.2,SNR=14						
VNDA				LR	LR	16 00 14.8	
	comp=Z,131nm,19.2s,baz=236,slow=34						
VNDA	**Vanda**	**62.91**	**181**	*e*P	**P**	**15 34 30.6**	**+0.1**
	comp=Z,5.1nm,1.0s,mb4.6						
VNDA				LR	LR	16 00 14.8	
SBA	**Scott Base**	**63.19**	**180**	*e*P	**P**	**15 34 33.3**	**+0.9**
KSRS	**Korea Array**	**63.54**	**326**	P	**P**	**15 34 34.2**	**-1.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=148,slow=7.2,SNR=3.3						
PETK	**Petropavlovsk-**	**67.98**	**354**	P	**P**	**15 35 06.4**	**+3.0**
	comp=Z,5.0nm,0.9s,mb4.5,baz=140,slow=11,SNR=3.3						
CMAR	**Chiang Mai Arr**	**74.67**	**294**	P	**P**	**15 35 45.7**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.1,baz=123,slow=4.0,SNR=16						
QSPA	**South Pole Qui**	**75.35**	**180**	*e*P	**P**	**15 35 47.6**	**+0.1**
	comp=Z,18nm,0.9s,mb5.0						
SONM	**Songino Array**	**82.29**	**324**	P	**P**	**15 36 26.4**	**+0.5**
	comp=Z,0.7nm,0.8s,mb3.6,baz=139,slow=6.9,SNR=4.8						
SONM				pP	pP	15 36 42.6	-1.2
	comp=Z,0.7nm,0.7s,baz=143,slow=6.3,SNR=4.3						
BILL	**Bilibino**	**82.49**	**360**	*e*P	**P**	**15 36

FUNV 24 15:27:01.2,676N×7315W,h164km,MW3.6,2D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.37**	**37**	*i* P	Pn	15 27 30.4	-0.3
CAPV				*e*S	Sn	15 27 51.2	-2.1
VIGV	**El Vigia**	**2.72**	**40**	⇓*i* P	Pn	15 27 44.9	-0.8
VIGV				*e*S	Sn	15 28 16.8	-3.4
SOCV	**Socops**	**2.73**	**56**	*e*P	Pn	15 27 45.2	-0.6
SOCV				*e*S	Sn	15 28 16.8	-3.5
ELOV	**Elorza**	**3.64**	**86**	*e*P	Pn	15 27 56.8	-0.5
VIRV	**Villa del Rosa**	**3.79**	**11**	*e*P	Pn	15 27 57.5	-1.7
VIRV				*e*S	Sn	15 28 40.2	-4.2
QARV	**Quebrada Arrib**	**4.30**	**37**	*e*P	Pn	15 28 04.3	-1.4
QARV				*e*S	Sn	15 28 51.8	-4.3
SANV	**Sanarito**	**4.49**	**52**	*e*P	Pn	15 28 06.5	-1.7
SANV				*e*S	Sn	15 28 55.2	-5.4
CURV	**Curarigua**	**4.51**	**44**	*e*P	Pn	15 28 07.2	-1.3
CURV				*e*S	Sn	15 28 55.2	-5.9
TEPV	**Terepaima**	**5.04**	**51**	*e*P	Pn	15 28 14.0	-1.4
TEPV				*e*S	Sn	15 29 08.5	-5.1
SIQV	**Siquisique**	**5.08**	**40**	*e*P	Pn	15 28 14.1	-1.9
SIQV				*e*S	Sn	15 29 08.9	-5.6
BAUV	**El Baul**	**5.50**	**66**	*e*P	Pn	15 28 18.8	-2.7
MONV	**Montecano**	**6.04**	**31**	*e*P	Pn	15 28 26.9	-1.6
MONV				*e*S	Sn	15 29 28.8	-8.3
CAOV	**Caicara del Or**	**6.80**	**85**	*e*P	Pn	15 28 36.0	-2.6

*IDC **24** 16:10:15.9±1.0,4487N×15027E,h0km,mb3.5/5, mb1 3.8/7,mb1mx3.5/23,mbtmp3.5/7,ML3.1/2,Error ellipse: s-maj=51.3km s-min=20.2km az=127.0*
*ISCJB **24** 16:10:26.9±2.7,451N±02×1493E±04,h115km±29km, mb3.4/5,Error ellipse: s-maj=51.1km s-min=19.8km az=30.7*

ISC 24 16:10:27.8±2.6,451N±02×1493E±04,h105km±29km,n26, σ0§91/25,mb3.4/5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.11**	**237**	P	**Pn**	**16 11 14.5**	**-0.5**
NEM2				*e*S	**Sn**	**16 11 50.3**	**-1.2**
JRA	**Rausu**	**3.22**	**250**	P	**Pn**	**16 11 17.6**	**+1.1**
JNK	**Nakash**	**3.64**	**247**	P	**Pn**	**16 11 22.9**	**+0.8**
JAK	**Akkeshi**	**3.95**	**239**	P	**Pn**	**16 11 25.7**	**-0.6**
JAK				*e*S	**Sn**	**16 12 10.3**	**-1.3**
JTKR	**Abashiri--Toko**	**4.03**	**255**	P	**Pn**	**16 11 28.1**	**+0.7**
JAR	**Ashorobuto**	**4.38**	**247**	P	**Pn**	**16 11 33.2**	**+1.1**
JOB	**Onbets**	**4.53**	**243**	P	**Pn**	**16 11 34.5**	**+0.4**
JOB				*e*S	Sx	16 12 25.2	
JKK2	**Kamakawa 2**	**4.86**	**257**	P	**Pn**	**16 11 38.8**	**+0.3**
ASAJ	**Asahikawa**	**4.90**	**260**	Pn	**Pn**	**16 11 39.8**	**+0.7**
	0.7nm,0.3s,baz=106,slow=27,SNR=6.2						
ASAJ	**Asahikawa**	**4.90**	**260**	P	**Pn**	**16 11 40.3**	**+1.2**
JCH	**Churui**	**4.98**	**242**	P	**Pn**	**16 11 39.8**	**-0.4**
JCH				*e*S	Sx	16 12 34.7	
JEM	**Erimo**	**5.45**	**237**	P	**Pn**	**16 11 47.7**	**+1.2**
JNBK	**Urakawa-nobuka**	**5.54**	**241**	P	**Pn**	**16 11 46.8**	**-1.0**
JNB	**Noboribetsu**	**6.55**	**249**	P	**Pn**	**16 12 01.0**	**-0.4**
JNB				*e*S	Sx	16 13 12.9	
JKB	**Kayabe**	**6.83**	**245**	P	**Pn**	**16 12 04.6**	**-0.7**
JKB				*e*S	Sx	16 13 17.3	
JTM	**Tenmabayashi**	**7.44**	**237**	*e*S	Sx	16 13 30.1	
JANG	**Nango**	**7.45**	**233**	*e*S	Sx	16 13 29.7	
JTH	**Tanohata**	**7.56**	**229**	*e*S	Sx	16 13 32.4	
OFUJ	**Ofunato**	**8.29**	**226**	*e*S	**Sn**	**16 13 50.3**	**-6.7**
JIO	**Ouri**	**8.93**	**224**	*e*S	**Sn**	**16 14 03.8**	**-8.8**
PETK	**Petropavlovsk-**	**9.69**	**32**	Pn	**Pn**	**16 12 36.5**	**-7.5**
	0.1nm,0.3s,baz=241,slow=42,SNR=2.4						
YKA	**Yellowknife Ar**	**53.79**	**35**	P	**P**	**16 19 37.2**	**-1.7**
	0.4nm,0.5s,mb3.7,baz=302,slow=7.2,SNR=6.5						
WRA	**Warramunga Arr**	**66.18**	**195**	P	**P**	**16 21 04.4**	**+0.4**
	0.2nm,0.4s,mb3.3,baz=12,slow=6.8,SNR=7.1						
PDAR	**Pinedale Array**	**67.84**	**51**	P	**P**	**16 21 14.0**	**-0.4**
	0.3nm,0.5s,mb3.4,baz=321,slow=1.3,SNR=3.3						
ASAR	**Alice Springs**	**69.89**	**195**	P	**P**	**16 21 28.6**	**+1.5**
	0.1nm,0.3s,mb3.1,baz=9.0,slow=6.6,SNR=6.2						
TXAR	**Lajitas Array**	**80.60**	**58**	P	**P**	**16 22 28.5**	**-0.2**
	0.2nm,0.4s,mb3.3,baz=305,slow=3.2,SNR=4.1						

*ISCJB **24** 16:30:25.9±0.9,752S±009×11374E±005,h49km±11km, mb3.7/3,Error ellipse: s-maj=15.9km s-min=8.3km az=7.0*
*DJA **24** 16:30:25,761S×11371E,h10km,MLv3.8/5*
*IDC **24** 16:30:32.2±5.8,867S×11436E,h0km,mb3.7/3,mb1 3.9/3, mb1mx3.5/17,mbtmp3.7/3,MS3.5/1,Ms1 3.5/1, ms1mx2.9/23,Error ellipse: s-maj=182.7km s-min=83.6km az=34.0*

ISC 24 16:30:26.1±2.1,75S±02×11375E±005,h31km±27km,n9, σ1§08/11,mb3.7/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMMI	**Kalianget**	**0.53**	**23**	P	**Pb**	**16 30 37.2**	**+0.1**
NBBI	**Negara**	**1.19**	**134**	P	**Pn**	**16 30 46.3**	**-0.4**
NBBI				S	**Sn**	**16 31 02.5**	**+0.6**
KRKI	**Karangkates**	**1.43**	**244**	P	**Pn**	**16 30 48.7**	**-1.3**
KRKI				S	**Sn**	**16 31 07.7**	**-0.1**
SJI	**Sawahan**	**1.98**	**264**	P	**Pn**	**16 30 57.3**	**-0.3**
SJI				S	**Sn**	**16 31 24.2**	**+2.8**
KHKI	**Kahang-Kahang**	**2.01**	**114**	P	**Pn**	**16 30 59.6**	**+1.6**
WRA	**Warramunga Arr**	**23.45**	**124**	P	**P**	**16 35 31.4**	**-1.9**
	0.8nm,0.5s,mb3.4,baz=302,slow=11,SNR=11						
ASAR	**Alice Springs**	**25.12**	**132**	P	**P**	**16 35 48.4**	**-0.1**
	1.9nm,0.7s,mb3.7,baz=306,slow=9.2,SNR=28						
STKA	**Stephens Creek**	**35.48**	**137**	P	**P**	**16 37 20.1**	**+0.1**
	0.8nm,0.5s,mb3.9,baz=330,slow=12,SNR=4.1						
MJAR	**Matsushiro Arr**	**49.49**	**26**	LR	LR	16 59 32.4	
	comp=Z,46nm,19.2s,baz=285,slow=35						

JMA 24 16:48:15.0±0.4,4425N×14844E,h0km,M3.9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.14**	**247**	P	Pn	16 48 52.7	+0.7
NEM2				*e*S	Sn	16 49 20.6	+1.3
JRA	**Rausu**	**2.41**	**264**	P	Pn	16 48 56.6	+0.9
JNK	**Nakash**	**2.77**	**257**	*e*S	Sn	16 49 35.7	+1.0
JAK	**Akkeshi**	**2.99**	**247**	P	Pn	16 49 04.6	+0.9
JAR	**Ashorobuto**	**3.51**	**256**	P	Pn	16 49 12.9	+2.1
JCH	**Churui**	**4.04**	**248**	P	Pn	16 49 19.6	+1.5
JNBK	**Urakawa-nobuka**	**4.60**	**247**	P	Pn	16 49 27.2	+1.5
JKB	**Kayabe**	**5.92**	**249**	P	Pn	16 49 45.0	+1.2
JKB				*e*S	Sn	16 50 52.6	+0.3

IDC 24 16:49:56.3±24.0,1726S×17263W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/19,mbtmp3.8/4,Error ellipse: s-maj=451.8km s-min=153.2km az=72.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.98**	**259**	P	P	16 57 24.9	+0.3
	1.0nm,0.5s,baz=95,slow=13,SNR=4.4						
STKA	**Stephens Creek**	**43.78**	**242**	P	P	16 58 04.4	+0.5
	0.7nm,0.4s,baz=76,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**50.16**	**258**	P	P	16 58 53.9	-0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=24						
ASAR	**Alice Springs**	**50.26**	**253**	P	P	16 58 53.9	-0.8
	0.8nm,0.5s,baz=92,slow=8.1,SNR=39						

IGQ 24 17:51:56.2,231S×7729W,h140km±9km,Mb4.0,Ms3.8, 3C-1D,Error ellipse: s-maj=8.4km s-min=4.6km az=14.2, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATA	**Patacocha**	**1.40**	**305**	P	Pn	17 52 25.0	+1.1
PATA	**Patacocha**	**1.40**	**305**	S	Sn	17 52 45.3	+0.2
ULBA	**Ulba**	**1.41**	**307**	P	Pn	17 52 25.0	+1.0
ULBA	**Ulba**	**1.41**	**307**	S	Sn	17 52 45.2	-0.1
ARRY	**Arrayan**	**1.41**	**304**	⇑P	Pn	17 52 24.6	+0.4
RUN5	**Runtun**	**1.44**	**308**	⇑P	Pn	17 52 25.3	+0.9
RUN5	**Runtun**	**1.44**	**308**	⇑S	Sn	17 52 45.5	-0.4
IGUA	**Igualata**	**1.58**	**301**	P	Pn	17 52 26.8	+0.9
PISA	**Pisayambo**	**1.66**	**319**	P	Pn	17 52 27.9	+1.1
PISA	**Pisayambo**	**1.66**	**319**	S	Sn	17 52 49.3	-0.8
TAMB	**Tambo**	**1.93**	**326**	P	Pn	17 52 31.9	+1.9
VC1	**Cotopaxi 1**	**2.00**	**326**	P	Pn	17 52 32.2	+1.5
CAMI	**Rancho Maria**	**2.03**	**323**	P	Pn	17 52 33.0	+1.9
ANTI	**Antisana**	**2.04**	**335**	⇓P	Pn	17 52 32.6	+1.3
CONE	**Cono NE Rev Vo**	**2.25**	**351**	P	Pn	17 52 34.8	+0.9
GGP	**Refugio Guagua**	**2.49**	**328**	P	Pn	17 52 37.9	+1.1
TERV	**Terraza Guagua**	**2.50**	**328**	P	Pn	17 52 38.8	+2.0
PINO	**Pino**	**2.51**	**328**	P	Pn	17 52 38.1	+1.0
COTA	**Cotacachi**	**2.83**	**338**	P	Pn	17 52 42.5	+1.4

*IDC **24** 18:01:28.1±1.5,2371N×12200E,h0km,mb3.5/3, mb1 3.7/4,mb1mx3.3/21,mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=75.2km s-min=25.7km az=67.0*
*ISCJB **24** 18:01:30.6±0.4,2388N±002×12253E±002,h15km±4km, mb3.5/3,Error ellipse: s-maj=3.7km s-min=2.6km az=162.5*
*TAP **24** 18:01:32.0,2398N×12248E,h29km,ML3.5,C*
*JMA **24** 18:01:32.4±0.3,2403N×12254E,h26km,M2.7*

ISC 24 18:01:30.2±0.5,2391N±002×12253E±002,h11km±3km, n52,σ0§82/91,mb3.5/3,2C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.71**	**39**	P	**Pg**	**18 01 44.2**	**+0.3**
YOJ				*e*S	**Sg**	**18 01 52.3**	**-0.9**
EHP	**Heping Village**	**0.82**	**299**	*e*P	**Pg**	**18 01 47.5**	**+1.5**
	baz=296						
TWD	**Chiawan**	**0.87**	**282**	*i* P	**Pg**	**18 01 47.0**	**+0.1**
	baz=277						
TWD				S	**Sg**	**18 01 58.1**	**-0.1**
	baz=277						
ENA	**Nanau**	**0.88**	**306**	⇑*i* P	**Pg**	**18 01 47.3**	**+0.1**
	baz=309						
ENA				S	**Sg**	**18 01 59.5**	**+0.8**
	baz=309						
TWC	**Suao**	**0.93**	**319**	⇑*i* P	**Pg**	**18 01 47.7**	**-0.4**
	baz=317						
TWC				S	**Sg**	**18 01 59.4**	**-0.9**
	baz=317						
ESL	**Shilin**	**1.00**	**265**	*e*P	**Pg**	**18 01 48.6**	**-0.9**
	baz=248						
ESL				*e*S	**Sg**	**18 02 02.4**	**-0.2**
	baz=248						
ILA	**Ilan**	**1.11**	**320**	*e*P	**Pb**	**18 01 50.0**	**-1.4**
	baz=308						
ILA				S	**Sb**	**18 02 06.8**	**+0.9**
	baz=308						
TWE	**Neicheng**	**1.12**	**316**	*i* P	**Pb**	**18 01 51.5**	**-0.2**
	baz=314						
TWE				*e*S	**Sb**	**18 02 07.1**	**+0.7**
	baz=314						
ENTT	**Nioudou**	**1.14**	**310**	*i* P	**Pb**	**18 01 51.7**	**-0.2**
	baz=307						
ENTT				*e*S	**Sb**	**18 02 06.6**	**-0.2**
	baz=307						
EHY	**Hungye**	**1.17**	**250**	P	**Pb**	**18 01 51.9**	**-0.6**
	baz=246						
EHY				*e*S	**Sb**	**18 02 07.3**	**-0.4**
	baz=246						
WHF	**Hehuan Shan**	**1.18**	**282**	*i* P	**Pb**	**18 01 52.1**	**-0.4**
	baz=267						
WHF				S	**Sb**	**18 02 07.0**	**-0.9**
	baz=267						
NNS	**Nan Shan**	**1.18**	**297**	⇓*i* P	**Pb**	**18 01 52.1**	**-0.5**
	baz=283						
NNS				*e*S	**Sb**	**18 02 07.2**	**-0.6**
	baz=283						
HATJ	**Hateruma jima**	**1.18**	**83**	P	**Pb**	**18 01 52.8**	**+0.2**
HATJ				*e*S	**Sb**	**18 02 08.2**	**+0.3**
IRIF	**Iriomote-Funau**	**1.18**	**69**	P	**Pb**	**18 01 52.7**	**+0.1**
IRIF				*e*S	**Sb**	**18 02 08.1**	**+0.2**
TWB1	**Santiao Chiao**	**1.20**	**336**	*e*P	**Pn**	**18 01 52.4**	**-0.6**
	baz=352						
TWB1				*e*S	**Sb**	**18 02 07.9**	**-0.6**
	baz=352						
TWF1	**Yuli**	**1.25**	**244**	⇓*i* P	**Pn**	**18 01 53.5**	**-0.2**
	baz=240						
TWF1				S	**Sb**	**18 02 09.3**	**-0.7**
	baz=240						
NSK	**Sanguang**	**1.31**	**306**	⇓*i* P	**Pn**	**18 01 54.2**	**-0.3**
	baz=289						
NSK				*e*S	**Sb**	**18 02 10.1**	**-1.6**
	baz=289						
CHKT	**Chengkung**	**1.33**	**233**	*e*P	**Pn**	**18 01 53.8**	**-1.0**
	baz=218						
CHKT				*e*S	**Sb**	**18 02 09.8**	**-2.6**
	baz=218						
NWF	**Wu-fen Shan**	**1.34**	**330**	*i* P	**Pn**	**18 01 54.4**	**-0.5**
	baz=329						
NWF				S	**Sb**	**18 02 12.6**	**0.0**
	baz=329						
TWA	**Mucha**	**1.37**	**321**	*e*P	**Pn**	**18 01 55.7**	**+0.4**
	baz=320						
TWA				S	**Sb**	**18 02 13.8**	**+0.4**
	baz=320						
JKRS	**Kuro-shima**	**1.40**	**76**	P	**Pn**	**18 01 56.0**	**+0.4**
TAP1	**Taipei**	**1.45**	**321**	*e*P	**Pn**	**18 01 56.9**	**+0.5**
	baz=337						
SMLT	**Sun Moon Lake**	**1.49**	**269**	*e*P	**Pn**	**18 01 57.0**	**0.0**
	baz=266						
SMLT				*e*S	**Sn**	**18 02 15.4**	**-1.0**
	baz=266						
YUS	**Yu-Shan**	**1.50**	**254**	*e*P	**Pn**	**18 01 57.4**	**+0.3**
	baz=250						
YUS				*e*S	**Sn**	**18 02 15.8**	**-0.9**
	baz=250						
TYC	**Yuchr**	**1.53**	**270**	*e*P	**Pn**	**18 01 57.6**	**+0.1**
	baz=267						
TYC				*e*S	**Sn**	**18 02 17.1**	**-0.2**
	baz=267						
JIJ	**Ishigaki jima**	**1.55**	**73**	P	**Pn**	**18 01 57.3**	**-0.4**
JIJ				*e*S	**Sn**	**18 02 16.7**	**-1.1**
TWS1	**Kuangyinshan**	**1.56**	**320**	*e*P	**Pn**	**18 01 57.8**	**-0.1**
	baz=335						
TWS1				*e*S	**Sn**	**18 02 18.4**	**+0.3**
	baz=335						
ELDTW	**Lidau**	**1.56**	**243**	P	**Pn**	**18 01 57.4**	**-0.5**
	baz=240						
ELDTW				*e*S	**Sn**	**18 02 16.7**	**-1.4**
	baz=240						
NSTT	**Nanjuang**	**1.57**	**298**	P	**Pn**	**18 01 58.9**	**+0.9**
	baz=295						
NSTT				*e*S	**Sn**	**18 02 18.4**	**+0.1**
	baz=295						
TWY	**Chenhua**	**1.60**	**328**	*e*P	**Pn**	**18 01 58.8**	**+0.3**
	baz=327						
TWY				*e*S	**Sn**	**18 02 19.6**	**+0.4**
	baz=327						
ALS	**Alishan**	**1.63**	**256**	*e*P	**Pn**	**18 01 59.7**	**+0.9**
	baz=253						
ALS				*e*S	**Sn**	**18 02 19.5**	**-0.3**
	baz=253						
TWQ1	**Liyutan**	**1.66**	**286**	*e*P	**Pn**	**18 02 00.1**	**+0.8**
	baz=283						
TWQ1				*e*S	**Sn**	**18 02 20.7**	**+0.1**
	baz=283						
WNT	**Mingjian**	**1.69**	**269**	*e*P	**Pn**	**18 01 59.9**	**+0.3**
	baz=266						
WNT				*e*S	**Sn**	**18 02 21.8**	**+0.6**
	baz=266						
TCU	**Taichung**	**1.71**	**278**	*e*P	**Pn**	**18 02 01.2**	**+1.3**
	baz=276						
TWG	**Pinlang**	**1.72**	**231**	*e*P	**Pn**	**18 01 59.4**	**-0.8**
	baz=239						
CHN5	**Tsauling**	**1.72**	**260**	*e*P	**Pn**	**18 02 01.0**	**+0.8**
	baz=247						
CHN5				*e*S	**Sn**	**18 02 22.0**	**-0.1**
	baz=247						
STYT	**Tauyuan**	**1.78**	**246**	*e*P	**Pn**	**18 02 00.9**	**-0.1**
	baz=243						
STYT				*e*S	**Sn**	**18 02 23.3**	**-0.4**
	baz=243						
WGK	**Gukeng**	**1.81**	**263**	*e*P	**Pn**	**18 02 02.5**	**+1.1**
	baz=260						
WGK				*e*S	**Sn**	**18 02 25.4**	**+1.1**
	baz=260						
CHN4	**Tsaushan**	**1.86**	**253**	*e*P	**Pn**	**18 02 03.5**	**+1.5**
	baz=250						
CHN4				*e*S	**Sn**	**18 02 25.9**	**+0.4**
	baz=250						
WTP	**Ta-pu**	**1.87**	**250**	*e*P	**Pn**	**18 02 03.6**	**+1.4**
	baz=239						
WTP				*e*S	**Sn**	**18 02 26.1**	**+0.2**
	baz=239						
ECL	**Taimali**	**1.95**	**228**	*e*P	**Pn**	**18 02 03.1**	**-0.1**
	baz=236						
ECL				*e*S	**Sn**	**18 02 26.5**	**-1.2**
	baz=236						
CHN1	**Nanshi**	**1.97**	**249**	*e*P	**Pn**	**18 02 05.1**	**+1.5**
	baz=246						
CHN1				*e*S	**Sn**	**18 02 29.0**	**+0.8**
	baz=246						
TWK	**Hsinying**	**1.98**	**252**	*e*P	**Pn**	**18 02 04.6**	**+0.9**
	baz=248						
TWK				*e*S	**Sn**	**18 02 29.5**	**+1.1**
	baz=248						
SSD	**Sandimen**	**2.09**	**237**	*e*P	**Pn**	**18 02 06.3**	**+1.1**
	baz=228						
SSD				*e*S	**Sn**	**18 02 31.5**	**+0.3**
	baz=228						
JTJ	**Tarama**	**2.12**	**69**	P	**Pn**	**18 02 06.0**	**+0.4**
CHN8	**Yiju**	**2.19**	**256**	*e*P	**Pn**	**18 02 05.8**	**-0.9**
	baz=253						
TWM1	**Shoushan**	**2.21**	**241**	*e*P	**Pn**	**18 02 08.6**	**+1.7**
	baz=239						
SCZT	**Fangliau**	**2.33**	**229**	*e*P	**Pn**	**18 02 10.1**	**+1.6**
	baz=232						
KSRS	**Korea Array**	**14.27**	**18**	Pn	**Pn**	**18 04 56.3**	**+4.0**
	0.1nm,0.3s,baz=199,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**39.39**	**316**	P	**P**	**18 08 57.7**	**-2.2**
	1.4nm,1.1s,mb3.6,baz=100,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**45.08**	**164**	P	**P**	**18 09 44.7**	**-1.7**
	0.4nm,0.6s,mb3.4,baz=346,slow=8.9,SNR=5.6						
ASAR	**Alice Springs**	**48.56**	**166**	P	**P**	**18 10 13.6**	**-0.1**
	0.6nm,1.1s,mb3.5,baz=352,slow=11,SNR=6.6						

*CSEM **24** 18:09:41.8±0.1,4076N×3071E,h13km±1km,MD2.8,Error ellipse: s-maj=3.4km s-min=2.2km az=7.0*
*ISK **24** 18:09:41.7,4080N×3071E,h7km,MD2.6*
*ISCJB **24** 18:09:42.3±0.6,4081N±004×3067E±004,h5km±5km, Error ellipse: s-maj=6.7km s-min=4.5km az=177.4*
*DDA **24** 18:09:43.5,4072N×3077E,h7km±2km,Md2.8*

ISC 24 18:09:42.6±0.6,4081N±004×3069E±004,h8km±6km,n15, σ0§71/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.16**	**84**	*i* P	**Pg**	**18 09 46.5**	**+0.4**
HENT				*i* S	**Sg**	**18 09 49.6**	**+1.2**
GULT	**Gulveren**	**0.40**	**199**	PG	**Pg**	**18 09 50.3**	**0.0**
GULT				*e*SG	**Sg**	**18 09 56.2**	**+0.6**
MDU	**Mudurnu**	**0.53**	**130**	PG	**Pg**	**18 09 52.3**	**-0.5**
MDU				SG	**Sg**	**18 09 59.1**	**-0.6**
ADVT	**Abdulvahap**	**0.81**	**243**	*e*PG	**Pg**	**18 09 57.4**	**-0.9**
ADVT				*e*SG	**Sg**	**18 10 09.1**	**+0.3**
SILT	**Sile**	**0.86**	**294**	*e*PG	**Pg**	**18 09 59.6**	**+0.4**
CAVI	**Cavuskoy**	**0.88**	**227**	*e*PG	**Pg**	**18 09 58.8**	**-0.8**
BORA	**Eskisehir**	**0.94**	**191**	*i* P	**Pg**	**18 10 00.0**	**-0.7**
BORA				*i* S	**Sg**	**18 10 13.1**	**+0.1**
SGKT	**Sivrigoynuk**	**1.07**	**102**	*i* P	**Pg**	**18 10 02.4**	**-0.7**
SGKT				*i* S	**Sg**	**18 10 16.5**	**-0.4**
GEMT	**Gemlik**	**1.20**	**252**	*e*PN	**Pn**	**18 10 05.2**	**-0.4**
ISK	**Istanbul-Kandi**	**1.26**	**282**	*e*PN	**Pn**	**18 10 07.4**	**+0.9**
ESKT	**Eskisehir**	**1.29**	**174**	*i* P	**Pn**	**18 10 06.8**	**-0.1**
ESKT				*i* S	**Sb**	**18 10 25.6**	**+1.8**
ESKT	**Eskisehir**	**1.29**	**174**	*e*Pn	**Pn**	**18 10 07.0**	**+0.1**
SEYT	**Eskypehyr**	**1.29**	**174**	*i* P	**Pn**	**18 10 06.8**	**-0.1**
KLYT	**Kilyos**	**1.32**	**290**	*e*PN	**Pn**	**18 10 07.5**	**+0.2**
ARMT	**Armutlu**	**1.41**	**261**	*e*PN	**Pn**	**18 10 07.9**	**-0.7**

*IDC **24** 18:13:19.5±2.2,3874N×7089E,h0km,mb3.4/2,mb1 3.7/4, mb1mx3.3/24,mbtmp3.6/4,ML3.3/2,Error ellipse: s-maj=59.9km s-min=32.6km az=108.0*
*NNC **24** 18:13:21.2±2.4,3909N×7023E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=17.9km s-min=15.1km az=10.0*
*ISCJB **24** 18:13:24.0±2.2,390N±0.1×703E±0.1,h70km±21km, mb3.2/2,Error ellipse: s-maj=24.0km s-min=10.6km az=29.2*

ISC 24 18:13:24.0±2.1,389N±01×7019E±010,h50km±22km,n17, σ1§11/21,mb3.4/2,7C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.18**	**39**	P	**Pn**	**18 14 24.9**	**-0.3**
	SNR=18						
KK31	**Karatay Array**	**4.20**	**3**	⇑Pn	**Pn**	**18 14 26.5**	**+1.1**
	1.5nm,0.3s,baz=175,slow=13,SNR=229						
KK31				⇑Sn	**Sn**	**18 15 18.2**	**+5.1**
	6.3nm,0.4s,baz=172,slow=26,SNR=8.5						
KK31				⇑Lg		18 15 29.8	
	40nm,0.7s,baz=171,slow=31,SNR=3.9						
EKS2	**Erkin-Say**	**4.63**	**35**	P	**Pn**	**18 14 31.0**	**-0.3**
	SNR=13						
UCH	**Uchtor**	**4.67**	**43**	P	**Pn**	**18 14 31.8**	**0.0**
	SNR=11						
AAK	**Ala-Archa**	**4.95**	**40**	P	**Pn**	**18 14 35.5**	**-0.2**
	SNR=16						
KZA	**Kyzart**	**4.99**	**49**	P	**Pn**	**18 14 37.1**	**+0.9**
	SNR=7.0						
KBK	**Karagaybulak**	**5.20**	**42**	P	**Pn**	**18 14 39.3**	**+0.2**
	SNR=24						
CHMS	**Chumysh**	**5.35**	**39**	P	**Pn**	**18 14 40.6**	**-0.5**
	SNR=12						
USP	**Ospenovka**	**5.43**	**35**	P	**Pn**	**18 14 41.4**	**-0.9**
	SNR=34						
TKM2	**Tokmak 2**	**5.73**	**44**	⇑Pn	**Pn**	**18 14 45.5**	**-0.8**
	8.1nm,0.5s						
TKM2				⇑Sn	**Sn**	**18 15 52.5**	**+1.8**
	16nm,0.7s						
TKM2				⇑Lg		18 16 14.3	
	11nm,0.7s						
TKM2	**Tokmak 2**	**5.73**	**44**	P	**Pn**	**18 14 46.8**	**+0.4**
	SNR=7.7						
MKAR	**Makanchi Array**	**11.86**	**44**	Pn	**Pn**	**18 16 07.5**	**-2.7**
	0.1nm,0.3s,baz=234,slow=15,SNR=4.1						
AB31	**Akbulak array**	**12.69**	**328**	Pn	**Pn**	**18 16 22.1**	**+0.5**
	0.7nm,0.2s,baz=137,slow=14,SNR=34						
AB31				Sn	**Sn**	**18 18 39.7**	**-1.4**
	4.6nm,0.8s,baz=150,slow=24,SNR=5.3						
AKTO	**Aktyubinsk**	**14.39**	**327**	⇓Pn	**Pn**	**18 16 46.4**	**+1.7**
	0.3nm,0.7s						
AKTO				⇑Sn	**Sn**	**18 19 22.6**	**0.0**
	3.7nm,2.5s					

MDU	**Mudurnu**	**1.79**	**307**	*e*PN	**Pn**	**18 17 39.7**	**+0.2**
BNN	**Bunyan**	**2.21**	**104**	*e*PN	**Pn**	**18 17 45.4**	**+0.1**
GULT	**Gulveren**	**2.23**	**298**	*e*PN	**Pn**	**18 17 46.7**	**+1.2**
KARA	**Karaisali**	**2.64**	**144**	*e*PN	**Pn**	**18 17 51.5**	**+0.4**
SARI	**SarD1z-Kayseri**	**2.90**	**103**	*e*PN	**Pn**	**18 17 53.6**	**-1.1**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**18 17 57.7**	**+0.8**

IDC **24** *18:36:25.5±0.5,4822N×15459E,h0km,mb4.4/23, mb1 4.5/25,mb1mx4.5/30,mbtmp4.4/25,ML4.0/2,MS3.4/4, Ms1 3.3/4,ms1mx3.0/42,Error ellipse: s-maj=17.3km s-min=11.0km az=163.0*

BJI **24** *18:36:27.9,4806N×155.10E,h43km,mB4.9,mb4.7,Ms4.4, Msz4.3*

NEIC **24** *18:36:29.3±1.7,4816N×15468E,h24km±12km,mb4.7/39, Error ellipse: s-maj=7.3km s-min=4.3km az=149.0*

ISCJB **24** *18:36:29.6±0.6,4808N±004×15478E±005,h41km±5km, mb4.7/85,MS3.9/11,Error ellipse: s-maj=7.3km s-min=4.1km az=147.3*

SKHL **24** *18:36:29.2±3.3,4790N×15530E,h76km±30km,mb5.2/7*

MOS **24** *18:36:33.3±1.2,4805N×15461E,h75km,mb4.8/35,Error ellipse: s-maj=8.8km s-min=6.7km az=105.1*

SZGRF **24** *18:36:37.7,4924N×15484E,h33km,mb4.9,Kuril Islands, Russia*

ISC 24 18:36:32.2±0.6,4813N±004×15474E±005,h47km±4km, h41km±2.7km:pP-P,n243,σ1§01/258,mb4.7/85,MS3.9/11, 27C-3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.71**	**19**	*e*P		**Pn**	**18 37 10.5**	**-2.7**
SKR				AMB		AMB	18 37 15.5	
	80nm,0.5s							
SKR				AMB		AMB	18 37 15.5	
	110nm,0.5s							
SKR				*i* S		**Sn**	**18 37 39.9**	**-4.8**
SKR				A			18 37 46.6	
	220nm,0.6s							
SKR				A			18 37 46.6	
	560nm,0.6s							
PETK	**Petropavlovsk-**	**5.33**	**20**	Pn		**Pn**	**18 37 49.3**	**+0.2**
	3.2nm,0.3s,baz=176,slow=12,SNR=77							
PETK				LR		LR	18 39 60.0	
	comp=Z,72nm,21.4s,baz=320,slow=41							
PET	**Petropavlovsk**	**5.50**	**25**	*e*PN		**Pn**	**18 37 50.2**	**-1.2**
PET				pmax		pmax		
	comp=Z,43nm,0.7s							
PET	**Petropavlovsk**	**5.50**	**25**	*e*P		**Pn**	**18 37 50.7**	**-0.7**
	comp=Z,38nm,0.6s							
KUR	**Kuril'sk**	**5.54**	**241**	*e*P		**Pn**	**18 37 51.8**	**-0.3**
KUR				AMB		AMB	18 37 52.2	
	comp=Z,152nm,0.6s							
KUR				AMB		AMB	18 37 52.2	
	comp=Z,304nm,0.6s							
KUR				*e*S		**Sn**	**18 38 54.0**	**-0.5**
KUR				A			18 39 03.8	
	comp=Z,2μm,2.0s							
KUR				A			18 39 03.8	
	comp=Z,304nm,0.5s							
KUR				A			18 39 03.8	
	comp=Z,152nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**7.41**	**240⇑**	*i*PN		**Pn**	**18 38 18.7**	**+1.1**
YUK				S		**Sn**	**18 39 42.0**	**+1.8**
YUK				pmax		pmax		
	comp=Z,360nm,0.3s							
YUK				smax				
	comp=N,250nm,0.5s							
YUK				smax				
	comp=E,140nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**7.41**	**240⇑**	*i*P		**Pn**	**18 38 18.7**	**+1.1**
YUK				AMB		AMB	18 38 19.0	
	comp=E,360nm,0.3s							
YUK				*e*S		**Sn**	**18 39 42.0**	**+1.8**
YUK				A			18 39 48.5	
	comp=E,250nm,0.5s							
YUK				A			18 39 48.5	
	comp=E,140nm,0.5s							
YSS	**Yuzh-Sakhalins**	**8.20**	**266⇑**	*i*PN		**Pn**	**18 38 31.8**	**+3.4**
YSS				*e*S		**Sn**	**18 40 03.9**	**+4.3**
YSS				pmax		pmax		
	comp=N,50nm,0.7s							
YSS				pmax		pmax		
	comp=Z,90nm,0.7s							
YSS				pmax		pmax		
	comp=E,120nm,0.8s							
YSS	**Yuzh-Sakhalins**	**8.20**	**266⇑**	*i*P		**Pn**	**18 38 31.8**	**+3.4**
YSS				AMB		AMB	18 38 32.4	
	comp=E,50nm,0.7s							
YSS				AMB		AMB	18 38 32.4	
	comp=E,120nm,0.8s							
YSS				AMB		AMB	18 38 32.4	
	comp=E,90nm,0.7s							
YSS				*e*sP			18 38 51.6	
YSS				*e*S		**Sn**	**18 40 03.9**	**+4.3**
TYV	**Tymovskoe**	**8.33**	**294**	*e*P		**Pn**	**18 38 32.0**	**+1.8**
TYV				AMB		AMB	18 38 32.9	
	comp=E,22nm,1.0s							
TYV				AMB		AMB	18 38 32.9	
	comp=E,46nm,1.0s							
TYV				AMB		AMB	18 38 34.0	
	comp=E,900nm,4.0s							
TYV				AMB		AMB	18 38 34.0	
	comp=E,400nm,6.0s							
TYV				*e*S		**Sn**	**18 40 08.0**	**+5.2**
TYV				A			18 40 20.0	
	comp=E,300nm,6.0s							
TYV				A			18 40 20.0	
	comp=E,600nm,6.0s							
UGL	**Uglegorsk**	**8.46**	**281**	*e*P		**Pn**	**18 38 36.0**	**+4.0**
UGL				AMB		AMB	18 38 37.0	
	comp=E,108nm,0.8s							
UGL				AMS		AMS	18 41 52.0	
	comp=E,1μm,18.0s							
UGL				AMS		AMS	18 41 52.0	
	comp=E,700nm,16.0s							
JMP	**Maruseppu**	**8.92**	**247**	P		**Pn**	**18 38 41.0**	**+2.7**
OKH	**Okha**	**9.23**	**310**	*e*P		**Pn**	**18 38 46.0**	**+3.5**
OKH				AMB		AMB	18 38 46.3	
	comp=E,100nm,0.9s							
OKH				*e*S		**Sn**	**18 40 26.0**	**+1.2**
JWK2	**Keihoku**	**9.26**	**257**	P		**Pn**	**18 38 49.3**	**+6.3**
ASAJ	**Asahikawa**	**9.34**	**249**	Pn		**Pn**	**18 38 47.6**	**+3.6**
	comp=E,9.8nm,0.3s,baz=78,slow=13,SNR=73							
ASAJ				LR		LR	18 42 03.4	
	comp=E,296nm,20.7s,baz=181,slow=36							
ASAJ	**Asahikawa**	**9.34**	**249**	P		**Pn**	**18 38 47.6**	**+3.6**
ASAJ	**Asahikawa**	**9.34**	**249**	PN		**Pn**	**18 38 47.7**	**+3.7**
ASAJ				pmax		pmax		
	comp=Z,10.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,296nm,20.7s							
ERM	**Erimo**	**10.22**	**238**	*e*PN		**Pn**	**18 38 55.7**	**-0.4**
JEM	**Erimo**	**10.22**	**238**	P		**Pn**	**18 38 55.5**	**-0.5**
JEW	**Eniwo**	**10.72**	**245**	P		**Pn**	**18 39 04.4**	**+1.4**
JSH	**Shimam**	**11.69**	**247**	P		**Pn**	**18 39 16.7**	**+0.5**
JOT	**Ohata**	**11.83**	**240**	P		**Pn**	**18 39 15.3**	**-2.8**
JTM	**Tenmabayashi**	**12.21**	**238**	P		**Pn**	**18 39 19.5**	**-3.8**
FX1	**Attu Island--F**	**12.65**	**61**	Pn		**Pn**	**18 39 26.6**	**-2.6**
	comp=Z,3.3nm,0.3s,baz=237,slow=3.1,SNR=11							
FX1	**Attu Island--F**	**12.65**	**61**	PN		**Pn**	**18 39 26.6**	**-2.6**
FX1				pmax		pmax		
	comp=Z,3.0nm,0.3s							
JOM	**Ohasama**	**12.99**	**233**	P		**Pn**	**18 39 29.1**	**-4.9**
JOM				*e*S		**Sn**	**18 41 44.2**	**-13**
SEY	**Seymchan**	**14.90**	**356**	*e*P		**Pn**	**18 40 05.4**	**+5.9**
KLR	**Kul'dur**	**15.22**	**283**	*e*P		**Pn**	**18 40 03.8**	**+0.1**
MAJO	**Matsushiro**	**16.80**	**232**	*e*P		**Pn**	**18 40 21.7**	**-2.2**
MAJO				pmax		pmax		
	comp=Z,15nm,0.8s							
MAJO	**Matsushiro**	**16.80**	**232**	*e*P		**Pn**	**18 40 21.7**	**-2.2**
	comp=Z,15nm,0.8s							
MAT	**Matsushiro**	**16.80**	**232**	P		**Pn**	**18 40 21.9**	**-2.0**
MJAR	**Matsushiro Arr**	**16.80**	**232**	Pn		**Pn**	**18 40 21.0**	**-2.9**
	comp=Z,0.6nm,0.3s,baz=31,slow=13,SNR=22							
MJAR	**Matsushiro Arr**	**16.80**	**232**	P		**Pn**	**18 40 21.0**	**-2.9**
MJAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
JRY	**Ryogami san**	**16.83**	**230**	P		**Pn**	**18 40 22.5**	**-1.9**
MDJ	**Mudanjiang**	**17.68**	**268**	P		**Pn**	**18 40 32.6**	**-2.2**
MDJ				AP		pP	18 40 43.4	-2.7
MDJ				XP		sP	18 40 48.5	-3.6
MDJ				S		**S**	**18 43 47.0**	**-9.1**
MDJ				PCP		PcP	18 45 10.8	-0.1
MDJ				SCP		ScP	18 48 42.3	+0.4
MDJ				PCS		PcS	18 48 47.3	+0.2
MDJ				SCS		ScS	18 52 22.6	+0.6
MDJ				AMB		AMB		
	comp=Z,14nm,0.9s							
MDJ				AMB		AMB		
	comp=Z,146nm,6.8s							
MDJ	**Mudanjiang**	**17.68**	**268**	*e*P		**Pn**	**18 40 35.4**	**+0.6**
	comp=Z,5.3nm,0.3s							
YAK	**Yakutsk**	**19.81**	**324**	*e*P		**Pn**	**18 40 56.4**	**-3.8**
YAK				pmax		pmax		
	comp=Z,37nm,1.1s							
YAK				pmax		pmax		
	comp=E,21nm,1.3s							
YAK				pmax		pmax		
	comp=N,17nm,1.1s							
YAK	**Yakutsk**	**19.81**	**324**	P		**Pn**	**18 40 57.3**	**-2.9**
	comp=N,25nm,0.8s							
CLNS	**Chul'man**	**20.02**	**307**	*e*P		**P**	**18 41 03.5**	**+2.8**
CLNS				*e*S		**S**	**18 44 42.6**	**-0.3**
CLNS				pmax		pmax		
	comp=N,10.0nm,0.8s							
CLNS				pmax		pmax		
	comp=Z,30nm,0.9s							
CLNS				pmax		pmax		
	comp=E,14nm,1.0s							
CLNS				smax				
	comp=E,115nm,13.6s							
CLNS				smax				
	comp=N,116nm,13.6s							
CLNS				MLR		MLR		
	comp=N,178nm,17.0s,MS3.7							
CLNS				MLR		MLR		
	comp=E,201nm,17.0s,MS3.7							
CLNS				MLR		MLR		
	comp=Z,121nm,17.0s,MS3.3							
CN2	**Changchun**	**20.75**	**269**	*e*P		**P**	**18 41 06.3**	**-2.4**
CN2				AMB		AMB		
	comp=Z,30nm,1.1s							
BILL	**Bilibino**	**20.81**	**12⇓**	*e*P		**P**	**18 41 10.4**	**+1.3**
BILL				*e*S		**S**	**18 44 59.6**	**+1.3**
BILL				pmax		pmax		
	comp=Z,5.0nm,1.0s							
BILL				MLR		MLR		
	comp=Z,100nm,19.0s,MS3.2							
BILL	**Bilibino**	**20.81**	**12**	*e*P		**P**	**18 41 06.5**	**-2.6**
	comp=Z,8.2nm,1.1s							
KSRS	**Korea Array**	**22.28**	**251**	P		**P**	**18 41 25.6**	**+0.6**
	comp=Z,15nm,0.7s,mb4.6,baz=52,slow=9.7,SNR=74							
KSRS	**Korea Array**	**22.28**	**251**	P		**P**	**18 41 25.7**	**+0.6**
KSRS				pmax		pmax		
	comp=Z,15nm,0.7s,mb4.5							
HIA	**Hailar**	**23.01**	**286**	*e*P		**P**	**18 41 32.4**	**-0.4**
HIA				pmax		pmax		
	comp=Z,2.0nm,0.5s							
HIA	**Hailar**	**23.01**	**286**	*e*P		**P**	**18 41 32.4**	**-0.3**
	comp=Z,2.3nm,0.5s,mb3.9							
BOD	**Bodaibo**	**26.00**	**307**	*e*P		**P**	**18 41 56.4**	**-3.8**
BOD				pmax		pmax		
	comp=Z,4.0nm,1.2s,mb3.8							
TIXI	**Tiksi**	**26.48**	**342**	P		**P**	**18 42 01.3**	**-3.1**
TIXI				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb3.9							
TIXI	**Tiksi**	**26.48**	**342**	P		**P**	**18 42 01.3**	**-3.1**
	comp=Z,1.8nm,0.5s,mb3.9							
BJI	**Beijing**	**28.61**	**268**	P		**P**	**18 42 22.1**	**-1.7**
BJI				S		**S**	**18 47 07.6**	**-1.3**
BJI				AMB		AMB		
	comp=Z,6.0nm,0.4s,mb4.7							
BJI				AMB		AMB		
	comp=Z,229nm,4.6s							
BJI				LR		LR		
	comp=N,204nm,16.1s,MS4.0							
BJI				LR		LR		
	comp=E,248nm,15.8s,MS4.0							
BJI				LR		LR		
	comp=Z,63nm,19.6s,MS3.2							
HHC	**Hu-ho-hao-te**	**31.31**	**273**	*e*P		**P**	**18 42 47.4**	**-0.3**
HHC				AP		pP	18 42 58.0	-2.1
HHC				XP		sP	18 43 01.5	-4.2
HHC				PP		PP	18 43 48.8	-10
HHC				*e*S		**S**	**18 47 48.4**	**-2.8**
HHC				PCS		PcS	18 49 25.9	+1.0
HHC				AMB		AMB		
	comp=Z,15nm,0.8s,mb4.9							
HHC				AMB		AMB		
	comp=Z,137nm,4.8s							
HHC				LR		LR		
	comp=N,333nm,15.5s,MS4.2							
HHC				LR		LR		
	comp=E,263nm,14.3s,MS4.2							
HHC				LR		LR		
	comp=Z,333nm,15.5s,MS4.1							
NJ2	**Nanjing**	**31.46**	**253**	*e*P		**P**	**18 42 50.3**	**+1.2**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.9							
ULN	**Ulaanbaatar**	**31.51**	**288**	*e*P		**P**	**18 42 48.4**	**-1.0**
SONM	**Songino Array**	**31.94**	**288**	P		**P**	**18 42 51.1**	**-2.0**
	comp=Z,1.0nm,0.7s,mb3.8,baz=72,slow=8.4,SNR=8.5							
SONM	**Songino Array**	**31.94**	**288**	P		**P**	**18 42 51.1**	**-2.0**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.7s							
MCK	**McKinley**	**33.89**	**42**	*e*P		**P**	**18 43 09.7**	**-0.2**
MCK				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.5							
MCK	**McKinley**	**33.89**	**42**	*e*P		**P**	**18 43 09.7**	**-0.2**
	comp=Z,7.0nm,1.1s,mb4.5							
COLA	**College**	**34.37**	**40**	*e*P		**P**	**18 43 14.4**	**+0.3**
WHN	**Wuhan**	**35.35**	**255**	*e*P		**P**	**18 43 23.0**	**+0.1**
XAN	**Xi'an**	**36.74**	**265**	P		**P**	**18 43 35.4**	**+0.6**
XAN				AP		pP	18 43 44.3	-3.0
XAN				PP		PP	18 44 56.9	-2.1
XAN				S		**S**	**18 49 13.8**	**-1.3**
XAN				AMB		AMB		
	comp=Z,2.0nm,0.5s,mb4.2							
XAN				LR		LR		
	comp=N,37nm,17.1s,MS3.8							
XAN				LR		LR		
	comp=E,128nm,17.1s,MS3.8							
XAN				LR		LR		
	comp=Z,290nm,18.4s,MS4.1							
LZH	**Lanzhou**	**38.96**	**271**	*e*P		**P**	**18 43 54.0**	**+0.5**
LZH				AP		pP	18 44 04.3	-1.8
LZH				XP		sP	18 44 11.0	-0.6
LZH				*e*PP		PP	18 45 28.0	+4.8
LZH				*e*S		**S**	**18 49 47.3**	**-1.3**
LZH				XS		sS	18 50 07.4	-2.4
LZH				SS		SS	18 52 33.0	-8.5
LZH				AMB		AMB		
	comp=Z,26nm,1.2s,mb4.8							
LZH				AMB		AMB		
	comp=Z,143nm,7.1s							
LZH				LR		LR		
	comp=N,394nm,14.8s							
LZH				LR		LR		
	comp=Z,528nm,16.3s,MS4.5							
GTA	**Gaotai**	**39.85**	**278⇑**	*e*P		**P**	**18 44 01.1**	**+0.2**
GTA				AP		pP	18 44 13.3	-0.2
GTA				XP		sP	18 44 18.4	-0.7
GTA				S		**S**	**18 50 03.1**	**+1.1**
GTA				XS		sS	18 50 23.5	+0.3
GTA				SS		SS	18 52 55.4	-4.0
GTA				AMB		AMB		
	comp=Z,4.0nm,1.1s,mb4.1							
GTA				AMB		AMB		
	comp=Z,174nm,5.1s							
GTA				LR		LR		
	comp=N,166nm,14.1s,MS4.2							
GTA				LR		LR		
	comp=E,211nm,14.4s,MS4.2							
GTA				LR		LR		
	comp=Z,403nm,14.4s,MS4.4							
CD2	**Chengdu**	**42.10**	**265**	P		**P**	**18 44 19.4**	**-0.1**
CD2				AP		pP	18 44 29.3	-2.9
CD2				XP		sP	18 44 33.4	-4.3
CD2				PP		PP	18 46 00.3	+2.9
CD2				PCP		PcP	18 46 14.0	+0.6
CD2				PCS		PcS	18 50 04.4	-0.8
CD2				S		**S**	**18 50 35.8**	**+0.2**
CD2				XS		sS	18 50 53.4	-3.4
CD2				AMB		AMB		
	comp=Z,30nm,0.7s,mb5.0							
CD2				AMB		AMB		
	comp=Z,180nm,5.3s							
CD2				LR		LR		
	comp=N,370nm,5.9s							
CD2				LR		LR		
	comp=Z,310nm,6.6s							
ZALV	**Zalesovo Beam**	**42.71**	**305**	P		**P**	**18 44 22.0**	**-2.1**
	comp=Z,5.7nm,0.5s,mb4.6,baz=68,slow=6.3,SNR=8.9							
ZALV	**Zalesovo Beam**	**42.71**	**305**	P		**P**	**18 44 22.0**	**-2.2**
ZALV				pmax		pmax		
	comp=Z,6.0nm,0.5s,mb4.6							
ZALV	**Zalesovo Beam**	**42.71**	**305**	P		**P**	**18 44 22.0**	**-2.1**
GYA	**Guiyang**	**43.09**	**258**	P		**P**	**18 44 26.8**	**-0.8**
GYA				AP		pP	18 44 40.3	0.0
GYA				XP		sP	18 44 45.8	0.0
GYA				PP		PP	18 46 11.0	+2.8
GYA				PCP		PcP	18 46 17.6	+0.9
GYA				SCP		ScP	18 50 03.3	-0.5
GYA				S		**S**	**18 50 50.3**	**+0.1**
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.6							
WMQ	**Urumqi**	**45.47**	**291**	*e*P		**P**	**18 44 47.8**	**+1.5**
WMQ				LR		LR		
	comp=N,92nm,17.0s,MS3.8							
WMQ				LR		LR		
	comp=E,26nm,19.0s,MS3.8							
WMQ				LR		LR		
	comp=Z,92nm,17.0s,MS3.8							
KMI	**Kunming**	**46.58**	**260**	P		**P**	**18 44 56.3**	**+1.0**
KMI				AP		pP	18 45 07.8	-0.4
KMI				XP		sP	18 45 12.3	-1.4
KMI				PP		PP	18 46 44.8	-0.4
KMI				PCS		PcS	18 50 26.8	+3.1
KMI				S		**S**	**18 51 39.0**	**-1.7**
KMI				XS		sS	18 51 59.9	-2.4
KMI				AMB		AMB		
	comp=Z,11nm,1.2s,mb4.7							
KMI				AMB		AMB		
	comp=Z,77nm,5.1s							
KMI				LR		LR		
	comp=Z,532nm,10.4s,MS4.8							
MK31	**Makanchi Array**	**47.30**	**297**	*e*P		**P**	**18 44 59.9**	**-0.7**
MKAR	**Makanchi Array**	**47.30**	**297**	P		**P**	**18 44 59.6**	**-1.0**
	comp=Z,7.2nm,0.7s,mb4.7,baz=58,slow=9.3,SNR=4.9							
MKAR				LR		LR	19 05 01.2	
	comp=Z,71nm,18.8s,MS3.7,baz=4.7,slow=36							
MKAR	**Makanchi Array**	**47.30**	**297**	P		**P**	**18 44 59.6**	**-1.0**
MKAR				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MKAR				MLR		MLR		
	comp=Z,71nm,18.8s							
KURK	**Kurchatov**	**47.53**	**303**	P		**P**	**18 45 01.9**	**-0.4**
	comp=Z,20nm,0.6s,mb5.3,baz=68,slow=8.5,SNR=13							
KURK	**Kurchatov**	**47.53**	**303**	P		**P**	**18 45 02.0**	**-0.4**
KURK				pmax		pmax		
	comp=Z,20nm,0.6s,mb5.3							
KURK	**Kurchatov**	**47.53**	**303**	*e*P		**P**	**18 45 01.3**	**-1.1**
YKA	**Yellowknife Ar**	**49.16**	**38**	P		**P**	**18 45 14.9**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.2,baz=296,slow=7.2,SNR=20							
RES	**Resolute Bay**	**49.17**	**19**	P		**P**	**18 45 14.2**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.1,baz=301,slow=7.6,SNR=5.4							
RES	**Resolute Bay**	**49.17**	**19**	P		**P**	**18 45 14.2**	**-0.6**
RES				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.2							
BVAR	**Borovoye Array**	**50.84**	**309**	P		**P**	**18 45 26.0**	**-1.6**
	comp=Z,11nm,0.5s,mb5.0,baz=60,slow=7.6,SNR=72							
BVAR	**Borovoye Array**	**50.84**	**309**	P		**P**	**18 45 26.0**	**-1.7**
BVAR				pmax		pmax		
	comp=Z,11nm,0.5s							
BRVK	**Borovoye**	**50.88**	**309**	*e*P		**P**	**18 45 26.7**	**-1.2**
BRVK				pmax		pmax		
	comp=Z,14nm,0.6s,mb5.1							
BRVK	**Borovoye**	**50.88**	**309**	*e*P		**P**	**18 45 26.7**	**-1.2**
	comp=Z,14nm,0.6s,mb5.1							
LSA	**Lhasa**	**51.30**	**273**	P		**P**	**18 45 33.0**	**+1.6**
LSA	**Lhasa**	**51.30**	**273**	*e*P		**P**	**18 45 32.2**	**+0.8**
LSA				pmax		pmax		
	comp=Z,9.0nm,0.5s,mb5.0							
LSA	**Lhasa**	**51.30**	**273**	*e*P		**P**	**18 45 32.2**	**+0.7**
	comp=Z,8.9nm,0.5s,mb5.0							
CHTO	**Chiang Mai**	**53.51**	**257**	*e*P		**P**	**18 45 48.3**	**+0.4**
CHTO				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.7							
CHTO	**Chiang Mai**	**53.51**	**257**	*e*P		**P**	**18 45 48.3**	**+0.4**
	comp=Z,6.1nm,0.6s,mb4.7							
SHL	**Shillong**	**53.51**	**269**	*e*P		**P**	**18 45 49.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**53.77**	**257**	P		**P**	**18 45 50.4**	**+0.6**
	comp=Z,3.6nm,0.8s,mb4.4,baz=31,slow=7.3,SNR=39							
CMAR	**Chiang Mai Arr**	**53.77**	**257**	P		**P**	**18 45 50.4**	**+0.6**
CMAR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
AAK	**Ala-Archa**	**54.22**	**296⇑**	*i*P		**P**	**18 45 51.4**	**-1.4**
AAK				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.2							
ARU	**Arti**	**54.74**	**317**	*c i*P		**P**	**18 45 54.2**	**-2.2**
ARU				*e*S		**S**	**18 53 26.1**	**-7.0**
ARU				SS		SS	18 57 12.6	-3.3
ARU				pmax		pmax		
	comp=Z,8.0nm,0.6s,mb4.9							
ARU	**Arti**	**54.74**	**317**	*e*P		**P**	**18 45 54.2**	**-2.2**
	comp=Z,9.4nm,0.6s,mb5.0							
TAPN	**Taplejung**	**55.12**	**273**	*e*P		**P**	**18 46 00.3**	**+0.7**
	comp=Z,8.5nm,0.4s,mb5.2							
ODAN	**Odare**	**55.66**	**273**	*e*P		**P**	**18 46 04.7**	**+1.3**
	comp=Z,12nm,0.5s,mb5.2							
JIRN	**Jiri**	**55.94**	**275**	*e*P		**P**	**18 46 06.3**	**+0.9**
	comp=Z,32nm,0.5s,mb5.6							
GUN	**Gumba**	**55.98**	**275**	*e*P		**P**	**18 46 06.3**	**+0.6**
	comp=Z,28nm,0.5s,mb5.6							
RAMN	**Ramite**	**56.13**	**274**	*e*P		**P**	**18 46 07.4**	**+0.6**
	comp=Z,28nm,0.4s,mb5.6							
KKN	**Kakani**	**56.46**	**276**	*e*P		**P**	**18 46 09.7**	**+0.6**
	comp=Z,28nm,0.5s,mb5.5							
KKN	**Kakani**	**56.46**	**276**	*e*P		**P**	**18 46 09.7**	**+0.6**
KKN				pmax		pmax		
	comp=Z,28nm,0.5s,mb5.5							
PKI	**Pulchoki**	**56.52**	**275**	*e*P		**P**	**18 46 10.4**	**+0.9**
DMN	**Daman**	**56.69**	**275**	*e*P		**P**	**18 46 11.6**	**+0.8**
	comp=Z,43nm,0.7s,mb5.6							
GKN	**Gorkha**	**56.75**	**276**	*e*P		**P**	**18 46 11.7**	**+0.5**
	comp=Z,42nm,0.5s,mb5.7							
DANN	**Dangsing**	**57.10**	**277**	*e*P		**P**	**18 46 14.4**	**+0.7**
	comp=Z,67nm,0.6s,mb5.9							
KOLN	**Koldanda**	**57.59**	**277**	*e*P		**P**	**18 46 17.9**	**+0.8**
	comp=Z,27nm,0.6s,mb5.5							
AKTK	**Aktyubinsk**	**58.63**	**312**	P		**P**	**18 46 22.4**	**-1.6**
AKTO	**Aktyubinsk**	**58.63**	**312**	P		**P**	**18 46 22.4**	**-1.6**
	comp=Z,1.7nm,0.6s,mb4.3,baz=65,slow=7.0,SNR=9.1							
AKTO	**Aktyubinsk**	**58.63**	**312**	P		**P**	**18 46 22.4**	**-1.6**
AKTO				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
HLID	**Hailey**	**59.83**	**57**	*e*P		**P**	**18 46 33.2**	**+0.8**
	comp=Z,1.6nm,0.8s,mb4.1							
NVAR	**Mina Array Bea**	**60.83**	**64**	P		**P**	**18

ANMO pmax pmax
comp=Z,3.0nm,1.4s
WB2 Warramunga Arr 70.18 200 *eP* **P 18 47 39.6 -0.1**
WRA Warramunga Arr 70.18 200 P **P 18 47 39.5 -0.2**
comp=Z,3.1nm,0.8s,mb4.3,baz=17,slow=6.4,SNR=16
WRA Warramunga Arr 70.18 200 P **P 18 47 39.5 -0.3**
WRA pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 71.01 327 P **P 18 47 42.7 -1.9**
comp=Z,1.0nm,0.5s,mb4.0,baz=33,slow=5.6,SNR=6.3
AKASG Malin Array Be 71.01 327 P **P 18 47 42.7 -1.9**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.01 327 P **P 18 47 42.7 -1.9**
SCHQ Schefferville 71.61 24 P **P 18 47 47.9 -0.2**
comp=Z,3.3nm,0.9s,mb4.2,baz=315,slow=9.9,SNR=3.0
ASAR Alice Springs 73.87 200 P **P 18 48 02.2 +0.4**
comp=Z,0.1nm,0.3s,baz=16,slow=5.2,SNR=4.6
STHS Stebnicka Huta 74.87 331 *i* P **P 18 48 08.1 +0.7**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
STHS Stebnicka Huta 74.87 331 *i* P **P 18 48 08.1 +0.7**
comp=Z,4.2nm,0.7s,mb4.5
STHS *e*S S 18 57 45.4 +4.8
BUR08 Bucovina Ar. S 75.02 327 *e*P **P 18 48 08.1 -0.3**
BURAR Bucovina Array 75.04 327⇑*i*P **P 18 48 08.3 -0.1**
KSP Ksiaz 75.15 334 *e*P **P 18 48 09.2 +0.2**
KSP Ksiaz 75.15 334 *e*P **P 18 48 08.9 -0.1**
CRVS Cervenica-Dubn 75.24 330 *i* P **P 18 48 09.2 -0.4**
OKC Ostrava-Krasne 75.49 333 *e*P **P 18 48 10.2 -0.8**
UPC Upice 75.53 334 *e*P **P 18 48 11.4 +0.2**
DPC Dobruska-Polom 75.58 334 *e*P **P 18 48 11.2 -0.3**
CLL Collm 75.66 336⇑*i*P **P 18 48 11.4 -0.5**
CLL pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
CLL Collm 75.66 336 *e*P **P 18 48 11.4 -0.5**
comp=Z,9.0nm,0.7s,mb4.8
CLL Collm 75.66 336⇑*i*P **P 18 48 11.4 -0.5**
comp=Z,9.0nm,0.7s,mb4.8
CLL Collm 75.66 336⇑*i*P **P 18 48 11.4 -0.5**
comp=Z,9.0nm,0.7s,mb4.8
TLCR 75.71 324⇑*i*P **P 18 48 12.6 +0.3**
BRG Berggiesshubel 75.79 336 *e*P **P 18 48 12.3 -0.4**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRG Berggiesshubel 75.79 336 *e*P **P 18 48 12.3 -0.4**
comp=Z,4.0nm,0.9s,mb4.3
BRG Berggiesshubel 75.79 336 *e*P **P 18 48 12.3 -0.4**
comp=Z,2.5nm,0.8s,mb4.2
CLZ Clausthal 75.85 338 *e*P **P 18 48 13.2 +0.2**
CLZ pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CLZ Clausthal 75.85 338 *e*P **P 18 48 13.2 +0.2**
comp=Z,10.0nm,1.0s,mb4.7
TXAR Lajitas Array 75.86 62 P **P 18 48 13.7 +0.2**
comp=Z,3.2nm,0.7s,mb4.3,baz=301,slow=4.2,SNR=37
TXAR Lajitas Array 75.86 62 P **P 18 48 13.7 +0.2**
TXAR pmax pmax
comp=Z,3.0nm,0.7s
PVCC Panska Ves 75.93 335 *e*P **P 18 48 13.7 +0.2**
PRU Pruhonice 76.42 335 *e*P **P 18 48 16.4 +0.1**
VRAC Vranov 76.43 333⇑*i*P **P 18 48 17.0 +0.7**
VRAC Vranov 76.43 333⇑P **P 18 48 17.0 +0.6**
VYHS Vyhne 76.45 332 *i* P **P 18 48 16.7 +0.2**
TIRR Tirgusor 76.47 324⇑*i*P **P 18 48 16.5 -0.2**
TIRR Tirgusor 76.47 324⇑P **P 18 48 16.5 -0.1**
DRGR 76.63 328⇑*i*P **P 18 48 17.5 0.0**
DRGR 76.63 328⇑P **P 18 48 17.4 -0.1**
WERN Wernitzgruen 76.75 336 *e*P **P 18 48 18.4 +0.3**
comp=Z,8.0nm,0.7s,mb4.8
TREC Trest 76.77 334 *e*P **P 18 48 18.4 +0.1**
NKC Novy Kostel 76.78 336 *e*P **P 18 48 18.5 +0.2**
SMOL Smolenice 76.88 332 *i* P **P 18 48 19.4 +0.5**
VOIR 76.94 326⇑*i*P **P 18 48 19.9 +0.6**
VOIR 76.94 326⇑P **P 18 48 19.9 +0.6**
MANZ Manzenberg 77.10 336 *e*P **P 18 48 20.3 +0.2**
comp=Z,4.0nm,0.8s,mb4.4
ROTZ Rotzenmuhle 77.27 336 *e*P **P 18 48 21.3 +0.2**
comp=Z,5.0nm,1.0s,mb4.4
KHC Kasperske Hory 77.47 335 *e*P **P 18 48 21.1 -1.1**
KHC Kasperske Hory 77.47 335 *e*P **P 18 48 22.6 +0.4**
KHC Kasperske Hory 77.47 335 *e*P **P 18 48 22.6 +0.4**
GRA1 Grafenberg Arr 77.60 337 *e*P **P 18 48 23.4 +0.5**
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.60 337 *e*P **P 18 48 23.4 +0.5**
GRF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.60 337 *e*P **P 18 48 23.4 +0.5**
GRF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 77.60 337 *e*P **P 18 48 23.4 +0.5**
comp=Z,9.0nm,0.8s,mb4.8
WET Wettzell 77.65 335 *e*P **P 18 48 23.7 +0.5**
WET pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WET Wettzell 77.65 335 *e*P **P 18 48 23.7 +0.5**
comp=Z,9.0nm,0.8s,mb4.8
GEC2 GERESS Array S 77.69 335 *e*P **P 18 48 23.4 0.0**
GEC2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
GEC2 GERESS Array S 77.69 335 *e*P **P 18 48 23.4 0.0**
comp=Z,5.0nm,0.8s,mb4.5
GERES GERESS Array B 77.69 335 P **P 18 48 23.6 +0.1**
comp=Z,3.0nm,0.6s,mb4.4,baz=34,slow=5.3,SNR=43
GERES GERESS Array B 77.69 335 P **P 18 48 23.6 +0.2**
GERES pmax pmax
comp=Z,3.0nm,0.6s
TNS Taunus Mts 77.82 339 *e*P **P 18 48 24.7 +0.6**
TNS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
TNS Taunus Mts 77.82 339 *e*P **P 18 48 24.7 +0.6**
comp=Z,7.0nm,0.7s,mb4.7
BZS Buzias 78.03 328⇓*i*P **P 18 48 25.2 -0.2**
BZS Buzias 78.03 328⇓P **P 18 48 25.2 -0.2**
MEM Membach 78.04 340 P **P 18 48 25.5 +0.2**
comp=Z,6.1nm,0.9s,mb4.5
BR131 Keskin Array S 78.13 318 *e*P **P 18 48 26.3 +0.2**
comp=Z,4.3nm,0.8s,mb4.4
BRTR Keskin Array B 78.13 318 P **P 18 48 26.4 +0.3**
comp=Z,4.8nm,0.9s,mb4.5,baz=69,slow=4.1,SNR=23
BRTR Keskin Array B 78.13 318 P **P 18 48 26.4 +0.3**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BCLA Clavier 78.37 341 P **P 18 48 26.6 -0.6**
PKSM Moragy 78.52 331⇑*i*P **P 18 48 27.4 -0.7**
PKSM Moragy 78.52 331⇑P **P 18 48 27.4 -0.7**
UMR Umm Al-Rimmam 78.85 302 *e*P **P 18 48 30.1 -0.1**
baz=302
UMR AMb AMB 18 48 30.9
comp=Z,44nm,0.7s,mb5.5,baz=302
MIB Mutribah 78.88 302 *e*P **P 18 48 30.2 -0.1**
baz=302
MIB AMb AMB 18 48 31.1
comp=Z,54nm,0.7s,mb5.6,baz=302
STU Stuttgart 78.98 338 *e*P **P 18 48 34.9 +4.4**
comp=Z,13nm,0.3s,mb5.3
SOKA Soboth 79.25 333⇑*i*P **P 18 48 32.4 +0.3**
comp=Z,6.8nm,1.0s,mb4.5
QRN Al-Qurain 79.35 301 *e*P **P 18 48 32.8 -0.1**
baz=301
QRN AMb AMB 18 48 42.2
comp=Z,88nm,1.5s,mb5.5,baz=301
NAY Al-Naaiem 79.35 302 *e*P **P 18 48 32.6 -0.3**
baz=302
NAY AMb AMB 18 48 34.1
comp=Z,20nm,1.5s,mb4.8,baz=302
KBA Koelnbreinsper 79.39 334⇑*i*P **P 18 48 33.9 +1.1**
comp=Z,15nm,0.8s,mb5.0
RDF Al-Radifah 79.42 302 *e*P **P 18 48 33.2 -0.1**
baz=302
RDF AMb AMB 18 48 42.8
comp=Z,55nm,1.3s,mb5.3,baz=302
WATA Walderalm 79.66 336⇑*i*P **P 18 48 35.0 +0.7**
comp=Z,8.6nm,0.9s,mb4.7
WTTA Wattenberg 79.71 335⇑*i*P **P 18 48 35.6 +1.0**
comp=Z,14nm,0.7s,mb5.0
MOTA Moosalm 79.78 336⇑*i*P **P 18 48 35.6 +0.6**
comp=Z,8.4nm,0.8s,mb4.7
CDF Champ du Feu 79.79 339 *e*P **P 18 48 34.9 -0.1**
comp=Z,11nm,0.9s,mb4.5
CDF Champ du Feu 79.79 339 *e*P **P 18 48 34.9 -0.1**
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CDF Champ du Feu 79.79 339 *e*P **P 18 48 34.9 -0.1**
comp=Z,5.7nm,0.9s,mb4.5
HINF Hinteralfeld 80.45 339 *e*P **P 18 48 38.0 -0.5**

STKA Stephens Creek 80.51 191 P **P 18 48 39.5 +0.7**
comp=Z,2.0nm,0.9s,mb4.0,baz=298,slow=11,SNR=2.9
STKA LR LR 19 27 47.2
comp=Z,33nm,18.2s,MS3.7,baz=202,slow=38
TUE Stuetta 81.06 337 *e*P **P 18 48 42.3 +0.5**
comp=Z,7.2nm,0.8s,mb4.7
LOR Lormes 81.66 340 *e*P **P 18 48 44.7 -0.3**
SSF Saint Saulge 81.94 341 *e*P **P 18 48 46.2 -0.2**
AVF Avril sur Loir 82.23 341 *e*P **P 18 48 48.0 0.0**
comp=Z,3.2nm,0.6s,mb4.1
BGF Bois d'Agland 82.56 341 *e*P **P 18 48 50.9 +1.2**
LPL La Plagne 82.62 338 *e*P **P 18 48 51.0 +0.9**
comp=Z,8.7nm,0.7s,mb4.6
LPL La Plagne 82.62 338 *e*P **P 18 48 51.0 +0.9**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
LPL La Plagne 82.62 338 *e*P **P 18 48 51.0 +0.9**
comp=Z,4.3nm,0.7s,mb4.6
LPG La Plagne 82.64 338 *e*P **P 18 48 51.2 +1.1**
comp=Z,6.8nm,0.5s,mb4.6
LPG La Plagne 82.64 338 *e*P **P 18 48 51.2 +1.1**
LPG pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
LPG La Plagne 82.64 338 *e*P **P 18 48 51.2 +1.1**
comp=Z,3.4nm,0.5s,mb4.6
TCF Toulx Ste Croi 82.95 341 *e*P **P 18 48 52.0 +0.2**
MFF Saint Martin d 83.14 343 *e*P **P 18 48 53.5 +0.8**
MBDF Montbardon 83.35 338 *e*P **P 18 48 54.1 +0.3**
comp=Z,9.1nm,0.9s,mb4.5
MBDF Montbardon 83.35 338 *e*P **P 18 48 54.1 +0.3**
MBDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
MBDF Montbardon 83.35 338 *e*P **P 18 48 54.1 +0.3**
comp=Z,4.6nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.40 338 *e*P **P 18 48 54.4 +0.3**
comp=Z,6.7nm,0.7s,mb4.5
ORIF Oris-en-Rattie 83.40 338 *e*P **P 18 48 54.4 +0.3**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
ORIF Oris-en-Rattie 83.40 338 *e*P **P 18 48 54.4 +0.3**
comp=Z,3.3nm,0.7s,mb4.5
LFF La Frestale 84.55 342 *e*P **P 18 49 00.5 +0.5**
comp=Z,12nm,0.7s,mb4.9
LFF La Frestale 84.55 342 *e*P **P 18 49 00.5 +0.5**
LFF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
LFF La Frestale 84.55 342 *e*P **P 18 49 00.5 +0.5**
comp=Z,6.3nm,0.7s,mb4.8
EPF Esparros 86.46 341 *e*P **P 18 49 08.0 -1.5**
CFAA Coronel Fontan 143.65 79 PKhKP 18 55 58.2
comp=Z,0.2nm,0.5s,baz=274,slow=3.7,SNR=6.3
CPUP Villa Florida 146.82 61 PKPbc PKPbc 18 56 07.8 -1.1
comp=Z,1.3nm,0.5s,baz=348,slow=4.3,SNR=6.2
CPUP Villa Florida 146.82 61 PKP2 PKPbc 18 56 07.8 -1.1
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP Villa Florida 146.82 61 *e*PKPbc PKPbc 18 56 08.4 -0.5
PLCA Paso Flores 147.22 94 PKPbc PKPbc 18 56 09.2 -0.4
comp=Z,2.4nm,0.8s,baz=167,slow=9.1,SNR=5.3
PLCA Paso Flores 147.22 94 PKP2 PKPbc 18 56 09.3 -0.3
PLCA pmax pmax
comp=Z,2.0nm,0.8s

*ISCJB **24** 18:39:03.9±1.0, 4305N±004×8466E±006, h7km±6km, mb3.8/9, Error ellipse: s-maj=7.5km s-min=6.2km az=44.5*
*BJI **24** 18:39:06.7, 4271N×8453E, h14km, mB4.7, mb4.3, ML3.9, Ms3.7, Msz3.8*
*NNC **24** 18:39:08.4±2.5, 4307N×8440E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=24.1km s-min=10.6km az=110.0*
*IDC **24** 18:39:09.1±3.0, 4299N×8461E, h35km±24km, mb3.6/7, mb1 3.7/12, mb1mx3.5/27, mbtmp3.6/12, ML3.5/5, Error ellipse: s-maj=34.9km s-min=15.1km az=56.0*
*NEIC **24** 18:39:09.0±0.7, 4278N×8459E, h35km, mb4.6/2, Error ellipse: s-maj=15.8km s-min=11.8km az=48.0*

ISC 24 18:39:06.3±1.2, 4299N±004×8468E±006, h12km±7km, n29, σ1°§41/43, mb3.8/9, 9C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.35**	**68**	P	**Pn**	**18 39 50.8**	**+6.2**
WMQ				SG	**Sg**	**18 40 23.6**	**+1.9**
WMQ				Smax			
	comp=N,647nm,0.6s						
WMQ				Smax			
	comp=E,542nm,0.5s						
MK31	**Makanchi Array**	**4.16**	**337**	⇑Pn	**Pn**	**18 40 13.5**	**+4.0**
	comp=E,0.5nm,0.3s,baz=160,slow=14,SNR=296						
MK31				⇑Pg	**Pg**	**18 40 24.4**	**-1.6**
	comp=E,7.6nm,0.4s,baz=150,slow=17,SNR=13						
MK31				⇓Sn	**Sn**	**18 41 04.3**	**+6.2**
	comp=E,13nm,0.5s,baz=148,slow=16,SNR=3.6						
MK31				⇑Lg		18 41 19.0	
	comp=E,32nm,0.4s,baz=144,slow=27,SNR=7.8						
MK31	**Makanchi Array**	**4.16**	**337**	*e*Pn	**Pn**	**18 40 13.8**	**+4.2**
MK31				*e*Pg	**Pg**	**18 40 24.5**	**-1.5**
MK31				*e*Sn	**Sn**	**18 40 57.0**	**-1.1**
MK31				*e*Sg	**Sg**	**18 41 19.7**	**-0.2**
MKAR	**Makanchi Array**	**4.16**	**337**	Pn	**Pn**	**18 40 13.3**	**+3.8**
	comp=E,0.9nm,0.3s,baz=156,slow=14,SNR=29						
MKAR				Pg	**Pg**	**18 40 24.4**	**-1.6**
	comp=E,7.1nm,0.3s,baz=153,slow=17,SNR=59						
MKAR				Sn	**Sn**	**18 40 56.8**	**-1.3**
	comp=E,11nm,0.3s,baz=148,slow=17,SNR=8.6						
MKAR				Lg		18 41 18.2	
	comp=E,19nm,0.3s,baz=152,slow=27,SNR=11						
TKM2	**Tokmak 2**	**6.67**	**272**	⇓Pn	**Pn**	**18 40 45.3**	**+1.3**
	comp=E,5.6nm,0.9s						
TKM2				⇓Sn	**Sn**	**18 42 00.8**	**+1.0**
	comp=E,6.3nm,0.8s						
TKM2				⇑Lg		18 42 33.6	
	comp=E,19nm,0.8s						
TKM2	**Tokmak 2**	**6.67**	**272**	*e*Pn	**Pn**	**18 40 45.7**	**+1.7**
	comp=E,7.1nm,0.5s						
TKM2				*e*Sg	**Sg**	**18 42 34.5**	**-5.7**
AAK	**Ala-Archa**	**7.50**	**271**	*e*Pn	**Pn**	**18 40 56.2**	**+0.8**
KURBB	**Kurchatov Arra**	**8.72**	**333**	⇓Pn	**Pn**	**18 41 14.9**	**+2.8**
	comp=E,0.2nm,0.4s						
KURBB				⇓Sn	**Sn**	**18 42 53.1**	**+3.0**
	comp=E,2.5nm,0.6s						
KURBB				⇓Lg		18 43 43.6	
	comp=E,8.2nm,1.1s						
KURK	**Kurchatov**	**8.77**	**334**	⇑Pn	**Pn**	**18 41 15.5**	**+2.8**
	comp=E,2.7nm,0.9s						
KURK				⇑Sn	**Sn**	**18 42 52.6**	**+1.2**
	comp=E,4.2nm,0.7s						
KURK				⇑Lg		18 43 45.2	
	comp=E,22nm,0.6s						
KURK	**Kurchatov**	**8.77**	**334**	Pn	**Pn**	**18 41 12.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=143,slow=14,SNR=3.2						
KURK				Sn	**Sn**	**18 42 47.2**	**-4.2**
	comp=E,0.2nm,0.3s,baz=140,slow=19,SNR=2.3						
KURK				Lg		18 43 49.0	
	comp=E,0.5nm,0.3s,baz=215,slow=23,SNR=7.9						
KK31	**Karatay Array**	**10.38**	**275**	⇑Pn	**Pn**	**18 41 37.7**	**+2.9**
	comp=E,2.0nm,0.7s,baz=130,slow=38,SNR=4.3						
KK31				⇑Lg		18 44 27.5	
	comp=E,2.0nm,0.5s,baz=80,slow=27,SNR=3.5						
ZALV	**Zalesovo Beam**	**10.96**	**0**	Pn	**Pn**	**18 41 43.2**	**+0.4**
	comp=E,1.1nm,0.3s,baz=185,slow=14,SNR=7.8						
ZALV				Sn	**Sn**	**18 43 44.8**	**-0.4**
	comp=E,1.4nm,0.3s,baz=187,slow=31,SNR=9.6						
GTA	**Gaotai**	**11.95**	**102**	*e*P	**Pn**	**18 42 04.0**	**+7.6**
GTA				AP		18 42 07.5	
GTA				XP		18 42 09.1	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s						
BVA0	**Borovoye Array**	**13.84**	**321**	Pn	**Pn**	**18 42 24.9**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=130,slow=11,SNR=8.3						
BVAR	**Borovoye Array**	**13.84**	**321**	Pn	**Pn**	**18 42 20.4**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=3.5						
BVAR				Lg		18 46 31.3	
	baz=120,slow=29,SNR=5.0						
KBL	**Kabul**	**14.81**	**240**	P	**Pn**	**18 42 31.9**	**-3.6**
	comp=Z,3.3nm,0.9s						
AKTK	**Aktyubinsk**	**19.67**	**301**	P	**Pn**	**18 43 36.0**	**-0.3**
AKTO	**Aktyubinsk**	**19.67**	**301**	P	**Pn**	**18 43 36.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=98,slow=18,SNR=5.5						
CMAR	**Chiang Mai Arr**	**27.28**	**149**	P	**P**	**18 44 51.5**	**+1.0**
	comp=Z,0.8nm,0.7s,mb3.4,baz=328,slow=9.3,SNR=10.0						
JOF	**Joensuu**	**36.44**	**322**	*ep*	**P**	**18 46 10.4**	**-0.1**
	comp=Z,3.7nm,0.4s,mb4.7						
KAF	**Kangasniemi**	**38.69**	**320**	*ep*	**P**	**18 46 29.7**	**+0.2**
ARCES	**ARCESS Array B**	**39.80**	**332**	P	**P**	**18 46 38.6**	**-0.1**
	comp=Z,8.1nm,1.0s,mb4.4,baz=89,slow=7.2,SNR=11						

NOA NORSAR Array B 45.96 320 P **P 18 47 28.7 0.0**
comp=Z,1.4nm,0.6s,mb4.0,baz=78,slow=7.9,SNR=3.4
NOA NORSAR Array B 45.96 320 P **P 18 47 28.7 0.0**
YKA Yellowknife Ar 73.73 9 P **P 18 50 38.6 -1.0**
comp=Z,0.2nm,0.5s,mb3.3,baz=339,slow=5.8,SNR=3.6
TORD Torodi Ar. Bea 76.06 275 P **P 18 50 51.7 -2.2**
comp=Z,0.4nm,0.4s,mb3.7,baz=40,slow=5.0,SNR=7.9
WRAB Tennant Creek 77.50 133 *e*P **P 18 50 59.1 -2.6**
comp=Z,3.9nm,1.1s,mb4.2
WRA Warramunga Arr 77.50 133 P **P 18 51 00.8 -1.0**
comp=Z,0.4nm,0.6s,mb3.5,baz=337,slow=5.8,SNR=7.8
ASAR Alice Springs 80.32 135 P **P 18 51 16.6 -0.6**
comp=Z,0.2nm,0.6s,mb3.2,baz=327,slow=5.4,SNR=3.9

DJA 24 18:45:52,591S×10733E, h24km, MLv3.8/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBJI	**Citeko**	**0.70**	**223**	P	Pb	18 46 06.0	+0.5
DBJI	**Dramaga**	**0.86**	**222**	P	Pb	18 46 07.3	-1.0
DBJI				S	Sb	18 46 21.1	+1.7
LEM	**Lembang**	**0.95**	**163**	P	Pb	18 46 10.1	+0.2
LEM				S	Sb	18 46 23.2	+1.1
SBJI	**Serang**	**1.21**	**260**	P	Pn	18 46 14.4	+0.9
SKJI	**Sukabumi**	**1.33**	**215**	P	Pn	18 46 13.5	-1.6

*NIED **24** 18:48:00, 2420N×12070E, h8km, Mw4.4 Best double couple: M0 5.19000×10^15 NP1:φ=66.00000°, δ81.00000°, λ79.00000°. NP2:φ=299.00000°, δ15.00000°, λ141.00000°.*
*TAP **24** 18:48:35.6, 2402N×12073E, h23km, ML4.9, B*
*ISCJB **24** 18:48:35.8±0.2, 2405N±001×12072E±002, h28km±1km, mb4.1/24, MS3.7/5, Error ellipse: s-maj=2.5km s-min=1.7km az=27.4*
*BJI **24** 18:48:35.1, 2411N×12081E, h26km, mB4.6, mb4.4, ML4.6, Ms4.2, Msz4.0*
*NEIC **24** 18:48:36.3±0.7, 2399N×12086E, h32km±6km, mb4.1/11, Error ellipse: s-maj=6.5km s-min=5.1km az=88.0*
NEIC Recorded [5 TAP] in Chang-hua; [3 TAP] in Miao-li, Nan-t'ou, P'eng-hu and Yun-lin; [2 TAP] in Chia-i and T'ai-chung; [1 TAP] in Hsin-chu, Hua-lien, Kao-hsiung, T'ai-nan and T'ai-tung Counties.
*IDC **24** 18:48:36.9±3.7, 2399N×12093E, h40km±33km, mb3.8/15, mb1 4.0/17, mb1mx3.9/24, mbtmp3.9/17, ML4.1/2, MS3.7/4, Ms1 3.8/4, ms1mx3.1/33, Error ellipse: s-maj=25.4km s-min=13.7km az=63.0*

ISC 24 18:48:36.2±0.2, 2403N±001×12073E±002, h25km±2km, n131, σ0§97/191, mb4.1/24, MS3.7/5, 18C-31D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TCU	**Taichung**	**0.12**	**336**	⇓*i*P	**Pb**	**18 48 40.8**	**-0.2**
	baz=331						
WNT	**Mingjian**	**0.16**	**196**	⇓*i*P	**Pb**	**18 48 41.0**	**-0.3**
	baz=205						
TYC	**Yuchr**	**0.17**	**138**	⇓*i*P	**Pb**	**18 48 41.1**	**-0.3**
	baz=134						
SMLT	**Sun Moon Lake**	**0.21**	**134**	⇓*i*P	**Pb**	**18 48 41.8**	**-0.2**
	baz=131						
SMLT				S	**Sb**	**18 48 46.4**	**+0.5**
	baz=131						
TWQ1	**Liyutan**	**0.32**	**7**	⇓*i*P	**Pb**	**18 48 43.7**	**+0.3**
	baz=7.0						
TWQ1				S	**Sb**	**18 48 49.4**	**+1.1**
	baz=7.0						
SSLB	**Suanglung**	**0.32**	**140**	*e*Pg	**Pb**	**18 48 42.3**	**-1.1**
SSLB				*e*Sg	**Sb**	**18 48 47.3**	**-1.1**
WGK	**Gukeng**	**0.38**	**204**	⇓*i*P	**Pb**	**18 48 44.3**	**-0.1**
	baz=206						
WGK				S	**Sb**	**18 48 50.6**	**+0.6**
	baz=206						
CHN5	**Tsauling**	**0.44**	**186**	⇓*i*P	**Pb**	**18 48 45.0**	**-0.3**
	baz=187						
WTCT	**Ta-ch'eng**	**0.45**	**248**	⇑*i*P	**Pb**	**18 48 45.1**	**-0.4**
	baz=250						
WTCT				*e*S	**Sb**	**18 48 52.2**	**+0.4**
	baz=250						
TWT	**Tachien**	**0.46**	**62**	⇑*i*P	**Pb**	**18 48 45.5**	**-0.2**
	baz=59						
WHF	**Hehuan Shan**	**0.50**	**77**	⇑*i*P	**Pb**	**18 48 47.0**	**+0.6**
	baz=75						
ALS	**Alishan**	**0.53**	**173**	⇓*i*P	**Pb**	**18 48 46.7**	**-0.1**
	baz=173						
ALS				*e*S	**Sb**	**18 48 53.9**	**-0.1**
	baz=173						
CHN2	**Minshiung**	**0.55**	**205**	⇓*i*P	**Pb**	**18 48 47.0**	**-0.3**
	baz=206						
YUS	**Yu-Shan**	**0.58**	**160**	⇑*i*P	**Pb**	**18 48 47.8**	**+0.2**
	baz=159						
YUS				S	**Sb**	**18 48 55.6**	**+0.1**
	baz=159						
CHY	**Chiayi**	**0.60**	**208**	⇓*i*P	**Pb**	**18 48 47.7**	**-0.4**
	baz=209						
CHY				*e*S	**Sb**	**18 48 56.2**	**0.0**
	baz=209						
WSF	**Szhu**	**0.61**	**230**	⇓*i*P	**Pb**	**18 48 47.7**	**-0.5**
	baz=232						
WSF				S	**Sb**	**18 48 56.8**	**+0.4**
	baz=232						
NSTT	**Nanjuang**	**0.64**	**22**	⇓*i*P	**Pb**	**18 48 48.9**	**+0.1**
	baz=28						
NSTT				S	**Sb**	**18 48 58.4**	**+0.9**
	baz=28						
ESL	**Shilin**	**0.68**	**109**	⇑*i*P	**Pb**	**18 48 49.3**	**-0.1**
	baz=107						
ESL				*e*S	**Sb**	**18 48 59.1**	**+0.8**
	baz=107						
CHN4	**Tsaushan**	**0.69**	**191**	⇓*i*P	**Pb**	**18 48 49.2**	**-0.4**
	baz=191						
CHN4				S	**Sb**	**18 48 58.9**	**+0.1**
	baz=191						
NNS	**Nan Shan**	**0.71**	**55**	⇑*i*P	**Pb**	**18 48 49.7**	**-0.2**
	baz=46						
NNS				*e*S	**Sb**	**18 48 59.0**	**-0.4**
	baz=46						
ESF	**Shoufeng Towns**	**0.73**	**103**	*e*P	**Pb**	**18 48 49.9**	**-0.3**
	baz=101						
TPUB	**Ta-pu**	**0.73**	**187**	*e*P	**Pb**	**18 48 49.4**	**-1.0**
TPUB				*e*S	**Sb**	**18 48 57.4**	**-2.6**
EHY	**Hungye**	**0.75**	**134**	⇑*i*P	**Pb**	**18 48 50.7**	**0.0**
	baz=129						
EHY				S	**Sb**	**18 49 01.0**	**+0.5**
	baz=129						
WTP	**Ta-pu**	**0.79**	**188**	⇓*i*P	**Pb**	**18 48 50.7**	**-0.6**
	baz=189						
WTP				*e*S	**Sb**	**18 49 01.4**	**-0.2**
	baz=189						
TWD	**Chiawan**	**0.79**	**86**	⇑*i*P	**Pb**	**18 48 51.1**	**-0.2**
	baz=85						
TWD				S	**Sb**	**18 49 01.5**	**-0.1**
	baz=85						
TWK	**Hsinying**	**0.80**	**196**	⇓*i*P	**Pb**	**18 48 50.8**	**-0.5**
	baz=197						
TWK				*e*S	**Sb**	**18 49 01.2**	**-0.4**
	baz=197						
HSN	**Hsinchu**	**0.80**	**16**	⇓P	**Pb**	**18 48 51.9**	**+0.5**
	baz=17						
HSN				*e*S	**Sb**	**18 49 04.2**	**+2.4**
	baz=17						
HWA	**Hwalien**	**0.80**	**94**	⇑*i*P	**Pb**	**18 48 51.7**	**+0.2**
	baz=92						
HWA				S	**Sb**	**18 49 03.9**	**+2.0**
	baz=92						
NACB	**Ninganchiao**	**0.80**	**80**	*e*P	**Pb**	**18 48 50.8**	**-0.6**
NACB				*e*S	**Sb**	**18 49 00.3**	**-1.6**
YULB	**Yu-li**	**0.82**	**141**	*e*P	**Pb**	**18 48 51.0**	**-0.8**
YULB				*e*S	**Sb**	**18 49 01.9**	**-0.5**
CHN8	**Yiju**	**0.83**	**215**	⇓*i*P	**Pb**	**18 48 51.3**	**-0.7**
	baz=216						
CHN8				*e*S	**Sb**	**18 49 03.6**	**+0.7**
	baz=216						
TWF1	**Yuli**	**0.85**	**142**	⇑*i*P	**Pb**	**18 48 52.2**	**-0.1**
	baz=142						
TWF1				*e*S	**Sb**	**18 49 03.4**	**+0.1**
	baz=142						
NSK

baz=193
STYT Tauyuan 0.87 178 ⇑P Pb 18 48 52.0 -0.5
baz=173
STYT *e*S **Sb 18 49 03.9 +0.1**
baz=173
ELDTW Lidau 0.88 163 ⇑*i*P Pb 18 48 52.3 -0.5
baz=152
ELDTW *e*S **Sb 18 49 03.6 -0.6**
baz=152
SGST Jiashian 0.96 188 ⇓*e*P Pn 18 48 53.3 -0.7
baz=198
ENTT Nioudou 0.97 51 ⇓*i*P Pn 18 48 54.1 -0.2
baz=40
ENTT *e*S **Sb 18 49 06.7 -0.1**
baz=40
SCLT Jiali 0.99 210 ⇓*i*P Pn 18 48 54.1 -0.4
baz=221
SCLT S **Sb 18 49 08.6 +1.5**
baz=221
ENA Nanau 1.00 67 ⇑P Pn 18 48 54.3 -0.4
baz=65
ENA *e*S **Sb 18 49 07.4 -0.2**
baz=65
CHN3 Shinhua 1.01 200 ⇓*i*P Pn 18 48 55.0 +0.2
baz=208
CHN3 *e*S **Sb 18 49 10.2 +2.3**
baz=208
NCU National Centr 1.02 24 *e*P Pn 18 48 54.6 -0.3
baz=9.0
TAI1 Yung-k'ang 1.09 205 ⇓P Pn 18 48 56.0 +0.1
baz=206
TAI1 *e*S **Sb 18 49 11.2 +1.0**
baz=206
TWE Neicheng 1.09 51 ⇓*i*P Pn 18 48 56.2 +0.3
baz=42
TWE *e*S **Sb 18 49 11.8 +1.6**
baz=42
CHKT Chengkung 1.10 148 ⇑*i*P Pn 18 48 56.5 +0.5
baz=147
CHKT *e*S **Sb 18 49 12.4 +2.1**
baz=147
TATO Taipei 1.16 36 *e*P Pn 18 48 56.1 -0.8
TWC Suao 1.17 60 ⇑*i*P Pn 18 48 57.3 +0.3
baz=52
TWC S **Sn 18 49 12.4 +0.3**
baz=52
PNG Penghu 1.17 247 *e*P Pn 18 48 55.5 -1.5
baz=248
PNG *e*S **Sn 18 49 10.8 -1.5**
baz=248
ILA Ilan 1.18 52 *e*P Pn 18 48 57.1 0.0
baz=40
ILA *e*S **Sn 18 49 14.9 +2.5**
baz=40
TWA Mucha 1.22 39 ⇓*i*P Pn 18 48 57.5 -0.2
baz=39
TWA *e*S **Sn 18 49 13.6 +0.2**
baz=39
TWS1 Kuangyinshan 1.23 30 ⇓P Pn 18 48 57.5 -0.3
baz=15
TWS1 *e*S **Sn 18 49 13.8 +0.1**
baz=15
TAP1 Taipei 1.23 36 ⇓P Pn 18 48 57.2 -0.6
baz=35
TAP1 *e*S **Sn 18 49 12.8 -0.9**
baz=35
TWM1 Shoushan 1.24 193 ⇓*e*P Pn 18 48 59.1 +1.2
baz=194
TWG Pinlang 1.25 165 *e*P Pn 18 48 58.4 +0.3
TWG *e*S **Sn 18 49 15.4 +1.4**
TWG Pinlang 1.25 165 ⇑*i*P Pn 18 48 58.7 +0.6
baz=166
TWG *e*S **Sn 18 49 15.1 +1.1**
baz=166
WDGT Dungji 1.25 232 *e*P Pn 18 48 57.1 -0.9
baz=241
WDGT *e*S **Sn 18 49 13.2 -0.9**
baz=241
SSD Sandimen 1.28 184 *e*P Pn 18 48 58.6 0.0
baz=185
SSD *e*S **Sn 18 49 15.9 +0.9**
baz=185
SGLT Jiouru 1.32 190 *e*P Pn 18 48 59.8 +0.7
baz=190
TTN Taitung 1.33 163 *e*P Pn 18 48 59.7 +0.5
baz=163
NWF Wu-fen Shan 1.41 43 ⇓P Pn 18 48 59.9 -0.3
baz=26
ECL Taimali 1.44 172 ⇑*i*P Pn 18 49 01.4 +0.6
baz=173
ECL *e*S **Sn 18 49 20.9 +2.0**
baz=173
TWY Chenhua 1.47 32 *e*P Pn 18 49 00.6 -0.5
baz=33
TWB1 Santiao Chiao 1.50 49 *e*P Pn 18 49 01.6 +0.1
baz=33
KAU Kaohsiung 1.51 195 *e*P Pn 18 49 01.6 -0.1
baz=195
EAST Anshuo 1.65 176 *e*P Pn 18 49 03.0 -0.6
baz=193
SCZT Fangliau 1.66 184 ⇓P Pn 18 49 04.0 +0.4
baz=184
TAW Tawu 1.68 175 *e*P Pn 18 49 04.5 +0.6
baz=192
TAW *e*S **Sn 18 49 26.1 +1.5**
baz=192
HEN Hengchun 2.02 180 ⇑P Pn 18 49 08.8 +0.2
baz=181
HEN *e*S **Sn 18 49 34.1 +1.0**
baz=181
TWK1 Hengchun 2.08 178 *e*P Pn 18 49 09.6 0.0
baz=178
LAY Lan-yu 2.12 159 *e*P Pn 18 49 09.7 -0.4
baz=159
LAY *e*S **Sn 18 49 36.4 +0.7**
baz=159
YOJ Yonaguni jima 2.12 78 *e*P Pn 18 49 10.4 +0.3
baz=76
YOJ *e*S **Sn 18 49 37.0 +1.3**
baz=76
TSEB Hengchuen, Pin 2.13 176 *e*P Pn 18 49 08.5 -1.7
baz=191
KNM Kinmen 2.13 281 *e*P Pn 18 49 10.5 +0.3
baz=281
QZH Quanzhou 2.15 295 P **Pn 18 49 09.1 -1.4**
QZH S **Sn 18 49 37.4 +1.1**
QZH Smax
comp=N,4μm,0.8s
QZH Smax
comp=E,2μm,0.6s
SSE Sheshan 7.05 3 P **Pn 18 50 20.1 +2.3**
SSE S **Sn 18 51 40.8 +3.7**
SSE AMB AMB
comp=Z,20nm,0.7s
SSE AMB AMB
comp=Z,68nm,4.5s
SSE LR LR
comp=N,32nm,11.9s
SSE LR LR
comp=E,258nm,11.9s
SSE LR LR
comp=Z,197nm,12.2s
JOW Kunigami 7.37 66 Pn **Pn 18 50 21.0 -1.2**
comp=Z,8.5nm,0.3s,baz=110,slow=25,SNR=8.0
NJ2 Nanjing 8.16 349 *e*P Pn 18 50 35.6 +2.6
NJ2 AP 18 50 42.3
NJ2 XP 18 50 45.5
NJ2 S **Sn 18 52 08.5 +4.1**
NJ2 AMB AMB
comp=Z,120nm,4.8s
NJ2 Smax
comp=N,130nm,0.9s
NJ2 Smax
comp=E,200nm,0.9s
NJ2 LR LR
comp=N,430nm,13.6s
NJ2 LR LR
comp=E,660nm,11.6s
NJ2 LR LR
comp=Z,650nm,11.6s
QIZ Qiongzhong 11.29 246 P **Pn 18 51 19.5 +3.5**
QIZ *e*S **Sn 18 53 27.9 +6.5**
QIZ LR LR
comp=Z,294nm,14.3s
GYA Guiyang 12.96 284 P **Pn 18 51 40.3 +1.5**
GYA AP 18 51 48.6
GYA PPP 18 51 59.4
GYA S **Sn 18 54 06.3 +4.1**
GYA SS 18 54 22.8
GYA AMB AMB
comp=Z,10.0nm,0.6s
GYA LR LR
comp=N,290nm,10.2s
GYA LR LR
comp=E,260nm,9.4s
GYA LR LR
comp=Z,120nm,11.5s
KSRS Korea Array 14.73 23 Pn **Pn 18 52 02.5 -0.4**
comp=Z,0.6nm,0.3s,baz=210,slow=14,SNR=11
KMI Kunming 16.40 278 P **Pn 18 52 28.1 +3.3**
KMI S **Sn 18 55 25.8 -0.4**
KMI LR LR
comp=N,206nm,9.1s
KMI LR LR
comp=E,538nm,9.5s
KMI LR LR
comp=Z,532nm,11.1s
BJI Beijing 16.42 348 P **Pn 18 52 25.3 +0.4**
BJI S **Sn 18 55 24.3 -2.0**
BJI AMB AMB
comp=Z,9.0nm,0.5s
BJI AMB AMB
comp=Z,106nm,5.1s
BJI LR LR
comp=N,402nm,11.4s
BJI LR LR
comp=E,341nm,15.3s
BJI LR LR
comp=Z,133nm,14.8s
CD2 Chengdu 16.54 298 P **Pn 18 52 30.1 +3.6**
CD2 AP pP 18 52 35.4 -0.2
CD2 XP sP 18 52 40.1 +1.3
CD2 PP 18 52 41.8
CD2 S **Sn 18 55 30.1 +0.7**
CD2 XS sS 18 55 44.8 -6.5
CD2 SS 18 55 52.8
CD2 AMB AMB
comp=Z,20nm,0.9s
CD2 AMB AMB
comp=Z,150nm,6.4s
CD2 LR LR
comp=N,590nm,10.1s
CD2 LR LR
comp=Z,660nm,13.7s
HHC Hu-ho-hao-te 18.45 338 *e*P Pn 18 52 50.5 +0.4
HHC AP pP 18 52 58.3 +1.7
HHC XP sP 18 53 03.1 +3.3
HHC PP 18 53 07.4
HHC S **Sn 18 56 15.8 +0.3**
HHC XS sS 18 56 27.4 -2.6
HHC PCP PcP 18 57 17.3 -2.5
HHC AMB AMB
comp=Z,11nm,0.6s
HHC AMB AMB
comp=Z,184nm,4.9s
HHC LR LR
comp=N,282nm,13.4s
HHC LR LR
comp=E,131nm,9.8s
HHC LR LR
comp=Z,268nm,12.5s
LZH Lanzhou 18.89 313 *e*P Pn 18 52 57.3 +1.8
LZH AP pP 18 53 03.5 +2.0
LZH XP sP 18 53 08.0 +3.3
LZH PP 18 53 14.3
LZH *e*S **Sn 18 56 23.3 -2.9**
LZH XS sS 18 56 37.0 -2.0
LZH SS 18 56 45.0
LZH AMB AMB
comp=Z,13nm,1.0s
LZH AMB AMB
comp=Z,71nm,5.8s
LZH LR LR
comp=N,394nm,13.8s
LZH LR LR
comp=Z,628nm,14.3s
CN2 Changchun 20.10 10 *e*P P 18 53 08.6 +0.7
CN2 *e*AP 18 53 17.4
CN2 *e*S **S 18 56 48.5 -3.9**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,200nm,3.0s
CHTO Chiang Mai 20.93 260 *e*P P 18 53 19.2 +2.0
comp=Z,2.4nm,0.6s
CMAR Chiang Mai Arr 21.04 259 P **P 18 53 19.6 +1.2**
comp=Z,2.2nm,0.7s,mb3.6,baz=61,slow=8.1,SNR=19
MDJ Mudanjiang 21.77 17 P **P 18 53 25.8 -0.2**
MDJ AMB AMB
comp=Z,9.0nm,0.8s,mb4.2
MDJ AMB AMB
comp=Z,112nm,5.0s
GTA Gaotai 23.40 316 *e*P P 18 53 40.6 -2.8
GTA AP 18 53 49.9
GTA XP sP 18 53 53.9 +0.5
GTA S **S 18 57 51.1 -3.6**
GTA XS sS 18 58 05.6 -1.1
GTA SS 18 58 40.9
GTA AMB AMB
comp=Z,56nm,4.2s
GTA LR LR
comp=N,166nm,14.4s,MS3.8
GTA LR LR
comp=E,211nm,14.7s,MS3.8
GTA LR LR
comp=Z,416nm,15.0s,MS4.0
HIA Hailar 25.20 358 *e*P P 18 53 59.0 -0.6
comp=Z,6.1nm,0.9s,mb4.1
ULN Ulaanbaatar 26.15 339 *e*P P 18 54 08.7 +0.4
comp=Z,1.8nm,0.7s,mb3.7
SONM Songino Array 26.35 338 P **P 18 54 09.5 -0.6**
comp=Z,2.5nm,0.9s,mb3.8,baz=156,slow=10,SNR=16
SONM LR LR 19 06 00.5
comp=Z,191nm,18.5s,MS3.7,baz=180,slow=39
LSA Lhasa 26.94 289 P **P 18 54 16.8 +1.1**
LSA Lhasa 26.94 289 *e*P P 18 54 16.3 +0.6
comp=Z,2.5nm,0.5s,mb4.0
KAPI Kappang 28.89 182 LR LR 19 06 15.7
comp=Z,65nm,21.4s,MS3.2,baz=211,slow=37
WMQ Urumqi 33.46 314 *e*P P 18 55 15.8 +2.6
MK31 Makanchi Array 38.16 316 *e*P P 18 55 53.6 +0.2
MK31 *e* 18 55 58.5
MKAR Makanchi Array 38.16 316 P **P 18 55 53.4 -0.1**
comp=Z,1.2nm,0.4s,mb4.0,baz=106,slow=10,SNR=38
MKAR PcP PcP 18 58 07.5 -0.4
comp=Z,1.0nm,0.8s,baz=135,slow=3.1,SNR=3.9
YAK Yakutsk 38.47 7 *e*P P 18 55 54.8 -1.0
comp=Z,5.5nm,0.6s,mb4.5
ZAA0 Zalesovo Array 40.15 327 *e*P P 18 56 09.3 -0.6
ZALV Zalesovo Beam 40.15 327 P **P 18 56 09.6 -0.4**
comp=Z,8.7nm,0.8s,mb4.5,baz=111,slow=8.1,SNR=28
ZALV PcP PcP 18 58 12.1 -1.9
comp=Z,1.1nm,0.5s,baz=103,slow=4.6,SNR=3.5
ZALV Zalesovo Beam 40.15 327 P **P 18 56 09.6 -0.4**
ZALV PcP PcP 18 58 12.1 -1.9
KURK Kurchatov 41.94 320 P **P 18 56 24.8 0.0**
comp=Z,2.4nm,1.1s,mb3.8,baz=114,slow=8.7,SNR=5.5
KURK Kurchatov 41.94 320 *e*P P 18 56 23.9 -0.9
comp=Z,1.0nm,0.4s,mb3.8
WRAB Tennant Creek 45.67 162 *e*P P 18 56 53.3 -1.8
comp=Z,1.5nm,0.6s,mb4.1
WRA Warramunga Arr 45.68 162 P **P 18 56 52.2 -2.8**
comp=Z,0.5nm,0.5s,mb3.8,baz=344,slow=8.5,SNR=13
WB2 Warramunga Arr 45.68 162 *e*P P 18 56 52.4 -2.7
BVAR Borovoye Array 47.53 321 P **P 18 57 08.4 -0.9**
comp=Z,1.1nm,0.7s,mb4.0,baz=107,slow=8.1,SNR=8.6
BVAR PcP PcP 18 58 38.6 -0.5
comp=Z,0.7nm,0.6s,baz=141,slow=5.0,SNR=3.6
BRVK Borovoye 47.60 321 *e*P P 18 57 09.7 -0.2
comp=Z,4.1nm,1.1s,mb4.4
ASAR Alice Springs 49.11 164 P **P 18 57 19.9 -1.8**
comp=Z,0.3nm,0.3s,mb3.8,baz=340,slow=6.9,SNR=22
CTA Charters Tower 50.41 148 *e*P P 18 57 38.0 +6.3
comp=Z,3.3nm,0.7s,mb4.5
AKTO Aktyubinsk 54.59 316 LR LR 19 24 57.6
comp=Z,58nm,18.1s,MS3.7,baz=20,slow=40
STKA Stephens Creek 59.07 159 P **P 18 58 32.5 -1.8**
comp=Z,1.5nm,0.8s,mb4.1,baz=314,slow=16,SNR=4.2
STKA Stephens Creek 59.07 159 *e*P P 18 58 32.6 -1.7
comp=Z,0.8nm,0.6s,mb3.9
STKA *e* pP 18 58 39.9 -2.1
JOF Joensuu 68.64 331 *e*p P 18 59 36.3 -0.6
ARCES ARCESS Array B 69.52 338 P **P 18 59 42.2 -0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=43,slow=7.3,SNR=5.2
ARCES ARCESS Array B 69.52 338 P **P 18 59 42.2 -0.2**
MALT Malatya 69.74 304 *e*P P 18 59 46.0 +1.7
comp=Z,8.5nm,0.8s,mb4.7
AKASG Malin Array Be 72.71 318 P **P 19 00 01.3 -0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=62,slow=6.0,SNR=5.0
AKASG Malin Array Be 72.71 318 P **P 19 00 01.3 -0.7**
BR131 Keskin Array S 72.93 306 *e*P P 19 00 04.0 +0.5
comp=Z,0.7nm,0.6s,mb3.8
BRTR Keskin Array B 72.93 306 P **P 19 00 03.9 +0.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=96,slow=6.2,SNR=15
NB2 NORSAR Subarra 78.16 332 P **P 19 00 32.8 -0.3**
comp=Z,1.7nm,0.7s,mb4.1,baz=60,slow=5.6
NOA NORSAR Array B 78.16 332 P **P 19 00 32.9 -0.2**
comp=Z,2.3nm,0.7s,mb4.2,baz=59,slow=5.6,SNR=5.9
NOA LR LR 19 38 47.4
comp=Z,112nm,20.0s,MS4.2,baz=5.0,slow=38
CLL Collm 81.92 323 *e*P P 19 00 54.0 +0.4
GERES GERESS Array B 82.70 320 P **P 19 00 57.7 0.0**
comp=Z,0.6nm,0.8s,mb3.7,baz=46,slow=3.9,SNR=6.7
YKA Yellowknife Ar 83.27 23 P **P 19 00 58.5 -1.8**
comp=Z,1.1nm,0.8s,mb3.9,baz=316,slow=4.8,SNR=15
YKA Yellowknife Ar 83.27 23 P **P 19 00 58.5 -1.8**
SDV Santo Domingo 145.45 20 *e*PKP PKPdf 19 08 12.3 -0.7

*ISCJB **24** 19:27:44.8±5.0, 64S±02×1550E±02, h86km±40km, mb3.6/7, Error ellipse: s-maj=42.8km s-min=25.7km az=35.5*
*NEIC **24** 19:27:46.5±3.7, 647S×15507E, h92km±26km, mb3.6/1, Error ellipse: s-maj=43.2km s-min=19.2km az=112.0*
*IDC **24** 19:27:46.3±6.8, 643S×15505E, h87km±52km, mb3.5/6, mb1 3.7/7, mb1mx3.5/17, mbtmp3.5/7, ML3.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.5/13, Error ellipse: s-maj=51.1km s-min=30.0km az=105.0*

ISC 24 19:27:45.8±4.3, 65S±02×1551E±02, h86km±33km, n11, σ0°31/11, mb3.6/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.42**	**249**	P		**Pn**	**19 29 44.9**	**-0.2**
	5.2nm,0.3s,baz=68,slow=6.7,SNR=21							
PMG				S		**Sn**	**19 31 18.8**	**+0.3**
	0.9nm,0.3s,baz=256,slow=8.3,SNR=3.8							
PMG				LR		LR	19 32 24.0	
	comp=Z,54nm,20.8s,baz=61,slow=33							
WRAB	**Tennant Creek**	**24.21**	**235**	*e*P		**P**	**19 32 54.8**	**+0.1**
	1.8nm,0.7s,mb3.5							
WB2	**Warramunga Arr**	**24.21**	**234**	*e*P		**P**	**19 32 54.5**	**-0.2**
WRA	**Warramunga Arr**	**24.22**	**235**	P		**P**	**19 32 55.0**	**+0.2**
	1.3nm,0.5s,mb3.5,baz=58,slow=9.8,SNR=40							
WRA				P		PcP	19 36 34.4	+1.1
	0.2nm,0.3s,baz=67,slow=2.7,SNR=9.2							
ASAR	**Alice Springs**	**26.61**	**228**	P		**P**	**19 33 16.0**	**-0.4**
	0.4nm,0.7s,mb3.0,baz=59,slow=7.8,SNR=6.3							
CMAR	**Chiang Mai Arr**	**60.70**	**295**	P		**P**	**19 37 48.8**	**+0.1**
	1.3nm,0.8s,mb4.0,baz=115,slow=5.4,SNR=11							
SONM	**Songino Array**	**68.99**	**327**	P		**P**	**19 38 41.6**	**-0.3**
	0.3nm,0.4s,mb3.4,baz=138,slow=5.3,SNR=4.9							
MKAR	**Makanchi Array**	**83.12**	**319**	P		**P**	**19 40 02.0**	**-0.3**
	0.7nm,0.7s,mb3.6,baz=123,slow=3.8,SNR=4.4							
YKA	**Yellowknife Ar**	**95.83**	**28**	P		**P**	**19 41 02.9**	**+0.6**
	0.2nm,0.5s,mb3.8,baz=264,slow=4.8,SNR=4.8							
YKA	**Yellowknife Ar**	**95.83**	**28**	P		**P**	**19 41 02.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**153.03**	**286**	PKPbc		PKPbc	19 47 33.8	-0.7
	0.2nm,0.3s,baz=85,slow=2.2,SNR=8.8							

*ISCJB **24** 19:29:31.6±0.7, 692N±006×7298W±007, h180km±6km, mb3.6/6, Error ellipse: s-maj=12.3km s-min=9.6km az=26.7*
*IDC **24** 19:29:31.9±0.7, 679N×7296W, h165km±6km, mb3.4/6, mb1 3.6/8, mb1mx3.4/21, mbtmp3.5/8, Error ellipse: s-maj=16.9km s-min=11.2km az=141.0*
*FUNV **24** 19:29:31.8, 676N×73.14W, h167km, MW3.7*
*NEIC **24** 19:29:32.1±0.5, 681N×7297W, mb4.1/1, Error ellipse: s-maj=15.1km s-min=12.2km az=129.0*

ISC 24 19:29:32.6±0.7, 691N±006×7298W±007, h172km±6km, n28, σ0°84/32, mb3.6/6, 1C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.16**	**35**	⇓*i*P		**Pn**	**19 30 01.2**	**+0.4**
CAPV				*e*S		**Sn**	**19 30 22.2**	**-0.3**
ROSC	**El Rosal**	**2.44**	**213**	P		**Pn**	**19 30 13.1**	**-1.1**
	22nm,0.3s,baz=272,slow=22,SNR=30							
ROSC				S		**Sn**	**19 30 40.1**	**-6.3**
	33nm,0.3s,baz=108,slow=16,SNR=16							
VIGV	**El Vigia**	**2.50**	**40**	*e*P		**Pn**	**19 30 15.6**	**+0.8**
VIGV				*e*S		**Sn**	**19 30 48.1**	**+0.4**
SOCV	**Socops**	**2.51**	**57**	⇓*i*P		**Pn**	**19 30 15.8**	**+0.8**
SOCV				*e*S		**Sn**	**19 30 47.9**	**+0.1**
SDV	**Santo Domingo**	**3.05**	**50**	P		**Pn**	**19 30 22.5**	**+1.0**
	36nm,0.3s,baz=257,slow=6.3,SNR=212							
SDV				S		**Sn**	**19 30 59.9**	**+0.5**
	30nm,0.3s,baz=257,slow=23,SNR=23							
ELOV	**Elorza**	**3.48**	**88**	⇓*i*P		**Pn**	**19 30 27.2**	**+0.4**
VIRV	**Villa del Rosa**	**3.61**	**9**	*e*P		**Pn**	**19 30 28.0**	**-0.5**
VIRV				*e*S		**Sn**	**19 31 10.0**	**-2.3**
QARV	**Quebrada Arrib**	**4.08**	**36**	*e*P		**Pn**	**19 30 35.5**	**+1.0**
QARV				*e*S		**Sn**	**19 31 22.3**	**-0.6**
SANV	**Sanarito**	**4.28**	**53**	*e*P		**Pn**	**19 30 37.5**	**+0.5**
CURV	**Curarigua**	**4.29**	**44**	*e*P		**Pn**	**19 30 37.8**	**+0.6**
DABV	**Dabajuro**	**4.61**	**30**	*e*P		**Pn**	**19 30 42.0**	**+0.6**
DABV				*e*S		**Sn**	**19 31 33.8**	**-1.4**
TEPV	**Terepaima**	**4.82**	**51**	*e*P		**Pn**	**19 30 44.7**	**+0.6**
SIQV	**Siquisique**	**4.86**	**40**	*e*P		**Pn**	**19 30 44.4**	**-0.2**
BAUV	**El Baul**	**5.30**	**67**	⇑*i*P		**Pn**	**19 30 49.3**	**-1.0**
BAUV				*e*S		**Sn**	**19 31 47.6**	**-3.6**
MONV	**Montecano**	**5.83**	**30**	*e*P		**Pn**	**19 30 57.3**	**+0.1**
CAOV	**Caicara del Or**	**6.62**	**86**	*e*P		**Pn**	**19 31 07.1**	**-0.7**
BDFB	**Brasilia**	**33.37**	**132**	P		**P**	**19 35 54.6**	**-0.2**
	0.7nm,0.5s,mb3.6,baz=353,slow=26,SNR=3.7							
TXAR	**Lajitas Array**	**36.50**	**311**	P		**P**	**19 36 22.1**	**+0.6**
	0.6nm,0.6s,mb3.4,baz=130,slow=9.3,SNR=11							
SCHQ	**Schefferville**	**48.04**	**5**	P		**P**	**19 37 56.1**	**+1.8**
	3.2nm,0.7s,mb4.1,baz=190,slow=11,SNR=5.2							
SCHQ	**Schefferville**	**48.04**	**5**	*e*P		**P**	**19 37 54.1**	**-0.1**
	3.8nm,0.7s,mb4.1							
YKA	**Yellowknife Ar**	**63.23**	**340**	P		**P**	**19 39 42.9**	**+0.6**
	0.7nm,0.6s,mb3.7,baz=131,slow=6.7,SNR=17							
YKA				pP		pP	19 40 21.4	-1.3
	0.2nm,0.5s,baz=132,slow=6.5,SNR=2.1							
DBIC	**Dimbokro**	**67.59**	**86**	P		**P**	**19 40 10.4**	**-0.9**
	1.2nm,0.5s,mb3.9,baz=350,slow=1.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**73.59**	**78**	P		**P**	**19 40 46.6**	**-0.9**
	0.3nm,0.6s,mb3.2,baz=282,slow=6.5,SNR=7.7							
TORD				pP		pP	19 41 29.1	0.0
	0.4nm,0.9s,baz=288,slow=5.9,SNR=1.9							
MKAR	**Makanchi Array**	**122.19**	**20**	PKP		PKPdf	19 48 07.3	+0.2
	0.2nm,0.3s,baz=296,slow=3.2,SNR=5.2							
SONM	**Songino Array**	**125.49**	**1**	PKP		PKPdf	19 48 15.2	+1.8
	0.2nm,0.4s,baz=270,slow=1.4,SNR=3.1							
ASAR	**Alice Springs**	**149.27**	**234**	PKPbc		PKPbc	19 49 01.7	-0.1
	0.4nm,0.6s,baz=118,slow=3.4,SNR=7.8							
WRA	**Warramunga Arr**	**150.50**	**241**	PKPbc		PKPbc	19 49 04.0	-0.8
	0.5nm,0.6s,baz=106,slow=2.8,SNR=13							
WRA				pPKPbc		pPKPbc	19 49 46.6	-3.1
	0.2nm,0.4s,baz=105,slow=2.6,SNR=1.9							
CMAR	**Chiang Mai Arr**	**153.56**	**17**	PKPbc		PKPbc	19 49 12.9	+1.1
	0.4nm,0.6s,baz=316,slow=2.4,SNR=4.1							

*ISCJB **24** 19:33:41.7±0.4, 4074N±005×2725E±004, h12km±4km, Error ellipse: s-maj=8.2km s-min=5.1km az=6.0*
*ISK **24** 19:33:41.5, 4073N×2724E, h10km, MD2.7*
*DDA **24** 19:33:41.9, 4074N×2733E, h7km±1km, Md2.8*
*CSEM **24** 19:33:41.4±0.1, 4075N×2724E, h12km, MD2.7, Error ellipse: s-maj=2.2km s-min=1.6km az=168.0*

ISC 24 19:33:42.0±0.4, 4075N±004×2726E±004, h11km±4km, n19, σ0°49/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SART	**Tekirdag**	**0.09**	**223**	*i*P		**Pg**	**19 33 45.0**	**+0.4**
SART				*i*S		**Sg**	**19 33 47.2**	**+0.8**
RKY	**Sarkoy-Tekirda**	**0.09**	**223**	*e*PG		**Pg**	**19 33 43.6**	**-1.0**
RKY				*e*SG		**Sg**	**19 33 46.1**	**-0.4**
TKR	**Tekirdag**	**0.32**	**41**	*e*PG		**Pg**	**19 33 49.2**	**+0.9**
EDC	**Edincik**	**0.61**	**131**	*e*PG		**Pg**	**19 33 53.8**	**-0.1**
BNT	**Bandirma**	**0.64**	**128**	*e*PG		**Pg**	**19 33 54.1**	**-0.3**
BNT				*e*SG		**Sg**	**19 34 02.5**	**-0.3**

ENEZ	**Enez**	**0.84**	**269**	*e*PG	**Pg**	**19 33 58.2**	**0.0**
ENEZ				*e*SG	**Sg**	**19 34 09.6**	**+0.4**
SLVT	**Silivri**	**0.86**	**56**	*e*PG	**Pg**	**19 33 58.7**	**+0.1**
KCT	**Karacabey**	**0.97**	**120**	*e*PG	**Pg**	**19 34 01.0**	**+0.4**
ELBA	**Catalca**	**0.97**	**66**	*i* P	**Pg**	**19 34 00.0**	**-0.6**
ELBA				*i* S	**Sg**	**19 34 12.9**	**-0.5**
CTKS	**Kestanelik-??a**	**1.06**	**63**	*e*PN	**Pn**	**19 34 02.6**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.06**	**47**	*e*PN	**Pn**	**19 34 02.6**	**-0.1**
EDRB	**Edirne**	**1.16**	**341**	*e*PN	**Pn**	**19 34 03.9**	**-0.1**
EZN	**Ezine**	**1.17**	**218**	*e*PN	**Pn**	**19 34 03.6**	**-0.5**
BALB	**Balikesir**	**1.21**	**157**	*e*PN	**Pn**	**19 34 05.1**	**+0.4**
BGKT	**Bogazkoy**	**1.22**	**69**	*e*PN	**Pn**	**19 34 05.4**	**+0.4**
ARMT	**Armutlu**	**1.23**	**98**	*e*PN	**Pn**	**19 34 05.5**	**+0.4**
KLYT	**Kilyos**	**1.44**	**69**	*e*PN	**Pn**	**19 34 08.0**	**+0.1**
GEMT	**Gemlik**	**1.50**	**102**	*e*PN	**Pn**	**19 34 09.4**	**+0.6**
SOF	**Sofiya**	**3.52**	**305**	*i* P	**Pn**	**19 34 35.6**	**-0.8**

GUC 24 19:34:46.5±0.7,2219S×6777W,h189km±6km,ML3.5, 2C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.14**	**248**	*e*P	Pn	19 35 17.2	+1.1
LVC				*i* S	Sn	19 35 41.0	+1.9
PECH	**Pedro de Valdi**	**1.81**	**257**	*e*P	Pn	19 35 23.8	+1.5
PECH				*i* S	Sn	19 35 52.0	+2.1
PECH	comp=N,415nm,0.2s			AML	AML	19 35 53.7	
PB01	**Plate Boundary**	**1.97**	**305**	*e*P	Pn	19 35 25.3	+1.4
PB01				*i* S	Sn	19 35 55.6	+2.8
PB01	comp=E,177nm,0.2s			AML	AML	19 35 57.4	
CEN1	**Los Morros**	**2.54**	**242**	*e*P	Pn	19 35 34.2	+4.1
CEN1				*i* S	Sn	19 36 09.9	+5.8
CEN1	comp=E,64nm,0.5s			AML	AML	19 36 11.7	
HMBC	**Humberston**	**2.75**	**314**	⇑*i* P	Pn	19 35 33.7	+1.1
HMBC				*e*S	Sn	19 36 10.1	+1.6
ANCH	**Antofagasta**	**2.85**	**238**	*e*P	Pn	19 35 35.5	+1.7
ANCH				*i* S	Sn	19 36 12.0	+1.3
PSGC	**Pisagua**	**3.40**	**319**	⇓*i* P	Pn	19 35 40.8	+0.4
PSGC				*i* S	Sn	19 36 23.1	+0.7
CPN1	**Cerro Paranal**	**3.42**	**224**	*i* S	Sn	19 36 23.2	+0.1
MNMC	**Miæe Miæ**	**3.50**	**330**	⇑*i* P	Pn	19 35 43.3	+1.6
MNMC				*i* S	Sn	19 36 26.7	+2.0

*IDC **24** 19:49:05.6±1.0, 3438N×8051E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/21, mbtmp3.7/6, Error ellipse: s-maj=59.1km s-min=25.2km az=32.0*
*NEIC **24** 19:49:07.0±0.9, 3463N×8054E, h10km, Error ellipse: s-maj=38.1km s-min=12.6km az=56.0*
*ISCJB **24** 19:49:11.7±3.7, 343N±0.3×805E±0.3, h55km±31km, mb3.5/6, Error ellipse: s-maj=56.2km s-min=29.3km az=31.7*
ISC 24 19:49:13.8±3.1,343N±0.3×805E±0.3,h60km±25km,n16, σ1§01/16,mb3.5/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**6.58**	**154**	*e*P	**Pn**	**19 50 46.9**	**-1.0**
GKN	**Gorkha**	**7.23**	**150**	*e*P	**Pn**	**19 50 56.5**	**-0.4**
KKN	**Kakani**	**7.69**	**147**	*e*P	**Pn**	**19 51 04.1**	**+0.9**
GUN	**Gumba**	**7.88**	**143**	*e*P	**Pn**	**19 51 08.0**	**+2.3**
JIRN	**Jiri**	**8.24**	**142**	*e*P	**Pn**	**19 51 11.7**	**+1.0**
RAMN	**Ramite**	**9.03**	**143**	*e*P	**Pn**	**19 51 20.7**	**-0.8**
TAPN	**Taplejung**	**9.30**	**137**	*e*P	**Pn**	**19 51 25.2**	**0.0**
ODAN	**Odare**	**9.51**	**140**	*e*P	**Pn**	**19 51 27.1**	**-1.0**
CMAR	**Chiang Mai Arr** 0.3nm,0.6s,mb2.9,baz=313,slow=10,SNR=4.0	**22.79**	**129**	P	**P**	**19 54 09.3**	**-2.1**
TORD	**Torodi Ar. Bea** 1.3nm,0.5s,mb4.1,baz=45,slow=5.1,SNR=36	**73.56**	**275**	P	**P**	**20 00 40.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**73.56**	**275**	P	**P**	**20 00 40.7**	**-0.2**
WRA	**Warramunga Arr** 0.2nm,0.5s,mb3.3,baz=323,slow=5.6,SNR=5.8	**74.38**	**128**	P	**P**	**20 00 46.3**	**+0.9**
ASAR	**Alice Springs** 0.4nm,0.5s,mb3.6,baz=318,slow=5.6,SNR=7.3	**76.79**	**131**	P	**P**	**20 00 59.9**	**+0.8**
YKA	**Yellowknife Ar** 0.2nm,0.9s,mb3.1,baz=334,slow=5.4,SNR=4.0	**82.73**	**7**	P	**P**	**20 01 30.6**	**-0.2**
YKA	**Yellowknife Ar**	**82.73**	**7**	P	**P**	**20 01 30.6**	**-0.2**
STKA	**Stephens Creek** 0.9nm,0.6s,mb4.2,baz=315,slow=4.3,SNR=3.3	**87.39**	**132**	P	**P**	**20 01 54.3**	**-0.1**

*BJI **24** 20:01:57.2, 4370N×12740W, h10km, mB5.1, mb4.8, Ms4.8, Ms2.4*
*ISCJB **24** 20:01:59.6±0.5, 4370N±004×12741W±006, h10km, mb4.3/17, MS3.9/22, Error ellipse: s-maj=6.8km s-min=5.4km az=37.6*
*NEIC **24** 20:02:01.3±1.2, 4367N×12739W, h10km, mb4.4/10, Error ellipse: s-maj=14.3km s-min=5.8km az=87.0*
*IDC **24** 20:02:04.4±1.1, 4376N×12664W, h0km, mb3.7/7, mb1 4.0/13, mb1mx3.8/30, mbtmp3.8/13, ML3.5/6, MS3.9/21, Ms1 3.9/21, ms1mx3.6/45, Error ellipse: s-maj=28.4km s-min=11.7km az=46.0*
ISC 24 20:02:01.0±0.5,4370N±004×12746W±006,h10km, (h13km±2.3km:pP-P),n88,σ1§08/77,mb4.3/17,MS3.9/22, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**2.70**	**84**	P	**Pn**	**20 02 43.0**	**-1.5**
MPOR	**Mary's Peak**	**2.93**	**73**	P	**Pn**	**20 02 45.8**	**-1.8**
HEBO	**Mount Hebo**	**3.06**	**59**	*e*Pn	**Pn**	**20 02 48.7**	**-0.6**
HEBO				*e*Sn	**Sn**	**20 03 29.9**	**+3.9**
COR	**Corvallis**	**3.12**	**72**	*e*Pn	**Pn**	**20 02 49.1**	**-1.2**
HSO	**Harness Mounta**	**3.18**	**92**	P	**Pn**	**20 02 49.3**	**-1.7**
KMOR	**Kings Mountain**	**3.43**	**54**	P	**Pn**	**20 02 53.8**	**-0.7**
HUMO	**Hull Mountain**	**3.47**	**107**	*e*Pn	**Pn**	**20 02 52.6**	**-2.4**
HUMO				*e*Sn	**Sn**	**20 03 31.4**	**-4.8**
HBO	**Huckleberry Mo**	**3.73**	**86**	P	**Pn**	**20 02 58.2**	**-0.3**
SSOR	**Sweet Springs**	**3.77**	**70**	P	**Pn**	**20 02 59.1**	**-0.1**
IRO	**Indian Ridge**	**3.78**	**84**	P	**Pn**	**20 02 58.2**	**-1.1**
FRIS	**Frissel Point**	**3.91**	**81**	P	**Pn**	**20 03 00.5**	**-0.5**
GT2	**Goat Mountain**	**3.99**	**67**	P	**Pn**	**20 03 02.6**	**+0.4**
YBH	**Yreka Blue Hor** 1.9nm,0.3s,baz=288,slow=12,SNR=37	**4.01**	**118**	Pn	**Pn**	**20 03 01.1**	**-1.4**
YBH	2.4nm,0.3s,baz=158,slow=19,SNR=8.1			Sn	**Sn**	**20 03 47.2**	**-2.4**
YBH	comp=Z,602nm,21.9s,baz=300,slow=40			LR	LR	20 04 24.0	
YBH	**Yreka Blue Hor**	**4.01**	**118**	*e*Pn	**Pn**	**20 03 00.8**	**-1.7**
BKCOR	**Black Crater**	**4.20**	**80**	P	**Pn**	**20 03 04.7**	**-0.4**
VLMM	**Larch Mountain**	**4.29**	**63**	P	**Pn**	**20 03 06.9**	**+0.6**
MTMW	**Mount Mitchell**	**4.40**	**56**	P	**Pn**	**20 03 08.3**	**+0.5**
VBEM	**Beaver Butte**	**4.43**	**70**	P	**Pn**	**20 03 08.9**	**+0.7**
HOOD	**Mount Hood Mea**	**4.46**	**67**	P	**Pn**	**20 03 09.4**	**+0.7**
VLL	**Laurance Lake**	**4.49**	**65**	P	**Pn**	**20 03 09.9**	**+0.8**
WDC	**Whiskeytown Da**	**4.81**	**129**	*e*Pn	**Pn**	**20 03 14.6**	**+1.3**
HDW	**Hoodsport**	**5.01**	**36**	P	**Pn**	**20 03 16.4**	**+0.2**
LON	**Longmire** 85nm,0.6s	**5.02**	**51**	*e*Pn	**Pn**	**20 03 17.1**	**+0.7**
MOD	**Modoc** 27nm,1.2s	**5.56**	**106**	Pn	**Pn**	**20 03 27.5**	**+3.7**
PGC	**Sidney**	**5.68**	**28**	*e*Pn	**Pn**	**20 03 25.5**	**+0.2**
HOPS	**Hopland** 186nm,1.5s	**5.75**	**143**	*e*Pn	**Pn**	**20 03 24.3**	**-2.0**
HAWA	**Hanford** 37nm,0.7s	**6.23**	**62**	*e*Pn	**Pn**	**20 03 33.4**	**+0.4**
BMO	**Blue Mountains** 19nm,0.8s	**7.38**	**78**	*e*Pn	**Pn**	**20 03 47.8**	**-0.9**
NEW	**Newport** 24nm,0.9s	**8.52**	**54**	*e*P	**Pn**	**20 04 04.5**	**+0.1**
NVAR	**Mina Array Bea** 0.2nm,0.3s,baz=300,slow=13,SNR=15	**8.69**	**124**	Pn	**Pn**	**20 04 07.2**	**+0.5**
NVAR	**Mina Array Bea**	**8.69**	**124**	Pn	**Pn**	**20 04 07.2**	**+0.5**
ELK	**Elko** 0.2nm,0.3s,baz=278,slow=7.7,SNR=6.9	**9.54**	**104**	Pn	**Pn**	**20 04 19.0**	**+0.7**
MSO	**Missoula** 16nm,0.9s	**10.03**	**67**	*e*Pn	**Pn**	**20 04 24.8**	**-0.3**
DLMT	**Dillon** 16nm,0.9s	**10.75**	**76**	*e*Pn	**Pn**	**20 04 34.8**	**0.0**
BOZ	**Bozeman (W)** 8.7nm,1.1s	**11.44**	**75**	*e*Pn	**Pn**	**20 04 44.6**	**+0.2**
DUG	**Dugway** 10nm,1.1s	**11.46**	**103**	*e*Pn	**Pn**	**20 04 45.3**	**+0.7**
RRI2	**Red Ridge** 12nm,0.9s	**11.73**	**86**	*e*Pn	**Pn**	**20 04 50.8**	**+2.5**
DCID1	**Drake Creek** 25nm,1.0s	**11.80**	**85**	*e*Pn	**Pn**	**20 04 52.1**	**+2.8**
SNOW	**Snow King Moun** 15nm,1.0s	**12.12**	**85**	Pn	**Pn**	**20 04 54.3**	**+0.6**
LDFC	**Landfair** 91nm,1.2s	**12.85**	**128**	*e*P	**Pn**	**20 05 05.4**	**+1.7**
EGMT	**Eagleton** 33nm,1.1s	**13.07**	**65**	*e*Pn	**Pn**	**20 05 06.9**	**+0.3**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=275,slow=11,SNR=27	**13.09**	**88**	Pn	**Pn**	**20 05 08.2**	**+1.2**
PDAR	comp=Z,544nm,20.5s,baz=95,slow=40			LR	LR	20 10 30.0	
PFO	**Pinyon Flat Ob** 0.1nm,0.3s,baz=311,slow=18,SNR=5.5	**13.23**	**136**	Pn	**Pn**	**20 05 10.6**	**+1.7**
WUAZ	**Wupatki**	**14.83**	**118**	*e*Pn	**Pn**	**20 05 33.0**	**+2.3**
MVCO	**Mesa Verde** 17nm,1.4s	**15.81**	**108**	P	**Pn**	**20 05 48.5**	**+4.9**
ISCO	**Idaho Springs** 21nm,1.1s	**16.75**	**96**	*e*P	**Pn**	**20 05 54.7**	**-1.0**
RSSD	**Black Hills** 15nm,1.1s	**16.88**	**80**	*e*P	**Pn**	**20 05 58.6**	**+1.4**
TUC	**Tucson**	**17.34**	**125**	*e*P	**Pn**	**20 06 03.8**	**+0.7**
SDCO	**Great Sand Dun** 19nm,1.2s	**17.66**	**102**	*e*P	**Pn**	**20 06 06.7**	**-0.3**
ANMO	**Albuquerque** 0.1nm,0.3s,baz=300,slow=12,SNR=5.0	**18.41**	**111**	Pn	**Pn**	**20 06 16.9**	**+0.7**
ANMO	comp=Z,316nm,18.2s,baz=304,slow=40			LR	LR	20 13 55.6	
ANMO	**Albuquerque**	**18.41**	**111**	Pn	**Pn**	**20 06 16.9**	**+0.7**
ANMO				LR	LR	20 13 55.6	
FFC	**Flin Flon** 130nm,1.8s	**19.85**	**47**	*e*P	**Pn**	**20 06 32.4**	**-1.0**
YKA	**Yellowknife Ar** 1.8nm,0.7s,baz=206,slow=11,SNR=13	**20.27**	**17**	P	**P**	**20 06 36.7**	**+0.3**
YKA	comp=Z,27nm,20.0s,MS2.6,baz=110,slow=36			LR	LR	20 14 11.7	
YKA	**Yellowknife Ar**	**20.27**	**17**	P	**P**	**20 06 36.7**	**+0.3**
YKA				LR	LR	20 14 11.7	
KDAK	**Kodiak Island** comp=Z,301nm,18.7s,MS3.7,baz=114,slow=31	**21.07**	**321**	LR	LR	20 13 04.4	
AMTX	**Amarillo** 12nm,0.9s,mb4.3	**21.74**	**105**	*e*P	**P**	**20 06 53.2**	**+0.7**
ECSD	**EROS,Sioux Fal** 25nm,1.2s,mb4.5	**22.24**	**79**	*e*P	**P**	**20 06 58.1**	**+0.4**
AGMN	**Agassiz Refuge** 42nm,1.4s,mb4.7	**22.34**	**67**	*e*P	**P**	**20 06 57.8**	**-0.9**
ULM	**Lac du Bonnet** 4.6nm,0.8s,mb4.0,baz=277,slow=9.4,SNR=6.0	**22.41**	**62**	P	**P**	**20 06 58.6**	**-0.9**
ULM	comp=Z,178nm,19.7s,MS3.5,baz=230,slow=40			LR	LR	20 16 37.0	
TXAR	**Lajitas Array** 1.5nm,0.9s,mb3.4,baz=301,slow=8.5,SNR=13	**23.79**	**119**	P	**P**	**20 07 13.0**	**-0.9**
TXAR	comp=Z,164nm,19.8s,MS3.5,baz=180,slow=36			LR	LR	20 15 55.8	
WMOK	**Wichita Mounta** 16nm,1.0s,mb4.4	**23.86**	**102**	*e*P	**P**	**20 07 14.1**	**-0.4**
LPIG	**La Paz** comp=Z,175nm,19.2s,MS3.5,baz=233,slow=35	**24.09**	**139**	LR	LR	20 15 53.6	
JCT	**Junction City** 10nm,0.9s,mb4.4	**25.57**	**112**	P	**P**	**20 07 29.6**	**-0.5**
SADO	**Sadowa** comp=Z,305nm,19.1s,MS4.0,baz=314,slow=38	**34.24**	**71**	LR	LR	20 23 17.7	
TKL	**Tuckaleechee C** comp=Z,286nm,20.1s,MS4.0,baz=292,slow=38	**34.24**	**88**	LR	LR	20 23 07.4	
CMIG	**Matias Romero** comp=Z,127nm,20.4s,MS3.7,baz=175,slow=37	**38.22**	**124**	LR	LR	20 25 33.2	
FRB	**Frobisher Bay** comp=Z,138nm,19.9s,MS3.8,baz=326,slow=38	**38.45**	**38**	LR	LR	20 26 24.5	
SCHQ	**Schefferville** comp=Z,294nm,18.2s,MS4.2,baz=80,slow=37	**39.89**	**52**	LR	LR	20 26 14.9	
TEIG	**Tepich** comp=Z,107nm,19.8s,MS3.7,baz=46,slow=39	**40.13**	**113**	LR	LR	20 27 56.1	
CN2	**Changchun**	**71.31**	**313**	*e*P	**P**	**20 13 21.3**	**+0.7**
SONM	**Songino Array** 1.0nm,1.0s,mb3.7,baz=15,slow=6.0,SNR=3.7	**77.26**	**326**	P	**P**	**20 14 02.6**	**+7.4**
SONM	comp=Z,95nm,20.9s,MS4.1,baz=135,slow=34			LR	LR	20 45 24.2	
BJI	**Beijing**	**78.82**	**315**	P	**P**	**20 14 02.9**	**-1.1**
BJI				S	S	20 23 58.8	-3.0
BJI	comp=Z,4.0nm,0.5s,mb4.6			AMB	AMB		
BJI	comp=Z,171nm,6.8s			AMB	AMB		
BJI	comp=N,259nm,15.4s,MS4.8			LR	LR		
BJI	comp=E,267nm,15.8s,MS4.8			LR	LR		
BJI	comp=Z,28nm,19.8s,MS3.6			LR	LR		
ZALV	**Zalesovo Beam** comp=Z,64nm,18.8s,MS4.0,baz=59,slow=36	**78.88**	**341**	LR	LR	20 49 09.9	
HHC	**Hu-ho-hao-te**	**80.48**	**319**	*e*P	**P**	**20 14 11.8**	**-1.2**
HHC				AP	pP	20 14 16.3	0.0
HHC				XP	sP	20 14 19.4	+1.9
HHC				PP	PP	20 17 14.6	-0.9
HHC				*e*S	S	20 24 14.0	-5.3
HHC				SS	SS	20 29 26.6	-3.5
HHC	comp=Z,6.0nm,0.7s,mb4.6			AMB	AMB		
HHC	comp=Z,138nm,4.9s			AMB	AMB		
HHC	comp=N,141nm,15.5s,MS4.6			LR	LR		
HHC	comp=E,168nm,17.8s,MS4.6			LR	LR		
HHC	comp=Z,120nm,13.1s,MS4.4			LR	LR		
GERES	**GERESS Array B** comp=Z,0.3nm,0.8s,mb3.3,baz=329,slow=3.7,SNR=2.9	**81.74**	**25**	P	**P**	**20 14 22.6**	**+3.1**
GERES				LR	LR	20 49 28.9	
DAVOX	**Davos/Dischmat** comp=Z,120nm,19.4s,MS4.3,baz=132,slow=37	**82.33**	**28**	LR	LR	20 52 32.7	
BVAR	**Borovoye Array** comp=Z,0.7nm,0.7s,mb3.7,baz=20,slow=4.7,SNR=4.5	**82.44**	**349**	P	**P**	**20 14 28.7**	**+5.6**
KURK	**Kurchatov** comp=Z,1.2nm,0.9s,mb3.9,baz=19,slow=5.0,SNR=4.0	**83.27**	**344**	P	**P**	**20 14 34.0**	**+6.6**
HNR	**Honiara** comp=Z,84nm,19.0s,MS4.1,baz=13,slow=32	**84.14**	**251**	LR	LR	20 48 02.0	
MKAR	**Makanchi Array** comp=Z,69nm,18.3s,MS4.1,baz=355,slow=37	**86.13**	**340**	LR	LR	20 55 19.7	
XAN	**Xi'an**	**87.13**	**316**	P	**P**	**20 14 46.4**	**-0.7**
XAN				AP	pP	20 14 49.3	-1.2
XAN				PP	PP	20 18 08.6	-1.4
XAN				S	S	20 25 24.8	-1.7
XAN				SS	SS	20 31 08.1	-0.5
XAN	comp=Z,2.0nm,0.8s,mb4.4			AMB	AMB		
XAN	comp=E,42nm,16.6s			LR	LR		
XAN	comp=Z,43nm,20.3s,MS3.9			LR	LR		
WMQ	**Urumqi**	**87.38**	**335**	*e*P	**P**	**20 14 49.8**	**+1.6**
LZH	**Lanzhou**	**87.91**	**321**	*e*P	**P**	**20 14 50.5**	**-0.4**
LZH				AP	pP	20 14 54.0	-0.2
LZH				XP	sP	20 14 57.0	+1.6
LZH	comp=Z,14nm,1.5s,mb5.0			AMB	AMB		
LZH	comp=Z,74nm,5.0s			AMB	AMB		
MLR	**Muntele Rosu** comp=Z,124nm,21.3s,MS4.3,baz=160,slow=37	**88.10**	**18**	LR	LR	20 56 46.2	
CD2	**Chengdu**	**92.21**	**318**	P	**P**	**20 15 10.5**	**-0.6**
CD2				AP	pP	20 15 14.9	+0.5
CD2				XP	sP	20 15 16.5	+0.9
CD2				PP	PP	20 18 52.8	+2.3
CD2				SKS		20 25 41.3	
CD2				S	S	20 26 09.3	-4.6
CD2				XS	sS	20 26 17.3	-2.1
CD2	comp=Z,20nm,0.5s			AMB	AMB		
CD2	comp=Z,200nm,5.5s			AMB	AMB		
CD2	comp=N,370nm,8.3s			LR	LR		
CD2	comp=Z,240nm,7.7s			LR	LR		
GYA	**Guiyang**	**94.36**	**313**	P	**P**	**20 15 20.8**	**-0.2**
GYA	comp=Z,10.0nm,1.0s,mb5.2			AMB	AMB		
CPUP	**Villa Florida** comp=Z,22nm,18.1s,MS3.7,baz=171,slow=36	**94.73**	**122**	LR	LR	20 58 39.4	
KMI	**Kunming**	**97.48**	**315**	P	**P**	**20 15 35.4**	**+0.2**
KMI				AP	pP	20 15 45.5	+6.9
KMI	comp=Z,7.0nm,1.2s,mb5.0			AMB	AMB		

*NEIC **24** 20:02:52.0±1.4, 2007S×17781W, h600km, mb4.0/2, Error ellipse: s-maj=30.7km s-min=25.9km az=55.0*
IDC 24 20:02:54.2±3.0,2018S×17788W,h620km±36km,mb3.1/4, mb1 3.3/5,mb1mx3.0/18,mbtmp3.2/5,Error ellipse: s-maj=40.5km s-min=25.8km az=169.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.53**	**192**	P	P	20 06 33.2	-0.4
CTA	**Charters Tower** 1.0nm,0.3s,baz=312,slow=1.9,SNR=6.0	**33.63**	**264**	P	P	20 08 46.0	+0.3
CTAO	**Charters Tower** 2.4nm,0.4s,baz=96,slow=11,SNR=14	**33.63**	**264**	*e*P	P	20 08 44.3	-1.5
STKA	**Stephens Creek** 3.2nm,0.5s	**38.03**	**244**	P	P	20 09 21.8	+0.1
ASAR	**Alice Springs** 2.2nm,1.0s,baz=90,slow=9.1,SNR=3.1	**44.70**	**256**	P	P	20 10 14.6	+0.4
ASAR	2.4nm,0.4s,baz=88,slow=8.8,SNR=83			PcP	PcP	20 11 43.1	+0.3
ASAR	0.2nm,0.4s,baz=108,slow=3.8,SNR=3.3			S	S	20 16 07.9	+0.5
ASAR	**Alice Springs** 0.9nm,0.8s,baz=92,slow=17,SNR=6.6	**44.70**	**256**	P	P	20 10 14.6	+0.4
ASAR				PcP	PcP	20 11 43.1	+0.3
ASAR				S	S	20 16 07.9	+0.5
WB2	**Warramunga Arr**	**44.75**	**262**	*e*P	P	20 10 13.8	-0.8
WRAB	**Tennant Creek** 2.6nm,0.8s	**44.75**	**262**	*e*P	P	20 10 14.0	-0.6
WRA	**Warramunga Arr** 1.7nm,0.5s,baz=97,slow=8.0,SNR=68	**44.76**	**262**	P	P	20 10 14.2	-0.5
GERES	**GERESS Array B** 0.6nm,0.8s,baz=46,slow=4.2,SNR=4.8	**149.93**	**345**	PKPbc	PKPbc	20 21 35.4	-0.3

*IDC **24** 20:06:57.7±20.0, 3607N×70.10E, h170km±199km, mb2.8/2, mb1 2.9/5, mb1mx2.7/25, mbtmp2.8/5, ML3.5/2, Error ellipse: s-maj=124.7km s-min=29.3km az=9.0*
*ISCJB **24** 20:07:03.0±0.7, 3641N±0.10×701E±0.2, h238km±9km, mb2.9/2, Error ellipse: s-maj=30.8km s-min=9.6km az=25.7*
*NEIC **24** 20:07:03.5±0.8, 3634N×7024E, h229km±10km, mb4.2/4, Error ellipse: s-maj=29.1km s-min=11.0km az=118.0*
ISC 24 20:07:03.9±0.7,364N±01×702E±02,h231km±9km,n18, σ0§82/21,mb2.9/2,2C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.05**	**207**	*e*P	**Pn**	**20 07 45.1**	**-0.3**
KBL				*e*S	**Sn**	**20 08 18.1**	**+0.2**
AML	**Almayashu** SNR=6.8	**6.36**	**24**	P	**Pn**	**20 08 36.2**	**+0.2**
AML	**Almayashu** 25nm,0.2s	**6.36**	**24**	*e*P	**Pn**	**20 08 36.2**	**+0.1**
KK31	**Karatay Array** 1.4nm,0.5s,baz=176,slow=12,SNR=21	**6.72**	**2**	Pn	**Pn**	**20 08 39.9**	**-0.8**
KK31	2.5nm,0.6s,baz=188,slow=21			⇑Sn	**S**	**20 09 51.2**	**-6.8**
EKS2	**Erkin-Say** SNR=15	**6.86**	**23**	P	**Pn**	**20 08 42.8**	**+0.3**
EKS2	**Erkin-Say** 9.1nm,0.5s	**6.86**	**23**	*e*P	**Pn**	**20 08 42.7**	**+0.2**
AAK	**Ala-Archa** SNR=13	**7.08**	**27**	P	**Pn**	**20 08 45.6**	**+0.4**
AAK	**Ala-Archa** 12nm,0.4s	**7.08**	**27**	*e*P	**Pn**	**20 08 45.5**	**+0.2**
KBK	**Karagaybulak** SNR=5.4	**7.27**	**29**	P	**Pn**	**20 08 48.3**	**+0.6**
USP	**Ospennovka** SNR=7.1	**7.64**	**24**	P	**Pn**	**20 08 52.7**	**+0.3**
TKM2	**Tokmak 2** 2.8nm,0.7s,baz=176,slow=12	**7.75**	**31**	⇑Pn	**Pn**	**20 08 53.9**	**+0.1**
TKM2	2.6nm,1.2s,baz=176,slow=12			⇓Sn	**S**	**20 10 06.7**	**-15**
TKM2	**Tokmak 2** 2.9nm,0.6s	**7.75**	**31**	*e*P	**Pn**	**20 08 53.4**	**-0.4**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=222,slow=15,SNR=6.8	**13.78**	**37**	P	**Pn**	**20 10 09.5**	**-0.3**
KURK	**Kurchatov** 0.0nm,0.3s,baz=212,slow=11,SNR=4.7	**15.57**	**20**	P	**Pn**	**20 10 29.3**	**-2.1**
KURK	**Kurchatov**	**15.57**	**20**	P	**Pn**	**20 10 29.3**	**-2.1**
BVAR	**Borovoye Array** 0.3nm,0.3s,baz=168,slow=9.5,SNR=6.1	**16.64**	**0**	P	**P**	**20 10 44.8**	**+2.2**
TORD	**Torodi Ar. Bea** 0.2nm,0.6s,mb2.9,baz=46,slow=5.8,SNR=3.3	**65.05**	**268**	P	**P**	**20 17 19.5**	**-0.3**
WRA	**Warramunga Arr** 0.2nm,0.9s,mb2.8,baz=327,slow=4.6,SNR=2.8	**82.50**	**121**	P	**P**	**20 19 01.0**	**+0.2**

*ISCJB **24** 20:09:17.4±0.5, 4379N±005×10507W±0.06, h0km, Error ellipse: s-maj=7.0km s-min=5.9km az=137.5*
*IDC **24** 20:09:18.9±1.7, 4363N×10542W, h0km, mb1 3.6/4, mb1mx3.4/25, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=41.1km s-min=8.0km az=148.0*
*NEIC **24** 20:09:19.5±0.5, 4371N×10516W, h0km, ML3.0, Error ellipse: s-maj=8.4km s-min=5.8km az=166.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 24 20:09:19.6±0.5,4374N±005×10512W±006,h0km,n21, σ1§10/24,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.88**	**64**	*e*P	**Pg**	**20 09 37.8**	**+1.5**
PHWY	**Pilot Hill**	**2.45**	**186**	*e*P	**Pn**	**20 10 00.5**	**-0.2**
PHWY				*e*S	**Sn**	**20 10 31.5**	**+0.2**
RWWY	**Rawlins**	**2.56**	**218**	*e*P	**Pn**	**20 10 01.4**	**-0.9**
RLMT	**Red Lodge**	**3.27**	**296**	*e*Pn	**Pn**	**20 10 11.2**	**-0.9**
BW06	**Boulder Array**	**3.38**	**255**	*e*Pn	**Pn**	**20 10 11.7**	**-1.8**
PDAR	**Pinedale Array** 1.5nm,0.3s,baz=84,slow=16,SNR=42	**3.38**	**255**	Pn	**Pn**	**20 10 12.1**	**-1.5**
PDAR	3.4nm,0.3s,baz=70,slow=21,SNR=57			Pg	**Pg**	**20 10 16.6**	**-7.8**
PDAR	4.9nm,0.3s,baz=74,slow=32,SNR=4.5			Lg		20 10 57.4	
OGNE	**Ogallala**	**3.61**	**140**	*e*Pn	**Pn**	**20 10 17.6**	**+0.9**
ISCO	**Idaho Springs**	**3.95**	**185**	*e*P	**Pn**	**20 10 21.4**	**0.0**
LOHW	**Long Hollow**	**3.98**	**270**	*e*P	**Pn**	**20 10 21.9**	**+0.2**
MOOW	**Moose Ponds**	**4.07**	**272**	*e*P	**Pn**	**20 10 22.9**	**-0.1**
SNOW	**Snow King Moun**	**4.10**	**268**	*e*P	**Pn**	**20 10 26.5**	**+3.1**
REDW	**Red Top Meadow**	**4.18**	**267**	*e*P	**Pn**	**20 10 24.3**	**-0.3**
IMW	**Indian Meadow**	**4.21**	**274**	*e*P	**Pn**	**20 10 28.1**	**+3.1**
RRI2	**Red Ridge**	**4.52**	**267**	*e

MRVT	**Maraveh tapeh**	**0.94**	**45**	*e*Pg		**Pg**	**20 14 45.2**	**-0.2**
	SNR=90							
MRVT				*e*Sg		**Sg**	**20 14 59.7**	**+2.1**
	SNR=90							
IGLO	**Ghaloghah**	**1.24**	**247**	*e*Pg		**Pg**	**20 14 49.7**	**-1.5**
IGLO				*e*Sg		**Sg**	**20 15 06.2**	**-1.1**
IGLO				*e*			20 15 19.9	
IKIA	**Kiasar**	**1.49**	**239**	*e*Pn		**Pn**	**20 14 54.1**	**-0.8**
IKIA				*e*Sn		**Sn**	**20 15 15.0**	**+0.2**
IKIA	**Kiasar**	**1.49**	**239**	*e*Pn		**Pn**	**20 14 54.1**	**-0.8**
IKIA				*e*			20 14 57.9	
IKIA				*e*Sn		**Sn**	**20 15 15.0**	**+0.2**
IANJ	**Anjilo**	**1.87**	**216**⇓	*e*Pn		**Pn**	**20 15 00.1**	**-0.1**
IANJ	**Anjilo**	**1.87**	**216**	*e*Pn		**Pn**	**20 14 59.6**	**-0.6**
IANJ				*e*			20 15 34.5	
ISHM	**Shahmirzad**	**1.98**	**234**	*e*Sn		**Sn**	**20 15 27.3**	**+0.4**
ISHM	**Shahmirzad**	**1.98**	**234**	*e*Pn		**Pn**	**20 15 02.4**	**+0.7**
ISHM				*e*			20 15 07.8	
ISHM				*e*Sn		**Sn**	**20 15 26.5**	**-0.4**
ISHV	**Shirvan**	**2.03**	**74**	*e*Sn		**Sn**	**20 15 28.3**	**+0.1**
ISHV	**Shirvan**	**2.03**	**74**	*e*Pn		**Pn**	**20 15 03.5**	**+1.1**
ISHV				*e*Sn		**Sn**	**20 15 30.5**	**+2.3**
ISHV				*e*			20 15 39.5	
IALA	**Alasht**	**2.17**	**246**	*e*Pn		**Pn**	**20 15 04.7**	**+0.4**
IALA				*e*Lg			20 15 35.2	
IFIR	**Firoozkooh**	**2.43**	**237**	*e*Pn		**Pn**	**20 15 09.5**	**+1.6**
IFIR	**Firoozkooh**	**2.43**	**237**	*e*Pn		**Pn**	**20 15 09.5**	**+1.6**
IFIR				*e*			20 15 12.3	
ILAS	**Lasjerd**	**2.46**	**230**	*e*Pn		**Pn**	**20 15 09.3**	**+1.0**
ILAS	**Lasjerd**	**2.46**	**230**	*e*Pn		**Pn**	**20 15 09.3**	**+1.0**
ILAS				*e*			20 15 12.6	
IPRN	**Peran**	**2.46**	**253**	*e*Pn		**Pn**	**20 15 09.2**	**+0.8**
IPRN				*e*Sn		**Sn**	**20 15 40.3**	**+1.4**
IPRN				*e*			20 15 51.5	
IKRD	**Kardeh**	**2.62**	**94**	*e*Pn		**Pg**	**20 15 22.3**	**+4.7**
IKRD				*e*			20 16 35.5	
IAKL	**Akhelmad**	**2.84**	**97**	*e*Pn		**Pn**	**20 15 13.5**	**0.0**
IAKL				*e*			20 15 33.8	
IDMV	**Damavand**	**2.96**	**242**	*e*Pn		**Pn**	**20 15 17.1**	**+1.9**
IDMV				*e*Sn		**Sn**	**20 15 50.2**	**-1.0**
IDMV	**Damavand**	**2.96**	**242**	*e*Pn		**Pn**	**20 15 17.2**	**+2.0**
IDMV				*e*			20 15 20.0	
IDMV				*e*Sn		**Sn**	**20 15 50.3**	**-0.9**
IPAY	**Payeh**	**3.06**	**99**	*e*Pn		**Pn**	**20 15 16.7**	**+0.2**
IPAY	**Payeh**	**3.06**	**99**	*e*Pn		**Pn**	**20 15 16.7**	**+0.2**
IPAY				*e*			20 15 42.2	
IMOG	**Moghan**	**3.41**	**104**	*e*Pn		**Pn**	**20 15 20.8**	**-0.5**
IMOG	**Moghan**	**3.41**	**104**	*e*Pn		**Pn**	**20 15 20.8**	**-0.5**
IMOG				*e*			20 15 39.1	
IVRN	**Varamin**	**3.48**	**236**	*e*Pn		**Pn**	**20 15 22.6**	**+0.2**
IVRN	**Varamin**	**3.48**	**236**	*e*Pn		**Pn**	**20 15 22.8**	**+0.4**
IVRN				*e*			20 15 38.5	
CHTH	**Charan**	**3.50**	**253**	*e*Pn		**Pn**	**20 15 25.2**	**+2.6**
ISFB	**Sefidab**	**3.60**	**224**	*e*Pn		**Pn**	**20 15 23.9**	**-0.1**
ISFB	**Sefidab**	**3.60**	**224**	*e*Pn		**Pn**	**20 15 23.9**	**-0.1**
ISFB				*e*			20 15 40.9	
IMYA	**Miami**	**3.95**	**98**	*e*Pn		**Pn**	**20 15 29.3**	**+0.5**
IMYA				*e*Sn		**Sn**	**20 16 15.0**	**-0.7**
IMYA	**Miami**	**3.95**	**98**	*e*Pn		**Pn**	**20 15 29.3**	**+0.5**
IMYA				*e*Sn		**Sn**	**20 16 15.0**	**-0.7**
IMYA				*e*			20 16 52.0	
GHVR	**GHOM**	**4.08**	**233**	*e*Pn		**Pn**	**20 15 31.9**	**+1.3**
NASN	**Na'in**	**4.64**	**206**	*e*Pn		**Pn**	**20 15 37.1**	**-1.3**
NASN				AML		AML	20 16 12.8	
	comp=E,9.8nm,0.6s							
IZEF	**Zefreh**	**4.74**	**211**	*e*Pn		**Pn**	**20 15 39.7**	**0.0**
IZEF				*e*			20 17 13.1	
IKLH	**Kolahrood**	**4.74**	**220**	*e*Pn		**Pn**	**20 15 38.8**	**-0.9**
IKLH	**Kolahrood**	**4.74**	**220**	*e*Pn		**Pn**	**20 15 38.8**	**-0.9**
IKLH				*e*			20 17 05.7	
ICHK	**Chekchek**	**4.79**	**189**	*e*Pn		**Pn**	**20 15 39.4**	**-0.9**
ICHK	**Chekchek**	**4.79**	**189**	*e*Pn		**Pn**	**20 15 39.0**	**-1.3**
ICHK				*e*			20 16 01.3	
ASAO	**Ashtian**	**4.90**	**242**	*e*Pn		**Pn**	**20 15 43.5**	**+1.7**
ASAO	**Ashtian**	**4.90**	**242**	*e*Pn		**Pn**	**20 15 43.5**	**+1.6**
	SNR=47							
ITEG	**Tejag**	**4.99**	**144**⇓	*e*Pn		**Pn**	**20 15 42.8**	**-0.4**
ITEG	**Tejag**	**4.99**	**144**	*e*Pn		**Pn**	**20 15 42.9**	**-0.3**
ITEG				*e*			20 15 43.8	
ISAD	**Sadrabad**	**5.23**	**195**	*e*Pn		**Pn**	**20 15 45.8**	**-0.6**
ISAD	**Sadrabad**	**5.23**	**195**	*e*Pn		**Pn**	**20 15 45.8**	**-0.6**
ISAD				*e*			20 17 19.7	
IBAF	**Bafgh**	**5.40**	**177**	*e*Pn		**Pn**	**20 15 47.6**	**-1.1**
IBAF	**Bafgh**	**5.40**	**177**	*e*Pn		**Pn**	**20 15 47.6**	**-1.1**
IBAF				*e*			20 17 27.6	
IKOO	**Kooshah**	**5.51**	**145**	*e*Pn		**Pn**	**20 15 49.6**	**-0.6**
IKOO	**Kooshah**	**5.51**	**145**	*e*Pn		**Pn**	**20 15 49.6**	**-0.6**
IKOO				*e*			20 15 50.5	
IPIR	**Pirpir**	**5.60**	**221**	*e*Pn		**Pn**	**20 15 54.2**	**+2.7**
IPIR				*e*			20 15 56.2	
IMEH	**Mehriz**	**5.61**	**186**	*e*Pn		**Pn**	**20 15 50.6**	**-1.1**
IMEH	**Mehriz**	**5.61**	**186**	*e*Pn		**Pn**	**20 15 50.6**	**-1.1**
IMEH				*e*			20 17 30.9	
GLBA	**Clilabad**	**5.86**	**295**	P		**Pn**	**20 15 54.4**	**-0.6**
	SNR=2.9							
PQL	**Pirkuli**	**6.43**	**308**	P		**Pn**	**20 16 04.0**	**+1.1**
	SNR=5.4							
BRDA	**Brd**	**7.11**	**300**	P		**Pn**	**20 16 12.1**	**-0.2**
	SNR=3.1							
BRDA				S		**Sn**	**20 17 32.4**	**-1.2**
SEKA	**Sheki**	**7.54**	**306**	P		**Pn**	**20 16 18.1**	**-0.1**
	SNR=6.6							
SEKA				S		**Sn**	**20 17 42.2**	**-2.0**
GANJ	**Ganja**	**7.87**	**300**	P		**Pn**	**20 16 22.2**	**-0.4**
	SNR=3.5							
AB09	**Akbulak array**	**12.72**	**14**	⇑Pn		**Pn**	**20 17 26.2**	**-2.8**
	comp=E,0.7nm,0.7s,baz=201,slow=14							
AB09				Sn		**Sn**	**20 19 43.3**	**-7.8**
	baz=199,slow=22							
AB09	**Akbulak array**	**12.72**	**14**	Pn		**Pn**	**20 17 26.2**	**-2.8**
	comp=E,0.7nm,0.7s							
AKTO	**Aktyubinsk**	**13.58**	**8**	⇓Pn		**Pn**	**20 17 38.7**	**-2.1**
	comp=E,5.1nm,3.2s							
AKTO				⇓Sn		**Sn**	**20 20 06.4**	**-5.7**
	comp=E,0.4nm,0.9s							
AKTO	**Aktyubinsk**	**13.58**	**8**	Pn		**Pn**	**20 17 38.8**	**-2.0**
	comp=E,0.3nm,0.3s,baz=180,slow=15,SNR=7.4							
BVAR	**Borovoye Array**	**19.21**	**29**	P		**Pn**	**20 18 52.2**	**-0.9**
	baz=217,slow=11							
MKAR	**Makanchi Array**	**22.29**	**55**	P		**P**	**20 19 24.5**	**-1.1**
	comp=E,1.0nm,0.6s,mb3.4,baz=243,slow=11,SNR=5.7							
AKASG	**Malin Array Be**	**23.09**	**315**	P		**P**	**20 19 35.7**	**+1.7**
	comp=E,0.9nm,0.6s,mb3.4,baz=132,slow=9.7,SNR=5.1							
ESDC	**Sonseca Array**	**45.80**	**292**	P		**P**	**20 22 52.8**	**+2.5**
	comp=E,0.1nm,0.5s,mb3.0,baz=69,slow=8.4,SNR=4.4							

*CSEM **24** 20:15:37.1±0.1,3801N×4298E,h2km,MD3.6,Error ellipse: s-maj=2.2km s-min=1.3km az=141.0*
*ISK **24** 20:15:38.0,3799N×4299E,h6km,ML3.5*
*ISCJB **24** 20:15:40.3±0.4,38.12N±003×4292E±003,h10km,Error ellipse: s-maj=4.5km s-min=3.1km az=41.2*
*DDA **24** 20:15:40.6,3821N×4289E,h10km±5km,Md3.6*

ISC 24 20:15:39.9±0.6,3811N±003×4292E±004,h0km±5km,n28, σ1§16/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	**Van**	**0.50**	**48**	*e*PG	**Pg**	**20 15 47.5**	**-1.9**
VANT				*e*SG	**Sg**	**20 15 55.3**	**-0.6**
TVAN	**Van**	**0.56**	**43**	*i* P	**Pg**	**20 15 50.1**	**-0.6**
TVAN				*i* S	**Sg**	**20 15 58.5**	**+0.5**
VANB	**Van**	**0.61**	**38**	*e*PG	**Pg**	**20 15 50.6**	**-0.9**
VANB				*e*SG	**Sg**	**20 16 01.6**	**+2.3**
TATV	**Tatvan**	**0.65**	**308**	*i* P	**Pg**	**20 15 52.2**	**0.0**
TATV	**Tatvan**	**0.65**	**308**	*i* P	**Pg**	**20 15 52.2**	**0.0**
HAKT	**HAKKARI**	**0.84**	**131**	*i* P	**Pg**	**20 16 00.4**	**+4.5**
HAKT				*i* S	**Sg**	**20 16 11.5**	**+4.8**
CUKT	**Cukurca**	**1.02**	**147**	*e*PG	**Pg**	**20 15 55.7**	**-3.8**
CLDR	**Caldiran**	**1.29**	**37**	*e*PN	**Pn**	**20 16 04.0**	**-1.1**
CLDR				*e*SN	**Sn**	**20 16 23.4**	**+0.3**
BEST	**Besiri**	**1.32**	**261**	*i* P	**Pg**	**20 16 04.5**	**-0.7**
BEST				*i* S	**Sg**	**20 16 23.6**	**+1.3**
AGRB	**Hanur-Agry**	**1.46**	**2**	*e*PN	**Pn**	**20 16 07.1**	**-0.3**
DYDN	**Diyadin**	**1.55**	**23**	*i* P	**Pn**	**20 16 07.8**	**-0.8**
BNGL	**BİNGOL**	**1.62**	**302**	*i* P	**Pn**	**20 16 10.6**	**+1.0**
BNGL				*i* S	**Sn**	**20 16 33.9**	**+2.7**
MSL	**Mosul**	**1.72**	**175**	*e*Pn	**Pn**	**20 16 10.0**	**-1.0**
MSL				*i* Sn	**Sn**	**20 16 34.0**	**+0.4**
MSL				*i* Sb	**Sb**	**20 16 35.0**	**+0.6**
MSL				*i* Sg	**Sg**	**20 16 37.0**	**+2.0**
MARD	**Mardin**	**1.88**	**245**	*i* P	**Pn**	**20 16 11.0**	**-2.1**
HOMI	**Horasan**	**2.08**	**338**	*i* P	**Pn**	**20 16 17.1**	**+1.1**
DIY	**Diyarbakir**	**2.14**	**265**	*e*PN	**Pn**	**20 16 15.9**	**-0.8**
ERZM	**Erzurum**	**2.16**	**326**	*i* P	**Pn**	**20 16 18.6**	**+1.5**
EZM	**Erzurum**	**2.16**	**326**	*e*PN	**Pn**	**20 16 17.7**	**+0.6**
DIYA	**Diyarbakir**	**2.22**	**266**	*i* P	**Pn**	**20 16 16.4**	**-1.4**
NAX	**Nakhchivan**	**2.28**	**62**	P	**Pn**	**20 16 20.3**	**+1.6**
	SNR=63							
KARS	**Kars**	**2.50**	**3**	*e*PN	**Pn**	**20 16 22.1**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.85**	**276**	*e*PN	**Pn**	**20 16 26.1**	**-0.5**
PTK	**Pertek**	**2.87**	**287**	*e*PN	**Pn**	**20 16 26.9**	**+0.1**
URFA	**Urfa**	**3.31**	**260**	*e*PN	**Pn**	**20 16 32.3**	**-0.6**
MYA	**Malataya**	**3.54**	**275**	*e*PN	**Pn**	**20 16 36.0**	**-0.1**
ATAB	**Bozova**	**3.72**	**261**	*i* P	**Pn**	**20 16 35.8**	**-2.7**
AKCD	**Akcadag**	**3.94**	**274**	*i* P	**Pn**	**20 16 40.8**	**-0.7**
ANDN	**Andirin**	**5.23**	**266**	*i* P	**Pb**	**20 17 13.2**	**+1.1**

IDC 24 20:30:58.0±1.4,757S×3731E,h0km,mb3.6/4,mb1 3.7/5, mb1mx3.4/24,mbtmp3.7/5,ML3.2/1,MS2.9/2,Ms1 2.9/2, ms1mx2.8/26,Error ellipse: s-maj=58.1km s-min=21.2km az=125.0,Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.77**	**229**	Pn	Pn	20 33 47.4	+0.1
	0.2nm,0.3s,baz=59,slow=12,SNR=2.1						
LSZ				Lg		20 37 10.0	
	0.5nm,0.3s,baz=158,slow=18,SNR=5.6						
LSZ				LR	LR	20 38 30.8	
	comp=Z,38nm,21.2s,baz=321,slow=38						
BOSA	**Boshof**	**23.83**	**207**	P	P	20 36 13.4	+0.5
	2.2nm,0.7s,baz=35,slow=11,SNR=7.0						
BOSA				LR	LR	20 45 09.2	
	comp=Z,52nm,21.5s,baz=321,slow=36						
ESDC	**Sonseca Array**	**60.54**	**324**	P	P	20 41 10.5	+0.3
	0.6nm,0.8s,baz=119,slow=7.1,SNR=4.5						
MKAR	**Makanchi Array**	**67.25**	**32**	P	P	20 41 54.5	+0.3
	0.7nm,0.8s,baz=232,slow=5.4,SNR=4.1						
KURK	**Kurchatov**	**68.13**	**27**	P	P	20 41 58.7	-1.0
	0.5nm,1.1s,baz=216,slow=4.0,SNR=2.5						

*IDC **24** 20:46:13.6±0.7,1225N×8830W,h0km,mb4.3/13, mb1 4.5/15,mb1mx4.3/25,mbtmp4.3/15,ML3.8/2,MS3.5/8, Ms1 3.4/8,ms1mx3.2/30,Error ellipse: s-maj=26.7km s-min=12.8km az=55.0*
*CASC **24** 20:46:16.9±2.1,1205N×8862W,h21km±12km,MD4.2, ML3.8,mb4.7(NEIC)*
*ISCJB **24** 20:46:17.3±0.6,1203N±005×8864W±004,h50km±5km, mb4.5/31,MS3.8/8,Error ellipse: s-maj=9.8km s-min=4.3km az=36.0*
*BJI **24** 20:46:19.6,1210N×8860W,h63km,mB5.5,Ms5.1,Msz4.8*
*NEIC **24** 20:46:20.6±1.2,1209N×8861W,h64km±10km,mb4.7/20, Error ellipse: s-maj=14.0km s-min=7.4km az=49.0*

ISC 24 20:46:19.1±0.6,1207N±005×8859W±004,h48km±5km,n99, σ1§09/80,mb4.5/31,MS3.8/8,5C-5D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**1.38**	**13**⇑	*e*P	x	20 46 41.7	
VSM				*e*P	x	20 46 41.7	
BLLM	**Bellamira**	**1.41**	**14**	*e*P	x	20 46 41.6	
CNCH	**Conchagua**	**1.41**	**32**	*e*P	x	20 46 41.4	
CNCH				*e*P	x	20 46 41.9	
SNVI	**San Vicente**	**1.55**	**351**	*e*P	x	20 46 43.2	
SNVI				*e*P	x	20 46 43.4	
LFRS	**El Faro**	**1.61**	**343**	*e*P	x	20 46 43.6	
CRIN	**San Cristobal**	**1.63**	**67**⇓	*e*P	**Pn**	**20 46 44.9**	**-0.5**
LBRS	**Las Brisas**	**1.71**	**345**	*e*P	x	20 46 45.7	
SNET	**Serv Nac Est T**	**1.72**	**339**	*e*P	x	20 46 45.0	
CAHU	**Cacaquatique**	**1.73**	**12**⇑	*e*P	x	20 46 46.9	
CAHU				*e*P	x	20 46 46.9	
TEL3	**Telica 3**	**1.78**	**74**	*e*P	**Pn**	**20 46 46.6**	**-0.8**
BOQS	**Boqueron**	**1.79**	**338**	*e*P	x	20 46 46.6	
BOQS				*e*P	x	20 46 46.6	
BOQS				*e*S	x	20 47 10.1	
BOQS				*e*S	x	20 47 10.4	
MIRN	**Miramar**	**1.87**	**79**	*e*P	**Pn**	**20 46 47.9**	**-0.8**
CNGN	**Cerro Negro**	**1.90**	**77**	*e*P	**Pn**	**20 46 47.8**	**-1.2**
CNGN				*e*S	**Sn**	**20 47 15.2**	**+3.5**
COPN	**Copaltepe**	**1.96**	**87**⇓	*e*P	**Pn**	**20 46 49.0**	**-0.8**
SBLS	**San Blas**	**2.03**	**330**⇓	*e*P	x	20 46 49.8	
SBLS				*e*P	x	20 46 50.0	
MOMN	**Momotombo**	**2.03**	**80**	*e*P	**Pn**	**20 46 50.3**	**-0.6**
SNJE	**San Jose**	**2.04**	**331**	*e*P	x	20 46 50.2	
RTR	**El Retiro**	**2.09**	**331**	*e*P	x	20 46 51.1	
CSAN		**2.12**	**87**⇑	*e*P	**Pn**	**20 46 51.6**	**-0.5**
APYN	**Apoyeque**	**2.19**	**86**	*e*P	**Pn**	**20 46 52.4**	**-0.7**
APYN				AML	AML	20 47 26.8	
	comp=Z,2μm,0.3s						
XAVN	**Gruta Xavier**	**2.21**	**88**⇓	*e*P	**Pn**	**20 46 52.8**	**-0.6**
XAVN				*e*S	**Sn**	**20 47 21.0**	**+1.5**
CRUN	**El Crucero**	**2.24**	**92**	*e*P	**Pn**	**20 46 53.8**	**0.0**
MGAN	**Managua**	**2.29**	**88**	*e*P	**Pn**	**20 46 53.7**	**-0.8**
MGAN				*e*S	**Sn**	**20 47 22.2**	**+0.7**
MGAN				AML	AML	20 47 25.6	
	comp=Z,2μm,0.3s						
RBDL	**Robledal**	**2.29**	**332**	*e*P	x	20 46 54.6	
TICN	**Ticuantepe**	**2.31**	**91**	*e*P	**Pn**	**20 46 54.3**	**-0.3**
WILN	**Americas 2**	**2.35**	**88**	*e*P	**Pn**	**20 46 53.4**	**-1.9**
TGUH	**Tegucigalpa,Un**	**2.35**	**33**⇑	*e*P	**Pn**	**20 46 55.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.35**	**33**	*e*Pn	**Pn**	**20 46 55.3**	**0.0**
HUEN		**2.38**	**83**⇓	*e*P	**Pn**	**20 46 55.0**	**-0.6**
HUEN				*e*P		20 46 55.3	
HUEN				*e*S	**Sn**	**20 47 25.1**	**+1.6**
MTO2	**Montecristo 2**	**2.43**	**342**	*e*P	x	20 46 56.6	
APON	**Apoyo**	**2.47**	**93**	*e*P	**Pn**	**20 46 56.3**	**-0.7**
APON				AML	AML	20 47 46.3	
	comp=Z,162nm,0.5s						
IXG	**Ixpaco**	**2.77**	**319**	*e*P	**Pn**	**20 47 00.5**	**-0.6**
SSN	**San Juan del S**	**2.79**	**106**	*e*P	**Pn**	**20 47 00.1**	**-1.2**
CONN	**Concepcion**	**2.94**	**100**	*e*P	**Pn**	**20 47 02.2**	**-1.2**
FUG	**Fuego 3**	**3.22**	**317**	*e*P	**Pn**	**20 47 07.3**	**0.0**
FUG				*e*S	**Sn**	**20 47 44.6**	**+0.2**
FG6		**3.33**	**318**	*e*P	**Pn**	**20 47 09.8**	**+1.1**
JCR	**Jicaral**	**4.07**	**123**	*e*P	**Pn**	**20 47 18.4**	**-0.5**
JCR				*e*S	**Sn**	**20 48 03.4**	**-1.8**
CGA2	**Cerro Gallo 2**	**4.53**	**116**	*e*P	**Pn**	**20 47 26.4**	**+1.2**
PRS1	**Puriscal**	**4.68**	**116**	*e*P	**Pn**	**20 47 28.4**	**+1.0**
PRS1				*e*S	**Sn**	**20 48 21.8**	**+1.4**
LAJ	**Bijagual**	**4.91**	**116**	*e*P	**Pn**	**20 47 26.1**	**-4.3**
QCR	**Quepos**	**5.08**	**121**⇓	*e*P	**Pn**	**20 47 33.2**	**+0.5**
URSC	**Urasca**	**5.22**	**115**	*e*P	**Pn**	**20 47 35.8**	**+1.1**
URSC				*e*S	**Sn**	**20 48 38.2**	**+4.6**
ACR	**Cerro Adams**	**6.32**	**122**	*e*P	**Pn**	**20 47 50.9**	**+1.1**
CMIG	**Matias Romero**	**7.88**	**310**	Pn	**Pn**	**20 48 10.5**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=112,slow=9.2,SNR=14						
CMIG				Sn	**Sn**	**20 49 34.9**	**-4.1**
	comp=Z,1.2nm,0.3s,baz=4.4,slow=5.6,SNR=2.8						
TEIG	**Tepich**	**8.11**	**2**	Pn	**Pn**	**20 48 15.5**	**+1.1**
	comp=Z,1.6nm,0.3s,baz=357,slow=2.8,SNR=6.5						
TEIG				LR	LR	20 51 28.7	
	comp=Z,328nm,21.7s,baz=228,slow=40						
TEIG	**Tepich**	**8.11**	**2**	*e*Pn	**Pn**	**20 48 16.5**	**+2.1**
MTDJ	**Mount Denham**	**12.30**	**59**	*e*P	**Pn**	**20 49 13.8**	**+2.1**
ROSC	**El Rosal**	**15.81**	**116**	Pn	**Pn**	**20 50 01.5**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=90,slow=20,SNR=2.3						
CHI2		**16.43**	**115**	*e*P	x	20 46 44.2	
SDV	**Santo Domingo**	**17.94**	**98**	P	**Pn**	**20 50 20.2**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=47,slow=20,SNR=5.8						
SDV				LR	LR	20 57 29.9	
	comp=Z,82nm,21.8s,baz=159,slow=38						
VBMS	**Vicksburg**	**20.13**	**355**	*e*P	**P**	**20 50 51.5**	**+2.4**
	comp=Z,76nm,0.6s						
NATX	**Nacogdoches**	**20.38**	**345**	*e*P	**P**	**20 50 53.5**	**+1.6**
	comp=Z,25nm,0.7s						
LRAL	**Lakeview Retre**	**20.92**	**4**	*e*P	**P**	**20 50 59.0**	**+1.4**
	comp=Z,16nm,0.9s						
JCT	**Junction City**	**21.06**	**332**	*e*P	**P**	**20 50 59.3**	**+0.1**
	comp=Z,21nm,0.6s,mb4.6						
ATAH	**Atahualpa**	**21.49**	**151**	P	**P**	**20 51 07.5**	**+3.6**
	comp=Z,7.0nm,0.9s,mb4.0,baz=310,slow=8.3,SNR=5.4						
ATAH				LR	LR	20 58 07.4	
	comp=Z,79nm,18.3s,MS3.1,baz=328,slow=33						
GOGA	**Godfrey**	**21.75**	**12**	*e*P	**P**	**20 51 07.7**	**+1.1**
	comp=Z,24nm,0.6s,mb4.8						
TXAR	**Lajitas Array**	**22.18**	**323**	P	**P**	**20 51 12.2**	**+0.9**
	comp=Z,2.9nm,0.6s,mb3.9,baz=149,slow=11,SNR=45						
TXAR				PcP	PcP	20 55 09.5	+2.8
	comp=Z,0.4nm,0.8s,baz=188,slow=3.5,SNR=3.5						
TXAR				ScP	ScP	20 58 48.4	+8.0
	comp=Z,0.7nm,1.1s,baz=122,slow=3.3,SNR=2.4						
OXF	**Oxford**	**22.35**	**358**	*e*P	**P**	**20 51 12.8**	**-0.2**
	comp=Z,18nm,0.6s,mb4.7						
MIAR	**Mount Ida**	**22.83**	**349**	*e*P	**P**	**20 51 18.4**	**+0.4**
	comp=Z,28nm,0.8s,mb4.7						
UALR	**University of**	**22.86**	**352**	*e*P	**P**	**20 51 18.7**	**+0.4**
	comp=Z,25nm,0.6s,mb4.8						
PCRV	**Puerto La Cruz**	**23.58**	**92**	P	**P**	**20 51 25.6**	**-0.1**
	comp=Z,13nm,0.6s,mb4.5,baz=34,slow=1.6,SNR=6.8						
PCRV				LR	LR	21 00 06.6	
	comp=Z,83nm,20.0s,MS3.2,baz=128,slow=36						
LPIG	**La Paz**	**23.82**	**303**	LR	LR	21 00 23.9	
	comp=Z,128nm,19.6s,MS3.4,baz=215,slow=36						
TKL	**Tuckaleechee C**	**23.88**	**10**	P	**P**	**20 51 28.1**	**-0.1**
	comp=Z,30nm,1.0s,mb4.7,baz=184,slow=11,SNR=16						
TKL	**Tuckaleechee C**	**23.88**	**10**	*e*P	**P**	**20 51 28.7**	**+0.5**
WVT	**Waverly**	**23.96**	**2**	*e*P	**P**	**20 51 29.2**	**+0.2**
	comp=Z,5.5nm,0.6s,mb4.2						
WMOK	**Wichita Mounta**	**24.39**	**339**	*e*P	**P**	**20 51 31.5**	**-1.4**
	comp=Z,23nm,1.3s,mb4.5						
SIUC	**Southern Illin**	**25.54**	**359**	*e*P	**P**	**20 51 40.2**	**-3.1**
	comp=Z,18nm,0.6s,mb4.8						
AMTX	**Amarillo**	**25.64**	**335**	*e*P	**P**	**20 51 43.5**	**-0.7**
	comp=Z,36nm,0.9s,mb4.9						
USIN	**University of**	**25.80**	**2**	*e*P	**P**	**20 51 44.6**	**-1.0**
	comp=Z,13nm,0.6s,mb4.6						
FVM	**French Village**	**25.86**	**357**	*e*P	**P**	**20 51 45.9**	**-0.3**
	comp=Z,5.4nm,0.6s,mb4.2						
WCI	**Wyandotte Cave**	**26.13**	**4**	*e*P	**P**	**20 51 48.1**	**-0.5**
	comp=Z,13nm,0.6s,mb4.7						
ANMO	**Albuquerque**	**27.96**	**327**	PcP	PcP	20 55 22.0	+2.4
	comp=Z,0.5nm,0.6s,baz=126,slow=7.3,SNR=3.6						
ACSO	**Alum Creek Sta**	**28.48**	**9**	*e*P	**P**	**20 52 09.4**	**-0.3**
	comp=Z,14nm,0.6s,mb4.8						
PDAR	**Pinedale Array**	**35.59**	**333**	P	**P**	**20 53 12.4**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=134,slow=9.8,SNR=4.3						
PDAR				PcP	PcP	20 55 41.9	+1.9
	comp=Z,1.0nm,0.7s,baz=145,slow=3.6,SNR=5.5						
EYMN	**Ely**	**35.84**	**357**	*e*P	**P**	**20 53 12.6**	**-1.5**
	comp=Z,8.7nm,0.6s,mb4.9						
AGMN	**Agassiz Refuge**	**36.62**	**352**	*e*P	**P**	**20 53 19.4**	**-1.3**
	comp=Z,9.0nm,0.6s,mb4.8						
SNOW	**Snow King Moun**	**36.68**	**333**	*e*P	**P**	**20 53 22.4**	**+1.2**
	comp=Z,6.2nm,0.7s,mb4.5						
NVAR	**Mina Array Bea**	**37.26**	**320**	P	**P**	**20 53 28.5**	**+2.2**
	comp=Z,2.6nm,0.8s,mb4.1,baz=136,slow=8.6,SNR=11						
NVAR				PcP	PcP	20 55 47.9	+2.7
	comp=Z,2.1nm,0.7s,baz=137,slow=4.8,SNR=6.8						
ULM	**Lac du Bonnet**	**38.54**	**352**	P	**P**	**20 53 34.8**	**-2.0**
	comp=Z,4.6nm,0.5s,mb4.5,baz=175,slow=10,SNR

IPM Ipoh 8.81 359 P **Pn** **20 58 27.6 +1.2**
83nm,1.1s,833nm0.2nm
COCO West Island 8.85 209 Pn **Pn** **20 58 23.0 -3.9**
3µm,0.7s,SNR=8.4
COCO West Island 8.85 209 *e*P **Pn** **20 58 23.2 -3.7**
COCO pmax pmax
comp=Z,611nm,1.2s
COCO West Island 8.85 209 *e*P **Pn** **20 58 23.2 -3.7**
comp=Z,611nm,1.2s
COCO West Island 8.85 209 P **Pn** **20 58 23.2 -3.7**
comp=Z,299nm,1.1s,comp=Z,0.9nm
KULM Kulim 9.63 357 *e*P **Pn** **20 58 37.0 -0.6**
comp=Z,122nm,1.1s
KULM Kulim 9.63 357 ⇓P **Pn** **20 58 38.0 +0.4**
KULM Kulim 9.63 357 P **Pn** **20 58 37.6 0.0**
comp=Z,116nm,1.3s,comp=Z,873nm
KTGM Kuala Trenggan 9.85 12 ⇓P **Pn** **20 58 40.8 +0.1**
KSM Kuching 10.84 58 *e*P **Pn** **20 58 57.7 +3.5**
comp=Z,41nm,1.1s
KSM Kuching 10.84 58 ⇓P **Pn** **20 58 55.4 +1.2**
KSM Kuching 10.84 58 P **Pn** **20 59 03.3 +9.1**
SJI Sawahan 11.06 108 P **Pn** **20 58 57.2 +0.1**
comp=Z,121nm,0.9s,comp=Z,1µm
STKI Sintang 11.22 67 P **Pn** **20 59 06.0 +6.7**
comp=Z,44nm,1.7s,comp=Z,3µm
SNG Songkhla 11.50 357 P **Pn** **20 59 02.0 -1.3**
comp=Z,300nm,1.0s
PLKI Palangkaraya 12.94 81 P **Pn** **20 59 27.3 +4.3**
comp=Z,226nm,1.1s,comp=Z,2µm
SBUM Sibu 12.97 59 ⇑P **Pn** **20 59 27.6 +4.2**
SBUM Sibu 12.97 59 P **Pn** **20 59 27.9 +4.5**
comp=Z,96nm,1.1s,comp=Z,1µm
BBKI Banjar Baru 13.68 87 P **Pn** **20 59 38.2 +5.2**
comp=Z,120nm,1.4s
BTM Bintulu 14.10 58 ⇓P **Pn** **20 59 42.1 +3.3**
KAPI Kappang 18.54 93 P **Pn** **21 00 33.9 -1.8**
comp=Z,1.0nm,0.3s,baz=287,slow=8.5,SNR=5.9
KAPI LR LR 21 08 25.3
comp=Z,773nm,21.1s,baz=278,slow=39
TSM Tawau 18.79 63 ⇓P **Pn** **21 00 39.8 +1.1**
SDKM Sandakan 18.86 58 ⇓P **Pn** **21 00 40.0 +0.5**
PCI Palu 18.97 80 P **Pn** **21 00 41.7 +0.8**
comp=Z,529nm,1.2s,comp=Z,4µm
KDM Kudat 19.26 54 ⇓P **Pn** **21 00 44.0 -0.3**
MYLDM Lahad Datu 19.76 61 ⇑P **Pn** **21 00 50.2 -0.1**
UBT Ubonrachathani 19.88 11 ⇓P **Pn** **21 00 50.0 -1.7**
NST Nakhon Sawan 19.96 357 P **Pn** **21 00 51.0 -1.6**
KDI Kendari 21.41 90 P **P** **21 01 08.6 +2.0**
CMAR Chiang Mai Arr 22.81 355 P **P** **21 01 19.1 -2.4**
comp=Z,48nm,0.8s,mb5.0,baz=187,slow=9.0,SNR=58
CMAR PcP PcP 21 05 13.1 +0.7
comp=Z,3.7nm,0.9s,baz=208,slow=3.5,SNR=7.9
CMAR pPcP 21 05 21.6
comp=Z,3.7nm,0.8s,baz=210,slow=2.8,SNR=8.0
CMAR LR LR 21 12 00.2
comp=Z,1µm,18.5s,MS4.4,baz=180,slow=41
CMAR Chiang Mai Arr 22.81 355 P **P** **21 01 19.1 -2.3**
CMAR 21 05 13.1
CMAR 21 05 21.7
CHG Chiang Mai 23.16 355 ⇓P **P** **21 01 23.0 -2.1**
comp=Z,64nm,1.1s,mb5.0
CHTO Chiang Mai 23.16 355 *e*P **P** **21 01 22.8 -2.3**
CHTO pmax pmax
comp=Z,64nm,1.0s,mb5.0
CHTO Chiang Mai 23.16 355 *e*P **P** **21 01 22.8 -2.3**
comp=Z,64nm,1.0s,mb5.0
FITZ Fitzroy Crossi 27.55 122 ⇑*i*P **P** **21 02 05.0 -0.4**
comp=Z,40nm,0.9s,mb5.0
FITZ *e*S S 21 07 11.5 +27
FITZ Fitzroy Crossi 27.55 122 *e*P **P** **21 02 04.8 -0.6**
comp=Z,28nm,0.9s,mb4.9
KOD Kodaikanal 27.71 302 *e*P **P** **21 02 09.2 +2.3**
VIS Vishakhapatnam 28.15 322 *e*P **P** **21 02 10.8 +0.1**
VIS AMb AMB 21 02 21.1
comp=Z,24nm,1.1s,mb4.8
KMI Kunming 29.38 3 P **P** **21 02 22.8 +1.3**
KMI AP pP 21 02 30.4 +0.1
KMI XP sP 21 02 33.8 -0.1
KMI PP PP 21 03 22.6 -5.7
KMI PPP 21 03 36.6
KMI AMB AMB
comp=Z,46nm,1.0s,mb5.2
KMI AMB AMB
comp=Z,115nm,5.0s
KMI LR LR
comp=N,971nm,18.0s,MS4.7
KMI LR LR
comp=E,1µm,15.5s,MS4.7
KMI LR LR
comp=Z,1µm,18.6s,MS4.5
HYB Hyderabad 31.11 315 *i* P **P** **21 02 38.0 +1.0**
HYB *e* pP 21 02 45.5 -0.2
HYB Hyderabad 31.11 315 *e*P **P** **21 02 38.0 +1.0**
SHL Shillong 31.11 344 *e*P **P** **21 02 38.0 +1.1**
SHL *e*S **S** **21 07 42.0 +1.3**
GYA Guiyang 31.13 10⇑*i*P **P** **21 02 39.8 +2.8**
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,140nm,5.0s
GYA LR LR
comp=N,890nm,18.2s,MS4.6
GYA LR LR
comp=E,660nm,17.4s,MS4.6
GYA LR LR
comp=Z,520nm,16.5s,MS4.3
BOK Bokaro 31.73 333 *e*P **P** **21 02 42.4 0.0**
NWAO Narrogin (SRO) 32.12 154 P **P** **21 02 46.0 +0.3**
comp=Z,15nm,0.9s,mb4.8,baz=333,slow=12,SNR=4.9
NGP Nagpur 33.38 320 *ex* **P** **21 02 49.3 -7.6**
NGP AMb AMB 21 03 06.6
comp=Z,32nm,0.7s,mb5.4
QZH Quanzhou 33.72 29 *e*P **P** **21 03 00.8 +1.0**
QZH S **S** **21 08 25.5 +4.1**
QZH AMB AMB
comp=Z,110nm,1.2s,mb5.7
ODAN Odare 33.80 338 *e*P **P** **21 03 01.5 +1.0**
comp=Z,200nm,0.9s,mb6.0
TAPN Taplejung 34.12 338 *e*P **P** **21 03 04.7 +1.4**
comp=Z,266nm,0.9s,mb6.2
RAMN Ramite 34.19 336 *e*P **P** **21 03 05.4 +1.6**
comp=Z,132nm,0.9s,mb5.9
JIRN Jiri 34.99 336 *e*P **P** **21 03 12.1 +1.4**
comp=Z,267nm,0.9s,mb6.2
ALBI Allahabad 35.00 328 *e*P **P** **21 03 10.0 -0.9**
CD2 Chengdu 35.19 4 P **P** **21 03 12.0 -0.4**
CD2 AP pP 21 03 21.8 +0.6
CD2 XP sP 21 03 25.6 +0.8
CD2 PP PP 21 04 32.5 -0.2
CD2 AMB AMB
comp=Z,80nm,1.0s,mb5.6
CD2 AMB AMB
comp=Z,230nm,8.3s
CD2 LR LR
comp=N,2µm,16.7s
CD2 LR LR
comp=Z,1µm,12.5s,MS4.8
PKI Pulchoki 35.23 335 *e*P **P** **21 03 13.6 +0.8**
comp=Z,46nm,0.9s,mb5.4
PKI Pulchoki 35.23 335 *e*P **P** **21 03 13.6 +0.8**
PKI pmax pmax
comp=Z,46nm,0.9s,mb5.4
LSA Lhasa 35.23 345 P **P** **21 03 14.0 +1.2**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.0
LSA Lhasa 35.23 345 *e*P **P** **21 03 13.7 +0.9**
LSA pmax pmax
comp=Z,25nm,1.0s,mb5.1
LSA Lhasa 35.23 345 *e*P **P** **21 03 13.7 +0.9**
comp=Z,25nm,1.0s,mb5.1
GUN Gumba 35.33 336 *e*P **P** **21 03 15.1 +1.4**
comp=Z,227nm,0.8s,mb6.1
DMN Daman 35.39 335 *e*P **P** **21 03 15.1 +0.9**
comp=Z,77nm,1.1s,mb5.5
KKN Kakani 35.47 335 *e*P **P** **21 03 15.8 +0.9**
comp=Z,111nm,0.9s,mb5.8
KKN Kakani 35.47 335 *e*P **P** **21 03 15.8 +0.9**
KKN pmax pmax
comp=Z,111nm,0.9s,mb5.8
WRA Warramunga Arr 35.81 118 P **P** **21 03 17.3 -0.7**
comp=Z,16nm,0.8s,mb5.0,baz=292,slow=10.0,SNR=69
WRA S **S** **21 08 52.0 -1.9**
comp=Z,2.1nm,1.0s,baz=293,slow=16,SNR=3.4
WRAB Tennant Creek 35.82 118 P **P** **21 03 17.2 -0.9**
comp=Z,162nm,0.9s,mb6.0,SNR=10
WRAB Tennant Creek 35.82 118⇑*i*P **P** **21 03 17.2 -0.9**
WRAB Tennant Creek 35.82 118 *e*P **P** **21 03 17.1 -0.9**
comp=Z,21nm,0.8s,mb5.1
WB2 Warramunga Arr 35.83 118⇑*i*P **P** **21 03 17.3 -0.8**
WB2 Warramunga Arr 35.83 118 *e*P **P** **21 03 17.1 -1.0**
GKN Gorkha 35.93 335 *e*P **P** **21 03 19.7 +0.9**
comp=Z,183nm,1.1s,mb5.9
BHPL Bhopal 35.93 321 *e*P **P** **21 03 19.3 +0.4**
KOLN Koldanda 36.18 333 *e*P **P** **21 03 22.2 +1.2**
comp=Z,81nm,0.9s,mb5.7
DANN Dangsing 36.61 334 *e*P **P** **21 03 25.5 +0.8**
comp=Z,128nm,1.1s,mb5.7
ASAR Alice Springs 36.93 124 P **P** **21 03 27.6 0.0**
comp=Z,5.5nm,0.7s,mb4.5,baz=293,slow=8.2,SNR=55
ASAR pP pP 21 03 35.1 -1.2
comp=Z,6.2nm,0.6s,baz=303,slow=8.4,SNR=12
ASAR PcP PcP 21 05 49.4 +0.7
comp=Z,3.8nm,0.8s,baz=305,slow=3.1,SNR=7.3
ASAR pPcP 21 05 57.4
comp=Z,4.3nm,0.9s,baz=309,slow=2.6,SNR=6.4
ASAR S **S** **21 09 10.1 -0.9**
comp=Z,1.4nm,1.1s,baz=297,slow=14,SNR=4.9
ASAR Alice Springs 36.93 124 P **P** **21 03 27.6 +0.1**
ASAR *PP pP 21 03 35.1 -1.2
ASAR 21 05 49.4
ASAR S **S** **21 09 10.1 -0.8**
WHN Wuhan 36.96 19 ⇓P **P** **21 03 27.6 0.0**
WHN AMB AMB
comp=Z,26nm,1.0s,mb5.0
WHN LR LR
comp=Z,2µm,15.4s,MS4.9
XAN Xi'an 38.92 10 P **P** **21 03 43.1 -1.0**
XAN AP pP 21 03 53.1 +0.2
XAN XP sP 21 03 57.0 +0.5
XAN AMB AMB
comp=Z,49nm,1.2s,mb5.1
XAN AMB AMB
comp=Z,103nm,3.8s
XAN LR LR
comp=N,376nm,15.4s,MS4.6
XAN LR LR
comp=E,663nm,15.8s,MS4.6
XAN LR LR
comp=Z,1µm,15.4s,MS4.9
LGTI Lohaghat 39.18 330 *e*P **P** **21 03 47.0 +0.7**
NJ2 Nanjing 39.96 24 *e*P **P** **21 03 55.9 +3.1**
NJ2 AP pP 21 04 06.3 +4.6
NJ2 XP sP 21 04 09.3 +4.0
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,250nm,4.0s
NJ2 LR LR
comp=N,330nm,22.9s,MS4.5
NJ2 LR LR
comp=E,640nm,21.8s,MS4.5
NJ2 LR LR
comp=Z,630nm,21.6s,MS4.4
AJM Ajmer 40.01 322 *e*P **P** **21 03 53.6 +0.3**
SSE Sheshan 40.13 27 P **P** **21 03 55.3 +1.1**
SSE AP pP 21 04 06.4 +3.3
SSE XP sP 21 04 11.1 +4.4
SSE PCP PcP 21 05 57.8 -0.6
SSE S **S** **21 10 01.3 +2.4**
SSE XS sS 21 10 19.8 +6.2
SSE AMB AMB
comp=Z,41nm,1.1s,mb5.1
SSE AMB AMB
comp=Z,186nm,3.6s
SSE LR LR
comp=N,309nm,10.9s,MS4.5
SSE LR LR
comp=E,225nm,10.9s,MS4.5
SSE LR LR
comp=Z,195nm,13.8s,MS4.1
LZH Lanzhou 40.34 3 *e*P **P** **21 03 55.5 -0.4**
LZH AP pP 21 04 05.3 +0.5
LZH XP sP 21 04 09.1 +0.7
LZH AMB AMB
comp=Z,60nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,225nm,6.2s
LZH LR LR
comp=E,2µm,15.7s
LZH LR LR
comp=Z,2µm,17.2s,MS5.1
DDI Dehra Dun 40.99 329 *e*P **P** **21 03 59.0 -2.4**
SMLA Simla 42.09 329 *i* P **P** **21 04 09.5 -0.8**
SMLA AMb AMB 21 04 20.8
comp=Z,90nm,1.3s,mb5.2
COEN Coen 42.48 106 *e*P **P** **21 04 11.6 -2.2**
comp=Z,23nm,1.2s,mb4.7
SDNR Sundarnagar 42.49 329 *e*P **P** **21 04 15.0 +1.4**
GTA Gaotai 43.60 358 ⇑P **P** **21 04 22.9 +0.5**
GTA AP pP 21 04 33.8 +2.4
GTA XP sP 21 04 37.3 +2.3
GTA PCP PcP 21 06 10.8 +1.1
GTA S **S** **21 10 51.1 +1.1**
GTA XS sS 21 11 07.6 +2.9
GTA SS SS 21 13 59.3 -6.5
GTA AMB AMB
comp=Z,24nm,0.9s,mb4.9
GTA AMB AMB
comp=Z,167nm,5.1s
GTA LR LR
comp=N,406nm,15.9s,MS4.8
GTA LR LR
comp=E,871nm,16.5s,MS4.8
GTA LR LR
comp=Z,649nm,15.6s,MS4.6
THN Thein Dam 43.88 328 *e*P **P** **21 04 23.1 -1.7**
BTO Baotou 45.51 9 *e*P **P** **21 04 37.3 -0.4**
PMG Port Moresby 45.91 99 P **P** **21 04 40.0 -1.3**
comp=Z,30nm,0.8s,mb5.3,baz=267,slow=3.7,SNR=16
PMG Port Moresby 45.91 99*c i*P **P** **21 04 40.1 -1.2**
PMG pmax pmax
comp=Z,77nm,1.4s
PMG Port Moresby 45.91 99 *e*P **P** **21 04 40.2 -1.1**
comp=Z,76nm,1.3s,mb5.5
HHC Hu-ho-hao-te 46.02 11 *e*P **P** **21 04 42.1 +0.4**
HHC AP pP 21 04 52.3 +1.6
HHC XP sP 21 04 56.3 +2.0
HHC AMB AMB
comp=Z,35nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,141nm,3.8s
HHC LR LR
comp=N,841nm,13.1s,MS4.9
HHC LR LR
comp=E,472nm,15.5s,MS4.9
HHC LR LR
comp=Z,759nm,11.9s,MS4.9
BJT Baijiatuan 46.30 16 *e*P **P** **21 04 44.4 +0.5**
BJT pmax pmax
comp=Z,22nm,0.4s
BJT Baijiatuan 46.30 16 *e*P **P** **21 04 44.4 +0.5**
comp=Z,22nm,0.4s,mb5.4
BJI Beijing 46.32 16 P **P** **21 04 44.4 +0.3**
BJI S **S** **21 11 33.8 +4.4**
BJI AMB AMB
comp=Z,67nm,0.9s,mb5.6
BJI AMB AMB
comp=Z,143nm,3.6s
BJI LR LR
comp=N,548nm,17.6s,MS4.7
BJI LR LR
comp=E,704nm,19.8s,MS4.7
BJI LR LR
comp=Z,343nm,20.0s,MS4.3
CTA Charters Tower 46.56 114 LR LR 21 27 18.0
comp=Z,250nm,18.9s,MS4.2,baz=92,slow=40
CTA Charters Tower 46.56 114 *e*P **P** **21 04 46.2 -0.2**
comp=Z,22nm,1.0s,mb5.0
CTAO Charters Tower 46.56 114 *e*P **P** **21 04 46.2 -0.2**
CTAO pmax pmax
comp=Z,51nm,1.1s,mb5.4
CTAO Charters Tower 46.56 114 *e*P **P** **21 04 46.2 -0.2**
comp=Z,51nm,1.1s,mb5.4
STKA Stephens Creek 46.71 131 P **P** **21 04 47.6 +0.3**
comp=Z,6.9nm,0.8s,mb4.6,baz=301,slow=6.5,SNR=14
STKA LR LR 21 25 50.3
comp=Z,603nm,20.6s,MS4.5,baz=102,slow=38
STKA Stephens Creek 46.71 131 *e*P **P** **21 04 47.4 0.0**
comp=Z,9.6nm,0.6s,mb4.9
STKA Stephens Creek 46.71 131 *e*P **P** **21 04 47.3 -0.1**
comp=Z,3.8nm,0.9s,mb4.3
STKA *e* pP 21 04 55.7 -0.7
DL2 Dalian 47.05 22 P **P** **21 04 49.3 -0.6**
DL2 *e*S **S** **21 11 38.4 -1.5**
DL2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
DL2 AMB AMB
comp=Z,150nm,4.4s
DL2 LR LR
comp=N,240nm,16.6s
DL2 LR LR
comp=Z,280nm,16.7s,MS4.3
KSRS Korea Array 48.51 29 P **P** **21 05 00.5 -0.7**
comp=Z,41nm,0.9s,mb5.4,baz=215,slow=8.1,SNR=97
KSRS PcP PcP 21 06 27.2 +0.3
comp=Z,6.0nm,1.0s,baz=226,slow=3.2,SNR=4.8
KBL Kabul 49.14 325 *e*P **P** **21 05 05.5 -0.6**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KBL Kabul 49.14 325 *e*P **P** **21 05 05.5 -0.6**
comp=Z,10nm,0.9s,mb4.8
KSH Kashi 49.48 334 *e*P **P** **21 05 09.4 +0.8**
KSH AP pP 21 05 19.8 +2.2
KSH XP sP 21 05 23.1 +1.9
KSH PCP PcP 21 06 31.9 +1.5
KSH PP PP 21 07 04.0 +1.0
KSH PPP 21 07 58.8
KSH SCP ScP 21 10 23.3 -0.5
KSH PCS PcS 21 10 26.4 -0.5
KSH S **S** **21 12 12.5 -1.6**
KSH XS sS 21 12 29.3 +0.2
KSH SCS ScS 21 14 55.6 -2.7
KSH SS SS 21 15 40.1 -6.4
KSH AMB AMB
comp=Z,44nm,0.5s,mb5.7
KSH AMB AMB
comp=Z,1µm,5.4s
KSH LR LR
comp=N,2µm,5.6s
KSH LR LR
comp=E,1µm,10.5s
KSH LR LR
comp=Z,2µm,6.2s
WMQ Urumqi 49.50 347⇑*i*P **P** **21 05 09.6 +0.9**
WMQ AMB AMB
comp=Z,55nm,1.2s,mb5.5
WMQ AMB AMB
comp=Z,313nm,6.0s
WMQ LR LR
comp=N,131nm,22.0s,MS4.3
WMQ LR LR
comp=E,284nm,20.0s,MS4.3
WMQ LR LR
comp=Z,318nm,21.0s,MS4.3
SNY Shenyang 50.33 22 ⇓P **P** **21 05 14.1 -0.9**
SNY AMB AMB
comp=Z,23nm,1.1s,mb5.1
SONM Songino Array 52.21 4 P **P** **21 05 29.7 +0.7**
comp=Z,56nm,0.9s,mb5.5,baz=186,slow=8.2,SNR=256
SONM PcP PcP 21 06 40.7 +0.4
comp=Z,8.7nm,0.7s,baz=180,slow=3.8,SNR=11
SONM LR LR 21 31 51.8
comp=Z,456nm,18.4s,MS4.5,baz=185,slow=41
SONM Songino Array 52.21 4 P **P** **21 05 29.7 +0.7**
SONM 21 06 40.7
ULN Ulaanbaatar 52.29 5*c i*P **P** **21 05 29.1 -0.5**
ULN Ulaanbaatar 52.29 5 *e*P **P** **21 05 30.1 +0.5**
comp=Z,38nm,0.9s,mb5.3
ULN *e*PcP PcP 21 06 40.8 +0.3
TKM2 Tokmak 2 52.47 336 *e*P **P** **21 05 31.3 +0.3**
TKM2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
TKM2 Tokmak 2 52.47 336 P **P** **21 05 31.6 +0.6**
SNR=27
TKM2 Tokmak 2 52.47 336 *e*P **P** **21 05 31.3 +0.3**
comp=Z,30nm,0.8s,mb5.3
KBK Karagaybulak 52.51 336 P **P** **21 05 32.6 +1.2**
SNR=8.8
AML Almayashu 52.61 334 P **P** **21 05 33.3 +1.3**
SNR=9.2
AAK Ala-Archa 52.68 335 P **P** **21 05 33.6 +1.0**
comp=Z,71nm,1.0s,mb5.5,SNR=5.9
AAK Ala-Archa 52.68 335⇑*i*P **P** **21 05 32.4 -0.2**
AAK pmax pmax
comp=Z,18nm,2.5s,mb4.6
AAK Ala-Archa 52.68 335 P **P** **21 05 33.8 +1.3**
SNR=6.5
AAK Ala-Archa 52.68 335 *e*P **P** **21 05 33.0 +0.4**
comp=Z,13nm,1.0s,mb4.8
AAK *e* pP 21 05 41.4 -0.3
CN2 Changchun 52.73 22 *e*P **P** **21 05 31.9 -1.0**
CN2 *e*AP pP 21 05 41.9 -0.1
CN2 *e*S **S** **21 12 57.8 -1.1**
CN2 AMB AMB
comp=Z,80nm,1.0s,mb5.6
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,340nm,17.0s,MS4.7
CN2 LR LR
comp=E,450nm,17.0s,MS4.7
CN2 LR LR
comp=Z,490nm,21.0s,MS4.5
FRU Bishkek 52.80 336 *e*P **P** **21 05 32.0 -1.4**
FRU pmax pmax
comp=Z,40nm,1.8s,mb5.0
CHMS Chumysh 52.88 336 P **P** **21 05 34.1 0.0**
SNR=8.3
EKS2 Erkin-Say 53.01 335 P **P** **21 05 36.0 +1.0**
SNR=28
EKS2 Erkin-Say 53.01 335 *e*P **P** **21 05 35.7 +0.7**
comp=Z,42nm,0.9s,mb5.4
USP Ospenovka 53.20 336 P **P** **21 05 36.6 +0.2**
SNR=19
MAJO Matsushiro 53.43 37 *e*P **P** **21 05 36.2 -2.0**
MAJO pmax pmax
comp=Z,46nm,1.1s,mb5.3
MAJO Matsushiro 53.43 37 *e*P **P** **21 05 36.2 -2.0**
comp=Z,46nm,1.1s,mb5.3
MAT Matsushiro 53.43 37 P **P** **21 05 36.4 -1.8**
MAT *e*S **S** **21 13 13.6 +4.8**
MJAR Matsushiro Arr 53.43 37 P **P** **21 05 36.3 -2.0**
comp=Z,32nm,1.0s,mb5.2,baz=219,slow=7.7,SNR=60
MK31 Makanchi Array 53.63 344 *e*P **P** **21 05 39.4 -0.1**
MKAR Makanchi Array 53.63 344 P **P** **21 05 39.1 -0.3**
comp=Z,34nm,0.8s,mb5.3,baz=147,slow=8.4,SNR=196
ARMA Armidale 54.09 125 *e*P **P** **21 05 44.9 +1.7**
OPO Ambohidratompo 54.52 250 P **P** **21 05 48.2 +1.6**
comp=Z,5.4nm,1.1s,mb4.5,baz=112,slow=8.3,SNR=4.4
ZAK Zakamensk 54.58 2⇓*i*P **P** **21 05 46.4 0.0**
ZAK *e* 21 06 49.6
ZAK *e* 21 07 49.5
ZAK pmax pmax
comp=Z,15nm,1.0s,mb5.0
MDJ Mudanjiang 55.04 25 P **P** **21 05 49.9 +0.1**
MDJ AP pP 21 05 59.8 +0.9
MDJ XP sP 21 06 03.8 +1.3
MDJ PCP PcP 21 06 46.3 -4.8
MDJ PP PP 21 07 57.6 +4.3
MDJ SCP ScP 21 10 45.0 -2.9
MDJ PCS PcS 21 10 49.4 -1.4
MDJ S **S** **21 13 34.8 +4.6**
MDJ AMB AMB
comp=Z,23nm,1.0s,mb5.2
MDJ AMB AMB
comp=Z,171nm,5.7s
MDJ LR LR
comp=N,216nm,16.6s,MS4.4
MDJ LR LR
comp=E,123nm,17.2s,MS4.4
MDJ LR LR
comp=Z,204nm,19.0s,MS4.2
MDJ Mudanjiang 55.04 25 *e*P **P** **21 05 49.1 -0.7**
comp=Z,22nm,1.0s,mb5.1
HIA Hailar 55.83 15 *e*P **P** **21 05 53.9 -1.5**
HIA pmax pmax
comp=Z,28nm,1.2s
HIA Hailar 55.83 15 *e*P **P** **21 05 53.9 -1.5**
comp=Z,28nm,1.2s,mb5.2
MOY Mondy 55.84 360 *e*P **P** **21 05 56.1 +0.7**
TLY Talaya 55.89 2 P **P** **21 05 56.0 +0.2**
comp=Z,151nm,0.9s,mb6.0,SNR=5.9
TLY Talaya 55.89 2 *e*P **P** **21 05 56.9 +1.1**
TLY *e* pP 21 06 04.7 -0.3
TLY *e*S **S** **21 13 50.4 +9.0**
TLY pmax pmax
comp=Z,31nm,1.0s,mb5.3
TLY MLR MLR

comp=Z,501nm,18.0s,MS4.7
TLY Talaya 55.89 2 *e*P P **21 05 56.6 +0.8**
comp=Z,27nm,1.0s,mb5.2
TLY *e* pP 21 06 04.7 -0.3
IRK Irkutsk 56.48 2 *e*P P **21 05 59.2 -0.8**
IRK *e* pP 21 06 08.2 -0.9
IRK pmax pmax
comp=Z,35nm,1.4s,mb5.2
ABKT Ailbek 58.02 320 P P **21 06 11.5 +0.4**
comp=Z,89nm,0.9s,mb5.8,SNR=5.5
KURK Kurchatov 58.21 343 P P **21 06 12.6 +0.4**
comp=Z,282nm,1.0s,mb6.2,SNR=31
KURK Kurchatov 58.21 343 *e*P P **21 06 11.5 -0.7**
KURK pmax pmax
comp=Z,53nm,1.0s,mb5.5
KURK Kurchatov 58.21 343 *e*P P **21 06 11.5 -0.7**
comp=Z,53nm,1.0s,mb5.5
HNR Honiara 58.52 98 P P **21 06 14.6 -0.5**
comp=Z,112nm,0.9s,mb5.9,baz=200,slow=5.7,SNR=4.0
KLR Kul'dur 59.65 23 *e*P P **21 06 17.8 -4.4**
KLR *e* pP 21 06 24.8 -6.7
KLR pmax pmax
comp=E,38nm,1.2s
KLR pmax pmax
comp=Z,68nm,1.2s,mb5.5
ZAA0 Zalesovo Array 59.72 349 *e*P P **21 06 22.1 -0.6**
ZALV Zalesovo Beam 59.72 349 P P **21 06 21.9 -0.7**
comp=Z,59nm,1.0s,mb5.6,baz=174,slow=5.7,SNR=79
ZALV LR LR 21 36 06.2
comp=Z,220nm,18.6s,MS4.3,baz=168,slow=40
HABR Khabarovsk 60.39 25*c e*P P **21 06 25.4 -1.9**
HABR *e**PP pP 21 06 33.9 -2.7
HABR *e**SP sP 21 06 37.4 -2.7
HABR *e* 21 07 08.7
HABR *e* 21 08 34.6
HABR *e*S **S 21 14 36.3 -4.0**
HABR *e**SS sS 21 14 54.6 -0.9
HABR *e* 21 16 12.0
HABR *e*SS SS 21 18 34.1 -4.5
HABR MLR MLR
comp=Z,223nm,16.0s,MS4.4
ASAJ Asahikawa 60.94 33 P P **21 06 30.2 -1.0**
comp=Z,15nm,0.7s,mb5.2,baz=257,slow=15,SNR=10
BVA0 Borovoye Array 62.81 340 *i* P P **21 06 42.8 -0.8**
BVA0 pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
BVAR Borovoye Array 62.81 340 LR LR 21 40 04.5
comp=Z,204nm,19.6s,MS4.3,baz=304,slow=42
BOD Bodaibo 62.87 8⇓ *i*P P **21 06 43.2 -0.7**
BOD pmax pmax
comp=Z,30nm,1.1s,mb5.3
BRVK Borovoye 62.88 340 P P **21 06 43.3 -0.7**
comp=Z,128nm,0.7s,mb6.2,SNR=18
BRVK Borovoye 62.88 340 *e*P P **21 06 43.0 -1.0**
BRVK pmax pmax
comp=Z,20nm,1.0s,mb5.2
BRVK Borovoye 62.88 340 *e*P P **21 06 43.0 -1.0**
comp=Z,20nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 62.91 31⇑ *e*P P **21 06 43.3 -1.0**
YSS *e* pP 21 06 51.6 -2.0
YSS pmax pmax
comp=Z,80nm,0.9s,mb5.8
CLNS Chul'man 64.01 14 *e*P P **21 06 50.2 -1.3**
CLNS pmax pmax
comp=Z,22nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,10.0nm,1.0s
CLNS pmax pmax
comp=N,15nm,1.0s
AB31 Akbulak array 64.28 331 P P **21 06 52.4 -1.0**
AB31 pmax pmax
comp=Z,32nm,0.8s,mb5.4
AKTK Aktyubinsk 66.00 331 *i* P P **21 07 02.9 -1.6**
AKTO Aktyubinsk 66.00 331 *i* P P **21 07 02.9 -1.6**
SVE Sverdlovsk 69.32 338⇓ *e*P P **21 07 25.2 -0.1**
SVE *e*SS SS 21 20 52.2 -5.1
SVE *e*SSS 21 23 59.2
SVE pmax pmax
comp=Z,60nm,1.0s,mb5.5
SVE MLR MLR
comp=Z,840nm,23.0s,MS4.9
YAK Yakutsk 69.76 14 *e*P P **21 07 24.5 -3.4**
YAK pmax pmax
comp=Z,75nm,0.9s,mb5.6
YAK pmax pmax
comp=E,19nm,1.2s
YAK pmax pmax
comp=N,28nm,1.1s
YAK MLR MLR
comp=N,404nm,16.0s,MS4.8
YAK MLR MLR
comp=Z,694nm,18.0s,MS5.0
YAK MLR MLR
comp=E,154nm,14.0s,MS4.8
YAK Yakutsk 69.76 14⇑ *i*P P **21 07 26.4 -1.5**
ARU Arti 69.85 336 P P **21 07 28.8 +0.2**
comp=E,152nm,1.0s,mb5.9,SNR=9.6
ARU Arti 69.85 336*c i*P P **21 07 28.2 -0.4**
ARU *e* 21 10 05.6
ARU *e*S S 21 16 37.2 +1.1
ARU SS SS 21 21 04.1 -1.3
ARU pmax pmax
comp=Z,33nm,1.0s,mb5.2
ARU Arti 69.85 336 *e*P P **21 07 27.9 -0.7**
comp=Z,32nm,1.0s,mb5.2
ARU *e* pP 21 07 36.1 -1.9
KIV Kislovodsk 71.10 319 *e*P P **21 07 36.6 +0.1**
KIV *e*S S 21 16 51.3 +0.1
KIV pmax pmax
comp=Z,16nm,1.2s,mb4.8
KIV MLR MLR
comp=Z,112nm,19.0s,MS4.1
SOKR Solikamsk 72.70 338*d i*P P **21 07 46.4 +0.6**
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.4
SOC Sochi 72.90 318 *e*P P **21 07 44.4 -2.9**
SOC *e* 21 10 26.0
SOC *e*PPP 21 12 07.3
SOC *e*S S 21 17 10.0 -1.8
SOC *e* 21 17 49.3
SOC *e*SS SS 21 21 49.9 -2.8
PETK Petropavlovsk- 74.29 31 P P **21 07 54.5 -0.7**
comp=Z,8.7nm,0.8s,mb4.7,baz=216,slow=4.6,SNR=7.6
PET Petropavlovsk 74.75 32 *e*P P **21 07 57.8 -0.1**
PET pmax pmax
comp=Z,31nm,0.7s,mb5.3
VRHR Novokhopersk 74.94 326 *e*P P **21 07 58.7 -0.4**
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.7s
BOSA Boshof 75.54 242 P P **21 08 03.3 +0.2**
comp=E,7.0nm,1.2s,mb4.5,baz=46,slow=5.3,SNR=3.0
BR131 Keskin Array S 75.78 313 *e*P P **21 08 03.4 -0.8**
comp=E,8.0nm,0.9s,mb4.7
BR131 *e* pP 21 08 11.7 -1.9
BRTR Keskin Array B 75.78 313 P P **21 08 03.3 -0.9**
comp=E,5.2nm,0.9s,mb4.5,baz=131,slow=7.3,SNR=30
BRTR pP pP 21 08 11.6 -2.1
comp=E,9.0nm,1.0s,baz=125,slow=6.2,SNR=17
SYO Syowa Base 76.00 199⇓ *e*P P **21 08 04.0 -0.8**
VORD Divnogorie 76.21 325 *e*P P **21 08 05.5 -0.9**
VORD pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 76.39 325 *e*P P **21 08 06.7 -0.7**
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.4s
SEY Seymchan 77.40 21 *e*P P **21 08 12.7 -0.1**
SEY Seymchan 77.40 21 *e*P P **21 08 12.8 0.0**
SEY Seymchan 77.40 21 *e*P P **21 08 12.8 0.0**
TIXI Tiksi 78.02 9*c i*P P **21 08 14.7 -1.4**
TIXI pmax pmax
comp=Z,37nm,1.2s,mb5.2
TIXI Tiksi 78.02 9 *e*P P **21 08 14.2 -2.0**
comp=Z,20nm,0.8s,mb5.1

OBN Obninsk 79.42 328⇑ *e*P P **21 08 23.9 -0.3**
OBN *e* 21 11 23.8
OBN *e*S S 21 18 31.5 +8.4
OBN pmax pmax
comp=Z,29nm,1.1s,mb5.1
KLMR Klimovskoe 80.47 334 *e*P P **21 08 28.6 -1.1**
KLMR pmax pmax
comp=Z,52nm,1.3s,mb5.3
TIRR Tirgusor 80.87 316 *e*P P **21 08 31.5 -0.7**
TIRR *e* pP 21 08 39.7 -2.0
TIRR pmax pmax
comp=Z,17nm,1.1s,mb4.9
TIRR Tirgusor 80.87 316 *e*P P **21 08 31.5 -0.7**
comp=Z,17nm,1.1s,mb4.9
TIRR *e* pP 21 08 39.7 -2.0
HARR Harsova 81.26 316⇓ *i*P P **21 08 35.0 +0.7**
AKASG Malin Array Be 82.07 322 P P **21 08 37.8 -0.6**
comp=Z,2.4nm,0.7s,mb4.3,baz=84,slow=5.2,SNR=9.7
AKASG pP pP 21 08 45.9 -2.1
comp=Z,2.6nm,0.7s,baz=88,slow=4.6,SNR=4.5
AKASG Malin Array Be 82.07 322 P P **21 08 37.8 -0.6**
AKASG pP pP 21 08 45.9 -2.1
BURAR Bucovina Array 83.81 319⇓ *i*P P **21 08 49.0 +1.5**
BUR08 Bucovina Ar. S 83.83 319 *e*P P **21 08 48.1 +0.5**
BUR08 *e* pP 21 08 56.9 -0.3
BILL Bilibino 84.99 20⇑ *e*P P **21 08 52.2 -0.8**
BILL *e* 21 12 05.1
BILL *e*S S 21 19 08.8 -11
BILL pmax pmax
comp=Z,14nm,0.9s,mb5.1
BILL Bilibino 84.99 20 *e*P P **21 08 51.6 -1.5**
comp=Z,20nm,1.2s,mb5.1
LVV L'vov 85.07 321 *e*P P **21 09 01.6 +7.7**
DRGR 85.30 318⇓ *i*P P **21 08 56.0 +0.9**
QSPA South Pole Qui 85.59 180 LR LR 21 41 51.5
comp=Z,179nm,18.8s,MS4.5,baz=128,slow=32
QSPA South Pole Qui 85.59 180 P P **21 08 56.9 +1.0**
comp=Z,11nm,1.2s,mb5.0
TRPA Tarpa 85.68 319⇑ *i*P P **21 08 57.3 +0.4**
BZS Buzias 85.82 316⇓ *i*P P **21 08 57.0 -0.7**
KWP Kalwaria 85.87 320 *e*P P **21 08 58.6 +0.8**
KWP Kalwaria 85.87 320 *e*P P **21 08 58.6 +0.8**
SUW Suwalki 86.49 325 *e*P P **21 09 00.8 0.0**
CRVS Cervenica-Dubn 86.53 319 *i*P P **21 08 59.7 -1.4**
CRVS pmax pmax
comp=Z,97nm,3.3s
CRVS Cervenica-Dubn 86.53 319 *i*P P **21 08 59.7 -1.4**
comp=Z,97nm,3.3s
STHS Stebnicka Huta 86.77 320 *i*P P **21 09 01.6 -0.7**
PKSM Moragy 87.97 316⇑ *i*P P **21 09 08.5 +0.4**
VYHS Vyhne 88.18 319 *e*P P **21 09 07.5 -1.6**
VYHS pmax pmax
comp=Z,10.0nm,1.6s,mb4.8
VYHS Vyhne 88.18 319 *e*P P **21 09 07.5 -1.6**
VYHS Vyhne 88.18 319 *e*P P **21 09 07.5 -1.6**
comp=Z,9.8nm,1.6s,mb4.8
ARCES ARCESS Array B 89.10 340 P P **21 09 13.6 +0.7**
comp=Z,14nm,0.9s,mb5.3,baz=100,slow=6.4,SNR=9.9
ARCES pP pP 21 09 21.6 -1.0
comp=Z,19nm,1.1s,baz=122,slow=14,SNR=4.9
MODS Modra-Piesok 89.19 318 *e*P P **21 09 12.6 -1.2**
MODS pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
MODS Modra-Piesok 89.19 318 *e*P P **21 09 12.6 -1.2**
MODS Modra-Piesok 89.19 318 *e*P P **21 09 12.6 -1.2**
comp=Z,5.9nm,1.1s,mb4.8
ZST Bratislava 89.28 318 *i*P P **21 09 14.9 +0.6**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
ZST Bratislava 89.28 318 *i*P P **21 09 14.9 +0.6**
comp=Z,4.8nm,0.8s,mb4.9
KSP Ksiaz 90.13 321 *e*P P **21 09 19.6 +1.4**
KSP Ksiaz 90.13 321 *e*P P **21 09 19.3 +1.1**
KSP *e*pP pP 21 09 27.0 -0.8
SNAA Sanae 90.24 198 *e*P P **21 09 20.1 +1.8**
SNAA *e* pP 21 09 28.6 +0.6
SNAA *e* 21 09 32.1
SNAA Sanae 90.24 198 *e*P P **21 09 18.9 +0.6**
SNAA pmax pmax
comp=Z,8.0nm,1.2s
SNAA Sanae 90.24 198 *e*P P **21 09 19.4 +1.1**
comp=Z,14nm,1.3s,mb5.1
GEC2 GERESS Array S 91.60 319 *e*P P **21 09 25.8 +0.7**
GEC2 *e**PP pP 21 09 33.7 -1.0
GEC2 pmax pmax
comp=Z,16nm,1.4s,mb5.2
GEC2 GERESS Array S 91.60 319 *e*P P **21 09 25.8 +0.7**
GEC2 *e*pP pP 21 09 33.7 -1.0
comp=Z,16nm,1.4s
GEC2 GERESS Array S 91.60 319 *e*P P **21 09 25.8 +0.7**
comp=Z,16nm,1.4s,mb5.2
GEC2 *e*pP pP 21 09 33.7 -1.0
GERES GERESS Array B 91.60 319 P P **21 09 25.8 +0.8**
comp=Z,2.4nm,0.9s,mb4.5,baz=90,slow=4.1,SNR=19
GERES pP pP 21 09 33.9 -0.8
comp=Z,5.0nm,1.1s,baz=98,slow=2.8,SNR=10
BRG Berggiesshubel 91.61 321 *e*P P **21 09 25.2 +0.1**
BRG *e* pP 21 09 34.5 -0.2
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
BRG Berggiesshubel 91.61 321 *e*pP pP 21 09 34.2 -0.5
comp=Z,543nm,5.3s
BRG Berggiesshubel 91.61 321 *e*P P **21 09 25.2 +0.1**
comp=Z,2.2nm,0.9s,mb4.5
BRG *e* pP 21 09 34.5 -0.2
VNA2 Neumayer--Watz 91.86 198 *e*P P **21 09 27.5 +1.6**
baz=127,slow=3.5
VNA2 *e* pP 21 09 36.2 +0.7
VNA2 *e* 21 09 39.5
FBE Freiberg 91.99 321 *e*P P **21 09 27.5 +0.7**
WET Wettzell 92.16 319 *e*P P **21 09 28.0 +0.3**
WET *e**PP pP 21 09 36.3 -1.0
WET pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
WET Wettzell 92.16 319 *e*P P **21 09 28.0 +0.3**
WET *e*pP pP 21 09 36.3 -1.0
comp=Z,9.0nm,1.2s
WET Wettzell 92.16 319 *e*P P **21 09 28.0 +0.3**
comp=Z,9.0nm,1.2s,mb5.0
WET *e*pP pP 21 09 36.3 -1.0
CLL Collm 92.24 321 *e*pP pP 21 09 37.0 -0.6
comp=Z,186nm,3.4s
CLL Collm 92.24 321 *e*pP pP 21 09 37.0 -0.6
ROTZ Rotzenmuhle 92.64 320 *e*pP pP 21 09 38.9 -0.6
comp=Z,6.0nm,1.1s
MANZ Manzenberg 92.72 320 *e*P P **21 09 30.9 +0.7**
comp=Z,14nm,1.3s,mb5.2
MANZ *e*pP pP 21 09 39.5 -0.4
MOX Moxa 93.07 320 *e*pP pP 21 09 41.1 -0.4
GRA1 Grafenberg Arr 93.28 319 *e*P P **21 09 32.9 +0.1**
comp=Z,22nm,1.6s,mb5.3
GRA1 *e*pP pP 21 09 41.8 -0.6
GRF Grafenberg Arr 93.28 319 *e*P P **21 09 32.9 +0.1**
GRF *e**PP pP 21 09 41.8 -0.6
GRF pmax pmax
comp=Z,22nm,1.6s,mb5.3
GRF Grafenberg Arr 93.28 319 *e*P P **21 09 32.9 +0.1**
GRF *e**PP pP 21 09 41.8 -0.6
GRF pmax pmax
comp=Z,22nm,1.6s,mb5.3
GRF Grafenberg Arr 93.28 319 *e*P P **21 09 32.9 +0.1**
comp=Z,22nm,1.6s,mb5.3
GRF *e*pP pP 21 09 41.8 -0.6
PPT Papeete 106.92 110 *e*LR LR 21 46 14.5
comp=Z,135nm,23.2s
YKA Yellowknife Ar 116.30 18 PKP PKPdf 21 15 00.6 -0.5
comp=Z,1.2nm,0.9s,baz=317,slow=2.2,SNR=12
YKA PP PP 21 16 01.2 -5.5
comp=Z,0.5nm,0.9s,baz=319,slow=5.2,SNR=4.8
YKA Yellowknife Ar 116.30 18 PKP PKPdf 21 15 00.6 -0.6
YKA PP PP 21 16 01.2 -5.5
RKT Rikitea 118.81 119 *e*LR LR 21 51 49.1
comp=Z,222nm,33.5s
NVAR Mina Array Bea 130.67 41 PKP PKPdf 21 15 30.8 +1.3
comp=Z,1.8nm,0.6s,baz=287,slow=1.6,SNR=8.9
NVAR pPKP pPKPdf 21 15 38.9 -0.5
comp=Z,1.9nm,0.8s,baz=261,slow=3.1,SNR=4.5
NVAR SKPbc SKPbc 21 18 53.0 +1.7
comp=Z,1.4nm,0.8s,baz=275,slow=4.4,SNR=5.5
NVAR Mina Array Bea 130.67 41 PKP PKPdf 21 15 30.8 +1.4
NVAR pPKP pPKPdf 21 15 38.9 -0.5
NVAR SKPbc SKPbc 21 18 53.0 +1.7
ULM Lac du Bonnet 132.09 15 PKP PKPdf 21 15 31.9 +0.1
comp=Z,6.0nm,0.9s,baz=312,slow=7.0,SNR=5.7
PDAR Pinedale Array 133.05 31 PKP PKPdf 21 15 34.6 +0.8
comp=Z,0.9nm,0.8s,baz=116,slow=2.1,SNR=5.5
PFO Pinyon Flat Ob 134.51 46 PKP PKPdf 21 15 36.7 -0.2
comp=Z,2.5nm,0.7s,baz=319,slow=1.8,SNR=4.6
PFO Pinyon Flat Ob 134.51 46 PKP PKPdf 21 15 36.7 -0.2
CPUP Villa Florida 143.03 213 PKP PKPdf 21 15 53.2 +0.5
comp=Z,1.7nm,0.9s,baz=80,slow=6.1,SNR=2.3
CPUP Villa Florida 143.03 213 *e*PKPdf PKPdf 21 15 50.7 -2.0
ACSO Alum Creek Sta 144.12 5 *e*PKPdf PKPdf 21 15 51.3 -2.9
WMOK Wichita Mounta 144.59 29 *e*PKIKP PKPdf 21 15 53.3 -1.9
BLO Bloomington 144.68 10 *e*PKIKP PKPdf 21 15 53.7 -1.5
OLIL Olney 144.79 13 *e*PKP PKPdf 21 15 54.3 -1.1
MCWV Mont Chateau 144.88 1 *e*PKP PKPdf 21 15 53.5 -2.0
FVM French Village 144.93 16 *e*PKIKP PKPdf 21 15 52.9 -2.7
SIUC Southern Illin 145.50 15 *e*PKP PKPdf 21 15 56.1 -0.6
USIN University of 145.62 12 *e*PKP PKPdf 21 15 56.4 -0.5
TXAR Lajitas Array 145.82 41 PKPbc PKPbc 21 15 58.6 +0.7
comp=Z,46nm,1.0s,baz=280,slow=1.6,SNR=198
MIAR Mount Ida 147.03 23 *e*PKP2 PKPbc 21 16 00.8 -0.5
UALR University of 147.28 21 *e*PKPbc PKPbc 21 16 01.4 -0.6
BLA Blacksburg 147.30 2 *e*PKP2 PKPbc 21 16 01.1 -0.9
JCT Junction City 147.37 35 *e*PKP2 PKPbc 21 16 00.8 -1.6
TZTN Tazewell 147.71 7 *e*PKPbc PKPbc 21 16 02.7 -0.5
TKL Tuckaleechee C 148.55 8 *e*PKP2 PKPbc 21 16 04.8 -0.6
GOGA Godfrey 150.81 8 *e*PKIKP PKPbc 21 16 10.8 -0.2
NHSC New Hope 151.40 2 *e*PKPbc PKPbc 21 16 12.3 -0.1
BRAL Brewton 152.41 15 *e*PKPbc PKPbc 21 16 15.3 +0.5

IDC 24 21:00:07.9±50.0, 1689S×17777W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/16, mbtmp4.1/3, Error ellipse: s-maj=929.4km s-min=152.4km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.66**	**240**	P	P	21 07 41.9	+0.1
	2.5nm,0.7s,baz=90,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**45.43**	**258**	P	P	21 08 28.8	-0.1
	0.8nm,0.5s,baz=94,slow=7.2,SNR=12						
ASAR	**Alice Springs**	**45.66**	**253**	P	P	21 08 30.5	-0.2
	3.1nm,0.6s,baz=88,slow=8.9,SNR=25						

IDC 24 21:04:33.5±1.3, 1243N×14361E, h24km±6km, mb3.5/3, mb1 3.9/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=80.5km s-min=19.0km az=122.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.69**	**47**	Pn	Pn	21 05 01.0	-0.6
	17nm,0.3s,baz=229,slow=14,SNR=7.4						
GUMO				Sn	Sn	21 05 22.3	-0.2
	30nm,0.3s,baz=43,slow=21,SNR=10.0						
WRA	**Warramunga Arr**	**33.43**	**196**	P	P	21 11 09.9	-0.7
	0.8nm,0.9s,baz=18,slow=9.5,SNR=5.4						
WRA				pP	pP	21 11 18.2	+0.4
	0.8nm,0.8s,baz=19,slow=9.6,SNR=3.6						
ASAR	**Alice Springs**	**37.10**	**195**	pP	pP	21 11 50.6	+1.2
	0.4nm,0.7s,baz=25,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**84.45**	**27**	P	P	21 17 03.6	-0.4
	0.2nm,0.4s,baz=284,slow=5.0,SNR=5.0						
YKA				pP	pP	21 17 11.3	-0.5
	0.4nm,0.4s,baz=286,slow=5.1,SNR=5.6						
NVAR	**Mina Array Bea**	**88.61**	**51**	P	P	21 17 26.2	+1.4
	0.4nm,0.6s,baz=269,slow=6.0,SNR=2.4						
NVAR				pP	pP	21 17 33.5	+0.8
	0.9nm,0.7s,baz=263,slow=6.2,SNR=3.0						

IDC 24 21:07:35.7±0.9, 012N×12361E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/17, mbtmp3.8/7, Error ellipse: s-maj=185.3km s-min=16.5km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.54**	**153**	P	P	21 12 37.2	-0.3
	1.4nm,0.6s,baz=336,slow=10.0,SNR=15						
ASAR	**Alice Springs**	**25.67**	**158**	P	P	21 13 08.5	+1.0
	0.5nm,0.5s,baz=344,slow=12,SNR=9.2						
STKA	**Stephens Creek**	**36.09**	**154**	P	P	21 14 38.5	-0.8
	1.0nm,0.8s,baz=322,slow=12,SNR=3.6						
SONM	**Songino Array**	**49.83**	**345**	P	P	21 16 31.1	+0.8
	1.0nm,0.9s,baz=158,slow=8.9,SNR=8.0						
MKAR	**Makanchi Array**	**58.83**	**328**	P	P	21 17 36.3	+0.3
	0.5nm,0.4s,baz=134,slow=8.8,SNR=5.8						
ZALV	**Zalesovo Beam**	**62.46**	**335**	P	P	21 17 59.9	-0.8
	0.6nm,0.3s,baz=130,slow=4.3,SNR=2.7						
KURK	**Kurchatov**	**63.18**	**330**	P	P	21 18 05.5	0.0
	1.1nm,0.6s,baz=133,slow=6.5,SNR=5.8						

*BJI **24** 21:21:50.6, 478S×10125E, h50km, mB5.3, mb5.4, Ms5.0, Msz4.8*
*ISCJB **24** 21:21:51.0±0.2, 429S±003×10121E±003, h26km, mb5.2/124, MS4.7/35, Error ellipse: s-maj=4.0km s-min=3.6km az=40.2*
*NEIC **24** 21:21:52.8±1.6, 431S×10123E, h27km±11km, mb5.2/53, Error ellipse: s-maj=5.5km s-min=3.4km az=45.0*
*MOS **24** 21:21:52.1±0.9, 421S×10131E, h33km, mb5.5/46, MS4.7/5, Error ellipse: s-maj=9.3km s-min=5.1km az=113.1*
*IDC **24** 21:21:52.3±0.4, 430S×10125E, h23km±2km, mb4.9/28, mb1 4.9/30, mb1mx4.9/30, mbtmp4.9/30, ML4.6/2, MS4.5/15, Ms1 4.5/15, ms1mx4.3/26, Error ellipse: s-maj=12.9km s-min=7.8km az=50.0*
*DJA **24** 21:21:53, 450S×10087E, h43km, Mw5.4/19*
*SZGRF **24** 21:22:02.1, 217S×10102E, h28km, mb5.2, Southern Sumatera, Indonesia*
ISC 24 21:21:53.0±0.2, 434S±003×10120E±003, h28km, h28km±4km: pP-P, n393, σ0°92/361, mb5.2/124, MS4.7/35, 33C-19D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKOM	**Kota Tinggi**	**6.64**	**24**	⇑P	**Pn**	**21 23 31.3**	**+2.5**
KGM	**Kluang**	**6.66**	**19**	⇓P	**Pn**	**21 23 30.9**	**+1.8**
PSI	**Prapat**	**7.45**	**342**	Pn	**Pn**	**21 23 37.3**	**-2.6**
	16nm,0.3s,baz=163,slow=10,SNR=47						
PSI				LR	LR	21 27 23.7	
	comp=Z,7μm,19.9s,baz=149,slow=45						
XMIS	**Christmas Isla**	**7.53**	**144**	*e*P	**Pn**	**21 23 33.7**	**-7.2**
XMIS				*e*S	**Sn**	**21 24 50.1**	**-15**
XMIS	**Christmas Isla**	**7.53**	**144**	Pn	**Pn**	**21 23 39.2**	**-1.8**
XMIS				*e*Sn	**Sn**	**21 24 49.7**	**-16**
FRIM	**Kepong**	**7.54**	**3**	⇑P	**Pn**	**21 23 42.0**	**+0.8**
IPM	**Ipoh**	**8.77**	**359**	⇑P	**Pn**	**21 23 59.9**	**+2.0**
COCO	**West Island**	**8.91**	**209**	Pn	**Pn**	**21 23 55.5**	**-4.5**
	5um,0.6s,SNR=17						
COCO	**West Island**	**8.91**	**209**	P	**Pn**	**21 23 55.4**	**-4.6**
	SNR=6.5						
COCO	**West Island**	**8.91**	**209**	*e*P	**Pn**	**21 23 54.8**	**-5.2**
COCO				pmax	pmax		
	comp=Z,619nm,0.8s						
COCO	**West Island**	**8.91**	**209**	*e*Pn	**Pn**	**21 23 54.8**	**-5.2**
	comp=Z,619nm,0.8s						
COCO				*e*Sn	**Sn**	**21 25 33.6**	**-6.0**
KULM	**Kulim**	**9.58**	**357**	*e*Pn	**Pn**	**21 24 09.7**	**+0.4**
	comp=Z,185nm,1.1s						
KULM				Sn	**Sn**	**21 25 55.7**	**-0.4**
KULM	**Kulim**	**9.58**	**357**	⇓P	**Pn**	**21 24 10.0**	**+0.8**
KTGM	**Kuala Trenggan**	**9.80**	**11**	⇑P	**Pn**	**21 24 13.3**	**+1.2**
KSM	**Kuching**	**10.78**	**58**	*e*Pn	**Pn**	**21 24 26.9**	**+1.3**
	comp=Z,34nm,0.8s						
KSM				*e*Sn	**Sn**	**21 26 27.6**	**+2.3**
SNG	**Songkhla**	**11.46**	**357**	P	**Pn**	**21 24 34.0**	**-0.9**
	comp=Z,440nm,1.0s						
SBUM	**Sibu**	**12.91**	**59**	P	**Pn**	**21 24 59.9**	**+5.1**
BTM	**Bintulu**	**14.04**	**58**	⇑P	**Pn**	**21 25 15.4**	**+5.2**
KKM	**Kota Kinabalu**	**18.20**	**56**	*e*Pn	**Pn**	**21 26 04.6**	**+0.8**
	comp=Z,165nm,1.2s						
KAPI	**Kappang**	**18.50**	**93**	P	**Pn**	**21 26 04.8**	**-2.7**
	comp=Z,1.2nm,0.3s,baz=272,slow=8.3,SNR=12						
KAPI				LR	LR	21 33 58.6	
	comp=Z,1μm,21.5s,baz=279,slow=39						
KAPI	**Kappang**	**18.50**	**93**	*e*P	**Pn**	**21 26 05.8**	**-1.6**
	comp=Z,82nm,1.1s						
KAPI				S	**Sn**	**21 29 32.4**	**-1.2**
TSM	**Tawau**	**18.73**	**63**	⇑P	**Pn**	**21 26 11.7**	**+1.4**
SDKM	**Sandakan**	**18.80**	**58**	⇓P	**Pn**	**21 26 12.4**	**+1.3**

KDM	**Kudat**	**19.20**	**54**	⇓P		**Pn**	**21 26 16.6**	**+0.7**
MYLDM	**Lahad Datu**	**19.70**	**61**	⇑P		**Pn**	**21 26 22.8**	**+0.9**
UBT	**Ubonrachathani**	**19.82**	**11**	⇓P		**Pn**	**21 26 22.0**	**-1.3**
NST	**Nakhon Sawan**	**19.91**	**357**	P		**Pn**	**21 26 23.0**	**-1.4**
KKTK	**Khon Kaen**	**20.61**	**4**	P		**P**	**21 26 29.0**	**-1.2**
	comp=Z,1μm,0.5s							
CM31	**Chiang Mai Arr**	**22.77**	**354**	*e*P		**P**	**21 26 51.5**	**-1.7**
	comp=Z,123nm,1.3s,mb5.2							
CMAR	**Chiang Mai Arr**	**22.77**	**354**	P		**P**	**21 26 51.1**	**-2.1**
	comp=Z,81nm,0.9s,mb5.2,baz=186,slow=9.2,SNR=92							
CMAR					PcP	PcP	21 30 45.3	+0.6
	comp=Z,4.6nm,0.9s,baz=211,slow=3.4,SNR=6.1							
CMAR					pPcP		21 30 54.1	
	comp=Z,6.4nm,0.9s,baz=213,slow=2.6,SNR=6.4							
CMAR					LR	LR	21 37 32.2	
	comp=Z,2μm,18.3s,MS4.6,baz=179,slow=41							
CMAR	**Chiang Mai Arr**	**22.77**	**354**	P		**P**	**21 26 51.2**	**-2.1**
CMAR							21 30 45.3	
CMAR							21 30 54.1	
CHG	**Chiang Mai**	**23.12**	**355**	⇓P		**P**	**21 26 55.1**	**-1.9**
	comp=Z,94nm,0.8s,mb5.3							
CHTO	**Chiang Mai**	**23.12**	**355**	P		**P**	**21 26 57.3**	**+0.3**
	SNR=31							
CHTO	**Chiang Mai**	**23.12**	**355**	*e*P		**P**	**21 26 54.5**	**-2.5**
CHTO					pmax	pmax		
	comp=Z,88nm,1.0s,mb5.1							
CHTO	**Chiang Mai**	**23.12**	**355**	*e*P		**P**	**21 26 54.5**	**-2.5**
	comp=Z,88nm,1.0s,mb5.2							
PALK	**Pallekele**	**23.49**	**299**	P		**P**	**21 27 01.3**	**+0.4**
PALK					pmax	pmax		
	comp=Z,23nm,1.1s,mb4.5							
PALK	**Pallekele**	**23.49**	**299**	P		**P**	**21 27 01.3**	**+0.4**
	comp=Z,23nm,1.1s,mb4.5							
ENPP	**El Nido**	**23.82**	**49**	*e*P		**P**	**21 27 03.6**	**-0.4**
MBWA	**Marble Bar**	**24.56**	**134**	*e*P		**P**	**21 27 10.9**	**+0.2**
	comp=Z,31nm,0.9s,mb4.8							
MBWA				*e*			21 27 26.4	
BUSP	**Coron**	**24.91**	**49**	*e*P		**P**	**21 27 14.7**	**+0.8**
SJMP	**San Jose**	**25.89**	**50**	*e*P		**P**	**21 27 23.2**	**+0.4**
LUBP	**Lubang**	**26.07**	**46**	*e*P		**P**	**21 27 24.7**	**+0.3**
OTRP	**Odiongan**	**26.52**	**51**	*e*P		**P**	**21 27 28.8**	**+0.3**
RCP	**Roxas**	**26.62**	**53**⇓	*e*P		**P**	**21 27 29.5**	**+0.1**
DAV	**Davao City (W)**	**26.84**	**65**	*e*P		**P**	**21 27 31.3**	**-0.1**
SCZP	**Santa Cruz**	**27.25**	**42**	*e*P		pP	21 27 48.2	+5.1
FITZ	**Fitzroy Crossi**	**27.54**	**122**⇑	*i*P		**P**	**21 27 37.1**	**-0.5**
	comp=Z,45nm,0.9s,mb5.1							
FITZ				*e*		pP	21 27 45.0	-0.7
FITZ	**Fitzroy Crossi**	**27.54**	**122**	*e*P		**P**	**21 27 37.0**	**-0.7**
	comp=Z,49nm,1.1s,mb5.0							
FITZ				*e*		pP	21 27 45.3	-0.4
KOD	**Kodaikanal**	**27.72**	**302**	*e*P		**P**	**21 27 40.8**	**+1.5**
KOD					AMb	AMB	21 27 53.3	
	comp=Z,42nm,1.2s,mb4.9							
VIS	**Vishakhapatnam**	**28.14**	**322**	*e*P		**P**	**21 27 43.5**	**+0.5**
VIS					AMb	AMB	21 27 53.6	
	comp=Z,34nm,0.5s,mb5.2							
KMI	**Kunming**	**29.33**	**3**	P		**P**	**21 27 54.9**	**+1.5**
KMI					PP	PP	21 28 54.3	-5.7
KMI					PPP		21 29 08.1	
KMI					S	**S**	**21 32 52.3**	**+7.1**
KMI					AMB	AMB		
	comp=Z,66nm,0.8s,mb5.4							
KMI					AMB	AMB		
	comp=Z,160nm,3.8s							
KMI					LR	LR		
	comp=N,1μm,16.8s,MS4.8							
KMI					LR	LR		
	comp=E,2μm,16.3s,MS4.8							
KMI					LR	LR		
	comp=Z,1μm,16.3s,MS4.6							
CAUP	**Cauayan**	**29.37**	**43**	*e*P		**P**	**21 27 53.1**	**-0.8**
MUN	**Mundaring**	**30.89**	**155**	*e*P		**P**	**21 28 06.4**	**-0.8**
GYA	**Guiyang**	**31.07**	**10**⇑	*i*P		**P**	**21 28 12.0**	**+3.1**
GYA					AP	pP	21 28 25.8	+8.8
GYA					XP	sP	21 28 33.4	+13
GYA					PP	PP	21 29 16.3	-3.1
GYA					PCP	PcP	21 31 06.3	+2.1
GYA					S	**S**	**21 33 13.6**	**+1.0**
GYA					XS	sS	21 33 38.9	+13
GYA					SCP	ScP	21 34 40.3	-5.1
GYA					SS	SS	21 35 01.9	-24
GYA					AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2							
GYA					AMB	AMB		
	comp=Z,160nm,5.3s							
GYA					LR	LR		
	comp=N,2μm,18.8s,MS4.8							
GYA					LR	LR		
	comp=E,1μm,17.6s,MS4.8							
GYA					LR	LR		
	comp=Z,1μm,16.0s,MS4.7							
SHL	**Shillong**	**31.08**	**344**	*e*P		**P**	**21 28 09.0**	**+0.1**
HYB	**Hyderabad**	**31.11**	**315**	*i*P		**P**	**21 28 09.5**	**+0.2**
HYB				*e*		pP	21 28 18.0	+0.6
HYB	**Hyderabad**	**31.11**	**315**	*e*P		**P**	**21 28 09.5**	**+0.2**
HYB				*e*		pP	21 28 18.0	+0.6
BOK	**Bokaro**	**31.70**	**333**	*e*P		**P**	**21 28 15.4**	**+0.9**
NWAO	**Narrogin (SRO)**	**32.14**	**154**	P		**P**	**21 28 17.1**	**-1.1**
	comp=Z,15nm,0.8s,mb4.9,baz=339,slow=9.2,SNR=10							
NWAO					pP	pP	21 28 24.8	-1.6
	comp=Z,27nm,1.0s,baz=325,slow=11,SNR=4.7							
NWAO	**Narrogin (SRO)**	**32.14**	**154**	*e*P		**P**	**21 28 18.2**	**-0.1**
NWAO				*e*			21 28 28.8	
QZH	**Quanzhou**	**33.66**	**29**	*e*P		**P**	**21 28 33.8**	**+2.2**
QZH					S	**S**	**21 33 56.0**	**+3.0**
QZH					LR	LR		
	comp=Z,1μm,14.2s,MS4.8							
AKL	**Akola**	**34.40**	**317**	*e*P		**P**	**21 28 37.8**	**-0.2**
AKL					AMb	AMB	21 28 48.7	
	comp=Z,31nm,2.0s,mb4.9							
NACB	**Ninganchiao**	**34.61**	**34**	P		**P**	**21 28 39.3**	**-0.5**
YHNB	**Yeheng**	**34.88**	**33**	*e*P		**P**	**21 28 42.3**	**+0.1**
ALBI	**Allahabad**	**34.98**	**328**	*e*P		**P**	**21 28 42.0**	**-1.0**
CD2	**Chengdu**	**35.14**	**4**	P		**P**	**21 28 43.8**	**-0.5**
CD2					AP	pP	21 28 58.8	+6.3
CD2					XP	sP	21 29 06.0	+10
CD2					PP	PP	21 30 04.1	-0.3
CD2					PCP	PcP	21 31 14.0	-1.5
CD2					S	**S**	**21 34 13.9**	**-1.7**
CD2					XS	sS	21 34 37.8	+8.6
CD2					AMB	AMB		
	comp=Z,120nm,1.0s,mb5.8							
CD2					AMB	AMB		
	comp=Z,360nm,5.1s							
CD2					LR	LR		
	comp=N,2μm,21.4s							
CD2					LR	LR		
	comp=Z,2μm,17.8s,MS4.8							
LSA	**Lhasa**	**35.20**	**345**	P		**P**	**21 28 46.0**	**+1.2**
LSA					AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2							
LSA	**Lhasa**	**35.20**	**345**	*e*P		**P**	**21 28 45.8**	**+1.0**
LSA				*e*		pP	21 28 55.5	+2.5
LSA				*e*			21 31 17.9	
LSA					pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2							
LSA	**Lhasa**	**35.20**	**345**	*e*P		**P**	**21 28 45.8**	**+0.9**
	comp=Z,32nm,0.9s,mb5.2							
LSA				*e*			21 28 55.5	
LSA				*e*PcP		PcP	21 31 17.9	+2.2
POO	**Poona**	**35.26**	**311**	*e*P		**P**	**21 28 43.5**	**-2.0**
POO				*e*P			21 28 47.4	
POO					AMb	AMB	21 28 56.2	
	comp=Z,29nm,1.0s,mb5.2							
WRA	**Warramunga Arr**	**35.80**	**118**	P		**P**	**21 28 49.5**	**-0.7**
	comp=Z,20nm,0.9s,mb5.1,baz=291,slow=10,SNR=80							
WRA					pP	pP	21 28 57.2	-1.2
	comp=Z,22nm,0.8s,baz=303,slow=9.3,SNR=20							
WRA					PcP	PcP	21 31 16.9	-0.8
	comp=Z,1.9nm,0.7s,baz=296,slow=2.4,SNR=4.0							
WRA					S	**S**	**21 34 28.0**	**+1.8**
	comp=Z,3.1nm,1.0s,baz=294,slow=15,SNR=4.3							
WRAB	**Tennant Creek**	**35.81**	**118**	P		**P**	**21 28 49.0**	**-1.3**
	comp=Z,291nm,0.7s,mb6.3,SNR=16							
WRAB	**Tennant Creek**	**35.81**	**118**	*e*P		**P**	**21 28 50.2**	**-0.1**
WRAB				*e*		pP	21 28 59.2	+0.7
WRAB				*e*			21 30 09.1	
WRAB				*e*			21 31 17.9	
WRAB					pmax	pmax		
	comp=Z,41nm,0.8s,mb5.4							
WRAB	**Tennant Creek**	**35.81**	**118**	*e*P		**P**	**21 28 50.1**	**-0.1**
	comp=Z,41nm,0.8s,mb5.4							
WRAB				*e*		pP	21 28 59.2	+0.7
WRAB				*e*PP		PP	21 30 09.1	-2.8
WRAB				*e*PcP		PcP	21 31 17.9	+0.1
WB2	**Warramunga Arr**	**35.81**	**118**⇑	*i*P		**P**	**21 28 49.6**	**-0.7**
WB2				*e*		pP	21 28 58.3	-0.2
WB2	**Warramunga Arr**	**35.81**	**118**	*e*P		**P**	**21 28 49.8**	**-0.5**
WB2				*e*			21 28 59.6	
WB2				*e*S		**S**	**21 34 26.0**	**-0.4**
WB2				*e*ScP		ScP	21 35 00.4	-1.8
BHPL	**Bhopal**	**35.92**	**321**	*e*P		**P**	**21 28 51.1**	**0.0**
BHPL					AMb	AMB	21 29 01.7	
	comp=Z,35nm,1.4s,mb5.1							
FORT	**Forrest**	**36.49**	**139**	*e*P		**P**	**21 29 02.6**	**+6.6**
	comp=Z,25nm,0.7s,mb5.2							
WHN	**Wuhan**	**36.90**	**19**	P		**P**	**21 28 59.8**	**+0.4**
WHN					PCP	PcP	21 31 21.0	+0.3
WHN					S	**S**	**21 34 50.0**	**+7.4**
WHN					LR	LR		
	comp=Z,2μm,16.4s,MS5.0							
ASAR	**Alice Springs**	**36.93**	**124**	P		**P**	**21 28 59.7**	**-0.1**
	comp=Z,7.3nm,0.9s,mb4.5,baz=294,slow=8.1,SNR=50							
ASAR					PcP	PcP	21 31 20.7	-0.3
	comp=Z,4.4nm,0.9s,baz=283,slow=2.1,SNR=5.1							
ASAR					pPcP		21 31 29.4	
	comp=Z,6.8nm,0.8s,baz=301,slow=2.8,SNR=8.4							
ASAR					S	**S**	**21 34 43.1**	**-0.2**
	comp=Z,2.2nm,1.1s,baz=290,slow=16,SNR=4.7							
ASAR	**Alice Springs**	**36.93**	**124**	P		**P**	**21 28 59.7**	**-0.1**
ASAR							21 31 20.7	
ASAR					S	**S**	**21 34 43.2**	**-0.1**
XAN	**Xi'an**	**38.86**	**10**	P		**P**	**21 29 15.3**	**-0.6**
XAN					AP	pP	21 29 29.8	+5.6
XAN					XP	sP	21 29 37.5	+10
XAN					PP	PP	21 30 48.1	+2.7
XAN					S	**S**	**21 35 06.8**	**-5.5**
XAN					AMB	AMB		
	comp=Z,71nm,1.3s,mb5.2							
XAN					AMB	AMB		
	comp=Z,176nm,7.3s							
XAN					LR	LR		
	comp=N,714nm,14.0s,MS4.8							
XAN					LR	LR		
	comp=E,790nm,14.0s,MS4.8							
XAN					LR	LR		
	comp=Z,2μm,14.2s,MS5.1							
LGTI	**Lohaghat**	**39.16**	**330**	*e*P		**P**	**21 29 19.0**	**+0.5**
PTH	**Pithoragarh**	**39.26**	**330**	*e*P		**P**	**21 29 19.1**	**-0.2**
NJ2	**Nanjing**	**39.90**	**24**	*e*P		**P**	**21 29 23.9**	**-0.7**
NJ2					AP	pP	21 29 39.3	+6.4
NJ2					XP	sP	21 29 46.3	+10
NJ2					PP	PP	21 31 00.6	+3.9
NJ2					S	**S**	**21 35 24.0**	**-3.9**
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6							
NJ2					AMB	AMB		
	comp=Z,320nm,5.2s							
NJ2					LR	LR		
	comp=N,520nm,20.0s							
NJ2					LR	LR		
	comp=E,750nm,26.0s							
NJ2					LR	LR		
	comp=Z,710nm,18.0s,MS4.5							
AJM	**Ajmer**	**40.00**	**321**	*e*P		**P**	**21 29 25.9**	**+0.3**
AJM					AMb	AMB	21 29 35.4	
	comp=Z,74nm,1.3s,mb5.2							
SSE	**Sheshan**	**40.07**	**27**	P		**P**	**21 29 27.1**	**+1.0**
SSE					XP	sP	21 29 48.8	+11
SSE					PCP	PcP	21 31 30.3	-0.3
SSE					S	**S**	**21 35 29.0**	**-1.5**
SSE					XS	sS	21 35 55.5	+11
SSE					SCS	ScS	21 39 28.0	-3.4
SSE					AMB	AMB		
	comp=Z,63nm,1.2s,mb5.2							
SSE					AMB	AMB		
	comp=Z,231nm,5.2s							
SSE					LR	LR		
	comp=N,490nm,11.1s,MS4.7							
SSE					LR	LR		
	comp=E,375nm,11.1s,MS4.7							
SSE					LR	LR		
	comp=Z,314nm,14.3s,MS4.3							
LZH	**Lanzhou**	**40.29**	**3**	⇓P		**P**	**21 29 28.5**	**+0.7**
LZH					AP	pP	21 29 40.3	+4.2
LZH					XP	sP	21 29 49.1	+10
LZH					PP	PP	21 31 05.1	+4.2
LZH					S	**S**	**21 35 29.0**	**-4.7**
LZH					XS	sS	21 36 00.1	+13
LZH					AMB	AMB		
	comp=Z,120nm,1.2s,mb5.5							
LZH					AMB	AMB		
	comp=Z,248nm,4.0s							
LZH					LR	LR		
	comp=E,2μm,15.3s							
LZH					LR	LR		
	comp=Z,2μm,16.1s,MS5.1							
DDI	**Dehra Dun**	**40.97**	**329**	*ex*		x	21 29 31.0	
SMLA	**Simla**	**42.07**	**329**	*i*P		**P**	**21 29 42.5**	**0.0**
SMLA					AMb	AMB	21 29 52.7	
	comp=Z,190nm,1.1s,mb5.6							
COEN	**Coen**	**42.46**	**106**	*e*P		**P**	**21 29 44.3**	**-1.6**
	comp=Z,38nm,1.2s,mb4.9							
COEN				*e*PcP		PcP	21 31 37.5	-1.2
SDNR	**Sundarnagar**	**42.47**	**329**	*e*P		**P**	**21 29 47.0**	**+1.2**
GTA	**Gaotai**	**43.55**	**358**⇑	*i*P		**P**	**21 29 55.3**	**+0.9**
GTA					AP	pP	21 30 10.5	+7.7
GTA					XP	sP	21 30 17.6	+12
GTA					PCP	PcP	21 31 43.0	+1.1
GTA					S	**S**	**21 36 20.9**	**-0.9**
GTA					XS	sS	21 36 47.4	+12
GTA					SS	SS	21 39 31.0	-6.3
GTA					AMB	AMB		
	comp=Z,34nm,0.8s,mb5.1							
GTA					AMB	AMB		
	comp=Z,263nm,6.6s							
GTA					LR	LR		
	comp=N,513nm,15.3s,MS5.0							
GTA					LR	LR		
	comp=E,1μm,16.2s,MS5.0							
GTA					LR	LR		
	comp=Z,902nm,15.3s,MS4.8							
THN	**Thein Dam**	**43.86**	**328**	*e*P		**P**	**21 29 55.4**	**-1.6**
BTO	**Baotou**	**45.45**	**9**	*e*P		**P**	**21 30 09.0**	**-0.6**
PMG	**Port Moresby**	**45.87**	**99**	P		**P**	**21 30 12.0**	**-1.4**
	comp=Z,43nm,0.8s,mb5.5,baz=274,slow=2.6,SNR=22							
PMG	**Port Moresby**	**45.87**	**99***c*	*i*P		**P**	**21 30 12.2**	**-1.2**
PMG					pmax	pmax		
	comp=Z,92nm,1.3s							
PMG	**Port Moresby**	**45.87**	**99**	*e*P		**P**	**21 30 12.3**	**-1.1**
	comp=Z,66nm,1.0s,mb5.5							
PMG				*e*PcP		PcP	21 31 51.0	+0.5
HHC	**Hu-ho-hao-te**	**45.96**	**11**	*e*P		**P**	**21 30 14.5**	**+0.9**
HHC					AP	pP	21 30 29.8	+7.8
HHC					XP	sP	21 30 37.3	+12
HHC					PCP	PcP	21 31 50.5	+0.4
HHC					PP	PP	21 32 02.4	+0.6
HHC					SCP	ScP	21 35 36.8	-4.8
HHC					PCS	PcS	21 35 43.4	-1.0
HHC					S	**S**	**21 36 53.4**	**-3.3**
HHC					XS	sS	21 37 19.9	+9.3
HHC					SCS	ScS	21 40 01.1	-6.5
HHC					SS	SS	21 40 11.6	-10
HHC					AMB	AMB		
	comp=Z,41nm,1.1s,mb5.3							
HHC					AMB	AMB		
	comp=Z,407nm,4.7s							
HHC					LR	LR		
	comp=N,1μm,13.1s,MS5.1							
HHC					LR	LR		
	comp=E,648nm,15.5s,MS5.1							
HHC					LR	LR		
	comp=Z,1μm,13.8s,MS5.0							
BJT	**Baijiatuau**	**46.24**	**16**	*e*P		**P**	**21 30 15.6**	**-0.2**
BJT				*e*		pP	21 30 24.4	+0.2
BJT				*e*			21 31 53.4	
BJT					pmax	pmax		
	comp=Z,121nm,1.1s							
BJT	**Baijiatuau**	**46.24**	**16**	*e*P		**P**	**21 30 15.6**	**-0.2**
	comp=Z,121nm,1.1s,mb5.7							
BJT				*e*		pP	21 30 24.4	+0.2
BJT				*e*PcP		PcP	21 31 53.4	+2.3
BJI	**Beijing**	**46.26**	**16**	P		**P**	**21 30 16.1**	**+0.1**
BJI					S	**S**	**21 37 00.1**	**-1.0**
BJI					AMB	AMB		
	comp=Z,82nm,1.0s,mb5.6							
BJI					AMB	AMB		
	comp=Z,170nm,3.5s							
BJI					LR	LR		
	comp=N,717nm,15.9s,MS5.0							
BJI					LR	LR		
	comp=E,959nm,14.4s,MS5.0							
BJI					LR	LR		
	comp=Z,535nm,20.1s							
CTA	**Charters Tower**	**46.54**	**114**	P		**P**	**21 30 18.6**	**+0.1**
	comp=Z,28nm,0.9s,mb5.2,baz=290,slow=9.2,SNR=23							
CTA	**Charters Tower**	**46.54**	**114**⇑	*i*P		**P**	**21 30 18.5**	**0.0**
	comp=Z,26nm,0.9s,mb5.2							
CTAO	**Charters Tower**	**46.54**	**114**	*e*P		**P**	**21 30 18.6**	**+0.1**
CTAO				*e*			21 30 28.6	
CTAO				*e*			21 31 50.5	
CTAO				*e*			21 32 09.0	
CTAO					pmax	pmax		
	comp=Z,49nm,1.0s,mb5.4							
CTAO	**Charters Tower**	**46.54**	**114**	*e*P		**P**	**21 30 18.6**	**0.0**
	comp=Z,49nm,1.0s,mb5.4							
CTAO				*e*			21 30 28.6	
CTAO				*e*PcP		PcP	21 31 50.5	-2.2
CTAO				*e*PP		PP	21 32 09.0	+0.8
STKA	**Stephens Creek**	**46.71**	**131**	P		**P**	**21 30 18.9**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8,baz=302,slow=7.8,SNR=20							
STKA					LR	LR	21 51 22.7	
	comp=Z,899nm,21.3s,MS4.7,baz=108,slow=38							
STKA	**Stephens Creek**	**46.71**	**131**	*e*P		**P**	**21 30 20.2**	**+0.5**
	comp=Z,8.4nm,0.7s,mb4.8							
STKA				*e*		pP	21 30 27.8	-0.3
STKA	**Stephens Creek**	**46.71**	**131**	*e*P		**P**	**21 30 20.3**	**+0.6**
	comp=Z,7.6nm,0.8s,mb4.7							
STKA				*e*		pP	21 30 27.9	-0.2
STKA				*e*PcP		PcP	21 31 52.8	-0.3
GUMO	**Guam**	**46.85**	**67**	*e*P		**P**	**21 30 20.8**	**-0.3**
DL2	**Dalian**	**46.99**	**22**	P		**P**	**21 30 21.6**	**-0.1**
DL2				*e*AP		pP	21 30 38.0	+7.9
DL2				*e*S		**S**	**21 37 09.8**	**-1.8**
DL2					AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0							
DL2					AMB	AMB		
	comp=Z,200nm,4.3s							
DL2					LR	LR		
	comp=N,380nm,16.5s							
DL2					LR	LR		
	comp=Z,410nm,17.9s,MS4.4							
KSRS	**Korea Array**	**48.45**	**29**	P		**P**	**21 30 32.8**	**-0.3**
	comp=Z,57nm,0.9s,mb5.6,baz=216,slow=8.0,SNR=126							
KSRS					PcP	PcP	21 31 59.5	+0.4
	comp=Z,8.3nm,0.9s,baz=224,slow=3.9,SNR=5.4							
KBL	**Kabul**	**49.12**	**324**	*e*P		**P**	**21 30 37.6**	**-0.7**
KBL				*e*		pP	21 30 46.0	-0.8
KBL					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0							
KBL	**Kabul**	**49.12**	**324**	*e*P		**P**	**21 30 37.6**	**-0.7**
	comp=Z,16nm,0.9s,mb5.0							
KBL				*e*		pP	21 30 46.0	-0.7
KSH	**Kashi**	**49.45**	**334**	P		**P**	**21 30 42.0**	**+1.3**
KSH					AP	pP	21 30 57.3	+8.2
KSH					XP	sP	21 31 04.4	+12
KSH					PP	PP	21 32 34.6	-0.5
KSH					PPP		21 33 27.8	
KSH					S	**S**	**21 37 37.1**	**-9.2**
KSH					SCS	ScS	21 40 26.3	-4.5
KSH					AMB	AMB		
	comp=Z,186nm,1.1s,mb6.0							
KSH					AMB	AMB		
	comp=Z,959nm,6.4s							
KSH					LR	LR		
	comp=N,1μm,9.3s							
KSH					LR	LR		
	comp=E,1μm,7.8s							
KSH					LR	LR		
	comp=Z,1μm,10.2s,MS5.1							
WMQ	**Urumqi**	**49.47**	**347**	P		**P**	**21 30 41.6**	**+0.9**
WMQ					AMB	AMB		
	comp=Z,116nm,1.0s,mb5.9							
WMQ					LR	LR		
	comp=N,295nm,18.0s,MS4.6							
WMQ					LR	LR		
	comp=E,468nm,20.0s,MS4.6							
WMQ					LR	LR		
	comp=Z,439nm,21.0s,MS4.4							
SNY	**Shenyang**	**50.27**	**22**	⇓P		**P**	**21 30 46.3**	**-0.6**
SNY					AMB	AMB		
	comp=Z,40nm,1.1s,mb5.4							
CBIJ	**Chichi jima**	**50.43**	**49**	LR		LR	21 52 12.5	
	comp=Z,396nm,18.9s,MS4.5,baz=112,slow=36							
ULHL	**Ulahol**	**51.62**	**336**	P		**P**	**21 30 57.7**	**+0.6**
	SNR=5.5							
SONM	**Songino Array**	**52.16**	**4**	P		**P**	**21 31 01.9**	**+1.0**
	comp=Z,77nm,0.9s,mb5.6,baz=186,slow=8.7,SNR=522							
SONM					PcP	PcP	21 32 12.7	+0.3
	comp=Z,12nm,0.6s,baz=185,slow=4.2,SNR=9.3							
SONM					LR	LR	21 55 10.4	
	comp=Z,483nm,18.6s,MS4.6,baz=176,slow=38							
SONM	**Songino Array**	**52.16**	**4**	P		**P**	**21 31 01.9**	**+1.0**
SONM							21 32 12.7	
EIDS	**Eidsvold**	**52.16**	**119**	*e*P		**P**	**21 31 02.3**	**+0.9**
	comp=Z,50nm,1.2s,mb5.3							
ULN	**Ulaanbaatar**	**52.24**	**5**	P		**P**	**21 31 02.8**	**+1.3**
	SNR=25							
ULN	**Ulaanbaatar**	**52.24**	**5**	*e*P		**P**	**21 31 02.0**	**+0.5**
ULN				*e*			21 32 13.2	
ULN					pmax	pmax		
	comp=Z,75nm,1.1s,mb5.5							
ULN	**Ulaanbaatar**	**52.24**	**5**	*e*P		**P**	**21 31 02.0**	**+0.4**
	comp=Z,75nm,1.1s,mb5.5							
ULN				*e*PcP		PcP	21 32 13.2	+0.4
UCH	**Uchtor**	**52.31**	**335**	*e*P		**P**	**21 31 03.0**	**+0.8**
	comp=Z,14nm,1.1s,mb4.8							
UCH				*e*PcP		PcP	21 32 14.4	+1.3
UCH				*e*PP		PP	21 33 01.0	-0.1
TKM2	**Tokmak 2**	**52.45**	**336**	*e*P		**P**	**21 31 03.6**	**+0.4**
TKM2				*e*		pP	21 31 11.6	-0.1
TKM2					pmax	pmax		
	comp=Z,72nm,1.0s,mb5.6							
TKM2	**Tokmak 2**	**52.45**	**336**	P		**P**	**21 31 03.6**	**+0.4**
	SNR=42							
TKM2	**Tokmak 2**	**52.45**	**336**	*e*P		**P**	**21 31 03.6**	**+0.5**
	comp=Z,72nm,1.0s,mb5.5							
TKM2				*e*		pP	21 31 11.6	-0.1
KBK	**Karagaybulak**	**52.49**	**336**	P		**P**	**21 31 04.5**	**+1.0**
	SNR=13							
AML	**Almayashu**	**52.58**	**334**	P		**P**	**21 31 05.1**	**+0.9

MAJO e 21 32 13.7
MAJO pmax pmax
comp=Z,54nm,1.1s,mb5.4
MAJO Matsushiro 53.37 37 *e*P **P 21 31 08.8 -1.3**
comp=Z,54nm,1.1s,mb5.4
MAJO *e*PcP PcP 21 32 13.7 -3.6
MAT Matsushiro 53.37 37 P **P 21 31 08.6 -1.5**
MAT *e*S **S 21 38 35.0 -5.5**
MJAR Matsushiro Arr 53.37 37 P **P 21 31 08.6 -1.5**
comp=Z,41nm,1.0s,mb5.3,baz=219,slow=7.6,SNR=76
MK31 Makanchi Array 53.59 344 *e*P **P 21 31 11.6 0.0**
MK31 *e* pP 21 31 19.6 -0.5
MK31 *e* 21 32 18.1
MK31 *e* 21 33 10.3
MKAR Makanchi Array 53.59 344 P **P 21 31 11.6 0.0**
comp=Z,46nm,0.8s,mb5.5,baz=148,slow=8.2,SNR=254
MKAR LR LR 21 59 05.4
comp=Z,242nm,18.1s,MS4.3,baz=159,slow=42
MKAR Makanchi Array 53.59 344 P **P 21 31 11.6 0.0**
MKAR LR LR 21 59 05.4
ARMA Armidale 54.08 125 *e*P **P 21 31 17.3 +1.8**
ARMA *e* pP 21 31 25.1 +1.1
ZAK Zakamensk 54.53 2⇓*i*P **P 21 31 18.2 -0.2**
ZAK *e* 21 32 21.8
ZAK pmax pmax
comp=Z,21nm,1.0s,mb5.1
OPO Ambohidratompo 54.58 250 P **P 21 31 20.3 +1.0**
comp=Z,13nm,0.9s,mb5.0,baz=61,slow=5.6,SNR=10
OPO pP pP 21 31 27.8 0.0
comp=Z,12nm,0.9s,baz=65,slow=8.1,SNR=6.8
ABPO Ambohimpanom 54.60 250 *e*P **P 21 31 19.7 +0.2**
ABPO *e* pP 21 31 28.5 +0.5
ABPO pmax pmax
comp=Z,15nm,1.0s,mb5.0
ABPO Ambohimpanom 54.60 250 *e*P **P 21 31 19.6 +0.2**
comp=Z,16nm,1.0s,mb5.0
ABPO *e* pP 21 31 28.5 +0.5
MDJ Mudanjiang 54.98 24 P **P 21 31 21.8 +0.1**
MDJ AP pP 21 31 35.9 +5.7
MDJ XP sP 21 31 41.9 +8.4
MDJ PCP PcP 21 32 22.3 -1.0
MDJ PP PP 21 33 30.0 +4.9
MDJ SCP ScP 21 36 16.3 -3.9
MDJ PCS PcS 21 36 24.1 +1.2
MDJ S **S 21 39 08.0 +6.0**
MDJ SCS ScS 21 41 07.0 -2.1
MDJ AMB AMB
comp=Z,40nm,1.0s,mb5.4
MDJ LR LR
comp=N,163nm,20.7s,MS4.4
MDJ LR LR
comp=E,285nm,20.7s,MS4.4
MDJ LR LR
comp=Z,308nm,20.7s,MS4.4
MDJ Mudanjiang 54.98 24 *e*P **P 21 31 21.2 -0.5**
comp=Z,38nm,1.0s,mb5.4
MDJ *e*PcP PcP 21 32 20.2 -3.1
HIA Hailar 55.77 15 *e*P **P 21 31 26.8 -0.5**
HIA *e* 21 32 24.3
HIA *e* 21 33 35.0
HIA pmax pmax
comp=Z,94nm,1.6s
HIA Hailar 55.77 15 *e*P **P 21 31 26.8 -0.5**
comp=Z,94nm,1.6s,mb5.6
HIA *e*PcP PcP 21 32 24.3 -1.9
HIA *e*PP PP 21 33 35.0 +2.9
MOY Mondy 55.79 360 *e*P **P 21 31 27.0 -0.4**
TLY Talaya 55.84 2 P **P 21 31 29.5 +1.7**
comp=Z,216nm,1.0s,mb6.1,SNR=6.3
TLY Talaya 55.84 2 P **P 21 31 29.3 +1.5**
SNR=9.8
TLY Talaya 55.84 2⇑*i*P **P 21 31 28.6 +0.8**
TLY *e* pP 21 31 36.9 +0.6
TLY pmax pmax
comp=Z,44nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,760nm,17.0s,MS4.8
TLY Talaya 55.84 2 *e*P **P 21 31 28.7 +0.9**
comp=Z,38nm,1.0s,mb5.4
TLY PcP PcP 21 32 27.3 +0.8
IRK Irkutsk 56.43 2⇓*i*P **P 21 31 31.7 -0.3**
IRK *e* 21 31 37.2
IRK pmax pmax
comp=Z,53nm,1.4s,mb5.4
CIT Chita 57.12 9 *e*P **P 21 31 37.9 +1.0**
CIT *e* pP 21 31 46.2 +0.7
CIT pmax pmax
comp=Z,98nm,1.3s,mb5.7
ABKT Ailbek 58.01 320 P **P 21 31 43.4 0.0**
comp=Z,172nm,1.0s,mb6.0,SNR=11
KURK Kurchatov 58.18 343 P **P 21 31 44.4 +0.1**
comp=Z,398nm,0.9s,mb6.5,SNR=33
KURK Kurchatov 58.18 343⇓P **P 21 31 44.9 +0.6**
SNR=24
KURK Kurchatov 58.18 343 P **P 21 31 43.7 -0.6**
comp=Z,40nm,0.9s,mb5.5,baz=164,slow=6.6,SNR=106
KURK pP pP 21 31 50.8 -2.1
comp=Z,38nm,0.9s,baz=160,slow=7.1,SNR=16
KURK Kurchatov 58.18 343⇑*i*P **P 21 31 44.0 -0.3**
KURK pmax pmax
comp=Z,71nm,0.9s,mb5.7
KURK Kurchatov 58.18 343 *e*P **P 21 31 43.8 -0.6**
comp=Z,75nm,1.0s,mb5.7
KURK *e* pP 21 31 52.6 -0.4
HNR Honiara 58.48 98 P **P 21 31 46.0 -1.2**
comp=Z,85nm,0.7s,mb5.9,baz=159,slow=3.5,SNR=6.0
HNR Honiara 58.48 98 *e*P **P 21 31 46.5 -0.7**
HNR pmax pmax
comp=Z,144nm,0.9s,mb6.0
HNR Honiara 58.48 98 *e*P **P 21 31 46.5 -0.8**
comp=Z,144nm,0.9s,mb6.0
KLR Kul'dur 59.59 23⇓*i*P **P 21 31 50.0 -4.2**
KLR *e* pP 21 31 57.8 -5.0
KLR pmax pmax
comp=E,48nm,1.4s
KLR pmax pmax
comp=Z,100nm,1.4s,mb5.7
ZAA0 Zalesovo Array 59.68 349 *e*P **P 21 31 54.5 -0.2**
ZAA0 *e* pP 21 32 02.6 -0.7
ZALV Zalesovo Beam 59.68 349 P **P 21 31 54.4 -0.3**
comp=Z,61nm,0.9s,mb5.6,baz=175,slow=5.5,SNR=145
ZALV pP pP 21 32 02.1 -1.1
comp=Z,47nm,0.8s,baz=181,slow=5.9,SNR=14
ZALV LR LR 22 01 49.2
comp=Z,269nm,19.4s,MS4.4,baz=172,slow=40
ZALV Zalesovo Beam 59.68 349 P **P 21 31 54.4 -0.3**
ZALV *PP pP 21 32 02.2 -1.1
HABR Khabarovsk 60.33 25*c*e**P P 21 31 55.8 -3.5**
HABR *e*PP pP 21 32 06.6 -1.3
HABR *e* 21 32 40.9
HABR *e* 21 34 09.4
HABR *e*S **S 21 40 07.7 -4.3**
HABR *e*SS sS 21 40 25.6 -0.6
HABR *e* 21 41 44.2
HABR *e*SS SS 21 44 06.7 -3.4
HABR pmax pmax
comp=Z,67nm,1.2s,mb5.5
HABR pmax pmax
comp=E,21nm,0.7s
HABR pmax pmax
comp=N,32nm,1.2s
HABR MLR MLR
comp=E,509nm,18.0s,MS4.8
HABR MLR MLR
comp=N,357nm,15.0s,MS4.8
HABR MLR MLR
comp=Z,301nm,17.0s,MS4.5
ASAJ Asahikawa 60.88 33 P **P 21 32 02.9 -0.3**
comp=Z,27nm,0.7s,mb5.5,baz=255,slow=9.5,SNR=11
RDF Al-Radifah 61.19 306 *e*P **P 21 32 04.4 -1.1**
baz=306
RDF AMb AMB 21 32 14.4
comp=Z,90nm,1.2s,mb5.8,baz=306
UMR Umm Al-Rimmam 61.31 307 *e*P **P 21 32 04.8 -1.5**
baz=307
UMR AMb AMB 21 32 15.3
comp=Z,78nm,1.2s,mb5.7,baz=307
NAY Al-Naaiem 61.57 307 *e*P **P 21 32 06.6 -1.5**
baz=306
NAY AMb AMB 21 32 16.8
comp=Z,39nm,1.2s,mb5.4,baz=306
MIB Mutribah 61.71 307 *e*P **P 21 32 07.2 -1.9**
baz=307
MIB AMb AMB 21 32 18.6
comp=Z,105nm,1.2s,mb5.8,baz=307

CASY Casey 62.17 176 *e*P **P 21 32 11.0 -0.5**
comp=Z,32nm,1.2s,mb5.3
BVA0 Borovoye Array 62.78 340 *i* P **P 21 32 14.5 -1.2**
BVA0 pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BVAR Borovoye Array 62.78 340 P **P 21 32 14.9 -0.8**
comp=Z,23nm,0.7s,mb5.4,baz=144,slow=8.7,SNR=172
BVAR pP pP 21 32 22.6 -1.8
comp=Z,28nm,0.8s,baz=146,slow=8.2,SNR=26
BOD Bodaibo 62.82 8⇓*i*P **P 21 32 15.5 -0.4**
BOD pmax pmax
comp=Z,39nm,1.1s,mb5.5
YSS Yuzh-Sakhalins 62.84 31⇑*i*P **P 21 32 15.2 -1.1**
YSS *e* pP 21 32 23.0 -1.9
YSS pmax pmax
comp=Z,130nm,1.0s,mb6.0
BRVK Borovoye 62.85 340 P **P 21 32 15.8 -0.4**
comp=Z,180nm,1.0s,mb6.2,SNR=21
BRVK Borovoye 62.85 340 *e*P **P 21 32 15.5 -0.7**
BRVK *e* pP 21 32 23.2 -1.6
BRVK pmax pmax
comp=Z,31nm,0.9s,mb5.4
BRVK Borovoye 62.85 340 *e*P **P 21 32 15.5 -0.6**
comp=Z,31nm,0.9s,mb5.4
BRVK *e* pP 21 32 23.2 -1.6
CLNS Chul'man 63.96 14 *e*P **P 21 32 23.3 -0.1**
CLNS pmax pmax
comp=Z,31nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,16nm,0.9s
CLNS pmax pmax
comp=N,18nm,0.9s
AB31 Akbulak array 64.26 331 P **P 21 32 24.4 -1.2**
AB31 pmax pmax
comp=Z,51nm,0.8s,mb5.6
DZM Mont Dzumac 65.45 112 *e*P **P 21 32 34.1 +0.2**
comp=Z,16nm,1.0s,mb5.0
DZM *e*PcP PcP 21 33 06.3 +0.6
AKTK Aktyubinsk 65.97 331 P **P 21 32 35.8 -0.9**
AKTK LR LR 22 03 42.8
AKTO Aktyubinsk 65.97 331 P **P 21 32 35.8 -0.9**
comp=Z,8.4nm,1.0s,mb4.7,baz=118,slow=6.2,SNR=19
AKTO LR LR 22 03 42.8
comp=Z,173nm,20.9s,MS4.2,baz=343,slow=38
DGRG David-garej 68.20 318 P **P 21 32 52.0 +1.0**
MAW Mawson 68.33 195 P **P 21 32 51.3 0.0**
comp=Z,11nm,0.9s,mb4.9,baz=37,slow=8.3,SNR=6.5
MAW LR LR 21 56 55.2
comp=Z,554nm,19.9s,MS4.8,baz=40,slow=31
MAW Mawson 68.33 195 *e*P **P 21 32 51.7 +0.3**
MAW pmax pmax
comp=Z,3.0nm,0.8s
MAW Mawson 68.33 195 *e*P **P 21 32 51.7 +0.3**
comp=Z,2.7nm,0.8s,mb4.3
MTA Mtatsminda 68.70 318 P **P 21 32 53.9 -0.2**
TBLG Delisi 68.75 318 P **P 21 32 54.6 +0.1**
GOR Gori 69.28 318 P **P 21 32 58.4 +0.6**
SVE Sverdlovsk 69.29 338⇓*e*P **P 21 32 57.6 +0.1**
SVE *e*S S 21 41 54.1 -8.0
SVE *e*SS SS 21 46 31.2 +1.9
SVE pmax pmax
comp=Z,78nm,1.0s,mb5.6
SVE MLR MLR
comp=Z,1µm,21.0s,MS5.1
YAK Yakutsk 69.70 14 *e*P **P 21 32 57.1 -2.8**
YAK pmax pmax
comp=Z,108nm,1.0s,mb5.7
YAK pmax pmax
comp=N,34nm,1.1s
YAK pmax pmax
comp=E,20nm,1.0s
YAK MLR MLR
comp=Z,883nm,17.0s,MS5.1
YAK MLR MLR
comp=N,604nm,17.0s,MS5.0
YAK MLR MLR
comp=E,343nm,17.0s,MS5.0
YAK Yakutsk 69.70 14 *e*P **P 21 32 58.8 -1.2**
ARU Arti 69.82 336 P **P 21 33 00.4 -0.4**
comp=E,267nm,1.0s,mb6.1,SNR=12
ARU Arti 69.82 336*c i*P **P 21 33 00.2 -0.6**
ARU *e* 21 35 32.6
ARU *e*PPP 21 37 16.6
ARU *e*S S 21 42 09.3 +1.0
ARU SS SS 21 46 39.2 +1.7
ARU pmax pmax
comp=Z,47nm,1.0s,mb5.4
ARU Arti 69.82 336 *e*P **P 21 33 00.2 -0.6**
comp=Z,57nm,1.1s,mb5.4
ARU *e* pP 21 33 08.0 -1.5
ONI Oni 69.98 318 P **P 21 33 02.8 +0.7**
KIV Kislovodsk 71.09 319 *e*P **P 21 33 07.4 -1.4**
KIV *e*S S 21 42 22.8 -0.8
KIV pmax pmax
comp=Z,28nm,1.0s,mb5.2
KIV Kislovodsk 71.09 319 *e*P **P 21 33 08.4 -0.4**
comp=Z,31nm,1.0s,mb5.2
KIV *e* pP 21 33 16.9 -0.7
KIV PP PP 21 35 46.8 0.0
GOF Gofitskoye 71.36 321 *e*P **P 21 33 18.7 +8.3**
MALT Malatya 71.80 313 *e*P **P 21 33 13.0 -0.2**
MALT *e* pP 21 33 21.8 -0.2
MALT pmax pmax
comp=Z,29nm,1.2s,mb5.1
MALT Malatya 71.80 313 *e*P **P 21 33 13.0 -0.2**
comp=Z,29nm,1.2s,mb5.1
MALT *e* pP 21 33 21.8 -0.1
LSZ Lusaka 72.49 255 P **P 21 33 18.0 +0.2**
SOKR Solikamsk 72.67 338*d i*P **P 21 33 18.1 +0.1**
SOKR pmax pmax
comp=Z,60nm,1.0s,mb5.5
SOC Sochi 72.89 318 *e*P **P 21 33 16.2 -3.4**
SOC *e*PP pP 21 33 25.9 -2.5
SOC *e*SP sP 21 33 31.7 +0.1
SOC *e* 21 33 35.4
SOC *e* 21 36 03.4
SOC *e*S S 21 42 41.0 -3.3
SOC *e* 21 43 25.2
PETK Petropavlovsk- 74.23 31 P **P 21 33 26.7 -0.5**
comp=Z,11nm,0.8s,mb4.8,baz=200,slow=2.4,SNR=8.9
PETK LR LR 22 09 59.0
comp=Z,118nm,18.7s,MS4.2,baz=98,slow=39
CSS Prodhromos 74.60 308 *e*P **P 21 33 29.4 -0.4**
comp=Z,54nm,1.1s,mb5.4
CSS *e* pP 21 33 37.4 -1.2
PET Petropavlovsk 74.68 32 *e*P **P 21 33 29.4 -0.5**
PET pmax pmax
comp=Z,39nm,0.7s,mb5.5
PET Petropavlovsk 74.68 32 *e*P **P 21 33 29.5 -0.4**
VRHR Novokhopersk 74.93 326 *e*P **P 21 33 30.8 -0.6**
VRHR *e*PP pP 21 33 39.1 -1.1
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,40nm,0.5s
LBTB Lobatse 75.14 245 *e*P **P 21 33 33.4 +0.2**
LBTB *e* pP 21 33 41.3 -0.7
LBTB 21 33 47.1
LBTB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LBTB Lobatse 75.14 245 *e*P **P 21 33 33.4 +0.2**
comp=Z,8.5nm,0.8s,mb4.7
LBTB *e* pP 21 33 41.3 -0.6
LBTB PcP PcP 21 33 47.1 +0.4
BOSA Boshof 75.60 242 P **P 21 33 35.2 -0.5**
comp=Z,6.4nm,0.8s,mb4.6,baz=56,slow=6.9,SNR=7.9
BOSA LR LR 22 00 34.2
comp=Z,455nm,18.7s,MS4.8,baz=138,slow=31
BOSA Boshof 75.60 242 *e*P **P 21 33 35.7 -0.1**
BOSA *e* pP 21 33 44.4 -0.2
BOSA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BOSA Boshof 75.60 242 *e*P **P 21 33 35.6 -0.1**
comp=Z,10nm,1.0s,mb4.7
BOSA *e* pP 21 33 44.4 -0.2
BR131 Keskin Array S 75.78 313 *e*P **P 21 33 35.6 -0.9**
BR131 *e* pP 21 33 43.6 -1.8
BRTR Keskin Array B 75.78 313 P **P 21 33 35.5 -1.0**
comp=Z,5.6nm,0.9s,mb4.5,baz=132,slow=7.1,SNR=30
BRTR pP pP 21 33 44.0 -1.4
comp=Z,12nm,0.9s,baz=138,slow=6.3,SNR=22
SYO Syowa Base 76.05 199⇑*e*X 21 33 35.6
SYO Syowa Base 76.05 199⇓*e*PcP PcP 21 33 49.7 0.0

URZ Urewera 76.26 128 LR LR 22 05 01.1
comp=Z,294nm,20.5s,MS4.6,baz=301,slow=34
VSR Storozhevoye 76.37 325 *e*P **P 21 33 38.8 -0.8**
VSR *e*PP pP 21 33 46.7 -1.8
VSR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.9s
SIM Simferopol' 77.13 318*d e*P **P 21 33 36.4 -7.7**
SIM *e* pP 21 33 43.0 -10
SIM pmax pmax
comp=Z,28nm,0.8s,mb5.2
SEY Seymchan 77.34 21⇑*i*P **P 21 33 45.0 +0.1**
SEY Seymchan 77.34 21⇑*i*P **P 21 33 45.1 +0.2**
ISP Isparta 77.58 310 *e*P **P 21 33 47.7 +0.9**
TIXI Tiksi 77.97 9*c i*P **P 21 33 46.8 -1.4**
TIXI pmax pmax
comp=Z,33nm,0.9s,mb5.3
TIXI Tiksi 77.97 9 *e*P **P 21 33 46.6 -1.6**
OBN Obninsk 79.41 328⇑*e*P **P 21 33 56.0 -0.4**
OBN *e* 21 36 58.4
OBN *e*S S 21 43 51.2 -4.3
OBN pmax pmax
comp=Z,23nm,1.1s,mb5.0
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.5
OBN Obninsk 79.41 328 P **P 21 33 56.9 +0.4**
OBN *e* pP 21 34 04.3 -0.9
SBA Scott Base 80.74 169 P **P 21 34 03.6 +0.3**
TIRR Tirgusor 80.86 316 *e*P **P 21 34 03.3 -1.3**
TIRR *e* pP 21 34 11.4 -2.0
TIRR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
TIRR Tirgusor 80.86 316⇓*i*P **P 21 34 04.4 -0.2**
TIRR Tirgusor 80.86 316 *e*P **P 21 34 03.3 -1.3**
comp=Z,7.9nm,0.9s,mb4.6
TIRR *e*PcP PcP 21 34 11.4 +0.3
HARR Harsova 81.26 316⇑*i*P **P 21 34 06.6 0.0**
KIS Kishinev 81.27 319 *e*P **P 21 34 14.0 +7.3**
KIS *i* pP 21 34 21.0 +5.4
KIS pmax pmax
comp=Z,110nm,1.2s,mb5.7
KIS Kishinev 81.27 319 *e*UNK **P 21 34 14.0 +7.3**
KIS XM 21 34 14.5
comp=Z,100nm,1.2s
AKASG Malin Array Be 82.06 322 P **P 21 34 09.9 -0.8**
comp=Z,3.7nm,0.7s,mb4.4,baz=88,slow=5.0,SNR=13
AKASG pP pP 21 34 17.5 -2.1
comp=Z,7.6nm,0.8s,baz=87,slow=4.9,SNR=8.9
AKASG Malin Array Be 82.06 322 P **P 21 34 09.9 -0.8**
AKASG pP pP 21 34 17.5 -2.1
KIEV Kiev 82.07 322 *e*P **P 21 34 09.6 -1.2**
KIEV *e* pP 21 34 16.8 -2.9
KIEV pmax pmax
comp=Z,17nm,1.4s,mb4.8
KIEV Kiev 82.07 322 *e*P **P 21 34 09.6 -1.1**
comp=Z,17nm,1.4s,mb4.8
KIEV *e*PcP PcP 21 34 16.8 +0.6
VRI Vrincioaia 82.38 317⇑*i*P **P 21 34 12.9 +0.4**
TSUM Tsumeb 82.57 251 *e*P **P 21 34 14.1 0.0**
BURAR Bucovina Array 83.80 319⇑*i*P **P 21 34 20.9 +1.1**
BUR08 Bucovina Ar. S 83.82 319 *e*P **P 21 34 20.4 +0.5**
BUR08 *e* pP 21 34 29.1 +0.3
JOF Joensuu 84.83 334 *e*p **P 21 34 24.0 -0.7**
comp=Z,6.7nm,0.9s,mb4.8
JOF Joensuu 84.83 334 *e*P **P 21 34 24.0 -0.7**
JOF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BILL Bilibino 84.93 20⇑*i*P **P 21 34 24.7 -0.4**
BILL *e*S S 21 44 43.6 -8.1
BILL pmax pmax
comp=Z,22nm,1.0s,mb5.2
BILL Bilibino 84.93 20 *e*P **P 21 34 24.2 -0.9**
comp=Z,24nm,1.1s,mb5.2
DEV Deva 84.98 317⇑*i*P **P 21 34 27.0 +1.1**
LVV L'vov 85.06 321 *e*P **P 21 34 33.8 +7.6**
DRGR 85.29 318⇑*i*P **P 21 34 27.8 +0.4**
QSPA South Pole Qui 85.63 180 P **P 21 34 28.9 +0.4**
comp=Z,4.8nm,1.0s,mb4.7,baz=306,slow=3.5,SNR=7.5
MAIT Maitri 85.75 199 *e*P **P 21 34 28.7 -0.5**
BZS Buzias 85.82 316⇓*i*P **P 21 34 30.2 +0.2**
KWP Kalwaria 85.86 320 *e*P **P 21 34 30.6 +0.4**
KWP Kalwaria 85.86 320 *e*P **P 21 34 30.6 +0.4**
SUW Suwalki 86.48 325 *e*P **P 21 34 32.9 -0.2**
SUW Suwalki 86.48 325 *e*P **P 21 34 32.9 -0.2**
STHS Stebnicka Huta 86.76 320 *i* P **P 21 34 34.9 +0.3**
STHS *e* pP 21 34 43.1 -0.4
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
STHS Stebnicka Huta 86.76 320 *i* P **P 21 34 34.9 +0.3**
STHS *i* pP pP 21 34 43.1 -0.4
STHS Stebnicka Huta 86.76 320 *i* P **P 21 34 34.9 +0.3**
comp=Z,4.9nm,0.9s,mb4.7
STHS *e* pP 21 34 43.1 -0.4
KAF Kangasniemi 86.80 333 *e*p **P 21 34 34.2 -0.3**
comp=Z,6.0nm,0.5s,mb5.1,baz=100,slow=4.4
KAF Kangasniemi 86.80 333 *e*P **P 21 34 34.2 -0.3**
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb5.1
NIE Niedzica 87.36 320 *e*P **P 21 34 38.3 +0.8**
NIE *e*pP pP 21 34 46.2 -0.2
OJC Ojcow 87.82 321 *e*P **P 21 34 29.7 -10**
OJC *e*pP pP 21 34 48.3 -0.3
OJC Ojcow 87.82 321 *e*P **P 21 34 39.7 0.0**
OJC *e*PP pP 21 34 48.3 -0.3
PKSM Moragy 87.97 316⇑*i*P **P 21 34 40.5 0.0**
VYHS Vyhne 88.17 319 *e*P **P 21 34 49.5 -0.9**
VYHS Vyhne 88.17 319 *e* **P 21 34 49.5 +8.1**
VYHS Vyhne 88.17 319 *i* pP pP 21 34 49.5 -0.9
OKC Ostrava-Krasne 88.81 320 *e*P **P 21 34 44.5 +0.1**
OKC *e*pP pP 21 34 53.0 -0.4
ARCES ARCESS Array B 89.07 340 P **P 21 34 45.6 +0.5**
comp=Z,15nm,0.9s,mb5.3,baz=59,slow=4.7,SNR=12
ARCES pP pP 21 34 53.7 -0.5
comp=Z,22nm,0.9s,baz=76,slow=5.1,SNR=8.0
ARCES LR LR 22 19 50.5
comp=Z,422nm,19.2s,MS4.9,baz=103,slow=39
ARCES ARCESS Array B 89.07 340 P **P 21 34 45.7 +0.5**
ARCES *PP pP 21 34 53.7 -0.5
ARCES ARCESS Array B 89.07 340 P **P 21 34 45.5 +0.5**
ARCES pP pP 21 34 53.7 -0.5
ARCES LR LR 22 19 50.5
MODS Modra-Piesok 89.18 318 *e*P pP 21 34 54.7 -0.4
MODS Modra-Piesok 89.18 318 *e* **P 21 34 54.7 +8.5**
MODS Modra-Piesok 89.18 318 *i* pP pP 21 34 54.7 -0.4
ZST Bratislava 89.27 318 *i* P **P 21 34 47.0 +0.4**
ZST *e* pP 21 34 55.1 -0.5
ZST pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
ZST Bratislava 89.27 318 *i* P **P 21 34 47.0 +0.4**
ZST *i* pP pP 21 34 55.1 -0.5
ZST Bratislava 89.27 318 *i* P **P 21 34 47.0 +0.4**
comp=Z,7.2nm,1.2s,mb4.9
ZST *e* pP 21 34 55.1 -0.5
DPC Dobruska-Polom 90.04 320 *e*P **P 21 34 50.8 +0.6**
DPC *e*pP pP 21 34 59.3 +0.2
KSP Ksiaz 90.12 321 *e*P **P 21 34 51.6 +1.1**
KSP Ksiaz 90.12 321 *e*P **P 21 34 51.3 +0.8**
KSP *e*pP pP 21 34 59.1 -0.4
UPC Upice 90.26 320 *e*P **P 21 34 51.1 -0.1**
UPC *e*pP pP 21 34 59.7 -0.4
SNAA Sanae 90.30 198 *e*P **P 21 34 52.3 +1.3**
SNAA Sanae 90.30 198 *e*P **P 21 34 52.3 +1.3**
SNAA *e* pP 21 34 58.8 -1.1
SNAA Sanae 90.30 198 *i* P **P 21 34 51.9 +0.9**
TREC Trest 90.46 319 *e*P **P 21 34 52.6 +0.5**
TREC *e*pP pP 21 35 00.6 -0.5
PRU Pruhonice 91.14 320 *e*P **P 21 34 55.6 +0.3**
PRU *e*pP pP 21 35 03.8 -0.5
PVCC Panska Ves 91.18 320 *e*P **P 21 34 55.8 +0.4**
GEC2 GERESS Array S 91.59 319 *e*P **P 21 34 57.9 +0.5**
GEC2 *e*PP pP 21 35 06.1 -0.3
GEC2 pmax pmax
comp=Z,14nm,1.4s,mb5.1
GEC2 GERESS Array S 91.59 319 *e*P **P 21 34 57.9 +0.5**
comp=Z,14nm,1.4s,mb5.1
GEC2 *e*pP pP 21 35 06.1 -0.3
comp=Z,7.0nm,1.0s
GERES GERESS Array B 91.59 319 P **P 21 34 57.9 +0.5**
comp=Z,2.8nm,0.9s,mb4.6,baz=90,slow=4.1,SNR=22
GERES pP pP 21 35 05.9 -0.5

comp=Z,4.3nm,0.9s,baz=88,slow=4.1,SNR=18
BRG Berggiesshubel 91.60 321 *e*P **P** **21 34 58.0 +0.6**
BRG *e* pP 21 35 05.5 -0.9
BRG pmax pmax
comp=Z,13nm,1.8s,mb5.0
BRG Berggiesshubel 91.60 321 *e*P **P** **21 34 58.0 +0.6**
comp=Z,21nm,1.8s,mb5.2
BRG epP pP 21 35 05.8 -0.6
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 91.60 321 *e*P **P** **21 34 58.0 +0.6**
comp=Z,13nm,1.8s,mb5.0
BRG *e* pP 21 35 05.5 -0.9
KHC Kasperske Hory 91.69 319 *e*P **P** **21 34 57.6 -0.3**
KHC epP pP 21 35 06.1 -0.7
VNA2 Neumayer--Watz 91.92 198 *e*P **P** **21 35 00.0 +1.5**
baz=300,slow=12
VNA2 Neumayer--Watz 91.92 198 *e*P **P** **21 35 00.0 +1.5**
VNA2 *e* pP 21 35 07.5 0.0
VNA2 *e* 21 35 22.4
RJOB Jochberg 92.11 318 *e*P **P** **21 35 00.3 +0.5**
comp=Z,12nm,1.5s,mb5.0
RJOB epP pP 21 35 08.8 0.0
comp=Z,2.0nm,0.8s
WET Wettzell 92.15 319 *e*P **P** **21 35 00.1 +0.1**
WET e*PP pP 21 35 08.8 -0.2
WET pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
WET Wettzell 92.15 319 *e*P **P** **21 35 00.1 +0.1**
comp=Z,6.0nm,1.1s,mb4.8
WET epP pP 21 35 08.8 -0.2
comp=Z,6.0nm,0.9s
CLL Collm 92.23 321 *e*P **P** **21 35 00.3 0.0**
comp=Z,15nm,1.2s,mb5.2
CLL epP pP 21 35 08.9 -0.4
comp=Z,6.0nm,1.0s
CLL Collm 92.23 321 *e*P **P** **21 35 00.0 -0.3**
CLL *i* pP pP 21 35 08.5 -0.8
comp=Z,15nm,1.2s
CLL esP sP 21 35 12.0 -0.5
CLL Collm 92.23 321 *e*P **P** **21 35 00.0 -0.3**
CLL *i* pP pP 21 35 08.5 -0.8
VNA1 Neumayer--Stat 92.28 198 *e*P **P** **21 35 01.7 +1.5**
VNA1 Neumayer--Stat 92.28 198 *e*P **P** **21 35 01.7 +1.5**
VNA1 *e* pP 21 35 09.3 +0.1
NKC Novy Kostel 92.51 320 *e*P **P** **21 35 02.6 +1.0**
NKC epP pP 21 35 10.0 -0.6
VNA3 Neumayer Olymp 92.51 198 *e*P **P** **21 35 02.1 +0.9**
VNA3 Neumayer Olymp 92.51 198 *e*P **P** **21 35 02.1 +0.9**
VNA3 *e* pP 21 35 10.3 +0.1
VNA3 *e* 21 35 24.2
TANN Tannenbergstha 92.51 320 *e*P **P** **21 35 02.1 +0.5**
comp=Z,777nm,6.2s
TANN epP pP 21 35 10.3 -0.3
comp=Z,4.0nm,1.0s
ROTZ Rotzenmuhle 92.63 320 *e*P **P** **21 35 02.9 +0.7**
comp=Z,18nm,1.4s,mb5.3
ROTZ epP pP 21 35 11.1 -0.1
comp=Z,4.0nm,1.0s
MANZ Manzenberg 92.71 320 *e*P **P** **21 35 03.4 +0.9**
comp=Z,20nm,1.3s,mb5.4
MANZ epP pP 21 35 11.6 +0.1
comp=Z,7.0nm,1.0s
MOX Moxa 93.06 320 *e*P **P** **21 35 12.6 +8.4**
comp=Z,15nm,1.4s,mb5.2
MOX Moxa 93.06 320 *e*P **P** **21 35 12.6 +8.4**
MOX pmax pmax
comp=Z,15nm,1.4s,mb5.2
MOX Moxa 93.06 320 *e*P **P** **21 35 04.4 +0.2**
comp=Z,18nm,1.5s,mb5.3
MOX epP pP 21 35 12.8 -0.3
comp=Z,7.0nm,1.2s
GRA1 Grafenberg Arr 93.27 319 *e*P **P** **21 35 05.7 +0.6**
comp=Z,17nm,1.1s,mb5.4
GRA1 epP pP 21 35 14.1 0.0
GRF Grafenberg Arr 93.27 319 *e*P **P** **21 35 05.7 +0.6**
GRF e*PP pP 21 35 14.1 0.0
GRF pmax pmax
comp=Z,17nm,1.1s,mb5.4
GRF Grafenberg Arr 93.27 319 *e*P **P** **21 35 05.7 +0.6**
GRF e*PP pP 21 35 14.1 0.0
GRF pmax pmax
comp=Z,17nm,1.1s,mb5.4
GRF Grafenberg Arr 93.27 319 *e*P **P** **21 35 05.7 +0.6**
comp=Z,17nm,1.1s,mb5.4
GRF epP pP 21 35 14.1 0.0
comp=Z,8.0nm,0.9s
NOA NORSAR Array B 93.76 331 P **P** **21 35 06.4 -0.7**
comp=Z,1.4nm,1.0s,mb4.4,baz=196,slow=2.9,SNR=3.5
NOA pP pP 21 35 14.8 -1.3
comp=Z,6.5nm,1.1s,baz=92,slow=4.5,SNR=6.8
NOA LR LR 22 25 24.6
comp=Z,168nm,21.7s,MS4.5,baz=355,slow=41
NOA NORSAR Array B 93.76 331 P **P** **21 35 06.4 -0.7**
NOA *PP pP 21 35 14.8 -1.3
NOA NORSAR Array B 93.76 331 P **P** **21 35 06.4 -0.7**
NOA pP pP 21 35 14.8 -1.3
NOA LR LR 22 25 24.6
CLZ Clausthal 93.90 322 *e*P **P** **21 35 08.1 +0.1**
CLZ pmax pmax
comp=Z,13nm,1.3s,mb5.2
CLZ Clausthal 93.90 322 *e*P **P** **21 35 08.1 +0.1**
comp=Z,13nm,1.3s,mb5.2
KEST Kesra 94.02 305 P **P** **21 35 09.5 +0.6**
comp=Z,0.8nm,0.9s,mb4.2,baz=298,slow=15,SNR=3.5
TNS Taunus Mts 95.07 320 *e*P **P** **21 35 13.9 +0.5**
TNS e*PP pP 21 35 21.7 -0.7
TNS pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
TNS Taunus Mts 95.07 320 *e*P **P** **21 35 13.9 +0.5**
comp=Z,10.0nm,1.2s,mb5.1
TNS epP pP 21 35 21.7 -0.7
TOA0 Torodi Ar. Sit 100.22 283 *e*Pdif Pdif 21 35 39.2 +2.7
PPT Papeete 106.89 110 *e*LR LR 22 11 31.8
comp=Z,187nm,23.2s
YKA Yellowknife Ar 116.24 18 PKP PKPdf 21 40 32.6 -0.8
comp=Z,1.6nm,0.9s,baz=312,slow=2.2,SNR=13
YKA pPKP pPKPdf 21 40 40.7 -2.0
comp=Z,2.0nm,0.9s,baz=313,slow=2.1,SNR=9.4
YKA Yellowknife Ar 116.24 18 PKP PKPdf 21 40 32.6 -0.8
YKA pPKP pPKPdf 21 40 40.7 -2.0
RKT Rikitea 118.79 119 *e*LR LR 22 17 12.0
comp=Z,240nm,22.8s
SCHQ Schefferville 128.74 351 PKP PKPdf 21 40 58.2 +0.6
comp=Z,4.4nm,0.9s,baz=259,slow=16,SNR=5.3
SCHQ Schefferville 128.74 351 PKP PKPdf 21 40 58.2 +0.6
DLMT Dillon 129.61 31 *e*PKPdf PKPdf 21 41 00.3 +0.7
DLMT *e* 21 41 09.4
NVAR Mina Array Bea 130.60 41 PKP PKPdf 21 41 02.9 +1.1
comp=Z,2.9nm,0.7s,baz=278,slow=3.5,SNR=9.9
NVAR pPKP pPKPdf 21 41 11.0 0.0
comp=Z,3.0nm,0.7s,baz=251,slow=2.2,SNR=8.2
NVAR SKPbc SKPbc 21 44 24.8 +1.1
comp=Z,2.7nm,1.0s,baz=275,slow=4.8,SNR=6.7
ELK Elko 131.18 37 PKP PKPdf 21 41 04.2 +1.5
comp=Z,4.2nm,0.9s,baz=287,slow=4.8,SNR=15
RLMT Red Lodge 131.42 29 *e*PKPdf PKPdf 21 41 03.3 +0.2
ULM Lac du Bonnet 132.04 15 PKP PKPdf 21 41 04.0 0.0
comp=Z,7.2nm,0.8s,baz=354,slow=4.2,SNR=9.6
ULM pPKP pPKPdf 21 41 12.0 -1.3
comp=Z,10.0nm,0.9s,baz=309,slow=5.2,SNR=6.5
PDAR Pinedale Array 132.99 31 PKhKP 21 40 55.8
comp=Z,0.6nm,0.9s,baz=343,slow=2.8,SNR=3.5
PDAR PKP PKPdf 21 41 07.2 +1.1
comp=Z,0.7nm,0.6s,baz=86,slow=2.0,SNR=7.6
GSC Goldstone 133.31 44 *e*PKIKP PKPdf 21 41 07.8 +0.9
PFO Pinyon Flat Ob 134.45 46 PKP PKPdf 21 41 10.5 +1.4
comp=Z,4.3nm,0.9s,baz=296,slow=2.0
PFO Pinyon Flat Ob 134.45 46 *e*PKPdf PKPdf 21 41 09.6 +0.5
WUAZ Wupatki 136.80 40 *e*PKPdf PKPdf 21 41 15.0 +1.6
ANMO Albuquerque 140.21 37 PKhKP 21 41 14.2
comp=Z,2.7nm,1.0s,baz=335,slow=3.7,SNR=4.2
ANMO PKP PKPdf 21 41 20.2 +0.4
comp=Z,5.1nm,1.0s,baz=279,slow=0.9,SNR=7.9
ANMO Albuquerque 140.21 37 *e*PKPdf PKPdf 21 41 13.7 -6.0
ANMO PKP PKPdf 21 41 20.2 +0.4
KSU1 Kansas State U 141.81 23 PKPdf PKPdf 21 41 18.2 -4.2
CPUP Villa Florida 143.09 213 PKhKP 21 41 20.7
comp=Z,0.3nm,0.3s,baz=107,slow=1.6,SNR=3.6
ACSO Alum Creek Sta 144.07 5 *e*PKPdf PKPdf 21 41 23.1 -3.3
WMOK Wichita Mounta 144.53 29 *e*PKIKP PKPdf 21 41 25.6 -1.8
BLO Bloomington 144.63 10 *e*PKIKP PKPdf 21 41 25.7 -1.8
OLIL Olney 144.74 13 *e*PKPdf PKPdf 21 41 26.4 -1.3
MCWV Mont Chateau 144.83 1 *e*PKPdf PKPdf 21 41 26.5 -1.3
MCWV *e* 21 41 34.2
FVM French Village 144.87 16 *e*PKIKP PKPdf 21 41 25.7 -2.2

SIUC Southern Illin 145.44 15 *e*PKPbc PKPbc 21 41 28.3 -0.6
USIN University of 145.57 12 *e*PKPdf PKPdf 21 41 28.8 -0.4
USIN *e* 21 41 36.6
WCI Wyandotte Cave 145.59 10 *e*PKIKP PKPdf 21 41 28.8 -0.3
WCI *e* 21 41 36.4
TXAR Lajitas Array 145.75 41 PKPbc PKPbc 21 41 30.5 +0.4
comp=Z,67nm,1.0s,baz=273,slow=1.6,SNR=283
MIAR Mount Ida 146.97 23 *e*PKP2 PKPab 21 41 33.9 -1.0
UALR University of 147.22 21 *e*PKPdf PKPdf 21 41 31.5 -0.5
UALR *e*PKPbc PKPbc 21 41 34.3 +0.1
UALR *e* 21 41 41.7
BLA Blacksburg 147.25 2 *e*PKPdf PKPdf 21 41 32.9 +0.9
BLA *e* 21 41 40.5
WVT Waverly 147.29 14 *e*PKPbc PKPbc 21 41 33.7 -0.6
WVT *e* 21 41 41.6
JCT Junction City 147.31 35 *e*PKPdf PKPdf 21 41 33.0 +0.7
JCT *e*PKPbc PKPbc 21 41 35.4 +0.8
TZTN Tazewell 147.66 7 *e*PKPbc PKPbc 21 41 34.8 -0.6
OXF Oxford 148.41 17 *e*PKPbc PKPbc 21 41 36.9 -0.6
OXF *e* 21 41 44.8
TKL Tuckaleechee C 148.50 8 *e*PKPbc PKPbc 21 41 37.0 -0.7
TKL *e* 21 41 45.3
NATX Nacogdoches 148.92 27 *e*PKPbc PKPbc 21 41 39.0 +0.1
NATX *e* 21 41 46.8
CNNC Cliffs of the 149.25 359 *e*PKPdf PKPdf 21 41 35.4 +0.1
CNNC *e*PKPbc PKPbc 21 41 39.6 +0.1
CNNC *e*PKPab PKPab 21 41 43.9 -0.1
HKT Hockley 149.86 30 *e*PKPbc PKPbc 21 41 41.8 +0.5
HKT *e* 21 41 49.6
VBMS Vicksburg 150.17 20 *e*PKPbc PKPbc 21 41 42.3 +0.3
VBMS *e*PKPab PKPab 21 41 47.8 0.0
LRAL Lakeview Retre 150.44 14 *e*PKPbc PKPbc 21 41 41.9 -0.6
LRAL *e*PKPab PKPab 21 41 48.7 -0.2
GOGA Godfrey 150.75 8 *e*PKIKP PKPbc 21 41 43.1 -0.2
GOGA *e* 21 41 50.9
NHSC New Hope 151.35 2 *e*PKPbc PKPbc 21 41 45.0 +0.3
NHSC *e* 21 41 51.4
LVC Limon Verde 151.52 199 PKPbc PKPbc 21 41 47.0 +1.6
comp=Z,5.0nm,0.9s,baz=162,slow=4.2,SNR=4.9
LVC Limon Verde 151.52 199 *e*PKPdf PKPdf 21 41 39.5 +0.3
LVC *e*PKPbc PKPbc 21 41 46.5 +1.2
LVC PKPbc PKPbc 21 41 47.0 +1.6
LVC *e* 21 41 53.8
BRAL Brewton 152.35 15 *e*PKPdf PKPbc 21 41 47.1 +0.1
BRAL *e*PKPab PKPab 21 41 55.6 -1.3
SIV San Ignacio 153.25 221 PKPbc PKPbc 21 41 50.6 +1.2
baz=148,slow=5.8

*ISCJB **24** 21:29:58.0±0.3,5624S×006×275W±0.1,h10km,mb4.4/18, Error ellipse: s-maj=9.2km s-min=7.6km az=142.3*
*IDC **24** 21:29:58.3±0.6,5623S×2743W,h0km,mb4.4/9,mb1 4.4/9, mb1mx4.2/16,mbtmpb4.3/9,Error ellipse: s-maj=24.3km s-min=20.2km az=28.0*
*NEIC **24** 21:30:03.4±0.2,5626S×2749W,h35km,mb4.5/14,Error ellipse: s-maj=8.0km s-min=6.6km az=190.0*
ISC 24 21:29:59.8±0.3,5626S×006×275W±01,h10km,n64,
σ0s79/41,mb4.4/18,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.66**	**157**	*e*P	**Pn**	**21 33 51.8**	**-1.2**
VNA1				*e*		21 33 56.4	
VNA1				*e*		21 34 02.5	
VNA1				*e*		21 34 07.2	
VNA3	**Neumayer Olymp**	**16.85**	**160**	*e*P	**Pn**	**21 33 54.8**	**-0.6**
VNA3				*e*		21 34 05.0	
VNA3				*e*		21 34 09.2	
VNA2	**Neumayer--Watz**	**17.06**	**157**	*e*P	**Pn**	**21 34 00.2**	**+2.2**
baz=300,slow=12							
VNA2	**Neumayer--Watz**	**17.06**	**157**	*e*P	**Pn**	**21 34 00.2**	**+2.2**
VNA2				*e*		21 34 04.7	
VNA2				*e*		21 34 11.0	
VNA2				*e*		21 34 15.3	
EFI	**East Falkland**	**18.47**	**272**	*e*P	**Pn**	**21 34 15.4**	**-0.2**
17nm,0.7s							
SNAA	**Sanae**	**18.62**	**156**	*e*P	**Pn**	**21 34 17.6**	**+0.4**
SNAA	**Sanae**	**18.62**	**156**	*e*P	**Pn**	**21 34 17.6**	**+0.4**
SNAA				*e*		21 34 28.7	
SNAA	**Sanae**	**18.62**	**156**	*e*P	**Pn**	**21 34 16.9**	**-0.3**
9.7nm,0.7s							
PMSA	**Palmer Station**	**19.63**	**229**	P	**Pn**	**21 34 29.2**	**-0.3**
TRQA	**Tornquist**	**29.25**	**294**	*e*P	**P**	**21 36 01.9**	**+0.2**
1.9nm,0.6s,mb4.0							
PLCA	**Paso Flores**	**31.87**	**281**	*e*P	**P**	**21 36 23.2**	**-1.6**
1.3nm,0.8s,mb3.8							
QSPA	**South Pole Qui**	**33.99**	**180**	P	**P**	**21 36 43.1**	**+0.2**
7.5nm,0.7s,mb4.8,baz=193,slow=3.8,SNR=15							
CPUP	**Villa Florida**	**36.82**	**312**	P	**P**	**21 37 07.7**	**-0.1**
0.8nm,0.5s,mb3.8,baz=142,slow=8.1,SNR=4.6							
CPUP				PcP	PcP	21 39 29.7	+0.1
1.8nm,0.6s,baz=136,slow=3.1,SNR=8.2							
CPUP	**Villa Florida**	**36.82**	**312**	P	**P**	**21 37 07.7**	**-0.1**
CPUP				PcP	PcP	21 39 29.7	+0.1
CFAA	**Coronel Fontan**	**37.49**	**294**	P	**P**	**21 37 12.8**	**-0.6**
0.6nm,0.8s,mb3.5,baz=152,slow=9.1,SNR=15							
CFAA	**Coronel Fontan**	**37.49**	**294**	P	**P**	**21 37 12.8**	**-0.6**
MAW	**Mawson**	**40.08**	**143**	P	**P**	**21 37 34.9**	**+0.1**
SHEL	**Horse Pasture**	**43.51**	**31**	*e*P	**P**	**21 38 02.8**	**-0.4**
34nm,0.8s,mb5.1							
LVC	**Limon Verde**	**45.26**	**301**	P	**P**	**21 38 18.5**	**+1.2**
11nm,0.8s,mb4.8,baz=167,slow=7.7,SNR=16							
LVC				PcP	PcP	21 39 57.8	+0.8
3.7nm,0.8s,baz=296,slow=3.2,SNR=3.9							
LVC	**Limon Verde**	**45.26**	**301**	*e*P	**P**	**21 38 17.9**	**+0.7**
10nm,0.8s,mb4.7							
LVC				PcP	PcP	21 39 57.8	+0.8
SBA	**Scott Base**	**45.86**	**184**	*e*P	**P**	**21 38 21.3**	**-0.1**
3.4nm,0.8s,mb4.3							
BOSA	**Boshof**	**46.19**	**76**	P	**P**	**21 38 25.6**	**+1.0**
5.1nm,0.9s,mb4.4,baz=208,slow=9.3,SNR=3.8							
BOSA	**Boshof**	**46.19**	**76**	*e*P	**P**	**21 38 25.8**	**+1.2**
4.4nm,0.8s,mb4.4							
LBTB	**Lobatse**	**49.23**	**73**	*e*P	**P**	**21 38 48.0**	**-0.2**
7.3nm,0.8s,mb4.8							
TSUM	**Tsumeb**	**49.93**	**61**	*e*P	**P**	**21 38 53.4**	**-0.2**
9.9nm,1.2s,mb4.7							
NNA	**Nana**	**58.20**	**299**	P	**P**	**21 39 54.5**	**+0.5**
LSZ	**Lusaka**	**58.61**	**69**	*e*P	**P**	**21 39 57.0**	**+0.2**
11nm,0.9s,mb4.9							
DBIC	**Dimbokro**	**65.43**	**25**	P	**P**	**21 40 42.1**	**-0.4**
3.6nm,1.0s,mb4.4,baz=169,slow=8.8,SNR=5.0							
DBIC	**Dimbokro**	**65.43**	**25**	*e*P	**P**	**21 40 42.4**	**-0.1**
5.8nm,1.0s,mb4.6							
ABPO	**Ambohimpanom**	**65.93**	**88**	P	**P**	**21 40 44.1**	**-1.7**
OTAV	**Otavalo**	**69.63**	**304**	*e*P	**P**	**21 41 10.6**	**+1.4**
6.2nm,1.1s,mb4.5							
TOA0	**Torodi Ar. Sit**	**73.32**	**30**	*e*P	**P**	**21 41 31.1**	**-0.2**
TOA0				PcP	PcP	21 41 49.8	+2.2
TORD	**Torodi Ar. Bea**	**73.32**	**30**	P	**P**	**21 41 30.4**	**-1.0**
3.3nm,0.9s,mb4.3,baz=204,slow=6.7,SNR=16							
SDV	**Santo Domingo**	**74.04**	**315**	P	**P**	**21 41 35.6**	**0.0**
MSEY	**Mahe Island**	**82.23**	**87**	P	**P**	**21 42 21.1**	**-0.1**
TAM	**Tamanrasset**	**83.56**	**30**	*e*P	**P**	**21 42 28.7**	**+0.9**
5.8nm,1.3s,mb4.5							
STKA	**Stephens Creek**	**91.72**	**171**	P	**P**	**21 43 07.2**	**-0.1**
CART	**Cartagena**	**96.16**	**21**	P	**P**	**21 43 26.7**	**-0.5**
ESDC	**Sonseca Array**	**97.63**	**18**	P	**P**	**21 43 34.9**	**+1.1**
0.6nm,0.9s,mb4.1,baz=186,slow=3.0,SNR=4.6							
ESDC	**Sonseca Array**	**97.63**	**18**	P	**P**	**21 43 34.9**	**+1.1**
ASAR	**Alice Springs**	**98.84**	**163**	P	**P**	**21 43 40.4**	**+0.5**
1.6nm,0.9s,mb4.5,baz=192,slow=2.7,SNR=8.8							
ULM	**Lac du Bonnet**	**120.28**	**316**	PKP	PKPdf	21 48 49.7	-0.2
2.0nm,0.6s,baz=44,slow=5.8,SNR=3.0							
PDAR	**Pinedale Array**	**120.31**	**302**	PKP	PKPdf	21 48 49.7	-0.5
0.4nm,0.7s,baz=169,slow=0.5,SNR=3.9							
NVAR	**Mina Array Bea**	**121.32**	**293**	PKP	PKPdf	21 48 53.9	+1.6
0.3nm,0.3s,baz=97,slow=3.7,SNR=3.3							
KBL	**Kabul**	**121.39**	**74**	PKPdf	PKPdf	21 48 53.1	+0.5
ELK	**Elko**	**121.52**	**297**	PKP	PKPdf	21 48 53.4	+0.8
0.5nm,0.4s,baz=110,slow=12,SNR=4.9							
FRB	**Frobisher Bay**	**123.79**	**339**	PKP	PKPdf	21 48 56.4	+0.2
1.9nm,0.6s,baz=80,slow=8.1,SNR=5.1							
CMAR	**Chiang Mai Arr**	**125.15**	**111**	PKP	PKPdf	21 49 00.4	+0.1
1.0nm,0.8s,baz=244,slow=3.0,SNR=7.7							
CHTO	**Chiang Mai**	**125.45**	**111**	PKPdf	PKPdf	21 49 00.0	-0.8
AKTK	**Aktyubinsk**	**127.59**	**54**	PKP	PKPdf	21 49 04.3	+0.4
AKTO	**Aktyubinsk**	**127.59**	**54**	PKP	PKPdf	21 49 04.3	+0.4
1.8nm,0.8s,baz=177,slow=2.5,SNR=5.3							
UCH	**Uchtor**	**129.93**	**71**	*e*PKPdf	PKPdf	21 49 10.8	+2.2
TKM2	**Tokmak 2**	**130.99**	**71**	*e*PKPdf	PKPdf	21 49 08.5	-2.1
BVAR	**Borovoye Array**	**135.04**	**58**	PKP	PKPdf	21 49 16.9	-1.0
0.3nm,0.4s,baz=270,slow=1.4,SNR=8.2							

YKA Yellowknife Ar 136.21 318 PKP PKPdf 21 49 18.9 -0.8
2.8nm,0.8s,baz=124,slow=2.4,SNR=28
YKA Yellowknife Ar 136.21 318 PKP PKPdf 21 49 18.9 -0.8
MK31 Makanchi Array 137.12 72 *e*PKPdf PKPdf 21 49 21.7 -0.2
ZALV Zalesovo Beam 142.62 64 PKP PKPdf 21 49 30.9 -0.9
0.5nm,0.3s,baz=204,slow=3.3,SNR=3.7
PAX Paxson 149.06 308 *e*PKPbc PKPbc 21 49 46.9 +0.3
KDAK Kodiak Island 150.76 296 PKPbc PKPbc 21 49 51.0 +0.1
25nm,0.8s,baz=58,slow=11,SNR=4.4
KDAK Kodiak Island 150.76 296 PKPbc PKPbc 21 49 51.0 +0.1
SONM Songino Array 150.91 87 PKPbc PKPbc 21 49 50.5 -1.0
2.9nm,0.8s,baz=261,slow=1.6,SNR=13
ULN Ulaanbaatar 151.29 88 *e*PKPbc PKPbc 21 49 52.7 +0.3
COLD Coldfoot 151.85 316 *e*PKPbc PKPbc 21 49 53.6 +0.6

*NIED **24** 21:33:00,3280N×13530E,h8km,Mw4.2 Best double couple: M₀2.33000×10¹⁵ NP1:φ₀260.00000°,δ63.00000°, λ-137.00000°. NP2:φ₀147.00000°,δ52.00000°, λ-36.00000°*
*ISCJB **24** 21:33:55.0±0.9,3281N±005×13527E±005,h33km±8km, mb3.9/18,Error ellipse: s-maj=8.9km s-min=6.2km az=140.6*
*MOS **24** 21:33:55.3±1.5,3280N×13531E,h33km,mb4.4/7,Error ellipse: s-maj=14.4km s-min=9.4km az=97.0*
*JMA **24** 21:33:55.3±0.1,3282N×13532E,h35km±2km, M3.9*
*IDC **24** 21:33:58.0±0.9,3276N×13541E,h32km±4km, mb3.7/12, mb1 3.8/14,mb1mx3.7/28,mbtmpb3.7/14,ML3.4/2,MS3.3/1, Ms1 3.3/1,ms1mx2.7/30, Error ellipse: s-maj=24.9km s-min=12.9km az=72.0*
*NEIC **24** 21:33:57.3±0.6,3286N×135.10E,h35km, mb4.3/8,Error ellipse: s-maj=12.8km s-min=8.9km az=112.0*
ISC 24 21:33:55.4±1.6,3286N±003×13523E±005,h20km±10km, h34km±.4km:pP-P,n54,σ1s23/64,mb3.9/18,7C,Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**0.79**	**31**	⇑P	**Pb**	**21 34 09.9**	**-0.5**
JWZ				*e*S	**Sb**	**21 34 20.2**	**-0.4**
JWM	**Minabe**	**1.00**	**6**	⇑P	**Pb**	**21 34 13.9**	**-0.1**
JWM				S	**Sb**	**21 34 26.7**	**0.0**
JAI	**Aioi**	**1.14**	**325**	⇑P	**Pn**	**21 34 16.5**	**+0.3**
JAI				S	**Sb**	**21 34 30.7**	**-0.1**
JWY	**Kouya**	**1.39**	**12**	⇑P	**Pn**	**21 34 19.8**	**+0.1**
JWY				*e*S	**Sn**	**21 34 36.9**	**-0.6**
JMN	**Monobe**	**1.43**	**308**	⇑P	**Pn**	**21 34 20.9**	**+0.7**
JAJ2	**Tsuna**	**1.59**	**350**	⇑P	**Pn**	**21 34 23.1**	**+0.7**
JKN2	**Miekihoku**	**1.63**	**32**	⇑P	**Pn**	**21 34 22.3**	**-0.7**
JKN2				*e*S	**Sn**	**21 34 41.7**	**-1.7**
JHE	**Heguri**	**1.83**	**12**	⇑P	**Pn**	**21 34 26.2**	**+0.4**
JHE				*e*S	**Sn**	**21 34 47.5**	**-0.9**
MAJO	**Matsushiro**	**4.42**	**33**	*e*Pn	**Pn**	**21 35 01.1**	**-0.2**
MAJO				Sn	**Sn**	**21 35 51.6**	**-0.6**
MAT	**Matsushiro**	**4.42**	**33**	P	**Pn**	**21 35 01.6**	**+0.3**
MAT				*e*S	**Sn**	**21 35 53.6**	**+1.4**
MJAR	**Matsushiro Arr**	**4.42**	**33**	Pn	**Pn**	**21 35 02.5**	**+1.2**
3.7nm,0.3s,baz=217,slow=16,SNR=29							
MJAR				Sn	**Sn**	**21 35 52.4**	**+0.3**
1.5nm,0.3s,baz=206,slow=19,SNR=6.3							
MJAR	**Matsushiro Arr**	**4.42**	**33**	P	**Pn**	**21 35 02.5**	**+1.2**
MJAR						21 35 52.4	
MJAR				pmax	pmax		
comp=Z,4.0nm,0.3s							
MJAR				smax			
comp=N,2.0nm,0.3s							
MJAR	**Matsushiro Arr**	**4.42**	**33**	P	**Pn**	**21 35 02.6**	**+1.3**
MJAR						21 35 52.4	
KSRS	**Korea Array**	**7.54**	**310**	Pn	**Pn**	**21 35 46.0**	**+1.8**
comp=N,0.3nm,0.3s,baz=123,slow=15,SNR=3.4							
KSRS				Sn	**Sn**	**21 37 08.5**	**-0.6**
comp=N,1.0nm,0.3s,baz=129,slow=24,SNR=5.7							
KSRS				LR	LR	21 39 05.7	
comp=N,207nm,20.6s,baz=48,slow=40							
MDJ	**Mudanjiang**	**12.54**	**341**	Pn	**Pn**	**21 36 51.7**	**-0.8**
TATO	**Taipei**	**14.36**	**240**	*e*Pn	**Pn**	**21 37 17.0**	**-0.5**
NACB	**Ninganchiao**	**14.77**	**238**	Pn	**Pn**	**21 37 21.2**	**-2.0**
KLR	**Kul'dur**	**16.57**	**352**	*e*P	**Pn**	**21 37 46.5**	**+0.1**
HIA	**Hailar**	**20.07**	**329**	*e*P	**P**	**21 38 25.6**	**-1.7**
HIA				pmax	pmax		
comp=Z,11nm,1.0s							
HIA	**Hailar**	**20.07**	**329**	*e*P	**P**	**21 38 25.6**	**-1.7**
comp=Z,11nm,1.0s							
ENH	**Enshi**	**22.07**	**270**	*e*P	**P**	**21 38 47.5**	**-1.6**
comp=Z,0.6nm,0.9s,mb3.0							
SONM	**Songino Array**	**26.39**	**313**	P	**P**	**21 39 32.8**	**+2.5**
comp=Z,0.4nm,0.4s,mb3.4,baz=122,slow=7.0,SNR=3.4							
SONM				pP	pP	21 39 42.3	+5.9
comp=Z,0.6nm,0.4s,baz=127,slow=10,SNR=4.0							
CM31	**Chiang Mai Arr**	**35.52**	**255**	P	**P**	**21 40 49.5**	**-1.6**
CMAR	**Chiang Mai Arr**	**35.52**	**255**	P	**P**	**21 40 53.1**	**+2.0**
comp=Z,0.7nm,0.8s,mb3.7,baz=47,slow=7.2,SNR=7.2							
CMAR				pP	pP	21 41 02.9	+5.6
comp=Z,0.6nm,0.7s,baz=48,slow=8.4,SNR=5.4							
BILL	**Bilibino**	**39.51**	**18**	*e*P	**P**	**21 41 24.0**	**-0.2**
BILL				pmax	pmax		
comp=Z,6.0nm,0.6s,mb4.5							
BILL	**Bilibino**	**39.51**	**18**	*e*P	**P**	**21 41 24.0**	**-0.2**
comp=Z,5.5nm,0.6s,mb4.5							
MKAR	**Makanchi Array**	**42.20**	**305**	P	**P**	**21 41 49.1**	**+2.3**
comp=Z,0.4nm,0.7s,mb3.2,baz=94,slow=12,SNR=3.0							
MKAR				pP	pP	21 41 58.2	+5.3
comp=Z,1.1nm,0.8s,baz=84,slow=11,SNR=4.0							
KURK	**Kurchatov**	**44.66**	**311**	P	**P**	**21 42 09.4**	**+2.8**
comp=Z,2.2nm,0.7s,mb4.1,baz=97,slow=8.4,SNR=11							
KURK				pP	pP	21 42 19.2	+6.4
comp=Z,5.2nm,0.8s,baz=96,slow=8.6,SNR=15							
KURK	**Kurchatov**	**44.66**	**311**	P	**P**	**21 42 09.4**	**+2.8**
KURK				*PP	pP	21 42 19.2	+6.4
KURK				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.1							
KURK	**Kurchatov**	**44.66**	**311**	*e*P	**P**	**21 42 06.7**	**+0.1**
comp=Z,5.6nm,1.1s,mb4.3							
KURK				*e*		21 42 18.9	
TKM2	**Tokmak 2**	**47.24**	**300**	*e*P	**P**	**21 42 25.9**	**-1.1**
TKM2				pmax	pmax		
comp=Z,8.0nm,1.7s,mb4.4							
TKM2	**Tokmak 2**	**47.24**	**300**	*e*P	**P**	**21 42 25.9**	**-1.1**
comp=Z,7.8nm,1.7s,mb4.4							
UCH	**

*IDC **24** 21:48:58.5±1.2, 187N×8348W, h0km, mb3.8/4, mb1 4.4/8, mb1mx4.0/21, mbtmp4.4/8, ML4.5/4, MS3.1/5, Ms1 3.1/5, ms1mx2.8/30, Error ellipse: s-maj=32.3km s-min=20.8km az=63.0*

*NEIC **24** 21:48:59.7±3.2, 184N×8343W, h12km±22km, mb4.4/4, Error ellipse: s-maj=8.1km s-min=7.0km az=77.0*

*ISCJB **24** 21:49:00.7±0.5, 187N±005×8346W±005, h33km, mb4.1/7, Error ellipse: s-maj=7.8km s-min=7.5km az=161.6*

ISC 24 21:49:00.8±3.4, 187N±006×8342W±006, h19km±23km, n30, σ0s97/32, mb4.1/7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**5.22**	**108**	*e*Pn	**Pn**	**21 50 16.6**	**-1.4**
	170nm,0.3s						
OTAV				*e*Sn	**Sn**	**21 51 13.3**	**-4.5**
PAYG	**Puerto Ayora**	**7.32**	**250**	*e*P	**Pn**	**21 50 46.5**	**-0.3**
BCIP	**Isla Barro Col**	**8.08**	**26**	*e*Pn	**Pn**	**21 50 57.2**	**-0.1**
ROSC	**El Rosal**	**9.54**	**72**	Pn	**Pn**	**21 51 20.2**	**+2.8**
	23nm,0.3s,baz=305,slow=3.5,SNR=40						
ROSC				Sn	**Sn**	**21 53 07.5**	**+3.3**
	1.2nm,0.3s,baz=86,slow=22,SNR=7.0						
ROSC				LR	LR	21 54 55.6	
	comp=Z,75nm,18.7s,baz=109,slow=37						
ROSC	**El Rosal**	**9.54**	**72**	*e*P	**Pn**	**21 51 19.3**	**+1.9**
ROSC				Sn	**Sn**	**21 53 07.5**	**+3.3**
ROSC				LR	LR	21 54 55.6	
ATAH	**Atahualpa**	**10.13**	**150**	Pn	**Pn**	**21 51 29.8**	**+4.4**
	4.5nm,0.3s,baz=337,slow=10.0,SNR=16						
ATAH				LR	LR	21 54 00.0	
	comp=Z,83nm,19.6s,baz=316,slow=29						
TGUH	**Tegucigalpa,Un**	**12.70**	**343**	Pn	**Pn**	**21 51 59.9**	**-0.7**
SDV	**Santo Domingo**	**14.51**	**61**	Pn	**Pn**	**21 52 25.0**	**-0.3**
	6.5nm,0.3s,baz=233,slow=11,SNR=39						
SDV				Sn	**Sn**	**21 55 03.7**	**-2.1**
	0.5nm,0.3s,baz=78,slow=23,SNR=4.7						
SDV				LR	LR	21 58 11.4	
	comp=Z,38nm,19.7s,baz=308,slow=38						
SDV	**Santo Domingo**	**14.51**	**61**	*e*P	**Pn**	**21 52 25.5**	**+0.2**
SDV				Sn	**Sn**	**21 55 03.7**	**-2.1**
SDV				LR	LR	21 58 11.4	
NNA	**Nana**	**15.23**	**155**	Pn	**Pn**	**21 52 35.2**	**+0.2**
	2.7nm,0.3s,baz=316,slow=11,SNR=6.0						
NNA	**Nana**	**15.23**	**155**	*e*Pn	**Pn**	**21 52 34.5**	**-0.5**
	10.0nm,0.5s						
TEIG	**Tepich**	**18.86**	**346**	LR	LR	22 00 15.4	
	comp=Z,91nm,20.6s,baz=291,slow=36						
CMIG	**Matias Romero**	**18.87**	**324**	LR	LR	21 59 32.4	
	comp=Z,71nm,18.5s,baz=298,slow=34						
SJG	**San Juan**	**23.41**	**45**	P	**P**	**21 54 08.3**	**-0.8**
CPD	**Cerro la Pandu**	**23.52**	**46**	P	**P**	**21 54 10.7**	**+0.5**
HUMP	**Col San Antoni**	**23.64**	**46**	*e*P	**P**	**21 54 12.1**	**+0.8**
CBYP	**Canovanas**	**23.72**	**45**	*e*P	**P**	**21 54 13.1**	**+1.0**
MTP	**Monte Pirata**	**23.82**	**46**	*e*P	**P**	**21 54 12.7**	**-0.3**
	6.9nm,0.7s,mb4.2						
LVC	**Limon Verde**	**28.15**	**151**	P	**P**	**21 54 52.2**	**+0.1**
LCO	**Las Campanas**	**33.03**	**159**	*e*P	**P**	**21 55 35.3**	**+0.2**
	3.4nm,0.3s,mb4.8						
TXAR	**Lajitas Array**	**33.43**	**327**	P	**P**	**21 55 40.0**	**+1.4**
	0.4nm,0.7s,mb3.4,baz=143,slow=8.4,SNR=5.2						
MIAR	**Mount Ida**	**33.87**	**345**	P	**P**	**21 55 41.9**	**-0.5**
WMOK	**Wichita Mounta**	**35.70**	**338**	P	**P**	**21 55 58.7**	**+0.5**
ANMO	**Albuquerque**	**39.29**	**329**	P	**P**	**21 56 27.5**	**-1.1**
PLCA	**Paso Flores**	**43.99**	**166**	P	**P**	**21 57 07.1**	**0.0**
	2.8nm,0.9s,mb4.0,baz=317,slow=8.1,SNR=4.0						
PLCA	**Paso Flores**	**43.99**	**166**	P	**P**	**21 57 07.1**	**0.0**
ULM	**Lac du Bonnet**	**49.36**	**349**	P	**P**	**21 57 50.0**	**+1.1**
	2.1nm,0.5s,mb4.4,baz=175,slow=6.9,SNR=4.8						
YKA	**Yellowknife Ar**	**64.81**	**345**	P	**P**	**21 59 37.4**	**-0.7**
	0.2nm,0.6s,mb3.3,baz=137,slow=5.9,SNR=6.0						
SUMG	**Summit**	**75.88**	**13**	*e*P	**P**	**22 00 45.3**	**-0.4**
	2.4nm,0.7s,mb4.2						
TSUM	**Tsumeb**	**101.00**	**109**	Pdif	Pdif	22 02 50.9	+1.7

*ISCJB **24** 21:54:42.2±0.4, 1814N±004×101.16W±003, h63km±7km, mb3.5/4, Error ellipse: s-maj=7.1km s-min=4.6km az=22.0*

*MEX **24** 21:54:44.2±0.5, 1815N×101.17W, h61km, 10km, MD4.2*

*NEIC **24** 21:54:44.1, 1815N×101.16W, h61km, MD4.2(MEX), After MEX.*

*IDC **24** 21:54:49.6±4.3, 1852N×10068W, h99km±37km, mb3.3/4, mb1 3.5/7, mb1mx3.3/23, mbtmp3.2/7, Error ellipse: s-maj=69.7km s-min=29.5km az=31.0*

ISC 24 21:54:43.3±0.4, 1814N±004×10117W±003, h53km±8km, n29, σ1s00/43, mb3.5/4, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.60**	**208**	⇑*i*P	**Pn**	**21 54 55.8**	**-0.2**
ZIIG				*i* S	**Sn**	**21 55 05.5**	**+0.4**
CAIG	**El Cayaco**	**1.39**	**141**	*i* P	**Pn**	**21 55 10.0**	**-0.3**
CAIG				*i* S	**Sn**	**21 55 22.8**	**-0.7**
MOIG	**Morelia**	**1.53**	**359**	*i* P	**Pn**	**21 55 08.5**	**+0.3**
MOIG				*i* S	**Sn**	**21 55 25.7**	**-1.3**
PLIG	**Platanillo**	**1.60**	**81**	*i* P	**Pn**	**21 55 09.2**	**-0.1**
PLIG				*i* S	**Sn**	**21 55 28.4**	**-0.5**
PLIG	**Platanillo**	**1.60**	**81**	*i* P	**Pn**	**21 55 10.0**	**+0.7**
PLIG				*i* S	**Sn**	**21 55 29.1**	**+0.3**
ACX	**Acapulco**	**1.74**	**136**	*i* P	**Pn**	**21 55 10.3**	**-0.8**
ACX				*i* S	**Sn**	**21 55 31.2**	**-1.1**
MMIG	**Aquila**	**2.07**	**274**	*i* P	**Pn**	**21 55 15.2**	**-0.4**
MMIG				*i* S	**Sn**	**21 55 40.1**	**-0.2**
PPM	**Popocatepetl**	**2.58**	**69**	*e*P	**Pn**	**21 55 22.5**	**-0.1**
PPM				*i* S	**Sn**	**21 55 52.4**	**-0.4**
UTMO	**Huajuapan**	**3.22**	**95**	*e*P	**Pn**	**21 55 31.1**	**-0.3**
UTMO				*i* S	**Sn**	**21 56 08.5**	**0.0**
PNIG	**Pinotepa**	**3.39**	**120**	*i* P	**Pn**	**21 55 33.6**	**0.0**
PNIG				*i* S	**Sn**	**21 56 13.4**	**+0.8**
PNIG	**Pinotepa**	**3.39**	**120**	*i* P	**Pn**	**21 55 33.6**	**0.0**
PNIG				*i* S	**Sn**	**21 56 13.9**	**+1.2**
VHO	**Vista Hermosa**	**4.36**	**103**	*i* P	**Pn**	**21 55 47.1**	**0.0**
VHO				*i* S	**Sn**	**21 56 35.8**	**-0.9**
OXX	**Oaxaca**	**4.37**	**103**	*e*P	**Pn**	**21 55 48.3**	**+1.2**
OXX				*i* S	**Sn**	**21 56 39.4**	**+2.6**
CMIG	**Matias Romero**	**6.09**	**99**	P	**Pn**	**21 56 12.0**	**+1.3**
	1.0nm,0.3s,baz=268,slow=12,SNR=12						
CMIG	**Matias Romero**	**6.09**	**99**	*i* P	**Pn**	**21 56 11.7**	**+1.0**
CMIG				*i* S	**Sn**	**21 57 26.2**	**+7.2**
TXAR	**Lajitas Array**	**11.37**	**349**	P	**Pn**	**21 57 25.0**	**+1.9**
	0.1nm,0.3s,baz=158,slow=9.7,SNR=4.4						
TEIG	**Tepich**	**12.36**	**78**	P	**Pn**	**21 57 37.2**	**+0.6**
WMOK	**Wichita Mounta**	**16.67**	**7**	*e*Pn	**Pn**	**21 58 33.9**	**+0.7**
	0.8nm,0.6s						
ANMO	**Albuquerque**	**17.39**	**345**	P	**Pn**	**21 58 43.6**	**+1.4**
	0.0nm,0.3s,baz=146,slow=11,SNR=3.5						
ANMO	**Albuquerque**	**17.39**	**345**	Pn	**Pn**	**21 58 41.9**	**-0.2**
MIAR	**Mount Ida**	**17.69**	**21**	Pn	**Pn**	**21 58 45.2**	**-0.6**
LRAL	**Lakeview Retre**	**19.55**	**38**	P	**Pn**	**21 59 05.5**	**-2.8**
WVT	**Waverly**	**21.45**	**31**	P	**P**	**21 59 27.0**	**-0.2**
TKL	**Tuckaleechee C**	**23.28**	**38**	P	**P**	**21 59 43.4**	**-3.0**
	2.4nm,0.9s,mb3.6,baz=209,slow=13,SNR=4.4						
NVAR	**Mina Array Bea**	**25.14**	**327**	P	**P**	**22 00 05.6**	**+2.2**
	0.9nm,0.5s,mb3.5,baz=138,slow=11,SNR=4.6						
NVAR	**Mina Array Bea**	**25.14**	**327**	P	**P**	**22 00 05.6**	**+2.2**
PDAR	**Pinedale Array**	**25.56**	**346**	P	**P**	**22 00 07.5**	**+0.4**
	1.1nm,0.8s,mb3.4,baz=153,slow=8.0,SNR=6.0						
PDAR				pP	pP	22 00 28.1	+7.6
	2.4nm,0.9s,baz=154,slow=11,SNR=10						
OTAV	**Otavalo**	**28.55**	**126**	P	**P**	**22 00 34.3**	**0.0**
YKA	**Yellowknife Ar**	**45.29**	**351**	P	**P**	**22 02 54.1**	**-1.3**
	0.2nm,0.4s,mb3.3,baz=158,slow=7.2,SNR=3.8						

NEIC 24 22:25:39.0, 3663S×17711E, h219km, MG3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.34**	**135**	P	Pn	22 26 13.1	+0.1
MXZ				S	S	22 26 39.5	-0.2
URZ	**Urewera**	**1.63**	**180**	P	Pn	22 26 15.9	+0.5
PUZ	**Puketiti**	**1.71**	**148**	P	Pn	22 26 16.1	0.0
PUZ				S	S	22 26 45.0	-0.3
MWZ	**Matawai**	**1.73**	**169**	P	Pn	22 26 17.1	+0.7
KNZ	**Kokohu**	**2.43**	**170**	P	Pn	22 26 23.5	+0.3
BKZ	**Black Stump Fm**	**2.58**	**191**	P	Pn	22 26 24.9	0.0
WNVZ	**Wahianoa**	**2.95**	**203**	P	Pn	22 26 29.4	+0.5
BFZ	**Birch Farm**	**4.10**	**189**	P	Pn	22 26 41.1	-1.5
MRZ	**Mangatainoka R**	**4.20**	**196**	P	Pn	22 26 41.9	-1.9
CAW	**Cannon Point**	**4.75**	**199**	P	Pn	22 26 48.3	-2.3
TCW	**Tory Channel**	**5.08**	**205**	P	Pn	22 26 53.4	-1.4
THZ	**Tophouse**	**6.08**	**211**	P	Pn	22 27 05.5	-1.9
KHZ	**Kahutara**	**6.41**	**204**	P	Pn	22 27 09.3	-2.3
LTZ	**Lake Taylor**	**7.19**	**210**	P	Pn	22 27 19.6	-2.0

*ISCJB **24** 22:38:11.1±0.7, 2013S±007×680W±0.1, h164km±12km, mb3.2/2, Error ellipse: s-maj=17.2km s-min=8.9km az=149.3*

*IDC **24** 22:38:11.5±2.2, 2017S×6797W, h161km±25km, mb3.2/2, mb1 3.4/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=42.4km s-min=22.3km az=142.0*

*NEIC **24** 22:38:12.5, 2025S×6805W, h154km, MG3.4(GUC), After GUC.*

*GUC **24** 22:38:12.5±0.7, 2025S×6805W, h154km±16km, ML3.4*

ISC 24 22:38:11.9±0.7, 2012S±007×6798W±010, h160km±12km, n12, σ0s58/19, mb3.2/2, 5C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**1.68**	**237**	⇑*i*P	**Pn**	**22 38 44.3**	**+0.2**
PB01				*i* S	**Sn**	**22 39 08.4**	**-0.5**
PB01				AML	AML	22 39 09.6	
	comp=N,492nm,0.4s						
HMBC	**Humberston**	**1.79**	**265**	⇑*i*P	**Pn**	**22 38 45.6**	**+0.3**
HMBC				*i* S	**Sn**	**22 39 10.7**	**-0.3**
PSGC	**Pisagua**	**2.08**	**284**	⇑*i*P	**Pn**	**22 38 49.4**	**+0.9**
PSGC				*i* S	**Sn**	**22 39 16.9**	**+0.1**
PB04	**Plate Boundary**	**2.55**	**213**	⇑*i*P	**Pn**	**22 38 59.1**	**+5.0**
PB04				*e*S	**Sn**	**22 39 34.2**	**+7.4**
PB04				AML	AML	22 39 36.3	
	comp=N,183nm,0.1s						
LVC	**Limon Verde**	**2.62**	**199**	P	**Pn**	**22 38 55.3**	**+0.3**
	comp=N,14nm,0.3s,baz=23,slow=9.4,SNR=130						
LVC				S	**Sn**	**22 39 27.9**	**-0.5**
	comp=N,17nm,0.3s,baz=130,slow=20,SNR=24						
LVC	**Limon Verde**	**2.62**	**199**	⇑*i*P	**Pn**	**22 38 55.2**	**+0.2**
LVC				*i* S	**Sn**	**22 39 27.7**	**-0.8**
LVC				AML	AML	22 39 28.6	
	comp=E,67nm,0.4s						
ARE	**Arequipa**	**4.93**	**317**	*e*P	**Pn**	**22 39 25.0**	**+0.3**
ARE				*e*S	**Sn**	**22 40 21.0**	**-0.5**
SIV	**San Ignacio**	**7.75**	**59**	P	**Pn**	**22 40 01.3**	**-0.7**
	baz=247,slow=13						
CPUP	**Villa Florida**	**11.58**	**124**	P	**Pn**	**22 40 53.5**	**+1.0**
	comp=E,0.4nm,0.3s,baz=279,slow=16,SNR=3.2						
CPUP	**Villa Florida**	**11.58**	**124**	P	**Pn**	**22 40 53.5**	**+1.0**
TORD	**Torodi Ar. Bea**	**76.08**	**70**	P	**P**	**22 49 41.4**	**-1.0**
	comp=E,0.2nm,0.4s,mb3.1,baz=249,slow=5.4,SNR=7.3						
YKA	**Yellowknife Ar**	**90.18**	**340**	P	**P**	**22 50 53.9**	**+0.3**
	comp=E,0.3nm,0.7s,mb3.4,baz=137,slow=4.0,SNR=5.1						

*BJI **24** 22:40:56.2, 4980S×12139E, h10km, mB5.3, mb4.8, Ms4.6*

*ISCJB **24** 22:41:00.0±5.2, 4894S±006×1215E±0.1, h2km±32km, mb4.7/26, MS4.2/15, Error ellipse: s-maj=16.0km s-min=8.6km az=16.5*

*IDC **24** 22:41:01.4±0.6, 4891S×12166E, h0km, mb4.6/12, mb1 4.7/13, mb1mx4.7/15, mbtmp4.6/13, ML2.8/1, MS4.2/15, Ms1 4.2/15, ms1mx4.1/22, Error ellipse: s-maj=32.3km s-min=15.2km az=112.0*

*NEIC **24** 22:41:02.8±0.3, 4894S×12151E, h10km, mb4.9/14, Error ellipse: s-maj=11.2km s-min=6.6km az=108.0*

*GCMT **24** 22:41:02.8±0.2, 4906S×12176E, h14km±1km, MW5.1/63, Moment Tensor Solution. s22,c27; s63,c105; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.66±.24; Mθθ3.51±.17; Mφφ0.14±.16; Mrθ-2.27±.38; Mθφ-2.19±.10; Mφr-0.17±.39; Best double couple: M=4.75400×10^16 NP1:φs315.00000°, δ35.00000°, λ-60.00000°. NP2: φs100.00000°, δ60.00000°, λ-109.00000°. Principal axes: T 5.0420, Plg13.0000°, Azm204.0000°; N -0.5780, Plg17.0000°, Azm110.0000°; P -4.4650, Plg69.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **24** 22:41:28, 4923S×12278E, h242km, mb4.6/10*

ISC 24 22:41:04.1±5.2, 4894S±006×1215E±01, h16km±32km, h21km±2.0km: pP-P, n85, σ0s80/55, mb4.7/26, MS4.2/15, 3C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**16.32**	**347**	Pn	**Pn**	**22 44 52.9**	**+0.5**
	1.6nm,0.3s,baz=190,slow=11,SNR=17						
NWAO				LR	LR	22 49 33.1	
	comp=Z,2μm,21.8s,baz=174,slow=31						
NWAO	**Narrogin (SRO)**	**16.32**	**347**	*e*Pn	**Pn**	**22 44 53.0**	**+0.6**
NWAO				LR	LR	22 49 33.1	
CASY	**Casey**	**18.30**	**194**	*e*Pn	**Pn**	**22 45 16.4**	**-0.4**
TAU	**Tasmania Unive**	**18.89**	**81**	*e*P	**Pn**	**22 45 24.4**	**+0.2**
	27nm,0.7s						
TOO	**Toolangi**	**20.74**	**66**	*e*P	**P**	**22 45 45.4**	**+1.6**
STKA	**Stephens Creek**	**22.79**	**49**	P	**P**	**22 46 04.4**	**-1.3**
	10.0nm,1.0s,mb4.2,baz=208,slow=10,SNR=8.3						
STKA				LR	LR	22 53 40.5	
	comp=Z,1μm,18.0s,MS4.4,baz=212,slow=33						
STKA	**Stephens Creek**	**22.79**	**49**	*e*P	**P**	**22 46 06.8**	**+1.1**
	8.3nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**22.79**	**49**	*e*P	**P**	**22 46 05.6**	**-0.1**
	2.2nm,0.8s,mb3.6						
STKA				LR	LR	22 53 40.5	
ASAR	**Alice Springs**	**27.06**	**26**	P	**P**	**22 46 45.1**	**-0.5**
	9.2nm,0.9s,mb4.3,baz=193,slow=9.1,SNR=53						
ASAR				PcP	PcP	22 50 05.6	-0.9
	1.1nm,0.5s,baz=196,slow=2.4,SNR=14						
MBWA	**Marble Bar**	**27.76**	**356**	*e*P	**P**	**22 46 51.5**	**-0.4**
	15nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**30.71**	**24**	P	**P**	**22 47 17.1**	**-1.0**
	4.8nm,0.9s,mb4.3,baz=198,slow=9.6,SNR=16						
WRA				PcP	PcP	22 50 14.0	-1.7
	2.0nm,0.9s,baz=214,slow=2.7,SNR=6.3						
WRA				LR	LR	22 58 25.1	
	comp=Z,1μm,21.8s,MS4.5,baz=195,slow=34						
WB2	**Warramunga Arr**	**30.72**	**24**	*e*P	**P**	**22 47 17.3**	**-0.9**
WB2	**Warramunga Arr**	**30.72**	**24**	*e*P	**P**	**22 47 17.4**	**-0.8**
WB2				PP	PP	22 48 26.9	-0.7
WRAB	**Tennant Creek**	**30.73**	**24**	*e*P	**P**	**22 47 17.8**	**-0.5**
	8.3nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**30.95**	**8**	*e*P	**P**	**22 47 20.8**	**+0.6**
	13nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**30.95**	**8**	*e*P	**P**	**22 47 20.3**	**+0.1**
	5.8nm,0.7s,mb4.5						
RPZ	**Rata Peaks**	**34.11**	**100**	LR	LR	22 58 42.5	
	comp=Z,195nm,18.7s,MS3.9,baz=227,slow=31						
MAW	**Mawson**	**34.32**	**215**	P	**P**	**22 47 51.6**	**+2.3**
	15nm,0.9s,mb4.9,baz=79,slow=15,SNR=2.9						
MAW				LR	LR	22 59 59.1	
	comp=Z,401nm,18.3s,MS4.2,baz=97,slow=33						
MAW	**Mawson**	**34.32**	**215**	*e*P	**P**	**22 47 49.1**	**-0.1**
	8.5nm,1.3s,mb4.5						
MAW				LR	LR	22 59 59.1	
CTA	**Charters Tower**	**34.96**	**43**	P	**P**	**22 47 55.4**	**+0.1**
	8.2nm,1.1s,mb4.6,baz=234,slow=11,SNR=4.6						
CTA				LR	LR	23 01 59.0	
	comp=Z,892nm,18.7s,MS4.5,baz=216,slow=36						
CTA	**Charters Tower**	**34.96**	**43**	*e*P	**P**	**22 47 55.9**	**+0.6**
	7.3nm,1.4s,mb4.4						
CTAO	**Charters Tower**	**34.96**	**43**	*e*P	**P**	**22 47 54.9**	**-0.4**
COEN	**Coen**	**39.19**	**35**	*e*P	**P**	**22 48 31.6**	**+0.5**
	12nm,1.0s,mb4.6						
URZ	**Urewera**	**40.81**	**96**	LR	LR	23 04 05.9	
	comp=Z,155nm,18.4s,MS3.9,baz=226,slow=34						
QSPA	**South Pole Qui**	**41.18**	**180**	P	**P**	**22 48 47.4**	**+0.3**
	16nm,0.9s,mb4.6,baz=325,slow=2.6,SNR=48						
PMG	**Port Moresby**	**44.88**	**37**	P	**P**	**22 49 17.2**	**-0.5**
	8.9nm,0.8s,mb4.7,baz=191,slow=8.3,SNR=6.0						
PMG	**Port Moresby**	**44.88**	**37**	*e*P	**P**	**22 49 16.9**	**-0.8**
	10nm,0.8s,mb4.7						
HNR	**Honiara**	**50.80**	**52**	LR	LR	23 10 13.7	
	comp=Z,352nm,18.7s,MS4.4,baz=298,slow=35						
SNAA	**Sanae**	**53.45**	**199**	*e*	**P**	**22 50 22.0**	**-0.6**
SNAA				*e*	pP	22 50 24.8	-3.0
SNAA				*e*		22 50 28.7	
SNAA				*e*		22 50 34.5	
SNAA	**Sanae**	**53.45**	**199**	*e*P	**P**	**22 50 21.9**	**-0.7**
	27nm,1.1s,mb5.1						
VNA2	**Neumayer--Watz**	**54.98**	**198**	*e*	**P**	**22 50 33.3**	**-0.4**
	baz=146,slow=6.3						
VNA2				*e*	pP	22 50 36.5	-2.4
VNA2				*e*	pP	22 50 39.9	+1.0
VNA2				*e*		22 50 46.1	
VNA2				*e*		22 50 53.4	
VNA3	**Neumayer Olymp**	**55.18**	**197**	*e*	**P**	**22 50 34.5**	**-0.7**
VNA3				*e*		22 50 37.2	
VNA3				*e*	pP	22 50 41.0	+0.6
VNA3				*e*		22 50 47.1	
VNA3				*e*		22 50 55.0	
VNA1	**Neumayer--Stat**	**55.37**	**198**	*e*	**P**	**22 50 36.9**	**+0.3**
VNA1				*e*	pP	22 50 43.1	+1.3
VNA1				*e*		22 50 49.0	
KULM	**Kulim**	**57.00**	**335**	*e*P	**P**	**22 50 48.1**	**-0.7**
	81nm,2.0s,mb5.4						
FUNA	**Funafuti**	**62.65**	**70**	P	**P**	**22 51 26.3**	**-1.5**
AFI	**Afiamalu**	**64.36**	**82**	LR	LR	23 13 55.3	
	comp=Z,157nm,18.8s,MS4.2,baz=84,slow=31						
CMAR	**Chiang Mai Arr**	**70.04**	**337**	P	**P**	**22 52 14.6**	**-0.4**
	2.7nm,0.7s,mb4.3,baz=190,slow=5.5,SNR=22						
CMAR				LR	LR	23 24 54.5	
	comp=Z,62nm,18.4s,MS3.9,baz=165,slow=38						
BOSA	**Boshof**	**72.84**	**246**	LR	LR	23 18 46.0	
	comp=Z,224nm,18.9s,MS4.5,baz=146,slow=31						
KMI	**Kunming**	**75.61**	**342**	P	**P**	**22 52 49.6**	**+1.7**
KMI				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.6						
KMI				AMB	AMB		
	comp=Z,84nm,4.2s						
KMI				LR	LR		
	comp=N,160nm,25.8s,MS4.4						
KMI				LR	LR		
	comp=E,146nm,22.4s,MS4.4						
PPT	**Papeete**	**76.26**	**101**	*e*LR	LR	23 16 18.6	
	comp=E,110nm,27.8s						
HYB	**Hyderabad**	**76.29**	**318**	*i* P	**P**	**22 52 52.0**	**+0.1**
HYB				*e*		22 53 14.0	
HYB	**Hyderabad**	**76.29**	**318**	*e*P	**P**	**22 52 52.0**	**+0.1**
WHN	**Wuhan**	**79.39**	**354**	P	**P**	**22 53 09.5**	**+0.7**
POO	**Poona**	**79.41**	**314**	*e*P	**P**	**22 53 06.5**	**-2.7**
LSZ	**Lusaka**	**80.80**	**257**	LR	LR	23 21 43.8	
	comp=E,257nm,20.3s,MS4.6,baz=163,slow=30						
LSA	**Lhasa**	**82.86**	**334**	P	**P**	**22 53 27.3**	**0.0**
LSA	**Lhasa**	**82.86**	**334**	*e*P	**P**	**22 53 27.7**	**+0.3**
	comp=E,19nm,1.0s,mb5.1						
LSA				*e*PcP	PcP	22 53 33.5	+1.4
XAN	**Xi'an**	**83.37**	**349**	P	**P**	**22 53 30.0**	**+0.1**
XAN				AP	pP	22 53 36.8	+1.5
XAN				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.6						
XAN				AMB	AMB		
	comp=Z,137nm,4.7s						
LZH	**Lanzhou**	**86.10**	**346**	*e*P	**P**	**22 53 44.0**	**+0.4**
LZH				AP	pP	22 53 51.3	+2.3
LZH				XP	sP	22 53 53.8	+2.9
LZH				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,109nm,4.1s						
KSRS	**Korea Array**	**86.21**	**5**	P	**P**	**22 53 44.6**	**+0.6**
	comp=Z,3.0nm,1.0s,mb4.5,baz=185,slow=3.9,SNR=11						
MJAR	**Matsushiro Arr**	**86.39**	**13**	P	**P**	**22 53 45.7**	**+0.7**
	comp=Z,5.1nm,0.9s,mb4.7,baz=193,slow=6.7,SNR=9.4						
MJAR				LR	LR	23 31 46.9	
	comp=Z,107nm,18.8s,MS4.3,baz=190,slow=35						
MJAR	**Matsushiro Arr**	**86.39**	**13**	P	**P**	**22 53 45.7**	**+0.7**
MJAR				LR	LR	23 31 46.9	
MAJO	**Matsushiro**	**86.39**	**13**	*e*P	**P**	**22 53 44.9**	**-0.1**
	comp=Z,19nm,1.3s,mb5.2						
DDI	**Dehra Dun**	**87.93**	**323**	*e*P	**P**	**22 53 47.0**	**-5.6**
GTA	**Gaotai**	**90.05**	**343**	⇑*e*P	**P**	**22 54 02.5**	**+0.2**
GTA				AP	pP	22 54 09.8	+2.0
GTA				XP	sP	22 54 13.6	+3.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.5						
PLCA	**Paso Flores**	**90.07**	**171**	P	**P**	**22 54 02.6**	**-0.2**
	comp=Z,5.7nm,1.0s,mb4.8,baz=206,slow=6.7,SNR=5.4						
PLCA				LR	LR	23 37 53.9	
	comp=Z,175nm,18.2s,MS4.5,baz=186,slow=38						
PLCA	**Paso Flores**	**90.07**	**171**	*e*P	**P**	**22 54 02.4**	**-0.5**
	comp=Z,13nm,1.2s,mb5.1						
PLCA				LR	LR	23 37 53.9	
TRQA	**Tornquist**	**93.32**	**177**	P	**P**	**22 54 19.4**	**+1.4**
MDJ	**Mudanjiang**	**93.44**	**6**	*e*P	**P**	**22 54 17.4**	**-0.6**
KBL	**Kabul**	**95.32**	**319**	*e*P	**P**	**22 54 26.8**	**-0.1**
	comp=Z,15nm,1.5s,mb5.2						
KBL				*e*	pP	22 54 32.9	+0.6
SONM	**Songino Array**	**97.28**	**350**	P	**P**	**22 54 35.6**	**+0.2**
	comp=Z,

	baz=248								
TWA	**Mucha**	**0.56**	**291**	P		**Pn**	**22 46 00.0**	**-0.3**	
	baz=287								
TWA				S		**Sn**	**22 46 11.1**	**-0.6**	
	baz=287								
TWY	**Chenhua**	**0.70**	**314**	*e*P		**Pn**	**22 46 00.7**	**-1.1**	
	baz=314								
TWY				S		**Sn**	**22 46 14.1**	**0.0**	
	baz=314								
NSK	**Sanguang**	**0.73**	**262**	P		**Pn**	**22 46 01.9**	**-0.1**	
	baz=257								
NSK				S		**Sn**	**22 46 14.4**	**-0.2**	
	baz=257								
TWS1	**Kuangyinshan**	**0.74**	**295**	*e*P		**Pn**	**22 46 02.1**	**+0.1**	
	baz=293								
TWS1				*e*S		**Sn**	**22 46 14.4**	**-0.4**	
	baz=293								
NNS	**Nan Shan**	**0.79**	**245**	*e*P		**Pn**	**22 46 02.9**	**+0.3**	
	baz=239								
NNS				*e*S		**Sn**	**22 46 16.1**	**+0.5**	
	baz=239								
YOJ	**Yonaguni jima**	**0.84**	**112**	P		**Pn**	**22 46 03.2**	**+0.1**	
YOJ				S		**Sn**	**22 46 16.8**	**+0.3**	
TWD	**Chiawan**	**0.87**	**216**	*e*P		**Pn**	**22 46 02.5**	**-0.8**	
	baz=211								
TWD				*e*S		**Sn**	**22 46 16.4**	**-0.7**	
	baz=211								
WHF	**Hehuan Shan**	**1.03**	**232**	*e*P		**Pn**	**22 46 05.4**	**+0.2**	
	baz=228								
WHF				*e*S		**Sn**	**22 46 20.5**	**+0.2**	
	baz=228								
TWT	**Tachien**	**1.04**	**240**	*e*P		**Pn**	**22 46 06.0**	**+0.7**	
	baz=236								
NSTT	**Nanjuang**	**1.06**	**262**	*e*P		**Pn**	**22 46 05.0**	**-0.5**	
	baz=258								
NSTT				*e*S		**Sn**	**22 46 20.5**	**-0.4**	
	baz=258								
ESL	**Shilin**	**1.17**	**215**	*e*P		**Pn**	**22 46 05.6**	**-1.3**	
	baz=210								
ESL				*e*S		**Sn**	**22 46 21.2**	**-1.9**	
	baz=210								
TWQ1	**Liyutan**	**1.33**	**251**	*e*P		**Pn**	**22 46 08.5**	**-0.3**	
	baz=248								
TWQ1				*e*S		**Sn**	**22 46 26.0**	**-0.6**	
	baz=248								
SMLT	**Sun Moon Lake**	**1.46**	**232**	*e*P		**Pn**	**22 46 10.7**	**+0.4**	
	baz=229								
SMLT				*e*S		**Sn**	**22 46 30.1**	**+0.7**	
	baz=229								
TYC	**Yuchr**	**1.47**	**234**	*e*P		**Pn**	**22 46 10.5**	**0.0**	
	baz=230								
TYC				*e*S		**Sn**	**22 46 30.5**	**+0.7**	
	baz=230								
EHY	**Hungye**	**1.48**	**211**	*e*P		**Pn**	**22 46 09.5**	**-1.2**	
	baz=208								
IRIF	**Iriomote-Funau**	**1.50**	**107**	P		**Pn**	**22 46 10.8**	**-0.1**	
IRIF				S		**Sn**	**22 46 30.1**	**-0.3**	
TWF1	**Yuli**	**1.63**	**209**	*e*P		**Pn**	**22 46 11.1**	**-1.5**	
	baz=206								
TWF1				*e*S		**Sn**	**22 46 32.1**	**-1.2**	
	baz=206								
HATJ	**Hateruma jima**	**1.67**	**115**	P		**Pn**	**22 46 12.8**	**-0.2**	
HATJ				*e*S		**Sn**	**22 46 35.2**	**+1.0**	
YUS	**Yu-Shan**	**1.69**	**221**	*e*P		**Pn**	**22 46 14.6**	**+1.2**	
	baz=218								
YUS				*e*S		**Sn**	**22 46 36.1**	**+1.3**	
	baz=218								
ALS	**Alishan**	**1.77**	**225**	*e*P		**Pn**	**22 46 16.2**	**+1.8**	
	baz=221								
ALS				*e*S		**Sn**	**22 46 38.3**	**+1.7**	
	baz=221								
JKRS	**Kuro-shima**	**1.77**	**107**	P		**Pn**	**22 46 14.5**	**+0.1**	
JKRS				S		**Sn**	**22 46 37.0**	**+0.4**	
CHN5	**Tsauling**	**1.79**	**229**	*e*P		**Pn**	**22 46 14.9**	**+0.2**	
	baz=226								
CHN5				*e*S		**Sn**	**22 46 38.0**	**+0.8**	
	baz=226								
CHKT	**Chengkung**	**1.83**	**204**	*e*P		**Pn**	**22 46 15.0**	**-0.1**	
	baz=201								
CHKT				*e*S		**Sn**	**22 46 35.5**	**-2.4**	
	baz=201								
JIJ	**Ishigaki jima**	**1.86**	**103**	P		**Pn**	**22 46 15.2**	**-0.2**	
JIJ				S		**Sn**	**22 46 38.3**	**-0.3**	
ELDTW	**Lidau**	**1.90**	**214**	*e*P		**Pn**	**22 46 16.4**	**+0.4**	
	baz=211								
ELDTW				*e*S		**Sn**	**22 46 38.7**	**-0.8**	
	baz=211								
CHN4	**Tsaushan**	**2.02**	**225**	*e*P		**Pn**	**22 46 17.8**	**+0.2**	
	baz=223								
CHN4				*e*S		**Sn**	**22 46 42.7**	**+0.4**	
	baz=223								
WTP	**Ta-pu**	**2.08**	**223**	*e*P		**Pn**	**22 46 18.7**	**+0.2**	
	baz=220								
WTP				*e*S		**Sn**	**22 46 44.4**	**+0.6**	
	baz=220								
TWK	**Hsinying**	**2.15**	**226**	*e*P		**Pn**	**22 46 19.5**	**+0.2**	
	baz=223								
TWK				*e*S		**Sn**	**22 46 45.5**	**+0.1**	
	baz=223								
CHN1	**Nanshi**	**2.18**	**223**	*e*P		**Pn**	**22 46 19.6**	**-0.1**	
	baz=221								
CHN1				*e*S		**Sn**	**22 46 45.5**	**-0.6**	
	baz=221								
JTJ	**Tarama**	**2.32**	**93**	P		**Pn**	**22 46 21.8**	**+0.3**	
JTJ				S		**Sn**	**22 46 49.6**	**+0.2**	

*ISCJB **24** 22:53:54.8±0.4, 24.10N±002×12186E±002, h54km±5km, Error ellipse: s-maj=4.1km s-min=2.6km az=137.5*
*TAP **24** 22:53:54.4, 24.14N×121.79E, h59km, ML3.3, C*
*JMA **24** 22:53:55.9±0.1, 2442N×12195E, h83km, M2.4*
ISC 24 22:53:55.3±0.4,**2411N**±002×**12186E**±002,**h52**km±5km, **n47**,σ0§**62**/82,**3C**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
EHP	**Heping Village**	**0.23**	**332**	*e*P		**Pn**	**22 54 03.9**	**-0.2**
	baz=343							
TWD	**Chiawan**	**0.24**	**264**	*i* P		**Pn**	**22 54 04.0**	**-0.2**
	baz=268							
TWD				*i* S		**Sn**	**22 54 10.9**	**+0.4**
	baz=268							
HWA	**Hwalien**	**0.26**	**241**	*e*P		**Pn**	**22 54 04.1**	**-0.2**
	baz=228							
HWA				*e*S		**Sn**	**22 54 11.8**	**+1.0**
	baz=228							
ENA	**Nanau**	**0.34**	**342**	*i* P		**Pn**	**22 54 04.8**	**-0.2**
	baz=350							
ENA				*e*S		**Sn**	**22 54 12.4**	**+0.5**
	baz=350							
ESF	**Shoufeng Towns**	**0.40**	**234**	*e*P		**Pn**	**22 54 05.1**	**-0.4**
	baz=236							
ESL	**Shilin**	**0.49**	**233**	*i* P		**Pn**	**22 54 05.6**	**-0.9**
	baz=234							
ESL				*e*S		**Sn**	**22 54 14.0**	**-0.6**
	baz=234							
TEGC	**Jichi Village**	**0.49**	**216**	*e*P		**Pn**	**22 54 06.6**	**0.0**
	baz=203							
TWC	**Suao**	**0.50**	**359**⇑	*i*P		**Pn**	**22 54 06.7**	**0.0**
	baz=9.0							
TWC				*i* S		**Sn**	**22 54 15.3**	**+0.4**
	baz=9.0							
WHF	**Hehuan Shan**	**0.54**	**274**⇑	*i*P		**Pn**	**22 54 06.9**	**-0.3**
	baz=266							
WHF				*e*S		**Sn**	**22 54 15.7**	**0.0**
	baz=266							
NNS	**Nan Shan**	**0.55**	**307**	*e*P		**Pn**	**22 54 07.1**	**-0.2**
	baz=308							
NNS				*e*S		**Sn**	**22 54 16.1**	**+0.1**
	baz=308							
ENTT	**Nioudou**	**0.59**	**333**	*i* P		**Pn**	**22 54 07.3**	**-0.5**
	baz=332							
ENTT				*e*S		**Sn**	**22 54 16.9**	**0.0**
	baz=332							
TWE	**Neicheng**	**0.64**	**344**	*i* P		**Pn**	**22 54 07.9**	**-0.4**
	baz=341							
TWE				*e*S		**Sn**	**22 54 17.6**	**-0.1**
	baz=341							
ILA	**Ilan**	**0.66**	**351**	*e*P		**Pn**	**22 54 09.3**	**+0.6**
	baz=351							
NSK	**Sanguang**	**0.73**	**321**	*e*P		**Pn**	**22 54 08.9**	**-0.6**
	baz=317							
NSK				*e*S		**Sn**	**22 54 18.7**	**-1.1**
	baz=317							
EHY	**Hungye**	**0.77**	**219**	*e*P		**Pn**	**22 54 08.8**	**-1.3**
	baz=222							
EHY				*e*S		**Sn**	**22 54 19.5**	**-1.4**
	baz=222							
SMLT	**Sun Moon Lake**	**0.90**	**256**	*e*P		**Pn**	**22 54 11.6**	**-0.2**
	baz=250							
SMLT				*e*S		**Sn**	**22 54 24.4**	**+0.5**
	baz=250							
TWA	**Mucha**	**0.90**	**344**	*e*P		**Pn**	**22 54 11.6**	**-0.2**
	baz=335							
TWA				*e*S		**Sn**	**22 54 23.9**	**0.0**
	baz=335							
TWB1	**Santiao Chiao**	**0.91**	**8**	*i* P		**Pn**	**22 54 11.5**	**-0.3**
	baz=10.0							
TWB1				S		**Sn**	**22 54 24.3**	**+0.3**
	baz=10.0							
TWF1	**Yuli**	**0.91**	**214**	P		**Pn**	**22 54 10.6**	**-1.3**
	baz=219							
TWF1				*e*S		**Sn**	**22 54 23.6**	**-0.5**
	baz=219							
TYC	**Yuchr**	**0.94**	**258**	P		**Pn**	**22 54 11.9**	**-0.3**
	baz=254							
TYC				*e*S		**Sn**	**22 54 25.1**	**+0.4**
	baz=254							
NSTT	**Nanjuang**	**0.94**	**304**	*e*P		**Pn**	**22 54 11.8**	**-0.5**
	baz=304							
NSTT				*e*S		**Sn**	**22 54 24.6**	**-0.1**
	baz=304							
NWF	**Wu-fen Shan**	**0.96**	**356**	P		**Pn**	**22 54 12.8**	**+0.2**
	baz=358							
NWF				S		**Sn**	**22 54 25.7**	**+0.4**
	baz=358							
TWQ1	**Liyutan**	**1.02**	**284**	*e*P		**Pn**	**22 54 13.0**	**-0.3**
	baz=283							
TWQ1				*e*S		**Sn**	**22 54 26.5**	**-0.2**
	baz=283							
YUS	**Yu-Shan**	**1.03**	**234**	P		**Pn**	**22 54 13.6**	**+0.1**
	baz=226							
YUS				*e*S		**Sn**	**22 54 27.7**	**+0.7**
	baz=226							
NCU	**National Centr**	**1.05**	**325**	*e*P		**Pn**	**22 54 13.8**	**0.0**
	baz=326							
TWS1	**Kuangyinshan**	**1.07**	**338**	*e*P		**Pn**	**22 54 13.5**	**-0.5**
	baz=340							
TWS1				*e*S		**Sn**	**22 54 27.1**	**-0.7**
	baz=340							
TCU	**Taichung**	**1.08**	**272**	*e*P		**Pn**	**22 54 14.1**	**-0.1**
	baz=271							
TCU				*e*S		**Sn**	**22 54 28.5**	**+0.4**
	baz=271							
WNT	**Mingjian**	**1.10**	**258**	*e*P		**Pn**	**22 54 14.9**	**+0.5**
	baz=256							
WNT				*e*S		**Sn**	**22 54 29.9**	**+1.4**
	baz=256							
CHKT	**Chengkung**	**1.10**	**204**	*e*P		**Pn**	**22 54 13.4**	**-1.1**
	baz=193							
CHKT				*e*S		**Sn**	**22 54 27.5**	**-1.1**
	baz=193							
YOJ	**Yonaguni jima**	**1.11**	**71**	P		**Pn**	**22 54 15.0**	**+0.4**
YOJ				S		**Sn**	**22 54 29.2**	**+0.4**
ALS	**Alishan**	**1.13**	**239**⇑	*i*P		**Pn**	**22 54 15.3**	**+0.5**
	baz=230							
ALS				*e*S		**Sn**	**22 54 30.1**	**+0.8**
	baz=230							
CHN5	**Tsauling**	**1.19**	**245**	*e*P		**Pn**	**22 54 16.0**	**+0.3**
	baz=235							
CHN5				*e*S		**Sn**	**22 54 31.7**	**+0.9**
	baz=235							
ELDTW	**Lidau**	**1.20**	**220**	*e*P		**Pn**	**22 54 14.6**	**-1.1**
	baz=218							
ELDTW				*e*S		**Sn**	**22 54 30.6**	**-0.3**
	baz=218							
STYT	**Tauyuan**	**1.38**	**227**	P		**Pn**	**22 54 18.6**	**+0.4**
	baz=225							
STYT				*e*S		**Sn**	**22 54 36.3**	**+0.9**
	baz=225							
CHN4	**Tsaushan**	**1.38**	**237**	*e*P		**Pn**	**22 54 18.4**	**+0.1**
	baz=235							
CHN4				*e*S		**Sn**	**22 54 36.1**	**+0.7**
	baz=235							
CHN2	**Minshiung**	**1.39**	**246**	*e*P		**Pn**	**22 54 17.6**	**-0.7**
	baz=236							
WTP	**Ta-pu**	**1.43**	**233**	*e*P		**Pn**	**22 54 19.1**	**+0.2**
	baz=231							
CHY	**Chiayi**	**1.45**	**245**	*e*P		**Pn**	**22 54 19.9**	**+0.8**
	baz=243							
TWG	**Pinlang**	**1.47**	**210**	*e*P		**Pn**	**22 54 18.0**	**-1.5**
	baz=200							
TWK	**Hsinying**	**1.51**	**237**	*e*P		**Pn**	**22 54 20.3**	**+0.3**
	baz=235							
TWK				*e*S		**Sn**	**22 54 39.2**	**+0.7**
	baz=235							
CHN1	**Nanshi**	**1.53**	**233**	*e*P		**Pn**	**22 54 20.6**	**+0.4**
	baz=232							
CHN1				*e*S		**Sn**	**22 54 39.3**	**+0.4**
	baz=232							
IRIF	**Iriomote-Funau**	**1.73**	**82**	P		**Pn**	**22 54 23.3**	**+0.4**
IRIF				S		**Sn**	**22 54 44.1**	**+0.3**
SSD	**Sandimen**	**1.76**	**220**	*e*P		**Pn**	**22 54 24.6**	**+1.2**
	baz=211							
HATJ	**Hateruma jima**	**1.78**	**91**	S		**Sn**	**22 54 46.1**	**+0.9**
JKRS	**Kuro-shima**	**1.97**	**86**	P		**Pn**	**22 54 27.1**	**+0.8**
JKRS				S		**Sn**	**22 54 50.5**	**+0.7**
JIJ	**Ishigaki jima**	**2.10**	**83**	P		**Pn**	**22 54 28.3**	**+0.2**
JIJ				S		**Sn**	**22 54 52.4**	**-0.6**
JTJ	**Tarama**	**2.65**	**78**	S		**Sn**	**22 55 06.0**	**-0.5**

*IDC **24** 23:10:40.0±1.4, 1382N×120.18E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=57.2km s-min=21.7km az=60.0*
*ISCJB **24** 23:10:43.3±2.0, 1365N±005×11976E±005, h15km±14km, mb3.6/3, Error ellipse: s-maj=9.2km s-min=6.9km az=31.7*
ISC 24 23:10:42.9±1.4,**1362N**±005×**11982E**±005,**h11**km±8km, **n12**,σ0§**89**/18,**mb3.6**/3,**1D**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.43**	**75**	*e*P		**Pg**	**23 10 51.4**	**-0.1**
LUBP				*e*S		**Sg**	**23 10 57.1**	**-0.1**
PGP	**Puerto Galera**	**1.11**	**96**	*e*P		**Pb**	**23 11 03.1**	**-1.1**
TGY	**Tagaytay City**	**1.19**	**66**⇓	*e*P		**Pb**	**23 11 05.4**	**0.0**
TGY				*e*S		**Sb**	**23 11 22.4**	**+1.5**
BUSP	**Coron**	**1.65**	**167**	*e*P		**Pn**	**23 11 12.2**	**+0.3**
BUSP				*e*S		**Sn**	**23 11 33.8**	**+0.7**
SJMP	**San Jose**	**1.72**	**132**	*e*P		**Pn**	**23 11 14.1**	**+1.3**
SJMP				*e*S		**Sn**	**23 11 34.2**	**-0.4**
ENPP	**El Nido**	**2.43**	**189**	*e*P		**Pn**	**23 11 22.9**	**+0.3**
OTRP	**Odiongan**	**2.49**	**120**	*e*P		**Pn**	**23 11 29.3**	**+5.9**
OTRP				*e*S		**Sn**	**23 11 53.3**	**-0.4**
BALP	**Baler**	**2.71**	**39**	*e*P		**Pn**	**23 11 26.2**	**-0.2**
BALP				*e*S		**Sn**	**23 11 59.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**20.62**	**286**	P		**P**	**23 15 24.1**	**+1.6**
	2.6nm,0.9s,baz=97,slow=9.2,SNR=19							
SONM	**Songino Array**	**35.90**	**345**	P		**P**	**23 17 41.1**	**-1.9**
	0.2nm,0.7s,mb3.1,baz=157,slow=7.8,SNR=2.8							
WRA	**Warramunga Arr**	**36.29**	**157**	P		**P**	**23 17 45.3**	**-1.3**
	1.4nm,0.5s,mb4.1,baz=336,slow=9.5,SNR=8.4							
ASAR	**Alice Springs**	**39.54**	**159**	P		**P**	**23 18 13.6**	**-0.4**
	0.7nm,0.7s,mb3.5,baz=343,slow=7.7,SNR=13							

*DDA **24** 23:21:10.8, 3963N×4286E, h7km±3km, Md3.3*
*ISCJB **24** 23:21:11.4±0.6, 3966N±004×4291E±005, h8km±6km, Error ellipse: s-maj=8.1km s-min=4.5km az=42.3*
*CSEM **24** 23:21:11.2±0.1, 3965N×4298E, h15km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.2km az=37.0*
*ISK **24** 23:21:11.2, 3966N×4292E, h7km, MD3.0*
ISC 24 23:21:11.9±0.5,**3965N**±004×**4291E**±005,**h11**km±5km,**n18**, σ1§**11**/30,**1C**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AGRB	**Hanur-Agry**	**0.10**	**139**	PG		**Pg**	**23 21 14.2**	**-0.3**
AGRB				*e*SG		**Sg**	**23 21 16.7**	**+0.3**
DYDN	**Diyadin**	**0.61**	**100**⇑	*i*P		**Pg**	**23 21 23.6**	**-0.1**
DYDN				*i* S		**Sg**	**23 21 33.0**	**+1.3**
DYDN	**Diyadin**	**0.61**	**100**	*i* P		**Pg**	**23 21 23.6**	**-0.1**
DYDN				*i* S		**Sg**	**23 21 33.0**	**+1.2**
HOMI	**Horasan**	**0.87**	**297**	*e*P		**Pg**	**23 21 27.2**	**-1.4**
HOMI				*e*S		**Sg**	**23 21 41.8**	**+1.8**
CLDR	**Caldiran**	**0.93**	**123**	*e*PG		**Pg**	**23 21 28.9**	**-0.8**
CLDR				*e*SG		**Sg**	**23 21 42.3**	**+0.5**
KARS	**Kars**	**0.97**	**8**	*e*PG		**Pg**	**23 21 30.6**	**-0.1**
VANB	**Van**	**1.12**	**160**	*e*PN		**Pn**	**23 21 33.3**	**-0.1**
VANB				*e*SN		**Sn**	**23 21 49.3**	**+0.5**
TVAN	**Van**	**1.18**	**161**	*e*P		**Pb**	**23 21 33.0**	**-1.3**
TVAN				*e*S		**Sb**	**23 21 50.2**	**+0.6**
TVAN	**Van**	**1.18**	**161**	*e*P		**Pb**	**23 21 33.0**	**-1.3**
TVAN				*e*S		**Sb**	**23 21 50.2**	**+0.6**
ERZM	**Erzurum**	**1.22**	**283**	*e*P		**Pn**	**23 21 33.4**	**-1.4**
ERZM				*e*S		**Sb**	**23 21 50.5**	**-0.2**
EZM	**Erzurum**	**1.22**	**283**	*e*PN		**Pn**	**23 21 34.5**	**-0.4**
TATV	**Tatvan**	**1.24**	**204**	*e*P		**Pn**	**23 21 32.8**	**-2.4**
TATV				*i* S		**Sb**	**23 21 50.0**	**-1.4**
VANT	**Van**	**1.26**	**163**	*e*PN		**Pn**	**23 21 34.8**	**-0.6**
BNGL	**BINGOL**	**1.53**	**244**	*e*P		**Pn**	**23 21 38.0**	**-1.1**
BNGL				*e*S		**Sn**	**23 21 59.4**	**+0.3**
BEST	**Besiri**	**2.17**	**217**	*e*P		**Pn**	**23 21 49.3**	**+1.3**
BEST				*e*S		**Sn**	**23 22 17.6**	**+2.7**
EZC	**Erzincan**	**2.39**	**273**	*e*PN		**Pn**	**23 21 57.0**	**+6.1**
PTK	**Pertek**	**2.83**	**256**	*e*PN		**Pn**	**23 21 58.5**	**+1.5**
SVRC	**Sivrice-ELAZID**	**3.08**	**247**	*e*PN		**Pn**	**23 22 01.8**	**+1.4**

IDC 24 23:25:23.2±1.8,**211N**×**12789E**,**h0**km,**mb3.8**/4,**mb1 4.0**/4, **mb1mx3.7**/15,**mbtmp3.8**/4,**Error ellipse: s-maj=132.6km s-min=23.4km az=66.0**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.81**	**164**	P		P	23 30 28.8	+1.0
	3.2nm,0.5s,baz=343,slow=10,SNR=12							
ASAR	**Alice Springs**	**26.28**	**167**	P		P	23 31 00.1	-0.3
	0.5nm,0.6s,baz=348,slow=7.6,SNR=18							
STKA	**Stephens Creek**	**36.21**	**160**	P		P	23 32 27.2	-0.7
	0.9nm,0.3s,baz=345,slow=10.0,SNR=7.1							
MKAR	**Makanchi Array**	**59.54**	**325**	P		P	23 35 28.9	+0.4
	0.2nm,0.3s,baz=114,slow=7.8,SNR=6.8							

*IDC **24** 23:31:12.0±1.1, 2311S×7062W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.6/17, mbtmp3.9/4, ML3.3/2, Error ellipse: s-maj=29.4km s-min=14.4km az=153.0*
*ISCJB **24** 23:31:13.1±0.9, 2312S±0.004×7075W±007, h31km±5km, mb3.8/3, Error ellipse: s-maj=10.6km s-min=5.6km az=19.4*
*GUC **24** 23:31:14.8±0.7, 2313S×7056W, h37km±2km, ML4.0*
*NEIC **24** 23:31:14.8, 2313S×7056W, h37km, ML4.0(GUC), After GUC.*
ISC 24 23:31:14.3±0.8,**2312S**±003×**7069W**±006,**h28**km±5km,**n23**, σ0§**96**/31,**mb3.8**/3,**4C-3D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.23**	**86**	*e*P		**Pb**	**23 31 20.6**	**0.0**
MECH				*i* S		**Sb**	**23 31 25.0**	**+0.2**
MECH				AML		AML	23 31 30.5	
	comp=N,33μm,0.7s							
CEN1	**Los Morros**	**0.53**	**121**⇓	*i*P		**Pb**	**23 31 25.3**	**+0.2**
CEN1				*i* S		**Sb**	**23 31 32.8**	**+0.4**
ANCH	**Antofagasta**	**0.62**	**155**⇓	*i*P		**Pb**	**23 31 25.9**	**-0.8**
ANCH				*i* S		**Sb**	**23 31 34.1**	**-0.9**
PECH	**Pedro de Valdi**	**1.07**	**61**⇓	*i*P		**Pn**	**23 31 32.8**	**-0.7**
PECH				*i* S		**Sn**	**23 31 46.0**	**-1.5**
PECH				AML		AML	23 31 48.9	
	comp=N,14μm,0.5s							
TOCH	**Tocopilla**	**1.12**	**24**	*e*P		**Pn**	**23 31 34.4**	**+0.3**
TOCH				*i* S		**Sn**	**23 31 48.6**	**0.0**
TOCH				AML		AML	23 31 49.7	
	comp=E,9μm,0.5s							
MACH	**Maria Elena**	**1.26**	**43**⇑	*i*P		**Pn**	**23 31 36.2**	**+0.1**
MACH				*i* S		**Sn**	**23 31 52.2**	**+0.1**
CPN1	**Cerro Paranal**	**1.52**	**170**⇑	*i*P		**Pn**	**23 31 41.0**	**+1.2**
LVC	**Limon Verde**	**1.72**	**73**	Pg		**Pn**	**23 31 43.6**	**+1.2**
	comp=E,92nm,0.3s,baz=253,slow=13,SNR=766							
LVC				Lg			23 32 04.3	
	comp=E,525nm,0.3s,baz=229,slow=18,SNR=38							
LVC	**Limon Verde**	**1.72**	**73**	Pg		**Pn**	**23 31 43.6**	**+1.2**
LVC				Lg			23 32 04.3	
LVC	**Limon Verde**	**1.72**	**73**⇑	*i*P		**Pn**	**23 31 43.1**	**+0.7**
LVC				*i* S		**Sn**	**23 32 04.2**	**+0.8**
LVC				AML		AML	23 32 08.8	
	comp=N,2μm,0.3s							
PB01	**Plate Boundary**	**2.35**	**29**⇑	*i*P		**Pn**	**23 31 51.8**	**+0.7**
PB01				AML		AML	23 32 27.4	
	comp=E,2μm,0.4s							
LCO	**Las Campanas**	**5.87**	**180**	*e*Pn		**Pn**	**23 32 39.3**	**-0.2**
	comp=E,21nm,0.6s							
LCO				*e*Sn		**Sn**	**23 33 42.8**	**-3.0**
ARE	**Arequipa**	**6.67**	**353**	*e*P		**Pn**	**23 32 51.0**	**+0.5**
ARE				*e*S		**Sn**	**23 34 04.0**	**-1.5**
CFAA	**Coronel Fontan**	**8.73**	**166**	Pn		**Pn**	**23 33 20.4**	**+1.7**
	comp=E,0.0nm,0.3s,baz=342,slow=15,SNR=4.8							
SIV	**San Ignacio**	**11.51**	**54**	Pn		**Pn**	**23 33 56.3**	**-0.6**
	comp=E,0.8nm,0.3s,baz=245,slow=12,SNR=18							
TRQA	**Tornquist**	**16.66**	**155**	Pn		**Pn**	**23 35 04.6**	**-1.2**
PLCA	**Paso Flores**	**17.56**	**180**	Pn		**Pn**	**23 35 17.0**	**-0.1**
	comp=E,1.3nm,0.8s							
SDV	**Santo Domingo**	**31.81**	**0**	P		**P**	**23 37 36.5**	**-0.2**
QSPA	**South Pole Qui**	**89.08**	**180**	P		**P**	**23 42 07.4**	**+2.8**
	comp=E,0.6nm,0.5s,mb3.9,baz=218,slow=3.0,SNR=10							
TORD	**Torodi Ar. Bea**	**79.45**	**71**	P		**P**	**23 43 18.9**	**+0.2**
	comp=E,1.7nm,0.9s,mb4.0,baz=242,slow=5.0,SNR=9.2							
YKA	**Yellowknife Ar**	**92.17**	**341**	P		**P**	**23 44 24.8**	**+4.0**
	comp=E,0.1nm,0.6s,mb3.4,baz=138,slow=4.8,SNR=3.5							
YKA	**Yellowknife Ar**	**92.17**	**341**	P		**P**	**23 44 24.8**	**+4.0**
MKAR	**Makanchi Array**	**147.91**	**36**	PKPbc		PKPbc	23 50 57.2	+0.4
	comp=E,0.4nm,0.7s,baz=292,slow=1.9,SNR=4.8							

*CSEM **24** 23:39:10.0±0.1, 3917N×4175E, h2km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.0km az=178.0*
*ISK **24** 23:39:10.6, 3914N×4171E, h5km, MD3.1*
*ISCJB **24** 23:39:11.5±0.7, 3914N±003×4171E±004, h2km±6km, Error ellipse: s-maj=5.5km s-min=4.3km az=175.2*
*DDA **24** 23:39:12.2, 3914N×4161E, h7km±2km, Md3.0*
ISC 24 23:39:12.0±0.6,**3914N**±002×**

TGY	**Tagaytay City**	**1.11**	**67**	*e*P		**Pn**	**00 07 47.7**	**+0.8**
TGY				*i* S		**Sn**	**00 08 04.1**	**+3.1**
BUSP	**Coron**	**1.69**	**169**	*e*P		**Pn**	**00 07 54.5**	**-0.3**
SJMP	**San Jose**	**1.71**	**135**	*e*P		**Pn**	**00 08 01.6**	**+6.5**
SCZP	**Santa Cruz**	**2.09**	**1**	*e*P		**Pn**	**00 08 05.0**	**+4.6**
PCPH	**Palayan**	**2.21**	**32**	*i*P		**Pn**	**00 08 00.7**	**-1.4**
PCPH				*i* S		**Sn**	**00 08 28.6**	**+0.3**
POLP	**Polilio Island**	**2.25**	**62**	*e*P		**Pn**	**00 08 03.3**	**+0.6**
POLP				*e*S		**Sn**	**00 08 31.2**	**+1.9**
OTRP	**Odiongan**	**2.46**	**122**	*e*P		**Pn**	**00 08 05.8**	**+0.3**
OTRP				*e*S		**Sn**	**00 08 35.2**	**+0.8**
ENPP	**El Nido**	**2.49**	**190**	*e*P		**Pn**	**00 08 05.2**	**-0.7**
ENPP				*e*S		**Sn**	**00 08 34.4**	**-0.8**
GQP	**Guinayangan**	**2.50**	**84**	*e*P		**Pn**	**00 08 07.7**	**+1.6**
GQP				*e*S		**Sn**	**00 08 39.1**	**+3.6**
BALP	**Baler**	**2.63**	**38**	*e*P		**Pn**	**00 08 07.6**	**-0.2**
BALP				*e*S		**Sn**	**00 08 34.8**	**-3.8**
AUQP	**San Andres**	**2.74**	**97**	*e*P		**Pn**	**00 08 12.8**	**+3.5**
AUQP				*e*S		**Sn**	**00 08 43.3**	**+2.0**
CUYO	**Cuyo Island**	**3.02**	**158**	*e*P		**Pn**	**00 08 12.8**	**-0.3**
CUYO				*e*S		**Sn**	**00 08 45.9**	**-2.3**
KALP	**Kalibo**	**3.11**	**129**	*e*P		**Pn**	**00 08 15.4**	**+0.9**
RCP	**Roxas**	**3.50**	**127**	*e*P		**Pb**	**00 08 30.0**	**+1.1**
CAUP	**Cauayan**	**3.75**	**30**	*e*P		**Pn**	**00 08 23.6**	**+0.3**
CAUP				*e*S		Sn	00 09 39.2	+33
GUIM	**Jordan**	**4.02**	**139**	*e*P		**Pn**	**00 08 29.8**	**+2.8**
PVCP	**Virac**	**4.15**	**91**	*i*P		**Pn**	**00 08 30.5**	**+1.7**
PVCP				*i* S		Px	00 08 53.7	
PALP	**Palanan**	**4.17**	**36**	*e*P		**Pn**	**00 08 30.3**	**+1.3**
PALP	**Palanan**	**4.17**	**36**	*i*P		**Pb**	**00 08 39.2**	**-1.1**
PALP				*i* S		**Sn**	**00 09 17.3**	**+0.7**
SIPP	**Brgy, Tapao**	**4.26**	**7**	*i*P		**Pn**	**00 08 32.3**	**+2.1**
PIP	**Pasuquin**	**4.68**	**9**	*e*P		**Pn**	**00 08 29.5**	**-6.5**
BATP	**Bataraza**	**5.26**	**203**	*e*P		**Pn**	**00 08 42.4**	**-1.6**
IPIL	**Ipil**	**6.42**	**155**	*e*P		**Pn**	**00 09 00.9**	**+1.0**
IPIL	**Ipil**	**6.42**	**155**	*i*P		**Sn**	**00 10 09.2**	**-3.0**
KKM	**Kota Kinabalu**	**8.40**	**206**	*e*Pn		**Pn**	**00 09 29.4**	**+2.2**
KKM				*e*Sn		**Sn**	**00 10 55.6**	**-5.2**
DAV	**Davao City (W)**	**8.63**	**139**	LR		LR	00 13 33.2	
	comp=Z,1μm,21.9s,baz=134,slow=43							
NACB	**Ninganchiao**	**10.57**	**9**	Pn		**Pn**	**00 09 55.5**	**-1.4**
QZH	**Quanzhou**	**11.28**	**354**	*e*P		**Pn**	**00 10 10.0**	**+3.5**
QZH				S		**Sn**	**00 12 18.3**	**+6.9**
QZH				LR		LR		
	comp=Z,2μm,13.5s							
KSM	**Kuching**	**15.38**	**219**	*e*Pn		**Pn**	**00 11 04.4**	**+2.0**
	comp=Z,57nm,0.8s							
KSM				*e*			00 11 11.9	
GYA	**Guiyang**	**17.75**	**318**	P		**Pn**	**00 11 34.3**	**+2.0**
GYA				AP		pP	00 11 44.6	+3.0
GYA				XP		sP	00 11 49.8	+4.0
GYA				PP			00 11 51.4	
GYA				S		**Sn**	**00 14 49.5**	**+0.2**
GYA				AMB		AMB		
	comp=Z,20nm,0.8s							
GYA				AMB		AMB		
	comp=Z,90nm,4.3s							
GYA				LR		LR		
	comp=N,490nm,11.8s							
GYA				LR		LR		
	comp=E,360nm,10.6s							
GYA				LR		LR		
	comp=Z,420nm,13.0s							
NJ2	**Nanjing**	**18.32**	**357**	*e*P		**Pn**	**00 11 41.8**	**+2.6**
NJ2				AP		pP	00 11 49.6	+1.9
NJ2				XP		sP	00 11 54.3	+2.4
NJ2				PP			00 11 57.8	
NJ2				S		**Sn**	**00 15 00.0**	**-2.8**
NJ2				AMB		AMB		
	comp=Z,20nm,0.7s							
NJ2				AMB		AMB		
	comp=Z,50nm,5.5s							
NJ2				LR		LR		
	comp=N,910nm,15.9s							
NJ2				LR		LR		
	comp=E,570nm,16.4s							
NJ2				LR		LR		
	comp=Z,570nm,16.4s							
KAPI	**Kappang**	**18.57**	**180**	LR		LR	00 18 55.5	
	comp=Z,390nm,21.0s,baz=260,slow=37							
ENH	**Enshi**	**19.10**	**332**	P		**Pn**	**00 11 47.3**	**-1.4**
KMI	**Kunming**	**19.75**	**308**	P		**Pn**	**00 11 58.1**	**+1.6**
KMI				AP		pP	00 12 06.8	+3.2
KMI				PP			00 12 17.8	
KMI				PPP			00 12 27.3	
KMI				S		**Sn**	**00 15 37.1**	**-0.5**
KMI				SSS			00 16 19.3	
KMI				AMB		AMB		
	comp=Z,12nm,1.4s							
KMI				LR		LR		
	comp=N,338nm,12.6s							
KMI				LR		LR		
	comp=E,454nm,15.4s							
KMI				LR		LR		
	comp=Z,504nm,17.2s							
CM31	**Chiang Mai Arr**	**20.67**	**286**	*e*P		**P**	**00 12 06.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**20.67**	**286**	P		**P**	**00 12 07.0**	**+2.0**
	comp=Z,24nm,0.9s,baz=97,slow=9.0,SNR=116							
CMAR				PcP		PcP	00 16 16.2	+1.8
	comp=Z,1.9nm,0.7s,baz=325,slow=0.3,SNR=10							
CMAR				ScP		ScP	00 19 49.6	+0.8
	comp=Z,1.0nm,0.8s,baz=40,slow=1.3,SNR=8.6							
CMAR				LR		LR	00 20 39.2	
	comp=Z,203nm,18.6s,MS3.5,baz=253,slow=38							
CMAR	**Chiang Mai Arr**	**20.67**	**286**	P		**P**	**00 12 07.0**	**+2.1**
CMAR							00 16 16.3	
KULM	**Kulim**	**20.70**	**248**	*e*P		**P**	**00 12 07.0**	**+1.7**
	comp=Z,36nm,1.1s							
CHTO	**Chiang Mai**	**20.73**	**287**	*e*P		**P**	**00 12 07.3**	**+1.7**
CHTO				pmax		pmax		
	comp=Z,13nm,0.9s							
CHTO	**Chiang Mai**	**20.73**	**287**	*e*P		**P**	**00 12 07.3**	**+1.7**
	comp=Z,13nm,0.9s							
XAN	**Xi'an**	**22.58**	**336**	P		**P**	**00 12 26.8**	**+1.5**
XAN				AP			00 12 36.0	
XAN				PP			00 12 55.5	
XAN				S		**S**	**00 16 27.4**	**-3.8**
XAN				AMB		AMB		
	comp=Z,4.0nm,1.0s,mb3.8							
XAN				AMB		AMB		
	comp=Z,156nm,6.8s							
XAN				LR		LR		
	comp=N,267nm,14.8s,MS4.1							
XAN				LR		LR		
	comp=E,483nm,13.3s,MS4.1							
XAN				LR		LR		
	comp=Z,726nm,16.6s,MS4.2							
PSI	**Prapat**	**23.36**	**244**	P		**P**	**00 12 34.5**	**+0.9**
	comp=Z,29nm,0.8s,mb4.7,baz=47,slow=8.4,SNR=17							
PSI				LR		LR	00 21 09.7	
	comp=Z,309nm,19.0s,MS3.8,baz=333,slow=35							
GUMO	**Guam**	**24.28**	**87**	LR		LR	00 21 47.0	
	comp=Z,430nm,19.3s,MS4.0,baz=276,slow=36							
GUMO	**Guam**	**24.28**	**87**	*e*P		**P**	**00 12 39.9**	**-2.3**
GUMO				pmax		pmax		
	comp=Z,22nm,0.4s,mb4.9							
GUMO	**Guam**	**24.28**	**87**	*e*P		**P**	**00 12 39.9**	**-2.3**
	comp=Z,22nm,0.4s,mb4.9							
KSRS	**Korea Array**	**24.75**	**15**	P		**P**	**00 12 44.0**	**-2.1**
	comp=Z,5.2nm,0.8s,mb4.1,baz=199,slow=11,SNR=17							
KSRS				LR		LR	00 24 07.2	
	comp=Z,420nm,18.2s,MS4.0,baz=201,slow=41							
CBIJ	**Chichi jima**	**24.75**	**54**	LR		LR	00 20 08.0	
	comp=Z,494nm,21.0s,MS4.0,baz=337,slow=31							
BJT	**Baijiatuao**	**26.45**	**354**	*e*P		**P**	**00 13 00.0**	**-1.5**
BJT				pmax		pmax		
	comp=Z,9.0nm,0.7s							
BJT	**Baijiatuao**	**26.45**	**354**	*e*P		**P**	**00 13 00.0**	**-1.5**
	comp=Z,8.5nm,0.7s,mb4.4							
BJI	**Beijing**	**26.47**	**354**	P		**P**	**00 13 02.3**	**+0.6**
BJI				S		**S**	**00 17 35.8**	**+2.4**
BJI				AMB		AMB		
	comp=Z,11nm,0.8s,mb4.4							
BJI				AMB		AMB		
	comp=Z,300nm,6.0s							
BJI				LR		LR		
	comp=N,381nm,10.9s,MS4.4							
BJI				LR		LR		
	comp=E,478nm,12.0s,MS4.4							
BJI				LR		LR		
	comp=Z,158nm,22.9s							
JHJ	**Hachijo jima 2**	**26.52**	**40**	LR		LR	00 22 51.4	
	comp=Z,274nm,21.6s,MS3.8,baz=288,slow=35							
LZH	**Lanzhou**	**26.56**	**330**	*e*P		**P**	**00 13 06.5**	**+3.9**
LZH				AP		pP	00 13 14.5	+2.4
LZH				XP		sP	00 13 20.0	+3.9
LZH				AMB		AMB		
	comp=Z,21nm,1.6s,mb4.4							
LZH				AMB		AMB		
	comp=Z,70nm,4.2s							
LZH				LR		LR		
	comp=E,718nm,15.4s							
LZH				LR		LR		
	comp=Z,682nm,16.5s,MS4.3							
HHC	**Hu-ho-hao-te**	**28.03**	**346**	*e*P		**P**	**00 13 17.6**	**+1.8**
HHC				AP		pP	00 13 26.9	+1.6
HHC				XP		sP	00 13 31.3	+2.0
HHC				PP		PP	00 14 07.8	-12
HHC				*e*S		**S**	**00 17 57.3**	**-0.8**
HHC				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.5							
HHC				AMB		AMB		
	comp=Z,183nm,4.3s							
HHC				LR		LR		
	comp=N,435nm,13.1s,MS4.3							
HHC				LR		LR		
	comp=E,194nm,12.0s,MS4.3							
HHC				LR		LR		
	comp=Z,377nm,15.3s,MS4.1							
MAJO	**Matsushiro**	**28.07**	**33**	P		**P**	**00 13 14.6**	**-1.6**
SHL	**Shillong**	**28.84**	**298**	*e*PG		**P**	**00 13 23.0**	**-0.1**
KAKA	**Kakadu**	**29.02**	**154**	*e*P		x	00 12 22.1	
	comp=Z,13nm,0.6s							
CN2	**Changchun**	**30.40**	**8**	*e*P		**P**	**00 13 33.8**	**-2.9**
CN2				*e*XP		sP	00 13 47.3	-2.9
CN2				*e*S		**S**	**00 18 31.0**	**-4.3**
CN2				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.5							
CN2				AMB		AMB		
	comp=Z,200nm,5.0s							
CN2				LR		LR		
	comp=N,440nm,16.0s,MS4.3							
CN2				LR		LR		
	comp=E,390nm,16.0s,MS4.3							
CN2				LR		LR		
	comp=Z,420nm,16.0s,MS4.2							
LSA	**Lhasa**	**30.98**	**306**	*e*P		**P**	**00 13 42.4**	**+0.4**
LSA				*e*		pP	00 13 52.9	+1.4
LSA				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.1							
LSA	**Lhasa**	**30.98**	**306**	*e*P		**P**	**00 13 42.4**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.1							
LSA				*e*		pP	00 13 52.9	+1.4
MDJ	**Mudanjiang**	**31.93**	**13**	P		**P**	**00 13 49.3**	**-0.9**
MDJ				AP		pP	00 13 57.6	-2.1
MDJ				XP		sP	00 14 01.8	-1.9
MDJ				PCP		PcP	00 16 31.0	-9.1
MDJ				S		**S**	**00 19 00.9**	**+1.7**
MDJ				XS		sS	00 19 19.1	+4.2
MDJ				AMB		AMB		
	comp=Z,16nm,1.1s,mb4.8							
MDJ				AMB		AMB		
	comp=Z,50nm,3.6s							
MDJ				LR		LR		
	comp=N,388nm,17.0s,MS4.2							
MDJ				LR		LR		
	comp=E,220nm,16.4s,MS4.2							
MDJ				LR		LR		
	comp=Z,477nm,17.0s,MS4.2							
MDJ	**Mudanjiang**	**31.93**	**13**	*e*P		**P**	**00 13 49.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**32.08**	**170**	*e*P		**P**	**00 13 51.5**	**-0.3**
	comp=Z,12nm,1.3s,mb4.6							
FITZ	**Fitzroy Crossi**	**32.08**	**170**	*e*P		**P**	**00 13 51.7**	**-0.1**
	comp=Z,7.8nm,1.1s,mb4.5							
TAPN	**Taplejung**	**32.95**	**299**	*e*P		**P**	**00 13 59.4**	**0.0**
	comp=Z,5.2nm,0.6s,mb4.7							
ODAN	**Odare**	**33.07**	**298**	*e*P		**P**	**00 14 00.2**	**-0.3**
	comp=Z,23nm,0.8s,mb5.2							
RAMN	**Ramite**	**33.77**	**298**	*e*P		**P**	**00 14 06.5**	**-0.1**
	comp=Z,14nm,0.8s,mb4.9							
JIRN	**Jiri**	**34.33**	**299**	*e*P		**P**	**00 14 11.6**	**+0.2**
	comp=Z,17nm,0.9s,mb5.0							
MBWA	**Marble Bar**	**34.62**	**180**	*e*P		**P**	**00 14 15.7**	**+1.9**
	comp=Z,4.7nm,0.6s,mb4.6							
GUN	**Gumba**	**34.66**	**300**	*e*P		**P**	**00 14 14.4**	**+0.1**
	comp=Z,20nm,0.7s,mb5.2							
PKI	**Pulchoki**	**34.97**	**299**	*e*P		**P**	**00 14 15.9**	**-1.0**
	comp=Z,12nm,0.7s,mb5.0							
PKI	**Pulchoki**	**34.97**	**299**	*e*P		**P**	**00 14 15.9**	**-1.0**
PKI				pmax		pmax		
	comp=Z,13nm,0.6s,mb5.0							
KKN	**Kakani**	**35.14**	**299**	*e*P		**P**	**00 14 17.3**	**-1.1**
	comp=Z,14nm,0.9s,mb4.9							
KKN	**Kakani**	**35.14**	**299**	*e*P		**P**	**00 14 17.3**	**-1.1**
KKN				pmax		pmax		
	comp=Z,14nm,0.9s,mb4.9							
DMN	**Daman**	**35.23**	**299**	*e*P		**P**	**00 14 18.8**	**-0.4**
	comp=Z,9.4nm,0.7s,mb4.8							
PMG	**Port Moresby**	**35.48**	**129**	P		**P**	**00 14 21.4**	**0.0**
PMG				pmax		pmax		
	comp=Z,4.0nm,0.6s							
PMG	**Port Moresby**	**35.48**	**129**	P		**P**	**00 14 21.4**	**0.0**
	comp=Z,3.5nm,0.6s,mb4.5							
HIA	**Hailar**	**35.49**	**360**	*e*P		**P**	**00 14 20.1**	**-1.0**
HIA				pmax		pmax		
	comp=Z,12nm,0.9s							
HIA	**Hailar**	**35.49**	**360**	*e*P		**P**	**00 14 20.1**	**-1.0**
	comp=Z,12nm,0.9s,mb4.8							
ULN	**Ulaanbaatar**	**35.72**	**345**	*e*P		**P**	**00 14 23.8**	**+0.7**
ULN				pmax		pmax		
	comp=Z,5.0nm,1.2s,mb4.3							
ULN	**Ulaanbaatar**	**35.72**	**345**	*e*P		**P**	**00 14 23.8**	**+0.7**
	comp=Z,5.4nm,1.2s,mb4.3							
GKN	**Gorkha**	**35.74**	**299**	*e*P		**P**	**00 14 22.7**	**-0.9**
	comp=Z,7.9nm,0.7s,mb4.8							
SONM	**Songino Array**	**35.86**	**344**	P		**P**	**00 14 23.2**	**-1.1**
	comp=Z,1.1nm,0.6s,mb3.9,baz=165,slow=8.8,SNR=8.6							
SONM				PcP		PcP	00 16 51.0	-0.2
	comp=Z,2.6nm,0.9s,baz=163,slow=2.8,SNR=6.9							
SONM				ScP		ScP	00 20 34.3	-0.7
	comp=Z,0.7nm,1.0s,baz=105,slow=3.4,SNR=3.7							
SONM	**Songino Array**	**35.86**	**344**	P		**P**	**00 14 23.2**	**-1.1**
SONM							00 16 51.0	
WRAB	**Tennant Creek**	**36.30**	**157**	*e*P		**P**	**00 14 27.5**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.2							
WRAB	**Tennant Creek**	**36.30**	**157**	*e*P		**P**	**00 14 27.5**	**-0.8**
	comp=Z,23nm,0.8s,mb5.2							
WRA	**Warramunga Arr**	**36.31**	**157**	P		**P**	**00 14 27.5**	**-0.9**
	comp=Z,26nm,0.9s,mb5.2,baz=336,slow=9.6,SNR=74							
WRA				S		**S**	**00 20 05.7**	**-1.5**
	comp=Z,2.6nm,1.0s,baz=340,slow=15,SNR=5.6							
WB2	**Warramunga Arr**	**36.31**	**157**	*e*P		**P**	**00 14 27.4**	**-1.1**
WB2				*e*S		**S**	**00 20 02.5**	**-4.8**
WB2	**Warramunga Arr**	**36.31**	**157**	*e*P		**P**	**00 14 27.5**	**-0.9**
KOLN	**Koldanda**	**36.56**	**298**	*e*P		**P**	**00 14 30.1**	**-0.5**
	comp=Z,11nm,0.7s,mb4.8							
DANN	**Dangsing**	**36.58**	**299**	*e*P		**P**	**00 14 30.3**	**-0.5**
	comp=Z,13nm,0.7s,mb4.9							
KLR	**Kul'dur**	**36.78**	**13**	*e*P		**P**	**00 14 26.6**	**-5.5**
PALK	**Pallekele**	**39.01**	**265**	P		**P**	**00 14 52.9**	**+1.4**
ZAK	**Zakamensk**	**39.03**	**343**	*e*P		**P**	**00 14 49.2**	**-1.9**
ZAK				*e*			00 17 00.4	
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.1							
ASAR	**Alice Springs**	**39.56**	**160**	P		**P**	**00 14 56.1**	**+0.2**
	comp=Z,9.4nm,0.7s,mb4.7,baz=342,slow=7.8,SNR=164							
ASAR				PcP		PcP	00 17 01.9	-1.0
	comp=Z,1.9nm,0.9s,baz=347,slow=3.8,SNR=4.4							
ASAR				S		**S**	**00 20 53.8**	**-2.7**
	comp=Z,0.9nm,0.8s,baz=347,slow=20,SNR=5.7							
ASAR	**Alice Springs**	**39.56**	**160**	P		**P**	**00 14 56.1**	**+0.2**
ASAR				PcP		PcP	00 17 01.9	-1.0
ASAR				S		**S**	**00 20 53.9**	**-2.7**
HYB	**Hyderabad**	**39.94**	**281**	*i*P		**P**	**00 15 00.0**	**+0.9**
HYB	**Hyderabad**	**39.94**	**281**	*e*P		**P**	**00 15 00.0**	**+0.9**
TLY	**Talaya**	**40.10**	**344**	*e*P		**P**	**00 15 08.9**	**+8.9**
TLY				*e*			00 24 22.9	
TLY				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.3							
TLY				MLR		MLR		
	comp=Z,195nm,17.0s,MS4.0							
TLY	**Talaya**	**40.10**	**344**	*e*P		**P**	**00 14 59.4**	**-0.7**
	comp=Z,3.2nm,0.6s,mb4.2							
WMQ	**Urumqi**	**40.75**	**324**	*e*P		**P**	**00 15 07.0**	**+1.5**
WMQ				LR		LR		
	comp=N,248nm,24.0s,MS4.1							
WMQ				LR		LR		
	comp=E,189nm,24.0s,MS4.1							
WMQ				LR		LR		
	comp=Z,240nm,20.0s,MS4.0							
MOY	**Mondy**	**40.84**	**342**	*e*P		**P**	**00 15 05.3**	**-0.8**
DDI	**Dehra Dun**	**41.90**	**300**	*e*P		**P**	**00 15 11.5**	**-3.7**
CTA	**Charters Tower**	**42.41**	**142**	*e*P		**P**	**00 15 19.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.2							
CTAO	**Charters Tower**	**42.41**	**142**	*e*P		**P**	**00 15 19.2**	**-0.2**
CTAO				pmax		pmax		
	comp=Z,18nm,1.3s,mb4.5							
CTAO	**Charters Tower**	**42.41**	**142**	*e*P		**P**	**00 15 19.2**	**-0.2**
	comp=Z,18nm,1.3s,mb4.5							
BOD	**Bodaibo**	**44.28**	**355**	*e*P		**P**	**00 15 31.2**	**-2.8**
BOD				pmax		pmax		
	comp=Z,6.0nm,1.8s,mb4.0							
KMBL	**Kambalda**	**44.82**	**178**	*e*P		**P**	**00 15 38.6**	**0.0**
	comp=Z,83nm,0.6s,mb5.7							
FORT	**Forrest**	**44.89**	**170**	*e*P		**P**	**00 15 39.9**	**+0.7**
	comp=Z,28nm,0.6s,mb5.3							
MKAR	**Makanchi Array**	**45.58**	**324**	P		**P**	**00 15 45.0**	**+0.4**
	comp=Z,1.9nm,0.7s,mb4.1,baz=136,slow=8.7,SNR=14							
MKAR				PcP		PcP	00 17 22.8	+0.1
	comp=Z,2.4nm,0.9s,baz=83,slow=3.9,SNR=3.6							
MKAR				ScP		ScP	00 21 14.3	+1.1
	comp=Z,0.9nm,0.8s,baz=115,slow=8.6,SNR=4.9							
MKAR				LR		LR	00 36 08.9	
	comp=Z,227nm,18.0s,MS4.2,baz=115,slow=38							
MKAR	**Makanchi Array**	**45.58**	**324**	P		**P**	**00 15 45.0**	**+0.5**
MKAR							00 17 22.8	
MKAR	**Makanchi Array**	**45.58**	**324**	P		**P**	**00 15 45.0**	**+0.4**
MKAR				PcP		PcP	00 17 22.8	+0.1
MKAR				ScP		ScP	00 21 14.3	+1.1
MKAR				LR		LR	00 36 08.9	
NWAO	**Narrogin (SRO)**	**46.41**	**183**	*e*P		**P**	**00 15 51.8**	**+0.7**
NWAO				pmax		pmax		
	comp=Z,6.0nm,0.6s							
NWAO	**Narrogin (SRO)**	**46.41**	**183**	*e*P		**P**	**00 15 51.8**	**+0.7**
	comp=Z,5.7nm,0.6s,mb4.7							
TKM2	**Tokmak 2**	**47.89**	**316**	*e*P		**P**	**00 16 03.1**	**+0.4**
TKM2				*e*		pP	00 16 12.1	-0.4
TKM2				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb4.4							
TKM2	**Tokmak 2**	**47.89**	**316**	*e*P		**P**	**00 16 03.1**	**+0.4**
	comp=Z,1.7nm,0.5s,mb4.3							
TKM2				*e*		pP	00 16 12.1	-0.4
UCH	**Uchtor**	**48.36**	**315**	*e*P		**P**	**00 16 08.0**	**+1.7**
AAK	**Ala-Archa**	**48.52**	**315**	*e*P		**P**	**00 16 08.1**	**+0.5**
AAK				pmax		pmax		
	comp=Z,3.0nm,1.3s,mb4.2							
AAK	**Ala-Archa**	**48.52**	**315**	*e*P		**P**	**00 16 08.0**	**+0.5**
	comp=Z,2.9nm,0.7s,mb4.4							
ZALV	**Zalesovo Beam**	**48.72**	**333**	P		**P**	**00 16 06.9**	**-2.0**
	comp=Z,2.6nm,0.7s,mb4.4,baz=110,slow=6.8,SNR=9.4							
ZALV				LR		LR	00 37 37.5	
	comp=Z,160nm,18.6s,MS4.0,baz=66,slow=37							
YAK	**Yakutsk**	**48.80**	**6**	*e*P		**P**	**00 16 06.0**	**-3.3**
YAK				*e**PP		pP	00 16 13.8	-5.4
YAK				*e*			00 17 36.3	
YAK				*e*			00 17 58.5	
YAK				*e*PPP			00 19 00.9	
YAK				*e*S		**S**	**00 23 04.5**	**-5.5**
YAK				*e**SS		sS	00 23 19.5	-6.7
YAK				*e*SSS			00 27 51.7	
YAK				pmax		pmax		
	comp=N,10.0nm,1.1s							
YAK				pmax		pmax		
	comp=Z,32nm,0.9s,mb5.3							
YAK				pmax		pmax		
	comp=E,3.0nm,1.0s							
YAK				pmax		pmax		
	comp=Z,49nm,2.5s,mb5.1							
YAK				pmax		pmax		
	comp=N,54nm,2.3s							
YAK				pmax		pmax		
	comp=E,109nm,3.5s							
YAK				smax				
	comp=E,23nm,2.0s							
YAK				smax				
	comp=N,155nm,4.3s							
YAK				MLR		MLR		
	comp=Z,34nm,9.0s							
YAK				MLR		MLR		
	comp=E,127nm,17.0s							
YAK	**Yakutsk**	**48.80**	**6**	*e*P		**P**	**00 16 07.3**	**-2.0**
AML	**Almayashu**	**48.89**	**315**	P		**P**	**00 16 12.1**	**+1.7**
EKS2	**Erkin-Say**	**49.02**	**315**	*e*P		**P**	**00 16 11.7**	**+0.2**
	comp=E,8.9nm,1.2s,mb4.7							
PETK	**Petropavlovsk-**	**49.43**	**29**	P		**P**	**00 16 11.9**	**-2.5**
	comp=E,5.6nm,0.9s,mb4.6,baz=180,slow=4.4,SNR=3.9							
PETK				LR		LR	00 36 18.3	
	comp=E,80nm,20.7s,MS3.7,baz=327,slow=35							
PETK	**Petropavlovsk-**	**49.43**	**29**	P		**P**	**00 16 11.9**	**-2.5**
PETK				LR		LR	00 36 18.3	
KURK	**Kurchatov**	**49.77**	**327**	*e*P		**P**	**00 16 17.1**	**+0.1**
KURK				pmax		pmax		
	comp=Z,24nm,1.0s,mb5.2							
KURK	**Kurchatov**	**49.77**	**327**	*e*P		**P**	**00 16 17.1**	**+0.1**
	comp=Z,24nm,1.0s,mb5.2							
STKA	**Stephens Creek**	**49.85**	**156**	P		**P**	**00 16 17.3**	**-0.4**
	comp=Z,7.2nm,0.7s,mb4.8,baz=333,slow=7.9,SNR=12							
STKA	**Stephens Creek**	**49.85**	**156**	*e*P		**P**	**00 16 17.2**	**-0.5**
	comp=Z,5.1nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**49.85**	**156**	*e*P		**P**	**00 16 17.3**	**-0.5**
	comp=Z,1.6nm,0.8s,mb4.1						

NB2	**NORSAR Subarra**	**86.92**	**332**	P		**P**	**00 20 07.8**	**-1.3**
	comp=Z,4.2nm,0.9s,mb4.7,baz=67,slow=4.8							
NOA	**NORSAR Array B**	**86.92**	**332**	P		**P**	**00 20 06.8**	**-2.3**
	comp=Z,2.7nm,0.8s,mb4.5,baz=68,slow=4.7,SNR=5.6							
NOA				LR		LR	01 05 05.7	
	comp=Z,86nm,19.5s,MS4.2,baz=270,slow=40							
RES	**Resolute Bay**	**89.18**	**9**	*e*P		**P**	**00 20 18.4**	**-1.2**
RES				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb5.0							
RES	**Resolute Bay**	**89.18**	**9**	*e*P		**P**	**00 20 18.4**	**-1.2**
	comp=Z,6.5nm,0.9s,mb5.0							
GERES	**GERESS Array B**	**90.15**	**321**	P		**P**	**00 20 25.0**	**+0.4**
	comp=Z,0.8nm,0.8s,mb4.1,baz=72,slow=4.3,SNR=8.7							
BBB	**Bella Bella**	**92.24**	**35**	LR		LR	01 04 25.7	
	comp=Z,333nm,18.8s,MS4.8,baz=111,slow=37							
YKA	**Yellowknife Ar**	**93.10**	**22**	P		**P**	**00 20 35.6**	**-2.4**
	comp=Z,0.8nm,0.7s,mb4.3,baz=310,slow=4.5,SNR=15							
YKA				LR		LR	01 03 58.4	
	comp=Z,19nm,18.6s,MS3.6,baz=180,slow=36							
TORD	**Torodi Ar. Bea**	**113.21**	**291**	PKiKP		PKiKP	00 26 03.1	+0.3
	comp=Z,0.7nm,0.9s,baz=55,slow=0.6,SNR=4.6							
DBIC	**Dimbokro**	**121.54**	**287**	PKP		PKPdf	00 26 19.0	+0.1
	comp=Z,3.3nm,0.9s,baz=126,slow=2.5,SNR=4.8							
DBIC	**Dimbokro**	**121.54**	**287**	PKP		PKPdf	00 26 19.0	+0.1
SDV	**Santo Domingo**	**155.28**	**26**	PKP		PKPdf	00 27 17.5	-1.1
	comp=Z,2.8nm,0.7s,baz=121,slow=2.3,SNR=5.4							

*IDC **25** 00:14:06.3±0.9, 1509N×9664W, h0km, mb3.7/9, mb1 4.1/12, mb1mx3.9/27, mbtmp3.9/12, ML4.1/3, MS3.5/6, Ms1 3.5/6, ms1mx3.0/40, Error ellipse: s-maj=24.7km s-min=17.6km az=63.0*

*ISCJB **25** 00:14:07.2±1.2, 1514N±004×9681W±003, h15km±10km, mb4.0/19, MS3.5/4, Error ellipse: s-maj=6.8km s-min=4.9km az=35.2*

*NEIC **25** 00:14:07.5, 1497N×9695W, h16km, mb4.3/16, MD4.1(MEX), After MEX.*

*MEX **25** 00:14:07.6±0.8, 1498N×9695W, h16km±16km, MD4.3*

ISC 25 00:14:09.2±1.2, 1522N±004×9678W±003, h12km±6km, n68, σ1§12/83, mb4.0/19, MS3.5/4, 2C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.85**	**50**	*i* P	**Pg**	**00 14 24.7**	**-0.9**
HUIG				*i* S	**Sg**	**00 14 38.3**	**+1.7**
PNIG	**Pinotepa**	**1.75**	**312**	⇑*i* P	**Pn**	**00 14 34.6**	**-4.6**
PNIG				*i* S	**Sn**	**00 14 53.9**	**-7.5**
PNIG	**Pinotepa**	**1.75**	**312**	⇑*i* P	**Pn**	**00 14 34.6**	**-4.6**
PNIG				*i* S	**Sn**	**00 14 53.9**	**-7.6**
VHO	**Vista Hermosa**	**1.84**	**1**	*i* P	**Pn**	**00 14 39.8**	**-0.8**
VHO				*i* S	**Sn**	**00 15 03.6**	**-0.3**
VHO	**Vista Hermosa**	**1.84**	**1**	*i* P	**Pn**	**00 14 39.9**	**-0.7**
VHO				*i* S	**Sn**	**00 15 04.1**	**+0.2**
OXX	**Oaxaca**	**1.85**	**2**	*i* P	**Pn**	**00 14 39.5**	**-1.3**
OXX				*i* S	**Sn**	**00 15 03.8**	**-0.3**
OXX	**Oaxaca**	**1.85**	**2**	*i* P	**Pn**	**00 14 40.0**	**-0.7**
OXX				*i* S	**Sn**	**00 15 04.3**	**+0.2**
CMIG	**Matias Romero**	**2.60**	**44**	Pn	**Pn**	**00 14 49.7**	**-1.4**
	52nm,0.3s,baz=221,slow=11,SNR=219						
CMIG				Sn	**Sn**	**00 15 23.2**	**+0.5**
	53nm,0.3s,baz=46,slow=18,SNR=7.4						
CMIG	**Matias Romero**	**2.60**	**44**	*i* P	**Pn**	**00 14 49.6**	**-1.5**
CMIG				*i* S	**Sn**	**00 15 23.3**	**+0.6**
UTMO	**Huajuapan**	**2.78**	**339**	*i* P	**Pn**	**00 14 52.0**	**-1.4**
UTMO				*i* S	**Sn**	**00 15 25.1**	**-1.8**
TPIG	**Tehuac#an**	**3.23**	**350**	*i* P	**Pn**	**00 14 58.1**	**-1.6**
TPIG				*i* S	**Sn**	**00 15 37.9**	**-0.2**
ACX	**Acapulco**	**3.43**	**299**	*e*P	**Pn**	**00 14 57.5**	**-5.0**
ACX				*i* S	**Sn**	**00 15 36.7**	**-6.4**
TGIG		**3.84**	**66**	*i* P	**Pn**	**00 15 07.0**	**-1.2**
TGIG				*i* S	**Sn**	**00 15 54.4**	**+1.2**
PPM	**Popocatepetl**	**4.22**	**335**	*e*P	**Pn**	**00 15 12.6**	**-0.7**
PPM				*i* S	**Sn**	**00 16 01.0**	**-1.4**
SCX	**San Cristobal**	**4.26**	**69**	*i* P	**Pn**	**00 15 14.6**	**+0.7**
SCX				*i* S	**Sn**	**00 16 04.9**	**+1.3**
THIG		**4.37**	**93**	*e*P	**Pn**	**00 15 10.5**	**-4.9**
THIG				*i* S	**Sn**	**00 16 04.9**	**-1.4**
CCIG	**Comitan**	**4.59**	**76**	*i* P	**Pn**	**00 15 17.5**	**-0.9**
TGUH	**Tegucigalpa,Un**	**9.27**	**96**	Pn	**Pn**	**00 16 22.2**	**-0.6**
TEIG	**Tepich**	**9.51**	**57**	Pn	**Pn**	**00 16 23.4**	**-2.6**
	4.2nm,0.3s,baz=319,slow=3.2,SNR=22						
TEIG				Sn	**Sn**	**00 18 07.7**	**-5.1**
	6.2nm,0.3s,baz=350,slow=20,SNR=12						
TEIG				LR	LR	00 20 48.1	
	comp=Z,61nm,19.3s,baz=36,slow=42						
TEIG	**Tepich**	**9.51**	**57**	*e*Pn	**Pn**	**00 16 24.4**	**-1.5**
TXAR	**Lajitas Array**	**15.42**	**337**	Pn	**Pn**	**00 17 47.9**	**+1.3**
	0.1nm,0.3s,baz=146,slow=12,SNR=7.2						
TXAR				LR	LR	00 24 10.0	
	comp=Z,341nm,19.2s,baz=130,slow=39						
JCT	**Junction City**	**15.44**	**350**	*e*Pn	**Pn**	**00 17 47.4**	**+0.5**
	65nm,2.0s						
GDL2	**Guadalupe Moun**	**18.26**	**339**	*e*Pn	**Pn**	**00 18 24.1**	**+1.6**
MIAR	**Mount Ida**	**19.46**	**8**	*e*Pn	**Pn**	**00 18 36.6**	**-0.3**
	39nm,1.3s						
WMOK	**Wichita Mounta**	**19.52**	**355**	*e*P	**Pn**	**00 18 36.4**	**-1.3**
	4.6nm,0.9s						
WMOK				*e*Pn	**Pn**	**00 18 37.2**	**-0.4**
UALR	**University of**	**19.88**	**11**	*e*Pn	**Pn**	**00 18 41.3**	**-0.6**
	9.0nm,0.7s						
AMTX	**Amarillo**	**20.07**	**348**	*e*Pn	**P**	**00 18 43.1**	**+0.7**
	28nm,1.4s						
TUC	**Tucson**	**21.26**	**326**	*e*P	**P**	**00 18 56.9**	**+1.6**
	6.7nm,1.1s,mb3.9						
ANMO	**Albuquerque**	**21.49**	**338**	P	**P**	**00 19 00.5**	**+2.7**
	6.8nm,1.0s,mb3.9,baz=143,slow=13,SNR=11						
ANMO				LR	LR	00 28 00.9	
	comp=Z,182nm,19.9s,MS3.5,baz=160,slow=38						
ANMO	**Albuquerque**	**21.49**	**338**	*e*P	**P**	**00 18 59.9**	**+2.1**
	14nm,1.2s,mb4.2						
SWET	**Sewanee**	**22.17**	**24**	*e*P	**P**	**00 19 04.7**	**-0.3**
PARMO	**Parma**	**22.26**	**15**	*e*P	**P**	**00 19 07.0**	**+1.0**
WVT	**Waverly**	**22.31**	**19**	*e*P	**P**	**00 19 06.0**	**-0.5**
	2.6nm,0.5s,mb3.9						
CPCT	**Cooper Cave**	**22.95**	**26**	*e*P	**P**	**00 19 13.9**	**+0.6**
SIUC	**Southern Illin**	**23.39**	**15**	*e*P	**P**	**00 19 17.7**	**-0.2**
OTAV	**Otavalo**	**23.44**	**128**	*e*P	**P**	**00 19 21.1**	**+2.3**
TKL	**Tuckaleechee C**	**23.45**	**27**	P	**P**	**00 19 18.1**	**-0.5**
	4.2nm,0.7s,mb4.0,baz=193,slow=9.7,SNR=9.3						
TKL				LR	LR	00 28 59.3	
	comp=Z,92nm,20.6s,MS3.2,baz=245,slow=38						
TKL	**Tuckaleechee C**	**23.45**	**27**	*e*P	**P**	**00 19 18.8**	**+0.2**
SDCO	**Great Sand Dun**	**23.73**	**343**	*e*P	**P**	**00 19 22.4**	**+1.2**
	11nm,1.6s,mb4.0						
KSU1	**Kansas State U**	**23.79**	**0**	*e*P	**P**	**00 19 22.1**	**+0.3**
	4.3nm,0.6s,mb4.1						
WUAZ	**Wupatki**	**24.08**	**330**	*e*P	**P**	**00 19 25.9**	**+1.4**
	13nm,0.9s,mb4.4						
WUAZ				*e*		00 19 39.4	
GLA	**Glamis**	**24.15**	**321**	*e*P	**P**	**00 19 24.3**	**-0.9**
	4.6nm,0.9s,mb3.9						
WCI	**Wyandotte Cave**	**24.72**	**20**	*e*P	**P**	**00 19 31.2**	**+0.9**
	19nm,1.1s,mb4.5						
BLO	**Bloomington**	**25.51**	**19**	*e*P	**P**	**00 19 38.8**	**+1.4**
	36nm,1.4s,mb4.7						
SDV	**Santo Domingo**	**26.32**	**101**	P	**P**	**00 19 46.7**	**+1.7**
ACSO	**Alum Creek Sta**	**27.68**	**23**	*e*P	**P**	**00 19 56.8**	**-0.2**
RSSD	**Black Hills**	**29.46**	**349**	P	**P**	**00 20 14.2**	**+1.3**
SJG	**San Juan**	**29.47**	**80**	P	**P**	**00 20 13.3**	**+0.2**
PDAR	**Pinedale Array**	**29.57**	**341**	P	**P**	**00 20 14.4**	**+0.6**
	0.4nm,0.8s,mb3.2,baz=134,slow=11,SNR=3.4						
NVAR	**Mina Array Bea**	**29.91**	**325**	P	**P**	**00 20 18.6**	**+1.7**
	1.0nm,0.6s,mb3.8,baz=150,slow=7.3,SNR=4.6						
NVAR				PcP	PcP	00 23 19.6	-0.1
	0.4nm,0.3s,baz=174,slow=4.0,SNR=3.6						
MTP	**Monte Pirata**	**30.03**	**80**	P	**P**	**00 20 17.9**	**-0.4**
ELK	**Elko**	**30.08**	**331**	P	**P**	**00 20 19.2**	**+0.9**
	0.4nm,0.4s,mb3.5,baz=177,slow=8.4,SNR=3.7						
ELK				LR	LR	00 32 43.5	
	comp=Z,211nm,20.8s,MS3.8,baz=18,slow=37						
ELK	**Elko**	**30.08**	**331**	P	**P**	**00 20 19.2**	**+0.9**
ELK				LR	LR	00 32 43.5	
SADO	**Sadowa**	**33.03**	**23**	LR	LR	00 36 45.2	
	comp=Z,97nm,20.1s,MS3.5,baz=98,slow=41						
NNA	**Nana**	**33.47**	**143**	*e*P	**P**	**00 20 44.5**	**-3.9**
	3.2nm,0.6s,mb4.4						
BBGH	**Gun Hill**	**36.12**	**88**	P	**P**	**00 21 10.6**	**-0.8**
WALA	**Waterton Lakes**	**36.55**	**341**	P	**P**	**00 21 14.1**	**-0.5**
SIV	**San Ignacio**	**46.96**	**130**	P	**P**	**00 22 38.1**	**-2.1**
	1.2nm,0.5s,mb4.0,baz=273,slow=20,SNR=7.1						
YKA	**Yellowknife Ar**	**48.87**	**349**	P	**P**	**00 22 53.9**	**-0.5**
	0.9nm,0.8s,mb3.9,baz=152,slow=7.1,SNR=8.6						
YKA				PcP	PcP	00 24 17.3	-1.4
	0.3nm,0.7s,baz=152,slow=3.9,SNR=3.8						
YKA	**Yellowknife Ar**	**48.87**	**349**	P	**P**	**00 22 53.9**	**-0.5**
YKA				PcP	PcP	00 24 17.3	-1.4
DLBC	**Dease Lake**	**49.72**	**338**	P	**P**	**00 23 00.5**	**-0.4**
LCO	**Las Campanas**	**50.68**	**150**	P	**P**	**00 23 09.0**	**+0.4**
CFAA	**Coronel Fontan**	**54.01**	**150**	P	**P**	**00 23 31.2**	**-2.1**
	0.1nm,0.4s,mb3.1,baz=299,slow=5.8,SNR=4.5						
CPUP	**Villa Florida**	**56.36**	**137**	*e*P	**P**	**00 23 46.6**	**-3.8**
	3.6nm,0.7s,mb4.5						
TRQA	**Tornquist**	**62.25**	**149**	*e*P	**P**	**00 24 32.0**	**+1.1**
ESDC	**Sonseca Array**	**82.57**	**51**	P	**P**	**00 26 32.0**	**-0.3**
	0.6nm,0.8s,mb3.7,baz=309,slow=5.2,SNR=5.0						
WRA	**Warramunga Arr**	**131.19**	**257**	PKP	PKPdf	00 33 20.3	-1.6
	0.7nm,1.0s,baz=39,slow=0.5,SNR=2.2						
CMAR	**Chiang Mai Arr**	**143.13**	**335**	PKP	PKPdf	00 33 43.3	-0.7
	0.7nm,0.3s,baz=348,slow=3.8,SNR=3.6						

*ISCJB **25** 00:19:35.8±0.5, 3753N±003×3571E±003, h7km±4km, Error ellipse: s-maj=4.9km s-min=4.4km az=178.9*

*CSEM **25** 00:19:35.4±0.1, 3751N×3572E, h10km, MD2.7, Error ellipse: s-maj=2.5km s-min=1.9km az=165.0*

*DDA **25** 00:19:35.5, 3752N×3570E, h21km±1km, Md3.0*

*ISK **25** 00:19:35.2, 3755N×3572E, h8km, MD2.7*

ISC 25 00:19:36.1±0.5, 3753N±003×3571E±003, h9km±4km, n17, σ0§70/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.10**	**116**	*e*PG	**Pg**	**00 19 37.7**	**-0.8**
KOZT				*e*SG	**Sg**	**00 19 40.0**	**-0.2**
ANDN	**Andirin**	**0.51**	**84**	*i* P	**Pg**	**00 19 45.9**	**+0.1**
ANDN				*i* S	**Sg**	**00 19 53.4**	**+0.9**
CEYT	**Ceyhan**	**0.52**	**177**	*e*PG	**Pg**	**00 19 46.0**	**0.0**
CEYT				*e*SG	**Sg**	**00 19 54.5**	**+1.7**
KARA	**Karaisali**	**0.59**	**243**	*e*PG	**Pg**	**00 19 47.2**	**-0.2**
KARA				*e*SG	**Sg**	**00 19 55.9**	**+0.9**
KMRS	**Kahramanmaras**	**0.94**	**91**	*e*PG	**Pg**	**00 19 53.9**	**-0.3**
NIG	**Nigde**	**1.05**	**304**	*e*PG	**Pg**	**00 19 55.7**	**-0.5**
COBT	**Iskenderun**	**1.09**	**156**	*i* P	**Pg**	**00 19 55.9**	**-1.2**
COBT				*i* S	**Sg**	**00 20 11.4**	**+0.2**
MERS	**Mersin**	**1.16**	**236**	*e*PN	**Pn**	**00 19 58.0**	**-0.4**
PINB	**Pinarbasi**	**1.27**	**25**	*i* P	**Pn**	**00 20 01.1**	**+1.0**
PINB				*i* S	**Sb**	**00 20 17.4**	**+0.8**
KUZU	**Kuzuini**	**1.32**	**124**	*i* P	**Pn**	**00 20 00.3**	**-0.4**
KUZU				*i* S	**Sb**	**00 20 17.1**	**-1.0**
KUZU	**Kuzuini**	**1.32**	**124**	*i* P	**Pn**	**00 20 00.3**	**-0.4**
KUZU				*i* S	**Sb**	**00 20 17.1**	**-1.0**
BNN	**Bunyan**	**1.33**	**4**	*e*PN	**Pn**	**00 19 59.8**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.39**	**34**	*e*PG	**Pg**	**00 19 55.3**	**-7.5**
AVNT	**Avonos**	**1.42**	**332**	*i* P	**Pn**	**00 20 02.0**	**-0.1**
AVNT				*i* S	**Sn**	**00 20 20.6**	**-0.3**
AVNT	**Avonos**	**1.42**	**332**	*i* P	**Pn**	**00 20 02.0**	**-0.1**
AVNT				*i* S	**Sn**	**00 20 20.6**	**-0.4**
AKCD	**Akcadag**	**1.91**	**66**	*i* P	**Pn**	**00 20 09.0**	**+0.2**
AKCD				*i* S	**Sn**	**00 20 33.6**	**+0.7**
IKL	**Isikli**	**2.07**	**232**	*e*PN	**Pn**	**00 20 11.3**	**+0.3**

*NEIC **25** 00:25:07.9, 3627S×7298W, h26km, ML3.4(GUC), After GUC.*

GUC 25 00:25:07.9±0.7, 3627S×7298W, h26km±2km, MD3.9, ML3.4, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COCH	**Cobquecura**	**0.21**	**49**	⇑*i* P	Pb	00 25 13.9	+0.1
COCH				*i* S	Sb	00 25 17.8	0.0
COCH	**Cobquecura**	**0.21**	**49**	⇑*i* P	Pb	00 25 13.9	+0.1
COCH				*i* S	Sb	00 25 17.8	0.0
COCH				AML	AML	00 25 18.3	
	comp=E,6μm,0.4s						
LNCH	**Linares**	**1.20**	**70**	⇑*i* P	Pn	00 25 29.0	+0.1
LNCH				*i* S	Sn	00 25 44.5	+0.2
LNCH	**Linares**	**1.20**	**70**	⇑*i* P	Pn	00 25 29.0	+0.1
LNCH				*i* S	Sn	00 25 44.5	+0.2
LNCH				AML	AML	00 25 50.9	
	comp=N,1μm,0.4s						
TALC	**Talca**	**1.40**	**52**	*i* P	Pn	00 26 01.8	+30
TALC				*i* S	Sn	00 26 19.9	+31
TALC				AML	AML	00 26 24.8	
	comp=E,2μm,0.3s						
NICH	**Los Niches**	**1.91**	**49**	*e*P	Pn	00 25 39.5	+0.7
NICH				*i* S	Sn	00 26 04.7	+2.8
CICH	**Cipreses**	**2.86**	**48**	*i* P	Pn	00 25 53.4	+1.6
CACH	**El Canelo**	**2.90**	**43**	*e*P	Pn	00 25 54.3	+1.9
LMEL	**Las Melosas**	**3.32**	**44**	*e*P	Pn	00 25 59.6	+1.4
LMEL				*i* S	Sn	00 26 38.9	+2.1
LMEL	**Las Melosas**	**3.32**	**44**	*e*P	Pn	00 25 59.6	+1.4
LMEL				*i* S	Sn	00 26 38.9	+2.1
LMEL				AML	AML	00 26 52.7	
	comp=E,84nm,0.5s						

IDC 25 00:43:51.3±3.6, 440S×10106E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.5/6, Error ellipse: s-maj=146.8km s-min=20.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.81**	**355**	P	P	00 48 55.3	-0.6
	0.5nm,0.4s,baz=181,slow=7.1,SNR=4.9						
WRA	**Warramunga Arr**	**35.90**	**118**	P	P	00 50 53.3	-0.2
	0.2nm,0.4s,baz=300,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**37.01**	**124**	P	P	00 51 03.2	+0.2
	0.2nm,0.7s,baz=301,slow=7.4,SNR=3.6						
SONM	**Songino Array**	**52.23**	**5**	P	P	00 53 05.0	+0.9
	0.6nm,0.8s,baz=182,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**53.61**	**344**	P	P	00 53 14.9	+0.6
	0.6nm,0.8s,baz=151,slow=7.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**59.71**	**349**	P	P	00 53 57.1	-0.5
	0.4nm,0.3s,baz=163,slow=5.3,SNR=3.1						
TXAR	**Lajitas Array**	**145.89**	**41**	PKPbc	PKPbc	01 03 32.5	-1.0
	0.3nm,0.7s,baz=278,slow=1.7,SNR=4.4						

IDC 25 00:53:06.0±2.3, 652S×12918E, h0km, mb3.8/1, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=152.6km s-min=31.8km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.25**	**160**	Pn	Pn	00 56 29.2	0.0
	0.2nm,0.3s,baz=342,slow=13,SNR=3.3						
WRA				Sn	Sn	00 58 54.0	-14
	0.5nm,0.3s,baz=335,slow=22,SNR=4.8						
ASAR	**Alice Springs**	**17.64**	**166**	P	Pn	00 57 13.4	+0.1
	0.1nm,0.3s,baz=339,slow=9.6,SNR=8.0						
ASAR				S	Sn	01 00 15.0	-16
	0.1nm,0.3s,baz=359,slow=24,SNR=4.9						
MKAR	**Makanchi Array**	**67.38**	**327**	P	P	01 04 03.2	+0.1
	0.7nm,0.6s,baz=116,slow=8.1,SNR=5.3						

*CSEM **25** 00:57:23.6±0.3, 3952N×2787E, h5km, MD2.6, Error ellipse: s-maj=6.9km s-min=4.5km az=83.0*

*DDA **25** 00:57:23.7, 3962N×2781E, h7km±4km, Md2.7*

*ISCJB **25** 00:57:24.7±0.9, 3960N±006×2787E±007, h8km±7km, Error ellipse: s-maj=11.4km s-min=8.5km az=143.9*

*ISK **25** 00:57:24.8, 3962N×2796E, h2km, MD2.6*

ISC 25 00:57:25.3±0.9, 3960N±004×2790E±008, h6km±9km, n7, σ0§71/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.05**	**339**	PG	**Pg**	**00 57 26.3**	**-0.3**
BALB				SG	**Sg**	**00 57 28.0**	**+0.4**
DST	**Dursunbey**	**0.56**	**89**	*e*PG	**Pg**	**00 57 35.6**	**-0.5**
DST				*e*SG	**Sg**	**00 57 43.7**	**+0.3**
AKS	**Akhisar**	**0.72**	**185**	*e*PG	**Pg**	**00 57 39.9**	**+0.8**
AKHS	**Akhisar**	**0.72**	**185**	*i* P	**Pg**	**00 57 37.4**	**-1.7**
AKHS				*i* S	**Sg**	**00 57 48.9**	**+0.5**
EDC	**Edincik**	**0.75**	**358**	*e*PG	**Pg**	**00 57 40.5**	**+0.8**
KCT	**Karacabey**	**0.75**	**28**	*e*PG	**Pg**	**00 57 38.9**	**-0.9**
GDZ	**Gediz**	**1.33**	**112**	*i* P	**Pn**	**00 57 50.4**	**+0.1**
GDZ				*i* S	**Sb**	**00 58 08.0**	**+0.2**

*NEIC **25** 01:00:31.8, 3840N×2176E, h30km, MD3.5(ATH), ML3.0(THE), After ATH.*

*ATH **25** 01:00:31.7, 3840N×2176E, h30km±2km, MD3.5/5*

*ISCJB **25** 01:00:32.4±0.4, 3840N±002×2190E±004, h10km, Error ellipse: s-maj=4.0km s-min=3.4km az=162.5*

*CSEM **25** 01:00:32.2±0.1, 3838N×2196E, h10km, MD3.5, Error ellipse: s-maj=3.0km s-min=1.7km az=67.0*

*THE **25** 01:00:32.0, 3840N×2189E, h0km±2km, ML3.0/5, Error ellipse: s-maj=2.2km s-min=0.8km az=116.0*

ISC 25 01:00:32.2±0.6, 3839N±002×2189E±003, h3km±4km, n24, σ1§01/41, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.47**	**226**	*e*Pb	**Pg**	**01 00 40.9**	**-0.2**
EVR	**Evrytania**	**0.53**	**353**	*e*PN	**Pg**	**01 00 42.6**	**+0.2**
EVR				*e*SN	**Sg**	**01 00 51.0**	**+1.6**
EVR	**Evrytania**	**0.53**	**353**	*e*Pn	**Pg**	**01 00 42.6**	**+0.2**
EVR				*e*Sn	**Sg**	**01 00 51.2**	**+1.8**
AGG	**Agios Georgios**	**0.72**	**28**	P	**Pg**	**01 00 44.8**	**-1.2**
AGG				S	**Sg**	**01 00 56.1**	**+0.7**
AGG	**Agios Georgios**	**0.72**	**28**	P	**Pg**	**01 00 44.8**	**-1.2**
AGG				S	**Sg**	**01 00 56.0**	**+0.6**
LKR	**Lokris**	**0.91**	**73**	P	**Pg**	**01 00 48.8**	**-0.8**
LKR				S	**Sg**	**01 01 02.0**	**+0.6**
LKR	**Lokris**	**0.91**	**73**	P	**Pg**	**01 00 48.8**	**-0.8**
LKR				S	**Sg**	**01 01 03.2**	**+1.8**
LTK	**Loutraki**	**0.92**	**113**	P	**Pg**	**01 00 49.9**	**0.0**
LTK				S	**Sg**	**01 01 02.9**	**+1.1**
VLS	**Valsamata**	**1.04**	**259**	P	**Pg**	**01 00 50.5**	**-1.7**
VLS				S	**Sg**	**01 01 06.8**	**+1.1**
VLS	**Valsamata**	**1.04**	**259**	*e*Pn	**Pg**	**01 00 50.5**	**-1.7**
VLS				S	**Sg**	**01 01 06.6**	**+0.9**
THL	**Klokotos Trika**	**1.18**	**5**	P	**Pg**	**01 00 53.3**	**-1.5**
THL				S	**Sg**	**01 01 10.4**	**+0.2**
THL	**Klokotos Trika**	**1.18**	**5**	*e*PB	**Pb**	**01 00 53.0**	**-2.2**
THL	**Klokotos Trika**	**1.18**	**5**	*e*Pb	**Pg**	**01 00 53.3**	**-1.5**
THL				S	**Sg**	**01 01 10.4**	**+0.2**
ITM	**Ithomi**	**1.20**	**179**	*e*PN	**Pn**	**01 00 54.8**	**-1.1**
DID	**Didima**	**1.38**	**129**	P	**Pn**	**01 00 58.1**	**-0.2**
DID				S	**Sb**	**01 01 17.7**	**+1.1**
XOR	**Xorichti**	**1.41**	**46**	P	**Pn**	**01 00 57.7**	**-1.0**
PYL	**PYLOS**	**1.49**	**185**	P	**Pn**	**01 00 59.3**	**-0.5**
PYL				S	**Sn**	**01 01 20.9**	**+1.1**
IGT	**Igoumenitsa**	**1.67**	**314**	P	**Pn**	**01 01 02.6**	**+0.3**
IGT				S	**Sn**	**01 01 25.2**	**+1.0**
LIT	**Litokhoron**	**1.77**	**15**	P	**Pn**	**01 01 03.0**	**-0.7**
LIT				S	**Sn**	**01 01 27.2**	**+0.4**
FNA	**Florina**	**2.43**	**351**	P	**Pn**	**01 01 13.8**	**+1.1**
FNA				S	**Sn**	**01 01 42.9**	**0.0**
APE	**Apeiranthos**	**3.17**	**113**	P	**Pn**	**01 01 23.0**	**+0.1**
APE				S	**Sn**	**01 01 59.1**	**-2.2**
CHOS	**Chios island**	**3.27**	**89**	P	**Pn**	**01 01 24.5**	**+0.2**
KARN	**Karanos**	**3.39**	**151**	P	**Pn**	**01 01 26.8**	**+0.8**
LAST	**Lasithi**	**4.32**	**137**	P	**Pn**	**01 01 39.3**	**+0.6**

*NEIC **25** 01:33:13.7±5.7, 299N×12526E, h112km±52km, mb3.8/4, Error ellipse: s-maj=66.7km s-min=11.3km az=61.0*

*ISCJB **25** 01:33:14.2±6.8, 29N±02×1252E±04, h132km±64km, mb3.7/8, Error ellipse: s-maj=73.4km s-min=13.8km az=149.1*

*IDC **25** 01:33:41.7±2.4, 179N×12276E, h438km±29km, mb3.2/6, mb1 3.3/7, mb1mx3.1/18, mbtmp3.2/7, Error ellipse: s-maj=63.4km s-min=12.2km az=64.0*

ISC 25 01:33:11.8±6.8, 31N±03×1254E±05, h95km±61km, n16, σ1§01/16, mb3.8/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.81**	**215**	P	**Pn**	**01 35 30.7**	**+0.7**
	2.8nm,0.3s,baz=30,slow=20,SNR=5.4						
FITZ	**Fitzroy Crossi**	**21.04**	**179**	P	**P**	**01 37 47.4**	**-0.7**
	3.2nm,0.4s,mb4.0						
QIZ	**Qiongzhong**	**21.97**	**317**	P	**P**	**01 37 56.2**	**-1.9**
WRAB	**Tennant Creek**	**24.50**	**159**	*e*P	**P**	**01 38 22.6**	**+0.3**
	2.3nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**24.50**	**159

PMG pmax pmax
comp=Z,93nm,0.9s
PMG Port Moresby 34.34 279 *e*P **P** **01 54 55.9 +1.4**
comp=Z,93nm,0.9s,mb5.2
COEN Coen 37.04 270 *e*P **P** **01 55 17.8 +1.0**
comp=Z,52nm,0.6s,mb5.1
TOO Toolangi 37.34 230 *e*P **P** **01 55 20.2 +1.2**
TAU Tasmania Unive 38.46 222 *e*P **P** **01 55 27.8 -0.3**
TAU pmax pmax
comp=Z,22nm,0.8s,mb4.6
TAU Tasmania Unive 38.46 222 *e*P **P** **01 55 27.8 -0.2**
comp=Z,22nm,0.8s,mb4.6
STKA Stephens Creek 38.74 241 P **P** **01 55 31.7 +1.2**
comp=Z,37nm,0.5s,mb5.1,baz=90,slow=9.6,SNR=246
STKA Stephens Creek 38.74 241 ⇓*i*P **P** **01 55 31.7 +1.1**
comp=Z,35nm,0.6s,mb5.0
STKA Stephens Creek 38.74 241 *e*P **P** **01 55 31.8 +1.2**
comp=Z,16nm,1.0s,mb4.4
ARPS Mount Arapiles 39.81 233 *e*P **P** **01 55 39.7 +0.6**
comp=Z,57nm,0.7s,mb5.1
WB2 Warramunga Arr 44.62 259 ⇓*i*P **P** **01 56 16.5 -0.8**
WB2 *e*S **S** **02 02 10.3 -5.9**
WB2 Warramunga Arr 44.62 259 *e*P **P** **01 56 16.6 -0.7**
WB2 *e*PcP PcP 01 57 48.7 -0.7
WRAB Tennant Creek 44.62 259 *e*P **P** **01 56 16.6 -0.7**
WRAB pmax pmax
comp=Z,36nm,0.7s,mb4.9
WRAB Tennant Creek 44.62 259 *e*P **P** **01 56 16.6 -0.7**
comp=Z,36nm,0.7s,mb4.9
WRA Warramunga Arr 44.63 259 P **P** **01 56 16.6 -0.8**
comp=Z,24nm,0.5s,mb4.8,baz=94,slow=7.0,SNR=200
WRA PcP PcP 01 57 49.0 -0.5
comp=Z,7.0nm,0.7s,baz=92,slow=3.4,SNR=7.4
WRA S **S** **02 02 10.3 -6.1**
comp=Z,1.7nm,0.8s,baz=92,slow=14,SNR=7.3
ASAR Alice Springs 44.83 254 P **P** **01 56 18.9 +0.1**
comp=Z,223nm,0.6s,baz=88,slow=8.0,SNR=4759
ASAR PcP PcP 01 57 49.4 -0.6
comp=Z,9.5nm,0.8s,baz=114,slow=3.1,SNR=7.6
ASAR S **S** **02 02 13.8 -5.2**
comp=Z,1.5nm,0.9s,baz=84,slow=16,SNR=7.8
FORT Forrest 50.10 244 *e*P **P** **01 56 57.9 -0.5**
comp=Z,98nm,0.5s,mb5.4
FORT Forrest 50.10 244 *e*P **P** **01 56 58.0 -0.4**
FITZ Fitzroy Crossi 53.02 260 *e*P **P** **01 57 19.8 0.0**
comp=Z,30nm,0.3s,mb5.1
FITZ Fitzroy Crossi 53.02 260 *e*P **P** **01 57 19.7 -0.1**
comp=Z,16nm,0.4s,mb4.7
FITZ *e*PcP PcP 01 58 20.3 0.0
KMBL Kambalda 55.41 244 *e*P **P** **01 57 35.4 -1.0**
comp=Z,199nm,1.1s,mb5.4
MBWA Marble Bar 58.10 256 *e*P **P** **01 57 54.5 -0.6**
comp=Z,43nm,0.9s,mb4.8
MEEK Meekatharra 58.50 249 *e*P **P** **01 57 56.9 -0.8**
comp=Z,27nm,0.4s,mb4.9
NWAO Narrogin (SRO) 59.32 242 *e*P **P** **01 58 02.8 -0.3**
MUN Mundaring 60.23 243 *e*P **P** **01 58 09.0 -0.2**
CASY Casey 66.43 205 *e*P **P** **01 58 48.7 +0.4**
comp=Z,8.5nm,0.5s,mb4.6
MJAR Matsushiro Arr 67.59 323 P **P** **01 58 54.7 -1.3**
comp=Z,7.3nm,0.6s,mb4.5,baz=160,slow=6.2,SNR=14
MAJO Matsushiro 67.59 323 *e*P **P** **01 58 55.3 -0.7**
MAJO pmax pmax
comp=Z,10.0nm,0.4s,mb4.8
MAJO Matsushiro 67.59 323 *e*P **P** **01 58 55.3 -0.6**
comp=Z,10nm,0.4s,mb4.8
MAT Matsushiro 67.59 323 P **P** **01 58 54.9 -1.1**
MAT S S 02 07 12.0 -0.5
FX1 Attu Island--F 70.52 355 P **P** **01 59 11.6 -1.6**
comp=Z,11nm,0.6s,mb4.6,baz=44,slow=20,SNR=7.4
ASAJ Asahikawa 70.94 331 P **P** **01 59 16.6 +0.7**
comp=Z,7.7nm,0.4s,mb4.6,baz=199,slow=8.0,SNR=4.9
TATO Taipei 72.15 304 *e*P **P** **01 59 22.6 -0.8**
comp=Z,70nm,0.9s,mb5.2
KSM Kuching 72.58 277 *e*P **P** **01 59 26.6 +0.3**
comp=Z,54nm,1.0s,mb5.0
KSM *e*PcP PcP 01 59 39.4 -1.1
PETK Petropavlovsk- 73.32 345 P **P** **01 59 28.8 -0.7**
comp=Z,7.9nm,0.6s,mb4.4,baz=122,slow=7.8,SNR=15
KSRS Korea Array 74.40 318 P **P** **01 59 36.5 +0.5**
comp=Z,3.6nm,0.6s,mb4.1,baz=127,slow=6.1,SNR=12
NJ2 Nanjing 77.67 309 *e*P **P** **01 59 54.8 +0.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.2
MDJ Mudanjiang 77.86 325 P **P** **01 59 55.4 +0.4**
MDJ AP pP 02 01 42.9 -1.2
MDJ XP sP 02 02 34.5 -2.0
MDJ PP PP 02 02 58.8 -1.3
MDJ S S 02 09 04.4 -1.8
MDJ XS sS 02 12 17.6 -3.0
MDJ AMB AMB
comp=Z,17nm,1.2s,mb4.3
MDJ AMB AMB
comp=Z,122nm,5.1s
MDJ Mudanjiang 77.86 325 *e*P **P** **01 59 55.4 +0.4**
comp=Z,8.4nm,0.7s,mb4.3
PFO Pinyon Flat Ob 77.97 49 P **P** **01 59 56.2 +0.3**
comp=Z,1.9nm,0.8s,mb3.6,baz=243,slow=6.8,SNR=2.7
PFO Pinyon Flat Ob 77.97 49 P **P** **01 59 56.2 +0.3**
KDAK Kodiak Island 78.08 14 P **P** **01 59 55.1 -0.7**
comp=Z,33nm,1.1s,mb4.7,baz=309,slow=23,SNR=6.0
YBH Yreka Blue Hor 78.29 39 P **P** **01 59 57.1 -0.3**
comp=Z,3.5nm,0.7s,mb3.9,baz=110,slow=1.6,SNR=8.8
GLA Glamis 78.88 50 *e*P **P** **02 00 02.0 +1.3**
PAHR Pah Rah Range 79.21 42 *e*P **P** **02 00 03.1 +0.8**
NVAR Mina Array Bea 79.22 44 P **P** **02 00 03.1 +0.7**
comp=Z,5.2nm,0.7s,mb4.2,baz=225,slow=9.4,SNR=18
CN2 Changchun 79.70 322 *e*P **P** **02 00 04.8 -0.1**
CN2 *e*AP pP 02 01 55.9 +1.3
CN2 AMB AMB
comp=Z,20nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,200nm,4.0s
TPH Tonopah 79.75 45 P **P** **02 00 05.9 +0.7**
PMR Palmer 82.28 14 *e*P **P** **02 00 16.6 -1.1**
PMR pmax pmax
comp=Z,8.0nm,0.3s,mb4.7
PMR Palmer 82.28 14 *e*P **P** **02 00 16.6 -1.2**
comp=Z,8.1nm,0.3s,mb4.7
WUAZ Wupatki 82.56 49 *e*P **P** **02 00 21.1 +1.2**
ETW Entiat 83.11 35 *e*P **P** **02 00 22.8 +0.5**
MSU Marysvale 83.40 46 *e*P **P** **02 00 25.3 +1.4**
SEY Seymchan 83.42 347 *e*P **P** **02 00 21.2 -2.2**
BJI Beijing 83.49 315 P **P** **02 00 25.9 +1.5**
BJI S S 02 10 07.1 +3.4
BJI AMB AMB
comp=Z,6.0nm,0.5s,mb4.4
BJI AMB AMB
comp=Z,149nm,7.0s
CHUM Lake Minchumin 83.67 11 *e*P **P** **02 00 23.0 -1.7**
comp=Z,4.9nm,0.4s,mb4.4
TRF Thorofare Moun 83.68 12 *e*P **P** **02 00 23.1 -1.6**
comp=Z,28nm,0.8s,mb4.8
TRF *e*pP pP 02 02 16.4 +0.5
MAW Mawson 84.17 200 P **P** **02 00 27.8 +0.5**
comp=Z,15nm,0.7s,mb4.6,baz=125,slow=7.6,SNR=18
MAW Mawson 84.17 200 *e*P **P** **02 00 27.4 +0.1**
MAW pmax pmax
comp=Z,3.0nm,0.6s
MAW Mawson 84.17 200 *e*P **P** **02 00 27.4 +0.1**
comp=Z,2.7nm,0.6s,mb4.0
GYA Guiyang 84.81 300 ⇓*i*P **P** **02 00 32.8 +1.6**
GYA AP pP 02 02 25.3 +2.7
GYA PP PP 02 03 59.4 +2.5
GYA SKS 02 10 05.8
GYA S S 02 10 18.3 +1.2
GYA PS 02 12 01.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,120nm,5.3s
SRU San Rafael 84.82 46 *e*P **P** **02 00 31.6 +0.6**
NEW Newport 85.26 36 *e*P **P** **02 00 32.5 -0.4**
COLA College 85.44 13 *e*P **P** **02 00 31.7 -1.7**
TXAR Lajitas Array 85.86 58 P **P** **02 00 37.5 +1.3**
comp=Z,3.6nm,0.8s,mb4.1,baz=217,slow=6.2,SNR=47
ANMO Albuquerque 85.93 52 *e*P **P** **02 00 36.6 +0.2**
comp=Z,3.6nm,1.3s,mb3.8
XAN Xi'an 86.00 307 P **P** **02 00 37.3 +0.5**
XAN AP pP 02 02 28.3 -0.3
XAN PP PP 02 04 07.3 +1.0
XAN S S 02 10 30.8 +2.6
XAN AMB AMB
comp=Z,21nm,1.0s,mb4.7
XAN AMB AMB
comp=Z,57nm,5.5s

HIA Hailar 86.05 325 *e*P **P** **02 00 36.2 -0.4**
BILL Bilibino 86.08 354 *e*P **P** **02 00 35.6 -0.7**
BILL pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
BILL Bilibino 86.08 354 *e*P **P** **02 00 35.7 -0.6**
comp=Z,4.6nm,0.7s,mb4.2
RRI2 Red Ridge 86.27 42 *e*P **P** **02 00 38.8 +1.0**
DLMT Dillon 86.43 40 *e*P **P** **02 00 39.0 +0.5**
REDW Red Top Meadow 86.57 43 *e*P **P** **02 00 40.0 +0.8**
DAWY Dawson 86.77 16 *e*P **P** **02 00 39.7 0.0**
HHC Hu-ho-hao-te 86.98 314 *e*P **P** **02 00 41.8 +0.6**
HHC AP pP 02 02 34.8 +1.4
HHC XP sP 02 03 24.5 -0.5
HHC PP PP 02 04 16.9 +3.0
HHC SKS 02 10 18.8
HHC AMB AMB
comp=Z,12nm,1.0s,mb4.6
HHC AMB AMB
comp=Z,139nm,4.9s
PDAR Pinedale Array 87.14 43 P **P** **02 00 41.8 -0.2**
comp=Z,3.8nm,0.7s,mb4.2,baz=212,slow=3.1,SNR=31
WALA Waterton Lakes 87.49 36 *e*P **P** **02 00 43.7 +0.3**
comp=Z,0.1nm,0.7s
KMI Kunming 87.61 297 P **P** **02 00 44.3 -0.3**
SDCO Great Sand Dun 87.78 49 *e*P **P** **02 00 45.2 +0.1**
comp=Z,1.4nm,0.9s,mb3.7
CMAR Chiang Mai Arr 88.71 290 P **P** **02 00 50.5 +0.7**
comp=Z,5.9nm,0.9s,mb4.4,baz=106,slow=2.8,SNR=25
CHTO Chiang Mai 88.82 290 *e*P **P** **02 00 50.4 +0.1**
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
CHTO Chiang Mai 88.82 290 *e*P **P** **02 00 50.4 +0.1**
comp=Z,7.7nm,1.1s,mb4.5
CD2 Chengdu 88.83 303 P **P** **02 00 51.1 +1.0**
CD2 AP pP 02 02 44.6 +1.8
CD2 XP sP 02 03 35.3 +1.0
CD2 PP PP 02 04 31.5 +2.8
CD2 SKS 02 10 31.3
CD2 S S 02 10 54.6 -0.1
CD2 AMB AMB
comp=Z,11nm,0.7s,mb4.8
CD2 AMB AMB
comp=Z,280nm,5.7s
SYO Syowa Base 89.48 193 ⇑*i*P **P** **02 00 50.2 -2.3**
SYO Syowa Base 89.48 193 ⇓*e*PcP PcP 02 00 52.0 -1.4
LZH Lanzhou 90.63 308 *e*P **P** **02 00 59.0 +0.7**
LZH PP PP 02 04 45.0 +2.3
LZH SKS 02 10 39.1
LZH *e*S S 02 11 05.0 -5.8
LZH AMB AMB
comp=Z,23nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,195nm,5.3s
SNAA Sanae 90.95 179 *e*P **P** **02 00 58.5 -0.7**
SNAA *e* 02 00 59.6
SNAA Sanae 90.95 179 *e*P **P** **02 00 59.0 -0.2**
SNAA pmax pmax
comp=Z,3.0nm,0.5s
SNAA Sanae 90.95 179 *e*P **P** **02 00 59.0 -0.2**
comp=Z,3.2nm,0.5s,mb4.5
VNA3 Neumayer Olymp 91.09 176 *e*P **P** **02 01 00.0 +0.1**
VNA3 *e* 02 01 01.0
VNA2 Neumayer--Watz 91.53 177 *e*P **P** **02 01 02.1 +0.2**
baz=184,slow=3.7
VNA2 *e* 02 01 03.0
VNA1 Neumayer--Stat 91.76 177 *e*P **P** **02 01 03.3 +0.3**
VNA1 *e* 02 01 04.4
ULN Ulaanbaatar 92.85 319 *e*P **P** **02 01 07.6 -0.7**
SONM Songino Array 93.24 319 P **P** **02 01 08.5 -1.5**
comp=Z,1.1nm,0.5s,mb4.1,baz=134,slow=5.5,SNR=9.0
YKA Yellowknife Ar 94.04 25 P **P** **02 01 12.2 -1.2**
comp=Z,2.8nm,0.8s,mb4.4,baz=246,slow=4.4,SNR=45
YKA Yellowknife Ar 94.04 25 P **P** **02 01 12.2 -1.2**
GTA Gaotai 94.76 310 *e*P **P** **02 01 17.5 +0.3**
GTA AP pP 02 03 12.3 +1.8
GTA XP sP 02 04 04.0 +2.2
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.3
ZALV Zalesovo Beam 107.92 322 PKiKP PKiKP 02 06 17.6 -1.9
comp=Z,1.2nm,0.6s,baz=175,slow=1.6,SNR=4.3
MK31 Makanchi Array 108.84 314 *e*PKiKP PKiKP 02 06 19.8 -1.7
MKAR Makanchi Array 109.84 314 Pdiff Pdif 02 02 20.8 +0.9
comp=Z,0.5nm,0.7s,baz=93,slow=5.9,SNR=3.5
MKAR PKiKP PKiKP 02 06 19.4 -2.1
comp=Z,1.0nm,0.5s,baz=183,slow=0.4,SNR=12
BRVK Borovoye 116.59 321 *e*PKiKP PKPdf 02 06 34.2 -1.9
KBL Kabul 118.06 300 *e*PKiKP PKPdf 02 06 38.3 -1.2
ARU Arti 122.52 326 *e*PKiKP PKPdf 02 06 45.9 -1.5
ARU Arti 122.52 326 *e*PKPdf PKPdf 02 06 45.9 -1.4
AKTK Aktyubinsk 124.56 320 PKP PKPdf 02 06 50.3 -1.2
AKTO Aktyubinsk 124.56 320 PKP PKPdf 02 06 50.3 -1.2
comp=Z,2.5nm,0.7s,baz=98,slow=3.7,SNR=11
ARCES ARCESS Array B 125.96 350 PKP PKPdf 02 06 52.8 -0.9
comp=Z,3.4nm,0.6s,baz=24,slow=1.5,SNR=15
BOSA Boshof 128.68 207 PKP PKPdf 02 07 00.6 +0.5
comp=Z,1.0nm,0.5s,baz=188,slow=7.1,SNR=3.8
JOF Joensuu 130.20 343 *ep* PKPdf 02 07 00.3 -1.6
comp=Z,0.9nm,0.4s
KAF Kangasniemi 132.21 345 *ep* PKPdf 02 07 01.6 -4.1
comp=Z,0.8nm,0.4s
NB2 NORSAR Subarra136.02 353 PKP PKPdf 02 07 11.6 -1.2
comp=Z,2.0nm,0.6s,baz=14,slow=4.0
NOA NORSAR Array B 136.02 353 PKP PKPdf 02 07 13.1 +0.2
comp=Z,1.4nm,0.6s,baz=14,slow=4.0,SNR=4.9
HFS Hagfors 136.58 351 PKhKP 02 06 59.6
comp=Z,2.4nm,0.8s,baz=180,slow=40,SNR=5.0
AKASG Malin Array Be 140.22 332 PKhKP 02 07 12.2
comp=Z,1.2nm,0.4s,baz=45,slow=3.8,SNR=12
AKASG PKP PKPdf 02 07 21.3 +0.4
comp=Z,1.5nm,0.4s,baz=44,slow=3.2,SNR=6.6
AKASG Malin Array Be 140.22 332 PKP 02 07 12.2
AKASG PKP PKPdf 02 07 21.3 +0.4
KEMA Kemaliye 141.32 312 *i* P PKPdf 02 07 17.2 -6.0
PINB Pinarbasi 143.05 312 *i* P PKPdf 02 07 23.8 -2.4
BSEG Bad Segeberg 143.06 351 *e*PKPbc PKPdf 02 07 22.8 -3.0
LVV L'vov 143.06 336 *e*PKHKP PKPdf 02 07 22.3 -3.6
KUZU Kuzuini 143.31 309 *i* P PKPdf 02 07 24.6 -2.3
ANDN Andirin 143.54 310 *i* P PKPdf 02 07 24.9 -2.3
KWP Kalwaria 143.72 337 *e*PKP PKPdf 02 07 25.3 -1.8
KWP Kalwaria 143.72 337 ⇓*i*P PKPdf 02 07 25.4 -1.7
KWP Kalwaria 143.72 337 *e*PKP PKPdf 02 07 25.3 -1.8
ILGA Ilgaz 143.78 317 *i* P PKPdf 02 07 26.7 -0.8
PPE Popeni 144.01 328 ⇑*i*P PKiKP 02 07 30.1 -1.4
PPE Popeni 144.01 328 ⇑P PKiKP 02 07 30.1 -1.3
AVNT Avonos 144.10 313 *i* P PKPdf 02 07 27.1 -1.0
TLCR 144.25 326 ⇓*i*P PKPdf 02 07 27.3 -0.9
TLCR 144.25 326 ⇓P PKPdf 02 07 27.3 -0.8
ELDT Eldivan 144.25 316 *i* P PKPdf 02 07 27.6 -0.7
BUR08 Bucovina Ar. S 144.26 332 *e*PKPbc PKPdf 02 07 27.7 -0.4
OJC Ojcow 144.26 340 *e*PKP PKPdf 02 07 26.7 -1.3
BURAR Bucovina Array 144.27 332 ⇓*i*P PKPdf 02 07 27.3 -0.8
BURAR Bucovina Array 144.27 332 P PKPdf 02 07 27.4 -0.7
STHS Stebnicka Huta 144.44 338 *i* PKiKP PKPdf 02 07 27.9 -0.5
STHS Stebnicka Huta 144.44 338 *i* PKP PKPdf 02 07 27.9 -0.5
STHS Stebnicka Huta 144.44 338 *i* PKP PKPdf 02 07 27.9 -0.5
NRDL Niedersach Rie 144.49 351 *e*PKPbc PKPdf 02 07 27.0 -1.3
BR131 Keskin Array S 144.49 315 *e*PKPdf PKPdf 02 07 27.8 -1.0
BRTR Keskin Array B 144.49 315 PKP PKPdf 02 07 27.9 -0.9
comp=Z,11nm,0.8s,baz=128,slow=3.6,SNR=6.4
CFR Carcaliu 144.61 327 ⇑*i*P PKPdf 02 07 30.3 +1.5
CFR Carcaliu 144.61 327 ⇑P PKPdf 02 07 30.3 +1.6
UZH Uzhgorod 144.70 336 ⇑*i*PKiKP PKPdf 02 07 28.4 -0.4
ODB Odobesti 144.75 328 ⇑*i*P PKPdf 02 07 29.7 +0.7
ODB Odobesti 144.75 328 P PKPdf 02 07 29.7 +0.7
KSP Ksiaz 144.76 344 *e*PKP PKPdf 02 07 28.9 0.0
KSP Ksiaz 144.76 344 *e*PKP PKPdf 02 07 28.7 -0.1
NIE Niedzica 144.77 339 *i* PKPdf PKPdf 02 07 29.1 +0.2
CRVS Cervenica-Dubn 144.79 337 *i* PKP PKPdf 02 07 28.7 -0.3
VRI Vrincioaia 144.85 329 ⇑*i*P PKPdf 02 07 29.1 -0.1
VRI Vrincioaia 144.85 329 ⇑P PKPdf 02 07 29.1 -0.1
PLOR Plostina 144.90 329 ⇓*i*P PKPdf 02 07 28.8 -0.5
TIRR Tirgusor 144.94 326 ⇑*i*P PKPdf 02 07 29.5 +0.1
TIRR Tirgusor 144.94 326 P PKPdf 02 07 29.4 0.0
BMR Baia Mare 144.97 334 ⇓*i*P PKPdf 02 07 29.5 +0.2
BMR Baia Mare 144.97 334 P PKPdf 02 07 29.4 +0.1
IBBN Ibbenburen 144.98 353 *e*PKPbc PKPdf 02 07 28.8 -0.4
TRPA Tarpa 145.00 335 ⇑*i*P PKPdf 02 07 29.3 -0.1
HARR Harsova 145.04 326 ⇓*i*P PKPdf 02 07 29.6 +0.1
HARR Harsova 145.04 326 P PKPdf 02 07 29.8 +0.3
CLZ Clausthal 145.08 350 *e*PKPbc PKPbc 02 07 29.4 -0.7
CLL Collm 145.11 347 *e*PKPbc PKPbc 02 07 29.1 -1.1
CLL Collm 145.11 347 ⇓*i*PKPbc PKPbc 02 07 29.3 -0.9
comp=Z,73nm,1.4s

OKC Ostrava-Krasne 145.12 341 *e*PKP PKPdf 02 07 29.6 +0.1
UPC Upice 145.14 344 *e*PKP PKPdf 02 07 29.8 +0.3
DPC Dobruska-Polom 145.19 343 *e*PKP PKPdf 02 07 30.3 +0.7
BRG Berggiesshubel 145.31 346 *e*PKPbc PKPbc 02 07 30.0 -0.8
BRG Berggiesshubel 145.31 346 *i* PKP PKPdf 02 07 30.1 +0.3
WTSB Winterswijk 145.41 354 *e*P PKPdf 02 07 30.0 +0.1
comp=Z,25nm,1.0s
PVCC Panska Ves 145.48 345 *e*PKP PKPdf 02 07 31.0 +0.9
PVCC *ex* x 02 07 34.3
VOIR 145.97 330 ⇑*i*P PKPdf 02 07 32.5 +1.4
VOIR 145.97 330 P PKPdf 02 07 32.5 +1.4
PRU Pruhonice 145.99 345 *e*PKP PKPdf 02 07 31.6 +0.6
DRGR 146.00 334 ⇑*i*P PKPdf 02 07 32.2 +1.1
DRGR 146.00 334 P PKPdf 02 07 32.5 +1.4
MOX Moxa 146.01 348 *e*PKPbc PKPbc 02 07 31.9 -0.9
VRAC Vranov 146.06 342 PKPbc PKPbc 02 07 32.2 -0.8
comp=Z,11nm,0.9s,baz=32,slow=3.0,SNR=19
VRAC Vranov 146.06 342 ⇓*i*P PKPdf 02 07 32.7 +1.6
VRAC Vranov 146.06 342 P PKPdf 02 07 32.5 +1.4
TANN Tannenbergstha 146.06 347 *e*PKPbc PKPbc 02 07 31.9 -1.1
VYHS Vyhne 146.07 339 *i* PKP PKPdf 02 07 32.5 +1.3
KOLL Kolacno 146.14 340 *i* PKP PKPdf 02 07 32.8 +1.5
PSZ Piszkesteto 146.19 338 ⇓*i*P PKPdf 02 07 32.8 +1.4
PSZ Piszkesteto 146.19 338 *e*PKPdf PKPdf 02 07 32.5 +1.2
NKC Novy Kostel 146.24 347 *e*PKP PKPdf 02 07 32.8 +1.4
NKC *ex* x 02 07 34.7
TREC Trest 146.38 343 *e*PKP PKPdf 02 07 33.1 +1.4
BORA Eskisehir 146.51 318 *i* P PKPdf 02 07 33.7 +1.5
SMOL Smolenice 146.51 341 *i* PKP PKPbc 02 07 34.2 -0.1
MANZ Manzenberg 146.54 348 *e*PKPbc PKPbc 02 07 33.6 -0.7
ROTZ Rotzenmuhle 146.73 347 *e*PKPbc PKPbc 02 07 34.3 -0.5
UCC Uccle 146.76 357 PKPbc PKPbc 02 07 33.9 -0.9
CSS Prodhromos 146.82 308 *e*PKPdf PKPdf 02 07 34.1 +1.3
MEM Membach 146.83 355 PKPbc PKPbc 02 07 33.9 -1.2
ZST Bratislava 146.89 341 *i* PKP PKPbc 02 07 35.1 -0.2
TNS Taunus Mts 146.94 352 *e*PKPbc PKPbc 02 07 34.5 -0.9
GRA1 Grafenberg Arr 147.00 348 *e*PKPbc PKPbc 02 07 34.9 -0.7
GRA1 *e*PKPab PKPab 02 07 38.4 -0.2
GRF Grafenberg Arr 147.00 348 *e*PKP2 PKPab 02 07 38.4 -0.2
GRF Grafenberg Arr 147.00 348 *e*PKIKP PKPbc 02 07 34.9 -0.7
GRF *e* 02 07 38.4
GRF Grafenberg Arr 147.00 348 *e*PKPbc PKPbc 02 07 34.9 -0.7
GRF *e*PKPab PKPab 02 07 38.4 -0.2
KHC Kasperske Hory 147.02 345 *e*PKP PKPbc 02 07 35.0 -0.6
KHC *ex* x 02 07 38.3
SNF Seneffe 147.05 357 PKPbc PKPbc 02 07 34.9 -0.8
GZR Gura Zlata 147.06 332 ⇑*i*P PKPbc 02 07 35.1 -0.8
GZR Gura Zlata 147.06 332 P PKPbc 02 07 34.9 -1.0
BCLA Clavier 147.07 356 PKPbc PKPbc 02 07 37.6 +1.9
WET Wettzell 147.17 346 *e*PKPbc PKPbc 02 07 34.7 -1.3
GEC2 GERESS Array S 147.26 345 *e*PKPbc PKPbc 02 07 35.4 -0.9
GERES GERESS Array B 147.26 345 PKPbc PKPbc 02 07 35.5 -0.7
comp=Z,9.4nm,0.7s,baz=22,slow=2.9,SNR=129
BZS Buzias 147.39 333 ⇑*i*P PKPbc 02 07 35.8 -0.9
BZS Buzias 147.39 333 P PKPbc 02 07 35.9 -0.9
GIVF Givet 147.43 356 ⇓*i*PKP1 PKPbc 02 07 35.9 -0.8
comp=Z,33nm,0.6s
DOU Dourbes 147.44 356 PKPbc PKPbc 02 07 35.9 -0.8
BAIF Baives 147.50 357 ⇓*i*PKP1 PKPbc 02 07 36.2 -0.7
comp=Z,36nm,0.7s
CONA Conrad Observa 147.51 342 ⇓*i*PKPbc PKPbc 02 07 36.6 -0.3
comp=Z,20nm,0.6s
CSNA Conrad Observa 147.51 342 ⇑*i*PKPbc PKPbc 02 07 36.6 -0.4
comp=Z,19nm,0.6s
WLF Walferdange 147.75 354 PKPbc PKPbc 02 07 37.4 -0.2
WLF Walferdange 147.75 354 *e*PKPbc PKPbc 02 07 37.1 -0.4
MOA Molln 148.03 344 ⇓*i*PKPbc PKPbc 02 07 37.6 -0.7
comp=Z,4.2nm,0.6s
PKSM Moragy 148.09 337 ⇓*i*P PKPbc 02 07 37.4 -1.1
PKSM Moragy 148.09 337 P PKPbc 02 07 37.4 -1.1
STU Stuttgart 148.25 350 *e*PKPbc PKPbc 02 07 38.0 -0.8
STU *e*PKPab PKPab 02 07 42.9 -0.8
STU Stuttgart 148.25 350 *e*PKPdf PKPdf 02 07 35.6 +0.9
FUR Furstenfeldbru 148.45 347 *e*PKPbc PKPbc 02 07 38.6 -0.7
GOLH Golhisar 148.50 314 *i* P PKPbc 02 07 38.2 -1.6
MANT Manisa 148.50 317 *i* P PKPbc 02 07 38.6 -1.2
RJOB Jochberg 148.51 345 *e*PKPbc PKPbc 02 07 38.4 -1.1
RJOB *e*PKPab PKPab 02 07 44.8 0.0
BFO Black Forest 148.81 351 *e*PKP2 PKPab 02 07 44.9 -1.1
BFO Black Forest 148.81 351 *e*PKPbc PKPbc 02 07 39.2 -1.0
BFO *e*PKPab PKPab 02 07 44.9 -1.1
FLN La Foliniere 148.83 3 ⇓*i*PKP1 PKPbc 02 07 39.2 -1.1
comp=Z,44nm,0.6s
CDF Champ du Feu 148.87 353 ⇓*i*PKP1 PKPbc 02 07 39.7 -0.7
comp=Z,26nm,0.7s
SOKA Soboth 148.88 342 ⇓*i*PKPbc PKPbc 02 07 39.1 -1.3
comp=Z,17nm,1.1s
PERS Pernice 148.90 342 *i* PKPbc PKPbc 02 07 39.2 -1.3
KBA Koelnbreinsper 148.99 344 ⇓*i*PKPbc PKPbc 02 07 39.1 -1.6
comp=Z,10nm,0.5s
MEZF Maizieres J'vi 149.00 355 ⇓*i*PKP1 PKPbc 02 07 40.1 -0.6
comp=Z,24nm,0.8s
LDF La Druitiere 149.01 2 ⇓*i*PKP1 PKPbc 02 07 39.5 -1.2
comp=Z,27nm,0.6s
ROSF Rostrenen 149.05 6 *e*PKP1 PKPbc 02 07 39.5 -1.3
WATA Walderalm 149.17 347 ⇓*i*PKPbc PKPbc 02 07 40.1 -1.0
comp=Z,12nm,0.5s
GRR Gorron 149.19 3 ⇓*i*PKP1 PKPbc 02 07 40.2 -0.9
comp=Z,42nm,0.7s
RETA Reutte 149.20 348 ⇓*i*PKPbc PKPbc 02 07 40.2 -0.9
comp=Z,7.1nm,0.5s
SGMF Saint Gilles 149.20 5 ⇓*i*PKP1 PKPbc 02 07 40.0 -1.2
comp=Z,29nm,0.6s
DOBS Dobrina 149.22 341 *i* PKPbc PKPbc 02 07 40.1 -1.2
WTTA Wattenberg 149.22 346 ⇑*i*PKPbc PKPbc 02 07 40.6 -0.7
comp=Z,30nm,0.5s
MOTA Moosalm 149.26 347 ⇓*i*PKPbc PKPbc 02 07 40.3 -1.0
comp=Z,7.5nm,0.5s
MYKA Terra Mystica 149.32 344 ⇓*i*PKPbc PKPbc 02 07 39.9 -1.6
comp=Z,15nm,0.5s
TURN Turunc 149.35 314 *i* P PKPbc 02 07 41.6 -0.3
HAU Haudompre 149.38 354 ⇓*i*PKP1 PKPbc 02 07 40.8 -0.8
comp=Z,23nm,0.6s
ABTA Abfaltersbach 149.50 345 ⇓*i*PKPbc PKPbc 02 07 40.4 -1.6
comp=Z,19nm,0.6s
HINF Hinteralfeld 149.51 353 ⇓*i*PKP1 PKPbc 02 07 40.9 -1.0
comp=Z,18nm,0.8s
DAVA Damuels 149.56 349 ⇑*i*PKPbc PKPbc 02 07 41.7 -0.4
comp=Z,29nm,1.2s
LJU Ljubljana 149.61 342 *i* PKPbc PKPbc 02 07 41.3 -0.9
FETA Feichten 149.65 347 ⇓*i*PKPbc PKPbc 02 07 41.6 -0.7
comp=Z,15nm,0.8s
VOY Vojsko 149.80 343 *e* PKPab 02 07 49.7 -0.5
VOJS Vojsko 149.80 343 *i* PKPbc PKPbc 02 07 41.3 -1.4
BOJS Bojanci 149.87 341 *i* PKPbc PKPbc 02 07 42.2 -0.6
DAVOS Davos 150.01 349 PKiKP PKPdf 02 07 36.9 -0.7
DAVOX Davos/Dischmat 150.05 348 PKP PKPdf 02 07 36.9 -0.8
comp=Z,2.4nm,0.8s,baz=320,slow=0.9,SNR=8.7
DAVOX PKPbc PKPbc 02 07 42.9 -0.4
comp=Z,40nm,0.6s,baz=250,slow=2.4,SNR=137
LOR Lormes 150.31 357 ⇓*i*PKP1 PKPbc 02 07 43.1 -0.7
comp=Z,29nm,0.5s
CABF La Chapelle 150.78 354 ⇓*i*PKP1 PKPbc 02 07 44.7 -0.2
comp=Z,29nm,0.8s
AVF Avril sur Loir 150.81 357 ⇓*i*PKP1 PKPbc 02 07 43.8 -1.2
comp=Z,10nm,0.6s
SMF Signal de Mont 150.93 357 *e*PKP1 PKPbc 02 07 44.1 -1.2
MFF Saint Martin d 151.00 2 ⇓*i*PKP1 PKPbc 02 07 44.4 -1.1
comp=Z,21nm,0.6s
BGF Bois d'Agland 151.06 358 ⇓*i*PKP1 PKPbc 02 07 44.8 -0.8
comp=Z,25nm,0.6s
TCF Toulx Ste Croi 151.34 359 ⇓*i*PKP1 PKPbc 02 07 45.3 -0.9
comp=Z,29nm,0.8s
LPL La Plagne 151.78 352 ⇓*i*PKP1 PKPbc 02 07 47.1 -0.1
comp=Z,10nm,0.7s
LPG La Plagne 151.80 352 ⇓*i*PKP1 PKPbc 02 07 47.3 0.0
comp=Z,12nm,0.8s
BNI Bardonecchia 152.25 352 *e*PKIKP PKPbc 02 07 48.2 -0.1
RJF Les Rejaudoux 152.33 0 ⇓*i*PKP1 PKPbc 02 07 47.4 -1.1
comp=Z,12nm,0.7s
ORIF Oris-en-Rattie 152.48 353 ⇓*i*PKP1 PKPbc 02 07 48.2 -0.6
comp=Z,7.9nm,0.6s
MBDF Montbardon 152.56 352 ⇓*i*PKP1 PKPbc 02 07 48.3 -0.7
comp=Z,15nm,0.6s
VIVF Saint-Julien-l 152.65 355 *e*PKP1 PKPbc 02 07 48.5 -0.7
LFF La Frestale 152.69 1 *e*PKP1 PKPbc 02 07 48.2 -1.1
CAF Calviac 152.71 359

ESDC Sonseca Array 157.45 11 PKP PKPdf 02 07 48.0 -0.2
comp=Z,0.0nm,0.2s,baz=33,slow=3.5,SNR=3.2
ESDC PKPab PKPab 02 08 21.8 -1.2
comp=Z,1.1nm,0.7s,baz=345,slow=4.3,SNR=9.6
KEST Kesra 160.61 341 PKPab PKPab 02 08 36.4 -0.5
comp=Z,1.1nm,0.6s,baz=271,slow=5.0,SNR=9.5
MDT Midelt 163.83 19 PKP PKPdf 02 07 54.7 -0.6
comp=Z,0.9nm,0.6s,baz=264,slow=6.2,SNR=4.9
MDT PKPab PKPab 02 08 51.2 +0.1
comp=Z,3.5nm,0.9s,baz=301,slow=5.6,SNR=7.6
DBIC Dimbokro 167.51 149 PKP PKPdf 02 07 56.6 -2.2
comp=Z,1.7nm,0.7s,baz=116,slow=0.4,SNR=4.1
TOA0 Torodi Ar. Sit 175.61 182 *e*PKPdf PKPdf 02 08 00.8 -1.7
TORD Torodi Ar. Bea 175.61 182 PKP PKPdf 02 08 00.6 -2.0
comp=Z,2.2nm,0.8s,baz=346,slow=1.2,SNR=13
TORD PKPab PKPab 02 09 42.9 -0.7
comp=Z,1.3nm,0.8s,baz=176,slow=3.1,SNR=8.6
TORD PP PP 02 13 33.0 -2.2
comp=Z,0.5nm,0.7s,baz=155,slow=4.0,SNR=3.9
TORD Torodi Ar. Bea 175.61 182 PKP PKPdf 02 08 00.6 -2.0
TORD PKPab PKPab 02 09 42.9 -0.7
TORD PP PP 02 13 33.0 -2.2

NIED **25** *02:04:00, 46.50N×153.40E, h17km, Mw4.6 Best double couple: M₀9.13000×10¹⁵ NP1:φ₀53.00000°, δ85.00000°, λ130.00000°. NP2:φ₀148.00000°, δ41.00000°, λ7.00000°.*
IDC **25** *02:04:21.6±0.6, 46.42N×153.15E, h0km, mb4.1/21, mb1 4.3/23, mb1mx4.3/28, mbtmp4.1/23, ML3.6/2, MS4.1/23, Ms1 4.1/23, ms1mx4.0/32, Error ellipse: s-maj=17.4km s-min=13.9km az=147.0*
JMA **25** *02:04:22.9±0.6, 46.53N×153.40E, h30km, M4.7*
MOS **25** *02:04:25.7±1.0, 46.48N×153.05E, h35km, mb4.5/39, MS4.3/14, Error ellipse: s-maj=8.4km s-min=6.3km az=78.2*
BJI **25** *02:04:25.8, 46.49N×153.13E, h35km, mB5.1, mb4.7, Ms4.5, Msz4.3*
ISCJB **25** *02:04:26.2±0.3, 46.48N±004×153.02E±005, h38km, mb4.5/74, MS4.2/35, Error ellipse: s-maj=7.0km s-min=3.0km az=146.3*
NEIC **25** *02:04:26.8±2.3, 46.49N×153.02E, h29km±16km, mb4.8/36, Error ellipse: s-maj=8.0km s-min=4.6km az=153.0*
SZGRF **25** *02:04:34.6, 47.61N×152.71E, h33km, mb5.0, Kuril Islands, Russia*
ISC 25 02:04:28.3±0.3, 46.44N±004×153.01E±005, h40km, h40km±1.7km:pP-P, n221, σ1§18/227, mb4.5/74, MS4.2/35, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.79**	**253**	*e*PN		**Pn**		**02 05 22.8**	**-1.4**
SKR	**Severo-Kuril's**	**4.72**	**25**	*e*PN		**Pn**		**02 05 35.0**	**-1.9**
SKR				pmax		pmax			
	comp=Z,90nm,0.5s								
SKR				MLR		MLR			
	comp=N,2μm,14.0s								
SKR				MLR		MLR			
	comp=E,4μm,14.0s								
SKR				MLR		MLR			
	comp=Z,2μm,14.0s								
YUK	**Yuzh-Kuril'sk**	**5.59**	**247**	PN		**Pn**		**02 05 49.9**	**+1.0**
YUK				*e*S		**Sn**		**02 06 58.0**	**+6.2**
YUK				smax					
	comp=E,360nm,0.6s								
YUK				smax					
	comp=N,640nm,0.6s								
YUK				smax					
	comp=N,3μm,1.0s								
YUK				smax					
	comp=E,3μm,1.0s								
NEM2	**Nemuro 2**	**6.01**	**242**	P		**Pn**		**02 05 52.6**	**-2.0**
NEM2				*e*S		**Sn**		**02 06 58.8**	**-3.3**
JAK	**Akkeshi**	**6.85**	**243**	P		**Pn**		**02 06 04.6**	**-1.6**
JAK				*e*S		**Sn**		**02 07 19.4**	**-3.4**
JTKR	**Abashiri--Toko**	**6.89**	**252**	P		**Pn**		**02 06 07.9**	**+1.2**
YSS	**Yuzh-Sakhalins**	**7.07**	**278**	*e*PN		**Pn**		**02 06 15.0**	**+5.8**
YSS				*e*S		**Sn**		**02 07 35.0**	**+6.8**
YSS				MLR		MLR			
	comp=Z,2μm,17.0s								
YSS				MLR		MLR			
	comp=N,1μm,14.0s								
YSS				MLR		MLR			
	comp=E,2μm,15.0s								
JAR	**Ashorobuto**	**7.28**	**248**	P		**Pn**		**02 06 12.3**	**+0.3**
JAR				*e*S		**Sn**		**02 07 34.5**	**+1.2**
PEA0B	**Petropavlovsk-**	**7.33**	**23**	*e*Pn		**Pn**		**02 06 11.3**	**-1.3**
PEA0B				*e*Sn		**Sn**		**02 07 34.9**	**+0.5**
PETK	**Petropavlovsk-**	**7.33**	**23**	Pn		**Pn**		**02 06 10.6**	**-2.0**
	comp=E,1.1nm,0.3s,baz=176,slow=12,SNR=18								
PETK				Sn		**Sn**		**02 07 35.2**	**+0.8**
	baz=224,slow=8.3,SNR=1.6								
PETK				LR		LR		02 09 02.7	
	comp=E,349nm,20.0s,baz=211,slow=38								
PETK	**Petropavlovsk-**	**7.33**	**23**	Pn		**Pn**		**02 06 10.6**	**-2.0**
PETK				Sn		**Sn**		**02 07 35.2**	**+0.8**
PETK				LR		LR		02 09 02.7	
	comp=Z,0.9nm,0.6s,baz=211,slow=38								
JOB	**Onbets**	**7.43**	**245**	*e*S		**Sn**		**02 07 34.6**	**-2.6**
JKK2	**Kamakawa 2**	**7.69**	**254**	P		**Pn**		**02 06 19.6**	**+1.9**
ASAJ	**Asahikawa**	**7.70**	**256**	Pn		**Pn**		**02 06 19.7**	**+1.8**
	comp=E,2.0nm,0.3s,baz=111,slow=22,SNR=5.4								
ASAJ				Sn		**Sn**		**02 07 49.4**	**+5.6**
	comp=E,0.9nm,0.3s,baz=95,slow=26,SNR=1.4								
ASAJ				LR		LR		02 09 21.4	
	comp=E,1μm,18.6s,baz=324,slow=38								
ASAJ	**Asahikawa**	**7.70**	**256**	P		**Pn**		**02 06 20.5**	**+2.6**
ASAJ	**Asahikawa**	**7.70**	**256**	PN		**Pn**		**02 06 19.7**	**+1.8**
ASAJ								02 07 49.4	
ASAJ				pmax		pmax			
	comp=Z,2.0nm,0.3s								
ASAJ				smax					
	comp=N,1.0nm,0.3s								
ASAJ				MLR		MLR			
	comp=Z,1μm,18.6s								
JCH	**Churui**	**7.88**	**244**	P		**Pn**		**02 06 19.1**	**-1.2**
JCH				*e*S		**Sn**		**02 07 45.3**	**-2.9**
ERM	**Erimo**	**8.34**	**241**	*e*PN		**Pn**		**02 06 28.5**	**+1.9**
JBT2	**Biratori 2**	**8.43**	**248**	P		**Pn**		**02 06 28.1**	**+0.3**
JNBK	**Urakawa-nobuka**	**8.44**	**244**	P		**Pn**		**02 06 26.2**	**-1.8**
JNBK				*e*S		**Sn**		**02 07 57.1**	**-4.8**
JANG	**Nango**	**10.33**	**238**	P		**Pn**		**02 06 49.5**	**-4.3**
JANG				*e*S		**Sn**		**02 08 38.8**	**-9.3**
JTM	**Tenmabayashi**	**10.34**	**241**	*e*S		**Sn**		**02 08 41.2**	**-7.2**
JTH	**Tanohata**	**10.41**	**235**	*e*S		**Sn**		**02 08 39.9**	**-10**
JRG	**Rokugo**	**11.48**	**237**	*e*S		**Sn**		**02 09 07.9**	**-8.4**
HABR	**Khabarovsk**	**12.32**	**286**	*e*PN		**Pn**		**02 07 27.9**	**+6.9**
HABR				MLR		MLR			
	comp=Z,425nm,13.0s								
HABR				MLR		MLR			
	comp=Z,670nm,10.0s								
FX1	**Attu Island--F**	**14.53**	**56**	Pn		**Pn**		**02 07 43.4**	**-7.7**
	comp=Z,2.4nm,0.3s,baz=57,slow=20,SNR=7.6								
FX1				Sn		**Sn**		**02 10 23.8**	**-6.8**
	comp=Z,1.2nm,0.3s,baz=55,slow=23,SNR=3.6								
FX1	**Attu Island--F**	**14.53**	**56**	P		**Pn**		**02 07 43.4**	**-7.7**
FX1								02 10 23.8	
FX1				pmax		pmax			
	comp=Z,2.0nm,0.3s								
FX1				smax					
	comp=N,1.0nm,0.3s								
FX1	**Attu Island--F**	**14.53**	**56**	Pn		**Pn**		**02 07 43.4**	**-7.7**
FX1				Sn		**Sn**		**02 10 23.8**	**-6.8**
KLR	**Kul'dur**	**14.54**	**289**	*e*P		**Pn**		**02 07 51.0**	**-0.2**
KLR				MLR		MLR			
	comp=E,1μm,14.0s								
KLR				MLR		MLR			
	comp=Z,3μm,14.0s								
MAJO	**Matsushiro**	**14.84**	**233**	*e*P		**Pn**		**02 07 54.2**	**-1.1**
MAT	**Matsushiro**	**14.84**	**233**	P		**Pn**		**02 07 53.8**	**-1.5**
MJAR	**Matsushiro Arr**	**14.84**	**233**	Pn		**Pn**		**02 07 54.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=26,slow=11,SNR=5.4								
CN2	**Changchun**	**19.59**	**272**	*e*P		**Pn**		**02 08 53.9**	**-0.5**
CN2				*e*XP		sP		02 09 06.6	-1.3
CN2				*e*S		**S**		**02 12 25.3**	**-6.3**
CN2				AMB		AMB			
	comp=Z,10.0nm,1.3s								
CN2				AMB		AMB			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,750nm,18.0s								
CN2				LR		LR			
	comp=E,630nm,18.0s								
CN2				LR		LR			
	comp=Z,780nm,18.0s								
YAK	**Yakutsk**	**20.54**	**328**	*e*P		**P**		**02 09 05.2**	**+2.2**
YAK				*e*				02 09 23.1	
YAK				*e*S		**S**		**02 12 55.1**	**+4.8**
YAK				*e*SS				02 13 25.7	
YAK				pmax		pmax			
	comp=E,2.0nm,1.0s								
YAK				pmax		pmax			
	comp=Z,10.0nm,0.9s								
YAK				pmax		pmax			
	comp=N,4.0nm,1.4s								
YAK				pmax		pmax			
	comp=N,3.0nm,0.4s								
YAK				pmax		pmax			
	comp=Z,6.0nm,0.4s								
YAK				smax					
	comp=E,19nm,1.4s								
YAK				smax					
	comp=N,32nm,1.5s								
YAK				MLR		MLR			
	comp=Z,567nm,19.0s,MS4.0								
YAK				MLR		MLR			
	comp=N,601nm,17.0s,MS4.1								
YAK				MLR		MLR			
	comp=E,280nm,17.0s,MS4.1								
YAK	**Yakutsk**	**20.54**	**328**	*e*P		**P**		**02 09 02.5**	**-0.5**
KSRS	**Korea Array**	**20.64**	**253**	P		**P**		**02 09 05.8**	**+1.6**
	comp=E,3.1nm,0.7s,baz=61,slow=10,SNR=11								
KSRS				LR		LR		02 16 03.1	
	comp=E,328nm,20.9s,MS3.7,baz=192,slow=34								
KSRS	**Korea Array**	**20.64**	**253**	P		**P**		**02 09 05.9**	**+1.7**
KSRS				pmax		pmax			
	comp=Z,3.0nm,0.7s								
KSRS				MLR		MLR			
	comp=Z,328nm,20.9s,MS3.7								
BILL	**Bilibino**	**22.71**	**13**	*e*P		**P**		**02 09 26.5**	**+0.4**
BILL				*e*				02 09 48.8	
BILL				*e*S		**S**		**02 13 35.3**	**+3.6**
BILL				pmax		pmax			
	comp=Z,4.0nm,0.7s,mb4.0								
BILL				MLR		MLR			
	comp=Z,400nm,14.0s,MS4.0								
BILL	**Bilibino**	**22.71**	**13**	*e*P		**P**		**02 09 24.4**	**-1.6**
	comp=Z,25nm,1.3s,mb4.5								
BOD	**Bodaibo**	**26.13**	**310**	*e*P		**P**		**02 09 54.3**	**-3.9**
BOD				pmax		pmax			
	comp=Z,6.0nm,1.9s,mb3.8								
BJI	**Beijing**	**27.40**	**270**	P		**P**		**02 10 09.3**	**-0.6**
BJI				S		**S**		**02 14 46.8**	**-0.4**
BJI				AMB		AMB			
	comp=Z,8.0nm,0.4s,mb4.6								
BJI				AMB		AMB			
	comp=Z,257nm,4.9s								
BJI				LR		LR			
	comp=N,419nm,14.8s,MS4.4								
BJI				LR		LR			
	comp=E,701nm,16.6s,MS4.4								
BJI				LR		LR			
	comp=Z,430nm,17.3s,MS4.1								
NJ2	**Nanjing**	**29.84**	**253**	*e*P		**P**		**02 10 33.1**	**+1.5**
NJ2				AMB		AMB			
	comp=Z,20nm,0.5s,mb5.1								
HHC	**Hu-ho-hao-te**	**30.24**	**275**	*e*P		**P**		**02 10 36.3**	**+1.2**
HHC				AP		pP		02 10 45.4	-0.7
HHC				XP		sP		02 10 49.6	-1.4
HHC				PP		PP		02 11 34.4	-9.3
HHC				PCP		PcP		02 13 36.9	+2.0
HHC				*e*S		**S**		**02 15 30.5**	**-1.3**
HHC				SS		SS		02 17 07.5	-34
HHC				AMB		AMB			
	comp=Z,10.0nm,0.7s,mb4.7								
HHC				AMB		AMB			
	comp=Z,109nm,4.8s								
HHC				LR		LR			
	comp=N,496nm,14.3s,MS4.5								
HHC				LR		LR			
	comp=E,499nm,14.3s,MS4.5								
HHC				LR		LR			
	comp=Z,658nm,15.5s,MS4.4								
ULN	**Ulaanbaatar**	**30.93**	**290**	*e*P		**P**		**02 10 40.9**	**-0.2**
ULN	**Ulaanbaatar**	**30.93**	**290**	P		**P**		**02 10 39.9**	**-1.2**
SONM	**Songino Array**	**31.37**	**290**	P		**P**		**02 10 44.4**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.4,baz=52,slow=9.6,SNR=3.2								
SONM				LR		LR		02 24 21.1	
	comp=Z,402nm,18.7s,MS4.1,baz=75,slow=38								
TLY	**Talaya**	**32.26**	**298**	*e*P		pP		02 11 03.8	0.0
TLY				*e*				02 11 57.9	
TLY				pmax		pmax			
	comp=Z,8.0nm,1.0s,mb4.5								
TLY				MLR		MLR			
	comp=Z,823nm,16.0s,MS4.5								
ZAK	**Zakamensk**	**32.74**	**295**	*e*P		**P**		**02 10 55.1**	**-1.8**
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.5s,mb3.8								
TATO	**Taipei**	**33.04**	**240**	*e*P		**P**		**02 10 58.6**	**-1.2**
XAN	**Xi'an**	**35.42**	**265**	P		**P**		**02 11 20.6**	**+0.3**
XAN				AP		pP		02 11 30.5	-1.0
XAN				PP		PP		02 12 39.6	-1.5
XAN				S		**S**		**02 16 50.0**	**-2.3**
XAN				AMB		AMB			
	comp=Z,5.0nm,0.8s,mb4.5								
XAN				AMB		AMB			
	comp=Z,32nm,4.1s								
XAN				LR		LR			
	comp=N,121nm,15.6s,MS4.1								
XAN				LR		LR			
	comp=E,190nm,13.4s,MS4.1								
XAN				LR		LR			
	comp=Z,319nm,14.2s,MS4.2								
PMR	**Palmer**	**35.87**	**44**	*e*P		**P**		**02 11 23.8**	**-0.1**
MCK	**McKinley**	**35.93**	**40**	*e*P		**P**		**02 11 24.3**	**-0.1**
COLA	**College**	**36.42**	**38**	*e*P		**P**		**02 11 28.4**	**-0.1**
COLA				pmax		pmax			
	comp=Z,8.0nm,0.9s,mb4.7								
COLA	**College**	**36.42**	**38**	*e*P		**P**		**02 11 28.4**	**-0.1**
	comp=Z,8.0nm,0.9s,mb4.7								
LZH	**Lanzhou**	**37.83**	**272**	*e*P		**P**		**02 11 42.8**	**+2.0**
LZH				AP		pP		02 11 54.3	+2.3
LZH				XP		sP		02 11 56.8	0.0
LZH				PP		PP		02 13 11.0	+3.4
LZH				*e*S		**S**		**02 17 31.0**	**+2.0**
LZH				AMB		AMB			
	comp=Z,53nm,1.3s,mb5.1								
LZH				AMB		AMB			
	comp=Z,243nm,5.8s								
LZH				LR		LR			
	comp=N,2μm,16.9s								
LZH				LR		LR			
	comp=Z,2μm,19.8s,MS4.9								
GTA	**Gaotai**	**38.95**	**279**	P		**P**		**02 11 52.3**	**+2.1**
GTA				AP		pP		02 12 03.1	+1.7
GTA				XP		sP		02 12 06.8	+0.6
GTA				S		**S**		**02 17 49.8**	**+4.0**
GTA				XS		sS		02 18 07.1	+2.6
GTA				SS		SS		02 20 36.0	-2.3
GTA				AMB		AMB			
	comp=Z,8.0nm,1.4s,mb4.3								
GTA				AMB		AMB			
	comp=Z,205nm,6.3s								
GTA				LR		LR			
	comp=N,362nm,15.0s,MS4.4								
GTA				LR		LR			
	comp=E,312nm,15.6s,MS4.4								
GTA				LR		LR			
	comp=Z,361nm,15.9s,MS4.3								
CD2	**Chengdu**	**40.78**	**265**	P		**P**		**02 12 06.3**	**+0.8**
CD2				AP		pP		02 12 16.0	-0.8
CD2				XP		sP		02 12 20.0	-1.6
CD2				PP		PP		02 13 43.9	+4.0
CD2				PCP		PcP		02 14 08.5	+2.4
CD2				PCS		PcS		02 17 58.0	+1.0
CD2				S		**S**		**02 18 13.4**	**-0.1**
CD2				XS		sS		02 18 29.6	-2.6
CD2				SS		SS		02 21 09.1	-6.1
CD2				AMB		AMB			
	comp=Z,20nm,1.0s,mb4.7								
CD2				AMB		AMB			
	comp=Z,220nm,5.1s								
CD2				LR		LR			
	comp=N,420nm,8.3s								
CD2				LR		LR			
	comp=Z,340nm,12.5s,MS4.4								
GYA	**Guiyang**	**41.58**	**258**	P		**P**		**02 12 12.4**	**+0.3**
GYA				AP		pP		02 12 24.6	+1.2
GYA				XP		sP		02 12 29.4	+1.2
GYA				PP		PP		02 13 51.0	+2.4
GYA				SCP		ScP		02 17 58.0	+2.6
GYA				S		**S**		**02 18 26.8**	**+1.4**
GYA				XS		sS		02 18 41.9	-2.2
GYA				SS		SS		02 21 23.6	-7.5
GYA				AMB		AMB			
	comp=Z,10.0nm,0.9s,mb4.5								
GYA				AMB		AMB			
	comp=Z,80nm,4.9s								
GYA				LR		LR			
	comp=N,490nm,17.8s,MS4.5								
GYA				LR		LR			
	comp=E,460nm,18.6s,MS4.5								
GYA				LR		LR			
	comp=Z,520nm,17.0s,MS4.5								
ZALV	**Zalesovo Beam**	**42.73**	**306**	P		**P**		**02 12 18.0**	**-3.2**
	comp=Z,0.8nm,0.4s,mb3.8,baz=57,slow=8.8,SNR=4.8								
ZALV				LR		LR		02 31 22.4	
	comp=Z,618nm,19.3s,MS4.5,baz=73,slow=38								
ZALV	**Zalesovo Beam**	**42.73**	**306**	P		**P**		**02 12 18.0**	**-3.2**
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb3.9								
ZALV				MLR		MLR			
	comp=Z,618nm,19.3s,MS4.5								
WMQ	**Urumqi**	**44.97**	**291**	*e*P		**P**		**02 12 40.8**	**+1.5**
WMQ				LR		LR			
	comp=N,327nm,18.0s,MS4.3								
WMQ				LR		LR			
	comp=E,166nm,20.0s,MS4.3								
WMQ				LR		LR			
	comp=Z,289nm,16.0s,MS4.3								
KMI	**Kunming**	**45.12**	**260**	P		**P**		**02 12 44.8**	**+4.2**
KMI				PP		PP		02 14 29.5	+3.0
KMI				S		**S**		**02 19 16.8**	**-0.3**
KMI				XS		sS		02 19 33.3	-2.8
KMI				SS		SS		02 22 28.5	-12
KMI				SSS				02 23 27.5	
KMI				LR		LR			
	comp=Z,111nm,19.0s,MS3.8								
DLBC	**Dease Lake**	**45.86**	**46**	*e*P		**P**		**02 12 46.2**	**+0.1**
MK31	**Makanchi Array**	**47.02**	**298**	*e*P		**P**		**02 12 55.2**	**-0.2**
MKAR	**Makanchi Array**	**47.02**	**298**	P		**P**		**02 12 54.9**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=66,slow=7.9,SNR=17								
MKAR				LR		LR		02 33 55.3	
	comp=Z,661nm,18.4s,MS4.6,baz=66,slow=38								
MKAR	**Makanchi Array**	**47.02**	**298**	P		**P**		**02 12 54.9**	**-0.5**
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
MKAR				MLR		MLR			
	comp=Z,661nm,18.4s								
KURK	**Kurchatov**	**47.47**	**304**	P		**P**		**02 12 58.8**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.3,baz=70,slow=8.6,SNR=16								
KURK	**Kurchatov**	**47.47**	**304**	P		**P**		**02 12 58.8**	**0.0**
KURK				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
KURK	**Kurchatov**	**47.47**	**304**	*e*P		**P**		**02 12 57.8**	**-1.1**
LSA	**Lhasa**	**50.22**	**273**	P		**P**		**02 13 23.0**	**+2.8**
LSA	**Lhasa**	**50.22**	**273**	*e*P		**P**		**02 13 19.9**	**-0.3**
LSA				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.7								
LSA	**Lhasa**	**50.22**	**273**	*e*P		**P**		**02 13 19.9**	**-0.3**
	comp=Z,4.7nm,0.6s,mb4.7								
BVAR	**Borovoye Array**	**51.00**	**310**	P		**P**		**02 13 25.2**	**-0.5**
	comp=Z,0.9nm,0.3s,mb4.1,baz=51,slow=7.1,SNR=10								
BVAR	**Borovoye Array**	**51.00**	**310**	P		**P**		**02 13 25.2**	**-0.5**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
BRVK	**Borovoye**	**51.04**	**310**	*e*P		**P**		**02 13 24.9**	**-1.1**
BRVK				pmax		pmax			
	comp=Z,124nm,3.0s								
BRVK	**Borovoye**	**51.04**	**310**	*e*P		**P**		**02 13 24.9**	**-1.1**
	comp=Z,124nm,3.0s								
RES	**Resolute Bay**	**51.15**	**18**	P		**P**		**02 13 26.0**	**-0.6**
	comp=Z,3.7nm,0.9s,mb4.3,baz=334,slow=9.3,SNR=7.7								
RES	**Resolute Bay**	**51.15**	**18**	P		**P**		**02 13 26.0**	**-0.6**
RES				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
RES	**Resolute Bay**	**51.15**	**18**	P		**P**		**02 13 26.0**	**-0.6**
YKA	**Yellowknife Ar**	**51.21**	**37**	P		**P**		**02 13 26.0**	**-1.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=298,slow=7.2,SNR=22								
YKA	**Yellowknife Ar**	**51.21**	**37**	P		**P**		**02 13 26.0**	**-1.2**
YKA				pmax		pmax			
	comp=Z,3.0nm,0.9s								
CHTO	**Chiang Mai**	**51.98**	**257**	*e*P		**P**		**02 13 33.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**52.23**	**256**	P		**P**		**02 13 36.4**	**+1.0**
	comp=Z,1.3nm,0.3s,mb4.3,baz=38,slow=7.7,SNR=5.2								
CMAR	**Chiang Mai Arr**	**52.23**	**256**	P		**P**		**02 13 36.4**	**+1.1**
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
TKM2	**Tokmak 2**	**53.07**	**296**	*e*P		**P**		**02 13 41.9**	**+0.6**
TKM2				pmax		pmax			
	comp=Z,10.0nm,1.4s,mb4.5								
TKM2	**Tokmak 2**	**53.07**	**296**	*e*P		**P**		**02 13 41.9**	**+0.6**
	comp=Z,10nm,1.4s,mb4.6								
AAK	**Ala-Archa**	**53.91**	**296**	*i* P		**P**		**02 13 47.7**	**+0.3**
AAK				pmax		pmax			
	comp=Z,1.0nm,0.8s,mb3.8								
AAK	**Ala-Archa**	**53.91**	**296**	*e*P		**P**		**02 13 46.4**	**-1.1**
	comp=Z,3.2nm,0.8s,mb4.3								
TAPN	**Taplejung**	**54.05**	**273**	*e*P		**P**		**02 13 50.2**	**+1.6**
	comp=Z,3.6nm,0.4s,mb4.7								
EKS2	**Erkin-Say**	**54.33**	**297**	*e*P		**P**		**02 13 50.4**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.3								
AML	**Almayashu**	**54.68**	**296**	*e*P		**P**		**02 13 53.1**	**+0.1**
	comp=Z,1.7nm,0.4s,mb4.4								
JIRN	**Jiri**	**54.90**	**275**	*e*P		**P**		**02 13 56.7**	**+1.9**
GUN	**Gumba**	**54.96**	**275**	*e*P		**P**		**02 13 57.8**	**+2.6**
	comp=Z,7.8nm,0.4s,mb5.1								
RAMN	**Ramite**	**55.06**	**274**	*e*P		**P**		**02 13 57.4**	**+1.4**
	comp=Z,14nm,0.4s,mb5.4								
ARU	**Arti**	**55.19**	**318**	*e*P		**P**		**02 13 55.3**	**-1.2**
ARU	**Arti**	**55.19**	**318**	*e*P		**P**		**02 13 55.3**	**-1.2**
KKN	**Kakani**	**55.44**	**275**	*e*P		**P**		**02 14 00.9**	**+2.1**
	comp=Z,6.2nm,0.3s,mb5.2								
KKN	**Kakani**	**55.44**	**275**	*e*P		**P**		**02 14 00.9**	**+2.1**
KKN				pmax		pmax			
	comp=Z,6.0nm,0.3s,mb5.1								
PKI	**Pulchoki**	**55.49**	**275**	*e*P		**P**		**02 14 00.7**	**+1.6**
	comp=Z,11nm,0.6s,mb5.1								
PKI	**Pulchoki**	**55.49**	**275**	*e*P		**P**		**02 14 00.7**	**+1.6**
PKI				pmax		pmax			
	comp=Z,11nm,0.6s,mb5.1								
DMN	**Daman**	**55.68**	**275**	*e*P		**P**		**02 14 02.4**	**+2.0**
	comp=Z,30nm,0.9s,mb5.3								
GKN

	comp=Z,14nm,1.4s,mb4.9							
FFC	**Flin Flon**	**61.02**	**40**	*e*P		**P**	**02 14 35.8**	**-1.5**
	comp=Z,14nm,1.4s,mb4.9							
HRY	**Holter Researc**	**61.23**	**51**	*e*P		**P**	**02 14 40.0**	**+1.2**
LRM	**Limekiln Ridge**	**61.44**	**53**	*e*P		**P**	**02 14 40.6**	**+0.3**
FCC	**Fort Churchill**	**61.56**	**33**	*e*P		**P**	**02 14 39.7**	**-1.2**
	comp=Z,1.2nm,1.9s,mb3.7							
FCC				*e*		pP	02 14 51.8	-0.9
FCC				*e*PcP		PcP	02 15 22.2	0.0
JOF	**Joensuu**	**61.58**	**334**	*e*p		**P**	**02 14 41.2**	**+0.3**
	comp=Z,0.6nm,0.4s,mb4.1							
JOF	**Joensuu**	**61.58**	**334**	*e*P		**P**	**02 14 41.2**	**+0.3**
JOF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.3							
HLID	**Hailey**	**61.74**	**56**	P		**P**	**02 14 42.7**	**+0.3**
BOZ	**Bozeman (W)**	**62.00**	**52**	*e*P		**P**	**02 14 44.5**	**+0.4**
KBL	**Kabul**	**62.11**	**292**	*e*P		**P**	**02 14 44.9**	**-0.1**
KBL				*e*			02 14 59.3	
KBL				*e*			02 15 22.2	
KBL				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.7							
KBL	**Kabul**	**62.11**	**292**	*e*P		**P**	**02 14 44.9**	**-0.1**
	comp=Z,6.1nm,0.9s,mb4.7							
KBL				*e*			02 14 59.3	
KBL				*e*PcP		PcP	02 15 22.2	-2.8
NVAR	**Mina Array Bea**	**62.64**	**62**	P		**P**	**02 14 47.7**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.9,baz=286,slow=7.6,SNR=3.8							
ELK	**Elko**	**63.03**	**58**	*e*P		**P**	**02 14 51.4**	**+0.4**
ELK				*e*		pP	02 15 02.5	-0.3
KAF	**Kangasniemi**	**63.69**	**335**	*e*p		**P**	**02 14 56.1**	**+1.1**
	comp=Z,0.5nm,0.3s,mb4.0							
KAF	**Kangasniemi**	**63.69**	**335**	*e*P		**P**	**02 14 56.1**	**+1.1**
KAF				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.3							
LOHW	**Long Hollow**	**63.86**	**54**	*e*P		**P**	**02 14 59.1**	**+2.7**
	comp=Z,32nm,2.1s,mb5.0							
REDW	**Red Top Meadow**	**63.88**	**54**	*e*P		**P**	**02 14 59.6**	**+3.0**
PSI	**Prapat**	**63.88**	**244**	LR		LR	02 45 09.2	
	comp=Z,87nm,19.1s,MS4.0,baz=27,slow=38							
DUG	**Dugway**	**64.80**	**58**	*e*P		**P**	**02 15 01.5**	**-1.2**
DUG				*e*		pP	02 15 14.0	-0.6
DUG				pmax	pmax			
	comp=Z,10.0nm,1.4s,mb4.7							
DUG	**Dugway**	**64.80**	**58**	*e*P		**P**	**02 15 01.5**	**-1.2**
	comp=Z,9.9nm,1.4s,mb4.7							
DUG				*e*		pP	02 15 14.0	-0.6
BW06	**Boulder Array**	**64.99**	**54**	*e*P		**P**	**02 15 03.8**	**0.0**
PDAR	**Pinedale Array**	**64.99**	**54**	P		**P**	**02 15 03.7**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.1,baz=286,slow=2.0,SNR=12							
PDAR				LR		LR	02 43 40.8	
	comp=Z,112nm,20.0s,MS4.1,baz=115,slow=36							
CTA	**Charters Tower**	**66.50**	**187**	LR		LR	02 43 49.1	
	comp=Z,85nm,18.5s,MS4.0,baz=232,slow=36							
SRU	**San Rafael**	**66.84**	**57**	*e*P		**P**	**02 15 15.8**	**0.0**
RSSD	**Black Hills**	**67.08**	**50**	*e*P		**P**	**02 15 17.1**	**-0.1**
RSSD				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.5							
RSSD	**Black Hills**	**67.08**	**50**	*e*P		**P**	**02 15 17.1**	**-0.2**
	comp=Z,5.7nm,1.1s,mb4.5							
WRAB	**Tennant Creek**	**68.19**	**199**	*e*P		**P**	**02 15 25.3**	**+0.9**
WRAB				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5							
WRAB	**Tennant Creek**	**68.19**	**199**	*e*P		**P**	**02 15 25.3**	**+1.0**
	comp=Z,4.3nm,0.9s,mb4.5							
WB2	**Warramunga Arr**	**68.20**	**199**	*e*P		**P**	**02 15 24.3**	**-0.1**
WRA	**Warramunga Arr**	**68.20**	**199**	P		**P**	**02 15 22.8**	**-1.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=20,slow=6.8,SNR=4.3							
WRA				LR		LR	02 44 21.2	
	comp=Z,45nm,21.2s,MS3.7,baz=100,slow=35							
AGMN	**Agassiz Refuge**	**68.21**	**42**	*e*P		**P**	**02 15 25.9**	**+1.6**
NB2	**NORSAR Subarra**	**68.50**	**341**	P		**P**	**02 15 25.4**	**-0.5**
	comp=Z,7.9nm,0.9s,mb4.7,baz=30,slow=6.5							
NOA	**NORSAR Array B**	**68.50**	**341**	P		**P**	**02 15 25.6**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.4,baz=28,slow=6.4,SNR=12							
NOA				LR		LR	02 48 45.7	
	comp=Z,188nm,18.1s,MS4.4,baz=10.0,slow=39							
NOA	**NORSAR Array B**	**68.50**	**341**	P		**P**	**02 15 25.6**	**-0.3**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NOA				MLR	MLR			
	comp=Z,188nm,18.1s							
HFS	**Hagfors**	**68.72**	**340**	P		**P**	**02 15 26.5**	**-0.7**
	comp=Z,3.0nm,0.4s,mb4.5,baz=53,slow=5.7,SNR=30							
HFS	**Hagfors**	**68.72**	**340**	P		**P**	**02 15 26.5**	**-0.8**
HFS				pmax	pmax			
	comp=Z,3.0nm,0.4s							
FITZ	**Fitzroy Crossi**	**68.84**	**208**	*e*P		**P**	**02 15 28.4**	**-0.1**
	comp=Z,2.7nm,0.6s,mb4.3							
ISCO	**Idaho Springs**	**69.18**	**54**	*e*P		**P**	**02 15 30.9**	**+0.4**
SDCO	**Great Sand Dun**	**70.66**	**55**	*e*P		**P**	**02 15 40.4**	**+0.7**
KIV	**Kislovodsk**	**70.96**	**314**	*e*P		**P**	**02 15 42.7**	**+1.4**
KIV				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4							
KIV				MLR	MLR			
	comp=Z,380nm,17.0s,MS4.7							
SUW	**Suwalki**	**71.23**	**331**	P		**P**	**02 15 41.4**	**-1.4**
AKASG	**Malin Array Be**	**71.76**	**326**	P		**P**	**02 15 45.4**	**-0.7**
	comp=Z,4.6nm,0.6s,mb4.6,baz=33,slow=6.2,SNR=19							
AKASG				LR		LR	02 49 21.7	
	comp=Z,288nm,19.4s,MS4.5,baz=40,slow=38							
AKASG	**Malin Array Be**	**71.76**	**326**	P		**P**	**02 15 45.4**	**-0.6**
AKASG				pmax	pmax			
	comp=Z,5.0nm,0.6s							
AKASG				MLR	MLR			
	comp=Z,288nm,19.4s							
AKBB	**Malin Array Si**	**71.76**	**326**	*e*P		**P**	**02 15 45.6**	**-0.4**
KIEV	**Kiev**	**71.77**	**326**	*e*P		**P**	**02 15 44.6**	**-1.5**
KIEV				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7							
KIEV	**Kiev**	**71.77**	**326**	*e*P		**P**	**02 15 44.5**	**-1.6**
	comp=Z,5.5nm,0.6s,mb4.7							
ASAR	**Alice Springs**	**71.89**	**198**	P		**P**	**02 15 46.8**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=12,slow=6.0,SNR=16							
ASAR	**Alice Springs**	**71.89**	**198**	P		**P**	**02 15 46.8**	**-0.2**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ANMO	**Albuquerque**	**72.05**	**58**	P		**P**	**02 15 48.9**	**+0.8**
SCHQ	**Schefferville**	**73.62**	**23**	LR		LR	02 52 33.4	
	comp=Z,141nm,19.9s,MS4.2,baz=114,slow=39							
BUR08	**Bucovina Ar. S**	**75.79**	**327**	*e*P		**P**	**02 16 10.0**	**+0.3**
DPC	**Dobruska-Polom**	**76.56**	**333**	*e*P		**P**	**02 16 15.6**	**+1.5**
WMOK	**Wichita Mounta**	**76.60**	**54**	*e*P		**P**	**02 16 14.3**	**-0.2**
WMOK				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
WMOK	**Wichita Mounta**	**76.60**	**54**	*e*P		**P**	**02 16 14.3**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.1							
CLL	**Collm**	**76.71**	**336**	*i* P		**P**	**02 16 14.3**	**-0.6**
CLL				*i*			02 16 21.2	
CLL				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
CLL				MLR	MLR			
	comp=Z,200nm,17.9s,MS4.5							
CLL	**Collm**	**76.71**	**336**	*i* P		**P**	**02 16 14.3**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.5							
CLL				*i*			02 16 21.2	
CLL				LR		LR		
	comp=Z,200nm,17.9s,MS4.5							
MALT	**Malatya**	**77.31**	**313**	*e*P		**P**	**02 16 20.5**	**+2.0**
MALT				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
MALT	**Malatya**	**77.31**	**313**	*e*P		**P**	**02 16 20.5**	**+2.0**
	comp=Z,3.0nm,0.8s,mb4.3							
PRU	**Pruhonice**	**77.43**	**334**	*e*P		**P**	**02 16 19.0**	**+0.1**
PSZ	**Piszkesteto**	**77.49**	**330**	*e*P		**P**	**02 16 18.5**	**-0.8**
PSZ				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
PSZ	**Piszkesteto**	**77.49**	**330**	*e*P		**P**	**02 16 18.5**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.2							
TXAR	**Lajitas Array**	**77.71**	**60**	P		**P**	**02 16 19.4**	**-1.4**
	comp=Z,2.7nm,0.7s,mb4.3,baz=301,slow=3.8,SNR=40							
TXAR	**Lajitas Array**	**77.71**	**60**	P		**P**	**02 16 19.5**	**-1.3**
TXAR				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KHC	**Kasperske Hory**	**78.48**	**334**	*e*P		**P**	**02 16 25.0**	**+0.2**
KHC	**Kasperske Hory**	**78.48**	**334**	*e*P		**P**	**02 16 24.0**	**-0.8**
BRTR	**Keskin Array B**	**78.56**	**317**	P		**P**	**02 16 25.6**	**+0.1**
	comp=Z,1.3nm,0.9s,mb3.9,baz=91,slow=5.1,SNR=5.9							
BRTR				LR		LR	02 56 57.3	
	comp=Z,154nm,18.9s,MS4.4,baz=220,slow=40							
STKA	**Stephens Creek**	**78.64**	**190**	LR		LR	02 50 52.4	
	comp=Z,87nm,18.8s,MS4.1,baz=26,slow=36							
GRA1	**Grafenberg Arr**	**78.67**	**336**	*e*P		**P**	**02 16 25.5**	**-0.3**
	comp=Z,21nm,1.8s,mb4.8							
GRF	**Grafenberg Arr**	**78.67**	**336**	*e*P		**P**	**02 16 25.5**	**-0.3**
GRF				pmax	pmax			
	comp=Z,21nm,1.8s,mb4.8							
GRF	**Grafenberg Arr**	**78.67**	**336**	*e*P		**P**	**02 16 25.5**	**-0.3**
	comp=Z,21nm,1.8s,mb4.8							
GERES	**GERESS Array B**	**78.70**	**334**	P		**P**	**02 16 26.0**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=36,slow=4.7,SNR=9.9							
GERES				LR		LR	02 55 03.6	
	comp=Z,284nm,19.0s,MS4.6,baz=285,slow=39							
GERES	**GERESS Array B**	**78.70**	**334**	P		**P**	**02 16 26.0**	**0.0**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
GERES				MLR	MLR			
	comp=Z,284nm,19.0s							
MIB	**Mutribah**	**78.76**	**301**	*e*P		**P**	**02 16 28.1**	**+1.4**
MIB				AMb	AMB		02 16 41.4	
	comp=Z,34nm,0.8s,mb5.3							
RDF	**Al-Radifah**	**79.28**	**301**	*e*P		**P**	**02 16 27.1**	**-2.5**
RDF				AMb	AMB		02 16 37.3	
	comp=Z,79nm,1.6s,mb5.4							
WATA	**Walderalm**	**80.69**	**335**	⇑*i*P		**P**	**02 16 37.3**	**+0.5**
	comp=Z,6.3nm,0.9s,mb4.5							
WTTA	**Wattenberg**	**80.73**	**334**	⇑*i*P		**P**	**02 16 37.5**	**+0.5**
	comp=Z,7.2nm,0.8s,mb4.7							
MOTA	**Moosalm**	**80.82**	**335**	⇑*i*P		**P**	**02 16 37.7**	**+0.2**
	comp=Z,4.3nm,0.9s,mb4.4							
CDF	**Champ du Feu**	**80.91**	**338**	*e*P		**P**	**02 16 37.1**	**-0.9**
	comp=Z,16nm,1.2s,mb4.5							
CDF	**Champ du Feu**	**80.91**	**338**	*e*P		**P**	**02 16 37.1**	**-0.9**
CDF				pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.5							
CDF	**Champ du Feu**	**80.91**	**338**	*e*P		**P**	**02 16 37.1**	**-0.9**
	comp=Z,8.2nm,1.2s,mb4.5							
HAU	**Haudompre**	**81.53**	**338**	*e*P		**P**	**02 16 40.8**	**-0.5**
PPT	**Papeete**	**82.04**	**126**	LR		LR	02 50 01.1	
	comp=Z,144nm,19.9s,MS4.3,baz=69,slow=33							
LOR	**Lormes**	**82.84**	**339**	*e*P		**P**	**02 16 47.0**	**-1.1**
	comp=Z,15nm,1.0s,mb4.7							
LOR	**Lormes**	**82.84**	**339**	*e*P		**P**	**02 16 47.0**	**-1.1**
LOR				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7							
LOR	**Lormes**	**82.84**	**339**	*e*P		**P**	**02 16 47.0**	**-1.1**
	comp=Z,7.5nm,1.0s,mb4.7							
SSF	**Saint Saulge**	**83.12**	**340**	*e*P		**P**	**02 16 48.6**	**-1.0**
SMF	**Signal de Mont**	**83.42**	**339**	*e*P		**P**	**02 16 49.9**	**-1.3**
	comp=Z,56nm,1.5s,mb5.1							
SMF	**Signal de Mont**	**83.42**	**339**	*e*P		**P**	**02 16 49.9**	**-1.3**
SMF				pmax	pmax			
	comp=Z,28nm,1.5s,mb5.1							
SMF	**Signal de Mont**	**83.42**	**339**	*e*P		**P**	**02 16 49.9**	**-1.3**
	comp=Z,28nm,1.5s,mb5.1							
LPL	**La Plagne**	**83.72**	**337**	*e*P		**P**	**02 16 51.8**	**-0.9**
LPG	**La Plagne**	**83.74**	**337**	*e*P		**P**	**02 16 51.9**	**-0.9**
ESDC	**Sonseca Array**	**91.82**	**342**	LR		LR	03 10 26.6	
	comp=Z,70nm,18.4s,MS4.1,baz=335,slow=43							
KEST	**Kesra**	**91.90**	**331**	P		**P**	**02 17 33.4**	**+1.1**
	comp=Z,1.1nm,0.8s,mb4.2,baz=181,slow=4.4,SNR=3.6							
KEST				LR		LR	03 03 53.7	
	comp=Z,59nm,18.8s,MS4.1,baz=190,slow=39							
TORD	**Torodi Ar. Bea**	**115.32**	**329**	PKP	PKPdf		02 23 04.3	-1.5
	comp=Z,0.2nm,0.7s,baz=25,slow=3.7,SNR=2.9							
TORD	**Torodi Ar. Bea**	**115.32**	**329**	PKP	PKPdf		02 23 04.3	-1.5
BDFB	**Brasilia**	**144.63**	**37**	PKP	PKPdf		02 24 01.0	+0.4
	comp=Z,1.6nm,1.0s,baz=114,slow=25,SNR=3.6							
PLCA	**Paso Flores**	**148.25**	**96**	PKP	PKPdf		02 24 04.8	-1.3
	comp=Z,2.7nm,1.0s,baz=249,slow=13,SNR=2.2							
PLCA	**Paso Flores**	**148.25**	**96**	PKIKP	PKPdf		02 24 04.8	-1.2
PLCA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
CPUP	**Villa Florida**	**148.68**	**61**	PKPbc	PKPbc		02 24 09.0	-2.0
	comp=Z,1.0nm,0.5s,baz=298,slow=2.8,SNR=5.5							
CPUP	**Villa Florida**	**148.68**	**61**	PKP2	PKPbc		02 24 09.0	-2.0
CPUP				pmax	pmax			
	comp=Z,1.0nm,0.5s							
CPUP	**Villa Florida**	**148.68**	**61**	PKPbc	PKPbc		02 24 09.0	-2.0
VNA2	**Neumayer--Watz**	**153.69**	**194**	*e*PKPdf	PKPab		02 24 33.8	-0.5
	baz=101,slow=1.9							
VNA2				*e*			02 24 45.3	
VNA3	**Neumayer Olymp**	**153.78**	**193**	*e*PKPdf	PKPab		02 24 33.1	-1.5
VNA3				*e*			02 24 44.9	

MOS ***25*** *02:18:32.9±2.5, 49.76N×8.791E, h29km, mb4.0/1, Error ellipse: s-maj=17.1km s-min=12.2km az=72.6*
ISCJB ***25*** *02:18:34.1±1.2, 50.27N±0.008×8.786E±0.006, h15km±7km, Error ellipse: s-maj=14.1km s-min=5.7km az=168.7*
NNC ***25*** *02:18:37.3±2.5, 49.94N×8.748E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=19.1km s-min=11.2km az=77.0*

ISC 25 02:18:36.1±1.1, 50.28N±0.007×8.788E±0.005, h13km±7km, n15, σ1§02/21, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.17**	**284**	*i* PG		**Pg**	**02 18 40.3**	**+0.3**
UKR	**Ust'-Kan**	**2.08**	**290**	*e*PN		**Pn**	**02 19 13.1**	**+2.4**
UKR				*e*			02 19 40.4	
TASR	**Tashtagol**	**2.48**	**0**	*e*PN		**Pg**	**02 19 23.6**	**-0.1**
TASR				*e*			02 19 58.8	
CERR	**Cheremushki**	**3.40**	**39**	*e*PN		**Pg**	**02 19 41.0**	**-0.1**
CERR				*e*			02 20 26.5	
HVS	**Khovu-Aksy**	**3.80**	**75**	*i* PN		**Pn**	**02 19 33.3**	**-1.0**
HVS				*i* S		**Sn**	**02 20 20.6**	**+1.8**
KZLR	**Kyzyl**	**4.39**	**69**	*e*PN		**Pn**	**02 19 41.7**	**-0.7**
MK31	**Makanchi Array**	**5.09**	**229**	⇓Pn		**Pn**	**02 19 52.2**	**+0.2**
	13nm,0.6s,baz=56,slow=14,SNR=498							
MK31				⇑Sn		**Sn**	**02 20 50.2**	**-0.4**
	9.9nm,0.3s,baz=201,slow=25,SNR=5.7							
MK31				⇓Lg			02 21 04.5	
	39nm,0.5s,baz=53,slow=30,SNR=7.2							
KURK	**Kurchatov**	**5.92**	**278**	⇓Pn		**Pn**	**02 20 03.6**	**+0.2**
	8.2nm,0.5s							
KURK				⇓Sn		**Sn**	**02 21 10.9**	**-0.2**
	17nm,0.7s							
KURK				⇑Lg			02 21 39.9	
	89nm,0.6s							
KURK	**Kurchatov**	**5.92**	**278**	*e*PN		**Pn**	**02 20 03.7**	**+0.3**
KURK				*i* S		**Sn**	**02 21 12.2**	**+1.1**
KURBB	**Kurchatov Arra**	**5.98**	**277**	⇑Pn		**Pn**	**02 20 04.7**	**+0.5**
	4.1nm,0.5s							
KURBB				⇑Sn		**Sn**	**02 21 13.4**	**+0.9**
	8.2nm,0.7s							
KURBB				⇑Lg			02 21 43.0	
	21nm,0.6s							
KRAR	**Krasnoyarsk**	**6.48**	**26**	*e*PN		**Pn**	**02 20 14.8**	**+3.7**
TLY	**Talaya**	**10.05**	**76**	*i* P		**Pn**	**02 20 59.2**	**-0.7**
BVA0	**Borovoye Array**	**11.21**	**291**	⇑Pn		**Pn**	**02 21 14.7**	**-1.1**
	0.3nm,0.6s,baz=106,slow=13,SNR=14							
BVA0				⇑Sn		**Sn**	**02 23 18.9**	**-1.9**
	1.1nm,0.8s,baz=107,slow=22,SNR=8.2							
BRVK	**Borovoye**	**11.27**	**291**	*i* P		**Pn**	**02 21 16.0**	**-0.7**
AAK	**Ala-Archa**	**11.97**	**235**	*i* P		**Pn**	**02 21 18.2**	**-8.1**
AAK				pmax	pmax			
	comp=Z,2.0nm,1.3s							

IDC 25 03:07:02.9±2.1, 517S×6876E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, MS3.4/3, Ms1 3.4/3, ms1mx3.1/22, Error ellipse: s-maj=68.1km s-min=23.7km az=55.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PSI	**Prapat**	**31.15**	**76**	LR		LR	03 23 48.8	
	comp=Z,56nm,18.2s,baz=317,slow=32							
BOSA	**Boshof**	**47.33**	**235**	LR		LR	03 33 08.4	
	comp=Z,42nm,19.1s,baz=142,slow=33							
MKAR	**Makanchi Array**	**53.11**	**12**	P		P	03 16 21.6	-0.5
	0.4nm,0.6s,baz=203,slow=8.7,SNR=4.8							
BRTR	**Keskin Array B**	**55.16**	**327**	P		P	03 16 37.8	+0.5
	1.0nm,1.1s,baz=142,slow=7.3,SNR=3.6							
KURK	**Kurchatov**	**56.31**	**8**	P		P	03 16 44.2	-1.2
	0.6nm,0.9s,baz=200,slow=7.1,SNR=3.5							
ZALV	**Zalesovo Beam**	**60.42**	**11**	P		P	03 17 13.5	-0.6
	0.9nm,0.5s,baz=205,slow=6.6,SNR=5.6							
SONM	**Songino Array**	**62.27**	**28**	P		P	03 17 27.9	+1.2
	1.3nm,0.7s,baz=220,slow=6.7,SNR=11							
ASAR	**Alice Springs**	**65.19**	**114**	P		P	03 17 46.2	-0.3
	0.2nm,0.6s,baz=276,slow=6.7,SNR=8.1							
WRA	**Warramunga Arr**	**65.31**	**109**	P		P	03 17 47.7	+0.4
	0.2nm,0.3s,baz=296,slow=4.6,SNR=7.0							
WRA				LR		LR	03 42 36.7	
	comp=Z,40nm,19.9s,baz=290,slow=33							
ROSC	**El Rosal**	**143.24**	**271**	PKhKP			03 26 36.0	
	3.2nm,0.3s,baz=114,slow=14,SNR=4.5							
TXAR	**Lajitas Array**	**154.92**	**344**	PKPab	PKPab		03 27 29.9	+7.6
	0.8nm,1.0s,baz=106,slow=2.0,SNR=4.2							

IDC 25 03:53:25.2±2.4, 198N×12761E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/14, mbtmp3.2/3, Error ellipse: s-maj=184.8km s-min=27.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.76**	**163**	P		P	03 58 29.3	0.0
	0.6nm,0.6s,baz=343,slow=10,SNR=3.4							
ASAR	**Alice Springs**	**26.22**	**167**	P		P	03 59 01.8	-0.1
	0.3nm,1.0s,baz=344,slow=8.2,SNR=4.8							
MKAR	**Makanchi Array**	**59.48**	**325**	P		P	04 03 30.4	+0.3
	0.2nm,0.5s,baz=128,slow=6.5,SNR=4.5							

IDC 25 03:59:54.5±1.9, 2038S×17677W, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.8/16, mbtmp3.9/3, Error ellipse: s-maj=79.7km s-min=31.5km az=166.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HNR	**Honiara**	**24.96**	**292**	P		P	04 05 20.3	+0.5
	171nm,0.3s,baz=138,slow=7.3,SNR=23							
ASAR	**Alice Springs**	**45.67**	**256**	P		P	04 08 18.4	+1.1
	3.6nm,0.6s,baz=88,slow=8.5,SNR=82							
WRA	**Warramunga Arr**	**45.76**	**262**	P		P	04 08 16.2	-1.9
	0.6nm,0.5s,baz=95,slow=7.2,SNR=8.7							
TXAR	**Lajitas Array**	**86.02**	**57**	P		P	04 12 37.3	+0.1
	0.4nm,0.7s,baz=203,slow=5.8,SNR=5.7							

MOS ***25*** *04:09:32.8±1.0, 48.07N×3.344E, h18km, mb4.0/7, Error ellipse: s-maj=7.4km s-min=5.7km az=91.1*
IDC ***25*** *04:09:32.9±0.9, 48.03N×3.345E, h0km, mb3.8/6, mb1 3.8/11, mb1mx3.6/27, mbtmp3.7/11, ML3.3/6, Error ellipse: s-maj=17.7km s-min=10.5km az=152.0*
ISCJB ***25*** *04:09:34.7±0.4, 48.05N±0.002×3.347E±0.003, h41km±8km, mb3.7/8, Error ellipse: s-maj=4.1km s-min=3.6km az=33.5*
CSEM ***25*** *04:09:34.7±0.1, 47.97N×3.352E, h45km, mb3.8/3, Error ellipse: s-maj=3.3km s-min=2.2km az=137.0*
NEIC ***25*** *04:09:36.7±0.5, 48.08N×3.349E, h44km±8km, mb3.7/4, Error ellipse: s-maj=6.8km s-min=4.8km az=214.0*

ISC 25 04:09:37.0±0.3, 4804N±002×3347E±003, h44km±8km, n97, σ1§14/117, mb3.7/8, 13C-12D, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SIM	**Simferopol'**	**3.12**	**171**	*e*P		**Pn**	**04 10 23.0**	**-0.6**
SIM				*e*S		**Sn**	**04 10 58.0**	**-1.7**
SIM	**Simferopol'**	**3.12**	**171**	P		**Pn**	**04 10 24.2**	**+0.6**
KIS	**Kishinev**	**3.32**	**253**	*e*		**Sn**	**04 11 09.0**	**+4.6**
SUDU	**Sudak**	**3.33**	**161**	⇑*e*P		**Pn**	**04 10 26.6**	**+0.2**
SUDU				*e*S		**Sn**	**04 11 05.1**	**+0.5**
ALU	**Alushta**	**3.42**	**169**	*e*P		**Pn**	**04 10 27.4**	**-0.3**
ALU				*e*S		**Sn**	**04 11 08.1**	**+1.1**
ALU	**Alushta**	**3.42**	**169**	P		**Pn**	**04 10 28.3**	**+0.6**
SEV	**Sevastopol'**	**3.50**	**178**	⇑*e*P		**Pn**	**04 10 27.2**	**-1.6**
SEV				*e*S		**Sn**	**04 11 06.6**	**-2.3**
SEV				*e*S		**Sn**	**04 11 07.2**	**-1.7**
AKASG	**Malin Array Be**	**3.84**	**315**	Pn		**Pn**	**04 10 32.5**	**-1.0**
	1.3nm,0.3s,baz=123,slow=13,SNR=3.7							
AKASG				Lg			04 11 30.2	
	33nm,0.3s,baz=124,slow=30,SNR=16							
AKASG	**Malin Array Be**	**3.84**	**315**	*e*P		**Pn**	**04 10 37.4**	**+3.9**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.3s							
AKBB	**Malin Array Si**	**3.84**	**315**	*e*Pn		**Pn**	**04 10 32.9**	**-0.6**
AKBB				Sn		**Sn**	**04 11 18.7**	**+1.4**
AKBB	**

NIE	**Niedzica**	**8.81**	**284**	*e*P		**Pn**	**04 11 43.4**	**+1.9**
PSZ	**Piszkesteto**	**9.11**	**274**	*e*Pn		**Pn**	**04 11 45.2**	**-0.5**
PSZ	**Piszkesteto**	**9.11**	**274**	*e*Pn		**Pn**	**04 11 45.2**	**-0.5**
OJC	**Ojcow**	**9.22**	**289**	*e*P		**Pn**	**04 11 46.8**	**-0.4**
OJC				*e*Sn		**Sn**	**04 13 26.9**	**-2.7**
MALT	**Malatya**	**10.37**	**158**	Pn		**Pn**	**04 12 03.7**	**+0.7**
MALT	**Malatya**	**10.37**	**158**	Pn		**Pn**	**04 12 03.7**	**+0.7**
ISP	**Isparta**	**10.42**	**193***c*	*i* P		**Pn**	**04 12 06.1**	**+2.4**
ISP	**Isparta**	**10.42**	**193**	*i* P		**Pn**	**04 12 06.2**	**+2.5**
MAK	**Makhachkala**	**11.08**	**112**	*i* P		**Pn**	**04 12 11.7**	**-1.0**
VSU	**Vasula**	**11.18**	**341**	*i* P		**Pn**	**04 12 13.9**	**-0.1**
VSU	**Vasula**	**11.18**	**341**	P		**Pn**	**04 12 13.9**	**-0.1**
GERES	**GERESS Array B**	**13.15**	**281**	Pn		**Pn**	**04 12 40.4**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=76,slow=14,SNR=3.4							
KHC	**Kasperske Hory**	**13.21**	**282**	*d* iP		**Pn**	**04 12 42.1**	**+0.4**
AKTK	**Aktyubinsk**	**16.19**	**72**	Pn		**Pn**	**04 13 16.3**	**-4.9**
AKTO	**Aktyubinsk**	**16.19**	**72**	Pn		**Pn**	**04 13 16.3**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=279,slow=13,SNR=3.7							
HFS	**Hagfors**	**16.68**	**324**	Pn		**Pn**	**04 13 21.1**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=147,slow=19,SNR=3.8							
ARU	**Arti**	**17.43**	**52**	P		**Pn**	**04 13 35.9**	**-0.7**
ARU	**Arti**	**17.43**	**52**	Pn		**Pn**	**04 13 35.8**	**-0.8**
ARU	**Arti**	**17.43**	**52**	Pn		**Pn**	**04 13 35.9**	**-0.8**
WLF	**Walferdange**	**18.01**	**285**	*e*P		**Pn**	**04 13 42.4**	**-1.4**
WLF				pmax	pmax			
	comp=Z,6.0nm,0.9s							
WLF	**Walferdange**	**18.01**	**285**	*e*P		**Pn**	**04 13 42.4**	**-1.4**
	comp=Z,5.7nm,0.9s							
WLF	**Walferdange**	**18.01**	**285**	*e*P		**Pn**	**04 13 42.4**	**-1.4**
	comp=Z,5.7nm,0.9s							
NOA	**NORSAR Array B**	**18.21**	**324**	P		**Pn**	**04 13 46.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=133,slow=9.8,SNR=3.6							
NAO01	**NORSAR Array S**	**18.22**	**323**	P		**Pn**	**04 13 44.5**	**-1.8**
NAO01	**NORSAR Array S**	**18.22**	**323**	P		**Pn**	**04 13 44.5**	**-1.8**
ARCES	**ARCESS Array B**	**21.91**	**353**	P		**P**	**04 14 26.6**	**+0.7**
	comp=Z,4.5nm,0.7s,mb4.0,baz=174,slow=11,SNR=21							
ARCES	**ARCESS Array B**	**21.91**	**353**	P		**P**	**04 14 26.7**	**+0.7**
ARCES				pmax	pmax			
	comp=Z,5.0nm,0.7s							
ARCES	**ARCESS Array B**	**21.91**	**353**	P		**P**	**04 14 26.6**	**+0.6**
ESK	**Eskdalemuir**	**23.65**	**302**	*e*P		**P**	**04 14 41.1**	**-2.9**
ESK	**Eskdalemuir**	**23.65**	**302**	*e*P		**P**	**04 14 41.1**	**-2.9**
BRVK	**Borovoye**	**23.74**	**64**	P		**P**	**04 14 43.4**	**-1.5**
BRVK	**Borovoye**	**23.74**	**64**	P		**P**	**04 14 43.4**	**-1.5**
BVAR	**Borovoye Array**	**23.81**	**64**	P		**P**	**04 14 49.0**	**+3.6**
	comp=Z,1.0nm,0.7s,mb3.3,baz=290,slow=6.0,SNR=4.0							
AAK	**Ala-Archa**	**29.08**	**85**	*i* P		**P**	**04 15 35.2**	**+2.1**
AAK				pmax	pmax			
	comp=Z,3.0nm,1.8s,mb3.7							
AAK	**Ala-Archa**	**29.08**	**85**	*e*P		**P**	**04 15 31.6**	**-1.5**
	comp=Z,1.0nm,0.4s,mb3.9							
AAK	**Ala-Archa**	**29.08**	**85**	*e*P		**P**	**04 15 31.6**	**-1.5**
	comp=Z,1.0nm,0.4s,mb3.9							
KURK	**Kurchatov**	**29.18**	**68**	*i* P		**P**	**04 15 36.3**	**+2.5**
KURK				MLR	MLR			
	comp=Z,100nm,17.0s							
KURK	**Kurchatov**	**29.18**	**68**	*e*P		**P**	**04 15 32.2**	**-1.6**
	comp=Z,0.5nm,0.5s,mb3.5							
KURK	**Kurchatov**	**29.18**	**68**	*e*P		**P**	**04 15 32.2**	**-1.6**
	comp=Z,0.5nm,0.5s,mb3.5							
ZALV	**Zalesovo Beam**	**32.25**	**60**	P		**P**	**04 16 01.8**	**+0.9**
	comp=Z,1.2nm,0.7s,mb3.9,baz=267,slow=11,SNR=5.6							
ZALV	**Zalesovo Beam**	**32.25**	**60**	P		**P**	**04 16 01.8**	**+0.9**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.8							
TORD	**Torodi Ar. Bea**	**43.67**	**228**	P		**P**	**04 17 38.5**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=29,slow=8.1,SNR=5.9							
TORD	**Torodi Ar. Bea**	**43.67**	**228**	P		**P**	**04 17 38.5**	**+1.1**
DBIC	**Dimbokro**	**52.52**	**231**	P		**P**	**04 18 46.2**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.0,baz=347,slow=5.6,SNR=3.8							
DBIC	**Dimbokro**	**52.52**	**231**	P		**P**	**04 18 46.2**	**+0.4**
DBIC				pmax	pmax			
	comp=Z,1.0nm,0.6s							
DBIC	**Dimbokro**	**52.52**	**231**	*e*P		**P**	**04 18 45.7**	**-0.1**
	comp=Z,1.7nm,0.7s,mb4.1							
YKA	**Yellowknife Ar**	**66.91**	**345**	P		**P**	**04 20 26.4**	**+2.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=17,slow=6.3,SNR=9.0							
YKA	**Yellowknife Ar**	**66.91**	**345**	P		**P**	**04 20 26.4**	**+2.3**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							

IDC 25 04:12:41.0±1.4,**2648S**×**17598W**,**h0**km,**mb3.7**/3,
mb1 4.0/3,**mb1mx3.8**/13,**mbtmp3.7**/3,**MS3.3**/2,**Ms1 3.3**/2,
ms1mx2.8/26,**Error ellipse: s-maj=74.2km**
s-min=32.5km az=173.0,**South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**28.41**	**302**	LR	LR	04 27 46.0	
	comp=Z,53nm,20.0s,baz=310,slow=32						
CTA	**Charters Tower**	**35.18**	**272**	LR	LR	04 31 10.3	
	comp=Z,54nm,18.9s,baz=231,slow=32						
ASAR	**Alice Springs**	**45.26**	**262**	P	P	04 21 00.1	-0.4
	0.2nm,0.3s,baz=97,slow=6.8,SNR=13						
WRA	**Warramunga Arr**	**45.90**	**267**	P	P	04 21 06.1	+0.4
	0.5nm,0.6s,baz=95,slow=7.9,SNR=5.1						
TXAR	**Lajitas Array**	**88.79**	**56**	P	P	04 25 37.2	+0.4
	0.5nm,0.8s,baz=198,slow=8.5,SNR=5.5						
TORD	**Torodi Ar. Bea**	**166.56**	**170**	PKPab	PKPab	04 33 50.1	-0.8
	0.7nm,0.7s,baz=186,slow=5.4,SNR=6.4						

IDC 25 04:24:15.0±1.7,**825S**×**11963E**,**h0**km,**mb3.7**/3,**mb1 3.9**/5,
mb1mx3.6/17,**mbtmp3.7**/5,**ML3.5**/2,**Error ellipse:**
s-maj=83.3km s-min=21.2km az=61.0,**Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.21**	**2**	Pn	Pn	04 25 07.5	+0.7
	4.9nm,0.3s,baz=182,slow=8.0,SNR=25						
KAPI				Sn	Sn	04 25 42.8	-3.1
	3.2nm,0.3s,baz=137,slow=19,SNR=3.6						
WRA	**Warramunga Arr**	**18.39**	**131**	P	Pn	04 28 30.8	-0.8
	0.2nm,0.3s,baz=298,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**20.55**	**140**	P	P	04 28 55.1	-0.2
	2.3nm,0.7s,baz=322,slow=10,SNR=22						
STKA	**Stephens Creek**	**31.15**	**142**	P	P	04 30 36.5	+0.9
	3.5nm,1.1s,baz=321,slow=13,SNR=3.4						
MKAR	**Makanchi Array**	**64.08**	**332**	P	P	04 34 50.6	-0.2
	0.2nm,0.6s,baz=136,slow=6.9,SNR=2.9						

IGQ ***25*** *04:31:17.4,355S×7998W,h5km±13km,Mb4.6,Ms4.4,*
Error ellipse: s-maj=13.2km s-min=2.6km az=101.1
ISCJB ***25*** *04:31:18.6±0.9,376S±005×8008W±008,h93km±9km,*
mb3.3/7,Error ellipse: s-maj=13.1km s-min=8.5km
az=172.1
NEIC ***25*** *04:31:19.2±1.7,379S×7992W,h82km±19km,mb4.0/1,*
Error ellipse: s-maj=27.9km s-min=10.3km az=79.0
NEIC Felt [III] at Chuculanas.
IDC ***25*** *04:31:20.9±2.8,370S×7979W,h98km±28km,mb3.0/6,*
mb1 3.5/9,mb1mx3.4/22,mbtmp3.3/9,MS2.9/1,Ms1 2.9/1,
ms1mx2.3/12,Error ellipse: s-maj=38.6km s-min=19.3km
az=60.0
ISC 25 04:31:19.3±0.8,**380S**±005×**8008W**±008,**h83**km±9km,**n44**,
σ0§**70**/46,**mb3.3**/7,**3D**,**Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**2.70**	**32**	P	**Pn**	**04 32 00.4**	**-0.3**
IGUA	**Igualata**	**2.70**	**32**	S	**Sn**	**04 32 32.1**	**-0.4**
ARRY	**Arrayan**	**2.79**	**35**	P	**Pn**	**04 32 01.5**	**-0.5**
CHIS	**Cerro-Chispas-**	**2.80**	**347**	‖P	**Pn**	**04 32 01.9**	**-0.2**
CHIS	**Cerro-Chispas-**	**2.80**	**347**	‖S	**Sn**	**04 32 33.3**	**-1.7**
PATA	**Patacocha**	**2.81**	**36**	‖P	**Pn**	**04 32 02.5**	**+0.3**
RETU	**Refugio**	**2.84**	**35**	P	**Pn**	**04 32 02.8**	**+0.2**
RETU	**Refugio**	**2.84**	**35**	S	**Sn**	**04 32 35.9**	**0.0**
JUI6	**Juive**	**2.85**	**34**	P	**Pn**	**04 32 02.6**	**-0.1**
ULBA	**Ulba**	**2.87**	**36**	P	**Pn**	**04 32 03.4**	**+0.5**
ULBA	**Ulba**	**2.87**	**36**	S	**Sn**	**04 32 35.8**	**-0.7**
RUN5	**Runtun**	**2.88**	**35**	P	**Pn**	**04 32 03.5**	**+0.3**
QIL2	**Quilotoa**	**3.13**	**22**	P	**Pn**	**04 32 05.9**	**-0.6**
QIL2	**Quilotoa**	**3.13**	**22**	S	**Sn**	**04 32 42.2**	**-0.7**
PISA	**Pisayambo**	**3.20**	**32**	P	**Pn**	**04 32 07.6**	**+0.2**
CAMI	**Rancho Maria**	**3.47**	**27**	P	**Pn**	**04 32 11.7**	**+0.5**
JAMA	**Jama**	**3.51**	**358**	P	**Pn**	**04 32 12.0**	**+0.2**
TAMB	**Tambo**	**3.52**	**29**	P	**Pn**	**04 32 12.7**	**+0.9**
VC1	**Cotopaxi 1**	**3.55**	**28**	P	**Pn**	**04 32 12.8**	**+0.6**
ATAH	**Atahualpa**	**3.60**	**152**	P	**Pn**	**04 32 17.3**	**+4.4**
	10nm,0.3s,baz=6.4,slow=8.1,SNR=53						
ATAH				S	**Sn**	**04 33 02.2**	**+8.0**
	23nm,0.3s,baz=38,slow=7.8,SNR=6.6						
ATAH				LR	LR	04 33 53.1	
	comp=Z,158nm,20.0s,baz=160,slow=41						
ANTI	**Antisana**	**3.83**	**30**	P	**Pn**	**04 32 16.3**	**+0.2**
TERV	**Terraza Guagua**	**3.89**	**22**	P	**Pn**	**04 32 17.4**	**+0.6**
TERV	**Terraza Guagua**	**3.89**	**22**	S	**Sn**	**04 33 02.0**	**+0.7**
GGP	**Refugio Guagua**	**3.89**	**22**	P	**Pn**	**04 32 17.2**	**+0.3**
GGP	**Refugio Guagua**	**3.89**	**22**	S	**Sn**	**04 33 02.1**	**+0.8**
PINO	**Pino**	**3.90**	**22**	P	**Pn**	**04 32 17.2**	**+0.3**
OTAV	**Otavalo**	**4.32**	**22**	*e*Pn	**Pn**	**04 32 22.4**	**-0.3**
OTAV				*e*Sn	**Sn**	**04 32 57.4**	**-15**
COTA	**Cotacachi**	**4.46**	**23**	P	**Pn**	**04 32 24.6**	**+0.1**
COTA	**Cotacachi**	**4.46**	**23**	S	**Sn**	**04 33 19.5**	**+4.3**
NNA	**Nana**	**8.75**	**159**	P	**Pn**	**04 33 23.5**	**+0.5**
	9.1nm,0.3s,baz=311,slow=9.3,SNR=29						
NNA				S	**Sn**	**04 34 58.6**	**-1.4**
	15nm,0.3s,baz=79,slow=18,SNR=9.9						
NNA	**Nana**	**8.75**	**159**	*e*Pn	**Pn**	**04 33 21.9**	**-1.2**
	28nm,0.6s						
NNA				*e*Sn	**Sn**	**04 34 44.2**	**-16**
SDV	**Santo Domingo**	**15.73**	**37**	P	**Pn**	**04 34 55.6**	**-0.5**
	0.9nm,0.3s,baz=283,slow=16,SNR=9.6						
LVC	**Limon Verde**	**21.61**	**151**	*e*P	**P**	**04 36 02.9**	**+0.3**
	4.9nm,0.8s,mb3.9						
SIV	**San Ignacio**	**22.27**	**124**	P	**P**	**04 36 07.0**	**-2.7**
	1.2nm,0.9s,mb3.2,baz=281,slow=10,SNR=3.1						
CFAA	**Coronel Fontan**	**29.82**	**159**	P	**P**	**04 37 19.5**	**+0.9**
	0.2nm,0.7s,mb2.8,baz=338,slow=7.2,SNR=4.8						
TXAR	**Lajitas Array**	**39.97**	**327**	P	**P**	**04 38 46.6**	**+0.8**
	0.2nm,0.7s,mb3.1,baz=152,slow=9.9,SNR=4.6						
TXAR				PcP	PcP	04 40 50.4	+0.7
	0.2nm,0.7s,baz=142,slow=7.7,SNR=2.7						
PDAR	**Pinedale Array**	**53.48**	**333**	P	**P**	**04 40 31.2**	**+0.2**
	0.5nm,0.8s,mb3.6,baz=127,slow=9.4,SNR=4.6						
YKA	**Yellowknife Ar**	**71.13**	**344**	P	**P**	**04 42 27.7**	**-0.8**
	0.3nm,0.8s,mb3.1,baz=137,slow=6.2,SNR=5.6						
VNA3	**Neumayer Olymp**	**80.19**	**162**	*e*	**P**	**04 43 20.5**	**+0.3**
VNA3				*e*		04 43 25.2	
VNA2	**Neumayer--Watz**	**80.81**	**161**	*e*	**P**	**04 43 23.6**	**+0.1**
	baz=288,slow=5.5						
VNA2				*e*		04 43 27.9	
SNAA	**Sanae**	**82.41**	**162**	*e*	**P**	**04 43 32.4**	**+0.5**
SNAA				*e*		04 43 37.4	
TORD	**Torodi Ar. Bea**	**82.86**	**76**	P	**P**	**04 43 34.3**	**-1.1**
	0.6nm,1.1s,mb3.3,baz=278,slow=6.3,SNR=5.3						
ASAR	**Alice Springs**	**137.09**	**229**	PKP	PKPdf	04 50 33.5	-0.1
	0.4nm,0.9s,baz=119,slow=2.7,SNR=4.2						
WRA	**Warramunga Arr**	**138.78**	**234**	PKP	PKPdf	04 50 35.3	-1.5
	0.6nm,0.9s,baz=112,slow=2.0,SNR=3.4						

ISCJB ***25*** *04:47:56.8±0.8,1908S±005×6920W±009,h109km±10km,*
mb3.8/6,Error ellipse: s-maj=14.1km s-min=8.0km
az=159.5
NEIC ***25*** *04:47:58.3±0.8,1910S×69.19W,h108km±9km,mb4.0/4,*
Error ellipse: s-maj=11.0km s-min=9.4km az=89.0
IDC ***25*** *04:47:59.1±2.7,1918S×69.14W,h116km±27km,mb3.4/6,*
mb1 3.5/8,mb1mx3.3/19,mbtmp3.4/8,Error ellipse:
s-maj=28.7km s-min=19.7km az=130.0
ISC 25 04:47:58.1±0.7,**1908S**±005×**6921W**±008,**h105**km±9km,
n16,σ0§**80**/18,**mb3.8**/6,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**3.39**	**320**	*e*P	**Pn**	**04 48 50.0**	**+0.7**
ARE				*e*S	**Sn**	**04 49 28.0**	**-0.8**
LVC	**Limon Verde**	**3.52**	**175**	P	**Pn**	**04 48 52.8**	**+1.8**
	5.8nm,0.3s,baz=353,slow=9.2,SNR=28						
LVC				S	**Sn**	**04 49 31.8**	**-0.1**
	28nm,0.3s,baz=12,slow=11,SNR=4.2						
SIV	**San Ignacio**	**8.35**	**70**	P	**Pn**	**04 49 56.1**	**-0.4**
	0.8nm,0.3s,baz=265,slow=9.7,SNR=22						
CFAA	**Coronel Fontan**	**12.50**	**176**	P	**Pn**	**04 50 50.3**	**-1.9**
	0.0nm,0.3s,baz=15,slow=12,SNR=2.8						
TRQA	**Tornquist**	**19.93**	**163**	*e*P	**P**	**04 52 22.2**	**+0.7**
	5.1nm,0.5s						
BDFB	**Brasilia**	**20.52**	**84**	P	**P**	**04 52 28.2**	**+0.1**
	1.7nm,0.5s,baz=252,slow=18,SNR=15						
BDFB	**Brasilia**	**20.52**	**84**	*e*P	**P**	**04 52 28.3**	**+0.1**
	2.4nm,0.4s						
PLCA	**Paso Flores**	**21.61**	**183**	P	**P**	**04 52 38.6**	**-1.0**
	3.3nm,0.9s,mb3.6,baz=13,slow=14,SNR=4.0						
PLCA	**Paso Flores**	**21.61**	**183**	P	**P**	**04 52 38.7**	**-0.9**
	2.8nm,0.8s,mb3.6						
RCBR	**Riachuelo**	**35.01**	**72**	*e*P	**P**	**04 54 41.0**	**+0.2**
	10nm,0.9s,mb4.7						
RPN	**Rapa Nui**	**37.63**	**250**	*e*P	**P**	**04 55 03.2**	**+0.1**
	16nm,0.4s						
TXAR	**Lajitas Array**	**58.50**	**325**	P	**P**	**04 57 43.8**	**+0.3**
	0.1nm,0.8s,mb2.9,baz=132,slow=3.8,SNR=2.5						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**04 58 48.8**	**0.0**
	1.1nm,0.5s,mb3.9,baz=235,slow=12,SNR=2.9						
TORD	**Torodi Ar. Bea**	**76.83**	**71**	P	**P**	**04 59 38.5**	**-0.5**
	1.5nm,0.5s,mb4.0,baz=253,slow=5.1,SNR=27						
YKA	**Yellowknife Ar**	**88.82**	**341**	P	**P**	**05 00 40.5**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=135,slow=4.8,SNR=11						
YKA				pP	pP	05 01 10.1	+2.8
	0.3nm,0.8s,baz=131,slow=4.8,SNR=4.4						
YKA	**Yellowknife Ar**	**88.82**	**341**	P	**P**	**05 00 40.5**	**+0.6**
YKA				pP	pP	05 01 10.1	+2.8

CSEM ***25*** *05:08:43.7,3927N×3322E,h2km,MD3.0,After ISK*
DDA ***25*** *05:08:43.5,3937N×3316E,h9km±1km,Md3.0*
ISK ***25*** *05:08:43.7,3927N×3322E,h2km,MD3.0*
ISCJB ***25*** *05:08:44.2±0.8,3933N±005×3318E±005,h7km±7km,*
Error ellipse: s-maj=8.7km s-min=4.6km az=145.4
ISC 25 05:08:44.2±0.7,**3934N**±005×**3318E**±005,**h2**km±9km,**n9**,
σ0§**88**/15,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.42**	**85**	PG	**Pg**	**05 08 52.3**	**+0.1**
KAMT				*e*SG	**Sg**	**05 08 58.4**	**+0.8**
CDAG	**Cicekdag**	**0.97**	**72**	*i* P	**Pg**	**05 09 02.1**	**-0.7**
CDAG				*i* S	**Sg**	**05 09 15.7**	**+0.3**
KIZT	**Kizilcal**	**1.11**	**246**	*e*Pn	**Pg**	**05 09 05.7**	**+0.3**
KIZT				*e*Sn	**Sg**	**05 09 21.9**	**+2.1**
KDHN	**Kadinhani**	**1.16**	**226**	*i* P	**Pg**	**05 09 00.9**	**-5.6**
KDHN				*i* S	**Sg**	**05 09 19.0**	**-2.5**
ELDT	**Eldivan**	**1.17**	**9**	*i* P	**Pg**	**05 09 06.1**	**-0.5**
ELDT				*i* S	**Sg**	**05 09 21.7**	**-0.1**
KONT	**Konya--Tatoy**	**1.53**	**205**	*e*Pn	**Pn**	**05 09 12.8**	**+0.4**
KONT				*e*Sn	**Sn**	**05 09 33.2**	**+0.3**
NIG	**Nigde**	**1.66**	**137**	*e*Pn	**Pn**	**05 09 13.4**	**-0.8**
YOZ	**Yozgat**	**1.69**	**79**	*e*Pn	**Pn**	**05 09 14.8**	**+0.2**
TOS	**Tosya**	**1.82**	**21**	*e*Pn	**Pb**	**05 09 17.9**	**-0.2**

IDC ***25*** *05:20:50.8±0.7,4783N×154.01E,h0km,mb3.9/10,*
mb1 4.2/11,mb1mx3.9/25,mbtmp3.9/11,ML4.0/1,MS3.2/4,
Ms1 3.2/4,ms1mx2.7/33,Error ellipse: s-maj=25.5km
s-min=14.7km az=156.0
NEIC ***25*** *05:20:52.2±0.6,4774N×154.15E,h10km,mb3.8/1,Error*
ellipse: s-maj=20.4km s-min=11.1km az=157.0
MOS ***25*** *05:20:56.8±1.5,4776N×154.31E,h65km,mb4.1/6,Error*
ellipse: s-maj=15.7km s-min=9.6km az=64.5
ISCJB ***25*** *05:20:57.2±1.3,4784N±009×1542E±01,h65km±12km,*
mb3.8/11,Error ellipse: s-maj=18.9km s-min=7.9km
az=141.0
ISC 25 05:20:58.9±1.1,**4786N**±009×**1542E**±01,**h61**km±10km,**n40**,
σ1§**41**/36,**mb3.9**/11,**3C-3D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.10**	**24**	*e*PN	**Pn**	**05 21 46.0**	**+0.8**
SKR				*e*S	**Sn**	**05 22 21.0**	**0.0**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=N,170nm,0.5s						
SKR				smax			
	comp=E,220nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
PETK	**Petropavlovsk-**	**5.71**	**22**	Pn	**Pn**	**05 22 22.6**	**+1.6**
	comp=Z,2.5nm,0.3s,baz=175,slow=12,SNR=34						
PET	**Petropavlovsk**	**5.91**	**27***d*	*i* PN	**Pn**	**05 22 25.4**	**+1.8**
PET	**Petropavlovsk**	**5.91**	**27**	*e*Pn	**Pn**	**05 22 21.3**	**-2.4**
YSS	**Yuzh-Sakhalins**	**7.79**	**268**	‖*i* PN	**Pn**	**05 22 52.5**	**+3.0**
YSS	**Yuzh-Sakhalins**	**7.79**	**268**	*e*Pn	**Pn**	**05 22 44.3**	**-5.2**
ASAJ	**Asahikawa**	**8.88**	**249**	Pn	**Pn**	**05 23 06.5**	**+2.2**
	comp=Z,2.2nm,0.3s,baz=90,slow=11,SNR=5.2						
ASAJ				LR	LR	05 27 08.1	
	comp=Z,76nm,19.1s,baz=218,slow=43						
ERM	**Erimo**	**9.75**	**237**	‖*i* PN	**Pn**	**05 23 14.9**	**-1.3**
HABR	**Khabarovsk**	**12.78**	**280**	*e*PN	**Pn**	**05 23 56.6**	**-0.9**
FX1	**Attu Island--F**	**13.11**	**60**	Pn	**Pn**	**05 23 59.1**	**-3.0**
	comp=Z,2.5nm,0.3s,baz=112,slow=19,SNR=11						
FX1				Sn	**Sn**	**05 26 11.0**	**-15**
	comp=Z,3.1nm,0.3s,baz=38,slow=22,SNR=9.1						
MJAR	**Matsushiro Arr**	**16.33**	**232**	*e*P	**Pn**	**05 24 49.3**	**+5.3**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**19.80**	**325**	‖*i* P	**Pn**	**05 25 23.9**	**-2.0**
BILL	**Bilibino**	**21.15**	**13***d*	*i* P	**P**	**05 25 38.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,14nm,2.2s,mb3.9						
KSRS	**Korea Array**	**21.82**	**251**	P	**P**	**05 25 45.2**	**-0.7**
	comp=Z,1.8nm,0.7s,mb3.6,baz=59,slow=10,SNR=6.0						
KSRS				LR	LR	05 33 12.7	
	comp=Z,37nm,19.0s,baz=345,slow=34						
KSRS	**Korea Array**	**21.82**	**251**	*e*P	**P**	**05 25 46.5**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
COLA	**College**	**34.82**	**39***c*	*i* P	**P**	**05 27 41.4**	**-2.0**
ZALV	**Zalesovo Beam**	**42.55**	**305**	LR	LR	05 49 21.2	
	comp=Z,44nm,18.2s,baz=131,slow=40						
MKAR	**Makanchi Array**	**47.07**	**297**	P	**P**	**05 29 24.5**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=70,slow=7.1,SNR=12						
MKAR	**Makanchi Array**	**47.07**	**297**	*e*P	**P**	**05 29 26.3**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**47.35**	**303**	P	**P**	**05 29 25.0**	**-1.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=168,slow=18,SNR=7.6						
KURK				LR	LR	05 50 00.4	
	comp=Z,46nm,19.7s,baz=335,slow=37						
KURK	**Kurchatov**	**47.35**	**303**	P	**P**	**05 29 29.2**	**+2.9**
	comp=Z,0.4nm,0.4s,mb3.7						
YKA	**Yellowknife Ar**	**49.60**	**38**	P	**P**	**05 29 42.2**	**-1.2**
	comp=Z,0.9nm,0.7s,mb3.9,baz=298,slow=7.2,SNR=14						
YKA				PcP	PcP	05 31 05.3	+1.3
	comp=Z,0.2nm,0.5s,baz=299,slow=3.9,SNR=4.3						
YKA	**Yellowknife Ar**	**49.60**	**38**	P	**P**	**05 29 42.2**	**-1.2**
YKA						05 31 05.3	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**49.60**	**38**	P	**P**	**05 29 42.2**	**-1.3**
YKA				PcP	PcP	05 31 05.3	+1.3
BVAR	**Borovoye Array**	**50.71**	**309**	P	**P**	**05 29 51.5**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=69,slow=8.1,SNR=4.0						
BVAR	**Borovoye Array**	**50.71**	**309**	P	**P**	**05 29 51.5**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**61.29**	**63**	P	**P**	**05 31 09.1**	**+1.4**
	comp=Z,1.4nm,0.6s,mb4.2,baz=296,slow=6.6,SNR=5.6						
NVAR	**Mina Array Bea**	**61.29**	**63**	P	**P**	**05 31 09.1**	**+1.4**
PDAR	**Pinedale Array**	**63.52**	**55**	P	**P**	**05 31 23.9**	**+1.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=308,slow=1.9,SNR=8.9						
WRA	**Warramunga Arr**	**69.80**	**200**	P	**P**	**05 32 01.5**	**-1.1**
	comp=Z,0.6nm,0.6s,m

comp=Z,6.6nm,0.6s,mb4.7
BVAR Borovoye Array 68.69 327 P **P** 05 32 22.4 -0.5
comp=Z,2.7nm,0.7s,mb4.2,baz=111,slow=8.1,SNR=14
BRVK Borovoye 68.76 327 *eP* **P** 05 32 22.6 -0.8
comp=Z,3.6nm,0.6s,mb4.4
TORD Torodi Ar. Bea 124.35 288 PKP PKPdf 05 40 18.2 -0.3
comp=Z,0.2nm,0.4s,baz=30,slow=1.4,SNR=4.1

*ISCJB **25** 05:22:58.1±0.3, 2383N±002×12167E±002, h46km±4km, Error ellipse: s-maj=3.7km s-min=2.3km az=135.8*
*TAP **25** 05:22:58.1, 2386N×12159E, h46km, ML3.3, C*
*JMA **25** 05:22:58.8±0.3, 2396N×12173E, h79km, M2.6*
ISC 25 05:22:58.6±0.3, 2384N±002×12167E±002, h43km±5km, n47, σ0°76/90, 2C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ESF	**Shoufeng Towns**	**0.15**	**283**	*eP*		**Pn**	**05 23 06.0**	**+0.2**
	baz=293							
HWA	**Hwalien**	**0.15**	**338**	*eP*		**Pn**	**05 23 06.1**	**+0.3**
HWA	baz=353			*eS*		**Sn**	**05 23 12.5**	**+1.6**
	baz=353							
TEGC	**Jichi Village**	**0.17**	**222**	*eP*		**Pn**	**05 23 07.5**	**+1.5**
	baz=198							
TEGC				*eS*		**Sn**	**05 23 13.7**	**+2.7**
	baz=198							
ESL	**Shilin**	**0.21**	**264**	P		**Pn**	**05 23 05.6**	**-0.7**
	baz=260							
ESL				*eS*		**Sn**	**05 23 10.4**	**-1.2**
	baz=260							
TWD	**Chiawan**	**0.25**	**345**	*i* P		**Pn**	**05 23 06.2**	**-0.4**
	baz=351							
TWD				*eS*		**Sn**	**05 23 11.9**	**-0.3**
	baz=351							
EHY	**Hungye**	**0.46**	**224**	P		**Pn**	**05 23 07.7**	**-1.2**
	baz=215							
EHY				*eS*		**Sn**	**05 23 12.7**	**-3.5**
	baz=215							
WHF	**Hehuan Shan**	**0.48**	**310**	⇑*i* P		**Pn**	**05 23 08.7**	**-0.5**
	baz=310							
WHF				S		**Sn**	**05 23 15.9**	**-0.7**
	baz=310							
TWF1	**Yuli**	**0.59**	**215**	P		**Pn**	**05 23 09.3**	**-1.3**
	baz=216							
TWF1				*eS*		**Sn**	**05 23 17.9**	**-1.3**
	baz=216							
ENA	**Nanau**	**0.59**	**7**	P		**Pn**	**05 23 09.9**	**-0.7**
	baz=4.0							
ENA				S		**Sn**	**05 23 18.8**	**-0.4**
	baz=4.0							
NNS	**Nan Shan**	**0.66**	**336**	P		**Pn**	**05 23 10.9**	**-0.5**
	baz=343							
NNS				S		**Sn**	**05 23 19.9**	**-0.8**
	baz=343							
SMLT	**Sun Moon Lake**	**0.70**	**274**	*i* P		**Pn**	**05 23 11.7**	**-0.4**
	baz=273							
SMLT				S		**Sn**	**05 23 21.3**	**-0.5**
	baz=273							
YUS	**Yu-Shan**	**0.74**	**242**	P		**Pn**	**05 23 12.7**	**+0.1**
	baz=236							
YUS				S		**Sn**	**05 23 22.6**	**-0.1**
	baz=236							
TYC	**Yuchr**	**0.74**	**275**	P		**Pn**	**05 23 12.3**	**-0.3**
	baz=276							
TYC				*eS*		**Sn**	**05 23 22.4**	**-0.4**
	baz=276							
CHKT	**Chengkung**	**0.79**	**201**	*eP*		**Pn**	**05 23 12.7**	**-0.5**
	baz=185							
CHKT				*eS*		**Sn**	**05 23 23.5**	**-0.3**
	baz=185							
TWC	**Suao**	**0.79**	**12**	P		**Pn**	**05 23 13.4**	**+0.2**
	baz=7.0							
TWC				S		**Sn**	**05 23 24.1**	**+0.3**
	baz=7.0							
ENTT	**Nioudou**	**0.80**	**354**	⇑*i* P		**Pn**	**05 23 12.7**	**-0.8**
	baz=357							
ENTT				*eS*		**Sn**	**05 23 23.2**	**-1.1**
	baz=357							
ALS	**Alishan**	**0.85**	**248**	P		**Pn**	**05 23 14.4**	**+0.3**
	baz=240							
ALS				S		**Sn**	**05 23 25.8**	**+0.3**
	baz=240							
ELDTW	**Lidau**	**0.88**	**223**	*eP*		**Pn**	**05 23 13.4**	**-1.0**
	baz=215							
TWE	**Neicheng**	**0.88**	**0**	*eP*		**Pn**	**05 23 14.7**	**+0.1**
	baz=3.0							
TWE				*eS*		**Sn**	**05 23 25.6**	**-0.5**
	baz=3.0							
NSK	**Sanguang**	**0.88**	**342**	P		**Pn**	**05 23 14.4**	**-0.2**
	baz=345							
WNT	**Mingjian**	**0.90**	**273**	*eP*		**Pn**	**05 23 15.2**	**+0.4**
	baz=272							
WNT				*eS*		**Sn**	**05 23 27.5**	**+0.9**
	baz=272							
CHN5	**Tsauling**	**0.94**	**255**	P		**Pn**	**05 23 15.2**	**-0.1**
	baz=253							
CHN5				S		**Sn**	**05 23 27.7**	**+0.2**
	baz=253							
TCU	**Taichung**	**0.96**	**289**	*i* P		**Pn**	**05 23 16.0**	**+0.5**
	baz=289							
TCU				S		**Sn**	**05 23 28.3**	**+0.3**
	baz=289							
TWQ1	**Liyutan**	**0.96**	**302**	⇓*i* P		**Pn**	**05 23 15.7**	**+0.1**
	baz=303							
TWQ1				*i* S		**Sn**	**05 23 28.6**	**+0.5**
	baz=303							
NSTT	**Nanjuang**	**1.00**	**323**	*eP*		**Pn**	**05 23 15.0**	**-1.1**
	baz=315							
NSTT				S		**Sn**	**05 23 29.3**	**+0.4**
	baz=315							
WGK	**Gukeng**	**1.02**	**262**	*eP*		**Pn**	**05 23 17.2**	**+0.8**
	baz=260							
WGK				*eS*		**Sn**	**05 23 31.1**	**+1.5**
	baz=260							
STYT	**Tauyuan**	**1.07**	**231**	P		**Pn**	**05 23 16.2**	**-0.9**
	baz=229							
STYT				S		**Sn**	**05 23 30.8**	**0.0**
	baz=229							
CHN4	**Tsaushan**	**1.10**	**244**	*eP*		**Pn**	**05 23 18.3**	**+0.9**
	baz=242							
CHN4				S		**Sn**	**05 23 31.7**	**+0.2**
	baz=242							
WTP	**Ta-pu**	**1.13**	**239**	P		**Pn**	**05 23 17.9**	**0.0**
	baz=244							
WTP				*eS*		**Sn**	**05 23 32.9**	**+0.7**
	baz=244							
TWA	**Mucha**	**1.14**	**356**	*eP*		**Pn**	**05 23 18.6**	**+0.5**
	baz=358							
TWA				S		**Sn**	**05 23 32.4**	**-0.1**
	baz=358							
TWG	**Pinlang**	**1.15**	**208**	*eP*		**Pn**	**05 23 17.7**	**-0.5**
	baz=196							
TWG				*eS*		**Sn**	**05 23 30.2**	**-2.6**
	baz=196							
CHY	**Chiayi**	**1.19**	**254**	*eP*		**Pn**	**05 23 18.7**	**0.0**
	baz=252							
CHY				*eS*		**Sn**	**05 23 34.0**	**+0.3**
	baz=252							
TWB1	**Santiao Chiao**	**1.20**	**14**	*eP*		**Pn**	**05 23 20.3**	**+1.4**
	baz=25							
TWB1				S		**Sn**	**05 23 34.3**	**+0.3**
	baz=25							
TWK	**Hsinying**	**1.22**	**242**	*eP*		**Pn**	**05 23 19.6**	**+0.4**
	baz=241							
TWK				*eS*		**Sn**	**05 23 34.6**	**+0.2**
	baz=241							
CHN1	**Nanshi**	**1.23**	**238**	P		**Pn**	**05 23 19.8**	**+0.5**
	baz=237							
CHN1				S		**Sn**	**05 23 34.8**	**+0.1**
	baz=237							
NWF	**Wu-fen Shan**	**1.23**	**5**	*i* P		**Pn**	**05 23 19.6**	**+0.2**
	baz=6.0							
NWF				S		**Sn**	**05 23 35.0**	**+0.2**
	baz=6.0							
WTCT	**Ta-ch'eng**	**1.27**	**271**	*eP*		**Pn**	**05 23 20.1**	**+0.3**
	baz=271							
WTCT				*eS*		**Sn**	**05 23 37.0**	**+1.3**
	baz=271							
TWS1	**Kuangyinshan**	**1.28**	**350**	P		**Pn**	**05 23 19.8**	**-0.2**
	baz=3.0							
TWS1				S		**Sn**	**05 23 36.1**	**+0.2**
	baz=3.0							
YOJ	**Yonaguni jima**	**1.38**	**63**	P		**Pn**	**05 23 21.5**	**+0.2**
YOJ				*eS*		**Sn**	**05 23 38.3**	**0.0**
SSD	**Sandimen**	**1.44**	**221**	*eP*		**Pn**	**05 23 23.2**	**+1.0**
	baz=220							
SSD				*eS*		**Sn**	**05 23 40.1**	**+0.1**
	baz=220							
SCZT	**Fangliau**	**1.75**	**214**	*eP*		**Pn**	**05 23 28.1**	**+1.7**
	baz=202							
SCZT				*eS*		**Sn**	**05 23 48.0**	**+0.5**
	baz=202							
IRIF	**Iriomote-Funau**	**1.95**	**75**	P		**Pn**	**05 23 29.5**	**+0.3**
IRIF				*eS*		**Sn**	**05 23 52.4**	**-0.1**
PNG	**Penghu**	**1.95**	**263**	*eP*		**Pn**	**05 23 28.3**	**-0.9**
	baz=262							
PNG				*eS*		**Sn**	**05 23 51.1**	**-1.4**
	baz=262							
HATJ	**Hateruma jima**	**1.97**	**83**	P		**Pn**	**05 23 29.7**	**+0.3**
HATJ				*eS*		**Sn**	**05 23 53.7**	**+0.8**
JKRS	**Kuro-shima**	**2.18**	**79**	P		**Pn**	**05 23 32.8**	**+0.5**
JKRS				*eS*		**Sn**	**05 23 58.5**	**+0.4**
JIJ	**Ishigaki jima**	**2.32**	**76**	P		**Pn**	**05 23 34.2**	**-0.1**
JIJ				S		**Sn**	**05 24 00.6**	**-1.1**
JTJ	**Tarama**	**2.88**	**73**	P		**Pn**	**05 23 42.1**	**+0.1**

*ISCJB **25** 05:23:01.2±0.6, 3944N±004×3309E±003, h1km±6km, Error ellipse: s-maj=6.3km s-min=4.3km az=163.5*
*CSEM **25** 05:23:01.7±0.1, 3945N×3310E, h2km, MD3.1, Error ellipse: s-maj=3.4km s-min=3.3km az=35.0*
*ISK **25** 05:23:01.7, 3945N×3310E, h5km, MD3.1*
*DDA **25** 05:23:02.5, 3941N×3311E, h7km±1km, Md3.0*
ISC 25 05:23:02.1±0.5, 3943N±003×3311E±003, h5km±7km, n15, σ1°§03/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KAMT	**Kaman**	**0.47**	**97**	PG		**Pg**	**05 23 12.0**	**+0.9**
KAMT				*e*SG		**Sg**	**05 23 18.9**	**+1.7**
LOD	**Lodumlu**	**0.53**	**330**	*e*PG		**Pg**	**05 23 12.4**	**0.0**
LOD				*e*SG		**Sg**	**05 23 21.7**	**+2.4**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P		**Pg**	**05 23 21.4**	**+0.3**
CDAG				*i* S		**Sg**	**05 23 33.5**	**-0.6**
ELDT	**Eldivan**	**1.09**	**13**	*i* P		**Pg**	**05 23 23.1**	**+0.1**
ELDT				*i* S		**Sn**	**05 23 39.1**	**-0.3**
KIZT	**Kizilcal**	**1.10**	**241**	*e*PN		**Pg**	**05 23 23.8**	**+0.5**
KIZT				*e*SN		**Sn**	**05 23 41.0**	**+1.1**
KDHN	**Kadinhani**	**1.19**	**221**	*i* P		**Pg**	**05 23 25.2**	**+0.2**
KDHN				*i* S		**Sg**	**05 23 37.5**	**-3.0**
KDHN	**Kadinhani**	**1.19**	**221**	*i* P		**Pg**	**05 23 25.2**	**+0.2**
LADK	**Ladik-KONYA**	**1.36**	**206**	*e*PN		**Pg**	**05 23 28.9**	**+0.7**
KONT	**Konya--Tatoy**	**1.59**	**202**	*e*PN		**Pg**	**05 23 32.3**	**-0.4**
YOZ	**Yozgat**	**1.72**	**82**	*e*PN		**Pg**	**05 23 34.1**	**-1.0**
TOS	**Tosya**	**1.75**	**23**	*e*PN		**Pg**	**05 23 34.2**	**-1.5**
ESKT	**Eskisehir**	**1.75**	**274**	*i* P		**Pg**	**05 23 35.1**	**-0.6**
ESKT				*i* S		**Sg**	**05 23 57.8**	**-0.7**
SEYT	**Eskypehyr**	**1.75**	**274**	*i* P		**Pg**	**05 23 35.1**	**-0.6**
SEYT				*i* S		**Sg**	**05 23 57.8**	**-0.6**
NIG	**Nigde**	**1.76**	**138**	*e*PN		**Pb**	**05 23 35.5**	**+0.5**
BNN	**Bunyan**	**2.20**	**104**	*e*PN		**Pb**	**05 23 41.0**	**-1.5**

IDC 25 05:36:56.9±2.5, 1098S×11255E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.4/4, Error ellipse: s-maj=137.0km s-min=24.0km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.79**	**116**	P		P	05 42 01.4	+0.1
	0.3nm,0.4s,baz=288,slow=11,SNR=3.7							
ASAR	**Alice Springs**	**23.93**	**125**	P		P	05 42 12.2	-0.6
	0.2nm,0.6s,baz=299,slow=9.2,SNR=4.3							
STKA	**Stephens Creek**	**33.92**	**132**	P		P	05 43 42.4	+0.5
	1.0nm,0.5s,baz=299,slow=9.6,SNR=5.6							
MKAR	**Makanchi Array**	**63.56**	**337**	P		P	05 47 29.4	+0.1
	0.3nm,0.4s,baz=148,slow=7.3,SNR=7.9							

BJI 25 05:52:53.5, 4350N×12125E, h15km, mb3.6, ML4.0, Ms4.1, Msz3.7, 1D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SNY	**Shenyang**	**2.40**	**133**	⇓P		Pn	05 53 32.9	+0.7
SNY				PG		Pg	05 53 35.0	-4.4
SNY				S		Sn	05 54 05.1	+3.9
SNY				Smax				
	comp=N,748nm,0.3s							
SNY				Smax				
	comp=E,1μm,0.4s							
CN2	**Changchun**	**3.06**	**83**	*e*P		Pn	05 53 42.1	+0.8
CN2				*e*PG		Pg	05 53 48.3	-3.9
CN2				*e*SG		Sg	05 54 25.9	-5.9
CN2				Smax				
	comp=N,100nm,0.6s							
CN2				Smax				
	comp=E,100nm,0.6s							
DL2	**Dalian**	**4.60**	**176**	P		Pn	05 54 01.5	-0.9
DL2				PG		Pg	05 54 17.3	-4.2
DL2				SG		Sg	05 55 17.1	-4.0
DL2				Smax				
	comp=N,50nm,0.6s							
MDJ	**Mudanjiang**	**6.11**	**77**	PG		Pg	05 54 44.8	-5.7
MDJ				SG		Sg	05 56 04.0	-5.6
MDJ				Smax				
	comp=N,76nm,0.9s							
MDJ				Smax				
	comp=E,63nm,0.9s							
HHC	**Hu-ho-hao-te**	**7.67**	**253**	*e*P		Pn	05 54 47.8	+3.3
HHC				S		Sn	05 56 23.9	+13
HHC				SG		Sn	05 56 59.3	+48
HHC				Smax				
	comp=N,60nm,0.6s							
HHC				Smax				
	comp=E,80nm,0.9s							

*IDC **25** 05:57:16.9±1.4, 5290N×16935W, h0km, mb3.5/5, mb1 3.9/5, mb1mx3.6/24, mbtmp3.5/5, Error ellipse: s-maj=80.8km s-min=25.3km az=153.0*
*ISCJB **25** 05:57:26.0±0.7, 529N±0.1×1690W±0.1, h79km±5km, mb3.5/4, Error ellipse: s-maj=25.0km s-min=9.8km az=154.7*
*NEIC **25** 05:57:26.9, 5279N×16887W, h66km, ML3.7(AEIC), ML3.9(PMR), After AEIC.*
ISC 25 05:57:27.1±0.8, 528N±01×1690W±01, h72km±6km, n17, σ0°§58/19, mb3.5/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
NIKO	**Nikolski**	**0.17**	**31**	P		**Pn**	**05 57 37.1**	**-0.7**
NIKO				S		**Sn**	**05 57 45.2**	**-0.4**
OKCE	**Okmok Cone E**	**0.78**	**40**	P		**Pn**	**05 57 42.8**	**-0.1**
OKCD	**Okmok Cone D**	**0.80**	**41**	P		**Pn**	**05 57 43.3**	**0.0**
UNV	**Unalaska Valle**	**1.81**	**55**	P		**Pn**	**05 57 56.1**	**-0.1**
UNV				S		**Sn**	**05 58 18.1**	**-0.1**
AKLV	**Akutan Long Va**	**2.25**	**52**	P		**Pn**	**05 58 02.4**	**+0.3**
AKGG	**Akutan Green G**	**2.26**	**51**	P		**Pn**	**05 58 02.6**	**+0.4**
AKUT	**Akutan**	**2.33**	**55**	P		**Pn**	**05 58 03.7**	**+0.6**
SPIA	**Saint Paul Isl**	**4.41**	**351**	P		**Pn**	**05 58 31.2**	**-0.2**
ADK	**Adak**	**4.81**	**262**	P		**Pn**	**05 58 38.4**	**+1.5**
SDPT	**Sand Point**	**5.61**	**60**	P		**Pn**	**05 58 47.8**	**0.0**
CHGN	**Chignik**	**7.06**	**56**	*eP*		**Pn**	**05 59 07.9**	**+0.3**
YKA	**Yellowknife Ar**	**29.77**	**49**	P		**P**	**06 03 25.7**	**-0.6**
	0.2nm,0.4s,baz=275,slow=7.8,SNR=8.7							
YKA	**Yellowknife Ar**	**29.77**	**49**	P		**P**	**06 03 25.7**	**-0.6**
PDAR	**Pinedale Array**	**40.09**	**80**	P		**P**	**06 04 55.7**	**+0.4**
	0.5nm,0.7s,mb3.5,baz=303,slow=5.3,SNR=4.9							
TXAR	**Lajitas Array**	**52.51**	**90**	P		**P**	**06 06 33.2**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=302,slow=6.2,SNR=16							
WRA	**Warramunga Arr**	**87.47**	**232**	P		**P**	**06 10 05.3**	**-1.1**
	0.3nm,0.7s,mb3.4,baz=36,slow=6.3,SNR=3.6							
ASAR	**Alice Springs**	**90.87**	**230**	P		**P**	**06 10 21.8**	**-0.5**
	0.2nm,0.8s,mb3.3,baz=26,slow=4.6,SNR=4.7							

*IDC **25** 06:14:11.8±1.0, 3939N×7421E, h0km, mb3.6/6, mb1 3.7/10, mb1mx3.5/26, mbtmp3.5/10, ML3.2/4, Error ellipse: s-maj=21.3km s-min=19.3km az=60.0*
*ISCJB **25** 06:14:21.2±2.6, 397N±02×740E±0.1, h85km±21km, mb3.3/6, Error ellipse: s-maj=33.1km s-min=16.6km az=9.7*
ISC 25 06:14:21.1±2.7, 396N±02×741E±01, h70km±22km, n21, σ1°§35/21, mb3.3/6, 2C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AML	**Almayashu**	**2.50**	**353**	P		**Pn**	**06 14 58.8**	**-0.7**
	SNR=18							
KZA	**Kyzart**	**2.59**	**20**	P		**Pn**	**06 15 02.3**	**+1.6**
	SNR=6.9							
UCH	**Uchtor**	**2.60**	**7**	P		**Pn**	**06 15 01.0**	**+0.1**
	SNR=17							
AAK	**Ala-Archa**	**3.00**	**6**	P		**Pn**	**06 15 06.5**	**+0.2**
	SNR=29							
EKS2	**Erkin-Say**	**3.02**	**356**	P		**Pn**	**06 15 08.7**	**+2.1**
	SNR=11							
ULHL	**Ulahol**	**3.07**	**32**	P		**Pn**	**06 15 10.1**	**+2.9**
	SNR=7.7							
KBK	**Karagaybulak**	**3.08**	**12**	P		**Pn**	**06 15 07.7**	**+0.3**
	SNR=25							
TKM2	**Tokmak 2**	**3.47**	**19**	⇑Pn		**Pn**	**06 15 12.4**	**-0.3**
TKM2				⇓Lg			06 15 53.1	
	77nm,0.9s							
TKM2				⇓Rg			06 16 04.4	
	71nm,0.9s							
TKM2	**Tokmak 2**	**3.47**	**19**	P		**Pn**	**06 15 12.5**	**-0.2**
	SNR=9.2							
USP	**Ospenovka**	**3.63**	**5**	P		**Pn**	**06 15 21.5**	**+6.6**
	SNR=17							
KK31	**Karatay Array**	**4.37**	**323**	⇓Pn		**Pn**	**06 15 23.7**	**-1.3**
	6.1nm,0.7s,baz=129,slow=12,SNR=23							
KK31				⇑Lg			06 16 10.5	
	18nm,0.6s,baz=130,slow=24							
MKAR	**Makanchi Array**	**9.32**	**37**	Pn		**Pn**	**06 16 30.9**	**-1.7**
	0.0nm,0.3s,baz=208,slow=12,SNR=3.8							
BVAR	**Borovoye Array**	**13.62**	**351**	Pn		**Pn**	**06 17 27.8**	**-3.1**
	0.2nm,0.3s,baz=168,slow=8.8,SNR=6.5							
AKTO	**Aktyubinsk**	**15.62**	**319**	Pn		**Pn**	**06 17 55.0**	**-1.9**
	0.1nm,0.3s,baz=130,slow=17,SNR=4.1							
ZALV	**Zalesovo Beam**	**16.06**	**23**	Pn		**Pn**	**06 18 00.3**	**-2.1**
	0.2nm,0.3s,baz=211,slow=7.8,SNR=2.6							
GERES	**GERRESS Array B**	**43.18**	**303**	P		**P**	**06 22 17.3**	**+2.5**
	0.3nm,0.6s,mb3.2,baz=64,slow=9.1,SNR=4.8							
NOA	**NORSAR Array B**	**43.40**	**321**	P		**P**	**06 22 17.1**	**+0.8**
	0.9nm,0.7s,mb3.6,baz=90,slow=8.1,SNR=2.9							
TORD	**Torodi Ar. Bea**	**68.20**	**269**	P		**P**	**06 25 14.8**	**+0.4**
	0.5nm,0.7s,mb3.5,baz=44,slow=5.4,SNR=5.0							
YKA	**Yellowknife Ar**	**77.97**	**4**	P		**P**	**06 26 11.6**	**+0.4**
	0.2nm,0.5s,mb3.1,baz=349,slow=5.5,SNR=9.2							
WRA	**Warramunga Arr**	**81.67**	**124**	P		**P**	**06 26 31.4**	**-0.4**
	0.3nm,0.5s,mb3.4,baz=325,slow=5.6,SNR=6.7							
ASAR	**Alice Springs**	**84.14**	**127**	P		**P**	**06 26 43.8**	**-0.7**
	0.3nm,0.8s,mb3.2,baz=313,slow=5.7,SNR=3.8							

*ROM **25** 07:08:39.6±0.2, 4206N×1527E, h25km±2km, Md2.8/25, Ml2.7/27, Error ellipse: s-maj=3.2km s-min=1.6km az=17.0*
*ISCJB **25** 07:08:40.6±0.5, 4202N±003×1527E±003, h26km±4km, Error ellipse: s-maj=5.2km s-min=3.4km az=9.6*
*CSEM **25** 07:08:40.1±0.1, 4195N×1525E, h30km, MD2.8/25, Error ellipse: s-maj=1.7km s-min=1.2km az=10.0*
ISC 25 07:08:40.8±0.5, 4201N±003×1526E±003, h22km±5km, n74, σ0°§95/101, 6C-2D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
FG2	**Serracapriola**	**0.22**	**199**	⇑*i*Pg		**Pb**	**07 08 45.6**	**-0.7**
	2μm,0.4s							
FG2	**Serracapriola**	**0.22**	**199**	⇑*i*Pg		**Pb**	**07 08 45.6**	**-0.7**
	2μm,0.4s							
RGNG	**Rignano Grg**	**0.42**	**144**	⇓*i*Pg		**Pb**	**07 08 49.0**	**-0.5**
RGNG						Sg	**07 08 55.7**	**+0.3**
RGNG	**Rignano Grg**	**0.42**	**144**	⇓*i*Pg		**Pb**	**07 08 49.0**	**-0.5**
RGNG						Sg	**07 08 55.7**	**+0.3**
FRES	**Fresagrandinar**	**0.44**	**265**	⇑*i*Pg		**Pb**	**07 08 49.4**	**-0.5**
	652nm,0.3s							
FRES	**Fresagrandinar**	**0.44**	**265**	⇑*i*Pg		**Pb**	**07 08 49.4**	**-0.5**
	652nm,0.3s							
SGRT	**San Giovanni R**	**0.45**	**125**	Pg		**Pb**	**07 08 49.6**	**-0.3**
SGRT				Sg		**Sb**	**07 08 56.2**	**+0.1**
SGRT	**San Giovanni R**	**0.45**	**125**	Pg		**Pb**	**07 08 49.6**	**-0.3**
SGRT				Sg		**Sb**	**07 08 56.2**	**+0.1**
MSAG	**Monte S. Angel**	**0.57**	**121**	Pg		**Pb**	**07 08 51.8**	**-0.3**
MSAG				Sg		**Sb**	**07 09 00.7**	**+0.9**
	1μm,0.5s							
MSAG	**Monte S. Angel**	**0.57**	**121**	Pg		**Pb**	**07 08 51.8**	**-0.3**
MSAG				Sg		**Sb**	**07 09 00.7**	**+0.9**
	1μm,0.5s							
TRIV	**Trivento**	**0.58**	**245**	Pg		**Pb**	**07 08 52.0**	**-0.3**
TRIV				Sg		**Sb**	**07 09 01.7**	**+1.6**
	169nm,0.7s							
TRIV	**Trivento**	**0.58**	**245**	Pg		**Pb**	**07 08 52.0**	**-0.3**
TRIV				Sg		**Sb**	**07 09 01.7**	**+1.6**
	169nm,0.7s							
MS1	**Monte Sant'Ang**	**0.60**	**121**	*e*Pg		**Pb**	**07 08 51.8**	**-0.7**
MS1				*e*Sg		**Sb**	**07 09 01.4**	**+0.9**
MOCO	**Biccari - m.te**	**0.65**	**187**	Pg		**Pb**	**07 08 52.9**	**-0.4**
MOCO				Sg		**Sb**	**07 09 03.1**	**+1.2**
	179nm,0.3s							
BSSO	**Busso**	**0.68**	**227**	⇑*i*Pg		**Pb**	**07 08 53.3**	**-0.6**
BSSO							**07 09 05.0**	**+2.1**
	117nm,0.4s							
BSSO	**Busso**	**0.68**	**227**	⇑*i*Pg		**Pb**	**07 08 53.3**	**-0.6**
BSSO							**07 09 05.0**	**+2.1**
	117nm,0.4s							
CAFR	**Castel Frentan**	**0.71**	**288**	Pg		**Pb**	**07 08 54.4**	**-0.1**
CAFR	**Castel Frentan**	**0.71**	**288**	Pg		**Pb**	**07 08 54.4**	**-0.1**
FG5	**Orsara di Pugl**	**0.73**	**179**	Pg		**Pb**	**07 08 54.4**	**-0.4**
	124nm,0.2s							
FG5	**Orsara di Pugl**	**0.73**	**179**	Pg		**Pb**	**07 08 54.4**	**-0.4**
	124nm,0.2s							
SACR	**S. Croce Del S**	**0.74**	**214**	Pg		**Pb**	**07 08 54.0**	**-0.9**
SACR				Sg		**Sb**	**07 09 05.9**	**+1.3**
	152nm,0.4s							
SACR	**S. Croce Del S**	**0.74**	**214**	Pg		**Pb**	**07 08 54.0**	**-0.9**
SACR				Sg		**Sb**	**07 09 05.9**	**+1.3**
	152nm,0.4s							
MIDA	**Miranda**	**0.84**	**244**	Pg		**Pb**	**07 08 55.3**	**-1.3**
MIDA				Sg		**Sb**	**07 09 09.3**	**+1.9**
MIDA	**Miranda**	**0.84**	**244**	Pg		**Pb**	**07 08 55.3**	**-1.3**
MIDA				Sg		**Sb**	**07 09 09.3**	**+1.9**
	177nm,0.3s							
PTRJ	**Pietraroja**	**0.85**	**220**	Pg		**Pb**	**07 08 55.5**	**-1.3**
	133nm,0.3s							
PTRJ	**Pietraroja**	**0.85**	**220**	Pg		**Pb**	**07 08 55.5**	**-1.3**
	133nm,0.3s							
PSB1	**Pescosannita**	**0.85**

MCRV	**Calabrutti - M**	**1.23**	**183**	Pg		**Pn**	07 09 01.8	**-0.9**
	302nm,0.6s							
MRLC	**Muro Lucano**	**1.27**	**172**	Pg		**Pn**	07 09 02.8	**-0.4**
	77nm,0.4s							
MRLC	**Muro Lucano**	**1.27**	**172**	Pg		**Pn**	07 09 02.8	**-0.4**
	77nm,0.4s							
MODR	**Mondragone**	**1.35**	**231**	Pg		**Pn**	07 09 04.6	**+0.3**
	31nm,0.6s							
MODR	**Mondragone**	**1.35**	**231**	Pg		**Pn**	07 09 04.6	**+0.3**
	31nm,0.6s							
PTQR	**Pietraquaria**	**1.38**	**271**	Pg		**Pn**	07 09 05.1	**+0.3**
PTQR	**Pietraquaria**	**1.38**	**271**	Pg		**Pn**	07 09 05.1	**+0.3**
AMUR	**Altamura**	**1.50**	**137**	Pg		**Pn**	07 09 06.3	**0.0**
	121nm,0.4s							
AMUR	**Altamura**	**1.50**	**137**	Pg		**Pn**	07 09 06.3	**0.0**
	121nm,0.4s							
BAI	**Bari**	**1.52**	**126**	*e*Pg		**Pn**	07 09 04.3	**-2.3**
BAI				*e*Sg		**Sn**	07 09 25.3	**-0.4**
CDRU	**Civita di Ruta**	**1.52**	**179**	Pg		**Pn**	07 09 06.6	**-0.1**
	49nm,0.2s							
CDRU	**Civita di Ruta**	**1.52**	**179**	Pg		**Pn**	07 09 06.6	**-0.1**
	49nm,0.2s							
SG1	**Sgolgore (BA)**	**1.58**	**137**	*e*Pn		**Pn**	07 09 08.0	**+0.4**
SG1				*e*Sn		**Sn**	07 09 33.2	**+5.8**
MIGL	**Miglionico**	**1.66**	**147**	Pg		**Pn**	07 09 08.6	**-0.1**
	240nm,0.3s							
MIGL	**Miglionico**	**1.66**	**147**	Pg		**Pn**	07 09 08.6	**-0.1**
	240nm,0.3s							
CMPR	**Campora**	**1.69**	**179**	Pg		**Pn**	07 09 08.9	**-0.1**
	41nm,0.5s							
CMPR	**Campora**	**1.69**	**179**	Pg		**Pn**	07 09 08.9	**-0.1**
	41nm,0.5s							
NOCI	**Noci**	**1.83**	**131**	Pg		**Pn**	07 09 11.2	**+0.3**
	120nm,0.3s							
NOCI	**Noci**	**1.83**	**131**	Pg		**Pn**	07 09 11.2	**+0.3**
	120nm,0.3s							
SIRI	**Monte Sirino -**	**1.88**	**166**	Pg		**Pn**	07 09 11.6	**-0.1**
	43nm,0.5s							
SIRI	**Monte Sirino -**	**1.88**	**166**	Pg		**Pn**	07 09 11.6	**-0.1**
	43nm,0.5s							
STON	**Ston**	**2.00**	**64**	*e*Pn		**Pn**	07 09 13.8	**+0.5**
STON					Sn	**Sn**	07 09 38.7	**+1.0**
STON	**Ston**	**2.00**	**64**	*e*Pn		**Pn**	07 09 13.7	**+0.4**
STON					Sn	**Sn**	07 09 38.6	**+0.9**
NVLJ	**Novalja**	**2.57**	**354**	*e*Pn		**Pn**	07 09 22.1	**+1.0**
NVLJ					Sn	**Sn**	07 09 53.7	**+2.1**
NVLJ	**Novalja**	**2.57**	**354**	*e*Pn		**Pn**	07 09 22.0	**+0.9**
NVLJ					Sn	**Sn**	07 09 53.7	**+2.1**

*ISCJB **25** 07:09:24.8±1.3, 4345N±005×1268W±0.1, h10km, mb3.9/5, Error ellipse: s-maj=14.2km s-min=5.9km az=162.2*
*NEIC **25** 07:09:26.2±1.7, 4340N×12678W, h10km, mb4.0/3, Error ellipse: s-maj=20.0km s-min=7.7km az=72.0*
*IDC **25** 07:09:27.6±2.0, 4349N×12638W, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.2/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/24, Error ellipse: s-maj=39.4km s-min=15.5km az=46.0*

ISC 25 07:09:25.9±1.4, 4338N±005×1268W±01, h10km, n44, σ0s97/49, mb3.9/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**2.30**	**76**	P	**Pn**	**07 10 02.5**	**-1.3**
MPOR	**Mary's Peak**	**2.62**	**63**	P	**Pn**	**07 10 06.9**	**-1.3**
HSO	**Harness Mounta**	**2.72**	**86**	P	**Pn**	**07 10 08.3**	**-1.3**
COR	**Corvallis**	**2.81**	**63**	*e*Pn	**Pn**	**07 10 10.1**	**-0.8**
HEBO	**Mount Hebo**	**2.86**	**49**	*e*Pn	**Pn**	**07 10 10.3**	**-1.3**
HUMO	**Hull Mountain**	**2.94**	**104**	*e*Pn	**Pn**	**07 10 10.7**	**-1.9**
HUMO				*e*Sn	**Sn**	**07 10 47.4**	**-0.5**
BBOR	**Butler Butte**	**3.07**	**98**	P	**Pn**	**07 10 13.5**	**-0.9**
IRO	**Indian Ridge**	**3.37**	**78**	P	**Pn**	**07 10 18.1**	**-0.4**
YBH	**Yreka Blue Hor**	**3.45**	**117**	Pn	**Pn**	**07 10 19.4**	**-0.3**
	1.3nm,0.3s,baz=295,slow=14,SNR=32						
YBH				Sn	**Sn**	**07 11 00.6**	**-0.1**
	0.5nm,0.3s,baz=131,slow=17,SNR=6.3						
YBH	**Yreka Blue Hor**	**3.45**	**117**	*e*Pn	**Pn**	**07 10 18.8**	**-0.9**
SSOR	**Sweet Springs**	**3.47**	**63**	P	**Pn**	**07 10 20.1**	**+0.2**
GT2	**Goat Mountain**	**3.72**	**60**	P	**Pn**	**07 10 23.8**	**+0.5**
BMW	**Boistfort Moun**	**4.01**	**38**	P	**Pn**	**07 10 26.5**	**-0.8**
RVW	**Rose Valley**	**4.01**	**45**	P	**Pn**	**07 10 27.1**	**-0.2**
VLMM	**Larch Mountain**	**4.04**	**56**	P	**Pn**	**07 10 28.2**	**+0.4**
TDH	**Tom, Dick, Har**	**4.08**	**60**	P	**Pn**	**07 10 28.8**	**+0.5**
HOOD	**Mount Hood Mea**	**4.18**	**61**	*e*Pn	**Pn**	**07 10 30.3**	**+0.6**
LON	**Longmire**	**4.89**	**45**	*e*Pn	**Pn**	**07 10 40.0**	**+0.5**
PGC	**Sidney**	**5.77**	**23**	*e*Pn	**Pn**	**07 10 51.0**	**-0.5**
PGC				*e*Sn	**Sn**	**07 11 55.0**	**-2.7**
JCW	**Jim Creek**	**5.90**	**34**	*e*Pn	**Pn**	**07 10 53.4**	**+0.1**
JCW				*e*Sn	**Sn**	**07 12 02.9**	**+2.0**
RSW	**Rattlesnake Hi**	**5.95**	**57**	*e*Pn	**Pn**	**07 10 54.3**	**+0.3**
	27nm,0.4s						
HAWA	**Hanford**	**5.99**	**57**	*e*Pn	**Pn**	**07 10 54.7**	**+0.2**
RPW	**Rockport**	**6.27**	**34**	*e*Pn	**Pn**	**07 10 58.5**	**+0.1**
	11nm,0.3s						
RPW				*e*Sn	**Sn**	**07 12 10.5**	**+0.4**
LNOR	**Lincton Mounta**	**6.58**	**65**	*e*Pn	**Pn**	**07 11 02.1**	**-0.5**
	7.4nm,0.6s						
OD2	**Odessa Site #2**	**6.97**	**52**	*e*Pn	**Pn**	**07 11 08.0**	**-0.1**
	6.1nm,0.3s						
BMO	**Blue Mountains**	**7.00**	**75**	*e*Pn	**Pn**	**07 11 08.2**	**-0.2**
NEW	**Newport**	**8.35**	**51**	*e*Pn	**Pn**	**07 11 26.5**	**-0.3**
ELK	**Elko**	**9.01**	**103**	Pn	**Pn**	**07 11 38.7**	**+2.7**
	0.1nm,0.3s,baz=295,slow=14,SNR=6.8						
ELK				LR	LR	07 15 04.8	
	comp=Z,79nm,21.5s,baz=295,slow=39						
ELK	**Elko**	**9.01**	**103**	Pn	**Pn**	**07 11 38.7**	**+2.7**
ELK				LR	LR	07 15 04.8	
BSMT	**Bassoo Peak**	**9.54**	**58**	*e*Pn	**Pn**	**07 11 44.0**	**+0.8**
MSO	**Missoula**	**9.74**	**65**	*e*Pn	**Pn**	**07 11 45.7**	**-0.2**
	3.5nm,0.7s						
DLMT	**Dillon**	**10.38**	**74**	*e*Pn	**Pn**	**07 11 56.6**	**+1.9**
WALA	**Waterton Lakes**	**10.59**	**53**	*e*Pn	**Pn**	**07 11 58.3**	**+0.8**
	0.1nm,0.4s						
BOZ	**Bozeman (W)**	**11.08**	**73**	*e*Pn	**Pn**	**07 12 05.7**	**+1.4**
	1.8nm,0.8s						
PDAR	**Pinedale Array**	**12.64**	**87**	Pn	**Pn**	**07 12 27.9**	**+2.3**
	0.0nm,0.3s,baz=269,slow=13,SNR=11						
DLBC	**Dease Lake**	**15.21**	**354**	Pn	**Pn**	**07 13 06.3**	**+5.8**
	0.2nm,0.3s,baz=178,slow=13,SNR=4.3						
FFC	**Flin Flon**	**19.73**	**46**	*e*P	**Pn**	**07 13 55.7**	**-1.1**
	5.0nm,0.9s						
YKA	**Yellowknife Ar**	**20.44**	**16**	P	**P**	**07 14 03.4**	**+0.3**
	0.7nm,0.6s,baz=207,slow=11,SNR=11						
YKA	**Yellowknife Ar**	**20.44**	**16**	P	**P**	**07 14 03.4**	**+0.3**
AGMN	**Agassiz Refuge**	**22.03**	**66**	*e*P	**P**	**07 14 20.5**	**+0.1**
	16nm,1.0s,mb4.4						
ULM	**Lac du Bonnet**	**22.15**	**61**	P	**P**	**07 14 21.8**	**+0.1**
	6.3nm,0.9s,mb4.1,baz=266,slow=9.3,SNR=7.5						
ULM				LR	LR	07 22 16.8	
	comp=Z,70nm,21.5s,baz=318,slow=35						
TXAR	**Lajitas Array**	**23.23**	**119**	P	**P**	**07 14 34.0**	**+0.8**
	0.4nm,0.8s,mb2.9,baz=295,slow=8.7,SNR=5.5						
WMOK	**Wichita Mounta**	**23.34**	**102**	*e*P	**P**	**07 14 34.8**	**+0.5**
	3.7nm,0.8s,mb3.9						
KURK	**Kurchatov**	**83.70**	**344**	P	**P**	**07 21 59.0**	**+4.4**
	0.3nm,0.2s,mb4.0,baz=15,slow=5.4,SNR=2.9						

IDC 25 07:14:53.0±29.0, 2094S×17839W, h588km±287km, mb3.1/4, mb1 3.2/4, mb1mx3.0/15, mbtmp3.1/4, Error ellipse: s-maj=207.2km s-min=94.1km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.09**	**265**	P	P	07 20 42.0	+0.3
	2.1nm,0.4s,baz=94,slow=10,SNR=12						
STKA	**Stephens Creek**	**37.27**	**245**	P	P	07 21 16.0	-0.2
	1.3nm,0.5s,baz=83,slow=9.0,SNR=7.6						
ASAR	**Alice Springs**	**44.06**	**257**	P	P	07 22 10.2	0.0
	3.1nm,0.8s,baz=95,slow=7.8,SNR=48						
WRA	**Warramunga Arr**	**44.18**	**263**	P	P	07 22 10.7	-0.4
	0.7nm,0.3s,baz=97,slow=7.5,SNR=9.6						
AKASG	**Malin Array Be**	**143.22**	**331**	PKP	PKPdf	07 33 20.3	-0.5
	1.1nm,0.4s,baz=45,slow=4.7,SNR=5.8						

IDC 25 07:38:44.1±3.6, 930S×11879E, h0km, mb4.1/2, mb1 4.3/4, mb1mx3.7/17, mbtmp4.1/4, ML3.3/1, Error ellipse: s-maj=84.9km s-min=23.5km az=66.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.36**	**13**	Pn	Pn	07 39 52.7	+1.0
	1.5nm,0.3s,baz=243,slow=9.0,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.99**	**143**	*e*P	Pn	07 41 35.5	+13
	2.5nm,0.3s						
FITZ				*e*S	Sn	07 43 32.1	+5.6
KAKA	**Kakadu**	**13.83**	**105**	*e*P	x	07 54 58.0	
	78nm,0.6s						
KAKA				*e*S	x	07 57 27.2	
WRA	**Warramunga Arr**	**18.38**	**127**	P	Pn	07 42 59.0	-1.6
	0.6nm,0.3s,baz=304,slow=13,SNR=26						
WRA				S	Sn	07 46 14.9	-12
	0.4nm,0.3s,baz=307,slow=24,SNR=4.7						
WB2	**Warramunga Arr**	**18.39**	**127**	*e*P	Pn	07 42 59.0	-1.7
WB2				*e*S	Sn	07 46 14.1	-13
ASAR	**Alice Springs**	**20.32**	**136**	P	P	07 43 23.2	+1.3
	3.2nm,0.4s,baz=317,slow=9.0,SNR=50						
ASAR				S	S	07 47 12.7	+1.9
	0.5nm,0.7s,baz=315,slow=22,SNR=4.2						
STKA	**Stephens Creek**	**30.86**	**140**	P	P	07 45 01.4	-0.8
	2.6nm,0.5s,baz=316,slow=9.0,SNR=16						
STKA	**Stephens Creek**	**30.86**	**140**	*e*P	P	07 45 01.2	-1.0
	1.6nm,0.3s						

IDC 25 07:42:34.7±1.5, 775S×3779E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/25, mbtmp4.0/8, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/34, Error ellipse: s-maj=51.0km s-min=19.0km az=117.0, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**12.02**	**231**	Pn	Pn	07 45 25.7	-1.6
	0.6nm,0.3s,baz=48,slow=12,SNR=9.9						
LSZ				Lg		07 48 43.4	
	0.7nm,0.3s,baz=126,slow=19,SNR=6.7						
LSZ				LR	LR	07 49 17.2	
	comp=Z,93nm,21.9s,baz=22,slow=34						
TSUM	**Tsumeb**	**22.68**	**238**	P	P	07 47 38.9	+0.9
	3.2nm,0.9s,baz=71,slow=11,SNR=5.3						
BOSA	**Borg El Arab**	**23.89**	**208**	P	P	07 47 50.9	+0.7
	4.8nm,0.6s,baz=38,slow=9.6,SNR=18						
BOSA				LR	LR	07 57 19.8	
	comp=Z,65nm,21.1s,baz=149,slow=37						
ASF	**Jabal al Asfar**	**39.71**	**359**	P	P	07 50 10.8	+1.9
	1.5nm,0.2s,baz=100,slow=19,SNR=3.0						
ASF				LR	LR	08 06 33.6	
	comp=Z,34nm,18.8s,baz=217,slow=36						
TORD	**Torodi Ar. Bea**	**41.44**	**300**	LR	LR	08 09 36.0	
	comp=Z,39nm,18.5s,baz=5.0,slow=39						
AKASG	**Malin Array Be**	**58.69**	**354**	P	P	07 52 33.4	-0.5
	0.2nm,0.3s,baz=167,slow=6.4,SNR=3.1						
GERES	**GERESS Array B**	**60.20**	**342**	P	P	07 52 44.5	+0.1
	0.5nm,0.9s,baz=146,slow=9.5,SNR=3.8						
ESDC	**Sonseca Array**	**60.97**	**324**	P	P	07 52 49.1	-0.7
	1.7nm,1.0s,baz=142,slow=6.9,SNR=6.9						
MKAR	**Makanchi Array**	**67.15**	**32**	P	P	07 53 29.9	-0.4
	2.2nm,1.1s,baz=224,slow=5.1,SNR=8.6						

*BJI **25** 07:52:45.1, 332S×14286E, h25km, mB5.2, mb5.0, Ms4.8, Msz4.4*
*ISCJB **25** 07:52:46.6±0.3, 336S±003×14244E±005, h22km, mb5.0/63, MS4.3/27, Error ellipse: s-maj=7.0km s-min=3.9km az=169.9*
*GCMT **25** 07:52:48.2±0.2, 3.155S×14261E, h18km±1km, MW5.2/69, Moment Tensor Solution. s44,c50; s69,c94; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.36±.20; Mθθ-1.93±.14; Mϕϕ-1.43±.16; Mrθ-1.27±.31; Mϕθ3.47±.10; Mϕr4.91±.52; Best double couple: Mo6.78700×10^16 NP1:ϕs339.00000°, δ73.00000°, λ114.00000°. Principal axes: T 6.5080, Plg56.0000°, Azm281.0000°; N 0.5570, Plg23.0000°, Azm152.0000°; P -7.0650, Plg24.0000°, Azm51.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **25** 07:52:48.2±0.2, 331S×14250E, mb5.4/28 Error ellipse: s-maj=7.5km s-min=5.0km az=73.0*
*MOS **25** 07:52:48.2±1.1, 332S×14241E, h33km, mb5.1/12, Error ellipse: s-maj=11.9km s-min=7.6km az=113.0*
*DJA **25** 07:52:50, 320S×14248E, h20km, Mw5.3/8*
*IDC **25** 07:52:51.3±2.2, 347S×14229E, h46km±21km, mb4.4/16, mb1 4.5/19, mb1mx4.5/22, mbtmp4.5/19, ML4.8/2, MS4.1/16, Ms1 4.1/16, ms1mx4.0/28, Error ellipse: s-maj=15.4km s-min=10.1km az=96.0*

ISC 25 07:52:48.8±0.3, 333S±003×14247E±005, h24km, h24km±1.4km: pP-P, n152, σ0s99/136, mb5.0/63, MS4.3/27, 9C-2D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.63**	**143**	P	**Pn**	**07 54 40.1**	**+1.5**
	1.8nm,0.3s,baz=346,slow=6.2,SNR=10						
PMG				S	**Sn**	**07 56 05.5**	**+1.2**
	0.7nm,0.3s,baz=351,slow=19,SNR=1.8						
PMG	**Port Moresby**	**7.63**	**143**	*e*Pn	**Pn**	**07 54 39.5**	**+1.0**
PMG				*e*Sn	**Sn**	**07 56 07.5**	**+3.2**
COEN	**Coen**	**10.58**	**176**	*e*Pn	**Pn**	**07 55 24.6**	**+5.5**
	45nm,1.1s						
COEN				*e*Sn	**Sn**	**07 57 15.6**	**-1.3**
GUMO	**Guam**	**16.98**	**8**	LR	LR	08 02 36.6	
	comp=Z,443nm,18.0s,baz=190,slow=34						
CTA	**Charters Tower**	**17.06**	**168**	P	**Pn**	**07 56 50.8**	**+4.8**
	0.2nm,0.3s,baz=30,slow=12,SNR=4.0						
CTA				LR	LR	08 03 30.3	
	comp=Z,915nm,20.3s,baz=165,slow=38						
CTA	**Charters Tower**	**17.06**	**168**	*e*P	**Pn**	**07 56 55.4**	**+9.5**
	13nm,1.8s						
CTA				*e*S	**Sn**	**08 00 05.7**	**+11**
CTAO	**Charters Tower**	**17.06**	**168**	*e*P	**Pn**	**07 56 45.7**	**-0.2**
WRAB	**Tennant Creek**	**18.30**	**205**	P	**Pn**	**07 57 00.6**	**-0.7**
	735nm,1.4s,SNR=19						
WRAB	**Tennant Creek**	**18.30**	**205**	*e*P	**Pn**	**07 57 00.6**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,310nm,1.4s						
WRAB	**Tennant Creek**	**18.30**	**205**	*e*Pn	**Pn**	**07 57 00.6**	**-0.6**
	comp=Z,310nm,1.4s						
WB2	**Warramunga Arr**	**18.31**	**205**	*e*P	**Pn**	**07 57 00.0**	**-1.4**
WB2				*e*S	**Sn**	**08 00 18.3**	**-7.0**
WB2	**Warramunga Arr**	**18.31**	**205**	*e*Pn	**Pn**	**07 57 00.8**	**-0.6**
WRA	**Warramunga Arr**	**18.32**	**205**	P	**Pn**	**07 57 00.8**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=24,slow=11,SNR=51						
WRA				S	**Sn**	**08 00 19.7**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=21,slow=22,SNR=6.1						
WRA				LR	LR	08 05 00.4	
	comp=Z,890nm,19.2s,baz=35,slow=40						
WRA	**Warramunga Arr**	**18.32**	**205**	P	**Pn**	**07 57 00.8**	**-0.6**
WRA				S	**Sn**	**08 00 19.7**	**-5.7**
HNR	**Honiara**	**18.39**	**110**	P	**Pn**	**07 57 02.1**	**-0.3**
	comp=Z,7.0nm,0.3s,baz=320,slow=2.3,SNR=7.1						
HNR	**Honiara**	**18.39**	**110**	*e*P	**Pn**	**07 57 01.5**	**-0.9**
HNR				pmax	pmax		
	comp=Z,95nm,0.8s						
HNR	**Honiara**	**18.39**	**110**	*e*P	**Pn**	**07 57 01.5**	**-0.9**
	comp=Z,95nm,0.8s						
DAV	**Davao City (W)**	**19.77**	**302**	P	**Pn**	**07 57 21.4**	**+2.4**
	comp=Z,18nm,0.3s,baz=122,slow=15,SNR=5.5						
DAV				LR	LR	08 04 21.6	
	comp=Z,425nm,18.9s,baz=214,slow=35						
ASAR	**Alice Springs**	**21.84**	**202**	P	**P**	**07 57 39.5**	**-0.2**
	comp=Z,19nm,1.0s,mb4.5,baz=29,slow=11,SNR=70						
ASAR				S	**S**	**08 01 34.6**	**-5.6**
	comp=Z,1.4nm,0.9s,baz=26,slow=24,SNR=2.7						
FITZ	**Fitzroy Crossi**	**22.07**	**227**	i/P	**P**	**07 57 41.1**	**-1.2**
	comp=Z,95nm,0.9s,mb5.2						
FITZ				*e*S	**S**	**08 01 37.2**	**-7.5**
FITZ	**Fitzroy Crossi**	**22.07**	**227**	*e*P	**P**	**07 57 41.3**	**-0.9**
	comp=Z,142nm,1.3s,mb5.2						
KAPI	**Kappang**	**22.71**	**265**	P	**P**	**07 57 48.6**	**-0.6**
	comp=Z,18nm,0.9s,mb4.5,baz=90,slow=19,SNR=4.1						
KAPI	**Kappang**	**22.71**	**265**	*e*P	**P**	**07 57 49.2**	**0.0**
EIDS	**Eidsvold**	**23.43**	**160**	*e*P	**P**	**07 57 57.1**	**+0.6**
	comp=Z,267nm,2.1s,mb5.3						
KKM	**Kota Kinabalu**	**27.82**	**290**	*e*P	**P**	**07 58 32.9**	**-3.7**
	comp=Z,25nm,1.0s,mb4.8						
MBWA	**Marble Bar**	**28.34**	**229**	*e*P	**P**	**07 58 41.0**	**-0.2**
	comp=Z,32nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**28.41**	**182**	P	**P**	**07 58 41.9**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7,baz=355,slow=8.8,SNR=26						
STKA				LR	LR	08 10 47.9	
	comp=Z,863nm,19.2s,MS4.4,baz=357,slow=38						
STKA	**Stephens Creek**	**28.41**	**182**	*e*P	**P**	**07 58 41.5**	**-0.1**
	comp=Z,13nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**28.41**	**182**	*e*P	**P**	**07 58 41.5**	**-0.1**
	comp=Z,5.3nm,1.0s,mb4.1						

FORT	**Forrest**	**30.50**	**205**	*e*P		**P**	**07 59 01.0**	**+0.8**
	comp=Z,125nm,0.7s,mb5.8							
FORT	**Forrest**	**30.50**	**205**	*e*P		**P**	**07 59 00.9**	**+0.7**
	comp=Z,170nm,0.8s,mb5.9							
KSM	**Kuching**	**32.50**	**278**	*e*P		**P**	**07 59 17.3**	**-0.7**
	comp=Z,24nm,1.2s,mb4.9							
TOO	**Toolangi**	**34.19**	**176**	*e*P		**P**	**07 59 34.0**	**+1.6**
MUN	**Mundaring**	**37.69**	**218**	*e*P		**P**	**08 00 02.2**	**-0.3**
NWAO	**Narrogin (SRO)**	**37.74**	**216**	P		**P**	**08 00 02.9**	**-0.1**
	comp=Z,17nm,1.0s,mb4.8,baz=42,slow=10,SNR=8.5							
QIZ	**Qiongzhong**	**39.04**	**306**	P		**P**	**08 00 15.0**	**+1.0**
QIZ				*e*S		**S**	**08 06 13.0**	**+0.9**
QIZ				AMB	AMB			
	comp=Z,17nm,1.5s,mb4.5							
QIZ				LR	LR			
	comp=E,341nm,15.7s							
QIZ				LR	LR			
	comp=Z,381nm,17.5s,MS4.3							
MJAR	**Matsushiro Arr**	**39.86**	**355**	LR	LR		08 15 06.0	
	comp=Z,145nm,19.4s,MS3.8,baz=230,slow=33							
NJ2	**Nanjing**	**41.73**	**329**	*e*P		**P**	**08 00 36.3**	**+0.2**
NJ2				AP	pP		08 00 43.5	+0.1
NJ2				XP	sP		08 00 47.0	+0.7
NJ2				PP	PP		08 02 16.3	+3.4
NJ2				S	**S**		**08 06 51.0**	**-1.0**
NJ2				XS	sS		08 07 05.0	+1.1
NJ2				AMB	AMB			
	comp=Z,20nm,0.6s,mb4.9							
NJ2				AMB	AMB			
	comp=Z,220nm,4.2s							
NJ2				LR	LR			
	comp=N,6μm,19.7s,MS5.5							
NJ2				LR	LR			
	comp=E,3μm,17.6s,MS5.5							
NJ2				LR	LR			
	comp=Z,3μm,17.6s,MS5.2							
KSRS	**Korea Array**	**42.77**	**343**	P		**P**	**08 00 43.9**	**-0.7**
	comp=Z,2.9nm,0.8s,mb4.0,baz=164,slow=10,SNR=12							
KSRS				PcP	PcP		08 02 35.5	-0.2
	comp=Z,2.0nm,0.9s,baz=160,slow=3.5,SNR=5.7							
KSRS				LR	LR		08 15 24.5	
	comp=Z,207nm,20.2s,MS4.0,baz=274,slow=32							
PSI	**Prapat**	**43.94**	**277**	P		**P**	**08 00 53.2**	**-1.2**
	comp=Z,43nm,1.0s,mb5.1,baz=180,slow=3.9,SNR=21							
PSI	**Prapat**	**43.94**	**277**	P		**P**	**08 00 53.2**	**-1.3**
GYA	**Guiyang**	**45.55**	**313**	i/P		**P**	**08 01 07.5**	**+0.5**
GYA				AP	pP		08 01 16.3	+2.0
GYA				PCP	PcP		08 02 47.3	+1.8
GYA				PP	PP		08 02 55.8	+1.8
GYA				SCP	ScP		08 06 37.8	+0.7
GYA				S	**S**		**08 07 48.3**	**+0.3**
GYA				XS	sS		08 08 01.5	+1.4
GYA				SS	SS		08 11 05.3	-7.1
GYA				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.0							
GYA				AMB	AMB			
	comp=Z,130nm,4.8s							
GYA				LR	LR			
	comp=N,890nm,18.8s,MS4.8							
GYA				LR	LR			
	comp=E,660nm,16.6s,MS4.8							
GYA				LR	LR			
	comp=Z,820nm,17.0s,MS4.7							
AFI	**Afiamalu**	**46.36**	**106**	LR	LR		08 18 24.4	
	comp=Z,479nm,20.0s,MS4.5,baz=262,slow=33							
URZ	**Urewera**	**46.99**	**142**	P		**P**	**08 01 18.1**	**-0.1**
	comp=Z,5.1nm,0.6s,mb4.6,baz=166,slow=19,SNR=2.9							
URZ				LR	LR		08 18 45.5	
	comp=Z,431nm,21.0s,MS4.4,baz=120,slow=33							
KMI	**Kunming**	**47.80**	**309**	P		**P**	**08 01 25.8**	**+1.1**
KMI				PP	PP		08 03 18.8	+2.1
KMI				S	**S**		**08 08 20.5**	**+0.2**
KMI				SS	SS		08 11 46.5	-2.7
KMI				AMB	AMB			
	comp=Z,21nm,1.6s,mb4.9							
KMI				LR	LR			
	comp=N,136nm,19.8s,MS4.2							
KMI				LR	LR			
	comp=E,238nm,24.8s,MS4.2							
KMI				LR	LR			
	comp=Z,257nm,23.9s,MS4.1							
CMAR	**Chiang Mai Arr**	**48.01**	**298**	P		**P**	**08 01 26.2**	**-0.2**
	comp=Z,9.6nm,1.1s,mb4.7,baz=113,slow=6.0,SNR=24							
CMAR				PcP	PcP		08 02 55.0	+0.6
	comp=Z,1.4nm,0.5s,baz=117,slow=2.1,SNR=4.4							
SNY	**Shenyang**	**48.12**	**341**	i/P		**P**	**08 01 26.3**	**-0.5**
SNY				AMB	AMB			
	comp=Z,14nm,2.0s,mb4.7							
SNY				AMB	AMB			
	comp=Z,91nm,5.1s							
SNY				LR

	comp=N,330nm,8.8s								
CD2					LR	LR			
	comp=Z,410nm,6.5s								
HHC	**Hu-ho-hao-te**	**52.25**	**330**	*e*P		**P**	**08**	**02**	**01.0 +2.8**
HHC					AP	pP	08	02	11.0 +5.4
HHC					XP	sP	08	02	15.0 +6.6
HHC					PP	PP	08	04	00.0 +3.1
HHC					PCS	PcS	08	07	08.0 +0.4
HHC				*e*S		**S**	**08**	**09**	**21.3 -0.5**
HHC					XS	sS	08	09	39.0 +5.0
HHC					SCS	ScS	08	11	45.5 -1.3
HHC					SS	SS	08	12	59.0 -0.8
HHC					AMB	AMB			
	comp=Z,11nm,1.0s,mb4.7								
HHC					AMB	AMB			
	comp=Z,148nm,6.1s								
HHC					LR	LR			
	comp=N,387nm,16.6s,MS4.6								
HHC					LR	LR			
	comp=E,251nm,14.3s,MS4.6								
HHC					LR	LR			
	comp=Z,311nm,17.8s,MS4.4								
KLR	**Kul'dur**	**53.17**	**351**	*e*P		**P**	**08**	**02**	**04.7 -0.1**
LZH	**Lanzhou**	**53.28**	**321**	*e*P		**P**	**08**	**02**	**06.5 +0.6**
LZH					AP	pP	08	02	12.5 -0.8
LZH					XP	sP	08	02	15.5 -0.7
LZH					PP	PP	08	04	06.5 +0.2
LZH					AMB	AMB			
	comp=Z,46nm,1.0s,mb5.4								
LZH					AMB	AMB			
	comp=Z,189nm,4.0s								
LZH					LR	LR			
	comp=E,297nm,14.9s								
LZH					LR	LR			
	comp=Z,553nm,15.8s,MS4.7								
PETK	**Petropavlovsk-**	**57.68**	**11**	P		**P**	**08**	**02**	**35.5 -1.7**
	comp=Z,3.2nm,0.9s,mb4.3,baz=180,slow=9.8,SNR=2.5								
PETK					LR	LR	08	23	03.5
	comp=Z,160nm,21.1s,MS4.1,baz=190,slow=31								
GTA	**Gaotai**	**57.84**	**322**	⇑P		**P**	**08**	**02**	**39.3 +0.7**
GTA					AP	pP	08	02	45.5 -0.6
GTA					XP	sP	08	02	48.3 -0.6
GTA					AMB	AMB			
	comp=Z,22nm,1.3s,mb5.0								
GTA					AMB	AMB			
	comp=Z,269nm,4.2s								
GTA					LR	LR			
	comp=N,174nm,17.1s,MS4.4								
GTA					LR	LR			
	comp=E,195nm,17.7s,MS4.4								
GTA					LR	LR			
	comp=Z,151nm,16.8s,MS4.2								
LSA	**Lhasa**	**59.04**	**308**	P		**P**	**08**	**02**	**48.5 +1.3**
ULN	**Ulaanbaatar**	**59.66**	**333**	*e*P		**P**	**08**	**02**	**51.2 +0.1**
SONM	**Songino Array**	**59.93**	**333**	P		**P**	**08**	**02**	**53.1 +0.1**
	comp=Z,3.7nm,1.1s,mb4.3,baz=150,slow=6.9,SNR=17								
SONM					LR	LR	08	27	19.7
	comp=Z,302nm,18.9s,MS4.5,baz=106,slow=34								
TAPN	**Taplejung**	**60.92**	**304**	*e*P		**P**	**08**	**03**	**01.1 +1.0**
	comp=Z,113nm,1.2s,mb5.9								
ODAN	**Odare**	**61.01**	**303**	*e*P		**P**	**08**	**03**	**01.7 +0.9**
	comp=Z,146nm,1.1s,mb6.0								
FX1	**Attu Island--F**	**61.68**	**21**	LR		LR	08	24	30.3
	comp=Z,133nm,20.6s,MS4.1,baz=50,slow=31								
RAMN	**Ramite**	**61.70**	**303**	*e*P		**P**	**08**	**03**	**06.4 +0.9**
	comp=Z,181nm,1.3s,mb6.0								
JIRN	**Jiri**	**62.29**	**304**	*e*P		**P**	**08**	**03**	**10.4 +1.0**
	comp=Z,88nm,1.2s,mb5.8								
PALK	**Pallekele**	**62.53**	**280**	*e*P		**P**	**08**	**03**	**11.5 +0.2**
PALK				*e**PP		pP	08	03	18.4 -0.4
PALK					pmax	pmax			
	comp=Z,23nm,1.2s,mb5.2								
PALK	**Pallekele**	**62.53**	**280**	*e*P		**P**	**08**	**03**	**11.5 +0.3**
	comp=Z,23nm,1.2s,mb5.2								
PALK				*e*pP		pP	08	03	18.4 -0.4
GUN	**Gumba**	**62.63**	**304**	*e*P		**P**	**08**	**03**	**12.7 +1.0**
	comp=Z,196nm,1.2s,mb6.1								
PKI	**Pulchoki**	**62.91**	**303**	*e*P		**P**	**08**	**03**	**14.0 +0.4**
PKIN	**Phulchoki**	**62.92**	**303**	*e*P		**P**	**08**	**03**	**14.0 +0.4**
KKN	**Kakani**	**63.09**	**303**	*e*P		**P**	**08**	**03**	**15.5 +0.7**
	comp=Z,178nm,1.1s,mb6.1								
DMN	**Daman**	**63.18**	**303**	*e*P		**P**	**08**	**03**	**16.2 +0.9**
	comp=Z,194nm,1.1s,mb6.1								
ZAK	**Zakamensk**	**63.19**	**333**	⇑*i*P		**P**	**08**	**03**	**14.7 -0.2**
ZAK					pmax	pmax			
	comp=Z,22nm,1.2s,mb5.2								
GKN	**Gorkha**	**63.70**	**303**	*e*P		**P**	**08**	**03**	**19.5 +0.7**
	comp=Z,178nm,1.1s,mb6.0								
TLY	**Talaya**	**63.95**	**334**	*e*P		**P**	**08**	**03**	**19.9 0.0**
TLY				*e*S		**S**	**08**	**12**	**00.7 +6.3**
TLY					pmax	pmax			
	comp=Z,18nm,1.2s,mb5.0								
TLY					MLR	MLR			
	comp=Z,214nm,22.0s,MS4.3								
TLY	**Talaya**	**63.95**	**334**	*e*P		**P**	**08**	**03**	**19.9 0.0**
	comp=Z,18nm,1.3s,mb4.9								
KOLN	**Koldanda**	**64.49**	**303**	*e*P		**P**	**08**	**03**	**24.8 +0.8**
	comp=Z,120nm,1.1s,mb5.8								
DANN	**Dangsing**	**64.55**	**303**	*e*P		**P**	**08**	**03**	**24.9 +0.6**
	comp=Z,73nm,0.9s,mb5.7								
BOD	**Bodaibo**	**65.11**	**344**	*e*P		**P**	**08**	**03**	**26.2 -1.1**
BOD					pmax	pmax			
	comp=Z,10.0nm,1.7s,mb4.6								
YAK	**Yakutsk**	**65.91**	**353**	⇑*e*P		**P**	**08**	**03**	**31.1 -1.4**
YAK					pmax	pmax			
	comp=Z,20nm,0.9s,mb5.2								
HYB	**Hyderabad**	**66.30**	**291**	*i* P		**P**	**08**	**03**	**35.5 -0.4**
HYB	**Hyderabad**	**66.30**	**291**	*e*P		**P**	**08**	**03**	**35.5 -0.4**
CASY	**Casey**	**66.70**	**193**	*e*P		**P**	**08**	**03**	**37.1 -0.3**
	comp=Z,35nm,1.4s,mb5.2								
WMQ	**Urumqi**	**67.85**	**320**	P		**P**	**08**	**03**	**45.5 +0.3**
WMQ					AMB	AMB			
	comp=Z,24nm,1.1s,mb5.1								
WMQ					AMB	AMB			
	comp=Z,217nm,5.0s								
WMQ					LR	LR			
	comp=N,56nm,20.0s,MS4.1								
WMQ					LR	LR			
	comp=E,107nm,20.0s,MS4.1								
WMQ					LR	LR			
	comp=Z,117nm,20.0s,MS4.1								
PPT	**Papeete**	**67.99**	**108**	*e*S		S	08	12	38.3 -6.6
	comp=Z,88nm,23.2s								
PPT	**Papeete**	**67.99**	**108**	*e*LR		LR	08	24	25.3
	comp=Z,158nm,23.5s								
PPT	**Papeete**	**67.99**	**108**	LR		LR	08	29	14.5
	comp=Z,177nm,19.6s,MS4.3,baz=260,slow=32								
TBI	**Tubuai**	**68.57**	**114**	*e*LR		LR	08	24	40.1
	comp=Z,255nm,41.5s								
DDI	**Dehra Dun**	**69.89**	**304**	*ex*		x	08	03	57.0
MK31	**Makanchi Array**	**72.59**	**321**	*e*P		**P**	**08**	**04**	**14.1 -0.1**
MK31				*e**PP		pP	08	04	20.7 -1.1
MKAR	**Makanchi Array**	**72.59**	**321**	P		**P**	**08**	**04**	**14.0 -0.2**
	comp=Z,11nm,1.1s,mb4.7,baz=107,slow=7.0,SNR=44								
MKAR					LR	LR	08	36	08.4
	comp=Z,96nm,18.1s,MS4.1,baz=238,slow=36								
BILL	**Bilibino**	**73.14**	**9**	*e*P		**P**	**08**	**04**	**19.3 +2.3**
BILL					pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.5								
ZAA0	**Zalesovo Array**	**74.38**	**329**	*e*P		**P**	**08**	**04**	**23.1 -1.5**
ZALV	**Zalesovo Beam**	**74.38**	**329**	P		**P**	**08**	**04**	**23.1 -1.4**
	comp=Z,4.3nm,0.7s,mb4.5,baz=104,slow=6.3,SNR=18								
ZALV					LR	LR	08	36	19.1
	comp=Z,155nm,18.7s,MS4.3,baz=114,slow=35								
TIXI	**Tiksi**	**75.37**	**356**	*e* *i*P		**P**	**08**	**04**	**28.2 -1.7**
TIXI					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4								
TIXI					MLR	MLR			
	comp=Z,100nm,16.0s,MS4.2								
KZA	**Kyzart**	**75.56**	**315**	P		**P**	**08**	**04**	**33.5 +1.9**
	SNR=18								
TKM2	**Tokmak 2**	**75.59**	**316**	P		**P**	**08**	**04**	**32.5 +0.7**
	SNR=7.6								
NVS	**Novosibirsk**	**75.62**	**329**	*e*P		**P**	**08**	**04**	**29.3 -2.4**
NVS					pmax	pmax			
	comp=N,23nm,1.9s								
NVS					pmax	pmax			
	comp=E,29nm,1.9s								
NVS					pmax	pmax			
	comp=Z,41nm,1.9s,mb5.0								
CHMS	**Chumysh**	**76.20**	**316**	P		**P**	**08**	**04**	**35.1 -0.2**
	SNR=5.3								
AAK	**Ala-Archa**	**76.27**	**315**	⇑*e*P		**P**	**08**	**04**	**36.0 +0.3**
AAK					pmax	pmax			
	comp=Z,8.0nm,1.4s,mb4.5								
AAK	**Ala-Archa**	**76.27**	**315**	*e*P		**P**	**08**	**04**	**36.1 +0.4**
	comp=Z,14nm,1.2s,mb4.8								
KURK	**Kurchatov**	**76.40**	**324**	P		**P**	**08**	**04**	**35.8 -0.4**
	comp=Z,70nm,1.4s,mb5.4,SNR=8.8								
KURK	**Kurchatov**	**76.40**	**324**	P		**P**	**08**	**04**	**35.4 -0.8**
	comp=Z,5.2nm,1.0s,mb4.4,baz=111,slow=5.4,SNR=20								
KURK	**Kurchatov**	**76.40**	**324**	*e*P		**P**	**08**	**04**	**35.4 -0.8**
KURK				*e*			08	07	27.9
KURK					pmax	pmax			
	comp=Z,64nm,1.8s,mb5.2								
KURK	**Kurchatov**	**76.40**	**324**	*e*P		**P**	**08**	**04**	**35.4 -0.8**
	comp=Z,64nm,1.8s,mb5.2								
KURK				*e*PP		PP	08	07	27.9 -0.2
USP	**Ospenovka**	**76.46**	**316**	P		**P**	**08**	**04**	**36.7 0.0**
	SNR=16								
AML	**Almayashu**	**76.68**	**315**	P		**P**	**08**	**04**	**39.5 +1.4**
	SNR=10.0								
AML	**Almayashu**	**76.68**	**315**	*e*P		**P**	**08**	**04**	**39.0 +0.9**
	comp=Z,35nm,1.3s,mb5.1								
EKS2	**Erkin-Say**	**76.78**	**315**	P		**P**	**08**	**04**	**39.5 +1.0**
	SNR=10								
EKS2	**Erkin-Say**	**76.78**	**315**	*e*P		**P**	**08**	**04**	**39.2 +0.7**
	comp=Z,21nm,1.2s,mb4.9								
TAOE	**Nuku Hiva Isla**	**77.04**	**98**	*e*LR		LR	08	28	27.1
	comp=Z,792nm,26.6s								
BVAR	**Borovoye Array**	**81.98**	**325**	P		**P**	**08**	**05**	**06.2 -0.5**
	comp=Z,9.2nm,0.9s,mb4.7,baz=106,slow=5.4,SNR=34								
BRVK	**Borovoye**	**82.05**	**325**	P		**P**	**08**	**05**	**06.0 -1.0**
	comp=Z,56nm,0.9s,mb5.5,SNR=6.4								
BRVK	**Borovoye**	**82.05**	**325**	*e*P		**P**	**08**	**05**	**06.1 -0.9**
BRVK					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7								
BRVK	**Borovoye**	**82.05**	**325**	*e*P		**P**	**08**	**05**	**06.1 -1.0**
	comp=Z,8.2nm,0.9s,mb4.7								
CHUM	**Lake Minchumin**	**82.33**	**24**	*e*P		**P**	**08**	**05**	**07.4 -0.9**
	comp=Z,26nm,0.8s,mb5.2								
MAW	**Mawson**	**82.97**	**202**	P		**P**	**08**	**05**	**11.1 -0.5**
	comp=Z,8.4nm,0.9s,mb4.8,baz=68,slow=2.3,SNR=6.9								
MAW	**Mawson**	**82.97**	**202**	*e*P		**P**	**08**	**05**	**11.5 -0.1**
	comp=Z,14nm,1.7s,mb4.7								
MAW	**Mawson**	**82.97**	**202**	*e*P		**P**	**08**	**05**	**12.1 +0.5**
COLA	**College**	**84.50**	**24**	*d* *i*P		**P**	**08**	**05**	**21.0 +1.5**
AKTK	**Aktyubinsk**	**89.00**	**320**	P		**P**	**08**	**05**	**40.3 -1.4**
AKTO	**Aktyubinsk**	**89.00**	**320**	P		**P**	**08**	**05**	**40.3 -1.4**
	comp=Z,3.1nm,1.0s,mb4.6,baz=72,slow=4.1,SNR=6.6								
ARU	**Arti**	**89.37**	**326**	*c* *i*P		**P**	**08**	**05**	**41.1 -2.2**
ARU					S	SKSac	08	16	08.3 -3.6
ARU					SS	SS	08	22	29.6 +2.6
ARU					pmax	pmax			
	comp=Z,14nm,1.7s,mb5.0								
YKA	**Yellowknife Ar**	**98.91**	**27**	P		**P**	**08**	**06**	**28.1 +1.2**
	comp=Z,0.4nm,0.9s,mb3.9,baz=280,slow=3.7,SNR=2.9								
YKA					LR	LR	08	48	02.3
	comp=Z,18nm,19.2s,MS3.6,baz=305,slow=33								
YKA	**Yellowknife Ar**	**98.91**	**27**	P		**P**	**08**	**06**	**28.1 +1.2**
YKA					LR	LR	08	48	02.3
TXAR	**Lajitas Array**	**112.39**	**60**	PKKPab		PKKPab	08	22	19.8 -2.2
	comp=Z,0.8nm,1.0s,baz=103,slow=2.9,SNR=5.7								
JCT	**Junction City**	**115.48**	**58**	*e*PKIKP		PKPdf	08	11	27.9 -1.5
GERES	**GERESS Array B**	**117.15**	**325**	PKP		PKPdf	08	11	30.8 -1.3
	comp=Z,0.3nm,0.6s,baz=75,slow=1.1,SNR=3.3								
DAVOX	**Davos/Dischmat**	**120.41**	**324**	PKP		PKPdf	08	11	37.0 -1.4
	comp=Z,1.1nm,0.6s,baz=32,slow=13,SNR=3.6								
DAVOS	**Davos**	**120.43**	**324**	PKIKP		PKPdf	08	11	37.0 -1.5
EKA	**Eskdalemuir Ar**	**121.21**	**338**	PKP		PKPdf	08	11	38.3 -1.4
	comp=Z,1.2nm,0.9s,baz=38,slow=3.5,SNR=4.1								
HINF	**Hinteralfeld**	**121.57**	**326**	*e*PKIKP		PKPdf	08	11	41.3 +0.7
LPL	**La Plagne**	**122.94**	**324**	*e*PKIKP		PKiKP	08	11	45.5 +2.0
BLO	**Bloomington**	**123.06**	**44**	*e*PKIKP		PKPdf	08	11	42.2 -1.6
LOR	**Lormes**	**123.53**	**327**	*e*PKIKP		PKPdf	08	11	44.6 +0.2
	comp=Z,27nm,1.4s								
ORIF	**Oris-en-Rattie**	**123.77**	**324**	*e*PKIKP		PKPdf	08	11	44.1 -0.8
	comp=Z,5.2nm,0.8s								
SSF	**Saint Saulge**	**123.84**	**327**	*e*PKIKP		PKPdf	08	11	44.3 -0.7
	comp=Z,9.9nm,0.9s								
FRF	**La Foret Royal**	**124.06**	**322**	*e*PKIKP		PKPdf	08	11	46.1 +0.6
SMRF	**Simiane la Rot**	**124.48**	**323**	*e*PKIKP		PKPdf	08	11	47.0 +0.7
TCF	**Toulx Ste Croi**	**125.02**	**327**	*e*PKIKP		PKPdf	08	11	46.8 -0.5
TORD	**Torodi Ar. Bea**	**140.03**	**286**	PKhKP			08	12	08.8
	comp=Z,0.7nm,0.9s,baz=56,slow=4.0,SNR=3.0								
TORD					PKP	PKPdf	08	12	15.5 -0.9
	comp=Z,1.9nm,1.0s,baz=91,slow=2.2,SNR=5.8								
TORD	**Torodi Ar. Bea**	**140.03**	**286**	PKP		PKPdf	08	12	15.5 -0.9
CPUP	**Villa Florida**	**144.84**	**148**	PKP		PKPdf	08	12	22.2 -2.5
	comp=Z,0.9nm,0.7s,baz=210,slow=12,SNR=3.1								
SDV	**Santo Domingo**	**146.65**	**79**	*e*PKPdf		PKPdf	08	12	26.5 -1.5
SDV				*e*PKPbc		PKPbc	08	12	28.4 -1.2
KIC	**Kosan Boka**	**147.19**	**277**	*e*PKIKP		PKPdf	08	12	30.1 +1.1
	comp=Z,64nm,0.9s								
DBIC	**Dimbokro**	**147.28**	**277**	PKPbc		PKPbc	08	12	30.8 -0.7
	comp=Z,16nm,0.8s,baz=89,slow=2.9,SNR=31								
DBIC	**Dimbokro**	**147.28**	**277**	*e*PKPbc		PKPbc	08	12	30.7 -0.8
TIC	**Toumodi**	**147.45**	**277**	*e*PKIKP		PKPbc	08	12	30.8 -1.2
	comp=Z,72nm,0.9s								
LIC	**Lamto**	**147.48**	**276**	*e*PKIKP		PKPbc	08	12	30.3 -1.8
	comp=Z,66nm,0.9s								
LIC	**Lamto**	**147.48**	**276**	⇑*i*PKIKP		PKPbc	08	12	31.2 -0.9
	comp=Z,45nm,0.9s								

*NEIC **25** 07:58:56.7, 36.35N×26.99E, h15km, MD3.1(ATH), After ATH.*
*ATH **25** 07:58:56.7, 36.35N×26.99E, h14km±11km, MD3.1/4*
*ISCJB **25** 07:58:57.3±0.6, 3640N±004×2704E±004, h16km±9km, Error ellipse: s-maj=7.0km s-min=5.2km az=166.4*
*CSEM **25** 07:58:57.3±0.2, 3642N×2706E, h20km, MD3.1, Error ellipse: s-maj=6.7km s-min=4.6km az=160.0*
*THE **25** 07:59:00.8, 3640N×2678E, h8km±2km, Error ellipse: s-maj=3.4km s-min=1.4km az=65.0*

ISC 25 07:58:57.2±0.8, 3640N±005×2705E±005, h16km±7km, n16, σ1°09/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.23**	**17**	*e*PG		**Pg**	**07 59 02.7**	**+0.4**
BDRM	**Kayabasi**	**0.74**	**25**	*i* P		**Pg**	**07 59 10.6**	**-1.1**
BDRM	**Kayabasi**	**0.74**	**25**	*i* P		**Pg**	**07 59 10.6**	**-1.1**
BDRM				*i* S		**Sg**	**07 59 23.6**	**+2.1**
KARP	**Karpathos**	**0.85**	**174**	*e*PB		**Pb**	**07 59 12.2**	**-1.4**
ARG	**Arkhangelos**	**0.89**	**101**	*e*PG		**Pg**	**07 59 14.1**	**-0.4**
ARG				*e*SB		**Sn**	**07 59 27.5**	**-0.2**
ARG	**Arkhangelos**	**0.89**	**101**	*e*Pn		**Pn**	**07 59 14.0**	**-1.1**
ARG				*e*Sn		**Sn**	**07 59 27.5**	**-0.2**
THR1	**Thera Island**	**1.28**	**269**	P		**Pn**	**07 59 19.8**	**-0.6**
THR1				S		**Sb**	**07 59 36.1**	**-1.1**
THR3	**Thira Island,**	**1.33**	**271**	P		**Pn**	**07 59 21.5**	**+0.4**
THR4	**Thira Island,**	**1.33**	**273**	P		**Pn**	**07 59 21.4**	**+0.3**
THR6	**Thira Island,**	**1.33**	**269**	P		**Pn**	**07 59 20.1**	**-1.0**
TURN	**Turunc**	**1.34**	**69**	*i* P		**Pn**	**07 59 17.1**	**-4.1**
THR5	**Thira Island,**	**1.37**	**271**	P		**Pn**	**07 59 22.2**	**+0.5**
APE	**Apeiranthos**	**1.39**	**299**	P		**Pn**	**07 59 22.8**	**+0.8**
APE				S		**Sn**	**07 59 39.1**	**-0.9**
ZKR	**Zakros**	**1.45**	**208**	P		**Pn**	**07 59 24.8**	**+2.1**
ZKR				S		**Sn**	**07 59 43.4**	**+2.1**
NPS	**Neapolis**	**1.62**	**226**	*e*PB		**Pb**	**07 59 25.7**	**-1.1**
LAST	**Lasithi**	**1.77**	**226**	P		**Pn**	**07 59 28.3**	**+1.1**
LAST				S		**Sn**	**07 59 49.5**	**+0.1**

*IDC **25** 07:59:39.8±1.0, 323S×142.47E, h0km, mb4.3/12, mb1 4.4/14, mb1mx4.3/19, mbtmp4.3/14, ML4.7/1, Error ellipse: s-maj=34.5km s-min=14.2km az=80.0*
*ISCJB **25** 07:59:41.6±4.9, 326S±007×14257E±009, h24km±35km, mb4.5/20, Error ellipse: s-maj=17.4km s-min=10.2km az=149.0*
*BJI **25** 07:59:42.0, 292S×14278E, h20km, mB5.3, mb4.8*
*NEIC **25** 07:59:44.9±0.5, 326S×14258E, h35km, mb4.6/8, Error ellipse: s-maj=15.5km s-min=7.3km az=81.0*

ISC 25 07:59:44.8±5.1, 327S±008×14249E±009, h30km±37km, n40, σ0°90/35, mb4.5/20, 1D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.66**	**143**	Pn		**Pn**	**08 01 33.9**	**-0.6**
	0.8nm,0.3s,baz=9.6,slow=11,SNR=3.5							
PMG					Sn	**Sn**	**08 03 01.3**	**+1.0**
	baz=292,slow=19,SNR=1.9							
PMG	**Port Moresby**	**7.66**	**143**	*e*Pn		**Pn**	**08 01 33.5**	**-0.9**
	24nm,0.8s							
PMG					Sn	**Sn**	**08 03 01.3**	**+1.0**
WRAB	**Tennant Creek**	**18.37**	**205**	*e*P		**Pn**	**08 03 57.9**	**+0.5**
	38nm,0.8s							
WB2	**Warramunga Arr**	**18.38**	**205**	*e*P		**Pn**	**08 03 57.7**	**+0.2**
WRA	**Warramunga Arr**	**18.38**	**205**	P		**Pn**	**08 03 57.3**	**-0.2**
	2.7nm,0.3s,baz=32,slow=11,SNR=41							
ASAR	**Alice Springs**	**21.91**	**202**	P		**P**	**08 04 35.1**	**-0.5**
	4.3nm,0.4s,mb4.2,baz=29,slow=13,SNR=18							
FITZ	**Fitzroy Crossi**	**22.13**	**227**	*e*P		**P**	**08 04 39.5**	**+1.4**
	17nm,0.5s,mb4.7							
STKA	**Stephens Creek**	**28.47**	**182**	P		**P**	**08 05 37.2**	**0.0**
	2.1nm,0.4s,mb4.1,baz=3.4,slow=9.6,SNR=14							
STKA	**Stephens Creek**	**28.47**	**182**	*e*P		**P**	**08 05 34.9**	**-2.4**
	4.5nm,0.9s,mb4.1							
STKA	**Stephens Creek**	**28.47**	**182**	*e*P		**P**	**08 05 37.0**	**-0.2**
	0.6nm,0.4s,mb3.6							
FORT	**Forrest**	**30.57**	**205**	*e*P		**P**	**08 05 56.1**	**+0.2**
	50nm,0.6s,mb5.5							
FORT	**Forrest**	**30.57**	**205**	*e*P		**P**	**08 05 55.8**	**-0.1**
	57nm,0.6s,mb5.6							
MUN	**Mundaring**	**37.75**	**218**	*e*P		**P**	**08 06 57.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**37.81**	**216**	P		**P**	**08 06 57.7**	**-0.9**
	7.3nm,0.6s,mb4.6,baz=67,slow=6.7,SNR=11							
KSRS	**Korea Array**	**42.72**	**343**	P		**P**	**08 07 38.5**	**-0.8**
	2.1nm,0.9s,mb3.9,baz=163,slow=9.9,SNR=6.4							
PSI	**Prapat**	**43.96**	**277**	P		**P**	**08 07 48.2**	**-1.5**
	12nm,0.9s,mb4.6,baz=146,slow=4.5,SNR=8.1							
PSI	**Prapat**	**43.96**	**277**	P		**P**	**08 07 48.2**	**-1.5**
CMAR	**Chiang Mai Arr**	**48.01**	**298**	P		**P**	**08 08 21.9**	**+0.4**
	1.0nm,0.3s,mb4.3,baz=116,slow=6.0,SNR=10.0							
CD2	**Chengdu**	**50.17**	**316**	P		**P**	**08 08 38.5**	**+0.6**
CD2					AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0							
CD2					AMB	AMB		
	comp=Z,110nm,5.5s							
LZH	**Lanzhou**	**53.24**	**321**	*e*P		**P**	**08 09 02.0**	**+1.3**
LZH					AP	pP	08	09	07.5 -2.5
LZH					XP	sP	08	09	10.8 -2.8
LZH					AMB	AMB			
	comp=Z,40nm,1.3s,mb5.2								
LZH					AMB	AMB			
	comp=Z,208nm,5.6s								
GTA	**Gaotai**	**57.80**	**322**	⇓P		**P**	**08**	**09**	**34.8 +1.4**
GTA					AP	pP	08	09	44.0 +1.2
GTA					XP	sP	08	09	48.0 +1.6
GTA					AMB	AMB			
	comp=Z,12nm,1.2s,mb4.8								
LSA	**Lhasa**	**59.02**	**308**	*e*P		**P**	**08**	**09**	**44.1 +2.0**
	comp=Z,21nm,1.3s,mb5.0								
ULN	**Ulaanbaatar**	**59.61**	**333**	*e*P		**P**	**08**	**09**	**46.5 +0.7**
	comp=Z,1.5nm,0.6s,mb4.2								
SONM	**Songino Array**	**59.89**	**333**	P		**P**	**08**	**09**	**47.8 0.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=142,slow=4.9,SNR=5.6								
MK31	**Makanchi Array**	**72.56**	**321**	*e*P		**P**	**08**	**11**	**09.2 +0.2**
MKAR	**Makanchi Array**	**72.56**	**321**	P		**P**	**08**	**11**	**09.2 +0.1**
	comp=Z,2.6nm,1.0s,mb4.1,baz=110,slow=7.0,SNR=17								
ZALV	**Zalesovo Beam**	**74.34**	**329**	P		**P**	**08**	**11**	**17.8 -1.6**
	comp=Z,1.2nm,0.6s,mb4.0,baz=117,slow=5.8,SNR=6.2								
ZALV	**Zalesovo Beam**	**74.34**	**329**	P		**P**	**08**	**11**	**17.8 -1.6**
KURK	**Kurchatov**	**76.36**	**324**	P		**P**	**08**	**11**	**30.1 -1.0**
	comp=Z,1.9nm,0.9s,mb4.0,baz=113,slow=5.4,SNR=7.5								
KURK	**Kurchatov**	**76.36**	**324**	*e*P		**P**	**08**	**11**	**29.8 -1.3**
	comp=Z,5.6nm,1.3s,mb4.3								
BVAR	**Borovoye Array**	**81.94**	**325**	P		**P**	**08**	**12**	**01.0 -0.6**
	comp=Z,5.3nm,0.9s,mb4.5,baz=108,slow=6.3,SNR=15								
BRVK	**Borovoye**	**82.01**

σ1§40/28, mb3.4/2, 2C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.77	177	ePn	Pn	09 00 16.1	-1.3
KK31	Karatay Array	4.96	15	⇓Pn	Pn	09 00 37.3	+3.5
	0.4nm,0.3s,baz=180,slow=7.3,SNR=11						
KK31				Pg	Pg	09 00 51.6	-2.3
	5.7nm,0.6s,baz=198,slow=22,SNR=17						
KK31				Lg		09 01 48.2	
	19nm,0.6s,baz=204,slow=28,SNR=6.5						
AML	Almayashu	5.36	43	ePn	Pn	09 00 41.1	+1.8
EKS2	Erkin-Say	5.78	40	eP	Pn	09 00 46.4	+1.4
	3.5nm,0.8s						
UCH	Uchtor	5.88	47	eP	Pn	09 00 47.1	+0.7
	5.3nm,0.8s						
AAK	Ala-Archa	6.14	44	ePn	Pn	09 00 50.8	+0.8
	23nm,2.3s						
TKM2	Tokmak 2	6.94	46	⇑Pn	Pn	09 01 00.7	-0.2
	7.7nm,0.7s						
TKM2				⇓Sn	Sn	09 02 19.9	-0.2
	12nm,1.0s						
TKM2	Tokmak 2	6.94	46	ePn	Pn	09 01 00.8	-0.2
	8.3nm,0.6s						
AB07	Akbulak array	12.63	333	⇑Pn	Pn	09 02 20.3	+1.4
	2.0nm,0.7s						
AB07				⇓Sn	Sn	09 04 37.5	-2.3
	0.8nm,0.5s						
MK31	Makanchi Array	13.07	45	ePn	Pn	09 02 23.1	-1.7
MKAR	Makanchi Array	13.07	45	Pn	Pn	09 02 23.1	-1.8
	0.1nm,0.3s,baz=228,slow=13,SNR=20						
KURK	Kurchatov	14.23	26	Pn	Pn	09 02 37.7	-3.1
	0.4nm,0.3s,baz=218,slow=11,SNR=3.8						
KURK	Kurchatov	14.23	26	ePn	Pn	09 02 42.8	+2.0
AKTK	Aktyubinsk	14.33	331	Pn	Pn	09 02 43.5	+1.4
AKTK				Sn	Sn	09 05 21.1	-0.1
AKTK				Lg		09 07 09.5	
AKTO	Aktyubinsk	14.33	331	⇓Pn	Pn	09 02 42.7	+0.7
	0.7nm,0.9s						
AKTO				⇓Sn	Sn	09 05 19.4	-1.8
	0.7nm,1.1s						
AKTO	Aktyubinsk	14.33	331	Pn	Pn	09 02 43.5	+1.4
	0.1nm,0.3s,baz=149,slow=14,SNR=5.0						
AKTO				Sn	Sn	09 05 21.1	-0.1
	0.1nm,0.3s,baz=232,slow=19,SNR=3.6						
AKTO				Lg		09 07 09.5	
	0.1nm,0.3s,baz=30,slow=20,SNR=1.8						
BVAR	Borovoye Array	14.76	4	Pn	Pn	09 02 47.1	-0.8
	0.2nm,0.3s,baz=183,slow=9.2,SNR=2.7						
BRVK	Borovoye	14.78	4	eP	Pn	09 02 51.4	+3.1
	1.2nm,0.7s						
ZALV	Zalesovo Beam	19.12	30	P	Pn	09 03 42.6	-0.4
	0.4nm,0.3s,baz=220,slow=13,SNR=8.6						
ARU	Arti	19.36	343	eP	Pn	09 03 47.8	+1.9
	6.8nm,1.1s						
ASF	Jabal al Asfar	26.66	266	LR	LR	09 19 03.5	
	comp=Z,25nm,20.0s,baz=28,slow=44						
KSRS	Korea Array	45.99	72	LR	LR	09 26 47.8	
	comp=Z,12nm,21.8s,baz=25,slow=36						
TORD	Torodi Ar. Bea	64.02	266	P	P	09 09 52.9	-0.6
	0.4nm,0.8s,mb3.5,baz=47,slow=5.2,SNR=2.8						
YKA	Yellowknife Ar	79.50	2	P	P	09 11 25.5	-0.3
	0.4nm,0.9s,mb3.4,baz=351,slow=5.6,SNR=5.2						

*ROM **25** 09:39:25.5±0.3,4262N×1670E,h10km,Ml3.2/27,Error ellipse: s-maj=4.8km s-min=3.7km az=36.0*
*PRU **25** 09:39:26.2,4238N×1638E,h0km*
*ISCJB **25** 09:39:26.4±0.5,4259N±002×1632E±002,h1km±4km, Error ellipse: s-maj=2.9km s-min=2.4km az=16.1*
*NEIC **25** 09:39:27.9,4261N×1646E,h4km,ML3.4(ZAG), ML3.4(PDG),After PDG.*
*CSEM **25** 09:39:27.0±0.1,4259N×1643E,h10km,ML3.1/16,Ms3.5, Error ellipse: s-maj=2.4km s-min=1.7km az=71.0*
*PDG **25** 09:39:27.9±0.1,4261N×1646E,h4km,MD3.4/1,ML3.4/9, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*
*VIE **25** 09:39:28.4±0.3,4250N×1629E,h10km,mb3.0/11,ML2.7/8, Ms3.5/3,Error ellipse: s-maj=2.6km s-min=1.9km az=78.0*
*LDG **25** 09:39:29.9±0.1,4274N×1647E,h10km,Ml3.0/17,Error ellipse: s-maj=3.4km s-min=1.2km az=12.0*

ISC 25 09:39:27.6±0.5,4253N±002×1633E±002,h1km±4km,n158, σ1§09/223,**19C-12D,Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MS1	Monte Sant'Ang	0.87	199	ePg	Pg	09 39 45.8	+1.5
MS1				eSg	Sg	09 40 00.2	+4.6
MSAG	Monte S. Angel	0.87	201	Pg	Pg	09 39 45.8	+1.4
MSAG				Sg	Sg	09 40 01.1	+5.4
	731nm,0.5s						
MSAG	Monte S. Angel	0.87	201	Pg	Pg	09 39 45.8	+1.4
MSAG				Sg	Sg	09 40 01.1	+5.4
	731nm,0.5s						
SGRT	San Giovanni R	0.89	210	Pg	Pg	09 39 46.4	+1.8
SGRT				Sg	Sg	09 40 00.5	+4.4
	662nm,0.3s						
SGRT	San Giovanni R	0.89	210	Pg	Pg	09 39 46.4	+1.8
SGRT				Sg	Sg	09 40 00.5	+4.4
	662nm,0.3s						
RGNG	Rignano Grg	1.02	213	Pg	Pg	09 39 48.2	+1.1
RGNG	Rignano Grg	1.02	213	Pg	Pg	09 39 48.2	+1.1
STON	Ston	1.07	71	ePg	Pg	09 39 47.5	-0.6
STON				Sg	Sg	09 40 01.9	0.0
FG2	Serracapriola	1.13	231	Pg	Pg	09 39 50.8	+1.5
	349nm,0.2s						
FG2	Serracapriola	1.13	231	Pg	Pg	09 39 50.8	+1.5
	349nm,0.2s						
FRES	Fresagrandinar	1.35	246	Pn	Pn	09 39 54.7	+1.1
FRES	Fresagrandinar	1.35	246	Pn	Pn	09 39 54.7	+1.1
MOCO	Biccari - m.te	1.45	217	Pg	Pg	09 39 55.3	-0.1
MRVN	Minervino Murg	1.47	184	Pg	Pn	09 39 54.0	-1.2
	118nm,0.3s						
MRVN	Minervino Murg	1.47	184	Pg	Pn	09 39 54.0	-1.2
	118nm,0.3s						
FG5	Orsara di Pugl	1.48	213	Pn	Pn	09 39 55.8	+0.5
	162nm,0.5s						
FG5	Orsara di Pugl	1.48	213	Pn	Pn	09 39 55.8	+0.5
	162nm,0.5s						
TRIV	Trivento	1.53	241	Pn	Pn	09 39 58.5	+2.5
TRIV	Trivento	1.53	241	Pn	Pn	09 39 58.5	+2.5
HCY	Herceg Novi	1.61	92	⇓iPg	Pn	09 39 55.6	-1.5
HCY				eSg	Sg	09 40 19.9	+0.7
PALZ	Palazzo San Ge	1.61	190	Pn	Pn	09 39 56.3	-0.8
	318nm,0.7s						
PALZ	Palazzo San Ge	1.61	190	Pn	Pn	09 39 56.3	-0.8
	318nm,0.7s						
BSSO	Busso	1.62	233	Pn	Pn	09 39 58.4	+1.1
	144nm,0.5s						
BSSO	Busso	1.62	233	Pn	Pn	09 39 58.4	+1.1
	144nm,0.5s						
AMUR	Altamura	1.63	173	Pn	Pn	09 39 55.9	-1.5
	177nm,0.5s						
AMUR	Altamura	1.63	173	Pn	Pn	09 39 55.9	-1.5
	177nm,0.5s						
SACR	S. Croce Del S	1.66	227	Pn	Pn	09 39 58.3	+0.5
	101nm,0.5s						
SACR	S. Croce Del S	1.66	227	Pn	Pn	09 39 58.3	+0.5
	101nm,0.5s						
VULT	Monte Vulture	1.66	199	Pn	Pn	09 39 59.0	+1.2
	361nm,0.5s						
VULT	Monte Vulture	1.66	199	Pn	Pn	09 39 59.0	+1.2
	361nm,0.5s						
BRY	Bratogost	1.67	76	⇑iPg	Pn	09 39 56.8	-1.2
BRY				eSg	Sg	09 40 20.9	-0.5
CAFE	Carife	1.71	209	Pn	Pn	09 40 00.1	+1.6
	176nm,0.7s						
CAFE	Carife	1.71	209	Pn	Pn	09 40 00.1	+1.6
	176nm,0.7s						
SG1	Sgolgore (BA)	1.71	171	ePn	Pn	09 39 56.6	-1.9
PSB1	Pescosannita	1.73	221	Pn	Pn	09 40 00.9	+2.2
	147nm,0.7s						
PSB1	Pescosannita	1.73	221	Pn	Pn	09 40 00.9	+2.2
	147nm,0.7s						
MRB1	Monte Rocchett	1.73	216	Pn	Pn	09 40 00.2	+1.4
	274nm,0.5s						
MRB1	Monte Rocchett	1.73	216	Pn	Pn	09 40 00.2	+1.4
	274nm,0.5s						
ACER	Acerenza	1.77	190	Pg	Pg	09 39 58.7	-2.7
ACER	Acerenza	1.77	190	Pg	Pg	09 39 58.7	-2.7
PTRJ	Pietraroja	1.78	230	Pn	Pn	09 40 00.5	+1.1
	92nm,0.4s						
PTRJ	Pietraroja	1.78	230	Pn	Pn	09 40 00.5	+1.1
	92nm,0.4s						
MIDA	Miranda	1.78	241	Pn	Pn	09 40 01.2	+1.7
	174nm,0.5s						
MIDA	Miranda	1.78	241	Pn	Pn	09 40 01.2	+1.7
	174nm,0.5s						
SNAL	S. Angelo Dei	1.81	208	Pn	Pn	09 39 59.7	-0.1
	225nm,0.6s						
SNAL	S. Angelo Dei	1.81	208	Pn	Pn	09 39 59.7	-0.1
	225nm,0.6s						
NOCI	Noci	1.82	162	Pn	Pn	09 39 58.4	-1.7
	242nm,0.5s						
NOCI	Noci	1.82	162	Pn	Pn	09 39 58.4	-1.7
	242nm,0.5s						
INTR	Introdacqua	1.87	255	Pn	Pn	09 40 01.4	+0.7
	329nm,0.6s						
INTR	Introdacqua	1.87	255	Pn	Pn	09 40 01.4	+0.7
	329nm,0.6s						
PE1	Pezze di Greco	1.91	154	ePn	Pn	09 39 59.0	-2.2
BUM	Brajici-Budva	1.92	96	⇓iPn	Pn	09 40 01.1	-0.2
BUM				eSn	Sn	09 40 27.4	+1.3
VAGA	Valle Agricola	1.92	235	Pn	Pn	09 40 02.9	+1.5
	139nm,0.4s						
VAGA	Valle Agricola	1.92	235	Pn	Pn	09 40 02.9	+1.5
	139nm,0.4s						
MIGL	Miglionico	1.93	177	Pn	Pn	09 40 00.5	-0.9
	544nm,0.6s						
MIGL	Miglionico	1.93	177	Pn	Pn	09 40 00.5	-0.9
	544nm,0.6s						
CSSN	Cassano Irpino	1.93	211	Pn	Pn	09 40 02.1	+0.6
	31nm,0.3s						
CSSN	Cassano Irpino	1.93	211	Pn	Pn	09 40 02.1	+0.6
	31nm,0.3s						
MCRV	Calabrutti - M	1.95	207	Pn	Pn	09 40 01.3	-0.5
	165nm,0.4s						
MCRV	Calabrutti - M	1.95	207	Pn	Pn	09 40 01.3	-0.5
	165nm,0.4s						
CERA	Filignano	1.96	242	Pn	Pn	09 40 04.9	+3.0
CERA	Filignano	1.96	242	Pn	Pn	09 40 04.9	+3.0
NKY	Niksic	1.99	81	⇑iPn	Pn	09 40 01.9	-0.4
NKY				eSn	Sn	09 40 28.8	+1.0
UPM	Unac-Piva	2.01	70	⇓iPn	Pn	09 40 02.0	-0.7
UPM				eSn	Sn	09 40 28.8	+0.3
TERO	Teramo	2.02	274	Pn	Pn	09 40 03.3	+0.6
	78nm,0.6s						
TERO	Teramo	2.02	274	Pn	Pn	09 40 03.3	+0.6
	78nm,0.6s						
SDI	San Donato	2.04	247	Pn	Pn	09 40 05.0	+1.9
	45nm,0.4s						
SDI	San Donato	2.04	247	Pn	Pn	09 40 05.0	+1.9
	45nm,0.4s						
POFI	Posta Fibreno	2.11	248	Pn	Pn	09 40 05.5	+1.5
	64nm,0.5s						
POFI	Posta Fibreno	2.11	248	Pn	Pn	09 40 05.5	+1.5
	64nm,0.5s						
SGO	Sicignano	2.11	202	Pn	Pn	09 40 03.9	-0.1
	43nm,0.4s						
SGO	Sicignano	2.11	202	Pn	Pn	09 40 03.9	-0.1
	43nm,0.4s						
PDG	Podgorica	2.17	92	⇑iPn	Pn	09 40 04.3	-0.5
TTG	Podgorica	2.17	92	⇑iPn	Pn	09 40 04.3	-0.5
TTG				eSn	Sn	09 40 33.5	+1.2
AQU	L'Aquila	2.17	266	eP	Pn	09 40 12.4	+7.5
CDRU	Civita di Ruta	2.18	201	Pn	Pn	09 40 04.2	-0.7
	50nm,0.6s						
CDRU	Civita di Ruta	2.18	201	Pn	Pn	09 40 04.2	-0.7
	50nm,0.6s						
MCEL	Monticello	2.24	190	Pn	Pn	09 40 04.9	-0.9
	72nm,0.5s						
MCEL	Monticello	2.24	190	Pn	Pn	09 40 04.9	-0.9
	72nm,0.5s						
ULC	Ulcinj	2.24	104	⇑iPn	Pn	09 40 06.0	+0.2
ULC				eSn	Sn	09 40 35.5	+1.4
NVLJ	Novalja	2.29	333	⇑iPn	Pn	09 40 06.6	+0.1
NVLJ				Sn	Sn	09 40 36.9	+1.6
MTSN	Montesano sull	2.30	191	Pn	Pn	09 40 06.0	-0.6
	68nm,0.5s						
MTSN	Montesano sull	2.30	191	Pn	Pn	09 40 06.0	-0.6
	68nm,0.5s						
CMPR	Campora	2.34	200	Pn	Pn	09 40 06.3	-0.9
	37nm,0.4s						
CMPR	Campora	2.34	200	Pn	Pn	09 40 06.3	-0.9
	37nm,0.4s						
SIRI	Monte Sirino -	2.37	189	Pn	Pn	09 40 07.0	-0.6
	61nm,0.3s						
SIRI	Monte Sirino -	2.37	189	Pn	Pn	09 40 07.0	-0.6
	61nm,0.3s						
PLE	Pljevlja	2.39	69	⇑iPn	Pn	09 40 07.3	-0.5
PLE				eSn	Sn	09 40 38.0	+0.3
CUC	Castrocucco	2.56	189	Pn	Pn	09 40 10.0	-0.2
	80nm,0.9s						
CUC	Castrocucco	2.56	189	Pn	Pn	09 40 10.0	-0.2
	80nm,0.9s						
BEY	Berane	2.65	81	⇓iPn	Pn	09 40 11.6	+0.1
IVA	Berane	2.65	81	⇓iPn	Pn	09 40 11.6	+0.1
IVA				eSn	Sn	09 40 44.5	+0.3
PVY	Plav	2.69	87	⇓iPn	Pn	09 40 11.8	-0.2
PVY				eSn	Sn	09 40 45.9	+0.7
SISC	Sisak	2.94	1	Sn	Sn	09 40 51.5	+0.2
BOJS	Bojanci	3.07	346	iPn	Pn	09 40 18.0	+0.8
TIP	Timpagrande	3.36	174	eP	Pg	09 40 31.5	-0.5
VISS	Visnje	3.44	342	iPn	Pn	09 40 22.8	+0.5
SKDS	Skadanscina	3.45	332	iPn	Pn	09 40 22.1	-0.3
SKDS	Skadanscina	3.45	332	iPn	Pn	09 40 22.0	-0.4
KEK	Kerkira	3.84	136	eP	Pn	09 40 27.3	-0.5
KRUS	Krusevo	3.85	106	iPn	Pn	09 40 28.9	+1.0
KRUS				iSn	Sn	09 41 14.2	+0.5
KRUS	Krusevo	3.85	106	iPn	Pn	09 40 29.0	+1.1
KRUS				iSn	Sn	09 41 14.2	+0.5
VOY	Vojsko	3.91	334	ePn	Pn	09 40 28.5	-0.3
VOY				eSn	Sn	09 41 13.1	-2.2
CADS	Cadrg	4.14	334	iPn	Pn	09 40 31.7	-0.2
OBKA	Obir	4.18	343	⇑iPn	Pn	09 40 33.0	+0.6
	SNR=26						
OBKA				⇑iSn	Sn	09 41 23.1	+1.2
SOKA	Soboth	4.25	348	⇑iPn	Pn	09 40 33.5	+0.1
SOKA				⇓iSn	Sn	09 41 24.7	+1.1
SOKA	Soboth	4.25	348	Pn	Pn	09 40 33.5	+0.1
SOKA				Sn	Sn	09 41 24.7	+1.1
JAN	Janina	4.46	129	eP	Pn	09 40 35.6	-0.7
ARSA	Arzberg	4.75	353	iPn	Pn	09 40 40.4	+0.1
	SNR=9.2						
ARSA				⇓iSn	Sn	09 41 37.3	+1.2
KBA	Koelnbreinsper	5.02	336	⇓iPn	Pn	09 40 44.0	+0.1
	SNR=9.2						
KBA				⇑iSn	Sn	09 41 43.3	+0.7
ABTA	Abfaltersbach	5.02	328	iPn	Pn	09 40 43.9	0.0
	SNR=15						
ABTA				⇓iSn	Sn	09 41 43.3	+0.7
ABTA	Abfaltersbach	5.02	328	Pn	Pn	09 40 43.9	-0.1
	SNR=15						
ABTA				Sn	Sn	09 41 43.3	+0.7
THL	Klokotos Trika	5.22	123	eP	Pn	09 40 47.0	+0.3
CONA	Conrad Observa	5.41	357	⇓iPn	Pn	09 40 49.5	+0.2
	SNR=8.4						
CONA				⇑iSn	Sn	09 41 53.1	+0.9
CSNA	Conrad Observa	5.41	357	⇑iPn	Pn	09 40 49.6	+0.2
CSNA				⇑iSn	Sn	09 41 53.2	+1.1
PGF	Pioggiola	5.42	273	ePn	Pn	09 40 50.4	+1.0
PGF				eSn	Sn	09 41 49.6	-2.7
	0.5nm,0.3s						
VLS	Valsamata	5.43	142	eP	Pn	09 40 47.7	-1.9
EVR	Evrytania	5.51	129	eP	Pn	09 40 52.0	+1.3
MOA	Molln	5.52	345	⇑iPn	Pn	09 40 51.2	+0.4
	SNR=28						
PLG	Polygyros	5.76	110	eP	Pn	09 40 53.5	-0.7
WTTA	Wattenberg	5.79	326	⇑iPn	Pn	09 40 55.0	+0.4
	SNR=9.1						
WATA	Walderalm	5.87	327	⇑iPn	Pn	09 40 55.9	+0.2
	SNR=12						
WATA				⇑iSn	Sn	09 42 04.2	+0.6
RLS	Riolos of Patr	5.95	137	eP	Pn	09 40 53.1	-3.6
MOTA	Moosalm	6.08	324	⇓iPn	Pn	09 40 58.5	+0.1
MOTA				⇑iSn	Sn	09 42 09.2	+0.6
LKR	Lokris	6.39	125	eP	Pn	09 41 01.4	-1.4
SBF	Sospel	6.64	285	ePn	Pn	09 41 05.7	-0.5
SBF				eSn	Sn	09 42 18.3	-4.1
	2.4nm,0.3s						
SBF	Sospel	6.64	285	ePn	Pn	09 41 05.7	-0.5
SBF				eSn	Sn	09 42 18.3	-4.1
	1.2nm,0.3s						
KHC	Kasperske Hory	6.88	345	ePN	Pn	09 41 09.0	-0.4
KHC				ex	x	09 41 18.3	
KHC				eSN	Sn	09 42 27.2	-1.1
FRF	La Foret Royal	7.17	282	ePn	Pn	09 41 13.1	-0.4
FRF				eSn	Sn	09 42 31.3	-4.2
	0.6nm,0.3s						
FRF	La Foret Royal	7.17	282	ePn	Pn	09 41 13.1	-0.4
	0.3nm,0.3s						
FRF				eSn	Sn	09 42 31.3	-4.2
	0.3nm,0.3s						
LMR	La Mourre	7.25	280	ePn	Pn	09 41 13.9	-0.7
LMR				eSn	Sn	09 42 33.3	-4.3
	1.0nm,0.3s						
LMR	La Mourre	7.25	280	ePn	Pn	09 41 13.9	-0.7
LMR				eSn	Sn	09 42 33.3	-4.3
	0.5nm,0.3s						
MBDF	Montbardon	7.27	291	ePn	Pn	09 41 14.3	-0.6
MBDF				eSn	Sn	09 42 33.1	-5.0
	2.0nm,0.3s						
MBDF	Montbardon	7.27	291	ePn	Pn	09 41 14.3	-0.6
MBDF				eSn	Sn	09 42 33.1	-5.0
	1.0nm,0.3s						
LPG	La Plagne	7.51	297	ePn	Pn	09 41 17.7	-0.5
LPG				eSn	Sn	09 42 38.2	-5.8
	2.5nm,0.3s						
LPG	La Plagne	7.51	297	ePn	Pn	09 41 17.7	-0.5
LPG				eSn	Sn	09 42 38.2	-5.8
	1.2nm,0.3s						
LPL	La Plagne	7.53	297	ePn	Pn	09 41 17.7	-0.8
LPL				eSn	Sn	09 42 38.8	-5.7
	2.0nm,0.3s						
LPL	La Plagne	7.53	297	ePn	Pn	09 41 17.7	-0.8
LPL				eSn	Sn	09 42 38.8	-5.7
	1.0nm,0.3s						
ORIF	Oris-en-Rattie	7.94	291	ePn	Pn	09 41 23.4	-0.6
ORIF				eSn	Sn	09 42 48.4	-6.0
	1.6nm,0.4s						
ORIF	Oris-en-Rattie	7.94	291	ePn	Pn	09 41 23.4	-0.6
ORIF				eSn	Sn	09 42 48.4	-6.0
	0.8nm,0.4s						
SMRF	Simiane la Rot	7.98	284	ePn	Pn	09 41 24.4	-0.3
SMRF				eSn	Sn	09 42 50.2	-5.3
	0.3nm,0.3s						
SMRF	Simiane la Rot	7.98	284	ePn	Pn	09 41 24.4	-0.3
SMRF				eSn	Sn	09 42 50.2	-5.3
	0.2nm,0.3s						
CABF	La Chapelle	8.37	303	ePn	Pn	09 41 28.7	-1.3
CABF				eSn	Sn	09 42 58.3	-6.8
	0.7nm,0.3s						
CABF	La Chapelle	8.37	303	ePn	Pn	09 41 28.7	-1.3
CABF				eSn	Sn	09 42 58.3	-6.8
	0.3nm,0.3s						
HINF	Hinteralfeld	8.53	312	ePn	Pn	09 41 30.0	-2.1
HINF				eSn	Sn	09 43 00.1	-8.8
	2.1nm,0.4s						
HINF	Hinteralfeld	8.53	312	ePn	Pn	09 41 30.0	-2.1
HINF				eSn	Sn	09 43 00.1	-8.8
	1.0nm,0.4s						
CDF	Champ du Feu	8.66	316	ePn	Pn	09 41 31.8	-2.1
CDF				eSn	Sn	09 43 03.7	-8.5
	0.8nm,0.4s						
CDF	Champ du Feu	8.66	316	ePn	Pn	09 41 31.8	-2.1
CDF				eSn	Sn	09 43 03.7	-8.5
	0.4nm,0.4s						
HAU	Haudompre	8.91	311	ePn	Pn	09 41 35.6	-1.8
HAU				eSn	Sn	09 43 09.6	-8.8
	4.6nm,0.5s						
HAU	Haudompre	8.91	311	ePn	Pn	09 41 35.6	-1.8
HAU				eSn	Sn	09 43 09.6	-8.8
	2.3nm,0.5s						
SMF	Signal de Mont	9.81	299	ePn	Pn	09 41 48.6	-1.1
SMF				eSn	Sn	09 43 32.2	-8.2
	1.0nm,0.2s						
SMF	Signal de Mont	9.81	299	ePn	Pn	09 41 48.6	-1.1
SMF				eSn	Sn	09 43 32.2	-8.2
	0.5nm,0.2s						
MEZF	Maizieres J'vi	9.91	311	ePn	Pn	09 41 48.3	-2.8
MEZF				eSn	Sn	09 43 33.6	-9.2
	4.5nm,0.6s						
MEZF	Maizieres J'vi	9.91	311	ePn	Pn	09 41 48.3	-2.8
MEZF				eSn	Sn	09 43 33.6	-9.2
	2.2nm,0.6s						
LOR	Lormes	10.03	302	ePn	Pn	09 41 51.5	-1.2
LOR				eSn	Sn	09 43 37.4	-8.5
	2.7nm,0.4s						
LOR	Lormes	10.03	302	ePn	Pn	09 41 51.5	-1.2
LOR				eSn	Sn	09 43 37.4	-8.5
	1.4nm,0.4s						
SSF	Saint Saulge	10.18	301	ePn	Pn	09 41 52.5	-2.2
SSF				eSn	Sn	09 43 40.6	-8.8
	0.6nm,0.4s						
SSF	Saint Saulge	10.18	301	ePn	Pn	09 41 52.5	-2.2
SSF				eSn	Sn	09 43 40.6	-8.8
	0.3nm,0.4s						

*IDC **25** 10:04:49.0±2.6,2671S×17867E,h545km±27km,mb3.7/16, mb1 3.9/18,mb1mx3.8/20,mbtmp3.7/18,Error ellipse: s-maj=18.3km s-min=13.0km az=66.0*
*NEIC **25** 10:04:51.6±1.2,2686S×17856E,h576km±12km,mb5.0/6, Error ellipse: s-maj=13.3km s-min=10.7km az=224.0*
*BJI **25** 10:04:51.5,2690S×17860E,h576km,mb4.9,mb4.7*
*ISCJB **25** 10:04:52.7±1.2,2680S±007×17842E±009,h598km±14km, mb4.3/21, Error ellipse: s-maj=12.2km s-min=10.4km az=178.7*
*DJA **25** 10:04:53,2688S×17834E,h581km,mb4.7/8*
*MOS **25** 10:04:53.3±3.1,2659S×17810E,h563km,mb5.1/3, Error ellipse: s-maj=22.3km s-min=14.3km az=15.6*

ISC 25 10:04:52.5±1.1,2680S±007×17850E±009,h583km±12km, n128, σ0§88/59,**mb4.3**/20,**22C-6D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	11.49	186	P	P	10 07 22.8	-2.9
	2.3nm,0.3s,baz=343,slow=3.3,SNR=13						
URZ				S	S	10 09 23.9	-7.9
	3.9nm,0.3s,baz=78,slow=23,SNR=18						
DZM	Mont Dzumac	11.95	291	eP	P	10 07 30.4	-0.2
DZM	Mont Dzumac	11.95	291	eP	P	10 07 31.2	+0.6
	66nm,0.6s						
NOUC	Port Laguerre	12.05	290	eP	P	10 07 31.5	-0.2
RPZ	Rata Peaks	17.93	198	P	P	10 08 27.7	-0.2
	1.1nm,0.3s,baz=30,slow=16,SNR=5.6						
RPZ				S	S	10 11 22.4	-0.6
	0.4nm,0.3s,baz=24,slow=19,SNR=2.4						
ARMA	Armidale	23.84

comp=Z,3.1nm,0.8s,baz=104,slow=14,SNR=10
FORT Forrest 44.09 252 *e*P **P 10 12 09.4 -0.7**
comp=Z,102nm,0.6s
FORT Forrest 44.09 252 *e*P **P 10 12 09.4 -0.7**
comp=Z,103nm,0.6s
FITZ Fitzroy Crossi 49.33 269⇓ *i*P **P 10 12 49.7 +0.1**
comp=Z,31nm,0.7s,mb4.8
FITZ Fitzroy Crossi 49.33 269 *e*P **P 10 12 49.5 -0.1**
comp=Z,44nm,1.2s,mb4.8
NWAO Narrogin (SRO) 52.85 248 P **P 10 13 14.8 0.0**
comp=Z,3.8nm,0.7s,mb3.9,baz=159,slow=7.2,SNR=5.4
NWAO Narrogin (SRO) 52.85 248 *e*P **P 10 13 15.3 +0.5**
comp=Z,4.5nm,0.8s,mb3.9
MBWA Marble Bar 53.60 263 *e*P **P 10 13 19.4 -1.0**
MUN Mundaring 53.88 249 *e*P **P 10 13 21.8 -0.4**
QSPA South Pole Qui 63.30 180 P **P 10 14 25.6 +1.1**
comp=Z,4.4nm,0.8s,mb3.8,baz=24,slow=1.8,SNR=33
MJAR Matsushiro Arr 73.55 327 P **P 10 15 25.9 -1.0**
comp=Z,3.6nm,0.7s,mb4.0,baz=165,slow=6.1,SNR=12
MAT Matsushiro 73.55 327 P **P 10 15 26.0 -0.9**
MAW Mawson 74.57 201 P **P 10 15 32.4 +0.2**
comp=Z,8.5nm,1.1s,mb4.2,baz=217,slow=20,SNR=8.6
MAW Mawson 74.57 201 *e*P **P 10 15 32.8 +0.5**
comp=Z,1.9nm,0.7s,mb3.7
KSRS Korea Array 79.62 321 P **P 10 16 00.1 +0.1**
comp=Z,4.2nm,0.8s,mb3.8,baz=133,slow=6.2,SNR=13
PETK Petropavlovsk- 81.61 348 P **P 10 16 09.9 +0.1**
comp=Z,4.6nm,0.6s,mb4.2,baz=114,slow=6.8,SNR=10
SNAA Sanae 81.80 180 *e*P **P 10 16 10.4 -0.4**
VNA3 Neumayer Olymp 82.06 177 *e*P **P 10 16 12.1 0.0**
VNA3 *e* pP 10 18 18.3 +2.6
VNA2 Neumayer--Watz 82.46 178 *e*P **P 10 16 14.2 0.0**
baz=194,slow=3.3
VNA2 *e* pP 10 18 20.6 +2.7
WHN Wuhan 83.72 309 P **P 10 16 21.5 +0.5**
HABR Khabarovsk 84.43 333 *e*P **P 10 16 24.9 +0.8**
HABR *e* 10 27 36.1
HABR MLR MLR
comp=Z,45nm,16.0s
CN2 Changchun 85.43 325 *e*P **P 10 16 28.5 -0.5**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb4.7
KLR Kul'dur 86.40 331 *e*P **P 10 16 29.0 -4.5**
NVAR Mina Array Bea 87.76 45 P **P 10 16 40.0 -0.2**
comp=Z,0.4nm,0.5s,mb3.4,baz=217,slow=7.2,SNR=3.8
CMAR Chiang Mai Arr 89.28 291 P **P 10 16 49.0 +1.4**
comp=Z,1.4nm,0.5s,mb4.0,baz=147,slow=2.6,SNR=9.5
XAN Xi'an 89.48 309 P **P 10 16 48.8 +0.5**
XAN AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
XAN AMB AMB
comp=Z,82nm,5.0s
TXAR Lajitas Array 93.10 59 P **P 10 17 05.7 +0.6**
comp=Z,0.3nm,0.9s,mb3.3,baz=282,slow=4.4,SNR=3.0
BILL Bilibino 94.98 355⇓ *e*P **P 10 17 10.2 -2.5**
BILL pmax pmax
comp=Z,4.0nm,1.6s,mb4.3
PDAR Pinedale Array 95.70 45 P **P 10 17 17.2 +0.7**
comp=Z,0.2nm,0.7s,mb3.4,baz=229,slow=3.5,SNR=2.1
SONM Songino Array 98.41 320 P Pdif 10 17 30.3 +1.5
comp=Z,0.3nm,0.5s,baz=134,slow=4.2,SNR=3.2
MKAR Makanchi Array 113.09 312 PKiKP PKiKP 10 22 22.6 -1.4
comp=Z,0.7nm,0.5s,baz=80,slow=1.4,SNR=8.5
ZALV Zalesovo Beam 113.31 320 PKiKP PKiKP 10 22 23.6 -0.6
comp=Z,0.2nm,0.3s,baz=15,slow=3.1,SNR=3.7
BOSA Boshof 119.22 207 PKP PKPdf 10 22 35.3 -1.2
comp=Z,3.1nm,1.0s,baz=290,slow=9.1,SNR=3.7
BVAR Borovoye Array 121.68 318 PKP PKPdf 10 22 39.2 -1.1
comp=Z,4.9nm,0.7s,baz=132,slow=1.3,SNR=25
BRVK Borovoye 121.75 318 *e*PKIKP PKPdf 10 22 39.9 -0.6
ARU Arti 128.37 322 *i* PKIKP PKPdf 10 22 53.1 +0.1
ARU 10 25 05.7
AKTK Aktyubinsk 129.40 315 PKP PKPdf 10 22 54.7 -0.5
AKTO Aktyubinsk 129.40 315 PKP PKPdf 10 22 54.7 -0.5
comp=Z,2.5nm,0.7s,baz=91,slow=4.3,SNR=9.8
ARCES ARCESS Array B 134.41 347 PKP PKPdf 10 23 04.9 +0.8
comp=Z,6.9nm,0.9s,baz=4.6,slow=6.1,SNR=5.6
JOF Joensuu 137.95 338 *ep* PKPdf 10 23 12.0 +1.2
comp=Z,0.7nm,0.4s
JOF Joensuu 137.95 338 *e*PKIKP PKPdf 10 23 12.0 +1.2
JOF pmax pmax
comp=Z,1.0nm,0.4s
KAF Kangasniemi 140.13 340 *ep* 10 23 07.2
comp=Z,0.7nm,0.5s
KAF Kangasniemi 140.13 340 *e*PKHKP 10 23 07.2
KAF pmax pmax
comp=Z,1.0nm,0.5s
SOC Sochi 142.81 308 *i* PKIKP PKiKP 10 23 24.0 +0.4
SOC *e* 10 26 37.1
SOC *e*PPP 10 29 54.4
SOC *e*SS SS 10 45 02.5 +33
SOC pmax pmax
comp=Z,6.0nm,0.5s
ANN Anapa 144.09 310 *i* PKHKP 10 23 20.9
ANN pmax pmax
comp=Z,61nm,0.9s
MALT Malatya 144.69 299 *e*PKIKP PKPdf 10 23 25.2 +1.6
NB2 NORSAR Subarra 144.69 349 PKP PKPdf 10 23 22.3 -0.6
comp=Z,4.7nm,0.6s,baz=15,slow=2.9
NOA NORSAR Array B 144.69 349 PKP PKPdf 10 23 22.4 -0.5
comp=Z,6.7nm,0.7s,baz=16,slow=4.7,SNR=27
SIM Simferopol' 146.28 312 *i* PKHKP 10 23 20.7
SIM pmax pmax
comp=Z,16nm,0.7s
AKASG Malin Array Be 146.58 324 PKPbc PKPbc 10 23 28.1 -0.9
comp=Z,9.0nm,0.5s,baz=44,slow=3.7,SNR=48
AKBB Malin Array Si 146.58 324 *e*PKIKP PKPbc 10 23 28.4 -0.6
KIEV Kiev 146.60 324 *e*PKIKP PKPbc 10 23 28.3 -0.8
EIL Elat 147.84 284 PKPbc PKPbc 10 23 33.4 +0.3
comp=Z,7.1nm,0.7s,baz=279,slow=3.9,SNR=4.9
BR131 Keskin Array S 148.12 303 *e*PKPbc PKPbc 10 23 32.8 -0.6
BRTR Keskin Array B 148.12 303 PKPbc PKPbc 10 23 33.1 -0.2
comp=Z,4.1nm,0.8s,baz=132,slow=2.0,SNR=19
CSS Prodhromos 149.14 294 *e*PKPbc PKPbc 10 23 35.8 -0.2
TLCR 149.62 315⇑ *i*P PKPbc 10 23 36.6 -0.2
TLCR 149.62 315⇑ *e*P PKPbc 10 23 36.6 -0.2
LVV L'vov 149.78 326 *e*PKHKP PKPbc 10 23 36.9 -0.1
TIRR Tirgusor 150.21 314⇑ *i*P PKPbc 10 23 38.0 -0.2
TIRR Tirgusor 150.21 314⇑ *e*P PKPbc 10 23 38.0 -0.3
HARR Harsova 150.41 315⇑ *i*P PKPbc 10 23 39.2 +0.5
BUR08 Bucovina Ar. S 150.50 322 *e*P PKPbc 10 23 39.4 +0.6
BURAR Bucovina Array 150.50 322⇑ *i*P PKPbc 10 23 40.3 +1.5
BURAR Bucovina Array 150.50 322⇑ *e*P PKPbc 10 23 40.3 +1.5
KWP Kalwaria 150.55 327⇑ *i*P PKPbc 10 23 38.9 +0.1
VRI Vrincioaia 150.58 318⇑ *i*P PKPbc 10 23 39.2 +0.1
VRI Vrincioaia 150.58 318⇑ *i*P PKPbc 10 23 41.1 +2.0
VRI Vrincioaia 150.58 318 ⇑P PKPbc 10 23 39.2 +0.2
VRI ⇑P 10 23 41.1
BMR Baia Mare 151.40 323⇑ *i*P PKPbc 10 23 41.0 +0.1
BMR Baia Mare 151.40 323⇑ *e*P PKPbc 10 23 41.0 +0.2
OJC Ojcow 151.48 331 *e*PKP PKPbc 10 23 40.9 0.0
TRPA Tarpa 151.62 325⇓ *i*P PKPbc 10 23 40.8 -0.5
CRVS Cervenica-Dubn 151.64 327 *e*PKP PKPbc 10 23 41.2 -0.1
VOIR 151.81 318⇓ *i*P PKPbc 10 23 43.6 +1.8
VOIR 151.81 318 ⇓P PKPbc 10 23 43.6 +1.7
NIE Niedzica 151.83 329 *e*PKP PKPbc 10 23 42.5 +0.8
DRGR 152.37 323⇑ *i*P PKPbc 10 23 42.7 -0.3
DRGR 152.37 323 ⇑P PKPbc 10 23 42.7 -0.3
KSP Ksiaz 152.42 335 *e*PKIKP PKPbc 10 23 43.4 +0.4
KSP *e* 10 23 56.4
UPC Upice 152.80 335 *e*PKPbc PKPbc 10 23 43.6 -0.2
UPC *e*PKPab PKPab 10 23 57.8 0.0
DPC Dobruska-Polom 152.81 335 *e*PKPbc PKPbc 10 23 44.1 +0.3
DPC *e*PKPab PKPab 10 23 58.4 +0.6
CLL Collm 153.16 340⇑ *i*PKIKP PKPbc 10 23 44.8 +0.2
CLL *i* 10 23 58.9
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL pmax pmax
comp=Z,91nm,0.8s
CLL Collm 153.16 340⇑ *i*PKPbc PKPbc 10 23 44.8 +0.2
comp=Z,10.0nm,0.9s
CLL *i* PKPab PKPab 10 23 58.9 -0.4
comp=Z,9.0nm,0.8s
GZR Gura Zlata 153.16 320⇑ *i*P PKPbc 10 23 43.9 -0.9
GZR Gura Zlata 153.16 320⇑ *e*P PKPbc 10 23 43.9 -0.9
VYHS Vyhne 153.17 329 *e*PKP PKPab 10 23 59.3 -0.1
BRG Berggiesshubel 153.23 338 *e*PKIKP PKPbc 10 23 45.0 +0.3
BRG pmax pmax
comp=Z,19nm,1.9s
BZS Buzias 153.69 322⇑ *i*P PKPbc 10 23 46.5 +0.6
BZS Buzias 153.69 322⇑ *e*P PKPbc 10 23 46.5 +0.6
NKC Novy Kostel 154.27 339 *e*PKPbc PKPbc 10 23 48.8 +1.9
NKC *e*PKPab PKPab 10 24 03.8 -0.3
KHC Kasperske Hory 154.82 336 *e*PKPbc PKPdf 10 23 48.3 +9.4
KHC *e*PKPab PKPab 10 24 06.8 +0.3
GERES GERESS Array B 155.02 336 PKPbc PKPdf 10 23 48.7 +9.5
comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=6.7
GERES PKPab PKPab 10 24 06.1 -1.2
comp=Z,1.5nm,0.8s,baz=38,slow=6.8,SNR=8.0
BAIF Baives 156.36 351 *e*PKP2 PKPab 10 24 11.5 -1.6
CDF Champ du Feu 157.36 345 *e*PKP2 PKPab 10 24 16.5 -1.0
HAU Haudompre 157.95 346 *e*PKP2 PKPab 10 24 19.1 -1.0
comp=Z,8.9nm,0.7s
HINF Hinteralfeld 158.02 345 *e*PKP2 PKPab 10 24 19.0 -1.3
CABF La Chapelle 159.33 345 *e*PKP2 PKPab 10 24 25.5 -0.6
SSF Saint Saulge 159.39 350 *e*PKP2 PKPab 10 24 26.1 -0.2
comp=Z,26nm,1.2s
AVF Avril sur Loir 159.68 350 *e*PKP2 PKPab 10 24 26.3 -1.3
comp=Z,22nm,1.1s
DBIC Dimbokro 159.73 170 PKP PKPdf 10 23 45.9 -0.2
comp=Z,1.9nm,1.0s,baz=101,slow=9.5,SNR=3.2
SMF Signal de Mont 159.74 349 *e*PKP2 PKPab 10 24 26.8 -1.1
comp=Z,12nm,0.7s
LPL La Plagne 160.19 343 *e*PKP2 PKPab 10 24 30.8 +0.9
LPG La Plagne 160.21 343 *e*PKP2 PKPab 10 24 31.0 +1.0
ORIF Oris-en-Rattie 160.97 344 *e*PKP2 PKPab 10 24 33.4 +0.1
comp=Z,15nm,0.9s
TORD Torodi Ar. Bea 166.09 193 PKP PKPdf 10 23 51.2 -0.8
comp=Z,2.5nm,1.0s,baz=293,slow=0.4,SNR=11
TORD PKPab PKPab 10 24 56.5 0.0
comp=Z,3.5nm,0.8s,baz=162,slow=3.8,SNR=17

IDC 25 10:30:21.3±14.0, 2342S×17867W, h491km±111km, mb3.2/5, mb1 3.3/6, mb1mx3.1/18, mbtmp3.2/6, Error ellipse: s-maj=221.4km s-min=44.0km az=58.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.23**	**193**	P	P	10 33 33.1	-0.8
	1.1nm,0.3s,baz=73,slow=1.5,SNR=8.4						
RPZ	**Rata Peaks**	**21.95**	**200**	P	P	10 34 38.3	+0.5
	8.5nm,0.6s,baz=25,slow=7.0,SNR=5.5						
CTA	**Charters Tower**	**32.70**	**269**	P	P	10 36 13.5	+1.0
	1.6nm,0.4s,baz=51,slow=22,SNR=10						
STKA	**Stephens Creek**	**36.04**	**248**	P	P	10 36 39.6	-0.8
	0.9nm,0.4s,baz=84,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**43.32**	**260**	P	P	10 37 39.1	-0.2
	0.6nm,0.5s,baz=96,slow=6.9,SNR=13						
WRA	**Warramunga Arr**	**43.66**	**265**	P	P	10 37 41.7	-0.3
	1.3nm,0.5s,baz=97,slow=8.3,SNR=32						

*CSEM **25** 10:32:33.5±0.1, 3652N×2666E, h153km±1km, MD3.1, Error ellipse: s-maj=2.5km s-min=1.8km az=38.0*
*ISCJB **25** 10:32:33.6±0.5, 3651N±004×2660E±004, h151km±5km, Error ellipse: s-maj=6.2km s-min=5.0km az=26.3*
*ATH **25** 10:32:34.3, 3657N×2658E, h145km±1km*
*HLW **25** 10:32:35.1, 3639N×2682E, h33km, Mb3.9*
*NEIC **25** 10:32:37.0, 3668N×2636E, h10km, ML3.0(ATH), After ATH.*
*DDA **25** 10:32:38.7, 3700N×2703E, h5km±2km, Md3.1*
*THE **25** 10:32:38.5, 3648N×2629E, h162km±1km, Error ellipse: s-maj=2.6km s-min=1.0km az=84.0*

ISC 25 10:32:34.5±0.5, 3651N±004×2659E±004, h147km±5km, n40, σ0°94/56, 2C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR1	**Thera Island**	**0.92**	**262**	P	**Pn**	**10 32 58.8**	**+0.5**
THR1				S	**Sn**	**10 33 14.2**	**-2.2**
THR4	**Thira Island,**	**0.96**	**267**	P	**Pn**	**10 32 59.1**	**+0.5**
THR4				S	**Sn**	**10 33 14.6**	**-2.4**
THR3	**Thira Island,**	**0.96**	**264**	P	**Pn**	**10 32 59.1**	**+0.4**
THR6	**Thira Island,**	**0.97**	**261**	P	**Pn**	**10 32 59.4**	**+0.7**
THR5	**Thira Island,**	**1.00**	**265**	P	**Pn**	**10 32 59.2**	**+0.2**
APE	**Apeiranthos**	**1.01**	**304**	P	**Pn**	**10 32 59.1**	**0.0**
APE				S	**Sn**	**10 33 17.5**	**-0.4**
APE	**Apeiranthos**	**1.01**	**304**	*e*P	**Pn**	**10 32 59.1**	**0.0**
KARP	**Karpathos**	**1.07**	**154**	*e*P	**Pn**	**10 33 00.3**	**+0.4**
KARP				*e*S	**Sn**	**10 33 19.2**	**+0.5**
ARG	**Arkhangelos**	**1.28**	**103**	*e*P	**Pn**	**10 33 02.2**	**+0.7**
ARG				*e*S	**Sn**	**10 33 22.5**	**+0.4**
ZKR	**Zakros**	**1.43**	**192**	P	**Pn**	**10 33 04.2**	**+1.1**
ZKR				S	**Sn**	**10 33 25.7**	**+0.8**
NPS	**Neapolis**	**1.48**	**213**	*e*P	**Pn**	**10 33 04.2**	**+0.6**
NPS				*e*S	**Sn**	**10 33 26.2**	**+0.4**
NPS	**Neapolis**	**1.48**	**213**	*e*P	**Pn**	**10 33 04.2**	**+0.6**
NPS				*e*S	**Sn**	**10 33 26.4**	**+0.6**
LAST	**Lasithi**	**1.62**	**214**	P	**Pn**	**10 33 05.7**	**+0.5**
LAST				S	**Sn**	**10 33 28.0**	**-0.6**
TURN	**Turunc**	**1.66**	**77**	*i* P	**Pn**	**10 33 02.4**	**-3.2**
TURN				*i* S	**Sn**	**10 33 22.4**	**-6.9**
IDI	**Anoyia**	**1.84**	**229**	P	**Pn**	**10 33 08.3**	**+0.7**
SIVA	**Sivas**	**2.08**	**225**	P	**Pn**	**10 33 11.6**	**+1.2**
SIVA				S	**Sn**	**10 33 35.9**	**-2.0**
KARN	**Karanos**	**2.43**	**244**	P	**Pn**	**10 33 14.7**	**+0.1**
GOLH	**Golhisar**	**2.49**	**72**	P	**Pn**	**10 33 15.9**	**+0.6**
GOLH				*i* S	**Sn**	**10 33 46.4**	**-0.4**
GVD	**Gavdhos**	**2.63**	**231**	*e*P	**Pn**	**10 33 18.5**	**+1.4**
PTL	**Penteli**	**2.66**	**306**	P	**Pn**	**10 33 18.4**	**+1.0**
DID	**Didima**	**2.86**	**291**	P	**Pn**	**10 33 19.8**	**-0.1**
KHAL	**Karahalli**	**2.96**	**50**	*i* P	**Pn**	**10 33 21.0**	**-0.3**
LTK	**Loutraki**	**3.26**	**299**	P	**Pn**	**10 33 25.0**	**0.0**
LKR	**Lokris**	**3.56**	**308**	P	**Pn**	**10 33 29.8**	**+0.9**
ITM	**Ithomi**	**3.80**	**282**	*e*P	**Pn**	**10 33 33.0**	**+1.0**
ITM	**Ithomi**	**3.80**	**282**	*e*P	**Pn**	**10 33 32.6**	**+0.6**
PYL	**PYLOS**	**3.91**	**277**	P	**Pn**	**10 33 32.6**	**-0.9**
PYL				S	**Sn**	**10 34 14.5**	**-4.8**
AGG	**Agios Georgios**	**4.20**	**308**	P	**Pn**	**10 33 37.7**	**+0.4**
AGG				S	**Sn**	**10 34 22.5**	**-3.6**
THL	**Klokotos Trika**	**4.72**	**312**	P	**Pn**	**10 33 44.9**	**+0.8**
THL				S	**Sn**	**10 34 34.5**	**-3.9**
VLS	**Valsamata**	**5.06**	**291**	*e*P	**Pn**	**10 33 50.0**	**+1.4**
VLS	**Valsamata**	**5.06**	**291**	P	**Pn**	**10 33 47.4**	**-1.2**
VLS	**Valsamata**	**5.06**	**291**	*e*P	**Pn**	**10 33 47.4**	**-1.2**
SLUM		**5.14**	**193**	⇓P	**Pn**	**10 33 49.3**	**-0.4**
HMAT	**Matruh**	**5.42**	**175**	⇑P	**Pn**	**10 33 52.4**	**-1.1**
IGT	**Igoumenitsa**	**5.79**	**303**	P	**Pn**	**10 33 57.6**	**-0.6**
IGT				S	**Sn**	**10 34 56.9**	**-6.8**
SWA2		**7.31**	**188**	⇑P	**Pn**	**10 34 18.2**	**-0.5**
AMAG	**Maghara**	**8.04**	**135**	P	**Pn**	**10 34 27.1**	**-1.4**
SUZ		**8.46**	**140**	P	**Pn**	**10 34 33.4**	**-0.7**
HNKL	**Nakhl**	**9.02**	**135**	P	**Pn**	**10 34 40.7**	**-0.9**
HFRF	**Wahat Farafira**	**9.45**	**171**	P	**Pn**	**10 34 47.4**	**+0.1**

*IDC **25** 10:35:48.5±1.4, 2445×13869E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.8/14, mbtmp3.9/6, ML4.2/2, MS3.3/1, Ms1 3.2/1, ms1mx2.6/19, Error ellipse: s-maj=59.6km s-min=14.3km az=87.0*
*NEIC **25** 10:35:49.8±0.7, 2355×13881E, h10km, mb4.1/2, Error ellipse: s-maj=23.9km s-min=9.5km az=80.0*
*ISCJB **25** 10:35:51.3±1.0, 2443S×007×1389E±02, h33km, mb3.9/5, Error ellipse: s-maj=31.1km s-min=10.4km az=179.0*

ISC 25 10:35:50.5±4.7, 2365±009×1389E±02, h16km±30km, n13, σ0°63/14, mb3.9/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**18.03**	**194**	*e*P	**Pn**	**10 40 01.4**	**+0.9**
	6.2nm,0.8s						
WB2	**Warramunga Arr**	**18.04**	**194**	*e*P	**Pn**	**10 39 59.6**	**-1.0**
WRA	**Warramunga Arr**	**18.05**	**194**	P	**Pn**	**10 40 00.1**	**-0.6**
	0.9nm,0.3s,baz=18,slow=12,SNR=32						
WRA				S	**Sn**	**10 43 15.4**	**-6.4**
	0.1nm,0.3s,baz=10,slow=21,SNR=4.9						
CTA	**Charters Tower**	**19.02**	**158**	P	**Pn**	**10 40 12.4**	**-0.1**
	0.3nm,0.3s,baz=343,slow=11,SNR=4.9						
CTAO	**Charters Tower**	**19.02**	**158**	*e*P	**Pn**	**10 40 13.7**	**+1.1**
ASAR	**Alice Springs**	**21.74**	**193**	P	**P**	**10 40 41.5**	**+0.2**
	2.1nm,0.7s,mb3.7,baz=20,slow=11,SNR=21						
ASAR				S	**S**	**10 44 41.3**	**0.0**
	3.2nm,1.0s,baz=14,slow=23,SNR=9.5						
MBWA	**Marble Bar**	**26.44**	**224**	*e*P	**P**	**10 41 27.3**	**+0.5**
STKA	**Stephens Creek**	**29.47**	**175**	P	**P**	**10 41 53.2**	**-0.6**
	1.0nm,0.6s,mb3.7,baz=348,slow=14,SNR=6.6						
STKA				LR	LR	10 54 34.5	
	comp=Z,60nm,19.4s,baz=207,slow=38						
STKA	**Stephens Creek**	**29.47**	**175**	*e*P	**P**	**10 41 53.5**	**-0.3**
STKA				LR	LR	10 54 34.5	
MKAR	**Makanchi Array**	**69.64**	**322**	P	**P**	**10 46 59.8**	**+0.7**
	0.9nm,0.8s,mb3.8,baz=116,slow=7.8,SNR=8.2						

ZALV Zalesovo Beam 71.74 330 P **P 10 47 11.5 -0.3**
0.6nm,0.4s,mb3.9,baz=134,slow=4.2,SNR=3.0
BRVK Borovoye 79.22 325 *e*P **P 10 47 54.2 -0.6**
2.4nm,0.7s,mb4.2
TORD Torodi Ar. Bea 136.36 287 PKP PKPdf 10 55 13.1 +0.6
0.3nm,0.6s,baz=68,slow=3.2,SNR=3.3

JMA 25 11:25:43.4±0.2, 4399N×14660E, h85km±3km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.88**	**225**	P	Pn	11 26 01.6	+0.2
NEM2				*e*S	Sn	11 26 14.6	-0.2
JRA	**Rausu**	**1.07**	**268**	P	Pn	11 26 03.7	+0.2
JRA				*e*S	Sn	11 26 18.6	0.0
JNK	**Nakash**	**1.42**	**254**	P	Pn	11 26 08.0	+0.1
JAK	**Akkeshi**	**1.71**	**235**	P	Pn	11 26 11.6	+0.1
JAK				*e*S	Sn	11 26 32.8	-0.1
JTKR	**Abashiri--Toko**	**1.94**	**270**	P	Pn	11 26 14.7	+0.1
JAR	**Ashorobuto**	**2.17**	**252**	P	Pn	11 26 18.4	+0.8
JAR				*e*S	Sn	11 26 45.4	+1.6
JOB	**Onbets**	**2.29**	**243**	P	Pn	11 26 19.8	+0.6
JMP	**Maruseppu**	**2.34**	**272**	P	Pn	11 26 20.1	+0.2
JCH	**Churui**	**2.73**	**241**	P	Pn	11 26 25.2	0.0

*IDC **25** 11:36:07.7±0.9, 159N×12754E, h77km±6km, mb3.9/6, mb1 4.1/7, mb1mx3.7/18, mbtmp4.0/7, Error ellipse: s-maj=42.7km s-min=13.9km az=70.0*
*ISCJB **25** 11:36:08.7±1.8, 14N±02×1275E±0.1, h91km±9km, mb4.2/9, Error ellipse: s-maj=28.8km s-min=11.2km az=32.5*
*NEIC **25** 11:36:13.0±3.5, 144N×12737E, h126km±32km, mb4.4/2, Error ellipse: s-maj=30.5km s-min=10.7km az=56.0*
*DJA **25** 11:36:16, 140N×12707E, h115km, MLv4.0/4*

ISC 25 11:36:10.4±1.3, 136N±010×12740E±008, h91km±8km, n21, σ1°29/20, mb4.2/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.58**	**183**	P	**Sn**	**11 36 36.0**	**-1.6**
LBMI	**Labuha**	**1.98**	**177**	P	Px	11 36 50.8	
LBMI				S	Sx	11 37 17.4	
MNI	**Manado**	**2.56**	**272**	P	**Pn**	**11 36 52.5**	**+2.4**
MNI				S	**Sn**	**11 37 21.3**	**+0.7**
SGSI	**Sangihe**	**2.97**	**321**	P	Px	11 37 09.2	
SWI	**Sorong**	**4.45**	**120**	P	Px	11 37 25.3	
KAPI	**Kappang**	**9.92**	**230**	P	**Pn**	**11 38 32.9**	**+2.8**
	4.9nm,0.3s,baz=299,slow=4.0,SNR=8.2						
KAPI				S	**Sn**	**11 40 17.5**	**-2.3**
	6.5nm,0.3s,baz=341,slow=21,SNR=6.4						
FITZ	**Fitzroy Crossi**	**19.41**	**185**	*e*P	**Pn**	**11 40 30.5**	**-1.1**
	5.0nm,0.4s						
WRAB	**Tennant Creek**	**22.23**	**162**	*e*P	**P**	**11 41 00.4**	**+0.7**
	25nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**22.23**	**163**	P	**P**	**11 41 00.2**	**+0.4**
	7.4nm,0.4s,mb4.3,baz=341,slow=11,SNR=113						
WB2	**Warramunga Arr**	**22.24**	**162**	*e*P	**P**	**11 41 00.4**	**+0.6**
WB2	**Warramunga Arr**	**22.24**	**162**	*e*P	**P**	**11 41 00.3**	**+0.5**
MBWA	**Marble Bar**	**23.60**	**198**	*e*P	**P**	**11 41 12.9**	**-0.2**
	5.9nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**25.66**	**166**	P	**P**	**11 41 32.0**	**+0.1**
	2.2nm,0.5s,mb3.8,baz=347,slow=8.0,SNR=55						
ASAR				pP		11 41 50.4	-1.9
	1.5nm,0.4s,baz=337,slow=9.6,SNR=4.9						
FORT	**Forrest**	**31.96**	**179**	*e*P	**P**	**11 42 27.4**	**-0.4**
	10.0nm,0.8s,mb4.6						
MUN	**Mundaring**	**34.81**	**197**	*e*P	**P**	**11 42 52.2**	**-0.3**
NWAO	**Narrogin (SRO)**	**35.43**	**195**	P	**P**	**11 42 57.6**	**-0.2**
	5.9nm,0.7s,mb4.5,baz=36,slow=7.8,SNR=8.7						
STKA	**Stephens Creek**	**35.69**	**159**	P	**P**	**11 43 00.7**	**+0.6**
	2.8nm,0.5s,mb4.4,baz=330,slow=10.0,SNR=28						
STKA	**Stephens Creek**	**35.69**	**159**	*e*P	**P**	**11 43 00.6**	**+0.5**
	3.0nm,0.8s,mb4.3						
ARMA	**Armidale**	**39.13**	**146**	*e*P	**P**	**11 43 31.4**	**+2.2**
MKAR	**Makanchi Array**	**59.88**	**326**	P	**P**	**11 46 05.1**	**-1.5**
	0.5nm,0.4s,mb3.9,baz=120,slow=7.6,SNR=24						
MKAR				sP	pP	11 46 34.5	+5.2
	0.7nm,0.6s,baz=122,slow=7.4,SNR=3.9						
KURK	**Kurchatov**	**64.09**	**328**	P	**P**	**11 46 32.7**	**-2.1**
	0.7nm,0.5s,mb3.8,baz=128,slow=6.7,SNR=5.0						
KURK				pP	pP	11 46 51.0	-6.8
	0.5nm,0.5s,baz=130,slow=6.4,SNR=3.1						
KURK				sP	sP	11 47 01.2	-6.6
	0.4nm,0.4s,baz=132,slow=6.6,SNR=2.1						

*CSEM **25** 11:49:08.7, 3822N×2038E, h5km, MD3.5/4, After ATH*
*NEIC **25** 11:49:08.7, 3822N×2038E, h5km, MD3.5(ATH), After ATH.*

ATH 25 11:49:08.0, 3819N×2034E, h5km, MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**94**	*e*PG	Pg	11 49 12.1	+0.2
VLS				*e*SG	Sg	11 49 15.7	+1.2
RLS	**Riolos of Patr**	**0.90**	**98**	*e*PG	Pg	11 49 24.9	-0.3
EVR	**Evrytania**	**1.36**	**57**	*e*PB	Pb	11 49 33.9	0.0
ITM	**Ithomi**	**1.61**	**128**	*e*PB	Pb	11 49 38.8	+0.6
ITM	**Ithomi**	**1.61**	**128**	*e*Pb	Pg	11 49 40.0	+1.1

*IDC **25** 11:51:34.1±3.4, 1398N×9257W, h0km, mb3.8/3, mb1 4.2/6, mb1mx3.8/23, mbtmp4.0/6, ML4.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/26, Error ellipse: s-maj=64.1km s-min=48.4km az=16.0*
*ISCJB **25** 11:51:37.4±1.1, 1413N±005×9277W±003, h23km±10km, mb3.7/3, Error ellipse: s-maj=8.3km s-min=5.6km az=4.0*
*NEIC **25** 11:51:38.9, 1401N×9270W, h19km, MD4.5(MEX), After MEX.*
*MEX **25** 11:51:38.9±0.7, 1401N×9270W, h19km±17km, MD4.5*
*CASC **25** 11:51:40.9±1.7, 1405N×9256W, h29km±956km, MD4.0*

ISC 25 11:51:37.8±1.2, 1416N±005×9272W±004, h12km±7km, n30, σ0°90/43, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

TEIG					*i* S		**Sn**	**11 54 51.2**	**+2.2**
PPM	**Popocatepetl**	**7.47**	**312**	*e*P			**Pn**	**11 53 27.2**	**+0.5**
PPM				*i* S			**Sn**	**11 54 51.9**	**+0.5**
TXAR	**Lajitas Array**	**18.18**	**328**	P			**Pn**	**11 55 52.8**	**+2.6**
	0.1nm,0.3s,baz=145,slow=13,SNR=17								
ANMO	**Albuquerque**	**24.13**	**331**	P			**P**	**11 56 54.2**	**+0.6**
	1.6nm,0.7s,mb3.6,baz=146,slow=14,SNR=10								
ANMO	**Albuquerque**	**24.13**	**331**	P			**P**	**11 56 54.2**	**+0.6**
PDAR	**Pinedale Array**	**31.99**	**336**	P			**P**	**11 58 04.2**	**+0.3**
	0.5nm,0.8s,mb3.4,baz=134,slow=6.4,SNR=4.2								
YKA	**Yellowknife Ar**	**50.71**	**347**	P			**P**	**12 00 36.0**	**-1.1**
	2.3nm,0.6s,mb4.3,baz=151,slow=7.2,SNR=48								
YKA	**Yellowknife Ar**	**50.71**	**347**	P			**P**	**12 00 36.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**145.61**	**340**	PKPbc		PKPbc		12 11 15.8	-1.4
	0.7nm,0.3s,baz=8.5,slow=3.6,SNR=6.6								

NNC 25 12:04:17.4±7.0, 3688N×7002E, h0km, mb3.7, mpv3.9, 4C-6D, Error ellipse: s-maj=61.5km s-min=54.2km az=95.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.22**	**3**	⇑Pn		Pn	12 05 53.4	+2.9
	3.0nm,0.3s,baz=172,slow=13							
KK31				⇑Sn		Sn	12 07 08.8	+6.5
	29nm,0.7s,baz=194,slow=21							
TKM2	**Tokmak 2**	**7.39**	**34**	⇓Pn		Pn	12 06 07.1	+0.6
	5.1nm,0.5s							
TKM2				⇓Sn		Sn	12 07 31.9	+0.8
	12nm,0.8s							
AB09	**Akbulak array**	**14.39**	**332**	⇑Pn		Pn	12 07 43.1	+0.9
	3.2nm,0.8s,baz=162,slow=12							
AB09				⇑Sn		Sn	12 10 22.6	+0.1
	1.5nm,0.5s,baz=153,slow=24							
KURBB	**Kurchatov Arra**	**15.03**	**21**	⇓Pn		Pn	12 07 50.0	-0.9
	0.5nm,0.7s							
AKTO	**Aktyubinsk**	**16.06**	**331**	⇓Pn		Pn	12 08 06.1	+1.6
	0.2nm,0.8s							
AKTO				⇓Sn		Sn	12 11 03.7	+0.6
	1.1nm,1.1s							
BVA0	**Borovoye Array**	**16.14**	**1**	⇓Pn		Pn	12 08 04.6	-0.9
	0.1nm,0.5s,baz=162,slow=10,SNR=8.2							

*CSEM **25** 12:11:44.5±0.1, 3888N×2709E, h15km, MD3.1, Error ellipse: s-maj=2.3km s-min=1.6km az=76.0*
*ISK **25** 12:11:44.7, 3886N×2707E, h20km, MD3.1*
*ISCJB **25** 12:11:45.1±0.6, 3889N±002×2715E±003, h11km±5km, Error ellipse: s-maj=4.3km s-min=4.1km az=136.4*
*DDA **25** 12:11:45.2, 3887N×2713E, h16km±2km, Md3.3*
*THE **25** 12:11:46.0, 3887N×2710E, h2km±2km, ML3.6/2, Error ellipse: s-maj=3.0km s-min=0.7km az=221.0*

ISC 25 12:11:45.8±0.4, 3888N±002×2713E±003, h16km±3km, n27, σ0§71/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
IZM	**Izmir**	**0.49**	**168**	PG		**Pg**	**12 11 55.1**	**-0.4**
IZM				*e*SG		**Sg**	**12 12 02.4**	**+0.3**
BLCB	**Balcova**	**0.50**	**188**	PG		**Pg**	**12 11 55.0**	**-0.7**
BLCB				*e*SG		**Sg**	**12 12 01.9**	**-0.4**
BLCB	**Balcova**	**0.50**	**188**	P		**Pg**	**12 11 55.4**	**-0.3**
BLCB				*e*Sg		**Sg**	**12 12 01.9**	**-0.5**
BLCB				S		**Sg**	**12 12 02.6**	**+0.2**
AKS	**Akhisar**	**0.53**	**90**	PG		**Pg**	**12 11 56.8**	**+0.5**
AKHS	**Akhisar**	**0.53**	**90**	*i* P		**Pg**	**12 11 56.6**	**+0.3**
AKHS				*i* S		**Sg**	**12 12 03.6**	**+0.2**
AYVA	**Ayvalik**	**0.55**	**321**	*i* P		**Pg**	**12 11 56.0**	**-0.7**
AYVA				*i* S		**Sg**	**12 12 04.7**	**+0.6**
PRK	**Paraskevi**	**0.77**	**299**	P		**Pg**	**12 12 00.0**	**-0.7**
PRK				S		**Sg**	**12 12 11.5**	**+0.7**
BALB	**Balikesir**	**0.96**	**37**	*e*PG		**Pg**	**12 12 04.1**	**-0.3**
CHOS	**Chios island**	**0.98**	**240**	P		**Pb**	**12 12 04.4**	**+0.1**
CHOS				S		**Sb**	**12 12 18.2**	**+1.2**
EZN	**Ezine**	**1.14**	**327**	*e*PN		**Pn**	**12 12 05.7**	**-1.3**
EZN				*e*SN		**Sn**	**12 12 21.2**	**-1.1**
GCAM	**G?zelcaml?**	**1.18**	**176**	*i* P		**Pn**	**12 12 07.1**	**-0.5**
GCAM				*i* S		**Sg**	**12 12 24.8**	**+0.9**
MANT	**Manisa**	**1.18**	**109**	*i* P		**Pn**	**12 12 08.1**	**+0.5**
MANT				*i* S		**Sb**	**12 12 24.2**	**+1.4**
KULA	**Kula-Manisa**	**1.25**	**106**	*e*PN		**Pn**	**12 12 08.4**	**-0.2**
DST	**Dursunbey**	**1.37**	**57**	*e*PN		**Pn**	**12 12 10.0**	**-0.3**
LPK	**Lapseki**	**1.52**	**349**	*e*PN		**Pn**	**12 12 11.6**	**-0.7**
EDC	**Edincik**	**1.57**	**21**	*e*PN		**Pn**	**12 12 13.1**	**+0.1**
BNT	**Bandirma**	**1.60**	**22**	*e*PN		**Pn**	**12 12 12.9**	**-0.5**
MLSB	**Milas**	**1.66**	**162**	*e*PN		**Pn**	**12 12 13.3**	**-0.9**
LIA	**Limnos Island**	**1.82**	**305**	P		**Pn**	**12 12 17.1**	**+0.6**
GDZ	**Gediz**	**1.84**	**83**	*i* P		**Pg**	**12 12 20.4**	**-0.7**
GDZ				*i* S		**Sg**	**12 12 45.2**	**+0.1**
KHAL	**Karahalli**	**1.92**	**105**	*i* P		**Pn**	**12 12 18.2**	**+0.4**
KHL	**Karahalli**	**1.95**	**106**	*e*PN		**Pn**	**12 12 18.3**	**+0.1**
YER	**Yerkesik**	**1.96**	**152**	*e*PN		**Pn**	**12 12 17.8**	**-0.6**
DAT	**Datca**	**2.17**	**171**	*e*PN		**Pn**	**12 12 20.1**	**-1.1**
ALN	**Alexandroupoli**	**2.18**	**338**	P		**Pn**	**12 12 22.6**	**+1.2**
ALN				S		**Sn**	**12 12 49.8**	**+1.7**
ALT	**Altintas**	**2.33**	**85**	*e*PN		**Pn**	**12 12 23.4**	**0.0**
DALT	**Dalyan (Mudla)**	**2.42**	**150**	*e*PN		**Pn**	**12 12 24.6**	**0.0**

IDC 25 12:12:20.1±63.0, 2016S×16659W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/14, mbtmp3.9/3, MS2.8/2, Ms1 2.8/2, ms1mx2.6/18, Error ellipse: s-maj=1291.0km s-min=212.5km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**47.62**	**245**	P		P	12 20 56.4	-1.7
	0.5nm,0.5s,baz=89,slow=14,SNR=5.8							
ASAR	**Alice Springs**	**54.98**	**255**	P		P	12 21 54.0	+0.5
	1.2nm,0.6s,baz=92,slow=7.8,SNR=13							
WRA	**Warramunga Arr**	**55.22**	**259**	P		P	12 21 55.9	+0.6
	0.7nm,0.5s,baz=90,slow=6.0,SNR=47							
GUMO	**Guam**	**58.34**	**301**	LR		LR	12 45 06.9	
	comp=Z,1.4nm,18.3s,baz=92,slow=34							
NWAO	**Narrogin (SRO)**	**68.03**	**242**	LR		LR	12 50 21.2	
	comp=Z,36nm,18.3s,baz=162,slow=34							

*IDC **25** 12:15:53.9±2.4, 2295S×7016W, h33km±17km, mb4.4/12, mb1 4.4/15, mb1mx4.3/21, mbtmp4.3/15, ML3.9/4, MS3.8/10, Ms1 3.7/10, ms1mx3.5/22, Error ellipse: s-maj=19.1km s-min=14.5km az=55.0*
*ISCJB **25** 12:15:55.6±0.3, 2299S±003×7016W±005, h61km±2km, mb4.8/29, Error ellipse: s-maj=7.3km s-min=4.3km az=12.4*
*NEIC **25** 12:15:56.0±0.2, 2298S×7006W, mb4.9/17, MD4.4(GUC), Error ellipse: s-maj=8.1km s-min=5.3km az=73.0*
NEIC Felt [III] at Tocopilla and [II] at Antofagasta.
*GUC **25** 12:15:55.3±0.4, 2296S×7021W, h57km±2km, MD4.4, ML4.9*
*BJI **25** 12:15:57.9, 2300S×7010W, h49km, mB5.4, Ms5.2, Msz4.6*

ISC 25 12:15:56.4±0.3, 2300S±003×7013W±005, h51km±3km, h51km±1.1km:pP-P, n108, σ1§04/92, mb4.8/29, MS3.9/9, 4C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MECH	**Mejillones**	**0.31**	**250**	⇓*i* P		**Pn**	**12 16 04.8**	**-1.0**
MECH				*i* S		**Sn**	**12 16 12.1**	**-0.4**
MECH				AML		AML	12 16 23.1	
	comp=N,77μm,0.4s							
CEN1	**Los Morros**	**0.39**	**189**	⇓*i* P		**Pn**	**12 16 08.7**	**+2.1**
CEN1				*i* S		**Sn**	**12 16 18.8**	**+4.9**
CEN1				AML		AML	12 16 19.1	
	comp=E,39μm,0.7s							
PECH	**Pedro de Valdi**	**0.58**	**47**	*e*P		**Pn**	**12 16 08.7**	**0.0**
PECH				*i* S		**Sn**	**12 16 19.0**	**+1.4**
PECH				AML		AML	12 16 19.2	
	comp=N,304μm,0.3s							
ANCH	**Antofagasta**	**0.73**	**201**	⇑*i* P		**Pn**	**12 16 10.0**	**-0.6**
ANCH				*i* S		**Sn**	**12 16 21.4**	**+0.5**
ANCH	**Antofagasta**	**0.73**	**201**	⇑*i* P		**Pn**	**12 16 10.0**	**-0.6**
ANCH				*i* S		**Sn**	**12 16 21.4**	**+0.5**
ANCH				AML		AML	12 16 22.2	
	comp=E,40μm,0.5s							
MACH	**Maria Elena**	**0.87**	**23**	*e*P		**Pn**	**12 16 12.2**	**-0.2**
MACH				*i* S		**Sn**	**12 16 25.0**	**+0.9**
TOCH	**Tocopilla**	**0.90**	**356**	*e*P		**Pn**	**12 16 11.7**	**-1.2**
TOCH				*e*S		**Sn**	**12 16 24.1**	**-0.9**
TOCH				AML		AML	12 16 24.8	
	comp=E,81μm,0.3s							
PB04	**Plate Boundary**	**0.94**	**39**	⇓*i* P		**Pn**	**12 16 09.1**	**-4.3**
PB04				*i* S		**Sn**	**12 16 19.8**	**-6.1**
PB04				AML		AML	12 16 19.8	
	comp=N,237μm,0.3s							
LVC	**Limon Verde**	**1.19**	**71**	Pg		**Pn**	**12 16 18.0**	**+1.3**
	comp=N,2μm,0.3s,baz=253,slow=11							
LVC				Lg			12 16 33.4	
	comp=N,1μm,0.3s,baz=238,slow=11,SNR=15							
LVC	**Limon Verde**	**1.19**	**71**	*e*Pn		**Pn**	**12 16 18.2**	**+1.5**
LVC	**Limon Verde**	**1.19**	**71**	⇓*e*P		**Pn**	**12 16 17.6**	**+0.9**
LVC				*i* S		**Sn**	**12 16 34.5**	**+2.7**
LVC				AML		AML	12 16 35.4	
	comp=N,24μm,0.5s							
CPN1	**Cerro Paranal**	**1.64**	**189**	⇑*i* P		**Pn**	**12 16 22.2**	**-0.7**
CPN1				*i* S		**Sn**	**12 16 43.9**	**+1.1**
PB01	**Plate Boundary**	**2.04**	**17**	⇓*i* P		**Pn**	**12 16 28.5**	**+0.2**
PB01				*i* S		**Sn**	**12 16 53.2**	**+0.7**
PB01				AML		AML	12 16 59.9	
	comp=E,15μm,0.4s							
LCO	**Las Campanas**	**6.01**	**185**	*e*Pn		**Pn**	**12 17 22.0**	**-0.7**
	comp=E,86nm,0.6s							
ARE	**Arequipa**	**6.63**	**349**	*e*P		**Pn**	**12 17 29.0**	**-2.3**
ARE				*i* S		**Sn**	**12 18 40.0**	**-5.5**
CFAA	**Coronel Fontan**	**8.73**	**169**	Pn		**Pn**	**12 17 58.3**	**-1.8**
	comp=E,0.1nm,0.3s,baz=347,slow=12,SNR=22							
CFAA				Sn		**Sn**	**12 19 43.0**	**+5.8**
	comp=E,0.2nm,0.3s,baz=178,slow=21,SNR=2.1							
CFAA	**Coronel Fontan**	**8.73**	**169**	Pn		**Pn**	**12 17 58.3**	**-1.8**
CFAA				Sn		**Sn**	**12 19 43.0**	**+5.8**
SIV	**San Ignacio**	**11.02**	**52**	Pn		**Pn**	**12 18 29.6**	**-1.9**
	comp=E,3.4nm,0.3s,baz=248,slow=11,SNR=54							
NNA	**Nana**	**12.68**	**329**	*e*Pn		**Pn**	**12 18 49.9**	**-4.2**
NNA				*e*Sn		**Sn**	**12 21 05.4**	**-8.4**
TRQA	**Tornquist**	**16.56**	**157**	*e*Pn		**Pn**	**12 19 44.0**	**-1.0**
	comp=E,60nm,0.9s							
PLCA	**Paso Flores**	**17.68**	**181**	P		**Pn**	**12 19 58.5**	**-0.5**
	comp=E,0.1nm,0.3s,baz=358,slow=12,SNR=5.2							
PLCA				LR		LR	12 26 42.7	
	comp=E,177nm,18.4s,baz=1.0,slow=37							
PLCA	**Paso Flores**	**17.68**	**181**	*e*Pn		**Pn**	**12 20 01.1**	**+2.1**
	comp=E,15nm,1.3s							
ATAH	**Atahualpa**	**17.79**	**332**	P		**P**	**12 19 56.5**	**-3.9**
	comp=E,0.2nm,0.3s,baz=109,slow=16,SNR=2.9							
BDFB	**Brasilia**	**22.10**	**75**	P		**P**	**12 20 45.6**	**-1.8**
	comp=E,4.2nm,0.5s,mb4.1,baz=236,slow=16,SNR=12							
BDFB				LR		LR	12 30 37.9	
	comp=E,99nm,20.6s,MS3.2,baz=64,slow=40							
OTAV	**Otavalo**	**24.48**	**340**	*e*P		**P**	**12 21 12.3**	**+1.5**
	comp=E,6.9nm,0.9s,mb4.1							
RCBR	**Riachuelo**	**37.14**	**68**	*e*P		**P**	**12 23 02.4**	**0.0**
	comp=E,37nm,1.1s,mb5.1							
TGUH	**Tegucigalpa,Un**	**40.47**	**334**	*e*P		**P**	**12 23 30.5**	**+0.3**
	comp=E,20nm,0.8s,mb4.9							
VNA3	**Neumayer Olymp**	**59.03**	**161**	*e*P		pP	12 26 05.2	+0.4
VNA3				*e*			12 26 10.8	
RKT	**Rikitea**	**59.18**	**256**	*e*LR		LR	12 43 22.2	
	comp=E,258nm,28.0s							
VNA2	**Neumayer--Watz**	**59.62**	**160**	*e*P		**P**	**12 25 55.1**	**+0.4**
VNA2				*e*		pP	12 26 09.3	+0.4
VNA2				*e*			12 26 14.4	
SWET	**Sewanee**	**59.80**	**345**	*e*P		**P**	**12 25 55.1**	**-1.2**
JCT	**Junction City**	**60.32**	**331**	*e*P		**P**	**12 25 59.9**	**-0.1**
	comp=E,15nm,0.7s,mb5.1							
WVT	**Waverly**	**61.14**	**344**	*e*P		**P**	**12 26 04.0**	**-1.5**
TXAR	**Lajitas Array**	**61.23**	**327**	P		**P**	**12 26 06.1**	**-0.1**
	comp=E,1.9nm,0.8s,mb4.3,baz=157,slow=9.2,SNR=34							
TXAR	**Lajitas Array**	**61.23**	**327**	P		**P**	**12 26 06.1**	**-0.1**
SNAA	**Sanae**	**61.24**	**161**	*e*P		**P**	**12 26 05.8**	**+0.1**
SNAA				*e*		pP	12 26 19.2	-0.8
SNAA				*e*			12 26 25.7	
SNAA	**Sanae**	**61.24**	**161**	*e*P		**P**	**12 26 05.7**	**0.0**
	comp=E,7.4nm,1.1s,mb4.7							
SNAA				*e*pP		pP	12 26 19.4	-0.6
MIAR	**Mount Ida**	**61.41**	**338**	*e*P		**P**	**12 26 06.6**	**-0.7**
	comp=E,9.9nm,0.9s,mb4.9							
WCI	**Wyandotte Cave**	**62.77**	**346**	*e*P		**P**	**12 26 14.7**	**-1.6**
	comp=E,98nm,2.4s,mb5.5							
SIUC	**Southern Illin**	**63.00**	**343**	*e*P		**P**	**12 26 16.8**	**-1.1**
	comp=E,28nm,1.4s,mb5.2							
FVM	**French Village**	**63.59**	**342**	*e*P		**P**	**12 26 20.8**	**-0.9**
	comp=E,12nm,0.7s,mb5.0							
LPM	**Los Pinos Moun**	**66.73**	**328**	*e*P		**P**	**12 26 43.5**	**+1.3**
ANMO	**Albuquerque**	**67.15**	**328**	*e*P		**P**	**12 26 45.6**	**+0.7**
	comp=E,4.4nm,0.8s,mb4.5							
QSPA	**South Pole Qui**	**67.20**	**180**	P		**P**	**12 26 45.4**	**+0.8**
	comp=E,3.0nm,0.5s,mb4.6,baz=179,slow=0.7,SNR=44							
SDCO	**Great Sand Dun**	**68.97**	**331**	*e*P		**P**	**12 26 57.2**	**+1.0**
LIC	**Lamto**	**69.89**	**74**	*e*P		**P**	**12 27 01.4**	**-1.1**
	comp=E,24nm,1.4s,mb5.0							
MVCO	**Mesa Verde**	**69.95**	**328**	*e*P		**P**	**12 27 03.5**	**+1.2**
TIC	**Toumodi**	**70.09**	**73**	*e*P		**P**	**12 27 02.7**	**-1.0**
	comp=E,12nm,0.5s,mb5.1							
KIC	**Kosan Boka**	**70.20**	**74**	*e*P		**P**	**12 27 03.4**	**-1.0**
	comp=E,41nm,0.9s,mb5.3							
DBIC	**Dimbkro**	**70.24**	**73**	P		**P**	**12 27 03.9**	**-0.7**
	comp=E,7.1nm,0.7s,mb4.7,baz=224,slow=5.7,SNR=16							
DBIC				LR		LR	12 55 18.4	
	comp=E,72nm,18.0s,MS4.0,baz=262,slow=34							
ISCO	**Idaho Springs**	**70.71**	**332**	*e*P		**P**	**12 27 07.5**	**+0.7**
ECSD	**EROS,Sioux Fal**	**70.72**	**340**	*e*P		**P**	**12 27 05.9**	**-0.9**
	comp=E,79nm,2.6s,mb5.2							
ECSD				*e*pP		pP	12 27 19.1	-2.3
SRU	**San Rafael**	**72.43**	**328**	*e*P		**P**	**12 27 18.4**	**+1.1**
	comp=E,7.7nm,0.7s,mb4.7							
MSU	**Marysvale**	**72.79**	**327**	*e*P		**P**	**12 27 21.1**	**+1.7**
RSSD	**Black Hills**	**73.66**	**335**	*e*P		**P**	**12 27 25.0**	**+0.6**
RSSD				*e*pP		pP	12 27 39.7	+0.7
MPU	**Maple Canyon**	**73.67**	**328**	*e*P		**P**	**12 27 26.3**	**+1.8**
	comp=E,9.5nm,1.0s,mb4.7							
PPT	**Papeete**	**73.89**	**257**	*e*LR		LR	12 50 14.9	
	comp=E,184nm,27.0s							
PPT	**Papeete**	**73.89**	**257**	LR		LR	12 51 06.6	
	comp=E,135nm,20.6s,MS4.2,baz=38,slow=29							
AGMN	**Agassiz Refuge**	**74.63**	**343**	*e*P		**P**	**12 27 29.3**	**-0.6**
AGMN				*e*pP		pP	12 27 43.7	-0.9
PDAR	**Pinedale Array**	**74.85**	**331**	P		**P**	**12 27 31.4**	**0.0**
	comp=E,1.0nm,0.5s,mb4.0,baz=132,slow=7.1,SNR=23							
SYO	**Syowa Base**	**75.50**	**159**	⇑*e*PcP		PcP	12 27 46.0	-1.7
SYO	**Syowa Base**	**75.50**	**159**	‖*e*sP		sP	12 27 55.8	+0.5
NVAR	**Mina Array Bea**	**75.99**	**323**	P		**P**	**12 27 38.5**	**+0.6**
	comp=E,2.7nm,0.8s,mb4.2,baz=155,slow=6.8,SNR=16							
LOHW	**Long Hollow**	**75.99**	**331**	*e*P		**P**	**12 27 38.4**	**+0.5**
LOHW				*e*pP		pP	12 27 53.2	+0.7
RRI2	**Red Ridge**	**76.11**	**330**	*e*P		**P**	**12 27 39.3**	**+0.8**
DCID1	**Drake Creek**	**76.24**	**331**	*e*P		**P**	**12 27 40.5**	**+1.2**
IMW	**Indian Meadow**	**76.36**	**331**	*e*P		**P**	**12 27 40.8**	**+0.9**
ULM	**Lac du Bonnet**	**76.41**	**343**	P		**P**	**12 27 39.2**	**-0.9**
	comp=E,3.3nm,0.4s,mb4.6,baz=162,slow=7.0,SNR=8.3							
ULM				LR		LR	13 02 36.3	
	comp=E,119nm,18.1s,MS4.2,baz=207,slow=37							
RLMT	**Red Lodge**	**76.61**	**333**	*e*P		**P**	**12 27 42.1**	**+0.8**
RLMT				*e*pP		pP	12 27 55.1	-0.9
HLID	**Hailey**	**77.72**	**329**	*e*P		**P**	**12 27 49.2**	**+1.6**
BOZ	**Bozeman (W)**	**78.04**	**332**	*e*P		**P**	**12 27 49.0**	**-0.4**
	comp=E,36nm,2.5s,mb4.8							
SUR	**Sutherland**	**78.80**	**120**	P		**P**	**12 27 54.4**	**+0.4**
	comp=E,7.4nm,0.9s,mb4.6,baz=164,slow=7.4,SNR=4.3							
TOA0	**Torodi Ar. Sit**	**78.92**	**71**	*e*P		**P**	**12 27 53.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**78.92**	**71**	P		**P**	**12 27 54.1**	**-0.8**
	comp=E,9.3nm,0.7s,mb4.8,baz=256,slow=5.1,SNR=60							
TORD				LR		LR	13 03 16.7	
	comp=E,36nm,18.0s,MS3.8,baz=295,slow=36							
TSUM	**Tsumeb**	**80.69**	**107**	P		**P**	**12 28 05.2**	**+0.7**
	comp=E,5.4nm,0.9s,mb4.5,baz=232,slow=6.1,SNR=10							
TSUM	**Tsumeb**	**80.69**	**107**	*e*P		**P**	**12 28 05.2**	**+0.7**
	comp=E,6.9nm,1.1s,mb4.5							
TSUM				*e*pP		pP	12 28 17.9	-1.3
WALA	**Waterton Lakes**	**81.66**	**333**	*e*P		**P**	**12 28 09.5**	**+0.6**
WALA				*e*pP		pP	12 28 24.4	+0.7
HAWA	**Hanford**	**82.26**	**328**	*e*P		**P**	**12 28 12.5**	**+0.4**
OD2	**Odessa Site #2**	**82.58**	**329**	*e*P		**P**	**12 28 14.0**	**+0.3**
OD2				*e*pP		pP	12 28 29.2	+0.6
MAW	**Mawson**	**83.22**	**164**	LR		LR	13 06 41.7	
	comp=E,76nm,20.7s,MS4.0,baz=204,slow=37							
BOSA	**Boshof**	**83.74**	**118**	P		**P**	**12 28 20.2**	**-0.1**
	comp=E,6.6nm,0.9s,mb4.8,baz=102,slow=4.3,SNR=11							
BOSA				LR		LR	13 01 22.0	
	comp=E,66nm,18.4s,MS4.0,baz=151,slow=33							
EDM	**Edmonton**	**84.64**	**336**	*e*P		**P**	**12 28 22.9**	**-1.3**
EDM				*e*pP		pP	12 28 38.1	-0.9
YKA	**Yellowknife Ar**	**92.22**	**341**	P		**P**	**12 28 59.3**	**-0.8**
	comp=E,3.2nm,0.6s,mb4.8,baz=141,slow=4.3,SNR=118							
YKA				LR		LR	13 13 13.1	
	comp=E,13nm,18.9s,MS3.4,baz=70,slow=37							
YKA	**Yellowknife Ar**	**92.22**	**341**	P		**P**	**12 28 59.3**	**-0.8**
YKA				LR		LR	13 13 13.1	
URZ	**Urewera**	**92.35**	**227**	LR		LR	13 00 20.0	
	comp=E,46nm,19.4s,MS3.9,baz=304,slow=29							
ASAR	**Alice Springs**	**128.06**	**208**	PKP		PKPdf	12 34 56.8	-0.6
	comp=E,1.6nm,0.7s,baz=144,slow=2.1,SNR=19							
WRA	**Warramunga Arr**	**131.09**	**211**	PKP		PKPdf	12 35 02.9	-0.3
	comp=E,1.4nm,0.5s,baz=149,slow=1.6,SNR=33							
PETK	**Petropavlovsk-**	**133.07**	**322**	PKP		PKPdf	12 35 06.2	+0.3
	comp=E,1.5nm,0.6s,baz=112,slow=18,SNR=3.0							
ZAA0	**Zalesovo Array**	**143.78**	**25**	*e*P		PKPdf	12 35 24.5	-0.9
ZALV	**Zalesovo Beam**	**143.78**	**25**	PKP		PKPdf	12 35 23.3	-2.1
	comp=E,1.6nm,0.7s,baz=318,slow=4.0,SNR=7.3							
TKM2	**Tokmak 2**	**145.38**	**47**	*e*PKPdf		PKPdf	12 35 29.5	+0.9
TKM2				*ep*PKPdf		pPKPdf	12 35 44.1	0.0
MK31	**Makanchi Array**	**147.50**	**36**	*e*PKPdf		PKPdf	12 35 32.4	+0.3
MK31				*ep*PKPdf		pPKPdf	12 35 47.5	-0.1
MKAR	**Makanchi Array**	**147.50**	**36**	PKPbc		PKPbc	12 35 31.7	-2.9
	comp=E,1.5nm,0.6s,baz=316,slow=3.3,SNR=17							
HYB	**Hyderabad**	**150.13**	**95**	*i* PKP		PKPbc	12 35 42.0	-0.2
HYB				*e*			12 35 48.0	
HYB				*e*			12 35 57.0	
HYB				*e*			12 36 02.0	
MJAR	**Matsushiro Arr**	**152.06**	**305**	PKPbc		PKPbc	12 35 46.0	-0.2
	comp=E,2.9nm,0.8s,baz=124,slow=1.3,SNR=8.3							
MAT	**Matsushiro**	**152.06**	**305**	PKP		PKPbc	12 35 45.3	-0.9
WMQ	**Urumqi**	**152.34**	**36**	*e*PKP		PKPdf	12 35 39.0	-0.8
SONM	**Songino Array**	**155.06**	**6**	PKPab		PKPab	12 36 07.7	-0.4
	comp=E,0.5nm,0.6s,baz=319,slow=2.9,SNR=3.8							
KSRS	**Korea Array**	**158.82**	**317**	PKPab		PKPab	12 36 22.1	-2.5
	comp=E,2.1nm,0.9s,baz=57,slow=4.6,SNR=4.8							
GTA	**Gaotai**	**161.54**	**25**	*e*PKP		PKPdf	12 35 54.0	+2.4
GTA				APKP			12 36 05.0	
GTA				XPKP			12 36 08.5	
HHC	**Hu-ho-hao-te**	**162.15**	**356**	*e*PKP		PKPdf	12 35 51.5	-0.7
HHC				PKP2		PKPab	12 36 40.0	+1.1
HHC				PKS			12 39 23.8	
HHC				PP		PP	12 40 25.0	+3.0
HHC				SKS		SKSdf	12 42 51.3	-1.5
HHC				SKKS		SKKSac	12 47 07.8	+1.0
HHC				SS		SS	13 00 39.0	+1.6
HHC				PP		PP		
	comp=Z,112nm,5.1s							
HHC				LR		LR		
	comp=N,51nm,21.4s							
HHC				LR		LR		
	comp=E,233nm,17.8s							
HHC				LR		LR		
	comp=Z,138nm,16.7s							
BJI	**Beijing**	**162.19**	**344**	PKP		PKPdf	12 35 51.3	-1.0
BJI				SS		SS	13 00 39.8	+1.6
BJI				LR		LR		
	comp=N,192nm,16.2s							
BJI				LR		LR		
	comp=E,210nm,18.1s							
BJI				LR		LR		
	comp=Z,49nm,19.7s							
LZH	**Lanzhou**	**165.

	4µm,0.5s						
KUR				A		13 03 55.0	
	7µm,0.5s						
KUR				A		13 03 58.0	
	18µm,1.8s						
KUR				A		13 03 58.0	
	12µm,1.8s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**256**	⇓*i*P/N	**Pn**	**13 03 58.9**	**-0.9**
YUK				*e*		13 04 18.9	
YUK				pmax	pmax		
	comp=Z,1µm,0.3s						
YUK				pmax	pmax		
	comp=N,710nm,0.4s						
YUK				pmax	pmax		
	comp=E,560nm,0.4s						
YUK				smax			
	comp=N,4µm,0.8s						
YUK				smax			
	comp=E,4µm,0.8s						
YUK				smax			
	comp=N,3µm,0.5s						
YUK				smax			
	comp=E,3µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**256**	⇓*i*P	**Pn**	**13 03 58.9**	**-0.9**
YUK				AMB	AMB	13 04 01.5	
	comp=E,1µm,0.3s						
YUK				AMB	AMB	13 04 01.5	
	comp=E,710nm,0.3s						
YUK				AMB	AMB	13 04 01.5	
	comp=E,560nm,0.4s						
YUK				*e*S	**Sn**	**13 04 20.7**	**+0.5**
YUK				A		13 04 25.0	
	comp=E,4µm,0.8s						
YUK				A		13 04 25.0	
	comp=E,4µm,0.8s						
YUK				A		13 04 31.6	
	comp=E,3µm,0.5s						
YUK				A		13 04 31.6	
	comp=E,3µm,0.5s						
NEM2	**Nemuro 2**	**2.02**	**238**	P	**Pn**	**13 04 03.1**	**-1.5**
NEM2				*e*S	**Sn**	**13 04 27.2**	**-1.6**
JRA	**Rausu**	**2.20**	**258**	P	**Pn**	**13 04 07.7**	**+0.6**
JNK	**Nakash**	**2.59**	**252**	P	**Pn**	**13 04 12.6**	**+0.3**
JAK	**Akkeshi**	**2.86**	**241**	P	**Pn**	**13 04 15.3**	**-0.7**
JAK				*e*S	**Sn**	**13 04 48.6**	**-0.7**
JTKR	**Abashiri--Toko**	**3.05**	**262**	P	**Pn**	**13 04 19.3**	**+0.7**
JAR	**Ashorobuto**	**3.34**	**251**	P	**Pn**	**13 04 23.5**	**+1.0**
JKK2	**Kamakawa 2**	**3.89**	**263**	P	**Pn**	**13 04 33.6**	**+3.5**
JCH	**Churui**	**3.90**	**244**	P	**Pn**	**13 04 29.9**	**-0.3**
ASAJ	**Asahikawa**	**3.97**	**267**	P	**Pn**	**13 04 32.4**	**+1.3**
	comp=E,4.6nm,0.3s,baz=80,slow=16,SNR=25						
ASAJ				LR	LR	13 06 22.7	
	comp=E,119nm,21.4s,baz=316,slow=42						
ERM	**Erimo**	**4.35**	**238**	*e*PN	**Pn**	**13 04 38.6**	**+2.2**
JNBK	**Urakawa-nobuka**	**4.46**	**243**	P	**Pn**	**13 04 37.5**	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.51**	**306**	⇓*e*P	**Pn**	**13 04 38.3**	**-0.2**
YSS				*e*S	**Sn**	**13 05 30.0**	**+0.5**
YSS				A		13 05 36.8	
	comp=E,50nm,0.7s						
JEW	**Eniwo**	**5.09**	**254**	P	**Pn**	**13 04 49.8**	**+3.4**
JKB	**Kayabe**	**5.77**	**246**	P	**Pn**	**13 04 56.2**	**+0.5**
JKB				*e*S	**Sn**	**13 06 00.1**	**-0.3**
JOT	**Ohata**	**6.02**	**242**	P	**Pn**	**13 04 58.9**	**-0.2**
TYV	**Tymovskoe**	**7.40**	**332**	*e*P	**Pn**	**13 05 17.8**	**-0.1**
PETK	**Petropavlovsk-**	**10.73**	**33**	P	**Pn**	**13 06 02.1**	**-1.3**
	comp=E,0.1nm,0.3s,baz=90,slow=19,SNR=3.2						
PETK				LR	LR	13 09 48.7	
	comp=E,33nm,19.8s,baz=68,slow=36						
MJAR	**Matsushiro Arr**	**10.90**	**227**	P	**Pn**	**13 06 05.0**	**-0.9**
	comp=E,0.4nm,0.3s,baz=30,slow=12,SNR=5.4						
MJAR				LR	LR	13 09 49.5	
	comp=E,82nm,19.1s,baz=45,slow=34						
PET	**Petropavlovsk**	**11.04**	**35**	*c*P/N	**Pn**	**13 06 09.0**	**+1.3**
KLR	**Kul'dur**	**12.17**	**299**	*e*PN	**Pn**	**13 06 32.7**	**+10**
KSRS	**Korea Array**	**16.75**	**252**	P	**Pn**	**13 07 22.3**	**-0.6**
	comp=E,0.1nm,0.3s,baz=56,slow=12,SNR=3.7						
KSRS	**Korea Array**	**16.75**	**252**	*e*P	**Pn**	**13 07 27.4**	**+4.5**
HIA	**Hailar**	**19.92**	**294**	*d*/P	**Pn**	**13 07 58.8**	**-2.2**
YAK	**Yakutsk**	**20.64**	**335**	⇑/P	**P**	**13 08 06.6**	**+0.1**
YAK				pmax	pmax		
	comp=Z,25nm,2.5s						
ULN	**Ulaanbaatar**	**28.40**	**292**	⇓*i*P	**P**	**13 09 21.3**	**+0.7**
SONM	**Songino Array**	**28.84**	**292**	P	**P**	**13 09 25.6**	**+1.1**
	comp=Z,0.6nm,0.4s,mb3.5,baz=84,slow=8.8,SNR=5.2						
TLY	**Talaya**	**30.19**	**300**	⇑/P	**P**	**13 09 35.7**	**-0.7**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.1						
ZALV	**Zalesovo Beam**	**41.13**	**307**	P	**P**	**13 11 11.4**	**+1.5**
	comp=Z,0.4nm,0.3s,mb3.7,baz=64,slow=9.8,SNR=2.6						
ZALV				PcP	PcP	13 13 08.0	-0.1
	comp=Z,1.5nm,0.3s,baz=71,slow=3.8,SNR=7.3						
ZALV	**Zalesovo Beam**	**41.13**	**307**	P	**P**	**13 11 11.4**	**+1.5**
ZALV				PcP	PcP	13 13 08.0	-0.1
MKAR	**Makanchi Array**	**44.87**	**297**	P	**P**	**13 11 39.8**	**-0.4**
	comp=Z,0.3nm,0.5s,mb3.3,baz=76,slow=10.0,SNR=12						
MKAR				PcP	PcP	13 13 20.9	+0.1
	comp=Z,1.1nm,0.6s,baz=69,slow=4.6,SNR=11						
KURK	**Kurchatov**	**45.71**	**304**	P	**P**	**13 11 47.6**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.6,baz=72,slow=8.5,SNR=7.2						
KURK				PcP	PcP	13 13 23.8	+0.2
	comp=Z,1.1nm,0.5s,baz=76,slow=3.4,SNR=4.8						
KURK	**Kurchatov**	**45.71**	**304**	*i* P	**P**	**13 11 46.1**	**-0.7**
CHTO	**Chiang Mai**	**48.13**	**254**	*e*P	**P**	**13 12 07.5**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
CHTO	**Chiang Mai**	**48.13**	**254**	*e*P	**P**	**13 12 07.5**	**+1.4**
	comp=Z,2.3nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**48.38**	**254**	P	**P**	**13 12 07.9**	**0.0**
	comp=Z,0.8nm,0.7s,mb3.7,baz=44,slow=7.3,SNR=8.6						
YKA	**Yellowknife Ar**	**54.84**	**34**	P	**P**	**13 12 54.9**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=301,slow=7.1,SNR=22						
YKA	**Yellowknife Ar**	**54.84**	**34**	P	**P**	**13 12 54.9**	**-0.6**
OBN	**Obninsk**	**65.16**	**324**	*e*P	**P**	**13 14 04.1**	**-2.2**
OBN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**65.30**	**194**	P	**P**	**13 14 07.9**	**+0.4**
	comp=Z,1.2nm,0.7s,mb3.8,baz=8.3,slow=6.7,SNR=14						
NVAR	**Mina Array Bea**	**66.63**	**59**	P	**P**	**13 14 16.5**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.7,baz=294,slow=7.5,SNR=5.0						
NVAR				pP	pP	13 14 30.1	-3.8
	comp=Z,0.5nm,0.7s,baz=297,slow=6.9,SNR=3.2						
PDAR	**Pinedale Array**	**68.94**	**50**	P	**P**	**13 14 30.4**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=260,slow=1.4,SNR=5.9						
PDAR				pP	pP	13 14 44.0	-4.5
	comp=Z,0.4nm,0.6s,baz=305,slow=3.2,SNR=2.5						
ASAR	**Alice Springs**	**69.01**	**194**	P	**P**	**13 14 31.8**	**+0.8**
	comp=Z,0.8nm,0.6s,mb3.7,baz=11,slow=6.8,SNR=20						
NB2	**NORSAR Subarra**	**69.20**	**339**	P	**P**	**13 14 30.7**	**-1.1**
	comp=Z,1.7nm,0.6s,mb4.0,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.20**	**339**	P	**P**	**13 14 30.9**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.8,baz=29,slow=6.4,SNR=8.3						
STKA	**Stephens Creek**	**76.19**	**186**	P	**P**	**13 15 13.9**	**+0.5**
	comp=Z,1.4nm,0.8s,mb3.8,baz=278,slow=14,SNR=4.1						
STKA				LR	LR	13 50 18.1	
	comp=Z,43nm,18.3s,baz=207,slow=37						
KHC	**Kasperske Hory**	**78.68**	**331**	*e*P	**P**	**13 15 27.0**	**-0.3**
GERES	**GERESS Array B**	**78.88**	**331**	P	**P**	**13 15 27.8**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.6,baz=40,slow=5.3,SNR=7.5						
MMAI	**Mount Meron Ar**	**81.59**	**308**	P	**P**	**13 15 43.0**	**-0.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=55,slow=7.2,SNR=4.9						
TXAR	**Lajitas Array**	**81.69**	**57**	P	**P**	**13 15 43.8**	**-0.1**
	comp=Z,0.9nm,0.5s,mb3.9,baz=297,slow=4.2,SNR=33						
TXAR				pP	pP	13 15 58.6	-3.7
	comp=Z,0.7nm,0.5s,baz=291,slow=4.3,SNR=7.9						
TORD	**Torodi Ar. Bea**	**115.06**	**323**	PKP	PKiKP	13 22 05.2	-1.3
	comp=Z,0.2nm,0.5s,baz=357,slow=3.4,SNR=4.1						
PLCA	**Paso Flores**	**151.48**	**96**	PKPbc	PKPbc	13 23 17.8	-0.7
	comp=Z,0.9nm,0.6s,baz=195,slow=3.5,SNR=3.9						

*NIED **25** 13:10:00.44.00N×148.00E,h41km,Mw3.8 Best double couple: M0=4.93000×10^14 NP1:φ=6.00000°,δ=73.00000°, λ=74.00000°. NP2:φ=230.00000°,δ=24.00000°,λ=132.00000°.*
*JMA **25** 13:10:47.3±0.4,44.01N×148.02E,h0km,M4.4*
*ISCJB **25** 13:10:47.1±0.9,44.38N±0.08×148.24E±0.10,h65km±7km, mb4.0/13,Error ellipse: s-maj=15.6km s-min=7.9km az=138.5*
*MOS **25** 13:10:48.2±0.7,44.48N×148.21E,h73km,mb4.1/1,Error ellipse: s-maj=15.6km s-min=13.0km az=61.2*
*NEIC **25** 13:10:50.4±0.9,44.51N×148.20E,h78km±8km, MG4.4(JMA),Error ellipse: s-maj=10.8km s-min=6.4km az=146.0*
*IDC **25** 13:10:50.9±3.0,44.55N×148.12E,h84km±27km,mb3.4/9, mb1 3.6/11,mb1mx3.4/23,mbtmp3.4/11,MS2.7/1,*

Ms1 2.7/1,ms1mx2.3/22,Error ellipse: s-maj=24.7km s-min=15.7km az=135.0

ISC 25 13:10:48.9±0.8,4437N±008×14821E±010,h61km±6km, n43,σ0≤94/44,mb4.1/13,3C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.72**	**260**	*e*PN	**Pn**	**13 11 12.1**	**-4.4**
YUK				*e*S	**Sn**	**13 11 37.7**	**+0.2**
YUK				pmax	pmax		
	comp=E,260nm,0.4s						
YUK				pmax	pmax		
	comp=Z,490nm,0.4s						
YUK				smax			
	comp=N,890nm,0.5s						
YUK				smax			
	comp=E,1µm,0.5s						
YUK				smax			
	comp=N,3µm,0.6s						
YUK				smax			
	comp=E,2µm,0.6s						
NEM2	**Nemuro 2**	**2.05**	**242**	P	**Pn**	**13 11 19.4**	**-1.5**
NEM2				*e*S	**Sn**	**13 11 42.8**	**-2.6**
JRA	**Rausu**	**2.27**	**260**	P	**Pn**	**13 11 24.3**	**+0.4**
JNK	**Nakash**	**2.64**	**254**	P	**Pn**	**13 11 28.9**	**-0.1**
JAK	**Akkeshi**	**2.90**	**243**	P	**Pn**	**13 11 31.7**	**-0.8**
JAK				*e*S	**Sn**	**13 12 04.9**	**-1.2**
JTKR	**Abashiri--Toko**	**3.12**	**264**	P	**Pn**	**13 11 37.6**	**+2.0**
JAR	**Ashorobuto**	**3.39**	**253**	P	**Pn**	**13 11 40.0**	**+0.8**
JCH	**Churui**	**3.94**	**245**	P	**Pn**	**13 11 46.3**	**-0.5**
ASAJ	**Asahikawa**	**4.04**	**268**	P	**Pn**	**13 11 49.6**	**+1.5**
	comp=E,5.9nm,0.3s,baz=78,slow=16,SNR=13						
ASAJ	**Asahikawa**	**4.04**	**268**	PN	**Pn**	**13 11 49.7**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ERM	**Erimo**	**4.38**	**239**	*e*PN	**Pn**	**13 11 54.9**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.62**	**306**	⇓*i*P/N	**Pn**	**13 11 55.3**	**-0.7**
JKB	**Kayabe**	**5.81**	**247**	P	**Pn**	**13 12 12.8**	**+0.4**
JOT	**Ohata**	**6.05**	**243**	P	**Pn**	**13 12 15.3**	**-0.4**
PETK	**Petropavlovsk-**	**10.75**	**32**	P	**Pn**	**13 13 20.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=188,slow=9.9,SNR=4.6						
PET	**Petropavlovsk**	**11.06**	**35**	*c*P/N	**Pn**	**13 13 24.3**	**+0.2**
KSRS	**Korea Array**	**16.80**	**253**	LR	LR	13 21 16.1	
	comp=Z,26nm,18.7s,baz=155,slow=37						
YAK	**Yakutsk**	**20.75**	**335**	⇑/P	**P**	**13 15 24.7**	**+0.6**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	**Ulaanbaatar**	**28.50**	**292**	*i* P	**P**	**13 16 38.2**	**+0.1**
SONM	**Songino Array**	**28.95**	**292**	P	**P**	**13 16 41.1**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=85,slow=7.6,SNR=3.2						
MKAR	**Makanchi Array**	**44.98**	**297**	P	**P**	**13 18 57.2**	**-0.6**
	comp=Z,0.2nm,0.4s,mb3.3,baz=47,slow=5.3,SNR=4.0						
MKAR	**Makanchi Array**	**44.98**	**297**	*e*P	**P**	**13 18 58.8**	**+1.1**
MKAR	**Makanchi Array**	**44.98**	**297**	P	**P**	**13 18 57.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**48.43**	**254**	P	**P**	**13 19 24.1**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=39,slow=6.3,SNR=5.3						
CMAR	**Chiang Mai Arr**	**48.43**	**254**	*e*P	**P**	**13 19 26.2**	**+1.1**
TAPN	**Taplejung**	**50.76**	**272**	*e*P	**P**	**13 19 43.1**	**+0.4**
	comp=Z,6.1nm,0.8s,mb4.6						
JIRN	**Jiri**	**51.67**	**273**	*e*P	**P**	**13 19 49.9**	**+0.4**
GUN	**Gumba**	**51.74**	**273**	*e*P	**P**	**13 19 50.5**	**+0.5**
RAMN	**Ramite**	**51.79**	**272**	*e*P	**P**	**13 19 50.5**	**+0.1**
	comp=Z,15nm,0.3s,mb5.3						
KKN	**Kakani**	**52.24**	**274**	*e*P	**P**	**13 19 53.9**	**+0.2**
PKI	**Pulchoki**	**52.28**	**273**	*e*P	**P**	**13 19 54.1**	**+0.1**
DMN	**Daman**	**52.47**	**274**	*e*P	**P**	**13 19 55.4**	**-0.1**
GKN	**Gorkha**	**52.58**	**274**	*e*P	**P**	**13 19 56.2**	**0.0**
	comp=Z,5.0nm,0.4s,mb4.8						
DANN	**Dangsing**	**53.00**	**275**	*e*P	**P**	**13 20 00.1**	**+0.8**
	comp=Z,5.3nm,0.3s,mb5.0						
KOLN	**Koldanda**	**53.45**	**275**	*e*P	**P**	**13 20 03.0**	**+0.3**
YKA	**Yellowknife Ar**	**54.86**	**34**	P	**P**	**13 20 11.3**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=301,slow=7.0,SNR=10						
WB2	**Warramunga Arr**	**65.24**	**194**	*e*P	**P**	**13 21 24.6**	**+0.7**
WRA	**Warramunga Arr**	**65.24**	**194**	P	**P**	**13 21 24.0**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.7,baz=8.1,slow=6.7,SNR=7.2						
ASAR	**Alice Springs**	**68.96**	**194**	P	**P**	**13 21 48.3**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=9.9,slow=6.7,SNR=12						
NOA	**NORSAR Array B**	**69.30**	**339**	P	**P**	**13 21 46.8**	**-2.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=29,slow=6.5,SNR=4.0						
ULM	**Lac du Bonnet**	**70.54**	**38**	P	**P**	**13 21 55.4**	**-1.6**
	comp=Z,1.6nm,0.5s,mb4.2,baz=353,slow=3.9,SNR=2.1						
TXAR	**Lajitas Array**	**81.67**	**57**	P	**P**	**13 23 00.2**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=296,slow=3.9,SNR=16						
PLCA	**Paso Flores**			PKPbc	PKPbc	13 30 34.9	-0.3
	comp=Z,1.2nm,0.8s,baz=142,slow=2.9,SNR=3.1						

*TEH **25** 13:15:47.0,2728N×5481E,h12km,ML3.7*
*IDC **25** 13:15:50.0±0.7,2678N×5471E,h0km,mb4.2/23, mb1 4.3/25,mb1mx4.2/30,mbtmp4.2/25,ML4.2/2,MS3.3/1, Ms1 3.3/1,ms1mx2.6/37,Error ellipse: s-maj=17.6km s-min=12.8km az=176.0*
*ISCJB **25** 13:15:49.7±0.4,2675N±005×5468E±003,h10km, mb4.3/51,Error ellipse: s-maj=7.2km s-min=4.1km az=161.9*
*THR **25** 13:15:50.3±0.4,2672N×5463E,h14km±4km,ML3.9*
*NEIC **25** 13:15:51.2±0.3,2674N×5471E,h10km,mb4.4/21, ML3.9(THR),Error ellipse: s-maj=7.1km s-min=3.7km az=175.0*
*CSEM **25** 13:15:52.8±0.1,2680N×5464E,h30km,mb4.4/21,Error ellipse: s-maj=3.3km s-min=2.3km az=171.0*
*MOS **25** 13:15:53.2±0.7,2680N×5468E,h33km,mb4.5/19,Error ellipse: s-maj=10.9km s-min=5.3km az=128.9*
*VIE **25** 13:15:55.9,2692N×5463E,h33km,mb3.9*

ISC 25 13:15:52.7±1.2,2675N±005×5471E±004,h18km±8km, n176,σ0≤79/183,mb4.3/51,15C-9D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.45**	**63**	*e*Pg	**Pg**	**13 16 18.6**	**-2.2**
BNDS				*e*Sg	**Sg**	**13 16 39.1**	**-0.5**
BNDS				AML	AML	13 16 46.0	
	comp=E,1µm,0.3s						
BNDS				AML	AML	13 16 56.9	
	comp=N,2µm,0.3s						
BNDS	**Bandar-Abbas**	**1.45**	**63**	*e*Pg	**Pg**	**13 16 18.5**	**-2.2**
	SNR=90						
BNDS				*e*Sg	**Sg**	**13 16 39.2**	**-0.5**
	SNR=90						
BNDS	**Bandar-Abbas**	**1.45**	**63**	*e*Pg	**Pg**	**13 16 18.0**	**-2.7**
BNDS				*e*Sg	**Sg**	**13 16 39.0**	**-0.7**
GHIR	**Ghir-Karzin**	**2.17**	**315**	*e*Pg	**Pg**	**13 16 29.3**	**-5.0**
GHIR				AML	AML	13 17 14.1	
	comp=E,855nm,0.1s						
GHIR				AML	AML	13 17 15.3	
	comp=N,973nm,1.8s						
GHIR	**Ghir-Karzin**	**2.17**	**315**	*e*Pg	**Pg**	**13 16 29.0**	**-5.3**
ASUD	**Al Ashush, Dub**	**2.19**	**165**	P	**Pn**	**13 16 32.3**	**+4.2**
	SNR=24						
IMOK	**Mouk**	**2.89**	**323**	⇑*e*Pn	**Pn**	**13 16 39.2**	**+1.4**
IMOK	**Mouk**	**2.89**	**323**	*e*Pn	**Pn**	**13 16 39.2**	**+1.4**
IMOK				*e*Sn	**Sn**	**13 17 14.7**	**+2.5**
IMOK				*e*		13 17 41.5	
ISRV	**Sarvestan**	**2.98**	**332**	*e*Pn	**Pn**	**13 16 41.2**	**+2.2**
ISRV	**Sarvestan**	**2.98**	**332**	*e*Pn	**Pn**	**13 16 41.2**	**+2.2**
ISRV				*e*Sn	**Sn**	**13 17 18.3**	**+4.0**
ISRV				*e*		13 17 41.5	
KRBR	**Kerman**	**3.69**	**29**	*e*Pn	**Pn**	**13 16 50.3**	**+1.4**
KRBR				AML	AML	13 17 40.6	
	comp=N,125nm,1.3s						
KRBR	**Kerman**	**3.69**	**29**	*e*Pn	**Pn**	**13 16 50.0**	**+1.2**
BTHS		**4.41**	**233**	P	**Pn**	**13 17 00.1**	**+1.3**
IMEH	**Mehriz**	**4.63**	**359**	*e*Pn	**Pn**	**13 17 03.3**	**+1.6**
IMEH	**Mehriz**	**4.63**	**359**	*e*Pn	**Pn**	**13 17 03.3**	**+1.6**
IMEH				*e*		13 17 09.4	
IMEH	**Mehriz**	**4.63**	**359**	*e*Pn	**Pn**	**13 17 03.8**	**+2.1**
IMEH				*e*		13 17 09.4	
IBAF	**Bafgh**	**4.88**	**9**	*e*Sn	**Sn**	**13 17 55.2**	**-6.0**
IBAF	**Bafgh**	**4.88**	**9**	*e*Pn	**Pn**	**13 17 06.2**	**+1.0**
IBAF				*e*		13 17 10.0	
IBAF	**Bafgh**	**4.88**	**9**	*e*Pn	**Pn**	**13 17 06.2**	**+1.0**
IBAF				*e*		13 17 10.0	
IBAF				*e*Sn	**Sn**	**13 17 55.2**	**-6.0**
ISAD	**Sadrabad**	**5.22**	**350**	*e*Pn	**Pn**	**13 17 11.8**	**+1.9**
ISAD				*e*Sn	**Sn**	**13 18 04.4**	**-5.3**
ISAD	**Sadrabad**	**5.22**	**350**	*e*	**Pb**	**13 17 18.4**	**-5.1**
ISAD	**Sadrabad**	**5.22**	**350**	*e*Pn	**Pn**	**13 17 12.5**	**+2.6**
ISAD				*e*		13 17 18.4	
ISAD				*e*Sn	**Sn**	**13 18 04.4**	**-5.3**
ICHK	**Chekchek**	**5.48**	**357**	*e*Pn	**Pn**	**13 17 07.9**	**-5.6**
ICHK	**Chekchek**	**5.48**	**357**	*e*Pn	**Pn**	**13 17 14.2**	**+0.7**
ICHK				*e*		13 17 21.9	
ICHK	**Chekchek**	**5.48**	**357**	*e*Pn	**Pn**	**13 17 14.2**	**+0.7**
ICHK				*e*		13 17 21.9	
HRDDS		**6.10**	**233**	P	**Pn**	**13 17 23.1**	**+1.1**
IPIR	**Pirpir**	**6.78**	**332**	*e*Sn	**Sn**	**13 18 43.3**	**-4.8**
IPIR	**Pirpir**	**6.78**	**332**	*e*Sn	**Sn**	**13 18 43.1**	**-5.0**
IDAH	**Dahanechah**	**7.46**	**36**	*e*Pn	**Pn**	**13 17 42.2**	**+1.5**
IDAH	**Dahanechah**	**7.46**	**36**	*e*Pn	**Pn**	**13 17 42.7**	**+2.0**
IDAH				*e*		13 17 45.5	
LYLS		**8.27**	**237**	P	**Pn**	**13 17 52.3**	**+0.6**
ASYS		**9.27**	**277**	S	**Sn**	**13 19 44.0**	**-5.4**
ASYS		**9.27**	**277**	P	**Pn**	**13 18 04.5**	**-1.0**
ASF	**Jabal al Asfar**	**16.43**	**293**	Pn	**Pn**	**13 19 41.8**	**-0.5**
	comp=N,0.6nm,0.3s,baz=328,slow=13,SNR=3.4						
MMAI	**Mount Meron Ar**	**17.86**	**295**	P	**Pn**	**13 19 59.4**	**-0.9**
	comp=N,1.3nm,0.3s,baz=86,slow=17,SNR=8.4						
MALT	**Malatya**	**17.90**	**314**	*e*P	**Pn**	**13 20 01.1**	**+0.4**
MALT				pmax	pmax		
	comp=Z,19nm,1.3s						
MALT	**Malatya**	**17.90**	**314**	*e*P	**Pn**	**13 20 01.1**	**+0.4**
	comp=Z,20nm,1.3s						
KIV	**Kislovodsk**	**19.73**	**334**	*e*P	**Pn**	**13 20 22.3**	**-0.5**
KIV				pmax	pmax		
	comp=Z,48nm,1.1s						
KIV	**Kislovodsk**	**19.73**	**334**	*e*P	**Pn**	**13 20 22.8**	**0.0**
	comp=Z,57nm,1.1s						
KIV	**Kislovodsk**	**19.73**	**334**	*e*P	**Pn**	**13 20 22.8**	**-0.1**
	comp=Z,57nm,1.1s						
CDAG	**Cicekdag**	**21.26**	**312**	*i* P	**P**	**13 20 36.9**	**-1.1**
CDAG				*i* S		13 20 42.1	
BR131	**Keskin Array S**	**21.80**	**312**	*e*P	**P**	**13 20 44.2**	**+0.5**
	comp=Z,18nm,0.8s,mb4.5						
BR131	**Keskin Array S**	**21.80**	**312**	*e*P	**P**	**13 20 44.2**	**+0.5**
	comp=Z,18nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	**21.80**	**312**	P	**P**	**13 20 44.5**	**+0.8**
	comp=Z,17nm,0.8s,mb4.5,baz=132,slow=13,SNR=40						
AML	**Almayashu**	**21.85**	**41**	*e*P	**P**	**13 20 43.9**	**-0.3**
	comp=Z,6.3nm,0.6s,mb4.2						
AML	**Almayashu**	**21.85**	**41**	*e*P	**P**	**13 20 43.9**	**-0.3**
	comp=Z,6.3nm,0.6s,mb4.2						
EKS2	**Erkin-Say**	**22.23**	**40**	*e*P	**P**	**13 20 48.7**	**+0.4**
	comp=Z,14nm,0.9s,mb4.4						
ELDT	**Eldivan**	**22.33**	**313**	*i* P	**P**	**13 20 49.9**	**+0.5**
AKTK	**Aktyubinsk**	**23.79**	**5**	P	**P**	**13 21 04.6**	**+0.4**
AKTK	**Aktyubinsk**	**23.79**	**5**	P	**P**	**13 21 04.6**	**+0.4**
AKTO	**Aktyubinsk**	**23.79**	**5**	P	**P**	**13 21 04.6**	**+0.4**
	comp=Z,1.7nm,0.3s,mb3.9,baz=181,slow=12,SNR=11						
IDI	**Anoyia**	**26.86**	**296**	P	**P**	**13 21 33.7**	**+1.4**
	comp=Z,5.7nm,0.5s,mb4.3,baz=85,slow=11,SNR=12						
BVAR	**Borovoye Array**	**28.74**	**20**	P	**P**	**13 21 48.9**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.0,baz=205,slow=6.6,SNR=11						
VRI	**Vrincioaia**	**29.31**	**318**	⇓*i*P	**P**	**13 21 53.6**	**-0.4**
MKAR	**Makanchi Array**	**29.56**	**40**	P	**P**	**13 21 56.2**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=223,slow=8.3,SNR=4.2						
MLR	**Muntele Rosu**	**29.59**	**317**	P	**P**	**13 21 57.7**	**+1.2**
	comp=Z,3.8nm,0.6s,mb4.3,baz=357,slow=11,SNR=4.9						
MLR	**Muntele Rosu**	**29.59**	**317**	P	**P**	**13 21 57.7**	**+1.1**
MLR	**Muntele Rosu**	**29.59**	**317**	P	**P**	**13 21 57.7**	**+1.2**
KURK	**Kurchatov**	**30.09**	**31**	P	**P**	**13 22 00.2**	**-0.7**
	comp=Z,3.4nm,0.7s,mb4.2,baz=233,slow=8.6,SNR=16						
KURK				LR	LR	13 36 33.0	
	comp=Z,49nm,19.0s,baz=355,slow=42						
KURK	**Kurchatov**	**30.09**	**31**	P	**P**	**13 22 00.2**	**-0.7**
KURK				LR	LR	13 36 33.0	
VOIR		**30.12**	**316**	⇓*i*P	**P**	**13 22 02.1**	**+

SMF	**Signal de Mont**	**44.50**	**310**	*e*P		**P**	**13 24 02.1**	**-0.9**
	comp=Z,2.8nm,0.6s,mb4.3							
SSF	**Saint Saulge**	**44.79**	**311**	*e*P		**P**	**13 24 04.6**	**-0.7**
	comp=Z,3.2nm,0.5s,mb4.1							
SSF	**Saint Saulge**	**44.79**	**311**	*e*P		**P**	**13 24 04.6**	**-0.7**
SSF					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2							
SSF	**Saint Saulge**	**44.79**	**311**	*e*P		**P**	**13 24 04.6**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.1							
AVF	**Avril sur Loir**	**44.85**	**310**	*e*P		**P**	**13 24 05.4**	**-0.4**
	comp=Z,2.4nm,0.5s,mb4.0							
AVF	**Avril sur Loir**	**44.85**	**310**	*e*P		**P**	**13 24 05.4**	**-0.4**
AVF					pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9							
AVF	**Avril sur Loir**	**44.85**	**310**	*e*P		**P**	**13 24 05.4**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.0							
BAIF	**Baives**	**44.86**	**315**	*e*P		**P**	**13 24 06.2**	**+0.4**
	comp=Z,25nm,1.1s,mb4.7							
BAIF	**Baives**	**44.86**	**315**	*e*P		**P**	**13 24 06.2**	**+0.4**
BAIF					pmax	pmax		
	comp=Z,13nm,1.1s,mb4.7							
BAIF	**Baives**	**44.86**	**315**	*e*P		**P**	**13 24 06.2**	**+0.4**
	comp=Z,13nm,1.1s,mb4.7							
NB2	**NORSAR Subarra**	**45.03**	**332**	P		**P**	**13 24 05.8**	**-1.1**
	comp=Z,3.6nm,0.7s,mb4.3,baz=120,slow=7.9							
NOA	**NORSAR Array B**	**45.03**	**332**	P		**P**	**13 24 05.9**	**-1.1**
	comp=Z,3.7nm,0.8s,mb4.2,baz=120,slow=8.0,SNR=7.3							
BGF	**Bois d'Agland**	**45.17**	**310**	*e*P		**P**	**13 24 07.8**	**-0.5**
	comp=Z,6.9nm,0.6s,mb4.3							
BGF	**Bois d'Agland**	**45.17**	**310**	*e*P		**P**	**13 24 07.8**	**-0.5**
BGF					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3							
BGF	**Bois d'Agland**	**45.17**	**310**	*e*P		**P**	**13 24 07.8**	**-0.5**
	comp=Z,3.5nm,0.6s,mb4.3							
SONM	**Songino Array**	**45.22**	**48**	P		**P**	**13 24 09.6**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.3,baz=270,slow=8.6,SNR=24							
MTLF	**Montolieu**	**45.30**	**305**	*e*P		**P**	**13 24 09.9**	**+0.5**
CAF	**Calviac**	**45.53**	**308**	*e*P		**P**	**13 24 11.1**	**-0.1**
	comp=Z,14nm,0.9s,mb4.6							
CAF	**Calviac**	**45.53**	**308**	*e*P		**P**	**13 24 11.1**	**-0.1**
CAF					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6							
CAF	**Calviac**	**45.53**	**308**	*e*P		**P**	**13 24 11.1**	**-0.1**
	comp=Z,6.9nm,0.9s,mb4.6							
TCF	**Toulx Ste Croi**	**45.57**	**310**	*e*P		**P**	**13 24 11.1**	**-0.4**
	comp=Z,6.0nm,0.6s,mb4.4							
TCF	**Toulx Ste Croi**	**45.57**	**310**	*e*P		**P**	**13 24 11.1**	**-0.4**
TCF					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4							
TCF	**Toulx Ste Croi**	**45.57**	**310**	*e*P		**P**	**13 24 11.1**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.4							
ULN	**Ulaanbaatar**	**45.67**	**48**	*e*P		**P**	**13 24 12.7**	**+0.5**
ULN					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
ULN	**Ulaanbaatar**	**45.67**	**48**	*e*P		**P**	**13 24 12.7**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.5							
ULN	**Ulaanbaatar**	**45.67**	**48**	*e*P		**P**	**13 24 12.7**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.5							
RJF	**Les Rejaudoux**	**45.96**	**308**	*e*P		**P**	**13 24 14.6**	**+0.1**
	comp=Z,6.0nm,0.7s,mb4.4							
RJF	**Les Rejaudoux**	**45.96**	**308**	*e*P		**P**	**13 24 14.6**	**+0.1**
RJF					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
RJF	**Les Rejaudoux**	**45.96**	**308**	*e*P		**P**	**13 24 14.6**	**+0.1**
	comp=Z,3.0nm,0.7s,mb4.4							
ARCES	**ARCESS Array B**	**46.09**	**346**	P		**P**	**13 24 15.2**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.3,baz=134,slow=8.7,SNR=7.7							
ARCES	**ARCESS Array B**	**46.09**	**346**	P		**P**	**13 24 15.2**	**0.0**
LFF	**La Frestale**	**46.47**	**308**	*e*P		**P**	**13 24 18.6**	**0.0**
	comp=Z,7.8nm,0.6s,mb4.5							
LFF	**La Frestale**	**46.47**	**308**	*e*P		**P**	**13 24 18.6**	**0.0**
LFF					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5							
LFF	**La Frestale**	**46.47**	**308**	*e*P		**P**	**13 24 18.6**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5							
ETSF	**Etsaut**	**47.32**	**305**	*e*P		**P**	**13 24 25.1**	**-0.1**
SJPF	**Ste Jean**	**47.81**	**305**	*e*P		**P**	**13 24 29.6**	**+0.5**
	comp=Z,8.4nm,0.7s,mb4.6							
SJPF	**Ste Jean**	**47.81**	**305**	*e*P		**P**	**13 24 29.6**	**+0.5**
SJPF					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
SJPF	**Ste Jean**	**47.81**	**305**	*e*P		**P**	**13 24 29.6**	**+0.5**
	comp=Z,4.2nm,0.7s,mb4.6							
ESDC	**Sonseca Array**	**49.95**	**301**	P		**P**	**13 24 45.2**	**-0.3**
	comp=Z,0.9nm,0.5s,mb4.0,baz=65,slow=7.2,SNR=12							
ESDC	**Sonseca Array**	**49.95**	**301**	P		**P**	**13 24 45.2**	**-0.4**
TOA0	**Torodi Ar. Sit**	**51.30**	**266**	*e*P		**P**	**13 24 55.9**	**-0.2**
TOA0	**Torodi Ar. Sit**	**51.30**	**266**	*e*P		**P**	**13 24 55.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**51.30**	**266**	P		**P**	**13 24 56.0**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=66,slow=8.2,SNR=17							
BOD	**Bodaibo**	**51.50**	**36**	*e*P		**P**	**13 24 56.0**	**-0.9**
BOD					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4							
DBIC	**Dimbokro**	**59.90**	**262**	P		**P**	**13 25 58.1**	**+0.2**
	comp=Z,1.8nm,0.5s,mb4.3,baz=28,slow=7.6,SNR=7.8							
KSRS	**Korea Array**	**61.53**	**60**	P		**P**	**13 26 08.0**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.1,baz=282,slow=6.8,SNR=3.3							
KSRS	**Korea Array**	**61.53**	**60**	P		**P**	**13 26 08.0**	**-0.8**
KSRS					pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1							
BOSA	**Boshof**	**61.88**	**209**	P		**P**	**13 26 12.1**	**+1.1**
	comp=Z,1.8nm,0.7s,mb4.3,baz=11,slow=12,SNR=5.1							
BOSA	**Boshof**	**61.88**	**209**	P		**P**	**13 26 12.1**	**+1.1**
SCHQ	**Schefferville**	**84.58**	**330**	P		**P**	**13 28 24.4**	**-0.3**
	comp=Z,3.2nm,0.8s,mb4.5,baz=351,slow=2.6,SNR=7.6							
WRA	**Warramunga Arr**	**90.02**	**112**	P		**P**	**13 28 51.5**	**-0.1**
	comp=Z,0.4nm,0.7s,mb3.9,baz=313,slow=4.1,SNR=6.0							
YKA	**Yellowknife Ar**	**90.66**	**355**	P		**P**	**13 28 54.1**	**+0.3**
	comp=Z,0.8nm,0.8s,mb4.1,baz=4.3,slow=4.8,SNR=16							
ASAR	**Alice Springs**	**91.43**	**116**	P		**P**	**13 28 57.7**	**-0.4**
	comp=Z,0.3nm,0.9s,mb3.6,baz=302,slow=4.3,SNR=5.1							
TXAR	**Lajitas Array**	**120.51**	**338**	PKP		PKPdf	13 34 43.1	-0.5
	comp=Z,0.3nm,0.9s,baz=85,slow=2.2,SNR=2.7							

*TEH **25** 13:15:39.8,3046N×4963E,h16km,ML3.6*
*THR **25** 13:15:47.9±0.3,3102N×4850E,h22km±5km,ML3.3*
*CSEM **25** 13:15:51.9±0.1,3137N×4876E,h5km,ML3.3, Error ellipse: s-maj=6.1km s-min=2.0km az=122.0*
*ISCJB **25** 13:15:53.1±0.4,3137N±005×4874E±008,h10km, Error ellipse: s-maj=11.7km s-min=3.5km az=34.3*
*KISR **25** 13:15:53.4,3095N×4905E,h10km,ML2.9*
ISC 25 13:15:54.4±0.4,3128N±004×4883E±007,h10km,n30, σ1§15/44,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.82**	**358**	*e*Pg		**Pg**	**13 16 08.4**	**-1.9**
SHGR				*e*Sg		**Sg**	**13 16 23.4**	**+2.3**
SHGR					AML	AML	13 16 34.7	
	comp=N,1μm,0.6s							
SHGR					AML	AML	13 16 36.4	
	comp=E,904nm,0.7s							
MIB	**Mutribah**	**1.96**	**222**	*e*P		**Pn**	**13 16 28.1**	**+0.4**
MIB				*e*S		**Sn**	**13 16 54.4**	**+2.1**
MIB	**Mutribah**	**1.96**	**222**	*e*P		**Pn**	**13 16 28.1**	**+0.4**
	baz=233							
MIB				*e*S		**Sn**	**13 16 54.4**	**+2.1**
	baz=233							
MIB					AML	AML	13 16 58.4	
	comp=Z,125nm,0.6s,baz=233							
UMR	**Umm Al-Rimmam**	**1.98**	**209**	*e*P		**Pn**	**13 16 27.4**	**-0.5**
UMR				*e*S		**Sn**	**13 16 52.7**	**0.0**
	comp=Z,120nm,0.3s							
UMR	**Umm Al-Rimmam**	**1.98**	**209**	*e*P		**Pn**	**13 16 27.4**	**-0.5**
	baz=220							
UMR				*e*S		**Sn**	**13 16 52.7**	**-0.1**
	baz=220							
UMR					AML	AML	13 16 56.2	
	comp=Z,120nm,0.3s,baz=220							
IPIR	**Pirpir**	**2.24**	**51**	*e*Pn		**Pn**	**13 16 32.1**	**+0.5**
IPIR				*e*Sn		**Sn**	**13 17 01.9**	**+2.6**
IPIR	**Pirpir**	**2.24**	**51**	*e*Pn		**Pn**	**13 16 32.2**	**+0.6**
IPIR				*e*Sn		**Sn**	**13 17 01.2**	**+1.9**
IPIR				*e*			13 17 09.9	
KBD	**Kabd**	**2.32**	**205**	*e*P		**Pn**	**13 16 32.0**	**-0.7**
KBD	**Kabd**	**2.32**	**205**	*e*P		**Pn**	**13 16 32.0**	**-0.6**
	baz=214							
KBD					AML	AML	13 17 07.7	
	comp=Z,78nm,0.4s,baz=214							
NAY	**Al-Naaiem**	**2.45**	**215**	*e*P		**Pn**	**13 16 34.2**	**-0.2**
NAY				*e*S		**Sn**	**13 17 05.6**	**+1.2**
	comp=Z,26nm,0.7s							
NAY	**Al-Naaiem**	**2.45**	**215**	*e*P		**Pn**	**13 16 34.2**	**-0.2**
	baz=223							
NAY				*e*S		**Sn**	**13 17 05.5**	**+1.1**
	baz=223							
NAY					AML	AML	13 17 20.2	
	comp=Z,26nm,0.7s,baz=223							
RDF	**Al-Radifah**	**2.60**	**206**	*e*P		**Pn**	**13 16 35.9**	**-0.6**
RDF				*e*S		**Sn**	**13 17 07.4**	**-0.7**
	comp=Z,92nm,0.4s							
RDF	**Al-Radifah**	**2.60**	**206**	*e*P		**Pn**	**13 16 35.9**	**-0.6**
	baz=213							
RDF				*e*S		**Sn**	**13 17 07.4**	**-0.7**
	baz=213							
RDF					AML	AML	13 17 22.3	
	comp=Z,92nm,0.4s,baz=213							
IKLH	**Kolahrood**	**3.09**	**48**	*e*Sn		**Sn**	**13 17 21.3**	**+1.1**
IKLH	**Kolahrood**	**3.09**	**48**	*e*Pn		**Pn**	**13 16 43.7**	**+0.5**
IKLH				*e*			13 16 44.2	
IKLH				*e*Sn		**Sn**	**13 17 20.4**	**+0.2**
IZEF	**Zefreh**	**3.38**	**61**	*e*Pn		**Pn**	**13 16 42.7**	**-4.5**
IZEF				*e*Sn		**Sn**	**13 17 21.5**	**-5.8**
IZEF	**Zefreh**	**3.38**	**61**	*e*Pn		**Pn**	**13 16 42.7**	**-4.5**
IZEF				*e*			13 16 48.2	
IZEF				*e*Sn		**Sn**	**13 17 21.5**	**-5.8**
ASAO	**Ashtian**	**3.41**	**17**	*e*Pn		**Pn**	**13 16 47.0**	**-0.7**
ASAO					AML	AML	13 17 46.5	
	comp=N,23nm,0.5s							
IVIS	**Veis**	**3.64**	**333**	*e*Pn		**Pn**	**13 17 01.2**	**+10**
IVIS				*e*			13 18 26.5	
NASN	**Na'in**	**3.70**	**65**	*e*Pn		**Pn**	**13 16 51.4**	**-0.2**
GHVR	**GHOM**	**3.80**	**32**	*e*Pn		**Pn**	**13 16 52.2**	**-0.9**
SNGE	**Sanandaj**	**4.00**	**342**	*e*Pn		**Pn**	**13 16 52.7**	**-3.0**
ISAD	**Sadrabad**	**4.19**	**80**	*e*Pn		**Pn**	**13 16 59.5**	**+1.1**
ISAD	**Sadrabad**	**4.19**	**80**	*e*Pn		**Pn**	**13 16 59.7**	**+1.3**
ISFB	**Sefidab**	**4.20**	**42**	*e*Pn		**Pn**	**13 16 57.1**	**-1.4**
ISFB	**Sefidab**	**4.20**	**42**	*e*Pn		**Pn**	**13 16 57.1**	**-1.4**
ISFB				*e*			13 18 06.3	
IRAZ	**Razeghan**	**4.21**	**12**	*e*Pn		**Pn**	**13 16 58.0**	**-0.7**
IRAZ	**Razeghan**	**4.21**	**12**	*e*Pn		**Pn**	**13 16 58.0**	**-0.7**
IRAZ				*e*			13 16 58.7	
IVRN	**Varamin**	**4.43**	**32**	*e*Pn		**Pn**	**13 17 00.7**	**-0.9**
IVRN	**Varamin**	**4.43**	**32**	*e*Pn		**Pn**	**13 17 00.7**	**-0.9**
IVRN				*e*			13 17 06.3	

IDC 25 13:33:13.7±55.0,1799S×17530W,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.6/16,mbtmp3.7/3,Error ellipse: s-maj=1030.0km s-min=166.2km az=81.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.20**	**242**	P		P	13 40 59.9	-0.4
	1.1nm,0.8s,baz=90,slow=8.1,SNR=2.8							
WRA	**Warramunga Arr**	**47.53**	**259**	P		P	13 41 50.8	-0.4
	0.2nm,0.6s,baz=96,slow=7.3,SNR=9.5							
ASAR	**Alice Springs**	**47.62**	**254**	P		P	13 41 52.4	+0.5
	1.7nm,0.5s,baz=89,slow=7.8,SNR=66							

*ISCJB **25** 13:41:55.9±0.8,3694N±004×2924E±004,h3km±8km, Error ellipse: s-maj=7.2km s-min=5.4km az=178.6*
*DDA **25** 13:41:55.9,3694N×2924E,h6km±6km,Md3.1*
*CSEM **25** 13:41:55.1±0.1,3693N×2923E,h5km,MD3.1,Error ellipse: s-maj=3.0km s-min=2.1km az=17.0*
*ISK **25** 13:41:55.4,3693N×2923E,h9km,MD3.0*
ISC 25 13:41:56.4±0.8,3694N±005×2924E±004,h8km±6km,n11, σ0§63/17,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.39**	**40**	*i* P		**Pg**	**13 42 03.3**	**-0.9**
GOLH				*i* S		**Sg**	**13 42 10.1**	**+0.8**
TURN	**Turunc**	**0.52**	**263**	*i* P		**Pg**	**13 42 10.9**	**+4.5**
ELL	**Elmali**	**0.57**	**109**	*e*PG		**Pg**	**13 42 07.0**	**-0.4**
ELL				*e*SG		**Sg**	**13 42 15.4**	**+0.7**
YER	**Yerkesik**	**0.79**	**285**	*e*PG		**Pg**	**13 42 11.1**	**-0.6**
YER				*e*SG		**Sg**	**13 42 22.2**	**+0.2**
DENT	**Denizli**	**0.83**	**349**	*e*PG		**Pg**	**13 42 12.0**	**-0.5**
DENT				*e*SG		**Sg**	**13 42 23.9**	**+0.6**
MLSB	**Milas**	**1.23**	**287**	*e*PN		**Pn**	**13 42 19.3**	**-0.5**
DAT	**Datca**	**1.35**	**262**	*e*PN		**Pn**	**13 42 20.9**	**-0.7**
KHL	**Karahalli**	**1.40**	**9**	*e*PN		**Pn**	**13 42 22.2**	**0.0**
BDRM	**Kayabasi**	**1.45**	**276**	*i* P		**Pn**	**13 42 23.2**	**+0.4**
BDRM				*i* S		**Sn**	**13 42 43.3**	**+1.4**
KHAL	**Karahalli**	**1.45**	**8**	*i* P		**Pn**	**13 42 23.3**	**+0.4**
KHAL				*i* S		**Sn**	**13 42 41.4**	**-0.6**
KULA	**Kula-Manisa**	**1.64**	**344**	*e*PN		**Pn**	**13 42 25.1**	**-0.4**

IDC 25 14:04:13.1±40.0,2960S×17732W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.8/13,mbtmp3.8/3,Error ellipse: s-maj=740.4km s-min=172.5km az=97.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.24**	**256**	P		P	14 11 10.0	+0.5
	0.8nm,0.6s,baz=90,slow=9.1,SNR=5.9							
ASAR	**Alice Springs**	**43.75**	**266**	P		P	14 12 19.9	-0.7
	0.8nm,0.9s,baz=107,slow=7.7,SNR=6.9							
WRA	**Warramunga Arr**	**44.67**	**271**	P		P	14 12 27.9	0.0
	0.9nm,0.3s,baz=110,slow=8.2,SNR=15							
KAKA	**Kakadu**	**49.39**	**279**	*e*P		x	14 12 34.6	
	74nm,0.7s							

*NIED **25** 14:04:00,3850N×14220E,h41km,Mw6.0 Best double couple: M₀1.31000×10¹⁸ NP1:φs192.00000°,δ71.00000°, λ94.00000°. NP2:φs187.00000°,δ19.00000°,λ78.00000°.*
*BGS **25** 14:04:25.9±2.6,3690N×14189E,h33km,mb5.4,MS5.9*
*MOS **25** 14:04:32.1±1.1,3854N×14207E,h41km,mb5.7/117, MS5.9/63,Error ellipse: s-maj=7.1km s-min=4.7km az=99.8*
*JMA **25** 14:04:32.8±0.1,3848N×142.15E,h40km±1km,M5.6*
JMA Felt III J1.
*BJI **25** 14:04:32.7,3839N×14203E,h56km,mB5.9,mb5.4,Ms5.9, Msz5.9*
*ISCJB **25** 14:04:33.4±0.1,3850N±002×14206E±002,h48km, mb5.4/299,MS5.8/256,Error ellipse: s-maj=2.9km s-min=2.0km az=143.1*
*SZGRF **25** 14:04:33.4,3868N×14339E,h50km,mb5.5,MS6.1,Off east coast of Honshu, Japan*
*GCMT **25** 14:04:34.7±0.1,3840N×14239E,h44km,MW6.1/111, Moment Tensor Solution. s111,c260; s109,c373; Duration: 236 Moment tensor: Scale 10¹⁸Nm; Mrr1.08±.01; Mθθ0.00±.01; Mϕϕ-1.08±.01; Mrθ0.46±.01; Mθϕ-0.41±.01; Mϕr0.96±.01; Best double couple: M₀1.56800×10¹⁸ NP1:φs192.00000°,δ24.00000°, λ79.00000°. NP2:φs24.00000°,δ67.00000°,λ95.00000°. Principal axes: T 1.5050, Plg68.0000°, Azm303.0000°; N 0.1280, Plg4.0000°, Azm202.0000°; P -1.6310, Plg21.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **25** 14:04:34.2±1.4,3848N×14205E,h46km±13km,mb4.8/37, mb1 4.8/43,mb1mx4.8/44,mbtmp4.8/43,ML4.4/6,MS5.7/29, Ms1 5.7/29,ms1mx5.6/33 Error ellipse: s-maj=11.5km s-min=7.4km az=99.0*
*NEIC **25** 14:04:34.7±0.1,3850N×14203E,mb5.4/177,MS5.7/188, MW6.0,MW6.0(NIED),Error ellipse: s-maj=3.6km s-min=2.6km az=150.0,Moment Tensor Solution. s130 Moment tensor: Scale 10¹⁸Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mθϕ0.00; Mϕr0.00; Best double couple: M₀1.20000×10¹⁸ NP1:φs181.00000°,δ20.00000°, λ65.00000°. NP2:φs28.00000°,δ72.00000°,λ99.00000°. Principal axes: T 1.1100, Plg61.0000°, Azm310.0000°; N 0.1100, Plg8.0000°, Azm205.0000°; P -1.2200, Plg26.0000°, Azm110.0000°;*
NEIC Felt [III] at Misawa. Felt at Daigo, Iwaki, Kamaishi, Koriyama, Tokyo and Tono. Recorded [3 JMA] in northeastern Honshu and [2 JMA] throughout northern Hokkaido.
*DJA **25** 14:05:05,3907N×14262E,h430km,Mw5.4/9*
ISC 25 14:04:35.4±0.1,3853N±002×14201E±002,h50km, h50km±1.0km:pP-P,n1017,σ0§97/921,mb5.4/299, MS5.8/256,107C-42D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JIO	**Ouri**	**0.53**	**262**	⇓P		**Pn**	**14 04 45.3**	**-1.6**
JIO				S		**Sn**	**14 04 53.8**	**-1.4**
OFUJ	**Ofunato**	**0.61**	**334**	⇓P		**Pn**	**14 04 46.5**	**-1.4**
OFUJ				*e*S		**Sn**	**14 04 56.0**	**-1.0**
JMK	**Ichinoseki**	**0.75**	**304**	⇓P		**Pn**	**14 04 48.8**	**-0.9**
JMK				*e*S		**Sn**	**14 05 00.2**	**+0.1**
MIYJ	**Miyakonagasawa**	**1.05**	**352**	⇓P		**Pn**	**14 04 52.1**	**-1.7**
JOU	**Okura**	**1.07**	**261**	⇓P		**Pn**	**14 04 53.2**	**-0.8**
JOU				*e*S		**Sn**	**14 05 08.5**	**+0.7**
JOM	**Ohasama**	**1.09**	**329**	⇓P		**Pn**	**14 04 53.7**	**-0.6**
JMM	**Marumori**	**1.17**	**236**	P		**Pn**	**14 04 53.3**	**-2.0**
JYK	**Kaneyama**	**1.35**	**287**	⇓P		**Pn**	**14 04 57.5**	**-0.3**
JRG	**Rokugo**	**1.38**	**309**	⇓P		**Pn**	**14 04 57.8**	**-0.4**
JTH	**Tanohata**	**1.41**	**355**	⇓P		**Pn**	**14 04 56.9**	**-1.7**
JFK	**Kawauchi**	**1.47**	**218**	⇓P		**Pn**	**14 04 57.0**	**-2.5**
JFK				*e*S		**Sn**	**14 05 16.0**	**-1.5**
JKZ	**Kuzumaki**	**1.54**	**340**	⇓P		**Pn**	**14 05 00.0**	**-0.4**
JYS	**Shirataka**	**1.56**	**259**	⇓P		**Pn**	**14 05 00.0**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.72**	**214**	⇓P		**Pn**	**14 05 00.2**	**-2.7**
JYW	**Yuwa**	**1.73**	**306**	⇓P		**Pn**	**14 05 03.3**	**+0.4**
JYA	**Atsumi**	**1.80**	**273**	⇓P		**Pn**	**14 05 03.8**	**-0.2**
JANG	**Nango**	**1.88**	**348**	P		**Pn**	**14 05 03.8**	**-1.2**
JAH	**Hinai**	**1.97**	**328**	⇓P		**Pn**	**14 05 06.5**	**+0.3**
JFY	**Yanaizu**	**2.14**	**239**	P		**Pn**	**14 05 08.0**	**-0.6**
JAW	**Awa shima**	**2.17**	**269**	⇓P		**Pn**	**14 05 09.0**	**0.0**
JOG2	**Oga 2**	**2.21**	**309**	P		**Pn**	**14 05 09.2**	**-0.3**
JHO	**Hitachi**	**2.24**	**211**	⇓P		**Pn**	**14 05 06.6**	**-3.3**
JNS	**Sasagawa**	**2.24**	**252**	⇓P		**Pn**	**14 05 09.5**	**-0.5**
JSB	**Shiboa**	**2.28**	**227**	P		**Pn**	**14 05 10.6**	**+0.1**
JIW	**Iwasaki**	**2.58**	**324**	⇓P		**Pn**	**14 05 14.8**	**+0.3**
JHK	**Hiroka**	**2.69**	**242**	⇓P		**Pn**	**14 05 15.9**	**-0.3**
JAG	**Ashikaga**	**2.93**	**225**	P		**Pn**	**14 05 18.3**	**-1.1**
JSD	**Sado**	**2.99**	**262**	⇓P		**Pn**	**14 05 19.5**	**-0.8**
JRY	**Ryogami san**	**3.53**	**226**	P		**Pn**	**14 05 27.0**	**-0.7**
ERM	**Erimo**	**3.59**	**14**	Pn		**Pn**	**14 05 27.4**	**-1.0**
	4μm,0.7s,SNR=42							
ERM	**Erimo**	**3.59**	**14**	⇑*i*P		**Pn**	**14 05 26.7**	**-1.7**
ERM	**Erimo**	**3.59**	**14**	*e*P		**Pn**	**14 05 26.4**	**-2.0**
MJAR	**Matsushiro Arr**	**3.62**	**238**	P		**Pn**	**14 05 29.1**	**+0.2**
	32nm,0.3s,baz=49,slow=10,SNR=120							
MJAR					LR	LR	14 07 10.1	
	comp=Z,221μm,19.6s,baz=60,slow=43							
MAJO	**Matsushiro**	**3.62**	**238**	*e*P		**Pn**	**14 05 29.4**	**+0.5**
MAT	**Matsushiro**	**3.62**	**238**	P		**Pn**	**14 05 29.0**	**+0.1**
MAT				S		**Sn**	**14 06 09.4**	**-0.9**
MAT	**Matsushiro**	**3.62**	**238**	P		**Pn**	**14 05 29.4**	**+0.5**
JNT	**Takato**	**4.08**	**231**	P		**Pn**	**14 05 37.2**	**+2.1**
JTT	**Ttatey**	**4.19**	**244**	P		**Pn**	**14 05 39.4**	**+2.8**
JNY	**Yasuok**	**4.59**	**228**	P		**Pn**	**14 05 43.6**	**+1.4**
SHZ3	**Shizuoka 3**	**4.61**	**223**	P		**Pn**	**14 05 43.3**	**+0.8**
JGF	**Kuroka**	**4.74**	**233**	P		**Pn**	**14 05 46.0**	**+1.8**
JGM	**Miyama**	**5.09**	**238**	⇑P		**Pn**	**14 05 51.3**	**+2.3**
ASAJ	**Asahikawa**	**5.60**	**4**	P		**Pn**	**14 05 55.3**	**-0.6**
	12nm,0.3s,baz=199,slow=12,SNR=46							
ASAJ					S	**Sn**	**14 06 59.9**	**+1.0**
	20nm,0.3s,baz=225,slow=31,SNR=5.0							
ASAJ	**Asahikawa**	**5.60**	**4**	P		**Pn**	**14 05 55.3**	**-0.6**
ASAJ					S	**Sn**	**14 06 59.9**	**+1.0**
ASAJ					pmax	pmax		
	comp=Z,12nm,0.3s							
ASAJ					smax			
	comp=N,20nm,0.3s							
JFM	**Mihama**	**5.68**	**240**	P		**Pn**	**14 05 59.9**	**+2.8**
JHJ	**Hachijo jima 2**	**5.70**	**199**	P		**Pn**	**14 05 55.8**	**-1.6**
	comp=N,183nm,0.3s,baz=197,slow=1.4,SNR=26							
JHJ					S	**Sn**	**14 06 56.0**	**-5.5**
	comp=N,695nm,0.3s,baz=70,slow=23,SNR=6.0							
YUK	**Yuzh-Kuril'sk**	**6.21**	**27**	P		**Pn**	**14 06 00.5**	**-3.9**
YUK					pmax	pmax		
	comp=Z,3μm,1.0s							
YUK					pmax	pmax		
	comp=N,2μm,0.8s							
YUK					pmax	pmax		
	comp=E,2μm,0.4s							
YUK					MLR	MLR		
	comp=Z,35μm,18.0s							
YUK					MLR	MLR		
	comp=N,28μm,20.0s							
YUK					MLR

SNY					AMB	AMB				
	comp=Z,10µm,12.0s									
SNY					LR	LR				
	comp=N,7µm,17.4s									
SNY					LR	LR				
	comp=Z,73µm,16.4s									
SKR	**Severo-Kuril's**	**15.73**	**35**	*e*P	**Pn**		**14 08 10.0**	**-3.4**		
SKR				*e*S	S		14 10 58.0	-21		
SKR					pmax	pmax				
	comp=E,1µm,6.0s									
SKR					pmax	pmax				
	comp=Z,2µm,6.0s									
SKR					pmax	pmax				
	comp=Z,230nm,0.9s									
SKR					pmax	pmax				
	comp=E,510nm,1.4s									
SKR					smax					
	comp=N,30nm,0.5s									
SKR					smax					
	comp=E,60nm,0.5s									
SKR					smax					
	comp=N,4µm,18.0s									
SKR					smax					
	comp=E,10µm,10.0s									
SKR					MLR	MLR				
	comp=Z,14µm,14.0s									
SKR					MLR	MLR				
	comp=N,14µm,18.0s									
SKR					MLR	MLR				
	comp=E,15µm,14.0s									
DL2	**Dalian**	**15.92**	**278**	⇑*i*P	**Pn**		**14 08 17.0**	**+1.1**		
DL2				AP	pP		14 08 25.0	-5.1		
DL2				PP			14 08 29.5			
DL2				S	**S**		**14 11 13.5**	**-10**		
DL2				SS			14 11 32.3			
DL2				AMB	AMB					
	comp=Z,230nm,1.0s									
DL2				AMB	AMB					
	comp=Z,2µm,7.8s									
DL2				LR	LR					
	comp=N,7µm,15.1s									
DL2				LR	LR					
	comp=Z,24µm,18.8s									
JOW	**Kunigami**	**16.41**	**229**	P	**Pn**		**14 08 20.7**	**-1.4**		
	comp=Z,1.8nm,0.3s,baz=15,slow=9.9,SNR=2.8									
PEA0B	**Petropavlovsk-**	**18.16**	**32**	*e*P	**Pn**		**14 08 43.8**	**+0.2**		
PETK	**Petropavlovsk-**	**18.16**	**32**	P	**Pn**		**14 08 41.5**	**-2.1**		
	comp=Z,0.5nm,0.3s,baz=216,slow=6.2,SNR=12									
PETK				LR	LR		14 16 27.6			
	comp=Z,13µm,19.0s,baz=319,slow=39									
PETK	**Petropavlovsk-**	**18.16**	**32**	P	**Pn**		**14 08 41.5**	**-2.1**		
PETK				LR	LR		14 16 27.6			
PET	**Petropavlovsk**	**18.50**	**33**	*e*P	**Pn**		**14 08 42.7**	**-5.0**		
PET				*e*S	**S**		**14 12 03.2**	**-11**		
PET				pmax	pmax					
	comp=Z,2µm,15.7s									
PET				pmax	pmax					
	comp=Z,3µm,8.2s									
PET				pmax	pmax					
	comp=Z,167nm,1.1s									
PET				MLR	MLR					
	comp=Z,11µm,17.0s									
PET				MLR	MLR					
	comp=Z,10µm,16.0s									
PET	**Petropavlovsk**	**18.50**	**33**	*e*P	**Pn**		**14 08 45.7**	**-2.0**		
	comp=Z,310nm,1.4s									
SSE	**Sheshan**	**18.62**	**253**	P	**Pn**		**14 08 47.5**	**-1.9**		
SSE				AP	pP		14 08 58.5	-1.5		
SSE				S	**S**		**14 12 13.8**	**-3.9**		
SSE				AMB	AMB					
	comp=Z,421nm,1.0s									
SSE				AMB	AMB					
	comp=Z,6µm,10.4s									
SSE				LR	LR					
	comp=N,11µm,16.8s									
SSE				LR	LR					
	comp=E,18µm,16.8s									
SSE				LR	LR					
	comp=Z,27µm,15.7s									
HIA	**Hailar**	**19.23**	**311**	*e*P	**Pn**		**14 08 53.7**	**-2.9**		
HIA					pmax	pmax				
	comp=Z,85nm,0.9s									
HIA	**Hailar**	**19.23**	**311**	*e*P	**Pn**		**14 08 53.7**	**-2.9**		
	comp=Z,85nm,0.9s									
TIA	**Tai'an**	**19.90**	**271**	*e*P	**Pn**		**14 09 01.5**	**-3.1**		
TIA				AP	pP		14 09 10.0	-4.1		
TIA				PP			14 09 22.0			
TIA				S	**S**		**14 12 42.0**	**-1.8**		
TIA				AMB	AMB					
	comp=Z,93nm,1.0s									
TIA				LR	LR					
	comp=N,5µm,10.0s									
TIA				LR	LR					
	comp=E,4µm,11.0s									
NJ2	**Nanjing**	**19.95**	**258**	*e*P	**Pn**		**14 09 03.3**	**-1.9**		
NJ2				AP	pP		14 09 13.5	-1.2		
NJ2				XP	sP		14 09 19.8	-1.2		
NJ2				PP			14 09 23.0			
NJ2				S	**S**		**14 12 41.0**	**-3.9**		
NJ2				XS	sS		14 12 55.8	-7.7		
NJ2				AMB	AMB					
	comp=Z,80nm,1.1s									
NJ2				AMB	AMB					
	comp=Z,6µm,10.7s									
NJ2				LR	LR					
	comp=N,8µm,18.6s									
NJ2				LR	LR					
	comp=E,9µm,19.5s									
NJ2				LR	LR					
	comp=Z,8µm,18.6s									
BJI	**Beijing**	**20.04**	**282**	P	**P**		**14 09 03.5**	**-0.6**		
BJI				AMB	AMB					
	comp=Z,24nm,0.5s									
BJI				AMB	AMB					
	comp=Z,2µm,3.0s									
BJI				LR	LR					
	comp=N,15µm,16.1s,MS5.7									
BJI				LR	LR					
	comp=E,25µm,15.9s,MS5.7									
BJI				LR	LR					
	comp=Z,17µm,23.6s									
BJT	**Baijiatuau**	**20.05**	**282**	*e*P	**P**		**14 09 02.3**	**-1.8**		
BJT					pmax	pmax				
	comp=Z,89nm,0.6s									
BJT					MLR	MLR				
	comp=Z,24µm,19.0s									
BJT	**Baijiatuau**	**20.05**	**282**	*e*P	**P**		**14 09 02.3**	**-1.8**		
	comp=Z,89nm,0.6s									
BJT					LR	LR				
	comp=Z,24µm,19.0s,MS5.5									
NRGR	**Nerungri**	**21.45**	**333**	*i* P	**P**		**14 09 19.1**	**0.0**		
NRGR				S	**S**		**14 13 14.9**	**+1.0**		
NRGR				smax						
	comp=N,282nm,1.0s									
CLNS	**Chul'man**	**21.53**	**334**	*e*P	**P**		**14 09 19.4**	**-0.5**		
CLNS				*e*			14 09 38.6			
CLNS				*e*S	**S**		**14 13 14.6**	**-0.9**		
CLNS				*e*			14 13 20.5			
CLNS				*e*SS			14 13 45.5			
CLNS				*e*			14 20 42.7			
CLNS				pmax	pmax					
	comp=Z,86nm,1.3s,mb5.0									
CLNS				pmax	pmax					
	comp=E,34nm,1.4s									
CLNS				pmax	pmax					
	comp=N,102nm,1.5s									
CLNS				pmax	pmax					
	comp=N,70nm,1.0s									
CLNS				pmax	pmax					
	comp=Z,76nm,1.0s,mb5.1									
CLNS				pmax	pmax					
	comp=E,47nm,1.0s									
CLNS				smax						
	comp=E,3µm,11.0s									
CLNS				smax						
	comp=N,3µm,11.4s									
CLNS				MLR	MLR					
	comp=Z,23µm,17.0s,MS5.7									
CLNS				MLR	MLR					
	comp=N,20µm,16.0s,MS5.6									
CLNS				MLR	MLR					
	comp=E,4µm,14.0s,MS5.6									
TATO	**Taipei**	**22.01**	**238**	PFAKE			14 09 40.0	+15		
TATO				LR	LR					
	comp=Z,32µm,21.0s,MS5.7									
YHNB	**Yeheng**	**22.29**	**238**	P	**P**		**14 09 23.0**	**-5.4**		
	comp=Z,77nm,0.6s,mb5.3									
YHNB				LR	LR					
	comp=Z,21µm,20.0s,MS5.6									
NACB	**Ninganchiao**	**22.49**	**236**	*e*P	**P**		**14 09 28.8**	**-1.7**		
	comp=Z,75nm,0.8s,mb5.2									
SSLB	**Suanglung**	**23.18**	**237**	*e*P	**P**		**14 09 33.9**	**-3.8**		
	comp=Z,150nm,1.0s,mb5.4									
YULB	**Yu-li**	**23.23**	**235**	*e*P	**P**		**14 09 35.0**	**-3.4**		
	comp=Z,112nm,1.0s,mb5.2									
HHC	**Hu-ho-hao-te**	**23.49**	**285**	*e*P	**P**		**14 09 39.8**	**-0.8**		
HHC				AP			14 09 51.5			
HHC				XP	sP		14 09 57.0	-1.9		
HHC				PP			14 10 12.3			
HHC				PCP	PcP		14 13 28.0	+3.1		
HHC				*e*S	**S**		**14 13 44.0**	**-6.4**		
HHC				XS	sS		14 14 03.5	-8.3		
HHC				SS			14 14 32.0			
HHC				SCP	ScP		14 17 01.0	+2.2		
HHC				PCS	PcS		14 17 06.3	+2.1		
HHC				AMB	AMB					
	comp=Z,21nm,0.9s,mb4.6									
HHC				AMB	AMB					
	comp=Z,2µm,8.9s									
HHC				LR	LR					
	comp=E,38µm,15.2s									
HHC				LR	LR					
	comp=Z,46µm,16.1s,MS6.0									
TPUB	**Ta-pu**	**23.73**	**236**	*e*P	**P**		**14 09 39.7**	**-3.2**		
	comp=Z,201nm,0.9s,mb5.5									
TWG	**Pinlang**	**23.78**	**235**	*e*P	**P**		**14 09 43.3**	**-0.1**		
	comp=Z,305nm,0.9s,mb5.7									
CIT	**Chita**	**23.96**	**314**	*e*P	**P**		**14 09 43.9**	**-0.8**		
CIT				*e*			14 10 00.0			
CIT				*e*			14 10 11.9			
CIT				*e*			14 10 29.1			
CIT				pmax	pmax					
	comp=Z,938nm,1.8s,mb5.9									
QZH	**Quanzhou**	**24.00**	**242**	P	**P**		**14 09 41.0**	**-4.4**		
QZH				S	**S**		**14 13 59.0**	**0.0**		
QZH				AMB	AMB					
	comp=Z,4µm,8.8s									
QZH				LR	LR					
	comp=N,46µm,18.9s,MS6.0									
QZH				LR	LR					
	comp=E,25µm,16.9s,MS6.0									
QZH				LR	LR					
	comp=Z,38µm,19.3s,MS5.9									
WHN	**Wuhan**	**24.08**	**259**	⇓P	**P**		**14 09 45.0**	**-1.0**		
WHN				AP			14 09 56.5			
WHN				S	**S**		**14 13 53.3**	**-6.8**		
WHN				LR	LR					
	comp=N,12µm,17.7s,MS6.1									
WHN				LR	LR					
	comp=E,49µm,15.5s,MS6.1									
WHN				LR	LR					
	comp=Z,67µm,19.3s,MS6.1									
BTO	**Baotou**	**24.68**	**285**	*e*P	**P**		**14 09 50.8**	**-0.6**		
BTO				S	**S**		**14 14 03.0**	**-6.6**		
BTO				LR	LR					
	comp=N,4µm,15.3s,MS5.5									
BTO				LR	LR					
	comp=E,11µm,15.5s,MS5.5									
YAK	**Yakutsk**	**24.72**	**346**	*e*P	**P**		**14 09 50.4**	**-1.2**		
YAK				*e*PP			14 09 58.3			
YAK				*e*			14 10 32.8			
YAK				pmax	pmax					
	comp=Z,117nm,1.1s,mb5.3									
YAK				pmax	pmax					
	comp=E,25nm,1.2s									
YAK				pmax	pmax					
	comp=N,103nm,1.5s									
YAK				pmax	pmax					
	comp=Z,307nm,1.5s,mb5.6									
YAK				pmax	pmax					
	comp=N,352nm,1.6s									
YAK				pmax	pmax					
	comp=E,89nm,1.4s									
YAK				MLR	MLR					
	comp=Z,19µm,16.0s,MS5.7									
YAK				MLR	MLR					
	comp=N,21µm,18.0s,MS5.7									
YAK				MLR	MLR					
	comp=E,8µm,18.0s,MS5.7									
YAK	**Yakutsk**	**24.72**	**346**	*e*P	**P**		**14 09 49.5**	**-2.1**		
	comp=E,170nm,0.8s,mb5.6									
YAK				LR	LR					
	comp=Z,7µm,21.0s,MS5.2									
GUMO	**Guam**	**24.97**	**173**	LR	LR		14 17 47.7			
	comp=Z,14µm,21.9s,MS5.4,baz=182,slow=32									
GUMO	**Guam**	**24.97**	**173**	PFAKE			14 10 00.0	+5.8		
GUMO				LR	LR					
	comp=Z,15µm,21.0s,MS5.5									
SEY	**Seymchan**	**25.23**	**11**	⇑*e*P	**P**		**14 09 56.7**	**+0.5**		
FX1	**Attu Island--F**	**25.81**	**46**	P	**P**		**14 10 01.6**	**+0.1**		
	comp=Z,5.4nm,0.5s,mb4.3,baz=265,slow=20,SNR=4.1									
FX1				LR	LR		14 18 58.5			
	comp=Z,9µm,20.1s,MS5.3,baz=261,slow=34									
BOD	**Bodaibo**	**26.54**	**326**	*e*P	**P**		**14 10 07.4**	**-0.7**		
BOD				*e*	pP		14 10 23.1	+2.2		
BOD				pmax	pmax					
	comp=Z,74nm,1.0s,mb5.2									
ULN	**Ulaanbaatar**	**26.94**	**302**	P	**P**		**14 10 12.9**	**+1.1**		
	SNR=26									
ULN	**Ulaanbaatar**	**26.94**	**302**	⇑*e*P	**P**		**14 10 12.2**	**+0.4**		
ULN	**Ulaanbaatar**	**26.94**	**302**	*e*P	**P**		**14 10 11.4**	**-0.3**		
	comp=Z,46nm,0.9s,mb5.0									
ULN				LR	LR					
	comp=Z,21µm,19.0s,MS5.7									
XAN	**Xi'an**	**26.96**	**271**	P	**P**		**14 10 11.8**	**-0.3**		
XAN				AP	pP		14 10 23.8	-1.2		
XAN				XP	sP		14 10 29.0	-2.0		
XAN				PP			14 10 57.3			
XAN				S	**S**		**14 14 42.5**	**-3.3**		
XAN				XS	sS		14 15 02.0	-5.6		
XAN				SS			14 15 55.0			
XAN				AMB	AMB					
	comp=Z,23nm,0.7s,mb4.8									
XAN				AMB	AMB					
	comp=Z,2µm,11.5s									
XAN				LR	LR					
	comp=N,6µm,20.8s,MS5.6									
XAN				LR	LR					
	comp=E,14µm,17.9s,MS5.6									
XAN				LR	LR					
	comp=Z,24µm,18.3s,MS5.8									
SONM	**Songino Array**	**27.38**	**301**	P	**P**		**14 10 16.2**	**+0.5**		
	comp=Z,11nm,0.5s,mb4.6,baz=105,slow=7.2,SNR=63									
SONM				LR	LR		14 21 41.3			
	comp=Z,23µm,18.6s,MS5.8,baz=91,slow=37									
SONM	**Songino Array**	**27.38**	**301**	P	**P**		**14 10 16.2**	**+0.5**		
SONM				LR	LR		14 21 41.3			
GZH	**Guangzhou**	**28.89**	**246**	P	**P**		**14 10 24.5**	**-4.9**		
GZH				S	**S**		**14 15 10.5**	**-5.8**		
GZH				LR	LR					
	comp=N,20µm,16.1s,MS6.0									
GZH				LR	LR					
	comp=E,16µm,14.3s,MS6.0									
GZH				LR	LR					
	comp=Z,36µm,14.7s,MS6.1									
IRK	**Irkutsk**	**29.47**	**310**	*e*P	**P**		**14 10 33.2**	**-1.1**		
IRK				*e*			14 11 46.9			
IRK				pmax	pmax					
	comp=Z,105nm,1.5s,mb5.3									
TLY	**Talaya**	**29.73**	**309**	P	**P**		**14 10 37.7**	**+1.1**		
	comp=Z,395nm,0.9s,mb6.1,SNR=7.5									
TLY	**Talaya**	**29.73**	**309**	P	**P**		**14 10 37.7**	**+1.1**		
	SNR=14									
TLY	**Talaya**	**29.73**	**309**	*c* *i*P	**P**		**14 10 37.5**	**+0.9**		
TLY				*e*			14 11 46.9			
TLY				*e*S	**S**		**14 15 33.1**	**+4.0**		
TLY				pmax	pmax					
	comp=Z,83nm,1.0s,mb5.4									
TLY				MLR	MLR					
	comp=Z,30µm,18.0s,MS6.0									
TLY	**Talaya**	**29.73**	**309**	*e*P	**P**		**14 10 36.7**	**+0.1**		
	comp=Z,93nm,1.1s,mb5.4									
TLY				LR	LR					
	comp=Z,33µm,19.0s,MS6.0									
ZAK	**Zakamensk**	**29.74**	**306**	⇑*i*P	**P**		**14 10 30.8**	**-5.9**		
ZAK				pmax	pmax					
	comp=Z,69nm,1.1s,mb5.3									
LZH	**Lanzhou**	**30.32**	**277**	⇑P	**P**		**14 10 42.0**	**+0.1**		
LZH				AP	pP		14 10 53.3	-1.6		
LZH				XP	sP		14 10 58.0	-2.8		
LZH				PP	PP		14 11 41.0	-10		
LZH				S	**S**		**14 15 38.0**	**-0.5**		
LZH				XS	sS		14 15 59.3	-1.0		
LZH				SS	SS		14 17 18.3	-31		
LZH				AMB	AMB					
	comp=Z,134nm,1.0s,mb5.6									
LZH				AMB	AMB					
	comp=Z,889nm,6.0s									
LZH				LR	LR					
	comp=E,29µm,16.2s									
LZH				LR	LR					
	comp=Z,37µm,17.0s,MS6.1									
MOY	**Mondy**	**31.36**	**308**	*e*P	**P**		**14 10 51.6**	**+0.6**		
MOY				pmax	pmax					
	comp=Z,14nm,3.2s									
ADK	**Adak**	**31.57**	**51**	PFAKE			14 11 00.0	+7.2		
ADK				LR	LR					
	comp=Z,15µm,22.0s,MS5.6									
GYA	**Guiyang**	**31.96**	**258**	⇑*i*P	**P**		**14 10 55.3**	**-1.2**		
GYA				AP	pP		14 11 08.5	-1.0		
GYA				XP	sP		14 11 14.3	-1.1		
GYA				PP	PP		14 12 02.5	-6.9		
GYA				PPP			14 12 18.5			
GYA				PCP	PcP		14 13 45.5	-0.2		
GYA				S	**S**		**14 16 01.3**	**-3.2**		
GYA				XS	sS		14 16 25.5	-0.8		
GYA				SCP	ScP		14 17 24.0	-0.9		
GYA				PCS	PcS		14 17 30.3	-0.3		
GYA				SS	SS		14 17 55.0	-28		
GYA				SSS			14 18 20.0			
GYA				SCS	ScS		14 21 20.3	-3.3		
GYA				AMB	AMB					
	comp=Z,90nm,1.0s,mb5.5									
GYA				AMB	AMB					
	comp=Z,9µm,10.2s									
GYA				LR	LR					
	comp=N,8µm,17.5s,MS5.8									
GYA				LR	LR					
	comp=E,14µm,15.7s,MS5.8									
GYA				LR	LR					
	comp=Z,16µm,18.2s,MS5.8									
CD2	**Chengdu**	**32.17**	**268**	P	**P**		**14 10 57.0**	**-1.3**		
CD2				AP	pP		14 11 11.3	0.0		
CD2				XP	sP		14 11 15.5	-1.7		
CD2				PCP	PcP		14 13 48.0	+1.8		
CD2				S	**S**		**14 16 04.0**	**-3.6**		
CD2				XS	sS		14 16 28.3	-1.2		
CD2				AMB	AMB					
	comp=Z,110nm,1.0s,mb5.6									
CD2				AMB	AMB					
	comp=Z,3µm,10.7s									
CD2				LR	LR					
	comp=N,20µm,17.8s									
CD2				LR	LR					
	comp=Z,23µm,16.7s,MS5.9									
BILL	**Bilibino**	**32.46**	**17**	*c* *i*P	**P**		**14 10 59.8**	**-0.6**		
BILL				*i*			14 11 17.9			
BILL				*i* S	**S**		**14 16 16.0**	**+4.7**		
BILL				pmax	pmax					
	comp=Z,60nm,1.2s,mb5.3									
BILL				MLR	MLR					
	comp=Z,8µm,22.0s,MS5.4									
BILL	**Bilibino**	**32.46**	**17**	*e*P	**P**		**14 10 59.2**	**-1.2**		
	comp=Z,60nm,1.0s,mb5.4									
BILL				LR	LR					
	comp=Z,7µm,20.0s,MS5.3									
GTA	**Gaotai**	**32.60**	**285**	⇑P	**P**		**14 11 02.8**	**+0.8**		
GTA				AP	pP		14 11 14.8	-0.2		
GTA				XP	sP		14 11 20.3	-0.7		
GTA				PP	PP		14 12 13.3	-3.0		
GTA				PPP			14 12 29.3			
GTA				PCP	PcP		14 13 47.3	0.0		
GTA				S	**S**		**14 16 15.5**	**+1.3**		
GTA				XS	sS		14 16 36.0	-0.1		
GTA				SCP	ScP		14 17 27.0	+0.1		
GTA				AMB	AMB					
	comp=Z,13nm,1.2s,mb4.7									
GTA				AMB	AMB					
	comp=Z,2µm,8.1s									
GTA				LR	LR					
	comp=N,14µm,19.2s,MS6.1									
GTA				LR	LR					
	comp=E,37µm,18.9s,MS6.1									
GTA				LR	LR					
	comp=Z,52µm,18.6s,MS6.3									
TIXI	**Tiksi**	**33.86**	**353**	⇑*e*P	**P**		**14 11 11.1**	**-1.5**		
TIXI				pmax	pmax					
	comp=Z,38nm,1.3s,mb5.2									
TIXI				MLR	MLR					
	comp=Z,19µm,21.0s,MS5.8									
TIXI	**Tiksi**	**33.86**	**353**	⇑*e*P	**P**		**14 11 11.2**	**-1.4**		
TIXI				LR	LR					
	comp=Z,17µm,19.0s,MS5.8									
QIZ	**Qiongzhong**	**33.99**	**244**	P	**P**		**14 11 17.0**	**+2.7**		
QIZ				AP	pP		14 11 29.8	+2.5		
QIZ				XP	sP		14 11 35.3	+2.1		
QIZ				PPP			14 12 51.0			
QIZ				S	**S**		**14 16 38.5**	**+2.5**		
QIZ				XS	sS		14 16 58.3	+0.3		
QIZ				AMB	AMB					
	comp=Z,30nm,1.1s,mb5.1									
QIZ				AMB	AMB					
	comp=Z,1µm,9.6s									
QIZ				LR	LR					
	comp=N,12µm,19.3s									
QIZ				LR	LR					
	comp=Z,15µm,18.1s,MS5.8									
QIZ	**Qiongzhong**	**33.99**	**244**	PFAKE			14 11 30.0	+16		
QIZ				LR	LR					
	comp=Z,15µm,19.0s,MS5.7									
DAV	**Davao City (W)**	**34.67**	**210**	LR	LR		14 24 53.0			
	comp=Z,4µm,18.8s,MS5.2,baz=54,slow=35									
DAV	**Davao City (W)**	**34.67**	**210**	PFAKE			14 11 30.0	+10		
DAV				LR	LR					
	comp=Z,8µm,22.0s,MS5.4									
MIDW	**Midway**	**35.20**	**95**	PFAKE			14 11 40.0	+15		
MIDW				LR	LR					
	comp=Z,20µm,22.0s,MS5.8									
KMI	**Kunming**	**35.68**	**260**	P	**P**		**14 11 28.0**	**-0.8**		
KMI				XP	sP		14 11 46.0	-1.8		
KMI				PP	PP		14 12 49.3	-1.2		
KMI				PPP			14 13 08.8			
KMI				S	**S**		**14 16 59.5**	**-2.4**		
KMI				XS	sS		14 17 21.0	-2.9		
KMI				SS	SS		14 19 20.0	-19		
KMI				SSS			14 19 49.0			
KMI				AMB	AMB					
	comp=Z,104nm,0.9s,mb5.8									
KMI				AMB	AMB					
	comp=Z,1µm,10.0s									
KMI				LR	LR					
	comp=N,17µm,17.8s,MS6.0									
KMI				LR	LR					
	comp=E,12µm,15.9s,MS6.0									
KMI				LR	LR					
	comp=Z,20µm,20.4s,MS5.9									
KDM	**Kudat**	**38.84**	**222**	⇓P	**P**		**14 11 55.3**	**-0.4**		
TNA	**Tin City**	**39.32**	**30**	*e*P	**P**		**14 11 59.3**	**+0.2**		
	comp=Z,67nm,0.9s,mb5.4									
MYLDM	**Lahad Datu**	**39.47**	**219**	⇓P	**P**		**14 12 02.6**	**+1.6**		
SDKM	**Sandakan**	**39.73**	**221**	⇓P	**P**		**14 12 03.7**	**+0.5**		
KKM	**Kota Kinabalu**	**39.90**	**222**	*e*P	**P**		**14 12 05.8**	**+1.3**		
	comp=Z,78nm,1.0s,mb5.4									
KKM				LR	LR					
	comp=Z,4µm,19.0s,MS5.3									
KKM	**Kota Kinabalu**	**39.90**	**222**	⇓P	**P**		**14 12 07.3**	**+2.8**		
UBT	**Ubonrachathani**	**39.94**	**245**	P	**P**		**14 12 09.5**	**+4.7**		
TSM	**Tawau**	**40.55**	**219**	⇓P	**P**		**14 12 10.9**	**+1.0**		
WMQ	**Urumqi**	**40.61**	**295**	P	**P**		**14 12 11.0**	**+0.9**		
WMQ				AP	pP		14 12 24.5	+1.2		
WMQ				PP	PP		14 13 49.0	+4.8		
WMQ				PCP	PcP		14 14 11.0	-0.3		
WMQ				S	**S**		**14 18 17.0**	**+1.0**		
WMQ				XS	sS		14 18 38.8	+0.5		
WMQ				SS	SS		14 21 13.5	-3.8		
WMQ				SCS	ScS		14 22 10.0	-0.9		
WMQ				AMB	AMB					
	comp=Z,96nm,1.3s,mb5.3									
WMQ				LR	LR					
	comp=N,6µm,21.0s									
WMQ				LR

ZAA0 Zalesovo Array 41.27 311 *e*P **P** **14 12 14.7 -0.7**
ZALV Zalesovo Beam 41.27 311 P **P** **14 12 15.4 0.0**
comp=Z,35nm,0.5s,mb5.2,baz=86,slow=8.0,SNR=94
ZALV LR LR 14 30 16.2
comp=Z,19μm,18.5s,MS6.0,baz=82,slow=37
CHG Chiang Mai 42.13 255 ⇑P **P** **14 12 22.3 -0.6**
comp=Z,61nm,0.9s,mb5.2
CHTO Chiang Mai 42.13 255 P **P** **14 12 22.7 -0.2**
SNR=26
CHTO Chiang Mai 42.13 255 *e*P **P** **14 12 22.1 -0.8**
CHTO pmax pmax
comp=Z,40nm,0.7s,mb5.2
CHTO MLR MLR
comp=Z,6μm,19.0s,MS5.5
CHTO Chiang Mai 42.13 255 *e*P **P** **14 12 22.1 -0.7**
comp=Z,40nm,0.7s,mb5.2
CHTO LR LR
comp=Z,6μm,19.0s,MS5.5
NVS Novosibirsk 42.16 313 ⇑*i*P **P** **14 12 21.8 -0.9**
NVS *e*S **S** **14 18 40.2 +1.4**
NVS pmax pmax
comp=E,107nm,1.2s
NVS pmax pmax
comp=Z,112nm,1.2s,mb5.4
NVS smax
comp=N,40nm,1.6s
NVS smax
comp=E,26nm,1.4s
CM31 Chiang Mai Arr 42.35 254 PFAKE 14 12 40.0 +15
CM31 LR LR
comp=Z,6μm,19.0s,MS5.5
CMAR Chiang Mai Arr 42.35 254 P **P** **14 12 24.6 0.0**
comp=Z,10.0nm,0.8s,mb4.5,baz=46,slow=7.2,SNR=57
CMAR LR LR 14 32 08.5
comp=Z,7μm,18.2s,MS5.6,baz=61,slow=39
LSA Lhasa 42.56 274 P **P** **14 12 28.3 +2.0**
LSA XP sP 14 12 45.0 -0.4
LSA XS sS 14 19 13.0 +5.3
LSA AMB AMB
comp=Z,2μm,11.5s
LSA LR LR
comp=E,12μm,24.3s
LSA LR LR
comp=Z,20μm,24.3s,MS5.9
LSA Lhasa 42.56 274 *e*P **P** **14 12 27.4 +1.1**
LSA pmax pmax
comp=Z,66nm,0.8s,mb5.4
LSA MLR MLR
comp=Z,20μm,22.0s,MS6.0
LSA Lhasa 42.56 274 *e*P **P** **14 12 27.4 +1.2**
comp=Z,66nm,0.8s,mb5.4
LSA LR LR
comp=Z,20μm,22.0s,MS6.0
IMP Imphal 42.70 266 *e*P **P** **14 12 28.0 +0.6**
IMP *ex* x 14 18 59.0
NST Nakhon Sawan 43.19 250 P **P** **14 12 31.2 -0.3**
MK31 Makanchi Array 43.74 301 *i*P **P** **14 12 35.5 -0.1**
MK31 pmax pmax
comp=Z,36nm,0.8s,mb5.2
MK31 Makanchi Array 43.74 301 *e*P **P** **14 12 35.2 -0.4**
MKAR Makanchi Array 43.74 301 P **P** **14 12 35.4 -0.2**
comp=Z,22nm,0.7s,mb5.0,baz=80,slow=12,SNR=65
MKAR LR LR 14 31 30.3
comp=Z,10μm,19.9s,MS5.7,baz=83,slow=37
SHL Shillong 43.91 268 *e*P **P** **14 12 37.0 -0.2**
SHL *ex* x 14 19 17.0
SBUM Sibu 45.06 225 ⇓P **P** **14 12 47.5 +1.1**
KURK Kurchatov 45.40 307 P **P** **14 12 48.7 0.0**
comp=Z,2μm,0.6s,SNR=93
KURK Kurchatov 45.40 307 P **P** **14 12 48.7 0.0**
SNR=73
KURK Kurchatov 45.40 307 P **P** **14 12 48.5 -0.2**
comp=Z,64nm,0.6s,mb5.7,baz=81,slow=8.1,SNR=94
KURK Kurchatov 45.40 307 P **P** **14 12 48.5 -0.2**
KURK pmax pmax
comp=Z,64nm,0.6s,mb5.6
KURK Kurchatov 45.40 307 *e*P **P** **14 12 48.3 -0.4**
comp=Z,192nm,0.8s,mb6.0
KURK LR LR
comp=Z,17μm,19.0s,MS6.0
NNT Nongplab 45.50 247 P **P** **14 12 51.2 +1.3**
CHUM Lake Minchumin 45.63 34 *e*P **P** **14 12 51.0 +0.7**
comp=Z,38nm,0.5s,mb5.6
KDAK Kodiak Island 45.67 43 P **P** **14 12 51.5 +0.7**
comp=Z,22nm,0.7s,mb5.2,baz=17,slow=3.1,SNR=13
KDAK Kodiak Island 45.67 43 *e*P **P** **14 12 51.4 +0.6**
KDAK pmax pmax
comp=Z,215nm,0.6s,mb6.2
KDAK MLR MLR
comp=Z,13μm,19.0s,MS5.9
KDAK Kodiak Island 45.67 43 *e*P **P** **14 12 51.4 +0.6**
comp=Z,215nm,0.6s,mb6.2
KDAK LR LR
comp=Z,13μm,19.0s,MS5.9
PPLA Purkeypile 45.67 36 *e*P **P** **14 12 52.0 +1.3**
comp=Z,60nm,0.5s,mb5.8
BPAW Bear Paw Mtn. 46.22 34 *e*P **P** **14 12 55.8 +0.8**
comp=Z,50nm,1.5s,mb5.2
KTH Kantishna Hill 46.24 35 *e*P **P** **14 12 56.1 +0.9**
comp=Z,31nm,0.5s,mb5.5
TAPN Taplejung 46.33 273 *e*P **P** **14 12 56.7 +0.4**
comp=Z,256nm,1.1s,mb6.0
TRF Thorofare Moun 46.53 35 *e*P **P** **14 12 58.8 +1.4**
comp=Z,46nm,0.3s,mb5.9
TARA Tarawa 46.59 135 PFAKE 14 13 10.0 +12
TARA LR LR
comp=Z,23μm,20.0s,MS6.1
COLD Coldfoot 46.62 30 *e*P **P** **14 12 58.6 +0.5**
comp=Z,23nm,1.0s,mb5.1
FIB Fire Island 46.67 38 P **P** **14 12 58.2 -0.3**
ODAN Odare 46.81 272 *e*P **P** **14 13 00.4 +0.3**
comp=Z,280nm,0.8s,mb6.2
KSM Kuching 46.93 226 *e*P **P** **14 13 01.2 +0.1**
comp=Z,50nm,0.8s,mb5.5
KSM Kuching 46.93 226 ⇑P **P** **14 13 01.9 +0.8**
MCK McKinley 47.13 35 P **P** **14 13 03.5 +1.4**
MCK pmax pmax
comp=Z,77nm,0.6s,mb5.8
MCK McKinley 47.13 35 *e*P **P** **14 13 02.2 +0.1**
comp=Z,77nm,0.6s,mb5.8
PMR Palmer 47.15 37 P **P** **14 13 00.7 -1.6**
JIRN Jiri 47.37 274 *e*P **P** **14 13 05.0 +0.5**
comp=Z,138nm,0.5s,mb6.1
RAMN Ramite 47.38 273 *e*P **P** **14 13 04.8 +0.2**
comp=Z,358nm,0.8s,mb6.3
GUN Gumba 47.49 275 *e*P **P** **14 13 05.9 +0.4**
comp=Z,537nm,0.9s,mb6.5
COLA College 47.56 33 *d i*P **P** **14 13 05.6 +0.1**
COLA College 47.56 33 *e*P **P** **14 13 05.3 -0.1**
comp=Z,48nm,0.6s,mb5.7
COLA LR LR
comp=Z,3μm,19.0s,MS5.3
PMG Port Moresby 47.93 173 P **P** **14 13 08.7 -0.1**
comp=Z,4.6nm,0.5s,mb4.7,baz=187,slow=6.7,SNR=4.8
PMG LR LR 14 31 08.9
comp=Z,4μm,21.6s,MS5.4,baz=352,slow=33
PMG Port Moresby 47.93 173 ⇑*e*P **P** **14 13 09.9 +1.1**
PMG pmax pmax
comp=Z,21nm,1.3s
PMG Port Moresby 47.93 173 *e*P **P** **14 13 08.8 0.0**
comp=Z,129nm,1.4s,mb5.8
PMG LR LR
comp=Z,4μm,22.0s,MS5.4
KAPI Kappang 47.99 211 P **P** **14 13 09.2 -0.2**
comp=Z,53nm,1.1s,mb5.5,baz=1.8,slow=3.6,SNR=7.9
KAPI LR LR 14 31 08.3
comp=Z,2μm,21.0s,MS5.0,baz=22,slow=33
KAPI Kappang 47.99 211 *e*P **P** **14 13 10.0 +0.7**
comp=Z,118nm,0.9s,mb5.9
KAPI LR LR
comp=Z,2μm,21.0s,MS5.1
KKN Kakani 48.02 275 *e*P **P** **14 13 09.8 +0.3**
comp=Z,338nm,0.9s,mb6.3
KKN Kakani 48.02 275 *e*P **P** **14 13 09.8 +0.3**
KKN pmax pmax
comp=Z,339nm,0.9s,mb6.4
PKI Pulchoki 48.02 274 *e*P **P** **14 13 09.4 -0.1**
comp=Z,150nm,0.8s,mb6.1
PKI Pulchoki 48.02 274 *e*P **P** **14 13 10.0 +0.5**
PKI pmax pmax
comp=Z,161nm,1.0s,mb6.0
PKI Pulchoki 48.02 274 *e*P **P** **14 13 10.0 +0.5**
comp=Z,161nm,1.0s,mb6.0
PKIN Phulchoki 48.03 274 *e*P **P** **14 13 10.0 +0.4**
comp=Z,161nm,1.0s,mb6.0
DMN Daman 48.24 275 *e*P **P** **14 13 11.3 +0.1**
comp=Z,69nm,0.6s,mb5.9

CAL Calcutta 48.25 267 *e*P **P** **14 13 13.2 +1.8**
CAL *e*S **S** **14 20 11.6 +4.2**
AAA Alma-Ata 48.30 297 *i*P **P** **14 13 14.5 +3.0**
AAA pmax pmax
comp=Z,2μm,4.3s
AAA MLR MLR
comp=Z,11μm,18.0s,MS5.9
AAA Alma-Ata 48.30 297 *i*P **P** **14 13 14.4 +2.9**
KTGM Kuala Trenggan 48.30 237 ⇓P **P** **14 13 13.2 +1.4**
GKN Gorkha 48.42 275 *e*P **P** **14 13 12.6 0.0**
comp=Z,296nm,1.0s,mb6.3
SNG Songkhla 48.64 241 P **P** **14 13 15.0 +0.6**
comp=Z,160nm,0.8s,mb6.1
PAX Paxson 48.74 35 *e*P **P** **14 13 16.0 +1.5**
PAX pmax pmax
comp=Z,29nm,0.8s,mb5.4
PAX Paxson 48.74 35 *e*P **P** **14 13 15.9 +1.4**
comp=Z,29nm,0.8s,mb5.3
DANN Dangsing 48.94 276 *e*P **P** **14 13 17.2 +0.6**
comp=Z,373nm,0.6s,mb6.6
KOLN Koldanda 49.34 276 *e*P **P** **14 13 19.8 +0.1**
comp=Z,249nm,1.1s,mb6.2
TKM2 Tokmak 2 49.35 297 P **P** **14 13 20.2 +0.7**
TKM2 pmax pmax
comp=Z,74nm,0.8s,mb5.8
TKM2 Tokmak 2 49.35 297 P **P** **14 13 20.3 +0.7**
SNR=39
TKM2 Tokmak 2 49.35 297 *e*P **P** **14 13 19.8 +0.2**
comp=Z,74nm,0.8s,mb5.8
TKM2 LR LR
comp=Z,6μm,20.0s,MS5.6
BOK Bokaro 49.51 270 *e*P **P** **14 13 19.6 -1.4**
BOK AMb AMB 14 13 27.6
comp=Z,66nm,1.0s,mb5.6
MENT Mentasta 49.54 35 *e*P **P** **14 13 20.5 -0.1**
KZA Kyzart 49.87 297 P **P** **14 13 26.0 +2.5**
SNR=11
KBK Karagaybulak 49.89 297 P **P** **14 13 23.8 +0.1**
SNR=36
CHMS Chumysh 49.91 298 P **P** **14 13 25.4 +1.6**
SNR=6.6
BVA0 Borovoye Array 49.93 311 P **P** **14 13 24.3 +0.6**
BVA0 pmax pmax
comp=Z,21nm,1.2s,mb5.0
BVAR Borovoye Array 49.93 311 P **P** **14 13 23.5 -0.3**
comp=Z,9.7nm,0.5s,mb5.1,baz=77,slow=7.6,SNR=47
BVAR PcP PcP 14 14 43.8 +0.4
comp=Z,17nm,0.5s,baz=51,slow=2.3,SNR=4.3
BRVK Borovoye 49.98 312 P **P** **14 13 24.6 +0.4**
comp=Z,273nm,0.9s,mb6.3,SNR=14
BRVK Borovoye 49.98 312 P **P** **14 13 24.4 +0.3**
SNR=26
BRVK Borovoye 49.98 312 P **P** **14 13 24.1 -0.1**
BRVK pmax pmax
comp=Z,74nm,0.9s,mb5.7
BRVK Borovoye 49.98 312 *e*P **P** **14 13 23.8 -0.4**
comp=Z,48nm,0.8s,mb5.6
BRVK LR LR
comp=Z,18μm,19.0s,MS6.1
KULM Kulim 49.98 239 *e*P **P** **14 13 24.2 -0.5**
comp=Z,34nm,0.8s,mb5.4
KULM Kulim 49.98 239 ⇑P **P** **14 13 25.5 +0.8**
USP Ospenovka 50.00 298 P **P** **14 13 24.5 0.0**
SNR=15
FRU Bishkek 50.06 298 *e*P **P** **14 13 26.0 +1.1**
FRU *e* 14 14 40.0
FRU pmax pmax
comp=Z,110nm,1.6s,mb5.6
FRU MLR MLR
comp=Z,10μm,18.0s,MS5.9
AAK Ala-Archa 50.21 297 P **P** **14 13 27.8 +1.8**
SNR=11
KSH Kashi 50.24 293 P **P** **14 13 28.8 +2.4**
KSH AP pP 14 13 38.5 -1.4
KSH XP sP 14 13 42.5 -3.2
KSH PP PP 14 15 24.0 +2.2
KSH PCS PcS 14 18 42.8 +0.9
KSH S **S** **14 20 37.5 +2.5**
KSH XS sS 14 20 54.5 -3.3
KSH SS SS 14 24 08.5 -0.1
KSH AMB AMB
comp=Z,267nm,0.8s,mb6.3
KSH AMB AMB
comp=Z,4μm,8.4s
KSH LR LR
comp=N,28μm,14.3s,MS6.7
KSH LR LR
comp=E,52μm,16.0s,MS6.7
KSH LR LR
comp=Z,46μm,17.8s,MS6.5
IPM Ipoh 50.33 238 P **P** **14 13 27.7 +0.4**
UCH Uchtor 50.33 297 *e*P **P** **14 13 27.5 +0.5**
comp=Z,18nm,1.0s,mb5.0
UCH LR LR
comp=Z,6μm,21.0s,MS5.6
EGAK Eagle 50.42 33 *e*P **P** **14 13 25.7 -1.7**
comp=Z,27nm,0.8s,mb5.3
EGAK LR LR
comp=Z,4μm,20.0s,MS5.4
MYKOM **Kota Tinggi 50.53 233** ⇓P **P** **14 13 31.0 +2.2**
HNR Honiara 50.56 157 P **P** **14 13 27.7 -1.2**
comp=Z,13nm,0.7s,mb5.0,baz=223,slow=20,SNR=1.8
HNR LR LR 14 33 30.2
comp=Z,16μm,20.7s,MS6.0,baz=324,slow=34
KGM Kluang 50.70 234 ⇑P **P** **14 13 30.9 +0.8**
EKS2 Erkin-Say 50.70 298 P **P** **14 13 29.7 -0.1**
SNR=11
EKS2 Erkin-Say 50.70 298 *e*P **P** **14 13 29.2 -0.5**
comp=Z,26nm,0.9s,mb5.2
EKS2 LR LR
comp=Z,11μm,19.0s,MS5.9
FRIM Kepong 50.86 237 ⇑P **P** **14 13 32.7 +1.4**
AML Almayashu 50.94 297 P **P** **14 13 33.5 +1.9**
SNR=24
AML Almayashu 50.94 297 *e*P **P** **14 13 32.2 +0.7**
comp=Z,89nm,1.0s,mb5.7
AML LR LR
comp=Z,7μm,20.0s,MS5.7
DAWY Dawson 51.29 34 *e*P **P** **14 13 33.9 +0.1**
COEN Coen 52.22 179 *e*P **P** **14 13 40.7 -0.6**
comp=Z,62nm,0.9s,mb5.5
DDI Dehra Dun 52.45 282 *ex* x 14 15 43.0
SDNR Sundarnagar 52.75 283 *e*P **P** **14 13 46.0 +0.8**
SMLA Simla 52.77 283 *i*P **P** **14 13 44.9 -0.4**
SMLA *ex* x 14 13 53.2
comp=Z,293nm,0.4s
SMLA *i*S **S** **14 21 12.3 +2.3**
KK31 Karatay Array 52.80 299 *i*P **P** **14 13 45.1 -0.3**
PSI Prapat 52.97 239 P **P** **14 13 46.6 -0.4**
comp=Z,24nm,0.9s,mb5.1,baz=18,slow=5.0,SNR=20
PSI LR LR 14 37 08.2
comp=Z,10μm,20.1s,MS5.8,baz=42,slow=37
DLH Dalhousie 53.05 285 *ex* P **P** **14 13 50.0 +2.6**
DLH *ex* x 14 14 03.0
BHK Bhakra 53.21 284 *ex* x 14 15 01.3
THN Thein Dam 53.29 285 *e*P **P** **14 13 48.1 -1.1**
KIP Kipapa 53.78 90 PFAKE 14 14 00.0 +7.1
KIP LR LR
comp=Z,8μm,19.0s,MS5.8
SVE Sverdlovsk 54.35 316 ⇑*e*P **P** **14 13 57.1 +0.6**
SVE *e*S **S** **14 21 29.7 -0.9**
SVE pmax pmax
comp=Z,130nm,1.1s,mb5.8
SVE MLR MLR
comp=Z,30μm,17.0s,MS6.4
JBP Jabalpur 54.46 273 *e*P **P** **14 13 58.3 +0.4**
JBP *ex* x 14 21 52.6
VIS Vishakhapatnam 54.81 265 *e*P **P** **14 14 00.7 +0.2**
VIS AMb AMB 14 14 08.9
comp=Z,74nm,1.7s,mb5.4
VIS *i*S **S** **14 21 38.7 +0.8**
SOKR Solikamsk 55.44 322 *d i*P **P** **14 14 06.6 +2.2**
SOKR S **S** **14 21 52.5 +7.3**
SOKR pmax pmax
comp=Z,70nm,1.5s,mb5.5
SOKR MLR MLR
comp=Z,7μm,17.0s,MS5.8
ARU Arti 55.56 318 P **P** **14 14 05.2 -0.1**
comp=Z,496nm,0.8s,mb6.6,SNR=26
ARU Arti 55.56 318 *e*P **P** **14 14 04.7 -0.6**
ARU pmax pmax
comp=Z,68nm,0.8s,mb5.7
ARU MLR MLR
comp=Z,31μm,19.0s,MS6.4
ARU Arti 55.56 318 *e*P **P** **14 14 04.7 -0.6**
comp=Z,68nm,0.8s,mb5.7
ARU LR LR
comp=Z,31μm,19.0s,MS6.4
NGP Nagpur 56.27 271 *e*P **P** **14 14 09.9 -0.9**
NGP *ex* x 14 14 16.9
comp=Z,116nm,1.6s
NGP *e*S **S** **14 21 56.5 -0.7**
BHPL Bhopal 56.43 274 *e*P **P** **14 14 12.0 0.0**
BHPL AMb AMB 14 14 20.8
comp=Z,55nm,1.6s,mb5.3
POHA Pohakuloa 56.63 90 PFAKE 14 14 30.0 +17
POHA LR LR
comp=Z,5μm,20.0s,MS5.6
WRAK Wrangell Islan 56.71 42 PFAKE 14 14 30.0 +17
WRAK LR LR
comp=Z,5μm,22.0s,MS5.6
AJM Ajmer 56.93 279 *e*P **P** **14 14 14.5 -1.1**
AJM AMb AMB 14 14 23.4
comp=Z,103nm,1.4s,mb5.7
KBL Kabul 57.33 290 P **P** **14 14 18.0 -0.2**
KBL pmax pmax
comp=Z,63nm,0.9s,mb5.7
KBL Kabul 57.33 290 *e*P **P** **14 14 17.3 -0.9**
comp=Z,63nm,0.9s,mb5.6
AB31 Akbulak array 57.34 310 P **P** **14 14 17.1 -1.0**
AB31 pmax pmax
comp=Z,54nm,0.8s,mb5.6
AKTK Aktyubinsk 58.03 311 P **P** **14 14 22.7 -0.2**
AKTO Aktyubinsk 58.03 311 P **P** **14 14 22.7 -0.2**
comp=Z,34nm,0.8s,mb5.4,baz=78,slow=7.4,SNR=51
AKTO Aktyubinsk 58.03 311 *i*P **P** **14 14 23.4 +0.5**
AKTO pmax pmax
comp=Z,13nm,1.1s,mb4.9
AKL Akola 58.10 272 *e*P **P** **14 14 24.4 +0.6**
AKL AMb AMB 14 14 32.1
comp=Z,103nm,0.6s,mb6.1
FUNA Funafuti 58.22 135 PFAKE 14 14 40.0 +15
FUNA LR LR
comp=Z,15μm,20.0s,MS6.1
FITZ Fitzroy Crossi 58.39 198 *e*P **P** **14 14 25.1 -0.6**
comp=Z,82nm,1.2s,mb5.6
FITZ *e*S **S** **14 22 25.0 +0.1**
FITZ Fitzroy Crossi 58.39 198 *e*P **P** **14 14 24.9 -0.7**
comp=Z,99nm,1.2s,mb5.7
CTA Charters Tower 58.45 175 P **P** **14 14 25.6 -0.4**
comp=Z,7.8nm,0.8s,mb4.8,baz=8.3,slow=5.0,SNR=8.1
CTA LR LR 14 36 40.6
comp=Z,2μm,20.3s,MS5.2,baz=90,slow=33
CTA Charters Tower 58.45 175 *e*P **P** **14 14 28.4 +2.4**
comp=Z,10nm,0.9s,mb4.9
CTAO Charters Tower 58.45 175 PFAKE 14 14 40.0 +14
CTAO LR LR
comp=Z,3μm,22.0s,MS5.3
ALE Alert 58.59 4 P **P** **14 14 26.0 -0.4**
comp=Z,184nm,1.0s,mb6.1,SNR=22
WRAB Tennant Creek 58.60 188 *c i*P **P** **14 14 25.2 -1.9**
WRAB Tennant Creek 58.60 188 *e*P **P** **14 14 24.7 -2.3**
comp=Z,94nm,0.8s,mb5.9
WRAB LR LR
comp=Z,3μm,20.0s,MS5.4
WB2 Warramunga Arr 58.61 188 *e*P **P** **14 14 25.0 -2.1**
WB2 *e*S **S** **14 22 24.5 -3.1**
WB2 Warramunga Arr 58.61 188 *e*P **P** **14 14 25.1 -2.1**
WRA Warramunga Arr 58.61 188 P **P** **14 14 25.3 -1.9**
comp=Z,60nm,0.8s,mb5.7,baz=6.0,slow=6.9,SNR=151
WRA LR LR 14 39 49.3
comp=Z,2μm,19.9s,MS5.3,baz=15,slow=36
HYB Hyderabad 58.73 268 *e*P **P** **14 14 28.5 +0.3**
HYB *e*S **S** **14 22 32.0 +2.4**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.5
HYB Hyderabad 58.73 268 *i*P **P** **14 14 28.5 +0.3**
comp=Z,50nm,1.0s,mb5.5
HYB *e*PP PP 14 16 42.0 +3.6
HYB *e*S **S** **14 22 32.0 +2.4**
HYB LR LR 14 42 00.0
comp=Z,7.1nm,20.0s
HYB Hyderabad 58.73 268 *e*P **P** **14 14 28.5 +0.3**
comp=Z,50nm,1.0s,mb5.5
HYB *e*S **S** **14 22 32.0 +2.4**
HYB *e* 14 42 00.0
SPITS Spitsbergen Ar 59.15 349 P **P** **14 14 28.1 -2.1**
comp=Z,22nm,1.0s,mb5.2,baz=296,slow=8.3,SNR=5.2
KBS Kingsbay 59.26 350 AMS AMS 14 42 37.0
comp=Z,4μm,21.8s,MS5.6
KBS Kingsbay 59.26 350 PFAKE 14 14 40.0 +8.9
KBS LR LR
comp=Z,5μm,19.0s,MS5.7
LATR Latur 59.73 270 *e*P **P** **14 14 35.0 -0.1**
LVZ Lovozero 60.94 336 ⇑*e*P **P** **14 14 43.1 +0.4**
LVZ LR LR
comp=Z,108μm,21.0s,MS7.0
QUE Quetta 60.96 287 *e*P **P** **14 14 52.0 +8.6**
RES Resolute Bay 61.03 15 P **P** **14 14 42.7 -0.5**
comp=Z,17nm,0.8s,mb5.2,baz=318,slow=6.8,SNR=35
RES Resolute Bay 61.03 15 P **P** **14 14 42.7 -0.5**
RES pmax pmax
comp=Z,17nm,0.8s,mb5.2
RES Resolute Bay 61.03 15 *e*P **P** **14 14 42.1 -1.1**
comp=Z,41nm,1.0s,mb5.5
BJO Bjornoya 61.10 345 AMS AMS 14 45 19.0
comp=Z,8μm,17.2s,MS6.0
APA Apatity 61.52 336 ⇑*i*P **P** **14 14 46.0 -0.6**
APA *i* 14 15 30.0
APA *e*S **S** **14 23 00.0 -4.1**
APA *i*PS 14 23 24.0
APA pmax pmax
comp=Z,60nm,1.0s,mb5.7
APA MLR MLR
comp=Z,13μm,22.0s,MS6.0
POO Poona 61.79 272 *e*P **P** **14 14 47.9 -1.2**
POO AMb AMB 14 14 56.8
comp=Z,100nm,1.9s,mb5.6
KEV Kevo 62.21 339 *e*P **P** **14 14 52.0 +0.8**
comp=Z,15nm,0.7s,mb5.2
KEV LR LR
comp=Z,9μm,22.0s,MS5.9
YKA Yellowknife Ar 62.28 31 P **P** **14 14 50.9 -0.8**
comp=Z,5.9nm,0.6s,mb4.9,baz=301,slow=6.1,SNR=100
YKA PcP PcP 14 15 29.0 -2.1
comp=Z,7.8nm,0.8s,baz=295,slow=5.8,SNR=4.2
YKA LR LR 14 47 14.1
comp=Z,213nm,18.1s,MS4.3,baz=290,slow=41
YKA Yellowknife Ar 62.28 31 P **P** **14 14 50.9 -0.8**
YKA 14 15 29.0
YKA Yellowknife Ar 62.28 31 P **P** **14 14 50.9 -0.8**
YKA PcP PcP 14 15 29.0 -2.1
YKA LR LR 14 47 14.2
ASAR Alice Springs 62.34 188 P **P** **14 14 51.1 -1.3**
comp=Z,19nm,0.7s,mb5.3,baz=9.6,slow=6.4,SNR=104
BOM Bombay 62.39 273 *ex* **P** **14 14 48.7 -4.5**
comp=Z,172nm,1.8s,mb5.9
BOM *e*S **S** **14 23 08.2 -8.3**
KLMR Klimovskoe 62.75 327 *e*P **P** **14 14 54.3 -0.6**
KLMR *e*S **S** **14 23 31.2 +12**
KLMR pmax pmax
comp=Z,103nm,1.3s,mb5.8
ARCES ARCESS Array B 62.76 339 P **P** **14 14 54.6 -0.3**
comp=Z,9.4nm,0.6s,mb5.1,baz=52,slow=7.2,SNR=21
ARCES LR LR 14 45 22.7
comp=Z,7μm,20.9s,MS5.8,baz=48,slow=39
MBWA Marble Bar 62.95 203 *e*P **P** **14 14 56.4 -0.2**
comp=Z,36nm,0.8s,mb5.5
MBWA LR LR
comp=Z,1μm,21.0s,MS5.1
PALK Pallekele 63.16 257 *e*P **P** **14 14 57.8 -0.5**
PALK pmax pmax
comp=Z,27nm,1.0s,mb5.3
PALK Pallekele 63.16 257 *e*P **P** **14 14 57.8 -0.5**
comp=Z,27nm,1.0s,mb5.3
VAN Vannovskaya 63.53 299 ⇓*i*P **P** **14 15 02.4 +1.9**
VAN S sS 14 23 54.6 +0.9
ABKT Ailbek 63.53 299 P **P** **14 15 00.5 0.0**
comp=Z,242nm,0.8s,mb6.3,SNR=6.9
GOA Goa 63.54 269 *e*P **P** **14 15 01.6 +0.8**
GOA AMb AMB 14 15 09.0
comp=Z,195nm,0.6s,mb6.3
KOD Kodaikanal 63.81 262 *e*P **P** **14 15 02.4 -0.3**
KOD AMb AMB 14 15 10.3
comp=Z,79nm,0.2s,mb6.3
EIDS Eidsvold 64.13 171 *e*P **P** **14 15 04.7 +0.3**
comp=Z,38nm,0.9s,mb5.4
MNGI Mangalore 64.25 266 *i*P **P** **14 15 05.7 +0.2**
MNGI AMb AMB 14 15 12.8
comp=Z,83nm,1.0s,mb5.7
MNGI *i* x x 14 24 06.9
DAG Danmarks Havn 64.32 355 ⇑*i*P **P** **14 15 02.2 -2.9**

DAG pmax pmax
comp=Z,33nm,1.0s,mb5.3
DAG MLR MLR
comp=Z,4μm,21.0s,MS5.6
DAG Danmarks Havn 64.32 355 ⇑*iP* **P 14 15 02.2 -2.9**
comp=Z,33nm,1.0s,mb5.3
DAG
comp=Z,4μm,21.0s
TRO Tromso 64.45 341 *e*S **S 14 23 43.4 +2.7**
TRO AMS AMS 14 48 30.2
comp=Z,7μm,17.2s,MS5.9
NOUC Port Laguerre 64.48 155 *e*P **P 14 15 10.6 +3.9**
DZM Mont Dzumac 64.50 155 *e*P **P 14 15 10.1 +3.3**
JOF Joensuu 64.87 332 *e*p **P 14 15 07.6 -1.2**
comp=Z,21nm,0.9s,mb5.2
JOF Joensuu 64.87 332 *e*P **P 14 15 07.6 -1.2**
JOF pmax pmax
comp=Z,21nm,0.9s,mb5.2
TRD Trivandrum 65.27 261 ⇓*e*P **P 14 15 16.0 +3.9**
TRD *e*S S 14 23 58.0 +5.8
NLWA Neilton Lookou 65.36 48 *e*P **P 14 15 13.5 +1.2**
comp=Z,38nm,0.8s,mb5.5
NLWA LR LR
comp=Z,4μm,21.0s,MS5.6
HDW Hoodsport 65.70 48 P **P 14 15 15.4 +1.0**
COCO West Island 65.77 230 PFAKE 14 15 30.0 +15
COCO LR LR
comp=Z,3μm,20.0s,MS5.5
MBW Mount Baker 65.78 46 P **P 14 15 15.3 +0.4**
CMW Cultus Mountai 65.84 47 P **P 14 15 16.1 +0.7**
XMAS Kiritimati 65.96 108 PFAKE 14 15 30.0 +13
XMAS LR LR
comp=Z,19μm,22.0s,MS6.3
JCW Jim Creek 66.07 47 P **P 14 15 17.4 +0.5**
RPW Rockport 66.17 46 P **P 14 15 17.4 0.0**
MOS Moscow 66.33 323 *e*P **P 14 15 18.4 0.0**
MOS *e* 14 15 38.7
MOS *e*S S 14 24 08.9 +4.9
MOS *e* 14 25 12.7
MOS pmax pmax
comp=Z,168nm,1.3s,mb5.9
MOS MLR MLR
comp=E,7μm,17.0s,MS6.1
MOS MLR MLR
comp=N,7μm,17.0s,MS6.1
MOS MLR MLR
comp=Z,10μm,16.0s,MS6.1
MOS Moscow 66.33 323 *e*P **P 14 15 18.3 -0.1**
HTW Haystack Looko 66.36 47 P **P 14 15 19.1 +0.4**
RMW Rattlesnake Mo 66.52 47 P **P 14 15 21.2 +1.5**
LON Longmire 66.89 48 P **P 14 15 23.6 +1.5**
LON pmax pmax
comp=Z,21nm,1.0s,mb5.1
LON Longmire 66.89 48 *e*P **P 14 15 23.1 +1.0**
comp=Z,21nm,1.0s,mb5.1
RCM Mount Rainier- 66.89 48 P **P 14 15 23.6 +1.5**
VRHR Novokhopersk 66.90 318 *e*P **P 14 15 21.9 -0.2**
VRHR *i* *SP sP 14 15 34.6 -7.3
VRHR *e*S S 14 24 09.6 -1.5
VRHR pmax pmax
comp=Z,60nm,0.8s,mb5.7
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR smax
comp=E,1μm,6.7s
VRHR smax
comp=Z,900nm,6.7s
VRHR smax
comp=N,1μm,5.3s
VRHR MLR MLR
comp=Z,20μm,17.0s,MS6.4
VRHR MLR MLR
comp=N,10μm,18.0s,MS6.3
VRHR MLR MLR
comp=E,14μm,17.0s,MS6.3
COR Corvallis 67.16 51 PFAKE 14 15 40.0 +16
COR LR LR
comp=Z,5μm,22.0s,MS5.7
OBN Obninsk 67.18 323 ⇑*iP* **P 14 15 23.2 -0.6**
OBN *i* 14 15 30.2
OBN *i* 14 15 52.7
OBN *i* 14 17 54.4
OBN *i* S S 14 24 16.1 +1.8
OBN *i* SS SS 14 28 40.1 +6.7
OBN pmax pmax
comp=Z,102nm,1.2s,mb5.7
OBN MLR MLR
comp=Z,10μm,17.0s,MS6.1
OBN Obninsk 67.18 323 *e*P **P 14 15 23.8 0.0**
comp=Z,95nm,1.0s,mb5.8
OBN LR LR
comp=Z,10μm,19.0s,MS6.1
KAF Kangasniemi 67.20 333 *e*p **P 14 15 22.6 -1.2**
comp=Z,28nm,0.7s,mb5.4,baz=48,slow=6.0
KAF Kangasniemi 67.20 333 *e*P **P 14 15 22.6 -1.2**
KAF pmax pmax
comp=Z,28nm,0.7s,mb5.4
AFI Afiamalu 67.74 131 PFAKE 14 15 40.0 +12
AFI LR LR
comp=Z,7μm,21.0s,MS5.9
VOR Voronezh 67.81 319 *e*P **P 14 15 28.0 +0.2**
VOR pmax pmax
comp=Z,180nm,2.0s,mb5.8
EDM Edmonton 67.88 39 P **P 14 15 28.0 -0.2**
EDM Edmonton 67.88 39 *e*P **P 14 15 27.5 -0.8**
MAK Makhachkala 67.91 308 *e*P **P 14 15 29.8 +1.2**
MAK *e* 14 15 49.9
MAK *e* 14 17 58.2
MAK *e*PPP 14 19 42.3
MAK *e*S S 14 24 24.4 +0.9
MAK pmax pmax
comp=Z,552nm,1.5s,mb6.4
MAK MLR MLR
comp=Z,10μm,16.0s,MS6.1
MAK Makhachkala 67.91 308 *i* P **P 14 15 29.8 +1.2**
VSR Storozhevoye 68.12 319 *e*P **P 14 15 29.6 -0.2**
VSR *i* *SP sP 14 15 43.8 -5.8
VSR *e*S S 14 24 26.1 +0.4
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR smax
comp=E,690nm,6.2s
VSR smax
comp=Z,150nm,4.7s
VSR smax
comp=N,230nm,4.1s
VSR MLR MLR
comp=Z,5μm,16.0s,MS5.8
VSR MLR MLR
comp=N,3μm,15.0s,MS6.0
VSR MLR MLR
comp=E,7μm,16.0s,MS6.0
MOR8 Moi Rana 68.12 340 *e*P **P 14 15 27.6 -2.0**
VORD Divnogorie 68.20 318 *e*P **P 14 15 29.5 -0.8**
VORD pmax pmax
comp=N,60nm,0.6s
VORD pmax pmax
comp=Z,40nm,0.6s,mb5.6
VORD pmax pmax
comp=E,50nm,0.8s
VORD MLR MLR
comp=N,7μm,16.0s,MS6.3
VORD MLR MLR
comp=E,13μm,16.0s,MS6.3
VORD MLR MLR
comp=Z,18μm,16.0s,MS6.4
HAWA Hanford 68.41 47 PFAKE 14 15 40.0 +8.3
HAWA LR LR
comp=Z,2μm,22.0s,MS5.4
HUMO Hull Mountain 68.43 52 PFAKE 14 15 40.0 +8.1
HUMO LR LR
comp=Z,4μm,22.0s,MS5.6
NEW Newport 68.73 45 P **P 14 15 33.8 +0.2**
NEW pmax pmax
comp=Z,19nm,0.8s
NEW Newport 68.73 45 *e*P **P 14 15 33.1 -0.5**
comp=Z,19nm,0.8s,mb5.1
NEW LR LR
comp=Z,3μm,21.0s,MS5.5

YBH Yreka Blue Hor 69.06 53 P **P 14 15 37.1 +1.3**
YBH pmax pmax
comp=Z,23nm,1.0s
YBH Yreka Blue Hor 69.06 53 *e*P **P 14 15 36.3 +0.5**
comp=Z,23nm,1.0s,mb5.0
YBH LR LR
comp=Z,3μm,21.0s,MS5.5
ARMA Armidale 69.18 171 *e*P **P 14 15 38.9 +2.5**
SUMG Summit 69.19 0 *e*P **P 14 15 36.3 +0.2**
comp=Z,57nm,0.8s,mb5.5
VSU Vasula 69.41 329 *i* P **P 14 15 38.7 +1.1**
VSU Vasula 69.41 329 *i* P **P 14 15 38.7 +1.1**
WDC Whiskeytown Da 69.80 54 PFAKE 14 15 50.0 +10
WDC LR LR
comp=Z,3μm,19.0s,MS5.6
WALA Waterton Lakes 70.01 43 *e*P **P 14 15 41.4 -0.2**
comp=Z,1.0nm,1.0s
NSS Namsos 70.05 339 AMS AMS 14 52 31.0
comp=Z,5μm,22.0s,MS5.7
STKA Stephens Creek 70.05 180 P **P 14 15 42.0 +0.3**
comp=Z,9.5nm,0.8s,mb4.8,baz=346,slow=8.4,SNR=13
STKA LR LR 14 44 06.6
comp=Z,4μm,21.1s,MS5.7,baz=18,slow=34
STKA Stephens Creek 70.05 180 *e*P **P 14 15 41.2 -0.6**
comp=Z,25nm,0.8s,mb5.2
STKA Stephens Creek 70.05 180 *e*P **P 14 15 40.2 -1.6**
comp=Z,9.8nm,1.0s,mb4.7
DGRG David-gareji 70.06 307 P **P 14 15 47.8 +5.8**
FORT Forrest 70.17 193 *e*P **P 14 15 41.5 -1.0**
comp=Z,47nm,0.6s,mb5.6
KIV Kislovodsk 70.29 311 P **P 14 15 44.7 +1.4**
comp=Z,1μm,1.0s,mb6.8,SNR=17
KIV Kislovodsk 70.29 311 P **P 14 15 44.0 +0.7**
SNR=39
KIV Kislovodsk 70.29 311 *e*P **P 14 15 43.5 +0.2**
KIV *e* 14 16 03.7
KIV *e* 14 18 20.4
KIV *e*S S 14 24 53.6 +2.1
KIV *e*SS SS 14 29 26.1 +4.3
KIV pmax pmax
comp=Z,236nm,1.1s,mb6.0
KIV pmax pmax
comp=Z,516nm,6.1s
KIV MLR MLR
comp=Z,5μm,19.0s,MS5.8
KIV Kislovodsk 70.29 311 *e*P **P 14 15 43.4 +0.1**
comp=Z,238nm,1.0s,mb6.1
KIV LR LR
comp=Z,6μm,19.0s,MS5.9
MTA Mtatsminda 70.29 308 P **P 14 15 44.9 +1.5**
TBLG Delisi 70.30 308 *e*P **P 14 15 45.1 +1.7**
TBLG Delisi 70.30 308 P **P 14 15 45.1 +1.7**
HOPS Hopland 70.34 56 PFAKE 14 16 00.0 +16
HOPS LR LR
comp=Z,7μm,20.0s,MS5.9
MOD Modoc 70.46 52 *e*P **P 14 15 44.6 +0.2**
comp=Z,40nm,1.2s,mb5.2
MOD LR LR
comp=Z,4μm,21.0s,MS5.6
BMO Blue Mountains 70.57 48 *e*P **P 14 15 44.9 -0.2**
comp=Z,27nm,1.3s,mb5.0
BMO LR LR
comp=Z,3μm,22.0s,MS5.5
ONI Oni 70.61 309 P **P 14 15 46.2 +0.8**
MCCM Marconi Confer 70.94 56 PFAKE 14 16 00.0 +13
MCCM LR LR
comp=Z,5μm,22.0s,MS5.8
WBK Wadi Bani Khal 71.04 284 ⇓P **P 14 15 49.4 +1.1**
SNR=7.4
WVOR Wild Horse Val 71.17 51 P **P 14 15 49.2 +0.5**
WVOR pmax pmax
comp=Z,32nm,1.2s,mb5.1
WVOR Wild Horse Val 71.17 51 *e*P **P 14 15 49.0 +0.3**
comp=Z,32nm,1.2s,mb5.1
WVOR LR LR
comp=Z,4μm,22.0s,MS5.6
MSO Missoula 71.32 45 *e*P **P 14 15 49.3 -0.2**
comp=Z,15nm,1.1s,mb4.8
MSO LR LR
comp=Z,1μm,21.0s,MS5.2
IDID Didziasalis 71.48 327 *e*P **P 14 15 50.8 +0.4**
IDID *e*S S 14 25 11.5 +6.6
SMDO Samad 71.48 285 P **P 14 15 52.1 +1.2**
SNR=8.7
MNK Minsk 71.55 326 *de*P **P 14 15 48.0 -2.8**
MNK *e*S S 14 25 02.0 -3.7
MNK pmax pmax
comp=Z,310nm,1.0s,mb6.2
MNK MLR MLR
comp=Z,37μm,18.0s,MS6.7
MNK MLR MLR
comp=N,19μm,18.0s,MS6.6
MNK MLR MLR
comp=E,19μm,18.0s,MS6.6
ISAL Salakas 71.57 327 *e*P **P 14 15 51.5 +0.6**
IIGN Ignalina 71.68 327 *e*P **P 14 15 51.9 +0.3**
HOQ Hoqain 71.75 286 P **P 14 15 52.7 +0.2**
SNR=7.2
JMDO Jabal Madar 71.83 284 P **P 14 15 53.8 +0.8**
SNR=6.7
DIGO Kars 71.90 307 ⇑*iP* **P 14 15 54.7 +1.6**
FFC Flin Flon 72.19 33 P **P 14 15 54.2 -0.4**
comp=E,177nm,0.9s,mb6.0,SNR=16
FFC Flin Flon 72.19 33 P **P 14 15 53.8 -0.8**
FFC pmax pmax
comp=Z,30nm,0.9s,mb5.2
FFC Flin Flon 72.19 33 *e*P **P 14 15 53.3 -1.4**
comp=Z,30nm,0.9s,mb5.2
FFC LR LR
comp=Z,3μm,22.0s,MS5.5
DYDN Diyadin 72.20 307 ⇑*iP* **P 14 15 56.0 +1.0**
SOC Sochi 72.25 312 *e*P **P 14 15 55.3 +0.1**
SOC *e* *SP sP 14 16 07.5 -7.6
SOC *e* pP 14 16 10.6 +1.2
SOC *e* 14 18 34.1
SOC *e*PPP 14 20 15.5
SOC *e*S S 14 25 17.5 +3.3
SOC *e* 14 25 54.1
SOC pmax pmax
comp=Z,58nm,0.7s,mb5.6
SOC pmax pmax
comp=Z,328nm,4.5s
SOC MLR MLR
comp=Z,8μm,19.0s,MS6.0
ARTV Artvin 72.34 309 ⇑*iP* **P 14 15 56.3 +0.5**
DBOC Borcka 72.41 309 ⇑*iP* **P 14 15 56.4 +0.3**
FCC Fort Churchill 72.45 27 P **P 14 15 54.9 -1.2**
FCC pmax pmax
comp=Z,1.0nm,1.0s
FCC Fort Churchill 72.45 27 *e*P **P 14 15 54.7 -1.4**
comp=Z,1.1nm,1.1s
ARQ Araqi 72.48 286 P **P 14 15 57.9 +1.0**
SNR=8.6
DDEM Demirkent 72.62 309 ⇑*iP* **P 14 15 58.8 +1.3**
SAO San Andreas Ge 72.66 57 PFAKE 14 16 10.0 +12
SAO LR LR
comp=Z,5μm,20.0s,MS5.7
MOL Molde 72.82 340 AMS AMS 14 47 43.9
comp=Z,6μm,33.4s,MS5.6
DOMB Dombas 72.82 339 *e*P **P 14 15 58.1 -0.1**
ANN Anapa 72.84 314 *e*P **P 14 15 58.4 -0.2**
ANN *e* pP 14 16 13.9 +1.0
ANN *e* 14 18 40.6
ANN *e*S S 14 25 24.1 +3.3
ANN *e* 14 26 11.8
ANN *e*SS SS 14 30 10.2 +9.5
ANN pmax pmax
comp=Z,73nm,1.2s,mb5.5
ANN MLR MLR
comp=N,7μm,18.0s,MS6.2
ANN MLR MLR
comp=E,8μm,18.0s,MS6.2
ANN MLR MLR
comp=Z,7μm,18.0s,MS6.0
EGMT Eagleton 72.84 42 *e*P **P 14 15 58.1 -0.5**
comp=Z,37nm,0.8s,mb5.4
EGMT LR LR
comp=Z,3μm,19.0s,MS5.6
HFS Hagfors 72.92 336 P **P 14 15 58.4 -0.4**
comp=Z,23nm,0.6s,mb5.3,baz=49,slow=4.5,SNR=48
DLMT Dillon 72.95 45 *e*P **P 14 15 58.5 -0.8**
comp=Z,36nm,1.1s,mb5.2
NB2 NORSAR Subarra 72.99 337 P **P 14 15 58.8 -0.4**
comp=Z,43nm,0.8s,mb5.4,baz=38,slow=6.2
NOA NORSAR Array B 72.99 337 P **P 14 15 58.9 -0.4**
comp=Z,35nm,0.8s,mb5.3,baz=38,slow=6.0,SNR=64

NOA LR LR 14 50 46.3
comp=Z,13μm,21.9s,MS6.2,baz=35,slow=38
HLID Hailey 73.01 48 *e*P **P 14 15 59.6 -0.1**
comp=Z,15nm,1.0s,mb4.9
HLID LR LR
comp=Z,2μm,20.0s,MS5.5
HOMI Horasan 73.03 308 ⇑*iP* **P 14 16 01.7 +1.8**
BMN Battle Mountai 73.20 52 P **P 14 16 02.4 +1.5**
BMN pmax pmax
comp=Z,29nm,1.1s,mb5.1
BMN Battle Mountai 73.20 52 *e*P **P 14 16 01.8 +0.9**
comp=Z,29nm,1.1s,mb5.1
BMN LR LR
comp=Z,3μm,19.0s,MS5.6
NAO01 NORSAR Array S 73.24 337 *e*P **P 14 16 00.7 0.0**
comp=Z,23nm,0.8s,mb5.2
NAO01 LR LR
comp=Z,13μm,19.0s,MS6.2
BOZ Bozeman (W) 73.31 45 P **P 14 16 02.0 +0.6**
BOZ pmax pmax
comp=Z,46nm,1.3s,mb5.2
BOZ Bozeman (W) 73.31 45 *e*P **P 14 16 01.0 -0.5**
comp=Z,46nm,1.4s,mb5.2
BOZ LR LR
comp=Z,2μm,20.0s,MS5.4
HAKT HAKKARI 73.35 305 ⇑*iP* **P 14 16 09.8 +8.0**
AKASG Malin Array Be 73.40 322 P **P 14 16 01.2 -0.6**
comp=Z,28nm,0.5s,mb5.4,baz=44,slow=6.1,SNR=78
AKASG LR LR 14 51 19.9
comp=Z,18μm,18.5s,MS6.4,baz=45,slow=38
AKBB Malin Array Si 73.40 322 P **P 14 16 01.3 -0.6**
AKBB Malin Array Si 73.40 322 *e*P **P 14 16 01.0 -0.9**
KIEV Kiev 73.42 322 *e*P **P 14 16 00.2 -1.8**
KIEV pmax pmax
comp=Z,85nm,0.9s,mb5.7
KIEV MLR MLR
comp=Z,15μm,19.0s,MS6.3
KIEV Kiev 73.42 322 *e*P **P 14 16 00.2 -1.8**
comp=Z,85nm,0.9s,mb5.7
KIEV LR LR
comp=Z,15μm,19.0s,MS6.3
TATV Tatvan 73.71 306 ⇑*iP* **P 14 16 05.5 +1.6**
NVAR Mina Array Bea 73.72 54 P **P 14 16 04.3 +0.4**
comp=Z,5.6nm,1.0s,mb4.5,baz=294,slow=6.1,SNR=15
NVAR Mina Array Bea 73.72 54 P **P 14 16 04.3 +0.4**
CNB Canberra Magne 73.79 174 *e*P **P 14 16 08.2 +4.1**
SUW Suwalki 73.88 327 *e*P **P 14 16 04.5 -0.1**
SUW LMZ 14 50 14.1
comp=Z,7μm,22.6s
KOPT Kop Dagi 73.91 308 ⇑*iP* **P 14 16 06.8 +1.7**
BNGL BINGOL 74.15 307 ⇑*iP* **P 14 16 08.1 +1.7**
MUN Mundaring 74.15 203 *e*P **P 14 16 04.9 -1.4**
ELK Elko 74.22 50 P **P 14 16 08.0 +1.1**
ELK pmax pmax
comp=Z,30nm,1.3s
ELK Elko 74.22 50 *e*P **P 14 16 07.5 +0.6**
comp=Z,30nm,1.3s,mb5.1
ELK LR LR
comp=Z,3μm,21.0s,MS5.6
MSL Mosul 74.42 304 *e*P **P 14 16 09.0 +0.9**
MSL *e*S S 14 25 51.0 +12
KONO Kongsberg 74.58 337 *e*S S 14 25 40.6 +0.6
KONO AMS AMS 14 51 27.4
comp=Z,10μm,22.1s,MS6.1
KONO Kongsberg 74.58 337 PFAKE 14 16 20.0 +11
KONO LR LR
comp=Z,13μm,21.0s,MS6.2
SIM Simferopol' 74.59 315 *e*P **P 14 16 00.5 -8.4**
SIM *e*S S 14 25 42.1 +1.5
SIM *e*SS SS 14 30 23.0 -4.5
SIM pmax pmax
comp=Z,45nm,0.7s,mb5.5
SIM MLR MLR
comp=Z,6μm,16.9s,MS6.0
TPH Tonopah 74.61 54 *e*P **P 14 16 10.0 +0.8**
TPH pmax pmax
comp=Z,29nm,1.1s,mb5.1
TPH MLR MLR
comp=Z,4μm,22.0s,MS5.7
TPH Tonopah 74.61 54 *e*P **P 14 16 10.0 +0.8**
comp=Z,28nm,1.1s,mb5.1
TPH LR LR
comp=Z,4μm,22.0s,MS5.7
NWAO Narrogin (SRO) 74.74 201 P **P 14 16 09.4 -0.2**
comp=Z,18nm,0.9s,mb5.0,baz=22,slow=10,SNR=7.3
NWAO Narrogin (SRO) 74.74 201 *e*P **P 14 16 09.9 +0.2**
NWAO pmax pmax
comp=Z,64nm,1.3s
NWAO MLR MLR
comp=Z,1μm,20.0s
NWAO Narrogin (SRO) 74.74 201 *e*P **P 14 16 09.9 +0.3**
comp=Z,64nm,1.3s,mb5.4
NWAO LR LR
comp=Z,1μm,20.0s,MS5.2
IMW Indian Meadow 74.79 46 *e*P **P 14 16 10.5 +0.5**
comp=Z,21nm,0.8s,mb5.1
DCID1 Drake Creek 74.84 46 *e*P **P 14 16 11.6 +1.3**
comp=Z,57nm,0.9s,mb5.5
RRI2 Red Ridge 74.92 46 *e*P **P 14 16 11.5 +0.6**
comp=Z,22nm,0.8s,mb5.1
RLMT Red Lodge 74.93 44 *e*P **P 14 16 11.2 +0.3**
comp=Z,54nm,1.4s,mb5.3
RLMT LR LR
comp=Z,3μm,19.0s,MS5.6
LOHW Long Hollow 75.15 46 *e*P **P 14 16 13.1 +0.9**
comp=Z,17nm,1.1s,mb4.9
SNOW Snow King Moun 75.16 46 *e*P **P 14 16 12.5 +0.3**
comp=Z,28nm,1.0s,mb5.2
REDW Red Top Meadow 75.17 46 *e*P **P 14 16 12.8 +0.5**
comp=Z,34nm,1.3s,mb5.1
RUND Rundenannen 75.19 339 *e*P **P 14 16 15.0 +2.9**
RUND AMb AMB 14 16 26.3
comp=Z,95nm,2.5s,mb5.3
FRB Frobisher Bay 75.21 14 P **P 14 16 12.0 -0.1**
comp=Z,36nm,0.7s,mb5.4,baz=331,slow=6.3,SNR=96
BER Bergen 75.22 339 *e*P **P 14 16 12.4 +0.1**
BER *e*S S 14 25 46.3 -0.8
BER AMS AMS 14 52 36.3
comp=Z,8μm,17.4s,MS6.0
ODD1 Odda 75.25 339 *e*P **P 14 16 11.9 -0.5**
UMR Umm Al-Rimmam 75.33 296 *e*P **P 14 16 12.3 -1.1**
baz=296
UMR AMb AMB 14 16 20.3
comp=Z,113nm,1.3s,mb5.6,baz=296
BHD Baghdad 75.44 301 *e*P **P 14 16 16.0 +2.0**
BHD *e*S S 14 26 04.0 +14
MIB Mutribah 75.45 296 *e*P **P 14 16 13.1 -1.1**
baz=296
MIB AMb AMB 14 16 15.4
comp=Z,114nm,0.9s,mb5.8,baz=296
DAC Darwin (Calif) 75.45 55 PFAKE 14 16 30.0 +16
DAC LR LR
comp=Z,5μm,22.0s,MS5.8
KBD Kabd 75.57 296 *e*P **P 14 16 13.7 -1.2**
baz=296
KBD AMb AMB 14 16 22.4
comp=Z,89nm,1.1s,mb5.6,baz=296
KEMA Kemaliye 75.59 309 ⇑*iP* **P 14 16 15.7 +0.9**
QRN Al-Qurain 75.66 295 *e*P **P 14 16 14.0 -1.4**
baz=295
QRN AMb AMB 14 16 23.6
comp=Z,195nm,1.4s,mb5.8,baz=295
ELZG Elazig 75.77 308 *e*P **P 14 16 18.0 +2.2**
TOO Toolangi 75.80 177 *e*P **P 14 16 15.5 -0.2**
RDF Al-Radifah 75.82 296 *e*P **P 14 16 14.9 -1.4**
baz=296
RDF AMb AMB 14 16 23.9
comp=Z,191nm,1.1s,mb5.9,baz=296
NAY Al-Naaiem 75.84 296 *e*P **P 14 16 14.8 -1.6**
baz=296
DUG Dugway 76.02 50 P **P 14 16 17.5 +0.3**
DUG pmax pmax
comp=Z,30nm,1.0s,mb5.2
DUG Dugway 76.02 50 *e*P **P 14 16 17.4 +0.1**
comp=Z,30nm,1.0s,mb5.2
DUG LR LR
comp=Z,3μm,21.0s,MS5.6
KIS Kishinev 76.06 320 *e*P **P 14 16 17.0 -0.3**
KIS *e* pP 14 16 29.0 -2.7
KIS *e*S S 14 25 59.0 +2.2
KIS *e* 14 26 15.0
KIS *e*PS 14 26 32.0
KIS pmax pmax
comp=Z,2μm,21.0s
KIS MLR MLR
comp=N,8μm,18.0s,MS6.3

KIS MLR MLR
comp=E,11µm,18.0s,MS6.3
KIS MLR MLR
comp=Z,13µm,18.0s,MS6.3
KIS MLR MLR
comp=Z,18µm,20.0s
KIS Kishinev 76.06 320 *e*P **P** **14 16 17.0 -0.3**
comp=Z,2µm,21.0s
KIS Kishinev 76.06 320 *e*PcP PcP 14 16 29.0 -0.4
TOKA Tokat 76.16 311⇑*i*P **P** **14 16 18.9 +0.9**
BORG Borgarnes 76.22 353 P **P** **14 16 18.8 +0.8**
comp=Z,26nm,0.8s,mb5.2,baz=313,slow=4.5,SNR=3.8
BORG Borgarnes 76.22 353 P **P** **14 16 18.8 +0.8**
MALT Malatya 76.22 308 P **P** **14 16 19.5 +1.1**
MALT Malatya 76.22 308 *e*P **P** **14 16 18.6 +0.1**
comp=Z,49nm,1.0s,mb5.4
MALT LR LR
comp=Z,4µm,19.0s,MS5.8
BW06 Boulder Array 76.28 46 PFAKE 14 16 30.0 +11
BW06 LR LR
comp=Z,3µm,22.0s,MS5.5
PDAR Pinedale Array 76.28 46 P **P** **14 16 18.4 -0.3**
comp=Z,11nm,0.6s,mb5.0,baz=272,slow=0.8,SNR=103
PDAR LR LR 14 45 59.4
comp=Z,2µm,21.9s,MS5.4,baz=327,slow=33
BSD Bornholm Skovb 76.35 332 *i*P **P** **14 16 19.3 +0.5**
BSD *i*S S 14 25 56.5 -3.2
BSD pmax pmax
comp=Z,80nm,1.0s,mb5.6
BSD MLR MLR
comp=Z,8µm,20.0s,MS6.0
BSD Bornholm Skovb 76.35 332 *i*P **P** **14 16 19.3 +0.5**
comp=Z,80nm,1.0s,mb5.6
BSD *i*S S 14 25 56.5 -3.2
BSD
comp=Z,8µm,20.0s
BSD Bornholm Skovb 76.35 332 *i*P **P** **14 16 18.5 -0.3**
BSD *i*S S 14 25 56.5 -3.2
LVV L'vov 76.45 324⇑*i*P **P** **14 16 20.9 +1.4**
LVV *e* 14 19 17.8
LVV *e*S S 14 26 06.6 +5.6
LVV *e*PS 14 26 58.9
LVV *e*SSS 14 34 14.9
LVV MLR MLR
comp=E,3µm,16.0s,MS6.0
LVV MLR MLR
comp=N,4µm,15.0s,MS6.0
LVV MLR MLR
comp=Z,5µm,15.0s,MS5.9
BEL Belsk 76.45 327 *e*P **P** **14 16 19.3 -0.1**
GSC Goldstone 76.56 56 *e*P **P** **14 16 19.9 -0.5**
GSC pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
GSC Goldstone 76.56 56 *e*P **P** **14 16 19.9 -0.5**
comp=Z,7.0nm,0.8s,mb4.6
COP Copenhagen 76.80 333 *i*P **P** **14 16 16.7 -4.6**
COP pmax pmax
comp=Z,46nm,0.9s,mb5.4
COP MLR MLR
comp=Z,6µm,20.0s,MS5.9
COP Copenhagen 76.80 333 *i*P **P** **14 16 16.7 -4.6**
comp=Z,46nm,0.9s,mb5.4
COP *i* 14 24 52.0
COP *i*S S 14 26 13.7 +9.1
COP
comp=Z,6µm,20.0s
GKP Gorka Klasztor 76.86 330 *e*P **P** **14 16 22.6 +0.8**
GKP LMZ 14 52 59.5
comp=Z,18µm,19.3s
GKP Gorka Klasztor 76.86 330 *e*P **P** **14 16 22.6 +0.9**
GKP LR LR
comp=Z,18µm,19.3s,MS6.4
BALT Daday 77.19 313 *e*P **P** **14 16 24.1 +0.3**
KWP Kalwaria 77.19 324 *e*P **P** **14 16 24.2 +0.6**
KWP LMZ 14 54 09.6
comp=Z,18µm,17.3s
KWP Kalwaria 77.19 324⇓*i*P **P** **14 16 24.4 +0.8**
KWP Kalwaria 77.19 324 *e*P **P** **14 16 24.2 +0.6**
PINB Pinarbasi 77.24 309⇑*i*P **P** **14 16 25.1 +1.0**
TLCR 77.28 318⇑*i*P **P** **14 16 23.9 -0.3**
TLCR 77.28 318 ⇑P **P** **14 16 23.9 -0.3**
ILGA Ilgaz 77.31 313⇑*i*P **P** **14 16 26.6 +2.1**
BUR08 Bucovina Ar. S 77.42 322 *e*P **P** **14 16 24.9 0.0**
BURAR Bucovina Array 77.43 322⇑*i*P **P** **14 16 25.1 +0.1**
BURAR Bucovina Array 77.43 322 P **P** **14 16 25.6 +0.5**
MVU Marysvale 77.45 51 PFAKE 14 16 40.0 +15
MVU LR LR
comp=Z,3µm,20.0s,MS5.6
LDFC Landfair 77.79 55 *e*P **P** **14 16 30.1 +2.9**
PFO Pinyon Flat Ob 77.82 57 PFAKE 14 16 40.0 +13
PFO LR LR
comp=Z,5µm,21.0s,MS5.8
ELDT Eldivan 77.84 312 *e*P **P** **14 16 27.9 +0.4**
CDAG Cicekdag 77.85 311⇑*i*P **P** **14 16 28.0 +0.5**
VRI Vrincioaia 77.89 320⇑*i*P **P** **14 16 28.2 +0.6**
VRI Vrincioaia 77.89 320 P **P** **14 16 29.3 +1.7**
PLOR Plostina 77.94 320 P **P** **14 16 28.6 +0.7**
PLOR Plostina 77.94 320⇑*i*P **P** **14 16 28.9 +1.0**
ANDN Andirin 77.97 309⇑*i*P **P** **14 16 28.9 +0.7**
TIRR Tirgusor 77.98 318 P **P** **14 16 28.7 +0.5**
TIRR Tirgusor 77.98 318⇑*i*P **P** **14 16 28.5 +0.3**
TIRR Tirgusor 77.98 318 *e*P **P** **14 16 28.2 0.0**
comp=Z,34nm,1.1s,mb5.2
ULM Lac du Bonnet 77.99 34 P **P** **14 16 27.7 -0.4**
comp=Z,15nm,0.8s,mb5.0,baz=307,slow=6.2,SNR=11
ULM LR LR 14 53 39.7
comp=Z,2µm,20.5s,MS5.4,baz=329,slow=38
ULM Lac du Bonnet 77.99 34 *e*P **P** **14 16 26.9 -1.2**
comp=Z,15nm,0.8s,mb5.0
ULM LR LR
comp=Z,3µm,20.0s,MS5.6
STHS Stebnicka Huta 78.01 325 *i*P **P** **14 16 29.2 +1.0**
STHS pmax pmax
comp=Z,37nm,1.3s,mb5.2
STHS Stebnicka Huta 78.01 325 *i*P **P** **14 16 29.2 +1.0**
STHS Stebnicka Huta 78.01 325 *i*P **P** **14 16 29.2 +1.0**
comp=Z,37nm,1.3s,mb5.2
OJC Ojcow 78.06 326 *e*P **P** **14 16 28.7 +0.2**
OJC *es*P sP 14 16 44.5 -4.0
OJC *e*SKSac SKSac 14 26 38.3 0.0
OJC L 14 54 07.1
comp=Z,18nm,18.8s
HARR Harsova 78.08 318⇑*i*P **P** **14 16 28.3 -0.4**
HARR Harsova 78.08 318 P **P** **14 16 29.3 +0.6**
UZH Uzhgorod 78.10 324⇑*i*P **P** **14 16 29.6 +0.9**
UZH *e* pP 14 16 40.0 -3.1
UZH *i* 14 19 21.0
UZH *e* 14 21 19.0
UZH *i*S S 14 26 21.4 +2.5
UZH *i* 14 26 41.0
UZH *e*PS 14 26 58.0
UZH *i* 14 27 30.0
UZH MLR MLR
comp=N,4µm,16.0s,MS6.0
UZH MLR MLR
comp=E,4µm,16.0s,MS6.0
UZH MLR MLR
comp=Z,4µm,16.0s,MS5.8
AVNT Avonos 78.10 310⇑*i*P **P** **14 16 29.1 +0.2**
BR131 Keskin Array S 78.21 312 *e*P **P** **14 16 29.0 -0.5**
comp=Z,6.1nm,0.5s,mb4.8
BR131 LR LR
comp=Z,3µm,20.0s,MS5.6
BRTR Keskin Array B 78.21 312 P **P** **14 16 29.6 0.0**
comp=Z,8.0nm,0.5s,mb4.9,baz=72,slow=4.0,SNR=50
BRTR LR LR 14 55 52.2
comp=Z,3µm,21.2s,MS5.6,baz=226,slow=39
CRVS Cervenica-Dubn 78.28 325 *i*P **P** **14 16 29.9 +0.2**
CRVS pmax pmax
comp=Z,21nm,1.1s,mb5.0
CRVS Cervenica-Dubn 78.28 325 *i*P **P** **14 16 29.9 +0.2**
comp=Z,21nm,1.1s,mb5.0
CVD Cernavoda 78.28 318 P **P** **14 16 31.7 +1.9**
RWWY Rawlins 78.31 46 *e*P **P** **14 16 29.9 -0.1**
comp=Z,31nm,0.9s,mb5.2
TRPA Tarpa 78.34 323⇓*i*P **P** **14 16 30.7 +0.6**
RSSD Black Hills 78.40 42 P **P** **14 16 29.8 -0.7**
RSSD pmax pmax
comp=Z,29nm,1.1s,mb5.1
RSSD Black Hills 78.40 42 *e*P **P** **14 16 29.6 -0.8**
comp=Z,29nm,1.1s,mb5.1
RSSD LR LR
comp=Z,2µm,21.0s,MS5.4
NIE Niedzica 78.42 325 *e*P **P** **14 16 31.2 +0.7**
RUE Ruedersdorf 78.81 331 *e*P **P** **14 16 32.5 -0.1**
comp=Z,66nm,1.1s,mb5.5
RUE Ruedersdorf 78.81 331 *e*P **P** **14 16 32.8 +0.2**
comp=Z,77nm,1.1s,mb5.5
RAC Raciborz 78.85 327 *e*P **P** **14 16 33.1 +0.2**
RAC MLR MLR
comp=Z,9µm,19.0s,MS6.1
BSEG Bad Segeberg 78.94 333 *e*P **P** **14 16 33.2 -0.1**
BSEG pmax pmax
comp=Z,67nm,1.0s,mb5.5
BSEG Bad Segeberg 78.94 333 *e*P **P** **14 16 33.2 -0.1**
comp=Z,67nm,1.0s,mb5.5
KECS Kecovo 79.03 325 *i*P **P** **14 16 34.1 +0.2**
VOIR 79.04 320⇑*i*P **P** **14 16 35.1 +1.1**
VOIR 79.04 320 P **P** **14 16 34.9 +1.0**
OKC Ostrava-Krasne 79.06 327 *e*P **P** **14 16 34.2 +0.2**
OKC *e*SKS SKKSac 14 26 49.2 +2.4
OKC AMS AMS 14 54 30.0
comp=Z,8µm,15.6s
OKC Ostrava-Krasne 79.06 327 *e*P **P** **14 16 34.2 +0.2**
OKC *e*S SKKSac 14 26 49.2 +2.4
KSP Ksiaz 79.08 328 *e*P **P** **14 16 34.5 +0.5**
KSP LMZ 14 54 09.7
comp=Z,19µm,20.8s
KSP Ksiaz 79.08 328⇑*e*P **P** **14 16 34.2 +0.1**
KSP *e**PP pP 14 16 47.8 -0.7
KSP *e* 14 19 32.0
KSP *e*S S 14 26 33.5 +4.2
KSP MLR MLR
comp=Z,22µm,20.8s,MS6.5
KSP Ksiaz 79.08 328⇑*e*P **P** **14 16 34.2 +0.1**
KSP *ep*P pP 14 16 47.8 -0.7
KSP *e*PP PP 14 19 32.0 -1.0
KSP *e*S S 14 26 33.5 +4.2
KSP *e*SS SS 14 31 29.0 -5.7
KSP LR LR
comp=Z,22µm,20.8s,MS6.5
DRGR 79.22 322 P **P** **14 16 35.0 +0.1**
GLA Glamis 79.23 56 P **P** **14 16 39.2 +3.9**
GLA pmax pmax
comp=Z,19nm,0.9s,mb5.0
AGMN Agassiz Refuge 79.44 35 *e*P **P** **14 16 35.0 -1.1**
comp=Z,14nm,0.8s,mb5.0
AGMN LR LR
comp=Z,4µm,21.0s,MS5.7
DPC Dobruska-Polom 79.44 328 *e*P **P** **14 16 36.5 +0.4**
DPC *ep*P pP 14 16 51.3 +0.8
DPC *e*SKS 14 26 43.0
DPC AMS AMS 14 55 20.0
comp=Z,10µm,18.1s
UPC Upice 79.45 328 *e*P **P** **14 16 36.4 +0.3**
UPC *ep*P pP 14 16 50.6 +0.1
PHWY Pilot Hill 79.54 45 *e*P **P** **14 16 36.0 -0.8**
comp=Z,15nm,1.0s,mb4.9
PSZ Piszkesteto 79.71 325 P **P** **14 16 38.2 +0.6**
PSZ Piszkesteto 79.71 325 *e*P **P** **14 16 38.4 +0.8**
PSZ Piszkesteto 79.71 325⇑*i*P **P** **14 16 37.5 -0.1**
PSZ Piszkesteto 79.71 325 *e*P **P** **14 16 37.9 +0.3**
comp=Z,59nm,1.1s,mb5.4
PSZ LR LR
comp=Z,9µm,19.0s,MS6.1
VYHS Vyhne 79.76 326 *i*P **P** **14 16 38.0 +0.2**
VYHS pmax pmax
comp=Z,17nm,1.1s,mb4.9
VYHS Vyhne 79.76 326 *i*P **P** **14 16 38.0 +0.2**
comp=Z,17nm,1.1s,mb4.9
VYHS *e*S S 14 26 47.0 +10
WUAZ Wupatki 79.87 53 *e*P **P** **14 16 39.4 +0.7**
comp=Z,36nm,1.1s,mb5.2
WUAZ LR LR
comp=Z,4µm,21.0s,MS5.7
KOLL Kolacno 79.89 326 *i*P **P** **14 16 38.5 0.0**
KDHN Kadinhani 79.90 311⇑*i*P **P** **14 16 39.6 +0.8**
BORA Eskisehir 79.95 313⇑*i*P **P** **14 16 38.7 -0.3**
BRG Berggiesshubel 80.00 330 *i*P **P** **14 16 38.9 -0.2**
BRG 14 19 45.0
BRG S S 14 26 50.0 +11
BRG PS 14 27 41.0
BRG SS SS 14 31 55.0 +6.5
BRG pmax pmax
comp=Z,20nm,1.0s,mb5.0
BRG MLR MLR
comp=N,6µm,17.1s,MS6.0
BRG MLR MLR
comp=E,2µm,18.7s,MS6.0
BRG MLR MLR
comp=Z,9µm,17.5s,MS6.2
BRG Berggiesshubel 80.00 330 *e*P **P** **14 16 38.6 -0.5**
comp=Z,32nm,0.9s,mb5.2
BRG Berggiesshubel 80.00 330 *i*P **P** **14 16 38.9 -0.2**
comp=Z,20nm,1.0s,mb5.0
BRG PP PP 14 19 45.0 +4.3
BRG S S 14 26 50.0 +11
BRG PS 14 27 41.0
BRG SS SS 14 31 55.0 +6.5
BRG LR LR
comp=Z,9µm,17.5s,MS6.2
PVCC Panska Ves 80.02 329 *e*P **P** **14 16 39.2 0.0**
PVCC AMS AMS 14 54 40.0
comp=Z,16µm,20.3s
CLL Collm 80.03 330⇑*i*P **P** **14 16 38.8 -0.5**
CLL *i* pP 14 16 52.8 -0.9
CLL *i* 14 17 00.2
CLL *e*S S 14 26 38.0 -1.4
CLL pmax pmax
comp=Z,63nm,1.0s,mb5.5
CLL MLR MLR
comp=Z,8µm,18.3s,MS6.1
CLL Collm 80.03 330 *e*P **P** **14 16 38.6 -0.7**
comp=Z,62nm,1.0s,mb5.5
CLL Collm 80.03 330⇑*i*P **P** **14 16 38.8 -0.5**
comp=Z,63nm,1.0s,mb5.5
CLL *i* pP pP 14 16 52.8 -0.9
CLL *i* sP sP 14 17 00.2 +0.9
CLL *e*PP PP 14 19 42.0 +1.1
CLL *e*PPP 14 21 36.0
CLL *e*S S 14 26 38.0 -1.4
CLL *es*S sS 14 27 03.0 -0.6
CLL *e*SPP 14 27 40.0
CLL *e*SS SS 14 31 47.0 -1.9
CLL *ex* x 14 32 38.0
CLL *e*SSS 14 35 18.0
CLL LmV 14 55 00.0
comp=Z,8µm,18.3s
CLL Collm 80.03 330⇑*i*P **P** **14 16 38.8 -0.5**
comp=Z,63nm,1.0s,mb5.5
CLL *i* pP 14 16 52.8 -0.9
CLL *i* 14 17 00.2
CLL *e*S S 14 26 38.0 -1.4
CLL LR LR
comp=Z,8µm,18.3s,MS6.1
VRAC Vranov 80.12 327⇑*i*P **P** **14 16 40.2 +0.4**
VRAC Vranov 80.12 327 P **P** **14 16 40.3 +0.5**
NRDL Niedersach Rie 80.17 332 *e*P **P** **14 16 39.3 -0.7**
comp=Z,81nm,1.9s,mb5.3
GZR Gura Zlata 80.19 321⇑*i*P **P** **14 16 40.0 -0.2**
GZR Gura Zlata 80.19 321 P **P** **14 16 40.5 +0.2**
FBE Freiberg 80.20 330 *e*P **P** **14 16 39.8 -0.4**
comp=Z,62nm,0.9s,mb5.5
FBE *ep*P pP 14 16 54.0 -0.6
ELBA Catalca 80.23 315⇑*i*P **P** **14 16 41.3 +0.8**
JMB Yambol 80.32 317 P **P** **14 16 42.4 +1.4**
HWQ Hawqa 80.32 306 *e*P **P** **14 16 41.0 -0.2**
SMOL Smolenice 80.37 326 *i*P **P** **14 16 41.9 +0.8**
BUD Budapest 80.43 325⇑*e*P **P** **14 16 41.8 +0.3**
KAC Achnashellach 80.45 343 *e*P **P** **14 16 41.6 +0.2**
PRU Pruhonice 80.45 329 *e*P **P** **14 16 41.7 +0.2**
PRU *ep*P pP 14 16 55.5 -0.5
PRU *e*S S 14 26 45.2 +1.4
PRU AMS AMS 14 54 30.0
comp=Z,12µm,21.4s
ISCO Idaho Springs 80.47 46 P **P** **14 16 42.6 +0.8**
ISCO pmax pmax
comp=Z,33nm,1.3s,mb5.1
ISCO Idaho Springs 80.47 46 *e*P **P** **14 16 41.6 -0.3**
comp=Z,32nm,1.3s,mb5.1
ISCO LR LR
comp=Z,3µm,22.0s,MS5.6
MVCO Mesa Verde 80.52 50 *e*P **P** **14 16 42.1 -0.1**
comp=Z,22nm,0.9s,mb5.1
MVCO LR LR
comp=Z,3µm,21.0s,MS5.6
MODS Modra-Piesok 80.54 326 *i*P **P** **14 16 42.7 +0.7**
MODS *e* 14 27 05.4
BZS Buzias 80.60 322⇑*i*P **P** **14 16 42.0 -0.4**
BZS Buzias 80.60 322 P **P** **14 16 42.8 +0.4**
TREC Trest 80.60 328 *e*P **P** **14 16 42.4 +0.1**
TREC AMS AMS 14 56 00.0
comp=Z,9µm,17.5s
CLZ Clausthal 80.60 332 *e*P **P** **14 16 42.3 0.0**
CLZ pmax pmax
comp=Z,93nm,1.3s,mb5.5
CLZ Clausthal 80.60 332 *e*P **P** **14 16 42.3 0.0**
comp=Z,93nm,1.3s,mb5.5
RAR Rarotonga 80.66 127 PFAKE 14 16 50.0 +7.1
RAR LR LR
comp=Z,5µm,22.0s,MS5.8
KPL Plockton 80.68 343 *e*P **P** **14 16 42.7 +0.1**
KPL AMb AMB 14 16 45.2
comp=Z,147nm,1.1s,mb5.8
KPL AMS AMS 14 57 34.2
comp=Z,3µm,19.3s,MS5.6
ZST Bratislava 80.75 326 *i*P **P** **14 16 44.1 +0.9**
ZST pmax pmax
comp=Z,20nm,1.1s,mb5.0
ZST Bratislava 80.75 326 *i*P **P** **14 16 44.1 +0.9**
comp=Z,20nm,1.1s,mb5.0
BHL Bhannes 80.75 306 *e*P **P** **14 16 42.7 -0.8**
TANN Tannenbergstha 80.95 330 *e*P **P** **14 16 44.0 -0.2**
comp=Z,68nm,1.8s,mb5.3
WERD Werda 80.98 330 *e*P **P** **14 16 44.0 -0.4**
comp=Z,33nm,1.2s,mb5.1
GUNZ Gunzen 81.04 330 *e*P **P** **14 16 44.3 -0.4**
comp=Z,32nm,1.0s,mb5.2
GDZ Gediz 81.04 313⇑*i*P **P** **14 16 45.4 +0.5**
WERN Wernitzgruen 81.08 330 *e*P **P** **14 16 44.7 -0.2**
comp=Z,36nm,1.1s,mb5.2
MOX Moxa 81.09 331 *e*P **P** **14 16 44.6 -0.4**
comp=Z,36nm,1.2s,mb5.2
MOX
comp=Z,6µm,19.0s
MOX Moxa 81.09 331 *e*P **P** **14 16 44.6 -0.4**
MOX pmax pmax
comp=Z,36nm,1.2s,mb5.2
MOX MLR MLR
comp=Z,6µm,19.0s,MS6.0
NKC Novy Kostel 81.10 330 *e*P **P** **14 16 44.9 -0.1**
NKC *ep*P pP 14 16 58.0 -1.4
NKC *e*SKS 14 26 57.8
NKC AMS AMS 14 56 00.0
comp=Z,6µm,16.4s
NKC Novy Kostel 81.10 330 *e*P **P** **14 16 44.9 -0.1**
NKC *ep*P pP 14 16 58.0 -1.4
NKC *e*S S 14 26 57.8 +7.2
WIT Witteveen 81.12 334 *e*P **P** **14 16 46.6 +1.6**
IBBN Ibbenburen 81.16 334 *e*P **P** **14 16 44.7 -0.6**
comp=Z,65nm,1.0s,mb5.5
IBBN *ep*P pP 14 16 58.9 -0.8
TAU Tasmania Unive 81.21 176 PFAKE 14 17 00.0 +15
TAU LR LR
comp=Z,4µm,22.0s,MS5.7
ESY Stoneypath 81.22 341 *e*P **P** **14 16 46.1 +0.6**
ISP Isparta 81.29 312 P **P** **14 16 46.5 +0.3**
ISP MLR MLR
comp=Z,4µm,21.0s,MS5.7
EDI Edinburgh 81.36 341 AMS AMS 14 57 30.5
comp=Z,4µm,18.9s,MS5.8
SOP Sopron 81.38 326⇓*e*P **P** **14 16 47.5 +1.0**
EAB Aberfoyle 81.41 342 *e*P **P** **14 16 47.2 +0.7**
MANZ Manzenberg 81.43 330 *e*P **P** **14 16 46.2 -0.5**
comp=Z,24nm,1.0s,mb5.1
MANZ *ep*P pP 14 17 00.9 -0.3
EBL Broad Law 81.45 341 *e*P **P** **14 16 49.0 +2.2**
CONA Conrad Observa 81.49 327⇑*i*P **P** **14 16 47.7 +0.6**
comp=Z,44nm,1.1s,mb5.3,SNR=28
CSNA Conrad Observa 81.49 327⇑*i*P **P** **14 16 47.7 +0.6**
comp=Z,40nm,1.0s,mb5.3
KDZ Kurdzhali 81.51 317 *i*P **P** **14 16 48.0 +0.7**
KHC Kasperske Hory 81.52 329 *e*P **P** **14 16 47.4 +0.2**
KHC *e**PP pP 14 17 00.9 -0.8
KHC *es*P sP 14 27 05.0 +10
KHC MLR MLR
comp=Z,14µm,22.0s,MS6.3
KHC Kasperske Hory 81.52 329 *e*P **P** **14 16 47.4 +0.2**
KHC *ep*P pP 14 17 00.9 -0.8
KHC *es*P sP 14 17 09.5 +2.2
KHC *e*SKS 14 27 05.0
KHC AMS AMS 14 55 10.0
comp=Z,14µm,22.0s
KHAL Karahalli 81.53 313⇑*i*P **P** **14 16 47.1 -0.4**
PGB Panagyurishte 81.53 319 *i*P **P** **14 16 49.1 +1.7**
PKSM Moragy 81.56 324⇓*i*P **P** **14 16 47.4 -0.1**
PKSM Moragy 81.56 324 P **P** **14 16 47.5 0.0**
ROTZ Rotzenmuhle 81.56 330 *e*P **P** **14 16 47.8 +0.3**
comp=Z,41nm,1.3s,mb5.2
PLD Plovdiv 81.57 318 P **P** **14 16 49.5 +1.9**
EYMN Ely 81.62 33 *e*P **P** **14 16 47.0 -0.8**
comp=Z,29nm,1.0s,mb5.2
EYMN LR LR
comp=Z,3µm,21.0s,MS5.6
GEC2 GERESS Array S 81.69 328 P **P** **14 16 48.0 -0.1**
GEC2 GERESS Array S 81.69 328 *e*P **P** **14 16 47.6 -0.5**
comp=Z,28nm,1.1s,mb5.1
GERES GERESS Array B 81.69 328 P **P** **14 16 48.1 0.0**
comp=Z,9.1nm,0.8s,mb4.8,baz=47,slow=2.7,SNR=43
GERES PP PP 14 19 55.4 +0.7
comp=Z,3.9nm,1.0s,baz=40,slow=7.1,SNR=3.8
GERES LR LR 14 56 03.5
comp=Z,12µm,20.9s,MS6.2,baz=24,slow=38
GERES GERESS Array B 81.69 328 P **P** **14 16 48.1 0.0**
GERES 14 19 55.4
ALN Alexandroupoli 81.70 316 P **P** **14 16 48.7 +0.3**
WTSB Winterswijk 81.78 334 *e*P **P** **14 16 48.7 +0.2**
PGBU Glenifferbraes 81.78 342 *e*P **P** **14 16 49.0 +0.5**
PGBU AMb AMB 14 16 54.1
comp=Z,121nm,1.5s,mb5.6
PGBU AMS AMS 14 57 53.7
comp=Z,4µm,18.7s,MS5.8
WET Wettzell 81.79 329 *e*P **P** **14 16 48.7 +0.1**
WET *e**PP pP 14 17 02.9 -0.2
WET pmax pmax
comp=Z,29nm,1.1s,mb5.1
WET Wettzell 81.79 329 *e*P **P** **14 16 48.7 +0.1**
comp=Z,29nm,1.1s,mb5.1
WET *ep*P pP 14 17 02.9 -0.2
RZN Rozhen 81.86 318 *i*P **P** **14 16 49.7 +0.5**
ESK Eskdalemuir 81.91 341 *e*P **P** **14 16 49.7 +0.6**
ESK AMb AMB 14 16 51.9
comp=Z,72nm,1.5s,mb5.4
ESK AMS AMS 14 57 44.8
comp=Z,5µm,19.1s,MS5.9
ESK Eskdalemuir 81.91 341 PFAKE 14 17 00.0 +11
ESK LR LR
comp=Z,5µm,19.0s,MS5.9
SDCO Great Sand Dun 81.93 48 *e*P **P** **14 16 49.5 -0.1**
comp=Z,20nm,1.3s,mb4.9
SDCO LR LR
comp=Z,2µm,22.0s,MS5.5
VTS Vitosha 81.99 319 P sP 14 17 07.4 -2.5
VTS Vitosha 81.99 319 *i*P **P** **14 16 54.0 +4.1**
GRA1 Grafenberg Arr 82.01 330 *e*P **P** **14 16 50.0 +0.2**
comp=Z,70nm,1.0s,mb5.5
GRA1 *ep*P pP 14 17 04.1 -0.2
GRA1 *e*S S 14 27 05.9 +5.9
GRA1 LR LR
comp=Z,8µm,19.1s,MS6.1
GRF Grafenberg Arr 82.01 330 *e*P **P** **14 16 50.0 +0.2**
GRF *e**PP pP 14 17 04.1 -0.2
GRF *e*S S 14 27 05.9 +5.9
GRF pmax pmax
comp=Z,70nm,1.0s,mb5.5
GRF MLR MLR
comp=Z,8µm,19.1s,MS6.1
GRF Grafenberg Arr 82.01 330 *e*P **P** **14 16 50.0 +0.2**
GRF *e**PP pP 14 17 04.1 -0.2
GRF *e*S S 14 27 05.9 +5.9
GRF pmax pmax
comp=Z,70nm,1.0s,mb5.5
GRF MLR MLR
comp=Z,8µm,19.1s,MS6.1
GRF Grafenberg Arr 82.01 330 *e*P **P** **14 16 50.0 +0.2**
comp=Z,70nm,1.0s,mb5.5
GRF *ep*P pP 14 17 04.1 -0.2
GRF *e*S S 14 27 05.9 +5.9
GRF *e*L 14 56 24.4
comp=Z,8µm,19.1s
BUG Bochum--Univer 82.05 333 *e*P **P** **14 16 49.1 -0.9**
comp=Z,57nm,1.3s,mb5.3
BUG *ep*P pP 14 17 03.6 -0.9
AKHS Akhisar 82.13 314⇑*i*P **P** **14 16 51.1 +0.4**

ARSA Arzberg 82.16 326⇑ *i*P P 14 16 50.7 0.0
comp=Z,27nm,1.2s,mb5.0,SNR=9.7
MOA Molln 82.23 327⇑ *i*P P 14 16 50.9 -0.1
comp=Z,47nm,1.5s,mb5.2,SNR=10.0
GOLH Golhisar 82.25 312⇑ *i*P P 14 16 51.1 -0.2
TUC Tucson 82.32 55 *e*P P 14 16 51.4 -0.4
TUC pmax pmax
comp=Z,18nm,1.4s,mb4.8
TUC MLR MLR
comp=Z,2µm,20.0s,MS5.5
TUC Tucson 82.32 55 *e*P P 14 16 51.4 -0.4
comp=Z,18nm,1.4s,mb4.8
TUC LR LR
comp=Z,2µm,20.0s,MS5.5
MMB Musomiste 82.44 318 *i* P P 14 16 53.0 +0.8
ECSD EROS,Sioux Fal 82.45 39 *e*P P 14 16 50.9 -1.3
comp=Z,24nm,0.9s,mb5.1
ECSD LR LR
comp=Z,3µm,21.0s,MS5.6
KOGS Kog 82.46 326 *e*P P 14 16 53.8 +1.6
NVR Nevrokopi 82.55 318 *e*P P 14 16 54.5 +1.7
KKB Krupnik 82.58 319 *i* P P 14 16 53.4 +0.5
TNS Taunus Mts 82.63 332 *e*P P 14 16 52.4 -0.6
TNS *e*PP pP 14 17 06.8 -0.7
TNS pmax pmax
comp=Z,59nm,1.5s,mb5.4
TNS Taunus Mts 82.63 332 *e*P P 14 16 52.4 -0.6
comp=Z,59nm,1.5s,mb5.4
TNS *e*pP pP 14 17 06.8 -0.7
HPK Haverah Park 82.69 339 *e*P P 14 16 53.0 -0.3
HPK AMb AMB 14 17 02.5
comp=Z,118nm,1.6s,mb5.7
HPK AMS AMS 14 57 45.1
comp=Z,9µm,21.0s,MS6.1
GAL1 Galloway 82.69 341 *e*P P 14 16 52.6 -0.6
GAL1 AMb AMB 14 17 00.6
comp=Z,88nm,1.6s,mb5.5
GAL1 AMS AMS 14 58 19.8
comp=Z,4µm,19.1s,MS5.8
PRK Paraskevi 82.74 315 P P 14 16 54.5 +0.7
GROS Grobnik 82.78 326 *e*P P 14 16 54.6 +0.7
GROS *e*PP PP 14 20 08.3 +4.6
GROS *e* 14 21 51.0
GROS *e*S S 14 27 17.4 +9.5
PERS Pernice 82.81 326 *i* P P 14 16 53.9 -0.1
SOKA Soboth 82.81 326⇑ *i*P P 14 16 54.1 0.0
comp=Z,75nm,1.2s,mb5.6
LIA Limnos Island 82.88 316 P P 14 16 54.8 +0.3
BLCB Balcova 82.91 314 P P 14 16 55.3 +0.6
AKAS Kas 82.91 311⇑ *i*P P 14 16 54.0 -0.7
RJOB Jochberg 82.93 328 *e*P P 14 16 54.6 -0.1
comp=Z,55nm,1.1s,mb5.5
RJOB *e*pP pP 14 17 08.7 -0.5
URZ Urewera 82.96 153 P P 14 16 54.3 -0.3
comp=Z,14nm,0.9s,mb5.0,baz=155,slow=17,SNR=2.4
TURN Turunc 83.06 312⇑ *i*P P 14 16 57.1 +1.6
HGN Heimansgroeve 83.08 334 *e*P P 14 16 55.6 +0.2
comp=Z,29nm,1.1s,mb5.2
HGN Heimansgroeve 83.08 334 *e*PP PP 14 20 12.3 +6.3
HGN Heimansgroeve 83.08 334 *e*S sS 14 27 33.1 -2.2
HGN Heimansgroeve 83.08 334 *e*SS SS 14 32 38.6 +4.4
LHO Holmfirth 83.12 339 *e*P P 14 16 54.9 -0.6
STIP Stip 83.17 319 P P 14 16 56.0 0.0
URLA Izmir 83.18 314 *e*P P 14 16 54.8 -1.3
MEM Membach 83.19 334 P P 14 16 54.8 -1.1
comp=Z,18nm,1.3s,mb4.9
KNT Kendrikon 83.19 318 P P 14 16 55.6 -0.5
SOH Sokhos 83.19 318 P P 14 16 56.3 +0.2
OUR Ouranopolis 83.21 317 P P 14 16 54.8 -1.4
FUR Furstenfeldbru 83.21 329 *e*P P 14 16 55.7 -0.4
FUR pmax pmax
comp=Z,65nm,0.9s,mb5.7
FUR Furstenfeldbru 83.21 329 *e*P P 14 16 55.7 -0.4
comp=Z,65nm,0.9s,mb5.7
KBA Koelnbreinsper 83.22 327⇑ *i*P P 14 16 55.9 -0.3
comp=Z,40nm,0.8s,mb5.5,SNR=31
VAY Valandovo 83.24 319 P P 14 16 56.1 -0.3
VAY Valandovo 83.24 319 *i* P P 14 16 55.9 -0.5
ANMO Albuquerque 83.26 50 *e*P P 14 16 57.8 +1.2
ANMO Albuquerque 83.26 50 *e*P P 14 16 57.0 +0.5
comp=Z,34nm,1.2s,mb5.2
ANMO LR LR
comp=Z,3µm,21.0s,MS5.7
GCAM G?zelcaml? 83.28 314⇑ *i*P P 14 16 55.9 -0.7
KBI1 Birley Grange 83.29 339 *e*P P 14 16 56.5 +0.1
SKO Skopje 83.35 320 P P 14 16 57.2 +0.3
PLE Pljevlja 83.36 322⇑ *i*P P 14 16 57.3 +0.4
IVA Berane 83.45 321⇑ *i*P P 14 16 57.3 -0.1
MYKA Terra Mystica 83.45 327⇑ *i*P P 14 16 56.7 -0.6
comp=Z,20nm,0.7s,mb5.2
CHOS Chios Island 83.46 315 P P 14 16 58.1 +0.5
PLG Polygyros 83.47 318 P P 14 16 57.2 -0.4
PLG Polygyros 83.47 318 *e*P P 14 16 57.6 0.0
HORT Hortiatis 83.49 318 P P 14 16 57.7 0.0
SMG Samos 83.50 314 *e*P P 14 16 57.5 -0.3
LJU Ljubljana 83.53 326 *e*P P 14 16 59.1 +1.4
THE Thessaloniki 83.53 318 P P 14 16 55.8 -2.1
STU Stuttgart 83.54 331 P P 14 16 57.7 0.0
STU pmax pmax
comp=Z,47nm,1.0s,mb5.6
STU Stuttgart 83.54 331 *e*P P 14 16 57.1 -0.6
comp=Z,52nm,1.1s,mb5.6
STU Stuttgart 83.54 331 *e*P P 14 16 57.4 -0.3
comp=Z,47nm,1.0s,mb5.6
GMM Mts of Mourne 83.57 342 *e*P P 14 16 58.4 +0.6
BCLA Clavier 83.59 334 P P 14 16 58.0 0.0
comp=Z,22nm,1.7s,mb5.0
GRG Griva 83.59 319 P P 14 16 58.6 +0.4
BDRM Kayabasi 83.60 313 *e*P P 14 16 57.9 -0.4
PVY Plav 83.62 321⇑ *i*P P 14 16 58.9 +0.6
BOJS Bojanci 83.63 325 *e*P P 14 16 57.9 -0.4
BOJS *e*PP PP 14 20 15.2 +4.6
PAIG Paliouri 83.66 317 P P 14 16 58.2 -0.4
CWF Charnwood Fore 83.68 339 *e*P P 14 16 58.4 0.0
CWF AMb AMB 14 17 03.0
comp=Z,31nm,1.7s,mb5.2
CWF AMS AMS 14 57 03.6
comp=Z,6µm,22.4s,MS5.9
UPM Unac-Piva 83.69 322⇑ *i*P P 14 16 58.5 -0.1
WATA Walderalm 83.75 329⇑ *i*P P 14 16 58.0 -0.8
comp=Z,11nm,0.7s,mb5.1,SNR=7.2
SCHQ Schefferville 83.77 16 P P 14 16 59.1 +0.3
comp=Z,11nm,0.7s,mb5.1,baz=353,slow=6.3,SNR=11
SCHQ LR LR 15 00 29.4
comp=Z,2µm,18.1s,MS5.5,baz=339,slow=40
WTTA Wattenberg 83.79 329⇓ *i*P P 14 16 58.9 -0.1
comp=Z,32nm,1.2s,mb5.3,SNR=5.4
ARG Arkhangelos 83.79 312 *e*P P 14 17 00.3 +1.0
VOY Vojsko 83.81 327 *e*P P 14 16 59.7 +0.5
VOY *e* pP 14 17 14.1 +0.4
ABTA Abfaltersbach 83.84 328 *i* P P 14 16 58.8 -0.5
comp=Z,15nm,1.2s,mb5.0,SNR=10.0
JAVS Javornik 83.85 326 *e*P P 14 16 58.6 -0.8
SNF Seneffe 83.86 334 P P 14 16 59.2 -0.2
comp=Z,23nm,1.7s,mb5.0
KRUS Krusevo 83.89 319 *i* P P 14 17 00.2 +0.5
WLF Walferdange 83.92 333 P P 14 16 57.6 -2.1
WLF Walferdange 83.92 333 PFAKE 14 17 10.0 +10
WLF LR LR
comp=Z,7µm,20.0s,MS6.0
WPM1 Penmaenmawr 83.93 340 *e*P P 14 17 00.2 +0.5
NKY Niksic 83.94 322⇑ *i*P P 14 16 59.6 -0.3
MOTA Moosalm 83.94 329⇑ *i*P P 14 16 59.6 -0.3
comp=Z,38nm,1.2s,mb5.4,SNR=16
RETA Reutte 83.96 329 *i* P P 14 16 59.9 0.0
comp=Z,61nm,1.1s,mb5.6,SNR=34
GIVF Givet 84.02 334 *e*P P 14 16 59.5 -0.7
BRY Bratogost 84.09 322⇑ *i*P P 14 17 00.1 -0.6
TTG Podgorica 84.09 321⇑ *i*P P 14 16 59.5 -1.2
AOS Alonnisos 84.10 316 P P 14 17 01.9 +1.1
BIA Bitola 84.10 319 P P 14 16 59.3 -1.5
DOU Dourbes 84.11 334 P P 14 17 01.8 +1.2
comp=Z,24nm,2.0s,mb5.0
YLL Llanberis 84.11 340 *e*P P 14 17 00.9 +0.3
SKDS Skadanscina 84.14 326 *e*P P 14 17 02.9 +2.0
LIT Litokhoron 84.17 318 P P 14 16 59.7 -1.4
BFO Black Forest 84.23 331 P P 14 17 01.2 -0.1
comp=Z,280nm,1.1s,mb6.3,SNR=13
BFO Black Forest 84.23 331 P P 14 17 00.9 -0.4
BFO pmax pmax
comp=Z,65nm,1.1s,mb5.7
BFO Black Forest 84.23 331 *e*P P 14 17 00.8 -0.5
comp=Z,80nm,1.3s,mb5.7
BFO *e*pP pP 14 17 15.1 -0.7

FNA Florina 84.25 319 P P 14 17 01.6 +0.1
BAIF Baives 84.27 334 *e*P P 14 17 00.9 -0.6
comp=Z,44nm,1.1s,mb5.2
BAIF Baives 84.27 334 *e*P P 14 17 00.9 -0.6
BAIF pmax pmax
comp=Z,22nm,1.1s,mb5.2
BAIF Baives 84.27 334 *e*P P 14 17 00.9 -0.6
comp=Z,22nm,1.1s,mb5.2
OHR Ohrid 84.30 320 P P 14 17 00.7 -1.1
OHR Ohrid 84.30 320 *i* P P 14 17 01.3 -0.5
XOR Xorichti 84.33 317 P P 14 17 01.6 -0.4
FETA Feichten 84.35 329 *i* P P 14 17 01.7 -0.3
comp=Z,31nm,1.0s,mb5.4,SNR=26
NEO Neokhori 84.35 317 *e*P P 14 17 02.5 +0.4
BUM Brajici-Budva 84.37 321⇑ *i*P P 14 17 01.7 -0.4
KZN Kozani 84.39 318 *e*P P 14 17 03.2 +0.9
CBKS Cedar Bluff 84.42 44 *e*P P 14 17 01.6 -0.8
CBKS pmax pmax
comp=Z,46nm,1.2s,mb5.5
CBKS MLR MLR
comp=Z,3µm,22.0s,MS5.6
CBKS Cedar Bluff 84.42 44 P P 14 17 02.2 -0.2
CBKS pmax pmax
comp=Z,46nm,1.2s,mb5.5
CBKS Cedar Bluff 84.42 44 *e*P P 14 17 01.6 -0.9
comp=Z,46nm,1.2s,mb5.5
CBKS LR LR
comp=Z,3µm,22.0s,MS5.6
ULC Ulcinj 84.45 321⇑ *i*P P 14 17 02.0 -0.5
HCY Herceg Novi 84.45 322⇑ *i*P P 14 17 03.1 +0.6
DAVA Damuels 84.48 330⇑ *i*P P 14 17 02.5 0.0
comp=Z,49nm,0.9s,mb5.6,SNR=11
CDF Champ du Feu 84.56 332 *e*P P 14 17 02.6 -0.3
comp=Z,93nm,1.2s,mb5.5
CDF Champ du Feu 84.56 332 *e*P P 14 17 02.6 -0.3
CDF pmax pmax
comp=Z,47nm,1.2s,mb5.5
CDF Champ du Feu 84.56 332 *e*P P 14 17 02.6 -0.3
comp=Z,46nm,1.2s,mb5.5
DLF Lyons Farm 84.57 342 *e*P P 14 17 02.9 0.0
TIR Tirane 84.60 320 P P 14 17 03.6 +0.3
TIR MLR MLR
comp=Z,22µm,19.0s,MS6.6
APE Apeiranthos 84.69 314 P P 14 17 02.8 -1.0
DCN Croghan 84.71 342 *e*P P 14 17 04.5 +0.9
ECH Echery 84.76 332 *e*P P 14 17 03.0 -1.0
ECH pmax pmax
comp=Z,29nm,1.0s,mb5.4
ECH Echery 84.76 332 *e*P P 14 17 03.0 -1.0
comp=Z,29nm,1.0s,mb5.4
THL Klokotos Trika 84.81 318 P P 14 17 03.8 -0.6
MCH1 Michaelchurch 84.82 339 *e*P P 14 17 04.1 0.0
MCH1 AMb AMB 14 17 16.8
comp=Z,81nm,1.7s,mb5.6
MCH1 AMS AMS 14 58 47.8
comp=Z,7µm,22.2s,MS6.0
KARP Karpathos 84.82 312 *e*P P 14 17 04.4 -0.1
SNZO South Karori 84.88 156 PFAKE 14 17 20.0 +16
SNZO LR LR
comp=Z,11µm,21.0s,MS6.2
PPT Papeete 84.89 117 *e*S S 14 27 31.6 +1.8
comp=Z,8µm,33.5s
PPT Papeete 84.89 117 *e*LR LR 14 43 45.0
comp=Z,23µm,24.8s,baz=318
PPT Papeete 84.89 117 LR LR 14 47 06.6
comp=Z,3µm,21.7s,MS5.7,baz=298,slow=30
SWN1 Swindon 84.91 338 AMS AMS 14 58 50.0
comp=Z,8µm,21.1s,MS6.1
LKR Lokris 84.95 317 P P 14 17 05.8 +0.7
LKR Lokris 84.95 317 *e*P P 14 17 04.5 -0.6
AGG Agios Georgios 85.04 317 P P 14 17 04.1 -1.5
ATH Athens Observa 85.05 316 *e*P P 14 17 05.8 +0.2
THR4 Thira Island, 85.19 314 P P 14 17 05.4 -1.0
HINF Hinteralfeld 85.21 332 *e*P P 14 17 05.3 -0.9
THR1 Thera Island 85.22 314 P P 14 17 04.7 -1.8
THR3 Thira Island, 85.23 314 P P 14 17 04.7 -1.8
HAU Haudompre 85.24 332 *e*P P 14 17 05.6 -0.8
comp=Z,39nm,0.9s,mb5.2
HAU *e*MLR MLR
comp=Z,8µm,21.2s,MS5.8
HAU Haudompre 85.24 332 *e*P P 14 17 05.6 -0.8
HAU pmax pmax
comp=Z,20nm,0.9s,mb5.2
HAU MLR MLR
comp=Z,8µm,21.3s,MS6.1
HAU Haudompre 85.24 332 *e*P P 14 17 05.6 -0.8
comp=Z,20nm,0.9s,mb5.2
HAU LR LR
comp=Z,8µm,21.3s,MS6.1
THR6 Thira Island, 85.27 314 P P 14 17 04.9 -1.8
MEZF Maizieres J'vi 85.30 333 *e*P P 14 17 06.4 -0.2
comp=Z,134nm,1.2s,mb5.6
MEZF Maizieres J'vi 85.30 333 *e*P P 14 17 06.4 -0.2
comp=Z,134nm,1.2s,mb6.0
JAN Janina 85.35 318 *e*P P 14 17 07.9 +0.8
TUE Stuetta 85.35 329 *e*P P 14 17 06.8 -0.1
comp=Z,30nm,0.9s,mb5.4
TUE LR LR
comp=Z,11µm,20.0s,MS6.2
EVR Evrytania 85.39 317 *e*P P 14 17 07.1 -0.2
LTK Loutraki 85.42 316 P P 14 17 06.0 -1.5
SCIA State Center 85.47 38 *e*P P 14 17 07.5 -0.2
comp=Z,78nm,1.2s,mb5.7
SCIA LR LR
comp=Z,3µm,21.0s,MS5.7
ZKR Zakros 85.67 312 P P 14 17 08.5 -0.3
IGT Igoumenitsa 85.71 319 P P 14 17 08.2 -0.7
KSU1 Kansas State U 85.88 42 *e*P P 14 17 08.1 -1.6
comp=Z,43nm,1.1s,mb5.6
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.6
NPS Neapolis 85.92 313 *e*P P 14 17 09.8 -0.2
LAST Lasithi 86.07 313 P P 14 17 10.3 -0.4
JFWS Jewell Farm 86.09 36 P P 14 17 11.0 +0.3
JFWS pmax pmax
comp=Z,17nm,0.8s,mb5.3
JFWS Jewell Farm 86.09 36 *e*P P 14 17 09.7 -0.9
comp=Z,17nm,0.8s,mb5.3
JFWS LR LR
comp=Z,4µm,20.0s,MS5.8
HTL Hartland 86.13 340 AMS AMS 14 59 50.0
comp=Z,7µm,21.1s,MS6.0
AMTX Amarillo 86.13 48 *e*P P 14 17 11.5 +0.4
comp=Z,24nm,0.8s,mb5.5
AMTX LR LR
comp=Z,2µm,20.0s,MS5.5
VLI Veliai 86.38 315 *e*P P 14 17 08.5 -3.8
VLI Veliai 86.38 315 *e*P P 14 17 10.0 -2.3
DYA Yadsworthy 86.48 339 AMS AMS 15 00 00.6
comp=Z,7µm,21.4s,MS6.0
CABF La Chapelle 86.50 331⇑ *i*P P 14 17 12.1 -0.6
comp=Z,36nm,0.9s,mb5.3
CABF La Chapelle 86.50 331⇑ *i*P P 14 17 12.1 -0.6
CABF pmax pmax
comp=Z,18nm,0.9s,mb5.3
CABF La Chapelle 86.50 331⇑ *i*P P 14 17 12.1 -0.6
comp=Z,18nm,0.9s,mb5.3
SIVA Sivas 86.55 313 P P 14 17 13.5 +0.4
ITM Ithomi 86.60 316 *e*P P 14 17 12.3 -1.0
VAM Vamos 86.62 314 *e*P P 14 17 13.3 -0.2
LOR Lormes 86.77 333 *e*P P 14 17 13.3 -0.6
comp=Z,89nm,1.1s,mb5.6
LOR *e*MLR MLR
comp=Z,6µm,23.0s,MS5.7
LOR Lormes 86.77 333 *e*P P 14 17 13.3 -0.6
LOR pmax pmax
comp=Z,45nm,1.1s,mb5.6
LOR MLR MLR
comp=Z,6µm,23.0s,MS6.0
LOR Lormes 86.77 333 *e*P P 14 17 13.3 -0.6
comp=Z,45nm,1.1s,mb5.6
LOR LR LR
comp=Z,6µm,23.0s,MS6.0
KARN Karanos 86.79 314 P P 14 17 13.8 -0.5
VLC Villacollemand 86.81 327 PFAKE 14 17 30.0 +16
VLC LR LR
comp=Z,10µm,20.0s,MS6.2
PYL PYLOS 86.91 316 P P 14 17 14.3 -0.5
AQU L'Aquila 86.92 325 *e*P P 14 17 16.3 +1.5
AQU pmax pmax
comp=Z,33nm,1.0s,mb5.5
AQU MLR MLR
comp=Z,18µm,19.0s,MS6.5
AQU L'Aquila 86.92 325 *e*P P 14 17 16.3 +1.5
comp=Z,33nm,1.0s,mb5.5

AQU LR LR
comp=Z,18µm,19.0s,MS6.5
FLN La Foliniere 86.94 336 *e*P P 14 17 14.0 -0.7
comp=Z,37nm,0.8s,mb5.4
FLN *e*MLR MLR
comp=Z,13µm,19.0s,MS6.1
FLN La Foliniere 86.94 336 *e*P P 14 17 14.0 -0.7
FLN pmax pmax
comp=Z,19nm,0.8s,mb5.4
FLN MLR MLR
comp=Z,14µm,19.0s,MS6.4
FLN La Foliniere 86.94 336 *e*P P 14 17 14.0 -0.7
comp=Z,18nm,0.8s,mb5.4
FLN LR LR
comp=Z,14µm,19.0s,MS6.4
LDF La Druitiere 86.97 336 *e*P P 14 17 14.2 -0.7
GLMI Grayling 86.99 31 PFAKE 14 17 30.0 +15
GLMI LR LR
comp=Z,2µm,19.0s,MS5.6
SSF Saint Saulge 87.07 333⇑ *i*P P 14 17 14.8 -0.6
comp=Z,49nm,1.1s,mb5.4
SSF Saint Saulge 87.07 333⇑ *i*P P 14 17 14.8 -0.6
SSF pmax pmax
comp=Z,25nm,1.1s,mb5.4
SSF Saint Saulge 87.07 333⇑ *i*P P 14 17 14.8 -0.6
comp=Z,25nm,1.1s,mb5.3
LPL La Plagne 87.17 330 *e*P P 14 17 15.8 -0.1
comp=Z,31nm,0.9s,mb5.2
LPL La Plagne 87.17 330 *e*P P 14 17 15.8 -0.1
LPL pmax pmax
comp=Z,16nm,0.9s,mb5.2
LPL La Plagne 87.17 330 *e*P P 14 17 15.8 -0.1
comp=Z,16nm,0.9s,mb5.2
LPG La Plagne 87.18 330 *e*P P 14 17 16.0 0.0
comp=Z,46nm,1.0s,mb5.4
LPG La Plagne 87.18 330 *e*P P 14 17 16.0 0.0
LPG pmax pmax
comp=Z,23nm,1.0s,mb5.4
LPG La Plagne 87.18 330 *e*P P 14 17 16.0 0.0
comp=Z,23nm,1.0s,mb5.4
HYF Humbligny 87.20 334 *e*P P 14 17 15.9 -0.1
SMF Signal de Mont 87.30 333 *e*P P 14 17 16.0 -0.6
comp=Z,127nm,1.4s,mb5.7
SMF Signal de Mont 87.30 333 *e*P P 14 17 16.0 -0.6
SMF pmax pmax
comp=Z,64nm,1.4s,mb5.7
SMF Signal de Mont 87.30 333 *e*P P 14 17 16.0 -0.6
comp=Z,64nm,1.4s,mb5.7
AVF Avril sur Loir 87.36 333⇑ *i*P P 14 17 16.3 -0.5
comp=Z,102nm,1.0s,mb5.7
AVF Avril sur Loir 87.36 333⇑ *i*P P 14 17 16.3 -0.5
AVF pmax pmax
comp=Z,51nm,1.0s,mb5.7
AVF Avril sur Loir 87.36 333⇑ *i*P P 14 17 16.3 -0.5
comp=Z,51nm,1.0s,mb5.7
GRR Gorron 87.38 336 *e*P P 14 17 16.5 -0.4
BNI Bardonecchia 87.58 330 *e*P P 14 17 18.1 +0.2
BNI pmax pmax
comp=Z,38nm,1.5s,mb5.4
BNI MLR MLR
comp=Z,6µm,20.0s,MS6.0
BNI Bardonecchia 87.58 330 *e*P P 14 17 18.1 +0.2
comp=Z,38nm,1.5s,mb5.4
BNI LR LR
comp=Z,6µm,20.0s,MS6.0
CUC Castrocucco 87.63 322 PFAKE 14 17 30.0 +12
CUC LR LR
comp=Z,11µm,19.0s,MS6.3
BGF Bois d'Agland 87.73 333 *e*P P 14 17 18.1 -0.5
comp=Z,64nm,1.3s,mb5.4
BGF Bois d'Agland 87.73 333 *e*P P 14 17 18.1 -0.5
BGF pmax pmax
comp=Z,32nm,1.3s,mb5.4
BGF Bois d'Agland 87.73 333 *e*P P 14 17 18.1 -0.5
comp=Z,32nm,1.3s,mb5.4
TIP Timpagrande 87.80 321 *e*P P 14 17 19.8 +0.8
comp=Z,178nm,2.1s,mb5.9
TIP LR LR
comp=Z,10µm,20.0s,MS6.2
MBDF Montbardon 87.81 330 *e*P P 14 17 18.3 -0.7
comp=Z,20nm,0.7s,mb5.1
MBDF Montbardon 87.81 330 *e*P P 14 17 18.3 -0.7
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
MBDF Montbardon 87.81 330 *e*P P 14 17 18.3 -0.7
comp=Z,9.9nm,0.7s,mb5.2
WMOK Wichita Mounta 87.89 46 P P 14 17 19.7 +0.1
WMOK pmax pmax
comp=Z,20nm,1.1s,mb5.3
WMOK Wichita Mounta 87.89 46 *e*P P 14 17 19.3 -0.4
comp=Z,20nm,1.1s,mb5.3
WMOK LR LR
comp=Z,2µm,20.0s,MS5.6
ORIF Oris-en-Rattie 88.00 330 *e*P P 14 17 19.7 -0.2
comp=Z,18nm,0.9s,mb5.0
ORIF *e*MLR MLR
comp=Z,5µm,20.5s,MS5.7
ORIF Oris-en-Rattie 88.00 330 *e*P P 14 17 19.7 -0.2
ORIF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
ORIF Oris-en-Rattie 88.00 330 *e*P P 14 17 19.7 -0.2
comp=Z,9.0nm,0.9s,mb5.0
SGMF Saint Gilles 88.03 337 *e*P P 14 17 19.6 -0.4
ROSF Rostrenen 88.17 338 *e*P P 14 17 20.3 -0.4
TCF Toulx Ste Croi 88.19 333 *e*P P 14 17 20.5 -0.3
SSB Saint Sauveur 88.21 331 P P 14 17 21.1 +0.2
SSB Saint Sauveur 88.21 331 *e*P P 14 17 20.8 -0.1
comp=Z,21nm,1.3s,mb5.2
SBF Sospel 88.27 329 *e*P P 14 17 21.1 -0.1
comp=Z,22nm,0.8s,mb5.2
SBF Sospel 88.27 329 *e*P P 14 17 21.1 -0.1
SBF pmax pmax
comp=Z,11nm,0.8s,mb5.1
SBF Sospel 88.27 329 *e*P P 14 17 21.1 -0.1
comp=Z,11nm,0.8s,mb5.2
VIVF Saint-Julien-l 88.52 331 *e*P P 14 17 22.0 -0.4
comp=Z,29nm,1.0s,mb5.3
VIVF Saint-Julien-l 88.52 331 *e*P P 14 17 22.0 -0.4
VIVF pmax pmax
comp=Z,14nm,1.0s,mb5.2
VIVF Saint-Julien-l 88.52 331 *e*P P 14 17 22.0 -0.4
comp=Z,14nm,1.0s,mb5.3
PGF Pioggiola 88.70 327 *e*P P 14 17 23.0 -0.3
comp=Z,32nm,1.2s,mb5.2
PGF Pioggiola 88.70 327 *e*P P 14 17 23.0 -0.3
PGF pmax pmax
comp=Z,16nm,1.2s,mb5.2
PGF Pioggiola 88.70 327 *e*P P 14 17 23.0 -0.3
comp=Z,16nm,1.2s,mb5.2
MFF Saint Martin d 88.72 335 *e*P P 14 17 23.1 -0.2
TXAR Lajitas Array 88.83 53 P P 14 17 23.3 -0.9
comp=Z,3.6nm,0.7s,mb4.8,baz=293,slow=2.7,SNR=71
TXAR LR LR 14 55 24.1
comp=Z,3µm,21.3s,MS5.6,baz=5.0,slow=34
FRF La Foret Royal 88.84 329 *e*P P 14 17 23.6 -0.3
TBI Tubuai 88.89 121 *e*S S 14 28 12.2 +4.0
comp=Z,2µm,24.9s
TBI Tubuai 88.89 121 *e*LR LR 14 45 11.3
comp=Z,10µm,22.0s,baz=316
SMRF Simiane la Rot 88.91 330 *e*P P 14 17 24.0 -0.2
CEL Celeste 88.93 321 *e*P P 14 17 23.7 -0.8
comp=Z,32nm,0.9s,mb5.7
CEL LR LR
comp=Z,11µm,20.0s,MS6.3
LMR La Mourre 89.08 329 *e*P P 14 17 24.4 -0.7
RJF Les Rejaudoux 89.29 333 *e*P P 14 17 25.7 -0.3
comp=Z,37nm,1.1s,mb5.3
RJF *e*MLR MLR
comp=Z,4µm,20.2s,MS5.6
RJF Les Rejaudoux 89.29 333 *e*P P 14 17 25.7 -0.3
RJF pmax pmax
comp=Z,19nm,1.1s,mb5.3
RJF MLR MLR
comp=Z,4µm,20.3s,MS5.9
RJF Les Rejaudoux 89.29 333 *e*P P 14 17 25.7 -0.3
comp=Z,19nm,1.1s,mb5.3
RJF LR LR
comp=Z,4µm,20.3s,MS5.9
CAF Calviac 89.42 333 *e*P P 14 17 26.7 +0.1
comp=Z,60nm,1.3s,mb5.5
CAF Calviac 89.42 333 *e*P P 14 17 26.7 +0.1
CAF pmax pmax
comp=Z,30nm,1.3s,mb5.5
CAF Calviac 89.42 333 *e*P P 14 17 26.7 +0.1
comp=Z,30nm,1.3s,mb5.5
AAM Ann Arbor 89.46 32 P P 14 17 27.6 +0.7
AAM pmax pmax

comp=Z,19nm,0.9s,mb5.4
AAM Ann Arbor 89.46 32 eP P 14 17 26.8 0.0
comp=Z,19nm,0.9s,mb5.4
AAM LR LR
comp=Z,2μm,21.0s,MS5.6
LASF Ste Croix 89.49 331 eP P 14 17 26.5 -0.4
FVM French Village 89.86 39 eP P 14 17 28.4 -0.4
FVM pmax pmax
comp=Z,43nm,1.3s,mb5.6
FVM French Village 89.86 39 eP P 14 17 28.4 -0.4
comp=Z,43nm,1.3s,mb5.6
LFF La Frestale 89.88 334 eP P 14 17 28.7 0.0
comp=Z,50nm,1.0s,mb5.5
LFF La Frestale 89.88 334 eP P 14 17 28.7 0.0
LFF pmax pmax
comp=Z,25nm,1.0s,mb5.5
LFF La Frestale 89.88 334 eP P 14 17 28.7 0.0
comp=Z,25nm,1.0s,mb5.5
MSEY Mahe Island 90.17 264 PFAKE 14 17 40.0 +9.4
MSEY LR LR
comp=Z,2μm,21.0s,MS5.5
JCT Junction City 90.38 50 P P 14 17 30.8 -0.6
JCT pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
JCT Junction City 90.38 50 eP P 14 17 30.4 -1.0
comp=Z,10nm,0.6s,mb5.3
JCT LR LR
comp=Z,3μm,21.0s,MS5.7
OLIL Olney 90.39 37 P P 14 17 29.6 -1.6
comp=Z,64nm,1.2s,mb5.8
SIUC Southern Illin 90.66 38 eP P 14 17 31.6 -0.9
comp=Z,30nm,0.8s,mb5.7
MTLF Montolieu 90.73 332 eP P 14 17 32.5 -0.2
comp=Z,35nm,1.3s,mb5.2
MTLF Montolieu 90.73 332 eP P 14 17 32.5 -0.2
MTLF pmax pmax
comp=Z,17nm,1.3s,mb5.2
MTLF Montolieu 90.73 332 eP P 14 17 32.5 -0.2
comp=Z,17nm,1.3s,mb5.2
BLO Bloomington 90.77 36 eP P 14 17 32.7 -0.3
BLO pmax pmax
comp=Z,21nm,1.1s,mb5.4
BLO Bloomington 90.77 36 eP P 14 17 32.6 -0.4
comp=Z,21nm,1.1s,mb5.4
LONY Lake Ozonia 90.88 25 PFAKE 14 17 40.0 +6.6
LONY LR LR
comp=Z,3μm,21.0s,MS5.7
MIAR Mount Ida 90.90 43 P P 14 17 33.2 -0.5
MIAR pmax pmax
comp=Z,23nm,0.9s,mb5.5
MIAR Mount Ida 90.90 43 eP P 14 17 32.7 -1.0
comp=Z,23nm,0.9s,mb5.5
MIAR LR LR
comp=Z,3μm,20.0s,MS5.7
ERPA Erie 91.09 30 PFAKE 14 17 50.0 +16
ERPA LR LR
comp=Z,2μm,19.0s,MS5.7
ACSO Alum Creek Sta 91.46 33 eP P 14 17 35.7 -0.5
comp=Z,24nm,1.0s,mb5.5
ACSO LR LR
comp=Z,2μm,20.0s,MS5.6
WDD Wield Dalam 91.48 320 PFAKE 14 17 50.0 +14
WDD LR LR
comp=Z,7μm,19.0s,MS6.1
NCB Newcomb 91.58 25 PFAKE 14 17 50.0 +13
NCB LR LR
comp=Z,3μm,21.0s,MS5.8
WCI Wyandotte Cave 91.64 36 P P 14 17 36.7 -0.4
WCI pmax pmax
comp=Z,14nm,0.9s,mb5.3
WCI Wyandotte Cave 91.64 36 eP P 14 17 36.2 -0.8
comp=Z,14nm,0.8s,mb5.3
WCI LR LR
comp=Z,2μm,20.0s,MS5.5
EPF Esparros 91.68 333 eP P 14 17 36.4 -0.8
comp=Z,16nm,1.1s,mb5.0
EPF Esparros 91.68 333 eP P 14 17 36.4 -0.8
EPF pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
EPF Esparros 91.68 333 eP P 14 17 36.4 -0.8
comp=Z,7.9nm,1.1s,mb5.0
PKME Peaks-Kenny Pk 91.95 22 PFAKE 14 17 50.0 +12
PKME LR LR
comp=Z,3μm,21.0s,MS5.7
LBNH Lisbon 92.08 24 PFAKE 14 17 50.0 +11
LBNH LR LR
comp=Z,2μm,20.0s,MS5.6
SJPF Ste Jean 92.16 334 eP P 14 17 38.5 -0.9
comp=Z,25nm,1.1s,mb5.1
SJPF Ste Jean 92.16 334 eP P 14 17 38.5 -0.9
SJPF pmax pmax
comp=Z,12nm,1.1s,mb5.1
SJPF Ste Jean 92.16 334 eP P 14 17 38.5 -0.9
comp=Z,12nm,1.1s,mb5.2
NATX Nacogdoches 92.41 45 PFAKE 14 17 50.0 +9.2
NATX LR LR
comp=Z,4μm,21.0s,MS5.9
BINY Binghamton 92.53 27 PFAKE 14 17 50.0 +8.9
BINY LR LR
comp=Z,3μm,19.0s,MS5.7
WVT Waverly 92.59 38 P P 14 17 40.7 -0.8
WVT pmax pmax
comp=Z,26nm,1.5s,mb5.4
WVT Waverly 92.59 38 eP P 14 17 40.4 -1.1
comp=Z,26nm,1.5s,mb5.4
WVT LR LR
comp=Z,2μm,20.0s,MS5.6
OXF Oxford 93.09 40 P P 14 17 45.1 +1.2
OXF pmax pmax
comp=Z,30nm,1.0s,mb5.7
OXF Oxford 93.09 40 eP P 14 17 44.0 +0.1
comp=Z,30nm,1.0s,mb5.7
OXF LR LR
comp=Z,2μm,22.0s,MS5.5
HKT Hockley 93.10 47 eP P 14 17 45.9 +1.9
HKT pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
HKT MLR MLR
comp=Z,3μm,22.0s,MS5.6
HKT Hockley 93.10 47 eP P 14 17 45.9 +1.9
comp=Z,10.0nm,1.4s,mb5.0
HKT LR LR
comp=Z,3μm,22.0s,MS5.6
SSPA Standing Stone 93.18 29 PFAKE 14 18 00.0 +16
SSPA LR LR
comp=Z,2μm,21.0s,MS5.5
MCWV Mont Chateau 93.24 31 PFAKE 14 18 00.0 +16
MCWV LR LR
comp=Z,3μm,22.0s,MS5.8
KVTX Kingsville 93.66 50 PFAKE 14 18 00.0 +13
KVTX LR LR
comp=Z,2μm,19.0s,MS5.5
KEST Kesra 94.12 323 P P 14 17 46.8 -1.8
comp=Z,1.4nm,0.8s,mb4.5,baz=96,slow=9.2,SNR=2.9
KEST LR LR 15 05 18.4
comp=Z,5μm,18.7s,MS6.0,baz=98,slow=39
TZTN Tazewell 94.27 35 eP P 14 17 47.9 -1.3
VBMS Vicksburg 94.32 42 PFAKE 14 18 00.0 +10
VBMS LR LR
comp=Z,2μm,20.0s,MS5.6
TKL Tuckaleechee C 94.90 36 P P 14 17 51.8 -0.3
TKL Tuckaleechee C 94.90 36 eP P 14 17 51.2 -0.9
BLA Blacksburg 95.08 33 PFAKE 14 18 00.0 +7.1
BLA LR LR
comp=Z,3μm,22.0s,MS5.7
CBN Corbin 95.48 30 PFAKE 14 18 10.0 +15
CBN LR LR
comp=Z,3μm,21.0s,MS5.8
LRAL Lakeview Retre 95.48 40 PFAKE 14 18 10.0 +15
LRAL LR LR
comp=Z,3μm,21.0s,MS5.7
MVO Moncorvo 95.80 337 eP P 14 17 57.2 +1.1
MVO Moncorvo 95.80 337 ePP PP 14 21 53.8 +6.5
MVO eS S 14 28 42.5 -27
MVO eLQ 14 47 21.9
MVO eLR LR 14 50 24.2
comp=Z,7μm,22.0s
ESDC Sonseca Array 96.15 334 P P 14 17 56.8 -1.0
comp=Z,1.7nm,0.8s,mb4.5,baz=20,slow=4.0,SNR=9.1
ESDC LR LR 15 06 32.7
comp=Z,7μm,18.9s,MS6.2,baz=25,slow=39
ESLA Sonseca Array 96.15 334 PFAKE 14 18 10.0 +12
ESLA LR LR
comp=Z,44μm,19.0s,MS7.0
PAB San Pablo 96.40 334 PFAKE 14 18 10.0 +11
PAB LR LR

comp=Z,10μm,20.0s,MS6.3
MTE Manteigas 96.65 337 eS SKKSac 14 28 57.9 -0.7
MTE eLQ 14 46 50.0
MTE eLR LR 14 51 45.6
comp=Z,5μm,20.0s
MTE Manteigas 96.65 337 PFAKE 14 18 10.0 +10
MTE LR LR
comp=Z,8μm,19.0s,MS6.2
GOGA Godfrey 96.89 37 PFAKE 14 18 10.0 +8.8
GOGA LR LR
comp=Z,2μm,22.0s,MS5.6
BRAL Brewton 97.07 41 PFAKE 14 18 10.0 +7.9
BRAL LR LR
comp=Z,2μm,20.0s,MS5.5
PMRV Marv??o 97.50 337 eP P 14 18 05.5 +1.7
PMRV Marv??o 97.50 337 ePP PP 14 22 04.1 +3.7
PMRV eS SKKSac 14 29 01.6 -3.2
PMRV eLQ 14 48 06.6
PMRV eLR LR 14 53 12.2
comp=Z,7μm,22.0s
CNNC Cliffs of the 97.83 32 PFAKE 14 18 20.0 +15
CNNC LR LR
comp=Z,2μm,22.0s,MS5.6
PESTR Estremoz 98.07 336 eP P 14 18 09.0 +2.6
PESTR Estremoz 98.07 336 ePP PP 14 22 08.7 +3.9
PESTR eS SKKSac 14 29 04.0 -5.0
PESTR eLQ 14 47 41.0
PESTR eLR LR 14 53 24.6
comp=Z,7μm,24.0s
PMAFR Mafra 98.50 338 eP P 14 18 08.9 +0.5
PMAFR Mafra 98.50 338 ePP PP 14 22 12.1 +3.9
PMAFR eS SKKSac 14 29 03.8 -8.4
PMAFR eLR LR 14 53 32.6
comp=Z,6μm,20.0s
PBAR Barrancos 98.53 336 eP P 14 18 11.2 +2.7
PBAR Barrancos 98.53 336 ePP PP 14 22 14.3 +5.9
PBAR eLQ 14 50 19.3
PBAR eLR LR 14 53 49.9
comp=Z,12μm,22.0s
NHSC New Hope 98.65 35 PFAKE 14 18 20.0 +11
NHSC LR LR
comp=Z,4μm,21.0s,MS5.9
RKT Rikitea 98.88 112 eSKSac SKSac 14 28 45.3 +1.1
comp=Z,2μm,29.0s
RKT eSS SS 14 36 25.0 +0.1
comp=Z,2μm,29.8s
RKT Rikitea 98.88 112 eLR LR 14 50 05.6
comp=Z,13μm,27.2s,baz=308
PVAQ Vaqueiros 99.45 336 eP P 14 18 16.4 +3.8
PVAQ Vaqueiros 99.45 336 ePP PP 14 22 19.6 +4.2
PVAQ eS S 14 30 00.7 +20
PVAQ eLQ 14 48 22.6
PVAQ eLR LR 14 54 17.2
comp=Z,11μm,22.0s
SFS San Fernando 99.81 334 PFAKE 14 18 30.0 +16
SFS LR LR
comp=Z,20μm,19.0s,MS6.7
MORF Marmelete 99.83 337 eP Pdif 14 18 19.7 +5.4
MORF Marmelete 99.83 337 ePP PP 14 22 28.5 +10
MORF eS SKKSac 14 29 14.9 -6.9
MORF eLQ 14 50 17.5
MORF eLR LR 14 54 36.9
comp=Z,5μm,22.0s
DWPF Disney 102.25 38 PFAKE 14 18 40.0 +15
DWPF LR LR
comp=Z,2μm,22.0s,MS5.6
RTC Rabat Centre 102.28 334 PFAKE 14 18 40.0 +15
RTC LR LR
comp=Z,4μm,21.0s,MS5.9
CMLA Cha da Macela 103.22 350 PFAKE 14 18 40.0 +11
CMLA LR LR
comp=Z,2μm,22.0s,MS5.6
PTCN Pitcairn Islan 103.61 111 PFAKE 14 18 40.0 +8.9
PTCN LR LR
comp=Z,5μm,20.0s,MS6.0
DRV Dumont d'Urvil 104.88 181 Pdif Pdif 14 18 50.0 +13
DRV Dumont d'Urvil 104.88 181 PP PP 14 23 05.0 +8.0
DRV SKKS SKKSac 14 30 29.0 +33
DRV SP SP 14 32 06.0 +1.5
DRV SS SS 14 37 45.0 -1.5
DRV L 14 48 00.0
DRV R 14 54 00.0
TEIG Tepich 104.91 48 PFAKE 14 18 50.0 +13
TEIG LR LR
comp=Z,2μm,22.0s,MS5.6
ABPO Ambohimpanom 105.24 258 PFAKE 14 23 00.0 +7.4
ABPO LR LR
comp=Z,2μm,20.0s,MS5.7
CASY Casey 107.26 193 PFAKE 14 23 10.0 +15
CASY LR LR
comp=Z,2μm,22.0s,MS5.6
TGUH Tegucigalpa,Un 110.29 52 PFAKE 14 23 10.0 +7.8
TGUH LR LR
comp=Z,2μm,22.0s,MS5.7
SDDR Presa de Saban 114.82 35 PFAKE 14 23 20.0 +9.2
SDDR LR LR
comp=Z,3μm,20.0s,MS5.8
TORD Torodi Ar. Bea 116.60 316 PKP PKPdf 14 23 14.3 0.0
comp=Z,0.7nm,0.6s,baz=28,slow=1.3,SNR=6.6
TORD PP PP 14 24 15.7 -5.5
comp=Z,5.0nm,1.0s,baz=15,slow=5.6,SNR=7.1
TORD PKKPab PKKPab 14 33 50.3 +2.2
comp=Z,2.1nm,1.1s,baz=206,slow=3.6,SNR=3.6
TORD Torodi Ar. Bea 116.60 316 PKP PKPdf 14 23 14.3 0.0
TORD PP PP 14 24 15.7 -5.5
TORD PKKPab PKKPab 14 33 50.3 +2.2
SBA Scott Base 117.09 174 PFAKE 14 23 20.0 +6.7
SBA LR LR
comp=Z,2μm,22.0s,MS5.6
SJG San Juan 117.77 30 PFAKE 14 23 30.0 +14
SJG LR LR
comp=Z,3μm,22.0s,MS5.8
LSZ Lusaka 117.92 272 PKIKP PKPdf 14 23 15.4 -1.3
LSZ MLR MLR
comp=Z,2μm,21.0s,MS5.7
BCIP Isla Barro Col 118.60 49 PFAKE 14 23 30.0 +12
BCIP LR LR
comp=Z,1μm,22.0s,MS5.6
PAYG Puerto Ayora 119.13 65 PFAKE 14 23 30.0 +11
PAYG LR LR
comp=Z,3μm,20.0s,MS5.9
RPN Rapa Nui 120.33 102 PFAKE 14 23 30.0 +9.0
RPN LR LR
comp=Z,7μm,22.0s,MS6.2
SDV Santo Domingo 123.87 40 ePKPdf PKPdf 14 23 27.6 -0.7
SDV LR LR
comp=Z,832nm,21.0s,MS5.4
BBGH Gun Hill 124.77 26 PFAKE 14 23 40.0 +10
BBGH LR LR
comp=Z,2μm,20.0s,MS5.8
GRGR Grenville 124.96 29 PFAKE 14 23 40.0 +10
GRGR LR LR
comp=Z,3μm,22.0s,MS5.9
LBTB Lobatse 125.27 264 ePKIKP PKPdf 14 23 30.3 -0.3
LBTB MLR MLR
comp=Z,3μm,22.0s,MS5.9
DBIC Dimbokro 125.51 318 PKP PKPdf 14 23 30.1 -1.4
comp=Z,2.4nm,0.7s,baz=266,slow=2.5,SNR=5.8
DBIC Dimbokro 125.51 318 ePKPdf PKPdf 14 23 30.4 -1.1
DBIC LR LR
comp=Z,4μm,21.0s,MS6.1
TIC Toumodi 125.61 318 ePKIKP PKPdf 14 23 31.8 +0.1
comp=Z,5.8nm,0.2s
KIC Kosan Boka 125.71 318 ePKIKP PKPdf 14 23 32.0 +0.2
comp=Z,36nm,1.0s
LIC Lamto 125.97 318 ePKIKP PKPdf 14 23 31.4 -0.9
comp=Z,20nm,1.0s
LIC Lamto 125.97 318 ePKIKP PKPdf 14 23 30.3 -2.0
comp=Z,14nm,1.0s
LIC eMLR MLR
comp=Z,6μm,21.5s,MS5.9
LIC Lamto 125.97 318 ePKPdf PKPdf 14 23 30.3 -2.0
LIC LR LR
comp=Z,3μm,21.5s,MS5.9
OTAV Otavalo 126.45 54 PFAKE 14 23 50.0 +17
OTAV LR LR
comp=Z,2μm,22.0s,MS5.7
BOSA Boshof 127.30 261 PKP PKPdf 14 23 32.4 -2.0
comp=Z,5.6nm,1.0s,baz=273,slow=3.8,SNR=5.4
BOSA Boshof 127.30 261 PKP PKPdf 14 23 32.4 -2.0
BOSA LR LR
comp=Z,2μm,19.0s,MS5.8
QSPA South Pole Qui 128.27 180 ePKPdf PKPdf 14 23 34.0 -0.7
QSPA LR LR
comp=Z,2μm,22.0s,MS5.7

TSUM Tsumeb 128.45 276 ePKPdf PKPdf 14 23 37.0 +0.1
TSUM LR LR
comp=Z,2μm,22.0s,MS5.8
SUR Sutherland 132.41 259 PFAKE 14 24 00.0 +16
SUR LR LR
comp=Z,2μm,20.0s,MS5.9
NNA Nana 136.52 63 PFAKE 14 24 00.0 +7.8
NNA LR LR
comp=Z,3μm,21.0s,MS6.0
SNAA Sanae 142.32 197 ePKPdf 14 23 54.9
SNAA e PKPdf 14 23 59.1 -1.9
SNAA e 14 24 09.1
SNAA e 14 24 17.3
SNAA Sanae 142.32 197 ePKPpre 14 23 54.8
SHEL Horse Pasture 143.87 300 PFAKE 14 24 20.0 +15
SHEL LR LR
comp=Z,2μm,19.0s,MS6.0
VNA2 Neumayer--Watz 143.89 196 ePKPdf PKPdf 14 24 00.6 -3.2
baz=143,slow=3.1
VNA2 e 14 24 02.4
VNA2 e 14 24 04.9
VNA2 e 14 24 15.1
VNA2 e 14 24 19.6
VNA2 e 14 24 24.2
VNA2 e 14 24 32.9
VNA3 Neumayer Olymp 144.13 195 ePKPdf PKPdf 14 24 01.0 -3.2
VNA3 e 14 24 02.7
VNA3 e 14 24 05.2
VNA3 e 14 24 15.4
VNA3 e 14 24 19.1
VNA3 e 14 24 24.4
VNA3 e 14 24 33.4
VNA1 Neumayer--Stat 144.29 196 ePKPdf PKPdf 14 24 03.7 -0.8
VNA1 e 14 24 06.4
VNA1 e 14 24 16.3
VNA1 e 14 24 19.8
VNA1 e 14 24 25.3
VNA1 e 14 24 34.3
RCBR Riachuelo 147.39 356 ePKPbc PKPbc 14 24 14.9 +0.9
LVC Limon Verde 149.19 68 ePKPbc PKPbc 14 24 18.5 0.0
LVC LR LR
comp=Z,3μm,21.0s,MS6.1
PMSA Palmer Station 149.59 158 PFAKE 14 24 20.0 +6.5
PMSA LR LR
comp=Z,2μm,19.0s,MS6.0
LCO Las Campanas 151.32 81 ePKPbc PKPbc 14 24 23.5 +0.1
PLCA Paso Flores 154.90 105 PKPbc PKPbc 14 24 29.5 -1.4
comp=Z,4.3nm,1.2s,baz=218,slow=3.3,SNR=3.0
PLCA Paso Flores 154.90 105 PKPbc PKPbc 14 24 29.5 -1.4
PLCA LR LR
comp=Z,1μm,20.0s,MS5.8
BDFB Brasilia 155.55 24 PKPbc PKPdf 14 24 32.9 +9.1
comp=Z,1.6nm,0.7s,baz=120,slow=20,SNR=4.0
CPUP Villa Florida 159.69 59 PKPab PKPab 14 25 04.4 -3.1
comp=Z,1.5nm,0.7s,baz=323,slow=1.8,SNR=2.9
CPUP Villa Florida 159.69 59 PKP2 PKPab 14 25 04.4 -3.1
CPUP pmax pmax
comp=Z,2.0nm,0.7s

NEIC 25 14:12:22.5, 6014N×15312W, h143km, MG3.5 (AEIC), **After AEIC., Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUL	**Augustine Lava**	**0.78**	**192**	P		Pn	14 12 44.5	-0.2
AUL				S		Sn	14 13 01.7	+0.1
SLKM	**Skilak Lake**	**1.49**	**74**	P		Pn	14 12 50.6	-0.6
SVW2	**Sparrevohn**	**1.55**	**309**	*eP*		Pn	14 12 50.1	-1.8
FIB	**Fire Island**	**1.78**	**53**	P		Pn	14 12 54.6	+0.1
SEW	**Seward**	**1.84**	**90**	P		Pn	14 12 54.7	-0.5
SEW				S		Sn	14 13 18.8	-1.4
RC01	**Rabbit Creek A**	**1.92**	**59**	P		Pn	14 12 55.1	-1.0
RC01				S		Sn	14 13 21.0	-1.0
SKT	**Skwentna**	**2.00**	**22**	P		Pn	14 12 56.1	-1.0
SKT				S		Sn	14 13 22.8	-0.8
KDAK	**Kodiak Island**	**2.38**	**173**	P		Pn	14 12 59.6	-2.1
	655nm,0.8s,SNR=5.3							
KDAK	**Kodiak Island**	**2.38**	**173**	P		Pn	14 13 00.0	-1.7
PMR	**Palmer**	**2.43**	**52**	S		Sn	14 13 30.7	-2.3
KNK	**Knik Glacier**	**2.62**	**59**	P		Pn	14 13 03.0	-1.6
GHO	**Glory Hole Cre**	**2.62**	**50**	P		Pn	14 13 02.9	-1.7
PPLA	**Purkeypile**	**2.80**	**9**	P		Pn	14 13 06.8	-0.1
SML	**Sawmill**	**2.87**	**52**	P		Pn	14 13 06.0	-1.8
OHAK	**Old Harbor**	**2.93**	**182**	P		Pn	14 13 06.6	-1.9
TT01	**Tatalina**	**3.10**	**335**	P		Pn	14 13 08.6	-2.2
KTH	**Kantishna Hill**	**3.58**	**16**	P		Pn	14 13 15.5	-1.4
TRF	**Thorofare Moun**	**3.58**	**21**	P		Pn	14 13 16.3	-0.6
EYAK	**Cordova Ski Ar**	**3.69**	**80**	P		Pn	14 13 17.9	-0.4
BPAW	**Bear Paw Mtn.**	**4.10**	**13**	P		Pn	14 13 22.0	-1.7
MCK	**McKinley**	**4.11**	**27**	P		Pn	14 13 23.0	-0.8
PAX	**Paxson**	**4.63**	**49**	P		Pn	14 13 29.8	-0.9
COLA	**College**	**5.34**	**25**	P		Pn	14 13 38.3	-1.8
IL1	**Eielson Array**	**5.47**	**29**	P		Pn	14 13 40.1	-1.8
PNL	**Peninsula**	**6.92**	**88**	P		Pn	14 13 59.9	-1.3

ISK ***25*** *14:28:53.7, 3840N×3908E, h3km, MD3.5*
ISCJB ***25*** *14:28:54.8±0.5, 3841N±003×3909E±003, h5km±4km, Error ellipse: s-maj=4.9km s-min=3.4km az=7.9*
DDA ***25*** *14:28:54.5, 3841N×3909E, h7km±3km, Md3.6*
CSEM ***25*** *14:28:54.1±0.1, 3840N×3907E, h8km, MD3.6, Error ellipse: s-maj=1.3km s-min=1.0km az=169.0*

ISC 25 14:28:55.3±0.4, 3841N±003×3908E±003, h5km±4km, n24, σ0.8 76/33, 3C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.11**	**318**	↑*iP*		**Pg**	**14 28 57.8**	**+0.2**
ELZG				*i* S		**Sg**	**14 29 00.0**	**+0.8**
SVRC	**Sivrice-ELAZID**	**0.18**	**101**	PG		**Pg**	**14 28 58.2**	**-0.6**
SVRC				*e*SG		**Sg**	**14 29 01.7**	**+0.4**
MALT	**Malatya**	**0.52**	**259**	*e*PG		**Pg**	**14 29 04.7**	**-0.7**
MALT				*e*SG		**Sg**	**14 29 12.7**	**+0.6**
PTK	**Pertek**	**0.54**	**27**	*e*PG		**Pg**	**14 29 04.8**	**-0.9**
AKCD	**Akcadag**	**0.92**	**263**	↑*iP*		**Pg**	**14 29 11.8**	**-1.1**
AKCD				*i* S		**Sg**	**14 29 25.0**	**+0.1**
DIYA	**Diyarbakir**	**0.95**	**121**	↑*iP*		**Pg**	**14 29 13.6**	**-0.1**
DIYA				*i* S		**Sg**	**14 29 26.6**	**+0.6**
URFA	**Urfa**	**0.99**	**192**	*e*PG		**Pg**	**14 29 13.5**	**-0.9**
URFA				*e*SG		**Sg**	**14 29 27.4**	**+0.2**
DIY	**Diyarbakir**	**1.04**	**119**	*e*PG		**Pg**	**14 29 14.6**	**-0.7**
DIY				*e*SG		**Sg**	**14 29 29.5**	**+0.8**
ATAB	**Bozova**	**1.13**	**214**	*eP*		**Pg**	**14 29 16.5**	**-0.4**
ATAB				*e*S		**Sg**	**14 29 32.4**	**+0.8**
DARE	**Darende-Malaty**	**1.13**	**299**	*e*PN		**Pn**	**14 29 18.2**	**+0.4**
EZC	**Erzincan**	**1.45**	**23**	*e*PN		**Pn**	**14 29 20.4**	**-1.8**
BEST	**Besiri**	**1.80**	**106**	*e*P		**Pn**	**14 29 26.5**	**-0.6**
BEST				*e*S		**Sn**	**14 29 50.2**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.89**	**279**	*e*PN		**Pn**	**14 29 31.1**	**+2.9**
GAZ	**Gaziantep**	**1.93**	**231**	*e*PN		**Pn**	**14 29 28.8**	**0.0**
KMRS	**Kahramanmaras**	**1.95**	**243**	*e*PN		**Pn**	**14 29 28.2**	**-0.8**
GUMT	**Gumushane**	**2.07**	**8**	*e*PN		**Pn**	**14 29 31.3**	**+0.6**
SVSK	**Karacayir**	**2.21**	**313**	*e*PN		**Pn**	**14 29 33.6**	**+0.9**
EZM	**Erzurum**	**2.32**	**49**	*e*PN		**Pn**	**14 29 34.2**	**0.0**
BNN	**Bunyan**	**2.57**	**281**	*e*PN		**Pn**	**14 29 37.1**	**-0.6**
KOZT	**Kozan**	**2.74**	**251**	*e*PN		**Pn**	**14 29 39.7**	**-0.2**
YOZ	**Yozgat**	**3.17**	**294**	*e*PN		**Pn**	**14 29 45.6**	**-0.3**
AGRB	**Hanur-Agry**	**3.26**	**68**	*e*PN		**Pn**	**14 29 47.5**	**+0.3**
BCA	**Borcka**	**3.60**	**32**	*e*PN		**Pn**	**14 29 52.4**	**+0.5**
CUKT	**Cukurca**	**3.77**	**107**	*e*PN		**Pn**	**14 29 55.3**	**+1.2**

CSEM ***25*** *14:42:19.3±0.2, 3694N×2931E, h10km, MD2.9, Error ellipse: s-maj=6.6km s-min=5.4km az=9.0*
ISK ***25*** *14:42:19.7, 3692N×2928E, h17km, MD2.9*
ISCJB ***25*** *14:42:20.1±0.6, 3697N±004×2929E±004, h3km±8km, Error ellipse: s-maj=6.8km s-min=5.2km az=151.8*
DDA ***25*** *14:42:20.2, 3696N×2934E, h7km±5km, Md2.9*

ISC 25 14:42:20.5±0.6, 3698N±004×2928E±004, h6km±8km, n10, σ0.9 80/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.34**	**40**	*i* P		**Pg**	**14 42 26.7**	**-0.5**
GOLH				*i* S		**Sg**	**14 42 32.4**	**+0.7**
ELL	**Elmali**	**0.55**	**114**	*e*PG		**Pg**	**14 42 31.0**	**-0.1**
ELL				*e*SG		**Sg**	**14 42 38.7**	**+0.5**
TURN	**Turunc**	**0.56**	**260**	*i* P		**Pg**	**14 42 37.1**	**+6.0**
DALT	**Dalyan (Mudla)**	**0.56**	**249**	*e*PG		**Pg**	**14 42 30.6**	**-0.7**
DALT				*e*SG		**Sg**	**14 42 38.9**	**+0.5**

AKAS	**Kas**	**0.78**	**161**	*i* P	**Pg**	**14 42 34.0**	**-1.5**
AKAS				*i* S	**Sg**	**14 42 46.8**	**+1.1**
YER	**Yerkesik**	**0.82**	**282**	*e*PG	**Pg**	**14 42 36.4**	**+0.2**
KHL	**Karahalli**	**1.36**	**8**	*e*PN	**Pn**	**14 42 44.6**	**-1.4**
KHAL	**Karahalli**	**1.40**	**7**	*i* P	**Pn**	**14 42 46.6**	**0.0**
KHAL				*i* S	**Sb**	**14 43 06.1**	**+0.9**
BDRM	**Kayabasi**	**1.48**	**274**	*i* P	**Pn**	**14 42 47.1**	**-0.5**
BDRM				*i* S	**Sn**	**14 43 08.4**	**+1.1**
KULA	**Kula-Manisa**	**1.61**	**342**	*e*PN	**Pn**	**14 42 49.1**	**-0.4**

IDC ***25*** *14:47:58.4±1.0, 265S×12224E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/18, mbtmp3.8/8, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx3.3/22, Error ellipse: s-maj=36.7km s-min=17.3km az=57.0*

ISCJB ***25*** *14:48:02.2±1.1, 271S±006×122.18E±006, h42km±12km, mb3.8/7, Error ellipse: s-maj=11.4km s-min=10.2km az=43.3*

NEIC ***25*** *14:48:03.6±0.5, 273S×122.16E, h35km, mb4.3/1, Error ellipse: s-maj=15.0km s-min=7.7km az=58.0*

DJA ***25*** *14:48:04, 293S×122.04E, h100km, MLv4.3/5*

ISC 25 14:48:02.9±3.3, 271S±006×12217E±007, h29km±27km, n19, σ0§60/22, mb3.8/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDI	**Kendari**	**1.32**	**160**	P	**Pn**	**14 48 25.1**	**-0.3**
KDI				S	**Sn**	**14 48 45.6**	**+3.6**
PCI	**Palu**	**2.94**	**308**	P	**Pn**	**14 48 48.2**	**+0.5**
KAPI	**Kappang**	**3.32**	**226**	Pn	**Pn**	**14 48 52.2**	**-0.8**
	9.5nm,0.3s,baz=88,slow=2.7,SNR=24						
KAPI				Sn	**Sn**	**14 49 31.8**	**+0.2**
	9.9nm,0.3s,baz=84,slow=22,SNR=7.4						
KAPI				LR	LR	14 50 25.3	
	comp=Z,774nm,20.2s,baz=13,slow=43						
KAPI	**Kappang**	**3.32**	**226**	*e*Pn	**Pn**	**14 48 52.4**	**-0.6**
KAPI				Sn	**Sn**	**14 49 31.8**	**+0.2**
KAPI				LR	LR	14 50 25.3	
KAPI	**Kappang**	**3.32**	**226**	P	**Pn**	**14 48 52.2**	**-0.8**
MNI	**Manado**	**4.92**	**33**	P	**Pn**	**14 49 23.0**	**+8.1**
	111nm,0.9s,0.5nm						
LBMI	**Labuha**	**5.71**	**69**	P	**Pn**	**14 49 26.2**	**+0.3**
WRA	**Warramunga Arr**	**20.85**	**146**	P	**P**	**14 52 41.9**	**-0.7**
	1.0nm,0.8s,baz=326,slow=12,SNR=8.0						
WB2	**Warramunga Arr**	**20.85**	**146**	*e*P	**P**	**14 52 43.0**	**+0.4**
ASAR	**Alice Springs**	**23.73**	**152**	P	**P**	**14 53 13.5**	**+0.7**
	1.2nm,0.7s,mb3.5,baz=327,slow=9.0,SNR=11						
PSI	**Prapat**	**23.87**	**283**	P	**P**	**14 53 14.3**	**0.0**
	8.8nm,1.1s,mb4.1,baz=124,slow=8.1,SNR=5.1						
CMAR	**Chiang Mai Arr**	**31.07**	**314**	P	**P**	**14 54 19.5**	**+0.7**
	1.2nm,0.8s,mb3.8,baz=138,slow=6.5,SNR=11						
CHTO	**Chiang Mai**	**31.30**	**314**	*e*P	**P**	**14 54 21.4**	**+0.5**
STKA	**Stephens Creek**	**34.30**	**150**	P	**P**	**14 54 46.4**	**-0.5**
	1.6nm,0.9s,mb4.0,baz=301,slow=13,SNR=3.5						
SONM	**Songino Array**	**52.20**	**347**	P	**P**	**14 57 10.2**	**-0.8**
	0.3nm,0.7s,mb3.4,baz=142,slow=4.9,SNR=3.8						
MK31	**Makanchi Array**	**60.49**	**330**	*e*P	**P**	**14 58 10.2**	**0.0**
MKAR	**Makanchi Array**	**60.49**	**330**	P	**P**	**14 58 09.8**	**-0.5**
	0.8nm,0.7s,mb3.9,baz=142,slow=6.0,SNR=9.0						
MKAR	**Makanchi Array**	**60.49**	**330**	P	**P**	**14 58 09.8**	**-0.5**
KURK	**Kurchatov**	**64.91**	**331**	*e*P	**P**	**14 58 39.3**	**-0.3**
	2.8nm,1.0s,mb4.2						

ISK ***25*** *15:19:37.7, 37.31N×28.28E, h6km, MD2.7*

ISCJB ***25*** *15:19:38.7±0.5, 37.28N±003×28.25E±003, h13km±6km, Error ellipse: s-maj=5.6km s-min=4.5km az=9.3*

CSEM ***25*** *15:19:38.2±0.2, 37.24N×28.19E, h2km, MD2.7, Error ellipse: s-maj=6.4km s-min=4.2km az=30.0*

DDA ***25*** *15:19:39.2, 37.22N×28.18E, h7km±5km, Md2.8*

ISC 25 15:19:39.2±0.6, 3727N±004×2822E±003, h13km±9km, n13, σ0§91/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.14**	**160**	*e*PG	**Pg**	**15 19 41.7**	**-1.1**
YER				*e*SG	**Sg**	**15 19 44.6**	**-0.7**
MLSB	**Milas**	**0.35**	**274**	*e*PG	**Pg**	**15 19 46.1**	**-0.3**
MLSB				*e*SG	**Sg**	**15 19 52.0**	**+0.8**
TURN	**Turunc**	**0.50**	**142**	*i* P	**Pg**	**15 19 48.3**	**-0.8**
TURN				*i* S	**Sg**	**15 19 56.2**	**+0.4**
DALT	**Dalyan (Mudla)**	**0.60**	**146**	*e*PG	**Pg**	**15 19 50.0**	**-1.0**
DALT				*e*SG	**Sg**	**15 19 58.9**	**0.0**
BDRM	**Kayabasi**	**0.65**	**252**	*i* P	**Pg**	**15 19 50.5**	**-1.4**
BDRM				*i* S	**Sg**	**15 20 00.3**	**-0.2**
BDRM	**Kayabasi**	**0.65**	**252**	*i* P	**Pg**	**15 19 50.5**	**-1.4**
BDRM				*i* S	**Sg**	**15 20 00.3**	**-0.2**
DAT	**Datca**	**0.75**	**224**	*e*PG	**Pg**	**15 19 53.6**	**-0.1**
DAT				*e*SG	**Sg**	**15 20 05.2**	**+1.7**
GCAM	**G?zelcaml?**	**0.89**	**299**	*i* P	**Pg**	**15 19 56.2**	**-0.3**
GCAM				*i* S	**Sg**	**15 20 09.1**	**+0.9**
GCAM	**G?zelcaml?**	**0.89**	**299**	*i* P	**Pg**	**15 19 56.2**	**-0.3**
GCAM				*i* S	**Sg**	**15 20 09.1**	**+0.9**
KULA	**Kula-Manisa**	**1.29**	**16**	*e*PN	**Pn**	**15 20 01.8**	**-1.1**
KHAL	**Karahalli**	**1.49**	**42**	*i* P	**Pg**	**15 20 07.8**	**-0.1**
KHAL				*i* S	**Sg**	**15 20 28.2**	**+1.0**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pg**	**15 20 09.1**	**+0.7**
AKAS				*i* S	**Sg**	**15 20 30.1**	**+1.9**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pg**	**15 20 09.1**	**+0.7**
AKAS				*i* S	**Sg**	**15 20 30.0**	**+1.9**

CSEM ***25*** *15:24:21.0±0.1, 3724N×2821E, h2km, MD2.7, Error ellipse: s-maj=2.0km s-min=1.6km az=31.0*

DDA ***25*** *15:24:21.8, 3724N×2822E, h10km±6km, Md2.8*

ISK ***25*** *15:24:21.0, 3726N×2824E, h4km, MD2.7*

ISCJB ***25*** *15:24:22.3±0.4, 3720N±003×2821E±003, h10km, Error ellipse: s-maj=4.8km s-min=3.6km az=21.9*

ISC 25 15:24:22.5±0.5, 3723N±005×2823E±004, h7km±8km, n13, σ0§81/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.10**	**153**	*e*PG	**Pg**	**15 24 24.4**	**-0.4**
YER				*e*SG	**Sg**	**15 24 26.9**	**+0.5**
MLSB	**Milas**	**0.36**	**281**	*e*PG	**Pg**	**15 24 28.5**	**-1.1**
MLSB				*e*SG	**Sg**	**15 24 34.8**	**+0.4**
TURN	**Turunc**	**0.46**	**139**	*i* P	**Pg**	**15 24 30.1**	**-1.3**
TURN				*i* S	**Sg**	**15 24 38.5**	**+1.0**
DALT	**Dalyan (Mudla)**	**0.56**	**144**	*e*PG	**Pg**	**15 24 33.0**	**-0.3**
BDRM	**Kayabasi**	**0.64**	**256**	*i* P	**Pg**	**15 24 34.7**	**-0.1**
BDRM				*i* S	**Sg**	**15 24 43.4**	**+0.1**
DAT	**Datca**	**0.72**	**227**	*e*PG	**Pg**	**15 24 36.1**	**-0.2**
GCAM	**G?zelcaml?**	**0.92**	**301**	*i* P	**Pg**	**15 24 40.1**	**0.0**
GCAM				*i* S	**Sg**	**15 24 53.0**	**+0.8**
GOLH	**Golhisar**	**1.07**	**89**	*i* P	**Pg**	**15 24 42.9**	**-0.1**
GOLH				*i* S	**Sg**	**15 25 02.1**	**+5.4**
MANT	**Manisa**	**1.29**	**12**	*i* P	**Pn**	**15 24 46.1**	**-0.7**
MANT				*i* S	**Sb**	**15 25 05.2**	**+1.4**
KULA	**Kula-Manisa**	**1.33**	**15**	*e*PN	**Pn**	**15 24 46.2**	**-1.2**
ELL	**Elmali**	**1.43**	**109**	*e*PN	**Pn**	**15 24 48.4**	**-0.3**
AKAS	**Kas**	**1.49**	**131**	*i* P	**Pn**	**15 24 51.7**	**+2.2**
AKAS				*i* S	**Sn**	**15 25 13.9**	**+4.8**
KHAL	**Karahalli**	**1.52**	**41**	*i* P	**Pn**	**15 24 49.6**	**-0.4**
KHAL				*i* S	**Sn**	**15 25 10.1**	**0.0**

IDC 25 15:26:54.9±35.0, 888N×12479E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/18, mbtmp3.6/3, MS4.0/1, Ms1 4.0/1, ms1mx3.4/26, 1C, Error ellipse: s-maj=598.0km s-min=195.2km az=157.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**1.88**	**171**	⇑*i*P	Px	15 27 43.4	
KCP				*i* S	Sn	15 27 59.7	+7.0
WRA	**Warramunga Arr**	**30.14**	**162**	P	P	15 33 07.9	+1.2
	0.2nm,0.4s,baz=343,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**33.55**	**165**	P	P	15 33 35.9	-0.7
	0.4nm,0.6s,baz=343,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**43.59**	**159**	P	P	15 35 00.6	-0.3
	2.0nm,0.8s,baz=342,slow=6.4,SNR=5.6						
FX1	**Attu Island--F**	**58.68**	**32**	LR	LR	15 59 54.4	
	comp=Z,127nm,19.6s,baz=129,slow=34						

ISCJB ***25*** *15:34:47.5±1.2, 2892N±006×5841E±009, h10km, Error ellipse: s-maj=13.1km s-min=5.8km az=37.6*

CSEM ***25*** *15:34:51.2±0.1, 2905N×5801E, h10km, ML4.2, Error ellipse: s-maj=4.0km s-min=2.7km az=168.0*

THR ***25*** *15:34:52.9±0.7, 29.16N×5809E, h14km±8km, ML4.0*

NEIC ***25*** *15:34:53.0, 2921N×5848E, h12km, MN4.2(TEH), After TEH.*

TEH ***25*** *15:35:10.1, 2921N×5848E, h12km, ML4.2*

ISC 25 15:34:50.7±2.1, 2907N±007×5841E±009, h10km±18km, n39, σ1§26/47, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**1.70**	**303**	*e*Pg	**Pn**	**15 35 19.2**	**-1.2**
KRBR				AML	AML	15 35 43.4	
	comp=E,2μm,0.3s						
KRBR				AML	AML	15 35 45.6	
	comp=N,3μm,0.5s						
ZHSF	**Zahedan**	**2.14**	**75**	*e*Pn	**Pn**	**15 35 33.7**	**+7.3**
BNDS	**Bandar-Abbas**	**2.58**	**230**	*e*Pn	**Pn**	**15 35 34.2**	**+1.7**
BNDS				*e*Sg	**Sg**	**15 36 09.4**	**-4.3**
IKOO	**Kooshah**	**3.38**	**9**	*e*Sn	**Sn**	**15 36 20.6**	**-3.2**
IKOO	**Kooshah**	**3.38**	**9**	*e*Pn	**Pn**	**15 35 43.0**	**-0.6**
IKOO				*e*Sn	**Sn**	**15 36 20.6**	**-3.2**
IKOO				*e*		15 36 37.3	
IBAF	**Bafgh**	**3.51**	**316**	*e*Pn	**Pn**	**15 35 46.1**	**+0.8**
IBAF				*e*Sn	**Sn**	**15 36 26.1**	**-0.9**
IBAF	**Bafgh**	**3.51**	**316**	Pn	**Pn**	**15 35 46.0**	**+0.7**
IBAF				Sn	**Sn**	**15 36 26.1**	**-0.9**
IBAF	**Bafgh**	**3.51**	**316**	*e*Pn	**Pn**	**15 35 46.1**	**+0.8**
IBAF				*e*Sn	**Sn**	**15 36 26.1**	**-0.9**
IBAF				*e*		15 36 48.7	
ITEG	**Tejag**	**3.83**	**4**	*e*Pn	**Pn**	**15 35 49.3**	**-0.4**
ITEG	**Tejag**	**3.83**	**4**	*e*Pn	**Pn**	**15 35 49.3**	**-0.4**
ITEG				*e*		15 35 49.9	
IDAH	**Dahanechah**	**3.87**	**19**	*e*Sn	**Sn**	**15 36 32.0**	**-3.7**
IDAH	**Dahanechah**	**3.87**	**19**	*e*Pn	**Pn**	**15 35 50.9**	**+0.7**
IDAH				*e*Sn	**Sn**	**15 36 32.0**	**-3.7**
IDAH				*e*		15 37 03.2	
IMEH	**Mehriz**	**4.02**	**306**	*e*Pn	**Pn**	**15 35 53.0**	**+0.7**
IMEH				*e*		15 36 57.7	
ISRV	**Sarvestan**	**4.64**	**275**	Pn	**Pn**	**15 36 03.4**	**+2.6**
ISRV	**Sarvestan**	**4.64**	**275**	*e*Pn	**Pn**	**15 36 03.5**	**+2.7**
ISRV				*e*		15 37 39.7	
ICHK	**Chekchek**	**4.68**	**314**	*e*Pn	**Pn**	**15 36 07.5**	**+6.1**
ICHK				*e*		15 37 21.8	
GHIR	**Ghir-Karzin**	**4.83**	**262**	*e*Pn	**Pn**	**15 36 04.2**	**+0.8**
GHIR				AML	AML	15 37 05.9	
	comp=N,116nm,0.5s						
GHIR	**Ghir-Karzin**	**4.83**	**262**	*e*Pn	**Pn**	**15 36 03.7**	**+0.3**
	SNR=52						
ISAD	**Sadrabad**	**4.96**	**306**	*e*Pn	**Pn**	**15 36 07.4**	**+2.1**
ISAD				*e*		15 37 32.0	
IMOK	**Mouk**	**4.98**	**271**	*e*Pn	**Pn**	**15 36 07.4**	**+1.8**
IMOK				*e*Sn	**Sn**	**15 37 04.1**	**+0.9**
IMOK	**Mouk**	**4.98**	**271**	*e*Pn	**Pn**	**15 36 07.4**	**+1.8**
IMOK				*e*Sn	**Sn**	**15 37 04.1**	**+0.9**
IMOK				*e*		15 37 18.0	
IZEF	**Zefreh**	**6.46**	**308**	Pn	**Pb**	**15 36 45.8**	**+2.5**
IZEF	**Zefreh**	**6.46**	**308**	*e*Pn	**Pb**	**15 36 45.9**	**+2.6**
IZEF				*e*		15 38 32.1	
IKLH	**Kolahrood**	**7.22**	**308**	Pn	**Pb**	**15 36 49.3**	**-6.9**
IKLH	**Kolahrood**	**7.22**	**308**	*e*Pn	**Pb**	**15 36 49.4**	**-6.8**
IKLH				*e*		15 39 01.5	
IPIR	**Pirpir**	**7.40**	**301**	Pn	**Pn**	**15 36 43.7**	**+5.0**
IPIR	**Pirpir**	**7.40**	**301**	*e*Pn	**Pn**	**15 36 43.8**	**+5.1**
IPIR				*e*		15 39 18.3	
IANJ	**Anjilo**	**7.43**	**330**	*e*Pn	**Pn**	**15 36 39.1**	**0.0**
IANJ	**Anjilo**	**7.43**	**330**	*e*Pn	**Pn**	**15 36 39.1**	**0.0**
ISFB	**Sefidab**	**7.44**	**317**	Pn	**Pb**	**15 36 59.6**	**-0.2**
ISFB	**Sefidab**	**7.44**	**317**	*e*Pn	**Pb**	**15 36 59.7**	**-0.1**
ISFB				*e*		15 39 01.6	
BTHS		**8.42**	**235**	P	**Pn**	**15 36 52.0**	**-0.7**
KFJS		**9.24**	**267**	S	**Sn**	**15 38 42.2**	**-5.8**
KFJS		**9.24**	**267**	P	**Pn**	**15 37 03.0**	**-1.0**
UMR	**Umm Al-Rimmam**	**9.35**	**276**	*e*P	**Pn**	**15 37 04.4**	**-1.0**
	baz=275						
UMR				AML	AML	15 38 49.0	
	comp=Z,12nm,0.4s,baz=275						
KBD	**Kabd**	**9.37**	**273**	*e*P	**Pn**	**15 37 05.1**	**-0.7**
RDF	**Al-Radifah**	**9.51**	**272**	*e*P	**Pn**	**15 37 06.6**	**-1.1**
	baz=271						
RDF				AML	AML	15 38 49.9	
	comp=Z,7.0nm,0.4s,baz=271						
MIB	**Mutribah**	**9.68**	**277**	*e*P	**Pn**	**15 37 09.1**	**-0.9**
	baz=276						
MIB				AML	AML	15 38 58.6	
	comp=Z,25nm,0.7s,baz=276						
NAY	**Al-Naaiem**	**9.76**	**274**	*e*P	**Pn**	**15 37 09.8**	**-1.4**
	baz=273						
NAY				AML	AML	15 39 00.4	
	comp=Z,9.0nm,0.6s,baz=273						

DDA 25 15:56:50.0, 3940N×3315E, h2km±4km, Md2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAG	**Cicekdag**	**0.97**	**76**	*i* P	Pg	15 57 08.7	+0.1
CDAG				*i* S	Sg	15 57 21.9	+0.8
CDAG	**Cicekdag**	**0.97**	**76**	*i* P	Pg	15 57 08.5	-0.1
CDAG				*i* S	Sg	15 57 21.9	+0.8
ELDT	**Eldivan**	**1.11**	**11**	*i* P	Pg	15 57 11.7	+0.4
ELDT				*i* S	Sg	15 57 28.6	+3.0
KDHN	**Kadinhani**	**1.20**	**223**	*i* P	Pg	15 57 12.3	-0.6
KDHN				*i* S	Sg	15 57 30.8	+2.4

DJA ***25*** *16:20:43, 1976S×6895W, h10km, mb5.8/6*

SZGRF ***25*** *16:20:44.2, 1994S×6758W, h33km, mb4.9, Southern Bolivia*

MOS ***25*** *16:20:49.8±0.9, 1937S×6907W, h101km, mb5.7/64, MS4.9/8, Error ellipse: s-maj=7.8km s-min=5.3km az=93.1*

ISCJB ***25*** *16:20:50.8±0.1, 1948S±002×6918W±003, h112km, mb5.6/215, Error ellipse: s-maj=3.8km s-min=2.7km az=167.4*

LDG ***25*** *16:20:50.6±0.6, 1890S×6913W, h100km, Mb5.4/20, Ms4.8/10, Error ellipse: s-maj=34.7km s-min=8.1km az=57.0*

IDC ***25*** *16:20:52.6±0.3, 1948S×6905W, h110km±2km, mb5.1/22, mb1 5.2/26, mb1mx5.2/27, mbtmp5.1/26, MS4.9/20, Ms1 4.9/20, ms1mx4.7/31, Error ellipse: s-maj=8.6km s-min=6.2km az=92.0*

NEIC ***25*** *16:20:52.6±0.1, 1945S×6905W, mb5.6/189, MW5.8, Error ellipse: s-maj=4.9km s-min=3.5km az=49.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^{17}Nm; M_{rr}=2.24; $M_{\theta\theta}$=1.43; $M_{\phi\phi}$=3.66; $M_{r\theta}$=1.93; $M_{\theta\phi}$=1.11; $M_{r\phi}$=-5.70; Best double couple: M_0=6.90000×10^{17} NP1:ϕ_s19.00000°, δ77.00000°, λ=-84.00000°. NP2:ϕ_s175.00000°, δ14.00000°, λ=-114.00000°. Principal axes: T 7.5600, Plg31.0000°, Azm104.0000°; N -1.5900, Plg5.0000°, Azm198.0000°; P -5.9800, Plg57.0000°, Azm297.0000°;*

NEIC Felt [V] at Camina and [IV] at Huara, Iquique, Pisagua and Pozo Almonte. Felt at Arica and Calama. Also felt [IV] at Tacna, Peru.

BJI ***25*** *16:20:52.5, 1940S×6900W, h112km, mB5.6*

GCMT ***25*** *16:20:52.6±0.1, 1964S×6942W, h120km, MW5.8/106, Moment Tensor Solution. s97,c206; s106,c264; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}=3.82±.07; $M_{\theta\theta}$=0.58±.07; $M_{\phi\phi}$=4.41±.09; $M_{r\theta}$=0.90±.05; $M_{\theta\phi}$=0.36±.07; $M_{r\phi}$=-5.29±.06; Best double couple: M_0=6.78100×10^{17} NP1:ϕ_s198.00000°, δ20.00000°, λ=-66.00000°. NP2:ϕ_s353.00000°, δ72.00000°, λ=-98.00000°. Principal axes: T 6.9980, Plg26.0000°, Azm89.0000°; N -0.4280, Plg8.0000°, Azm355.0000°; P -6.5640, Plg63.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

GUC ***25*** *16:20:52.0±0.5, 1961S×6934W, h110km±4km, ML5.7*

ISC 25 16:20:52.6±0.1, 1950S±002×6912W±003, h114km, h114km±4km; pP-P, n661, σ1§10/479, mb5.6/214, 26C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNMC	**Miæe Miæ**	**0.58**	**309**	⇑*i*P	**Pn**	**16 21 09.3**	**-1.1**
MNMC				*i* S	**Sn**	**16 21 22.1**	**-1.8**
PSGC	**Pisagua**	**0.95**	**264**	⇑*i*P	**Pn**	**16 21 10.8**	**-2.9**
PSGC				*i* S	**Sn**	**16 21 25.0**	**-4.6**
HMBC	**Humberston**	**1.06**	**223**	⇑*i*P	**Pn**	**16 21 11.8**	**-3.0**
HMBC				*i* S	**Sn**	**16 21 27.0**	**-4.5**
PB01	**Plate Boundary**	**1.57**	**193**	⇑*i*P	**Pn**	**16 21 18.8**	**-1.8**
PB01				*i* S	**Sn**	**16 21 38.9**	**-2.9**
PB01				AML	AML	16 21 42.5	
	comp=E,114μm,0.4s						
TOCH	**Tocopilla**	**2.77**	**201**	⇑*i*P	**Pn**	**16 21 33.9**	**-1.9**
TOCH				*i* S	**Sn**	**16 22 05.7**	**-3.3**
TOCH				AML	AML	16 22 25.1	
	comp=E,24μm,0.7s						
PB04	**Plate Boundary**	**2.77**	**187**	⇑*e*P	**Pn**	**16 21 35.1**	**-0.6**
PB04				*i* S	**Sn**	**16 22 08.5**	**-0.4**
PB04				AML	AML	16 22 32.1	
	comp=E,34μm,0.6s						
LVC	**Limon Verde**	**3.10**	**176**	P	**Pn**	**16 21 39.7**	**-0.4**
	comp=E,187nm,0.3s,baz=345,slow=9.1,SNR=259						
LVC				S	**Sn**	**16 22 16.7**	**-0.1**
	comp=E,2μm,0.3s,baz=342,slow=20,SNR=14						
LVC				LR	LR	16 22 56.1	
	comp=E,9μm,21.8s,baz=334,slow=40						
LVC	**Limon Verde**	**3.10**	**176**	⇑*e*Pn	**Pn**	**16 21 39.6**	**-0.5**
LVC	**Limon Verde**	**3.10**	**176**	⇑*i*P	**Pn**	**16 21 39.9**	**-0.2**
LVC				*i* S	**Sn**	**16 22 16.5**	**-0.3**
LVC				AML	AML	16 22 50.8	
	comp=N,18μm,0.7s						
PECH	**Pedro de Valdi**	**3.13**	**189**	*e*P	**Pn**	**16 21 39.6**	**-0.8**
PECH				*i* S	**Sn**	**16 22 15.6**	**-1.7**
PECH				AML	AML	16 22 41.8	
	comp=E,39μm,0.6s						
ARE	**Arequipa**	**3.77**	**323**	⇑*i*P	**Pn**	**16 21 46.6**	**-2.4**
ARE				*e*S	**Sn**	**16 22 30.0**	**-2.6**
SIV	**San Ignacio**	**8.42**	**67**	P	**Pn**	**16 22 50.3**	**-1.5**
	comp=E,333nm,0.3s,baz=262,slow=11,SNR=4878						
LCO	**Las Campanas**	**9.58**	**188**	*e*Pn	**Pn**	**16 23 01.4**	**-6.1**
	comp=E,602nm,0.8s						
NNA	**Nana**	**10.54**	**314**	Pn	**Pn**	**16 23 17.0**	**-3.5**
	comp=E,503nm,0.6s,SNR=8.6						
NNA	**Nana**	**10.54**	**314**	*e*Pn	**Pn**	**16 23 15.8**	**-4.7**
	comp=E,134nm,0.8s						
CFAA	**Coronel Fontan**	**12.08**	**176**	P	**Pn**	**16 23 36.5**	**-4.4**
	comp=E,0.3nm,0.3s,baz=351,slow=13,SNR=45						
CFAA				S	**Sn**	**16 26 04.8**	**+11**
	comp=E,0.3nm,0.3s,baz=227,slow=19,SNR=1.8						
CFAA				LR	LR	16 28 50.8	
	comp=E,304nm,20.9s,baz=344,slow=40						
CPUP	**Villa Florida**	**12.81**	**124**	P	**Pn**	**16 23 48.2**	**-2.4**
	comp=E,18nm,0.3s,baz=284,slow=12,SNR=244						
CPUP	**Villa Florida**	**12.81**	**124**	P	**Pn**	**16 23 48.2**	**-2.4**
CPUP				pmax	pmax		
	comp=Z,18nm,0.3s						
CPUP	**Villa Florida**	**12.81**	**124**	⇑*e*Pn	**Pn**	**16 23 47.6**	**-3.0**
	comp=Z,1μm,0.8s						
ATAH	**Atahualpa**	**15.35**	**323**	P	**Pn**	**16 24 21.4**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=139,slow=16,SNR=12						
ATAH				S	**S**	**16 27 08.4**	**-13**
	comp=Z,0.8nm,0.3s,baz=270,slow=1.0,SNR=1.9						
LPA	**La Plata**	**18.27**	**149**	*de*P	**P**	**16 24 56.0**	**-1.3**
LPA				*e*S	**S**	**16 28 19.0**	**-1.4**
LPA				*e*S	**S**	**16 28 33.0**	**+13**
TRQA	**Tornquist**	**19.51**	**163**	⇑*i*P	**P**	**16 25 10.5**	**-0.4**
	comp=Z,775nm,1.3s						
BDFB	**Brasilia**	**20.48**	**83**	P	**P**	**16 25 20.8**	**-0.7**
	comp=Z,185nm,0.5s,baz=256,slow=18,SNR=195						
BDFB				S	**S**	**16 29 03.5**	**-1.1**
	comp=Z,31nm,0.9s,baz=204,slow=20,SNR=1.7						
BDFB				LR	LR	16 34 52.5	
	comp=Z,3μm,18.7s,baz=59,slow=41						
BDFB	**Brasilia**	**20.48**	**83**	P	**P**	**16 25 20.8**	**-0.7**
BDFB				S	**S**	**16 29 03.5**	**-1.1**
PLCA	**Paso Flores**	**21.20**	**183**	P	**P**	**16 25 28.6**	**-0.4**
	comp=Z,227nm,0.8s,mb5.5,baz=2.4,slow=12,SNR=78						
PLCA				pP		16 25 50.2	
	comp=Z,55nm,0.8s,baz=356,slow=14,SNR=2.8						
PLCA				S	**S**	**16 29 20.5**	**+2.3**
	comp=Z,5.0nm,0.9s,baz=62,slow=15,SNR=3.8						
PLCA				PcP	PcP	16 29 29.9	-0.1
	comp=Z,16nm,0.9s,baz=4.6,slow=4.6,SNR=2.6						
PLCA	**Paso Flores**	**21.20**	**183**	*e*P	**P**	**16 25 28.3**	**-0.6**
	comp=Z,305nm,0.9s,mb5.6						
OTAV	**Otavalo**	**21.64**	**334**	*e*P	**P**	**16 25 35.0**	**+1.0**
	comp=Z,245nm,1.4s,mb5.3						
ROSC	**El Rosal**	**24.74**	**348**	P	**P**	**16 26 03.4**	**-0.2**
	comp=Z,20nm,0.6s,mb4.7,baz=235,slow=1.0,SNR=11						
ROSC				LR	LR	16 36 54.7	
	comp=Z,3μm,20.2s,baz=192,slow=39						
CAM4	**Nova Friburgo**	**24.95**	**101**	⇓*i*P	**P**	**16 26 05.1**	**-0.4**
CAM4				*i*		16 26 05.6	
CAM4				*i*		16 26 07.3	
CAM4				*i*		16 26 10.6	
CAM4				*i*		16 26 14.6	
CAM4				*i*		16 26 31.9	
CAM4				*i*		16 26 45.0	
CAM3	**Guarapari**	**26.87**	**98**	⇑*i*P	**P**	**16 26 22.3**	**-0.5**
CAM3				*i*		16 26 23.4	
CAM3				*i*		16 26 27.0	
CAM3				*i*		16 26 32.7	
CAM3				*i*	pP	16 26

RCC **Rio Carpintero** 39.77 350 *e*P P **16 28 12.3 -2.1**
GRTK **Grand Turk** 40.80 357 *e*P P **16 28 23.6 +0.7**
CCCC **Cccc** 41.32 348 *e*P P **16 28 27.3 +0.1**
CCIG **Comitan** 42.15 326 *i* P P **16 28 33.4 -0.6**
MGV **Manicaragua** 42.69 345 *e*P P **16 28 34.8 -3.5**
TEIG **Tepich** 43.71 334 *e*P P **16 28 46.2 -0.3**
comp=Z,49nm,0.7s,mb5.3
HUIG **Huatulco** 43.96 321 *i* P P **16 28 50.1 +1.4**
SOR **Soroa** 44.17 341 *e*P P **16 28 50.1 0.0**
CMIG **Matias Romero** 44.31 323 *i* P P **16 28 53.0 +1.7**
VHO **Vista Hermosa** 45.35 321 *i* P P **16 29 01.9 +2.2**
OXX **Oaxaca** 45.36 321 *e*P P **16 28 55.5 -4.2**
PMSA **Palmer Station** 45.38 177 P P **16 29 00.6 +1.4**
comp=Z,27nm,0.9s,mb5.0,baz=350,slow=10,SNR=3.5
PMSA LR LR 16 46 37.4
comp=Z,828nm,20.7s,baz=142,slow=34
PNIG **Pinotepa** 45.67 319 *i* P P **16 29 03.6 +1.5**
LVIG **Laguna Verde** 47.28 324 *i* P P **16 29 12.4 -2.3**
CAIG **El Cayaco** 47.50 318 *i* P P **16 29 17.3 +0.9**
PPM **Popocatepetl** 48.03 321 *e*P P **16 29 21.1 +0.6**
PLIG **Platanillo** 48.03 320 *i* P P **16 29 22.1 +1.5**
ZIIG **Zihuatanejo** 48.67 317 *i* P P **16 29 24.1 -1.3**
DWPF **Disney** 48.80 345 *e*P P **16 29 26.5 +0.2**
comp=Z,148nm,0.9s,mb5.9
MOIG **Morelia** 50.04 319 *i* P P **16 29 37.4 +1.6**
BRAL **Brewton** 53.09 341 *e*P P **16 29 59.5 +1.1**
comp=Z,779nm,1.3s,mb6.6
BRAL *e*pP pP 16 30 26.6 +1.2
BRAL sP sP 16 30 40.3 +2.2
ZAIG **Zacatecas** 53.21 321 *i* P P **16 30 00.9 +1.6**
NHSC **New Hope** 53.37 348 *e*P P **16 30 00.6 +0.3**
comp=Z,465nm,1.1s,mb6.4
NHSC *e*pP pP 16 30 27.4 0.0
NHSC *e*sP sP 16 30 40.7 +0.7
GOGA **Godfrey** 54.37 345 *e*P P **16 30 06.5 -1.1**
GOGA *e**PP pP 16 30 34.1 -0.7
GOGA pmax pmax
comp=Z,315nm,1.6s,mb6.1
GOGA **Godfrey** 54.37 345 *e*P P **16 30 06.5 -1.0**
comp=Z,315nm,1.6s,mb6.1
GOGA *e*pP pP 16 30 34.1 -0.6
KVTX **Kingsville** 54.44 328 *e*P P **16 30 09.6 +1.3**
comp=Z,356nm,1.3s,mb6.2
LRAL **Lakeview Retre** 54.96 342 *e*P P **16 30 10.8 -1.1**
comp=Z,209nm,1.4s,mb6.0
LRAL *e*pP pP 16 30 38.5 -0.7
CNNC **Cliffs of the** 55.07 351 *e*P P **16 30 14.4 +1.7**
comp=Z,88nm,1.3s,mb5.6
VBMS **Vicksburg** 55.36 338 *e*P P **16 30 14.4 -0.4**
comp=Z,28nm,0.6s,mb5.5
HKT **Hockley** 55.49 332 *e*P P **16 30 16.1 +0.3**
HKT pmax pmax
comp=Z,215nm,1.6s,mb5.9
HKT **Hockley** 55.49 332 *e*P P **16 30 16.1 +0.4**
comp=Z,215nm,1.6s,mb5.9
NATX **Nacogdoches** 56.55 334 *e*P P **16 30 23.9 +0.7**
comp=Z,272nm,1.2s,mb6.2
NATX *e*pP pP 16 30 51.1 +0.5
TKL **Tuckaleechee C** 56.59 346 *e*P P **16 30 22.5 -0.9**
TKL *e**PP pP 16 30 49.7 -1.1
TKL *e**SP sP 16 31 03.1 -0.3
OXF **Oxford** 57.08 340 *e*P P **16 30 25.0 -1.9**
OXF *e**PP pP 16 30 53.5 -0.8
OXF pmax pmax
comp=Z,191nm,1.1s,mb6.0
OXF **Oxford** 57.08 340 *e*P P **16 30 25.0 -1.9**
comp=Z,191nm,1.1s,mb6.0
OXF *e*pP pP 16 30 53.5 -0.8
TZTN **Tazewell** 57.38 346 *e*P P **16 30 28.0 -1.0**
comp=Z,299nm,1.6s,mb6.1
TZTN *e*pP pP 16 30 54.5 -2.0
BLA **Blacksburg** 57.40 349 *e*P P **16 30 29.2 +0.1**
BLA pmax pmax
comp=Z,229nm,1.5s,mb6.0
BLA **Blacksburg** 57.40 349 *e*P P **16 30 29.2 0.0**
comp=Z,229nm,1.5s,mb6.0
JCT **Junction City** 57.80 329 *e*P P **16 30 31.5 -0.6**
JCT pmax pmax
comp=Z,88nm,1.2s,mb5.7
JCT **Junction City** 57.80 329 *e*P P **16 30 31.5 -0.5**
comp=Z,88nm,1.2s,mb5.7
CBN **Corbin** 57.92 352 *e*P P **16 30 32.8 +0.1**
comp=Z,23nm,0.4s,mb5.6
WVT **Waverly** 58.09 342 *e*P P **16 30 32.6 -1.4**
WVT *e**PP pP 16 30 59.7 -1.8
WVT pmax pmax
comp=Z,183nm,1.1s,mb6.0
WVT **Waverly** 58.09 342 *e*P P **16 30 32.6 -1.4**
comp=Z,183nm,1.1s,mb6.0
WVT *e*pP pP 16 30 59.7 -1.8
UALR **University of** 58.31 338 *e*P P **16 30 34.8 -0.8**
comp=Z,119nm,1.3s,mb5.8
UALR *e*pP pP 16 31 02.4 -0.7
MIAR **Mount Ida** 58.56 336 *e*P P **16 30 36.9 -0.4**
MIAR *e**PP pP 16 31 04.2 -0.7
MIAR pmax pmax
comp=Z,93nm,1.1s,mb5.7
MIAR **Mount Ida** 58.56 336 *e*P P **16 30 36.9 -0.5**
comp=Z,93nm,1.1s,mb5.7
MIAR *e*pP pP 16 31 04.2 -0.7
TXAR **Lajitas Array** 58.89 325 P P **16 30 39.5 -0.1**
comp=Z,5.6nm,0.8s,mb4.6,baz=149,slow=8.0,SNR=63
TXAR pP pP 16 31 07.3 0.0
comp=Z,4.0nm,0.6s,baz=139,slow=8.3,SNR=4.5
TXAR PKPPKP 17 00 12.4
comp=Z,0.5nm,0.9s,baz=270,slow=1.3,SNR=4.0
TXAR **Lajitas Array** 58.89 325 P P **16 30 39.5 -0.2**
TXAR *PP pP 16 31 07.3 +0.1
PVMO **Portageville** 58.92 341 *e*P P **16 30 38.1 -1.6**
comp=Z,503nm,1.1s,mb6.5
PVMO *e*pP pP 16 31 07.2 -0.1
WCI **Wyandotte Cave** 59.65 344 *e*P P **16 30 43.4 -1.3**
WCI *e**PP pP 16 31 11.0 -1.3
WCI pmax pmax
comp=Z,698nm,1.7s,mb6.4
WCI **Wyandotte Cave** 59.65 344 *e*P P **16 30 43.4 -1.3**
comp=Z,698nm,1.7s,mb6.4
WCI *e*pP pP 16 31 11.0 -1.3
MCWV **Mont Chateau** 59.69 350 *e*P P **16 30 45.4 +0.4**
comp=Z,133nm,1.1s,mb5.9
MCWV *e*pP pP 16 31 13.0 +0.3
USIN **University of** 59.76 343 *e*P P **16 30 44.2 -1.2**
comp=Z,478nm,1.5s,mb6.3
USIN *e*pP pP 16 31 10.6 -2.6
USIN *e*sP sP 16 31 24.8 -0.8
SIUC **Southern Illin** 59.97 342 *e*P P **16 30 46.1 -0.8**
comp=Z,469nm,1.1s,mb6.4
SIUC *e*pP pP 16 31 13.4 -1.2
SIUC *e*sP sP 16 31 27.5 +0.4
SHEL **Horse Pasture** 60.17 98 *e*P P **16 30 50.2 +1.4**
SHEL pmax pmax
comp=Z,287nm,1.3s,mb6.1
SHEL **Horse Pasture** 60.17 98 *e*P P **16 30 50.2 +1.4**
comp=Z,287nm,1.3s,mb6.1
SSPA **Standing Stone** 60.38 352 *e*P P **16 30 49.8 +0.1**
comp=Z,171nm,1.8s,mb5.8
FVM **French Village** 60.59 341 *e*P P **16 30 50.5 -0.6**
FVM *e**PP pP 16 31 18.3 -0.5
FVM pmax pmax
comp=Z,303nm,1.1s,mb6.2
FVM **French Village** 60.59 341 *e*P P **16 30 50.5 -0.7**
comp=Z,303nm,1.1s,mb6.2
FVM *e*pP pP 16 31 18.3 -0.5
BLO **Bloomington** 60.59 345 P P **16 30 49.3 -1.9**
BLO pmax pmax
comp=Z,380nm,1.4s,mb6.2
BLO **Bloomington** 60.59 345 *e*P P **16 30 49.0 -2.2**
comp=Z,376nm,1.4s,mb6.2
BLO *e*pP pP 16 31 17.7 -1.2
OLIL **Olney** 60.60 343 *e*P P **16 30 49.8 -1.4**
comp=Z,381nm,1.6s,mb6.2
OLIL *e*pP pP 16 31 17.5 -1.4
ACSO **Alum Creek Sta** 60.81 348 *e*P P **16 30 51.9 -0.7**
comp=Z,194nm,1.1s,mb6.0
ACSO *e*pP pP 16 31 19.8 -0.5
WMOK **Wichita Mounta** 60.86 332 *e*P P **16 30 52.1 -1.0**
WMOK *e**PP pP 16 31 20.2 -0.6
WMOK pmax pmax
comp=Z,80nm,1.5s,mb5.5
WMOK **Wichita Mounta** 60.86 332 *e*P P **16 30 52.1 -1.0**
comp=Z,80nm,1.5s,mb5.5
WMOK *e*pP pP 16 31 20.2 -0.6
RKT **Rikitea** 61.00 254 *e*P P **16 30 55.4 +1.0**
comp=Z,56nm,1.1s,mb5.5
RKT *e*pP pP 16 31 20.7 -1.4
comp=Z,39nm,1.1s
RKT *e*S S **16 39 05.5 +1.2**
comp=Z,2µm,25.0s
RKT *e*LQ 16 46 42.7
comp=Z,1µm,25.8s
RKT *e*LR LR 16 49 22.8
comp=Z,4µm,36.2s,baz=105
RKT **Rikitea** 61.00 254 *e*P P **16 30 55.4 +1.0**
RKT *e**PP pP 16 31 20.7 -1.4
RKT *e*S S **16 39 05.5 +1.2**
RKT pmax pmax
comp=Z,56nm,1.1s,mb5.5
RKT **Rikitea** 61.00 254 *e*P P **16 30 55.4 +1.0**
comp=Z,56nm,1.1s,mb5.5
RKT *e*pP pP 16 31 20.7 -1.4
RKT *e*S S **16 39 05.5 +1.2**
RKT *e*LQ 16 46 42.7
SLM **Saint Louis** 61.13 341 *e*P P **16 30 52.9 -1.9**
SLM *e**PP pP 16 31 21.1 -1.4
SLM pmax pmax
comp=Z,249nm,1.5s,mb6.0
SLM **Saint Louis** 61.13 341 *e*P P **16 30 52.9 -1.9**
comp=Z,249nm,1.5s,mb6.0
SLM *e*pP pP 16 31 21.1 -1.4
BINY **Binghamton** 61.71 354 *e*P P **16 30 58.9 +0.2**
comp=Z,50nm,0.8s,mb5.6
BBTS **Babate** 61.88 61 LR LR 16 56 14.0
comp=Z,2µm,21.8s,baz=57,slow=34
VNA3 **Neumayer Olymp** 62.03 162 *e*P P **16 31 01.8 +1.4**
VNA3 *e* 16 31 04.4
VNA3 *e* 16 31 19.5
VNA3 *e* 16 31 23.0
VNA3 *e* pP 16 31 29.1 +0.9
ERPA **Erie** 62.12 351 *e*P P **16 31 01.7 +0.3**
comp=Z,378nm,0.9s,mb6.4
ERPA *e*pP pP 16 31 29.2 0.0
VNA1 **Neumayer--Stat** 62.23 161 *e*P P **16 31 03.6 +1.8**
VNA1 *e* 16 31 06.1
VNA1 *e* 16 31 12.0
AMTX **Amarillo** 62.31 330 *e*P P **16 31 02.1 -0.7**
comp=Z,66nm,1.1s,mb5.6
VNA2 **Neumayer--Watz** 62.60 161 *e*P P **16 31 05.3 +1.1**
VNA2 *e* 16 31 08.3
VNA2 *e* 16 31 13.7
VNA2 *e* 16 31 22.3
VNA2 *e* 16 31 26.2
VNA2 *e* pP 16 31 33.0 +0.9
HDIL **Hopedale** 62.63 343 *e*P P **16 31 03.3 -1.5**
comp=Z,137nm,0.9s,mb5.9
AAM **Ann Arbor** 62.94 348 *e*P P **16 31 05.9 -0.9**
AAM pmax pmax
comp=Z,174nm,1.4s,mb5.8
AAM **Ann Arbor** 62.94 348 *e*P P **16 31 05.9 -0.9**
comp=Z,174nm,1.4s,mb5.8
NCB **Newcomb** 63.33 356 *e*P P **16 31 09.9 +0.5**
comp=Z,57nm,1.1s,mb5.4
LBNH **Lisbon** 63.48 358 P P **16 31 11.4 +1.1**
LBNH *e* pP 16 31 39.2 +1.0
LBNH pmax pmax
comp=Z,67nm,1.1s,mb5.5
LBNH **Lisbon** 63.48 358 *e*P P **16 31 10.9 +0.6**
comp=Z,67nm,1.1s,mb5.5
LBNH *e*pP pP 16 31 38.5 +0.3
KSU1 **Kansas State U** 63.72 336 *e*P P **16 31 11.4 -0.7**
comp=Z,140nm,1.1s,mb5.7
KSU1 *e*pP pP 16 31 39.2 -0.8
LONY **Lake Ozonia** 64.00 356 *e*P P **16 31 14.3 +0.5**
comp=Z,74nm,0.9s,mb5.5
SNAA **Sanae** 64.23 161 *e*P P **16 31 16.1 +1.1**
SNAA *e* 16 31 18.7
SNAA *e* 16 31 24.5
SNAA **Sanae** 64.23 161⇑ *e*P P **16 31 16.0 +1.0**
SNAA **Sanae** 64.23 161 *e*P P **16 31 15.8 +0.8**
comp=Z,67nm,0.8s,mb5.5
SNAA *e*pP pP 16 31 43.6 +0.6
PKME **Peaks-Kenny Pk** 64.45 360 *e*P P **16 31 17.1 +0.5**
comp=Z,61nm,1.0s,mb5.4
PKME *e*pP pP 16 31 44.6 0.0
CBKS **Cedar Bluff** 64.72 334 P P **16 31 18.6 +0.1**
CBKS pmax pmax
comp=Z,140nm,1.0s,mb5.8
CBKS **Cedar Bluff** 64.72 334 *e*P P **16 31 18.4 -0.1**
comp=Z,141nm,1.0s,mb5.8
CBKS *e*pP pP 16 31 46.6 0.0
ANMO **Albuquerque** 64.73 327 P P **16 31 19.3 +0.6**
ANMO pmax pmax
comp=Z,110nm,1.6s
ANMO **Albuquerque** 64.73 327 *e*P P **16 31 18.9 +0.2**
comp=Z,111nm,1.6s,mb5.4
ANMO *e*pP pP 16 31 46.6 -0.1
SCIA **State Center** 65.04 340 *e*P P **16 31 19.7 -0.8**
comp=Z,177nm,1.1s,mb5.8
SCIA *e*pP pP 16 31 47.4 -1.2
JFWS **Jewell Farm** 65.08 343 *e*P P **16 31 19.8 -1.0**
JFWS *e**PP pP 16 31 47.6 -1.3
JFWS pmax pmax
comp=Z,221nm,1.1s,mb5.9
JFWS **Jewell Farm** 65.08 343 *e*P P **16 31 19.8 -1.0**
comp=Z,221nm,1.1s,mb5.9
JFWS *e*pP pP 16 31 47.6 -1.3
TUC **Tucson** 65.15 322 *e*P P **16 31 21.7 +0.2**
TUC *e**PP pP 16 31 50.1 +0.5
TUC pmax pmax
comp=Z,132nm,1.8s,mb5.5
TUC **Tucson** 65.15 322 *e*P P **16 31 21.7 +0.2**
comp=Z,132nm,1.8s,mb5.5
TUC *e*pP pP 16 31 50.1 +0.6
GLMI **Grayling** 65.56 348 *e*P P **16 31 23.4 -0.5**
comp=Z,391nm,1.2s,mb6.1
GLMI *e*pP pP 16 31 52.6 +0.7
SDCO **Great Sand Dun** 66.43 329 *e*P P **16 31 30.4 +0.8**
comp=Z,172nm,1.5s,mb5.7
SDCO *e*pP pP 16 31 58.2 +0.5
MVCO **Mesa Verde** 67.52 327 *e*P P **16 31 36.7 +0.2**
comp=Z,259nm,1.6s,mb5.8
MVCO *e*pP pP 16 32 05.2 +0.5
ECSD **EROS,Sioux Fal** 67.79 339 *e*P P **16 31 37.4 -0.6**
comp=Z,330nm,1.4s,mb6.0
ECSD *e*pP pP 16 32 06.5 +0.2
WUAZ **Wupatki** 67.81 324 *e*P P **16 31 39.7 +1.4**
comp=Z,428nm,2.1s,mb5.9
LIC **Lamto** 68.03 75⇑ *i*P P **16 31 39.8 -0.5**
comp=Z,230nm,0.6s,mb5.9
LIC *e*MLR MLR
comp=Z,3µm,23.0s
LIC **Lamto** 68.03 75⇑ *i*P P **16 31 39.8 -0.5**
comp=Z,115nm,0.6s,mb5.9
LIC LR LR
comp=Z,1µm,23.0s
GLA **Glamis** 68.09 320 P P **16 31 41.9 +1.7**
GLA *e* pP 16 32 06.9 -1.6
GLA pmax pmax
comp=Z,360nm,2.1s,mb5.8
GLA **Glamis** 68.09 320 *e*P P **16 31 41.4 +1.2**
comp=Z,358nm,2.1s,mb5.8
GLA *e*pP pP 16 32 08.6 +0.1
ISCO **Idaho Springs** 68.12 330 *e*P P **16 31 41.0 +0.8**
ISCO pmax pmax
comp=Z,81nm,1.3s,mb5.4
ISCO **Idaho Springs** 68.12 330 *e*P P **16 31 41.0 +0.7**
comp=Z,81nm,1.3s,mb5.4
CHIE **El Hierro** 68.23 48 P P **16 31 41.2 0.0**
comp=Z,341nm,1.4s,mb6.0
DBIC **Dimbokro** 68.37 74 P P **16 31 42.0 -0.3**
comp=Z,282nm,0.5s,mb6.3,baz=224,slow=6.5,SNR=291
DBIC pP pP 16 32 10.4 -0.2
comp=Z,28nm,0.5s,baz=295,slow=3.1,SNR=4.0
DBIC sP sP 16 32 22.6 -0.3
comp=Z,68nm,0.8s,baz=218,slow=6.6,SNR=1.4
DBIC S S 16 40 33.9 -1.2
comp=Z,90nm,1.1s,baz=128,slow=23,SNR=48
DBIC PKP2ab 17 00 01.4
comp=Z,2.7nm,0.9s,baz=120,slow=1.2,SNR=3.0
DBIC LR LR 17 00 07.7
comp=Z,2µm,21.6s,baz=218,slow=34
DBIC **Dimbokro** 68.37 74 *e*P P **16 31 41.9 -0.4**
comp=Z,337nm,0.6s,mb6.3
DBIC *e*pP pP 16 32 10.8 +0.2
DBIC *e*sP sP 16 32 22.2 -0.7
MAIT **Maitri** 68.73 159 *e*P P **16 31 43.6 -0.1**
NVL **N'lazarevskaya** 68.76 159 *e*P P **16 31 45.9 +2.0**
NVL *e**PP pP 16 32 12.1 0.0
NVL S S 16 40 41.1 +3.2
NVL pmax pmax
comp=Z,104nm,1.1s,mb5.6
EHIG **Higuera** 68.84 47 P P **16 31 44.8 -0.2**
comp=Z,92nm,0.7s,mb5.7
EGOM **La Gomera** 69.02 48 P P **16 31 45.7 -0.4**
comp=Z,579nm,1.5s,mb6.2
PHWY **Pilot Hill** 69.24 331 *e*P P **16 31 47.9 +0.8**
comp=Z,225nm,1.6s,mb5.8
PHWY *e*pP pP 16 32 16.2 +0.7
PFO **Pinyon Flat Ob** 69.47 319 P P **16 31 50.5 +1.8**
comp=Z,213nm,1.1s,mb5.9,SNR=8.2
PFO **Pinyon Flat Ob** 69.47 319 *e*P P **16 31 49.5 +0.8**
PFO *e**PP pP 16 32 17.5 +0.4
PFO pmax pmax
comp=Z,52nm,1.0s,mb5.3
PFO **Pinyon Flat Ob** 69.47 319 *e*P P **16 31 49.5 +0.8**
comp=Z,52nm,1.0s,mb5.3
PFO *e*pP pP 16 32 17.4 +0.4
CCAN **Las Canadas** 69.48 48 P P **16 31 49.8 +0.9**
comp=Z,56nm,0.8s,mb5.4
LDFC **Landfair** 69.65 321 *e*P P **16 31 52.0 +2.1**
EYMN **Ely** 70.07 344 *e*P P **16 31 51.4 -0.7**
comp=Z,39nm,0.9s,mb5.2
EYMN *e*pP pP 16 32 20.0 -0.5
EOSO **Osorio** 70.14 49 P P **16 31 54.5 +1.5**
comp=Z,65nm,0.7s,mb5.6
RWWY **Rawlins** 70.35 331 *e*P P **16 31 54.7 +0.7**
comp=Z,333nm,1.8s,mb5.9
QSPA **South Pole Qui** 70.68 180 P P **16 31 56.7 +1.2**
comp=Z,52nm,0.8s,mb5.4,baz=154,slow=3.2
QSPA S S 16 41 02.2 +2.0
comp=Z,4.1nm,1.3s,baz=360,slow=22,SNR=8.3
QSPA PKP2ab 16 59 51.3
comp=Z,6.4nm,1.1s,baz=250,slow=1.0,SNR=6.3
QSPA LR LR 17 04 29.6
comp=Z,438nm,20.1s,baz=17,slow=37
QSPA **South Pole Qui** 70.68 180 *e*P P **16 31 56.5 +1.1**
comp=Z,142nm,1.3s,mb5.6
QSPA *e*pP pP 16 32 23.9 0.0
QSPA *e*sP sP 16 32 36.0 -0.2
GSC **Goldstone** 70.82 320 *e*P P **16 31 57.6 +0.7**
GSC *e**PP pP 16 32 25.8 +0.4
GSC pmax pmax
comp=Z,175nm,1.5s,mb5.7
GSC **Goldstone** 70.82 320 *e*P P **16 31 57.6 +0.7**
comp=Z,175nm,1.5s,mb5.7
GSC *e*pP pP 16 32 25.8 +0.4
PASC **Pasadena Art C** 70.92 318 *e*P P **16 31 58.8 +1.2**
comp=Z,682nm,1.6s,mb6.2
PASC *e*pP pP 16 32 26.9 +0.9
RSSD **Black Hills** 70.92 334 *e*P P **16 31 57.7 +0.4**
RSSD *e**PP pP 16 32 26.1 +0.3
RSSD pmax pmax
comp=Z,33nm,0.8s,mb5.2
RSSD **Black Hills** 70.92 334 *e*P P **16 31 57.7 +0.4**
comp=Z,33nm,0.8s,mb5.2
RSSD *e*pP pP 16 32 26.1 +0.3
CFTV **Fuerteventura** 71.39 50 P P **16 32 01.0 +0.5**
comp=Z,160nm,1.2s,mb5.7
AGMN **Agassiz Refuge** 71.61 342 *e*P P **16 32 00.6 -0.8**
comp=Z,150nm,1.4s,mb5.6
AGMN *e*pP pP 16 32 29.4 -0.5
DUG **Dugway** 71.99 326 *e*P P **16 32 04.9 +1.0**
DUG *e**PP pP 16 32 33.2 +0.8
DUG pmax pmax
comp=Z,133nm,1.4s,mb5.6
DUG **Dugway** 71.99 326 *e*P P **16 32 04.8 +1.0**
comp=Z,133nm,1.4s,mb5.6
DUG *e*pP pP 16 32 33.2 +0.8
PMAR **Madeira** 72.01 44 *e*P P **16 32 05.3 +1.1**
comp=Z,284nm,1.6s,mb5.8
PMAR *e*pP pP 16 32 34.4 +1.7
EFAM **Famara** 72.19 49 P P **16 32 05.5 +0.2**
comp=Z,596nm,1.4s,mb6.2
PDAR **Pinedale Array** 72.29 330 P P **16 32 05.8 +0.2**
comp=Z,9.4nm,0.9s,mb4.6,baz=123,slow=8.2,SNR=54
PDAR pP pP 16 32 33.8 -0.4
comp=Z,8.5nm,0.9s,baz=162,slow=10,SNR=3.8
TPH **Tonopah** 72.94 322 *e*P P **16 32 10.5 +1.0**
TPH *e**PP pP 16 32 38.5 +0.4
TPH pmax pmax
comp=Z,133nm,1.4s,mb5.6
TPH **Tonopah** 72.94 322 *e*P P **16 32 10.4 +0.9**
comp=Z,133nm,1.4s,mb5.6
TPH *e*pP pP 16 32 38.5 +0.4
REDW **Red Top Meadow** 73.36 330 *e*P P **16 32 12.4 +0.5**
comp=Z,191nm,1.5s,mb5.7
REDW *e*pP pP 16 32 41.2 +0.7
ULM **Lac du Bonnet** 73.36 342 P P **16 32 11.2 -0.6**
comp=Z,74nm,1.1s,mb5.4,baz=158,slow=5.8,SNR=21
ULM pP pP 16 32 39.3 -1.1
comp=Z,26nm,0.6s,baz=161,slow=5.8,SNR=3.7
ULM LR LR 17 05 12.3
comp=Z,578nm,21.3s,baz=149,slow=36
ULM **Lac du Bonnet** 73.36 342 *e*P P **16 32 11.0 -0.8**
comp=Z,61nm,1.0s,mb5.4
ULM *e*pP pP 16 32 39.1 -1.2
SNOW **Snow King Moun** 73.39 330 *e*P P **16 32 12.5 +0.4**
comp=Z,28nm,0.8s,mb5.2
LOHW **Long Hollow** 73.43 330 *e*P P **16 32 12.9 +0.7**
comp=Z,260nm,1.9s,mb5.7
RRI2 **Red Ridge** 73.57 329 *e*P P **16 32 14.3 +1.2**
comp=Z,76nm,0.9s,mb5.4
RRI2 *e*pP pP 16 32 40.2 -1.5
ELK **Elko** 73.67 325 P P **16 32 15.0 +1.2**
ELK pmax pmax
comp=Z,110nm,1.5s
ELK **Elko** 73.67 325 *e*P P **16 32 14.8 +1.0**
comp=Z,108nm,1.5s,mb5.4
ELK *e*pP pP 16 32 43.0 +0.5
DCID1 **Drake Creek** 73.69 330 *e*P P **16 32 15.1 +1.3**
comp=Z,31nm,0.4s,mb5.4
DCID1 *e*pP pP 16 32 43.3 +0.9
IMW **Indian Meadow** 73.80 330 *e*P P **16 32 15.4 +1.0**
comp=Z,199nm,1.6s,mb5.6
IMW *e*pP pP 16 32 43.2 +0.1
NVAR **Mina Array Bea** 73.81 322 P P **16 32 16.0 +1.4**
comp=Z,15nm,0.9s,mb4.7,baz=148,slow=6.7,SNR=63
NVAR pP pP 16 32 43.8 +0.5
comp=Z,30nm,1.0s,baz=133,slow=5.6,SNR=7.4
RLMT **Red Lodge** 73.97 332 *e*P P **16 32 16.2 +0.8**
comp=Z,274nm,1.6s,mb5.7
RLMT *e*pP pP 16 32 44.6 +0.6
TBI **Tubuai** 73.97 251 *e*S S 16 41 39.8 +0.4
comp=Z,650nm,31.8s
TBI **Tubuai** 73.97 251 *e*LR LR 16 55 16.8
comp=Z,3µm,35.0s,baz=109
SCHQ **Schefferville** 74.05 1 P P **16 32 16.8 +1.1**
comp=Z,66nm,0.9s,mb5.4,baz=166,slow=5.9,SNR=19
SCHQ pP pP 16 32 44.5 +0.1
comp=Z,33nm,0.9s,baz=182,slow=6.8,SNR=3.2
SCHQ **Schefferville** 74.05 1 *e*P P **16 32 15.8 +0.2**
comp=Z,83nm,1.0s,mb5.4
SCHQ *e*pP pP 16 32 44.1 -0.3
HLID **Hailey** 75.25 328 *e*P P **16 32 24.3 +1.4**
comp=Z,126nm,1.3s,mb5.5
HLID *e*pP pP 16 32 52.9 +1.3
BOZ **Bozeman (W)** 75.44 331 *e*P P **16 32 24.5 +0.6**
BOZ *e**PP pP 16 32 52.6 -0.1
BOZ pmax pmax
comp=Z,106nm,1.5s,mb5.3
BOZ **Bozeman (W)** 75.44 331 *e*P P **16 32 24.5 +0.6**
comp=Z,106nm,1.5s,mb5.3
BOZ *e*pP pP 16 32 52.6 -0.1
PPT **Papeete** 75.60 256 *e*S S 16 41 57.6 -0.1
comp=Z,1µm,27.0s
PPT **Papeete** 75.60 256 *e*LQ 16 52 40.8
comp=Z,2µm,30.0s
PPT *e*LR LR 16 56 25.5
comp=Z,3µm,28.0s,baz=128
PPT **Papeete** 75.60 256 LR LR 16 56 27.2
comp=Z,418nm,20.3s,baz=351,slow=28
DLMT **Dillon** 75.68 330 *e*P P **16 32 26.3 +1.0**
comp=Z,121nm,1.4s,mb5.4
DLMT *e*pP pP 16 32 55.0 +0.9
EGMT **Eagleton** 76.43 333 *e*P P **16 32 29.5 +0.1**
comp=Z,262nm,1.4s,mb5.8
EGMT *e*pP pP 16 32 58.0 -0.3
WVOR **Wild Horse Val** 76.68 325 *e*P P **16 32 30.6 -0.4**
WVOR *e**PP pP 16 32 59.6 -0.3
WVOR pmax pmax
comp=Z,62nm,1.6s,mb5.1
WVOR **Wild Horse Val** 76.68 325 *e*P P **16 32 30.6 -0.4**
comp=Z,62nm,1.6s,mb5.1
WVOR *e*pP pP 16 32 59.6 -0.2
TOA0 **Torodi Ar. Sit** 76.88 71 *e*P P **16 32 32.0 -0.7**
TOA0 *e*pP pP 16 33 01.4 -0.2
TOA0 *e*sP sP 16 33 13.0 -0.8

TOA0 ePP PP 16 35 16.3 -11
TORD Torodi Ar. Bea 76.88 71 P **P** **16 32 32.0 -0.7**
comp=Z,95nm,0.8s,mb5.6,baz=253,slow=5.2,SNR=403
TORD pP pP 16 33 01.2 -0.3
comp=Z,182nm,1.1s,baz=255,slow=5.7,SNR=6.7
TORD sP sP 16 33 12.0 -1.7
comp=Z,126nm,1.2s,baz=249,slow=4.6,SNR=2.5
TORD PP PP 16 35 16.5 -11
comp=Z,49nm,0.9s,baz=246,slow=6.2,SNR=6.5
TORD S S 16 42 07.9 -3.8
comp=Z,13nm,0.9s,baz=252,slow=10,SNR=11
TORD LR LR 17 05 37.0
comp=Z,3µm,19.8s,baz=240,slow=35
TORD Torodi Ar. Bea 76.88 71 P **P** **16 32 32.0 -0.7**
TORD pP pP 16 33 01.2 -0.3
TORD sP sP 16 33 12.0 -1.7
TORD PP PP 16 35 16.5 -11
TORD S S 16 42 07.9 -3.8
TORD LR LR 17 05 37.0
LBCM Butte Creek Ri 77.16 322 P **P** **16 32 34.3 +0.6**
MOD Modoc 77.25 323 eP **P** **16 32 35.2 +1.0**
comp=Z,158nm,1.7s,mb5.5
MOD epP pP 16 33 03.7 +0.6
MSO Missoula 77.40 330 eP **P** **16 32 36.2 +1.3**
comp=Z,101nm,1.5s,mb5.3
MSO epP pP 16 33 04.9 +1.1
BMO Blue Mountains 77.64 327 eP **P** **16 32 36.8 +0.5**
comp=Z,105nm,1.3s,mb5.4
BMO epP pP 16 33 05.5 +0.3
WDC Whiskeytown Da 77.69 321 P **P** **16 32 36.1 -0.6**
WDC pmax pmax
comp=Z,110nm,1.5s,mb5.4
WDC Whiskeytown Da 77.69 321 eP **P** **16 32 35.9 -0.8**
comp=Z,113nm,1.6s,mb5.3
WDC epP pP 16 33 03.7 -1.9
SBA Scott Base 77.75 190 eP **P** **16 32 38.2 +1.6**
SBA pmax pmax
comp=Z,189nm,1.9s,mb5.5
SBA Scott Base 77.75 190 eP **P** **16 32 38.2 +1.7**
comp=Z,188nm,1.9s,mb5.5
SYO Syowa Base 78.44 160⇑ *i*P **P** **16 32 40.2 -0.2**
SYO Syowa Base 78.44 160⇓ *i*PcP PcP 16 32 44.8 -4.4
KTRM Thompson Ridge 79.02 322 P **P** **16 32 45.3 +1.3**
WALA Waterton Lakes 79.02 332 eP **P** **16 32 44.4 +0.6**
comp=Z,4.8nm,1.4s,mb4.1
WALA epP pP 16 33 13.4 +0.6
FFC Flin Flon 79.08 341 P **P** **16 32 44.0 0.0**
comp=Z,163nm,1.4s,mb5.7,SNR=20
FFC Flin Flon 79.08 341 eP **P** **16 32 43.7 -0.3**
FFC e*PP pP 16 33 12.6 -0.4
FFC pmax pmax
comp=Z,109nm,1.4s,mb5.5
FFC Flin Flon 79.08 341 eP **P** **16 32 43.7 -0.3**
comp=Z,109nm,1.4s,mb5.5
FFC epP pP 16 33 12.6 -0.4
RTC Rabat Centre 79.62 48 P **P** **16 32 47.8 +0.3**
RTC epP pP 16 33 16.6 +0.1
SUR Sutherland 79.76 121 P **P** **16 32 50.3 +1.9**
comp=Z,681nm,1.1s,mb6.4,SNR=24
SUR Sutherland 79.76 121⇑P **P** **16 32 50.5 +2.1**
SNR=5.7
SUR Sutherland 79.76 121 eP **P** **16 32 49.4 +1.0**
comp=Z,210nm,1.3s,mb5.8
HAWA Hanford 79.83 327 eP **P** **16 32 49.1 +0.9**
comp=Z,420nm,1.9s,mb5.9
HAWA epP pP 16 33 18.1 +0.8
NEW Newport 79.93 330 eP **P** **16 32 47.8 -0.9**
NEW pmax pmax
comp=Z,48nm,1.4s
NEW Newport 79.93 330 eP **P** **16 32 47.8 -0.9**
comp=Z,48nm,1.4s,mb5.1
OD2 Odessa Site #2 80.09 328 P **P** **16 32 50.7 +1.1**
MORF Marmelete 80.18 45 eP **P** **16 32 51.2 +0.8**
comp=Z,290nm,1.2s,mb6.0
MORF epP pP 16 33 20.3 +0.9
MORF eS S 16 42 48.5 +2.4
MORF A 17 05 11.3
comp=Z,543nm,19.0s
PTEO Sao Teotonio 80.26 45 eP **P** **16 32 52.9 +2.1**
comp=Z,520nm,1.3s,mb6.2
PTEO epP pP 16 33 21.6 +1.7
MDT Midelt 80.62 50 P **P** **16 32 54.1 +1.3**
comp=Z,51nm,1.1s,mb5.3,baz=240,slow=5.0,SNR=36
MDT pP pP 16 33 23.0 +1.0
comp=Z,117nm,1.2s,baz=225,slow=4.5,SNR=7.8
MDT S S 16 42 52.2 +1.3
comp=Z,0.7nm,0.9s,baz=281,slow=10,SNR=2.1
MDT LR LR 17 05 24.4
comp=Z,380nm,20.3s,baz=256,slow=33
FCC Fort Churchill 80.65 347 eP **P** **16 32 52.6 +0.3**
FCC e*PP pP 16 33 20.6 -0.8
FCC pmax pmax
comp=Z,6.0nm,1.5s,mb4.2
FCC Fort Churchill 80.65 347 eP **P** **16 32 52.6 +0.2**
comp=Z,5.5nm,1.5s,mb4.2
FCC epP pP 16 33 20.6 -0.8
PMAFR Mafra 80.69 43 eS S 16 42 53.3 +2.0
PMAFR eLR LR 16 59 07.8
comp=Z,573nm,20.3s
EBG Ellensburg 80.70 327 P **P** **16 32 54.4 +1.5**
TSUM Tsumeb 80.81 107 eP **P** **16 32 54.9 +0.6**
comp=Z,174nm,1.4s,mb5.7
PVAQ Vaqueiros 80.86 45 eP **P** **16 32 54.8 +0.8**
comp=Z,154nm,1.7s,mb5.6
PVAQ epP pP 16 33 23.7 +0.6
PVAQ eS S 16 42 56.1 +3.0
PVAQ eLQ 16 54 19.4
PVAQ eLR LR 16 59 06.1
comp=Z,550nm,22.0s
EGRO El Granado 81.08 45 P **P** **16 32 55.4 +0.2**
comp=Z,214nm,1.2s,mb5.8
PBEJ Beja 81.09 44 eP **P** **16 32 56.3 +1.1**
comp=Z,69nm,1.3s,mb5.3
PBEJ epP pP 16 33 25.5 +1.2
LON Longmire 81.24 326 eP **P** **16 32 55.9 +0.1**
LON e*PP pP 16 33 24.2 -0.7
LON pmax pmax
comp=Z,127nm,1.8s,mb5.5
LON Longmire 81.24 326 eP **P** **16 32 55.9 +0.1**
comp=Z,127nm,1.8s,mb5.5
LON epP pP 16 33 24.2 -0.7
EVO Evora 81.28 44 eP **P** **16 32 56.6 +0.4**
comp=Z,307nm,1.2s,mb5.7
EVO eMLR MLR
comp=Z,529nm,18.8s
EVO Evora 81.28 44 eP **P** **16 32 57.0 +0.8**
comp=Z,124nm,1.4s,mb5.5
PBAR Barrancos 81.72 45 eP **P** **16 32 59.3 +0.7**
comp=Z,123nm,1.7s,mb5.5
PBAR epP pP 16 33 29.4 +1.7
PBAR eS S 16 43 04.7 +2.6
PBAR eLR LR 16 59 35.7
comp=Z,525nm,20.0s
PESTR Estremoz 81.73 44 eP **P** **16 32 59.6 +1.0**
comp=Z,120nm,1.2s,mb5.6
PESTR epP pP 16 33 27.8 +0.1
PESTR eS S 16 43 04.9 +2.8
PESTR eLQ 16 54 45.5
PESTR eLR LR 16 59 15.7
EMIN Mina Concepcio 81.75 45 P **P** **16 32 58.7 0.0**
comp=Z,268nm,1.3s,mb5.9
ESPR Espera 81.83 46 P **P** **16 32 58.9 -0.2**
comp=Z,227nm,1.3s,mb5.8
EJIF Jimena Fronter 81.87 47 P **P** **16 32 59.1 -0.3**
EJIF pmax pmax
comp=Z,74nm,0.9s,mb5.5
EJIF Jimena Fronter 81.87 47 P **P** **16 32 59.1 -0.3**
comp=Z,74nm,0.9s,mb5.5
EDM Edmonton 81.88 335 eP **P** **16 32 58.6 -0.4**
EDM e*PP pP 16 33 26.5 -1.6
EBAD Badajoz 82.05 44 P **P** **16 33 00.2 0.0**
comp=Z,128nm,1.3s,mb5.6
PMRV Marv??o 82.17 44 eP **P** **16 33 02.3 +1.4**
comp=Z,79nm,1.4s,mb5.3
PMRV epP pP 16 33 31.4 +1.4
PMRV eS S 16 43 09.5 +2.9
PMRV eLR LR 16 59 44.2
comp=Z,330nm,18.0s
PCBR Castelo Branco 82.34 43 eP **P** **16 33 02.7 +1.0**
comp=Z,92nm,1.4s,mb5.4
EMIJ Mijas 82.41 47 P **P** **16 33 01.8 -0.4**
comp=Z,68nm,1.0s,mb5.4
MTE Manteigas 82.60 43 eP **P** **16 33 04.3 +1.2**
comp=Z,154nm,1.4s,mb5.6
MTE epP pP 16 33 32.8 +0.5
MTE eS S 16 43 15.1 +4.2
MTE eLQ 16 55 01.3
MTE eLR LR 17 00 19.9
comp=Z,586nm,18.0s
MTE Manteigas 82.60 43 eP **P** **16 33 04.3 +1.3**
comp=Z,102nm,1.1s,mb5.6
PVRL Vila Real 82.97 42 eP **P** **16 33 05.0 0.0**
comp=Z,195nm,1.6s,mb5.7
PCAB Cabril 83.02 41 eP **P** **16 33 06.1 +0.9**
comp=Z,159nm,1.3s,mb5.7
PCAB epP pP 16 33 34.6 +0.2
ELOB Lobios 83.08 41 P **P** **16 33 06.7 +1.1**
comp=Z,149nm,1.4s,mb5.6
EMAZ Mazaricos 83.13 40 P **P** **16 33 08.3 +2.6**
comp=Z,86nm,1.3s,mb5.4
ELOJ Sierra Loja 83.14 47 P **P** **16 33 07.1 +1.2**
ELOJ pmax pmax
comp=Z,258nm,1.3s,mb5.9
ELOJ Sierra Loja 83.14 47 P **P** **16 33 07.1 +1.1**
comp=Z,258nm,1.3s,mb5.9
ELUQ Luque 83.27 46 P **P** **16 33 07.5 +0.9**
ELUQ pmax pmax
comp=Z,357nm,1.3s,mb6.0
ELUQ Luque 83.27 46 P **P** **16 33 07.5 +0.9**
comp=Z,357nm,1.3s,mb6.0
EALB Alboran 83.31 48 P **P** **16 33 07.7 +0.8**
comp=Z,122nm,1.3s,mb5.6
ERON Agron 83.31 47 P **P** **16 33 07.7 +0.9**
comp=Z,15nm,0.6s,mb5.0
PGC Siey 83.31 327 eP **P** **16 33 05.3 -1.2**
comp=Z,69nm,2.5s,mb5.0
PGC epP pP 16 33 36.5 +0.8
MVO Moncorvo 83.35 42 eP **P** **16 33 07.5 +0.6**
comp=Z,205nm,1.3s,mb5.8
MVO epP pP 16 33 35.8 -0.3
MVO eS S 16 43 20.9 +2.5
MVO eLR LR 17 00 06.3
comp=Z,567nm,18.0s
STS Santiago 83.35 40 P **P** **16 33 05.9 -1.0**
STS pmax pmax
comp=Z,205nm,1.6s,mb5.7
STS Santiago 83.35 40 P **P** **16 33 05.9 -1.0**
comp=Z,205nm,1.6s,mb5.7
EADA Adamuz 83.37 46 P **P** **16 33 08.3 +1.2**
comp=Z,61nm,1.2s,mb5.3
ECOG Cogollos-Vega 83.61 47 P **P** **16 33 08.5 +0.2**
ECOG pmax pmax
comp=Z,74nm,1.4s,mb5.3
ECOG Cogollos-Vega 83.61 47 P **P** **16 33 08.5 +0.2**
comp=Z,74nm,1.4s,mb5.3
PBRG Braganca 83.88 42 eP **P** **16 33 10.9 +1.3**
comp=Z,144nm,1.3s,mb5.6
PBRG epP pP 16 33 39.7 +0.8
EBER Berja 83.89 48 P **P** **16 33 10.5 +0.7**
comp=Z,30nm,0.9s,mb5.1
EBAN Banos Encina 83.90 46 P **P** **16 33 10.9 +1.1**
EBAN pmax pmax
comp=Z,31nm,0.8s,mb5.2
EBAN Banos Encina 83.90 46 P **P** **16 33 10.9 +1.1**
comp=Z,31nm,0.8s,mb5.2
ERUA La Rua 83.94 41 P **P** **16 33 10.5 +0.6**
ERUA pmax pmax
comp=Z,137nm,1.3s,mb5.6
ERUA La Rua 83.94 41 P **P** **16 33 10.5 +0.5**
comp=Z,137nm,1.3s,mb5.6
ECAL Calabor 83.95 42 P **P** **16 33 10.6 +0.6**
comp=Z,218nm,1.3s,mb5.8
TAM Tamanrasset 84.10 63 eP **P** **16 33 12.0 +0.8**
TAM e*PP pP 16 33 41.7 +1.2
TAM pmax pmax
comp=Z,176nm,1.3s,mb5.7
TAM Tamanrasset 84.10 63 eP **P** **16 33 12.0 +0.8**
comp=Z,176nm,1.3s,mb5.7
TAM epP pP 16 33 41.7 +1.2
EQES Quesada 84.21 47 P **P** **16 33 12.5 +1.2**
comp=Z,69nm,1.3s,mb5.3
PAB San Pablo 84.23 45 eP **P** **16 33 11.8 +0.4**
PAB pmax pmax
comp=Z,96nm,1.3s,mb5.5
PAB San Pablo 84.23 45 eP **P** **16 33 11.8 +0.4**
comp=Z,96nm,1.3s,mb5.5
ENIJ Nijar 84.40 48 P **P** **16 33 12.3 -0.1**
ENIJ pmax pmax
comp=Z,61nm,1.2s,mb5.3
ENIJ Nijar 84.40 48 P **P** **16 33 12.3 -0.1**
comp=Z,61nm,1.2s,mb5.3
ESDC Sonseca Array 84.55 45 P **P** **16 33 13.7 +0.6**
comp=Z,41nm,1.1s,mb5.3,baz=240,slow=4.9,SNR=61
ESDC pP pP 16 33 43.2 +0.9
comp=Z,49nm,1.1s,baz=242,slow=5.6,SNR=3.8
ESDC LR LR 17 08 12.3
comp=Z,400nm,20.4s,baz=230,slow=34
ESDC Sonseca Array 84.55 45 P **P** **16 33 13.1 +0.1**
comp=Z,61nm,1.3s,mb5.4
ESLA Sonseca Array 84.55 45 eP **P** **16 33 14.1 +1.0**
comp=Z,41nm,1.3s,mb5.2
ESLA epP pP 16 33 42.8 +0.4
BOSA Boshof 84.56 118 P **P** **16 33 13.8 +0.3**
comp=Z,29nm,0.5s,mb5.5,baz=257,slow=6.4,SNR=57
BOSA pP pP 16 33 42.9 +0.1
comp=Z,41nm,1.1s,baz=279,slow=4.6,SNR=2.8
BOSA LR LR 17 07 28.4
comp=Z,984nm,20.8s,baz=254,slow=33
BOSA Boshof 84.56 118 P **P** **16 33 13.8 +0.3**
BOSA *PP pP 16 33 42.9 +0.1
BOSA pmax pmax
comp=Z,29nm,0.5s,mb5.5
BOSA MLR MLR
comp=Z,984nm,20.8s
BOSA Boshof 84.56 118 eP **P** **16 33 13.6 +0.1**
comp=Z,202nm,1.4s,mb5.9
BOSA epP pP 16 33 43.1 +0.3
GUD Guadarrama 84.92 44 P **P** **16 33 15.0 +0.1**
GUD pmax pmax
comp=Z,14nm,0.6s,mb5.1
GUD Guadarrama 84.92 44 P **P** **16 33 15.0 +0.1**
comp=Z,14nm,0.6s,mb5.0
EVIA Vianos 85.01 46 P **P** **16 33 15.2 -0.2**
EVIA pmax pmax
comp=Z,56nm,1.2s,mb5.4
EVIA Vianos 85.01 46 P **P** **16 33 15.2 -0.2**
comp=Z,56nm,1.2s,mb5.4
ETOB Tobarra 85.67 47 P **P** **16 33 20.2 +1.6**
comp=Z,155nm,1.3s,mb5.8
LBTB Lobatse 86.03 115 eP **P** **16 33 21.1 +0.2**
LBTB e*PP pP 16 33 50.4 +0.1
ETRT Tiaret 86.16 50 P **P** **16 33 22.0 +0.9**
EANR 'Ain N'Sour 86.27 50 P **P** **16 33 22.8 +1.1**
MAW Mawson 86.30 163 P **P** **16 33 22.6 +1.2**
comp=Z,20nm,0.7s,mb5.2,baz=226,slow=4.9,SNR=18
MAW LR LR 17 11 15.4
comp=Z,471nm,19.3s,baz=235,slow=35
MAW Mawson 86.30 163 eP **P** **16 33 22.4 +1.1**
MAW pmax pmax
comp=Z,13nm,1.2s
MAW Mawson 86.30 163 eP **P** **16 33 22.4 +1.1**
comp=Z,13nm,1.2s,mb4.7
ETOR Torete 86.39 44 P **P** **16 33 25.0 +2.8**
ETOR pmax pmax
comp=Z,69nm,1.0s,mb5.5
ETOR Torete 86.39 44 P **P** **16 33 25.0 +2.8**
comp=Z,69nm,1.0s,mb5.5
ECHE Chera 86.52 46 P **P** **16 33 25.4 +2.6**
ECHE pmax pmax
comp=Z,79nm,1.4s,mb5.5
ECHE Chera 86.52 46 P **P** **16 33 25.4 +2.6**
comp=Z,79nm,1.4s,mb5.5
ECHA Ech Chlef 86.55 50 P **P** **16 33 24.0 +0.9**
ELAN Lanestosa 86.70 42 P **P** **16 33 26.6 +2.9**
comp=Z,109nm,1.8s,mb5.5
EBNR Beni Rached 86.73 50 P **P** **16 33 24.7 +0.8**
ECRI Cripan 86.98 43 P **P** **16 33 27.8 +2.8**
ECRI pmax pmax
comp=Z,29nm,0.5s,mb5.5
ECRI Cripan 86.98 43 P **P** **16 33 27.8 +2.8**
comp=Z,29nm,0.5s,mb5.5
EMOS Mosqueruela 87.22 45 P **P** **16 33 28.9 +2.6**
comp=Z,112nm,1.8s,mb5.5
EMHD Djebel Mahouad 87.72 50 P **P** **16 33 29.5 +0.8**
SJPF Ste Jean 88.05 43 eP **P** **16 33 29.8 -0.3**
comp=Z,29nm,0.6s,mb5.2
SJPF Ste Jean 88.05 43 eP **P** **16 33 29.8 -0.3**
SJPF pmax pmax
comp=Z,15nm,0.6s,mb5.2
SJPF Ste Jean 88.05 43 eP **P** **16 33 29.8 -0.3**
comp=Z,15nm,0.6s,mb5.2
ETSF Etsaut 88.37 43 eP **P** **16 33 31.5 -0.1**
comp=Z,31nm,0.6s,mb5.2
ETSF Etsaut 88.37 43 eP **P** **16 33 31.5 -0.1**
ETSF pmax pmax
comp=Z,15nm,0.6s,mb5.2
ETSF Etsaut 88.37 43 eP **P** **16 33 31.5 -0.1**
comp=Z,15nm,0.6s,mb5.2
REYF Montagne du Re 88.56 43 eP **P** **16 33 32.7 +0.2**
EPOB Poblet 88.72 45 P **P** **16 33 33.9 +0.6**
comp=Z,20nm,1.1s,mb5.0
EBIE Bielsa 88.73 44 P **P** **16 33 34.1 +0.8**
comp=Z,32nm,1.4s,mb5.2
EPF Esparros 89.02 43 eP **P** **16 33 34.3 -0.3**
YKA Yellowknife Ar 89.24 341 P **P** **16 33 35.4 +0.2**
comp=Z,71nm,0.9s,mb5.7,baz=133,slow=4.5,SNR=669
YKA pP pP 16 34 04.2 -0.6
comp=Z,107nm,0.8s,baz=134,slow=4.7,SNR=11
YKA PKKPbc PKKPbc 16 51 14.5 0.0
comp=Z,0.3nm,0.6s,baz=322,slow=3.6,SNR=8.0
YKA LR LR 17 15 02.7
comp=Z,48nm,19.2s,baz=230,slow=36
YKA Yellowknife Ar 89.24 341 P **P** **16 33 35.4 +0.2**
YKA *PP pP 16 34 04.2 -0.6
YKA Yellowknife Ar 89.24 341 P **P** **16 33 35.4 +0.2**
YKA pP pP 16 34 04.2 -0.6
YKA PKKPbc PKKPbc 16 51 14.5 0.0
YKA LR LR 17 15 02.7
QUIF Quistinic 89.25 38 eP **P** **16 33 34.4 -1.2**
ROSF Rostrenen 89.40 38 eP **P** **16 33 35.1 -1.2**
MLS Moulis 89.47 44 eP **P** **16 33 36.9 +0.1**
SET Setif 89.51 51 P **P** **16 33 39.0 +1.9**
SGMF Saint Gilles 89.77 38 eP **P** **16 33 36.8 -1.2**
DFRA Djebel Bou Aff 90.00 51 P **P** **16 33 46.0 +6.6**
CARF Carcanieres 90.03 44 eP **P** **16 33 39.1 -0.3**
LFF La Frestale 90.16 42 eP **P** **16 33 38.9 -1.0**
comp=Z,85nm,0.8s,mb5.6
LFF La Frestale 90.16 42 eP **P** **16 33 38.9 -1.0**
LFF pmax pmax
comp=Z,43nm,0.8s,mb5.6
LFF La Frestale 90.16 42 eP **P** **16 33 38.9 -1.0**
comp=Z,42nm,0.8s,mb5.6
FILF Fillols 90.26 45 eP **P** **16 33 39.6 -0.8**
MTLF Montolieu 90.38 44 eP **P** **16 33 39.9 -1.1**
MFF Saint Martin d 90.40 40 eP **P** **16 33 40.0 -1.0**
RJF Les Rejaudoux 90.82 42 eP **P** **16 33 41.8 -1.2**
RJF eMLR MLR
comp=Z,938nm,22.2s
RJF Les Rejaudoux 90.82 42 eP **P** **16 33 41.8 -1.2**
RJF LR LR
comp=Z,940nm,22.3s
GRR Gorron 90.83 38 eP **P** **16 33 41.6 -1.3**
comp=Z,86nm,1.2s,mb5.5
GRR Gorron 90.83 38 eP **P** **16 33 41.6 -1.3**
GRR pmax pmax
comp=Z,43nm,1.2s,mb5.5
GRR Gorron 90.83 38 eP **P** **16 33 41.6 -1.3**
comp=Z,43nm,1.2s,mb5.5
CAF Calviac 90.99 42 eP **P** **16 33 42.6 -1.2**
comp=Z,19nm,0.6s,mb5.1
CAF Calviac 90.99 42 eP **P** **16 33 42.6 -1.2**
CAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
CAF Calviac 90.99 42 eP **P** **16 33 42.6 -1.2**
comp=Z,9.6nm,0.6s,mb5.1
FLN La Foliniere 91.22 38 eP **P** **16 33 43.6 -1.2**
FLN eMLR MLR
comp=Z,326nm,18.0s
FLN La Foliniere 91.22 38 eP **P** **16 33 43.6 -1.2**
FLN LR LR
comp=Z,330nm,18.0s
LDF La Druitiere 91.35 38 eP **P** **16 33 44.0 -1.4**
DRV Dumont d'Urvil 91.37 191 S S 16 44 32.0 -2.5
DRV SS SS 16 50 44.0 +2.9
DRV L L 16 58 00.0
LSZ Lusaka 91.66 107 PP PP 16 37 25.3 -2.1
comp=Z,25nm,1.3s,baz=250,slow=14,SNR=6.4
LSZ PKKPbc PKKPbc 16 51 07.1 +1.3
comp=Z,1.7nm,0.5s,baz=283,slow=1.7,SNR=3.8
LSZ LR LR 17 14 18.6
comp=Z,860nm,18.0s,baz=340,slow=35
LSZ Lusaka 91.66 107 eP **P** **16 33 49.1 +1.5**
LSZ pmax pmax
comp=Z,25nm,1.3s,mb5.3
LSZ Lusaka 91.66 107 eP **P** **16 33 49.1 +1.4**
comp=Z,25nm,1.3s,mb5.3
TCF Toulx Ste Croi 91.70 41 eP **P** **16 33 45.8 -1.2**
comp=Z,12nm,0.6s,mb5.0
TCF Toulx Ste Croi 91.70 41 eP **P** **16 33 45.8 -1.2**
TCF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
TCF Toulx Ste Croi 91.70 41 eP **P** **16 33 45.8 -1.2**
comp=Z,6.1nm,0.6s,mb5.0
LASF Ste Croix 91.77 44 eP **P** **16 33 46.6 -0.8**
LBL Lubilhac 91.88 42 eP **P** **16 33 48.1 +0.2**
PYM Petit Puy Mans 91.96 42 eP **P** **16 33 46.5 -1.7**
AGO Saint Agoulin 92.17 42 eP **P** **16 33 48.7 -0.5**
BGF Bois d'Agland 92.21 41 eP **P** **16 33 48.3 -1.1**
KEST Kesra 92.26 53 P **P** **16 33 49.9 0.0**
comp=Z,5.3nm,1.0s,mb4.7,baz=135,slow=7.1,SNR=3.5
KEST PKKP PKKPbc 16 51 05.3 -0.1
comp=Z,1.5nm,0.9s,baz=251,slow=7.6,SNR=3.5
KEST LR LR 17 16 07.8
comp=Z,361nm,18.8s,baz=79,slow=36
HYF Humbligny 92.40 40 eP **P** **16 33 49.2 -1.0**
AVF Avril sur Loir 92.63 41 eP **P** **16 33 49.9 -1.4**
comp=Z,16nm,0.7s,mb5.2
AVF Avril sur Loir 92.63 41 eP **P** **16 33 49.9 -1.4**
AVF pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
AVF Avril sur Loir 92.63 41 eP **P** **16 33 49.9 -1.4**
comp=Z,7.8nm,0.7s,mb5.2
VIVF Saint-Julien-l 92.63 43 eP **P** **16 33 50.8 -0.6**
SSB Saint Sauveur 92.73 43 eP **P** **16 33 51.4 -0.4**
SSB pmax pmax
comp=Z,36nm,1.4s,mb5.5
SSB Saint Sauveur 92.73 43 eP **P** **16 33 51.4 -0.4**
comp=Z,36nm,1.4s,mb5.5
SSF Saint Saulge 92.84 41 eP **P** **16 33 50.8 -1.5**
comp=Z,18nm,0.6s,mb5.3
SSF Saint Saulge 92.84 41 eP **P** **16 33 50.8 -1.5**
SSF pmax pmax
comp=Z,9.0nm,0.6s,mb5.3
SSF Saint Saulge 92.84 41 eP **P** **16 33 50.8 -1.5**
comp=Z,9.3nm,0.6s,mb5.3
SMRF Simiane la Rot 92.85 44 eP **P** **16 33 50.8 -1.6**
SMF Signal de Mont 92.87 41 eP **P** **16 33 51.4 -1.0**
comp=Z,46nm,0.7s,mb5.6
SMF Signal de Mont 92.87 41 eP **P** **16 33 51.4 -1.0**
SMF pmax pmax
comp=Z,23nm,0.7s,mb5.6
SMF Signal de Mont 92.87 41 eP **P** **16 33 51.4 -1.0**
comp=Z,23nm,0.7s,mb5.6
EKA Eskdalemuir Ar 93.02 32 PP PP 16 37 35.2 -2.4
comp=Z,16nm,1.3s,baz=257,slow=5.9,SNR=5.4
LOR Lormes 93.14 41 eP **P** **16 33 52.2 -1.5**
comp=Z,19nm,0.6s,mb5.3
LOR eMLR MLR
comp=Z,712nm,21.8s
LOR Lormes 93.14 41 eP **P** **16 33 52.2 -1.5**
LOR pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
LOR MLR MLR
comp=Z,710nm,21.8s
LOR Lormes 93.14 41 eP **P** **16 33 52.2 -1.5**
comp=Z,9.5nm,0.6s,mb5.3
LOR LR LR
comp=Z,710nm,21.8s
LMR La Mourre 93.21 45 eP **P** **16 33 53.7 -0.4**
comp=Z,11nm,0.5s,mb5.0
LMR La Mourre 93.21 45 eP **P** **16 33 53.7 -0.4**
LMR pmax pmax
comp=Z,5.0nm,0.5s,mb5.1
LMR La Mourre 93.21 45 eP **P** **16 33 53.7 -0.4**
comp=Z,5.4nm,0.5s,mb5.1
FRF La Foret Royal 93.39 45 eP **P** **16 33 54.3 -0.6**
comp=Z,28nm,1.1s,mb5.2
FRF La Foret Royal 93.39 45 eP **P** **16 33 54.3 -0.6**
FRF pmax pmax
comp=Z,14nm,1.1s,mb5.2
FRF La Foret Royal 93.39 45 eP **P** **16 33 54.3 -0.6**
comp=Z,14nm,1.1s,mb5.2
ORIF Oris-en-Rattie 93.44 43 eP **P** **16 33 53.7 -1.4**
comp=Z,16nm,0.6s,mb5.2
ORIF eMLR MLR
comp=Z,869nm,22.0s
ORIF Oris-en-Rattie 93.44 43 eP **P** **16 33 53.7 -1.4**

ORIF pmax pmax
comp=Z,8.0nm,0.6s,mb5.2
ORIF Oris-en-Rattie 93.44 43 *e*P **P 16 33 53.7 -1.4**
comp=Z,8.2nm,0.6s,mb5.2
MBDF Montbardon 93.94 44 *e*P **P 16 33 55.8 -1.6**
SBF Sospel 94.04 45 *e*P **P 16 33 57.2 -0.7**
SUMG Summit 94.12 9 *e*P **P 16 33 58.9 +1.3**
comp=Z,91nm,1.2s,mb6.0
LPL La Plagne 94.23 43 *e*P **P 16 33 57.3 -1.4**
LPG La Plagne 94.24 43 *e*P **P 16 33 57.6 -1.2**
CABF La Chapelle 94.26 42 *e*P **P 16 33 57.1 -1.7**
CABF pmax pmax
comp=Z,23nm,1.0s,mb5.2
CABF La Chapelle 94.26 42 *e*P **P 16 33 57.1 -1.7**
CABF pmax pmax
comp=Z,12nm,1.0s,mb5.2
CABF La Chapelle 94.26 42 *e*P **P 16 33 57.1 -1.7**
comp=Z,12nm,1.0s,mb5.2
MEZF Maizieres J'vi 94.39 40 *e*P **P 16 33 58.4 -1.0**
comp=Z,53nm,0.7s,mb5.7
MEZF Maizieres J'vi 94.39 40 *e*P **P 16 33 58.4 -1.0**
comp=Z,53nm,0.7s,mb6.0
CASY Casey 94.49 180 P **P 16 33 60.0 +0.3**
comp=Z,20nm,0.9s,mb5.4
CASY *e*pP pP 16 34 29.7 +0.4
BAIF Baives 94.54 38 *e*P **P 16 33 59.0 -1.0**
PGF Pioggiola 94.59 47 *e*P **P 16 33 58.3 -2.2**
DOU Dourbes 94.78 38 E 16 34 09.3
THEF They Montfort 94.85 40 *e*P **P 16 34 00.7 -0.8**
GIVF Givet 94.92 38 *e*P **P 16 34 00.7 -1.1**
UCC Uccle 94.94 38 P **P 16 34 02.3 +0.4**
HAU Haudompre 94.98 41 *e*P **P 16 34 00.7 -1.4**
comp=Z,7.8nm,0.6s,mb5.0
HAU *e*MLR MLR
comp=Z,520nm,21.8s
HAU Haudompre 94.98 41 *e*P **P 16 34 00.7 -1.4**
HAU pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
HAU MLR MLR
comp=Z,520nm,21.8s
HAU Haudompre 94.98 41 *e*P **P 16 34 00.7 -1.4**
comp=Z,3.9nm,0.6s,mb5.0
HAU LR LR
comp=Z,520nm,21.8s
LOMF Lomont 95.02 41 *e*P **P 16 34 03.1 +0.8**
HINF Hinteralfeld 95.22 41 *e*P **P 16 34 01.9 -1.3**
BCLA Clavier 95.33 38 P **P 16 34 05.3 +1.7**
RES Resolute Bay 95.40 353 PKKPbc PKKPbc 16 50 56.2 -2.5
comp=Z,1.5nm,0.8s,baz=0.0,slow=3.0,SNR=3.8
MOF Molkenrain 95.41 41 *e*P **P 16 34 02.9 -1.2**
URZ Urewera 95.44 226 LR LR 17 08 23.3
comp=Z,583nm,20.1s,baz=188,slow=30
BBS Basel-Blauen 95.49 42 *e*P **P 16 34 05.5 +1.1**
WLF Walferdange 95.53 39 P **P 16 34 03.8 -0.7**
comp=Z,41nm,1.5s,mb5.6
WLF Walferdange 95.53 39 *e*P **P 16 34 03.2 -1.4**
WLF pmax pmax
comp=Z,74nm,1.4s,mb5.9
WLF Walferdange 95.53 39 *e*Pdiff **P 16 34 05.5 +0.9**
WLF *e*SKSac SKSac 16 44 28.2 -1.7
WLF Walferdange 95.53 39 *e*P **P 16 34 03.2 -1.4**
comp=Z,74nm,1.4s,mb5.9
ECH Echery 95.56 41 *e*P **P 16 34 02.5 -2.3**
ECH Echery 95.56 41 P **P 16 34 03.8 -1.0**
ECH Echery 95.56 41 *e*P **P 16 34 03.5 -1.3**
comp=Z,32nm,1.4s,mb5.6
CDF Champ du Feu 95.71 41 *e*P **P 16 34 04.2 -1.2**
MEM Membach 95.82 38 P **P 16 34 05.3 -0.5**
HGN Heimansgroeve 95.84 38 *e*P **P 16 34 04.1 -1.9**
comp=Z,22nm,2.5s,mb5.2
FELD Feldberg im Sc 95.96 41 *e*P **P 16 34 04.4 -2.2**
RUP Ruppelstein 96.08 39 *e*P **P 16 34 06.1 -1.0**
LANF Langenberg 96.26 40 *e*P **P 16 34 07.2 -0.7**
TUE Stuetta 96.28 43 *e*P **P 16 34 08.4 +0.4**
comp=Z,47nm,1.7s,mb5.6
BFO Black Forest 96.33 41 *e*Pdiff **P 16 34 11.2 +3.0**
BFO *e*PP PP 16 37 59.7 -3.8
BFO *e*SKSac SKSac 16 44 31.9 -2.3
DAVOS Davos 96.70 43 P **P 16 34 10.2 +0.2**
DAVOS 16 38 04.6
DAVOX Davos/Dischmat 96.73 43 P **P 16 34 10.2 +0.1**
comp=Z,4.6nm,1.0s,mb4.9,baz=224,slow=13,SNR=7.1
DAVOX PP PP 16 38 04.6 -2.1
comp=Z,8.6nm,1.0s,baz=247,slow=6.7,SNR=4.8
DAVOX PKKPbc PKKPbc 16 50 53.2 -0.9
comp=Z,2.1nm,0.9s,baz=85,slow=6.5,SNR=5.1
BUG Bochum--Univer 96.88 38 *e*Pdiff **P 16 34 11.4 +0.7**
BUG *e*PP PP 16 38 04.6 -3.1
BUG *e*SKSac SKSac 16 44 35.3 -1.6
STU Stuttgart 97.03 41 *e*Pdiff **P 16 34 11.4 0.0**
STU *e*PP PP 16 38 04.6 -4.3
STU *e*SKSac SKSac 16 44 35.9 -1.9
TNS Taunus Mts 97.11 39 *e*Pdiff **P 16 34 11.5 -0.2**
TNS *e*PP PP 16 38 05.1 -4.4
TNS *e*SKSac SKSac 16 44 38.4 +0.3
IBBN Ibbenburen 97.49 37 *e*Pdiff **P 16 34 13.4 0.0**
IBBN *e*PP PP 16 38 08.8 -3.5
MOTA Moosalm 97.72 43↓ *i*PcP PcP 16 34 15.3 +0.7
comp=Z,12nm,1.2s
WTTA Wattenberg 98.03 43↑ *i*Pdiff **P 16 34 16.9 +1.0**
comp=Z,22nm,1.2s,mb5.6
FUR Furstenfeldbru 98.11 42 *e*PP PP 16 38 12.9 -4.3
FUR *e*SKSac SKSac 16 44 41.2 -2.1
CUC Castrocucco 98.53 51 *e*P **P 16 34 18.2 -0.2**
comp=Z,28nm,1.2s,mb5.7
GRA1 Grafenberg Arr 98.60 40 *e*Pdif **P 16 34 17.3 -1.1**
GRA1 *e*PP PP 16 38 15.8 -5.1
GRA1 *e*SKSac SKSac 16 44 45.4 -0.3
GRA1 LR LR
comp=Z,400nm,20.5s
GRF Grafenberg Arr 98.60 40 *e*Pdiff **P 16 34 17.3 -1.1**
GRF *e*PP PP 16 38 15.8 -5.1
GRF *e*SKSac SKSac 16 44 45.4 -0.3
GRF *e*L 17 15 40.4
comp=Z,396nm,20.5s
CLZ Clausthal 98.83 38 *e*Pdiff **P 16 34 19.3 -0.1**
CLZ *e*PP PP 16 38 18.7 -3.9
CLZ *e*SKSac SKSac 16 44 47.2 +0.5
NRDL Niedersach Rie 98.90 37 *e*PP PP 16 38 19.0 -4.1
NRDL *e*SKSac SKSac 16 44 45.2 -1.9
RJOB Jochberg 98.93 43 *e*PP PP 16 38 18.0 -5.5
RJOB *e*SKSac SKSac 16 44 44.8 -2.6
MOX Moxa 99.16 40 *e*PP PP 16 38 19.8 -5.3
MOX
comp=Z,600nm,23.0s
MOX Moxa 99.16 40 *e*SKSac SKSac 16 44 49.2 +0.8
ROTZ Rotzenmuhle 99.22 40 *e*SKSac SKSac 16 44 49.6 +0.8
MANZ Manzenberg 99.24 40 *e*Pdiff **P 16 34 22.2 +0.9**
MANZ *e*PP PP 16 38 21.0 -4.7
MANZ *e*SKSac SKSac 16 44 49.8 +0.9
WET Wettzell 99.44 41 *e*PP PP 16 38 22.3 -5.0
WET *e*SKSac SKSac 16 44 50.3 +0.4
BSEG Bad Segeberg 99.51 36 *e*PP PP 16 38 24.5 -3.2
BSEG *e*SKSac SKSac 16 44 48.9 -1.1
NKC Novy Kostel 99.52 40 *e*PP PP 16 38 21.0 -6.9
TANN Tannenbergstha 99.59 40 *e*Pdiff Pdif 16 34 22.4 -0.6
TANN *e*PP PP 16 38 22.6 -5.8
TANN *e*SKSac SKSac 16 44 51.6 +1.0
GEC2 GERESS Array S 99.86 42 *e*Pdiff Pdif 16 34 23.4 -0.8
GEC2 *e*SKSac SKSac 16 44 50.3 -1.7
GERES GERESS Array B 99.86 42 P Pdif 16 34 24.2 0.0
comp=Z,1.6nm,1.0s,baz=273,slow=5.2,SNR=7.2
GERES PP PP 16 38 26.8 -3.6
comp=Z,5.0nm,1.1s,baz=229,slow=8.1,SNR=4.3
GERES PKKPbc PKKPbc 16 50 45.3 -0.1
comp=Z,0.8nm,0.7s,baz=48,slow=2.0,SNR=6.2
GERES GERESS Array B 99.86 42 P Pdif 16 34 24.2 0.0
GERES 16 38 26.8
KHC Kasperske Hory 99.87 41 *e*PDIF Pdif 16 34 24.0 -0.2
KHC *e*PP PP 16 38 27.3 -3.3
CLL Collm 100.20 39 *e*P Pdif 16 34 26.0 +0.3
CLL *i* 16 38 28.0
CLL *e*S Sdif 16 45 51.0 -0.3
CLL pmax pmax
comp=Z,25nm,1.6s
CLL MLR MLR
comp=Z,600nm,21.9s
CLL Collm 100.20 39 *e*Pdiff Pdif 16 34 25.8 +0.1
CLL *e*PP PP 16 38 28.2 -4.8
CLL *e*SKSac SKSac 16 44 53.9 +0.4
CLL Collm 100.20 39 *e*Pdif Pdif 16 34 26.0 +0.3
comp=Z,25nm,1.6s
CLL Lm 16 15 00.0
comp=Z,600nm,21.9s
CLL *e*pPdif 16 34 56.0
CLL *e*x x 16 35 09.0
CLL *i* PP PP 16 38 28.0 -5.0
comp=Z,43nm,1.5s
CLL *e*SKSac SKSac 16 45 01.0 +7.5
CLL *e*Sdif Sdif 16 45 51.0 -0.3
CLL *e*SP SP 16 47 26.0 +5.5
CLL *e*sPS 16 48 06.0
CLL *e*SS SS 16 52 48.0 -0.3
CLL Collm 100.20 39 *e*Pdif Pdif 16 34 26.0 +0.3
comp=Z,25nm,1.6s
CLL *e* 16 34 56.0
CLL *i* PP PP 16 38 28.0 -5.0
CLL *e*SKS 16 45 01.0
CLL *e*Sdif Sdif 16 45 51.0 -0.3
CLL LR LR
comp=Z,600nm,21.9s
BRG Berggiesshubel 100.63 40 *e*P Pdif 16 34 28.7 +1.1
BRG *e* 16 38 30.6
BRG 16 45 01.0
BRG S Sdif 16 45 53.0 -1.9
BRG PS PS 16 47 20.0 -20
BRG pmax pmax
comp=Z,6.0nm,11.4s
BRG pmax pmax
comp=Z,17nm,1.6s
BRG Berggiesshubel 100.63 40 *e*PP PP 16 38 30.4 -5.9
BRG *e*SKSac SKSac 16 44 56.6 +0.9
BRG Berggiesshubel 100.63 40 *e*P Pdif 16 34 28.7 +1.1
comp=Z,17nm,1.9s
BRG *e*PP PP 16 38 30.6 -5.6
BRG SKS 16 45 01.0
BRG S Sdif 16 45 53.0 -1.9
BRG PS PS 16 47 20.0 -20
BRG *e*PKKP PKKPbc 16 50 30.3 -13
PRU Pruhonice 100.73 41 *e*PP PP 16 38 32.3 -4.7
PVCC Panska Ves 100.91 40 *e*PP PP 16 38 35.7 -2.7
TREC Trest 101.11 42 *e*PP PP 16 38 36.8 -3.1
UPC Upice 101.78 41 *e*PP PP 16 38 39.5 -5.5
VRAC Vranov 101.81 42 PP PP 16 38 41.4 -3.8
comp=Z,3.8nm,0.9s,baz=229,slow=9.0,SNR=6.8
DPC Dobruska-Polom 101.93 41 *e*PP PP 16 38 40.1 -6.0
NOA NORSAR Array B 102.28 29 P Pdif 16 34 35.8 +0.9
comp=Z,3.1nm,1.0s,baz=250,slow=4.4,SNR=2.9
NOA PP PP 16 38 46.4 -2.0
comp=Z,17nm,1.2s,baz=250,slow=7.2,SNR=6.1
COLA College 102.79 335*d* *i*P Pdif 16 34 37.1 -0.1
OKC Ostrava-Krasne 102.93 42 *e*PP PP 16 38 49.2 -4.3
HFS Hagfors 103.19 31 PKiKP PKiKP 16 38 54.8 -2.7
comp=Z,21nm,1.1s,baz=235,slow=5.2,SNR=9.2
OJC Ojcow 104.05 41 *e*PKiKP PKiKP 16 38 59.4 0.0
IDI Anoyia 104.17 57 Pdiff Pdif 16 34 50.3 +7.0
comp=Z,4.5nm,0.9s,baz=266,slow=6.3,SNR=6.0
IDI PP PP 16 38 53.5 -10
comp=Z,4.7nm,0.8s,baz=270,slow=12,SNR=4.2
MLR Muntele Rosu 107.12 47 Pdiff Pdif 16 35 02.5 +6.1
comp=Z,0.8nm,0.7s,baz=298,slow=15,SNR=3.6
MLR PP PP 16 39 15.1 -10
comp=Z,9.5nm,1.2s,baz=88,slow=20,SNR=6.7
MLR PKKPbc PKKPbc 16 50 22.7 -0.8
comp=Z,2.3nm,0.7s,baz=106,slow=4.2,SNR=4.2
KIS Kishinev 109.33 46 *e*UNK 16 39 30.0
AKASG Malin Array Be 110.06 42 PP PP 16 39 42.1 -3.8
comp=Z,6.3nm,1.0s,baz=262,slow=7.4,SNR=16
AKASG PKKPbc PKKPbc 16 50 13.3 -1.1
comp=Z,1.3nm,0.6s,baz=72,slow=3.8,SNR=5.7
EIL Elat 111.28 65 PP PP 16 39 45.6 -10
comp=Z,3.8nm,0.5s,baz=60,slow=2.4,SNR=3.7
BR131 Keskin Array S 111.83 54 *e*PKiKP PKiKP 16 39 14.3 0.0
BRTR Keskin Array B 111.83 54 PKiKP PKiKP 16 39 14.7 +0.4
comp=Z,3.1nm,1.0s,baz=211,slow=2.2,SNR=5.6
BRTR PP PP 16 39 47.5 -11
comp=Z,2.0nm,0.8s,baz=261,slow=5.7,SNR=4.3
BRTR PKKPab PKKPab 16 50 17.1 +1.5
comp=Z,1.9nm,0.9s,baz=119,slow=4.2,SNR=9.1
MMAI Mount Meron Ar 112.25 61 PKiKP PKiKP 16 39 18.2 +2.9
comp=Z,1.5nm,0.5s,baz=307,slow=0.7,SNR=6.3
MMAI PP PP 16 39 48.2 -14
comp=Z,0.9nm,0.5s,baz=345,slow=6.0,SNR=4.1
MMAI PKKPab PKKPab 16 50 16.1 +2.0
comp=Z,6.4nm,1.0s,baz=94,slow=3.3,SNR=8.8
ASF Jabal al Asfar 113.36 63 PKiKP PKiKP 16 39 18.8 +1.4
comp=Z,5.5nm,0.9s,baz=335,slow=1.6,SNR=4.9
ASF PP PP 16 40 10.7 +0.7
comp=Z,7.7nm,1.1s,baz=148,slow=2.8,SNR=7.2
ASF PKKPab PKKPab 16 50 11.0 +1.8
comp=Z,0.8nm,0.3s,baz=16,slow=2.5,SNR=3.2
ASF Jabal al Asfar 113.36 63 PKIKP PKiKP 16 39 18.8 +1.4
ASF 16 40 10.7
OBN Obninsk 114.72 38 *i* PKIKP PKiKP 16 39 20.6 +1.3
OBN *e* 16 39 54.6
OBN *i* 16 40 16.2
OBN *e*SS SS 16 56 08.8 +4.6
OBN pmax pmax
comp=Z,14nm,1.1s
OBN Obninsk 114.72 38↑ *e*PKP PKiKP 16 39 20.6 +1.3
ANN Anapa 115.11 49 *i* PKIKP PKiKP 16 39 15.2 -5.2
ANN *e* 16 40 16.2
ANN *e*SP SP 16 49 59.8 +11
ANN pmax pmax
comp=Z,440nm,8.1s
MALT Malatya 115.38 56 *e*PKIKP PKPdf 16 39 21.5 +0.4
KLMR Klimovskoe 115.91 31 PKIKP PKPdf 16 39 22.4 +1.0
SOC Sochi 116.69 50 *i* PKIKP PKPdf 16 39 27.1 +3.6
SOC *e* 16 40 37.3
SOC *e*PPP 16 43 10.3
SOC *e* 16 46 25.2
SOC *e*PS PS 16 50 14.8 -2.7
SOC *e*SS SS 16 56 38.0 +7.2
KIV Kislovodsk 118.85 50 *i* PKIKP PKPdf 16 39 29.3 +1.7
KIV *e* 16 40 46.2
KIV *e*PS PS 16 50 41.2 +4.3
KIV *e*SS SS 16 57 11.6 +13
KIV pmax pmax
comp=Z,20nm,1.1s
KIV Kislovodsk 118.85 50↑ *e*PKP PKPdf 16 39 29.2 +1.6
BILL Bilibino 120.59 339 *i* PKIKP PKPdf 16 39 29.3 -0.9
BILL *i* 16 40 57.2
BILL pmax pmax
comp=Z,9.0nm,1.4s
BILL MLR MLR
comp=Z,400nm,23.0s
BILL Bilibino 120.59 339 *e*PKPdf PKPdf 16 39 29.9 -0.3
STKA Stephens Creek 121.04 210 PKP PKPdf 16 39 32.5 +0.2
comp=Z,5.8nm,0.6s,baz=178,slow=0.6,SNR=15
STKA pPKP pPKPdf 16 40 01.7 -1.5
comp=Z,3.2nm,0.8s,baz=199,slow=1.6,SNR=2.5
STKA PP PP 16 40 59.9 -2.2
comp=Z,4.7nm,1.0s,baz=137,slow=1.9,SNR=4.6
STKA Stephens Creek 121.04 210 *e*P PKPdf 16 39 32.3 0.0
comp=Z,4.5nm,0.6s
STKA Stephens Creek 121.04 210 *e*PKPdf PKPdf 16 39 31.7 -0.6
NAY Al-Naaiem 121.82 67 *e*P PKPdf 16 39 37.7 +3.9
baz=67
NAY AMb AMB 16 39 39.0
comp=Z,22nm,1.6s,baz=67
MIB Mutribah 121.96 67 *e*P PKPdf 16 39 37.5 +3.5
baz=66
MIB AMb AMB 16 39 38.5
comp=Z,38nm,1.1s,baz=66
RDF Al-Radifah 122.06 68 *e*P PKPdf 16 39 37.7 +3.5
baz=68
RDF AMb AMB 16 39 39.0
comp=Z,42nm,1.1s,baz=68
UMR Umm Al-Rimmam 122.27 67 *e*P PKPdf 16 39 38.2 +3.6
baz=67
UMR AMb AMB 16 39 39.6
comp=Z,54nm,1.0s,baz=67
ARU Arti 126.60 33 *i* PKIKP PKPdf 16 39 42.8 +0.7
ARU 16 41 43.1
ARU SS SS 16 58 41.3 +5.4
ARU Arti 126.60 33 *e*PKPdf PKPdf 16 39 42.7 +0.7
TIXI Tiksi 126.79 353↑ *i*PKIKP PKPdf 16 39 41.1 -0.9
TIXI Tiksi 126.79 353 *e*PKPdf PKPdf 16 39 40.0 -2.1
FORT Forrest 127.36 199 *e*P PKPdf 16 39 44.3 -0.1
comp=Z,22nm,0.6s
SVE Sverdlovsk 127.50 32 *e*PKIKP PKPdf 16 39 47.7 +3.9
SVE pmax pmax
comp=Z,14nm,1.2s
NWAO Narrogin (SRO) 127.52 187 PKP PKPdf 16 39 44.2 -0.5
comp=Z,15nm,0.8s,baz=184,slow=6.1,SNR=7.7
CTA Charters Tower 127.57 223 PKP PKPdf 16 39 44.8 -0.3
comp=Z,6.5nm,0.6s,baz=241,slow=1.0,SNR=8.1
CTA Charters Tower 127.57 223 *e*P PKPdf 16 39 45.2 +0.1
comp=Z,13nm,1.0s
SEY Seymchan 128.19 337↑ *e*PKIKP PKPdf 16 39 45.7 +0.8
MUN Mundaring 128.56 186 *e*P PKPdf 16 39 47.0 +0.3
PETK Petropavlovsk- 130.84 324 PKP PKPdf 16 39 51.1 +0.8
comp=Z,14nm,1.0s,baz=71,slow=6.2,SNR=7.1
PETK pPKP pPKPdf 16 40 20.6 -0.6
comp=Z,14nm,1.1s,baz=90,slow=10,SNR=4.4
ASAR Alice Springs 131.58 209 PKhKP 16 39 33.6
comp=Z,0.4nm,0.6s,baz=140,slow=3.2,SNR=7.1
ASAR PKP PKPdf 16 39 52.2 -0.4
comp=Z,7.4nm,0.5s,baz=133,slow=1.7,SNR=29
ASAR pPKP pPKPdf 16 40 21.9 -1.6
comp=Z,6.8nm,0.8s,baz=136,slow=2.1,SNR=3.4
ASAR PP PP 16 42 09.2 -2.6
comp=Z,5.2nm,1.1s,baz=150,slow=6.8,SNR=6.1
ASAR SKPbc SKPbc 16 43 07.4 -0.4
comp=Z,8.1nm,1.1s,baz=150,slow=3.7,SNR=6.4
ASAR tx tx 16 43 59.6
comp=Z,4.3nm,0.8s,baz=150,slow=4.0,SNR=4.4
ASAR Alice Springs 131.58 209 PKP 16 39 33.6
ASAR PKP PKPdf 16 39 52.2 -0.4
ASAR pPKP pPKPdf 16 40 21.9 -1.6
ASAR PP PP 16 42 09.2 -2.6
ASAR SKPbc SKPbc 16 43 07.4 -0.4
COEN Coen 134.00 226 *e*PKPdf PKPdf 16 39 57.1 -0.2
PMG Port Moresby 134.15 234 PKP PKPdf 16 39 57.4 -0.3
comp=Z,8.7nm,0.9s,baz=95,slow=22,SNR=7.7
PMG PP PP 16 42 27.3 -1.9
comp=Z,2.9nm,0.7s,baz=119,slow=8.1,SNR=4.6
PMG SKPbc SKPbc 16 43 17.5 +0.6
comp=Z,8.7nm,1.0s,baz=32,slow=2.1,SNR=4.6
PMG tx tx 16 44 06.8
comp=Z,4.1nm,0.8s,baz=259,slow=5.2,SNR=2.3
PMG Port Moresby 134.15 234 *e*PKPdf PKPdf 16 39 57.0 -0.7
BRVK Borovoye 134.18 33 PKIKP PKPdf 16 39 57.2 +0.7
WB2 Warramunga Arr 134.55 212 *e*P 16 39 47.4
WB2 *e*S SKPbc 16 43 27.9 +10
WB2 Warramunga Arr 134.55 212 *e*PKPdf PKPdf 16 39 58.2 -0.1
WRA Warramunga Arr 134.56 212 PKhKP 16 39 46.3
comp=Z,1.2nm,0.7s,baz=158,slow=2.2,SNR=11
WRA PKP PKPdf 16 39 58.0 -0.4
comp=Z,8.7nm,0.6s,baz=148,slow=1.6,SNR=36
WRA pPKP pPKPdf 16 40 27.9 -1.4
comp=Z,7.3nm,0.9s,baz=143,slow=1.5,SNR=2.5
WRA PP PP 16 42 29.2 -1.8
comp=Z,4.5nm,1.1s,baz=153,slow=4.9,SNR=8.4
WRA SKPbc SKPbc 16 43 17.8 -0.2
comp=Z,5.3nm,0.9s,baz=150,slow=3.0,SNR=5.8
WRA tx tx 16 44 09.7
comp=Z,4.7nm,0.8s,baz=148,slow=3.1,SNR=6.2
WRA Warramunga Arr 134.56 212 PKHKP 16 39 46.3
WRA 16 39 58.0
WRA 16 40 27.9
WRA 16 42 29.2
WRA Warramunga Arr 134.56 212 PKP 16 39 46.3
WRA PKP PKPdf 16 39 58.0 -0.4
WRA pPKP pPKPdf 16 40 27.9 -1.4
WRA PP PP 16 42 29.2 -1.8
WRA SKPbc SKPbc 16 43 17.8 -0.2
WRAB Tennant Creek 134.56 212 *e*PKIKP PKPdf 16 39 58.2 -0.1
YAK Yakutsk 135.53 347 *e*PKIKP PKPdf 16 39 58.3 -0.5
YAK *e* 16 40 29.5
YAK pmax pmax
comp=Z,13nm,0.9s
YAK Yakutsk 135.53 347↑ *e*PKP PKPdf 16 40 00.0 +1.2
NVS Novosibirsk 138.94 24 *e*PKIKP PKPdf 16 40 00.4 -4.9
NVS *e* 16 40 36.8
NVS pmax pmax
comp=Z,47nm,1.1s
NVS pmax pmax
comp=E,17nm,1.2s
KURK Kurchatov 139.75 32 PP PP 16 43 02.0 -1.4
comp=E,1.2nm,0.3s,baz=295,slow=6.7,SNR=3.6
KURK Kurchatov 139.75 32 *e*PKPdf PKPdf 16 40 07.8 +0.9
FITZ Fitzroy Crossi 139.92 202 *e*P PKPdf 16 40 01.4 -6.9
comp=E,31nm,0.8s
FITZ *e*S SKPbc 16 43 43.0 +9.1
FITZ Fitzroy Crossi 139.92 202 *e*PKPdf PKPdf 16 40 07.9 -0.3
KBL Kabul 140.12 59 *e*PKIKP PKPdf 16 40 08.2 +0.1
ZAA0 Zalesovo Array 140.22 24 *e*PKPpre 16 40 01.9
ZALV Zalesovo Beam 140.22 24 PKhKP 16 40 01.7
comp=E,2.3nm,0.7s,baz=322,slow=8.3,SNR=11
ZALV PKP PKPdf 16 40 07.0 -0.6
comp=E,21nm,0.8s,baz=298,slow=3.2,SNR=26
ZALV SKPbc SKPbc 16 43 35.2 +1.8
comp=E,9.5nm,1.0s,baz=287,slow=5.7,SNR=4.3
ZALV Zalesovo Beam 140.22 24 PKHKP 16 40 01.7
ZALV 16 40 07.1
EKS2 Erkin-Say 141.17 45 *e*PKPdf PKPdf 16 40 08.8 -0.9
CLNS Chul'man 141.28 348 *i* PKHKP 16 40 04.1
CLNS pmax pmax
comp=Z,17nm,1.2s
CLNS pmax pmax
comp=N,9.0nm,1.4s
CLNS pmax pmax
comp=E,8.0nm,1.0s
AML Almayashu 141.33 46 *e*PKPdf PKPdf 16 40 11.6 +1.5
NRGR Nerungri 141.48 348 *e*PKIKP PKPdf 16 40 05.2 -4.7
BHJ Bhuj 141.52 77 AMS AMS 17 45 10.9
comp=Z,390nm,16.0s
FRU Bishkek 141.65 45 *e*PKIKP PKPdf 16 40 12.0 +1.4
FRU *e* 16 43 16.0
BOD Bodaibo 141.66 357 *e*PKHKP 16 40 04.2
BOD pmax pmax
comp=Z,19nm,1.1s
TKM2 Tokmak 2 142.26 44 PKIKP PKPdf 16 40 11.0 -0.7
KSH Kashi 143.97 49 PKP PKPdf 16 40 15.8 +1.0
KSH *e*APKP 16 40 42.0
KSH XPKP 16 40 52.8
KSH PP PP 16 43 33.0 +3.3
KSH PKS 16 43 49.5
KSH PPP 16 46 48.0
KSH SKS SKSdf 16 47 13.5 -0.4
KSH SKKS SKKSac 16 50 12.5 +1.0
KSH SS SS 17 02 06.0 +1.3
KSH PP PP
comp=Z,716nm,5.0s
KSH LR LR
comp=N,2μm,5.5s
KSH LR LR
comp=E,1μm,6.0s
KSH LR LR
comp=Z,2μm,7.2s
MK31 Makanchi Array 144.11 34 *e*PKIKP PKPdf 16 40 13.2 -1.6
MKAR Makanchi Array 144.11 34 PKP PKPdf 16 40 13.4 -1.4
comp=Z,29nm,1.1s,baz=339,slow=3.0,SNR=50
MKAR pPKP pPKPdf 16 40 45.4 -0.4
comp=Z,8.2nm,0.6s,baz=321,slow=2.0,SNR=2.5
MKAR PP PP 16 43 36.2 +6.2
comp=Z,3.3nm,0.9s,baz=288,slow=7.0,SNR=2.2
MKAR SKP 16 43 40.2
comp=Z,6.2nm,1.0s,baz=294,slow=3.9,SNR=4.1
MKAR Makanchi Array 144.11 34 PKIKP PKPdf 16 40 13.4 -1.4
MKAR 16 40 45.4
MKAR 16 43 36.2
MKAR Makanchi Array 144.11 34 PKP PKPdf 16 40 13.4 -1.4
MKAR pPKP pPKPdf 16 40 45.4 -0.4
MKAR PP PP 16 43 36.2 +6.2
MKAR SKP 16 43 40.2
GOA Goa 144.48 90 *e*P PKPdf 16 40 16.4 +0.1
ERM Erimo 144.65 317 *e*PKIKP PKPdf 16 40 16.5 +0.6
MNGI Mangalore 144.82 95 *e*P PKPdf 16 40 17.1 +0.1
POO Poona 145.02 85 *e*P PKPbc 16 40 17.4 +0.6
HABR Khabarovsk 145.12 332*d* *i*PKIKP PKPdf 16 40 17.6 +1.1
HABR *e* 16 40 45.7
HABR *e* 16 43 34.4
HABR *e*PPP 16 46 46.9
HABR *e*SS SS 17 02 18.8 +2.2
HABR *e*SSS 17 07 45.6
HABR MLR MLR
comp=Z,177nm,23.0s
KAD Karad 145.15 88 *i* P PKPbc 16 40 17.4 +0.1
KLR Kul'dur 145.94 335 *e*PKHKP 16 40 14.7
KLR pmax pmax
comp=E,64nm,1.8s
KLR pmax pmax
comp=Z,270nm,1.8s
AJM Ajmer 146.01 71 *e*P PKPdf 16 40 20.2 +1.5
THN Thein Dam 146.02 61 *e*P PKPdf 16 40 18.9 +0.3
DLH Dalhousie 146.20 60 *e*P PKPab 16 40 21.0 0.0
DLH *ex* x 16 40 29.0
KOD Kodaikanal 146.47 101 *e*P PKPab 16 40 22.6 0.0
BHK Bhakra 146.83 62 *ex* x 16 40 34.5
IRK Irkutsk 146.91 7↓ *i*PKP2 PKPab 16 40 22.4 -0.7
IRK pmax pmax

	comp=Z,170nm,1.0s								
GUMO	**Guam**	**146.94**	**265**		PKPbc	PKPbc	16 40 20.9	-1.8	
	comp=Z,422nm,1.0s,baz=188,slow=5.5,SNR=7.8								
GUMO					pPKPbc	pPKPbc	16 40 51.7	-1.6	
	comp=Z,142nm,0.8s,baz=200,slow=14,SNR=2.3								
MOY	**Mondy**	**146.97**	**11**	*e*	PKP2	PKPab	16 40 22.2	-1.1	
MOY					pmax	pmax			
	comp=Z,16nm,1.3s								
SDNR	**Sundarnagar**	**147.27**	**62**	*ex*		PKPbc	16 40 24.0	+0.8	
TLY	**Talaya**	**147.38**	**8**	⇑P		PKPbc	16 40 22.7	-0.1	
	SNR=10								
TLY	**Talaya**	**147.38**	**8**	*e*	PKP2	PKPbc	16 40 22.8	0.0	
TLY					pmax	pmax			
	comp=Z,66nm,1.1s								
TLY	**Talaya**	**147.38**	**8**	*e*	PKPbc	PKPbc	16 40 24.2	+1.4	
CIT	**Chita**	**147.48**	**357**	*e*	PKP2	PKPbc	16 40 22.7	-0.4	
CIT					pmax	pmax			
	comp=Z,368nm,1.9s								
SMLA	**Simla**	**147.52**	**62**	*e*	P	PKPdf	16 40 22.7	+1.5	
SMLA				*i*	x	x	16 40 52.8		
LATR	**Latur**	**147.55**	**86**	*e*	P	PKPbc	16 40 24.0	-0.3	
NDI	**New Delhi**	**148.03**	**67**	*e*	P	PKPdf	16 40 22.0	-0.1	
NDI				*ex*		x	16 44 22.0		
AKL	**Akola**	**148.20**	**82**	*e*	P	PKPdf	16 40 23.4	+0.9	
PALK	**Pallekele**	**148.29**	**108**	*e*	PKPbc	PKPbc	16 40 25.8	-0.6	
DDI	**Dehra Dun**	**148.44**	**64**	*e*	P	PKPdf	16 40 23.0	+0.3	
ZAK	**Zakamensk**	**148.60**	**9**	*e*	PKIKP	PKPdf	16 40 23.9	+1.6	
ZAK				*e*			16 40 58.5		
ZAK				*e*			16 43 58.5		
ZAK					pmax	pmax			
	comp=Z,75nm,1.2s								
BHPL	**Bhopal**	**148.66**	**77**	*e*	P	PKPdf	16 40 24.2	+1.0	
BHPL					AMS	AMS	17 46 33.6		
	comp=Z,441nm,17.3s								
WMQ	**Urumqi**	**148.94**	**34**		PKP	PKPdf	16 40 25.0	+1.9	
WMQ					LR	LR			
	comp=N,281nm,32.0s								
WMQ					LR	LR			
	comp=E,362nm,29.0s								
WMQ					LR	LR			
	comp=Z,361nm,29.0s								
HYB	**Hyderabad**	**149.29**	**89**	*i*	PKP	PKPdf	16 40 26.0	+1.6	
HYB				*e*	PKPAB	PKPab	16 40 34.5	+0.8	
HYB				*e*			16 40 56.0		
HYB				*e*			16 40 59.5		
HYB				*e*	pPKPAB		16 41 20.0		
HYB				*e*			16 43 36.0		
HYB				*e*			16 44 09.0		
HYB				*e*			16 44 36.0		
HYB	**Hyderabad**	**149.29**	**89**	*e*	P	PKPdf	16 40 26.0	+1.6	
HYB				*e*			16 40 56.0		
HIA	**Hailar**	**149.46**	**349**	*e*	PKHKP	PKPdf	16 40 23.5	-0.2	
HIA				*e*			16 40 27.8		
XMIS	**Christmas Isla**	**149.77**	**170**	*e*	PKPab	PKPab	16 40 35.2	-0.3	
NGP	**Nagpur**	**150.13**	**81**	*e*	P	PKPdf	16 40 26.7	+1.1	
PTH	**Pithoragarh**	**150.44**	**64**	*ex*		PKPbc	16 40 32.2	+0.9	
LGTI	**Lohaghat**	**150.49**	**64**	*ex*		x	16 40 32.5		
MDJ	**Mudanjiang**	**150.50**	**332**		PKP	PKPdf	16 40 24.5	-1.0	
MDJ					XPKP		16 41 06.0		
MDJ					PP	PP	16 44 07.3	+0.1	
MDJ					SS	SS	17 03 18.5	+1.6	
MDJ					PP	PP			
	comp=Z,247nm,15.7s								
MDJ					LR	LR			
	comp=N,327nm,43.9s								
MDJ					LR	LR			
	comp=E,334nm,29.3s								
MDJ					LR	LR			
	comp=Z,286nm,48.8s								
MDJ	**Mudanjiang**	**150.50**	**332**	*e*	PKPdf	PKPdf	16 40 25.7	+0.2	
MDJ				*e*	PKPbc	PKPbc	16 40 31.3	+0.4	
MJAR	**Matsushiro Arr**	**150.65**	**311**		PKP	PKPdf	16 40 26.8	+0.8	
	comp=Z,17nm,1.0s,baz=327,slow=2.1,SNR=4.3								
MJAR					PKPbc	PKPbc	16 40 31.9	+0.3	
	comp=Z,20nm,0.8s,baz=88,slow=1.5,SNR=37								
MJAR					pPKPbc	pPKPbc	16 41 01.7	-0.6	
	comp=Z,35nm,0.8s,baz=143,slow=0.7,SNR=8.4								
MAJO	**Matsushiro**	**150.65**	**311**	*e*	PKIKP	PKPbc	16 40 31.6	0.0	
MAT	**Matsushiro**	**150.65**	**311**		PKP	PKPbc	16 40 31.5	-0.1	
SONM	**Songino Array**	**151.50**	**6**		PKP	PKPdf	16 40 28.5	+1.6	
	comp=Z,15nm,1.1s,baz=338,slow=0.9,SNR=22								
SONM					PKPbc	PKPbc	16 40 34.1	+0.9	
	comp=Z,44nm,0.7s,baz=309,slow=1.2,SNR=56								
SONM					pPKPbc	pPKPbc	16 41 03.6	-0.3	
	comp=Z,30nm,0.8s,baz=348,slow=1.3,SNR=3.4								
ULN	**Ulaanbaatar**	**151.53**	**5**	*e*	PKPdf	PKPdf	16 40 26.9	-0.1	
ULN				*e*	PKPbc	PKPbc	16 40 34.2	+1.0	
CN2	**Changchun**	**152.87**	**336**	*e*	PKP	PKPdf	16 40 30.0	+0.9	
CN2					APKP		16 40 57.0		
CN2					XPKP		16 41 07.5		
CN2					PP	PP	16 44 24.8	+4.3	
CN2					PP	PP			
	comp=Z,200nm,4.0s								
KOLN	**Koldanda**	**153.73**	**67**	*e*	P	PKPdf	16 40 31.4	+0.6	
DANN	**Dangsing**	**153.74**	**65**	*e*	P	PKPdf	16 40 31.9	+1.1	
VIS	**Vishakhapatnam**	**153.84**	**89**	*e*	P	PKPdf	16 40 31.7	+0.4	
VIS					AMS	AMS	17 47 45.1		
	comp=Z,386nm,20.1s								
KAPI	**Kappang**	**154.12**	**201**		PKP	PKPdf	16 40 31.8	-0.1	
	comp=Z,17nm,0.9s,baz=109,slow=12,SNR=3.6								
KAPI					PKPab	PKPab	16 40 53.8	0.0	
	comp=Z,108nm,0.9s,baz=232,slow=3.2,SNR=3.6								
KAPI	**Kappang**	**154.12**	**201**		PKP	PKPdf	16 40 31.8	-0.1	
KAPI				*e*	PKPab	PKPab	16 40 53.8	-0.1	
GKN	**Gorkha**	**154.57**	**66**	*e*	P	PKPdf	16 40 32.3	+0.3	
DMN	**Daman**	**155.07**	**66**	*e*	P	PKPdf	16 40 33.4	+0.7	
KKN	**Kakani**	**155.17**	**66**	*e*	P	PKPdf	16 40 33.4	+0.5	
PKI	**Pulchoki**	**155.34**	**66**	*e*	P	PKPdf	16 40 33.4	+0.3	
GUN	**Gumba**	**155.66**	**65**	*e*	P	PKPdf	16 40 34.5	+1.0	
JIRN	**Jiri**	**155.99**	**66**	*e*	P	PKPdf	16 40 34.6	+0.7	
BOK	**Bokaro**	**156.39**	**75**	*e*	P	PKPdf	16 40 35.1	+0.5	
BOK					AMb	AMB	16 40 39.5		
	comp=Z,32nm,1.3s								
RAMN	**Ramite**	**156.51**	**67**	*e*	P	PKPdf	16 40 35.3	+0.6	
KSRS	**Korea Array**	**156.74**	**324**		PKP	PKPdf	16 40 35.8	+1.2	
	comp=Z,9.8nm,1.1s,baz=83,slow=0.5,SNR=12								
KSRS					PKPab	PKPab	16 41 04.8	+0.4	
	comp=Z,11nm,1.0s,baz=68,slow=2.7,SNR=8.9								
KSRS					pPKPab	pPKPab	16 41 33.4	-1.0	
	comp=Z,12nm,1.1s,baz=54,slow=3.1,SNR=3.0								
ODAN	**Odare**	**157.22**	**67**	*e*	P	PKPdf	16 40 36.3	+0.7	
TAPN	**Taplejung**	**157.37**	**65**	*e*	P	PKPdf	16 40 36.5	+0.8	
GTA	**Gaotai**	**157.98**	**23**		PKP	PKPdf	16 40 36.8	+0.7	
GTA					APKP		16 41 04.0		
GTA					XPKP		16 41 14.8		
GTA					PP	PP	16 44 54.5	+5.5	
GTA					SKS	SKSdf	16 47 31.8	+0.3	
GTA					SKKS	SKKSac	16 51 31.3	+3.3	
GTA					PP	PP			
	comp=Z,110nm,5.4s								
GTA					LR	LR			
	comp=N,153nm,17.7s								
GTA					LR	LR			
	comp=E,194nm,18.0s								
GTA					LR	LR			
	comp=Z,280nm,18.0s								
DL2	**Dalian**	**158.54**	**337**	*i*	PKPR	PKPdf	16 40 37.5	+0.7	
DL2					APKP		16 41 09.3		
DL2					PKP2	PKPab	16 41 16.5	+4.3	
DL2					PP	PP	16 44 50.8	-1.2	
DL2					SS	SS	17 04 43.0	-0.8	
DL2					PP	PP			
	comp=Z,200nm,6.0s								
HHC	**Hu-ho-hao-te**	**158.71**	**359**	*e*	PKP	PKPdf	16 40 38.3	+1.3	
HHC					APKP		16 41 05.0		
HHC					PKP2	PKPab	16 41 16.5	+3.7	
HHC					PKS		16 44 10.5		
HHC					PP	PP	16 44 58.5	+5.9	
HHC					SKKS	SKKSac	16 51 34.8	+3.1	
HHC					PP	PP			
	comp=Z,388nm,7.8s								
HHC					LR	LR			
	comp=N,157nm,16.8s								
HHC					LR	LR			
	comp=E,163nm,18.0s								
HHC					LR	LR			
	comp=Z,250nm,15.6s								
BJI	**Beijing**	**159.03**	**349**		PKP	PKPdf	16 40 39.0	+1.6	
BJI					LR	LR			
	comp=N,241nm,16.1s								
BJI					LR	LR			
	comp=E,262nm,14.3s								
BJI					LR	LR			
	comp=Z,380nm,28.4s								
LSA	**Lhasa**	**159.41**	**57**		PKP	PKPdf	16 40 40.0	+1.9	
LSA	**Lhasa**	**159.41**	**57**	*e*	PKPdf	PKPdf	16 40 40.0	+1.9	
PSI	**Prapat**	**159.70**	**143**		PKP	PKPdf	16 40 39.7	+0.8	
	comp=Z,12nm,0.8s,baz=219,slow=7.0,SNR=7.6								
PSI					pPKP	pPKPdf	16 41 08.9	-1.1	
	comp=Z,5.6nm,0.8s,baz=228,slow=9.0,SNR=2.2								
PSI					PKPab	PKPab	16 41 19.2	+1.2	
	comp=Z,38nm,0.9s,baz=212,slow=7.0,SNR=6.5								
PSI					pPKPab	pPKPab	16 41 48.4	+0.6	
	comp=Z,16nm,0.8s,baz=157,slow=6.7,SNR=2.6								
PSI	**Prapat**	**159.70**	**143**		PKIKP	PKPdf	16 40 39.7	+0.7	
PSI							16 41 08.9		
PSI							16 41 19.2		
PSI	**Prapat**	**159.70**	**143**		PKP	PKPdf	16 40 39.7	+0.8	
PSI					pPKP	pPKPdf	16 41 08.9	-1.1	
PSI					PKPab	PKPab	16 41 19.2	+1.2	
PSI					pPKPab	pPKPab	16 41 48.4	+0.6	
SHL	**Shillong**	**161.45**	**68**	*e*	P	PKPdf	16 40 42.0	+1.5	
SHL				*ex*		x	16 45 40.0		
LZH	**Lanzhou**	**162.35**	**19**		PKP	PKPdf	16 40 42.0	+0.9	
LZH					APKP		16 41 09.8		
LZH					XPKP		16 41 18.5		
LZH					PKP2	PKPab	16 41 33.8	+4.9	
LZH				*e*	PP	PP	16 45 15.0	+2.6	
LZH					SKKS	SKKSac	16 51 53.0	+2.2	
LZH					PP	PP			
	comp=Z,256nm,7.2s								
LZH					LR	LR			
	comp=N,2μm,18.3s								
LZH					LR	LR			
	comp=Z,2μm,20.2s								
IMP	**Imphal**	**163.44**	**68**	*e*	P	PKPdf	16 40 40.0	-2.5	
IMP				*ex*		x	16 41 35.0		
IMP				*ex*		x	16 45 23.0		
SSE	**Sheshan**	**165.17**	**323**		PKP	PKPdf	16 40 44.5	+0.7	
SSE					PP	PP	16 45 31.3	+3.5	
SSE					SS	SS	17 05 55.3	+1.6	
SSE					PP	PP			
	comp=Z,230nm,12.0s								
SSE					LR	LR			
	comp=N,165nm,27.5s								
SSE					LR	LR			
	comp=E,296nm,27.5s								
SSE					LR	LR			
	comp=Z,290nm,28.0s								
XAN	**Xi'an**	**165.41**	**6**		PKP	PKPdf	16 40 44.0	0.0	
XAN					APKP		16 41 13.8		
XAN					XPKP		16 41 23.5		
XAN					PKP2	PKPab	16 41 46.8	+4.5	
XAN					SKS	SKSdf	16 47 39.0	+1.1	
XAN					SKKS	SKKSac	16 52 10.5	+4.2	
XAN					PP	PP			
	comp=Z,356nm,10.5s								
XAN					LR	LR			
	comp=N,119nm,34.0s								
XAN					LR	LR			
	comp=E,237nm,36.4s								
XAN					LR	LR			
	comp=Z,477nm,30.4s								
NJ2	**Nanjing**	**165.59**	**332**	*e*	PKP	PKPdf	16 40 44.0	-0.2	
CD2	**Chengdu**	**166.94**	**28**		PKP	PKPdf	16 40 46.8	+1.5	
CD2					APKP		16 41 15.0		
CD2					XPKP		16 41 25.5		
CD2					SKS	SKSdf	16 47 40.5	+1.5	
CD2					SKKS	SKKSac	16 52 16.8	+2.6	
CD2					LR	LR			
	comp=N,560nm,11.9s								
CD2					LR	LR			
	comp=Z,760nm,19.0s								
WHN	**Wuhan**	**168.56**	**345**	⇑	PKP	PKPdf	16 40 47.0	+0.6	
WHN					APKP		16 41 17.5		
WHN					PKP2	PKPab	16 41 56.5	+0.2	
WHN					PP	PP	16 45 44.0	-0.5	
CMAR	**Chiang Mai Arr**	**168.66**	**93**		PKP	PKPdf	16 40 47.6	+0.8	
	comp=Z,11nm,1.1s,baz=264,slow=1.7,SNR=18								
CMAR					pPKP	pPKPdf	16 41 18.6	+0.7	
	comp=Z,8.2nm,1.2s,baz=279,slow=1.8,SNR=2.6								
CMAR					PKPab	PKPab	16 41 57.8	+0.3	
	comp=Z,8.9nm,0.8s,baz=267,slow=4.9,SNR=14								
CMAR					PP	PP	16 45 47.4	+0.1	
	comp=Z,7.6nm,1.1s,baz=262,slow=4.2,SNR=7.5								
CHTO	**Chiang Mai**	**168.70**	**91**	*e*	PKPdf	PKPdf	16 40 46.6	-0.2	
KMI	**Kunming**	**170.61**	**52**		PKP	PKPdf	16 40 47.3	-0.5	
KMI					APKP		16 41 17.5		
KMI					PKP2	PKPab	16 42 06.3	+0.5	
KMI					PP	PP	16 45 57.8	+1.6	
KMI					PP	PP			
	comp=Z,435nm,8.1s								
KMI					LR	LR			
	comp=N,174nm,26.1s								
KMI					LR	LR			
	comp=E,256nm,36.8s								
KMI					LR	LR			
	comp=Z,731nm,30.7s								
GYA	**Guiyang**	**172.06**	**29**	*i*	PKP	PKPdf	16 40 46.0	-2.5	
GYA					APKP		16 41 18.3		
GYA					XPKP		16 41 30.8		
GYA					PKP2	PKPab	16 42 12.0	0.0	
GYA					PKS		16 44 18.5		
GYA					PP	PP	16 46 03.5	+1.1	
GYA					SKS	SKSdf	16 47 37.5	-4.1	
GYA					PPP		16 50 13.3		
GYA					SKKS	SKKSac	16 52 39.0	-0.4	
GYA					PP	PP			
	comp=Z,540nm,9.4s								
GYA					LR	LR			
	comp=N,3μm,25.5s								
GYA					LR	LR			
	comp=E,2μm,24.7s								
GYA					LR	LR			
	comp=Z,2μm,25.2s								
QIZ	**Qiongzhong**	**178.91**	**115**		PKP	PKPdf	16 40 50.8	+0.4	
QIZ					PP	PP	16 46 38.5	+1.9	
QIZ					SKKS	SKKSac	16 53 14.5	+2.1	
QIZ					PP	PP			
	comp=Z,643nm,12.6s								

IDC 25 16:25:52.0±49.0, 1661S×17677W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/16, mbtmp3.9/3, Error ellipse: s-maj=918.0km s-min=165.6km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.62**	**240**	P	P	16 33 34.3	+0.5
	0.8nm,0.5s,baz=96,slow=9.2,SNR=4.7						
WRA	**Warramunga Arr**	**46.41**	**258**	P	P	16 34 20.4	-0.3
	0.4nm,0.5s,baz=95,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**46.66**	**253**	P	P	16 34 22.4	-0.2
	2.4nm,0.5s,baz=88,slow=8.5,SNR=45						

IDC 25 16:27:21.6±26.0, 2172S×17345W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=482.8km s-min=142.0km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.61**	**265**	P	P	16 34 38.9	+0.6
	2.4nm,0.3s,baz=91,slow=11,SNR=13						
CTA	**Charters Tower**	**37.61**	**265**	*eP*	P	16 34 38.9	+0.6
	1.6nm,0.3s						
STKA	**Stephens Creek**	**41.13**	**246**	P	P	16 35 06.9	-0.8
	1.2nm,0.5s,baz=94,slow=11,SNR=10						
STKA	**Stephens Creek**	**41.13**	**246**	*eP*	P	16 35 06.7	-0.9
	1.0nm,0.5s						
ASAR	**Alice Springs**	**48.38**	**257**	P	P	16 36 05.1	-0.5
	0.9nm,0.6s,baz=93,slow=8.3,SNR=11						
WB2	**Warramunga Arr**	**48.63**	**262**	*eP*	P	16 36 07.9	+0.3
WRA	**Warramunga Arr**	**48.64**	**262**	P	P	16 36 08.0	+0.4
	1.1nm,0.6s,baz=96,slow=8.2,SNR=20						

IDC 25 16:40:49.8±2.1, 1754S×16787E, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/18, mbtmp4.1/6, Error ellipse: s-maj=45.4km s-min=39.6km az=36.0
ISCJB 25 16:40:54.3±1.8, 176S±02×1677E±03, h33km, mb4.0/7, Error ellipse: s-maj=36.3km s-min=21.4km az=167.3
NEIC 25 16:40:55.8±1.5, 1761S×16777E, h35km, Error ellipse: s-maj=32.2km s-min=19.3km az=80.0
ISC 25 16:40:56.1±1.8, 176S±02×1678E±03, h35km, n10, σ0§62/10, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.59**	**195**	*eP*		**Pn**	**16 42 02.9**	**-0.2**
STKA	**Stephens Creek**	**27.58**	**234**	P		**P**	**16 46 41.2**	**+1.2**
	1.9nm,0.9s,mb3.7,baz=72,slow=9.5,SNR=7.8							
WRA	**Warramunga Arr**	**31.69**	**260**	P		**P**	**16 47 15.6**	**-1.0**
	0.2nm,0.3s,mb3.4,baz=90,slow=6.9,SNR=7.4							
ASAR	**Alice Springs**	**32.19**	**253**	P		**P**	**16 47 20.8**	**-0.2**
	1.7nm,0.5s,mb4.1,baz=80,slow=8.4,SNR=51							
FITZ	**Fitzroy Crossi**	**40.03**	**263**	*eP*		**P**	**16 48 28.6**	**+0.6**
	11nm,0.6s,mb4.8							
NWAO	**Narrogin (SRO)**	**47.72**	**241**	P		**P**	**16 49 29.3**	**-0.4**
	7.8nm,0.8s,mb4.8,baz=127,slow=5.0,SNR=6.4							
NWAO	**Narrogin (SRO)**	**47.72**	**241**	P		**P**	**16 49 29.3**	**-0.4**
QSPA	**South Pole Qui**	**72.42**	**180**	P		**P**	**16 52 18.1**	**-0.2**
	1.7nm,0.9s,mb4.0,baz=80,slow=2.0,SNR=3.4							
QSPA	**South Pole Qui**	**72.42**	**180**	*eP*		**P**	**16 52 18.3**	**0.0**
SONM	**Songino Array**	**85.09**	**324**	P		**P**	**16 53 28.3**	**+0.1**
	0.3nm,0.7s,mb3.5,baz=142,slow=7.7,SNR=3.9							

ISCJB 25 16:41:09.9±1.6, 2808S±008×1797W±0.1, h404km±19km, mb3.6/6, Error ellipse: s-maj=18.2km s-min=10.7km az=26.1
IDC 25 16:41:12.1±2.2, 2800S×17970W, h416km±22km, mb3.3/5, mb1 3.5/7, mb1mx3.3/17, mbtmp3.5/7, Error ellipse: s-maj=19.9km s-min=19.4km az=80.0
NEIC 25 16:41:12.2±1.2, 2804S×17969W, h422km±16km, mb3.8/2, Error ellipse: s-maj=17.5km s-min=12.2km az=131.0
ISC 25 16:41:11.8±2.2, 2806S±008×1797W±01, h416km±27km, n19, σ0§86/17, mb3.6/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**10.53**	**194**	P		**P**	**16 43 34.7**	**0.0**
	12nm,0.3s,baz=0.3,slow=3.1,SNR=42							
URZ				S		**S**	**16 45 29.3**	**-3.2**
	5.8nm,0.3s,baz=236,slow=22,SNR=12							
AFI	**Afiamalu**	**15.87**	**29**	P		**P**	**16 44 33.7**	**+0.5**
	1.7nm,0.3s,baz=225,slow=11,SNR=4.1							
AFI				S		**S**	**16 47 18.5**	**-1.2**
	0.9nm,0.3s,baz=53,slow=20,SNR=2.9							
CTA	**Charters Tower**	**32.04**	**277**	P		**P**	**16 47 03.3**	**+1.2**
	4.9nm,0.6s,mb4.0,baz=105,slow=13,SNR=8.1							
CTA	**Charters Tower**	**32.04**	**277**	*eP*		**P**	**16 47 03.4**	**+1.3**
	3.7nm,0.6s,mb3.9							
STKA	**Stephens Creek**	**33.67**	**254**	P		**P**	**16 47 15.9**	**0.0**
	1.1nm,0.8s,mb3.2,baz=104,slow=8.3,SNR=3.7							
ASAR	**Alice Springs**	**41.83**	**265**	P		**P**	**16 48 23.1**	**-0.2**
	0.8nm,0.5s,mb3.3,baz=94,slow=6.8,SNR=9.5							
ASAR				ScP		ScP	16 53 19.6	-0.6
	0.6nm,0.6s,baz=114,slow=3.6,SNR=6.3							
WB2	**Warramunga Arr**	**42.59**	**271**	*eP*		**P**	**16 48 29.0**	**-0.4**
WB2	**Warramunga Arr**	**42.59**	**271**	*eP*		**P**	**16 48 28.8**	**-0.6**
WRAB	**Tennant Creek**	**42.59**	**271**	*eP*		**P**	**16 48 28.8**	**-0.6**
	1.7nm,0.3s,mb3.9							
WRA	**Warramunga Arr**	**42.60**	**271**	P		**P**	**16 48 29.1**	**-0.3**
	1.5nm,0.3s,mb3.8,baz=108,slow=6.3,SNR=51							
QSPA	**South Pole Qui**	**62.05**	**180**	P		**P**	**16 50 51.0**	**+1.7**
	2.0nm,0.7s,mb3.8,baz=14,slow=1.4,SNR=12							
QSPA	**South Pole Qui**	**62.05**	**180**	*eP*		**P**	**16 50 50.7**	**+1.4**
	1.8nm,0.6s,mb3.8							
SNAA	**Sanae**	**80.53**	**179**	*e*		**P**	**16 52 38.4**	**-0.1**
VNA3	**Neumayer Olymp**	**80.73**	**177**	*e*		**P**	**16 52 39.5**	**-0.1**
VNA3				*e*			16 52 40.6	
VNA2	**Neumayer--Watz**	**81.15**	**177**	*e*		**P**	**16 52 42.2**	**+0.4**
	baz=194,slow=6.0							
VNA2				*e*			16 52 43.4	
NOA	**NORSAR Array B**	**146.22**	**350**	PKPbc		PKPbc	17 00 03.0	-0.6
	0.6nm,0.7s,baz=16,slow=4.9,SNR=3.7							
HFS	**Hagfors**	**146.66**	**348**	PKPbc		PKPbc	17 00 04.4	-0.5
	0.9nm,0.3s,baz=64,slow=3.4,SNR=9.6							
AKASG	**Malin Array Be**	**148.56**	**324**	PKPbc		PKPbc	17 00 09.9	-0.2
	0.5nm,0.4s,baz=46,slow=3.3,SNR=2.1							
TORD	**Torodi Ar. Bea**	**165.12**	**185**	PKPab		PKPab	17 01 27.0	-0.1
	0.7nm,0.7s,baz=180,slow=2.3,SNR=2.9							

ISCJB 25 16:45:27.4±0.6, 4947S±008×1264E±02, h10km, mb4.0/6, Error ellipse: s-maj=23.1km s-min=11.9km az=7.5
IDC 25 16:45:28.1±1.2, 4948S×12629E, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/14, mbtmp4.1/7, ML2.3/1, MS3.7/1, Ms1 3.7/1, ms1mx3.2/22, Error ellipse: s-maj=36.6km s-min=23.3km az=87.0
NEIC 25 16:45:29.2±0.8, 4949S×12630E, h10km, mb4.5/1, Error ellipse: s-maj=24.4km s-min=15.2km az=91.0
ISC 25 16:45:29.5±0.6, 4946S±008×1263E±02, h10km, n14, σ0§98/12, mb4.0/6, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**17.86**	**334**	P		**Pn**	**16 49 37.8**	**-0.1**
	0.5nm,0.3s,baz=177,slow=5.4,SNR=6.1							
NWAO				LR	LR	16 54 40.4		
	comp=Z,263nm,21.7s,baz=258,slow=31							
NWAO	**Narrogin (SRO)**	**17.86**	**334**	P		**Pn**	**16 49 37.8**	**-0.1**
NWAO				LR	LR	16 54 40.4		
STKA	**Stephens Creek**	**20.97**	**39**	P		**P**	**16 50 11.7**	**-0.9**
	1.6nm,0.6s,baz=228,slow=15,SNR=4.0							
ASAR	**Alice Springs**	**26.43**	**16**	P		**P**	**16 51 06.2**	**-0.1**
	2.3nm,0.5s,mb4.0,baz=192,slow=8.7,SNR=46							
WRA	**Warramunga Arr**	**30.14**	**15**	P		**P**	**16 51 38.5**	**-1.0**
	1.1nm,0.8s,mb3.6,baz=194,slow=8.1,SNR=6.2							
URZ	**Urewera**	**37.62**	**92**	P		**P**	**16 52 45.9**	**+1.6**

KGM	**Kluang**	**6.55**	**73**	⇑P		**Pn**	**16 56 01.3**	**-0.6**
KSI	**Kapahiang**	**6.67**	**124**	P		**Pn**	**16 56 03.9**	**+0.3**
	466nm,1.0s,6µm1.9nm							
MYKOM	**Kota Tinggi**	**7.00**	**76**	⇑P		**Pn**	**16 56 07.3**	**-0.9**
MYKOM	**Kota Tinggi**	**7.00**	**76**	P		**Pn**	**16 56 05.9**	**-2.3**
	51nm,0.8s,0.3nm							
SNG	**Songkhla**	**7.89**	**27**	P		**Pn**	**16 56 15.0**	**-5.3**
	200nm,0.9s							
KTGM	**Kuala Trenggan**	**8.00**	**49**	⇓P		**Pn**	**16 56 20.3**	**-1.6**
KLJ	**Kotabumi**	**9.21**	**122**	P		**Pn**	**16 56 43.5**	**+5.0**
SBUM	**Sibu**	**15.34**	**81**	P		**Pn**	**16 58 02.3**	**+0.3**
	24nm,0.9s							
NST	**Nakhon Sawan**	**15.78**	**11**	P		**Pn**	**16 58 09.2**	**+1.6**
UBT	**Ubonrachathani**	**16.99**	**27**	⇓P		**Pn**	**16 58 23.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**18.35**	**6**	P		**Pn**	**16 58 37.4**	**-2.3**
	1.0nm,0.3s,baz=196,slow=12,SNR=113							
CMAR				PcP		PcP	17 03 10.7	+0.6
	0.0nm,0.3s,baz=224,slow=2.7,SNR=4.6							
CMAR				pPcP			17 03 22.5	
	0.0nm,0.3s,baz=232,slow=3.0,SNR=5.7							
CHG	**Chiang Mai**	**18.70**	**6**	⇓P		**Pn**	**16 58 41.5**	**-2.5**
	31nm,1.1s							
CHTO	**Chiang Mai**	**18.70**	**6**	*e*P		**Pn**	**16 58 40.6**	**-3.4**
CHTO				pmax		pmax		
	comp=Z,22nm,0.8s							
CHTO	**Chiang Mai**	**18.70**	**6**	*e*P		**Pn**	**16 58 40.6**	**-3.4**
	comp=Z,22nm,0.8s							
KKM	**Kota Kinabalu**	**20.02**	**72**	*e*P		**P**	**16 58 57.8**	**0.0**
	comp=Z,48nm,0.9s							
KKM	**Kota Kinabalu**	**20.02**	**72**	P		**P**	**16 58 57.8**	**0.0**
SDKM	**Sandakan**	**20.85**	**74**	⇓P		**P**	**16 59 07.1**	**+0.2**
VIS	**Vishakhapatnam**	**22.12**	**323**	*e*P		**P**	**16 59 21.8**	**+1.3**
VIS				AMb		AMB	16 59 27.6	
	comp=Z,26nm,1.3s,mb4.5							
QIZ	**Qiongzhong**	**22.62**	**33**	P		**P**	**16 59 23.5**	**-2.2**
QIZ				XP		sP	16 59 39.0	-1.4
QIZ				S		**S**	**17 03 23.5**	**-8.0**
QIZ				AMB		AMB		
	comp=Z,37nm,1.9s,mb4.5							
QIZ				LR		LR		
	comp=N,1µm,16.9s,MS4.6							
QIZ				LR		LR		
	comp=E,1µm,17.5s,MS4.6							
QIZ				LR		LR		
	comp=Z,900nm,18.0s,MS4.2							
HYB	**Hyderabad**	**25.07**	**314**	*e*P		sP	17 00 01.5	-2.9
KMI	**Kunming**	**25.49**	**12**	P		**P**	**16 59 53.5**	**+0.6**
KMI				AP		pP	17 00 03.5	0.0
KMI				PP			17 00 32.5	
KMI				S		**S**	**17 04 13.0**	**-4.7**
KMI				AMB		AMB		
	comp=Z,24nm,1.1s,mb4.6							
KMI				LR		LR		
	comp=N,246nm,20.9s,MS4.1							
KMI				LR		LR		
	comp=E,596nm,20.9s,MS4.1							
KMI				LR		LR		
	comp=Z,561nm,15.7s							
SHL	**Shillong**	**25.82**	**349**	*e*P		**P**	**16 59 56.0**	**+0.2**
SHL				*ex*		x	17 00 08.5	
SHL				*ex*		x	17 04 30.0	
BOK	**Bokaro**	**25.94**	**336**	*ex*		x	16 59 58.6	
BOK				AMb		AMB	17 00 03.0	
	comp=Z,33nm,0.9s,mb4.8							
GYA	**Guiyang**	**27.80**	**19**	P		**P**	**17 00 15.8**	**+2.1**
GYA				AP		pP	17 00 25.5	+1.1
GYA				XP		sP	17 00 31.3	+2.3
GYA				PP			17 01 05.5	
GYA				PPP			17 01 19.8	
GYA				PCP		PcP	17 03 31.3	+1.8
GYA				XS		sS	17 05 14.8	+2.8
GYA				SS			17 06 16.8	
GYA				SSS			17 06 37.3	
GYA				SCP		ScP	17 07 07.5	0.0
GYA				SCS		ScS	17 10 58.5	-1.2
GYA				AMB		AMB		
	comp=Z,20nm,0.9s,mb4.8							
GYA				AMB		AMB		
	comp=Z,120nm,4.7s							
GYA				LR		LR		
	comp=N,690nm,17.8s,MS4.4							
GYA				LR		LR		
	comp=E,560nm,16.6s,MS4.4							
GYA				LR		LR		
	comp=Z,620nm,17.0s,MS4.3							
ODAN	**Odare**	**28.20**	**341**	*e*P		**P**	**17 00 21.8**	**+4.6**
	comp=Z,61nm,1.0s,mb5.2							
RAMN	**Ramite**	**28.54**	**340**	*e*P		**P**	**17 00 25.9**	**+5.6**
	comp=Z,44nm,0.6s,mb5.3							
TAPN	**Taplejung**	**28.55**	**342**	*e*P		**P**	**17 00 24.5**	**+4.1**
	comp=Z,62nm,1.0s,mb5.3							
JIRN	**Jiri**	**29.33**	**340**	*e*P		**P**	**17 00 29.6**	**+2.3**
	comp=Z,78nm,0.9s,mb5.4							
PKI	**Pulchoki**	**29.52**	**339**	*e*P		**P**	**17 00 32.7**	**+3.7**
	comp=Z,44nm,1.1s,mb5.1							
PKI	**Pulchoki**	**29.52**	**339**	*e*P		**P**	**17 00 32.7**	**+3.7**
PKI				pmax		pmax		
	comp=Z,44nm,1.1s,mb5.1							
PKIN	**Phulchoki**	**29.54**	**339**	*e*P		**P**	**17 00 32.1**	**+3.0**
	comp=Z,15nm,0.8s,mb4.8							
GUN	**Gumba**	**29.67**	**340**	*e*P		**P**	**17 00 32.8**	**+2.5**
	comp=Z,60nm,0.7s,mb5.5							
DMN	**Daman**	**29.67**	**338**	*e*P		**P**	**17 00 33.5**	**+3.2**
	comp=Z,17nm,0.8s,mb4.8							
KKN	**Kakani**	**29.77**	**339**	*e*P		**P**	**17 00 33.4**	**+2.2**
	comp=Z,36nm,0.9s,mb5.1							
KKN	**Kakani**	**29.77**	**339**	*e*P		**P**	**17 00 33.4**	**+2.2**
KKN				pmax		pmax		
	comp=Z,36nm,0.9s,mb5.1							
LSA	**Lhasa**	**29.98**	**350**	*e*P		**P**	**17 00 33.9**	**+0.9**
LSA				pmax		pmax		
	comp=Z,24nm,0.9s,mb4.9							
LSA	**Lhasa**	**29.98**	**350**	*e*P		**P**	**17 00 33.9**	**+0.9**
	comp=Z,24nm,0.9s,mb4.9							
GKN	**Gorkha**	**30.20**	**338**	*e*P		**P**	**17 00 35.8**	**+0.8**
	comp=Z,55nm,0.8s,mb5.3							
KOLN	**Koldanda**	**30.40**	**336**	*e*P		**P**	**17 00 37.2**	**+0.4**
	comp=Z,85nm,0.7s,mb5.6							
DANN	**Dangsing**	**30.85**	**337**	*e*P		**P**	**17 00 41.1**	**+0.3**
	comp=Z,61nm,0.8s,mb5.5							
CD2	**Chengdu**	**31.31**	**11**	P		**P**	**17 00 46.5**	**+1.8**
CD2				AP		pP	17 00 56.5	+1.1
CD2				XP		sP	17 01 00.5	+0.4
CD2				PP		PP	17 01 51.0	-5.0
CD2				PCP		PcP	17 03 40.3	+1.9
CD2				S		**S**	**17 05 51.3**	**+2.2**
CD2				XS		sS	17 06 07.3	+0.4
CD2				SS		SS	17 07 39.3	-25
CD2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.9							
CD2				AMB		AMB		
	comp=Z,500nm,10.7s							
CD2				LR		LR		
	comp=N,600nm,14.9s							
CD2				LR		LR		
	comp=Z,520nm,11.3s,MS4.5							
FITZ	**Fitzroy Crossi**	**33.41**	**124**	*e*P		**P**	**17 01 03.1**	**-0.3**
	comp=Z,29nm,0.8s,mb5.3							
FITZ	**Fitzroy Crossi**	**33.41**	**124**	*e*P		**P**	**17 01 03.5**	**+0.2**
	comp=Z,15nm,0.8s,mb5.0							
WHN	**Wuhan**	**34.46**	**27**	P		**P**	**17 01 12.8**	**+0.5**
XAN	**Xi'an**	**35.56**	**17**	P		**P**	**17 01 20.0**	**-1.7**
XAN				AP		pP	17 01 32.0	-0.5
XAN				PP		PP	17 02 44.5	+1.5
XAN				S		**S**	**17 06 58.3**	**+3.3**
XAN				AMB		AMB		
	comp=Z,11nm,1.0s,mb4.7							
XAN				AMB		AMB		
	comp=Z,38nm,3.8s							
XAN				LR		LR		
	comp=E,195nm,19.9s							
XAN				LR		LR		
	comp=Z,345nm,24.9s,MS4.0							
LZH	**Lanzhou**	**36.37**	**9**	*e*P		**P**	**17 01 31.0**	**+2.4**
LZH				AP		pP	17 01 39.3	-0.1
LZH				XP		sP	17 01 45.0	+1.0
LZH				PP		PP	17 02 53.5	+1.6
LZH				*e*S		**S**	**17 07 05.0**	**-2.3**
LZH				XS		sS	17 07 22.0	-3.3
LZH				SS		SS	17 09 31.0	-16
LZH				AMB		AMB		
	comp=Z,26nm,1.6s,mb4.9							
LZH				AMB		AMB		
	comp=Z,149nm,5.7s							
LZH				LR		LR		
	comp=E,631nm,15.9s							
LZH				LR		LR		
	comp=Z,878nm,17.0s,MS4.6							
MUN	**Mundaring**	**36.68**	**152**	*e*P		**P**	**17 01 33.2**	**+1.9**
NJ2	**Nanjing**	**37.88**	**31**	*e*P		**P**	**17 01 42.8**	**+1.2**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
NWAO	**Narrogin (SRO)**	**37.95**	**152**	P		**P**	**17 01 42.9**	**+0.8**
	comp=Z,14nm,0.9s,mb4.7,baz=322,slow=9.1,SNR=6.8							
GTA	**Gaotai**	**39.22**	**3**	⇓*e*P		**P**	**17 01 52.3**	**-0.3**
GTA				AP		pP	17 01 59.3	-4.2
GTA				XP		sP	17 02 03.8	-4.3
GTA				S		**S**	**17 07 49.5**	**-0.9**
GTA				SS		SS	17 10 33.8	-11
GTA				AMB		AMB		
	comp=Z,4.0nm,1.0s,mb4.1							
GTA				AMB		AMB		
	comp=Z,177nm,6.0s							
GTA				LR		LR		
	comp=N,243nm,18.0s,MS4.2							
GTA				LR		LR		
	comp=E,183nm,19.8s,MS4.2							
GTA				LR		LR		
	comp=Z,211nm,19.2s,MS4.0							
WRA	**Warramunga Arr**	**41.58**	**121**	P		**P**	**17 02 12.9**	**+0.3**
	comp=Z,28nm,0.8s,mb5.0,baz=301,slow=9.0,SNR=199							
WRAB	**Tennant Creek**	**41.59**	**121**	P		**P**	**17 02 13.9**	**+1.3**
	comp=Z,280nm,0.6s,mb6.1,SNR=19							
WRAB	**Tennant Creek**	**41.59**	**121**	⇓*i*P		**P**	**17 02 12.3**	**-0.3**
WRAB	**Tennant Creek**	**41.59**	**121**	*e*P		**P**	**17 02 12.6**	**0.0**
	comp=Z,33nm,0.8s,mb5.0							
WB2	**Warramunga Arr**	**41.59**	**121**	*e*P		**P**	**17 02 11.8**	**-0.8**
WB2	**Warramunga Arr**	**41.59**	**121**	*e*P		**P**	**17 02 12.5**	**-0.2**
FORT	**Forrest**	**42.53**	**139**	*e*P		**P**	**17 02 22.3**	**+2.2**
	comp=Z,33nm,0.7s,mb5.2							
HHC	**Hu-ho-hao-te**	**42.66**	**16**	*e*P		**P**	**17 02 23.0**	**+2.0**
HHC				AP		pP	17 02 32.0	+0.1
HHC				XP		sP	17 02 37.0	+0.5
HHC				PP		PP	17 04 04.5	+4.0
HHC				PCP		PcP	17 04 15.5	+3.0
HHC				PCS		PcS	17 08 06.0	+1.5
HHC				*e*S		**S**	**17 08 43.3**	**+1.7**
HHC				XS		sS	17 08 59.0	-0.8
HHC				SS		SS	17 11 47.0	-6.0
HHC				SCS		ScS	17 12 19.3	0.0
HHC				AMB		AMB		
	comp=Z,9.0nm,1.1s,mb4.4							
HHC				AMB		AMB		
	comp=Z,175nm,4.4s							
HHC				LR		LR		
	comp=N,227nm,15.6s,MS4.3							
HHC				LR		LR		
	comp=E,213nm,18.0s,MS4.3							
HHC				LR		LR		
	comp=Z,215nm,14.4s,MS4.2							
ASAR	**Alice Springs**	**42.85**	**126**	P		**P**	**17 02 23.6**	**+0.8**
	comp=Z,8.4nm,0.9s,mb4.5,baz=295,slow=8.0,SNR=121							
BJI	**Beijing**	**43.42**	**21**	P		**P**	**17 02 27.5**	**+0.4**
BJI				S		**S**	**17 08 55.8**	**+3.0**
BJI				AMB		AMB		
	comp=Z,16nm,0.7s,mb4.9							
BJI				AMB		AMB		
	comp=Z,209nm,3.7s							
BJI				LR		LR		
	comp=N,209nm,15.5s,MS4.6							
BJI				LR		LR		
	comp=E,456nm,12.9s,MS4.6							
BJI				LR		LR		
	comp=Z,369nm,17.9s,MS4.3							
WMQ	**Urumqi**	**44.34**	**350**	*e*P		**P**	**17 02 37.3**	**+2.9**
WMQ				AMB		AMB		
	comp=Z,31nm,1.3s,mb4.9							
TKM2	**Tokmak 2**	**46.79**	**338**	*e*P		**P**	**17 02 56.7**	**+2.8**
TKM2				pmax		pmax		
	comp=Z,21nm,1.2s,mb4.9							
TKM2	**Tokmak 2**	**46.79**	**338**	*e*P		**P**	**17 02 56.7**	**+2.8**
	comp=Z,21nm,1.2s,mb5.0							
KSRS	**Korea Array**	**46.84**	**34**	P		**P**	**17 02 56.5**	**+2.1**
	comp=Z,13nm,0.8s,mb4.9,baz=219,slow=8.9,SNR=47							
AML	**Almayashu**	**46.85**	**336**	*e*P		**P**	**17 02 54.5**	**+0.1**
	comp=Z,11nm,0.6s,mb5.0							
AML				*e*		pP	17 03 06.0	+0.6
EKS2	**Erkin-Say**	**47.26**	**337**	*e*P		**P**	**17 02 57.7**	**+0.1**
	comp=Z,17nm,0.8s,mb5.0							
SONM	**Songino Array**	**48.24**	**8**	P		**P**	**17 03 05.0**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.4,baz=193,slow=9.0,SNR=19							
SONM				pP		pP	17 03 16.8	+0.6
	comp=Z,12nm,0.8s,baz=190,slow=7.3,SNR=28							
SONM				PcP		PcP	17 04 31.1	-0.6
	comp=Z,1.3nm,0.8s,baz=202,slow=4.4,SNR=2.4							
SONM				pPcP			17 04 43.9	
	comp=Z,1.5nm,0.6s,baz=197,slow=3.9,SNR=4.2							
SONM	**Songino Array**	**48.24**	**8**	P		**P**	**17 03 05.0**	**-0.1**
SONM				*PP		pP	17 03 16.8	+0.6
SONM							17 04 31.1	
MK31	**Makanchi Array**	**48.28**	**346**	*e*P		**P**	**17 03 05.2**	**-0.2**
MK31				*e*		pP	17 03 15.6	-0.9
MKAR	**Makanchi Array**	**48.28**	**346**	P		**P**	**17 03 05.8**	**+0.5**
	comp=Z,2.1nm,0.5s,mb4.5,baz=156,slow=7.8,SNR=9.9							
MKAR				pP		pP	17 03 16.4	-0.1
	comp=Z,12nm,0.6s,baz=157,slow=7.6,SNR=28							
MKAR	**Makanchi Array**	**48.28**	**346**	P		**P**	**17 03 05.8**	**+0.5**
MKAR				pP		pP	17 03 16.4	-0.1
ULN	**Ulaanbaatar**	**48.37**	**9**	*e*P		**P**	**17 03 06.0**	**-0.1**
ULN				*e*		pP	17 03 17.6	+0.4
ULN				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.8							
ULN	**Ulaanbaatar**	**48.37**	**9**	*e*P		**P**	**17 03 06.0**	**-0.1**
	comp=Z,9.6nm,1.0s,mb4.8							
ULN				*e*		pP	17 03 17.6	+0.4
CN2	**Changchun**	**50.35**	**27**	*e*P		**P**	**17 03 25.5**	**+4.2**
CN2				*e*AP		pP	17 03 35.5	+3.0
CN2				*e*S		**S**	**17 10 36.3**	**+4.6**
CN2				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.8							
CN2				AMB		AMB		
	comp=Z,200nm,5.0s							
CN2				LR		LR		
	comp=N,210nm,15.0s,MS4.5							
CN2				LR		LR		
	comp=E,250nm,15.0s,MS4.5							
CN2				LR		LR		
	comp=Z,160nm,16.0s,MS4.1							
ZAK	**Zakamensk**	**50.39**	**5**	*e*P		**P**	**17 03 20.1**	**-1.3**
ZAK				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.6							
PMG	**Port Moresby**	**50.76**	**102**	P		**P**	**17 03 25.0**	**+0.1**
	comp=Z,13nm,0.7s,mb5.0,baz=314,slow=4.7,SNR=9.3							
PMG	**Port Moresby**	**50.76**	**102**	⇑*e*P		**P**	**17 03 25.2**	**+0.4**
PMG				pmax		pmax		
	comp=Z,17nm,0.9s							
PMG	**Port Moresby**	**50.76**	**102**	*e*P		**P**	**17 03 24.9**	**0.0**
	comp=Z,10nm,0.7s,mb4.9							
CTA	**Charters Tower**	**52.15**	**116**	LR		LR	17 27 20.3	
	comp=Z,294nm,18.6s,MS4.3,baz=307,slow=38							
CTA	**Charters Tower**	**52.15**	**116**	*e*P		**P**	**17 03 36.2**	**+1.1**
	comp=Z,13nm,1.0s,mb4.8							
MAT	**Matsushiro**	**52.61**	**42**	P		**P**	**17 03 34.8**	**-3.5**
MJAR	**Matsushiro Arr**	**52.61**	**42**	P		**P**	**17 03 40.8**	**+2.5**
	comp=Z,2.1nm,1.1s,mb4.0,baz=90,slow=39,SNR=4.7							
STKA	**Stephens Creek**	**52.73**	**131**	P		**P**	**17 03 40.6**	**+1.3**
	comp=Z,20nm,0.9s,mb5.0,baz=314,slow=7.5,SNR=40							
STKA				pP		pP	17 03 51.5	+1.0
	comp=Z,6.1nm,0.8s,baz=313,slow=7.4,SNR=5.2							
STKA	**Stephens Creek**	**52.73**	**131**	*e*P		**P**	**17 03 40.5**	**+1.2**
	comp=Z,12nm,0.8s,mb4.9							
STKA	**Stephens Creek**	**52.73**	**131**	*e*P		**P**	**17 03 40.6**	**+1.3**
	comp=Z,6.1nm,1.1s,mb4.4							
HIA	**Hailar**	**52.73**	**19**	*e*P		**P**	**17 03 38.4**	**-0.6**
HIA				*e*		pP	17 03 49.9	-0.3
HIA				pmax		pmax		
	comp=Z,6.0nm,0.6s							
HIA	**Hailar**	**52.73**	**19**	*e*P		**P**	**17 03 38.4**	**-0.6**
	comp=Z,5.7nm,0.6s,mb4.7							
HIA				*e*		pP	17 03 49.9	-0.2
KURK	**Kurchatov**	**52.82**	**345**	P		**P**	**17 03 39.2**	**-0.4**
	comp=Z,0.9nm,0.3s,mb4.2,baz=162,slow=6.7,SNR=3.2							
KURK				pP		pP	17 03 50.5	-0.3
	comp=Z,7.4nm,0.6s,baz=165,slow=6.9,SNR=9.0							
KURK				PcP		PcP	17 04 47.9	-0.6
	comp=Z,0.5nm,0.3s,baz=168,slow=5.7,SNR=1.7							
KURK				pPcP			17 04 59.9	
	comp=Z,1.1nm,0.2s,baz=162,slow=3.0,SNR=4.2							
KURK	**Kurchatov**	**52.82**	**345**	P		**P**	**17 03 39.2**	**-0.4**
KURK				*PP		pP	17 03 50.5	-0.3
KURK							17 04 47.9	
KURK	**Kurchatov**	**52.82**	**345**	P		**P**	**17 03 39.2**	**-0.4**
KURK						PcP	17 04 47.9	
KURK						pP	17 05 00.5	
KURK						PcP	17 04 47.9	
KURK						pPcP	17 04 59.9	
MDJ	**Mudanjiang**	**52.90**	**29**	P		**P**	**17 03 41.5**	**+1.2**
MDJ				AP		pP	17 03 50.5	-1.0
MDJ				XP		sP	17 03 54.5	-1.5
MDJ				PCP		PcP	17 04 50.0	+1.0
MDJ				PP		PP	17 05 41.0	+0.8
MDJ				S		**S**	**17 11 03.0**	**-3.8**
MDJ				SCS		ScS	17 13 23.5	-3.5
MDJ				AMB		AMB		
	comp=Z,6.0nm,1.7s,mb4.2							
MDJ				AMB		AMB		
	comp=Z,50nm,4.7s							
MDJ				LR		LR		
	comp=N,294nm,34.0s,MS4.3							
MDJ				LR		LR		
	comp=E,332nm,32.3s,MS4.3							
MDJ				LR		LR		
	comp=Z,329nm,20.4s							
ZAA0	**Zalesovo Array**	**54.63**	**351**	*e*P		**P**	**17 03 52.2**	**-0.5**
ZALV	**Zalesovo Beam**	**54.63**	**351**	P		**P**	**17 03 52.3**	**-0.4**
	comp=Z,7.7nm,0.4s,mb5.1,baz=165,slow=6.5,SNR=20							
ZALV				pP		pP	17 04 03.5	-0.4
	comp=Z,23nm,0.5s,baz=168,slow=6.7,SNR=27							
RDF	**Al-Radifah**	**55.25**	**306**	*e*P		**P**	**17 03 56.0**	**-1.8**
	baz=306							
RDF				AMb		AMB	17 04 16.5	
	comp=Z,42nm,1.6s,mb5.2,baz=306							
NAY	**Al-Naaiem**	**55.62**	**306**	*e*P		**P**	**17 03 58.8**	**-1.6**
	baz=306							
NAY				AMb		AMB	17 04 24.4	
	comp=Z,20nm,1.8s,mb4.8,baz=306							
NVS	**Novosibirsk**	**55.74**	**350**	*e*P		**P**	**17 04 03.0**	**+2.3**
NVS				pmax		pmax		
	comp=Z,34nm,1.2s,mb5.2							
NVS				pmax		pmax		
	comp=N,28nm,1.4s							
NVS				pmax		pmax		
	comp=E,19nm,1.3s							
MIB	**Mutribah**	**55.76**	**307**	*e*P		**P**	**17 04 00.3**	**-1.0**
	baz=307							
MIB				AMb		AMB	17 04 14.0	
	comp=Z,30nm,1.1s,mb5.2,baz=307							
KLR	**Kul'dur**	**57.31**	**26**	*e*P		**P**	**17 04 12.4**	**+0.4**
BOD	**Bodaibo**	**59.12**	**10**	*e*P		**P**	**17 04 29.1**	**+4.6**
BOD				*e*			17 04 35.5	
BOD				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
BOD				pmax		pmax		
	comp=Z,22nm,0.9s,mb5.2							
ARMA	**Armidale**	**60.00**	**126**	*e*P		**P**	**17 04 32.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**61.34**	**34**	⇑*i*P		**P**	**17 04 38.0**	**-2.0**
YSS				pmax		pmax		
	comp=Z,20nm,1.7s,mb5.0							
HNR	**Honiara**	**63.30**	**101**	P		**P**	**17 04 54.3**	**+0.6**
	comp=Z,62nm,0.7s,mb5.9,baz=251,slow=2.0,SNR=8.7							
HNR	**Honiara**	**63.30**	**101**	*e*P		**P**	**17 04 53.8**	**+0.1**
HNR				pmax		pmax		
	comp=Z,56nm,0.9s,mb5.7							
HNR	**Honiara**	**63.30**	**101**	*e*P		**P**	**17 04 53.8**	**+0.2**
	comp=Z,56nm,0.9s,mb5.7							
SVE	**Sverdlovsk**	**63.66**	**339**	*e*P		pP	17 05 05.3	-1.4
SVE				pmax		pmax		
	comp=Z,14nm,1.0s,mb5.0							
ARU	**Arti**	**64.15**	**337**	P		**P**	**17 05 04.5**	**+6.1**
KIV	**Kislovodsk**	**65.05**	**320**	*e*P		**P**	**17 05 10.5**	**+5.9**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
MALT	**Malatya**	**65.77**	**313**	*e*P		**P**	**17 05 08.9**	**-0.5**
MALT				*e*		pP	17 05 19.2	-1.7
MALT				pmax		pmax		
	comp=Z,6.0nm,1.2s,mb4.5							
MALT	**Malatya**	**65.77**	**313**	*e*P		**P**	**17 05 08.9**	**-0.4**
	comp=Z,6.0nm,1.2s,mb4.5							
MALT				*e*		pP	17 05 19.2	-1.7
YAK	**Yakutsk**	**66.52**	**16**	*e*P		pP	17 05 24.0	-1.2
YAK				pmax		pmax		
	comp=Z,47nm,0.9s,mb5.5							
YAK				pmax		pmax		
	comp=E,11nm,1.1s							
YAK				pmax		pmax		
	comp=N,13nm,1.2s							
YAK	**Yakutsk**	**66.52**	**16**	P		**P**	**17 05 15.0**	**+1.3**
	comp=N,55nm,0.8s,mb5.6							
YAK				*e*		pP	17 05 24.2	-1.0
BR131	**Keskin Array S**	**69.75**	**313**	*e*P		**P**	**17 05 32.9**	**-1.5**
	comp=N,1.0nm,0.7s,mb3.9							
BR131				*e*		pP	17 05 45.0	-1.0
BRTR	**Keskin Array B**	**69.75**	**313**	P		**P**	**17 05 33.0**	**-1.4**
	comp=N,1.8nm,0.8s,mb4.0,baz=126,slow=6.4,SNR=12							
BRTR				pP		pP	17 05 43.9	-2.1
	comp=N,2.1nm,0.6s,baz=136,slow=7.6,SNR=10							
OBN	**Obninsk**	**73.48**	**329**	*e*P		pP	17 06 07.1	-1.1
OBN				pmax		pmax		
	comp=Z,40nm,2.3s,mb4.9							
BOSA	**Boshof**	**74.10**	**240**	P		**P**	**17 05 59.1**	**-1.7**
	comp=Z,1.2nm,0.5s,mb4.1,baz=88,slow=3.7,SNR=3.2							
TIXI	**Tiksi**	**74.30**	**10**	*c* *i*P		**P**	**17 05 59.9**	**-1.1**
TIXI				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.5							
TIXI	**Tiksi**	**74.30**	**10**	*e*P		**P**	**17 05 59.5**	**-1.5**
	comp=Z,29nm,0.9s,mb5.2							
TIXI				*e*		pP	17 06 11.5	-1.2
SEY	**Seymchan**	**74.83**	**23**	⇑*i*P		**P**	**17 06 06.3**	**+2.0**
AKASG	**Malin Array Be**	**76.05**	**323**	P		**P**	**17 06 10.0**	**-1.5**
	comp=Z,4.1nm,0.7s,mb4.5,baz=96,slow=4.5,SNR=11							
AKASG				pP		pP	17 06 21.2	-2.0
	comp=Z,2.3nm,0.5s,baz=91,slow=4.6,SNR=8.5							
AKASG	**Malin Array Be**	**76.05**	**323**	P		**P**	**17 06 10.0**	**-1.5**
AKASG				pP		pP	17 06 21.2	-2.0
KIEV	**Kiev**	**76.05**	**323**	*e*P		**P**	**17

LPL	**La Plagne**	**90.17**	**315**	*eP*		**P**		**17 07 23.9**	**-0.6**
	comp=Z,6.1nm,0.9s,mb4.9								
BAIF	**Baives**	**91.77**	**320**	*eP*		**P**		**17 07 29.8**	**-2.1**
	comp=Z,10nm,0.8s,mb4.9								
BAIF	**Baives**	**91.77**	**320**	*eP*		**P**		**17 07 29.8**	**-2.1**
BAIF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.9								
BAIF	**Baives**	**91.77**	**320**	*eP*		**P**		**17 07 29.8**	**-2.1**
	comp=Z,5.2nm,0.8s,mb4.9								
LOR	**Lormes**	**92.11**	**317**	*eP*		**P**		**17 07 32.0**	**-1.5**
SMF	**Signal de Mont**	**92.15**	**316**	*eP*		**P**		**17 07 32.6**	**-1.1**
	comp=Z,18nm,1.1s,mb5.0								
SMF	**Signal de Mont**	**92.15**	**316**	*eP*		**P**		**17 07 32.6**	**-1.1**
SMF				pmax	pmax				
	comp=Z,9.0nm,1.1s,mb5.0								
SMF	**Signal de Mont**	**92.15**	**316**	*eP*		**P**		**17 07 32.6**	**-1.1**
	comp=Z,9.1nm,1.1s,mb5.0								
AVF	**Avril sur Loir**	**92.48**	**317**	*eP*		**P**		**17 07 35.0**	**-0.2**
NVAR	**Mina Array Bea**	**129.76**	**36**	PKP	PKPdf			17 13 34.5	+0.7
	comp=Z,1.2nm,0.8s,baz=264,slow=2.8,SNR=7.7								
NVAR				pPKP	pPKPdf			17 13 47.9	+1.8
	comp=Z,1.2nm,0.7s,baz=277,slow=3.0,SNR=7.3								
PDAR	**Pinedale Array**	**131.10**	**26**	PKP	PKPdf			17 13 36.8	+0.6
	comp=Z,0.3nm,0.6s,baz=258,slow=1.7,SNR=3.1								
PDAR				pPKP	pPKPdf			17 13 49.0	+0.6
	comp=Z,0.4nm,0.7s,baz=231,slow=2.0,SNR=3.4								
ANMO	**Albuquerque**	**138.80**	**30**	*i* PKIKP	PKPdf			17 13 51.7	+0.9
CPUP	**Villa Florida**	**144.09**	**221**	PKP	PKPdf			17 13 58.8	-1.7
	comp=Z,8.0nm,0.7s,baz=102,slow=3.4,SNR=25								
CPUP				pPKP	pPKPdf			17 14 10.5	-2.3
	comp=Z,1.7nm,0.5s,baz=90,slow=3.1,SNR=4.5								
CPUP	**Villa Florida**	**144.09**	**221**	*e*PKP	PKPdf			17 13 58.5	-2.0
TXAR	**Lajitas Array**	**144.68**	**32**	PKP	PKPdf			17 14 00.4	-1.1
	comp=Z,3.5nm,0.8s,baz=262,slow=0.9,SNR=34								
TXAR				pPKP	pPKPdf			17 14 12.4	-1.4
	comp=Z,7.1nm,0.8s,baz=41,slow=1.3,SNR=25								
JCT	**Junction City**	**145.63**	**26**	*e*PKP	PKPdf			17 14 02.8	-0.2
JCT				*e*				17 14 14.7	
GOGA	**Godfrey**	**146.68**	**1**	*e*PKP2	PKPbc			17 14 05.4	-0.9

KRSC ***25*** *17:08:04.2±0.1,5601N×16106E,h130km±20km, ML4.5*
ISCJB ***25*** *17:08:05.8±0.3,5599N±003×16103E±007,h124km±2km, mb3.9/20, Error ellipse: s-maj=6.9km s-min=4.6km az=15.7*
MOS ***25*** *17:08:05.5±1.2,5596N×16105E,h125km, mb4.2/5, Error ellipse: s-maj=15.4km s-min=7.0km az=83.5*
IDC ***25*** *17:08:07.8±0.7,5602N×16072E,h123km±6km, mb3.4/13, mb1 3.7/15,mb1mx3.5/26,mbtmp3.5/15,MS4.3/1, Ms1 4.3/1,ms1mx3.0/28, Error ellipse: s-maj=17.8km s-min=12.1km az=159.0*
NEIC ***25*** *17:08:07.3±1.0,5594N×16089E,h124km±10km,mb4.2/8, Error ellipse: s-maj=13.2km s-min=9.9km az=153.0*

ISC 25 17:08:06.9±0.3,5599N±003×16104E±007,h118km±2km, h120km±3.2km;pP-P,n72,σ0§95/89,mb3.9/20,3C-2D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.14**	**280**	*eP*	**Pn**	**17 08 22.9**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**0.20**	**255**	*eP*	**Pn**	**17 08 23.1**	**-0.2**
BZGR				*i* S	**Sn**	**17 08 36.2**	**+0.6**
CIRR	**Tsirk**	**0.20**	**306**	*eP*	**Pn**	**17 08 23.0**	**-0.3**
CIRR				*i* S	**Sn**	**17 08 36.2**	**+0.6**
BZWR	**Bezymyannyi-We**	**0.31**	**265**	*eP*	**Pn**	**17 08 23.3**	**-0.3**
BZWR				*i* S	**Sn**	**17 08 36.3**	**+0.1**
BZMR	**Bezymyannaya**	**0.32**	**259**	*eP*	**Pn**	**17 08 23.3**	**-0.3**
BZMR				*i* S	**Sn**	**17 08 36.9**	**+0.6**
KRSR	**Krestovskiy**	**0.35**	**310**	*eP*	**Pn**	**17 08 23.0**	**-0.8**
KRSR				*i* S	**Sn**	**17 08 36.3**	**-0.2**
KLY	**Klyuchi**	**0.39**	**326**	*eP*	**Pn**	**17 08 23.2**	**-0.8**
KLY				*i* S	**Sn**	**17 08 36.2**	**-0.7**
KIRR	**Kirishev**	**0.40**	**264**	*eP*	**Pn**	**17 08 23.5**	**-0.5**
KIRR				*i* S	**Sn**	**17 08 36.9**	**0.0**
KPT	**Kopyto**	**0.46**	**267**	*eP*	**Pn**	**17 08 23.7**	**-0.7**
KPT				*i* S	**Sn**	**17 08 37.3**	**-0.3**
KMNR	**Kamenistaya**	**0.51**	**243**	*eP*	**Pn**	**17 08 24.4**	**-0.3**
KMNR				*i* S	**Sn**	**17 08 39.6**	**+1.5**
KOZR	**Kozyr**	**0.65**	**277**	PN	**Pn**	**17 08 25.2**	**-0.4**
KOZR				S	**Sn**	**17 08 40.1**	**+0.3**
KOZ	**Kozyrevsk**	**0.66**	**276**	*eP*	**Pn**	**17 08 25.2**	**-0.5**
KOZ				*i* S	**Sn**	**17 08 40.1**	**+0.2**
SRKR	**Sorokina**	**0.67**	**6**	*eP*	**Pn**	**17 08 25.5**	**-0.2**
TUMR	**Tumrok**	**0.88**	**216**	*eP*	**Pn**	**17 08 27.7**	**+0.2**
TUMR				*i* S	**Sn**	**17 08 43.7**	**+0.6**
KBTR	**Krutoberegovo**	**1.02**	**77**	*eP*	**Pn**	**17 08 28.3**	**-0.6**
KBTR				*i* S	**Sn**	**17 08 45.2**	**-0.3**
MKZ	**Mys Kozlova**	**1.49**	**164**	*eP*	**Pn**	**17 08 33.2**	**-0.9**
MKZ				*i* S	**Sn**	**17 08 55.3**	**+0.5**
KII	**Karymskiy**	**2.17**	**206**	P	**Pn**	**17 08 42.7**	**+0.4**
GNL	**Ganaly**	**2.92**	**219**	*eP*	**Pn**	**17 08 52.3**	**+0.3**
SPN	**Mys Shipunski**	**2.96**	**192**	*eP*	**Pn**	**17 08 51.4**	**-1.2**
SPN				*i* S	**Sn**	**17 09 26.9**	**-0.9**
NLC	**Nalytchevo**	**3.00**	**200**	*eP*	**Pn**	**17 08 53.1**	**+0.1**
NLC				*i* S	**Sn**	**17 09 30.0**	**+1.4**
AVH	**Avacha**	**3.05**	**207**	P	**Pn**	**17 08 54.7**	**+1.0**
PET	**Petropavlovsk**	**3.29**	**206**	⇓*i* PN	**Pn**	**17 08 57.0**	**+0.2**
PET				*e*S	**Sn**	**17 09 37.2**	**+1.8**
PET				pmax	pmax		
	comp=Z,145nm,0.5s						
PET				smax			
	comp=N,330nm,0.7s						
PET	**Petropavlovsk**	**3.29**	**206**	*eP*	**Pn**	**17 08 57.7**	**+0.9**
PET				*i* S	**Sn**	**17 09 37.7**	**+2.3**
PET	**Petropavlovsk**	**3.29**	**206**	*eP*n	**Pn**	**17 08 57.4**	**+0.6**
PEA0B	**Petropavlovsk-**	**3.49**	**215**	*eP*n	**Pn**	**17 08 58.0**	**-1.4**
PETK	**Petropavlovsk-**	**3.49**	**215**	P	**Pn**	**17 08 59.5**	**+0.1**
	comp=N,5.0nm,0.3s,baz=62,slow=16,SNR=33						
RUS	**Russkaya**	**3.87**	**204**	*eP*	**Pn**	**17 09 04.1**	**-0.4**
RUS				*i* S	**Sn**	**17 09 48.9**	**-0.3**
MIPR	**Malaya Ipel'ka**	**4.50**	**216**	P	**Pn**	**17 09 12.4**	**-0.6**
FX1	**Attu Island--F**	**7.72**	**109**	P	**Pn**	**17 09 55.4**	**-1.1**
	comp=N,7.2nm,0.3s,baz=0.0,slow=2.1,SNR=33						
FX1				S	**Sn**	**17 11 17.6**	**-4.7**
	comp=N,11nm,0.3s,baz=176,slow=16,SNR=10						
SEY	**Seymchan**	**8.23**	**331**	⇑PN	**Pn**	**17 10 05.6**	**+2.3**
BILL	**Bilibino**	**12.33**	**9**	*e*PN	**Pn**	**17 11 00.1**	**+2.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	**Bilibino**	**12.33**	**9**	*e*Pn	**Pn**	**17 11 00.8**	**+2.8**
	comp=Z,3.8nm,0.6s						
ASAJ	**Asahikawa**	**16.71**	**232**	P	**Pn**	**17 11 54.8**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=27,slow=9.0,SNR=12						
ASAJ	**Asahikawa**	**16.71**	**232**	P	**Pn**	**17 11 54.8**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	**17.11**	**304**	⇑*i* P	**Pn**	**17 11 58.3**	**-0.2**
YAK				pmax	pmax		
	comp=Z,19nm,1.0s						
ERM	**Erimo**	**18.18**	**227**	⇑*i* P	**P**	**17 12 09.5**	**-0.6**
TIXI	**Tiksi**	**20.73**	**332**	*d* P	**P**	**17 12 37.9**	**+0.4**
SONM	**Songino Array**	**33.87**	**280**	P	**P**	**17 14 38.4**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.4,baz=71,slow=7.1,SNR=4.3						
SONM				pP	pP	17 15 02.8	-1.0
	comp=Z,0.4nm,0.5s,baz=57,slow=10,SNR=3.3						
YKA	**Yellowknife Ar**	**40.68**	**45**	P	**P**	**17 15 36.5**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=301,slow=8.0,SNR=17						
YKA				PcP	PcP	17 17 33.9	-0.2
	comp=Z,0.1nm,0.4s,baz=307,slow=3.5,SNR=5.2						
YKA	**Yellowknife Ar**	**40.68**	**45**	P	**P**	**17 15 36.5**	**+1.5**
YKA				PcP	PcP	17 17 33.9	-0.2
KURK	**Kurchatov**	**46.71**	**300**	P	**P**	**17 16 23.8**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.7,baz=99,slow=5.1,SNR=3.7						
MKAR	**Makanchi Array**	**47.44**	**294**	P	**P**	**17 16 27.8**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.6,baz=51,slow=6.5,SNR=9.0						
BVAR	**Borovoye Array**	**49.05**	**307**	P	**P**	**17 16 40.2**	**-1.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=55,slow=7.8,SNR=4.5						
BRVK	**Borovoye**	**49.08**	**307**	P	**P**	**17 16 38.1**	**-3.5**
FCC	**Fort Churchill**	**50.89**	**40**	*eP*	**P**	**17 16 55.4**	**+0.3**
NVAR	**Mina Array Bea**	**54.29**	**73**	P	**P**	**17 17 23.2**	**+2.7**
	comp=Z,0.6nm,0.6s,mb3.8,baz=290,slow=7.0,SNR=4.9						
NVAR				pP	pP	17 17 51.2	+2.7
	comp=Z,0.6nm,0.7s,baz=306,slow=7.6,SNR=2.9						
EKS2	**Erkin-Say**	**54.67**	**295**	*eP*	**P**	**17 17 22.1**	**-1.1**
	comp=Z,5.0nm,1.2s,mb4.4						
LSA	**Lhasa**	**54.84**	**272**	P	**P**	**17 17 25.8**	**+1.2**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LSA	**Lhasa**	**54.84**	**272**	P	**P**	**17 17 25.8**	**+1.2**
	comp=Z,1.8nm,0.6s,mb4.3						
PDAR	**Pinedale Array**	**55.67**	**63**	P	**P**	**17 17 32.2**	**+1.9**
	comp=Z,0.3nm,0.5s,mb3.6,baz=293,slow=1.0,SNR=4.9						
PDAR				pP	pP	17 18 02.0	+3.5
	comp=Z,0.8nm,0.7s,baz=326,slow=3.3,SNR=4.9						
DUG	**Dugway**	**55.89**	**67**	P	**P**	**17 17 30.2**	**-1.8**
DUG				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
DUG	**Dugway**	**55.89**	**67**	P	**P**	**17 17 30.2**	**-1.8**
	comp=Z,3.5nm,1.1s,mb4.3						
DAV	**Davao City (W)**	**56.27**	**224**	LR	LR	17 40 24.1	
	comp=Z,240nm,18.1s,baz=228,slow=34						
RSSD	**Black Hills**	**57.37**	**58**	P	**P**	**17 17 44.0**	**+1.6**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
RSSD	**Black Hills**	**57.37**	**58**	P	**P**	**17 17 44.0**	**+1.6**
	comp=Z,1.7nm,0.8s,mb4.1						
NB2	**NORSAR Subarra**	**60.91**	**344**	P	**P**	**17 18 06.1**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=19,slow=6.9						
NOA	**NORSAR Array B**	**60.91**	**344**	P	**P**	**17 18 06.4**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=19,slow=6.9,SNR=4.6						
KBL	**Kabul**	**63.21**	**292**	P	**P**	**17 18 20.5**	**-1.8**
KBL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
KBL	**Kabul**	**63.21**	**292**	P	**P**	**17 18 20.5**	**-1.7**
	comp=Z,3.1nm,1.2s,mb4.1						
AKASG	**Malin Array Be**	**66.41**	**329**	P	**P**	**17 18 41.5**	**-1.2**
	comp=Z,0.6nm,0.5s,mb3.7,baz=28,slow=6.9,SNR=3.0						
TXAR	**Lajitas Array**	**69.03**	**69**	P	**P**	**17 19 01.0**	**+1.5**
	comp=Z,0.8nm,0.7s,mb3.6,baz=306,slow=4.8,SNR=8.3						
TXAR				pP	pP	17 19 30.6	+2.0
	comp=Z,0.7nm,0.9s,baz=301,slow=4.0,SNR=3.3						
TXAR	**Lajitas Array**	**69.03**	**69**	*eP*	**P**	**17 19 01.3**	**+1.8**
GERES	**GERESS Array B**	**72.03**	**338**	pP	pP	17 19 47.9	+1.1
	comp=Z,0.6nm,0.9s,baz=353,slow=5.4,SNR=3.4						
CTAO	**Charters Tower**	**76.81**	**194**	P	**P**	**17 19 44.5**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.8						
CTAO	**Charters Tower**	**76.81**	**194**	P	**P**	**17 19 44.5**	**-0.7**
	comp=Z,30nm,1.4s,mb4.8						
WRAB	**Tennant Creek**	**78.93**	**206**	*eP*	**P**	**17 19 55.9**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**78.93**	**206**	*eP*	**P**	**17 19 55.9**	**-1.1**
	comp=Z,11nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**78.95**	**206**	P	**P**	**17 19 56.7**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.0,baz=8.2,slow=5.8,SNR=11						
ASAR	**Alice Springs**	**82.63**	**205**	P	**P**	**17 20 16.6**	**+0.1**
	comp=Z,1.8nm,0.5s,mb4.1,baz=16,slow=4.7,SNR=30						
ASAR	**Alice Springs**	**82.63**	**205**	*eP*	**P**	**17 20 16.6**	**0.0**
ESDC	**Sonseca Array**	**83.85**	**348**	P	**P**	**17 20 23.5**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.3,baz=359,slow=4.9,SNR=3.9						
QSPA	**South Pole Qui**	**145.75**	**180**	*e*PKPdf	PKPdf	17 27 29.5	+0.2
QSPA				*e*SKP		17 30 39.8	

IDC 25 17:10:05.2±9.5,5786S×2708W,h0km,mb3.8/2, mb1 3.7/2,mb1mx3.5/13,mbtmp3.8/2,Error ellipse: s-maj=704.0km s-min=115.9km az=134.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**15.27**	**158**	*e*	Pn	17 13 32.1	-10
VNA3				*e*		17 13 35.7	
VNA2	**Neumayer--Watz**	**15.50**	**156**	*e*	Pn	17 13 35.3	-10
VNA2				*e*		17 13 39.2	
SNAA	**Sanae**	**17.08**	**154**	*e*	Pn	17 13 55.2	-10
SNAA				*e*		17 13 58.9	
DBIC	**Dimbokro**	**66.79**	**24**	P	P	17 20 58.5	+0.1
	0.3nm,0.3s,baz=186,slow=9.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**74.60**	**29**	P	P	17 21 46.0	0.0
	0.4nm,0.4s,baz=204,slow=6.2,SNR=6.1						
YKA	**Yellowknife Ar**	**137.54**	**317**	PKP	PKPdf	17 29 28.9	-0.4
	0.4nm,0.6s,baz=131,slow=2.1,SNR=11						

ISCJB ***25*** *17:10:20.4±2.0,53S±0.1×1470E±0.1,h121km±20km, mb4.2/4, Error ellipse: s-maj=25.2km s-min=12.7km az=36.5*
NEIC ***25*** *17:10:23.1±3.0,532S×147.13E,h142km±30km,mb4.6/4, Error ellipse: s-maj=36.2km s-min=11.9km az=150.0*
IDC ***25*** *17:10:24.8±2.1,554S×147.10E,h153km±27km,mb3.6/2, mb1 3.9/4,mb1mx3.4/15,mbtmp3.7/4, Error ellipse: s-maj=59.1km s-min=13.5km az=106.0*

ISC 25 17:10:25.9±1.6,56S±01×1471E±01,h156km±13km,n14, σ0§96/21,mb4.3/4,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.80**	**179**	P	**Pn**	**17 11 24.0**	**+0.3**
	3.3nm,0.3s,baz=31,slow=5.2,SNR=39						
PMG				S	**Sn**	**17 12 07.9**	**-0.8**
	3.4nm,0.3s,baz=353,slow=12,SNR=4.8						
PMG	**Port Moresby**	**3.80**	**179**	*e*Pn	**Pn**	**17 11 23.6**	**-0.1**
PMG				P		17 11 24.0	
PMG				S	**Sn**	**17 12 07.9**	**-0.8**
PMG				*e*Sn	**Sn**	**17 12 08.8**	**+0.1**
HNR	**Honiara**	**13.29**	**107**	*e*Pn	**Pn**	**17 13 27.4**	**-1.2**
	76nm,1.1s						
WRAB	**Tennant Creek**	**18.91**	**220**	*e*P	**P**	**17 14 35.4**	**+0.8**
	12nm,0.5s						
WRAB				*e*S	**S**	**17 18 00.6**	**-0.7**
WRAB				*e*Sn	**Sn**	**17 18 10.0**	**-0.3**
WB2	**Warramunga Arr**	**18.91**	**220**	*eP*	**P**	**17 14 35.8**	**+1.1**
WB2	**Warramunga Arr**	**18.91**	**220**	⇓*i* P	**P**	**17 14 35.6**	**+0.9**
WB2				*e*S	**S**	**17 18 00.5**	**-1.0**
WRA	**Warramunga Arr**	**18.92**	**220**	P	**P**	**17 14 35.7**	**+0.9**
	3.3nm,0.3s,baz=48,slow=11,SNR=196						
WRA				S	**S**	**17 18 00.4**	**-1.2**
	baz=39,slow=20,SNR=6.3						
ASAR	**Alice Springs**	**22.02**	**214**	P	**P**	**17 15 08.9**	**+1.0**
	6.9nm,0.4s,mb4.4,baz=49,slow=8.5,SNR=152						
ASAR				S	**S**	**17 19 01.6**	**+1.7**
	3.9nm,0.9s,baz=31,slow=22,SNR=16						
FITZ	**Fitzroy Crossi**	**24.38**	**237**	*eP*	**P**	**17 15 29.9**	**+0.1**
	32nm,0.5s,mb5.1						
FITZ	**Fitzroy Crossi**	**24.38**	**237**	*eP*	**P**	**17 15 29.8**	**0.0**
	18nm,0.6s,mb4.8						
ARMA	**Armidale**	**25.07**	**171**	*eP*	**P**	**17 15 37.5**	**+1.6**
MBWA	**Marble Bar**	**30.72**	**237**	*eP*	**P**	**17 16 26.4**	**+0.1**
	6.1nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**77.25**	**320**	P	**P**	**17 22 01.2**	**-1.5**
	0.3nm,0.4s,mb3.2,baz=103,slow=8.1,SNR=9.2						
TORD	**Torodi Ar. Bea**	**145.09**	**285**	PKPbc	PKPbc	17 29 43.7	-1.8
	0.4nm,0.8s,baz=83,slow=2.5,SNR=2.4						

NNC 25 17:39:53.2±9.6,3711N×6991E,h0km,mb3.6,mpv2.8, 3C-1D,Error ellipse: s-maj=101.9km s-min=60.7km az=52.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.00**	**4**	⇑Pn	Pn	17 41 27.6	+4.4
	0.3nm,0.3s,baz=190,slow=12,SNR=20						
KK31				⇑Sn	Sn	17 42 38.9	+6.4
	0.3nm,0.2s,baz=192,slow=18,SNR=4.8						
MK31	**Makanchi Array**	**13.34**	**40**	Pn	Pn	17 43 05.1	+1.4
	1.5nm,0.6s,baz=220,slow=11,SNR=18						
AB09	**Akbulak array**	**14.14**	**332**	⇑Pn	Pn	17 43 14.5	-0.2
	0.7nm,0.4s						
AB09				⇓Sn	Sn	17 45 51.0	-1.3
	0.5nm,0.5s						

ISCJB ***25*** *17:47:45.3±2.1,2316S±006×705W±0.1,h15km±13km, mb4.0/15,MS3.7/4, Error ellipse: s-maj=15.6km s-min=9.1km az=171.0*
NEIC ***25*** *17:47:48.1±2.8,2316S×7047W,h27km±20km,mb4.3/9, Error ellipse: s-maj=13.6km s-min=8.8km az=88.0*
IDC ***25*** *17:47:49.6±3.5,2314S×7038W,h33km±24km,mb3.6/6, mb1 3.9/8,mb1mx3.8/16,mbtmp3.7/8,ML4.1/2,MS3.6/7, Ms1 3.6/7,ms1mx3.4/28, Error ellipse: s-maj=28.5km s-min=22.4km az=124.0*

ISC 25 17:47:45.8±1.9,2316S±005×7055W±007,h9km±12km,n39, σ1§37/35,mb4.0/15,MS3.7/4,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.61**	**71**	Pg	**Pg**	**17 48 16.4**	**-0.2**
	224nm,0.3s,baz=255,slow=14,SNR=726						
LVC				Lg		17 48 38.0	
	1µm,0.3s,baz=21,slow=17,SNR=52						
LVC	**Limon Verde**	**1.61**	**71**	*e*Pn	**Pn**	**17 48 16.3**	**+1.9**
LVC				Pg	**Pg**	**17 48 16.4**	**-0.2**
LVC				*e*Sn	**Sn**	**17 48 37.2**	**+2.0**
LVC				Lg		17 48 38.0	
LCO	**Las Campanas**	**5.83**	**181**	*e*Pn	**Pn**	**17 49 11.0**	**-1.5**
	32nm,0.5s						
LCO				*e*Sn	**Sn**	**17 50 28.4**	**+9.0**
ARE	**Arequipa**	**6.72**	**352**	*eP*	**Pn**	**17 49 24.0**	**-0.7**
CFAA	**Coronel Fontan**	**8.66**	**167**	Pn	**Pn**	**17 49 51.6**	**+0.3**
	0.1nm,0.3s,baz=342,slow=14,SNR=8.4						
CFAA				Sn	**Sn**	**17 51 44.0**	**+15**
	0.3nm,0.3s,baz=218,slow=16,SNR=10						
CFAA				LR	LR	17 53 23.9	
	comp=Z,46nm,19.4s,baz=327,slow=39						
SIV	**San Ignacio**	**11.43**	**53**	Pn	**Pn**	**17 50 30.0**	**+0.7**
	2.2nm,0.3s,baz=237,slow=12,SNR=28						
CPUP	**Villa Florida**	**12.42**	**107**	Pn	**Pn**	**17 50 45.2**	**+2.4**
	0.3nm,0.3s,baz=270,slow=12,SNR=5.2						
CPUP				LR	LR	17 55 59.5	
	comp=Z,645nm,21.6s,baz=294,slow=40						
CPUP	**Villa Florida**	**12.42**	**107**	*e*Pn	**Pn**	**17 50 42.8**	**-0.1**
	9.4nm,0.6s						
CPUP				LR	LR	17 55 59.5	
TRQA	**Tornquist**	**16.57**	**156**	*e*Pn	**Pn**	**17 51 37.2**	**-1.1**
	8.2nm,0.9s						
PLCA	**Paso Flores**	**17.52**	**180**	P	**Pn**	**17 51 53.0**	**+2.7**
	0.1nm,0.3s,baz=349,slow=10,SNR=2.5						
PLCA				LR	LR	17 58 21.7	
	comp=Z,258nm,18.9s,baz=359,slow=36						
BDFB	**Brasilia**	**22.52**	**75**	P	**P**	**17 52 43.6**	**-2.4**
	0.5nm,0.5s,mb3.2,baz=131,slow=20,SNR=2.1						
BDFB				LR	LR	18 02 49.5	
	comp=Z,200nm,18.2s,MS3.6,baz=71,slow=40						
OTAV	**Otavalo**	**24.49**	**341**	P	**P**	**17 53 05.3**	**-0.2**
	5.3nm,1.2s,mb3.9						
PCRV	**Puerto La Cruz**	**33.63**	**11**	LR	LR	18 09 32.9	
	comp=Z,197nm,18.3s,MS3.9,baz=293,slow=39						
SWET	**Sewanee**	**59.86**	**345**	*eP*	**P**	**17 57 50.7**	**-1.1**
WVT	**Waverly**	**61.19**	**344**	*eP*	**P**	**17 57 59.3**	**-1.5**
	9.0nm,1.1s,mb4.8						
SNAA	**Sanae**	**61.22**	**160**	*eP*	**P**	**17 58 00.1**	**-0.6**
	6.3nm,1.4s,mb4.5						
BBTS	**Babate**	**64.85**	**60**	LR	LR	18 25 14.2	
	comp=Z,111nm,19.2s,MS4.1,baz=213,slow=35						
QSPA	**South Pole Qui**	**67.04**	**180**	*eP*	**P**	**17 58 40.2**	**+1.5**
	2.0nm,0.6s,mb4.3						
ANMO	**Albuquerque**	**67.08**	**328**	P	**P**	**17 58 41.0**	**+1.4**
	1.0nm,0.7s,mb4.0						
SDCO	**Great Sand Dun**	**68.92**	**331**	*eP*	**P**	**17 58 52.6**	**+1.5**
	4.3nm,0.9s,mb4.4						
DBIC	**Dimbokro**	**70.66**	**74**	P	**P**	**17 59 01.7**	**-0.7**
	2.3nm,0.8s,mb4.1,baz=256,slow=8.1,SNR=4.4						
DBIC	**Dimbokro**	**70.66**	**74**	P	**P**	**17 59 01.7**	**-0.7**
PPT	**Papeete**	**73.47**	**258**	LR	LR	18 25 23.8	
	comp=Z,16nm,19.4s,MS3.3,baz=9.0,slow=31						
RSSD	**Black Hills**	**73.65**	**336**	*eP*	**P**	**17 59 20.2**	**+0.6**
	1.7nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**74.80**	**331**	P	**P**	**17 59 26.8**	**+0.4**
	0.2nm,0.5s,mb3.3,baz=133,slow=8.0,SNR=4.5						
NVAR	**Mina Array Bea**	**75.88**	**323**	P	**P**	**17 59 34.2**	**+1.6**
	0.7nm,0.8s,mb3.7,baz=163,slow=5.9,SNR=5.0						
NVAR	**Mina Array Bea**	**75.88**	**323**	P	**P**	**17 59 34.2**	**+1.6**
HLID	**Hailey**	**77.65**	**329**	*eP*	**P**	**17 59 44.0**	**+1.5**
	1.5nm,0.8s,mb4.0						
TOA0	**Torodi Ar. Sit**	**79.34**	**71**	*eP*	**P**	**17 59 50.8**	**-1.7**
TORD	**Torodi Ar. Bea**	**79.34**	**71**	P	**P**	**17 59 51.8**	**-0.7**
	2.4nm,0.8s,mb4.2,baz=255,slow=5.6,SNR=14						
TORD				pP	pP	17 59 59.1	+3.7
	1.3nm,0.5s,baz=252,slow=4.7,SNR=5.7						
TSUM	**Tsumeb**	**81.02

CMIG	**Matias Romero**	**0.32**	**258**	*i* P	Pn	18 07 25.1	-1.2
CMIG				*i* S	Sn	18 07 39.1	-1.9
TGIG		**1.42**	**105**	*i* P	Pn	18 07 33.7	-1.3
TGIG				*i* S	Sn	18 07 53.9	-2.3
PCIG		**1.93**	**138**	*i* P	Pn	18 07 40.4	-0.4
PCIG				*i* S	Sn	18 08 04.7	-1.9
HUIG	**Huatulco**	**2.03**	**227**	*i* P	Pn	18 07 39.4	-2.6
HUIG				*i* S	Sn	18 08 06.7	-2.0
VHO	**Vista Hermosa**	**2.08**	**268**	*i* P	Pn	18 07 42.1	-0.5
VHO				*i* S	Sn	18 08 09.5	-0.3
CCIG	**Comitan**	**2.48**	**110**	*i* P	Pn	18 07 46.2	-1.2
CCIG				*i* S	Sn	18 08 16.3	-2.1
TPIG	**Tehuac#an**	**2.95**	**296**	*i* P	Pn	18 07 52.1	-1.3
TPIG				*i* S	Sn	18 08 26.9	-2.3
UTMO	**Huajuapan**	**3.17**	**283**	*i* P	Pn	18 07 55.8	-0.5
UTMO				*i* S	Sn	18 08 31.6	-2.6
PNIG	**Pinotepa**	**3.51**	**258**	*eP*	Pn	18 07 57.8	-2.8
PNIG				*i* S	Sn	18 08 39.4	-2.6
PNIG	**Pinotepa**	**3.51**	**258**	*eP*	Pn	18 07 57.7	-2.9
PNIG				*i* S	Sn	18 08 38.4	-3.6
PPM	**Popocatepetl**	**4.31**	**297**	*eP*	Pn	18 08 10.3	-0.9
PPM				*i* S	Sn	18 09 01.0	0.0

*ISCJB **25** 18:11:27.6±3.2,5.1S±0.1×1526E±0.1, h60km±28km, mb4.3/18, MS3.7/3, Error ellipse: s-maj=17.8km s-min=17.3km az=10.5*

*NEIC **25** 18:11:30.0±2.0,5.12S×152.63E, h69km±17km, mb4.4/9, Error ellipse: s-maj=12.6km s-min=11.4km az=83.0*

*IDC **25** 18:11:31.6±5.6,5.12S×152.50E, h76km±46km, mb3.9/9, mb1 4.1/11, mb1mx3.9/18, mbtmp4.0/11, ML3.5/2, MS3.6/4, Ms1 3.5/4, ms1mx3.1/24, Error ellipse: s-maj=35.7km s-min=22.9km az=80.0*

ISC 25 18:11:30.4±2.5, 51S±01×1526E±01, h72km±22km, n35, σ0$74/32, mb4.2/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.89**	**232**	P	**Pn**	**18 13 09.7**	**+0.8**
	2.5nm,0.3s,baz=42,slow=11,SNR=17						
PMG				S	**Sn**	**18 14 25.2**	**-0.7**
	10nm,0.3s,baz=150,slow=22,SNR=9.6						
PMG	**Port Moresby**	**6.89**	**232**	*e*Pn	**Pn**	**18 13 08.3**	**-0.5**
PMG				*e*Sn	**Sn**	**18 14 14.8**	**-11**
PMG				S	**Sn**	**18 14 25.2**	**-0.7**
HNR	**Honiara**	**8.40**	**121**	LR	LR	18 16 10.7	
	comp=Z,122nm,21.3s,baz=119,slow=33						
CTA	**Charters Tower**	**16.10**	**202**	P	**Pn**	**18 15 14.0**	**+1.6**
	0.3nm,0.3s,baz=51,slow=14,SNR=4.6						
DZM	**Mont Dzumac**	**21.48**	**143**	*eP*	**P**	**18 16 13.1**	**-0.2**
	7.0nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**23.09**	**229**	*eP*	**P**	**18 16 29.7**	**-0.5**
	26nm,1.1s,mb4.5						
WB2	**Warramunga Arr**	**23.09**	**229**	*eP*	**P**	**18 16 29.8**	**-0.5**
WB2	**Warramunga Arr**	**23.09**	**229**	*eP*	**P**	**18 16 29.8**	**-0.5**
WRA	**Warramunga Arr**	**23.10**	**229**	P	**P**	**18 16 29.7**	**-0.7**
	18nm,1.0s,mb4.3,baz=53,slow=9.3,SNR=46						
ASAR	**Alice Springs**	**25.79**	**223**	P	**P**	**18 16 55.0**	**+0.2**
	10nm,0.8s,mb4.3,baz=58,slow=8.0,SNR=53						
STKA	**Stephens Creek**	**28.54**	**200**	P	**P**	**18 17 19.1**	**-0.2**
	4.1nm,0.9s,mb4.0,baz=26,slow=8.4,SNR=11						
STKA				LR	LR	18 29 20.0	
	comp=Z,162nm,18.3s,baz=237,slow=38						
STKA	**Stephens Creek**	**28.54**	**200**	*eP*	**P**	**18 17 19.0**	**-0.4**
	3.3nm,0.9s,mb4.0						
FITZ	**Fitzroy Crossi**	**29.36**	**242**	*eP*	**P**	**18 17 26.4**	**-0.4**
	12nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**29.36**	**242**	*eP*	**P**	**18 17 25.9**	**-0.9**
	6.0nm,0.8s,mb4.3						
KAPI	**Kappang**	**32.76**	**269**	P	**P**	**18 17 56.6**	**-0.3**
	12nm,0.9s,mb4.7,baz=90,slow=16,SNR=2.7						
MBWA	**Marble Bar**	**35.66**	**240**	*eP*	**P**	**18 18 21.9**	**0.0**
	12nm,1.1s,mb4.7						
MJAR	**Matsushiro Arr**	**43.61**	**343**	LR	LR	18 34 05.3	
	comp=Z,103nm,21.3s,baz=245,slow=31						
CMAR	**Chiang Mai Arr**	**57.88**	**295**	P	**P**	**18 21 16.2**	**+0.9**
	2.8nm,0.8s,mb4.3,baz=111,slow=5.2,SNR=26						
SONM	**Songino Array**	**66.53**	**328**	P	**P**	**18 22 12.4**	**-0.2**
	0.3nm,0.5s,mb3.4,baz=143,slow=5.2,SNR=3.3						
LSA	**Lhasa**	**68.30**	**305**	*eP*	**P**	**18 22 24.8**	**+0.5**
	1.9nm,0.7s,mb4.0						
BILL	**Bilibino**	**73.64**	**5**	*eP*	**P**	**18 22 55.5**	**-0.3**
MK31	**Makanchi Array**	**80.48**	**319**	*eP*	**P**	**18 23 35.4**	**+0.8**
MKAR	**Makanchi Array**	**80.48**	**319**	P	**P**	**18 23 34.8**	**+0.2**
	0.7nm,0.8s,mb3.5,baz=96,slow=7.9,SNR=7.1						
MCK	**McKinley**	**81.24**	**23**	*eP*	**P**	**18 23 37.5**	**-0.7**
MCK				*e*	pP	18 23 53.2	-4.6
ZALV	**Zalesovo Beam**	**81.35**	**326**	P	**P**	**18 23 38.1**	**-0.9**
	1.1nm,0.6s,mb3.9,baz=110,slow=5.1,SNR=6.3						
ZALV				LR	LR	18 57 29.9	
	comp=Z,37nm,18.9s,baz=79,slow=34						
COLA	**College**	**82.23**	**22**	*eP*	**P**	**18 23 41.6**	**-1.8**
	5.1nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**84.06**	**314**	P	**P**	**18 23 54.2**	**+0.8**
	1.6nm,0.7s,mb4.0						
QSPA	**South Pole Qui**	**84.82**	**180**	*eP*	**P**	**18 23 57.2**	**+0.7**
	4.4nm,1.0s,mb4.3						
QSPA				*e*	pP	18 24 13.6	-2.6
EKS2	**Erkin-Say**	**85.31**	**313**	P	**P**	**18 24 00.6**	**+0.9**
	3.0nm,0.9s,mb4.2						
YKA	**Yellowknife Ar**	**95.80**	**28**	P	**P**	**18 24 49.0**	**+0.6**
	0.4nm,0.8s,mb3.9,baz=272,slow=4.7,SNR=7.0						
YKA	**Yellowknife Ar**	**95.80**	**28**	P	**P**	**18 24 49.0**	**+0.6**
TOA0	**Torodi Ar. Sit**	**150.26**	**288**	*e*PKPdf	PKPdf	18 31 08.0	-1.2
TOA0				*e*PKPbc	PKPbc	18 31 13.8	-0.5
TORD	**Torodi Ar. Bea**	**150.26**	**288**	PKPbc	PKPbc	18 31 14.5	+0.1
	3.1nm,1.0s,baz=72,slow=2.1,SNR=18						
BDFB	**Brasilia**	**150.93**	**136**	PKPbc	PKPbc	18 31 18.2	+2.3
	1.0nm,0.5s,baz=123,slow=27,SNR=5.7						
DBIC	**Dimbokro**	**157.57**	**275**	PKPab	PKPab	18 31 51.4	-0.5
	1.0nm,0.5s,baz=77,slow=4.8,SNR=5.0						

*NEIC **25** 18:17:21.3, 3520N×2294E, h18km, MD3.5(ATH), After ATH.*

*ATH **25** 18:17:21.3, 3520N×2294E, h18km, MD3.5/4*

*CSEM **25** 18:17:27.5±0.4, 3572N×2346E, h10km, MD3.5, Error ellipse: s-maj=10.2km s-min=3.4km az=87.0*

*ISCJB **25** 18:17:28.2±1.7, 357N±0.1×234E±0.1, h27km±11km, Error ellipse: s-maj=26.9km s-min=9.7km az=135.5*

*THE **25** 18:17:28.0, 3565N×2336E, h15km±2km, Error ellipse: s-maj=4.8km s-min=1.3km az=228.0*

ISC 25 18:17:28.0±2.0, 356N±01×233E±02, h24km±12km, n14, σ0$68/16, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARN	**Karanos**	**0.52**	**114**	P	**Pb**	**18 17 38.5**	**+0.1**
KARN				S	**Sb**	**18 17 45.9**	**+0.4**
VAM	**Vamos**	**0.73**	**106**	*e*PN	**Pn**	**18 17 41.5**	**-1.3**
GVD	**Gavdhos**	**0.99**	**141**	*e*PN	**Pn**	**18 17 40.6**	**-5.7**
VLI	**Veliai**	**1.15**	**348**	*e*PN	**Pn**	**18 17 49.7**	**+1.1**
SIVA	**Sivas**	**1.34**	**116**	P	**Pn**	**18 17 51.8**	**+0.6**
LAST	**Lasithi**	**1.81**	**104**	P	**Pn**	**18 17 56.5**	**-1.1**
LAST				S	**Sn**	**18 18 21.1**	**+1.4**
THR5	**Thira Island,**	**1.81**	**63**	P	**Pn**	**18 17 57.4**	**-0.3**
THR6	**Thira Island,**	**1.82**	**66**	P	**Pn**	**18 17 57.9**	**0.0**
THR3	**Thira Island,**	**1.85**	**64**	P	**Pn**	**18 17 57.9**	**-0.3**
THR4	**Thira Island,**	**1.87**	**63**	P	**Pn**	**18 17 57.9**	**-0.6**
THR1	**Thera Island**	**1.88**	**66**	P	**Pn**	**18 17 58.5**	**-0.1**
NPS	**Neapolis**	**1.89**	**100**	*e*PN	**Pn**	**18 17 58.8**	**+0.1**
APE	**Apeiranthos**	**2.29**	**50**	P	**Pn**	**18 18 04.2**	**0.0**
LTK	**Loutraki**	**2.42**	**353**	P	**Pn**	**18 18 06.1**	**0.0**

IDC 25 18:27:33.8±4.4, 243S×13954E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/13, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=168.2km s-min=30.0km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.14**	**196**	P	Pn	18 31 48.1	+0.9
	0.1nm,0.3s,baz=16,slow=12,SNR=8.1						
ASAR	**Alice Springs**	**21.81**	**194**	P	P	18 32 27.4	-0.2
	0.4nm,0.5s,baz=25,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**70.08**	**322**	P	P	18 38 47.8	0.0
	0.3nm,0.6s,baz=113,slow=5.9,SNR=4.9						

*IDC **25** 18:45:09.1±0.7, 6178N×150.15W, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.7/25, mbtmp3.7/12, ML3.2/3, Error ellipse: s-maj=15.5km s-min=13.7km az=101.0*

*ISCJB **25** 18:45:14.5±0.3, 6155N±003×14991W±007, h63km±4km, mb3.8/10, Error ellipse: s-maj=5.8km s-min=5.6km az=18.8*

*NEIC **25** 18:45:16.6, 6158N×14994W, h30km, ML3.5(AEIC), ML3.8(PMR), After AEIC.*

NEIC Felt [III] at Eagle River and [II] at Anchorage and Palmer. Felt at Chugiak, Wasilla and Willow.

ISC 25 18:45:15.7±0.3, 6153N±003×14993W±007, h56km±4km, n45, σ0$89/51, mb3.8/10, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIB	**Fire Island**	**0.39**	**198**	P	**Pn**	**18 45 26.4**	**+0.3**
FIB				S	**Sn**	**18 45 33.9**	**+0.3**
PMR	**Palmer**	**0.39**	**81**	P	**Pn**	**18 45 24.7**	**-1.4**
PMR				S	**Sn**	**18 45 32.5**	**-1.1**
RC01	**Rabbit Creek A**	**0.45**	**168**	P	**Pn**	**18 45 25.7**	**-1.1**
RC01				S	**Sn**	**18 45 35.1**	**+0.3**
GHO	**Glory Hole Cre**	**0.54**	**63**	P	**Pn**	**18 45 27.0**	**-0.7**
SKT	**Skwentna**	**0.88**	**301**	P	**Pn**	**18 45 31.0**	**-1.0**
SKT				S	**Sn**	**18 45 43.3**	**-0.7**
SLKM	**Skilak Lake**	**1.04**	**188**	P	**Pn**	**18 45 34.3**	**+0.2**
SEW	**Seward**	**1.45**	**170**	P	**Pn**	**18 45 41.3**	**+1.7**
PPLA	**Purkeypile**	**1.73**	**323**	P	**Pn**	**18 45 43.2**	**-0.1**
TRF	**Thorofare Moun**	**1.93**	**355**	P	**Pn**	**18 45 46.2**	**+0.1**
KTH	**Kantishna Hill**	**2.08**	**348**	P	**Pn**	**18 45 48.3**	**+0.2**
MCK	**McKinley**	**2.26**	**11**	P	**Pn**	**18 45 51.2**	**+0.7**
EYAK	**Cordova Ski Ar**	**2.26**	**114**	P	**Pn**	**18 45 50.7**	**+0.1**
PAX	**Paxson**	**2.54**	**53**	P	**Pn**	**18 45 55.6**	**+1.3**
CHUM	**Lake Minchumin**	**2.60**	**336**	P	**Pn**	**18 45 55.1**	**-0.1**
BPAW	**Bear Paw Mtn.**	**2.62**	**350**	P	**Pn**	**18 45 55.0**	**-0.5**
SVW2	**Sparrevohn**	**2.76**	**263**	P	**Pn**	**18 45 57.6**	**+0.2**
TTO1	**Tatalina**	**3.17**	**299**	P	**Pn**	**18 46 02.7**	**-0.2**
MENT	**Mentasta**	**3.23**	**61**	*e*P	**Pn**	**18 46 04.5**	**+0.7**
COLA	**College**	**3.48**	**15**	P	**Pn**	**18 46 07.8**	**+0.5**
IL1	**Eielson Array**	**3.53**	**22**	P	**Pn**	**18 46 08.6**	**+0.7**
KDAK	**Kodiak Island**	**4.00**	**201**	Pn	**Pn**	**18 46 13.4**	**-0.9**
	0.6nm,0.3s,baz=167,slow=16,SNR=20						
KDAK					Sn	**Sn**	**18 46 57.0**	**-2.7**
	6.9nm,0.3s,baz=336,slow=18,SNR=6.7						
KDAK					Lg		18 47 18.9	
	9.4nm,0.3s,baz=281,slow=22,SNR=6.7						
KDAK	**Kodiak Island**	**4.00**	**201**	P	**Pn**	**18 46 15.1**	**+0.8**
BCA3	**Beaver Creek A**	**4.10**	**64**	P	**Pn**	**18 46 16.4**	**+0.6**
GCSA	**Galena City Sc**	**4.51**	**319**	P	**Pn**	**18 46 21.6**	**+0.3**
OHAK	**Old Harbor**	**4.65**	**203**	P	**Pn**	**18 46 25.4**	**+2.1**
IM3	**Indian Mountai**	**4.78**	**341**	P	**Pn**	**18 46 25.2**	**+0.2**
EGAK	**Eagle**	**5.14**	**47**	*e*Pn	**Pn**	**18 46 29.8**	**-0.1**
	48nm,0.8s						
DAWY	**Dawson**	**5.46**	**58**	P	**Pn**	**18 46 35.2**	**+0.9**
COLD	**Coldfoot**	**5.72**	**359**	P	**Pn**	**18 46 38.5**	**+0.6**
BM3	**Burnt Mountain**	**6.34**	**19**	P	**Pn**	**18 46 46.6**	**+0.3**
TNA	**Tin City**	**8.97**	**305**	*e*Pn	**Pn**	**18 47 23.2**	**+0.9**
	17nm,0.6s						
TNA				*e*Sn	**Sn**	**18 48 56.2**	**-5.5**
DLBC	**Dease Lake**	**10.43**	**98**	Pn	**Pn**	**18 47 41.9**	**-0.4**
	0.1nm,0.3s,baz=285,slow=12,SNR=3.3						
DLBC	**Dease Lake**	**10.43**	**98**	Pn	**Pn**	**18 47 41.9**	**-0.4**
YKA	**Yellowknife Ar**	**16.48**	**71**	Pn	**Pn**	**18 49 01.0**	**-1.8**
	0.2nm,0.3s,baz=281,slow=10,SNR=15						
YKA				PcP	PcP	18 53 51.2	+0.3
	0.0nm,0.3s,baz=281,slow=0.9,SNR=4.3						
YKA	**Yellowknife Ar**	**16.48**	**71**	Pn	**Pn**	**18 49 01.0**	**-1.8**
YKA				PcP	PcP	18 53 51.2	+0.3
FX1	**Attu Island--F**	**21.51**	**263**	P	**P**	**18 50 00.9**	**+1.4**
	1.9nm,0.3s,mb3.9,baz=5.2,slow=11,SNR=4.4						
PDAR	**Pinedale Array**	**30.39**	**109**	P	**P**	**18 51 26.0**	**+4.0**
	0.3nm,0.7s,mb3.1,baz=324,slow=12,SNR=2.7						
KSRS	**Korea Array**	**54.30**	**284**	P	**P**	**18 54 36.0**	**+0.1**
	1.0nm,0.7s,mb3.9,baz=35,slow=7.6,SNR=3.1						
SONM	**Songino Array**	**55.09**	**307**	P	**P**	**18 54 42.2**	**+0.8**
	1.9nm,0.7s,mb4.2,baz=33,slow=7.1,SNR=14						
ZALV	**Zalesovo Beam**	**57.01**	**325**	P	**P**	**18 54 53.9**	**-1.1**
	0.4nm,0.3s,mb3.9,baz=18,slow=8.5,SNR=3.1						
KURK	**Kurchatov**	**61.58**	**327**	P	**P**	**18 55 25.8**	**-0.9**
	0.9nm,0.5s,mb4.2,baz=30,slow=6.6,SNR=5.4						
MKAR	**Makanchi Array**	**64.15**	**323**	P	**P**	**18 55 42.2**	**-1.5**
	0.3nm,0.4s,mb3.6,baz=29,slow=4.9,SNR=7.5						
AKASG	**Malin Array Be**	**68.12**	**1**	P	**P**	**18 56 08.4**	**-0.7**
	1.4nm,0.5s,mb4.3,baz=358,slow=6.5,SNR=6.6						
GERES	**GERESS Array B**	**69.19**	**11**	P	**P**	**18 56 16.2**	**+0.4**
	0.3nm,0.7s,mb3.4,baz=359,slow=5.9,SNR=3.3						
CMAR	**Chiang Mai Arr**	**83.55**	**297**	P	**P**	**18 57 36.8**	**-0.7**
	0.8nm,0.8s,mb3.9,baz=9.7,slow=7.2,SNR=6.8						

*NEIC **25** 19:03:53.6, 1486N×6113W, h156km, MD3.6(TRN), After TRN.*

TRN 25 19:03:53.9, 1487N×6112W, h153km, MD3.6, M3.0(FDF), 8C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.14**	**193**	*eP*	Pn	19 04 15.6	+1.1
FDF				*eS*	Sn	19 04 31.0	+0.8
FDF	**Fort de France**	**0.14**	**193**	*ePg*	Pn	19 04 15.4	+0.9
FDF				*eSg*	Sn	19 04 31.1	+0.9
BIM	**Bigot**	**0.35**	**172**	*eP*	Pn	19 04 16.0	+1.0
BIM				*eS*	Sn	19 04 32.0	+0.9
MVM	**Montagne Vaucl**	**0.38**	**145**	*eP*	Pn	19 04 16.1	+1.0
DLPL	**La Plaine**	**0.48**	**345**	*eP*	Pn	19 04 16.9	+1.4
DLPL				*eS*	Sn	19 04 33.6	+1.5
DWS	**Wesley**	**0.72**	**345**	*eP*	Pn	19 04 18.1	+1.2
DWS				*eS*	Sn	19 04 35.9	+1.3
SLW	**Petit Monier**	**0.86**	**168**	*eP*	Pn	19 04 18.4	+0.5
SLW	**Petit Monier**	**0.86**	**168**	*eP*	Pn	19 04 19.4	+1.5
SLW				*eS*	Sn	19 04 36.8	+0.6
SLW	**Petit Monier**	**0.86**	**168**	*eP*	Pn	19 04 19.4	+1.5
SLW				*eS*	Sn	19 04 36.8	+0.6
SLPE	**Piton Saint Es**	**1.03**	**173**	*eP*	Pn	19 04 20.8	+1.6
SLPE				*eS*	Sn	19 04 40.1	+1.5
SLDE	**Delcer**	**1.06**	**177**	*eP*	Pn	19 04 20.4	+0.9
SLDE				*eS*	Sn	19 04 39.7	+0.6
SLDE	**Delcer**	**1.06**	**177**	*eP*	Pn	19 04 22.4	+2.9
SLDE				*eS*	Sn	19 04 42.4	+3.3
MGG	**Marie-Galante**	**1.06**	**350**	*eP*	Pn	19 04 20.5	+0.9
MCLT	**Moule a Chique**	**1.16**	**171**	*i*P	Pn	19 04 20.8	+0.3
MCLT				*eS*	Sn	19 04 39.9	-0.9
HMG	**Houelmont**	**1.24**	**333**	*eP*	Pn	19 04 22.7	+1.6
DOG	**Dongo Capester**	**1.25**	**337**	*eP*	Pn	19 04 22.5	+1.2
SCG	**Saint Claude**	**1.27**	**335**	*i*P	Pn	19 04 23.0	+1.5
SCG				*i*S	Sn	19 04 43.0	+0.4
BCG	**Bois Riant Cap**	**1.30**	**338**	*eP*	Pn	19 04 22.9	+1.2
LZG	**Guadaloupe-1**	**1.42**	**334**	*eP*	Pn	19 04 24.2	+1.3
DEG	**La Desirade**	**1.44**	**2**	*eP*	Pn	19 04 23.8	+0.7
SSV	**Crater Summit**	**1.53**	**183**	*eP*	Pn	19 04 25.5	+1.4
SSV				*eS*	Sn	19 04 49.8	+2.5
SSV	**Crater Summit**	**1.53**	**183**	*eP*	Pn	19 04 25.5	+1.4
SSV				*eS*	Sn	19 04 51.0	+3.8
SVV	**Soufriere Volc**	**1.54**	**184**	*eP*	Pn	19 04 25.9	+1.6
SVV				*eS*	Sn	19 04 48.3	+0.8
SVV	**Soufriere Volc**	**1.54**	**184**	*eP*	Pn	19 04 25.9	+1.6
SVV				*eS*	Sn	19 04 49.5	+2.0
SVB	**Belmont**	**1.59**	**185**	*i*P	Pn	19 04 25.5	+0.7
SVB				*eS*	Sn	19 04 51.0	+2.7
SVB	**Belmont**	**1.59**	**185**	*i*P	Pn	19 04 25.5	+0.7
SVB				*eS*	Sn	19 04 47.9	-0.5
FCV	**Fort Charlotte**	**1.71**	**184**	*i*P	Pn	19 04 27.1	+1.2
FCV				*eS*	Sn	19 04 52.1	+1.6
BPA	**Boggy Peak**	**2.28**	**342**	*eP*	Pn	19 04 34.0	+1.5
BPA				*eS*	Sn	19 05 02.0	-0.3
GRCU	**Cariacou**	**2.41**	**188**	*ePg*	Pn	19 04 34.7	+0.6
GRCU				*eS*	Sn	19 05 05.6	+0.5
GRSS	**Sisters**	**2.60**	**191**	*eP*	Pn	19 04 36.2	-0.2
GRIC	**Isle de Caille**	**2.61**	**190**	*eP*	Pn	19 04 36.7	+0.2
GRHS	**Sauteurs**	**2.68**	**191**	*eP*	Pn	19 04 37.5	0.0
GRW	**Mount Saint Ca**	**2.74**	**191**	*ePg*	Pn	19 04 38.8	+0.5
GRGR	**Grenville**	**2.77**	**191**	*ePn*	Pn	19 04 39.1	+0.6
ANWB	**Willy Bob**	**2.86**	**347**	*ePn*	Pn	19 04 39.0	-0.6
ANWB				*eSn*	Sn	19 05 13.5	-1.5
SKI	**Saint Kitts**	**2.90**	**328**	*eP*	Pn	19 04 42.2	+2.0
SKI				*eS*	Sn	19 05 15.9	-0.1
TOSP	**Speyside**	**3.59**	**171**	*i*P	Pn	19 04 49.5	+0.4
TOSP				*eS*	Sn	19 05 31.7	-0.1
TCE	**Chacachacare**	**4.19**	**189**	*eP*	Pn	19 04 58.7	+1.9
TRN	**Trinidad (W)**	**4.20**	**184**	*eP*	Pn	19 04 58.1	+1.1

MAN 25 19:30:01, 1762N×12236E, h20km, mb4.2, ML3.1, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.55**	**173**	*i*P	Pb	19 30 13.1	+1.0
PALP				*i* S	Sb	19 30 24.9	+5.4
SGCP	**Mt. Cagua**	**0.69**	**335**	*e*P	Pb	19 30 14.4	0.0
SGCP				*e*S	Sb	19 30 22.9	-0.5
CAUP	**Cauayan**	**0.84**	**217**	*e*P	Pb	19 30 18.2	+1.3
CAUP				*e*S	Sb	19 30 30.5	+2.7
ABRA	**Dolores**	**1.57**	**271**	*e*P	Pn	19 30 28.0	+0.3
ABRA				*e*S	Sn	19 30 48.9	+1.4
BALP	**Baler**	**2.01**	**202**	*e*P	Pn	19 30 36.5	+2.7
BALP				*e*S	Sn	19 30 59.9	+1.5

*ISCJB **25** 20:23:55.5±0.6, 3664N±003×7108E±008, h196km±9km, mb3.0/2, Error ellipse: s-maj=11.0km s-min=5.3km az=173.7*

*NEIC **25** 20:23:56.1±0.8, 3667N×7097E, h205km±10km, mb4.3/9, Error ellipse: s-maj=12.2km s-min=7.2km az=84.0*

*IDC **25** 20:23:57.2±10.0, 3677N×7048E, h206km±73km, mb2.8/2, mb1 2.8/4, mb1mx2.6/23, mbtmp2.7/4, Error ellipse: s-maj=342.3km s-min=33.0km az=139.0*

ISC 25 20:23:56.4±0.6, 3665N±003×7108E±008, h190km±9km, n27, σ1$10/32, mb3.0/2, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.68**	**219**	*e*Pn	**Pn**	**20 24 42.6**	**+0.9**
KBL				*e*Sn	**Sn**	**20 25 16.1**	**-0.9**
DLH	**Dalhousie**	**5.75**	**134**	*e*S	**Sn**	**20 26 26.0**	**-0.4**
AML	**Almayashu**	**5.83**	**20**	*e*Pn	**Pn**	**20 25 23.4**	**+2.1**
	10nm,0.4s						
AML				*e*Sn	**Sn**	**20 26 26.8**	**-1.5**
UCH	**Uchtor**	**6.17**	**24**	*e*Sn	**Sn**	**20 26 36.6**	**+0.5**
EKS2	**Erkin-Say**	**6.35**	**18**	*e*Sn	**Sn**	**20 26 39.7**	**-0.8**
KK31	**Karatay Array**	**6.46**	**356**	Pn	**Pn**	**20 25 30.4**	**+1.1**
	1.2nm,0.4s,baz=183,slow=12,SNR=40						
KK31				⇑Sn	**Sn**	**20 26 40.3**	**-2.6**
	3.6nm,0.5s,baz=175,slow=14,SNR=14						
TKM2	**Tokmak 2**	**7.16**	**28**	Pn	**Pn**	**20 25 40.1**	**+1.5**
SMLA	**Simla**	**7.48**	**136**	*e*P	**Pn**	**20 25 43.0**	**+0.1**
SMLA				*i* S	**Sn**	**20 27 02.8**	**-4.5**
SMLA				*ex*	x	20 27 05.9	
	comp=N,263nm,0.4s						
SMLA				*ex*	x	20 27 06.7	
	comp=E,191nm,0.2s						
KLP	**Kalpa**	**7.84**	**129**	*e*P	**Pn**	**20 25 49.8**	**+2.2**
KLP				*e*S	**Sn**	**20 27 11.8**	**-4.0**
JOSI	**Joshimath**	**9.32**	**128**	*e*S	**Sn**	**20 27 45.7**	**-5.5**
KHET	**Khetri**	**9.44**	**154**	*e*S	**Sn**	**20 27 45.1**	**-8.9**
KUDL	**Kundal**	**9.64**	**150**	*e*S	**Sn**	**20 27 49.6**	**-9.1**
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**20 26 59.2**	**+3.5**
	comp=E,0.1nm,0.3s,baz=213,slow=11,SNR=4.4						
DANN	**Dangsing**	**13.52**	**124**	*e*P	**Pn**	**20 27 00.5**	**-0.3**
	comp=E,3.9nm,0.3s						
KOLN	**Koldanda**	**13.80**	**126**	*e*P	**Pn**	**20 27 05.1**	**+0.8**
	comp=E,3.4nm,0.3s						
GKN	**Gorkha**	**14.34**	**123**	*e*P	**Pn**	**20 27 10.3**	**-0.6**
	comp=E,10nm,0.4s						
DMN	**Daman**	**14.91**	**123**	*e*P	**Pn**	**20 27 18.6**	**+0.7**
KKN	**Kakani**	**14.91**	**122**	*e*P	**Pn**	**20 27 17.0**	**-0.9**
	comp=E,8.0nm,0.4s						
PKI	**Pulchoki**	**15.13**	**123**	*e*P	**Pn**	**20 27 21.3**	**+0.6**
GUN	**Gumba**	**15.24**	**121**	*e*P	**Pn**	**20 27 22.5**	**+0.5**
	comp=E,3.9nm,0.3s						
JIRN	**Jiri**	**15.61**	**121**	*e*P	**Pn**	**20 27 25.8**	**-

CPD				*e*S	**Sn**	**20 57 24.7**	**-0.3**
SJG	**San Juan**	**1.37**	**267**⇑	*e*P	**Pn**	**20 57 08.4**	**+0.2**
SJG				*e*S	**Sn**	**20 57 28.6**	**-0.3**
SJG	**San Juan**	**1.37**	**267**⇑	*e*P	**Pn**	**20 57 08.4**	**+0.2**
SJG	**San Juan**	**1.37**	**267**⇓	*e*P	**Pn**	**20 57 08.7**	**+0.4**
SJG				*e*S	**Sn**	**20 57 28.6**	**-0.3**
SJG				*e*S	**Sn**	**20 57 28.9**	**0.0**
SJG	**San Juan**	**1.37**	**267**⇓	*e*P	**Pn**	**20 57 08.7**	**+0.4**
SJG				*e*S	**Sn**	**20 57 28.9**	**0.0**
ICM	**Isla Caja Muer**	**1.74**	**260**⇓	*e*P	**Pn**	**20 57 12.3**	**-0.1**
ICM				*e*S	**Sn**	**20 57 36.3**	**0.0**
CELP	**Cerrillos**	**1.77**	**266**⇑	*e*P	**Pn**	**20 57 13.0**	**+0.2**
CELP				*e*S	**Sn**	**20 57 37.4**	**+0.4**
CELP	**Cerrillos**	**1.77**	**266**⇑	*e*P	**Pn**	**20 57 13.4**	**+0.6**
CELP				*e*S	**Sn**	**20 57 37.4**	**+0.4**
OBIP	**Obispado Ponce**	**1.80**	**265**⇑	*e*P	**Pn**	**20 57 13.3**	**+0.2**
OBIP				*e*S	**Sn**	**20 57 37.3**	**-0.3**
LRS	**Lares**	**2.02**	**273**⇑	*e*P	**Pn**	**20 57 15.7**	**-0.1**
LRS				*e*S	**Sn**	**20 57 42.1**	**-0.2**
LRS	**Lares**	**2.02**	**273**⇑	*e*P	**Pn**	**20 57 15.7**	**-0.1**
LRS				*e*S	**Sn**	**20 57 42.6**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.07**	**264**⇑	*e*P	**Pn**	**20 57 16.1**	**-0.2**
GBPR	**Guanica, Bosqu**	**2.07**	**264**⇑	*e*P	**Pn**	**20 57 16.8**	**+0.5**
GBPR				*e*S	**Sn**	**20 57 42.5**	**-0.8**
LSP	**Las Mesas**	**2.25**	**270**⇑	*e*P	**Pn**	**20 57 18.9**	**+0.3**
LSP				*e*S	**Sn**	**20 57 47.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.28**	**266**⇑	*e*P	**Pn**	**20 57 19.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.28**	**266**⇑	*e*P	**Pn**	**20 57 19.2**	**+0.3**
CRPR				*e*S	**Sn**	**20 57 48.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.28**	**266**⇑	*e*P	**Pn**	**20 57 19.0**	**+0.1**
CRPR				*e*S	**Sn**	**20 57 48.2**	**+0.3**
AGPR	**Aguadilla, PR**	**2.29**	**277**⇑	*e*P	**Pn**	**20 57 18.6**	**-0.5**
AGPR				*e*S	**Sn**	**20 57 46.9**	**-1.2**
ANWB	**Willy Bob**	**2.84**	**100**	*e*Pn	**Pn**	**20 57 24.6**	**-1.3**
ANWB				*e*Sn	**Sn**	**20 57 56.3**	**-4.1**

SKHL 25 20:57:04.7±0.2,**5461N**×**12292E**,**h26**km±6km,**mb4.2**/7,
1C-1D,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUP	**Tupik**	**1.74**	**265**	*e*Pn	Pn	20 57 34.4	+1.2
TUP				*e*Pg	Pn	20 57 36.6	+3.5
TUP				AMB	AMB	20 57 41.0	
	124nm,0.4s						
TUP				*e*Sn	Sn	20 57 57.6	+3.2
KROS	**Kirovskiy**	**2.37**	**93**	*e*Pn	Pn	20 57 40.9	-0.9
KROS				⇓*i*Pg	Pn	20 57 46.9	+5.1
KROS				AMB	AMB	20 57 49.9	
	17nm,0.4s						
KROS				AMB	AMB	20 57 49.9	
	83nm,0.4s						
KROS				AMB	AMB	20 57 49.9	
	93nm,0.4s						
KROS				pPg		20 57 53.7	
KROS				*i* Sg	Sn	20 58 17.6	+7.6
KROS				A		20 58 22.7	
	190nm,0.4s						
KROS				A		20 58 22.7	
	220nm,0.4s						
KROS				A		20 58 22.7	
	200nm,0.4s						
CLNS	**Chul'man**	**2.50**	**26**	*e*Pg	Pn	20 57 51.8	+8.3
CLNS				AMB	AMB	20 57 55.5	
	6.0nm,0.2s						
CLNS				*e*Sn	Sn	20 58 18.3	+5.2
CLNS				*e*Sg	Sn	20 58 25.0	+12
CLNS				A		20 58 26.3	
	358nm,0.4s						
ZEA	**Zeya**	**2.69**	**107**	*e*Pn	Pn	20 57 47.8	+1.6
ZEA				*e*Pg	Pn	20 57 54.0	+7.8
ZEA				AMB	AMB	20 57 54.9	
	27nm,0.3s						
ZEA				pPg		20 58 04.5	
ZEA				*e*Sg	Sn	20 58 28.6	+11
ZEA				A		20 58 29.2	
	210nm,0.5s						
ZEA				A		20 58 29.2	
	75nm,0.5s						
YASR	**Yasnyy**	**3.27**	**112**⇑	*i*Pn	Pn	20 57 53.4	-0.8
YASR				*e*Pg	Pn	20 58 03.9	+10
YASR				AMB	AMB	20 58 05.0	
	6.0nm,0.5s						
YASR				AMB	AMB	20 58 05.0	
	7.0nm,0.5s						
YASR				AMB	AMB	20 58 05.0	
	13nm,0.5s						
YASR				*e*Sg	Sn	20 58 44.9	+13
YASR				A		20 58 50.4	
	14nm,0.5s						
YASR				A		20 58 50.4	
	70nm,0.5s						
BMKR	**Bomnak**	**3.44**	**86**	*e*Pn	Pn	20 57 56.0	-0.5
BMKR				pPn		20 58 03.8	
BMKR				*e*Pg	Pn	20 58 06.8	+10
BMKR				AMB	AMB	20 58 08.5	
	39nm,0.3s						
BMKR				AMB	AMB	20 58 08.5	
	9.0nm,0.3s						
BMKR				AMB	AMB	20 58 08.5	
	40nm,0.3s						
BMKR				*e*Sn	Sn	20 58 38.9	+2.5
BMKR				*e*Sg	Sn	20 58 52.3	+16
BMKR				A		20 58 57.5	
	172nm,0.5s						
BMKR				A		20 58 57.5	
	126nm,0.5s						
BMKR				A		20 58 57.5	
	90nm,0.5s						
CRS	**Chara**	**3.49**	**313**	*e*Pg	Pn	20 58 08.7	+12
CRS				*e*Sg	Sn	20 58 52.2	+15
CRS				A		20 58 57.3	
	329nm,1.0s						
EKMR	**Ekimchan**	**6.13**	**100**	*e*Pn	Pn	20 58 33.0	-0.5
EKMR				AMB	AMB	20 58 33.5	
	5.0nm,0.3s						
EKMR				AMB	AMB	20 58 33.5	
	9.0nm,0.3s						
EKMR				AMB	AMB	20 58 33.5	
	25nm,0.3s						
EKMR				*e*Sg	Sn	21 00 16.5	+34
EKMR				A		21 00 30.7	
	16nm,0.5s						
KLR	**Kul'dur**	**7.67**	**131**	*e*rx	rx	21 00 14.3	
KLR				*e*Sg	Sn	21 01 03.8	+43

*ISCJB **25** 21:02:20.6±0.5, 924S±005×7394W±005, h33km, mb3.9/8, Error ellipse: s-maj=8.1km s-min=7.0km az=145.6*
*NEIC **25** 21:02:21.5±2.2, 930S×7390W, h27km±16km, mb4.3/3, Error ellipse: s-maj=11.5km s-min=7.6km az=63.0*
*IDC **25** 21:02:24.0±5.8, 908S×7372W, h33km±43km, mb3.6/6, mb1 3.8/9, mb1mx3.6/22, mbtmp3.7/9, ML3.8/3, MS2.7/3, Ms1 2.7/3, ms1mx2.4/26, Error ellipse: s-maj=53.4km s-min=21.4km az=28.0*

ISC 25 21:02:22.8±0.5,**926S**±005×**7392W**±005,**h35**km,**n38,**
σ0**83**/28,**mb3.9**/8,**Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.95**	**226**	*e*Pn	**Pn**	**21 03 21.1**	**+0.1**
NNA				*e*		21 03 28.1	
NNA				*e*Sn	**Sn**	**21 04 06.4**	**+0.3**
ATAH	**Atahualpa**	**4.97**	**297**	Pn	**Pn**	**21 03 38.5**	**+3.5**
	3.0nm,0.3s,baz=146,slow=0.8,SNR=18						
ATAH				Sn	**Sn**	**21 04 30.2**	**-1.1**
	2.3nm,0.3s,baz=72,slow=18,SNR=2.3						
ATAH				Lg		21 04 57.0	
	7.5nm,0.3s,baz=352,slow=14,SNR=7.4						
ATAH				LR	LR	21 05 49.8	
	comp=Z,99nm,19.1s,baz=15,slow=41						
OTAV	**Otavalo**	**10.46**	**334**	*e*Pn	**Pn**	**21 04 49.9**	**-0.6**
ROSC	**El Rosal**	**14.03**	**358**	LR	LR	21 10 13.1	
	comp=Z,16nm,20.3s,baz=28,slow=34						
LVC	**Limon Verde**	**14.12**	**161**	LR	LR	21 12 04.0	
	comp=Z,53nm,20.7s,baz=250,slow=41						
LVC	**Limon Verde**	**14.12**	**161**	Pn	**Pn**	**21 05 39.2**	**-1.2**
SIV	**San Ignacio**	**14.20**	**119**	Pn	**Pn**	**21 05 41.2**	**-0.4**
	0.4nm,0.3s,baz=310,slow=12,SNR=12						
SIV				Lg		21 09 40.0	
	1.2nm,0.3s,baz=259,slow=14,SNR=4.9						
SDV	**Santo Domingo**	**18.32**	**10**	P	**Pn**	**21 06 33.3**	**-1.1**
	0.2nm,0.3s,baz=4.6,slow=17,SNR=2.2						
SDV				Lg		21 11 53.7	
	0.3nm,0.3s,baz=46,slow=17,SNR=2.3						
SDV	**Santo Domingo**	**18.32**	**10**	P	**Pn**	**21 06 34.3**	**-0.1**
SDV				Lg		21 11 53.8	
PAYG	**Puerto Ayora**	**18.39**	**297**	P	**Pn**	**21 06 34.9**	**-0.4**
TRQA	**Tornquist**	**30.62**	**161**	P	**P**	**21 08 27.8**	**-5.9**
	2.5nm,0.9s,mb4.0						
PLCA	**Paso Flores**	**31.48**	**175**	P	**P**	**21 08 40.0**	**-1.2**
	3.2nm,0.9s,mb4.2						
TEIG	**Tepich**	**32.53**	**334**	P	**P**	**21 08 50.4**	**-0.2**
	3.0nm,0.6s,mb4.4,baz=244,slow=13,SNR=3.7						
TEIG	**Tepich**	**32.53**	**334**	*e*P	**P**	**21 08 50.4**	**-0.3**
	55nm,1.8s,mb5.2						
TXAR	**Lajitas Array**	**47.90**	**324**	P	**P**	**21 10 59.4**	**+1.6**
	0.5nm,0.5s,mb3.8,baz=152,slow=8.0,SNR=14						
PDAR	**Pinedale Array**	**61.15**	**331**	P	**P**	**21 12 34.6**	**+0.9**
	1.0nm,1.1s,mb3.9,baz=141,slow=4.6,SNR=4.4						
DBIC	**Dimbokro**	**70.61**	**80**	P	**P**	**21 13 35.2**	**-0.1**
	1.1nm,0.8s,mb3.9,baz=270,slow=10,SNR=3.2						
DBIC	**Dimbokro**	**70.61**	**80**	P	**P**	**21 13 35.2**	**-0.1**
VNA3	**Neumayer Olymp**	**73.14**	**162**	*e*	**P**	**21 13 50.3**	**+0.9**
VNA3	**Neumayer Olymp**	**73.14**	**162**	*e*P	**P**	**21 13 50.3**	**+0.9**
VNA3	**Neumayer Olymp**	**73.14**	**162**	*e*	PcP	21 14 09.5	+3.6
VNA3	**Neumayer Olymp**	**73.14**	**162**	*e*P	PcP	21 14 09.5	+3.6
VNA2	**Neumayer--Watz**	**73.72**	**162**	*e*	**P**	**21 13 54.0**	**+1.1**
	baz=296,slow=3.9						
VNA2	**Neumayer--Watz**	**73.72**	**162**	*e*P	**P**	**21 13 54.0**	**+1.1**
	baz=317,slow=13						
VNA2				*e*		21 13 59.7	
VNA2				*e*	pP	21 14 02.4	-1.4
VNA2	**Neumayer--Watz**	**73.72**	**162**	*e*	PcP	21 14 13.2	+4.8
	baz=296,slow=3.9						
VNA2	**Neumayer--Watz**	**73.72**	**162**	*e*P	PcP	21 14 13.2	+4.8
	baz=317,slow=13						
SNAA	**Sanae**	**75.35**	**162**	*e*	**P**	**21 14 02.8**	**+0.5**
SNAA	**Sanae**	**75.35**	**162**	*e*P	**P**	**21 14 02.8**	**+0.5**
SNAA				*e*		21 14 09.2	
SNAA				*e*	pP	21 14 11.8	-1.4
YKA	**Yellowknife Ar**	**78.12**	**342**	P	**P**	**21 14 18.3**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=139,slow=5.8,SNR=13						
YKA	**Yellowknife Ar**	**78.12**	**342**	P	**P**	**21 14 18.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**78.30**	**74**	P	**P**	**21 14 19.8**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=250,slow=5.0,SNR=10						
SBA	**Scott Base**	**86.91**	**191**	P	**P**	**21 15 03.2**	**-0.4**
ZALV	**Zalesovo Beam**	**132.28**	**17**	PKP	PKPdf	21 21 34.0	+0.9
	1.0nm,0.6s,baz=299,slow=3.1,SNR=5.7						
ASAR	**Alice Springs**	**137.45**	**219**	PKhKP		21 21 41.8	
	0.2nm,0.7s,baz=147,slow=1.9,SNR=4.1						
MKAR	**Makanchi Array**	**137.46**	**24**	PKP	PKPdf	21 21 44.0	+1.0
	0.2nm,0.6s,baz=342,slow=2.2,SNR=2.4						
WRA	**Warramunga Arr**	**139.80**	**224**	PKP	PKPdf	21 21 47.8	-0.3
	0.3nm,0.5s,baz=135,slow=1.9,SNR=2.5						
KSRS	**Korea Array**	**145.69**	**328**	PKPbc	PKPbc	21 21 58.8	+0.4
	1.8nm,1.0s,baz=40,slow=2.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**168.53**	**36**	PKPab	PKPab	21 23 38.3	+2.1
	0.4nm,0.7s,baz=326,slow=5.8,SNR=3.3						

*ISCJB **25** 22:51:04.0±0.6, 3999N±005×4042E±004, h9km±7km, Error ellipse: s-maj=9.1km s-min=4.7km az=19.7*
*CSEM **25** 22:51:03.7±0.2, 4000N×4038E, h5km, MD2.8, Error ellipse: s-maj=7.2km s-min=4.7km az=5.0*
*DDA **25** 22:51:03.8, 3994N×4043E, h7km±3km, Md2.8*
*ISK **25** 22:51:03.2, 4011N×4047E, h24km, MD3.0*

ISC 25 22:51:04.6±0.6,**3999N**±005×**4044E**±004,**h10**km±7km,**n8,**
σ0**89**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.06**	**59**	*i* P	**Pg**	**22 51 06.3**	**-0.3**
KOPT				*i* S	**Sg**	**22 51 08.7**	**+0.6**
EZC	**Erzincan**	**0.54**	**243**	*e*PG	**Pg**	**22 51 21.2**	**+6.2**
EZC				*e*SG	**Sg**	**22 51 33.8**	**+12**
EZM	**Erzurum**	**0.72**	**96**	*e*PG	**Pg**	**22 51 17.2**	**-1.2**
EZM				*e*SG	**Sg**	**22 51 28.8**	**+0.9**
ERZM	**Erzurum**	**0.72**	**96**	*i* P	**Pg**	**22 51 16.8**	**-1.7**
ERZM				*i* S	**Sg**	**22 51 28.7**	**+0.8**
GUMT	**Gumushane**	**0.87**	**303**	*e*PG	**Pg**	**22 51 20.2**	**-1.2**
GUMT				*e*SG	**Sg**	**22 51 32.0**	**-0.7**
MACK	**Trabzon**	**1.08**	**332**	*i* P	**Pg**	**22 51 25.5**	**+0.1**
MACK				*i* S	**Sg**	**22 51 40.5**	**+1.1**
PTK	**Pertek**	**1.36**	**217**	*e*PN	**Pn**	**22 51 29.3**	**-0.4**
PTK				*e*SN	**Sn**	**22 51 47.9**	**+0.1**
KEMA	**Kemaliye**	**1.66**	**245**	*i* P	**Pn**	**22 51 35.0**	**+1.1**
KEMA				*i* S	**Sg**	**22 51 58.7**	**+0.6**

*ISCJB **25** 23:11:23.6±1.3, 213S±01×17851W±009, h483km±16km, mb3.7/10, Error ellipse: s-maj=18.5km s-min=10.3km az=147.4*
*NEIC **25** 23:11:25.9±1.1, 2127S×17851W, h502km±12km, mb4.1/3, Error ellipse: s-maj=13.7km s-min=9.1km az=144.0*
*IDC **25** 23:11:27.1±2.2, 2124S×17856W, h509km±25km, mb3.4/8, mb1 3.7/10, mb1mx3.5/18, mbtmp3.4/10, Error ellipse: s-maj=32.5km s-min=14.5km az=153.0*

ISC 25 23:11:25.2±1.2,**2128S**±009×**17851W**±009,**h489**km±14km,
n39,σ0**93**/27,**mb3.7**/10,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.74**	**42**	P	**P**	**23 13 40.6**	**+0.8**
	3.6nm,0.3s,baz=209,slow=8.0,SNR=5.8						
AFI				S	**S**	**23 15 27.2**	**-3.3**
	2.5nm,0.3s,baz=73,slow=20,SNR=2.0						
FUNA	**Funafuti**	**12.87**	**350**	*e*P	**P**	**23 14 12.7**	**-0.5**
URZ	**Urewera**	**17.34**	**192**	P	**P**	**23 15 00.9**	**+1.1**
	1.2nm,0.3s,baz=359,slow=5.6,SNR=7.6						
CTA	**Charters Tower**	**32.95**	**266**	P	**P**	**23 17 19.7**	**+1.1**
	3.5nm,0.4s,mb4.1,baz=95,slow=9.0,SNR=6.6						
CTA	**Charters Tower**	**32.95**	**266**	P	**P**	**23 17 19.7**	**+1.1**
CTAO	**Charters Tower**	**32.95**	**266**	*e*P	**P**	**23 17 20.0**	**+1.5**
	3.4nm,0.4s,mb4.1						
PMG	**Port Moresby**	**35.06**	**284**	*e*P	**P**	**23 17 36.8**	**+0.3**
	3.6nm,0.6s,mb4.0						
TAU	**Tasmania Univ**	**35.74**	**225**	*e*P	**P**	**23 17 41.2**	**-0.5**
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**23 17 52.5**	**0.0**
ASAR	**Alice Springs**	**43.88**	**258**	P	**P**	**23 18 48.3**	**+0.6**
	1.7nm,0.7s,mb3.6,baz=94,slow=7.9,SNR=24						
ASAR				PcP	PcP	23 20 23.1	-0.3
	0.5nm,0.6s,baz=93,slow=4.8,SNR=9.3						
WB2	**Warramunga Arr**	**44.01**	**263**	*e*P	**P**	**23 18 48.7**	**-0.1**
WRAB	**Tennant Creek**	**44.02**	**263**	*e*P	**P**	**23 18 48.7**	**0.0**
	1.4nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**44.03**	**263**	P	**P**	**23 18 48.0**	**-0.8**
	0.3nm,0.4s,mb3.1,baz=94,slow=8.5,SNR=7.2						
FITZ	**Fitzroy Crossi**	**52.46**	**263**	*e*P	**P**	**23 19 49.3**	**-2.7**
SBA	**Scott Base**	**57.07**	**184**	*e*P	**P**	**23 20 22.5**	**-0.8**
CASY	**Casey**	**63.06**	**205**	*e*P	**P**	**23 21 02.6**	**-0.8**
KSM	**Kuching**	**73.05**	**278**	*e*P	**P**	**23 22 05.6**	**+0.2**
NVAR	**Mina Array Bea**	**81.92**	**44**	P	**P**	**23 22 54.2**	**+1.3**
	1.2nm,0.6s,mb3.6,baz=225,slow=8.0,SNR=12						
NVAR	**Mina Array Bea**	**81.92**	**44**	P	**P**	**23 22 54.2**	**+1.3**
FIB	**Fire Island**	**85.27**	**13**	P	**P**	**23 23 08.5**	**-0.6**
TXAR	**Lajitas Array**	**87.88**	**58**	P	**P**	**23 23 23.5**	**+1.2**
	1.0nm,0.9s,mb3.5,baz=205,slow=5.5,SNR=9.9						
PLCA	**Paso Flores**	**89.08**	**134**	*e*P	**P**	**23 23 27.7**	**-0.1**
PDAR	**Pinedale Array**	**89.85**	**43**	P	**P**	**23 23 31.6**	**+0.5**
	1.2nm,0.6s,mb3.9,baz=226,slow=3.3,SNR=7.2						
CMAR	**Chiang Mai Arr**	**89.92**	**290**	P	**P**	**23 23 33.2**	**+1.2**
	1.1nm,0.3s,mb4.1,baz=119,slow=3.2,SNR=4.8						
TRQA	**Tornquist**	**96.17**	**135**	P	**P**	**23 23 59.5**	**-0.8**
YKA	**Yellowknife Ar**	**97.42**	**25**	P	**P**	**23 24 04.4**	**-0.8**
	0.1nm,0.7s,mb3.1,baz=251,slow=3.8,SNR=3.0						
MKAR	**Makanchi Array**	**111.38**	**313**	PKiKP	PKiKP	23 29 00.7	-2.3
	0.6nm,0.9s,baz=115,slow=0.8,SNR=7.9						
ARCES	**ARCESS Array B**	**129.60**	**349**	PKP	PKPdf	23 29 35.6	-1.6
	2.6nm,0.7s,baz=354,slow=1.2,SNR=6.8						
AKASG	**Malin Array Be**	**143.46**	**330**	PKhKP		23 29 59.7	
	2.5nm,0.4s,baz=41,slow=4.2,SNR=20						
AKASG	**Malin Array Be**	**143.46**	**330**	PKP	PKPdf	23 29 59.7	-3.6
BR131	**Keskin Array S**	**147.00**	**311**	*e*PKPdf	PKPdf	23 30 10.1	+0.4
BRTR	**Keskin Array B**	**147.00**	**311**	PKPbc	PKPbc	23 30 11.5	-1.1
	1.2nm,0.6s,baz=138,slow=5.5,SNR=8.7						
BUR08	**Bucovina Ar. S**	**147.48**	**330**	PKPdf	PKPdf	23 30 10.2	0.0
BUR08				*e*PKPbc	PKPbc	23 30 13.6	0.0
CLL	**Collm**	**148.71**	**346**	*e*PKPbc	PKPbc	23 30 16.0	-0.5
KHC	**Kasperske Hory**	**150.58**	**344**	*e*PKPbc	PKPbc	23 30 20.0	-1.1
GERES	**GERESS Array B**	**150.81**	**343**	PKPbc	PKPbc	23 30 20.7	-0.9
	1.1nm,0.6s,baz=26,slow=2.1,SNR=15						
DBIC	**Dimbokro**	**164.23**	**156**	PKP	PKPdf	23 30 32.6	-0.3
	1.5nm,1.0s,baz=214,slow=3.6,SNR=3.3						
TOA0	**Torodi Ar. Sit**	**171.91**	**181**	*e*PKPdf	PKPdf	23 30 38.4	+0.4
TORD	**Torodi Ar. Bea**	**171.91**	**181**	PKP	PKPdf	23 30 36.1	-1.9
	0.4nm,0.8s,baz=304,slow=2.9,SNR=2.7						

*ISK **25** 23:19:40.6, 37.16N×3604E, h23km, MD2.5*
*CSEM **25** 23:19:41.6±0.2, 37.17N×3605E, h8km, MD2.5, Error ellipse: s-maj=6.5km s-min=5.2km az=164.0*
*ISCJB **25** 23:19:42.5±0.7, 37.18N±004×3602E±005, h10km, Error ellipse: s-maj=6.4km s-min=6.0km az=7.0*
*DDA **25** 23:19:42.1, 37.15N×3600E, h22km±3km, Md2.8*

ISC 25 23:19:42.7±0.7,**3718N**±004×**3603E**±005,**h10**km,**n7,**
σ0**88**/12,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**0.28**	**233**	*e*PG	**Pg**	**23 19 47.7**	**-0.6**
CEYT				*e*SG	**Sg**	**23 19 52.6**	**+0.5**
KOZT	**Kozan**	**0.34**	**332**	*e*PG	**Pg**	**23 19 48.1**	**-1.4**
KOZT				*e*SG	**Sg**	**23 19 55.4**	**+1.3**
ANDN	**Andirin**	**0.48**	**32**	*i* P	**Pg**	**23 19 52.2**	**+0.2**
ANDN				*i* S	**Sg**	**23 20 02.5**	**+4.1**
KMRS	**Kahramanmaras**	**0.77**	**65**	*e*PG	**Pg**	**23 19 56.6**	**-1.0**
KUZU	**Kuzuini**	**0.93**	**115**	*i* P	**Pg**	**23 20 00.9**	**+0.3**
KUZU				*i* S	**Sg**	**23 20 13.4**	**+0.6**
KUZU	**Kuzuini**	**0.93**	**115**	*i* P	**Pg**	**23 20 00.9**	**+0.2**
KUZU				*i* S	**Sg**	**23 20 13.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.59**	**19**	*e*PN	**Pn**	**23 20 03.6**	**-7.4**

CASC 25 23:20:41.1±1.1,**1364N**×**9048W**,**h72**km±7km,**MD3.6,**
2C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.53**	**3**⇑	*e*P	Pn	23 20 54.8	+0.4
IXG				*e*S	Sn	23 21 04.5	+0.4
PCG	**Pacaya**	**0.76**	**351**	*e*P	Pn	23 20 57.5	+0.8
PCG				*e*S	Sn	23 21 10.2	+1.8
RTR	**El Retiro**	**0.85**	**73**	*e*P	x	23 20 58.4	
RTR				*e*S	x	23 21 11.6	
SBLS	**San Blas**	**0.85**	**77**	*e*P	x	23 20 58.3	
SBLS				*e*S	x	23 21 11.6	
FUG	**Fuego 3**	**0.87**	**336**⇓	*e*P	Pn	23 20 58.5	+0.3
SNJE	**San Jose**	**0.88**	**75**	*e*P	x	23 20 58.3	
SNJE				*e*S	x	23 21 12.5	
RBDL	**Robledal**	**0.90**	**59**	*e*P	x	23 20 58.4	
RBDL				*e*S	x	23 21 13.0	
NBG	**Las Nubes**	**0.95**	**8**	*e*P	Pn	23 21 00.2	+1.1
FG6		**0.99**	**337**⇑	*e*P	Pn	23 21 00.2	+0.6
FG6				*e*S	Sn	23 21 14.4	+1.1
BOQS	**Boqueron**	**1.17**	**85**	*e*P	x	23 21 01.8	
BOQS				*e*S	x	23 21 18.9	
SNET	**Serv Nac Est T**	**1.21**	**88**	*e*P	x	23 21 02.4	
SNET				*e*S	x	23 21 18.8	
JAT	**Jato**	**1.31**	**301**	*e*P	Pn	23 21 04.3	+0.7
MTO2	**Montecristo 2**	**1.32**	**55**	*e*P	x	23 21 03.2	
MTO2				*e*S	x	23 21 22.0	
LFRS	**El Faro**	**1.38**	**91**	*e*P	x	23 21 05.0	
LFRS				*e*S	x	23 21 23.2	
LBRS	**Las Brisas**	**1.40**	**86**	*e*P	x	23 21 05.0	
LBRS				*e*S	x	23 21 24.3	
SNVI	**San Vicente**	**1.59**	**91**	*e*P	x	23 21 07.8	
MRL	**Marmol**	**1.61**	**28**	*e*P	Pn	23 21 08.8	+1.2
CNCH	**Conchagua**	**2.60**	**98**	*e*P	x	23 21 21.2	

*ISCJB **25** 23:21:14.6±1.2, 354N±004×12733E±006, h33km±11km, mb4.7/58, MS4.0/6, Error ellipse: s-maj=10.4km s-min=5.9km az=161.2*
*MOS **25** 23:21:14.8±1.1, 354N×12733E, h33km, mb4.8/15, Error ellipse: s-maj=12.8km s-min=7.4km az=115.8*
*NEIC **25** 23:21:17.7±1.0, 356N×12731E, h44km±9km, mb4.8/36, Error ellipse: s-maj=7.3km s-min=4.6km az=73.0*
*BJI **25** 23:21:18.4, 376N×12702E, h36km, mB4.9, mb4.6, Ms4.6, Msz4.4*
*IDC **25** 23:21:20.8±2.4, 347N×12724E, h68km±22km, mb4.0/12, mb1 4.2/13, mb1mx4.1/18, mbtmp4.1/13, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=32.4km s-min=11.1km az=73.0*
*DJA **25** 23:21:26, 371N×12712E, h60km, MLv4.8/5*

ISC 25 23:21:17.1±1.0,**352N**±004×**12732E**±006,**h35**km±9km,
h36km±1.9km:**pP-P,n122,**σ1**902**/126,**mb4.7**/58,**MS4.0**/6,**2C,**
Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**3.23**	**230**	P	**Pn**	**23 22 11.2**	**+5.9**
DAV	**Davao City (W)**	**3.93**	**334**	P	**Pn**	**23 22 20.3**	**+5.3**
	49nm,0.3s,baz=200,slow=6.8,SNR=8.8						
DAV				S	**Sn**	**23 23 04.0**	**+4.1**

CMAR	**Chiang Mai Arr**	**31.48**	**300**	P		**P**	**23 27 35.5**	**-0.3**		
	comp=Z,3.6nm,0.8s,mb4.2,baz=115,slow=7.1,SNR=19									
CHTO	**Chiang Mai**	**31.63**	**301**	*e*P		**P**	**23 27 37.0**	**-0.1**		
CHTO				pmax	pmax					
	comp=Z,5.0nm,0.7s,mb4.5									
CHTO	**Chiang Mai**	**31.63**	**301**	*e*P		**P**	**23 27 37.0**	**-0.1**		
	comp=Z,5.3nm,0.7s,mb4.5									
KMI	**Kunming**	**31.94**	**315**	P		**P**	**23 27 42.0**	**+2.2**		
KMI				AMB	AMB					
	comp=Z,11nm,1.1s,mb4.6									
KSRS	**Korea Array**	**33.77**	**1**	P		**P**	**23 27 56.1**	**+0.6**		
	comp=Z,0.9nm,0.4s,mb4.1,baz=175,slow=9.3,SNR=3.9									
COCO	**West Island**	**34.09**	**242**	*e*P		**P**	**23 27 59.0**	**+0.4**		
COCO				pmax	pmax					
	comp=Z,52nm,0.8s,mb5.5									
COCO	**West Island**	**34.09**	**242**	*e*P		**P**	**23 27 59.0**	**+0.4**		
	comp=Z,52nm,0.8s,mb5.5									
MAJO	**Matsushiro**	**34.36**	**16**	*e*P		**P**	**23 28 00.4**	**-0.2**		
XAN	**Xi'an**	**34.87**	**333**	P		**P**	**23 28 04.5**	**-0.6**		
XAN				AP	pP		23 28 15.0	-0.3		
XAN				PP	PP		23 29 26.0	+1.4		
XAN				S	**S**		**23 33 36.8**	**+2.9**		
XAN				AMB	AMB					
	comp=Z,16nm,0.8s,mb5.0									
XAN				AMB	AMB					
	comp=Z,38nm,3.8s									
CD2	**Chengdu**	**35.16**	**323**	P		**P**	**23 28 07.0**	**-0.7**		
CD2				AMB	AMB					
	comp=Z,10.0nm,0.7s,mb4.8									
BBOO	**Buckleboo**	**37.07**	**168**	*e*P		**P**	**23 28 23.9**	**-0.1**		
	comp=Z,2.1nm,0.4s,mb4.3									
NWAO	**Narrogin (SRO)**	**37.49**	**194**	P		**P**	**23 28 28.6**	**+1.1**		
	comp=Z,1.7nm,0.4s,mb4.3,baz=13,slow=17,SNR=6.1									
NWAO	**Narrogin (SRO)**	**37.49**	**194**	*e*P		**P**	**23 28 29.1**	**+1.6**		
NWAO				pmax	pmax					
	comp=Z,2.0nm,0.3s									
NWAO	**Narrogin (SRO)**	**37.49**	**194**	*e*P		**P**	**23 28 29.1**	**+1.6**		
	comp=Z,1.8nm,0.3s,mb4.4									
BJT	**Baijiatuan**	**37.71**	**346**	*e*P		**P**	**23 28 30.3**	**+1.0**		
BJT				pmax	pmax					
	comp=Z,14nm,0.4s									
BJT	**Baijiatuan**	**37.71**	**346**	*e*P		**P**	**23 28 30.3**	**+1.0**		
	comp=Z,14nm,0.4s,mb5.0									
BJI	**Beijing**	**37.73**	**346**	P		**P**	**23 28 30.3**	**+0.9**		
BJI				S	**S**		**23 34 20.5**	**+3.0**		
BJI				AMB	AMB					
	comp=Z,24nm,0.8s,mb5.0									
BJI				AMB	AMB					
	comp=Z,84nm,3.6s									
BJI				LR	LR					
	comp=N,250nm,11.5s									
BJI				LR	LR					
	comp=E,281nm,17.2s									
BJI				LR	LR					
	comp=Z,116nm,28.6s									
STKA	**Stephens Creek**	**37.73**	**160**	P		**P**	**23 28 29.6**	**0.0**		
	comp=Z,8.2nm,0.7s,mb4.6,baz=335,slow=7.7,SNR=27									
STKA	**Stephens Creek**	**37.73**	**160**	*e*P		**P**	**23 28 29.7**	**+0.1**		
	comp=Z,4.9nm,0.5s,mb4.5									
STKA	**Stephens Creek**	**37.73**	**160**	*e*P		**P**	**23 28 30.1**	**+0.5**		
	comp=Z,1.6nm,0.9s,mb3.8									
LZH	**Lanzhou**	**38.98**	**329**	*e*P		**P**	**23 28 41.0**	**+0.9**		
LZH				AP	pP		23 28 50.0	-0.4		
LZH				XP	sP		23 28 53.0	-1.6		
LZH				PP	PP		23 30 17.0	+7.1		
LZH				AMB	AMB					
	comp=Z,25nm,1.0s,mb4.9									
LZH				AMB	AMB					
	comp=Z,130nm,4.0s									
HHC	**Hu-ho-hao-te**	**39.78**	**341**	*e*P		**P**	**23 28 48.0**	**+1.3**		
HHC				AP	pP		23 28 58.0	+1.0		
HHC				XP	sP		23 29 02.5	+1.3		
HHC				PP	PP		23 30 24.0	+5.5		
HHC				PCP	PcP		23 30 53.5	+1.0		
HHC				PCS	PcS		23 34 42.0	-0.5		
HHC				*e*S	**S**		**23 34 50.5**	**+2.1**		
HHC				XS	sS		23 35 07.8	+2.3		
HHC				SCS	ScS		23 38 50.0	-1.5		
HHC				AMB	AMB					
	comp=Z,10.0nm,1.0s,mb4.5									
HHC				AMB	AMB					
	comp=Z,74nm,5.3s									
HHC				LR	LR					
	comp=N,142nm,16.8s,MS4.1									
HHC				LR	LR					
	comp=E,166nm,16.8s,MS4.1									
HHC				LR	LR					
	comp=Z,201nm,14.4s,MS4.1									
CN2	**Changchun**	**40.14**	**358**	*e*P		**P**	**23 28 53.5**	**+3.9**		
CN2				*e*AP	pP		23 29 03.3	+3.3		
CN2				*e*S	**S**		**23 34 59.3**	**+5.5**		
CN2				AMB	AMB					
	comp=Z,10.0nm,0.6s,mb4.7									
CN2				AMB	AMB					
	comp=Z,200nm,3.0s									
MDJ	**Mudanjiang**	**40.97**	**2**	P		**P**	**23 28 57.3**	**+0.8**		
MDJ				AP	pP		23 29 06.0	-0.8		
MDJ				XP	sP		23 29 10.0	-1.1		
MDJ				PP	PP		23 30 32.0	+0.6		
MDJ				PCP	PcP		23 30 56.3	+0.1		
MDJ				S	**S**		**23 35 04.5**	**-1.6**		
MDJ				SCS	ScS		23 38 59.0	+0.5		
MDJ				AMB	AMB					
	comp=Z,8.0nm,1.1s,mb4.3									
MDJ				AMB	AMB					
	comp=Z,77nm,4.8s									
MDJ				LR	LR					
	comp=N,318nm,16.9s,MS4.4									
MDJ				LR	LR					
	comp=E,298nm,16.6s,MS4.4									
MDJ				LR	LR					
	comp=Z,447nm,18.6s,MS4.4									
MDJ	**Mudanjiang**	**40.97**	**2**	*e*P		**P**	**23 28 55.2**	**-1.2**		
	comp=Z,13nm,1.1s,mb4.5									
LSA	**Lhasa**	**43.02**	**311**	P		**P**	**23 29 16.0**	**+2.6**		
LSA	**Lhasa**	**43.02**	**311**	*e*P		**P**	**23 29 13.7**	**+0.3**		
LSA				*e*	pP		23 29 25.0	+1.2		
LSA				pmax	pmax					
	comp=Z,7.0nm,0.6s,mb4.6									
LSA	**Lhasa**	**43.02**	**311**	*e*P		**P**	**23 29 13.7**	**+0.2**		
	comp=Z,7.0nm,0.6s,mb4.6									
LSA				*e*	pP		23 29 25.0	+1.1		
GTA	**Gaotai**	**43.58**	**329**	⇑*e*P		**P**	**23 29 18.0**	**+0.2**		
GTA				AP	pP		23 29 27.5	-0.7		
GTA				XP	sP		23 29 31.5	-0.9		
GTA				S	**S**		**23 35 44.0**	**-0.7**		
GTA				XS	sS		23 35 59.5	-2.4		
GTA				SS	SS		23 38 50.5	-10		
GTA				AMB	AMB					
	comp=Z,5.0nm,0.7s,mb4.3									
GTA				AMB	AMB					
	comp=Z,109nm,5.4s									
GTA				LR	LR					
	comp=N,91nm,14.1s,MS4.0									
GTA				LR	LR					
	comp=E,121nm,14.7s,MS4.0									
GTA				LR	LR					
	comp=Z,142nm,16.5s,MS4.0									
TAPN	**Taplejung**	**44.61**	**306**	*e*P		**P**	**23 29 25.9**	**-0.4**		
	comp=Z,23nm,1.0s,mb5.0									
ODAN	**Odare**	**44.67**	**305**	*e*P		**P**	**23 29 26.3**	**-0.4**		
	comp=Z,20nm,0.7s,mb5.1									
RAMN	**Ramite**	**45.35**	**305**	*e*P		**P**	**23 29 32.0**	**-0.2**		
	comp=Z,15nm,0.6s,mb5.0									
JIRN	**Jiri**	**45.97**	**306**	*e*P		**P**	**23 29 36.9**	**-0.2**		
	comp=Z,28nm,0.9s,mb5.2									
HIA	**Hailar**	**46.03**	**353**	P		**P**	**23 29 35.9**	**-1.3**		
GUN	**Gumba**	**46.32**	**306**	*e*P		**P**	**23 29 39.5**	**-0.3**		
	comp=Z,20nm,0.5s,mb5.3									
PALK	**Pallekele**	**46.54**	**277**	*e*P		**P**	**23 29 41.2**	**-0.6**		
PALK				pmax	pmax					
	comp=Z,4.0nm,0.7s,mb4.5									
PALK	**Pallekele**	**46.54**	**277**	*e*P		**P**	**23 29 41.2**	**-0.6**		
	comp=Z,4.3nm,0.7s,mb4.5									
PKI	**Pulchoki**	**46.57**	**305**	*e*P		**P**	**23 29 41.0**	**-0.8**		
PKIN	**Phulchoki**	**46.58**	**305**	*e*P		**P**	**23 29 40.5**	**-1.4**		
	comp=Z,5.0nm,0.4s,mb4.8									
KKN	**Kakani**	**46.76**	**305**	*e*P		**P**	**23 29 42.4**	**-0.9**		
	comp=Z,13nm,0.7s,mb5.0									
KKN	**Kakani**	**46.76**	**305**	*e*P		**P**	**23 29 42.4**	**-0.9**		
KKN				pmax	pmax					
	comp=Z,13nm,0.7s,mb5.0									
DMN	**Daman**	**46.83**	**305**	*e*P		**P**	**23 29 43.1**	**-0.7**		
	comp=Z,19nm,0.9s,mb5.0									
GKN	**Gorkha**	**47.37**	**305**	*e*P		**P**	**23 29 46.6**	**-1.4**		
	comp=Z,9.5nm,0.6s,mb4.9									
ULN	**Ulaanbaatar**	**47.50**	**342**	*e*P		**P**	**23 29 49.2**	**+0.6**		
ULN				pmax	pmax					
	comp=Z,4.0nm,0.8s,mb4.4									
ULN	**Ulaanbaatar**	**47.50**	**342**	*e*P		**P**	**23 29 49.2**	**+0.5**		
	comp=Z,4.1nm,0.8s,mb4.4									
ULN	**Ulaanbaatar**	**47.50**	**342**	P		**P**	**23 29 50.7**	**+2.1**		
	comp=Z,8.0nm,1.4s,mb4.5									
SONM	**Songino Array**	**47.68**	**341**	P		**P**	**23 29 50.9**	**+0.8**		
	comp=Z,1.5nm,0.4s,mb4.3,baz=161,slow=7.9,SNR=13									
KOLN	**Koldanda**	**48.13**	**305**	*e*P		**P**	**23 29 53.6**	**-0.3**		
	comp=Z,29nm,0.3s,mb5.8									
DANN	**Dangsing**	**48.22**	**305**	*e*P		**P**	**23 29 54.1**	**-0.5**		
	comp=Z,61nm,0.5s									
TAU	**Tasmania Unive**	**49.63**	**161**	*e*P		**P**	**23 30 04.9**	**-0.2**		
TAU				pmax	pmax					
	comp=Z,13nm,0.9s,mb5.0									
TAU	**Tasmania Unive**	**49.63**	**161**	*e*P		**P**	**23 30 04.9**	**-0.2**		
	comp=Z,13nm,0.9s,mb5.0									
HYB	**Hyderabad**	**49.74**	**290**	*i* P		**P**	**23 30 05.5**	**-0.9**		
HYB	**Hyderabad**	**49.74**	**290**	*e*P		**P**	**23 30 05.5**	**-0.9**		
TLY	**Talaya**	**51.91**	**341**	*e*P		**P**	**23 30 24.5**	**+2.3**		
MOY	**Mondy**	**52.78**	**340**	*e*P		**P**	**23 30 31.0**	**+2.4**		
WMQ	**Urumqi**	**53.23**	**325**	*e*P		**P**	**23 30 34.5**	**+2.4**		
BOD	**Bodaibo**	**55.16**	**351**	*e*P		**P**	**23 30 47.8**	**+2.0**		
BOD				pmax	pmax					
	comp=Z,4.0nm,1.4s,mb4.3									
PETK	**Petropavlovsk-**	**55.40**	**22**	P		**P**	**23 30 49.0**	**+1.3**		
	comp=Z,3.0nm,0.7s,mb4.4,baz=172,slow=4.6,SNR=8.1									
MK31	**Makanchi Array**	**58.06**	**325**	*e*P		**P**	**23 31 04.3**	**-2.4**		
MKAR	**Makanchi Array**	**58.06**	**325**	P		**P**	**23 31 07.0**	**+0.3**		
	comp=Z,2.5nm,0.5s,mb4.5,baz=116,slow=8.0,SNR=40									
UCH	**Uchtor**	**60.73**	**317**	*e*P		**P**	**23 31 24.7**	**-0.6**		
	comp=Z,2.0nm,0.5s,mb4.5									
ZAA0	**Zalesovo Array**	**61.04**	**333**	*e*P		**P**	**23 31 26.6**	**-0.5**		
ZALV	**Zalesovo Beam**	**61.04**	**333**	P		**P**	**23 31 27.1**	**0.0**		
	comp=Z,4.7nm,0.5s,mb4.9,baz=116,slow=6.8,SNR=15									
EKS2	**Erkin-Say**	**61.40**	**317**	*e*P		**P**	**23 31 30.5**	**+0.7**		
	comp=Z,2.1nm,0.5s,mb4.5									
KBL	**Kabul**	**62.12**	**307**	*e*P		**P**	**23 31 33.9**	**-0.9**		
KBL				pmax	pmax					
	comp=Z,3.0nm,0.6s,mb4.6									
KBL	**Kabul**	**62.12**	**307**	*e*P		**P**	**23 31 33.9**	**-0.9**		
	comp=Z,2.8nm,0.6s,mb4.6									
KURK	**Kurchatov**	**62.23**	**327**	*e*P		**P**	**23 31 35.3**	**+0.1**		
KURK				pmax	pmax					
	comp=Z,17nm,0.9s,mb5.2									
KURK	**Kurchatov**	**62.23**	**327**	*e*P		**P**	**23 31 35.3**	**+0.1**		
	comp=Z,17nm,0.9s,mb5.2									
NVS	**Novosibirsk**	**62.32**	**333**	⇑*i*P		**P**	**23 31 35.0**	**-0.7**		
NVS				pmax	pmax					
	comp=Z,15nm,1.0s,mb5.1									
NVS				pmax	pmax					
	comp=N,12nm,1.4s									
NVS				pmax	pmax					
	comp=E,11nm,1.1s									
BRVK	**Borovoye**	**67.89**	**327**	*e*P		**P**	**23 32 12.6**	**+0.7**		
BRVK				pmax	pmax					
	comp=Z,26nm,0.9s,mb5.3									
BRVK	**Borovoye**	**67.89**	**327**	*e*P		**P**	**23 32 12.6**	**+0.7**		
	comp=Z,26nm,0.9s,mb5.3									
TIXI	**Tiksi**	**68.04**	**1**	*e*P		**P**	**23 32 12.1**	**-0.5**		
TIXI				pmax	pmax					
	comp=Z,3.0nm,0.7s,mb4.4									
TIXI	**Tiksi**	**68.04**	**1**	*e*P		**P**	**23 32 12.1**	**-0.5**		
	comp=Z,2.7nm,0.7s,mb4.4									
BILL	**Bilibino**	**69.60**	**15**	*e*P		**P**	**23 32 21.2**	**-1.1**		
ARU	**Arti**	**75.43**	**328**	*e*P		**P**	**23 32 57.1**	**-0.1**		
ARU				pmax	pmax					
	comp=Z,8.0nm,0.5s,mb4.9									
ARU	**Arti**	**75.43**	**328**	*e*P		**P**	**23 32 57.1**	**-0.1**		
	comp=Z,8.2nm,0.5s,mb4.9									
KIV	**Kislovodsk**	**83.71**	**314**	*e*P		**P**	**23 33 41.9**	**-0.6**		
KIV	**Kislovodsk**	**83.71**	**314**	*e*P		**P**	**23 33 41.9**	**-0.6**		
KIV	**Kislovodsk**	**83.71**	**314**	*e*P		**P**	**23 33 41.9**	**-0.7**		
MCK	**McKinley**	**84.09**	**26**	P		**P**	**23 33 44.1**	**+0.1**		
MALT	**Malatya**	**86.97**	**308**	*e*P		**P**	**23 33 59.2**	**+0.2**		
MALT				pmax	pmax					
	comp=Z,2.0nm,0.6s,mb4.5									
MALT	**Malatya**	**86.97**	**308**	*e*P		**P**	**23 33 59.1**	**+0.2**		
	comp=Z,1.5nm,0.6s,mb4.4									
MALT	**Malatya**	**86.97**	**308**	P		**P**	**23 34 01.0**	**+2.0**		
BRTR	**Keskin Array B**	**90.61**	**310**	P		**P**	**23 34 16.4**	**+0.3**		
	comp=Z,0.6nm,0.5s,mb4.2,baz=138,slow=4.9,SNR=7.4									
ARCES	**ARCESS Array B**	**90.85**	**340**	P		**P**	**23 34 15.6**	**-1.0**		
	comp=Z,4.0nm,0.8s,mb4.8,baz=88,slow=6.4,SNR=5.4									
AKASG	**Malin Array Be**	**92.42**	**321**	P		**P**	**23 34 21.1**	**-3.2**		
	comp=Z,1.3nm,0.6s,mb4.5,baz=60,slow=4.4,SNR=4.4									
BOSA	**Boshof**	**102.27**	**242**	P		Pdif	23 35 08.6	0.0		
ESLA	**Sonseca Array**	**118.00**	**319**	*e*PKPdf		PKPdf	23 39 59.5	-1.1		
TORD	**Torodi Ar. Bea**	**123.54**	**288**	PKP		PKPdf	23 40 11.6	-0.3		
	comp=Z,0.4nm,0.7s,baz=37,slow=2.0,SNR=3.7									

*IDC **25** 23:21:26.8±1.0, 2199N×143.12E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.9/20, mbtmp3.8/7, MS3.6/11, Ms1 3.6/11, ms1mx3.2/44, Error ellipse: s-maj=34.1km s-min=22.8km az=82.0*

*ISCJB **25** 23:21:27.9±0.8, 215N±0.1×1430E±02, h33km, mb4.0/13, MS3.5/11, Error ellipse: s-maj=22.7km s-min=14.3km az=164.9*

*MOS **25** 23:21:29.8±1.4, 2197N×143.07E, h33km, mb4.6/4, Error ellipse: s-maj=29.9km s-min=14.3km az=118.5*

*NEIC **25** 23:21:29.7±0.7, 2146N×143.10E, h35km, mb4.4/5, Error ellipse: s-maj=21.0km s-min=14.2km az=76.0*

ISC 25 23:21:29.9±0.8, 215N±01×1431E±02, h35km, n35, σ0=96/25, mb4.0/13, MS3.5/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.65**	**324**	P	**P**	**23 26 06.4**	**0.0**
	1.1nm,0.5s,baz=150,slow=8.0,SNR=3.8						
KSRS				LR	LR	23 32 50.9	
	comp=Z,79nm,20.6s,MS3.1,baz=331,slow=34						
DAV	**Davao City (W)**	**22.16**	**232**	LR	LR	23 33 07.4	
	comp=Z,145nm,21.3s,MS3.4,baz=231,slow=31						
KLR	**Kul'dur**	**29.14**	**345**	*e*P	**P**	**23 27 22.7**	**-4.7**
ENH	**Enshi**	**31.39**	**293**	*e*P	**P**	**23 27 48.9**	**+1.3**
	0.5nm,0.4s,mb3.7						
HIA	**Hailar**	**33.37**	**332**	P	**P**	**23 28 05.8**	**+1.1**
KAPI	**Kappang**	**34.87**	**224**	LR	LR	23 40 11.2	
	comp=Z,39nm,20.8s,MS3.1,baz=260,slow=32						
FX1	**Attu Island--F**	**38.93**	**29**	LR	LR	23 42 56.2	
	comp=Z,59nm,20.8s,MS3.4,baz=25,slow=34						
ULN	**Ulaanbaatar**	**39.09**	**321**	*e*P	**P**	**23 28 53.6**	**+0.1**
SONM	**Songino Array**	**39.46**	**321**	P	**P**	**23 28 56.0**	**-0.6**
	1.0nm,0.5s,mb3.8,baz=131,slow=7.3,SNR=8.4						
CHTO	**Chiang Mai**	**41.43**	**274**	*e*P	**P**	**23 29 13.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**41.50**	**274**	LR	LR	23 44 07.8	
	comp=Z,55nm,21.8s,MS3.4,baz=95,slow=33						
WRAB	**Tennant Creek**	**42.02**	**192**	*e*P	**P**	**23 29 17.0**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
WRAB	**Tennant Creek**	**42.02**	**192**	*e*P	**P**	**23 29 17.0**	**-1.0**
	comp=Z,2.9nm,0.4s,mb4.3						
WB2	**Warramunga Arr**	**42.03**	**192**	*e*P	**P**	**23 29 18.4**	**+0.3**
WRA	**Warramunga Arr**	**42.04**	**192**	P	**P**	**23 29 24.4**	**+6.3**
	comp=Z,0.6nm,0.5s,mb3.5,baz=4.6,slow=8.4,SNR=3.8						
ZAK	**Zakamensk**	**42.47**	**323**	*e*P	**P**	**23 29 20.3**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2						
ASAR	**Alice Springs**	**45.74**	**192**	P	**P**	**23 29 53.9**	**+6.0**
	comp=Z,0.6nm,0.5s,mb3.8,baz=19,slow=9.2,SNR=5.0						
PSI	**Prapat**	**46.76**	**253**	LR	LR	23 49 30.0	
	comp=Z,83nm,18.6s,MS3.7,baz=188,slow=36						
ZAA0	**Zalesovo Array**	**54.34**	**322**	*e*P	**P**	**23 30 51.2**	**-1.6**
ZALV	**Zalesovo Beam**	**54.34**	**322**	P	**P**	**23 30 51.4**	**-1.3**
	comp=Z,1.2nm,0.6s,mb4.0,baz=101,slow=7.7,SNR=8.9						
ZALV	**Zalesovo Beam**	**54.34**	**322**	P	**P**	**23 30 51.4**	**-1.3**
MKAR	**Makanchi Array**	**54.79**	**313**	P	**P**	**23 30 56.1**	**0.0**
	comp=Z,0.8nm,0.7s,mb3.9,baz=92,slow=8.4,SNR=9.0						
AFI	**Afiamalu**	**56.55**	**124**	LR	LR	23 52 05.1	
	comp=Z,42nm,21.2s,MS3.5,baz=72,slow=32						
KURK	**Kurchatov**	**57.58**	**317**	LR	LR	23 57 55.1	
	comp=Z,57nm,18.7s,MS3.7,baz=330,slow=38						
KDAK	**Kodiak Island**	**58.44**	**35**	LR	LR	23 54 29.3	
	comp=Z,73nm,18.9s,MS3.8,baz=83,slow=34						
EKS2	**Erkin-Say**	**60.77**	**308**	*e*P	**P**	**23 31 42.0**	**+3.8**
	comp=Z,3.5nm,0.8s,mb4.5						
BRVK	**Borovoye**	**62.85**	**320**	*e*P	**P**	**23 31 52.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BRVK	**Borovoye**	**62.85**	**320**	*e*P	**P**	**23 31 52.3**	**+0.2**
	comp=Z,3.9nm,0.9s,mb4.5						
KBL	**Kabul**	**65.37**	**299**	*e*P	**P**	**23 32 10.3**	**+1.3**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
KBL	**Kabul**	**65.37**	**299**	*e*P	**P**	**23 32 10.3**	**+1.3**
	comp=Z,3.0nm,0.9s,mb4.3						
RAR	**Rarotonga**	**70.08**	**124**	LR	LR	23 56 51.1	
	comp=Z,68nm,21.4s,MS3.9,baz=275,slow=30						
YKA	**Yellowknife Ar**	**76.70**	**28**	P	**P**	**23 33 16.6**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=292,slow=5.9,SNR=9.0						
YKA	**Yellowknife Ar**	**76.70**	**28**	P	**P**	**23 33 16.6**	**-0.5**
NVAR	**Mina Array Bea**	**83.35**	**51**	P	**P**	**23 33 54.9**	**+1.3**
	comp=Z,1.0nm,0.8s,mb3.9,baz=280,slow=5.3,SNR=6.6						
PDAR	**Pinedale Array**	**87.62**	**45**	LR	LR	00 15 16.1	
	comp=Z,42nm,18.2s,MS3.9,baz=153,slow=37						

*KISR **25** 23:26:01.6, 3227N×5024E, h38km, ML2.9*
*THR **25** 23:26:09.9±0.5, 3160N×4930E, h38km±4km, ML2.6*
*ISCJB **25** 23:26:11.5±0.7, 3188N±005×494E±0.1, h10km, Error ellipse: s-maj=12.9km s-min=5.7km az=19.7*
*CSEM **25** 23:26:11.5±0.1, 3185N×4946E, h12km, ML2.9, Error ellipse: s-maj=5.2km s-min=1.9km az=125.0*

ISC 25 23:26:13.3±2.1, 3187N±008×494E±01, h15km±17km, n13, σ0=59/16, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.54**	**297**	*e*Pg	**Pg**	**23 26 23.2**	**-0.6**
SHGR				AML	AML	23 26 40.4	
	comp=E,242nm,0.4s						
MIB	**Mutribah**	**2.70**	**221**	*e*P	**Pn**	**23 26 56.6**	**+0.6**
	baz=226						
MIB				*e*S	**Sn**	**23 27 38.0**	**+10**
	baz=226						
MIB				AML	AML	23 27 43.3	
	comp=Z,18nm,0.5s,baz=226						
UMR	**Umm Al-Rimmam**	**2.71**	**212**	*e*P	**Pn**	**23 26 56.0**	**-0.3**
UMR	**Umm Al-Rimmam**	**2.71**	**212**	*e*P	**Pn**	**23 26 56.0**	**-0.2**
	baz=219						
UMR				AML	AML	23 27 44.7	
	comp=Z,39nm,0.5s,baz=219						
ASAO	**Ashtian**	**2.73**	**12**	*e*Pn	**Pn**	**23 26 56.9**	**+0.4**
ASAO				*e*Sg	**Sg**	**23 27 41.7**	**+0.8**
ASAO				AML	AML	23 27 50.2	
	comp=E,16nm,0.5s						
ASAO	**Ashtian**	**2.73**	**12**	*e*P	**Pn**	**23 26 56.8**	**+0.3**
	SNR=54						
ASAO				*e*Sg	**Sg**	**23 27 41.7**	**+0.8**
	SNR=95						
KBD	**Kabd**	**3.05**	**209**	*e*P	**Pn**	**23 27 00.9**	**0.0**
	baz=216						
KBD				AML	AML	23 27 46.6	
	comp=Z,10.0nm,0.2s,baz=216						
NASN	**Na'in**	**3.06**	**71**	*e*Pn	**Pn**	**23 27 00.0**	**-1.0**
NASN	**Na'in**	**3.06**	**71**	*e*P	**Pn**	**23 27 00.2**	**-0.8**
	SNR=54						
NAY	**Al-Naaiem**	**3.19**	**216**	*e*P	**Pn**	**23 27 03.2**	**+0.4**
RDF	**Al-Radifah**	**3.33**	**209**	*e*P	**Pn**	**23 27 05.1**	**+0.3**
	baz=216						
RDF				AML	AML	23 27 50.0	
	comp=Z,20nm,0.3s,baz=216						
SNGE	**Sanandaj**	**3.63**	**333**	*e*P	**Pn**	**23 27 08.9**	**0.0**
SNGE				AML	AML	23 27 56.9	
	comp=E,9.9nm,0.4s						
SNGE	**Sanandaj**	**3.63**	**333**	*e*P	**Pn**	**23 27 07.5**	**-1.4**
	SNR=54						

*NNC **25** 23:33:07.4±8.0, 3795N×71.17E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=83.6km s-min=60.7km az=61.0*

ISC 25 23:33:02.9±2.9, 373N±02×713E±02, h35km, n11, σ0=85/13, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.20**	**20**	P	**Pn**	**23 34 18.9**	**+0.8**
	SNR=89						
UCH	**Uchtor**	**5.54**	**25**	P	**Pn**	**23 34 23.5**	**+0.7**
	SNR=5.8						
EKS2	**Erkin-Say**

ERM Erimo 3.67 10 *e*Pn **Pn** **23 39 48.7 -0.9**
ERM *e*Sn **Sn** **23 40 30.4 -1.2**
MJAR Matsushiro Arr 3.72 241 Pn **Pn** **23 39 50.9 +0.6**
12nm,0.3s,baz=66,slow=12,SNR=45
MJAR Sn **Sn** **23 40 33.1 +0.3**
15nm,0.3s,baz=214,slow=19,SNR=5.5
MJAR LR LR 23 41 31.5
comp=Z,764nm,18.9s,baz=60,slow=42
MJAR Matsushiro Arr 3.72 241 P **Pn** **23 39 50.9 +0.6**
MJAR 23 40 33.1
MJAR Matsushiro Arr 3.72 241 Pn **Pn** **23 39 50.9 +0.6**
MJAR Sn **Sn** **23 40 33.1 +0.3**
MJAR LR LR 23 41 31.5
MAJO Matsushiro 3.72 241 *e*P **Pn** **23 39 51.4 +1.1**
MAT Matsushiro 3.72 241 P **Pn** **23 39 51.0 +0.7**
MAT S **Sn** **23 40 33.5 +0.6**
JHJ Hachijo jima 2 5.64 202 Sn **Sn** **23 41 13.7 -6.5**
74nm,0.3s,baz=71,slow=23,SNR=2.6
ASAJ Asahikawa 5.72 2 Pn **Pn** **23 40 17.1 -0.5**
16nm,0.3s,baz=207,slow=12,SNR=32
ASAJ Sn **Sn** **23 41 17.2 -4.7**
6.7nm,0.3s,baz=234,slow=34,SNR=1.9
ASAJ Asahikawa 5.72 2 P **Pn** **23 40 17.2 -0.4**
ASAJ 23 41 17.2
ASAJ pmax pmax
comp=Z,16nm,0.3s
ASAJ smax
comp=N,7.0nm,0.3s
YUK Yuzh-Kuril'sk 6.25 25 P **Pn** **23 40 22.7 -2.2**
YUK *i* S **Sn** **23 41 29.0 -6.0**
YUK smax
comp=N,1μm,0.5s
YUK smax
comp=E,1μm,0.5s
YUK smax
comp=N,2μm,0.6s
YUK smax
comp=E,2μm,0.6s
YSS Yuzh-Sakhalins 8.56 2⇑ *e*P **Pn** **23 40 56.0 -0.6**
YSS *e*S **Sn** **23 42 31.3 -0.4**
YSS pmax pmax
comp=Z,50nm,0.8s
YSS pmax pmax
comp=N,50nm,0.9s
YSS smax
comp=N,60nm,1.0s
CBIJ Chichi jima 11.27 180 Pn **Pn** **23 41 29.1 -4.8**
comp=N,21nm,0.3s,baz=266,slow=18,SNR=4.5
CBIJ Sn **Sn** **23 43 23.5 -15**
comp=N,9.0nm,0.3s,baz=168,slow=20,SNR=2.2
HABR Khabarovsk 11.35 335 *e*P **Pn** **23 41 35.8 +1.1**
HABR *e* 23 43 41.3
HABR MLR MLR
comp=Z,201nm,11.0s
MDJ Mudanjiang 11.35 307 P **Pn** **23 41 35.0 +0.2**
MDJ S **Sn** **23 43 41.5 +1.4**
MDJ PCP PcP 23 47 26.3 -0.2
MDJ SCS ScS 23 54 33.0 +1.9
MDJ AMB AMB
comp=Z,20nm,0.9s
MDJ AMB AMB
comp=Z,76nm,4.5s
MDJ LR LR
comp=N,294nm,12.8s
MDJ LR LR
comp=E,299nm,15.9s
MDJ LR LR
comp=Z,441nm,16.1s
MDJ Mudanjiang 11.35 307 *e*Pn **Pn** **23 41 35.5 +0.8**
comp=Z,28nm,0.8s
KSRS Korea Array 11.37 270 Pn **Pn** **23 41 36.3 +1.2**
comp=Z,0.5nm,0.3s,baz=77,slow=14,SNR=3.6
KSRS LR LR 23 45 47.7
comp=Z,303nm,18.6s,baz=163,slow=36
KSRS Korea Array 11.37 270 P **Pn** **23 41 36.3 +1.2**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,303nm,18.6s
KLR Kul'dur 13.21 328 *e*P **Pn** **23 41 54.8 -5.3**
KLR MLR MLR
comp=N,600nm,13.0s
KLR MLR MLR
comp=Z,800nm,13.0s
CN2 Changchun 13.78 298 *e*P **Pn** **23 42 10.5 +2.6**
CN2 *e*AP 23 42 18.0
CN2 *e*S **Sn** **23 44 43.5 +4.0**
CN2 AMB AMB
comp=Z,10.0nm,1.1s
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,280nm,18.0s
CN2 LR LR
comp=E,260nm,18.0s
CN2 LR LR
comp=Z,340nm,18.0s
DL2 Dalian 16.13 278 P **Pn** **23 42 40.3 +1.2**
DL2 *e*S **S** **23 45 38.3 -10**
DL2 AMB AMB
comp=Z,20nm,1.0s
DL2 AMB AMB
comp=Z,110nm,4.6s
DL2 LR LR
comp=N,220nm,16.5s
DL2 LR LR
comp=Z,130nm,14.6s
PETK Petropavlovsk- 18.17 31 P **Pn** **23 43 03.3 -1.0**
comp=Z,0.1nm,0.3s,baz=207,slow=9.3,SNR=4.0
PETK LR LR 23 50 40.3
comp=Z,67nm,18.5s,baz=38,slow=39
PET Petropavlovsk 18.50 32 P **Pn** **23 43 07.2 -1.1**
HIA Hailar 19.47 311 P **Pn** **23 43 17.7 -2.3**
HIA pmax pmax
comp=Z,15nm,0.9s
HIA Hailar 19.47 311 P **Pn** **23 43 17.7 -2.3**
comp=Z,15nm,0.9s
TIA Tai'an 20.11 272 *e*P **P** **23 43 25.0 -0.5**
NJ2 Nanjing 20.12 259 *e*P **P** **23 43 28.5 +2.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s
BJI Beijing 20.26 283 P **P** **23 43 27.3 +0.1**
BJI S **S** **23 47 11.0 -1.2**
BJI AMB AMB
comp=Z,28nm,0.7s
BJI AMB AMB
comp=Z,206nm,4.3s
BJI LR LR
comp=N,191nm,17.4s
BJI LR LR
comp=E,283nm,10.2s
BJI LR LR
comp=Z,116nm,27.9s
BJT Baijiatuau 20.27 283 *e*P **P** **23 43 26.8 -0.5**
BJT pmax pmax
comp=Z,27nm,0.5s
BJT Baijiatuau 20.27 283 *e*P **P** **23 43 26.8 -0.5**
comp=Z,27nm,0.5s
CLNS Chul'man 21.73 334 *e*P **P** **23 43 41.8 -1.1**
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=Z,13nm,1.0s,mb4.3
NACB Ninganchiao 22.58 237 *e*P **P** **23 43 50.7 -1.5**
HHC Hu-ho-hao-te 23.72 286 *e*P **P** **23 44 03.5 0.0**
HHC AP 23 44 13.0
HHC XP sP 23 44 17.3 -2.1
HHC PP 23 44 36.3
HHC PCP PcP 23 47 50.0 +3.4
HHC *e*S **S** **23 48 11.5 -4.2**
HHC XS sS 23 48 27.0 -6.9
HHC SS 23 49 01.0
HHC PCS PcS 23 51 28.3 +2.3
HHC AMB AMB
comp=Z,8.0nm,0.7s,mb4.3
HHC AMB AMB
comp=Z,157nm,5.5s
HHC LR LR
comp=N,68nm,11.7s,MS4.1
HHC LR LR
comp=E,397nm,10.8s,MS4.1
HHC LR LR
comp=Z,356nm,11.7s,MS4.1
YAK Yakutsk 24.90 346 *e*P **P** **23 44 12.7 -1.4**
YAK pmax pmax
comp=Z,38nm,0.8s,mb5.0
YAK pmax pmax
comp=N,11nm,0.8s
YAK Yakutsk 24.90 346 *e*P **P** **23 44 13.8 -0.3**
comp=N,52nm,0.7s,mb5.2
SEY Seymchan 25.32 11⇑ *e*P **P** **23 44 18.8 +0.9**
BOD Bodaibo 26.76 326 *e*P **P** **23 44 30.5 -0.4**
BOD pmax pmax
comp=Z,16nm,0.7s,mb4.7
XAN Xi'an 27.16 271 P **P** **23 44 33.8 -1.0**
XAN AP pP 23 44 43.0 -2.9
XAN S **S** **23 49 07.8 -2.9**
XAN AMB AMB
comp=Z,5.0nm,0.5s,mb4.3
XAN AMB AMB
comp=Z,46nm,3.3s
XAN LR LR
comp=N,94nm,10.0s,MS3.8
XAN LR LR
comp=E,119nm,15.0s,MS3.8
XAN LR LR
comp=Z,226nm,16.8s,MS3.8
ULN Ulaanbaatar 27.18 302⇑ *e*P **P** **23 44 35.6 +0.8**
ULN Ulaanbaatar 27.18 302 *e*P **P** **23 44 35.3 +0.4**
comp=Z,8.0nm,0.8s,mb4.3
SONM Songino Array 27.62 302 P **P** **23 44 38.2 -0.5**
comp=Z,2.2nm,0.4s,mb4.1,baz=107,slow=9.6,SNR=16
SONM LR LR 23 55 42.9
comp=Z,151nm,19.0s,MS3.6,baz=184,slow=36
TLY Talaya 29.98 309 *e*P **P** **23 45 00.4 +0.8**
TLY pmax pmax
comp=Z,11nm,0.7s,mb4.7
TLY MLR MLR
comp=Z,265nm,19.0s,MS3.9
ZAK Zakamensk 29.98 306⇑ *i*P **P** **23 44 59.8 +0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
LZH Lanzhou 30.53 278 *e*P **P** **23 45 04.8 +0.1**
LZH AP pP 23 45 15.0 -0.8
LZH XP sP 23 45 20.0 -0.7
LZH PP PP 23 46 03.0 -11
LZH *e*S **S** **23 50 05.0 +1.5**
LZH *e*SS SS 23 51 45.0 -30
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,127nm,5.9s
LZH LR LR
comp=E,584nm,14.5s
LZH LR LR
comp=Z,976nm,16.1s,MS4.5
MOY Mondy 31.60 308 *e*P **P** **23 45 14.1 +0.1**
GYA Guiyang 32.13 259 P **P** **23 45 19.8 +0.9**
GYA AP pP 23 45 31.0 +1.0
GYA XP sP 23 45 36.5 +1.6
GYA PP PP 23 46 29.0 -2.9
GYA PPP 23 46 43.3
GYA PCP PcP 23 48 07.5 +0.2
GYA S **S** **23 50 27.8 -0.9**
GYA XS sS 23 50 46.3 -1.0
GYA SCP ScP 23 51 48.3 +0.7
GYA SSS 23 52 47.0
GYA SCS ScS 23 55 45.5 -1.1
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.8s
GYA LR LR
comp=N,890nm,18.8s,MS4.6
GYA LR LR
comp=E,760nm,17.6s,MS4.6
GYA LR LR
comp=Z,720nm,17.0s,MS4.4
CD2 Chengdu 32.37 268 P **P** **23 45 20.0 -1.0**
CD2 AP pP 23 45 32.5 +0.4
CD2 XP sP 23 45 36.3 -0.6
CD2 PP PP 23 46 30.5 -4.0
CD2 PCP PcP 23 48 10.5 +2.6
CD2 S **S** **23 50 33.3 +1.0**
CD2 XS sS 23 50 49.3 -1.6
CD2 SS SS 23 52 28.8 -23
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
CD2 AMB AMB
comp=Z,210nm,4.9s
CD2 LR LR
comp=N,250nm,4.7s
CD2 LR LR
comp=Z,270nm,10.0s,MS4.2
BILL Bilibino 32.53 17⇑ *e*P **P** **23 45 24.3 +2.4**
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.6
GTA Gaotai 32.83 285⇑ *e*P **P** **23 45 25.5 +0.6**
GTA AP pP 23 45 35.0 -1.1
GTA XP sP 23 45 39.0 -1.9
GTA S **S** **23 50 41.0 +1.6**
GTA XS sS 23 50 57.3 -0.6
GTA SS SS 23 52 40.5 -21
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.4
GTA AMB AMB
comp=Z,76nm,5.4s
GTA LR LR
comp=N,117nm,16.2s,MS4.1
GTA LR LR
comp=E,340nm,17.7s,MS4.1
GTA LR LR
comp=Z,324nm,15.6s,MS4.1
TIXI Tiksi 34.02 352⇑ *e*P **P** **23 45 33.5 -1.4**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TIXI MLR MLR
comp=Z,100nm,22.0s,MS3.5
TIXI Tiksi 34.02 352 *e*P **P** **23 45 34.0 -0.9**
comp=Z,4.2nm,0.7s,mb4.5
KMI Kunming 35.85 260 P **P** **23 45 49.8 -1.4**
KMI AMB AMB
comp=Z,8.0nm,0.7s,mb4.8
KMI LR LR
comp=Z,70nm,28.5s,MS3.3
NIKO Nikolski 36.38 50 P **P** **23 45 52.7 -2.7**
WMQ Urumqi 40.85 296 P **P** **23 46 34.5 +1.5**
WMQ AMB AMB
comp=Z,34nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,200nm,4.0s
WMQ LR LR
comp=N,76nm,18.0s,MS3.8
WMQ LR LR
comp=E,104nm,18.0s,MS3.8
WMQ LR LR
comp=Z,86nm,26.0s
ZAA0 Zalesovo Array 41.51 311 *e*P **P** **23 46 38.1 -0.2**
ZAA0 *e* pP **P** **23 46 48.6 -1.0**
ZALV Zalesovo Beam 41.51 311 P **P** **23 46 38.2 -0.1**
comp=Z,7.3nm,0.5s,mb4.5,baz=86,slow=8.2,SNR=33
ZALV pP pP 23 46 47.9 -1.7
comp=Z,12nm,0.6s,baz=87,slow=7.6,SNR=9.7
ZALV pPcP 23 48 45.3
comp=Z,3.1nm,0.6s,baz=77,slow=3.3,SNR=3.7
ZALV LR LR 00 04 38.7
comp=Z,151nm,18.6s,MS3.9,baz=233,slow=37
ZALV Zalesovo Beam 41.51 311 P **P** **23 46 38.2 -0.1**
ZALV *PP pP 23 46 47.9 -1.7
ZALV 23 48 45.3
ZALV Zalesovo Beam 41.51 311 P **P** **23 46 38.2 -0.1**
ZALV pP pP 23 46 47.9 -1.7
ZALV pPcP 23 48 45.3
ZALV LR LR 00 04 38.7
CHTO Chiang Mai 42.29 255 *e*P **P** **23 46 45.2 +0.1**
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
CHTO Chiang Mai 42.29 255 *e*P **P** **23 46 45.1 +0.1**
comp=Z,6.1nm,0.9s,mb4.2
NVS Novosibirsk 42.40 313 *e*P **P** **23 46 43.8 -1.8**
NVS pmax pmax
comp=E,9.0nm,1.3s
NVS pmax pmax
comp=Z,15nm,1.3s,mb4.5
CMAR Chiang Mai Arr 42.51 255 P **P** **23 46 46.5 -0.4**
comp=Z,0.8nm,0.3s,mb3.9,baz=46,slow=6.6,SNR=6.9
LSA Lhasa 42.77 274 P **P** **23 46 50.3 +1.4**
LSA Lhasa 42.77 274 *e*P **P** **23 46 50.0 +1.1**
LSA pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
LSA Lhasa 42.77 274 *e*P **P** **23 46 50.0 +1.1**
comp=Z,7.7nm,0.6s,mb4.6
MK31 Makanchi Array 43.98 301 *e*P **P** **23 46 58.6 +0.2**
MKAR Makanchi Array 43.98 301 P **P** **23 46 58.3 -0.1**
comp=Z,8.0nm,0.7s,mb4.5,baz=86,slow=8.6,SNR=29
MKAR pP pP 23 47 08.5 -1.3
comp=Z,17nm,0.8s,baz=86,slow=9.8,SNR=24
MKAR LR LR 00 05 17.6
comp=Z,82nm,18.5s,MS3.7,baz=360,slow=36
MKAR Makanchi Array 43.98 301 P **P** **23 46 58.3 -0.1**
MKAR *PP pP 23 47 08.5 -1.3
MKAR Makanchi Array 43.98 301 P **P** **23 46 58.3 -0.1**
MKAR pP pP 23 47 08.5 -1.3
MKAR LR LR 00 05 17.6
KURK Kurchatov 45.64 307 P **P** **23 47 11.8 +0.3**
comp=Z,19nm,0.6s,mb5.2,baz=81,slow=8.4,SNR=71
KURK Kurchatov 45.64 307 P **P** **23 47 11.8 +0.3**
KURK pmax pmax
comp=Z,19nm,0.6s,mb5.2
KURK Kurchatov 45.64 307 *e*P **P** **23 47 10.5 -1.0**
comp=Z,39nm,0.8s,mb5.4
TAPN Taplejung 46.53 273 *e*P **P** **23 47 19.5 +0.6**
comp=Z,10nm,0.5s,mb5.0
ODAN Odare 47.02 273 *e*P **P** **23 47 23.2 +0.5**
comp=Z,12nm,0.4s,mb5.1
MCK McKinley 47.12 34 P **P** **23 47 22.0 -1.0**
COLA College 47.57 33 *c i*P **P** **23 47 27.9 +1.5**
COLA College 47.57 33 *e*P **P** **23 47 27.4 +1.0**
JIRN Jiri 47.58 274 *e*P **P** **23 47 27.8 +0.7**
comp=Z,18nm,0.4s,mb5.4
RAMN Ramite 47.59 273 *e*P **P** **23 47 27.5 +0.3**
comp=Z,22nm,0.5s,mb5.5
GUN Gumba 47.70 275 *e*P **P** **23 47 28.5 +0.4**
comp=Z,55nm,0.5s,mb5.9
KKN Kakani 48.23 275 *e*P **P** **23 47 32.5 +0.4**
comp=Z,27nm,0.5s,mb5.5
KKN Kakani 48.23 275 *e*P **P** **23 47 32.5 +0.4**
KKN pmax pmax
comp=Z,27nm,0.5s,mb5.5
PKI Pulchoki 48.23 275 *e*P **P** **23 47 32.1 0.0**
comp=Z,14nm,0.5s,mb5.3
PKI Pulchoki 48.23 275 *e*P **P** **23 47 32.1 0.0**
PKI pmax pmax
comp=Z,14nm,0.5s,mb5.2
PKIN Phulchoki 48.24 275 *e*P **P** **23 47 32.1 -0.1**
comp=Z,20nm,0.5s,mb5.4
DMN Daman 48.45 275 *e*P **P** **23 47 34.1 +0.3**
comp=Z,5.9nm,0.3s,mb5.2
GKN Gorkha 48.63 276 *e*P **P** **23 47 35.3 +0.1**
comp=Z,22nm,0.5s,mb5.5
DANN Dangsing 49.16 277 *e*P **P** **23 47 39.9 +0.7**
comp=Z,78nm,0.4s
KOLN Koldanda 49.55 276 *e*P **P** **23 47 42.4 +0.1**
comp=Z,11nm,0.3s,mb5.4
TKM2 Tokmak 2 49.59 298 *e*P **P** **23 47 43.0 +0.7**
TKM2 *e* pP 23 47 53.2 -0.7
TKM2 pmax pmax
comp=Z,18nm,1.0s,mb5.1
TKM2 Tokmak 2 49.59 298 *e*P **P** **23 47 43.0 +0.6**
comp=Z,18nm,1.0s,mb5.1
TKM2 *e* pP 23 47 53.2 -0.7
BVAR Borovoye Array 50.16 312 P **P** **23 47 46.2 -0.3**
comp=Z,2.8nm,0.3s,mb4.7,baz=66,slow=8.1,SNR=19
BVAR PcP PcP 23 49 05.0 -0.4
comp=Z,2.0nm,0.7s,baz=71,slow=4.9,SNR=2.9
BVAR pPcP 23 49 17.0
comp=Z,4.2nm,0.6s,baz=79,slow=3.4,SNR=7.0
BVAR Borovoye Array 50.16 312 P **P** **23 47 46.2 -0.3**
BVAR 23 49 05.0
BRVK Borovoye 50.22 312 *e*P **P** **23 47 46.9 0.0**
BRVK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
BRVK Borovoye 50.22 312 *e*P **P** **23 47 46.9 -0.1**
comp=Z,7.8nm,0.7s,mb4.8
EKS2 Erkin-Say 50.94 298 *e*P **P** **23 47 52.3 -0.2**
comp=Z,4.9nm,0.8s,mb4.5
AML Almayashu 51.18 297 *e*P **P** **23 47 54.5 +0.1**
comp=Z,12nm,0.8s,mb4.9
AML *e* pP 23 48 06.5 +0.6
COEN Coen 52.09 179 *e*P **P** **23 48 01.1 -0.2**
comp=Z,5.9nm,0.6s,mb4.7
SVE Sverdlovsk 54.58 318 *e*P **P** **23 48 18.6 -0.6**
SVE *e*S **S** **23 55 47.0 -8.6**
SVE *e*SS SS 23 59 38.2 +0.2
SVE pmax pmax
comp=Z,20nm,0.9s,mb5.2
SVE MLR MLR
comp=Z,1μm,22.0s,MS4.9
ARU Arti 55.79 318 *d i*P **P** **23 48 27.4 -0.5**
ARU *e* 23 50 33.0
ARU PPP 23 51 44.0
ARU *e*S **S** **23 56 11.6 -0.2**
ARU *e*SS SS 23 59 50.7 -6.4
ARU pmax pmax
comp=Z,14nm,0.8s,mb5.0
ARU Arti 55.79 318 *e*P **P** **23 48 28.1 +0.2**
comp=Z,14nm,0.6s,mb5.2
DLBC Dease Lake 57.14 39 P **P** **23 48 36.8 -0.7**
KBL Kabul 57.57 291 *e*P **P** **23 48 40.2 -0.7**
KBL *e* pP 23 48 51.7 -1.0
KBL pmax pmax
comp=Z,11nm,0.9s,mb4.9
KBL Kabul 57.57 291 *e*P **P** **23 48 40.2 -0.7**
comp=Z,11nm,0.9s,mb4.9
KBL *e* pP 23 48 51.7 -1.0
CTA Charters Tower 58.30 176 P **P** **23 48 44.8 -1.2**
comp=Z,8.6nm,1.0s,mb4.7,baz=347,slow=9.9,SNR=6.0
CTAO Charters Tower 58.30 176 *e*P **P** **23 48 45.4 -0.6**
CTAO pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
CTAO Charters Tower 58.30 176 *e*P **P** **23 48 45.4 -0.5**
comp=Z,3.6nm,0.6s,mb4.6
FITZ Fitzroy Crossi 58.33 199 *e*P **P** **23 48 46.0 -0.2**
comp=Z,4.7nm,0.6s,mb4.7
FITZ Fitzroy Crossi 58.33 199 *e*P **P** **23 48 46.0 -0.2**
comp=Z,1.9nm,0.5s,mb4.4
WRAB Tennant Creek 58.50 189 *e*P **P** **23 48 46.1 -1.3**
WRAB pmax pmax
comp=Z,13nm,0.7s,mb5.1
WRAB Tennant Creek 58.50 189 *e*P **P** **23 48 46.1 -1.2**
comp=Z,13nm,0.7s,mb5.1
WB2 Warramunga Arr 58.51 189 *e*P **P** **23 48 46.2 -1.2**
WB2 Warramunga Arr 58.51 189 *e*P **P** **23 48 46.1 -1.3**
WB2 *e* pP 23 48 59.1 -0.1
WRA Warramunga Arr 58.51 189 P **P** **23 48 46.3 -1.1**
comp=Z,15nm,0.7s,mb5.1,baz=7.6,slow=7.3,SNR=54
WRA sP sP 23 48 59.5 -4.3
comp=Z,8.3nm,0.8s,baz=6.1,slow=7.3,SNR=8.2
HYB Hyderabad 58.92 268 *i* P **P** **23 48 50.5 -0.1**
HYB *e* 23 48 58.5
HYB Hyderabad 58.92 268 *e*P **P** **23 48 58.5 +7.9**
RES Resolute Bay 61.11 15 *e*P **P** **23 49 04.8 0.0**
RES *e* pP 23 49 15.1 -1.5
ASAR Alice Springs 62.23 189 P **P** **23 49 12.2 -0.7**
comp=Z,6.8nm,0.7s,mb4.9,baz=9.7,slow=5.3,SNR=61
YKA Yellowknife Ar 62.29 31 P **P** **23 49 12.8 0.0**
comp=Z,0.9nm,0.6s,mb4.1,baz=299,slow=6.3,SNR=16
ARCES ARCESS Array B 62.96 339 P **P** **23 49 17.3 +0.1**
comp=Z,1.3nm,0.5s,mb4.3,baz=57,slow=6.5,SNR=8.8
ARCES LR LR 00 19 46.2
comp=Z,195nm,18.8s,MS4.3,baz=25,slow=39
RMQ Roma 64.83 174 *e*P **P** **23 49 29.9 0.0**
comp=Z,6.2nm,0.5s,mb4.9
JOF Joensuu 65.08 332 *ep* **P** **23 49 31.2 0.0**
comp=Z,1.8nm,0.4s,mb4.5
JOF Joensuu 65.08 332 *e*P **P** **23 49 31.2 0.0**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 67.41 333 *ep* **P** **23 49 45.8 -0.3**
comp=Z,1.4nm,0.4s,mb4.3,baz=48,slow=6.0
KAF Kangasniemi 67.41 333 *e*P **P** **23 49 45.8 -0.3**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
OBN Obninsk 67.41 323⇓ *i*P **P** **23 49 46.0 -0.3**
OBN pmax pmax
comp=Z,17nm,1.3s,mb4.9
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
OBN Obninsk 67.41 323 *e*P **P** **23 49 46.0 -0.2**
VSR Storozhevoye 68.35 319 *e*P **P** **23 49 52.0 -0.3**
VSR pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
VSR pmax pmax

comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.7s
NEW Newport 68.68 45 *e*P **P 23 49 54.9 +0.5**
SUMG Summit 69.32 0 *e*P **P 23 49 58.6 +0.6**
STKA Stephens Creek 69.92 181 P **P 23 50 01.4 -0.6**
comp=E,2.4nm,0.8s,mb4.2,baz=342,slow=8.1,SNR=9.1
STKA Stephens Creek 69.92 181 *e*P **P 23 50 01.4 -0.6**
comp=E,1.6nm,0.4s,mb4.3
STKA Stephens Creek 69.92 181 *e*P **P 23 50 01.4 -0.6**
comp=E,0.4nm,0.6s,mb3.5
STKA *e* pP 23 50 13.6 -0.4
WALA Waterton Lakes 69.97 43 *e*P **P 23 50 02.1 -0.2**
KIV Kislovodsk 70.53 311 *e*P **P 23 50 04.4 -1.4**
KIV pmax pmax
comp=Z,15nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,62nm,19.0s,MS3.9
KIV Kislovodsk 70.53 311 *e*P **P 23 50 07.2 +1.4**
BBOO Buckleboo 71.08 186 *e*P **P 23 50 08.6 -0.5**
comp=Z,4.1nm,0.6s,mb4.5
FFC Flin Flon 72.19 33 *e*P **P 23 50 15.3 -0.4**
FFC *e* pP 23 50 25.8 -2.0
FCC Fort Churchill 72.48 27 *e*P **P 23 50 17.6 +0.3**
HLID Hailey 72.95 48 *e*P **P 23 50 21.4 +1.0**
NB2 NORSAR Subarra 73.19 337 P **P 23 50 21.8 +0.3**
comp=Z,1.8nm,0.5s,mb4.3,baz=36,slow=6.2
NOA NORSAR Array B 73.19 337 P **P 23 50 20.9 -0.6**
comp=Z,3.6nm,0.8s,mb4.4,baz=38,slow=6.0,SNR=10
NOA LR LR 00 24 30.4
comp=Z,120nm,18.4s,MS4.2,baz=0.0,slow=37
NOA NORSAR Array B 73.19 337 P **P 23 50 20.9 -0.6**
NOA LR LR 00 24 30.4
AKASG Malin Array Be 73.63 322 P **P 23 50 23.6 -0.7**
comp=Z,4.3nm,0.7s,mb4.5,baz=46,slow=6.1,SNR=12
AKASG LR LR 00 25 42.1
comp=Z,140nm,18.2s,MS4.3,baz=10.0,slow=38
NVAR Mina Array Bea 73.63 54 P **P 23 50 25.2 +0.7**
comp=Z,2.1nm,0.9s,mb4.1,baz=291,slow=5.7,SNR=11
SUW Suwalki 74.10 328 *e*P **P 23 50 26.8 -0.2**
TPH Tonopah 74.53 54 *e*P **P 23 50 30.2 +0.4**
NWAO Narrogin (SRO) 74.69 202 P **P 23 50 30.4 0.0**
IMW Indian Meadow 74.74 46 *e*P **P 23 50 32.8 +1.9**
FRB Frobisher Bay 75.29 14 P **P 23 50 33.2 -0.5**
comp=Z,2.9nm,0.7s,mb4.3,baz=344,slow=3.9,SNR=11
FRB Frobisher Bay 75.29 14 P **P 23 50 33.2 -0.5**
DUG Dugway 75.95 50 *e*P **P 23 50 38.6 +0.7**
BW06 Boulder Array 76.23 46 *e*P **P 23 50 39.9 +0.4**
PDAR Pinedale Array 76.23 46 P **P 23 50 39.8 +0.3**
comp=Z,2.2nm,0.5s,mb4.3,baz=274,slow=1.6,SNR=29
MALT Malatya 76.47 308⇑ *i*P **P 23 50 42.5 +1.6**
MALT Malatya 76.47 308 *e*P **P 23 50 41.1 +0.3**
comp=Z,2.0nm,0.9s,mb4.0
MALT *e* pP 23 50 53.1 +0.1
KWP Kalwaria 77.42 325⇓ *i*P **P 23 50 47.4 +1.4**
KWP Kalwaria 77.42 325⇓P **P 23 50 47.4 +1.4**
BUR08 Bucovina Ar. S 77.65 322 *e*P **P 23 50 47.5 +0.2**
BUR08 *e*PcP PcP 23 50 57.4 +0.1
BURAR Bucovina Array 77.66 322⇓ *i*P **P 23 50 48.0 +0.6**
BURAR Bucovina Array 77.66 322⇓P **P 23 50 48.0 +0.6**
SRU San Rafael 78.01 49 *e*P **P 23 50 50.5 +1.0**
OJC Ojcow 78.28 326 *e*P **P 23 50 51.4 +0.6**
RSSD Black Hills 78.36 42 *e*P **P 23 50 51.4 0.0**
BRTR Keskin Array B 78.45 312 P **P 23 50 52.1 +0.2**
comp=Z,0.7nm,0.6s,mb3.8,baz=131,slow=3.9,SNR=4.1
BRTR PP PP 23 53 49.8 +0.7
comp=Z,0.9nm,1.0s,baz=29,slow=3.3,SNR=3.6
BRTR LR LR 00 30 46.7
comp=Z,29nm,18.4s,MS3.6,baz=225,slow=40
BRTR Keskin Array B 78.45 312 P **P 23 50 52.1 +0.2**
BRTR 23 53 49.8
NIE Niedzica 78.65 326 *e*P **P 23 50 54.4 +1.6**
MLR Muntele Rosu 78.78 320 LR LR 00 28 22.3
comp=Z,133nm,18.3s,MS4.3,baz=199,slow=38
DPC Dobruska-Polom 79.66 328 *e*P **P 23 50 58.9 +0.6**
PSZ Piszkesteto 79.94 325 *e*P **P 23 51 01.0 +1.1**
CLL Collm 80.25 330 *e*P **P 23 51 00.0 -1.5**
CLL *i* 23 51 04.4
CLL *i* pP 23 51 13.6 -0.1
VRAC Vranov 80.34 327 LR LR 00 27 05.1
comp=Z,68nm,18.5s,MS4.0,baz=48,slow=36
ISCO Idaho Springs 80.42 46 *e*P **P 23 51 03.6 +1.0**
BZS Buzias 80.82 322⇑ *i*P **P 23 51 07.6 +2.9**
BZS Buzias 80.82 322⇑P **P 23 51 07.6 +2.9**
KHC Kasperske Hory 81.73 329 *e*P **P 23 51 09.7 +0.3**
KHC *e* pP 23 51 22.7 +1.0
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KHC Kasperske Hory 81.73 329 *e*P **P 23 51 09.0 -0.4**
KHC *ex* x 23 51 13.0
KHC *ex* x 23 51 19.8
KHC Kasperske Hory 81.73 329 *e*P **P 23 51 09.7 +0.2**
comp=Z,3.4nm,0.8s,mb4.3
KHC *e* pP 23 51 22.7 +1.0
GERES GERESS Array B 81.91 329 P **P 23 51 10.1 -0.2**
comp=Z,0.2nm,0.4s,baz=38,slow=6.2,SNR=9.2
GERES pP pP 23 51 20.5 -2.1
comp=Z,0.9nm,0.6s,baz=39,slow=5.6,SNR=6.6
ANMO Albuquerque 83.19 50 *e*P **P 23 51 17.9 +0.6**
MEM Membach 83.39 334 P **P 23 51 20.5 +2.4**
STU Stuttgart 83.75 331 *e*P **P 23 51 19.1 -0.8**
PMOR Pomariorio Ree 84.11 114 *e*T 01 23 59.4
comp=Z,28nm,0.2s
PPT Papeete 84.64 117 *e*LR LR 00 17 54.8
comp=Z,140nm,26.5s
PPT Papeete 84.64 117 *e*T 01 24 37.9
comp=Z,5.3nm,0.3s
CDF Champ du Feu 84.77 332 *e*P **P 23 51 27.2 +2.1**
comp=Z,12nm,1.1s,mb4.6
CDF Champ du Feu 84.77 332 *e*P **P 23 51 27.2 +2.1**
CDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
CDF Champ du Feu 84.77 332 *e*P **P 23 51 27.2 +2.1**
comp=Z,6.1nm,1.1s,mb4.6
TIAR Tiarei 84.80 117 *e*T 01 24 49.3
comp=Z,73nm,0.3s
TVO Taravao 85.02 117 *e*T 01 25 05.7
comp=Z,32nm,0.3s
DAVOX Davos/Dischmat 85.11 329 LR LR 00 32 42.2
comp=Z,108nm,21.7s,MS4.2,baz=58,slow=38
TUE Stuetta 85.57 329 *e*P **P 23 51 29.8 +0.7**
comp=Z,2.4nm,0.8s,mb4.5
MEH Mehetia 85.91 116 *e*T 01 26 12.7
comp=Z,700nm,0.3s
LOR Lormes 86.98 333 *e*P **P 23 51 36.9 +0.8**
comp=Z,18nm,1.0s,mb5.0
LOR Lormes 86.98 333 *e*P **P 23 51 36.9 +0.8**
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LOR Lormes 86.98 333 *e*P **P 23 51 36.9 +0.8**
comp=Z,9.0nm,1.0s,mb5.0
SSF Saint Saulge 87.28 333 *e*P **P 23 51 37.9 +0.4**
comp=Z,8.5nm,1.0s,mb4.7
SSF Saint Saulge 87.28 333 *e*P **P 23 51 37.9 +0.4**
SSF pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
SSF Saint Saulge 87.28 333 *e*P **P 23 51 37.9 +0.4**
comp=Z,4.3nm,1.0s,mb4.6
LPL La Plagne 87.39 330 *e*P **P 23 51 38.2 +0.1**
comp=Z,6.8nm,0.8s,mb4.6
LPL La Plagne 87.39 330 *e*P **P 23 51 38.2 +0.1**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
LPL La Plagne 87.39 330 *e*P **P 23 51 38.2 +0.1**
comp=Z,3.4nm,0.8s,mb4.6
LPG La Plagne 87.40 330 *e*P **P 23 51 38.7 +0.6**
comp=Z,3.9nm,0.6s,mb4.5
LPG La Plagne 87.40 330 *e*P **P 23 51 38.7 +0.6**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
LPG La Plagne 87.40 330 *e*P **P 23 51 38.7 +0.6**
comp=Z,2.0nm,0.6s,mb4.5
AVF Avril sur Loir 87.56 333 *e*P **P 23 51 38.7 -0.2**
comp=Z,20nm,1.0s,mb5.0
AVF Avril sur Loir 87.56 333 *e*P **P 23 51 38.7 -0.2**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
AVF Avril sur Loir 87.56 333 *e*P **P 23 51 38.7 -0.2**
comp=Z,10nm,1.0s,mb5.0
TBI Tubuai 88.65 121 *e*T 01 29 34.5
comp=Z,30nm,0.3s
TXAR Lajitas Array 88.76 53 P **P 23 51 44.9 0.0**
comp=Z,1.1nm,0.6s,mb4.4,baz=290,slow=2.8,SNR=26
SMRF Simiane la Rot 89.13 330 *e*P **P 23 51 46.6 +0.2**
VAE Valguarnera 90.51 321 LR LR 00 39 08.1
comp=Z,69nm,19.7s,MS4.1,baz=129,slow=40
KEST Kesra 94.34 323 LR LR 00 39 41.1
comp=Z,41nm,18.1s,MS3.9,baz=67,slow=39
ESDC Sonseca Array 96.36 334 LR LR 00 41 05.3
comp=Z,65nm,18.9s,MS4.1,baz=45,slow=39

*ISCJB **25** 23:40:24.4±0.7, 5.05S±0.09W×1.526E±0.01, h33km, mb4.0/15, Error ellipse: s-maj=20.2km s-min=8.5km az=30.6*
*NEIC **25** 23:40:27.6±2.5, 5.06S×152.56E, h47km±21km, mb4.2/3, Error ellipse: s-maj=18.6km s-min=11.1km az=90.0*
*IDC **25** 23:40:29.3±1.0, 5.07S×152.47E, h58km±6km, mb3.7/11, mb1 3.8/12, mb1mx3.7/18, mbtmp3.6/12, MS2.9/3, Ms1 2.9/3, ms1mx2.6/20, Error ellipse: s-maj=30.7km s-min=14.3km az=118.0*
ISC 25 23:40:26.8±3.3, 51S±01×1526E±02, h41km±28km**, n32, σ0°73/27, mb4.0**/15**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.92**	**231**	P		**Pn**	**23 42 06.0 +0.3**
	0.6nm,0.3s,baz=291,slow=15,SNR=1.9						
PMG				S		**Sn**	**23 43 22.5 -0.7**
	2.0nm,0.3s,baz=6.5,slow=3.2,SNR=3.3						
HNR	**Honiara**	**8.46**	**121**	LR	LR	23 44 34.8	
	comp=Z,50nm,19.9s,baz=290,slow=29						
CTA	**Charters Tower**	**16.16**	**202**	LR	LR	23 49 36.0	
	comp=Z,41nm,19.2s,baz=228,slow=34						
WRAB	**Tennant Creek**	**23.11**	**229**	*e*P	**P**	**23 45 29.0 -0.5**	
	6.4nm,0.8s,mb4.1						
WB2	**Warramunga Arr**	**23.12**	**229**	*e*P	**P**	**23 45 30.1 +0.6**	
WB2	**Warramunga Arr**	**23.12**	**229**	*e*P	**P**	**23 45 30.3 +0.8**	
WRA	**Warramunga Arr**	**23.13**	**229**	P	**P**	**23 45 29.9 +0.3**	
	4.5nm,0.9s,mb3.9,baz=48,slow=10,SNR=11						
KNA	**Kununurra**	**25.71**	**244**	*e*P	**P**	**23 45 55.3 +1.8**	
	14nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**25.82**	**222**	P	**P**	**23 45 54.9 +0.5**	
	1.6nm,0.6s,mb3.8,baz=56,slow=8.9,SNR=24						
STKA	**Stephens Creek**	**28.59**	**200**	P	**P**	**23 46 18.8 -0.4**	
	2.4nm,1.1s,mb3.9,baz=12,slow=12,SNR=4.4						
STKA				LR	LR	23 57 21.5	
	comp=Z,30nm,19.0s,baz=27,slow=36						
STKA	**Stephens Creek**	**28.59**	**200**	*e*P	**P**	**23 46 18.6 -0.6**	
	0.6nm,1.1s,mb3.2						
STKA				LR	LR	23 57 21.5	
FITZ	**Fitzroy Crossi**	**29.37**	**242**	*e*P	**P**	**23 46 26.1 -0.2**	
	12nm,1.5s,mb4.4						
FITZ	**Fitzroy Crossi**	**29.37**	**242**	*e*P	**P**	**23 46 26.1 -0.1**	
	3.7nm,0.6s,mb4.3						
DAV	**Davao City (W)**	**29.56**	**294**	P	**P**	**23 46 27.3 -0.7**	
MBWA	**Marble Bar**	**35.68**	**240**	*e*P	**P**	**23 47 21.2 -0.2**	
	1.1nm,0.4s,mb4.1						
TAU	**Tasmania Unive**	**37.97**	**186**	P	**P**	**23 47 40.2 -0.4**	
KKM	**Kota Kinabalu**	**37.98**	**286**	P	**P**	**23 47 40.9 -0.3**	
CMAR	**Chiang Mai Arr**	**57.83**	**295**	P	**P**	**23 50 15.7 +1.0**	
	1.3nm,0.4s,mb4.3,baz=116,slow=5.2,SNR=8.8						
PETK	**Petropavlovsk-**	**58.12**	**4**	P	**P**	**23 50 15.8 -0.3**	
	4.0nm,1.0s,mb4.4,baz=152,slow=8.8,SNR=4.3						
PETK	**Petropavlovsk-**	**58.12**	**4**	P	**P**	**23 50 15.8 -0.3**	
SONM	**Songino Array**	**66.46**	**328**	P	**P**	**23 51 13.2 +1.2**	
	0.4nm,0.7s,mb3.6,baz=148,slow=6.3,SNR=3.1						
SONM	**Songino Array**	**66.46**	**328**	P	**P**	**23 51 13.2 +1.2**	
MKAR	**Makanchi Array**	**80.41**	**319**	P	**P**	**23 52 34.3 +0.2**	
	0.3nm,0.6s,mb3.4,baz=95,slow=7.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**81.28**	**326**	P	**P**	**23 52 37.8 -0.9**	
	1.1nm,0.5s,mb4.0,baz=108,slow=6.1,SNR=4.6						
ZALV				pP	pP	23 52 54.1 +3.1	
	0.5nm,0.3s,baz=134,slow=44,SNR=2.3						
KURK	**Kurchatov**	**83.87**	**322**	P	**P**	**23 52 52.2 0.0**	
	0.4nm,0.5s,mb3.8,baz=98,slow=5.3,SNR=3.3						
BVAR	**Borovoye Array**	**89.35**	**323**	P	**P**	**23 53 18.2 -0.7**	
	0.7nm,0.4s,mb4.3,baz=107,slow=6.4,SNR=6.5						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	**P**	**23 53 49.0 +0.8**	
	0.2nm,0.8s,mb3.6,baz=274,slow=5.2,SNR=4.0						
YKA				pP	pP	23 54 04.4 +3.6	
	0.2nm,0.6s,baz=270,slow=4.9,SNR=3.9						
ARU	**Arti**	**96.44**	**326**	P	**P**	**23 53 50.1 -1.4**	
TORD	**Torodi Ar. Bea**	**150.22**	**288**	PKPbc	PKPbc	00 00 14.1 -0.4	
	0.8nm,0.4s,baz=84,slow=2.3,SNR=20						
TORD				pPKPbc	pPKPbc	00 00 32.7 +5.2	
	1.7nm,0.8s,baz=63,slow=2.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**150.22**	**288**	PKPbc	PKPbc	00 00 14.1 -0.4	
TORD				pPKPbc	pPKPbc	00 00 32.7 +5.2	
BDFB	**Brasilia**	**151.00**	**136**	PKPbc	PKPbc	00 00 18.3 +2.0	
	1.4nm,0.7s,baz=189,slow=22,SNR=4.5						
DBIC	**Dimbokro**	**157.54**	**275**	PKPab	PKPab	00 00 51.3 -0.5	
	2.5nm,0.9s,baz=245,slow=12,SNR=5.7						

*ISCJB **26** 00:06:48.7±0.8, 39.36N±004×33.11E±005, h5km±8km, Error ellipse: s-maj=6.7km s-min=5.8km az=156.6*
*CSEM **26** 00:06:48.3±0.1, 39.39N×33.13E, h12km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.5km az=156.0*
*DDA **26** 00:06:49.0, 39.39N×33.12E, h7km±1km, Md2.9*
*ISK **26** 00:06:48.4, 39.38N×33.11E, h16km, MD2.9*
ISC 26 00:06:49.3±0.7, 3938N±004×**3312E**±004**, h13**km±8km**, n9, σ0°75/14, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.46**	**91**	*e*PG	**Pg**	**00 06 58.7 +0.3**	
KAMT				*e*SG	**Sg**	**00 07 05.1 +0.4**	
LOD	**Lodumlu**	**0.58**	**332**	*e*PG	**Pg**	**00 06 59.9 -0.7**	
LOD				*e*SG	**Sg**	**00 07 08.7 +0.3**	
CDAG	**Cicekdag**	**1.00**	**75**	*i* P	**Pb**	**00 07 08.0 -0.5**	
CDAG				*i* S	**Sg**	**00 07 22.2 +0.5**	
KIZT	**Kizilcal**	**1.08**	**243**	*e*PG	**Pg**	**00 07 09.6 -0.6**	
ELDT	**Eldivan**	**1.14**	**12**	*i* P	**Pb**	**00 07 10.2 -0.6**	
ELDT				*i* S	**Sb**	**00 07 26.5 +1.0**	
KDHN	**Kadinhani**	**1.16**	**223**	*i* P	**Pb**	**00 07 11.2 +0.1**	
KDHN				*i* S	**Sb**	**00 07 28.0 +2.0**	
KONT	**Konya--Tatoy**	**1.55**	**203**	*e*PN	**Pn**	**00 07 15.6 -0.9**	
NIG	**Nigde**	**1.72**	**137**	*e*PN	**Pn**	**00 07 18.5 -0.4**	
YOZ	**Yozgat**	**1.73**	**81**	*e*PN	**Pn**	**00 07 18.5 -0.5**	

*ISCJB **26** 00:20:06.5±1.1, 39.37N±004×33.18E±005, h4km±9km, Error ellipse: s-maj=8.4km s-min=5.7km az=141.2*
*CSEM **26** 00:20:06.5, 39.46N×33.23E, h19km, MD2.9, After ISK*
*DDA **26** 00:20:06.5, 39.38N×33.17E, h3km±1km, Md2.6*
*ISK **26** 00:20:06.5, 39.46N×33.23E, h19km, MD2.9*
ISC 26 00:20:06.9±0.7, 3937N±004×**3317E**±005**, h7**km±9km**, n8, σ0°78/13, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.42**	**90**	*e*PG	**Pg**	**00 20 14.7 -0.3**	
KAMT				*e*SG	**Sg**	**00 20 21.4 +0.8**	
LOD	**Lodumlu**	**0.60**	**329**	*e*PG	**Pg**	**00 20 18.4 -0.1**	
CDAG	**Cicekdag**	**0.96**	**75**	*i* P	**Pg**	**00 20 24.9 -0.4**	
CDAG				*i* S	**Sg**	**00 20 38.0 +0.2**	
KIZT	**Kizilcal**	**1.12**	**244**	*e*PN	**Pn**	**00 20 28.3 -0.6**	
ELDT	**Eldivan**	**1.13**	**10**	*i* P	**Pg**	**00 20 28.6 0.0**	
ELDT				*i* S	**Sg**	**00 20 44.3 +0.9**	
KDHN	**Kadinhani**	**1.18**	**224**	*i* P	**Pg**	**00 20 28.9 -0.6**	
KDHN				*i* S	**Sg**	**00 20 44.9 0.0**	
KONT	**Konya--Tatoy**	**1.56**	**204**	*e*PN	**Pn**	**00 20 35.6 +0.6**	
KONT				*e*SN	**Sn**	**00 20 56.6 +1.2**	
YOZ	**Yozgat**	**1.69**	**80**	*e*PN	**Pn**	**00 20 34.7 -2.0**	

*DJA **26** 00:29:25, 099S×130.85E, h12km, MLv3.5/4*
IDC 26 00:28:57.0±5.6, 096S×13233E, h0km**, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, ML3.3**/1**, Error ellipse: s-maj=351.6km s-min=27.8km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.08**	**275**	P	Sg	00 29 34.0	+2.3
MSAI	**Masohi**	**4.14**	**235**	P	Px	00 30 12.6	
LBMI	**Labuha**	**4.84**	**274**	P	Px	00 30 18.3	
JAY	**Jayapura**	**8.51**	**101**	P	Px	00 31 49.0	
WRA	**Warramunga Arr**	**18.96**	**174**	P	Pn	00 33 19.6	-1.1
	0.1nm,0.3s,baz=353,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**22.62**	**176**	P	P	00 34 00.0	+0.4
	1.6nm,0.7s,baz=1.4,slow=12,SNR=17						
MKAR	**Makanchi Array**	**64.59**	**324**	P	P	00 39 36.4	+0.1
	0.4nm,0.7s,baz=115,slow=8.1,SNR=3.9						

*CSEM **26** 00:41:06.2±0.3, 4307N×4491E, h12km, mb3.3, Error ellipse: s-maj=21.8km s-min=5.2km az=142.0*
*ISCJB **26** 00:41:08.6±0.4, 4273N±002×4486E±003, h3km±4km, Error ellipse: s-maj=3.7km s-min=3.2km az=147.3*
*TIF **26** 00:41:09.8, 4269N×4469E, h13km±2km*
*MOS **26** 00:41:09.0±1.4, 4276N×4474E, h12km, mb4.6/1, Error ellipse: s-maj=7.5km s-min=5.5km az=110.8*
*NNC **26** 00:41:14.0±22.0, 43.11N×4529E, h23km±337km, mb3.3, Error ellipse: s-maj=314.4km s-min=128.5km az=81.0*
ISC 26 00:41:09.6±0.4, 4273N±002×**4485E**±003**, h4**km±4km**, n49, σ1°36/72, 10C-6D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.34**	**355**⇓	*i*PG	**Pg**	**00 41 17.4 +1.1**	
SNJR				*i* S	**Sg**	**00 41 24.1 +3.3**	
VLKR	**Vladikavkaz**	**0.34**	**338**⇓	*i*PG	**Pg**	**00 41 16.9 +0.6**	
VLKR				*i* S	**Sg**	**00 41 23.2 +2.4**	
ARNR	**Ardon**	**0.62**	**318**⇑	*i*PG	**Pg**	**00 41 21.5 -0.1**	
ARNR				*i* S	**Sg**	**00 41 30.9 +1.1**	
KORR	**Kora**	**0.68**	**302**⇑	*i*PG	**Pg**	**00 41 22.4 -0.3**	
KORR				*i* S	**Sg**	**00 41 32.2 +0.7**	
ZEI	**Tsey**	**0.70**	**274**⇑	*i*PG	**Pg**	**00 41 21.4 -1.7**	
ZEI				*e*S	**Sg**	**00 41 30.7 -1.5**	
KMSR	**Komsomolskaya**	**0.76**	**328**⇑	*i*PG	**Pg**	**00 41 24.8 +0.5**	
KMSR				*e*S	**Sg**	**00 41 36.5 +2.3**	
GOR	**Gori**	**0.92**	**217**	*e*PG	**Pg**	**00 41 27.1 -0.2**	
GOR	**Gori**	**0.92**	**217**	P	**Pg**	**00 41 27.1 -0.2**	
GOR				S	**Sg**	**00 41 40.1 +0.8**	
LSNR	**Lesken**	**0.94**	**306**⇑	*i*PG	**Pg**	**00 41 26.7 -0.9**	
LSNR				*i* S	**Sg**	**00 41 40.2 +0.5**	
DIGR	**Digorskoe uzhe**	**0.95**	**281**⇑	*i*PG	**Pg**	**00 41 26.0 -1.9**	
DIGR				*i* S	**Sg**	**00 41 37.8 -2.4**	
TBLG	**Delisi**	**1.00**	**185**	*e*PG	**Pg**	**00 41 28.7 -0.1**	
TBLG	**Delisi**	**1.00**	**185**	P	**Pg**	**00 41 28.7 -0.1**	
TBLG				S	**Sg**	**00 41 42.4 +0.8**	
TRKR	**Terskaya**	**1.00**	**355**⇑	*i*PG	**Pg**	**00 41 28.5 -0.3**	
TRKR				*i* S	**Sg**	**00 41 42.8 +1.0**	
BTLR	**Botlikh**	**1.01**	**93**	*i* PG	**Pg**	**00 41 27.2 -1.9**	
BTLR				*i* S	**Sg**	**00 41 41.4 -0.8**	
BTLR				pmax	pmax		
	comp=Z,147nm,0.3s						
MTA	**Mtatsminda**	**1.03**	**182**	*e*PG	**Pg**	**00 41 29.5 +0.1**	
MTA	**Mtatsminda**	**1.03**	**182**	P	**Pg**	**00 41 29.5 +0.1**	
MTA				S	**Sg**	**00 41 43.8 +1.0**	
ONI	**Oni**	**1.04**	**262**	*e*PG	**Pg**	**00 41 28.3 -1.3**	
ONI	**Oni**	**1.04**	**262**	P	**Pg**	**00 41 28.3 -1.4**	
ONI				S	**Sg**	**00 41 41.4 -1.8**	
PRTR	**Priterechnaya**	**1.11**	**338**⇓	*i*PG	**Pg**	**00 41 29.9 -1.0**	
PRTR				*i* S	**Sg**	**00 41 46.7 +1.5**	
DGRG	**David-gareji**	**1.33**	**163**	*e*PG	**Pg**	**00 41 35.9 +0.7**	
DGRG	**David-gareji**	**1.33**	**163**	P	**Pg**	**00 41 35.9 +0.9**	
DGRG				S	**Sg**	**00 41 56.8 +4.4**	
DLMR	**Dylym**	**1.35**	**75**	*i* PG	**Pn**	**00 41 30.0 -5.3**	
DLMR				pmax	pmax		
	comp=Z,230nm,0.2s						
XNZR	**Khunzakh**	**1.38**	**97**	*i* PG	**Pg**	**00 41 36.0 -0.1**	
XNZR				*i* S	**Sg**	**00 41 56.0 +2.0**	
XNZR				pmax	pmax		
	comp=Z,132nm,0.2s						
DBC	**Dubki**	**1.48**	**78**	*e*PG	**Pn**	**00 41 34.0 -3.1**	
DBC				pmax	pmax		
	comp=Z,104nm,0.2s						
GNBR	**Gunib**	**1.60**	**101**⇓	*i*PN	**Pn**	**00 41 41.0 +2.3**	
GNBR				*e*S	**Sn**	**00 42 03.2 +3.4**	
GNBR				pmax	pmax		
	comp=Z,44nm,0.2s						
BEYR	**Belyy Ugol+**	**1.96**	**312**	*i* PN	**Pn**	**00 41 40.3 -3.4**	
MAK	**Makhachkala**	**1.97**	**82**	*e*PN	**Pn**	**00 41 47.6 +3.8**	
MAK				*e*		00 42 17.9	
MAK				smax			
	comp=E,537nm,0.4s						
KIV	**Kislovodsk**	**2.00**	**309**	*e*PN	**Pn**	**00 41 40.3 -4.0**	
DOMR	**Dombai**	**2.43**	**285**	*i* PN	**Pn**	**00 41 45.5 -4.7**	
DIGO	**Kars**	**2.56**	**206**	*i* P	**Pn**	**00 41 53.0 +1.1**	
DIGO	**Kars**	**2.56**	**206**	*i* P	**Pn**	**00 41 53.0 +1.1**	
DIGO				*i* S	**Sn**	**00 42 27.7 +4.1**	
ARTV	**Artvin**	**2.67**	**236**	*i* P	**Pn**	**00 41 54.0 +0.6**	
ARTV	**Artvin**	**2.67**	**236**	*i* P	**Pn**	**00 41 54.0 +0.6**	
ARTV				*i* S	**Sn**	**00 42 31.0 +4.8**	
DAGI	**Agillar**	**2.74**	**234**	*i* P	**Pn**	**00 41 54.2 -0.2**	
DBOC	**Borcka**	**2.74**	**241**	*i* P	**Pn**	**00 41 54.2 -0.3**	
DBOC	**Borcka**	**2.74**	**241**	*i* P	**Pn**	**00 41 54.2 -0.3**	
DBOC				*i* S	**Sn**	**00 42 30.4 +2.3**	
DDEM	**Demirkent**	**2.95**	**233**	*i* P	**Pn**	**00 41 57.4 0.0**	
DDEM	**Demirkent**	**2.95**	**233**	*i* P	**Pn**	**00 41 57.4 +0.1**	
DDEM				*i* S	**Sn**	**00 42 35.6 +2.4**	
AKTO	**Aktyubinsk**	**11.88**	**45**⇓	*i*S	**Sn**	**00 46 04.0 -8.8**	
AB01	**Akbulak array**	**12.35**	**53**⇑	*i*P	**Pn**	**00 44 01.6 -4.6**	
	comp=E,0.5nm,0.3s,baz=241,slow=12						
AB01				⇑*i*S	**Sn**	**00 46 12.2 -12**	
	comp=E,1.3nm,0.5s,baz=247,slow=22						
AB31	**Akbulak array**	**12.35**	**53**	*e*P	**Pn**	**00 44 02.7 -3.5**	
OBN	**Obninsk**	**13.53**	**339**	*i* P	**Pn**	**00 44 17.8 -4.4**	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**16.30**	**28**	*i* P	**Pn**	**00 44 59.6 +0.4**	
KK31	**Karatay Array**	**18.78**	**80**⇑	P	**Pn**	**00 45 27.1 -3.1**	
	comp=Z,0.3nm,0.3s,baz=294,slow=13,SNR=8.4						
KK31	**Karatay Array**	**18.78**	**80**	P	**Pn**	**00 45 27.1 -3.1**	
	SNR=8.4						
KKAR	**Karatay Array**	**18.78**	**80**	*e*P	**Pn**	**00 45 29.8 -0.4**	
BRVK	**Borovoye**	**19.84**	**50**	*i* P	**Pn**	**00 45 42.5 -0.3**	
KURK	**Kurchatov**	**24.32**	**59**⇓	*i*P	**P**	**00 46 27.5 -0.7**	
KURK				pmax	pmax		
	comp=Z,4.0nm,2.4s						
MKAR	**Makanchi Array**	**26.72**	**68**	*e*P	**P**	**00 46 47.5 -2.5**	

*ISCJB **26** 00:48:48.6±0.3, 6.092N±003×149.35W±006, h53km±4km, mb3.5/5, Error ellipse: s-maj=5.0km s-min=4.4km az=19.2*
*IDC **26** 00:48:49.9±0.8, 61.11N×149.25W, h37km±6km, mb3.3/5, mb1 3.5/8, mb1mx3.4/24, mbtmp3.4/8, ML3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/20, Error ellipse: s-maj=

PNL	**Peninsula**	**5.12**	**100**	*e*Pn	**Pn**	**00 50 04.3**	**+0.1**
PNL				*e*Sn	**Sn**	**00 51 01.0**	**-1.0**
EGAK	**Eagle**	**5.41**	**41**	*e*Pn	**Pn**	**00 50 07.7**	**-0.3**
	32nm,0.6s						
EGAK				*e*Sn	**Sn**	**00 51 11.8**	**+2.9**
IM3	**Indian Mountai**	**5.45**	**341**	P	**Pn**	**00 50 08.9**	**+0.3**
DAWY	**Dawson**	**5.61**	**51**	*e*Pn	**Pn**	**00 50 10.7**	**-0.1**
DAWY				Sn	**Sn**	**00 51 13.3**	**-0.6**
COLD	**Coldfoot**	**6.35**	**357**	P	**Pn**	**00 50 21.5**	**+0.6**
BM3	**Burnt Mountain**	**6.86**	**16**	P	**Pn**	**00 50 28.1**	**+0.3**
WHY	**Whitehorse**	**7.11**	**86**	P	**Pn**	**00 50 30.5**	**-0.8**
SKAG	**Skagway**	**7.11**	**96**	*e*Pn	**Pn**	**00 50 32.6**	**+0.5**
TNA	**Tin City**	**9.55**	**307**	P	**Pn**	**00 51 05.0**	**+0.2**
DLBC	**Dease Lake**	**10.09**	**96**	Pn	**Pn**	**00 51 12.2**	**0.0**
	0.2nm,0.3s,baz=30,slow=19,SNR=5.8						
YKA	**Yellowknife Ar**	**16.45**	**69**	Pn	**Pn**	**00 52 35.7**	**-1.8**
	0.1nm,0.3s,baz=278,slow=10,SNR=19						
YBH	**Yreka Blue Hor**	**25.12**	**128**	LR	LR	01 03 05.3	
	comp=Z,78nm,20.1s,baz=107,slow=34						
NVAR	**Mina Array Bea**	**29.69**	**125**	PcP	PcP	00 57 55.9	+1.0
	0.1nm,0.3s,baz=326,slow=2.4,SNR=3.6						
TXAR	**Lajitas Array**	**43.69**	**115**	P	**P**	**00 56 51.4**	**+0.8**
	0.2nm,0.6s,mb3.0,baz=314,slow=5.8,SNR=3.8						
SONM	**Songino Array**	**55.68**	**308**	P	**P**	**00 58 21.8**	**+0.3**
	0.5nm,0.8s,mb3.6,baz=20,slow=4.6,SNR=3.2						
ZALV	**Zalesovo Beam**	**57.67**	**325**	P	**P**	**00 58 35.2**	**-0.4**
	0.3nm,0.4s,mb3.7,baz=23,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**57.67**	**325**	P	**P**	**00 58 35.2**	**-0.4**
MKAR	**Makanchi Array**	**64.80**	**323**	P	**P**	**00 59 22.5**	**-1.4**
	0.4nm,0.8s,mb3.5,baz=30,slow=7.4,SNR=2.8						
MKAR				pP	pP	00 59 33.4	-2.7
	0.5nm,0.5s,baz=33,slow=6.4,SNR=4.4						
MKAR				sP	sP	00 59 40.0	-1.0
	0.7nm,0.6s,baz=46,slow=6.1,SNR=4.9						
MKAR	**Makanchi Array**	**64.80**	**323**	P	**P**	**00 59 22.5**	**-1.4**
MKAR				pP	pP	00 59 33.4	-2.7
MKAR				sP	sP	00 59 40.0	-0.9
AKASG	**Malin Array Be**	**68.74**	**1**	P	**P**	**00 59 48.5**	**-0.4**
	0.2nm,0.3s,mb3.6,baz=360,slow=6.7,SNR=2.5						
AKASG				pP	pP	00 59 59.4	-1.8
	1.3nm,0.5s,baz=360,slow=6.6,SNR=3.0						
AKASG	**Malin Array Be**	**68.74**	**1**	P	**P**	**00 59 48.5**	**-0.4**
AKASG				pP	pP	00 59 59.4	-1.8

*IDC **26** 00:52:58.5±1.3,242S×14005E,h0km,mb4.1/5,mb1 4.3/8, mb1mx4.1/15,mbtmp4.2/8,ML4.2/2,MS3.7/7,Ms1 3.6/7, ms1mx3.4/15,Error ellipse: s-maj=49.9km s-min=18.1km az=70.0*

*ISCJB **26** 00:53:01.5±1.2,268S±004×14043E±008,h35km±11km, mb4.1/7,MS3.6/6,Error ellipse: s-maj=13.6km s-min=6.4km az=178.5*

*DJA **26** 00:53:03,284S×14044E,h34km,MLv4.9/3*

*NEIC **26** 00:53:04.6±1.4,273S×14052E,h56km±15km,mb4.1/4, Error ellipse: s-maj=15.6km s-min=9.3km az=84.0*

NEIC Felt [III] at Jayapura.

ISC 26 00:53:04.3±0.7,273S±004×14040E±007,h45km±8km,n46, σ1§22/40,mb4.1/7,MS3.6/6,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.37**	**56**	P	**Pn**	**00 53 14.7**	**+1.0**
BAKI	**Biak**	**4.55**	**290**	P	**Pn**	**00 54 10.1**	**-0.5**
MMPI	**Merauke**	**5.70**	**180**	P	**Pn**	**00 54 25.9**	**-0.6**
SWI	**Sorong**	**9.32**	**281**	P	**Pn**	**00 55 15.9**	**-0.2**
PMG	**Port Moresby**	**9.45**	**135**	Pn	**Pn**	**00 55 21.9**	**+4.1**
	0.3nm,0.3s,baz=287,slow=11,SNR=2.9						
PMG	**Port Moresby**	**9.45**	**135**	Pn	**Pn**	**00 55 16.0**	**-1.8**
	13nm,0.8s						
PMG	**Port Moresby**	**9.45**	**135**	P	**Pn**	**00 55 13.4**	**-4.4**
COEN	**Coen**	**11.49**	**166**	Pn	**Pn**	**00 55 46.1**	**+0.3**
	34nm,1.3s						
GUMO	**Guam**	**16.81**	**15**	LR	LR	01 02 28.1	
	comp=Z,17nm,21.4s,baz=263,slow=34						
GUMO	**Guam**	**16.81**	**15**	P	**Pn**	**00 56 55.8**	**-0.8**
DAV	**Davao City (W)**	**17.70**	**303**	*e*Pn	**Pn**	**00 57 08.2**	**+0.6**
WRAB	**Tennant Creek**	**18.09**	**199**	*e*Pn	**Pn**	**00 57 14.1**	**+1.7**
	8.9nm,0.8s						
WRAB				*e*Sn	**Sn**	**01 00 32.7**	**-0.7**
WB2	**Warramunga Arr**	**18.10**	**199**	*e*P	**Pn**	**00 57 14.2**	**+1.7**
WB2	**Warramunga Arr**	**18.10**	**199**	*e*Pn	**Pn**	**00 57 11.2**	**-1.3**
WB2				*e*Sn	**Sn**	**01 00 30.4**	**-3.3**
WRA	**Warramunga Arr**	**18.10**	**199**	P	**Pn**	**00 57 13.4**	**+0.9**
	1.0nm,0.3s,baz=21,slow=13,SNR=13						
WRA				S	**S**	**01 00 30.9**	**-6.7**
	0.2nm,0.3s,baz=20,slow=22,SNR=4.5						
CTA	**Charters Tower**	**18.18**	**162**	P	**Pn**	**00 57 19.1**	**+5.6**
	0.4nm,0.3s,baz=6.8,slow=12,SNR=5.7						
CTA				LR	LR	01 04 58.9	
	comp=Z,322nm,18.9s,baz=49,slow=39						
CTAO	**Charters Tower**	**18.18**	**162**	Pn	**Pn**	**00 57 12.0**	**-1.5**
FITZ	**Fitzroy Crossi**	**21.04**	**222**	*e*P	**P**	**00 57 44.2**	**-0.3**
	14nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.04**	**222**	*e*P	**P**	**00 57 44.2**	**-0.4**
	11nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**21.74**	**196**	P	**P**	**00 57 53.5**	**+1.5**
	5.4nm,0.6s,mb4.1,baz=24,slow=12,SNR=52						
ASAR				S	**S**	**01 01 52.2**	**+2.1**
	0.7nm,0.8s,baz=17,slow=22,SNR=4.1						
STKA	**Stephens Creek**	**29.02**	**178**	P	**P**	**00 59 03.4**	**+3.4**
	10.0nm,1.3s,mb4.4,baz=325,slow=7.5,SNR=6.1						
STKA				LR	LR	01 12 54.4	
	comp=Z,252nm,18.4s,MS3.9,baz=186,slow=41						
STKA	**Stephens Creek**	**29.02**	**178**	*e*P	**P**	**00 59 01.9**	**+1.9**
	4.5nm,1.2s,mb4.1						
STKA	**Stephens Creek**	**29.02**	**178**	*e*P	**P**	**00 59 00.2**	**+0.1**
	2.7nm,1.4s,mb3.8						
STKA				LR	LR	01 12 54.4	
NACB	**Ninganchiao**	**32.39**	**327**	*e*P	**P**	**00 59 31.1**	**+1.1**
KSRS	**Korea Array**	**41.62**	**345**	LR	LR	01 15 31.4	
	comp=Z,53nm,19.1s,MS3.4,baz=162,slow=33						
CMAR	**Chiang Mai Arr**	**45.91**	**299**	P	**P**	**01 01 20.1**	**-2.7**
	1.2nm,0.7s,mb3.9,baz=121,slow=6.4,SNR=9.6						
CHTO	**Chiang Mai**	**46.05**	**299**	*e*P	**P**	**01 01 23.7**	**-0.3**
	1.8nm,0.4s,mb4.3						
LSA	**Lhasa**	**57.04**	**308**	*e*P	**P**	**01 02 47.6**	**+1.6**
PETK	**Petropavlovsk-**	**57.50**	**12**	LR	LR	01 23 12.4	
	comp=Z,38nm,21.6s,MS3.5,baz=81,slow=32						
SONM	**Songino Array**	**58.47**	**334**	LR	LR	01 25 42.1	
	comp=Z,62nm,18.2s,MS3.8,baz=58,slow=34						
PPT	**Papete**	**70.15**	**108**	LR	LR	01 29 18.5	
	comp=Z,82nm,19.6s,MS4.0,baz=349,slow=31						
MK31	**Makanchi Array**	**70.83**	**322**	*e*P	**P**	**01 04 16.1**	**-0.3**
MKAR	**Makanchi Array**	**70.83**	**322**	P	**P**	**01 04 15.3**	**-1.0**
	2.3nm,0.9s,mb4.1,baz=111,slow=6.6,SNR=11						
MKAR	**Makanchi Array**	**70.83**	**322**	P	**P**	**01 04 15.3**	**-1.0**
ZALV	**Zalesovo Beam**	**72.80**	**329**	P	**P**	**01 04 25.5**	**-2.5**
	0.7nm,0.6s,mb3.8,baz=90,slow=5.9,SNR=5.0						
ZALV				LR	LR	01 36 33.2	
	comp=Z,15nm,19.8s,MS3.3,baz=202,slow=36						
KURK	**Kurchatov**	**74.70**	**324**	P	**P**	**01 04 39.7**	**+0.5**
EKS2	**Erkin-Say**	**74.90**	**315**	P	**P**	**01 04 41.4**	**+0.8**
SBA	**Scott Base**	**76.36**	**174**	*e*P	**P**	**01 04 45.1**	**-3.2**
MCK	**McKinley**	**83.98**	**25**	P	**P**	**01 05 29.2**	**-0.3**
COLA	**College**	**84.79**	**24**	*e*P	**P**	**01 05 33.0**	**-0.6**
KIV	**Kislovodsk**	**97.44**	**314**	*e*P	**P**	**01 06 34.6**	**+1.2**
MALT	**Malatya**	**101.08**	**308**	*e*Pdif	Pdif	01 06 50.1	+0.8
LBTB	**Lobatse**	**111.11**	**242**	PKiKP	PKiKP	01 11 31.8	-1.9
TSUM	**Tsumeb**	**119.74**	**246**	PKPdf	PKPdf	01 11 49.4	-1.0
DBIC	**Dimbokro**	**145.16**	**278**	PKP	PKPdf	01 12 36.3	-1.8
	3.7nm,0.6s,baz=74,slow=4.5,SNR=20						
DBIC	**Dimbokro**	**145.16**	**278**	*e*PKPbc	PKPbc	01 12 36.8	-0.9

IDC 26 00:59:29.4±5.1,224S×13917E,h0km,mb3.4/3,mb1 3.7/4, mb1mx3.5/13,mbtmp3.5/4,ML3.8/1,Error ellipse: s-maj=224.5km s-min=26.0km az=88.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.21**	**195**	P	Pn	01 03 43.3	-0.5
	0.3nm,0.3s,baz=14,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**21.90**	**193**	P	P	01 04 24.4	+0.2
	0.8nm,0.7s,baz=17,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**69.70**	**322**	P	P	01 10 42.2	+1.2
	0.2nm,0.3s,baz=111,slow=8.0,SNR=7.3						
ZALV	**Zalesovo Beam**	**71.77**	**330**	P	P	01 10 52.6	-0.9
	0.3nm,0.5s,baz=108,slow=4.7,SNR=2.9						

IDC 26 01:32:22.6±5.1,2690N×9289E,h0km,mb3.3/3,mb1 3.6/3, mb1mx3.2/22,mbtmp3.3/3,Error ellipse: s-maj=422.8km s-min=31.7km az=61.0,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.61**	**215**	*e*PG	Pg	01 32 50.0	-3.5
SHL				*e*SG	Sg	01 33 05.5	-8.8
MKAR	**Makanchi Array**	**21.55**	**340**	P	P	01 37 13.5	+0.1
	0.1nm,0.3s,baz=151,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**61.50**	**135**	P	P	01 42 41.6	+0.2
	0.6nm,0.5s,baz=324,slow=7.2,SNR=3.6						
ASAR	**Alice Springs**	**64.01**	**138**	P	P	01 42 58.1	0.0
	0.2nm,0.5s,baz=320,slow=6.7,SNR=6.9						

GUC 26 01:43:24.7±0.5,2292S×7017W,h49km±3km,MD3.5, ML3.2,6C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.32**	**235**	⇑*i*P	Pn	01 43 33.7	-0.2
MECH				*i* S	Sn	01 43 40.9	+0.5
MECH				AML	AML	01 43 42.1	
	comp=N,4μm,0.2s						
CEN1	**Los Morros**	**0.47**	**183**	*e*P	Pn	01 43 37.4	+1.9
CEN1				*i* S	Sn	01 43 47.8	+4.5
CEN1				AML	AML	01 43 48.1	
	comp=N,1μm,0.6s						
PECH	**Pedro de Valdi**	**0.56**	**55**	⇑*i*P	Pn	01 43 37.2	+0.6
PECH				*i* S	Sn	01 43 46.6	+1.4
PECH				AML	AML	01 43 47.0	
	comp=E,5μm,0.6s						
ANCH	**Antofagasta**	**0.79**	**196**	⇑*i*P	Pn	01 43 39.9	+0.3
MACH	**Maria Elena**	**0.81**	**28**	⇑*i*P	Pn	01 43 40.7	+0.7
MACH				*i* S	Sn	01 43 52.7	+1.7
TOCH	**Tocopilla**	**0.82**	**358**	⇑*i*P	Pn	01 43 40.1	+0.1
TOCH				*i* S	Sn	01 43 52.2	+1.0
TOCH				AML	AML	01 43 53.4	
	comp=E,2μm,0.3s						
LVC	**Limon Verde**	**1.20**	**75**	⇓*i*P	Pn	01 43 46.5	+1.4
LVC				*i* S	Sn	01 44 02.5	+2.2
LVC				AML	AML	01 44 03.7	
	comp=N,640nm,0.4s						
CPN1	**Cerro Paranal**	**1.71**	**187**	AML	AML	01 44 18.9	
	comp=N,177nm,0.6s						
PB01	**Plate Boundary**	**1.97**	**19**	⇑*i*P	Pn	01 43 56.7	+1.0
PB01				*i* S	Sn	01 44 21.1	+1.9
PB01				AML	AML	01 44 27.7	
	comp=E,202nm,0.3s						

IDC 26 02:04:44.2±20.0,2128S×17937E,h416km±233km, mb3.0/5,mb1 3.4/5,mb1mx3.2/15,mbtmp3.0/5,Error ellipse: s-maj=197.5km s-min=53.9km az=169.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.95**	**258**	P	P	02 11 56.3	-0.6
	0.3nm,0.4s,baz=95,slow=7.5,SNR=8.0						
WRA	**Warramunga Arr**	**42.07**	**263**	P	P	02 11 58.5	+0.7
	0.6nm,0.3s,baz=95,slow=8.2,SNR=4.6						
NVAR	**Mina Array Bea**	**83.28**	**44**	P	P	02 16 27.3	+1.5
	0.3nm,0.8s,baz=238,slow=8.4,SNR=2.9						
TXAR	**Lajitas Array**	**89.55**	**58**	P	P	02 16 55.3	-0.8
	0.5nm,0.7s,baz=211,slow=6.4,SNR=8.3						
PDAR	**Pinedale Array**	**91.22**	**44**	P	P	02 17 04.2	+0.7
	0.3nm,0.7s,baz=212,slow=3.2,SNR=2.9						
HFS	**Hagfors**	**139.87**	**349**	PKhKP		02 23 16.9	
	1.1nm,0.3s,baz=72,slow=4.7,SNR=18						
EKA	**Eskdalemuir Ar**	**145.94**	**3**	PKPbc	PKPbc	02 23 34.9	-0.8
	1.3nm,0.8s,baz=12,slow=4.4,SNR=3.8						

*TRN **26** 02:14:07.5, 1908N×6476W,h12km*

*NEIC **26** 02:14:09.0, 1919N×6453W,h59km,MD3.5(RSPR),After RSPR.*

*RSPR **26** 02:14:09.0, 1919N×6453W,h59km±12km,MD3.5/14, MD3.5/14*

ISC 26 02:14:08.7±1.4,1923N±008×6458W±008,h35km,n22, σ0§49/36,13C-9D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.81**	**183**	⇓*e*P	**Pn**	**02 14 23.0**	**-0.6**
TBVI	**Tortola**	**0.81**	**183**	⇓*e*P	**Pn**	**02 14 23.4**	**-0.3**
TBVI				*e*S	**Sn**	**02 14 34.8**	**+0.3**
TBVI	**Tortola**	**0.81**	**183**	⇓*e*P	**Pn**	**02 14 23.0**	**-0.6**
TBVI				*e*S	**Sn**	**02 14 34.8**	**+0.3**
STVI	**Saint Thomas**	**0.95**	**202**	⇑*e*P	**Pn**	**02 14 24.8**	**-0.7**
STVI				*e*S	**Sn**	**02 14 37.7**	**-0.1**
MTP	**Monte Pirata**	**1.46**	**219**	⇑*e*P	**Pn**	**02 14 32.5**	**-0.1**
MTP	**Monte Pirata**	**1.46**	**219**	⇑*e*P	**Pn**	**02 14 32.5**	**-0.1**
MTP				*e*S	**Sn**	**02 14 50.5**	**0.0**
MTP	**Monte Pirata**	**1.46**	**219**	⇑*e*P	**Pn**	**02 14 32.5**	**-0.1**
MTP				*e*S	**Sn**	**02 14 50.5**	**0.0**
CDVI	**St. Croix**	**1.48**	**187**	⇑*e*P	**Pn**	**02 14 34.4**	**+1.5**
CBYP	**Canovanas**	**1.54**	**232**	⇑*e*P	**Pn**	**02 14 33.4**	**-0.4**
HUMP	**Col San Antoni**	**1.62**	**228**	⇓*e*P	**Pn**	**02 14 34.2**	**-0.6**
HUMP				*e*S	**Sn**	**02 14 54.3**	**-0.2**
CPD	**Cerro la Pandu**	**1.74**	**227**	⇓*e*P	**Pn**	**02 14 36.5**	**0.0**
CPD				*e*S	**Sn**	**02 14 57.2**	**-0.2**
CPD	**Cerro la Pandu**	**1.74**	**227**	⇓*e*P	**Pn**	**02 14 36.5**	**0.0**
CPD				*e*S	**Sn**	**02 14 57.2**	**-0.2**
SJG	**San Juan**	**1.86**	**233**	⇑*e*P	**Pn**	**02 14 37.5**	**-0.7**
SJG				*e*S	**Sn**	**02 15 00.5**	**+0.1**
SJG	**San Juan**	**1.86**	**233**	⇑*e*P	**Pn**	**02 14 37.5**	**-0.7**
SJG	**San Juan**	**1.86**	**233**	⇑*e*P	**Pn**	**02 14 37.9**	**-0.2**
SJG				*e*S	**Sn**	**02 15 00.5**	**+0.1**
SJG				*e*S	**Sn**	**02 15 00.9**	**+0.5**
SJG	**San Juan**	**1.86**	**233**	⇑*e*P	**Pn**	**02 14 37.9**	**-0.2**
SJG				*e*S	**Sn**	**02 15 00.9**	**+0.5**
CELP	**Cerrillos**	**2.22**	**239**	⇓*e*P	**Pn**	**02 14 43.0**	**-0.1**
OBIP	**Obispado Ponce**	**2.26**	**239**	⇑*e*P	**Pn**	**02 14 43.7**	**+0.1**
ICMI	**Isla Caja Muer**	**2.27**	**234**	⇑*e*P	**Pn**	**02 14 43.7**	**-0.1**
LSP	**Las Mesas**	**2.60**	**247**	⇑*e*P	**Pn**	**02 14 49.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**2.69**	**243**	⇓*e*P	**Pn**	**02 14 50.0**	**+0.4**
CRPR				*e*S	**Sn**	**02 15 21.7**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.69**	**243**	⇓*e*P	**Pn**	**02 14 50.0**	**+0.4**
CRPR				*e*S	**Sn**	**02 15 21.1**	**+0.1**

*ISCJB **26** 02:17:35.8±4.5,47S±02×1526E±03,h72km±36km, mb4.0/7,Error ellipse: s-maj=60.3km s-min=23.2km az=30.8*

*NEIC **26** 02:17:39.8±2.9,467S×15245E,h88km±20km,mb4.2/2, Error ellipse: s-maj=52.8km s-min=14.7km az=111.0*

*IDC **26** 02:17:41.4±5.5,462S×15230E,h96km±44km,mb3.7/4, mb1 3.7/5,mb1mx3.4/16,mbtmp3.6/5,MS2.5/1,Ms1 2.5/1, ms1mx2.1/28,Error ellipse: s-maj=72.1km s-min=23.9km az=113.0*

ISC 26 02:17:39.2±3.9,47S±02×1526E±03,h86km±29km,n12, σ0§42/11,mb4.0/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.12**	**229**	P	**Pn**	**02 19 20.2**	**-0.6**
	0.6nm,0.3s,baz=36,slow=17,SNR=2.4						
PMG				S	**Sn**	**02 20 40.9**	**+0.6**
	2.6nm,0.3s,baz=86,slow=22,SNR=6.2						
PMG				LR	LR	02 22 06.8	
	comp=Z,39nm,19.4s,baz=48,slow=38						
WRAB	**Tennant Creek**	**23.33**	**228**	*e*P	**P**	**02 22 39.8**	**-0.1**
	5.1nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**23.33**	**228**	*e*P	**P**	**02 22 39.6**	**-0.4**
WB2	**Warramunga Arr**	**23.33**	**228**	*e*P	**P**	**02 22 39.8**	**-0.2**
WRA	**Warramunga Arr**	**23.34**	**228**	P	**P**	**02 22 40.1**	**+0.1**
	3.4nm,0.4s,mb4.0,baz=50,slow=9.3,SNR=26						
ASAR	**Alice Springs**	**26.07**	**222**	P	**P**	**02 23 05.0**	**+0.2**
	0.8nm,0.3s,mb3.6,baz=55,slow=9.2,SNR=42						
STKA	**Stephens Creek**	**28.93**	**200**	P	**P**	**02 23 30.7**	**+0.4**
	0.6nm,0.8s,mb3.3,baz=20,slow=14,SNR=3.8						
FITZ	**Fitzroy Crossi**	**29.51**	**241**	*e*P	**P**	**02 23 35.1**	**-0.5**
	5.8nm,0.8s,mb4.3						
FORT	**Forrest**	**34.72**	**219**	*e*P	**P**	**02 24 20.7**	**-0.4**
	2.0nm,0.3s,mb4.4						
PETK	**Petropavlovsk-**	**57.76**	**4**	P	**P**	**02 27 21.6**	**+0.5**
	2.6nm,0.9s,mb4.3,baz=148,slow=7.7,SNR=5.8						
TOA0	**Torodi Ar. Sit**	**150.07**	**288**	*e*PKPbc	PKPbc	02 37 21.1	+0.2
TORD	**Torodi Ar. Bea**	**150.07**	**288**	PKPbc	PKPbc	02 37 21.3	+0.4
	0.5nm,0.3s,baz=88,slow=2.0,SNR=22						

MAN 26 02:23:14,984N×12211E,h95km,mb4.4,ML3.2,MS3.0, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.92**	**31**	*e*P	Pn	02 23 29.9	-3.2
SNPH	**Sibulan**	**1.22**	**114**	*i* P	Pn	02 23 37.5	+0.9
CUYO	**Cuyo Island**	**1.47**	**313**	*e*P	Pn	02 23 37.0	-2.6
CUYO				*e*S	Sn	02 23 53.8	-5.2
TBP	**Tagbilaran**	**1.74**	**95**	*e*P	Pn	02 23 44.8	+1.8
TBP				*e*S	Sn	02 24 10.0	+4.9
RCP	**Roxas**	**1.82**	**20**	⇓*e*P	Pn	02 23 45.7	+1.5
RCP				*e*S	Sn	02 24 08.0	+1.0
LLP	**Lapu-Lapu**	**1.89**	**75**	*e*P	Pn	02 23 46.6	+1.6
LLP				*e*S	Sn	02 24 09.7	+1.1
PAGZ	**Pagadian**	**2.34**	**147**	*e*P	Pn	02 23 48.4	-2.5
PAGZ				*e*S	Sn	02 24 23.5	+4.3
OTRP	**Odiongan**	**2.51**	**358**	*e*P	Pn	02 23 51.7	-1.4
SJMP	**San Jose**	**2.78**	**340**	*e*P	Pn	02 23 53.8	-3.0
ENPP	**El Nido**	**2.97**	**298**	*e*P	Pn	02 23 58.2	-0.9
BUKP	**Musuan**	**3.51**	**123**	*e*P	Pn	02 24 11.8	+5.3

*CSEM **26** 02:23:45.8±0.2,3693N×29.11E,h2km,MD2.8,Error ellipse: s-maj=6.8km s-min=3.6km az=9.0*

*ISK **26** 02:23:46.0,3699N×29.12E,h12km,MD2.7*

*ISCJB **26** 02:23:47.3±0.6,3694N±004×29.11E±004,h10km,Error ellipse: s-maj=6.1km s-min=4.5km az=160.8*

*DDA **26** 02:23:48.4,3701N×2930E,h7km±5km,Md2.8*

ISC 26 02:23:47.5±0.7,3697N±005×2909E±004,h4km±11km,n8, σ1§06/14,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.40**	**256**	*i* P	**Pg**	**02 24 00.5**	**+5.2**
TURN				*i* S	**Sg**	**02 24 12.7**	**+12**
DALT	**Dalyan (Mudla)**	**0.41**	**241**	*e*PG	**Pg**	**02 23 55.1**	**-0.3**
DALT				*e*SG	**Sg**	**02 24 02.2**	**+1.4**
GOLH	**Golhisar**	**0.46**	**55**	*i* P	**Pg**	**02 23 55.0**	**-1.4**
GOLH				*i* S	**Sg**	**02 24 03.6**	**+1.1**
YER	**Yerkesik**	**0.67**	**285**	*e*PG	**Pg**	**02 23 59.7**	**-0.6**
ELL	**Elmali**	**0.69**	**108**	*e*PG	**Pg**	**02 23 59.7**	**-1.1**
ELL				*e*SG	**Sg**	**02 24 09.2**	**-0.6**
AKAS	**Kas**	**0.84**	**150**	*i* P	**Pg**	**02 24 03.4**	**-0.2**
AKAS				*i* S	**Sg**	**02 24 16.4**	**+1.7**
DAT	**Datca**	**1.24**	**259**	*e*PN	**Pn**	**02 24 10.1**	**-1.4**
KHAL	**Karahalli**	**1.44**	**13**	*i* P	**Pn**	**02 24 14.6**	**+0.3**
KHAL				*i* S	**Sb**	**02 24 34.6**	**+1.2**

*NNC **26** 02:40:06.5±4.7,4328N×8341E,h0km,mb2.9,mpv2.6, Error ellipse: s-maj=41.0km s-min=31.9km az=127.0*

BJI 26 02:40:03.2,4306N×8366E,h13km,ML2.9,2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.04**	**74**	PG	Pn	02 40 57.0	+6.1
WMQ				SG	Sn	02 41 34.0	+6.9
WMQ				Smax			
	comp=N,55nm,0.7s						
WMQ				Smax			
	comp=E,37nm,0.8s						
MK31	**Makanchi Array**	**3.86**	**346**	Pn	Pn	02 41 03.9	+1.7
	comp=E,0.2nm,0.3s,baz=154,slow=14,SNR=58						
MK31				Pg	Pg	02 41 12.3	-4.8
	comp=E,1.4nm,0.3s,baz=157,slow=16,SNR=32						
MK31				Lg		02 42 00.5	
	comp=E,8.6nm,0.5s,baz=161,slow=29,SNR=6.6						
TKM2	**Tokmak 2**	**5.92**	**271**	⇑Lg	Sg	02 43 06.1	-6.9
	comp=E,13nm,1.1s						
KURBB	**Kurchatov Arra**	**8.34**	**337**	⇑Lg	Sn	02 44 24.0	+46
	comp=E,0.6nm,1.0s						
KURK	**Kurchatov**	**8.40**	**338**	⇓Lg	Sn	02 44 23.3	+44
	comp=E,0.1nm,0.3s						

*IDC **26** 02:44:17.5±3.1,245S×14032E,h0km,mb3.7/3,mb1 4.0/4, mb1mx3.7/13,mbtmp3.8/4,ML3.9/1,MS3.1/1,Ms1 3.1/1, ms1mx2.7/13,Error ellipse: s-maj=97.7km s-min=26.9km az=83.0*

*ISCJB **26** 02:44:22.4±3.8,255S±01×1399E±008,h33km,mb3.7/3, Error ellipse: s-maj=110.1km s-min=15.8km az=173.6*

*NEIC **26** 02:44:22.7±2.0,247S×14025E,h35km,mb3.6/1,Error ellipse: s-maj=68.4km s-min=13.6km az=85.0*

**ISC 26 02:44:24.8±4.1,25S

KDHN				*i* S		**Sb**	**03 26 50.1**	**+0.4**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN		**Pn**	**03 26 41.6**	**-1.2**

*IDC **26** 03:29:47.7±0.9, 9.14N×12626E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/18, mbtmp3.9/7, Error ellipse: s-maj=80.0km s-min=17.4km az=67.0*
*NEIC **26** 03:29:52.9±0.5, 9.16N×12627E, h35km, mb4.4/3, Error ellipse: s-maj=46.2km s-min=10.0km az=69.0*
*ISCJB **26** 03:29:56.7±1.1, 9.15N±005×1263E±0.1, h88km±9km, mb4.0/9, Error ellipse: s-maj=17.7km s-min=7.8km az=165.9*
ISC 26 03:29:57.7±1.1, 914N±005×1263E±01, h79km±10km, n25, σ0$88/27, mb4.0/9, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BUTP	**Butuan**	**0.73**	**256**	*e*P		**Pn**	**03 30 12.0**	**-1.6**
BUTP				*e*S		**Sn**	**03 30 24.1**	**-1.3**
MSLP	**Maasin**	**1.76**	**304**	*e*P		**Pn**	**03 30 27.3**	**+0.8**
BUKP	**Musuan**	**1.78**	**225**	*e*P		**Pn**	**03 30 26.9**	**+0.2**
BUKP				*e*S		**Sn**	**03 30 49.6**	**+0.9**
PLP	**Palo**	**2.42**	**326**	⇓*i*P		**Pn**	**03 30 35.3**	**+0.1**
PLP				*i* S		**Sn**	**03 31 03.6**	**-0.3**
TBP	**Tagbilaran**	**2.51**	**283**	*e*P		**Pn**	**03 30 37.2**	**+0.8**
TBP				*e*S		**Sn**	**03 31 05.6**	**-0.5**
OCLP	**Ormoc**	**2.55**	**318**	*e*P		**Pn**	**03 30 38.4**	**+1.4**
LLP	**Lapu-Lapu**	**2.62**	**297**	⇓*e*P		**Pn**	**03 30 39.2**	**+1.3**
LLP				*e*S		**Sn**	**03 31 08.1**	**-0.7**
PAGZ	**Pagadian**	**3.20**	**247**	*e*P		**Pn**	**03 30 47.0**	**+1.3**
GUIM	**Jordan**	**3.98**	**292**	*e*P		**Pn**	**03 30 56.0**	**-0.4**
WRA	**Warramunga Arr**	**29.95**	**165**	P		**P**	**03 35 57.8**	**-0.9**
	0.3nm,0.6s,mb3.1,baz=348,slow=9.4,SNR=4.5							
ASAR	**Alice Springs**	**33.43**	**167**	P		**P**	**03 36 28.4**	**-0.8**
	0.2nm,0.3s,mb3.4,baz=348,slow=7.3,SNR=13							
ASAR				PcP		PcP	03 39 09.7	+0.7
	0.3nm,0.6s,baz=360,slow=4.1,SNR=4.7							
FORT	**Forrest**	**39.73**	**178**	*e*P		**P**	**03 37 23.1**	**+0.5**
	7.6nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**43.32**	**161**	P		**P**	**03 37 52.2**	**+0.2**
	1.5nm,0.4s,mb4.1,baz=331,slow=7.0,SNR=6.8							
STKA	**Stephens Creek**	**43.32**	**161**	*e*P		**P**	**03 37 51.9**	**0.0**
	1.1nm,0.3s,mb4.1							
STKA	**Stephens Creek**	**43.32**	**161**	P		**P**	**03 37 52.2**	**+0.2**
MK31	**Makanchi Array**	**52.96**	**323**	*e*P		**P**	**03 39 06.2**	**+0.1**
MKAR	**Makanchi Array**	**52.96**	**323**	P		**P**	**03 39 06.5**	**+0.4**
	1.8nm,0.7s,mb4.2,baz=124,slow=8.1,SNR=19							
ZALV	**Zalesovo Beam**	**55.64**	**332**	P		**P**	**03 39 23.5**	**-2.0**
	0.7nm,0.3s,mb4.2,baz=134,slow=8.3,SNR=3.3							
KURK	**Kurchatov**	**57.03**	**326**	P		**P**	**03 39 35.4**	**0.0**
	1.8nm,0.6s,mb4.3,baz=127,slow=6.8,SNR=7.3							
KURK	**Kurchatov**	**57.03**	**326**	*e*P		**P**	**03 39 34.8**	**-0.6**
	3.4nm,0.8s,mb4.4							
BRVK	**Borovoye**	**62.70**	**326**	*e*P		**P**	**03 40 13.9**	**-0.2**
	1.9nm,0.8s,mb4.1							
YKA	**Yellowknife Ar**	**94.75**	**24**	P		**P**	**03 43 11.1**	**+0.9**
	0.1nm,0.6s,mb3.4,baz=296,slow=4.6,SNR=3.6							
TORD	**Torodi Ar. Bea**	**120.74**	**291**	PKP		PKPdf	03 48 41.7	0.0
	0.5nm,0.9s,baz=57,slow=1.9,SNR=3.1							
PLCA	**Paso Flores**	**145.15**	**157**	PKPbc		PKPbc	03 49 27.4	+1.3
	0.8nm,0.7s,baz=228,slow=4.2,SNR=3.1							
PLCA	**Paso Flores**	**145.15**	**157**	PKPbc		PKPbc	03 49 27.4	+1.3

IDC 26 03:39:05.5±64.0, 1403S×16692E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=1089.0km s-min=108.5km az=64.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
STKA	**Stephens Creek**	**29.19**	**228**	P		P	03 45 09.0	+0.1
	1.3nm,0.4s,baz=48,slow=9.6,SNR=11							
WRA	**Warramunga Arr**	**31.67**	**255**	P		P	03 45 31.2	+0.3
	0.6nm,0.5s,baz=86,slow=8.7,SNR=4.4							
ASAR	**Alice Springs**	**32.61**	**248**	P		P	03 45 38.9	-0.3
	0.5nm,0.3s,baz=76,slow=9.3,SNR=33							

*ISCJB **26** 03:51:22.8±1.0, 2073S±009×17844W±009, h545km±15km, mb3.9/18, Error ellipse: s-maj=15.9km s-min=10.6km az=136.6*
*NEIC **26** 03:51:24.1±1.0, 2073S×17834W, h556km±12km, mb4.2/7, Error ellipse: s-maj=14.3km s-min=9.3km az=139.0*
*IDC **26** 03:51:24.1±1.7, 2073S×17835W, h550km±19km, mb3.4/13, mb1 3.6/15, mb1mx3.6/20, mbtmp3.5/15, Error ellipse: s-maj=18.4km s-min=12.8km az=135.0*
ISC 26 03:51:23.1±1.0, 2072S±009×17837W±009, h537km±14km, n36, σ0$71/33, mb3.9/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AFI	**Afiamalu**	**9.25**	**44**	P		**P**	**03 53 34.1**	**+0.9**
	9.5nm,0.3s,baz=0.6,slow=5.2,SNR=15							
AFI				S		**S**	**03 55 19.1**	**-0.9**
	2.7nm,0.3s,baz=197,slow=20,SNR=3.6							
URZ	**Urewera**	**17.91**	**192**	P		**P**	**03 54 59.4**	**-1.2**
	5.5nm,0.3s,baz=299,slow=2.1,SNR=23							
RPZ	**Rata Peaks**	**24.57**	**199**	P		**P**	**03 56 01.5**	**+1.1**
	6.9nm,0.4s,mb4.6,baz=61,slow=11,SNR=5.4							
CTA	**Charters Tower**	**33.12**	**265**	P		**P**	**03 57 15.9**	**+0.8**
	8.1nm,0.5s,mb4.5,baz=104,slow=10,SNR=13							
CTA	**Charters Tower**	**33.12**	**265**	*e*P		**P**	**03 57 15.4**	**+0.3**
	4.4nm,0.4s,mb4.3							
CTAO	**Charters Tower**	**33.12**	**265**	*e*P		**P**	**03 57 15.3**	**+0.2**
	3.0nm,0.4s,mb4.2							
PMG	**Port Moresby**	**35.06**	**284**	P		**P**	**03 57 31.8**	**+0.4**
	21nm,0.8s,mb4.7,baz=86,slow=10,SNR=5.8							
PMG	**Port Moresby**	**35.06**	**284**	*e*P		**P**	**03 57 31.6**	**+0.2**
	11nm,0.8s,mb4.4							
COEN	**Coen**	**37.25**	**274**	*e*P		**P**	**03 57 49.9**	**+0.5**
	4.3nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**37.38**	**244**	P		**P**	**03 57 51.0**	**+0.7**
	1.8nm,0.5s,mb3.9,baz=94,slow=9.8,SNR=16							
STKA	**Stephens Creek**	**37.38**	**244**	*e*P		**P**	**03 57 51.0**	**+0.7**
	1.7nm,0.5s,mb3.8							
ASAR	**Alice Springs**	**44.13**	**257**	P		**P**	**03 58 44.1**	**0.0**
	2.0nm,0.5s,mb3.9,baz=91,slow=7.9,SNR=74							
ASAR				ScP		ScP	04 03 16.7	-1.6
	0.4nm,0.7s,baz=110,slow=4.7,SNR=4.5							
ASAR				S		**S**	**04 04 33.9**	**-4.3**
	0.7nm,0.6s,baz=93,slow=16,SNR=7.8							
ASAR	**Alice Springs**	**44.13**	**257**	P		**P**	**03 58 44.1**	**0.0**
ASAR				ScP		ScP	04 03 16.7	-1.6
ASAR				S		**S**	**04 04 33.9**	**-4.3**
WB2	**Warramunga Arr**	**44.22**	**262**	*e*P		**P**	**03 58 44.3**	**-0.6**
WRAB	**Tennant Creek**	**44.22**	**262**	*e*P		**P**	**03 58 44.5**	**-0.4**
	1.8nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**44.23**	**262**	P		**P**	**03 58 44.6**	**-0.3**
	2.1nm,0.3s,mb4.2,baz=96,slow=7.2,SNR=33							
WRA				S		**S**	**04 04 31.0**	**-8.6**
	0.4nm,0.7s,baz=97,slow=14,SNR=2.8							
FORT	**Forrest**	**48.89**	**247**	*e*P		**P**	**03 59 19.3**	**-0.8**
	6.1nm,0.6s,mb4.3							
CASY	**Casey**	**63.62**	**205**	*e*P		**P**	**04 01 00.8**	**-0.2**
	4.2nm,0.5s,mb4.1							
MJAR	**Matsushiro Arr**	**70.18**	**324**	P		**P**	**04 01 41.1**	**-0.7**
	1.9nm,0.5s,mb3.9,baz=169,slow=7.2,SNR=7.0							
PETK	**Petropavlovsk-**	**76.40**	**345**	P		**P**	**04 02 16.8**	**-0.1**
	2.9nm,0.6s,mb3.9,baz=115,slow=7.8,SNR=7.6							
KSRS	**Korea Array**	**76.83**	**319**	P		**P**	**04 02 20.4**	**+0.7**
	1.0nm,0.5s,mb3.5,baz=130,slow=5.3,SNR=4.4							
NVAR	**Mina Array Bea**	**81.42**	**43**	P		**P**	**04 02 45.0**	**+1.1**
	0.6nm,0.8s,mb3.1,baz=224,slow=9.3,SNR=4.7							
SNAA	**Sanae**	**87.80**	**179**	*e*P		**P**	**04 03 14.4**	**-0.2**
	0.8nm,0.4s,mb3.8							
VNA3	**Neumayer Olymp**	**87.94**	**176**	*e*		**P**	**04 03 14.9**	**-0.4**
VNA2	**Neumayer--Watz**	**88.38**	**177**	*e*		**P**	**04 03 17.6**	**+0.3**
	baz=199,slow=3.5							
VNA1	**Neumayer--Stat**	**88.61**	**177**	*e*		**P**	**04 03 18.6**	**+0.2**
PDAR	**Pinedale Array**	**89.36**	**43**	P		**P**	**04 03 23.4**	**+1.1**
	0.4nm,0.6s,mb3.5,baz=203,slow=3.4,SNR=4.3							
CMAR	**Chiang Mai Arr**	**89.86**	**290**	P		**P**	**04 03 25.2**	**0.0**
	1.2nm,0.4s,mb4.0,baz=129,slow=2.8,SNR=5.2							
YKA	**Yellowknife Ar**	**96.86**	**25**	P		**P**	**04 03 54.5**	**-1.6**
	0.1nm,0.7s,mb3.2,baz=244,slow=4.5,SNR=3.4							
BVAR	**Borovoye Array**	**119.03**	**320**	PKP		PKPdf	04 09 09.4	-1.1
	0.3nm,0.4s,baz=46,slow=4.2,SNR=3.9							
AKASG	**Malin Array Be**	**143.04**	**331**	PKhKP			04 09 52.2	
	4.7nm,0.4s,baz=42,slow=4.3,SNR=31							
BRTR	**Keskin Array B**	**146.73**	**312**	PKPbc		PKPbc	04 10 04.3	-0.6
	0.7nm,0.5s,baz=143,slow=4.5,SNR=4.9							
MLR	**Muntele Rosu**	**148.22**	**327**	PKPbc		PKPbc	04 10 08.1	-0.5
	1.2nm,0.7s,baz=297,slow=23,SNR=9.3							

GERES	**GERESS Array B**	**150.32**	**344**	PKPbc		PKPbc	04 10 12.9	-0.6
	0.7nm,0.6s,baz=357,slow=2.8,SNR=7.8							
GERES				PKPab		PKPab	04 10 22.3	+0.1
	0.3nm,0.5s,baz=7.1,slow=3.2,SNR=4.9							
DAVOX	**Davos/Dischmat**	**153.15**	**347**	PKPbc		PKPbc	04 10 19.6	-0.4
	0.8nm,0.5s,baz=214,slow=7.4,SNR=6.6							
DAVOX				PKPab		PKPab	04 10 34.2	0.0
	0.3nm,0.4s,baz=274,slow=16,SNR=4.0							
TORD	**Torodi Ar. Bea**	**172.47**	**180**	PKPab		PKPab	04 11 59.1	-0.4
	0.5nm,0.6s,baz=166,slow=4.0,SNR=7.4							

*ISCJB **26** 03:53:27.4±0.6, 3819N±002×23.17E±003, h7km±4km, Error ellipse: s-maj=4.2km s-min=2.7km az=162.4*
*CSEM **26** 03:53:27.6±0.1, 3822N×2317E, h10km, ML3.4/4, Error ellipse: s-maj=1.5km s-min=1.0km az=83.0*
*NEIC **26** 03:53:28.2, 38.19N×23.15E, h30km, ML3.5(ATH), After ATH.*
*ATH **26** 03:53:28.2, 38.19N×23.16E, h30km±1km, MD3.6/16, ML3.5*
*THE **26** 03:53:28.1, 3821N×23.15E, h6km, ML3.4/4, Error ellipse: s-maj=0.9km s-min=0.4km az=264.0*
ISC 26 03:53:28.4±0.4, 3820N±002×2313E±003, h11km±3km, n60, σ0$83/82, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LTK	**Loutraki**	**0.21**	**217**	P		**Pg**	**03 53 32.3**	**-0.6**
LTK				S		**Sg**	**03 53 35.6**	**-0.3**
LKR	**Lokris**	**0.47**	**347**	P		**Pg**	**03 53 37.4**	**-0.1**
LKR				S		**Sg**	**03 53 43.9**	**+0.2**
LKR	**Lokris**	**0.47**	**347**	*e*PB		**Pg**	**03 53 38.2**	**+0.7**
LKR				*e*SB		**Sg**	**03 53 45.7**	**+2.0**
LKR	**Lokris**	**0.47**	**347**	*e*Pb		**Pg**	**03 53 37.9**	**+0.4**
LKR				*e*Sb		**Sg**	**03 53 45.5**	**+1.8**
LKR	**Lokris**	**0.47**	**347**	*e*Pb		**Pg**	**03 53 37.9**	**+0.4**
LKR				*e*Sb		**Sg**	**03 53 45.5**	**+1.8**
ATH	**Athens Observa**	**0.51**	**116**	*e*PB		**Pg**	**03 53 39.0**	**+0.6**
ATH				*e*SB		**Sg**	**03 53 46.8**	**+1.7**
ATH	**Athens Observa**	**0.51**	**116**	*e*Pb		**Pg**	**03 53 39.0**	**+0.6**
ATH				*e*Sb		**Sg**	**03 53 47.2**	**+2.1**
NAIG	**Nisos Aigina**	**0.52**	**147**	*e*PN		**Pg**	**03 53 38.6**	**+0.1**
NAIG	**Nisos Aigina**	**0.52**	**147**	*e*Pn		**Pg**	**03 53 38.5**	**0.0**
PTL	**Penteli**	**0.60**	**104**	*e*PN		**Pg**	**03 53 40.2**	**+0.2**
PTL	**Penteli**	**0.60**	**104**	*e*Pn		**Pg**	**03 53 40.5**	**+0.5**
DID	**Didima**	**0.69**	**173**	P		**Pg**	**03 53 41.0**	**-0.8**
DID				S		**Sg**	**03 53 51.1**	**+0.3**
AGG	**Agios Georgios**	**1.04**	**323**	P		**Pg**	**03 53 47.5**	**-0.8**
AGG				S		**Sg**	**03 54 03.0**	**+1.2**
NEO	**Neokhori**	**1.11**	**4**	*e*PN		**Pn**	**03 53 49.3**	**-0.6**
NEO				*e*SN		**Sn**	**03 54 04.2**	**-1.1**
AOS	**Alonnisos**	**1.14**	**31**	P		**Pb**	**03 53 49.4**	**-0.7**
AOS				S		**Sb**	**03 54 05.0**	**+0.2**
XOR	**Xorichti**	**1.17**	**2**	P		**Pb**	**03 53 50.0**	**-0.6**
XOR				S		**Sb**	**03 54 07.2**	**+1.4**
EVR	**Evrytania**	**1.26**	**305**	*e*PN		**Pn**	**03 53 52.2**	**+0.2**
EVR	**Evrytania**	**1.26**	**305**	*e*Pn		**Pn**	**03 53 52.7**	**+0.7**
RLS	**Riolos of Patr**	**1.32**	**265**	*e*PN		**Pn**	**03 53 52.7**	**-0.1**
ITM	**Ithomi**	**1.39**	**224**	*e*PN		**Pn**	**03 53 53.8**	**0.0**
VLI	**Veliai**	**1.48**	**186**	*e*PB		**Pb**	**03 53 54.0**	**-1.9**
THL	**Klokotos Trika**	**1.62**	**328**	P		**Pn**	**03 53 56.4**	**-0.5**
THL				S		**Sn**	**03 54 17.8**	**0.0**
THL	**Klokotos Trika**	**1.62**	**328**	*e*Pb		**Pb**	**03 53 56.5**	**-1.8**
THL				S		**Sn**	**03 54 17.8**	**0.0**
PYL	**PYLOS**	**1.70**	**221**	P		**Pn**	**03 53 58.3**	**+0.3**
PYL				S		**Sn**	**03 54 21.8**	**+2.0**
PLG	**Polygyros**	**2.19**	**6**	*e*Pn		**Pn**	**03 54 04.1**	**-0.6**
PLG				S		**Sn**	**03 54 32.2**	**+0.4**
APE	**Apeiranthos**	**2.21**	**120**	P		**Pn**	**03 54 04.4**	**-0.6**
APE				S		**Sn**	**03 54 33.2**	**+0.8**
APE	**Apeiranthos**	**2.21**	**120**	*e*Pn		**Pn**	**03 54 04.6**	**-0.4**
APE				S		**Sn**	**03 54 33.2**	**+0.8**
OUR	**Ouranopolis**	**2.24**	**17**	P		**Pn**	**03 54 04.9**	**-0.5**
CHOS	**Chios island**	**2.31**	**84**	P		**Pn**	**03 54 06.5**	**+0.1**
LIA	**Limnos Island**	**2.33**	**43**	P		**Pn**	**03 54 06.0**	**-0.7**
KZN	**Kozani**	**2.36**	**334**	*e*PN		**Pn**	**03 54 07.5**	**+0.5**
HORT	**Hortiatis**	**2.40**	**359**	P		**Pn**	**03 54 06.9**	**+0.7**
HORT				S		**Sn**	**03 54 37.7**	**+0.7**
THR4	**Thira Island,**	**2.50**	**133**	P		**Pn**	**03 54 08.8**	**-0.2**
THR3	**Thira Island,**	**2.54**	**134**	P		**Pn**	**03 54 09.5**	**0.0**
THR6	**Thira Island,**	**2.58**	**135**	P		**Pn**	**03 54 09.6**	**-0.4**
THR1	**Thera Island**	**2.60**	**134**	P		**Pn**	**03 54 10.0**	**-0.4**
SOH	**Sokhos**	**2.63**	**4**	P		**Pn**	**03 54 10.7**	**-0.1**
GRG	**Griva**	**2.81**	**349**	P		**Pn**	**03 54 13.2**	**-0.1**
KARN	**Karanos**	**2.86**	**167**	P		**Pn**	**03 54 13.3**	**-0.6**
VAM	**Vamos**	**2.91**	**163**	*e*PN		**Pn**	**03 54 14.6**	**-0.1**
VAM	**Vamos**	**2.91**	**163**	*e*Pn		**Pn**	**03 54 14.0**	**-0.7**
FNA	**Florina**	**2.92**	**333**	P		**Pn**	**03 54 14.6**	**-0.2**
KNT	**Kendrikon**	**2.97**	**357**	P		**Pn**	**03 54 15.2**	**-0.2**
SMG	**Samos**	**2.97**	**98**	*e*PN		**Pn**	**03 54 15.4**	**0.0**
BIA	**Bitola**	**3.15**	**334**	P		**Pn**	**03 54 17.6**	**-0.3**
BIA	**Bitola**	**3.15**	**334**	*e*Pn		**Pn**	**03 54 20.9**	**+3.0**
BIA	**Bitola**	**3.15**	**334**	*e*Pn		**Pn**	**03 54 21.0**	**+3.1**
SIVA	**Sivas**	**3.45**	**156**	P		**Pn**	**03 54 24.0**	**+1.1**
KRUS	**Krusevo**	**3.49**	**336**	*i* Pn		**Pn**	**03 54 24.0**	**+1.5**
KRUS	**Krusevo**	**3.49**	**336**	*i* Pn		**Pn**	**03 54 24.1**	**+1.5**
ALN	**Alexandroupoli**	**3.52**	**39**	P		**Pn**	**03 54 22.1**	**-0.8**
LAST	**Lasithi**	**3.57**	**147**	P		**Pn**	**03 54 23.6**	**-0.1**
STIP	**Stip**	**3.57**	**349**	*e*Pn		**Pn**	**03 54 24.5**	**+0.8**
STIP	**Stip**	**3.57**	**349**	*e*Pn		**Pn**	**03 54 24.6**	**+0.9**
ZKR	**Zakros**	**3.95**	**140**	P		**Pn**	**03 54 29.9**	**+1.0**

*PGC **26** 04:08:40.8±18.0, 6327N×14494W, h20km, ML3.5/3, 220km Ese of Fairbanks, Ak Central Alaska*
NEIC 26 04:08:36.6, 6333N×14517W, h6km, ML3.2(AEIC), **ML4.0**(PMR), **5D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PAX	**Paxson**	**0.38**	**201**	P		Pg	04 08 43.8	-0.2
PAX				S		Sg	04 08 48.9	0.0
DOT	**Dot Lake**	**0.59**	**56**	P		Pg	04 08 48.2	+0.2
DOT				S		Sg	04 08 56.1	+0.4
MENT	**Mentasta**	**0.77**	**120**	P		Pg	04 08 50.9	-0.4
BCA3	**Beaver Creek A**	**1.56**	**98**	P		Pn	04 09 04.2	-0.5
IL1	**Eielson Array**	**1.64**	**333**	P		Pn	04 09 04.5	-1.3
MCK	**McKinley**	**1.74**	**285**	P		Pn	04 09 08.3	+1.1
MCK				S		Sn	04 09 32.1	+2.4
COLA	**College**	**1.95**	**324**	P		Pn	04 09 09.7	-0.5
COLA				S		Sn	04 09 38.1	+3.2
EGAK	**Eagle**	**2.29**	**49**	*e*Pn		Pn	04 09 14.6	-0.2
EGAK				*e*Pg		Pg	04 09 19.2	-1.2
EGAK				*e*Sg		Sg	04 09 47.8	-2.2
TRF	**Thorofare Moun**	**2.31**	**275**	P		Pn	04 09 16.0	+1.0
PMR	**Palmer**	**2.53**	**228**	P		Pn	04 09 19.0	+0.8
KTH	**Kantishna Hill**	**2.59**	**278**	*e*Pn		Pn	04 09 19.6	+0.6
KTH				*e*Pg		Pg	04 09 25.1	-1.2
KTH				*e*Sn		Sn	04 09 50.3	-0.5
KTH				*e*Sg		Sg	04 09 57.8	-2.1
DAWY	**Dawson**	**2.68**	**71**	⇑Pn		Pn	04 09 20.0	-0.2
DAWY				⇑Pg		Pg	04 09 27.8	-0.1
DAWY				⇑Sg		Sg	04 10 00.7	-1.9
DAWY	**Dawson**	**2.68**	**71**	P		Pn	04 09 20.0	-0.2
BPAW	**Bear Paw Mtn.**	**2.70**	**289**	*e*Pn		Pn	04 09 20.8	+0.3
BPAW				*e*Pg		Pg	04 09 26.8	-1.5
BPAW				*e*Sg		Sg	04 10 01.4	-2.0
EYAK	**Cordova Ski Ar**	**2.80**	**186**	P		Pn	04 09 24.0	+2.2
RC01	**Rabbit Creek A**	**3.10**	**226**	*e*Pg		Pg	04 09 28.9	-7.0
RC01				*e*Sg		Sg	04 10 09.5	-6.6
PPLA	**Purkeypile**	**3.22**	**265**	P		Pn	04 09 30.0	+2.7
CHUM	**Lake Minchumin**	**3.24**	**283**	*e*Pn		Pn	04 09 28.0	+0.1
CHUM				*e*Pg		Pg	04 09 37.0	-1.7
CHUM				*e*Sg		Sg	04 10 19.5	-1.1
BM3	**Burnt Mountain**	**4.12**	**3**	P		Pn	04 09 40.1	+0.2
HYT	**Haines Junctio**	**4.39**	**121**	⇓Pn		Pn	04 09 45.4	+1.7
HYT				⇓Pg		Pg	04 09 57.1	-3.5
HYT				⇓Sg		Sg	04 10 52.4	-5.1
COLD	**Coldfoot**	**4.45**	**334**	P		Pn	04 09 44.7	+0.2
IM3	**Indian Mountai**	**4.55**	**310**	P		Pn	04 09 45.4	-0.5
TT01	**Tatalina**	**4.95**	**270**	P		Pn	04 09 51.3	0.0
WHY	**Whitehorse**	**5.54**	**114**	⇓Pn		Pn	04 09 58.8	-0.6
WHY				⇓Sn		Sn	04 11 01.2	-2.0
WHY				⇑Sg		Sg	04 11 28.8	-5.4

*ISCJB **26** 04:10:26.8±0.7, 189N±0.1×1457E±0.3, h200km, mb3.4/8, Error ellipse: s-maj=33.6km s-min=14.0km az=6.8*
*NEIC **26** 04:10:31.4±5.2, 1887N×14570E, h232km±53km, mb3.7/1, Error ellipse: s-maj=37.1km s-min=10.9km az=97.0*
*IDC **26** 04:10:32.5±7.1, 1889N×14570E, h243km±70km, mb3.1/7, mb1 3.4/8, mb1mx3.1/21, mbtmp3.1/8, Error ellipse: s-maj=47.4km s-min=14.5km az=98.0*
ISC 26 04:10:28.4±0.7, 189N±01×1458E±02, h200km, n11, σ0$52/11, mb3.4/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MJAR	**Matsushiro Arr**	**18.83**	**341**	P		**P**	**04 14 33.7**	**+0.6**
	0.7nm,0.3s,baz=167,slow=11,SNR=5.1							
WRAB	**Tennant Creek**	**40.15**	**197**	*e*P		**P**	**04 17 45.0**	**0.0**
	1.6nm,0.5s,mb3.7							
WRA	**Warramunga Arr**	**40.16**	**197**	P		**P**	**04 17 45.5**	**+0.4**
	1.5nm,0.6s,mb3.6,baz=9.0,slow=8.8,SNR=15							
ASAR	**Alice Springs**	**43.82**	**196**	P		**P**	**04 18 14.8**	**+0.1**
	0.5nm,0.5s,mb3.1,baz=13,slow=7.9,SNR=13							
ASAR				PcP		PcP	04 19 56.5	-1.0
	0.2nm,0.7s,baz=20,slow=3.0,SNR=4.4							
STKA	**Stephens Creek**	**50.60**	**185**	P		**P**	**04 19 06.5**	**-0.4**
	0.5nm,0.5s,mb3.2,baz=349,slow=16,SNR=3.3							
BVAR	**Borovoye Array**	**66.40**	**320**	P		**P**	**04 20 55.2**	**-0.6**
	0.2nm,0.4s,mb3.1,baz=99,slow=8.9,SNR=2.7							
YKA	**Yellowknife Ar**	**77.81**	**28**	P		**P**	**04 22 02.2**	**-1.0**
	0.2nm,0.6s,mb3.0,baz=287,slow=5.6,SNR=6.2							
YKA	**Yellowknife Ar**	**77.81**	**28**	P		**P**	**04 22 02.2**	**-1.0**
NVAR	**Mina Array Bea**	**82.98**	**52**	P		**P**	**04 22 31.8**	**+0.5**
	1.0nm,0.7s,mb3.7,baz=265,slow=5.8,SNR=8.0							
NVAR	**Mina Array Bea**	**82.98**	**52**	P		**P**	**04 22 31.8**	**+0.5**
PDAR	**Pinedale Array**	**87.66**	**45**	P		**P**	**04 22 54.8**	**+0.4**
	0.2nm,0.3s,mb3.4,baz=30,slow=4.2,SNR=3.9							

*BJI **26** 04:14:15.1, 893S×15825E, h10km, mB5.2, mb5.0, Ms5.0, Msz4.6*
*ISCJB **26** 04:14:18.6±1.6, 875S±004×15740E±003, h2km±9km, mb5.0/77, MS4.4/23, Error ellipse: s-maj=7.2km s-min=4.6km az=178.6*
*NEIC **26** 04:14:19.4±3.6, 872S×15757E, h2km±22km, mb5.1/36, Error ellipse: s-maj=8.6km s-min=6.2km az=158.0*
*GCMT **26** 04:14:19.4±0.2, 883S×15756E, h14km±1km, MW5.0/78, Moment Tensor Solution. s36,c47; s78,c111; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.17±.11; Mθθ-0.24±.12; Mφφ 0.41±.11; Mrθ-1.87±.37; Mrφ 3.25±.12; Mθφ~1.91±.37; Best double couple: M○ 3.98800×10^16 NP1: ϕs 173.00000°, δ 68.00000°, λ 161.00000°. NP2: ϕs 270.00000°, δ 73.00000°, λ 23.00000°. Principal axes: T 4.7900, Plg 28.0000°, Azm 133.0000°; N -1.6050, Plg 62.0000°, Azm 305.0000°; P -3.1860, Plg 3.0000°, Azm 41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **26** 04:14:19.2±0.5, 866S×15756E, h0km, mb4.8/20, mb1 4.9/23, mb1mx4.9/25, mbtmp4.8/23, ML4.6/2, MS4.3/16, Ms1 4.3/16, ms1mx4.1/29 Error ellipse: s-maj=16.6km s-min=14.3km az=144.0*
*MOS **26** 04:14:23.2±1.0, 866

comp=Z,214nm,19.1s,MS3.9,baz=249,slow=35
RPZ Rata Peaks 36.80 163 LR LR 04 35 29.0
comp=Z,803nm,18.2s,MS4.5,baz=142,slow=34
KAPI Kappang 37.60 273 P **P** **04 21 36.8 +0.1**
comp=Z,44nm,0.9s,mb5.2,baz=92,slow=5.0,SNR=6.6
KAPI LR LR 04 39 41.2
comp=Z,283nm,18.1s,MS4.1,baz=112,slow=40
KAPI Kappang 37.60 273 *e*P **P** **04 21 36.3 -0.3**
comp=Z,54nm,0.9s,mb5.3
MBWA Marble Bar 38.37 247 *e*P **P** **04 21 42.2 -0.9**
comp=Z,28nm,0.8s,mb5.0
RAR Rarotonga 42.99 112 LR LR 04 36 26.2
comp=Z,374nm,21.4s,MS4.2,baz=255,slow=31
KKM Kota Kinabalu 43.66 288 *e*P **P** **04 22 27.4 +0.6**
comp=Z,24nm,0.8s,mb5.0
NWAO Narrogin (SRO) 44.23 231 *e*P **P** **04 22 30.7 -0.4**
NWAO pmax pmax
comp=Z,13nm,0.9s
NWAO Narrogin (SRO) 44.23 231 *e*P **P** **04 22 30.7 -0.4**
comp=Z,13nm,0.9s,mb4.7
MUN Mundaring 44.66 233 *e*P **P** **04 22 33.7 -0.8**
JOW Kunigami 45.31 322 P **P** **04 22 38.4 -1.3**
comp=Z,30nm,0.8s,mb5.1,baz=72,slow=25,SNR=3.8
YHNB Yeheng 48.39 314 *e*P **P** **04 23 04.8 +1.0**
comp=Z,31nm,0.7s,mb5.5
MJAR Matsushiro Arr 48.55 339 P **P** **04 23 03.4 -1.5**
comp=Z,3.8nm,0.8s,mb4.5,baz=173,slow=8.7,SNR=6.8
MJAR LR LR 04 41 26.5
comp=Z,283nm,18.4s,MS4.3,baz=185,slow=34
MAT Matsushiro 48.55 339 P **P** **04 23 03.6 -1.3**
MAT S **S** **04 30 07.0 -0.2**
PPT Papeete 52.17 105 *e*LQ 04 36 24.8
comp=Z,726nm,25.8s
PPT *e*LR LR 04 38 36.8
comp=Z,381nm,24.0s,baz=269
PPT Papeete 52.17 105 LR LR 04 40 22.9
comp=Z,236nm,19.3s,MS4.2,baz=270,slow=30
TBI Tubuai 52.75 113 *e*LQ 04 36 37.6
comp=Z,889nm,33.0s
TBI *e*LR LR 04 38 45.3
comp=Z,582nm,28.8s,baz=284
KSRS Korea Array 53.64 331 P **P** **04 23 43.3 +0.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=151,slow=9.1,SNR=13
KSRS LR LR 04 46 09.9
comp=Z,185nm,18.4s,MS4.2,baz=311,slow=36
NJ2 Nanjing 54.82 320 *e*P **P** **04 23 54.3 +2.4**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
WHN Wuhan 56.89 315 ⇑P **P** **04 24 08.0 +1.2**
WHN S **S** **04 32 02.8 +1.3**
WHN AMB AMB
comp=Z,46nm,1.0s,mb5.5
WHN LR LR
comp=Z,731nm,14.5s,MS4.9
KULM Kulim 58.33 282 *e*P **P** **04 24 16.2 -1.1**
comp=Z,36nm,0.9s,mb5.4
MDJ Mudanjiang 58.78 337 P **P** **04 24 19.5 -0.3**
MDJ AP pP 04 24 22.8 +2.0
MDJ XP sP 04 24 23.8 +2.7
MDJ PP PP 04 26 29.5 -0.4
MDJ S **S** **04 32 25.5 -0.2**
MDJ SCS ScS 04 34 09.5 -1.2
MDJ AMB AMB
comp=Z,11nm,1.3s,mb4.7
MDJ AMB AMB
comp=Z,122nm,4.7s
MDJ LR LR
comp=N,166nm,17.2s,MS4.3
MDJ LR LR
comp=E,152nm,18.6s,MS4.3
MDJ LR LR
comp=Z,206nm,20.1s,MS4.2
MDJ Mudanjiang 58.78 337 *e*P **P** **04 24 19.8 0.0**
comp=Z,18nm,1.1s,mb5.0
PSI Prapat 59.47 278 P **P** **04 24 24.1 -1.1**
comp=Z,2.6nm,0.3s,mb4.7,baz=182,slow=3.4,SNR=3.6
PSI LR LR 04 53 21.1
comp=Z,206nm,19.1s,MS4.3,baz=314,slow=39
CN2 Changchun 59.82 334 *e*P **P** **04 24 27.0 0.0**
CN2 AMB AMB
comp=Z,10.0nm,1.3s,mb4.7
GYA Guiyang 60.45 307 P **P** **04 24 32.5 +0.8**
GYA PP PP 04 26 47.5 +2.4
GYA SCP ScP 04 29 14.8 -4.2
GYA S **S** **04 32 43.5 -4.5**
GYA SCS ScS 04 34 20.8 -3.1
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,220nm,9.0s
GYA LR LR
comp=N,89nm,14.0s,MS4.2
GYA LR LR
comp=E,90nm,13.8s,MS4.2
GYA LR LR
comp=Z,78nm,14.2s,MS4.0
PETK Petropavlovsk- 61.62 0 P **P** **04 24 37.7 -1.3**
comp=Z,7.6nm,0.9s,mb4.8,baz=179,slow=7.5,SNR=6.2
PETK Petropavlovsk- 61.62 P **P** **04 24 37.7 -1.3**
BJI Beijing 61.74 325 P **P** **04 24 41.3 +1.1**
BJI S **S** **04 33 05.8 +1.9**
BJI SS SS 04 37 08.5 +2.6
BJI AMB AMB
comp=Z,8.0nm,0.5s,mb5.1
BJI LR LR
comp=N,193nm,10.2s
BJI LR LR
comp=E,200nm,15.8s
BJI LR LR
comp=Z,166nm,20.1s
KLR Kul'dur 61.98 341 *e*P **P** **04 24 37.9 -3.7**
XAN Xi'an 62.66 316 P **P** **04 24 46.5 +0.1**
XAN PP PP 04 27 06.0 +1.6
XAN S **S** **04 33 10.5 -5.2**
XAN AMB AMB
comp=Z,19nm,1.2s,mb5.1
XAN LR LR
comp=N,104nm,26.9s,MS4.1
XAN LR LR
comp=E,118nm,24.3s,MS4.1
XAN LR LR
comp=Z,291nm,22.9s,MS4.4
FX1 Attu Island--F 62.84 11 P **P** **04 24 44.7 -2.5**
comp=Z,10nm,0.7s,mb5.1,baz=86,slow=14,SNR=2.6
KMI Kunming 63.02 304 P **P** **04 24 52.0 +3.0**
KMI AP pP 04 24 54.8 +4.8
KMI XP sP 04 24 56.5 +6.1
KMI PP PP 04 27 11.8 +4.1
KMI S **S** **04 33 23.5 +3.0**
KMI XS sS 04 33 30.8 +8.6
KMI SS SS 04 37 31.0 +4.7
KMI AMB AMB
comp=Z,17nm,0.9s,mb5.2
KMI AMB AMB
comp=Z,228nm,3.5s
KMI LR LR
comp=N,256nm,18.1s,MS4.6
KMI LR LR
comp=E,255nm,20.5s,MS4.6
KMI LR LR
comp=Z,351nm,24.6s,MS4.4
CMAR Chiang Mai Arr 63.74 295 P **P** **04 24 54.5 +0.6**
comp=Z,11nm,0.8s,mb4.9,baz=117,slow=5.0,SNR=41
CHTO Chiang Mai 63.86 296 *e*P **P** **04 24 55.5 +0.8**
CHTO pmax pmax
comp=Z,19nm,1.0s,mb5.1
CHTO Chiang Mai 63.86 296 *e*P **P** **04 24 55.5 +0.8**
comp=Z,19nm,1.0s,mb5.1
CD2 Chengdu 64.80 310 P **P** **04 25 01.8 +1.1**
CD2 AP pP 04 25 05.5 +3.8
CD2 XP sP 04 25 07.8 +5.7
CD2 PCP PcP 04 25 34.5 +0.3
CD2 PP PP 04 27 24.8 +1.4
CD2 S **S** **04 33 42.3 -0.3**
CD2 SS SS 04 37 55.5 +1.4
CD2 AMB AMB
comp=Z,70nm,0.7s,mb5.8
CD2 AMB AMB
comp=Z,140nm,3.7s
CD2 LR LR
comp=N,280nm,6.5s
CD2 LR LR
comp=Z,320nm,10.1s,MS4.8
HHC Hu-ho-hao-te 64.95 323 *e*P **P** **04 25 03.8 +2.4**
HHC AP pP 04 25 07.0 +4.6
HHC XP sP 04 25 10.3 +7.5
HHC PCP PcP 04 25 36.3 +1.8
HHC PP PP 04 27 29.0 +4.6
HHC PCS 04 29 38.8
HHC *e*S **S** **04 33 43.8 -0.2**
HHC SS SS 04 37 57.3 +1.3
HHC AMB AMB
comp=Z,17nm,0.9s,mb5.1
HHC AMB AMB
comp=Z,177nm,5.4s
HHC LR LR
comp=N,226nm,14.4s,MS4.6
HHC LR LR
comp=E,154nm,15.6s,MS4.6
HHC LR LR
comp=Z,152nm,14.4s,MS4.3
RKT Rikitea 66.03 111 *e*S S 04 33 55.6 -2.4
comp=Z,107nm,24.0s
RKT *e*LQ 04 42 14.3
comp=Z,243nm,32.5s
RKT *e*LR LR 04 45 00.9
comp=Z,647nm,36.0s,baz=279
HIA Hailar 66.55 334 *e*P **P** **04 25 11.3 -0.2**
LZH Lanzhou 67.27 315 *e*P **P** **04 25 17.5 +1.0**
LZH AP pP 04 25 20.0 +2.5
LZH XP sP 04 25 22.5 +4.7
LZH PP PP 04 27 46.0 +1.2
LZH S S 04 34 09.3 -3.2
LZH XS sS 04 34 21.5 +7.4
LZH SS SS 04 38 32.0 -0.3
LZH AMB AMB
comp=Z,42nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,104nm,4.0s
LZH LR LR
comp=N,583nm,15.0s
LZH LR LR
comp=Z,764nm,17.1s,MS5.0
CLNS Chul'man 70.63 342 *e*P **P** **04 25 37.4 +0.5**
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=Z,18nm,1.1s,mb4.9
SEY Seymchan 71.58 358 ⇓*i*P **P** **04 25 43.7 +1.2**
GTA Gaotai 71.68 316 *e*P **P** **04 25 44.0 +0.3**
GTA AP pP 04 25 47.8 +3.1
GTA XP sP 04 25 50.5 +5.4
GTA PP PP 04 28 28.0 +5.1
GTA S S 04 35 06.3 +1.9
GTA XS sS 04 35 13.8 +7.8
GTA SS SS 04 39 42.0 +1.8
GTA AMB AMB
comp=Z,12nm,1.8s,mb4.5
GTA AMB AMB
comp=Z,136nm,7.2s
GTA LR LR
comp=N,536nm,14.4s,MS5.1
GTA LR LR
comp=E,451nm,14.7s,MS5.1
GTA LR LR
comp=Z,339nm,15.0s,MS4.7
ULN Ulaanbaatar 71.79 327 *e*P **P** **04 25 43.6 -0.5**
ULN pmax pmax
comp=Z,12nm,1.1s,mb4.7
ULN Ulaanbaatar 71.79 327 *e*P **P** **04 25 43.6 -0.6**
comp=Z,12nm,1.1s,mb4.7
SONM Songino Array 72.13 327 P **P** **04 25 47.0 +0.8**
comp=Z,3.9nm,0.9s,mb4.3,baz=131,slow=5.5,SNR=16
SHL Shillong 72.28 300 *i*P **P** **04 25 48.0 +0.4**
YAK Yakutsk 73.80 347 *e*P **P** **04 25 54.0 -1.7**
YAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
LSA Lhasa 74.27 304 P **P** **04 26 00.5 +1.2**
LSA Lhasa 74.27 304 *e*P **P** **04 26 00.4 +1.1**
LSA pmax pmax
comp=Z,23nm,1.1s,mb5.0
LSA Lhasa 74.27 304 *e*P **P** **04 26 00.4 +1.2**
comp=Z,23nm,1.1s,mb5.0
BOD Bodaibo 75.15 338 *e*P **P** **04 26 02.6 -1.1**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ZAK Zakamensk 75.27 328 *e*P **P** **04 26 04.7 +0.1**
ZAK pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
TLY Talaya 75.81 329 *e*P **P** **04 26 11.2 +3.6**
TLY *e* 04 36 03.6
TLY pmax pmax
comp=Z,15nm,1.7s,mb4.7
TAPN Taplejung 76.39 301 *e*P **P** **04 26 12.1 +0.6**
comp=Z,59nm,1.0s,mb5.5
ODAN Odare 76.52 300 *e*P **P** **04 26 12.8 +0.6**
comp=Z,38nm,0.8s,mb5.4
BILL Bilibino 76.86 3 ⇑*i*P **P** **04 26 12.7 -0.5**
BILL *i* 04 26 19.4
BILL *i* 04 26 23.9
BILL pmax pmax
comp=Z,16nm,1.1s,mb4.9
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.2
BILL Bilibino 76.86 3 *e*P **P** **04 26 12.2 -1.1**
comp=Z,29nm,1.1s,mb5.1
KDAK Kodiak Island 77.70 25 P **P** **04 26 17.1 -1.0**
comp=Z,20nm,0.9s,mb5.1,baz=152,slow=2.0,SNR=4.1
JIRN Jiri 77.77 301 *e*P **P** **04 26 20.1 +0.8**
comp=Z,20nm,0.8s,mb5.1
GUN Gumba 78.11 301 *e*P **P** **04 26 21.8 +0.7**
comp=Z,48nm,0.9s,mb5.4
PALK Pallekele 78.13 279 *e*P **P** **04 26 21.9 +0.3**
PALK pmax pmax
comp=Z,38nm,1.2s,mb5.2
PALK Pallekele 78.13 279 *e*P **P** **04 26 21.9 +0.3**
comp=Z,38nm,1.2s,mb5.2
PKI Pulchoki 78.41 300 *e*P **P** **04 26 23.0 +0.2**
comp=Z,61nm,1.2s,mb5.4
KKN Kakani 78.58 301 *e*P **P** **04 26 23.6 -0.2**
comp=Z,41nm,1.1s,mb5.3
DMN Daman 78.68 300 *e*P **P** **04 26 25.1 +0.8**
comp=Z,71nm,1.0s,mb5.6
GKN Gorkha 79.19 301 *e*P **P** **04 26 27.2 +0.1**
comp=Z,34nm,0.8s,mb5.3
KOLN Koldanda 80.01 300 *e*P **P** **04 26 31.4 -0.2**
comp=Z,34nm,0.9s,mb5.3
DANN Dangsing 80.03 301 *e*P **P** **04 26 31.5 -0.2**
comp=Z,92nm,1.3s,mb5.5
PMR Palmer 81.43 23 *e*P **P** **04 26 37.6 -0.8**
CHUM Lake Minchumin 81.70 20 *e*P **P** **04 26 38.9 -0.9**
comp=Z,22nm,0.8s,mb5.1
WMQ Urumqi 81.77 317 P **P** **04 26 39.8 -0.8**
WMQ AMB AMB
comp=Z,5.0nm,1.2s,mb4.3
WMQ AMB AMB
comp=Z,170nm,5.0s
TRF Thorofare Moun 82.13 21 *e*P **P** **04 26 40.0 -2.0**
comp=Z,18nm,0.9s,mb5.0
HYB Hyderabad 82.15 289 *i*P **P** **04 26 43.0 -0.1**
HYB Hyderabad 82.15 289 *e*P **P** **04 26 43.0 -0.1**
TIXI Tiksi 82.44 351 ⇑*i*P **P** **04 26 42.0 -1.5**
TIXI pmax pmax
comp=Z,9.0nm,1.9s,mb4.4
TIXI Tiksi 82.44 351 *e*P **P** **04 26 42.9 -0.6**
comp=Z,19nm,1.4s,mb4.8
MCK McKinley 82.78 21 *e*P **P** **04 26 43.7 -1.8**
MCK pmax pmax
comp=Z,46nm,0.9s,mb5.5
MCK McKinley 82.78 21 *e*P **P** **04 26 43.7 -1.7**
comp=Z,46nm,0.9s,mb5.5
MAW Mawson 83.72 203 LR LR 05 00 53.5
comp=Z,113nm,19.4s,MS4.3,baz=357,slow=33
MAW Mawson 83.72 203 *e*P **P** **04 26 50.0 -0.4**
MAW pmax pmax
comp=Z,5.0nm,1.4s
MAW Mawson 83.72 203 *e*P **P** **04 26 50.0 -0.3**
comp=Z,5.2nm,1.4s,mb4.5
COLA College 83.84 21 *e*P **P** **04 26 48.8 -2.1**
COLA pmax pmax
comp=Z,20nm,0.9s,mb5.2
COLA College 83.84 21 *e*P **P** **04 26 48.8 -2.1**
comp=Z,20nm,0.9s,mb5.3
EGAK Eagle 86.20 22 *e*P **P** **04 27 02.5 -0.3**
comp=Z,14nm,1.2s,mb5.1
MK31 Makanchi Array 86.33 318 *e*P **P** **04 27 03.2 -0.6**
MKAR Makanchi Array 86.33 318 P **P** **04 27 03.5 -0.2**
comp=Z,3.6nm,0.7s,mb4.7,baz=98,slow=6.1,SNR=33
ZALV Zalesovo Beam 86.99 326 P **P** **04 27 05.0 -1.9**
comp=Z,1.8nm,0.7s,mb4.4,baz=126,slow=4.2,SNR=4.6
NVS Novosibirsk 88.16 326 *e*P **P** **04 27 23.0 +11**
OHCM Honcut 88.64 50 *e*P **P** **04 27 12.1 -3.0**
RPN Rapa Nui 88.90 117 LR LR 04 56 13.5
comp=Z,14μm,21.9s,baz=316,slow=28
BEKR Beckwourth 89.60 50 ⇓P **P** **04 27 19.6 -0.1**
baz=90
KURK Kurchatov 89.72 321 P **P** **04 27 18.6 -1.3**
comp=Z,2.3nm,0.3s,mb4.9,baz=106,slow=3.6,SNR=4.4
KURK Kurchatov 89.72 321 ⇑*i*P **P** **04 27 18.6 -1.3**
KURK pmax pmax
comp=Z,5.0nm,1.4s,mb4.7
KURK Kurchatov 89.72 321 *e*P **P** **04 27 18.8 -1.1**
comp=Z,4.0nm,1.1s,mb4.7
K05A Summer Lake 89.79 47 ⇓P **P** **04 27 20.5 0.0**
baz=90
ARVC Arvin 89.88 55 ⇓P **P** **04 27 21.0 0.0**
baz=90
TKM2 Tokmak 2 89.99 313 *e*P **P** **04 27 21.3 0.0**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
TKM2 Tokmak 2 89.99 313 *e*P **P** **04 27 21.3 0.0**
comp=Z,4.1nm,0.8s,mb4.8
R06C Coleville 90.03 51 ⇓P **P** **04 27 21.9 +0.2**
baz=90
O06A Flanigan 90.06 49 ⇑P **P** **04 27 22.4 +0.7**
baz=90
MWC Mount Wilson 90.34 56 *e*P **P** **04 27 23.5 +0.3**
MWC pmax pmax
comp=Z,11nm,0.7s,mb5.3
MWC Mount Wilson 90.34 56 *e*P **P** **04 27 23.4 +0.2**
comp=Z,11nm,0.7s,mb5.3
MTUM Tungsten Hills 90.50 52 *e*P **P** **04 27 24.5 +0.6**
EDW2 Edwards Air Fo 90.51 55 ⇑P **P** **04 27 24.3 +0.3**
baz=90
TIN Tinemaha 90.71 53 ⇑P **P** **04 27 25.5 +0.7**
baz=91,SNR=5.8
CWC Cottonwood Cre 90.72 53 ⇓P **P** **04 27 24.9 0.0**
baz=91
L07A Adell 90.78 48 ⇓P **P** **04 27 25.3 +0.2**
baz=91
M07A Soldier Meadow 90.78 48 ⇑P **P** **04 27 25.5 +0.4**
baz=91
N07B Gerlach 90.82 49 ⇓P **P** **04 27 25.8 +0.5**
baz=91
LRMC Laurel Mountai 90.86 54 ⇑P **P** **04 27 25.5 -0.1**
baz=91,SNR=5.1
NVAR Mina Array Bea 90.90 51 P **P** **04 27 26.0 +0.3**
comp=Z,6.1nm,0.8s,mb5.0,baz=247,slow=7.0,SNR=48
K07A Rock Creek Ran 90.98 47 ⇓P **P** **04 27 26.1 +0.1**
baz=91
MPMC Manual Prospec 91.12 54 ⇓P **P** **04 27 27.0 +0.2**
baz=91
G07A Ruggs Ranch, H 91.17 44 ⇑P **P** **04 27 26.5 -0.3**
baz=91
Q08A Gabbs 91.26 51 ⇓P **P** **04 27 27.6 +0.2**
baz=91,SNR=5.5
E07A Sunnyside 91.29 43 ⇓P **P** **04 27 27.2 -0.2**
baz=91
D07A Quincy 91.34 43 ⇓P **P** **04 27 27.0 -0.5**
baz=91
WVOR Wild Horse Val 91.37 47 *e*P **P** **04 27 27.5 -0.3**
WVOR pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
WVOR Wild Horse Val 91.37 47 *e*P **P** **04 27 27.5 -0.3**
comp=Z,4.4nm,1.0s,mb4.7
GRAC Grapevine Rang 91.37 53 ⇑P **P** **04 27 28.2 +0.3**
baz=91,SNR=8.6
N08A GE Springer Mi 91.44 49 ⇓P **P** **04 27 28.3 +0.1**
baz=91
MONP Monument Peak 91.46 57 ⇑P **P** **04 27 28.6 +0.1**
baz=91
K08A Mann Creek Ran 91.53 47 ⇓P **P** **04 27 28.4 -0.2**
baz=92
GSC Goldstone 91.54 55 ⇓P **P** **04 27 28.6 -0.2**
baz=92
GSC Goldstone 91.54 55 *e*P **P** **04 27 28.9 +0.1**
L08A Fields 91.54 48 ⇓P **P** **04 27 28.7 +0.1**
baz=92
S09A Goldfield 91.61 52 ⇓P **P** **04 27 29.3 +0.3**
baz=92,SNR=11
J08A Circle Bar Ran 91.66 47 ⇓P **P** **04 27 29.1 0.0**
baz=92
TPH Tonopah 91.67 52 *e*P **P** **04 27 29.9 +0.6**
I08A Drewsey 91.69 46 ⇑P **P** **04 27 29.4 +0.1**
baz=92
FURC Furnace Creek, 91.69 54 ⇑P **P** **04 27 29.7 +0.2**
baz=92,SNR=7.1
R09A Tonopah 91.82 52 ⇑P **P** **04 27 30.1 +0.2**
baz=92,SNR=11
Q09A Carvers 91.83 51 ⇓P **P** **04 27 30.3 +0.3**
baz=92
HEC Hector,Ludlow 91.85 55 ⇓P **P** **04 27 30.1 -0.1**
baz=92
BELC Belle Mtn. 91.98 56 ⇑P **P** **04 27 30.9 0.0**
baz=92
L09A Wilkinson Ranc 92.01 48 ⇑P **P** **04 27 30.8 0.0**
baz=92
O09A Fish Creek Ran 92.05 50 ⇑P **P** **04 27 30.9 -0.1**
baz=92
SHOC Shoshone 92.06 54 ⇑P **P** **04 27 31.1 0.0**
baz=92
M09A Marrel Ranch, 92.06 49 ⇑P **P** **04 27 31.6 +0.5**
baz=92
K09A Rome 92.08 47 ⇑P **P** **04 27 31.0 -0.1**
baz=92
U10A Ash Meadows, A 92.10 54 ⇑P **P** **04 27 31.7 +0.3**
baz=92
S10A Tonopah Range, 92.14 52 ⇑P **P** **04 27 31.6 +0.1**
baz=92,SNR=12
J09A Fry Pan Ranch, 92.17 47 ⇓P **P** **04 27 31.4 0.0**
baz=92
TUQ Turquoise Moun 92.27 55 ⇓P **P** **04 27 32.2 +0.1**
baz=92
GMRC Granite Mounta 92.38 55 ⇓P **P** **04 27 32.9 +0.2**
baz=92
D09A Jones Farm, Ri 92.43 43 ⇓P **P** **04 27 31.9 -0.7**
baz=92
Q10A Clear Creek Ra 92.43 51 ⇓P **P** **04 27 33.0 +0.2**
baz=92,SNR=6.7
P10A Eureka 92.51 50 ⇓P **P** **04 27 33.2 +0.1**
baz=92
N10A Dunphy 92.65 49 ⇓P **P** **04 27 34.1 +0.3**
baz=93
IRM Iron Mountain 92.70 56 ⇓P **P** **04 27 34.3 +0.1**
baz=93
V11A Goodsprings 92.73 54 ⇓P **P** **04 27 34.6 +0.3**
baz=93
BMO Blue Mountains 92.74 45 *e*P **P** **04 27 35.9 +1.8**
M10A I.L. Ranch, Tu 92.76 49 ⇑P **P** **04 27 34.6 +0.4**
baz=93
J10A Berg Farm, Mel 92.89 47 ⇓P **P** **04 27 34.9 0.0**
baz=93
L10A Juniper Basin 92.89 48 ⇑P **P** **04 27 35.2 +0.4**
baz=93
G10A Bishop Farm, J 92.94 45 ⇓P **P** **04 27 35.0 0.0**
baz=93
F10A Beach Ranch, E 92.98 44 ⇑P **P** **04 27 34.4 -0.7**
baz=93
R11A Troy Canyon, C 92.99 52 ⇑P **P** **04 27 35.5 +0.1**
baz=93,SNR=10.0
Q11A Duckwater 93.01 51 ⇑P **P** **04 27 35.8 +0.3**
baz=93,SNR=15
P11A Circle Ranch, 93.04 51 ⇓P **P** **04 27 35.9 +0.3**
baz=93
H10A Noah's Angus R 93.09 46 ⇑P **P** **04 27 35.1 -0.7**
baz=93
T11A Corn Creek, Al 93.11 53 ⇓P **P** **04 27 36.1 +0.1**
baz=93
D10A Wagner Farm, O 93.13 43 ⇑P **P** **04 27 35.1 -0.7**
baz=93
O11A Cowboy Ranch, 93.20 50 ⇑P **P** **04 27 36.5 +0.2**
baz=93,SNR=9.7
A10A Northport 93.25 41 ⇓P **P** **04 27 36.7 +0.3**
baz=93
K11A Parker Ranch, 93.32 47 ⇑P **P** **04 27 36.7 -0.1**
baz=93
NEW Newport 93.42 42 *e*P **P** **04 27 35.5 -1.6**
NEW pmax pmax
comp=Z,3.0nm,0.9s
NEW Newport 93.42 42 *e*P **P** **04 27 35.5 -1.6**
comp=Z,3.1nm,0.9s,mb4.7
L11A Cat Creek Ranc 93.44 48 ⇓P **P** **04 27 37.6 +0.2**
baz=93
S12A Delamar Landin 93.45 53 ⇓P **P** **04 27 38.1 +0.6**
baz=93
I11A Placerville 93.55 46 ⇑P **P** **04 27 37.5 -0.3**
baz=94
MFID Camas Ranch 93.57 47 ⇓P **P** **04 27 38.0 0.0**

	baz=94								
ELK	**Elko**	**93.61**	**50**	*e*P		**P**		**04 27 37.7**	**-0.5**
ELK				pmax		pmax			
	comp=Z,3.0nm,0.8s								
ELK	**Elko**	**93.61**	**50**	*e*P		**P**		**04 27 37.7**	**-0.5**
	comp=Z,2.8nm,0.8s,mb4.7								
H11A	**Donnelly**	**93.63**	**46**	⇓P		**P**		**04 27 37.9**	**-0.3**
	baz=94								
113A	**Mohawk Valley,**	**93.65**	**58**	⇓P		**P**		**04 27 38.1**	**-0.4**
	baz=94								
Q12A	**Willow Creek R**	**93.67**	**51**	⇑P		**P**		**04 27 39.0**	**+0.5**
	baz=94,SNR=7.5								
P12A	**McGill**	**93.68**	**51**	⇓P		**P**		**04 27 38.8**	**+0.3**
	baz=94,SNR=6.3								
R12A	**Pony Springs,**	**93.75**	**52**	⇓P		**P**		**04 27 39.1**	**+0.2**
	baz=94								
N12A	**Clover Valley,**	**93.78**	**49**	⇓P		**P**		**04 27 39.1**	**+0.2**
	baz=94								
W13A	**Hualapai Mount**	**93.87**	**55**	⇑P		**P**		**04 27 39.5**	**0.0**
	baz=94								
V13A	**Grand Canyon W**	**93.90**	**54**	⇓P		**P**		**04 27 39.7**	**0.0**
	baz=94								
O12A	**Currie**	**93.91**	**50**	⇓P		**P**		**04 27 39.9**	**+0.3**
	baz=94,SNR=15								
M12A	**Wells**	**93.95**	**49**	⇑P		**P**		**04 27 39.9**	**+0.2**
	baz=94								
L12A	**House Creek Ra**	**93.97**	**48**	⇑P		**P**		**04 27 40.1**	**+0.2**
	baz=94								
J12A	**Stokes Ranch,**	**94.07**	**47**	⇓P		**P**		**04 27 40.3**	**0.0**
	baz=94,SNR=8.7								
K12A	**Draper Farm, C**	**94.13**	**48**	⇓P		**P**		**04 27 40.8**	**+0.2**
	baz=94								
R13A	**O'Grain Ranch,**	**94.22**	**52**	⇓P		**P**		**04 27 41.4**	**+0.3**
	baz=94								
S13A	**Holt Ranch, En**	**94.23**	**53**	⇑P		**P**		**04 27 41.8**	**+0.7**
	baz=94								
Q13A	**Wheeler Ranch,**	**94.29**	**51**	⇓P		**P**		**04 27 41.8**	**+0.5**
	baz=94								
F12A	**Elk City**	**94.31**	**45**	⇓P		**P**		**04 27 41.9**	**+0.6**
	baz=94								
P13A	**Bates Ranch, G**	**94.36**	**51**	⇑P		**P**		**04 27 42.0**	**+0.4**
	baz=94								
M13A	**Montello**	**94.50**	**49**	⇑P		**P**		**04 27 42.3**	**0.0**
	baz=94								
V14A	**Boquillas Ranc**	**94.58**	**55**	⇑P		**P**		**04 27 43.1**	**+0.3**
	baz=94								
HLID	**Hailey**	**94.61**	**47**	⇓P		**P**		**04 27 42.9**	**+0.2**
	baz=95								
HLID	**Hailey**	**94.61**	**47**	*e*P		**P**		**04 27 42.9**	**+0.2**
	comp=Z,3.2nm,1.0s,mb4.7								
U14A	**Mt Trumbull**	**94.62**	**54**	⇑P		**P**		**04 27 42.9**	**0.0**
	baz=95								
Q14A	**Sevier Lake (B**	**94.87**	**51**	⇓P		**P**		**04 27 44.5**	**+0.4**
	baz=95								
P14A	**Drum Mountains**	**95.10**	**51**	⇓P		**P**		**04 27 45.2**	**+0.1**
	baz=95								
M14A	**Sheep Mountain**	**95.13**	**49**	⇓P		**P**		**04 27 44.9**	**-0.2**
	baz=95								
BVAR	**Borovoye Array**	**95.16**	**323**		P	**P**		**04 27 43.3**	**-1.7**
	comp=Z,1.2nm,0.8s,mb4.4,baz=84,slow=6.1,SNR=5.7								
U15A	**North Rim**	**95.33**	**54**	⇑P		**P**		**04 27 46.7**	**+0.5**
	baz=95								
DUG	**Dugway**	**95.37**	**50**	⇓P		**P**		**04 27 46.4**	**+0.1**
	baz=95								
DUG	**Dugway**	**95.37**	**50**	*e*P		**P**		**04 27 46.3**	**0.0**
DUG				pmax		pmax			
	comp=Z,8.0nm,1.5s,mb4.9								
DUG	**Dugway**	**95.37**	**50**	*e*P		**P**		**04 27 46.3**	**0.0**
	comp=Z,7.8nm,1.5s,mb4.9								
K14A	**Jones Ranch, D**	**95.38**	**48**	⇓P		**P**		**04 27 46.6**	**+0.3**
	baz=95								
L15A	**Malad City**	**95.90**	**49**	⇑P		**P**		**04 27 48.5**	**-0.1**
	baz=96								
B14A	**Marquette Ranc**	**95.98**	**42**	⇓P		**P**		**04 27 49.7**	**+0.8**
	baz=96								
S16A	**Weppner Ranch,**	**96.03**	**53**	⇑P		**P**		**04 27 49.9**	**+0.6**
	baz=96								
E15A	**Deer Lodge**	**96.20**	**44**	⇑P		**P**		**04 27 49.5**	**-0.4**
	baz=96								
JLU	**Jordanelle**	**96.45**	**50**	*e*P		**P**		**04 27 52.8**	**+1.6**
YKA	**Yellowknife Ar**	**96.74**	**28**	P		**P**		**04 27 50.7**	**-1.2**
	comp=Z,0.8nm,0.7s,mb4.3,baz=262,slow=4.6,SNR=20								
YKA				PKKP		PKKPbc		04 44 33.8	-3.5
	comp=Z,0.2nm,0.7s,baz=82,slow=2.9,SNR=5.2								
YKA	**Yellowknife Ar**	**96.74**	**28**	P		**P**		**04 27 50.7**	**-1.2**
YKA				PKKP		PKKPbc		04 44 33.8	-3.5
F16A	**Kennard Place,**	**96.84**	**45**	⇑P		**P**		**04 27 52.6**	**-0.2**
	baz=97								
O17A	**Robinson Place**	**96.95**	**50**	⇓P		**P**		**04 27 53.5**	**0.0**
	baz=97								
BW06	**Boulder Array**	**98.06**	**48**	*e*P		**P**		**04 27 57.5**	**-0.9**
	comp=Z,1.5nm,0.8s,mb4.6								
PDAR	**Pinedale Array**	**98.06**	**48**	P		**P**		**04 27 57.7**	**-0.7**
	comp=Z,1.2nm,0.8s,mb4.5,baz=225,slow=2.1,SNR=9.0								
K19A	**Absolon Red Bu**	**98.58**	**48**	⇓P		**P**		**04 28 00.1**	**-0.7**
	baz=99								
TXAR	**Lajitas Array**	**101.94**	**62**	P		Pdif		04 28 16.3	+0.9
	comp=Z,0.8nm,0.8s,baz=233,slow=6.1,SNR=3.6								
AKASG	**Malin Array Be**	**120.38**	**325**	PKP		PKPdf		04 33 11.7	-1.5
	comp=Z,0.6nm,0.5s,baz=65,slow=1.9,SNR=4.8								
BOSA	**Boshof**	**120.78**	**229**	PKP		PKPdf		04 33 14.4	-0.2
	comp=Z,1.9nm,0.6s,baz=114,slow=5.8,SNR=8.7								
BOSA	**Boshof**	**120.78**	**229**	*e*PKPdf		PKPdf		04 33 14.3	-0.4
BR131	**Keskin Array S**	**121.37**	**311**	*e*PKPdf		PKPdf		04 33 14.5	-0.9
BRTR	**Keskin Array B**	**121.37**	**311**	PKP		PKPdf		04 33 14.2	-1.3
	comp=Z,0.8nm,0.8s,baz=127,slow=3.3,SNR=4.0								
BRTR				PP		PP		04 34 46.7	+0.3
	comp=Z,1.7nm,1.1s,baz=77,slow=5.5,SNR=4.8								
LBTB	**Lobatse**	**122.34**	**233**	*e*PKIKP		PKPdf		04 33 16.7	-1.1
LSZ	**Lusaka**	**124.35**	**245**	*e*PKIKP		PKPdf		04 33 21.9	+0.1
GERES	**GERESS Array B**	**129.80**	**329**	PKP		PKPdf		04 33 31.1	-0.1
	comp=Z,0.7nm,0.6s,baz=65,slow=1.4,SNR=9.5								
TSUM	**Tsumeb**	**131.67**	**235**	*e*PKPdf		PKPdf		04 33 36.4	+0.7
ESDC	**Sonseca Array**	**145.01**	**335**	PKP		PKPdf		04 33 58.0	-1.5
	comp=Z,1.2nm,0.8s,baz=28,slow=4.3,SNR=7.0								
BDFB	**Brasilia**	**145.01**	**134**	PKPbc		PKPbc		04 33 57.6	-1.8
	comp=Z,7.1nm,0.7s,baz=254,slow=5.1,SNR=35								
CAM3	**Guarapari**	**145.78**	**149**	(P)		PKPdf		04 34 00.6	-0.8
CAM3				*i*				04 34 04.5	
CAM3				*i*				04 34 12.6	
CAM3				*i*				04 34 20.9	
TAM	**Tamanrasset**	**149.68**	**301**	*e*PKP2		PKPbc		04 34 12.4	0.0
TOA0	**Torodi Ar. Sit**	**155.81**	**283**	*e*PKPdf		PKPdf		04 34 15.9	-1.0
TORD	**Torodi Ar. Bea**	**155.81**	**283**	PKP		PKPdf		04 34 15.5	-1.4
	comp=Z,0.7nm,0.7s,baz=9.6,slow=1.4,SNR=5.9								
DBIC	**Dimbokro**	**162.35**	**265**	PKPab		PKPab		04 35 11.6	-0.4
	comp=Z,1.8nm,0.7s,baz=88,slow=5.0,SNR=5.5								

*IDC **26** 04:18:54.2±1.2,4008S×17425E,h92km±17km,mb3.1/2, mb1 3.5/4,mb1mx3.5/14,mbtmp3.4/4,MS2.7/1,Ms1 2.7/1, ms1mx2.5/9,Error ellipse: s-maj=34.5km s-min=9.4km az=132.0*

*ISCJB **26** 04:18:55.7±0.4,3998S±003×17404E±006,h126km±5km, mb3.4/2,Error ellipse: s-maj=7.3km s-min=4.2km az=22.1*

*NEIC **26** 04:18:57.2,3997S×174.10E,h123km,MG4.4(WEL),After WEL.*

NEIC Felt [IV] at Merrilands, New Plymouth and Welbourn. Also felt in the Wanganui area and the northern part of the South Island.

ISC 26 04:18:56.7±0.4,3999S±003×17405E±005,h119km±5km, n66,σ1°91/70,mb3.4/2,North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.66**	**4**	P		**Pn**	**04 19 16.3**	**+0.7**
DFE				S		**Sn**	**04 19 28.4**	**-1.5**
NEZ	**North Egmont**	**0.71**	**3**	P		**Pn**	**04 19 16.5**	**+0.4**
NEZ				S		**Sn**	**04 19 28.4**	**-2.2**
NWEZ	**Newall Road**	**0.72**	**349**	P		**Pn**	**04 19 16.9**	**+0.8**
RAEZ	**Rainy Point**	**0.75**	**21**	P		**Pn**	**04 19 16.9**	**+0.6**
WAZ	**Wanganui**	**0.76**	**73**	P		**Pn**	**04 19 17.2**	**+0.8**
WAZ				S		**Sn**	**04 19 31.9**	**+0.7**
PKE	**Pukeiti**	**0.79**	**357**	P		**Pn**	**04 19 17.2**	**+0.5**
PKE				S		**Sn**	**04 19 31.5**	**-0.3**
VRZ	**Vera Road**	**1.02**	**33**	*e*P		**Pn**	**04 19 19.0**	**+0.2**
VRZ				S		**Sn**	**04 19 34.9**	**-0.6**
KIW	**Kapiti Island**	**1.09**	**143**	P		**Pn**	**04 19 19.9**	**+0.3**
NNZ	**Nelson**	**1.33**	**202**	P		**Pn**	**04 19 23.3**	**+1.2**
MRW	**Makara Radio**	**1.34**	**158**	P		**Pn**	**04 19 23.1**	**+0.9**
MRZ	**Mangatainoka R**	**1.35**	**120**	P		**Pn**	**04 19 22.5**	**+0.2**
CAW	**Cannon Point**	**1.36**	**146**	P		**Pn**	**04 19 23.3**	**+0.8**
WNVZ	**Wahianoa**	**1.36**	**62**	P		**Pn**	**04 19 22.7**	**+0.2**
DRZ	**Dome Shelter**	**1.37**	**59**	P		**Pn**	**04 19 23.6**	**+1.1**
FWVZ	**Far West T-bar**	**1.37**	**58**	P		**Pn**	**04 19 22.7**	**+0.1**
TWVZ	**Taurewa**	**1.41**	**50**	P		**Pn**	**04 19 23.0**	**0.0**
WEL	**Wellington**	**1.41**	**157**	P		**Pn**	**04 19 23.9**	**+0.9**
SNZO	**South Karori**	**1.42**	**160**	P		**Pn**	**04 19 23.8**	**+0.8**
TUVZ	**Tukino**	**1.43**	**61**	P		**Pn**	**04 19 23.5**	**+0.2**
QRZ	**Quartz Range**	**1.43**	**234**	P		**Pn**	**04 19 24.1**	**+0.9**
MOVZ	**Moawhango**	**1.44**	**67**	P		**Pn**	**04 19 22.9**	**-0.4**
NGZ	**Ngauruhoe**	**1.45**	**57**	P		**Pn**	**04 19 23.5**	**+0.1**
TSZ	**Takapari Road**	**1.47**	**94**	P		**Pn**	**04 19 23.4**	**-0.3**
WTVZ	**West Tongariro**	**1.47**	**54**	P		**Pn**	**04 19 23.8**	**+0.1**
BHW	**Baring Head**	**1.55**	**157**	P		**Pn**	**04 19 25.2**	**+0.5**
HIZ	**Hauiti**	**1.60**	**23**	P		**Pn**	**04 19 25.1**	**-0.1**
MTW	**Mount Morrison**	**1.61**	**137**	P		**Pn**	**04 19 25.5**	**+0.1**
KATZ	**Kakaramea**	**1.62**	**52**	P		**Pn**	**04 19 25.6**	**+0.1**
MSWZ	**Moikau Station**	**1.70**	**148**	P		**Pn**	**04 19 26.9**	**+0.6**
RITZ	**Rihia Road**	**1.72**	**55**	P		**Pn**	**04 19 27.0**	**+0.3**
BSWZ	**Blackbirch Sta**	**1.73**	**184**	P		**Pn**	**04 19 28.1**	**+1.3**
RATZ	**Rangitukua**	**1.74**	**51**	P		**Pn**	**04 19 27.4**	**+0.5**
PAWZ	**Paruwai Farm**	**1.75**	**144**	P		**Pn**	**04 19 27.4**	**+0.5**
BFZ	**Birch Farm**	**1.82**	**113**	P		**Pn**	**04 19 27.6**	**-0.2**
WATZ	**Wairara**	**1.82**	**46**	P		**Pn**	**04 19 28.8**	**+0.9**
HATZ	**Hinemaiaia**	**1.92**	**56**	P		**Pn**	**04 19 28.5**	**-0.6**
THZ	**Tophouse**	**1.98**	**206**	P		**Pn**	**04 19 30.9**	**+1.1**
BKZ	**Black Stump Fm**	**2.06**	**67**	P		**Pn**	**04 19 29.9**	**-0.9**
DSZ	**Denniston Nort**	**2.45**	**223**	P		**Pn**	**04 19 36.7**	**+1.0**
KHZ	**Kahutara**	**2.46**	**189**	P		**Pn**	**04 19 36.8**	**+0.9**
TOZ	**Tahuroa Road**	**2.52**	**27**	P		**Pn**	**04 19 36.3**	**-0.4**
URZ	**Urewera**	**2.94**	**55**	P		**Pn**	**04 19 40.0**	**-2.2**
	30nm,0.3s,baz=244,slow=7.7,SNR=135							
URZ				S		**Sn**	**04 20 11.8**	**-5.4**
	38nm,0.3s,baz=202,slow=5.8,SNR=8.3							
URZ	**Urewera**	**2.94**	**55**	P		**Pn**	**04 19 40.6**	**-1.5**
MKAZ	**Moumakai**	**3.00**	**17**	P		**Pn**	**04 19 43.2**	**+0.2**
WTAZ	**Waiatarua**	**3.08**	**8**	P		**Pn**	**04 19 45.3**	**+1.4**
OTAZ	**Otara**	**3.11**	**13**	P		**Pn**	**04 19 45.2**	**+0.8**
MWZ	**Matawai**	**3.17**	**60**	P		**Pn**	**04 19 43.3**	**-1.8**
KAAZ	**Kauri Point**	**3.20**	**9**	P		**Pn**	**04 19 47.0**	**+1.4**
KUZ	**Kuaotunu**	**3.49**	**23**	P		**Pn**	**04 19 48.9**	**-0.5**
CRLZ	**Canterbury Las**	**3.74**	**196**	P		**Pn**	**04 19 51.7**	**-1.0**
PUZ	**Puketiti**	**3.79**	**61**	P		**Pn**	**04 19 51.0**	**-2.4**
MQZ	**McQueen's Vall**	**3.86**	**195**	P		**Pn**	**04 19 52.6**	**-1.7**
WCZ	**Waipu Caves**	**4.04**	**3**	P		**Pn**	**04 19 56.7**	**-0.1**
MXZ	**Matakaoa Point**	**4.11**	**55**	P		**Pn**	**04 19 55.8**	**-1.9**
RPZ	**Rata Peaks**	**4.35**	**210**	P		**Pn**	**04 19 59.9**	**-0.9**
	19nm,0.3s,baz=52,slow=2.9,SNR=49							
RPZ				S		**Sn**	**04 20 47.0**	**-3.6**
	13nm,0.3s,baz=274,slow=6.6,SNR=9.7							
RPZ				LR		LR	04 21 50.8	
	comp=Z,97nm,19.6s,baz=164,slow=41							
FOZ	**Fox Glacier**	**4.84**	**221**	P		**Pn**	**04 20 05.5**	**-1.9**
LBZ	**Lake Benmore**	**5.25**	**212**	P		**Pn**	**04 20 10.9**	**-2.0**
ODZ	**Otahua Downs**	**5.65**	**205**	P		**Pn**	**04 20 16.9**	**-1.4**
JCZ	**Jackson Bay**	**5.67**	**222**	P		**Pn**	**04 20 17.5**	**-1.1**
EAZ	**Earnscleugh**	**6.30**	**212**	P		**Pn**	**04 20 24.9**	**-2.2**
MSZ	**Milford Sound**	**6.52**	**222**	P		**Pn**	**04 20 29.5**	**-0.5**
ASAR	**Alice Springs**	**37.44**	**284**	P		**P**	**04 25 59.8**	**+1.3**
	0.2nm,0.4s,mb3.4,baz=116,slow=6.8,SNR=4.7							
WRA	**Warramunga Arr**	**39.37**	**289**	P		**P**	**04 26 16.5**	**+1.8**
	0.2nm,0.3s,mb3.4,baz=125,slow=8.3,SNR=4.9							
ARCES	**ARCESS Array B**	**146.06**	**341**	PKPbc		PKPbc	04 38 21.6	+0.1
	8.5nm,1.0s,baz=60,slow=2.2,SNR=11							
ARCES	**ARCESS Array B**	**146.06**	**341**	PKPbc		PKPbc	04 38 21.6	+0.1
DBIC	**Dimbokro**	**146.82**	**182**	PKPbc		PKPbc	04 38 25.4	0.0
	1.2nm,0.7s,baz=122,slow=3.8,SNR=3.3							

*VIE **26** 04:19:46.5±0.5,4498N×1485E,h10km±2km,mb2.1/2, ML2.6/2,Error ellipse: s-maj=2.8km s-min=1.7km az=167.0 53 km SE of Rijeka*

*ISCJB **26** 04:19:48.1±0.5,4505N±002×1480E±003,h10km,Error ellipse: s-maj=3.4km s-min=3.1km az=162.9*

*NEIC **26** 04:19:48.8±0.7,4509N×1472E,h10km,ML2.1(LJU), ML2.6(ZAG),Error ellipse: s-maj=7.2km s-min=5.5km az=62.0*

*CSEM **26** 04:19:48.1±0.1,4505N×1475E,h2km,ML2.6/2,Error ellipse: s-maj=2.3km s-min=1.6km az=91.0*

ISC 26 04:19:48.7±0.5,4504N±002×1479E±003,h4km±6km,n51, σ0°82/97,2C-6D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.48**	**173**	*e*Pg		**Pg**	**04 19 57.2**	**-0.6**
NVLJ				*i* Sg		**Sg**	**04 20 04.9**	**+0.9**
NVLJ	**Novalja**	**0.48**	**173**	*e*Pg		**Pg**	**04 19 57.2**	**-0.6**
NVLJ				*i* Sg		**Sg**	**04 20 04.9**	**+0.9**
BOJS	**Bojanci**	**0.57**	**35**	⇓*i*Pg		**Pg**	**04 19 59.1**	**-0.5**
BOJS				*i* Sg		**Sg**	**04 20 07.3**	**+0.3**
BOJS								
	comp=Z,84nm,0.1s							
BOJS	**Bojanci**	**0.57**	**35**	⇓*i*Pg		**Pg**	**04 19 59.1**	**-0.5**
BOJS				*i* Sg		**Sg**	**04 20 07.3**	**+0.3**
BOJS	**Bojanci**	**0.57**	**35**	⇓*i*Pg		**Pg**	**04 19 59.1**	**-0.5**
BOJS				*i* Sg		**Sg**	**04 20 07.3**	**+0.3**
KNDS	**Knezji Dol**	**0.57**	**329**	*i* Sg		**Sg**	**04 20 07.5**	**+0.5**
KNDS								
	comp=Z,34nm,0.1s							
CEY	**Cerknica**	**0.75**	**340**	*i* Pg		**Pg**	**04 20 02.2**	**-0.8**
CEY				*i* Sg		**Sg**	**04 20 13.6**	**+0.9**
CEY								
	comp=Z,36nm,0.1s							
CEY	**Cerknica**	**0.75**	**340**	*i* Pg		**Pg**	**04 20 02.2**	**-0.8**
CEY				*i* Sg		**Sg**	**04 20 13.6**	**+0.9**
CEY	**Cerknica**	**0.75**	**340**	*i* Pg		**Pg**	**04 20 02.2**	**-0.8**
CEY				*i* Sg		**Sg**	**04 20 13.6**	**+0.9**
SKDS	**Skadanscina**	**0.75**	**313**	*i* Pg		**Pg**	**04 20 01.7**	**-1.4**
SKDS				*i* Sg		**Sg**	**04 20 13.1**	**+0.3**
VISS	**Visnje**	**0.77**	**2**	*i* Pg		**Pg**	**04 20 02.4**	**-1.0**
VISS				*i* Sg		**Sg**	**04 20 13.5**	**+0.1**
VISS								
	comp=Z,34nm,0.2s							
VISS	**Visnje**	**0.77**	**2**	*i* Pg		**Pg**	**04 20 02.4**	**-1.0**
VISS				*i* Sg		**Sg**	**04 20 13.5**	**+0.2**
VISS	**Visnje**	**0.77**	**2**	*i* Pg		**Pg**	**04 20 02.4**	**-1.0**
VISS				*i* Sg		**Sg**	**04 20 13.5**	**+0.1**
CRES	**Cresnjev**	**0.92**	**30**	*i* Pg		**Pg**	**04 20 05.6**	**-0.7**
CRES				*i* Sg		**Sg**	**04 20 18.2**	**0.0**
CRES								
	comp=Z,51nm,0.2s							
CRES	**Cresnjev**	**0.92**	**30**	*i* Pg		**Pg**	**04 20 05.6**	**-0.7**
CRES				*i* Sg		**Sg**	**04 20 18.2**	**0.0**
CRES	**Cresnjev**	**0.92**	**30**	*i* Pg		**Pg**	**04 20 05.6**	**-0.7**
CRES				*i* Sg		**Sg**	**04 20 18.2**	**0.0**
LEGS	**Legarje**	**0.98**	**22**	*i* Pg		**Pg**	**04 20 06.7**	**-0.9**
LEGS				*i* Sg		**Sg**	**04 20 20.0**	**-0.3**
JAVS	**Javornik**	**1.00**	**329**	*i* Pg		**Pg**	**04 20 06.0**	**-1.8**
JAVS				*i* Sg		**Sg**	**04 20 21.7**	**+0.9**
JAVS								
	comp=Z,12nm,0.1s							
JAVS	**Javornik**	**1.00**	**329**	*i* Pg		**Pg**	**04 20 06.0**	**-1.8**
JAVS				*i* Sg		**Sg**	**04 20 21.7**	**+1.0**
JAVS	**Javornik**	**1.00**	**329**	*i* Pg		**Pg**	**04 20 06.0**	**-1.8**
JAVS				*i* Sg		**Sg**	**04 20 21.7**	**+0.9**
GCIS	**Gornji Cirnik**	**1.02**	**35**	*i* Pg		**Pg**	**04 20 08.0**	**-0.2**
GCIS				*e*Sg		**Sg**	**04 20 21.4**	**+0.1**
GCIS								
	comp=Z,24nm,0.2s							
GCIS	**Gornji Cirnik**	**1.02**	**35**	*i* Pg		**Pg**	**04 20 08.0**	**-0.2**
GCIS				*e*Sg		**Sg**	**04 20 21.4**	**0.0**
GCIS	**Gornji Cirnik**	**1.02**	**35**	*i* Pg		**Pg**	**04 20 08.0**	**-0.2**
GCIS				*e*Sg		**Sg**	**04 20 21.4**	**+0.1**
PDKS	**Podkum**	**1.03**	**8**	*i* Pg		**Pg**	**04 20 07.6**	**-0.9**
PDKS				*i* Sg		**Sg**	**04 20 22.0**	**+0.1**
PDKS								
	comp=Z,29nm,0.2s							
PDKS	**Podkum**	**1.03**	**8**	*i* Pg		**Pg**	**04 20 07.6**	**-0.9**
PDKS				*i* Sg		**Sg**	**04 20 22.0**	**+0.1**
CESS	**Cesta pri Krsk**	**1.05**	**27**	*i* Pg		**Pg**	**04 20 09.1**	**+0.3**
CESS				*i* Sg		**Sg**	**04 20 22.7**	**+0.3**
CESS								
	comp=Z,23nm,0.1s							
CESS	**Cesta pri Krsk**	**1.05**	**27**	*i* Pg		**Pg**	**04 20 09.1**	**+0.3**
CESS				*i* Sg		**Sg**	**04 20 22.7**	**+0.3**
CESS	**Cesta pri Krsk**	**1.05**	**27**	*i* Pg		**Pg**	**04 20 09.1**	**+0.3**
CESS				*i* Sg		**Sg**	**04 20 22.7**	**+0.3**
VNDS	**Vrh nad Dolski**	**1.07**	**357**	*i* Pg		**Pg**	**04 20 08.4**	**-0.7**
GOLS	**Golise**	**1.14**	**31**	*i* Pg		**Pg**	**04 20 11.1**	**+0.7**
GOLS				*i* Sg		**Sg**	**04 20 25.4**	**+0.2**
GOLS								
	comp=Z,46nm,0.3s							
GOLS	**Golise**	**1.14**	**31**	*i* Pg		**Pg**	**04 20 11.1**	**+0.6**
GOLS				*i* Sg		**Sg**	**04 20 25.4**	**+0.2**
GOLS	**Golise**	**1.14**	**31**	*i* Pg		**Pg**	**04 20 11.1**	**+0.7**
GOLS				*i* Sg		**Sg**	**04 20 25.4**	**+0.2**
VOY	**Vojsko**	**1.18**	**328**	*e*		**Pg**	**04 20 12.4**	**+1.1**
VOJS	**Vojsko**	**1.18**	**328**	*i* Pg		**Pg**	**04 20 10.9**	**-0.4**
VOJS				*i* Sg		**Sg**	**04 20 27.9**	**+1.2**
SISC	**Sisak**	**1.20**	**68**	*e*Pg		**Pg**	**04 20 12.2**	**+0.6**
SISC				Sg		**Sg**	**04 20 27.3**	**+0.2**
DOBS	**Dobrina**	**1.21**	**23**	*i* Pg		**Pg**	**04 20 11.5**	**-0.4**
DOBS				*e*Sg		**Sg**	**04 20 27.2**	**-0.4**
MOZS	**Mozjanca**	**1.28**	**349**	*i* Pg		**Pg**	**04 20 13.4**	**+0.1**
GORS	**Gorjuse**	**1.40**	**337**	*i* Pg		**Pn**	**04 20 14.3**	**-0.7**
GORS								
	comp=Z,20nm,0.2s							
CADS	**Cadrg**	**1.40**	**328**	*i* Pg		**Pg**	**04 20 14.9**	**-0.7**
CADS				*e*Sg		**Sg**	**04 20 34.2**	**+0.5**
CADS								
	comp=Z,51nm,0.4s							
CADS	**Cadrg**	**1.40**	**328**	*i* Pg		**Pg**	**04 20 14.9**	**-0.7**
CADS				*e*Sg		**Sg**	**04 20 34.2**	**+0.5**
CADS	**Cadrg**	**1.40**	**328**	*i* Pg		**Pg**	**04 20 14.9**	**-0.7**
CADS				*e*Sg		**Sg**	**04 20 34.2**	**+0.5**
ZAVS	**Zavodnje**	**1.41**	**7**	*i* Pg		**Pn**	**04 20 14.5**	**-0.6**
OBKA	**Obir**	**1.48**	**353**	⇓*i*Pg		**Pg**	**04 20 16.6**	**-0.5**
OBKA				⇓*i*Sg		**Sg**	**04 20 38.1**	**+1.8**
	comp=Z,34nm,0.3s							
GROS	**Grobnik**	**1.51**	**19**	*i* Pg		**Pg**	**04 20 17.0**	**-0.6**
GROS				*i* Sg		**Sg**	**04 20 36.4**	**-0.7**
GROS								
	comp=Z,29nm,0.3s							
GROS	**Grobnik**	**1.51**	**19**	*i* Pg		**Pg**	**04 20 17.0**	**-0.6**
GROS				*i* Sg		**Sg**	**04 20 36.4**	**-0.7**
GROS	**Grobnik**	**1.51**	**19**	*i* Pg		**Pg**	**04 20 17.0**	**-0.6**
GROS				*i* Sg		**Sg**	**04 20 36.4**	**-0.7**
PERS	**Pernice**	**1.61**	**8**	*i* Pn		**Pn**	**04 20 18.1**	**+0.1**
PERS				*i* Sn		**Sg**	**04 20 41.5**	**+1.0**
PERS								
	comp=Z,24nm,0.2s							
PERS	**Pernice**	**1.61**	**8**	*i* Pn		**Pn**	**04 20 18.1**	**+0.1**
PERS				*i* Sn		**Sg**	**04 20 41.5**	**+1.0**
PERS	**Pernice**	**1.61**	**8**	*i* Pn		**Pn**	**04 20 18.1**	**+0.1**
PERS				*i* Sn		**Sg**	**04 20 41.5**	**+1.0**
SOKA	**Soboth**	**1.65**	**6**	⇑*i*Pg		**Pn**	**04 20 18.6**	**+0.1**
SOKA				⇑*i*Sn		**Sn**	**04 20 39.2**	**-0.9**
SOKA				⇓*i*Sg		**Sg**	**04 20 42.6**	**+1.0**
	comp=Z,8.7nm,0.3s							
STON	**Ston**	**3.02**	**135**	*e*Pn		**Pn**	**04 20 40.0**	**+2.7**
STON				Sn		**Sn**

0.4nm,0.7s,baz=345,slow=6.9,SNR=8.2
YKA Yellowknife Ar 72.48 20 P P 04 54 09.0 +0.4
0.3nm,0.8s,baz=320,slow=4.6,SNR=6.8

LDG ***26*** *04:45:24.7±0.1, 40.12N×7309E, h10km, Mb5.4/40, Ms4.5/10, Error ellipse: s-maj=7.0km s-min=4.1km az=35.0*
IDC ***26*** *04:45:25.8±0.4, 40.17N×7303E, h0km, mb4.8/26, mb1 4.9/31, mb1mx4.9/31, mbtmp4.8/31, ML4.6/5, MS4.5/34, Ms1 4.5/34, ms1mx4.4/52, Error ellipse: s-maj=9.2km s-min=8.9km az=9.0*
ISCJB ***26*** *04:45:27.4±0.8, 4044N±002×7305E±002, h15km±6km, mb5.1/268, MS4.7/73, Error ellipse: s-maj=3.4km s-min=2.6km az=27.3*
MOS ***26*** *04:45:30.1±1.0, 4044N×7306E, h33km, mb5.5/113, MS4.7/45, Error ellipse: s-maj=6.0km s-min=3.3km az=128.2*
BJI ***26*** *04:45:31.0, 4054N×7310E, h41km, mB5.2, mb4.8, ML5.3, Ms5.1, Msz4.9*
GCMT ***26*** *04:45:32.8±0.2, 4034N×7305E, h25km, MW5.1/80, Moment Tensor Solution. s47,c70; s80,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.11±.19; $M_{\theta\theta}$-5.77±.14; $M_{\phi\phi}$0.66±.12; $M_{r\theta}$0.35±.25; $M_{r\phi}$1.86±.09; $M_{\theta\phi}$-1.03±.27; Best double couple: M◎5.81900×10^{16} NP1:ϕ_s273.00000°,δ43.00000°,λ72.00000°. NP2: ϕ_s117.00000°,δ49.00000°,λ106.00000°. Principal axes: T 5.3380, Plg77.0000°, Azm91.0000°; N 0.9720, Plg12.0000°, Azm286.0000°; P -6.3010, Plg3.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***26*** *04:45:32.8±0.5, 4034N×7306E, h44km±4km, mb5.2/167 Error ellipse: s-maj=4.1km s-min=2.8km az=189.0*
NEIC Damage included with event on January 1, 2008 at 06:32 UTC.
NNC ***26*** *04:45:35.1±3.5, 4076N×7296E, h11km±13km, mb5.5, mpv5.3, Error ellipse: s-maj=29.4km s-min=8.1km az=3.0*
SZGRF ***26*** *04:45:37.9, 4082N×7204E, h19km, mb4.9, MS4.7, Kyrgyzstan*
DJA ***26*** *04:45:38, 4058N×7320E, h78km, mb5.2/16*
BGS ***26*** *04:46:06.6±1.7, 43.16N×68.19E, h33km, mb5.2*
ISC 26 04:45:27.4±0.5, 4041N±002×7310E±002, h4km±3km, h24km±2.8km;pP-P,n775,σ1§03/785,mb5.1/268,MS4.7/73, 56C-33D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.78**	**14**	P	**Pg**	**04 46 03.5**	**+1.9**
AML	**Almayashu**	**1.78**	**14**	⇓*i*Pn	**Pg**	**04 46 03.2**	**+1.7**
AML				*e*Sn	**Sg**	**04 46 28.2**	**+3.6**
UCH	**Uchtor**	**2.11**	**30**	P	**Pg**	**04 46 08.4**	**+0.6**
	SNR=716						
UCH	**Uchtor**	**2.11**	**30**	*e*Pn	**Pg**	**04 46 08.1**	**+0.2**
UCH				*e*Sn	**Sg**	**04 46 37.6**	**+2.5**
EKS2	**Erkin-Say**	**2.31**	**12**	P	**Pg**	**04 46 10.8**	**-0.9**
	SNR=1859						
EKS2	**Erkin-Say**	**2.31**	**12**	*e*Pn	**Pg**	**04 46 10.7**	**-1.0**
EKS2				*e*Sn	**Sg**	**04 46 43.5**	**+1.9**
KZA	**Kyzart**	**2.33**	**43**	P	**Pg**	**04 46 11.4**	**-0.6**
	SNR=526						
KSH	**Kashi**	**2.38**	**111**	P	**Pg**	**04 46 11.5**	**-1.6**
KSH				S	**Sg**	**04 46 41.0**	**-2.9**
KSH				Smax			
	comp=N,73μm,1.0s						
KSH				Smax			
	comp=E,44μm,0.5s						
AAK	**Ala-Archa**	**2.46**	**25**	P	**Pg**	**04 46 13.4**	**-1.2**
	SNR=405						
KBK	**Karagaybulak**	**2.64**	**31**	P	**Pg**	**04 46 16.3**	**-1.7**
	SNR=2976						
FRU	**Bishkek**	**2.68**	**25**	⇓*i*PN	**Pg**	**04 46 17.0**	**-1.7**
FRU				*e*S	**Sg**	**04 46 52.6**	**-0.8**
FRU				pmax	pmax		
	comp=Z,22μm,1.4s						
FRU				smax			
	comp=N,73μm,2.0s						
CHMS	**Chumysh**	**2.87**	**25**	P	**Pg**	**04 46 18.8**	**-3.6**
	SNR=488						
ULHL	**Ulahol**	**3.00**	**51**	P	**Pn**	**04 46 20.4**	**+4.7**
	SNR=503						
USP	**Ospenovka**	**3.04**	**20**	P	**Pn**	**04 46 20.9**	**+4.6**
	SNR=257						
TKM2	**Tokmak 2**	**3.13**	**36**	⇓Pn	**Pn**	**04 46 22.7**	**+5.1**
	comp=N,339nm,0.8s						
TKM2				⇑Pg	**Pg**	**04 46 28.0**	**+0.5**
TKM2				⇑Lg		04 47 09.1	
	comp=N,7μm,0.6s						
TKM2	**Tokmak 2**	**3.13**	**36**	P	**Pn**	**04 46 22.7**	**+5.1**
	SNR=248						
TKM2	**Tokmak 2**	**3.13**	**36**	*e*Pn	**Pn**	**04 46 22.5**	**+4.9**
TKM2				*e*Sn	**Sn**	**04 47 03.1**	**+7.7**
KK31	**Karatay Array**	**3.32**	**325**	⇓Pn	**Pn**	**04 46 22.5**	**+2.4**
	comp=N,72nm,0.3s						
KK31				⇓Pg	**Pg**	**04 46 29.9**	**-1.1**
	comp=N,1μm,0.3s						
KK31				⇑Lg		04 47 10.1	
	comp=N,9μm,0.8s						
KK31	**Karatay Array**	**3.32**	**325**	PN	**Pg**	**04 46 29.8**	**-1.2**
KK31						04 47 10.0	
KK31				pmax	pmax		
	comp=Z,1μm,0.3s						
KK31				smax			
	comp=N,2μm,0.3s						
KNDC	**Almaty**	**4.03**	**45**	⇑Pn	**Pn**	**04 46 35.6**	**+5.8**
	comp=N,794nm,0.9s						
KNDC				⇑Pg	**Pg**	**04 46 44.6**	**0.0**
	comp=N,4μm,0.7s						
KNDC				⇑Lg		04 47 38.5	
	comp=N,11μm,0.7s						
AAA	**Alma-Ata**	**4.05**	**44**	*i* PN	**Pg**	**04 46 43.8**	**-1.3**
CEP	**Cherat**	**6.64**	**189**	P	**Pn**	**04 47 08.6**	**+2.8**
CEP				S	**Sn**	**04 48 13.0**	**-8.9**
KBL	**Kabul**	**6.69**	**210**	*e*PN	**Pn**	**04 47 10.2**	**+3.8**
KBL				*e*		04 48 26.7	
KBL				pmax	pmax		
	comp=Z,2μm,0.9s						
KBL	**Kabul**	**6.69**	**210**	*e*Pn	**Pn**	**04 47 10.2**	**+3.8**
	comp=Z,2μm,0.9s						
KBL				*e*Sn	**Sn**	**04 48 26.7**	**+3.7**
JMU	**Jammu**	**7.81**	**169**	*ex*	x	04 48 06.0	
JMU				*e*S	**Sn**	**04 48 49.0**	**-1.7**
DLH	**Dalhousie**	**8.18**	**163**	*e*P	**Pn**	**04 47 30.0**	**+3.0**
DLH				*ex*	x	04 49 00.0	
THN	**Thein Dam**	**8.23**	**164**	*e*P	**Pn**	**04 47 30.3**	**+2.6**
THN				*ex*	x	04 49 02.8	
SBDP	**Sheikh Budin**	**8.30**	**194**	P	**Pn**	**04 47 29.8**	**+1.2**
SARP	**Sargodha**	**8.48**	**182**	P	**Pn**	**04 47 31.5**	**+0.5**
MK31	**Makanchi Array**	**9.23**	**43**	⇑Pn	**Pn**	**04 47 44.3**	**+3.0**
	comp=Z,114nm,0.7s						
MK31				⇑Lg		04 50 22.5	
	comp=Z,1μm,1.4s,baz=225,slow=29,SNR=3.6						
MK31	**Makanchi Array**	**9.23**	**43**	*i* P	**Pn**	**04 47 44.6**	**+3.4**
MK31				pmax	pmax		
	comp=Z,91nm,0.5s						
MK31	**Makanchi Array**	**9.23**	**43**	*e*Pn	**Pn**	**04 47 44.5**	**+3.3**
MKAR	**Makanchi Array**	**9.23**	**43**	Pn	**Pn**	**04 47 44.7**	**+3.5**
	comp=Z,1.8nm,0.3s,baz=238,slow=11,SNR=68						
MKAR				Lg		04 50 18.0	
	comp=Z,9.8nm,0.3s,baz=240,slow=23,SNR=3.1						
MKAR				LR	LR	04 50 58.1	
	comp=Z,939nm,20.1s,baz=226,slow=35						
MKAR	**Makanchi Array**	**9.23**	**43**	P	**Pn**	**04 47 44.7**	**+3.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**9.23**	**43**	Pn	**Pn**	**04 47 44.7**	**+3.5**
MKAR				Lg		04 50 18.0	
MKAR				LR	LR	04 50 58.1	
BHK	**Bhakra**	**9.37**	**162**	*e*P	**Pn**	**04 47 47.0**	**+3.8**
BHK				*ex*	x	04 49 32.8	
SDNR	**Sundarnagar**	**9.42**	**159**	*e*P	**Pn**	**04 47 46.0**	**+2.0**
SDNR				*ex*	x	04 49 28.6	
SMLA	**Simla**	**9.83**	**159**	*i* P	**Pn**	**04 47 51.4**	**+1.9**
SMLA				*i* S	**Sn**	**04 49 33.7**	**-6.7**
DDI	**Dehra Dun**	**10.84**	**157**	*e*P	**Pn**	**04 48 03.2**	**-0.2**
DDI				*ex*	x	04 50 01.0	
KURBB	**Kurchatov Arra**	**10.90**	**19**	⇓Pn	**Pn**	**04 48 04.6**	**+0.5**
	comp=Z,24nm,0.8s						
KURK	**Kurchatov**	**11.01**	**19**	Pn	**Pn**	**04 48 06.0**	**+0.4**
	comp=Z,577nm,0.8s,SNR=5.8						
KURK	**Kurchatov**	**11.01**	**19**	⇑Pn	**Pn**	**04 48 06.1**	**+0.5**
	comp=Z,99nm,0.9s						
KURK				⇓Lg		04 51 13.4	
	comp=Z,2μm,0.9s						
KURK	**Kurchatov**	**11.01**	**19**	P	**Pn**	**04 48 07.0**	**+1.4**
	SNR=28						
KURK	**Kurchatov**	**11.01**	**19**	Pn	**Pn**	**04 48 04.7**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=213,slow=12,SNR=22						
KURK				Sn	**Sn**	**04 50 08.0**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=204,slow=27,SNR=4.3						
KURK				Lg		04 51 14.9	
	comp=Z,6.4nm,0.3s,baz=197,slow=27,SNR=7.9						
KURK				LR	LR	04 52 38.8	
	comp=Z,3μm,18.5s,baz=205,slow=39						
KURK	**Kurchatov**	**11.01**	**19**	*e*Pn	**Pn**	**04 48 06.6**	**+1.0**
QUE	**Quetta**	**11.36**	**208**	*e*P	**Pn**	**04 48 20.0**	**+9.5**
QUE				*e*S	**Sn**	**04 50 35.0**	**+17**
WMQ	**Urumqi**	**11.37**	**68**	P	**Pn**	**04 48 15.3**	**+4.8**
WMQ				S	**Sn**	**04 50 23.0**	**+5.1**
WMQ				LR	LR		
	comp=N,9μm,5.4s						
WMQ				LR	LR		
	comp=E,11μm,3.2s						
WMQ				LR	LR		
	comp=Z,3μm,17.0s						
ABKT	**Ailbek**	**11.89**	**263**	Pn	**Pn**	**04 48 19.1**	**+1.4**
	comp=Z,971nm,0.6s,SNR=17						
VAN	**Vannovskaya**	**11.89**	**263**	*e*P	**Pn**	**04 48 15.3**	**-2.5**
PTH	**Pithoragarh**	**12.30**	**150**	*e*P	**Pn**	**04 48 28.7**	**+5.4**
PTH				*e*S	**Sn**	**04 50 34.8**	**-6.1**
LGTI	**Lohaghat**	**12.40**	**150**	*ex*	x	04 48 23.0	
VOSK	**Vostochnaya**	**12.40**	**354**	⇑Lg		04 51 59.9	
	comp=Z,3μm,1.1s						
BVA0	**Borovoye Array**	**12.76**	**353**	⇓Pn	**Pn**	**04 48 29.6**	**+0.1**
	comp=Z,24nm,0.8s,baz=165,slow=14,SNR=545						
BVA0				⇓Lg		04 52 08.9	
	comp=Z,204nm,1.4s,baz=167,slow=30,SNR=3.6						
BVA0	**Borovoye Array**	**12.76**	**353**	*i* P	**Pn**	**04 48 29.5**	**0.0**
BVA0				pmax	pmax		
	comp=Z,24nm,0.9s						
BVAR	**Borovoye Array**	**12.76**	**353**	Pn	**Pn**	**04 48 29.4**	**-0.1**
	comp=Z,6.8nm,0.3s,baz=162,slow=12,SNR=197						
BVAR				Sn	**Sn**	**04 50 50.2**	**-1.6**
	comp=Z,6.4nm,0.3s,baz=152,slow=25,SNR=3.1						
BVAR				Lg		04 52 14.3	
	comp=Z,11nm,0.3s,baz=170,slow=28,SNR=6.1						
BVAR				LR	LR	04 53 43.5	
	comp=Z,4μm,18.6s,baz=172,slow=38						
BVAR	**Borovoye Array**	**12.76**	**353**	P	**Pn**	**04 48 29.4**	**-0.1**
BVAR						04 50 50.2	
BVAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BVAR				smax			
	comp=N,6.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,4μm,18.6s						
BRVK	**Borovoye**	**12.80**	**352**	Pn	**Pn**	**04 48 30.1**	**0.0**
	comp=Z,822nm,1.0s,SNR=42						
BRVK	**Borovoye**	**12.80**	**352**	P	**Pn**	**04 48 30.7**	**+0.6**
	SNR=36						
BRVK	**Borovoye**	**12.80**	**352**	*e*Pn	**Pn**	**04 48 30.2**	**+0.1**
BRVK				*e*Sn	**Sn**	**04 50 53.4**	**+0.5**
AB01	**Akbulak array**	**12.85**	**318**	⇑Pn	**Pn**	**04 48 29.6**	**-1.1**
AB01				⇑Lg		04 52 12.6	
	comp=Z,247nm,0.8s						
AB31	**Akbulak array**	**12.85**	**318**	P	**Pn**	**04 48 29.2**	**-1.5**
AB31				pmax	pmax		
	comp=Z,161nm,0.8s						
AJM	**Ajmer**	**13.95**	**174**	*e*P	**Pn**	**04 48 46.8**	**+0.9**
AJM				AMb	AMB	04 48 51.6	
	comp=Z,203nm,1.2s						
AKTK	**Aktyubinsk**	**14.56**	**319**	Pn	**Pn**	**04 48 52.6**	**-1.4**
AKTK				Sn	**Sn**	**04 51 28.6**	**-7.2**
AKTK				Lg		04 53 11.9	
AKTK				LR	LR	04 55 00.2	
AKTO	**Aktyubinsk**	**14.56**	**319**	Pn	**Pn**	**04 48 52.6**	**-1.4**
	comp=Z,2.5nm,0.3s,baz=131,slow=12,SNR=36						
AKTO				Sn	**Sn**	**04 51 28.6**	**-7.2**
	comp=Z,1.7nm,0.3s,baz=25,slow=18,SNR=2.1						
AKTO				Lg		04 53 11.9	
	comp=Z,2.5nm,0.3s,baz=24,slow=16,SNR=2.6						
AKTO				LR	LR	04 55 00.2	
	comp=Z,3μm,19.1s,baz=134,slow=39						
DANN	**Dangsing**	**14.89**	**141**	*e*P	**Pn**	**04 48 56.0**	**-2.7**
	comp=Z,397nm,0.7s						
KOLN	**Koldanda**	**15.30**	**142**	*e*P	**Pn**	**04 49 00.8**	**-3.4**
	comp=Z,246nm,0.8s						
GKN	**Gorkha**	**15.61**	**139**	*e*P	**Pn**	**04 49 04.4**	**-3.8**
	comp=Z,174nm,0.4s						
ZAA0	**Zalesovo Array**	**15.68**	**26**	*e*Pn	**Pn**	**04 49 09.5**	**+0.4**
ZALV	**Zalesovo Beam**	**15.68**	**26**	Pn	**Pn**	**04 49 10.6**	**+1.5**
	comp=Z,4.3nm,0.3s,baz=217,slow=13,SNR=37						
ZALV				Sn	**Sn**	**04 52 10.1**	**+6.9**
	comp=Z,0.5nm,0.3s,baz=225,slow=22,SNR=3.8						
ZALV				Lg		04 53 50.0	
	baz=224,slow=21,SNR=2.5						
ZALV				LR	LR	04 55 41.6	
	comp=Z,2μm,18.9s,baz=219,slow=39						
ZALV	**Zalesovo Beam**	**15.68**	**26**	P	**Pn**	**04 49 10.6**	**+1.5**
ZALV						04 52 10.1	
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,2μm,18.9s						
ZALV	**Zalesovo Beam**	**15.68**	**26**	Pn	**Pn**	**04 49 10.6**	**+1.5**
ZALV				Sn	**Sn**	**04 52 10.1**	**+6.9**
ZALV				Lg		04 53 50.0	
ZALV				LR	LR	04 55 41.6	
NVS	**Novosibirsk**	**15.95**	**22**	*e*P	**Pn**	**04 49 11.3**	**-1.2**
NVS				*e*		04 52 11.2	
KKN	**Kakani**	**16.11**	**138**	*e*P	**Pn**	**04 49 10.9**	**-3.8**
	comp=Z,256nm,0.6s						
DMN	**Daman**	**16.17**	**138**	*e*P	**Pn**	**04 49 11.8**	**-3.7**
	comp=Z,134nm,0.5s						
GUN	**Gumba**	**16.32**	**136**	*e*P	**Pn**	**04 49 13.5**	**-4.0**
	comp=Z,419nm,0.7s						
PKIN	**Phulchoki**	**16.34**	**138**	*e*P	**Pn**	**04 49 14.3**	**-3.4**
	comp=Z,96nm,0.6s						
PKI	**Pulchoki**	**16.35**	**138**	*e*P	**Pn**	**04 49 13.8**	**-4.1**
	comp=Z,446nm,1.1s						
JIRN	**Jiri**	**16.69**	**136**	*e*P	**Pn**	**04 49 18.8**	**-3.4**
	comp=Z,229nm,0.4s						
BHJ	**Bhuj**	**17.35**	**191**	*e*P	**Pn**	**04 49 30.3**	**-0.2**
BHJ				AMb	AMB	04 49 39.8	
	comp=Z,318nm,1.5s						
RAMN	**Ramite**	**17.47**	**136**	*e*P	**Pn**	**04 49 27.6**	**-4.4**
	comp=Z,207nm,0.5s						
BHPL	**Bhopal**	**17.50**	**167**	*e*P	**Pn**	**04 49 33.1**	**+0.7**
BHPL				AMb	AMB	04 49 42.0	
	comp=Z,290nm,1.6s						
TAPN	**Taplejung**	**17.77**	**133**	*e*P	**Pn**	**04 49 30.9**	**-4.7**
	comp=Z,273nm,0.6s						
ODAN	**Odare**	**17.97**	**134**	*e*P	**Pn**	**04 49 34.5**	**-3.7**
	comp=Z,406nm,0.7s						
LSA	**Lhasa**	**18.20**	**120**	P	**Pn**	**04 49 43.0**	**+2.0**
LSA				AP	pP	04 49 50.5	+8.2
LSA				XP	sP	04 49 54.5	+12
LSA				S	**Sn**	**04 53 09.8**	**+5.3**
LSA				LR	LR		
	comp=N,2μm,15.2s						
LSA				LR	LR		
	comp=E,1μm,12.2s						
LSA				LR	LR		
	comp=Z,3μm,15.2s						
LSA	**Lhasa**	**18.20**	**120**	⇑*i*P	**Pn**	**04 49 42.8**	**+1.8**
LSA				pmax	pmax		
	comp=Z,35nm,0.7s						
LSA	**Lhasa**	**18.20**	**120**	⇑*i*P	**Pn**	**04 49 42.8**	**+1.8**
	comp=Z,35nm,0.7s						
SVE	**Sverdlovsk**	**18.33**	**338**	⇓*e*P	**Pn**	**04 49 42.2**	**-0.2**
SVE				pmax	pmax		
	comp=Z,105nm,1.0s						
SVE				MLR	MLR		
	comp=Z,6μm,11.0s						
ARU	**Arti**	**18.65**	**334**	*d i*P	**Pn**	**04 49 47.2**	**+1.0**
ARU				pmax	pmax		
	comp=Z,89nm,1.7s						
ARU				MLR	MLR		
	comp=Z,3μm,13.0s						
ARU	**Arti**	**18.65**	**334**	*e*P	**Pn**	**04 49 46.6**	**+0.4**
	comp=Z,107nm,0.8s						
MAK	**Makhachkala**	**19.27**	**286**	*e*P	**Pn**	**04 49 55.0**	**+1.2**
MAK				*e*S	**Sn**	**04 53 29.9**	**-0.2**
MAK				MLR	MLR		
	comp=Z,9μm,16.0s						
BOK	**Bokaro**	**19.75**	**143**	*e*P	**Pn**	**04 49 57.8**	**-2.0**
BOK				AMb	AMB	04 50 07.7	
	comp=Z,247nm,1.0s						
NGP	**Nagpur**	**19.86**	**163**	*e*P	**Pn**	**04 49 59.7**	**-1.3**
NGP				*ex*	x	04 50 05.0	
	comp=Z,132nm,1.5s						
NGP				*ex*	x	04 53 40.0	
AKL	**Akola**	**19.92**	**169**	*e*P	**Pn**	**04 50 01.2**	**-0.6**
AKL				AMb	AMB	04 50 09.3	
	comp=Z,151nm,0.3s						
GTA	**Gaotai**	**20.50**	**84**	⇑P	**P**	**04 50 08.0**	**+1.7**
GTA				AP		04 50 15.0	
GTA				XP	sP	04 50 19.3	+11
GTA				PP		04 50 30.8	
GTA				S	**S**	**04 53 56.0**	**-0.1**
GTA				XS	sS	04 54 06.0	+8.2
GTA				SS		04 54 25.0	
GTA				AMB	AMB		
	comp=Z,50nm,1.2s						
GTA				AMB	AMB		
	comp=Z,489nm,6.0s						
GTA				LR	LR		
	comp=N,2μm,15.6s,MS4.8						
GTA				LR	LR		
	comp=E,2μm,14.1s,MS4.8						
GTA				LR	LR		
	comp=Z,3μm,17.4s,MS4.6						
DGRG	**David-gareji**	**20.95**	**282**	P	**P**	**04 50 12.0**	**+0.8**
BIDO	**Bidbid**	**21.04**	**221**	⇑P	**P**	**04 50 17.7**	**+5.3**
	SNR=9.5						
HATD	**Hatta, Dubai**	**21.05**	**228**	P	**P**	**04 50 16.3**	**+3.8**
	SNR=9.0						
MTA	**Mtatsminda**	**21.35**	**283**	P	**P**	**04 50 14.8**	**-0.8**
WBK	**Wadi Bani Khal**	**21.40**	**218**	P	**P**	**04 50 21.2**	**+5.0**
	SNR=11						
HOQ	**Hoqain**	**21.41**	**223**	P	**P**	**04 50 21.4**	**+5.1**
	SNR=8.1						
SMDO	**Samad**	**21.46**	**221**	⇑P	**P**	**04 50 21.0**	**+4.1**
	SNR=12						
SHL	**Shillong**	**21.55**	**128**	*i* P	**P**	**04 50 18.0**	**+0.2**
SHL				*i* S	**S**	**04 54 16.0**	**-1.2**
POO	**Poona**	**21.81**	**178**	*e*P	**P**	**04 50 21.5**	**+0.8**
POO				AMb	AMB	04 50 31.2	
	comp=Z,184nm,1.8s,mb5.2						
GOR	**Gori**	**21.83**	**284**	P	**P**	**04 50 25.7**	**+4.9**
JMDO	**Jabal Madar**	**22.02**	**220**	P	**P**	**04 50 27.5**	**+4.6**
	SNR=14						
ARQ	**Araqi**	**22.02**	**224**	⇓P	**P**	**04 50 26.7**	**+3.8**
	SNR=19						
LATR	**Latur**	**22.12**	**171**	*e*P	**P**	**04 50 24.0**	**+0.1**
LATR				*ex*	x	04 54 30.0	
BSY	**Bisya**	**22.16**	**222**	⇓P	**P**	**04 50 28.4**	**+4.1**
	SNR=22						
MOY	**Mondy**	**22.26**	**50**	*e*P	**P**	**04 50 28.1**	**+2.9**
MOY				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.2						
ONI	**Oni**	**22.27**	**285**	P	**P**	**04 50 25.8**	**+0.4**
DYDN	**Diyadin**	**22.51**	**277**	*i* P	**P**	**04 50 28.9**	**+0.9**
DIGO	**Kars**	**22.59**	**280**	*i* P	**P**	**04 50 28.5**	**-0.3**
KIV	**Kislovodsk**	**22.75**	**289**	P	**P**	**04 50 29.8**	**-0.7**
	comp=Z,1μm,0.8s,mb6.3,SNR=9.0						
KIV	**Kislovodsk**	**22.75**	**289**	P	**P**	**04 50 29.6**	**-0.9**
	SNR=26						
KIV	**Kislovodsk**	**22.75**	**289**	*e*P	**P**	**04 50 29.2**	**-1.3**
KIV				*e*S	**S**	**04 54 39.3**	**-0.8**
KIV				pmax	pmax		
	comp=Z,72nm,0.7s,mb5.2						
KIV				MLR	MLR		
	comp=Z,615nm,14.0s,MS4.2						
KIV	**Kislovodsk**	**22.75**	**289**	*e*P	**P**	**04 50 29.2**	**-1.3**
	comp=Z,139nm,0.7s,mb5.5						
BWNR	**Bhubaneshwar**	**22.80**	**148**	*e*P	**P**	**04 50 33.0**	**+1.8**
BWNR				*e*S	**S**	**04 54 39.3**	**-1.9**
HAKT	**HAKKARI**	**22.98**	**272**	*i* P	**P**	**04 50 42.2**	**+9.3**
KAD	**Karad**	**23.04**	**177**	*i* x	**P**	**04 50 37.2**	**+3.5**
KAD				*i* x	**S**	**04 54 41.2**	**-3.9**
ZAK	**Zakamensk**	**23.27**	**55**	*e*P	**P**	**04 50 36.6**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,60nm,1.1s,mb4.9						
UMR	**Umm Al-Rimmam**	**23.37**	**250**	*e*P	**P**	**04 50 37.8**	**+0.6**
	baz=250						
UMR				AMb	AMB	04 50 43.7	
	comp=Z,438nm,1.2s,mb5.8,baz=250						
IMP	**Imphal**	**23.38**	**125**	*i* P	**P**	**04 50 38.0**	**+0.7**
HYB	**Hyderabad**	**23.39**	**167**	*e*P	**P**	**04 50 37.0**	**-0.4**
HYB				*e*S	**S**	**04 54 48.0**	**-2.9**
HYB				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.2						
HYB	**Hyderabad**	**23.39**	**167**	*i* P	**P**	**04 50 37.0**	**-0.4**
	comp=Z,110nm,1.0s,mb5.2						
HYB				*e*pP		04 50 48.5	
HYB				*e*PP		04 51 11.0	
HYB				*e*S	**S**	**04 54 46.0**	**-4.9**
HYB				LR	LR	04 59 56.0	
	comp=Z,6.8nm,10.0s						
HYB	**Hyderabad**	**23.39**	**167**	*e*P	**P**	**04 50 37.0**	**-0.4**
	comp=Z,110nm,1.0s,mb5.2						
HYB				*e*S	**S**	**04 54 48.0**	**-2.9**
HYB				*e*		04 59 56.0	
ARTV	**Artvin**	**23.55**	**282**	*i* P	**P**	**04 50 40.8**	**+1.8**
DAGI	**Agillar**	**23.58**	**282**	*i* P	**P**	**04 50 40.7**	**+1.4**
KBD	**Kabd**	**23.60**	**250**	*e*P	**P**	**04 50 39.2**	**-0.4**
	baz=250						
KBD				AMb	AMB	04 50 45.9	
	comp=Z,281nm,1.0s,mb5.7,baz=250						
QRN	**Al-Qurain**	**23.69**	**248**	*e*P	**P**	**04 50 40.4**	**0.0**
	baz=248						
QRN				AMb	AMB	04 50 53.6	
	comp=Z,280nm,1.0s,mb5.7,baz=248						
DBOC	**Borcka**	**23.73**	**283**	*i* P	**P**	**04 50 41.4**	**+0.8**
DDEM	**Demirkent**	**23.73**	**281**	*i* P	**P**	**04 50 40.8**	**+0.1**
HOMI	**Horasan**	**23.76**	**279**	*i* P	**P**	**04 50 41.7**	**+0.8**
TLY	**Talaya**	**23.83**	**52**	*e*P	**P**	**04 50 43.0**	**+1.5**
TLY				pmax	pmax		
	comp=Z,49nm,1.4s,mb4.7						
TLY				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.4						
TLY	**Talaya**	**23.83**	**52**	*e*P	**P**	**04 50 42.6**	**+1.1**
	comp=Z,39nm,1.1s,mb4.8						
RDF	**Al-Radifah**	**23.85**	**249**	*e*P	**P**	**04 50 41.7**	**-0.2**
	baz=249						
RDF				AMb	AMB	04 50 48.3	
	comp=Z,366nm,1.2s,mb5.7,baz=249						
NAY	**Al-Naaiem**	**23.88**	**250**	*e*P	**P**	**

SONM pmax pmax
comp=Z,10.0nm,0.8s
SONM MLR MLR
comp=Z,2μm,18.1s
SOC Sochi 24.92 288 *c* iP **P** **04 50 50.7 -0.8**
SOC *e* 04 50 56.1
SOC *e* 04 51 24.7
SOC *eS* **S** **04 55 15.5 +0.2**
SOC pmax pmax
comp=Z,48nm,1.1s,mb4.9
SOC MLR MLR
comp=Z,1μm,17.0s,MS4.5
MARD Mardin 25.28 273 *i* P **P** **04 50 55.5 +0.7**
ULN Ulaanbaatar 25.33 62 P **P** **04 50 56.8 +1.6**
SNR=20
ULN Ulaanbaatar 25.33 62 *eP* **P** **04 50 56.0 +0.9**
ULN pmax pmax
comp=Z,66nm,1.2s,mb5.0
ULN Ulaanbaatar 25.33 62 *eP* **P** **04 50 56.0 +0.9**
comp=Z,66nm,1.2s,mb5.0
DIYA Diyarbakir 25.61 275 *i* P **P** **04 50 59.3 +1.5**
VORD Divnogorie 25.66 306 *eP* **P** **04 50 57.1 -1.0**
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,70nm,0.8s
VORD pmax pmax
comp=Z,50nm,0.8s,mb5.1
VORD MLR MLR
comp=E,2μm,20.0s,MS4.7
VORD MLR MLR
comp=Z,3μm,20.0s,MS4.8
VORD MLR MLR
comp=N,860nm,19.0s,MS4.7
VSR Storozhevoye 25.78 306 *eP* **P** **04 50 58.4 -0.8**
VSR pmax pmax
comp=Z,20nm,0.9s,mb4.7
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,60nm,1.1s
VSR MLR MLR
comp=Z,960nm,15.0s,MS4.5
VSR MLR MLR
comp=N,460nm,19.0s,MS4.6
VSR MLR MLR
comp=E,2μm,17.0s,MS4.6
VOR Voronezh 25.87 307⇑ *iP* **P** **04 50 58.0 -2.0**
VOR *eS* **S** **04 55 33.0 +2.8**
VOR pmax pmax
comp=Z,180nm,2.0s,mb5.2
ELZG Elazig 26.32 277 *i* P **P** **04 51 05.0 +0.8**
GRSN GIRESUNGRSN 26.33 283 *i* P **P** **04 51 08.6 +4.3**
ANN Anapa 26.48 291 *eP* **P** **04 51 03.9 -1.7**
ANN *eS* **S** **04 55 37.4 -2.6**
ANN pmax pmax
comp=Z,73nm,1.1s,mb5.1
ANN MLR MLR
comp=N,917nm,11.0s,MS4.7
ANN MLR MLR
comp=E,865nm,11.0s,MS4.7
ANN MLR MLR
comp=Z,1μm,11.0s,MS4.6
ANN Anapa 26.48 291 *eP* **P** **04 51 07.5 +1.9**
KEMA Kemaliye 26.50 279 *i* P **P** **04 51 06.7 +0.8**
MALT Malatya 26.79 277 *eP* **P** **04 51 09.7 +1.2**
MALT pmax pmax
comp=Z,101nm,0.9s,mb5.3
MALT Malatya 26.79 277 *eP* **P** **04 51 09.7 +1.2**
comp=Z,102nm,0.9s,mb5.3
ATAB Bozova 27.13 275 *i* P **P** **04 51 12.0 +0.5**
AKCD Akcadag 27.18 277 *i* P **P** **04 51 13.5 +1.5**
GZT Gaziantep 27.72 275 *i* P **P** **04 51 17.6 +0.8**
MOS Moscow 27.85 315 *eP* **P** **04 51 16.7 -1.1**
MOS *e* 04 51 22.1
MOS *e* 04 52 03.7
MOS *e* 04 57 31.5
MOS pmax pmax
comp=Z,106nm,1.2s,mb5.3
MOS MLR MLR
comp=E,1μm,15.0s
MOS MLR MLR
comp=Z,2μm,15.0s,MS4.8
WHFO Wadi Hawf 27.93 222 P **P** **04 51 22.5 +3.7**
SNR=7.4
PINB Pinarbasi 28.23 279 *i* P **P** **04 51 22.7 +1.3**
OBN Obninsk 28.24 314 *c* iP **P** **04 51 20.7 -0.6**
OBN pmax pmax
comp=Z,82nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,700nm,15.0s,MS4.4
OBN Obninsk 28.24 314 *eP* **P** **04 51 21.1 -0.2**
comp=Z,103nm,1.1s,mb5.4
KUZU Kuzuini 28.27 274 *i* P **P** **04 51 25.4 +3.7**
ANDN Andirin 28.58 276 *i* P **P** **04 51 24.7 +0.3**
SIM Simferopol' 28.82 292 *eP* **P** **04 51 18.0 -8.6**
SIM pmax pmax
comp=Z,49nm,0.7s,mb5.3
SIM MLR MLR
comp=Z,730nm,16.3s,MS4.4
COBT Iskenderun 28.97 274 *i* P **P** **04 51 29.9 +1.9**
CTKT Corum 28.98 283 *i* P **P** **04 51 33.0 +5.0**
KLMR Klimovskoe 29.02 326 P **P** **04 51 27.4 -0.8**
KLMR pmax pmax
comp=Z,83nm,1.5s,mb5.2
HHC Hu-ho-hao-te 29.04 76 *eP* **P** **04 51 30.5 +1.9**
HHC AP pP 04 51 42.0 +12
HHC XP sP 04 51 47.5 +17
HHC PP PP 04 52 25.0 -8.9
HHC PCP PcP 04 54 38.5 +1.7
HHC *eS* **S** **04 56 16.8 -3.7**
HHC XS sS 04 56 37.0 +15
HHC SS SS 04 57 47.5 -36
HHC PCS PcS 04 58 19.3 -0.1
HHC SCS ScS 05 02 07.0 -5.8
HHC AMB AMB
comp=Z,13nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,179nm,4.2s
HHC LR LR
comp=N,2μm,13.2s,MS4.9
HHC LR LR
comp=E,1μm,12.1s,MS4.9
HHC LR LR
comp=Z,2μm,14.3s,MS4.9
KMI Kunming 29.04 113 P **P** **04 51 31.5 +2.8**
KMI AP pP 04 51 39.8 +10
KMI XP sP 04 51 43.5 +13
KMI PP PP 04 52 27.0 -7.1
KMI S **S** **04 56 21.3 +0.6**
KMI XS sS 04 56 33.0 +10
KMI SS SS 04 57 50.3 -33
KMI AMB AMB
comp=Z,13nm,1.4s,mb4.5
KMI AMB AMB
comp=Z,273nm,4.6s
KMI LR LR
comp=N,781nm,12.3s
KMI LR LR
comp=E,731nm,18.5s
KMI LR LR
comp=Z,972nm,15.9s,MS4.5
XAN Xi'an 29.08 91 P **P** **04 51 28.5 -0.5**
XAN AP pP 04 51 37.0 +6.8
XAN PP PP 04 52 26.3 -8.2
XAN S **S** **04 56 22.5 +1.3**
XAN AMB AMB
comp=Z,8.0nm,0.9s,mb4.5
XAN LR LR
comp=E,847nm,20.5s
AVNT Avonos 29.37 279 *i* P **P** **04 51 35.0 +3.5**
ILGA Ilgaz 29.68 284 *i* P **P** **04 51 38.5 +4.2**
BALT Daday 29.83 285 *i* P **P** **04 51 36.8 +1.2**
BR131 Keskin Array S 30.04 282 *eP* **P** **04 51 37.6 +0.2**
comp=E,54nm,0.8s,mb5.3
BRTR Keskin Array B 30.04 282 P **P** **04 51 37.6 +0.2**
comp=E,8.4nm,0.7s,mb4.6,baz=94,slow=7.7,SNR=44
BRTR LR LR 05 05 56.5
comp=E,481nm,18.0s,MS4.2,baz=64,slow=41
BRTR Keskin Array B 30.04 282 P **P** **04 51 37.6 +0.2**
BRTR pmax pmax
comp=Z,8.0nm,0.7s
BRTR MLR MLR
comp=Z,481nm,18.0s
KOD Kodaikanal 30.30 171 *eP* **P** **04 51 40.0 +0.2**
KOD AMb AMB 04 51 41.2
comp=Z,79nm,1.1s,mb5.4
CHTO Chiang Mai 30.91 127 *eP* **P** **04 51 44.6 -0.7**
CHTO pmax pmax
comp=Z,23nm,1.4s,mb4.8
CHTO Chiang Mai 30.91 127 *eP* **P** **04 51 44.6 -0.7**
comp=Z,23nm,1.4s,mb4.8
SGKT Sivrigoynuk 31.02 284 *i* P **P** **04 51 42.9 -3.1**
GYA Guiyang 31.07 106⇑ *iP* **P** **04 51 49.5 +2.8**
GYA AP pP 04 52 02.3 +14
GYA XP sP 04 52 06.0 +18
GYA PCP PcP 04 54 43.3 +1.0
GYA S **S** **04 56 58.3 +5.8**
GYA SCP ScP 04 58 22.8 -3.0
GYA PCS PcS 04 58 27.5 +1.0
GYA AMB AMB
comp=Z,20nm,0.7s,mb5.1
GYA AMB AMB
comp=Z,490nm,8.2s
GYA LR LR
comp=N,560nm,10.7s,MS4.7
GYA LR LR
comp=E,620nm,11.4s,MS4.7
GYA LR LR
comp=Z,560nm,10.3s,MS4.5
CMAR Chiang Mai Arr 31.18 127 P **P** **04 51 44.7 -3.0**
comp=Z,1.4nm,0.5s,mb4.1,baz=313,slow=8.5,SNR=5.4
CMAR PcP PcP 04 54 40.7 -1.9
comp=Z,1.4nm,0.3s,baz=318,slow=5.2,SNR=4.3
CMAR LR LR 05 06 41.8
comp=Z,445nm,21.2s,MS4.1,baz=318,slow=41
CMAR Chiang Mai Arr 31.18 127 P **P** **04 51 44.7 -3.0**
CMAR 04 54 40.7
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR MLR MLR
comp=Z,445nm,21.2s
BOD Bodaibo 31.32 42 *eP* **P** **04 51 49.0 +0.5**
BOD pmax pmax
comp=Z,72nm,0.9s,mb5.5
KDHN Kadinhani 31.50 280 *i* P **P** **04 51 50.5 +0.2**
CSS Prodhromos 31.75 273 *eP* **P** **04 51 51.7 -0.8**
comp=Z,15nm,0.8s,mb4.9
TRD Trivandrum 31.95 173⇑ *ex* x 04 52 59.0
AKASG Malin Array Be 31.97 304 P **P** **04 51 52.9 -1.4**
comp=Z,34nm,0.7s,mb5.3,baz=80,slow=7.5,SNR=50
AKASG LR LR 05 07 53.4
comp=Z,2μm,18.7s,MS4.8,baz=95,slow=42
AKASG Malin Array Be 31.97 304 P **P** **04 51 52.9 -1.4**
AKASG pmax pmax
comp=Z,34nm,0.7s
AKASG MLR MLR
comp=Z,2μm,18.7s
AKASG Malin Array Be 31.97 304 P **P** **04 51 52.9 -1.4**
AKASG LR LR 05 07 53.4
AKBB Malin Array Si 31.97 304 *eP* **P** **04 51 53.6 -0.7**
KIEV Kiev 31.98 304 *eP* **P** **04 51 53.2 -1.2**
KIEV pmax pmax
comp=Z,68nm,0.9s,mb5.5
KIEV Kiev 31.98 304 *eP* **P** **04 51 53.2 -1.2**
comp=Z,68nm,0.9s,mb5.5
ESKT Eskisehir 32.17 282 *i* P **P** **04 51 55.3 -0.9**
KIS Kishinev 32.34 297 *eP* **P** **04 51 57.0 -0.6**
KIS *e* 04 53 06.0
KIS *e* 04 54 45.0
KIS *e* 04 57 07.0
KIS *e* 04 58 59.0
KIS MLR MLR
comp=Z,1μm,12.0s,MS4.8
KIS MLR MLR
comp=Z,900nm,11.0s
KIS Kishinev 32.34 297 *eP* PcP PcP 04 54 45.0 -0.3
KIS *e* LQ 05 02 20.0
KIS LRM 05 07 36.0
comp=Z,1μm,12.0s
BORA Eskisehir 32.38 283 *i* P **P** **04 52 02.1 +4.1**
BJI Beijing 32.65 76 P **P** **04 52 00.8 +0.4**
BJI S **S** **04 57 11.3 -5.7**
BJI AMB AMB
comp=Z,4.0nm,0.4s,mb4.7
BJI AMB AMB
comp=Z,112nm,6.1s
BJI LR LR
comp=N,2μm,14.3s
BJI LR LR
comp=E,1μm,20.9s
BJI LR LR
comp=Z,1μm,20.9s
PUL Pulkovo 32.81 321⇑ *eP* **P** **04 52 01.1 -0.4**
ISP Isparta 32.91 280 P **P** **04 52 08.1 +5.4**
ISP Isparta 32.91 280 *eP* **P** **04 52 03.8 +1.1**
comp=Z,54nm,0.9s,mb5.5
TIRR Tirgusor 32.92 292⇑ *iP* **P** **04 52 06.8 +4.1**
MNK Minsk 33.08 311 *eP* **P** **04 52 04.0 0.0**
HARR Harsova 33.22 293 ⇓ *iP* **P** **04 52 10.3 +4.9**
JOF Joensuu 33.42 326 *ep* **P** **04 52 07.2 +0.3**
comp=Z,3.9nm,0.4s,mb4.7
JOF Joensuu 33.42 326 *eP* **P** **04 52 07.2 +0.3**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
PALK Pallekele 33.69 166 *eP* **P** **04 52 09.6 0.0**
PALK pmax pmax
comp=Z,56nm,1.3s,mb5.3
PALK Pallekele 33.69 166 *eP* **P** **04 52 09.6 0.0**
comp=Z,56nm,1.3s,mb5.3
IDID Didziasalis 33.80 312 *eP* **P** **04 52 10.3 +0.1**
VRI Vrincioaia 33.90 295 ⇓ *iP* **P** **04 52 12.5 +1.3**
VRI Vrincioaia 33.90 295 P **P** **04 52 12.3 +1.0**
PLOR Plostina 33.95 295 P **P** **04 52 12.9 +1.2**
PLOR Plostina 33.95 295 ⇓ *iP* **P** **04 52 12.8 +1.1**
IIGN Ignalina 34.09 312 *eP* **P** **04 52 13.5 +0.7**
VSU Vasula 34.28 318 ⇓ *iP* **P** **04 52 14.7 +0.3**
MLR Muntele Rosu 34.49 294 LR LR 05 08 37.7
comp=Z,1μm,20.5s,MS4.7,slow=40
LVZ Lovozero 34.52 335⇑ *eP* **P** **04 52 16.9 +0.6**
BURAR Bucovina Array 34.72 298 ⇑ *iP* **P** **04 52 18.3 -0.1**
BUR08 Bucovina Ar. S 34.73 298 *eP* **P** **04 52 18.5 +0.1**
WHN Wuhan 34.73 93 ⇓ P **P** **04 52 20.0 +1.3**
WHN AP pP 04 52 26.5 +6.7
WHN XP sP 04 52 35.0 +15
WHN *eS* **S** **04 57 48.8 -0.6**
WHN LR LR
comp=N,3μm,11.4s
WHN LR LR
comp=E,824nm,7.4s
WHN LR LR
comp=Z,2μm,20.1s
APA Apatity 34.74 335⇑ *eP* **P** **04 52 24.6 +6.3**
APA pmax pmax
comp=Z,76nm,1.4s,mb5.4
APA MLR MLR
comp=Z,5μm,13.0s,MS5.4
VOIR 35.12 294⇑ *iP* **P** **04 52 22.3 +0.4**
VOIR 35.12 294 P **P** **04 52 22.7 +0.8**
LVV L'vov 35.32 302 *eP* **P** **04 52 22.8 -0.7**
LVV *eS* **S** **04 58 03.0 +5.0**
LVV MLR MLR
comp=Z,2μm,16.2s,MS4.9
LVV MLR MLR
comp=N,300nm,16.0s,MS4.9
LVV MLR MLR
comp=E,2μm,16.0s,MS4.9
KAF Kangasniemi 35.35 324 *ep* **P** **04 52 24.9 +1.3**
comp=E,3.8nm,0.4s,mb4.7,baz=104,slow=8.4
KAF Kangasniemi 35.35 324 *eP* **P** **04 52 24.9 +1.3**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
BDRM Kayabasi 35.47 280 *i* P **P** **04 52 27.8 +2.8**
SUW Suwalki 35.77 309 *eP* **P** **04 52 26.9 -0.4**
SUW LMZ 05 09 48.2
comp=Z,2μm,17.9s
KWP Kalwaria 36.19 302 *eP* **P** **04 52 31.7 +0.8**
KWP LMZ 05 10 38.1
comp=Z,2μm,15.7s
KWP Kalwaria 36.19 302 ⇓ *iP* **P** **04 52 31.4 +0.5**
DRGR 36.52 297 ⇓ *iP* **P** **04 52 34.2 +0.4**
DRGR 36.52 297 P **P** **04 52 35.0 +1.2**
UZH Uzhgorod 36.56 300 *eP* **P** **04 52 34.2 +0.1**
UZH *i* 04 52 39.6
UZH *i* 04 52 47.0
UZH *eS* **S** **04 58 10.0 -7.0**
UZH MLR MLR
comp=N,1μm,14.0s,MS5.0
UZH MLR MLR
comp=E,2μm,14.0s,MS5.0
UZH MLR MLR
comp=Z,1μm,14.0s,MS4.8
GZR Gura Zlata 36.71 295 ⇓ *iP* **P** **04 52 36.8 +1.4**
GZR Gura Zlata 36.71 295 P **P** **04 52 36.5 +1.0**
APE Apeiranthos 36.91 281 P **P** **04 52 42.2 +5.0**
APE Apeiranthos 36.91 281 ⇓ *iP* **P** **04 52 37.0 -0.2**
APE Apeiranthos 36.91 281 ⇓ P **P** **04 52 37.0 -0.2**
CLNS Chul'man 36.97 46 *eP* **P** **04 52 42.4 +4.9**
CLNS pmax pmax
comp=N,6.0nm,1.0s
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.7
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS MLR MLR
comp=Z,3μm,13.0s,MS5.2
CLNS MLR MLR
comp=N,345nm,13.0s,MS5.1
CLNS MLR MLR
comp=E,2μm,13.0s,MS5.1
CRVS Cervenica-Dubn 37.07 301 *eP* **P** **04 52 39.4 +0.9**
CRVS Cervenica-Dubn 37.07 301 *eP* **P** **04 52 39.4 +0.9**
CRVS Cervenica-Dubn 37.07 301 *eP* **P** **04 52 39.4 +0.9**
STHS Stebnicka Huta 37.16 302 *i* P **P** **04 52 39.4 +0.2**
BZS Buzias 37.47 295⇑ *iP* **P** **04 52 42.3 +0.4**
BZS Buzias 37.47 295 P **P** **04 52 42.6 +0.7**
NJ2 Nanjing 37.49 88 *eP* **P** **04 52 45.3 +3.0**
NJ2 AP pP 04 52 57.5 +14
NJ2 XP sP 04 53 03.0 +19
NJ2 PP PP 04 54 14.5 +6.9
NJ2 S **S** **04 58 33.0 +1.4**
NJ2 SS SS 05 01 06.0 -10
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.1
NJ2 AMB AMB
comp=Z,220nm,6.4s
NJ2 LR LR
comp=N,810nm,18.2s,MS4.9
NJ2 LR LR
comp=E,2μm,17.9s,MS4.9
NJ2 LR LR
comp=Z,2μm,17.8s,MS4.8
SNY Shenyang 37.61 71⇑ P **P** **04 52 40.0 -3.2**
SNY AMB AMB
comp=Z,16nm,1.0s,mb4.7
SNY AMB AMB
comp=Z,230nm,4.3s
SNY LR LR
comp=E,3μm,13.5s
SNY LR LR
comp=Z,4μm,14.1s,MS5.3
NIE Niedzica 37.76 302 *eP* **P** **04 52 45.0 +0.7**
KEV Kevo 37.85 336 *ep* **P** **04 52 47.1 +2.3**
comp=Z,2.8nm,0.3s,mb4.5
KEV Kevo 37.85 336 *eP* **P** **04 52 47.1 +2.3**
KEV pmax pmax
comp=Z,3.0nm,0.3s,mb4.5
QIZ Qiongzhong 37.99 113 P **P** **04 52 48.5 +1.9**
QIZ *eS* **S** **04 58 39.8 +0.5**
QIZ AMB AMB
comp=Z,30nm,2.2s,mb4.6
QIZ LR LR
comp=E,774nm,15.1s
QIZ LR LR
comp=Z,1μm,14.5s,MS4.8
OJC Ojcow 38.00 303 *eP* **P** **04 52 46.0 -0.4**
ARCES ARCESS Array B 38.23 335 P **P** **04 52 48.6 +0.6**
comp=Z,15nm,0.8s,mb4.8,baz=109,slow=8.6,SNR=34
ARCES LR LR 05 09 40.9
comp=Z,705nm,19.6s,MS4.5,baz=117,slow=38
ARCES ARCESS Array B 38.23 335 P **P** **04 52 48.7 +0.7**
ARCES pmax pmax
comp=Z,15nm,0.8s
ARCES MLR MLR
comp=Z,705nm,19.6s
ARE0 ARCESS Array S 38.23 335 *eP* **P** **04 52 48.4 +0.4**
PSZ Piszkesteto 38.24 300 P **P** **04 52 49.2 +0.8**
PSZ Piszkesteto 38.24 300 ⇓ *e* SSp 04 52 49.1
PSZ Piszkesteto 38.24 300 ⇓ *iP* **P** **04 52 49.0 +0.6**
PSZ Piszkesteto 38.24 300 *eP* **P** **04 52 48.9 +0.5**
comp=Z,28nm,1.0s,mb4.9
CN2 Changchun 38.45 67 *eP* **P** **04 52 54.0 +3.7**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CN2 LR LR
comp=N,2μm,18.0s,MS5.1
CN2 LR LR
comp=E,2μm,18.0s,MS5.1
CN2 LR LR
comp=Z,2μm,14.0s,MS5.0
KTK1 Kautokeino 38.77 334 *e* **P** **04 52 58.9 +6.3**
KTK1 Kautokeino 38.77 334 *eP* **P** **04 52 58.9 +6.3**
VYHS Vyhne 38.85 301 *i* P **P** **04 52 53.6 +0.1**
BUD Budapest 38.89 299 ⇓ *e* SSP 04 52 54.5
OKC Ostrava-Krasne 39.11 303 *eP* **P** **04 52 55.7 +0.1**
OKC AMS AMS 05 12 30.0
comp=Z,1μm,16.6s
KOLL Kolacno 39.12 301 *i* P **P** **04 52 56.0 +0.2**
GKP Gorka Klasztor 39.32 308 *eP* **P** **04 52 57.4 0.0**
GKP LMZ 05 10 23.1
comp=Z,2μm,15.9s
GKP Gorka Klasztor 39.32 308 *eP* **P** **04 52 57.3 -0.1**
GKP LR LR
comp=Z,2μm,15.9s,MS5.1
PKSM Moragy 39.39 297⇑ *iP* **P** **04 52 57.6 -0.4**
PKSM Moragy 39.39 297 P **P** **04 52 58.7 +0.6**
SSE Sheshan 39.70 88 P **P** **04 53 01.0 +0.2**
SSE AMB AMB
comp=Z,43nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,235nm,4.5s
SSE LR LR
comp=N,525nm,15.8s,MS4.8
SSE LR LR
comp=E,1μm,15.8s,MS4.8
SSE LR LR
comp=Z,1μm,13.3s,MS5.0
SMOL Smolenice 39.77 301 *eP* **P** **04 53 02.2 +1.0**
YAK Yakutsk 39.85 38 *iP* **P** **04 53 01.9 +0.2**
YAK *e* PP pP 04 53 10.0 +7.2
YAK *e* 04 54 34.0
YAK *e* PPP 04 54 59.7
YAK *e* 04 55 08.4
YAK *eS* **S** **04 59 06.0 -0.5**
YAK *e* SS sS 04 59 18.8 +10
YAK *e* SSS 05 02 28.4
YAK pmax pmax
comp=E,79nm,1.5s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=Z,155nm,1.0s,mb5.7
YAK pmax pmax
comp=Z,36nm,1.2s,mb5.0
YAK smax
comp=E,89nm,3.0s
YAK MLR MLR
comp=Z,1μm,13.0s,MS4.8
YAK MLR MLR
comp=E,815nm,14.0s,MS4.8
YAK MLR MLR
comp=N,247nm,13.0s,MS4.8
YAK Yakutsk 39.85 38 *eP* **P** **04 53 01.3 -0.4**
comp=N,181nm,0.8s,mb5.9
MODS Modra-Piesok 39.90 301 *eP* **P** **04 53 08.1 +5.9**
ZST Bratislava 40.04 300 *eP* **P** **04 53 07.5 +4.1**
KSP Ksiaz 40.15 305 *eP* **P** **04 53 04.4 +0.1**
KSP LMZ 05 12 48.0
comp=N,4μm,18.2s
KSP Ksiaz 40.15 305⇑ *eP* **P** **04 53 04.2 -0.1**
KSP *ep* P pP 04 53 08.7 +3.2
KSP LR LR
comp=Z,4μm,18.2s,MS5.3
VRAC Vranov 40.18 302 LR LR 05 12 40.8
comp=Z,954nm,20.2s,MS4.6,baz=78,slow=41
VRAC Vranov 40.18 302⇑ *iP* **P** **04 53 04.8 +0.2**
VRAC Vranov 40.18 302 P **P** **04 53 05.5 +0.9**
DPC Dobruska-Polom 40.20 304 *eP* **P** **04 53 05.1 +0.4**
DPC AMS AMS 05 12 50.0
comp=Z,2μm,17.8s
UPC Upice 40.37 304 *eP* **P** **04 53 06.2 0.0**
TRO Tromso 40.42 334 *eP* **P** **04 53 04.7 -1.6**
SOP Sopron 40.50 300 ⇓ *eP* **P** **04 53 07.8 +0.6**
TREC Trest 40.90 302 *eP* **P** **04 53 11.2 +0.7**
TREC *ex* x 04 53 16.5

TREC AMS AMS 05 12 00.0
comp=Z,1µm,16.2s
CONA Conrad Observa 40.91 300 *i* P **P** **04 53 11.0 +0.3**
comp=E,68nm,1.1s,mb5.2,SNR=18
CSNA Conrad Observa 40.91 300⇑ *i*P **P** **04 53 10.9 +0.3**
comp=E,60nm,1.1s,mb5.1
HFS Hagfors 41.10 319 LR LR 05 11 10.0
comp=Z,849nm,19.8s,MS4.6,baz=88,slow=37
MDJ Mudanjiang 41.15 65 P **P** **04 53 12.5 -0.1**
MDJ AP pP 04 53 23.0 +9.2
MDJ XP sP 04 53 28.5 +14
MDJ PP PP 04 54 47.8 +0.5
MDJ SCP ScP 04 58 57.3 -5.1
MDJ PCS PcS 04 59 02.8 0.0
MDJ S **S** **04 59 23.0 -3.3**
MDJ XS sS 04 59 42.0 +14
MDJ AMB AMB
comp=Z,4.0nm,1.2s,mb3.9
MDJ AMB AMB
comp=Z,58nm,4.0s
MDJ LR LR
comp=N,909nm,15.9s,MS5.2
MDJ LR LR
comp=E,2µm,13.3s,MS5.2
MDJ LR LR
comp=Z,3µm,12.3s,MS5.3
PVCC Panska Ves 41.28 304 *e*P **P** **04 53 14.2 +0.6**
PVCC AMS AMS 05 13 20.0
comp=Z,2µm,17.7s
MOR8 Moi Rana 41.29 328 *e*P **P** **04 53 12.9 -0.6**
MOR8 AMb AMB 04 53 18.8
comp=Z,72nm,1.7s,mb5.0
MOR8 Moi Rana 41.29 328 *e*P **P** **04 53 13.1 -0.5**
comp=Z,72nm,1.7s,mb5.0
PRU Pruhonice 41.39 304 *e*P **P** **04 53 14.5 0.0**
PRU AMS AMS 05 13 40.0
comp=Z,1µm,16.6s
RUE Ruedersdorf 41.48 307 *e*P **P** **04 53 15.2 -0.1**
comp=E,71nm,1.6s,mb5.0
TIXI Tiksi 41.54 23⇑ *e*P **P** **04 53 16.1 +0.6**
TIXI pmax pmax
comp=Z,144nm,1.3s,mb5.4
TIXI MLR MLR
comp=Z,1µm,16.0s,MS4.9
TIXI Tiksi 41.54 23 *e*P **P** **04 53 15.7 +0.2**
comp=Z,82nm,0.7s,mb5.5
KLR Kul'dur 41.58 58 *e*P **P** **04 53 13.0 -3.1**
KLR *e*S **S** **04 59 28.5 -4.1**
KLR MLR MLR
comp=E,1µm,11.0s
KLR MLR MLR
comp=Z,2µm,11.0s,MS5.3
BRG Berggiesshubel 41.62 305 *i* P **P** **04 53 16.4 0.0**
BRG *e* 04 55 00.4
BRG pmax pmax
comp=Z,13nm,1.0s,mb4.5
BRG MLR MLR
comp=N,664nm,14.1s,MS4.8
BRG MLR MLR
comp=E,907nm,18.4s,MS4.8
BRG MLR MLR
comp=Z,1µm,15.4s,MS5.0
BRG Berggiesshubel 41.62 305 *e*P **P** **04 53 16.3 -0.1**
comp=Z,21nm,1.0s,mb4.7
BRG Berggiesshubel 41.62 305 *i* P **P** **04 53 16.4 0.0**
comp=Z,13nm,1.0s,mb4.5
BRG *i* 04 53 21.3
BRG *e* 04 55 00.4
BRG LR LR
comp=Z,1µm,15.4s,MS5.0
PERS Pernice 41.68 299 *e*P **P** **04 53 17.3 +0.3**
PERS *i* 04 53 21.6
SOKA Soboth 41.73 299⇓ *i*P **P** **04 53 17.1 -0.2**
comp=Z,58nm,1.0s,mb5.2
BOJS Bojanci 41.86 297 *i* P **P** **04 53 18.6 +0.1**
BOJS *i* 04 53 23.9
COP Copenhagen 41.93 312 *i* P **P** **04 53 19.1 +0.2**
COP pmax pmax
comp=Z,55nm,0.9s,mb5.2
COP MLR MLR
comp=Z,440nm,16.0s,MS4.4
COP Copenhagen 41.93 312 *i* P **P** **04 53 19.1 +0.2**
comp=Z,55nm,0.9s,mb5.2
COP
comp=Z,430nm,16.0s
MOA Molln 41.98 300 *i* P **P** **04 53 19.3 -0.1**
comp=Z,54nm,1.4s,mb5.0,SNR=12
FBE Freiberg 41.98 305 *e*P **P** **04 53 19.3 -0.1**
comp=Z,30nm,1.0s,mb4.9
VISS Visnje 42.06 297 *i* P **P** **04 53 20.6 +0.5**
VISS *i* 04 53 25.1
CLL Collm 42.13 306⇑ *i*P **P** **04 53 20.1 -0.5**
CLL *i* 04 53 28.2
CLL pmax pmax
comp=Z,20nm,0.9s,mb4.8
CLL MLR MLR
comp=Z,2µm,17.8s,MS5.1
CLL Collm 42.13 306 *e*P **P** **04 53 20.4 -0.2**
comp=Z,20nm,0.9s,mb4.8
CLL Collm 42.13 306⇑ *i*P **P** **04 53 20.1 -0.5**
comp=Z,20nm,0.9s,mb4.8
CLL *i* pP pP 04 53 25.0 +3.2
comp=Z,34nm,0.8s
CLL *i* sP sP 04 53 27.0 +4.8
CLL *e*PP PP 04 54 58.0 +0.1
CLL *e*pPP 04 55 05.0
CLL *e*x x 05 00 15.0
CLL Collm 42.13 306⇑ *i*P **P** **04 53 20.1 -0.5**
comp=Z,20nm,0.9s,mb4.8
CLL *i* 04 53 25.0
CLL *i* 04 53 28.2
CLL LR LR
comp=Z,2µm,17.8s,MS5.1
GEC2 GERESS Array S 42.14 302 *e*P **P** **04 53 20.6 -0.1**
GEC2 pmax pmax
comp=Z,82nm,1.8s,mb5.1
GEC2 GERESS Array S 42.14 302 *e*P **P** **04 53 20.6 -0.1**
comp=Z,82nm,1.8s,mb5.1
GERES GERESS Array B 42.14 302 P **P** **04 53 21.2 +0.5**
comp=Z,13nm,0.6s,mb4.7,baz=66,slow=7.3,SNR=72
GERES LR LR 05 14 10.8
comp=Z,901nm,19.0s,MS4.7,baz=74,slow=41
GERES GERESS Array B 42.14 302 P **P** **04 53 21.2 +0.5**
GERES pmax pmax
comp=Z,13nm,0.6s
GERES MLR MLR
comp=Z,901nm,19.0s
KHC Kasperske Hory 42.16 303 *e*P **P** **04 53 21.0 +0.1**
KHC *e*pP pP 04 53 25.0 +3.0
KHC AMS AMS 05 14 30.0
comp=Z,1µm,17.5s
KHC Kasperske Hory 42.16 303 *e*P **P** **04 53 25.0 +4.1**
KHC LR LR
comp=Z,1µm,17.5s,MS4.8
KSRS Korea Array 42.18 76 P **P** **04 53 20.8 -0.4**
comp=Z,5.4nm,0.9s,mb4.2,baz=268,slow=8.1,SNR=14
KSRS LR LR 05 12 10.4
comp=Z,935nm,20.3s,MS4.7,baz=292,slow=38
KSRS Korea Array 42.18 76 P **P** **04 53 20.8 -0.4**
KSRS pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
KSRS MLR MLR
comp=Z,935nm,20.3s,MS4.7
LJU Ljubljana 42.22 298 *i* P **P** **04 53 21.5 +0.1**
LJU *i* 04 53 26.9
NB2 NORSAR Subarra 42.34 320 P **P** **04 53 21.6 -0.6**
comp=Z,23nm,0.6s,mb5.0,baz=91,slow=8.6
NOA NORSAR Array B 42.34 320 P **P** **04 53 21.7 -0.5**
comp=Z,13nm,0.7s,mb4.7,baz=91,slow=8.1,SNR=40
NOA PP PP 04 55 03.6 +3.7
comp=Z,8.3nm,0.8s,baz=104,slow=9.2,SNR=6.9
NOA LR LR 05 11 47.9
comp=Z,1µm,19.2s,MS4.7,baz=75,slow=37
NOA PKKP 05 16 55.6
comp=Z,1.7nm,0.9s,baz=71,slow=1.6,SNR=3.3
NOA NORSAR Array B 42.34 320 P **P** **04 53 21.7 -0.5**
NOA 04 55 03.6
NOA pmax pmax
comp=Z,13nm,0.7s
NOA pmax pmax
comp=Z,8.0nm,0.8s
NOA MLR MLR
comp=Z,1µm,19.2s
NOA NORSAR Array B 42.34 320 P **P** **04 53 21.7 -0.5**
NOA PP PP 04 55 03.6 +3.7
NOA LR LR 05 11 47.9
NOA PKKP 05 16 55.6
NAO01 NORSAR Array S 42.50 320 *e*P **P** **04 53 22.8 -0.7**
comp=Z,14nm,0.6s,mb4.8
JAVS Javornik 42.57 298 *i* P **P** **04 53 24.4 +0.1**
JAVS *i* 04 53 29.4
WET Wettzell 42.61 303 *e*P **P** **04 53 24.6 +0.1**
WET pmax pmax
comp=Z,49nm,1.8s,mb4.9
WET Wettzell 42.61 303 *e*P **P** **04 53 24.6 +0.1**
comp=Z,49nm,1.8s,mb4.9
TANN Tannenbergstha 42.63 305 *e*P **P** **04 53 24.6 -0.1**
comp=Z,45nm,1.8s,mb4.9
VOY Vojsko 42.65 298 *e*P **P** **04 53 24.9 0.0**
VOY *e* 04 53 29.3
VOY *e* 04 53 45.5
MYKA Terra Mystica 42.67 299⇓ *i*P **P** **04 53 25.1 0.0**
comp=Z,49nm,1.5s,mb5.0
NKC Novy Kostel 42.67 304 *e*P **P** **04 53 25.0 0.0**
NKC AMS AMS 05 14 40.0
comp=Z,2µm,16.8s
TIP Timpagrande 42.68 287 *e*P **P** **04 53 24.9 -0.3**
comp=Z,11nm,0.7s,mb4.7
WERN Wernitzgruen 42.70 304 *e*P **P** **04 53 25.2 -0.1**
comp=Z,33nm,1.6s,mb4.8
GUNZ Gunzen 42.72 305 *e*P **P** **04 53 25.3 -0.1**
comp=Z,20nm,1.2s,mb4.7
WERD Werda 42.72 305 *e*P **P** **04 53 25.1 -0.3**
comp=Z,28nm,1.6s,mb4.7
KBA Koelnbreinsper 42.76 300⇑ *i*P **P** **04 53 25.5 -0.3**
comp=Z,28nm,0.7s,mb5.1
KULM Kulim 42.84 137 *e*P **P** **04 53 26.2 -0.6**
comp=Z,18nm,1.0s,mb4.8
ROTZ Rotzenmuhle 42.91 304 *e*P **P** **04 53 26.7 -0.3**
comp=Z,20nm,1.5s,mb4.6
MANZ Manzenberg 42.93 304 *e*P **P** **04 53 27.3 +0.2**
comp=Z,11nm,1.2s,mb4.5
CUC Castrocucco 43.08 289 *e*P **P** **04 53 28.9 +0.4**
comp=Z,67nm,0.8s,mb5.4
CUC *e*PcP PcP 04 55 17.1 -1.3
MOX Moxa 43.11 305 *e*P **P** **04 53 28.7 +0.1**
MOX *e* 04 53 33.7
MOX
comp=Z,2µm,19.0s
MOX Moxa 43.11 305 *e*P **P** **04 53 28.1 -0.5**
comp=Z,15nm,1.1s,mb4.6
KONO Kongsberg 43.18 318 *e*P **P** **04 53 28.7 -0.3**
KONO pmax pmax
comp=Z,148nm,1.6s,mb5.5
KONO Kongsberg 43.18 318 *e*P **P** **04 53 28.6 -0.3**
comp=Z,148nm,1.6s,mb5.5
BSEG Bad Segeberg 43.35 310 *e*P **P** **04 53 30.9 +0.5**
BSEG pmax pmax
comp=Z,60nm,0.9s,mb5.3
BSEG Bad Segeberg 43.35 310 *e*P **P** **04 53 30.9 +0.5**
comp=Z,60nm,0.9s,mb5.3
BSEG Bad Segeberg 43.35 310 *e*P **P** **04 53 30.9 +0.5**
DOMB Dombas 43.36 322 *e*P **P** **04 53 31.3 +0.9**
DOMB AMb AMB 04 53 40.1
comp=Z,64nm,1.6s,mb5.1
DOMB Dombas 43.36 322 *e*P **P** **04 53 31.3 +0.9**
comp=Z,64nm,1.5s,mb5.1
GRA1 Grafenberg Arr 43.55 304 *e*P **P** **04 53 32.7 +0.5**
comp=Z,32nm,1.1s,mb5.0
GRA1 *e*pP pP 04 53 37.7 +4.4
GRF Grafenberg Arr 43.55 304 *e*P **P** **04 53 32.7 +0.5**
GRF *e**PP pP 04 53 37.7 +4.4
GRF pmax pmax
comp=Z,32nm,1.1s,mb5.0
GRF MLR MLR
comp=Z,1µm,21.0s,MS4.7
GRF Grafenberg Arr 43.55 304 *e*P **P** **04 53 32.7 +0.5**
GRF *e**PP pP 04 53 37.7 +4.4
GRF pmax pmax
comp=Z,32nm,1.1s,mb5.0
GRF MLR MLR
comp=Z,1µm,21.0s,MS4.7
GRF Grafenberg Arr 43.55 304 *e*P **P** **04 53 32.7 +0.5**
comp=Z,32nm,1.1s,mb5.0
GRF *e*pP pP 04 53 37.7 +4.4
GRF *e*L 05 13 51.4
comp=Z,1µm,21.0s
CLZ Clausthal 43.66 307 *e*P **P** **04 53 32.7 -0.3**
CLZ pmax pmax
comp=Z,44nm,1.6s,mb4.9
CLZ Clausthal 43.66 307 *e*P **P** **04 53 32.7 -0.3**
comp=Z,44nm,1.6s,mb4.9
NRDL Niedersach Rie 43.70 308 *e*P **P** **04 53 33.4 +0.1**
comp=Z,51nm,1.1s,mb5.2
WTTA Wattenberg 43.84 300⇑ *i*P **P** **04 53 33.9 -0.7**
comp=Z,43nm,0.8s,mb5.2,SNR=7.1
FUR Furstenfeldbru 43.86 302 *e*P **P** **04 53 35.0 +0.3**
FUR pmax pmax
comp=Z,71nm,1.6s,mb5.2
FUR Furstenfeldbru 43.86 302 *e*P **P** **04 53 35.0 +0.3**
comp=Z,71nm,1.6s,mb5.2
WATA Walderalm 43.87 300⇓ *i*P **P** **04 53 34.1 -0.6**
comp=Z,25nm,0.7s,mb5.1,SNR=18
HABR Khabarovsk 43.87 58 *e*P **P** **04 53 32.8 -1.9**
HABR *e* 04 55 15.7
HABR *e* 04 55 19.0
HABR *e*S **S** **05 00 05.9 -0.4**
HABR *e* 05 03 32.8
HABR *e*SSS 05 04 02.4
HABR MLR MLR
comp=Z,302nm,14.0s,MS4.4
AQU L'Aquila 44.03 293 *e*P **P** **04 53 36.5 +0.4**
AQU pmax pmax
comp=Z,51nm,1.0s,mb5.2
AQU L'Aquila 44.03 293 *e*P **P** **04 53 36.5 +0.4**
comp=Z,51nm,1.0s,mb5.2
SPITS Spitsbergen Ar 44.09 346 LR LR 05 15 59.6
comp=Z,1µm,18.4s,MS4.8,baz=350,slow=41
PSI Prapat 44.12 141 P **P** **04 53 35.7 -1.4**
comp=Z,3.1nm,0.4s,mb4.4,baz=77,slow=22,SNR=4.4
PSI Prapat 44.12 141 P **P** **04 53 35.7 -1.4**
PSI pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
PSI Prapat 44.12 141 P **P** **04 53 35.7 -1.4**
MOTA Moosalm 44.17 300⇑ *i*P **P** **04 53 36.0 -1.2**
comp=Z,24nm,0.8s,mb5.0,SNR=16
RETA Reutte 44.36 301⇓ *i*P **P** **04 53 38.3 -0.4**
comp=Z,33nm,1.2s,mb4.9,SNR=6.4
FETA Feichten 44.51 300⇑ *i*P **P** **04 53 38.7 -1.2**
comp=Z,29nm,1.3s,mb4.9,SNR=5.9
SNART Snartemo 44.51 317 *e*P **P** **04 53 39.7 -0.1**
SNART AMb AMB 04 53 53.1
comp=Z,100nm,1.6s,mb5.4
DAVA Damuels 44.99 301 *i* P **P** **04 53 43.6 -0.1**
comp=Z,70nm,0.9s,mb5.5,SNR=14
STU Stuttgart 45.06 303 *e*P **P** **04 53 44.1 -0.1**
STU pmax pmax
comp=Z,39nm,0.9s,mb5.2
STU Stuttgart 45.06 303 *e*P **P** **04 53 44.1 -0.1**
comp=Z,24nm,1.2s,mb4.9
STU Stuttgart 45.06 303 *e*P **P** **04 53 44.1 -0.2**
comp=Z,39nm,0.9s,mb5.2
TOD Tromm 45.10 304 *e*P **P** **04 53 44.3 -0.3**
DAVOX Davos/Dischmat 45.13 300 LR LR 05 14 35.9
comp=Z,799nm,20.2s,MS4.6,baz=67,slow=39
IBBN Ibbenburen 45.15 308 *e*P **P** **04 53 44.6 -0.3**
comp=Z,61nm,1.3s,mb5.3
TNS Taunus Mts 45.18 305 *e*P **P** **04 53 45.6 +0.4**
TNS pmax pmax
comp=Z,45nm,1.9s,mb5.0
TNS Taunus Mts 45.18 305 *e*P **P** **04 53 45.6 +0.4**
comp=Z,45nm,1.9s,mb5.0
KBS Kingsbay 45.19 346 *e*P **P** **04 53 46.6 +1.7**
KBS *e**PP pP 04 53 52.0 +5.9
KBS pmax pmax
comp=Z,59nm,0.8s,mb5.5
KBS Kingsbay 45.19 346 *e*P **P** **04 53 46.6 +1.6**
comp=Z,59nm,0.8s,mb5.5
KBS *e*pP pP 04 53 52.0 +5.9
SPAK Spaichingen-Ko 45.49 302 *e*P **P** **04 53 47.7 0.0**
VLC Villacollemand 45.56 296 *e*P **P** **04 53 47.4 -0.9**
comp=Z,100nm,1.1s,mb5.7
TUE Stuetta 45.57 300 *e*P **P** **04 53 47.5 -0.9**
comp=Z,16nm,0.7s,mb5.1
BUG Bochum--Univer 45.63 307 *e*P **P** **04 53 48.9 +0.2**
comp=Z,38nm,1.1s,mb5.2
BFO Black Forest 45.73 303 *e*P **P** **04 53 48.9 -0.6**
BFO pmax pmax
comp=Z,13nm,1.1s,mb4.8
BFO Black Forest 45.73 303 *e*P **P** **04 53 48.9 -0.6**
comp=Z,13nm,1.1s,mb4.8
WTSB Winterswijk 45.80 308 *e*P **P** **04 53 52.0 +1.9**
comp=Z,37nm,1.2s,mb5.2
ABH Alteburg 45.83 305 *e*P **P** **04 53 51.2 +0.9**
LANF Langenberg 45.89 304 *e*P **P** **04 53 50.8 0.0**
FELD Feldberg im Sc 46.06 302 *e*P **P** **04 53 51.6 -0.6**
RUP Ruppelstein 46.18 305 *e*P **P** **04 53 53.4 +0.3**
CDF Champ du Feu 46.38 303 *e*P **P** **04 53 54.5 -0.2**
comp=Z,57nm,0.9s,mb5.2
CDF Champ du Feu 46.38 303 *e*P **P** **04 53 54.5 -0.2**
CDF pmax pmax
comp=Z,28nm,0.9s,mb5.2
CDF Champ du Feu 46.38 303 *e*P **P** **04 53 54.5 -0.2**
comp=Z,28nm,0.9s,mb5.2
ECH Echery 46.51 303 *e*P **P** **04 53 56.2 +0.5**
ECH Echery 46.51 303 *e*P **P** **04 53 54.8 -0.9**
ECH pmax pmax
comp=Z,21nm,1.0s,mb5.0
ECH Echery 46.51 303 *e*P **P** **04 53 54.8 -0.9**
comp=Z,21nm,1.0s,mb5.0
MEM Membach 46.60 306 P **P** **04 53 56.9 +0.5**
comp=Z,17nm,1.5s,mb4.8
HGN Heimansgroeve 46.61 306 *e*P **P** **04 53 56.2 -0.2**
comp=Z,20nm,1.4s,mb4.9
MOF Molkenrain 46.63 302 *e*P **P** **04 53 56.2 -0.4**
WLF Walferdange 46.76 305 P **P** **04 53 57.3 -0.3**
comp=Z,41nm,1.5s,mb5.1
WLF Walferdange 46.76 305 *e*P **P** **04 53 58.3 +0.7**
WLF pmax pmax
comp=Z,27nm,0.8s,mb5.2
WLF Walferdange 46.76 305 *e*P **P** **04 53 58.0 +0.4**
comp=Z,46nm,1.3s,mb5.2
WLF Walferdange 46.76 305 *e*P **P** **04 53 58.3 +0.7**
comp=Z,27nm,0.8s,mb5.2
HINF Hinteralfeld 46.82 302 *e*P **P** **04 53 57.7 -0.4**
comp=Z,66nm,1.1s,mb5.2
HINF Hinteralfeld 46.82 302 *e*P **P** **04 53 57.7 -0.4**
HINF pmax pmax
comp=Z,33nm,1.1s,mb5.2
HINF Hinteralfeld 46.82 302 *e*P **P** **04 53 57.7 -0.4**
comp=Z,33nm,1.1s,mb5.2
PGF Pioggiola 47.04 295 *e*P **P** **04 53 59.5 -0.4**
comp=Z,135nm,1.0s,mb5.5
PGF Pioggiola 47.04 295 *e*P **P** **04 53 59.5 -0.4**
PGF pmax pmax
comp=Z,67nm,1.0s,mb5.5
PGF Pioggiola 47.04 295 *e*P **P** **04 53 59.5 -0.4**
comp=Z,67nm,1.0s,mb5.5
BCLA Clavier 47.09 306 P **P** **04 53 58.4 -1.8**
comp=Z,26nm,3.1s
HAU Haudompre 47.09 303 *e*P **P** **04 53 59.9 -0.4**
comp=Z,48nm,0.9s,mb5.1
HAU *e*MLR MLR
comp=Z,836nm,20.5s,MS4.4
HAU Haudompre 47.09 303 *e*P **P** **04 53 59.9 -0.4**
HAU pmax pmax
comp=Z,24nm,0.9s,mb5.1
HAU MLR MLR
comp=Z,840nm,20.5s,MS4.7
HAU Haudompre 47.09 303 *e*P **P** **04 53 59.9 -0.4**
comp=Z,24nm,0.9s,mb5.1
HAU LR LR
comp=Z,840nm,20.5s,MS4.7
JOW Kunigami 47.19 89 P **P** **04 54 01.2 -0.1**
comp=Z,14nm,0.4s,mb5.2,baz=356,slow=3.7,SNR=5.1
THEF They Montfort 47.26 303 *e*P **P** **04 54 01.2 -0.4**
GIVF Givet 47.47 306 *e*P **P** **04 54 03.4 +0.2**
comp=Z,62nm,0.9s,mb5.2
GIVF Givet 47.47 306 *e*P **P** **04 54 03.4 +0.2**
GIVF pmax pmax
comp=Z,31nm,0.9s,mb5.2
GIVF Givet 47.47 306 *e*P **P** **04 54 03.4 +0.2**
comp=Z,31nm,0.9s,mb5.2
SAOF Saorge 47.54 297 *e*P **P** **04 54 03.5 -0.3**
UCC Uccle 47.57 307 P **P** **04 54 04.0 0.0**
LPG La Plagne 47.59 299 *e*P **P** **04 54 04.4 +0.2**
comp=Z,59nm,0.7s,mb5.4
LPG La Plagne 47.59 299 *e*P **P** **04 54 04.4 +0.2**
LPG pmax pmax
comp=Z,30nm,0.7s,mb5.4
LPG La Plagne 47.59 299 *e*P **P** **04 54 04.4 +0.2**
comp=Z,30nm,0.7s,mb5.4
LPL La Plagne 47.60 299 *e*P **P** **04 54 04.3 +0.1**
comp=Z,28nm,0.5s,mb5.3
LPL La Plagne 47.60 299 *e*P **P** **04 54 04.3 +0.1**
LPL pmax pmax
comp=Z,14nm,0.5s,mb5.2
LPL La Plagne 47.60 299 *e*P **P** **04 54 04.3 +0.1**
comp=Z,14nm,0.5s,mb5.2
DOU Dourbes 47.61 306 P **P** **04 54 04.4 +0.1**
comp=Z,14nm,1.8s,mb4.7
RSL Roselend 47.61 300 *e*P **P** **04 54 03.8 -0.5**
AUTN L'Aution 47.63 297 *e*P **P** **04 54 03.7 -0.8**
SBF Sospel 47.67 297 *e*P **P** **04 54 04.6 -0.2**
comp=Z,245nm,1.1s,mb5.8
SBF Sospel 47.67 297 *e*P **P** **04 54 04.6 -0.2**
SBF pmax pmax
comp=Z,123nm,1.1s,mb5.8
SBF Sospel 47.67 297 *e*P **P** **04 54 04.6 -0.2**
comp=Z,123nm,1.1s,mb5.8
OG22 Abries 47.68 298 *e*P **P** **04 54 06.0 +1.1**
LUCF Luceram 47.72 297 *e*P **P** **04 54 01.8 -3.4**
TOUF Mont Tournerai 47.74 297 *e*P **P** **04 54 03.2 -2.2**
MEZF Maizieres J'vi 47.78 304 *e*P **P** **04 54 05.7 +0.1**
comp=Z,150nm,1.2s,mb5.6
MEZF Maizieres J'vi 47.78 304 *e*P **P** **04 54 05.7 +0.1**
comp=Z,150nm,1.2s,mb5.9
BNI Bardonecchia 47.78 299 *e*P **P** **04 54 05.5 -0.2**
BNI pmax pmax
comp=Z,78nm,1.3s,mb5.6
BNI Bardonecchia 47.78 299 *e*P **P** **04 54 05.5 -0.2**
comp=Z,78nm,1.3s,mb5.6
MBDF Montbardon 47.83 298 *e*P **P** **04 54 06.4 +0.4**
comp=Z,82nm,0.7s,mb5.5
MBDF Montbardon 47.83 298 *e*P **P** **04 54 06.4 +0.4**
MBDF pmax pmax
comp=Z,41nm,0.7s,mb5.6
MBDF Montbardon 47.83 298 *e*P **P** **04 54 06.4 +0.4**
comp=Z,41nm,0.7s,mb5.6
MVIF Mont Vial 47.85 297 *e*P **P** **04 54 03.2 -3.0**
BAIF Baives 47.86 306 *e*P **P** **04 54 06.5 +0.3**
comp=Z,71nm,0.9s,mb5.4
BAIF Baives 47.86 306 *e*P **P** **04 54 06.5 +0.3**
BAIF pmax pmax
comp=Z,35nm,0.9s,mb5.4
BAIF Baives 47.86 306 *e*P **P** **04 54 06.5 +0.3**
comp=Z,35nm,0.9s,mb5.4
OG05 Jujurieux 48.27 300 *e*P **P** **04 54 09.0 -0.5**
FRF La Foret Royal 48.31 297 *e*P **P** **04 54 09.2 -0.6**
comp=Z,96nm,1.1s,mb5.4
FRF La Foret Royal 48.31 297 *e*P **P** **04 54 09.2 -0.6**
FRF pmax pmax
comp=Z,48nm,1.1s,mb5.4
FRF La Foret Royal 48.31 297 *e*P **P** **04 54 09.2 -0.6**
comp=Z,48nm,1.1s,mb5.4
ORIF Oris-en-Rattie 48.36 299 *e*P **P** **04 54 09.7 -0.5**
comp=Z,58nm,1.0s,mb5.3
ORIF *e*MLR MLR
comp=Z,1µm,22.2s,MS4.5
ORIF Oris-en-Rattie 48.36 299 *e*P **P** **04 54 09.7 -0.5**
ORIF pmax pmax
comp=Z,29nm,1.0s,mb5.3
ORIF Oris-en-Rattie 48.36 299 *e*P **P** **04 54 09.7 -0.5**
comp=Z,29nm,1.0s,mb5.3
LMR La Mourre 48.48 297 *e*P **P** **04 54 10.7 -0.4**
comp=Z,89nm,1.3s,mb5.3
LMR La Mourre 48.48 297 *e*P **P** **04 54 10.7 -0.4**
LMR pmax pmax
comp=Z,45nm,1.3s,mb5.3
LMR La Mourre 48.48 297 *e*P **P** **04 54 10.7 -0.4**
comp=Z,45nm,1.3s,mb5.3
STOF St-Etienne Org 48.66 298 *e*P **P** **04 54 12.2 -0.2**
TAVF Tavernes 48.69 297 *e*P **P** **04 54 15.4 +2.7**
SMRF Simiane la Rot 48.89 298 *e*P **P** **04 54 13.9 -0.3**
comp=Z,70nm,1.1s,mb5.3
SMRF Simiane la Rot 48.89 298 *e*P **P** **04 54 13.9 -0.3**
comp=Z,70nm,1.1s,mb5.6
LOR Lormes 48.92 302 *e*P **P** **04 54 13.3 -1.1**
comp=Z,39nm,1.0s,mb5.1
LOR *e*MLR MLR
comp=Z,841nm,19.5s,MS4.4
LOR Lormes 48.92 302 *e*P **P** **04 54 13.3 -1.1**
LOR pmax pmax
comp=Z,20nm,1.0s,mb5.1
LOR MLR MLR
comp=Z,840nm,19.5s,MS4.7
LOR Lormes 48.92 302 *e*P **P** **04 54 13.3 -1.1**
comp=Z,20nm,1.0s,mb5.1

LOR LR LR
comp=Z,840nm,19.5s,MS4.7
BERF Bertagne 49.05 297 *eP* **P 04 54 16.7 +1.2**
SSB Saint Sauveur 49.13 300 *eP* **P 04 54 14.7 -1.4**
SSB pmax pmax
comp=Z,18nm,1.6s,mb4.8
SSB Saint Sauveur 49.13 300 *eP* **P 04 54 14.7 -1.4**
comp=Z,18nm,1.6s,mb4.9
SMF Signal de Mont 49.13 302 *eP* **P 04 54 15.2 -0.9**
TREF Trevaresse 49.14 297 *eP* **P 04 54 15.0 -1.2**
VIVF Saint-Julien-I 49.19 299 *eP* **P 04 54 16.3 -0.2**
comp=Z,43nm,0.7s,mb5.3
VIVF Saint-Julien-I 49.19 299 *eP* **P 04 54 16.3 -0.2**
VIVF pmax pmax
comp=Z,22nm,0.7s,mb5.3
VIVF Saint-Julien-I 49.19 299 *eP* **P 04 54 16.3 -0.2**
comp=Z,22nm,0.7s,mb5.3
GELF Grande-Etoile 49.20 297 *eP* **P 04 54 15.9 -0.7**
SSF Saint Saulge 49.21 302 *eP* **P 04 54 15.7 -1.0**
comp=Z,38nm,1.1s,mb5.0
SSF Saint Saulge 49.21 302 *eP* **P 04 54 15.7 -1.0**
SSF pmax pmax
comp=Z,19nm,1.1s,mb5.0
SSF Saint Saulge 49.21 302 *eP* **P 04 54 15.7 -1.0**
comp=Z,19nm,1.1s,mb5.0
PRAF Pradon 49.23 298 *eP* **P 04 54 18.0 +1.2**
YSS Yuzh-Sakhalins 49.29 58⇓ *iP* **P 04 54 15.8 -1.5**
AVF Avril sur Loir 49.40 302 *eP* **P 04 54 17.5 -0.6**
comp=Z,121nm,1.0s,mb5.6
AVF Avril sur Loir 49.40 302 *eP* **P 04 54 17.5 -0.6**
AVF pmax pmax
comp=Z,60nm,1.0s,mb5.6
AVF Avril sur Loir 49.40 302 *eP* **P 04 54 17.5 -0.6**
comp=Z,60nm,1.0s,mb5.6
KEST Kesra 49.45 286 P **P 04 54 18.7 +0.1**
comp=Z,4.0nm,0.8s,mb4.5,baz=336,slow=4.0,SNR=9.8
KEST LR LR 05 20 22.3
comp=Z,130nm,18.8s,MS4.0,baz=320,slow=42
PLDF La Plantade 49.50 301 *eP* **P 04 54 19.1 +0.2**
HYF Humbligny 49.70 303 *eP* **P 04 54 20.2 -0.2**
JMIC Jan Mayen 49.72 335 LR LR 05 15 23.5
comp=Z,624nm,20.5s,MS4.6,baz=82,slow=36
AGO Saint Agoulin 49.80 301 *eP* **P 04 54 21.8 +0.7**
BGF Bois d'Agland 49.81 302 *eP* **P 04 54 20.4 -0.8**
comp=Z,31nm,0.9s,mb5.0
BGF Bois d'Agland 49.81 302 *eP* **P 04 54 20.4 -0.8**
BGF pmax pmax
comp=Z,16nm,0.9s,mb5.0
BGF Bois d'Agland 49.81 302 *eP* **P 04 54 20.4 -0.8**
comp=Z,16nm,0.9s,mb5.0
PYM Petit Puy Mans 49.98 301 *eP* **P 04 54 21.4 -1.1**
LBL Lubilhac 50.01 300 *eP* **P 04 54 21.1 -1.6**
LASF Ste Croix 50.01 298 *eP* **P 04 54 22.7 -0.1**
comp=Z,114nm,1.1s,mb5.5
MAJO Matsushiro 50.09 72 *eP* **P 04 54 22.9 -0.6**
MAJO pmax pmax
comp=Z,28nm,0.9s,mb5.3
MAJO Matsushiro 50.09 72 *eP* **P 04 54 22.9 -0.6**
comp=Z,28nm,0.9s,mb5.3
MAT Matsushiro 50.09 72 P **P 04 54 22.7 -0.8**
MJAR Matsushiro Arr 50.09 72 P **P 04 54 23.5 0.0**
comp=Z,13nm,0.9s,mb5.0,baz=290,slow=9.5,SNR=24
MJAR LR LR 05 16 46.9
comp=Z,380nm,19.7s,MS4.4,baz=315,slow=37
MJAR Matsushiro Arr 50.09 72 P **P 04 54 23.5 0.0**
MJAR pmax pmax
comp=Z,13nm,0.9s
MJAR MLR MLR
comp=Z,380nm,19.7s
MCD Coleburn Disti 50.13 317 *eP* **P 04 54 22.8 -0.7**
XSO Sourhope Farm 50.15 314 *eP* **P 04 54 22.6 -1.0**
ASAJ Asahikawa 50.17 61 LR LR 05 16 48.1
comp=Z,520nm,19.2s,MS4.5,baz=175,slow=37
HPK Haverah Park 50.23 312⇑ *eP* **P 04 54 24.2 0.0**
HPK AMb AMB 04 54 30.7
comp=Z,144nm,1.7s,mb5.7
SEY Seymchan 50.27 36⇑ *eP* **P 04 54 24.8 +0.3**
SEY Seymchan 50.27 36⇑ *eP* **P 04 54 24.9 +0.4**
TCF Toulx Ste Croi 50.31 302 *eP* **P 04 54 24.8 -0.3**
comp=Z,105nm,1.3s,mb5.4
TCF Toulx Ste Croi 50.31 302 *eP* **P 04 54 24.8 -0.3**
TCF pmax pmax
comp=Z,52nm,1.3s,mb5.4
TCF Toulx Ste Croi 50.31 302 *eP* **P 04 54 24.8 -0.3**
comp=Z,52nm,1.3s,mb5.4
KBI1 Birley Grange 50.38 311⇑ *eP* **P 04 54 24.4 -1.0**
CWF Charnwood Fore 50.40 311 *eP* **P 04 54 24.1 -1.5**
CWF AMb AMB 04 54 34.9
comp=Z,45nm,1.4s,mb5.3
SKP1 Kophill 50.42 309 *eP* **P 04 54 25.0 -0.8**
EBL Broad Law 50.50 315 *eP* **P 04 54 26.2 -0.1**
MVH1 Achvaich 50.52 318 *eP* **P 04 54 26.5 +0.1**
EDI Edinburgh 50.54 315 *eP* **P 04 54 26.5 -0.1**
EDI AMb AMB 04 54 34.8
comp=Z,74nm,2.0s,mb5.3
EBH Black Hill 50.62 315 *eP* **P 04 54 26.9 -0.3**
KWE Weaver Farm 50.63 311 *eP* **P 04 54 27.2 -0.1**
EAU Auchinoon 50.70 315 *eP* **P 04 54 26.9 -1.0**
ESK Eskdalemuir 50.72 314⇑ *eP* **P 04 54 27.7 -0.2**
ESK AMb AMB 04 54 28.5
comp=Z,87nm,1.8s,mb5.4
ESK Eskdalemuir 50.72 314 *eP* **P 04 54 27.9 -0.1**
ESK pmax pmax
comp=Z,17nm,0.6s,mb5.2
ESK Eskdalemuir 50.72 314 *eP* **P 04 54 27.9 0.0**
comp=Z,16nm,0.6s,mb5.1
MDO Dochfour 50.74 317 *eP* **P 04 54 27.7 -0.5**
WOL Wolverton 50.79 309 *eP* **P 04 54 27.9 -0.6**
WOL AMb AMB 04 54 30.1
comp=Z,201nm,1.4s,mb5.9
CAF Calviac 50.90 300 *eP* **P 04 54 29.4 -0.1**
comp=Z,58nm,1.2s,mb5.1
CAF Calviac 50.90 300 *eP* **P 04 54 29.4 -0.1**
CAF pmax pmax
comp=Z,29nm,1.2s,mb5.1
CAF Calviac 50.90 300 *eP* **P 04 54 29.4 -0.1**
comp=Z,29nm,1.2s,mb5.1
SSW Stow on the Wo 50.95 310 *eP* **P 04 54 29.7 -0.1**
LDF La Druitiere 51.01 305 *eP* **P 04 54 29.5 -0.8**
RJF Les Rejaudoux 51.12 301 *eP* **P 04 54 31.3 +0.1**
RJF eMLR MLR
comp=Z,418nm,17.2s,MS4.2
RJF Les Rejaudoux 51.12 301 *eP* **P 04 54 31.3 +0.1**
RJF LR LR
comp=Z,420nm,17.3s,MS4.5
FLN La Foliniere 51.18 305 *eP* **P 04 54 30.6 -0.9**
comp=Z,75nm,1.0s,mb5.3
FLN eMLR MLR
comp=Z,2µm,20.8s,MS4.7
FLN La Foliniere 51.18 305 *eP* **P 04 54 30.6 -0.9**
FLN pmax pmax
comp=Z,37nm,1.0s,mb5.3
FLN MLR MLR
comp=Z,2µm,20.8s,MS5.0
FLN La Foliniere 51.18 305 *eP* **P 04 54 30.6 -0.9**
comp=Z,38nm,1.0s,mb5.3
FLN LR LR
comp=Z,2µm,20.8s,MS5.0
KAC Achnashellach 51.22 317⇑ *eP* **P 04 54 31.6 -0.1**
GCD Castle Douglas 51.26 314 *eP* **P 04 54 32.0 -0.1**
SJAF Saint Jean de 51.27 297 *eP* **P 04 54 31.9 -0.4**
EJON La Jonquera 51.28 297 P **P 04 54 36.4 +4.0**
comp=Z,45nm,1.3s,mb5.2
ERM Erimo 51.34 64⇓ *iP* **P 04 54 34.3 +1.4**
MTLF Montolieu 51.39 298 *eP* **P 04 54 33.0 -0.2**
comp=Z,95nm,1.4s,mb5.2
MTLF Montolieu 51.39 298 *eP* **P 04 54 33.0 -0.2**
MTLF pmax pmax
comp=Z,47nm,1.4s,mb5.2
MTLF Montolieu 51.39 298 *eP* **P 04 54 33.0 -0.2**
comp=Z,48nm,1.4s,mb5.2
DAG Danmarks Havn 51.47 343⇓ *iP* **P 04 54 34.0 +0.6**
DAG pmax pmax
comp=Z,35nm,0.6s,mb5.5
DAG Danmarks Havn 51.47 343⇓ *iP* **P 04 54 34.0 +0.6**
comp=Z,35nm,0.6s,mb5.5
GRR Gorron 51.54 305 *eP* **P 04 54 33.3 -1.0**
comp=Z,131nm,1.0s,mb5.5
GRR Gorron 51.54 305 *eP* **P 04 54 33.3 -1.0**
GRR pmax pmax
comp=Z,66nm,1.0s,mb5.5
GRR Gorron 51.54 305 *eP* **P 04 54 33.3 -1.0**
comp=Z,66nm,1.0s,mb5.5
MCH1 Michaelchurch 51.62 310⇑ *eP* **P 04 54 34.4 -0.4**
MCH1 AMb AMB 04 54 41.8
comp=Z,117nm,1.8s,mb5.5
HGH Gray Hill 51.62 310 *eP* **P 04 54 34.4 -0.4**
MFF Saint Martin d 51.73 303 *eP* **P 04 54 34.6 -1.1**
comp=Z,54nm,1.0s,mb5.1
MFF Saint Martin d 51.73 303 *eP* **P 04 54 34.6 -1.1**
MFF pmax pmax
comp=Z,27nm,1.0s,mb5.1
MFF Saint Martin d 51.73 303 *eP* **P 04 54 34.6 -1.1**
comp=Z,27nm,1.0s,mb5.1
HTR Trewern Hill 51.75 310 *eP* **P 04 54 35.5 -0.3**
LFF La Frestale 51.77 300 *eP* **P 04 54 35.9 -0.1**
comp=Z,75nm,1.0s,mb5.3
LFF La Frestale 51.77 300 *eP* **P 04 54 35.9 -0.1**
LFF pmax pmax
comp=Z,38nm,1.0s,mb5.3
LFF La Frestale 51.77 300 *eP* **P 04 54 35.9 -0.1**
comp=Z,38nm,1.0s,mb5.3
ETOS Mallorca 52.42 294 P **P 04 54 46.3 +5.4**
comp=Z,46nm,0.7s,mb5.5
SGMF Saint Gilles 52.65 305 *eP* **P 04 54 42.0 -0.5**
comp=Z,55nm,0.7s,mb5.3
SGMF Saint Gilles 52.65 305 *eP* **P 04 54 42.0 -0.5**
SGMF pmax pmax
comp=Z,28nm,0.7s,mb5.3
SGMF Saint Gilles 52.65 305 *eP* **P 04 54 42.0 -0.5**
comp=Z,28nm,0.7s,mb5.3
EPF Esparros 52.77 298 *eP* **P 04 54 43.8 +0.3**
comp=Z,30nm,0.9s,mb4.9
EPF Esparros 52.77 298 *eP* **P 04 54 43.8 +0.3**
EPF pmax pmax
comp=Z,15nm,0.9s,mb4.9
EPF Esparros 52.77 298 *eP* **P 04 54 43.8 +0.3**
comp=Z,15nm,0.9s,mb4.9
RESF Ens 52.86 298 *eP* **P 04 54 44.0 -0.2**
EPOB Poblet 52.96 296 P **P 04 54 49.7 +4.8**
comp=Z,10nm,0.8s,mb4.8
EBIE Bielsa 53.05 298 P **P 04 54 50.7 +5.1**
comp=Z,24nm,0.9s,mb5.1
ROSF Rosnen 53.06 306 *eP* **P 04 54 44.9 -0.7**
comp=Z,30nm,0.5s,mb5.2
ROSF Rostrenen 53.06 306 *eP* **P 04 54 44.9 -0.7**
ROSF pmax pmax
comp=Z,15nm,0.5s,mb5.2
ROSF Rostrenen 53.06 306 *eP* **P 04 54 44.9 -0.7**
comp=Z,15nm,0.5s,mb5.2
QUIF Quistinic 53.15 305 *eP* **P 04 54 46.3 +0.1**
comp=Z,153nm,1.2s,mb5.5
QUIF Quistinic 53.15 305 *eP* **P 04 54 46.3 +0.1**
QUIF pmax pmax
comp=Z,76nm,1.2s,mb5.5
QUIF Quistinic 53.15 305 *eP* **P 04 54 46.3 +0.1**
comp=Z,76nm,1.2s,mb5.5
DLF Lyons Farm 53.21 312 *eP* **P 04 54 52.7 +6.1**
ETSF Etsaut 53.43 299 *eP* **P 04 54 48.2 -0.2**
comp=Z,78nm,1.1s,mb5.2
ETSF Etsaut 53.43 299 *eP* **P 04 54 48.2 -0.2**
ETSF pmax pmax
comp=Z,39nm,1.1s,mb5.2
ETSF Etsaut 53.43 299 *eP* **P 04 54 48.2 -0.2**
comp=Z,39nm,1.1s,mb5.2
SJPF Ste Jean 53.79 299 *eP* **P 04 54 50.8 -0.2**
comp=Z,33nm,1.0s,mb4.9
SJPF Ste Jean 53.79 299 *eP* **P 04 54 50.8 -0.2**
SJPF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SJPF Ste Jean 53.79 299 *eP* **P 04 54 50.8 -0.2**
comp=Z,16nm,1.0s,mb4.9
ESAC San Caprasio 53.86 297 P **P 04 54 57.0 +5.4**
comp=Z,21nm,0.7s,mb5.2
EMHD Djebel Mahouad 53.88 290 P **P 04 54 50.9 -0.9**
EALK Alkurruntz 53.93 299 P **P 04 54 57.1 +5.1**
comp=Z,30nm,1.0s,mb5.2
BILL Bilibino 54.38 28*c iP* **P 04 54 55.6 +0.7**
BILL *i* 04 55 03.2
BILL *e* 04 55 58.4
BILL pmax pmax
comp=Z,49nm,1.6s,mb5.2
BILL MLR MLR
comp=Z,1µm,15.0s,MS5.1
BILL Bilibino 54.38 28 *eP* **P 04 54 55.9 +1.0**
comp=Z,55nm,0.9s,mb5.5
EMOS Mosqueruela 54.44 296 P **P 04 55 01.6 +5.7**
comp=Z,21nm,0.8s,mb5.1
ECRI Cripan 54.86 299 P **P 04 55 03.5 +4.7**
ECRI pmax pmax
comp=Z,25nm,1.1s,mb5.2
ECRI Cripan 54.86 299 P **P 04 55 03.5 +4.7**
comp=Z,25nm,1.1s,mb5.2
EBNR Beni Rached 54.86 290 P **P 04 54 58.8 -0.1**
EBEN Benarda 55.00 294 P **P 04 55 06.1 +6.2**
comp=Z,22nm,0.5s,mb5.5
ECHA Ech Chlef 55.05 290 P **P 04 55 00.0 -0.2**
ECHE Chera 55.12 295 P **P 04 55 06.6 +5.8**
ECHE pmax pmax
comp=Z,15nm,0.8s,mb5.1
ECHE Chera 55.12 295 P **P 04 55 06.6 +5.8**
comp=Z,15nm,0.8s,mb5.1
ELAN Lanestosa 55.20 300 P **P 04 55 06.6 +5.3**
comp=Z,36nm,0.9s,mb5.4
EANR 'Ain N'Sour 55.33 290 P **P 04 55 01.7 -0.6**
ALE Alert 55.35 354 P **P 04 55 03.0 +1.2**
comp=Z,79nm,0.6s,mb5.9,SNR=7.9
ETRT Tiaret 55.45 290 P **P 04 55 03.0 -0.2**
ETOB Tobarra 55.95 294 P **P 04 55 12.2 +5.5**
comp=Z,18nm,0.7s,mb5.2
PETK Petropavlovsk- 56.05 46 P **P 04 55 07.8 +0.6**
comp=Z,9.6nm,1.0s,mb4.8,baz=256,slow=6.0,SNR=4.2
PETK LR LR 05 20 25.7
comp=Z,333nm,19.6s,MS4.4,baz=285,slow=37
CART Cartagena 56.06 293 *eP* **P 04 55 06.8 -0.8**
comp=Z,74nm,0.8s,mb5.8
BORG Borgarnes 56.08 329 LR LR 05 18 58.5
comp=Z,1µm,18.3s,MS5.1,baz=221,slow=36
EARI Arriondas 56.34 301 P **P 04 55 16.1 +6.7**
comp=Z,18nm,0.9s,mb5.1
EVIA Vianos 56.62 295 P **P 04 55 17.2 +5.7**
EVIA pmax pmax
comp=Z,25nm,0.9s,mb5.2
EVIA Vianos 56.62 295 P **P 04 55 17.2 +5.7**
comp=Z,25nm,0.9s,mb5.2
GUD Guadarrama 56.83 298 P **P 04 55 17.2 +4.2**
GUD pmax pmax
comp=Z,23nm,1.6s,mb5.0
GUD Guadarrama 56.83 298 P **P 04 55 17.2 +4.3**
comp=Z,23nm,1.6s,mb5.0
ESDC Sonseca Array 57.15 296 P **P 04 55 14.5 -0.7**
comp=Z,15nm,0.9s,mb5.0,baz=56,slow=7.6,SNR=22
ESLA Sonseca Array 57.15 296 *eP* **P 04 55 15.0 -0.2**
comp=Z,5.3nm,1.0s,mb4.5
ENIJ Nijar 57.20 293 P **P 04 55 21.0 +5.4**
ENIJ pmax pmax
comp=Z,18nm,0.8s,mb5.2
ENIJ Nijar 57.20 293 P **P 04 55 21.0 +5.4**
comp=Z,18nm,0.8s,mb5.2
EQES Quesada 57.41 294 P **P 04 55 21.4 +4.3**
comp=Z,7.3nm,1.0s,mb4.7
PAB San Pablo 57.47 296 *eP* **P 04 55 19.3 +1.8**
PAB pmax pmax
comp=Z,20nm,1.3s,mb5.0
PAB San Pablo 57.47 296 *eP* **P 04 55 19.3 +1.8**
comp=Z,20nm,1.3s,mb5.0
EPON Pontenova 57.60 302 P **P 04 55 21.5 +3.2**
comp=Z,14nm,2.5s,mb4.6
EBER Berja 57.71 293 P **P 04 55 24.4 +5.2**
comp=Z,18nm,0.6s,mb5.3
EBAN Banos Encina 57.73 295 P **P 04 55 24.7 +5.3**
EBAN pmax pmax
comp=Z,23nm,0.8s,mb5.3
EBAN Banos Encina 57.73 295 P **P 04 55 24.7 +5.3**
comp=Z,23nm,0.8s,mb5.2
SUMG Summit 57.92 341 *eP* **P 04 55 21.5 +1.3**
comp=Z,40nm,0.8s,mb5.5
ECOG Cogollos-Vega 58.00 294 P **P 04 55 25.7 +4.4**
ECOG pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
ECOG Cogollos-Vega 58.00 294 P **P 04 55 25.7 +4.4**
comp=Z,9.2nm,0.7s,mb4.9
PBRG Braganca 58.03 300 *eP* **P 04 55 26.2 +4.8**
EGUA Guajares 58.22 293 P **P 04 55 25.4 +2.6**
EGUA pmax pmax
comp=Z,103nm,0.8s,mb5.9
EGUA Guajares 58.22 293 P **P 04 55 25.4 +2.6**
comp=Z,103nm,0.8s,mb5.9
EADA Adamuz 58.28 295 P **P 04 55 27.7 +4.5**
comp=Z,11nm,0.9s,mb4.9
EALB Alboran 58.28 292 P **P 04 55 27.0 +3.8**
comp=Z,58nm,1.0s,mb5.6
ELUQ Luque 58.35 294 P **P 04 55 27.9 +4.1**
ELUQ pmax pmax
comp=Z,52nm,1.7s,mb5.3
ELUQ Luque 58.35 294 P **P 04 55 27.9 +4.1**
comp=Z,52nm,1.7s,mb5.3
ELOJ Sierra Loja 58.48 294 P **P 04 55 28.8 +4.2**
ELOJ pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
ELOJ Sierra Loja 58.48 294 P **P 04 55 28.8 +4.2**
comp=Z,5.1nm,0.5s,mb4.8
MVO Moncorvo 58.52 299 *eP* **P 04 55 24.7 -0.1**
comp=Z,22nm,1.8s,mb4.9
MVO A 04 55 35.1
comp=Z,54nm,1.5s
TAM Tamanrasset 58.84 274 *eP* **P 04 55 26.0 -1.3**
TAM pmax pmax
comp=Z,11nm,0.9s,mb4.9
TAM Tamanrasset 58.84 274 *eP* **P 04 55 26.0 -1.3**
comp=Z,11nm,0.9s,mb4.9
ELOB Lobios 58.87 300 P **P 04 55 32.6 +5.4**
comp=Z,58nm,1.2s,mb5.5
PCAB Cabril 58.92 300 *eP* **P 04 55 28.2 +0.6**
comp=Z,75nm,1.7s,mb5.4
PVRL Vila Real 58.92 300 *eP* **P 04 55 30.2 +2.5**
comp=Z,21nm,1.2s,mb5.0
EMIJ Mijas 59.19 294 P **P 04 55 32.7 +3.1**
comp=Z,23nm,0.9s,mb5.2
MTE Manteigas 59.23 299 *eP* **P 04 55 32.3 +2.5**
comp=Z,60nm,1.4s,mb5.4
PMRV Marv??o 59.59 298 *eP* **P 04 55 37.0 +4.7**
comp=Z,26nm,1.0s,mb5.2
EBAD Badajoz 59.66 297 P **P 04 55 38.1 +5.3**
comp=Z,24nm,0.8s,mb5.3
EJIF Jimena Fronter 59.74 294 P **P 04 55 37.4 +4.0**
EJIF pmax pmax
comp=Z,29nm,1.0s,mb5.3
EJIF Jimena Fronter 59.74 294 P **P 04 55 37.4 +4.0**
comp=Z,29nm,1.0s,mb5.3
ESPR Espera 59.80 294 P **P 04 55 38.4 +4.6**
comp=Z,18nm,0.8s,mb5.2
EMIN Mina Concepcio 59.92 296 P **P 04 55 38.9 +4.3**
comp=Z,20nm,0.7s,mb5.3
PBAR Barrancos 59.97 296 *eP* **P 04 55 38.9 +4.0**
comp=Z,66nm,1.7s,mb5.4
PESTR Estremoz 60.00 297 *eP* **P 04 55 39.3 +4.1**
EVO Evora 60.46 297 *eP* **P 04 55 42.1 +3.8**
comp=Z,31nm,1.6s,mb5.1
EGRO El Granado 60.59 296 P **P 04 55 43.8 +4.6**
comp=Z,15nm,0.7s,mb5.2
PBEJ Beja 60.61 296 *eP* **P 04 55 39.1 -0.2**
comp=Z,50nm,1.2s,mb5.5
PVAQ Vaqueiros 60.82 296 *eP* **P 04 55 45.4 +4.6**
comp=Z,30nm,1.0s,mb5.4
ABPO Ambohimpanom 63.84 207 *eP* **P 04 56 00.9 -0.1**
ABPO pmax pmax
comp=Z,38nm,1.2s,mb5.3
ABPO Ambohimpanom 63.84 207 *eP* **P 04 56 00.9 -0.1**
comp=Z,38nm,1.2s,mb5.3
TNA Tin City 64.33 24 *eP* **P 04 56 04.9 +1.2**
comp=Z,29nm,1.0s,mb5.3
FX1 Attu Island--F 64.36 41 LR LR 05 26 23.0
comp=Z,192nm,18.2s,MS4.3,baz=318,slow=38
RES Resolute Bay 64.92 357 LR LR 05 28 33.7
comp=Z,284nm,20.2s,MS4.5,baz=45,slow=40
RES Resolute Bay 64.92 357 *eP* **P 04 56 07.6 +0.2**
RES pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RES Resolute Bay 64.92 357 *eP* **P 04 56 07.6 +0.2**
comp=Z,9.3nm,0.8s,mb4.9
TOA0 Torodi Ar. Sit 67.47 268 *eP* **P 04 56 22.4 -2.3**
TORD Torodi Ar. Bea 67.47 268 P **P 04 56 22.5 -2.2**
comp=Z,7.3nm,0.5s,mb5.0,baz=59,slow=5.0,SNR=175
TORD S S 05 05 23.8 +2.0
comp=Z,1.1nm,0.9s,baz=59,slow=12,SNR=4.8
TORD Torodi Ar. Bea 67.47 268 P **P 04 56 22.5 -2.2**
TORD S S 05 05 23.8 +2.0
COLD Coldfoot 67.77 17 *eP* **P 04 56 26.0 +0.2**
comp=Z,47nm,0.8s,mb5.6
LSZ Lusaka 69.34 227 *eP* **P 04 56 35.4 -0.9**
LSZ pmax pmax
comp=Z,20nm,1.0s,mb5.0
LSZ Lusaka 69.34 227 *eP* **P 04 56 35.4 -0.8**
comp=Z,20nm,1.0s,mb5.0
PMAR Madeira 69.68 296 *eP* **P 04 56 44.4 +6.1**
comp=Z,120nm,1.5s,mb5.6
CHUM Lake Minchumin 70.02 20 *eP* **P 04 56 40.2 +0.3**
comp=Z,10nm,0.7s,mb4.9
COLA College 70.27 17⇑ *iP* **P 04 56 41.6 +0.2**
COLA College 70.27 17 *eP* **P 04 56 41.1 -0.2**
comp=Z,29nm,0.8s,mb5.3
KTH Kantishna Hill 70.64 19 *eP* **P 04 56 44.0 +0.3**
comp=Z,43nm,1.1s,mb5.3
PPLA Purkeypile 70.86 20 *eP* **P 04 56 45.6 +0.6**
comp=Z,16nm,0.7s,mb5.0
MCK McKinley 70.98 18 *eP* **P 04 56 46.6 +0.9**
MCK pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MCK McKinley 70.98 18 *eP* **P 04 56 46.6 +0.8**
comp=Z,10nm,0.8s,mb4.8
DAWY Dawson 72.74 14 *eP* **P 04 56 56.5 +0.2**
PMR Palmer 72.74 20 *eP* **P 04 56 55.6 -0.8**
PMR pmax pmax
comp=Z,29nm,1.0s,mb5.2
PMR Palmer 72.74 20 *eP* **P 04 56 55.6 -0.7**
comp=Z,29nm,1.0s,mb5.2
KDAK Kodiak Island 74.96 23 P **P 04 57 08.8 -0.6**
comp=Z,16nm,0.9s,mb5.0,baz=293,slow=7.7,SNR=3.3
MBWA Marble Bar 75.06 135 *eP* **P 04 57 09.8 -0.6**
comp=Z,19nm,1.1s,mb4.9
FITZ Fitzroy Crossi 75.97 129 *eP* **P 04 57 14.7 -1.0**
comp=Z,27nm,1.2s,mb5.0
FITZ Fitzroy Crossi 75.97 129 *eP* **P 04 57 14.7 -1.0**
comp=Z,24nm,1.2s,mb5.0
DBIC Dimbokro 76.54 267 P **P 04 57 17.3 -1.8**
comp=Z,16nm,0.9s,mb4.9,baz=32,slow=6.9,SNR=20
DBIC LR LR 05 35 44.0
comp=Z,459nm,18.9s,MS4.8,baz=31,slow=40
DBIC Dimbokro 76.54 267 *eP* **P 04 57 17.6 -1.6**
DBIC pmax pmax
comp=Z,55nm,0.9s
DBIC Dimbokro 76.54 267 *eP* **P 04 57 17.6 -1.5**
comp=Z,55nm,0.9s,mb5.5
LIC Lamto 76.95 267 *eP* **P 04 57 19.7 -1.8**
comp=Z,135nm,0.9s,mb5.6
LIC eMLR MLR
comp=Z,690nm,18.8s,MS4.7
LIC Lamto 76.95 267 *eP* **P 04 57 19.7 -1.8**
comp=Z,68nm,0.9s,mb5.6
LIC LR LR
comp=Z,350nm,18.8s,MS4.7
YKA Yellowknife Ar 77.26 4 P **P 04 57 22.5 +0.1**
comp=Z,17nm,0.8s,mb5.0,baz=349,slow=5.7,SNR=214
YKA PKKPbc PKKPbc 05 16 31.3 +3.5
comp=Z,0.2nm,0.7s,baz=166,slow=1.9,SNR=5.3
YKA LR LR 05 36 05.7
comp=Z,58nm,20.7s,MS3.9,baz=140,slow=39
SKAG Skagway 77.75 14 *eP* **P 04 57 25.4 +0.2**
comp=Z,104nm,1.6s,mb5.5
TSUM Tsumeb 78.61 233 *eP* **P 04 57 29.5 -1.0**
comp=Z,15nm,0.9s,mb4.9
LBTB Lobatse 78.67 223 *eP* **P 04 57 30.3 -0.4**
LBTB pmax pmax
comp=Z,24nm,0.8s,mb5.2
LBTB Lobatse 78.67 223 *eP* **P 04 57 30.3 -0.4**
comp=Z,24nm,0.8s,mb5.2
SCHQ Schefferville 79.13 338 P **P 04 57 32.9 -0.1**
comp=Z,7.1nm,0.7s,mb4.7,baz=27,slow=5.3,SNR=6.1
SCHQ LR LR 05 32 00.6
comp=Z,510nm,18.6s,MS4.9,baz=57,slow=35
FCC Fort Churchill 80.62 353 *eP* **P 04 57 40.2 -0.7**
comp=Z,2.3nm,1.3s,mb4.0
BOSA Boshof 81.78 221 P **P 04 57 45.7 -1.7**
comp=Z,8.3nm,1.0s,mb4.6,baz=54,slow=4.4,SNR=6.9
BOSA LR LR 05 33 44.8
comp=Z,243nm,18.5s,MS4.6,baz=28,slow=36
BOSA Boshof 81.78 221 *eP* **P 04 57 45.8 -1.6**
BOSA pmax pmax
comp=Z,28nm,1.1s,mb5.1
BOSA Boshof 81.78 221 *eP* **P 04 57 45.8 -1.6**
comp=Z,28nm,1.1s,mb5.1
WRA Warramunga Arr 82.72 124 P **P 04 57 51.1 -1.4**
comp=Z,9.1nm,0.8s,mb4.8,baz=325,slow=5.2,SNR=55
WRA LR LR 05 36 27.9
comp=Z,112nm,18.8s,MS4.3,baz=330,slow=37
WRA Warramunga Arr 82.72 124 P **P 04 57 51.1 -1.4**
WRA pmax pmax
comp=Z,9.0nm,0.8s

WRA					MLR	MLR				
	comp=Z,112nm,18.8s									
WRAB	**Tennant Creek**	**82.72**	**124**		P	**P**	**04 57 51.0**	**-1.5**		
	comp=Z,169nm,1.0s,mb6.0,SNR=6.3									
WRAB	**Tennant Creek**	**82.72**	**124**	*e*	P	**P**	**04 57 51.0**	**-1.5**		
WRAB					pmax	pmax				
	comp=Z,29nm,1.0s,mb5.3									
WRAB	**Tennant Creek**	**82.72**	**124**	*e*	P	**P**	**04 57 51.0**	**-1.5**		
	comp=Z,29nm,1.0s,mb5.3									
WB2	**Warramunga Arr**	**82.73**	**124**	⇑*iP*		**P**	**04 57 51.0**	**-1.5**		
WB2	**Warramunga Arr**	**82.73**	**124**	*e*	P	**P**	**04 57 50.8**	**-1.7**		
PMG	**Port Moresby**	**84.14**	**107**		P	**P**	**04 57 59.5**	**-0.5**		
	comp=Z,9.6nm,0.8s,mb5.0,baz=18,slow=3.9,SNR=4.2									
PMG	**Port Moresby**	**84.14**	**107**	*e*	P	**P**	**04 58 00.2**	**+0.2**		
PMG					pmax	pmax				
	comp=Z,11nm,0.8s									
PMG	**Port Moresby**	**84.14**	**107**	*e*	P	**P**	**04 58 00.2**	**+0.2**		
	comp=Z,11nm,0.8s,mb5.0									
COEN	**Coen**	**84.38**	**113**	*e*	P	**P**	**04 57 59.7**	**-1.5**		
	comp=Z,15nm,0.8s,mb5.2									
FFC	**Flin Flon**	**85.15**	**357**		P	**P**	**04 58 04.0**	**-0.5**		
	comp=Z,185nm,0.8s,mb6.3,SNR=13									
FFC	**Flin Flon**	**85.15**	**357**	*e*	P	**P**	**04 58 03.7**	**-0.8**		
FFC					pmax	pmax				
	comp=Z,32nm,0.9s,mb5.5									
FFC	**Flin Flon**	**85.15**	**357**	*e*	P	**P**	**04 58 03.7**	**-0.8**		
	comp=Z,32nm,0.9s,mb5.5									
ASAR	**Alice Springs**	**85.19**	**127**		P	**P**	**04 58 03.5**	**-1.6**		
	comp=Z,6.3nm,0.8s,mb4.8,baz=322,slow=5.3,SNR=62									
ASAR	**Alice Springs**	**85.19**	**127**		P	**P**	**04 58 03.5**	**-1.6**		
ASAR					pmax	pmax				
	comp=Z,6.0nm,0.8s									
EDM	**Edmonton**	**86.58**	**4**	*e*	P	**P**	**04 58 11.5**	**-0.1**		
SUR	**Sutherland**	**87.07**	**222**	*e*	P	**P**	**04 58 14.8**	**+0.7**		
	comp=Z,40nm,1.0s,mb5.6									
FORT	**Forrest**	**87.22**	**135**	⇑*iP*		**P**	**04 58 13.4**	**-1.5**		
	comp=Z,40nm,0.7s,mb5.8									
FORT	**Forrest**	**87.22**	**135**	*e*	P	**P**	**04 58 13.6**	**-1.3**		
	comp=Z,41nm,0.6s,mb5.8									
ULM	**Lac du Bonnet**	**89.20**	**353**		P	**P**	**04 58 23.6**	**-0.7**		
	comp=Z,5.8nm,0.8s,mb5.0,baz=11,slow=4.5,SNR=6.2									
ULM					LR	LR	05 41 31.1			
	comp=Z,389nm,18.9s,MS4.8,baz=32,slow=38									
ULM	**Lac du Bonnet**	**89.20**	**353**	*e*	P	**P**	**04 58 23.1**	**-1.1**		
	comp=Z,19nm,1.2s,mb5.3									
LONY	**Lake Ozonia**	**90.51**	**338**	*e*	P	**P**	**04 58 31.0**	**+0.6**		
	comp=Z,5.9nm,0.9s,mb4.9									
WALA	**Waterton Lakes**	**90.70**	**5**	*e*	P	**P**	**04 58 31.7**	**+0.4**		
	comp=Z,1.2nm,1.1s,mb4.1									
CTA	**Charters Tower**	**90.71**	**116**	*e*	P	**P**	**04 58 31.4**	**-0.2**		
	comp=Z,7.5nm,0.9s,mb5.0									
CTAO	**Charters Tower**	**90.71**	**116**	*e*	P	**P**	**04 58 31.7**	**+0.1**		
CTAO					pmax	pmax				
	comp=Z,19nm,1.1s,mb5.3									
CTAO	**Charters Tower**	**90.71**	**116**	*e*	P	**P**	**04 58 31.7**	**+0.1**		
	comp=Z,18nm,1.1s,mb5.3									
EYMN	**Ely**	**90.97**	**350**	*e*	P	**P**	**04 58 32.5**	**0.0**		
	comp=Z,28nm,0.9s,mb5.6									
AGMN	**Agassiz Refuge**	**91.14**	**353**	*e*	P	**P**	**04 58 33.2**	**-0.1**		
	comp=Z,35nm,1.2s,mb5.6									
NEW	**Newport**	**91.25**	**7**	*e*	P	**P**	**04 58 34.3**	**+0.5**		
NEW					pmax	pmax				
	comp=Z,17nm,0.9s									
NEW	**Newport**	**91.25**	**7**	*e*	P	**P**	**04 58 34.3**	**+0.5**		
	comp=Z,17nm,0.9s,mb5.4									
EGMT	**Eagleton**	**91.92**	**2**	*e*	P	**P**	**04 58 37.2**	**+0.3**		
	comp=Z,19nm,0.9s,mb5.4									
DLMT	**Dillon**	**94.46**	**4**	*e*	P	**P**	**04 58 49.6**	**+0.9**		
	comp=Z,54nm,1.7s,mb5.7									
RLMT	**Red Lodge**	**94.83**	**2**	*e*	P	**P**	**04 58 51.7**	**+1.3**		
	comp=Z,12nm,0.9s,mb5.3									
JFWS	**Jewell Farm**	**95.70**	**348**	*e*	P	**P**	**04 58 54.1**	**-0.3**		
JFWS					pmax	pmax				
	comp=Z,25nm,0.7s,mb5.8									
JFWS	**Jewell Farm**	**95.70**	**348**	*e*	P	**P**	**04 58 54.1**	**-0.3**		
	comp=Z,25nm,0.7s,mb5.8									
ECSD	**EROS,Sioux Fal**	**95.73**	**353**	*e*	P	**P**	**04 58 54.5**	**0.0**		
	comp=Z,20nm,0.9s,mb5.5									
STKA	**Stephens Creek**	**95.81**	**127**		P	**P**	**04 58 51.9**	**-2.9**		
	comp=Z,1.6nm,0.6s,mb4.6,baz=317,slow=7.6,SNR=5.7									
STKA	**Stephens Creek**	**95.81**	**127**	*e*	P	**P**	**04 58 53.5**	**-1.3**		
RSSD	**Black Hills**	**95.81**	**358**	*e*	P	**P**	**04 58 55.8**	**+0.9**		
RSSD					pmax	pmax				
	comp=Z,10.0nm,0.7s,mb5.3									
RSSD	**Black Hills**	**95.81**	**358**	*e*	P	**P**	**04 58 55.8**	**+0.9**		
	comp=Z,10nm,0.7s,mb5.4									
IMW	**Indian Meadow**	**96.00**	**3**	*e*	P	**P**	**04 58 57.5**	**+1.7**		
	comp=Z,11nm,1.1s,mb5.2									
HLID	**Hailey**	**96.14**	**5**	*e*	P	**P**	**04 58 57.0**	**+0.7**		
	comp=Z,16nm,1.8s,mb5.2									
MOOW	**Moose Ponds**	**96.16**	**3**	*e*	P	**P**	**04 58 57.8**	**+1.4**		
	comp=Z,3.5nm,0.8s,mb4.8									
LOHW	**Long Hollow**	**96.30**	**3**	*e*	P	**P**	**04 58 58.0**	**+0.9**		
	comp=Z,3.1nm,0.9s,mb4.7									
SNOW	**Snow King Moun**	**96.44**	**3**	*e*	P	**P**	**04 58 58.4**	**+0.6**		
	comp=Z,6.2nm,0.9s,mb5.0									
YBH	**Yreka Blue Hor**	**96.99**	**12**		LR	LR	05 43 02.2			
	comp=Z,121nm,20.9s,MS4.4,baz=4.1,slow=36									
SCIA	**State Center**	**97.13**	**350**	*e*	P	**P**	**04 59 00.2**	**-0.7**		
	comp=Z,8.3nm,0.6s,mb5.3									
BW06	**Boulder Array**	**97.17**	**2**	*e*	P	**P**	**04 59 01.3**	**+0.2**		
	comp=Z,3.9nm,0.9s,mb4.8									
PDAR	**Pinedale Array**	**97.17**	**2**	P		**P**	**04 59 01.5**	**+0.4**		
	comp=Z,1.1nm,0.8s,mb4.3,baz=0.0,slow=1.9,SNR=7.2									
PDAR					LR	LR	05 47 53.7			
	comp=Z,311nm,18.2s,MS4.8,baz=243,slow=38									
ELK	**Elko**	**98.87**	**6**	*e*	P	**P**	**04 59 08.3**	**-0.5**		
ELK					pmax	pmax				
	comp=Z,3.0nm,1.0s									
ELK	**Elko**	**98.87**	**6**	*e*	P	**P**	**04 59 08.3**	**-0.4**		
	comp=Z,3.0nm,1.0s,mb4.8									
DUG	**Dugway**	**99.60**	**5**	*e*	P	**P**	**04 59 12.2**	**+0.2**		
DUG					pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.8									
DUG	**Dugway**	**99.60**	**5**	*e*	Pdif	**P**	**04 59 12.2**	**+0.2**		
	comp=Z,4.2nm,1.0s,mb4.8									
NVAR	**Mina Array Bea**	**100.85**	**9**		P	Pdif	04 59 19.3	+1.6		
	comp=Z,0.6nm,0.8s,baz=19,slow=3.1,SNR=3.9									
NVAR	**Mina Array Bea**	**100.85**	**9**		P	Pdif	04 59 19.3	+1.6		
TXAR	**Lajitas Array**	**110.55**	**357**		PP	PP	05 04 42.8	+6.9		
	comp=Z,1.4nm,0.9s,baz=32,slow=4.9,SNR=5.8									
TXAR					PKKPbc	PKKPbc	05 15 04.3	+4.4		
	comp=Z,0.5nm,0.6s,baz=193,slow=3.9,SNR=4.4									
TGUH	**Tegucigalpa,Un**	**122.83**	**337**	*e*	PKPdf	PKPdf	05 04 25.2	-0.1		
SNAA	**Sanae**	**123.63**	**202**	*e*	PKPdf	PKPdf	05 04 24.3	-0.7		
SNAA				*e*			05 04 29.2			
SNAA				*e*			05 04 34.4			
SNAA				*e*			05 04 39.4			
SNAA	**Sanae**	**123.63**	**202**	*e*	PKPdf	PKPdf	05 04 24.2	-0.8		
VNA2	**Neumayer--Watz**	**124.63**	**203**	*e*	PKPdf	PKPdf	05 04 26.7	-0.2		
	baz=4.1,slow=3.2									
VNA2				*e*			05 04 31.6			
VNA2				*e*			05 04 37.7			
VNA1	**Neumayer--Stat**	**124.79**	**204**	*e*	PKPdf	PKPdf	05 04 27.6	+0.4		
VNA1				*e*			05 04 32.4			
VNA1				*e*			05 04 38.4			
VNA3	**Neumayer Olymp**	**125.44**	**203**	*e*	PKPdf	PKPdf	05 04 27.4	-1.0		
VNA3				*e*			05 04 32.4			
VNA3				*e*			05 04 39.0			
VNA3				*e*			05 04 43.3			
ROSC	**El Rosal**	**125.94**	**319**		PKP	PKPdf	05 04 32.0	+0.8		
	comp=Z,7.4nm,0.9s,baz=97,slow=22,SNR=5.2									
QSPA	**South Pole Qui**	**130.19**	**180**		PKKPbc		05 13 39.8			
	comp=Z,0.5nm,0.3s,baz=32,slow=2.6,SNR=7.7									
OTAV	**Otavalo**	**131.97**	**320**	*e*	PKPdf	PKPdf	05 04 40.7	-2.0		
CPUP	**Villa Florida**	**136.82**	**273**		PKP	PKPdf	05 04 50.4	-1.0		
	comp=Z,2.6nm,0.7s,baz=356,slow=9.3,SNR=5.9									
CPUP	**Villa Florida**	**136.82**	**273**		PKIKP	PKPdf	05 04 50.4	-1.0		
CPUP					pmax	pmax				
	comp=Z,3.0nm,0.7s									
CPUP	**Villa Florida**	**136.82**	**273**	*e*	PKPdf	PKPdf	05 04 49.7	-1.6		
NNA	**Nana**	**141.25**	**308**	*e*	PKPdf	PKPdf	05 04 59.2	-0.5		
LVC	**Limon Verde**	**143.41**	**287**	*e*	PKPdf	PKPdf	05 05 03.0	-0.4		
TRQA	**Tornquist**	**145.41**	**259**	*e*	PKPbc	PKPbc	05 05 05.0	-1.4		
PMSA	**Palmer Station**	**145.42**	**211**	*e*	PKPbc	PKPbc	05 05 05.2	-0.4		
LCO	**Las Campanas**	**148.35**	**280**	*e*	PKPbc	PKPbc	05 05 12.2	-2.9		
PLCA	**Paso Flores**	**152.51**	**257**		PKPbc	PKPbc	05 05 22.6	-2.0		
	comp=Z,7.0nm,1.0s,baz=318,slow=2.2,SNR=9.4									
PLCA	**Paso Flores**	**152.51**	**257**	*e*	PKPbc	PKPbc	05 05 23.1	-1.6		

*SZGRF **26** 05:06:02.3,2207S×17620W,h157km, South of Fiji Islands*
*MOS **26** 05:06:05.0±1.0,2177S×17661W,h123km,mb5.2/12, Error ellipse: s-maj=10.8km s-min=10.4km az=26.0*

*NEIC **26** 05:06:05.6±1.0,2210S×17645W,h131km±8km,mb5.3/37, Error ellipse: s-maj=6.0km s-min=4.6km az=129.0*
*BGS **26** 05:06:05.5±5.9,2210S×17645W,h131km,mb5.3(NEIC)*
*GCMT **26** 05:06:05.6±0.2,2202S×17606W,h152km±2km,MW5.1/87, Moment Tensor Solution. s46,c57; s87,c132; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.95±.17; Mθθ=0.24±.24; Mϕϕ=2.71±.25; Mrθ=-0.18±.14; Mθϕ=3.22±.23; Mϕr=4.52±.14; Best double couple: M=6.20×10¹⁶ NP1:ϕs=247.00000°,δ32.00000°,λ=-34.00000°. NP2: ϕs=7.00000°,δ73.00000°,λ=-117.00000°. Principal axes: T 6.5790, Plg23.0000°, Azm118.0000°; N -0.7520, Plg26.0000°, Azm16.0000°; P -5.8240, Plg54.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **26** 05:06:06.0,2210S×17650W,h150km,mB5.3,mb4.9*
*ISCJB **26** 05:06:07.1±0.1,2211S±004×17656W±004,h152km, mb5.0/64,Error ellipse: s-maj=6.5km s-min=3.4km az=138.6*
*IDC **26** 05:06:08.5±0.4,2195S×17650W,h150km±3km,mb4.7/26, mb1 4.8/27,mb1mx4.8/27,mbtmp4.7/27,MS3.9/4, Ms1 3.8/4,ms1mx3.3/24,Error ellipse: s-maj=11.4km s-min=8.3km az=151.0*
*DJA **26** 05:06:16,2208S×17700W,h191km,Mw5.5/8*
ISC 26 05:06:08.7±0.1,2214S±004×17652W±004,h154km, h154km±1.4km;pP-P,n736,c0s63/457,mb5.0/64, 192C-175D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.35**	**30**	P	**Pn**	**05 08 08.6**	**-11**
	16nm,0.3s,baz=290,slow=6.1,SNR=14						
AFI				S	Sn	05 09 40.6	-23
	10nm,0.3s,baz=45,slow=23,SNR=3.6						
AFI	**Afiamalu**	**9.35**	**30**	*e*P	**Pn**	**05 08 09.4**	**-11**
AFI				pmax	pmax		
	comp=Z,111nm,0.6s						
AFI	**Afiamalu**	**9.35**	**30**	*e*Pn	**Pn**	**05 08 09.4**	**-11**
	comp=Z,111nm,0.6s						
FUNA	**Funafuti**	**14.15**	**342**	*e*P	**Pn**	**05 09 20.8**	**-1.6**
	comp=Z,36nm,0.8s						
RAR	**Rarotonga**	**15.60**	**90**	P	**Pn**	**05 09 39.1**	**-1.2**
	comp=Z,8.7nm,0.3s,baz=254,slow=8.7,SNR=18						
RAR				S	S	05 12 13.7	-21
	comp=Z,13nm,0.3s,baz=108,slow=13,SNR=6.6						
RAR				T		05 24 46.1	
	comp=Z,31nm,0.3s,baz=74,slow=4.2,SNR=4.0						
RAR	**Rarotonga**	**15.60**	**90**	*e*P	**Pn**	**05 09 38.8**	**-1.5**
RAR				pmax	pmax		
	comp=Z,397nm,1.0s						
RAR	**Rarotonga**	**15.60**	**90**	*e*Pn	**Pn**	**05 09 38.8**	**-1.6**
	comp=Z,397nm,1.0s						
NORM	**Noumea**	**15.74**	**266**	*e*P	**Pn**	**05 09 47.6**	**+5.5**
DZM	**Mont Dzumac**	**15.79**	**267**	*e*P	**Pn**	**05 09 47.1**	**+4.5**
NOUC	**Port Laguerre**	**15.92**	**267**	*e*P	**Pn**	**05 09 49.1**	**+4.8**
MWZ	**Matawai**	**16.93**	**196**	P	**Pn**	**05 09 53.6**	**-2.7**
URZ	**Urewera**	**16.97**	**197**	P	**Pn**	**05 09 54.2**	**-2.6**
	comp=Z,22nm,0.3s,baz=11,slow=1.9,SNR=30						
URZ				S	**S**	**05 12 50.8**	**-14**
	comp=Z,4.8nm,0.3s,baz=233,slow=23,SNR=6.5						
URZ	**Urewera**	**16.97**	**197**	P	**Pn**	**05 09 54.6**	**-2.2**
BKZ	**Black Stump Fm**	**17.99**	**198**	P	**Pn**	**05 10 05.0**	**-4.0**
BFZ	**Birch Farm**	**19.47**	**197**	P	**P**	**05 10 21.9**	**-1.6**
MRZ	**Mangatainoka R**	**19.64**	**198**	P	**P**	**05 10 23.2**	**-2.1**
SNZO	**South Karori**	**20.49**	**199**	*e*P	**P**	**05 10 33.6**	**-0.8**
	comp=Z,216nm,1.3s						
QRZ	**Quartz Range**	**20.80**	**204**	P	**P**	**05 10 37.1**	**-0.7**
NNZ	**Nelson**	**20.84**	**202**	P	**P**	**05 10 36.4**	**-1.8**
THZ	**Tophouse**	**21.49**	**202**	P	**P**	**05 10 42.7**	**-2.3**
DSZ	**Denniston Nort**	**21.87**	**204**	P	**P**	**05 10 48.3**	**-0.8**
LTZ	**Lake Taylor**	**22.61**	**202**	P	**P**	**05 10 56.1**	**-0.2**
MQZ	**McQueen's Vall**	**23.30**	**200**	P	**P**	**05 11 03.2**	**+0.5**
WVZ	**Waitaha Valley**	**23.42**	**204**	P	**P**	**05 11 03.2**	**-0.5**
RPZ	**Rata Peaks**	**23.85**	**203**	P	**P**	**05 11 08.2**	**+0.5**
	comp=Z,97nm,0.6s,mb5.5,baz=345,slow=0.9,SNR=28						
RPZ	**Rata Peaks**	**23.85**	**203**	P	**P**	**05 11 08.2**	**+0.5**
FOZ	**Fox Glacier**	**24.23**	**205**	P	**P**	**05 11 10.5**	**-0.6**
JCZ	**Jackson Bay**	**25.03**	**206**	P	**P**	**05 11 18.6**	**+0.3**
PPT	**Papeete**	**25.73**	**85**	*e*P	**P**	**05 11 23.4**	**-1.6**
	comp=Z,5.8nm,0.4s,mb4.5						
PPT	**Papeete**	**25.73**	**85**	P	**P**	**05 11 23.2**	**-1.8**
	comp=Z,55nm,1.1s,mb5.1,baz=206,slow=8.2,SNR=5.4						
PPT				T		05 37 40.1	
	comp=Z,73nm,0.4s,baz=37,slow=23,SNR=5.3						
TIAR	**Tiarei**	**25.95**	**85**	*e*P	**P**	**05 11 25.4**	**-1.5**
	comp=Z,650nm,0.9s						
PMOR	**Pomariorio Ree**	**28.02**	**80**	*e*P	**P**	**05 11 43.5**	**-1.9**
	comp=Z,7.0nm,0.4s,mb4.7						
ARMA	**Armidale**	**29.65**	**247**	⇓*iP*		**05 12 01.9**	**+2.2**
EIDS	**Eidsvold**	**29.79**	**257**	*e*P	**P**	**05 12 02.7**	**+1.7**
	comp=Z,136nm,0.8s,mb5.7						
CNB	**Canberra Magne**	**32.50**	**239**	*e*P	**P**	**05 12 26.8**	**+2.1**
CAN	**Canberra**	**32.79**	**239**	*e*P	**P**	**05 12 28.9**	**+1.7**
CAN				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.5						
CAN	**Canberra**	**32.79**	**239**	*e*P	**P**	**05 12 28.9**	**+1.7**
	comp=Z,82nm,0.9s,mb5.5						
CTA	**Charters Tower**	**34.73**	**266**	P	**P**	**05 12 44.8**	**+0.5**
	comp=Z,138nm,0.7s,mb5.7,baz=98,slow=10,SNR=124						
CTA				PcP	PcP	05 15 15.2	+0.6
	comp=Z,21nm,1.0s,baz=103,slow=4.4,SNR=4.6						
CTA	**Charters Tower**	**34.73**	**266**	⇓*iP*		**05 12 45.3**	**+1.1**
	comp=Z,94nm,0.6s,mb5.6						
CTA				*i* PCP	PcP	05 15 15.6	+1.0
CTAO	**Charters Tower**	**34.73**	**266**	*e*P	**P**	**05 12 45.4**	**+1.2**
CTAO				*e*		05 15 15.6	
CTAO				pmax	pmax		
	comp=Z,136nm,0.7s,mb5.7						
CTAO	**Charters Tower**	**34.73**	**266**	*e*P	**P**	**05 12 45.4**	**+1.2**
	comp=Z,136nm,0.7s,mb5.7						
CTAO				*e*PcP	PcP	05 15 15.6	+1.0
TOO	**Toolangi**	**36.08**	**236**	*e*P	**P**	**05 12 56.4**	**+0.8**
TAU	**Tasmania Unive**	**36.47**	**227**	P	**P**	**05 13 00.5**	**+1.8**
	comp=Z,311nm,0.8s,mb6.0,SNR=7.9						
PMG	**Port Moresby**	**37.06**	**284**	P	**P**	**05 13 04.2**	**+0.1**
	comp=Z,142nm,0.8s,mb5.6,baz=91,slow=5.3,SNR=56						
PMG				PcP	PcP	05 15 22.4	+0.7
	comp=Z,16nm,0.9s,baz=354,slow=5.1,SNR=3.3						
PMG	**Port Moresby**	**37.06**	**284**	*e*P	**P**	**05 13 04.7**	**+0.6**
PMG				*e*		05 15 22.4	
PMG				pmax	pmax		
	comp=Z,137nm,0.8s						
PMG	**Port Moresby**	**37.06**	**284**	*e*P	**P**	**05 13 04.7**	**+0.5**
	comp=Z,137nm,0.8s,mb5.6						
PMG				*e*PcP	PcP	05 15 22.4	+0.7
STKA	**Stephens Creek**	**38.35**	**246**	P	**P**	**05 13 15.7**	**+0.9**
	comp=Z,93nm,0.6s,mb5.6,baz=90,slow=9.5,SNR=282						
STKA				ScP	ScP	05 19 01.1	+2.2
	comp=Z,3.5nm,0.9s,baz=0.1,slow=3.3,SNR=2.8						
STKA				PKiKP	PKiKP	05 22 38.0	-1.6
	comp=Z,0.7nm,0.7s,baz=129,slow=6.5,SNR=2.9						
STKA				LR	LR	05 28 51.0	
	comp=Z,159nm,18.3s,baz=215,slow=35						
STKA	**Stephens Creek**	**38.35**	**246**	⇓*iP*		**05 13 15.7**	**+0.9**
	comp=Z,78nm,0.6s,mb5.5						
STKA	**Stephens Creek**	**38.35**	**246**	*e*P	**P**	**05 13 15.8**	**+1.0**
	comp=Z,20nm,0.6s,mb4.9						
COEN	**Coen**	**39.08**	**275**	*e*P	**P**	**05 13 21.7**	**+0.7**
	comp=Z,126nm,0.9s,mb5.5						
ASAR	**Alice Springs**	**45.51**	**258**	P	**P**	**05 14 13.1**	**+0.1**
	comp=Z,123nm,0.8s,mb5.6,baz=91,slow=8.1,SNR=364						
ASAR				pP	pP	05 14 48.2	+1.0
	comp=Z,10nm,0.8s,baz=83,slow=7.1,SNR=1.2						
ASAR				PcP	PcP	05 15 49.8	+0.6
	comp=Z,24nm,0.8s,baz=105,slow=3.6,SNR=16						
ASAR				ScP	ScP	05 19 30.6	+3.0
	comp=Z,1.3nm,0.7s,baz=99,slow=5.2,SNR=4.8						
ASAR				S	**S**	**05 20 43.9**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=89,slow=7.2,SNR=5.6						
ASAR				PKiKP	PKiKP	05 22 45.1	-1.1
	comp=Z,0.5nm,0.6s,baz=85,slow=1.6,SNR=7.0						
ASAR	**Alice Springs**	**45.51**	**258**	P	**P**	**05 14 13.1**	**+0.2**
ASAR						05 15 49.8	
ASAR				S	**S**	**05 20 43.9**	**+0.6**
ASAR	**Alice Springs**	**45.51**	**258**	P	**P**	**05 14 13.1**	**+0.1**
ASAR				pP	pP	05 14 48.2	+1.0
ASAR				PcP	PcP	05 15 49.8	+0.6
ASAR				ScP	ScP	05 19 30.6	+3.0
ASAR				S	**S**	**05 20 43.9**	**+0.6**
WB2	**Warramunga Arr**	**45.75**	**263**	⇓*iP*		**05 14 14.3**	**-0.5**
WB2				*i* PCP	PcP	05 15 50.9	+0.8
WB2	**Warramunga Arr**	**45.75**	**263**	*e*P	**P**	**05 14 14.2**	**-0.6**
WB2				*e*PcP	PcP	05 15 50.8	+0.7
WRAB	**Tennant Creek**	**45.75**	**263**	P	**P**	**05 14 14.0**	**-0.9**
	comp=Z,720nm,1.0s,SNR=55						
WRAB	**Tennant Creek**	**45.75**	**263**	*e*P	**P**	**05 14 14.4**	**-0.5**
WRAB				*e*		05 15 50.6	
WRAB				pmax	pmax		
	comp=Z,117nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**45.75**	**263**	*e*P	**P**	**05 14 14.4**	**-0.4**
	comp=Z,116nm,1.0s,mb5.5						
WRAB				*e*PcP	PcP	05 15 50.6	+0.5
WRA	**Warramunga Ar**	**45.76**	**263**	P	**P**	**05 14 14.4**	**-0.5**
	comp=Z,55nm,0.7s,mb5.3,baz=98,slow=8.1,SNR=196						
WRA				pP	pP	05 14 49.4	0.0
	comp=Z,11nm,0.9s,baz=99,slow=8.1,SNR=1.4						
WRA				PcP	PcP	05 15 50.8	+0.6
	comp=Z,22nm,0.8s,baz=99,slow=4.0,SNR=13						
WRA				ScP	ScP	05 19 32.0	+3.2
	comp=Z,0.9nm,0.6s,baz=88,slow=3.7,SNR=4.7						
WRA				PKIKP	PKiKP	05 22 45.1	-1.5
	comp=Z,0.8nm,0.8s,baz=83,slow=0.6,SNR=5.8						
WRA	**Warramunga Arr**	**45.76**	**263**	P	**P**	**05 14 14.4**	**-0.5**
WRA						05 15 50.8	
WRA	**Warramunga Arr**	**45.76**	**263**	P	**P**	**05 14 14.4**	**-0.5**
WRA				pP	pP	05 14 49.4	0.0
WRA				PcP	PcP	05 15 50.8	+0.6
WRA				ScP	ScP	05 19 32.0	+3.2
FORT	**Forrest**	**49.93**	**248**	⇓*iP*		**05 14 46.5**	**-0.4**
	comp=Z,521nm,0.6s						
FORT	**Forrest**	**49.93**	**248**	*e*P	**P**	**05 14 46.5**	**-0.4**
	comp=Z,479nm,0.6s						
GUMO	**Guam**	**51.91**	**310**	P	**P**	**05 15 02.1**	**+0.3**
	comp=Z,338nm,0.8s,baz=171,slow=10.0,SNR=12						
GUMO	**Guam**	**51.91**	**310**	*e*P	**P**	**05 15 02.0**	**+0.2**
GUMO				pmax	pmax		
	comp=Z,189nm,0.7s,mb5.8						
GUMO	**Guam**	**51.91**	**310**	*e*P	**P**	**05 15 02.0**	**+0.3**
	comp=Z,189nm,0.7s,mb5.8						
FITZ	**Fitzroy Crossi**	**54.19**	**263**	⇓*iP*		**05 15 18.6**	**+0.1**
	comp=Z,62nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**54.19**	**263**	*e*P	**P**	**05 15 18.5**	**-0.1**
	comp=Z,49nm,0.8s,mb5.3						
SBA	**Scott Base**	**56.34**	**184**	*e*P	**P**	**05 15 37.4**	**+4.4**
SBA				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
SBA	**Scott Base**	**56.34**	**184**	*e*P	**P**	**05 15 37.4**	**+4.4**
	comp=Z,12nm,0.6s,mb4.9						
MBWA	**Marble Bar**	**58.85**	**258**	*e*P	**P**	**05 15 50.8**	**-0.7**
	comp=Z,131nm,1.0s,mb5.7						
NWAO	**Narrogin (SRO)**	**58.88**	**244**	P	**P**	**05 15 51.8**	**+0.3**
	comp=Z,19nm,0.8s,mb5.0,baz=103,slow=5.7,SNR=14						
NWAO				PcP	PcP	05 16 41.6	+2.4
	comp=Z,7.8nm,0.7s,baz=134,slow=2.5,SNR=3.8						
NWAO	**Narrogin (SRO)**	**58.88**	**244**	*e*P	**P**	**05 15 51.2**	**-0.3**
NWA

NVAR pP pP 05 18 43.4 -2.6
comp=Z,10.0nm,1.0s,baz=223,slow=9.0,SNR=8.1
NVAR PKKPbc PKKPbc 05 36 45.6 +2.2
comp=Z,0.4nm,0.6s,baz=78,slow=4.2,SNR=4.9
NVAR PKPPKP 05 44 52.4
comp=Z,0.7nm,0.8s,baz=68,slow=1.9,SNR=4.2
NVAR Mina Array Bea 81.28 42 P **P 05 18 07.9 +0.2**
NVAR pP pP 05 18 43.4 -2.6
NVAR PKKPbc PKKPbc 05 36 45.6 +2.2
NVAR P'P' 05 44 52.4
U10A Ash Meadows, A 81.36 45 ⇑P **P 05 18 08.3 +0.2**
baz=81
LDFC Landfair 81.41 47 *e*P **P 05 18 08.6 +0.2**
comp=Z,10nm,0.6s,mb4.6
O06A Flanigan 81.41 40 ⇓P **P 05 18 08.5 +0.2**
baz=82,SNR=6.6
S09A Goldfield 81.55 44 ⇑P **P 05 18 09.3 +0.2**
baz=82
Y13A Salome 81.58 48 ⇑P **P 05 18 09.5 +0.2**
baz=82,SNR=5.3
V11A Goodsprings 81.62 46 ⇑P **P 05 18 09.7 +0.1**
baz=82,SNR=6.3
W12A Cal Nev Ari 81.69 47 ⇑P **P 05 18 10.3 +0.4**
baz=82
N06A Buffalo Meadow 81.77 40 ⇑P **P 05 18 10.4 +0.3**
baz=82
Q08A Gabbs 81.78 42 ⇑P **P 05 18 10.5 +0.3**
baz=82
Z14A Wintersburg 81.94 49 ⇑P **P 05 18 11.4 +0.1**
baz=82
V12A Nelson 81.95 46 ⇑P **P 05 18 11.5 +0.2**
baz=82
R09A Tonopah 81.95 43 ⇓P **P 05 18 11.5 +0.4**
baz=82,SNR=5.6
O07A Toulon 81.98 41 ⇑P **P 05 18 11.5 +0.2**
baz=82,SNR=10
NJ2 Nanjing 81.98 309 *e*P **P 05 18 12.5 +1.0**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
X13A Yucca 82.00 48 ⇑P **P 05 18 11.5 -0.1**
baz=82,SNR=5.6
S10A Tonopah Range, 82.06 44 ⇑P **P 05 18 11.9 +0.1**
baz=82,SNR=9.6
KDAK Kodiak Island 82.10 13 P **P 05 18 11.6 +0.2**
comp=Z,20nm,0.9s,mb4.7,baz=142,slow=5.6,SNR=4.5
MOD Modoc 82.21 39 *e*P **P 05 18 12.2 -0.3**
comp=Z,18nm,1.4s,mb4.5
Y14A Wickenburg 82.22 49 ⇑P **P 05 18 12.6 -0.1**
baz=82,SNR=5.2
W13A Hualapai Mount 82.25 47 ⇑P **P 05 18 13.0 +0.2**
baz=82
N07B Gerlach 82.30 40 ⇑P **P 05 18 13.2 +0.2**
baz=82
116A Eloy 82.39 50 ⇓P **P 05 18 13.8 +0.2**
baz=82
K05A Summer Lake 82.39 38 ⇑P **P 05 18 14.1 +0.7**
baz=82,SNR=5.4
Z15A Gila River Ind 82.46 50 ⇓P **P 05 18 14.0 +0.1**
baz=82
R10A Warm Springs 82.47 44 ⇓P **P 05 18 14.1 +0.2**
baz=83,SNR=6.2
O08A Rochester Mine 82.50 41 ⇑P **P 05 18 14.4 +0.4**
baz=83,SNR=11
HABR Khabarovsk 82.55 330 *e*P **P 05 18 12.9 -1.1**
HABR *e* 05 21 22.4
HABR *e*S S 05 28 16.5 -1.4
HABR *e* 05 29 03.0
HABR *e*'SS sS 05 29 21.7 -2.6
HABR *e*SS SS 05 33 39.8 -3.8
HABR *e*SSS 05 37 09.9
HABR MLR MLR
comp=Z,110nm,18.0s
U12A Valley of Fire 82.55 46 ⇑P **P 05 18 14.6 +0.3**
baz=83,SNR=6.7
M07A Soldier Meadow 82.56 40 ⇑P **P 05 18 14.6 +0.4**
baz=83,SNR=7.8
T11A Corn Creek, Al 82.56 45 ⇓P **P 05 18 14.7 +0.3**
baz=83,SNR=9.2
X14A Yava 82.58 48 ⇑P **P 05 18 15.0 +0.4**
baz=83,SNR=5.6
V13A Grand Canyon W 82.60 47 ⇓P **P 05 18 15.0 +0.3**
baz=83,SNR=7.3
217A Green Valley 82.62 52 ⇑P **P 05 18 14.8 0.0**
baz=83
MDJ Mudanjiang 82.65 324 P **P 05 18 15.0 +0.4**
MDJ AP pP 05 18 52.0 -1.0
MDJ XP sP 05 19 08.5 -0.7
MDJ S S 05 28 20.5 +1.4
MDJ XS sS 05 29 25.8 +0.3
MDJ AMB AMB
comp=Z,25nm,1.0s,mb4.9
MDJ AMB AMB
comp=Z,102nm,4.2s
MDJ Mudanjiang 82.65 324 *e*P **P 05 18 14.5 -0.1**
comp=Z,23nm,0.9s,mb4.9
P09A Austin 82.68 42 ⇓P **P 05 18 15.2 +0.3**
baz=83
Y15A Casa Rosa Ranc 82.69 49 ⇓P **P 05 18 15.3 +0.1**
baz=83,SNR=8.1
Q10A Clear Creek Ra 82.72 43 ⇓P **P 05 18 15.5 +0.4**
baz=83
N08A GE Springer Mi 82.81 41 ⇑P **P 05 18 15.5 0.0**
baz=83,SNR=9.5
L07A Adell 82.85 39 ⇓P **P 05 18 16.5 +0.8**
baz=83,SNR=5.2
W14A Seligman 82.86 48 ⇓P **P 05 18 16.4 +0.4**
baz=83,SNR=12
TUC Tucson 82.92 51 *e*P **P 05 18 16.9 +0.5**
TUC pmax pmax
comp=Z,14nm,1.3s,mb4.5
TUC Tucson 82.92 51 *e*P **P 05 18 16.9 +0.5**
comp=Z,14nm,1.3s,mb4.5
U13A Pakoon Wash 82.92 46 ⇓P **P 05 18 16.6 +0.4**
baz=83,SNR=12
R11A Troy Canyon, C 82.96 44 ⇑P **P 05 18 16.5 +0.1**
baz=83
Z16A Peralta Trail, 83.00 50 ⇑P **P 05 18 17.1 +0.3**
baz=83,SNR=8.6
S12A Delamar Landin 83.01 45 ⇑P **P 05 18 17.2 +0.5**
baz=83,SNR=8.6
O09A Fish Creek Ran 83.02 42 ⇓P **P 05 18 16.6 -0.1**
baz=83
318A Bisbee 83.05 52 ⇑P **P 05 18 17.4 +0.4**
baz=83
X15A Humboldt 83.05 49 ⇓P **P 05 18 17.2 +0.3**
baz=83,SNR=8.9
M08A Happy Creek Ra 83.07 40 ⇓P **P 05 18 17.6 +0.7**
baz=83
V14A Boquillas Ranc 83.07 47 ⇑P **P 05 18 17.5 +0.4**
baz=83,SNR=15
117A Oracle 83.09 51 ⇓P **P 05 18 17.5 +0.3**
baz=83,SNR=6.8
P10A Eureka 83.14 42 ⇓P **P 05 18 17.5 +0.1**
baz=83
J06A Christmas Vall 83.15 38 ⇑P **P 05 18 17.2 -0.1**
baz=83
Q11A Duckwater 83.20 43 ⇓P **P 05 18 17.5 -0.1**
baz=83,SNR=5.4
N09A Rock Creek Ran 83.22 41 ⇑P **P 05 18 17.9 +0.2**
baz=83,SNR=5.7
Y16A Circle Bar Ran 83.25 49 ⇓P **P 05 18 18.5 +0.5**
baz=83,SNR=8.7
218A Dragoon 83.28 52 ⇓P **P 05 18 18.6 +0.4**
baz=83,SNR=7.0
T13A Saint George 83.30 46 ⇓P **P 05 18 18.6 +0.4**
baz=83,SNR=5.8
K07A Rock Creek Ran 83.32 39 ⇑P **P 05 18 18.2 0.0**
baz=83,SNR=5.7
W15A Williams 83.40 48 ⇑P **P 05 18 19.3 +0.5**
baz=84
H05A Madras 83.44 36 ⇓P **P 05 18 19.1 +0.4**
baz=84
U14A Mt Trumbull 83.45 47 ⇓P **P 05 18 19.6 +0.6**
baz=84,SNR=13
WVOR Wild Horse Val 83.52 39 *e*P **P 05 18 19.0 -0.1**
WVOR pmax pmax
comp=Z,13nm,1.1s,mb4.6
WVOR Wild Horse Val 83.52 39 *e*P **P 05 18 19.0 -0.2**
comp=Z,13nm,1.1s,mb4.6
319A Douglas 83.53 53 ⇓P **P 05 18 20.0 +0.5**
baz=84,SNR=6.5
L08A Fields 83.54 39 ⇑P **P 05 18 19.4 +0.1**
baz=84,SNR=9.2
P11A Circle Ranch, 83.55 43 ⇓P **P 05 18 19.5 +0.1**
baz=84
I06A Prineville 83.55 37 ⇑P **P 05 18 19.6 +0.3**
baz=84,SNR=5.6
X16A Lo Mia Camp, P 83.56 49 ⇑P **P 05 18 20.1 +0.5**
baz=84,SNR=12
R12A Pony Springs, 83.58 44 ⇑P **P 05 18 19.8 +0.2**
baz=84
Y17A Roosevelt 83.60 50 ⇓P **P 05 18 19.9 +0.1**
baz=84,SNR=5.1
M09A Marrel Ranch, 83.61 40 ⇓P **P 05 18 20.0 +0.3**
baz=84,SNR=6.8
F04A Amboy 83.63 35 ⇓P **P 05 18 19.7 +0.1**
baz=84
S13A Holt Ranch, En 83.65 45 ⇓P **P 05 18 20.1 +0.1**
baz=84,SNR=5.9
118A Homack Ranch, 83.68 51 ⇓P **P 05 18 20.6 +0.4**
baz=84,SNR=13
J07A Hines 83.70 38 ⇓P **P 05 18 20.3 +0.2**
baz=84
N10A Dunphy 83.76 41 ⇓P **P 05 18 20.6 +0.2**
baz=84,SNR=9.4
K08A Mann Creek Ran 83.78 39 ⇑P **P 05 18 20.9 +0.4**
baz=84,SNR=12
V15A Kaibab Nationa 83.81 47 ⇓P **P 05 18 21.2 +0.4**
baz=84,SNR=13
L09A Wilkinson Ranc 83.83 40 ⇓P **P 05 18 21.1 +0.4**
baz=84
Q12A Willow Creek R 83.84 44 ⇑P **P 05 18 21.0 +0.1**
baz=84
W16A Flagstaff 83.86 48 ⇑P **P 05 18 21.4 +0.3**
baz=84,SNR=10.0
219A White Tail Can 83.87 52 ⇑P **P 05 18 21.4 +0.2**
baz=84
T14A Hurricane 83.87 46 ⇓P **P 05 18 21.6 +0.5**
baz=84,SNR=5.6
R13A O'Grain Ranch, 83.91 45 ⇓P **P 05 18 21.6 +0.3**
baz=84
O11A Cowboy Ranch, 83.94 42 ⇑P **P 05 18 21.8 +0.4**
baz=84,SNR=12
H06A Lindquist Farm 83.98 37 ⇑P **P 05 18 21.3 -0.1**
baz=84
I07A Izee 84.03 37 ⇓P **P 05 18 22.2 +0.4**
baz=84
P12A McGill 84.04 43 ⇓P **P 05 18 22.0 +0.1**
baz=84,SNR=6.5
U15A North Rim 84.06 47 ⇑P **P 05 18 22.6 +0.6**
baz=84,SNR=20
F05A White Salmon 84.11 35 ⇑P **P 05 18 22.7 +0.7**
baz=84
G06A Carlson Farm, 84.13 36 ⇑P **P 05 18 22.3 +0.1**
baz=84
J08A Circle Bar Ran 84.17 38 ⇓P **P 05 18 22.5 0.0**
baz=84,SNR=6.9
WUAZ Wupatki 84.20 48 ⇑P **P 05 18 23.3 +0.5**
baz=84,SNR=5.7
S14A Cedar City 84.20 45 ⇑P **P 05 18 23.1 +0.4**
baz=84
K09A Rome 84.21 39 ⇓P **P 05 18 22.7 0.0**
baz=84,SNR=12
M10A I.L. Ranch, Tu 84.22 41 ⇑P **P 05 18 23.0 +0.3**
baz=84,SNR=9.4
119A Ashpeak Ranch, 84.23 51 ⇑P **P 05 18 23.5 +0.5**
baz=84,SNR=5.4
N11A Elko Archery C 84.29 42 ⇑P **P 05 18 23.7 +0.5**
baz=84
Q13A Wheeler Ranch, 84.31 44 ⇓P **P 05 18 23.5 +0.2**
baz=84,SNR=9.3
T15A Red Dirt Ranch 84.32 46 ⇓P **P 05 18 23.6 +0.2**
baz=84,SNR=11
H07A Lands Inn, Kim 84.32 37 ⇓P **P 05 18 23.4 +0.2**
baz=84
E05A Randle 84.38 34 ⇓P **P 05 18 23.5 0.0**
baz=84
F06A Goldendale 84.39 36 ⇑P **P 05 18 23.9 +0.4**
baz=84
W17A Winslow 84.42 49 ⇓P **P 05 18 24.3 +0.4**
baz=84
CN2 Changchun 84.44 322 *e*P **P 05 18 23.5 -0.3**
CN2 AMB AMB
comp=Z,20nm,1.2s,mb4.7
I08A Drewsey 84.46 38 ⇑P **P 05 18 23.9 0.0**
baz=85,SNR=8.2
C04A Brinnon 84.52 33 ⇑P **P 05 18 24.3 +0.2**
baz=85
Z19A T-Link Ranch, 84.52 51 ⇓P **P 05 18 25.1 +0.7**
baz=85
J09A Fry Pan Ranch, 84.58 39 ⇓P **P 05 18 24.7 +0.1**
baz=85,SNR=5.6
L10A Juniper Basin 84.58 40 ⇓P **P 05 18 24.6 +0.1**
baz=85,SNR=19
O12A Currie 84.59 43 ⇑P **P 05 18 24.5 -0.1**
baz=85,SNR=8.3
P13A Bates Ranch, G 84.60 44 ⇓P **P 05 18 24.8 +0.1**
baz=85,SNR=5.6
M11A Holland Ranch, 84.62 41 ⇑P **P 05 18 25.0 +0.3**
baz=85,SNR=6.7
KLR Kul'dur 84.64 329 *e*P **P 05 18 20.2 -4.4**
X18A Snowflake 84.67 50 ⇓P **P 05 18 25.5 +0.3**
baz=85,SNR=6.3
G07A Ruggs Ranch, H 84.68 36 ⇑P **P 05 18 25.2 +0.2**
baz=85
S15A Panguitch 84.69 46 ⇑P **P 05 18 25.9 +0.7**
baz=85,SNR=7.7
U16A Tuba City 84.70 48 ⇓P **P 05 18 25.6 +0.3**
baz=85,SNR=6.7
N12A Clover Valley, 84.75 42 ⇓P **P 05 18 25.4 0.0**
baz=85,SNR=8.6
K10A MacKenzie Ranc 84.76 40 ⇓P **P 05 18 25.5 +0.1**
baz=85,SNR=7.7
E06A Yakima 84.78 35 ⇑P **P 05 18 25.7 +0.3**
baz=85
Q14A Sevier Lake (B 84.81 44 ⇑P **P 05 18 26.1 +0.3**
baz=85,SNR=14
T16A Glen Canyon Da 84.89 47 ⇑P **P 05 18 26.7 +0.4**
baz=85
F07A Phinny Hill Vi 84.94 36 ⇑P **P 05 18 26.1 -0.1**
baz=85
I09A Lost Marbles R 84.97 38 ⇓P **P 05 18 26.4 -0.1**
baz=85
L11A Cat Creek Ranc 85.07 41 ⇑P **P 05 18 26.8 -0.2**
baz=85,SNR=6.0
X19A St. Johns 85.08 50 ⇑P **P 05 18 28.0 +0.7**
baz=85,SNR=6.2
G08A Pilot Rock 85.09 37 ⇓P **P 05 18 27.2 +0.2**
baz=85,SNR=5.2
M12A Wells 85.15 42 ⇓P **P 05 18 27.5 +0.1**
baz=85
J10A Berg Farm, Mel 85.21 39 ⇑P **P 05 18 27.8 +0.1**
baz=85
S16A Weppner Ranch, 85.22 46 ⇑P **P 05 18 28.0 +0.1**
baz=85
K11A Parker Ranch, 85.26 40 ⇑P **P 05 18 28.2 +0.3**
baz=85
U17A Shonto 85.26 47 ⇑P **P 05 18 28.4 +0.3**
baz=85
D06A Cle Elum 85.27 34 ⇑P **P 05 18 28.2 +0.3**
baz=85
P14A Drum Mountains 85.28 44 ⇓P **P 05 18 28.4 +0.3**
baz=85
V18A Ganado 85.30 49 ⇓P **P 05 18 28.5 +0.2**
baz=85
B05A Bryant 85.32 33 ⇑P **P 05 18 27.9 -0.2**
baz=85
KULM Kulim 85.36 278 *e*P **P 05 18 29.1 -0.1**
comp=Z,13nm,0.8s,mb4.7
T17A Navajo Res., N 85.37 47 ⇑P **P 05 18 29.1 +0.4**
baz=85,SNR=6.3
Q15A Fillmore 85.40 45 ⇑P **P 05 18 29.2 +0.5**
baz=86
SYO Syowa Base 85.43 192⇑*e*X 05 19 27.6
H09A Durkee 85.43 38 ⇑P **P 05 18 28.9 +0.2**
baz=86
F08A Pendleton 85.50 36 ⇑P **P 05 18 29.4 +0.3**
baz=86
L12A House Creek Ra 85.50 41 ⇑P **P 05 18 29.7 +0.5**
baz=86
M13A Montello 85.58 42 ⇓P **P 05 18 29.8 +0.2**
baz=86,SNR=7.8
I10A Payette 85.58 39 ⇑P **P 05 18 29.7 +0.3**
baz=86
R16A Teasdale 85.60 46 ⇑P **P 05 18 30.0 +0.2**
baz=86,SNR=5.3
U18A Rough Rock, Ch 85.71 48 ⇓P **P 05 18 30.6 +0.3**
baz=86
S17A Black Ridge (B 85.71 47 ⇓P **P 05 18 29.7 -0.5**
baz=86
GAMB Gambell 85.72 2 *e*P **P 05 18 29.6 -0.1**
comp=Z,97nm,1.4s,mb5.3
D07A Quincy 85.73 35 ⇑P **P 05 18 30.4 +0.3**
baz=86
MFID Camas Ranch 85.75 40 ⇓P **P 05 18 30.3 0.0**
baz=86,SNR=5.4
DUG Dugway 85.78 44 ⇑P **P 05 18 30.6 +0.1**
baz=86
E08A Dider Farm, El 85.78 36 ⇑P **P 05 18 30.9 +0.5**
baz=86
K12A Draper Farm, C 85.86 41 ⇓P **P 05 18 30.9 +0.1**
baz=86
H10A Noah's Angus R 85.91 38 ⇑P **P 05 18 31.2 +0.1**
baz=86
V19A Window Rock 85.92 49 ⇑P **P 05 18 31.5 +0.1**
baz=86
F09A S2 Ranch, Elgi 85.93 37 ⇑P **P 05 18 31.5 +0.3**
baz=86
I11A Placerville 85.97 39 ⇑P **P 05 18 31.4 0.0**
baz=86
C07A Waterville 86.00 34 ⇓P **P 05 18 31.2 -0.2**
baz=86,SNR=5.2
T18A Mexican Hat 86.08 47 ⇑P **P 05 18 32.0 -0.1**
baz=86,SNR=9.6
J12A Stokes Ranch, 86.09 40 ⇑P **P 05 18 32.2 +0.2**
baz=86
G10A Bishop Farm, J 86.12 38 ⇓P **P 05 18 32.1 0.0**
baz=86
Q16A Castle Valley 86.15 45 ⇓P **P 05 18 32.4 0.0**
baz=86,SNR=5.4
M14A Sheep Mountain 86.17 42 ⇓P **P 05 18 32.5 +0.1**
baz=86
A06A Chilliwack 86.17 33 ⇓P **P 05 18 32.6 +0.3**
baz=86
R17A Hanksville Air 86.19 46 ⇓P **P 05 18 32.5 -0.2**
baz=86
D08A Wollman Farm, 86.21 35 ⇓P **P 05 18 32.6 +0.1**
baz=86
PMR Palmer 86.30 13 *e*P **P 05 18 31.2 -1.4**
PMR pmax pmax
comp=Z,21nm,1.0s,mb4.8
PMR Palmer 86.30 13 *e*P **P 05 18 31.2 -1.4**
comp=Z,21nm,1.0s,mb4.8
SNAA Sanae 86.33 178 *e*P **P 05 18 33.0 +0.1**
SNAA *e* 05 18 47.9
SNAA *e* 05 18 59.0
SNAA *e* pP 05 19 12.3 +0.8
SNAA Sanae 86.33 178 *e*P **P 05 18 33.3 +0.4**
SNAA pmax pmax
comp=Z,6.0nm,0.8s
SNAA Sanae 86.33 178 *e*P **P 05 18 33.3 +0.5**
comp=Z,5.8nm,0.8s,mb4.4
K13A Stover Farm, H 86.36 41 ⇑P **P 05 18 33.1 -0.2**
baz=86
H11A Donnelly 86.40 38 ⇓P **P 05 18 33.4 -0.1**
baz=86,SNR=5.8
VNA3 Neumayer Olymp 86.42 176 *e*P **P 05 18 34.1 +0.8**
VNA3 *e* 05 18 48.9
VNA3 *e* 05 18 58.8
VNA3 *e* pP 05 19 12.7 +0.8
B07A Winthrop 86.46 34 ⇑P **P 05 18 33.7 0.0**
baz=87
F10A Beach Ranch, E 86.47 37 ⇓P **P 05 18 33.6 -0.2**
baz=87
D09A Jones Farm, Ri 86.54 36 ⇓P **P 05 18 34.2 +0.1**
baz=87
C08A Higginbotham F 86.59 35 ⇓P **P 05 18 34.5 +0.1**
baz=87
SRU San Rafael 86.68 45 ⇓P **P 05 18 35.0 0.0**
baz=87,SNR=13
HLID Hailey 86.68 40 ⇑P **P 05 18 34.9 +0.1**
baz=87
R18A Canyonlands Na 86.72 46 ⇓P **P 05 18 35.0 -0.2**
baz=87,SNR=6.0
P17A Butcher Ranch, 86.73 45 ⇓P **P 05 18 35.2 0.0**
baz=87
J13A Cove Ranch, Pi 86.73 40 ⇑P **P 05 18 34.9 -0.2**
baz=87,SNR=5.2
TXAR Lajitas Array 86.79 57 P **P 05 18 36.0 +0.3**
comp=Z,4.6nm,0.7s,mb4.4,baz=218,slow=8.1,SNR=27
TXAR pP pP 05 19 13.8 -0.6
comp=Z,5.1nm,0.9s,baz=206,slow=8.3,SNR=6.1
TXAR PKKP PKKPbc 05 36 30.7 +0.9
comp=Z,0.8nm,0.8s,baz=106,slow=4.4,SNR=4.1
B08A Colville Reser 86.80 34 ⇑P **P 05 18 35.1 -0.2**
baz=87
E10A Myers Farm, Un 86.84 37 ⇓P **P 05 18 35.6 +0.1**
baz=87
K14A Jones Ranch, D 86.85 41 ⇓P **P 05 18 35.6 -0.1**
baz=87
VNA2 Neumayer--Watz 86.87 176 *e*P **P 05 18 36.5 +1.0**
baz=201,slow=3.4
VNA2 *e* 05 18 51.7
VNA2 *e* 05 19 00.8
VNA2 *e* pP 05 19 14.8 +0.6
S19A Harvey Farm, M 86.89 47 ⇓P **P 05 18 35.9 -0.2**
baz=87
Q18A Rafter H Ranch 86.93 46 ⇑P **P 05 18 35.8 -0.4**
baz=87,SNR=6.8
H12A Diamond D Ranc 86.98 39 ⇓P **P 05 18 36.4 +0.1**
baz=87
C09A Chrisman Ranch 87.01 35 ⇑P **P 05 18 36.2 -0.1**
baz=87
F11A Grangeville 87.02 37 ⇑P **P 05 18 36.1 -0.4**
baz=87
N16A Rees Ranch, Co 87.03 44 ⇓P **P 05 18 36.8 +0.2**
baz=87
L15A Malad City 87.04 42 ⇑P **P 05 18 36.4 -0.3**
baz=87
I13A Wildhorse Cree 87.06 40 ⇑P **P 05 18 36.9 +0.2**
baz=87
MVCO Mesa Verde 87.06 48 ⇑P **P 05 18 36.6 -0.3**
baz=87
J14A Carey 87.08 41 ⇑P **P 05 18 37.1 +0.3**
baz=87
VNA1 Neumayer--Stat 87.09 176 *e*P **P 05 18 38.1 +1.6**
VNA1 *e* 05 18 52.7
VNA1 *e* 05 19 02.7
VNA1 *e* pP 05 19 15.3 +0.1
R19A Curley Farm, L 87.09 47 ⇓P **P 05 18 36.8 -0.2**
baz=87
D10A Wagner Farm, O 87.09 36 ⇓P **P 05 18 36.1 -0.7**
baz=87,SNR=6.0
O17A Robinson Place 87.11 44 ⇓P **P 05 18 37.6 +0.5**
baz=87,SNR=18
P18A Preston Nutter 87.13 45 ⇑P **P 05 18 37.2 0.0**
baz=87
M16A Huntsville 87.14 43 ⇓P **P 05 18 37.3 +0.2**
baz=87
PLCA Paso Flores 87.15 133 P **P 05 18 38.9 +1.4**
comp=Z,2.6nm,0.8s,mb4.1,baz=204,slow=4.2,SNR=15
PLCA PKKPbc PKKPbc 05 36 27.8 -0.8
comp=Z,2.1nm,0.9s,baz=222,slow=12,SNR=4.2
PLCA Paso Flores 87.15 133 P **P 05 18 38.9 +1.4**
PLCA PKKPbc PKKPbc 05 36 27.8 -0.8
A08A Turner Farm, O 87.20 34 ⇑P **P 05 18 37.4 +0.1**
baz=87,SNR=7.7
E11A Bogner Ranch, 87.27 37 ⇓P **P 05 18 37.0 -0.6**
baz=87
ANMO Albuquerque 87.36 51⇑*e*P **P 05 18 37.9 -0.5**
Q19A Hogan Spring (87.43 46 ⇓P **P 05 18 38.2 -0.4**
baz=88,SNR=5.7
N17A Moffit Pass 87.45 44 ⇑P **P 05 18 38.5 -0.1**
baz=88
F12A Elk City 87.45 38 ⇑P **P 05 18 38.3 -0.3**
baz=88,SNR=7.3
B09A Rice 87.46 35 ⇓P **P 05 18 38.5 0.0**
baz=88
I14A Mackay 87.46 40 ⇓P **P 05 18 38.8 +0.2**
baz=88
A09A Danville 87.57 34 ⇓P **P 05 18 38.9 -0.1**
baz=88,SNR=6.3
O18A Roosevelt 87.62 45 ⇓P **P 05 18 39.5 0.0**
baz=88
G13A Cobalt 87.66 39 ⇓P **P 05 18 39.2 -0.3**
baz=88
TRF Thorofare Moun 87.77 11 *e*P **P 05 18 38.1 -1.5**
comp=Z,56nm,0.7s,mb5.5
J15A Blackfoot 87.78 41 ⇓P **P 05 18 40.4 +0.2**
baz=88,SNR=5.7
CHUM Lake Minchumin 87.81 10 *e*P **P 05 18 38.2 -1.6**
comp=Z,52nm,1.2s,mb5.2
M17A Scullys Gap (B 87.84 43 ⇓P **P 05 18 39.9 -0.6**
baz=88
H14A Leadore 87.90 40 ⇓P **P 05 18 40.8 +0.2**
baz=88
P19A Cripple Cowboy 87.97 46 ⇓P **P 05 18 41.1 -0.1**
baz=88,SNR=8.0
K16A Soda Springs 87.99 42 ⇑P **P 05 18 41.5 +0.3**
baz=88
F13A Darby 88.00 38 ⇑P **P 05 18 40.6 -0.5**
baz=88,SNR=5.0

BJI **Beijing** 88.02 315 P P 05 18 41.8 +0.4
BJI S S 05 29 13.5 +1.5
BJI SS SS 05 35 07.0 +2.7
BJI AMB AMB
comp=Z,18nm,0.7s,mb5.0
BJI AMB AMB
comp=Z,237nm,6.3s
BJI LR LR
comp=N,146nm,16.6s
BJI LR LR
comp=E,326nm,14.8s
BJI LR LR
comp=Z,201nm,29.1s
L17A Cokeville 88.04 43 ⇑P P 05 18 40.9 -0.6
baz=88
Q20A Ridgley Place, 88.08 46 ⇑P P 05 18 41.4 -0.3
baz=88
A10A Northport 88.11 34 ⇑P P 05 18 41.7 +0.1
baz=88
M18A Lyman 88.20 44 ⇑P P 05 18 41.8 -0.4
baz=88,SNR=5.6
N18A Larsen Ranch, 88.21 44 ⇑P P 05 18 42.0 -0.3
baz=88
J16A Bone 88.21 41 ⇓P P 05 18 42.6 +0.3
baz=88
O19A Miners Draw (B 88.22 45 ⇓P P 05 18 42.2 -0.2
baz=88
MCK McKinley 88.28 12 *e*P P 05 18 40.6 -1.4
MCK pmax pmax
comp=Z,47nm,0.9s,mb5.3
MCK McKinley 88.28 12 *e*P P 05 18 40.6 -1.4
comp=Z,47nm,0.9s,mb5.3
SEY Seymchan 88.28 346⇑*e*P P 05 18 40.7 -1.4
R21A Cimarron 88.29 47 ⇓P P 05 18 42.8 +0.1
baz=88,SNR=6.1
H15A Lima 88.33 40 ⇓P P 05 18 42.9 +0.2
baz=88
K17A Gardner Place, 88.36 42 ⇓P P 05 18 42.6 -0.3
baz=88
B11A Sandpoint 88.41 35 ⇑P P 05 18 42.8 -0.2
baz=88,SNR=6.4
E13A Victor 88.45 38 ⇑P P 05 18 42.6 -0.6
baz=88
C12B Naegeli Ranch, 88.47 36 ⇓P P 05 18 42.8 -0.5
baz=89,SNR=8.3
L18A Fontenelle, Gr 88.48 43 ⇑P P 05 18 43.4 -0.1
baz=89
N19A John Jarvie Ra 88.49 44 ⇑P P 05 18 43.1 -0.5
baz=89
Q21A Lamborn Mesa, 88.51 47 ⇓P P 05 18 43.6 -0.1
baz=89
I16A Newdale 88.62 41 ⇑P P 05 18 44.6 +0.5
baz=89
GYA Guiyang 88.65 299⇓*i*P P 05 18 47.0 +2.3
GYA AP pP 05 19 26.8 +3.3
GYA XP sP 05 19 43.5 +3.8
GYA PP PP 05 22 21.5 +5.7
GYA SKS 05 28 58.8
GYA S S 05 29 18.3 -0.2
GYA SS SS 05 35 18.0 +4.0
GYA AMB AMB
comp=Z,20nm,0.7s,mb5.2
GYA AMB AMB
comp=Z,94nm,8.0s
GYA LR LR
comp=N,610nm,18.3s
GYA LR LR
comp=E,580nm,19.4s
GYA LR LR
comp=Z,540nm,19.2s
D13A Huson 88.67 37 ⇓P P 05 18 43.5 -0.7
baz=89
O20A White River Ci 88.72 45 ⇓P P 05 18 44.5 -0.2
baz=89
G15A Dillon 88.72 40 ⇑P P 05 18 44.5 -0.1
baz=89,SNR=7.5
A11A Hall Mountain, 88.73 35 ⇑P P 05 18 44.7 +0.2
baz=89,SNR=5.3
J17A Brown Place, J 88.82 42 ⇑P P 05 18 44.8 -0.3
baz=89
M19A Rock Springs 88.82 44 ⇑P P 05 18 44.7 -0.4
baz=89
E14A Clinton 88.84 38 ⇑P P 05 18 44.5 -0.5
baz=89,SNR=5.7
K18A Toltan Ranch, 88.85 43 ⇓P P 05 18 45.3 +0.1
baz=89
B12A Libby 88.85 36 ⇓P P 05 18 45.0 -0.1
baz=89,SNR=5.8
C13A Hot Springs 88.95 37 ⇓P P 05 18 44.9 -0.6
baz=89
L19A Farson 89.00 43 ⇑P P 05 18 45.8 -0.1
baz=89,SNR=5.3
DLBC Dease Lake 89.03 22 P P 05 18 45.4 -0.3
comp=Z,2.6nm,0.8s,mb4.2,baz=210,slow=8.0,SNR=6.2
DLBC pP pP 05 19 24.3 -0.2
comp=Z,4.8nm,0.8s,baz=256,slow=9.1,SNR=3.9
N20A Spence Gulch, 89.06 45 ⇑P P 05 18 46.1 -0.2
baz=89
A12A Yaak River Ran 89.09 35 ⇓P P 05 18 46.1 -0.1
baz=89,SNR=5.5
F15A Butte 89.09 39 ⇓P P 05 18 46.1 -0.2
baz=89
G16A Moss Hill, Enn 89.16 40 ⇑P P 05 18 46.8 +0.2
baz=89
J18A Kendall Valley 89.16 42 ⇑P P 05 18 46.2 -0.4
baz=89,SNR=5.8
D14A Greenough 89.20 38 ⇑P P 05 18 45.9 -0.9
baz=89
H16A Russell Place, 89.21 40 ⇑P P 05 18 47.2 +0.4
baz=89
BW06 Boulder Array 89.22 43 ⇓P P 05 18 46.7 -0.2
baz=89
PDAR Pinedale Array 89.22 43 P P 05 18 46.4 -0.6
comp=Z,1.9nm,0.8s,mb4.1,baz=214,slow=3.3,SNR=17
PDAR pP pP 05 19 24.0 -1.8
comp=Z,1.7nm,0.9s,baz=225,slow=3.3,SNR=3.3
PDAR PKKPbc PKKPbc 05 36 24.8 +0.2
comp=Z,0.5nm,0.7s,baz=91,slow=3.9,SNR=4.4
O21A Pagoda 89.27 46 ⇑P P 05 18 46.7 -0.6
baz=89
E15A Deer Lodge 89.33 38 ⇓P P 05 18 46.8 -0.5
baz=89
B13A Whitefish 89.40 36 ⇑P P 05 18 47.2 -0.5
baz=90
M20A Sweetwater, Wa 89.44 44 ⇑P P 05 18 47.2 -0.8
baz=90
N21A Black Mountain 89.51 45 ⇓P P 05 18 48.2 -0.2
baz=90
COLA College 89.52 12*d*iP P 05 18 46.2 -1.6
COLA College 89.52 12 *e*P P 05 18 46.0 -1.8
comp=Z,24nm,0.6s,mb5.3
F16A Kennard Place, 89.57 39 ⇑P P 05 18 48.3 -0.2
baz=90
L20A Wamsutter 89.60 44 ⇑P P 05 18 48.6 -0.1
baz=90
K19A Absolon Red Bu 89.70 43 ⇓P P 05 18 48.7 -0.5
baz=90
D15A Lincoln 89.74 38 ⇓P P 05 18 49.1 -0.2
baz=90
A13A Flathead Natio 89.75 36 ⇓P P 05 18 49.2 -0.1
baz=90
G17A Pierce Place, 89.84 40 ⇑P P 05 18 50.1 +0.3
baz=90
K20A Yellowstone Ra 89.93 43 ⇑P P 05 18 49.8 -0.5
baz=90
B14A Marquette Ranc 90.05 37 ⇓P P 05 18 50.2 -0.5
baz=90,SNR=5.6
C15A Salmond Ranch, 90.10 37 ⇓P P 05 18 50.5 -0.4
baz=90
F17A Fitzpatrick Pl 90.20 40 ⇑P P 05 18 51.9 +0.4
baz=90
XAN Xi'an 90.22 307 P P 05 18 51.3 -0.5
XAN AP pP 05 19 30.0 -0.7
XAN PP PP 05 22 28.3 +0.2
XAN S S 05 29 34.0 +1.3
XAN SS SS 05 35 38.8 +2.4
XAN AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
XAN LR LR
comp=E,48nm,17.7s
XAN LR LR
comp=Z,84nm,19.1s
N22A Wattenberg Ran 90.23 46 ⇓P P 05 18 51.6 -0.1
baz=90
D16A Dana Ranch, Ca 90.29 38 ⇓P P 05 18 52.0 +0.2
baz=90
A14A Double T Ranch 90.31 36 ⇑P P 05 18 51.4 -0.5
baz=90,SNR=5.8
E17A Martinsdale 90.38 39 ⇓P P 05 18 52.1 -0.2
baz=90
B15A Bradely Ranch, 90.42 37 ⇓P P 05 18 51.6 -0.8
baz=90
G18A Lazy EL Ranch, 90.55 40 ⇑P P 05 18 53.2 +0.1
baz=91
C16A Fuhringer Ranc 90.60 38 ⇓P P 05 18 52.8 -0.4
baz=91
RLMT Red Lodge 90.62 41 ⇑P P 05 18 53.7 +0.2
baz=91
DAWY Dawson 90.66 15 *e*P P 05 18 52.7 -0.5
A15A Johnson Ranch, 90.69 36 ⇑P P 05 18 53.9 +0.3
baz=91
F18A Big Timber 90.76 40 ⇓P P 05 18 53.9 -0.1
baz=91
BILL Billibino 90.81 354*d*iP P 05 18 52.6 -1.1
BILL *e* 05 22 29.0
BILL pmax pmax
comp=Z,35nm,1.6s,mb5.1
BILL Billibino 90.81 354 *e*P P 05 18 52.5 -1.3
comp=Z,19nm,0.9s,mb5.1
HIA Hailar 90.83 324⇓*i*P P 05 18 53.3 -1.0
D17A Six Diamond Ra 90.85 39 ⇓P P 05 18 54.2 -0.2
baz=91,SNR=6.6
E18A Harlowton 90.99 39 ⇑P P 05 18 55.5 +0.4
baz=91
C17A Wharram Farm, 91.06 38 ⇑P P 05 18 55.2 -0.2
baz=91
A16A West Butte Ran 91.30 37 ⇓P P 05 18 56.4 -0.1
baz=91
KMI Kunming 91.32 297 P P 05 18 57.5 +0.4
KMI AP pP 05 19 37.3 +1.2
KMI XP sP 05 19 53.0 +0.8
KMI AMB AMB
comp=Z,14nm,1.3s,mb4.8
KMI LR LR
comp=Z,79nm,28.8s
B17A L&G Farms, Che 91.40 38 ⇓P P 05 18 56.8 -0.2
baz=92
HHC Hu-ho-hao-te 91.48 314 *e*P P 05 18 58.8 +1.3
HHC AP pP 05 19 39.3 +2.8
HHC XP sP 05 19 56.3 +3.7
HHC PP PP 05 22 41.0 +3.1
HHC SKS 05 29 13.8
HHC S S 05 29 42.0 -1.9
HHC XS sS 05 30 52.8 +1.2
HHC AMB AMB
comp=Z,8.0nm,1.0s,mb4.7
HHC AMB AMB
comp=Z,209nm,4.7s
HHC LR LR
comp=N,142nm,15.6s
HHC LR LR
comp=E,168nm,14.4s
HHC LR LR
comp=Z,176nm,15.6s
A17A Triple J Farms 91.80 37 ⇑P P 05 18 58.6 -0.2
baz=92
EGMT Eagleton 91.85 38 ⇑P P 05 18 59.0 -0.1
baz=92
CMAR Chiang Mai Arr 91.95 289 P P 05 19 01.6 +1.4
comp=Z,15nm,0.9s,mb5.0,baz=127,slow=3.3,SNR=58
B18A Beardsley Farm 92.03 38 ⇑P P 05 18 59.8 -0.1
baz=92
CHTO Chiang Mai 92.09 289 *e*P P 05 19 01.0 +0.2
CHTO pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CHTO Chiang Mai 92.09 289 *e*P P 05 19 01.0 +0.1
comp=Z,8.5nm,0.8s,mb4.8
A18A Metzger Ranch, 92.27 37 ⇓P P 05 19 00.9 -0.1
baz=92
CFAA Coronel Fontan 93.02 126 PKKPbc PKKPbc 05 36 13.4 -0.4
comp=Z,0.1nm,0.5s,baz=8.6,slow=4.2,SNR=4.9
RSSD Black Hills 93.39 43 *e*P P 05 19 05.6 -0.6
RSSD pmax pmax
comp=Z,11nm,0.9s,mb5.0
RSSD Black Hills 93.39 43 *e*P P 05 19 05.6 -0.6
comp=Z,11nm,0.9s,mb5.0
LZH Lanzhou 94.86 307 *e*P P 05 19 13.0 -0.2
LZH AP pP 05 19 51.5 -0.7
LZH XP sP 05 20 09.0 +0.7
LZH *e*PP PP 05 23 07.0 +2.6
LZH SKS 05 29 33.0
LZH *e*S S 05 30 13.3 -0.5
LZH SS SS 05 36 43.0 +0.3
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,129nm,5.4s
YKA Yellowknife Ar 97.43 24 P P 05 19 23.2 -0.9
comp=Z,3.2nm,0.9s,mb4.7,baz=240,slow=4.3,SNR=51
YKA pP pP 05 20 01.9 -1.3
comp=Z,4.2nm,0.8s,baz=238,slow=4.4,SNR=13
YKA PKiKP PKiKP 05 23 58.9 +0.7
comp=Z,0.3nm,0.7s,baz=261,slow=1.5,SNR=3.8
YKA PKKPbc PKKPbc 05 36 00.2 -3.7
comp=Z,1.6nm,0.6s,baz=38,slow=2.3,SNR=29
YKA PKPPKP 05 44 17.2
comp=Z,0.2nm,0.8s,baz=47,slow=3.1,SNR=4.3
YKA Yellowknife Ar 97.43 24 P P 05 19 23.2 -0.9
YKA pP pP 05 20 01.9 -1.3
ULN Ulaanbaatar 97.50 319⇑*i*P P 05 19 23.9 -1.0
SONM Songino Array 97.89 318 P P 05 19 25.5 -1.1
comp=Z,0.2nm,0.4s,mb3.9,baz=135,slow=5.4,SNR=4.1
SONM PP PP 05 23 23.4 -4.1
comp=Z,1.7nm,1.1s,baz=122,slow=8.3,SNR=6.1
SONM LR LR 06 00 33.7
comp=Z,68nm,19.1s,baz=320,slow=33
SONM Songino Array 97.89 318 P P 05 19 25.5 -1.1
SONM 05 23 23.4
GTA Gaotai 99.07 309 *e*P P 05 19 29.0 -3.1
GTA AP pP 05 20 09.5 -1.7
GTA XP sP 05 20 27.5 +0.2
GTA AMB AMB
comp=Z,3.0nm,0.8s,mb4.8
TIXI Tiksi 100.68 345⇑*i*P Pdif 05 19 36.8 -2.4
TIXI Tiksi 100.68 345⇑*i*P Pdif 05 19 36.9 -2.3
SIV San Ignacio 106.30 115 PKKPbc PKKPbc 05 35 35.9 -0.2
comp=Z,0.9nm,0.8s,baz=81,slow=6.9,SNR=4.6
RES Resolute Bay 108.99 16 PKiKP PKiKP 05 24 17.6 -1.4
comp=Z,0.8nm,0.8s,baz=276,slow=2.6,SNR=3.9
ZAA0 Zalesovo Array 112.63 321 *e*PKPdf PKiKP 05 24 25.4 -1.0
ZALV Zalesovo Beam 112.63 321 PKiKP PKiKP 05 24 25.2 -1.2
comp=Z,3.2nm,0.6s,baz=155,slow=1.1,SNR=15
ZALV pPKiKP 05 25 05.2
comp=Z,0.5nm,0.4s,baz=169,slow=1.5,SNR=2.5
ZALV Zalesovo Beam 112.63 321 PKPdf PKiKP 05 24 25.2 -1.2
MK31 Makanchi Array 113.32 313 *e*PKiKP PKiKP 05 24 27.0 -0.9
MKAR Makanchi Array 113.32 313 PKiKP PKiKP 05 24 26.8 -1.1
comp=Z,3.0nm,0.6s,baz=78,slow=0.5,SNR=24
KURK Kurchatov 116.13 317 PKP PKPdf 05 24 32.1 -1.1
comp=Z,3.3nm,0.6s,baz=92,slow=1.9,SNR=17
KURK pPKP pPKPdf 05 25 12.6 -1.3
comp=Z,1.2nm,0.7s,baz=17,slow=30,SNR=2.5
KURK Kurchatov 116.13 317 *e*PKPdf PKPdf 05 24 32.0 -1.2
AML Almayashu 118.94 307 *e*PKPdf PKPdf 05 24 39.3 +0.4
BVAR Borovoye Array 121.22 319 PKP PKPdf 05 24 42.2 -0.7
comp=Z,7.2nm,0.7s,baz=110,slow=1.5,SNR=31
BVAR pPKP pPKPdf 05 25 22.7 -0.9
comp=Z,2.5nm,0.7s,baz=75,slow=1.7,SNR=3.3
BRVK Borovoye 121.28 320 *e*PKiKP PKPdf 05 24 42.4 -0.6
KBL Kabul 121.88 298 *e*PKiKP PKPdf 05 24 45.4 +0.6
SPITS Spitsbergen Ar 123.58 357 PKP PKPdf 05 24 45.8 -1.0
comp=Z,17nm,0.7s,baz=96,slow=2.0,SNR=6.7
BOSA Boshof 125.34 204 PKP PKPdf 05 24 52.4 +0.7
comp=Z,6.5nm,0.5s,baz=99,slow=4.3,SNR=25
BOSA Boshof 125.34 204 PKP PKPdf 05 24 52.4 +0.7
ARU Arti 127.33 325⇑*i*PKiKP PKPdf 05 24 53.6 -0.9
ARU Arti 127.33 325⇑*e*PKP PKPdf 05 24 53.7 -0.8
AKTK Aktyubinsk 129.20 318 PKP PKPdf 05 24 58.6 +0.3
AKTO Aktyubinsk 129.20 318 PKP PKPdf 05 24 58.6 +0.3
comp=Z,3.5nm,0.7s,baz=95,slow=3.2,SNR=10
ARCES ARCESS Array B 130.78 350 PKP PKPdf 05 25 00.5 -0.3
comp=Z,8.8nm,0.6s,baz=24,slow=1.7,SNR=28
ARCES ARCESS Array B 130.78 350 PKP PKPdf 05 25 00.5 -0.3
KLMR Klimovskoe 133.93 336 PKHKP 05 24 58.6
JOF Joensuu 135.11 342 *ep* PKPdf 05 25 08.1 -1.0
comp=Z,14nm,0.6s
JOF Joensuu 135.11 342 *e*PKiKP PKPdf 05 25 08.1 -1.0
JOF pmax pmax
comp=Z,14nm,0.6s
LSZ Lusaka 135.62 215 *e*PKiKP PKPdf 05 25 12.1 +0.6
KAF Kangasniemi 137.10 344 *ep* 05 25 04.8
comp=Z,8.4nm,0.6s
KAF Kangasniemi 137.10 344 *e*PKHKP 05 25 04.8
KAF pmax pmax
comp=Z,8.0nm,0.6s
MOS Moscow 137.99 332 *e*PKiKP PKPdf 05 25 14.7 +0.1
MOS pmax pmax
comp=Z,45nm,0.8s
OBN Obninsk 138.85 332⇓*i*PKiKP PKPdf 05 25 16.9 +0.7
OBN pmax pmax
comp=Z,26nm,1.4s
OBN Obninsk 138.85 332⇑*i*PKP PKPdf 05 25 17.3 +1.1
NB2 NORSAR Subarra 140.76 354 PKP 05 25 11.4
comp=Z,4.4nm,0.8s,baz=16,slow=3.2
NOA NORSAR Array B 140.76 354 PKhKP 05 25 12.2
comp=Z,5.5nm,0.8s,baz=21,slow=3.8,SNR=11
HAKT HAKKARI 142.19 303 *i*P PKiKP 05 25 26.0 +0.2
KONO Kongsberg 142.28 355⇑*e*PKiKP PKPdf 05 25 23.6 +1.3
IDID Didziasalis 142.60 338 *e*P PKPdf 05 25 18.4 -4.6
ISAL Salakas 142.60 339 *e*P PKPdf 05 25 16.7 -6.2
IIGN Ignalina 142.75 339 *e*P PKPdf 05 25 18.0 -5.2
MVH1 Achvaich 143.83 7⇑*e*P PKPdf 05 25 22.2 -2.9
KOPT Kop Dagi 143.95 308 *i*P PKPdf 05 25 26.3 +0.5
BEST Besiri 143.98 304 *i*P PKPdf 05 25 25.3 -0.7
KAC Achnashellach 144.11 8 *e*P PKPdf 05 25 22.4 -3.1
MCD Coleburn Disti 144.26 6⇑*e*P PKPdf 05 25 23.0 -2.5
MDO Dochfour 144.28 7⇑*e*P PKPdf 05 25 23.6 -2.2
MARD Mardin 144.51 304 *i*P PKPdf 05 25 25.5 -1.4
KAR1 Arisaig 144.60 9 *e*P PKPdf 05 25 24.0 -2.4
SUW Suwalki 144.85 340 *e*PKP PKPdf 05 25 25.9 -1.1
SUW Suwalki 144.85 340 *e*PKP PKPdf 05 25 25.9 -1.1
AKASG Malin Array Be 145.11 331 PKP PKPbc 05 25 26.0 -1.4
comp=Z,99nm,0.7s,baz=43,slow=4.4,SNR=274
AKASG pPKP pPKPdf 05 26 06.9 -1.4
comp=Z,18nm,0.6s,baz=42,slow=4.2,SNR=4.8
AKBB Malin Array Si 145.11 331 *e*PKiKP PKPbc 05 25 25.9 -1.4
KIEV Kiev 145.12 331 *e*PKiKP PKPbc 05 25 25.7 -1.7
EAB Aberfoyle 145.51 8 *e*P PKPdf 05 25 27.2 -0.8
ELZG Elazig 145.54 306 *i*P PKPdf 05 25 29.9 +1.3
EBH Black Hill 145.55 7 *e*P PKPdf 05 25 27.0 -1.1
KEMA Kemaliye 145.66 308 *i*P PKPdf 05 25 29.5 +0.7
COP Copenhagen 145.85 351 *i*PKP2 PKPab 05 25 29.3 -0.8
COP pmax pmax
comp=Z,51nm,0.9s
COP Copenhagen 145.85 351 *i*P PKPdf 05 25 29.3 +0.7
comp=Z,51nm,0.9s
EAU Auchinoon 145.95 7 *e*P PKPdf 05 25 27.6 -1.1
ESY Stoneypath 145.97 6 *e*P PKPdf 05 25 28.6 -0.2
BSD Bornholm Skovb 145.98 348 *i*PKP2 PKPab 05 25 29.6 -1.0
BSD pmax pmax
comp=Z,140nm,0.9s
BSD Bornholm Skovb 145.98 348⇑*i*P PKPdf 05 25 29.5 +0.7
BSD Bornholm Skovb 145.98 348 *i*P PKPdf 05 25 29.6 +0.8
comp=Z,139nm,0.9s
MALT Malatya 146.01 306⇑*i*P PKPdf 05 25 30.0 +0.5
MALT Malatya 146.01 306 *e*PKPbc PKPbc 05 25 31.5 +0.9
EBL Broad Law 146.07 7 *e*P PKPdf 05 25 28.4 -0.5
SIM Simferopol' 146.13 320*d*iPKHKP 05 25 21.8
SIM pmax pmax
comp=Z,113nm,0.7s
ATAB Bozova 146.37 305 *i*P PKPdf 05 25 32.1 +2.0
AKCD Akcadag 146.40 306 *i*P PKPdf 05 25 32.5 +2.4
XSO Sourhope Farm 146.42 6 *e*P PKPdf 05 25 30.4 +0.8
ESK Eskdalemuir 146.50 7 *e*P PKPdf 05 25 28.2 -1.5
ESK AMb AMB 05 25 29.4
comp=Z,146nm,1.6s
GAL1 Galloway 146.75 9 *e*P PKPdf 05 25 30.5 +0.4
GAL1 AMb AMB 05 25 34.4
comp=Z,82nm,1.4s
GZT Gaziantep 146.96 305 *i*P PKPbc 05 25 34.1 +0.8
XAL Allendale 147.05 6 *e*P PKPdf 05 25 32.3 +1.6
GKP Gorka Klasztor 147.19 345 *e*PKP PKPdf 05 25 33.3 +2.4
GKP Gorka Klasztor 147.19 345 *e*PKP PKPdf 05 25 33.3 +2.4
PINB Pinarbasi 147.39 308 *i*P PKPdf 05 25 32.3 +0.5
WIM Isle of Man 147.45 9 *e*P PKPdf 05 25 31.5 +0.2
BEL Belsk 147.47 340 *e*PKP PKPbc 05 25 34.5 +0.3
KUZU Kuzuini 147.51 304 *i*P PKPbc 05 25 35.3 +0.4
CTKT Corum 147.78 312 *i*P PKPbc 05 25 36.1 +0.7
ANDN Andirin 147.81 306 *i*P PKPbc 05 25 36.0 +0.4
BSEG Bad Segeberg 147.84 352 *e*PKPbc PKPbc 05 25 34.6 -0.5
BSEG *ep*PKPbc pPKPbc 05 26 15.7 +0.2
BSEG *ep*PKPbc pPKPbc 05 26 15.7 +0.2
BSEG Bad Segeberg 147.84 352 *e*PKPbc PKPbc 05 25 34.6 -0.5
KIS Kishinev 147.86 327 *e*PKP2 PKPbc 05 25 34.5 -0.9
KIS pmax pmax
comp=Z,400nm,1.0s
KIS Kishinev 147.86 327⇑*i*PKP PKPbc 05 25 34.5 -0.9
KIS Kishinev 147.86 327 PM PKPbc 05 25 35.0 -0.4
comp=Z,400nm,1.0s
LVV L'vov 147.98 335 *i*PKP2 PKPbc 05 25 34.6 -1.0
HPK Haverah Park 148.00 6 *e*P PKPdf 05 25 33.9 +1.6
HPK AMb AMB 05 25 35.4
comp=Z,66nm,1.0s
BALT Daday 148.31 315 *i*P PKPbc 05 25 37.1 +0.3
ILGA Ilgaz 148.31 314 *i*P PKPbc 05 25 37.6 +0.8
WLF1 Llynfaes 148.33 9 *e*P PKPdf 05 25 34.4 +1.5
YRC Rhoscolyn 148.34 9 *e*P PKPdf 05 25 31.8 -1.0
LHO Holmfirth 148.39 6⇑*e*P PKPdf 05 25 35.2 +2.3
WPM1 Penmaenmawr 148.43 8 *e*P PKPbc 05 25 36.0 -0.7
AVNT Avonos 148.48 309 *i*P PKPdf 05 25 32.7 -0.8
CDAG Cicekdag 148.49 311 *i*P PKPbc 05 25 36.7 -0.6
YLL Llanberis 148.51 9 *e*P PKPbc 05 25 35.9 -1.0
KWP Kalwaria 148.64 336 *e*PKP PKPbc 05 25 37.5 +0.2
KWP Kalwaria 148.64 336⇓*i*P PKPdf 05 25 33.0 -0.4
KWP Kalwaria 148.64 336 *e*PKP PKPbc 05 25 37.5 +0.2
RUE Ruedersdorf 148.69 348 *ep*PKPbc pPKPbc 05 26 18.7 +0.9
RUE Ruedersdorf 148.69 348 *e*PKPbc PKPbc 05 25 36.9 -0.4
KBI1 Birley Grange 148.71 6 *e*P PKPbc 05 25 36.4 -1.0
SBD1 Bryn Du 148.86 8 *e*P PKPbc 05 25 36.5 -1.3
KWE Weaver Farm 148.91 6 *e*P PKPbc 05 25 37.5 -0.5
BR131 Keskin Array S 148.96 311 *e*PKPbc PKPbc 05 25 38.2 -0.3
BRTR Keskin Array B 148.96 311 PKPbc PKPbc 05 25 38.0 -0.5
comp=Z,41nm,0.7s,baz=153,slow=2.5,SNR=159
BRTR pPKPbc pPKPbc 05 26 18.4 -0.6
comp=Z,6.0nm,0.6s,baz=146,slow=5.9,SNR=2.0
TLCR 149.04 324⇓*i*P PKPbc 05 25 38.2 -0.3
HWQ Hawqa 149.07 300 *e*P PKPbc 05 25 39.0 0.0
BUR08 Bucovina Ar. S 149.15 331 *e*PKPbc PKPbc 05 25 38.9 +0.2
BURAR Bucovina Array 149.16 331⇓*i*P PKPbc 05 25 39.1 +0.4
OJC Ojcow 149.18 339 *e*PKPdf PKPdf 05 25 35.6 +1.3
OJC *e*PKPab PKPbc 05 25 38.6 -0.1
CWF Charnwood Fore 149.24 6⇑*e*P PKPbc 05 25 38.0 -0.8
CWF AMb AMB 05 25 38.6
comp=Z,83nm,1.3s
NRDL Niedersach Rie 149.27 352 *e*PKPbc PKPbc 05 25 38.4 -0.4
WIT Witteveen 149.28 356 *e*PKP PKPbc 05 25 39.4 +0.6
comp=Z,316nm,0.7s
STHS Stebnicka Huta 149.36 337 *e*PKP PKPbc 05 25 39.8 +0.6
RCY Rachaya 149.37 299 *e*P PKPbc 05 25 40.0 +0.3
BHL Bhannes 149.40 300 *e*P PKPbc 05 25 40.2 +0.5
UZH Uzhgorod 149.61 335 *e*PKHKP PKPdf 05 25 37.2 +2.2
KSP Ksiaz 149.65 344 *e*PKP PKPbc 05 25 40.3 +0.5
KSP Ksiaz 149.65 344 *e*PKHKP PKPdf 05 25 35.3 +0.3
KSP *e* 05 25 44.0
KSP Ksiaz 149.65 344 *e*PKPdf PKPdf 05 25 35.3 +0.3
KSP *i*PKPdf PKPbc 05 25 40.1 +0.3
KSP *e*PKPab PKPbc 05 25 44.0 -1.4
KSP *ep*PKP pPKPdf 05 26 20.0 +4.1
SGKT Sivrigoynuk 149.65 314 *i*P PKPbc 05 25 40.1 -0.1
HTR Trewern Hill 149.66 8 *e*P PKPbc 05 25 38.5 -1.3
VRI Vrincioaia 149.69 327 PKP2 PKPbc 05 25 40.2 +0.1
VRI Vrincioaia 149.69 327⇑*i*P PKPdf 05 25 35.5 +0.2
NIE Niedzica 149.69 338 *e*PKPbc PKPbc 05 25 40.5 +0.5
CRVS Cervenica-Dubn 149.71 336 *i*PKP PKPbc 05 25 40.6 +0.6
IBBN Ibbenburen 149.71 355 *e*PKPbc PKPbc 05 25 39.7 -0.2
IBBN *e*PKPab PKPab 05 25 45.2 -0.4
TIRR Tirgusor 149.72 323⇑*i*P PKPdf 05 25 33.3 -2.1
TIRR Tirgusor 149.72 323 *e*PKPbc PKPbc 05 25 39.8 -0.4
PLOR Plostina 149.74 327 PKP2 PKPbc 05 25 40.1 -0.1
MCH1 Michaelchurch 149.78 8 *e*P PKPbc 05 25 39.3 -0.8
MCH1 AMb AMB 05 25 41.8
comp=Z,82nm,1.6s
HARR Harsova 149.84 324 PKP2 PKPbc 05 25 40.7 +0.2
HARR Harsova 149.84 324⇑*i*P PKPdf 05 25 35.8 +0.3
CLZ Clausthal 149.88 351 *e*PKPbc PKPbc 05 25 40.3 0.0
CLZ *ep*PKPbc pPKPbc 05 26 21.2 +0.4
CLZ *ep*PKPbc pPKPbc 05 26 21.2 +0.4
CLZ Clausthal 149.88 351 *e*PKPbc PKPbc 05 25 40.3 0.0
SSW Stow on the Wo 149.95 7 *e*P PKPdf 05 25 38.0 +2.6
CLL Collm 149.96 348⇓*e*PKiKP PKPdf 05 25 35.0 -0.5
CLL *i* 05 25 45.6
CLL *e* 05 26 19.0
CLL pmax pmax
comp=Z,49nm,0.8s
CLL pmax pmax

	comp=Z,64nm,1.4s							
CLL	**Collm**	**149.96**	**348**	*e*PKPbc	PKPbc	05 25 40.1	-0.4	
CLL				*ep*PKPbc	pPKPbc	05 26 21.8	+0.8	
CLL	**Collm**	**149.96**	**348**	*e*PKPdf	PKPdf	05 25 35.0	-0.5	
CLL				⇓*i*PKPbc	PKPbc	05 25 40.4	-0.1	
	comp=Z,49nm,0.8s							
CLL				*i* PKiKP	PKiKP	05 25 41.8	+0.4	
CLL				*i* PKPab	PKPab	05 25 45.6	-1.1	
	comp=Z,64nm,1.4s							
CLL				*e*(ePKPbc)		05 26 19.0		
CLL				*ep*PKPab	pPKPab	05 26 21.0	-5.1	
CLL	**Collm**	**149.96**	**348**	*e*PKP	PKPdf	05 25 35.0	-0.5	
CLL				⇓*i*PKP	PKPbc	05 25 40.4	-0.1	
CLL				*i* PKP	PKPab	05 25 45.6	-1.1	
CLL				*ep*PKP	pPKPdf	05 26 19.0	+2.7	
CVD	**Cernavoda**	**150.03**	**323**	PKP2	PKPbc	05 25 41.7	+0.8	
UPC	**Upice**	**150.03**	**344**	*e*PKPDF	PKPdf	05 25 36.3	+0.7	
UPC				⇑*i*PKP	PKPbc	05 25 41.0	+0.3	
UPC				*e*PKPAB	PKPab	05 25 46.9	-0.1	
OKC	**Ostrava-Krasne**	**150.03**	**341**	⇑*i*PKP	PKPbc	05 25 40.6	-0.2	
OKC				*e*PKPAB	PKPab	05 25 45.9	-1.1	
DPC	**Dobruska-Polom**	**150.09**	**343**	*e*PKPDF	PKPdf	05 25 35.5	-0.2	
DPC				⇑*i*PKP	PKPbc	05 25 41.3	+0.4	
DPC				*e*PKPAB	PKPab	05 25 47.5	+0.2	
WTSB	**Winterswijk**	**150.12**	**356**	*e*PKP	PKPbc	05 25 40.7	-0.2	
	comp=Z,85nm,0.9s							
HGH	**Gray Hill**	**150.16**	**8**	*e*P	PKPbc	05 25 39.3	-1.7	
BRG	**Berggiesshubel**	**150.18**	**347**	*e*PKHKP	PKPdf	05 25 36.0	+0.1	
BRG				*i*		05 25 46.3		
BRG				pmax	pmax			
	comp=Z,5.0nm,1.1s							
BRG				pmax	pmax			
	comp=Z,19nm,0.8s							
BRG				pmax	pmax			
	comp=Z,23nm,1.0s							
BRG	**Berggiesshubel**	**150.18**	**347**	*e*PKPbc	PKPbc	05 25 40.5	-0.6	
BRG				*e*PKPab	PKPab	05 25 46.2	-1.4	
BRG				*ep*PKPbc	pPKPbc	05 26 22.5	+0.9	
BRG	**Berggiesshubel**	**150.18**	**347**	*e*PKP	PKPdf	05 25 36.0	+0.1	
BRG				*i*		05 25 40.5		
BRG				*i*		05 25 46.3		
FBE	**Freiberg**	**150.26**	**347**	*e*PKPbc	PKPbc	05 25 41.3	0.0	
FBE				*e*PKPab	PKPab	05 25 47.3	-0.6	
FBE				*ep*PKPbc	pPKPbc	05 26 22.6	+0.8	
SKP1	**Kophill**	**150.29**	**5**	*e*P	PKPbc	05 25 39.7	-1.6	
HENT	**Hendek**	**150.29**	**315**	*i* P	PKPbc	05 25 41.5	-0.2	
MLR	**Muntele Rosu**	**150.35**	**327**	PKPbc	PKPbc	05 25 41.3	-0.4	
MLR				pPKPbc	pPKPbc	05 26 21.1	-1.1	
PVCC	**Panska Ves**	**150.36**	**346**	*e*PKPDF	PKPdf	05 25 36.4	+0.2	
PVCC				⇑*i*PKP	PKPbc	05 25 41.8	+0.3	
PVCC				*e*PKPAB	PKPab	05 25 47.0	-1.4	
KDHN	**Kadinhani**	**150.54**	**310**	*i* P	PKPbc	05 25 42.1	-0.2	
BUG	**Bochum--Univer**	**150.61**	**355**	*e*PKPbc	PKPbc	05 25 41.6	-0.5	
VOIR		**150.83**	**328**	PKIKP	PKPbc	05 25 42.9	+0.1	
VOIR		**150.83**	**328**	⇑*i*P	PKPdf	05 25 38.7	+1.6	
MOX	**Moxa**	**150.85**	**349**	*e*PKP	PKPdf	05 25 36.2	-0.7	
MOX				*e*		05 25 42.5		
	comp=Z,27nm,1.1s							
MOX	**Moxa**	**150.85**	**349**	*e*PKPbc	PKPbc	05 25 42.3	-0.4	
PRU	**Pruhonice**	**150.87**	**345**	⇑*i*PKP	PKPbc	05 25 42.8	0.0	
PRU				*e*PKPAB	PKPab	05 25 50.1	-0.4	
DRGR		**150.90**	**332**	⇓*i*P	PKPdf	05 25 37.7	+0.6	
DRGR		**150.90**	**332**	P	PKPbc	05 25 43.0	0.0	
WERD	**Werda**	**150.91**	**348**	*e*PKPbc	PKPbc	05 25 42.8	0.0	
WERD				*ep*PKPbc	pPKPbc	05 26 24.7	+1.3	
TANN	**Tannenbergstha**	**150.91**	**348**	*e*PKPbc	PKPbc	05 25 42.8	0.0	
VRAC	**Vranov**	**150.97**	**342**	⇓*i*P	PKPdf	05 25 37.7	+0.6	
VRAC	**Vranov**	**150.97**	**342**	P	PKPbc	05 25 43.4	+0.4	
ESKT	**Eskisehir**	**150.97**	**313**	*i* P	PKPbc	05 25 43.4	0.0	
MAMC	**Mammari**	**150.97**	**303**	P	PKPbc	05 25 43.7	+0.2	
VYHS	**Vyhne**	**150.99**	**339**	*i* PKP	PKPbc	05 25 43.3	+0.2	
GUNZ	**Gunzen**	**150.99**	**348**	*e*PKPbc	PKPbc	05 25 43.1	+0.1	
GUNZ				*e*PKPab	PKPab	05 25 50.4	-0.6	
WERN	**Wernitzgruen**	**151.05**	**348**	*e*PKPbc	PKPbc	05 25 43.4	+0.2	
WERN				*e*PKPab	PKPab	05 25 50.8	-0.4	
KOLL	**Kolacno**	**151.06**	**339**	*e*PKP	PKPbc	05 25 43.6	+0.4	
BORA	**Eskisehir**	**151.06**	**314**	*i* P	PKPbc	05 25 43.4	-0.1	
NKC	**Novy Kostel**	**151.09**	**348**	*e*PKPDF	PKPdf	05 25 36.4	-0.9	
NKC				⇑*i*PKP	PKPbc	05 25 43.3	+0.1	
NKC				*e*PKPAB	PKPab	05 25 50.6	-0.8	
PSZ	**Piszkesteto**	**151.11**	**337**	⇓*e*PKP	PKPbc	05 25 43.3	-0.1	
PSZ	**Piszkesteto**	**151.11**	**337**	⇓*i*P	PKPdf	05 25 30.8	-6.6	
PSZ	**Piszkesteto**	**151.11**	**337**	*e*PKPbc	PKPbc	05 25 43.1	-0.3	
TREC	**Trest**	**151.28**	**344**	*e*PKPDF	PKPdf	05 25 37.5	-0.1	
TREC				⇑*i*PKP	PKPbc	05 25 43.7	0.0	
TREC				*e*PKPAB	PKPab	05 25 50.5	-1.7	
SZAC	**Souni-Zanaja**	**151.37**	**302**	⇑P	PKPbc	05 25 44.6	+0.2	
	comp=Z,4.8nm,0.8s							
SZAC	**Souni-Zanaja**	**151.37**	**302**	*e*P	PKPbc	05 25 44.6	+0.2	
HGN	**Heimansgroeve**	**151.37**	**357**	*e*PKP	PKPbc	05 25 43.6	-0.3	
	comp=Z,36nm,0.9s							
MANZ	**Manzenberg**	**151.39**	**348**	*e*PKPbc	PKPbc	05 25 43.8	-0.2	
UCC	**Uccle**	**151.39**	**359**	PKPbc	PKPbc	05 25 43.8	-0.1	
SMOL	**Smolenice**	**151.43**	**340**	*e*PKP	PKPbc	05 25 44.9	+0.8	
ALFC	**Alevga**	**151.46**	**303**	⇑P	PKPbc	05 25 44.3	-0.3	
	comp=Z,2.1nm,0.7s							
MEM	**Membach**	**151.52**	**357**	PKPbc	PKPbc	05 25 43.2	-1.0	
ROTZ	**Rotzenmuhle**	**151.58**	**348**	*e*PKPbc	PKPbc	05 25 44.2	-0.2	
ROTZ				*e*PKPab	PKPab	05 25 52.9	-0.6	
SNF	**Seneffe**	**151.68**	**359**	PKPbc	PKPbc	05 25 44.1	-0.6	
SNF				PKPab	PKPab	05 25 53.0	-0.9	
TNS	**Taunus Mts**	**151.71**	**353**	*e*PKPbc	PKPbc	05 25 44.6	-0.1	
TNS				*e*PKPab	PKPab	05 25 53.0	-0.9	
TNS				*e*PKPbc	PKPab	05 25 53.0	-0.9	
TNS	**Taunus Mts**	**151.71**	**353**	*e*PKPbc	PKPbc	05 25 44.6	-0.1	
BCLA	**Clavier**	**151.74**	**358**	PKPbc	PKPbc	05 25 44.0	-0.7	
BCLA				PKPab	PKPab	05 25 52.4	-1.7	
PPCY	**Paphos**	**151.75**	**303**	P	PKPbc	05 25 44.6	-0.7	
BUD	**Budapest**	**151.79**	**337**	⇓*e*PKP	PKPbc	05 25 44.7	-0.2	
ZST	**Bratislava**	**151.81**	**341**	*e*PKP	PKPbc	05 25 45.5	+0.5	
GRA1				*e*PKPab	PKPab	05 25 54.0	-0.5	
GRA1				LR	LR			
	comp=Z,1μm,21.0s							
GRA1	**Grafenberg Arr**	**151.83**	**349**	*e*PKPbc	PKPbc	05 25 44.4	-0.6	
GRF	**Grafenberg Arr**	**151.83**	**349**	*e*PKPbc	PKPbc	05 25 44.4	-0.6	
GRF				*e*PKPab	PKPab	05 25 54.0	-0.5	
KHC	**Kasperske Hory**	**151.90**	**346**	*e*PKPDF	PKPdf	05 25 38.3	-0.2	
KHC				⇑*i*PKP	PKPbc	05 25 45.2	+0.1	
KHC				*e*PKPAB	PKPab	05 25 54.2	-0.6	
KHC				*ep*PKP	pPKPab	05 26 26.0	-8.2	
GZR	**Gura Zlata**	**151.94**	**330**	⇑*i*P	PKPbc	05 25 41.3	-4.1	
GZR	**Gura Zlata**	**151.94**	**330**	P	PKPbc	05 25 44.9	-0.4	
ISP	**Isparta**	**151.98**	**310**	*e*PKIKP	PKPbc	05 25 44.7	-1.0	
WET	**Wettzell**	**152.04**	**347**	*e*PKPbc	PKPbc	05 25 46.2	+0.7	
WET				*e*PKPab	PKPab	05 25 55.0	-0.4	
WET				*e*PKPab	PKPab	05 25 55.0	-0.4	
WET	**Wettzell**	**152.04**	**347**	*e*PKPbc	PKPbc	05 25 46.2	+0.7	
DOU	**Dourbes**	**152.09**	**358**	PKPbc	PKPbc	05 25 45.4	-0.1	
GDZ	**Gediz**	**152.11**	**313**	*i* P	PKPbc	05 25 45.7	-0.3	
ABH	**Alteburg**	**152.13**	**354**	PKP	PKPbc	05 25 45.8	+0.2	
GEC2	**GERESS Array S**	**152.14**	**345**	*e*PKPbc	PKPbc	05 25 45.4	-0.3	
GEC2				*e*PKPab	PKPab	05 25 55.2	-0.6	
GEC2				*ep*PKPbc	pPKPab	05 26 27.1	-8.1	
GEC2				*e*PKPab	PKPab	05 25 55.2	-0.6	
GEC2	**GERESS Array S**	**152.14**	**345**	*e*PKPbc	PKPbc	05 25 45.4	-0.3	
GERES	**GERESS Array B**	**152.14**	**345**	PKPdf	PKPdf	05 25 38.9	0.0	
	comp=Z,1.5nm,0.8s,baz=162,slow=0.6,SNR=12							
GERES				PKPbc	PKPbc	05 25 45.6	-0.1	
	comp=Z,10nm,0.7s,baz=29,slow=2.2,SNR=66							
GERES				pPKPbc	pPKPab	05 26 25.7	-9.4	
	comp=Z,2.6nm,0.8s,baz=85,slow=2.1,SNR=2.1							
TOD	**Tromm**	**152.27**	**353**	PKP	PKPbc	05 25 45.8	-0.2	
BZS	**Buzias**	**152.29**	**332**	⇓*i*P	PKPdf	05 25 39.2	-0.1	
BZS	**Buzias**	**152.29**	**332**	P	PKPbc	05 25 45.9	-0.3	
RUP	**Ruppelstein**	**152.35**	**355**	PKP	PKPbc	05 25 46.0	-0.1	
CONA	**Conrad Observa**	**152.42**	**342**	⇑*i*PKiKP	PKiKP	05 25 46.3	-0.2	
	comp=Z,21nm,0.8s							
CSNA	**Conrad Observa**	**152.42**	**342**	⇑*i*PKiKP	PKiKP	05 25 46.3	-0.3	
	comp=Z,19nm,0.8s							
SOP	**Sopron**	**152.43**	**341**	⇓*e*PKP	PKPbc	05 25 46.4	0.0	
WLF	**Walferdange**	**152.45**	**356**	PKPbc	PKPbc	05 25 46.2	-0.1	
WLF	**Walferdange**	**152.45**	**356**	*e*PKPbc	PKPbc	05 25 46.3	-0.1	
WLF	**Walferdange**	**152.45**	**356**	*e*PKPbc	PKPbc	05 25 46.9	+0.5	
LANF	**Langenberg**	**153.00**	**354**	PKP	PKPbc	05 25 47.5	-0.1	
PKSM	**Moragy**	**153.01**	**336**	⇑*i*P	PKPdf	05 25 39.7	-0.6	
PKSM	**Moragy**	**153.01**	**336**	P	PKPbc	05 25 47.6	-0.1	
MANT	**Manisa**	**153.03**	**313**	*i* P	PKPbc	05 25 48.2	+0.2	
STU	**Stuttgart**	**153.04**	**352**	*e*PKPbc	PKPbc	05 25 47.4	-0.3	
STU				*e*PKPab	PKPab	05 25 58.6	-1.0	
STU	**Stuttgart**	**153.04**	**352**	*e*PKPdf	PKPdf	05 25 40.5	+0.2	
STU				*e*PKPbc	PKPbc	05 25 47.4	-0.3	
STU				*e*PKPab	PKPab	05 25 58.9	-0.7	
FUR	**Furstenfeldbru**	**153.29**	**348**	*e*PKPbc	PKPbc	05 25 47.6	-0.7	
FUR				*e*PKPab	PKPab	05 25 59.9	-0.8	
FUR				*e*PKPab	PKPab	05 25 59.9	-0.8	
FUR	**Furstenfeldbru**	**153.29**	**348**	*e*PKPbc	PKPbc	05 25 47.6	-0.7	
RJOB	**Jochberg**	**153.39**	**346**	*e*PKPbc	PKPbc	05 25 48.2	-0.3	
RJOB				*e*PKPab	PKPab	05 26 00.8	-0.3	
BFO	**Black Forest**	**153.58**	**353**	*e*PKP2	PKPab	05 26 00.7	-1.2	
BFO	**Black Forest**	**153.58**	**353**	*e*PKPbc	PKPbc	05 25 47.8	-1.1	
BFO				*e*PKPab	PKPab	05 26 00.7	-1.2	
BFO	**Black Forest**	**153.58**	**353**	*e*PKPbc	PKPbc	05 25 48.2	-0.7	
BFO				*e*PKPab	PKPab	05 26 00.9	-1.0	
BFO				*e*PKPab	PKPab	05 26 00.7	-1.2	
BFO	**Black Forest**	**153.58**	**353**	*e*PKPbc	PKPbc	05 25 47.8	-1.1	
CDF	**Champ du Feu**	**153.61**	**354**	*e*PKIKP	PKPdf	05 25 41.9	+0.8	
MEZF	**Maizieres J'vi**	**153.67**	**358**	*e*PKIKP	PKPdf	05 25 41.1	-0.1	
QUIF	**Quistinic**	**153.74**	**10**	*e*PKIKP	PKPdf	05 25 40.7	-0.6	
	comp=Z,41nm,1.1s							
SPAK	**Spaichingen-Ko**	**153.75**	**352**	PKP	PKPbc	05 25 49.3	0.0	
ECH	**Echery**	**153.82**	**354**	PKIKP	PKPbc	05 25 49.3	-0.1	
ECH				*e*		05 26 01.2		
THEF	**They Montfort**	**153.90**	**356**	PKP	PKPbc	05 25 49.5	-0.1	
FELD	**Feldberg im Sc**	**154.07**	**353**	PKP	PKPdf	05 25 41.9	+0.2	
MOTA	**Moosalm**	**154.12**	**348**	⇑*i*PKPbc	PKPbc	05 25 49.7	-0.3	
	comp=Z,8.0nm,0.7s							
MOF	**Molkenrain**	**154.18**	**354**	PKP	PKPbc	05 25 46.4	-3.8	
HINF	**Hinteralfeld**	**154.24**	**355**	*e*PKIKP	PKPdf	05 25 42.6	+0.6	
VISS	**Visnje**	**154.64**	**341**	*e*PKIKP	PKPdf	05 25 40.7	-1.9	
VISS				*i* PKPbc	PKPbc	05 25 50.8	-0.4	
VISS				*i* PKPab	PKPab	05 26 05.1	-1.4	
LOMF	**Lomont**	**154.71**	**355**	PKP	PKPbc	05 25 49.0	-2.3	
BOJS	**Bojanci**	**154.78**	**340**	*i* PKPdf	PKPdf	05 25 42.6	-0.2	
BOJS				*i* PKPbc	PKPbc	05 25 51.2	-0.3	
BOJS				*i* PKPab	PKPab	05 26 06.1	-1.0	
DAVOS	**Davos**	**154.84**	**350**	PKIKP	PKPdf	05 25 43.2	+0.4	
DAVOS						05 26 07.0		
DAVOX	**Davos/Dischmat**	**154.88**	**350**	PKP	PKPdf	05 25 43.2	+0.3	
	comp=Z,3.6nm,0.8s,baz=330,slow=1.5,SNR=12							
DAVOX				PKPbc	PKPbc	05 25 52.0	+0.3	
	comp=Z,11nm,0.6s,baz=95,slow=1.4,SNR=31							
DAVOX				PKPab	PKPab	05 26 07.0	-0.5	
	comp=Z,16nm,0.8s,baz=336,slow=4.3,SNR=8.9							
LOR	**Lormes**	**154.93**	**359**	*e*PKIKP	PKPdf	05 25 42.6	-0.4	
SSF	**Saint Saulge**	**155.14**	**360**	*e*PKIKP	PKPdf	05 25 42.9	-0.3	
	comp=Z,7.6nm,0.8s							
TUE	**Stuetta**	**155.27**	**350**	*e*PKPdf	PKPdf	05 25 43.1	-0.3	
AVF	**Avril sur Loir**	**155.41**	**0**	*e*PKIKP	PKPdf	05 25 44.1	+0.5	
MFF	**Saint Martin d**	**155.42**	**6**	*e*PKIKP	PKPdf	05 25 43.4	-0.2	
CABF	**La Chapelle**	**155.50**	**356**	*e*PKIKP	PKPdf	05 25 44.0	+0.3	
SMF	**Signal de Mont**	**155.56**	**359**	*e*PKIKP	PKPdf	05 25 44.1	+0.3	
BGF	**Bois d'Agland**	**155.64**	**1**	*e*PKIKP	PKPdf	05 25 43.5	-0.4	
TCF	**Toulx Ste Croi**	**155.89**	**2**	*e*PKIKP	PKPdf	05 25 43.9	-0.4	
	comp=Z,40nm,1.3s							
LPG	**La Plagne**	**156.55**	**354**	*e*PKIKP	PKPdf	05 25 45.2	0.0	
	comp=Z,16nm,1.2s							
RJF	**Les Rejaudoux**	**156.84**	**4**	*e*PKIKP	PKPdf	05 25 45.1	-0.5	
BNI	**Bardonecchia**	**157.00**	**354**	*e*PKP2	PKPab	05 26 16.6	0.0	
LFF	**La Frestale**	**157.15**	**5**	*e*PKIKP	PKPdf	05 25 45.6	-0.4	
IDI	**Anoyia**	**157.17**	**310**	PKP	PKPdf	05 25 46.6	+0.3	
	comp=Z,4.9nm,0.8s,baz=139,slow=4.6,SNR=5.2							
IDI				PKPbc	PKPdf	05 25 56.3	+10	
	comp=Z,5.2nm,0.9s,baz=108,slow=4.7,SNR=3.5							
ORIF	**Oris-en-Rattie**	**157.20**	**356**	*e*PKIKP	PKPdf	05 25 46.0	0.0	
	comp=Z,13nm,1.0s							
CAF	**Calviac**	**157.25**	**3**	*e*PKIKP	PKPdf	05 25 46.1	0.0	
MBDF	**Montbardon**	**157.31**	**354**	*e*PKIKP	PKPdf	05 25 45.9	-0.3	
VIVF	**Saint-Julien-l**	**157.32**	**358**	*e*PKIKP	PKPdf	05 25 46.2	0.0	
SMRF	**Simiane la Rot**	**158.16**	**356**	*e*PKIKP	PKPdf	05 25 47.4	+0.2	
FRF	**La Foret Royal**	**158.48**	**354**	*e*PKIKP	PKPdf	05 25 47.2	-0.4	
LMR	**La Mourre**	**158.72**	**354**	*e*PKIKP	PKPdf	05 25 47.1	-0.8	
PGF	**Pioggiola**	**159.14**	**348**	*e*PKIKP	PKPdf	05 25 48.7	+0.3	
ESDC	**Sonseca Array**	**161.41**	**18**	PKP	PKPdf	05 25 51.6	+0.6	
	comp=Z,1.2nm,0.7s,baz=346,slow=2.6,SNR=6.7							
ESDC				PKPab	PKPab	05 26 35.6	-0.3	
	comp=Z,3.9nm,0.6s,baz=331,slow=3.6,SNR=23							
ESDC				pPKPab	pPKPab	05 27 14.9	-0.2	
	comp=Z,3.6nm,0.8s,baz=326,slow=3.3,SNR=6.2							
LIC	**Lamto**	**162.17**	**151**	*e*PKIKP	PKPdf	05 25 51.6	-1.0	
	comp=Z,44nm,1.3s							
DBIC	**Dimbokro**	**162.64**	**151**	PKP	PKPdf	05 25 52.5	-0.6	
	comp=Z,7.6nm,1.1s,baz=165,slow=4.0,SNR=6.3							
DBIC				PKPab	PKPab	05 26 42.2	+0.2	
	comp=Z,2.7nm,0.7s,baz=155,slow=5.4,SNR=6.1							
KEST	**Kesra**	**165.53**	**341**	PKPab	PKPab	05 26 54.2	0.0	
	comp=Z,3.4nm,0.7s,baz=305,slow=2.5,SNR=11							
KEST				pPKPab	pPKPab	05 27 34.8	+1.5	
	comp=Z,1.6nm,1.0s,baz=257,slow=6.3,SNR=3.3							
TOA0	**Torodi Ar. Sit**	**170.89**	**169**	*e*PKPdf	PKPdf	05 25 58.2	-1.0	
TORD	**Torodi Ar. Bea**	**170.89**	**169**	PKP	PKPdf	05 25 58.2	-1.0	
	comp=Z,4.2nm,0.9s,baz=308,slow=0.8,SNR=20							
TORD				PKPab	PKPab	05 27 19.9	+1.7	
	comp=Z,5.9nm,0.8s,baz=169,slow=3.9,SNR=17							
TORD				pPKPab	pPKPab	05 27 58.4	+1.0	
	comp=Z,2.1nm,0.7s,baz=182,slow=3.8,SNR=1.7							
TORD				PP	PP	05 31 06.1	-1.5	
	comp=Z,0.7nm,0.7s,baz=136,slow=9.8,SNR=4.0							
TORD	**Torodi Ar. Bea**	**170.89**	**169**	PKP	PKPdf	05 25 58.2	-1.0	
TORD				PKPab	PKPab	05 27 19.9	+1.7	
TORD				pPKPab	pPKPab	05 27 58.4	+1.0	
TORD				PP	PP	05 31 06.1	-1.5	
TAM	**Tamanrasset**	**178.00**	**289**	*e*PKIKP	PKPdf	05 26 01.6	+0.3	

ISCJB ***26*** *05:13:05.6± 1.2, 472N×01.0× 1529E± 0.1, h77km± 11km, mb3.5/12, Error ellipse: s-maj=22.4km s-min=9.4km az=144.0*

NEIC ***26*** *05:13:05.9± 0.5, 4724N× 15281E, Error ellipse: s-maj=17.4km s-min=8.9km az=147.0*

MOS ***26*** *05:13:05.7± 1.5, 4725N× 15276E, h79km, mb4.1/1, Error ellipse: s-maj=20.0km s-min=11.2km az=57.7*

IDC ***26*** *05:13:06.2± 1.0, 4722N× 15280E, h67km± 7km, mb3.4/12, mb1 3.6/13, mb1mx3.5/24, mbtmp3.4/13, Error ellipse: s-maj=23.9km s-min=16.8km az=167.0*

ISC 26 05:13:07.5± 1.0, 472N± 01× 1528E± 01, h78km± 10km, h69km± 1.4km:pP-P, n33, σ1$00/29, mb3.5/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**4.09**	**31**	*e*PN		**Pn**	**05 14 08.7**	**+1.2**
SKR				pmax		pmax		
	comp=Z,80nm,0.5s							
PETK	**Petropavlovsk-**	**6.67**	**26**	P		**Pn**	**05 14 42.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=179,slow=11,SNR=9.5							
ASAJ	**Asahikawa**	**7.81**	**250**	P		**Pn**	**05 14 59.2**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=97,slow=14,SNR=4.3							
ASAJ	**Asahikawa**	**7.81**	**250**	PN		**Pn**	**05 14 59.3**	**+1.0**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**8.64**	**236**	*e*PN		**Pn**	**05 15 07.2**	**-2.4**
FX1	**Attu Island--F**	**14.22**	**59**	P		**Pn**	**05 16 22.1**	**-2.7**
	comp=Z,2.0nm,0.3s,baz=248,slow=21,SNR=4.3							
FX1	**Attu Island--F**	**14.22**	**59**	P		**Pn**	**05 16 22.2**	**-2.6**
FX1				pmax		pmax		
	comp=Z,2.0nm,0.3s							
MJAR	**Matsushiro Arr**	**15.22**	**231**	P		**Pn**	**05 16 38.9**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=40,slow=8.3,SNR=6.3							
KSRS	**Korea Array**	**20.76**	**251**	P		**P**	**05 17 42.3**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=51,slow=11,SNR=4.0							
KSRS	**Korea Array**	**20.76**	**251**	P		**P**	**05 17 42.3**	**+0.5**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**30.99**	**289**	P		**P**	**05 19 14.2**	**-3.0**
	comp=Z,0.2nm,0.5s,mb3.1,baz=86,slow=6.7,SNR=2.4							
ZALV	**Zalesovo Beam**	**42.17**	**305**	PcP		PcP	**05 22 44.9**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=72,slow=4.8,SNR=5.2							
MKAR	**Makanchi Array**	**46.55**	**297**	P		**P**	**05 21 26.1**	**-0.8**
	comp=Z,0.4nm,0.8s,mb3.2,baz=54,slow=8.6,SNR=2.4							
MKAR				PcP		PcP	05 22 59.8	-0.2
	comp=Z,0.3nm,0.4s,baz=62,slow=4.8,SNR=7.0							
KURK	**Kurchatov**	**46.94**	**303**	P		**P**	**05 21 29.8**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.3,baz=70,slow=7.8,SNR=2.5							
BVAR	**Borovoye Array**	**50.41**	**309**	P		**P**	**05 21 56.2**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.4,baz=92,slow=3.5,SNR=2.5							
BVAR				PcP		PcP	05 23 13.8	0.0
	comp=Z,0.8nm,0.6s,baz=33,slow=3.5,SNR=4.6							
BVAR	**Borovoye Array**	**50.41**	**309**	P		**P**	**05 21 56.2**	**-0.3**
BVAR							05 23 13.8	
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**50.66**	**37**	P		**P**	**05 21 58.4**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=298,slow=7.0,SNR=8.8							
YKA				pP		pP	05 22 15.1	-2.6
	comp=Z,1.5nm,0.6s,baz=296,slow=7.1,SNR=16							
YKA	**Yellowknife Ar**	**50.66**	**37**	P		**P**	**05 21 58.4**	**+0.1**
YKA				*PP		pP	05 22 15.1	-2.6
YKA				pmax		pmax		
	comp=Z,2.0nm,0.6s							
YKA	**Yellowknife Ar**	**50.66**	**37**	P		**P**	**05 21 58.4**	**+0.2**
YKA				pP		pP	05 22 15.2	-2.6
NVAR	**Mina Array Bea**	**62.39**	**62**	P		**P**	**05 23 21.8**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=291,slow=7.6,SNR=3.9							
NVAR				pP		pP	05 23 40.0	-1.9
	comp=Z,0.4nm,0.5s,baz=296,slow=6.9,SNR=3.4							
PDAR	**Pinedale Array**	**64.63**	**54**	P		**P**	**05 23 36.6**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.7,baz=166,slow=6.0,SNR=6.5							
PDAR				pP		pP	05 23 54.3	-2.4
	comp=Z,1.4nm,0.8s,baz=292,slow=0.9,SNR=7.1							
AKASG	**Malin Array Be**	**71.04**	**326**	P		**P**	**05 24 16.1**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.6,baz=33,slow=8.0,SNR=3.5							
ASAR	**Alice Springs**	**72.59**	**198**	P		**P**	**05 24 26.1**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.7,baz=4.3,slow=5.8,SNR=7.3							
ASAR	**Alice Springs**	**72.59**	**198**	P	

NEIC 26 05:55:26.8,3815S×17866W,h33km,ML3.9(WEL),After WEL.,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	2.43	271	P	Pn	05 56 03.2	-1.0
PUZ				S	Sn	05 56 31.1	-1.7
MXZ	Matakaoa Point	2.47	283	P	Pn	05 56 03.8	-0.9
KNZ	Kokohu	3.00	252	P	Pn	05 56 11.0	-1.0
MWZ	Matawai	3.01	265	P	Pn	05 56 11.2	-0.9
MWZ				S	Sn	05 56 44.9	-2.1
URZ	Urewera	3.33	267	P	Pn	05 56 16.6	0.0
BKZ	Black Stump Fm	3.93	254	P	Pn	05 56 24.6	-0.1
MOVZ	Moawhango	4.54	252	P	Pn	05 56 33.4	+0.2
TUVZ	Tukino	4.59	254	P	Pn	05 56 34.2	+0.4
TSZ	Takapari Road	4.60	244	P	Pn	05 56 32.2	-1.8
WNVZ	Wahianoa	4.64	254	P	Pn	05 56 35.6	+1.1
BFZ	Birch Farm	4.69	236	P	Pn	05 56 32.2	-2.9
MRZ	Mangatainoka R	5.12	239	P	Pn	05 56 38.6	-2.5
MTW	Mount Morrison	5.42	234	P	Pn	05 56 41.5	-3.7
KIW	Kapiti Island	5.66	239	P	Pn	05 56 46.4	-2.2
CAW	Cannon Point	5.67	237	P	Pn	05 56 45.5	-3.2
TCW	Tory Channel	6.25	238	P	Pn	05 56 53.5	-3.1
NNZ	Nelson	6.86	241	P	Pn	05 57 02.2	-2.8
QRZ	Quartz Range	7.32	246	P	Pn	05 57 08.1	-3.2

BJI ***26*** *05:59:50.4,1080N×6570W,h10km,mB5.4,Ms5.2,Msz4.7*
ISCJB ***26*** *05:59:52.3±0.5,1080N±002×6567W±002,h23km±4km, mb4.4/23,MS3.9/8,Error ellipse: s-maj=3.7km s-min=2.5km az=162.4*
NEIC ***26*** *05:59:52.4,1076N×6568W,h6km,mb4.7/15, MW4.6(CAR),After CAR.*
NEIC Felt [III] at Baruta and Caracas; [II] at Chacao and Los Dos Caminos. Also felt at El Cafetal, El Hatillo, La Guaira and Petare.
FUNV ***26*** *05:59:52.2,1076N×6568W,h1km,MW4.6*
IDC ***26*** *05:59:53.4±0.6,1073N×6560W,h21km±3km,mb3.8/12, mb1 4.1/14,mb1mx4.0/24,mbtmp3.9/14,ML3.8/2,MS3.7/6, Ms1 3.7/6,ms1mx3.3/27,Error ellipse: s-maj=13.2km s-min=8.6km az=39.0*
ISC 26 05:59:52.4±0.6,**1077N**±002×**6567W**±002,**h10**km±4km, **h23**km±.8km**:pP-P,n108,**σ1s**12**/137,**mb4.4**/23,**MS3.9**/8, **10C-3D,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIRV	Birongo	0.66	244	⇑iP	Pg	06 00 04.7	-0.5
BIRV				eS	Sg	06 00 13.5	-0.3
BIRV	Birongo	0.66	244	eP	Pg	06 00 04.7	-0.4
BIRV				eS	Sg	06 00 13.5	-0.3
CUPV	Cœpira	0.72	190	⇑iP	Pg	06 00 06.3	+0.1
CUPV				eS	Sg	06 00 16.3	+0.7
CUPV	Cœpira	0.72	190	eP	Pg	06 00 06.3	+0.1
CUPV				eS	Sg	06 00 16.3	+0.7
ORCV	Isla La Orchil	1.16	334	⇓eP	Pb	06 00 14.2	-0.3
ORCV				eS	Sb	06 00 29.9	+0.3
ORCV	Isla La Orchil	1.16	334	eP	Pb	06 00 14.1	-0.5
ORCV				eS	Sb	06 00 30.0	+0.4
LLAV	El Llanito	1.16	255	eP	Pb	06 00 13.3	-1.3
LLAV				eS	Sb	06 00 29.1	-0.6
FUNV	FUNVISIS	1.16	255	⇑eP	Pb	06 00 13.2	-1.4
FUNV				eS	Sb	06 00 29.9	+0.3
PCRV	Puerto La Cruz	1.17	120	Pg	Pg	06 00 14.4	-0.5
	170nm,0.3s,baz=260,slow=3.1,SNR=336						
PCRV				Lg		06 00 29.5	
	214nm,0.3s,baz=266,slow=7.5,SNR=20						
PCRV	Puerto La Cruz	1.17	120	⇓eP	Pb	06 00 14.4	-0.3
PCRV	Puerto La Cruz	1.17	120	eP	Pb	06 00 14.5	-0.2
IBAV	Isla La Blanqu	1.50	45	eP	Pn	06 00 18.9	-0.4
MERV	Las Mercedes	1.63	202	⇑eP	Pn	06 00 21.5	+0.4
MERV				eS	Sn	06 00 42.9	+0.7
MERV	Las Mercedes	1.63	202	eP	Pn	06 00 21.5	+0.4
MERV				eS	Sn	06 00 42.9	+0.8
TURV	Turiamo	2.16	262	eP	Pn	06 00 27.3	-1.1
TURV				eS	Sn	06 00 55.3	0.0
TURV	Turiamo	2.16	262	eP	Pn	06 00 27.3	-1.1
TURV				eS	Sn	06 00 54.5	-0.8
PRGV	PARIAGUAN	2.23	153	⇓eP	Pn	06 00 29.4	0.0
PRGV				eS	Sn	06 00 57.2	+0.2
CRUV	Carupano	2.39	92	eP	Pn	06 00 34.3	+2.7
ITEV	Isla Los Testi	2.56	77	eP	Pn	06 00 33.6	-0.3
ITEV				eS	Sn	06 01 05.5	+0.5
GUNV	Guanoco	2.75	102	eP	Pn	06 00 37.1	+0.6
GUNV				eS	Sn	06 01 10.4	+0.7
BAUV	El Baul	2.96	232	⇑eP	Pn	06 00 38.7	-0.7
BAUV				eS	Sn	06 01 14.7	-0.4
BAUV	El Baul	2.96	232	eP	Pn	06 00 38.7	-0.8
JACV	Jacura	3.12	276	⇑eP	Pn	06 00 40.8	-0.8
JACV				eS	Sn	06 01 18.3	-0.7
CAOV	Caicara del Or	3.48	191	⇑eP	Pn	06 00 46.2	-0.4
TEPV	Terepaima	3.56	257	eP	Pn	06 00 48.8	+1.1
TEPV				eS	Sn	06 01 28.4	-1.4
TCE	Chacachacare	3.85	91	eP	Pn	06 00 52.1	+0.5
TCE				eS	Sn	06 01 40.9	+4.0
SANV	Sanarito	4.01	252	⇑eP	Pn	06 00 54.6	+0.6
SIQV	Siquisique	4.07	269	eP	Pn	06 00 54.5	-0.2
SIQV				eS	Sn	06 01 40.2	-2.3
GRGR	Grenville	4.16	71	ePn	Pn	06 00 55.3	-0.6
GRGR				eSn	Sn	06 01 42.1	-2.6
GRW	Mount Saint Ca	4.16	70	eP	Pn	06 00 58.5	+2.5
GRW				eS	Sn	06 01 43.7	-1.0
TPP	Pointe-a-Pierr	4.17	96	eP	Pn	06 00 54.0	-2.1
TRN	Trinidad (W)	4.19	91	eP	Pn	06 00 58.6	+2.2
GRSS	Sisters	4.25	69	eP	Pn	06 00 56.5	-0.7
CURV	Curarigua	4.29	260	⇑eP	Pn	06 00 57.8	+0.1
MONV	Montecano	4.38	286	eP	Pn	06 00 58.0	-1.1
MONV				eS	Sn	06 01 46.5	-3.7
TBH	Brigand Hill	4.53	93	eP	Pn	06 01 03.2	+2.1
RIOV	Rio Grande	4.65	125	eP	Pn	06 01 03.0	+0.3
TPR	Prospect	4.82	85	eP	Pn	06 01 09.5	+4.5
FCV	Fort Charlotte	4.94	61	eP	Pn	06 01 06.7	+0.1
FCV				eS	Sn	06 02 03.1	-0.6
SVB	Belmont	4.99	60	eP	Pn	06 01 06.9	-0.4
SVB				eS	Sn	06 02 01.9	-3.1
SVV	Soufriere Volc	5.04	59	eP	Pn	06 01 08.2	+0.2
SVV				eS	Sn	06 02 05.9	-0.4
TOSP	Speyside	5.07	84	eP	Pn	06 01 12.9	+4.5
SDV	Santo Domingo	5.24	250	Pn	Pn	06 01 11.6	+0.8
	9.3nm,0.3s,baz=78,slow=9.8,SNR=107						
SDV				Sn	Sn	06 02 10.7	-0.6
	25nm,0.3s,baz=159,slow=24,SNR=3.9						
SDV				Lg		06 02 39.6	
	39nm,0.3s,baz=14,slow=13,SNR=7.3						
SDV	Santo Domingo	5.24	250	ePn	Pn	06 01 11.9	+1.1
	170nm,0.8s						
SDV				eSn	Sn	06 02 11.1	-0.2
SDV				eSg	Sg	06 02 39.8	-1.0
ELOV	Elorza	5.31	226	⇑eP	Pn	06 01 12.0	+0.2
ELOV				eS	Sn	06 02 08.5	-4.6
MCLT	Moule a Chique	5.47	57	eP	Pn	06 01 13.5	-0.4
MCLT				eS	Sn	06 02 14.1	-2.8
FDF	Fort de France	5.91	48	eP	Pn	06 01 20.2	+0.2
FDF	Fort de France	5.91	48	ePn	Pn	06 01 19.9	-0.2
	110nm,0.6s						
FDF				eSn	Sn	06 02 25.6	-2.3
MVM	Montagne Vaucl	5.99	51	eP	Pn	06 01 22.1	+1.1
LUEV	Luepa	6.42	139	eP	Pn	06 01 26.2	-0.9
LUEV				eS	Sn	06 02 34.8	-5.7
VIRV	Villa del Rosa	6.63	268	eP	Pn	06 01 28.9	-1.0
VIRV				eS	Sn	06 02 38.9	-6.7
SKI	Saint Kitts	7.12	23	eP	Pn	06 01 37.7	+1.1
SKI				eS	Sn	06 02 52.2	-5.4
ICM	Isla Caja Muer	7.13	353	ePn	Pn	06 01 36.6	-0.2
ICM				eSn	Sn	06 02 49.5	-8.4
CELP	Cerrillos	7.32	353	ePn	Pn	06 01 39.1	-0.3
CRPR	Cabo Rojo, PR	7.33	349	ePn	Pn	06 01 39.4	-0.1
	29nm,0.6s						
CRPR				eSn	Sn	06 02 56.1	-6.8
CBYP	Canovanas	7.46	359	ePn	Pn	06 01 39.4	-2.0
CBYP				eSn	Sn	06 03 00.5	-5.6
LSP	Las Mesas	7.49	350	ePn	Pn	06 01 42.1	+0.4
MPR	Mayaguez	7.54	349	ePn	Pn	06 01 42.6	+0.2
SDDR	Presa de Saban	9.81	327	ePn	Pn	06 02 15.8	+2.3
SDDR				eSn	Sn	06 04 03.9	+0.1
ROSC	El Rosal	10.40	236	Pn	Pn	06 02 22.2	+0.6
	9.1nm,0.3s,baz=44,slow=0.6,SNR=31						
ROSC				Sn	Sn	06 04 20.4	+2.1
	1.5nm,0.3s,baz=92,slow=18,SNR=3.6						
GTBY	Guantanamo Bay	12.87	316	ePn	Pn	06 02 56.8	+1.2
BCIP	Isla Barro Col	14.05	265	ePn	Pn	06 03 12.1	+0.5
OTAV	Otavalo	16.46	231	eP	Pn	06 03 48.8	+5.2
	10nm,1.0s						
TGUH	Tegucigalpa,Un	21.35	281	eP	P	06 04 42.0	+2.0
ATAH	Atahualpa	21.73	216	P	P	06 04 45.4	+1.4
	13nm,1.0s,mb4.3,baz=33,slow=5.5,SNR=6.6						
ATAH				LR	LR	06 14 22.2	
	comp=Z,223nm,18.5s,MS3.6,baz=214,slow=40						
SIV	San Ignacio	26.97	170	P	P	06 05 34.2	-0.2
	1.4nm,0.7s,mb3.6,baz=19,slow=9.7,SNR=8.1						
TKL	Tuckaleechee C	29.74	329	LR	LR	06 18 30.5	
	comp=Z,133nm,20.6s,MS3.6,baz=75,slow=38						
BDFB	Brasilia	31.53	146	P	P	06 06 15.7	+0.8
	1.4nm,0.9s,mb3.8,baz=105,slow=23,SNR=2.7						
BDFB				LR	LR	06 19 33.8	
	comp=Z,97nm,19.3s,MS3.5,baz=65,slow=38						
LVC	Limon Verde	33.32	185	LR	LR	06 22 14.0	
	comp=Z,94nm,18.1s,MS3.5,baz=343,slow=40						
MIAR	Mount Ida	34.76	317	eP	P	06 06 42.2	-0.8
	2.8nm,0.7s,mb4.3						
CPUP	Villa Florida	37.75	168	P	P	06 07 07.2	-1.5
	1.2nm,0.6s,mb3.8,baz=345,slow=9.9,SNR=6.5						
CPUP				LR	LR	06 23 54.7	
	comp=Z,50nm,21.3s,MS3.3,baz=337,slow=38						
CPUP	Villa Florida	37.75	168	eP	P	06 07 07.2	-1.5
	7.5nm,0.6s,mb4.6						
KSU1	Kansas State U	39.43	321	eP	P	06 07 22.0	-0.6
	13nm,0.7s,mb4.8						
KSU1				e		06 07 28.7	
LCO	Las Campanas	39.84	187	eP	P	06 07 25.2	-0.9
	10.0nm,1.0s,mb4.5						
TXAR	Lajitas Array	39.95	303	P	P	06 07 26.3	-0.9
	0.1nm,0.4s,baz=128,slow=41,SNR=2.1						
TXAR	Lajitas Array	39.95	303	P	P	06 07 26.3	-0.9
CFAA	Coronel Fontan	42.20	183	P	P	06 07 43.7	-1.8
	0.2nm,0.8s,baz=3.1,slow=5.0,SNR=6.3						
SCHQ	Schefferville	43.96	359	P	P	06 07 59.8	+0.3
	9.1nm,0.8s,mb4.5,baz=148,slow=6.9,SNR=8.4						
SDCO	Great Sand Dun	44.66	314	eP	P	06 08 07.1	+1.7
	18nm,1.8s,mb4.6						
ISCO	Idaho Springs	45.68	316	eP	P	06 08 14.9	+1.5
	6.6nm,1.3s,mb4.4						
WUAZ	Wupatki	48.15	308	eP	P	06 08 35.1	+2.2
	3.1nm,0.7s,mb4.5						
SRU	San Rafael	48.81	313	eP	P	06 08 39.7	+1.8
	36nm,2.1s,mb5.0						
PDAR	Pinedale Array	49.68	318	P	P	06 08 44.8	+0.3
	1.8nm,0.7s,mb4.2,baz=116,slow=11,SNR=17						
PDAR				pP	pP	06 08 50.9	+3.1
	3.3nm,0.5s,baz=121,slow=11,SNR=18						
PDAR				PcP	PcP	06 10 04.6	-1.1
	0.4nm,0.7s,baz=111,slow=5.1,SNR=1.7						
BW06	Boulder Array	49.68	318	eP	P	06 08 45.0	+0.5
	29nm,1.9s,mb5.0						
RLMT	Red Lodge	50.59	321	eP	P	06 08 52.4	+1.0
	28nm,1.8s,mb4.9						
REDW	Red Top Meadow	50.80	318	eP	P	06 08 53.8	+0.9
	18nm,1.6s,mb4.8						
PLCA	Paso Flores	51.44	185	P	P	06 08 56.8	-0.9
	2.1nm,0.8s,mb4.2,baz=335,slow=8.9,SNR=6.0						
PLCA				pP	pP	06 09 03.5	+2.6
	4.4nm,0.8s,baz=1.6,slow=8.0,SNR=7.0						
PLCA				LR	LR	06 33 51.3	
	comp=Z,177nm,18.1s,MS4.1,baz=335,slow=40						
PLCA	Paso Flores	51.44	185	eP	P	06 08 55.1	-2.5
	4.0nm,0.8s,mb4.4						
PLCA				e		06 09 03.4	
NVAR	Mina Array Bea	54.32	310	P	P	06 09 19.9	+0.7
	0.6nm,0.8s,mb3.6,baz=106,slow=7.7,SNR=4.0						
NVAR				pP	pP	06 09 26.6	+4.2
	1.1nm,0.7s,baz=120,slow=5.6,SNR=7.5						
OHCM	Honcut	56.95	310	eP	P	06 09 39.9	+1.9
ESDC	Sonseca Array	61.48	51	P	P	06 10 08.9	-0.5
	0.2nm,0.4s,mb3.6,baz=246,slow=29,SNR=3.6						
ESDC				pP	pP	06 10 16.3	+3.6
	0.4nm,0.4s,baz=267,slow=7.4,SNR=2.9						
ESDC	Sonseca Array	61.48	51	P	P	06 10 08.9	-0.5
ESDC				pP	pP	06 10 16.3	+3.6
YKA	Yellowknife Ar	62.35	337	P	P	06 10 14.0	-0.8
	1.9nm,0.7s,mb4.3,baz=114,slow=7.0,SNR=32						
YKA				pP	pP	06 10 20.5	+2.4
	1.1nm,0.5s,baz=113,slow=6.8,SNR=13						
YKA	Yellowknife Ar	62.35	337	P	P	06 10 14.0	-0.8
YKA				pP	pP	06 10 20.5	+2.4
SUMG	Summit	63.88	9	eP	P	06 10 26.9	+2.1
	24nm,0.8s,mb5.3						
TORD	Torodi Ar. Bea	65.77	80	P	P	06 10 35.6	-2.6
	0.7nm,1.0s,mb3.6,baz=291,slow=5.4,SNR=3.0						
DAWY	Dawson	73.27	334	eP	P	06 11 24.8	+1.2
EGAK	Eagle	74.15	334	eP	P	06 11 29.8	+1.0
	11nm,0.9s,mb4.8						
AQU	L'Aquila	74.77	49	eP	P	06 11 33.0	+0.2
WMQ	Urumqi	120.51	22	ePKP	PKPdf	06 18 46.3	+1.8
MDJ	Mudanjiang	123.17	347	PKP	PKPdf	06 18 48.3	-1.3
HHC	Hu-ho-hao-te	128.58	3	ePKP	PKPdf	06 18 57.3	-2.8
HHC				PP	PP	06 21 05.5	+1.5
HHC				PKS		06 22 32.5	
HHC				SKS	SKSdf	06 26 03.5	-8.6
HHC				SKKS	SKKSac	06 27 53.5	-9.5
HHC				PP	PP		
	comp=Z,80nm,5.0s						
HHC				LR	LR		
	comp=N,144nm,15.6s,MS4.9						
HHC				LR	LR		
	comp=E,140nm,15.6s,MS4.9						
HHC				LR	LR		
	comp=Z,139nm,18.0s,MS4.7						
BJI	Beijing	129.43	358	PKP	PKPdf	06 19 01.8	+0.1
BJI				SS	SS	06 38 30.0	-0.4
BJI				LR	LR		
	comp=N,148nm,15.1s,MS4.9						
BJI				LR	LR		
	comp=E,160nm,17.8s,MS4.9						
BJI				LR	LR		
	comp=Z,38nm,18.4s,MS4.1						
LZH	Lanzhou	132.36	12	ePKP	PKPdf	06 19 01.8	-5.6
LZH				XPKP		06 19 05.0	
NJ2	Nanjing	137.21	354	ePKP	PKPdf	06 19 12.0	-4.6
GYA	Guiyang	142.25	11	ePKP	PKPdf	06 19 25.0	-0.9
GYA				PP	PP	06 22 35.3	+4.9
GYA				PP	PP		
	comp=Z,80nm,8.4s						
KMI	Kunming	142.58	17	PKP	PKPdf	06 19 29.3	+2.8
CMAR	Chiang Mai Arr	147.23	28	PKPbc	PKPbc	06 19 36.0	-0.9
	comp=Z,0.9nm,0.4s,baz=334,slow=3.3,SNR=7.3						

ISCJB ***26*** *06:10:31.5±0.5,4581N±003×1739E±002,h4km±4km, Error ellipse: s-maj=5.2km s-min=2.9km az=179.7*
CSEM ***26*** *06:10:32.0±0.2,4573N×1738E,h17km±1km,ML2.3/4, Error ellipse: s-maj=3.7km s-min=1.9km az=177.0*
VIE ***26*** *06:10:33.2±0.4,4584N×1735E,h11km±2km,mb2.2/3, ML2.3/4,Error ellipse: s-maj=4.1km s-min=1.6km az=179.0 73 km WSW of Pecs*
PRU ***26*** *06:10:36.2,4609N×1748E,h0km*
NEIC ***26*** *06:10:36.2±1.7,4575N×1703E,h14km±11km,ML2.9(ZAG), Error ellipse: s-maj=11.4km s-min=10.1km az=96.0*
ISC 26 06:10:33.3±0.4,**4579N**±003×**1736E**±002,**h12**km±3km**,n42,** σ1s**11**/73**,5C-4D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RHK3	Tenkes	0.63	81	ePn	Pg	06 10 45.8	+0.2
RHK3				eSn	Sg	06 10 56.1	+2.2
SISC	Sisak	0.76	246	ePg	Pg	06 10 47.7	-0.4
SISC				Sg	Sg	06 10 58.7	+0.8
PKSM	Moragy	0.99	64	ePn	Pn	06 10 51.7	-1.3
PKSM	Moragy	0.99	64	ePg	Pg	06 10 52.3	0.0
PKSM				eSn	Sn	06 11 05.9	-1.0
PKSM				eSg	Sg	06 11 06.2	+1.0
KOGS	Kog	1.01	311	i Pg	Pg	06 10 52.7	-0.1
KOGS				i Sg	Sg	06 11 06.9	+0.9
GCIS	Gornji Cirnik	1.21	274	i Pg	Pg	06 10 55.1	-1.5
GCIS				i Sg	Sg	06 11 12.3	0.0
GCIS							
	comp=Z,24nm,0.1s						
GCIS	Gornji Cirnik	1.21	274	i Pg	Pg	06 10 55.1	-1.5
GCIS				i Sg	Sg	06 11 12.3	0.0
GOLS	Golise	1.23	281	i Pg	Pg	06 10 55.6	-1.3
GOLS				i Sg	Sg	06 11 14.9	+2.0
GOLS							
	comp=Z,36nm,0.2s						
GOLS	Golise	1.23	281	i Pg	Pg	06 10 55.6	-1.3
GOLS				i Sg	Sg	06 11 14.9	+2.0
GOLS	Golise	1.23	281	i Pg	Pg	06 10 55.6	-1.3
GOLS				i Sg	Sg	06 11 14.9	+2.0
CRES	Cresnjev	1.33	272	i Pg	Pg	06 10 56.8	-2.0
CRES				eSg	Sg	06 11 16.3	+0.2
CRES							
	comp=Z,20nm,0.1s						
CRES	Cresnjev	1.33	272	i Pg	Pg	06 10 56.8	-2.0
CRES				eSg	Sg	06 11 16.3	+0.2
CRES	Cresnjev	1.33	272	i Pg	Pg	06 10 56.8	-2.0
CRES				eSg	Sg	06 11 16.3	+0.2
CESS	Cesta pri Krsk	1.34	279	i Pg	Pg	06 10 57.2	-1.8
CESS				eSg	Sg	06 11 17.3	+1.0
CESS							
	comp=Z,33nm,0.2s						
CESS	Cesta pri Krsk	1.34	279	i Pg	Pg	06 10 57.2	-1.7
CESS				eSg	Sg	06 11 17.3	+1.0
CESS	Cesta pri Krsk	1.34	279	i Pg	Pg	06 10 57.2	-1.8
CESS				eSg	Sg	06 11 17.3	+1.0
DOBS	Dobrina	1.37	286	ePg	Pg	06 10 57.1	-2.4
LEGS	Legarje	1.44	277	ePn	Pn	06 10 58.2	-0.9
LEGS				eSn	Sn	06 11 20.2	+2.3
GROS	Grobnik	1.46	298	i Pn	Pn	06 10 58.5	-0.9
BOJS	Bojanci	1.50	260	i Pn	Pn	06 10 59.5	-0.6
BOJS				i Sn	Sn	06 11 21.2	+1.6
PDKS	Podkum	1.67	280	i Pn	Pn	06 11 05.7	+3.4
ZAVS	Zavodnje	1.75	292	i Pn	Pn	06 11 03.5	0.0
VISS	Visnje	1.76	271	i Pn	Pn	06 11 03.0	-0.6
PERS	Pernice	1.77	299	i Pn	Pn	06 11 03.1	-0.7
FRGS	Fruska Gora	1.84	109	ePn	Pn	06 11 03.7	-0.9
VNDS	Vrh nad Dolski	1.88	280	ePn	Pn	06 11 04.5	-0.7
ARSA	Arzberg	1.93	320	⇓iPn	Pn	06 11 06.2	+0.2
ARSA				⇑iSg	Sg	06 11 36.1	+0.7
	comp=Z,7.9nm,0.5s						
SOP	Sopron	1.97	344	⇓ePn	Pn	06 11 09.4	+2.9
SOP				eSn	Sn	06 11 35.8	+4.6
BUD	Budapest	2.05	34	ePn	Pn	06 11 03.5	-4.0
BUD	Budapest	2.05	34	⇑ePn	Pn	06 11 03.6	-3.9
BUD				eSn	Sn	06 11 41.5	+8.5
OBKA	Obir	2.08	291	⇑iPn	Pn	06 11 07.9	-0.1
OBKA				⇓iPg	Pg	06 11 12.7	-0.5
OBKA				⇓iSg	Sg	06 11 40.4	+0.3
	comp=Z,9.5nm,0.2s						
NVLJ	Novalja	2.14	236	i Pn	Pn	06 11 09.3	+0.4
NVLJ				Sn	Sn	06 11 35.6	+0.3
VOY	Vojsko	2.43	277	ePn	Pn	06 11 19.5	+6.7
VOY				eSn	Sn	06 11 52.3	+10
PSZ	Piszkesteto	2.75	38	Pn	Pn	06 11 18.3	+1.1
PSZ	Piszkesteto	2.75	38	ePn	Pn	06 11 24.7	+7.5
PSZ				eSn	Sn	06 12 03.9	+14
PSZ	Piszkesteto	2.75	38	ePn	Pn	06 11 23.8	+6.6
PSZ				eSn	Sn	06 11 59.9	+10
STON	Ston	2.93	175	ePn	Pn	06 11 20.6	+0.9
STON				Sn	Sn	06 11 58.0	+3.3
MOA	Molln	2.96	315	⇑iPn	Pn	06 11 19.9	-0.2
MOA				⇑iSn	Sn	06 11 55.3	-0.1
BZS	Buzias	2.99	92	ePn	Pn	06 11 20.4	-0.1
BZS				eSg	Sg	06 12 09.5	+0.3
GRUS	Gruza	3.05	127	ePn	Pn	06 11 20.5	-0.8
VRAC	Vranov	3.56	352	ePn	Pn	06 11 28.1	-0.2
KHC	Kasperske Hory	4.21	324	ePN	Pn	06 11 38.8	+1.5
KHC				eSN	Sn	06 12 25.2	-1.2

ISCJB ***26*** *06:38:00.0±0.3,632S±005×15491E±005,h48km, mb4.8/39,MS3.9/15,Error ellipse: s-maj=7.3km s-min=6.5km az=17.9*
IDC ***26*** *06:38:01.5±0.4,636S×15493E,h48km±3km,mb4.3/15, mb1 4.5/17,mb1mx4.4/19,mbtmp4.3/17,MS3.8/14, Ms1 3.8/14,ms1mx3.7/21,Error ellipse: s-maj=11.2km s-min=10.5km az=107.0*
BJI ***26*** *06:38:07.6,760S×15470E,h44km,mB5.2,mb5.0*
NEIC ***26*** *06:38:10.7±0.5,760S×15465E,mb5.1/11,Error ellipse: s-maj=16.1km s-min=11.0km az=135.0*
MOS ***26*** *06:38:11.0±2.6,738S×15478E,h61km,mb5.1/10,Error ellipse: s-maj=10.5km s-min=8.9km az=57.4*
ISC 26 06:38:02.1±0.3,**636S**±005×**15487E**±005,**h50**km, **h50**km±1.0km**:pP-P,n324,**σ0s**89**/73,**mb4.8**/39,**MS3.9**/15, **96C-102D,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.88	122	P	Pn	06 39 27.2	+0.4
	28nm,0.3s,baz=338,slow=0.8,SNR=4.4						
HNR				S	Sn	06 40 34.5	+1.6
	12nm,0.3s,baz=350,slow=19,SNR=3.0						
HNR				LR	LR	06 40 45.2	
	comp=Z,273nm,20.6s,baz=302,slow=28						
HNR	Honiara	5.88	122	P	Pn	06 39 27.3	+0.5
HNR				S	Sn	06 40 34.6	+1.6
PMG	Port Moresby	8.22	248	P	Pn	06 40 00.3	+1.5
	32nm,0.3s,baz=59,slow=5.1,SNR=64						
PMG				S	Sn	06 41 35.0	+4.6
	46nm,0.3s,baz=207,slow=12,SNR=8.6						
PMG				LR	LR	06 43 05.2	
	comp=Z,2μm,20.6s,baz=50,slow=37						
PMG	Port Moresby	8.22	248	d iP	Pn	06 40 01.2	+2.4
PMG	Port Moresby	8.22	248	ePn	Pn	06 40 01.4	+2.6
	614nm,0.7s						
PMG				eSn	Sn	06 41 36.5	+6.2
COEN	Coen	13.76	236	ePn	Pn	06 41 14.6	-0.1
	44nm,0.8s						
CTA	Charters Tower	16.01	211	P	Pn	06 41 45.1	+1.1
	0.8nm,0.3s,baz=38,slow=17,SNR=12						
CTA				LR	LR	06 45 57.5	
	comp=Z,122nm,20.4s,baz=38,slow=30						
CTA	Charters Tower	16.01	211	eP	Pn	06 41 46.0	+1.9
	15nm,0.9s						
CTAO	Charters Tower	16.01	211	eP	Pn	06 41 43.5	-0.6
GUMO	Guam	22.16	333	LR	LR	06 50 51.7	
	comp=Z,151nm,18.6s,MS3.4,baz=166,slow=35						
WRAB	Tennant Creek	24.07	234	c iP	P	06 43 13.7	+0.7
WRAB	Tennant Creek	24.07	234	eP	P	06 43 13.3	+0.3
WB2	Warramunga Arr	24.07	234	⇑iP	P	06 43 13.3	+0.3
WB2				eSCP	PcP	06 47 07.7	+14
WB2				eS	S	06 47 25.9	-1.3
WB2				eSCS	PcS	06 50 46.8	+13
WB2	Warramunga Arr	24.07	234	eP	P	06 43 13.5	+0.5
WRA	Warramunga Arr	24.08	234	P	P	06 43 13.7	+0.6
	24nm,0.9s,mb4.6,baz=57,slow=9.5,SNR=44						
WRA				PcP	PcP	06 46 53.1	-0.6
	0.9nm,0.3s,baz=64,slow=2.8,SNR=6.4						
WRA				pPcP		06 47 07.6	
	5.4nm,0.5s,baz=57,slow=2.7,SNR=11						
WRA				S	S	06 47 29.0	+1.6
	6.6nm,1.2s,baz=60,slow=16,SNR=8.3						
WRA				LR	LR	06 52 34.8	
	comp=Z,460nm,19.4s,MS4.0,baz=60,slow=36						
WRA	Warramunga Arr	24.08	234	P	P	06 43 13.7	+0.6
WRA						06 47 07.6	
WRA				S	S	06 47 29.0	+1.6
ARMA	Armidale	24.13	187	eP	P	06 43 13.2	-0.2
ASAR	Alice Springs	26.51	227	P	P	06 43 34.9	-0.2
	3.7nm,0.8s,mb4.0,baz=59,slow=8.8,SNR=71						
ASAR				pP	pP	06 43 46.7	-1.2
	10nm,0.7s,baz=59,slow=9.3,SNR=19						
ASAR				pPcP		06 47 12.7	
	8.5nm,0.8s,baz=64,slow=2.4,SNR=15						
STKA	Stephens Creek	28.26	204	P	P	06 43 49.8	-0.9
	1.5nm,0.5s,mb3.9,baz=17,slow=7.8,SNR=10						
STKA				pPcP		06 47 16.6	
	6.5nm,0.8s,baz=27,slow=4.3,SNR=5.7						
STKA				LR	LR	06 55 16.9	
	comp=Z,561nm,18.2s,MS4.2,baz=22,slow=37						
STKA	Stephens Creek	28.26	204	eP	P	06 43 49.3	-1.4
	3.6nm,0.6s,mb4.2						
STKA				eSCP	PcP	06 47 16.4	+13
STKA	Stephens Creek	28.26	204	eP	P	06 43 49.4	-1.3
	1.7nm,0.8s,mb3.7						
FITZ	Fitzroy Crossi	30.80	245	⇑iP	P	06 44 12.3	-1.1
	29nm,0.7s,mb5.2						
FITZ				eSCP	PcP	06 47 22.8	+13
FITZ	Fitzroy Crossi	30.80	245	eP	P	06 44 12.6	-0.8
	19nm,0.6s,mb5.1						
FORT	Forrest	34.97	223	eP	P	06 44 49.1	-0.5
	12nm,0.6s,mb5.0						
FORT				e	pP	06 45 00.3	-2.4
FORT	Forrest	34.97	223	eP	P	06 44 48.0	-1.7
	41nm,0.7s,mb5.5						
FORT				epP	pP	06 44 59.4	-3.3
MBWA	Marble Bar	37.05	243	eP	P	06 45 06.4	-1.1
	27nm,1.5s,mb4.9						

URZ	**Urewera**	**37.62**	**151**	P		**P**	**06 45 12.2**	**0.0**
	7.2nm,0.7s,mb4.5,baz=89,slow=2.8,SNR=6.0							
RPZ	**Rata Peaks**	**39.84**	**162**	P		**P**	**06 45 28.3**	**-2.4**
	10nm,0.8s,mb4.6,baz=346,slow=4.2,SNR=2.6							
MUN	**Mundaring**	**44.15**	**230**	*e*P		**P**	**06 46 05.7**	**-0.3**
SSLB	**Suanglung**	**44.65**	**313**	*e*P		pP	06 46 23.4	-0.1
MJAR	**Matsushiro Arr**	**45.44**	**341**	LR		LR	07 01 57.8	
	comp=Z,82nm,18.5s,MS3.7,baz=10.0,slow=32							
KSRS	**Korea Array**	**50.32**	**332**	P		**P**	**06 46 53.4**	**-0.5**
	3.4nm,0.9s,mb4.4,baz=152,slow=8.1,SNR=7.9							
KSRS				pP		pP	06 47 07.0	-0.5
	5.3nm,0.9s,baz=149,slow=0.9,SNR=6.2							
KSRS				LR		LR	07 05 32.2	
	comp=Z,71nm,19.3s,MS3.7,baz=301,slow=33							
NJ2	**Nanjing**	**51.35**	**320**	*e*P		**P**	**06 47 07.5**	**+5.7**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.5s,mb5.0							
WHN	**Wuhan**	**53.40**	**316**	⇑P		pP	06 47 32.0	+1.3
YSS	**Yuzh-Sakhalins**	**54.15**	**350**	*i* P		pP	06 47 37.4	+1.5
YSS				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.8							
MDJ	**Mudanjiang**	**55.60**	**338**	P		**P**	**06 47 41.5**	**+8.8**
MDJ				AP		pP	06 48 20.5	+34
MDJ				XP		sP	06 48 37.5	+45
MDJ				PP		PP	06 49 46.8	+9.3
MDJ				SCP		ScP	06 52 21.3	-5.6
MDJ				PCS		PcS	06 52 40.0	+8.0
MDJ				S		**S**	**06 55 08.3**	**-6.7**
MDJ				AMB	AMB			
	comp=Z,56nm,5.1s							
MDJ				LR		LR		
	comp=N,35nm,36.6s,MS3.4							
MDJ				LR		LR		
	comp=E,54nm,41.3s,MS3.4							
MDJ				LR		LR		
	comp=Z,61nm,27.2s							
CN2	**Changchun**	**56.56**	**335**	*e*P		pP	06 47 52.0	-1.4
CN2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.9							
GYA	**Guiyang**	**56.97**	**307**	*e*P		**P**	**06 47 47.8**	**+5.0**
GYA				AP		pP	06 48 28.5	+32
GYA				PCP		PcP	06 48 46.0	+8.3
GYA				PP		PP	06 49 56.8	+6.8
GYA				SCP		ScP	06 52 25.3	-8.1
GYA				PCS		PcS	06 52 44.0	+5.3
GYA				S		**S**	**06 55 20.5**	**-13**
GYA				XS		sS	06 56 30.5	+34
GYA				SCS		ScS	06 57 16.3	-12
GYA				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.8							
GYA				AMB	AMB			
	comp=Z,80nm,5.2s							
HABR	**Khabarovsk**	**57.30**	**344**	*e*P		pP	06 47 57.1	-1.5
HABR				*e**PP		pP	06 48 13.1	+15
HABR				*e*			06 48 49.4	
HABR				*e*			06 50 05.8	
HABR				*e*S		**S**	**06 55 52.7**	**+15**
HABR				*e*			06 56 11.3	
HABR				*e*			06 57 42.0	
HABR				*e*SS		SS	06 59 45.4	+18
BJI	**Beijing**	**58.33**	**326**	P		**P**	**06 47 59.0**	**+6.9**
BJI				S		**S**	**06 55 43.8**	**-7.2**
BJI				SS		SS	06 59 39.8	-4.1
BJI				AMB	AMB			
	comp=Z,4.0nm,0.5s,mb4.7							
BJI				AMB	AMB			
	comp=Z,81nm,5.7s							
BJI				LR		LR		
	comp=N,232nm,26.0s,MS4.3							
BJI				LR		LR		
	comp=E,192nm,24.9s,MS4.3							
BJI				LR		LR		
	comp=Z,74nm,22.2s,MS3.8							
XAN	**Xi'an**	**59.16**	**316**	P		pP	06 48 12.0	+0.1
XAN				AMB	AMB			
	comp=Z,4.0nm,0.6s,mb4.6							
PET	**Petropavlovsk**	**59.24**	**3**	⇓*i* P		pP	06 48 13.8	+1.7
PET				pmax	pmax			
	comp=Z,63nm,1.7s,mb5.4							
PETK	**Petropavlovsk-**	**59.28**	**2**	P		**P**	**06 47 58.8**	**+0.3**
	comp=Z,7.5nm,0.8s,mb4.8,baz=160,slow=7.4,SNR=5.7							
PETK				pP		pP	06 48 12.4	0.0
	comp=Z,8.7nm,0.6s,baz=158,slow=5.4,SNR=6.1							
PETK				LR		LR	07 08 17.0	
	comp=Z,138nm,22.0s,MS4.0,baz=178,slow=31							
KMI	**Kunming**	**59.56**	**304**	P		**P**	**06 48 02.5**	**+1.5**
KMI				AMB	AMB			
	comp=Z,18nm,1.1s,mb5.0							
KMI				AMB	AMB			
	comp=Z,75nm,4.7s							
KMI				LR		LR		
	comp=N,202nm,24.5s,MS4.3							
KMI				LR		LR		
	comp=E,162nm,26.0s,MS4.3							
KMI				LR		LR		
	comp=Z,144nm,21.7s,MS4.1							
KMI	**Kunming**	**59.56**	**304**	P		pP	06 48 16.3	+1.4
KMI				AMB	AMB			
	comp=Z,44nm,1.0s,mb5.4							
CMAR	**Chiang Mai Arr**	**60.40**	**295**	P		**P**	**06 48 07.5**	**+0.7**
	comp=Z,15nm,0.8s,mb5.1,baz=116,slow=5.0,SNR=32							
CMAR				pP		pP	06 48 22.2	+1.4
	comp=Z,44nm,0.8s,baz=117,slow=5.2,SNR=29							
CMAR				LR		LR	07 12 58.4	
	comp=Z,62nm,18.5s,MS3.8,baz=267,slow=35							
CHTO	**Chiang Mai**	**60.51**	**296**	*e*P		pP	06 48 21.4	-0.1
HHC	**Hu-ho-hao-te**	**61.51**	**324**	*e*P		**P**	**06 48 21.5**	**+7.6**
HHC				AP		pP	06 48 59.3	+31
HHC				XP		sP	06 49 16.8	+43
HHC				PP		PP	06 50 38.8	+8.9
HHC				PCS		PcS	06 53 04.0	+5.7
HHC				*e*S		**S**	**06 56 23.5**	**-8.4**
HHC				SCS		ScS	06 57 53.0	-8.3
HHC				SS		SS	07 00 26.0	-7.9
HHC				AMB	AMB			
	comp=Z,16nm,0.7s,mb5.3							
HHC				AMB	AMB			
	comp=Z,80nm,5.0s							
HHC				LR		LR		
	comp=N,183nm,16.8s,MS4.4							
HHC				LR		LR		
	comp=E,119nm,18.0s,MS4.4							
HHC				LR		LR		
	comp=Z,112nm,18.0s,MS4.1							
HIA	**Hailar**	**63.29**	**335***c i* P			pP	06 48 39.0	-0.7
HIA	**Hailar**	**63.29**	**335**	*e*P		pP	06 48 39.2	-0.5
	comp=Z,22nm,0.9s							
ULN	**Ulaanbaatar**	**68.40**	**328**	*e*P		pP	06 49 12.3	-0.4
SONM	**Songino Array**	**68.73**	**327**	P		**P**	**06 49 00.7**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.4,baz=131,slow=6.1,SNR=22							
SONM				pP		pP	06 49 15.4	+0.5
	comp=Z,5.8nm,0.8s,baz=128,slow=4.8,SNR=14							
SONM				LR		LR	07 20 04.5	
	comp=Z,60nm,18.4s,MS3.9,baz=177,slow=37							
SHL	**Shillong**	**68.87**	**300**	*e*P		**P**	**06 49 01.5**	**-0.5**
SEY	**Seymchan**	**69.12**	**359**	*e*P		pP	06 49 17.1	+0.2
LSA	**Lhasa**	**70.81**	**304**	P		pP	06 49 28.5	+0.4
LSA				AMB	AMB			
	comp=Z,30nm,0.9s,mb5.2							
LSA	**Lhasa**	**70.81**	**304**	*e*P		pP	06 49 27.7	-0.4
LSA				pmax	pmax			
	comp=Z,26nm,0.8s,mb5.2							
LSA	**Lhasa**	**70.81**	**304**	*e*P		pP	06 49 27.7	-0.4
	comp=Z,26nm,0.8s							
YAK	**Yakutsk**	**70.91**	**348**	*e*P		pP	06 49 26.5	-1.5
YAK				pmax	pmax			
	comp=Z,22nm,1.4s,mb4.9							
YAK				pmax	pmax			
	comp=E,5.0nm,1.5s							
YAK				pmax	pmax			
	comp=N,8.0nm,1.5s							
ZAK	**Zakamensk**	**71.89**	**328**	*e*P		**P**	**06 49 19.0**	**-0.9**
ZAK				*e*		pP	06 49 32.3	-1.8
ZAK				*e*			06 49 47.4	
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
BOD	**Bodaibo**	**71.98**	**338**	*e*P		pP	06 49 32.8	-1.7
TLY	**Talaya**	**72.45**	**329***d i* P			pP	06 49 37.1	-0.4
TLY				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
TAPN	**Taplejung**	**72.97**	**301**	*e*P		**P**	**06 49 27.6**	**+0.8**
TAPN	**Taplejung**	**72.97**	**301**	*e*P		pP	06 49 40.9	-0.2
	comp=Z,100nm,1.0s							
ODAN	**Odare**	**73.10**	**300**	*e*P		**P**	**06 49 28.3**	**+0.6**
ODAN	**Odare**	**73.10**	**300**	*e*P		pP	06 49 41.6	-0.3
	comp=Z,162nm,0.8s							
RAMN	**Ramite**	**73.81**	**300**	*e*P		**P**	**06 49 32.2**	**+0.4**
RAMN	**Ramite**	**73.81**	**300**	*e*P		pP	06 49 45.7	-0.4
JIRN	**Jiri**	**74.35**	**301**	*e*P		**P**	**06 49 35.7**	**+0.7**
JIRN	**Jiri**	**74.35**	**301**	*e*P		pP	06 49 49.0	-0.3
	comp=Z,52nm,0.6s							
BILL	**Bilibino**	**74.66**	**4**	*d i* P		pP	06 49 50.5	+0.3
BILL				*i*			06 50 01.4	
BILL					pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2							
BILL	**Bilibino**	**74.66**	**4**	*e*P		pP	06 49 50.5	+0.3
	comp=Z,23nm,0.8s							
GUN	**Gumba**	**74.68**	**301**	*e*P		**P**	**06 49 37.6**	**+0.7**
	comp=Z,26nm,0.7s,mb5.2							
GUN	**Gumba**	**74.68**	**301**	*e*P		pP	06 49 51.0	-0.2
	comp=Z,90nm,0.6s							
PKI	**Pulchoki**	**74.99**	**301**	*e*P		**P**	**06 49 39.0**	**+0.3**
PKI	**Pulchoki**	**74.99**	**301**	*e*P		pP	06 49 52.4	-0.6
PKIN	**Phulchoki**	**75.00**	**301**	*e*P		**P**	**06 49 38.5**	**-0.3**
	comp=Z,6.1nm,0.4s,mb4.9							
KKN	**Kakani**	**75.16**	**301**	*e*P		**P**	**06 49 40.0**	**+0.4**
KKN	**Kakani**	**75.16**	**301**	*e*P		pP	06 49 53.4	-0.6
	comp=Z,82nm,0.7s							
PALK	**Pallekele**	**75.22**	**279**	*e*P		pP	06 49 54.2	-0.4
PALK					pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2							
PALK	**Pallekele**	**75.22**	**279**	*e*P		pP	06 49 54.1	-0.4
	comp=Z,32nm,1.0s							
DMN	**Daman**	**75.26**	**301**	*e*P		**P**	**06 49 41.0**	**+0.8**
DMN	**Daman**	**75.26**	**301**	*e*P		pP	06 49 54.3	-0.3
	comp=Z,142nm,0.9s							
GKN	**Gorkha**	**75.77**	**301**	*e*P		**P**	**06 49 43.3**	**+0.2**
GKN	**Gorkha**	**75.77**	**301**	*e*P		pP	06 49 56.7	-0.8
	comp=Z,125nm,0.9s							
KOLN	**Koldanda**	**76.59**	**300**	*e*P		**P**	**06 49 47.8**	**0.0**
KOLN	**Koldanda**	**76.59**	**300**	*e*P		pP	06 50 01.4	-0.8
	comp=Z,94nm,0.7s							
DANN	**Dangsing**	**76.60**	**301**	*e*P		**P**	**06 49 47.7**	**-0.2**
DANN	**Dangsing**	**76.60**	**301**	*e*P		pP	06 50 01.4	-0.8
	comp=Z,64nm,0.7s							
WMQ	**Urumqi**	**78.28**	**317**	*e*P		**P**	**06 50 01.8**	**+4.9**
HYB	**Hyderabad**	**78.94**	**289**	*i* P		pP	06 50 14.0	-1.5
HYB	**Hyderabad**	**78.94**	**289**	*e*P		pP	06 50 14.0	-1.5
TIXI	**Tiksi**	**79.71**	**352**	⇑*i*P		pP	06 50 19.7	+1.1
TIXI				pmax	pmax			
	comp=Z,6.0nm,1.3s,mb4.4							
PMR	**Palmer**	**80.26**	**24**	*e*P		pP	06 50 21.6	-0.1
PMR				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0							
PMR	**Palmer**	**80.26**	**24**	*e*P		pP	06 50 21.6	-0.1
	comp=Z,20nm,1.0s							
MCK	**McKinley**	**81.51**	**22**	*e*P		pP	06 50 27.9	-0.5
COLA	**College**	**82.53**	**21**	*e*P		pP	06 50 33.1	-0.7
COLA				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.7							
COLA	**College**	**82.53**	**21**	*e*P		pP	06 50 33.1	-0.7
	comp=Z,5.3nm,0.7s							
MK31	**Makanchi Array**	**82.84**	**319**	*e*P		pP	06 50 35.0	-0.8
MKAR	**Makanchi Array**	**82.84**	**319**	P		**P**	**06 50 20.9**	**-0.4**
	comp=Z,6.2nm,0.8s,mb4.7,baz=103,slow=5.3,SNR=37							
MKAR				pP		pP	06 50 34.9	-0.9
	comp=Z,23nm,0.8s,baz=99,slow=4.6,SNR=39							
MKAR				LR		LR	07 27 37.3	
	comp=Z,63nm,20.4s,MS4.0,baz=14,slow=36							
ZAA0	**Zalesovo Array**	**83.58**	**326**	*e*P		pP	06 50 37.1	-2.3
ZALV	**Zalesovo Beam**	**83.58**	**326**	P		**P**	**06 50 23.1**	**-1.8**
	comp=Z,4.1nm,0.8s,mb4.6,baz=104,slow=6.3,SNR=13							
ZALV				pP		pP	06 50 36.9	-2.5
	comp=Z,20nm,0.8s,baz=115,slow=5.6,SNR=23							
HYT	**Haines Junctio**	**84.86**	**27**	*e*P		pP	06 50 46.4	+0.6
MAW	**Mawson**	**84.94**	**203**	P		**P**	**06 50 30.9**	**-0.7**
	comp=Z,2.5nm,0.5s,mb4.6,baz=70,slow=7.1,SNR=9.9							
MAW				pP		pP	06 50 44.6	-1.6
	comp=Z,14nm,0.9s,baz=80,slow=7.4,SNR=7.5							
MAW	**Mawson**	**84.94**	**203**	*e*P		**P**	**06 50 30.6**	**-1.0**
	comp=Z,4.1nm,0.8s,mb4.6							
MAW				*e*		pP	06 50 44.0	-2.1
MAW	**Mawson**	**84.94**	**203**	*e*P		**P**	**06 50 31.0**	**-0.5**
MAW						pP	06 50 44.6	-1.6
EGAK	**Eagle**	**84.98**	**23**	*e*P		pP	06 50 46.8	+0.5
KURK	**Kurchatov**	**86.26**	**322***c i* P			pP	06 50 51.7	-1.3
KURK				pmax	pmax			
	comp=Z,11nm,1.3s,mb4.9							
KURK	**Kurchatov**	**86.26**	**322**	*e*P		pP	06 50 51.3	-1.7
	comp=Z,6.3nm,1.2s							
DLBC	**Dease Lake**	**87.66**	**31**	*e*P		pP	06 51 00.1	+0.5
AML	**Almayashu**	**87.71**	**313**	*e*P		pP	06 50 58.7	-1.6
	comp=Z,14nm,0.9s							
PKM	**Peak Mountain**	**89.76**	**55**	⇑P		pP	06 51 12.5	+2.3
	baz=91							
BEKR	**Beckwourth**	**90.03**	**50**	⇓P		pP	06 51 12.5	+1.2
	baz=92							
F05A	**White Salmon**	**90.12**	**44**	⇑P		pP	06 51 12.6	+1.0
	baz=92							
WCN	**Washoe City**	**90.41**	**51**	⇓P		pP	06 51 14.7	+1.6
	baz=92							
O06A	**Flanigan**	**90.47**	**50**	⇓P		pP	06 51 14.1	+0.7
	baz=92							
R06C	**Coleville**	**90.54**	**51**	⇓P		pP	06 51 14.5	+0.7
	baz=92							
N06A	**Buffalo Meadow**	**90.55**	**49**	⇓P		pP	06 51 14.0	+0.3
	baz=92							
J06A	**Christmas Vall**	**90.66**	**47**	⇑P		pP	06 51 14.3	+0.1
	baz=92							
H06A	**Lindquist Farm**	**90.74**	**45**	⇓P		pP	06 51 15.8	+1.3
	baz=92							
D06A	**Cle Elum**	**90.74**	**43**	⇑P		pP	06 51 14.5	0.0
	baz=92							
PASC	**Pasadena Art C**	**91.01**	**56**	*e*P		pP	06 51 17.6	+1.6
L07A	**Adell**	**91.09**	**48**	⇓P		pP	06 51 17.0	+0.8
	baz=92							
MWC	**Mount Wilson**	**91.12**	**56**	*e*P		pP	06 51 17.1	+0.6
M07A	**Soldier Meadow**	**91.13**	**49**	⇑P		pP	06 51 17.1	+0.7
	baz=92							
F07A	**Phinny Hill Vi**	**91.18**	**44**	⇑P		pP	06 51 16.6	+0.1
	baz=92							
O07A	**Toulon**	**91.20**	**50**	⇓P		pP	06 51 17.3	+0.5
	baz=93							
N07B	**Gerlach**	**91.20**	**49**	⇓P		pP	06 51 17.2	+0.5
	baz=93							
I07A	**Izee**	**91.24**	**46**	⇓P		pP	06 51 17.0	+0.2
	baz=93							
K07A	**Rock Creek Ran**	**91.24**	**47**	⇓P		pP	06 51 17.4	+0.5
	baz=93							
EDW2	**Edwards Air Fo**	**91.25**	**55**	⇓P		pP	06 51 17.9	+0.8
	baz=93							
E07A	**Sunnyside**	**91.32**	**43**	⇓P		pP	06 51 17.0	-0.2
	baz=93							
D07A	**Quincy**	**91.33**	**43**	⇓P		pP	06 51 16.6	-0.6
	baz=93							
C07A	**Waterville**	**91.34**	**42**	⇓P		pP	06 51 16.7	-0.5
	baz=93							
CWC	**Coonwood Cre**	**91.36**	**54**	⇑P		pP	06 51 18.3	+0.6
	baz=93,SNR=5.2							
B07A	**Winthrop**	**91.41**	**42**	⇑P		pP	06 51 17.3	-0.2
	baz=93							
NVAR	**Mina Array Bea**	**91.42**	**52**	P		**P**	**06 51 03.6**	**+0.4**
	comp=Z,2.3nm,1.0s,mb4.5,baz=237,slow=6.0,SNR=9.3							
NVAR				pP		pP	06 51 17.8	0.0
	comp=Z,11nm,1.0s,baz=252,slow=6.2,SNR=23							
BFSC	**Mount Baldy St**	**91.45**	**56**	⇑P		pP	06 51 19.1	+1.1
	baz=93							
LRMC	**Laurel Mountai**	**91.57**	**55**	⇓P		pP	06 51 19.4	+0.8
	baz=93							
M08A	**Happy Creek Ra**	**91.73**	**49**	⇓P		pP	06 51 19.2	0.0
	baz=93							
MURC	**Murrieta**	**91.75**	**57**	⇑P		pP	06 51 20.2	+0.7
	baz=93							
109C	**Camp Elliot, M**	**91.75**	**57**	⇓P		pP	06 51 19.9	+0.3
	baz=93							
O08A	**Rochester Mine**	**91.76**	**50**	⇑P		pP	06 51 20.2	+0.8
	baz=93							
Q08A	**Gabbs**	**91.77**	**51**	⇓P		pP	06 51 19.9	+0.5
	baz=93							
G08A	**Pilot Rock**	**91.78**	**45**	⇑P		pP	06 51 19.2	-0.2
	baz=93							
BRVK	**Borovoye**	**91.78**	**323**	*e*P		pP	06 51 16.1	-3.1
MPMC	**Manual Prospec**	**91.79**	**54**	⇑P		pP	06 51 20.6	+1.0
	baz=93,SNR=7.1							
K08A	**Mann Creek Ran**	**91.80**	**47**	⇓P		pP	06 51 20.1	+0.6
	baz=93							
N08A	**GE Springer Mi**	**91.83**	**49**	⇑P		pP	06 51 20.0	+0.3
	baz=93							
L08A	**Fields**	**91.84**	**48**	⇑P		pP	06 51 20.2	+0.5
	baz=93							
J08A	**Circle Bar Ran**	**91.89**	**47**	⇓P		pP	06 51 19.9	+0.1
	baz=93							
B08A	**Colville Reser**	**91.91**	**42**	⇑P		pP	06 51 19.7	-0.2
	baz=93							
GRAC	**Grapevine Rang**	**92.00**	**53**	⇓P		pP	06 51 21.5	+1.0
	baz=94							
C08A	**Higginbotham F**	**92.03**	**42**	⇑P		pP	06 51 20.0	-0.4
	baz=93							
BBRC	**Big Bear Sol-O**	**92.06**	**56**	⇓P		pP	06 51 21.4	+0.5
	baz=94							
S09A	**Goldfield**	**92.19**	**52**	⇑P		pP	06 51 22.2	+0.8
	baz=94,SNR=9.4							
TPH	**Tonopah**	**92.23**	**52**	*e*P		pP	06 51 22.6	+1.0
N09A	**Rock Creek Ran**	**92.30**	**49**	⇑P		pP	06 51 22.0	+0.1
	baz=94							
L09A	**Wilkinson Ranc**	**92.33**	**48**	⇑P		pP	06 51 22.3	+0.3
	baz=94							
MONP	**Monument Peak**	**92.33**	**57**	⇓P		pP	06 51 23.4	+1.2
	baz=94							
FURC	**Furnace Creek,**	**92.34**	**54**	⇑P		pP	06 51 23.0	+0.8
	baz=94,SNR=5.4							
Q09A	**Carvers**	**92.34**	**51**	⇓P		pP	06 51 23.0	+0.9
	baz=94							
R09A	**Tonopah**	**92.36**	**52**	⇓P		pP	06 51 22.6	+0.4
	baz=94,SNR=5.9							
PFO	**Pinyon Flat Ob**	**92.37**	**57**	⇑P		pP	06 51 23.5	+1.1
	baz=94							
J09A	**Fry Pan Ranch,**	**92.41**	**47**	⇓P		pP	06 51 22.4	+0.1
	baz=94							
M09A	**Marrel Ranch,**	**92.42**	**49**	⇓P		pP	06 51 23.0	+0.6
	baz=94							
D09A	**Jones Farm, Ri**	**92.44**	**43**	⇓P		pP	06 51 22.1	-0.3
	baz=94							
A09A	**Danville**	**92.48**	**41**	⇓P		pP	06 51 22.1	-0.4
	baz=94							
O09A	**Fish Creek Ran**	**92.48**	**50**	⇑P		pP	06 51 23.3	+0.5
	baz=94,SNR=5.7							
HEC	**Hector,Ludlow**	**92.60**	**55**	⇑P		pP	06 51 24.1	+0.7
	baz=94							
G09A	**Cove**	**92.60**	**45**	⇑P		pP	06 51 22.9	-0.2
	baz=94							
B09A	**Rice**	**92.70**	**42**	⇓P		pP	06 51 23.5	0.0
	baz=94							
S10A	**Tonopah Range,**	**92.71**	**52**	⇓P		pP	06 51 24.6	+0.7
	baz=94,SNR=8.8							
SHOC	**Shoshone**	**92.75**	**54**	⇓P		pP	06 51 24.4	+0.3
	baz=94,SNR=5.9							
U10A	**Ash Meadows, A**	**92.76**	**54**	⇓P		pP	06 51 24.8	+0.7
	baz=94							
BELC	**Belle Mtn.**	**92.79**	**56**	⇓P		pP	06 51 24.7	+0.4
	baz=94							
SYO	**Syowa Base**	**92.89**	**199**	⇑*e*P		pP	06 51 18.0	-6.0
BMO	**Blue Mountains**	**92.89**	**45**	*e*P		pP	06 51 24.2	-0.3
R10A	**Warm Springs**	**92.97**	**52**	⇑P		pP	06 51 25.4	+0.3
	baz=94							
P10A	**Eureka**	**92.98**	**51**	⇓P		pP	06 51 25.3	+0.3
	baz=94							
K10A	**MacKenzie Ranc**	**92.99**	**47**	⇑P		pP	06 51 25.5	+0.5
	baz=94							
TUQ	**Turquoise Moun**	**92.99**	**55**	⇑P		pP	06 51 25.6	+0.4
	baz=94							
O10A	**Cortez Mining,**	**93.02**	**50**	⇓P		pP	06 51 25.3	+0.1
	baz=94							
N10A	**Dunphy**	**93.06**	**50**	⇑P		pP	06 51 26.0	+0.6
	baz=94							
F10A	**Beach Ranch, E**	**93.06**	**44**	⇑P		pP	06 51 24.6	-0.7
	baz=94							
G10A	**Bishop Farm, J**	**93.07**	**45**	⇑P		pP	06 51 25.3	0.0
	baz=94							
D10A	**Wagner Farm, O**	**93.14**	**43**	⇑P		pP	06 51 25.3	-0.3
	baz=94							
GMRC	**Granite Mounta**	**93.15**	**56**	⇓P		pP	06 51 26.7	+0.8
	baz=95							
A10A	**Northport**	**93.15**	**41**	⇓P		pP	06 51 25.4	-0.2
	baz=94							
BC3	**Big Chuckw Mtn**	**93.21**	**57**	⇑P		pP	06 51 27.3	+1.1
	baz=95							
L10A	**Juniper Basin**	**93.22**	**48**	⇓P		pP	06 51 26.3	+0.3
	baz=95							
H10A	**Noah's Angus R**	**93.26**	**46**	⇑P		pP	06 51 26.4	+0.2
	baz=95							
V11A	**Goodsprings**	**93.43**	**54**	⇑P		pP	06 51 28.1	+0.9
	baz=95							
IRM	**Iron Mountain**	**93.51**	**56**	⇑P		pP	06 51 28.4	+0.8
	baz=95							
P11A	**Circle Ranch,**	**93.52**	**51**	⇓P		pP	06 51 28.4	+0.9
	baz=95							
Q11A	**Duckwater**	**93.53**	**51**	⇑P		pP	06 51 28.0	+0.4
	baz=95,SNR=7.3							
R11A	**Troy Canyon, C**	**93.54**	**52**	⇑P		pP	06 51 28.1	+0.4
	baz=95,SNR=7.4							
O11A	**Cowboy Ranch,**	**93.65**	**50**	⇑P		pP	06 51 28.3	+0.2
	baz=95,SNR=5.5							
N11A	**Elko Archery C**	**93.65**	**50**	⇓P		pP	06 51 28.6	+0.6
	baz=95							
SHPR	**Sheep Range**	**93.71**	**54**	*e*P		pP	06 51 29.4	+0.9
T11A	**Corn Creek, Al**	**93.73**	**53**	⇓P		pP	06 51 29.0	+0.4
	baz=95,SNR=6.6							
L11A	**Cat Creek Ranc**	**93.76**	**48**	⇑P		pP	06 51 28.3	-0.3
	baz=95							
I11A	**Placerville**	**93.76**	**46**	⇓P

	baz=96									
I13A	**Wildhorse Cree**	**95.09**	**47**	⇑P		pP		06 51 34.8	+0.1
	baz=96									
B13A	**Whitefish**	**95.14**	**42**	⇑P		pP		06 51 34.4	-0.3
	baz=96									
W14A	**Seligman**	**95.29**	**55**	⇓P		pP		06 51 36.5	+0.7
	baz=97									
U14A	**Mt Trumbull**	**95.30**	**54**	⇑P		pP		06 51 36.5	+0.7
	baz=97									
V14A	**Boquillas Ranc**	**95.30**	**55**	⇑P		pP		06 51 36.8	+1.0
	baz=97									
Q14A	**Sevier Lake (B**	**95.39**	**51**	⇓P		pP		06 51 36.8	+0.7
	baz=97									
S14A	**Cedar City**	**95.40**	**53**	⇑P		pP		06 51 36.9	+0.8
	baz=97									
X14A	**Yava**	**95.40**	**56**	⇑P		pP		06 51 36.8	+0.5
	baz=97									
T14A	**Hurricane**	**95.42**	**53**	⇓P		pP		06 51 37.0	+0.7
	baz=97									
M14A	**Sheep Mountain**	**95.50**	**49**	⇓P		pP		06 51 36.8	+0.2
	baz=97									
I14A	**Mackay**	**95.57**	**47**	⇓P		pP		06 51 36.8	0.0
	baz=97									
N14A	**Grayback Hills**	**95.58**	**50**	⇓P		pP		06 51 36.7	-0.3
	baz=97									
P14A	**Drum Mountains**	**95.59**	**51**	⇓P		pP		06 51 36.8	-0.2
	baz=97									
K14A	**Jones Ranch, D**	**95.69**	**48**	⇓P		pP		06 51 37.1	-0.3
	baz=97									
DUG	**Dugway**	**95.83**	**50**	⇑P		pP		06 51 38.0	-0.1
	baz=97									
YKA	**Yellowknife Ar**	**95.83**	**28**	P		**P**		**06 51 22.4**	**-0.5**
	comp=Z,0.5nm,0.5s,mb4.2,baz=267,slow=4.5,SNR=18									
YKA					pP		pP	06 51 36.8	-0.8
	comp=Z,6.0nm,0.7s,baz=265,slow=4.5,SNR=45									
YKA					LR		LR	07 29 13.8		
	comp=Z,21nm,20.4s,MS3.6,baz=210,slow=32									
X15A	**Humboldt**	**95.94**	**56**	⇑P		pP		06 51 39.1	+0.3
	baz=97									
T15A	**Red Dirt Ranch**	**95.97**	**53**	⇓P		pP		06 51 39.6	+0.7
	baz=97									
U15A	**North Rim**	**96.01**	**54**	⇓P		pP		06 51 39.6	+0.6
	baz=98									
V15A	**Kaibab Nationa**	**96.07**	**55**	⇑P		pP		06 51 40.8	+1.5
	baz=98									
EDM	**Edmonton**	**96.11**	**37**	*e*P		pP		06 51 33.5	-5.6
H15A	**Lima**	**96.19**	**46**	⇑P		pP		06 51 40.0	+0.4
	baz=98									
P15A	**Leamington**	**96.20**	**51**	⇑P		pP		06 51 39.7	-0.1
	baz=98									
L15A	**Malad City**	**96.25**	**48**	⇓P		pP		06 51 39.9	0.0
	baz=98									
E15A	**Deer Lodge**	**96.27**	**44**	⇑P		pP		06 51 39.7	-0.2
	baz=98									
A15A	**Johnson Ranch,**	**96.32**	**41**	⇓P		pP		06 51 40.0	-0.1
	baz=98									
C15A	**Salmond Ranch,**	**96.36**	**43**	⇓P		pP		06 51 40.1	-0.2
	baz=98									
S16A	**Weppner Ranch,**	**96.64**	**53**	⇓P		pP		06 51 42.1	+0.2
	baz=98									
R16A	**Teasdale**	**96.75**	**52**	⇑P		pP		06 51 43.2	+0.8
	baz=98									
N16A	**Rees Ranch, Co**	**96.91**	**50**	⇑P		pP		06 51 43.2	+0.2
	baz=98									
U16A	**Tuba City**	**96.93**	**54**	⇓P		pP		06 51 43.9	+0.6
	baz=98									
I16A	**Newdale**	**96.99**	**47**	⇓P		pP		06 51 43.5	+0.2
	baz=98									
Q16A	**Castle Valley**	**97.03**	**52**	⇑P		pP		06 51 44.1	+0.5
	baz=98									
A16A	**West Butte Ran**	**97.07**	**42**	⇑P		pP		06 51 43.1	-0.5
	baz=98									
T17A	**Navajo Res., N**	**97.23**	**54**	⇑P		pP		06 51 45.2	+0.6
	baz=99									
U17A	**Shonto**	**97.33**	**54**	⇑P		pP		06 51 45.7	+0.7
	baz=99									
R17A	**Hanksville Air**	**97.37**	**52**	⇓P		pP		06 51 45.4	+0.3
	baz=99									
P17A	**Butcher Ranch,**	**97.38**	**51**	⇓P		pP		06 51 45.4	+0.2
	baz=99									
O17A	**Robinson Place**	**97.41**	**50**	⇑P		pP		06 51 45.5	+0.2
	baz=99									
SRU	**San Rafael**	**97.54**	**51**	⇓P		pP		06 51 46.1	+0.2
	baz=99									
B17A	**L&G Farms, Che**	**97.58**	**42**	⇓P		pP		06 51 45.0	-0.9
	baz=99									
F17A	**Fitzpatrick Pl**	**97.63**	**45**	⇓P		pP		06 51 46.4	+0.3
	baz=99									
V18A	**Ganado**	**97.89**	**55**	⇓P		pP		06 51 48.2	+0.7
	baz=99									
S18A	**Hurst Farm, Bl**	**97.91**	**53**	⇑P		pP		06 51 48.2	+0.6
	baz=99									
M18A	**Lyman**	**97.96**	**49**	⇑P		pP		06 51 47.3	-0.4
	baz=99									
O18A	**Roosevelt**	**97.97**	**50**	⇑P		pP		06 51 48.2	+0.4
	baz=99									
L18A	**Fontenelle, Gr**	**97.99**	**49**	⇓P		pP		06 51 47.7	-0.2
	baz=99									
K18A	**Toltan Ranch,**	**98.01**	**48**	⇓P		pP		06 51 47.9	0.0
	baz=99									
R18A	**Canyonlands Na**	**98.01**	**52**	⇑P		pP		06 51 48.4	+0.3
	baz=99									
E18A	**Harlowton**	**98.16**	**44**	⇑P		pP		06 51 48.6	+0.1
	baz=100									
N18A	**Larsen Ranch,**	**98.25**	**50**	⇓P		pP		06 51 48.6	-0.4
	baz=100									
BW06	**Boulder Array**	**98.36**	**48**	⇓P		pP		06 51 48.9	-0.6
	baz=100									
BW06	**Boulder Array**	**98.36**	**48**	*e*Pdif		pP		06 51 48.5	-1.1
PDAR	**Pinedale Array**	**98.36**	**48**	P		**P**		**06 51 33.4**	**-1.4**
	comp=Z,0.7nm,1.0s,mb4.1,baz=329,slow=3.2,SNR=3.2									
PDAR					pP		pP	06 51 48.3	-1.2
	comp=Z,2.0nm,1.0s,baz=246,slow=3.2,SNR=10									
PDAR					LR		LR	07 32 01.7		
	comp=Z,174nm,21.4s,MS4.5,baz=318,slow=33									
R19A	**Curley Farm, L**	**98.50**	**52**	⇓P		pP		06 51 50.4	+0.2
	baz=100									
Q19A	**Hogan Spring (**	**98.52**	**52**	⇑P		pP		06 51 51.0	+0.7
	baz=100									
S19A	**Harvey Farm, M**	**98.59**	**53**	⇑P		pP		06 51 51.2	+0.6
	baz=100									
O19A	**Miners Draw (B**	**98.65**	**50**	⇑P		pP		06 51 50.7	-0.1
	baz=100									
P19A	**Cripple Cowboy**	**98.75**	**51**	⇑P		pP		06 51 51.4	+0.1
	baz=100									
K19A	**Absolon Red Bu**	**98.89**	**48**	⇑P		pP		06 51 51.3	-0.5
	baz=100									
MVCO	**Mesa Verde**	**99.08**	**53**	⇑P		pP		06 51 52.8	0.0
	baz=100									
L20A	**Wamsutter**	**99.26**	**49**	⇓P		pP		06 51 53.2	-0.4
	baz=101									
Q20A	**Ridgley Place,**	**99.27**	**52**	⇑P		pP		06 51 53.6	-0.1
	baz=101									
N20A	**Spence Gulch,**	**99.31**	**50**	⇓P		pP		06 51 53.4	-0.5
	baz=101									
O20A	**White River Ci**	**99.32**	**50**	⇑P		pP		06 51 53.8	0.0
	baz=101									
M20A	**Sweetwater, Wa**	**99.37**	**49**	⇑P		pP		06 51 53.8	-0.2
	baz=101									
Q21A	**Lamborn Mesa,**	**99.83**	**52**	⇓P				06 51 56.8		
	baz=101									
R21A	**Cimarron**	**99.85**	**52**	⇓P				06 51 56.8		
	baz=101									
N21A	**Black Mountain**	**99.88**	**50**	⇓P				06 51 56.4		
	baz=101									
O21A	**Pagoda**	**99.92**	**50**	⇑P				06 51 56.8		
	baz=101									
L21A	**Rawlins**	**99.98**	**49**	⇓P				06 51 56.9		
	baz=101									
LENM	**Lemitar**	**100.28**	**57**	*e*Pdif				06 52 00.3		
N22A	**Wattenberg Ran**	**100.69**	**50**	⇓P				06 51 59.8		
	baz=102									
KIV	**Kislovodsk**	**110.31**	**315**	*i* PKIKP		PKiKP		06 56 39.4	+11	
KIV				pmax		pmax				
	comp=Z,8.0nm,1.1s									
BLO	**Bloomington**	**116.05**	**49**	*e*PKIKP		pPKPdf		06 56 52.0	-3.2	
NOA	**NORSAR Array B**	**119.06**	**341**	pPKP		pPKPdf		06 56 58.5	-1.8	
	comp=Z,1.3nm,0.7s,baz=46,slow=1.9,SNR=2.6									
BOSA	**Boshof**	**120.32**	**232**	PKP		PKPdf		06 56 47.5	-1.0	
	comp=Z,3.2nm,1.2s,baz=219,slow=6.5,SNR=3.8									
BOSA				pPKP		pPKPdf		06 57 02.5	-1.3	
	comp=Z,2.2nm,0.6s,baz=171,slow=3.7,SNR=2.3									
SSPA	**Standing Stone**	**121.95**	**46**	*e*PKPdf		pPKPdf		06 57 03.6	-2.8	
CLL	**Collm**	**125.19**	**332**	*e*PKPdf		pPKPdf		06 57 10.0	-2.4	
KHC	**Kasperske Hory**	**126.33**	**329**	*i* PKIKP		pPKPdf		06 57 12.0	-2.6	
GERES	**GERESS Array B**	**126.44**	**329**	PKP		PKPdf		06 56 58.6	-1.0	
	comp=Z,0.1nm,0.4s,baz=355,slow=1.5,SNR=3.6									
GERES				pPKP		pPKPdf		06 57 13.7	-1.2	
	comp=Z,1.3nm,0.8s,baz=48,slow=2.0,SNR=8.6									
SDV	**Santo Domingo**	**134.85**	**84**	*e*PKPdf		pPKPdf		06 57 28.3	-3.5	
BDFB	**Brasilia**	**148.51**	**134**	PKPbc		PKPbc		06 57 44.9	+0.5	
	comp=Z,2.4nm,1.1s,baz=308,slow=25,SNR=3.3									
BDFB					pPKPbc		pPKPbc	06 57 57.2	-2.3	
	comp=Z,6.2nm,0.8s,baz=223,slow=7.9,SNR=10									
TOA0	**Tordoi Ar. Sit**	**152.73**	**286**	*e*PKPdf		PKPbc		06 57 52.6	-1.9	
TOA0				*e*PKPab		PKPab		06 58 07.8	+2.4	
TORD	**Tordoi Ar. Bea**	**152.73**	**286**	PKPbc		PKPbc		06 57 52.5	-2.0	
	comp=Z,0.8nm,0.3s,baz=84,slow=2.2,SNR=19									
TORD					PKPab		PKPab	06 58 06.9	+1.5	
	comp=Z,8.9nm,0.8s,baz=58,slow=2.0,SNR=21									
TORD	**Tordoi Ar. Bea**	**152.73**	**286**	PKPab		PKPab		06 58 06.9	+1.5	
DBIC	**Dimbokro**	**159.85**	**272**	PKPab		PKPab		06 58 34.8	-1.3	
	comp=Z,3.0nm,0.9s,baz=91,slow=5.2,SNR=4.9									
DBIC					pPKPab		pPKPab	06 58 50.7	-0.2	
	comp=Z,6.3nm,0.8s,baz=76,slow=3.6,SNR=6.9									

*NEIC **26** 06:40:46.5, 15.12N×94.47W, h20km, MD3.9(MEX), After MEX.*

MEX 26 06:40:46.4±1.0, 1510N×9448W, h20km±83km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PCIG		**1.35**	**64**	*i* P			Pn	06 41 06.8	-3.3
PCIG				*i* S			Sn	06 41 22.3	-5.2
HUIG	**Huatulco**	**1.71**	**293**	*e*P			Pn	06 41 12.6	-2.5
HUIG				*i* S			Sn	06 41 31.5	-4.7
HUIG	**Huatulco**	**1.71**	**293**	*e*P			Pn	06 41 12.6	-2.5
HUIG				*i* S			Sn	06 41 30.9	-5.3
CMIG	**Matias Romero**	**2.02**	**349**	*i* P			Pn	06 41 17.1	-2.2
CMIG				*i* S			Sn	06 41 39.7	-4.2
TGIG		**2.12**	**38**	*i* P			Pn	06 41 19.2	-1.4
TGIG				*i* S			Sn	06 41 43.2	-3.1
THIG		**2.15**	**95**	*e*P			Pn	06 41 19.0	-2.0
THIG				*i* S			Sn	06 41 43.1	-4.0
CCIG	**Comitan**	**2.54**	**62**	*i* P			Pn	06 41 24.6	-1.8
CCIG				*i* S			Sn	06 41 53.4	-3.4
VHO	**Vista Hermosa**	**2.92**	**312**	*e*P			Pn	06 41 29.5	-2.2
VHO				*i* S			Sn	06 42 02.8	-3.5
VHO	**Vista Hermosa**	**2.92**	**312**	*e*P			Pn	06 41 28.7	-3.0
VHO				*i* S			Sn	06 42 02.8	-3.5
UTMO	**Huajuapan**	**4.19**	**311**	*e*P			Pn	06 41 51.8	+2.6
UTMO				*i* S			Sn	06 42 36.9	-0.6

CASC 26 07:03:57.7±1.6, 1260N×8864W, h39km±206km, MD3.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VSM	**San Miguel**	**0.89**	**23**	*e*P			x	07 04 14.2	
VSM				*e*P			x	07 04 14.2	
VSM				*e*S			x	07 04 27.2	
BLLM	**Bellamira**	**0.92**	**25**	*e*P			x	07 04 14.2	
BLLM				*e*S			x	07 04 27.2	
SNVI	**San Vicente**	**1.02**	**349**	*e*P			x	07 04 15.6	
SNVI				*e*P			x	07 04 15.6	
SNVI				*e*S			x	07 04 28.4	
CNCH	**Conchagua**	**1.03**	**50**	*e*P			x	07 04 15.5	
CNCH				*e*P			x	07 04 15.6	
LFRS	**El Faro**	**1.09**	**338**	*e*P			x	07 04 16.2	
LCBS	**La Ceiba**	**1.10**	**342**	*e*P			x	07 04 16.3	
LBRS	**Las Brisas**	**1.19**	**341**	*e*P			x	07 04 18.1	
SNET	**Serv Nac Est T**	**1.22**	**332**	*e*P			x	07 04 17.9	
SNET				*e*S			x	07 04 34.2	
LFU	**La Fuente**	**1.23**	**338**	*e*P			x	07 04 18.5	
CAHU	**Cacacuatique**	**1.23**	**20**	*e*P			x	07 04 18.9	
CAHU				*e*P			x	07 04 20.2	
BOQS	**Boqueron**	**1.29**	**331**	*e*P			x	07 04 19.9	
BOQS				*e*P			x	07 04 20.0	
SBLS	**San Blas**	**1.56**	**322**	*e*P			x	07 04 23.5	
SBLS				*e*P			x	07 04 23.5	
SBLS				*e*S			x	07 04 43.9	
SNJE	**San Jose**	**1.57**	**323**	*e*P			x	07 04 23.8	
SNJE				*e*S			x	07 04 43.5	
RTR	**El Retiro**	**1.62**	**323**	*e*P			x	07 04 24.5	
RTR				*e*S			x	07 04 45.1	
MIRN	**Miramar**	**1.89**	**95**	*e*P			Pn	07 04 26.7	-0.8
TGUH	**Tegucigalpa,Un**	**1.96**	**42**	*e*P			Pn	07 04 29.4	+0.9
COPN	**Copaltepe**	**2.04**	**102**	*e*P			Pn	07 04 29.4	-0.2

IGQ 26 07:21:03.2, 049N×7987W, h12km±5km, Mb4.2, Ms4.0, 2C-2D, Error ellipse: s-maj=7.1km s-min=1.6km az=61.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JAMA	**Jama**	**0.82**	**204**	P			Pg	07 21 17.1	-2.0
JAMA				*S*			Sg	07 21 30.1	+0.3
PINO	**Pino**	**1.42**	**117**	⇑P			Pn	07 21 30.2	+1.4
TERV	**Terraza Guagua**	**1.43**	**118**	P			Pn	07 21 30.3	+1.4
GGP	**Refugio Guagua**	**1.44**	**117**	P			Pn	07 21 30.2	+1.1
GGP	**Refugio Guagua**	**1.44**	**117**	S			Sn	07 21 56.7	+8.8
COTA	**Cotacachi**	**1.54**	**96**	⇓P			Pn	07 21 32.3	+1.8
COTA	**Cotacachi**	**1.54**	**96**	⇓S			Sn	07 21 57.6	+7.1
QIL2	**Quilotoa**	**1.65**	**145**	P			Pn	07 21 32.8	+0.7
CHIS	**Cerro-Chispas-**	**1.75**	**209**	P			Pn	07 21 36.0	+2.5
CHIS	**Cerro-Chispas-**	**1.75**	**209**	S			Sn	07 22 00.3	+4.6
VC1	**Cotopaxi 1**	**1.85**	**127**	P			Pn	07 21 37.5	+2.8
TAMB	**Tambo**	**1.91**	**128**	P			Pn	07 21 38.7	+3.1
ANTI	**Antisana**	**1.95**	**119**	P			Pn	07 21 40.2	+4.1
ANTI	**Antisana**	**1.95**	**119**	S			Sn	07 22 13.2	+13
PISA	**Pisayambo**	**2.14**	**136**	P			Pn	07 21 42.1	+3.4
CONE	**Cono NE Rev Vo**	**2.29**	**104**	⇑P			Pn	07 21 46.5	+5.6
ARRY	**Arrayan**	**2.44**	**144**	P			Pn	07 21 46.2	+3.3

*IDC **26** 07:50:02.1±1.2, 26.72N×91.87E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/4, Error ellipse: s-maj=110.6km s-min=22.5km az=52.0*

*ISCJB **26** 07:50:09.0±1.9, 267N±02×918E±02, h71km±20km, mb3.3/4, Error ellipse: s-maj=38.8km s-min=21.6km az=146.3*

ISC 26 07:50:09.8±1.7, 267N±01×918E±02, h58km±20km, n6, σ0≥93/8, mb3.4/4, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SHL	**Shillong**	**1.16**	**178**	*e*PG			**Pn**	**07 50 31.0**	**+1.1**
SHL				*i* SG			**Sn**	**07 50 44.0**	**-0.8**
IMP	**Imphal**	**2.72**	**135**	*e*P			**Pn**	**07 50 51.0**	**0.0**
IMP				*i* S			**Sn**	**07 51 10.0**	**-13**
MKAR	**Makanchi Array**	**21.40**	**342**	P			**P**	**07 54 51.9**	**-0.6**
	0.7nm,0.5s,mb3.2,baz=159,slow=9.9,SNR=6.5								
WRA	**Warramunga Arr**	**62.06**	**134**	P			**P**	**08 00 24.0**	**-0.6**
	0.3nm,1.0s,mb3.4,baz=324,slow=7.3,SNR=3.6								
GERES	**GERESS Array B**	**62.78**	**313**	P			**P**	**08 00 29.4**	**+0.4**
	0.6nm,0.5s,mb4.0,baz=77,slow=7.0,SNR=10								
ASAR	**Alice Springs**	**64.53**	**137**	P			**P**	**08 00 41.4**	**+0.5**
	0.1nm,0.5s,mb3.1,baz=321,slow=7.2,SNR=3.3								

*CSEM **26** 08:04:13.9±0.1, 38.42N×39.04E, h10km, MD2.9, Error ellipse: s-maj=4.3km s-min=2.8km az=177.0*

*ISCJB **26** 08:04:15.0±0.5, 38.41N±004×39.04E±003, h4km±5km, Error ellipse: s-maj=6.0km s-min=4.1km az=12.7*

*DDA **26** 08:04:14.8, 38.42N×39.02E, h12km±1km, Md2.9*

*ISK **26** 08:04:14.1, 38.39N×39.04E, h4km, MD2.9*

ISC 26 08:04:15.4±0.5, 38.41N±003×39.04E±003, h2km±6km, n13, σ0≥94/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
ELZG	**Elazig**	**0.10**	**331**	*i* P			**Pg**	**08 04 18.0**	**+0.7**
ELZG				*i* S			**Sg**	**08 04 19.9**	**+1.3**
SVRC	**Sivrice-ELAZID**	**0.21**	**100**	PG			**Pg**	**08 04 18.9**	**-0.6**
SVRC				eSG			**Sg**	**08 04 22.6**	**+0.4**
MYA	**Malatya**	**0.49**	**260**	*e*PG			**Pg**	**08 04 24.5**	**-0.4**
MYA				eSG			**Sg**	**08 04 31.4**	**+0.1**
MALT	**Malatya**	**0.49**	**258**	*e*PG			**Pg**	**08 04 24.5**	**-0.4**
MALT				eSG			**Sg**	**08 04 31.5**	**+0.2**
PTK	**Pertek**	**0.55**	**30**	*e*PG			**Pg**	**08 04 24.9**	**-1.0**
AKCD	**Akcadag**	**0.89**	**263**	*i* P			**Pg**	**08 04 31.7**	**-0.8**
AKCD				*i* S			**Sg**	**08 04 44.6**	**+0.6**
KEMA	**Kemaliye**	**0.96**	**333**	*i* P			**Pg**	**08 04 32.4**	**-1.3**
KEMA				*i* S			**Sg**	**08 04 46.5**	**+0.3**
DIYA	**Diyarbakir**	**0.98**	**120**	*i* P			**Pg**	**08 04 34.3**	**+0.1**
DIYA				*i* S			**Sg**	**08 04 48.8**	**+1.9**
URFA	**Urfa**	**0.99**	**190**	*e*PG			**Pg**	**08 04 32.9**	**-1.4**
EZC	**Erzincan**	**1.46**	**24**	*e*PN			**Pn**	**08 04 41.5**	**-1.3**
MARD	**Mardin**	**1.76**	**128**	*i* P			**Pn**	**08 04 46.0**	**-0.8**
MARD				*i* S			**Sn**	**08 05 10.4**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.86**	**279**	*e*PN			**Pn**	**08 04 50.2**	**+2.0**
SVSK	**Karacayir**	**2.19**	**314**	*e*PN			**Pn**	**08 04 52.8**	**+0.1**

IDC 26 08:07:38.7±6.6, 3027N×13838E, h424km±167km, mb2.8/3, mb1 2.9/5, mb1mx2.6/23, mbtmp2.7/5, Error ellipse: s-maj=151.3km s-min=64.0km az=23.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MJAR	**Matsushiro Arr**	**6.26**	**359**	P			P	08 09 14.7	-0.1
	0.4nm,0.3s,baz=174,slow=11,SNR=6.0								
KSRS	**Korea Array**	**11.26**	**312**	P			P	08 10 09.9	+0.4
	0.2nm,0.3s,baz=124,slow=10,SNR=4.3								
WRA	**Warramunga Arr**	**50.07**	**185**	P			P	08 15 52.9	0.0
	0.4nm,0.3s,baz=0.8,slow=8.1,SNR=11								
ASAR	**Alice Springs**	**53.79**	**185**	P			P	08 16 19.9	0.0
	0.2nm,0.5s,baz=2.0,slow=6.0,SNR=8.2								
STKA	**Stephens Creek**	**61.88**	**177**	P			P	08 17 15.1	-0.1
	0.5nm,0.4s,baz=332,slow=15,SNR=4.2								

*BJI **26** 08:20:38.6, 7.03S×156.15E, h88km, mB5.2, mb4.9, Ms4.9, Msz4.2*

*IDC **26** 08:20:39.6±0.5, 69.1S×155.83E, h61km±4km, mb4.6/16, mb1 4.7/17, mb1mx4.7/18, mbtmp4.6/17, MS3.9/16, Ms1 3.9/16, ms1mx3.7/29, Error ellipse: s-maj=12.3km s-min=10.7km az=73.0*

*ISCJB **26** 08:20:39.1±0.3, 689S±004×155.82E±004, h71km, mb4.8/47, Error ellipse: s-maj=6.4km s-min=5.2km az=164.0*

*MOS **26** 08:20:40.1±0.9, 687S×155.85E, h80km, mb4.8/12, Error ellipse: s-maj=10.3km s-min=9.0km az=78.1*

*NEIC **26** 08:20:42.4±0.9, 691S×155.84E, h89km±8km, mb4.9/19, Error ellipse: s-maj=7.2km s-min=6.3km az=128.0*

*GCMT **26** 08:20:42.4±0.3, 7.03S×155.79E, h89km±3km, MW5.0/43, Moment Tensor Solution. s38,c51; s43,c55; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.96±.22; $M_{\theta\theta}$-2.33±.18; $M_{\phi\phi}$0.36±.18; $M_{r\theta}$0.59±.17; $M_{\theta\phi}$4.24±.17; $M_{\phi r}$-0.05±.19; Best double couple: M○4.49800×10^{16} NP1:ϕs351.00000°, δ79.00000°, λ175.00000°. NP2: ϕs82.00000°, δ85.00000°, λ11.00000°. Principal axes: T 3.5310, Plg11.0000°, Azm307.0000°; N 1.9330, Plg78.0000°, Azm107.0000°; P -5.4650, Plg4.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **26** 08:20:46, 7.02S×155.78E, h117km, Mw5.3/6*

ISC 26 08:20:41.1±0.3, 690S±004×155.81E±005, h73km, h73km±4.1km: pP-P, n129, σ1≥02/113, mb4.8/47, 5C-6D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
HNR	**Honiara**	**4.80**	**122**	P			**Pn**	**08 21 50.6**	**-0.3**
	42nm,0.3s,baz=229,slow=2.4,SNR=16								
HNR				S			**Sn**	**08 22 46.8**	**+1.4**
	102nm,0.3s,baz=2.4,slow=15,SNR=4.9								
HNR	**Honiara**	**4.80**	**122**	*e*Pn			**Pn**	**08 21 50.7**	**-0.3**
PMG	**Port Moresby**	**8.92**	**253**	P			**Pn**	**08 22 49.8**	**+2.5**
	23nm,0.3s,baz=54,slow=8.7,SNR=52								
PMG				S			**Sn**	**08 24 29.5**	**+3.3**
	6.3nm,0.3s,baz=326,slow=20,SNR=9.4								
PMG				LR		LR		08 26 15.7	
	comp=Z,555nm,18.8s,baz=60,slow=38								
PMG	**Port Moresby**	**8.92**	**253**	*c* iP			**Pn**	**08 22 49.2**	**+1.9**
PMG	**Port Moresby**	**8.92**	**253**	*e*Pn			**Pn**	**08 22 48.8**	**+1.5**
PMG				*e*Sn			**Sn**	**08 24 32.7**	**+6.5**
COEN	**Coen**	**14.26**	**240**	*e*Pn			**Pn**	**08 24 00.7**	**+1.1**
	52nm,0.8s								
CTA	**Charters Tower**	**16.06**	**214**	P			**Pn**	**08 24 24.1**	**+1.5**
	3.2nm,0.3s,baz=34,slow=12,SNR=31								
CTA	**Charters Tower**	**16.06**	**214**	*e*P			**Pn**	**08 24 23.8**	**+1.3**
	89nm,1.2s								
CTAO	**Charters Tower**	**16.06**	**214**	*e*P			**Pn**	**08 24 24.0**	**+1.5**
CTAO				pmax		pmax			
	comp=Z,211nm,1.2s								
CTAO	**Charters Tower**	**16.06**	**214**	*e*P			**Pn**	**08 24 24.0**	**+1.5**
	comp=Z,210nm,1.2s								
EIDS	**Eidsvold**	**18.91**	**193**	*e*P			**Pn**	**08 24 56.3**	**-1.2**
	comp=

MAJO pmax pmax
comp=Z,15nm,0.7s,mb4.8
MAJO Matsushiro 46.26 340 *e*P **P 08 28 58.7 -0.6**
comp=Z,15nm,0.7s,mb4.8
MAT Matsushiro 46.26 340 P **P 08 28 58.6 -0.7**
KSRS Korea Array 51.24 331 P **P 08 29 38.5 +1.0**
comp=Z,7.2nm,0.8s,mb4.7,baz=147,slow=8.2,SNR=26
KSRS LR LR 08 49 11.7
comp=Z,47nm,20.3s,baz=312,slow=33
NJ2 Nanjing 52.36 320 *e*P **P 08 29 48.5 +2.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
PPT Papeete 54.25 107 *e*LR LR 08 45 54.9
comp=Z,81nm,23.5s
PPT Papeete 54.25 107 LR LR 08 47 41.3
comp=Z,93nm,21.2s,baz=92,slow=30
TBI Tubuai 54.97 114 *e*LR LR 08 46 15.3
comp=Z,111nm,30.0s
KULM Kulim 56.37 281 *e*P **P 08 30 14.3 -1.1**
comp=Z,53nm,1.2s,mb5.5
MDJ Mudanjiang 56.45 338 P **P 08 30 16.8 +1.4**
MDJ AP pP 08 30 36.8 +2.8
MDJ XP sP 08 30 45.8 +3.6
MDJ SCP ScP 08 35 04.0 -0.6
MDJ PCS PcS 08 35 13.0 +1.0
MDJ S **S 08 38 04.0 +3.0**
MDJ AMB AMB
comp=Z,6.0nm,0.9s,mb4.6
MDJ AMB AMB
comp=Z,44nm,4.8s
MDJ LR LR
comp=Z,39nm,25.0s
GYA Guiyang 58.04 307 P **P 08 30 27.3 +0.4**
GYA AP pP 08 30 47.3 +1.7
GYA XP sP 08 30 57.5 +3.7
GYA PP PP 08 32 37.3 +1.0
GYA SCP ScP 08 35 07.0 -5.1
GYA S **S 08 38 20.0 -2.5**
GYA XS sS 08 38 59.8 +5.6
GYA SS SS 08 42 12.3 -2.7
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
GYA AMB AMB
comp=Z,150nm,9.2s
GYA LR LR
comp=N,630nm,18.5s
GYA LR LR
comp=E,500nm,17.0s
GYA LR LR
comp=Z,520nm,18.0s
BJI Beijing 59.30 325 P **P 08 30 36.8 +1.4**
BJI S **S 08 38 38.0 -0.3**
BJI SS SS 08 42 38.5 +4.1
BJI AMB AMB
comp=Z,7.0nm,0.8s,mb4.7
BJI AMB AMB
comp=Z,224nm,5.4s
BJI LR LR
comp=N,185nm,25.4s
BJI LR LR
comp=E,276nm,24.8s
BJI LR LR
comp=Z,93nm,22.7s
PET Petropavlovsk 59.74 2 *e*P **P 08 30 39.7 +1.6**
PETK Petropavlovsk- 59.80 1 P **P 08 30 39.9 +1.3**
comp=Z,5.3nm,0.7s,mb4.7,baz=145,slow=5.4,SNR=5.3
PETK pP pP 08 30 56.1 -1.2
comp=Z,11nm,0.9s,baz=143,slow=5.4,SNR=4.3
PETK LR LR 08 52 16.1
comp=Z,88nm,21.6s,baz=177,slow=32
PETK Petropavlovsk- 59.80 1 P **P 08 30 39.9 +1.4**
PETK *PP pP 08 30 56.2 -1.1
XAN Xi'an 60.20 316 P **P 08 30 40.8 -0.9**
XAN AP pP 08 31 03.0 +2.5
XAN XP sP 08 31 12.3 +3.7
XAN PP PP 08 32 56.8 +1.4
XAN S **S 08 38 52.0 +1.8**
XAN SS SS 08 42 52.3 +3.6
XAN AMB AMB
comp=Z,5.0nm,0.7s,mb4.7
XAN AMB AMB
comp=Z,17nm,12.6s
XAN LR LR
comp=Z,94nm,22.1s
KMI Kunming 60.64 304 P **P 08 30 46.0 +1.1**
KMI AP pP 08 31 09.0 +5.3
KMI XP sP 08 31 19.5 +7.7
KMI PP PP 08 33 04.8 +5.4
KMI S **S 08 38 55.3 -0.7**
KMI XS sS 08 39 34.3 +6.3
KMI SS SS 08 42 56.3 +0.5
KMI AMB AMB
comp=Z,11nm,1.1s,mb4.8
KMI AMB AMB
comp=Z,139nm,6.3s
KMI LR LR
comp=N,129nm,21.0s
KMI LR LR
comp=E,167nm,21.6s
KMI LR LR
comp=Z,108nm,30.2s
CMAR Chiang Mai Arr 61.48 295 P **P 08 30 51.6 +0.9**
comp=Z,3.4nm,0.4s,mb4.7,baz=110,slow=4.6,SNR=20
CMAR pP pP 08 31 07.5 -2.0
comp=Z,4.1nm,0.6s,baz=121,slow=4.7,SNR=4.3
CMAR LR LR 08 55 08.9
comp=Z,29nm,18.4s,baz=130,slow=34
CMAR Chiang Mai Arr 61.48 295 P **P 08 30 51.6 +0.9**
CMAR *PP pP 08 31 07.5 -2.0
CMAR Chiang Mai Arr 61.48 295 P **P 08 30 51.6 +0.9**
CMAR pP pP 08 31 07.5 -2.0
CMAR LR LR 08 55 08.9
CHTO Chiang Mai 61.59 296 *e*P **P 08 30 50.5 -0.9**
CHTO pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
CHTO Chiang Mai 61.59 296 *e*P **P 08 30 50.5 -0.9**
comp=Z,8.9nm,1.1s,mb4.7
CD2 Chengdu 62.37 310 P **P 08 30 56.3 -0.1**
CD2 AP pP 08 31 22.5 +7.1
CD2 XP sP 08 31 33.5 +10
CD2 PP PP 08 33 18.8 +4.2
CD2 PCS PcS 08 35 38.0 -0.8
CD2 S **S 08 39 16.8 -1.0**
CD2 XS sS 08 39 58.8 +8.9
CD2 SS SS 08 43 24.5 +1.7
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
CD2 AMB AMB
comp=Z,260nm,4.7s
CD2 LR LR
comp=N,310nm,7.7s
CD2 LR LR
comp=Z,210nm,9.5s
HHC Hu-ho-hao-te 62.50 323 *e*P **P 08 30 57.5 +0.4**
HHC AP pP 08 31 21.8 +5.8
HHC XP sP 08 31 33.0 +8.9
HHC PP PP 08 33 17.5 +2.0
HHC PCS PcS 08 35 36.8 -2.2
HHC *e*S **S 08 39 16.0 -3.0**
HHC XS sS 08 39 57.5 +6.4
HHC SCS ScS 08 40 37.3 -5.7
HHC SS SS 08 43 23.3 -1.2
HHC AMB AMB
comp=Z,13nm,1.0s,mb4.9
HHC AMB AMB
comp=Z,118nm,4.6s
HHC LR LR
comp=N,168nm,15.5s
HHC LR LR
comp=E,95nm,16.7s
HHC LR LR
comp=Z,126nm,14.3s
LZH Lanzhou 64.82 315 *e*P **P 08 31 13.5 +1.0**
LZH AP pP 08 31 35.0 +3.5
LZH XP sP 08 31 44.0 +4.5
LZH PP PP 08 33 37.0 +1.0
LZH *e*S **S 08 39 47.0 -1.0**
LZH XS sS 08 40 30.5 +10
LZH SS SS 08 44 01.0 +0.2
LZH AMB AMB
comp=Z,19nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,139nm,5.6s
LZH LR LR
comp=N,363nm,15.7s
LZH LR LR
comp=Z,471nm,17.3s
GTA Gaotai 69.22 317 *e*P **P 08 31 41.3 +0.9**
GTA AP pP 08 32 01.0 +1.4
GTA XP sP 08 32 11.0 +3.4
GTA PP PP 08 34 16.3 +2.0
GTA S S 08 40 36.8 -4.2
GTA AMB AMB
comp=Z,5.0nm,1.3s,mb4.2
GTA AMB AMB
comp=Z,95nm,8.4s
GTA LR LR
comp=N,105nm,14.4s
GTA LR LR
comp=E,93nm,13.5s
GTA LR LR
comp=Z,107nm,13.8s
ULN Ulaanbaatar 69.36 327 *c i*P **P 08 31 41.8 +0.8**
ULN Ulaanbaatar 69.36 327 *e*P **P 08 31 41.9 +0.9**
comp=Z,21nm,1.0s,mb4.9
SEY Seymchan 69.68 358 *i*P **P 08 31 42.6 0.0**
SONM Songino Array 69.70 327 P **P 08 31 44.2 +1.2**
comp=Z,24nm,1.0s,mb5.0,baz=140,slow=6.7,SNR=90
SONM LR LR 08 59 13.4
comp=Z,77nm,21.7s,baz=131,slow=33
SHL Shillong 69.95 300 *e*P **P 08 31 45.0 -0.1**
YAK Yakutsk 71.64 347 *i*P **P 08 31 55.3 +0.7**
YAK pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
BOD Bodaibo 72.83 338 *e*P **P 08 32 01.7 0.0**
ZAK Zakamensk 72.84 328‖ *e*P **P 08 32 01.8 -0.2**
ZAK pmax pmax
comp=Z,13nm,1.1s,mb4.7
CHGN Chignik 73.33 25 *e*pP pP 08 32 25.1 +1.0
TLY Talaya 73.39 329 *i*P **P 08 32 03.9 -1.3**
TLY pmax pmax
comp=Z,11nm,1.1s,mb4.6
TLY Talaya 73.39 329 *e*P **P 08 32 04.3 -0.9**
comp=Z,8.7nm,0.9s,mb4.6
BILL Bilibino 75.13 4 *e*P **P 08 32 15.1 +0.1**
BILL pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
BILL Bilibino 75.13 4 *e*P **P 08 32 15.1 +0.1**
comp=Z,9.1nm,0.8s,mb4.6
WMQ Urumqi 79.31 317 *e*P **P 08 32 39.3 +0.4**
WMQ LR LR
comp=Z,66nm,27.0s
HYB Hyderabad 80.00 289 *i*P **P 08 32 43.0 -0.2**
HYB Hyderabad 80.00 289 *e*P **P 08 32 43.0 -0.2**
TIXI Tiksi 80.38 352‖ *e*P **P 08 32 44.2 +0.1**
MCK McKinley 81.67 22 *e*P **P 08 32 50.4 -0.7**
MCK pmax pmax
comp=Z,12nm,0.9s,mb4.7
MCK McKinley 81.67 22 *e*P **P 08 32 50.4 -0.7**
comp=Z,12nm,0.9s,mb4.7
COLA College 82.70 21 *e*P **P 08 32 55.1 -1.4**
COLA *e**PP pP 08 33 15.2 -1.0
COLA *e**SP sP 08 33 24.7 +0.6
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
COLA College 82.70 21 *e*P **P 08 32 55.1 -1.4**
comp=Z,6.0nm,0.9s,mb4.4
COLA *e*pP pP 08 33 15.2 -1.0
COLA *e*SP sP 08 33 24.7 +0.6
MK31 Makanchi Array 83.87 318 *e*P **P 08 33 02.9 0.0**
MKAR Makanchi Array 83.87 318 P **P 08 33 03.1 +0.2**
comp=Z,8.4nm,0.8s,mb4.6,baz=99,slow=5.2,SNR=37
MKAR pP pP 08 33 20.6 -2.1
comp=Z,4.3nm,0.8s,baz=94,slow=8.2,SNR=4.5
ZAA0 Zalesovo Array 84.56 326 *e*P **P 08 33 05.0 -1.1**
ZALV Zalesovo Beam 84.56 326 P **P 08 33 05.4 -0.8**
comp=Z,6.5nm,0.6s,mb4.8,baz=119,slow=5.2,SNR=21
ZALV pP pP 08 33 23.2 -2.8
comp=Z,1.9nm,0.4s,baz=120,slow=5.7,SNR=3.1
ZALV LR LR 09 08 15.3
comp=Z,49nm,19.8s,baz=93,slow=34
ZALV Zalesovo Beam 84.56 326 P **P 08 33 05.4 -0.8**
ZALV *PP pP 08 33 23.2 -2.8
MAW Mawson 84.80 203 P **P 08 33 06.8 -0.4**
comp=Z,11nm,0.8s,mb4.9,baz=96,slow=6.1,SNR=11
MAW LR LR 09 08 46.9
comp=Z,109nm,18.3s,baz=0.8,slow=34
MAW Mawson 84.80 203 *e*P **P 08 33 06.7 -0.5**
comp=Z,8.2nm,0.8s,mb4.7
EGAK Eagle 85.12 23 *e*pP pP 08 33 29.6 +1.0
NVS Novosibirsk 85.72 326 *e*P **P 08 33 09.2 -2.8**
NVS pmax pmax
comp=Z,33nm,2.0s,mb4.9
NVS pmax pmax
comp=N,14nm,1.8s
NVS pmax pmax
comp=E,8.0nm,1.3s
KURK Kurchatov 87.26 322 P **P 08 33 18.8 -0.8**
comp=E,2.0nm,0.6s,mb4.2,baz=105,slow=3.7,SNR=7.2
KURK Kurchatov 87.26 322‖ *i*P **P 08 33 18.3 -1.3**
KURK pmax pmax
comp=Z,19nm,2.2s,mb4.6
YBH Yreka Blue Hor 88.22 48 LR LR 09 04 46.8
comp=Z,277nm,21.4s,baz=357,slow=30
OHCM Honcut 88.71 50 *e*pP pP 08 33 48.5 +1.8
NVAR Mina Array Bea 91.03 52 P **P 08 33 42.2 +4.6**
comp=Z,0.4nm,0.7s,mb3.6,baz=233,slow=8.9,SNR=2.5
NVAR pP pP 08 33 57.5 -0.2
comp=Z,1.0nm,0.8s,baz=253,slow=5.8,SNR=4.5
BVAR Borovoye Array 92.71 323 P **P 08 33 43.9 -1.2**
comp=Z,5.3nm,0.8s,mb4.9,baz=107,slow=6.0,SNR=21
BRVK Borovoye 92.78 323 *e*P **P 08 33 43.8 -1.6**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
BRVK Borovoye 92.78 323 *e*P **P 08 33 43.8 -1.6**
comp=Z,3.1nm,0.9s,mb4.6
YKA Yellowknife Ar 95.87 28 P **P 08 33 59.1 -0.2**
comp=Z,1.1nm,0.7s,mb4.4,baz=267,slow=4.5,SNR=25
YKA pP pP 08 34 15.3 -4.0
comp=Z,1.0nm,0.7s,baz=266,slow=4.7,SNR=7.8
YKA PKKP PKKPbc 08 50 46.1 -4.7
comp=Z,0.4nm,0.6s,baz=84,slow=2.9,SNR=14
YKA LR LR 09 09 30.7
comp=Z,25nm,20.9s,baz=210,slow=31
LPIG La Paz 96.31 67 LR LR 09 09 00.5
comp=Z,138nm,18.8s,baz=11,slow=30
PDAR Pinedale Array 98.03 48 P **P 08 34 09.9 +0.2**
comp=Z,0.6nm,1.0s,mb4.1,baz=264,slow=9.0,SNR=2.7
PDAR LR LR 09 15 18.7
comp=Z,165nm,19.9s,baz=317,slow=34
ARCES ARCESS Array B 109.73 343 PKiKP PKiKP 08 39 02.2 -1.0
comp=Z,7.0nm,1.0s,baz=12,slow=6.2,SNR=5.6
ARCES ARCESS Array B 109.73 343 PKPdf PKiKP 08 39 02.2 -1.0
KIV Kislovodsk 111.36 315 *e*PKiKP PKiKP 08 39 06.3 -0.7
KIV pmax pmax
comp=Z,8.0nm,1.1s
AKASG Malin Array Be 117.93 325 PKP PKPdf 08 39 17.9 -1.5
comp=Z,1.0nm,0.4s,baz=62,slow=1.9,SNR=4.7
NOA NORSAR Array B 119.88 341 PKP PKPdf 08 39 21.4 -1.4
comp=Z,0.9nm,0.8s,baz=192,slow=14,SNR=3.4
BOSA Boshof 120.71 231 PKP PKPdf 08 39 23.9 -1.6
comp=Z,3.5nm,0.8s,baz=156,slow=4.9,SNR=6.9
CLL Collm 126.11 332‖ *i*PKPdf PKPdf 08 39 34.8 -0.3
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 127.27 330 *i*PKIKP PKPdf 08 39 36.1 -1.3
KHC Kasperske Hory 127.27 330 *e*PKPdf PKPdf 08 39 36.5 -0.9
GERES GERESS Array B 127.39 329 PKP PKPdf 08 39 37.5 -0.1
comp=Z,1.7nm,0.6s,baz=68,slow=1.3,SNR=20
GERES pPKP pPKPdf 08 39 54.6 -3.7
comp=Z,1.3nm,0.7s,baz=101,slow=1.4,SNR=5.3
EKA Eskdalemuir Ar 128.86 345 PKP PKPdf 08 39 39.5 -0.8
comp=Z,1.6nm,0.9s,baz=8.5,slow=1.4,SNR=3.8
DAVOX Davos/Dischmat 130.69 329 PKP PKPdf 08 39 43.9 -0.1
comp=Z,1.2nm,0.5s,baz=165,slow=4.1,SNR=5.4
DAVOS Davos 130.69 330 PKIKP PKPdf 08 39 43.9 -0.1
TAM Tamanrasset 147.33 302 *e*PKP2 PKPab 08 40 17.5 -1.8
BDFB Brasilia 147.47 134 PKPbc PKPbc 08 40 16.4 -1.4
comp=Z,4.3nm,0.8s,baz=235,slow=8.1,SNR=11
BDFB pPKPbc pPKPbc 08 40 33.0 -5.5
comp=Z,4.7nm,0.7s,baz=236,slow=2.7,SNR=4.6
TORD Torodi Ar. Bea 153.78 286 PKP PKPdf 08 40 24.1 -1.0
comp=Z,1.0nm,0.8s,baz=299,slow=1.1,SNR=4.1
TORD PKPbc PKPbc 08 40 31.8 -1.2
comp=Z,4.7nm,0.9s,baz=40,slow=2.2,SNR=15
TORD Torodi Ar. Bea 153.78 286 PKP PKPdf 08 40 24.1 -1.0
TORD PKPbc PKPbc 08 40 31.8 -1.2
KIC Kosan Boka 160.68 270 *e*PKP1 PKPab 08 41 15.7 -0.3
comp=Z,70nm,0.9s
DBIC Dimbokro 160.80 270 PKPab PKPab 08 41 16.3 -0.2
comp=Z,6.2nm,0.6s,baz=87,slow=5.4,SNR=12
LIC Lamto 160.95 269 *e*PKP1 PKPab 08 41 16.7 -0.5
comp=Z,35nm,0.9s
TIC Toumodi 160.96 270 *e*PKP1 PKPab 08 41 16.8 -0.4
comp=Z,62nm,1.0s

*ISCJB **26** 08:33:50.3±0.8, 3828N±002×2327E±005, h9km±6km, Error ellipse: s-maj=6.4km s-min=3.5km az=166.5*
*ATH **26** 08:33:50.7, 3830N×2327E, h19km±2km, MD3.1/7*
*THE **26** 08:33:50.8, 3828N×2322E, h11km±1km, MLZ.6/1, Error ellipse: s-maj=1.9km s-min=0.5km az=250.0*
*NEIC **26** 08:33:50.7, 3829N×2326E, h19km, MD3.1(ATH), After ATH.*
*CSEM **26** 08:33:50.8±0.1, 38.34N×2330E, h12km, MLZ.6/1, Error ellipse: s-maj=2.6km s-min=1.5km az=77.0*

ISC 26 08:33:50.8±0.5, 3829N±003×2324E±004, h11km±5km, n23, σ0.872/35, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.35**	**219**	P	P		**Pg**	**08 33 57.3**	**-0.4**
LTK				S	S		**Sg**	**08 34 02.3**	**0.0**
LKR	**Lokris**	**0.41**	**332**	P	P		**Pg**	**08 33 58.8**	**0.0**
LKR				S	S		**Sg**	**08 34 05.5**	**+1.2**
LKR	**Lokris**	**0.41**	**332**	*e*PB	P		**Pg**	**08 33 58.9**	**+0.1**
LKR				*e*SB	S		**Sg**	**08 34 05.2**	**+0.9**
LKR	**Lokris**	**0.41**	**332**	*e*Pb	P		**Pg**	**08 33 58.8**	**0.0**
LKR				*e*Sb	S		**Sg**	**08 34 05.2**	**+0.9**
ATH	**Athens Observa**	**0.49**	**130**	*e*PB	P		**Pg**	**08 34 00.5**	**+0.1**
ATH				*e*SB	S		**Sg**	**08 34 06.9**	**+0.1**
NAIG	**Nisos Aigina**	**0.57**	**160**	*e*PN	P		**Pg**	**08 34 02.0**	**+0.2**
DID	**Didima**	**0.78**	**180**	P	P		**Pg**	**08 34 05.2**	**-0.7**
DID				S	S		**Sg**	**08 34 16.1**	**0.0**
AOS	**Alonnisos**	**1.01**	**29**	P	P		**Pb**	**08 34 09.8**	**-0.4**
AOS				S	S		**Sb**	**08 34 24.2**	**+0.7**
NEO	**Neokhori**	**1.01**	**359**	*e*PN	P		**Pn**	**08 34 10.3**	**-0.6**
NEO				*e*SN	S		**Sn**	**08 34 23.9**	**-1.2**
NEO	**Neokhori**	**1.01**	**359**	*e*Pn	P		**Pn**	**08 34 10.4**	**-0.5**
NEO				*e*Sn	S		**Sn**	**08 34 23.9**	**-1.2**
AGG	**Agios Georgios**	**1.02**	**316**	P	P		**Pb**	**08 34 10.3**	**-0.1**
AGG				S	S		**Sb**	**08 34 24.2**	**+0.3**
XOR	**Xorichti**	**1.07**	**358**	P	P		**Pb**	**08 34 11.1**	**-0.2**
XOR				S	S		**Sb**	**08 34 26.6**	**+1.2**
RLS	**Riolos of Patr**	**1.42**	**261**	*e*PN	P		**Pn**	**08 34 18.2**	**+1.7**
ITM	**Ithomi**	**1.52**	**224**	*e*PB	P		**Pb**	**08 34 17.9**	**-1.1**
ITM	**Ithomi**	**1.52**	**224**	*e*Pb	P		**Pb**	**08 34 18.3**	**-0.7**
VLI	**Veliai**	**1.59**	**189**	*e*PN	P		**Pn**	**08 34 20.0**	**+1.2**
THL	**Klokotos Trika**	**1.59**	**323**	P	P		**Pn**	**08 34 18.1**	**-0.7**
PAIG	**Paliouri**	**1.67**	**12**	P	P		**Pn**	**08 34 19.2**	**-0.7**
PLG	**Polygyros**	**2.08**	**4**	P	P		**Pn**	**08 34 25.1**	**-0.5**
OUR	**Ouranopolis**	**2.12**	**15**	P	P		**Pn**	**08 34 25.7**	**-0.4**
APE	**Apeiranthos**	**2.19**	**123**	P	P		**Pn**	**08 34 26.5**	**-0.5**
APE				S	S		**Sn**	**08 34 55.2**	**+1.2**
LIA	**Limnos Island**	**2.20**	**43**	P	P		**Pn**	**08 34 26.7**	**-0.5**
CHOS	**Chios island**	**2.21**	**87**	P	P		**Pn**	**08 34 27.6**	**+0.2**

IDC 26 08:43:50.8±2.0, 196N×12630E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/15, mbtmp3.3/4, Error ellipse: s-maj=190.7km s-min=24.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.15**	**160**	P	P		P	08 48 59.5	+0.5
	0.6nm,0.5s,baz=340,slow=10,SNR=7.1								
ASAR	**Alice Springs**	**26.52**	**164**	P	P		P	08 49 29.5	-0.7
	0.3nm,0.9s,baz=331,slow=6.8,SNR=5.6								
STKA	**Stephens Creek**	**36.65**	**158**	P	P		P	08 50 59.3	+0.1
	0.5nm,0.7s,baz=325,slow=12,SNR=3.8								
MKAR	**Makanchi Array**	**58.76**	**326**	P	P		P	08 53 50.9	+0.2
	0.2nm,0.4s,baz=124,slow=7.5,SNR=6.4								

IDC 26 08:53:37.5±50.0, 1654S×17723W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/16, mbtmp3.8/3, Error ellipse: s-maj=923.9km s-min=153.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.28**	**240**	P	P		P	09 01 17.0	+0.5
	0.6nm,0.4s,baz=88,slow=13,SNR=11								
WRA	**Warramunga Arr**	**46.00**	**258**	P	P		P	09 02 02.5	-0.5
	0.3nm,0.5s,baz=96,slow=7.5,SNR=9.9								
ASAR	**Alice Springs**	**46.25**	**253**	P	P		P	09 02 04.8	-0.2
	2.6nm,0.6s,baz=88,slow=8.4,SNR=66								

IDC 26 09:01:15.3±2.3, 2912N×14151E, h48km±21km, mb3.3/5, mb1 3.6/7, mb1mx3.3/22, mbtmp3.3/7, ML3.4/2, Error ellipse: s-maj=41.9km s-min=16.3km az=85.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.10**	**163**	P	P		Pn	09 01 48.8	+0.8
	9.5nm,0.3s,baz=274,slow=24,SNR=5.8								
CBIJ				S	S		Sn	09 02 13.3	+0.3
	38nm,0.3s,baz=275,slow=22,SNR=6.2								
MJAR	**Matsushiro Arr**	**7.90**	**340**	P	P		Pn	09 03 07.1	-0.4
	0.7nm,0.3s,baz=158,slow=11,SNR=5.6								
WRA	**Warramunga Arr**	**49.27**	**189**	P	P		P	09 09 59.8	+0.6
	0.5nm,0.5s,baz=7.6,slow=7.8,SNR=13								
ASAR	**Alice Springs**	**52.99**	**189**	P	P		P	09 10 26.1	-1.0
	0.3nm,0.9s,baz=10,slow=5.7,SNR=3.4								
YKA	**Yellowknife Ar**	**70.65**	**29**	P	P		P	09 12 24.9	-0.5
	0.2nm,0.5s,baz=297,slow=6.4,SNR=5.6								
NVAR	**Mina Array Bea**	**79.74**	**52**	P	P		P	09 13 18.8	+0.7
	0.4nm,0.6s,baz=308,slow=4.4,SNR=2.4								
TXAR	**Lajitas Array**	**94.86**	**53**	P	P		P	09 14 32.7	+0.3
	0.3nm,0.7s,baz=270,slow=1.8,SNR=3.5								

*ISCJB **26** 09:01:26.7±0.7, 4549N±009×1472E±0.1, h198km±8km, mb3.5/13, Error ellipse: s-maj=17.3km s-min=9.4km az=137.6*
*NEIC **26** 09:01:27.8±0.9, 4568N×147.11E, h190km±9km, MG4.1(JMA), Error ellipse: s-maj=12.7km s-min=8.0km az=134.0*
*MOS **26** 09:01:27.7±1.2, 4569N×147.17E, h207km, mb4.1/7, Error ellipse: s-maj=24.6km s-min=13.4km az=59.1*
*JMA **26** 09:01:28.6±0.5, 4513N×14756E, h186km, M4.1*
*IDC **26** 09:01:29.1±1.9, 4571N×147.15E, h201km±18km, mb3.3/13, mb1 3.5/16, mb1mx3.4/26, mbtmp3.3/16, Error ellipse: s-maj=17.1km s-min=11.8km az=130.0*

ISC 26 09:01:27.4±0.7, 4554N±009×1472E±01, h186km±8km, n45, σ1820/49, mb3.6/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.39**	**206**	P	P		**Pn**	**09 02 08.2**	**-1.0**
NEM2				*e*S	S		**Sn**	**09 02 38.2**	**-3.4**
JTKR	**Abashiri--Toko**	**2.79**	**237**	P	P		**Pn**	**09 02 15.8**	**+2.0**
JAK	**Akkeshi**	**3.09**	**216**	P	P		**Pn**	**09 02 17.5**	**+0.1**
JAK				*e*S	S		**Sn**	**09 02 55.8**	**-0.6**
JAR	**Ashorobuto**	**3.30**	**229**	P	P		**Pn**	**09 02 22.1**	**+2.2**
ASAJ	**Asahikawa**	**3.54**	**248**	P	P		**Pn**	**09 02 26.4**	**+3.5**
	1.8nm,0.3s,baz=289,slow=30,SNR=12								
ASAJ	**Asahikawa**	**3.54**	**248**	PN	**Pn**			**09 02 26.4**	**+3.5**
ASAJ				pmax	pmax				
	comp=Z,2.0nm,0.3s								
JKK2	**Kamakawa 2**	**3.56**	**244**	P	P		**Pn**	**09 02 26.0**	**+2.9**
JWK2	**Keihoku**	**3.71**	**268**	P	P		**Pn**	**09 02 29.5**	**+4.5**
JCH	**Churui**	**4.00**	**224**	P	P		**Pn**	**09 02 29.5**	**+0.9**
JCH				*e*S	S		**Sn**	**09 03 15.7**	**-0.8**
JNBK	**Urakawa-nobuka**	**4.55**	**226**	P	P		**Pn**	**09 02 35.6**	**0.0**
JNBK				*e*S	S		**Sn**	**09 03 27.9**	**-1.3**
ERM	**Erimo**	**4.56**	**221**	*e*Pn	P		**Pn**	**09 02 37.1**	**+1.4**
ERM				*e*Sn	S		**Sn**	**09 03 25.3**	**-4.0**
JKB	**Kayabe**	**5.74**	**233**	P	P		**Pn**	**09 02 51.4**	**+0.3**
JKB				*e*S	S		**Sn**	**09 03 55.3**	**-1.6**
JOT	**Ohata**	**6.08**	**229**	P	P		**Pn**	**09 02 54.9**	**-0.6**
JOT				*e*S	S		**Sn**	**09 04 01.2**	**-3.7**
JOSM	**Okushiri--Mats**	**6.54**	**241**	P	P		**Pn**	**09 03 02.9**	**+1.4**
JMK	**Ichinoseki**	**7.91**	**216**	P	P		**Pn**	**09 03 18.7**	**-0.8**
JMK				*e*S	S		**Sn**	**09 04 42.9**	**-5.5**
PETK	**Petropavlovsk-**	**10.23**	**38**	P	P		**Pn**	**09 03 48.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=224,slow=13,SNR=2.9								
KSRS	**Korea Array**	**16.49**	**247**	P	P		**Pn**	**09 05 11.7**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=54,slow=12,SNR=7.3								
FX1	**Attu Island--F**	**18.44**	**57**	P	P		**P**	**09 05 28.9**	**+0.3**

comp=Z,0.9nm,0.3s,baz=254,slow=18,SNR=2.6
FX1 Attu Island--F 18.44 57 P **P** **09 05 28.9 +0.3**
FX1 pmax pmax
comp=Z,1.0nm,0.3s
FX1 Attu Island--F 18.44 57 P **P** **09 05 28.9 +0.3**
MKAR Makanchi Array 43.79 296 P **P** **09 09 14.3 0.0**
comp=Z,0.3nm,0.6s,mb3.1,baz=78,slow=6.5,SNR=3.0
MKAR PcP PcP 09 10 58.0 +0.6
comp=Z,0.3nm,0.6s,baz=65,slow=4.6,SNR=3.4
KURK Kurchatov 44.56 303 P **P** **09 09 20.3 -0.1**
comp=Z,0.9nm,0.4s,mb3.8,baz=72,slow=8.3,SNR=4.7
KURK Kurchatov 44.56 303 P **P** **09 09 20.3 -0.1**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
YKA Yellowknife Ar 54.32 34 P **P** **09 10 32.6 -1.4**
comp=Z,0.4nm,0.6s,mb3.3,baz=301,slow=7.1,SNR=17
YKA PcP PcP 09 11 35.0 -0.4
comp=Z,0.1nm,0.4s,baz=307,slow=3.9,SNR=5.1
YKA Yellowknife Ar 54.32 34 P **P** **09 10 32.6 -1.4**
YKA PcP PcP 09 11 35.0 -0.4
ARCES ARCESS Array B 57.58 339 P **P** **09 10 57.1 +0.1**
comp=Z,4.4nm,0.8s,mb4.3,baz=24,slow=9.2,SNR=2.6
ARCES ARCESS Array B 57.58 339 P **P** **09 10 57.1 +0.1**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
YBH Yreka Blue Hor 61.93 58 P **P** **09 11 27.2 +0.1**
comp=Z,1.0nm,0.7s,mb3.8,baz=331,slow=10,SNR=3.5
YBH Yreka Blue Hor 61.93 58 P **P** **09 11 27.2 +0.1**
YBH pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 66.20 193 P **P** **09 11 55.2 +0.3**
comp=Z,0.9nm,0.6s,mb3.8,baz=10,slow=6.6,SNR=9.0
WRA Warramunga Arr 66.20 193 P **P** **09 11 55.2 +0.2**
WRA pmax pmax
comp=Z,1.0nm,0.6s
NVAR Mina Array Bea 66.63 59 P **P** **09 11 57.8 +0.1**
comp=Z,0.8nm,0.6s,mb3.7,baz=294,slow=7.2,SNR=7.0
NOA NORSAR Array B 67.94 339 P **P** **09 12 03.8 -1.7**
comp=Z,2.2nm,1.0s,mb3.8,baz=30,slow=6.6,SNR=4.7
NOA NORSAR Array B 67.94 339 P **P** **09 12 03.8 -1.7**
NOA pmax pmax
comp=Z,2.0nm,1.0s
PDAR Pinedale Array 68.76 50 P **P** **09 12 10.6 -0.3**
comp=Z,0.9nm,0.6s,mb3.7,baz=48,slow=0.7,SNR=9.9
ASAR Alice Springs 69.92 193 P **P** **09 12 19.6 +1.5**
comp=Z,0.9nm,0.7s,mb3.6,baz=11,slow=5.8,SNR=17
ASAR Alice Springs 69.92 193 P **P** **09 12 19.6 +1.5**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 70.15 323 P **P** **09 12 17.5 -1.8**
comp=Z,0.4nm,0.4s,mb3.5,baz=58,slow=5.8,SNR=2.7
STKA Stephens Creek 77.21 185 P **P** **09 13 01.8 +1.4**
comp=Z,0.5nm,0.5s,mb3.5,baz=14,slow=2.9,SNR=3.3
TXAR Lajitas Array 81.66 56 P **P** **09 13 24.6 -0.2**
comp=Z,0.6nm,0.5s,mb3.5,baz=284,slow=3.7,SNR=10
TXAR Lajitas Array 81.66 56 P **P** **09 13 24.6 -0.2**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
VNA2 Neumayer--Watz 151.69 197 *e* PKPbc 09 20 59.1 +0.9
baz=108,slow=1.4
VNA3 Neumayer Olymp 151.90 196 *e* PKPbc PKPbc 09 20 59.3 +0.6
PLCA Paso Flores 152.24 94 PKPbc PKPbc 09 21 00.7 +0.3
comp=Z,1.7nm,0.7s,baz=306,slow=0.9,SNR=5.7
PLCA Paso Flores 152.24 94 PKIKP PKPbc 09 21 00.7 +0.3
PLCA pmax pmax
comp=Z,2.0nm,0.7s

*ISCJB **26** 09:15:24.9±0.4, 679N±005×7298W±004, h171km±4km, mb3.9/10, Error ellipse: s-maj=9.3km s-min=5.2km az=141.2*
*FUNV **26** 09:15:24.8, 675N×7320W, h173km, MW4.3*
*NEIC **26** 09:15:25.7±0.8, 673N×7301W, h164km±10km, mb4.4/1, Error ellipse: s-maj=15.9km s-min=11.2km az=153.0*
*IDC **26** 09:15:25.5±0.7, 676N×7292W, h160km±7km, mb3.8/10, mb1 4.0/14, mb1mx3.8/24, mbtmp3.9/14, Error ellipse: s-maj=15.5km s-min=7.4km az=134.0*
ISC 26 09:15:26.2±0.4, 679N±005×7295W±005, h166km±4km, n39, σ0≤94/44, mb3.9/10, 13C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**30**	↑*iP*		**Pn**	**09 15 55.1**	**+0.5**
CAPV				*e*S		**Sn**	**09 16 16.5**	**+0.2**
ROSC	**El Rosal**	**2.36**	**216**	P		**Pn**	**09 16 06.9**	**+0.4**
	148nm,0.3s,baz=88,slow=16,SNR=428							
ROSC				S		**Sn**	**09 16 36.9**	**-0.8**
	127nm,0.3s,baz=86,slow=20,SNR=8.1							
SOCV	**Socops**	**2.55**	**54**	↑*iP*		**Pn**	**09 16 09.7**	**+1.0**
SOCV				*e*S		**Sn**	**09 16 42.3**	**+0.7**
SDV	**Santo Domingo**	**3.10**	**48**	P		**Pn**	**09 16 16.6**	**+1.2**
SDV				S		**Sn**	**09 16 53.3**	**-0.3**
	99nm,0.3s,baz=50,slow=14,SNR=9.7							
ELOV	**Elorza**	**3.45**	**86**	↑*iP*		**Pn**	**09 16 21.3**	**+1.5**
ELOV				*e*S		**Sn**	**09 17 02.7**	**+1.2**
VIRV	**Villa del Rosa**	**3.73**	**8**	↑*iP*		**Pn**	**09 16 21.7**	**-1.7**
VIRV				*e*S		**Sn**	**09 17 04.5**	**-3.5**
QARV	**Quebrada Arrib**	**4.16**	**35**	↑*iP*		**Pn**	**09 16 29.3**	**+0.4**
SANV	**Sanarito**	**4.32**	**51**	↑*iP*		**Pn**	**09 16 31.1**	**+0.1**
CURV	**Curarigua**	**4.36**	**42**	↑*iP*		**Pn**	**09 16 31.7**	**+0.2**
DABV	**Dabajuro**	**4.70**	**29**	*eP*		**Pn**	**09 16 36.0**	**+0.1**
TEPV	**Terepaima**	**4.87**	**49**	↑*iP*		**Pn**	**09 16 38.6**	**+0.4**
BAUV	**El Baul**	**5.31**	**66**	↑*iP*		**Pn**	**09 16 43.2**	**-0.7**
MONV	**Montecano**	**5.91**	**30**	↑*iP*		**Pn**	**09 16 50.6**	**-1.3**
TURV	**Turiamo**	**6.22**	**54**	*eP*		**Pn**	**09 16 55.6**	**-0.4**
CAOV	**Caicara del Or**	**6.60**	**85**	↓*eP*		**Pn**	**09 17 00.4**	**-0.6**
MERV	**Las Mercedes**	**7.03**	**69**	↑*iP*		**Pn**	**09 17 05.9**	**-0.7**
BCIP	**Isla Barro Col**	**7.22**	**290**	*e*Pn		**Pn**	**09 17 05.3**	**-3.9**
BIRV	**Birongo**	**7.55**	**61**	*eP*		**Pn**	**09 17 12.8**	**-0.8**
CUPV	**Cœpira**	**7.79**	**65**	↑*iP*		**Pn**	**09 17 16.3**	**-0.5**
OTAV	**Otavalo**	**8.51**	**220**	*e*Pn		**Pn**	**09 17 24.6**	**-1.8**
	7.3nm,0.6s							
OTAV					Sn	**Sn**	**09 18 57.5**	**-3.9**
PCRV	**Puerto La Cruz**	**8.88**	**67**	P		**Pn**	**09 17 30.9**	**-0.3**
	3.6nm,0.3s,baz=195,slow=5.9,SNR=24							
PCRV				S		**Sn**	**09 19 09.1**	**-1.1**
	baz=73,slow=18,SNR=2.4							
MTDJ	**Mount Denham**	**12.22**	**339**	*e*Pn		**Pn**	**09 18 16.3**	**+1.4**
MTDJ					Sn	**Sn**	**09 20 21.0**	**-9.3**
ATAH	**Atahualpa**	**14.74**	**202**	P		**Pn**	**09 18 48.8**	**+2.1**
	0.3nm,0.3s,baz=46,slow=12,SNR=2.6							
TEIG	**Tepich**	**19.99**	**313**	P		**P**	**09 19 46.5**	**+0.5**
	11nm,0.4s,baz=176,slow=1.7,SNR=15							
SIV	**San Ignacio**	**25.50**	**153**	pP		pP	09 21 14.1	+0.6
	0.9nm,0.5s,baz=327,slow=9.7,SNR=6.8							
TXAR	**Lajitas Array**	**36.61**	**312**	P		**P**	**09 22 16.8**	**+0.2**
	1.1nm,0.4s,mb3.8,baz=127,slow=8.8,SNR=24							
TXAR					PcP	PcP	09 24 38.0	+1.7
	0.3nm,0.6s,baz=108,slow=4.1,SNR=3.6							
ULM	**Lac du Bonnet**	**47.37**	**340**	P		**P**	**09 23 42.2**	**-1.2**
	5.8nm,0.5s,mb4.5,baz=138,slow=6.7,SNR=11							
SCHQ	**Schefferville**	**48.16**	**5**	P		**P**	**09 23 50.1**	**+0.8**
	3.3nm,0.6s,mb4.2,baz=199,slow=5.6,SNR=13							
PDAR	**Pinedale Array**	**48.20**	**324**	P		**P**	**09 23 50.3**	**+0.3**
	1.1nm,0.5s,mb3.7,baz=127,slow=8.7,SNR=18							
NVAR	**Mina Array Bea**	**51.63**	**315**	P		**P**	**09 24 17.0**	**+1.1**
	0.8nm,0.6s,mb3.5,baz=123,slow=6.7,SNR=5.9							
FRB	**Frobisher Bay**	**56.94**	**2**	P		**P**	**09 24 53.5**	**-0.3**
	1.7nm,0.4s,mb4.2,baz=174,slow=8.1,SNR=13							
YKA	**Yellowknife Ar**	**63.35**	**340**	P		**P**	**09 25 37.4**	**+0.1**
	3.4nm,0.5s,mb4.4,baz=133,slow=6.6,SNR=186							
YKA	**Yellowknife Ar**	**63.35**	**340**	P		**P**	**09 25 37.4**	**+0.1**
DBIC	**Dimbokro**	**67.57**	**86**	P		**P**	**09 26 05.2**	**-0.2**
	1.3nm,0.8s,mb3.7,baz=270,slow=6.1,SNR=2.9							
TORD	**Torodi Ar. Bea**	**73.58**	**78**	P		**P**	**09 26 40.7**	**-1.0**
	0.1nm,0.3s,mb3.0,baz=292,slow=5.7,SNR=3.7							
ARCES	**ARCESS Array B**	**86.64**	**20**	P		**P**	**09 27 51.5**	**+0.9**
	3.0nm,0.9s,mb4.1,baz=267,slow=4.5,SNR=3.3							
MKAR	**Makanchi Array**	**122.29**	**20**	PKP		PKPdf	09 34 01.7	+0.1
	0.2nm,0.3s,baz=289,slow=2.0,SNR=5.3							
ASAR	**Alice Springs**	**149.23**	**234**	PKP		PKPdf	09 34 51.9	+0.3
	0.3nm,0.4s,baz=98,slow=1.4,SNR=6.8							
ASAR					PKPbc	PKPbc	09 34 55.6	-0.3
	0.4nm,0.4s,baz=118,slow=3.3,SNR=12							
WRA	**Warramunga Arr**	**150.47**	**241**	PKPbc		PKPbc	09 34 58.9	-0.2
	0.5nm,0.3s,baz=105,slow=3.0,SNR=26							

*ISCJB **26** 09:32:59.5±4.2, 364N±02×710E±02, h146km±36km, mb3.0/5, Error ellipse: s-maj=38.0km s-min=28.1km az=21.4*
*IDC **26** 09:32:59.3±10.0, 3629N×7100E, h131km±90km, mb3.0/6, mb1 3.2/8, mb1mx3.0/24, mbtmp3.0/8, Error ellipse: s-maj=44.2km s-min=28.6km az=18.0*
ISC 26 09:33:00.5±4.0, 364N±02×710E±02, h141km±34km, n9, σ0≤54/10, mb3.0/5, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.74**	**357**	P		**Pn**	**09 34 37.3**	**+0.4**
	3.8nm,0.3s,baz=180,slow=12,SNR=36							
KK31				↑↑S		**Sn**	**09 35 48.7**	**-3.7**
	3.5nm,0.4s,baz=181,slow=23,SNR=13							
BVAR	**Borovoye Array**	**16.67**	**359**	P		**Pn**	**09 36 45.4**	**-0.2**
	0.2nm,0.3s,baz=155,slow=11,SNR=3.0							
AKTO	**Aktyubinsk**	**16.91**	**330**	P		**Pn**	**09 36 49.2**	**+0.7**
	0.2nm,0.3s,baz=119,slow=11,SNR=5.4							
ZALV	**Zalesovo Beam**	**20.03**	**24**	P		**P**	**09 37 22.3**	**+0.2**
	0.6nm,0.4s,baz=220,slow=13,SNR=3.1							
NOA	**NORSAR Array B**	**44.51**	**323**	P		**P**	**09 40 57.3**	**-0.2**
	0.6nm,0.5s,mb3.5,baz=97,slow=7.7,SNR=2.9							
TORD	**Torodi Ar. Bea**	**65.74**	**269**	P		**P**	**09 43 30.0**	**-0.4**
	0.3nm,0.5s,mb3.3,baz=53,slow=6.4,SNR=3.8							
YKA	**Yellowknife Ar**	**81.38**	**3**	P		**P**	**09 45 01.5**	**+0.4**
	0.1nm,0.5s,mb2.7,baz=354,slow=5.7,SNR=5.5							
WRA	**Warramunga Arr**	**81.90**	**122**	P		**P**	**09 45 03.9**	**-0.5**
	0.1nm,0.3s,mb2.9,baz=322,slow=4.3,SNR=3.3							
ASAR	**Alice Springs**	**84.15**	**125**	P		**P**	**09 45 16.1**	**+0.2**
	0.1nm,0.6s,mb2.8,baz=317,slow=5.5,SNR=4.7							

IDC 26 09:35:52.6±9.0, 586S×15119E, h79km±63km, mb3.0/2, mb1 3.3/3, mb1mx3.1/16, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=127.2km s-min=55.9km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.33**	**228**	P		Pn	09 37 09.4	-0.3
	1.2nm,0.3s,baz=26,slow=12,SNR=4.3							
PMG				S		Sn	09 38 12.0	+2.3
	1.8nm,0.3s,baz=132,slow=20,SNR=4.8							
WRA	**Warramunga Arr**	**21.55**	**228**	P		P	09 40 34.0	-1.7
	0.8nm,0.6s,baz=52,slow=10,SNR=11							
ASAR	**Alice Springs**	**24.29**	**221**	P		P	09 41 02.4	-0.5
	0.5nm,0.6s,baz=52,slow=9.1,SNR=10							
TORD	**Torodi Ar. Bea**	**149.08**	**286**	PKPbc		PKPbc	09 55 33.5	+0.6
	0.3nm,0.7s,baz=79,slow=2.9,SNR=2.4							

*NIED **26** 09:56:00, 2940N×142.20E, h5km, Mw4.2 Best double couple: M0 2.59000×10^15 NP1:φs356.00000°, δ77.00000°, λ73.0000°. NP2:φs229.00000°, δ21.00000°, λ142.00000°.*
*BJI **26** 09:56:46.0, 2900N×142.16E, h36km, mB4.9, mb4.5, Ms4.4, Msz4.2*
*ISCJB **26** 09:56:49.4±1.1, 2931N±002×14153E±003, h21km±7km, mb4.5/55, MS3.7/15, Error ellipse: s-maj=5.1km s-min=3.4km az=149.7*
*JMA **26** 09:56:49.0±0.2, 2942N×142.16E, h32km, M4.6*
*MOS **26** 09:56:50.0±0.9, 2922N×14154E, h33km, mb4.6/24, Error ellipse: s-maj=14.1km s-min=7.0km az=101.6*
*IDC **26** 09:56:52.6±1.8, 2925N×14163E, h38km±15km, mb4.1/20, mb1 4.3/23, mb1mx4.2/27, mbtmp4.1/23, ML4.4/3, MS3.4/12, Ms1 3.5/12, ms1mx3.2/48, Error ellipse: s-maj=16.5km s-min=11.7km az=75.0*
*NEIC **26** 09:56:52.3±0.2, 2920N×14162E, h35km, mb4.8/27, MW4.2(NIED), Error ellipse: s-maj=7.1km s-min=5.7km az=142.0*
ISC 26 09:56:52.8±0.5, 2927N±002×14155E±003, h35km±4km, h27km±4.7km: pP-P, n391, σ0≤62/405, mb4.5/55, MS3.7/15, 132C-124D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.24**	**165**	Pn		**Pn**	**09 57 26.7**	**-0.6**
	119nm,0.3s,baz=281,slow=20,SNR=21							
CBIJ					Sn	**Sn**	**09 57 49.3**	**-4.4**
	229nm,0.3s,baz=281,slow=21,SNR=9.8							
CBIJ					LR	LR	09 58 20.5	
	comp=Z,340nm,20.5s,baz=276,slow=40							
CBIJ	**Chichi jima**	**2.24**	**165**	P		**Pn**	**09 57 26.5**	**-0.8**
CBIJ				*e*S		**Sn**	**09 57 53.6**	**-0.1**
JHHJ	**Haha-jima-NKT**	**2.69**	**168**	*e*S		**Sn**	**09 58 05.7**	**+0.8**
JHJ2	**Mitsune**	**4.11**	**339**	P		**Pn**	**09 57 51.8**	**-1.3**
JHJ2				*e*S		**Sn**	**09 58 39.5**	**-0.4**
JHJ	**Hachijo jima 2**	**4.13**	**339**	Pn		**Pn**	**09 57 52.5**	**-0.8**
	22nm,0.3s,baz=55,slow=21,SNR=5.0							
JHJ					Sn	**Sn**	**09 58 39.0**	**-1.3**
	76nm,0.3s,baz=71,slow=22,SNR=5.0							
JKO	**Kozu shima**	**5.32**	**338**	P		**Pn**	**09 58 09.6**	**-0.1**
JKO				*e*S		**Sn**	**09 59 12.7**	**+3.0**
BSO1	**Boso 1**	**5.39**	**355**	P		**Pn**	**09 58 09.7**	**-1.0**
BSO1				*e*S		**Sn**	**09 59 10.4**	**-1.1**
BSO3	**Boso 3**	**5.59**	**351**	P		**Pn**	**09 58 11.8**	**-1.6**
BSO3				*e*S		**Sn**	**09 59 16.3**	**0.0**
BSO4	**Boso 4**	**5.80**	**350**	P		**Pn**	**09 58 16.8**	**+0.5**
BSO4				*e*S		**Sn**	**09 59 23.4**	**+1.9**
JOD2	**Odawara 2**	**6.33**	**341**	P		**Pn**	**09 58 23.5**	**-0.1**
JOD2				*e*S		**Sn**	**09 59 34.1**	**-0.5**
JIE	**Ise**	**6.56**	**322**	P		**Pn**	**09 58 30.7**	**+3.9**
JNY	**Yasuok**	**6.83**	**334**	P		**Pn**	**09 58 33.1**	**+2.7**
JHU	**Hanno**	**6.84**	**344**	P		**Pn**	**09 58 30.7**	**+0.1**
JHU				*e*S		**Sn**	**09 59 46.5**	**-0.6**
JRY	**Ryogami san**	**7.09**	**342**	P		**Pn**	**09 58 35.0**	**+1.0**
JRY				*e*S		**Sn**	**09 59 52.8**	**-0.5**
MJAR	**Matsushiro Arr**	**7.78**	**340**	Pn		**Pn**	**09 58 44.1**	**+0.7**
	5.3nm,0.3s,baz=160,slow=12,SNR=33							
MJAR					Sn	**Sn**	**10 00 10.4**	**+0.2**
	0.9nm,0.3s,baz=140,slow=42,SNR=2.5							
MJAR					LR	LR	10 01 40.3	
	comp=Z,116nm,18.2s,baz=140,slow=37							
MJAR	**Matsushiro Arr**	**7.78**	**340**	P		**Pn**	**09 58 44.1**	**+0.7**
MJAR							10 00 10.5	
MJAR					pmax	pmax		
	comp=Z,5.0nm,0.3s							
MJAR					smax			
	comp=N,1.0nm,0.3s							
MJAR					MLR	MLR		
	comp=Z,116nm,18.2s							
MAJO	**Matsushiro**	**7.78**	**340**	*e*P		**Pn**	**09 58 44.1**	**+0.6**
MAT	**Matsushiro**	**7.78**	**340**	P		**Pn**	**09 58 43.9**	**+0.4**
MAT				S		**Sn**	**10 00 11.2**	**+0.9**
KSRS	**Korea Array**	**14.00**	**309**	Pn		**Pn**	**10 00 14.2**	**+5.5**
	comp=Z,0.2nm,0.3s,baz=123,slow=13,SNR=5.8							
KSRS					LR	LR	10 05 23.1	
	comp=Z,120nm,20.3s,baz=164,slow=36							
ASAJ	**Asahikawa**	**14.84**	**3**	Pn		**Pn**	**10 00 16.7**	**-3.3**
	comp=Z,0.9nm,0.3s,baz=192,slow=9.2,SNR=6.0							
ASAJ					Sn	**Sn**	**10 02 48.2**	**-15**
	comp=Z,0.1nm,0.3s,baz=211,slow=33,SNR=2.1							
YSS	**Yuzh-Sakhalins**	**17.68**	**3**	*i*P		**Pn**	**10 00 55.6**	**-0.5**
YSS					pmax	pmax		
	comp=Z,36nm,1.3s							
MDJ	**Mudanjiang**	**18.02**	**331**	P		**Pn**	**10 01 01.3**	**+0.9**
MDJ					AP	pP	10 01 07.3	-2.5
MDJ					XP	sP	10 01 09.8	-4.5
MDJ					S	**S**	**10 04 24.8**	**-0.6**
MDJ					XS	sS	10 04 39.5	-0.4
MDJ					SCP	ScP	10 09 03.0	-3.6
MDJ					AMB	AMB		
	comp=Z,12nm,0.8s							
MDJ					AMB	AMB		
	comp=Z,27nm,3.7s							
MDJ					LR	LR		
	comp=N,54nm,6.7s							
MDJ					LR	LR		
	comp=E,83nm,4.7s							
MDJ					LR	LR		
	comp=Z,139nm,5.4s							
YHNB	**Yeheng**	**18.56**	**260**	*e*P		**Pn**	**10 01 09.2**	**+2.2**
YULB	**Yu-li**	**19.07**	**257**	*e*P		**Pn**	**10 01 15.1**	**+1.9**
SSLB	**Suanglung**	**19.22**	**258**	*e*P		**Pn**	**10 01 12.9**	**-2.1**
	comp=Z,34nm,0.5s							
NJ2	**Nanjing**	**19.72**	**284**	*e*P		**Pn**	**10 01 21.8**	**+0.9**
NJ2					AMB	AMB		
	comp=Z,20nm,0.9s							
HABR	**Khabarovsk**	**19.82**	**347**	*e*P		**Pn**	**10 01 29.3**	**+7.4**
HABR				*e*S		**S**	**10 04 59.3**	**-2.1**
HABR					MLR	MLR		
	comp=Z,44nm,14.0s							
KLR	**Kul'dur**	**21.30**	**342**	*e*P		**P**	**10 01 38.4**	**+2.2**
BJI	**Beijing**	**23.40**	**304**	P		**P**	**10 01 57.8**	**-0.9**
BJI				S		**S**	**10 06 10.5**	**+1.4**
BJI					AMB	AMB		
	comp=Z,5.0nm,0.4s,mb4.3							
BJI					AMB	AMB		
	comp=Z,64nm,4.3s							
BJI					LR	LR		
	comp=N,223nm,10.2s,MS4.1							
BJI					LR	LR		
	comp=E,245nm,11.4s,MS4.1							
BJI					LR	LR		
	comp=Z,89nm,19.6s							
PETK	**Petropavlovsk-**	**26.61**	**22**	LR		LR	10 12 07.3	
	comp=Z,29nm,21.6s,MS2.8,baz=165,slow=34							
HHC	**Hu-ho-hao-te**	**27.00**	**303**	*e*P		**P**	**10 02 33.5**	**+2.1**
HHC					AP	pP	10 02 43.0	+1.6
HHC					XP	sP	10 02 47.0	+1.3
HHC					PP		10 03 19.5	
HHC					S	**S**	**10 07 06.0**	**-0.5**
HHC					XS	sS	10 07 22.5	-0.6
HHC					PCS	PcS	10 09 34.3	+0.7
HHC					SCS	ScS	10 13 20.5	-0.3
HHC					AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.3							
HHC					AMB	AMB		
	comp=Z,70nm,3.8s							
HHC					LR	LR		
	comp=N,148nm,12.0s,MS4.0							
HHC					LR	LR		
	comp=E,183nm,10.9s,MS4.0							
HHC					LR	LR		
	comp=Z,148nm,15.3s,MS3.7							
XAN	**Xi'an**	**28.11**	**288**	P		**P**	**10 02 40.0**	**-1.4**
XAN				S		**S**	**10 07 25.3**	**+1.2**
XAN				SS			10 08 49.3	
XAN					AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.0							
XAN					LR	LR		
	comp=Z,73nm,19.3s,MS3.3							
GYA	**Guiyang**	**30.91**	**273**	*e*P		**P**	**10 03 07.3**	**+1.1**
GYA					AP	pP	10 03 18.5	+2.2
GYA					XP	sP	10 03 22.0	+1.4
GYA					PP	PP	10 04 10.3	-6.0
GYA					PCP	PcP	10 06 03.0	+0.7
GYA					S	**S**	**10 08 08.5**	**+0.4**
GYA					XS	sS	10 08 25.3	+0.5
GYA					SCP	ScP	10 09 41.8	-0.6
GYA					SCS	ScS	10 13 36.8	-2.6
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
GYA					AMB	AMB		
	comp=Z,90nm,4.2s							
GYA					LR	LR		
	comp=N,430nm,17.5s,MS4.3							
GYA					LR	LR		
	comp=E,300nm,17.0s,MS4.3							
GYA					LR	LR		
	comp=Z,420nm,18.0s,MS4.1							
LZH	**Lanzhou**	**32.31**	**292**	*e*P		**P**	**10 03 18.5**	**0.0**
LZH					AP	pP	10 03 24.8	-3.8
LZH					AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7							
LZH					AMB	AMB		
	comp=Z,67nm,4.0s							
LZH					LR	LR		
	comp=E,243nm,14.2s							
LZH					LR	LR		
	comp=Z,350nm,15.9s,MS4.2							
ULN	**Ulaanbaatar**	**32.38**	**315**	↑*eP*		**P**	**10 03 17.3**	**-1.7**
CD2	**Chengdu**	**32.64**	**282**	P		**P**	**10 03 21.8**	**+0.3**
CD2					AP	pP	10 03 29.0	-2.6
CD2					XP	sP	10 03 32.5	-3.3
CD2					PP	PP	10 04 30.8	-4.7
CD2					S	**S**	**10 08 35.0**	**-0.2**
CD2					AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3							
CD2					AMB	AMB		
	comp=Z,120nm,4.9s							
CD2					LR	LR		
	comp=N,220nm,8.9s							
CD2					LR	LR		
	comp=Z,230nm,7.1s							
SONM	**Songino Array**	**32.78**	**314**	P		**P**	**10 03 23.0**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=129,slow=8.5,SNR=4.8							
SONM					PcP	PcP	10 06 07.4	+0.3
	comp=Z,0.5nm,0.6s,baz=79,slow=3.6,SNR=4.5							
SONM	**Songino Array**	**32.78**	**314**	P		**P**	**10 03 23.0**	**+0.5**
SONM							10 06 07.4	
SONM					pmax	pmax		
	comp=Z,1.0nm,0.6s							
YAK	**Yakutsk**	**33.69**	**350**	*e*P		**P**	**10 03 28.5**	**-1.6**
YAK					pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8							
YAK	**Yakutsk**	**33.69**	**350**	*e*P		**P**	**10 03 29.7**	**-0.4**
	comp=Z,20nm,0.6s,mb5.2							
BOD	**Bodaibo**	**34.36**	**334**	*e*P		**P**	**10 03 34.3**	**-1.8**
BOD					pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
SEY	**Seymchan**	**34.40**	**9**	↑*iP*		**P**	**10 03 35.7**	**-0.6**
KMI	**Kunming**	**34.66**	**273**	P		**P**	**10 03 39.5**	**+0.4**
KMI					AP	pP	10 03 46.0	-3.2
KMI					XP	sP	10 03 48.8	-4.7
KMI					PP	PP	10 04 56.3	-1.7
KMI					S	**S**	**10 09 06.5**	**-0.1**
KMI					AMB	AMB		
	comp=Z,12nm,1.4s,mb4.6							
KMI					AMB	AMB		
	comp=Z,58nm,3.4s							
KMI					LR	LR		
	comp=N,206nm,22.4s,MS4.0							
KMI					LR	LR		
	comp=E,173nm,19.0s,MS4.0							
KMI					LR	LR		
	comp=Z,98nm,17.8s,MS3.6							
CHTO	**Chiang Mai**	**40.09**	**265**	*e*P		**P**	**10 04 24.9**	**-0.2**
CHTO					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2							
CHTO	**Chiang Mai**	**40.09**	**265**	*e*P		**P**	**10 04 24.9**	**-0.2**
	comp=Z,4.9nm,0.9s,mb4.2							
CMAR	**Chiang M

comp=Z,2.2nm,0.5s,mb4.4,baz=92,slow=9.7,SNR=18
KURK LR LR 10 27 50.5

comp=Z,55nm,19.8s,MS3.6,baz=75,slow=36
KURK Kurchatov 51.08 313 *eP* **P 10 05 50.6 -1.0**
comp=Z,2.8nm,0.7s,mb4.3
KDAK Kodiak Island 52.98 38 P **P 10 06 04.9 -0.7**
comp=Z,17nm,0.9s,mb5.0,baz=300,slow=13,SNR=4.8
ASAR Alice Springs 53.14 189 P **P 10 06 05.7 -1.5**
comp=Z,0.5nm,0.5s,mb3.8,baz=5.4,slow=5.9,SNR=18
ASAR PcP PcP 10 07 15.6 +0.5
comp=Z,1.4nm,0.6s,baz=17,slow=4.1,SNR=7.1
ASAR ScP ScP 10 11 07.0 -2.9
comp=Z,0.3nm,0.8s,baz=17,slow=4.2,SNR=3.1
CHUM Lake Minchumin 53.65 30 *eP* **P 10 06 10.8 +0.4**
comp=Z,4.4nm,0.5s,mb4.6
BPAW Bear Paw Mtn. 54.26 30 *eP* **P 10 06 12.8 -2.2**
comp=Z,3.1nm,0.5s,mb4.5
MBWA Marble Bar 54.37 205 *eP* **P 10 06 15.8 -0.3**
MCK McKinley 55.13 31 *eP* **P 10 06 21.0 -0.2**
MCK pmax pmax
comp=Z,21nm,1.3s,mb5.0
MCK McKinley 55.13 31 *eP* **P 10 06 21.0 -0.2**
comp=Z,21nm,1.3s,mb5.0
COLA College 55.68 29⇓ *eP* **P 10 06 25.2 0.0**
BVAR Borovoye Array 56.08 316 P **P 10 06 28.1 -0.1**
comp=Z,4.7nm,0.6s,mb4.7,baz=93,slow=7.0,SNR=20
BVAR LR LR 10 31 17.8
comp=Z,98nm,18.5s,MS3.9,baz=127,slow=37
BVAR Borovoye Array 56.08 316 P **P 10 06 28.1 -0.1**
BVAR pmax pmax
comp=Z,5.0nm,0.6s
BVAR MLR MLR
comp=Z,98nm,18.5s
BRVK Borovoye 56.14 316 *eP* **P 10 06 29.1 +0.5**
BRVK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
BRVK Borovoye 56.14 316 *eP* **P 10 06 29.1 +0.4**
comp=Z,5.9nm,0.9s,mb4.6
DAWY Dawson 59.35 30 *eP* **P 10 06 51.6 +0.6**
STKA Stephens Creek 60.81 180 P **P 10 07 00.3 -1.0**
comp=Z,0.8nm,0.5s,mb4.1,baz=347,slow=12,SNR=3.1
STKA Stephens Creek 60.81 180 *eP* **P 10 07 00.1 -1.2**
ARU Arti 62.38 322⇑ *iP* **P 10 07 11.8 +0.1**
ARU pmax pmax
comp=Z,20nm,1.3s,mb5.1
ARU Arti 62.38 322 *eP* **P 10 07 11.7 0.0**
comp=Z,13nm,0.6s,mb5.2
AKTK Aktyubinsk 64.10 315 P **P 10 07 23.3 +0.1**
AKTO Aktyubinsk 64.10 315 P **P 10 07 23.3 +0.1**
comp=Z,4.0nm,0.8s,mb4.5,baz=105,slow=4.6,SNR=12
AKTO Aktyubinsk 64.10 315 P **P 10 07 23.3 +0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
RES Resolute Bay 70.09 14 P **P 10 08 00.2 -0.6**
baz=313,slow=5.5
YKA Yellowknife Ar 70.50 29 P **P 10 08 02.7 -0.8**
comp=Z,1.5nm,0.6s,mb4.1,baz=295,slow=6.4,SNR=56
YKA Yellowknife Ar 70.50 29 P **P 10 08 02.7 -0.8**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 70.50 29 P **P 10 08 02.7 -0.9**
ARCES ARCESS Array B 71.31 341 P **P 10 08 08.4 +0.1**
comp=Z,4.2nm,0.7s,mb4.5,baz=72,slow=8.2,SNR=8.6
ARCES ARCESS Array B 71.31 341 P **P 10 08 08.4 0.0**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 72.90 333 *ep* **P 10 08 17.4 -0.5**
comp=Z,2.2nm,0.4s,mb4.4
JOF Joensuu 72.90 333 *eP* **P 10 08 17.4 -0.5**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
D06A Cle Elum 73.92 45⇑P **P 10 08 24.4 +0.1**
baz=74
A08A Turner Farm, O 74.10 43⇑P **P 10 08 25.6 +0.3**
baz=74
F05A White Salmon 74.11 46⇓P **P 10 08 25.5 +0.1**
baz=74
C07A Waterville 74.19 44⇑P **P 10 08 25.6 -0.2**
baz=74
B08A Colville Reser 74.33 43⇑P **P 10 08 26.5 -0.1**
baz=74
OBN Obninsk 74.44 325 *eP* **P 10 08 26.1 -1.0**
OBN *e* 10 08 45.7
OBN pmax pmax
comp=Z,24nm,1.9s,mb4.8
A09A Danville 74.50 42⇓P **P 10 08 27.6 0.0**
baz=74
C08A Higginbotham F 74.76 44⇓P **P 10 08 28.6 -0.5**
baz=75
E07A Sunnyside 74.81 45⇑P **P 10 08 29.1 -0.4**
baz=75
B09A Rice 75.00 43⇑P **P 10 08 30.7 +0.2**
baz=75
F07A Phinny Hill Vi 75.06 46⇑P **P 10 08 31.3 +0.4**
baz=75
A10A Northport 75.10 42⇓P **P 10 08 31.5 +0.4**
baz=75
D08A Wollman Farm, 75.16 44⇑P **P 10 08 31.7 +0.3**
baz=75
KAF Kangasniemi 75.28 334 *ep* **P 10 08 31.1 -0.8**
comp=Z,2.0nm,0.4s,mb4.4
KAF Kangasniemi 75.28 334 *eP* **P 10 08 31.1 -0.8**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
H06A Lindquist Farm 75.33 47⇓P **P 10 08 32.3 -0.2**
baz=75
EDM Edmonton 75.42 37 *eP* **P 10 08 32.8 0.0**
I06A Prineville 75.76 48⇑P **P 10 08 35.5 +0.6**
baz=76
A11A Hall Mountain, 75.80 42⇑P **P 10 08 35.5 +0.4**
baz=76
F08A Pendleton 75.83 45⇓P **P 10 08 35.8 +0.5**
baz=76
G08A Pilot Rock 75.94 46⇑P **P 10 08 36.7 +0.7**
baz=76
B11A Sandpoint 76.05 42⇓P **P 10 08 37.0 +0.5**
baz=76
I07A Izee 76.15 47⇓P **P 10 08 37.3 +0.1**
baz=76
A12A Yaak River Ran 76.23 41⇑P **P 10 08 37.8 +0.3**
baz=76
B12A Libby 76.49 42⇓P **P 10 08 39.6 +0.6**
baz=76
J07A Hines 76.60 48⇓P **P 10 08 40.2 +0.4**
baz=76
G09A Cove 76.69 45⇓P **P 10 08 40.4 +0.2**
baz=76
D11A Klaveano Farm, 76.73 43⇑P **P 10 08 40.6 +0.2**
baz=76
I08A Drewsey 76.83 47⇑P **P 10 08 41.1 +0.1**
baz=77
C12B Naegeli Ranch, 76.92 43⇓P **P 10 08 41.6 +0.1**
baz=77
A13A Flathead Natio 76.94 41⇓P **P 10 08 41.9 +0.4**
baz=77
K07A Rock Creek Ran 76.96 48⇓P **P 10 08 42.1 +0.3**
baz=77
H09A Durkee 77.05 46⇑P **P 10 08 42.4 +0.2**
baz=77
G10A Bishop Farm, J 77.09 45⇓P **P 10 08 42.3 -0.2**
baz=77
E11A Bogner Ranch, 77.14 44⇑P **P 10 08 42.8 +0.1**
baz=77
J08A Circle Bar Ran 77.15 47⇑P **P 10 08 42.8 -0.1**
baz=77
WALA Waterton Lakes 77.17 41 *eP* **P 10 08 43.0 +0.2**
comp=Z,0.3nm,0.8s,mb3.3
BMO Blue Mountains 77.18 46 *eP* **P 10 08 43.1 +0.1**
BMO pmax pmax
comp=Z,36nm,2.1s,mb4.9
BMO Blue Mountains 77.18 46 *eP* **P 10 08 43.1 +0.1**
comp=Z,36nm,2.1s,mb4.9
B13A Whitefish 77.19 42⇑P **P 10 08 43.2 +0.3**
baz=77,SNR=5.7
L07A Adell 77.21 49⇑P **P 10 08 43.3 0.0**
baz=77
F11A Grangeville 77.40 44⇑P **P 10 08 44.3 +0.1**
baz=77
K08A Mann Creek Ran 77.44 48⇓P **P 10 08 44.5 0.0**
baz=77
C13A Hot Springs 77.47 42⇓P **P 10 08 44.4 -0.1**
baz=77,SNR=10
N06A Buffalo Meadow 77.47 50⇓P **P 10 08 44.6 -0.1**
baz=77
A14A Double T Ranch 77.49 41⇓P **P 10 08 44.5 -0.1**
baz=77,SNR=5.7
JTMT Jette 77.61 42 *eP* **P 10 08 45.6 +0.3**

J09A Fry Pan Ranch, 77.62 47⇑P **P 10 08 45.8 +0.3**
baz=77
M07A Soldier Meadow 77.62 49⇑P **P 10 08 45.8 +0.3**
baz=77
H10A Noah's Angus R 77.66 46⇑P **P 10 08 45.6 -0.1**
baz=78
O06A Flanigan 77.75 51⇑P **P 10 08 46.2 -0.1**
baz=78
L08A Fields 77.78 48⇓P **P 10 08 46.6 +0.2**
baz=78
D13A Huson 77.83 43⇑P **P 10 08 46.8 +0.2**
baz=78
I10A Payette 77.87 46⇑P **P 10 08 47.3 +0.4**
baz=78
A15A Johnson Ranch, 77.88 40⇑P **P 10 08 46.7 -0.1**
baz=78,SNR=7.2
B14A Marquette Ranc 77.88 41⇑P **P 10 08 46.8 0.0**
baz=78,SNR=5.8
SWMT Swartz Lake 77.89 42 *eP* **P 10 08 47.0 +0.1**
P06A Stead Airport, 77.93 51⇓P **P 10 08 46.5 -0.7**
baz=78
K09A Rome 77.95 48⇑P **P 10 08 47.2 -0.1**
baz=78
F12A Elk City 78.01 44⇑P **P 10 08 47.9 +0.3**
baz=78
N07B Gerlach 78.04 50⇓P **P 10 08 48.0 +0.1**
baz=78
H11A Donnelly 78.06 45⇑P **P 10 08 47.9 -0.1**
baz=78
PAHR Pah Rah Range 78.27 51 *eP* **P 10 08 48.9 -0.2**
comp=Z,7.3nm,1.1s,mb4.5
L09A Wilkinson Ranc 78.31 48⇑P **P 10 08 49.5 +0.2**
baz=78
E13A Victor 78.31 43⇓P **P 10 08 49.2 0.0**
baz=78
B15A Bradely Ranch, 78.31 41⇑P **P 10 08 49.0 -0.3**
baz=78,SNR=7.9
D14A Greenough 78.39 42⇓P **P 10 08 49.6 -0.1**
baz=78
O07A Toulon 78.39 50⇑P **P 10 08 49.7 -0.1**
baz=78
SUMG Summit 78.43 0 *eP* **P 10 08 50.8 +1.4**
comp=Z,97nm,2.2s,mb5.3
K10A MacKenzie Ranc 78.46 47⇓P **P 10 08 50.2 0.0**
baz=78
I11A Placerville 78.48 46⇑P **P 10 08 49.8 -0.4**
baz=78
A16A West Butte Ran 78.53 40⇓P **P 10 08 50.3 -0.1**
baz=78,SNR=6.8
F13A Darby 78.56 44⇑P **P 10 08 50.2 -0.4**
baz=78
C15A Salmond Ranch, 78.57 41⇓P **P 10 08 50.5 -0.1**
baz=78,SNR=5.3
N08A GE Springer Mi 78.60 50⇑P **P 10 08 50.5 -0.5**
baz=78
E14A Clinton 78.74 43⇓P **P 10 08 51.5 -0.2**
baz=78
B16A M & M Farms, S 78.75 41⇓P **P 10 08 51.4 -0.3**
baz=78,SNR=7.3
R06C Coleville 78.78 52⇑P **P 10 08 52.0 0.0**
baz=79
MFID Camas Ranch 78.81 46⇓P **P 10 08 52.0 -0.1**
baz=79
O08A Rooster Mine 78.82 50⇑P **P 10 08 52.3 +0.1**
baz=79
H12A Diamond D Ranc 78.86 45⇑P **P 10 08 52.2 -0.1**
baz=79
G13A Cobalt 78.97 44⇑P **P 10 08 52.8 -0.1**
baz=79
N09A Rock Creek Ran 78.97 49⇓P **P 10 08 52.6 -0.4**
baz=79
K11A Parker Ranch, 79.00 47⇑P **P 10 08 52.8 -0.3**
baz=79,SNR=6.6
A17A Triple J Farms 79.04 40⇓P **P 10 08 53.1 -0.1**
baz=79
C16A Fuhringer Ranc 79.05 41⇑P **P 10 08 53.1 -0.1**
baz=79,SNR=12
L10A Juniper Basin 79.06 48⇓P **P 10 08 53.4 -0.1**
baz=79
E15A Deer Lodge 79.24 43⇓P **P 10 08 54.3 0.0**
baz=79
M10A I.L. Ranch, Tu 79.29 48⇓P **P 10 08 54.2 -0.5**
baz=79
B17A L&G Farms, Che 79.33 40⇓P **P 10 08 54.7 -0.1**
baz=79,SNR=10
J12A Stokes Ranch, 79.36 46⇑P **P 10 08 54.8 -0.2**
baz=79
L11A Cat Creek Ranc 79.48 48⇓P **P 10 08 55.6 -0.1**
baz=79
O09A Fish Creek Ran 79.52 50⇑P **P 10 08 55.8 -0.3**
baz=79
A18A Metzger Ranch, 79.53 39⇓P **P 10 08 55.6 -0.3**
baz=79,SNR=7.6
D16A Dana Ranch, Ca 79.57 42⇓P **P 10 08 55.8 -0.3**
baz=79
NVAR Mina Array Bea 79.62 52 P **P 10 08 56.9 +0.4**
comp=Z,3.6nm,0.7s,mb4.4,baz=296,slow=5.3,SNR=21
NVAR Mina Array Bea 79.62 52 P **P 10 08 56.9 +0.3**
HLID Hailey 79.63 46⇑P **P 10 08 56.6 0.0**
baz=79
HLID Hailey 79.63 46 *eP* **P 10 08 56.3 -0.2**
comp=Z,4.1nm,1.0s,mb4.3
F15A Butte 79.63 43⇑P **P 10 08 56.6 +0.1**
baz=79,SNR=16
I13A Wildhorse Cree 79.64 45⇓P **P 10 08 57.1 +0.5**
baz=79,SNR=7.2
Q08A Gabbs 79.66 51⇓P **P 10 08 56.8 0.0**
baz=80
C17A Wharram Farm, 79.70 41⇑P **P 10 08 56.9 +0.1**
baz=80
N10A Dunphy 79.71 49⇓P **P 10 08 57.6 +0.6**
baz=80
H14A Leadore 79.74 44⇑P **P 10 08 57.5 +0.4**
baz=80
E16A East Helena 79.75 42⇓P **P 10 08 57.8 +0.7**
baz=80
K12A Draper Farm, C 79.79 47⇓P **P 10 08 57.7 +0.3**
baz=80
DLMT Dillon 79.82 44 *eP* **P 10 08 58.2 +0.6**
comp=Z,65nm,2.5s,mb5.1
M11A Holland Ranch, 79.82 48⇑P **P 10 08 58.1 +0.5**
baz=80
B18A Beardsley Farm 79.85 40⇑P **P 10 08 57.7 +0.1**
baz=80,SNR=7.5
J13A Cove Ranch, Pi 79.86 46⇓P **P 10 08 58.0 +0.2**
baz=80,SNR=5.5
L12A House Creek Ra 79.96 47⇓P **P 10 08 59.0 +0.6**
baz=80
G15A Dillon 79.99 44⇓P **P 10 08 58.2 -0.2**
baz=80
D17A Six Diamond Ra 80.00 41⇑P **P 10 08 58.4 0.0**
baz=80,SNR=8.1
I14A Mackay 80.04 45⇓P **P 10 08 59.2 +0.4**
baz=80,SNR=15
N11A Elko Archery C 80.17 49⇓P **P 10 08 59.9 +0.4**
baz=80
F16A Kennard Place, 80.18 43⇑P **P 10 08 59.5 +0.1**
baz=80
H15A Lima 80.18 44⇑P **P 10 08 59.9 +0.4**
baz=80
FFC Flin Flon 80.19 32 *eP* **P 10 08 58.9 -0.5**
FFC pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
FFC Flin Flon 80.19 32 *eP* **P 10 08 58.9 -0.5**
comp=Z,7.0nm,0.7s,mb4.7
PKM Peak Mountain 80.25 56⇓P **P 10 09 00.4 +0.3**
baz=80
E17A Martinsdale 80.27 42⇑P **P 10 09 00.3 +0.3**
baz=80,SNR=5.8
K13A Stover Farm, H 80.30 46⇓P **P 10 09 00.7 +0.5**
baz=80
J14A Carey 80.31 46⇑P **P 10 09 01.0 +0.8**
baz=80,SNR=7.9
VES Vestal, Richgr 80.32 54⇑P **P 10 09 00.0 -0.4**
baz=80
M12A Wells 80.40 48⇓P **P 10 09 00.7 0.0**
baz=80
D18A Linhart Farms, 80.49 41⇓P **P 10 09 01.0 -0.1**
baz=80
AKASG Malin Array Be 80.54 323 P **P 10 09 01.4 +0.1**
comp=Z,1.1nm,0.4s,mb4.1,baz=48,slow=5.6,SNR=7.1
AKASG Malin Array Be 80.54 323 P **P 10 09 01.4 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
R09A Tonopah 80.55 51⇓P **P 10 09 01.2 -0.4**
baz=80,SNR=8.9
O11A Cowboy Ranch, 80.56 49⇑P **P 10 09 01.5 -0.1**
baz=80

N12A Clover Valley, 80.60 48⇓P **P 10 09 02.0 +0.1**
baz=80
L13A Double Diamond 80.68 47⇓P **P 10 09 02.7 +0.5**
baz=80
F17A Fitzpatrick Pl 80.69 42⇑P **P 10 09 02.1 -0.1**
baz=80
S09A Goldfield 80.70 52⇓P **P 10 09 02.3 -0.2**
baz=80,SNR=6.8
Q10A Clear Creek Ra 80.72 51⇓P **P 10 09 02.7 +0.2**
baz=80
E18A Harlowton 80.77 42⇓P **P 10 09 02.9 +0.3**
baz=81,SNR=6.4
QLMT Earthquake Lak 80.80 44 *eP* **P 10 09 03.5 +0.7**
M13A Montello 80.91 48⇑P **P 10 09 03.8 +0.4**
baz=81
K14A Jones Ranch, D 80.93 46⇑P **P 10 09 03.9 +0.4**
baz=81
J15A Blackfoot 80.95 45⇓P **P 10 09 04.3 +0.6**
baz=81
G17A Pierce Place, 80.95 43⇑P **P 10 09 04.0 +0.4**
baz=81
H16A Russell Place, 80.98 44⇓P **P 10 09 03.7 -0.1**
baz=81
S10A Tonopah Range, 81.04 52⇑P **P 10 09 04.3 +0.1**
baz=81
R10A Warm Springs 81.05 51⇑P **P 10 09 04.0 -0.3**
baz=81
O12A Currie 81.09 49⇓P **P 10 09 04.3 -0.1**
baz=81,SNR=5.5
PPT Papeete 81.11 116 LR LR 10 42 59.4
comp=Z,53nm,18.8s,MS3.9,baz=285,slow=34
Q11A Duckwater 81.21 50⇑P **P 10 09 05.1 0.0**
baz=81
F18A Big Timber 81.24 42⇓P **P 10 09 05.4 +0.3**
baz=81
I16A Newdale 81.28 44⇓P **P 10 09 06.0 +0.6**
baz=81
MPMC Manual Prospec 81.34 54⇑P **P 10 09 05.6 -0.3**
baz=81
M14A Sheep Mountain 81.36 47⇑P **P 10 09 06.0 +0.1**
baz=81,SNR=5.7
P12A McGill 81.39 50⇑P **P 10 09 06.0 0.0**
baz=81
NB2 NORSAR Subarra 81.39 338 P **P 10 09 04.7 -0.9**
comp=Z,2.0nm,0.7s,mb4.2,baz=43,slow=4.8
NOA NORSAR Array B 81.39 338 P **P 10 09 04.8 -0.8**
comp=Z,2.6nm,0.9s,mb4.2,baz=40,slow=5.3,SNR=4.5
NOA NORSAR Array B 81.39 338 P **P 10 09 04.8 -0.8**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA NORSAR Array B 81.39 338 P **P 10 09 04.8 -0.8**
R11A Troy Canyon, C 81.51 51⇑P **P 10 09 06.6 -0.2**
baz=81,SNR=5.7
J16A Bone 81.52 45⇑P **P 10 09 07.3 +0.6**
baz=81,SNR=7.6
H17A Grant Village 81.55 44⇑P **P 10 09 08.7 +1.9**
baz=81,SNR=6.0
EDW2 Edwards Air Fo 81.57 55⇑P **P 10 09 07.0 -0.1**
baz=81
FURC Furnace Creek, 81.58 53⇑P **P 10 09 07.3 +0.2**
baz=81
IMW Indian Meadow 81.60 44 *eP* **P 10 09 07.4 +0.3**
comp=Z,5.4nm,0.8s,mb4.5
DCID1 Drake Creek 81.61 45 *eP* **P 10 09 07.4 +0.2**
comp=Z,17nm,1.3s,mb4.8
O13A Hicks Ranch, I 81.67 49⇓P **P 10 09 08.0 +0.5**
baz=82
Q12A Willow Creek R 81.67 50⇓P **P 10 09 07.9 +0.3**
baz=82
L15A Malad City 81.71 46⇑P **P 10 09 08.2 +0.5**
baz=82
K16A Soda Springs 81.77 45⇓P **P 10 09 08.8 +0.7**
baz=82,SNR=8.4
MOOW Moose Ponds 81.80 44 *eP* **P 10 09 09.2 +1.0**
comp=Z,68nm,3.0s
N14A Grayback Hills 81.81 48⇑P **P 10 09 08.3 +0.1**
baz=82
I17A Pilgram Creek 81.81 44⇑P **P 10 09 09.6 +1.4**
baz=82
RLMT Red Lodge 81.94 42⇑P **P 10 09 09.1 +0.3**
baz=82
RLMT Red Lodge 81.94 42 *eP* **P 10 09 09.3 +0.5**
SNOW Snow King Moun 81.95 44 *eP* **P 10 09 10.1 +1.2**
comp=Z,133nm,2.9s,mb5.4
LOHW Long Hollow 81.96 44 *eP* **P 10 09 09.8 +0.9**
comp=Z,68nm,3.0s
U10A Ash Meadows, A 81.98 53⇓P **P 10 09 09.3 +0.1**
baz=82
P13A Bates Ranch, G 81.99 49⇓P **P 10 09 09.6 +0.3**
baz=82
J17A Brown Place, J 82.03 45⇓P **P 10 09 09.6 +0.2**
baz=82
R12A Pony Springs, 82.18 50⇑P **P 10 09 10.3 +0.1**
baz=82
GSC Goldstone 82.20 54⇑P **P 10 09 10.4 -0.1**
baz=82
Q13A Wheeler Ranch, 82.25 50⇓P **P 10 09 10.4 -0.2**
baz=82
L16A Fish Haven 82.31 46⇓P **P 10 09 11.1 +0.2**
baz=82
T11A Corn Creek, Al 82.32 52⇑P **P 10 09 10.8 -0.2**
baz=82,SNR=5.9
S12A Delamar Landin 82.39 51⇓P **P 10 09 11.7 +0.3**
baz=82
DUG Dugway 82.39 48⇑P **P 10 09 11.4 +0.1**
baz=82,SNR=5.7
DUG Dugway 82.39 48 *eP* **P 10 09 11.5 +0.2**
DUG pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
DUG Dugway 82.39 48 *eP* **P 10 09 11.5 +0.1**
comp=Z,5.0nm,0.9s,mb4.4
J18A Kendall Valley 82.53 44⇑P **P 10 09 12.4 +0.4**
baz=82,SNR=7.0
P14A Drum Mountains 82.55 49⇓P **P 10 09 12.1 -0.1**
baz=82,SNR=6.8
M16A Huntsville 82.56 47⇑P **P 10 09 12.1 0.0**
baz=82
BBRC Big Bear Sol-O 82.65 55⇓P **P 10 09 12.5 -0.2**
baz=82
R13A O'Grain Ranch, 82.69 50⇑P **P 10 09 13.1 +0.2**
baz=82
Q14A Sevier Lake (B 82.73 49⇑P **P 10 09 13.3 +0.2**
baz=82,SNR=5.5
TUQ Turquoise Moun 82.76 53⇑P **P 10 09 13.0 -0.3**
baz=83
HEC Hector,Ludlow 82.78 54⇓P **P 10 09 13.3 -0.1**
baz=83
K18A Toltan Ranch, 82.84 45⇑P **P 10 09 13.7 +0.1**
baz=83
V11A Goodsprings 82.90 53⇑P **P 10 09 14.1 0.0**
baz=83
N16A Rees Ranch, Co 82.91 47⇑P **P 10 09 14.1 +0.1**
baz=83
JLU Jordanelle 83.06 47 *eP* **P 10 09 15.5 +0.7**
BW06 Boulder Array 83.06 45⇓P **P 10 09 14.6 -0.1**
baz=83
PDAR Pinedale Array 83.06 45 P **P 10 09 12.4 -2.4**
comp=Z,3.4nm,0.7s,mb4.1,baz=329,slow=3.2,SNR=12
S13A Holt Ranch, En 83.07 51⇓P **P 10 09 15.2 +0.3**
baz=83,SNR=7.6
P15A Leamington 83.08 48⇑P **P 10 09 15.1 +0.2**
baz=83
M17A Scullys Gap (B 83.08 46⇑P **P 10 09 15.0 +0.1**
baz=83
L18A Fontenelle, Gr 83.23 45⇑P **P 10 09 15.9 +0.2**
baz=83
R14A James Farms, M 83.26 50⇑P **P 10 09 15.1 -0.8**
baz=83
N17A Moffit Pass 83.27 47⇓P **P 10 09 16.1 +0.2**
baz=83
GMRC Granite Mounta 83.28 54⇓P **P 10 09 15.7 -0.4**
baz=83
DAU Daniels Canyon 83.28 47 *eP* **P 10 09 16.0 0.0**
PFO Pinyon Flat Ob 83.31 55⇓P **P 10 09 15.8 -0.4**
baz=83
Q15A Fillmore 83.31 49⇑P **P 10 09 16.1 -0.1**
baz=83
T13A Saint George 83.34 51⇑P **P 10 09 16.2 -0.1**
baz=83
V12A Nelson 83.36 53⇓P **P 10 09 16.3 -0.1**
baz=83
BELC Belle Mtn. 83.44 55⇓P **P 10 09 16.5 -0.4**
baz=83
K19A Absolon Red Bu 83.47 44⇓P **P 10 09 16.3 -0.5**
baz=83
M18A Lyman 83.48 46⇓P **P 10 09 16.8 -0.2**
baz=83,SNR=6.3

L19A	**Farson**	**83.56**	**45**	⇓P		**P**	**10 09 17.4**	**+0.1**	
	baz=83,SNR=5.4								
U13A	**Pakoon Wash**	**83.61**	**52**	⇑P		**P**	**10 09 17.5**	**-0.2**	
	baz=83								
O17A	**Robinson Place**	**83.74**	**47**	⇓P		**P**	**10 09 18.5**	**+0.2**	
	baz=84								
K20A	**Yellowstone Ra**	**83.87**	**44**	⇓P		**P**	**10 09 19.0**	**+0.1**	
	baz=84								
V13A	**Grand Canyon W**	**83.89**	**52**	⇑P		**P**	**10 09 18.9**	**-0.2**	
	baz=84								
N18A	**Larsen Ranch,**	**83.98**	**46**	⇓P		**P**	**10 09 19.6**	**+0.1**	
	baz=84								
BC3	**Big Chuckw Mtn**	**84.00**	**55**	⇓P		**P**	**10 09 19.3**	**-0.5**	
	baz=84								
BR131	**Keskin Array S**	**84.13**	**312**	*e*P		**P**	**10 09 20.3**	**0.0**	
	comp=Z,4.7nm,0.8s,mb4.7								
BRTR	**Keskin Array B**	**84.13**	**312**	P		**P**	**10 09 20.2**	**0.0**	
	comp=Z,3.5nm,0.9s,mb4.5,baz=74,slow=4.2,SNR=11								
BRTR				LR		LR	10 49 14.4		
	comp=Z,30nm,18.3s,MS3.7,baz=210,slow=37								
BRTR	**Keskin Array B**	**84.13**	**312**	P		**P**	**10 09 20.3**	**0.0**	
BRTR				pmax		pmax			
	comp=Z,4.0nm,0.9s								
BRTR				MLR		MLR			
	comp=Z,31nm,18.3s								
P17A	**Butcher Ranch,**	**84.13**	**48**	⇓P		**P**	**10 09 20.2**	**-0.1**	
	baz=84,SNR=7.2								
U14A	**Mt Trumbull**	**84.15**	**51**	⇓P		**P**	**10 09 20.2**	**-0.2**	
	baz=84								
Q16A	**Castle Valley**	**84.15**	**48**	⇓P		**P**	**10 09 20.5**	**0.0**	
	baz=84								
O18A	**Roosevelt**	**84.16**	**47**	⇓P		**P**	**10 09 20.4**	**-0.1**	
	baz=84								
L20A	**Wamsutter**	**84.23**	**45**	⇓P		**P**	**10 09 20.6**	**-0.2**	
	baz=84								
R16A	**Teasdale**	**84.29**	**49**	⇑P		**P**	**10 09 21.5**	**+0.4**	
	baz=84,SNR=7.0								
N19A	**John Jarvie Ra**	**84.34**	**46**	⇓P		**P**	**10 09 21.3**	**-0.1**	
	baz=84								
W13A	**Hualapai Mount**	**84.36**	**53**	⇑P		**P**	**10 09 21.2**	**-0.4**	
	baz=84								
P18A	**Preston Nutter**	**84.36**	**47**	⇑P		**P**	**10 09 21.4**	**-0.1**	
	baz=84								
T15A	**Red Dirt Ranch**	**84.37**	**51**	⇑P		**P**	**10 09 21.6**	**0.0**	
	baz=84,SNR=5.9								
SRU	**San Rafael**	**84.47**	**48**	⇓P		**P**	**10 09 21.7**	**-0.3**	
	baz=84,SNR=6.2								
SRU	**San Rafael**	**84.47**	**48**	*e*P		**P**	**10 09 21.7**	**-0.3**	
SRU				pmax		pmax			
	comp=Z,3.0nm,0.8s,mb4.5								
SRU	**San Rafael**	**84.47**	**48**	*e*P		**P**	**10 09 21.7**	**-0.3**	
	comp=Z,3.2nm,0.8s,mb4.5								
BUR08	**Bucovina Ar. S**	**84.49**	**323**	*e*P		**P**	**10 09 21.5**	**-0.4**	
S16A	**Weppner Ranch,**	**84.52**	**50**	⇓P		**P**	**10 09 22.2**	**-0.1**	
	baz=84								
V14A	**Boquillas Ranc**	**84.62**	**52**	⇑P		**P**	**10 09 23.0**	**+0.1**	
	baz=84,SNR=5.0								
Y12C	**Blythe**	**84.62**	**54**	⇓P		**P**	**10 09 22.8**	**-0.1**	
	baz=84								
M20A	**Sweetwater, Wa**	**84.62**	**45**	⇑P		**P**	**10 09 23.2**	**+0.4**	
	baz=84,SNR=5.3								
X13A	**Yucca**	**84.66**	**53**	⇓P		**P**	**10 09 23.0**	**-0.1**	
	baz=84								
O19A	**Miners Draw (B**	**84.71**	**46**	⇓P		**P**	**10 09 22.8**	**-0.4**	
	baz=84								
R17A	**Hanksville Air**	**84.72**	**49**	⇑P		**P**	**10 09 23.5**	**+0.2**	
	baz=84,SNR=7.0								
Q18A	**Rafter H Ranch**	**84.73**	**48**	⇑P		**P**	**10 09 22.9**	**-0.5**	
	baz=84								
U15A	**North Rim**	**84.75**	**51**	⇑P		**P**	**10 09 23.1**	**-0.4**	
	baz=84								
GLA	**Glamis**	**84.77**	**55**	⇓P		**P**	**10 09 23.8**	**+0.1**	
	baz=85								
L21A	**Rawlins**	**84.85**	**44**	⇓P		**P**	**10 09 23.8**	**-0.1**	
	baz=85,SNR=5.2								
W14A	**Seligman**	**84.86**	**52**	⇑P		**P**	**10 09 23.9**	**-0.1**	
	baz=85								
N20A	**Spence Gulch,**	**84.95**	**46**	⇑P		**P**	**10 09 24.8**	**+0.4**	
	baz=85,SNR=9.8								
T16A	**Glen Canyon Da**	**84.98**	**50**	⇑P		**P**	**10 09 24.5**	**-0.1**	
	baz=85								
Y13A	**Salome**	**85.08**	**54**	⇓P		**P**	**10 09 25.3**	**+0.1**	
	baz=85								
S17A	**Black Ridge (B**	**85.09**	**49**	⇑P		**P**	**10 09 25.0**	**-0.2**	
	baz=85								
V15A	**Kaibab Nationa**	**85.16**	**52**	⇑P		**P**	**10 09 25.6**	**0.0**	
	baz=85								
P19A	**Cripple Cowboy**	**85.17**	**47**	⇑P		**P**	**10 09 25.7**	**+0.2**	
	baz=85,SNR=12								
R18A	**Canyonlands Na**	**85.28**	**48**	⇓P		**P**	**10 09 25.4**	**-0.7**	
	baz=85,SNR=5.2								
O20A	**White River Ci**	**85.36**	**46**	⇑P		**P**	**10 09 26.4**	**-0.1**	
	baz=85,SNR=6.1								
Q19A	**Hogan Spring (**	**85.37**	**48**	⇑P		**P**	**10 09 26.5**	**-0.1**	
	baz=85								
X14A	**Yava**	**85.39**	**53**	⇑P		**P**	**10 09 26.5**	**-0.3**	
	baz=85								
W15A	**Williams**	**85.44**	**52**	⇑P		**P**	**10 09 26.8**	**-0.1**	
	baz=85								
N21A	**Black Mountain**	**85.45**	**45**	⇓P		**P**	**10 09 26.8**	**-0.1**	
	baz=85,SNR=7.3								
Y14A	**Wickenburg**	**85.59**	**53**	⇑P		**P**	**10 09 27.5**	**-0.3**	
	baz=85								
S18A	**Hurst Farm, Bl**	**85.60**	**49**	⇑P		**P**	**10 09 27.2**	**-0.5**	
	baz=85								
M22A	**Cedar Creek Ra**	**85.65**	**44**	⇓P		**P**	**10 09 28.2**	**+0.3**	
	baz=85								
113A	**Mohawk Valley,**	**85.67**	**55**	⇓P		**P**	**10 09 27.9**	**-0.3**	
	baz=86								
U16A	**Tuba City**	**85.69**	**51**	⇑P		**P**	**10 09 28.2**	**0.0**	
	baz=86								
R19A	**Curley Farm, L**	**85.74**	**48**	⇑P		**P**	**10 09 27.9**	**-0.5**	
	baz=86								
U17A	**Shonto**	**85.76**	**50**	⇓P		**P**	**10 09 28.7**	**+0.1**	
	baz=86,SNR=5.0								
X15A	**Humboldt**	**85.83**	**53**	⇓P		**P**	**10 09 28.6**	**-0.4**	
	baz=86								
WUAZ	**Wupatki**	**85.87**	**51**	⇑P		**P**	**10 09 28.8**	**-0.3**	
	baz=86								
WUAZ	**Wupatki**	**85.87**	**51**	*e*P		**P**	**10 09 28.8**	**-0.3**	
	comp=Z,4.3nm,0.8s,mb4.7								
T18A	**Mexican Hat**	**85.99**	**49**	⇓P		**P**	**10 09 29.0**	**-0.6**	
	baz=86								
Q20A	**Ridgley Place,**	**85.99**	**47**	⇑P		**P**	**10 09 29.7**	**0.0**	
	baz=86,SNR=13								
Y15A	**Casa Rosa Ranc**	**86.05**	**53**	⇓P		**P**	**10 09 30.0**	**0.0**	
	baz=86								
N22A	**Wattenberg Ran**	**86.09**	**45**	⇓P		**P**	**10 09 29.7**	**-0.3**	
	baz=86								
S19A	**Harvey Farm, M**	**86.13**	**49**	⇑P		**P**	**10 09 30.1**	**-0.2**	
	baz=86								
U18A	**Rough Rock, Ch**	**86.39**	**50**	⇓P		**P**	**10 09 32.1**	**+0.5**	
	baz=86,SNR=5.8								
X16A	**Lo Mia Camp, P**	**86.42**	**52**	⇓P		**P**	**10 09 31.8**	**0.0**	
	baz=86								
Q21A	**Lamborn Mesa,**	**86.52**	**47**	⇑P		**P**	**10 09 32.5**	**+0.3**	
	baz=86								
T19A	**Beclabito**	**86.72**	**49**	⇑P		**P**	**10 09 33.5**	**+0.2**	
	baz=86								
V18A	**Ganado**	**86.74**	**51**	⇓P		**P**	**10 09 33.4**	**0.0**	
	baz=86								
214A	**Organ Pipe Nat**	**86.79**	**55**	⇓P		**P**	**10 09 33.9**	**+0.2**	
	baz=87								
R21A	**Cimarron**	**86.81**	**47**	⇑P		**P**	**10 09 33.9**	**+0.3**	
	baz=87,SNR=5.2								
MVCO	**Mesa Verde**	**86.85**	**49**	⇑P		**P**	**10 09 33.8**	**-0.1**	
	baz=87								
X18A	**Snowflake**	**87.39**	**52**	⇓P		**P**	**10 09 36.5**	**0.0**	
	baz=87								
Z17A	**San Carlos Hig**	**87.71**	**53**	⇓P		**P**	**10 09 38.1**	**0.0**	
	baz=88								
X19A	**St. Johns**	**87.89**	**51**	⇑P		**P**	**10 09 38.9**	**0.0**	
	baz=88								
217A	**Green Valley**	**88.31**	**54**	⇓P		**P**	**10 09 40.6**	**-0.4**	
	baz=88								
218A	**Dragoon**	**88.74**	**54**	⇓P		**P**	**10 09 42.6**	**-0.4**	
	baz=88								
318A	**Bisbee**	**89.08**	**54**	⇓P		**P**	**10 09 44.7**	**0.0**	
	baz=89								
219A	**White Tail Can**	**89.28**	**53**	⇑P		**P**	**10 09 45.8**	**+0.2**	
	baz=89								
GERES	**GERESS Array B**	**89.37**	**329**	P		**P**	**10 09 44.7**	**-0.9**	
	comp=Z,0.3nm,0.4s,mb3.9,baz=46,slow=6.5,SNR=3.9								
TXAR	**Lajitas Array**	**94.74**	**53**	P		**P**	**10 10 11.2**	**+0.3**	
	comp=Z,2.0nm,0.7s,mb4.7,baz=292,slow=2.4,SNR=21								
TXAR				PP		PP	10 14 04.4	+5.3	
	comp=Z,0.6nm,1.0s,baz=316,slow=5.2,SNR=3.6								
TXAR	**Lajitas Array**	**94.74**	**53**	P		**P**	**10 10 11.2**	**+0.3**	
TXAR				pmax		pmax	10 14 04.4		
	comp=Z,2.0nm,0.7s								
TXAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
TORD	**Torodi Ar. Bea**	**122.73**	**312**	PKP		PKPdf	10 15 44.6	-1.0	
	comp=Z,0.4nm,0.5s,baz=24,slow=1.5,SNR=5.5								
TORD				PKKPbc		PKKPbc	10 25 38.2	+0.3	
	comp=Z,0.2nm,0.6s,baz=228,slow=3.4,SNR=5.2								
PLCA	**Paso Flores**	**151.47**	**122**	PKPbc		PKPbc	10 16 43.0	0.0	
	comp=Z,4.7nm,0.9s,baz=214,slow=2.9,SNR=12								
PLCA	**Paso Flores**	**151.47**	**122**	PKIKP		PKPbc	10 16 43.0	0.0	
PLCA				pmax		pmax			
	comp=Z,5.0nm,0.9s								
CPUP	**Villa Florida**	**163.04**	**85**	PKPab		PKPab	10 17 40.5	-1.1	
	comp=Z,0.5nm,0.3s,baz=315,slow=4.3,SNR=5.2								
CPUP	**Villa Florida**	**163.04**	**85**	PKP2		PKPab	10 17 40.6	-1.1	
CPUP				pmax		pmax			
	comp=Z,1.0nm,0.3s								

CSEM ***26*** *10:18:52.3±0.1, 3757N×2804E, h5km, MD2.7, Error ellipse: s-maj=2.1km s-min=1.6km az=121.0*
ISCJB ***26*** *10:18:53.7±1.3, 3747N±006×2814E±006, h3km±10km, Error ellipse: s-maj=10.2km s-min=7.3km az=23.4*
ISK ***26*** *10:18:53.0, 3754N×2804E, h5km, MD2.7*
DDA ***26*** *10:19:00.2, 3739N×2779E, h7km±2km, Md2.8*

ISC 26 10:18:54.0±1.3, 3749N±006×2814E±006, h7km±10km, n7, σ1°03/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.34**	**236**	*e*P	**Pg**		**10 18 59.8**	**-1.0**
MLSB				*e*SG	**Sg**		**10 19 04.9**	**-0.4**
YER	**Yerkesik**	**0.37**	**162**	*e*P	**Pg**		**10 19 02.2**	**+1.0**
BDRM	**Kayabasi**	**0.69**	**233**	*i* P	**Pg**		**10 19 06.7**	**-0.7**
BDRM				*i* S	**Sg**		**10 19 15.2**	**-1.2**
GCAM	**G?zelcaml?**	**0.75**	**287**	*i* P	**Pb**		**10 19 11.0**	**+1.7**
GCAM				*i* S	**Sb**		**10 19 20.7**	**+1.0**
DALT	**Dalyan (Mudla)**	**0.82**	**151**	*e*PG	**Pg**		**10 19 10.9**	**+1.0**
DALT				*e*SG	**Sn**		**10 19 23.7**	**-0.6**
DAT	**Datca**	**0.88**	**211**	*e*PG	**Pg**		**10 19 10.6**	**-0.3**
DAT				*e*SG	**Sg**		**10 19 23.5**	**+1.1**
KULA	**Kula-Manisa**	**1.10**	**22**	*e*PN	**Pn**		**10 19 14.4**	**-1.5**

ISCJB ***26*** *10:19:18.5±0.6, 570N±0.1×339W±0.1, h10km, mb3.9/14, MS3.6/20, Error ellipse: s-maj=17.8km s-min=10.2km az=12.2*
IDC ***26*** *10:19:18.9±0.9, 5701N×3384W, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML2.5/2, MS3.6/23, Ms1 3.6/23, ms1mx3.4/53, Error ellipse: s-maj=25.3km s-min=17.4km az=17.0*
NEIC ***26*** *10:19:20.2±0.5, 5699N×3390W, h10km, Error ellipse: s-maj=15.3km s-min=8.9km az=194.0*

ISC 26 10:19:20.4±0.6, 570N±01×339W±01, h10km, n37, σ0°74/20, mb3.9/14, MS3.6/20, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**12.69**	**329**	LR		LR	10 26 28.7	
	comp=Z,490nm,19.9s,baz=76,slow=34							
FRB	**Frobisher Bay**	**18.22**	**306**	P		**Pn**	**10 23 33.2**	**+0.2**
	0.1nm,0.3s,baz=102,slow=12,SNR=6.4							
FRB				LR		LR	10 29 46.0	
	comp=Z,98nm,20.8s,baz=322,slow=34							
SCHQ	**Schefferville**	**18.48**	**277**	P		**Pn**	**10 23 35.0**	**-1.3**
	0.1nm,0.3s,baz=90,slow=7.1,SNR=3.5							
SCHQ				LR		LR	10 29 39.7	
	comp=Z,222nm,20.7s,baz=99,slow=34							
SCHQ	**Schefferville**	**18.48**	**277**	P		**Pn**	**10 23 35.0**	**-1.3**
SCHQ				LR		LR	10 29 39.7	
NOA	**NORSAR Array B**	**23.21**	**61**	LR		LR	10 31 49.1	
	comp=Z,77nm,18.2s,MS3.2,baz=180,slow=32							
HFS	**Hagfors**	**24.60**	**63**	P		**P**	**10 24 39.9**	**-0.4**
	6.4nm,1.0s,mb4.1,baz=280,slow=0.9,SNR=3.0							
ESDC	**Sonseca Array**	**26.07**	**119**	P		**P**	**10 24 54.4**	**+0.6**
	0.4nm,0.4s,mb3.3,baz=318,slow=7.5,SNR=3.3							
ESDC				LR		LR	10 33 57.3	
	comp=Z,100nm,18.8s,MS3.4,baz=0.0,slow=34							
ESDC	**Sonseca Array**	**26.07**	**119**	P		**P**	**10 24 54.4**	**+0.6**
ESDC				LR		LR	10 33 57.3	
DAVOX	**Davos/Dischmat**	**28.42**	**92**	LR		LR	10 36 02.0	
	comp=Z,180nm,19.3s,MS3.7,baz=260,slow=35							
RES	**Resolute Bay**	**28.68**	**331**	LR		LR	10 35 10.4	
	comp=Z,27nm,20.1s,MS2.9,baz=254,slow=33							
GERES	**GERESS Array B**	**29.30**	**86**	LR		LR	10 35 51.7	
	comp=Z,96nm,19.1s,MS3.4,baz=304,slow=34							
VRAC	**Vranov**	**30.61**	**83**	LR		LR	10 35 55.9	
	comp=Z,109nm,19.6s,MS3.5,baz=343,slow=33							
KEST	**Kesra**	**35.81**	**109**	LR		LR	10 41 44.4	
	comp=Z,31nm,18.1s,MS3.1,baz=331,slow=38							
AKASG	**Malin Array Be**	**36.56**	**72**	P		**P**	**10 26 25.2**	**-0.7**
	2.4nm,0.7s,mb4.1,baz=304,slow=8.5,SNR=6.6							
VAE	**Valguarnera**	**37.19**	**101**	LR		LR	10 43 33.8	
	comp=Z,64nm,18.4s,MS3.5,baz=132,slow=39							
MLR	**Muntele Rosu**	**37.98**	**81**	LR		LR	10 42 35.5	
	comp=Z,121nm,18.1s,MS3.8,baz=138,slow=37							
YKA	**Yellowknife Ar**	**38.53**	**313**	P		**P**	**10 26 43.1**	**+0.7**
	0.5nm,0.9s,mb3.3,baz=58,slow=9.2,SNR=4.9							
YKA				LR		LR	10 41 49.4	
	comp=Z,26nm,20.4s,MS3.0,baz=235,slow=35							
IDI	**Anoyia**	**44.50**	**93**	LR		LR	10 44 58.1	
	comp=Z,60nm,19.3s,MS3.5,baz=290,slow=35							
DLBC	**Dease Lake**	**47.07**	**314**	LR		LR	10 46 24.5	
	comp=Z,509nm,19.7s,MS4.5,baz=139,slow=34							
PDAR	**Pinedale Array**	**48.23**	**287**	P		**P**	**10 28 01.6**	**+0.7**
	0.1nm,0.6s,mb3.0,baz=48,slow=51,SNR=3.6							
PDAR				LR		LR	10 46 49.6	
	comp=Z,202nm,18.4s,MS4.1,baz=123,slow=34							
AKTK	**Aktyubinsk**	**50.83**	**56**	P		**P**	**10 28 20.9**	**+0.3**
AKTK				LR		LR	10 47 53.9	
AKTO	**Aktyubinsk**	**50.83**	**56**	P		**P**	**10 28 20.9**	**+0.3**
	1.0nm,0.7s,mb3.9,baz=304,slow=7.3,SNR=4.9							
AKTO				LR		LR	10 47 53.9	
	comp=Z,52nm,18.5s,MS3.6,baz=224,slow=34							
TORD	**Torodi Ar. Bea**	**51.49**	**134**	P		**P**	**10 28 25.2**	**-0.7**
	1.5nm,0.9s,mb3.9,baz=330,slow=5.9,SNR=5.2							
MMAI	**Mount Meron Ar**	**51.95**	**86**	LR		LR	10 48 58.8	
	comp=Z,18nm,20.8s,MS3.1,baz=70,slow=34							
BVAR	**Borovoye Array**	**54.17**	**46**	P		**P**	**10 28 45.0**	**-0.3**
	1.4nm,0.8s,mb3.9,baz=291,slow=5.9,SNR=5.9							
DBIC	**Dimbokro**	**55.12**	**144**	P		**P**	**10 28 53.2**	**+0.5**
	3.2nm,0.8s,mb4.4,baz=333,slow=4.5,SNR=3.1							
DBIC				LR		LR	10 49 10.1	
	comp=Z,109nm,19.8s,MS3.9,baz=339,slow=32							
DBIC	**Dimbokro**	**55.12**	**144**	P		**P**	**10 28 53.2**	**+0.5**
DBIC				LR		LR	10 49 10.1	
ZALV	**Zalesovo Beam**	**58.70**	**37**	P		**P**	**10 29 15.7**	**-1.8**
	0.3nm,0.3s,mb3.8,baz=353,slow=5.8,SNR=2.1							
KURK	**Kurchatov**	**59.16**	**43**	P		**P**	**10 29 21.0**	**+0.2**
	2.2nm,0.9s,mb4.2,baz=324,slow=7.2,SNR=7.9							
CMIG	**Matias Romero**	**60.10**	**255**	LR		LR	10 56 48.5	
	comp=Z,55nm,18.2s,MS3.7,baz=322,slow=37							
MKAR	**Makanchi Array**	**63.77**	**43**	P		**P**	**10 29 52.1**	**+0.1**
	1.7nm,0.8s,mb4.1,baz=332,slow=7.0,SNR=11							
SONM	**Songino Array**	**70.45**	**27**	P		**P**	**10 30 35.6**	**+1.1**
	0.3nm,0.7s,mb3.3,baz=355,slow=7.2,SNR=2.0							
BDFB	**Brasilia**	**73.31**	**194**	LR		LR	10 56 48.4	
	comp=Z,22nm,19.7s,MS3.5,baz=195,slow=31							
KSRS	**Korea Array**	**84.67**	**14**	LR		LR	11 08 01.9	
	comp=Z,26nm,19.7s,MS3.6,baz=355,slow=34							
LSZ	**Lusaka**	**88.39**	**121**	LR		LR	11 12 31.3	
	comp=Z,93nm,18.3s,MS4.2,baz=345,slow=36							
CMAR	**Chiang Mai Arr**	**95.16**	**44**	P		**P**	**10 32 44.3**	**+0.4**
	0.8nm,0.3s,mb4.6,baz=325,slow=4.5,SNR=4.0							
ASAR	**Alice Springs**	**145.55**	**20**	PKPbc		PKPbc	10 38 57.7	-0.9
	1.1nm,0.9s,baz=354,slow=2.4,SNR=8.7							

ISCJB ***26*** *10:29:58.7±0.9, 3746N±006×28.10E±009, h10km, Error ellipse: s-maj=10.4km s-min=7.9km az=13.2*
CSEM ***26*** *10:29:58.0±0.2, 3747N×28.14E, h2km, MD2.6, Error ellipse: s-maj=4.9km s-min=3.7km az=118.0*
ISK ***26*** *10:29:59.0, 3745N×28.13E, h9km, MD2.6*
DDA ***26*** *10:30:00.3, 3732N×2799E, h7km±2km, Md3.1*

ISC 26 10:29:59.1±1.4, 3748N±008×281E±01, h5km±26km, n7, σ0°96/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.34**	**238**	*e*PG	**Pg**		**10 30 05.8**	**+0.2**
YER	**Yerkesik**	**0.36**	**161**	*e*PG	**Pg**		**10 30 06.2**	**+0.2**
BDRM	**Kayabasi**	**0.69**	**233**	*i* P	**Pg**		**10 30 10.4**	**-1.8**
DALT	**Dalyan (Mudla)**	**0.81**	**150**	*e*PG	**Pg**		**10 30 14.5**	**-0.2**
DAT	**Datca**	**0.87**	**211**	*e*PG	**Pg**		**10 30 15.9**	**+0.2**
DAT				*e*SG	**Sg**		**10 30 27.6**	**+0.7**
KULA	**Kula-Manisa**	**1.12**	**22**	*e*PN	**Pn**		**10 30 21.4**	**0.0**
URLA	**Izmir**	**1.50**	**306**	*i* P	**Pg**		**10 30 28.3**	**+0.5**

ISCJB ***26*** *10:53:00.5±0.4, 3069N±004×13869E±007, h380km±4km, mb4.0/31, Error ellipse: s-maj=9.3km s-min=6.4km az=170.7*
JMA ***26*** *10:53:00.8±0.3, 3092N×13925E, h417km, M4.1*
NIED ***26*** *10:53:00, 3090N×13920E, h380km, Mw4.2 Best double couple: M0 2.21000×10^15 NP1:φ=60.00000°, δ83.00000°, λ=-167.00000°. NP2:φ=328.00000°, δ78.00000°, λ=-7.00000°.*
MOS ***26*** *10:53:01.1±0.7, 3077N×13856E, h383km, mb4.2/16, Error ellipse: s-maj=14.3km s-min=8.1km az=108.8*
BJI ***26*** *10:53:01.3, 3075N×13853E, h382km, mB4.5, mb4.5*
IDC ***26*** *10:53:02.7±1.1, 3078N×13851E, h381km±10km, mb3.5/19, mb1 3.6/23, mb1mx3.6/28, mbtmp3.5/23, Error ellipse: s-maj=12.7km s-min=9.7km az=86.0*
NEIC ***26*** *10:53:02.2±0.8, 3077N×13850E, h374km±7km, mb4.6/5, MW4.2(NIED), Error ellipse: s-maj=8.9km s-min=8.1km az=123.0*

ISC 26 10:53:01.9±0.5, 3074N±005×13868E±007, h376km±4km, n81, σ0°96/95, mb4.0/31, 3C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.55**	**21**	P		**Pn**	**10 54 00.2**	**+0.9**
	34nm,0.3s,baz=79,slow=22,SNR=6.8							
JHJ				S		**S**	**10 54 44.8**	**-1.1**
	150nm,0.3s,baz=78,slow=23,SNR=11							
TK02	**Tokai 2**	**3.29**	**347**	P		**Pn**	**10 54 08.2**	**+2.6**
JIE	**Ise**	**4.00**	**336**	P		**Pn**	**10 54 14.9**	**+2.6**
JIE				*e*S		**S**	**10 55 10.9**	**+1.6**
BSO1	**Boso 1**	**4.35**	**26**	P		**Pn**	**10 54 14.8**	**-1.0**
BSO1				*e*S		**S**	**10 55 11.1**	**-4.7**
JOD2	**Odawara 2**	**4.52**	**4**	P		**Pn**	**10 54 17.6**	**+0.1**
JOD2				*e*S		**S**	**10 55 17.0**	**-1.9**
CBIJ	**Chichi jima**	**4.76**	**139**	P		**Pn**	**10 54 18.6**	**-1.6**
	54nm,0.3s,baz=266,slow=19,SNR=14							
CBIJ				S		**S**	**10 55 19.6**	**-4.1**
	190nm,0.3s,baz=307,slow=22,SNR=19							
CBIJ	**Chichi jima**	**4.76**	**139**	P		**Pn**	**10 54 18.8**	**-1.4**
JRY	**Ryogami san**	**5.26**	**2**	P		**Pn**	**10 54 25.3**	**0.0**
JRY				*e*S		**S**	**10 55 29.6**	**-3.5**
MJAR	**Matsushiro Arr**	**5.79**	**356**	P		**Pn**	**10 54 30.6**	**-0.6**
	8.6nm,0.3s,baz=171,slow=11,SNR=58							
MJAR				S		**S**	**10 55 43.2**	**-0.6**
	1.7nm,0.3s,baz=164,slow=16,SNR=3.9							
MJAR	**Matsushiro Arr**	**5.79**	**356**	P		**Pn**	**10 54 30.6**	**-0.6**
MJAR				S		**S**	**10 55 43.2**	**-0.6**
MJAR				pmax		pmax		
	comp=Z,9.0nm,0.3s							
MJAR				smax				
	comp=N,2.0nm,0.3s							
MAJO	**Matsushiro**	**5.80**	**356**	*e*P		**Pn**	**10 54 30.8**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,46nm,0.3s							
MAJO	**Matsushiro**	**5.80**	**356**	*e*Pn		**Pn**	**10 54 30.8**	**-0.4**
	comp=Z,46nm,0.3s							
MAT	**Matsushiro**	**5.80**	**356**	P		**Pn**	**10 54 30.7**	**-0.5**
MAT				S		**S**	**10 55 43.9**	**+0.1**
MAT	**Matsushiro**	**5.80**	**356**	P		**Pn**	**10 54 30.9**	**-0.3**
MAT				*e*S		**S**	**10 55 43.4**	**-0.4**
JHS	**Saijyo**	**6.31**	**314**	P		**Pn**	**10 54 39.3**	**+2.3**
JMK	**Ichinoseki**	**8.45**	**14**	P		**Pn**	**10 55 00.5**	**-1.0**
JMK				*e*S		**S**	**10 56 33.1**	**-6.3**
JTU	**Tsushima**	**8.68**	**298**	P		**Pn**	**10 55 06.5**	**+2.2**
JOT	**Ohata**	**10.79**	**10**	P		**Pn**	**10 55 28.9**	**0.0**
KSRS	**Korea Array**	**11.14**	**310**	P		**Pn**	**10 55 33.5**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=122,slow=11,SNR=23							
KSRS	**Korea Array**	**11

WRA	**Warramunga Arr**	**50.57**	**185**	P		**P**	**11 01 24.0**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.3,baz=2.2,slow=7.8,SNR=28							
WRA				pP		pP	11 02 43.5	+3.0
	comp=Z,0.5nm,0.7s,baz=1.8,slow=7.5,SNR=2.2							
WRA	**Warramunga Arr**	**50.57**	**185**	P		**P**	**11 01 24.0**	**+0.2**
WRA				*PP		pP	11 02 43.5	+3.0
WRA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
AML	**Almayashu**	**52.35**	**302**	*e*P		**P**	**11 01 36.9**	**+0.2**
	comp=Z,24nm,0.6s,mb4.7							
BVA0	**Borovoye Array**	**53.29**	**316**	P		**P**	**11 01 43.0**	**-0.3**
BVA0				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb3.8							
BVAR	**Borovoye Array**	**53.29**	**316**	P		**P**	**11 01 43.1**	**-0.2**
	comp=Z,18nm,0.5s,mb4.6,baz=95,slow=7.7,SNR=112							
BVAR				PcP		PcP	11 02 45.5	+0.2
	comp=Z,2.3nm,0.4s,baz=120,slow=2.3,SNR=8.0							
BVAR	**Borovoye Array**	**53.29**	**316**	P		**P**	**11 01 43.1**	**-0.2**
BVAR							11 02 45.5	
BVAR				pmax		pmax		
	comp=Z,18nm,0.5s							
BVAR				pmax		pmax		
	comp=Z,2.0nm,0.4s							
BRVK	**Borovoye**	**53.35**	**316**	P		**P**	**11 01 43.3**	**-0.4**
BRVK				pmax		pmax		
	comp=Z,21nm,0.7s,mb4.6							
ASAR	**Alice Springs**	**54.29**	**185**	P		**P**	**11 01 51.2**	**+0.5**
	comp=Z,0.5nm,0.6s,mb3.0,baz=15,slow=14,SNR=21							
KK31	**Karatay Array**	**54.49**	**303**	*e*P		**P**	**11 01 51.8**	**-0.2**
KK31				pmax		pmax		
	comp=Z,9.0nm,0.4s,mb4.5							
ARU	**Arti**	**59.66**	**321**	*i* P		**P**	**11 02 27.2**	**-0.4**
AB31	**Akbulak array**	**60.37**	**312**	P		**P**	**11 02 31.8**	**-0.7**
AB31				pmax		pmax		
	comp=Z,9.0nm,0.5s,mb4.5							
AKTO	**Aktyubinsk**	**61.29**	**314**	P		**P**	**11 02 37.6**	**-1.0**
STKA	**Stephens Creek**	**62.34**	**177**	P		**P**	**11 02 46.7**	**+1.1**
	comp=Z,0.7nm,0.5s,mb3.5,baz=352,slow=14,SNR=3.8							
ARCES	**ARCESS Array B**	**69.08**	**340**	P		**P**	**11 03 27.7**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.0,baz=77,slow=8.7,SNR=9.1							
YKA	**Yellowknife Ar**	**70.40**	**28**	P		**P**	**11 03 35.8**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=299,slow=6.2,SNR=9.3							
YKA	**Yellowknife Ar**	**70.40**	**28**	P		**P**	**11 03 35.8**	**0.0**
UMR	**Umm Al-Rimmam**	**76.29**	**296**	*e*P		**P**	**11 04 09.9**	**-0.6**
	baz=300							
UMR				AMb		AMB	11 04 13.9	
	comp=Z,44nm,1.3s,mb5.0,baz=300							
MIB	**Mutribah**	**76.46**	**297**	*e*P		**P**	**11 04 10.7**	**-0.7**
	baz=300							
MIB				AMb		AMB	11 04 11.6	
	comp=Z,40nm,0.7s,baz=300							
RDF	**Al-Radifah**	**76.71**	**296**	*e*P		**P**	**11 04 12.1**	**-0.8**
	baz=300							
NAY	**Al-Naaiem**	**76.80**	**296**	*e*P		**P**	**11 04 12.5**	**-0.8**
	baz=300							
NAY				AMb		AMB	11 04 13.6	
	comp=Z,23nm,0.6s,mb5.1,baz=300							
AKASG	**Malin Array Be**	**77.86**	**322**	P		**P**	**11 04 18.3**	**-0.5**
	comp=Z,4.9nm,0.5s,mb4.5,baz=49,slow=6.0,SNR=17							
AKASG	**Malin Array Be**	**77.86**	**322**	P		**P**	**11 04 18.3**	**-0.5**
AKASG				pmax		pmax		
	comp=Z,5.0nm,0.5s							
NOA	**NORSAR Array B**	**79.08**	**337**	P		**P**	**11 04 24.8**	**-0.3**
	comp=Z,2.0nm,0.8s,mb3.9,baz=51,slow=5.7,SNR=4.6							
NOA	**NORSAR Array B**	**79.08**	**337**	P		**P**	**11 04 24.8**	**-0.3**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
NVAR	**Mina Array Bea**	**80.65**	**51**	P		**P**	**11 04 35.8**	**+1.9**
	comp=Z,0.2nm,0.4s,mb3.2,baz=283,slow=5.5,SNR=2.4							
BRTR	**Keskin Array B**	**81.29**	**311**	P		**P**	**11 04 37.2**	**0.0**
	comp=Z,3.1nm,0.9s,mb4.1,baz=98,slow=4.4,SNR=13							
BRTR	**Keskin Array B**	**81.29**	**311**	P		**P**	**11 04 37.3**	**+0.1**
BRTR				pmax		pmax		
	comp=Z,3.0nm,0.9s							
PDAR	**Pinedale Array**	**83.74**	**43**	P		**P**	**11 04 50.9**	**+1.2**
	comp=Z,0.2nm,0.6s,mb3.1,baz=283,slow=4.5,SNR=3.0							
GERES	**GERESS Array B**	**86.80**	**327**	P		**P**	**11 05 03.6**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.5,baz=43,slow=6.0,SNR=5.5							
GERES	**GERESS Array B**	**86.80**	**327**	P		**P**	**11 05 03.6**	**-0.9**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**119.88**	**310**	PKP		PKPdf	11 11 06.8	-2.0
	comp=Z,0.5nm,1.0s,baz=18,slow=1.6,SNR=2.6							

PRE 26 11:02:24.8±1.0, 2996S×2950E, h5km, ML3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KSD	**Kokstad**	**0.58**	**187**	*e*P		Pg	11 02 36.1	+0.1
KSD				*e*S		Sg	11 02 43.4	-0.3
KSD				AML		AML	11 02 43.7	
	comp=Z,5μm,0.2s							
POGA	**Pongola**	**3.18**	**36**	*e*P		Pn	11 03 16.7	+1.3
POGA				*e*S		Sn	11 03 54.5	+0.8
POGA				AML		AML	11 04 05.7	
	comp=Z,84nm,0.4s							
PRYS	**Parys**	**3.56**	**328**	*e*P		Pn	11 03 22.3	+1.5
PRYS				*e*S		Sn	11 04 03.3	0.0
PRYS				AML		AML	11 04 21.2	
	comp=Z,62nm,0.2s							
ERPM	**east rand prop**	**3.77**	**343**	*e*P		Pn	11 03 25.8	+2.2
ERPM				*e*S		Sn	11 04 10.5	+2.1
ERPM				AML		AML	11 04 31.4	
	comp=Z,56nm,0.4s							
BOSA	**Boshof**	**3.94**	**289**	*e*P		Pn	11 03 26.7	+0.7
BOSA				*e*S		Sn	11 04 11.5	-1.2
BOSA				AML		AML	11 04 32.2	
	comp=Z,93nm,0.8s							
SWZ	**Schweizer**	**4.59**	**306**	*e*P		Pn	11 03 36.0	+1.1
SWZ				*e*S		Sn	11 04 27.2	-1.5
SWZ				AML		AML	11 04 56.8	
	comp=Z,91nm,0.5s							
KSR	**Koster**	**4.70**	**330**	*e*P		Pn	11 03 37.5	+1.1
KSR				*e*S		Sn	11 04 29.4	-1.8
KSR				AML		AML	11 04 54.2	
	comp=Z,66nm,0.4s							
LBTB	**Lobatse**	**6.03**	**324**	*e*P		Pn	11 03 55.6	+1.0
LBTB				*e*S		Sn	11 05 02.1	-1.9
LBTB				AML		AML	11 05 38.2	
	comp=Z,30nm,0.5s							
UPI	**Upington**	**7.39**	**280**	*e*P		Pn	11 04 13.8	+0.5
UPI				*e*S		Sn	11 05 34.4	-3.2
UPI				AML		AML	11 06 19.0	
	comp=Z,19nm,0.6s							
MSNA	**Messina**	**7.60**	**4**	*e*S		Sn	11 05 36.5	-6.2
MSNA				AML		AML	11 06 36.3	
	comp=Z,14nm,0.5s							
SUR	**Sutherland**	**7.83**	**250**	*e*P		Pn	11 04 21.0	+1.6
SUR				*e*S		Sn	11 05 45.1	-3.2
CVNA	**Calvinia**	**8.52**	**257**	*e*P		Pn	11 04 29.3	+0.4
CVNA				*e*S		Sn	11 06 01.0	-4.4
CVNA				AML		AML	11 06 56.6	
	comp=Z,21nm,0.6s							

IDC 26 11:10:47.5±4.0, 688S×10191E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/19, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.6/34, Error ellipse: s-maj=160.5km s-min=21.0km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				P		P	h m s	ISC
CMAR	**Chiang Mai Arr**	**25.35**	**353**	P		P	11 16 16.9	+0.6
	0.9nm,0.6s,baz=189,slow=8.3,SNR=7.0							
DAV	**Davao City (W)**	**27.38**	**60**	LR		LR	11 28 07.1	
	comp=Z,55nm,18.5s,baz=283,slow=38							
WRA	**Warramunga Arr**	**34.03**	**116**	P		P	11 17 33.4	-0.1
	1.0nm,0.7s,baz=285,slow=12,SNR=8.0							
ASAR	**Alice Springs**	**34.96**	**122**	P		P	11 17 41.3	-0.2
	0.2nm,0.4s,baz=297,slow=7.9,SNR=7.5							
SONM	**Songino Array**	**54.62**	**4**	P		P	11 20 17.6	-0.2
	0.8nm,0.6s,baz=183,slow=8.6,SNR=6.9							
MKAR	**Makanchi Array**	**56.21**	**344**	P		P	11 20 29.3	+0.1
	0.9nm,0.9s,baz=139,slow=7.6,SNR=4.6							
ZALV	**Zalesovo Beam**	**62.29**	**349**	P		P	11 21 10.4	-0.8
	0.8nm,0.6s,baz=196,slow=4.3,SNR=4.1							
TXAR	**Lajitas Array**	**147.14**	**44**	PKPbc		PKPbc	11 30 33.6	+0.4
	0.3nm,0.8s,baz=177,slow=2.5,SNR=4.6							

*ATH **26** 11:10:47.9, 3971N×2063E, h19km±1km, MD3.2/6*
*ISCJB **26** 11:10:48.8±0.5, 3967N±003×2053E±004, h10km, Error ellipse: s-maj=5.4km s-min=3.6km az=149.8*

*NEIC **26** 11:10:48.4, 3966N×2062E, h16km, MD3.3(ATH), After ATH.*
*CSEM **26** 11:10:48.8±0.1, 3965N×2062E, h5km, MD3.3, Error ellipse: s-maj=3.7km s-min=3.1km az=148.0*
*THE **26** 11:10:49.2, 3965N×2060E, h0km±2km, ML3.1/8, Error ellipse: s-maj=2.4km s-min=0.9km az=278.0*

ISC 26 11:10:49.3±0.6, 3963N±003×2061E±003, h2km±5km, n27, σ1°13/42, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JAN	**Janina**	**0.19**	**83**	*e*Pb		**Pg**	**11 10 52.5**	**-0.4**
JAN				*e*Sb		**Sg**	**11 10 55.8**	**+0.4**
IGT	**Igoumenitsa**	**0.24**	**245**	P		**Pg**	**11 10 53.6**	**-0.2**
IGT				S		**Sg**	**11 10 58.0**	**+1.1**
KEK	**Kerkira**	**0.63**	**277**	*e*PN		**Pg**	**11 11 00.8**	**-0.6**
KEK				*e*SN		**Sg**	**11 11 09.6**	**+0.1**
KEK	**Kerkira**	**0.63**	**277**	*e*Pn		**Pg**	**11 11 01.1**	**-0.3**
KEK				*e*Sn		**Sg**	**11 11 09.6**	**+0.1**
THL	**Klokotos Trika**	**1.09**	**93**	P		**Pg**	**11 11 09.1**	**-1.1**
THL				S		**Sg**	**11 11 25.5**	**+1.2**
THL	**Klokotos Trika**	**1.09**	**93**	*e*Pn		**Pn**	**11 11 08.7**	**-2.9**
THL	**Klokotos Trika**	**1.09**	**93**	P		**Pg**	**11 11 09.1**	**-1.1**
THL				S		**Sg**	**11 11 25.5**	**+1.2**
KZN	**Kozani**	**1.12**	**53**	*e*PN		**Pn**	**11 11 08.2**	**-3.8**
KZN	**Kozani**	**1.12**	**53**	*e*Pb		**Pb**	**11 11 08.5**	**-2.9**
KZN				*e*Sn		**Sn**	**11 11 24.9**	**-3.1**
EVR	**Evrytania**	**1.18**	**127**	*e*PN		**Pn**	**11 11 11.2**	**-1.6**
EVR	**Evrytania**	**1.18**	**127**	*e*Pn		**Pn**	**11 11 11.6**	**-1.2**
FNA	**Florina**	**1.29**	**27**	P		**Pg**	**11 11 12.8**	**-1.2**
FNA				S		**Sg**	**11 11 32.2**	**+1.4**
VLS	**Valsamata**	**1.46**	**181**	P		**Pn**	**11 11 16.2**	**-0.4**
VLS				S		**Sb**	**11 11 37.1**	**+1.0**
VLS	**Valsamata**	**1.46**	**181**	*e*Pn		**Pn**	**11 11 16.6**	**0.0**
VLS				S		**Sb**	**11 11 37.1**	**+1.0**
AGG	**Agios Georgios**	**1.47**	**114**	P		**Pn**	**11 11 15.5**	**-1.3**
AGG				S		**Sb**	**11 11 38.2**	**+1.7**
OHR	**Ohrid**	**1.48**	**6**	P		**Pn**	**11 11 15.7**	**-1.3**
OHR	**Ohrid**	**1.48**	**6**	*e*Pn		**Pn**	**11 11 18.5**	**+1.5**
OHR	**Ohrid**	**1.48**	**6**	*e*Pn		**Pn**	**11 11 18.6**	**+1.6**
BIA	**Bitola**	**1.49**	**21**	*e*Pn		**Pn**	**11 11 17.4**	**+0.3**
LIT	**Litokhoron**	**1.52**	**72**	P		**Pn**	**11 11 17.5**	**-0.1**
LIT				S		**Sn**	**11 11 38.4**	**+0.5**
KRUS	**Krusevo**	**1.80**	**16**	*i* Pn		**Pn**	**11 11 23.5**	**+2.1**
KRUS	**Krusevo**	**1.80**	**16**	*i* Pn		**Pn**	**11 11 23.6**	**+2.2**
GRG	**Griva**	**1.90**	**46**	P		**Pn**	**11 11 22.3**	**-0.5**
GRG				S		**Sn**	**11 11 47.8**	**+0.4**
HORT	**Hortiatis**	**2.14**	**62**	P		**Pn**	**11 11 26.0**	**-0.1**
HORT				S		**Sn**	**11 11 54.2**	**+1.0**
PLG	**Polygyros**	**2.30**	**70**	P		**Pn**	**11 11 27.9**	**-0.4**
PAIG	**Paliouri**	**2.38**	**82**	P		**Pn**	**11 11 30.2**	**+0.8**
PAIG				S		**Sn**	**11 11 59.5**	**+0.3**
LTK	**Loutraki**	**2.45**	**130**	P		**Pn**	**11 11 29.6**	**-0.7**

JMA 26 11:25:17.6, 3578N×13615E, h10km±1km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JFM	**Mihama**	**0.28**	**208**	P		Pg	11 25 23.5	+0.2
JFM				S		Sg	11 25 27.6	+0.4
JGM	**Miyama**	**0.47**	**100**	P		Pg	11 25 26.7	-0.1
JGM				*e*S		Sg	11 25 33.0	0.0
JKG	**Kaga**	**0.52**	**16**	P		Pg	11 25 27.8	+0.1
JKG				*e*S		Sg	11 25 34.7	+0.2
JWT	**Wachi**	**0.79**	**231**	P		Pg	11 25 32.5	-0.3
JWT				*e*S		Sg	11 25 42.9	-0.1
JKY	**Yasaka**	**0.86**	**260**	P		Pg	11 25 33.8	-0.5
JKY				*e*S		Sg	11 25 45.3	-0.2
MAT	**Matsushiro**	**1.83**	**65**	P		Pn	11 25 50.1	+1.0
MAT				S		Sn	11 26 16.9	+4.6

*ISCJB **26** 11:25:45.9±1.0, 3645N±005×3703E±006, h11km±7km, Error ellipse: s-maj=11.0km s-min=5.5km az=138.0*
*CSEM **26** 11:25:48.2±0.1, 3657N×3679E, h2km, MD3.2, Error ellipse: s-maj=4.7km s-min=2.3km az=126.0*
*DDA **26** 11:25:48.2, 3654N×3690E, h6km±2km, Md3.2*
*ISK **26** 11:25:50.0, 3657N×3664E, h28km, MD3.0*

ISC 26 11:25:47.0±1.0, 3648N±005×3700E±006, h16km±6km, n11, σ1°96/16, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KUZU	**Kuzuini**	**0.30**	**12**	*i* P		**Pg**	**11 25 53.9**	**+0.4**
KUZU				*i* S		**Sg**	**11 25 58.2**	**+0.4**
COBT	**Iskenderun**	**0.60**	**274**	*i* P		**Pg**	**11 25 58.6**	**-0.2**
COBT				*i* S		**Sg**	**11 26 06.2**	**-0.5**
GAZ	**Gaziantep**	**0.71**	**14**	*e*PG		**Pn**	**11 26 04.9**	**+2.5**
HTY	**Hatay**	**0.78**	**243**	*e*PG		**Pg**	**11 26 02.3**	**+0.1**
HTY				*e*SG		**Sg**	**11 26 12.9**	**+0.5**
KMRS	**Kahramanmaras**	**1.03**	**356**	*e*PG		**Pg**	**11 26 07.3**	**+0.4**
KMRS				*e*SG		**Sg**	**11 26 20.4**	**0.0**
ANDN	**Andirin**	**1.22**	**335**	*i* P		**Pn**	**11 26 10.4**	**+1.1**
ANDN				*i* S		**Sb**	**11 26 25.8**	**+0.7**
KOZT	**Kozan**	**1.37**	**317**	*e*PN		**Pn**	**11 26 10.1**	**-1.3**
URFA	**Urfa**	**1.75**	**56**	*e*PN		**Pg**	**11 26 21.7**	**+1.1**
MALT	**Malatya**	**2.16**	**31**	*e*PN		**Pg**	**11 26 26.9**	**-1.5**
MYA	**Malataya**	**2.17**	**31**	*e*PN		**Pg**	**11 26 27.2**	**-1.4**
SARI	**SarD1z-Kayseri**	**2.21**	**354**	*e*PN		**Pn**	**11 26 21.0**	**-1.9**

*ISCJB **26** 11:33:42.9±0.6, 279S±01×133W±01, h10km, mb4.1/8, MS4.0/14, Error ellipse: s-maj=17.0km s-min=14.3km az=34.3*
*IDC **26** 11:33:43.1±0.8, 2791S×1326W, h0km, mb4.0/7, mb1 4.0/7, mb1mx3.9/19, mbtmp4.0/7, MS4.0/14, Ms1 4.0/14, ms1mx3.9/19, Error ellipse: s-maj=29.5km s-min=24.8km az=141.0*
*NEIC **26** 11:33:44.6±0.5, 2791S×1327W, h10km, mb4.1/1, Error ellipse: s-maj=17.6km s-min=12.0km az=155.0*

ISC 26 11:33:44.7±0.6, 2795S±01×133W±01, h10km, n25, σ0°57/12, mb4.1/8, MS4.0/14, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TSUM	**Tsumeb**	**29.52**	**80**	*e*P		**P**	**11 39 49.9**	**+0.4**
	3.3nm,1.0s,mb4.0							
SUR	**Sutherland**	**29.73**	**107**	LR		LR	11 49 02.7	
	comp=Z,387nm,20.2s,MS4.0,baz=90,slow=31							
BOSA	**Boshof**	**33.84**	**100**	LR		LR	11 51 18.1	
	comp=Z,380nm,19.8s,MS4.1,baz=268,slow=31							
BDFB	**Brasilia**	**34.38**	**283**	P		**P**	**11 40 32.0**	**-0.2**
	4.6nm,1.1s,mb4.3,baz=81,slow=19,SNR=3.2							
BDFB				LR		LR	11 51 40.4	
	comp=Z,180nm,21.8s,MS3.8,baz=110,slow=31							
DBIC	**Dimbokro**	**35.34**	**15**	LR		LR	11 51 16.1	
	comp=Z,177nm,20.6s,MS3.8,baz=171,slow=30							
CPUP	**Villa Florida**	**39.09**	**262**	LR		LR	11 54 19.1	
	comp=Z,175nm,21.9s,MS3.9,baz=72,slow=32							
VNA2	**Neumayer--Watz**	**43.16**	**177**	*e*		**P**	**11 41 45.2**	**0.0**
	baz=337,slow=11							
VNA2				*e*		pP	11 41 47.0	-1.3
VNA2				*e*			11 42 04.8	
TOA0	**Torodi Ar. Sit**	**43.33**	**22**	*e*P		**P**	**11 41 47.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**43.33**	**22**	P		**P**	**11 41 46.9**	**-0.3**
	1.0nm,0.9s,mb3.6,baz=189,slow=8.7,SNR=5.5							
TORD				LR		LR	11 56 17.2	
	comp=Z,261nm,19.5s,MS4.1,baz=195,slow=31							
VNA3	**Neumayer Olymp**	**43.40**	**178**	*e*		**P**	**11 41 46.4**	**-0.7**
VNA3				*e*		pP	11 41 48.7	-1.5
VNA3				*e*			11 42 06.2	
SIV	**San Ignacio**	**45.64**	**275**	P		**P**	**11 42 06.5**	**+0.8**
	1.5nm,0.9s,mb3.9,baz=113,slow=7.5,SNR=4.3							
PLCA	**Paso Flores**	**48.22**	**239**	P		**P**	**11 42 24.7**	**-0.8**
	1.9nm,0.9s,mb4.1,baz=63,slow=6.0,SNR=3.5							
PLCA				LR		LR	11 58 23.3	
	comp=Z,120nm,19.7s,MS3.9,baz=105,slow=31							
PMSA	**Palmer Station**	**48.64**	**206**	LR		LR	11 58 46.0	
	comp=Z,197nm,19.2s,MS4.1,baz=108,slow=31							
QSPA	**South Pole Qui**	**62.30**	**180**	P		**P**	**11 44 07.5**	**+0.9**
	3.4nm,0.8s,mb4.5,baz=220,slow=4.3,SNR=9.3							
QSPA				LR		LR	12 05 03.1	
	comp=Z,65nm,21.7s,MS3.8,baz=59,slow=30							
SDV	**Santo Domingo**	**66.42**	**295**	P		**P**	**11 44 34.8**	**+0.4**
	4.8nm,1.0s,mb4.5,baz=222,slow=5.7,SNR=4.3							
KEST	**Kesra**	**66.82**	**20**	LR		LR	12 11 37.3	
	comp=Z,72nm,18.4s,MS3.9,baz=206,slow=34							
ROSC	**El Rosal**	**67.20**	**289**	LR		LR	12 14 21.5	
	comp=Z,97nm,19.2s,MS4.0,baz=8.9,slow=36							

VNDA	**Vanda**	**74.75**	**179**	LR		LR	12 13 49.6	
	comp=Z,131nm,19.8s,MS4.2,baz=176,slow=32							
GERES	**GERESS Array B**	**80.14**	**18**	LR		LR	12 17 39.4	
	comp=Z,90nm,18.9s,MS4.1,baz=189,slow=33							
AKASG	**Malin Array Be**	**86.83**	**25**	P		**P**	**11 46 28.4**	**-0.6**
	0.6nm,0.5s,mb4.1,baz=221,slow=6.6,SNR=4.2							
AKASG	**Malin Array Be**	**86.83**	**25**	P		**P**	**11 46 28.4**	**-0.6**
NOA	**NORSAR Array B**	**90.86**	**12**	LR		LR	12 25 58.3	
	comp=Z,75nm,18.7s,MS4.2,baz=15,slow=34							
ASAR	**Alice Springs**	**119.72**	**145**	PKP		PKPdf	11 52 34.6	-1.0
	0.2nm,0.7s,baz=129,slow=1.1,SNR=4.1							
SONM	**Songino Array**	**129.75**	**50**	PKP		PKPdf	11 52 54.5	+0.5
	0.5nm,0.8s,baz=338,slow=6.4,SNR=3.0							
KSRS	**Korea Array**	**146.19**	**64**	PKPbc		PKPbc	11 53 24.9	-0.5
	1.6nm,0.7s,baz=283,slow=4.3,SNR=5.5							

*ISCJB **26** 11:33:46.6±0.3, 1087N±003×6251W±003, h122km±3km, mb3.8/7, Error ellipse: s-maj=5.8km s-min=3.5km az=145.9*
*FUNV **26** 11:33:47.7, 1089N×6238W, h119km, MW3.8*
*IDC **26** 11:33:48.1±1.6, 1100N×6265W, h118km±14km, mb3.5/7, mb1 3.6/9, mb1mx3.5/23, mbtmp3.4/9, Error ellipse: s-maj=17.9km s-min=15.7km az=112.0*
*NEIC **26** 11:33:49.5, 1089N×6246W, h108km, MD3.5(TRN), After TRN.*
*TRN **26** 11:33:49.9, 1088N×6236W, h113km, MD3.5*

ISC 26 11:33:47.7±0.3, 1087N±003×6251W±003, h116km±3km, n37, σ1°904/67, mb3.8/7, 2C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUIV	**Guiria**	**0.36**	**128**	*i*P		**Pn**	**11 34 04.3**	**-0.1**
GUIV				*e*S		**Sn**	**11 34 15.9**	**-1.0**
CRUV	**Carupano**	**0.74**	**255**	*i*P		**Pn**	**11 34 07.4**	**+0.5**
CRUV				*e*S		**Sn**	**11 34 21.6**	**+0.2**
TCE	**Chacachacare**	**0.76**	**103**	*e*P		**Pn**	**11 34 08.3**	**+1.2**
TCE				*e*S		**Sn**	**11 34 21.1**	**-0.7**
GUNV	**Guanoco**	**0.82**	**211**	*e*P		**Pn**	**11 34 08.8**	**+1.2**
GUNV				*e*S		**Sn**	**11 34 24.4**	**+1.7**
TRN	**Trinidad (W)**	**1.11**	**101**	*i*P		**Pn**	**11 34 11.6**	**+1.1**
TRN				*e*S		**Sn**	**11 34 26.4**	**-1.3**
TPP	**Pointe-a-Pierr**	**1.18**	**118**	*e*P		**Pn**	**11 34 12.1**	**+0.9**
TPP				*e*S		**Sn**	**11 34 27.2**	**-1.8**
TPP	**Pointe-a-Pierr**	**1.18**	**118**	*e*P		**Pn**	**11 34 12.1**	**+0.9**
TPP				*e*S		**Sn**	**11 34 26.7**	**-2.3**
TBH	**Brigand Hill**	**1.47**	**105**	*e*P		**Pn**	**11 34 15.6**	**+1.1**
TBH				*e*S		**Sn**	**11 34 33.1**	**-1.8**
TBH	**Brigand Hill**	**1.47**	**105**	*e*P		**Pn**	**11 34 15.6**	**+1.1**
TBH				*e*S		**Sn**	**11 34 36.2**	**+1.3**
GRGR	**Grenville**	**1.51**	**34**	*e*Pn		**Pn**	**11 34 15.0**	**0.0**
GRGR				*e*Sn		**Sn**	**11 34 35.6**	**-0.1**
GRW	**Mount Saint Ca**	**1.53**	**33**	*e*P		**Pn**	**11 34 17.1**	**+1.8**
GRW				*e*S		**Sn**	**11 34 36.0**	**-0.2**
GRW	**Mount Saint Ca**	**1.53**	**33**	*e*P		**Pn**	**11 34 17.1**	**+1.8**
GRW				*e*S		**Sn**	**11 34 38.0**	**+1.8**
GRHS	**Sauteurs**	**1.59**	**32**	*e*P		**Pn**	**11 34 17.3**	**+1.4**
GRHS				*e*S		**Sn**	**11 34 36.4**	**-1.1**
GRSS	**Sisters**	**1.67**	**32**	*e*P		**Pn**	**11 34 18.4**	**+1.5**
GRSS				*e*S		**Sn**	**11 34 39.4**	**+0.3**
GRIC	**Isle de Caille**	**1.68**	**33**	*e*P		**Pn**	**11 34 17.5**	**+0.5**
GRIC				*e*S		**Sn**	**11 34 38.6**	**-0.6**
TPR	**Prospect**	**1.73**	**79**	*e*P		**Pn**	**11 34 18.4**	**+0.8**
TPR				*e*S		**Sn**	**11 34 38.8**	**-1.6**
TPR	**Prospect**	**1.73**	**79**	*e*P		**Pn**	**11 34 18.4**	**+0.8**
TPR				*e*S		**Sn**	**11 34 40.3**	**-0.1**
TOSP	**Speyside**	**1.98**	**77**	*e*P		**Pn**	**11 34 20.0**	**-0.8**
TOSP				*e*S		**Sn**	**11 34 42.0**	**-4.0**
PCRV	**Puerto La Cruz**	**2.20**	**252**	P		**Pn**	**11 34 24.3**	**+0.8**
	9.9nm,0.3s,baz=98,slow=2.9,SNR=85							
PCRV				S		**Sn**	**11 34 49.2**	**-1.7**
	31nm,0.3s,baz=239,slow=18,SNR=31							
PCRV	**Puerto La Cruz**	**2.20**	**252**	*i*P		**Pn**	**11 34 24.5**	**+1.1**
PCRV				*e*S		**Sn**	**11 34 50.8**	**-0.1**
IBAV	**Isla La Blanqu**	**2.24**	**295**	*e*P		**Pn**	**11 34 24.8**	**+0

*IDC **26** 11:51:52.3±0.6, 670S×15500E, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.4/18, mbtmp4.3/14, ML4.0/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/21, Error ellipse: s-maj=22.4km s-min=17.3km az=112.0*

*ISCJB **26** 11:51:56.2±0.5, 672S±007×15494E±007, h33km, mb4.5/25, MS3.4/4, Error ellipse: s-maj=11.8km s-min=8.4km az=37.2*

*NEIC **26** 11:51:59.6±2.2, 675S×15489E, h52km±18km, mb4.2/3, Error ellipse: s-maj=16.6km s-min=11.8km az=95.0*

ISC 26 11:51:59.7±2.9, 676S±009×1549E±01, h49km±23km, n50, σ0$87/39, mb4.5/25, MS3.4/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.13**	**251**	Pn	**Pn**	**11 53 54.9**	**-0.4**
	10.0nm,0.3s,baz=68,slow=6.8,SNR=19						
PMG				Sn	**Sn**	**11 55 28.7**	**+2.8**
	6.6nm,0.3s,baz=97,slow=14,SNR=6.2						
PMG				LR	LR	11 56 54.9	
	comp=Z,240nm,21.3s,baz=44,slow=37						
CTAO	**Charters Tower**	**15.70**	**212**	*e*Pn	**Pn**	**11 55 36.9**	**-0.8**
	20nm,1.2s						
RMQ	**Roma**	**20.48**	**196**	*e*P	**P**	**11 56 35.0**	**+1.5**
	30nm,0.8s						
ARMA	**Armidale**	**23.74**	**187**	*e*P	**P**	**11 57 08.7**	**+1.2**
WRAB	**Tennant Creek**	**23.89**	**235**	*e*P	**P**	**11 57 08.0**	**-1.0**
	8.0nm,0.8s,mb4.2						
WRAB				*e*PcP	PcP	12 00 51.1	+0.2
WB2	**Warramunga Arr**	**23.89**	**235**	*e*P	**P**	**11 57 08.5**	**-0.5**
WB2	**Warramunga Arr**	**23.89**	**235**	*e*P	**P**	**11 57 08.5**	**-0.5**
WB2				*e*PcP	PcP	12 00 51.3	+0.3
WRA	**Warramunga Arr**	**23.90**	**235**	P	**P**	**11 57 08.6**	**-0.5**
	2.9nm,0.5s,mb3.9,baz=54,slow=9.6,SNR=45						
WRA				PcP	PcP	12 00 51.4	+0.4
	2.5nm,0.6s,baz=60,slow=2.4,SNR=21						
WRA				LR	LR	12 06 19.7	
	comp=Z,68nm,18.4s,MS3.1,baz=25,slow=36						
ASAR	**Alice Springs**	**26.28**	**228**	P	**P**	**11 57 30.2**	**-0.5**
	1.1nm,0.6s,mb3.5,baz=57,slow=8.7,SNR=37						
ASAR				PcP	PcP	12 00 56.3	+0.1
	2.1nm,1.1s,baz=96,slow=3.4,SNR=5.5						
STKA	**Stephens Creek**	**27.92**	**205**	P	**P**	**11 57 44.0**	**-1.4**
	1.4nm,0.5s,mb3.9,baz=41,slow=13,SNR=6.7						
STKA				PcP	PcP	12 00 59.0	-1.0
	1.6nm,0.7s,baz=261,slow=0.9,SNR=5.0						
STKA				LR	LR	12 08 21.0	
	comp=Z,100nm,19.3s,MS3.4,baz=206,slow=35						
STKA	**Stephens Creek**	**27.92**	**205**	*e*P	**P**	**11 57 44.0**	**-1.3**
	1.1nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**27.92**	**205**	P	**P**	**11 57 44.0**	**-1.4**
STKA				PcP	PcP	12 00 59.0	-1.0
STKA				LR	LR	12 08 21.0	
FITZ	**Fitzroy Crossi**	**30.70**	**246**	*e*P	**P**	**11 58 09.2**	**-0.9**
	5.8nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**30.70**	**246**	*e*P	**P**	**11 58 09.5**	**-0.6**
	2.4nm,0.5s,mb4.3						
BBOO	**Buckleboo**	**31.30**	**212**	*e*P	**P**	**11 58 14.2**	**-1.1**
	3.0nm,1.2s,mb4.0						
AFI	**Afiamalu**	**33.48**	**105**	LR	LR	12 09 48.9	
	comp=Z,83nm,21.7s,MS3.4,baz=190,slow=32						
PETK	**Petropavlovsk-**	**59.68**	**2**	LR	LR	12 28 28.2	
	comp=Z,30nm,18.9s,MS3.4,baz=316,slow=37						
CMAR	**Chiang Mai Arr**	**60.63**	**295**	P	**P**	**12 02 07.5**	**+1.5**
	2.1nm,0.8s,mb4.3,baz=120,slow=5.4,SNR=11						
SONM	**Songino Array**	**69.11**	**327**	P	**P**	**12 03 00.5**	**-0.2**
	0.3nm,0.4s,mb3.6,baz=122,slow=3.5,SNR=4.5						
VNDA	**Vanda**	**70.82**	**178**	P	**P**	**12 03 11.6**	**+0.9**
	2.5nm,0.7s,mb4.2,baz=332,slow=6.3,SNR=13						
TAPN	**Taplejung**	**73.23**	**301**	*e*P	**P**	**12 03 26.5**	**+0.5**
	11nm,0.7s,mb4.9						
ODAN	**Odare**	**73.36**	**300**	*e*P	**P**	**12 03 27.5**	**+0.7**
	32nm,0.4s						
RAMN	**Ramite**	**74.06**	**300**	*e*P	**P**	**12 03 31.2**	**+0.3**
	9.0nm,0.5s,mb5.0						
JIRN	**Jiri**	**74.61**	**301**	*e*P	**P**	**12 03 34.6**	**+0.5**
	11nm,0.5s,mb5.0						
GUN	**Gumba**	**74.94**	**301**	*e*P	**P**	**12 03 36.6**	**+0.6**
	29nm,0.7s,mb5.3						
KKN	**Kakani**	**75.42**	**301**	*e*P	**P**	**12 03 38.5**	**-0.3**
	14nm,0.5s,mb5.2						
DMN	**Daman**	**75.52**	**301**	*e*P	**P**	**12 03 39.8**	**+0.4**
	32nm,0.7s,mb5.4						
GKN	**Gorkha**	**76.03**	**301**	*e*P	**P**	**12 03 42.2**	**0.0**
	16nm,0.7s,mb5.0						
KOLN	**Koldanda**	**76.85**	**300**	*e*P	**P**	**12 03 46.6**	**-0.3**
	15nm,0.9s,mb4.9						
DANN	**Dangsing**	**76.86**	**301**	*e*P	**P**	**12 03 46.5**	**-0.5**
	10nm,0.7s,mb4.8						
MKAR	**Makanchi Array**	**83.19**	**319**	P	**P**	**12 04 20.5**	**-0.2**
	1.8nm,0.7s,mb4.2,baz=100,slow=5.3,SNR=17						
MKAR	**Makanchi Array**	**83.19**	**319**	P	**P**	**12 04 20.5**	**-0.2**
QSPA	**South Pole Qui**	**83.22**	**180**	P	**P**	**12 04 21.0**	**+0.7**
	10nm,0.8s,mb4.9,baz=6.8,slow=1.5,SNR=21						
ZALV	**Zalesovo Beam**	**83.95**	**326**	P	**P**	**12 04 22.5**	**-2.0**
	0.9nm,0.5s,mb4.2,baz=131,slow=4.2,SNR=4.9						
MAW	**Mawson**	**84.59**	**203**	P	**P**	**12 04 27.8**	**+0.3**
	3.5nm,0.5s,mb4.7,baz=110,slow=7.9,SNR=7.7						
NVAR	**Mina Array Bea**	**91.62**	**52**	P	**P**	**12 05 02.7**	**+1.0**
	2.1nm,1.0s,mb4.4,baz=253,slow=5.7,SNR=6.3						
NVAR	**Mina Array Bea**	**91.62**	**52**	P	**P**	**12 05 02.7**	**+1.0**
YKA	**Yellowknife Ar**	**96.16**	**28**	P	**P**	**12 05 21.7**	**-0.3**
	0.9nm,0.6s,mb4.4,baz=267,slow=4.6,SNR=27						
YKA	**Yellowknife Ar**	**96.16**	**28**	P	**P**	**12 05 21.7**	**-0.3**
PDAR	**Pinedale Array**	**98.59**	**48**	P	**P**	**12 05 32.8**	**-0.6**
	0.4nm,0.7s,mb4.1,baz=79,slow=3.2,SNR=4.1						
PLCA	**Paso Flores**	**116.95**	**143**	PKP	PKPdf	12 10 39.0	-0.4
	2.0nm,1.0s,baz=272,slow=4.6,SNR=3.3						
BRTR	**Keskin Array B**	**118.18**	**312**	PKP	PKPdf	12 10 40.7	-1.1
	0.8nm,0.7s,baz=90,slow=2.9,SNR=3.5						
BOSA	**Boshof**	**120.12**	**231**	PKP	PKPdf	12 10 46.0	+0.1
	2.3nm,0.9s,baz=65,slow=20,SNR=3.8						
BOSA	**Boshof**	**120.12**	**231**	PKP	PKPdf	12 10 46.0	+0.1
GERES	**GERESS Array B**	**126.82**	**329**	PKP	PKPdf	12 10 57.7	-0.3
	0.8nm,0.7s,baz=90,slow=1.3,SNR=8.1						
CPUP	**Villa Florida**	**134.60**	**138**	PKP	PKPdf	12 11 14.2	+0.7
	0.2nm,0.3s,baz=345,slow=2.7,SNR=4.2						
BDFB	**Brasilia**	**148.19**	**135**	PKPbc	PKPbc	12 11 41.0	-0.2
	3.8nm,0.7s,baz=153,slow=10,SNR=6.8						
TOA0	**Torodi Ar. Sit**	**152.91**	**286**	*e*PKPbc	PKPbc	12 11 51.5	-1.0
TORD	**Torodi Ar. Bea**	**152.91**	**286**	PKP	PKPdf	12 11 44.4	-0.9
	0.4nm,0.7s,baz=27,slow=1.4,SNR=3.0						
TORD				PKPbc	PKPbc	12 11 51.6	-0.9
	6.1nm,0.7s,baz=66,slow=1.8,SNR=62						
TORD	**Torodi Ar. Bea**	**152.91**	**286**	PKP	PKPdf	12 11 44.4	-0.9
TORD				PKPbc	PKPbc	12 11 51.6	-0.9

*GII **26** 12:22:08.2±1.4, 3385N×3661E, h0km, ML2.5/1, EXPLOSION*

*GRAL **26** 12:22:08.1±0.3, 3354N×3703E, h60km±43km, MD3.3*

ISC 26 12:22:07.3±1.6, 3368N±006×3699E±010, h0km, n11, σ0$87/15, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.99**	**259**	*e*P	**Pg**	**12 22 25.7**	**-0.6**
RCY				*e*S	**Sg**	**12 22 38.6**	**-0.6**
HWQ	**Hawqa**	**1.05**	**305**	*e*P	**Pg**	**12 22 27.7**	**+0.3**
HWQ				*e*S	**Sg**	**12 22 42.4**	**+1.3**
BHL	**Bhannes**	**1.13**	**282**	*e*P	**Pg**	**12 22 28.3**	**-0.7**
KSHT	**Keshet**	**1.20**	**235**	Pg	**Pg**	**12 22 30.0**	**-0.3**
KSHT				Sg	**Sg**	**12 22 46.9**	**+0.9**
KSDI	**Kefar Szold**	**1.21**	**247**	Pg	**Pg**	**12 22 29.3**	**-1.2**
MMA2	**Mount Meron ar**	**1.48**	**244**	Pn	**Pn**	**12 22 34.5**	**-0.7**
MMC7	**Mount Meron ar**	**1.49**	**244**	Pn	**Pn**	**12 22 34.5**	**-0.8**
BLGI	**Bet Lehem HaGe**	**1.77**	**238**	Sn	**Sn**	**12 23 02.3**	**-0.2**
MMLI	**Mount Malkishu**	**1.80**	**227**	Pn	**Pn**	**12 22 40.2**	**+0.6**
HMDT	**Nahal Hemdat**	**1.88**	**221**	Pn	**Pn**	**12 22 41.7**	**+1.1**
HMDT				Sn	**Sn**	**12 23 08.3**	**+3.3**
OFRI	**'Ofer**	**1.98**	**238**	Pn	**Pn**	**12 22 42.2**	**+0.1**

*CSEM **26** 12:22:17.6±0.1, 3864N×2913E, h15km, MD3.1, Error ellipse: s-maj=2.4km s-min=2.0km az=43.0*

*ISCJB **26** 12:22:18.2±0.5, 3866N±003×2913E±004, h10km±5km, Error ellipse: s-maj=5.4km s-min=5.0km az=179.5*

*DDA **26** 12:22:18.9, 3861N×2917E, h7km±4km, Md3.1*

*ISK **26** 12:22:18.1, 3864N×2914E, h18km, MD2.9*

ISC 26 12:22:18.9±0.5, 3865N±003×2913E±004, h15km±4km, n22, σ0$87/29, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULA	**Kula-Manisa**	**0.39**	**251**	PG	**Pg**	**12 22 27.5**	**+0.8**
KULA				*e*SG	**Sg**	**12 22 32.6**	**+0.5**
KHAL	**Karahalli**	**0.40**	**134**	⇓*i*P	**Pg**	**12 22 26.9**	**0.0**
KHAL				*i* S	**Sg**	**12 22 30.1**	**-2.1**
KHL	**Karahalli**	**0.45**	**136**	*e*PG	**Pg**	**12 22 27.9**	**+0.1**
KHL				*e*SG	**Sg**	**12 22 33.6**	**-0.1**
GDZ	**Gediz**	**0.52**	**32**	⇑*i*P	**Pg**	**12 22 29.8**	**+0.7**
GDZ				*i* S	**Sg**	**12 22 37.1**	**+1.0**
ALT	**Altintas**	**0.87**	**62**	*e*PG	**Pg**	**12 22 36.0**	**+0.3**
ALT				*e*SG	**Sg**	**12 22 46.8**	**-0.2**
DST	**Dursunbey**	**1.03**	**338**	*e*PG	**Pg**	**12 22 37.9**	**-0.9**
SHUT	**Suhut-Afyon**	**1.12**	**94**	*e*PN	**Pn**	**12 22 39.9**	**-0.1**
ISP	**Isparta**	**1.35**	**126**	*e*PN	**Pn**	**12 22 42.7**	**-0.5**
BALB	**Balikesir**	**1.39**	**316**	*e*PN	**Pn**	**12 22 43.0**	**-0.8**
GOLH	**Golhisar**	**1.45**	**166**	*e*P	**Pn**	**12 22 46.1**	**+1.6**
GOLH				*e*S	**Sn**	**12 23 06.5**	**+3.3**
ESKT	**Eskisehir**	**1.60**	**56**	*e*PN	**Pn**	**12 22 46.2**	**-0.4**
BORA	**Eskisehir**	**1.60**	**39**	*e*P	**Pn**	**12 22 49.5**	**+2.8**
BORA				*e*S	**Sn**	**12 23 11.0**	**+3.9**
CAVI	**Cavuskoy**	**1.65**	**19**	*e*PN	**Pn**	**12 22 47.1**	**-0.2**
BLCB	**Balcova**	**1.66**	**262**	*e*PN	**Pn**	**12 22 46.7**	**-0.8**
KCT	**Karacabey**	**1.73**	**340**	*e*PN	**Pn**	**12 22 48.0**	**-0.3**
GEMT	**Gemlik**	**1.79**	**1**	*e*PN	**Pn**	**12 22 49.0**	**-0.2**
ADVT	**Abdulvahap**	**1.85**	**15**	*e*PN	**Pn**	**12 22 50.0**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.91**	**192**	*e*PN	**Pn**	**12 22 50.8**	**-0.1**
ARMT	**Armutlu**	**1.93**	**354**	*e*PN	**Pn**	**12 22 50.3**	**-0.8**
BNT	**Bandirma**	**1.95**	**332**	*e*PN	**Pn**	**12 22 50.8**	**-0.6**
GULT	**Gulveren**	**2.08**	**31**	*e*PN	**Pn**	**12 22 53.6**	**+0.3**
KIZT	**Kizilcal**	**2.16**	**83**	*e*PN	**Pn**	**12 22 54.0**	**-0.3**

*NIED **26** 12:38:00, 3120N×14090E, h92km, Mw4.2 Best double couple: Mo1.93000×10^15 NP1:φ=200.00000°, δ=84.00000°, λ=92.00000°. NP2:φ=4.00000°, δ=7.00000°, λ=73.00000°.*

*MOS **26** 12:38:13.9±1.0, 3090N×14001E, h108km, mb4.0/9, Error ellipse: s-maj=29.9km s-min=12.2km az=106.0*

*ISCJB **26** 12:38:14.6±0.6, 3103N±005×1402E±0.1, h109km±5km, mb3.9/16, Error ellipse: s-maj=16.9km s-min=5.8km az=161.2*

*JMA **26** 12:38:15.4±0.2, 3118N×14094E, h65km, M4.6*

*IDC **26** 12:38:15.2±1.0, 3097N×14005E, h98km±8km, mb3.7/16, mb1 3.8/19, mb1mx3.7/27, mbtmp3.7/19, MS3.4/1, Ms1 3.4/1, ms1mx2.2/40, Error ellipse: s-maj=20.1km s-min=7.7km az=74.0*

*NEIC **26** 12:38:16.0±1.2, 3095N×14003E, h107km±10km, mb4.5/1, MW4.1(NIED), Error ellipse: s-maj=13.0km s-min=10.4km az=70.0*

ISC 26 12:38:15.9±0.5, 3104N±005×1403E±01, h104km±5km, n49, σ1$00/57, mb3.9/16, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.10**	**350**	P	**Pn**	**12 38 50.0**	**0.0**
JHJ2				*e*S	**Sn**	**12 39 15.3**	**-0.7**
JHJ	**Hachijo jima 2**	**2.12**	**349**	P	**Pn**	**12 38 50.2**	**+0.1**
	229nm,0.3s,baz=66,slow=21,SNR=20						
JHJ				S	**Sn**	**12 39 16.4**	**+0.1**
	226nm,0.3s,baz=92,slow=23,SNR=8.8						
JHJ				LR	LR	12 39 18.6	
	comp=Z,927nm,19.8s,baz=284,slow=29						
JMY	**Miyakejima3**	**3.09**	**348**	P	**Pn**	**12 39 03.1**	**+0.1**
JMY				*e*S	**Sn**	**12 39 38.3**	**-1.0**
JKO	**Kozu shima**	**3.28**	**344**	P	**Pn**	**12 39 07.0**	**+1.5**
BSO1	**Boso 1**	**3.66**	**9**	P	**Pn**	**12 39 08.1**	**-2.4**
CBIJ	**Chichi jima**	**4.27**	**156**	P	**Pn**	**12 39 17.4**	**-1.4**
	16nm,0.3s,baz=278,slow=20,SNR=5.9						
CBIJ				S	**Sn**	**12 40 07.9**	**+0.2**
	60nm,0.3s,baz=280,slow=22,SNR=8.5						
CBIJ	**Chichi jima**	**4.27**	**156**	P	**Pn**	**12 39 18.2**	**-0.6**
JOD2	**Odawara 2**	**4.33**	**347**	P	**Pn**	**12 39 19.5**	**-0.1**
JIE	**Ise**	**4.49**	**319**	P	**Pn**	**12 39 23.8**	**+2.1**
JWZ	**Kozaga**	**4.58**	**304**	P	**Pn**	**12 39 24.4**	**+1.4**
JRY	**Ryogami san**	**5.10**	**348**	P	**Pn**	**12 39 29.8**	**-0.1**
JRY				*e*S	**Sn**	**12 40 26.7**	**-0.8**
MJAR	**Matsushiro Arr**	**5.75**	**343**	P	**Pn**	**12 39 39.7**	**+0.9**
	1.9nm,0.3s,baz=24,slow=12,SNR=8.6						
MJAR	**Matsushiro Arr**	**5.75**	**343**	P	**Pn**	**12 39 39.7**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.75**	**343**	P	**Pn**	**12 39 39.7**	**+0.9**
MAJO	**Matsushiro**	**5.75**	**343**	*e*P	**Pn**	**12 39 39.1**	**+0.3**
MAJO				*e*		12 40 43.8	
MAJO				pmax	pmax		
	comp=Z,22nm,0.8s						
MAJO	**Matsushiro**	**5.75**	**343**	*e*Pn	**Pn**	**12 39 39.1**	**+0.3**
	comp=Z,22nm,0.8s						
MAJO				*e*Sn	**Sn**	**12 40 43.8**	**+0.4**
MAT	**Matsushiro**	**5.75**	**343**	P	**Pn**	**12 39 39.4**	**+0.6**
MAT				*e*S	**Sn**	**12 40 43.1**	**-0.3**
MAT	**Matsushiro**	**5.75**	**343**	*e*S	**Sn**	**12 40 42.7**	**-0.7**
JMK	**Ichinoseki**	**7.94**	**5**	P	**Pn**	**12 40 04.9**	**-3.6**
JMK				*e*S	**Sn**	**12 41 27.6**	**-8.9**
JKB	**Kayabe**	**10.85**	**3**	P	**Pn**	**12 40 43.5**	**-4.5**
KSRS	**Korea Array**	**12.04**	**305**	P	**Pn**	**12 41 07.7**	**+3.8**
	comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=10						
KSRS	**Korea Array**	**12.04**	**305**	P	**Pn**	**12 41 07.7**	**+3.7**
SONM	**Songino Array**	**30.76**	**313**	P	**P**	**12 44 21.1**	**-0.1**
	comp=Z,0.2nm,0.3s,mb3.3,baz=122,slow=7.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**45.44**	**317**	P	**P**	**12 46 22.8**	**-1.3**
	comp=Z,0.6nm,0.3s,mb3.8,baz=73,slow=11,SNR=3.5						
ZALV	**Zalesovo Beam**	**45.44**	**317**	P	**P**	**12 46 22.8**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
MKAR	**Makanchi Array**	**46.72**	**307**	P	**P**	**12 46 33.1**	**-1.1**
	comp=Z,0.6nm,0.7s,mb3.4,baz=83,slow=9.9,SNR=5.3						
MKAR				PcP	PcP	12 48 06.8	+0.7
	comp=Z,0.3nm,0.5s,baz=86,slow=6.9,SNR=3.4						
MKAR				ScP	ScP	12 51 49.7	-0.5
	comp=Z,0.3nm,0.7s,baz=79,slow=6.0,SNR=4.2						
KURK	**Kurchatov**	**49.06**	**312**	P	**P**	**12 46 51.1**	**-1.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=91,slow=9.3,SNR=9.5						
KURK	**Kurchatov**	**49.06**	**312**	P	**P**	**12 46 51.2**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**51.00**	**187**	P	**P**	**12 47 05.8**	**-1.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=5.4,slow=7.7,SNR=25						
WRA				PcP	PcP	12 48 23.0	+1.1
	comp=Z,0.3nm,0.4s,baz=8.6,slow=3.7,SNR=3.5						
WRA				ScP	ScP	12 52 08.7	+0.1
	comp=Z,0.6nm,0.7s,baz=0.9,slow=4.7,SNR=6.7						
WRA	**Warramunga Arr**	**51.00**	**187**	P	**P**	**12 47 05.8**	**-1.4**
WRA						12 48 23.0	
WRA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA				pmax	pmax		
	comp=N,1.0nm,0.7s						
KDAK	**Kodiak Island**	**52.29**	**39**	P	**P**	**12 47 16.6**	**+0.3**
	comp=N,8.8nm,0.9s,mb4.8,baz=311,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**54.73**	**187**	P	**P**	**12 47 33.2**	**-1.4**
	comp=N,0.6nm,0.5s,mb3.9,baz=1.8,slow=6.5,SNR=36						
ASAR	**Alice Springs**	**54.73**	**187**	P	**P**	**12 47 33.2**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**69.28**	**340**	P	**P**	**12 49 11.5**	**+0.2**
	comp=Z,1.7nm,0.5s,mb4.2,baz=60,slow=7.3,SNR=9.8						
ARCES	**ARCESS Array B**	**69.28**	**340**	P	**P**	**12 49 11.5**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**69.49**	**29**	P	**P**	**12 49 13.0**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.4,baz=300,slow=6.3,SNR=9.6						
YKA	**Yellowknife Ar**	**69.49**	**29**	P	**P**	**12 49 13.0**	**+0.2**
URZ	**Urewera**	**77.03**	**151**	P	**P**	**12 49 58.1**	**+0.8**
	comp=Z,8.1nm,0.8s,mb4.5,baz=308,slow=17,SNR=3.2						
AKASG	**Malin Array Be**	**78.46**	**323**	P	**P**	**12 50 04.7**	**-0.5**
	comp=Z,0.5nm,0.3s,mb3.8,baz=50,slow=5.6,SNR=3.3						
AKASG	**Malin Array Be**	**78.46**	**323**	P	**P**	**12 50 04.7**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	**NORSAR Array B**	**79.34**	**337**	P	**P**	**12 50 09.5**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.7,baz=51,slow=5.7,SNR=3.1						
NOA	**NORSAR Array B**	**79.34**	**337**	P	**P**	**12 50 09.5**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**79.41**	**52**	P	**P**	**12 50 12.1**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.6,baz=301,slow=5.1,SNR=3.3						
BRTR	**Keskin Array B**	**82.11**	**312**	P	**P**	**12 50 25.3**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=48,slow=8.6,SNR=3.3						
BRTR	**Keskin Array B**	**82.11**	**312**	P	**P**	**12 50 25.3**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**82.59**	**44**	P	**P**	**12 50 28.6**	**+1.1**
	comp=Z,0.4nm,0.7s,mb3.4,baz=289,slow=4.5,SNR=3.7						
TXAR	**Lajitas Array**	**94.55**	**52**	P	**P**	**12 51 26.7**	**+1.7**
	comp=Z,1.0nm,0.7s,mb4.3,baz=295,slow=3.1,SNR=13						
TXAR	**Lajitas Array**	**94.55**	**52**	P	**P**	**12 51 26.7**	**+1.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**94.55**	**52**	P	**P**	**12 51 26.7**	**+1.7**

IDC 26 12:45:01.2±1.5, 3031S×6069E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, MS3.5/5, Ms1 3.5/5, ms1mx3.2/40, Error ellipse: s-maj=54.8km s-min=28.0km az=31.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**37.35**	**179**	LR	LR	13 03 35.1	
	comp=Z,61nm,20.2s,baz=268,slow=30						
CMAR	**Chiang Mai Arr**	**60.88**	**42**	P	**P**	12 55 16.2	+0.5
	0.7nm,0.5s,baz=229,slow=7.1,SNR=7.1						
VNDA	**Vanda**	**63.02**	**166**	LR	LR	13 20 58.3	
	comp=Z,66nm,19.4s,baz=154,slow=34						
ASAR	**Alice Springs**	**64.57**	**104**	P	**P**	12 55 40.0	-0.5
	1.1nm,0.8s,baz=244,slow=6.1,SNR=18						
ASF	**Jabal al Asfar**	**66.11**	**338**	LR	LR	13 21 05.3	
	comp=Z,19nm,18.9s,baz=82,slow=33						
WRA	**Warramunga Arr**	**66.47**	**100**	P	**P**	12 55 53.6	+0.8
	1.4nm,0.9s,baz=242,slow=5.8,SNR=7.4						
MMAI	**Mount Meron Ar**	**67.37**	**337**	LR	LR	13 19 58.9	
	comp=Z,21nm,21.6s,baz=90,slow=31						
TORD	**Torodi Ar. Bea**	**71.31**	**298**	P	**P**	12 56 23.2	+0.2
	0.4nm,0.8s,baz=88,slow=1.5,SNR=3.6						
MKAR	**Makanchi Array**	**79.18**	**15**	P	**P**	12 57 07.7	+0.2
	0.4nm,0.7s,baz=202,slow=6.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**86.47**	**14**	P	**P**	12 57 44.4	-0.9
	0.8nm,0.7s,baz=184,slow=4.3,SNR=3.3						
URZ	**Urewera**	**89.62**	**135**	LR	LR	13 32 57.7	
	comp=Z,42nm,18.9s,baz=300,slow=32						
YKA	**Yellowknife Ar**	**147.66**	**356**	PKPbc	PKPbc	13 04 46.4	-0.4
	1.1nm,0.8s,baz=353,slow=2.7,SNR=22						

*IDC **26** 12:58:41.3±1.0, 3642S×7291W, h0km, mb4.0/6, mb1 4.1/9, mb1mx4.0/19, mbtmp3.9/9, ML3.7/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21, Error ellipse: s-maj=30.5km s-min=15.6km az=80.0*

*ISCJB **26** 12:58:43.4±1.1, 3643S±005×7302W±008, h23km±6km, mb3.9/6, Error ellipse: s-maj=10.5km s-min=7.7km az=1.3*

*NEIC **26** 12:58:43.6, 3644S×7298W, h10km, ML4.3(GUC), After GUC.*

*GUC **26** 12:58:43.6±0.7, 3644S×7298W, h10km±2km, MD4.0, ML4.3*

ISC 26 12:58:44.0±1.1, 3642S±004×7299W±007, h13km±5km, n25, σ1$03/36, mb3.9/6, 2C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COCH	**Cobquecura**	**0.33**	**29**	⇑*i*P	**Pg**	**12 58 51.0**	**+0.2**
COCH				*i* S	**Sg**	**12 58 56.0**	**+0.6**
COCH	**Cobquecura**	**0.33**	**29**	⇑*i*P	**Pg**	**12 58 51.0**	**+0.2**
COCH				*i* S	**Sg**	**12 58 56.0**	**+0.6**
COCH				AML	AML	12 58 57.3	
	comp=N,30μm,0.5s						
CCHI	**Chillan**	**0.76**	**104**	⇓*i*P	**Pg**	**12 58 58.0**	**-0.7**
CCHI				*i* S	**Sg**	**12 59 08.2**	**-0.5**
CCHI	**Chillan**	**0.76**	**104**	⇓*i*P	**Pg**	**12 58 58.0**	**-0.7**
CCHI				*i* S	**Sg**	**12 59 08.2**	**-0

CMAR	**Chiang Mai Arr**	**88.44 290**	P	**P**	**13 24 31.8**	**+0.9**
	1.0nm,0.8s,mb3.6,baz=113,slow=2.8,SNR=7.1					
YKA	**Yellowknife Ar**	**94.19 25**	P	**P**	**13 24 55.1**	**-1.3**
	0.2nm,0.7s,mb3.3,baz=241,slow=4.6,SNR=5.5					
MKAR	**Makanchi Array**	**108.65 314**	PKiKP	PKiKP	13 30 01.2	-2.4
	0.2nm,0.6s,baz=343,slow=1.5,SNR=3.2					
BRTR	**Keskin Array B**	**144.30 315**	PKP	PKPdf	13 31 09.1	-1.7
	1.2nm,0.8s,baz=52,slow=2.2,SNR=5.7					
CLL	**Collm**	**145.07 347**	*i* PKPbc	PKPbc	13 31 11.7	-0.8
	comp=Z,4.0nm,0.7s					
GERES	**GERESS Array B**	**147.20 345**	PKPbc	PKPbc	13 31 17.8	-0.8
	comp=Z,0.9nm,0.5s,baz=26,slow=3.4,SNR=11					
DAVOX	**Davos/Dischmat**	**150.01 348**	PKPbc	PKPbc	13 31 24.9	-0.7
	comp=Z,1.8nm,0.4s,baz=27,slow=2.3,SNR=5.3					

GUC 26 13:17:02.7±0.8, 2385S×6726W, h237km±10km, MD3.6, ML3.9, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.95**	**309**	⇑*iP*	Pn	13 17 45.6	+1.9
LVC				*i* S	S	13 18 18.4	+2.5
PECH	**Pedro de Valdi**	**2.54**	**299**	*eP*	Pn	13 17 51.6	+2.0
PECH				*i* S	S	13 18 29.2	+2.8
PECH				AML	AML	13 18 29.8	
	comp=N,422nm,0.2s						
PB04	**Plate Boundary**	**2.58**	**307**	*i* P	Pn	13 17 57.6	+7.6
PB04				*i* S	S	13 18 40.0	+13
CEN1	**Los Morros**	**2.73**	**279**	*i* P	Pn	13 17 55.1	+3.6
CEN1				*i* S	S	13 18 33.8	+3.8
CEN1				AML	AML	13 18 36.7	
	comp=N,111nm,0.7s						
ANCH	**Antofagasta**	**2.89**	**273**	*i* P	Pn	13 17 55.4	+2.2
ANCH				*i* S	S	13 18 34.5	+1.5
ANCH				AML	AML	13 18 37.9	
	comp=N,78nm,0.2s						
PB01	**Plate Boundary**	**3.47**	**323**	⇓*iP*	Pn	13 18 01.9	+2.2
PB01				*i* S	S	13 18 47.3	+2.5
HMBC	**Humberston**	**4.31**	**325**	*i* P	Pn	13 18 12.5	+2.9
HMBC				*i* S	S	13 19 05.6	+2.8

*MAN **26** 14:06:00, 1591N×120.10E, h62km, MS3.1*
MAN INTENSITY III - LINGAYEN, PANGASINAN.

IDC 26 14:06:19.6±11.0, 1636N×12102E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/20, mbtmp3.4/3, Error ellipse: s-maj=343.2km s-min=33.3km az=35.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.17**	**279**	P	P	14 11 06.7	+0.1
	0.6nm,0.3s,baz=84,slow=8.2,SNR=5.0						
WRA	**Warramunga Arr**	**38.38**	**160**	P	P	14 13 42.5	-0.2
	0.9nm,1.2s,baz=338,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**41.73**	**162**	P	P	14 14 10.6	+0.1
	0.5nm,1.0s,baz=339,slow=6.6,SNR=5.7						

IDC 26 14:22:11.8±3.9, 229S×14004E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/14, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=161.7km s-min=25.2km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.41**	**197**	P	Pn	14 26 27.9	-0.6
	0.1nm,0.3s,baz=18,slow=12,SNR=11						
ASAR	**Alice Springs**	**22.06**	**195**	P	P	14 27 08.8	+0.4
	0.5nm,0.8s,baz=25,slow=11,SNR=9.4						
MKAR	**Makanchi Array**	**70.28**	**322**	P	P	14 33 26.5	-0.4
	0.3nm,0.7s,baz=114,slow=7.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**72.25**	**329**	P	P	14 33 39.4	+0.7
	0.3nm,0.3s,baz=104,slow=4.6,SNR=2.3						

*SZGRF **26** 14:56:12.8, 2248S×17697W, h33km, South of Fiji Islands*
*DJA **26** 14:56:46, 2434S×17836W, h390km, mb4.9/8*
*ISCJB **26** 14:57:00.4±1.5, 2394S±006×17970W±008, h458km±17km, mb4.6/35, Error ellipse: s-maj=11.1km s-min=8.8km az=15.0*
*BJI **26** 14:57:01.5, 2390S×17970W, h473km, mB4.9, mb4.5*
*NEIC **26** 14:57:02.8±1.1, 2387S×17967W, h483km±12km, mb4.8/10, Error ellipse: s-maj=12.4km s-min=8.9km az=154.0*
*IDC **26** 14:57:04.2±1.2, 2393S×17973W, h492km±11km, mb4.1/18, mb1 4.2/19, mb1mx4.1/21, mbtmp4.1/19, Error ellipse: s-maj=12.0km s-min=10.4km az=97.0*

ISC 26 14:57:02.1±1.3, 2392S±007×17969W±008, h466km±14km, h476km±2.4km:pP-P, n121, σ0 89/62, mb4.6/35, 20C-12D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**12.46**	**38**	P	**P**	**14 59 45.0**	**-0.9**
	4.1nm,0.3s,baz=295,slow=19,SNR=11						
AFI				S	**S**	**15 01 53.6**	**-7.4**
	2.2nm,0.3s,baz=229,slow=19,SNR=5.1						
AFI	**Afiamalu**	**12.46**	**38**	*eP*	**P**	**14 59 44.4**	**-1.5**
	61nm,0.8s						
URZ	**Urewera**	**14.55**	**190**	P	**P**	**15 00 09.2**	**+1.2**
	10.0nm,0.3s,baz=11,slow=3.5,SNR=36						
URZ				S	**S**	**15 02 37.3**	**-4.1**
	1.9nm,0.3s,baz=176,slow=19,SNR=10						
RPZ	**Rata Peaks**	**21.16**	**199**	P	**P**	**15 01 11.7**	**-1.2**
	16nm,0.5s,mb4.8,baz=76,slow=21,SNR=13						
RPZ				S	**S**	**15 04 37.4**	**+0.7**
	12nm,0.9s,baz=356,slow=15,SNR=3.3						
HNR	**Honiara**	**24.20**	**303**	P	**P**	**15 01 40.3**	**-0.4**
	81nm,0.9s,mb5.2,baz=185,slow=4.5,SNR=3.9						
ARMA	**Armidale**	**26.28**	**249**	*eP*	**P**	**15 02 00.7**	**+1.8**
PPT	**Papeete**	**28.83**	**83**	P	**P**	**15 02 22.4**	**+0.9**
	26nm,0.8s,mb4.7,baz=31,slow=2.4,SNR=4.2						
CNB	**Canberra Magne**	**29.09**	**240**	*eP*	**P**	**15 02 25.2**	**+1.7**
CTA	**Charters Tower**	**31.76**	**270**	P	**P**	**15 02 47.9**	**+1.0**
	80nm,0.5s,mb5.4,baz=96,slow=10,SNR=199						
CTA	**Charters Tower**	**31.76**	**270**	⇓*iP*	**P**	**15 02 47.8**	**+0.9**
	62nm,0.4s,mb5.4						
TOO	**Toolangi**	**32.67**	**237**	⇓*iP*	**P**	**15 02 55.2**	**+0.7**
PMG	**Port Moresby**	**34.77**	**289**	P	**P**	**15 03 12.8**	**+0.3**
	56nm,0.7s,mb5.1,baz=98,slow=5.7,SNR=34						
PMG	**Port Moresby**	**34.77**	**289**	*eP*	**P**	**15 03 12.5**	**0.0**
	68nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**	**15 03 14.6**	**+0.5**
	9.5nm,0.5s,mb4.5,baz=91,slow=9.8,SNR=77						
STKA				PcP	PcP	15 05 33.2	-0.5
	2.8nm,0.6s,baz=24,slow=7.3,SNR=3.1						
STKA	**Stephens Creek**	**34.98**	**248**	⇓*iP*	**P**	**15 03 14.5**	**+0.5**
	7.5nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**34.98**	**248**	*eP*	**P**	**15 03 14.3**	**+0.3**
	2.0nm,0.6s,mb3.7						
COEN	**Coen**	**36.40**	**279**	*eP*	**P**	**15 03 26.4**	**+0.4**
	22nm,0.9s,mb4.6						
ASAR	**Alice Springs**	**42.31**	**261**	P	**P**	**15 04 13.8**	**-0.1**
	18nm,0.5s,mb4.8,baz=97,slow=7.1,SNR=742						
ASAR				ScP	ScP	15 08 58.8	-4.3
	2.1nm,0.9s,baz=117,slow=4.3,SNR=8.4						
ASAR				S	**S**	**15 09 55.3**	**-5.0**
	1.1nm,0.7s,baz=99,slow=15,SNR=5.5						
WB2	**Warramunga Arr**	**42.68**	**266**	⇓*iP*	**P**	**15 04 16.1**	**-0.8**
WB2				*eS*	**S**	**15 09 58.6**	**-7.1**
WB2	**Warramunga Arr**	**42.68**	**266**	*eP*	**P**	**15 04 16.1**	**-0.8**
WRAB	**Tennant Creek**	**42.68**	**266**	*eP*	**P**	**15 04 16.1**	**-0.8**
	59nm,0.7s,mb5.1						
WRA	**Warramunga Arr**	**42.69**	**266**	P	**P**	**15 04 16.3**	**-0.7**
	42nm,0.4s,mb5.2,baz=95,slow=8.3,SNR=619						
WRA				ScP	ScP	15 09 02.8	-1.9
	1.5nm,0.7s,baz=100,slow=4.0,SNR=6.2						
WRA				S	**S**	**15 09 59.2**	**-6.7**
	2.0nm,0.9s,baz=105,slow=14,SNR=8.0						
FORT	**Forrest**	**46.57**	**250**	⇓*iP*	**P**	**15 04 45.8**	**-1.1**
	79nm,0.5s,mb5.4						
FORT	**Forrest**	**46.57**	**250**	*eP*	**P**	**15 04 45.7**	**-1.2**
	100nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**51.11**	**266**	⇓*iP*	**P**	**15 05 20.5**	**-0.4**
	45nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.11**	**266**	*eP*	**P**	**15 05 20.6**	**-0.3**
	28nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**55.48**	**246**	P	**P**	**15 05 51.0**	**-1.0**
	4.7nm,0.5s,mb4.0,baz=117,slow=6.6,SNR=13						
MBWA	**Marble Bar**	**55.65**	**260**	*eP*	**P**	**15 05 52.2**	**-1.1**
	24nm,0.9s,mb4.5						
MUN	**Mundaring**	**56.48**	**246**	⇓*iP*	**P**	**15 05 58.1**	**-0.8**
QSPA	**South Pole Qui**	**66.16**	**180**	P	**P**	**15 07 03.0**	**+1.2**
	8.9nm,0.5s,mb4.6,baz=14,slow=1.4,SNR=27						
QSPA	**South Pole Qui**	**66.16**	**180**	*eP*	**P**	**15 07 02.9**	**+1.1**
	13nm,0.8s,mb4.6						
MJAR	**Matsushiro Arr**	**72.08**	**325**	P	**P**	**15 07 37.3**	**-0.8**
	3.7nm,0.8s,mb4.0,baz=162,slow=5.9,SNR=11						
MAT	**Matsushiro**	**72.08**	**325**	P	**P**	**15 07 37.7**	**-0.4**
MAW	**Mawson**	**77.83**	**200**	P	**P**	**15 08 10.3**	**+0.2**
	10.0nm,0.7s,mb4.4,baz=115,slow=7.1,SNR=16						
KSRS	**Korea Array**	**78.44**	**320**	P	**P**	**15 08 14.3**	**+0.5**
	4.1nm,0.7s,mb4.0,baz=134,slow=5.8,SNR=20						
PETK	**Petropavlovsk-**	**79.19**	**346**	P	**P**	**15 08 17.1**	**-0.3**
	6.9nm,0.8s,mb4.2,baz=120,slow=8.8,SNR=4.3						
NJ2	**Nanjing**	**80.89**	**311**	*eP*	**P**	**15 08 26.3**	**-0.5**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
MDJ	**Mudanjiang**	**82.44**	**326**	P	**P**	**15 08 35.0**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,87nm,4.3s						
SYO	**Syowa Base**	**83.06**	**193**	⇑*eP*	**P**	**15 08 34.2**	**-3.1**
SYO	**Syowa Base**	**83.06**	**193**	⇓*eX*		15 08 37.4	
CN2	**Changchun**	**84.07**	**323**	*eP*	**P**	**15 08 42.5**	**-0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	**84.57**	**44**	P	**P**	**15 08 46.1**	**+0.8**
	comp=Z,0.8nm,0.7s,mb3.5,baz=232,slow=9.3,SNR=4.1						
SNAA	**Sanae**	**84.64**	**179**	*eP*	**P**	**15 08 44.1**	**-1.1**
SNAA				*e*		15 08 46.2	
VNA3	**Neumayer Olymp**	**84.84**	**177**	*eP*	**P**	**15 08 45.1**	**-1.1**
VNA3				*e*		15 08 47.1	
VNA3				*e*		15 10 43.4	
VNA2	**Neumayer--Watz**	**85.26**	**177**	*eP*	**P**	**15 08 47.6**	**-0.6**
VNA2				*e*		15 08 50.0	
VNA2				*e*		15 10 46.1	
GYA	**Guiyang**	**87.00**	**301**	*eP*	**P**	**15 08 58.0**	**+0.7**
GYA				AP	pP	15 10 45.3	+3.6
GYA				XP	sP	15 11 33.5	+4.0
GYA				PP	PP	15 12 31.3	+2.2
GYA				SKS		15 18 38.5	
GYA				S	S	15 18 55.8	-0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,80nm,5.2s						
BJI	**Beijing**	**87.24**	**316**	P	**P**	**15 08 58.5**	**+0.4**
BJI				S	S	15 18 59.0	+0.7
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.6						
BJI				AMB	AMB		
	comp=Z,149nm,5.2s						
XAN	**Xi'an**	**88.98**	**308**	P	**P**	**15 09 06.8**	**+0.4**
XAN				AP	pP	15 10 52.0	+0.7
XAN				XP	sP	15 11 40.5	+1.6
XAN				PP	PP	15 12 44.5	-0.1
XAN				S	S	15 19 15.0	+0.4
XAN				SS	SS	15 25 23.5	+1.9
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.8						
XAN				AMB	AMB		
	comp=Z,22nm,14.6s						
KMI	**Kunming**	**89.52**	**298**	P	**P**	**15 09 09.8**	**+0.7**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.5						
CMAR	**Chiang Mai Arr**	**89.80**	**290**	P	**P**	**15 09 11.5**	**+1.0**
	comp=Z,5.6nm,0.9s,mb4.4,baz=135,slow=3.3,SNR=38						
CMAR				PP	PP	15 12 52.7	+1.4
	comp=Z,0.5nm,0.3s,baz=126,slow=7.1,SNR=6.3						
CHTO	**Chiang Mai**	**89.95**	**291**	*eP*	**P**	**15 09 12.0**	**+0.8**
	comp=Z,10nm,1.0s,mb4.6						
TXAR	**Lajitas Array**	**90.20**	**58**	P	**P**	**15 09 13.2**	**+1.0**
	comp=Z,1.8nm,0.7s,mb4.0,baz=212,slow=6.4,SNR=20						
HHC	**Hu-ho-hao-te**	**90.63**	**315**	*eP*	**P**	**15 09 14.5**	**+0.6**
HHC				AP	pP	15 11 02.5	+3.5
HHC				XP	sP	15 11 45.0	-1.5
HHC				PP	PP	15 13 00.5	+3.1
HHC				SKS		15 18 59.5	
HHC				*e*S	S	15 19 27.0	-2.3
HHC				XS	sS	15 22 38.5	+1.3
HHC				SS	SS	15 25 48.0	+2.9
HHC				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,190nm,4.8s						
CD2	**Chengdu**	**91.33**	**303**	P	**P**	**15 09 16.5**	**-0.9**
CD2				AP	pP	15 11 04.5	+2.0
CD2				PP	PP	15 13 08.0	+4.9
CD2				S	S	15 19 32.0	-4.0
CD2				XS	sS	15 22 44.3	+0.2
CD2				SS	SS	15 25 57.5	+2.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				AMB	AMB		
	comp=Z,140nm,5.4s						
PDAR	**Pinedale Array**	**92.51**	**44**	P	**P**	**15 09 22.6**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=230,slow=2.5,SNR=3.7						
BOZ	**Bozeman (W)**	**92.72**	**41**	*eP*	**P**	**15 09 19.9**	**-3.5**
	comp=Z,3.5nm,0.6s,mb4.6						
LZH	**Lanzhou**	**93.61**	**308**	*eP*	**P**	**15 09 28.0**	**+0.3**
LZH				AP	pP	15 11 16.0	+3.0
LZH				XP	sP	15 12 04.5	+4.0
LZH				AMB	AMB		
	comp=Z,17nm,1.6s,mb4.8						
LZH				AMB	AMB		
	comp=Z,89nm,5.0s						
YKA	**Yellowknife Ar**	**100.26**	**25**	PKKPbc	PKKPbc	15 26 09.4	-4.7
	comp=Z,0.2nm,0.5s,baz=43,slow=2.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**112.15**	**321**	PKiKP	PKiKP	15 14 41.2	-2.3
	comp=Z,0.6nm,0.4s,baz=286,slow=0.9,SNR=4.1						
MKAR	**Makanchi Array**	**112.38**	**313**	PKiKP	PKiKP	15 14 42.1	-2.1
	comp=Z,0.6nm,0.5s,baz=227,slow=1.1,SNR=4.8						
KURK	**Kurchatov**	**115.41**	**316**	PKP	PKPdf	15 14 47.7	-2.2
	comp=Z,1.8nm,0.5s,baz=106,slow=1.7,SNR=3.8						
AML	**Almayashu**	**117.65**	**306**	*eP*	PKPdf	15 14 53.6	-0.9
BVAR	**Borovoye Array**	**120.64**	**319**	PKP	PKPdf	15 14 58.2	-1.6
	comp=Z,2.1nm,0.4s,baz=126,slow=1.7,SNR=17						
BVAR	**Borovoye Array**	**120.64**	**319**	PKP	PKPdf	15 14 58.2	-1.6
BOSA	**Boshof**	**122.51**	**206**	PKP	PKPdf	15 15 03.1	-1.2
	comp=Z,2.8nm,1.0s,baz=77,slow=12,SNR=3.7						
AKTK	**Aktyubinsk**	**128.51**	**316**	PKP	PKPdf	15 15 13.3	-1.7
AKTO	**Aktyubinsk**	**128.51**	**316**	PKP	PKPdf	15 15 13.3	-1.7
	comp=Z,2.2nm,0.7s,baz=146,slow=2.3,SNR=8.7						
ARCES	**ARCESS Array B**	**131.97**	**348**	PKP	PKPdf	15 15 19.1	-1.8
	comp=Z,5.8nm,0.9s,baz=57,slow=4.5,SNR=8.8						
ARCES				SKPbc	SKPbc	15 17 59.4	-3.7
	comp=Z,5.5nm,0.9s,baz=44,slow=5.7,SNR=4.0						
LSZ	**Lusaka**	**132.46**	**218**	PKP	PKPdf	15 15 23.2	-0.3
	comp=Z,1.6nm,0.5s,baz=154,slow=1.1,SNR=5.2						
LSZ				SKPbc	SKPbc	15 18 02.7	-3.8
	comp=Z,1.6nm,0.8s,baz=69,slow=8.4,SNR=3.7						
MALT	**Malatya**	**144.62**	**303**	⇑*iP*	PKPdf	15 15 44.1	-0.9
MALT	**Malatya**	**144.62**	**303**	*eP*	PKPdf	15 15 43.9	-1.1
AKASG	**Malin Array Be**	**145.14**	**327**	PKPbc	PKPbc	15 15 44.1	-2.1
	comp=Z,3.8nm,0.5s,baz=44,slow=3.9,SNR=22						
AKASG				SKPbc	SKPbc	15 18 36.5	-4.0
	comp=Z,1.6nm,0.5s,baz=40,slow=3.0,SNR=6.8						
ASF	**Jabal al Asfar**	**146.80**	**293**	PKPbc	PKPbc	15 15 51.4	-0.2
	comp=Z,7.1nm,0.8s,baz=349,slow=2.7,SNR=15						
BR131	**Keskin Array S**	**147.82**	**307**	*e*PKPbc	PKPbc	15 15 52.9	-1.0
BR131				*e*PKPab	PKPab	15 15 57.7	-0.3
BRTR	**Keskin Array B**	**147.82**	**307**	PKPbc	PKPbc	15 15 52.8	-1.2
	comp=Z,3.7nm,0.7s,baz=137,slow=4.9,SNR=14						
BRTR				PKPab	PKPab	15 15 58.3	+0.3
	comp=Z,4.6nm,0.6s,baz=79,slow=3.4,SNR=15						
TLCR		**148.63**	**320**	⇑*iP*	PKPbc	15 15 54.6	-1.2
TLCR		**148.63**	**320**	⇑P	PKPbc	15 15 54.6	-1.2
EIL	**Elat**	**148.63**	**288**	PKPbc	PKPbc	15 15 55.7	-0.6
	comp=Z,7.6nm,0.6s,baz=328,slow=4.0,SNR=6.1						
EIL				PKPab	PKPab	15 16 02.1	+0.4
	comp=Z,11nm,0.7s,baz=46,slow=2.6,SNR=7.9						
EIL	**Elat**	**148.63**	**288**	PKPbc	PKPbc	15 15 55.7	-0.6
EIL				PKPab	PKPab	15 16 02.1	+0.4
KWP	**Kalwaria**	**148.92**	**331**	⇑*iP*	PKPbc	15 15 55.7	-0.7
KWP	**Kalwaria**	**148.92**	**331**	⇑P	PKPbc	15 15 55.7	-0.7
BUR08	**Bucovina Ar. S**	**149.14**	**326**	*e*PKPbc	PKPbc	15 15 56.6	-0.3
BURAR	**Bucovina Array**	**149.15**	**326**	⇑*iP*	PKPbc	15 15 56.8	-0.2
BURAR	**Bucovina Array**	**149.15**	**326**	⇑P	PKPbc	15 15 56.8	-0.1
TIRR	**Tirgusor**	**149.26**	**319**	⇑*iP*	PKPdf	15 15 54.3	+1.8
TIRR	**Tirgusor**	**149.26**	**319**	⇑P	PKPbc	15 15 54.2	+1.8
HARR	**Harsova**	**149.42**	**319**	⇑*iP*	PKPbc	15 15 57.0	-0.8
HARR	**Harsova**	**149.42**	**319**	⇑P	PKPbc	15 15 57.0	-0.8
OJC	**Ojcow**	**149.68**	**335**	*e*PKP	PKPbc	15 15 57.4	-0.8
NIE	**Niedzica**	**150.10**	**333**	*e*PKP	PKPbc	15 15 59.4	+0.2
KSP	**Ksiaz**	**150.41**	**339**	⇓*i*PKPdf	PKPbc	15 15 59.4	-0.5
OKC	**Ostrava-Krasne**	**150.61**	**336**	*e*PKPbc	PKPbc	15 15 59.9	-0.5
VOIR		**150.63**	**323**	⇑*iP*	PKPbc	15 15 59.4	-1.2
VOIR		**150.63**	**323**	⇑P	PKPbc	15 15 59.4	-1.2
UPC	**Upice**	**150.79**	**339**	*e*PKPbc	PKPbc	15 16 00.2	-0.6
DPC	**Dobruska-Polom**	**150.82**	**339**	*e*PKPbc	PKPbc	15 16 00.4	-0.4
CLL	**Collm**	**150.96**	**343**	*e*PKPbc	PKPbc	15 16 00.3	-0.8
CLL	**Collm**	**150.96**	**343**	⇓*i*PKPbc	PKPbc	15 16 00.2	-0.9
	comp=Z,13nm,0.7s						
DRGR		**150.96**	**327**	⇑*iP*	PKPbc	15 16 00.3	-1.0
DRGR		**150.96**	**327**	⇑P	PKPbc	15 16 00.3	-1.0
BRG	**Berggiesshubel**	**151.10**	**342**	*e*PKPbc	PKPbc	15 16 00.9	-0.6
BRG	**Berggiesshubel**	**151.10**	**342**	*i* PKP	PKPbc	15 16 00.8	-0.7
FBE	**Freiberg**	**151.22**	**343**	*e*PKPbc	PKPbc	15 16 01.2	-0.5
PVCC	**Panska Ves**	**151.22**	**341**	*e*PKPbc	PKPbc	15 16 01.3	-0.4
PVCC				*e*PKPab	PKPab	15 16 12.1	+0.4
NEUB	**Neuenburg**	**151.36**	**345**	*e*PKPbc	PKPbc	15 16 01.2	-0.8
VRAC	**Vranov**	**151.62**	**337**	⇑*iP*	PKPab	15 16 13.6	+0.2
VRAC	**Vranov**	**151.62**	**337**	⇑P	PKPab	15 16 13.6	+0.2
PRU	**Pruhonice**	**151.71**	**340**	*e*PKPbc	PKPbc	15 16 02.1	-0.8
TANN	**Tannenbergstha**	**151.91**	**343**	*e*PKPbc	PKPbc	15 16 02.6	-0.7
WERD	**Werda**	**151.93**	**344**	*e*PKPbc	PKPbc	15 16 02.6	-0.7
TREC	**Trest**	**152.01**	**339**	*e*PKPbc	PKPbc	15 16 02.7	-0.9
BZS	**Buzias**	**152.32**	**327**	⇓*iP*	PKPbc	15 16 01.8	-2.6
BZS	**Buzias**	**152.32**	**327**	⇓P	PKPbc	15 16 01.8	-2.5
KHC	**Kasperske Hory**	**152.76**	**341**	*e*PKPbc	PKPbc	15 16 04.1	-1.1
KHC				*e*PKPab	PKPab	15 16 18.4	+0.1
GRA1	**Grafenberg Arr**	**152.90**	**344**	*e*PKPbc	PKPbc	15 16 04.4	-1.1
GRF	**Grafenberg Arr**	**152.90**	**344**	*e*PKPbc	PKPbc	15 16 04.4	-1.1
GERES	**GERESS Array B**	**152.97**	**340**	PKPbc	PKPbc	15 16 04.1	-1.6
	comp=Z,1.0nm,0.7s,baz=29,slow=3.0,SNR=9.0						
GERES				PKPab	PKPab	15 16 18.4	-0.8
	comp=Z,0.3nm,0.7s,baz=11,slow=2.0,SNR=3.0						
PKSM	**Moragy**	**153.30**	**331**	⇑*iP*	PKPbc	15 16 04.3	-2.2
PKSM	**Moragy**	**153.30**	**331**	⇑P	PKPbc	15 16 04.3	-2.1
TORD	**Torodi Ar. Bea**	**169.20**	**187**	PKP	PKPdf	15 16 13.6	-2.3
	comp=Z,1.3nm,0.9s,baz=346,slow=0.6,SNR=6.2						
TORD				PKPab	PKPab	15 17 29.8	-1.0
	comp=Z,2.3nm,0.6s,baz=177,slow=3.9,SNR=16						
TORD				PP	PP	15 21 20.1	+0.3
	comp=Z,1.2nm,1.0s,baz=180,slow=5.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**169.20**	**187**	PKP	PKPdf	15 16 13.6	-2.3
TORD				PKPab	PKPab	15 17 29.8	-1.0
TORD				PP	PP	15 21 20.1	+0.3

IDC 26 15:10:20.9±4.6, 2782S×1498W, h0km, mb4.0/3, mb1 4.0/3, mb1mx3.6/16, mbtmp4.0/3, MS3.7/8, Ms1 3.6/8, ms1mx3.5/24, Error ellipse: s-maj=330.8km s-min=45.2km az=100.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**31.21**	**107**	LR	LR	15 26 11.8	
	comp=Z,159nm,18.2s,baz=98,slow=30						
BDFB	**Brasilia**	**32.88**	**285**	LR	LR	15 28 52.5	
	comp=Z,94nm,19.1s,baz=274,slow=34						
BOSA	**Boshof**	**35.35**	**101**	LR	LR	15 29 42.4	
	comp=Z,146nm,18.3s,baz=275,slow=33						
DBIC	**Dimbokro**	**35.65**	**17**	P	P	15 17 21.7	+0.9
	1.4nm,0.8s,baz=233,slow=4.4,SNR=3.0						
DBIC				LR	LR	15 28 07.4	
	comp=Z,41nm,21.2s,baz=186,slow=30						
CPUP	**Villa Florida**	**37.60**	**262**	LR	LR	15 30 59.0	
	comp=Z,118nm,20.9s,baz=79,slow=33						
LSZ	**Lusaka**	**41.84**	**82**	LR	LR	15 33 56.5	
	comp=Z,150nm,20.1s,baz=95,slow=34						
TORD	**Torodi Ar. Bea**	**43.81**	**24**	P	P	15 18 27.4

mb3.3/7, Error ellipse: s-maj=54.3km s-min=16.7km az=4.9

*IDC **26** 15:20:52.0±2.1, 1305N×143.13E, h201km±26km, mb3.0/6, mb1 3.2/6, mb1mx3.0/21, mbtmp3.0/6, Error ellipse: s-maj=50.4km s-min=19.0km az=96.0*

*NEIC **26** 15:20:52.5±1.2, 1301N×14308E, h206km±16km, mb3.9/1, Error ellipse: s-maj=35.0km s-min=10.7km az=94.0*

ISC 26 15:20:52.2±1.7, 130N±01×1432E±03, h203km±22km, n12, σ0§60/14, mb3.3/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.77**	**71**	P			**Pn**	**15 21 29.7**	**+1.1**
	10nm,0.3s,baz=168,slow=15,SNR=8.9								
GUMO				S			**Sn**	**15 21 56.7**	**-0.2**
	28nm,0.3s,baz=6.2,slow=23,SNR=12								
GUMO	**Guam**	**1.77**	**71**	Pn			**Pn**	**15 21 29.8**	**+1.2**
GUMO					*e*Sn		**Sn**	**15 21 55.4**	**-1.5**
WRAB	**Tennant Creek**	**33.87**	**195**	P			**P**	**15 27 15.7**	**0.0**
WB2	**Warramunga Arr**	**33.88**	**195**	P			**P**	**15 27 15.4**	**-0.4**
WRA	**Warramunga Arr**	**33.88**	**195**	P			**P**	**15 27 15.4**	**-0.5**
	0.3nm,0.7s,mb2.9,baz=17,slow=9.4,SNR=4.3								
ASAR	**Alice Springs**	**37.56**	**194**	P			**P**	**15 27 47.9**	**+0.7**
	0.2nm,1.0s,mb2.6,baz=28,slow=8.8,SNR=4.2								
MKAR	**Makanchi Array**	**60.75**	**317**	P			**P**	**15 30 42.2**	**-0.3**
	0.4nm,0.5s,mb3.3,baz=110,slow=7.8,SNR=3.0								
ZALV	**Zalesovo Beam**	**61.12**	**325**	P			**P**	**15 30 44.4**	**-0.4**
	0.5nm,0.4s,mb3.5,baz=103,slow=6.4,SNR=2.7								
BRVK	**Borovoye**	**69.41**	**322**	*e*P			**P**	**15 31 38.6**	**+0.5**
	1.4nm,0.5s,mb3.9								
YKA	**Yellowknife Ar**	**84.13**	**27**	P			**P**	**15 33 00.4**	**+0.3**
	0.2nm,0.6s,mb3.0,baz=288,slow=5.1,SNR=4.7								
YKA	**Yellowknife Ar**	**84.13**	**27**	P			**P**	**15 33 00.4**	**+0.3**
ARCES	**ARCESS Array B**	**87.11**	**342**	P			**P**	**15 33 14.5**	**-0.2**
	1.1nm,0.7s,mb3.7,baz=73,slow=6.1,SNR=3.4								

IDC 26 15:23:00.2±6.1, 1082S×1289W, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.6/19, mbtmp3.9/4, ML3.0/1, MS3.7/3, Ms1 3.6/3, ms1mx3.1/32, Error ellipse: s-maj=306.8km s-min=104.2km az=126.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LIC	**Lamto**	**18.66**	**25**	*e*P			Pn	15 27 26.8	+6.7
	15nm,0.7s								
KIC	**Kosan Boka**	**18.90**	**26**	*e*P			Pn	15 27 27.6	+4.6
	37nm,1.3s								
TIC	**Toumodi**	**19.04**	**25**	*e*P			Pn	15 27 25.0	+0.3
	23nm,0.7s								
DBIC	**Dimbokro**	**19.13**	**25**	P			Pn	15 27 25.8	0.0
	0.1nm,0.3s,baz=198,slow=10,SNR=3.7								
TORD	**Torodi Ar. Bea**	**27.87**	**32**	P			P	15 28 51.4	-0.5
	2.9nm,0.7s,baz=218,slow=9.2,SNR=15								
BDFB	**Brasilia**	**34.50**	**258**	LR			LR	15 41 04.5	
	comp=Z,70nm,19.6s,baz=267,slow=31								
BOSA	**Boshof**	**39.80**	**122**	LR			LR	15 44 51.1	
	comp=Z,72nm,18.0s,baz=316,slow=33								
VNA2	**Neumayer--Watz**	**60.15**	**178**	*e*			P	15 33 18.9	+10
	baz=344,slow=8.8								
SNAA	**Sanae**	**61.11**	**176**	*e*			P	15 33 25.2	+9.4
GERES	**GERESS Array B**	**63.88**	**19**	P			P	15 33 34.7	+0.1
	0.3nm,0.6s,baz=204,slow=5.9,SNR=3.7								
AKASG	**Malin Array Be**	**71.37**	**27**	P			P	15 34 22.2	+0.3
	0.3nm,0.4s,baz=224,slow=7.8,SNR=6.0								
SCHQ	**Schefferville**	**79.49**	**332**	LR			LR	16 03 52.2	
	comp=Z,71nm,18.4s,baz=76,slow=31								

IDC 26 15:30:38.5±3.6, 535N×12802E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/19, mbtmp3.4/4, MS4.0/1, Ms1 4.0/1, ms1mx3.0/13, Error ellipse: s-maj=325.7km s-min=21.2km az=68.0, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.89**	**166**	P			P	15 36 12.1	-0.2
	0.5nm,0.9s,baz=348,slow=10,SNR=8.0								
WRA				LR			LR	15 46 11.5	
	comp=Z,358nm,19.5s,baz=325,slow=36								
ASAR	**Alice Springs**	**29.41**	**169**	P			P	15 36 44.1	+0.3
	0.3nm,1.0s,baz=352,slow=7.0,SNR=11								
MKAR	**Makanchi Array**	**56.99**	**324**	P			P	15 40 26.0	+0.1
	0.5nm,0.5s,baz=119,slow=7.3,SNR=7.8								
KURK	**Kurchatov**	**61.09**	**327**	P			P	15 40 54.3	0.0
	0.2nm,0.3s,baz=126,slow=6.5,SNR=3.3								

*ISCJB **26** 15:36:06.8±0.3, 3196S±004×13829E±004, h10km, mb4.3/8, Error ellipse: s-maj=6.1km s-min=4.2km az=20.6*

*IDC **26** 15:36:10.1±0.8, 3215S×13831E, h0km, mb4.2/7, mb1 4.3/9, mb1mx4.2/14, mbtmp4.2/9, ML4.4/2, MS3.5/2, Ms1 3.4/2, ms1mx3.0/21, Error ellipse: s-maj=19.6km s-min=15.0km az=16.0*

*NEIC **26** 15:36:11.0, 3209S×13838E, h16km, mb4.4/3, ML4.7(AUST), After AUST.*

*AUST **26** 15:36:11.4, 3209S×13838E, h16km, ML4.7*

ISC 26 15:36:09.2±0.3, 3199S±004×13828E±003, h10km, (h12km±1.2km: pP-P), n62, σ1§52/82, mb4.3/8, South Australia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BBOO	**Buckleboo**	**2.04**	**246**	*e*P			**Pn**	**15 36 46.5**	**+2.8**
BBOO				*e*S			**Sn**	**15 37 12.8**	**+3.6**
	2um,0.4s								
STKA	**Stephens Creek**	**2.83**	**89**	Pn			**Pn**	**15 36 56.2**	**+1.8**
	32nm,0.3s,baz=281,slow=11,SNR=934								
STKA				Pg			**Pg**	**15 37 02.0**	**-1.3**
	234nm,0.3s,baz=257,slow=15,SNR=70								
STKA				Lg				15 37 37.6	
	726nm,0.3s,baz=347,slow=22,SNR=14								
STKA				LR			LR	15 38 15.0	
	comp=Z,617nm,18.8s,baz=191,slow=44								
STKA	**Stephens Creek**	**2.83**	**89**	*e*P			**Pn**	**15 36 56.2**	**+1.8**
STKA				*e*S			**Sn**	**15 37 31.1**	**+2.6**
	561nm,0.3s								
STKA	**Stephens Creek**	**2.83**	**89**	*e*Pn			**Pn**	**15 36 56.2**	**+1.8**
STKA				Pg			**Pg**	**15 37 02.0**	**-1.3**
STKA				*e*Sn			**Sn**	**15 37 30.4**	**+2.0**
STKA				Lg				15 37 37.6	
STKA				LR			LR	15 38 15.0	
ARPS	**Mount Arapiles**	**5.60**	**149**	*e*P			**Pn**	**15 37 32.2**	**-0.4**
ARPS				*e*S			**Sn**	**15 38 31.1**	**-5.9**
	272nm,0.3s								
CMSA	**Cobar Meteorol**	**6.33**	**88**	*e*P			**Pn**	**15 37 42.1**	**-0.5**
CMSA				*e*S			**Sn**	**15 38 52.9**	**-2.1**
	83nm,0.3s								
QLP	**Quilpie**	**7.49**	**45**	*e*P			**Pn**	**15 38 00.6**	**+2.1**
TOO	**Toolangi**	**8.13**	**135**	*e*P			**Pn**	**15 38 07.1**	**-0.2**
TOO				*e*S			**Sn**	**15 39 35.1**	**-4.2**
YNG	**Young**	**8.79**	**108**	*e*P			**Pn**	**15 38 16.8**	**+0.4**
YNG				*e*S			**Sn**	**15 39 51.4**	**-4.1**
	71nm,0.7s								
FORT	**Forrest**	**8.82**	**275**	*e*P			**Pn**	**15 38 17.4**	**+0.7**
FORT				*e*S			**Sn**	**15 39 52.3**	**-3.9**
	119nm,0.4s								
FORT	**Forrest**	**8.82**	**275**	*e*Pn			**Pn**	**15 38 17.0**	**+0.2**
	144nm,0.5s								
FORT				*e*Sn			**Sn**	**15 39 54.1**	**-2.1**
FORT				*e*Sg			Sn	15 40 45.4	+49
ASAR	**Alice Springs**	**9.15**	**334**	Pn			**Pn**	**15 38 23.9**	**+2.6**
	4.9nm,0.3s,baz=156,slow=12,SNR=180								
ASAR				Sn			**Sn**	**15 40 04.4**	**0.0**
	10nm,0.3s,baz=158,slow=24,SNR=24								
ASAR				Lg				15 41 07.0	
	4.3nm,0.3s,baz=160,slow=28,SNR=4.5								
CAN	**Canberra**	**9.53**	**113**	*e*Pn			**Pn**	**15 38 26.2**	**-0.3**
	23nm,0.4s								
CNB	**Canberra Magne**	**9.82**	**113**	*e*P			**Pn**	**15 38 30.3**	**-0.1**
CNB				*e*S			**Sn**	**15 40 17.7**	**-3.0**
MILA	**Mila**	**10.29**	**122**	*e*P			**Pn**	**15 38 36.6**	**-0.4**
MILA				*e*S			**Sn**	**15 40 29.5**	**-2.9**
	22nm,0.6s								
RMQ	**Roma**	**10.67**	**62**	*e*P			**Pn**	**15 38 42.2**	**+0.1**
RMQ				*e*S			**Sn**	**15 40 35.2**	**-6.5**
	20nm,0.5s								
RIV	**Riverview**	**10.98**	**103**	*e*P			**Pn**	**15 38 48.3**	**+1.9**
ARMA	**Armidale**	**11.54**	**86**	*e*P			**Pn**	**15 38 54.5**	**+0.4**
ARMA				*e*S			**Sn**	**15 40 57.1**	**-5.9**
WB2	**Warramunga Arr**	**12.51**	**343**	*e*P			**Pn**	**15 39 08.1**	**+0.8**
WB2				*e*S			**Sn**	**15 41 22.3**	**-4.4**
WB2	**Warramunga Arr**	**12.51**	**343**	*e*Pn			**Pn**	**15 39 06.8**	**-0.5**
WRA	**Warramunga Arr**	**12.51**	**343**	Pn			**Pn**	**15 39 07.4**	**+0.1**
	3.7nm,0.3s,baz=164,slow=13,SNR=117								
WRA				Sn			**Sn**	**15 41 24.5**	**-2.3**
	3.6nm,0.3s,baz=172,slow=23,SNR=17								
WRAB	**Tennant Creek**	**12.52**	**343**	*e*Pn			**Pn**	**15 39 07.9**	**+0.5**
	36nm,0.5s								
EIDS	**Eidsvold**	**13.03**	**63**	*e*P			**Pn**	**15 39 13.6**	**-0.8**
CTA	**Charters Tower**	**13.85**	**33**	Pn			**Pn**	**15 39 26.1**	**+0.6**
	4.3nm,0.3s,baz=203,slow=16,SNR=23								
CTA				Sn			**Sn**	**15 41 53.9**	**-5.5**
	3.1nm,0.3s,baz=90,slow=20,SNR=4.1								
CTA	**Charters Tower**	**13.85**	**33**	*e*P			**Pn**	**15 39 25.4**	**-0.2**
CTA				*e*S			**Sn**	**15 41 51.8**	**-7.7**
	21nm,0.6s								
CTA	**Charters Tower**	**13.85**	**33**	Pn			**Pn**	**15 39 26.1**	**+0.6**
CTA				Sn			**Sn**	**15 41 53.9**	**-5.5**
CTAO	**Charters Tower**	**13.85**	**33**	*e*P			**Pn**	**15 39 26.0**	**+0.4**
	17nm,0.6s								
KMBL	**Kambalda**	**13.98**	**268**	*e*P			**Pn**	**15 39 24.5**	**-2.8**
KMBL				*e*S			**Sn**	**15 41 52.5**	**-10**
	61nm,0.5s								
MTSU	**Mount Surprise**	**14.84**	**23**	*e*P			**Pn**	**15 39 39.7**	**+0.6**
NWAO	**Narrogin (SRO)**	**17.78**	**261**	P			**Pn**	**15 40 14.8**	**-2.0**
	0.9nm,0.3s,baz=87,slow=11,SNR=8.4								
NWAO				S			**Sn**	**15 43 23.3**	**-12**
	0.7nm,0.3s,baz=41,slow=20,SNR=3.3								
NWAO				Lg				15 45 22.0	
	1.1nm,0.3s,baz=174,slow=21,SNR=9.5								
NWAO	**Narrogin (SRO)**	**17.78**	**261**	*e*P			**Pn**	**15 40 14.5**	**-2.4**
NWAO				*e*S			**Sn**	**15 43 23.5**	**-12**
	45nm,0.5s								
NWAO	**Narrogin (SRO)**	**17.78**	**261**	P			**Pn**	**15 40 14.8**	**-2.0**
NWAO				*e*Pn			**Pn**	**15 40 15.2**	**-1.7**
NWAO				S			**Sn**	**15 43 23.3**	**-12**
NWAO				Lg				15 45 22.0	
MEEK	**Meekatharra**	**17.95**	**282**	*e*P			**Pn**	**15 40 16.0**	**-3.0**
MEEK				*e*S			**Sn**	**15 43 25.6**	**-14**
	15nm,0.4s								
RKGY	**Rocky Gully**	**17.99**	**256**	*e*P			**Pn**	**15 40 19.9**	**+0.5**
RKGY				*e*S			**Sn**	**15 43 28.4**	**-12**
	63nm,1.9s								
MUN	**Mundaring**	**18.72**	**264**	*e*P			**Pn**	**15 40 28.1**	**-0.2**
MORW	**Morawa**	**19.37**	**273**	*e*P			**Pn**	**15 40 32.4**	**-3.8**
MORW				*e*S			**Sn**	**15 43 57.7**	**-16**
	8.0nm,0.4s								
MBWA	**Marble Bar**	**19.76**	**299**	*e*P			**Pn**	**15 40 39.4**	**-1.5**
MBWA				*e*S			**Sn**	**15 44 08.7**	**-14**
MBWA	**Marble Bar**	**19.76**	**299**	*e*Pn			**Pn**	**15 40 39.7**	**-1.1**
	5.4nm,0.6s								
RPZ	**Rata Peaks**	**28.22**	**124**	LR			LR	15 52 23.6	
	comp=Z,107nm,18.4s,baz=133,slow=35								
VNDA	**Vanda**	**46.84**	**173**	P			**P**	**15 44 39.9**	**+1.1**
	1.7nm,0.7s,mb4.1,baz=338,slow=7.4,SNR=14								
MAW	**Mawson**	**55.32**	**207**	*e*P			**P**	**15 45 44.5**	**+1.9**
	2.9nm,0.3s,mb4.8								
QSPA	**South Pole Qui**	**58.11**	**180**	P			**P**	**15 46 04.3**	**+2.0**
	2.5nm,0.6s,mb4.4,baz=330,slow=1.8,SNR=6.0								
QSPA	**South Pole Qui**	**58.11**	**180**	*e*P			**P**	**15 46 04.2**	**+1.9**
	4.2nm,0.9s,mb4.5								
CMAR	**Chiang Mai Arr**	**62.75**	**317**	P			**P**	**15 46 38.1**	**+3.3**
	0.9nm,0.7s,mb4.0,baz=152,slow=5.9,SNR=5.7								
MJAR	**Matsushiro Arr**	**68.18**	**360**	P			**P**	**15 47 13.9**	**+4.4**
	0.6nm,0.4s,mb3.9,baz=260,slow=28,SNR=3.8								
SNAA	**Sanae**	**73.09**	**192**	*e*			**P**	**15 47 40.5**	**+1.4**
SNAA				*e*			pP	15 47 45.0	+2.6
VNA2	**Neumayer--Watz**	**74.50**	**191**	*e*			**P**	**15 47 49.4**	**+2.0**
	baz=152,slow=6.1								
VNA2				*e*			pP	15 47 52.8	+2.1
VNA2				*e*				15 47 57.2	
VNA3	**Neumayer Olymp**	**74.58**	**190**	*e*			**P**	**15 47 49.9**	**+2.0**
VNA3				*e*			pP	15 47 53.1	+1.9
VNA3				*e*				15 47 57.2	
SONM	**Songino Array**	**84.46**	**339**	P			**P**	**15 48 43.7**	**+2.0**
	1.2nm,0.8s,mb4.1,baz=152,slow=4.1,SNR=2.8								
BOSA	**Boshof**	**92.35**	**234**	P			**P**	**15 49 21.4**	**+1.2**
	3.0nm,1.0s,mb4.6,baz=214,slow=3.6,SNR=3.2								
BOSA	**Boshof**	**92.35**	**234**	P			**P**	**15 49 21.4**	**+1.2**
MK31	**Makanchi Array**	**93.24**	**325**	P			**P**	**15 49 27.4**	**+3.8**
MKAR	**Makanchi Array**	**93.24**	**325**	P			**P**	**15 49 27.4**	**+3.8**
	1.1nm,0.8s,mb4.4,baz=138,slow=5.4,SNR=1.7								
YKA	**Yellowknife Ar**	**125.67**	**33**	PKP		PKPdf		15 55 14.4	+4.4
	0.2nm,0.8s,baz=275,slow=1.5,SNR=4.1								
YKA	**Yellowknife Ar**	**125.67**	**33**	PKP		PKPdf		15 55 14.4	+4.4
TORD	**Torodi Ar. Bea**	**136.09**	**255**	PKP		PKPdf		15 55 33.0	+1.7
	0.3nm,0.5s,baz=93,slow=1.2,SNR=5.1								
TORD	**Torodi Ar. Bea**	**136.09**	**255**	PKP		PKPdf		15 55 33.0	+1.7
MTLF	**Montolieu**	**143.80**	**301**	*e*PKP1		PKPdf		15 55 46.1	+1.7
LDF	**La Druitiere**	**144.70**	**310**	*e*PKP1		PKPdf		15 55 46.4	+0.6
	7.4nm,0.6s								
MFF	**Saint Martin d**	**145.10**	**307**	*e*PKP1		PKPbc		15 55 47.7	+1.6
	5.2nm,0.5s								
GRR	**Gorron**	**145.22**	**310**	*e*PKP1		PKPbc		15 55 47.7	+1.3
ESDC	**Sonseca Array**	**148.62**	**295**	PKPbc		PKPab		15 55 58.2	-1.8
	0.5nm,0.5s,baz=55,slow=2.4,SNR=4.9								

*DJA **26** 15:36:35, 9.12S×133.37E, h20km, Mw5.4/5*

*BJI **26** 15:37:02.9, 753S×13088E, h18km, mB5.1, mb4.7, Ms5.0, Msz4.6*

*ISCJB **26** 15:37:03.3±0.3, 759S±004×13058E±007, h15km, mb4.7/39, MS3.8/12, Error ellipse: s-maj=9.8km s-min=5.4km az=164.0*

*IDC **26** 15:37:04.4±1.0, 736S×13049E, h0km, mb4.4/11, mb1 4.5/13, mb1mx4.5/19, mbtmp4.5/13, ML4.2/2, MS3.6/8, Ms1 3.6/8, ms1mx3.5/19, Error ellipse: s-maj=31.1km s-min=24.1km az=63.0*

*NEIC **26** 15:37:05.2±0.3, 745S×13062E, h10km, mb4.7/10, Error ellipse: s-maj=11.1km s-min=6.8km az=59.0*

*MOS **26** 15:37:06.3±0.9, 752S×13055E, h33km, mb4.9/7, Error ellipse: s-maj=19.7km s-min=8.6km az=109.9*

ISC 26 15:37:05.2±0.3, 764S±003×13060E±007, h16km, h16km±2.0km: pP-P, n82, σ1§10/86, mb4.7/39, MS3.8/12, 4C-2D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KNA	**Kununurra**	**8.26**	**192**	*e*P			**Pn**	**15 39 08.6**	**+4.1**
KNA				*e*S			**Sn**	**15 40 37.4**	**-0.1**
	244nm,0.4s								
KAPI	**Kappang**	**11.10**	**283**	LR			LR	15 43 42.2	
	comp=Z,385nm,20.7s,baz=23,slow=36								
KAPI	**Kappang**	**11.10**	**283**	Pn			**Pn**	**15 39 50.3**	**+7.0**
FITZ	**Fitzroy Crossi**	**11.47**	**204**	*e*P			**Pn**	**15 39 50.5**	**+2.0**
FITZ				*e*S			**Sn**	**15 41 50.2**	**-6.1**
	156nm,0.5s								
FITZ	**Fitzroy Crossi**	**11.47**	**204**	*e*Pn			**Pn**	**15 39 50.5**	**+2.0**
	4.6nm,0.6s								
WRAB	**Tennant Creek**	**12.75**	**164**	*i* P			**Pn**	**15 40 08.7**	**+2.7**
WRA	**Warramunga Arr**	**12.76**	**164**	Pn			**Pn**	**15 40 07.9**	**+1.8**
	5.6nm,0.3s,baz=344,slow=13,SNR=10								
WRA				Sn			**Sn**	**15 42 25.2**	**-2.6**
	14nm,0.3s,baz=333,slow=22,SNR=8.9								
COEN	**Coen**	**13.85**	**118**	*e*P			**Pn**	**15 40 21.9**	**+0.9**
COEN				*e*S			**Sn**	**15 42 46.8**	**-7.8**
	33nm,0.6s								
COEN	**Coen**	**13.85**	**118**	*e*Pn			**Pn**	**15 40 21.8**	**+0.7**
	230nm,1.3s								
ASAR	**Alice Springs**	**16.25**	**169**	Pn			**Pn**	**15 40 57.4**	**+4.5**
	5.0nm,0.3s,baz=354,slow=11,SNR=5.1								
ASAR				Sn			**Sn**	**15 43 51.3**	**-1.7**
	3.4nm,0.3s,baz=355,slow=28,SNR=5.8								
PMG	**Port Moresby**	**16.47**	**97**	Pn			**Pn**	**15 40 58.0**	**+2.2**
	0.9nm,0.3s,baz=241,slow=10,SNR=3.7								
PMG	**Port Moresby**	**16.47**	**97**	*i* P			**Pn**	**15 40 58.2**	**+2.4**
KKM	**Kota Kinabalu**	**19.77**	**313**	*e*P			**Pn**	**15 41 35.9**	**-0.4**
KSM	**Kuching**	**22.18**	**293**	*e*P			**P**	**15 42 02.8**	**+1.9**
HNR	**Honiara**	**29.07**	**96**	LR			LR	15 55 03.9	
	comp=Z,154nm,19.0s,MS3.6,baz=269,slow=37								
CMAR	**Chiang Mai Arr**	**40.60**	**310**	P			**P**	**15 44 44.0**	**-0.5**
	4.6nm,0.9s,mb4.1,baz=142,slow=7.4,SNR=39								
CMAR				LR			LR	16 03 01.3	
	comp=Z,22nm,18.5s,MS3.0,baz=135,slow=39								
CHTO	**Chiang Mai**	**40.81**	**310**	*e*P			**P**	**15 44 45.3**	**-0.9**
CHTO				pmax			pmax		
	comp=Z,9.0nm,0.9s,mb4.4								
CHTO	**Chiang Mai**	**40.81**	**310**	*e*P			**P**	**15 44 45.2**	**-1.0**
	comp=Z,8.9nm,0.9s,mb4.4								
WHN	**Wuhan**	**41.04**	**338**	*i* P			**P**	**15 44 47.0**	**-1.0**
GYA	**Guiyang**	**41.09**	**326**	*i* P			**P**	**15 44 48.3**	**-0.2**
GYA				PP			PP	15 46 25.3	+1.8
GYA				PCP			PcP	15 46 51.5	+3.4
GYA				SCP			ScP	15 50 39.3	+1.9
GYA				S			**S**	**15 50 59.0**	**-1.8**
GYA				AMB			AMB		
	comp=Z,10.0nm,0.8s,mb4.5								
GYA				AMB			AMB		
	comp=Z,120nm,7.5s								
GYA				LR			LR		
	comp=N,480nm,17.8s,MS4.5								
GYA				LR			LR		
	comp=E,350nm,18.0s,MS4.5								
GYA				LR			LR		
	comp=Z,470nm,17.0s,MS4.4								
KMI	**Kunming**	**42.38**	**321**	P			**P**	**15 44 59.8**	**+0.7**
KMI				AP			pP	15 45 04.0	-0.1
KMI				XP			sP	15 45 05.8	-0.3
KMI				PP			PP	15 46 42.5	+5.0
KMI				S			**S**	**15 51 22.8**	**+2.8**
KMI				XS			sS	15 51 29.3	+1.0
KMI				SS			SS	15 54 25.3	-4.1
KMI				AMB			AMB		
	comp=Z,9.0nm,1.3s,mb4.2								
KMI				AMB			AMB		
	comp=Z,108nm,4.4s								
KMI				LR			LR		
	comp=N,120nm,8.3s								
KMI				LR			LR		
	comp=E,111nm,11.1s								
KMI				LR			LR		
	comp=Z,88nm,12.2s,MS3.9								
MAJO	**Matsushiro**	**44.52**	**9**	*e*P			**P**	**15 45 14.5**	**-1.6**
MAJO				pmax			pmax		
	comp=Z,26nm,1.0s,mb5.0								
MAJO	**Matsushiro**	**44.52**	**9**	*e*P			**P**	**15 45 14.5**	**-1.7**
	comp=Z,26nm,1.0s,mb5.0								
MAT	**Matsushiro**	**44.52**	**9**	P			**P**	**15 45 14.8**	**-1.3**
MAT				*e*S			**S**	**15 51 42.0**	**-9.0**
MJAR	**Matsushiro Arr**	**44.52**	**9**	P			**P**	**15 45 14.8**	**-1.4**
	comp=Z,11nm,0.9s,mb4.7,baz=190,slow=10.0,SNR=20								
MJAR				LR			LR	16 00 53.1	
	comp=Z,92nm,18.7s,MS3.7,baz=10.0,slow=32								
KSRS	**Korea Array**	**44.92**	**357**	P			**P**	**15 45 19.3**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.8,baz=168,slow=8.6,SNR=7.4								
KSRS				LR			LR	16 02 44.7	
	comp=Z,68nm,19.2s,MS3.6,baz=314,slow=34								
CD2	**Chengdu**	**46.16**	**327**	P			**P**	**15 45 32.8**	**+3.6**
CD2				AP			pP	15 45 36.8	+2.5
CD2				XP			sP	15 45 38.5	+2.2
CD2				PCP			PcP	15 47 09.0	+3.9
CD2				PP			PP	15 47 21.3	+3.6
CD2				PCS			PcS	15 51 01.8	+2.2
CD2				S			**S**	**15 52 18.5**	**+3.7**
CD2				XS			sS	15 52 25.5	+2.3
CD2				SS			SS	15 55 35.5	-4.9
CD2				AMB			AMB		
	comp=Z,10.0nm,0.5s,mb5.0								
CD2				AMB			AMB		
	comp=Z,200nm,5.9s								
CD2				LR			LR		
	comp=N,260nm,7.7s								
CD2				LR			LR		
	comp=Z,230nm,6.5s								
XAN	**Xi'an**	**46.26**	**335**	P			**P**	**15 45 29.0**	**-1.0**
XAN				AP			pP	15 45 32.5	-2.6
XAN				PP			PP	15 47 19.5	+0.7
XAN				S			**S**	**15 52 18.8**	**+2.6**
XAN				AMB			AMB		
	comp=Z,2.0nm,0.6s,mb4.2								
XAN				AMB			AMB		
	comp=Z,16nm,13.7s								
BJI	**Beijing**	**49.28**	**345**	P			**P**	**15 45 52.5**	**-0.8**
BJI				S			**S**	**15 53 01.0**	**+2.2**
BJI				AMB			AMB		
	comp=Z,13nm,0.5s,mb5.2								
BJI				AMB			AMB		
	comp=Z,56nm,3.5s								
BJI				LR			LR		
	comp=N,188nm,15.3s,MS4.4								
BJI				LR			LR		
	comp=E,202nm,14.9s,MS4.4								
LZH	**Lanzhou**	**50.24**	**332**	*e*P			**P**	**15 46 02.5**	**+1.8**
LZH				AP			pP	15 46 06.5	+0.7
LZH				XP			sP	15 46 08.5	+0.7
LZH				AMB			AMB		
	comp=Z,15nm,1.5s,mb4.8								
LZH				AMB			AMB		
	comp=Z,73nm,4.7s								
HHC	**Hu-ho-hao-te**	**51.33**	**342**	*e*P			**P**	**15 46 12.3**	**+3.5**
HHC				AP			pP	15 46 16.0	+2.0
HHC			

YAK	Yakutsk	69.46	360	*e*P	P	15	48	12.1 -0.3
	comp=N,33nm,1.0s,mb5.2							
KBL	Kabul	71.63	310	*e*P	P	15	48	27.1 +0.8
KBL				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.5							
KBL	Kabul	71.63	310	*e*P	P	15	48	27.1 +0.8
	comp=Z,4.0nm,0.6s,mb4.5							
AML	Almayashu	71.68	319	*e*P	P	15	48	27.8 +1.4
	comp=Z,14nm,1.0s,mb4.8							
SEY	Seymchan	72.32	10⇑	*e*P	P	15	48	30.5 +0.7
ZALV	Zalesovo Beam	72.41	334	P	P	15	48	29.9 -0.6
	comp=Z,1.1nm,0.5s,mb4.1,baz=121,slow=5.7,SNR=7.1							
ZALV				LR	LR	16	21	49.2
	comp=Z,21nm,18.4s,MS3.5,baz=16,slow=37							
ZALV	Zalesovo Beam	72.41	334	P	P	15	48	29.9 -0.6
ZALV				LR	LR	16	21	49.2
KURK	Kurchatov	73.37	328	P	P	15	48	36.7 +0.4
	comp=Z,2.9nm,0.5s,mb4.5,baz=129,slow=5.3,SNR=8.2							
KURK	Kurchatov	73.37	328	*e*P	P	15	48	35.7 -0.6
KURK				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4							
KURK	Kurchatov	73.37	328	*e*P	P	15	48	35.7 -0.5
	comp=Z,2.4nm,0.4s,mb4.5							
MAW	Mawson	74.58	202	LR	LR	16	21	46.7
	comp=Z,91nm,18.5s,MS4.1,baz=306,slow=36							
BVAR	Borovoye Array	78.92	328	P	P	15	49	08.0 +0.2
	comp=Z,4.6nm,1.1s,mb4.3,baz=134,slow=4.3,SNR=12							
BRVK	Borovoye	78.99	328	*e*P	P	15	49	08.0 -0.2
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4							
BRVK	Borovoye	78.99	328	*e*P	P	15	49	08.0 -0.2
	comp=Z,5.2nm,1.1s,mb4.4							
TIXI	Tiksi	79.13	359⇑	*e*P	P	15	49	08.6 0.0
TIXI				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
TIXI	Tiksi	79.13	359	*e*P	P	15	49	07.9 -0.7
	comp=Z,3.7nm,0.8s,mb4.4							
SYO	Syowa Base	83.29	201⇓	*e*X	P	15	49	25.8 -5.1
AKTK	Aktyubinsk	84.94	322	P	P	15	49	40.1 +0.6
AKTO	Aktyubinsk	84.94	322	P	P	15	49	40.1 +0.6
	comp=Z,2.9nm,0.7s,mb4.5,baz=119,slow=6.3,SNR=9.5							
ARU	Arti	86.56	328	*e*P	P	15	49	47.0 -0.4
ARU				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8							
ARU	Arti	86.56	328	*e*P	P	15	49	47.0 -0.5
	comp=Z,7.4nm,1.0s,mb4.9							
TXAR	Lajitas Array	124.74	60	PKP	PKPdf	15	56	06.6 +1.7
	comp=Z,0.3nm,0.8s,baz=245,slow=3.9,SNR=3.5							
TORD	Torodi Ar. Bea	129.52	281	PKP	PKPdf	15	56	15.5 +1.2
	comp=Z,0.9nm,0.7s,baz=75,slow=2.0,SNR=4.4							
TORD	Torodi Ar. Bea	129.52	281	PKP	PKPdf	15	56	15.5 +1.2
LVC	Limon Verde	144.38	148	*e*PKP	PKPdf	15	56	44.9 +3.3
CPUP	Villa Florida	145.37	167	PKPbc	PKPab	15	56	45.7 +2.5
	comp=Z,0.7nm,0.4s,baz=225,slow=1.8,SNR=6.2							
CPUP	Villa Florida	145.37	167	*e*PKP	PKPab	15	56	46.2 +3.1

*IDC **26** 16:14:43.9±1.4, 1516S×17343W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.0/18, mbtmp4.2/5, MS3.1/3, Ms1 3.1/3, ms1mx2.9/33, Error ellipse: s-maj=54.8km s-min=26.8km az=128.0*
*NEIC **26** 16:14:44.8±0.7, 1503S×17329W, h10km, mb4.2/3, Error ellipse: s-maj=29.7km s-min=14.3km az=139.0*
*ISCJB **26** 16:14:45.5±0.7, 1495S±02×1733W±0.1, h33km, mb4.2/8, Error ellipse: s-maj=26.7km s-min=12.5km az=147.6*

ISC 26 16:14:46.7±0.6, 148S±02×1732W±01, h35km, n23, σ0§98/17, mb4.2/8, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.62	59	Pn		Pn	Pn	16 15 13.5	+0.7
	131nm,0.3s,baz=100,slow=0.5,SNR=362								
AFI				Sn		Sn	Sn	16 15 31.4	-1.1
	536nm,0.3s,baz=64,slow=23,SNR=27								
AFI				LR		LR	LR	16 15 53.7	
	comp=Z,418nm,19.6s,baz=171,slow=34								
AFI	Afiamalu	1.62	59	*e*Pn		Pn	Pn	16 15 13.4	+0.6
AFI				*e*Sn		Sn	Sn	16 15 31.5	-1.0
AFI				LR		LR	LR	16 15 53.7	
RAR	Rarotonga	14.29	119	LR		LR	LR	16 21 57.4	
	comp=Z,192nm,21.7s,baz=269,slow=30								
PPT	Papeete	22.86	100	*e*LR		LR		16 25 11.3	
	91nm,26.5s								
PPT				*e*LR		LR	LR	16 25 11.3	
	91nm,26.5s								
TBI	Tubuai	23.99	114	*e*T				16 44 16.2	
	7.6nm,0.4s								
URZ	Urewera	24.93	198	P		P		16 20 04.8	-1.7
	11nm,0.7s,mb4.5,baz=7.2,slow=5.6,SNR=8.7								
HNR	Honiara	26.77	278	LR		LR	LR	16 29 49.5	
	comp=Z,34nm,18.4s,baz=164,slow=34								
RKT	Rikitea	37.02	109	*e*T				17 00 41.1	
	3.2nm,0.3s								
STKA	Stephens Creek	44.52	239	P		P		16 22 54.1	-1.0
	2.4nm,0.7s,mb4.1,baz=80,slow=9.9,SNR=9.4								
STKA	Stephens Creek	44.52	239	*e*P		P		16 22 54.2	-0.9
	1.9nm,0.9s,mb3.9								
STKA	Stephens Creek	44.52	239	*e*P		P		16 22 54.1	-1.0
WB2	Warramunga Arr	50.16	256	*e*P		P		16 23 39.5	+0.3
WB2	Warramunga Arr	50.16	256	*e*P		P		16 23 39.5	+0.3
WRAB	Tennant Creek	50.17	256	*e*P		P		16 23 39.5	+0.3
	1.2nm,0.5s,mb4.2								
WRA	Warramunga Arr	50.18	256	P		P		16 23 39.0	-0.3
	1.2nm,0.4s,mb4.2,baz=92,slow=6.7,SNR=43								
ASAR	Alice Springs	50.49	251	P		P		16 23 41.3	-0.3
	2.0nm,0.4s,mb4.5,baz=88,slow=7.7,SNR=115								
VNDA	Vanda	64.03	186	*e*P		P		16 25 17.9	+1.5
QSPA	South Pole Qui	75.28	180	*e*P		P		16 26 26.4	+0.8
	5.8nm,1.1s,mb4.4								
HLID	Hailey	79.02	39	*e*P		P		16 26 52.8	+5.7
	1.6nm,0.9s,mb4.0								
YKA	Yellowknife Ar	89.44	23	P		P		16 27 43.3	+3.8
	0.4nm,0.9s,mb3.7,baz=241,slow=4.3,SNR=7.4								
GERES	GERESS Array B	145.54	352	PKPbc		PKPab		16 34 25.3	+3.8
	0.6nm,0.9s,baz=6.9,slow=4.4,SNR=4.0								
BR131	Keskin Array S	145.78	322	PKP		PKPab		16 34 26.1	+3.3
BRTR	Keskin Array B	145.78	322	PKPbc		PKPab		16 34 26.1	+3.3
	2.1nm,0.9s,baz=48,slow=1.8,SNR=8.7								

IDC 26 16:18:10.3±1.5, 1367W×9341E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=50.3km s-min=29.0km az=49.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.14	47	Pn		Pn	Pn	16 19 55.2	-0.9
	0.1nm,0.3s,baz=239,slow=15,SNR=14								
CMAR				Sn		Sn	Sn	16 21 11.2	-6.8
	baz=232,slow=20,SNR=2.1								
WRA	Warramunga Arr	52.32	129	P		P	P	16 27 24.2	-0.1
	0.3nm,0.8s,baz=299,slow=9.3,SNR=2.8								
ASAR	Alice Springs	54.27	133	P		P	P	16 27 38.6	+0.1
	0.2nm,0.6s,baz=310,slow=7.7,SNR=4.3								
GERES	GERESS Array B	73.08	317	P		P	P	16 29 42.8	+0.4
	0.3nm,0.6s,baz=75,slow=5.7,SNR=3.8								

*IDC **26** 16:33:03.8±0.8, 1754S×17307W, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.1/20, mbtmp4.0/10, MS3.5/4, Ms1 3.5/4, ms1mx3.1/31, Error ellipse: s-maj=29.7km s-min=20.3km az=136.0*
*NEIC **26** 16:33:06.0±0.7, 1757S×17308W, h10km, mb4.1/1, Error ellipse: s-maj=30.3km s-min=16.4km az=134.0*
*ISCJB **26** 16:33:07.5±0.7, 174S±0.1×1732W±0.2, h33km, mb4.1/12, MS3.5/2, Error ellipse: s-maj=23.7km s-min=13.3km az=29.7*

ISC 26 16:33:09.3±0.7, 175S±01×1731W±02, h35km, n28, σ0§95/21, mb4.1/12, MS3.5/2, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.79	20	Pn		Pn	Pn	16 33 58.5	-6.8
	3.7nm,0.3s,baz=98,slow=12,SNR=14								
AFI				Sn		Sn	Sn	16 34 39.2	-9.4
	42nm,0.3s,baz=142,slow=17,SNR=5.5								
AFI				LR		LR	LR	16 35 14.9	
	comp=Z,345nm,21.8s,baz=184,slow=34								
AFI				T				16 38 05.6	
	10nm,0.3s,baz=135,slow=18,SNR=5.3								
AFI	Afiamalu	3.79	20	*e*Pn		Pn	Pn	16 33 58.4	-6.8
AFI				Sn		Sn	Sn	16 34 39.2	-9.4
AFI				LR		LR	LR	16 35 14.9	

RAR	Rarotonga	13.14	109	LR		LR		16 39 23.4
	comp=Z,210nm,20.2s,baz=264,slow=29							
RAR	Rarotonga	13.14	109	P		Pn		16 36 02.2 -11
URZ	Urewera	22.39	201	P		P		16 38 04.9 +0.3
	13nm,0.7s,mb4.5,baz=350,slow=18,SNR=14							
URZ				S		S		16 42 04.3 -4.5
	4.9nm,0.7s,baz=316,slow=20,SNR=2.9							
URZ				LR		LR		16 45 44.3
	comp=Z,118nm,21.2s,MS3.3,baz=17,slow=34							
PPT	Papeete	22.46	94	*e*LQ				16 42 09.8
	450nm,28.2s							
PPT				*e*LR		LR		16 43 14.0
	90nm,23.0s							
TBI	Tubuai	22.92	109	*e*LR		LR		16 43 16.1
	275nm,32.5s							
HNR	Honiara	27.35	284	LR		LR		16 48 13.8
	comp=Z,177nm,18.1s,MS3.7,baz=104,slow=33							
RPZ	Rata Peaks	29.37	204	P		P		16 39 12.8 +3.8
	10nm,0.7s,mb4.7,baz=19,slow=12,SNR=7.1							
CTA	Charters Tower	38.48	260	P		P		16 40 29.3 +1.1
	4.9nm,0.9s,mb4.2,baz=85,slow=12,SNR=3.8							
STKA	Stephens Creek	43.25	242	P		P		16 41 07.4 -0.1
	2.1nm,0.8s,mb3.9,baz=86,slow=5.9,SNR=6.6							
STKA	Stephens Creek	43.25	242	*e*P		P		16 41 07.6 +0.1
WRA	Warramunga Arr	49.65	258	P		P		16 41 56.6 -1.3
	1.3nm,0.5s,mb4.2,baz=97,slow=8.7,SNR=3.9							
ASAR	Alice Springs	49.74	254	P		P		16 41 57.5 -1.0
	6.7nm,0.7s,mb4.8,baz=85,slow=8.5,SNR=26							
QSPA	South Pole Qui	72.57	180	P		P		16 44 32.0 -0.3
	1.6nm,0.9s,mb4.0,baz=42,slow=1.1,SNR=8.5							
QSPA	South Pole Qui	72.57	180	*e*P		P		16 44 31.9 -0.4
	1.3nm,0.7s,mb4.0							
NVAR	Mina Array Bea	75.70	41	P		P		16 44 51.2 0.0
	0.6nm,0.6s,mb3.7,baz=219,slow=9.3,SNR=2.8							
KSRS	Korea Array	77.83	316	P		P		16 45 03.2 0.0
	0.3nm,0.5s,mb3.5,baz=130,slow=49,SNR=2.7							
PDAR	Pinedale Array	83.64	42	P		P		16 45 34.4 +0.1
	0.3nm,0.7s,mb3.6,baz=232,slow=4.4,SNR=2.6							
YKA	Yellowknife Ar	91.90	23	P		P		16 46 13.2 -0.4
	0.3nm,0.8s,mb3.6,baz=218,slow=5.0,SNR=2.9							
YKA	Yellowknife Ar	91.90	23	P		P		16 46 13.2 -0.4
CMAR	Chiang Mai Arr	93.51	288	P		P		16 46 24.8 +2.7
	0.4nm,0.4s,mb4.2,baz=97,slow=3.3,SNR=5.0							
MALT	Malatya	145.50	313	*e*PKP		PKPab		16 52 47.0 +2.7
KSP	Ksiaz	145.88	349	*e*P		PKPab		16 52 46.1 +0.8
CLL	Collm	145.91	353	*e*PKPbc		PKPbc		16 52 46.0 +1.1
	comp=Z,5.0nm,0.8s							
CLL				*e*PKiKP		PKiKP		16 52 50.0 +1.6
CLL				*i* sPKiKP				16 52 55.4
BRTR	Keskin Array B	147.92	319	PKPbc		PKPbc		16 52 52.6 +1.5
	comp=Z,1.2nm,0.8s,baz=35,slow=4.5,SNR=5.3							
GERES	GERESS Array B	148.23	351	PKPbc		PKPbc		16 52 53.3 +1.7
	comp=Z,0.4nm,0.7s,baz=323,slow=2.0,SNR=4.8							
TORD	Torodi Ar. Bea	173.40	130	PKPab		PKPab		16 54 43.0 -1.4
	comp=Z,0.4nm,0.6s,baz=252,slow=4.3,SNR=3.8							

*NEIC **26** 16:37:04.0±2.4, 704S×12980E, h82km±22km, mb3.8/1, Error ellipse: s-maj=20.7km s-min=15.9km az=200.0*
*IDC **26** 16:37:06.6±3.7, 727S×12933E, h102km±29km, mb3.7/3, mb1 3.9/5, mb1mx3.6/16, mbtmp3.8/5, Error ellipse: s-maj=87.9km s-min=22.0km az=67.0*
*ISCJB **26** 16:37:12.8±1.4, 763S±0.10×12986E±0.09, h150km, mb3.7/3, Error ellipse: s-maj=14.1km s-min=11.9km az=3.3*

ISC 26 16:37:07.7±1.9, 745S±008×1296E±01, h113km±18km, n18, σ1§86/22, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.26	200	*e*P		Pn		16 39 48.1	+2.8
	8.9nm,0.3s								
FITZ				*e*S		Sn		16 41 48.4	-0.9
FITZ	Fitzroy Crossi	11.26	200	*e*P		Pn		16 39 47.9	+2.6
	8.8nm,0.7s								
WRAB	Tennant Creek	13.23	160	*e*Pn		Pn		16 40 12.1	+0.8
	8.8nm,0.6s								
WRAB				*e*Sn		Sn		16 42 31.9	-5.2
WRA	Warramunga Arr	13.24	160	P		Pn		16 40 12.3	+1.0
	3.1nm,0.3s,baz=338,slow=13,SNR=102								
WRA				S		Sn		16 42 34.9	-2.2
	1.7nm,0.3s,baz=331,slow=22,SNR=6.5								
WB2	Warramunga Arr	13.24	160	*e*P		Pn		16 40 12.1	+0.7
WB2				*e*S		Sn		16 42 35.1	-2.2
WB2	Warramunga Arr	13.24	160	*e*P		Pn		16 40 12.2	+0.8
COEN	Coen	14.82	117	*e*P		Pn		16 40 30.9	-0.7
MBWA	Marble Bar	16.63	214	*e*P		Pn		16 40 59.5	+5.4
MBWA				*e*S		S		16 43 56.8	-3.0
ASAR	Alice Springs	16.64	166	P		Pn		16 40 56.8	+2.6
	1.1nm,0.3s,baz=333,slow=9.8,SNR=118								
ASAR				S		S		16 44 02.4	+2.4
	0.5nm,0.3s,baz=353,slow=28,SNR=5.1								
ASAR				ScP		ScP		16 49 00.7	-1.5
	0.0nm,0.3s,baz=353,slow=2.1,SNR=4.5								
STKA	Stephens Creek	26.75	157	P		P		16 42 39.6	+2.8
	1.3nm,0.4s,mb3.9,baz=338,slow=8.1,SNR=8.0								
STKA				pP		pP		16 43 03.0	+1.6
	2.0nm,0.5s,baz=320,slow=12,SNR=7.3								
STKA	Stephens Creek	26.75	157	*e*P		P		16 42 39.9	+3.1
	0.9nm,0.3s,mb3.8								
MK31	Makanchi Array	68.39	327	*e*P		P		16 47 55.4	-1.7
MKAR	Makanchi Array	68.39	327	P		P		16 47 54.9	-2.2
	0.5nm,0.3s,mb3.8,baz=112,slow=8.2,SNR=6.9								
MKAR	Makanchi Array	68.39	327	P		P		16 47 54.9	-2.2
QSPA	South Pole Qui	82.53	180	P		P		16 49 19.3	+1.9
	0.7nm,0.5s,mb3.7,baz=6.5,slow=3.0,SNR=9.4								
QSPA	South Pole Qui	82.53	180	*e*P		P		16 49 19.1	+1.8
	0.7nm,0.5s,mb3.8								
CPUP	Villa Florida	145.75	169	PKPbc		PKPbc		16 56 35.6	+1.3
	0.5nm,0.3s,baz=159,slow=1.8,SNR=6.1								
CPUP	Villa Florida	145.75	169	*e*PKPbc		PKPbc		16 56 35.3	+1.0

*NNC **26** 16:39:18.1±4.1, 4440N×8471E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=34.3km s-min=22.2km az=145.0*

BJI 26 16:39:17.8, 4435N×8481E, h14km, ML3.4, 6C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	2.15	103⇑	*i*P		Pn		16 39 55.5	+2.4
WMQ				SG		Sg		16 40 25.0	-1.7
WMQ				Smax					
	comp=N,152nm,0.6s								
WMQ				Smax					
	comp=E,167nm,0.8s								
MK31	Makanchi Array	3.02	325	⇑Pn		Pn		16 40 06.3	+1.2
	comp=E,0.6nm,0.3s,baz=142,slow=14								
MK31				⇓Pg		Pg		16 40 13.0	-2.6
	comp=E,14nm,0.6s,baz=147,slow=17								
MK31				⇓Lg				16 40 50.6	
	comp=E,46nm,0.4s,baz=143,slow=29								
KURBB	Kurchatov Arra	7.58	328	⇑Pn		Pn		16 41 07.2	-0.5
	comp=E,0.6nm,0.5s								
KURBB				⇑Lg				16 43 14.0	
	comp=E,4.8nm,0.7s								
KURK	Kurchatov	7.62	329	⇑Pn		Pn		16 41 06.9	-1.3
	comp=E,3.5nm,1.1s								
KURK				⇑Lg				16 43 15.6	
	comp=E,32nm,0.8s								

IDC 26 16:43:59.3±3.8, 378S×10071E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=168.3km s-min=26.1km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.17	356	P		P		16 48 58.0	+0.9
	0.4nm,0.4s,baz=184,slow=7.7,SNR=5.7								
ASAR	Alice Springs	37.65	125	P		P		16 51 16.5	+0.1
	0.2nm,0.3s,baz=302,slow=8.0,SNR=7.2								
MKAR	Makanchi Array	52.92	344	P		P		16 53 17.4	+0.1
	0.5nm,0.6s,baz=152,slow=8.0,SNR=4.6								
ZALV	Zalesovo Beam	59.04	349	P		P		16 54 00.3	-0.6
	0.4nm,0.3s,baz=177,slow=8.7,SNR=3.3								

BJI 26 16:44:47.0, 2979N×11464E, h19km, ML3.6, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WHN	Wuhan	0.79	342	PG		Pg		16 44 59.5	-3.0
WHN				SG		Sg		16 45 09.5	-3.6
WHN				Smax					
	comp=N,140nm,0.4s								
WHN				Smax					
	comp=E,840nm,0.7s								

*BJI **26** 16:46:49.2, 5.19S×12942E, h18km, mB5.1, mb4.7*
*IDC **26** 16:46:54.2±0.5, 451S×12897E, h0km, mb4.6/13, mb1 4.6/15, mb1mx4.5/20, mbtmp4.6/15, ML3.8/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/30, Error ellipse: s-maj=26.2km s-min=13.4km az=66.0*
*NEIC **26** 16:46:56.8±0.3, 457S×12904E, mb4.7/10, Error ellipse: s-maj=12.7km s-min=6.6km az=62.0*
*MOS **26** 16:46:57.3±0.9, 446S×12905E, h33km, mb4.9/10, Error ellipse: s-maj=18.6km s-min=9.4km az=119.8*
*ISCJB **26** 16:46:59.7±1.0, 450S±006×12907E±007, h58km±9km, mb4.8/43, Error ellipse: s-maj=12.1km s-min=7.5km az=146.1*
*DJA **26** 16:47:00, 445S×12908E, h10km, MLv4.4/4*

ISC 26 16:46:59.2±0.9, 457S±004×12903E±007, h37km±9km, n92, σ0§98/82, mb4.8/43, 2C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.22	355	P		Pn		16 47 18.9	-0.9
LBMI	Labuha	4.19	339	P		Pn		16 48 01.9	+1.2
KDI	Kendari	6.42	275	P		Pn		16 48 36.2	+4.8
	17nm,1.3s,2µm0.1nm								
MNI	Manado	7.29	325	P		Pn		16 48 48.7	+5.3
	106nm,1.1s,1µm0.4nm								
KAPI	Kappang	9.26	267	LR		LR		16 52 32.6	
	comp=Z,125nm,21.9s,baz=276,slow=37								
PCI	Palu	9.88	291	P		Px		16 49 30.5	
FITZ	Fitzroy Crossi	13.85	194	*e*Pn		Pn		16 50 11.4	-1.8
WRAB	Tennant Creek	16.13	162	*e*P		Pn		16 50 40.6	-2.7
WRAB				pmax	pmax				
	comp=Z,31nm,1.3s								
WRAB	Tennant Creek	16.13	162	*e*Pn		Pn		16 50 40.6	-2.7
	comp=Z,31nm,1.3s								
WRAB	Tennant Creek	16.13	162	P		Pn		16 50 45.4	+2.1
	comp=Z,22nm,1.4s								
WRA	Warramunga Arr	16.13	162	Pn		Pn		16 50 39.9	-3.5
	comp=Z,0.7nm,0.3s,baz=340,slow=13,SNR=33								
WB2	Warramunga Arr	16.14	162	*e*P		Pn		16 50 39.7	-3.7
WB2	Warramunga Arr	16.14	162	*e*P		Pn		16 50 40.4	-3.0
KKM	Kota Kinabalu	16.58	309	P		Pn		16 50 49.6	+0.5
COEN	Coen	16.78	125	*e*P		Pn		16 50 52.8	+1.2
	comp=Z,45nm,0.8s								
COEN	Coen	16.78	125	P		Pn		16 50 55.3	+3.7
	comp=Z,31nm,1.0s,comp=Z,294nm								
PMG	Port Moresby	18.62	106	P		Pn		16 51 15.0	+0.7
	comp=Z,0.3nm,0.3s,baz=350,slow=6.1,SNR=4.7								
PMG	Port Moresby	18.62	106	P		Pn		16 51 18.4	+4.0
MBWA	Marble Bar	18.80	208	*e*P		Pn		16 51 17.6	+1.1
ASAR	Alice Springs	19.56	167	P		Pn		16 51 26.0	+0.5
	comp=Z,1.7nm,0.3s,baz=346,slow=10,SNR=162								
ASAR				S		S		16 55 03.4	+0.3
	baz=345,slow=24,SNR=3.4								
ASAR				PcP		PcP		16 55 43.8	+0.3
	comp=Z,0.2nm,0.3s,baz=9.1,slow=2.0,SNR=8.5								
ASAR	Alice Springs	19.56	167	P		Pn		16 51 26.0	+0.5
ASAR				S		S		16 55 03.4	+0.3
KSM	Kuching	19.64	287	*e*P		Pn		16 51 25.9	-0.8
CTAO	Charters Tower	22.79	134	P		P		16 51 57.2	-1.6
CTAO				pmax	pmax				
	comp=Z,27nm,1.2s,mb4.5								
CTAO	Charters Tower	22.79	134	P		P		16 51 57.2	-1.6
	comp=Z,27nm,1.2s,mb4.5								
STKA	Stephens Creek	29.61	158	P		P		16 53 02.9	+1.8
	comp=Z,1.6nm,0.7s,mb3.9,baz=353,slow=8.9,SNR=4.9								
STKA				LR		LR		17 04 17.3	
	comp=Z,71nm,18.5s,baz=28,slow=35								
STKA	Stephens Creek	29.61	158	*e*P		P		16 53 03.0	+1.9
STKA				LR		LR		17 04 17.3	
NWAO	Narrogin (SRO)	30.29	200	LR		LR		17 05 11.2	
	comp=Z,58nm,18.9s,baz=254,slow=36								
HNR	Honiara	31.05	101	P		P		16 53 14.1	0.0
	comp=Z,60nm,0.9s,mb5.4,baz=203,slow=3.4,SNR=4.2								
CMAR	Chiang Mai Arr	37.45	309	P		P		16 54 10.4	+1.0
	comp=Z,8.8nm,0.8s,mb4.7,baz=138,slow=7.3,SNR=83								
CMAR				PcP		PcP		16 56 28.6	+1.0
	comp=Z,1.2nm,0.8s,baz=169,slow=2.6,SNR=5.4								
WHN	Wuhan	37.63	339	P		P		16 54 13.3	+2.5
CHTO	Chiang Mai	37.66	309	*e*P		P		16 54 11.8	+0.6
CHTO				*e*				16 54 17.4	
CHTO				pmax	pmax				
	comp=Z,21nm,0.9s,mb4.9								
CHTO	Chiang Mai	37.66	309	*e*P		P		16 54 11.8	+0.7
	comp=Z,21nm,0.9s,mb4.9								
CHTO				*e*				16 54 17.4	
NJ2	Nanjing	37.68	346	*e*P		P		16 54 11.0	-0.2
NJ2				AMB	AMB				
	comp=Z,20nm,

	comp=N,17nm,0.6s,mb5.2								
YAK				*e*			16 57 50.5		
KBL	**Kabul**	**68.47**	**310**	*eP*		**P**	**16 57 57.5**	**-0.4**	
KBL				*e*			16 58 03.1		
KBL					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.7								
KBL	**Kabul**	**68.47**	**310**	*eP*		**P**	**16 57 57.5**	**-0.5**	
	comp=Z,5.9nm,0.8s,mb4.7								
KBL				*e*			16 58 03.1		
ZAA0	**Zalesovo Array**	**68.99**	**334**	*eP*		**P**	**16 57 59.8**	**-1.0**	
ZALV	**Zalesovo Beam**	**68.99**	**334**	P		**P**	**16 57 59.7**	**-1.1**	
	comp=Z,5.2nm,0.8s,mb4.5,baz=107,slow=5.0,SNR=18								
ZALV	**Zalesovo Beam**	**68.99**	**334**	P		**P**	**16 57 59.7**	**-1.1**	
SEY	**Seymchan**	**69.61**	**11**⇑	*eP*		**P**	**16 58 04.8**	**+0.4**	
KURK	**Kurchatov**	**69.95**	**329**	*eP*		**P**	**16 58 06.3**	**-0.5**	
KURK				*e*			16 58 12.3		
KURK					pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9								
KURK	**Kurchatov**	**69.95**	**329**	*eP*		**P**	**16 58 06.3**	**-0.5**	
	comp=Z,14nm,0.8s,mb5.0								
KURK				*e*			16 58 12.2		
NVS	**Novosibirsk**	**70.27**	**334**	*eP*		**P**	**16 58 07.4**	**-1.2**	
NVS					pmax	pmax			
	comp=Z,11nm,1.4s,mb4.6								
NVS					pmax	pmax			
	comp=E,12nm,1.5s								
VNDA	**Vanda**	**74.96**	**173**	P		**P**	**16 58 37.2**	**+1.0**	
	comp=E,2.8nm,0.8s,mb4.3,baz=327,slow=5.6,SNR=9.6								
BRVK	**Borovoye**	**75.58**	**328**	*eP*		**P**	**16 58 39.8**	**-0.3**	
BRVK				*e*			16 58 46.0		
BRVK					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7								
BRVK	**Borovoye**	**75.58**	**328**	*eP*		**P**	**16 58 39.8**	**-0.3**	
	comp=Z,8.3nm,0.9s,mb4.7								
BRVK				*e*			16 58 46.0		
TIXI	**Tiksi**	**76.07**	**360**⇓	*iP*		**P**	**16 58 41.9**	**-0.7**	
TIXI					pmax	pmax			
	comp=Z,11nm,1.8s,mb4.5								
TIXI	**Tiksi**	**76.07**	**360**	*eP*		**P**	**16 58 42.2**	**-0.4**	
	comp=Z,6.8nm,0.9s,mb4.6								
BILL	**Bilibino**	**76.98**	**14**	*eP*		**P**	**16 58 48.4**	**+0.6**	
BILL					pmax	pmax			
	comp=Z,8.0nm,2.0s,mb4.3								
AKTK	**Aktyubinsk**	**81.57**	**322**	P		**P**	**16 59 13.2**	**+0.1**	
AKTO	**Aktyubinsk**	**81.57**	**322**	P		**P**	**16 59 13.2**	**+0.1**	
	comp=Z,5.9nm,0.7s,mb4.6,baz=114,slow=6.4,SNR=19								
ARU	**Arti**	**83.14**	**328**	*c iP*		**P**	**16 59 20.8**	**-0.5**	
ARU				*e*			17 02 28.8		
ARU					S	S	17 09 38.5	0.0	
ARU					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7								
MIB	**Mutribah**	**85.06**	**300**	*eP*		**P**	**16 59 31.0**	**-0.7**	
MIB					AMb	AMB	16 59 37.8		
	comp=Z,27nm,0.9s,mb5.4								
NAY	**Al-Naaiem**	**85.07**	**300**	*eP*		**P**	**16 59 30.7**	**-1.0**	
NAY					AMb	AMB	16 59 31.9		
	comp=Z,15nm,0.8s,mb5.2								
QSPA	**South Pole Qui**	**85.39**	**180**	P		**P**	**16 59 32.5**	**+0.2**	
	comp=Z,1.6nm,0.7s,mb4.3,baz=250,slow=1.8,SNR=11								
ARCES	**ARCESS Array B**	**98.98**	**340**	P		**P**	**17 00 34.4**	**-1.3**	
	comp=Z,4.1nm,0.9s,mb5.0,baz=93,slow=7.3,SNR=9.7								
YKA	**Yellowknife Ar**	**106.00**	**26**	PKiKP		PKiKP	17 05 18.8	-0.2	
	comp=Z,0.4nm,0.7s,baz=305,slow=1.6,SNR=8.0								
YKA	**Yellowknife Ar**	**106.00**	**26**	PKPdf		PKiKP	17 05 18.8	-0.2	
PDAR	**Pinedale Array**	**115.86**	**44**	PKP		PKPdf	17 05 39.4	+1.1	
	comp=Z,0.3nm,0.6s,baz=310,slow=6.9,SNR=3.5								
TXAR	**Lajitas Array**	**124.48**	**57**	PKP		PKPdf	17 05 55.5	+0.2	
	comp=Z,0.5nm,0.8s,baz=225,slow=1.6,SNR=4.1								
TOA0	**Torodi Ar. Sit**	**127.36**	**283**	*e*PKPdf		PKPdf	17 06 01.6	+0.4	
TORD	**Torodi Ar. Bea**	**127.36**	**283**	PKP		PKPdf	17 06 01.2	+0.1	
	comp=Z,2.2nm,0.8s,baz=56,slow=2.3,SNR=12								
CPUP	**Villa Florida**	**148.67**	**169**	PKPbc		PKPbc	17 06 44.1	+0.7	
	comp=Z,8.2nm,0.8s,baz=161,slow=2.0,SNR=22								
CPUP	**Villa Florida**	**148.67**	**169**	*e*PKPdf		PKPdf	17 06 40.6	+0.9	
CPUP				*e*PKPbc		PKPbc	17 06 44.1	+0.7	
CPUP				PKPbc		PKPbc	17 06 44.1	+0.7	
ATAH	**Atahualpa**	**150.31**	**113**	PKPbc		PKPab	17 06 50.4	-3.7	
	comp=Z,11nm,0.8s,baz=76,slow=2.7,SNR=7.0								

*CSEM **26** 16:58:31.9±0.1,3856N×29.11E,h4km±1km, MD2.9, Error ellipse: s-maj=3.5km s-min=2.2km az=19.0*
*ISCJB **26** 16:58:32.6±0.4,3860N±003×29.13E±003,h10km, Error ellipse: s-maj=4.3km s-min=3.4km az=13.7*
*ISK **26** 16:58:32.4,3856N×29.14E, h4km, MD2.7*
*DDA **26** 16:58:32.6,3861N×29.15E, h7km±4km, Md2.9*
ISC 26 16:58:33.0±0.5,3861N±003×2914E±003,h3km±8km,n15,
σ0§49/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHAL	**Karahalli**	**0.37**	**131**	*iP*	**Pg**	**16 58 39.9**	**-0.1**
KHAL				*i* S	**Sg**	**16 58 45.1**	**+0.2**
KULA	**Kula-Manisa**	**0.39**	**255**	*e*PG	**Pg**	**16 58 40.8**	**+0.4**
KULA				*e*SG	**Sg**	**16 58 45.8**	**+0.3**
KHL	**Karahalli**	**0.42**	**134**	*e*PG	**Pg**	**16 58 40.4**	**-0.6**
KHL				*e*SG	**Sg**	**16 58 46.9**	**+0.4**
MANT	**Manisa**	**0.47**	**255**	*i* P	**Pg**	**16 58 42.0**	**-0.1**
MANT				*i* S	**Sg**	**16 58 48.4**	**+0.2**
GDZ	**Gediz**	**0.54**	**29**	*i* P	**Pg**	**16 58 43.1**	**-0.3**
GDZ				*i* S	**Sg**	**16 58 50.7**	**+0.2**
ALT	**Altintas**	**0.88**	**60**	*e*PG	**Pg**	**16 58 49.3**	**-0.5**
AKHS	**Akhisar**	**1.07**	**285**	*i* P	**Pg**	**16 58 52.8**	**-0.8**
AKHS				*i* S	**Sg**	**16 59 07.7**	**+0.3**
AKS	**Akhisar**	**1.07**	**285**	*e*PN	**Pn**	**16 58 53.9**	**-1.0**
DURS	**Dursunbey**	**1.11**	**332**	*i* P	**Pg**	**16 58 54.4**	**+0.1**
DURS				*i* S	**Sg**	**16 59 09.5**	**+0.7**
ESKT	**Eskisehir**	**1.61**	**55**	*e*PN	**Pn**	**16 59 02.8**	**+0.5**
CAVI	**Cavuskoy**	**1.68**	**19**	*e*PN	**Pn**	**16 59 03.8**	**+0.6**
KCT	**Karacabey**	**1.76**	**340**	*e*PN	**Pb**	**16 59 05.5**	**-0.4**
GEMT	**Gemlik**	**1.82**	**1**	*e*PN	**Pb**	**16 59 06.5**	**-0.4**
ARMT	**Armutlu**	**1.96**	**354**	*e*PN	**Pb**	**16 59 08.9**	**-0.5**
GULT	**Gulveren**	**2.10**	**30**	*e*PN	**Pn**	**16 59 10.0**	**+0.9**

*NEIC **26** 17:00:17.3±1.0,688N×8276W,h10km,mb4.4/1, Error ellipse: s-maj=17.0km s-min=13.9km az=45.0*
*ISCJB **26** 17:00:18.6±0.8,695N±007×8274W±007,h33km,mb3.8/5, MS3.4/2, Error ellipse: s-maj=12.6km s-min=5.2km az=137.2*
*CASC **26** 17:00:20.5±1.9,727N×8280W,h0km±23km,MD4.3, mb4.4(NEIC)*
*IDC **26** 17:00:30.6±6.7,808N×8224W,h64km±43km,mb3.5/5, mb1 3.9/7,mb1mx3.6/20,mbtmp3.7/7,ML3.8/2,MS3.4/4, Ms1 3.4/4,ms1mx3.0/22, Error ellipse: s-maj=142.5km s-min=30.8km az=18.0*
ISC 26 17:00:20.6±0.8,697N±007×8275W±007,h35km,n29,
σ1§02/36,mb3.8/5,MS3.4/2,3C-2D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**1.73**	**346**	*eP*	**Pn**	**17 00 46.5**	**-1.7**
ACR				*eS*	**Sn**	**17 01 07.5**	**-1.5**
BAR1		**2.33**	**346**	*eP*	**Pn**	**17 00 56.0**	**-0.4**
BAR1				*eS*	**Sn**	**17 01 23.0**	**-0.9**
BUS	**Buena Vista**	**2.76**	**339**⇑	*eP*	**Pn**	**17 01 02.4**	**0.0**
QCR	**Quepos**	**2.82**	**330**⇑	*eP*	**Pn**	**17 01 02.3**	**-0.9**
QCR				*eS*	**Sn**	**17 01 36.7**	**+0.8**
LCR2	**La Lucha 2**	**3.02**	**336**	*eP*	**Pn**	**17 01 04.5**	**-1.6**
URSC	**Urasca**	**3.03**	**340**	*eP*	**Pn**	**17 01 06.6**	**+0.5**
URSC				*eS*	**Sn**	**17 01 40.8**	**-0.3**
LAJ	**Bijagual**	**3.18**	**335**⇓	*eP*	**Pn**	**17 01 08.3**	**+0.1**
LAJ				*eS*	**Sn**	**17 01 46.9**	**+2.0**
SJS	**Escuela Geolog**	**3.22**	**336**	*eP*	**Pn**	**17 01 09.2**	**+0.4**
SJS				*eS*	**Sn**	**17 01 46.1**	**+0.1**
PRS1	**Puriscal**	**3.37**	**333**	*eP*	**Pn**	**17 01 09.7**	**-1.1**
PRS1				*eS*	**Sn**	**17 01 48.5**	**-1.1**
CGA2	**Cerro Gallo 2**	**3.47**	**331**	*eP*	**Pn**	**17 01 12.1**	**-0.1**
CGA2				*eS*	**Sn**	**17 01 53.6**	**+1.5**
BCIP	**Isla Barro Col**	**3.62**	**53**	*eP*	**Pn**	**17 01 13.7**	**-0.5**
JCR	**Jicaral**	**3.70**	**321**⇑	*eP*	**Pn**	**17 01 14.3**	**-1.0**
JCR				*eS*	**Sn**	**17 01 57.7**	**0.0**
FORC	**Fortuna**	**3.96**	**331**⇓	*eP*	**Pn**	**17 01 19.9**	**+0.9**
CUI	**Cuipilapa**	**4.38**	**327**	*i* P	**Pn**	**17 01 24.8**	**+0.2**
CUI				*i* S	**Sn**	**17 02 14.8**	**+0.4**
OTAV	**Otavalo**	**7.94**	**147**	*eP*	**Pn**	**17 02 11.8**	**-1.9**
	12nm,1.0s						
SDV	**Santo Domingo**	**12.15**	**80**	P	**Pn**	**17 03 12.6**	**+1.3**
	0.3nm,0.3s,baz=316,slow=5.9,SNR=12						
SDV	**Santo Domingo**	**12.15**	**80**	*eP*	**Pn**	**17 03 12.2**	**+0.9**
MTDJ	**Mount Denham**	**12.29**	**24**	*e*Pn	**Pn**	**17 03 13.1**	**-0.1**
TEIG	**Tepich**	**14.23**	**338**	LR	LR	17 09 25.8	
	comp=Z,120nm,18.1s,baz=299,slow=40						
CMIG	**Matias Romero**	**15.55**	**311**	P	**Pn**	**17 04 01.1**	**+3.8**
	0.9nm,0.3s,baz=110,slow=10.0,SNR=9.9						
CMIG				LR	LR	17 10 00.5	
	comp=Z,103nm,21.8s,baz=115,slow=37						
SDDR	**Presa de Saban**	**16.34**	**42**	*eP*	**Pn**	**17 04 08.8**	**+1.4**
	22nm,0.7s						
TXAR	**Lajitas Array**	**29.73**	**321**	LR	LR	17 20 25.0	
	comp=Z,69nm,18.8s,MS3.3,baz=185,slow=41						
CPUP	**Villa Florida**	**41.28**	**144**	LR	LR	17 27 17.8	
	comp=Z,60nm,20.6s,MS3.5,baz=210,slow=38						
PDAR	**Pinedale Array**	**42.78**	**331**	P	**P**	**17 08 16.1**	**+1.2**
	0.7nm,0.9s,mb3.4,baz=138,slow=7.0,SNR=4.9						
ULM	**Lac du Bonnet**	**44.52**	**348**	P	**P**	**17 08 27.8**	**-0.8**
	4.0nm,0.8s,mb4.3,baz=150,slow=8.8,SNR=4.5						
NVAR	**Mina Array Bea**	**44.86**	**320**	P	**P**	**17 08 35.0**	**+3.4**
	0.8nm,0.6s,mb3.7,baz=130,slow=6.0,SNR=5.2						
NVAR	**Mina Array Bea**	**44.86**	**320**	P	**P**	**17 08 35.0**	**+3.4**
YKA	**Yellowknife Ar**	**60.12**	**344**	P	**P**	**17 10 24.8**	**+0.6**
	0.6nm,0.6s,mb3.8,baz=136,slow=6.9,SNR=16						
GERES	**GERESS Array B**	**89.04**	**41**	P	**P**	**17 13 12.9**	**+0.8**
	0.6nm,0.8s,mb4.0,baz=297,slow=4.4,SNR=4.6						

*BJI **26** 17:12:42.8,555N×13128E,h18km,mB5.3,mb5.5,Ms4.8, Msz4.2*
*ISCJB **26** 17:12:44.2±0.2,546N±003×13122E±004,h23km, mb5.6/125,MS4.1/29, Error ellipse: s-maj=5.7km s-min=3.7km az=155.1*
*MOS **26** 17:12:46.8±1.0,529N×13110E,h35km,mb5.6/39,Error ellipse: s-maj=11.0km s-min=6.1km az=120.3*
*GCMT **26** 17:12:51.8±0.2,532N×13115E,h62km±1km,MW5.1/59, Moment Tensor Solution. s59,c97; s50,c73; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.45±.18; Mθθ-6.34±.14; Mφφ1.89±.19; Mrt1.13±.18; Mθφ-0.58±.15; Mθr0.42±.15; Best double couple: M0 5.5800×10^16^ NP1:ϕ274.00000°, δ39.00000°, λ101.00000°. NP2: ϕ79.00000°, δ51.00000°, λ81.00000°. Principal axes: T 4.6140, Plg81.0000°, Azm306.0000°; N 1.8890, Plg7.0000°, Azm85.0000°; P -6.5030, Plg6.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **26** 17:12:51.8±0.8,538N×13115E,h70km±7km,mb5.4/38 Error ellipse: s-maj=6.2km s-min=4.2km az=53.0*
*DJA **26** 17:12:52, 531N×13130E,h82km, Mw5.4/17*
*IDC **26** 17:12:53.5±1.2,541N×13123E,h84km±9km,mb5.1/23, mb1 5.0/25,mb1mx5.0/26,mbtmp5.1/25,MS4.0/15, Ms1 4.0/15,ms1mx3.9/25,Error ellipse: s-maj=15.4km s-min=6.9km az=63.0*
ISC 26 17:12:46.2±0.2,548S±003×13124E±004,h24km, h24km±1.6km:pP-P,n436,σ1§16/326,mb5.6/125,MS4.1/29, 49C-19D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**3.12**	**313**	P	**Pn**	**17 13 38.1**	**+4.1**
AAI	**Ambon**	**3.51**	**300**	P	**Pn**	**17 13 43.4**	**+4.1**
LBMI	**Labuha**	**6.08**	**322**	P	**Pn**	**17 14 17.2**	**+2.5**
	825nm,1.0s,8μm3.3nm						
LBMI				S	**Sn**	**17 15 20.8**	**-2.8**
	825nm,1.0s,8μm3.3nm						
KAKA	**Kakadu**	**7.29**	**171**	*eP*	x	17 13 32.1	
	877nm,0.4s						
KAKA				*eS*	x	17 14 50.2	
TNTI	**Ternate**	**7.31**	**328**	P	**Pn**	**17 14 34.2**	**+2.7**
	236nm,1.0s,3μm0.8nm						
KDI	**Kendari**	**8.72**	**280**	P	**Pn**	**17 14 57.9**	**+7.0**
	475nm,1.2s,4μm1.5nm						
MNI	**Manado**	**9.38**	**317**	P	**Pn**	**17 15 02.2**	**+2.2**
	269nm,1.0s,3μm						
MNI				S	**Sn**	**17 16 42.5**	**-2.3**
	269nm,1.0s,3μm						
KAPI	**Kappang**	**11.45**	**272**	Pn	**Pn**	**17 15 35.9**	**+7.6**
	1μm,1.1s,SNR=6.6						
KAPI	**Kappang**	**11.45**	**272**	P	**Pn**	**17 15 35.8**	**+7.5**
	SNR=5.6						
KAPI	**Kappang**	**11.45**	**272**	P	**Pn**	**17 15 33.8**	**+5.5**
	5.6nm,0.3s,baz=91,slow=9.4,SNR=16						
KAPI				LR	LR	17 20 46.7	
	comp=Z,2μm,18.8s,baz=104,slow=41						
KAPI	**Kappang**	**11.45**	**272**	*eP*	**Pn**	**17 15 33.9**	**+5.6**
	225nm,1.1s						
KAPI	**Kappang**	**11.45**	**272**	P	**Pn**	**17 15 35.6**	**+7.3**
	121nm,1.8s						
PCI	**Palu**	**12.25**	**291**	P	**Pn**	**17 15 44.5**	**+5.2**
	169nm,1.5s,2μm						
DAV	**Davao City (W)**	**13.68**	**336**	P	**Pn**	**17 16 01.9**	**+3.1**
	25nm,0.3s,baz=64,slow=9.9,SNR=3.7						
FITZ	**Fitzroy Crossi**	**13.69**	**203**	*eP*	**Pn**	**17 15 57.0**	**-1.9**
	153nm,0.2s						
FITZ				*eS*	**Sn**	**17 18 18.8**	**-11**
FITZ	**Fitzroy Crossi**	**13.69**	**203**	*eP*	**Pn**	**17 15 56.8**	**-2.1**
	0.2nm,0.2s						
FITZ				*eS*	**Sn**	**17 18 18.7**	**-12**
FITZ	**Fitzroy Crossi**	**13.69**	**203**	P	**Pn**	**17 15 57.9**	**-1.0**
COEN	**Coen**	**14.47**	**126**	*eP*	**Pn**	**17 16 08.7**	**-0.9**
	86nm,0.4s						
COEN	**Coen**	**14.47**	**126**	P	**Pn**	**17 16 09.1**	**-0.5**
	122nm,1.0s,1μm						
WRAB	**Tennant Creek**	**14.69**	**168**	Pn	**Pn**	**17 16 11.0**	**-1.5**
	3μm,1.5s,SNR=68						
WRAB	**Tennant Creek**	**14.69**	**168**⇑	*eP*	**Pn**	**17 16 10.1**	**-2.4**
WRAB	**Tennant Creek**	**14.69**	**168**	*eP*	**Pn**	**17 16 09.9**	**-2.6**
	318nm,0.8s						
WRAB	**Tennant Creek**	**14.69**	**168**	P	**Pn**	**17 16 09.8**	**-2.7**
WRA	**Warramunga Arr**	**14.69**	**168**	P	**Pn**	**17 16 09.6**	**-3.0**
	22nm,0.3s,baz=351,slow=13,SNR=179						
WRA				S	**Sn**	**17 18 44.8**	**-10**
	32nm,0.3s,baz=355,slow=22,SNR=8.2						
WB2	**Warramunga Arr**	**14.70**	**168**⇓	*iP*	**Pn**	**17 16 09.8**	**-2.9**
WB2				*eS*	**Sn**	**17 18 46.7**	**-8.2**
WB2	**Warramunga Arr**	**14.70**	**168**	*eP*	**Pn**	**17 16 10.1**	**-2.6**
PMG	**Port Moresby**	**16.26**	**105**	P	**Pn**	**17 16 33.7**	**+0.5**
	2.3nm,0.3s,baz=293,slow=9.6,SNR=10						
PMG	**Port Moresby**	**16.26**	**105**	*eP*	**Pn**	**17 16 35.4**	**+2.2**
PMG				pmax	pmax		
	comp=Z,98nm,1.1s						
PMG	**Port Moresby**	**16.26**	**105**	*eP*	**Pn**	**17 16 35.4**	**+2.2**
	comp=Z,98nm,1.1s						
PMG	**Port Moresby**	**16.26**	**105**	P	**Pn**	**17 16 36.2**	**+3.0**
	comp=Z,87nm,1.4s,comp=Z,873nm						
BBKI	**Banjar Baru**	**16.47**	**276**	P	**Pn**	**17 16 39.9**	**+4.1**
	comp=Z,400nm,1.3s,comp=Z,5μm						
TSM	**Tawau**	**16.50**	**306**	⇑P	**Pn**	**17 16 38.1**	**+1.8**
MYLDM	**Lahad Datu**	**16.55**	**310**	⇓P	**Pn**	**17 16 41.2**	**+4.4**
MYLDM	**Lahad Datu**	**16.55**	**310**	P	**Pn**	**17 16 40.7**	**+3.9**
	comp=Z,234nm,1.0s,comp=Z,3μm						
KMMI	**Kalianget**	**17.24**	**264**	P	**Pn**	**17 16 51.1**	**+5.6**
	comp=Z,740nm,1.0s						
PLKI	**Palangkaraya**	**17.55**	**280**	P	**Pn**	**17 16 52.7**	**+3.3**
	comp=Z,277nm,0.9s,comp=Z,4μm						
SDKM	**Sandakan**	**17.84**	**308**	⇑P	**Pn**	**17 16 57.7**	**+4.6**
ASAR	**Alice Springs**	**18.27**	**172**	P	**Pn**	**17 16 57.0**	**-1.1**
	comp=Z,14nm,0.3s,baz=354,slow=9.1,SNR=519						
ASAR				S	**Sn**	**17 20 12.2**	**-9.3**
	comp=Z,9.8nm,0.3s,baz=352,slow=28,SNR=6.2						
KRKI	**Karangkates**	**18.84**	**261**	P	**Pn**	**17 17 11.8**	**+6.6**
KKM	**Kota Kinabalu**	**18.86**	**307**	*eP*	**Pn**	**17 17 05.9**	**+0.4**
	comp=Z,141nm,1.0s						
KKM	**Kota Kinabalu**	**18.86**	**307**	⇑P	**Pn**	**17 17 06.9**	**+1.4**
KKM	**Kota Kinabalu**	**18.86**	**307**	P	**Pn**	**17 17 06.5**	**+1.0**
	comp=Z,175nm,1.0s,comp=Z,2μm						
KDM	**Kudat**	**18.92**	**310**	⇓P	**Pn**	**17 17 07.5**	**+1.3**
MBWA	**Marble Bar**	**19.17**	**215**	P	**Pn**	**17 17 10.5**	**+1.3**
	SNR=9.2						
MBWA	**Marble Bar**	**19.17**	**215**	*eP*	**Pn**	**17 17 09.7**	**+0.6**
	comp=Z,144nm,0.6s						
MBWA	**Marble Bar**	**19.17**	**215**	P	**Pn**	**17 17 10.0**	**+0.9**
	comp=Z,266nm,0.7s,comp=Z,2μm						
SJI	**Sawahan**	**19.47**	**262**	P	**Pn**	**17 17 14.9**	**+2.1**
	comp=Z,192nm,0.8s						
BTM	**Bintulu**	**20.07**	**295**	⇑P	**P**	**17 17 19.4**	**+1.3**
STKI	**Sintang**	**20.48**	**285**	P	**P**	**17 17 22.9**	**+0.4**
	comp=Z,74nm,0.9s						
SBUM	**Sibu**	**20.56**	**292**	⇑P	**P**	**17 17 25.1**	**+1.8**
SBUM	**Sibu**	**20.56**	**292**	P	**P**	**17 17 24.6**	**+1.2**
	comp=Z,91nm,1.2s,comp=Z,685nm						
CTA	**Charters Tower**	**20.60**	**136**	P	**P**	**17 17 26.2**	**+2.5**
	comp=Z,85nm,0.9s,baz=320,slow=13,SNR=22						
CTA				S	**S**	**17 21 11.7**	**-1.3**
	comp=Z,23nm,0.7s,baz=45,slow=19,SNR=4.2						
CTA	**Charters Tower**	**20.60**	**136**	P	**P**	**17 17 26.2**	**+2.5**
CTA				S	**S**	**17 21 11.7**	**-1.3**
CTA				pmax	pmax		
	comp=Z,85nm,0.9s						
CTA				smax			
	comp=N,23nm,0.7s						
CTA	**Charters Tower**	**20.60**	**136**	*eP*	**P**	**17 17 27.3**	**+3.6**
	comp=N,123nm,0.9s						
CTA				*eS*	**S**	**17 21 06.5**	**-6.5**
CTAO	**Charters Tower**	**20.60**	**136**	*eP*	**P**	**17 17 27.3**	**+3.6**
	comp=N,180nm,0.9s						
CTAO				LR	LR		
	comp=Z,800nm,22.0s,MS4.0						
CTAO	**Charters Tower**	**20.60**	**136**	P	**P**	**17 17 28.5**	**+4.8**
	comp=Z,252nm,0.9s,comp=Z,2μm						
KSM	**Kuching**	**22.01**	**288**	⇑P	**P**	**17 17 40.7**	**+1.7**
KSM	**Kuching**	**22.01**	**288**	P	**P**	**17 17 41.9**	**+2.9**
	comp=Z,77nm,1.1s,mb5.0						
JCJI	**Jatiwangi**	**22.86**	**266**	P	**P**	**17 17 47.6**	**-0.5**
	comp=Z,326nm,1.3s,mb5.6						
GUMO	**Guam**	**23.28**	**35**	LR	LR	17 26 55.4	
	comp=Z,299nm,19.5s,MS3.8,baz=251,slow=36						
LEM	**Lembang**	**23.52**	**266**	P	**P**	**17 17 54.5**	**-0.4**
	comp=Z,160nm,1.2s,mb5.3						
TPI	**Tanjungpandan**	**23.67**	**276**	P	**P**	**17 18 05.7**	**+9.4**
CBJI	**Citeko**	**24.27**	**267**	P	**P**	**17 18 01.7**	**-0.1**
	comp=Z,716nm,1.0s,mb6.0						
DBJI	**Dramaga**	**24.37**	**266**	P	**P**	**17 17 59.4**	**-3.3**
	comp=Z,112nm,1.1s,mb5.2						
FORT	**Forrest**	**25.35**	**186**	*eP*	**P**	**17 18 12.7**	**+1.3**
	comp=Z,249nm,0.6s,mb5.9						
FORT				*eS*	**S**	**17 22 55.9**	**+20**
FORT	**Forrest**	**25.35**	**186**	*eP*	**P**	**17 18 12.7**	**+1.3**
	comp=Z,262nm,0.6s,mb5.9						
EIDS	**Eidsvold**	**27.44**	**138**	P	**P**	**17 18 32.0**	**+1.7**
	comp=Z,26nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**28.00**	**161**	P	**P**	**17 18 37.1**	**+1.8**
	comp=Z,11nm,0.3s,mb4.9,baz=336,slow=8.3,SNR=122						
STKA				S	**S**	**17 23 13.7**	**-4.6**
	comp=Z,20nm,1.0s,baz=253,slow=19,SNR=4.3						
STKA				LR	LR	17 31 32.9	
	comp=Z,515nm,19.3s,MS4.1,baz=333,slow=40						
STKA	**Stephens Creek**	**28.00**	**161**	*eP*	**P**	**17 18 37.1**	**+1.8**
	comp=Z,22nm,0.6s,mb5.0						
STKA				*eS*	**S**	**17 23 14.9**	**-3.4**
STKA	**Stephens Creek**	**28.00**	**161**	*eP*	**P**	**17 18 36.8**	**+1.6**
	comp=Z,32nm,0.6s,mb5.1						
MYKOM	**Kota Tinggi**	**28.29**	**284**	⇑P	**P**	**17 18 37.4**	**-0.7**
HNR	**Honiara**	**28.73**	**100**	P	**P**	**17 18 42.7**	**+0.7**
	comp=Z,40nm,0.8s,mb5.2,baz=266,slow=3.2,SNR=5.1						
KGM	**Kluang**	**28.86**	**284**	⇑P	**P**	**17 18 42.5**	**-0.7**
RGRI	**Rengat**	**29.30**	**279**	P	**P**	**17 18 44.0**	**-3.1**
	comp=Z,180nm,0.5s,mb6.1						
MUN	**Mundaring**	**29.88**	**206**	*eP*	**P**	**17 18 53.0**	**+1.0**
KTGM	**Kuala Trenggan**	**30.04**	**290**	⇑P	**P**	**17 18 53.4**	**-0.3**
NWAO	**Narrogin (SRO)**	**30.27**	**204**	P	**P**	**17 18 56.7**	**+1.3**
	comp=Z,29nm,0.7s,mb5.1,baz=25,slow=9.3,SNR=47						
NWAO				LR	LR	17 33 12.9	
	comp=Z,511nm,19.1s,MS4.2,baz=26,slow=40						
NWAO	**Narrogin (SRO)**	**30.27**	**204**	P	**P**	**17 18 57.1**	**+1.7**
NWAO				pmax	pmax		
	comp=Z,19nm,0.6s						
NWAO	**Narrogin (SRO)**	**30.27**	**204**	*eP*	**P**	**17 18 56.5**	**+1.0**
	comp=Z,19nm,0.6s,mb5.0						
SSLB	**Suanglung**	**30.77**	**341**	*eP*	**P**	**17 18 58.0**	**-1.8**
	comp=Z,54nm,1.0s,mb5.3						
FRIM	**Kepong**	**30.82**	**286**	⇓P	**P**	**17 18 59.5**	**-1.0**
PDSI	**Padang**	**31.05**	**277**	P	**P**	**17 19 00.5**	**-2.1**
	comp=Z,62nm,0.7s,mb5.5						
PPI	**Padang Panjang**	**31.19**	**

CHTO pmax pmax
comp=Z,99nm,0.8s,mb5.6
CHTO Chiang Mai 39.94 308 *e*P **P 17 20 19.0 +0.1**
comp=Z,99nm,0.8s,mb5.6
CHTO *e*PcP PcP 17 22 24.5 +0.3
KMI Kunming 41.14 319 P **P 17 20 29.8 +1.1**
KMI AP pP 17 20 40.8 +4.7
KMI PP PP 17 22 08.8 +4.8
KMI PCP PcP 17 22 29.5 +1.5
KMI S **S 17 26 41.3 +0.6**
KMI XS sS 17 26 59.8 +7.0
KMI SS SS 17 29 39.0 -5.1
KMI AMB AMB
comp=Z,67nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,183nm,3.1s
KMI LR LR
comp=N,104nm,19.3s,MS4.0
KMI LR LR
comp=E,198nm,18.6s,MS4.0
KMI LR LR
comp=Z,170nm,21.3s,MS3.9
MJAR Matsushiro Arr 42.30 8 P **P 17 20 37.1 -0.9**
comp=Z,54nm,0.7s,mb5.3,baz=183,slow=9.1,SNR=133
MJAR LR LR 17 38 05.5
comp=Z,292nm,18.5s,MS4.2,baz=200,slow=36
MJAR Matsushiro Arr 42.30 8 P **P 17 20 37.1 -0.9**
MJAR pmax pmax
comp=Z,54nm,0.7s
MJAR MLR MLR
comp=Z,292nm,18.5s
MAJO Matsushiro 42.30 8 P **P 17 20 36.9 -1.1**
MAJO pmax pmax
comp=Z,100nm,0.7s,mb5.5
MAJO Matsushiro 42.30 8 *e*P **P 17 20 36.9 -1.1**
comp=Z,103nm,0.7s,mb5.6
MAT Matsushiro 42.30 8 P **P 17 20 37.0 -1.0**
MAT *e*S **S 17 26 49.0 -8.6**
KSRS Korea Array 42.82 356 P **P 17 20 42.7 +0.5**
comp=Z,5.4nm,0.7s,mb4.4,baz=168,slow=8.5,SNR=26
KSRS PcP PcP 17 22 32.8 -0.5
comp=Z,8.0nm,0.8s,baz=175,slow=3.9,SNR=12
KSRS LR LR 17 35 56.6
comp=Z,102nm,21.3s,MS3.7,baz=175,slow=32
KSRS Korea Array 42.82 356 P **P 17 20 42.7 +0.5**
KSRS 17 22 32.8
KSRS pmax pmax
comp=Z,5.0nm,0.7s
KSRS MLR MLR
comp=Z,102nm,21.3s,MS3.7
TIA Tai'an 43.53 343 *e*P **P 17 20 48.0 0.0**
XAN Xi'an 44.61 333 P **P 17 20 56.0 -0.7**
XAN AP pP 17 21 03.3 -0.8
XAN PP PP 17 22 41.5 +0.4
XAN S **S 17 27 33.0 +1.6**
XAN AMB AMB
comp=Z,130nm,1.0s,mb5.7
XAN LR LR
comp=Z,272nm,31.5s,MS4.0
CD2 Chengdu 44.71 326 P **P 17 20 56.8 -0.8**
CD2 AP pP 17 21 02.8 -2.2
CD2 XP sP 17 21 05.8 -2.1
CD2 PCP PcP 17 22 39.0 -0.8
CD2 PP PP 17 22 42.5 +0.2
CD2 PCS PcS 17 26 31.3 -2.1
CD2 S **S 17 27 32.5 -0.5**
CD2 XS sS 17 27 42.5 -2.7
CD2 SS SS 17 30 45.0 -9.1
CD2 AMB AMB
comp=Z,60nm,1.1s,mb5.3
CD2 AMB AMB
comp=Z,170nm,7.4s
CD2 LR LR
comp=N,520nm,5.4s
CD2 LR LR
comp=Z,260nm,8.9s
IMP Imphal 47.13 311 *e*P **P 17 21 15.0 -1.8**
BJI Beijing 47.37 344 P **P 17 21 18.3 0.0**
BJI S **S 17 28 02.0 -8.9**
BJI AMB AMB
comp=Z,155nm,0.8s,mb6.0
BJI AMB AMB
comp=Z,210nm,3.6s
BJI LR LR
comp=N,162nm,26.0s,MS4.1
BJI LR LR
comp=E,211nm,25.5s,MS4.1
BJI LR LR
comp=Z,164nm,23.7s,MS3.9
SNY Shenyang 47.59 352 ⇑P **P 17 21 20.0 0.0**
SNY S **S 17 28 06.3 -7.7**
SNY SS SS 17 31 34.5 -8.0
SNY AMB AMB
comp=Z,55nm,0.8s,mb5.6
SNY AMB AMB
comp=Z,196nm,5.1s
SNY LR LR
comp=E,233nm,26.4s
SNY LR LR
comp=Z,308nm,37.1s
LZH Lanzhou 48.67 330 ⇓P **P 17 21 29.3 +0.8**
LZH AP pP 17 21 37.5 +1.5
LZH XP sP 17 21 42.0 +3.1
LZH PP PP 17 23 23.3 +1.5
LZH *e*S **S 17 28 28.3 -1.2**
LZH XS sS 17 28 42.0 +0.2
LZH SS SS 17 31 54.3 -5.9
LZH AMB AMB
comp=Z,140nm,1.0s,mb6.0
LZH AMB AMB
comp=Z,590nm,4.0s
LZH LR LR
comp=N,714nm,15.1s
LZH LR LR
comp=Z,936nm,16.7s,MS4.8
SHL Shillong 49.11 311 ⇑*i*P **P 17 21 32.0 -0.1**
SHL *ex* x 17 28 25.0
CN2 Changchun 49.33 354 ⇑P **P 17 21 33.0 -0.4**
CN2 *e*AP pP 17 21 39.0 -1.8
CN2 PCP PcP 17 22 55.8 0.0
CN2 *e*S **S 17 28 37.8 -0.6**
CN2 AMB AMB
comp=Z,90nm,0.7s,mb5.9
HHC Hu-ho-hao-te 49.51 340 *e*P **P 17 21 35.3 +0.5**
HHC AP pP 17 21 39.5 -2.8
HHC XP sP 17 21 42.0 -3.2
HHC PCP PcP 17 22 56.3 -0.3
HHC PP PP 17 23 30.5 +1.2
HHC PCS PcS 17 26 52.0 -1.1
HHC *e*S **S 17 28 41.5 +0.4**
HHC XS sS 17 28 49.3 -4.1
HHC SCS ScS 17 31 22.8 -2.4
HHC SS SS 17 32 09.3 -4.2
HHC AMB AMB
comp=Z,51nm,1.0s,mb5.5
HHC AMB AMB
comp=Z,170nm,3.6s
HHC LR LR
comp=N,72nm,20.2s,MS4.1
HHC LR LR
comp=E,156nm,15.5s,MS4.1
HHC LR LR
comp=Z,132nm,17.8s,MS4.0
BTO Baotou 49.83 339 *e*P **P 17 21 36.3 -0.9**
MDJ Mudanjiang 49.88 358 P **P 17 21 38.0 +0.4**
MDJ AP pP 17 21 44.3 -0.8
MDJ XP sP 17 21 47.0 -1.0
MDJ PP PP 17 23 32.8 +0.1
MDJ SCP ScP 17 26 52.5 +0.3
MDJ PCS PcS 17 26 55.0 +0.5
MDJ S **S 17 28 47.8 +1.6**
MDJ XS sS 17 28 58.3 -0.2
MDJ AMB AMB
comp=Z,47nm,1.4s,mb5.3
MDJ AMB AMB
comp=Z,112nm,5.4s
MDJ LR LR
comp=N,79nm,24.7s,MS3.7
MDJ LR LR
comp=E,56nm,26.6s,MS3.7
MDJ LR LR
comp=Z,139nm,39.0s
RPZ Rata Peaks 51.71 144 P **P 17 21 53.2 +1.7**
comp=Z,30nm,0.9s,mb5.2,baz=107,slow=2.1,SNR=7.8
LSA Lhasa 51.98 315 P **P 17 21 54.5 +0.8**
LSA AMB AMB
comp=Z,90nm,0.8s,mb5.8
PALK Pallekele 51.99 284 P **P 17 21 53.9 -0.1**
comp=Z,93nm,0.6s,mb5.9,SNR=6.4
PALK Pallekele 51.99 284 *e*P **P 17 21 52.6 -1.4**
PALK pmax pmax
comp=Z,19nm,0.7s,mb5.1
PALK Pallekele 51.99 284 *e*P **P 17 21 52.6 -1.4**
comp=Z,19nm,0.7s,mb5.1
PALK Pallekele 51.99 284 P **P 17 21 53.9 -0.1**
comp=Z,20nm,1.3s,mb4.9
VIS Vishakhapatnam 52.60 297 *e*P **P 17 21 56.7 -1.7**
VIS AMb AMB 17 22 00.1
comp=Z,74nm,1.0s,mb5.6
BOK Bokaro 52.93 305 *e*P **P 17 22 00.4 -0.4**
BOK AMb AMB 17 22 02.5
comp=Z,52nm,0.8s,mb5.5
ODAN Odare 53.22 309 *e*P **P 17 22 02.9 0.0**
comp=Z,278nm,0.8s,mb6.3
TAPN Taplejung 53.22 310 *e*P **P 17 22 03.0 +0.1**
comp=Z,234nm,0.5s,mb6.3
GTA Gaotai 53.26 330 ⇑*i*P **P 17 22 03.3 +0.3**
GTA AP pP 17 22 10.5 0.0
GTA XP sP 17 22 13.8 +0.4
GTA PCP PcP 17 23 11.3 +0.7
GTA PP PP 17 24 05.3 +1.9
GTA S **S 17 29 31.8 -1.1**
GTA XS sS 17 29 44.5 -0.8
GTA SS SS 17 33 10.0 -3.1
GTA AMB AMB
comp=Z,68nm,1.0s,mb5.5
GTA AMB AMB
comp=Z,199nm,6.2s
GTA LR LR
comp=N,138nm,11.3s,MS4.4
GTA LR LR
comp=E,160nm,11.9s,MS4.4
GTA LR LR
comp=Z,133nm,12.8s,MS4.2
HABR Khabarovsk 53.82 3 *e*P **P 17 22 05.8 -1.1**
HABR *e*PP pP 17 22 16.1 +1.6
HABR *e*SP sP 17 22 20.2 +2.8
HABR *e* 17 23 11.5
HABR *e* 17 24 06.4
HABR *e*S **S 17 29 40.0 -0.3**
HABR *e*SS sS 17 29 56.6 +3.9
HABR *e*SS SS 17 33 21.5 -0.2
HABR pmax pmax
comp=Z,91nm,1.4s,mb5.5
HABR pmax pmax
comp=N,18nm,0.9s
HABR pmax pmax
comp=E,37nm,1.6s
HABR MLR MLR
comp=Z,101nm,19.0s,MS3.9
RAMN Ramite 53.87 309 *e*P **P 17 22 08.1 +0.4**
comp=Z,574nm,0.7s,mb6.6
KLR Kul'dur 54.48 0 *e*P **P 17 22 07.8 -3.9**
KLR *e* 17 23 11.1
KLR pmax pmax
comp=E,37nm,1.6s
KLR pmax pmax
comp=Z,85nm,1.6s,mb5.4
JIRN Jiri 54.54 310 *e*P **P 17 22 12.7 +0.1**
comp=Z,161nm,0.6s,mb6.2
GUN Gumba 54.91 310 *e*P **P 17 22 15.4 +0.2**
comp=Z,408nm,0.7s,mb6.6
PKI Pulchoki 55.10 309 *e*P **P 17 22 16.4 -0.2**
comp=Z,164nm,0.8s,mb6.1
PKIN Phulchoki 55.11 309 *e*P **P 17 22 16.4 -0.3**
comp=Z,109nm,0.8s,mb5.9
KKN Kakani 55.31 309 *e*P **P 17 22 18.0 -0.1**
comp=Z,235nm,0.8s,mb6.2
DMN Daman 55.35 309 *e*P **P 17 22 18.5 +0.1**
comp=Z,409nm,1.0s,mb6.4
KOD Kodaikanal 55.78 286 *e*P **P 17 22 21.0 -0.7**
KOD AMb AMB 17 22 21.6
comp=Z,69nm,0.7s,mb5.8
GKN Gorkha 55.91 309 *e*P **P 17 22 22.3 -0.1**
comp=Z,379nm,0.7s,mb6.5
KOLN Koldanda 56.60 308 *e*P **P 17 22 27.6 +0.2**
comp=Z,323nm,0.7s,mb6.5
DANN Dangsing 56.75 309 *e*P **P 17 22 28.5 +0.1**
comp=Z,220nm,0.7s,mb6.3
HYB Hyderabad 56.77 295 *e*P **P 17 22 27.5 -1.3**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.5
HYB Hyderabad 56.77 295 *i* P **P 17 22 27.5 -1.3**
comp=Z,50nm,1.0s,mb5.5
HYB *e* 17 22 46.5
HYB *e* 17 22 53.5
HYB *e* 17 23 13.0
HYB Hyderabad 56.77 295 *e*P **P 17 22 27.5 -1.3**
comp=Z,50nm,1.0s,mb5.5
ULN Ulaanbaatar 57.22 341 P **P 17 22 32.6 +1.3**
SNR=30
ULN Ulaanbaatar 57.22 341 P **P 17 22 32.4 +1.0**
ULN pmax pmax
comp=Z,53nm,1.0s,mb5.5
ULN Ulaanbaatar 57.22 341 *e*P **P 17 22 32.1 +0.8**
comp=Z,53nm,1.0s,mb5.5
ULN LR LR
comp=Z,97nm,19.0s,MS3.9
ULN Ulaanbaatar 57.22 341 P **P 17 22 31.9 +0.5**
comp=Z,77nm,1.3s,comp=Z,747nm,mb5.6
SONM Songino Array 57.41 340 P **P 17 22 33.0 +0.3**
comp=Z,35nm,0.9s,mb5.4,baz=159,slow=6.3,SNR=67
SONM PcP PcP 17 23 26.0 -0.4
comp=Z,10.0nm,0.7s,baz=152,slow=3.9,SNR=5.4
SONM Songino Array 57.41 340 P **P 17 22 33.0 +0.3**
SONM 17 23 26.0
SONM pmax pmax
comp=Z,35nm,0.9s
NGP Nagpur 57.61 299 *e*P **P 17 22 33.0 -1.6**
NGP AMb AMB 17 22 33.7
comp=Z,72nm,1.4s,mb5.5
AKL Akola 59.23 298 *e*P **P 17 22 44.5 -1.5**
AKL AMb AMB 17 22 46.0
comp=Z,109nm,1.2s,mb5.8
CIT Chita 59.23 347 *e*P **P 17 22 45.9 +0.6**
CIT *e* 17 23 05.0
CIT *e* 17 23 34.1
CIT pmax pmax
comp=Z,87nm,1.8s,mb5.5
BHPL Bhopal 59.77 301 *e*P **P 17 22 48.4 -1.2**
BHPL AMb AMB 17 22 50.6
comp=Z,96nm,1.4s,mb5.7
ZAK Zakamensk 60.65 340 ⇑*i*P **P 17 22 55.6 +0.5**
ZAK *e* 17 23 39.4
ZAK pmax pmax
comp=Z,32nm,1.2s,mb5.3
KAD Karad 60.71 293 *e*P **P 17 22 55.5 -0.7**
KAD AMb AMB 17 22 59.5
comp=Z,32nm,0.9s,mb5.4
POO Poona 61.37 294 *ex* x 17 22 57.0
POO *e*P 17 22 59.1
POO AMb AMB 17 23 00.9
comp=Z,55nm,0.8s,mb5.8
DRV Dumont d'Urvil 61.39 176 S **S 17 31 21.0 +1.9**
DRV R 17 42 00.0
TLY Talaya 61.63 341 P **P 17 23 02.5 +0.7**
comp=Z,205nm,0.9s,mb6.3,SNR=6.3
TLY Talaya 61.63 341 P **P 17 23 03.1 +1.3**
SNR=8.7
TLY Talaya 61.63 341 *e*P **P 17 23 02.6 +0.8**
TLY *e* 17 31 17.3
TLY pmax pmax
comp=Z,42nm,1.0s,mb5.5
TLY Talaya 61.63 341 *e*P **P 17 23 02.5 +0.7**
comp=Z,32nm,1.0s,mb5.4
IRK Irkutsk 61.91 342 ⇑*i*P **P 17 23 03.9 +0.3**
IRK pmax pmax
comp=Z,118nm,1.1s,mb5.9
CLNS Chul'man 62.32 356 *e*P **P 17 23 06.6 +0.4**
CLNS pmax pmax
comp=Z,25nm,1.3s,mb5.2
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS pmax pmax
comp=N,12nm,1.1s
PETK Petropavlovsk- 62.51 18 P **P 17 23 08.3 +0.8**
comp=N,24nm,0.8s,mb5.4,baz=166,slow=4.7,SNR=21
PETK PcP PcP 17 23 46.3 -0.4
comp=N,6.4nm,0.7s,baz=167,slow=1.6,SNR=4.6
PETK LR LR 17 46 26.1
comp=N,89nm,19.9s,MS3.9,baz=211,slow=32
PETK Petropavlovsk- 62.51 18 P **P 17 23 08.4 +0.8**
PETK 17 23 46.3
MOY Mondy 62.52 339 *e*P **P 17 23 09.0 +1.3**
MOY pmax pmax
comp=Z,136nm,1.4s,mb5.9
PET Petropavlovsk 62.73 18 *e*P **P 17 23 09.8 +0.7**
PET *e*S **S 17 31 35.2 -1.1**
PET *e*SS SS 17 35 43.2 +1.7
PET pmax pmax
comp=Z,85nm,1.0s,mb5.8
PET Petropavlovsk 62.73 18 ⇓*i*P **P 17 23 09.0 -0.1**
WMQ Urumqi 62.81 326 P **P 17 23 10.5 +0.7**
WMQ AMB AMB
comp=Z,253nm,1.0s,mb6.3
WMQ AMB AMB
comp=Z,233nm,4.0s
WMQ LR LR
comp=N,159nm,28.0s,MS4.1
WMQ LR LR
comp=E,126nm,30.0s,MS4.1
WMQ LR LR
comp=Z,158nm,32.0s,MS4.0
SMLA Simla 63.12 309 *i* P **P 17 23 12.3 +0.2**
SMLA AMb AMB 17 23 14.5
comp=Z,311nm,0.0s
AJM Ajmer 63.31 303 *e*P **P 17 23 12.2 -1.3**
AJM AMb AMB 17 23 14.3
comp=Z,86nm,1.2s,mb5.8
SDNR Sundarnagar 63.43 309 *e*P **P 17 23 15.0 +0.8**
BOD Bodaibo 64.61 350 *e*P **P 17 23 21.1 -0.3**
BOD pmax pmax
comp=Z,37nm,1.0s,mb5.4
THN Thein Dam 64.79 310 *e*P **P 17 23 20.9 -2.2**
YAK Yakutsk 67.32 359 *i* P **P 17 23 38.6 -0.2**
YAK pmax pmax
comp=N,24nm,1.2s
YAK pmax pmax
comp=Z,132nm,1.4s,mb5.8
YAK Yakutsk 67.32 359 *e*P **P 17 23 38.5 -0.3**
comp=Z,107nm,0.6s,mb6.0
MK31 Makanchi Array 67.64 326 P **P 17 23 41.8 +0.7**
MK31 Makanchi Array 67.64 326 *e*P **P 17 23 41.6 +0.4**
MKAR Makanchi Array 67.64 326 P **P 17 23 41.5 +0.4**
comp=Z,183nm,0.7s,mb6.2,baz=114,slow=8.0,SNR=1093
MKAR S S 17 32 31.8 -5.1
comp=Z,0.3nm,0.7s,baz=114,slow=13,SNR=2.9
MKAR PKP2bc 17 52 01.4
comp=Z,1.3nm,1.0s,baz=318,slow=1.6,SNR=5.2
MKAR LR LR 17 52 08.5
comp=Z,99nm,19.3s,MS4.0,baz=281,slow=35
MKAR Makanchi Array 67.64 326 P **P 17 23 41.5 +0.4**
MKAR S S 17 32 31.8 -5.1
MKAR pmax pmax
comp=Z,183nm,0.7s
MKAR Makanchi Array 67.64 326 P **P 17 23 41.5 +0.4**
MKAR S S 17 32 31.8 -5.1
MKAR ⇑*e* 17 52 01.4
MKAR LR LR 17 52 08.4
KSH Kashi 67.75 317 P **P 17 23 43.5 +1.6**
KSH AP pP 17 23 51.3 +1.7
KSH XP sP 17 23 54.5 +2.0
KSH PCP PcP 17 24 11.0 +2.4
KSH PP PP 17 26 15.5 +3.9
KSH SCP 17 28 10.5
KSH PCS 17 28 13.5
KSH S S 17 32 38.5 +0.1
KSH XS sS 17 32 51.3 +0.2
KSH SCS ScS 17 33 36.3 -3.0
KSH SS SS 17 37 01.5 +1.3
KSH AMB AMB
comp=Z,261nm,0.9s,mb6.3
KSH AMB AMB
comp=Z,817nm,5.6s
KZA Kyzart 69.43 319 P **P 17 23 54.1 +1.7**
SNR=20
TKM2 Tokmak 2 69.61 320 P **P 17 23 54.4 +0.9**
TKM2 pmax pmax
comp=Z,70nm,0.8s,mb5.6
TKM2 Tokmak 2 69.61 320 *e*P **P 17 23 54.2 +0.7**
comp=Z,70nm,0.8s,mb5.7
TKM2 LR LR
comp=Z,206nm,20.0s,MS4.4
KBK Karagaybulak 69.90 319 P **P 17 23 56.4 +1.1**
SNR=21
UCH Uchtor 69.99 319 P **P 17 23 57.5 +1.6**
SNR=16
UCH Uchtor 69.99 319 *e*P **P 17 23 57.2 +1.3**
comp=Z,78nm,1.4s,mb5.5
SEY Seymchan 70.09 10 ⇓*i*P **P 17 23 54.4 -1.6**
SEY Seymchan 70.09 10 ⇓*i*P **P 17 23 54.5 -1.5**
AAK Ala-Archa 70.19 319 P **P 17 23 58.1 +1.1**
SNR=34
CHMS Chumysh 70.19 319 P **P 17 23 57.5 +0.4**
SNR=11
USP Ospenovka 70.48 320 P **P 17 23 59.5 +0.7**
SNR=62
AML Almayashu 70.48 318 P **P 17 24 00.4 +1.5**
SNR=61
AML Almayashu 70.48 318 *e*P **P 17 24 00.1 +1.3**
comp=Z,141nm,0.9s,mb5.9
EKS2 Erkin-Say 70.67 319 P **P 17 24 01.3 +1.3**
SNR=33
EKS2 Erkin-Say 70.67 319 *e*P **P 17 24 01.1 +1.0**
comp=Z,92nm,0.9s,mb5.7
KBL Kabul 70.74 309 P **P 17 23 59.1 -1.5**
KBL pmax pmax
comp=Z,75nm,1.0s,mb5.6
KBL Kabul 70.74 309 *e*P **P 17 23 58.4 -2.2**
comp=Z,75nm,0.9s,mb5.6
ZAA0 Zalesovo Array 70.78 333 *e*P **P 17 23 59.6 -0.8**
ZALV Zalesovo Beam 70.78 333 P **P 17 23 59.8 -0.6**
comp=Z,98nm,0.8s,mb5.8,baz=108,slow=4.8,SNR=307
ZALV S S 17 33 06.5 -7.2
comp=Z,0.5nm,0.3s,baz=134,slow=11,SNR=6.0
ZALV LR LR 17 55 56.1
comp=Z,70nm,19.9s,MS3.9,baz=29,slow=36
ZALV Zalesovo Beam 70.78 333 P **P 17 23 59.8 -0.6**
ZALV S S 17 33 06.5 -7.2
ZALV pmax pmax
comp=Z,98nm,0.8s,mb5.8
ZALV smax
comp=N,1.0nm,0.3s
ZALV MLR MLR
comp=Z,70nm,19.9s,MS3.9
KURK Kurchatov 71.88 328 P **P 17 24 07.1 0.0**
comp=Z,871nm,0.9s,mb6.7
KURK Kurchatov 71.88 328 P **P 17 24 07.5 +0.4**
SNR=48
KURK Kurchatov 71.88 328 P **P 17 24 06.9 -0.2**
comp=Z,125nm,0.9s,mb5.8,baz=125,slow=5.0,SNR=240
KURK S S 17 33 21.0 -5.5
comp=Z,0.4nm,0.4s,baz=107,slow=14,SNR=9.2
KURK Kurchatov 71.88 328 P **P 17 24 06.9 -0.2**
KURK S S 17 33 21.0 -5.5
KURK pmax pmax
comp=Z,125nm,0.9s,mb5.8
KURK Kurchatov 71.88 328 *e*P **P 17 24 07.0 -0.1**
comp=Z,219nm,1.1s,mb6.0
KK31 Karatay Array 73.02 318 ⇑*e*P **P 17 24 13.9 -0.2**
VNDA Vanda 73.81 173 P **P 17 24 19.4 +1.2**
comp=Z,17nm,0.8s,mb5.0,baz=323,slow=6.2,SNR=64
VNDA LR LR 17 55 51.7
comp=Z,134nm,18.4s,MS4.3,baz=342,slow=35
VNDA Vanda 73.81 173 P **P 17 24 19.4 +1.2**
VNDA pmax pmax
comp=Z,17nm,0.8s
VNDA MLR MLR
comp=Z,134nm,18.4s
VNDA Vanda 73.81 173 P **P 17 24 19.4 +1.2**
VNDA LR LR 17 55 51.7
SBA Scott Base 74.68 173 *e*P **P 17 24 25.2 +1.9**
SBA pmax pmax
comp=Z,16nm,0.8s,mb5.0
SBA Scott Base 74.68 173 *e*P **P 17 24 25.1 +1.9**
comp=Z,16nm,0.8s,mb5.0
MSEY Mahe Island 75.42 267 *e*P **P 17 24 28.5 -0.2**
MSEY pmax pmax
comp=Z,43nm,0.9s,mb5.4
MSEY Mahe Island 75.42 267 *e*P **P 17 24 28.5 -0.3**
comp=Z,43nm,0.9s,mb5.4
WBK Wadi Bani Khal 75.88 295 P **P 17 24 32.1 +0.9**
SNR=9.7
JMDO Jabal Madar 76.61 294 P **P 17 24 35.8 +0.4**
SNR=6.2
SMDO Samad 76.80 295 P **P 17 24 36.8 +0.3**
SNR=13

MAW	**Mawson**	**76.81**	**201**	P	**P**	**17 24 36.8**	**+1.2**
	comp=Z,34nm,0.9s,mb5.3,baz=76,slow=6.7,SNR=19						
MAW				LR	LR	17 56 55.8	
	comp=Z,209nm,19.1s,MS4.5,baz=221,slow=34						
MAW	**Mawson**	**76.81**	**201**	*eP*	**P**	**17 24 36.7**	**+1.1**
	comp=Z,15nm,0.6s,mb5.1						
MAW	**Mawson**	**76.81**	**201**	*eP*	**P**	**17 24 36.7**	**+1.1**
	comp=Z,12nm,1.2s,mb4.7						
BIDO	**Bidbid**	**76.83**	**296**	P	**P**	**17 24 37.2**	**+0.6**
	SNR=25						
TIXI	**Tiksi**	**76.99**	**359**	⇑*iP*	**P**	**17 24 34.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
TIXI	**Tiksi**	**76.99**	**359**	*eP*	**P**	**17 24 34.8**	**-1.7**
	comp=Z,29nm,0.7s,mb5.3						
BILL	**Bilibino**	**77.36**	**13**	*eP*	**P**	**17 24 37.2**	**-1.4**
BILL				*i*		17 24 48.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
BILL	**Bilibino**	**77.36**	**13**	*eP*	**P**	**17 24 37.4**	**-1.2**
	comp=Z,9.7nm,0.9s,mb4.7						
BVA0	**Borovoye Array**	**77.44**	**327**	P	**P**	**17 24 38.4**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
BVAR	**Borovoye Array**	**77.44**	**327**	P	**P**	**17 24 39.2**	**-0.2**
	comp=Z,85nm,0.9s,mb5.7,baz=131,slow=6.1,SNR=259						
BVAR	**Borovoye Array**	**77.44**	**327**	P	**P**	**17 24 39.2**	**-0.2**
BVAR				pmax	pmax		
	comp=Z,85nm,0.9s						
BSY	**Bisya**	**77.51**	**295**	P	**P**	**17 24 40.3**	**-0.1**
	SNR=7.0						
BRVK	**Borovoye**	**77.52**	**327**	P	**P**	**17 24 39.5**	**-0.3**
	comp=Z,704nm,0.8s,mb6.6,SNR=64						
BRVK	**Borovoye**	**77.52**	**327**	P	**P**	**17 24 40.0**	**+0.2**
	SNR=28						
BRVK	**Borovoye**	**77.52**	**327**	P	**P**	**17 24 39.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,150nm,0.9s,mb5.9						
BRVK	**Borovoye**	**77.52**	**327**	*eP*	**P**	**17 24 39.5**	**-0.3**
	comp=Z,96nm,0.8s,mb5.8						
HOQ	**Hoqain**	**77.57**	**295**	P	**P**	**17 24 41.4**	**+0.7**
	SNR=16						
ARQ	**Araqi**	**78.23**	**295**	P	**P**	**17 24 44.6**	**+0.2**
	SNR=8.6						
HATD	**Hatta, Dubai**	**78.87**	**296**	P	**P**	**17 24 48.5**	**+0.5**
	SNR=5.0						
BANOM	**Banah**	**78.94**	**298**	P	**P**	**17 24 49.3**	**+1.0**
	SNR=7.2						
RBK	**Rabkut**	**79.35**	**289**	P	**P**	**17 24 50.8**	**+0.2**
	SNR=8.3						
WHFO	**Wadi Hawf**	**79.82**	**289**	P	**P**	**17 24 52.7**	**-0.5**
	SNR=12						
ABKT	**Ailbek**	**80.18**	**310**	P	**P**	**17 24 55.4**	**+0.6**
	comp=Z,341nm,0.9s,mb6.3,SNR=25						
ABTO	**Aybut**	**80.18**	**289**	P	**P**	**17 24 55.2**	**0.0**
	SNR=12						
AB31	**Akbulak array**	**82.09**	**321**	P	**P**	**17 25 03.9**	**-0.8**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
ABPO	**Ambohimpanom**	**82.59**	**252**	*eP*	**P**	**17 25 08.0**	**+0.1**
AKTK	**Aktyubinsk**	**83.63**	**322**	P	**P**	**17 25 12.2**	**-0.4**
AKTO	**Aktyubinsk**	**83.63**	**322**	P	**P**	**17 25 12.2**	**-0.5**
	comp=Z,21nm,0.8s,mb5.3,baz=105,slow=6.4,SNR=74						
AKTO	**Aktyubinsk**	**83.63**	**322**	*iP*	**P**	**17 25 11.5**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
SVE	**Sverdlovsk**	**84.11**	**329**	⇓*eP*	**P**	**17 25 14.4**	**-0.5**
SVE				*e*	pP	17 25 20.7	-2.1
SVE				pmax	pmax		
	comp=Z,249nm,1.3s,mb6.2						
QSPA	**South Pole Qui**	**84.49**	**180**	P	**P**	**17 25 17.3**	**+0.8**
	comp=Z,39nm,0.7s,mb5.7,baz=316,slow=1.7,SNR=188						
QSPA				S	S	17 35 32.5	-8.8
	comp=Z,2.1nm,1.0s,baz=119,slow=23,SNR=9.0						
QSPA	**South Pole Qui**	**84.49**	**180**	*eP*	**P**	**17 25 17.1**	**+0.6**
	comp=Z,43nm,0.8s,mb5.6						
ARU	**Arti**	**85.07**	**328**	P	**P**	**17 25 18.7**	**-1.1**
	comp=Z,420nm,0.9s,mb6.6,SNR=16						
ARU	**Arti**	**85.07**	**328**	*c iP*	**P**	**17 25 18.5**	**-1.3**
ARU				*e*		17 28 33.8	
ARU				*e*	PPP	17 30 36.7	
ARU				*e*	S	17 35 39.6	-8.1
ARU				SS	SS	17 41 12.7	-8.8
ARU				pmax	pmax		
	comp=Z,108nm,1.2s,mb5.8						
ARU	**Arti**	**85.07**	**328**	*eP*	**P**	**17 25 18.4**	**-1.4**
	comp=Z,55nm,0.8s,mb5.7						
ARU				*e*	PP	17 28 36.3	-0.8
SYO	**Syowa Base**	**85.52**	**201**	⇓*iP*	**P**	**17 25 21.0**	**-0.9**
SYO	**Syowa Base**	**85.52**	**201**	⇓*i*	PcP	17 25 23.6	-1.2
SYO	**Syowa Base**	**85.52**	**201**	⇓*i*	pP	17 25 27.4	-2.3
SVW2	**Sparrevohn**	**86.73**	**28**	*eP*	**P**	**17 25 28.6**	**+0.7**
QRN	**Al-Qurain**	**86.77**	**299**	*eP*	**P**	**17 25 27.8**	**-1.0**
	baz=299						
QRN				AMb	AMB	17 25 29.3	
	comp=Z,177nm,1.2s,mb6.2,baz=299						
SOKR	**Solikamsk**	**86.89**	**331**	⇑*iP*	**P**	**17 25 27.2**	**-1.5**
SOKR				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.5						
KBD	**Kabd**	**87.02**	**300**	*eP*	**P**	**17 25 28.7**	**-1.4**
	baz=300						
KBD				AMb	AMB	17 25 31.2	
	comp=Z,52nn,1.4s,mb5.6,baz=300						
RDF	**Al-Radifah**	**87.11**	**299**	*eP*	**P**	**17 25 29.1**	**-1.4**
	baz=299						
RDF				AMb	AMB	17 25 30.6	
	comp=Z,134nm,0.7s,mb6.3,baz=299						
MIB	**Mutribah**	**87.41**	**300**	*eP*	**P**	**17 25 31.1**	**-0.9**
	baz=300						
MIB				AMb	AMB	17 25 33.7	
	comp=Z,174nm,1.3s,mb6.1,baz=300						
NAY	**Al-Naaiem**	**87.42**	**300**	*eP*	**P**	**17 25 31.1**	**-1.0**
	baz=300						
NAY				AMb	AMB	17 25 31.9	
	comp=Z,111nm,0.7s,mb6.2,baz=300						
COLD	**Coldfoot**	**90.60**	**22**	*eP*	**P**	**17 25 45.7**	**-0.4**
	comp=Z,12nm,0.9s,mb5.2						
GNI	**Garni**	**90.81**	**310**	P	**P**	**17 25 47.9**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.8,baz=151,slow=15,SNR=4.2						
GNI	**Garni**	**90.81**	**310**	P	**P**	**17 25 48.8**	**+1.1**
GNI				pmax	pmax		
	comp=Z,12nn,1.2s						
GNI	**Garni**	**90.81**	**310**	*eP*	**P**	**17 25 48.6**	**+0.8**
	comp=Z,12nn,1.2s,mb5.1						
COLA	**College**	**91.06**	**25**	*eP*	**P**	**17 25 47.6**	**-0.7**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
COLA	**College**	**91.06**	**25**	*eP*	**P**	**17 25 47.6**	**-0.7**
	comp=Z,7.1nm,0.8s,mb5.0						
KIV	**Kislovodsk**	**92.71**	**314**	*eP*	**P**	**17 25 53.8**	**-2.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
KIV	**Kislovodsk**	**92.71**	**314**	⇑*eP*	**P**	**17 25 53.0**	**-3.5**
MALT	**Malatya**	**95.56**	**308**	P	**P**	**17 26 09.9**	**+0.2**
	comp=Z,8.1nm,1.2s,mb5.0						
KLMR	**Klimovskoe**	**95.58**	**331**	*eP*	**P**	**17 26 06.1**	**-3.1**
KLMR				pmax	pmax		
	comp=Z,79nm,1.5s,mb5.9						
ANN	**Anapa**	**96.52**	**314**	*eP*	**P**	**17 26 11.6**	**-2.3**
ANN				pmax	pmax		
	comp=Z,103nm,1.3s,mb6.1						
ASF	**Jabal al Asfar**	**96.55**	**302**	P	**P**	**17 26 14.3**	**0.0**
	comp=Z,7.9nm,0.9s,mb5.2,baz=3.9,slow=1.8,SNR=13						
ASF				LR	LR	18 14 14.0	
	comp=Z,40nn,19.0s,MS3.9,baz=46,slow=38						
ASF	**Jabal al Asfar**	**96.55**	**302**	P	**P**	**17 26 14.3**	**0.0**
ASF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASF				MLR	MLR		
	comp=Z,40nn,19.0s						
OBN	**Obninsk**	**97.13**	**325**	⇓*iP*	**P**	**17 26 14.3**	**-2.1**
OBN				*e*		17 30 12.0	
OBN				pmax	pmax		
	comp=Z,58nn,1.4s,mb5.8						
SNAA	**Sanae**	**97.42**	**193**	*e*Pdiff	**P**	**17 26 17.8**	**+0.4**
SNAA				*e*		17 26 20.2	
SNAA				*e*		17 42 53.5	
SNAA	**Sanae**	**97.42**	**193**	⇑*eP*	**P**	**17 26 18.2**	**+0.8**
SNAA				pmax	pmax		
	comp=Z,17nm,1.3s						
SNAA	**Sanae**	**97.42**	**193**	*eP*	**P**	**17 26 18.0**	**+0.5**
	comp=Z,13nm,1.0s,mb5.3						
MMAI	**Mount Meron Ar**	**97.84**	**302**	P	**P**	**17 26 19.9**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.8,baz=75,slow=7.9,SNR=12						
EIL	**Elat**	**98.14**	**299**	P	**P**	**17 26 20.3**	**-1.2**
	comp=Z,5.1nm,0.7s,mb5.2,baz=21,slow=2.2,SNR=5.3						
EIL				LR	LR	18 11 31.0	
	comp=Z,76nm,20.6s,MS4.2,baz=244,slow=36						
VNA2	**Neumayer--Watz**	**98.98**	**193**	*e*Pdiff	**P**	**17 26 25.7**	**+1.3**
VNA2				*e*		17 26 27.6	
VNA2				*e*	pP	17 26 31.2	-1.2
VNA2				*e*		17 30 55.8	
VNA2				*e*		17 30 59.6	
VNA2				*e*		17 42 49.3	
VNA3	**Neumayer Olymp**	**99.22**	**192**	*e*Pdiff	**P**	**17 26 26.6**	**+1.1**
VNA3				*e*		17 26 28.6	
VNA3				*e*	pP	17 26 33.1	-0.4
VNA3				*e*		17 30 56.0	
VNA3				*e*		17 30 59.7	
VNA3				*e*		17 42 48.3	
BR131	**Keskin Array S**	**99.31**	**309**	*eP*	**P**	**17 26 24.8**	**-1.7**
	comp=Z,0.5nm,0.3s,mb4.5						
BRTR	**Keskin Array B**	**99.31**	**309**	P	**P**	**17 26 25.2**	**-1.3**
	comp=Z,3.1nm,0.9s,mb4.8,baz=116,slow=4.5,SNR=13						
BRTR				PKKPbc	PKKPbc	17 42 51.5	-0.2
	comp=Z,0.8nm,0.8s,baz=195,slow=2.4,SNR=4.0						
JOF	**Joensuu**	**99.37**	**333**	*ep*	**P**	**17 26 24.7**	**-1.5**
	comp=Z,1.0nm,0.4s,mb4.7						
JOF	**Joensuu**	**99.37**	**333**	*eP*	**P**	**17 26 24.7**	**-1.5**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.7						
ARCES	**ARCESS Array B**	**100.58**	**340**	P	Pdif	17 26 30.8	-1.1
	comp=Z,17nm,0.9s,baz=79,slow=6.3,SNR=11						
ARCES				PKiKP	PKiKP	17 30 56.8	-1.0
	comp=Z,2.6nm,0.8s,baz=96,slow=1.2,SNR=6.1						
ARCES				PKKPbc	PKKPbc	17 42 46.2	-2.9
	comp=Z,8.7nm,1.0s,baz=339,slow=5.2,SNR=3.7						
LSZ	**Lusaka**	**101.07**	**253**	*eP*	Pdif	17 26 33.3	-0.7
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LSZ	**Lusaka**	**101.07**	**253**	*e*Pdif	Pdif	17 26 33.3	-0.7
	comp=Z,7.2nn,1.1s						
BOSA	**Boshof**	**101.29**	**240**	P	Pdif	17 26 35.1	+0.1
	comp=Z,7.6nm,0.9s,baz=133,slow=2.8,SNR=5.9						
BOSA	**Boshof**	**101.29**	**240**	P	Pdif	17 26 35.1	+0.1
BOSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KAF	**Kangasniemi**	**101.78**	**332**	*ep*	Pdif	17 26 34.4	-2.8
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**101.78**	**332**	*eP*	Pdif	17 26 34.4	-2.8
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**101.82**	**321**	P	Pdif	17 26 35.4	-1.9
	comp=Z,1.5nm,0.7s,baz=80,slow=3.7,SNR=5.4						
AKASG	**Malin Array Be**	**101.82**	**321**	P	Pdif	17 26 35.4	-2.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**101.82**	**321**	P	Pdif	17 26 35.4	-2.0
MLR	**Muntele Rosu**	**104.60**	**315**	Pdiff	Pdif	17 26 49.3	-0.5
	comp=Z,4.5nm,1.0s,baz=331,slow=3.9,SNR=6.0						
MLR	**Muntele Rosu**	**104.60**	**315**	P	Pdif	17 26 49.3	-0.4
MLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BUR08	**Bucovina Ar. S**	**104.82**	**318**	*e*Pdif	Pdif	17 26 50.0	-0.7
YKA	**Yellowknife Ar**	**105.85**	**26**	Pdiff	Pdif	17 26 54.2	-1.0
	comp=Z,1.4nm,1.1s,baz=292,slow=5.0,SNR=8.7						
YKA				PKiKP	PKiKP	17 31 06.9	-0.6
	comp=Z,3.7nm,0.6s,baz=294,slow=1.8,SNR=94						
YKA				PKKPbc	PKKPbc	17 42 30.0	-3.1
	comp=Z,1.3nm,0.6s,baz=106,slow=2.9,SNR=20						
YKA				PKKPab	PKKPab	17 42 45.4	-2.2
	comp=Z,2.1nm,0.7s,baz=106,slow=5.2,SNR=19						
YKA	**Yellowknife Ar**	**105.85**	**26**	Pdif	Pdif	17 26 54.2	-1.0
YKA				PKPdf	PKiKP	17 31 07.0	-0.6
YKA				PKKPbc	PKKPbc	17 42 30.1	-3.1
YKA				PKKPab	PKKPab	17 42 45.4	-2.2
UZH	**Uzhgorod**	**106.58**	**319**	⇑*iP*	Pdif	17 26 58.0	-0.5
NB2	**NORSAR Subarra**	**108.98**	**334**	P	Pdif	17 27 07.6	-1.6
	comp=Z,1.7nm,0.7s,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**108.98**	**334**	Pdiff	Pdif	17 27 07.6	-1.6
	comp=Z,2.5nm,0.8s,baz=66,slow=4.5,SNR=5.2						
NOA	**NORSAR Array B**	**108.98**	**334**	P	Pdif	17 27 07.6	-1.6
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	**NORSAR Array B**	**108.98**	**334**	Pdif	Pdif	17 27 07.6	-1.6
NVAR	**Mina Array Bea**	**109.39**	**51**	Pdiff	Pdif	17 27 12.9	+1.9
	comp=Z,1.8nm,0.9s,baz=262,slow=3.6,SNR=6.0						
NVAR				PKiKP	PKiKP	17 31 15.9	+1.0
	comp=Z,0.8nm,0.4s,baz=241,slow=2.8,SNR=6.1						
NVAR				PKKPbc	PKKPbc	17 42 20.0	-1.3
	comp=Z,2.0nm,0.7s,baz=115,slow=3.5,SNR=7.8						
NVAR				PKKP	PKKPbc	17 42 33.1	+12
	comp=Z,3.0nm,0.8s,baz=108,slow=5.5,SNR=8.7						
CLL	**Collm**	**111.68**	**323**	*e*PKiKP	PKiKP	17 31 19.0	+0.2
CLL				*e*PP	PP	17 32 02.0	+1.3
KHC	**Kasperske Hory**	**112.02**	**321**	⇓*i*PKiKP	PKiKP	17 31 18.5	-1.0
GERES	**GERESS Array B**	**112.03**	**321**	Pdiff	Pdif	17 27 23.8	+1.1
	comp=Z,0.1nm,0.3s,baz=48,slow=2.0,SNR=4.3						
GERES				PKiKP	PKiKP	17 31 19.1	-0.4
	comp=Z,1.8nm,0.7s,baz=61,slow=1.7,SNR=19						
GERES				PP	PP	17 32 01.8	-1.6
	comp=Z,1.0nm,0.8s,baz=77,slow=5.9,SNR=4.1						
GERES	**GERESS Array B**	**112.03**	**321**	P	Pdif	17 27 23.8	+1.0
GERES				*i*		17 31 19.1	
GERES						17 32 01.8	
EGMT	**Eagleton**	**113.22**	**40**	*e*PKiKP	PKiKP	17 31 22.3	+0.5
ABTA	**Abfaltersbach**	**113.44**	**319**	⇑*i*PKiKP	PKiKP	17 31 20.9	-1.4
	comp=Z,9.8nm,1.2s						
WTTA	**Wattenberg**	**113.85**	**320**	⇑*i*PKiKP	PKiKP	17 31 22.6	-0.5
	comp=Z,10nm,0.5s						
WATA	**Walderalm**	**113.86**	**320**	⇑*i*PKiKP	PKiKP	17 31 22.3	-0.8
	comp=Z,3.0nm,0.5s						
REDW	**Red Top Meadow**	**113.87**	**45**	*e*PKiKP	PKiKP	17 31 24.3	+1.1
SNOW	**Snow King Moun**	**113.92**	**45**	*e*PKiKP	PKiKP	17 31 24.8	+1.4
RLMT	**Red Lodge**	**114.45**	**43**	*e*PKPdf	PKiKP	17 31 25.6	+1.3
FETA	**Feichten**	**114.51**	**320**	⇑*i*PKiKP	PKiKP	17 31 23.9	-0.5
	comp=Z,6.7nm,1.0s						
PDAR	**Pinedale Array**	**114.95**	**45**	PKP	PKiKP	17 31 25.6	+0.3
	comp=Z,2.8nm,0.8s,baz=232,slow=1.1,SNR=27						
PDAR				PKKPbc	PKKPbc	17 42 01.9	-1.1
	comp=Z,2.3nm,0.6s,baz=121,slow=5.4,SNR=16						
PDAR				PKKPab	PKKPab	17 42 07.4	-0.2
	comp=Z,2.7nm,0.8s,baz=110,slow=5.6,SNR=8.7						
DAVA	**Damuels**	**114.97**	**320**	⇑*i*PKiKP	PKiKP	17 31 24.8	-0.4
	comp=Z,3.8nm,0.5s						
WUAZ	**Wupatki**	**115.37**	**53**	*e*PKPdf	PKPdf	17 31 27.0	+0.6
TUE	**Stuetta**	**115.59**	**319**	*e*PKPdf	PKPdf	17 31 25.5	-1.0
MEM	**Membach**	**116.04**	**325**	PKP	PKPdf	17 31 27.1	0.0
WLF	**Walferdange**	**116.35**	**324**	PKP	PKPdf	17 31 28.0	+0.2
TUC	**Tucson**	**116.48**	**57**	*e*PKiKP	PKPdf	17 31 29.5	+0.9
BCLA	**Clavier**	**116.52**	**325**	PKP	PKPdf	17 31 27.7	-0.4
HINF	**Hinteralfeld**	**116.67**	**322**	⇑*i*PKiKP	PKPdf	17 31 27.4	-1.1
	comp=Z,5.7nm,0.6s						
HAU	**Haudompre**	**116.91**	**322**	⇑*i*PKiKP	PKPdf	17 31 28.0	-0.9
	comp=Z,11nm,0.9s						
GIVF	**Givet**	**116.94**	**324**	*e*PKiKP	PKPdf	17 31 28.5	-0.4
DOU	**Dourbes**	**117.07**	**325**	PKP	PKPdf	17 31 28.8	-0.4
PGF	**Pioggiola**	**117.15**	**315**	*e*PKiKP	PKPdf	17 31 28.3	-1.3
	comp=Z,44nm,1.2s						
MVCO	**Mesa Verde**	**117.24**	**51**	*e*PKPdf	PKPdf	17 31 31.1	+1.1
BAIF	**Baives**	**117.31**	**325**	⇑*i*PKiKP	PKPdf	17 31 29.2	-0.5
	comp=Z,13nm,0.8s						
CABF	**La Chapelle**	**117.63**	**320**	⇑*i*PKiKP	PKPdf	17 31 30.0	-0.4
	comp=Z,10nm,0.6s						
LPG	**La Plagne**	**117.63**	**319**	⇑*i*PKiKP	PKPdf	17 31 30.0	-0.4
	comp=Z,7.8nm,0.6s						
LPL	**La Plagne**	**117.64**	**319**	⇑*i*PKiKP	PKPdf	17 31 29.9	-0.5
	comp=Z,13nm,0.7s						
SBF	**Sospel**	**117.78**	**317**	⇑*i*PKiKP	PKPdf	17 31 29.8	-0.9
	comp=Z,28nm,0.7s						
MBDF	**Montbardon**	**117.91**	**318**	*e*PKiKP	PKPdf	17 31 29.9	-1.1
	comp=Z,10nm,0.7s						
RSSD	**Black Hills**	**118.31**	**42**	*e*PKiKP	PKPdf	17 31 31.0	-0.8
FRF	**La Foret Royal**	**118.42**	**317**	⇑*i*PKiKP	PKPdf	17 31 31.1	-0.9
	comp=Z,6.8nm,0.6s						
ORIF	**Oris-en-Rattie**	**118.42**	**319**	*e*PKiKP	PKPdf	17 31 31.2	-0.8
	comp=Z,12nm,0.7s						
LMR	**La Mourre**	**118.59**	**317**	*e*PKiKP	PKPdf	17 31 31.4	-0.9
LOR	**Lormes**	**118.75**	**322**	*e*PKiKP	PKPdf	17 31 31.1	-1.4
KEST	**Kesra**	**118.88**	**308**	PKP	PKPdf	17 31 33.1	-0.1
	comp=Z,2.1nm,1.0s,baz=92,slow=3.0,SNR=4.0						
KEST				PP	PP	17 32 48.1	-3.9
	comp=Z,2.9nm,0.9s,baz=3.6,slow=8.9,SNR=4.9						
SMRF	**Simiane la Rot**	**118.98**	**318**	⇑*i*PKiKP	PKPdf	17 31 32.8	-0.3
	comp=Z,20nm,1.0s						
SMF	**Signal de Mont**	**119.03**	**321**	*e*PKiKP	PKPdf	17 31 32.3	-0.8
	comp=Z,5.5nm,0.7s						
SSF	**Saint Saulge**	**119.06**	**322**	⇑*i*PKiKP	PKPdf	17 31 32.4	-0.7
	comp=Z,13nm,0.9s						
VIVF	**Saint-Julien-l**	**119.24**	**319**	⇑*i*PKiKP	PKPdf	17 31 32.8	-0.7
	comp=Z,13nm,0.9s						
AVF	**Avril sur Loir**	**119.27**	**322**	⇑*i*PKiKP	PKPdf	17 31 32.5	-1.0
	comp=Z,3.7nm,0.6s						
ANMO	**Albuquerque**	**119.41**	**53**	*e*PKiKP	PKPdf	17 31 35.1	+0.9
BGF	**Bois d'Agland**	**119.68**	**321**	⇑*i*PKiKP	PKPdf	17 31 33.9	-0.4
	comp=Z,19nm,0.8s						
LASF	**Ste Croix**	**120.08**	**319**	*e*PKiKP	PKPdf	17 31 34.7	-0.5
TCF	**Toulx Ste Croi**	**120.20**	**321**	⇑*i*PKiKP	PKPdf	17 31 34.8	-0.5
	comp=Z,22nm,1.0s						
LDF	**La Druitiere**	**120.50**	**325**	*e*PKiKP	PKPdf	17 31 35.3	-0.5
ULM	**Lac du Bonnet**	**120.51**	**33**	PKP	PKPdf	17 31 34.9	-0.9
	comp=Z,11nm,0.6s,baz=322,slow=2.4,SNR=16						
ULM				PKKPbc	PKKPbc	17 41 41.6	-1.7
	comp=Z,4.4nm,0.7s,baz=111,slow=3.7,SNR=5.9						
ULM	**Lac du Bonnet**	**120.51**	**33**	*e*PKPdf	PKPdf	17 31 34.8	-1.0
FLN	**La Foliniere**	**120.62**	**325**	*e*PKiKP	PKPdf	17 31 34.7	-1.4
CAF	**Calviac**	**120.89**	**320**	⇑*i*PKiKP	PKPdf	17 31 36.4	-0.3
	comp=Z,30nm,1.2s						
GRR	**Gorron**	**121.03**	**325**	*e*PKiKP	PKPdf	17 31 36.2	-0.7
RJF	**Les Rejaudoux**	**121.07**	**321**	*e*PKiKP	PKPdf	17 31 36.6	-0.4
MTLF	**Montolieu**	**121.47**	**318**	*e*PKiKP	PKPdf	17 31 37.1	-0.8
	comp=Z,21nm,1.1s						
MFF	**Saint Martin d**	**121.49**	**323**	⇑*i*PKiKP	PKPdf	17 31 37.1	-0.7
	comp=Z,19nm,0.7s						
LFF	**La Frestale**	**121.73**	**321**	*e*PKiKP	PKPdf	17 31 38.0	-0.3
SGMF	**Saint Gilles**	**122.07**	**325**	*e*PKiKP	PKPdf	17 31 38.0	-0.9
	comp=Z,8.4nm,0.6s						
ROSF	**Rostrenen**	**122.43**	**326**	*e*PKiKP	PKPdf	17 31 38.6	-0.9
QUIF	**Quistinic**	**122.59**	**325**	*e*PKiKP	PKPdf	17 31 39.0	-0.9
	comp=Z,53nm,1.1s						
EPF	**Esparros**	**122.84**	**319**	*e*PKiKP	PKPdf	17 31 39.9	-0.6
	comp=Z,8.8nm,0.8s						
TXAR	**Lajitas Array**	**123.09**	**59**	PKP	PKPdf	17 31 42.1	+0.7
	comp=Z,7.4nm,0.9s,baz=236,slow=1.2,SNR=55						
TXAR				PKKPbc	PKKPbc	17 41 32.4	-0.4
	comp=Z,1.7nm,0.8s,baz=102,slow=6.3,SNR=12						
TXAR				SKKPbc		17 45 18.5	
	comp=Z,0.7nm,1.1s,baz=104,slow=5.3,SNR=3.6						
ECSD	**EROS,Sioux Fal**	**123.34**	**40**	*e*PKPdf	PKPdf	17 31 40.5	-0.9
ETSF	**Etsaut**	**123.49**	**319**	*e*PKiKP	PKPdf	17 31 42.0	+0.2
	comp=Z,20nm,1.0s						
SJPF	**Ste Jean**	**123.83**	**319**	*e*PKiKP	PKPdf	17 31 42.4	0.0
	comp=Z,15nn,1.0s						
TAM	**Tamanrasset**	**124.94**	**294**	*e*PKiKP	PKPdf	17 31 45.8	+0.7
WMOK	**Wichita Mounta**	**125.49**	**51**	*e*PKiKP	PKPdf	17 31 46.0	+0.1
JCT	**Junction City**	**126.03**	**56**	*e*PKiKP	PKPdf	17 31 47.5	+0.5
SCIA	**State Center**	**126.41**	**41**	*e*PKPdf	PKPdf	17 31 47.5	+0.1
ESDC	**Sonseca Array**	**127.26**	**317**	PKP	PKPdf	17 31 48.7	-0.4
	comp=Z,0.1nm,0.3s,baz=83,slow=0.6,SNR=5.3						
ESDC				PP	PP	17 33 48.4	+0.2
	comp=Z,3.1nm,0.8s,baz=60,slow=6.8,SNR=9.7						
ESDC	**Sonseca Array**	**127.26**	**317**	PKP	PKPdf	17 31 48.7	-0.4
ESDC				PP	PP	17 33 48.4	+0.2
JFWS	**Jewell Farm**	**127.75**	**38**	*e*PKiKP	PKPdf	17 31 49.2	-0.7
MVO	**Moncorvo**	**128.54**	**320**

KUZU	**Kuzuini**	**2.33**	**225**	*i* P		**Pn**	**17 15 16.3**	**+5.5**
KUZU				*i* S		**Sn**	**17 15 46.9**	**+6.9**

IDC 26 17:47:28.1±1.9, 191N×9661E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.3/22, mbtmp3.3/5, ML2.5/1, Error ellipse: s-maj=38.4km s-min=26.3km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.47**	**69**	Pn	**Pn**	17 48 09.2	-0.5
	1.0nm,0.3s,baz=243,slow=9.0,SNR=3.9						
PSI				Sn	Sn	17 48 40.6	+0.1
	2.1nm,0.3s,baz=216,slow=15,SNR=5.0						
CMAR	**Chiang Mai Arr**	**16.60**	**8**	Pn	**Pn**	17 51 24.2	+1.8
	baz=198,slow=12,SNR=16						
WRA	**Warramunga Arr**	**42.91**	**122**	P	**P**	17 55 28.4	-0.4
	0.2nm,0.5s,baz=302,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**44.29**	**127**	P		17 55 40.3	+0.4
	0.3nm,0.9s,baz=308,slow=8.1,SNR=4.0						
MKAR	**Makanchi Array**	**46.42**	**346**	P	**P**	17 55 56.0	-0.4
	0.8nm,0.7s,baz=151,slow=7.1,SNR=4.8						

*ISCJB **26** 18:02:34.5±0.6, 3511N×004×23.12E×005, h48km±9km, mb3.3/4, Error ellipse: s-maj=8.8km s-min=4.6km az=136.5*
*HLW **26** 18:02:34.9, 3519N×2326E, h33km, Mb3.7*
*CSEM **26** 18:02:36.3±0.2, 3525N×2322E, h40km, MD3.8, Error ellipse: s-maj=6.8km s-min=2.1km az=29.0*
*THE **26** 18:02:37.0, 3523N×2321E, h28km±1km, ML3.8/3, Error ellipse: s-maj=2.8km s-min=0.8km az=32.0*
*IDC **26** 18:02:39.4±2.1, 3514N×2338E, h77km±24km, mb3.2/4, mb1 3.2/7, mb1mx3.1/26, mbtmp3.1/7, Error ellipse: s-maj=30.5km s-min=22.6km az=134.0*
*NEIC **26** 18:02:42.8, 3577N×2399E, h6km, MD3.8(ATH), After ATH.*
*ATH **26** 18:02:42.7, 3579N×2401E, h6km, MD3.7/6*

ISC 26 18:02:35.9±0.6, 3510N±004×2315E±005, h40km±10km, n46, σ0♛96/55, mb3.3/4, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	**Karanos**	**0.69**	**64**	P	**Pn**	**18 02 48.6**	**-0.7**
KARN				S	**Sn**	**18 02 57.5**	**-1.4**
VAM	**Vamos**	**0.91**	**70**	*e*PB	**Pn**	**18 02 51.0**	**-1.2**
SIVA	**Sivas**	**1.36**	**93**	P	**Pn**	**18 02 58.6**	**+0.2**
IDI	**Anoyia**	**1.44**	**82**	P	**Pn**	**18 02 59.9**	**+0.5**
	7.9nm,0.3s,baz=268,slow=15,SNR=44						
IDI				S	**Sn**	**18 03 18.1**	**+1.0**
	13nm,0.3s,baz=240,slow=23,SNR=12						
IDI	**Anoyia**	**1.44**	**82**	P	**Pn**	**18 02 59.9**	**+0.5**
IDI				S	**Sn**	**18 03 18.0**	**+0.9**
VLI	**Veliai**	**1.62**	**354**	*e*PN	**Pn**	**18 03 06.0**	**+4.0**
LAST	**Lasithi**	**1.91**	**88**	P	**Pn**	**18 03 06.6**	**+0.7**
LAST				S	**Sn**	**18 03 29.2**	**+0.5**
NPS	**Neapolis**	**2.02**	**85**	*e*PN	**Pn**	**18 03 08.1**	**+0.6**
NPS	**Neapolis**	**2.02**	**85**	*e*Pn	**Pn**	**18 03 08.4**	**+0.9**
PYL	**PYLOS**	**2.12**	**328**	P	**Pn**	**18 03 09.2**	**+0.4**
THR6	**Thira Island,**	**2.21**	**55**	P	**Pn**	**18 03 10.0**	**-0.1**
THR5	**Thira Island,**	**2.22**	**53**	P	**Pn**	**18 03 09.7**	**-0.4**
THR3	**Thira Island,**	**2.25**	**54**	P	**Pn**	**18 03 09.9**	**-0.6**
THR1	**Thera Island**	**2.26**	**55**	P	**Pn**	**18 03 10.1**	**-0.7**
THR4	**Thira Island,**	**2.27**	**53**	P	**Pn**	**18 03 10.6**	**-0.3**
ITM	**Ithomi**	**2.30**	**335**	*e*PN	Px	18 03 22.0	
ITM	**Ithomi**	**2.30**	**335**	*e*Pn	Px	18 03 22.1	
ZKR	**Zakros**	**2.51**	**89**	P	**Pn**	**18 03 15.1**	**+0.9**
ZKR				S	**Sn**	**18 03 44.4**	**+0.8**
APE	**Apeiranthos**	**2.75**	**44**	*e*PN	**Pn**	**18 03 16.4**	**-1.1**
APE	**Apeiranthos**	**2.75**	**44**	*e*Pn	**Pn**	**18 03 17.0**	**-0.5**
LTK	**Loutraki**	**2.92**	**357**	P	**Pn**	**18 03 19.7**	**-0.1**
KARP	**Karpathos**	**3.31**	**81**	*e*PB	**Pn**	**18 03 26.3**	**+1.1**
LKR	**Lokris**	**3.54**	**358**	P	**Pn**	**18 03 28.4**	**+0.1**
VLS	**Valsamata**	**3.69**	**327**	P	**Pn**	**18 03 30.8**	**+0.4**
VLS				S	**Sn**	**18 04 12.2**	**-0.5**
AGG	**Agios Georgios**	**3.96**	**351**	P	**Pn**	**18 03 35.5**	**+1.3**
AGG				S	**Sn**	**18 04 19.9**	**+0.5**
SLUM		**4.00**	**154**	P	**Pn**	**18 03 34.9**	**+0.3**
SLUM				S	**Sn**	**18 04 18.2**	**-1.9**
CHOS	**Chios island**	**4.02**	**35**	P	**Pn**	**18 03 34.7**	**-0.2**
XOR	**Xorichti**	**4.25**	**0**	P	**Pn**	**18 03 39.0**	**+0.9**
THL	**Klokotos Trika**	**4.54**	**349**	P	**Pn**	**18 03 42.8**	**+0.7**
IGT	**Igoumenitsa**	**4.96**	**334**	P	**Pn**	**18 03 49.4**	**+1.6**
IGT				S	**Sn**	**18 04 41.6**	**-2.2**
LIT	**Litokhoron**	**5.02**	**354**	P	**Pn**	**18 03 48.6**	**0.0**
HMAT	**Matruh**	**5.19**	**139**	P	**Pn**	**18 03 50.2**	**-0.8**
HMAT	**Matruh**	**5.19**	**139**	P	**Pn**	**18 03 50.2**	**-0.8**
OUR	**Ouranopolis**	**5.26**	**7**	P	**Pn**	**18 03 51.9**	**-0.1**
PLG	**Polygyros**	**5.27**	**2**	P	**Pn**	**18 03 51.9**	**-0.1**
HORT	**Hortiatis**	**5.49**	**360**	P	**Pn**	**18 03 54.6**	**-0.4**
FNA	**Florina**	**5.84**	**347**	P	**Pn**	**18 03 59.8**	**-0.1**
FNA				S	**Sn**	**18 05 03.5**	**-2.1**
KNT	**Kendrikon**	**6.05**	**358**	P	**Pn**	**18 04 03.0**	**+0.2**
SWA2		**6.16**	**161**	⇓P	**Pn**	**18 04 04.5**	**+0.1**
SWA2				S	**Sn**	**18 05 10.0**	**-3.6**
BRTR	**Keskin Array B**	**9.53**	**58**	P	**Pn**	**18 04 50.9**	**+0.4**
	0.1nm,0.3s,baz=244,slow=12,SNR=2.6						
GERES	**GERESS Array B**	**15.40**	**336**	P	**Pn**	**18 06 14.0**	**+3.8**
	0.1nm,0.3s,baz=148,slow=11,SNR=5.8						
AKASG	**Malin Array Be**	**16.20**	**14**	P	**Pn**	**18 06 22.8**	**+2.4**
	0.8nm,0.3s,baz=209,slow=9.4,SNR=3.7						
HFS	**Hagfors**	**25.79**	**349**	P	**P**	**18 08 02.2**	**-0.5**
	1.3nm,0.5s,mb3.7,baz=156,slow=11,SNR=6.1						
TORD	**Torodi Ar. Bea**	**29.22**	**227**	P	**P**	**18 08 35.7**	**+1.8**
	0.2nm,0.5s,mb3.1,baz=33,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**45.18**	**56**	P	**P**	**18 10 46.9**	**-1.7**
	0.3nm,0.4s,mb3.4,baz=270,slow=7.8,SNR=9.1						
YKA	**Yellowknife Ar**	**76.99**	**341**	P	**P**	**18 14 23.5**	**-0.5**
	0.1nm,0.7s,mb2.8,baz=36,slow=5.3,SNR=4.1						

*IDC **26** 18:47:04.1±2.6, 542S×13306E, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.6/13, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=81.1km s-min=15.4km az=75.0*
*ISCJB **26** 18:47:05.9±2.1, 53S±02×1333E±05, h33km, mb3.4/2, Error ellipse: s-maj=68.8km s-min=13.3km az=164.2*
*NEIC **26** 18:47:05.9±7.7, 468S×134.13E, h41km±68km, mb4.1/1, Error ellipse: s-maj=71.8km s-min=22.8km az=47.0*

ISC 26 18:47:08.7±2.1, 54S±02×1331E±05, h35km, n8, σ1♛41/9, mb3.4/2, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**14.51**	**175**	*e*P	**Pn**	**18 50 37.0**	**+5.4**
	8.9nm,0.7s						
WRA	**Warramunga Arr**	**14.52**	**175**	Pn	**Pn**	**18 50 29.4**	**-2.3**
	0.2nm,0.3s,baz=5.6,slow=13,SNR=16						
WRA				Sn	**Sn**	**18 53 12.8**	**+1.3**
	0.3nm,0.3s,baz=9.3,slow=22,SNR=6.0						
WB2	**Warramunga Ar**	**14.52**	**175**	*e*P	**Pn**	**18 50 38.0**	**+6.2**
FITZ	**Fitzroy Crossi**	**14.60**	**209**	*e*P	pP	18 50 44.5	-3.3
ASAR	**Alice Springs**	**18.19**	**178**	P	**Pn**	**18 51 19.1**	**+0.5**
	0.5nm,0.3s,baz=5.3,slow=12,SNR=56						
ASAR				S	**S**	**18 54 42.3**	**-2.8**
	0.1nm,0.3s,baz=358,slow=26,SNR=3.9						
STKA	**Stephens Creek**	**27.53**	**164**	P	**P**	**18 52 52.6**	**+0.5**
	0.4nm,0.4s,mb3.4,baz=349,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**27.53**	**164**	P	**P**	**18 52 52.6**	**+0.5**
STKA				*e*P		18 52 54.4	
CMAR	**Chiang Mai Arr**	**41.18**	**306**	P	**P**	**18 54 50.4**	**+0.2**
	0.7nm,0.7s,mb3.4,baz=129,slow=6.4,SNR=9.2						

*CSEM **26** 18:59:33.2, 3955N×3315E, h5km, MD2.8, After ISK DDA **26** 18:59:33.8, 3939N×3314E, h4km±1km, Md2.2*
*ISK **26** 18:59:33.2, 3955N×3315E, h5km, MD2.8*
*ISCJB **26** 18:59:35.3±1.5, 3936N±006×3318E±007, h8km±11km, Error ellipse: s-maj=12.2km s-min=5.9km az=140.6*

ISC 26 18:59:35.4±1.2, 3937N±005×3317E±007, h9km±12km, n10, σ1♛27/15, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.42**	**90**	*e*PG	**Pg**	**18 59 42.9**	**-0.6**
KAMT				*e*SG	**Sg**	**18 59 49.9**	**+0.8**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**19 00 00.0**	**+6.1**
CDAG				*i* S	**Sg**	**19 00 06.4**	**-0.1**
CDAG	**Cicekdag**	**0.96**	**74**	*i* P	**Pg**	**18 59 52.6**	**-1.3**
KIZT	**Kizilcal**	**1.12**	**244**	*e*PN	**Pn**	**18 59 56.6**	**-0.5**
KIZT				*e*SN	**Sn**	**19 00 12.9**	**+0.4**
ELDT	**Eldivan**	**1.14**	**10**	⇓*i*P	**Pb**	**19 00 00.1**	**+3.0**
ELDT				*i* S	**Sg**	**19 00 12.1**	**+0.1**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P	**Pb**	**19 00 00.2**	**+2.3**
KDHN				*i* S	**Sb**	**19 00 12.7**	**-0.5**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P	**Pb**	**18 59 56.2**	**-1.7**
CORM	**Corum**	**1.39**	**54**	*e*PN	**Pn**	**18 59 58.2**	**-2.6**
YOZ	**Yozgat**	**1.69**	**80**	*e*PN	**Pn**	**19 00 04.3**	**-0.6**
NIG	**Nigde**	**1.69**	**138**	*e*PN	**Pn**	**19 00 07.0**	**+2.1**

*PGC **26** 19:18:21.1±3.0, 6336N×144.17W, h10km, ML3.5/3, 237km Ese of Fairbanks, Ak Central Alaska*

NEIC 26 19:18:20.9, 6335N×14408W, h6km, ML2.9(AEIC), **ML3.5**(PGC), **3D, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOT	**Dot Lake**	**0.30**	**1**	P	Pg	19 18 26.8	+0.1
DOT				S	Sg	19 18 32.1	+1.6
MENT	**Mentasta**	**0.45**	**159**	*e*P	Pg	19 18 29.0	-0.6
PAX	**Paxson**	**0.74**	**239**	P	Pg	19 18 34.7	-0.4
PAX				S	Sg	19 18 44.5	-0.1
BCA3	**Beaver Creek A**	**1.08**	**105**	P	Pg	19 18 41.0	-0.6
IL1	**Eielson Array**	**1.88**	**320**	P	Pn	19 18 52.7	-0.9
EGAK	**Eagle**	**1.92**	**41**	P	Pn	19 18 54.5	+0.4
DAWY	**Dawson**	**2.21**	**69**	⇓Pn	Pn	19 18 57.6	-0.4
DAWY				⇑Pg	Pg	19 19 01.1	-2.0
DAWY				⇑Sg	Sg	19 19 30.5	-1.2
DAWY	**Dawson**	**2.21**	**69**	P	Pn	19 18 57.7	-0.3
MCK	**McKinley**	**2.21**	**282**	P	Pn	19 18 58.7	+0.6
COLA	**College**	**2.25**	**314**	P	Pn	19 18 58.1	-0.5
TRF	**Thorofare Moun**	**2.80**	**275**	P	Pn	19 19 06.9	+0.8
PMR	**Palmer**	**2.94**	**235**	*e*P	Pn	19 19 10.9	+2.8
KTH	**Kantishna Hill**	**3.08**	**277**	*e*P	Pn	19 19 12.3	+2.2
BPAW	**Bear Paw Mtn.**	**3.16**	**287**	*e*P	Pn	19 19 13.9	+2.7
RC01	**Rabbit Creek A**	**3.49**	**232**	P	Pn	19 19 16.0	+0.3
FIB	**Fire Island**	**3.60**	**235**	*e*P	Pn	19 19 19.1	+2.0
PPLA	**Purkeypile**	**3.71**	**267**	P	Pn	19 19 19.9	+1.2
CHUM	**Lake Minchumin**	**3.72**	**282**	*e*P	Pn	19 19 22.7	+3.9
HYT	**Haines Junctio**	**4.00**	**126**	⇓Pn	Pn	19 19 21.9	-0.8
HYT				⇓Pg	Pg	19 19 33.2	-4.2
HYT				⇑Sg	Sg	19 20 25.5	-3.7
BM3	**Burnt Mountain**	**4.09**	**357**	P	Pn	19 19 24.6	+0.7
SEW	**Seward**	**4.14**	**220**	*e*P	Pn	19 19 30.4	+5.7
COLD	**Coldfoot**	**4.66**	**329**	P	Pn	19 19 32.4	+0.7
WHY	**Whitehorse**	**5.11**	**118**	⇑Pn	Pn	19 19 37.6	-0.3
WHY				⇑Sg	Sg	19 21 00.7	-3.9

*MOS **26** 19:26:29.4±0.8, 1540N×14677E, h33km, mb4.9/11, Error ellipse: s-maj=13.6km s-min=8.4km az=102.6*
*BJI **26** 19:26:30.5, 1564N×14702E, h42km, mB5.1, mb4.7, Ms4.2, Msz4.1*
*ISCJB **26** 19:26:31.3±1.8, 1534N±004×14680E±009, h51km±15km, mb4.7/54, MS3.9/11, Error ellipse: s-maj=14.0km s-min=7.4km az=0.9*
*IDC **26** 19:26:31.5±5.7, 1534N×14669E, h33km±43km, mb4.2/19, mb1 4.3/20, mb1mx4.2/28, mbtmp4.2/20, ML4.4/1, MS3.7/8, Ms1 3.8/8, ms1mx3.4/35, Error ellipse: s-maj=22.8km s-min=12.5km az=88.0*
*NEIC **26** 19:26:32.1±1.6, 1536N×14671E, h40km±14km, mb4.6/10, Error ellipse: s-maj=12.7km s-min=6.4km az=93.0*

ISC 26 19:26:29.9±3.0, 1535N±004×14687E±007, h25km±21km, n101, σ0♛92/92, mb4.7/54, MS3.9/11, 2C-3D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.61**	**228**	Pn	**Pn**	**19 27 10.8**	**+0.3**
	86nm,0.3s,baz=35,slow=2.1,SNR=41						
GUMO				Sn	**Sn**	**19 27 41.7**	**+0.3**
	172nm,0.3s,baz=38,slow=21,SNR=8.1						
GUMO				LR	LR	19 28 09.7	
	comp=Z,1μm,18.6s,baz=112,slow=40						
GUMO	**Guam**	**2.61**	**228**	P	**Pn**	**19 27 10.8**	**+0.3**
GUMO						19 27 41.7	
GUMO	**Guam**	**2.61**	**228**	Pn	**Pn**	**19 27 10.8**	**+0.3**
GUMO				Sn	**Sn**	**19 27 41.7**	**+0.3**
GUMO				LR	LR	19 28 09.7	
MJAR	**Matsushiro Arr**	**22.47**	**342**	P	**P**	**19 31 25.9**	**-1.4**
	3.0nm,0.7s,mb3.9,baz=168,slow=9.5,SNR=9.5						
MJAR				LR	LR	19 39 04.9	
	comp=Z,210nm,18.4s,MS3.6,baz=190,slow=34						
MAJO	**Matsushiro**	**22.48**	**342**	*e*P	**P**	**19 31 26.9**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.3						
MAJO	**Matsushiro**	**22.48**	**342**	*e*P	**P**	**19 31 26.9**	**-0.5**
	comp=Z,5.8nm,0.5s,mb4.3						
MAT	**Matsushiro**	**22.48**	**342**	P	**P**	**19 31 26.0**	**-1.3**
PMG	**Port Moresby**	**24.60**	**179**	P	**P**	**19 31 47.7**	**-0.6**
	comp=Z,5.7nm,0.7s,mb4.2,baz=0.5,slow=11,SNR=4.3						
KSRS	**Korea Array**	**27.69**	**326**	P	**P**	**19 32 15.8**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.0,baz=147,slow=9.4,SNR=12						
ASAJ	**Asahikawa**	**28.90**	**354**	P	**P**	**19 32 28.4**	**+1.6**
	comp=Z,9.5nm,0.7s,mb4.6,baz=191,slow=11,SNR=6.8						
NJ2	**Nanjing**	**30.44**	**308**	*e*P	**P**	**19 32 40.0**	**-0.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
WHN	**Wuhan**	**33.40**	**303**	P	**P**	**19 33 06.8**	**+0.2**
WHN				*e*S	**S**	**19 38 27.5**	**+1.1**
WHN				LR	LR		
	comp=Z,588nm,15.7s,MS4.4						
WRAB	**Tennant Creek**	**37.16**	**200**	⇑*e*P	**P**	**19 33 39.8**	**+0.9**
WRAB	**Tennant Creek**	**37.16**	**200**	*e*P	**P**	**19 33 38.8**	**-0.1**
	comp=Z,12nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**37.17**	**200**	*e*P	**P**	**19 33 38.4**	**-0.6**
WRA	**Warramunga Arr**	**37.17**	**200**	P	**P**	**19 33 39.0**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.4,baz=24,slow=9.3,SNR=20						
WRA				PcP	PcP	19 35 59.4	+0.5
	comp=Z,0.8nm,0.5s,baz=18,slow=3.3,SNR=6.3						
PETK	**Petropavlovsk-**	**38.63**	**10**	P	**P**	**19 33 52.5**	**+1.4**
	comp=Z,1.4nm,0.4s,mb4.1,baz=210,slow=11,SNR=11						
FITZ	**Fitzroy Crossi**	**39.27**	**213**	*e*P	**P**	**19 33 56.9**	**+0.1**
	comp=Z,17nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**39.27**	**213**	*e*P	**P**	**19 33 57.1**	**+0.3**
	comp=Z,15nm,1.1s,mb4.6						
HHC	**Hu-ho-hao-te**	**39.77**	**317**	*e*P	**P**	**19 34 02.5**	**+1.8**
HHC				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.4						
HHC				AMB	AMB		
	comp=Z,79nm,5.0s						
HHC				LR	LR		
	comp=N,172nm,17.8s,MS4.0						
HHC				LR	LR		
	comp=E,114nm,15.5s,MS4.0						
HHC				LR	LR		
	comp=Z,216nm,14.3s,MS4.1						
ASAR	**Alice Springs**	**40.79**	**198**	P	**P**	**19 34 09.7**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=15,slow=11,SNR=16						
LZH	**Lanzhou**	**43.48**	**307**	*e*P	**P**	**19 34 32.3**	**+1.0**
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,100nm,4.1s						
LZH				LR	LR		
	comp=E,156nm,14.2s						
LZH				LR	LR		
	comp=Z,195nm,15.7s,MS4.1						
MBWA	**Marble Bar**	**45.01**	**217**	*e*P	**P**	**19 34 43.3**	**-0.3**
CHTO	**Chiang Mai**	**45.84**	**281**	*e*P	**P**	**19 34 50.3**	**0.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**45.84**	**281**	*e*P	**P**	**19 34 50.3**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**45.86**	**281**	P	**P**	**19 34 51.3**	**+0.8**
	comp=Z,7.3nm,0.8s,mb4.7,baz=79,slow=6.1,SNR=63						
CMAR				LR	LR	19 51 11.3	
	comp=Z,119nm,19.7s,MS3.8,baz=143,slow=32						
CMAR	**Chiang Mai Arr**	**45.86**	**281**	P	**P**	**19 34 51.3**	**+0.8**
CMAR				LR	LR	19 51 11.3	
ULN	**Ulaanbaatar**	**46.09**	**323**	*e*P	**P**	**19 34 51.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**46.09**	**323**	*e*P	**P**	**19 34 51.5**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.3						
SONM	**Songino Array**	**46.46**	**323**	P	**P**	**19 34 54.2**	**-0.6**
	comp=Z,1.8nm,0.5s,mb4.2,baz=138,slow=9.4,SNR=9.4						
STKA	**Stephens Creek**	**47.23**	**186**	P	**P**	**19 35 00.1**	**-0.7**
	comp=Z,2.4nm,1.0s,mb4.1,baz=28,slow=8.8,SNR=3.7						
STKA	**Stephens Creek**	**47.23**	**186**	*e*P	**P**	**19 35 00.8**	**0.0**
	comp=Z,1.3nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**47.23**	**186**	*e*P	**P**	**19 35 00.6**	**-0.2**
GTA	**Gaotai**	**47.50**	**310**	*e*P	**P**	**19 35 04.0**	**+1.0**
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.7						
YAK	**Yakutsk**	**48.20**	**349**	*e*P	**P**	**19 35 06.8**	**-1.3**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
BBOO	**Buckleboo**	**48.99**	**192**	*e*P	**P**	**19 35 14.5**	**0.0**
FORT	**Forrest**	**49.30**	**201**	*e*P	**P**	**19 35 17.3**	**+0.4**
	comp=Z,7.6nm,0.6s,mb4.9						
ZAK	**Zakamensk**	**49.50**	**325**	*e*P	**P**	**19 35 12.4**	**-5.8**
ZAK				*e*		19 35 17.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MEEK	**Meekatharra**	**49.96**	**214**	*e*P	**P**	**19 35 20.9**	**-1.1**
	comp=Z,6.2nm,0.9s,mb4.6						
LSA	**Lhasa**	**52.95**	**296**	P	**P**	**19 35 46.3**	**+1.8**
LSA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
MORW	**Morawa**	**53.26**	**214**	*e*P	**P**	**19 35 46.5**	**-0.2**
	comp=Z,21nm,1.0s,mb5.0						
BILL	**Bilibino**	**54.13**	**9**	⇓*i*P	**P**	**19 35 53.6**	**+1.1**
BILL				*e*		19 36 06.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
BILL	**Bilibino**	**54.13**	**9**	*e*P	**P**	**19 35 54.0**	**+1.5**
	comp=Z,4.5nm,0.6s,mb4.6						
MUN	**Mundaring**	**55.48**	**212**	*e*P	**P**	**19 36 02.9**	**+0.1**
NWAO	**Narrogin (SRO)**	**55.74**	**210**	*e*P	**P**	**19 36 04.5**	**-0.1**
TAPN	**Taplejung**	**55.93**	**293**	*e*P	**P**	**19 36 06.9**	**+0.7**
	comp=Z,27nm,0.6s,mb5.5						
ODAN	**Odare**	**56.23**	**292**	*e*P	**P**	**19 36 08.8**	**+0.5**
	comp=Z,42nm,0.7s,mb5.6						
RAMN	**Ramite**	**56.93**	**292**	*e*P	**P**	**19 36 13.8**	**+0.5**
	comp=Z,38nm,0.9s,mb5.5						
JIRN	**Jiri**	**57.28**	**293**	*e*P	**P**	**19 36 16.5**	**+0.7**
	comp=Z,57nm,0.6s,mb5.8						
TIXI	**Tiksi**	**57.31**	**353**	⇑*e*P	**P**	**19 36 14.1**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
TIXI	**Tiksi**	**57.31**	**353**	*e*P	**P**	**19 36 14.5**	**-0.7**
	comp=Z,2.7nm,0.4s,mb4.6						
WMQ	**Urumqi**	**57.36**	**312**	P	**P**	**19 36 17.0**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,198nm,5.0s						
WMQ				LR	LR		
	comp=N,106nm,23.0s,MS3.9						
WMQ				LR	LR		
	comp=E,25nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,116nm,21.0s,MS4.0						
GUN	**Gumba**	**57.55**	**293**	*e*P	**P**	**19 36 18.4**	**+0.7**
	comp=Z,62nm,0.7s						
PKI	**Pulchoki**	**57.97**	**293**	*e*P	**P**	**19 36 21.0**	**+0.3**
	comp=Z,27nm,0.6s,mb5.5						
PKIN	**Phulchoki**	**57.98**	**293**	*e*P	**P**	**19 36 20.8**	**0.0**
	comp=Z,22nm,0.5s,mb5.5						
KKN	**Kakani**	**58.08**	**293**	*e*P	**P**	**19 36 21.8**	**+0.3**
	comp=Z,30nm,0.7s,mb5.5						
DMN	**Daman**	**58.24**	**293**	*e*P	**P**	**19 36 23.0**	**+0.4**
	comp=Z,35nm,0.5s						
GKN	**Gorkha**	**58.65**	**294**	*e*P	**P**	**19 36 25.7**	**+0.3**
	comp=Z,38nm,0.4s						
DANN	**Dangsing**	**59.41**	**294**	*e*P	**P**	**19 36 31.2**	**+0.5**
	comp=Z,81nm,0.7s						
KOLN	**Koldanda**	**59.57**	**293**	*e*P	**P**	**19 36 31.9**	**+0.1**
	comp=Z,36nm,0.8s,mb5.5						
ZALV	**Zalesovo Beam**	**61.35**	**323**	P	**P**	**19 36 42.8**	**-0.7**
	comp=Z,2.7nm,0.6s,mb4.6,baz=108,slow=8.0,SNR=12						
ZALV				LR	LR	20 06 09.0	
	comp=Z,38nm,18.7s,MS3.6,baz=303,slow=39						
MK31	**Makanchi Array**	**61.60**	**315**	*e*P	**P**	**19 36 45.5**	**+0.2**
MKAR	**Makanchi Array**	**61.60**	**315**	P	**P**	**19 36 45.4**	**+0.1**
	comp=Z,4.1nm,0.4s,mb4.9,baz=90,slow=8.7,SNR=70						
MKAR				LR	LR	20 03 18.5	
	comp=Z,55nm,20.1s,MS3.7,baz=353,slow=36						
RAR	**Rarotonga**	**63.73**	**123**	LR	LR	19 59 02.4	
	comp=Z,160nm,20.8s,MS4.2,baz=44,slow=30						
KURK	**Kurchatov**	**64.51**	**319**	P	**P**	**19 37 04.0**	**-0.6**
	comp=Z,26nm,0.7s,mb5.4,baz=96,slow=7.4,SNR=44						
KURK	**Kurchatov**	**64.51**	**319**	*e*P	**P**	**19 37 04.2**	**-0.4**
HYB	**Hyderabad**	**65.25**	**282**	*e*P	**P**	**19 37 10.0**	**0.0**
**PA

az=157.2
*NEIC **26** 19:31:23.9±1.9, 3522N×7666E, h74km±18km, mb4.0/2, Error ellipse: s-maj=17.9km s-min=15.2km az=136.0*
*IDC **26** 19:31:24.2±5.3, 3535N×7675E, h72km±49km, mb3.5/7, mb1 3.6/11, mb1mx3.4/28, mbtmp3.5/11, ML3.5/4, MS3.3/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=32.3km s-min=19.4km az=29.0*

ISC 26 19:31:23.0±0.6, 3537N±004×7665E±009, h57km±10km, n30, σ1§36/32, mb3.7/6, 1C-1D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**2.88**	**192**	*eP*	**Pn**		**19 32 06.0**	**-0.4**
DLH				*ex*	x		19 32 45.0	
THN	**Thein Dam**	**3.03**	**195**	*eP*	**Pn**		**19 32 07.6**	**-0.9**
THN				*ex*	x		19 32 47.3	
SDNR	**Sundarnagar**	**3.87**	**176**	*eP*	**Pn**		**19 32 21.0**	**+1.1**
SDNR				*ex*	x		19 33 12.6	
BHK	**Bhakra**	**3.94**	**183**	*ex*	x		19 33 14.2	
KLP	**Kalpa**	**4.05**	**160**	*eP*	**Pn**		**19 32 25.2**	**+2.7**
KLP				*eS*	**Sn**		**19 33 11.9**	**+3.3**
KLP				AML	AML		19 33 32.4	
	comp=E,215nm,0.6s							
KLP				AML	AML		19 33 34.5	
	comp=N,120nm,0.6s							
SMLA	**Simla**	**4.25**	**174**	*eP*	**Pn**		**19 32 25.8**	**+0.6**
SMLA				*eS*	**Sn**		**19 33 15.7**	**+2.2**
SMLA				*ex*	x		19 33 29.0	
	comp=E,597nm,0.3s							
SMLA				*ex*	x		19 33 31.6	
	comp=N,575nm,0.3s							
DDI	**Dehra Dun**	**5.17**	**166**	*ex*	x		19 32 48.5	
DDI				*ex*	x		19 33 52.5	
JOSI	**Joshimath**	**5.38**	**152**	*ex*	**Pn**		**19 32 39.2**	**-1.5**
JOSI				*eS*	**Sn**		**19 33 42.1**	**+0.7**
KBL	**Kabul**	**6.30**	**265**	*eP*	**Pn**		**19 32 53.2**	**-0.1**
	comp=N,3.9nm,0.5s							
SONA	**Sohna**	**7.11**	**177**	*ex*	**Pn**		**19 33 00.6**	**-3.8**
SONA				*eS*	**Sn**		**19 34 21.5**	**-2.2**
AML	**Almayashu**	**7.14**	**342**	*eP*	**Pn**		**19 33 08.6**	**+3.9**
KUDL	**Kundal**	**7.20**	**181**	*eP*	**Pn**		**19 33 03.4**	**-2.3**
KUDL				*ex*	x		19 34 19.3	
KHET	**Khetri**	**7.31**	**186**	*ex*	x		19 33 02.6	
KHET				*eS*	**Sn**		**19 34 23.5**	**-5.1**
KK31	**Karatay Array**	**9.07**	**330**	⇑*P*	**Pn**		**19 33 29.9**	**-1.2**
	comp=N,0.4nm,0.3s,baz=140,slow=11							
KK31				⇓*S*	**Sn**		**19 35 11.6**	**-0.1**
	comp=N,4.5nm,1.0s,baz=148,slow=21							
MKAR	**Makanchi Array**	**12.18**	**19**	P	**Pn**		**19 34 13.9**	**+0.3**
	comp=N,0.2nm,0.3s,baz=203,slow=13,SNR=20							
KURK	**Kurchatov**	**15.41**	**5**	P	**Pn**		**19 34 55.8**	**-0.8**
	comp=N,0.1nm,0.3s,baz=191,slow=11,SNR=7.9							
KURK	**Kurchatov**	**15.41**	**5**	*eP*	**Pn**		**19 34 59.9**	**+3.3**
	comp=N,3.6nm,0.9s							
BVAR	**Borovoye Array**	**18.20**	**348**	P	**Pn**		**19 35 31.4**	**0.0**
	comp=N,0.1nm,0.3s,baz=156,slow=7.9,SNR=5.8							
BRVK	**Borovoye**	**18.25**	**348**	P	**Pn**		**19 35 32.4**	**+0.4**
	comp=N,32nm,1.2s							
ZALV	**Zalesovo Beam**	**19.44**	**15**	P	**Pn**		**19 35 43.6**	**-2.6**
	comp=N,0.4nm,0.3s,baz=224,slow=8.3,SNR=7.3							
AKTK	**Aktyubinsk**	**20.24**	**324**	P	**P**		**19 35 54.8**	**+1.5**
AKTO	**Aktyubinsk**	**20.24**	**324**	P	**P**		**19 35 54.8**	**+1.5**
	comp=N,1.3nm,0.4s,baz=129,slow=17,SNR=4.5							
SONM	**Songino Array**	**25.32**	**51**	P	**P**		**19 36 43.8**	**-0.4**
	comp=N,2.2nm,0.7s,mb3.8,baz=251,slow=10,SNR=6.6							
CMAR	**Chiang Mai Arr**	**25.96**	**125**	P	**P**		**19 36 49.9**	**-0.4**
	comp=N,1.1nm,0.6s,mb3.6,baz=309,slow=10,SNR=8.6							
MLR	**Muntele Rosu**	**39.32**	**301**	P	**P**		**19 38 48.5**	**+2.1**
	comp=N,2.3nm,0.9s,mb3.9,baz=105,slow=20,SNR=3.0							
HFS	**Hagfors**	**46.78**	**322**	P	**P**		**19 39 46.7**	**+0.3**
	comp=N,3.9nm,1.0s,mb4.3,baz=84,slow=13,SNR=3.1							
HFS	**Hagfors**	**46.78**	**322**	P	**P**		**19 39 46.7**	**+0.3**
HFS				pmax	pmax			
	comp=Z,4.0nm,1.0s							
NOA	**NORSAR Array B**	**48.03**	**323**	LR	LR		20 01 50.4	
	comp=Z,33nm,21.1s,baz=335,slow=38							
TORD	**Torodi Ar. Bea**	**70.31**	**272**	P	**P**		**19 42 29.0**	**-1.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=60,slow=6.1,SNR=5.3							
YKA	**Yellowknife Ar**	**82.06**	**5**	P	**P**		**19 43 36.4**	**-0.3**
	comp=Z,0.2nm,0.7s,mb3.2,baz=347,slow=5.0,SNR=4.9							

*NEIC **26** 19:34:31.2±0.8, 1536N×14696E, h10km, mb4.6/1, Error ellipse: s-maj=24.1km s-min=12.1km az=103.0*
*ISCJB **26** 19:34:34.1±3.3, 154N±0.1×1469E±02, h40km±27km, mb4.4/19, Error ellipse: s-maj=27.3km s-min=20.1km az=4.1*
*IDC **26** 19:34:35.9±1.3, 1534N×14688E, h40km±6km, mb3.6/10, mb1 3.8/11, mb1mx3.6/24, mbtmp3.7/11, ML3.5/1, MS3.9/1, Ms1 3.9/1, ms1mx2.9/31, Error ellipse: s-maj=33.2km s-min=16.6km az=98.0*

ISC 26 19:34:30.9±6.5, 1538N±009×1469E±01, h5km±41km, h41km±1.1km: pP-P, n28, σ0§48/28, mb4.4/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.67**	**229**		Pn	**Pn**	**19 35 14.6**	**+0.1**
	9.4nm,0.3s,baz=18,slow=20,SNR=5.8							
GUMO					Sn	**Sn**	**19 35 47.4**	**+0.1**
	24nm,0.3s,baz=356,slow=22,SNR=3.8							
GUMO	**Guam**	**2.67**	**229**		Pn	**Pn**	**19 35 14.6**	**+0.1**
GUMO					Sn	**Sn**	**19 35 47.4**	**+0.1**
CTA	**Charters Tower**	**35.25**	**181**		LR	LR	19 53 14.4	
	comp=Z,158nm,18.1s,baz=40,slow=32							
WRA	**Warramunga Arr**	**37.22**	**200**		P	**P**	**19 41 42.3**	**-1.0**
	0.8nm,0.7s,mb3.7,baz=19,slow=9.4,SNR=5.0							
WRA	**Warramunga Arr**	**37.22**	**200**		P	**P**	**19 41 42.3**	**-1.0**
ASAR	**Alice Springs**	**40.84**	**198**		P	**P**	**19 42 14.2**	**+0.6**
	0.1nm,0.5s,baz=15,slow=11,SNR=2.8							
CMAR	**Chiang Mai Arr**	**45.91**	**281**		P	**P**	**19 42 55.5**	**+0.8**
	1.2nm,0.8s,mb3.9,baz=86,slow=5.6,SNR=11							
SONM	**Songino Array**	**46.47**	**323**		P	**P**	**19 42 59.4**	**+0.6**
	0.5nm,0.5s,mb3.7,baz=126,slow=7.3,SNR=3.1							
TAPN	**Taplejung**	**55.98**	**293**	*eP*		**P**	**19 44 10.8**	**+0.3**
	5.7nm,0.6s,mb4.8							
ODAN	**Odare**	**56.27**	**292**	*eP*		**P**	**19 44 12.7**	**+0.1**
	5.6nm,0.5s,mb4.9							
RAMN	**Ramite**	**56.97**	**292**	*eP*		**P**	**19 44 17.4**	**-0.2**
	7.3nm,0.7s,mb4.8							
JIRN	**Jiri**	**57.32**	**293**	*eP*		**P**	**19 44 20.7**	**+0.6**
	10nm,0.6s,mb5.0							
GUN	**Gumba**	**57.59**	**293**	*eP*		**P**	**19 44 22.4**	**+0.4**
	7.8nm,0.5s,mb5.0							
PKI	**Pulchoki**	**58.02**	**293**	*eP*		**P**	**19 44 24.8**	**-0.2**
PKIN	**Phulchoki**	**58.03**	**293**	*eP*		**P**	**19 44 24.4**	**-0.7**
	4.1nm,0.4s,mb4.8							
KKN	**Kakani**	**58.12**	**293**	*eP*		**P**	**19 44 25.4**	**-0.4**
	7.7nm,0.7s,mb4.8							
DMN	**Daman**	**58.28**	**293**	*eP*		**P**	**19 44 26.8**	**-0.1**
	7.5nm,0.5s,mb5.0							
GKN	**Gorkha**	**58.69**	**294**	*eP*		**P**	**19 44 29.6**	**-0.1**
	7.1nm,0.5s,mb5.0							
DANN	**Dangsing**	**59.45**	**294**	*eP*		**P**	**19 44 35.1**	**+0.1**
	14nm,0.7s							
KOLN	**Koldanda**	**59.61**	**293**	*eP*		**P**	**19 44 35.7**	**-0.4**
	4.1nm,0.6s,mb4.6							
ZALV	**Zalesovo Beam**	**61.36**	**323**	P		**P**	**19 44 46.4**	**-1.2**
	0.7nm,0.4s,mb4.1,baz=100,slow=6.0,SNR=3.3							
MKAR	**Makanchi Array**	**61.62**	**315**	P		**P**	**19 44 49.3**	**-0.1**
	0.7nm,0.4s,mb4.1,baz=89,slow=8.4,SNR=27							
MKAR				pP		pP	19 45 01.2	+10
	0.8nm,0.6s,baz=91,slow=7.9,SNR=5.0							
KURK	**Kurchatov**	**64.53**	**319**	P		**P**	**19 45 08.8**	**0.0**
	3.8nm,0.5s,mb4.7,baz=98,slow=6.7,SNR=8.4							
KURK				pP		pP	19 45 20.3	+10
	3.3nm,0.6s,baz=96,slow=7.2,SNR=5.5							
KURK	**Kurchatov**	**64.53**	**319**	*eP*		**P**	**19 45 08.4**	**-0.3**
	3.9nm,0.9s,mb4.4							
KURK				pP		pP	19 45 20.3	+10
BVAR	**Borovoye Array**	**69.78**	**321**	P		**P**	**19 45 42.1**	**+0.1**
	0.7nm,0.4s,mb3.9,baz=108,slow=8.0,SNR=6.5							
BVAR				pP		pP	19 45 54.5	+11
	1.7nm,0.7s,baz=99,slow=7.7,SNR=6.4							
YKA	**Yellowknife Ar**	**80.36**	**28**	P		**P**	**19 46 43.6**	**+0.7**
	0.1nm,0.4s,mb3.1,baz=285,slow=5.2,SNR=4.9							
ARCES	**ARCESS Array B**	**86.00**	**342**	P		**P**	**19 47 11.9**	**0.0**
	3.3nm,0.8s,mb4.6,baz=59,slow=7.2,SNR=7.8							
DBIC	**Dimbokro**	**144.48**	**306**	PKP		PKPdf	19 54 07.5	-1.9
	0.9nm,0.3s,baz=2.3,slow=2.1,SNR=3.1							

*IDC **26** 19:34:44.8±1.0, 2511S×17606W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/17, mbtmp4.2/11, MS3.9/9,*

Ms1 3.9/9, ms1mx3.7/20, Error ellipse: s-maj=38.8km s-min=21.2km az=160.0
*NEIC **26** 19:34:46.7±0.8, 2469S×17603W, h10km, mb4.9/3, Error ellipse: s-maj=27.3km s-min=15.4km az=139.0*
*ISCJB **26** 19:34:48.9±0.6, 2515S±0.1×1762W±0.1, h33km, mb4.3/15, MS3.9/8, Error ellipse: s-maj=19.5km s-min=16.1km az=167.8*

ISC 26 19:34:50.6±0.6, 2515S±01×1761W±01, h35km, n36, σ1§09/24, mb4.3/15, MS3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.82**	**21**	P	n	**Pn**	**19 37 28.4**	**-8.5**
	2.0nm,0.3s,baz=32,slow=18,SNR=4.0							
AFI					Sn	**Sn**	**19 39 31.2**	**-16**
	1.9nm,0.3s,baz=194,slow=15,SNR=4.0							
URZ	**Urewera**	**14.36**	**202**		Sn	**Sn**	**19 40 42.4**	**-6.9**
	0.8nm,0.3s,baz=353,slow=21,SNR=6.2							
URZ					LR	LR	19 43 05.5	
	comp=Z,434nm,19.2s,baz=236,slow=35							
RAR	**Rarotonga**	**15.50**	**79**	P	n	**Pn**	**19 38 11.3**	**-15**
	1.4nm,0.3s,baz=292,slow=20,SNR=4.0							
RPZ	**Rata Peaks**	**21.36**	**206**	P		**P**	**19 39 23.5**	**-11**
	2.9nm,0.3s,mb4.2,baz=338,slow=17,SNR=5.1							
RPZ					LR	LR	19 46 46.5	
	comp=Z,344nm,21.1s,MS3.7,baz=199,slow=34							
TBI	**Tubuai**	**24.35**	**92**	*e*LR		LR	19 45 33.7	
	566nm,27.2s,baz=264							
PPT	**Papeete**	**25.78**	**78**	*e*LR		LR	19 46 14.8	
	787nm,27.0s,baz=246							
PPT	**Papeete**	**25.78**	**78**	LR		LR	19 49 02.4	
	comp=Z,445nm,18.8s,MS4.0,baz=262,slow=33							
HNR	**Honiara**	**27.58**	**300**	LR		LR	19 49 19.6	
	comp=Z,299nm,20.9s,MS3.9,baz=0.5,slow=32							
RKT	**Rikitea**	**37.50**	**96**	*e*LR		LR	19 51 29.9	
	327nm,28.8s							
STKA	**Stephens Creek**	**37.62**	**250**	P		**P**	**19 42 03.3**	**+1.1**
	1.9nm,1.0s,mb3.8,baz=81,slow=11,SNR=4.6							
STKA					LR	LR	19 55 50.3	
	comp=Z,286nm,18.8s,MS4.1,baz=28,slow=34							
STKA	**Stephens Creek**	**37.62**	**250**	P		**P**	**19 42 04.5**	**+2.3**
	2.6nm,1.4s,mb3.8							
STKA					LR	LR	19 55 50.4	
PMG	**Port Moresby**	**38.23**	**287**	P		**P**	**19 42 06.2**	**-1.2**
	10.0nm,0.8s,mb4.6,baz=152,slow=7.9,SNR=6.5							
PMG					LR	LR	19 54 42.6	
	comp=Z,92nm,18.7s,MS3.6,baz=290,slow=31							
ASAR	**Alice Springs**	**45.35**	**261**	P		**P**	**19 43 04.2**	**-1.5**
	2.9nm,1.1s,mb4.0,baz=100,slow=7.9,SNR=14							
WRAB	**Tennant Creek**	**45.86**	**266**	*eP*		**P**	**19 43 09.8**	**+0.1**
	14nm,1.3s,mb4.7							
WRA	**Warramunga Arr**	**45.87**	**266**	P		**P**	**19 43 09.5**	**-0.3**
	3.1nm,1.0s,mb4.2,baz=101,slow=8.5,SNR=9.4							
WRA					LR	LR	19 59 51.6	
	comp=Z,88nm,18.1s,MS3.7,baz=110,slow=33							
VNDA	**Vanda**	**53.55**	**186**	LR		LR	20 03 55.1	
	comp=Z,98nm,18.1s,MS3.9,baz=8.3,slow=33							
QSPA	**South Pole Qui**	**65.02**	**180**	*eP*		**P**	**19 45 28.3**	**+1.6**
	7.7nm,0.9s,mb4.7							
MJAR	**Matsushiro Arr**	**74.90**	**323**	P		**P**	**19 46 27.7**	**-0.2**
	1.9nm,0.9s,mb4.0,baz=176,slow=6.3,SNR=4.6							
MJAR	**Matsushiro Arr**	**74.90**	**323**	P		**P**	**19 46 27.7**	**-0.2**
PETK	**Petropavlovsk-**	**81.11**	**344**	P		**P**	**19 47 01.5**	**-0.4**
	4.7nm,0.8s,mb4.5,baz=150,slow=12,SNR=3.2							
PETK	**Petropavlovsk-**	**81.11**	**344**	P		**P**	**19 47 01.5**	**-0.4**
KSRS	**Korea Array**	**81.45**	**318**	P		**P**	**19 47 04.5**	**+0.4**
	0.4nm,0.4s,mb3.7,baz=152,slow=11,SNR=5.2							
NVAR	**Mina Array Basa**	**83.18**	**42**	P		**P**	**19 47 15.0**	**+1.8**
	1.0nm,0.7s,mb3.9,baz=212,slow=8.2,SNR=3.6							
VNA3	**Neumayer Olymp**	**83.48**	**176**	*e*PKPdf		**P**	**19 47 12.8**	**-1.5**
VNA3				*e*			19 47 14.9	
VNA2	**Neumayer--Watz**	**83.94**	**176**	*e*PKPdf		**P**	**19 47 15.7**	**-0.9**
	baz=164,slow=3.2							
VNA2				*e*			19 47 17.7	
PLCA	**Paso Flores**	**84.89**	**133**	LR		LR	20 20 59.0	
	comp=Z,72nm,18.1s,MS4.1,baz=193,slow=33							
TXAR	**Lajitas Array**	**88.08**	**56**	P		**P**	**19 47 37.1**	**-0.6**
	1.5nm,1.1s,mb4.1,baz=190,slow=6.4,SNR=5.5							
ANMO	**Albuquerque**	**88.92**	**50**	P		**P**	**19 47 41.3**	**-0.3**
	1.2nm,0.8s,mb4.3,baz=189,slow=5.9,SNR=4.9							
CMAR	**Chiang Mai Arr**	**93.26**	**289**	P		**P**	**19 48 03.8**	**+1.7**
	3.0nm,0.9s,mb4.7,baz=138,slow=3.4,SNR=20							
CHTO	**Chiang Mai**	**93.41**	**289**	*eP*		**P**	**19 48 03.4**	**+0.6**
	5.2nm,0.9s,mb5.0							
HFS	**Hagfors**	**144.30**	**352**	PKP		PKPdf	19 54 18.2	-4.2
	3.7nm,0.8s,baz=46,slow=4.2,SNR=4.1							
AKASG	**Malin Array Be**	**147.83**	**329**	PKPbc		PKPbc	19 54 30.0	-1.6
	1.6nm,0.7s,baz=38,slow=3.5,SNR=8.4							
AKASG	**Malin Array Be**	**147.83**	**329**	PKPbc		PKPbc	19 54 30.0	-1.6
BRTR	**Keskin Array B**	**151.10**	**308**	PKPbc		PKPbc	19 54 39.5	-0.6
	1.0nm,1.0s,baz=154,slow=6.5,SNR=4.9							
CLL	**Collm**	**152.88**	**347**	*e*PKPab		PKPab	19 54 52.0	-2.8
TORD	**Torodi Ar. Bea**	**167.96**	**170**	PKPab		PKPab	19 55 59.4	-1.8
	0.8nm,0.9s,baz=181,slow=1.5,SNR=4.0							

*ISCJB **26** 19:57:08.0±0.4, 960N±003×122.15E±003, h35km±5km, mb4.1/14, MS3.3/3, Error ellipse: s-maj=5.1km s-min=4.1km az=37.8*
*IDC **26** 19:57:11.9±2.7, 953N×12222E, h56km±25km, mb3.6/11, mb1 3.8/12, mb1mx3.7/21, mbtmp3.7/12, ML4.6/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/32, Error ellipse: s-maj=28.6km s-min=12.1km az=62.0*
*NEIC **26** 19:57:12.3±1.1, 948N×122.18E, h62km±10km, Error ellipse: s-maj=12.6km s-min=7.6km az=218.0*

ISC 26 19:57:09.0±1.4, 960N±003×12216E±003, h31km±11km, n49, σ1§13/60, mb4.1/14, MS3.3/3, 3C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.09**	**103**	⇑*iP*		**Pn**	**19 57 27.0**	**-1.1**
SNPH					*i* S	**Sn**	**19 57 41.5**	**-0.6**
GUIM	**Jordan**	**1.10**	**22**	*eP*		**Pn**	**19 57 25.7**	**-2.7**
GUIM					*e*S	**Sn**	**19 57 39.6**	**-2.9**
TBP	**Tagbilaran**	**1.68**	**87**	*eP*		**Pn**	**19 57 34.9**	**-1.3**
TBP					*e*S	**Sn**	**19 57 59.6**	**+2.9**
CUYO	**Cuyo Island**	**1.68**	**318**	*eP*		**Pn**	**19 57 36.1**	**-0.2**
CUYO					*e*S	**Sn**	**19 57 55.3**	**-1.4**
IPIL	**Ipil**	**1.84**	**167**	*eP*		**Pn**	**19 57 37.7**	**-0.9**
IPIL					*e*S	**Sn**	**19 57 59.5**	**-1.3**
IPIL	**Ipil**	**1.84**	**167**	⇑*iP*		**Pn**	**19 57 38.7**	**+0.2**
IPIL					*i* S	**Sn**	**19 57 59.8**	**-1.0**
LLP	**Lapu-Lapu**	**1.92**	**68**	⇓*eP*		**Pn**	**19 57 38.0**	**-1.5**
LLP					*e*S	**Sn**	**19 58 01.1**	**-1.4**
RCP	**Roxas**	**2.03**	**16**	⇓*eP*		**Pn**	**19 57 41.9**	**+0.8**
KALP	**Kalibo**	**2.08**	**5**	*eP*		**Pn**	**19 57 42.2**	**+0.5**
PAGZ	**Pagadian**	**2.12**	**145**	*eP*		**Pn**	**19 57 42.7**	**+0.4**
PAGZ					*e*S	**Sn**	**19 58 12.9**	**+5.4**
ZMPH	**Zamboanga City**	**2.63**	**182**	⇑*iP*		**Pn**	**19 57 49.1**	**-0.2**
ZMPH					*i* S	**Sn**	**19 58 09.0**	**-11**
MSLP	**Maasin**	**2.71**	**78**	*eP*		**Pn**	**19 57 49.9**	**-0.6**
MSLP					*e*S	**Sn**	**19 58 33.5**	**+11**
OCLP	**Ormoc**	**2.81**	**59**	*eP*		**Pn**	**19 57 50.7**	**-1.1**
OCLP					*e*S	**Sn**	**19 58 26.3**	**+1.7**
SJMP	**San Jose**	**3.02**	**340**	*eP*		**Pn**	**19 57 54.5**	**-0.3**
BUSP	**Coron**	**3.07**	**321**	*eP*		**Pn**	**19 57 55.1**	**-0.3**
BUSP					*e*S	**Sn**	**19 58 30.0**	**-1.2**
ENPP	**El Nido**	**3.13**	**301**	*eP*		**Pn**	**19 57 56.2**	**-0.1**
ENPP					*e*S	**Sn**	**19 58 31.7**	**-0.9**
PLP	**Palo**	**3.18**	**60**	⇓*eP*		**Pn**	**19 57 55.5**	**-1.4**
PLP					*e*S	**Sn**	**19 58 35.0**	**+1.2**
BUKP	**Musuan**	**3.34**	**121**	*eP*		**Pn**	**19 58 00.2**	**+1.2**
BUKP					*e*S	**Sn**	**19 58 46.4**	**+8.7**
BUTP	**Butuan**	**3.47**	**100**	*eP*		**Pn**	**19 58 01.4**	**+0.5**
BUTP					*e*S	**Sn**	**19 58 51.4**	**+10**
BESP	**Borongan**	**3.79**	**58**	*eP*		**Pn**	**19 58 06.0**	**+0.8**
DAV	**Davao City (W)**	**4.21**	**126**	P		**Pn**	**19 58 13.4**	**+2.3**
	40nm,0.3s,baz=301,slow=5.9,SNR=1.8							
BATP	**Bataraza**	**4.38**	**260**	*eP*		**Pn**	**19 58 13.1**	**-0.4**
PVCP	**Virac**	**4.43**	**26**	*eP*		**Pn**	**19 58 15.4**	**+1.4**
KKM	**Kota Kinabalu**	**6.87**	**240**	*eP*		**Pn**	**19 58 49.5**	**+1.9**
	23nm,0.6s							
KAPI	**Kappang**	**14.71**	**189**	LR		LR	20 06 26.0	
	comp=Z,164nm,20.5s,baz=79,slow=38							
GUMO	**Guam**	**22.59**	**78**	LR		LR	20 10 18.0	
	comp=Z,76nm,20.6s,MS3.1,baz=109,slow=35							
PSI	**Prapat**	**24.06**	**255**	P		**P**	**20 02 23.2**	**+1.5**
	5.4nm,0.8s,mb4.0,baz=60,slow=16,SNR=3.5							
CMAR	**Chiang Mai Arr**	**24.16**	**294**	P		**P**	**20 02 23.9**	**+1.2**
	1.5nm,0.9s,mb3.4,baz=114,slow=7.4,SNR=6.8							
KSRS	**Korea Array**	**28.22**	**10**	P		**P**	**20 03 00.3**	**+1.2**
	1.0nm,0.7s,mb3.6,baz=177,slow=10,SNR=5.0							
WRA	**Warramunga Arr**	**31.71**	**158**	P		**P**	**20 03 28.7**	**-1.4**
	0.9nm,0.6s,mb3.8,baz=332,slow=10,SNR=4.8							
WB2	**Warramunga Arr**	**31.71**	**158**	*eP*		**P**	**20 03 28.5**	**-1.6**
ASAR	**Alice Springs**	**35.00**	**161**	P		**P**	**20 03 58.6**	**-0.1**
	3.7nm,0.6s,mb4.5,baz=342,slow=7.5,SNR=105							
ASAR				PcP		PcP	20 06 29.7	-1.0
	0.9nm,0.8s,baz=341,slow=2.1,SNR=6.4							
ASAR				S		**S**	**20 09 27.3**	**-1.6**
	1.1nm,1.1s,baz=348,slow=22,SNR=4.5							
MEEK	**Meekatharra**	**36.18**	**185**	*eP*		**P**	**20 04 09.1**	**+0.2**
	8.7nm,0.6s,mb4.9							
SONM	**Songino Array**	**40.37**	**344**	P		**P**	**20 04 44.7**	**+0.8**
	0.2nm,0.3s,mb3.3,baz=165,slow=7.7,SNR=4.5							
FORT	**Forrest**	**40.54**	**172**	*eP*		**P**	**20 04 45.5**	**0.0**
	16nm,0.6s,mb4.8							
KMBL	**Kambalda**	**40.73**	**180**	*eP*		**P**	**20 04 47.1**	**+0.1**
	51nm,0.9s,mb5.2							
NWAO	**Narrogin (SRO)**	**42.55**	**186**	*eP*		**P**	**20 05 02.7**	**+0.8**
	50nm,0.6s							
STKA	**Stephens Creek**	**45.24**	**157**	P		**P**	**20 05 22.5**	**-1.0**
	1.5nm,0.7s,mb3.9,baz=351,slow=6.8,SNR=5.7							
STKA	**Stephens Creek**	**45.24**	**157**	P		**P**	**20 05 22.5**	**-1.0**
MK31	**Makanchi Array**	**50.18**	**325**	*eP*		**P**	**20 06 03.4**	**+1.6**
MKAR	**Makanchi Array**	**50.18**	**325**	P		**P**	**20 06 03.0**	**+1.2**
	1.3nm,0.8s,mb4.0,baz=133,slow=8.7,SNR=11							
KBL	**Kabul**	**54.40**	**306**	*eP*		**P**	**20 06 33.6**	**+0.3**
AKTO	**Aktyubinsk**	**66.28**	**321**	LR		LR	20 37 02.7	
	comp=Z,48nm,18.3s,MS3.7,baz=231,slow=36							
BRTR	**Keskin Array B**	**82.82**	**309**	P		**P**	**20 09 31.2**	**+0.7**
	0.7nm,0.7s,mb3.8,baz=77,slow=5.0,SNR=4.1							
AKASG	**Malin Array Be**	**84.51**	**320**	P		**P**	**20 09 39.1**	**+0.1**
	0.9nm,0.5s,mb4.1,baz=64,slow=5.8,SNR=3.7							
PPT	**Papeete**	**91.21**	**108**	LR		LR	20 47 06.5	
	comp=Z,6.9nm,20.5s,MS3.1,baz=81,slow=33							
YKA	**Yellowknife Ar**	**95.98**	**23**	P		**P**	**20 10 32.4**	**-0.5**
	0.4nm,1.0s,mb3.8,baz=304,slow=5.8,SNR=3.6							
PLCA	**Paso Flores**	**147.00**	**162**	PKPbc		PKPbc	20 16 48.4	-0.5
	2.9nm,0.9s,baz=184,slow=3.4,SNR=7.4							
CPUP	**Villa Florida**	**163.35**	**182**	PKP		PKPdf	20 17 08.7	-0.6
	0.2nm,0.3s,baz=172,slow=4.5,SNR=3.2							

*NEIC **26** 19:59:40.3, 1591N×9729W, h16km, MD3.8(MEX), After MEX.*

MEX 26 19:59:40.5±0.6, 1591N×9730W, h16km±9km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.93**	**301**	*i* P		Pb	19 59 54.6	-3.7
PNIG				*i* S		Sb	20 00 06.9	-3.6
HUIG	**Huatulco**	**1.15**	**97**	*i* P		Pn	19 59 58.5	-3.4
HUIG				*i* S		Sb	20 00 11.6	-5.2
VHO	**Vista Hermosa**	**1.28**	**25**	*i* P		Pn	20 00 00.1	-3.6
VHO				*i* S		Sb	20 00 14.8	-5.5
OXX	**Oaxaca**	**1.29**	**25**	*e*P		Pn	20 00 00.6	-3.3
OXX				*i* S		S

KEMA				*i* S		**Sn**	**20 42 57.6**	**+6.1**
PTK	**Pertek**	**2.57**	**47**	*e*PN		**Pn**	**20 42 24.2**	**+0.4**
DIYA	**Diyarbakir**	**2.62**	**72**	*i* P		**Pn**	**20 42 23.9**	**-0.5**
DIYA				*i* S		**Sn**	**20 43 05.3**	**+8.8**
DIY	**Diyarbakir**	**2.69**	**73**	*e*PN		**Pn**	**20 42 25.3**	**-0.1**
SVSK	**Karacayir**	**2.74**	**0**	*e*PN		**Pn**	**20 42 27.0**	**+0.8**
YOZ	**Yozgat**	**2.79**	**333**	*e*PN		**Pn**	**20 42 26.1**	**-0.6**
EREN	**Erenkoy**	**2.79**	**235**	*e*PN		**Pn**	**20 42 26.1**	**-0.7**
IKL	**Isikli**	**2.80**	**252**	*e*PN		**Pn**	**20 42 26.1**	**-0.8**
HWQ	**Hawqa**	**3.00**	**196**	*e*Pn		**Pn**	**20 42 30.2**	**+0.5**
MARD	**Mardin**	**3.04**	**86**	*i* P		**Pn**	**20 42 29.1**	**-1.1**
MARD				*i* S		**Sg**	**20 43 17.8**	**-1.5**
TOKA	**Tokat**	**3.17**	**353**	*i* P		**Pn**	**20 42 32.0**	**0.0**
TOKA	**Tokat**	**3.17**	**353**	*i* P		**Pn**	**20 42 32.0**	**-0.1**
CDAG	**Cicekdag**	**3.19**	**321**	*i* P		**Pn**	**20 42 33.0**	**+0.7**
CDAG				*i* S		**Sn**	**20 43 04.2**	**-6.4**
KAMT	**Kaman**	**3.38**	**312**	*e*PN		**Pn**	**20 42 35.4**	**+0.5**
EZC	**Erzincan**	**3.41**	**40**	*e*PN		**Pn**	**20 42 32.6**	**-2.7**
BHL	**Bhannes**	**3.43**	**199**	*e*Pn		**Pn**	**20 42 36.4**	**+0.8**
BEST	**Besiri**	**3.49**	**77**	*i* P		**Pn**	**20 42 35.9**	**-0.6**
CORM	**Corum**	**3.52**	**329**	*e*PN		**Pn**	**20 42 37.7**	**+0.9**
LEF	**Lefka**	**3.88**	**239**	*e*PN		**Pn**	**20 42 42.0**	**+0.2**
KVT	**Kavak**	**3.97**	**350**	*e*PN		**Pn**	**20 42 43.5**	**+0.4**
MSL	**Mosul**	**4.99**	**97**	*e*P		**Pg**	**20 43 18.0**	**+0.9**
MSL				*e*S		**Sb**	**20 44 12.0**	**+2.5**

*ISCJB **26** 20:48:06.8±0.5, 37.16N±003×36.97E±003, h3km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=4.2*
*CSEM **26** 20:48:06.4±0.1, 37.17N×3700E, h5km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.6km az=6.0*
*DDA **26** 20:48:06.3, 37.18N×3697E, h14km±2km, Md2.9*
*ISK **26** 20:48:06.1, 37.17N×3699E, h3km, MD2.8*

ISC 26 20:48:07.3±0.4**, 3717N**±003×**3699E**±003**, h5**km±5km**, n23,** σ0:**74**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.18**	**88**	*e*PG	**Pg**	**20 48 10.8**	**0.0**
GAZ				*e*SG	**Sg**	**20 48 13.8**	**+0.5**
KMRS	**Kahramanmaras**	**0.35**	**349**	*e*PG	**Pg**	**20 48 13.4**	**-0.6**
KMRS				*e*SG	**Sg**	**20 48 19.0**	**+0.5**
KUZU	**Kuzuini**	**0.40**	**170**	*i* P	**Pg**	**20 48 15.1**	**+0.2**
KUZU				*i* S	**Sg**	**20 48 21.0**	**+0.9**
GZT	**Gaziantep**	**0.50**	**68**	*i* P	**Pg**	**20 48 16.4**	**-0.5**
ANDN	**Andirin**	**0.66**	**309**	*i* P	**Pg**	**20 48 19.0**	**-0.9**
ANDN				*i* S	**Sg**	**20 48 28.2**	**-0.2**
COBT	**Iskenderun**	**0.87**	**222**	*i* P	**Pg**	**20 48 23.3**	**-0.7**
COBT				*i* S	**Sg**	**20 48 34.8**	**-0.4**
KOZT	**Kozan**	**0.97**	**289**	*e*PG	**Pg**	**20 48 24.8**	**-1.2**
KOZT				*e*SG	**Sg**	**20 48 39.5**	**+0.8**
CEYT	**Ceyhan**	**1.00**	**261**	*e*PG	**Pg**	**20 48 26.2**	**-0.3**
CEYT				*e*SG	**Sg**	**20 48 41.3**	**+1.9**
ATAB	**Bozova**	**1.09**	**73**	*i* P	**Pg**	**20 48 28.0**	**-0.1**
ATAB				*i* S	**Sg**	**20 48 42.4**	**+0.1**
ATAB	**Bozova**	**1.09**	**73**	*i* P	**Pg**	**20 48 28.0**	**-0.1**
ATAB				*i* S	**Sg**	**20 48 42.3**	**+0.1**
HTY	**Hatay**	**1.25**	**213**	*e*PN	**Pn**	**20 48 30.3**	**-0.9**
AKCD	**Akcadag**	**1.35**	**33**	*i* P	**Pn**	**20 48 32.8**	**+0.1**
AKCD				*i* S	**Sb**	**20 48 51.2**	**+0.6**
KRTS	**Karatas**	**1.42**	**246**	*e*PN	**Pn**	**20 48 34.1**	**+0.4**
URFA	**Urfa**	**1.49**	**79**	*e*PN	**Pn**	**20 48 34.5**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.53**	**352**	*e*PN	**Pn**	**20 48 32.2**	**-3.0**
PINB	**Pinarbasi**	**1.58**	**343**	*i* P	**Pn**	**20 48 36.1**	**+0.3**
PINB				*i* S	**Sn**	**20 48 57.0**	**+0.4**
PINB	**Pinarbasi**	**1.58**	**343**	*i* P	**Pn**	**20 48 36.1**	**+0.3**
PINB				*i* S	**Sn**	**20 48 57.0**	**+0.4**
MALT	**Malatya**	**1.62**	**44**	*e*PN	**Pn**	**20 48 37.2**	**+0.8**
MYA	**Malataya**	**1.63**	**44**	*e*PN	**Pn**	**20 48 36.3**	**-0.2**
BNN	**Bunyan**	**1.91**	**332**	*e*PN	**Pn**	**20 48 40.9**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.20**	**56**	*e*PN	**Pn**	**20 48 43.7**	**-0.7**
KEMA	**Kemaliye**	**2.41**	**29**	*i* P	**Pn**	**20 48 51.4**	**+4.1**
KEMA				*i* S	**Sn**	**20 49 24.2**	**+7.0**
PTK	**Pertek**	**2.57**	**47**	*e*PN	**Pn**	**20 48 49.7**	**+0.3**

JMA 26 20:52:57.2±0.3**, 3197N**×**14073E, h20**km**, M3.6, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.38**	**326**	P	Pn	20 53 21.4	+0.2
JHJ2				S	Sn	20 53 39.6	+0.7
BSO1	**Boso 1**	**2.68**	**4**	P	Pn	20 53 39.4	+0.2
BSO2	**Boso 2**	**2.77**	**0**	S	Sn	20 54 14.3	+0.9
BSO3	**Boso 3**	**2.83**	**356**	P	Pn	20 53 41.9	+0.6
BSO3				S	Sn	20 54 14.7	-0.1
JOD2	**Odawara 2**	**3.56**	**338**	P	Pn	20 53 53.0	+1.7
JHU	**Hanno**	**4.05**	**343**	P	Pn	20 54 00.2	+2.1
JRY	**Ryogami san**	**4.31**	**340**	P	Pn	20 54 04.8	+3.2
JAG	**Ashikaga**	**4.57**	**347**	P	Pn	20 54 06.8	+1.7
JAG				S	Sn	20 54 57.6	0.0

*BJI **26** 21:05:40.3, 1390N×5680E, h10km, mB5.0, mb4.7*
*IDC **26** 21:05:41.4±0.7, 1390N×5682E, h0km, mb3.9/18, mb1 4.1/18, mb1mx4.0/26, mbtmp3.9/18, MS3.7/17, Ms1 3.7/17, ms1mx3.6/31, Error ellipse: s-maj=18.4km s-min=16.0km az=6.0*
*ISCJB **26** 21:05:41.1±0.4, 1389N±007×5678E±006, h10km, mb4.2/36, MS3.6/17, Error ellipse: s-maj=9.8km s-min=7.8km az=1.2*
*MOS **26** 21:05:41.1±0.9, 1389N×5672E, h10km, mb4.7/15, Error ellipse: s-maj=10.8km s-min=7.1km az=111.3*
*NEIC **26** 21:05:42.9±0.3, 1389N×5678E, h10km, mb4.4/16, Error ellipse: s-maj=7.4km s-min=6.3km az=172.0*
*CSEM **26** 21:05:44.7±0.1, 1395N×5676E, h33km, mb4.5/16, Error ellipse: s-maj=5.0km s-min=3.4km az=89.0*

ISC 26 21:05:43.0±0.4**, 1388N**±007×**5680E**±006**, h10**km**, n114,** σ0:**83**/107**, mb4.2**/36**, MS3.6**/17**, 3C-2D, Socotra region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYB	**Hyderabad**	**21.23**	**78**	*e*P	**P**	**21 10 30.0**	**+0.7**
HYB	**Hyderabad**	**21.23**	**78**	*i* P	**P**	**21 10 30.0**	**+0.7**
HYB				*e*		21 10 34.5	
KBL	**Kabul**	**23.36**	**26**	*e*P	**P**	**21 10 52.7**	**+0.9**
KBL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.1						
KBL	**Kabul**	**23.36**	**26**	*e*P	**P**	**21 10 52.7**	**+0.9**
	comp=Z,7.6nm,1.1s,mb4.0						
KBL	**Kabul**	**23.36**	**26**	*e*P	**P**	**21 10 52.7**	**+0.9**
	comp=Z,7.6nm,1.1s,mb4.0						
EIL	**Elat**	**25.59**	**311**	LR	LR	21 21 40.8	
	comp=Z,161nm,19.4s,MS3.6,baz=89,slow=38						
ASF	**Jabal al Asfar**	**25.75**	**318**	P	**P**	**21 11 12.9**	**-0.9**
	comp=Z,1.5nm,0.6s,mb3.7,baz=249,slow=14,SNR=2.4						
ASF				LR	LR	21 22 18.8	
	comp=Z,76nm,18.9s,MS3.2,baz=159,slow=39						
MMAI	**Mount Meron Ar**	**27.25**	**318**	LR	LR	21 23 17.1	
	comp=Z,75nm,19.1s,MS3.3,baz=75,slow=39						
GNI	**Garni**	**28.23**	**340**	LR	LR	21 23 50.0	
	comp=Z,71nm,21.1s,MS3.2,baz=336,slow=39						
GNI	**Garni**	**28.23**	**340**	*e*P	**P**	**21 11 36.2**	**+0.1**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GNI	**Garni**	**28.23**	**340**	*e*P	**P**	**21 11 36.2**	**+0.1**
	comp=Z,6.3nm,0.8s,mb4.3						
GNI	**Garni**	**28.23**	**340**	*e*P	**P**	**21 11 36.2**	**+0.1**
	comp=Z,6.3nm,0.8s,mb4.3						
MALT	**Malatya**	**29.28**	**330**	*e*P	**P**	**21 11 45.3**	**-0.2**
MALT				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MALT	**Malatya**	**29.28**	**330**	*e*P	**P**	**21 11 45.3**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.6						
MALT	**Malatya**	**29.28**	**330**	*e*P	**P**	**21 11 45.3**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.6						
CSS	**Prodhromos**	**29.81**	**319**	*e*P	**P**	**21 11 50.3**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.0						
CSS	**Prodhromos**	**29.81**	**319**	*e*P	**P**	**21 11 50.3**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.1						
EKS2	**Erkin-Say**	**32.20**	**24**	P	**P**	**21 12 11.8**	**+0.6**
EKS2	**Erkin-Say**	**32.20**	**24**	P	**P**	**21 12 11.8**	**+0.5**
KIV	**Kislovodsk**	**32.32**	**341**	*e*P	**P**	**21 12 13.1**	**+0.9**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**32.32**	**341**	*e*P	**P**	**21 12 13.1**	**+0.9**
	comp=Z,6.9nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**32.32**	**341**	*e*P	**P**	**21 12 13.1**	**+0.9**
	comp=Z,6.9nm,0.9s,mb4.5						
BR131	**Keskin Array S**	**32.82**	**326**	P	**P**	**21 12 16.7**	**0.0**
BRTR	**Keskin Array B**	**32.82**	**326**	P	**P**	**21 12 17.4**	**+0.7**
	comp=Z,1.6nm,1.0s,mb3.9,baz=146,slow=12,SNR=6.4						
BRTR				LR	LR	21 27 20.8	
	comp=Z,116nm,18.5s,MS3.6,baz=136,slow=40						
AKTK	**Aktyubinsk**	**36.47**	**1**	P	**P**	**21 12 48.2**	**+0.2**
AKTK	**Aktyubinsk**	**36.47**	**1**	P	**P**	**21 12 48.2**	**+0.2**
AKTO	**Aktyubinsk**	**36.47**	**1**	P	**P**	**21 12 48.2**	**+0.2**
	comp=Z,0.7nm,0.4s,mb3.9,baz=171,slow=13,SNR=2.4						
TIRR	**Tirgusor**	**38.90**	**327**	*e*P	**P**	**21 13 08.6**	**-0.2**
TIRR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
TIRR	**Tirgusor**	**38.90**	**327**	*e*P	**P**	**21 13 08.6**	**-0.2**
	comp=Z,8.1nm,0.9s,mb4.5						
MK31	**Makanchi Array**	**39.14**	**28**	*e*P	**P**	**21 13 11.8**	**+1.0**
MK31	**Makanchi Array**	**39.14**	**28**	*e*P	**P**	**21 13 11.8**	**+1.0**
MKAR	**Makanchi Array**	**39.14**	**28**	*e*P	**P**	**21 13 11.2**	**+0.5**
	comp=Z,1.2nm,0.9s,mb3.6,baz=213,slow=7.8,SNR=6.2						
MKAR				LR	LR	21 31 02.4	
	comp=Z,67nm,20.2s,MS3.5,baz=172,slow=39						
LSZ	**Lusaka**	**40.50**	**225**	P	**P**	**21 13 22.7**	**+0.3**
LSZ	**Lusaka**	**40.50**	**225**	P	**P**	**21 13 22.7**	**+0.3**
BVAR	**Borovoye Array**	**40.52**	**13**	P	**P**	**21 13 23.2**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.2,baz=198,slow=9.1,SNR=2.8						
CMAR	**Chiang Mai Arr**	**40.66**	**78**	P	**P**	**21 13 24.9**	**+1.2**
	comp=Z,3.6nm,1.0s,mb3.9,baz=274,slow=9.1,SNR=19						
CMAR				LR	LR	21 32 58.8	
	comp=Z,43nm,18.7s,MS3.3,baz=302,slow=40						
CHTO	**Chiang Mai**	**40.66**	**77**	P	**P**	**21 13 23.3**	**-0.5**
CHTO	**Chiang Mai**	**40.66**	**77**	P	**P**	**21 13 23.3**	**-0.5**
VRI	**Vrincioaia**	**40.73**	**328**	⇑*i*P	**P**	**21 13 26.2**	**+2.2**
KURK	**Kurkovo**	**40.78**	**21**	P	**P**	**21 13 22.2**	**-2.1**
	comp=Z,0.2nm,0.2s,mb3.3,baz=216,slow=8.2,SNR=2.3						
KURK				LR	LR	21 32 06.7	
	comp=Z,93nm,18.9s,MS3.7,baz=250,slow=39						
VOIR		**41.34**	**326**	⇓*i*P	**P**	**21 13 30.6**	**+1.6**
ARU	**Arti**	**42.48**	**1**	*e*P	**P**	**21 13 37.7**	**-0.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
ARU	**Arti**	**42.48**	**1**	*e*P	**P**	**21 13 37.7**	**-0.4**
	comp=Z,4.6nm,1.1s,mb4.0						
ARU	**Arti**	**42.48**	**1**	*e*P	**P**	**21 13 37.6**	**-0.5**
	comp=Z,4.6nm,1.1s,mb4.0						
AKASG	**Malin Array Be**	**42.99**	**334**	P	**P**	**21 13 42.2**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=136,slow=7.6,SNR=9.6						
AKASG	**Malin Array Be**	**42.99**	**334**	P	**P**	**21 13 42.2**	**-0.2**
BZS	**Buzias**	**43.37**	**324**	⇑*i*P	**P**	**21 13 46.0**	**+0.4**
DRGR		**43.46**	**326**	⇓*i*P	**P**	**21 13 47.4**	**+1.1**
OBN	**Obninsk**	**44.05**	**343**	*e*P	**P**	**21 13 49.8**	**-1.1**
OBN				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.7						
TRPA	**Tarpa**	**44.38**	**327**	⇑*i*P	**P**	**21 13 53.8**	**+0.2**
ZALV	**Zalesovo Beam**	**45.65**	**23**	P	**P**	**21 14 04.2**	**+0.6**
	comp=Z,0.8nm,0.3s,mb4.1,baz=224,slow=6.2,SNR=5.3						
ZALV				LR	LR	21 34 12.0	
	comp=Z,102nm,19.2s,MS3.8,baz=262,slow=38						
PSZ	**Piszkesteto**	**45.67**	**326**	P	**P**	**21 14 03.5**	**-0.4**
PSZ	**Piszkesteto**	**45.67**	**326**	P	**P**	**21 14 03.5**	**-0.3**
SUW	**Suwalki**	**47.95**	**334**	*e*P	**P**	**21 14 22.2**	**+0.6**
SUW				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
SUW	**Suwalki**	**47.95**	**334**	*e*P	**P**	**21 14 22.2**	**+0.6**
	comp=Z,14nm,0.8s,mb5.1						
SUW	**Suwalki**	**47.95**	**334**	*e*P	**P**	**21 14 22.2**	**+0.6**
	comp=Z,14nm,0.8s,mb5.1						
GYA	**Guiyang**	**48.17**	**67**	P	**P**	**21 14 24.0**	**+0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
LBTB	**Lobatse**	**49.20**	**218**	*e*P	**P**	**21 14 32.0**	**+0.3**
LBTB	**Lobatse**	**49.20**	**218**	*e*P	**P**	**21 14 32.0**	**+0.3**
TAM	**Tamanrasset**	**49.27**	**288**	*e*P	**P**	**21 14 33.7**	**+1.4**
TAM				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
TAM	**Tamanrasset**	**49.27**	**288**	*e*P	**P**	**21 14 33.7**	**+1.4**
	comp=Z,3.5nm,1.1s,mb4.8						
TAM	**Tamanrasset**	**49.27**	**288**	*e*P	**P**	**21 14 33.7**	**+1.4**
	comp=Z,3.5nm,1.1s,mb4.3						
GERES	**GERESS Array B**	**49.65**	**324**	P	**P**	**21 14 34.2**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.6,baz=128,slow=8.6,SNR=4.8						
GERES				LR	LR	21 39 41.1	
	comp=Z,93nm,18.1s,MS3.8,baz=92,slow=41						
VLC	**Villacolmenard**	**49.65**	**317**	P	**P**	**21 14 36.1**	**+1.2**
VLC	**Villacolmenard**	**49.65**	**317**	P	**P**	**21 14 36.1**	**+1.2**
BOSA	**Boshof**	**52.12**	**216**	P	**P**	**21 14 54.2**	**+0.6**
	comp=Z,2.6nm,0.9s,mb4.2,baz=176,slow=10,SNR=4.6						
BOSA				LR	LR	21 35 37.5	
	comp=Z,187nm,18.3s,MS4.2,baz=352,slow=34						
BOSA	**Boshof**	**52.12**	**216**	P	**P**	**21 14 53.8**	**+0.2**
BOSA	**Boshof**	**52.12**	**216**	P	**P**	**21 14 53.8**	**+0.2**
BOSA				LR	LR	21 35 37.5	
BNI	**Bardonecchia**	**52.45**	**317**	*e*P	**P**	**21 14 56.0**	**+0.1**
BNI	**Bardonecchia**	**52.45**	**317**	*e*P	**P**	**21 14 56.0**	**+0.2**
LPG	**La Plagne**	**52.55**	**317**	*e*P	**P**	**21 14 56.2**	**-0.4**
	comp=Z,8.6nm,0.8s,mb4.4						
LPG	**La Plagne**	**52.55**	**317**	*e*P	**P**	**21 14 56.2**	**-0.4**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LPG	**La Plagne**	**52.55**	**317**	*e*P	**P**	**21 14 56.2**	**-0.4**
	comp=Z,4.3nm,0.8s,mb4.4						
LPL	**La Plagne**	**52.57**	**317**	*e*P	**P**	**21 14 56.1**	**-0.7**
	comp=Z,9.7nm,1.0s,mb4.4						
LPL	**La Plagne**	**52.57**	**317**	*e*P	**P**	**21 14 56.1**	**-0.7**
LPL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
LPL	**La Plagne**	**52.57**	**317**	*e*P	**P**	**21 14 56.1**	**-0.7**
	comp=Z,4.8nm,1.0s,mb4.4						
SONM	**Songino Array**	**53.11**	**40**	LR	LR	21 39 00.3	
	comp=Z,82nm,19.1s,MS3.8,baz=166,slow=38						
CDF	**Champ du Feu**	**53.29**	**321**	*e*P	**P**	**21 15 01.3**	**-0.7**
	comp=Z,6.4nm,1.0s,mb4.2						
CDF	**Champ du Feu**	**53.29**	**321**	*e*P	**P**	**21 15 01.3**	**-0.7**
CDF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CDF	**Champ du Feu**	**53.29**	**321**	*e*P	**P**	**21 15 01.3**	**-0.7**
	comp=Z,3.2nm,1.0s,mb4.2						
CABF	**La Chapelle**	**53.37**	**318**	*e*P	**P**	**21 15 02.0**	**-0.7**
	comp=Z,344nm,1.3s,mb4.8						
CABF	**La Chapelle**	**53.37**	**318**	*e*P	**P**	**21 15 02.0**	**-0.7**
CABF				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
CABF	**La Chapelle**	**53.37**	**318**	*e*P	**P**	**21 15 02.0**	**-0.7**
	comp=Z,17nm,1.3s,mb4.8						
TOA0	**Torodi Ar. Sit**	**53.48**	**276**	*e*P	**P**	**21 15 04.2**	**+0.2**
TOA0	**Torodi Ar. Sit**	**53.48**	**276**	*e*P	**P**	**21 15 04.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**53.48**	**276**	P	**P**	**21 15 05.2**	**+1.1**
	comp=Z,1.9nm,1.0s,mb4.0,baz=89,slow=6.1,SNR=8.8						
TORD				PcP	PcP	21 16 11.7	+0.7
	comp=Z,0.7nm,1.0s,baz=85,slow=4.6,SNR=2.8						
TORD				LR	LR	21 36 28.7	
	comp=Z,42nm,18.2s,MS3.5,baz=190,slow=34						
TORD	**Torodi Ar. Bea**	**53.48**	**276**	P	**P**	**21 15 05.2**	**+1.1**
TORD				PcP	PcP	21 16 11.7	+0.7
TORD				LR	LR	21 36 28.7	
WLF	**Walferdange**	**54.45**	**322**	*e*P	**P**	**21 15 10.1**	**-0.5**
WLF	**Walferdange**	**54.45**	**322**	*e*P	**P**	**21 15 10.1**	**-0.4**
LOR	**Lormes**	**55.03**	**318**	*e*P	**P**	**21 15 14.2**	**-0.6**
SSF	**Saint Saulge**	**55.19**	**318**	*e*P	**P**	**21 15 15.3**	**-0.7**
AVF	**Avril sur Loir**	**55.21**	**318**	*e*P	**P**	**21 15 15.2**	**-0.9**
BAIF	**Baives**	**55.77**	**322**	*e*P	**P**	**21 15 19.2**	**-0.9**
	comp=Z,19nm,1.2s,mb4.7						
BAIF	**Baives**	**55.77**	**322**	*e*P	**P**	**21 15 19.2**	**-0.9**
BAIF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
BAIF	**Baives**	**55.77**	**322**	*e*P	**P**	**21 15 19.2**	**-0.9**
	comp=Z,9.6nm,1.2s,mb4.7						
NOA	**NORSAR Array B**	**57.38**	**336**	LR	LR	21 40 04.3	
	comp=Z,46nm,18.1s,MS3.6,baz=185,slow=36						
ESDC	**Sonseca Array**	**58.83**	**308**	P	**P**	**21 15 40.3**	**-1.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=88,slow=7.4,SNR=6.3						
ARCES	**ARCESS Array B**	**59.00**	**348**	P	**P**	**21 15 41.7**	**-0.8**
	comp=Z,5.8nm,1.0s,mb4.6,baz=120,slow=5.3,SNR=3.0						
ARCES				LR	LR	21 47 04.0	
	comp=Z,110nm,18.2s,MS4.0,baz=11,slow=42						
DBIC	**Dimbokro**	**60.96**	**270**	P	**P**	**21 15 58.5**	**+1.6**
	comp=Z,4.7nm,1.1s,mb4.5,baz=119,slow=10,SNR=4.1						
DBIC	**Dimbokro**	**60.96**	**270**	*e*P	**P**	**21 15 56.7**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DBIC	**Dimbokro**	**60.96**	**270**	*e*P	**P**	**21 15 56.7**	**-0.2**
	comp=Z,9.1nm,1.2s,mb4.8						
DBIC	**Dimbokro**	**60.96**	**270**	*e*P	**P**	**21 15 56.7**	**-0.2**
	comp=Z,9.1nm,1.2s,mb4.8						
ESK	**Eskdalemuir**	**61.76**	**326**	P	**P**	**21 16 01.5**	**-0.2**
ESK	**Eskdalemuir**	**61.76**	**326**	P	**P**	**21 16 01.5**	**-0.2**
CN2	**Changchun**	**65.13**	**48**	*e*P	**P**	**21 16 23.8**	**-0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
KSRS	**Korea Array**	**66.77**	**55**	P	**P**	**21 16 34.0**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=260,slow=7.5,SNR=5.1						
KSRS				LR	LR	21 48 02.1	
	comp=Z,75nm,19.0s,MS3.9,baz=343,slow=38						
TIXI	**Tiksi**	**71.28**	**19**	*e*P	**P**	**21 17 00.6**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
TIXI	**Tiksi**	**71.28**	**19**	*e*P	**P**	**21 17 00.6**	**-1.7**
	comp=Z,8.5nm,1.3s,mb4.5						
TIXI	**Tiksi**	**71.28**	**19**	*e*P	**P**	**21 17 00.6**	**-1.7**
	comp=Z,8.5nm,1.3s,mb4.5						
MAW	**Mawson**	**81.38**	**178**	LR	LR	21 47 28.3	
	comp=Z,77nm,19.7s,MS4.1,baz=112,slow=31						
WRA	**Warramunga Arr**	**83.32**	**112**	P	**P**	**21 18 10.0**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=297,slow=4.3,SNR=10.0						
ASAR	**Alice Springs**	**84.05**	**116**	P	**P**	**21 18 13.6**	**-0.8**
	comp=Z,1.4nm,0.7s,mb4.2,baz=291,slow=4.7,SNR=15						
TXAR	**Lajitas Array**	**133.08**	**336**	PKP	PKPdf	21 24 59.0	-0.5
	comp=Z,0.4nm,0.7s,baz=96,slow=1.3,SNR=4.5						

*ISCJB **26** 21:05:50.0±0.4, 1012N±003×12563E±007, h155km±3km, mb4.0/14, Error ellipse: s-maj=10.7km s-min=5.0km az=170.7*
*IDC **26** 21:05:51.7±3.0, 1008N×12554E, h152km±25km, mb3.8/6, mb1 4.0/7, mb1mx3.6/19, mbtmp3.9/7, Error ellipse: s-maj=54.0km s-min=17.1km az=73.0*
*NEIC **26** 21:05:52.0±1.1, 1004N×12560E, h159km±10km, mb4.2/6, Error ellipse: s-maj=14.5km s-min=6.4km az=71.0*

ISC 26 21:05:51.2±0.4**, 1012N**±003×**12562E**±006**, h150**km±3km**, n46,** σ0:**74**/52**, mb4.0**/14**, 2C-2D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.75**	**271**	*e*P	**Pn**	**21 06 14.1**	**+0.1**
MSLP				*e*S	**Sn**	**21 06 31.0**	**-0.3**
BUTP	**Butuan**	**1.14**	**180**	*e*P	**Pn**	**21 06 17.2**	**0.0**
BUTP				*e*S	**Sn**	**21 06 37.8**	**+0.7**
PLP	**Palo**	**1.22**	**329**	⇑*i*P	**Pn**	**21 06 17.7**	**-0.1**
PLP				*i* S	**Sn**	**21 06 37.0**	**-1.3**
OCLP	**Ormoc**	**1.36**	**313**	*e*P	**Pn**	**21 06 20.0**	**+0.7**
OCLP				*e*S	**Sn**	**21 06 41.6**	**+0.9**
BESP	**Borongan**	**1.48**	**353**	*e*P	**Pn**	**21 06 20.5**	**-0.1**
BESP				*e*S	**Sn**	**21 06 42.7**	**-0.4**
LLP	**Lapu-Lapu**	**1.64**	**277**	⇓*i*P	**Pn**	**21 06 22.3**	**+0.1**
LLP				*i* S	**Sn**	**21 06 45.1**	**-0.8**
TBP	**Tagbilaran**	**1.78**	**256**	*e*P	**Pn**	**21 06 24.2**	**+0.4**
TBP				*e*S	**Sn**	**21 06 46.9**	**-1.8**
BUKP	**Musuan**	**2.29**	**194**	*e*P	**Pn**	**21 06 30.2**	**+0.5**
BUKP				*e*S	**Sn**	**21 07 00.8**	**+1.3**
SNPH	**Sibulan**	**2.47**	**252**	*e*P	**Pn**	**21 06 32.5**	**+0.6**
CNP	**Catarman**	**2.56**	**339**	*e*P	**Pn**	**21 06 32.6**	**-0.4**

NWAO	**Narrogin (SRO)**	**34.30**	**206**	LR	LR	21 39 22.6	
	comp=Z,85nm,19.6s,MS3.5,baz=255,slow=36						
NWAO	**Narrogin (SRO)**	**34.30**	**206**	*e*P	**P**	**21 25 31.5**	**-0.4**
COCO	**West Island**	**38.22**	**253**	P	**P**	**21 26 05.7**	**0.0**
CMAR	**Chiang Mai Arr**	**40.34**	**302**	P	**P**	**21 26 23.6**	**+0.2**
	1.9nm,0.9s,mb3.8,baz=123,slow=6.9,SNR=12						
CMAR				PcP	PcP	21 28 27.9	+1.4
	0.7nm,0.8s,baz=133,slow=2.0,SNR=5.7						
CMAR				LR	LR	21 43 14.9	
	comp=Z,32nm,20.8s,MS3.1,baz=235,slow=36						
CHTO	**Chiang Mai**	**40.51**	**303**	*e*P	**P**	**21 26 24.7**	**0.0**
	1.6nm,0.8s,mb3.7						
HHC	**Hu-ho-hao-te**	**47.68**	**337**	*e*P	**P**	**21 27 22.8**	**+0.9**
HHC				AP	pP	21 27 27.0	-5.3
HHC				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,76nm,3.8s						
HHC				LR	LR		
	comp=N,161nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=E,168nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=Z,198nm,16.6s,MS4.2						
ULN	**Ulaanbaatar**	**55.33**	**338**	*e*P	**P**	**21 28 18.6**	**-0.3**
	comp=Z,2.4nm,1.0s,mb4.2						
SONM	**Songino Array**	**55.55**	**338**	P	**P**	**21 28 21.3**	**+0.7**
	comp=Z,1.4nm,0.8s,mb4.1,baz=147,slow=8.5,SNR=5.7						
CASY	**Casey**	**65.94**	**190**	P	**P**	**21 29 29.7**	**-1.3**
MK31	**Makanchi Array**	**66.77**	**324**	*e*P	**P**	**21 29 37.1**	**+0.5**
MKAR	**Makanchi Array**	**66.77**	**324**	P	**P**	**21 29 37.4**	**+0.7**
	comp=Z,5.4nm,0.6s,mb4.8,baz=113,slow=8.2,SNR=58						
ZAA0	**Zalesovo Array**	**69.39**	**331**	*e*P	**P**	**21 29 52.0**	**-0.9**
ZALV	**Zalesovo Beam**	**69.39**	**331**	P	**P**	**21 29 52.5**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.2,baz=102,slow=6.2,SNR=10						
KURK	**Kurchatov**	**70.85**	**326**	P	**P**	**21 30 02.5**	**+0.6**
	comp=Z,4.3nm,0.7s,mb4.5,baz=120,slow=6.3,SNR=6.1						
KURK	**Kurchatov**	**70.85**	**326**	*e*P	**P**	**21 30 01.5**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.6						
KBL	**Kabul**	**71.08**	**308**	*e*P	**P**	**21 30 03.6**	**-0.1**
	comp=Z,2.4nm,0.9s,mb4.1						
BRVK	**Borovoye**	**76.52**	**326**	*e*P	**P**	**21 30 35.1**	**-0.1**
	comp=Z,3.6nm,0.8s,mb4.3						
VNDA	**Vanda**	**76.57**	**174**	P	**P**	**21 30 36.2**	**+1.1**
	comp=Z,1.6nm,0.7s,mb4.0,baz=306,slow=7.4,SNR=7.3						
VNDA	**Vanda**	**76.57**	**174**	P	**P**	**21 30 36.2**	**+1.1**
ARU	**Arti**	**84.01**	**327**	*e*P	**P**	**21 31 14.3**	**-1.2**
	comp=Z,5.2nm,1.0s,mb4.6						
GNI	**Garni**	**91.04**	**310**	P	**P**	**21 31 49.9**	**0.0**
MALT	**Malatya**	**95.94**	**308**	*e*P	**P**	**21 32 11.7**	**-0.7**
	comp=Z,0.8nm,0.4s,mb4.5						
TORD	**Torodi Ar. Bea**	**131.77**	**285**	PKP	PKPdf	21 37 59.9	+0.7
	comp=Z,0.7nm,0.8s,baz=66,slow=2.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**131.77**	**285**	PKP	PKPdf	21 37 59.9	+0.7
DBIC	**Dimbokro**	**138.91**	**277**	PKPdf	PKPdf	21 38 12.5	-0.2
CPUP	**Villa Florida**	**149.40**	**159**	PKPbc	PKPbc	21 38 36.7	+1.8
	comp=Z,2.6nm,0.7s,baz=136,slow=4.6,SNR=9.5						

ISCJB ***26*** *21:20:17.8±0.5, 37.16N±003×3696E±003, h7km±4km, Error ellipse: s-maj=4.5km s-min=4.1km az=163.7*
DDA ***26*** *21:20:17.6, 37.16N×3697E, h7km±4km, Md2.8*
CSEM ***26*** *21:20:17.4±0.1, 37.16N×3697E, h12km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.3km az=163.0*
ISK ***26*** *21:20:17.4, 37.19N×3696E, h7km, MD2.8*

ISC 26 21:20:18.1±0.4, 3716N±003×3697E±003, h6km±5km, n20, σ0§65/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.20**	**87**	*e*PG	**Pg**	**21 20 21.7**	**-0.3**
GAZ				*e*SG	**Sg**	**21 20 25.3**	**+0.7**
KMRS	**Kahramanmaras**	**0.35**	**351**	*e*PG	**Pg**	**21 20 24.3**	**-0.6**
KMRS				*e*SG	**Sg**	**21 20 29.3**	**-0.1**
KUZU	**Kuzuini**	**0.40**	**167**	*i* P	**Pg**	**21 20 26.2**	**+0.4**
KUZU				*i* S	**Sg**	**21 20 32.2**	**+1.1**
GZT	**Gaziantep**	**0.51**	**68**	*i* P	**Pg**	**21 20 27.9**	**-0.1**
GZT				*i* S	**Sg**	**21 20 34.8**	**+0.1**
ANDN	**Andirin**	**0.65**	**310**	*i* P	**Pg**	**21 20 30.2**	**-0.4**
ANDN				*i* S	**Sg**	**21 20 40.0**	**+1.1**
COBT	**Iskenderun**	**0.86**	**222**	*i* P	**Pg**	**21 20 34.3**	**-0.3**
COBT				*i* S	**Sg**	**21 20 45.2**	**-0.6**
KOZT	**Kozan**	**0.96**	**290**	*e*PG	**Pg**	**21 20 36.7**	**+0.1**
CEYT	**Ceyhan**	**0.99**	**261**	*e*PG	**Pg**	**21 20 37.1**	**0.0**
ATAB	**Bozova**	**1.10**	**73**	*i* P	**Pg**	**21 20 39.4**	**+0.1**
ATAB				*i* S	**Sg**	**21 20 52.2**	**-1.3**
HTY	**Hatay**	**1.23**	**213**	*e*PN	**Pn**	**21 20 41.5**	**-0.4**
AKCD	**Akcadag**	**1.36**	**34**	*i* P	**Pn**	**21 20 44.0**	**+0.4**
AKCD				*i* S	**Sb**	**21 21 02.6**	**+1.0**
URFA	**Urfa**	**1.50**	**79**	*e*PN	**Pn**	**21 20 45.6**	**0.0**
SARI	**SarD1z-Kayseri**	**1.53**	**352**	*e*PN	**Pn**	**21 20 42.6**	**-3.3**
PINB	**Pinarbasi**	**1.58**	**344**	*i* P	**Pn**	**21 20 47.2**	**+0.6**
PINB				*i* S	**Sn**	**21 21 08.0**	**+0.8**
MALT	**Malatya**	**1.63**	**45**	*e*PN	**Pn**	**21 20 47.2**	**-0.1**
MYA	**Malataya**	**1.64**	**44**	*e*PN	**Pn**	**21 20 47.0**	**-0.4**
BNN	**Bunyan**	**1.91**	**333**	*e*PN	**Pn**	**21 20 50.3**	**-0.8**
DARE	**Darende-Malaty**	**1.99**	**20**	*e*PN	**Pn**	**21 20 44.4**	**-6.7**
NIG	**Nigde**	**2.10**	**298**	*e*PN	**Pn**	**21 20 53.6**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.21**	**56**	*e*PN	**Pn**	**21 20 55.3**	**0.0**

ISCJB ***26*** *21:21:39.5±1.1, 781S±006×11674E±009, h285km±11km, mb3.8/15, Error ellipse: s-maj=16.2km s-min=8.6km az=155.0*
IDC ***26*** *21:21:40.1±3.1, 783S×11669E, h273km±28km, mb3.4/11, mb1 3.6/12, mb1mx3.5/20, mbtmp3.5/12, Error ellipse: s-maj=33.8km s-min=10.1km az=66.0*
NEIC ***26*** *21:21:40.0±0.7, 783S×11673E, h277km±7km, mb3.9/10, Error ellipse: s-maj=9.6km s-min=5.1km az=62.0*

ISC 26 21:21:40.0±1.1, 785S±006×11673E±009, h275km±12km, n40, σ0§61/35, mb3.8/15, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**4.12**	**47**	P	**Pn**	**21 22 46.7**	**+0.4**
	12nm,0.3s,baz=231,slow=8.3,SNR=33						
KSM	**Kuching**	**11.26**	**325**	*e*P	**Pn**	**21 24 14.1**	**+0.1**
MBWA	**Marble Bar**	**13.55**	**168**	*e*Pn	**Pn**	**21 24 41.3**	**-0.6**
KULM	**Kulim**	**20.68**	**309**	P	**P**	**21 25 59.8**	**+0.1**
WRA	**Warramunga Arr**	**20.87**	**127**	P	**P**	**21 26 00.9**	**-0.8**
	1.9nm,0.3s,baz=302,slow=11,SNR=7.1						
WRAB	**Tennant Creek**	**20.88**	**127**	*e*P	**P**	**21 26 01.1**	**-0.6**
	4.4nm,0.5s						
WB2	**Warramunga Arr**	**20.88**	**127**	*e*P	**P**	**21 26 00.9**	**-0.9**
ASAR	**Alice Springs**	**22.77**	**136**	P	**P**	**21 26 19.6**	**+0.6**
	2.6nm,0.5s,mb3.8,baz=314,slow=8.5,SNR=18						
ASAR				PcP	PcP	21 30 01.9	+0.3
	0.9nm,0.4s,baz=312,slow=1.8,SNR=8.6						
NWAO	**Narrogin (SRO)**	**24.96**	**179**	P	**P**	**21 26 39.1**	**+0.3**
CTA	**Charters Tower**	**31.06**	**116**	P	**P**	**21 27 34.5**	**+1.5**
	1.7nm,0.4s,mb4.0,baz=292,slow=14,SNR=3.1						
CTA	**Charters Tower**	**31.06**	**116**	P	**P**	**21 27 34.5**	**+1.5**
CTAO	**Charters Tower**	**31.06**	**116**	*e*P	**P**	**21 27 34.3**	**+1.3**
	2.9nm,0.6s,mb4.0						
NACB	**Ninganchiao**	**32.18**	**8**	P	**P**	**21 27 42.4**	**-0.2**
STKA	**Stephens Creek**	**33.28**	**139**	P	**P**	**21 27 52.9**	**+0.9**
	1.6nm,0.4s,mb3.9,baz=317,slow=9.0,SNR=8.3						
STKA				PcP	PcP	21 30 27.3	-0.1
	0.7nm,0.3s,baz=352,slow=7.1,SNR=3.7						
STKA	**Stephens Creek**	**33.28**	**139**	*e*P	**P**	**21 27 52.4**	**+0.4**
	0.7nm,1.0s,mb3.1						
STKA				PcP	PcP	21 30 27.3	-0.1
KSRS	**Korea Array**	**46.26**	**12**	P	**P**	**21 29 39.6**	**+1.3**
	2.2nm,0.7s,mb3.6,baz=190,slow=8.2,SNR=8.6						
MAJO	**Matsushiro**	**48.54**	**23**	*e*P	**P**	**21 29 54.7**	**-1.1**
	4.0nm,0.4s,mb4.1						
MJAR	**Matsushiro Arr**	**48.54**	**23**	P	**P**	**21 29 55.4**	**-0.4**
	2.7nm,0.7s,mb3.7,baz=201,slow=7.8,SNR=10.0						
ULN	**Ulaanbaatar**	**56.12**	**352**	*e*P	**P**	**21 30 51.1**	**+0.1**
	1.3nm,0.5s,mb3.6						
SONM	**Songino Array**	**56.19**	**352**	P	**P**	**21 30 52.4**	**+1.0**
	2.5nm,0.6s,mb3.8,baz=171,slow=8.7,SNR=14						
MK31	**Makanchi Array**	**62.43**	**334**	*e*P	**P**	**21 31 33.4**	**-0.6**
MKAR	**Makanchi Array**	**62.43**	**334**	P	**P**	**21 31 34.0**	**0.0**
	0.5nm,0.5s,mb3.4,baz=149,slow=6.1,SNR=5.0						
MKAR	**Makanchi Array**	**62.43**	**334**	P	**P**	**21 31 34.0**	**0.0**
KURK	**Kurchatov**	**66.99**	**335**	P	**P**	**21 32 03.0**	**-0.3**
	0.3nm,0.2s,mb3.6,baz=128,slow=6.0,SNR=2.9						
KURK	**Kurchatov**	**66.99**	**335**	*e*P	**P**	**21 32 02.6**	**-0.7**
	0.4nm,0.3s,mb3.6						
ZALV	**Zalesovo Beam**	**67.18**	**340**	P	**P**	**21 32 03.6**	**-0.8**
	0.8nm,0.4s,mb3.8,baz=158,slow=6.4,SNR=3.6						
MAW	**Mawson**	**69.56**	**199**	P	**P**	**21 32 18.9**	**-0.1**
VNDA	**Vanda**	**73.47**	**171**	P	**P**	**21 32 42.7**	**+0.6**
	0.8nm,0.8s,mb3.4,baz=307,slow=5.8,SNR=6.7						
VNDA	**Vanda**	**73.47**	**171**	*e*P	**P**	**21 32 42.3**	**+0.2**
	0.4nm,0.5s,mb3.3						
ARU	**Arti**	**79.77**	**331**	P	**P**	**21 33 17.2**	**-0.3**
MALT	**Malatya**	**85.74**	**309**	*e*P	**P**	**21 33 48.5**	**0.0**
	1.3nm,0.7s,mb3.9						
LSZ	**Lusaka**	**86.57**	**255**	*e*P	**P**	**21 33 53.3**	**+0.3**
	1.0nm,0.5s,mb3.9						
LBTB	**Lobatse**	**87.75**	**245**	*e*P	**P**	**21 33 58.6**	**+0.1**
	4.3nm,1.1s,mb4.2						
OBN	**Obninsk**	**90.79**	**326**	P	**P**	**21 34 11.9**	**+0.1**
SUR	**Sutherland**	**90.81**	**237**	P	**P**	**21 34 12.7**	**+0.1**
YKA	**Yellowknife Ar**	**114.05**	**23**	PKP	PKiKP	21 39 45.2	-0.8
	0.1nm,0.4s,baz=313,slow=1.8,SNR=7.7						
YKA	**Yellowknife Ar**	**114.05**	**23**	PKP	PKiKP	21 39 45.2	-0.8
TORD	**Torodi Ar. Bea**	**116.04**	**281**	PKP	PKPdf	21 39 50.5	-0.8
	0.4nm,0.5s,baz=64,slow=2.7,SNR=7.6						
ESLA	**Sonseca Array**	**118.46**	**311**	*e*PKPdf	PKPdf	21 39 55.4	+0.1
CPUP	**Villa Florida**	**145.54**	**189**	PKPbc	PKPbc	21 40 48.3	+1.4
	0.8nm,0.4s,baz=114,slow=1.2,SNR=6.8						

IDC 26 21:42:54.4±1.9, 2893N×8381E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.3/25, mbtmp3.5/6, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=48.3km s-min=33.1km az=75.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.32**	**124**	P	Pn	21 46 57.8	+0.1
	0.1nm,0.3s,baz=297,slow=8.3,SNR=5.2						
MKAR	**Makanchi Array**	**17.87**	**357**	P	Pn	21 47 05.6	+1.3
	0.1nm,0.3s,baz=188,slow=11,SNR=12						
KURK	**Kurchatov**	**22.11**	**351**	P	P	21 47 49.5	-1.6
	1.8nm,0.8s,baz=166,slow=11,SNR=8.1						
ZALV	**Zalesovo Beam**	**25.01**	**1**	P	P	21 48 19.6	-0.2
	0.4nm,0.3s,baz=194,slow=9.9,SNR=4.4						
BVAR	**Borovoye Array**	**26.03**	**341**	P	P	21 48 29.3	+0.2
	0.4nm,0.5s,baz=144,slow=11,SNR=3.3						
ASF	**Jabal al Asfar**	**40.29**	**287**	LR	LR	22 07 27.7	
	comp=Z,17nm,19.1s,baz=243,slow=37						
TORD	**Torodi Ar. Bea**	**76.94**	**278**	P	P	21 54 49.5	+0.2
	0.4nm,0.6s,baz=55,slow=4.6,SNR=3.6						

ISCJB ***26*** *21:44:35.2±2.6, 2307S±005×7069W±007, h22km±21km, mb3.7/4, Error ellipse: s-maj=11.0km s-min=7.4km az=23.0*
IDC ***26*** *21:44:37.0±4.4, 2309S×7052W, h18km±25km, mb3.7/4, mb1 3.9/5, mb1mx3.7/17, mbtmp3.8/5, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=33.1km s-min=27.1km az=168.0*
NEIC ***26*** *21:44:39.0±0.5, 2308S×7062W, h35km, mb3.7/1, Error ellipse: s-maj=12.0km s-min=8.3km az=83.0*

ISC 26 21:44:35.0±1.8, 2306S±005×7065W±006, h5km±11km, n21, σ0§97/24, mb3.7/4, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.66**	**75**	Pg	**Pg**	**21 45 06.2**	**-0.7**
	186nm,0.3s,baz=254,slow=13,SNR=1935						
LVC				Lg		21 45 26.3	
	1µm,0.3s,baz=16,slow=7.4,SNR=23						
LVC	**Limon Verde**	**1.66**	**75**	Pg	**Pg**	**21 45 06.2**	**-0.7**
LVC				Lg		21 45 26.3	
LVC				*e*S	**Sn**	**21 45 27.0**	**+0.5**
LCO	**Las Campanas**	**5.92**	**180**	*e*Pn	**Pn**	**21 46 03.6**	**+0.2**
	34nm,0.4s						
LCO				*e*Sn	**Sn**	**21 47 11.2**	**-0.5**
ARE	**Arequipa**	**6.61**	**353**	*e*P	**Pn**	**21 46 13.0**	**+0.1**
ARE				*e*S	Px	21 46 26.0	
CFAA	**Coronel Fontan**	**8.78**	**166**	Pn	**Pn**	**21 46 42.1**	**-0.4**
	0.1nm,0.3s,baz=339,slow=8.0,SNR=6.5						
CFAA				Sn	**Sn**	**21 48 30.9**	**+9.1**
	0.1nm,0.3s,baz=205,slow=23,SNR=3.2						
CFAA	**Coronel Fontan**	**8.78**	**166**	Pn	**Pn**	**21 46 42.1**	**-0.4**
CFAA				Sn	**Sn**	**21 48 30.9**	**+9.1**
SIV	**San Ignacio**	**11.44**	**54**	Pn	**Pn**	**21 47 18.6**	**-0.5**
	3.1nm,0.3s,baz=240,slow=12,SNR=44						
SIV				Sn	**Sn**	**21 49 27.5**	**+0.1**
	0.0nm,0.3s,baz=322,slow=18,SNR=2.8						
CPUP	**Villa Florida**	**12.54**	**108**	Pn	**Pn**	**21 47 36.3**	**+2.2**
	0.4nm,0.3s,baz=289,slow=5.3,SNR=3.6						
CPUP				LR	LR	21 53 05.2	
	comp=Z,301nm,18.0s,baz=254,slow=41						
TRQA	**Tornquist**	**16.69**	**156**	*e*Pn	**Pn**	**21 48 31.6**	**+2.0**
	4.2nm,0.6s						
PLCA	**Paso Flores**	**17.62**	**180**	LR	LR	21 54 56.2	
	comp=Z,89nm,19.5s,baz=1.1,slow=35						
PLCA	**Paso Flores**	**17.62**	**180**	*e*Pn	**Pn**	**21 48 40.5**	**-0.7**
BDFB	**Brasilia**	**22.58**	**75**	P	**P**	**21 49 36.4**	**0.0**
	0.5nm,0.4s,mb3.3,baz=229,slow=20,SNR=3.5						
BDFB				LR	LR	21 59 38.8	
	comp=Z,69nm,18.8s,baz=355,slow=40						
PAYG	**Puerto Ayora**	**29.31**	**317**	*e*P	**P**	**21 50 40.8**	**+2.1**
DWPF	**Disney**	**51.93**	**348**	*e*P	**P**	**21 53 44.3**	**-0.6**
TXAR	**Lajitas Array**	**61.02**	**327**	P	**P**	**21 54 50.3**	**+0.6**
	0.4nm,0.9s,mb3.5,baz=163,slow=3.5,SNR=3.2						
SNAA	**Sanae**	**61.34**	**160**	P	**P**	**21 54 51.0**	**-0.4**
TOA0	**Torodi Ar. Sit**	**79.39**	**71**	*e*P	**P**	**21 56 41.2**	**-1.4**
TORD	**Torodi Ar. Bea**	**79.39**	**71**	P	**P**	**21 56 41.4**	**-1.3**
	1.5nm,0.5s,mb4.2,baz=256,slow=5.2,SNR=24						
YKA	**Yellowknife Ar**	**92.13**	**341**	P	**P**	**21 57 44.4**	**-0.5**
	0.4nm,0.8s,mb3.8,baz=133,slow=4.9,SNR=6.9						
YKA	**Yellowknife Ar**	**92.13**	**341**	P	**P**	**21 57 44.4**	**-0.5**
MKAR	**Makanchi Array**	**147.84**	**36**	PKPbc	PKPbc	22 04 20.7	-0.3
	0.5nm,0.4s,baz=320,slow=3.0,SNR=8.8						

CSEM ***26*** *21:52:38.1, 3446N×3085E, h33km, ML3.4, After HLW*

HLW 26 21:52:38.1, 3446N×3085E, h33km, Mb3.4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**3.02**	**323**	*i* P	Pn	21 53 26.0	+2.4
KHAL	**Karahalli**	**4.05**	**345**	*i* P	Pn	21 53 38.5	+0.7
AMAG	**Maghara**	**4.29**	**152**	P	Pn	21 53 41.1	0.0
KOT	**Kottamia**	**4.59**	**169**	P	Pn	21 53 45.8	+0.5
HMAT	**Matruh**	**4.61**	**224**	P	Pn	21 53 45.6	+0.2
HMAT				S	Sn	21 54 34.7	-3.2
HHAG	**Hagoal**	**4.62**	**166**	P	Pn	21 53 45.5	0.0
HHAG	**Hagoal**	**4.62**	**166**	P	Pn	21 53 45.5	0.0
HSAF	**As Saff**	**4.86**	**173**	P	Pn	21 53 49.1	+0.2
SUZ		**4.90**	**179**	P	Pn	21 53 50.6	+1.1
GLL	**Jalalah**	**4.92**	**171**	P	Pn	21 53 49.7	0.0
HNKL	**Nakhl**	**5.24**	**149**	P	Pn	21 53 53.8	-0.3
HNKL				S	Sn	21 54 50.1	-3.2
HKAT	**Jabal Katrina**	**6.50**	**155**	P	Pn	21 54 11.4	0.0
SWA2		**6.94**	**223**	P	Pn	21 54 17.8	+0.4
SWA2		**6.94**	**223**	P	Pn	21 54 17.8	+0.4

ISCJB ***26*** *21:59:09.9±0.5, 3220N±002×11577W±002, h11km±3km, Error ellipse: s-maj=4.0km s-min=3.3km az=153.2*
NEIC ***26*** *21:59:11.5, 3217N×11580W, h9km, ML3.2(PAS), ML3.4(ECX), After ECX.*
ECX ***26*** *21:59:11.5±0.7, 3217N×11580W, h5km, MD3.2, ML3.4*

ISC 26 21:59:10.0±0.4, 3217N±002×11576W±003, h13km±4km, n30, σ0§91/54, 18C-7D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dowling**	**0.28**	**214**	⇓*e*P	**Pg**	**21 59 16.3**	**+0.4**
RDX				*e*S	**Sg**	**21 59 19.9**	**+0.1**
SGL	**Mount Signal**	**0.48**	**4**	⇑*i*P	**Pg**	**21 59 20.3**	**+0.8**
YUH	**Yuha Desert**	**0.50**	**344**	⇑*i*P	**Pg**	**21 59 20.1**	**+0.3**
RMX	**La Rumorosa**	**0.51**	**328**	⇑*e*P	**Pg**	**21 59 20.4**	**+0.3**
RMX				*e*S	**Sg**	**21 59 26.8**	**0.0**
DVTC	**Desert V Tower**	**0.57**	**330**	P	**Pg**	**21 59 21.4**	**+0.3**
	baz=0.6,SNR=24						
DVTC				⇑S	**Sg**	**21 59 28.4**	**-0.2**
	baz=0.6						
SWSC	**Sam W. Stewart**	**0.77**	**358**	⇓P	**Pg**	**21 59 25.0**	**0.0**
	baz=0.8,SNR=122						
CBX	**Cerro Bola**	**0.78**	**281**	⇑*i*P	**Pg**	**21 59 24.8**	**-0.3**
CBX				*e*S	**Sg**	**21 59 34.9**	**-0.4**
ENX	**Ensenada**	**0.82**	**250**	⇑*e*P	**Pg**	**21 59 25.7**	**-0.2**
ENX				*e*		21 59 37.0	
	comp=N,2µm,0.3s						
ECNX	**Esteban Cantu**	**0.88**	**235**	⇑*e*P	**Pg**	**21 59 26.8**	**-0.1**
ECNX				*e*S	**Sg**	**21 59 38.0**	**-0.3**
MONP	**Monument Peak**	**0.91**	**322**	P	**Pg**	**21 59 27.5**	**-0.1**
	baz=0.9,SNR=58						
MONP				⇑S	**Sg**	**21 59 38.6**	**-0.9**
	baz=0.9						
PBX	**Punta Banda**	**0.92**	**243**	⇑*e*P	**Pg**	**21 59 27.6**	**-0.3**
PBX				*e*S	**Sg**	**21 59 39.5**	**-0.4**
PBX				⇑*e*		21 59 41.3	
	comp=E,1µm,0.4s						
112A	**Yuma**	**1.06**	**70**	P	**Pb**	**21 59 30.2**	**0.0**
	baz=1.2,SNR=8.2						
112A				⇑S	**Sb**	**21 59 43.8**	**-0.2**
	baz=1.2						
GLA	**Glamis**	**1.18**	**42**	⇓P	**Pn**	**21 59 31.8**	**-0.4**
	baz=1.3,SNR=57						
GLA				⇑S	**Sb**	**21 59 46.4**	**-1.1**
	baz=1.3						
GLA	**Glamis**	**1.18**	**42**	*e*Pn	**Pn**	**21 59 31.6**	**-0.6**
GLA				*e*Sn	**Sn**	**21 59 46.7**	**-1.4**
109C	**Camp Elliot, M**	**1.34**	**303**	P	**Pn**	**21 59 34.2**	**-0.3**
	baz=1.3,SNR=35						
109C				⇑S	**Sb**	**21 59 50.7**	**-1.4**
	baz=1.3						
BC3	**Big Chuckw Mtn**	**1.50**	**10**	⇑P	**Pn**	**21 59 36.5**	**-0.2**
	baz=1.6,SNR=13						
BC3				⇓S	**Sn**	**21 59 54.5**	**-1.6**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.55**	**338**	⇓P	**Pn**	**21 59 36.9**	**-0.4**
	baz=1.6,SNR=29						
PFO	**Pinyon Flat Ob**	**1.55**	**338**	*e*Pn	**Pn**	**21 59 37.0**	**-0.2**
PFO				*e*Sn	**Sn**	**21 59 55.9**	**-1.3**
113A	**Mohawk Valley,**	**1.79**	**70**	⇑P	**Pn**	**21 59 40.8**	**+0.2**
	baz=1.9,SNR=12						
BELC	**Belle Mtn.**	**1.84**	**354**	⇓P	**Pn**	**21 59 41.2**	**-0.1**
	baz=1.9						
MURC	**Murrieta**	**1.87**	**320**	⇑Pb	**Pb**	**21 59 43.5**	**-0.6**
	baz=1.8						
MURC				⇑Sb	**Sb**	**22 00 07.6**	**+0.2**
	baz=1.8						
IRM	**Iron Mountain**	**2.05**	**14**	⇓P	**Pn**	**21 59 44.1**	**-0.1**
	baz=2.1,SNR=20						
214A	**Organ Pipe Nat**	**2.51**	**94**	⇑P	**Pn**	**21 59 50.4**	**-0.1**
	baz=2.6,SNR=7.4						
MWC	**Mount Wilson**	**2.81**	**317**	*e*Pn	**Pn**	**21 59 58.7**	**+4.0**
MWC				*e*Sn	**Sn**	**22 00 29.4**	**+1.0**
LDFC	**Landfair**	**2.95**	**10**	*e*Pn	**Pn**	**21 59 55.8**	**-0.7**
LDFC				*e*Sn	**Sn**	**22 00 42.1**	**+10**
GSC	**Goldstone**	**3.24**	**345**	*e*Pn	**Pn**	**22 00 01.6**	**+1.0**
GSC				*e*Pg	**Pg**	**22 00 13.4**	**+1.3**
GSC				*e*Sn	**Sn**	**22 00 41.7**	**+2.6**
GSC				*e*Sg	**Sg**	**22 00 54.2**	**0.0**
TUC	**Tucson**	**4.22**	**87**	*e*Pn	**Pn**	**22 00 17.0**	**+3.1**
TUC				*e*Pg	**Pg**	**22 00 35.9**	**+5.1**
TUC				*e*Sn	**Sn**	**22 01 09.7**	**+6.6**
TUC				*e*Sg	**Sg**	**22 01 23.1**	**-2.4**
TPNV	**Topopah Spring**	**4.79**	**355**	*e*Pn	**Pn**	**22 00 22.7**	**+1.0**
TPNV				*e*Pg	**Pg**	**22 00 42.5**	**+0.8**
WUAZ	**Wupatki**	**4.95**	**46**	*e*Pn	**Pn**	**22 00 26.2**	**+2.2**
WUAZ				*e*Sn	**Sn**	**22 01 25.8**	**+4.8**
MVCO	**Mesa Verde**	**7.81**	**48**	*e*Pn	**Pn**	**22 01 05.0**	**+1.6**

IDC ***26*** *22:04:50.2±0.5, 5250N×16822W, h0km, mb5.4/39, mb1 5.5/40, mb1mx5.5/41, mbtmp5.4/40, ML4.6/1, MS6.1/28, Ms1 6.1/28, ms1mx5.9/44, Error ellipse: s-maj=14.9km s-min=8.6km az=179.0*
MOS ***26*** *22:04:53.8±1.1, 5266N×16824W, h33km, mb6.2/148, MS6.1/83, Error ellipse: s-maj=6.6km s-min=5.7km az=70.6*

PMR Palmer 13.70 41 *e*P **Pn 22 08 07.7 -0.4**
PMR Palmer 13.70 41 *e*P **Pn 22 08 07.0 -1.1**
comp=Z,20nm,0.7s
MID Middleton Isla 13.99 52 *e*P **Pn 22 08 10.0 -2.0**
MID Middleton Isla 13.99 52 *e*Pn **Pn 22 08 09.8 -2.2**
CHUM Lake Minchumin 14.03 30⇑*e*Pn **Pn 22 08 11.6 -0.9**
comp=Z,2µm,1.3s
KTH Kantishna Hill 14.24 33⇑*i*Pn **Pn 22 08 16.3 +0.9**
comp=Z,46nm,0.9s
KTH Sn **Sn 22 10 53.7 +1.9**
TRF Thorofare Moun 14.39 34 *e*Pn **Pn 22 08 15.6 -1.8**
comp=Z,69nm,0.5s
TRF *e*Sn **Sn 22 10 57.2 +1.8**
BPAW Bear Paw Mtn. 14.60 31⇑*e*Pn **Pn 22 08 19.7 -0.5**
comp=Z,446nm,0.9s
BPAW *e*Sn **Sn 22 10 55.9 -4.7**
MCK McKinley 15.03 35 *e*Pn **Pn 22 08 24.9 -1.1**
MCK Sn **Sn 22 10 54.1 -17**
PAX Paxson 15.89 40 *e*P **Pn 22 08 35.7 -1.4**
PAX *e* 22 11 29.0
PAX pmax pmax
comp=Z,1µm,1.1s
PAX Paxson 15.89 40 *e*Pn **Pn 22 08 35.7 -1.3**
comp=Z,1µm,1.1s
PAX *e*Sn **Sn 22 11 29.0 -2.8**
COLA College 16.13 32 *i* P **Pn 22 08 38.5 -1.7**
COLA College 16.13 32⇑*e*Pn **Pn 22 08 37.6 -2.5**
comp=Z,338nm,0.9s
COLA *e*Sn **Sn 22 11 40.2 +2.6**
MENT Mentasta 16.57 42 *e*P **Pn 22 08 46.5 +0.7**
COLD Coldfoot 17.12 24⇑*e*Pn **Pn 22 08 52.9 +0.2**
comp=Z,262nm,0.5s
COLD *e*Sn **Sn 22 12 07.1 +5.3**
PNL Peninsula 17.46 55 *e*Pn **Pn 22 08 55.6 -1.4**
comp=Z,451nm,0.8s
PNL *e*Sn **Sn 22 12 09.7 -0.3**
EGAK Eagle 18.44 38 *e*Pn **Pn 22 09 06.4 -2.5**
comp=Z,366nm,1.1s
EGAK *e*Sn **Sn 22 12 31.1 -2.4**
HYT Haines Junctio 18.62 52 *e*Pn **Pn 22 09 11.1 -0.1**
DAWY Dawson 18.81 41⇑*e*Pn **Pn 22 09 11.7 -1.6**
DAWY PcP PcP 22 13 37.7 -0.5
SIT Sitka 19.36 64 *e*P **Pn 22 09 20.7 +0.6**
SIT pmax pmax
comp=Z,166nm,0.9s
SIT Sitka 19.36 64 *e*P **Pn 22 09 20.7 +0.6**
comp=Z,166nm,0.9s
SKAG Skagway 19.48 56 *e*P **Pn 22 09 20.0 -1.4**
comp=Z,1µm,1.0s
SKAG *e*S **S 22 12 57.7 -0.1**
BILL Bilibino 19.73 331⇑*i*P **Pn 22 09 23.7 -0.6**
BILL *i* S **S 22 12 54.4 -8.3**
BILL pmax pmax
comp=Z,35nm,1.2s
BILL MLR MLR
comp=Z,86µm,18.0s
BILL Bilibino 19.73 331 *i* P **Pn 22 09 22.8 -1.5**
PET Petropavlovsk 19.92 284⇓*i*P **Pn 22 09 24.7 -2.0**
PET *i* S **S 22 13 06.5 -0.3**
PET pmax pmax
comp=Z,960nm,0.8s
PET pmax pmax
comp=Z,17µm,11.7s
PET pmax pmax
comp=Z,26µm,16.1s
PET MLR MLR
comp=Z,74µm,19.0s
PET MLR MLR
comp=Z,64µm,18.0s
PET Petropavlovsk 19.92 284⇓*i*P **Pn 22 09 25.1 -1.6**
PEA0B Petropavlovsk- 20.46 285 *e*P **P 22 09 30.9 +0.1**
PEA0B S **S 22 13 11.8 -5.8**
PETK Petropavlovsk- 20.46 285 P **P 22 09 30.6 -0.1**
comp=Z,267nm,0.7s,baz=84,slow=14,SNR=124
CRAG Craig 20.70 68 *e*P **P 22 09 34.6 +1.4**
WRAK Wrangell Islan 21.04 65 *e*P **P 22 09 40.2 +3.3**
comp=Z,476nm,1.2s,mb5.7
WRAK S **S 22 13 28.0 -0.8**
WRAK LR LR
comp=Z,56µm,19.0s,MS6.0
SKR Severo-Kuril's 22.06 279 *e*P **P 22 09 46.0 -2.0**
SKR pmax pmax
comp=Z,220nm,1.0s,mb5.5
SKR pmax pmax
comp=N,5µm,14.0s
SKR pmax pmax
comp=Z,14µm,14.0s
SKR pmax pmax
comp=E,11µm,16.0s
SKR MLR MLR
comp=Z,31µm,18.0s,MS5.8
SKR MLR MLR
comp=N,22µm,20.0s,MS6.0
SKR MLR MLR
comp=E,56µm,18.0s,MS6.0
SKR Severo-Kuril's 22.06 279 *e*P **P 22 09 44.0 -4.0**
DLBC Dease Lake 22.18 60 P **P 22 09 49.6 +0.5**
comp=E,84nm,0.9s,mb5.2,baz=266,slow=11,SNR=23
DLBC Dease Lake 22.18 60 *e*P **P 22 09 49.4 +0.3**
DLBC *e*PcP PcP 22 13 45.2 +0.6
SEY Seymchan 23.02 312⇓*i*P **P 22 09 57.5 -0.5**
SEY Seymchan 23.02 312⇓*i*P **P 22 09 57.6 -0.4**
BBB Bella Bella 24.28 75 P **P 22 10 11.8 +1.8**
comp=E,40nm,1.2s,mb4.7,baz=278,slow=14,SNR=2.0
BBB LR LR 22 19 20.9
comp=E,31µm,18.6s,MS5.8,baz=288,slow=36
MIDW Midway 25.28 199 PFAKE 22 10 30.0 +11
MIDW LR LR
comp=Z,40µm,19.0s,MS6.0
PGC Sidney 28.34 80 *e*P **P 22 10 45.9 -0.9**
comp=Z,10nm,1.4s
PGC *e*PcP PcP 22 13 58.9 +0.3
B04A Port Angeles 28.57 81 ⇑S **S 22 15 37.5 +3.4**
baz=28
NLWA Neilton Lookou 28.64 82 P **P 22 10 49.3 -0.1**
comp=Z,170nm,1.2s,mb5.7
NLWA *e*PP PP 22 11 55.5 +1.3
NLWA *e*PcP PcP 22 13 56.2 -3.2
NLWA *e*S **S 22 15 17.3 -18**
NLWA LR LR
comp=Z,46µm,20.0s,MS6.1
A04A Legoe Bay, Lum 28.76 79 ⇑S **S 22 15 39.8 +2.6**
baz=29
D03A Wishkah Elem. 28.83 83 ⇑S **S 22 15 42.3 +4.0**
baz=29
A05A Maple Falls 29.01 78 ⇓P **P 22 10 53.8 +1.1**
baz=29
A05A ⇑S **S 22 15 43.2 +2.1**
baz=29
C04A Brinnon 29.04 81 ⇑S **S 22 15 45.9 +4.3**
baz=29
E03A Lebam 29.22 84 ⇑P **P 22 10 56.5 +2.0**
baz=29
E03A ⇓S **S 22 15 46.4 +1.9**
baz=29
B05A Bryant 29.32 80 ⇑P **P 22 10 56.9 +1.5**
baz=29
B05A ⇑S **S 22 15 47.8 +1.7**
baz=29
A06A Chilliwack 29.33 78 ⇓P **P 22 10 57.0 +1.5**
baz=29
A06A ⇓S **S 22 15 48.4 +2.2**
baz=29
B06A Marblemount 29.58 79 ⇓P **P 22 10 59.4 +1.8**
baz=30
B06A ⇑S **S 22 15 51.8 +1.8**
baz=30
YKA Yellowknife Ar 29.58 49 P **P 22 10 56.8 -0.7**
comp=Z,8.3nm,0.7s,mb4.6,baz=270,slow=8.7,SNR=77
YKA PcP PcP 22 14 01.3 -0.1
comp=Z,4.0nm,0.6s,baz=275,slow=2.8,SNR=5.1
YKA ScP ScP 22 17 44.1 +3.9
comp=Z,14nm,1.0s,baz=279,slow=3.2,SNR=6.0
YKA LR LR 22 23 48.6
comp=Z,4µm,21.0s,MS5.0,baz=255,slow=38
YKA P3KPbc 22 42 57.2
comp=Z,0.2nm,0.5s,baz=94,slow=4.8,SNR=8.6
YKA P3KP 22 44 21.7
comp=Z,0.7nm,1.0s,baz=152,slow=1.9,SNR=3.6
YKA Yellowknife Ar 29.58 49 P **P 22 10 56.8 -0.7**
YKA 22 14 01.4
YKA 22 17 44.2
YKA Yellowknife Ar 29.58 49 P **P 22 10 56.8 -0.8**
YKA PcP PcP 22 14 01.4 -0.1
YKA ScP ScP 22 17 44.1 +3.9
YKA LR LR 22 23 48.6
YKA *e* 22 42 57.2
HEBO Mount Hebo 29.76 86 P **P 22 10 58.6 -0.8**
G03A Yamhill 30.00 86 ⇑P **P 22 11 03.5 +2.0**
baz=30
G03A ⇓S **S 22 15 59.3 +2.6**
baz=30
LON Longmire 30.19 82 P **P 22 11 05.6 +2.5**
LON pmax pmax
comp=Z,120nm,1.3s,mb5.5
LON Longmire 30.19 82 *e*P **P 22 11 03.4 +0.3**
comp=Z,116nm,1.3s,mb5.5
LON *e*PP PP 22 12 11.3 -0.1
C06A Tall Timber Ra 30.19 80 ⇓S **S 22 16 02.7 +2.9**
baz=30
F04A Amboy 30.21 84 ⇓P **P 22 11 04.1 +0.7**
baz=30,SNR=8.9
F04A ⇓S **S 22 16 02.4 +2.2**
baz=30
H03A Soap Creek Ran 30.32 87 ⇓S **S 22 16 04.0 +2.2**
baz=30
I02A Mapleton 30.35 88 ⇑P **P 22 11 06.1 +1.5**
baz=30
I02A ⇑S **S 22 16 06.0 +3.8**
baz=30
COR Corvallis 30.36 87 *e*P **P 22 11 05.1 +0.4**
COR *e* 22 12 11.3
COR *e*S **S 22 15 56.3 -6.1**
COR pmax pmax
comp=Z,356nm,1.1s,mb6.0
COR MLR MLR
comp=Z,36µm,20.0s,MS6.0
COR Corvallis 30.36 87 *e*P **P 22 11 05.1 +0.4**
comp=Z,356nm,1.1s,mb6.0
COR *e*PP PP 22 12 11.3 -2.1
COR *e*S **S 22 15 56.3 -6.1**
COR LR LR
comp=Z,36µm,20.0s,MS6.0
B07A Winthrop 30.42 78 ⇓P **P 22 11 05.0 -0.2**
baz=30,SNR=7.1
B07A ⇑S **S 22 16 05.2 +2.0**
baz=30
G04A Mulino 30.54 85 ⇑P **P 22 11 07.0 +0.7**
baz=30,SNR=13
G04A ⇑S **S 22 16 08.3 +3.0**
baz=30
D06A Cle Elum 30.56 81 ⇓P **P 22 11 07.5 +1.1**
baz=30
I03A Eugene 30.70 88 ⇑P **P 22 11 09.0 +1.3**
baz=31
A08A Turner Farm, O 30.71 77 ⇓P **P 22 11 07.6 -0.1**
baz=31,SNR=9.5
SSOR Sweet Springs 30.73 86 P **P 22 11 09.8 +1.8**
E06A Yakima 30.79 82 ⇑P **P 22 11 09.2 +0.8**
baz=31,SNR=11
C07A Waterville 30.80 80 ⇑P **P 22 11 08.6 +0.1**
baz=31,SNR=10
F05A White Salmon 30.82 84 ⇑P **P 22 11 10.0 +1.3**
baz=31
EBG Ellensburg 30.86 81 P **P 22 11 13.1 +4.0**
B08A Colville Reser 30.93 78 ⇑P **P 22 11 09.7 +0.1**
baz=31,SNR=12
HOOD Mount Hood Mea 30.99 85 *e*P **P 22 11 08.7 -1.5**
comp=Z,257nm,1.0s,mb6.0
H04A Detroit Lake 30.99 86 ⇓P **P 22 11 10.4 +0.2**
baz=31,SNR=17
D07A Quincy 31.08 80 ⇑P **P 22 11 10.9 -0.1**
baz=31,SNR=6.7
A09A Danville 31.11 76 ⇑P **P 22 11 11.2 0.0**
baz=31,SNR=9.8
YUK Yuzh-Kuril'sk 31.23 273 *e*P **P 22 11 10.0 -2.3**
YUK *e*PPP 22 12 31.0
YUK *e*S **S 22 16 22.0 +6.0**
YUK *e*SS SS 22 18 08.0 -22
YUK pmax pmax
comp=Z,5µm,4.0s
YUK pmax pmax
comp=E,6µm,3.5s
YUK pmax pmax
comp=Z,310nm,0.5s,mb6.4
YUK smax
comp=N,8µm,3.5s
YUK MLR MLR
comp=Z,46µm,20.0s,MS6.1
YUK MLR MLR
comp=N,24µm,15.0s,MS6.1
YUK MLR MLR
comp=E,29µm,19.0s,MS6.1
G05A Wamic 31.23 85 ⇓P **P 22 11 12.5 +0.2**
baz=31,SNR=6.9
F06A Goldendale 31.29 83 ⇓P **P 22 11 13.2 +0.4**
baz=31,SNR=7.7
C08A Higginbotham F 31.36 79 ⇑P **P 22 11 13.3 -0.2**
baz=31,SNR=13
E07A Sunnyside 31.46 81 ⇓P **P 22 11 14.6 +0.2**
baz=31,SNR=14
MDW Midway 31.49 81 P **P 22 11 15.2 +0.6**
H05A Madras 31.59 85 ⇑P **P 22 11 16.3 +0.8**
baz=32,SNR=10
B09A Rice 31.61 77 ⇑P **P 22 11 15.8 +0.1**
baz=32,SNR=9.5
YSS Yuzh-Sakhalins 31.63 280*e*P **P 22 11 15.0 -0.8**
YSS *e**SP sP 22 11 29.0 -1.4
YSS *e*PPP 22 12 40.3
YSS *e* 22 14 08.0
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.5
YSS pmax pmax
comp=N,900nm,4.0s
YSS pmax pmax
comp=E,1µm,4.0s
YSS pmax pmax
comp=Z,2µm,4.0s
YSS MLR MLR
comp=Z,44µm,19.0s,MS6.2
YSS MLR MLR
comp=N,15µm,17.0s,MS6.2
YSS MLR MLR
comp=E,44µm,18.0s,MS6.2
G06A Carlson Farm, 31.65 84 ⇓P **P 22 11 16.4 +0.4**
baz=32,SNR=7.7
HUMO Hull Mountain 31.65 90 *e*P **P 22 11 15.9 -0.1**
comp=E,244nm,1.4s,mb5.8
HUMO *e*PP PP 22 12 26.9 -0.8
HUMO *e*PcP PcP 22 14 11.6 +4.3
HUMO *e*S **S 22 16 36.6 +14**
HUMO LR LR
comp=Z,43µm,20.0s,MS6.1
BBOR Butler Butte 31.66 89 P **P 22 11 18.4 +2.3**
A10A Northport 31.71 76 ⇑P **P 22 11 16.3 -0.2**
baz=32
VTHM Trough 31.72 84 P **P 22 11 21.4 +4.7**
HAWA Hanford 31.73 81 *e*P **P 22 11 16.6 -0.1**
comp=Z,140nm,1.1s,mb5.7
HAWA *e*PcP PcP 22 14 04.7 -2.7
HAWA *e*S **S 22 16 42.1 +18**
HAWA LR LR
comp=Z,29µm,20.0s,MS6.0
F07A Phinny Hill Vi 31.74 83 ⇓P **P 22 11 17.1 +0.2**
baz=32,SNR=16
D08A Wollman Farm, 31.78 80 ⇑P **P 22 11 17.1 -0.1**
baz=32,SNR=15
KTRM Thompson Ridge 31.79 91 P **P 22 11 18.3 +1.0**
C09A Chrisman Ranch 31.82 78 ⇓P **P 22 11 17.3 -0.2**
baz=32,SNR=12
I05A Bend 31.82 86 ⇓P **P 22 11 18.1 +0.6**
baz=32,SNR=8.9
E08A Dider Farm, El 31.97 81 ⇓P **P 22 11 19.2 +0.3**
baz=32,SNR=20
VIPM Ingram Point 32.04 85 P **P 22 11 21.7 +2.3**
H06A Lindquist Farm 32.09 85 ⇑P **P 22 11 20.4 +0.5**
baz=32,SNR=23
KIP Kipapa 32.10 162 PFAKE 22 11 30.0 +10
KIP LR LR
comp=Z,33µm,19.0s,MS6.0
D09A Jones Farm, Ri 32.15 80 ⇑P **P 22 11 20.1 -0.2**
baz=32,SNR=17
G07A Ruggs Ranch, H 32.22 83 ⇓P **P 22 11 21.4 +0.4**
baz=32,SNR=8.1
NEW Newport 32.29 77 *e*P **P 22 11 20.8 -0.8**
NEW *e*S **S 22 16 36.3 +3.8**
NEW pmax pmax
comp=Z,87nm,1.1s
NEW MLR MLR
comp=Z,25µm,20.0s
NEW Newport 32.29 77 *e*P **P 22 11 20.8 -0.8**
comp=Z,87nm,1.1s,mb5.5
NEW *e*S **S 22 16 36.3 +3.8**
NEW LR LR
comp=Z,25µm,20.0s,MS5.9
YBH Yreka Blue Hor 32.30 91 P **P 22 11 21.6 -0.2**
comp=Z,24nm,0.8s,mb5.1,baz=285,slow=5.8,SNR=5.5
YBH LR LR 22 21 30.3
comp=Z,35µm,19.9s,MS6.0,baz=303,slow=31
YBH Yreka Blue Hor 32.30 91 *e*P **P 22 11 22.8 +1.1**
YBH 22 12 40.8
YBH 22 14 11.7
YBH *e*S **S 22 16 29.4 -3.3**
YBH pmax pmax
comp=Z,139nm,1.1s
YBH MLR MLR
comp=Z,29µm,19.0s
YBH Yreka Blue Hor 32.30 91 *e*P **P 22 11 22.8 +1.1**
comp=Z,139nm,1.1s,mb5.7
YBH PP PP 22 12 40.8 +5.9
YBH PcP PcP 22 14 11.7 +2.6
YBH *e*S **S 22 16 29.4 -3.4**
YBH LR LR
comp=Z,29µm,19.0s,MS6.0
A11A Hall Mountain, 32.43 75 ⇑P **P 22 11 22.9 +0.1**
baz=32,SNR=26
EDM Edmonton 32.43 67 *e*P **P 22 11 22.3 -0.5**
EDM *e* 22 12 35.1
EDM 22 14 10.6
EDM S **S 22 16 31.3 -3.3**
F08A Pendleton 32.49 82 ⇑P **P 22 11 23.7 +0.3**
baz=32,SNR=8.7
E09A Wood Farm, Sta 32.51 80 ⇓P **P 22 11 23.5 -0.1**
baz=32,SNR=23
I06A Prineville 32.59 86 ⇑P **P 22 11 24.6 +0.4**
baz=32,SNR=15
G08A Pilot Rock 32.64 83 ⇑P **P 22 11 24.9 +0.2**
baz=32,SNR=20
B11A Sandpoint 32.66 76 ⇑P **P 22 11 24.5 -0.3**
baz=32,SNR=12
D10A Wagner Farm, O 32.77 79 ⇑P **P 22 11 25.2 -0.6**
baz=33,SNR=20
K05A Summer Lake 32.84 88 ⇑P **P 22 11 26.8 +0.3**
baz=33,SNR=29
A12A Yaak River Ran 32.86 75 ⇓P **P 22 11 26.5 -0.1**
baz=33,SNR=6.9
TIXI Tiksi 32.90 329⇓*i*P **P 22 11 26.0 -0.7**
I07A Izee 32.94 85 ⇓P **P 22 11 27.2 -0.1**
baz=33,SNR=30
J06A Christmas Vall 33.00 87 ⇑P **P 22 11 28.0 +0.2**
baz=33,SNR=37
F09A S2 Ranch, Elgi 33.06 81 ⇑P **P 22 11 28.0 -0.3**
baz=33,SNR=16
WDC Whiskeytown Da 33.08 93 *e*P **P 22 11 29.0 +0.4**
WDC pmax pmax
comp=Z,229nm,1.1s,mb6.0
WDC MLR MLR
comp=Z,26µm,21.0s,MS5.9
WDC Whiskeytown Da 33.08 93 *e*P **P 22 11 29.0 +0.4**
comp=Z,229nm,1.1s,mb6.0
WDC *e*PcP PcP 22 14 03.5 -7.8
WDC *e*S **S 22 16 57.6 +13**
WDC LR LR
comp=Z,26µm,21.0s,MS5.9
B12A Libby 33.11 76 ⇑P **P 22 11 28.2 -0.5**
baz=33
E10A Myers Farm, Un 33.15 80 ⇑P **P 22 11 28.4 -0.7**
baz=33,SNR=16
ASAJ Asahikawa 33.17 275 P **P 22 11 28.5 -0.8**
comp=Z,83nm,1.1s,mb5.6,baz=12,slow=4.2,SNR=12
ASAJ LR LR 22 23 54.5
comp=Z,61µm,20.7s,MS6.3,baz=77,slow=34
H08A Prairie City 33.21 84 ⇑P **P 22 11 29.6 -0.2**
baz=33,SNR=32
F10A Beach Ranch, E 33.33 81 ⇑P **P 22 11 30.4 -0.4**
baz=33,SNR=15
D11A Klaveano Farm, 33.34 78 ⇓P **P 22 11 30.3 -0.4**
baz=33,SNR=13
G09A Cove 33.35 82 ⇓P **P 22 11 30.7 -0.2**
baz=33,SNR=21
J07A Hines 33.44 86 ⇓P **P 22 11 31.5 -0.2**
baz=33,SNR=12
C12B Naegeli Ranch, 33.53 77 ⇑P **P 22 11 32.4 -0.1**
baz=33,SNR=18
YAK Yakutsk 33.54 311*c i*P **P 22 11 30.5 -1.9**
YAK *e**PP pP 22 11 40.4 -2.3
YAK *e*PPP 22 12 58.6
YAK *e* 22 14 11.2
YAK *e*S **S 22 16 52.2 +0.6**
YAK *e**SS sS 22 17 09.0 +0.3
YAK *e*SS SS 22 19 01.8 -15
YAK *e*SSS 22 19 26.9
YAK *e* 22 21 56.2
YAK pmax pmax
comp=Z,280nm,0.9s,mb6.2
YAK pmax pmax
comp=N,19nm,0.9s
YAK pmax pmax
comp=E,111nm,1.1s
YAK smax
comp=E,692nm,4.1s
YAK smax
comp=N,808nm,4.1s
YAK MLR MLR
comp=N,54µm,19.0s,MS6.4
YAK MLR MLR
comp=Z,43µm,14.0s,MS6.3
YAK MLR MLR
comp=E,43µm,15.0s,MS6.4
YAK Yakutsk 33.54 311⇑*e*P **P 22 11 30.3 -2.1**
comp=E,17nm,0.6s,mb5.1
YAK *e*PP PP 22 12 50.0 +1.7
YAK *e*S **S 22 16 53.5 +1.8**
YAK LR LR
comp=Z,64µm,19.0s,MS6.4
I08A Drewsey 33.60 85 ⇑P **P 22 11 32.8 -0.3**
baz=34,SNR=30
MOD Modoc 33.67 89 *e*P **P 22 11 33.9 +0.2**
comp=Z,167nm,1.0s,mb5.9
MOD *e*S **S 22 16 58.1 +4.1**
MOD LR LR
comp=Z,46µm,20.0s,MS6.2
HOPS Hopland 33.73 95 *e*P **P 22 11 34.7 +0.5**
comp=Z,231nm,1.0s,mb6.1
HOPS *e*S **S 22 16 58.0 +2.9**
HOPS LR LR
comp=Z,31µm,22.0s,MS6.0
G10A Bishop Farm, J 33.75 82 ⇑P **P 22 11 34.2 -0.1**
baz=34,SNR=52
H09A Durkee 33.75 83 ⇓P **P 22 11 34.1 -0.2**
baz=34,SNR=15
E11A Bogner Ranch, 33.75 79 ⇑P **P 22 11 33.2 -1.1**
baz=34,SNR=20
B13A Whitefish 33.81 75 ⇓P **P 22 11 34.4 -0.5**
baz=34,SNR=8.5
WALA Waterton Lakes 33.82 74 *e*P **P 22 11 34.7 -0.3**
comp=Z,3.1nm,1.1s
WALA *e*PcP PcP 22 14 13.4 +0.3
K07A Rock Creek Ran 33.86 87 ⇓P **P 22 11 35.4 0.0**
baz=34,SNR=39
BMO Blue Mountains 33.86 82 *e*P **P 22 11 35.5 +0.1**
comp=Z,162nm,1.4s,mb5.8
BMO *e*S **S 22 17 00.3 +3.3**
BMO LR LR
comp=Z,33µm,21.0s,MS6.0
J08A Circle Bar Ran 33.96 85 ⇓P **P 22 11 36.5 +0.2**
baz=34,SNR=24
ERM Erimo 34.00 272 P **P 22 11 36.7 +0.1**
comp=Z,2µm,1.1s,mb6.9,SNR=19
ERM Erimo 34.00 272 *e*P **P 22 11 36.4 -0.2**
ERM *e* 22 14 14.5
ERM *e*S **S 22 16 58.3 -0.8**
ERM pmax pmax
comp=Z,474nm,1.2s,mb6.3
ERM MLR MLR
comp=Z,52µm,20.0s,MS6.3
ERM Erimo 34.00 272 *e*P **P 22 11 36.4 -0.2**
comp=Z,474nm,1.2s,mb6.3
ERM *e*PcP PcP 22 14 14.5 +0.7
ERM *e*S **S 22 16 58.3 -0.8**
ERM LR LR
comp=Z,52µm,20.0s,MS6.3
F11A Grangeville 34.02 80 ⇓P **P 22 11 35.8 -0.9**
baz=34,SNR=30
I09A Lost Marbles R 34.07 84 ⇓P **P 22 11 37.2 +0.1**
baz=34,SNR=13
C13A Hot Springs 34.08 76 ⇓P **P 22 11 36.7 -0.5**

baz=34,SNR=36
A14A Double T Ranch 34.15 74 ⇑P **P 22 11 37.2 -0.6**
baz=34,SNR=31
L07A Adell 34.19 88 ⇑P **P 22 11 38.4 +0.2**
baz=34,SNR=30
POHA Pohakuloa 34.23 158 *e*P **P 22 11 39.2 +0.4**
comp=Z,271nm,1.1s,mb6.1
POHA *e*PP PP 22 12 50.8 -5.9
POHA PcP PcP 22 14 09.1 -5.7
POHA *e*S **S 22 17 07.0 +3.9**
POHA LR LR
comp=Z,31µm,20.0s,MS6.0
K08A Mann Creek Ran 34.30 86 ⇓P **P 22 11 39.1 -0.1**
baz=34,SNR=18
H10A Noah's Angus R 34.34 82 ⇓P **P 22 11 39.3 -0.2**
baz=34,SNR=74
WVOR Wild Horse Val 34.38 87 *e*P **P 22 11 40.9 +1.0**
WVOR *e*S **S 22 17 13.8 +8.8**
WVOR pmax pmax
comp=Z,169nm,1.0s,mb5.9
WVOR MLR MLR
comp=Z,30µm,20.0s,MS6.0
WVOR Wild Horse Val 34.38 87 *e*P **P 22 11 40.9 +1.0**
comp=Z,168nm,1.0s,mb5.9
WVOR *e*S **S 22 17 13.8 +8.8**
WVOR LR LR
comp=Z,30µm,20.0s,MS6.0
MCCM Marconi Confer 34.38 96 *e*P **P 22 11 40.6 +0.7**
comp=Z,743nm,1.8s,mb6.3
MCCM *e*PP PP 22 12 57.3 -0.8
MCCM *e*PcP PcP 22 14 19.1 +4.1
MCCM *e*S **S 22 17 16.8 +12**
MCCM LR LR
comp=Z,33µm,20.0s,MS6.1
J09A Fry Pan Ranch, 34.41 85 ⇓P **P 22 11 40.0 0.0**
baz=34,SNR=50
D13A Huson 34.43 77 ⇑P **P 22 11 39.2 -1.1**
baz=34,SNR=10
B14A Marquette Ranc 34.52 75 ⇓P **P 22 11 40.4 -0.6**
baz=34,SNR=25
A15A Johnson Ranch, 34.55 73 ⇑P **P 22 11 40.1 -1.2**
baz=34,SNR=15
I10A Payette 34.58 83 ⇑P **P 22 11 41.7 +0.2**
baz=34,SNR=13
N06A Buffalo Meadow 34.63 90 ⇓P **P 22 11 42.5 +0.4**
baz=34,SNR=65
M07A Soldier Meadow 34.66 89 ⇓P **P 22 11 42.6 +0.3**
baz=35,SNR=61
L08A Fields 34.70 87 ⇓P **P 22 11 42.5 -0.1**
baz=35,SNR=38
H11A Donnelly 34.72 82 ⇑P **P 22 11 42.4 -0.4**
baz=35,SNR=33
K09A Rome 34.78 86 ⇓P **P 22 11 43.7 +0.3**
baz=35,SNR=42
BEKR Beckwourth 34.84 92 ⇓P **P 22 11 43.9 0.0**
baz=35,SNR=43
MSO Missoula 34.87 77 *e*P **P 22 11 43.5 -0.5**
comp=Z,120nm,1.4s,mb5.6
MSO *e*PcP PcP 22 14 15.7 -0.6
MSO S **S 22 17 18.2 +5.7**
MSO LR LR
comp=Z,9µm,19.0s,MS5.5
E13A Victor 34.92 78 ⇓P **P 22 11 43.8 -0.7**
baz=35,SNR=14
J10A Berg Farm, Mel 34.96 84 ⇑P **P 22 11 44.4 -0.4**
baz=35
B15A Bradely Ranch, 34.96 74 ⇓P **P 22 11 43.9 -0.9**
baz=35,SNR=21
O06A Flanigan 34.98 91 ⇑P **P 22 11 45.2 +0.1**
baz=35,SNR=25
D14A Greenough 35.00 77 ⇑P **P 22 11 44.3 -0.9**
baz=35,SNR=46
M08A Happy Creek Ra 35.10 88 ⇑P **P 22 11 46.3 +0.1**
baz=35,SNR=35
N07B Gerlach 35.14 90 ⇑P **P 22 11 46.3 -0.1**
baz=35,SNR=36
F13A Darby 35.17 79 ⇓P **P 22 11 45.8 -0.8**
baz=35,SNR=33
I11A Placerville 35.18 83 ⇑P **P 22 11 46.3 -0.5**
baz=35,SNR=21
C15A Salmond Ranch, 35.19 75 ⇑P **P 22 11 46.2 -0.6**
baz=35,SNR=43
L09A Wilkinson Ranc 35.21 87 ⇑P **P 22 11 47.1 +0.1**
baz=35,SNR=10
A16A West Butte Ran 35.23 73 ⇑P **P 22 11 46.0 -1.1**
baz=35,SNR=15
P06A Stead Airport, 35.24 92 ⇑P **P 22 11 47.8 +0.5**
baz=35
K10A MacKenzie Ranc 35.26 85 ⇑P **P 22 11 47.1 -0.3**
baz=35,SNR=41
E14A Clinton 35.35 78 ⇓P **P 22 11 47.4 -0.7**
baz=35,SNR=22
B16A M & M Farms, S 35.41 74 ⇑P **P 22 11 47.7 -1.1**
baz=35,SNR=12
HABR Khabarovsk 35.48 287 *c i*P **P 22 11 48.5 -0.8**
HABR *e**PP pP 22 11 58.0 -1.6
HABR *e* 22 13 07.7
HABR *e* 22 14 17.6
HABR *e*S **S 22 17 21.8 0.0**
HABR *e**SS sS 22 17 38.7 -0.2
HABR *e*SSS 22 20 00.7
HABR pmax pmax
comp=Z,375nm,1.0s,mb6.3
HABR pmax pmax
comp=E,231nm,1.0s
HABR pmax pmax
comp=N,92nm,1.0s
HABR MLR MLR
comp=N,18µm,18.0s,MS6.1
HABR MLR MLR
comp=Z,25µm,20.0s,MS6.0
HABR MLR MLR
comp=E,25µm,22.0s,MS6.1
H12A Diamond D Ranc 35.51 81 ⇓P **P 22 11 48.9 -0.7**
baz=35,SNR=34
MFID Camas Ranch 35.54 84 ⇓P **P 22 11 49.3 -0.5**
baz=35,SNR=35
WCN Washoe City 35.55 92 ⇓P **P 22 11 50.3 +0.2**
baz=36,SNR=22
O07A Toulon 35.57 90 ⇓P **P 22 11 50.3 +0.2**
baz=36,SNR=56
G13A Cobalt 35.59 80 ⇑P **P 22 11 49.4 -0.8**
baz=36,SNR=29
D15A Lincoln 35.61 76 ⇑P **P 22 11 49.6 -0.8**
baz=36,SNR=40
N08A GE Springer Mi 35.65 89 ⇓P **P 22 11 51.4 +0.6**
baz=36,SNR=69
M09A Marrel Ranch, 35.69 88 ⇑P **P 22 11 51.9 +0.7**
baz=36,SNR=28
C16A Fuhringer Ranc 35.69 75 ⇓P **P 22 11 50.5 -0.5**
baz=36,SNR=62
A17A Triple J Farms 35.75 72 ⇑P **P 22 11 50.9 -0.7**
baz=36,SNR=20
K11A Parker Ranch, 35.77 85 ⇓P **P 22 11 51.5 -0.3**
baz=36,SNR=60
E15A Deer Lodge 35.85 77 ⇓P **P 22 11 52.0 -0.5**
baz=36,SNR=38
RES Resolute Bay 35.87 26 P **P 22 11 50.7 -1.7**
comp=E,11nm,0.8s,mb4.8,baz=247,slow=12,SNR=29
RES LR LR 22 26 24.0
comp=E,14µm,21.4s,MS5.7,baz=267,slow=36
RES Resolute Bay 35.87 26 *e*P **P 22 11 51.1 -1.3**
RES *e* 22 13 15.7
RES *e* 22 14 19.2
RES pmax pmax
comp=Z,36nm,0.6s,mb5.5
RES Resolute Bay 35.87 26 *e*P **P 22 11 51.1 -1.3**
comp=Z,36nm,0.6s,mb5.5
RES *e*PP PP 22 13 15.7 +1.7
RES *e*PcP PcP 22 14 19.2 +0.5
L10A Juniper Basin 35.90 86 ⇑P **P 22 11 52.9 -0.1**
baz=36,SNR=30
O08A Rochester Mine 35.93 90 ⇓P **P 22 11 54.0 +0.8**
baz=36
P07A Fallon 35.94 91 ⇑P **P 22 11 54.4 +1.1**
baz=36
N09A Rock Creek Ran 35.98 88 ⇓P **P 22 11 54.0 +0.4**
baz=36,SNR=21
B17A L&G Farms, Che 36.01 73 ⇑P **P 22 11 53.6 -0.2**
baz=36
J12A Stokes Ranch, 36.07 83 ⇓P **P 22 11 54.4 0.0**
baz=36,SNR=59
SAO San Andreas Ge 36.14 97 *e*P **P 22 11 54.6 -0.5**
SAO *e* 22 13 17.8
SAO *e*S **S 22 17 28.7 -3.5**
SAO pmax pmax
comp=Z,218nm,1.3s,mb5.9
SAO MLR MLR
comp=Z,22µm,21.0s,MS5.9
SAO San Andreas Ge 36.14 97 *e*P **P 22 11 54.5 -0.5**
comp=Z,218nm,1.3s,mb5.9
SAO *e*PP PP 22 13 17.8 +0.3
SAO *e*S **S 22 17 28.7 -3.5**
SAO LR LR
comp=Z,22µm,21.0s,MS5.9
M10A I.L. Ranch, Tu 36.18 87 ⇓P **P 22 11 55.3 0.0**
baz=36,SNR=39
D16A Dana Ranch, Ca 36.19 76 ⇓P **P 22 11 55.1 -0.3**
baz=36,SNR=13
R06C Coleville 36.23 93 ⇓P **P 22 11 56.1 +0.4**
baz=36,SNR=47
F15A Butte 36.24 78 ⇑P **P 22 11 55.5 -0.2**
baz=36,SNR=13
A18A Metzger Ranch, 36.26 72 ⇓P **P 22 11 55.1 -0.9**
baz=36,SNR=17
L11A Cat Creek Ranc 36.29 85 ⇓P **P 22 11 56.3 0.0**
baz=36,SNR=76
I13A Wildhorse Cree 36.30 82 ⇑P **P 22 11 56.1 -0.2**
baz=36,SNR=57
HLID Hailey 36.31 82 ⇓P **P 22 11 56.2 -0.3**
baz=36,SNR=71
HLID Hailey 36.31 82 *e*P **P 22 11 56.4 -0.1**
comp=Z,168nm,0.5s,mb6.2
HLID *e*PcP PcP 22 14 21.9 +1.3
HLID *e*S **S 22 17 36.1 +1.5**
HLID LR LR
comp=Z,31µm,21.0s,MS6.1
P08A Dixie Valley 36.34 90 ⇓P **P 22 11 56.9 +0.2**
baz=36,SNR=7.5
C17A Wharram Farm, 36.35 74 ⇑P **P 22 11 56.8 +0.1**
baz=36
Q07A Schurz 36.36 92 ⇑P **P 22 11 57.5 +0.6**
baz=36
H14A Leadore 36.36 80 ⇓P **P 22 11 56.4 -0.4**
baz=36,SNR=19
E16A East Helena 36.37 76 ⇑P **P 22 11 56.3 -0.5**
baz=36,SNR=15
BMN Battle Mountai 36.41 89 *e*P **P 22 11 57.9 +0.6**
BMN *e* 22 14 20.0
BMN *e*S **S 22 17 39.7 +3.5**
BMN pmax pmax
comp=Z,113nm,1.3s,mb5.6
BMN MLR MLR
comp=Z,28µm,21.0s,MS6.0
BMN Battle Mountai 36.41 89 *e*P **P 22 11 57.9 +0.6**
comp=Z,113nm,1.3s,mb5.6
BMN *e*PcP PcP 22 14 20.0 -0.9
BMN *e*S **S 22 17 39.7 +3.4**
BMN LR LR
comp=Z,28µm,21.0s,MS6.0
DLMT Dillon 36.43 79 *e*P **P 22 11 57.7 +0.3**
comp=Z,108nm,1.3s,mb5.6
DLMT *e*PP PP 22 13 19.1 -1.4
DLMT *e*PcP PcP 22 14 21.5 +0.6
DLMT *e*ScP ScP 22 18 08.0 +3.7
K12A Draper Farm, C 36.53 84 ⇓P **P 22 11 58.4 0.0**
baz=36,SNR=31
J13A Cove Ranch, Pi 36.55 82 ⇑P **P 22 11 58.3 -0.2**
baz=36,SNR=62
B18A Beardsley Farm 36.55 73 ⇓P **P 22 11 57.9 -0.5**
baz=36,SNR=12
G15A Dillon 36.60 79 ⇓P **P 22 11 58.4 -0.5**
baz=36,SNR=50
D17A Six Diamond Ra 36.63 75 ⇑P **P 22 11 58.8 -0.3**
baz=36,SNR=18
N10A Dunphy 36.68 88 ⇓P **P 22 11 59.7 +0.1**
baz=37
I14A Mackay 36.69 81 ⇑P **P 22 11 59.5 -0.2**
baz=37,SNR=67
M11A Holland Ranch, 36.69 86 ⇑P **P 22 11 59.9 +0.2**
baz=37,SNR=21
EGMT Eagleton 36.74 73 ⇓P **P 22 11 59.9 -0.2**
baz=37
EGMT Eagleton 36.74 73 *e*P **P 22 11 59.2 -0.9**
comp=Z,312nm,0.9s,mb6.1
EGMT *e*PcP PcP 22 14 22.0 +0.3
EGMT *e*S **S 22 18 00.7 +20**
EGMT LR LR
comp=Z,23µm,20.0s,MS6.0
L12A House Creek Ra 36.75 85 ⇑P **P 22 12 00.4 +0.3**
baz=37,SNR=30
F16A Kennard Place, 36.78 77 ⇑P **P 22 12 00.2 -0.3**
baz=37,SNR=15
H15A Lima 36.80 80 ⇑P **P 22 12 00.2 -0.3**
baz=37,SNR=45
BOZ Bozeman (W) 36.85 78 ⇓P **P 22 12 00.3 -0.8**
baz=37
BOZ Bozeman (W) 36.85 78 *e*P **P 22 11 59.8 -1.2**
BOZ *e* 22 14 24.3
BOZ *e*S **S 22 17 45.7 +2.8**
BOZ pmax pmax
comp=Z,109nm,1.2s,mb5.6
BOZ MLR MLR
comp=Z,10µm,21.0s,MS5.6
BOZ Bozeman (W) 36.85 78 *e*P **P 22 11 59.8 -1.2**
comp=Z,109nm,1.2s,mb5.6
BOZ *e*PcP PcP 22 14 24.3 +2.2
BOZ *e*S **S 22 17 45.7 +2.8**
BOZ LR LR
comp=Z,10µm,21.0s,MS5.6
E17A Martinsdale 36.89 76 ⇓P **P 22 12 00.8 -0.5**
baz=37,SNR=37
O10A Cortez Mining, 36.94 88 ⇑P **P 22 12 02.3 +0.5**
baz=37
Q08A Gabbs 36.94 91 ⇑P **P 22 12 01.7 -0.2**
baz=37,SNR=22
G16A Moss Hill, Enn 36.97 78 ⇑P **P 22 12 01.4 -0.6**
baz=37,SNR=41
NVAR Mina Array Bea 36.98 92 P **P 22 12 00.8 -1.4**
comp=Z,28nm,0.8s,mb5.1,baz=286,slow=9.0,SNR=40
J14A Carey 36.99 82 ⇓P **P 22 12 02.0 -0.2**
baz=37,SNR=59
P09A Austin 37.00 90 ⇑P **P 22 12 02.2 -0.1**
baz=37,SNR=8.8
K13A Stover Farm, H 37.02 83 ⇑P **P 22 12 02.4 -0.1**
baz=37,SNR=22
KLR Kul'dur 37.03 289 *e*P **P 22 11 56.7 -5.8**
KLR pmax pmax
comp=E,180nm,1.6s
KLR pmax pmax
comp=Z,250nm,1.6s,mb5.8
KLR pmax pmax
comp=E,2µm,10.0s
KLR pmax pmax
comp=Z,3µm,10.0s
KLR MLR MLR
comp=N,30µm,17.0s,MS6.3
KLR MLR MLR
comp=E,37µm,17.0s,MS6.3
KLR MLR MLR
comp=Z,46µm,17.0s,MS6.3
N11A Elko Archery C 37.09 87 ⇑P **P 22 12 03.4 +0.3**
baz=37
D18A Linhart Farms, 37.13 74 ⇑P **P 22 12 02.9 -0.5**
baz=37,SNR=17
R08A Mina 37.16 92 ⇓P **P 22 12 04.0 +0.3**
baz=37
MLAC Mammoth Lakes 37.17 94 ⇓P **P 22 12 03.8 0.0**
baz=37,SNR=9.7
I15A Monteview 37.23 80 ⇑P **P 22 12 04.1 -0.2**
baz=37,SNR=21
M12A Wells 37.23 86 ⇑P **P 22 12 04.3 0.0**
baz=37,SNR=65
F17A Fitzpatrick Pl 37.30 77 ⇑P **P 22 12 04.9 +0.1**
baz=37,SNR=27
P10A Eureka 37.37 89 ⇑P **P 22 12 05.7 +0.2**
baz=37,SNR=12
E18A Harlowton 37.39 75 ⇓P **P 22 12 05.4 -0.2**
baz=37,SNR=26
Q09A Carvers 37.42 91 ⇑P **P 22 12 06.4 +0.5**
baz=37,SNR=18
L13A Double Diamond 37.43 84 ⇓P **P 22 12 05.7 -0.3**
baz=37,SNR=19
ELK Elko 37.43 87 *e*P **P 22 12 06.3 +0.3**
ELK *e*S **S 22 17 48.0 -3.8**
ELK pmax pmax
comp=Z,134nm,1.2s
ELK MLR MLR
comp=Z,42µm,20.0s
ELK Elko 37.43 87 *e*P **P 22 12 06.3 +0.3**
comp=Z,134nm,1.2s,mb5.7
ELK *e*S **S 22 17 48.0 -3.8**
ELK LR LR
comp=Z,42µm,20.0s,MS6.2
CLNS Chul'man 37.47 304 *e*P **P 22 12 03.9 -2.2**
CLNS *e**PP pP 22 12 15.4 -1.1
CLNS *e* 22 13 28.0
CLNS *e*PPP 22 13 47.6
CLNS *e* 22 14 20.9
CLNS *e*S **S 22 17 49.3 -2.6**
CLNS *e* 22 18 08.5
CLNS *e*SS SS 22 20 23.3 -13
CLNS pmax pmax
comp=Z,118nm,1.4s,mb5.5
CLNS pmax pmax
comp=N,19nm,1.3s
CLNS pmax pmax
comp=E,88nm,1.4s
CLNS pmax pmax
comp=E,24nm,1.1s
CLNS pmax pmax
comp=N,22nm,1.0s
CLNS pmax pmax
comp=Z,19nm,1.0s,mb4.9
CLNS smax
comp=N,3µm,16.2s
CLNS smax
comp=E,7µm,17.5s
CLNS MLR MLR
comp=N,38µm,19.0s,MS6.3
CLNS MLR MLR
comp=E,28µm,18.0s,MS6.3
CLNS MLR MLR
comp=Z,36µm,18.0s,MS6.2
N12A Clover Valley, 37.49 86 ⇓P **P 22 12 06.9 +0.4**
baz=37,SNR=58
O11A Cowboy Ranch, 37.55 88 ⇑P **P 22 12 06.8 -0.2**
baz=37,SNR=45
G17A Pierce Place, 37.56 77 ⇑P **P 22 12 06.9 -0.2**
baz=37,SNR=16
H16A Russell Place, 37.59 79 ⇓P **P 22 12 06.9 -0.4**
baz=37,SNR=32
J15A Blackfoot 37.60 81 ⇓P **P 22 12 07.3 -0.1**
baz=38,SNR=30
NRGR Nerungri 37.62 304 *i* P **P 22 12 10.4 +3.0**
K14A Jones Ranch, D 37.63 83 ⇓P **P 22 12 07.0 -0.7**
baz=38
M13A Montello 37.72 85 ⇓P **P 22 12 08.3 -0.1**
baz=38,SNR=31
RCTC Rector, Farmer 37.78 96 ⇓P **P 22 12 09.4 +0.4**
baz=38,SNR=8.1
P11A Circle Ranch, 37.84 89 ⇑P **P 22 12 09.8 +0.3**
baz=38,SNR=7.9
F18A Big Timber 37.85 76 ⇓P **P 22 12 09.2 -0.3**
baz=38,SNR=12
R09A Tonopah 37.86 91 ⇑P **P 22 12 09.5 -0.1**
baz=38,SNR=15
TPH Tonopah 37.87 92 *e*P **P 22 12 10.3 +0.6**
TPH 22 13 35.7
TPH *e* 22 14 22.0
TPH *e*S **S 22 18 07.2 +8.8**
TPH pmax pmax
comp=Z,132nm,1.1s,mb5.6
TPH MLR MLR
comp=Z,20µm,22.0s,MS5.9
TPH Tonopah 37.87 92 *e*P **P 22 12 10.3 +0.6**
comp=Z,132nm,1.1s,mb5.6
TPH PP PP 22 13 35.7 -0.7
TPH *e*PcP PcP 22 14 22.0 -3.3
TPH *e*S **S 22 18 07.2 +8.8**
TPH LR LR
comp=Z,20µm,22.0s,MS5.9
Q10A Clear Creek Ra 37.90 90 ⇑P **P 22 12 10.6 +0.6**
baz=38,SNR=66
I16A Newdale 37.90 80 ⇑P **P 22 12 10.1 +0.1**
baz=38,SNR=26
TIN Tinemaha 37.91 94 ⇓P **P 22 12 10.9 +0.9**
baz=38
K15A Arbon 37.94 82 ⇓P **P 22 12 11.1 +0.8**
baz=38
SMMC Simmler 37.98 98 ⇓P **P 22 12 10.8 +0.1**
baz=38,SNR=15
FFC Flin Flon 38.02 60 *e*P **P 22 12 09.5 -1.3**
FFC *e* 22 13 36.6
FFC *e*S **S 22 18 00.8 +0.5**
FFC pmax pmax
comp=Z,78nm,1.1s,mb5.3
FFC MLR MLR
comp=Z,54µm,20.0s,MS6.3
FFC Flin Flon 38.02 60 *e*P **P 22 12 09.5 -1.2**
comp=Z,78nm,1.1s,mb5.3
FFC *e*PP PP 22 13 36.6 -1.2
FFC *e*S **S 22 18 00.8 +0.5**
FFC LR LR
comp=Z,54µm,20.0s,MS6.3
O12A Currie 38.02 87 ⇓P **P 22 12 11.2 +0.2**
baz=38,SNR=52
S09A Goldfield 38.09 92 ⇑P **P 22 12 11.5 -0.1**
baz=38,SNR=31
M14A Sheep Mountain 38.13 84 ⇓P **P 22 12 11.4 -0.5**
baz=38,SNR=48
H17A Grant Village 38.16 79 ⇑P **P 22 12 12.1 0.0**
baz=38,SNR=32
J16A Bone 38.16 81 ⇓P **P 22 12 12.3 +0.1**
baz=38,SNR=50
VES Vestal, Richgr 38.19 96 ⇑P **P 22 12 12.1 -0.3**
baz=38,SNR=32
IMW Indian Meadow 38.22 80 *e*P **P 22 12 12.4 -0.2**
comp=Z,91nm,1.1s,mb5.4
IMW *e*S **S 22 18 10.1 +6.5**
DCID1 Drake Creek 38.24 80 *e*P **P 22 12 12.9 +0.1**
comp=Z,127nm,0.9s,mb5.7
DCID1 *e*PcP PcP 22 14 23.9 -2.5
G18A Lazy EL Ranch, 38.26 77 ⇓P **P 22 12 12.5 -0.4**
baz=38,SNR=13
R10A Warm Springs 38.29 91 ⇑P **P 22 12 13.6 +0.3**
baz=38,SNR=16
RRI2 Red Ridge 38.30 81 *e*P **P 22 12 13.2 -0.1**
comp=Z,92nm,1.1s,mb5.4
RRI2 PcP PcP 22 14 29.0 +2.4
Q11A Duckwater 38.34 90 ⇓P **P 22 12 14.2 +0.5**
baz=38,SNR=46
S10A Tonopah Range, 38.35 91 ⇓P **P 22 12 13.7 -0.1**
baz=38,SNR=26
PKM Peak Mountain 38.37 98 ⇓P **P 22 12 14.7 +0.7**
baz=38,SNR=11
CWC Cottonwood Cre 38.40 94 ⇑P **P 22 12 14.2 0.0**
baz=38,SNR=11
P12A McGill 38.41 88 ⇓P **P 22 12 14.3 +0.1**
baz=38,SNR=61
MOOW Moose Ponds 38.42 80 *e*P **P 22 12 13.9 -0.4**
comp=Z,104nm,1.5s,mb5.3
MOOW *e*PP PP 22 13 43.2 +0.8
MOOW *e*PcP PcP 22 14 30.9 +4.0
MOOW S **S 22 18 14.1 +7.5**
I17A Pilgram Creek 38.42 79 ⇓P **P 22 12 14.6 +0.2**
baz=38,SNR=21
L15A Malad City 38.42 83 ⇑P **P 22 12 14.8 +0.4**
baz=38,SNR=35
K16A Soda Springs 38.43 81 ⇓P **P 22 12 14.4 0.0**
baz=38,SNR=106
GRAC Grapevine Rang 38.47 93 ⇓P **P 22 12 15.2 +0.4**
baz=38,SNR=13
RLMT Red Lodge 38.54 77 ⇑P **P 22 12 15.2 -0.1**
baz=38
RLMT Red Lodge 38.54 77 *e*P **P 22 12 15.1 -0.2**
comp=Z,75nm,1.3s,mb5.3
RLMT *e*PcP PcP 22 14 30.6 +3.2
RLMT *e*S **S 22 18 02.1 -6.3**
RLMT LR LR
comp=Z,13µm,20.0s,MS5.8
O13A Hicks Ranch, I 38.57 87 ⇑P **P 22 12 16.1 +0.5**
baz=38
REDW Red Top Meadow 38.57 80 *e*P **P 22 12 15.7 +0.1**
comp=Z,91nm,1.1s,mb5.4
REDW PP PP 22 13 44.2 +0.1
REDW *e*PcP PcP 22 14 27.7 +0.3
SNOW Snow King Moun 38.57 80 *e*P **P 22 12 16.0 +0.4**
comp=Z,250nm,1.5s,mb5.7
SNOW *e*PcP PcP 22 14 27.3 -0.2
SNOW *e*S **S 22 18 07.6 -1.4**
LOHW Long Hollow 38.58 80 *e*P **P 22 12 15.5 -0.2**
comp=Z,129nm,1.5s,mb5.4
LOHW *e*PP PP 22 13 44.4 +0.2
N14A Grayback Hills 38.62 85 ⇑P **P 22 12 16.1 +0.1**
baz=38,SNR=53
J17A Brown Place, J 38.65 80 ⇓P **P 22 12 16.1 -0.1**
baz=38,SNR=13
R11A Troy Canyon, C 38.69 90 ⇑P **P 22 12 17.2 +0.5**
baz=39,SNR=91

M15A **Larsen Ranch,** 38.70 84 ⇓P P 22 12 16.6 -0.2
baz=39,SNR=20
Q12A **Willow Creek R** 38.72 89 ⇓P P 22 12 17.5 +0.6
baz=39,SNR=100
SBC **Santa Barbara** 38.74 98 ⇑P P 22 12 17.9 +0.8
baz=39
DAC **Darwin (Calif)** 38.80 94 PFAKE 22 12 30.0 +12
DAC LR LR
comp=Z,26µm,21.0s,MS6.0
ARVC **Arvin** 38.82 97 ⇑P P 22 12 17.3 -0.4
baz=39
K17A **Gardner Place,** 38.88 81 ⇑P P 22 12 18.7 +0.5
baz=39,SNR=10
P13A **Bates Ranch, G** 38.96 87 ⇑P P 22 12 19.2 +0.3
baz=39,SNR=62
L16A **Fish Haven** 39.00 82 ⇓P P 22 12 18.9 -0.2
baz=39,SNR=63
I18A **Diamond G Ranc** 39.00 79 ⇓P P 22 12 19.1 0.0
baz=39,SNR=26
N15A **Stansbury Isla** 39.00 85 ⇓P P 22 12 19.1 -0.1
baz=39,SNR=39
MPMC **Manual Prospec** 39.01 94 ⇓P P 22 12 19.5 +0.1
baz=39,SNR=40
FURC **Furnace Creek,** 39.12 93 ⇓P P 22 12 20.4 +0.1
baz=39,SNR=34
J18A **Kendall Valley** 39.16 80 ⇑P P 22 12 19.8 -0.6
baz=39,SNR=44
TPNV **Topopah Spring** 39.18 92 eP P 22 12 20.6 -0.2
TPNV 22 14 23.1
TPNV e 22 18 16.0
TPNV pmax pmax
comp=Z,150nm,0.9s,mb5.7
TPNV MLR MLR
comp=Z,23µm,20.0s,MS6.0
TPNV **Topopah Spring** 39.18 92 eP P 22 12 20.6 -0.2
comp=Z,150nm,0.9s,mb5.7
TPNV PcP PcP 22 14 23.1 -6.4
TPNV eScP ScP 22 18 15.9 +1.1
TPNV LR LR
comp=Z,23µm,20.0s,MS6.0
DUG **Dugway** 39.24 86 ⇑P P 22 12 21.6 +0.4
baz=39
DUG **Dugway** 39.24 86 eP P 22 12 21.1 -0.1
DUG e 22 13 55.1
DUG 22 14 31.2
DUG eS S 22 18 11.6 -7.5
DUG pmax pmax
comp=Z,267nm,1.3s,mb5.8
DUG MLR MLR
comp=Z,26µm,20.0s,MS6.1
DUG **Dugway** 39.24 86 eP P 22 12 21.1 -0.2
comp=Z,267nm,1.3s,mb5.8
DUG ePP PP 22 13 55.1 +3.7
DUG PcP PcP 22 14 31.2 +1.6
DUG eS S 22 18 11.6 -7.5
DUG LR LR
comp=Z,26µm,20.0s,MS6.1
Q13A **Wheeler Ranch,** 39.27 88 ⇑P P 22 12 21.7 +0.2
baz=39,SNR=30
LRMC **Laurel Mountai** 39.27 95 ⇑P P 22 12 21.6 +0.1
baz=39
L17A **Cokeville** 39.28 82 ⇓P P 22 12 21.5 -0.1
baz=39,SNR=12
M16A **Huntsville** 39.29 83 ⇓P P 22 12 21.8 +0.2
baz=39,SNR=22
R12A **Pony Springs,** 39.30 89 ⇑P P 22 12 21.7 0.0
baz=39,SNR=28
BLG **Laguna Peak** 39.36 98 ⇑P P 22 12 22.4 +0.1
baz=39
O15A **The Old Anders** 39.40 85 ⇓P P 22 12 23.0 +0.5
baz=39,SNR=14
P14A **Drum Mountains** 39.45 87 ⇓P P 22 12 23.3 +0.3
baz=39,SNR=31
K18A **Toltan Ranch,** 39.47 81 ⇓P P 22 12 22.9 -0.2
baz=39,SNR=43
U10A **Ash Meadows, A** 39.48 93 ⇑P P 22 12 23.1 -0.2
baz=39,SNR=9.1
EDW2 **Edwards Air Fo** 39.49 96 ⇓P P 22 12 23.5 +0.1
baz=39,SNR=12
S12A **Delamar Landin** 39.61 90 ⇑P P 22 12 25.0 +0.6
baz=40,SNR=49
T11A **Corn Creek, Al** 39.62 91 ⇓P P 22 12 24.7 +0.3
baz=40,SNR=82
N16A **Rees Ranch, Co** 39.66 84 ⇑P P 22 12 25.1 +0.4
baz=40,SNR=16
SNCC **San Nicolas Is** 39.68 99 ⇓P P 22 12 24.4 -0.6
baz=40
BW06 **Boulder Array** 39.69 80 ⇑P P 22 12 24.7 -0.3
baz=40
BW06 **Boulder Array** 39.69 80⇓eP P 22 12 25.2 +0.2
comp=Z,138nm,0.6s,mb5.9
BW06 ePP PP 22 13 58.4 +2.2
BW06 ePcP PcP 22 14 31.7 +0.7
BW06 eS S 22 18 27.8 +2.1
BW06 LR LR
comp=Z,21µm,19.0s,MS6.0
PDAR **Pinedale Array** 39.69 80 P P 22 12 24.0 -0.9
comp=Z,46nm,0.9s,mb5.2,baz=297,slow=3.5,SNR=57
PDAR LR LR 22 27 13.5
comp=Z,17µm,19.4s,MS5.9,baz=314,slow=34
PDAR **Pinedale Array** 39.69 80 P P 22 12 24.0 -0.9
PDAR LR LR 22 27 13.5
Q14A **Sevier Lake (B** 39.70 88 ⇓P P 22 12 24.9 -0.2
baz=40,SNR=70
DECC **Green Verdugo** 39.71 97 ⇑P P 22 12 25.0 -0.2
baz=40
M17A **Scullys Gap (B** 39.78 83 ⇑P P 22 12 25.2 -0.5
baz=40,SNR=37
R13A **O'Grain Ranch,** 39.79 89 ⇑P P 22 12 26.0 +0.2
baz=40,SNR=53
SHOC **Shoshone** 39.85 94 ⇓P P 22 12 26.6 +0.2
baz=40,SNR=11
PASC **Pasadena Art C** 39.85 97 eP P 22 12 25.5 -0.9
comp=Z,649nm,1.3s,mb6.2
L18A **Fontenelle, Gr** 39.89 82 ⇑P P 22 12 26.3 -0.4
baz=40,SNR=45
MWC **Mount Wilson** 39.89 97 eP P 22 12 26.8 +0.1
MWC e pP 22 12 35.7 -1.5
MWC pmax pmax
comp=Z,301nm,1.3s,mb5.9
MWC **Mount Wilson** 39.89 97 eP P 22 12 26.8 0.0
comp=Z,302nm,1.3s,mb5.9
MWC e pP 22 12 35.7 -1.4
GSC **Goldstone** 39.93 95 ⇑P P 22 12 27.1 +0.1
baz=40,SNR=38
GSC **Goldstone** 39.93 95 eP P 22 12 26.6 -0.4
GSC e pP 22 12 37.3 -0.1
GSC e 22 13 58.7
GSC e 22 14 34.4
GSC pmax pmax
comp=Z,212nm,0.9s,mb5.9
GSC **Goldstone** 39.93 95 eP P 22 12 26.6 -0.4
comp=Z,212nm,0.9s,mb5.9
GSC e pP 22 12 37.3 -0.1
GSC ePP PP 22 13 58.7 -0.3
GSC ePcP PcP 22 14 34.4 +2.5
P15A **Leamington** 39.95 86 ⇓P P 22 12 27.2 +0.1
baz=40,SNR=36
N17A **Moffit Pass** 39.99 83 ⇓P P 22 12 27.3 -0.2
baz=40,SNR=21
U11A **Corn Creek** 40.05 92 ⇑P P 22 12 27.8 -0.2
baz=40
K19A **Absolon Red Bu** 40.08 80 ⇓P P 22 12 27.3 -0.9
baz=40,SNR=63
RRX **Edison Barstow** 40.09 95 ⇓P P 22 12 28.6 +0.2
baz=40
FMP **Fort Macarthur** 40.10 98 ⇓P P 22 12 28.6 +0.1
baz=40
BFSC **Mount Baldy St** 40.13 97 ⇓P P 22 12 28.5 -0.2
baz=40,SNR=24
M18A **Lyman** 40.17 82 ⇑P P 22 12 28.7 -0.2
baz=40,SNR=10
L19A **Farson** 40.20 81 ⇓P P 22 12 29.0 -0.1
baz=40,SNR=30
ALE **Alert** 40.22 11 P P 22 12 28.0 -0.9
comp=Z,250nm,1.0s,mb5.9,SNR=17
ALE **Alert** 40.22 11 P P 22 12 28.9 0.0
S13A **Holt Ranch, En** 40.23 90 ⇓P P 22 12 29.3 -0.1
baz=40,SNR=62
Q15A **Fillmore** 40.24 87 ⇑P P 22 12 30.4 +0.9
baz=40,SNR=12
FCC **Fort Churchill** 40.27 51 eP P 22 12 29.3 -0.2
FCC 22 14 33.1
FCC eS S 22 18 35.2 +1.2
FCC pmax pmax
comp=Z,18nm,1.4s,mb4.6
FCC **Fort Churchill** 40.27 51 eP P 22 12 29.3 -0.2
comp=Z,18nm,1.4s,mb4.6
FCC PcP PcP 22 14 33.1 +0.6
FCC eS S 22 18 35.2 +1.2
P16A **Fountain Green** 40.30 86 ⇓P P 22 12 29.9 -0.1
baz=40
TUQ **Turquoise Moun** 40.38 94 ⇑P P 22 12 30.9 +0.2
baz=40,SNR=15
MJAR **Matsushiro Arr** 40.39 268 P P 22 12 30.2 -0.6
comp=Z,46nm,0.9s,mb5.2,baz=42,slow=6.8,SNR=53
MAJO **Matsushiro** 40.39 268⇑eP P 22 12 30.1 -0.7
MAJO e pP 22 12 41.9 +0.7
MAJO e 22 14 13.7
MAJO eS S 22 18 36.9 +0.6
MAJO pmax pmax
comp=Z,273nm,0.9s,mb6.0
MAJO MLR MLR
comp=Z,55µm,20.0s,MS6.4
MAJO **Matsushiro** 40.39 268⇑eP P 22 12 30.1 -0.7
comp=Z,273nm,0.9s,mb6.0
MAJO e pP 22 12 41.9 +0.6
MAJO e 22 14 13.7
MAJO eS S 22 18 36.9 +0.6
MAJO LR LR
comp=Z,55µm,20.0s,MS6.4
MAT **Matsushiro** 40.39 268 P P 22 12 30.2 -0.6
MAT S S 22 18 38.0 +1.7
V11A **Goodsprings** 40.41 93 ⇓P P 22 12 31.2 +0.2
baz=40,SNR=18
SCI **San Clemente I** 40.45 99 ⇑P P 22 12 31.4 0.0
baz=40
K20A **Yellowstone Ra** 40.48 79 ⇑P P 22 12 30.8 -0.7
baz=40,SNR=33
O17A **Robinson Place** 40.50 84 ⇑P P 22 12 31.5 -0.2
baz=40,SNR=54
HEC **Hector,Ludlow** 40.53 95 ⇓P P 22 12 32.0 0.0
baz=40,SNR=8.0
S14A **Cedar City** 40.54 89 ⇑P P 22 12 32.6 +0.6
baz=40,SNR=12
BBRC **Big Bear Sol-O** 40.56 96 ⇓P P 22 12 32.4 +0.2
baz=40
U12A **Valley of Fire** 40.56 92 ⇓P P 22 12 32.6 +0.4
baz=40,SNR=11
T13A **Saint George** 40.57 90 ⇑P P 22 12 32.5 +0.2
baz=40,SNR=33
MVU **Marysvale** 40.65 87 PFAKE 22 12 40.0 +7.0
MVU LR LR
comp=Z,33µm,20.0s,MS6.2
M19A **Rock Springs** 40.67 81 ⇑P P 22 12 32.7 -0.4
baz=40,SNR=14
N18A **Larsen Ranch,** 40.67 82 ⇓P P 22 12 33.1 0.0
baz=40,SNR=45
MDJ **Mudanjiang** 40.70 284 P P 22 12 31.3 -2.0
MDJ AP pP 22 12 40.3 -3.5
MDJ XP sP 22 12 44.0 -4.1
MDJ PP PP 22 14 04.5 -2.8
MDJ AMB AMB
comp=Z,26nm,1.0s,mb4.8
MDJ LR LR
comp=N,27µm,40.2s
MDJ LR LR
comp=E,14µm,34.3s
MDJ LR LR
comp=Z,35µm,24.5s
V12A **Nelson** 40.84 93 ⇑P P 22 12 34.8 +0.3
baz=41,SNR=38
MURC **Murrieta** 40.84 97 ⇑P P 22 12 34.7 +0.1
baz=41
L20A **Wamsutter** 40.87 80 ⇓P P 22 12 34.1 -0.5
baz=41,SNR=27
O18A **Roosevelt** 40.90 84 ⇓P P 22 12 35.2 +0.2
baz=41,SNR=21
U13A **Pakoon Wash** 40.92 91 ⇓P P 22 12 35.1 -0.1
baz=41,SNR=62
P17A **Butcher Ranch,** 40.95 85 ⇑P P 22 12 35.6 +0.2
baz=41,SNR=24
GMRC **Granite Mounta** 40.97 94 ⇑P P 22 12 35.7 +0.1
baz=41,SNR=46
N19A **John Jarvie Ra** 41.02 82 ⇑P P 22 12 35.3 -0.7
baz=41,SNR=38
Q16A **Castle Valley** 41.03 86 ⇓P P 22 12 36.2 +0.1
baz=41,SNR=35
T14A **Hurricane** 41.04 90 ⇓P P 22 12 37.0 +0.8
baz=41,SNR=21
S15A **Panguitch** 41.09 88 ⇓P P 22 12 36.3 -0.2
baz=41,SNR=17
W12A **Cal Nev Ari** 41.11 93 ⇓P P 22 12 36.7 0.0
baz=41
LDFC **Landfair** 41.11 94 eP P 22 12 37.5 +0.7
comp=Z,326nm,1.1s,mb5.9
LDFC ePP PP 22 14 05.4 -6.4
P18A **Preston Nutter** 41.15 84 ⇑P P 22 12 37.2 +0.2
baz=41,SNR=64
R16A **Teasdale** 41.24 87 ⇓P P 22 12 37.8 0.0
baz=41,SNR=59
M20A **Sweetwater, Wa** 41.26 81 ⇓P P 22 12 37.8 -0.1
baz=41,SNR=52
V13A **Grand Canyon W** 41.28 92 ⇑P P 22 12 38.1 -0.1
baz=41,SNR=40
PFO **Pinyon Flat Ob** 41.29 96 P P 22 12 39.5 +1.3
comp=Z,540nm,1.2s,mb6.0,SNR=10
PFO **Pinyon Flat Ob** 41.29 96 P P 22 12 37.5 -0.7
comp=Z,29nm,1.1s,mb4.8,baz=322,slow=6.8,SNR=3.8
PFO LR LR 22 25 55.4
comp=Z,22µm,21.6s,MS6.0,baz=296,slow=31
PFO **Pinyon Flat Ob** 41.29 96 ⇑P P 22 12 38.1 -0.1
baz=41,SNR=10
PFO **Pinyon Flat Ob** 41.29 96 eP P 22 12 38.0 -0.2
PFO e pP 22 12 46.5 -2.2
PFO e 22 14 17.6
PFO pmax pmax
comp=Z,147nm,1.2s,mb5.5
PFO MLR MLR
comp=Z,22µm,21.0s,MS6.0
PFO **Pinyon Flat Ob** 41.29 96 eP P 22 12 38.0 -0.2
comp=Z,147nm,1.2s,mb5.5
PFO e pP 22 12 46.5 -2.2
PFO ePP PP 22 14 17.6 +3.8
PFO eScP ScP 22 18 20.4 -2.7
PFO LR LR
comp=Z,22µm,21.0s,MS6.0
BELC **Belle Mtn.** 41.30 96 ⇑P P 22 12 37.6 -0.7
baz=41,SNR=19
SRU **San Rafael** 41.30 85 ⇑P P 22 12 38.4 +0.1
baz=41,SNR=25
109C **Camp Elliot, M** 41.39 98 ⇑P P 22 12 38.3 -0.8
baz=41
U14A **Mt Trumbull** 41.40 90 ⇑P P 22 12 39.1 0.0
baz=41,SNR=38
O19A **Miners Draw (B** 41.42 83 ⇑P P 22 12 38.4 -0.8
baz=41,SNR=49
L21A **Rawlins** 41.47 80 ⇑P P 22 12 39.0 -0.7
baz=41,SNR=69
T15A **Red Dirt Ranch** 41.50 89 ⇓P P 22 12 40.2 +0.3
baz=41,SNR=26
S16A **Weppner Ranch,** 41.52 88 ⇑P P 22 12 40.2 0.0
baz=41,SNR=61
Q18A **Rafter H Ranch** 41.54 85 ⇑P P 22 12 39.7 -0.5
baz=41,SNR=63
N20A **Spence Gulch,** 41.61 82 ⇓P P 22 12 40.7 -0.1
baz=42,SNR=33
R17A **Hanksville Air** 41.62 86 ⇓P P 22 12 40.7 -0.3
baz=42,SNR=84
IRM **Iron Mountain** 41.70 95 ⇑P P 22 12 41.7 0.0
baz=42,SNR=39
RWWY **Rawlins** 41.73 80 eP P 22 12 41.5 -0.3
comp=Z,532nm,1.6s,mb5.9
RWWY ePcP PcP 22 14 35.1 -2.5
MONP **Monument Peak** 41.80 97 ⇓P P 22 12 42.7 +0.3
baz=42,SNR=9.6
W13A **Hualapai Mount** 41.84 93 ⇓P P 22 12 42.5 -0.2
baz=42,SNR=34
BC3 **Big Chuckw Mtn** 41.86 95 ⇑P P 22 12 42.8 -0.1
baz=42,SNR=10
P19A **Cripple Cowboy** 41.91 84 ⇑P P 22 12 42.8 -0.5
baz=42,SNR=64
U15A **North Rim** 41.94 90 ⇓P P 22 12 43.6 +0.1
baz=42,SNR=79
V14A **Boquillas Ranc** 41.96 91 ⇑P P 22 12 44.4 +0.6
baz=42,SNR=47
O20A **White River Ci** 42.05 82 ⇓P P 22 12 43.9 -0.5
baz=42,SNR=100
T16A **Glen Canyon Da** 42.05 89 ⇑P P 22 12 44.0 -0.4
baz=42,SNR=16
S17A **Black Ridge (B** 42.06 87 ⇓P P 22 12 44.7 +0.1
baz=42,SNR=99
N21A **Black Mountain** 42.11 81 ⇑P P 22 12 44.2 -0.6
baz=42,SNR=62
R18A **Canyonlands Na** 42.14 86 ⇓P P 22 12 44.9 -0.3
baz=42,SNR=47
SWSC **Sam W. Stewart** 42.15 96 ⇓P P 22 12 44.7 -0.6
baz=42,SNR=8.4
Q19A **Hogan Spring (** 42.16 85 ⇑P P 22 12 44.5 -0.8
baz=42,SNR=70
RSSD **Black Hills** 42.20 75 eP P 22 12 44.2 -1.3
RSSD e 22 14 20.4
RSSD e 22 14 40.1
RSSD pmax pmax
comp=Z,146nm,1.4s,mb5.4
RSSD MLR MLR
comp=Z,21µm,20.0s,MS6.0
RSSD **Black Hills** 42.20 75 eP P 22 12 44.1 -1.4
comp=Z,146nm,1.4s,mb5.4
RSSD ePP PP 22 14 20.4 -3.0
RSSD ePcP PcP 22 14 40.1 +1.0
RSSD eScP ScP 22 18 27.5 +1.0
RSSD LR LR
comp=Z,21µm,20.0s,MS6.0
X13A **Yucca** 42.21 93 ⇓P P 22 12 45.6 -0.2
baz=42,SNR=22
W14A **Seligman** 42.25 92 ⇑P P 22 12 46.0 -0.1
baz=42,SNR=28
M22A **Cedar Creek Ra** 42.27 80 ⇑P P 22 12 45.6 -0.5
baz=42,SNR=43
Y12C **Blythe** 42.36 95 ⇑P P 22 12 47.0 0.0
baz=42,SNR=12
BOD **Bodaibo** 42.39 309⇓eP P 22 12 45.3 -1.6
BOD e 22 19 08.9
BOD pmax pmax
comp=Z,123nm,1.5s,mb5.3
V15A **Kaibab Nationa** 42.41 90 ⇑P P 22 12 47.6 +0.2
baz=42,SNR=74
O21A **Pagoda** 42.47 82 ⇑P P 22 12 47.6 -0.2
baz=42,SNR=19
T17A **Navajo Res., N** 42.47 88 ⇑P P 22 12 47.9 0.0
baz=42,SNR=43
S18A **Hurst Farm, BI** 42.52 87 ⇓P P 22 12 48.0 -0.2
baz=42,SNR=59
R19A **Curley Farm, L** 42.58 85 ⇑P P 22 12 48.5 -0.3
baz=42,SNR=10
GLA **Glamis** 42.66 96 ⇓P P 22 12 49.7 +0.3
baz=43,SNR=9.2
GLA **Glamis** 42.66 96 eP P 22 12 48.6 -0.8
GLA e 22 14 29.3
GLA e 22 14 40.6
GLA S S 22 19 08.0 -2.0
GLA pmax pmax
comp=Z,154nm,1.3s,mb5.6
GLA **Glamis** 42.66 96 eP P 22 12 48.5 -0.9
comp=Z,154nm,1.3s,mb5.6
GLA ePP PP 22 14 29.3 +0.8
GLA ePcP PcP 22 14 40.6 -0.3
GLA eScP ScP 22 18 28.5 -0.1
GLA S S 22 19 08.0 -2.0
N22A **Wattenberg Ran** 42.72 80 ⇑P P 22 12 49.8 0.0
baz=43,SNR=42
Y13A **Salome** 42.74 94 ⇑P P 22 12 50.3 +0.2
baz=43,SNR=22
Q20A **Ridgley Place,** 42.75 84 ⇓P P 22 12 49.5 -0.6
baz=43,SNR=36
W15A **Williams** 42.77 91 ⇓P P 22 12 50.2 -0.1
baz=43,SNR=17
U17A **Shonto** 42.82 88 ⇑P P 22 12 50.7 0.0
baz=43,SNR=13
X14A **Yava** 42.87 92 ⇓P P 22 12 51.5 +0.4
baz=43,SNR=53
T18A **Mexican Hat** 42.95 87 ⇓P P 22 12 51.8 0.0
baz=43,SNR=81
S19A **Harvey Farm, M** 43.01 86 ⇑P P 22 12 52.0 -0.1
baz=43,SNR=33
PHWY **Pilot Hill** 43.02 79 eP P 22 12 52.5 +0.3
comp=Z,91nm,1.4s,mb5.3
PHWY e pP 22 13 03.1 +0.4
PHWY ePP PP 22 14 32.5 +0.2
PHWY ePcP PcP 22 14 42.3 +0.4
WUAZ **Wupatki** 43.09 90 ⇑P P 22 12 53.3 +0.3
baz=43
WUAZ **Wupatki** 43.09 90 eP P 22 12 53.5 +0.6
comp=Z,132nm,1.1s,mb5.6
WUAZ eS S 22 19 21.4 +5.0
WUAZ LR LR
comp=Z,29µm,21.0s,MS6.2
Y14A **Wickenburg** 43.16 93 ⇓P P 22 12 53.2 -0.3
baz=43,SNR=14
112A **Yuma** 43.16 96 ⇓P P 22 12 53.7 +0.2
baz=43
X15A **Humboldt** 43.26 92 ⇓P P 22 12 54.6 +0.4
baz=43,SNR=23
Q21A **Lamborn Mesa,** 43.27 83 ⇑P P 22 12 54.4 +0.2
baz=43,SNR=40
W16A **Flagstaff** 43.28 91 ⇓P P 22 12 54.5 +0.1
baz=43,SNR=19
U18A **Rough Rock, Ch** 43.42 88 ⇑P P 22 12 55.7 +0.2
baz=43,SNR=23
ULM **Lac du Bonnet** 43.44 63 P P 22 12 54.5 -1.0
comp=Z,14nm,0.8s,mb4.7,baz=296,slow=8.3,SNR=10
ULM LR LR 22 31 42.6
comp=Z,26µm,19.1s,MS6.2,baz=313,slow=37
ULM **Lac du Bonnet** 43.44 63 eP P 22 12 53.8 -1.7
comp=Z,134nm,1.2s,mb5.5
ULM ePP PP 22 14 49.8 +13
ULM eS S 22 19 29.3 +8.2
ULM LR LR
comp=Z,35µm,22.0s,MS6.2
113A **Mohawk Valley,** 43.50 95 ⇑P P 22 12 56.3 +0.1
baz=43,SNR=14
Y15A **Casa Rosa Ranc** 43.56 92 ⇑P P 22 12 56.5 -0.2
baz=44,SNR=32
R21A **Cimarron** 43.57 84 ⇑P P 22 12 56.2 -0.6
baz=43,SNR=55
Z14A **Wintersburg** 43.59 94 ⇓P P 22 12 57.1 +0.2
baz=44,SNR=9.0
CN2 **Changchun** 43.61 286 ⇑P P 22 12 55.8 -1.2
CN2 eAP pP 22 13 06.5 -1.0
CN2 AMB AMB
comp=Z,90nm,0.7s,mb5.6
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,43µm,20.0s,MS6.5
CN2 LR LR
comp=E,36µm,20.0s,MS6.5
CN2 LR LR
comp=Z,45µm,20.0s,MS6.4
T19A **Beclabito** 43.66 87 ⇑P P 22 12 57.3 -0.2
baz=44,SNR=138
MVCO **Mesa Verde** 43.74 86 ⇑P P 22 12 58.3 +0.2
baz=44
MVCO **Mesa Verde** 43.74 86 eP P 22 12 57.4 -0.8
comp=Z,191nm,1.3s,mb5.7
MVCO e 22 13 13.3
MVCO ePP PP 22 14 37.4 -2.7
MVCO ePcP PcP 22 14 45.3 +0.9
MVCO eS S 22 19 35.6 +10
MVCO LR LR
comp=Z,17µm,20.0s,MS6.0
X16A **Lo Mia Camp, P** 43.79 91 ⇑P P 22 12 59.4 +0.9
baz=44,SNR=28
V18A **Ganado** 43.84 89 ⇓P P 22 12 59.4 +0.4
baz=44,SNR=18
ISCO **Idaho Springs** 43.85 81 eP P 22 12 59.2 +0.3
ISCO e pP 22 13 08.9 -0.6
ISCO 22 14 47.3
ISCO pmax pmax
comp=Z,77nm,1.2s,mb5.3
ISCO MLR MLR
comp=Z,31µm,21.0s,MS6.2
ISCO **Idaho Springs** 43.85 81 eP P 22 12 59.2 +0.3
comp=Z,77nm,1.2s,mb5.3
ISCO e pP 22 13 08.9 -0.6
ISCO PcP PcP 22 14 47.3 +2.6
ISCO eScP ScP 22 18 43.5 +10
ISCO LR LR
comp=Z,31µm,21.0s,MS6.2
Z15A **Gila River Ind** 44.12 93 ⇑P P 22 13 02.1 +1.0
baz=44
Y16A **Circle Bar Ran** 44.13 92 ⇓P P 22 13 02.3 +1.0
baz=44,SNR=22
W18A **Petrified Fore** 44.36 89 ⇓P P 22 13 03.7 +0.6
baz=44,SNR=14
V19A **Window Rock** 44.38 88 ⇑P P 22 13 03.6 +0.3
baz=44,SNR=11
115A **Sonoran Desert** 44.48 94 ⇓P P 22 13 04.4 +0.3
baz=44,SNR=20

AGMN Agassiz Refuge 44.51 65 *e*P **P** **22 13 02.5 -1.7**
comp=Z,30nm,0.5s,mb5.4
AGMN *e* 22 13 17.6
AGMN *e*S **S** **22 19 50.8 +14**
AGMN LR LR
comp=Z,24µm,20.0s,MS6.1
Z16A Peralta Trail, 44.53 92 ⇓P **P** **22 13 04.1 -0.3**
baz=44,SNR=9.0
W19A Sanders 44.58 89 ⇓P **P** **22 13 05.4 +0.6**
baz=44,SNR=31
X18A Snowflake 44.62 90 ⇑P **P** **22 13 05.7 +0.5**
baz=44,SNR=20
214A Organ Pipe Nat 44.64 95 ⇓P **P** **22 13 05.5 +0.1**
baz=45,SNR=34
Y17A Roosevelt 44.64 92 ⇑P **P** **22 13 05.5 +0.1**
baz=44,SNR=20
116A Eloy 44.89 93 ⇑P **P** **22 13 08.0 +0.6**
baz=45,SNR=8.6
X19A St. Johns 45.09 90 ⇑P **P** **22 13 09.2 +0.2**
baz=45,SNR=21
Z17A San Carlos Hig 45.14 92 ⇑P **P** **22 13 09.6 +0.3**
baz=45,SNR=14
SDCO Great Sand Dun 45.21 83 *e*P **P** **22 13 09.2 -0.6**
comp=Z,122nm,1.2s,mb5.6
SDCO *e*PP PP 22 14 57.1 +1.3
SDCO *e*S **S** **22 19 54.0 +6.8**
SDCO LR LR
comp=Z,16µm,20.0s,MS5.9
OGNE Ogallala 45.28 77 *e*P **P** **22 13 11.2 +0.8**
comp=Z,369nm,1.4s,mb6.0
OGNE *e* pP 22 13 21.3 +0.4
OGNE *e*PP PP 22 14 56.8 +0.4
OGNE *e*ScP ScP 22 18 35.3 -3.9
OGNE *e*S **S** **22 19 51.3 +3.2**
OGNE LR LR
comp=Z,14µm,21.0s,MS5.9
216A Three Points, 45.43 94 ⇑P **P** **22 13 12.1 +0.5**
baz=45
117A Oracle 45.48 93 ⇓P **P** **22 13 12.9 +0.9**
baz=45,SNR=29
CIT Chita 45.57 302 *e*P **P** **22 13 14.9 +2.4**
CIT *e* pP 22 13 22.1 -0.9
CIT *e* 22 13 31.8
CIT pmax pmax
comp=Z,421nm,1.7s,mb6.1
TUC Tucson 45.63 93 *e*P **P** **22 13 14.0 +0.8**
TUC *e* 22 14 46.4
TUC *e*S **S** **22 19 54.1 +0.9**
TUC pmax pmax
comp=Z,105nm,1.2s,mb5.6
TUC MLR MLR
comp=Z,10µm,20.0s,MS5.8
TUC Tucson 45.63 93 *e*P **P** **22 13 13.9 +0.7**
comp=Z,121nm,1.2s,mb5.7
TUC *e*PcP PcP 22 14 46.4 -4.6
TUC *e*ScP ScP 22 18 44.2 +3.4
TUC *e*S **S** **22 19 54.0 +0.8**
TUC LR LR
comp=Z,12µm,20.0s,MS5.8
Z19A T-Link Ranch, 45.88 91 ⇑P **P** **22 13 16.1 +0.9**
baz=46
118A Homack Ranch, 45.90 92 ⇓P **P** **22 13 15.9 +0.5**
baz=46,SNR=39
SNY Shenyang 45.90 285 ⇑P **P** **22 13 15.0 -0.2**
SNY PP PP 22 14 58.5 -4.4
SNY AMB AMB
comp=Z,58nm,0.9s,mb5.5
SNY AMB AMB
comp=Z,2µm,3.8s
SNY LR LR
comp=N,36µm,18.2s,MS6.4
SNY LR LR
comp=E,23µm,20.6s,MS6.4
SNY LR LR
comp=Z,40µm,15.0s
217A Green Valley 45.98 93 ⇑P **P** **22 13 16.7 +0.7**
baz=46,SNR=19
KSRS Korea Array 46.06 277 P **P** **22 13 16.8 +0.3**
comp=Z,128nm,0.9s,mb5.9,baz=56,slow=7.4,SNR=129
KSRS LR LR 22 33 31.9
comp=Z,23µm,19.5s,MS6.1,baz=54,slow=37
119A Ashpeak Ranch, 46.22 91 ⇓P **P** **22 13 18.1 +0.3**
baz=46,SNR=27
218A Dragoon 46.31 93 ⇓P **P** **22 13 19.2 +0.6**
baz=46,SNR=25
ANMO Albuquerque 46.47 87 P **P** **22 13 19.2 -0.6**
comp=Z,20nm,1.2s,mb4.9,baz=318,slow=11,SNR=4.1
ANMO LR LR 22 30 37.6
comp=Z,27µm,20.6s,MS6.2,baz=125,slow=33
ANMO Albuquerque 46.47 87 *e*P **P** **22 13 20.6 +0.8**
ANMO *e* 22 14 53.4
ANMO *e* 22 15 10.7
ANMO *e*S **S** **22 20 10.4 +5.2**
ANMO pmax pmax
comp=Z,71nm,1.1s
ANMO MLR MLR
comp=Z,27µm,20.0s
ANMO Albuquerque 46.47 87 *e*P **P** **22 13 20.6 +0.8**
comp=Z,71nm,1.1s,mb5.5
ANMO *e*PcP PcP 22 14 53.4 -0.5
ANMO *e*PP PP 22 15 10.7 +1.6
ANMO *e*ScP ScP 22 18 53.0 +8.8
ANMO *e*S **S** **22 20 10.4 +5.2**
ANMO LR LR
comp=Z,27µm,20.0s,MS6.2
318A Bisbee 46.72 93 ⇓P **P** **22 13 22.4 +0.6**
baz=47,SNR=26
ECSD EROS,Sioux Fal 46.75 71 *e*P **P** **22 13 19.4 -2.5**
comp=Z,128nm,1.1s,mb5.8
ECSD *e*PcP PcP 22 14 54.8 0.0
ECSD S **S** **22 20 26.3 +17**
ECSD LR LR
comp=Z,31µm,20.0s,MS6.3
219A White Tail Can 46.77 92 ⇑P **P** **22 13 22.8 +0.5**
baz=47,SNR=31
Y22D IRIS PASSCAL I 46.78 88 ⇑P **P** **22 13 22.7 +0.5**
baz=47
EYMN Ely 47.11 63 *e*P **P** **22 13 23.2 -1.4**
comp=Z,212nm,1.1s,mb6.0
EYMN *e* 22 13 38.8
EYMN *e*PcP PcP 22 14 56.2 +0.2
EYMN *e*ScP ScP 22 18 33.9 -13
EYMN *e*S **S** **22 20 03.2 -11**
EYMN LR LR
comp=Z,18µm,21.0s,MS6.0
319A Douglas 47.19 93 ⇑P **P** **22 13 26.2 +0.7**
baz=47,SNR=17
CBKS Cedar Bluff 47.99 78⇑ *e*P **P** **22 13 28.6 -3.0**
CBKS *e* 22 15 01.6
CBKS 22 15 25.0
CBKS *e*S **S** **22 20 30.5 +3.6**
CBKS pmax pmax
comp=Z,286nm,1.2s,mb6.2
CBKS MLR MLR
comp=Z,9µm,19.0s,MS5.8
CBKS Cedar Bluff 47.99 78⇑ *e*P **P** **22 13 28.6 -3.0**
comp=Z,286nm,1.2s,mb6.2
CBKS *e*PcP PcP 22 15 01.6 +2.3
CBKS PP PP 22 15 25.0 +1.3
CBKS *e*ScP ScP 22 18 35.5 -15
CBKS *e*S **S** **22 20 30.5 +3.6**
CBKS LR LR
comp=Z,9µm,19.0s,MS5.8
FRB Frobisher Bay 48.40 36 P **P** **22 13 33.5 -0.9**
comp=Z,54nm,0.9s,mb5.6,baz=313,slow=8.5,SNR=63
KBS Kingsbay 48.74 360 *e*pP pP 22 13 47.4 -0.2
KBS *e*S **S** **22 20 38.3 +1.8**
KBS AMS AMS 22 36 49.7
comp=Z,15µm,21.1s,MS6.0
KBS Kingsbay 48.74 360 *e*P **P** **22 13 36.0 -0.9**
KBS 22 14 58.5
KBS *e*S **S** **22 20 45.9 +9.4**
KBS pmax pmax
comp=Z,100nm,1.0s,mb5.8
KBS MLR MLR
comp=Z,18µm,20.0s,MS6.1
KBS Kingsbay 48.74 360 *e*P **P** **22 13 36.0 -0.9**
comp=Z,100nm,1.0s,mb5.8
KBS PcP PcP 22 14 58.5 -2.9
KBS *e*PP PP 22 15 43.8 +14
KBS *e*ScP ScP 22 19 09.2 +16
KBS *e*S **S** **22 20 45.9 +9.4**
KBS LR LR
comp=Z,18µm,20.0s,MS6.1
DL2 Dalian 48.90 283⇑ *i*P **P** **22 13 38.0 -0.6**
DL2 S **S** **22 20 38.3 -1.3**
DL2 AMB AMB
comp=Z,100nm,1.0s,mb5.8
DL2 AMB AMB
comp=Z,740nm,3.7s
DL2 LR LR
comp=N,6µm,22.1s
DL2 LR LR
comp=Z,12µm,21.1s,MS5.8
AMTX Amarillo 49.42 83 P **P** **22 13 42.0 -0.7**
comp=Z,152nm,1.0s,mb6.0
AMTX *e*PcP PcP 22 15 06.1 +1.7
AMTX *e*PP PP 22 15 40.7 +4.0
AMTX *e*ScP ScP 22 18 52.3 -4.4
AMTX *e*S **S** **22 20 42.9 -4.1**
AMTX LR LR
comp=Z,17µm,21.0s,MS6.0
SPB4 Spitsbergen Ar 49.46 359 *e*P **P** **22 13 41.9 -0.5**
SPB4 *e* pP 22 13 51.8 -1.2
SPB4 PcP PcP 22 15 03.8 -0.2
SPB4 *e*ScP ScP 22 18 54.8 -1.4
SPITS Spitsbergen Ar 49.46 359 P **P** **22 13 42.1 -0.3**
comp=Z,31nm,0.7s,mb5.4,baz=42,slow=3.2,SNR=35
DAG Danmarks Havn 49.47 9⇓ *e*P **P** **22 13 41.4 -1.1**
DAG pmax pmax
comp=Z,93nm,0.8s,mb5.9
DAG MLR MLR
comp=Z,38µm,19.0s,MS6.4
DAG Danmarks Havn 49.47 9⇓ *i*P **P** **22 13 41.4 -1.1**
comp=Z,92nm,0.8s,mb5.9
DAG *e* 22 18 40.4
DAG
comp=Z,38µm,19.0s
DAG Danmarks Havn 49.47 9⇓ *e*P **P** **22 13 41.4 -1.1**
comp=Z,92nm,0.8s,mb5.9
DAG *e* 22 18 40.4
DAG LR LR
comp=Z,38µm,19.0s,MS6.4
KSU1 Kansas State U 49.67 76 *e*P **P** **22 13 43.4 -1.1**
comp=Z,128nm,1.1s,mb5.9
KSU1 *e*PcP PcP 22 15 05.0 -0.3
KSU1 *e*ScP ScP 22 19 00.8 +3.1
KSU1 S **S** **22 20 50.2 -0.2**
KSU1 LR LR
comp=Z,18µm,20.0s,MS6.1
SCIA State Center 49.84 71 *e*P **P** **22 13 44.0 -1.8**
comp=Z,251nm,1.3s,mb6.1
SCIA *e*PcP PcP 22 15 01.7 -4.2
SCIA *e*PP PP 22 15 35.7 -4.7
SCIA *e*ScP ScP 22 18 57.9 -0.5
SCIA *e*S **S** **22 20 41.5 -11**
SCIA LR LR
comp=Z,30µm,20.0s,MS6.3
IRK Irkutsk 50.11 307 *e*P **P** **22 13 49.0 +1.4**
IRK *e* 22 14 06.6
IRK pmax pmax
comp=Z,434nm,1.6s,mb6.2
SUMG Summit 50.36 17 *e*P **P** **22 13 49.5 +0.2**
comp=Z,325nm,0.9s,mb6.4
TLY Talaya 50.76 307 P **P** **22 13 52.2 -0.3**
comp=Z,785nm,1.3s,mb6.5,SNR=21
TLY Talaya 50.76 307 ⇓P **P** **22 13 52.9 +0.4**
SNR=33
TLY Talaya 50.76 307 *c i*P **P** **22 13 52.0 -0.5**
TLY pmax pmax
comp=Z,230nm,1.3s,mb6.0
TLY MLR MLR
comp=Z,36µm,19.0s,MS6.4
TLY Talaya 50.76 307⇓ *i*P **P** **22 13 51.9 -0.6**
JFWS Jewell Farm 50.90 68 *e*P **P** **22 13 50.9 -2.8**
JFWS *e* 22 15 12.5
JFWS *e* 22 15 49.5
JFWS *e*S **S** **22 21 05.7 -1.7**
JFWS pmax pmax
comp=Z,61nm,0.6s,mb5.7
JFWS MLR MLR
comp=Z,48µm,19.0s,MS6.5
JFWS Jewell Farm 50.90 68 *e*P **P** **22 13 50.9 -2.8**
comp=Z,61nm,0.6s,mb5.7
JFWS *e*PcP PcP 22 15 12.5 +2.7
JFWS *e*PP PP 22 15 49.5 -0.4
JFWS *e*S **S** **22 21 05.7 -1.7**
JFWS LR LR
comp=Z,48µm,19.0s,MS6.5
XMAS Kiritimati 51.17 166 PFAKE 22 14 10.0 +14
XMAS LR LR
comp=Z,20µm,20.0s,MS6.1
WMOK Wichita Mounta 51.27 81 *e*P **P** **22 13 55.1 -1.5**
WMOK *e* 22 15 12.0
WMOK *e*S **S** **22 21 10.5 -2.3**
WMOK pmax pmax
comp=Z,90nm,0.9s,mb5.7
WMOK MLR MLR
comp=Z,19µm,21.0s,MS6.1
WMOK Wichita Mounta 51.27 81 *e*P **P** **22 13 55.1 -1.5**
comp=Z,90nm,0.9s,mb5.7
WMOK *e*PcP PcP 22 15 12.0 +0.7
WMOK *e*ScP ScP 22 19 05.0 +0.3
WMOK *e*S **S** **22 21 10.5 -2.2**
WMOK LR LR
comp=Z,19µm,21.0s,MS6.1
BJI Beijing 51.36 288 P **P** **22 13 57.0 -0.2**
BJI AMB AMB
comp=Z,123nm,0.9s,mb5.8
BJI AMB AMB
comp=Z,2µm,4.7s
BJI LR LR
comp=N,48µm,19.0s,MS6.7
BJI LR LR
comp=E,37µm,17.7s,MS6.7
BJI LR LR
comp=Z,41µm,19.8s,MS6.5
ULN Ulaanbaatar 51.41 301 P **P** **22 13 57.3 -0.1**
SNR=72
ULN Ulaanbaatar 51.41 301⇓ *i*P **P** **22 13 56.8 -0.7**
ZAK Zakamensk 51.75 305 *e*P **P** **22 13 59.7 -0.3**
ZAK *e* 22 15 16.2
ZAK pmax pmax
comp=Z,108nm,1.5s,mb5.6
SONM Songino Array 51.77 301 P **P** **22 13 59.8 -0.4**
comp=Z,147nm,1.2s,mb5.8,baz=52,slow=7.3,SNR=50
MOY Mondy 52.06 308 *e*P **P** **22 14 02.0 -0.2**
MOY pmax pmax
comp=Z,413nm,1.7s,mb6.1
TXAR Lajitas Array 52.06 90 P **P** **22 14 01.3 -1.3**
comp=Z,32nm,0.7s,mb5.4,baz=302,slow=5.1,SNR=121
TXAR LR LR 22 34 42.9
comp=Z,13µm,18.9s,MS6.0,baz=0.0,slow=34
TXAR PKPPKP 22 44 33.8
comp=Z,1.1nm,1.0s,baz=149,slow=1.9,SNR=4.4
TXAR Lajitas Array 52.06 90 P **P** **22 14 01.3 -1.3**
TXAR LR LR 22 34 42.9
TXAR P'P' 22 44 33.8
GLMI Grayling 52.78 63 P **P** **22 14 02.0 -5.7**
comp=Z,228nm,0.9s,mb6.1
GLMI *e*PcP PcP 22 15 17.4 +0.6
GLMI *e*ScP ScP 22 19 07.7 -3.4
GLMI LR LR
comp=Z,11µm,20.0s,MS5.9
HDIL Hopedale 52.97 70 *e*P **P** **22 14 06.9 -2.3**
comp=Z,414nm,1.1s,mb6.3
HDIL *e*PcP PcP 22 15 18.1 +0.5
HDIL *e*PP PP 22 16 07.9 -0.8
HDIL LR LR
comp=Z,30µm,20.0s,MS6.3
BJO Bjornoya 53.09 358 *e*P **P** **22 14 09.7 +0.1**
BJO *e*S **S** **22 21 44.5 +7.8**
BJO *i* 22 25 47.3
BJO AMS AMS 22 42 04.4
comp=Z,14µm,19.1s,MS6.0
TIA Tai'an 53.36 284 ⇑P **P** **22 14 10.0 -2.1**
TIA AP pP 22 14 22.8 0.0
TIA XP sP 22 14 28.0 +0.9
TIA AMB AMB
comp=Z,90nm,1.0s,mb5.7
TIA AMB AMB
comp=Z,806nm,5.0s
TIA LR LR
comp=N,7µm,20.0s,MS5.9
TIA LR LR
comp=E,7µm,18.0s,MS5.9
TARA Tarawa 53.43 204 *e*P **P** **22 14 16.4 +3.6**
TARA *e*S **S** **22 21 33.0 -10**
TARA LR LR
comp=Z,24µm,20.0s,MS6.2
HHC Hu-ho-hao-te 53.48 292 *e*P **P** **22 14 13.0 +0.1**
HHC AP pP 22 14 23.0 -0.6
HHC XP sP 22 14 28.0 +0.1
HHC PCP PcP 22 15 21.0 +1.5
HHC PP PP 22 16 14.0 +0.7
HHC AMB AMB
comp=Z,41nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,2µm,3.7s
HHC LR LR
comp=N,23µm,15.5s,MS6.6
HHC LR LR
comp=E,36µm,16.6s,MS6.6
HHC LR LR
comp=Z,45µm,16.8s,MS6.6
JCT Junction City 53.60 86 *e*P **P** **22 14 11.7 -2.3**
JCT *e* 22 15 21.6
JCT *e* 22 16 13.8
JCT pmax pmax
comp=Z,483nm,1.5s,mb6.2
JCT MLR MLR
comp=Z,20µm,19.0s,MS6.2
JCT Junction City 53.60 86 *e*P **P** **22 14 11.7 -2.3**
comp=Z,483nm,1.5s,mb6.2
JCT *e*PcP PcP 22 15 21.6 +1.4
JCT *e*PP PP 22 16 13.8 -0.8
JCT *e*ScP ScP 22 19 14.6 -0.3
JCT *e*S **S** **22 21 32.1 -13**
JCT LR LR
comp=Z,20µm,19.0s,MS6.2
SLM Saint Louis 53.71 72 *e*P **P** **22 14 14.3 -0.3**
SLM 22 15 21.4
SLM pmax pmax
comp=Z,285nm,1.2s,mb6.1
SLM Saint Louis 53.71 72 *e*P **P** **22 14 14.3 -0.3**
comp=Z,285nm,1.2s,mb6.1
SLM PcP PcP 22 15 21.4 +1.0
GUMO Guam 53.81 242 *e*P **P** **22 14 12.3 -3.3**
GUMO *e* 22 16 20.1
GUMO pmax pmax
comp=Z,315nm,1.0s,mb6.2
GUMO MLR MLR
comp=Z,12µm,20.0s,MS6.0
GUMO Guam 53.81 242 *e*P **P** **22 14 12.3 -3.3**
comp=Z,315nm,1.0s,mb6.2
GUMO *e*PP PP 22 16 20.1 +3.3
GUMO LR LR
comp=Z,12µm,20.0s,MS6.0
FVM French Village 54.03 73⇑ *e*P **P** **22 14 14.9 -2.1**
FVM *e* 22 15 21.7
FVM *e* 22 16 18.0
FVM pmax pmax
comp=Z,210nm,1.3s,mb5.9
FVM French Village 54.03 73⇑ *e*P **P** **22 14 14.9 -2.1**
comp=Z,210nm,1.3s,mb5.9
FVM *e*PcP PcP 22 15 21.6 0.0
FVM *e*PP PP 22 16 18.0 -0.4
SSE Sheshan 54.46 276 P **P** **22 14 20.0 -0.2**
SSE XP sP 22 14 36.5 +1.3
SSE S **S** **22 21 55.0 -1.3**
SSE XS sS 22 22 15.5 +1.5
SSE AMB AMB
comp=Z,375nm,1.0s,mb6.3
SSE AMB AMB
comp=Z,4µm,9.9s
SSE LR LR
comp=N,10µm,21.0s,MS6.0
SSE LR LR
comp=E,9µm,21.0s,MS6.0
SSE LR LR
comp=Z,21µm,20.0s,MS6.2
BTO Baotou 54.51 292 *i* P **P** **22 14 21.0 +0.5**
BTO S **S** **22 21 54.0 -2.8**
MIAR Mount Ida 54.52 78 *e*P **P** **22 14 19.3 -1.3**
MIAR pmax pmax
comp=Z,308nm,1.3s,mb6.2
MIAR MLR MLR
comp=Z,13µm,19.0s,MS6.0
MIAR Mount Ida 54.52 78 *e*P **P** **22 14 19.3 -1.3**
comp=Z,308nm,1.3s,mb6.2
MIAR LR LR
comp=Z,13µm,19.0s,MS6.0
SCHQ Schefferville 54.80 44 P **P** **22 14 22.1 -0.2**
comp=Z,63nm,1.0s,mb5.6,baz=312,slow=8.3,SNR=20
SCHQ Schefferville 54.80 44 *e*P **P** **22 14 21.7 -0.6**
comp=Z,143nm,1.0s,mb6.0
SCHQ *e* pP 22 14 32.0 -1.1
SCHQ *e*PcP PcP 22 15 22.7 -1.6
SCHQ *e*PP PP 22 16 24.6 -0.2
SCHQ LR LR
comp=Z,35µm,19.0s,MS6.5
OLIL Olney 54.87 70 *e*P **P** **22 14 20.3 -2.8**
comp=Z,362nm,1.3s,mb6.2
OLIL *e*PcP PcP 22 15 25.3 +0.4
SIUC Southern Illin 54.92 72 *e*P **P** **22 14 21.5 -1.9**
comp=Z,84nm,0.8s,mb5.8
SIUC *e* pP 22 14 33.6 -0.7
SIUC *e*PcP PcP 22 15 26.1 +1.1
SIUC *e*PP PP 22 16 25.2 -1.1
AAM Ann Arbor 54.97 64 *e*P **P** **22 14 23.4 -0.4**
AAM *e* pP 22 14 34.6 +0.1
AAM pmax pmax
comp=Z,38nm,0.6s,mb5.6
AAM MLR MLR
comp=Z,19µm,19.0s,MS6.2
AAM Ann Arbor 54.97 64 *e*P **P** **22 14 23.4 -0.4**
comp=Z,38nm,0.6s,mb5.6
AAM *e* pP 22 14 34.6 0.0
AAM *e*S PcS 22 19 37.3 +12
AAM LR LR
comp=Z,19µm,19.0s,MS6.2
UALR University of 55.10 77 *e*P **P** **22 14 25.1 +0.4**
comp=Z,112nm,1.3s,mb5.7
UALR *e*PcP PcP 22 15 25.4 -0.4
UALR *e*PP PP 22 16 28.3 +0.3
NJ2 Nanjing 55.19 279 *e*P **P** **22 14 25.0 -0.5**
NJ2 AP pP 22 14 35.3 -1.0
NJ2 XP sP 22 14 39.3 -1.2
NJ2 PP PP 22 16 30.0 +1.1
NJ2 AMB AMB
comp=Z,70nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,3µm,10.3s
NJ2 LR LR
comp=N,17µm,19.9s,MS6.2
NJ2 LR LR
comp=E,15µm,20.4s,MS6.2
NJ2 LR LR
comp=Z,15µm,20.4s,MS6.1
BLO Bloomington 55.48 69 *e*P **P** **22 14 25.2 -2.3**
BLO *e* 22 15 27.6
BLO pmax pmax
comp=Z,101nm,1.0s,mb5.8
BLO Bloomington 55.48 69 *e*P **P** **22 14 25.2 -2.3**
comp=Z,101nm,1.0s,mb5.8
BLO *e*PcP PcP 22 15 27.6 +0.4
PVMO Portageville 55.53 74 *e*P **P** **22 14 27.8 0.0**
USIN University of 55.65 71 *e*P **P** **22 14 26.4 -2.3**
comp=Z,316nm,1.1s,mb6.3
NATX Nacogdoches 55.81 81 *e*P **P** **22 14 29.6 -0.4**
comp=Z,535nm,1.4s,mb6.4
NATX *e*PP PP 22 16 40.8 +6.3
NATX LR LR
comp=Z,26µm,20.0s,MS6.3
JMIC Jan Mayen 55.87 8 LR LR 22 42 06.4
comp=Z,14µm,18.9s,MS6.1,baz=342,slow=40
WCI Wyandotte Cave 56.25 70 *e*P **P** **22 14 30.4 -2.6**
WCI *e* 22 15 30.3
WCI pmax pmax
comp=Z,59nm,0.8s,mb5.7
WCI MLR MLR
comp=Z,27µm,20.0s,MS6.3
WCI Wyandotte Cave 56.25 70 *e*P **P** **22 14 30.4 -2.6**
comp=Z,59nm,0.8s,mb5.7
WCI *e*PcP PcP 22 15 30.3 +0.1
WCI *e*S **S** **22 22 06.9 -13**
WCI LR LR
comp=Z,27µm,20.0s,MS6.3
HKT Hockley 56.39 83 P **P** **22 14 35.5 +1.4**
HKT pmax pmax
comp=Z,380nm,1.5s,mb6.2
HKT Hockley 56.39 83 *e*P **P** **22 14 33.7 -0.4**
comp=Z,384nm,1.5s,mb6.2
HKT LR LR
comp=Z,22µm,19.0s,MS6.3

ACSO Alum Creek Sta 56.75 66 *e*P **P** **22 14 36.0 -0.5**
comp=Z,134nm,1.3s,mb5.8
ACSO *e* pP 22 14 47.4 +0.1
ACSO *e*PcP PcP 22 15 30.6 -1.5
ACSO LR LR
comp=Z,23µm,19.0s,MS6.3
WVT Waverly 56.81 73 *e*P **P** **22 14 35.3 -1.7**
WVT *e*ScP ScP 22 19 26.0 -2.9
WVT *e*S **S** **22 22 18.8 -8.8**
WVT LR LR
comp=Z,19µm,22.0s,MS6.2
KVTX Kingsville 56.87 87 *e*P **P** **22 14 37.0 -0.5**
comp=Z,138nm,0.9s,mb6.0
KVTX LR LR
comp=Z,20µm,20.0s,MS6.2
OXF Oxford 57.02 75 P **P** **22 14 36.6 -1.9**
OXF pmax pmax
comp=Z,950nm,1.3s,mb6.7
OXF Oxford 57.02 75 *e*P **P** **22 14 36.4 -2.1**
comp=Z,951nm,1.4s,mb6.6
OXF LR LR
comp=Z,14µm,21.0s,MS6.0
ERPA Erie 57.10 62 *e*P **P** **22 14 37.2 -1.7**
comp=Z,383nm,1.5s,mb6.2
ERPA *e* pP 22 14 48.1 -1.7
ERPA LR LR
comp=Z,29µm,21.0s,MS6.3
KEV Kevo 57.46 354 *e*p **P** **22 14 39.6 -1.5**
comp=Z,103nm,0.8s,mb5.9
KEV Kevo 57.46 354 P **P** **22 14 40.5 -0.6**
KEV pmax pmax
comp=Z,140nm,0.9s,mb6.0
ZAIG Zacatecas 57.53 95 *i* P **P** **22 14 42.5 +0.2**
ZAA0 Zalesovo Array 57.72 318 *e*P **P** **22 14 42.5 -0.6**
ZAA0 *e* pP 22 14 53.4 -0.6
ZAA0 *e*PcP PcP 22 15 35.2 -0.4
ZALV Zalesovo Beam 57.72 318 P **P** **22 14 42.6 -0.5**
comp=Z,22nm,0.7s,mb5.3,baz=45,slow=6.9,SNR=35
ZALV LR LR 22 43 20.2
comp=Z,22µm,18.1s,MS6.3,baz=51,slow=40
ZALV PKP2bc 22 44 38.6
comp=Z,0.3nm,0.3s,baz=90,slow=0.4,SNR=3.7
ZALV Zalesovo Beam 57.72 318 P **P** **22 14 42.6 -0.5**
ZALV LR LR 22 43 20.2
ZALV ⇑*e* 22 44 38.6
ARCES ARCESS Array B 57.77 354 P **P** **22 14 42.6 -0.6**
comp=Z,81nm,0.9s,mb5.8,baz=356,slow=6.3,SNR=53
ARCES PcP PcP 22 15 35.5 -0.1
comp=Z,37nm,0.8s,baz=356,slow=5.5,SNR=3.7
ARCES LR LR 22 42 03.9
comp=Z,16µm,19.3s,MS6.2,baz=9.6,slow=39
ARCES ARCESS Array B 57.77 354 P **P** **22 14 42.7 -0.6**
ARCES 22 15 35.5
ARCES ARCESS Array B 57.77 354 P **P** **22 14 42.6 -0.6**
ARCES PcP PcP 22 15 35.5 -0.1
ARCES LR LR 22 42 03.9
ARE0 ARCESS Array S 57.77 354 *e*P **P** **22 14 42.7 -0.6**
ARE0 *e* pP 22 14 53.5 -0.6
ARE0 *e*PcP PcP 22 15 37.0 +1.3
TRO Tromso 57.97 357 *e*P **P** **22 14 43.6 -1.1**
TRO *e*S **S** **22 22 43.6 +1.7**
TRO AMS AMS 22 42 58.0
comp=Z,13µm,22.4s,MS6.0
VBMS Vicksburg 57.97 78 *e*P **P** **22 14 44.8 -0.5**
comp=Z,485nm,1.3s,mb6.4
VBMS *e*PcP PcP 22 15 35.9 -1.2
VBMS LR LR
comp=Z,17µm,19.0s,MS6.2
LONY Lake Ozonia 58.21 57 *e*P **P** **22 14 45.0 -1.7**
comp=Z,89nm,0.9s,mb5.8
LONY LR LR
comp=Z,18µm,19.0s,MS6.2
KTK1 Kautokeino 58.42 355 *e*P **P** **22 14 48.5 +0.7**
KTK1 *e*S **S** **22 22 50.3 +2.6**
KTK1 AMS AMS 22 49 49.2
comp=N,13µm,18.0s
LVZ Lovozero 58.62 350⇓*e*P **P** **22 14 49.0 -0.2**
LVZ MLR MLR
comp=Z,17µm,19.0s,MS6.2
TATO Taipei 58.69 271 *e*P **P** **22 14 49.3 -1.1**
TATO *e*PcP PcP 22 15 40.8 +0.8
TATO *e*PP PP 22 16 59.1 -1.0
TATO LR LR
comp=Z,30µm,20.0s,MS6.4
NCB Newcomb 58.85 57 *e*P **P** **22 14 49.6 -1.6**
comp=Z,400nm,1.5s,mb6.2
NCB *e* pP 22 15 00.9 -1.1
NCB *e*PcP PcP 22 15 40.5 +0.1
NCB *e*PP PP 22 16 58.9 -2.2
NCB LR LR
comp=Z,26µm,19.0s,MS6.4
MCWV Mont Chateau 58.88 64 *e*P **P** **22 14 49.3 -2.2**
comp=Z,281nm,1.3s,mb6.1
MCWV *e* pP 22 15 00.2 -2.1
MCWV LR LR
comp=Z,31µm,20.0s,MS6.4
WHN Wuhan 58.97 281 ⇑P **P** **22 14 51.8 -0.4**
WHN AP pP 22 15 01.0 -2.1
WHN S **S** **22 22 54.8 -1.2**
WHN AMB AMB
comp=Z,110nm,0.7s,mb6.0
WHN AMB AMB
comp=Z,4µm,3.6s
WHN LR LR
comp=N,29µm,17.7s,MS6.5
WHN LR LR
comp=E,15µm,15.6s,MS6.5
WHN LR LR
comp=Z,28µm,17.6s,MS6.4
YHNB Yeheng 58.98 271 PFAKE 22 15 00.0 +7.6
YHNB LR LR
comp=Z,22µm,20.0s,MS6.3
TZTN Tazewell 58.99 69 *e*P **P** **22 14 53.1 +0.8**
comp=Z,55nm,0.6s,mb5.8
APA Apatity 59.06 350⇓*i*P **P** **22 14 54.0 +1.7**
APA *i* 22 15 00.0
APA *e*S **S** **22 22 57.0 +0.9**
APA *i* PS 22 23 10.0
APA *e*SS SS 22 26 48.0 -1.4
APA pmax pmax
comp=Z,230nm,1.4s,mb6.0
BINY Binghamton 59.18 60 *e*P **P** **22 14 52.1 -1.3**
comp=Z,108nm,0.9s,mb5.9
BINY LR LR
comp=Z,24µm,20.0s,MS6.3
NACB Ninganchiao 59.22 270 *e*P **P** **22 14 54.9 +0.9**
comp=Z,156nm,1.0s,mb6.0
NACB *e*PcP PcP 22 15 41.2 -0.9
SSPA Standing Stone 59.26 62 *e*P **P** **22 14 52.5 -1.6**
comp=Z,398nm,1.5s,mb6.2
SSPA *e* pP 22 15 03.9 -1.1
SSPA *e*PcP PcP 22 15 40.6 -1.4
SSPA *e*PP PP 22 17 02.0 -2.8
SSPA LR LR
comp=Z,31µm,21.0s,MS6.4
LRAL Lakeview Retre 59.48 75 *e*P **P** **22 14 54.6 -1.1**
comp=Z,86nm,1.0s,mb5.7
LRAL *e* pP 22 15 04.3 -2.2
LRAL *e*PcP PcP 22 15 41.0 -2.0
LRAL LR LR
comp=Z,14µm,21.0s,MS6.1
TKL Tuckaleechee C 59.49 70 *e*P **P** **22 14 54.6 -1.2**
TKL *e* pP 22 15 06.2 -0.4
TKL *e* 22 15 43.2
TKL *e* 22 17 07.1
XAN Xi'an 59.69 287 P **P** **22 14 56.5 -0.6**
XAN AP pP 22 15 06.3 -1.7
XAN PP PP 22 17 08.5 -0.3
XAN AMB AMB
comp=Z,46nm,0.9s,mb5.5
XAN AMB AMB
comp=Z,1µm,4.9s
XAN LR LR
comp=N,7µm,22.4s,MS6.2
XAN LR LR
comp=E,18µm,20.3s,MS6.2
XAN LR LR
comp=Z,38µm,22.4s,MS6.5
LBNH Lisbon 59.83 56 *e*P **P** **22 14 56.5 -1.4**
LBNH *e* pP 22 15 07.9 -0.9
LBNH *e* 22 15 43.9
LBNH pmax pmax
comp=Z,57nm,1.0s,mb5.6
LBNH MLR MLR
comp=Z,29µm,19.0s,MS6.4
LBNH Lisbon 59.83 56 *e*P **P** **22 14 56.5 -1.4**
comp=Z,57nm,1.0s,mb5.5
LBNH *e* pP 22 15 07.9 -0.9
LBNH *e*PcP PcP 22 15 43.9 -0.3
LBNH LR LR
comp=Z,29µm,19.0s,MS6.4
SSLB Suanglung 59.89 270 *e*P **P** **22 14 57.8 -0.9**
comp=Z,341nm,1.0s,mb6.3
SSLB *e*PcP PcP 22 15 44.2 -0.6
SSLB *e*PP PP 22 17 08.0 -2.8
YULB Yu-li 59.98 270 *e*P **P** **22 14 58.4 -0.8**
comp=Z,533nm,1.4s,mb6.4
YULB *e* pP 22 15 09.6 -0.5
YULB *e*PcP PcP 22 15 43.9 -1.3
BORG Borgarnes 60.23 16 *e*P **P** **22 15 00.4 0.0**
BORG pmax pmax
comp=Z,847nm,2.0s
BORG MLR MLR
comp=Z,26µm,20.0s
BORG Borgarnes 60.23 16 *e*P **P** **22 15 00.4 0.0**
comp=Z,847nm,2.0s,mb6.4
BORG LR LR
comp=Z,26µm,20.0s,MS6.4
BLA Blacksburg 60.29 67 *e*P **P** **22 14 59.4 -1.8**
BLA *e* pP 22 15 10.4 -1.7
BLA pmax pmax
comp=Z,143nm,0.9s,mb6.0
BLA MLR MLR
comp=Z,33µm,19.0s,MS6.5
BLA Blacksburg 60.29 67 *e*P **P** **22 14 59.4 -1.9**
comp=Z,143nm,0.9s,mb6.0
BLA *e* pP 22 15 10.4 -1.7
BLA LR LR
comp=Z,33µm,19.0s,MS6.5
PKME Peaks-Kenny Pk 60.40 53 *e*P **P** **22 15 00.8 -1.0**
comp=Z,61nm,1.0s,mb5.6
PKME *e* pP 22 15 11.7 -1.0
PKME LR LR
comp=Z,21µm,22.0s,MS6.2
TPUB Ta-pu 60.45 270 *e*P **P** **22 15 03.0 +0.5**
comp=Z,128nm,0.9s,mb6.0
QZH Quanzhou 60.48 273⇑*i*P **P** **22 15 03.0 +0.3**
QZH AMB AMB
comp=Z,550nm,1.4s,mb6.4
QZH AMB AMB
comp=Z,5µm,4.0s
QZH LR LR
comp=N,17µm,19.4s,MS6.4
QZH LR LR
comp=E,21µm,19.6s,MS6.4
QZH LR LR
comp=Z,19µm,20.0s,MS6.2
TWG Pinlang 60.54 270 *e*P **P** **22 15 03.1 -0.1**
comp=Z,215nm,1.3s,mb6.1
TWG *e*PcP PcP 22 15 47.8 +0.3
MOIG Morelia 60.71 96 *e*P **P** **22 15 08.3 +4.0**
BRAL Brewton 60.89 76 *e*P **P** **22 15 02.2 -3.2**
comp=Z,504nm,1.2s,mb6.5
BRAL LR LR
comp=Z,14µm,19.0s,MS6.1
GTA Gaotai 60.98 298⇑*i*P **P** **22 15 05.5 -0.4**
GTA AP pP 22 15 15.8 -1.0
GTA XP sP 22 15 20.0 -1.0
GTA PP PP 22 17 24.5 +4.4
GTA AMB AMB
comp=Z,41nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,1µm,4.8s
GTA LR LR
comp=N,31µm,20.5s,MS6.7
GTA LR LR
comp=E,45µm,19.9s,MS6.7
GTA LR LR
comp=Z,43µm,20.5s,MS6.6
LZH Lanzhou 61.14 292 ⇓P **P** **22 15 07.5 +0.5**
LZH AP pP 22 15 17.3 -0.6
LZH XP sP 22 15 21.0 -1.1
LZH PP PP 22 17 23.0 +1.5
LZH AMB AMB
comp=Z,491nm,1.1s,mb6.5
LZH AMB AMB
comp=Z,1µm,4.0s
LZH LR LR
comp=N,51µm,16.7s
LZH LR LR
comp=Z,52µm,17.5s,MS6.7
CBN Corbin 61.27 64 *e*P **P** **22 15 07.4 -0.5**
comp=Z,160nm,1.1s,mb6.1
CBN *e* pP 22 15 17.5 -1.3
CBN LR LR
comp=Z,15µm,21.0s,MS6.1
GOGA Godfrey 61.27 72 *e*P **P** **22 15 05.5 -2.4**
GOGA *e* pP 22 15 15.7 -3.1
GOGA pmax pmax
comp=Z,134nm,1.3s,mb5.9
GOGA MLR MLR
comp=Z,23µm,21.0s,MS6.3
GOGA Godfrey 61.27 72 *e*P **P** **22 15 05.5 -2.4**
comp=Z,134nm,1.3s,mb5.9
GOGA *e* pP 22 15 15.7 -3.1
GOGA LR LR
comp=Z,23µm,21.0s,MS6.3
STOK Stokkvaagen 61.40 359 *e*P **P** **22 15 10.0 +1.7**
STOK AMb AMB 22 15 14.3
comp=Z,252nm,1.7s,mb6.1
MOR8 Moi Rana 61.55 359 *e*P **P** **22 15 07.1 -2.2**
MOR8 AMb AMB 22 15 19.9
comp=Z,98nm,0.7s,mb6.0
FUNA Funafuti 61.82 194 *e*P **P** **22 15 11.9 +0.2**
FUNA LR LR
comp=Z,18µm,20.0s,MS6.2
PTVM Pico Tres Padr 62.03 94 *i* P **P** **22 15 10.7 -2.5**
ZIIG Zihuatanejo 62.12 97 *i* P **P** **22 15 16.6 +2.7**
IIO Organos 62.27 94 *i* P **P** **22 15 12.7 -2.1**
SOKR Solikamsk 62.45 336*c* *i*P **P** **22 15 14.1 -1.3**
SOKR S S 22 24 01.1 +22
SOKR pmax pmax
comp=Z,230nm,1.2s,mb6.2
SOKR MLR MLR
comp=Z,29µm,19.0s,MS6.5
KURK Kurchatov 62.66 319 P **P** **22 15 16.8 -0.2**
comp=Z,589nm,1.5s,mb6.5,SNR=29
KURK Kurchatov 62.66 319 P **P** **22 15 16.8 -0.2**
SNR=33
KURK Kurchatov 62.66 319 P **P** **22 15 16.9 -0.1**
comp=Z,27nm,0.5s,mb5.6,baz=44,slow=8.1,SNR=48
PLIG Platanillo 62.71 95 *e*P **P** **22 15 17.6 -0.2**
PPM Popocatepetl 62.73 94 *e*P **P** **22 15 26.0 +8.1**
CNNC Cliffs of the 63.13 67 *e*P **P** **22 15 18.3 -2.0**
comp=Z,211nm,1.4s,mb6.1
CNNC *e*PcP PcP 22 15 59.3 +1.6
NSS Namsos 63.21 360 *e*P **P** **22 15 21.3 +0.8**
NSS *e*S **S** **22 23 49.8 +0.9**
NSS AMS AMS 22 46 32.3
comp=Z,9µm,17.1s,MS6.0
CAIG El Cayaco 63.28 97 *i* P **P** **22 15 20.3 -1.3**
NHSC New Hope 63.39 70 *e*P **P** **22 15 21.4 -0.7**
comp=Z,193nm,0.8s,mb6.3
NHSC *e*PcP PcP 22 15 58.8 0.0
NHSC PP PP 22 17 40.7 -0.6
NHSC LR LR
comp=Z,38µm,20.0s,MS6.6
LVIG Laguna Verde 63.58 92 *i* P **P** **22 15 17.4 -6.1**
JOF Joensuu 63.81 350 *e*p **P** **22 15 23.2 -1.2**
comp=Z,153nm,1.0s,mb6.0
JOF Joensuu 63.81 350 *e*P **P** **22 15 23.2 -1.2**
JOF pmax pmax
comp=Z,153nm,1.0s,mb6.0
SVE Sverdlovsk 63.81 333⇑*e*P **P** **22 15 25.1 +0.6**
SVE *e* 22 15 38.8
SVE *e* 22 17 50.1
SVE *e*PPP 22 19 20.8
SVE *e*S S 22 24 17.4 +21
SVE *e* 22 25 16.6
SVE pmax pmax
comp=Z,327nm,1.4s,mb6.2
BVA0 Borovoye Array 63.92 325 *i* P **P** **22 15 25.1 -0.2**
BVA0 pmax pmax
comp=Z,41nm,1.0s,mb5.4
BVAR Borovoye Array 63.92 325 P **P** **22 15 25.1 -0.2**
comp=Z,106nm,0.8s,mb5.9,baz=55,slow=6.1,SNR=324
BRVK Borovoye 63.93 325 P **P** **22 15 25.6 +0.3**
SNR=66
BRVK Borovoye 63.93 325⇓*i*P **P** **22 15 24.9 -0.4**
WMQ Urumqi 63.93 309⇑*i*P **P** **22 15 25.5 0.0**
WMQ PCP PcP 22 16 01.3 +0.4
WMQ PP PP 22 17 47.5 +1.6
WMQ S **S** **22 23 57.0 -1.5**
WMQ XS sS 22 24 14.0 -2.5
WMQ SCS ScS 22 25 13.0 -3.1
WMQ SS SS 22 28 06.3 -0.2
WMQ AMB AMB
comp=Z,259nm,1.5s,mb6.0
WMQ AMB AMB
comp=Z,3µm,4.5s
WMQ LR LR
comp=N,69µm,21.0s,MS6.8
WMQ LR LR
comp=E,25µm,20.0s,MS6.8
WMQ LR LR
comp=Z,27µm,19.0s,MS6.5
MK31 Makanchi Array 64.15 314 *e*P **P** **22 15 25.8 -1.1**
MK31 PP PP 22 17 44.0 -3.7
MKAR Makanchi Array 64.15 314 P **P** **22 15 25.6 -1.2**
comp=Z,34nm,0.8s,mb5.4,baz=54,slow=6.7,SNR=84
MKAR PKP2bc 22 44 19.1
comp=Z,1.3nm,0.9s,baz=235,slow=4.3,SNR=5.0
MKAR PKP2ab 22 44 31.3
comp=Z,3.7nm,1.1s,baz=224,slow=3.3,SNR=8.4
MKAR LR LR 22 46 49.4
comp=Z,33µm,18.3s,MS6.5,baz=39,slow=39
MKAR Makanchi Array 64.15 314 P **P** **22 15 25.6 -1.2**
MKAR ⇑*e* 22 44 19.1
MKAR P'P'ab 22 44 31.3
MKAR LR LR 22 46 49.4
ARU Arti 64.73 333⇓*i*P **P** **22 15 29.9 -0.6**
KLMR Klimovskoe 64.74 345 *e*P **P** **22 15 30.3 -0.3**
KLMR *e*S **S** **22 24 09.9 +1.9**
KLMR pmax pmax
comp=Z,223nm,1.4s,mb6.0
CD2 Chengdu 64.95 289 P **P** **22 15 32.8 +0.4**
CD2 AP pP 22 15 44.0 +0.6
CD2 XP sP 22 15 47.3 -0.3
CD2 PP PP 22 17 56.0 +0.8
CD2 AMB AMB
comp=Z,370nm,1.0s,mb6.4
CD2 AMB AMB
comp=Z,5µm,8.9s
CD2 LR LR
comp=N,26µm,21.4s
CD2 LR LR
comp=Z,34µm,20.2s,MS6.5
GZH Guangzhou 65.05 276 P **P** **22 15 29.5 -3.6**
GZH S S 22 24 06.8 -6.0
GZH LR LR
comp=N,10µm,19.8s,MS6.1
GZH LR LR
comp=E,7µm,21.0s,MS6.1
GZH LR LR
comp=Z,20µm,19.0s,MS6.3
KAF Kangasniemi 65.06 353 *e*p **P** **22 15 31.3 -1.3**
comp=Z,234nm,0.9s,mb6.2,baz=5.6,slow=6.1
KAF Kangasniemi 65.06 353 *e*P **P** **22 15 31.3 -1.3**
KAF pmax pmax
comp=Z,234nm,0.9s,mb6.2
PNIG Pinotepa 65.08 96 *e*P **P** **22 15 35.1 +1.7**
HKC Hong Kong Obse 65.13 275⇑*i*P **P** **22 15 32.0 -1.7**
HKC S S 22 24 14.0 +0.1
MOL Molde 65.13 2 *e* **P** **22 15 29.9 -3.1**
OXX Oaxaca 65.40 94 *e*P **P** **22 15 37.0 +1.5**
VHO Vista Hermosa 65.41 94 *i* P **P** **22 15 37.8 +2.3**
DOMB Dombas 65.69 1 *e*P **P** **22 15 35.8 -0.9**
TAOE Nuku Hiva Isla 65.75 149 *e*S S 22 24 16.2 -5.2
comp=Z,126µm,25.1s
TAOE *e*SS SS 22 28 25.7 -11
comp=Z,24µm,24.4s
TAOE *e*LR LR 22 35 08.2
comp=Z,103µm,27.9s,baz=354
AFI Afiamalu 66.30 184 PFAKE 22 15 50.0 +9.0
AFI LR LR
comp=Z,11µm,19.0s,MS6.1
DWPF Disney 66.34 74 *e*P **P** **22 15 40.0 -1.4**
comp=Z,204nm,1.3s,mb6.0
DWPF LR LR
comp=Z,8µm,19.0s,MS6.0
CMIG Matias Romero 66.52 92 *i* P **P** **22 15 42.7 +0.1**
GYA Guiyang 66.55 283⇑*i*P **P** **22 15 43.0 +0.3**
GYA AP pP 22 15 53.3 -0.4
GYA XP sP 22 15 57.0 -0.9
GYA PCP PcP 22 16 13.3 +1.3
GYA PP PP 22 18 11.0 +1.8
GYA AMB AMB
comp=Z,150nm,0.7s,mb6.1
GYA AMB AMB
comp=Z,1µm,4.0s
GYA LR LR
comp=N,13µm,18.5s,MS6.3
GYA LR LR
comp=E,14µm,21.2s,MS6.3
GYA LR LR
comp=Z,15µm,20.6s,MS6.2
NB2 NORSAR Subarra 66.72 0 P **P** **22 15 42.6 -0.7**
comp=Z,102nm,0.9s,mb5.9,baz=0.7,slow=6.5
NOA NORSAR Array B 66.72 0 P **P** **22 15 42.5 -0.8**
comp=Z,80nm,1.0s,mb5.7,baz=360,slow=6.3,SNR=82
NOA LR LR 22 48 57.1
comp=Z,6µm,19.0s,MS5.8,baz=350,slow=40
HUIG Huatulco 66.79 94 *i* P **P** **22 15 44.5 +0.2**
NAO01 NORSAR Array S 66.91 0 *e*P **P** **22 15 43.9 -0.6**
comp=Z,18nm,0.7s,mb5.2
NAO01 *e* pP 22 15 53.7 -1.8
NAO01 *e*PcP PcP 22 16 12.9 0.0
NAO01 PP PP 22 18 13.7 +2.2
NAO01 LR LR
comp=Z,10µm,20.0s,MS6.0
PUL Pulkovo 67.00 350⇓*e*P **P** **22 15 45.8 +0.7**
BER Bergen 67.26 3 *e*P **P** **22 15 52.0 +5.3**
BER *e*S S 22 24 47.5 +9.0
HNR Honiara 67.51 214 *e*P **P** **22 15 50.6 +1.8**
HNR pmax pmax
comp=Z,175nm,1.0s,mb6.0
HNR MLR MLR
comp=Z,10µm,19.0s,MS6.0
HNR Honiara 67.51 214 *e*P **P** **22 15 50.5 +1.7**
comp=Z,175nm,1.0s,mb6.0
HNR LR LR
comp=Z,10µm,19.0s,MS6.0
HFS Hagfors 67.62 359 P **P** **22 15 48.1 -0.9**
comp=Z,92nm,0.5s,mb6.1,baz=41,slow=4.7,SNR=389
ODD1 Odda 67.77 3 *e*P **P** **22 15 49.2 -0.8**
KONO Kongsberg 68.10 1 *e*P **P** **22 15 52.4 +0.3**
KONO *e*S S 22 24 53.0 +4.3
KONO Kongsberg 68.10 1 P **P** **22 15 52.2 +0.2**
KONO pmax pmax
comp=Z,150nm,1.0s,mb6.0
KONO Kongsberg 68.10 1 *e*P **P** **22 15 52.0 0.0**
KONO LR LR
comp=Z,9µm,20.0s,MS6.0
TEIG Tepich 68.16 85 *e*P **P** **22 15 51.0 -1.9**
comp=Z,89nm,0.9s,mb5.8
TEIG LR LR
comp=Z,7µm,20.0s,MS5.9
BLS5 Blasjo 68.26 3 *e*P **P** **22 15 53.5 +0.5**
ORE Reay 68.50 9⇑*e*P **P** **22 15 54.4 -0.2**
VSU Vasula 68.64 352*d* *i*P **P** **22 15 55.3 -0.1**
VSU pmax pmax
comp=Z,161nm,0.9s,mb6.0
VSU Vasula 68.64 352 *i* P **P** **22 15 55.4 0.0**
CCIG Comitan 68.81 91 *i* P **P** **22 15 59.2 +2.1**
MVH1 Achvaich 69.08 9 *e*P **P** **22 15 57.6 -0.5**
AAA Alma-Ata 69.25 315 *i* P **P** **22 15 59.9 +0.4**
AAA *i* S S 22 25 21.0 +18
AAA pmax pmax
comp=Z,3µm,9.6s
AAA MLR MLR
comp=Z,32µm,21.0s,MS6.5
SNART Snartemo 69.37 3 *e*P **P** **22 15 59.9 -0.1**
SOR Soroa 69.40 79 *e*P **P** **22 16 01.1 +0.5**
MCD Coleburn Disti 69.50 9 *e*P **P** **22 16 00.6 -0.2**
MDO Dochfour 69.54 9⇑*e*P **P** **22 16 00.7 -0.3**
PMOR Pomariorio Ree 69.58 159 *e*P **P** **22 16 01.7 0.0**
comp=Z,236nm,1.1s,mb6.0
MME1 Meikle Cairn 69.79 8⇑*e*P **P** **22 16 01.8 -0.8**
VAH Vaihoa 69.87 159 *e*P **P** **22 16 03.4 0.0**
comp=Z,270nm,1.1s,mb6.1
KMI Kunming 69.87 285 P **P** **22 16 04.0 +0.4**
KMI AP pP 22 16 14.5 -0.1
KMI XP sP 22 16 17.8 -1.0
KMI PP PP 22 18 39.5 +1.4
KMI AMB AMB

KMI AMB AMB
comp=Z,174nm,1.6s,mb5.7
KMI LR LR
comp=Z,2μm,4.7s
KMI LR LR
comp=N,11μm,18.4s,MS6.3
KMI LR LR
comp=E,13μm,19.4s,MS6.3
KMI LR LR
comp=Z,14μm,20.5s,MS6.2
MOS Moscow 69.94 345 *e*P **P 22 16 02.1 -1.4**
MOS *e* 22 16 24.7
MOS *e* 22 18 37.7
MOS *e*S S 22 25 11.4 +0.9
MOS pmax pmax
comp=Z,203nm,1.0s,mb6.0
MOS pmax pmax
comp=N,206nm,1.0s
DAV Davao City (W) 70.03 255 P **P 22 16 06.9 +2.2**
SNR=6.2
DAV Davao City (W) 70.03 255⇑ *e*P **P 22 16 01.5 -3.2**
DAV Davao City (W) 70.03 255 *e*P **P 22 16 05.3 +0.7**
DAV *e*PP PP 22 18 36.0 -3.9
DAV LR LR
comp=Z,39μm,21.0s,MS6.6
TKM2 Tokmak 2 70.12 315 P **P 22 16 05.0 +0.2**
TKM2 pmax pmax
comp=Z,340nm,1.5s,mb6.1
TKM2 Tokmak 2 70.12 315 P **P 22 16 05.1 +0.3**
SNR=32
TKM2 Tokmak 2 70.12 315 *e*P **P 22 16 04.9 +0.1**
comp=Z,338nm,1.6s,mb6.0
TKM2 LR LR
comp=Z,29μm,21.0s,MS6.5
AKTK Aktyubinsk 70.16 331 P **P 22 16 04.7 -0.2**
AKTO Aktyubinsk 70.16 331 P **P 22 16 04.7 -0.2**
comp=Z,156nm,0.8s,mb6.0,baz=44,slow=6.2,SNR=182
QIZ Qiongzhong 70.24 276 P **P 22 16 06.5 +0.6**
QIZ AP pP 22 16 17.0 0.0
QIZ XP sP 22 16 20.8 -0.3
QIZ S S 22 25 18.5 +3.4
QIZ XS sS 22 25 31.0 -2.4
QIZ SCS ScS 22 26 01.8 -4.0
QIZ SS SS 22 29 46.0 +0.6
QIZ AMB AMB
comp=Z,98nm,1.5s,mb5.5
QIZ LR LR
comp=E,9μm,20.7s
QIZ LR LR
comp=Z,11μm,21.4s,MS6.1
USP Ospenovka 70.30 316 P **P 22 16 06.2 +0.2**
SNR=53
CHMS Chumysh 70.41 316 P **P 22 16 07.0 +0.3**
SNR=51
AB31 Akbulak array 70.60 329 P **P 22 16 07.1 -0.6**
AB31 pmax pmax
comp=Z,178nm,0.8s,mb6.0
FRU Bishkek 70.61 316 *e*P **P 22 16 09.0 +1.2**
FRU pmax pmax
comp=Z,680nm,1.8s,mb6.3
FRU MLR MLR
comp=Z,26μm,18.0s,MS6.5
KBK Karagaybulak 70.61 316 P **P 22 16 08.3 +0.5**
SNR=53
OBN Obninsk 70.71 345 P **P 22 16 07.0 -1.2**
comp=Z,2μm,0.9s,mb7.0,SNR=13
OBN Obninsk 70.71 345*c i*P **P 22 16 06.9 -1.3**
OBN *i* 22 16 26.7
OBN pmax pmax
comp=Z,78nm,0.9s,mb5.6
EAB Aberfoyle 70.78 9⇑ *e*P **P 22 16 08.2 -0.4**
EBH Black Hill 70.80 9 *e*P **P 22 16 08.2 -0.6**
AAK Ala-Archa 70.82 316 P **P 22 16 09.5 +0.4**
SNR=63
KZA Kyzart 70.95 315 P **P 22 16 10.7 +0.8**
SNR=24
EKS2 Erkin-Say 71.10 316 P **P 22 16 11.4 +0.6**
SNR=11
EKS2 Erkin-Say 71.10 316 *e*P **P 22 16 11.1 +0.3**
comp=Z,98nm,0.9s,mb5.7
EKS2 *e* pP 22 16 21.1 -0.8
EKS2 *e*PP PP 22 18 44.9 -3.2
EKS2 LR LR
comp=Z,23μm,20.0s,MS6.4
PGBU Glenifferbraes 71.13 10 *e*P **P 22 16 10.2 -0.6**
PGBU AMb AMB 22 16 16.8
comp=Z,228nm,1.2s,mb6.0
PGBU AMS AMS 22 53 00.5
comp=Z,10μm,18.8s,MS6.1
UCH Uchtor 71.14 316 *e*P **P 22 16 10.7 -0.4**
comp=Z,57nm,1.3s,mb5.3
UCH *e*PP PP 22 18 48.4 -0.1
UCH LR LR
comp=Z,11μm,20.0s,MS6.1
EAU Auchinoon 71.20 9 *e*P **P 22 16 10.4 -0.7**
EBL Broad Law 71.31 9⇑ *e*P **P 22 16 12.3 +0.5**
ISAL Salakas 71.55 351 *e*P **P 22 16 13.3 0.0**
AML Almayashu 71.57 316 P **P 22 16 14.7 +1.0**
SNR=36
AML Almayashu 71.57 316 *e*P **P 22 16 14.6 +1.0**
comp=Z,106nm,1.0s,mb5.7
AML *e* pP 22 16 24.5 -0.2
AML LR LR
comp=Z,22μm,20.0s,MS6.4
XSO Sourhope Farm 71.66 8⇑ *e*P **P 22 16 13.9 -0.1**
MGV Manicaragua 71.72 77 *e*P **P 22 16 08.2 -6.6**
PPT Papeete 71.72 161 *e*PP PP 22 18 48.1 -6.4
comp=Z,926nm,24.2s
PPT *e*S S 22 25 27.5 -4.4
comp=Z,54μm,25.8s
PPT *e*SS SS 22 30 11.9 +3.2
comp=Z,6μm,28.0s
PPT *e*LQ 22 34 40.3
comp=Z,12μm,23.0s
PPT *e*LR LR 22 37 50.4
comp=Z,47μm,30.5s,baz=352
PPT Papeete 71.72 161 LR LR 22 41 05.0
comp=Z,9μm,20.2s,MS6.0,baz=326,slow=30
PPT Papeete 71.72 161 *e*P **P 22 16 14.9 +0.2**
PPT *e*S S 22 25 27.5 -4.4
PPT *e*SS SS 22 30 11.9 +3.2
PPT pmax pmax
comp=Z,157nm,1.6s
PPT Papeete 71.72 161 *e*P **P 22 16 14.9 +0.2**
comp=Z,157nm,1.6s,mb5.7
PPT *e*PP PP 22 18 48.1 -6.4
PPT *e*S S 22 25 27.5 -4.4
PPT *e*SS SS 22 30 11.9 +3.2
PPT *e*LQ 22 34 40.3
EKA Eskdalemuir Ar 71.73 9 P **P 22 16 14.3 -0.1**
comp=Z,79nm,1.0s,mb5.6,baz=359,slow=4.4,SNR=22
IDID Didziasalis 71.75 351 *e*P **P 22 16 14.3 -0.2**
ESK Eskdalemuir 71.75 9⇑ *e*P **P 22 16 14.1 -0.4**
ESK AMb AMB 22 16 25.1
comp=Z,260nm,1.6s,mb5.9
ESK AMS AMS 22 54 42.8
comp=Z,12μm,18.6s,MS6.2
ESK Eskdalemuir 71.75 9 P **P 22 16 14.2 -0.3**
ESK pmax pmax
comp=Z,210nm,1.1s,mb6.0
ESK Eskdalemuir 71.75 9 *e*P **P 22 16 14.0 -0.5**
comp=Z,207nm,1.1s,mb6.0
ESK *e* pP 22 16 24.8 -0.8
ESK LR LR
comp=Z,12μm,19.0s,MS6.2
IIGN Ignalina 71.76 351 *e*P **P 22 16 14.6 0.0**
TIAR Tiarei 71.76 161 *e*P **P 22 16 15.0 +0.1**
TVO Taravao 72.00 161 *e*P **P 22 16 16.6 +0.3**
GAL1 Galloway 72.04 10 *e*P **P 22 16 15.5 -0.7**
GAL1 AMb AMB 22 16 27.4
comp=Z,294nm,1.2s,mb6.1
GAL1 AMS AMS 22 53 36.6
comp=Z,14μm,18.3s,MS6.3
KK31 Karatay Array 72.08 319 *i*P **P 22 16 15.9 -0.8**
KK31 pmax pmax
comp=Z,122nm,0.8s,mb5.9
KK31 Karatay Array 72.08 319 *i*P **P 22 16 15.0 -1.7**
COP Copenhagen 72.09 360 *i*P **P 22 16 21.5 +5.0**
COP pmax pmax
comp=Z,91nm,1.0s,mb5.7
COP MLR MLR
comp=Z,4μm,18.0s,MS5.8
COP Copenhagen 72.09 360 *i*P **P 22 16 21.5 +5.0**
comp=Z,91nm,1.0s,mb5.7
COP *i*S S 22 25 49.0 +14
COP
comp=Z,4μm,18.0s

MEH Mehetia 72.33 160 *e*P **P 22 16 17.9 -0.4**
comp=Z,922nm,1.2s,mb6.6
MNK Minsk 72.44 350⇑ *e*P **P 22 16 16.0 -2.7**
MNK *e*PPP 22 20 48.0
MNK *e*S S 22 25 34.0 -5.5
MNK *e*PS 22 26 12.0
MNK *e*SS SS 22 30 22.0 +4.9
MNK *e*SSS 22 33 30.0
PMG Port Moresby 72.54 227⇓ *e*P **P 22 16 18.5 -1.2**
PMG pmax pmax
comp=Z,62nm,1.3s
PMG Port Moresby 72.54 227 *e*P **P 22 16 17.9 -1.8**
comp=Z,126nm,0.9s,mb5.8
PMG *e* pP 22 16 30.5 -0.3
PMG LR LR
comp=Z,13μm,22.0s,MS6.2
BSD Bornholm Skovb 72.63 358 *i*P **P 22 16 17.0 -2.8**
BSD pmax pmax
comp=Z,70nm,0.9s,mb5.6
BSD MLR MLR
comp=Z,8μm,17.0s,MS6.0
BSD Bornholm Skovb 72.63 358 *i*P **P 22 16 17.0 -2.8**
comp=Z,70nm,0.9s,mb5.6
BSD *i*S S 22 25 53.0 +11
BSD
comp=Z,7μm,17.0s
BSD Bornholm Skovb 72.63 358 *i*P **P 22 16 17.0 -2.8**
comp=Z,70nm,0.9s,mb5.6
BSD *i*S S 22 25 53.0 +11
KSH Kashi 72.73 313 P **P 22 16 22.3 +1.7**
KSH AP pP 22 16 32.3 +0.6
KSH XP sP 22 16 36.3 +0.4
KSH PCP PcP 22 16 40.5 +2.7
KSH PP PP 22 19 05.3 +3.2
KSH S S 22 25 42.5 -0.8
KSH XS sS 22 25 59.0 -2.6
KSH SKS 22 26 19.3
KSH SCS ScS 22 26 22.5 -2.5
KSH AMB AMB
comp=Z,595nm,1.2s,mb6.4
KSH AMB AMB
comp=Z,4μm,4.2s
KSH LR LR
comp=N,95μm,19.4s,MS7.2
KSH LR LR
comp=E,85μm,17.0s,MS7.2
KSH LR LR
comp=Z,85μm,19.0s,MS7.0
DMUB Kingscourt 72.74 11 *e*P **P 22 16 19.1 -1.4**
WIM Isle of Man 72.75 10 *e*P **P 22 16 19.9 -0.6**
LSA Lhasa 72.97 297 P **P 22 16 23.5 +1.3**
LSA AP pP 22 16 29.8 -3.5
LSA XP sP 22 16 32.8 -4.7
LSA AMB AMB
comp=Z,120nm,1.0s,mb5.8
LSA LR LR
comp=N,9μm,16.8s,MS6.5
LSA LR LR
comp=E,18μm,16.8s,MS6.5
LSA LR LR
comp=Z,25μm,16.8s,MS6.6
RGN Rugen 73.22 359 *e*P **P 22 16 24.5 +1.2**
comp=Z,303nm,1.1s,mb6.1
RGN Rugen 73.22 359 *e*P **P 22 16 24.3 +1.0**
comp=Z,176nm,0.8s,mb6.0
HPK Haverah Park 73.23 8⇑ *e*P **P 22 16 23.2 -0.1**
HPK AMb AMB 22 16 34.9
comp=Z,587nm,1.6s,mb6.3
HPK AMS AMS 22 56 54.2
comp=Z,9μm,17.8s,MS6.1
SUW Suwalki 73.34 353 *e*P **P 22 16 23.4 -0.6**
SUW Suwalki 73.34 353 *e*P **P 22 16 23.4 -0.6**
DLF Lyons Farm 73.38 11 *e*P **P 22 16 19.3 -4.9**
DSB Dublin 73.45 11 *e*P **P 22 16 24.6 -0.1**
comp=Z,112nm,1.2s,mb5.7
DSB *e*PP PP 22 19 08.0 +0.2
TGUH Tegucigalpa,Un 73.50 88 *e*P **P 22 16 26.2 +0.8**
comp=Z,545nm,1.5s,mb6.3
TGUH PP PP 22 19 08.4 -1.0
TGUH LR LR
comp=Z,11μm,22.0s,MS6.1
VOR Voronezh 73.51 343 *e*P **P 22 16 24.0 -1.1**
VOR pmax pmax
comp=Z,300nm,1.8s,mb5.9
WME Myndd Eilian 73.53 10⇑ *e*P **P 22 16 23.6 -1.5**
LHO Holmfirth 73.62 8⇑ *e*P **P 22 16 24.8 -0.9**
WLF1 Llynfaes 73.63 10 *e*P **P 22 16 24.9 -0.8**
WLF1 AMb AMB 22 16 34.0
comp=Z,236nm,1.4s,mb5.9
VRHR Novokhopersk 73.66 341 *e*P **P 22 16 25.1 -0.8**
VRHR *e*S S 22 25 48.9 -4.5
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.5
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR smax
comp=E,2μm,19.7s
VRHR smax
comp=Z,1μm,18.9s
VRHR smax
comp=N,2μm,18.3s
WPM1 Penmaenmawr 73.71 10⇑ *e*P **P 22 16 24.9 -1.2**
CCCC Cccc 73.74 76 *e*P **P 22 16 28.1 +1.3**
YLL Llanberis 73.80 10 *e*P **P 22 16 26.1 -0.6**
BSEG Bad Segeberg 73.83 1 *e*P **P 22 16 27.2 +0.3**
BSEG pmax pmax
comp=Z,114nm,1.0s,mb5.8
BSEG Bad Segeberg 73.83 1 *e*P **P 22 16 27.2 +0.3**
comp=Z,114nm,1.0s,mb5.8
BSEG *e*S S 22 26 08.7 +13
RAR Rarotonga 73.86 172 PFAKE 22 16 40.0 +13
RAR LR LR
comp=Z,10μm,19.0s,MS6.1
YRE Yr Eifl 73.93 10 *e*P **P 22 16 26.9 -0.6**
KBI1 Birley Grange 73.94 8⇑ *e*P **P 22 16 27.3 -0.2**
VSR Storozhevoye 74.01 342 *e*P **P 22 16 27.2 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR MLR MLR
comp=Z,6μm,20.0s,MS5.9
VSR MLR MLR
comp=N,9μm,18.0s,MS6.2
VSR MLR MLR
comp=E,6μm,17.0s,MS6.2
STNC Stoke 74.04 9 *e*P **P 22 16 27.9 -0.2**
STNC AMb AMB 22 16 39.8
comp=Z,589nm,1.1s,mb6.4
SBD1 Bryn Du 74.12 9⇑ *e*P **P 22 16 28.6 0.0**
KWE Weaver Farm 74.15 8⇑ *e*P **P 22 16 28.5 -0.3**
VORD Divnogorie 74.23 342 *e*P **P 22 16 28.0 -1.2**
VORD *e*S S 22 26 06.1 +6.2
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.2
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,30nm,1.4s
VORD MLR MLR
comp=N,22μm,19.0s,MS6.5
VORD MLR MLR
comp=Z,17μm,19.0s,MS6.3
VORD MLR MLR
comp=E,7μm,18.0s,MS6.5
GKP Gorka Klasztor 74.41 357 *e*P **P 22 16 30.1 -0.1**
GKP *e*S S 22 26 15.7 +14
GKP Gorka Klasztor 74.41 357 *e*P **P 22 16 30.1 -0.2**
GKP *e*S S 22 26 15.7 +14
CWF Charnwood Fore 74.47 8⇑ *e*P **P 22 16 30.3 -0.3**
CWF AMb AMB 22 16 39.2
comp=Z,263nm,1.5s,mb6.0
CWF AMS AMS 22 55 18.7
comp=Z,9μm,20.0s,MS6.1
AEU East Anglia Un 74.79 7 *e*P **P 22 16 32.2 -0.2**
WIT Witteveen 74.88 3 *e*P **P 22 16 36.2 +3.2**
comp=Z,694nm,2.0s,mb6.2
HTR Trewern Hill 74.94 10⇑ *e*P **P 22 16 32.8 -0.5**
MCH1 Michaelchurch 75.05 9⇑ *e*P **P 22 16 33.2 -0.7**
MCH1 AMb AMB 22 16 44.6
comp=Z,482nm,1.5s,mb6.2

MCH1 AMS AMS 22 55 15.8
comp=Z,8μm,19.0s,MS6.0
IMP Imphal 75.23 291 *e*P **P 22 16 35.0 -0.5**
IMP *ex* x 22 21 34.0
WAR Warsaw 75.25 354 *e*P **P 22 16 36.3 +1.2**
WAR *e*S S 22 26 08.2 -3.0
WAR Warsaw 75.25 354 *e*P **P 22 16 36.3 +1.2**
WAR *e*S S 22 26 08.2 -3.0
NRDL Niedersach Rie 75.28 1 *e*P **P 22 16 35.1 -0.2**
comp=Z,99nm,1.1s,mb5.7
NRDL *e*S S 22 26 18.6 +7.1
RUE Ruedersdorf 75.29 359 *e*P **P 22 16 35.5 +0.2**
comp=Z,281nm,1.2s,mb6.1
RUE Ruedersdorf 75.29 359 *e*P **P 22 16 34.5 -0.8**
comp=Z,204nm,1.1s,mb6.0
KDM Kudat 75.38 262⇑ P **P 22 16 38.7 +2.2**
IBBN Ibbenburen 75.42 3 *e*P **P 22 16 36.3 +0.2**
comp=Z,196nm,1.2s,mb5.9
IBBN *e*S S 22 26 24.0 +11
HGH Gray Hill 75.42 9⇑ *e*P **P 22 16 36.0 -0.1**
SKP1 Kophill 75.52 8⇑ *e*P **P 22 16 37.0 +0.3**
SWN1 Swindon 75.64 9 *e*P **P 22 16 36.8 -0.6**
SWN1 AMb AMB 22 16 48.3
comp=Z,682nm,1.4s,mb6.4
SWN1 AMS AMS 22 56 49.8
comp=Z,8μm,19.0s,MS6.1
WTSB Winterswijk 75.73 3 *e*P **P 22 16 37.7 -0.2**
comp=Z,176nm,1.7s,mb5.7
MYLDM Lahad Datu 75.75 260⇓ P **P 22 16 39.5 +0.9**
SHL Shillong 75.78 293⇑ *i*P **P 22 16 38.0 -0.6**
SHL *e*S S 22 26 22.0 +4.1
HTL Hartland 75.88 10 P **P 22 16 38.2 -0.6**
HTL AMb AMB 22 16 49.5
comp=Z,302nm,1.4s,mb6.0
HTL AMS AMS 22 55 20.7
comp=Z,10μm,18.3s
HTL Hartland 75.88 10⇑ *e*P **P 22 16 38.2 -0.6**
HTL AMb AMB 22 16 49.5
comp=Z,302nm,1.4s,mb6.0
HTL AMS AMS 22 55 20.7
comp=Z,10μm,18.3s,MS6.2
HEX Exmoor 75.88 10⇑ *e*P **P 22 16 38.5 -0.3**
RCC Rio Carpintero 75.89 76 *e*P **P 22 16 26.4 -13**
WOL Wolverton 75.89 8⇑ *e*P **P 22 16 38.4 -0.4**
WOL AMb AMB 22 16 49.6
comp=Z,881nm,1.5s,mb6.5
CLZ Clausthal 75.93 1 *e*P **P 22 16 39.4 +0.4**
CLZ pmax pmax
comp=Z,214nm,1.2s,mb6.0
CLZ Clausthal 75.93 1 *e*P **P 22 16 39.4 +0.4**
comp=Z,214nm,1.2s,mb6.0
CLZ *e*S S 22 26 31.9 +13
AKASG Malin Array Be 76.03 349 P **P 22 16 38.5 -1.1**
comp=Z,45nm,0.6s,mb5.5,baz=12,slow=5.8,SNR=71
AKASG LR LR 22 58 23.2
comp=Z,22μm,18.3s,MS6.5,baz=15,slow=42
AKASG Malin Array Be 76.03 349 P **P 22 16 38.5 -1.1**
AKASG LR LR 22 58 23.2
AKBB Malin Array Si 76.03 349 *e*P **P 22 16 38.4 -1.2**
AKBB *e* pP 22 16 49.5 -1.3
KIEV Kiev 76.04 349 *e*P **P 22 16 38.5 -1.2**
comp=Z,132nm,0.8s,mb5.9
KIEV *e* pP 22 16 49.7 -1.1
KIEV LR LR
comp=Z,19μm,19.0s,MS6.4
UBT Ubonrachathani 76.08 277⇑ P **P 22 16 40.5 +0.1**
MTDJ Mount Denham 76.17 78 *e*P **P 22 16 40.8 -0.1**
comp=Z,194nm,1.3s,mb5.9
MTDJ *e*PP PP 22 19 28.5 -3.4
SDKM Sandakan 76.17 261⇑ P **P 22 16 42.6 +1.7**
GTBY Guantanamo Bay 76.29 75 *e*P **P 22 16 43.9 +2.3**
comp=Z,265nm,1.2s,mb6.0
GTBY *e* pP 22 16 51.9 -0.8
GTBY *e*PP PP 22 19 33.1 +0.2
KKM Kota Kinabalu 76.44 262 *e*P **P 22 16 42.2 -0.3**
comp=Z,229nm,1.3s,mb6.0
KKM LR LR
comp=Z,3μm,22.0s,MS5.6
KKM Kota Kinabalu 76.44 262⇑ P **P 22 16 46.3 +3.8**
CLL Collm 76.47 359⇑ *i*P **P 22 16 41.8 -0.3**
CLL *i* 22 16 47.2
CLL *e*S S 22 26 30.0 +5.3
CLL pmax pmax
comp=Z,59nm,1.1s,mb5.4
CLL MLR MLR
comp=Z,12μm,17.4s,MS6.3
CLL Collm 76.47 359 *e*P **P 22 16 41.7 -0.4**
comp=Z,151nm,1.4s,mb5.7
CLL *e*S S 22 26 39.1 +14
CLL Collm 76.47 359⇑ *i*P **P 22 16 41.8 -0.3**
comp=Z,59nm,1.1s,mb5.4
CLL *i* x x 22 16 47.2
comp=Z,150nm,1.4s
CLL *i* PcP PcP 22 16 53.4 -0.3
CLL *e*PP PP 22 19 44.0 +11
CLL *e*PPP 22 21 31.0
CLL *e*S S 22 26 30.0 +5.3
comp=N,2μm,19.1s
CLL *e*S S 22 26 30.0 +5.3
comp=E,3μm,23.2s
CLL *e*PPS 22 27 17.0
CLL *e*SS SS 22 31 35.0 +17
CLL *ex* x 22 35 24.0
CLL *ex* x 22 36 12.0
CLL LmH 22 57 00.0
comp=N,7μm,21.6s
CLL LmH 22 57 00.0
comp=E,10μm,19.6s
CLL Collm 76.47 359⇑ *i*P **P 22 16 41.8 -0.3**
comp=E,59nm,1.1s,mb5.4
CLL *i* 22 16 47.2
CLL *e*S S 22 26 30.0 +5.3
CLL *e*P'P' 22 44 03.0
CLL LR LR
comp=Z,12μm,17.4s,MS6.3
DYA Yadsworthy 76.49 10⇑ *e*P **P 22 16 41.7 -0.5**
DYA AMb AMB 22 16 53.5
comp=Z,380nm,1.2s,mb6.2
DYA AMS AMS 22 55 40.4
comp=Z,10μm,18.2s,MS6.2
KKTK Khon Kaen 76.56 279 P **P 22 16 43.0 -0.1**
comp=Z,2μm,0.7s,mb7.0
MASC Masc 76.61 74 *e*P **P 22 16 44.4 +1.0**
TAPN Taplejung 76.68 298 *e*P **P 22 16 43.9 +0.2**
comp=Z,112nm,0.6s,mb6.0
UCC Uccle 76.80 5 P **P 22 16 44.1 +0.1**
comp=Z,199nm,2.3s,mb5.6
TSM Tawau 76.83 260⇑ P **P 22 16 46.6 +1.9**
FBE Freiberg 76.85 359 *e*P **P 22 16 44.4 +0.1**
comp=Z,808nm,2.0s,mb6.3
BEBN Eben Emael 76.86 4 P **P 22 16 45.0 +0.7**
comp=Z,60nm,1.4s,mb5.3
KSP Ksiaz 76.87 357 *e*P **P 22 16 44.6 +0.3**
KSP Ksiaz 76.87 357⇑ *e*P **P 22 16 44.2 -0.2**
KSP *e*S S 22 26 40.0 +11
KSP *e*SS SS 22 31 18.0 -6.3
KSP LR LR
comp=Z,20μm,18.5s,MS6.5
BRG Berggiesshubel 76.89 359⇑ *i*P **P 22 16 44.6 +0.1**
BRG *i* 22 16 49.9
BRG 22 19 43.0
BRG S S 22 26 42.0 +13
BRG pmax pmax
comp=Z,17nm,1.0s,mb4.9
BRG MLR MLR
comp=N,4μm,18.0s,MS5.9
BRG MLR MLR
comp=E,3μm,19.4s,MS5.9
BRG MLR MLR
comp=Z,6μm,17.5s,MS6.0
BRG Berggiesshubel 76.89 359 *e*P **P 22 16 44.4 -0.1**
comp=Z,198nm,1.4s,mb5.8
BRG *e*S S 22 26 41.2 +12
BRG Berggiesshubel 76.89 359⇑ *i*P **P 22 16 44.6 +0.1**
comp=Z,17nm,1.0s,mb4.9
BRG *i* 22 16 49.9
BRG PP PP 22 19 43.0 +6.1
BRG S S 22 26 42.0 +13
BRG SS SS 22 31 37.0 +12
BRG *e* 22 39 06.4
BRG *e*P'P' 22 44 00.8
BRG LR LR
comp=Z,6μm,17.5s,MS6.0
HGN Heimansgroeve 76.90 4 *e*P **P 22 16 44.1 -0.5**
comp=Z,249nm,1.8s,mb5.8

MENF Mencas 76.91 6 *eP* **P 22 16 45.5 +0.9**
CHG Chiang Mai 76.96 284 ⇓*P* **P 22 16 44.8 -0.6**
comp=Z,145nm,1.0s,mb5.9
CHTO Chiang Mai 76.96 284 P **P 22 16 45.3 -0.1**
SNR=85
CHTO Chiang Mai 76.96 284 *eP* **P 22 16 44.7 -0.7**
CHTO *e* 22 19 42.3
CHTO *eS* S 22 26 36.7 +5.8
CHTO pmax pmax
comp=Z,218nm,1.4s,mb5.9
CHTO MLR MLR
comp=Z,13µm,20.0s,MS6.2
CHTO Chiang Mai 76.96 284 *eP* **P 22 16 44.7 -0.6**
comp=Z,218nm,1.4s,mb5.9
CHTO *ePP* PP 22 19 42.2 +3.7
CHTO *eS* S 22 26 36.7 +5.8
CHTO LR LR
comp=Z,13µm,20.0s,MS6.2
MEM Membach 77.06 4 P **P 22 16 45.4 0.0**
comp=Z,104nm,1.5s,mb5.5
SNF Seneffe 77.08 5 P **P 22 16 45.4 -0.2**
comp=Z,124nm,2.4s,mb5.4
MOX Moxa 77.14 0 *eP* **P 22 16 45.9 0.0**
comp=Z,418nm,1.9s,mb6.0
MOX
comp=Z,8µm,18.0s
MOX Moxa 77.14 0 *eP* **P 22 16 45.9 0.0**
MOX pmax pmax
comp=Z,418nm,1.9s,mb6.0
MOX MLR MLR
comp=Z,8µm,18.0s,MS6.1
MOX Moxa 77.14 0 *eP* **P 22 16 46.0 +0.1**
comp=Z,228nm,1.4s,mb5.9
MOX *eS* S 22 26 44.1 +12
UPC Upice 77.21 357⇑ *eP* **P 22 16 46.4 +0.1**
GUN Gumba 77.22 299 *eP* **P 22 16 47.0 +0.3**
comp=Z,533nm,0.8s,mb6.5
BCLA Clavier 77.22 4 P **P 22 16 46.1 -0.2**
comp=Z,91nm,1.5s,mb5.5
PVCC Panska Ves 77.23 358⇑ *iP* **P 22 16 46.5 +0.1**
PVCC *eS* S 22 26 44.2 +11
PVCC AMS AMS 22 57 00.0
comp=Z,9µm,19.6s
CM31 Chiang Mai Arr 77.23 284 PFAKE 22 17 00.0 +13
CM31 LR LR
comp=Z,17µm,20.0s,MS6.4
CMAR Chiang Mai Arr 77.23 284 P **P 22 16 46.9 -0.1**
comp=Z,98nm,1.0s,mb5.7,baz=25,slow=6.2,SNR=174
CMAR LR LR 22 54 07.2
comp=Z,19µm,19.7s,MS6.4,baz=48,slow=38
ODAN Odare 77.24 297 *eP* **P 22 16 46.7 -0.2**
comp=Z,534nm,1.3s,mb6.3
JIRN Jiri 77.25 299 *eP* **P 22 16 47.4 +0.5**
comp=Z,979nm,1.2s,mb6.6
WERD Werda 77.33 360 *eP* **P 22 16 47.3 +0.3**
comp=Z,518nm,2.3s,mb6.0
OJC Ojcow 77.34 355 *eP* **P 22 16 47.1 +0.1**
OJC L 23 01 26.2
comp=Z,15nm,17.2s
DPC Dobruska-Polom 77.36 357⇑ *iP* **P 22 16 47.5 +0.4**
DPC *eS* S 22 26 41.0 +6.6
DPC *eSS* SS 22 31 39.9 +8.2
DPC AMS AMS 23 01 10.0
comp=Z,10µm,17.3s
TANN Tannenbergstha 77.37 360 *eP* **P 22 16 47.3 +0.1**
comp=Z,489nm,2.1s,mb6.1
TANN *eS* S 22 26 46.6 +12
TBI Tubuai 77.38 162 *ePP* PP 22 19 27.4 -15
comp=Z,1µm,26.8s
TBI *eS* S 22 26 30.3 -4.6
comp=Z,23µm,28.8s
TBI *eSS* SS 22 31 25.6 -9.1
comp=Z,5µm,26.2s
TBI *eLQ* 22 36 47.1
comp=Z,8µm,26.2s
TBI *eLR* LR 22 39 58.0
comp=Z,26µm,34.0s,baz=347
GRTK Grand Turk 77.38 71 P **P 22 16 47.7 0.0**
GUNZ Gunzen 77.42 360 *eP* **P 22 16 47.8 +0.3**
comp=Z,772nm,2.3s,mb6.2
LVV L'vov 77.44 352 *eP* **P 22 16 49.7 +2.1**
LVV *e* 22 16 57.2
LVV *eS* S 22 26 37.7 +2.4
LVV *ePS* 22 27 19.0
LVV MLR MLR
comp=Z,102µm,21.7s,MS7.1
LVV MLR MLR
comp=N,7µm,21.0s,MS6.1
LVV MLR MLR
comp=E,7µm,20.4s,MS6.1
WERN Wernitzgruen 77.50 360 *eP* **P 22 16 48.4 +0.5**
comp=Z,935nm,2.5s,mb6.3
DOU Dourbes 77.51 5 P **P 22 16 48.0 +0.1**
comp=Z,64nm,1.6s,mb5.3
GIVF Givet 77.51 5 *eP* **P 22 16 47.9 -0.1**
comp=Z,263nm,1.0s,mb5.8
GIVF Givet 77.51 5 *eP* **P 22 16 47.9 -0.1**
GIVF pmax pmax
comp=Z,132nm,1.0s,mb5.8
GIVF Givet 77.51 5 *eP* **P 22 16 47.9 -0.1**
comp=Z,132nm,1.0s,mb5.8
TNS Taunus Mts 77.52 2 *eP* **P 22 16 48.1 +0.1**
TNS pmax pmax
comp=Z,166nm,1.3s,mb5.8
TNS Taunus Mts 77.52 2 *eP* **P 22 16 48.1 +0.1**
comp=Z,166nm,1.3s,mb5.8
BAIF Baives 77.53 5 *eP* **P 22 16 48.1 0.0**
comp=Z,344nm,1.3s,mb5.8
BAIF Baives 77.53 5 *eP* **P 22 16 48.1 0.0**
BAIF pmax pmax
comp=Z,172nm,1.3s,mb5.8
BAIF Baives 77.53 5 *eP* **P 22 16 48.1 0.0**
comp=Z,172nm,1.3s,mb5.8
NKC Novy Kostel 77.55 360⇑ *iP* **P 22 16 48.4 +0.2**
NKC *eS* S 22 26 47.5 +11
NKC AMS AMS 23 03 00.0
comp=Z,10µm,15.9s
NKC Novy Kostel 77.55 360⇑ *iP* **P 22 16 48.4 +0.2**
NKC *eS* S 22 26 47.5 +11
RAC Raciborz 77.56 356 *eP* **P 22 16 48.8 +0.6**
RAC *eS* S 22 26 37.3 +0.8
RAC MLR MLR
comp=Z,15µm,18.0s,MS6.4
RAMN Ramite 77.59 298 *eP* **P 22 16 48.8 0.0**
comp=Z,421nm,0.8s,mb6.4
KKN Kakani 77.63 300 *eP* **P 22 16 49.0 0.0**
comp=Z,343nm,1.0s,mb6.2
KWP Kalwaria 77.73 353 *eP* **P 22 16 49.6 +0.4**
KWP Kalwaria 77.73 353 ⇓*iP* **P 22 16 49.8 +0.6**
KWP Kalwaria 77.73 353 *eP* **P 22 16 49.6 +0.4**
PKI Pulchoki 77.74 299 *eP* **P 22 16 49.6 0.0**
comp=Z,1µm,1.5s,mb6.6
PRU Pruhonice 77.77 358⇑ *iP* **P 22 16 49.6 +0.2**
PRU *eS* S 22 26 50.3 +11
PRU MLR MLR
comp=Z,11µm,18.3s,MS6.2
PRU Pruhonice 77.77 358⇑ *iP* **P 22 16 49.6 +0.2**
PRU *eS* S 22 26 50.3 +11
PRU *ex* x 22 32 08.5
PRU AMS AMS 22 57 30.0
comp=Z,11µm,18.3s
MANZ Manzenberg 77.80 360 *eP* **P 22 16 49.8 +0.2**
comp=Z,415nm,2.2s,mb6.0
MANZ *eS* S 22 26 51.2 +12
GKN Gorkha 77.80 300 *eP* **P 22 16 49.8 -0.2**
comp=Z,444nm,1.0s,mb6.4
OKC Ostrava-Krasne 77.80 356⇑ *iP* **P 22 16 49.7 +0.1**
OKC *eS* S 22 26 51.7 +12
OKC AMS AMS 23 01 00.0
comp=Z,13µm,16.7s
OKC Ostrava-Krasne 77.80 356⇑ *iP* **P 22 16 49.7 +0.1**
OKC *eS* S 22 26 51.7 +12
ABH Alteburg 77.84 3 *eP* **P 22 16 49.9 +0.1**
DMN Daman 77.87 300 *eP* **P 22 16 50.5 +0.1**
comp=Z,1µm,1.6s,mb6.6
MORC Moravsky Berou 77.89 356 *eP* **P 22 16 50.2 +0.1**
JSA Saint Aubin 77.91 9 *eP* **P 22 16 50.4 +0.1**
JSA AMb AMB 22 16 56.2
comp=Z,241nm,1.4s,mb5.9
JQE Queens East 77.91 9⇑ *eP* **P 22 16 49.7 -0.5**
JRS Jersey 77.91 9 *eP* **P 22 16 50.8 +0.5**
DANN Dangsing 77.98 301 *eP* **P 22 16 51.3 +0.3**
comp=Z,509nm,0.6s,mb6.7
RUP Ruppelstein 78.00 3 *eP* **P 22 16 50.8 +0.1**
WLF Walferdange 78.01 4 P **P 22 16 50.9 +0.1**
comp=Z,151nm,2.2s,mb5.5
WLF Walferdange 78.01 4 P **P 22 16 51.3 +0.5**
WLF pmax pmax
comp=Z,150nm,1.1s,mb5.8
WLF Walferdange 78.01 4 *eP* **P 22 16 51.3 +0.5**
comp=Z,837nm,2.3s,mb6.3
WLF Walferdange 78.01 4 *eP* **P 22 16 51.1 +0.4**
comp=Z,151nm,1.1s,mb5.8
WLF LR LR
comp=Z,9µm,20.0s,MS6.1
ROTZ Rotzenmuhle 78.02 360 *eP* **P 22 16 51.5 +0.7**
comp=Z,904nm,2.5s,mb6.3
ROTZ *eS* S 22 26 55.5 +14
STHS Stebnicka Huta 78.05 354 *iP* **P 22 16 52.0 +1.0**
STHS pmax pmax
comp=Z,24nm,1.0s,mb5.1
STHS Stebnicka Huta 78.05 354 *iP* **P 22 16 52.0 +1.0**
comp=Z,24nm,1.0s,mb5.1
GRA1 Grafenberg Arr 78.09 0 *eP* **P 22 16 51.7 +0.5**
comp=Z,1µm,2.0s,mb6.4
GRA1 *eS* S 22 26 54.1 +12
GRA1 LR LR
comp=Z,7µm,21.8s,MS5.9
GRF Grafenberg Arr 78.09 0 *eP* **P 22 16 51.7 +0.5**
comp=Z,1µm,2.0s,mb6.4
GRF *eS* S 22 26 54.1 +12
GRF *eL* 22 50 46.9
comp=Z,7µm,21.8s
NIE Niedzica 78.11 354 *eP* **P 22 16 51.9 +0.6**
TOD Tromm 78.15 2 *eP* **P 22 16 51.8 +0.3**
VRAC Vranov 78.39 357 *P* **P 22 16 53.4 +0.5**
comp=Z,93nm,1.0s,mb5.7,baz=12,slow=5.8,SNR=56
VRAC Vranov 78.39 357 *P* **P 22 16 53.5 +0.6**
VRAC Vranov 78.39 357⇑ *iP* **P 22 16 53.2 +0.3**
VRAC Vranov 78.39 357 *iP* **P 22 16 53.3 +0.4**
KTD Kalmit 78.42 2 *eP* **P 22 16 53.6 +0.6**
TREC Trest 78.44 358⇑ *eP* **P 22 16 53.2 0.0**
TREC *eS* S 22 26 56.1 +10
TREC AMS AMS 22 59 50.0
comp=Z,12µm,17.7s
DLH Dalhousie 78.46 309 *eP* **P 22 16 54.0 +0.4**
FLN La Foliniere 78.49 8 *eP* **P 22 16 53.1 -0.3**
comp=Z,702nm,1.5s,mb6.1
FLN *eMLR* MLR
comp=Z,14µm,19.8s,MS6.0
FLN La Foliniere 78.49 8 *eP* **P 22 16 53.1 -0.3**
FLN pmax pmax
comp=Z,351nm,1.5s,mb6.1
FLN MLR MLR
comp=Z,14µm,19.8s,MS6.3
FLN La Foliniere 78.49 8 *eP* **P 22 16 53.1 -0.3**
comp=Z,351nm,1.5s,mb6.1
FLN LR LR
comp=Z,14µm,19.8s,MS6.3
KOLN Koldanda 78.53 301 *eP* **P 22 16 54.0 0.0**
comp=Z,641nm,1.2s,mb6.4
CRVS Cervenica-Dubn 78.55 353 *iP* **P 22 16 54.1 +0.4**
CRVS pmax pmax
comp=Z,171nm,2.3s,mb5.6
CRVS Cervenica-Dubn 78.55 353 *iP* **P 22 16 54.0 +0.3**
CRVS Cervenica-Dubn 78.55 353 *iP* **P 22 16 54.1 +0.4**
comp=Z,171nm,2.3s,mb5.6
WET Wettzell 78.64 359 *eP* **P 22 16 54.7 +0.5**
WET *eS* S 22 27 00.1 +12
WET pmax pmax
comp=Z,746nm,2.4s,mb6.2
WET Wettzell 78.64 359 *eP* **P 22 16 54.7 +0.5**
comp=Z,746nm,2.4s,mb6.2
WET *eS* S 22 27 00.1 +12
ROSF Rostrenen 78.64 10 *eP* **P 22 16 54.3 0.0**
comp=Z,355nm,1.4s,mb5.8
ROSF Rostrenen 78.64 10 *eP* **P 22 16 54.3 0.0**
ROSF pmax pmax
comp=Z,178nm,1.4s,mb5.8
ROSF Rostrenen 78.64 10 *eP* **P 22 16 54.3 0.0**
comp=Z,178nm,1.4s,mb5.8
KHC Kasperske Hory 78.64 359⇑ *iP* **P 22 16 54.6 +0.3**
KHC *e* pP 22 17 02.5 -3.0
KHC *eS* S 22 27 02.7 +14
KHC MLR MLR
comp=Z,10µm,18.0s,MS6.2
KHC Kasperske Hory 78.64 359⇑ *iP* **P 22 16 54.6 +0.3**
KHC *epP* pP 22 17 02.5 -3.0
KHC *eS* S 22 27 02.7 +14
KHC *ex* x 22 32 18.0
KHC AMS AMS 22 58 30.0
comp=Z,10µm,18.0s
THN Thein Dam 78.67 309 *ex* x 22 16 52.4
LDF La Druitiere 78.69 8 *eP* **P 22 16 54.1 -0.4**
comp=Z,311nm,1.0s,mb5.9
LDF La Druitiere 78.69 8 *eP* **P 22 16 54.1 -0.4**
LDF pmax pmax
comp=Z,155nm,1.0s,mb5.9
LDF La Druitiere 78.69 8 *eP* **P 22 16 54.1 -0.4**
comp=Z,155nm,1.0s,mb5.9
NST Nakhon Sawan 78.69 281 *P* **P 22 16 55.0 0.0**
comp=Z,75nm,1.3s,mb5.5
LANF Langenberg 78.75 3 *eP* **P 22 16 55.3 +0.4**
UZH Uzhgorod 78.75 353 *eP* **P 22 16 55.2 +0.3**
UZH *e* pP 22 17 06.6 +0.5
UZH *i* pP 22 17 08.8 +2.7
UZH *eS* S 22 26 47.0 -2.5
UZH *i* 22 27 51.0
SGMF Saint Gilles 78.79 10 *eP* **P 22 16 55.0 -0.1**
comp=Z,265nm,1.1s,mb5.8
SGMF Saint Gilles 78.79 10 *eP* **P 22 16 55.0 -0.1**
SGMF pmax pmax
comp=Z,132nm,1.1s,mb5.8
SGMF Saint Gilles 78.79 10 *eP* **P 22 16 55.0 -0.1**
comp=Z,132nm,1.1s,mb5.8
GRR Gorron 78.83 9 *eP* **P 22 16 55.1 -0.2**
comp=Z,586nm,1.4s,mb6.0
GRR Gorron 78.83 9 *eP* **P 22 16 55.1 -0.2**
GRR pmax pmax
comp=Z,293nm,1.4s,mb6.0
GRR Gorron 78.83 9 *eP* **P 22 16 55.1 -0.2**
comp=Z,293nm,1.4s,mb6.0
PTH Pithoragarh 78.83 304 *eP* **P 22 16 55.8 +0.1**
SDNR Sundarnagar 78.84 308 *eP* **P 22 16 55.0 -0.7**
LGTI Lohaghat 78.90 304 *eP* **P 22 16 55.3 -0.7**
GEC2 GERESS Array S 78.93 359 *eP* **P 22 16 56.1 +0.3**
GEC2 *eS* S 22 27 04.5 +13
GEC2 pmax pmax
comp=Z,717nm,2.3s,mb6.2
GEC2 GERESS Array S 78.93 359 *eP* **P 22 16 56.1 +0.3**
comp=Z,717nm,2.3s,mb6.2
GEC2 *eS* S 22 27 04.5 +13
GERES GERESS Array B 78.93 359 *P* **P 22 16 56.1 +0.3**
comp=Z,30nm,1.0s,mb5.2,baz=3.8,slow=4.0,SNR=68
GERES PKKPbc PKKPbc 22 35 46.5 +0.1
comp=Z,0.3nm,0.6s,baz=224,slow=4.1,SNR=3.0
GERES PKPPKP 22 43 59.4
comp=Z,0.9nm,0.8s,baz=107,slow=1.4,SNR=5.5
STU Stuttgart 78.99 2 *eP* **P 22 16 57.8 +1.6**
STU *e* pP 22 17 06.4 -1.0
STU pmax pmax
comp=Z,168nm,1.1s,mb5.9
STU Stuttgart 78.99 2 *eP* **P 22 16 56.4 +0.2**
comp=Z,308nm,1.7s,mb6.0
STU *eS* S 22 27 05.7 +14
STU Stuttgart 78.99 2 *eP* **P 22 16 57.8 +1.6**
comp=Z,168nm,1.1s,mb5.9
STU *e* pP 22 17 06.4 -1.0
KECS Kecovo 79.03 354 *iP* **P 22 16 55.4 -1.0**
KOLL Kolacno 79.05 356 *iP* **P 22 16 57.2 +0.7**
SMLA Simla 79.05 307 *iP* **P 22 16 56.6 -0.3**
SMLA AMb AMB 22 17 04.6
comp=Z,984nm,2.9s,mb6.2
QUIF Quistinic 79.06 10 *eP* **P 22 16 56.5 -0.1**
comp=Z,292nm,1.3s,mb5.7
QUIF Quistinic 79.06 10 *eP* **P 22 16 56.5 -0.1**
QUIF pmax pmax
comp=Z,146nm,1.3s,mb5.8
QUIF Quistinic 79.06 10 *eP* **P 22 16 56.5 -0.1**
comp=Z,146nm,1.3s,mb5.8
VYHS Vyhne 79.11 355 *iP* **P 22 16 57.4 +0.5**
VYHS pmax pmax
comp=Z,231nm,2.5s,mb5.7
VYHS Vyhne 79.11 355 *iP* **P 22 16 57.4 +0.5**
comp=Z,231nm,2.5s,mb5.7
MEZF Maizieres J'vi 79.12 5 *eP* **P 22 16 57.2 +0.3**
comp=Z,705nm,1.7s,mb6.0
MEZF Maizieres J'vi 79.12 5 *eP* **P 22 16 57.2 +0.3**
comp=Z,705nm,1.7s,mb6.3
SMOL Smolenice 79.16 356 *iP* **P 22 16 58.3 +1.2**
BHK Bhakra 79.17 308 *ex* x 22 17 13.8

TRPA Tarpa 79.23 353⇓ *iP* **P 22 16 58.2 +0.7**
SDDR Presa de Saban 79.27 73 *eP* **P 22 16 56.9 -1.2**
comp=Z,140nm,1.1s,mb5.8
SDDR LR LR
comp=Z,15µm,22.0s,MS6.3
DDI Dehra Dun 79.28 306 *ex* **P 22 16 55.9 -2.2**
DDI *ex* x 22 27 10.4
CDF Champ du Feu 79.30 3 *eP* **P 22 16 58.1 +0.2**
comp=Z,504nm,1.4s,mb6.0
CDF Champ du Feu 79.30 3 *eP* **P 22 16 58.1 +0.2**
CDF pmax pmax
comp=Z,252nm,1.4s,mb6.0
CDF Champ du Feu 79.30 3 *eP* **P 22 16 58.1 +0.2**
comp=Z,252nm,1.4s,mb6.0
BFO Black Forest 79.41 2 P **P 22 16 59.2 +0.7**
comp=Z,611nm,1.2s,mb6.4,SNR=21
BFO Black Forest 79.41 2 P **P 22 16 58.7 +0.2**
BFO pmax pmax
comp=Z,140nm,1.1s,mb5.8
BFO Black Forest 79.41 2 *eP* **P 22 16 58.5 0.0**
comp=Z,267nm,1.6s,mb5.9
THEF They Montfort 79.44 4 *eP* **P 22 16 58.8 +0.2**
BUR08 Bucovina Ar. S 79.48 351 *eP* **P 22 16 58.4 -0.5**
ZST Bratislava 79.49 356 *iP* **P 22 17 00.1 +1.2**
ZST pmax pmax
comp=Z,45nm,1.0s,mb5.3
ZST Bratislava 79.49 356 *iP* **P 22 17 00.1 +1.2**
comp=Z,45nm,1.0s,mb5.3
ECH Echery 79.49 3 *eP* **P 22 16 59.0 +0.1**
ECH Echery 79.49 3 *eP* **P 22 16 58.8 -0.1**
comp=Z,190nm,1.0s,mb6.0
BURAR Bucovina Array 79.51 351 ⇓*iP* **P 22 16 59.2 +0.2**
BURAR Bucovina Array 79.51 351 *P* **P 22 16 59.2 +0.2**
LIBD Limburg 79.57 3 *eP* **P 22 16 59.8 +0.4**
FUR Furstenfeldbru 79.62 0 *eP* **P 22 17 00.2 +0.6**
comp=Z,2µm,2.2s,mb6.5
PSZ Piszkesteto 79.63 354 *eP* **P 22 17 00.7 +1.0**
PSZ Piszkesteto 79.63 354⇑ *iP* **P 22 17 01.1 +1.4**
SPAK Spaichingen-Ko 79.65 2 *eP* **P 22 17 00.3 +0.5**
HAU Haudompre 79.67 4 *eP* **P 22 17 00.0 +0.1**
comp=Z,408nm,1.2s,mb5.9
HAU *eMLR* MLR
comp=Z,15µm,20.2s,MS6.0
HAU Haudompre 79.67 4 *eP* **P 22 17 00.0 +0.1**
HAU pmax pmax
comp=Z,204nm,1.2s,mb5.9
HAU MLR MLR
comp=Z,15µm,20.3s,MS6.3
HAU Haudompre 79.67 4 *eP* **P 22 17 00.0 +0.1**
comp=Z,204nm,1.2s,mb5.9
HAU LR LR
comp=Z,15µm,20.3s,MS6.3
IAS Iasi 79.68 349⇑ *iP* **P 22 17 00.2 +0.2**
IAS Iasi 79.68 349 *P* **P 22 16 59.2 -0.7**
KIS Kishinev 79.72 348 *eP* **P 22 17 00.0 -0.2**
KIS *e* 22 17 06.0
KIS *e* 22 20 05.0
KIS *eS* S 22 26 54.0 -5.8
KIS *i* 22 27 21.0
KIS *i* PS 22 27 36.0
KIS Kishinev 79.72 348 *i* PcP PcP 22 17 06.0 -1.9
KIS Kishinev 79.72 348 *eS* S 22 26 54.0 -5.8
KIS Kishinev 79.72 348 *i* PS 22 27 36.0
CONA Conrad Observa 79.80 357 *iP* **P 22 17 01.4 +0.9**
comp=Z,317nm,1.6s,mb6.0,SNR=109
CSNA Conrad Observa 79.80 357⇑ *iP* **P 22 17 01.5 +0.9**
comp=Z,254nm,1.4s,mb6.0
MOF Molkenrain 79.86 3 *eP* **P 22 17 00.9 0.0**
FELD Feldberg im Sc 79.86 3 *eP* **P 22 17 00.9 0.0**
HINF Hinteralfeld 79.88 3 *eP* **P 22 17 01.1 0.0**
comp=Z,221nm,1.0s,mb5.7
HINF Hinteralfeld 79.88 3 *eP* **P 22 17 01.1 0.0**
HINF pmax pmax
comp=Z,110nm,1.0s,mb5.7
HINF Hinteralfeld 79.88 3 *eP* **P 22 17 01.1 0.0**
comp=Z,110nm,1.0s,mb5.7
MOA Molln 79.91 358⇑ *iP* **P 22 17 01.6 +0.4**
comp=Z,174nm,1.2s,mb5.8,SNR=34
KBL Kabul 79.92 315 P **P 22 17 00.7 -0.8**
KBL pmax pmax
comp=Z,290nm,1.0s,mb6.2
KBL Kabul 79.92 315 *eP* **P 22 17 00.7 -0.8**
comp=Z,286nm,1.0s,mb6.2
KBL *ePP* PP 22 20 02.3 -0.4
MAK Makhachkala 79.94 334 *eP* **P 22 17 05.1 +3.6**
MAK *e* 22 20 10.5
MAK *eS* S 22 27 18.4 +16
MAK *e* 22 27 49.3
MAK pmax pmax
comp=E,541nm,1.4s
MAK pmax pmax
comp=Z,889nm,1.2s,mb6.6
MAK pmax pmax
comp=N,1µm,1.7s
MAK smax
comp=N,12µm,13.1s
SLE Schleitheim 79.98 2⇑ *iP* **P 22 17 01.7 +0.1**
comp=N,1µm,3.3s
SOP Sopron 80.02 357⇑ *eP* **P 22 17 03.8 +2.0**
STEIN Stein am Rhein 80.09 2⇑ *iP* **P 22 17 02.2 0.0**
comp=N,2µm,2.8s,mb6.4
TRULL Truellikon 80.10 2⇑ *iP* **P 22 17 02.4 +0.1**
comp=N,711nm,2.1s,mb6.2
BUD Budapest 80.11 355 *eP* **P 22 17 04.0 +1.7**
CAL Calcutta 80.15 294 *eP* **P 22 17 03.0 0.0**
CAL *ex* x 22 27 16.2
FLACH Flaach 80.18 2⇑ *iP* **P 22 17 02.7 0.0**
comp=N,2µm,3.8s
KIV Kislovodsk 80.20 338 P **P 22 17 03.7 +0.8**
comp=N,1µm,1.0s,mb6.8,SNR=34
KIV Kislovodsk 80.20 338 P **P 22 17 04.0 +1.1**
SNR=42
KIV Kislovodsk 80.20 338 *eP* **P 22 17 03.0 +0.1**
KIV *eS* S 22 27 06.5 +1.5
KIV *eSS* SS 22 32 19.1 +4.4
KIV pmax pmax
comp=Z,270nm,1.1s,mb6.1
KIV pmax pmax
comp=Z,835nm,4.8s
KIV Kislovodsk 80.20 338⇓ *eP* **P 22 17 04.0 +1.1**
SULZ Cheisacher 80.21 3⇑ *iP* **P 22 17 03.0 +0.2**
comp=Z,2µm,4.2s
WEIN Weingarten 80.23 2⇑ *iP* **P 22 17 03.2 +0.3**
comp=Z,1µm,2.2s,mb6.4
BBS Basel-Blauen 80.25 3 *eP* **P 22 17 03.3 +0.2**
LOR Lormes 80.29 5 *eP* **P 22 17 03.4 +0.1**
comp=Z,474nm,1.3s,mb6.0
LOR *eMLR* MLR
comp=Z,17µm,21.0s,MS6.1
LOR Lormes 80.29 5 *eP* **P 22 17 03.4 +0.1**
LOR pmax pmax
comp=Z,237nm,1.3s,mb6.0
LOR MLR MLR
comp=Z,17µm,21.0s,MS6.4
LOR Lormes 80.29 5 *eP* **P 22 17 03.4 +0.1**
comp=Z,237nm,1.3s,mb6.0
LOR LR LR
comp=Z,17µm,21.0s,MS6.4
RETA Reutte 80.30 1 *iP* **P 22 17 03.8 +0.5**
comp=Z,192nm,1.1s,mb5.9,SNR=50
BOURR Bourrignon 80.32 3⇑ *iP* **P 22 17 03.9 +0.5**
comp=Z,881nm,1.8s,mb6.4
WILA Wila 80.34 2⇑ *iP* **P 22 17 04.0 +0.5**
comp=Z,1µm,2.0s,mb6.4
LOMF Lomont 80.35 3 *eP* **P 22 17 04.0 +0.4**
ZUR Degenried 80.38 2⇑ *iP* **P 22 17 04.1 +0.3**
comp=Z,2µm,4.3s
BALST Balsthal 80.39 3⇑ *iP* **P 22 17 04.2 +0.4**
comp=Z,906nm,2.2s,mb6.3
MOTA Moosalm 80.44 0 *iP* **P 22 17 04.6 +0.6**
comp=Z,209nm,1.1s,mb6.0,SNR=80
WATA Walderalm 80.45 0⇓ *iP* **P 22 17 04.5 +0.4**
comp=Z,191nm,1.0s,mb6.0,SNR=83
SSF Saint Saulge 80.47 6 *eP* **P 22 17 04.4 +0.1**
comp=Z,325nm,1.0s,mb5.9
SSF Saint Saulge 80.47 6 *eP* **P 22 17 04.4 +0.1**
SSF pmax pmax
comp=Z,163nm,1.0s,mb5.9
SSF Saint Saulge 80.47 6 *eP* **P 22 17 04.4 +0.1**
comp=Z,162nm,1.0s,mb5.9
ARSA Arzberg 80.48 357 *iP* **P 22 17 05.2 +0.8**
comp=Z,230nm,1.2s,mb6.0,SNR=46
DAVA Damuels 80.49 1⇑ *iP*cP PcP 22 17 06.2 -5.0
comp=Z,148nm,1.1s,SNR=37
ANN Anapa 80.50 342 *eP* **P 22 17 03.9 -0.6**
ANN *eS* S 22 27 11.7 +3.6

ANN eSS SS 22 32 19.4 +0.3
ANN pmax pmax
comp=Z,216nm,1.0s,mb6.0
ANN MLR MLR
comp=Z,11µm,19.0s,MS6.2
ANN Anapa 80.50 342 *e*P **P 22 17 03.7 -0.8**
WTTA Wattenberg 80.52 0⇓*i*P **P 22 17 05.3 +0.8**
comp=Z,383nm,1.9s,mb6.0,SNR=54
DRGR 80.55 352⇑*i*P **P 22 17 05.0 +0.3**
DRGR 80.55 352 P **P 22 17 04.7 0.0**
BTM Bintulu 80.58 263⇓P **P 22 17 05.7 +0.4**
MFF Saint Martin d 80.66 8 *e*P **P 22 17 05.4 +0.1**
comp=Z,771nm,1.2s,mb6.2
MFF Saint Martin d 80.66 8 *e*P **P 22 17 05.4 +0.1**
MFF pmax pmax
comp=Z,386nm,1.2s,mb6.2
MFF Saint Martin d 80.66 8 *e*P **P 22 17 05.4 +0.1**
comp=Z,386nm,1.2s,mb6.2
KBA Koelnbreinsper 80.70 359⇑*i*P **P 22 17 06.8 +1.3**
comp=Z,874nm,1.2s,mb6.6,SNR=135
PLONS Plons/SG 80.72 2⇑*i*P **P 22 17 06.0 +0.4**
comp=Z,2µm,4.0s
AVF Avril sur Loir 80.73 6 *e*P **P 22 17 05.6 -0.1**
comp=Z,256nm,0.9s,mb5.8
AVF Avril sur Loir 80.73 6 *e*P **P 22 17 05.6 -0.1**
AVF pmax pmax
comp=Z,128nm,0.9s,mb5.8
AVF Avril sur Loir 80.73 6 *e*P **P 22 17 05.6 -0.1**
comp=Z,128nm,0.9s,mb5.8
BRANT Les Verrieres 80.75 4⇑*i*P **P 22 17 06.4 +0.7**
comp=Z,2µm,3.8s
FETA Feichten 80.76 1 *i*P **P 22 17 06.7 +0.9**
comp=Z,422nm,1.0s,mb6.3,SNR=184
RKT Rikitea 80.78 149 ePP PP 22 20 08.7 -2.2
comp=Z,1µm,26.8s
RKT *e*S S 22 27 06.9 -4.3
comp=Z,14µm,37.8s
RKT *e*SS SS 22 32 20.2 -5.6
comp=Z,5µm,27.0s
RKT *e*LR LR 22 41 59.6
comp=Z,26µm,29.5s,baz=342
MUO Muotathal 80.78 2⇑*i*P **P 22 17 06.7 +0.8**
comp=Z,2µm,4.4s
BNALP Bannalp 80.88 2⇑*i*P **P 22 17 07.2 +0.8**
comp=Z,2µm,4.1s
SMF Signal de Mont 80.91 6 *e*P **P 22 17 06.7 +0.1**
comp=Z,548nm,1.1s,mb6.1
SMF Signal de Mont 80.91 6 *e*P **P 22 17 06.7 +0.1**
SMF pmax pmax
comp=Z,274nm,1.1s,mb6.1
SMF Signal de Mont 80.91 6 *e*P **P 22 17 06.7 +0.1**
comp=Z,274nm,1.1s,mb6.1
LLS Linth-Limmern 80.91 2⇑*i*P **P 22 17 07.2 +0.6**
comp=Z,1µm,3.3s
TORNY Torny/Romont 80.93 3⇑*i*P **P 22 17 07.3 +0.6**
comp=Z,2µm,4.0s
DAVOS Davos 80.93 1 P **P 22 17 08.0 +1.3**
BGF Bois d'Agland 80.93 6 *e*P **P 22 17 06.7 0.0**
comp=Z,664nm,1.5s,mb6.1
BGF Bois d'Agland 80.93 6 *e*P **P 22 17 06.7 0.0**
BGF pmax pmax
comp=Z,332nm,1.5s,mb6.0
BGF Bois d'Agland 80.93 6 *e*P **P 22 17 06.7 0.0**
comp=Z,332nm,1.5s,mb6.0
SIM Simferopol' 80.95 344 *c i*P **P 22 16 57.0 -10**
SIM *e*S S 22 27 08.0 -4.8
SIM pmax pmax
comp=Z,90nm,1.0s,mb5.7
SIM pmax pmax
comp=Z,2µm,11.6s
SIM MLR MLR
comp=Z,24µm,18.2s,MS6.6
HASLI Hasliberg/Brie 80.98 3⇑*i*P **P 22 17 07.6 +0.6**
comp=Z,1µm,3.9s
DAVOX Davos/Dischmat 80.99 1 P **P 22 17 08.0 +1.0**
comp=Z,67nm,0.9s,mb5.6,baz=343,slow=6.0,SNR=56
DAVOX Davos/Dischmat 80.99 1⇑*i*P **P 22 17 08.1 +1.1**
comp=Z,2µm,3.8s
ABTA Abfaltersbach 81.04 359 *i*P **P 22 17 07.7 +0.4**
comp=Z,299nm,1.1s,mb6.1,SNR=118
NDI New Delhi 81.04 306 *e*P **P 22 17 06.0 -1.6**
NDI *e*S S 22 27 16.0 +1.8
MDB Medias 81.05 351⇑*i*P **P 22 17 08.1 +0.7**
MDB Medias 81.05 351⇑P **P 22 17 08.1 +0.8**
CABF La Chapelle 81.06 4 *e*P **P 22 17 08.1 +0.7**
comp=Z,555nm,1.1s,mb6.1
CABF La Chapelle 81.06 4 *e*P **P 22 17 08.1 +0.7**
CABF pmax pmax
comp=Z,278nm,1.1s,mb6.1
CABF La Chapelle 81.06 4 *e*P **P 22 17 08.1 +0.7**
comp=Z,278nm,1.1s,mb6.1
SOKA Soboth 81.07 358⇑*i*P **P 22 17 08.2 +0.7**
comp=Z,491nm,1.3s,mb6.3
VRI Vrincioaia 81.08 349⇓*i*P **P 22 17 09.5 +2.0**
PLOR Plostina 81.11 350⇑*i*P **P 22 17 09.2 +1.5**
PERS Pernice 81.11 358 *i*P **P 22 17 08.4 +0.7**
PERS *e* 22 17 13.4
PERS *e*S S 22 26 56.8 -18
PERS *e*SKSac SKSac 22 27 23.7 +0.1
GIMEL St. Georges / 81.14 4⇑*i*P **P 22 17 08.6 +0.8**
comp=Z,2µm,3.1s
MYKA Terra Mystica 81.14 359⇓*i*P **P 22 17 07.8 -0.1**
comp=Z,187nm,1.4s,mb5.8
FUORN Ofenpass-Fuorn 81.16 1⇑*i*P **P 22 17 09.2 +1.3**
comp=Z,2µm,4.0s
TCF Toulx Ste Croi 81.16 7 *e*P **P 22 17 07.8 -0.1**
comp=Z,409nm,1.4s,mb5.8
TCF Toulx Ste Croi 81.16 7 *e*P **P 22 17 07.8 -0.1**
TCF pmax pmax
comp=Z,205nm,1.4s,mb5.9
TCF Toulx Ste Croi 81.16 7 *e*P **P 22 17 07.8 -0.1**
comp=Z,205nm,1.4s,mb5.9
FVI Forni Avoltri 81.19 359 P **P 22 17 08.7 +0.6**
SOC Sochi 81.21 340 *c i*P **P 22 17 08.4 +0.1**
SOC *e**PP pP 22 17 16.4 -3.1
SOC *e**SP sP 22 17 20.4 -3.2
SOC *e* 22 20 19.9
SOC *e*S S 22 27 15.5 0.0
SOC *e*SS SS 22 32 30.6 +0.9
SOC *e*SSS 22 35 58.0
SOC pmax pmax
comp=Z,176nm,0.9s,mb6.0
SOC pmax pmax
comp=Z,1µm,4.3s
SOC MLR MLR
comp=Z,8µm,20.0s,MS6.1
VAN Vannovskaya 81.24 325⇑*i*P **P 22 17 09.0 +0.5**
VAN *e*S S 22 27 26.0 +10
OBKA Obir 81.25 358⇑*i*P **P 22 17 09.0 +0.6**
comp=Z,241nm,1.2s,mb6.0,SNR=44
ABKT Ailbek 81.25 325 P **P 22 17 08.9 +0.3**
comp=Z,2µm,1.1s,mb7.0,SNR=79
ABKT Ailbek 81.25 325 P **P 22 17 08.9 +0.4**
GROS Grobnik 81.27 357 *e*P **P 22 17 08.9 +0.4**
VDL Val di Lei 81.28 2⇑*i*P **P 22 17 09.6 +1.0**
comp=Z,2µm,4.0s
TUE Stuetta 81.29 2 *e*P **P 22 17 09.6 +0.9**
comp=Z,389nm,1.4s,mb6.1
TUE *e*PcP PcP 22 17 14.6 -0.2
TUE *e* pP 22 17 20.1 +0.3
TUE LR LR
comp=Z,8µm,19.0s,MS6.1
FUSIO Fusio 81.30 2⇑*i*P **P 22 17 09.7 +1.0**
comp=Z,2µm,4.0s
BRMO Bormio 81.30 1 P **P 22 17 10.1 +1.4**
ONI Oni 81.33 337 P **P 22 17 09.3 +0.4**
LKBD Leukerbad 81.34 3⇑*i*P **P 22 17 09.7 +0.8**
comp=Z,821nm,2.5s,mb6.2
OG01 Vacheresse 81.36 4 *e*P **P 22 17 06.9 -2.1**
PKSM Moragy 81.40 355⇑*i*P **P 22 17 09.6 +0.4**
PKSM Moragy 81.40 355⇑*e*P **P 22 17 09.1 -0.1**
DEV Deva 81.44 352⇑*i*P **P 22 17 10.1 +0.7**
DEV Deva 81.44 352⇑P **P 22 17 10.1 +0.7**
GORS Gorjuse 81.45 358 *e*P **P 22 17 09.1 -0.4**
AGO Saint Agoulin 81.46 6 *e*P **P 22 17 09.9 +0.4**
ALBI Allahabad 81.46 301 *ex* **P 22 17 07.0 -2.9**
TLCR 81.50 348⇓*i*P **P 22 17 10.4 +0.6**
TLCR 81.50 348⇓P **P 22 17 10.4 +0.7**
CADS Cadrg 81.54 359 *e*P **P 22 17 09.6 -0.4**
PLDF La Plantade 81.57 6 *e*P **P 22 17 10.6 +0.5**
OG05 Jujurieux 81.60 4 *e*P **P 22 17 10.6 +0.3**
EMV Vieux Emosson 81.64 3⇑*i*P **P 22 17 11.3 +0.8**
comp=Z,2µm,4.1s
VNDS Vrh nad Dolski 81.65 358 *e*P **P 22 17 11.2 +0.6**
MMK Mattmark 81.68 3⇑*i*P **P 22 17 12.2 +1.5**
comp=Z,2µm,3.0s
VOIR 81.68 351⇓*i*P **P 22 17 11.3 +0.6**
VOIR 81.68 351 P **P 22 17 11.2 +0.5**
SBUM Sibu 81.70 263⇓P **P 22 17 15.0 +3.8**
VERF Verneugheol 81.71 7 *e*P **P 22 17 10.9 0.0**
GOR Gori 81.73 336 P **P 22 17 11.7 +0.7**
VOY Vojsko 81.74 358 *e*P **P 22 17 10.3 -0.7**
VOY *e* 22 17 14.2
VOY *e* 22 17 38.8
VOY *e* 22 18 34.4
CTI Castel Tesino 81.74 0 P **P 22 17 10.2 -0.8**
RHK3 Tenkes 81.74 355 *e*P **P 22 17 10.8 -0.2**
PYM Petit Puy Mans 81.75 6 *e*P **P 22 17 11.5 +0.4**
BZS Buzias 81.80 353⇓*i*P **P 22 17 11.3 -0.1**
BZS Buzias 81.80 353 P **P 22 17 11.3 0.0**
BCIP Isla Barro Col 81.83 86 PFAKE 22 17 20.0 +8.0
BCIP LR LR
comp=Z,4µm,22.0s,MS5.8
MTA Mtatsminda 81.83 336 P **P 22 17 11.6 0.0**
ISR Istrita 81.84 349⇓*i*P **P 22 17 11.3 -0.3**
JAVS Javornik 81.87 358 *i* P **P 22 17 11.4 -0.3**
JAVS *e*SKSac SKSac 22 27 33.0 +4.2
CRES Cresnjev 81.91 357 *e*P **P 22 17 12.8 +0.9**
DGRG David-gareji 81.91 335 P **P 22 17 10.6 -1.5**
GZR Gura Zlata 81.93 352⇓*i*P **P 22 17 12.3 +0.2**
GZR Gura Zlata 81.93 352 P **P 22 17 12.1 0.0**
VISS Visnje 81.95 358 *i* P **P 22 17 12.8 +0.7**
RSL Roselend 82.00 4 *e*P **P 22 17 13.3 +0.9**
CEY Cerknica 82.02 358 *e*P **P 22 17 13.3 +0.8**
COLF Collangettes 82.02 6 *e*P **P 22 17 13.2 +0.7**
FRNF Fournols 82.08 7 *e*P **P 22 17 14.8 +2.0**
RJF Les Rejaudoux 82.09 7 *e*P **P 22 17 12.7 -0.1**
comp=Z,246nm,1.1s,mb5.8
RJF *e*MLR MLR
comp=Z,17µm,20.2s,MS6.1
RJF Les Rejaudoux 82.09 7 *e*P **P 22 17 12.7 -0.1**
RJF pmax pmax
comp=Z,123nm,1.1s,mb5.8
RJF MLR MLR
comp=Z,17µm,20.3s,MS6.4
RJF Les Rejaudoux 82.09 7 *e*P **P 22 17 12.7 -0.1**
comp=Z,123nm,1.1s,mb5.8
RJF LR LR
comp=Z,17µm,20.3s,MS6.4
AGPR Aguadilla, PR 82.09 70 *e*P **P 22 17 15.4 +2.1**
comp=Z,712nm,1.3s,mb6.4
HARR Harsova 82.10 348⇓*i*P **P 22 17 13.1 +0.2**
HARR Harsova 82.10 348 P **P 22 17 13.3 +0.3**
LPL La Plagne 82.17 4 *e*P **P 22 17 14.8 +1.5**
comp=Z,279nm,1.1s,mb5.8
LPL La Plagne 82.17 4 *e*P **P 22 17 14.8 +1.5**
LPL pmax pmax
comp=Z,139nm,1.1s,mb5.8
LPL La Plagne 82.17 4 *e*P **P 22 17 14.8 +1.5**
comp=Z,139nm,1.1s,mb5.8
LPG La Plagne 82.19 4 *e*P **P 22 17 15.0 +1.6**
comp=Z,317nm,1.0s,mb5.9
LPG La Plagne 82.19 4 *e*P **P 22 17 15.0 +1.6**
LPG pmax pmax
comp=Z,158nm,1.0s,mb5.9
LPG La Plagne 82.19 4 *e*P **P 22 17 15.0 +1.6**
comp=Z,158nm,1.0s,mb5.9
TRAV Traversella 82.21 3 P **P 22 17 14.4 +0.9**
SKDS Skadanscina 82.22 358 *e*P **P 22 17 13.2 -0.3**
KNDS Knezji Dol 82.23 358 *e*P **P 22 17 13.5 -0.1**
BOJS Bojanci 82.24 358 *i* P **P 22 17 13.8 +0.2**
BOJS *i* PcP PcP 22 17 17.1 -1.9
BOJS *e*S S 22 26 46.6 -39
BOJS *e*SKSac SKSac 22 27 30.3 -1.0
TIRR Tirgusor 82.27 348⇑*i*P **P 22 17 13.6 -0.2**
TIRR Tirgusor 82.27 348⇑P **P 22 17 13.6 -0.3**
LBL Lubilhac 82.28 6 *e*P **P 22 17 14.7 +0.8**
SSB Saint Sauveur 82.31 5 *e*P **P 22 17 13.3 -0.7**
SSB Saint Sauveur 82.31 5 *e*P **P 22 17 14.4 +0.4**
SSB pmax pmax
comp=Z,114nm,1.0s,mb5.8
SSB Saint Sauveur 82.31 5 *e*P **P 22 17 14.4 +0.3**
comp=Z,114nm,1.0s,mb5.8
SSB *e*PcP PcP 22 17 18.6 -0.6
LFF La Frestale 82.39 8 *e*P **P 22 17 14.6 +0.2**
comp=Z,269nm,0.8s,mb5.9
LFF La Frestale 82.39 8 *e*P **P 22 17 14.6 +0.2**
LFF pmax pmax
comp=Z,134nm,0.8s,mb5.9
LFF La Frestale 82.39 8 *e*P **P 22 17 14.6 +0.2**
comp=Z,134nm,0.8s,mb5.9
GRN Grenoble 82.41 4 *e*P **P 22 17 15.6 +1.1**
CTA Charters Tower 82.45 223 *e*P **P 22 17 13.3 -1.6**
comp=Z,47nm,1.0s,mb5.4
CTA *e*S S 22 27 26.4 -2.2
CTAO Charters Tower 82.45 223 P **P 22 17 13.7 -1.2**
CTAO pmax pmax
comp=Z,92nm,1.1s,mb5.6
CTAO Charters Tower 82.45 223 *e*P **P 22 17 13.6 -1.4**
comp=Z,92nm,1.1s,mb5.6
CTAO *e* pP 22 17 26.4 +0.2
CTAO LR LR
comp=Z,7µm,20.0s,MS6.0
CRPR Cabo Rojo, PR 82.45 70 *e*P **P 22 17 15.1 -0.1**
comp=Z,56nm,1.0s,mb5.5
CRPR *e* pP 22 17 25.2 -1.2
CVD Cernavoda 82.46 348⇑*i*P **P 22 17 15.2 +0.4**
CVD Cernavoda 82.46 348 P **P 22 17 15.8 +1.0**
GDM Grand'Maison 82.46 4 *e*P **P 22 17 15.9 +1.1**
CAF Calviac 82.50 7 *e*P **P 22 17 15.3 +0.3**
comp=Z,305nm,1.0s,mb6.0
CAF Calviac 82.50 7 *e*P **P 22 17 15.3 +0.3**
CAF pmax pmax
comp=Z,153nm,1.0s,mb6.0
CAF Calviac 82.50 7 *e*P **P 22 17 15.3 +0.3**
comp=Z,152nm,1.0s,mb6.0
BNI Bardonecchia 82.64 4 *e*P **P 22 17 17.4 +1.7**
BNI *e* pP 22 17 26.0 -1.0
BNI pmax pmax
comp=Z,336nm,1.0s,mb6.3
BNI MLR MLR
comp=Z,12µm,20.0s,MS6.2
BNI Bardonecchia 82.64 4 *e*P **P 22 17 17.4 +1.7**
comp=Z,336nm,1.0s,mb6.3
BNI *e*PcP PcP 22 17 20.4 -0.3
BNI *e* pP 22 17 26.0 -1.0
BNI LR LR
comp=Z,12µm,20.0s,MS6.2
ORIF Oris-en-Rattie 82.74 4 *e*P **P 22 17 17.1 +0.8**
comp=Z,224nm,0.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,13µm,20.8s,MS6.0
ORIF Oris-en-Rattie 82.74 4 *e*P **P 22 17 17.1 +0.8**
ORIF pmax pmax
comp=Z,112nm,0.9s,mb5.9
ORIF Oris-en-Rattie 82.74 4 *e*P **P 22 17 17.1 +0.8**
comp=Z,112nm,0.9s,mb5.9
VIVF Saint-Julien-l 82.74 5 *e*P **P 22 17 16.8 +0.5**
comp=Z,137nm,0.9s,mb5.7
VIVF Saint-Julien-l 82.74 5 *e*P **P 22 17 16.8 +0.5**
VIVF pmax pmax
comp=Z,68nm,0.9s,mb5.7
VIVF Saint-Julien-l 82.74 5 *e*P **P 22 17 16.8 +0.5**
comp=Z,68nm,0.9s,mb5.7
OG22 Abries 82.88 3 *e*P **P 22 17 18.7 +1.7**
ICM Isla Caja Muer 82.88 70 P **P 22 17 18.5 +1.1**
CRAR CRAIOVA 82.91 351 P **P 22 17 17.5 +0.4**
DBOC Borcka 82.92 338⇑*i*P **P 22 17 17.4 +0.1**
SJG San Juan 82.92 70 *e*P **P 22 17 17.1 -0.5**
SJG pmax pmax
comp=Z,197nm,0.9s
SJG MLR MLR
comp=Z,11µm,21.0s
SJG San Juan 82.92 70 *e*P **P 22 17 17.1 -0.5**
comp=Z,197nm,0.9s,mb6.1
SJG LR LR
comp=Z,11µm,21.0s,MS6.2
CBYP Canovanas 82.96 69 *e*P **P 22 17 18.4 +0.6**
comp=Z,269nm,1.5s,mb6.0
CBYP *e*PcP PcP 22 17 22.5 0.0
MBDF Montbardon 82.97 4 *e*P **P 22 17 18.9 +1.5**
comp=Z,587nm,1.0s,mb6.3
MBDF Montbardon 82.97 4 *e*P **P 22 17 18.9 +1.5**
MBDF pmax pmax
comp=Z,293nm,1.0s,mb6.3
MBDF Montbardon 82.97 4 *e*P **P 22 17 18.9 +1.5**
comp=Z,294nm,1.0s,mb6.3
PSCM Serra do Cume 83.01 30 *e*P **P 22 17 22.5 +4.7**
ARTV Artvin 83.01 338⇑*i*P **P 22 17 16.7 -1.0**
RAVA Ravarino 83.03 0 P **P 22 17 21.7 +3.9**
OCF Saint Nazaire 83.05 5 *e*P **P 22 17 19.0 +1.1**
OG26 St.-Nazaire-De 83.05 5 *e*P **P 22 17 19.0 +1.1**
PSN Preselentsi 83.06 348 P **P 22 17 19.2 +1.2**
EPON Pontenova 83.08 14 P **P 22 17 18.1 +0.1**
comp=Z,1µm,2.6s,mb6.5
DAGI Agillar 83.11 338⇑*i*P **P 22 17 18.8 +0.5**
KAPI Kappang 83.17 253 *e*P **P 22 17 18.4 -0.4**
comp=Z,311nm,1.4s,mb6.2
KAPI ePP PP 22 20 33.1 +2.7
KAPI LR LR
comp=Z,7µm,22.0s,MS6.0
EMAZ Mazaricos 83.17 15 P **P 22 17 16.8 -1.7**
comp=Z,439nm,2.5s,mb6.0
DOI San Damiano 83.20 3 P **P 22 17 18.5 -0.2**
SURF Saint Ours 83.21 4 *e*P **P 22 17 20.5 +1.8**
PAYG Puerto Ayora 83.22 100 *e*P **P 22 17 18.9 -0.3**
comp=Z,102nm,1.2s,mb5.7
PAYG LR LR
comp=Z,6µm,21.0s,MS6.0
MTP Monte Pirata 83.27 69 *e*P **P 22 17 18.5 -0.9**
comp=Z,304nm,1.1s,mb6.2
MTP ePcP PcP 22 17 23.5 -0.4
STS Santiago 83.30 15 P **P 22 17 18.9 -0.3**
STS pmax pmax
comp=Z,95nm,1.1s,mb5.7
STS Santiago 83.30 15 P **P 22 17 18.9 -0.2**
comp=Z,95nm,1.1s,mb5.7
GNI Garni 83.30 335 P **P 22 17 21.1 +1.9**
SNR=35
GNI Garni 83.30 335 P **P 22 17 20.5 +1.2**
GNI pmax pmax
comp=Z,240nm,1.2s
GNI Garni 83.30 335⇓*i*eP **P 22 17 19.6 +0.3**
DDEM Demirkent 83.33 338⇑*i*P **P 22 17 20.2 +0.8**
BWNR Bhubaneshwar 83.34 295 *ex* x 22 17 17.7
BWNR *e*S S 22 27 41.2 +3.1
EARI Arriondas 83.37 12 P **P 22 17 19.8 +0.2**
comp=Z,1µm,2.7s,mb6.4
LASF Ste Croix 83.47 6 *e*P **P 22 17 20.9 +0.8**
comp=Z,256nm,1.1s,mb5.9
VLC Villacollemand 83.62 1 *e*P **P 22 17 21.4 +0.6**
comp=Z,234nm,1.1s,mb6.2
VLC LR LR
comp=Z,8µm,21.0s,MS6.1
KSM Kuching 83.63 264 *e*P **P 22 17 20.9 -0.4**
comp=Z,187nm,1.1s,mb6.1
KSM Kuching 83.63 264⇓P **P 22 17 22.8 +1.5**
PRD Provadia 83.63 349 P **P 22 17 20.7 -0.2**
ELAN Lanestosa 83.66 11 P **P 22 17 20.7 -0.3**
comp=Z,1µm,2.3s,mb6.6
SMRF Simiane la Rot 83.66 4 *e*P **P 22 17 22.4 +1.4**
comp=Z,411nm,1.2s,mb6.2
SMRF Simiane la Rot 83.66 4 *e*P **P 22 17 22.4 +1.4**
comp=Z,411nm,1.2s,mb6.4
TOUF Mont Tournerai 83.69 3 *e*P **P 22 17 22.2 +1.0**
AUTN L'Aution 83.72 3 *e*P **P 22 17 21.9 +0.6**
MACK Trabzon 83.73 339⇑*i*P **P 22 17 21.6 +0.1**
SAOF Saorge 83.73 3 *e*P **P 22 17 22.5 +1.1**
SZH Strazhica 83.74 350 *e*P **P 22 17 21.1 -0.3**
MVIF Mont Vial 83.81 3 *e*P **P 22 17 22.5 +0.7**
IMI Imperia 83.82 3 P **P 22 17 22.1 +0.3**
comp=Z,174nm,1.2s,mb6.1
LUCF Luceram 83.82 3 *e*P **P 22 17 22.5 +0.7**
SBF Sospel 83.85 3 *e*P **P 22 17 22.5 +0.5**
comp=Z,485nm,0.8s,mb6.4
SBF Sospel 83.85 3 *e*P **P 22 17 22.5 +0.5**
SBF pmax pmax
comp=Z,243nm,0.8s,mb6.4
SBF Sospel 83.85 3 *e*P **P 22 17 22.5 +0.5**
comp=Z,243nm,0.8s,mb6.4
RSM Repubblica di 83.85 359 P **P 22 17 22.9 +0.9**
comp=Z,310nm,2.1s,mb6.1
OSSF Osses 83.87 10 *e*P **P 22 17 21.7 -0.4**
EALK Alkurruntz 83.88 10 P **P 22 17 22.2 0.0**
comp=Z,1µm,2.4s,mb6.6
ELIZ Elizondo 83.94 10 P **P 22 17 21.4 -1.1**
ELIZ pmax pmax
comp=Z,221nm,1.7s,mb6.0
ELIZ Elizondo 83.94 10 P **P 22 17 21.4 -1.0**
comp=Z,221nm,1.7s,mb6.0
CALN Calern 83.94 4 *e*P **P 22 17 23.3 +0.8**
ORDF Ordiarp 83.94 9 *e*P **P 22 17 23.2 +0.7**
REVF Revere 83.97 3 *e*P **P 22 17 22.9 +0.3**
ERUA La Rua 83.99 14 P **P 22 17 22.9 +0.1**
ERUA pmax pmax
comp=Z,77nm,1.1s,mb5.8
ERUA La Rua 83.99 14 P **P 22 17 22.9 +0.2**
comp=Z,77nm,1.1s,mb5.8
EZAM Zamans 83.99 15 P **P 22 17 22.3 -0.5**
EZAM pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
EZAM Zamans 83.99 15 P **P 22 17 22.3 -0.5**
comp=Z,7.6nm,0.9s,mb4.8
SJPF Ste Jean 84.02 10 *e*P **P 22 17 23.5 +0.6**
comp=Z,149nm,0.9s,mb5.8
SJPF Ste Jean 84.02 10 *e*P **P 22 17 23.5 +0.6**
SJPF pmax pmax
comp=Z,75nm,0.9s,mb5.8
SJPF Ste Jean 84.02 10 *e*P **P 22 17 23.5 +0.6**
comp=Z,74nm,0.9s,mb5.8
GRSN GIRESUNGRSN 84.06 340⇑*i*P **P 22 17 23.9 +0.8**
FSSB Fossombrone 84.09 359 P **P 22 17 24.2 +1.0**
comp=Z,237nm,1.1s,mb6.2
MTLF Montolieu 84.09 7 *e*P **P 22 17 23.8 +0.6**
comp=Z,300nm,1.0s,mb6.1
MTLF Montolieu 84.09 7 *e*P **P 22 17 23.8 +0.6**
MTLF pmax pmax
comp=Z,150nm,1.0s,mb6.1
MTLF Montolieu 84.09 7 *e*P **P 22 17 23.8 +0.6**
comp=Z,150nm,1.0s,mb6.1
HOMI Horasan 84.10 337⇑*i*P **P 22 17 22.6 -0.7**
LARF Larrau 84.11 9 *e*P **P 22 17 24.4 +1.0**
FRF La Foret Royal 84.12 4 *e*P **P 22 17 23.9 +0.5**
comp=Z,372nm,1.0s,mb6.2
FRF La Foret Royal 84.12 4 *e*P **P 22 17 23.9 +0.5**
FRF pmax pmax
comp=Z,186nm,1.0s,mb6.2
FRF La Foret Royal 84.12 4 *e*P **P 22 17 23.9 +0.5**
comp=Z,186nm,1.0s,mb6.2
AJM Ajmer 84.13 307⇑*i*P **P 22 17 22.9 -0.9**
AJM ⇑*i*P 22 17 22.9
AJM AMb AMB 22 17 30.4
comp=Z,168nm,1.4s,mb6.0
DYDN Diyadin 84.14 336⇑*i*P **P 22 17 24.7 +1.2**
REYF Montagne du Re 84.14 9 *e*P **P 22 17 23.7 +0.2**
JBP Jabalpur 84.16 301 *e*P **P 22 17 23.0 -0.9**
JBP *e*S S 22 27 44.8 -1.5
PTCN Pitcairn Islan 84.19 146 PFAKE 22 17 30.0 +6.2
PTCN LR LR
comp=Z,11µm,19.0s,MS6.2
PLE Pljevlja 84.23 354⇑*i*P **P 22 17 24.7 +0.8**
EPF Esparros 84.25 8 *e*P **P 22 17 23.8 -0.2**
comp=Z,303nm,1.2s,mb6.0
EPF Esparros 84.25 8 *e*P **P 22 17 23.8 -0.2**
EPF pmax pmax
comp=Z,151nm,1.2s,mb6.0
EPF Esparros 84.25 8 *e*P **P 22 17 23.8 -0.2**
comp=Z,151nm,1.2s,mb6.0
PIEI Pieia 84.25 359 P **P 22 17 25.1 +1.1**
ETSF Etsaut 84.29 9 *e*P **P 22 17 25.0 +0.7**
comp=Z,911nm,1.3s,mb6.5
ETSF Etsaut 84.29 9 *e*P **P 22 17 25.0 +0.7**
ETSF pmax pmax
comp=Z,456nm,1.3s,mb6.5
ETSF Etsaut 84.29 9 *e*P **P 22 17 25.0 +0.7**
comp=Z,456nm,1.3s,mb6.4
PDA Ponta Delgada 84.32 29 *e*P **P 22 17 28.4 +3.9**
PDA *e*S S 22 27 51.0 +3.6
PDA eLQ 22 40 48.0
PDA *e*P 22 47 58.0
LMR La Mourre 84.34 4 *e*P **P 22 17 25.1 +0.6**
comp=Z,457nm,1.1s,mb6.2
LMR La Mourre 84.34 4 *e*P **P 22 17 25.1 +0.6**
LMR pmax pmax
comp=Z,228nm,1.1s,mb6.2
LMR La Mourre 84.34 4 *e*P **P 22 17 25.1 +0.6**
comp=Z,228nm,1.1s,mb6.2
CMLA Cha da Macela 84.35 29 *e*P **P 22 17 27.5 +2.8**
CMLA *e*S S 22 27 50.4 +2.7
CMLA eLQ 22 39 54.4
CMLA eLR LR 22 43 21.6
CMLA Cha da Macela 84.35 29 *e*P **P 22 17 24.1 -0.5**
CMLA LR LR
comp=Z,15µm,20.0s,MS6.4

ERZM Erzurum 84.36 338 ⇑ iP P 22 17 26.6 +2.0
VIEF Viey 84.36 9 eP P 22 17 25.4 +0.8
ELOB Lobios 84.37 15 P P 22 17 24.4 -0.3
comp=Z,173nm,2.1s,mb5.8
ECRI Cripan 84.38 11 P P 22 17 25.3 +0.6
ECRI pmax pmax
comp=Z,71nm,1.1s,mb5.7
ECRI Cripan 84.38 11 P P 22 17 25.3 +0.6
comp=Z,71nm,1.1s,mb5.7
MLS Moulis 84.38 8 eP P 22 17 25.1 +0.4
UPM Unac-Piva 84.38 355 ⇑ iP P 22 17 24.5 -0.2
BALT Daday 84.40 344 ⇑ iP P 22 17 26.6 +1.7
CING Cingoli 84.40 359 P P 22 17 25.9 +1.1
comp=Z,407nm,1.8s,mb6.2
MELF Melles 84.44 8 eP P 22 17 25.9 +0.9
KOPT Kop Dagi 84.45 338 ⇑ iP P 22 17 26.9 +1.7
JMB Yambol 84.45 349 P P 22 17 25.6 +0.5
JMB Yambol 84.45 349 P P 22 17 27.4 +2.3
RESF Ens 84.47 8 eP P 22 17 26.4 +1.2
ECAL Calabor 84.49 14 P P 22 17 25.2 -0.1
comp=Z,1μm,3.6s
PCAB Cabril 84.53 15 eP P 22 17 27.4 +1.9
comp=Z,174nm,1.7s,mb5.9
QUE Quetta 84.55 314 ⇑ iP P 22 17 35.0 +9.2
QUE eS S 22 28 05.0 +15
EBIE Bielsa 84.57 9 P P 22 17 26.7 +1.0
comp=Z,1μm,2.2s,mb6.7
SALF Salau 84.59 8 eP P 22 17 24.4 -1.4
PBRG Braganca 84.63 14 eP P 22 17 26.4 +0.4
comp=Z,254nm,1.8s,mb6.0
PGB Panagyurishte 84.63 351 P P 22 17 25.9 -0.1
IVA Berane 84.65 354 ⇑ iP P 22 17 26.0 -0.1
VTS Vitosha 84.68 352 P P 22 17 26.9 +0.7
BRY Bratogost 84.70 355 ⇑ iP P 22 17 25.3 -1.1
CARF Carcanieres 84.70 7 eP P 22 17 26.4 0.0
NKY Niksic 84.77 355 ⇑ iP P 22 17 26.0 -0.7
ILGA Ilgaz 84.81 343 ⇑ iP P 22 17 28.6 +1.7
FILF Fillols 84.89 7 eP P 22 17 26.4 -0.9
PVY Plav 84.92 354 ⇑ iP P 22 17 27.2 -0.3
KTGM Kuala Trenggan 84.97 272 ⇓ iP P 22 17 31.8 +3.7
DIM Dimitrovgrad 84.98 350 P P 22 17 28.6 +0.8
SJAF Saint Jean de 84.99 7 eP P 22 17 27.6 -0.2
PTO Porto 84.99 15 A 22 17 49.9
comp=Z,314nm,1.7s
PVRL Vila Real 85.00 15 eP P 22 17 28.8 +0.9
comp=Z,210nm,1.6s,mb6.0
TOKA Tokat 85.00 341 ⇑ iP P 22 17 29.9 +1.9
VALF Valcebollere 85.01 7 eP P 22 17 28.6 +0.7
PLD Plovdiv 85.02 350 P P 22 17 27.6 -0.3
PLD Plovdiv 85.02 350 P P 22 17 28.8 +0.9
EJON La Jonquera 85.03 7 P P 22 17 28.5 +0.5
comp=Z,2μm,4.2s
CTKT Corum 85.03 343 ⇑ iP P 22 17 29.9 +1.8
SNG Songkhla 85.05 275 P P 22 17 27.0 -1.5
comp=Z,300nm,0.9s,mb6.4
TTG Podgorica 85.13 354 ⇑ iP P 22 17 27.6 -0.9
HCY Herceg Novi 85.16 355 ⇑ iP P 22 17 28.0 -0.6
TVAN Van 85.17 336 ⇑ iP P 22 17 30.6 +1.8
PGF Pioggiola 85.21 2 eP P 22 17 29.4 +0.5
comp=Z,769nm,1.0s,mb6.5
PGF Pioggiola 85.21 2 eP P 22 17 29.4 +0.5
PGF pmax pmax
comp=Z,385nm,1.0s,mb6.5
PGF Pioggiola 85.21 2 eP P 22 17 29.4 +0.5
comp=Z,385nm,1.0s,mb6.5
MVO Moncorvo 85.21 14 eP P 22 17 29.0 +0.1
comp=Z,182nm,1.5s,mb6.0
MVO eS S 22 28 00.0 +3.9
MVO eLQ 22 41 34.3
MVO eLR LR 22 48 39.5
comp=Z,7μm,18.0s
BUM Brajici-Budva 85.28 355 ⇑ iP P 22 17 29.0 -0.3
BNGL BINGOL 85.31 337 ⇑ iP P 22 17 31.3 +1.8
EIDS Eidsvold 85.36 216 eP P 22 17 29.9 +0.3
comp=Z,97nm,1.5s,mb5.7
KDZ Kurdzhali 85.39 350 P P 22 17 31.9 +2.1
KKB Krupnik 85.41 352 P P 22 17 31.3 +1.4
AQU L'Aquila 85.42 359 P P 22 17 31.0 +1.0
AQU pmax pmax
comp=Z,390nm,1.0s,mb6.5
AQU L'Aquila 85.42 359 ⇓ iP P 22 17 30.8 +0.8
AQU L'Aquila 85.42 359 eP P 22 17 30.6 +0.6
comp=Z,297nm,1.0s,mb6.4
AQU LR LR
comp=Z,6μm,20.0s,MS6.0
BHPL Bhopal 85.43 303 ⇑ iP P 22 17 29.2 -1.1
BHPL AMb AMB 22 17 36.8
comp=Z,248nm,1.5s,mb6.1
RZN Rozhen 85.43 350 P P 22 17 30.3 +0.3
SKO Skopje 85.44 353 P P 22 17 30.9 +0.8
SKO Skopje 85.44 353 ⇓ iP P 22 17 31.1 +1.0
ESAC San Caprasio 85.47 9 P P 22 17 30.2 0.0
comp=Z,2μm,2.4s,mb6.9
TATV Tatvan 85.47 336 ⇑ iP P 22 17 31.9 +1.6
HENT Hendek 85.49 346 ⇑ iP P 22 17 30.9 +0.6
PVIS Viseu 85.52 15 eP P 22 17 31.3 +0.8
comp=Z,208nm,1.9s,mb6.0
ELBA Catalca 85.53 347 ⇑ iP P 22 17 31.1 +0.6
ULC Ulcinj 85.60 354 ⇑ iP P 22 17 30.4 -0.5
KEMA Kemaliye 85.61 339 ⇑ iP P 22 17 31.5 +0.6
MMB Musomiste 85.62 351 P P 22 17 31.3 +0.3
STIP Stip 85.66 352 P P 22 17 30.7 -0.4
STIP Stip 85.66 352 ⇑ iP P 22 17 31.2 +0.1
MTCE Montecelio 85.76 359 P P 22 17 31.9 +0.3
MTE Manteigas 85.88 15 eP P 22 17 32.6 +0.3
comp=Z,130nm,1.8s,mb5.9
MTE eS S 22 28 07.6 +4.8
MTE eLQ 22 42 44.9
MTE eLR LR 22 52 41.5
MTE Manteigas 85.88 15 eP P 22 17 32.0 -0.3
comp=Z,204nm,1.8s,mb6.1
MTE LR LR
comp=Z,11μm,20.0s,MS6.2
EPOB Poblet 85.98 8 P P 22 17 33.1 +0.3
comp=Z,2μm,2.6s,mb6.8
VAY Valandovo 86.00 352 P P 22 17 32.4 -0.4
VAY Valandovo 86.00 352 ⇑ iP P 22 17 32.5 -0.4
HAKT HAKKARI 86.01 335 ⇑ iP P 22 17 41.8 +8.8
KRUS Krusevo 86.06 353 ⇓ iP P 22 17 33.6 +0.5
ALN Alexandroupoli 86.06 349 P P 22 17 33.3 +0.1
OSPF L'Ospedale 86.10 2 eP P 22 17 34.9 +1.6
BR131 Keskin Array S 86.11 343 eP P 22 17 33.8 +0.4
comp=Z,92nm,0.9s,mb6.0
BR131 e pP 22 17 45.5 +0.8
BR131 LR LR
comp=Z,6μm,20.0s,MS6.0
BRTR Keskin Array B 86.11 343 P P 22 17 34.0 +0.6
comp=Z,87nm,1.0s,mb6.0,baz=18,slow=1.6,SNR=92
BRTR PKKPbc PKKPbc 22 35 30.7 +0.7
comp=Z,0.9nm,1.0s,baz=168,slow=1.1,SNR=3.7
BRTR PKPPKP 22 43 41.1
comp=Z,0.9nm,0.8s,baz=232,slow=1.4,SNR=4.1
BRTR LR LR 23 05 44.4
comp=Z,7μm,18.3s,MS6.1,baz=216,slow=42
GUD Guadarrama 86.12 12 P P 22 17 33.4 -0.1
GUD pmax pmax
comp=Z,13nm,0.5s,mb5.4
GUD Guadarrama 86.12 12 P P 22 17 33.4 -0.1
comp=Z,13nm,0.5s,mb5.4
KNT Kendrikon 86.12 352 P P 22 17 33.6 +0.1
SART Tekirdag 86.14 348 ⇑ iP P 22 17 33.8 +0.3
TIR Tirane 86.17 354 P P 22 17 33.4 -0.3
TIR Tirane 86.17 354 P P 22 17 34.0 +0.3
TIR pmax pmax
comp=Z,150nm,1.0s,mb6.2
ETOR Torete 86.20 10 P P 22 17 33.7 -0.1
ETOR pmax pmax
comp=Z,37nm,0.6s,mb5.8
ETOR Torete 86.20 10 P P 22 17 33.7 -0.1
comp=Z,36nm,0.6s,mb5.8
ELZG Elazig 86.24 339 ⇑ iP P 22 17 35.8 +1.7
BEST Besiri 86.30 337 ⇑ iP P 22 17 35.7 +1.3
NGP Nagpur 86.31 300 ⇑ eP P 22 17 32.5 -2.1
NGP ex x 22 17 40.4
comp=Z,167nm,1.5s
NGP eS S 22 27 56.4 -11
OHR Ohrid 86.34 353 P P 22 17 34.3 -0.3
OHR Ohrid 86.34 353 ⇑ iP P 22 17 34.9 +0.4
GRG Griva 86.37 352 P P 22 17 34.8 +0.1
BIA Bitola 86.40 353 i P P 22 17 33.7 -1.1
ULDT Uludag 86.42 347 ⇑ iP P 22 17 36.0 +1.1
SOH Sokhos 86.42 351 P P 22 17 34.4 -0.5
PCBR Castelo Branco 86.44 15 eP P 22 17 34.6 -0.4
comp=Z,95nm,1.8s,mb5.7

BORA Eskisehir 86.48 346 ⇑ iP P 22 17 36.1 +0.9
DIYA Diyarbakir 86.53 338 ⇑ iP P 22 17 36.7 +1.2
MALT Malatya 86.54 339 P P 22 17 36.7 +1.1
MALT pmax pmax
comp=Z,180nm,1.4s,mb6.1
MALT Malatya 86.54 339 ⇓ iP P 22 17 37.0 +1.4
MALT Malatya 86.54 339 P P 22 17 36.8 +1.2
PINB Pinarbasi 86.61 341 ⇑ iP P 22 17 37.5 +1.6
FNA Florina 86.63 353 P P 22 17 35.8 -0.1
THE Thessaloniki 86.64 351 P P 22 17 35.5 -0.5
AKCD Akcadag 86.66 340 ⇑ iP P 22 17 30.9 -5.3
HORT Hortiatis 86.67 351 P P 22 17 35.6 -0.5
VIS Vishakhapatnam 86.79 295 ⇑ iP P 22 17 36.1 -1.0
EMOS Mosqueruela 86.81 9 P P 22 17 36.1 -0.7
comp=Z,879nm,2.6s,mb6.5
OUR Ouranopolis 86.84 351 P P 22 17 36.4 -0.6
PLG Polygyros 86.86 351 P P 22 17 36.3 -0.8
PMRV Marv??o 86.86 15 eP P 22 17 36.7 -0.4
comp=Z,101nm,1.7s,mb5.8
PMRV eS S 22 28 17.9 +5.6
PMRV eLQ 22 40 46.5
PMRV eLR LR 22 47 22.3
comp=Z,9μm,18.0s
IPM Ipoh 86.92 273 ⇑ P P 22 17 40.9 +3.1
MARD Mardin 86.96 337 ⇑ iP P 22 17 39.2 +1.5
PMAFR Mafra 87.01 16 eP P 22 17 37.8 -0.1
comp=Z,364nm,1.6s,mb6.4
PMAFR eS S 22 28 12.7 -1.1
PMAFR eLQ 22 43 38.0
PMAFR eLR LR 22 47 58.1
comp=Z,10μm,22.0s
ESDC Sonseca Array 87.10 12 P P 22 17 38.0 -0.3
comp=Z,43nm,0.9s,mb5.7,baz=348,slow=4.8,SNR=89
ESDC PKKPbc PKKPbc 22 35 27.8 +0.1
comp=Z,0.7nm,0.9s,baz=225,slow=1.5,SNR=4.4
ESDC PKPPKP 22 43 43.4
comp=Z,0.9nm,0.8s,baz=54,slow=1.7,SNR=4.4
ESDC LR LR 23 00 25.1
comp=Z,9μm,19.4s,MS6.2,baz=350,slow=38
ESDC Sonseca Array 87.10 12 P P 22 17 37.6 -0.6
comp=Z,110nm,1.4s,mb5.9
ESLA Sonseca Array 87.10 12 eP P 22 17 37.8 -0.5
comp=Z,12nm,0.9s,mb5.1
ESLA e pP 22 17 48.6 -1.0
ESLA LR LR
comp=Z,62μm,20.0s,MS7.0
LOS Limnos 87.12 350 P P 22 17 38.1 -0.3
LIA Limnos Island 87.15 350 P P 22 17 37.5 -1.0
PAB San Pablo 87.18 12 eP P 22 17 38.2 -0.5
comp=Z,38nm,1.0s,mb5.6
PAB LR LR
comp=Z,9μm,22.0s,MS6.2
PTRP Pietrapertosa 87.19 357 P P 22 17 41.0 +2.3
comp=Z,187nm,1.3s,mb6.2
LIT Litokhoron 87.21 352 P P 22 17 38.4 -0.4
MSL Mosul 87.26 335 eP P 22 17 40.0 +0.9
MSL eSKS 22 28 10.0
MSL eS S 22 28 29.0 +13
PAIG Paliouri 87.28 351 P P 22 17 38.2 -0.9
MYKOM Kota Tinggi 87.31 269 ⇑ P P 22 17 42.8 +3.1
PESTR Estremoz 87.37 15 eP P 22 17 39.4 -0.2
comp=Z,112nm,1.5s,mb5.9
PESTR Estremoz 87.37 15 ePP PP 22 21 15.5 +12
PESTR eS S 22 28 20.6 +3.3
PESTR eLQ 22 40 43.8
PESTR eLR LR 22 47 31.3
comp=Z,7μm,20.0s
ATAB Bozova 87.38 339 ⇑ iP P 22 17 40.9 +1.2
GDZ Gediz 87.40 346 ⇑ iP P 22 17 40.2 +0.4
KGM Kluang 87.46 270 ⇑ P P 22 17 41.7 +1.3
ECHE Chera 87.53 10 P P 22 17 39.7 -0.7
ECHE pmax pmax
comp=Z,19nm,0.8s,mb5.4
ECHE Chera 87.53 10 P P 22 17 39.7 -0.7
comp=Z,19nm,0.8s,mb5.4
FRIM Kepong 87.53 272 ⇓ P P 22 17 41.2 +0.5
AYVA Ayvalik 87.56 348 ⇑ iP P 22 17 40.2 -0.3
EBAD Badajoz 87.57 15 P P 22 17 39.5 -1.1
comp=Z,356nm,2.5s,mb6.2
SDV Santo Domingo 87.61 79 eP P 22 17 41.5 +0.4
comp=Z,106nm,1.3s,mb5.9
SDV e pP 22 17 51.5 -0.9
SDV LR LR
comp=Z,3μm,20.0s,MS5.7
ORI Oriolo Calabro 87.63 356 P P 22 17 43.3 +2.5
comp=Z,2μm,3.5s
EVO Evora 87.63 15 ⇑ iP P 22 17 41.0 +0.1
comp=Z,259nm,1.7s,mb5.9
EVO eMLR MLR
comp=Z,16μm,21.0s,MS6.1
EVO Evora 87.63 15 eP P 22 17 40.9 0.0
comp=Z,64nm,1.7s,mb5.6
GZT Gaziantep 87.64 340 ⇑ iP P 22 17 42.1 +1.2
WRAB Tennant Creek 87.67 232 ⇓ eP P 22 17 39.5 -1.6
WRAB Tennant Creek 87.67 232 eP P 22 17 39.1 -2.0
comp=Z,77nm,1.0s,mb5.9
WRAB e pP 22 17 51.9 -0.5
WRAB LR LR
comp=Z,11μm,21.0s,MS6.2
PRK Paraskevi 87.67 349 P P 22 17 40.3 -0.7
WB2 Warramunga Arr 87.68 232 eP P 22 17 38.8 -2.3
WB2 eS S 22 28 04.4 -15
ANDN Andirin 87.68 341 ⇑ iP P 22 17 40.8 -0.4
WRA Warramunga Arr 87.68 232 P P 22 17 38.6 -2.5
comp=Z,25nm,1.1s,mb5.3,baz=39,slow=5.2,SNR=27
WRA LR LR 22 53 33.3
comp=Z,9μm,21.6s,MS6.1,baz=35,slow=33
WRA Warramunga Arr 87.68 232 P P 22 17 38.6 -2.5
WRA LR LR 22 53 33.3
ETOS Mallorca 87.69 7 P P 22 17 41.8 +0.7
comp=Z,20nm,0.8s,mb5.4
CUC Castrocucco 87.72 357 eP P 22 17 40.2 -1.1
comp=Z,64nm,1.0s,mb5.8
CUC e pP 22 17 51.8 -0.8
CUC LR LR
comp=Z,7μm,19.0s,MS6.1
AKL Akola 87.74 302 ex x 22 17 36.4
THL Klokotos Trika 87.79 352 P P 22 17 40.5 -1.1
AKHS Akhisar 87.84 348 ⇑ iP P 22 17 40.8 -1.1
XOR Xorichti 87.88 351 P P 22 17 41.5 -0.5
IGT Igoumenitsa 87.95 353 P P 22 17 41.7 -0.6
AOS Alonnisos 88.00 351 P P 22 17 42.6 0.0
KHAL Karahalli 88.10 346 ⇑ iP P 22 17 43.0 -0.1
MANT Manisa 88.12 347 ⇑ iP P 22 17 43.3 +0.1
PBAR Barrancos 88.14 15 eP P 22 17 43.3 0.0
comp=Z,138nm,1.5s,mb6.0
PBAR eS S 22 28 26.4 +1.8
PBAR eLQ 22 41 15.6
PBAR eLR LR 22 49 52.4
comp=Z,8μm,18.0s
PBEJ Beja 88.15 15 eP P 22 17 43.2 -0.1
comp=Z,98nm,1.5s,mb5.8
AGG Agios Georgios 88.30 352 P P 22 17 42.6 -1.4
EVIA Vianos 88.30 11 P P 22 17 43.7 -0.3
EVIA pmax pmax
comp=Z,48nm,0.9s,mb5.7
EVIA Vianos 88.30 11 P P 22 17 43.7 -0.3
comp=Z,48nm,0.9s,mb5.7
KUZU Kuzuini 88.31 340 ⇑ iP P 22 17 45.3 +1.2
ETOB Tobarra 88.40 10 P P 22 17 45.9 +1.4
comp=Z,1μm,4.1s
BLCB Balcova 88.42 348 P P 22 17 43.9 -0.7
ISP Isparta 88.47 345 P P 22 17 45.1 +0.3
ISP Isparta 88.47 345 P P 22 17 45.2 +0.4
PTEO Sao Teotonio 88.48 16 eP P 22 17 44.4 -0.5
comp=Z,181nm,1.6s,mb6.0
TIP Timpagrande 88.50 356 eP P 22 17 44.6 -0.3
comp=Z,54nm,1.1s,mb5.8
TIP LR LR
comp=Z,8μm,20.0s,MS6.1
EADA Adamuz 88.50 13 P P 22 17 44.7 -0.3
comp=Z,418nm,2.3s,mb6.4
URLA Izmir 88.50 348 ⇑ iP P 22 17 45.1 +0.1
CHOS Chios island 88.54 349 P P 22 17 44.9 -0.3
ROSC El Rosal 88.56 84 P P 22 17 43.5 -2.2
comp=Z,4.9nm,0.4s,mb5.2,baz=105,slow=20,SNR=2.4
ROSC LR LR 23 03 04.0
comp=Z,3μm,18.7s,MS5.8,baz=259,slow=39
EMIN Mina Concepcio 88.59 15 P P 22 17 44.9 -0.5
comp=Z,404nm,2.6s,mb6.3
LKR Lokris 88.61 351 P P 22 17 43.8 -1.7
EBAN Banos Encina 88.61 12 P P 22 17 45.2 -0.3
EBAN pmax pmax
comp=Z,37nm,0.9s,mb5.7

EBAN Banos Encina 88.61 12 P P 22 17 45.2 -0.3
comp=Z,37nm,0.9s,mb5.7
EGRO El Granado 88.69 15 P P 22 17 43.3 -2.7
comp=Z,266nm,2.2s,mb6.2
COBT Iskenderun 88.72 340 ⇑ iP P 22 17 47.4 +1.3
MORF Marmelete 88.72 16 eP P 22 17 45.3 -0.8
comp=Z,199nm,1.4s,mb6.2
MORF eS S 22 28 34.9 +4.7
MORF eLQ 22 49 05.8
MORF eLR LR 22 52 01.6
comp=Z,11μm,20.0s
PVAQ Vaqueiros 88.78 15 eP P 22 17 46.5 +0.2
comp=Z,153nm,1.9s,mb6.0
PVAQ eS S 22 28 31.8 +1.1
PVAQ eLQ 22 43 24.6
PVAQ eLR LR 22 51 15.8
comp=Z,13μm,22.0s
GRI Girifalco 88.87 356 P P 22 17 46.5 -0.2
comp=Z,170nm,1.3s,mb6.2
EQES Quesada 89.06 12 P P 22 17 47.2 -0.5
comp=Z,485nm,2.7s,mb6.3
GCAM G?zelcaml? 89.07 348 ⇑ iP P 22 17 47.0 -0.7
ELUQ Luque 89.14 13 P P 22 17 46.7 -1.3
ELUQ pmax pmax
comp=Z,15nm,1.0s,mb5.3
ELUQ Luque 89.14 13 P P 22 17 46.7 -1.3
comp=Z,15nm,1.0s,mb5.3
GOLH Golhisar 89.21 346 ⇑ iP P 22 17 48.3 0.0
LTK Loutraki 89.23 351 P P 22 17 46.7 -1.7
VLS Valsamata 89.28 353 P P 22 17 47.1 -1.5
CEL Celeste 89.45 357 eP P 22 17 47.8 -1.6
comp=Z,61nm,1.0s,mb5.9
CEL ePP PP 22 21 22.8 +3.0
CEL LR LR
comp=Z,6μm,21.0s,MS6.0
ECOG Cogollos-Vega 89.51 12 P P 22 17 49.4 -0.4
ECOG pmax pmax
comp=Z,40nm,1.0s,mb5.7
ECOG Cogollos-Vega 89.51 12 P P 22 17 49.4 -0.4
comp=Z,40nm,1.0s,mb5.7
ELOJ Sierra Loja 89.56 13 P P 22 17 49.6 -0.4
ELOJ pmax pmax
comp=Z,71nm,1.0s,mb6.0
ELOJ Sierra Loja 89.56 13 P P 22 17 49.6 -0.4
comp=Z,71nm,1.0s,mb6.0
ESPR Espera 89.60 14 P P 22 17 49.9 -0.2
comp=Z,336nm,2.2s,mb6.3
HYB Hyderabad 89.64 299 eP P 22 17 50.0 -0.6
HYB e 22 28 16.0
HYB eS S 22 28 41.0 +1.7
HYB pmax pmax
comp=Z,125nm,1.0s,mb6.2
HYB Hyderabad 89.64 299 ⇑ iP P 22 17 50.0 -0.6
comp=Z,125nm,1.0s,mb6.2
HYB ePP PP 22 21 19.0 -3.2
HYB eSKS 22 28 16.0
HYB eS S 22 28 41.0 +1.7
HYB e 22 28 56.0
HYB LR LR 23 06 06.0
comp=Z,16nm,16.0s
HYB Hyderabad 89.64 299 eP P 22 17 50.0 -0.6
comp=Z,125nm,1.0s,mb6.2
HYB eSKS 22 28 16.0
HYB eS S 22 28 41.0 +1.7
BDRM Kayabasi 89.67 348 ⇑ iP P 22 17 49.8 -0.7
OTAV Otavalo 89.69 90 eP P 22 17 50.4 -0.5
comp=Z,108nm,1.3s,mb6.0
OTAV ePP PP 22 21 24.1 +1.0
OTAV LR LR
comp=Z,4μm,21.0s,MS5.8
DID Didima 89.72 351 P P 22 17 48.7 -2.0
ERON Agron 89.73 12 P P 22 17 49.7 -1.1
comp=Z,38nm,1.1s,mb5.6
ARMA Armidale 89.78 214 eP P 22 17 51.1 +0.3
ARMA eS S 22 28 25.1 -15
LATR Latur 89.87 301 eP P 22 17 49.7 -2.0
BHD Baghdad 89.87 333 eP P 22 17 55.0 +3.5
BHD eS S 22 28 47.0 +5.9
APE Apeiranthos 89.91 349 P P 22 17 49.8 -1.8
SFS San Fernando 89.94 14 PFAKE 22 18 00.0 +8.2
SFS LR LR
comp=Z,19μm,20.0s,MS6.5
EGUA Guajares 89.95 12 P P 22 17 50.9 -0.9
EGUA pmax pmax
comp=Z,304nm,1.1s,mb6.5
EGUA Guajares 89.95 12 P P 22 17 50.9 -0.9
comp=Z,304nm,1.1s,mb6.5
ENIJ Nijar 89.98 11 P P 22 17 51.9 -0.1
ENIJ pmax pmax
comp=Z,14nm,0.6s,mb5.5
ENIJ Nijar 89.98 11 P P 22 17 51.9 -0.1
comp=Z,14nm,0.6s,mb5.5
EMIJ Mijas 90.05 13 P P 22 17 52.4 +0.1
comp=Z,189nm,2.0s,mb6.1
EJIF Jimena Fronter 90.06 14 P P 22 17 51.5 -0.8
EJIF pmax pmax
comp=Z,20nm,0.7s,mb5.6
EJIF Jimena Fronter 90.06 14 P P 22 17 51.5 -0.9
comp=Z,20nm,0.7s,mb5.6
PCRV Puerto La Cruz 90.13 73 LR LR 22 57 39.2
comp=Z,10μm,20.7s,MS6.2,baz=70,slow=35
AKAS Kas 90.18 346 ⇓ iP P 22 17 50.1 -2.8
GRGR Grenville 90.28 70 PFAKE 22 18 00.0 +6.3
GRGR LR LR
comp=Z,12μm,20.0s,MS6.3
PYL PYLOS 90.46 352 P P 22 17 53.1 -1.1
FITZ Fitzroy Crossi 90.56 240 eP P 22 17 53.1 -1.6
comp=Z,60nm,1.1s,mb5.8
FITZ Fitzroy Crossi 90.56 240 eP P 22 17 53.6 -1.1
comp=Z,92nm,1.3s,mb6.0
BBGH Gun Hill 90.65 67 PFAKE 22 18 10.0 +15
BBGH LR LR
comp=Z,20μm,21.0s,MS6.5
CSS Prodhromos 90.80 342 P P 22 17 55.9 +0.1
HWQ Hawqa 90.95 340 eP P 22 17 56.3 -0.2
EBNR Beni Rached 91.04 8 P P 22 17 58.4 +1.5
ASAR Alice Springs 91.07 231 P P 22 17 55.4 -1.5
comp=Z,20nm,0.9s,mb5.5,baz=33,slow=4.6,SNR=75
ASAR PKPPKP 22 43 33.1
comp=Z,1.0nm,1.1s,baz=163,slow=1.3,SNR=4.6
DFRA Djebel Bou Aff 91.08 5 P P 22 17 58.0 +0.9
POO Poona 91.18 303 ⇑ iP P 22 17 57.4 -0.4
POO AMb AMB 22 18 21.1
comp=Z,214nm,1.5s,mb6.2
OKGL Djebel Kef Gue 91.21 9 P P 22 17 59.0 +1.3
EMHD Djebel Mahouad 91.24 7 P P 22 17 58.3 +0.5
ADJB Djebel Djouab 91.32 7 P P 22 17 59.4 +1.2
EANR 'Ain N'Sour 91.34 9 P P 22 17 58.5 +0.2
BHL Bhannes 91.37 340 eP P 22 17 58.4 0.0
URZ Urewera 91.37 191 LR LR 22 56 35.6
comp=Z,20μm,18.6s,MS6.6,baz=15,slow=34
CASM Ain Smara 91.40 4 P P 22 18 00.0 +1.4
SET Setif 91.40 5 P P 22 17 59.0 +0.4
PMAR Madeira 91.43 24 eP P 22 18 00.1 +1.3
comp=Z,429nm,1.6s,mb6.5
AKET Djebel Ketaf 91.46 6 P P 22 18 00.8 +1.9
OJBR Djebel Berber 91.63 9 P P 22 18 00.0 +0.4
ATAF Djebel Tarf 91.66 6 P P 22 18 00.8 +1.0
KARN Karanos 91.73 350 P P 22 17 59.5 -0.6
ZKR Zakros 91.75 348 P P 22 17 59.2 -1.0
LAST Lasithi 91.80 349 P P 22 17 59.0 -1.4
WDD Wield Dalam 91.88 358 PFAKE 22 18 10.0 +9.2
WDD LR LR
comp=Z,6μm,19.0s,MS6.0
ETRT Tiaret 91.91 9 P P 22 18 01.6 +0.7
SIVA Sivas 92.02 349 P P 22 18 01.7 +0.3
KEST Kesra 92.02 2 P P 22 18 01.5 0.0
comp=Z,5.4nm,0.6s,mb5.0,baz=279,slow=1.8,SNR=25
KAD Karad 92.03 302 eP P 22 18 00.6 -1.2
KAD AMb AMB 22 18 28.0
comp=Z,133nm,1.6s,mb6.0
MIB Mutribah 92.26 330 eP P 22 18 01.7 -0.9
baz=330
MIB AMb AMB 22 18 06.2
comp=Z,344nm,0.9s,mb6.7,baz=330
RTC Rabat Centre 92.26 15 PFAKE 22 18 10.0 +7.4
RTC LR LR
comp=Z,4μm,20.0s,MS5.9
MDRS Chennai 92.29 295 ⇑ ix x 22 17 45.7
MDRS ex x 22 28 17.2
UMR Umm Al-Rimmam 92.37 329 eP P 22 18 02.3 -0.9
baz=329
UMR AMb AMB 22 18 09.8
comp=Z,186nm,1.5s,mb6.2,baz=329
BANOM Banah 92.69 321 P P 22 18 05.5 +0.8

SNR=5.2
KBD Kabd 92.73 329 *e*P **P** 22 18 04.1 -0.7
baz=329
KBD AMb AMB 22 18 11.6
comp=Z,106nm,1.4s,mb6.1,baz=329
NAY Al-Naaiem 92.80 329 *e*P **P** 22 18 04.1 -1.1
baz=329
NAY AMb AMB 22 18 11.7
comp=Z,86nm,1.4s,mb6.0,baz=329
RDF Al-Radifah 93.01 329 *e*P **P** 22 18 04.8 -1.3
baz=329
RDF AMb AMB 22 18 13.0
comp=Z,250nm,1.4s,mb6.5,baz=329
QRN Al-Qurain 93.06 329 *e*P **P** 22 18 05.1 -1.2
baz=329
QRN AMb AMB 22 18 13.9
comp=Z,211nm,1.8s,mb6.3,baz=329
GOA Goa 93.74 301 ⇑*i*P **P** 22 18 05.6 -4.0
GOA *i*S SKSac 22 28 39.8 -1.8
HATD Hatta, Dubai 93.75 320 ⇑P **P** 22 18 08.9 -0.7
SNR=7.5
HOQ Hoqain 94.40 319 P **P** 22 18 12.9 +0.3
SNR=11
RPN Rapa Nui 94.51 130 PFAKE 22 18 20.0 +7.2
RPN LR LR
comp=Z,6µm,20.0s,MS6.0
SMDO Samad 94.57 318 P **P** 22 18 13.1 -0.3
SNR=9.6
WBK Wadi Bani Khal 94.59 317 ⇓P **P** 22 18 13.3 -0.2
SNR=6.6
SNZO South Karori 94.69 193 PFAKE 22 18 20.0 +6.8
SNZO LR LR
comp=Z,8µm,20.0s,MS6.2
STKA Stephens Creek 94.81 221 P **P** 22 18 12.1 -2.0
comp=Z,6.0nm,1.0s,mb5.0,baz=21,slow=5.2,SNR=8.4
STKA LR LR 22 56 21.9
comp=Z,10µm,21.2s,MS6.2,baz=275,slow=33
STKA Stephens Creek 94.81 221 *e*P **P** 22 18 12.0 -2.0
comp=Z,7.8nm,1.3s,mb5.0
STKA *e*S SKSac 22 28 54.3 +8.0
STKA Stephens Creek 94.81 221 *e*P **P** 22 18 13.5 -0.5
comp=Z,7.5nm,1.3s,mb5.0
STKA *e*PP PP 22 22 05.6 +2.1
ARQ Araqi 94.93 319 P **P** 22 18 14.6 -0.5
SNR=32
JMDO Jabal Madar 95.16 318 P **P** 22 18 15.5 -0.6
SNR=10
BSY Bisya 95.19 319 P **P** 22 18 15.7 -0.5
SNR=13
MNGI Mangalore 95.34 299 *e*P **P** 22 18 17.3 +0.3
MNGI AMb AMB 22 18 22.0
comp=Z,74nm,0.9s,mb6.1
KOD Kodaikanal 96.15 296 *e*P **P** 22 18 21.0 +0.3
KOD AMb AMB 22 18 45.3
comp=Z,79nm,1.8s,mb5.8
MBWA Marble Bar 96.23 243 PFAKE 22 18 30.0 +9.2
MBWA LR LR
comp=Z,5µm,20.0s,MS6.0
PALK Pallekele 96.76 291 *e*P **P** 22 18 24.2 +0.7
PALK *e* pP 22 18 33.8 -1.1
PALK *e* 22 22 19.2
PALK pmax pmax
comp=Z,76nm,1.1s,mb6.0
PALK Pallekele 96.76 291 *e*P **P** 22 18 24.2 +0.7
comp=Z,76nm,1.1s,mb6.0
PALK *e* pP 22 18 33.8 -1.0
PALK *e*PP PP 22 22 19.2 +0.9
RPZ Rata Peaks 97.58 195 LR LR 23 02 16.8
comp=Z,7µm,18.1s,MS6.2,baz=8.3,slow=35
TRD Trivandrum 97.85 295⇓*ex* x 22 18 44.0
TRD *ex* x 22 22 56.0
NNA Nana 100.26 96 PFAKE 22 18 50.0 +11
NNA LR LR
comp=Z,4µm,20.0s,MS5.9
COCO West Island 102.55 266 PFAKE 22 19 00.0 +11
COCO LR LR
comp=Z,4µm,19.0s,MS6.0
TAU Tasmania Unive 102.56 212 PFAKE 22 19 00.0 +11
TAU LR LR
comp=Z,7µm,19.0s,MS6.2
NWAO Narrogin (SRO) 106.96 238 PFAKE 22 23 30.0 +12
NWAO LR LR
comp=Z,5µm,20.0s,MS6.1
LVC Limon Verde 113.23 97 PFAKE 22 23 40.0 +10
LVC LR LR
comp=Z,3µm,20.0s,MS5.9
TOA0 Torodi Ar. Sit 113.96 11 *e*PKiKP PKiKP 22 23 30.1 -1.6
TOA0 *e*PP PP 22 24 25.2 +0.6
TORD Torodi Ar. Bea 113.96 11 Pdiff Pdif 22 19 37.6 -2.4
comp=Z,0.4nm,0.9s,baz=8.9,slow=4.2,SNR=2.3
TORD PKP PKiKP 22 23 30.3 -1.4
comp=Z,1.6nm,0.5s,baz=338,slow=2.4,SNR=29
TORD PKKPbc PKKPbc 22 34 09.6 -1.5
comp=Z,1.3nm,0.7s,baz=163,slow=2.7,SNR=8.3
TORD PKKPab PKKPab 22 34 17.4 -5.3
comp=Z,4.3nm,0.8s,baz=183,slow=2.1,SNR=11
TORD Torodi Ar. Bea 113.96 11 Pdif Pdif 22 19 37.6 -2.4
TORD PKP PKiKP 22 23 30.3 -1.4
TORD PKKPbc PKKPbc 22 34 09.6 -1.6
TORD PKKPab PKKPab 22 34 17.4 -5.3
LCO Las Campanas 116.90 103 PFAKE 22 23 50.0 +13
LCO LR LR
comp=Z,5µm,20.0s,MS6.1
RCBR Riachuelo 119.26 57 PFAKE 22 23 50.0 +8.1
RCBR LR LR
comp=Z,9µm,20.0s,MS6.4
TIC Toumodi 119.28 19 *e*PKP1 PKPdf 22 23 40.6 -1.4
comp=Z,91nm,1.1s
DBIC Dimbokro 119.29 19 PKP PKPdf 22 23 40.1 -1.9
comp=Z,6.0nm,1.0s,baz=54,slow=3.0,SNR=9.2
DBIC PKKPbc PKKPbc 22 33 50.2 -2.2
comp=Z,2.5nm,0.9s,baz=169,slow=5.2,SNR=3.3
DBIC Dimbokro 119.29 19 *e*PKPdf PKPdf 22 23 40.7 -1.3
DBIC *e*PP PP 22 25 01.4 -0.6
DBIC LR LR
comp=Z,15µm,21.0s,MS6.6
KIC Kosan Boka 119.62 19 *e*PKP1 PKPdf 22 23 40.7 -1.9
comp=Z,172nm,1.4s
LIC Lamto 119.69 19 *e*PKP1 PKPdf 22 23 41.3 -1.5
comp=Z,42nm,0.9s
LIC Lamto 119.69 19 *e*PKIKP PKPdf 22 23 41.3 -1.5
comp=Z,30nm,0.9s
LIC *e*MLR MLR
comp=Z,23µm,21.2s,MS6.5
LIC Lamto 119.69 19 *e*PKPdf PKPdf 22 23 41.3 -1.5
LIC LR LR
comp=Z,12µm,21.3s,MS6.5
MSEY Mahe Island 120.23 307 PFAKE 22 23 50.0 +6.2
MSEY LR LR
comp=Z,8µm,20.0s,MS6.4
BDFB Brasilia 120.55 75 PFAKE 22 23 50.0 +5.8
BDFB LR LR
comp=Z,5µm,19.0s,MS6.2
CPUP Villa Florida 123.03 91 PKP PKPdf 22 23 50.2 +1.5
comp=Z,0.5nm,0.4s,baz=9.1,slow=6.3,SNR=3.8
CPUP Villa Florida 123.03 91 *e*PKPdf PKPdf 22 23 47.8 -0.9
CPUP *e*PP PP 22 25 28.1 -0.5
CPUP LR LR
comp=Z,874nm,19.0s,MS5.4
DRV Dumont d'Urvil 125.19 203 PP PP 22 25 47.0 +4.4
DRV SKS SKSdf 22 30 49.0 -11
DRV SKKS SKKSac 22 32 39.0 +2.8
DRV SP SP 22 35 57.0 +19
DRV SS SS 22 42 52.0 +15
DRV L 22 57 00.0
DRV R 23 03 00.0
PLCA Paso Flores 125.25 113 PKP PKPdf 22 23 52.9 +0.4
comp=Z,2.6nm,1.1s,baz=216,slow=5.4,SNR=2.6
PLCA Paso Flores 125.25 113 *e*PKPdf PKPdf 22 23 52.6 +0.1
PLCA *e* 22 24 03.1
PLCA *e*PP PP 22 25 43.1 -0.4
PLCA LR LR
comp=Z,6µm,20.0s,MS6.3
TRQA Tornquist 128.41 105 *e*PKPdf PKPdf 22 23 59.6 +0.9
TRQA LR LR
comp=Z,4µm,20.0s,MS6.1
CAM4 Nova Friburgo 128.98 75 (P) PKPdf 22 23 56.2 -4.0
CAM4 *i* 22 24 03.8
SBA Scott Base 131.09 187 PFAKE 22 24 10.0 +7.4
SBA LR LR
comp=Z,8µm,19.0s,MS6.4
VNDA Vanda 131.17 188 PKhKP 22 23 58.2
comp=Z,1.7nm,1.0s,baz=330,slow=6.3,SNR=3.0
VNDA SKPab 22 27 29.3
comp=Z,6.2nm,1.0s,baz=356,slow=5.3,SNR=4.6
VNDA Vanda 131.17 188 PKP PKPdf 22 23 58.2 -4.5
VNDA SKPab 22 27 29.3
CASY Casey 133.39 213 PFAKE 22 24 20.0 +13
CASY LR LR
comp=Z,7µm,19.0s,MS6.4
ABPO Ambohimpanom 136.61 307 PFAKE 22 24 20.0 +5.3
ABPO LR LR
comp=Z,10µm,20.0s,MS6.5
EFI East Falkland 138.68 118 PFAKE 22 24 30.0 +13
EFI LR LR
comp=Z,7µm,19.0s,MS6.4
LSZ Lusaka 140.55 335 *e*PKHKP 22 24 15.0
LSZ *e* 22 24 19.1
LSZ *e* 22 24 32.3
LSZ MLR MLR
comp=Z,11µm,20.0s,MS6.6
SHEL Horse Pasture 140.91 27 PFAKE 22 24 30.0 +7.4
SHEL LR LR
comp=Z,4µm,20.0s,MS6.2
PMSA Palmer Station 141.26 138 PFAKE 22 24 30.0 +8.3
PMSA LR LR
comp=Z,9µm,19.0s,MS6.5
TSUM Tsumeb 146.37 350 PFAKE 22 24 40.0 +7.9
TSUM LR LR
comp=Z,8µm,20.0s,MS6.5
LBTB Lobatse 150.53 334 *e*PKIKP PKPdf 22 24 39.5 +0.8
LBTB *e* 22 24 43.7
LBTB *e* 22 28 20.2
LBTB MLR MLR
comp=Z,9µm,21.0s,MS6.5
MAW Mawson 151.48 219 PKPbc PKPbc 22 24 43.6 -1.4
comp=Z,22nm,0.8s,baz=87,slow=1.4,SNR=33
MAW Mawson 151.48 219 *e*P PKPbc 22 24 43.5 -1.5
comp=Z,45nm,1.1s
MAW Mawson 151.48 219 *e*PKPbc PKPbc 22 24 43.8 -1.2
MAW *e*PKPab PKPab 22 24 53.6 0.0
MAW LR LR
comp=Z,10µm,20.0s,MS6.6
BOSA Boshof 154.03 332 PKP PKPdf 22 24 44.7 +0.8
comp=Z,5.5nm,1.0s,baz=345,slow=1.8,SNR=4.6
BOSA PKPbc PKPbc 22 24 51.4 -0.5
comp=Z,19nm,0.8s,baz=48,slow=2.6,SNR=26
BOSA Boshof 154.03 332 *e*PKPdf PKPdf 22 24 44.5 +0.6
BOSA *e*PKPbc PKPbc 22 24 52.6 +0.7
BOSA LR LR
comp=Z,13µm,21.0s,MS6.7
TRIS Tristan da Cun 157.09 57 PFAKE 22 25 00.0 +12
TRIS LR LR
comp=Z,6µm,20.0s,MS6.4
SUR Sutherland 158.76 338 PFAKE 22 25 00.0 +10
SUR LR LR
comp=Z,12µm,22.0s,MS6.7
VNA3 Neumayer Olymp 158.98 161 *e*PKPdf PKPdf 22 24 52.2 +3.3
VNA3 *e* 22 25 03.4
VNA3 *e* 22 25 10.1
VNA3 *e* 22 25 34.4
VNA3 *e* 22 25 43.2
VNA3 *e* 22 25 56.5
VNA2 Neumayer--Watz 159.68 162 *e*PKPdf PKPdf 22 24 52.5 +2.8
VNA2 *e* 22 25 04.7
VNA2 *e* 22 25 10.3
VNA2 *e* 22 25 34.7
VNA1 Neumayer--Stat 159.74 161 *e*PKPdf PKPab 22 25 35.1 +6.2
VNA1 *e* 22 25 43.0
SNAA Sanae 159.79 167 *e* PKPdf 22 25 30.9 +41
SNAA *e* 22 25 37.9
SNAA *e* 22 26 00.1
SNAA Sanae 159.79 167 *e*PKIKP PKPdf 22 24 51.2 +1.4
SNAA *e* 22 25 28.5
NVL N'lazarevskaya 161.76 180 PKIKP PKPdf 22 24 51.0 -1.0
NVL pmax pmax
comp=Z,36nm,2.4s

IDC ***26*** *22:09:49.3±0.6, 52.48N×168.26W, h0km, mb4.6/27, mb1 4.7/28, mb1mx4.7/34, mbtmp4.6/28, ML3.5/1, Error ellipse: s-maj=21.4km s-min=10.9km az=5.0*
BJI ***26*** *22:09:50.9, 52.76N×168.29W, h17km, mB5.6, mb4.9, Ms4.7, Msz4.5*
ISCJB ***26*** *22:09:52.3±1.3, 52.31N±0.05×168.18W±0.06, h33km±8km, mb5.0/104, Error ellipse: s-maj=9.3km s-min=5.3km az=158.5*
NEIC ***26*** *22:09:54.9±0.6, 52.46N×168.20W, h37km±4km, mb5.2/36, ML4.6(AEIC), ML4.9(PMR), Error ellipse: s-maj=8.2km s-min=4.3km az=168.0*
MOS ***26*** *22:09:55.7±0.8, 52.97N×168.69W, h33km, mb5.5/35, Error ellipse: s-maj=24.5km s-min=6.4km az=92.8*
SZGRF ***26*** *22:09:56.5, 52.62N×167.83W, h33km, mb5.2, Fox Islands, Aleutian Islands, United States*
ISC 26 22:09:54.4±1.3, 52.38N±0.05×168.15W±0.06, h34km±8km, h23km±4.5km:pP-P, n232, σ0.82/233, mb5.0/104, 60C-2D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.74**	**325**	P	**Pn**	**22 10 07.2**	**-1.0**
NIKO				S	**Sb**	**22 10 19.1**	**+0.9**
OKCE	**Okmok Cone E**	**1.05**	**359**	P	**Pn**	**22 10 12.6**	**0.0**
OKCE				S	**Sn**	**22 10 27.9**	**+1.8**
OKCD	**Okmok Cone D**	**1.05**	**1**	P	**Pn**	**22 10 12.6**	**-0.1**
UNV	**Unalaska Valle**	**1.77**	**33**	P	**Pn**	**22 10 20.9**	**-1.7**
UNV				S	**Sn**	**22 10 45.0**	**+1.1**
AKLV	**Akutan Long Va**	**2.22**	**35**	P	**Pn**	**22 10 27.6**	**-1.1**
AKUT	**Akutan**	**2.27**	**38**	*e*P	**Pn**	**22 10 29.4**	**+0.1**
ATKA	**Atka Island**	**3.72**	**270**	P	**Pn**	**22 10 50.2**	**+0.9**
FALS	**False Pass**	**3.76**	**47**	P	**Pn**	**22 10 48.5**	**-1.2**
SPIA	**Saint Paul Isl**	**4.96**	**347**	P	**Pn**	**22 11 08.1**	**+1.8**
SDPT	**Sand Point**	**5.43**	**54**	P	**Pn**	**22 11 12.2**	**-0.5**
KDAK	**Kodiak Island**	**10.43**	**53**	Pn	**Pn**	**22 12 17.7**	**-3.5**
KDAK	9.7nm,0.3s,baz=249,slow=7.1,SNR=11			Sn	**Sn**	**22 14 08.2**	**-8.5**
	baz=319,slow=19,SNR=3.5						
FX1	**Attu Island--F**	**11.37**	**280**	Pn	**Pn**	**22 12 33.9**	**-0.2**
	1.1nm,0.3s,baz=270,slow=20,SNR=3.3						
PMR	**Palmer**	**13.83**	**41**	*e*P	**Pn**	**22 13 07.0**	**-0.6**
PMR				pmax	pmax		
	comp=Z,114nm,1.5s						
PMR	**Palmer**	**13.83**	**41**	*e*P	**Pn**	**22 13 07.0**	**-0.6**
	comp=Z,114nm,1.5s						
BILL	**Bilibino**	**19.95**	**332**	*e*P	**Pn**	**22 14 25.9**	**+1.1**
BILL				pmax	pmax		
	comp=Z,46nm,1.2s						
PET	**Petropavlovsk**	**20.03**	**285**	*i* P	**P**	**22 14 24.8**	**+0.8**
PET				pmax	pmax		
	comp=Z,73nm,0.7s						
PETK	**Petropavlovsk-**	**20.58**	**286**	P	**P**	**22 14 28.9**	**-1.1**
	comp=Z,27nm,0.5s,baz=83,slow=14,SNR=13						
DLBC	**Dease Lake**	**22.24**	**59**	P	**P**	**22 14 50.8**	**+3.0**
	comp=Z,19nm,1.1s,mb4.4,baz=294,slow=12,SNR=2.5						
SEY	**Seymchan**	**23.21**	**312**	*e*P	**P**	**22 14 58.6**	**+0.6**
YKA	**Yellowknife Ar**	**29.67**	**49**	P	**P**	**22 15 57.7**	**+1.4**
	comp=Z,2.4nm,0.5s,mb4.2,baz=276,slow=8.8,SNR=6.0						
YKA	**Yellowknife Ar**	**29.67**	**49**	P	**P**	**22 15 57.7**	**+1.4**
YBH	**Yreka Blue Hor**	**32.23**	**91**	P	**P**	**22 16 21.1**	**+2.0**
	comp=Z,4.2nm,0.8s,mb4.3,baz=334,slow=8.6,SNR=5.8						
TIXI	**Tiksi**	**33.12**	**329**	*e*P	**P**	**22 16 25.5**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
YAK	**Yakutsk**	**33.73**	**311**	*e*P	**P**	**22 16 31.5**	**-0.5**
YAK				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
NVAR	**Mina Array Bea**	**36.92**	**92**	P	**P**	**22 17 01.2**	**+1.6**
	comp=Z,2.9nm,0.7s,mb4.2,baz=302,slow=8.6,SNR=4.7						
PDAR	**Pinedale Array**	**39.67**	**80**	P	**P**	**22 17 23.0**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.2,baz=278,slow=2.6,SNR=4.5						
MJAR	**Matsushiro Arr**	**40.44**	**269**	P	**P**	**22 17 29.3**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.1,baz=36,slow=5.9,SNR=4.6						
MJAR	**Matsushiro Arr**	**40.44**	**269**	P	**P**	**22 17 29.3**	**0.0**
MAJO	**Matsushiro**	**40.45**	**269**	*e*P	**P**	**22 17 29.6**	**+0.4**
MAT	**Matsushiro**	**40.45**	**269**	P	**P**	**22 17 29.2**	**0.0**
MDJ	**Mudanjiang**	**40.82**	**285**	P	**P**	**22 17 33.8**	**+1.6**
MDJ				PP	PP	22 19 07.8	+1.4
MDJ				SCP	ScP	22 23 25.5	+6.2
MDJ				S	**S**	**22 23 45.8**	**+5.1**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,1µm,9.1s						
PFO	**Pinyon Flat Ob**	**41.20**	**96**	P	**P**	**22 17 36.0**	**+0.5**
	comp=Z,1.6nm,0.5s,mb3.9,baz=284,slow=8.3,SNR=2.9						
CN2	**Changchun**	**43.73**	**286**	*e*P	**P**	**22 17 55.3**	**-0.6**
CN2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						

KSRS Korea Array 46.15 278 P **P** 22 18 15.1 -0.2
comp=Z,13nm,0.9s,mb4.9,baz=58,slow=7.6,SNR=9.7
ANMO Albuquerque 46.42 87⇑*e*P pP 22 18 32.9 +5.3
ANMO pmax pmax
comp=Z,24nm,2.5s
SPITS Spitsbergen Ar 49.68 359 P **P** 22 18 39.9 -2.2
comp=Z,4.5nm,0.7s,mb4.6,baz=98,slow=8.1,SNR=10
SUMG Summit 50.55 17 *e*P **P** 22 18 48.5 -0.2
TLY Talaya 50.94 307 *e*P **P** 22 18 51.5 -0.4
BJI Beijing 51.49 288 P **P** 22 18 57.5 +1.3
BJI AMB AMB
comp=Z,6.0nm,0.6s,mb4.7
SONM Songino Array 51.94 301 P **P** 22 18 59.7 +0.3
comp=Z,9.6nm,0.9s,mb4.8,baz=59,slow=6.6,SNR=6.0
TXAR Lajitas Array 52.00 90 P **P** 22 18 59.9 -0.2
comp=Z,5.0nm,0.6s,mb4.6,baz=304,slow=5.6,SNR=12
TXAR Lajitas Array 52.00 90 P **P** 22 18 59.9 -0.2
HHC Hu-ho-hao-te 53.62 292 *e*P **P** 22 19 12.3 +0.4
HHC AMB AMB
comp=Z,27nm,1.3s,mb5.0
HHC AMB AMB
comp=Z,1µm,8.7s
NJ2 Nanjing 55.29 279 *e*P **P** 22 19 24.3 +0.1
NJ2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
KEV Kevo 57.68 354 *e*p **P** 22 19 39.7 -0.9
comp=Z,2.1nm,0.4s,mb4.5
KEV Kevo 57.68 354 *e*P **P** 22 19 39.7 -0.9
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
ZALV Zalesovo Beam 57.92 318 P **P** 22 19 42.2 -0.3
comp=Z,2.6nm,0.7s,mb4.4,baz=39,slow=7.4,SNR=2.7
ARCES ARCESS Array B 57.99 354 P **P** 22 19 41.5 -1.3
comp=Z,11nm,0.9s,mb4.9,baz=353,slow=7.3,SNR=9.5
XAN Xi'an 59.81 288 P **P** 22 19 55.0 -1.0
XAN AP pP 22 20 03.3 -3.2
XAN PP PP 22 22 09.3 +1.5
XAN S **S** **22 28 10.5 +5.7**
XAN AMB AMB
comp=Z,39nm,1.6s,mb5.2
SSLB Suanglung 59.96 271 *e*P **P** 22 19 57.2 +0.1
GTA Gaotai 61.14 298 *e*P **P** 22 20 04.5 -0.5
GTA AP pP 22 20 09.3 -6.2
GTA XP sP 22 20 12.0 -7.5
GTA S **S** **22 28 21.0 -0.7**
GTA XS sS 22 28 29.3 -10
GTA SS SS 22 32 22.0 +0.8
GTA AMB AMB
comp=Z,23nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,379nm,5.4s
LZH Lanzhou 61.28 293 *e*P **P** 22 20 06.8 +0.8
LZH AP pP 22 20 17.0 +0.5
LZH XP sP 22 20 20.5 0.0
LZH AMB AMB
comp=Z,78nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,293nm,4.5s
KURK Kurchatov 62.86 319 P **P** 22 20 17.2 +0.8
comp=Z,5.6nm,0.9s,mb4.7,baz=47,slow=7.7,SNR=5.1
JOF Joensuu 64.03 350 *e*p **P** 22 20 23.4 -0.5
comp=Z,1.8nm,0.4s,mb4.5
JOF Joensuu 64.03 350 *e*P **P** 22 20 23.4 -0.5
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
BVAR Borovoye Array 64.13 325 P **P** 22 20 24.1 -0.5
comp=Z,5.9nm,0.5s,mb4.9,baz=56,slow=6.3,SNR=8.8
MKAR Makanchi Array 64.34 314 P **P** 22 20 26.4 +0.2
comp=Z,2.9nm,0.8s,mb4.4,baz=41,slow=4.6,SNR=3.8
ARU Arti 64.95 333⇑*e*P **P** 22 20 28.8 -1.2
ARU pmax pmax
comp=Z,34nm,1.7s,mb5.1
CD2 Chengdu 65.08 289 P **P** 22 20 32.0 +0.8
CD2 AMB AMB
comp=Z,70nm,1.3s,mb5.5
KAF Kangasniemi 65.28 353 *e*p **P** 22 20 30.4 -1.6
comp=Z,6.0nm,0.5s,mb4.9
KAF Kangasniemi 65.28 353 *e*P **P** 22 20 30.4 -1.6
KAF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
GYA Guiyang 66.66 283 P **P** 22 20 44.3 +2.9
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
NOA NORSAR Array B 66.93 0 P **P** 22 20 41.7 -0.9
comp=Z,5.0nm,0.8s,mb4.6,baz=359,slow=6.3,SNR=4.9
KMI Kunming 69.99 285 P **P** 22 21 03.0 +0.7
KMI AP pP 22 21 07.3 -5.7
KMI XP sP 22 21 10.3 -6.7
KMI AMB AMB
comp=Z,19nm,1.6s,mb4.8
AKTK Aktyubinsk 70.38 331 P **P** 22 21 03.7 -0.6
AKTO Aktyubinsk 70.38 331 P **P** 22 21 03.7 -0.6
comp=Z,9.7nm,0.8s,mb4.8,baz=27,slow=7.1,SNR=4.5
OBN Obninsk 70.93 345 *e*P **P** 22 21 06.0 -1.6
OBN pmax pmax
comp=Z,29nm,1.7s,mb4.9
SUW Suwalki 73.56 353 *e*P **P** 22 21 22.0 -1.3
IBBN Ibbenburen 75.63 3 *e*P **P** 22 21 35.5 +0.2
comp=Z,58nm,1.5s,mb5.3
CLZ Clausthal 76.15 1 *e*P **P** 22 21 38.7 +0.4
CLZ pmax pmax
comp=Z,36nm,1.3s,mb5.1
CLZ Clausthal 76.15 1 *e*P **P** 22 21 38.7 +0.4
comp=Z,36nm,1.3s,mb5.1
AKASG Malin Array Be 76.25 349 P **P** 22 21 37.6 -1.3
comp=Z,8.7nm,0.8s,mb4.8,baz=15,slow=5.8,SNR=7.2
BUG Bochum-Univer 76.49 3 *e*P **P** 22 21 40.0 -0.2
comp=Z,52nm,1.4s,mb5.3
TAPN Taplejung 76.83 298 *e*P **P** 22 21 42.9 +0.3
comp=Z,88nm,1.1s,mb5.6
CHTO Chiang Mai 77.07 284 *e*P **P** 22 21 43.8 -0.2
BRG Berggiesshubel 77.11 359 *e*P **P** 22 21 43.8 +0.1
comp=Z,18nm,1.3s,mb4.8
HGN Heimansgroeve 77.11 4 *e*PPP pP 22 21 51.6 -2.9
HGN Heimansgroeve 77.11 4 *e*SS S 22 31 46.2 +16
CMAR Chiang Mai Arr 77.34 284 P **P** 22 21 44.2 -1.3
comp=Z,17nm,1.0s,mb4.9,baz=22,slow=5.7,SNR=15
MOX Moxa 77.36 0 *e*P **P** 22 21 44.9 -0.2
comp=Z,26nm,1.5s,mb4.9
GUN Gumba 77.37 299 *e*P **P** 22 21 45.6 0.0
comp=Z,113nm,1.1s,mb5.7
ODAN Odare 77.39 298 *e*P **P** 22 21 43.8 -1.9
comp=Z,64nm,1.2s,mb5.4
JIRN Jiri 77.41 299 *e*P **P** 22 21 44.7 -1.1
comp=Z,124nm,1.1s,mb5.7
UPC Upice 77.43 357 *e*P **P** 22 21 45.3 -0.2
DPC Dobruska-Polom 77.58 357 *e*P **P** 22 21 46.9 +0.5
TANN Tannenbergstha 77.58 360 *e*P **P** 22 21 46.8 +0.4
comp=Z,21nm,1.7s,mb4.8
GIVF Givet 77.72 5 *e*P **P** 22 21 46.8 -0.4
comp=Z,193nm,1.7s,mb5.5
GIVF Givet 77.72 5 *e*P **P** 22 21 46.8 -0.4
GIVF pmax pmax
comp=Z,96nm,1.7s,mb5.5
GIVF Givet 77.72 5 *e*P **P** 22 21 46.8 -0.4
comp=Z,96nm,1.7s,mb5.5
BAIF Baives 77.73 5 *e*P **P** 22 21 47.1 -0.1
comp=Z,74nm,1.4s,mb5.1
BAIF Baives 77.73 5 *e*P **P** 22 21 47.1 -0.1
BAIF pmax pmax
comp=Z,37nm,1.4s,mb5.1
BAIF Baives 77.73 5 *e*P **P** 22 21 47.1 -0.1
comp=Z,37nm,1.4s,mb5.1
TNS Taunus Mts 77.74 2 *e*P **P** 22 21 47.3 +0.1
TNS pmax pmax
comp=Z,24nm,1.4s,mb4.9
TNS Taunus Mts 77.74 2 *e*P **P** 22 21 47.3 +0.1
comp=Z,24nm,1.4s,mb4.9
RAMN Ramite 77.75 298 *e*P **P** 22 21 47.3 -0.4
comp=Z,112nm,1.0s,mb5.8
KKN Kakani 77.79 300 *e*P **P** 22 21 47.3 -0.6
comp=Z,76nm,1.2s,mb5.5
PKI Pulchoki 77.89 299 *e*P **P** 22 21 48.4 -0.1
comp=Z,160nm,1.4s,mb5.8
PKIN Phulchoki 77.90 299 *e*P **P** 22 21 47.8 -0.7
comp=Z,106nm,1.4s,mb5.6
KWP Kalwaria 77.95 353⇑*i*P **P** 22 21 49.5 +1.1
GKN Gorkha 77.96 300 *e*P **P** 22 21 48.6 -0.3
comp=Z,33nm,0.6s,mb5.4
PRU Pruhonice 77.99 358 *e*P **P** 22 21 46.3 -2.3
OKC Ostrava-Krasne 78.02 356 *e*P **P** 22 21 48.2 -0.6
DMN Daman 78.03 300 *e*P **P** 22 21 49.3 +0.1
comp=Z,141nm,1.4s,mb5.7
DANN Dangsing 78.15 301 *e*P **P** 22 21 50.4 +0.5
comp=Z,131nm,0.9s,mb5.8
ROTZ Rotzenmuhle 78.23 360 *e*P **P** 22 21 50.1 +0.1

comp=Z,24nm,1.5s,mb4.9
GRA1 Grafenberg Arr 78.31 0 *e*P **P 22 21 50.3 -0.1**
comp=Z,48nm,1.4s,mb5.2
GRF Grafenberg Arr 78.31 0 *e*P **P 22 21 50.3 -0.1**
GRF pmax pmax
comp=Z,48nm,1.4s,mb5.2
GRF Grafenberg Arr 78.31 0 *e*P **P 22 21 50.3 -0.1**
GRF pmax pmax
comp=Z,48nm,1.4s,mb5.2
GRF Grafenberg Arr 78.31 0 *e*P **P 22 21 50.3 -0.1**
comp=Z,48nm,1.4s,mb5.2
VRAC Vranov 78.61 357 P **P 22 21 52.3 +0.2**
comp=Z,11nm,1.0s,mb4.7,baz=10,slow=6.4,SNR=4.2
VRAC Vranov 78.61 357⇑*i*P **P 22 21 52.5 +0.4**
FLN La Foliniere 78.69 8⇑*i*P **P 22 21 52.0 -0.6**
KOLN Koldanda 78.69 301 *e*P **P 22 21 52.6 -0.3**
comp=Z,129nm,1.5s,mb5.7
ROSF Rostrenen 78.84 10 *e*P **P 22 21 53.2 -0.2**
WET Wettzell 78.85 359 *e*P **P 22 21 53.5 +0.1**
WET pmax pmax
comp=Z,28nm,1.5s,mb5.0
WET Wettzell 78.85 359 *e*P **P 22 21 53.5 +0.1**
comp=Z,28nm,1.5s,mb5.0
KHC Kasperske Hory 78.86 359 *e*P **P 22 21 54.3 +0.8**
LDF La Druitiere 78.89 8⇑*i*P **P 22 21 53.2 -0.5**
SGMF Saint Gilles 79.00 10 *e*P **P 22 21 53.9 -0.3**
GRR Gorron 79.03 9⇑*i*P **P 22 21 54.1 -0.3**
comp=Z,55nm,1.2s,mb5.1
GRR Gorron 79.03 9⇑*i*P **P 22 21 54.1 -0.3**
GRR pmax pmax
comp=Z,27nm,1.2s,mb5.0
GRR Gorron 79.03 9⇑*i*P **P 22 21 54.1 -0.3**
comp=Z,27nm,1.2s,mb5.1
GEC2 GERESS Array S 79.14 359 *e*P **P 22 21 54.1 -0.9**
GEC2 pmax pmax
comp=Z,32nm,1.4s,mb5.1
GEC2 GERESS Array S 79.14 359 *e*P **P 22 21 54.1 -0.9**
comp=Z,32nm,1.4s,mb5.1
GERES GERESS Array B 79.14 359 P **P 22 21 55.0 0.0**
comp=Z,4.5nm,1.0s,mb4.3,baz=29,slow=3.0,SNR=5.9
STU Stuttgart 79.20 2 *e*P **P 22 21 55.0 -0.4**
comp=Z,25nm,1.1s,mb5.1
QUIF Quistinic 79.27 10 *e*P **P 22 21 55.2 -0.5**
comp=Z,87nm,1.5s,mb5.2
QUIF Quistinic 79.27 10 *e*P **P 22 21 55.2 -0.5**
QUIF pmax pmax
comp=Z,44nm,1.5s,mb5.2
QUIF Quistinic 79.27 10 *e*P **P 22 21 55.2 -0.5**
comp=Z,44nm,1.5s,mb5.2
MEZF Maizieres J'vi 79.33 5 *e*P **P 22 21 56.1 0.0**
comp=Z,142nm,1.8s,mb5.3
MEZF Maizieres J'vi 79.33 5 *e*P **P 22 21 56.1 0.0**
comp=Z,142nm,1.8s,mb5.6
TRPA Tarpa 79.46 353⇑*i*P **P 22 21 57.5 +0.8**
CDF Champ du Feu 79.51 3 *e*P **P 22 21 57.0 -0.1**
comp=Z,55nm,1.5s,mb5.0
CDF Champ du Feu 79.51 3 *e*P **P 22 21 57.0 -0.1**
CDF pmax pmax
comp=Z,28nm,1.5s,mb5.0
CDF Champ du Feu 79.51 3 *e*P **P 22 21 57.0 -0.1**
comp=Z,28nm,1.5s,mb5.0
BFO Black Forest 79.63 2 *e*P **P 22 21 57.2 -0.5**
BFO pmax pmax
comp=Z,34nm,1.5s,mb5.1
BFO Black Forest 79.63 2 *e*P **P 22 21 57.2 -0.5**
comp=Z,34nm,1.5s,mb5.1
ECH Echery 79.71 3 *e*P **P 22 21 57.4 -0.7**
FUR Furstenfeldbru 79.83 0 *e*P **P 22 21 57.5 -1.3**
FUR pmax pmax
comp=Z,44nm,1.3s,mb5.2
FUR Furstenfeldbru 79.83 0 *e*P **P 22 21 57.5 -1.3**
comp=Z,44nm,1.3s,mb5.2
HAU Haudompre 79.89 4 *e*P **P 22 21 58.9 -0.2**
comp=Z,48nm,1.4s,mb4.9
HAU Haudompre 79.89 4 *e*P **P 22 21 58.9 -0.2**
HAU pmax pmax
comp=Z,24nm,1.4s,mb4.9
HAU Haudompre 79.89 4 *e*P **P 22 21 58.9 -0.2**
comp=Z,24nm,1.4s,mb4.9
KIS Kishinev 79.94 348 *e*PPP PcP 22 22 10.0 +3.1
KIS Kishinev 79.94 348 *e*SS 22 32 50.0
KIS eSSS 22 36 10.0
KIS LRM 22 59 40.0
comp=Z,13μm,17.0s
CONA Conrad Observa 80.02 357⇑*i*P **P 22 22 00.4 +0.6**
comp=Z,32nm,1.2s,mb5.1
CSNA Conrad Observa 80.02 357⇑*i*P **P 22 22 00.4 +0.7**
comp=Z,29nm,1.2s,mb5.1
HINF Hinteralfeld 80.09 3 *e*P **P 22 22 00.0 -0.2**
comp=Z,54nm,1.3s,mb5.0
HINF Hinteralfeld 80.09 3 *e*P **P 22 22 00.0 -0.2**
HINF pmax pmax
comp=Z,27nm,1.3s,mb5.0
HINF Hinteralfeld 80.09 3 *e*P **P 22 22 00.0 -0.2**
comp=Z,27nm,1.3s,mb5.0
KIV Kislovodsk 80.43 338⇑*e*P **P 22 22 02.0 -0.1**
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
LOR Lormes 80.50 6⇑*i*P **P 22 22 02.2 -0.2**
comp=Z,79nm,1.5s,mb5.1
LOR Lormes 80.50 6⇑*i*P **P 22 22 02.2 -0.2**
LOR pmax pmax
comp=Z,39nm,1.5s,mb5.1
LOR Lormes 80.50 6⇑*i*P **P 22 22 02.2 -0.2**
comp=Z,39nm,1.5s,mb5.1
SSF Saint Saulge 80.68 6⇑*i*P **P 22 22 03.3 -0.1**
comp=Z,91nm,1.4s,mb5.2
SSF Saint Saulge 80.68 6⇑*i*P **P 22 22 03.3 -0.1**
SSF pmax pmax
comp=Z,46nm,1.4s,mb5.2
SSF Saint Saulge 80.68 6⇑*i*P **P 22 22 03.3 -0.1**
comp=Z,46nm,1.4s,mb5.2
DRGR 80.77 352⇑*i*P **P 22 22 04.2 +0.3**
MFF Saint Martin d 80.86 8⇑*i*P **P 22 22 04.2 -0.2**
comp=Z,108nm,1.4s,mb5.3
MFF Saint Martin d 80.86 8⇑*i*P **P 22 22 04.2 -0.2**
MFF pmax pmax
comp=Z,54nm,1.4s,mb5.3
MFF Saint Martin d 80.86 8⇑*i*P **P 22 22 04.2 -0.2**
comp=Z,54nm,1.4s,mb5.3
KBA Koelnbreinsper 80.92 359⇑*i*P **P 22 22 05.8 +1.2**
comp=Z,72nm,1.3s,mb5.4
AVF Avril sur Loir 80.94 6 *e*P **P 22 22 04.4 -0.4**
comp=Z,69nm,1.4s,mb5.1
AVF Avril sur Loir 80.94 6 *e*P **P 22 22 04.4 -0.4**
AVF pmax pmax
comp=Z,34nm,1.4s,mb5.1
AVF Avril sur Loir 80.94 6 *e*P **P 22 22 04.4 -0.4**
comp=Z,34nm,1.4s,mb5.1
FETA Feichten 80.98 1⇓*i*P **P 22 22 05.6 +0.7**
comp=Z,36nm,1.3s,mb5.1
SMF Signal de Mont 81.12 6 *e*P **P 22 22 05.4 -0.3**
comp=Z,120nm,1.5s,mb5.3
SMF Signal de Mont 81.12 6 *e*P **P 22 22 05.4 -0.3**
SMF pmax pmax
comp=Z,60nm,1.5s,mb5.3
SMF Signal de Mont 81.12 6 *e*P **P 22 22 05.4 -0.3**
comp=Z,60nm,1.5s,mb5.3
BGF Bois d'Agland 81.14 6⇑*i*P **P 22 22 05.7 -0.1**
comp=Z,97nm,1.5s,mb5.2
BGF Bois d'Agland 81.14 6⇑*i*P **P 22 22 05.7 -0.1**
BGF pmax pmax
comp=Z,49nm,1.5s,mb5.2
BGF Bois d'Agland 81.14 6⇑*i*P **P 22 22 05.7 -0.1**
comp=Z,49nm,1.5s,mb5.2
DAVOS Davos 81.15 1 P **P 22 22 06.9 +1.0**
DAVOX Davos/Dischmat 81.21 1 P **P 22 22 06.9 +0.7**
comp=Z,6.4nm,0.6s,mb4.7,baz=295,slow=5.1,SNR=7.6
ABTA Abfaltersbach 81.25 360⇑*i*P **P 22 22 06.7 +0.3**
comp=Z,28nm,1.2s,mb5.1
CABF La Chapelle 81.27 4 *e*P **P 22 22 06.9 +0.4**
comp=Z,160nm,1.5s,mb5.4
CABF La Chapelle 81.27 4 *e*P **P 22 22 06.9 +0.4**
CABF pmax pmax
comp=Z,80nm,1.5s,mb5.4
CABF La Chapelle 81.27 4 *e*P **P 22 22 06.9 +0.4**
comp=Z,80nm,1.5s,mb5.4
SOKA Soboth 81.29 358⇑*i*P **P 22 22 06.7 +0.1**
comp=Z,66nm,1.4s,mb5.4
TCF Toulx Ste Croi 81.37 7⇑*i*P **P 22 22 06.8 -0.2**
comp=Z,66nm,1.5s,mb5.0
TCF Toulx Ste Croi 81.37 7⇑*i*P **P 22 22 06.8 -0.2**
TCF pmax pmax
comp=Z,33nm,1.5s,mb5.0
TCF Toulx Ste Croi 81.37 7⇑*i*P **P 22 22 06.8 -0.2**
comp=Z,33nm,1.5s,mb5.0
TUE Stuetta 81.51 2 *e*P **P 22 22 07.9 +0.1**
VOIR 81.91 351⇓*i*P **P 22 22 12.6 +2.7**
BZS Buzias 82.03 353⇑*i*P **P 22 22 10.6 +0.1**
GZR Gura Zlata 82.16 352⇑*i*P **P 22 22 11.3 +0.1**
RJF Les Rejaudoux 82.29 7 *e*P **P 22 22 11.3 -0.6**
comp=Z,143nm,1.7s,mb5.3
RJF Les Rejaudoux 82.29 7 *e*P **P 22 22 11.3 -0.6**
RJF pmax pmax
comp=Z,71nm,1.7s,mb5.3
RJF Les Rejaudoux 82.29 7 *e*P **P 22 22 11.3 -0.6**
comp=Z,71nm,1.7s,mb5.3
LPL La Plagne 82.39 4 *e*P **P 22 22 13.7 +1.3**
comp=Z,38nm,1.2s,mb4.9
LPL La Plagne 82.39 4 *e*P **P 22 22 13.7 +1.3**
LPL pmax pmax
comp=Z,19nm,1.2s,mb4.9
LPL La Plagne 82.39 4 *e*P **P 22 22 13.7 +1.3**
comp=Z,19nm,1.2s,mb4.9
LPG La Plagne 82.41 4 *e*P **P 22 22 14.1 +1.6**
comp=Z,75nm,1.5s,mb5.1
LPG La Plagne 82.41 4 *e*P **P 22 22 14.1 +1.6**
LPG pmax pmax
comp=Z,38nm,1.5s,mb5.1
LPG La Plagne 82.41 4 *e*P **P 22 22 14.1 +1.6**
comp=Z,38nm,1.5s,mb5.1
TIRR Tirgusor 82.49 348⇑*i*P **P 22 22 12.9 -0.1**
LFF La Frestale 82.59 8 *e*P **P 22 22 13.4 -0.1**
CAF Calviac 82.71 7⇑*i*P **P 22 22 14.1 0.0**
comp=Z,67nm,1.5s,mb5.1
CAF Calviac 82.71 7⇑*i*P **P 22 22 14.1 0.0**
CAF pmax pmax
comp=Z,33nm,1.5s,mb5.1
CAF Calviac 82.71 7⇑*i*P **P 22 22 14.1 0.0**
comp=Z,33nm,1.5s,mb5.2
ORIF Oris-en-Rattie 82.95 4⇑*i*P **P 22 22 16.0 +0.6**
VIVF Saint-Julien-l 82.95 5⇑*i*P **P 22 22 15.7 +0.3**
MBDF Montbardon 83.18 4⇑*i*P **P 22 22 17.8 +1.3**
comp=Z,42nm,1.0s,mb5.1
MBDF Montbardon 83.18 4⇑*i*P **P 22 22 17.8 +1.3**
MBDF pmax pmax
comp=Z,21nm,1.0s,mb5.1
MBDF Montbardon 83.18 4⇑*i*P **P 22 22 17.8 +1.3**
comp=Z,21nm,1.0s,mb5.1
LASF Ste Croix 83.68 6⇑*i*P **P 22 22 19.9 +0.8**
comp=Z,180nm,1.8s,mb5.6
SMRF Simiane la Rot 83.87 5 *e*P **P 22 22 21.3 +1.2**
comp=Z,84nm,1.4s,mb5.4
SMRF Simiane la Rot 83.87 5 *e*P **P 22 22 21.3 +1.2**
comp=Z,84nm,1.4s,mb5.7
SBF Sospel 84.06 3⇑*i*P **P 22 22 21.4 +0.3**
SJPF Ste Jean 84.22 10 *e*P **P 22 22 22.2 +0.3**
MTLF Montolieu 84.30 7⇑*i*P **P 22 22 22.7 +0.4**
comp=Z,89nm,1.4s,mb5.4
MTLF Montolieu 84.30 7⇑*i*P **P 22 22 22.7 +0.4**
MTLF pmax pmax
comp=Z,44nm,1.4s,mb5.4
MTLF Montolieu 84.30 7⇑*i*P **P 22 22 22.7 +0.4**
comp=Z,44nm,1.4s,mb5.4
FRF La Foret Royal 84.34 4 *e*P **P 22 22 22.7 +0.2**
EPF Esparros 84.45 8 *e*P **P 22 22 22.5 -0.6**
ETSF Etsaut 84.50 9⇑*i*P **P 22 22 23.9 +0.6**
comp=Z,49nm,1.0s,mb5.3
ETSF Etsaut 84.50 9⇑*i*P **P 22 22 23.9 +0.6**
ETSF pmax pmax
comp=Z,24nm,1.0s,mb5.3
ETSF Etsaut 84.50 9⇑*i*P **P 22 22 23.9 +0.6**
comp=Z,24nm,1.0s,mb5.3
LMR La Mourre 84.56 4⇑*i*P **P 22 22 24.1 +0.5**
comp=Z,88nm,1.4s,mb5.4
LMR La Mourre 84.56 4⇑*i*P **P 22 22 24.1 +0.5**
LMR pmax pmax
comp=Z,44nm,1.4s,mb5.4
LMR La Mourre 84.56 4⇑*i*P **P 22 22 24.1 +0.5**
comp=Z,44nm,1.4s,mb5.4
PGF Pioggiola 85.42 2⇑*i*P **P 22 22 28.3 +0.3**
comp=Z,150nm,1.3s,mb5.7
PGF Pioggiola 85.42 2⇑*i*P **P 22 22 28.3 +0.3**
PGF pmax pmax
comp=Z,75nm,1.3s,mb5.7
PGF Pioggiola 85.42 2⇑*i*P **P 22 22 28.3 +0.3**
comp=Z,75nm,1.3s,mb5.7
BR131 Keskin Array S 86.34 343 *e*P **P 22 22 33.0 +0.5**
BRTR Keskin Array B 86.34 343 P **P 22 22 33.6 +1.0**
comp=Z,144nm,1.1s,mb5.1,baz=29,slow=2.8,SNR=7.9
ESDC Sonseca Array 87.30 12 P **P 22 22 36.6 -0.6**
comp=Z,2.8nm,0.7s,mb4.6,baz=346,slow=4.5,SNR=9.8
WRA Warramunga Arr 87.60 233 P **P 22 22 38.7 -0.1**
comp=Z,0.8nm,0.6s,mb4.1,baz=35,slow=6.2,SNR=3.0
HYB Hyderabad 89.80 299 *i*P **P 22 22 50.0 +0.6**
HYB Hyderabad 89.80 299 *e*P **P 22 22 50.0 +0.6**
ASAR Alice Springs 90.98 231 P **P 22 22 54.2 -0.3**
comp=Z,2.8nm,0.9s,mb4.6,baz=24,slow=4.4,SNR=4.3
TORD Torodi Ar. Bea 114.16 11 PKP PKiKP 22 28 30.6 +0.5
comp=Z,1.1nm,0.9s,baz=241,slow=5.2,SNR=4.1

*IDC **26** 22:22:54.3±1.2,5258N×168.24W,h0km,mb3.8/11, mb1 4.0/12,mb1mx3.9/27,mbtmp3.8/12,ML3.1/1,Error ellipse: s-maj=36.5km s-min=14.7km az=0.0*
*NEIC **26** 22:22:56.9,5225N×168.07W,h26km,ML3.3(AEIC),After AEIC.*
*ISCJB **26** 22:22:58.9±1.8,524N±02×1682W±0.1,h55km±12km, mb3.9/10,Error ellipse: s-maj=26.1km s-min=10.3km az=167.4*
ISC 26 22:22:58.6±1.6,524N±01×16815W±010,h35km±13km,n23, σ0≥92/25,mb3.9/10,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.76**	**326**	P		**Pn**	**22 23 12.2**	**-0.6**
NIKO				S		**Sn**	**22 23 24.5**	**+1.6**
OKFG	**Magazine Ridge**	**1.07**	**8**	P		**Pn**	**22 23 16.8**	**-0.3**
OKCE	**Okmok Cone E**	**1.08**	**360**	P		**Pn**	**22 23 17.3**	**+0.1**
OKCD	**Okmok Cone D**	**1.08**	**1**	P		**Pn**	**22 23 17.7**	**+0.5**
UNV	**Unalaska Valle**	**1.80**	**33**	P		**Pn**	**22 23 26.2**	**-0.9**
UNV				S		**Sn**	**22 23 49.0**	**+0.4**
KDAK	**Kodiak Island**	**10.44**	**52**	Pn		**Pn**	**22 25 24.2**	**-1.5**
	0.3nm,0.3s,baz=180,slow=8.1,SNR=3.6							
KDAK	**Kodiak Island**	**10.44**	**52**	Pn		**Pn**	**22 25 24.2**	**-1.5**
FX1	**Attu Island--F**	**11.37**	**280**	Pn		**Pn**	**22 25 38.8**	**+0.4**
	0.5nm,0.3s,baz=108,slow=20,SNR=4.6							
PETK	**Petropavlovsk-**	**20.59**	**286**	P		**P**	**22 27 33.2**	**-1.0**
	2.4nm,0.6s,baz=84,slow=13,SNR=7.1							
PETK	**Petropavlovsk-**	**20.59**	**286**	P		**P**	**22 27 33.2**	**-1.0**
YKA	**Yellowknife Ar**	**29.69**	**49**	P		**P**	**22 29 02.5**	**+1.8**
	0.2nm,0.5s,mb3.1,baz=270,slow=8.0,SNR=4.6							
YKA	**Yellowknife Ar**	**29.69**	**49**	P		**P**	**22 29 02.5**	**+1.8**
NVAR	**Mina Array Bea**	**36.92**	**92**	P		**P**	**22 30 05.5**	**+1.7**
	0.4nm,0.3s,mb3.7,baz=308,slow=7.8,SNR=2.0							
NVAR	**Mina Array Bea**	**36.92**	**92**	P		**P**	**22 30 05.5**	**+1.7**
KSRS	**Korea Array**	**46.15**	**278**	P		**P**	**22 31 19.8**	**+0.4**
	0.8nm,0.6s,mb3.8,baz=50,slow=6.6,SNR=4.3							
SPITS	**Spitsbergen Ar**	**49.71**	**359**	P		**P**	**22 31 45.2**	**-1.2**
	10nm,1.0s,mb4.8,baz=10,slow=12,SNR=4.1							
SONM	**Songino Array**	**51.95**	**301**	P		**P**	**22 32 04.1**	**+0.4**
	0.7nm,0.4s,mb3.9,baz=93,slow=5.8,SNR=2.5							
TXAR	**Lajitas Array**	**52.00**	**90**	P		**P**	**22 32 05.1**	**+0.8**
	0.5nm,0.7s,mb3.5,baz=297,slow=5.4,SNR=5.8							
TXAR	**Lajitas Array**	**52.00**	**90**	P		**P**	**22 32 05.1**	**+0.8**
ARCES	**ARCESS Array B**	**58.02**	**354**	P		**P**	**22 32 46.6**	**-0.6**
	4.0nm,0.9s,mb4.4,baz=7.8,slow=8.6,SNR=4.8							
MKAR	**Makanchi Array**	**64.36**	**314**	P		**P**	**22 33 30.1**	**-0.3**
	0.5nm,0.7s,mb3.6,baz=46,slow=8.7,SNR=4.1							
NOA	**NORSAR Array B**	**66.96**	**0**	P		**P**	**22 33 46.5**	**-0.5**
	1.0nm,0.9s,mb3.8,baz=339,slow=4.6,SNR=2.4							
AKASG	**Malin Array Be**	**76.28**	**349**	P		**P**	**22 34 42.3**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=16,slow=5.5,SNR=3.1							

*ISCJB **26** 22:26:40.5±0.9,3939N±004×3315E±004,h5km±8km, Error ellipse: s-maj=6.5km s-min=5.6km az=169.9*
*CSEM **26** 22:26:40.5,3942N×3317E,h9km,MD2.8,After ISK*
*DDA **26** 22:26:40.1,3939N×3317E,h3km±1km,Md2.6*
*ISK **26** 22:26:40.5,3942N×3317E,h9km,MD2.8*
ISC 26 22:26:40.8±0.7,3938N±004×3315E±004,h8km±7km,n11, σ0≥67/16,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.44**	**91**	*e*PG		**Pg**	**22 26 48.6**	**-0.8**
KAMT				eSG		**Sg**	**22 26 56.0**	**+0.8**
LOD	**Lodumlu**	**0.59**	**330**	*e*PG		**Pg**	**22 26 51.7**	**-0.5**
LOD				eSG		**Sg**	**22 27 00.6**	**+0.8**
CDAG	**Cicekdag**	**0.98**	**75**⇓	*i*P		**Pg**	**22 26 58.4**	**-1.2**
CDAG				*i* S		**Sg**	**22 27 12.6**	**+0.2**
KIZT	**Kizilcal**	**1.10**	**243**	*e*PN		**Pn**	**22 27 02.7**	**+0.2**
ELDT	**Eldivan**	**1.13**	**11**	*i* P		**Pg**	**22 27 02.3**	**-0.2**
ELDT				*i* S		**Sg**	**22 27 17.9**	**+0.8**
KDHN	**Kadinhani**	**1.18**	**223**	*i* P		**Pb**	**22 27 03.3**	**0.0**
KDHN				*i* S		**Sg**	**22 27 18.4**	**-0.2**
CANT	**Cankiri**	**1.28**	**16**	*e*PN		**Pn**	**22 27 04.4**	**-0.4**
CORM	**Corum**	**1.39**	**55**	*e*PN		**Pn**	**22 27 06.2**	**-0.3**
YOZ	**Yozgat**	**1.70**	**81**	*e*PN		**Pn**	**22 27 10.9**	**+0.2**
NIG	**Nigde**	**1.71**	**138**	*e*PN		**Pn**	**22 27 12.3**	**+1.4**
TOS	**Tosya**	**1.78**	**22**	*e*PN		**Pn**	**22 27 11.1**	**-0.8**

IDC 26 22:26:54.1±5.9,5324N×17036W,h0km,mb3.4/4, mb1 3.8/4,mb1mx3.5/24,mbtmp3.4/4,Error ellipse: s-maj=293.7km s-min=26.9km az=18.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NVAR	**Mina Array Bea**	**38.28**	**91**	P		P	22 34 16.3	+0.4
	0.6nm,0.5s,baz=320,slow=8.3,SNR=2.4							
PDAR	**Pinedale Array**	**40.83**	**79**	P		P	22 34 37.4	+0.2
	0.3nm,0.5s,baz=321,slow=2.1,SNR=3.9							
TXAR	**Lajitas Array**	**53.33**	**89**	P		P	22 36 14.7	-0.2
	0.4nm,0.7s,baz=303,slow=6.9,SNR=3.7							
MKAR	**Makanchi Array**	**62.77**	**312**	P		P	22 37 20.9	+0.1
	0.1nm,0.5s,baz=46,slow=6.2,SNR=2.5							

JMA 26 22:29:08.7±0.2,3976N×14356E,h23km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.32**	**278**	P		Pn	22 29 31.7	0.0
MIYJ	**Miyakonagasawa**	**1.36**	**263**	P		Pn	22 29 32.6	+0.4
MIYJ				*e*S		Sn	22 29 50.1	+0.7
JANG	**Nango**	**1.69**	**292**	P		Pn	22 29 37.2	+0.5
JOM	**Ohasama**	**1.77**	**261**	P		Pn	22 29 39.2	+1.3
JOM				*e*S		Sn	22 30 00.8	+1.0
JMK	**Ichinoseki**	**1.99**	**247**	P		Pn	22 29 41.7	+0.9
JIO	**Ouri**	**2.16**	**234**	P		Pn	22 29 43.5	+0.3
JTM	**Tenmabayashi**	**2.17**	**299**	P		Pn	22 29 44.9	+1.6
JTM				*e*S		Sn	22 30 10.8	+1.4
JOT	**Ohata**	**2.51**	**311**	P		Pn	22 29 51.1	+3.1
JNBK	**Urakawa-nobuka**	**2.59**	**347**	*e*S		Sn	22 30 23.3	+3.4
JYK	**Kaneyama**	**2.62**	**252**	P		Pn	22 29 51.3	+1.7
JCH	**Churui**	**2.86**	**357**	P		Pn	22 29 55.2	+2.4
JCH				*e*S		Sn	22 30 27.7	+1.3
JKB	**Kayabe**	**2.86**	**319**	P		Pn	22 29 57.3	+4.4
JMM	**Marumori**	**2.87**	**230**	P		Pn	22 29 52.4	-0.6
JMM				*e*S		Sn	22 30 24.1	-2.8

*ISCJB **26** 22:34:52.8±0.6,4.9S±0.1×118W±0.1,h10km,mb4.3/9, Error ellipse: s-maj=17.2km s-min=13.0km az=44.3*
*IDC **26** 22:34:53.5±2.8,4.84S×1176W,h0km,mb4.1/5,mb1 4.2/6, mb1mx3.8/24,mbtmp4.1/6,ML3.5/1,MS4.4/1,Ms1 4.4/1, ms1mx4.1/38,Error ellipse: s-maj=68.3km s-min=27.1km az=73.0*
*NEIC **26** 22:34:54.4±0.4,4.86S×1184W,h10km,mb4.7/3,Error ellipse: s-maj=13.5km s-min=9.3km az=126.0*
ISC 26 22:34:54.7±0.6,49S±01×118W±01,h10km,n14,σ0≤86/13, mb4.3/9,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**13.40**	**31**	Pn		**Pn**	**22 38 04.9**	**-0.3**
	0.2nm,0.3s,baz=195,slow=13,SNR=7.2							
DBIC				LR		LR	22 42 16.3	
	comp=Z,2μm,19.9s,baz=238,slow=33							
TOA0	**Torodi Ar. Sit**	**22.37**	**37**	*e*P		**P**	**22 39 53.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**22.37**	**37**	P		**P**	**22 39 52.4**	**-0.9**
	9.3nm,0.7s,mb4.3,baz=221,slow=9.5,SNR=70							
TSUM	**Tsumeb**	**31.99**	**119**	P		**P**	**22 41 21.3**	**-0.1**
	1.8nm,0.9s,mb3.9,baz=281,slow=10,SNR=2.4							
LSZ	**Lusaka**	**40.63**	**108**	P		**P**	**22 42 35.9**	**+0.6**
	3.5nm,0.9s,mb4.0,baz=276,slow=6.5,SNR=6.4							
GERES	**GERESS Array B**	**57.95**	**20**	P		**P**	**22 44 47.7**	**+0.5**
	1.4nm,0.7s,mb4.1,baz=191,slow=6.3,SNR=9.0							
CPD	**Cerro la Pandu**	**58.02**	**295**	*e*P		**P**	**22 44 47.6**	**-0.7**
	6.8nm,0.7s,mb4.8							
AOPR	**Arecibo Observ**	**58.87**	**295**	*e*P		**P**	**22 44 56.6**	**+2.3**
	7.5nm,0.6s,mb4.9							
EFI	**East Falkland**	**60.33**	**211**	P		**P**	**22 45 02.1**	**-1.6**
LCO	**Las Campanas**	**60.56**	**239**	P		**P**	**22 45 05.5**	**-0.2**
AKASG	**Malin Array Be**	**65.62**	**27**	P		**P**	**22 45 38.8**	**-0.1**
	0.4nm,0.5s,mb3.7,baz=228,slow=6.7,SNR=3.1							
TEIG	**Tepich**	**79.06**	**292**	*e*P		**P**	**22 46 59.8**	**-0.1**
	14nm,1.2s,mb4.8							
MAW	**Mawson**	**79.69**	**158**	*e*P		**P**	**22 47 03.2**	**+0.9**
	0.6nm,0.3s,mb4.0							
ASAR	**Alice Springs**	**136.14**	**132**	PKP		PKPdf	22 54 17.2	-0.1
	0.7nm,1.1s,baz=222,slow=2.2,SNR=3.5							

*IDC **26** 22:43:38.1±1.7,5288N×168.10W,h0km,mb3.3/5, mb1 3.7/7,mb1mx3.6/27,mbtmp3.6/7,ML3.4/2,Error ellipse: s-maj=61.6km s-min=15.1km az=177.0*
*NEIC **26** 22:43:38.6,5225N×168.07W,h10km,ML3.2(AEIC),After AEIC.*
*ISCJB **26** 22:43:43.8±1.7,527N±03×1682W±0.1,h74km±10km, mb3.2/4,Error ellipse: s-maj=45.2km s-min=12.1km az=168.5*
ISC 26 22:43:44.6±2.0,527N±03×1682W±01,h60km±14km,n14, σ0≤81/15,mb3.2/4,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.52**	**308**	P		**Pn**	**22 43 55.1**	**-1.8**
NIKO				S		**Sn**	**22 44 07.0**	**+1.3**
OKFG	**Magazine Ridge**	**0.77**	**12**	P		**Pn**	**22 43 59.6**	**-0.1**
OKCD	**Okmok Cone D**	**0.78**	**3**	P		**Pn**	**22 44 00.3**	**+0.5**
UNV	**Unalaska Valle**	**1.56**	**39**	P		**Pn**	**22 44 09.8**	**-0.3**
KDAK	**Kodiak Island**	**10.27**	**54**	Pn		**Pn**	**22 46 08.1**	**-1.0**
	0.7nm,0.3s,baz=63,slow=19,SNR=4.1							
FX1	**Attu Island--F**	**11.31**	**279**	Pn		**Pn**	**22 46 23.7**	**+0.5**
	0.7nm,0.3s,baz=270,slow=20,SNR=3.8							
PETK	**Petropavlovsk-**	**20.49**	**285**	P		**P**	**22 48 16.4**	**-0.9**
	2.0nm,0.5s,baz=80,slow=13,SNR=13							
PETK	**Petropavlovsk-**	**20.49**	**285**	P		**P**	**22 48 16.4**	**-0.9**
YKA	**Yellowknife Ar**	**29.50**	**49**	P		**P**	**22 49 43.2**	**+0.6**
	0.1nm,0.4s,mb2.9,baz=274,slow=7.7,SNR=5.5							
YKA	**Yellowknife Ar**	**29.50**	**49**	P		**P**	**22 49 43.2**	**+0.6**
PDAR	**Pinedale Array**	**39.63**	**80**	P		**P**	**22 51 10.7**	**+0.5**
	0.4nm,0.5s,mb3.4,baz=294,slow=3.4,SNR=4.5							
TXAR	**Lajitas Array**	**52.01**	**90**	P		**P**	**22 52 48.5**	**+0.7**
	0.3nm,0.7s,mb3.3,baz=245,slow=2.6,SNR=3.4							
TXAR	**Lajitas Array**	**52.01**	**90**	P		**P**	**22 52 48.5**	**+0.7**
MKAR	**Makanchi Array**	**64.14**	**314**	P		**P**	**22 54 11.9**	**-0.3**
	0.2nm,0.8s,mb3.2,baz=54,slow=8.8,SNR=2.6							

*IDC **26** 22:49:34.4±0.7,5239N×168.28W,h0km,mb4.3/23, mb1 4.5/24,mb1mx4.4/29,mbtmp4.3/24,ML3.1/1,Error ellipse: s-maj=22.5km s-min=11.3km az=0.0*
*ISCJB **26** 22:49:36.3±1.4,5231N±007×168.

AKUT	Akutan	2.26	36	eP		Pn		22 50 12.5	-1.1
ADK	Adak	5.36	269	eP		Pn		22 50 57.5	+1.3
ADK				pmax	pmax				
	comp=Z,60nm,0.5s								
ADK	Adak	5.36	269	ePn		Pn		22 50 57.5	+1.4
	comp=Z,60nm,0.5s								
SDPT	Sand Point	5.39	53	eP		Pn		22 50 57.2	+0.5
KDAK	Kodiak Island	10.39	52	Pn		Pn		22 52 02.8	-2.4
	comp=Z,3.9nm,0.3s,baz=236,slow=7.0,SNR=23								
KDAK	Kodiak Island	10.39	52	ePn		Pn		22 52 04.0	-1.2
SVW2	Sparrevohn	11.11	33	Pn		Pn		22 52 15.4	+0.4
FX1	Attu Island--F	11.45	280	Pn		Pn		22 52 17.9	-1.8
	comp=Z,0.5nm,0.3s,baz=315,slow=20,SNR=3.4								
FX1	Attu Island--F	11.45	280	Pn		Pn		22 52 17.9	-1.8
RSO	Redoubt South	11.72	40	ePn		Pn		22 52 27.3	+4.1
FIB	Fire Island	13.15	41	P		Pn		22 52 42.1	-0.8
TNA	Tin City	13.27	0	ePn		Pn		22 52 46.2	+1.8
	comp=Z,13nm,0.9s								
RC01	Rabbit Creek A	13.29	42	ePn		Pn		22 52 44.0	-0.8
PMR	Palmer	13.81	40	eP		Pn		22 52 51.4	-0.4
PMR				pmax	pmax				
	comp=Z,5.0nm,0.6s								
PMR	Palmer	13.81	40	eP		Pn		22 52 51.4	-0.4
	comp=Z,4.8nm,0.6s								
MID	Middleton Isla	14.04	51	eP		Pn		22 52 54.1	-1.0
MID				pmax	pmax				
	comp=Z,1μm,1.5s								
MID	Middleton Isla	14.04	51	eP		Pn		22 52 54.1	-1.0
	comp=Z,1μm,1.5s								
KTH	Kantishna Hill	14.39	32	ePn		Pn		22 53 00.7	+1.0
	comp=Z,38nm,1.0s								
PAX	Paxson	16.00	39	eP		Pn		22 53 19.4	-1.6
PAX				pmax	pmax				
	comp=Z,6.0nm,0.7s								
PAX	Paxson	16.00	39	ePn		Pn		22 53 19.4	-1.7
	comp=Z,6.4nm,0.7s								
COLA	College	16.27	32	*i* P		Pn		22 53 22.0	-2.6
COLA	College	16.27	32	eP		Pn		22 53 22.3	-2.2
	comp=Z,21nm,0.9s								
MENT	Mentasta	16.68	41	eP		Pn		22 53 30.1	+0.5
SIT	Sitka	19.36	63	P		Pn		22 54 00.3	-2.4
BILL	Bilibino	20.02	332	μ *i*P		P		22 54 10.3	+1.6
BILL				pmax	pmax				
	comp=Z,10.0nm,1.0s								
BILL	Bilibino	20.02	332	eP		P		22 54 10.1	+1.4
	comp=Z,7.2nm,0.8s								
PETK	Petropavlovsk-	20.66	286	P		P		22 54 15.6	-0.2
	comp=Z,11nm,0.6s,baz=88,slow=15,SNR=33								
PETK	Petropavlovsk-	20.66	286	P		P		22 54 15.6	-0.2
DLBC	Dease Lake	22.20	59	P		P		22 54 35.9	+3.7
	comp=Z,7.6nm,0.8s,mb4.2,baz=256,slow=11,SNR=8.8								
DLBC	Dease Lake	22.20	59	eP		P		22 54 32.1	-0.1
SEY	Seymchan	23.30	313	eP		P		22 54 42.2	-1.6
YKA	Yellowknife Ar	29.64	49	P		P		22 55 42.3	+1.1
	comp=Z,1.9nm,0.8s,mb3.9,baz=270,slow=8.6,SNR=33								
YKA					PcP	PcP		22 58 45.3	+0.2
	comp=Z,0.4nm,0.6s,baz=282,slow=3.2,SNR=6.3								
YKA					ScP	ScP		23 02 26.2	+0.1
	comp=Z,0.5nm,0.7s,baz=280,slow=3.6,SNR=7.1								
YBH	Yreka Blue Hor	32.16	91	P		P		22 56 06.1	+2.5
	comp=Z,3.2nm,0.9s,mb4.2,baz=158,slow=2.2,SNR=4.3								
EDM	Edmonton	32.41	66	eP		P		22 56 06.9	+1.2
EDM				*e*				22 56 16.2	
TIXI	Tiksi	33.19	329	eP		P		22 56 12.3	-0.1
TIXI				pmax	pmax				
	comp=Z,10.0nm,2.5s,mb4.3								
TIXI	Tiksi	33.19	329	eP		P		22 56 12.8	+0.5
	comp=Z,1.7nm,0.8s,mb4.0								
YAK	Yakutsk	33.81	311	eP		P		22 56 16.5	-1.4
YAK				pmax	pmax				
	comp=Z,8.0nm,0.7s,mb4.8								
YAK	Yakutsk	33.81	311	eP		P		22 56 15.8	-2.1
	comp=Z,15nm,0.6s,mb5.1								
RES	Resolute Bay	36.05	26	eP		P		22 56 35.9	-1.1
NVAR	Mina Array Bea	36.84	92	P		P		22 56 46.3	+2.1
	comp=Z,1.9nm,0.7s,mb4.0,baz=297,slow=7.8,SNR=7.4								
PDAR	Pinedale Array	39.60	80	P		P		22 57 08.3	+1.0
	comp=Z,3.1nm,0.8s,mb4.1,baz=285,slow=2.9,SNR=3.9								
MJAR	Matsushiro Arr	40.52	269	P		P		22 57 15.4	+0.4
	comp=Z,0.5nm,0.3s,mb3.6,baz=44,slow=6.9,SNR=4.6								
MAJO	Matsushiro	40.52	269	eP		P		22 57 14.5	-0.6
MAT	Matsushiro	40.52	269	P		P		22 57 15.9	+0.8
MDJ	Mudanjiang	40.90	285	P		P		22 57 16.8	-1.3
MDJ				AMB	AMB				
	comp=Z,5.0nm,1.8s,mb3.8								
MDJ				AMB	AMB				
	comp=Z,2μm,11.5s								
CN2	Changchun	43.81	286	eP		P		22 57 41.3	-0.5
CN2				AMB	AMB				
	comp=Z,10.0nm,0.7s,mb4.7								
SDCO	Great Sand Dun	45.11	83	eP		P		22 57 46.0	-6.2
	comp=Z,5.0nm,1.3s,mb4.2								
KSRS	Korea Array	46.23	278	P		P		22 58 00.6	-0.5
	comp=Z,2.2nm,0.7s,mb4.2,baz=56,slow=7.4,SNR=12								
TLY	Talaya	51.02	307	eP		P		22 58 37.4	-0.4
BJI	Beijing	51.57	288	P		P		22 58 43.0	+0.9
BJI				AMB	AMB				
	comp=Z,7.0nm,0.6s,mb4.8								
ULN	Ulaanbaatar	51.66	301	eP		P		22 58 41.7	-0.9
ULN	Ulaanbaatar	51.66	301	eP		P		22 58 41.4	-1.2
	comp=Z,4.3nm,0.8s,mb4.4								
TXAR	Lajitas Array	51.92	90	P		P		22 58 45.3	+0.5
	comp=Z,3.7nm,0.8s,mb4.4,baz=298,slow=5.6,SNR=33								
ZAK	Zakamensk	52.01	306	eP		P		22 58 54.3	+9.1
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.3s,mb4.1								
SONM	Songino Array	52.02	302	P		P		22 58 43.5	-1.8
	comp=Z,1.9nm,0.7s,mb4.1,baz=64,slow=6.8,SNR=5.4								
SCHQ	Schefferville	54.89	44	P		P		22 59 06.7	+0.4
	comp=Z,3.0nm,0.8s,mb4.4,baz=268,slow=3.1,SNR=4.1								
KEV	Kevo	57.73	354	ep		P		22 59 25.1	-1.2
	comp=Z,1.3nm,0.4s,mb4.3								
KEV	Kevo	57.73	354	eP		P		22 59 25.3	-1.0
KEV				pmax	pmax				
	comp=Z,18nm,0.9s,mb5.1								
KEV	Kevo	57.73	354	eP		P		22 59 25.3	-1.0
	comp=Z,18nm,0.9s,mb5.1								
ZALV	Zalesovo Beam	58.00	318	P		P		22 59 27.7	-0.7
	comp=Z,0.8nm,0.5s,mb4.0,baz=38,slow=5.6,SNR=4.2								
ARCES	ARCESS Array B	58.04	354	P		P		22 59 27.4	-1.0
	comp=Z,4.7nm,0.8s,mb4.6,baz=358,slow=8.1,SNR=16								
WHN	Wuhan	59.15	281	P		P		22 59 38.5	+1.7
XAN	Xi'an	59.90	288	P		P		22 59 42.0	+0.1
XAN				PP		PP		23 01 54.8	+1.1
XAN				S		S		23 07 56.3	+3.4
XAN				AMB	AMB				
	comp=Z,4.0nm,0.9s,mb4.5								
XAN				LR	LR				
	comp=N,476nm,18.7s								
XAN				LR	LR				
	comp=E,894nm,18.7s								
XAN				LR	LR				
	comp=Z,1μm,17.8s								
GTA	Gaotai	61.23	298	eP		P		22 59 50.8	-0.1
GTA				AP		pP		22 59 54.5	-1.6
GTA				XP		sP		22 59 57.3	-0.8
GTA				AMB	AMB				
	comp=Z,7.0nm,0.8s,mb4.8								
KURK	Kurchatov	62.94	319	P		P		23 00 02.5	+0.3
	comp=Z,1.5nm,0.4s,mb4.5,baz=47,slow=7.2,SNR=4.3								
KURK	Kurchatov	62.94	319	eP		P		23 00 01.4	-0.8
JOF	Joensuu	64.09	350	ep		P		23 00 08.3	-1.3
	comp=Z,1.1nm,0.4s,mb4.2								
BVAR	Borovoye Array	64.21	325	P		P		23 00 10.0	-0.5
	comp=Z,7.1nm,0.7s,mb4.8,baz=51,slow=7.8,SNR=41								
BRVK	Borovoye	64.22	325	eP		P		23 00 10.0	-0.6
BRVK				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.8								
BRVK	Borovoye	64.22	325	eP		P		23 00 10.0	-0.6
	comp=Z,7.8nm,0.9s,mb4.7								
MK31	Makanchi Array	64.42	314	eP		P		23 00 10.9	-1.1
MKAR	Makanchi Array	64.42	314	P		P		23 00 11.0	-1.1
	comp=Z,1.9nm,0.7s,mb4.2,baz=48,slow=6.4,SNR=20								
ARU	Arti	65.02	334	*d* *i*P		P		23 00 14.7	-1.1
ARU								23 02 33.5	
ARU				*e*S		S		23 08 58.6	+1.8
ARU				SS		SS		23 13 10.6	+2.9
ARU				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.8								
KAF	Kangasniemi	65.33	353	ep		P		23 00 16.3	-1.4
	comp=Z,3.1nm,0.5s,mb4.6,baz=5.6,slow=6.2								
KAF	Kangasniemi	65.33	353	eP		P		23 00 16.3	-1.4
KAF				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.6								
GYA	Guiyang	66.74	283	eP		P		23 00 30.0	+2.7
GYA				AMB	AMB				
	comp=Z,10.0nm,1.0s,mb4.8								
NB2	NORSAR Subarra	66.97	0	P		P		23 00 27.4	-0.9
	comp=Z,2.4nm,0.6s,mb4.4,baz=0.4,slow=6.2								
NOA	NORSAR Array B	66.97	0	P		P		23 00 27.6	-0.6
	comp=Z,5.4nm,0.8s,mb4.6,baz=0.3,slow=6.3,SNR=13								
KMI	Kunming	70.07	285	P		P		23 00 50.0	+1.8
KMI				AMB	AMB				
	comp=Z,5.0nm,1.5s,mb4.2								
TKM2	Tokmak 2	70.40	316	eP		P		23 00 49.5	-0.4
OBN	Obninsk	70.99	345	eP		P		23 00 51.5	-1.8
OBN				pmax	pmax				
	comp=Z,6.0nm,1.1s,mb4.4								
EKS2	Erkin-Say	71.38	317	eP		P		23 00 55.5	-0.3
	comp=Z,2.3nm,0.5s,mb4.4								
AML	Almayashu	71.85	316	eP		P		23 00 59.5	+0.7
LSA	Lhasa	73.20	297	P		P		23 01 08.3	+1.3
AKASG	Malin Array Be	76.31	349	P		P		23 01 23.1	-1.5
	comp=Z,2.6nm,0.6s,mb4.3,baz=13,slow=5.8,SNR=10.0								
CLL	Collm	76.73	359	eP		P		23 01 26.0	-1.0
CMAR	Chiang Mai Arr	77.43	284	P		P		23 01 29.9	-1.5
	comp=Z,1.3nm,0.3s,mb4.3,baz=38,slow=6.0,SNR=4.8								
UPC	Upice	77.48	357	eP		P		23 01 31.6	+0.4
PVCC	Panska Ves	77.49	358	eP		P		23 01 31.8	+0.5
DPC	Dobruska-Polom	77.62	357	eP		P		23 01 32.0	0.0
DPC				ep	pP	pP		23 01 37.5	+0.1
GIVF	Givet	77.76	5	eP		P		23 01 32.8	0.0
BAIF	Baives	77.77	5	eP		P		23 01 32.9	+0.1
KWP	Kalwaria	78.00	353	eP		P		23 01 34.0	-0.1
KWP				pmax	pmax				
	comp=Z,11nm,0.9s,mb4.8								
KWP	Kalwaria	78.00	353	↑*i*P		P		23 01 34.7	+0.6
KWP	Kalwaria	78.00	353	eP		P		23 01 34.0	-0.1
	comp=Z,11nm,0.9s,mb4.8								
PRU	Pruhonice	78.03	358	eP		P		23 01 34.5	+0.2
GRA1	Grafenberg Arr	78.35	0	eP		P		23 01 36.6	+0.6
	comp=Z,10.0nm,1.1s,mb4.7								
GRF	Grafenberg Arr	78.35	0	eP		P		23 01 36.6	+0.6
GRF				pmax	pmax				
	comp=Z,10.0nm,1.1s,mb4.7								
GRF	Grafenberg Arr	78.35	0	eP		P		23 01 36.6	+0.6
GRF				pmax	pmax				
	comp=Z,10.0nm,1.1s,mb4.7								
GRF	Grafenberg Arr	78.35	0	eP		P		23 01 36.6	+0.6
	comp=Z,10.0nm,1.1s,mb4.7								
VRAC	Vranov	78.66	357	↑*i*P		P		23 01 38.3	+0.5
VRAC	Vranov	78.66	357	↑P		P		23 01 38.3	+0.6
FLN	La Foliniere	78.72	8	eP		P		23 01 37.8	-0.3
KHC	Kasperske Hory	78.90	359	eP		P		23 01 40.0	+0.9
LDF	La Druitiere	78.92	8	eP		P		23 01 38.7	-0.5
SGMF	Saint Gilles	79.03	10	eP		P		23 01 39.8	0.0
GRR	Gorron	79.06	9	eP		P		23 01 39.8	-0.2
	comp=Z,23nm,1.0s,mb4.8								
GRR	Gorron	79.06	9	eP		P		23 01 39.8	-0.2
GRR				pmax	pmax				
	comp=Z,12nm,1.0s,mb4.8								
GRR	Gorron	79.06	9	eP		P		23 01 39.8	-0.2
	comp=Z,12nm,1.0s,mb4.8								
GERES	GERESS Array B	79.19	359	P		P		23 01 40.6	-0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=2.9,slow=3.9,SNR=12								
QUIF	Quistinic	79.29	10	eP		P		23 01 41.3	0.0
MEZF	Maizieres J'vi	79.37	5	eP		P		23 01 41.9	+0.2
VYHS	Vyhne	79.38	355	eP		P		23 01 42.2	+0.5
CDF	Champ du Feu	79.55	3	eP		P		23 01 42.8	+0.1
BUR08	Bucovina Ar. S	79.76	351	eP		P		23 01 43.9	+0.1
BURAR	Bucovina Array	79.79	351	μ *i*P		P		23 01 43.7	-0.3
BURAR	Bucovina Array	79.79	351	μP		P		23 01 43.7	-0.3
PSZ	Piszkesteto	79.90	355	P		P		23 01 43.1	-1.4
HAU	Haudompre	79.92	4	eP		P		23 01 44.7	0.0
CONA	Conrad Observa	80.06	357	↑*i*P		P		23 01 46.2	+0.8
	comp=Z,8.3nm,1.1s,mb4.6								
CSNA	Conrad Observa	80.06	357	↑*i*P		P		23 01 46.2	+0.8
	comp=Z,7.2nm,1.0s,mb4.5								
HINF	Hinteralfeld	80.13	4	eP		P		23 01 45.8	0.0
	comp=Z,9.3nm,1.1s,mb4.3								
HINF	Hinteralfeld	80.13	4	eP		P		23 01 45.8	0.0
HINF				pmax	pmax				
	comp=Z,5.0nm,1.1s,mb4.4								
HINF	Hinteralfeld	80.13	4	eP		P		23 01 45.8	0.0
	comp=Z,4.7nm,1.1s,mb4.3								
KBL	Kabul	80.20	315	eP		P		23 01 45.3	-1.1
KBL				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.7								
KBL	Kabul	80.20	315	eP		P		23 01 45.3	-1.1
	comp=Z,8.6nm,0.9s,mb4.7								
KIV	Kislovodsk	80.50	338	P		P		23 01 48.7	+0.8
KIV	Kislovodsk	80.50	338	P		P		23 01 48.7	+0.9
LOR	Lormes	80.53	6	eP		P		23 01 48.0	0.0
	comp=Z,22nm,1.2s,mb4.7								
LOR	Lormes	80.53	6	eP		P		23 01 48.0	0.0
LOR				pmax	pmax				
	comp=Z,11nm,1.2s,mb4.7								
LOR	Lormes	80.53	6	eP		P		23 01 48.0	0.0
	comp=Z,11nm,1.2s,mb4.7								
MOTA	Moosalm	80.70	1	μ *i*P		P		23 01 49.4	+0.5
	comp=Z,6.3nm,0.9s,mb4.5								
SSF	Saint Saulge	80.72	6	eP		P		23 01 49.1	+0.1
	comp=Z,9.3nm,0.8s,mb4.4								
SSF	Saint Saulge	80.72	6	eP		P		23 01 49.1	+0.1
SSF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
SSF	Saint Saulge	80.72	6	eP		P		23 01 49.1	+0.1
	comp=Z,4.7nm,0.8s,mb4.5								
DRGR		80.83	353	↑*i*P		P		23 01 47.6	-2.0
DRGR		80.83	353	↑P		P		23 01 47.6	-2.0
MFF	Saint Martin d	80.90	8	eP		P		23 01 50.1	+0.2
	comp=Z,47nm,1.2s,mb5.0								
MFF	Saint Martin d	80.90	8	eP		P		23 01 50.1	+0.2
MFF				pmax	pmax				
	comp=Z,23nm,1.2s,mb5.0								
MFF	Saint Martin d	80.90	8	eP		P		23 01 50.1	+0.2
	comp=Z,23nm,1.2s,mb5.0								
KBA	Koelnbreinsper	80.96	359	↑*i*P		P		23 01 51.5	+1.2
	comp=Z,19nm,0.9s,mb5.0								
AVF	Avril sur Loir	80.98	6	eP		P		23 01 50.4	0.0
	comp=Z,8.2nm,0.9s,mb4.4								
AVF	Avril sur Loir	80.98	6	eP		P		23 01 50.4	0.0
AVF				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.3								
AVF	Avril sur Loir	80.98	6	eP		P		23 01 50.4	0.0
	comp=Z,4.1nm,0.9s,mb4.4								
SMF	Signal de Mont	81.15	6	eP		P		23 01 51.4	+0.1
	comp=Z,18nm,1.0s,mb4.7								
SMF	Signal de Mont	81.15	6	eP		P		23 01 51.4	+0.1
SMF				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.7								
SMF	Signal de Mont	81.15	6	eP		P		23 01 51.4	+0.1
	comp=Z,9.2nm,1.0s,mb4.7								
BGF	Bois d'Agland	81.18	6	eP		P		23 01 51.6	+0.2
	comp=Z,8.7nm,0.8s,mb4.5								
BGF	Bois d'Agland	81.18	6	eP		P		23 01 51.6	+0.2
BGF				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4								
BGF	Bois d'Agland	81.18	6	eP		P		23 01 51.6	+0.2
	comp=Z,4.3nm,0.8s,mb4.4								
CABF	La Chapelle	81.31	4	eP		P		23 01 52.8	+0.7
	comp=Z,36nm,1.2s,mb4.9								
CABF	La Chapelle	81.31	4	eP		P		23 01 52.8	+0.7
CABF				pmax	pmax				
	comp=Z,18nm,1.2s,mb4.9								
CABF	La Chapelle	81.31	4	eP		P		23 01 52.8	+0.7
	comp=Z,18nm,1.2s,mb4.9								
SOKA	Soboth	81.33	358	↑*i*P		P		23 01 52.6	+0.3
	comp=Z,8.9nm,1.0s,mb4.7								
TCF	Toulx Ste Croi	81.40	7	eP		P		23 01 52.6	0.0
	comp=Z,8.2nm,0.9s,mb4.4								
TCF	Toulx Ste Croi	81.40	7	eP		P		23 01 52.6	0.0
TCF				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.3								
TCF	Toulx Ste Croi	81.40	7	eP		P		23 01 52.6	0.0
	comp=Z,4.1nm,0.9s,mb4.4								
VOIR		81.96	351	↑*i*P		P		23 01 55.4	-0.2
VOIR		81.96	351	↑P		P		23 01 55.4	-0.2
BZS	Buzias	82.08	353	↑*i*P		P		23 01 55.9	-0.3
GZR	Gura Zlata	82.21	352	↑*i*P		P		23 01 55.2	-1.7
GZR	Gura Zlata	82.21	352	↑P		P		23 01 55.2	-1.7
RJF	Les Rejaudoux	82.33	7	eP		P		23 01 57.4	-0.1
	comp=Z,9.0nm,0.9s,mb4.4								
RJF	Les Rejaudoux	82.33	7	eP		P		23 01 57.4	-0.1
RJF				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.4								
RJF	Les Rejaudoux	82.33	7	eP		P		23 01 57.4	-0.1
	comp=Z,4.5nm,0.9s,mb4.4								
LPL	La Plagne	82.42	4	eP		P		23 01 59.5	+1.5
LPG	La Plagne	82.44	4	eP		P		23 01 59.8	+1.7
TIRR	Tirgusor	82.55	348	eP		P		23 01 59.2	+0.5
LFF	La Frestale	82.62	8	eP		P		23 01 59.3	+0.2
	comp=Z,42nm,1.0s,mb5.1								
LFF	La Frestale	82.62	8	eP		P		23 01 59.3	+0.2
LFF				pmax	pmax				
	comp=Z,21nm,1.0s,mb5.1								
LFF	La Frestale	82.62	8	eP		P		23 01 59.3	+0.2
	comp=Z,21nm,1.0s,mb5.1								
CAF	Calviac	82.74	7	eP		P		23 02 00.1	+0.4
	comp=Z,13nm,0.9s,mb4.7								
CAF	Calviac	82.74	7	eP		P		23 02 00.1	+0.4
CAF				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.6								
CAF	Calviac	82.74	7	eP		P		23 02 00.1	+0.4
	comp=Z,6.4nm,0.9s,mb4.7								
ORIF	Oris-en-Rattie	82.98	4	eP		P		23 02 01.7	+0.7
	comp=Z,7.8nm,0.9s,mb4.4								
ORIF	Oris-en-Rattie	82.98	4	eP		P		23 02 01.7	+0.7
ORIF				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5								
ORIF	Oris-en-Rattie	82.98	4	eP		P		23 02 01.7	+0.7
	comp=Z,3.9nm,0.9s,mb4.4								
VIVF	Saint-Julien-l	82.98	5	eP		P		23 02 01.4	+0.4
MBDF	Montbardon	83.21	4	eP		P		23 02 03.6	+1.4
	comp=Z,16nm,0.9s,mb4.8								
MBDF	Montbardon	83.21	4	eP		P		23 02 03.6	+1.4
MBDF				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb4.8								
MBDF	Montbardon	83.21	4	eP		P		23 02 03.6	+1.4
	comp=Z,8.0nm,0.9s,mb4.8								
GNI	Garni	83.59	335	P		P		23 02 04.8	+0.6
SBF	Sospel	84.10	3	eP		P		23 02 07.3	+0.6
	comp=Z,40nm,0.9s,mb5.2								
SBF	Sospel	84.10	3	eP		P		23 02 07.3	+0.6
SBF				pmax	pmax				
	comp=Z,20nm,0.9s,mb5.2								
SBF	Sospel	84.10	3	eP		P		23 02 07.3	+0.6
	comp=Z,20nm,0.9s,mb5.2								
SJPF	Ste Jean	84.25	10	eP		P		23 02 07.8	+0.3
MTLF	Montolieu	84.33	7	eP		P		23 02 08.4	+0.5
	comp=Z,9.3nm,0.9s,mb4.6								
MTLF	Montolieu	84.33	7	eP		P		23 02 08.4	+0.5
MTLF				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.6								
MTLF	Montolieu	84.33	7	eP		P		23 02 08.4	+0.5
	comp=Z,4.7nm,0.9s,mb4.6								
FRF	La Foret Royal	84.37	4	eP		P		23 02 08.7	+0.6
EPF	Esparros	84.48	9	eP		P		23 02 08.4	-0.3
	comp=Z,15nm,0.9s,mb4.8								
EPF	Esparros	84.48	9	eP		P		23 02 08.4	-0.3
EPF				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.8								
EPF	Esparros	84.48	9	eP		P		23 02 08.4	-0.3
	comp=Z,7.4nm,0.9s,mb4.8								
ETSF	Etsaut	84.53	9	eP		P		23 02 09.7	+0.8
	comp=Z,14nm,0.8s,mb4.8								
ETSF	Etsaut	84.53	9	eP		P		23 02 09.7	+0.8
ETSF				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb4.8								
ETSF	Etsaut	84.53	9	eP		P		23 02 09.7	+0.8
	comp=Z,6.8nm,0.8s,mb4.8								
PGF	Pioggiola	85.46	2	eP		P		23 02 14.1	+0.5
	comp=Z,28nm,0.9s,mb5.1								
PGF	Pioggiola	85.46	2	eP		P		23 02 14.1	+0.5
PGF				pmax	pmax				
	comp=Z,14nm,0.9s,mb5.1								
PGF	Pioggiola	85.46	2	eP		P		23 02 14.1	+0.5
	comp=Z,14nm,0.9s,mb5.1								
BR131	Keskin Array S	86.40	343	eP		P		23 02 18.9	+0.6
	comp=Z,1.1nm,0.6s,mb4.3			

mb1 3.9/16,mb1mx3.8/28,mbtmp3.6/16,Error ellipse: s-maj=30.4km s-min=15.8km az=3.0
*NEIC **26** 23:09:18.9,5228N×16797W,h25km,ML3.5(AEIC),After AEIC.*
*ISCJB **26** 23:09:20.5±1.8,524N±0.1×1682W±0.1,h44km±13km,mb3.7/16,Error ellipse: s-maj=24.2km s-min=10.9km az=170.7*

ISC 26 23:09:20.6±2.1,**524N**±01×**1682W**±01,**h30**km±13km,**n25,** σ0°**87**/26,**mb3.7**/16,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.69**	**323**	P	**Pb**	**23 09 34.3**	**+0.3**
OKFG	**Magazine Ridge**	**1.00**	**9**	P	**Pn**	**23 09 38.8**	**+0.3**
OKCD	**Okmok Cone D**	**1.01**	**2**	P	**Pn**	**23 09 39.2**	**+0.5**
UNV	**Unalaska Valle**	**1.75**	**35**	P	**Pn**	**23 09 48.0**	**-0.8**
AKLV	**Akutan Long Va**	**2.19**	**37**	P	**Pn**	**23 09 54.7**	**-0.2**
AKUT	**Akutan**	**2.24**	**39**	*e*Pn	**Pn**	**23 09 55.4**	**-0.2**
AKUT				*e*Sn	**Sn**	**23 10 22.4**	**+0.2**
KDAK	**Kodiak Island**	**10.41**	**53**	Pn	**Pn**	**23 11 45.8**	**-1.8**
	1.1nm,0.3s,baz=314,slow=22,SNR=6.0						
PETK	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**23 13 56.2**	**-0.2**
	2.1nm,0.6s,baz=95,slow=16,SNR=4.2						
DLBC	**Dease Lake**	**22.23**	**59**	P	**P**	**23 14 15.7**	**+1.3**
	2.5nm,0.9s,mb3.6,baz=225,slow=8.6,SNR=2.3						
YKA	**Yellowknife Ar**	**29.66**	**49**	P	**P**	**23 15 23.2**	**+0.2**
	0.1nm,0.5s,mb2.9,baz=269,slow=8.5,SNR=4.2						
YKA	**Yellowknife Ar**	**29.66**	**49**	P	**P**	**23 15 23.2**	**+0.2**
NVAR	**Mina Array Bea**	**36.94**	**92**	P	**P**	**23 16 28.1**	**+1.4**
	0.7nm,0.7s,mb3.6,baz=295,slow=11,SNR=2.2						
KSRS	**Korea Array**	**46.12**	**277**	P	**P**	**23 17 41.6**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=49,slow=7.8,SNR=2.7						
SONM	**Songino Array**	**51.90**	**301**	P	**P**	**23 18 27.4**	**+1.5**
	0.6nm,0.4s,mb3.9,baz=66,slow=5.0,SNR=2.5						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**23 18 27.1**	**0.0**
	1.3nm,0.6s,mb4.0,baz=300,slow=5.1,SNR=13						
ARCES	**ARCESS Array B**	**57.94**	**354**	P	**P**	**23 19 10.4**	**+1.1**
	6.3nm,1.0s,mb4.6,baz=8.2,slow=8.2,SNR=2.6						
KURK	**Kurchatov**	**62.81**	**319**	P	**P**	**23 19 43.1**	**+0.2**
	0.2nm,0.4s,mb3.6,baz=27,slow=6.3,SNR=2.1						
BVAR	**Borovoye Array**	**64.08**	**325**	P	**P**	**23 19 49.4**	**-1.8**
	0.4nm,0.5s,mb3.7,baz=52,slow=6.3,SNR=4.8						
BRVK	**Borovoye**	**64.09**	**325**	P	**P**	**23 19 51.7**	**+0.5**
	3.9nm,0.9s,mb4.4						
MKAR	**Makanchi Array**	**64.29**	**314**	P	**P**	**23 19 52.0**	**-0.7**
	0.7nm,1.0s,mb3.6,baz=194,slow=3.1,SNR=3.7						
NOA	**NORSAR Array B**	**66.88**	**0**	P	**P**	**23 20 07.7**	**-1.5**
	1.3nm,1.0s,mb3.9,baz=40,slow=17,SNR=3.1						
GERES	**GERESS Array B**	**79.09**	**359**	P	**P**	**23 21 22.1**	**+0.5**
	0.2nm,0.6s,mb3.2,baz=331,slow=9.0,SNR=2.6						
BRTR	**Keskin Array B**	**86.28**	**343**	P	**P**	**23 21 59.9**	**+0.7**
	0.2nm,0.3s,mb3.8,baz=90,slow=8.6,SNR=2.3						
ESDC	**Sonseca Array**	**87.25**	**12**	P	**P**	**23 22 03.2**	**-0.7**
	0.1nm,0.4s,mb3.4,baz=343,slow=5.7,SNR=2.5						
ASAR	**Alice Springs**	**90.39**	**231**	P	**P**	**23 22 20.8**	**-0.7**
	0.3nm,0.7s,mb3.7,baz=38,slow=3.5,SNR=3.5						

*IDC **26** 23:09:25.8±0.9,5243N×168.15W,h0km,mb4.1/17,mb1 4.4/17,mb1mx4.2/28,mbtmp4.1/17, Error ellipse: s-maj=29.5km s-min=15.0km az=2.0*
*BJI **26** 23:09:25.4,5240N×168.10W,h22km,mb4.8*
*ISCJB **26** 23:09:29.4±0.6,524N±0.1×168.17W±0.10,h33km,mb4.3/32,Error ellipse: s-maj=16.2km s-min=8.2km az=170.2*
*NEIC **26** 23:09:29.4±1.8,5239N×168.14W,h23km±11km,mb4.5/17,Error ellipse: s-maj=10.7km s-min=5.4km az=170.0*
*MOS **26** 23:09:29.3±1.1,5240N×16821W,h33km,mb4.8/16,Error ellipse: s-maj=18.6km s-min=9.6km az=88.6*

ISC 26 23:09:28.4±3.7,**524N**±01×**16813W**±009,**h15**km±21km,**n87,** σ0°**68**/86,**mb4.3**/32,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.71**	**323**	Pn	**Pn**	**23 09 44.7**	**+0.8**
ADK	**Adak**	**5.29**	**268**	P	**Pn**	**23 10 46.9**	**+0.1**
KDAK	**Kodiak Island**	**10.40**	**53**	Pn	**Pn**	**23 11 55.5**	**-1.3**
	4.9nm,0.3s,baz=245,slow=7.1,SNR=19						
SVW2	**Sparrevohn**	**11.08**	**33**	Pn	**Pn**	**23 12 06.4**	**+0.3**
COLA	**College**	**16.25**	**32**	*e*P	**Pn**	**23 13 15.2**	**-0.5**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
COLA	**College**	**16.25**	**32**	*e*Pn	**Pn**	**23 13 15.2**	**-0.5**
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**20.58**	**286**	P	**P**	**23 14 07.0**	**+0.6**
	comp=Z,7.9nm,0.7s,baz=84,slow=15,SNR=9.3						
PETK	**Petropavlovsk-**	**20.58**	**286**	P	**P**	**23 14 07.0**	**+0.6**
DLBC	**Dease Lake**	**22.22**	**59**	P	**P**	**23 14 25.4**	**+1.5**
	comp=Z,5.4nm,0.9s,mb4.0,baz=275,slow=13,SNR=4.4						
YKA	**Yellowknife Ar**	**29.64**	**49**	P	**P**	**23 15 33.1**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.6,baz=271,slow=8.1,SNR=19						
YKA				PcP	PcP	23 18 36.2	-0.4
	comp=Z,0.6nm,0.7s,baz=281,slow=2.2,SNR=10.0						
YKA	**Yellowknife Ar**	**29.64**	**49**	PcP	PcP	23 18 36.2	-0.4
EDM	**Edmonton**	**32.44**	**66**	*e*P	**P**	**23 15 57.0**	**-0.5**
NVAR	**Mina Array Bea**	**36.91**	**92**	P	**P**	**23 16 37.1**	**+0.9**
	comp=Z,3.3nm,0.8s,mb4.2,baz=303,slow=8.0,SNR=7.4						
NVAR	**Mina Array Bea**	**36.91**	**92**	P	**P**	**23 16 37.1**	**+0.9**
BOD	**Bodaibo**	**42.56**	**309**	*e*P	**P**	**23 17 20.9**	**-2.1**
CN2	**Changchun**	**43.73**	**286**	*e*P	**P**	**23 17 32.0**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
KSRS	**Korea Array**	**46.15**	**278**	P	**P**	**23 17 52.9**	**+0.9**
	comp=Z,3.1nm,0.8s,mb4.3,baz=50,slow=7.7,SNR=12						
SONM	**Songino Array**	**51.93**	**301**	P	**P**	**23 18 36.3**	**+0.2**
	comp=Z,0.6nm,0.3s,mb4.0,baz=72,slow=5.2,SNR=4.5						
SONM	**Songino Array**	**51.93**	**301**	P	**P**	**23 18 36.3**	**+0.2**
TXAR	**Lajitas Array**	**51.99**	**90**	P	**P**	**23 18 35.9**	**-1.0**
	comp=Z,3.6nm,0.8s,mb4.4,baz=298,slow=5.6,SNR=21						
TXAR	**Lajitas Array**	**51.99**	**90**	P	**P**	**23 18 35.9**	**-0.9**
ARCES	**ARCESS Array B**	**57.96**	**354**	P	**P**	**23 19 18.5**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.4,baz=15,slow=10.0,SNR=7.8						
ARCES	**ARCESS Array B**	**57.96**	**354**	P	**P**	**23 19 18.5**	**-0.9**
KURK	**Kurchatov**	**62.84**	**319**	P	**P**	**23 19 53.4**	**+0.3**
	comp=Z,0.4nm,0.4s,mb4.0,baz=42,slow=7.4,SNR=4.0						
KURK	**Kurchatov**	**62.84**	**319**	*e*P	**P**	**23 19 52.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
KURK	**Kurchatov**	**62.84**	**319**	*e*P	**P**	**23 19 52.6**	**-0.4**
	comp=Z,1.0nm,0.3s,mb4.4						
BVAR	**Borovoye Array**	**64.11**	**325**	P	**P**	**23 20 01.3**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.6,baz=50,slow=8.0,SNR=22						
BRVK	**Borovoye**	**64.12**	**325**	*e*P	**P**	**23 20 01.1**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BRVK	**Borovoye**	**64.12**	**325**	*e*P	**P**	**23 20 01.1**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**64.33**	**314**	P	**P**	**23 20 02.3**	**-0.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=48,slow=7.1,SNR=12						
NB2	**NORSAR Subarra**	**66.90**	**0**	P	**P**	**23 20 18.3**	**-1.0**
	comp=Z,2.5nm,0.7s,mb4.3,baz=0.2,slow=6.5						
NOA	**NORSAR Array B**	**66.90**	**0**	P	**P**	**23 20 18.9**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.3,baz=359,slow=6.4,SNR=4.9						
NOA	**NORSAR Array B**	**66.90**	**0**	P	**P**	**23 20 18.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**77.34**	**284**	P	**P**	**23 21 22.4**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.1,baz=23,slow=6.3,SNR=9.8						
LDF	**La Druitiere**	**78.86**	**8**	*e*P	**P**	**23 21 29.5**	**-0.9**
	comp=Z,36nm,1.1s,mb4.9						
LDF	**La Druitiere**	**78.86**	**8**	*e*P	**P**	**23 21 29.5**	**-0.9**
LDF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
LDF	**La Druitiere**	**78.86**	**8**	*e*P	**P**	**23 21 29.5**	**-0.9**
	comp=Z,18nm,1.1s,mb4.9						
SGMF	**Saint Gilles**	**78.96**	**10**	*e*P	**P**	**23 21 30.9**	**-0.1**
	comp=Z,20nm,1.0s,mb4.7						
SGMF	**Saint Gilles**	**78.96**	**10**	*e*P	**P**	**23 21 30.9**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SGMF	**Saint Gilles**	**78.96**	**10**	*e*P	**P**	**23 21 30.9**	**-0.1**
	comp=Z,10nm,1.0s,mb4.7						
GERES	**GERESS Array B**	**79.11**	**359**	P	**P**	**23 21 30.5**	**-1.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=348,slow=4.5,SNR=6.7						
GERES	**GERESS Array B**	**79.11**	**359**	P	**P**	**23 21 30.5**	**-1.2**
CDF	**Champ du Feu**	**79.48**	**3**	*e*P	**P**	**23 21 33.8**	**0.0**
LOR	**Lormes**	**80.47**	**6**	*e*P	**P**	**23 21 39.3**	**+0.2**
SSF	**Saint Saulge**	**80.65**	**6**	*e*P	**P**	**23 21 40.1**	**0.0**
	comp=Z,9.3nm,0.9s,mb4.4						
SSF	**Saint Saulge**	**80.65**	**6**	*e*P	**P**	**23 21 40.1**	**0.0**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
SSF	**Saint Saulge**	**80.65**	**6**	*e*P	**P**	**23 21 40.1**	**0.0**
	comp=Z,4.7nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**80.83**	**8**	*e*P	**P**	**23 21 41.1**	**0.0**
	comp=Z,8.5nm,0.9s,mb4.4						
MFF	**Saint Martin d**	**80.83**	**8**	*e*P	**P**	**23 21 41.1**	**0.0**
MFF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MFF	**Saint Martin d**	**80.83**	**8**	*e*P	**P**	**23 21 41.1**	**0.0**
	comp=Z,4.3nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**80.91**	**6**	*e*P	**P**	**23 21 41.4**	**-0.1**
	comp=Z,10nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	**80.91**	**6**	*e*P	**P**	**23 21 41.4**	**-0.1**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**80.91**	**6**	*e*P	**P**	**23 21 41.4**	**-0.1**
	comp=Z,5.3nm,0.9s,mb4.5						
SMF	**Signal de Mont**	**81.08**	**6**	*e*P	**P**	**23 21 42.5**	**0.0**
CABF	**La Chapelle**	**81.23**	**4**	*e*P	**P**	**23 21 43.9**	**+0.6**
	comp=Z,11nm,1.0s,mb4.5						
CABF	**La Chapelle**	**81.23**	**4**	*e*P	**P**	**23 21 43.9**	**+0.6**
CABF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CABF	**La Chapelle**	**81.23**	**4**	*e*P	**P**	**23 21 43.9**	**+0.6**
	comp=Z,5.7nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**81.33**	**7**	*e*P	**P**	**23 21 43.6**	**-0.2**
	comp=Z,5.3nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**81.33**	**7**	*e*P	**P**	**23 21 43.6**	**-0.2**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TCF	**Toulx Ste Croi**	**81.33**	**7**	*e*P	**P**	**23 21 43.6**	**-0.2**
	comp=Z,2.7nm,0.9s,mb4.2						
RJF	**Les Rejaudoux**	**82.26**	**7**	*e*P	**P**	**23 21 48.5**	**-0.2**
	comp=Z,7.5nm,0.9s,mb4.3						
RJF	**Les Rejaudoux**	**82.26**	**7**	*e*P	**P**	**23 21 48.5**	**-0.2**
RJF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
RJF	**Les Rejaudoux**	**82.26**	**7**	*e*P	**P**	**23 21 48.5**	**-0.2**
	comp=Z,3.8nm,0.9s,mb4.3						
LFF	**La Frestale**	**82.56**	**8**	*e*P	**P**	**23 21 50.5**	**+0.2**
	comp=Z,16nm,0.8s,mb4.8						
LFF	**La Frestale**	**82.56**	**8**	*e*P	**P**	**23 21 50.5**	**+0.2**
LFF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
LFF	**La Frestale**	**82.56**	**8**	*e*P	**P**	**23 21 50.5**	**+0.2**
	comp=Z,8.1nm,0.8s,mb4.8						
ORIF	**Oris-en-Rattie**	**82.92**	**4**	*e*P	**P**	**23 21 53.1**	**+1.0**
	comp=Z,4.9nm,0.8s,mb4.3						
ORIF	**Oris-en-Rattie**	**82.92**	**4**	*e*P	**P**	**23 21 53.1**	**+1.0**
ORIF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ORIF	**Oris-en-Rattie**	**82.92**	**4**	*e*P	**P**	**23 21 53.1**	**+1.0**
	comp=Z,2.5nm,0.8s,mb4.3						
VIVF	**Saint-Julien-l**	**82.92**	**5**	*e*P	**P**	**23 21 52.7**	**+0.6**
MBDF	**Montbardon**	**83.14**	**4**	*e*P	**P**	**23 21 54.6**	**+1.3**
	comp=Z,7.6nm,0.8s,mb4.5						
MBDF	**Montbardon**	**83.14**	**4**	*e*P	**P**	**23 21 54.6**	**+1.3**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
MBDF	**Montbardon**	**83.14**	**4**	*e*P	**P**	**23 21 54.6**	**+1.3**
	comp=Z,3.8nm,0.8s,mb4.5						
SJPF	**Ste Jean**	**84.19**	**10**	*e*P	**P**	**23 21 59.3**	**+0.6**
MTLF	**Montolieu**	**84.27**	**7**	*e*P	**P**	**23 21 59.5**	**+0.4**
EPF	**Esparros**	**84.42**	**8**	*e*P	**P**	**23 21 59.6**	**-0.2**
	comp=Z,8.3nm,0.9s,mb4.5						
EPF	**Esparros**	**84.42**	**8**	*e*P	**P**	**23 21 59.6**	**-0.2**
EPF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
EPF	**Esparros**	**84.42**	**8**	*e*P	**P**	**23 21 59.6**	**-0.2**
	comp=Z,4.2nm,0.9s,mb4.6						
ETSF	**Etsaut**	**84.47**	**9**	*e*P	**P**	**23 22 00.7**	**+0.6**
	comp=Z,6.8nm,0.7s,mb4.6						
ETSF	**Etsaut**	**84.47**	**9**	*e*P	**P**	**23 22 00.7**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
ETSF	**Etsaut**	**84.47**	**9**	*e*P	**P**	**23 22 00.7**	**+0.6**
	comp=Z,3.4nm,0.7s,mb4.6						
LMR	**La Mourre**	**84.52**	**4**	*e*P	**P**	**23 22 00.7**	**+0.3**
	comp=Z,24nm,1.1s,mb4.9						
LMR	**La Mourre**	**84.52**	**4**	*e*P	**P**	**23 22 00.7**	**+0.3**
LMR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.9						
LMR	**La Mourre**	**84.52**	**4**	*e*P	**P**	**23 22 00.7**	**+0.3**
	comp=Z,12nm,1.1s,mb4.9						
BRTR	**Keskin Array B**	**86.31**	**343**	P	**P**	**23 22 09.8**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.3,baz=31,slow=1.4,SNR=8.2						
ESDC	**Sonseca Array**	**87.27**	**12**	P	**P**	**23 22 14.0**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.2,baz=343,slow=4.9,SNR=8.4						
ASAR	**Alice Springs**	**91.00**	**231**	P	**P**	**23 22 30.9**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.9,baz=32,slow=5.7,SNR=5.3						

*IDC **26** 23:09:38.4±1.3,2741S×7174W,h0km,mb4.4/3,mb1 4.0/7,mb1mx3.8/21,mbtmp4.0/7,ML3.4/3,MS3.3/1,Ms1 3.3/1,ms1mx2.9/33,Error ellipse: s-maj=43.1km s-min=24.5km az=101.0*
*NEIC **26** 23:09:38.4±2.2,2743S×7175W,h3km±14km,mb4.4/4,Error ellipse: s-maj=7.4km s-min=4.9km az=82.0*
*ISCJB **26** 23:09:40.9±0.4,2741S±004×7168W±008,h33km,mb4.3/6,Error ellipse: s-maj=9.9km s-min=5.2km az=165.6*

ISC 26 23:09:43.2±0.4,**2742S**±004×**7169W**±007,**h35**km,**n35,** σ0°**74**/36,**mb4.3**/6,**1C,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.81**	**151**	*i*Pn	**Pn**	**23 10 11.1**	**-0.7**
LCO				*e*Sn	**Sn**	**23 10 32.6**	**-0.9**
CFAA	**Coronel Fontan**	**5.14**	**145**	Pn	**Pn**	**23 10 59.2**	**+1.6**
	1.6nm,0.3s,baz=320,slow=12,SNR=92						
CFAA				Sn	**Sn**	**23 11 56.2**	**+0.5**
	2.0nm,0.3s,baz=177,slow=18,SNR=6.3						
CFAA				LR	LR	23 12 46.4	
	comp=Z,291nm,19.8s,baz=17,slow=36						
CFAA	**Coronel Fontan**	**5.14**	**145**	Pn	**Pn**	**23 10 59.2**	**+1.6**
CFAA				Sn	**Sn**	**23 11 56.2**	**+0.5**
CFAA				LR	LR	23 12 46.4	
LVC	**Limon Verde**	**5.41**	**28**	Pn	**Pn**	**23 11 01.3**	**-0.1**
	3.4nm,0.3s,baz=214,slow=8.7,SNR=88						
LVC				Sn	**Sn**	**23 12 01.3**	**-1.1**
	7.4nm,0.3s,baz=37,slow=22,SNR=8.5						
LVC	**Limon Verde**	**5.41**	**28**	*e*Pn	**Pn**	**23 11 01.6**	**+0.2**
LVC				*e*Sn	**Sn**	**23 12 02.4**	**-0.1**
CPUP	**Villa Florida**	**12.87**	**88**	Pn	**Pn**	**23 12 42.5**	**-1.1**
	0.0nm,0.3s,baz=187,slow=16,SNR=2.0						
CPUP	**Villa Florida**	**12.87**	**88**	Pn	**Pn**	**23 12 42.5**	**-1.1**
PLCA	**Paso Flores**	**13.31**	**176**	Pn	**Pn**	**23 12 48.1**	**-1.4**
	0.1nm,0.3s,baz=329,slow=5.9,SNR=2.6						
TRQA	**Tornquist**	**13.38**	**145**	*e*Pn	**Pn**	**23 12 49.1**	**-1.4**
SIV	**San Ignacio**	**15.05**	**43**	Pn	**Pn**	**23 13 07.5**	**-5.7**
	0.9nm,0.3s,baz=251,slow=11,SNR=16						
PAYG	**Puerto Ayora**	**32.03**	**323**	P	**P**	**23 16 06.0**	**-0.6**
ROSC	**El Rosal**	**32.19**	**355**	*e*P	**P**	**23 16 08.7**	**+0.7**
RPN	**Rapa Nui**	**33.38**	**262**	P	**P**	**23 16 17.6**	**-0.7**
PMSA	**Palmer Station**	**37.68**	**175**	P	**P**	**23 16 55.3**	**+0.6**
RCBR	**Riachuelo**	**40.22**	**64**	*e*P	**P**	**23 17 17.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**43.92**	**338**	P	**P**	**23 17 45.9**	**-0.7**
TEIG	**Tepich**	**50.02**	**340**	P	**P**	**23 18 33.5**	**-0.7**
VNA3	**Neumayer Olymp**	**55.36**	**160**	*e*	**P**	**23 19 13.7**	**+0.5**
VNA3				*e*		23 19 19.2	
VNA3				*e*		23 19 29.2	
VNA2	**Neumayer--Watz**	**55.99**	**159**	*e*	**P**	**23 19 18.0**	**+0.3**
	baz=294,slow=8.9						
VNA2				*e*		23 19 23.2	
VNA2				*e*		23 19 31.5	
SNAA	**Sanae**	**57.59**	**160**	*e*	**P**	**23 19 29.1**	**+0.1**
SNAA				*e*	pP	23 19 41.7	+2.1
SNAA	**Sanae**	**57.59**	**160**	*e*P	**P**	**23 19 29.2**	**+0.2**
	3.2nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**62.79**	**180**	P	**P**	**23 20 05.3**	**+0.7**
	1.8nm,0.5s,mb4.5,baz=91,slow=1.4,SNR=5.5						
WMOK	**Wichita Mounta**	**66.93**	**336**	P	**P**	**23 20 32.3**	**+0.3**
SDCO	**Great Sand Dun**	**72.17**	**332**	P	**P**	**23 21 04.4**	**+0.2**
DBIC	**Dimbokro**	**72.87**	**73**	P	**P**	**23 21 09.4**	**+0.5**
	3.5nm,0.7s,mb4.4,baz=209,slow=7.7,SNR=8.1						
DBIC	**Dimbokro**	**72.87**	**73**	*e*P	**P**	**23 21 09.5**	**+0.5**
	2.4nm,0.5s,mb4.4						
MAW	**Mawson**	**79.39**	**164**	*e*P	**P**	**23 21 45.7**	**+0.5**
	0.5nm,0.5s,mb3.7						
TOA0	**Torodi Ar. Sit**	**81.72**	**71**	*e*P	**P**	**23 21 59.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**81.72**	**71**	P	**P**	**23 21 59.4**	**+0.8**
	2.3nm,0.6s,mb4.3,baz=270,slow=4.7,SNR=30						
LBTB	**Lobatse**	**84.82**	**115**	*e*P	**P**	**23 22 15.0**	**+0.5**
	1.6nm,0.6s,mb4.3						
NEW	**Newport**	**85.64**	**331**	P	**P**	**23 22 17.7**	**-0.1**
KURK	**Kurchatov**	**147.62**	**36**	PKPbc	PKPbc	23 29 23.9	+0.4
	0.9nm,0.5s,baz=306,slow=3.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**148.37**	**27**	PKPbc	PKPbc	23 29 26.2	+0.9
	2.1nm,0.7s,baz=298,slow=3.2,SNR=7.9						
MKAR	**Makanchi Array**	**151.85**	**40**	PKPbc	PKPbc	23 29 35.0	+0.9
	1.2nm,0.4s,baz=321,slow=1.8,SNR=24						
MKAR	**Makanchi Array**	**151.85**	**40**	PKPbc	PKPbc	23 29 35.0	+0.9

*IDC **26** 23:16:47.6±0.8,5250N×168.21W,h0km,mb4.0/16,mb1 4.2/17,mb1mx4.1/29,mbtmp4.0/17,ML3.1/1,MS4.9/1,Ms1 4.9/1,ms1mx3.9/46,Error ellipse: s-maj=28.9km s-min=12.6km az=4.0*
*NEIC **26** 23:16:49.8,5235N×168.02W,h5km,ML3.5(AEIC),After AEIC.*
*ISCJB **26** 23:16:50.2±0.6,5229N±007×168.19W±009,h33km,mb3.9/15,Error ellipse: s-maj=10.5km s-min=8.1km az=11.4*

ISC 26 23:16:52.7±0.6,**5243N**±008×**16812W**±009,**h35**km,**n27,** σ0°**74**/27,**mb3.9**/15,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.71**	**321**	P	**Pn**	**23 17 05.3**	**-0.9**
NIKO				S	**Sn**	**23 17 17.6**	**+1.7**
OKCD	**Okmok Cone D**	**1.01**	**0**	P	**Pn**	**23 17 10.9**	**+0.6**
UNV	**Unalaska Valle**	**1.73**	**34**	P	**Pn**	**23 17 19.7**	**-0.5**
AKLV	**Akutan Long Va**	**2.17**	**36**	P	**Pn**	**23 17 26.6**	**+0.2**
AKUT	**Akutan**	**2.22**	**39**	P	**Pn**	**23 17 26.8**	**-0.2**
KDAK	**Kodiak Island**	**10.38**	**53**	Pn	**Pn**	**23 19 17.2**	**-1.7**
	2.4nm,0.3s,baz=245,slow=7.5,SNR=14						
FX1	**Attu Island--F**	**11.38**	**280**	Pn	**Pn**	**23 19 32.4**	**-0.1**
	0.5nm,0.3s,baz=42,slow=15,SNR=3.6						
PETK	**Petropavlovsk-**	**20.58**	**286**	P	**P**	**23 21 27.8**	**-0.5**
	5.8nm,0.8s,baz=85,slow=16,SNR=4.9						
YKA	**Yellowknife Ar**	**29.63**	**49**	P	**P**	**23 22 54.7**	**+0.4**
	0.2nm,0.4s,mb3.2,baz=273,slow=8.6,SNR=6.4						
YKA				PcP	PcP	23 25 58.0	+0.2
	0.1nm,0.7s,baz=287,slow=2.8,SNR=4.2						
YKA	**Yellowknife Ar**	**29.63**	**49**	P	**P**	**23 22 54.7**	**+0.4**
YKA				PcP	PcP	23 25 58.0	+0.2
YBH	**Yreka Blue Hor**	**32.22**	**91**	P	**P**	**23 23 18.7**	**+1.4**
	2.1nm,0.7s,mb4.1,baz=180,slow=6.2,SNR=3.5						
NVAR	**Mina Array Bea**	**36.90**	**92**	P	**P**	**23 23 58.8**	**+1.0**
	1.5nm,0.7s,mb4.0,baz=302,slow=8.5,SNR=4.8						
PDAR	**Pinedale Array**	**39.64**	**80**	P	**P**	**23 24 21.1**	**+0.4**
	1.2nm,0.6s,mb3.8,baz=296,slow=4.9,SNR=9.0						
PFO	**Pinyon Flat Ob**	**41.19**	**96**	LR	LR	23 39 02.5	
	comp=Z,1µm,18.2s,baz=321,slow=32						
KSRS	**Korea Array**	**46.16**	**278**	P	**P**	**23 25 13.5**	**-0.1**
	0.9nm,0.4s,mb4.0,baz=39,slow=4.4,SNR=4.7						
TXAR	**Lajitas Array**	**51.98**	**90**	P	**P**	**23 25 58.5**	**+0.2**
	2.4nm,0.7s,mb4.3,baz=298,slow=5.5,SNR=27						
ARCES	**ARCESS Array B**	**57.94**	**354**	P	**P

comp=Z,3.5nm,0.7s,mb4.3,baz=350,slow=3.5,SNR=6.3
EDM Edmonton 32.55 66 P **P** 23 32 51.6 -3.4
TIXI Tiksi 33.17 329⇑*eP* **P** 23 32 59.3 -0.9
TIXI pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
TIXI Tiksi 33.17 329 *eP* **P** 23 32 58.8 -1.4
comp=Z,3.0nm,0.8s,mb4.3
YAK Yakutsk 33.75 311⇑*eP* **P** 23 33 03.4 -2.0
YAK pmax pmax
comp=Z,11nm,0.6s,mb5.0
YAK Yakutsk 33.75 311 *eP* **P** 23 33 03.6 -1.8
RES Resolute Bay 36.15 26 *eP* **P** 23 33 24.7 -1.2
NVAR Mina Array Bea 36.97 92 P **P** 23 33 35.1 +1.9
comp=Z,2.5nm,0.7s,mb4.1,baz=296,slow=9.6,SNR=7.9
KLR Kul'dur 37.14 290 *eP* **P** 23 33 28.8 -5.8
RLMT Red Lodge 38.61 76 P **P** 23 33 46.1 -0.9
comp=Z,8.5nm,1.1s,mb4.4
PDAR Pinedale Array 39.74 80 P **P** 23 33 57.6 +1.1
comp=Z,1.8nm,0.6s,mb4.0,baz=302,slow=4.4,SNR=18
MAJO Matsushiro 40.39 269 *eP* **P** 23 33 58.5 -3.5
MAJO pmax pmax
comp=Z,11nm,0.9s,mb4.6
MAJO Matsushiro 40.39 269 *eP* **P** 23 33 58.5 -3.5
comp=Z,11nm,0.9s,mb4.6
MJAR Matsushiro Arr 40.39 269 P **P** 23 34 02.4 +0.4
comp=Z,0.8nm,0.3s,mb3.9,baz=151,slow=13,SNR=6.4
BOD Bodaibo 42.59 309 *eP* **P** 23 34 18.1 -1.7
BOD pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
CN2 Changchun 43.70 286 *eP* **P** 23 34 28.0 -1.0
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
KSRS Korea Array 46.10 278 P **P** 23 34 48.6 +0.5
comp=Z,7.2nm,0.8s,mb4.6,baz=56,slow=7.4,SNR=25
TLY Talaya 50.95 307 *eP* **P** 23 35 22.3 -2.9
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TLY Talaya 50.95 307 *eP* **P** 23 35 22.3 -3.0
comp=Z,4.4nm,0.7s,mb4.5
ULN Ulaanbaatar 51.58 301⇑*eP* **P** 23 35 29.1 -0.9
ULN Ulaanbaatar 51.58 301 *eP* **P** 23 35 28.0 -2.0
comp=Z,8.8nm,0.9s,mb4.7
ZAK Zakamensk 51.94 306 *eP* **P** 23 35 30.5 -2.1
ZAK *e* 23 36 43.2
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
SONM Songino Array 51.94 301 P **P** 23 35 32.7 0.0
comp=Z,4.1nm,1.0s,mb4.3,baz=62,slow=7.0,SNR=9.0
TXAR Lajitas Array 52.05 90 P **P** 23 35 34.4 +0.6
comp=Z,1.9nm,0.8s,mb4.1,baz=302,slow=6.0,SNR=12
TXAR Lajitas Array 52.05 90 P **P** 23 35 34.4 +0.6
KEV Kevo 57.77 354 *ep* **P** 23 36 14.3 -0.2
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 57.77 354 *eP* **P** 23 36 14.3 -0.2
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 57.77 354 *eP* **P** 23 36 12.3 -2.2
comp=Z,2.3nm,0.5s,mb4.5
ZALV Zalesovo Beam 57.96 318 P **P** 23 36 14.8 -1.3
comp=Z,2.4nm,0.8s,mb4.3,baz=38,slow=7.5,SNR=8.4
ARCES ARCESS Array B 58.08 354 P **P** 23 36 16.1 -0.7
comp=Z,2.5nm,0.9s,mb4.2,baz=19,slow=7.2,SNR=11
LVZ Lovozero 58.93 350⇑*eP* **P** 23 36 21.8 -0.8
LVZ pmax pmax
comp=Z,112nm,2.5s,mb5.5
WHN Wuhan 59.04 281 ⇓P **P** 23 36 24.0 0.0
GTA Gaotai 61.14 298 *eP* **P** 23 36 38.0 -0.2
GTA AP pP 23 36 42.5 -3.5
GTA XP sP 23 36 45.8 -3.1
GTA AMB AMB
comp=Z,7.0nm,0.7s,mb4.9
LZH Lanzhou 61.27 293 *eP* **P** 23 36 40.0 +0.8
LZH AP pP 23 36 47.0 +0.1
LZH XP sP 23 36 50.0 +0.1
LZH AMB AMB
comp=Z,19nm,1.4s,mb5.0
LZH AMB AMB
comp=Z,86nm,4.3s
KURK Kurchatov 62.90 319 P **P** 23 36 49.8 -0.1
comp=Z,4.2nm,0.9s,mb4.6,baz=50,slow=7.4,SNR=8.4
KURK Kurchatov 62.90 319⇑*eP* **P** 23 36 48.8 -1.1
KURK pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
KURK Kurchatov 62.90 319 *eP* **P** 23 36 47.7 -2.2
comp=Z,3.2nm,0.8s,mb4.5
JOF Joensuu 64.12 350 *ep* **P** 23 36 56.8 -0.9
comp=Z,1.7nm,0.3s,mb4.5
BVAR Borovoye Array 64.18 325 P **P** 23 36 58.0 -0.3
comp=Z,6.4nm,0.6s,mb4.8,baz=54,slow=6.6,SNR=52
BRVK Borovoye 64.19 325 *eP* **P** 23 36 57.9 -0.4
BRVK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BRVK Borovoye 64.19 325 *eP* **P** 23 36 57.9 -0.4
comp=Z,9.7nm,0.9s,mb4.8
MK31 Makanchi Array 64.37 314 *eP* **P** 23 36 57.8 -1.8
MKAR Makanchi Array 64.37 314 P **P** 23 36 58.8 -0.9
comp=Z,3.3nm,0.7s,mb4.5,baz=48,slow=6.6,SNR=37
ARU Arti 65.01 333*d iP* **P** 23 37 02.5 -1.2
ARU *e* 23 39 26.5
ARU *eS* S 23 45 43.4 -0.4
ARU SS SS 23 49 58.5 +3.7
ARU pmax pmax
comp=Z,14nm,1.0s,mb5.0
ARU Arti 65.01 333 *eP* **P** 23 37 03.5 -0.2
comp=Z,11nm,0.9s,mb4.9
CD2 Chengdu 65.06 289 P **P** 23 37 05.3 +0.9
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
KAF Kangasniemi 65.37 353 *ep* **P** 23 37 04.9 -1.0
comp=Z,2.5nm,0.4s,mb4.6
KAF Kangasniemi 65.37 353 *eP* **P** 23 37 04.9 -1.0
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
GYA Guiyang 66.63 283 *eP* **P** 23 37 16.3 +1.8
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
NB2 NORSAR Subarra 67.03 0 P **P** 23 37 16.2 -0.4
comp=Z,2.5nm,0.7s,mb4.3,baz=0.4,slow=6.2
NOA NORSAR Array B 67.03 0 P **P** 23 37 16.4 -0.1
comp=Z,4.2nm,0.8s,mb4.5,baz=360,slow=6.3,SNR=10
NOA NORSAR Array B 67.03 0 P **P** 23 37 16.4 -0.1
TKM2 Tokmak 2 70.35 316 P **P** 23 37 36.8 -0.7
AKTK Aktyubinsk 70.43 331 P **P** 23 37 37.8 -0.1
AKTO Aktyubinsk 70.43 331 ⇓P **P** 23 37 37.8 -0.1
comp=Z,8.5nm,0.7s,mb4.8,baz=43,slow=6.7,SNR=31
OBN Obninsk 71.01 345 ⇓P **P** 23 37 40.8 -0.6
OBN *e* 23 38 02.5
OBN *e* 23 40 18.0
OBN pmax pmax
comp=Z,28nm,1.4s,mb5.0
OBN Obninsk 71.01 345 P **P** 23 37 38.9 -2.5
EKS2 Erkin-Say 71.33 317 *eP* **P** 23 37 41.0 -2.5
comp=Z,4.6nm,0.9s,mb4.4
UCH Uchtor 71.38 316 P **P** 23 37 41.1 -2.7
AML Almayashu 71.80 316 *eP* **P** 23 37 43.9 -2.5
NRDL Niedersach Rie 75.59 1 *eP* **P** 23 38 09.1 +0.7
comp=Z,4.0nm,0.8s,mb4.4
IBBN Ibbenburen 75.73 3 *eP* **P** 23 38 10.6 +1.4
comp=Z,21nm,1.5s,mb4.8
CLZ Clausthal 76.25 1 *eP* **P** 23 38 13.4 +1.2
CLZ pmax pmax
comp=Z,14nm,1.3s,mb4.7
CLZ Clausthal 76.25 1 *eP* **P** 23 38 13.4 +1.2
comp=Z,14nm,1.3s,mb4.7
AKASG Malin Array Be 76.34 349 P **P** 23 38 11.8 -0.9
comp=Z,5.2nm,0.5s,mb4.8,baz=15,slow=5.8,SNR=18
CLL Collm 76.78 359 *eP* **P** 23 38 15.5 +0.3
comp=Z,5.0nm,0.9s,mb4.4
BRG Berggiesshubel 77.21 359 *eP* **P** 23 38 17.9 +0.3
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BRG Berggiesshubel 77.21 359 *eP* **P** 23 38 17.9 +0.3
comp=Z,3.3nm,1.1s,mb4.2
CMAR Chiang Mai Arr 77.31 284 P **P** 23 38 18.9 +0.1
comp=Z,3.4nm,0.6s,mb4.5,baz=25,slow=6.1,SNR=29
MOX Moxa 77.45 0 *eP* **P** 23 38 19.6 +0.6
comp=Z,10.0nm,1.2s,mb4.6
UPC Upice 77.53 357 *eP* **P** 23 38 20.3 +0.9
DPC Dobruska-Polom 77.67 357 *eP* **P** 23 38 21.4 +1.2
GIVF Givet 77.83 5 *eP* **P** 23 38 20.8 -0.3
BAIF Baives 77.84 5 *eP* **P** 23 38 21.0 -0.1
KWP Kalwaria 78.04 353 *eP* **P** 23 38 21.8 -0.5
KWP pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KWP Kalwaria 78.04 353 ⇓*iP* **P** 23 38 23.1 +0.8
KWP Kalwaria 78.04 353 *eP* **P** 23 38 21.8 -0.5
comp=Z,8.6nm,0.6s,mb4.9
PRU Pruhonice 78.08 358 *eP* **P** 23 38 23.3 +0.8
MANZ Manzenberg 78.11 360 *eP* **P** 23 38 23.7 +1.0
comp=Z,3.0nm,1.1s,mb4.1
OKC Ostrava-Krasne 78.12 356 *eP* **P** 23 38 23.2 +0.5
ROTZ Rotzenmuhle 78.33 360 *eP* **P** 23 38 25.1 +1.2
comp=Z,14nm,1.6s,mb4.6
STHS Stebnicka Huta 78.36 354 *i P* **P**
STHS pmax pmax 23 38 25.6 +1.5
comp=Z,8.0nm,1.0s,mb4.6
STHS Stebnicka Huta 78.36 354 *i P* **P** 23 38 25.6 +1.5
comp=Z,7.8nm,1.0s,mb4.6
GRA1 Grafenberg Arr 78.41 0 *eP* **P** 23 38 25.2 +0.9
comp=Z,16nm,1.4s,mb4.8
GRF Grafenberg Arr 78.41 0 *eP* **P**
GRF pmax pmax 23 38 25.2 +0.9
comp=Z,16nm,1.4s,mb4.8
GRF Grafenberg Arr 78.41 0 *eP* **P**
GRF pmax pmax 23 38 25.2 +0.9
comp=Z,16nm,1.4s,mb4.8
GRF Grafenberg Arr 78.41 0 *eP* **P** 23 38 25.2 +0.9
comp=Z,16nm,1.4s,mb4.8
VRAC Vranov 78.71 357 ⇓*iP* **P** 23 38 27.2 +1.2
VRAC Vranov 78.71 357 ⇓P **P** 23 38 27.2 +1.3
TREC Trest 78.75 358 *eP* **P** 23 38 27.1 +0.9
CRVS Cervenica-Dubn 78.86 353 *eP* **P** 23 38 31.2 +4.4
CRVS pmax pmax
comp=Z,108nm,3.5s
CRVS Cervenica-Dubn 78.86 353 *eP* **P** 23 38 31.2 +4.4
comp=Z,108nm,3.5s
ROSF Rostenen 78.94 10 *eP* **P** 23 38 26.8 -0.5
WET Wettzell 78.95 359 *eP* **P** 23 38 28.4 +1.1
WET pmax pmax
comp=Z,34nm,2.5s,mb4.8
WET Wettzell 78.95 359 *eP* **P** 23 38 28.4 +1.1
comp=Z,34nm,2.5s,mb4.8
KHC Kasperske Hory 78.96 359⇑*eP* **P** 23 38 26.4 -0.9
KHC Kasperske Hory 78.96 359 *eP* **P** 23 38 28.0 +0.7
KHC Kasperske Hory 78.96 359 *eP* **P** 23 38 28.0 +0.7
LDF La Druitiere 79.00 8 *eP* **P** 23 38 27.0 -0.6
SGMF Saint Gilles 79.10 10 *eP* **P** 23 38 27.9 -0.2
GRR Gorron 79.13 9 *eP* **P** 23 38 27.9 -0.4
GEC2 GERESS Array S 79.24 359 *eP* **P** 23 38 29.6 +0.7
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GEC2 GERESS Array S 79.24 359 *eP* **P** 23 38 29.6 +0.7
comp=Z,6.0nm,1.1s,mb4.4
GERES GERESS Array B 79.24 359 P **P** 23 38 29.3 +0.4
comp=Z,2.5nm,0.8s,mb4.2,baz=3.4,slow=4.5,SNR=19
STU Stuttgart 79.30 2 *eP* **P** 23 38 30.2 +1.0
comp=Z,7.0nm,0.7s,mb4.7
KOLL Kolacno 79.36 356 *iP* **P** 23 38 31.1 +1.5
VYHS Vyhne 79.42 355 *iP* **P** 23 38 30.8 +0.9
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
VYHS Vyhne 79.42 355 *iP* **P** 23 38 30.8 +0.9
comp=Z,6.5nm,1.1s,mb4.5
MEZF Maizieres J'vi 79.43 5 *eP* **P** 23 38 30.0 0.0
SMOL Smolenice 79.47 356 *eP* **P** 23 38 31.8 +1.7
TRPA Tarpa 79.55 353 ⇓*iP* **P** 23 38 31.1 +0.5
CDF Champ du Feu 79.61 3 *eP* **P** 23 38 30.9 0.0
comp=Z,12nm,1.0s,mb4.5
CDF Champ du Feu 79.61 3 *eP* **P**
CDF pmax pmax 23 38 30.9 0.0
comp=Z,6.0nm,1.0s,mb4.5
CDF Champ du Feu 79.61 3 *eP* **P** 23 38 30.9 0.0
comp=Z,6.3nm,1.0s,mb4.5
BFO Black Forest 79.73 2 *eP* **P** 23 38 32.4 +0.9
BFO pmax pmax
comp=Z,13nm,1.3s,mb4.7
BFO Black Forest 79.73 2 *eP* **P** 23 38 32.4 +0.9
comp=Z,13nm,1.3s,mb4.7
BUR08 Bucovina Ar. S 79.79 351 *eP* **P** 23 38 32.1 +0.2
ZST Bratislava 79.80 356 *iP* **P** 23 38 33.8 +1.9
ZST pmax pmax
comp=Z,12nm,1.3s,mb4.7
ZST Bratislava 79.80 356 *iP* **P** 23 38 33.8 +1.9
comp=Z,12nm,1.3s,mb4.7
BURAR Bucovina Array 79.82 351⇑*iP* **P** 23 38 32.1 0.0
BURAR Bucovina Array 79.82 351 ⇑P **P** 23 38 32.1 +0.1
FUR Furstenfeldbru 79.93 0 *eP* **P** 23 38 34.6 +1.9
FUR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
FUR Furstenfeldbru 79.93 0 *eP* **P** 23 38 34.6 +1.9
comp=Z,10.0nm,1.0s,mb4.7
PSZ Piszkesteto 79.94 354 ⇓*iP* **P** 23 38 34.1 +1.4
PSZ Piszkesteto 79.94 354 *eP* **P** 23 38 30.3 -2.4
comp=Z,6.4nm,1.0s,mb4.5
HAU Haudompre 79.99 4 *eP* **P** 23 38 32.9 -0.1
comp=Z,7.9nm,0.7s,mb4.4
HAU Haudompre 79.99 4 *eP* **P**
HAU pmax pmax 23 38 32.9 -0.1
comp=Z,4.0nm,0.7s,mb4.5
HAU Haudompre 79.99 4 *eP* **P** 23 38 32.9 -0.1
comp=Z,4.0nm,0.7s,mb4.5
KBL Kabul 80.14 315 *eP* **P**
KBL pmax pmax 23 38 31.4 -2.7
comp=Z,13nm,1.1s,mb4.8
KBL Kabul 80.14 315 *eP* **P** 23 38 31.4 -2.6
comp=Z,13nm,1.1s,mb4.8
HINF Hinteralfeld 80.19 3 *eP* **P** 23 38 33.8 -0.3
comp=Z,18nm,1.1s,mb4.6
HINF Hinteralfeld 80.19 3 *eP* **P**
HINF pmax pmax 23 38 33.8 -0.3
comp=Z,9.0nm,1.1s,mb4.6
HINF Hinteralfeld 80.19 3 *eP* **P** 23 38 33.8 -0.3
comp=Z,8.9nm,1.1s,mb4.6
KIV Kislovodsk 80.50 338 *eP* **P**
KIV pmax pmax 23 38 36.2 +0.4
comp=Z,14nm,1.1s,mb4.8
KIV Kislovodsk 80.50 338 *eP* **P** 23 38 33.9 -1.9
comp=Z,11nm,1.0s,mb4.7
LOR Lormes 80.60 5 *eP* **P** 23 38 36.1 -0.2
comp=Z,26nm,1.2s,mb4.7
LOR Lormes 80.60 5 *eP* **P**
LOR pmax pmax 23 38 36.1 -0.2
comp=Z,13nm,1.2s,mb4.7
LOR Lormes 80.60 5 *eP* **P** 23 38 36.1 -0.2
comp=Z,13nm,1.2s,mb4.7
MOTA Moosalm 80.75 0⇑*iP* **P** 23 38 37.8 +0.7
comp=Z,6.4nm,0.9s,mb4.6
SSF Saint Saulge 80.79 6 *eP* **P** 23 38 37.2 -0.1
comp=Z,8.2nm,0.8s,mb4.4
SSF Saint Saulge 80.79 6 *eP* **P**
SSF pmax pmax 23 38 37.2 -0.1
comp=Z,4.0nm,0.8s,mb4.4
SSF Saint Saulge 80.79 6 *eP* **P** 23 38 37.2 -0.1
comp=Z,4.1nm,0.8s,mb4.4
DRGR 80.86 352 ⇓*iP* **P** 23 38 37.4 -0.3
DRGR 80.86 352 ⇓P **P** 23 38 37.4 -0.3
MFF Saint Martin d 80.97 8 *eP* **P** 23 38 38.3 0.0
comp=Z,18nm,0.8s,mb4.7
MFF Saint Martin d 80.97 8 *eP* **P**
MFF pmax pmax 23 38 38.3 0.0
comp=Z,9.0nm,0.8s,mb4.8
MFF Saint Martin d 80.97 8 *eP* **P** 23 38 38.3 0.0
comp=Z,8.9nm,0.8s,mb4.8
KBA Koelnbreinsper 81.01 359⇑*iPcP* PcP 23 38 40.4 -4.5
comp=Z,16nm,0.7s,SNR=11
AVF Avril sur Loir 81.05 6 *eP* **P** 23 38 38.4 -0.3
comp=Z,18nm,1.1s,mb4.6
AVF Avril sur Loir 81.05 6 *eP* **P**
AVF pmax pmax 23 38 38.4 -0.3
comp=Z,9.0nm,1.1s,mb4.6
AVF Avril sur Loir 81.05 6 *eP* **P** 23 38 38.4 -0.3
comp=Z,8.9nm,1.1s,mb4.6
SMF Signal de Mont 81.22 6 *eP* **P** 23 38 39.3 -0.3
comp=Z,50nm,1.4s,mb4.9
SMF Signal de Mont 81.22 6 *eP* **P**
SMF pmax pmax 23 38 39.3 -0.3
comp=Z,25nm,1.4s,mb5.0
SMF Signal de Mont 81.22 6 *eP* **P** 23 38 39.3 -0.3
comp=Z,25nm,1.4s,mb5.0
CABF La Chapelle 81.37 4 *eP* **P** 23 38 40.9 +0.5
comp=Z,30nm,1.1s,mb4.8
CABF La Chapelle 81.37 4 *eP* **P**
CABF pmax pmax 23 38 40.9 +0.5
comp=Z,15nm,1.1s,mb4.8
CABF La Chapelle 81.37 4 *eP* **P** 23 38 40.9 +0.5
comp=Z,15nm,1.1s,mb4.8
SOKA Soboth 81.38 358⇑*iP* **P** 23 38 41.4 +0.9
comp=Z,14nm,1.1s,mb4.8
TCF Toulx Ste Croi 81.47 7 *eP* **P** 23 38 40.6 -0.3
comp=Z,4.8nm,0.8s,mb4.2
TCF Toulx Ste Croi 81.47 7 *eP* **P**
TCF pmax pmax 23 38 40.6 -0.3
comp=Z,2.0nm,0.8s,mb4.1
TCF Toulx Ste Croi 81.47 7 *eP* **P** 23 38 40.6 -0.3
comp=Z,2.4nm,0.8s,mb4.2
VOIR 81.99 351⇑*iP* **P** 23 38 44.6 +0.9
VOIR 81.99 351 ⇑P **P** 23 38 44.6 +0.9
BZS Buzias 82.12 353⇑*iP* **P** 23 38 44.4 +0.1
BZS Buzias 82.12 353 ⇑P **P** 23 38 44.4 +0.1
GZR Gura Zlata 82.25 352⇑*iP* **P** 23 38 45.2 +0.2
GZR Gura Zlata 82.25 352 ⇑P **P** 23 38 45.1 +0.1
RJF Les Rejaudoux 82.40 7 *eP* **P** 23 38 45.6 -0.2
comp=Z,26nm,1.2s,mb4.7
RJF Les Rejaudoux 82.40 7 *eP* **P** 23 38 45.6 -0.2
RJF pmax pmax
comp=Z,13nm,1.2s,mb4.7
RJF Les Rejaudoux 82.40 7 *eP* **P** 23 38 45.6 -0.2
comp=Z,13nm,1.2s,mb4.7
LPL La Plagne 82.49 4 *eP* **P** 23 38 47.7 +1.4
LPG La Plagne 82.51 4 *eP* **P** 23 38 47.7 +1.3
comp=Z,19nm,1.3s,mb4.7
LPG La Plagne 82.51 4 *eP* **P** 23 38 47.7 +1.3
LPG pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
LPG La Plagne 82.51 4 *eP* **P** 23 38 47.7 +1.3
comp=Z,9.6nm,1.3s,mb4.7
TIRR Tirgusor 82.58 348⇑*iP* **P** 23 38 46.5 -0.3
TIRR Tirgusor 82.58 348 ⇑P **P** 23 38 46.5 -0.3
LFF La Frestale 82.70 8 *eP* **P** 23 38 47.4 0.0
comp=Z,12nm,0.6s,mb4.8
LFF La Frestale 82.70 8 *eP* **P** 23 38 47.4 0.0
LFF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LFF La Frestale 82.70 8 *eP* **P** 23 38 47.4 0.0
comp=Z,5.9nm,0.6s,mb4.8
CAF Calviac 82.81 7 *eP* **P** 23 38 47.4 -0.6
ORIF Oris-en-Rattie 83.05 4 *eP* **P** 23 38 49.9 +0.7
VIVF Saint-Julien-l 83.05 5 *eP* **P** 23 38 50.2 +1.0
MBDF Montbardon 83.28 4 *eP* **P** 23 38 51.7 +1.3
comp=Z,20nm,1.0s,mb4.8
MBDF Montbardon 83.28 4 *eP* **P** 23 38 51.7 +1.3
MBDF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
MBDF Montbardon 83.28 4 *eP* **P** 23 38 51.7 +1.3
comp=Z,9.9nm,1.0s,mb4.8
SMRF Simiane la Rot 83.97 4 *eP* **P** 23 38 55.8 +1.8
comp=Z,46nm,1.2s,mb5.2
SMRF Simiane la Rot 83.97 4 *eP* **P** 23 38 55.8 +1.8
comp=Z,46nm,1.2s,mb5.5
SJPF Ste Jean 84.32 10 *eP* **P** 23 38 56.3 +0.5
comp=Z,16nm,1.1s,mb4.8
SJPF Ste Jean 84.32 10 *eP* **P** 23 38 56.3 +0.5
SJPF pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
SJPF Ste Jean 84.32 10 *eP* **P** 23 38 56.3 +0.5
comp=Z,8.1nm,1.1s,mb4.8
MTLF Montolieu 84.40 7 *eP* **P** 23 38 56.4 +0.2
comp=Z,33nm,1.2s,mb5.0
MTLF Montolieu 84.40 7 *eP* **P** 23 38 56.4 +0.2
MTLF pmax pmax
comp=Z,17nm,1.2s,mb5.0
MTLF Montolieu 84.40 7 *eP* **P** 23 38 56.4 +0.2
comp=Z,16nm,1.2s,mb5.0
FRF La Foret Royal 84.44 4 *eP* **P** 23 38 57.2 +0.8
comp=Z,28nm,1.1s,mb5.1
FRF La Foret Royal 84.44 4 *eP* **P** 23 38 57.2 +0.8
FRF pmax pmax
comp=Z,14nm,1.1s,mb5.0
FRF La Foret Royal 84.44 4 *eP* **P** 23 38 57.2 +0.8
comp=Z,14nm,1.1s,mb5.0
EPF Esparros 84.56 8 *eP* **P** 23 38 56.5 -0.5
ETSF Etsaut 84.60 9 *eP* **P** 23 38 57.7 +0.5
comp=Z,16nm,0.9s,mb4.9
ETSF Etsaut 84.60 9 *eP* **P** 23 38 57.7 +0.5
ETSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ETSF Etsaut 84.60 9 *eP* **P** 23 38 57.7 +0.5
comp=Z,7.8nm,0.9s,mb4.8
LMR La Mourre 84.66 4 *eP* **P** 23 38 57.9 +0.4
comp=Z,29nm,1.0s,mb5.0
LMR La Mourre 84.66 4 *eP* **P** 23 38 57.9 +0.4
LMR pmax pmax
comp=Z,15nm,1.0s,mb5.1
LMR La Mourre 84.66 4 *eP* **P** 23 38 57.9 +0.4
comp=Z,15nm,1.0s,mb5.1
PGF Pioggiola 85.52 2 *eP* **P** 23 39 02.1 +0.3
comp=Z,63nm,1.0s,mb5.5
PGF Pioggiola 85.52 2 *eP* **P** 23 39 02.1 +0.3
PGF pmax pmax
comp=Z,31nm,1.0s,mb5.5
PGF Pioggiola 85.52 2 *eP* **P** 23 39 02.1 +0.3
comp=Z,32nm,1.0s,mb5.5
BR131 Keskin Array S 86.41 343 *eP* **P** 23 39 04.6 -1.7
comp=Z,7.2nm,1.0s,mb4.9
BRTR Keskin Array B 86.42 343 P **P** 23 39 07.0 +0.7
comp=Z,3.0nm,0.6s,mb4.7,baz=28,slow=2.1,SNR=12
MALT Malatya 86.83 339 P **P** 23 39 06.3 -2.1
ESDC Sonseca Array 87.41 12 P **P** 23 39 11.2 +0.1
comp=Z,1.7nm,0.8s,mb4.3,baz=350,slow=4.9,SNR=12
ASAR Alice Springs 90.87 231 P **P** 23 39 27.0 -0.4
comp=Z,0.8nm,0.7s,mb4.2,baz=25,slow=4.5,SNR=8.5
TSUM Tsumeb 146.68 350 PKPbc PKPbc 23 46 05.2 -0.5
comp=Z,3.0nm,0.8s,baz=341,slow=2.7,SNR=6.3

IDC ***26*** *23:37:33.6±1.5, 428S×10144E, h0km, mb4.0/9, mb1 4.1/10, mb1mx4.0/20, mbtmp4.0/10, ML3.7/1, Error ellipse: s-maj=49.0km s-min=16.2km az=60.0*
ISCJB ***26*** *23:37:36.2±0.5, 428S±007×10145E±0.10, h33km, mb4.2/17, Error ellipse: s-maj=15.1km s-min=8.2km az=152.7*
NEIC ***26*** *23:37:37.2±3.4, 430S×10145E, h26km±24km, mb4.3/7, Error ellipse: s-maj=11.1km s-min=5.8km az=59.0*
ISC 26 23:37:38.5±0.4, 428S±007×10146E±010, h35km, n31, σ0s71/28, mb4.2/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.48**	**340**	Pn	**Pn**	**Pn**	**23 39 23.6**	**-1.6**
	1.2nm,0.3s,baz=149,slow=12,SNR=5.2							
COCO	**West Island**	**9.09**	**210**	*e*Pn	**Pn**	**Pn**	**23 39 38.9**	**-8.4**
CMAR	**Chiang Mai Arr**	**22.73**	**354**	P	**P**	**P**	**23 42 38.5**	**+0.9**
	2.5nm,0.5s,mb3.9,baz=184,slow=8.5,SNR=20							
CHTO	**Chiang Mai**	**23.08**	**354**	*e*P	**P**	**P**	**23 42 40.7**	**-0.6**
	10nm,1.4s,mb4.1							
FITZ	**Fitzroy Crossi**	**27.36**	**122**	*e*P	**P**	**P**	**23 43 20.0**	**-0.6**
	8.8nm,1.3s,mb4.1							
NWAO	**Narrogin (SRO)**	**32.09**	**154**	*e*P	**P**	**P**	**23 44 02.1**	**-0.2**
	11nm,0.9s,mb4.7							
WRA	**Warramunga Arr**	**35.61**	**119**	P	**P**	**P**	**23 44 33.3**	**+0.2**
	0.5nm,0.5s,mb3.7,baz=307,slow=9.4,SNR=5.1							
WRAB	**Tennant Creek**	**35.61**	**119**	*e*P	**P**	**P**	**23 44 32.8**	**-0.4**
	3.7nm,0.9s,mb4.3							
WB2	**Warramunga Arr**	**35.62**	**119**	*e*P	**P**	**P**	**23 44 33.4**	**+0.1**
ASAR	**Alice Springs**	**36.75**	**125**	P	**P**	**P**	**23 44 43.4**	**+0.5**
	0.3nm,0.5s,mb3.4,baz=293,slow=7.4,SNR=4.2							
JOW	**Kunigami**	**40.37**	**38**	P	**P**	**P**	**23 45 12.6**	**-0.5**
	20nm,0.4s,mb5.2,baz=121,slow=18,SNR=3.1							
STKA	**Stephens Creek**	**46.56**	**131**	P	**P**	**P**	**23 46 03.7**	**+0.6**
	0.6nm,0.6s,mb3.7,baz=313,slow=9.8,SNR=2.4							
STKA	**Stephens Creek**	**46.56**	**131**	P	**P**	**P**	**23 46 03.7**	**+0.6**
KSRS	**Korea Array**	**48.28**	**28**	P	**P**	**P**	**23 46 16.9**	**+0.7**
	2.7nm,0.8s,mb4.3,baz=214,slow=8.2,SNR=8.4							
KBL	**Kabul**	**49.22**	**324**	P	**P**	**P**	**23 46 25.2**	**+1.6**
SONM	**Songino Array**	**52.08**	**4**	P	**P**	**P**	**23 46 46.1**	**+1.3**
	4.7nm,0.7s,mb4.5,baz=185,slow=8.5,SNR=11							
ULN	**Ulaanbaatar**	**52.16**	**5**	*e*P	**P**	**P**	**23 46 45.2**	**-0.2**
	2.4nm,0.8s,mb4.2							
MJAR	**Matsushiro Arr**	**53.17**	**37**	P	**P**	**P**	**23 46 53.0**	**-0.2**
	0.7nm,0.3s,mb4.1,baz=216,slow=7.2,SNR=4.3							
MK31	**Makanchi Array**	**53.61**	**344**	*e*P	**P**	**P**	**23 46 56.1**	**-0.1**
MKAR	**Makanchi Array**	**53.61**	**344**	P	**P**	**P**	**23 46 56.1**	**-0.1**
	2.6nm,0.8s,mb4.2,baz=151,slow=8.4,SNR=21							
TLY	**Talaya**	**55.78**	**2**	*e*P	**P**	**P**	**23 47 11.6**	**-0.2**
KURK	**Kurchatov**	**58.20**	**343**	*e*P	**P**	**P**	**23 47 28.9**	**-0.1**
	3.0nm,0.9s,mb4.3							
ZALV	**Zalesovo Beam**	**59.67**	**349**	P	**P**	**P**	**23 47 38.7**	**-0.5**
	2.9nm,0.8s,mb4.4,baz=184,slow=5.9,SNR=12							
CASY	**Casey**	**62.21**	**176**	P	**P**	**P**	**23 47 54.7**	**-1.5**
LSZ	**Lusaka**	**72.75**	**255**	P	**P**	**P**	**23 49 03.5**	**-0.3**
LBTB	**Lobatse**	**75.39**	**245**	*e*P	**P**	**P**	**23 49 20.0**	**+0.9**
	3.7nm,1.0s,mb4.3							
BOSA	**Boshof**	**75.85**	**242**	P	**P**	**P**	**23 49 21.7**	**0.0**
RAO	**Raoul Island**	**79.75**	**119**	*e*P	**P**	**P**	**23 49 43.8**	**+0.4**
COLA	**College**	**102.56**	**24**	Pdif	Pdif	Pdif	23 51 32.0	+0.6
TXAR	**Lajitas Array**	**145.54**	**41**	PKPbc	PKPbc	PKPbc	23 57 15.1	+1.2
	1.9nm,0.8s,baz=255,slow=1.8,SNR=9.2							

TKL	**Tuckaleechee C**	**148.41**	**8**	PKPbc	PKPbc	23 57 21.4	-0.5		
	3.1nm,0.7s,baz=350,slow=6.1,SNR=3.2								

*IDC **26** 23:39:50.9±0.7,5240N×16836W,h0km,mb4.4/19, mb1 4.6/20,mb1mx4.5/30,mbtmp4.4/20,ML4.4/1,MS4.6/1, Ms1 4.6/1,ms1mx3.4/48,Error ellipse: s-maj=24.5km s-min=11.1km az=1.0*

*ISCJB **26** 23:39:51.9±1.3,5216N±005×16827W±005,h24km±7km, mb4.6/52,MS4.4/2,Error ellipse: s-maj=9.5km s-min=4.1km az=158.1*

*MOS **26** 23:39:53.7±1.0,5244N×16835W,h33km, mb5.0/17,Error ellipse: s-maj=13.1km s-min=10.3km az=66.6*

*BJI **26** 23:39:53.3,5302N×16893W,h10km,mB5.4, mb4.8,Ms4.8, Msz4.5*

*NEIC **26** 23:39:55.2±1.4,5230N×16833W,h31km±8km,mb4.8/27, Error ellipse: s-maj=8.7km s-min=3.8km az=167.0*

ISC 26 23:39:53.9±1.2,5222N±005×16827W±005,h24km±7km, h18km±4.2km:pP-P,n152,σ0≧99/160,mb4.6/52,MS4.4/2, 4C-2D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.83**	**335**	P	**Pb**	**23 40 09.0**	**-0.7**
NIKO				S	**Sb**	**23 40 21.5**	**+1.0**
OKCE	**Okmok Cone E**	**1.21**	**3**	P	**Pn**	**23 40 15.2**	**-0.1**
OKFG	**Magazine Ridge**	**1.21**	**10**	P	**Pn**	**23 40 15.4**	**+0.1**
OKFG				S	**Sn**	**23 40 32.4**	**+1.4**
OKCD	**Okmok Cone D**	**1.22**	**5**	P	**Pn**	**23 40 15.4**	**0.0**
UNV	**Unalaska Valle**	**1.95**	**33**	P	**Pn**	**23 40 24.7**	**-0.8**
UNV				S	**Sn**	**23 40 49.4**	**+0.3**
AKLV	**Akutan Long Va**	**2.39**	**35**	P	**Pn**	**23 40 32.1**	**+0.5**
AKGG	**Akutan Green G**	**2.41**	**34**	P	**Pn**	**23 40 32.9**	**+1.1**
AKUT	**Akutan**	**2.44**	**37**	P	**Pn**	**23 40 32.3**	**+0.1**
ATKA	**Atka Island**	**3.64**	**272**	P	**Pn**	**23 40 49.6**	**+0.9**
FALS	**False Pass**	**3.92**	**46**	Pn	**Pn**	**23 40 51.8**	**-0.8**
FALS				*e*Sn	**Sn**	**23 41 37.3**	**-0.4**
ADK	**Adak**	**5.20**	**270**	P	**Pn**	**23 41 10.5**	**+0.3**
ADK				*e*Sn	**Sn**	**23 42 09.2**	**-0.1**
KDAK	**Kodiak Island**	**10.58**	**52**	Pn	**Pn**	**23 42 22.7**	**-1.1**
	3.0nm,0.3s,baz=285,slow=3.8,SNR=16						
KDAK	**Kodiak Island**	**10.58**	**52**	*e*Pn	**Pn**	**23 42 22.6**	**-1.3**
KDAK				Sn	**Sn**	**23 44 14.8**	**-6.7**
SVW2	**Sparrevohn**	**11.29**	**33**	*e*Pn	**Pn**	**23 42 34.2**	**+0.7**
FX1	**Attu Island--F**	**11.32**	**281**	Pn	**Pn**	**23 42 34.7**	**+0.7**
	8.5nm,0.3s,baz=63,slow=6.4,SNR=44						
FX1	**Attu Island--F**	**11.32**	**281**	Pn	**Pn**	**23 42 34.7**	**+0.7**
GAMB	**Gambell**	**11.73**	**352**	*e*Pn	**Pn**	**23 42 42.4**	**+2.9**
RSO	**Redoubt South**	**11.90**	**40**	*e*Pn	**Pn**	**23 42 43.2**	**+1.3**
SEW	**Seward**	**13.09**	**46**	*e*Pn	**Pn**	**23 42 57.5**	**-0.6**
FIB	**Fire Island**	**13.34**	**41**	*e*P	**Pn**	**23 43 01.5**	**0.0**
TNA	**Tin City**	**13.38**	**1**	*e*Pn	**Pn**	**23 43 03.6**	**+1.6**
	27nm,1.5s						
PPLA	**Purkeypile**	**13.70**	**32**	*e*Pn	**Pn**	**23 43 09.3**	**+3.0**
	31nm,1.0s						
PMR	**Palmer**	**14.00**	**40**	*e*P	**Pn**	**23 43 10.2**	**-0.2**
CHUM	**Lake Minchumin**	**14.36**	**29**	*e*Pn	**Pn**	**23 43 13.9**	**-1.5**
	36nm,0.4s						
KTH	**Kantishna Hill**	**14.57**	**32**	*e*Pn	**Pn**	**23 43 18.7**	**+0.5**
	29nm,1.1s						
TRF	**Thorofare Moun**	**14.71**	**33**	*e*Pn	**Pn**	**23 43 21.5**	**+1.4**
	33nm,1.4s						
TRF				*e*Sn	**Sn**	**23 46 00.1**	**-2.0**
BPAW	**Bear Paw Mtn.**	**14.93**	**30**	*e*Pn	**Pn**	**23 43 24.0**	**+0.9**
	24nm,1.0s						
PAX	**Paxson**	**16.18**	**39**	*e*P	**Pn**	**23 43 37.6**	**-1.8**
PAX				*e*		23 46 38.7	
PAX				pmax	pmax		
	comp=Z,23nm,1.3s						
PAX	**Paxson**	**16.18**	**39**	*e*Pn	**Pn**	**23 43 37.6**	**-1.8**
	comp=Z,23nm,1.3s						
PAX				*e*Sn	**Sn**	**23 46 38.7**	**+0.8**
COLA	**College**	**16.45**	**32**	*e*P	**Pn**	**23 43 41.2**	**-1.6**
COLA				pmax	pmax		
	comp=Z,22nm,1.0s						
COLA	**College**	**16.45**	**32**	*e*Pn	**Pn**	**23 43 41.2**	**-1.7**
	comp=Z,22nm,1.0s						
MENT	**Mentasta**	**16.86**	**41**	Pn	**Pn**	**23 43 48.2**	**+0.3**
COLD	**Coldfoot**	**17.47**	**24**	*e*Pn	**Pn**	**23 43 56.0**	**+0.3**
	comp=Z,17nm,1.1s						
EGAK	**Eagle**	**18.74**	**37**	*e*P	**Pn**	**23 44 09.1**	**-2.0**
	comp=Z,18nm,1.1s						
DAWY	**Dawson**	**19.10**	**40**	*e*Pn	**Pn**	**23 44 13.8**	**-1.8**
SIT	**Sitka**	**19.55**	**63**	P	**Pn**	**23 44 18.8**	**-2.1**
SKAG	**Skagway**	**19.70**	**55**	*e*P	**Pn**	**23 44 21.1**	**-1.6**
PET	**Petropavlovsk**	**20.00**	**285⇑**	*e*P	**Pn**	**23 44 24.5**	**-1.8**
PET				pmax	pmax		
	comp=Z,43nm,0.9s						
PET	**Petropavlovsk**	**20.00**	**285**	*e*P	**Pn**	**23 44 23.5**	**-2.8**
	comp=Z,29nm,0.9s						
BILL	**Bilibino**	**20.05**	**332**	*e*P	**P**	**23 44 26.2**	**+1.3**
BILL				pmax	pmax		
	comp=Z,32nm,1.1s						
BILL	**Bilibino**	**20.05**	**332**	*e*P	**P**	**23 44 24.9**	**0.0**
	comp=Z,29nm,1.1s						
PETK	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**23 44 30.2**	**-0.3**
	comp=Z,22nm,0.6s,baz=82,slow=15,SNR=78						
PETK				LR	LR	23 51 40.3	
	comp=Z,1μm,18.4s,MS4.4,baz=301,slow=35						
PETK	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**23 44 30.2**	**-0.3**
PETK				LR	LR	23 51 40.3	
DLBC	**Dease Lake**	**22.39**	**59**	P	**P**	**23 44 54.0**	**+3.9**
	comp=Z,5.2nm,1.1s,mb3.9,baz=275,slow=16,SNR=3.1						
DLBC	**Dease Lake**	**22.39**	**59**	*e*P	**P**	**23 44 49.6**	**-0.5**
SEY	**Seymchan**	**23.27**	**313⇑**	*e*P	**P**	**23 44 57.7**	**-1.6**
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**23 45 59.7**	**+1.0**
	comp=Z,0.4nm,0.3s,mb3.6,baz=276,slow=7.1,SNR=22						
YKA				PcP	PcP	23 49 01.9	+0.6
	comp=Z,0.5nm,0.8s,baz=290,slow=2.8,SNR=4.3						
YKA				ScP	ScP	23 52 42.0	+0.5
	comp=Z,0.5nm,0.9s,baz=276,slow=3.4,SNR=6.2						
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**23 45 59.7**	**+1.0**
YKA				PcP	PcP	23 49 01.9	+0.7
YKA				ScP	ScP	23 52 42.0	+0.5
YBH	**Yreka Blue Hor**	**32.31**	**91**	P	**P**	**23 46 23.8**	**+3.0**
	comp=Z,2.8nm,0.7s,mb4.2,baz=58,slow=2.1,SNR=4.1						
EDM	**Edmonton**	**32.59**	**66**	*e*P	**P**	**23 46 23.4**	**+0.3**
TIXI	**Tiksi**	**33.21**	**329⇑**	*e*P	**P**	**23 46 27.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
TIXI	**Tiksi**	**33.21**	**329**	*e*P	**P**	**23 46 27.4**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.2						
YAK	**Yakutsk**	**33.78**	**311⇑**	*e*P	**P**	**23 46 31.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
YAK	**Yakutsk**	**33.78**	**311**	P	**P**	**23 46 32.2**	**-1.1**
ERM	**Erimo**	**34.00**	**272**	*e*P	**P**	**23 46 35.9**	**+0.4**
RES	**Resolute Bay**	**36.22**	**26**	*e*P	**P**	**23 46 53.5**	**-0.7**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
RES	**Resolute Bay**	**36.22**	**26**	*e*P	**P**	**23 46 53.5**	**-0.7**
	comp=Z,2.3nm,0.9s,mb4.1						
NVAR	**Mina Array Bea**	**36.99**	**92**	P	**P**	**23 47 03.2**	**+2.0**
	comp=Z,2.0nm,0.8s,mb4.0,baz=297,slow=8.2,SNR=7.3						
NVAR	**Mina Array Bea**	**36.99**	**92**	P	**P**	**23 47 03.2**	**+2.0**
KLR	**Kul'dur**	**37.14**	**290**	*e*P	**P**	**23 46 57.2**	**-5.2**
RLMT	**Red Lodge**	**38.64**	**76**	*e*P	**P**	**23 47 14.6**	**-0.5**
	comp=Z,54nm,2.2s,mb4.9						
PDAR	**Pinedale Array**	**39.77**	**80**	P	**P**	**23 47 25.4**	**+0.8**
	comp=Z,1.8nm,0.7s,mb3.9,baz=319,slow=3.7,SNR=11						
MAJO	**Matsushiro**	**40.37**	**269**	*e*P	**P**	**23 47 28.9**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**40.37**	**269**	*e*P	**P**	**23 47 28.9**	**-0.7**
	comp=Z,14nm,0.8s,mb4.7						
MJAR	**Matsushiro Arr**	**40.37**	**269**	P	**P**	**23 47 30.0**	**+0.4**
	comp=Z,1.4nm,0.3s,mb4.2,baz=48,slow=6.4,SNR=8.6						
MJAR				PcP	PcP	23 49 32.4	0.0
	comp=Z,0.7nm,0.3s,baz=214,slow=0.9,SNR=4.2						
MDJ	**Mudanjiang**	**40.78**	**285**	P	**P**	**23 47 34.0**	**+1.1**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.6s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,1μm,11.8s						
BOD	**Bodaibo**	**42.61**	**309**	*e*P	**P**	**23 47 45.7**	**-2.0**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
CN2	**Changchun**	**43.70**	**286**	*e*P	**P**	**23 47 55.8**	**-0.9**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
KSRS	**Korea Array**	**46.09**	**278**	P	**P**	**23 48 16.9**	**+1.1**
	comp=Z,9.5nm,0.9s,mb4.7,baz=54,slow=7.5,SNR=30						
TLY	**Talaya**	**50.97**	**307**	P	**P**	**23 48 50.6**	**-2.5**
BJI	**Beijing**	**51.46**	**288**	P	**P**	**23 48 54.5**	**-2.5**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.6						
BJI				AMB	AMB		
	comp=Z,985nm,12.9s						
ULN	**Ulaanbaatar**	**51.59**	**301**	*e*P	**P**	**23 48 57.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**51.59**	**301**	*e*P	**P**	**23 48 57.2**	**-0.7**
	comp=Z,8.1nm,0.9s,mb4.7						
SONM	**Songino Array**	**51.95**	**301**	P	**P**	**23 49 00.5**	**-0.1**
	comp=Z,6.1nm,1.0s,mb4.5,baz=50,slow=8.1,SNR=16						
TXAR	**Lajitas Array**	**52.08**	**90**	P	**P**	**23 49 01.8**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.0,baz=303,slow=6.1,SNR=15						
HHC	**Hu-ho-hao-te**	**53.60**	**292**	*e*P	**P**	**23 49 13.0**	**+0.2**
HHC				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,1μm,9.9s						
NJ2	**Nanjing**	**55.24**	**279**	*e*P	**P**	**23 49 23.5**	**-1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
ZALV	**Zalesovo Beam**	**57.99**	**318**	P	**P**	**23 49 43.3**	**-0.7**
	comp=Z,2.8nm,0.9s,mb4.3,baz=35,slow=5.6,SNR=7.0						
ARCES	**ARCESS Array B**	**58.14**	**354**	P	**P**	**23 49 44.0**	**-0.9**
	comp=Z,7.5nm,0.9s,mb4.7,baz=358,slow=7.7,SNR=13						
WHN	**Wuhan**	**59.03**	**281**	⇓P	**P**	**23 49 51.8**	**+0.1**
XAN	**Xi'an**	**59.79**	**288**	P	**P**	**23 49 56.8**	**-0.1**
XAN				AP	pP	23 50 05.0	+0.7
XAN				PP	PP	23 52 08.8	+0.2
XAN				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.8						
XAN				AMB	AMB		
	comp=Z,360nm,14.0s						
XAN				LR	LR		
	comp=N,175nm,17.3s,MS4.5						
XAN				LR	LR		
	comp=E,337nm,22.1s,MS4.5						
XAN				LR	LR		
	comp=Z,358nm,26.5s,MS4.4						
GTA	**Gaotai**	**61.15**	**298**	*e*P	**P**	**23 50 06.3**	**+0.2**
GTA				AP	pP	23 50 10.5	-3.0
GTA				XP	sP	23 50 13.3	-3.0
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
LZH	**Lanzhou**	**61.27**	**293**	*e*P	**P**	**23 50 07.8**	**+0.9**
LZH				AP	pP	23 50 11.5	-2.9
LZH				XP	sP	23 50 14.0	-3.2
LZH				AMB	AMB		
	comp=Z,27nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,138nm,6.4s						
KURK	**Kurchatov**	**62.93**	**319**	*e*P	**P**	**23 50 17.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
KURK	**Kurchatov**	**62.93**	**319**	*e*P	**P**	**23 50 17.2**	**-0.6**
	comp=Z,4.5nm,0.9s,mb4.6						
BVAR	**Borovoye Array**	**64.21**	**325**	P	**P**	**23 50 25.9**	**-0.4**
	comp=Z,4.4nm,0.5s,mb4.8,baz=54,slow=7.5,SNR=32						
BRVK	**Borovoye**	**64.22**	**325**	*e*P	**P**	**23 50 25.4**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BRVK	**Borovoye**	**64.22**	**325**	*e*P	**P**	**23 50 25.4**	**-1.0**
	comp=Z,9.6nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**64.39**	**314**	*e*P	**P**	**23 50 25.8**	**-1.8**
MKAR	**Makanchi Array**	**64.39**	**314**	P	**P**	**23 50 26.7**	**-0.9**
	comp=Z,3.2nm,0.7s,mb4.4,baz=48,slow=6.0,SNR=28						
MKAR	**Makanchi Array**	**64.39**	**314**	P	**P**	**23 50 26.7**	**-0.9**
ARU	**Arti**	**65.06**	**333**	*d*P	**P**	**23 50 31.6**	**-0.1**
ARU				*e*S	S	23 59 13.5	+1.3
ARU				SS	SS	00 03 27.3	+4.0
ARU				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
ARU	**Arti**	**65.06**	**333**	*e*P	**P**	**23 50 31.5**	**-0.2**
	comp=Z,16nm,0.9s,mb5.0						
CD2	**Chengdu**	**65.06**	**289**	P	**P**	**23 50 33.3**	**+1.2**
CD2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GYA	**Guiyang**	**66.62**	**283**	P	**P**	**23 50 43.0**	**+0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NB2	**NORSAR Subarra**	**67.09**	**0**	P	**P**	**23 50 44.0**	**-0.7**
	comp=Z,3nm,0.7s,mb4.3,baz=360,slow=6.5						
NOA	**NORSAR Array B**	**67.09**	**0**	P	**P**	**23 50 44.2**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.4,baz=360,slow=6.3,SNR=9.2						
HFS	**Hagfors**	**67.99**	**359**	P	**P**	**23 50 49.9**	**-0.5**
	comp=Z,4.6nm,0.5s,mb4.8,baz=21,slow=3.8,SNR=36						
KMI	**Kunming**	**69.96**	**285**	P	**P**	**23 51 03.8**	**+0.6**
KMI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
MOS	**Moscow**	**70.30**	**345**	*i*	**P**	**23 51 07.0**	**+2.2**
MOS				pmax	pmax		
	comp=Z,1μm,1.6s						
MOS				pmax	pmax		
	comp=N,600nm,1.5s						
TKM2	**Tokmak 2**	**70.37**	**316**	*e*P	**P**	**23 51 06.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
TKM2	**Tokmak 2**	**70.37**	**316**	*e*P	**P**	**23 51 06.0**	**+0.5**
	comp=Z,7.9nm,1.3s,mb4.5						
AKTK	**Aktyubinsk**	**70.47**	**331**	P	**P**	**23 51 06.1**	**+0.1**
AKTO	**Aktyubinsk**	**70.47**	**331**	P	**P**	**23 51 06.1**	**+0.1**
	comp=Z,8.8nm,0.8s,mb4.7,baz=38,slow=5.9,SNR=28						
AML	**Almayashu**	**71.83**	**316**	*e*P	**P**	**23 51 15.3**	**+0.9**
	comp=Z,4.4nm,0.7s,mb4.5						
CM31	**Chiang Mai Arr**	**77.31**	**284**	*e*P	**P**	**23 51 47.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**77.31**	**284**	P	**P**	**23 51 47.0**	**+0.6**
	comp=Z,7.3nm,0.9s,mb4.6,baz=25,slow=6.2,SNR=36						
GIVF	**Givet**	**77.89**	**5**	*e*P	**P**	**23 51 49.4**	**+0.2**
	comp=Z,26nm,1.0s,mb4.8						
GIVF	**Givet**	**77.89**	**5**	*e*P	**P**	**23 51 49.4**	**+0.2**
GIVF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GIVF	**Givet**	**77.89**	**5**	*e*P	**P**	**23 51 49.4**	**+0.2**
	comp=Z,13nm,1.0s,mb4.8						
BAIF	**Baives**	**77.90**	**5**	*e*P	**P**	**23 51 49.5**	**+0.3**
	comp=Z,42nm,1.4s,mb4.9						
BAIF	**Baives**	**77.90**	**5**	*e*P	**P**	**23 51 49.5**	**+0.3**
BAIF				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
BAIF	**Baives**	**77.90**	**5**	*e*P	**P**	**23 51 49.5**	**+0.3**
	comp=Z,21nm,1.4s,mb4.9						
FLN	**La Foliniere**	**78.86**	**8**	*e*P	**P**	**23 51 54.5**	**-0.1**
	comp=Z,54nm,1.3s,mb5.0						
FLN	**La Foliniere**	**78.86**	**8**	*e*P	**P**	**23 51 54.5**	**-0.1**
FLN				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
FLN	**La Foliniere**	**78.86**	**8**	*e*P	**P**	**23 51 54.5**	**-0.1**
	comp=Z,27nm,1.3s,mb5.0						
ROSF	**Rostrenen**	**79.01**	**10**	*e*P	**P**	**23 51 55.7**	**+0.3**
	comp=Z,98nm,1.6s,mb5.2						
ROSF	**Rostrenen**	**79.01**	**10**	*e*P	**P**	**23 51 55.7**	**+0.3**
ROSF				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.2						
ROSF	**Rostrenen**	**79.01**	**10**	*e*P	**P**	**23 51 55.7**	**+0.3**
	comp=Z,49nm,1.6s,mb5.2						
LDF	**La Druitiere**	**79.06**	**8**	*e*P	**P**	**23 51 55.7**	**0.0**
SGMF	**Saint Gilles**	**79.16**	**10**	*e*P	**P**	**23 51 56.5**	**+0.2**
GRR	**Gorron**	**79.20**	**9**	*e*P	**P**	**23 51 56.4**	**0.0**
MEZF	**Maizieres J'vi**	**79.50**	**5**	*e*P	**P**	**23 51 58.6**	**+0.5**
KBL	**Kabul**	**80.17**	**315**	*e*P	**P**	**23 52 01.1**	**-0.9**
KBL				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
KBL	**Kabul**	**80.17**	**315**	*e*P	**P**	**23 52 01.1**	**-0.8**
	comp=Z,16nm,1.1s,mb4.8						
LOR	**Lormes**	**80.66**	**5**	*e*P	**P**	**23 52 04.6**	**+0.2**
	comp=Z,32nm,1.2s,mb4.8						
LOR	**Lormes**	**80.66**	**5**	*e*P	**P**	**23 52 04.6**	**+0.2**
LOR				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
LOR	**Lormes**	**80.66**	**5**	*e*P	**P**	**23 52 04.6**	**+0.2**
	comp=Z,16nm,1.2s,mb4.8						
SSF	**Saint Saulge**	**80.85**	**6**	*e*P	**P**	**23 52 05.9**	**+0.5**
	comp=Z,17nm,1.0s,mb4.6						
SSF	**Saint Saulge**	**80.85**	**6**	*e*P	**P**	**23 52 05.9**	**+0.5**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**80.85**	**6**	*e*P	**P**	**23 52 05.9**	**+0.5**
	comp=Z,8.6nm,1.0s,mb4.6						
MFF	**Saint Martin d**	**81.03**	**8**	*e*P	**P**	**23 52 06.9**	**+0.5**
	comp=Z,34nm,1.0s,mb4.9						
MFF	**Saint Martin d**	**81.03**	**8**	*e*P	**P**	**23 52 06.9**	**+0.5**
MFF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
MFF	**Saint Martin d**	**81.03**	**8**	*e*P	**P**	**23 52 06.9**	**+0.5**
	comp=Z,17nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**81.11**	**6**	*e*P	**P**	**23 52 07.1**	**+0.3**
SMF	**Signal de Mont**	**81.28**	**5**	*e*P	**P**	**23 52 07.9**	**+0.2**
SMF	**Signal de Mont**	**81.28**	**5**	*e*P	**P**	**23 52 07.9**	**+0.2**
BGF	**Bois d'Agland**	**81.31**	**6**	*e*P	**P**	**23 52 08.3**	**+0.5**
TCF	**Toulx Ste Croi**	**81.53**	**7**	*e*P	**P**	**23 52 09.3**	**+0.3**
LFF	**La Frestale**	**82.76**	**8**	*e*P	**P**	**23 52 16.1**	**+0.6**
	comp=Z,22nm,0.9s,mb4.9						
LFF	**La Frestale**	**82.76**	**8**	*e*P	**P**	**23 52 16.1**	**+0.6**
LFF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
LFF	**La Frestale**	**82.76**	**8**	*e*P	**P**	**23 52 16.1**	**+0.6**
	comp=Z,11nm,0.9s,mb4.9						
CAF	**Calviac**	**82.88**	**7**	*e*P	**P**	**23 52 16.6**	**+0.5**
SJPF	**Ste Jean**	**84.39**	**9**	*e*P	**P**	**23 52 24.7**	**+0.8**
EPF	**Esparros**	**84.62**	**8**	*e*P	**P**	**23 52 25.2**	**+0.2**
ETSF	**Etsaut**	**84.67**	**9**	*e*P	**P**	**23 52 26.4**	**+1.1**
	comp=Z,14nm,0.9s,mb4.8						
ETSF	**Etsaut**	**84.67**	**9**	*e*P	**P**	**23 52 26.4**	**+1.1**
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
ETSF	**Etsaut**	**84.67**	**9**	*e*P	**P**	**23 52 26.4**	**+1.1**
	comp=Z,6.8nm,0.9s,mb4.8						
ESDC	**Sonseca Array**	**87.47**	**12**	P	**P**	**23 52 39.4**	**+0.2**
	comp=Z,2.3nm,0.9s,mb4.4,baz=354,slow=4.5,SNR=8.9						
HYB	**Hyderabad**	**89.81**	**299**	*i* P	**P**	**23 52 50.5**	**-0.1**
HYB	**Hyderabad**	**89.81**	**299**	*e*P	**P**	**23 52 50.5**	**-0.1**
ASAR	**Alice Springs**	**90.82**	**231**	P	**P**	**23 52 55.2**	**+0.3**
	comp=Z,1.7nm,1.0s,mb4.3,baz=35,slow=4.2,SNR=8.8						

*DJA **26** 23:40:45,2260S×6834W,h20km,mb5.9/7*

*MOS **26** 23:40:50.5±1.3,2239S×6837W,h100km,mb5.6/34,Error ellipse: s-maj=14.1km s-min=7.8km az=112.6*

*IDC **26** 23:40:51.9±0.5,2234S×6846W,h91km±4km,mb5.2/27, mb1 5.3/30,mb1mx5.2/33,mbtmp5.2/30,MS4.9/3, Ms1 4.8/3,ms1mx4.1/30,Error ellipse: s-maj=11.3km s-min=9.4km az=68.0*

*ISCJB **26** 23:40:52.2±0.1,2238S±003×6837W±003,h106km, mb5.5/113,Error ellipse: s-maj=4.0km s-min=3.5km az=21.8*

*GUC **26** 23:40:53.1±0.9,2245S×6863W,h107km±5km,ML5.5*

*GCMT **26** 23:40:53.1±0.4,2219S×6877W,h121km±3km,MW5.5/62, Moment Tensor Solution. s25,c30; s62,c88; Duration: 154 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.92±.07, $M_{\theta\theta}$-0.03±.11; $M_{\phi\phi}$1.95±.13; $M_{r\theta}$-0.14±.06; $M_{\theta\phi}$-1.77±.09; $M_{\phi r}$-0.23±.09; Best double couple: M0 2.48900×10^{17} NP1:ϕs135.00000°,δ45.00000°,λ-111.00000°. NP2: ϕs344.00000°,δ48.00000°,λ-70.00000°. Principal axes: T 2.9910, Plg1.0000°, Azm60.0000°; N -1.0070, Plg15.0000°, Azm150.0000°; P -1.9870, Plg75.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **26** 23:40:53.1,2245S×6863W,h107km,mb5.6/85,After GUC.*

NEIC Felt [IV] at Calama, [III] at Tocopilla and [II] at Antofagasta.

*BJI **26** 23:40:54.1,2250S×6860W,h106km,mB5.5*

ISC 26 23:40:54.1±0.1,2238S±003×6831W±003,h108km, h108km±.8km:pP-P,n790,σ0≧73/691,mb5.5/113, 199C-174D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.60**	**248**	P	**Pn**	**23 41 09.2**	**-2.2**
	19μm,0.3s,baz=48,slow=4.6						
LVC				S	**Sn**	**23 41 19.7**	**-4.7**
	24μm,0.3s,baz=206,slow=17,SNR=53						
LVC	**Limon Verde**	**0.60**	**248**	⇓*i*Pn	**Pn**	**23 41 09.4**	**-2.0**
LVC				*e*Sn	**Sn**	**23 41 20.7**	**-3.7**
LVC	**Limon Verde**	**0.60**	**248**	⇓*i*P	**Pn**	**23 41 09.6**	**-1.8**
LVC				*i* S	**Sn**	**23 41 21.2**	**-3.3**
LVC				AML	AML	23 41 22.9	
	comp=N,357μm,0.6s						
PECH	**Pedro de Valdi**	**1.28**	**260**	⇑*i*P	**Pn**	**23 41 14.8**	**-3.3**
PECH				*i* S	**Sn**	**23 41 31.4**	**-5.0**
PECH				AML	AML	23 41 32.2	
	comp=N,363μm,0.3s						
MACH	**Maria Elena**	**1.36**	**278**	⇑*i*P	**Pn**	**23

EFI epP pP 23 47 19.8 +0.9
EFI PP PP 23 48 02.1 -3.2
EFI ePcP PcP 23 49 52.4 -0.4
SDV Santo Domingo 31.16 356 eP **P** **23 47 01.2 -1.7**
comp=Z,21nm,0.8s,mb4.9
SDV epP pP 23 47 21.3 -5.5
SDV ePcP PcP 23 49 55.3 -0.3
SDV S **S** **23 51 59.5 -1.6**
USHA Ushuaia 32.40 180 P **P** **23 47 12.0 -1.4**
comp=Z,69nm,0.9s,mb5.4,baz=347,slow=4.7,SNR=30
GRGR Grenville 34.92 11 eP **P** **23 47 36.7 +1.2**
comp=Z,110nm,0.5s,mb5.9
GRGR epP pP 23 47 58.9 -0.8
GRGR ePcP PcP 23 50 05.5 -0.6
RCBR Riachuelo 35.35 67 eP **P** **23 47 39.9 +0.5**
comp=Z,180nm,0.8s,mb6.0
RCBR epP pP 23 48 05.3 +1.7
FDF Fort de France 37.55 11 eP **P** **23 47 58.5 +0.5**
FDF e*PP pP 23 48 22.6 +0.2
FDF e 23 50 13.3
FDF pmax pmax
comp=Z,162nm,0.7s,mb6.0
FDF Fort de France 37.55 11 eP **P** **23 47 56.6 -1.4**
FDF Fort de France 37.55 11 eP **P** **23 47 58.5 +0.5**
comp=Z,162nm,0.7s,mb6.0
FDF epP pP 23 48 22.6 +0.3
FDF ePcP PcP 23 50 13.3 -0.7
CRPR Cabo Rojo, PR 40.16 2 eP **P** **23 48 17.6 -2.1**
CRPR epP pP 23 48 44.5 +0.2
CRPR ePcP PcP 23 50 21.4 -0.7
OBIP Obispado Ponce 40.21 3 eP **P** **23 48 18.0 -2.2**
OBIP epP pP 23 48 46.9 +2.1
CELP Cerrillos 40.24 3 eP **P** **23 48 18.3 -2.1**
SJG San Juan 40.30 3 eP **P** **23 48 20.5 -0.4**
SJG pmax pmax
comp=Z,170nm,1.1s
SJG San Juan 40.30 3 eP **P** **23 48 20.5 -0.3**
comp=Z,172nm,1.1s,mb5.8
SJG epP pP 23 48 45.4 -0.2
SJG esP sP 23 48 59.3 +1.5
SJG ePP PP 23 49 55.5 -0.4
ANWB Willy Bob 40.31 10 eP **P** **23 48 21.2 +0.2**
ANWB epP pP 23 48 45.8 +0.2
ANWB ePP PP 23 49 56.1 +0.1
ANWB ePcP PcP 23 50 23.5 +0.9
LRS Lares 40.45 2 eP **P** **23 48 21.3 -0.8**
CBYP Canovanas 40.48 4 eP **P** **23 48 20.1 -2.3**
comp=Z,30nm,0.9s,mb5.1
CBYP epP pP 23 48 46.6 -0.4
CBYP esP sP 23 49 01.0 +1.8
CBYP ePP PP 23 49 59.0 +1.2
CBYP ePcP PcP 23 50 22.8 -0.4
TGUH Tegucigalpa,Un 40.71 331 eP **P** **23 48 23.9 -0.4**
comp=Z,144nm,0.9s,mb5.8
TGUH epP pP 23 48 50.0 +1.0
TGUH esP sP 23 48 59.5 -1.7
TGUH ePcP PcP 23 50 24.3 +0.4
PMSA Palmer Station 42.47 177 P **P** **23 48 37.8 -0.3**
comp=Z,122nm,0.8s,mb5.7,baz=355,slow=5.8,SNR=14
TEIG Tepich 46.62 334 eP **P** **23 49 10.8 -0.9**
comp=Z,58nm,0.7s,mb5.4
TEIG epP pP 23 49 36.3 -0.6
TEIG ePcP PcP 23 50 43.9 0.0
TUIG Tuzandepetl 47.60 325 eP **P** **23 49 18.6 -0.7**
OXX Oaxaca 48.08 322 eP **P** **23 49 24.0 +1.0**
ACX Acapulco 49.79 319 eP **P** **23 49 36.3 +0.3**
PLIG Platanillo 50.72 321 eP **P** **23 49 43.7 +0.6**
PPM Popocatepetl 50.75 322 eP **P** **23 49 45.0 +1.8**
IIO Organos 51.22 322 *i* P **P** **23 49 47.3 +0.5**
PTVM Pico Tres Padr 51.44 322 eP **P** **23 49 48.9 +0.5**
DWPF Disney 51.77 345 eP **P** **23 49 50.6 -0.2**
comp=Z,135nm,1.0s,mb5.9
DWPF epP pP 23 50 16.6 +0.2
DWPF ePcP PcP 23 51 01.8 -0.7
MOIG Morelia 52.72 320 eP **P** **23 49 58.1 +0.2**
ZAIG Zacatecas 55.92 321 *i* P **P** **23 50 21.9 +0.9**
PTCN Pitcairn Islan 56.20 254 eP **P** **23 50 23.9 +0.7**
NHSC New Hope 56.33 348 eP **P** **23 50 24.1 +0.3**
comp=Z,328nm,1.0s,mb6.3
NHSC epP pP 23 50 50.6 +0.8
NHSC ePcP PcP 23 51 17.9 -1.9
NHSC ePP PP 23 52 28.7 -1.9
GOGA Godfrey 57.34 345 eP **P** **23 50 29.7 -1.2**
GOGA pmax pmax
comp=Z,47nm,1.1s,mb5.4
GOGA Godfrey 57.34 345 eP **P** **23 50 29.6 -1.2**
comp=Z,47nm,1.1s,mb5.4
LRAL Lakeview Retre 57.92 341 eP **P** **23 50 33.2 -1.7**
comp=Z,57nm,1.0s,mb5.6
LRAL epP pP 23 50 59.7 -1.4
LRAL ePcP PcP 23 51 23.8 -2.3
LRAL ePP PP 23 52 42.8 -2.0
CNNC Cliffs of the 58.02 351 eP **P** **23 50 34.1 -1.6**
comp=Z,72nm,1.2s,mb5.6
VBMS Vicksburg 58.30 338 eP **P** **23 50 36.9 -0.8**
comp=Z,196nm,1.5s,mb5.9
HKT Hockley 58.38 332 eP **P** **23 50 37.4 -0.8**
HKT e*PP pP 23 51 04.1 -0.3
HKT e*SP sP 23 51 15.6 -0.7
HKT e 23 51 27.1
HKT e 23 52 47.5
HKT pmax pmax
comp=Z,66nm,1.0s,mb5.6
HKT Hockley 58.38 332 eP **P** **23 50 37.4 -0.9**
comp=Z,66nm,1.0s,mb5.6
HKT epP pP 23 51 04.1 -0.4
HKT esP sP 23 51 15.6 -0.6
HKT ePcP PcP 23 51 27.1 -0.9
HKT ePP PP 23 52 47.5 -1.3
NATX Nacogdoches 59.46 334 eP **P** **23 50 45.5 -0.1**
comp=Z,286nm,0.9s,mb6.3
NATX epP pP 23 51 10.6 -1.3
NATX esP sP 23 51 22.1 -1.6
NATX ePcP PcP 23 51 31.5 -0.7
NATX ePP PP 23 52 55.7 -2.7
CPCT Cooper Cave 59.53 345 eP **P** **23 50 44.4 -1.7**
TKL Tuckaleechee C 59.55 345 eP **P** **23 50 45.2 -1.0**
SWET Sewanee 59.67 343 eP **P** **23 50 45.6 -1.4**
OXF Oxford 60.03 340 eP **P** **23 50 47.4 -2.1**
OXF e*PP pP 23 51 14.7 -1.1
OXF pmax pmax
comp=Z,194nm,1.0s,mb6.1
OXF Oxford 60.03 340 eP **P** **23 50 47.4 -2.2**
comp=Z,194nm,1.0s,mb6.1
OXF epP pP 23 51 14.7 -1.2
BLA Blacksburg 60.36 349 eP **P** **23 50 51.8 +0.1**
BLA e*PP pP 23 51 18.5 +0.4
BLA e 23 53 05.6
BLA pmax pmax
comp=Z,247nm,1.5s,mb6.0
BLA Blacksburg 60.36 349 eP **P** **23 50 51.8 0.0**
comp=Z,247nm,1.5s,mb6.0
BLA epP pP 23 51 18.4 +0.4
BLA ePP PP 23 53 05.6 -0.7
JSRW J. Sargeant Re 60.43 351 eP **P** **23 50 53.0 +0.8**
JCT Junction City 60.64 329 eP **P** **23 50 52.6 -1.2**
JCT pmax pmax
comp=Z,170nm,0.9s,mb6.1
JCT Junction City 60.64 329 eP **P** **23 50 52.6 -1.2**
comp=Z,170nm,0.8s,mb6.1
JCT epP pP 23 51 19.1 -1.1
CBN Corbin 60.86 352 eP **P** **23 50 55.0 -0.1**
comp=Z,46nm,0.7s,mb5.6
CBN epP pP 23 51 20.5 -1.0
RKT Rikitea 60.97 255 eP **P** **23 50 56.0 -0.3**
comp=Z,88nm,1.0s,mb5.8
RKT Rikitea 60.97 255 eP **P** **23 50 56.0 -0.3**
RKT pmax pmax
comp=Z,88nm,1.0s,mb5.7
WVT Waverly 61.05 342 eP **P** **23 50 54.3 -2.1**
WVT pmax pmax
comp=Z,120nm,0.9s,mb5.9
WVT Waverly 61.05 342 eP **P** **23 50 54.2 -2.2**
comp=Z,123nm,0.9s,mb5.9
WVT epP pP 23 51 20.8 -2.1
UALR University of 61.26 338 eP **P** **23 50 56.6 -1.3**
comp=Z,89nm,1.0s,mb5.8
UALR epP pP 23 51 22.9 -1.3
SNAA Sanae 61.27 161 eP **P** **23 50 57.3 -0.2**
SNAA pmax pmax
comp=Z,200nm,0.9s
SNAA Sanae 61.27 161 eP **P** **23 50 57.3 -0.2**
comp=Z,203nm,0.9s,mb6.2

SNAA epP pP 23 51 23.2 -0.7
SNAA esP sP 23 51 35.1 -0.6
MIAR Mount Ida 61.50 336 eP **P** **23 50 58.3 -1.2**
MIAR e*PP pP 23 51 23.6 -2.3
MIAR pmax pmax
comp=Z,74nm,0.7s,mb5.8
MIAR Mount Ida 61.50 336 eP **P** **23 50 58.3 -1.2**
comp=Z,74nm,0.7s,mb5.8
MIAR epP pP 23 51 23.6 -2.3
GNAR Gosnell 61.56 340 eP **P** **23 50 59.1 -0.7**
comp=Z,3µm,1.2s
GLAT Glass 61.62 341 eP **P** **23 50 59.3 -0.9**
TXAR Lajitas Array 61.67 325 P **P** **23 50 59.7 -1.0**
comp=Z,12nm,0.8s,mb5.0,baz=149,slow=8.8,SNR=67
TXAR PKPPKP 00 20 18.1
comp=Z,0.6nm,0.8s,baz=212,slow=3.2,SNR=4.9
TXAR Lajitas Array 61.67 325 P **P** **23 50 59.7 -1.0**
TXAR P'P' 00 20 18.1
SDMD Soldier's Deli 61.98 353 eP **P** **23 51 02.5 -0.1**
comp=Z,53nm,0.9s,mb5.6
PARMO Parma 62.12 341 eP **P** **23 51 02.8 -0.8**
MVL Millersville 62.51 353 eP **P** **23 51 05.9 -0.2**
comp=Z,61nm,0.8s,mb5.6
WCI Wyandotte Cave 62.61 344 eP **P** **23 51 04.9 -1.9**
WCI pmax pmax
comp=Z,70nm,0.9s,mb5.6
WCI Wyandotte Cave 62.61 344 eP **P** **23 51 04.9 -2.0**
comp=Z,70nm,0.9s,mb5.6
WCI epP pP 23 51 31.4 -1.9
WCI esP sP 23 51 44.0 -1.1
MCWV Mont Chateau 62.65 350 eP **P** **23 51 06.8 -0.3**
comp=Z,95nm,0.9s,mb5.7
MCWV epP pP 23 51 33.0 -0.6
MCWV ePcP PcP 23 51 45.2 +0.3
MCWV ePP PP 23 53 20.4 -6.0
BBTS Babate 62.67 59 P **P** **23 51 08.0 +0.2**
comp=Z,112nm,0.9s,mb5.8,baz=209,slow=1.0,SNR=6.2
USIN University of 62.73 343 eP **P** **23 51 05.7 -1.9**
comp=Z,107nm,1.1s,mb5.7
USIN epP pP 23 51 32.8 -1.3
USIN ePcP PcP 23 51 43.9 -1.4
USIN ePP PP 23 53 26.3 -0.9
SIUC Southern Illin 62.93 341 eP **P** **23 51 07.2 -1.8**
comp=Z,140nm,1.3s,mb5.7
SIUC epP pP 23 51 33.8 -1.7
SIUC ePcP PcP 23 51 45.4 -0.8
PAL Palisades 63.28 355 eP **P** **23 51 11.6 +0.4**
PAL pmax pmax
comp=Z,39nm,1.0s,mb5.3
PAL Palisades 63.28 355 eP **P** **23 51 11.6 +0.4**
comp=Z,39nm,0.9s,mb5.3
SSPA Standing Stone 63.32 352 eP **P** **23 51 11.5 0.0**
comp=Z,72nm,1.3s,mb5.4
SSPA ePcP PcP 23 51 47.7 +0.1
YLE Yale 63.52 356 eP **P** **23 51 13.3 +0.5**
FVM French Village 63.54 341 eP **P** **23 51 11.5 -1.5**
FVM pmax pmax
comp=Z,110nm,0.8s,mb5.7
FVM French Village 63.54 341 eP **P** **23 51 11.5 -1.5**
comp=Z,146nm,0.8s,mb5.9
FVM epP pP 23 51 38.1 -1.5
BLO Bloomington 63.56 344 eP **P** **23 51 10.9 -2.2**
BLO e*PP pP 23 51 38.8 -0.9
BLO pmax pmax
comp=Z,42nm,0.7s,mb5.4
BLO Bloomington 63.56 344 eP **P** **23 51 10.9 -2.2**
comp=Z,42nm,0.7s,mb5.4
BLO epP pP 23 51 38.8 -0.9
BLO ePP PP 23 53 34.3 -0.2
OLIL Olney 63.56 343 eP **P** **23 51 11.3 -1.9**
comp=Z,46nm,0.9s,mb5.3
WMOK Wichita Mounta 63.76 332 eP **P** **23 51 12.5 -2.0**
WMOK pmax pmax
comp=Z,30nm,0.9s,mb5.1
WMOK Wichita Mounta 63.76 332 eP **P** **23 51 12.5 -1.9**
comp=Z,30nm,0.9s,mb5.1
WMOK ePcP PcP 23 51 49.4 -0.2
ACSO Alum Creek Sta 63.77 348 eP **P** **23 51 13.5 -1.0**
comp=Z,80nm,1.0s,mb5.5
ACSO e 23 51 31.2
ACSO epP pP 23 51 40.5 -0.6
ACSO ePP PP 23 53 32.3 -4.0
BRYW Bryant College 64.04 357 eP **P** **23 51 16.5 +0.3**
GDL2 Guadalupe Moun 64.30 326 eP **P** **23 51 17.7 -0.4**
ALLY Alegheny Colle 64.64 350 eP **P** **23 51 19.9 -0.2**
comp=Z,90nm,0.8s,mb5.7
ALLY epP pP 23 51 46.2 -0.6
BINY Binghamton 64.65 354 eP **P** **23 51 20.2 +0.1**
BINY e 23 51 36.3
BINY epP pP 23 51 46.8 0.0
TRY Troy 64.97 356 eP **P** **23 51 22.5 +0.3**
ERPA Erie 65.08 350 eP **P** **23 51 22.6 -0.4**
comp=Z,114nm,0.8s,mb5.8
ERPA e 23 51 40.1
ERPA epP pP 23 51 48.5 -1.1
ERPA ePcP PcP 23 51 54.2 -0.6
AMTX Amarillo 65.17 330 eP **P** **23 51 22.4 -1.3**
comp=Z,123nm,1.3s,mb5.6
AMTX epP pP 23 51 48.5 -1.9
AMTX ePcP PcP 23 51 55.8 +0.4
AMTX ePP PP 23 53 44.2 -4.5
HDIL Hopedale 65.59 343 eP **P** **23 51 24.4 -1.9**
comp=Z,55nm,0.8s,mb5.4
HDIL pP pP 23 51 51.0 -2.0
HDIL ePcP PcP 23 51 57.0 0.0
ACCN Adirondack Com 65.62 356 eP **P** **23 51 26.9 +0.5**
comp=Z,73nm,1.6s,mb5.3
MAIT Maitri 65.78 159 eP **P** **23 51 25.4 -1.8**
NVL N'lazarevskaya 65.81 159 *d* iP **P** **23 51 27.0 -0.4**
NVL e pP 23 51 54.7 +0.6
NVL pmax pmax
comp=Z,242nm,1.1s,mb5.9
HNH Hanover 65.86 357 epP pP 23 51 58.1 +3.5
AAM Ann Arbor 65.90 348 eP **P** **23 51 27.1 -1.1**
AAM pmax pmax
comp=Z,28nm,0.9s,mb5.1
AAM Ann Arbor 65.90 348 eP **P** **23 51 27.1 -1.2**
comp=Z,28nm,0.8s,mb5.2
MDV Middlebury 66.20 356 eP **P** **23 51 30.4 +0.3**
NCB Newcomb 66.25 355 eP **P** **23 51 30.7 +0.3**
comp=Z,84nm,1.3s,mb5.4
NCB ePcP PcP 23 51 59.1 -0.6
319A Douglas 66.33 322 P **P** **23 51 31.5 +0.3**
baz=66,SNR=36
LBNH Lisbon 66.38 357 eP **P** **23 51 31.8 +0.6**
LBNH e pP 23 51 56.8 -1.2
LBNH pmax pmax
comp=Z,48nm,1.0s,mb5.3
LBNH Lisbon 66.38 357 eP **P** **23 51 31.8 +0.6**
comp=Z,48nm,0.9s,mb5.3
LBNH epP pP 23 51 56.7 -1.3
LBNH ePcP PcP 23 52 00.4 +0.2
LBNH ePP PP 23 54 00.7 +1.7
WVL Waterville 66.63 359 eP **P** **23 51 32.4 -0.4**
KSU1 Kansas State U 66.65 336 eP **P** **23 51 31.6 -1.5**
comp=Z,99nm,0.9s,mb5.6
KSU1 epP pP 23 51 58.0 -1.9
318A Bisbee 66.78 322 P **P** **23 51 34.1 0.0**
baz=67,SNR=53
219A White Tail Can 66.78 323 ⇑P **P** **23 51 34.2 +0.2**
baz=67
LONY Lake Ozonia 66.92 355 eP **P** **23 51 34.5 -0.2**
LONY epP pP 23 52 01.5 0.0
Y22D IRIS PASSCAL I 67.10 326 ⇓P **P** **23 51 36.5 +0.4**
baz=67
LPM Los Pinos Moun 67.13 326 eP **P** **23 51 36.3 0.0**
LPM epP pP 23 52 03.9 +0.9
LENM Lemitar 67.20 326 eP **P** **23 51 36.8 +0.1**
218A Dragoon 67.20 322 P **P** **23 51 37.0 +0.2**
baz=67,SNR=49
PKME Peaks-Kenny Pk 67.33 359 eP **P** **23 51 37.6 +0.4**
PKME e pP 23 52 04.2 +0.2
119A Ashpeak Ranch, 67.38 323 P **P** **23 51 38.2 +0.4**
baz=68,SNR=21
217A Green Valley 67.50 321 P **P** **23 51 38.7 +0.1**
baz=68,SNR=63
ANMO Albuquerque 67.54 327 eP **P** **23 51 38.8 0.0**
ANMO pmax pmax
comp=Z,89nm,0.9s
ANMO Albuquerque 67.54 327 eP **P** **23 51 38.8 0.0**
comp=Z,89nm,0.8s,mb5.7
ANMO e pP 23 52 05.5 -0.2
SADO Sadowa 67.55 352 P **P** **23 51 37.8 -0.9**
baz=190,slow=7.5

CBKS Cedar Bluff 67.63 334 eP **P** **23 51 38.7 -0.6**
CBKS e*PP pP 23 52 05.9 -0.2
118A Homack Ranch, 67.66 323 ⇑P **P** **23 51 39.8 +0.2**
baz=68,SNR=56
Z19A T-Link Ranch, 67.75 324 ⇑P **P** **23 51 40.8 +0.6**
baz=68
QSPA South Pole Qui 67.81 180 P **P** **23 51 40.5 +0.6**
comp=Z,38nm,0.9s,mb5.2,baz=163,slow=3.0,SNR=12
TUC Tucson 67.87 322 eP **P** **23 51 40.8 -0.2**
TUC e*PP pP 23 52 07.5 -0.3
TUC e 23 54 07.4
TUC pmax pmax
comp=Z,101nm,1.4s,mb5.5
TUC Tucson 67.87 322 eP **P** **23 51 40.8 -0.2**
comp=Z,101nm,1.4s,mb5.5
TUC epP pP 23 52 07.5 -0.3
TUC ePP PP 23 54 07.4 -4.9
SCIA State Center 68.00 340 eP **P** **23 51 40.2 -1.3**
SCIA epP pP 23 52 08.8 +0.4
SCIA esP sP 23 52 18.4 -1.7
Z18A Geronimo 68.03 323 ⇑P **P** **23 51 42.1 +0.2**
baz=68,SNR=8.5
216A Three Points, 68.03 321 P **P** **23 51 42.4 +0.4**
baz=68,SNR=29
117A Oracle 68.04 322 P **P** **23 51 42.1 +0.1**
baz=68,SNR=78
JFWS Jewell Farm 68.05 343 eP **P** **23 51 40.3 -1.5**
JFWS epP pP 23 52 07.4 -1.3
JFWS esP sP 23 52 18.0 -2.4
Z17A San Carlos Hig 68.43 323 ⇓P **P** **23 51 44.5 +0.1**
baz=69,SNR=8.2
DBIC Dimbokro 68.45 73 P **P** **23 51 45.5 +0.5**
comp=Z,100nm,0.8s,mb5.7,baz=219,slow=6.6,SNR=101
DBIC Dimbokro 68.45 73 eP **P** **23 51 45.3 +0.3**
DBIC e*PP pP 23 52 13.1 +1.2
DBIC e*SP sP 23 52 25.3 +1.7
DBIC e 23 54 18.4
DBIC pmax pmax
comp=Z,136nm,0.9s
DBIC Dimbokro 68.45 73 eP **P** **23 51 45.2 +0.2**
comp=Z,136nm,0.9s,mb5.8
DBIC epP pP 23 52 13.1 +1.1
DBIC esP sP 23 52 25.3 +1.7
DBIC ePP PP 23 54 18.4 +0.8
GLMI Grayling 68.52 348 eP **P** **23 51 43.7 -1.0**
comp=Z,80nm,0.7s,mb5.7
116A Eloy 68.58 321 ⇑P **P** **23 51 45.5 +0.1**
baz=69,SNR=15
X19A St. Johns 68.62 324 P **P** **23 51 46.0 +0.3**
baz=69,SNR=16
214A Organ Pipe Nat 68.80 320 ⇑P **P** **23 51 47.1 +0.4**
baz=69
Y17A Roosevelt 68.93 323 P **P** **23 51 48.0 +0.5**
baz=69,SNR=74
115A Sonoran Desert 68.99 321 ⇑P **P** **23 51 48.2 +0.3**
baz=69
Z16A Peralta Trail, 69.00 322 ⇑P **P** **23 51 48.1 +0.1**
baz=69,SNR=15
X18A Snowflake 69.06 324 P **P** **23 51 48.6 +0.3**
baz=69,SNR=18
W19A Sanders 69.19 325 P **P** **23 51 49.3 +0.2**
baz=69,SNR=25
SDCO Great Sand Dun 69.29 329 eP **P** **23 51 49.9 +0.2**
SDCO epP pP 23 52 16.6 0.0
SDCO esP sP 23 52 31.6 +3.4
Z15A Gila River Ind 69.38 322 ⇑P **P** **23 51 50.4 +0.1**
baz=70,SNR=6.3
W18A Petrified Fore 69.39 325 P **P** **23 51 50.7 +0.4**
baz=70,SNR=20
Y16A Circle Bar Ran 69.42 323 P **P** **23 51 51.1 +0.5**
baz=70,SNR=46
V19A Window Rock 69.47 325 P **P** **23 51 51.3 +0.5**
baz=70,SNR=51
X16A Lo Mia Camp, P 69.80 323 P **P** **23 51 53.4 +0.5**
baz=70,SNR=74
Z14A Wintersburg 69.88 321 ⇓P **P** **23 51 53.3 -0.1**
baz=70
W17A Winslow 69.88 324 ⇓P **P** **23 51 53.6 +0.3**
baz=70,SNR=18
V18A Ganado 69.94 325 ⇓P **P** **23 51 53.7 +0.1**
baz=70,SNR=16
113A Mohawk Valley, 69.94 320 P **P** **23 51 53.7 -0.1**
baz=70,SNR=9.8
Y15A Casa Rosa Ranc 69.96 322 P **P** **23 51 54.1 +0.3**
baz=70,SNR=56
112A Yuma 70.26 320 ⇓P **P** **23 51 55.9 +0.2**
baz=70
X15A Humboldt 70.29 323 ⇓P **P** **23 51 56.3 +0.5**
baz=70
T19A Beclabito 70.31 326 ⇓P **P** **23 51 56.0 +0.1**
baz=70
Y14A Wickenburg 70.33 322 ⇓P **P** **23 51 56.2 +0.1**
baz=70
MVCO Mesa Verde 70.34 327 ⇓P **P** **23 51 56.4 +0.3**
baz=71
MVCO Mesa Verde 70.34 327 eP **P** **23 51 56.3 +0.2**
comp=Z,107nm,0.9s,mb5.7
MVCO ePcP PcP 23 52 16.1 -0.9
MVCO epP pP 23 52 23.7 +0.6
MVCO sP sP 23 52 34.2 -0.5
MVCO ePP PP 23 54 31.6 -1.9
W16A Flagstaff 70.34 323 P **P** **23 51 57.0 +0.9**
baz=70,SNR=105
OGNE Ogallala 70.37 333 eP **P** **23 51 55.9 -0.3**
OGNE ePcP PcP 23 52 16.1 -0.9
OGNE epP pP 23 52 23.7 +0.5
OGNE ePP PP 23 54 33.9 +0.3
U18A Rough Rock, Ch 70.44 325 ⇑P **P** **23 51 57.2 +0.5**
baz=71
WUAZ Wupatki 70.57 324 ⇓P **P** **23 51 58.1 +0.6**
baz=71
WUAZ Wupatki 70.57 324 eP **P** **23 51 58.1 +0.6**
WUAZ epP pP 23 52 24.4 -0.2
X14A Yava 70.65 322 ⇓P **P** **23 51 58.4 +0.4**
baz=71
Y13A Salome 70.72 321 ⇓P **P** **23 51 58.8 +0.3**
baz=71
ECSD EROS,Sioux Fal 70.74 339 eP **P** **23 51 56.8 -1.5**
ECSD ePcP PcP 23 52 17.8 -0.7
ECSD epP pP 23 52 24.5 -0.9
R21A Cimarron 70.77 328 ⇑P **P** **23 51 59.2 +0.6**
baz=71
GLA Glamis 70.77 320 ⇓P **P** **23 51 59.0 +0.2**
baz=71
GLA Glamis 70.77 320 eP **P** **23 51 59.0 +0.2**
GLA pmax pmax
comp=Z,180nm,1.9s,mb5.6
GLA Glamis 70.77 320 eP **P** **23 51 59.0 +0.2**
comp=Z,183nm,1.9s,mb5.6
GLA ePcP PcP 23 52 18.3 -0.7
GLA epP pP 23 52 25.3 -0.6
W15A Williams 70.81 323 ⇓P **P** **23 51 59.8 +0.8**
baz=71
T18A Mexican Hat 70.98 326 ⇑P **P** **23 52 00.2 +0.1**
baz=71
ISCO Idaho Springs 70.99 330 eP **P** **23 52 00.1 +0.1**
comp=Z,43nm,0.8s,mb5.3
U17A Shonto 70.99 325 ⇓P **P** **23 52 00.7 +0.7**
baz=71
S19A Harvey Farm, M 71.07 327 ⇑P **P** **23 52 00.7 +0.1**
baz=71
Y12C Blythe 71.08 321 ⇑P **P** **23 52 01.0 +0.3**
baz=71
Q21A Lamborn Mesa, 71.14 329 ⇑P **P** **23 52 01.3 +0.4**
baz=71
V15A Kaibab Nationa 71.23 324 ⇓P **P** **23 52 02.4 +0.9**
baz=71
DVTC Desert V Tower 71.27 319 ⇑P **P** **23 52 02.2 +0.4**
baz=71
SWSC Sam W. Stewart 71.28 319 ⇑P **P** **23 52 02.0 +0.1**
baz=72
X13A Yucca 71.28 322 ⇑P **P** **23 52 02.2 +0.3**
baz=72
W14A Seligman 71.30 322 ⇑P **P** **23 52 02.7 +0.7**
baz=72
T17A Navajo Res., N 71.37 325 ⇓P **P** **23 52 03.4 +1.1**
baz=72
S18A Hurst Farm, Bl 71.47 326 ⇑P **P** **23 52 03.6 +0.6**
baz=72
R19A Curley Farm, L 71.55 327 ⇓P **P** **23 52 03.6 +0.2**
baz=72
BC3 Big Chuckw Mtn 71.56 320 ⇓P **P** **23 52 03.9 +0.3**
baz=72
Q20A Ridgley Place, 71.59 328 ⇑P **P** **23 52 03.6 0.0**
baz=72
V14A Boquillas Ranc 71.61 323 ⇑P **P** **23 52 04.8 +0.9**

baz=72
MONP **Monument Peak** 71.62 319 ⇑P P 23 52 04.2 +0.3
baz=72
W13A **Hualapai Mount** 71.67 322 ⇓P P 23 52 04.9 +0.7
baz=72
T16A **Glen Canyon Da** 71.73 325 ⇑P P 23 52 05.2 +0.7
baz=72
IRM **Iron Mountain** 71.74 320 ⇓P P 23 52 04.8 +0.2
baz=72
U15A **North Rim** 71.74 324 ⇓P P 23 52 05.6 +1.0
baz=72
S17A **Black Ridge (B** 71.84 326 ⇑P P 23 52 05.7 +0.5
baz=72
R18A **Canyonlands Na** 71.95 327 ⇓P P 23 52 05.8 0.0
baz=72
109C **Camp Elliot, M** 72.04 318 ⇑P P 23 52 06.4 -0.1
baz=72
Q19A **Hogan Spring (** 72.06 328 ⇓P P 23 52 06.7 +0.2
baz=72
CMLA **Cha da Macela** 72.09 34 *e*LR LR 00 14 37.6
PHWY **Pilot Hill** 72.13 331 *e*P P 23 52 06.8 +0.1
comp=Z,131nm,1.4s,mb5.6
PHWY *e*PcP PcP 23 52 22.7 -1.8
PHWY *e*pP pP 23 52 34.2 +0.3
BELC **Belle Mtn.** 72.13 320 ⇑P P 23 52 07.3 +0.4
baz=72
PFO **Pinyon Flat Ob** 72.14 319 P P 23 52 07.1 +0.1
comp=Z,171nm,1.3s,mb5.7,SNR=7.8
PFO **Pinyon Flat Ob** 72.14 319 P P 23 52 06.4 -0.6
comp=Z,28nm,1.1s,mb5.0,baz=120,slow=4.8,SNR=14
PFO **Pinyon Flat Ob** 72.14 319 ⇑P P 23 52 07.3 +0.3
baz=72
PFO **Pinyon Flat Ob** 72.14 319 *e*P P 23 52 07.2 +0.2
PFO *e*PcP PcP 23 52 25.0 +0.2
PFO *e*pP pP 23 52 34.8 +0.6
N22A **Wattenberg Ran** 72.17 330 ⇑P P 23 52 07.7 +0.6
baz=72
O21A **Pagoda** 72.18 329 ⇑P P 23 52 07.9 +0.8
baz=72
U14A **Mt Trumbull** 72.22 323 ⇓P P 23 52 08.4 +1.0
baz=72
T15A **Red Dirt Ranch** 72.23 324 ⇓P P 23 52 08.4 +1.0
baz=72
V13A **Grand Canyon W** 72.27 322 ⇑P P 23 52 08.3 +0.6
baz=72
S16A **Weppner Ranch,** 72.33 325 ⇓P P 23 52 08.3 +0.3
baz=72
LDFC **Landfair** 72.36 321 *e*P P 23 52 09.6 +1.3
LDFC *e*PcP PcP 23 52 23.8 -1.9
LDFC *e*pP pP 23 52 33.5 -2.0
W12A **Cal Nev Ari** 72.38 321 ⇑P P 23 52 08.6 +0.1
baz=73
R17A **Hanksville Air** 72.39 326 ⇓P P 23 52 08.8 +0.4
baz=73
P19A **Cripple Cowboy** 72.45 328 ⇑P P 23 52 09.2 +0.5
baz=73
GMRC **Granite Mounta** 72.47 321 ⇓P P 23 52 09.6 +0.6
baz=73
O20A **White River Ci** 72.48 329 ⇑P P 23 52 09.4 +0.5
baz=73
MURC **Murrieta** 72.58 319 ⇑P P 23 52 09.8 +0.2
baz=73
Q18A **Rafter H Ranch** 72.61 327 ⇑P P 23 52 10.0 +0.3
baz=73
N21A **Black Mountain** 72.63 330 ⇑P P 23 52 10.5 +0.7
baz=73
T14A **Hurricane** 72.64 324 ⇓P P 23 52 10.7 +0.8
baz=73
U13A **Pakoon Wash** 72.66 323 ⇓P P 23 52 10.6 +0.6
baz=73
V12A **Nelson** 72.67 322 ⇓P P 23 52 10.4 +0.2
baz=73
R16A **Teasdale** 72.69 326 ⇑P P 23 52 10.5 +0.4
baz=73
S15A **Panguitch** 72.70 325 ⇓P P 23 52 10.8 +0.6
baz=73
M22A **Cedar Creek Ra** 72.72 331 ⇓P P 23 52 10.6 +0.3
baz=73
SRU **San Rafael** 72.82 327 ⇑P P 23 52 11.1 +0.2
baz=73
SRU **San Rafael** 72.82 327 *e*P P 23 52 11.0 +0.1
BBRC **Big Bear Sol-O** 72.86 319 ⇓P P 23 52 12.2 +0.8
baz=73
HEC **Hector,Ludlow** 72.90 320 ⇑P P 23 52 12.1 +0.5
baz=73
U12A **Valley of Fire** 72.99 322 ⇓P P 23 52 12.3 +0.3
baz=73
Q16A **Castle Valley** 73.00 326 ⇑P P 23 52 12.4 +0.4
baz=73
O19A **Miners Draw (B** 73.03 328 ⇑P P 23 52 12.3 +0.2
baz=73
N20A **Spence Gulch,** 73.04 329 ⇑P P 23 52 12.5 +0.3
baz=73
EYMN **Ely** 73.04 344 *e*P P 23 52 10.9 -1.1
EYMN *e*pP pP 23 52 38.2 -1.0
T13A **Saint George** 73.06 323 ⇑P P 23 52 13.1 +0.7
baz=73
P18A **Preston Nutter** 73.07 327 ⇓P P 23 52 13.1 +0.7
baz=73
V11A **Goodsprings** 73.08 322 ⇑P P 23 52 12.8 +0.3
baz=73
TUQ **Turquoise Moun** 73.08 321 ⇓P P 23 52 12.9 +0.3
baz=73
S14A **Cedar City** 73.20 324 ⇓P P 23 52 13.8 +0.6
baz=73
P17A **Butcher Ranch,** 73.20 327 ⇑P P 23 52 13.5 +0.3
baz=73
MSU **Marysvale** 73.22 325 *e*P P 23 52 14.0 +0.7
RWWY **Rawlins** 73.22 331 *e*P P 23 52 13.6 +0.3
RWWY *e*PcP PcP 23 52 28.8 -0.4
RWWY *e*pP pP 23 52 40.5 0.0
BFSC **Mount Baldy St** 73.29 319 ⇑P P 23 52 13.9 +0.1
baz=74
TMUT **Trail Mountain** 73.30 327 *e*P P 23 52 14.6 +0.8
FMP **Fort Macarthur** 73.33 318 ⇓P P 23 52 14.3 +0.3
baz=74
RRX **Edison Barstow** 73.33 320 ⇑P P 23 52 14.6 +0.5
baz=74
SHPR **Sheep Range** 73.40 322 *e*P P 23 52 14.8 +0.4
O18A **Roosevelt** 73.44 328 ⇑P P 23 52 15.0 +0.4
baz=74
S13A **Holt Ranch, En** 73.44 324 ⇓P P 23 52 15.5 +0.9
baz=74
U11A **Corn Creek** 73.47 322 ⇓P P 23 52 15.5 +0.7
baz=74
GSC **Goldstone** 73.51 320 ⇓P P 23 52 15.4 +0.3
baz=74
GSC **Goldstone** 73.51 320 *e*P P 23 52 15.5 +0.4
GSC *e*PcP PcP 23 52 30.3 -0.3
GSC *e*pP pP 23 52 41.6 -0.7
GSC *es*P sP 23 52 54.1 +0.1
GSC *e*PP PP 23 54 59.6 -1.1
L21A **Rawlins** 73.52 331 ⇑P P 23 52 14.9 -0.1
baz=74
M20A **Sweetwater, Wa** 73.52 330 ⇑P P 23 52 15.2 +0.3
baz=74
N19A **John Jarvie Ra** 73.52 329 ⇓P P 23 52 15.0 0.0
baz=74
MWC **Mount Wilson** 73.53 319 *e*P P 23 52 15.5 +0.3
SHOC **Shoshone** 73.62 321 ⇑P P 23 52 15.6 -0.1
baz=74
Q15A **Fillmore** 73.69 326 ⇑P P 23 52 16.6 +0.6
baz=74
DECC **Green Verdugo** 73.71 319 ⇑P P 23 52 16.6 +0.3
baz=74
O17A **Robinson Place** 73.75 327 ⇓P P 23 52 17.1 +0.8
baz=74
P16A **Fountain Green** 73.77 326 ⇓P P 23 52 17.1 +0.6
baz=74
RSSD **Black Hills** 73.83 334 *e*P P 23 52 16.8 0.0
RSSD *e*pP pP 23 52 42.5 -1.6
EDW2 **Edwards Air Fo** 73.93 319 ⇓P P 23 52 17.4 -0.2
baz=74
R13A **O'Grain Ranch,** 73.94 324 ⇑P P 23 52 18.3 +0.8
baz=74
T11A **Corn Creek, Al** 73.95 323 ⇓P P 23 52 18.3 +0.7
baz=74
M19A **Rock Springs** 73.98 329 ⇓P P 23 52 17.7 0.0
baz=74
L20A **Wamsutter** 73.99 330 ⇓P P 23 52 17.9 +0.1
baz=74
U10A **Ash Meadows, A** 74.01 321 ⇑P P 23 52 18.5 +0.6
baz=74
S12A **Delamar Landin** 74.01 323 ⇓P P 23 52 18.6 +0.7
baz=74
P15A **Leamington** 74.06 326 ⇓P P 23 52 18.6 +0.4
baz=74
MPU **Maple Canyon** 74.06 327 *e*P P 23 52 18.8 +0.6
BLG **Laguna Peak** 74.07 318 ⇓P P 23 52 18.2 -0.2
baz=74
Q14A **Sevier Lake (B** 74.15 325 ⇓P P 23 52 19.6 +0.9
baz=74
LRMC **Laurel Mountai** 74.16 320 ⇓P P 23 52 19.1 +0.2
baz=74
DAU **Daniels Canyon** 74.17 327 *e*P P 23 52 19.4 +0.6
OSI **Osito Adit** 74.20 319 ⇓P P 23 52 19.0 -0.1
baz=74
MEH **Mehetia** 74.20 257 *e*P P 23 52 19.7 +0.1
comp=Z,914nm,1.1s,mb6.4
NLU **North Lily Min** 74.24 326 *e*P P 23 52 19.8 +0.5
TPNV **Topopah Spring** 74.33 322 *e*P P 23 52 20.5 +0.7
TPNV *e*PcP PcP 23 52 32.8 -1.2
TPNV *e*pP pP 23 52 47.7 +0.6
TPNV *es*P sP 23 52 57.4 -1.3
FURC **Furnace Creek,** 74.35 321 ⇓P P 23 52 20.3 +0.3
baz=74
M18A **Lyman** 74.36 329 ⇑P P 23 52 19.7 -0.2
baz=75
N17A **Moffit Pass** 74.36 328 ⇑P P 23 52 20.6 +0.7
baz=75
R12A **Pony Springs,** 74.39 324 ⇓P P 23 52 21.1 +0.9
baz=75
JLU **Jordanelle** 74.41 327 *e*P P 23 52 20.6 +0.4
MPMC **Manual Prospec** 74.44 320 ⇑P P 23 52 20.6 +0.1
baz=75
P14A **Drum Mountains** 74.48 326 ⇓P P 23 52 21.6 +1.0
baz=75
K20A **Yellowstone Ra** 74.50 331 ⇓P P 23 52 20.4 -0.3
baz=75
Q13A **Wheeler Ranch,** 74.52 325 ⇓P P 23 52 21.6 +0.7
baz=75
L19A **Farson** 74.54 330 ⇓P P 23 52 21.2 +0.3
baz=75
AGMN **Agassiz Refuge** 74.57 341 *e*P P 23 52 19.7 -1.2
AGMN *e*PcP PcP 23 52 33.7 -1.1
AGMN *e*pP pP 23 52 43.5 -4.7
ARVC **Arvin** 74.60 319 ⇓P P 23 52 21.6 +0.2
baz=75
N16A **Rees Ranch, Co** 74.62 327 ⇑P P 23 52 21.9 +0.5
baz=75
VAH **Vaihoa** 74.67 260 *e*P P 23 52 22.6 +0.3
comp=Z,91nm,0.9s,mb5.5
M17A **Scullys Gap (B** 74.68 328 ⇓P P 23 52 21.4 -0.3
baz=75
O15A **The Old Anders** 74.68 326 ⇑P P 23 52 22.4 +0.6
baz=75
L18A **Fontenelle, Gr** 74.72 329 ⇑P P 23 52 22.1 +0.1
baz=75
NOQ **North Oquirrh** 74.78 327 *e*P P 23 52 22.8 +0.4
DUG **Dugway** 74.80 326 ⇓P P 23 52 22.9 +0.5
baz=75
DUG **Dugway** 74.80 326 *e*P P 23 52 22.6 +0.2
DUG *e*pP pP 23 52 48.2 -1.5
K19A **Absolon Red Bu** 74.87 330 ⇑P P 23 52 22.5 -0.3
baz=75
P13A **Bates Ranch, G** 74.88 325 ⇓P P 23 52 23.7 +0.7
baz=75
R11A **Troy Canyon, C** 74.94 323 ⇓P P 23 52 24.1 +0.8
baz=75
PMOR **Pomariorio Ree** 74.99 260 *e*P P 23 52 24.3 +0.1
comp=Z,269nm,1.4s,mb5.8
GRAC **Grapevine Rang** 75.01 321 ⇓P P 23 52 24.2 +0.4
baz=75
Q12A **Willow Creek R** 75.02 324 ⇓P P 23 52 24.2 +0.4
baz=75
M16A **Huntsville** 75.03 328 ⇓P P 23 52 23.7 -0.1
baz=75
CWC **Cottonwood Cre** 75.04 320 ⇓P P 23 52 24.4 +0.4
baz=75
PKM **Peak Mountain** 75.06 318 ⇓P P 23 52 24.4 +0.3
baz=75
SBA **Scott Base** 75.06 190 *e*P P 23 52 24.5 +1.0
BW06 **Boulder Array** 75.15 330 ⇓P P 23 52 24.2 -0.2
baz=75
PDAR **Pinedale Array** 75.15 330 P P 23 52 23.9 -0.5
comp=Z,15nm,1.0s,mb4.7,baz=152,slow=6.6,SNR=72
PDAR PKKPbc PKKPbc 00 11 46.3 -2.4
comp=Z,0.5nm,0.8s,baz=90,slow=1.5,SNR=3.8
PDAR PKPPKP 00 19 52.4
comp=Z,0.4nm,0.8s,baz=0.0,slow=0.6,SNR=3.9
N15A **Stansbury Isla** 75.16 327 ⇑P P 23 52 24.5 -0.1
baz=75
S10A **Tonopah Range,** 75.21 322 ⇑P P 23 52 25.3 +0.4
baz=75
VES **Vestal, Richgr** 75.24 319 ⇑P P 23 52 25.0 0.0
baz=75
L17A **Cokeville** 75.26 329 ⇑P P 23 52 24.8 -0.3
baz=76
K18A **Toltan Ranch,** 75.28 329 ⇑P P 23 52 25.6 +0.5
baz=76
R10A **Warm Springs** 75.30 323 ⇑P P 23 52 26.4 +1.0
baz=76
TVO **Taravao** 75.30 257 *e*P P 23 52 26.2 +0.3
comp=Z,973nm,1.4s,mb6.3
TVO **Taravao** 75.30 257 *e*P P 23 52 26.2 +0.3
TVO pmax pmax
comp=Z,973nm,1.4s,mb6.3
Q11A **Duckwater** 75.33 324 ⇓P P 23 52 26.0 +0.4
baz=76
O13A **Hicks Ranch, I** 75.36 325 ⇓P P 23 52 26.1 +0.4
baz=76
P12A **McGill** 75.37 324 ⇑P P 23 52 26.3 +0.5
baz=76
S09A **Goldfield** 75.43 322 ⇑P P 23 52 26.3 +0.1
baz=76
SPUT **South Promonto** 75.44 327 *e*P P 23 52 26.2 +0.1
SMMC **Simmler** 75.44 318 ⇑P P 23 52 26.8 +0.5
baz=76
TIAR **Tiarei** 75.46 257 *e*P P 23 52 27.0 +0.1
comp=Z,382nm,1.0s,mb6.1
L16A **Fish Haven** 75.47 328 ⇑P P 23 52 26.1 -0.1
baz=76
N14A **Grayback Hills** 75.47 326 ⇑P P 23 52 26.3 0.0
baz=76
SYO **Syowa Base** 75.48 159 ⇑/P P 23 52 24.6 -1.4
SYO **Syowa Base** 75.48 159 ⇓/PcP PcP 23 52 34.2 -4.4
TIN **Tinemaha** 75.55 321 ⇑P P 23 52 27.2 +0.3
baz=76
M15A **Larsen Ranch,** 75.55 327 ⇓P P 23 52 26.6 -0.1
baz=76
RCTC **Rector, Farmer** 75.64 320 ⇑P P 23 52 26.6 -0.8
baz=76
PPT **Papeete** 75.66 257 *e*P P 23 52 28.6 +0.6
comp=Z,74nm,1.3s,mb5.3
PPT **Papeete** 75.66 257 *e*P P 23 52 28.6 +0.6
PPT pmax pmax
comp=Z,74nm,1.3s
TPH **Tonopah** 75.67 322 *e*P P 23 52 28.2 +0.7
TPH *e*pP pP 23 52 54.6 -0.3
R09A **Tonopah** 75.70 322 ⇑P P 23 52 27.8 +0.1
baz=76
J18A **Kendall Valley** 75.71 330 ⇓P P 23 52 27.5 -0.1
baz=76
Q10A **Clear Creek Ra** 75.73 323 ⇓P P 23 52 28.5 +0.7
baz=76
K17A **Gardner Place,** 75.78 329 ⇑P P 23 52 27.9 -0.1
baz=76
O12A **Currie** 75.86 325 ⇑P P 23 52 28.8 +0.3
baz=76
P11A **Circle Ranch,** 75.89 324 ⇓P P 23 52 29.1 +0.4
baz=76
L15A **Malad City** 75.93 328 ⇑P P 23 52 28.7 -0.1
baz=76
MTUM **Tungsten Hills** 75.95 321 *e*P P 23 52 29.2 +0.1
HVU **Hansel Valley** 75.95 327 *e*P P 23 52 28.9 -0.1
I18A **Diamond G Ranc** 75.99 330 ⇓P P 23 52 29.6 +0.4
baz=76
M14A **Sheep Mountain** 76.04 327 ⇑P P 23 52 29.4 -0.1
baz=76
VNDA **Vanda** 76.08 190 P P 23 52 29.8 +0.4
comp=Z,27nm,1.0s,mb5.0,baz=136,slow=4.7,SNR=41
VNDA **Vanda** 76.08 190 P P 23 52 29.8 +0.5
VNDA pmax pmax
comp=Z,27nm,1.0s
VNDA **Vanda** 76.08 190 *e*P P 23 52 29.6 +0.2
comp=Z,45nm,1.1s,mb5.1
VNDA *e*pP pP 23 52 54.3 -2.4
VNDA *es*P sP 23 53 04.7 -3.6
J17A **Brown Place, J** 76.15 330 ⇑P P 23 52 30.6 +0.5
baz=76
K16A **Soda Springs** 76.16 329 ⇓P P 23 52 30.8 +0.6
baz=76
Q09A **Carvers** 76.17 323 ⇓P P 23 52 30.9 +0.5
baz=76
REDW **Red Top Meadow** 76.21 329 *e*P P 23 52 30.6 +0.2
REDW *es*P sP 23 53 06.5 -2.9
REDW *e*PP PP 23 55 23.4 +0.1
SNOW **Snow King Moun** 76.25 330 *e*P P 23 52 31.1 +0.4
SNOW *e*pP pP 23 52 58.7 +0.7
O11A **Cowboy Ranch,** 76.25 325 ⇑P P 23 52 31.1 +0.4
baz=76
LOHW **Long Hollow** 76.29 330 *e*P P 23 52 31.1 +0.2
LOHW *e*pP pP 23 52 57.1 -1.2
MLAC **Mammoth Lakes** 76.29 321 ⇓P P 23 52 31.5 +0.4
baz=76
ULM **Lac du Bonnet** 76.32 342 P P 23 52 29.6 -1.3
comp=Z,37nm,0.8s,mb5.2,baz=154,slow=5.9,SNR=39
ULM **Lac du Bonnet** 76.32 342 *e*P P 23 52 29.3 -1.6
comp=Z,53nm,0.9s,mb5.3
ULM PcP PcP 23 52 41.4 -0.9
ULM *e* pP 23 52 52.8 -5.5
ULM *e*pP pP 23 52 58.1 -0.2
P10A **Eureka** 76.32 324 ⇑P P 23 52 31.9 +0.8
baz=76
M13A **Montello** 76.35 326 ⇓P P 23 52 31.1 -0.2
baz=77
R08A **Mina** 76.36 322 ⇓P P 23 52 31.6 +0.1
baz=77
RRI2 **Red Ridge** 76.42 329 *e*P P 23 52 31.9 +0.3
RRI2 *e*pP pP 23 52 58.5 -0.6
N12A **Clover Valley,** 76.44 325 ⇓P P 23 52 31.8 0.0
baz=77
MOOW **Moose Ponds** 76.46 330 *e*P P 23 52 31.9 +0.1
MOOW *e*pP pP 23 52 58.8 -0.5
ELK **Elko** 76.46 325 *e*P P 23 52 32.0 +0.1
ELK *e* 23 52 42.8
ELK *e**PP pP 23 52 55.9 -3.5
ELK pmax pmax
comp=Z,46nm,0.9s
ELK **Elko** 76.46 325 *e*P P 23 52 32.0 0.0
comp=Z,46nm,0.9s,mb5.2
ELK *e*PcP PcP 23 52 42.8 -0.4
ELK *e*pP pP 23 52 55.9 -3.5
J16A **Bone** 76.51 329 ⇓P P 23 52 32.3 +0.2
baz=77
K15A **Arbon** 76.51 328 ⇑P P 23 52 32.3 +0.2
baz=77
I17A **Pilgram Creek** 76.51 330 ⇓P P 23 52 33.0 +0.9
baz=77
NVAR **Mina Array Bea** 76.53 322 P P 23 52 32.6 +0.2
comp=Z,15nm,0.8s,mb4.8,baz=153,slow=6.9,SNR=61
NVAR PKPPKP 00 19 50.9
comp=Z,1.6nm,1.0s,baz=349,slow=1.5,SNR=4.4
DCID1 **Drake Creek** 76.55 329 *e*P P 23 52 32.6 +0.3
DCID1 *e*PcP PcP 23 52 43.0 -0.5
DCID1 *es*P sP 23 53 07.4 -3.9
Q08A **Gabbs** 76.61 322 ⇓P P 23 52 32.7 -0.1
baz=77
P09A **Austin** 76.65 323 ⇑P P 23 52 33.2 +0.2
baz=77
IMW **Indian Meadow** 76.66 330 *e*P P 23 52 33.4 +0.4
IMW *e*pP pP 23 52 59.8 -0.7
K14A **Jones Ranch, D** 76.72 328 ⇑P P 23 52 33.3 -0.1
baz=77
L13A **Double Diamond** 76.77 327 ⇑P P 23 52 34.0 +0.3
baz=77
M12A **Wells** 76.78 326 ⇓P P 23 52 33.7 0.0
baz=77
N11A **Elko Archery C** 76.78 325 ⇓P P 23 52 33.7 0.0
baz=77
O10A **Cortez Mining,** 76.82 324 ⇓P P 23 52 34.1 +0.2
baz=77
RLMT **Red Lodge** 76.85 332 ⇑P P 23 52 34.4 +0.4
baz=77
RLMT **Red Lodge** 76.85 332 *e*P P 23 52 34.3 +0.3
RLMT *e*pP pP 23 52 58.9 -2.6
H17A **Grant Village** 76.88 330 ⇓P P 23 52 35.2 +1.0
baz=77
I16A **Newdale** 76.90 329 ⇑P P 23 52 34.7 +0.3
baz=77
SCHQ **Schefferville** 76.91 1 P P 23 52 34.0 -0.1
comp=Z,38nm,0.8s,mb5.2,baz=169,slow=4.3,SNR=34
SCHQ **Schefferville** 76.91 1 *e*P P 23 52 33.7 -0.4
comp=Z,46nm,0.9s,mb5.2
SCHQ *e*PcP PcP 23 52 47.5 +2.7
SCHQ *e*pP pP 23 53 00.9 -0.6
J15A **Blackfoot** 77.00 329 ⇓P P 23 52 35.2 +0.4
baz=77
YFT **Old Faithful** 77.04 330 *e*P P 23 52 36.8 +1.7
O09A **Fish Creek Ran** 77.11 324 ⇑P P 23 52 35.8 +0.2
baz=77
N10A **Dunphy** 77.12 324 ⇓P P 23 52 35.8 +0.1
baz=77
TOA0 **Torodi Ar. Sit** 77.13 70 *e*P P 23 52 36.1 -0.2
TOA0 *e*pP pP 23 53 04.7 +1.0
TORD **Torodi Ar. Bea** 77.13 70 P P 23 52 36.1 -0.2
comp=Z,108nm,0.8s,mb5.6,baz=254,slow=4.9,SNR=335
TORD pP pP 23 53 04.6 +0.9
comp=Z,84nm,0.9s,baz=252,slow=5.5,SNR=7.2
G18A **Lazy EL Ranch,** 77.14 331 ⇑P P 23 52 35.8 +0.2
baz=77
YNR **Norris Junctio** 77.17 330 *e*P P 23 52 37.1 +1.2
WAKR **Walker** 77.23 321 *e*P P 23 52 36.8 +0.5
M11A **Holland Ranch,** 77.25 325 ⇓P P 23 52 36.7 +0.4
baz=78
K13A **Stover Farm, H** 77.25 327 ⇑P P 23 52 36.6 +0.3
baz=78
R06C **Coleville** 77.25 321 ⇓P P 23 52 37.2 +0.7
baz=77
P08A **Dixie Valley** 77.27 323 ⇑P P 23 52 36.9 +0.4
baz=78
L12A **House Creek Ra** 77.36 326 ⇓P P 23 52 37.4 +0.5
baz=78
H16A **Russell Place,** 77.42 330 ⇑P P 23 52 38.0 +0.8
baz=78
J14A **Carey** 77.47 328 ⇑P P 23 52 38.0 +0.5
baz=78
I15A **Monteview** 77.47 329 ⇓P P 23 52 38.4 +0.9
baz=78
QLMT **Earthquake Lak** 77.60 330 *e*P P 23 52 39.1 +0.9
P07A **Fallon** 77.62 322 ⇓P P 23 52 38.8 +0.3
baz=78
K12A **Draper Farm, C** 77.65 327 ⇑P P 23 52 39.2 +0.6
baz=78
SUR **Sutherland** 77.65 120 P P 23 52 40.5 +1.5
comp=Z,53nm,0.7s,mb5.4,baz=240,slow=6.0,SNR=37
SUR **Sutherland** 77.65 120 *e*P P 23 52 40.2 +1.2
SUR *e*pP pP 23 53 07.4 +0.9
F18A **Big Timber** 77.66 332 ⇓P P 23 52 38.5 0.0
baz=78
G17A **Pierce Place,** 77.66 331 ⇑P P 23 52 39.1 +0.5
baz=78
M10A **I.L. Ranch, Tu** 77.71 325 ⇓P P 23 52 39.1 +0.2
baz=78
O08A **Rochester Mine** 77.72 323 ⇓P P 23 52 38.7 -0.3
baz=78
L11A **Cat Creek Ranc** 77.75 326 ⇑P P 23 52 39.7 +0.6
baz=78
N09A **Rock Creek Ran** 77.77 324 ⇑P P 23 52 38.8 -0.4
baz=78
J13A **Cove Ranch, Pi** 77.84 328 ⇑P P 23 52 40.1 +0.5
baz=78
I14A **Mackay** 77.88 328 ⇑P P 23 52 40.6 +0.9
baz=78
WCN **Washoe City** 77.95 322 ⇑P P 23 52 41.0 +0.6
baz=78
H15A **Lima** 78.01 329 ⇓P P 23 52 41.2 +0.7
baz=78
PAHR **Pah Rah Range** 78.01 322 *e*P P 23 52 41.1 +0.4
O07A **Toulon** 78.04 323 ⇑P P 23 52 40.6 -0.1
baz=78
N08A **GE Springer Mi** 78.05 324 ⇓P P 23 52 40.1 -0.7
baz=78
L10A **Juniper Basin** 78.06 325 ⇑P P 23 52 41.2 +0.3
baz=78
F17A **Fitzpatrick Pl** 78.08 331 ⇑P P 23 52 41.2 +0.4
baz=78
G16A **Moss Hill, Enn** 78.08 330 ⇓P P 23 52 41.1 +0.2
baz=78
HLID **Hailey** 78.08 328 ⇓P P 23 52 41.6 +0.7
baz=78
HLID **Hailey** 78.08 328 *e*P P 23 52 41.5 +0.5
comp=Z,131nm,1.0s,mb5.6
HLID *e*pP pP 23 53 05.5 -3.0
M09A **Marrel Ranch,** 78.12 324 ⇓P P 23 52 41.2 0.0
baz=78
I13A **Wildhorse Cree** 78.19 328 ⇓P P 23 52 42.3 +0.8
baz=78
J12A **Stokes Ranch,** 78.20 327 ⇓P P 23 52 42.0 +0.4
baz=78

E18A **Harlowton** 78.26 332 ⇑P P 23 52 42.0 +0.1
baz=78
P06A **Stead Airport,** 78.29 322 ⇑P P 23 52 42.3 +0.2
baz=78
BOZ **Bozeman (W)** 78.32 331 ⇓P P 23 52 42.0 -0.2
baz=78
BOZ **Bozeman (W)** 78.32 331 *e*P P 23 52 41.8 -0.4
K11A **Parker Ranch,** 78.33 326 ⇓P P 23 52 42.5 +0.2
baz=78
G15A **Dillon** 78.35 330 ⇑P P 23 52 42.6 +0.3
baz=79
H14A **Leadore** 78.35 329 ⇑P P 23 52 43.0 +0.6
baz=79
F16A **Kennard Place,** 78.42 331 ⇓P P 23 52 42.7 0.0
baz=79
N07B **Gerlach** 78.51 323 ⇓P P 23 52 43.3 -0.1
baz=79
O06A **Flanigan** 78.57 322 ⇑P P 23 52 43.8 +0.1
baz=79
E17A **Martinsdale** 78.59 332 ⇑P P 23 52 43.9 +0.2
baz=79
M08A **Happy Creek Ra** 78.64 324 ⇓P P 23 52 43.9 -0.1
baz=79
L09A **Wilkinson Ranc** 78.66 325 ⇑P P 23 52 44.1 0.0
baz=79
BEKR **Beckwourth** 78.68 322 ⇑P P 23 52 44.5 +0.3
baz=79
MFID **Camas Ranch** 78.69 327 ⇑P P 23 52 44.5 +0.3
baz=79
D18A **Linhart Farms,** 78.70 333 ⇑P P 23 52 44.2 -0.1
baz=79
H13A **Challis** 78.74 328 ⇑P P 23 52 45.1 +0.6
baz=79
K10A **MacKenzie Ranc** 78.77 326 ⇓P P 23 52 44.8 0.0
baz=79
LRM **Limekiln Ridge** 78.82 330 *e*P P 23 52 45.2 +0.2
F15A **Butte** 78.86 330 ⇑P P 23 52 45.5 +0.4
baz=79
N06A **Buffalo Meadow** 78.97 323 ⇑P P 23 52 45.9 0.0
baz=79
E16A **East Helena** 79.01 331 ⇑P P 23 52 46.0 +0.1
baz=79
H12A **Diamond D Ranc** 79.02 328 ⇓P P 23 52 46.4 +0.4
baz=79
M07A **Soldier Meadow** 79.04 324 ⇑P P 23 52 46.2 0.0
baz=79
D17A **Six Diamond Ra** 79.05 332 ⇑P P 23 52 46.1 0.0
baz=79
I11A **Placerville** 79.11 327 ⇓P P 23 52 46.4 -0.2
baz=79
G13A **Cobalt** 79.12 329 ⇓P P 23 52 47.3 +0.7
baz=79
L08A **Fields** 79.14 325 ⇑P P 23 52 46.6 -0.1
baz=79
K09A **Rome** 79.16 325 ⇓P P 23 52 46.9 0.0
baz=79
J10A **Berg Farm, Mel** 79.17 326 ⇓P P 23 52 46.5 -0.4
baz=79
HRY **Holter Researc** 79.22 331 *e*P P 23 52 47.3 +0.2
TSUM **Tsumeb** 79.25 106 P P 23 52 49.2 +1.2
comp=Z,112nm,0.9s,mb5.7,baz=226,slow=5.5,SNR=121
TSUM pP pP 23 53 17.6 +2.0
comp=Z,71nm,0.9s,baz=231,slow=5.8,SNR=7.5
TSUM **Tsumeb** 79.25 106 *e*P P 23 52 49.0 +0.9
comp=Z,148nm,1.0s,mb5.8
TSUM *e*pP pP 23 53 17.4 +1.8
EGMT **Eagleton** 79.33 333 ⇑P P 23 52 47.4 -0.3
baz=80
EGMT **Eagleton** 79.33 333 *e*P P 23 52 47.0 -0.7
comp=Z,79nm,1.1s,mb5.5
EGMT *e*pP pP 23 53 12.9 -2.3
EGMT *e*sP sP 23 53 25.4 -1.4
D16A **Dana Ranch, Ca** 79.34 332 ⇓P P 23 52 48.2 +0.5
baz=80
E15A **Deer Lodge** 79.36 331 ⇓P P 23 52 48.1 +0.2
baz=80
C17A **Wharram Farm,** 79.46 332 ⇓P P 23 52 47.9 -0.4
baz=80
L07A **Adell** 79.56 324 ⇑P P 23 52 49.4 +0.4
baz=80
K08A **Mann Creek Ran** 79.59 325 ⇓P P 23 52 49.0 -0.2
baz=80
J09A **Fry Pan Ranch,** 79.63 326 ⇑P P 23 52 49.1 -0.3
baz=80
B18A **Beardsley Farm** 79.63 333 ⇓P P 23 52 49.0 -0.2
baz=80
I10A **Payette** 79.66 327 ⇓P P 23 52 49.6 +0.1
baz=80
F13A **Darby** 79.68 329 ⇑P P 23 52 49.9 +0.3
baz=80
H11A **Donnelly** 79.70 328 ⇓P P 23 52 49.7 0.0
baz=80
E14A **Clinton** 79.75 330 ⇑P P 23 52 50.6 +0.6
baz=80
D15A **Lincoln** 79.78 331 ⇑P P 23 52 50.5 +0.4
baz=80
K07A **Rock Creek Ran** 79.97 324 ⇑P P 23 52 51.6 +0.3
baz=80
B17A **L&G Farms, Che** 79.98 333 ⇓P P 23 52 50.6 -0.6
baz=80
H10A **Noah's Angus R** 79.99 327 ⇓P P 23 52 51.1 -0.2
baz=80
MOD **Modoc** 80.01 323 *e*P P 23 52 50.7 -0.8
comp=Z,78nm,1.0s,mb5.5
MOD *e*pP pP 23 53 18.1 -1.0
MOD *e*PP PP 23 55 53.3 -1.8
C16A **Fuhringer Ranc** 80.01 332 ⇓P P 23 52 51.1 -0.2
baz=80
CHMT **Chamberlain Mo** 80.01 331 *e*P P 23 52 51.5 +0.1
J08A **Circle Bar Ran** 80.01 325 ⇓P P 23 52 51.6 +0.1
baz=80
I09A **Lost Marbles R** 80.06 326 ⇑P P 23 52 51.7 0.0
baz=80
A18A **Metzger Ranch,** 80.07 334 ⇑P P 23 52 51.0 -0.7
baz=80
E13A **Victor** 80.09 330 ⇑P P 23 52 52.3 +0.5
baz=80
D14A **Greenough** 80.25 331 ⇓P P 23 52 52.7 0.0
baz=80
MSO **Missoula** 80.26 330 *e*P P 23 52 52.9 +0.2
MSO *e*pP pP 23 53 18.9 -1.4
MSO *e*sP sP 23 53 30.4 -1.4
SLMT **Seeley Lake** 80.36 331 *e*P P 23 52 53.3 0.0
C15A **Salmond Ranch,** 80.37 331 ⇓P P 23 52 53.7 +0.4
baz=81
WDC **Whiskeytown Da** 80.40 321 *e*P P 23 52 51.6 -2.0
WDC *e*PcP PcP 23 52 59.1 -1.2
A17A **Triple J Farms** 80.44 333 ⇑P P 23 52 53.3 -0.4
baz=81
I08A **Drewsey** 80.44 326 ⇑P P 23 52 54.1 +0.3
baz=81
BMO **Blue Mountains** 80.46 327 *e*P P 23 52 53.5 -0.3
BMO *e*pP pP 23 53 20.0 -1.4
B16A **M & M Farms, S** 80.46 332 ⇑P P 23 52 53.0 -0.7
baz=81
J07A **Hines** 80.47 325 ⇑P P 23 52 54.1 +0.3
baz=81
H09A **Durkee** 80.50 327 ⇑P P 23 52 54.1 0.0
baz=81
F11A **Grangeville** 80.62 328 ⇑P P 23 52 54.4 -0.3
baz=81
G10A **Bishop Farm, J** 80.67 327 ⇑P P 23 52 55.4 +0.4
baz=81
D13A **Huson** 80.70 330 ⇓P P 23 52 55.2 +0.2
baz=81
B15A **Bradely Ranch,** 80.76 332 ⇑P P 23 52 54.6 -0.7
baz=81
SWMT **Swartz Lake** 80.79 331 *e*P P 23 52 55.5 0.0
A16A **West Butte Ran** 80.82 333 ⇓P P 23 52 55.4 -0.2
baz=81
J06A **Christmas Vall** 80.83 324 ⇓P P 23 52 55.7 -0.1
baz=81
K05A **Summer Lake** 80.88 324 ⇓P P 23 52 56.7 +0.5
baz=81
H08A **Prairie City** 80.92 326 ⇑P P 23 52 56.4 +0.1
baz=81
E11A **Bogner Ranch,** 80.99 329 ⇓P P 23 52 56.0 -0.6
baz=81
G09A **Cove** 80.99 327 ⇓P P 23 52 56.9 +0.3
baz=81
HOG **Hogback Mounta** 81.01 323 P P 23 52 57.2 +0.4
I07A **Izee** 81.05 325 ⇑P P 23 52 57.3 +0.3
baz=81
YBMT **Yellow Bay** 81.06 331 *e*P P 23 52 57.1 +0.2
JTMT **Jette** 81.10 331 *e*P P 23 52 57.3 +0.1
B14A **Marquette Ranc** 81.10 332 ⇑P P 23 52 56.6 -0.5
baz=81

C13A **Hot Springs** 81.18 330 ⇑P P 23 52 57.7 +0.1
baz=81
F10A **Beach Ranch, E** 81.21 328 ⇓P P 23 52 57.7 0.0
baz=81
VSP **Spence Mountai** 81.22 323 P P 23 52 58.0 +0.1
YBH **Yreka Blue Hor** 81.25 322 P P 23 52 56.2 -1.9
comp=Z,20nm,0.8s,mb5.0,baz=94,slow=4.0,SNR=28
YBH **Yreka Blue Hor** 81.25 322 P P 23 52 56.2 -1.9
YBH pmax pmax
comp=Z,20nm,0.8s
KHMM **Horse Mountain** 81.29 321 *e*P P 23 52 59.0 +0.6
A15A **Johnson Ranch,** 81.33 332 ⇓P P 23 52 57.4 -1.0
baz=82
I06A **Prineville** 81.33 325 ⇑P P 23 52 58.8 +0.4
baz=82
F09A **S2 Ranch, Elgi** 81.36 327 ⇑P P 23 52 58.4 -0.2
baz=82
BSMT **Bassoo Peak** 81.41 330 *e*P P 23 52 58.9 +0.1
E10A **Myers Farm, Un** 81.52 328 ⇓P P 23 52 59.2 -0.2
baz=82
D11A **Klaveano Farm,** 81.54 329 ⇑P P 23 52 58.9 -0.6
baz=82
G08A **Pilot Rock** 81.60 327 ⇑P P 23 52 59.7 -0.2
baz=82
C12B **Naegeli Ranch,** 81.62 330 ⇑P P 23 52 59.9 0.0
baz=82
A14A **Double T Ranch** 81.63 332 ⇑P P 23 52 59.3 -0.6
baz=82
B13A **Whitefish** 81.65 331 ⇓P P 23 53 00.0 0.0
baz=82
LNOR **Lincton Mounta** 81.66 327 *e*P P 23 52 59.6 -0.6
MORF **Marmelete** 81.70 44 *e*P P 23 53 02.3 +1.7
comp=Z,90nm,1.9s,mb5.3
PTEO **Sao Teotonio** 81.80 44 *e*P P 23 53 03.0 +1.9
comp=Z,121nm,1.4s,mb5.5
F08A **Pendleton** 81.86 327 ⇓P P 23 53 00.4 -0.8
baz=82
MDT **Midelt** 81.88 50 P P 23 53 02.2 +0.6
comp=Z,16nm,0.9s,mb4.9,baz=232,slow=5.7,SNR=17
MDT pP pP 23 53 28.4 -1.0
comp=Z,12nm,0.8s,baz=82,slow=8.7,SNR=4.9
WALA **Waterton Lakes** 81.91 332 *e*P P 23 53 01.0 -0.4
WALA PcP PcP 23 53 07.4 +0.8
WALA *e*pP pP 23 53 28.3 -0.8
H06A **Lindquist Farm** 81.93 325 ⇓P P 23 53 02.0 +0.4
baz=82
G07A **Ruggs Ranch, H** 81.95 326 ⇓P P 23 53 02.0 +0.3
baz=82
D10A **Wagner Farm, O** 82.00 329 ⇑P P 23 53 01.4 -0.5
baz=82
FFC **Flin Flon** 82.04 341 *e*P P 23 53 00.6 -1.3
FFC *e*PP pP 23 53 28.2 -1.5
FFC *e*SP sP 23 53 40.4 -0.8
FFC pmax pmax
comp=Z,43nm,1.1s,mb5.2
FFC **Flin Flon** 82.04 341 *e*P P 23 53 00.6 -1.3
comp=Z,43nm,1.1s,mb5.2
FFC *e*pP pP 23 53 28.2 -1.5
FFC *e*sP sP 23 53 40.4 -0.8
E09A **Wood Farm, Sta** 82.04 328 ⇑P P 23 53 01.5 -0.7
baz=82
I05A **Bend** 82.05 325 ⇑P P 23 53 02.6 +0.3
baz=82
B12A **Libby** 82.22 330 ⇑P P 23 53 03.1 +0.1
baz=82
H05A **Madras** 82.35 325 ⇑P P 23 53 03.8 0.0
baz=82
PVAQ **Vaqueiros** 82.36 44 *e*P P 23 53 05.2 +1.2
G06A **Carlson Farm,** 82.43 326 ⇑P P 23 53 04.4 +0.3
baz=83
E08A **Dider Farm, El** 82.48 327 ⇑P P 23 53 04.0 -0.5
baz=83
D09A **Jones Farm, Ri** 82.51 328 ⇓P P 23 53 04.2 -0.3
baz=83
F07A **Phinny Hill Vi** 82.51 326 ⇑P P 23 53 04.8 +0.2
baz=83
BOSA **Boshof** 82.54 118 P P 23 53 05.6 +0.2
comp=Z,102nm,0.9s,mb5.7,baz=250,slow=4.6,SNR=89
BOSA **Boshof** 82.54 118 *e*P P 23 53 05.1 -0.3
BOSA *e*PP pP 23 53 34.0 +0.9
BOSA pmax pmax
comp=Z,147nm,1.0s,mb5.8
BOSA **Boshof** 82.54 118 *e*P P 23 53 05.1 -0.3
comp=Z,147nm,1.0s,mb5.8
BOSA *e*pP pP 23 53 34.0 +0.9
C10A **Spilker Farm,** 82.56 329 ⇓P P 23 53 04.4 -0.4
baz=83
B11A **Sandpoint** 82.56 330 ⇑P P 23 53 04.2 -0.6
baz=83
A12A **Yaak River Ran** 82.59 331 ⇑P P 23 53 04.8 -0.1
baz=83
HSO **Harness Mounta** 82.62 323 P P 23 53 05.5 +0.3
PBEJ **Beja** 82.63 44 *e*P P 23 53 06.3 +0.9
comp=Z,39nm,1.1s,mb5.2
HAWA **Hanford** 82.65 327 *e*P P 23 53 05.3 0.0
comp=Z,54nm,0.8s,mb5.4
HAWA *e*pP pP 23 53 34.7 +1.6
RSW **Rattlesnake Hi** 82.68 327 P P 23 53 05.9 +0.4
WRD **Warden** 82.74 328 P P 23 53 06.5 +0.7
G05A **Wamic** 82.79 325 ⇓P P 23 53 06.2 +0.1
baz=83
D08A **Wollman Farm,** 82.80 328 ⇓P P 23 53 05.7 -0.4
baz=83
EVO **Evora** 82.83 43 *e*P P 23 53 07.2 +0.8
B10A **Chitwood Farm,** 82.86 330 ⇑P P 23 53 05.4 -0.9
baz=83
F06A **Goldendale** 82.86 326 ⇓P P 23 53 06.2 -0.2
baz=83
H04A **Detroit Lake** 82.88 324 ⇓P P 23 53 05.8 -0.8
baz=83
E07A **Sunnyside** 82.93 327 ⇑P P 23 53 06.3 -0.4
baz=83
A11A **Hall Mountain,** 82.93 330 ⇑P P 23 53 06.4 -0.3
baz=83
OD2 **Odessa Site #2** 82.93 328 P P 23 53 06.5 -0.3
C09A **Chrisman Ranch** 83.01 329 ⇓P P 23 53 06.9 -0.2
baz=83
I03A **Eugene** 83.01 323 ⇓P P 23 53 07.1 -0.1
baz=83
FHE **Frenchman Hill** 83.02 327 P P 23 53 07.5 +0.3
HOOD **Mount Hood Mea** 83.02 325 *e*P P 23 53 08.2 +1.0
PBAR **Barrancos** 83.25 44 *e*P P 23 53 08.8 +0.2
comp=Z,36nm,1.1s,mb5.1
F05A **White Salmon** 83.29 326 ⇑P P 23 53 08.2 -0.4
baz=84
PESTR **Estremoz** 83.29 43 *e*P P 23 53 09.4 +0.6
comp=Z,50nm,1.4s,mb5.2
MAW **Mawson** 83.33 163 P P 23 53 08.6 0.0
comp=Z,48nm,0.6s,mb5.5,baz=217,slow=6.2,SNR=79
MAW **Mawson** 83.33 163 *e*P P 23 53 08.0 -0.6
MAW *e*PP pP 23 53 36.4 0.0
MAW pmax pmax
comp=Z,27nm,1.0s
MAW **Mawson** 83.33 163 *e*P P 23 53 08.0 -0.7
comp=Z,27nm,1.0s,mb5.0
MAW *e*pP pP 23 53 36.4 0.0
I02A **Mapleton** 83.34 323 ⇑P P 23 53 08.7 -0.3
baz=84
C08A **Higginbotham F** 83.37 328 ⇑P P 23 53 08.4 -0.5
baz=84
G04A **Mulino** 83.38 325 ⇑P P 23 53 08.7 -0.4
baz=84
B09A **Rice** 83.38 329 ⇓P P 23 53 08.4 -0.7
baz=84
D07A **Quincy** 83.42 327 ⇑P P 23 53 09.4 +0.1
baz=84
H03A **Soap Creek Ran** 83.48 324 ⇓P P 23 53 09.6 0.0
baz=84
E06A **Yakima** 83.49 326 ⇓P P 23 53 09.5 -0.2
baz=84
A10A **Northport** 83.50 330 ⇑P P 23 53 08.8 -0.8
baz=84
FCC **Fort Churchill** 83.61 347 *e*P P 23 53 09.2 -0.7
FCC *e*pP pP 23 53 36.2 -1.6
FCC *e*sP sP 23 53 47.2 -2.0
PMRV **Marv??o** 83.74 43 *e*P P 23 53 10.3 -0.8
comp=Z,27nm,1.2s,mb5.0
WTV **Waterville** 83.75 328 P P 23 53 10.5 -0.5
C07A **Waterville** 83.80 328 ⇓P P 23 53 11.0 -0.2
baz=84
F04A **Amboy** 83.83 325 ⇑P P 23 53 10.8 -0.6
baz=84
D06A **Cle Elum** 83.86 327 ⇓P P 23 53 11.0 -0.5
baz=84
H02A **Toledo** 83.86 324 ⇓P P 23 53 11.0 -0.6
baz=84
ETW **Entiat** 83.88 328 *e*P P 23 53 11.2 -0.4

G03A **Yamhill** 83.88 324 ⇑P P 23 53 11.6 0.0
baz=84
B08A **Colville Reser** 83.91 329 ⇓P P 23 53 10.9 -0.8
baz=84
PCBR **Castelo Branco** 83.93 43 *e*P P 23 53 12.2 +0.1
comp=Z,30nm,1.5s,mb4.9
A09A **Danville** 83.98 329 ⇑P P 23 53 11.3 -0.8
baz=84
LON **Longmire** 84.05 326 *e*P P 23 53 11.9 -0.6
LBTB **Lobatse** 84.14 115 *e*P P 23 53 14.1 +0.5
LBTB *e*PP pP 23 53 43.0 +1.5
LBTB pmax pmax
comp=Z,109nm,0.9s,mb5.7
LBTB **Lobatse** 84.14 115 *e*P P 23 53 14.1 +0.5
comp=Z,109nm,0.9s,mb5.7
LBTB *e*pP pP 23 53 43.0 +1.5
PVIS **Viseu** 84.18 42 *e*P P 23 53 14.1 +0.8
comp=Z,48nm,1.5s,mb5.1
NLW **Nelson Butte** 84.20 328 P P 23 53 12.7 -0.5
MTE **Manteigas** 84.21 42 *e*P P 23 53 13.8 +0.3
comp=Z,49nm,1.5s,mb5.1
MTE **Manteigas** 84.21 42 *e*P P 23 53 13.6 +0.1
comp=Z,46nm,0.9s,mb5.3
A08A **Turner Farm, O** 84.29 329 ⇑P P 23 53 13.1 -0.5
baz=84
B07A **Winthrop** 84.36 328 ⇑P P 23 53 13.2 -0.8
baz=85
C06A **Tall Timber Ra** 84.37 328 ⇑P P 23 53 13.2 -0.9
baz=85
F03A **Seaside** 84.43 325 ⇑P P 23 53 13.7 -0.7
baz=85
ELOJ **Sierra Loja** 84.56 46 P P 23 53 16.5 +1.2
comp=Z,74nm,1.3s,mb5.5
PVRL **Vila Real** 84.62 41 *e*P P 23 53 16.4 +0.9
comp=Z,65nm,1.5s,mb5.3
PCAB **Cabril** 84.69 41 *e*P P 23 53 16.3 +0.5
ELUQ **Luque** 84.71 46 P P 23 53 15.1 -1.0
comp=Z,100nm,1.2s,mb5.6
EDM **Edmonton** 84.79 335 *e*P P 23 53 14.4 -1.7
EDM *e*PP pP 23 53 42.3 -1.7
EDM *e*SP sP 23 53 53.8 -1.6
E03A **Lebam** 84.83 325 ⇑P P 23 53 16.1 -0.3
baz=85
EADA **Adamuz** 84.84 45 P P 23 53 15.1 -1.6
comp=Z,119nm,1.1s,mb5.7
MVO **Moncorvo** 84.98 42 *e*P P 23 53 17.9 +0.6
RPW **Rockport** 85.03 328 *e*P P 23 53 16.5 -0.9
B06A **Marblemount** 85.06 328 ⇑P P 23 53 16.2 -1.3
baz=85
JCW **Jim Creek** 85.07 327 *e*P P 23 53 16.4 -1.2
B05A **Bryant** 85.20 327 ⇓P P 23 53 16.9 -1.3
baz=85
C04A **Brinnon** 85.28 326 ⇑P P 23 53 18.0 -0.7
baz=86
NLWA **Neilton Lookou** 85.53 326 ⇓P P 23 53 19.6 -0.3
baz=86
ECAL **Calabor** 85.61 41 P P 23 53 19.7 -0.7
comp=Z,42nm,1.3s,mb5.2
A05A **Maple Falls** 85.68 328 ⇑P P 23 53 19.6 -1.0
baz=86
B04A **Port Angeles** 85.78 326 ⇓P P 23 53 20.8 -0.3
baz=86
A04A **Legoe Bay, Lum** 85.81 327 ⇑P P 23 53 20.7 -0.5
baz=86
FRB **Frobisher Bay** 85.84 360 P P 23 53 19.9 -1.1
comp=Z,40nm,1.0s,mb5.3,baz=182,slow=5.2,SNR=33
FRB **Frobisher Bay** 85.84 360 P P 23 53 19.9 -1.1
FRB pmax pmax
comp=Z,40nm,1.0s
FRB **Frobisher Bay** 85.84 360 P P 23 53 19.9 -1.1
EPON **Pontenova** 86.16 40 P P 23 53 20.3 -2.8
comp=Z,31nm,1.1s,mb5.2
LSZ **Lusaka** 90.11 106 P P 23 53 44.8 +2.2
comp=Z,12nm,0.7s,mb5.1,baz=240,slow=3.3,SNR=40
LSZ LR LR 00 29 10.9
comp=Z,1μm,18.4s,baz=356,slow=32
LSZ **Lusaka** 90.11 106 *e*P P 23 53 44.8 +2.2
comp=Z,68nm,1.5s,mb5.6
LSZ *e*pP pP 23 54 13.9 +3.2
BBB **Bella Bella** 90.67 328 P P 23 53 43.7 -0.6
comp=Z,42nm,0.9s,mb5.6,baz=226,slow=1.4,SNR=5.2
CASY **Casey** 91.61 180 *e*P P 23 53 48.6 0.0
comp=Z,198nm,0.9s,mb6.3
YKA **Yellowknife Ar** 92.20 340 P P 23 53 50.2 -0.9
comp=Z,49nm,0.8s,mb5.8,baz=133,slow=4.5,SNR=797
YKA pP pP 23 54 15.3 -3.9
comp=Z,7.0nm,0.8s,baz=132,slow=4.5,SNR=3.0
YKA PKIKP PKiKP 23 58 39.2 -0.9
comp=Z,0.6nm,0.6s,baz=137,slow=2.3,SNR=4.0
YKA PKKPbc PKKPbc 00 11 05.7 -3.2
comp=Z,1.2nm,1.0s,baz=317,slow=2.9,SNR=9.1
YKA **Yellowknife Ar** 92.20 340 P P 23 53 50.2 -0.9
YKA *PP pP 23 54 15.3 -4.0
YKA 00 11 05.7
YKA pmax pmax
comp=Z,49nm,0.8s
YKA **Yellowknife Ar** 92.20 340 P P 23 53 50.2 -0.9
YKA pP pP 23 54 15.3 -3.9
DLBC **Dease Lake** 95.24 332 P P 23 54 04.4 -0.8
comp=Z,24nm,0.9s,mb5.6,baz=131,slow=4.0,SNR=21
DLBC PP PP 23 57 54.0 -2.9
comp=Z,6.8nm,1.1s,baz=170,slow=6.4,SNR=3.3
DLBC PKKPbc PKKPbc 00 10 58.3 -2.5
comp=Z,4.0nm,1.0s,baz=142,slow=5.7,SNR=3.3
DAVOS **Davos** 98.30 43 P P 23 54 20.0 +0.7
DAVOX **Davos/Dischmat** 98.33 43 P P 23 54 20.0 +0.6
comp=Z,8.1nm,0.8s,mb5.3,baz=218,slow=18,SNR=2.5
RES **Resolute Bay** 98.34 353 P P 23 54 18.2 -0.6
comp=Z,4.3nm,1.1s,mb4.9,baz=182,slow=7.6,SNR=7.9
RES **Resolute Bay** 98.34 353 P P 23 54 18.3 -0.6
RES pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
GERES **GERESS Array B** 101.49 42 PKKPbc PKKPbc 00 10 39.8 -3.0
comp=Z,0.7nm,0.7s,baz=41,slow=2.5,SNR=4.5
AKASG **Malin Array Be** 111.67 43 PKiKP PKiKP 23 59 14.9 -0.9
comp=Z,0.9nm,0.3s,baz=262,slow=2.9,SNR=6.3
AKASG PKKPbc PKKPbc 00 10 08.0 -3.2
comp=Z,2.8nm,0.8s,baz=86,slow=2.9,SNR=9.4
AKASG **Malin Array Be** 111.67 43 *i* PKiKP PKiKP 23 59 14.9 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.3s
ARCES **ARCESS Array B** 112.09 22 PKKPbc PKKPbc 00 10 06.6 -3.7
comp=Z,2.8nm,0.7s,baz=88,slow=3.2,SNR=13
BR131 **Keskin Array S** 112.88 55 *e*PKiKP PKiKP 23 59 19.0 +0.6
MMAI **Mount Meron Ar** 112.93 62 PKiKP PKiKP 23 59 19.2 +0.5
comp=Z,2.2nm,0.5s,baz=64,slow=1.9,SNR=10
ASF **Jabal al Asfar** 113.98 64 PKP PKiKP 23 59 20.0 -0.7
comp=Z,6.7nm,0.9s,baz=76,slow=5.3,SNR=6.8
ASF **Jabal al Asfar** 113.98 64 PKIKP PKiKP 23 59 20.0 -0.8
ASF pmax pmax
comp=Z,7.0nm,0.9s
APA **Apatity** 114.94 24 ⇑ *i* PKIKP PKiKP 23 59 20.0 -1.5
APA pmax pmax
comp=Z,26nm,1.0s
APA MLR MLR
comp=Z,2μm,18.0s
OBN **Obninsk** 116.51 38 ⇑ *i* PKIKP PKPdf 23 59 24.3 -0.6
OBN pmax pmax
comp=Z,60nm,1.6s
OBN **Obninsk** 116.51 38 ⇑ *e*PKP PKPdf 23 59 25.1 +0.2
STKA **Stephens Creek** 118.92 209 PKP PKPdf 23 59 28.4 -2.0
comp=Z,9.1nm,0.9s,baz=130,slow=1.5,SNR=20
STKA PP PP 00 00 47.1 -2.5
comp=Z,0.6nm,0.5s,baz=118,slow=1.2,SNR=3.9
STKA PKKPbc PKKPbc 00 09 43.6 -2.1
comp=Z,2.1nm,0.8s,baz=342,slow=9.9,SNR=5.1
STKA **Stephens Creek** 118.92 209 *e*P PKPdf 23 59 29.5 -0.9
comp=Z,6.0nm,0.8s
STKA **Stephens Creek** 118.92 209 *e*PKPdf PKPdf 23 59 29.1 -1.3
KIV **Kislovodsk** 120.09 51 *e*PKIKP PKPdf 23 59 32.4 +0.3
KIV pmax pmax
comp=Z,41nm,1.1s
KIV **Kislovodsk** 120.09 51 ⇑ *e*PKP PKPdf 23 59 32.8 +0.7
GNI **Garni** 121.39 56 PKP PKPdf 23 59 34.6 -0.2
comp=Z,17nm,0.7s,baz=310,slow=3.4,SNR=14
GNI **Garni** 121.39 56 *i* PKIKP PKPdf 23 59 34.9 +0.1
NWAO **Narrogin (SRO)** 124.75 186 PKP PKPdf 23 59 40.8 -0.8
comp=Z,11nm,0.8s,baz=211,slow=4.4,SNR=5.5
NWAO **Narrogin (SRO)** 124.75 186 PKIKP PKPdf 23 59 40.8 -0.8
NWAO pmax pmax
comp=Z,11nm,0.8s
FORT **Forrest** 124.86 197 *e*PKPdf PKPdf 23 59 40.3 -1.6
MUN **Mundaring** 125.78 185 *e*P PKPdf 23 59 42.8 -0.8
CTA **Charters Tower** 125.95 221 PKP PKPdf 23 59 43.4 -0.8
comp=Z,15nm,0.9s,baz=211,slow=1.6,SNR=6.3
CTA **Charters Tower** 125.95 221 PKIKP PKPdf 23 59 43.4 -0.8

CTA					pmax	pmax			
	comp=Z,15nm,0.9s								
CTA	**Charters Tower**	**125.95**	**221**	*eP*		PKPdf	23 59 43.9	-0.3	
	comp=Z,11nm,0.9s								
ASAR	**Alice Springs**	**129.39**	**207**		PKhKP		23 59 33.1		
	comp=Z,1.2nm,0.8s,baz=153,slow=1.8,SNR=6.5								
ASAR					PKP	PKPdf	23 59 49.8	-0.9	
	comp=Z,43nm,0.9s,baz=132,slow=0.9,SNR=135								
ASAR					PKPPKP		00 18 20.4		
	comp=Z,0.3nm,0.5s,baz=306,slow=4.6,SNR=5.5								
ASAR	**Alice Springs**	**129.39**	**207**		PKHKP		23 59 33.1		
ASAR							23 59 49.8		
ASAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
ASAR					pmax	pmax			
	comp=Z,43nm,0.9s								
TIXI	**Tiksi**	**129.73**	**353**⇑	*e*	PKP	PKPdf	23 59 48.5	-1.3	
AKTK	**Aktyubinsk**	**129.92**	**42**		PKP	PKPdf	23 59 51.2	+0.4	
AKTO	**Aktyubinsk**	**129.92**	**42**		PKP	PKPdf	23 59 51.2	+0.4	
	comp=Z,15nm,0.8s,baz=353,slow=1.5,SNR=12								
AKTO	**Aktyubinsk**	**129.92**	**42**		PKIKP	PKPdf	23 59 51.2	+0.5	
AKTO					pmax	pmax			
	comp=Z,15nm,0.8s								
SEY	**Seymchan**	**131.13**	**337**⇑	*e*	PKIKP	PKPdf	23 59 51.9	-0.8	
WB2	**Warramunga Arr**	**132.47**	**209**	*e*	P	PKPdf	23 59 56.2	-0.4	
WB2				*e*	S	SKPdf	00 03 21.9	-0.2	
WB2				*e*			00 04 14.4		
WRA	**Warramunga Arr**	**132.47**	**209**		PKhKP		23 59 42.0		
	comp=Z,1.3nm,0.7s,baz=205,slow=1.7,SNR=5.3								
WRA					PKP	PKPdf	23 59 56.0	-0.6	
	comp=Z,46nm,0.9s,baz=156,slow=1.8,SNR=57								
WRA					PP	PP	00 02 16.4	-3.3	
	comp=Z,3.0nm,1.1s,baz=157,slow=5.5,SNR=4.6								
WRA	**Warramunga Arr**	**132.47**	**209**		PKHKP		23 59 42.0		
WRA							23 59 56.0		
WRA							00 02 16.4		
WRA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
WRA					pmax	pmax			
	comp=Z,46nm,0.9s								
WRA					pmax	pmax			
	comp=Z,3.0nm,1.1s								
PETK	**Petropavlovsk-**	**133.60**	**323**		PKP	PKPdf	23 59 57.2	-0.4	
	comp=Z,14nm,0.9s,baz=98,slow=6.1,SNR=6.1								
BVAR	**Borovoye Array**	**136.20**	**35**		PKP	PKPdf	00 00 02.9	+0.4	
	comp=Z,18nm,0.9s,baz=282,slow=2.9,SNR=23								
BVAR					pPKP	pPKPdf	00 00 31.2	-0.7	
	comp=Z,7.9nm,0.9s,baz=294,slow=1.5,SNR=3.6								
BVAR	**Borovoye Array**	**136.20**	**35**		PKIKP	PKPdf	00 00 02.9	+0.4	
BVAR							00 00 31.2		
BVAR					pmax	pmax			
	comp=Z,18nm,0.9s								
KURK	**Kurchatov**	**141.75**	**34**⇑	*i*	PKIKP	PKPdf	00 00 13.5	+0.8	
KURK					pmax	pmax			
	comp=Z,34nm,1.7s								
ZALV	**Zalesovo Beam**	**142.50**	**26**		PKhKP		00 00 09.8		
	comp=Z,30nm,0.7s,baz=327,slow=4.1,SNR=20								
ZALV					SKPbc	SKPbc	00 03 42.0	0.0	
	comp=Z,9.2nm,0.9s,baz=296,slow=4.8,SNR=3.8								
EKS2	**Erkin-Say**	**142.59**	**48**		P	PKPdf	00 00 16.3	+1.9	
	SNR=8.0								
AAK	**Ala-Archa**	**143.09**	**48**		P	PKPdf	00 00 13.5	-1.8	
	SNR=7.8								
KBK	**Karagaybulak**	**143.39**	**48**		P	PKPdf	00 00 14.6	-1.3	
	SNR=11								
TKM2	**Tokmak 2**	**143.73**	**47**		P	PKPdf	00 00 15.4	-1.0	
	SNR=11								
KZA	**Kyzart**	**143.81**	**49**		P	PKPdf	00 00 16.7	0.0	
	SNR=8.4								
CLNS	**Chul'man**	**144.25**	**348**	*e*	PKIKP	PKPdf	00 00 15.0	-1.9	
CLNS					pmax	pmax			
	comp=Z,55nm,1.0s								
CLNS					pmax	pmax			
	comp=E,21nm,1.1s								
CLNS					pmax	pmax			
	comp=N,30nm,1.0s								
POO	**Poona**	**144.40**	**89**	*e*	P	PKPdf	00 00 18.2	-0.1	
KAD	**Karad**	**144.42**	**91**	*e*	P	PKPdf	00 00 16.6	-1.9	
ULHL	**Ulahol**	**144.43**	**48**		P	PKPdf	00 00 18.3	+0.6	
	SNR=8.0								
YUK	**Yuzh-Kuril'sk**	**144.55**	**316**		PKHKP		00 00 07.0		
YUK					pmax	pmax			
	comp=Z,360nm,0.9s								
YSS	**Yuzh-Sakhalins**	**144.98**	**322**⇓	*i*	PKIKP	PKPdf	00 00 17.1	-1.4	
YSS					pmax	pmax			
	comp=Z,260nm,1.0s								
YSS					pmax	pmax			
	comp=N,40μm,1.0s								
YSS					pmax	pmax			
	comp=E,110μm,1.0s								
KOD	**Kodaikanal**	**145.09**	**105**	*e*	P	PKPbc	00 00 20.0	+0.6	
KSH	**Kashi**	**145.21**	**52**	*e*	PKP	PKPdf	00 00 19.5	+0.4	
KSH					PKP2	PKPab	00 00 23.5	+4.3	
KSH					APKP		00 00 46.3		
KSH					XPKP		00 00 57.0		
KSH					PP	PP	00 03 46.8	+7.5	
KSH					PKS		00 03 54.0		
KSH					SKS	SKSdf	00 07 17.3	-1.2	
KSH					SKKS	SKKSac	00 10 24.8	+3.5	
KSH					SS	SS	00 22 29.8	+8.0	
KSH					LR	LR			
	comp=N,1μm,6.4s								
KSH					LR	LR			
	comp=E,2μm,7.2s								
KSH					LR	LR			
	comp=Z,2μm,12.3s								
MKAR	**Makanchi Array**	**146.01**	**37**		PKPbc	PKPbc	00 00 20.9	-0.4	
	comp=Z,114nm,0.8s,baz=309,slow=2.7,SNR=128								
MKAR	**Makanchi Array**	**146.01**	**37**		PKP2	PKPab	00 00 20.9	-1.0	
MKAR					pmax	pmax			
	comp=Z,115nm,0.8s								
AJM	**Ajmer**	**146.10**	**76**	*e*	P	PKPdf	00 00 20.9	-0.2	
XMIS	**Christmas Isla**	**146.81**	**169**	*e*	P	PKPdf	00 00 24.1	+1.4	
KHET	**Khetri**	**147.13**	**73**	*e*	P	PKPdf	00 00 23.3	+0.5	
KHET	**Khetri**	**147.13**	**73**	*ex*	x		00 00 23.3		
KUDL	**Kundal**	**147.73**	**72**	*e*	P	PKPdf	00 00 23.9	+0.2	
KUDL	**Kundal**	**147.73**	**72**	*ex*	x		00 00 23.9		
AKL	**Akola**	**147.74**	**86**	*e*	P	PKPdf	00 00 24.5	+0.5	
AKL					AMb	AMB	00 00 29.0		
	comp=Z,128nm,1.0s								
KKR	**Kurukshetra**	**147.90**	**69**	*e*	P	PKPdf	00 00 24.1	+0.2	
HABR	**Khabarovsk**	**148.00**	**330**	*e*	PKP2	PKPdf	00 00 24.1	+0.6	
HABR				*e*			00 16 22.7		
HABR				*e*	SS	SS	00 22 50.1	-1.8	
HABR				*e*	SSS		00 28 24.2		
HABR					MLR	MLR			
	comp=Z,327nm,22.0s								
SMLA	**Simla**	**148.07**	**67**	*i*	P	PKPdf	00 00 22.9	-1.3	
SMLA	**Simla**	**148.07**	**67**	*i*	x	x	00 00 22.9		
BHGR	**Bahadurgarh**	**148.10**	**71**	*ex*	x		00 00 19.7		
SONA	**Sohna**	**148.25**	**72**	*e*	P	PKPdf	00 00 24.0	-0.6	
AYAN	**Aya Nagar**	**148.27**	**72**	*e*	P	PKPdf	00 00 22.8	-1.9	
BHPL	**Bhopal**	**148.44**	**82**	*e*	P	PKPdf	00 00 25.2	+0.2	
HYB	**Hyderabad**	**148.49**	**93**	*e*	PKIKP	PKPdf	00 00 25.5	+0.2	
KLR	**Kul'dur**	**148.85**	**334**	*e*	PKHKP		00 00 20.8		
KLP	**Kalpa**	**148.93**	**66**	*e*	P	PKPdf	00 00 26.8	+1.2	
KLP	**Kalpa**	**148.93**	**66**	*ex*	x		00 00 26.8		
AGRA	**Agra**	**149.04**	**74**	*e*	P	PKPdf	00 00 26.2	+0.2	
MOY	**Mondy**	**149.61**	**13**	*e*	PKHKP	PKPdf	00 00 27.4	+1.3	
MOY					pmax	pmax			
	comp=Z,187nm,1.6s								
NGP	**Nagpur**	**149.69**	**86**	*e*	P	PKPdf	00 00 25.9	-1.2	
TLY	**Talaya**	**150.10**	**10**	*e*	PKIKP	PKPdf	00 00 27.6	+0.8	
TLY					pmax	pmax			
	comp=Z,59nm,1.0s								
JOSI	**Joshimath**	**150.18**	**67**	*e*	P	PKPdf	00 00 26.9	-0.8	
WMQ	**Urumqi**	**150.84**	**37**		PKP	PKPdf	00 00 28.0	-0.2	
ZAK	**Zakamensk**	**151.29**	**11**	*e*	PKIKP	PKPdf	00 00 29.4	+0.7	
ZAK					pmax	pmax			
	comp=Z,38nm,1.0s								
VIS	**Vishakhapatnam**	**152.98**	**95**	*e*	P	PKPdf	00 00 32.1	0.0	
MJAR	**Matsushiro Arr**	**153.05**	**307**		PKPbc	PKPbc	00 00 38.0	-1.2	
	comp=Z,34nm,1.0s,baz=88,slow=1.5,SNR=23								
MJAR					pPKPbc	pPKPbc	00 01 07.0	-1.5	
	comp=Z,12nm,0.9s,baz=87,slow=2.0,SNR=3.1								
MJAR	**Matsushiro Arr**	**153.05**	**307**		PKIKP	PKPbc	00 00 38.0	-1.2	
MJAR							00 01 07.0		
MJAR					pmax	pmax			
	comp=Z,34nm,1.0s								
MAT	**Matsushiro**	**153.05**	**307**		PKP	PKPbc	00 00 38.1	-1.1	
MDJ	**Mudanjiang**	**153.38**	**331**		PKP	PKPdf	00 00 31.5	-0.5	
MDJ					LR	LR			
	comp=N,2μm,21.6s								
MDJ					LR	LR			
	comp=E,1μm,21.6s								
MDJ					LR	LR			
	comp=Z,1μm,18.1s								
KOLN	**Koldanda**	**154.03**	**72**	*e*	P	PKPdf	00 00 32.9	-0.6	
	comp=Z,46nm,1.0s								
DANN	**Dangsing**	**154.10**	**71**	*e*	P	PKPdf	00 00 33.9	+0.4	
	comp=Z,139nm,0.8s								
SONM	**Songino Array**	**154.25**	**8**		PKP	PKPdf	00 00 33.8	+0.6	
	comp=Z,20nm,0.9s,baz=324,slow=0.7,SNR=27								
SONM					PKPbc	PKPbc	00 00 41.0	-0.4	
	comp=Z,22nm,0.9s,baz=321,slow=1.4,SNR=10								
SONM					PKPab	PKPab	00 00 55.2	-0.5	
	comp=Z,10nm,0.8s,baz=326,slow=4.2,SNR=6.3								
SONM	**Songino Array**	**154.25**	**8**		PKIKP	PKPdf	00 00 33.8	+0.7	
SONM							00 00 55.2		
SONM					pmax	pmax			
	comp=Z,21nm,0.9s								
GKN	**Gorkha**	**154.91**	**72**	*e*	P	PKPdf	00 00 34.1	-0.6	
	comp=Z,78nm,1.0s								
DMN	**Daman**	**155.37**	**72**	*e*	P	PKPdf	00 00 35.0	-0.3	
KKN	**Kakani**	**155.50**	**72**	*e*	P	PKPdf	00 00 35.2	-0.3	
	comp=Z,46nm,0.9s								
PKI	**Pulchoki**	**155.64**	**72**	*e*	P	PKPdf	00 00 35.0	-0.7	
GUN	**Gumba**	**156.02**	**71**	*e*	P	PKPdf	00 00 36.0	-0.2	
	comp=Z,114nm,1.2s								
JIRN	**Jiri**	**156.32**	**72**	*e*	P	PKPdf	00 00 36.1	-0.5	
	comp=Z,25nm,0.9s								
RAMN	**Ramite**	**156.76**	**74**	*e*	P	PKPdf	00 00 37.1	-0.1	
	comp=Z,76nm,0.8s								
ODAN	**Odare**	**157.47**	**74**	*e*	P	PKPdf	00 00 37.9	-0.2	
	comp=Z,80nm,1.0s								
TAPN	**Taplejung**	**157.70**	**72**	*e*	P	PKPdf	00 00 38.2	-0.1	
	comp=Z,66nm,1.2s								
KSRS	**Korea Array**	**159.47**	**321**		PKP	PKPdf	00 00 40.5	+0.4	
	comp=Z,27nm,1.0s,baz=66,slow=1.0,SNR=21								
KSRS					PKPab	PKPab	00 01 18.2	-0.3	
	comp=Z,15nm,0.9s,baz=54,slow=4.2,SNR=13								
KSRS	**Korea Array**	**159.47**	**321**		PKIKP	PKPdf	00 00 40.5	+0.4	
KSRS							00 01 18.3		
KSRS					pmax	pmax			
	comp=Z,27nm,1.0s								
LSA	**Lhasa**	**160.17**	**64**		PKP	PKPdf	00 00 42.3	+1.1	
GTA	**Gaotai**	**160.24**	**28**		PKP	PKPdf	00 00 41.0	+0.1	
GTA					APKP		00 01 07.3		
GTA					XPKP		00 01 18.0		
GTA					PKP2	PKPab	00 01 22.3	+0.6	
GTA					PKS		00 04 11.0		
GTA					PP	PP	00 05 07.3	+3.8	
GTA					SKS	SKSdf	00 07 32.3	-4.1	
GTA					SS	SS	00 25 03.5	-1.2	
GTA					PP	PP			
	comp=Z,615nm,10.1s								
GTA					LR	LR			
	comp=N,368nm,18.7s								
GTA					LR	LR			
	comp=E,587nm,17.2s								
GTA					LR	LR			
	comp=Z,777nm,16.7s								
HHC	**Hu-ho-hao-te**	**161.59**	**0**	*e*	PKP	PKPdf	00 00 43.0	+0.7	
HHC					APKP		00 01 11.0		
HHC					XPKP		00 01 20.0		
HHC					PKP2	PKPab	00 01 27.5	0.0	
HHC					PKS		00 04 15.0		
HHC					PP	PP	00 05 14.0	+3.7	
HHC					SKS	SKSdf	00 07 36.5	-1.0	
HHC					SKKS	SKKSac	00 11 51.3	+1.9	
HHC					SS	SS	00 25 19.0	+1.0	
HHC					PP	PP			
	comp=Z,528nm,10.4s								
HHC					LR	LR			
	comp=N,239nm,16.7s								
HHC					LR	LR			
	comp=E,331nm,15.5s								
HHC					LR	LR			
	comp=Z,337nm,19.0s								
LZH	**Lanzhou**	**164.73**	**25**	*e*	PKP	PKPdf	00 00 43.5	-2.0	
LZH					APKP		00 01 10.0		
LZH					PKP2	PKPab	00 01 42.5	+1.0	
LZH					SKKS	SKKSac	00 12 11.0	+5.3	
LZH					SS	SS	00 25 54.0	+2.8	
LZH					PP	PP			
	comp=Z,97nm,7.8s								
LZH					LR	LR			
	comp=N,342nm,18.2s								
LZH					LR	LR			
	comp=Z,630nm,20.7s								
TIA	**Tai'an**	**165.43**	**342**	⇑	PKP	PKPdf	00 00 46.3	+0.2	
CMAR	**Chiang Mai Arr**	**167.43**	**106**		PKP	PKPdf	00 00 48.0	-0.2	
	comp=Z,12nm,1.0s,baz=275,slow=2.0,SNR=19								
CMAR					PKPab	PKPab	00 01 54.2	+0.2	
	comp=Z,9.8nm,0.8s,baz=254,slow=5.5,SNR=16								
CMAR					SKPbc		00 04 28.9		
	comp=Z,1.3nm,0.3s,baz=248,slow=2.6,SNR=4.8								
CMAR					PP	PP	00 05 42.6	-0.3	
	comp=Z,1.3nm,0.4s,baz=248,slow=4.9,SNR=12								
CMAR	**Chiang Mai Arr**	**167.43**	**106**		PKIKP	PKPdf	00 00 48.0	-0.1	
CMAR							00 01 54.3		
CMAR							00 05 42.7		
CMAR					pmax	pmax			
	comp=Z,12nm,1.0s								
XAN	**Xi'an**	**168.13**	**11**		PKP	PKPdf	00 00 47.5	-0.7	
XAN					APKP		00 01 14.0		
XAN					PP	PP	00 05 47.3	+2.8	
XAN					SKS	SKSdf	00 07 40.0	-2.3	
XAN					SKKS	SKKSac	00 12 22.3	-0.3	
XAN					SS	SS	00 26 25.5	+0.5	
XAN					LR	LR			
	comp=N,575nm,28.1s								
XAN					LR	LR			
	comp=E,1μm,29.2s								
XAN					LR	LR			
	comp=Z,2μm,23.6s								
NJ2	**Nanjing**	**168.46**	**328**	*e*	PKP	PKPdf	00 00 47.8	-0.7	
CD2	**Chengdu**	**168.94**	**38**		PKP	PKPdf	00 00 47.0	-1.8	
CD2					PP	PP			
	comp=Z,240nm,7.2s								
CD2					LR	LR			
	comp=N,290nm,7.5s								
CD2					LR	LR			
	comp=Z,330nm,7.2s								
KMI	**Kunming**	**171.36**	**70**		PKP	PKPdf	00 00 50.5	+0.2	
KMI					PKP2	PKPab	00 02 11.5	+0.1	
KMI					PP	PP	00 06 05.0	+2.4	
KMI					LR	LR			
	comp=N,187nm,14.3s								
KMI					LR	LR			
	comp=E,183nm,18.1s								
KMI					LR	LR			
	comp=Z,156nm,22.7s								
WHN	**Wuhan**	**171.53**	**344**	⇑	PKP	PKPdf	00 00 50.3	0.0	
WHN					PKP2	PKPab	00 02 09.3	-1.9	
WHN					PP	PP	00 05 59.3	-2.3	
GYA	**Guiyang**	**173.88**	**47**		PKP	PKPdf	00 00 51.3	-0.1	
GYA					APKP		00 01 18.5		
GYA					XPKP		00 01 29.0		
GYA					PKP2	PKPab	00 02 23.8	+1.4	
GYA					PKS		00 04 20.0		
GYA					PP	PP	00 06 17.3	+3.1	
GYA					SKS	SKSdf	00 07 43.8	-1.1	
GYA					SKKS	SKKSac	00 12 50.5	-0.6	
GYA					SS	SS	00 27 23.0	-0.6	
GYA					PP	PP			
	comp=Z,180nm,9.4s								
GYA					LR	LR			
	comp=N,890nm,22.1s								
GYA					LR	LR			
	comp=E,550nm,24.3s								
GYA					LR	LR			
	comp=Z,950nm,22.4s								

ISCJB ***26*** *23:42:29.2s0.5, 4572N±003×2656E±003, h98km±5km, Error ellipse: s-maj=4.6km s-min=3.6km az=30.6*
BUC ***26*** *23:42:29.2s0.7, 4571N×2659E, h103km±8km, MD3.7/2, Error ellipse: s-maj=6.1km s-min=5.0km az=29.0*
CSEM ***26*** *23:42:29.5s0.1, 4569N×2660E, h87km±2km, MD3.7/2, Error ellipse: s-maj=2.9km s-min=2.5km az=52.0*
NEIC ***26*** *23:42:32.5, 4559N×2661E, h70km, MD3.4(BUC), After BUC.*
SOF ***26*** *23:42:32.1, 4537N×2642E, h18km, MD2.6*
ISC 26 23:42:30.0±0.5, 4572N±003×2658E±003, h95km±5km, n46, σ0ŝ77/82, 18C-12D, Romania

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

PLOR	**Plostina**	**0.14**	**21**⇑	*i*	P		Pn	23 42 43.2	-0.2
PLOR				*i*	S		Sn	23 42 53.1	-0.2
VRI	**Vrincioaia**	**0.18**	**36**⇑	*i*	P		Pn	23 42 43.5	0.0
VRI				*i*	S		Sn	23 42 53.2	-0.3
GRER		**0.44**	**141**⇓	*i*	P		Pn	23 42 46.0	+1.2
GRER				*i*	S		Sn	23 42 57.5	+1.7
PETR		**0.46**	**90**⇑	*i*	P		Pn	23 42 45.6	+0.7
PETR				*i*	S		Sn	23 42 56.6	+0.6
ISR	**Istrita**	**0.60**	**182**⇑	*i*	P		Pn	23 42 46.5	+0.4
ISR				*i*	S		Sn	23 42 58.1	+0.1
TUDR		**0.78**	**99**⇑	*i*	P		Pn	23 42 47.5	-0.1
TUDR				*i*	S		Sn	23 43 01.3	+0.5
TESR		**0.79**	**4**⇑	*i*	P		Pn	23 42 48.0	+0.2
TESR				*i*	S		Sn	23 43 00.4	-0.7
VARR		**0.91**	**79**⇑	*i*	P		Pn	23 42 49.7	+0.7
VARR				*i*	S		Sn	23 43 03.2	-0.1
VOIR		**1.11**	**256**⇑	*i*	P		Pn	23 42 51.7	+0.4
VOIR					S		Sn	23 43 06.7	-0.5
VOIR		**1.11**	**256**⇑	*i*	P		Pn	23 42 51.7	+0.4
VOIR				*i*	S		Sn	23 43 06.5	-0.7
VOIR		**1.11**	**256**		P		Pn	23 42 52.9	+1.6
VOIR					S		Sn	23 43 06.7	-0.5
GIUM	**Giurgiulesti**	**1.17**	**101**⇑	*i*	P		Pn	23 42 52.7	+0.8
GIUM				*i*	S		Sn	23 43 08.5	0.0
CFR	**Carcaliu**	**1.23**	**116**⇑	*i*	P		Pn	23 42 52.6	0.0
CFR				*i*	S		Sn	23 43 09.5	-0.1
HARR	**Harsova**	**1.41**	**137**⇓	*i*	P		Pn	23 42 54.9	+0.1
HARR				*i*	S		Sn	23 43 12.1	-1.5
HARR	**Harsova**	**1.41**	**137**		P		Pn	23 42 54.9	+0.1
BUC1	**Bucharest**	**1.43**	**196**		P		Pn	23 42 55.2	+0.1
BUC1				*i*	S		Sn	23 43 13.3	-0.7
BUC1	**Bucharest**	**1.43**	**196**⇑	*i*	P		Pn	23 42 55.3	+0.2
BUC1				*i*	S		Sn	23 43 13.3	-0.7
BUC1	**Bucharest**	**1.43**	**196**		P		Pn	23 42 55.2	+0.2
IAS	**Iasi**	**1.62**	**24**	*i*	S		Sn	23 43 17.8	-0.5
TLCR		**1.66**	**108**⇓	*i*	P		Pn	23 42 57.5	-0.5
TLCR				*i*	S		Sn	23 43 18.6	-0.7
TLCR		**1.66**	**108**	⇑	P		Pn	23 42 57.5	-0.5
TLCR					S		Sn	23 43 18.6	-0.7
CVD	**Cernavoda**	**1.75**	**143**	⇓	P		Pn	23 42 58.9	-0.2
CVD				*i*	S		Sn	23 43 19.3	-1.8
CVD	**Cernavoda**	**1.75**	**143**⇓	*i*	P		Pn	23 42 59.0	-0.1
CVD				*i*	S		Sn	23 43 19.3	-1.8
CVD	**Cernavoda**	**1.75**	**143**	⇓	P		Pn	23 42 58.9	-0.2
CVD					S		Sn	23 43 19.3	-1.9
TIRR	**Tirgusor**	**1.81**	**134**		P		Pn	23 43 00.0	+0.1
TIRR					S		Sn	23 43 21.3	-1.4
TIRR	**Tirgusor**	**1.81**	**134**⇓	*i*	P		Pn	23 43 00.1	+0.2
TIRR				*i*	S		Sn	23 43 20.9	-1.8
TIRR	**Tirgusor**	**1.81**	**134**		P		Pn	23 43 00.0	+0.1
TIRR					S		Sn	23 43 21.3	-1.4
KIS	**Kishinev**	**2.01**	**50**⇑	*i*	P		Pn	23 43 02.7	+0.2
KIS				*i*	S		Sn	23 43 26.8	-0.4
BURAR	**Bucovina Array**	**2.11**	**334**⇓	*i*	P		Pn	23 43 04.9	+1.1
BURAR				*i*	S		Sn	23 43 30.0	+0.4
BURAR	**Bucovina Array**	**2.11**	**334**	⇑	P		Pn	23 43 04.9	+1.1
BURAR					S		Sn	23 43 30.0	+0.4
BUR08	**Bucovina Ar. S**	**2.14**	**334**	*e*	Pn		Pn	23 43 05.8	+1.6
BUR08				*e*	Sn		Sn	23 43 27.9	-2.5
BUR08	**Bucovina Ar. S**	**2.14**	**334**	*e*	Pn		Pn	23 43 05.8	+1.6
BUR08				*e*	Sn		Sn	23 43 27.9	-2.5
PSN	**Preselentsi**	**2.34**	**150**		P		Pn	23 43 07.7	+0.9
SZH	**Strazhica**	**2.50**	**191**		P		Pn	23 43 08.6	-0.3
DEV	**Deva**	**2.58**	**275**	*i*	S		Sn	23 43 40.7	+0.2
PRD	**Provadia**	**2.59**	**167**		P		Pn	23 43 11.1	+1.0
PVL	**Pavlikeni**	**2.66**	**200**		P		Pn	23 43 12.0	+0.9
GZR	**Gura Zlata**	**2.69**	**264**⇑		P		Pn	23 43 11.9	+0.5
GZR				*i*	S		Sn	23 43 43.1	-0.2
GZR	**Gura Zlata**	**2.69**	**264**	⇓	P		Pn	23 43 11.9	+0.5
GZR					S		Sn	23 43 42.4	-0.9
DRGR		**2.89**	**293**⇓	*i*	P		Pn	23 43 13.3	-0.8
DRGR				*i*	S		Sn	23 43 47.7	-0.3
DRGR		**2.89**	**293**	⇓	P		Pn	23 43 13.3	-0.8
DRGR					S		Sn	23 43 47.7	-0.3
JMB	**Yambol**	**3.25**	**180**		P		Pn	23 43 19.2	+0.2
BZS	**Buzias**	**3.48**	**270**	⇑	P		Pn	23 43 21.5	-0.5
BZS				*i*	S		Sn	23 44 01.5	-0.7
BZS	**Buzias**	**3.48**	**270**⇓	*i*	P		Pn	23 43 21.5	-0.5
BZS				*i*	S		Sn	23 44 01.5	-0.7
BZS	**Buzias**	**3.48**	**270**	⇑	P		Pn	23 43 21.5	-0.5
BZS					S		Sn	23 44 01.5	-0.7
RZN	**Rozhen**	**4.25**	**199**	*e*	P		Pn	23 43 32.8	+0.3

SZGRF ***26*** *23:47:07.6, 3909N×3388E, h33km, mb5.1, Turkey*
BJI ***26*** *23:47:08.3, 3946N×3266E, h20km, mB5.5, mb4.9, Ms5.5, Msz5.2*
IDC ***26*** *23:47:09.6s0.4, 3947N×3305E, h0km, mb4.8/31, mb1 4.9/40, mb1mx4.9/40, mbtmp4.8/40, ML4.1/7, MS5.1/42, Ms1 5.1/42, ms1mx5.1/47, Error ellipse: s-maj=7.6km s-min=6.1km az=172.0*
DDA ***26*** *23:47

KDHN *i* S **Sb** **23 47 48.5 -1.1**
CANT Cankiri 1.23 18 PN **Pn** **23 47 33.7 -0.9**
CANT *e*SN **Sn** **23 47 51.8 +0.6**
CANT Cankiri 1.23 18 Pn **Pn** **23 47 33.7 -0.9**
CANT Sg **Sg** **23 47 53.7 +2.6**
LADK Ladik-KONYA 1.37 205 PN **Pn** **23 47 35.0 -1.4**
LADK *e*SN **Sn** **23 47 54.0 -0.5**
CORM Corum 1.39 57 PN **Pn** **23 47 36.2 -0.5**
SGKT Sivrigoynuk 1.39 325⇑ *i*P **Pn** **23 47 36.5 -0.3**
SGKT *i* S **Sg** **23 47 60.0 +3.7**
AVNT Avonos 1.51 115⇑ *i*P **Pn** **23 47 36.1 -2.4**
AVNT *i* S **Sn** **23 47 58.8 +0.7**
KONT Konya--Tatoy 1.60 202 PN **Pn** **23 47 38.8 -0.8**
ILGA Ilgaz 1.68 16⇓ *i*P **Pn** **23 47 40.8 +0.1**
ILGA *i* S **Sg** **23 48 06.2 +0.9**
ILGA Ilgaz 1.68 16 *i*P **Pn** **23 47 40.8 +0.1**
ILGA *i* S **Sg** **23 48 06.2 +0.8**
BSTP Nigde 1.68 152⇓ *i*P **Pn** **23 47 40.4 -0.3**
BSTP *i* S **Sg** **23 48 06.3 +0.9**
YOZ Yozgat 1.72 83 PN **Pn** **23 47 41.5 +0.1**
TOS Tosya 1.74 23 PN **Pn** **23 47 41.6 -0.1**
CTKT Corum 1.75 47⇑ *i*P **Pn** **23 47 42.3 +0.6**
CTKT *i* S **Sg** **23 48 08.7 +0.9**
ESKT Eskisehir 1.75 273 PN **Pn** **23 47 40.9 -0.8**
ESKT Eskisehir 1.75 273⇑ *i*P **Pn** **23 47 40.2 -1.5**
ESKT *i* S **Sg** **23 48 13.9 +6.2**
SEYT Eskypehyr 1.75 273 *i*P **Pn** **23 47 40.2 -1.5**
NIG Nigde 1.77 138 PN **Pn** **23 47 41.6 -0.4**
MDU Mudurnu 1.78 306 PN **Pn** **23 47 41.9 -0.2**
BALT Daday 2.10 6⇓ *i*P **Pn** **23 47 46.5 -0.1**
BALT *i* S **Sn** **23 48 13.4 +0.7**
SHUT Suhut-Afyon 2.18 247 PN **Pn** **23 47 47.6 0.0**
HENT Hendek 2.19 310⇓ *i*P **Pn** **23 47 47.5 -0.2**
HENT *i* S **Sg** **23 48 22.5 +0.8**
BNN Bunyan 2.21 105 PN **Pn** **23 47 48.3 +0.3**
GULT Gulveren 2.23 297 *e*PN **Pn** **23 47 47.6 -0.7**
GULT Gulveren 2.23 297 Pn **Pn** **23 47 52.1 +3.8**
KDZE Karadeniz Ereo 2.26 326 PN **Pn** **23 47 48.6 -0.1**
ALT Altintas 2.36 262 *e*PN **Pn** **23 47 49.8 -0.3**
ISP Isparta 2.58 233 P **Pn** **23 47 52.7 -0.5**
ISP S **Sn** **23 48 25.6 +1.0**
ISP Isparta 2.58 233 *e*Pn **Pn** **23 47 52.4 -0.8**
ISP Isparta 2.58 233 P **Pn** **23 47 52.7 -0.5**
ISP S **Sn** **23 48 25.6 +1.0**
ISP Isparta 2.58 233⇓ *i*P **Pn** **23 47 53.1 -0.1**
BZK Bozkurt 2.61 15 *e*PN **Pn** **23 47 53.8 +0.2**
CAVI Cavuskoy 2.63 288 *e*PN **Pn** **23 47 53.4 -0.4**
KARA Karaisali 2.66 144 *e*PN **Pn** **23 47 54.0 -0.2**
PINB Pinarbasi 2.67 105⇑ *i*P **Pn** **23 47 55.5 +0.5**
PINB *i* S **Sg** **23 48 34.5 -2.8**
TOKA Tokat 2.74 70⇑ *i*P **Pn** **23 47 55.6 +0.3**
TOKA *i* S **Sn** **23 48 33.1 +4.7**
DIKM Dikmen 2.75 36 *e*PN **Pn** **23 47 55.8 +0.4**
ADVT Abdulvahap 2.77 292 *e*PN **Pn** **23 47 55.5 -0.3**
KVT Kavak 2.78 53 *e*PN **Pn** **23 47 56.3 +0.4**
TOKT Tokat 2.79 70 *e*PN **Pn** **23 47 56.7 +0.7**
BCK Bucak 2.80 226 *e*PN **Pn** **23 47 55.7 -0.4**
MERS Mersin 2.80 156 *e*PN **Pn** **23 47 56.1 0.0**
GDZ Gediz 2.84 264⇑ *i*P **Pn** **23 47 55.9 -0.8**
GDZ *i* S **Sg** **23 48 40.5 -2.1**
KOZT Kozan 2.89 132 *e*PN **Pn** **23 47 57.3 -0.1**
SARI SarD1z-Kayseri 2.90 104 *e*PN **Pn** **23 47 56.7 -0.8**
KHL Karahalli 3.01 249 *e*PN **Pn** **23 47 59.7 +0.6**
SVSK Karacayir 3.04 80 *e*PN **Pn** **23 47 59.8 +0.4**
ANDN Andirin 3.15 125⇑ *i*P **Pn** **23 48 01.7 +0.8**
ANDN *i* S **Sg** **23 48 49.7 -2.7**
SILT Sile 3.15 304 *e*PN **Pn** **23 48 01.6 +0.6**
GEMT Gemlik 3.17 290 *e*PN **Pn** **23 48 01.7 +0.4**
GEMT Gemlik 3.17 290 Pn **Pn** **23 48 00.6 -0.7**
ANTB Antalya 3.19 218 *e*PN **Pn** **23 48 01.9 +0.4**
CEYT Ceyhan 3.19 139 *e*PN **Pn** **23 48 01.3 -0.3**
CEYT Ceyhan 3.19 139 Pn **Pg** **23 48 10.3 -2.3**
IKL Isikli 3.23 172 *e*PN **Pn** **23 48 02.3 +0.3**
IKL Isikli 3.23 172 Pn **Pn** **23 48 03.6 +1.6**
KRTS Karatas 3.38 147 *e*PN **Pn** **23 48 04.7 +0.6**
ARMT Armutlu 3.45 290 *e*PN **Pn** **23 48 05.5 +0.4**
ARMT Armutlu 3.45 290 Pn **Pn** **23 48 04.3 -0.8**
DST Dursunbey 3.47 274 *e*PN **Pn** **23 48 04.9 -0.5**
KMRS Kahramanmaras 3.55 122 *e*PN **Pn** **23 48 07.5 +1.1**
KULA Kula-Manisa 3.59 256 *e*PN **Pn** **23 48 06.8 -0.2**
KLYT Kilyos 3.60 302 *e*PN **Pn** **23 48 06.8 -0.3**
DENT Denizli 3.61 243 *e*PN **Pn** **23 48 07.7 +0.4**
DARE Darende-Malaty 3.68 96 *e*PN **Pn** **23 48 06.7 -1.5**
ELL Elmali 3.69 224 *e*PN **Pn** **23 48 09.5 +1.1**
AKCD Akcadag 3.93 105⇑ *i*P **Pn** **23 48 12.6 +1.1**
AKCD *i* S **Sg** **23 49 12.8 -4.7**
GAZ Gaziantep 3.94 124 *e*PN **Pn** **23 48 12.2 +0.4**
GAZ Gaziantep 3.94 124 Pn **Pg** **23 48 24.8 -2.2**
EREN Erenkoy 3.99 167 *e*PN **Pn** **23 48 13.7 +1.1**
GZT Gaziantep 4.07 119⇑ *i*P **Pn** **23 48 14.4 +0.7**
GZT *i* S **Sn** **23 49 09.3 +8.0**
HTY Hatay 4.09 143 *e*PN **Pn** **23 48 13.6 -0.3**
AKAS Kas 4.23 222 *i*P **Pn** **23 48 17.2 +1.3**
AKAS *i* S **Sn** **23 49 04.3 -1.0**
ALFC Alevga 4.29 186⇑⇑P **Pn** **23 48 15.1 -1.6**
39nm,1.1s
ALFC Alevga 4.29 186⇑ *i*P **Pn** **23 48 15.1 -1.6**
MYA Malataya 4.29 103 *e*PN **Pn** **23 48 17.8 +1.1**
MYA Malataya 4.29 103 Pn **Pn** **23 48 19.0 +2.3**
MALT Malatya 4.30 103 *e*PN **Pn** **23 48 17.2 +0.5**
MALT Malatya 4.30 103⇑ *i*P **Pn** **23 48 17.1 +0.3**
MALT Malatya 4.30 103⇑⇑P **Pn** **23 48 17.1 +0.3**
CSS Prodhromos 4.47 178 P **Pn** **23 48 17.2 -2.0**
CSS S **Sn** **23 49 10.8 -0.4**
PHNC Paralimni 4.49 170 P **Pn** **23 48 19.5 +0.1**
52nm,1.2s
PPCY Paphos 4.59 188 P **Pn** **23 48 20.2 -0.5**
SZAC Souni-Zanaja 4.68 182 P **Pn** **23 48 22.6 +0.6**
39nm,1.1s
BLCB Balcova 4.85 259 P **Pn** **23 48 24.2 -0.1**
ARG Arkhangelos 5.09 232 *e*PN **Pn** **23 48 27.6 0.0**
YAL Yalta 5.10 8⇓ *i*P **Pn** **23 48 27.8 0.0**
YAL *e*S **Sn** **23 49 26.2 -0.5**
SEV Sevastopol' 5.12 4⇈ *e*P **Pn** **23 48 27.4 -0.6**
SEV *i* S **Sn** **23 49 25.1 -1.5**
SMG Samos 5.21 253 *e*PN **Pn** **23 48 28.8 -1.5**
PRK Paraskevi 5.30 270 P **Pn** **23 48 30.8 +0.2**
PRK S **Sn** **23 49 31.5 -0.2**
PRK Paraskevi 5.30 270 *e*PN **Pn** **23 48 30.8 +0.2**
ALU Alushta 5.33 10⇓ *i*P **Pn** **23 48 30.1 -0.8**
ALU *e*S **Sn** **23 49 29.1 -3.1**
AVR AVREN 5.50 314 P **Pn** **23 48 33.2 -0.1**
SIM Simferopol' 5.56 7⇓ *i*P **Pn** **23 48 32.0 -2.0**
SIM *e*S **Sn** **23 49 32.0 -5.8**
CHOS Chios island 5.60 261 P **Pn** **23 48 35.3 +0.6**
CHOS S **Sn** **23 49 39.1 +0.1**
ALN Alexandroupoli 5.60 287 P **Pn** **23 48 33.3 -1.4**
ALN S **Sn** **23 49 37.4 -1.6**
PSN Preselentsi 5.62 321 P **Pn** **23 48 35.0 +0.1**
SUDU Sudak 5.62 14⇓ *e*P **Pn** **23 48 34.1 -0.9**
SUDU *e*S **Sn** **23 49 37.4 -2.1**
SUDU MLR MLR
comp=Z,8µm,6.9s
HWQ Hawqa 5.63 155 *e*Pn **Pn** **23 48 35.1 +0.1**
PRD Provadia 5.71 313 P **Pn** **23 48 35.2 -0.9**
JMB Yambol 5.79 304 P **Pn** **23 48 38.5 +1.2**
JMB Yambol 5.79 304 P **Pg** **23 48 56.1 -6.2**
FEO Feodosiya 5.83 16⇓ *e*P **Pn** **23 48 37.9 +0.2**
FEO *i* S **Sn** **23 49 42.6 -1.9**
BHL Bhannes 5.89 159 *e*Pn **Pn** **23 48 38.3 -0.3**
RDO Rodhopi 6.04 289 *e*PG **Sn** **23 49 49.2 -0.5**
TIRR Tirgusor 6.12 327 P **Pn** **23 48 42.4 +0.7**
TIRR Tirgusor 6.12 327⇑ *i*P **Pn** **23 48 41.1 -0.6**
TIRR Tirgusor 6.12 327 P **Pn** **23 48 42.4 +0.7**
KARP Karpathos 6.12 232 *e*PN **Pn** **23 48 42.9 +1.1**
LIA Limnos Island 6.13 277 *e*PN **Pn** **23 48 41.6 -0.4**
LIA Limnos Island 6.13 277 P **Pn** **23 48 41.7 -0.3**
CVD Cernavoda 6.17 324 P **Pn** **23 48 43.9 +1.5**
CVD Cernavoda 6.17 324⇑ *i*P **Pn** **23 48 43.1 +0.7**
CVD Cernavoda 6.17 324 P **Pn** **23 48 43.9 +1.5**
LOS Limnos 6.21 277 P **Pn** **23 48 43.1 +0.1**
ANN Anapa 6.25 30 *e*P **Pn** **23 48 43.2 -0.3**
ANN *e*S **Sn** **23 49 57.5 +2.7**
ANN pmax pmax
comp=Z,126nm,1.7s
ANN MLR MLR
comp=N,2µm,7.0s
ANN MLR MLR
comp=E,3µm,7.0s
ANN MLR MLR
comp=Z,7µm,7.0s
KDZ Kurdzhali 6.26 293 P **Pn** **23 48 43.2 -0.5**
DIM Dimitrovgrad 6.32 297 P **Pn** **23 48 44.4 -0.1**
RCY Rachaya 6.33 159 *e*Pn **Pn** **23 48 43.7 -1.0**
KERU Kerch 6.37 22 *e*P **Pn** **23 48 47.7 +2.5**
KERU MLR MLR
comp=Z,6µm,6.8s
APE Apeiranthos 6.42 251 P **Pn** **23 48 46.4 +0.6**
APE S **Sn** **23 50 00.1 +1.0**
APE Apeiranthos 6.42 251 *e*PG **Pg** **23 49 17.3 +3.0**
APE Apeiranthos 6.42 251 *i*P **Pn** **23 48 46.6 +0.8**
APE Apeiranthos 6.42 251⇑ *i*P **Pn** **23 48 46.1 +0.3**
SOC Sochi 6.46 48 *e*P **Pn** **23 48 47.2 +0.8**
SOC *e* 23 49 58.8
SOC pmax pmax
comp=Z,108nm,1.2s
SOC MLR MLR
comp=Z,10µm,15.0s
HARR Harsova 6.51 325 P **Pn** **23 48 47.1 0.0**
HARR Harsova 6.51 325⇓ *i*P **Pn** **23 48 46.7 -0.4**
HARR Harsova 6.51 325 P **Pn** **23 48 47.1 +0.1**
TLCR 6.56 332⇑ *i*P **Pn** **23 48 47.2 -0.7**
TLCR 6.56 332⇑⇑P **Pn** **23 48 47.1 -0.7**
SZH Strazhica 6.62 308 P **Pg** **23 49 16.2 -1.9**
MMAI Mount Meron Ar 6.67 163 Pn **Pn** **23 48 47.1 -2.2**
comp=Z,12nm,0.3s,baz=346,slow=13,SNR=61
MMAI LR LR 23 52 02.7
comp=Z,37µm,18.6s,baz=345,slow=44
RZN Rozhen 6.77 292 P **Pn** **23 48 50.2 -0.5**
THR1 Thera Island 6.78 246 P **Pn** **23 48 51.7 +0.9**
THR4 Thira Island, 6.78 246 P **Pn** **23 48 51.6 +0.8**
THR3 Thira Island, 6.80 246 P **Pn** **23 48 51.8 +0.7**
THR6 Thira Island, 6.83 246 P **Pn** **23 48 52.2 +0.7**
THR5 Thira Island, 6.83 246 P **Pn** **23 48 53.1 +1.5**
PLD Plovdiv 6.91 295 P **Pn** **23 48 51.4 -1.3**
PLD Plovdiv 6.91 295 P **Pn** **23 48 51.6 -1.1**
PVL Pavlikeni 6.96 305 P **Pn** **23 48 54.0 +0.7**
ZKR Zakros 6.99 234 P **Pn** **23 48 54.3 +0.6**
OUR Ouranopolis 7.08 280 P **Pn** **23 48 54.0 -0.9**
AOS Alonnisos 7.16 271 P **Pn** **23 48 56.4 +0.3**
BUC1 Bucharest 7.21 315⇑ *i*P **Pn** **23 48 56.5 -0.2**
BUC1 Bucharest 7.21 315⇑⇑P **Pn** **23 48 56.5 -0.2**
NPS Neapolis 7.28 237 *e*PN **Pn** **23 48 56.8 -0.9**
PAIG Paliouri 7.29 277 P **Pn** **23 48 57.0 -0.8**
NVR Nevrokopi 7.31 288 *e*PN **Pn** **23 48 58.0 -0.1**
LAST Lasithi 7.43 237 P **Pn** **23 48 59.9 +0.1**
PGB Panagyurishte 7.44 298 P **Pn** **23 48 59.2 -0.7**
MMB Musomiste 7.46 290 P **Pn** **23 48 59.7 -0.5**
ISR Istrita 7.47 322⇑ *i*P **Pn** **23 49 01.1 +0.7**
ISR Istrita 7.47 322⇑⇑P **Pn** **23 49 01.1 +0.7**
PLG Polygyros 7.49 280 *e*PN **Pn** **23 48 59.3 -1.2**
PLG Polygyros 7.49 280 P **Pn** **23 48 59.8 -0.7**
ATH Athens Observa 7.49 262 *e*PN **Pn** **23 49 04.3 +3.7**
SOH Sokhos 7.60 284 P **Pn** **23 49 01.6 -0.5**
NEO Neokhori 7.66 272 *e*PN **Pn** **23 49 01.9 -1.0**
XOR Xorichti 7.68 273 P **Pn** **23 49 02.7 -0.5**
IDI Anoyia 7.74 240 Pn **Pn** **23 49 03.7 -0.4**
comp=Z,10nm,0.3s,baz=57,slow=12,SNR=90
IDI Sn **Sn** **23 50 31.8 0.0**
comp=Z,5.5nm,0.3s,baz=213,slow=9.3,SNR=4.4
IDI LR LR 23 52 05.2
comp=Z,17µm,19.2s,baz=54,slow=38
HORT Hortiatis 7.77 282 P **Pn** **23 49 04.0 -0.4**
THE Thessaloniki 7.87 282 P **Pn** **23 49 05.5 -0.4**
ASF Jabal al Asfar 7.88 156 Pn **Pn** **23 49 06.1 +0.2**
comp=Z,0.8nm,0.3s,baz=202,slow=4.2,SNR=33
ASF Sn **Sn** **23 50 33.6 -1.4**
comp=Z,0.9nm,0.3s,baz=73,slow=8.2,SNR=3.1
ASF Lg 23 51 18.8
comp=Z,1.5nm,0.3s,baz=214,slow=3.5,SNR=3.9
ASF LR LR 23 52 30.8
comp=Z,22µm,19.5s,baz=70,slow=40
ASF Jabal al Asfar 7.88 156 P **Pn** **23 49 06.1 +0.2**
ASF 23 50 33.6
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF smax
comp=N,1.0nm,0.3s
ASF MLR MLR
comp=Z,22µm,19.5s
LKR Lokris 7.91 267 *e*PN **Pn** **23 49 05.7 -0.6**
LKR Lokris 7.91 267 P **Pn** **23 49 06.3 0.0**
SIVA Sivas 7.95 239 P **Pn** **23 49 08.5 +1.5**
VRI Vrincioaia 7.96 326 P **Pn** **23 49 07.0 0.0**
VRI Vrincioaia 7.96 326⇑ *i*P **Pn** **23 49 07.2 +0.2**
VRI Vrincioaia 7.96 326 P **Pn** **23 49 07.0 0.0**
PLOR Plostina 7.98 326⇑ *i*P **Pn** **23 49 07.8 +0.5**
DID Didima 7.98 259 P **Pn** **23 49 08.2 +0.9**
KNT Kendrikon 7.99 286 P **Pn** **23 49 06.9 -0.6**
KKB Krupnik 8.00 291 P **Pn** **23 49 07.1 -0.4**
MLR Muntele Rosu 8.04 321 Pn **Pn** **23 49 08.1 0.0**
comp=Z,2.1nm,0.3s,baz=199,slow=4.2,SNR=27
MLR Sn **Sn** **23 50 36.5 -2.3**
comp=Z,14nm,0.3s,baz=85,slow=15,SNR=2.8
MLR LR LR 23 52 55.1
comp=Z,8µm,21.1s,baz=334,slow=43
MLR Muntele Rosu 8.04 321 P **Pn** **23 49 08.1 +0.1**
MLR 23 50 36.5
MLR pmax pmax
comp=Z,2.0nm,0.3s
MLR smax
comp=N,14nm,0.3s
MLR MLR MLR
comp=Z,8µm,21.1s
LTK Loutraki 8.05 263 P **Pn** **23 49 09.5 +1.2**
VTS Vitosha 8.12 296 P **Pn** **23 49 08.6 -0.6**
VAM Vamos 8.15 243 *e*PB **Pb** **23 49 23.8 -8.8**
KIS Kishinev 8.18 339α *i*P **Pn** **23 49 09.0 -1.0**
KIS *i* S **Sn** **23 50 40.0 -2.3**
KIS pmax pmax
comp=Z,400nm,0.8s
KIS MLR MLR
comp=Z,19µm,16.0s
KIS MLR MLR
comp=N,14µm,17.0s
KIS MLR MLR
comp=Z,22µm,16.0s
KIS Kishinev 8.18 339⇑ *i*P **Pn** **23 49 09.0 -1.0**
comp=Z,600nm,0.8s
KIS *i* S **Sn** **23 50 40.0 -2.3**
KIS *i* Li 23 51 30.0
KIS *i* LQ 23 52 16.0
KIS *i* LR LR 23 52 56.0
comp=Z,22µm,16.0s
KIS Kishinev 8.18 339⇑⇑P **Pn** **23 49 09.4 -0.6**
KIS Kishinev 8.18 339 P **Pn** **23 49 08.8 -1.2**
LIT Litokhoron 8.21 278 P **Pn** **23 49 09.8 -0.6**
VAY Valandovo 8.26 287 P **Pn** **23 49 10.6 -0.6**
VAY Valandovo 8.26 287 *i*P **Pn** **23 49 10.5 -0.7**
VAY *i* S Sn 23 51 41.1 +57
GRG Griva 8.34 284 P **Pn** **23 49 12.0 -0.2**
KARN Karanos 8.35 244 P **Pn** **23 49 13.9 +1.5**
AGG Agios Georgios 8.38 271 P **Pn** **23 49 13.5 +0.7**
ONI Oni 8.42 65 P **Pn** **23 49 15.1 +1.7**
VOIR 8.45 318 P **Pn** **23 49 13.9 +0.2**
VOIR 8.45 318⇓ *i*P **Pn** **23 49 14.2 +0.5**
VOIR 8.45 318 P **Pn** **23 49 13.9 +0.2**
KIV Kislovodsk 8.46 55 P **Pn** **23 49 20.0 +6.1**
SNR=22
KIV Kislovodsk 8.46 55 *e*P **Pn** **23 49 16.3 +2.4**
KIV *e*S **Sn** **23 50 54.0 +4.6**
KIV pmax pmax
comp=Z,104nm,1.2s
KIV MLR MLR
comp=Z,6µm,8.0s
KIV Kislovodsk 8.46 55 *e*Pn **Pn** **23 49 12.9 -1.0**
comp=Z,122nm,0.8s
KIV *e*Sn **Sn** **23 50 49.9 +0.5**
KIV Kislovodsk 8.46 55 *e*Pn **Pn** **23 49 12.9 -1.1**
comp=Z,122nm,0.8s
KIV *e*Sn **Sn** **23 50 49.9 +0.5**
MSL Mosul 8.47 108 *e*P **Pn** **23 49 18.0 +4.0**
MSL *i* S **Sn** **23 50 59.0 +9.5**
CRAR CRAIOVA 8.49 308 P **Pn** **23 49 14.3 +0.1**
THL Klokotos Trika 8.58 274 *e*PN **Pn** **23 49 17.3 +1.8**
THL Klokotos Trika 8.58 274 P **Pn** **23 49 15.8 +0.3**
STIP Stip 8.61 289 P **Pn** **23 49 16.0 0.0**
STIP Stip 8.61 289 *i*P **Pn** **23 49 16.2 +0.3**
GOR Gori 8.73 70 P **Pn** **23 49 21.8 +4.2**
IAS Iasi 8.74 334 P **Pn** **23 49 17.3 -0.4**
IAS Iasi 8.74 334⇓ *i*P **Pn** **23 49 17.5 -0.2**
IAS Iasi 8.74 334 P **Pn** **23 49 17.3 -0.4**
KZN Kozani 8.76 279 *e*PN **Pn** **23 49 18.5 +0.5**
EVR Evrytania 8.79 270 *e*PN **Pn** **23 49 21.9 +3.4**
GNI Garni 8.98 82 P **Pn** **23 49 26.4 +5.4**
SNR=20
GNI Garni 8.98 82 Pn **Pn** **23 49 25.5 +4.4**
comp=Z,0.7nm,0.3s,baz=296,slow=1.7,SNR=20
GNI LR LR 23 53 28.2
comp=Z,18µm,18.8s,baz=281,slow=42
GNI Garni 8.98 82 P **Pn** **23 49 25.5 +4.4**
GNI pmax pmax
comp=Z,1.0nm,0.3s
GNI MLR MLR
comp=Z,18µm,18.8s
ITM Ithomi 9.07 259 *e*PN **Pn** **23 49 23.7 +1.4**
FNA Florina 9.09 282 P **Pn** **23 49 22.6 +0.1**
BIA Bitola 9.15 284 *i*P **Pn** **23 49 23.6 +0.2**
MTA Mtatsminda 9.17 72 P **Pn** **23 49 17.0 -6.7**
RLS Riolos of Patr 9.20 265 *e*PN **Pn** **23 49 24.1 0.0**
SKO Skopje 9.22 290 P **Pn** **23 49 25.3 +1.0**
SKO Skopje 9.22 290 *i*P **Pn** **23 49 25.7 +1.4**
KRUS Krusevo 9.25 286 *i*P **Pn** **23 49 25.7 +1.0**
MDB Medias 9.27 319 P **Pn** **23 49 26.0 +1.0**
MDB Medias 9.27 319⇓ *i*P **Pn** **23 49 25.7 +0.7**
MDB Medias 9.27 319 P **Pn** **23 49 25.9 +1.0**
BOLS Boljevac 9.43 301 *e*Pn **Pn** **23 49 27.2 0.0**
DJES Djerdap 9.45 307 *e*Pn **Pn** **23 49 29.9 +2.5**
OHR Ohrid 9.56 284 P **Pn** **23 49 29.1 +0.2**
OHR Ohrid 9.56 284 *i*P **Pn** **23 49 29.2 +0.3**
DGRG David-gareji 9.56 74 P **Pn** **23 49 32.9 +3.9**
GZR Gura Zlata 9.68 311⇑ *i*P **Pn** **23 49 30.5 -0.1**
GZR Gura Zlata 9.68 311 P **Pn** **23 49 29.6 -1.0**
VLS Valsamata 9.85 267 *e*PN **Pn** **23 49 35.0 +2.0**
VLS Valsamata 9.85 267 P **Pn** **23 49 34.9 +1.9**
EIL Elat 9.86 171 Pn **Pn** **23 49 32.9 -0.3**
comp=Z,2.3nm,0.3s,baz=348,slow=10,SNR=12
EIL LR LR 23 53 43.7
comp=Z,11µm,21.1s,baz=346,slow=40
IGT Igoumenitsa 9.88 275 P **Pn** **23 49 35.2 +1.9**
DEV Deva 9.89 314⇑ *i*P **Pn** **23 49 34.3 +0.8**
DEV Deva 9.89 314⇑⇑P **Pn** **23 49 34.3 +0.8**
BURAR Bucovina Array 9.98 328 P **Pn** **23 49 34.8 +0.2**
BURAR Bucovina Array 9.98 328⇑ *i*P **Pn** **23 49 35.6 +1.0**
BUR08 Bucovina Ar. S 10.01 328⇑⇑ *e*Pn **Pn** **23 49 34.6 -0.4**
BUR08 *e*Sn **Sn** **23 51 26.9 -0.4**
GRUS Gruza 10.28 300⇑ *i*Pn **Pn** **23 49 37.7 -1.1**
KEK Kerkira 10.28 276 *e*PN **Pn** **23 49 38.5 -0.3**
TIR Tirane 10.28 285 P **Pn** **23 49 40.2 +1.3**
TIR Tirane 10.28 285 *e*P **Pn** **23 49 36.8 -2.1**
TIR *e* 23 51 32.3
TIR pmax pmax
comp=Z,158nm,0.9s
TIR Tirane 10.28 285 *e*Pn **Pn** **23 49 36.8 -2.0**
comp=Z,158nm,0.9s
TIR *e*Sn **Sn** **23 51 32.3 -1.8**
PVY Plav 10.41 292⇓ *i*Pn **Pn** **23 49 41.8 +1.1**
PVY *e*Sn **Sn** **23 51 34.4 -2.9**
BZS Buzias 10.48 310⇑ *i*P **Pn** **23 49 40.6 -1.0**
BZS Buzias 10.48 310 P **Pn** **23 49 40.5 -1.1**
BEY Berane 10.54 293⇓ *i*Pn **Pn** **23 49 43.3 +1.0**
BEY *e*Sn **Sn** **23 51 37.8 -2.5**
IVA Berane 10.54 293⇓ *i*Pn **Pn** **23 49 43.3 +1.0**
IVA *e*Sn **Sn** **23 51 37.8 -2.5**
DRGR 10.56 317 P **Pn** **23 49 43.3 +0.6**
DRGR 10.56 317⇑ *i*P **Pn** **23 49 43.2 +0.5**
SJES Sjenica 10.59 295 *e*Pn **Pn** **23 49 47.1 +4.1**
BEO Beograd 10.81 304 *e*Pn **Pn** **23 49 46.3 +0.3**
ULC Ulcinj 10.82 288⇑ *i*Pn **Pn** **23 49 47.7 +1.5**
ULC *i* Sn **Sn** **23 51 44.6 -2.7**
PDG Podgorica 10.89 290 *e*Sn **Sn** **23 51 46.4 -2.7**
TTG Podgorica 10.89 290⇑ *i*Pn **Pn** **23 49 48.6 +1.4**
TTG *e*Sn **Sn** **23 51 46.4 -2.7**
BHD Baghdad 10.97 121 *e*P **Pn** **23 49 56.0 +7.7**
BHD *e*S **Sn** **23 52 05.0 +14**
PLE Pljevlja 11.01 295⇑ *i*Pn **Pn** **23 49 50.1 +1.3**
PLE *e*Sn **Sn** **23 51 48.9 -3.0**
BUM Brajici-Budva 11.13 289⇓ *i*Pn **Pn** **23 49 52.0 +1.5**
BUM *e*Sn **Sn** **23 51 52.2 -2.8**
NKY Niksic 11.16 292⇓ *i*Pn **Pn** **23 49 52.5 +1.6**
NKY *e*Sn **Sn** **23 51 52.8 -2.9**
UPM Unac-Piva 11.32 294⇓ *i*Pn **Pn** **23 49 54.5 +1.5**
UPM *e*Sn **Sn** **23 51 56.6 -2.9**
FRGS Fruska Gora 11.38 304 *e*Pn **Pn** **23 49 53.4 -0.5**
MAK Makhachkala 11.40 67 *e*P **Pn** **23 50 00.2 +6.0**
MAK MLR MLR
comp=Z,8µm,12.0s
HCY Herceg Novi 11.45 290⇓ *i*Pn **Pn** **23 49 56.5 +1.6**
HCY *i* Sn **Sn** **23 51 59.9 -2.8**
BRY Bratogost 11.51 292⇓ *i*Pn **Pn** **23 49 57.2 +1.6**
BRY *e*Sn **Sn** **23 52 01.1 -3.0**
TRPA Tarpa 11.56 322⇑ *i*P **Pn** **23 49 56.0 -0.3**
KIEV Kiev 11.59 348 *e*P **Pn** **23 49 53.4 -3.2**
KIEV *e* 23 52 01.8
KIEV pmax pmax
comp=Z,188nm,1.0s
KIEV Kiev 11.59 348 *e*Pn **Pn** **23 49 53.4 -3.2**
comp=Z,188nm,1.0s
KIEV *e*Sn **Sn** **23 52 01.8 -4.1**
KIEV Kiev 11.59 348 *e*Pn **Pn** **23 49 53.4 -3.2**
comp=Z,188nm,1.0s
KIEV *e*Sn **Sn** **23 52 01.8 -4.1**
AKASG Malin Array Be 11.59 348 Pn **Pn** **23 49 53.5 -3.2**
comp=Z,11nm,0.3s,baz=161,slow=13,SNR=33
AKASG Sn **Sn** **23 52 00.4 -5.6**
comp=Z,16nm,0.3s,baz=164,slow=23,SNR=8.6
AKASG LR LR 23 55 31.6
comp=Z,12µm,20.1s,baz=165,slow=44
AKASG Malin Array Be 11.59 348 P **Pn** **23 49 53.5 -3.2**
AKASG 23 52 00.4
AKASG pmax pmax
comp=Z,11nm,0.3s
AKASG smax
comp=N,16nm,0.3s
AKASG MLR MLR
comp=Z,12µm,20.1s
AKBB Malin Array Si 11.59 348⇑ *e*Pn **Pn** **23 49 54.0 -2.7**
AKBB *e*Sn **Sn** **23 52 03.2 -2.8**
AKBB Malin Array Si 11.59 348⇑⇑ *e*Pn **Pn** **23 49 54.0 -2.7**
AKBB *e*Sn **Sn** **23 52 03.2 -2.8**
UZH Uzhgorod 12.03 323 *e*P **Pn** **23 50 02.6 -0.1**
UZH *e*S **Sn** **23 52 15.6 -1.2**
UZH MLR MLR
comp=N,8µm,12.0s
UZH MLR MLR
comp=E,22µm,12.0s
UZH MLR MLR
comp=Z,10µm,12.0s
STON Ston 12.11 291 P **Pn** **23 50 06.5 +2.6**
STON Ston 12.11 291 *i*P **Pn** **23 50 06.5 +2.6**
STON Ston 12.11 291 *i*P **Pn** **23 50 06.5 +2.6**
LVV L'vov 12.22 331 *e*P **Pn** **23 50 03.4 -1.9**
LVV *e*S **Sn** **23 52 20.2 -1.2**
LVV MLR MLR
comp=Z,4µm,9.7s
LVV MLR MLR
comp=N,4µm,9.4s
LVV MLR MLR
comp=E,5µm,9.4s
VORD Divnogorie 12.32 19 *e*P **Pn** **23 50 08.3 +1.7**
VORD pmax pmax
comp=N,650nm,1.2s
VORD pmax pmax
comp=Z,350nm,1.2s
VORD pmax pmax
comp=E,410nm,0.9s
VORD MLR MLR
comp=Z,5µm,14.0s
VORD MLR MLR
comp=N,3µm,13.0s
VORD MLR MLR
comp=E,7µm,13.0s
VSR Storozhevoye 12.52 18 *e*P **Pn** **23 50 09.5 +0.1**
VSR pmax pmax
comp=Z,180nm,1.3s
VSR pmax pmax
comp=N,550nm,1.1s
VSR pmax pmax
comp=E,270nm,1.0s
PKSM Moragy 12.58 307⇑ *i*P **Pn** **23 50 09.6 -0.7**
PKSM Moragy 12.58 307⇑⇑P **Pn** **23 50 09.6 -0.7**
KWP Kalwaria 12.59 327 *e*P **Pn** **23 50 09.7 -0.7**
KWP *e*S Sn 23 53 18.9 +48
KWP Kalwaria 12.59 327⇓ *i*P **Pn** **23 50 09.9 -0.5**
KWP Kalwaria 12.59 327 *e*P **Pn** **23 50 09.7 -0.7**
KWP *e*S Sn 23 53 18.9 +48

CRVS Cervenica-Dubn 12.61 322 *e*P **Pn 23 50 10.2 -0.5**
CRVS pmax pmax
comp=Z,1µm,5.4s
CRVS Cervenica-Dubn 12.61 322 *e*P **Pn 23 50 10.2 -0.5**
comp=Z,1µm,5.4s
CRVS Cervenica-Dubn 12.61 322 *e*P **Pn 23 50 10.2 -0.5**
comp=Z,1µm,5.4s
TIP Timpagrande 12.67 274⇑*e*Pn **Pn 23 50 11.6 +0.1**
TIP Timpagrande 12.67 274⇓*e*Pn **Pn 23 50 11.6 +0.1**
TIP eSn **Sn 23 52 36.4 +3.8**
PSZ Piszkesteto 12.77 316 *e*Pn **Pn 23 50 11.3 -1.5**
PSZ Piszkesteto 12.77 316⇑*e*P **Pn 23 50 15.7 +2.9**
PSZ Piszkesteto 12.77 316⇑*i*P **Pn 23 50 11.9 -0.9**
PSZ Piszkesteto 12.77 316 *e*Pn **Pn 23 50 11.3 -1.4**
PSZ eSn **Sn 23 52 32.6 -2.1**
BUD Budapest 13.00 313⇑*e*P **Pn 23 50 18.3 +2.3**
VOR Voronezh 13.01 17 *e*P **Pn 23 50 15.0 -1.0**
VOR pmax pmax
comp=Z,400nm,1.8s
STHS Stebnicka Huta 13.07 324 *i* PN **Pn 23 50 16.8 -0.2**
VRHR Novokhopersk 13.10 24 *e*P **Pn 23 50 17.2 -0.1**
VRHR pmax pmax
comp=Z,50nm,0.7s
VRHR pmax pmax
comp=N,80nm,1.0s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR MLR MLR
comp=Z,4µm,10.0s
VRHR MLR MLR
comp=N,4µm,11.0s
VRHR MLR MLR
comp=E,8µm,14.0s
CUC Castrocucco 13.33 278⇑*e*Pn **Pn 23 50 21.1 +0.6**
comp=E,259nm,1.2s
CUC eSn **Sn 23 52 42.0 -6.7**
CUC Castrocucco 13.33 278⇓*e*Pn **Pn 23 50 21.1 +0.6**
comp=E,259nm,1.2s
CUC eSn **Sn 23 52 42.0 -6.7**
CEL Celeste 13.47 270⇓*e*Pn **Pn 23 50 20.5 -2.0**
comp=E,142nm,1.0s
CEL eSn **Sn 23 52 42.6 -10**
CEL Celeste 13.47 270⇓*e*Pn **Pn 23 50 20.5 -2.0**
comp=E,142nm,1.0s
CEL eSn **Sn 23 52 42.6 -10**
NIE Niedzica 13.51 322 *e*P **Pn 23 50 23.6 +0.6**
VYHS Vyhne 13.68 316 *i* P **Pn 23 50 25.6 +0.4**
VYHS pmax pmax
comp=Z,21nm,1.4s
VYHS Vyhne 13.68 316 *i* P **Pn 23 50 25.6 +0.4**
comp=Z,21nm,1.4s
VYHS Vyhne 13.68 316 *i* P **Pn 23 50 25.6 +0.4**
comp=Z,21nm,1.4s
KOLL Kolacno 13.96 316 *e*PN **Pn 23 50 30.0 +0.9**
OJC Ojcow 14.31 323 *e*P **Pn 23 50 32.5 -1.3**
OJC eSS 23 53 25.3
SMOL Smolenice 14.46 314 *e*PN **Pn 23 50 38.6 +2.7**
CRES Cresnjev 14.46 302 *e*P **Pn 23 50 36.5 +0.6**
ZST Bratislava 14.47 312 *i* P **Pn 23 50 37.9 +1.8**
ZST pmax pmax
comp=Z,12nm,1.2s
ZST Bratislava 14.47 312 *i* P **Pn 23 50 37.9 +1.8**
comp=Z,12nm,1.2s
ZST Bratislava 14.47 312 *i* P **Pn 23 50 37.9 +1.8**
comp=Z,12nm,1.2s
GROS Grobnik 14.66 304 *e*P **Pn 23 50 38.8 +0.1**
VAE Valguarnera 14.78 268 Pn **Pn 23 50 39.6 -0.7**
comp=Z,0.3nm,0.3s,baz=344,slow=6.3,SNR=4.5
VAE LR LR 23 57 35.5
comp=Z,8µm,18.6s,baz=15,slow=42
OKC Ostrava-Krasne 14.85 319 *e*P **Pn 23 50 42.7 +1.4**
OKC AMS AMS 23 57 40.0
comp=Z,14µm,14.3s
ARSA Arzberg 14.97 307⇑*i*Pn **Pn 23 50 44.1 +1.3**
SNR=16
SOKA Soboth 15.04 305⇓*i*Pn **Pn 23 50 43.7 -0.2**
VNDS Vrh nad Dolski 15.05 302 *e*P **Pn 23 50 44.3 +0.3**
CONA Conrad Observa 15.06 310⇓*i*Pn **Pn 23 50 44.5 +0.4**
SNR=14
BEL Belsk 15.07 329 *e*SE **Sn 23 53 49.6 +19**
MIB Mutribah 15.14 125 *e*P **Pn 23 50 44.8 -0.4**
comp=Z,209nm,0.8s
MIB Mutribah 15.14 125 *e*P **Pn 23 50 44.8 -0.4**
baz=125
MIB AMb AMB 23 50 56.0
comp=Z,209nm,0.8s,baz=125
WDD Wield Dalam 15.15 262 Pn **Pn 23 50 43.3 -2.0**
comp=Z,407nm,1.0s
WDD Wield Dalam 15.15 262 Pn **Pn 23 50 43.3 -2.0**
comp=Z,407nm,1.0s
AQU L'Aquila 15.18 287 *e*P **Pn 23 50 46.1 +0.4**
AQU *e* 23 53 28.4
AQU pmax pmax
comp=Z,119nm,1.0s
AQU L'Aquila 15.18 287 *e*Pn **Pn 23 50 46.1 +0.4**
comp=Z,119nm,1.0s
AQU L'Aquila 15.18 287 *e*Pn **Pn 23 50 46.1 +0.4**
comp=Z,119nm,1.0s
AQU eSn **Sn 23 53 28.4 -5.5**
OBKA Obir 15.29 304⇓*i*Pn **Pn 23 50 47.5 +0.4**
SNR=13
WAR Warsaw 15.30 331 *e*P **Pn 23 50 45.9 -1.3**
WAR *e* 23 50 53.2
WAR eS **Sn 23 53 55.5 +19**
WAR Warsaw 15.30 331 *e*P **Pn 23 50 45.9 -1.2**
WAR *e* 23 50 53.2
WAR eS **Sn 23 53 55.5 +19**
VRAC Vranov 15.36 315 Pn **Pn 23 50 48.1 +0.2**
comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=30
VRAC LR LR 23 57 36.2
comp=Z,7µm,20.3s,baz=132,slow=41
VRAC Vranov 15.36 315⇓*i*P **Pn 23 50 48.5 +0.6**
VRAC Vranov 15.36 315 ⇓P **Pn 23 50 48.5 +0.6**
NAY Al-Naaiem 15.46 127 *e*P **Pn 23 50 48.7 -0.7**
comp=Z,78nm,1.7s
NAY Al-Naaiem 15.46 127 *e*P **Pn 23 50 48.7 -0.7**
baz=127
NAY AMb AMB 23 51 03.0
comp=Z,78nm,1.7s,baz=127
MNK Minsk 15.48 348⇑*e*P **Pn 23 50 42.0 -7.6**
MNK eS **Sn 23 53 32.0 -9.0**
MNK pmax pmax
comp=Z,280nm,1.0s
MNK MLR MLR
comp=Z,37µm,18.0s
UMR Umm Al-Rimmam 15.55 125 *e*P **Pn 23 50 49.7 -0.9**
comp=Z,403nm,1.1s
UMR Umm Al-Rimmam 15.55 125 *e*P **Pn 23 50 49.7 -0.8**
baz=125
UMR AMb AMB 23 51 04.1
comp=Z,403nm,1.1s,baz=125
VOY Vojsko 15.56 301 *e*P **Pn 23 50 56.1 +5.4**
VOY *e* 23 51 08.3
VOY *e* 23 51 56.0
VOY *e* 23 55 36.7
GORS Gorjuse 15.59 302 *e*P **Pn 23 50 50.8 -0.2**
KBD Kabd 15.79 126 *e*P **Pn 23 50 53.0 -0.8**
comp=Z,150nm,2.2s
KBD Kabd 15.79 126 *e*P **Pn 23 50 53.0 -0.8**
baz=126
KBD AMb AMB 23 51 07.0
comp=Z,150nm,2.2s,baz=126
OBN Obninsk 15.85 7*d i*P **Pn 23 50 52.9 -1.5**
OBN pmax pmax
comp=Z,716nm,1.6s
OBN MLR MLR
comp=Z,7µm,19.0s
OBN Obninsk 15.85 7⇑*i*Pn **Pn 23 50 52.7 -1.7**
comp=Z,737nm,1.4s
OBN eSn **Sn 23 53 46.7 -3.3**
RDF Al-Radifah 15.88 127 *e*P **Pn 23 50 54.1 -0.8**
comp=Z,266nm,1.4s
RDF Al-Radifah 15.88 127 *e*P **Pn 23 50 54.1 -0.7**
baz=127
RDF AMb AMB 23 51 07.2
comp=Z,266nm,1.4s,baz=127
MYKA Terra Mystica 15.92 303⇑*i*Pn **Pn 23 50 55.6 +0.3**
TREC Trest 15.96 314 *e*P **Pn 23 50 56.2 +0.4**
TREC AMS AMS 23 59 30.0
comp=Z,18µm,12.7s
MOA Molln 15.99 308⇓*i*P **Pn 23 50 59.5 +3.2**
SNR=29
SUW Suwalki 16.06 338 *e*P **Pn 23 50 52.3 -4.8**
SUW *e* 23 51 01.4
SUW eS **Sn 23 54 07.1 +12**

SUW Suwalki 16.06 338 *e*P **Pn 23 50 52.3 -4.8**
SUW *e* 23 51 01.4
SUW eS **Sn 23 54 07.1 +12**
DPC Dobruska-Polom 16.10 318 *e*P **Pn 23 50 58.2 +0.6**
DPC AMS AMS 23 58 00.0
comp=Z,15µm,13.8s
QRN Al-Qurain 16.23 127 *e*P **Pn 23 50 58.9 -0.5**
baz=127
QRN AMb AMB 23 51 07.8
comp=Z,281nm,1.4s,baz=127
KBA Koelnbreinsper 16.27 304⇓*i*Pn **Pn 23 51 00.4 +0.6**
SNR=16
UPC Upice 16.35 318 *e*P **Pn 23 51 00.8 0.0**
KSP Ksiaz 16.41 320 *e*P **Pn 23 51 02.0 +0.4**
KSP eS **Sn 23 54 21.4 +18**
KSP Ksiaz 16.41 320⇑*e*P **Pn 23 51 01.9 +0.3**
KSP *e* 23 51 10.9
KSP eS **Sn 23 54 13.5 +10**
IDID Didziasalis 16.45 347 *e*P **Pn 23 50 59.0 -3.0**
IDID eS **Sn 23 53 54.4 -10**
IIGN Ignalina 16.57 346 *e*P **Pn 23 50 59.8 -3.8**
MOS Moscow 16.58 9 *e*P **Pn 23 50 57.6 -6.1**
MOS eS **Sn 23 54 04.9 -2.8**
MOS pmax pmax
comp=Z,1µm,1.6s
MOS pmax pmax
comp=N,600nm,1.5s
MOS MLR MLR
comp=N,6µm,14.0s
MOS MLR MLR
comp=Z,4µm,11.0s
ABTA Abfaltersbach 16.70 303⇑*i*Pn **Pn 23 51 06.5 +1.3**
SNR=8.0
GEC2 GERESS Array S 16.77 310 *e*P **Pn 23 51 05.7 -0.4**
GEC2 pmax pmax
comp=Z,80nm,1.4s
GEC2 GERESS Array S 16.77 310 *e*P **Pn 23 51 05.7 -0.4**
comp=Z,80nm,1.4s
GERES GERESS Array B 16.77 310 Pn **Pn 23 51 06.1 0.0**
comp=Z,0.2nm,0.3s,baz=116,slow=7.7,SNR=21
GERES LR LR 23 58 31.0
comp=Z,8µm,18.6s,baz=120,slow=41
ISAL Salakas 16.80 346 *e*P **Pn 23 51 03.2 -3.2**
ISAL eS **Sn 23 54 02.5 -10**
PRU Pruhonice 16.85 315 *e*P **Pn 23 51 06.2 -0.9**
PRU *ex* x 23 51 17.0
PRU AMS AMS 23 59 30.0
comp=Z,9µm,11.4s
PRU Pruhonice 16.85 315 *e*P **Pn 23 51 06.2 -0.9**
PRU *e* 23 51 17.0
KHC Kasperske Hory 16.97 311 *e*P **Pn 23 51 07.9 -0.7**
KHC *ex* x 23 51 21.1
KHC *ex* x 23 51 40.5
KHC AMS AMS 23 59 10.0
comp=Z,8µm,11.5s
KHC Kasperske Hory 16.97 311 *e*P **Pn 23 51 07.9 -0.7**
KHC *e* 23 51 21.1
KHC *e* 23 51 40.5
PVCC Panska Ves 17.12 316 *e*P **Pn 23 51 10.6 0.0**
PVCC *ex* x 23 51 18.0
PVCC AMS AMS 23 59 00.0
comp=Z,13µm,12.5s
PVCC Panska Ves 17.12 316 *e*P **Pn 23 51 10.6 0.0**
PVCC *e* 23 51 18.0
WET Wettzell 17.38 311 *e*P **Pn 23 51 13.3 -0.5**
WTTA Wattenberg 17.43 304⇓*i*P **Pn 23 51 14.7 +0.3**
SNR=20
WATA Walderalm 17.49 304⇑*i*Pn **Pn 23 51 15.3 +0.1**
SNR=34
VLC Villacollemand 17.57 293 *e*Pn **Pn 23 51 13.8 -2.4**
comp=Z,114nm,1.1s
VLC Villacollemand 17.57 293 *e*Pn **Pn 23 51 13.8 -2.4**
comp=Z,114nm,1.1s
VLC eSn **Sn 23 54 40.8 +9.1**
GKP Gorka Klasztor 17.59 327 *e*P **Pn 23 51 14.6 -1.7**
BRG Berggiesshubel 17.64 317 *e*P **Pn 23 51 15.9 -1.2**
MOTA Moosalm 17.80 304⇑*i*P **Pn 23 51 19.2 +0.3**
SNR=26
FETA Feichten 17.94 302⇓*i*Pn **Pn 23 51 22.8 +2.0**
SNR=22
FUR Furstenfeldbru 17.96 306 *e*P **Pn 23 51 20.9 -0.1**
FBE Freiberg 17.98 316 *e*P **Pn 23 51 21.0 -0.2**
ROTZ Rotzenmuhle 18.05 312 *e*P **Pn 23 51 22.1 0.0**
RETA Reutte 18.06 304⇑*i*P **Pn 23 51 22.3 +0.1**
SNR=43
NKC Novy Kostel 18.14 313 *e*P **Pn 23 51 23.2 +0.1**
NKC *ex* x 23 51 33.8
NKC AMS AMS 23 59 10.0
comp=Z,7µm,15.7s
NKC Novy Kostel 18.14 313 *e*P **Pn 23 51 23.2 +0.1**
NKC *e* 23 51 33.8
WERN Wernitzgruen 18.20 313 *e*P **Pn 23 51 25.3 +1.4**
MANZ Manzenberg 18.21 312 *e*P **Pn 23 51 25.2 +1.1**
TANN Furstenbergstha 18.22 314 *e*P **Pn 23 51 24.6 +0.5**
GUNZ Gunzen 18.26 314 *e*P **Pn 23 51 25.7 +1.0**
WERD Werda 18.32 314 *e*P **Pn 23 51 26.6 +1.3**
CLL Collm 18.38 317⇑*i*P **Pn 23 51 26.3 +0.2**
CLL pmax pmax
comp=Z,136nm,2.2s
CLL MLR MLR
comp=Z,12µm,15.8s
CLL Collm 18.38 317 *e*P **Pn 23 51 26.1 0.0**
CLL Collm 18.38 317⇑*i*P **Pn 23 51 26.3 +0.2**
comp=Z,136nm,2.2s
CLL *i* (PP) 23 51 36.0
CLL *i* PPP 23 51 44.9
CLL *i* x 23 52 16.4
CLL eS **Sn 23 55 01.0 +10**
CLL Collm 18.38 317⇑*i*P **Pn 23 51 26.3 +0.2**
comp=Z,136nm,2.2s
CLL *i* 23 51 36.0
CLL eS **Sn 23 55 01.0 +10**
DAVOX Davos/Dischmat 18.44 301 LR LR 23 59 26.5
comp=Z,11µm,19.3s,baz=101,slow=40
PGF Pioggiola 18.45 287 *e*P **Pn 23 51 27.1 +0.1**
comp=Z,359nm,1.2s
PGF Pioggiola 18.45 287 *e*P **Pn 23 51 27.1 +0.1**
PGF pmax pmax
comp=Z,180nm,1.2s
PGF Pioggiola 18.45 287 *e*P **Pn 23 51 27.1 +0.1**
comp=Z,180nm,1.2s
DAVA Damuels 18.57 303⇑*i*pP pP 23 51 29.6 -1.8
SNR=29
GRA1 Grafenberg Arr 18.60 311 *e*P **Pn 23 51 28.0 -0.8**
GRF Grafenberg Arr 18.60 311 *e*P **Pn 23 51 28.0 -0.8**
GRF *e*L 23 59 07.6
comp=Z,9µm,20.4s
RUE Ruedersdorf 18.65 321 *e*P **Pn 23 51 28.2 -1.1**
RUE Ruedersdorf 18.65 321 *e*Pn **Pn 23 51 26.8 -2.6**
comp=Z,303nm,1.4s
TUE Stuetta 18.72 300 *e*Pn **Pn 23 51 31.2 +1.0**
comp=Z,124nm,1.2s
TUE eSn **Sn 23 55 01.9 +2.5**
MOX Moxa 18.80 314 *e*P **Pn 23 51 31.7 +0.5**
comp=Z,93nm,1.4s
MOX
comp=Z,6µm,20.0s
MOX Moxa 18.80 314 *e*P **Pn 23 51 31.7 +0.5**
MOX pmax pmax
comp=Z,93nm,1.4s
MOX MLR MLR
comp=Z,6µm,20.0s
MOX Moxa 18.80 314 *e*P **Pn 23 51 31.8 +0.6**
KEST Kesra 19.18 266 P **Pn 23 51 38.5 +2.6**
comp=Z,1.5nm,0.3s,baz=5.4,slow=2.6,SNR=14
KEST LR LR 00 00 23.9
comp=Z,980nm,18.4s,baz=176,slow=42
STU Stuttgart 19.48 306⇓*e*P **Pn 23 51 38.4 -0.9**
STU *e* 23 55 12.1
STU pmax pmax
comp=Z,88nm,1.0s
STU Stuttgart 19.48 306 *e*P **Pn 23 51 38.6 -0.7**
STU Stuttgart 19.48 306⇓*e*Pn **Pn 23 51 38.4 -0.9**
comp=Z,88nm,1.0s
STU eSn **Sn 23 55 12.1 -5.6**
STU Stuttgart 19.48 306⇓*e*Pn **Pn 23 51 38.4 -1.0**
comp=Z,88nm,1.0s
STU eSn **Sn 23 55 12.1 -5.6**
VSU Vasula 19.48 350⇓*i*P **Pn 23 51 37.2 -2.1**
SPAK Spaichingen-Ko 19.52 304 *e*P **Pn 23 51 40.2 +0.3**
VAN Vannovskaya 19.56 86 *e*P **Pn 23 51 41.0 +0.6**
VAN eS **Sn 23 55 23.0 +3.1**
ABKT Ailbek 19.57 86 Pn **Pn 23 51 41.7 +1.1**
comp=Z,432nm,0.8s,SNR=30

SAOF Saorge 19.58 292 *e*P **Pn 23 51 40.5 -0.1**
SBF Sospel 19.66 291 *e*P **Pn 23 51 41.2 -0.4**
comp=Z,474nm,1.0s
SBF Sospel 19.66 291 *e*P **Pn 23 51 41.2 -0.4**
SBF pmax pmax
comp=Z,237nm,1.0s
SBF Sospel 19.66 291 *e*P **Pn 23 51 41.2 -0.4**
comp=Z,237nm,1.0s
AUTN L'Aution 19.67 292 *e*P **Pn 23 51 42.1 +0.4**
REVF Revere 19.70 291 *e*P **Pn 23 51 41.0 -1.0**
LUCF Luceram 19.72 291 *e*P **Pn 23 51 42.1 -0.3**
TOUF Mont Tournerai 19.80 292 *e*P **Pn 23 51 43.4 +0.1**
BSD Bornholm Skovb 19.86 328 *i* P **Pn 23 51 41.3 -2.6**
BSD *e* 23 55 19.5
BSD pmax pmax
comp=Z,99nm,0.9s
BSD Bornholm Skovb 19.86 328 *i* P **Pn 23 51 41.3 -2.6**
comp=Z,99nm,0.9s
BSD *e* 23 55 19.5
MVIF Mont Vial 19.86 291 *e*P **Pn 23 51 43.9 -0.1**
BFO Black Forest 19.88 305 *e*P **Pn 23 51 43.4 -0.8**
BFO eS **Sn 23 55 24.1 -3.4**
BFO pmax pmax
comp=Z,182nm,1.0s
BFO Black Forest 19.88 305 *e*P **Pn 23 51 43.4 -0.8**
comp=Z,182nm,1.0s
BFO eS **Sn 23 55 24.1 -3.4**
FELD Feldberg im Sc 19.96 303 *e*P **Pn 23 51 44.5 -0.6**
TOD Tromm 20.01 308 *e*P **P 23 51 44.7 +0.8**
TOD Tromm 20.01 308 *e*P **P 23 51 44.7 +0.8**
CALN Calern 20.04 291 *e*P **P 23 51 45.9 +1.5**
SURF Saint Ours 20.15 293 *e*P **P 23 51 48.1 +2.5**
RGN Rugen 20.16 325 *e*P **P 23 51 44.7 -0.8**
RGN Rugen 20.16 325⇓*e*P **P 23 51 44.5 -1.0**
comp=Z,388nm,1.1s
RGN Rugen 20.16 325⇓*e*P **P 23 51 44.5 -1.0**
comp=Z,388nm,1.1s
BBS Basel-Blauen 20.18 302 *e*P **P 23 51 46.4 +0.6**
MBDF Montbardon 20.21 294 *e*P **P 23 51 46.9 +0.7**
comp=Z,264nm,0.7s
MBDF Montbardon 20.21 294 *e*P **P 23 51 46.9 +0.7**
MBDF pmax pmax
comp=Z,132nm,0.7s
MBDF Montbardon 20.21 294 *e*P **P 23 51 46.9 +0.7**
comp=Z,132nm,0.7s
FRF La Foret Royal 20.21 290 *e*P **P 23 51 47.0 +0.8**
comp=Z,519nm,1.5s
FRF La Foret Royal 20.21 290 *e*P **P 23 51 47.0 +0.8**
FRF pmax pmax
comp=Z,259nm,1.5s
FRF La Foret Royal 20.21 290 *e*P **P 23 51 47.0 +0.8**
comp=Z,259nm,1.5s
LIBD Limburg 20.29 304 *e*P **P 23 51 48.8 +1.7**
LMR La Mourre 20.30 290 *e*P **P 23 51 48.0 +0.8**
comp=Z,317nm,1.3s
LMR La Mourre 20.30 290 *e*P **P 23 51 48.0 +0.8**
LMR pmax pmax
comp=Z,158nm,1.3s
LMR La Mourre 20.30 290 *e*P **P 23 51 48.0 +0.8**
comp=Z,158nm,1.3s
BNI Bardonecchia 20.31 295 P **P 23 51 44.7 -2.6**
BNI eS **S 23 55 34.2 -0.5**
BNI pmax pmax
comp=Z,412nm,1.3s
BNI MLR MLR
comp=Z,6µm,19.0s,MS5.0
BNI Bardonecchia 20.31 295 P **P 23 51 44.7 -2.6**
comp=Z,412nm,1.3s
BNI eS **S 23 55 34.2 -0.5**
BNI LR LR
comp=Z,6µm,19.0s,MS5.0
LPG La Plagne 20.32 296 *e*P **P 23 51 48.7 +1.4**
comp=Z,513nm,1.0s
LPG La Plagne 20.32 296 *e*P **P 23 51 48.7 +1.4**
LPG pmax pmax
comp=Z,256nm,1.0s
LPG La Plagne 20.32 296 *e*P **P 23 51 48.7 +1.4**
comp=Z,256nm,1.0s
LPL La Plagne 20.33 296 *e*P **P 23 51 49.3 +1.8**
comp=Z,356nm,1.0s
LPL La Plagne 20.33 296 *e*P **P 23 51 49.3 +1.8**
LPL pmax pmax
comp=Z,178nm,1.0s
LPL La Plagne 20.33 296 *e*P **P 23 51 49.3 +1.8**
comp=Z,178nm,1.0s
KTD Kalmit 20.35 307 *e*P **P 23 51 48.6 +1.0**
KTD Kalmit 20.35 307 *e*P **P 23 51 48.6 +1.0**
LANF Langenberg 20.41 306 *e*P **P 23 51 49.0 +0.7**
LANF Langenberg 20.41 306 *e*P **P 23 51 49.0 +0.7**
LANF Langenberg 20.41 306 *e*P **P 23 51 49.0 +0.7**
PUL Pulkovo 20.43 356⇑*i*P **P 23 51 49.7 +1.3**
TNS Taunus Mts 20.45 310 *e*P **P 23 51 49.3 +0.5**
TNS Taunus Mts 20.45 310 *e*P **P 23 51 49.3 +0.5**
MOF Molkenrain 20.52 303 *e*P **P 23 51 50.8 +1.3**
NRDL Niedersach Rie 20.53 317 *e*P **P 23 51 49.7 +0.1**
CDF Champ du Feu 20.58 304 *e*P **P 23 51 50.6 +0.5**
comp=Z,574nm,1.4s
CDF Champ du Feu 20.58 304 *e*P **P 23 51 50.6 +0.5**
comp=Z,287nm,1.4s
CDF Champ du Feu 20.58 304 *e*P **P 23 51 50.6 +0.5**
comp=Z,287nm,1.4s
ECH Echery 20.60 304 *e*P **P 23 51 51.2 +0.8**
ECH Echery 20.60 304 *e*P **P 23 51 51.0 +0.6**
ECH eS **S 23 55 33.4 -7.0**
ECH pmax pmax
comp=Z,239nm,1.0s
ECH MLR MLR
comp=Z,7µm,19.0s,MS5.0
ECH Echery 20.60 304 *e*P **P 23 51 51.0 +0.6**
comp=Z,239nm,1.0s
ECH eS **S 23 55 33.4 -7.0**
ECH Echery 20.60 304 *e*P **P 23 51 51.0 +0.6**
comp=Z,239nm,1.0s
ECH eS **S 23 55 33.4 -7.0**
ECH LR LR
comp=Z,7µm,19.0s,MS5.0
LOMF Lomont 20.60 301 *e*P **P 23 51 51.6 +1.2**
AKTK Aktyubinsk 20.68 50 P **P 23 51 50.3 -0.9**
AKTK LR LR 00 03 27.6
AKTO Aktyubinsk 20.68 50 P **P 23 51 50.3 -0.9**
comp=Z,42nm,0.6s,baz=247,slow=12,SNR=51
AKTO LR LR 00 03 27.6
comp=Z,3µm,18.1s,MS4.7,baz=242,slow=47
AKTO Aktyubinsk 20.68 50 P **P 23 51 50.3 -0.9**
AKTO pmax pmax
comp=Z,42nm,0.6s
AKTO MLR MLR
comp=Z,3µm,18.2s,MS4.7
HINF Hinteralfeld 20.69 302 *e*P **P 23 51 51.7 +0.3**
comp=Z,186nm,1.1s
HINF Hinteralfeld 20.69 302 *e*P **P 23 51 51.7 +0.3**
HINF pmax pmax
comp=Z,93nm,1.1s
HINF Hinteralfeld 20.69 302 *e*P **P 23 51 51.7 +0.3**
comp=Z,93nm,1.1s
GDM Grand'Maison 20.72 295 *e*P **P 23 51 53.0 +1.3**
ORIF Oris-en-Rattie 20.86 294 *e*P **P 23 51 53.8 +0.6**
comp=Z,298nm,1.1s
ORIF *e*MLR MLR
comp=Z,10µm,22.0s,MS4.9
ORIF Oris-en-Rattie 20.86 294 *e*P **P 23 51 53.8 +0.6**
ORIF pmax pmax
comp=Z,149nm,1.1s
ORIF Oris-en-Rattie 20.86 294 *e*P **P 23 51 53.8 +0.6**
comp=Z,149nm,1.1s
ABH Alteburg 20.87 308 *e*P **P 23 51 54.0 +0.7**
CABF La Chapelle 20.95 299 *e*P **P 23 51 54.6 +0.4**
comp=Z,335nm,1.1s
CABF La Chapelle 20.95 299 *e*P **P 23 51 54.6 +0.4**
CABF pmax pmax
comp=Z,167nm,1.1s
CABF La Chapelle 20.95 299 *e*P **P 23 51 54.6 +0.4**
comp=Z,167nm,1.1s
GRN Grenoble 20.99 295 *e*P **P 23 51 55.4 +0.8**
SMRF Simiane la Rot 21.00 291 *e*P **P 23 51 55.4 +0.6**
comp=Z,659nm,1.7s,mb5.4
SMRF Simiane la Rot 21.00 291 *e*P **P 23 51 55.4 +0.6**
comp=Z,330nm,1.7s,mb5.4
CKFL Kef-Lekhel 21.01 270 P **P 23 51 59.0 +4.0**
HAU Haudompre 21.07 303 *e*P **P 23 51 56.4 +0.9**
comp=Z,229nm,1.0s,mb5.2
HAU *e*MLR MLR
comp=Z,6µm,19.2s,MS4.7
HAU Haudompre 21.07 303 *e*P **P 23 51 56.4 +0.9**
comp=Z,115nm,1.0s,mb5.2

HAU Haudompre 21.07 303 *e*P **P 23 51 56.4 +0.9**
comp=Z,115nm,1.0s,mb5.2
HAU LR LR
comp=Z,6μm,19.3s,MS5.0
RUP Ruppelstein 21.10 308 *e*P **P 23 51 56.6 +0.8**
RUP Ruppelstein 21.10 308 *e*P **P 23 51 56.6 +0.8**
BSEG Bad Segeberg 21.19 321 *e*P **P 23 51 56.6 -0.1**
CASM Ain Smara 21.23 270 P **P 23 52 01.3 +4.0**
COP Copenhagen 21.29 327 *i* P **P 23 51 57.0 -0.7**
COP pmax pmax
comp=Z,60nm,1.0s,mb4.9
COP Copenhagen 21.29 327 *i* P **P 23 51 57.0 -0.7**
comp=Z,60nm,1.0s,mb4.9
COP *e*S S 23 55 28.8 -25
THEF They Montfort 21.36 303 *e*P **P 23 51 59.2 +0.6**
THEF They Montfort 21.36 303 *e*P **P 23 51 59.2 +0.6**
THEF They Montfort 21.36 303 *e*P **P 23 51 59.2 +0.6**
AB31 Akbulak array 21.45 54 P **P 23 51 58.4 -1.2**
AB31 pmax pmax
comp=Z,88nm,1.0s,mb5.0
BUG Bochum--Univer 21.61 312 *e*P **P 23 52 00.5 -0.8**
DFRA Djebel Bou Aff 21.63 271 P **P 23 52 03.5 +1.9**
WLF Walferdange 21.65 307 P **P 23 52 02.1 +0.4**
comp=Z,70nm,1.7s,mb4.8
WLF Walferdange 21.65 307 *e*P **P 23 52 01.1 -0.6**
WLF Walferdange 21.65 307 *e*P **P 23 52 01.3 -0.4**
comp=Z,101nm,1.3s,mb5.1
WLF Walferdange 21.65 307 *e*P **P 23 52 01.3 -0.4**
comp=Z,101nm,1.3s,mb5.1
WLF *e*S **S 23 56 07.1 +6.0**
WLF LR LR
comp=Z,8μm,19.0s,MS5.1
VIVF Saint-Julien-l 21.71 294 *e*P **P 23 52 02.3 -0.1**
comp=Z,189nm,1.0s,mb5.2
VIVF Saint-Julien-l 21.71 294 *e*P **P 23 52 02.3 -0.1**
VIVF pmax pmax
comp=Z,95nm,1.0s,mb5.2
VIVF Saint-Julien-l 21.71 294 *e*P **P 23 52 02.3 -0.1**
comp=Z,95nm,1.0s,mb5.2
IBBN Ibbenburen 21.71 315 *e*P **P 23 52 02.6 +0.3**
comp=Z,222nm,1.2s,mb5.5
KLMR Klimovskoe 21.81 8⇑ *i*P **P 23 52 03.8 +0.5**
KLMR *e*S **S 23 56 07.1 +3.1**
KLMR pmax pmax
comp=Z,1μm,1.8s,mb6.1
SSB Saint Sauveur 21.84 295 *e*P **P 23 52 02.2 -1.5**
SSB pmax pmax
comp=Z,50nm,0.9s,mb4.9
SSB Saint Sauveur 21.84 295 *e*P **P 23 52 02.2 -1.5**
comp=Z,50nm,0.9s,mb4.9
SSB Saint Sauveur 21.84 295 *e*P **P 23 52 02.2 -1.5**
comp=Z,50nm,0.9s,mb4.9
SSB *e*S **S 23 56 17.7 +13**
MEZF Maizieres J'vi 22.03 303 *e*P **P 23 52 06.5 +0.7**
comp=Z,533nm,1.4s,mb5.5
MEZF Maizieres J'vi 22.03 303 *e*P **P 23 52 06.5 +0.7**
comp=Z,266nm,1.4s,mb5.5
MEZF Maizieres J'vi 22.03 303 *e*P **P 23 52 06.5 +0.7**
comp=Z,533nm,1.4s,mb5.8
MEM Membach 22.05 309 P **P 23 52 08.0 +2.0**
comp=Z,52nm,1.1s,mb4.9
MEM Membach 22.05 309 P **P 23 52 07.9 +2.0**
comp=Z,52nm,1.1s,mb4.9
CKHR Kef el Ahmar 22.06 270 P **P 23 52 05.0 -1.2**
SET Setif 22.09 270 P **P 23 52 09.0 +2.4**
WTSB Winterswijk 22.10 313 *e*P **P 23 52 06.6 +0.1**
comp=Z,274nm,1.7s,mb5.4
HGN Heimansgroeve 22.14 310 *e*P **P 23 52 07.8 +0.8**
comp=Z,71nm,1.8s,mb4.8
LASF Ste Croix 22.25 292 *e*P **P 23 52 08.1 0.0**
comp=Z,564nm,1.6s,mb5.4
LASF Ste Croix 22.25 292 *e*P **P 23 52 08.1 0.0**
comp=Z,282nm,1.6s,mb5.4
BCLA Clavier 22.41 308 P **P 23 52 09.5 -0.3**
comp=Z,62nm,1.8s,mb4.7
SMF Signal de Mont 22.48 298 *e*P **P 23 52 10.3 -0.3**
comp=Z,274nm,1.3s,mb5.2
SMF Signal de Mont 22.48 298 *e*P **P 23 52 10.3 -0.3**
comp=Z,137nm,1.3s,mb5.2
WIT Witteveen 22.53 315 *e*P **P 23 52 11.4 +0.4**
comp=Z,547nm,1.1s,mb5.9
PLDF La Plantade 22.55 296 *e*P **P 23 52 12.0 +0.7**
PLDF La Plantade 22.55 296 *e*P **P 23 52 12.0 +0.7**
PLDF La Plantade 22.55 296 *e*P **P 23 52 12.0 +0.7**
LOR Lormes 22.57 300 *e*P **P 23 52 11.4 -0.1**
comp=Z,402nm,1.1s,mb5.5
LOR *e*MLR MLR
comp=Z,11μm,17.8s,MS5.0
LOR Lormes 22.57 300 *e*P **P 23 52 11.4 -0.1**
LOR pmax pmax
comp=Z,201nm,1.1s,mb5.5
LOR MLR MLR
comp=Z,11μm,17.8s,MS5.3
LOR Lormes 22.57 300 *e*P **P 23 52 11.4 -0.1**
comp=Z,201nm,1.1s,mb5.5
LOR LR LR
comp=Z,11μm,17.8s,MS5.3
GIVF Givet 22.60 307 *e*P **P 23 52 11.0 -0.9**
comp=Z,228nm,1.3s,mb5.2
GIVF Givet 22.60 307 *e*P **P 23 52 11.0 -0.9**
GIVF pmax pmax
comp=Z,114nm,1.3s,mb5.1
GIVF Givet 22.60 307 *e*P **P 23 52 11.0 -0.9**
comp=Z,114nm,1.3s,mb5.2
DOU Dourbes 22.74 307 P **P 23 52 12.9 -0.4**
comp=Z,47nm,1.8s,mb4.6
LBL Lubilhac 22.74 294 *e*P **P 23 52 14.1 +0.7**
LBL Lubilhac 22.74 294 *e*P **P 23 52 14.1 +0.7**
LBL Lubilhac 22.74 294 *e*P **P 23 52 14.1 +0.7**
SSF Saint Saulge 22.77 299 *e*P **P 23 52 13.5 -0.2**
comp=Z,191nm,1.1s,mb5.2
SSF Saint Saulge 22.77 299 *e*P **P 23 52 13.5 -0.2**
SSF pmax pmax
comp=Z,95nm,1.1s,mb5.1
SSF Saint Saulge 22.77 299 *e*P **P 23 52 13.5 -0.2**
comp=Z,95nm,1.1s,mb5.2
SSF Saint Saulge 22.77 299 *e*P **P 23 52 13.5 -0.2**
comp=Z,95nm,1.1s,mb5.1
AVF Avril sur Loir 22.84 299 *e*P **P 23 52 14.4 0.0**
comp=Z,341nm,1.2s,mb5.4
AVF Avril sur Loir 22.84 299 *e*P **P 23 52 14.4 0.0**
AVF pmax pmax
comp=Z,171nm,1.2s,mb5.3
AVF Avril sur Loir 22.84 299 *e*P **P 23 52 14.4 0.0**
comp=Z,171nm,1.2s,mb5.4
AVF Avril sur Loir 22.84 299 *e*P **P 23 52 14.4 0.0**
comp=Z,171nm,1.2s,mb5.3
AGO Saint Agoulin 22.90 297 *e*P **P 23 52 15.5 +0.5**
PYM Petit Puy Mans 22.95 296 *e*P **P 23 52 16.0 +0.4**
PYM Petit Puy Mans 22.95 296 *e*P **P 23 52 16.0 +0.4**
PYM Petit Puy Mans 22.95 296 *e*P **P 23 52 16.0 +0.4**
EJON La Jonquera 22.97 287 P **P 23 52 17.6 +1.8**
comp=Z,8.0nm,0.6s,mb4.3
BAIF Baives 22.97 307 *e*P **P 23 52 15.9 +0.2**
comp=Z,152nm,1.2s,mb5.0
BAIF Baives 22.97 307 *e*P **P 23 52 15.9 +0.2**
BAIF pmax pmax
comp=Z,76nm,1.2s,mb5.0
BAIF Baives 22.97 307 *e*P **P 23 52 15.9 +0.2**
comp=Z,76nm,1.2s,mb5.0
SNF Seneffe 23.05 308 P **P 23 52 15.9 -0.7**
comp=Z,63nm,1.8s,mb4.7
SNF Seneffe 23.05 308 P **P 23 52 15.9 -0.7**
comp=Z,63nm,1.8s,mb4.7
ATAF Djebel Tarf 23.06 270 P **P 23 52 20.1 +3.3**
KAF Kangasniemi 23.08 352 *e*p **P 23 52 16.7 -0.1**
comp=Z,5.9nm,0.4s,mb4.4,baz=160,slow=10
KAF Kangasniemi 23.08 352 *e*P **P 23 52 16.7 -0.1**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb4.4
UCC Uccle 23.10 309 P **P 23 52 17.9 +0.8**
comp=Z,78nm,2.1s,mb4.8
BGF Bois d'Agland 23.15 298 *e*P **P 23 52 17.4 -0.3**
comp=Z,226nm,1.1s,mb5.2
BGF Bois d'Agland 23.15 298 *e*P **P 23 52 17.4 -0.3**
BGF pmax pmax
comp=Z,113nm,1.1s,mb5.2
BGF Bois d'Agland 23.15 298 *e*P **P 23 52 17.4 -0.3**
comp=Z,113nm,1.1s,mb5.2
BGF Bois d'Agland 23.15 298 *e*P **P 23 52 17.4 -0.3**
comp=Z,113nm,1.1s,mb5.2
ETOS Mallorca 23.30 281 P **P 23 52 22.2 +2.9**
comp=Z,54nm,1.1s,mb4.9
AKET Djebel Ketaf 23.31 271 P **P 23 52 20.1 +0.6**
MTLF Montolieu 23.43 290 *e*P **P 23 52 19.7 -1.0**
comp=Z,86nm,1.1s,mb4.8
MTLF Montolieu 23.43 290 *e*P **P 23 52 19.7 -1.0**
comp=Z,43nm,1.1s,mb4.8
MTLF Montolieu 23.43 290 *e*P **P 23 52 19.7 -1.0**
comp=Z,43nm,1.1s,mb4.8
JOF Joensuu 23.54 358 *e*p **P 23 52 21.2 -0.4**
comp=Z,9.9nm,0.4s,mb4.6
JOF Joensuu 23.54 358 *e*P **P 23 52 21.2 -0.4**
JOF pmax pmax
comp=Z,10.0nm,0.4s,mb4.6
TCF Toulx Ste Croi 23.56 297 *e*P **P 23 52 21.1 -0.8**
comp=Z,149nm,1.0s,mb5.1
TCF Toulx Ste Croi 23.56 297 *e*P **P 23 52 21.1 -0.8**
TCF pmax pmax
comp=Z,74nm,1.0s,mb5.1
TCF Toulx Ste Croi 23.56 297 *e*P **P 23 52 21.1 -0.8**
comp=Z,74nm,1.0s,mb5.1
CAF Calviac 23.56 294 *e*P **P 23 52 22.2 +0.2**
comp=Z,68nm,0.8s,mb4.8
CAF Calviac 23.56 294 *e*P **P 23 52 22.2 +0.2**
CAF pmax pmax
comp=Z,34nm,0.8s,mb4.8
CAF Calviac 23.56 294 *e*P **P 23 52 22.2 +0.2**
comp=Z,34nm,0.8s,mb4.8
CAF Calviac 23.56 294 *e*P **P 23 52 22.2 +0.2**
comp=Z,34nm,0.8s,mb4.8
ADJB Djebel Djouab 23.62 271 P **P 23 52 23.4 +0.7**
ARU Arti 23.86 36⇑ *e*P **P 23 52 24.1 -0.5**
ARU pmax pmax
comp=Z,420nm,1.8s,mb5.6
ARU MLR MLR
comp=Z,4μm,18.0s,MS4.9
ARU Arti 23.86 36⇑ *e*P **P 23 52 24.2 -0.4**
RJF Les Rejaudoux 23.97 294 *e*P **P 23 52 26.5 +0.8**
comp=Z,458nm,1.5s,mb5.4
RJF *e*MLR MLR
comp=Z,10μm,21.8s,MS4.9
RJF Les Rejaudoux 23.97 294 *e*P **P 23 52 26.5 +0.8**
comp=Z,229nm,1.5s,mb5.4
RJF Les Rejaudoux 23.97 294 *e*P **P 23 52 26.5 +0.8**
comp=Z,229nm,1.5s,mb5.4
RJF LR LR
comp=Z,10μm,21.8s,MS5.2
EMHD Djebel Mahouad 23.99 272 P **P 23 52 26.7 +0.7**
HFS Hagfors 24.03 336 P **P 23 52 25.5 -0.7**
comp=Z,36nm,0.6s,mb5.0,baz=144,slow=10,SNR=19
HFS LR LR 00 02 42.9
comp=Z,2μm,20.9s,MS4.6,baz=146,slow=39
HFS Hagfors 24.03 336 P **P 23 52 25.5 -0.6**
HFS pmax pmax
comp=Z,36nm,0.6s
HFS MLR MLR
comp=Z,2μm,20.9s
MLS Moulis 24.27 289 *e*P **P 23 52 28.8 +0.4**
EPOB Poblet 24.40 285 P **P 23 52 31.6 +1.9**
comp=Z,21nm,0.7s,mb4.7
LFF La Frestale 24.50 294 *e*P **P 23 52 31.0 +0.4**
comp=Z,292nm,1.5s,mb5.3
LFF La Frestale 24.50 294 *e*P **P 23 52 31.0 +0.4**
LFF pmax pmax
comp=Z,146nm,1.5s,mb5.3
LFF La Frestale 24.50 294 *e*P **P 23 52 31.0 +0.4**
comp=Z,146nm,1.5s,mb5.3
EIBI Ibiza 24.55 279 P **P 23 52 34.0 +2.9**
comp=Z,30nm,0.9s,mb4.8
EPF Esparros 24.81 289 *e*P **P 23 52 32.4 -1.0**
comp=Z,34nm,0.9s,mb4.6
EPF Esparros 24.81 289 *e*P **P 23 52 32.4 -1.0**
EPF pmax pmax
comp=Z,17nm,0.9s,mb4.6
EPF Esparros 24.81 289 *e*P **P 23 52 32.4 -1.0**
comp=Z,17nm,0.9s,mb4.6
EPF Esparros 24.81 289 *e*P **P 23 52 32.4 -1.0**
comp=Z,17nm,0.9s,mb4.6
RESF Ens 24.83 288 *e*P **P 23 52 33.9 +0.3**
EBIE Bielsa 24.98 288 P **P 23 52 35.9 +0.9**
comp=Z,43nm,0.9s,mb5.0
EBIE Bielsa 24.98 288 P **P 23 52 35.9 +0.9**
comp=Z,43nm,0.9s,mb5.0
SVE Sverdlovsk 25.04 37⇓ *e*P **P 23 52 36.1 +0.8**
SVE *e*S **S 23 57 00.0 +0.9**
SVE pmax pmax
comp=Z,187nm,1.0s,mb5.6
VIEF Viey 25.05 289 *e*P **P 23 52 35.8 +0.2**
EBNR Beni Rached 25.06 273 P **P 23 52 39.0 +3.2**
KONO Kongsberg 25.09 331⇑ *e*P **P 23 52 36.6 +0.9**
KONO Kongsberg 25.09 331 *e*P **P 23 52 35.5 -0.2**
comp=Z,323nm,1.4s,mb5.7
KONO Kongsberg 25.09 331 *e*P **P 23 52 35.5 -0.2**
comp=Z,323nm,1.4s,mb5.7
KONO *e*S **S 23 57 12.2 +12**
KONO LR LR
comp=Z,5μm,19.0s,MS5.0
SOKR Solikamsk 25.10 29*c* *i*P **P 23 52 38.3 +2.5**
SOKR S **S 23 57 06.6 +6.6**
SOKR pmax pmax
comp=Z,330nm,1.8s,mb5.6
SOKR MLR MLR
comp=Z,4μm,16.0s,MS5.0
MFF Saint Martin d 25.21 297 *e*P **P 23 52 36.3 -0.7**
comp=Z,90nm,0.6s,mb5.2
MFF Saint Martin d 25.21 297 *e*P **P 23 52 36.3 -0.7**
MFF pmax pmax
comp=Z,45nm,0.6s,mb5.2
MFF Saint Martin d 25.21 297 *e*P **P 23 52 36.3 -0.7**
comp=Z,45nm,0.6s,mb5.2
REYF Montagne du Re 25.35 289 *e*P **P 23 52 40.1 +1.8**
LDF La Druitiere 25.42 302 *e*P **P 23 52 37.6 -1.3**
comp=Z,254nm,1.1s,mb5.4
LDF La Druitiere 25.42 302 *e*P **P 23 52 37.6 -1.3**
LDF pmax pmax
comp=Z,127nm,1.1s,mb5.4
LDF La Druitiere 25.42 302 *e*P **P 23 52 37.6 -1.3**
comp=Z,127nm,1.1s,mb5.4
ETSF Etsaut 25.48 289 *e*P **P 23 52 38.8 -0.7**
comp=Z,145nm,1.1s,mb5.1
ETSF Etsaut 25.48 289 *e*P **P 23 52 38.8 -0.7**
ETSF pmax pmax
comp=Z,73nm,1.1s,mb5.1
ETSF Etsaut 25.48 289 *e*P **P 23 52 38.8 -0.7**
comp=Z,72nm,1.1s,mb5.1
NAO01 NORSAR Array S 25.48 335 *e*P **P 23 52 40.5 +1.2**
comp=Z,242nm,1.1s,mb5.6
NAO01 *e*PcP PcP 23 56 07.8 -2.8
NAO01 *e*S **S 23 57 09.4 +3.2**
NAO01 LR LR
comp=Z,6μm,20.0s,MS5.1
EANR 'Ain N'Sour 25.50 272 P **P 23 52 39.2 -0.5**
ETRT Tiaret 25.51 271 P **P 23 52 40.0 +0.1**
ESAC San Caprasio 25.52 286 P **P 23 52 42.2 +2.4**
comp=Z,129nm,1.0s,mb5.4
NB2 NORSAR Subarra 25.52 335 P **P 23 52 40.1 +0.4**
comp=Z,50nm,0.8s,mb5.1,baz=138,slow=9.3
NOA NORSAR Array B 25.52 335 P **P 23 52 39.8 +0.1**
comp=Z,46nm,0.9s,mb5.0,baz=137,slow=9.0,SNR=34
NOA LR LR 00 04 14.3
comp=Z,6μm,18.3s,MS5.1,baz=145,slow=40
NOA NORSAR Array B 25.52 335 P **P 23 52 39.8 +0.1**
NOA pmax pmax
comp=Z,46nm,0.9s
NOA MLR MLR
comp=Z,6μm,18.3s
ARQ Araqi 25.52 122 P **P 23 52 41.0 +1.0**
SNR=16
FLN La Foliniere 25.68 302 *e*P **P 23 52 40.1 -1.1**
comp=Z,200nm,1.3s,mb5.2
FLN *e*MLR MLR
comp=Z,7μm,20.2s,MS4.9
FLN La Foliniere 25.68 302 *e*P **P 23 52 40.1 -1.1**
FLN pmax pmax
comp=Z,100nm,1.3s,mb5.2
FLN MLR MLR
comp=Z,7μm,20.3s,MS5.2
FLN La Foliniere 25.68 302 *e*P **P 23 52 40.1 -1.1**
comp=Z,100nm,1.3s,mb5.2
FLN LR LR
comp=Z,7μm,20.3s,MS5.2
EMOS Mosqueruela 25.70 283 P **P 23 52 43.2 +1.7**
comp=Z,61nm,0.9s,mb5.1
EMOS Mosqueruela 25.70 283 P **P 23 52 43.2 +1.7**
comp=Z,61nm,0.9s,mb5.1
LARF Larrau 25.79 289 *e*P **P 23 52 42.1 -0.2**
EBEN Beniarda 25.81 279 P **P 23 52 43.9 +1.4**
comp=Z,39nm,1.1s,mb4.8
EBEN Beniarda 25.81 279 P **P 23 52 43.9 +1.4**
comp=Z,39nm,1.1s,mb4.8
GRR Gorron 25.88 301 *e*P **P 23 52 42.1 -0.9**
comp=Z,198nm,0.7s,mb5.4
GRR Gorron 25.88 301 *e*P **P 23 52 42.1 -0.9**
GRR pmax pmax
comp=Z,99nm,0.7s,mb5.5
GRR Gorron 25.88 301 *e*P **P 23 52 42.1 -0.9**
comp=Z,99nm,0.7s,mb5.4
HOQ Hoqain 25.88 120 P **P 23 52 43.5 +0.3**
SNR=11
HOQ Hoqain 25.88 120 P **P 23 52 43.5 +0.2**
SNR=11
SJPF Ste Jean 25.95 289 *e*P **P 23 52 43.7 -0.1**
comp=Z,187nm,1.3s,mb5.2
SJPF Ste Jean 25.95 289 *e*P **P 23 52 43.7 -0.1**
SJPF pmax pmax
comp=Z,94nm,1.3s,mb5.2
SJPF Ste Jean 25.95 289 *e*P **P 23 52 43.7 -0.1**
comp=Z,94nm,1.3s,mb5.2
OSSF Osses 25.97 290 *e*P **P 23 52 44.6 +0.6**
EALK Alkurruntz 26.15 290 P **P 23 52 47.2 +1.6**
comp=Z,14nm,0.8s,mb4.5
EALK Alkurruntz 26.15 290 P **P 23 52 47.2 +1.6**
comp=Z,14nm,0.8s,mb4.5
ELIZ Elizondo 26.17 289 P **P 23 52 47.3 +1.5**
ELIZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
ELIZ Elizondo 26.17 289 P **P 23 52 47.3 +1.5**
comp=Z,7.6nm,0.9s,mb4.2
ELIZ Elizondo 26.17 289 P **P 23 52 47.3 +1.5**
comp=Z,7.6nm,0.9s,mb4.2
ECHE Chera 26.20 281 P **P 23 52 49.3 +3.2**
comp=Z,46nm,1.0s,mb5.0
ODD1 Odda 26.39 330 *e*P **P 23 52 48.9 +1.4**
ODD1 AMb AMB 23 52 49.7
comp=Z,172nm,2.5s,mb5.1
ODD1 Odda 26.39 330 *e*P **P 23 52 48.9 +1.3**
comp=Z,172nm,2.5s,mb5.1,SNR=28
CART Cartagena 26.66 277 *e*P **P 23 52 49.2 -1.1**
comp=Z,84nm,0.9s,mb5.3
CART Cartagena 26.66 277 *e*P **P 23 52 49.2 -1.1**
comp=Z,84nm,0.9s,mb5.3
ETOR Torete 26.82 284 P **P 23 52 53.5 +1.9**
ETOR pmax pmax
comp=Z,19nm,0.8s,mb4.7
ETOR Torete 26.82 284 P **P 23 52 53.5 +1.9**
comp=Z,19nm,0.8s,mb4.7
ETOR Torete 26.82 284 P **P 23 52 53.5 +1.9**
comp=Z,19nm,0.8s,mb4.7
ETOB Tobarra 26.84 279 P **P 23 52 54.3 +2.5**
comp=Z,29nm,0.8s,mb4.9
ECRI Cripan 26.94 288 P **P 23 52 52.9 +0.2**
ECRI pmax pmax
comp=Z,23nm,0.7s,mb4.8
ECRI Cripan 26.94 288 P **P 23 52 52.8 +0.1**
comp=Z,23nm,0.7s,mb4.8
ECRI Cripan 26.94 288 P **P 23 52 52.9 +0.2**
comp=Z,23nm,0.7s,mb4.8
SGMF Saint Gilles 26.99 301 *e*P **P 23 52 52.8 -0.3**
comp=Z,286nm,1.3s,mb5.3
SGMF Saint Gilles 26.99 301 *e*P **P 23 52 52.8 -0.3**
SGMF pmax pmax
comp=Z,143nm,1.3s,mb5.3
SGMF Saint Gilles 26.99 301 *e*P **P 23 52 52.8 -0.3**
comp=Z,143nm,1.3s,mb5.3
QUIF Quistinic 27.36 300 *e*P **P 23 52 56.0 -0.4**
comp=Z,184nm,1.4s,mb5.1
QUIF Quistinic 27.36 300 *e*P **P 23 52 56.0 -0.4**
QUIF pmax pmax
comp=Z,92nm,1.4s,mb5.1
QUIF Quistinic 27.36 300 *e*P **P 23 52 56.0 -0.4**
comp=Z,92nm,1.4s,mb5.1
ROSF Rostrenen 27.47 301 *e*P **P 23 52 56.0 -1.4**
comp=Z,266nm,1.5s,mb5.3
ROSF Rostrenen 27.47 301 *e*P **P 23 52 56.0 -1.4**
ROSF pmax pmax
comp=Z,133nm,1.5s,mb5.2
ROSF Rostrenen 27.47 301 *e*P **P 23 52 56.0 -1.4**
comp=Z,133nm,1.5s,mb5.3
ELAN Lanestosa 27.56 290 P **P 23 52 59.6 +1.4**
comp=Z,17nm,0.7s,mb4.8
ELAN Lanestosa 27.56 290 P **P 23 52 59.6 +1.3**
comp=Z,17nm,0.7s,mb4.8
EVIA Vianos 27.57 280 P **P 23 53 01.0 +2.6**
EVIA pmax pmax
comp=Z,35nm,1.0s,mb4.9
EVIA Vianos 27.57 280 P **P 23 53 01.0 +2.6**
comp=Z,35nm,1.0s,mb4.9
ENIJ Nijar 27.75 276 P **P 23 53 03.3 +3.2**
NSS Namsos 28.02 341 *e*P **P 23 53 01.8 -0.4**
APA Apatity 28.18 0⇑ *i*P **P 23 53 07.6 +4.0**
APA *i* pP 23 53 11.2 +4.3
APA *i*S **S 23 57 47.0 -1.6**
APA MLR MLR
comp=Z,10μm,16.0s,MS5.5
KK31 Karatay Array 28.20 70 *i*P **P 23 53 03.4 -0.5**
EQES Quesada 28.20 278 P **P 23 53 04.0 0.0**
comp=Z,34nm,0.9s,mb5.0
EQES Quesada 28.20 278 P **P 23 53 04.0 -0.1**
comp=Z,34nm,0.9s,mb5.0
GUD Guadarrama 28.42 285 P **P 23 53 06.8 +0.8**
GUD pmax pmax
comp=Z,12nm,0.8s,mb4.6
GUD Guadarrama 28.42 285 P **P 23 53 06.8 +0.8**
comp=Z,12nm,0.8s,mb4.6
GUD Guadarrama 28.42 285 P **P 23 53 06.8 +0.9**
comp=Z,12nm,0.8s,mb4.6
ESDC Sonseca Array 28.45 282 P **P 23 53 05.9 -0.4**
comp=Z,14nm,0.8s,mb4.6,baz=69,slow=9.3,SNR=48
ESDC PcP PcP 23 56 18.0 -0.2
comp=Z,0.5nm,0.6s,baz=32,slow=2.3,SNR=3.0
ESDC LR LR 00 05 16.6
comp=Z,3μm,18.8s,MS4.9,baz=65,slow=38
ESDC Sonseca Array 28.45 282 P **P 23 53 05.3 -1.0**
comp=Z,11nm,0.8s,mb4.5
ESDC Sonseca Array 28.45 282 P **P 23 53 05.3 -1.0**
comp=Z,11nm,0.8s,mb4.5
ESLA Sonseca Array 28.45 282 *e*P **P 23 53 05.4 -0.9**
ESLA Sonseca Array 28.45 282 *e*P **P 23 53 05.4 -0.9**
comp=Z,18nm,1.1s,mb4.6
ESLA *e* 23 53 23.5
ESLA *e*PP PP 23 54 08.9 -1.5
ESLA *e*PcP PcP 23 56 07.0 -11
ESLA *e*S **S 23 57 41.0 -12**
ESLA LR LR
comp=Z,23μm,20.0s,MS5.8
LVZ Lovozero 28.53 1 *i*P **P 23 53 09.6 +3.0**
LVZ Lovozero 28.53 1 PFAKE 23 53 20.0 +13
LVZ LR LR
comp=Z,7μm,22.0s,MS5.2
EBAN Banos Encina 28.66 279 P **P 23 53 07.5 -0.6**
comp=Z,48nm,0.9s,mb5.2
EBAN Banos Encina 28.66 279 P **P 23 53 07.5 -0.6**
comp=Z,48nm,0.9s,mb5.2
TAM Tamanrasset 28.70 243 *e*P **P 23 53 09.4 +0.7**
TAM Tamanrasset 28.70 243 *e*P **P 23 53 09.3 +0.7**
comp=Z,34nm,1.0s,mb5.0
TAM *e* 23 53 19.3
TAM PcP PcP 23 56 12.6 -6.4
TAM LR LR
comp=Z,5μm,22.0s,MS5.0
ECOG Cogollos-Vega 28.72 277 P **P 23 53 08.5 -0.2**
comp=Z,25nm,0.9s,mb4.9
ECOG Cogollos-Vega 28.72 277 P **P 23 53 08.5 -0.2**
comp=Z,25nm,0.9s,mb4.9
BRVK Borovoye 28.73 49⇓ P **P 23 53 11.0 +2.4**
SNR=10
BRVK Borovoye 28.73 49⇑ *e*P **P 23 53 08.8 +0.2**
PAB San Pablo 28.77 282 *e*P **P 23 53 08.5 -0.6**
PAB *e* 23 54 12.6
PAB *e*S **S 23 58 06.7 +8.2**
PAB pmax pmax
comp=Z,96nm,1.3s,mb5.4
PAB MLR MLR
comp=Z,3μm,20.0s,MS4.9
PAB San Pablo 28.77 282 *e*P **P 23 53 08.4 -0.7**
PAB San Pablo 28.77 282 *e*P **P 23 53 08.4 -0.7**
comp=Z,96nm,1.3s,mb5.4
PAB *e* 23 53 22.2
PAB *e*PP PP 23 54 12.6 -1.4
PAB *e*S **S 23 58 06.7 +8.3**
PAB LR LR
comp=Z,3μm,20.0s,MS4.9
BVAR Borovoye Array 28.79 49 P **P 23 53 08.4 -0.7**
comp=Z,3.2nm,0.9s,mb4.1,baz=252,slow=9.2,SNR=8.3
BVAR LR LR 00 08 11.0
comp=Z,5μm,19.1s,MS5.2,baz=265,slow=44
BVAR Borovoye Array 28.79 49 P **P 23 53 08.4 -0.7**
BVAR pmax pmax

comp=Z,3.0nm,0.9s
BVAR MLR MLR

comp=Z,5µm,19.1s
MOR8 Moi Rana 28.81 344 *e*P **P 23 53 10.3 +1.1**
MOR8 AMb AMB 23 53 28.1

comp=Z,134nm,4.8s
MOR8 Moi Rana 28.81 344 *e*P **P 23 53 10.3 +1.1**
comp=Z,134nm,4.8s,SNR=28
EKA Eskdalemuir Ar 28.84 316 P **P 23 53 09.4 -0.1**
comp=Z,31nm,0.8s,mb5.1,baz=116,slow=9.0,SNR=27
EKA Eskdalemuir Ar 28.84 316 P **P 23 53 09.5 0.0**
EKA pmax pmax

comp=Z,31nm,0.8s
EKA Eskdalemuir Ar 28.84 316 P **P 23 53 09.4 -0.1**
EGUA Guajares 28.84 277 P **P 23 53 09.6 -0.1**
comp=Z,360nm,1.0s,mb6.1
EGUA Guajares 28.84 277 P **P 23 53 09.6 -0.1**
comp=Z,360nm,1.0s,mb6.1
EARI Arriondas 28.84 290 P **P 23 53 07.8 -1.9**
comp=Z,54nm,1.8s,mb5.0
EARI Arriondas 28.84 290 P **P 23 53 07.8 -1.9**
comp=Z,54nm,1.8s,mb5.0
ESK Eskdalemuir 28.86 315 *e*P **P 23 53 08.8 -0.9**
ESK *e* 23 53 14.4
ESK *e* 23 54 12.0
ESK MLR MLR

comp=Z,6µm,19.0s,MS5.2
ERON Agron 28.97 277 P **P 23 53 10.8 -0.1**
comp=Z,25nm,0.9s,mb4.9
ERON Agron 28.97 277 P **P 23 53 10.8 -0.1**
comp=Z,25nm,0.9s,mb4.9
KBL Kabul 28.99 88 *e*P **P 23 53 10.4 -0.7**
KBL *e* 23 54 11.2
KBL *e*S **S 23 58 02.6 +0.6**
KBL pmax pmax

comp=Z,16nm,1.1s,mb4.7
KBL Kabul 28.99 88 *e*P **P 23 53 10.4 -0.7**
comp=Z,16nm,1.1s,mb4.7
KBL Kabul 28.99 88 *e*P **P 23 53 10.4 -0.7**
comp=Z,16nm,1.1s,mb4.7
KBL *e*PP PP 23 54 11.2 -5.3
KBL *e*PcP PcP 23 56 35.0 +15
KBL *e*S **S 23 58 02.6 +0.6**
EMIJ Mijas 29.85 277 P **P 23 53 18.6 -0.1**
comp=Z,92nm,1.0s,mb5.5
KTK1 Kautokeino 30.11 353 *e*P **P 23 53 21.0 +0.4**
DLF Lyons Farm 30.23 310 *e*P **P 23 53 25.8 +3.9**
EJIF Jimena Fronter 30.41 277 P **P 23 53 23.6 -0.1**
EJIF pmax pmax

comp=Z,27nm,0.7s,mb5.1
EJIF Jimena Fronter 30.41 277 P **P 23 53 23.6 -0.1**
comp=Z,27nm,0.7s,mb5.1
EJIF Jimena Fronter 30.41 277 P **P 23 53 23.6 -0.1**
comp=Z,27nm,0.7s,mb5.1
ARCES ARCESS Array B 30.43 355 P **P 23 53 24.0 +0.5**
comp=Z,18nm,0.7s,mb4.9,baz=167,slow=8.8,SNR=75
ARCES LR LR 00 06 22.2

comp=Z,1µm,19.6s,MS4.5,baz=167,slow=38
ARCES ARCESS Array B 30.43 355 P **P 23 53 24.0 +0.5**
ARCES pmax pmax

comp=Z,18nm,0.7s
ARCES MLR MLR

comp=Z,1µm,19.6s
ARE0 ARCESS Array S 30.43 355 *e*P **P 23 53 23.0 -0.5**
ARE0 ARCESS Array S 30.43 355 *e*P **P 23 53 23.0 -0.5**
MVO Moncorvo 30.48 286 *e*LR LR 00 04 55.2

comp=Z,2µm,16.0s
KEV Kevo 30.55 356 *e*P **P 23 53 25.1 +0.6**
comp=Z,1.6nm,0.4s,mb4.2
KEV LR LR

comp=Z,2µm,19.0s,MS4.8
DMUB Kingscourt 30.57 312 *e*P **P 23 53 24.8 -0.1**
EKS2 Erkin-Say 30.63 71 *e*P **P 23 53 24.8 -0.7**
EKS2 Erkin-Say 30.63 71 *e*P **P 23 53 24.8 -0.7**
EKS2 *e* 23 53 39.2
EKS2 *e*PP PP 23 54 32.3 -2.2
AML Almayashu 30.65 72 PFAKE 23 53 40.0 +14
AML LR LR

comp=Z,3µm,19.0s,MS5.0
EMIN Mina Concepcio 30.96 280 P **P 23 53 28.0 -0.5**
comp=Z,52nm,1.1s,mb5.3
EMIN Mina Concepcio 30.96 280 P **P 23 53 28.0 -0.5**
comp=Z,52nm,1.1s,mb5.3
SFS San Fernando 30.98 277 PFAKE 23 53 40.0 +11
SFS LR LR

comp=Z,9µm,21.0s,MS5.4
MTE Manteigas 31.00 285 *e*P **P 23 53 29.7 +0.8**
comp=Z,90nm,1.5s,mb5.4
MTE *e*LR LR 00 05 40.6

comp=Z,3µm,18.0s
MTE Manteigas 31.00 285 PFAKE 23 53 40.0 +11
MTE LR LR

comp=Z,3µm,19.0s,MS4.9
MDT Midelt 31.01 270 LR LR 00 07 35.2

comp=Z,1µm,18.1s,MS4.7,baz=119,slow=40
PCBR Castelo Branco 31.07 284 *e*P **P 23 53 29.7 +0.2**
comp=Z,77nm,1.3s,mb5.4
PMRV Marv??o 31.10 283 *e*P **P 23 53 28.8 -0.9**
comp=Z,72nm,1.5s,mb5.3
PMRV *e*LR LR 00 03 44.8

comp=Z,3µm,18.0s
PCAB Cabril 31.12 288 *e*P **P 23 53 30.1 +0.2**
PBAR Barrancos 31.14 281 *e*P **P 23 53 30.1 +0.1**
comp=Z,60nm,1.5s,mb5.2
PBAR *e*LR LR 00 03 26.6

comp=Z,3µm,18.0s
TRO Tromso 31.18 350 *e*P **P 23 53 28.3 -1.8**
PVIS Viseu 31.20 286 *e*P **P 23 53 30.2 -0.4**
comp=Z,76nm,1.5s,mb5.3
FRU Bishkek 31.22 70⇓ *i*P **P 23 53 32.6 +1.9**
FRU pmax pmax

comp=Z,117nm,1.6s,mb5.5
UCH Uchtor 31.23 71 *e*P **P 23 53 29.6 -1.3**
UCH *e*PP PP 23 54 37.7 -3.6
UCH LR LR

comp=Z,2µm,21.0s,MS4.8
PESTR Estremoz 31.38 282 *e*P **P 23 53 31.3 -0.9**
comp=Z,95nm,1.5s,mb5.4
PESTR *e*LR LR 00 06 20.3

comp=Z,3µm,15.5s
EVO Evora 31.78 282 *e*P **P 23 53 35.9 +0.2**
comp=Z,47nm,1.7s,mb5.0
PBEJ Beja 31.80 281 *e*P **P 23 53 35.2 -0.7**
comp=Z,70nm,1.6s,mb5.2
PVAQ Vaqueiros 31.86 280 *e*P **P 23 53 33.6 -2.8**
comp=Z,98nm,1.6s,mb5.4
TKM2 Tokmak 2 31.92 70 *e*P **P 23 53 34.0 -2.9**
TKM2 *e* 23 54 48.1
TKM2 *e* 23 56 25.9
TKM2 pmax pmax

comp=Z,9.0nm,0.9s,mb4.6
TKM2 MLR MLR

comp=Z,3µm,19.0s,MS5.0
TKM2 Tokmak 2 31.92 70 *e*P **P 23 53 34.0 -2.9**
comp=Z,9.4nm,0.9s,mb4.6
TKM2 *e*PP PP 23 54 48.1 -0.8
TKM2 *e*PcP PcP 23 56 25.9 -1.1
TKM2 LR LR

comp=Z,3µm,19.0s,MS5.0
RTC Rabat Centre 32.31 273 PFAKE 23 53 50.0 +10
RTC LR LR

comp=Z,2µm,22.0s,MS4.7
PTEO Sao Teotonio 32.59 280 *e*P **P 23 53 43.7 +0.9**
MORF Marmelete 32.60 280 *e*P **P 23 53 43.3 +0.4**
comp=Z,86nm,1.2s,mb5.6
MORF *e*LR LR 00 03 38.4

comp=Z,2µm,15.7s
KSH Kashi 32.86 76 P **P 23 53 48.0 +2.9**
KSH AP pP 23 53 52.3 +3.8
KSH XP sP 23 53 54.8 +5.0
KSH PP PP 23 54 58.8 -0.5
KSH PCP PcP 23 56 32.0 +2.3
KSH S **S 23 59 04.8 +2.4**
KSH XS sS 23 59 12.0 +4.1
KSH AMB AMB

comp=Z,57nm,0.9s,mb5.5
KSH AMB AMB

comp=Z,2µm,7.8s
KSH LR LR

comp=N,9µm,11.6s,MS5.8
KSH LR LR

comp=E,7µm,12.2s,MS5.8
KSH LR LR

comp=Z,12µm,14.0s,MS5.8
KURK Kurchatov 33.55 55 P **P 23 53 52.0 +0.9**
SNR=18

KURK Kurchatov 33.55 55 *i*P **P 23 53 51.8 +0.7**
JASL Jaisalmer 33.77 100 *e*P **P 23 53 52.6 -0.6**
THN Thein Dam 34.95 88 *e*P **P 23 54 02.5 -0.9**
MK31 Makanchi Array 36.15 62⇑ *e*P **P 23 54 13.8 +0.3**
MK31 *e* 23 55 34.1
MK31 *e* 23 56 35.3
MK31 Makanchi Array 36.15 62 *e*PP PP 23 55 34.1 -1.5
MKAR Makanchi Array 36.15 62 P **P 23 54 13.6 +0.1**
comp=Z,15nm,1.0s,mb4.9,baz=274,slow=6.3,SNR=36
MKAR LR LR 00 11 32.1

comp=Z,4µm,18.9s,MS5.2,baz=274,slow=40
MKAR Makanchi Array 36.15 62 P **P 23 54 13.6 +0.1**
MKAR pmax pmax

comp=Z,15nm,1.0s
MKAR MLR MLR

comp=Z,4µm,18.9s
SMLA Simla 36.61 89 *e*P **P 23 54 17.8 +0.1**
SMLA AMb AMB 23 54 20.4

comp=Z,57nm,1.8s,mb5.1
AJM Ajmer 36.86 98 *e*P **P 23 54 20.9 +1.1**
AJM AMb AMB 23 54 21.9

comp=Z,24nm,0.8s,mb5.1
KKR Kurukshetra 36.86 91 *e*P **P 23 54 20.8 +1.0**
KHET Khetri 36.95 95 *e*P **P 23 54 21.2 +0.5**
KLP Kalpa 37.28 88 *e*P **P 23 54 23.0 -0.3**
ZAA0 Zalesovo Array 37.44 50 *e*P **P 23 54 23.7 -0.8**
ZAA0 Zalesovo Array 37.44 50 *e*P **P 23 54 23.7 -0.7**
ZAA0 *e*PP PP 23 55 44.2 -5.5
ZAA0 *e*PcP PcP 23 56 40.6 -2.2
ZALV Zalesovo Beam 37.44 50 P **P 23 54 24.1 -0.4**
comp=Z,9.7nm,0.6s,mb4.8,baz=264,slow=9.3,SNR=25
ZALV LR LR 00 13 35.2

comp=Z,2µm,18.4s,MS5.0,baz=271,slow=42
ZALV Zalesovo Beam 37.44 50 P **P 23 54 24.1 -0.4**
ZALV pmax pmax

comp=Z,10.0nm,0.6s,mb4.8
ZALV MLR MLR

comp=Z,2µm,18.4s,MS5.0
KUDL Kundal 37.45 94 *e*P **P 23 54 25.6 +0.8**
DDI Dehra Dun 37.65 90 *e*P **P 23 54 24.0 -2.5**
AYAN Aya Nagar 37.78 93 *e*P **P 23 54 26.9 -0.7**
AYAN AMb AMB 23 54 29.6

comp=Z,49nm,1.1s,mb5.2
SONA Sohna 37.86 93 *e*P **P 23 54 29.3 +1.0**
JMIC Jan Mayen 38.05 339 LR LR 00 10 32.5

comp=Z,3µm,19.1s,MS5.1,baz=125,slow=37
TOA0 Torodi Ar. Sit 38.11 235 *e*P **P 23 54 28.2 -2.3**
TOA0 Torodi Ar. Sit 38.11 235 *e*P **P 23 54 28.2 -2.4**
TOA0 *e* 23 54 40.1
TORD Torodi Ar. Bea 38.11 235 P **P 23 54 29.6 -0.9**
comp=Z,16nm,0.8s,mb4.8,baz=33,slow=6.4,SNR=7.2
TORD LR LR 00 13 09.1

comp=Z,6µm,18.7s,MS5.4,baz=40,slow=41
JOSI Joshimath 38.71 89 *e*P **P 23 54 35.2 -0.3**
AGRA Agra 39.02 94 *e*P **P 23 54 38.4 +0.4**
SPITS Spitsbergen Ar 39.46 355 P **P 23 54 41.0 -0.2**
comp=Z,33nm,0.9s,mb5.1,baz=287,slow=20,SNR=11
SPITS LR LR 00 13 15.3

comp=Z,2µm,18.1s,MS5.1,baz=320,slow=40
SPITS Spitsbergen Ar 39.46 355 P **P 23 54 41.0 -0.2**
SPITS pmax pmax

comp=Z,33nm,0.9s
SPITS MLR MLR

comp=Z,2µm,18.1s
SPB4 Spitsbergen Ar 39.47 355 *e*P **P 23 54 39.7 -1.5**
SPB4 Spitsbergen Ar 39.47 355 *e*PP PP 23 56 10.7 -0.9
SPB4 Spitsbergen Ar 39.47 355 *e*P **P 23 54 39.7 -1.6**
SPB4 *e*PP PP 23 56 10.7 -0.9
SPB4 *e*PcP PcP 23 56 44.7 -4.0
BORG Borgarnes 40.12 327 LR LR 00 11 38.9

comp=Z,3µm,20.3s,MS5.1,baz=108,slow=37
WMQ Urumqi 40.41 65 P **P 23 54 50.3 +0.8**
WMQ PP PP 23 56 28.5 +6.1
WMQ AMB AMB

comp=Z,43nm,1.0s,mb5.1
WMQ LR LR

comp=N,8µm,16.0s,MS5.8
WMQ LR LR

comp=E,5µm,16.0s,MS5.8
WMQ LR LR

comp=Z,5µm,18.0s,MS5.4
KBS Kingsbay 40.50 354 P **P 23 54 49.7 -0.1**
KBS MLR MLR

comp=Z,2µm,21.0s,MS5.0
PMAR Madeira 40.55 277 *e*P **P 23 54 52.2 +1.4**
comp=Z,213nm,1.3s,mb5.6
BHPL Bhopal 40.72 100 *e*P **P 23 54 52.8 +0.5**
BHPL AMb AMB 23 54 54.1

comp=Z,25nm,0.9s,mb4.8
KAD Karad 41.86 110 *i*P **P 23 54 59.2 -2.5**
AKL Akola 41.87 103 *e*P **P 23 55 02.3 +0.6**
AKL AMb AMB 23 55 03.4

comp=Z,48nm,0.8s,mb5.2
GOA Goa 42.79 112 *e*P **P 23 55 07.9 -1.3**
GOA AMb AMB 23 55 15.3

comp=Z,25nm,1.0s,mb4.9
LATR Latur 42.91 106 *e*P **P 23 55 09.5 -0.7**
DANN Dangsing 42.98 89 *e*P **P 23 55 11.0 +0.3**
comp=Z,214nm,0.8s,mb6.0
KOLN Koldanda 43.13 90 *e*P **P 23 55 11.8 -0.1**
comp=Z,96nm,0.8s,mb5.6
NGP Nagpur 43.15 101 *e*P **P 23 55 11.4 -0.7**
NGP AMb AMB 23 55 13.6

comp=Z,46nm,1.0s,mb5.1
DAG Danmarks Havn 43.44 345⇓ *i*P **P 23 55 15.0 +1.2**
DAG pmax pmax

comp=Z,50nm,1.3s,mb5.1
DAG Danmarks Havn 43.44 345⇓ *i*P **P 23 55 15.0 +1.2**
comp=Z,50nm,1.3s,mb5.1
GKN Gorkha 43.82 89 *e*P **P 23 55 17.2 -0.3**
comp=Z,227nm,1.1s,mb5.8
DMN Daman 44.38 89 *e*P **P 23 55 22.0 +0.1**
comp=Z,200nm,0.9s,mb5.8
KKN Kakani 44.42 89 *e*P **P 23 55 22.0 -0.3**
comp=Z,128nm,1.0s,mb5.6
PKIN Phulchoki 44.62 89 *e*P **P 23 55 24.2 +0.3**
comp=Z,49nm,0.8s,mb5.4
PKI Pulchoki 44.63 89 *e*P **P 23 55 24.4 +0.4**
comp=Z,120nm,1.1s,mb5.6
GUN Gumba 44.83 88 *e*P **P 23 55 25.4 -0.2**
comp=Z,110nm,0.8s,mb5.8
HYB Hyderabad 45.01 106 *e*P **P 23 55 27.5 +0.4**
HYB pmax pmax

comp=Z,45nm,1.0s,mb5.2
HYB Hyderabad 45.01 106 *e*P **P 23 55 27.5 +0.4**
comp=Z,45nm,1.0s,mb5.2
HYB Hyderabad 45.01 106 *i*P **P 23 55 27.5 +0.4**
comp=Z,45nm,1.0s,mb5.2
CMLA Cha da Macela 45.15 287 *e*LQ 00 06 00.6
CMLA *e*LR LR 00 08 44.6
CMLA Cha da Macela 45.15 287 PFAKE 23 55 40.0 +12
CMLA LR LR

comp=Z,2µm,20.0s,MS5.1
JIRN Jiri 45.19 88 *e*P **P 23 55 28.4 0.0**
comp=Z,77nm,1.0s,mb5.5
RAMN Ramite 45.85 89 *e*P **P 23 55 33.1 -0.6**
comp=Z,79nm,0.8s,mb5.7
ODAN Odare 46.51 89 *e*P **P 23 55 38.3 -0.6**
comp=Z,87nm,1.1s,mb5.6
TAPN Taplejung 46.52 88 *e*P **P 23 55 38.6 -0.3**
comp=Z,51nm,0.8s,mb5.5
DBIC Dimbokro 47.20 236 P **P 23 55 43.5 -0.9**
comp=Z,11nm,0.6s,mb5.0,baz=32,slow=9.0,SNR=8.5
DBIC LR LR 00 17 50.3

comp=Z,4µm,20.2s,MS5.4,baz=31,slow=39
DBIC Dimbokro 47.20 236 *e*P **P 23 55 43.3 -1.0**
DBIC *e*PcP PcP 23 57 15.9 +0.1
DBIC *e*PP PP 23 57 31.3 -4.1
DBIC LR LR

comp=Z,4µm,20.0s,MS5.4
SUMG Summit 47.38 337 *e*P **P 23 55 45.0 -0.1**
comp=Z,14nm,0.7s,mb5.0
SUMG Summit 47.38 337 *e*PcP PcP 23 57 15.1 -0.4
SUMG Summit 47.38 337 *e*P **P 23 55 45.0 -0.1**
comp=Z,14nm,0.7s,mb5.0
SUMG *e*PcP PcP 23 57 15.2 -0.4
MOY Mondy 47.42 52 *e*P **P 23 55 51.0 +5.3**
MOY pmax pmax

comp=Z,41nm,3.1s
LIC Lamto 47.65 236 *e*P **P 23 55 46.8 -1.0**
comp=Z,54nm,0.8s,mb5.3
LIC Lamto 47.65 236 *e*P **P 23 55 46.8 -1.0**
comp=Z,27nm,0.8s,mb5.3
MSEY Mahe Island 48.51 150 *e*P **P 23 55 54.4 0.0**
comp=Z,33nm,0.8s,mb5.4

MSEY Mahe Island 48.51 150 *e*PcP PcP 23 57 17.5 -2.9
MSEY Mahe Island 48.51 150 *e*P **P 23 55 54.4 0.0**
comp=Z,33nm,0.8s,mb5.4
MSEY *e*PcP PcP 23 57 17.6 -2.8
MSEY *e*PP PP 23 57 43.9 -3.5
MSEY LR LR

comp=Z,3µm,20.0s,MS5.2
KOD Kodaikanal 48.95 114 *e*P **P 23 55 58.5 +0.5**
KOD AMb AMB 23 55 59.7

comp=Z,26nm,1.2s,mb5.1
TLY Talaya 49.02 51 *i*P **P 23 56 00.0 +2.0**
TLY pmax pmax

comp=Z,13nm,0.8s,mb5.0
TLY MLR MLR

comp=Z,3µm,22.0s,MS5.2
TLY Talaya 49.02 51 *e*P **P 23 55 56.8 -1.2**
TLY Talaya 49.02 51 *e*PcP PcP 23 57 19.9 -1.9
TLY Talaya 49.02 51 *e*P **P 23 55 56.9 -1.2**
TLY *e*PcP PcP 23 57 19.9 -1.8
TLY LR LR

comp=Z,3µm,20.0s,MS5.2
ZAK Zakamensk 49.14 53 *e*P **P 23 55 59.9 +0.9**
ZAK pmax pmax

comp=Z,14nm,1.4s,mb4.8
GTA Gaotai 50.41 67 *e*P **P 23 56 09.0 +0.2**
GTA AP pP 23 56 13.3 +1.1
GTA XP sP 23 56 16.5 +3.0
GTA PP PP 23 58 05.8 +1.6
GTA AMB AMB

comp=Z,8.0nm,1.0s,mb4.7
GTA AMB AMB

comp=Z,934nm,5.6s
GTA LR LR

comp=N,3µm,25.3s
GTA LR LR

comp=E,2µm,18.4s
GTA LR LR

comp=Z,2µm,16.6s
SHL Shillong 50.64 87 *e*P **P 23 56 10.0 -0.7**
SONM Songino Array 51.86 55 P **P 23 56 19.6 +0.1**
comp=Z,4.6nm,0.9s,mb4.4,baz=277,slow=4.4,SNR=12
SONM PcP PcP 23 57 34.2 +1.9

comp=Z,6.3nm,1.0s,baz=298,slow=3.2,SNR=4.0
SONM LR LR 00 20 49.0

comp=Z,4µm,20.3s,MS5.4,baz=299,slow=39
SONM Songino Array 51.86 55 P **P 23 56 19.6 +0.1**
SONM 23 57 34.2
SONM pmax pmax

comp=Z,5.0nm,0.9s
SONM MLR MLR

comp=Z,4µm,20.3s
ULN Ulaanbaatar 52.27 55⇑ P **P 23 56 23.8 +1.2**
SNR=11
ULN Ulaanbaatar 52.27 55⇑ *e*P **P 23 56 22.9 +0.3**
ULN Ulaanbaatar 52.27 55 *e*PcP PcP 23 57 32.2 -1.6
ULN Ulaanbaatar 52.27 55 *e*P **P 23 56 20.6 -2.0**
ULN *e*PcP PcP 23 57 32.2 -1.7
ULN LR LR

comp=Z,4µm,19.0s,MS5.5
IMP Imphal 52.63 87 *e*P **P 23 56 26.0 +0.4**
BOD Bodaibo 53.13 41 *e*P **P 23 56 27.8 -1.0**
BOD pmax pmax

comp=Z,38nm,0.9s,mb5.3
PALK Pallekele 53.30 114 *e*P **P 23 56 29.7 -0.9**
PALK *e* 23 58 30.1
PALK pmax pmax

comp=Z,9.0nm,0.9s,mb4.7
PALK Pallekele 53.30 114 *e*P **P 23 56 29.7 -0.9**
comp=Z,9.3nm,0.9s,mb4.7
PALK Pallekele 53.30 114 *e*PP PP 23 58 30.1 -0.8
PALK Pallekele 53.30 114 *e*P **P 23 56 29.7 -0.9**
comp=Z,9.3nm,0.9s,mb4.7
PALK *e*PP PP 23 58 30.1 -0.8
LSZ Lusaka 54.62 186 P **P 23 56 40.3 +0.2**
comp=Z,7.9nm,0.8s,mb4.8,baz=18,slow=6.2,SNR=4.6
LSZ Lusaka 54.62 186 P **P 23 56 40.3 +0.2**
LSZ pmax pmax

comp=Z,8.0nm,0.9s,mb4.8
LSZ Lusaka 54.62 186 *e*P **P 23 56 38.3 -1.8**
LSZ LR LR

comp=Z,4µm,19.0s,MS5.5
LZH Lanzhou 54.69 70 P **P 23 56 41.0 +0.4**
LZH AP pP 23 56 46.0 +2.0
LZH XP sP 23 56 48.5 +3.2
LZH PP PP 23 58 44.3 +1.4
LZH AMB AMB

comp=Z,65nm,1.2s,mb5.5
LZH AMB AMB

comp=Z,267nm,6.0s
LZH LR LR

comp=N,4µm,15.9s
LZH LR LR

comp=Z,4µm,17.0s,MS5.6
TIXI Tiksi 54.86 23⇑ *e*P **P 23 56 40.8 -0.5**
TIXI pmax pmax

comp=Z,52nm,1.7s,mb5.3
TIXI Tiksi 54.86 23⇑ *e*P **P 23 56 40.8 -0.5**
TIXI pmax pmax

comp=Z,52nm,1.7s,mb5.3
TIXI Tiksi 54.86 23 PFAKE 23 56 50.0 +8.7
TIXI LR LR

comp=Z,2µm,22.0s,MS5.2
TIXI Tiksi 54.86 23⇑ *e*P **P 23 56 40.9 -0.4**
CD2 Chengdu 57.05 75 P **P 23 56 59.0 +1.5**
CD2 AMB AMB

comp=Z,20nm,1.0s,mb5.1
CD2 AMB AMB

comp=Z,980nm,11.6s
CD2 LR LR

comp=N,430nm,11.4s
CD2 LR LR

comp=Z,410nm,16.8s
HHC Hu-ho-hao-te 58.01 61 *e*P **P 23 57 04.3 +0.2**
HHC AP pP 23 57 08.8 +1.2
HHC XP sP 23 57 11.5 +2.6
HHC PCP PcP 23 57 54.8 -1.3
HHC PP PP 23 59 14.5 +2.1
HHC AMB AMB

comp=Z,12nm,0.9s,mb4.9
HHC AMB AMB

comp=Z,558nm,7.6s
HHC LR LR

comp=N,2µm,19.0s,MS5.4
HHC LR LR

comp=E,2µm,20.2s,MS5.4
HHC LR LR

comp=Z,2µm,20.2s,MS5.2
YAK Yakutsk 58.92 33 *e*P **P 23 57 10.4 +0.2**
YAK pmax pmax

comp=Z,25nm,0.9s,mb5.2
YAK pmax pmax

comp=E,23nm,1.9s
YAK pmax pmax

comp=N,12nm,2.1s
YAK MLR MLR

comp=Z,2µm,17.0s,MS5.3
YAK MLR MLR

comp=E,2µm,21.0s,MS5.4
YAK MLR MLR

comp=N,2µm,21.0s,MS5.4
YAK Yakutsk 58.92 33⇑ *e*P **P 23 57 12.2 +2.0**
NRGR Nerungri 58.97 40 *e*P **P 23 57 12.9 +2.3**
OPO Ambohidratompo 59.19 164 P **P 23 57 13.7 +1.2**
comp=N,14nm,0.8s,mb5.1,baz=341,slow=6.2,SNR=15
KMI Kunming 59.24 81 P **P 23 57 13.3 +0.4**
KMI AP pP 23 57 18.3 +1.9
KMI PP PP 23 59 27.8 +4.2
KMI AMB AMB

comp=Z,13nm,1.0s,mb4.9
KMI AMB AMB

comp=Z,369nm,10.4s
KMI LR LR

comp=N,1µm,22.3s,MS5.1
KMI LR LR

comp=E,1µm,24.7s,MS5.1
KMI LR LR

comp=Z,1µm,21.1s,MS4.9
XAN Xi'an 59.33 69 P **P 23 57 14.3 +0.9**
XAN AP pP 23 57 18.3 +1.4
XAN PP PP 23 59 23.5 -0.7
XAN AMB AMB

comp=Z,80nm,1.2s,mb5.6
XAN LR LR

comp=N,558nm,25.1s,MS5.0
XAN LR LR

comp=E,1µm,26.6s,MS5.0
XAN LR LR
comp=Z,2µm,26.1s,MS5.0
ABPO Ambohimpanom 59.63 164 PFAKE 23 57 30.0 +15
ABPO LR LR
comp=Z,2µm,20.0s,MS5.3
CHG Chiang Mai 59.80 90 ⇓P **P 23 57 15.8 -1.0**
comp=Z,178nm,1.0s,mb6.0
CHTO Chiang Mai 59.80 90 P **P 23 57 17.0 +0.2**
SNR=8.2
CHTO Chiang Mai 59.80 90 *e*P **P 23 57 15.6 -1.2**
CHTO *e* 23 58 02.1
CHTO pmax pmax
comp=Z,18nm,1.0s,mb5.1
CHTO MLR MLR
comp=Z,1µm,20.0s,MS5.0
CHTO Chiang Mai 59.80 90 *e*PcP PcP 23 58 02.1 -1.4
CHTO Chiang Mai 59.80 90 *e*P **P 23 57 15.6 -1.3**
comp=Z,18nm,1.0s,mb5.0
CHTO *e*PcP PcP 23 58 02.1 -1.4
CHTO LR LR
comp=Z,1µm,20.0s,MS5.0
CM31 Chiang Mai Arr 60.00 90 *e*P **P 23 57 18.2 0.0**
CM31 Chiang Mai Arr 60.00 90 *e*P **P 23 57 18.2 0.0**
CM31 LR LR
comp=Z,813nm,20.0s,MS4.9
CMAR Chiang Mai Arr 60.00 90 P **P 23 57 17.3 -0.9**
comp=Z,11nm,0.8s,mb4.9,baz=300,slow=7.9,SNR=36
CMAR LR LR 00 28 08.3
comp=Z,825nm,18.6s,MS4.9,baz=281,slow=41
CMAR Chiang Mai Arr 60.00 90 P **P 23 57 17.3 -0.9**
CMAR pmax pmax
comp=Z,11nm,0.8s
CMAR MLR MLR
comp=Z,825nm,18.6s
TSUM Tsumeb 60.11 197 P **P 23 57 19.3 +0.5**
comp=Z,6.2nm,1.0s,mb4.6,baz=265,slow=11,SNR=3.3
TSUM Tsumeb 60.11 197 *e*P **P 23 57 15.1 -3.7**
comp=Z,8.3nm,1.1s,mb4.7
TSUM LR LR
comp=Z,3µm,20.0s,MS5.5
FRB Frobisher Bay 60.19 330 P **P 23 57 19.1 +0.2**
comp=Z,29nm,0.8s,mb5.3,baz=65,slow=7.5,SNR=27
FRB Frobisher Bay 60.19 330 P **P 23 57 19.1 +0.2**
FRB pmax pmax
comp=Z,29nm,0.8s
FRB Frobisher Bay 60.19 330 P **P 23 57 19.0 +0.1**
RES Resolute Bay 61.10 346 P **P 23 57 25.1 +0.2**
comp=Z,5.4nm,0.8s,mb4.7,baz=20,slow=11,SNR=9.6
RES Resolute Bay 61.10 346 P **P 23 57 25.2 +0.2**
RES pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
RES Resolute Bay 61.10 346 *e*P **P 23 57 24.5 -0.5**
comp=Z,14nm,1.1s,mb5.0
RES Resolute Bay 61.10 346 *e*P **P 23 57 24.5 -0.5**
comp=Z,14nm,1.1s,mb5.0
BJI Beijing 61.50 60 P **P 23 57 27.3 -0.9**
BJI AMB AMB
comp=Z,14nm,0.9s,mb5.1
BJI AMB AMB
comp=Z,837nm,4.9s
BJI LR LR
comp=N,1µm,17.2s,MS5.3
BJI LR LR
comp=E,1µm,13.5s,MS5.3
BJI LR LR
comp=Z,556nm,20.9s
GYA Guiyang 61.52 78⇑ *i*P **P 23 57 28.8 +0.3**
GYA PCP PcP 23 58 12.8 +2.5
GYA PP PP 23 59 44.8 +1.0
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,420nm,11.5s
GYA LR LR
comp=N,1µm,15.1s,MS5.3
GYA LR LR
comp=E,1µm,17.3s,MS5.3
GYA LR LR
comp=Z,2µm,18.4s,MS5.2
NST Nakhon Sawan 62.55 92 P **P 23 57 30.0 -5.5**
SCHQ Schefferville 63.98 321 P **P 23 57 44.5 0.0**
comp=Z,7.6nm,0.8s,mb4.8,baz=82,slow=4.4,SNR=4.4
SCHQ Schefferville 63.98 321 P **P 23 57 44.5 0.0**
SCHQ LR LR
comp=Z,3µm,20.0s,MS5.5
TIA Tai'an 64.06 63 *e*P **P 23 57 47.5 +2.2**
LBTB Lobatse 64.50 188 *e*P **P 23 57 46.8 -1.3**
LBTB pmax pmax
comp=Z,15nm,0.8s,mb5.1
LBTB MLR MLR
comp=Z,3µm,19.0s,MS5.4
LBTB Lobatse 64.50 188 *e*P **P 23 57 46.8 -1.3**
comp=Z,15nm,0.8s,mb5.1
LBTB Lobatse 64.50 188 *e*P **P 23 57 46.8 -1.3**
comp=Z,15nm,0.8s,mb5.1
LBTB LR LR
comp=Z,3µm,19.0s,MS5.4
WHN Wuhan 65.06 70 P **P 23 57 53.8 +1.8**
CN2 Changchun 65.58 53 *e*P **P 23 57 56.5 +1.4**
CN2 *e*XP sP 23 58 03.8 +3.9
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,2µm,16.0s,MS5.6
CN2 LR LR
comp=E,2µm,16.0s,MS5.6
CN2 LR LR
comp=Z,2µm,17.0s,MS5.4
SHEL Horse Pasture 65.97 221 PFAKE 23 58 10.0 +12
SHEL LR LR
comp=Z,2µm,20.0s,MS5.3
KLR Kul'dur 66.33 45 *e*P **P 23 57 55.2 -4.6**
SEY Seymchan 67.08 26⇑ *e*P **P 23 58 05.1 +0.7**
BILL Bilibino 67.23 17 *e*P **P 23 58 05.0 -0.3**
BILL *i* 00 00 34.0
BILL pmax pmax
comp=Z,47nm,1.7s,mb5.2
BILL MLR MLR
comp=Z,2µm,18.0s,MS5.4
BILL Bilibino 67.23 17⇑ *e*P **P 23 58 05.1 -0.2**
MDJ Mudanjiang 67.64 50 P **P 23 58 04.8 -3.5**
MDJ AMB AMB
comp=Z,5.0nm,1.8s,mb4.2
MDJ AMB AMB
comp=Z,921nm,10.3s
BOSA Boshof 68.10 187 P **P 23 58 11.1 0.0**
comp=Z,40nm,0.8s,mb5.5,baz=5.1,slow=6.8,SNR=31
BOSA LR LR 00 29 22.9
comp=Z,2µm,18.2s,MS5.4,baz=130,slow=37
BOSA Boshof 68.10 187 *e*P **P 23 58 10.5 -0.6**
BOSA *e* 23 58 34.4
BOSA pmax pmax
comp=Z,36nm,0.8s,mb5.5
BOSA MLR MLR
comp=Z,3µm,19.0s,MS5.5
BOSA Boshof 68.10 187 *e*P **P 23 58 10.5 -0.6**
comp=Z,36nm,0.8s,mb5.5
BOSA Boshof 68.10 187 *e*PcP PcP 23 58 34.4 -2.7
BOSA Boshof 68.10 187 *e*P **P 23 58 10.5 -0.6**
comp=Z,36nm,0.8s,mb5.5
BOSA *e*PcP PcP 23 58 34.4 -2.7
BOSA LR LR
comp=Z,3µm,19.0s,MS5.5
KSRS Korea Array 70.65 57 P **P 23 58 26.4 -0.6**
comp=Z,20nm,0.7s,mb5.2,baz=301,slow=5.3,SNR=25
KSRS LR LR 00 32 51.1
comp=Z,4µm,18.4s,MS5.7,baz=312,slow=39
KSRS Korea Array 70.65 57 P **P 23 58 26.5 -0.5**
KSRS pmax pmax
comp=Z,20nm,0.7s,mb5.2
KSRS MLR MLR
comp=Z,4µm,18.4s,MS5.7
PKME Peaks-Kenny Pk 70.70 313 PFAKE 23 58 40.0 +13
PKME LR LR
comp=Z,2µm,19.0s,MS5.5
SUR Sutherland 72.36 191 *e*P **P 23 58 34.2 -2.9**
comp=Z,26nm,0.9s,mb5.2
SUR Sutherland 72.36 191 *e*P **P 23 58 34.2 -3.0**
comp=Z,26nm,0.9s,mb5.2
SUR *e*PP PP 00 01 11.5 -7.0
SUR LR LR
comp=Z,3µm,19.0s,MS5.6
LBNH Lisbon 72.81 313 PFAKE 23 58 50.0 +10
LBNH LR LR
comp=Z,2µm,20.0s,MS5.3
YHNB Yeheng 73.51 72 *e*P **P 23 58 42.3 -2.1**
YHNB Yeheng 73.51 72 *e*P **P 23 58 42.3 -2.0**
YHNB LR LR
comp=Z,2µm,21.0s,MS5.3
YSS Yuzh-Sakhalins 73.59 42 *e*P **P 23 58 47.0 +2.5**
YSS pmax pmax
comp=Z,220nm,1.8s,mb5.8
COLD Coldfoot 73.63 1 *e*P **P 23 58 42.4 -2.0**
comp=Z,18nm,0.9s,mb5.0
COLD Coldfoot 73.63 1 *e*PcP PcP 23 58 58.7 -1.5
COLD Coldfoot 73.63 1 *e*P **P 23 58 42.4 -2.0**
comp=Z,18nm,0.9s,mb5.0
COLD *e*PcP PcP 23 58 58.7 -1.5
NACB Ninganchiao 73.96 72 *e*P **P 23 58 43.0 -4.0**
LONY Lake Ozonia 74.05 315 *e*P **P 23 58 47.7 +0.5**
comp=Z,13nm,0.8s,mb4.9
LONY Lake Ozonia 74.05 315 *e*P **P 23 58 47.7 +0.5**
comp=Z,13nm,0.8s,mb4.9
LONY LR LR
comp=Z,2µm,19.0s,MS5.5
YULB Yu-li 74.20 73 *e*P **P 23 58 47.2 -1.3**
comp=Z,33nm,1.0s,mb5.2
YULB Yu-li 74.20 73 *e*P **P 23 58 47.2 -1.2**
comp=Z,33nm,1.0s,mb5.2
YULB *e*PcP PcP 23 58 57.8 -5.6
NCB Newcomb 74.27 314 PFAKE 23 59 00.0 +12
NCB LR LR
comp=Z,2µm,21.0s,MS5.4
YKA Yellowknife Ar 75.14 345 P **P 23 58 53.4 +0.2**
comp=Z,11nm,0.9s,mb4.8,baz=12,slow=6.4,SNR=50
YKA LR LR 00 31 36.7
comp=Z,158nm,20.2s,MS4.3,baz=350,slow=36
YKA Yellowknife Ar 75.14 345 P **P 23 58 53.4 +0.2**
YKA pmax pmax
comp=Z,11nm,0.9s
YKA MLR MLR
comp=Z,158nm,20.2s
ASAJ Asahikawa 75.36 45 LR LR 00 34 25.6
comp=Z,976nm,20.6s,MS5.1,baz=146,slow=38
COLA College 76.02 0 *e*P **P 23 58 57.3 -0.9**
COLA *e* 23 59 09.3
COLA MLR MLR
comp=Z,923nm,19.0s,MS5.1
COLA College 76.02 0 *e*PcP PcP 23 59 09.3 -1.2
EGAK Eagle 76.02 357 PFAKE 23 59 10.0 +12
EGAK LR LR
comp=Z,1µm,19.0s,MS5.3
PETK Petropavlovsk- 76.13 31 P **P 23 59 02.0 +2.9**
comp=Z,21nm,1.3s,mb4.9,baz=183,slow=10,SNR=3.7
PETK LR LR 00 37 50.8
comp=Z,1µm,19.2s,MS5.3,baz=311,slow=40
SADO Sadowa 76.40 317 P **P 23 59 01.6 +0.9**
comp=Z,6.3nm,0.9s,mb4.6,baz=70,slow=5.0,SNR=3.8
BINY Binghamton 76.40 314 PFAKE 23 59 10.0 +9.2
BINY LR LR
comp=Z,3µm,20.0s,MS5.6
PET Petropavlovsk 76.57 30 PFAKE 23 59 10.0 +8.5
PET LR LR
comp=Z,2µm,20.0s,MS5.4
ERM Erimo 77.05 46 PFAKE 23 59 20.0 +16
ERM LR LR
comp=Z,2µm,21.0s,MS5.4
MCK McKinley 77.16 1 *e*P **P 23 59 02.7 -2.0**
comp=Z,10µm,0.8s
MCK McKinley 77.16 1 *e*P **P 23 59 02.7 -2.0**
comp=Z,20µm,0.8s
MAJO Matsushiro 77.72 53 *e*P **P 23 59 11.6 +3.2**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.8
MAJO MLR MLR
comp=Z,1µm,21.0s,MS5.3
MAJO Matsushiro 77.72 53 *e*P **P 23 59 11.6 +3.2**
comp=Z,11nm,0.8s,mb4.8
MAJO LR LR
comp=Z,1µm,21.0s,MS5.3
MAT Matsushiro 77.72 53 P **P 23 59 09.4 +1.1**
MJAR Matsushiro Arr 77.72 53 P **P 23 59 07.8 -0.6**
comp=Z,5.9nm,0.8s,mb4.6,baz=318,slow=2.4,SNR=14
MJAR LR LR 00 39 53.6
comp=Z,1µm,18.5s,MS5.2,baz=295,slow=41
RCBR Riachuelo 77.75 252 PFAKE 23 59 20.0 +11
RCBR LR LR
comp=Z,3µm,19.0s,MS5.6
COCO West Island 78.32 116 PFAKE 23 59 20.0 +8.1
COCO LR LR
comp=Z,2µm,19.0s,MS5.3
SSPA Standing Stone 78.51 314 *e*P **P 23 59 13.2 +0.6**
comp=Z,35nm,1.4s,mb5.1
SSPA Standing Stone 78.51 314 *e*P **P 23 59 13.2 +0.6**
comp=Z,35nm,1.4s,mb5.1
SSPA LR LR
comp=Z,2µm,22.0s,MS5.3
FFC Flin Flon 78.62 335 PFAKE 23 59 20.0 +7.0
FFC LR LR
comp=Z,2µm,19.0s,MS5.5
ERPA Erie 78.66 316 PFAKE 23 59 20.0 +6.6
ERPA LR LR
comp=Z,3µm,21.0s,MS5.6
GLMI Grayling 79.16 320 PFAKE 23 59 30.0 +14
GLMI LR LR
comp=Z,2µm,21.0s,MS5.4
KSM Kuching 79.18 97 PFAKE 23 59 30.0 +13
KSM LR LR
comp=Z,2µm,19.0s,MS5.4
PMR Palmer 79.30 1 *e*P **P 23 59 16.5 -0.1**
PMR pmax pmax
comp=Z,49nm,1.5s,mb5.2
PMR Palmer 79.30 1 *e*P **P 23 59 16.5 -0.1**
comp=Z,49nm,1.5s,mb5.2
PMR Palmer 79.30 1 *e*P **P 23 59 16.5 -0.1**
comp=Z,49nm,1.5s,mb5.2
RC01 Rabbit Creek A 79.80 1 *e*P **P 23 59 19.4 +0.1**
RC01 Rabbit Creek A 79.80 1 *e*P **P 23 59 19.4 +0.2**
CBN Corbin 79.85 311 PFAKE 23 59 30.0 +10
CBN LR LR
comp=Z,2µm,19.0s,MS5.4
EYMN Ely 80.06 326 PFAKE 23 59 30.0 +9.1
EYMN LR LR
comp=Z,2µm,19.0s,MS5.5
ULM Lac du Bonnet 80.08 330 P **P 23 59 20.2 -0.8**
comp=Z,9.7nm,0.7s,mb4.8,baz=33,slow=4.8,SNR=9.4
ULM LR LR 00 37 51.6
comp=Z,2µm,19.2s,MS5.4,baz=44,slow=38
MCWV Mont Chateau 80.27 314 PFAKE 23 59 30.0 +7.7
MCWV LR LR
comp=Z,2µm,22.0s,MS5.4
AAM Ann Arbor 80.47 318 PFAKE 23 59 30.0 +6.7
AAM LR LR
comp=Z,2µm,20.0s,MS5.5
KKM Kota Kinabalu 80.87 90 PFAKE 23 59 40.0 +14
KKM LR LR
comp=Z,1µm,21.0s,MS5.2
JHJ Hachijo jima 2 80.93 54 LR LR 00 38 32.2
comp=Z,913nm,19.0s,MS5.2,baz=20,slow=38
DLBC Dease Lake 81.47 351 P **P 23 59 29.3 +1.0**
comp=Z,3.8nm,0.8s,mb4.4,baz=107,slow=14,SNR=5.3
ACSO Alum Creek Sta 81.59 316 PFAKE 23 59 40.0 +11
ACSO LR LR
comp=Z,4µm,21.0s,MS5.7
AGMN Agassiz Refuge 81.62 328 PFAKE 23 59 40.0 +11
AGMN LR LR
comp=Z,2µm,20.0s,MS5.5
BLA Blacksburg 82.29 312 PFAKE 23 59 40.0 +7.0
BLA LR LR
comp=Z,2µm,20.0s,MS5.6
KDAK Kodiak Island 83.02 3 LR LR 00 43 19.7
comp=Z,964nm,18.1s,MS5.2,baz=191,slow=41
KDAK Kodiak Island 83.02 3 PFAKE 23 59 50.0 +14
KDAK LR LR
comp=Z,2µm,19.0s,MS5.4
JFWS Jewell Farm 83.31 322 PFAKE 23 59 50.0 +12
JFWS LR LR
comp=Z,2µm,21.0s,MS5.4
BBGH Gun Hill 83.81 282 PFAKE 23 59 50.0 +8.8
BBGH LR LR
comp=Z,3µm,21.0s,MS5.6
HDIL Hopedale 84.63 320 PFAKE 00 00 00.0 +15
HDIL LR LR
comp=Z,2µm,19.0s,MS5.4
WCI Wyandotte Cave 84.81 316 PFAKE 00 00 00.0 +14
WCI LR LR
comp=Z,3µm,20.0s,MS5.6
NHSC New Hope 85.01 309 PFAKE 00 00 00.0 +13
NHSC LR LR
comp=Z,2µm,20.0s,MS5.5
TKL Tuckaleechee C 85.30 313 P **P 23 59 47.5 -0.9**
comp=Z,14nm,0.9s,mb5.1,baz=58,slow=1.8,SNR=9.4
TKL Tuckaleechee C 85.30 313 P **P 23 59 47.5 -0.9**
TKL pmax pmax
comp=Z,14nm,0.9s,mb5.1
TKL Tuckaleechee C 85.30 313 *e*P **P 23 59 46.0 -2.4**
TKL Tuckaleechee C 85.30 313 *e*P **P 23 59 46.0 -2.5**
OLIL Olney 85.39 318 *e*P **P 23 59 47.0 -1.8**
OLIL Olney 85.39 318 *e*P **P 23 59 47.0 -1.9**
SCIA State Center 85.49 323 PFAKE 00 00 00.0 +11
SCIA LR LR
comp=Z,2µm,20.0s,MS5.5
ECSD EROS,Sioux Fal 85.58 326 PFAKE 00 00 00.0 +10
ECSD LR LR
comp=Z,2µm,19.0s,MS5.5
SJG San Juan 85.58 290 PFAKE 00 00 00.0 +10
SJG LR LR
comp=Z,2µm,21.0s,MS5.4
USIN University of 85.73 317 *e*P **P 23 59 50.6 0.0**
comp=Z,23nm,0.8s,mb5.5
USIN University of 85.73 317 *e*P **P 23 59 50.6 0.0**
comp=Z,23nm,0.8s,mb5.5
GRGR Grenville 86.03 282 PFAKE 00 00 00.0 +7.6
GRGR LR LR
comp=Z,993nm,21.0s,MS5.2
GOGA Godfrey 86.73 311 PFAKE 00 00 10.0 +14
GOGA LR LR
comp=Z,2µm,19.0s,MS5.5
EGMT Eagleton 86.88 336 PFAKE 00 00 10.0 +14
EGMT LR LR
comp=Z,3µm,22.0s,MS5.6
WVT Waverly 87.19 316 PFAKE 00 00 10.0 +12
WVT LR LR
comp=Z,3µm,20.0s,MS5.6
BBB Bella Bella 87.30 349 LR LR 00 40 25.9
comp=Z,1µm,18.7s,MS5.3,baz=206,slow=37
DAV Davao City (W) 87.47 83 LR LR 00 46 27.8
comp=Z,1µm,18.9s,MS5.3,baz=326,slow=41
DAV Davao City (W) 87.47 83 PFAKE 00 00 10.0 +11
DAV LR LR
comp=Z,1µm,20.0s,MS5.4
RSSD Black Hills 88.28 331 PFAKE 00 00 10.0 +7.2
RSSD LR LR
comp=Z,2µm,20.0s,MS5.6
SDDR Presa de Saban 88.72 294 PFAKE 00 00 20.0 +15
SDDR LR LR
comp=Z,1µm,21.0s,MS5.4
NEW Newport 88.77 341 PFAKE 00 00 20.0 +15
NEW LR LR
comp=Z,2µm,22.0s,MS5.4
LRAL Lakeview Retre 89.03 313 PFAKE 00 00 20.0 +13
LRAL LR LR
comp=Z,2µm,20.0s,MS5.6
MSO Missoula 89.21 338 PFAKE 00 00 20.0 +13
MSO LR LR
comp=Z,2µm,20.0s,MS5.5
OXF Oxford 89.25 316 PFAKE 00 00 20.0 +12
OXF LR LR
comp=Z,3µm,19.0s,MS5.7
RLMT Red Lodge 89.28 334 PFAKE 00 00 20.0 +12
RLMT LR LR
comp=Z,2µm,20.0s,MS5.5
DWPF Disney 89.29 307 PFAKE 00 00 20.0 +12
DWPF LR LR
comp=Z,1µm,21.0s,MS5.4
KSU1 Kansas State U 89.29 323 PFAKE 00 00 20.0 +12
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.7
BOZ Bozeman (W) 89.58 336 PFAKE 00 00 20.0 +11
BOZ LR LR
comp=Z,3µm,21.0s,MS5.6
OGNE Ogallala 90.16 328 PFAKE 00 00 20.0 +8.3
OGNE LR LR
comp=Z,1µm,20.0s,MS5.4
BRAL Brewton 90.56 312 PFAKE 00 00 20.0 +6.2
BRAL LR LR
comp=Z,2µm,20.0s,MS5.6
KAPI Kappang 90.56 96 PFAKE 00 00 20.0 +6.0
KAPI LR LR
comp=Z,1µm,22.0s,MS5.3
CBKS Cedar Bluff 90.94 325 PFAKE 00 00 30.0 +15
CBKS LR LR
comp=Z,3µm,20.0s,MS5.7
HAWA Hanford 91.11 341 PFAKE 00 00 30.0 +14
HAWA LR LR
comp=Z,2µm,19.0s,MS5.5
NLWA Neilton Lookou 91.15 345 PFAKE 00 00 30.0 +14
NLWA LR LR
comp=Z,3µm,21.0s,MS5.8
MIAR Mount Ida 91.42 319 PFAKE 00 00 30.0 +12
MIAR LR LR
comp=Z,2µm,19.0s,MS5.6
BW06 Boulder Array 91.45 333 PFAKE 00 00 30.0 +12
BW06 LR LR
comp=Z,2µm,19.0s,MS5.6
PDAR Pinedale Array 91.45 333 P **P 00 00 17.4 -0.4**
comp=Z,0.6nm,0.7s,mb4.1,baz=76,slow=3.8,SNR=3.0
PDAR PP PP 00 04 00.9 +6.4
comp=Z,1.7nm,0.9s,baz=42,slow=6.9,SNR=4.3
PDAR PKKP PKKPbc 00 17 39.1 +1.6
comp=Z,0.7nm,0.7s,baz=165,slow=6.2,SNR=3.7
PDAR LR LR 00 46 09.1
comp=Z,2µm,18.1s,MS5.6,baz=39,slow=39
PDAR Pinedale Array 91.45 333 P **P 00 00 17.4 -0.3**
PDAR Pinedale Array 91.45 333 P **P 00 00 17.4 -0.4**
PDAR PP PP 00 04 00.9 +6.4
PDAR PKKP PKKPbc 00 17 39.1 +1.6
PDAR LR LR 00 46 09.1
VBMS Vicksburg 91.59 315 PFAKE 00 00 30.0 +11
VBMS LR LR
comp=Z,2µm,20.0s,MS5.6
BMO Blue Mountains 91.97 339 PFAKE 00 00 30.0 +10
BMO LR LR
comp=Z,2µm,21.0s,MS5.5
HLID Hailey 92.32 337 PFAKE 00 00 30.0 +8.3
HLID LR LR
comp=Z,3µm,19.0s,MS5.7
ISCO Idaho Springs 92.58 329 PFAKE 00 00 30.0 +7.0
ISCO LR LR
comp=Z,2µm,19.0s,MS5.5
BDFB Brasilia 93.12 252 P **P 00 00 26.1 +0.4**
comp=Z,2.3nm,0.8s,mb4.6,baz=136,slow=26,SNR=3.7
BDFB LR LR 00 43 03.4
comp=Z,1µm,20.3s,MS5.3,baz=198,slow=36
BDFB Brasilia 93.12 252 P **P 00 00 26.1 +0.4**
BDFB pmax pmax
comp=Z,2.0nm,0.8s
BDFB MLR MLR
comp=Z,1µm,20.3s
BDFB Brasilia 93.12 252 P **P 00 00 26.1 +0.4**
WMOK Wichita Mounta 93.84 322 PFAKE 00 00 40.0 +11
WMOK LR LR
comp=Z,2µm,21.0s,MS5.6
NATX Nacogdoches 94.17 318 PFAKE 00 00 40.0 +10
NATX LR LR
comp=Z,2µm,22.0s,MS5.6
SDCO Great Sand Dun 94.29 328 PFAKE 00 00 40.0 +9.1
SDCO LR LR
comp=Z,2µm,19.0s,MS5.6
WVOR Wild Horse Val 94.57 339 PFAKE 00 00 40.0 +7.9
WVOR LR LR
comp=Z,2µm,21.0s,MS5.5
DUG Dugway 94.85 334 PFAKE 00 00 40.0 +6.6
DUG LR LR
comp=Z,2µm,21.0s,MS5.5
SDV Santo Domingo 94.86 286 PFAKE 00 00 50.0 +16
SDV LR LR
comp=Z,666nm,22.0s,MS5.1
AMTX Amarillo 95.07 324 PFAKE 00 00 50.0 +16
AMTX LR LR
comp=Z,2µm,19.0s,MS5.6
ELK Elko 95.14 336 PFAKE 00 00 50.0 +15
ELK LR LR
comp=Z,3µm,21.0s,MS5.7
HUMO Hull Mountain 95.50 342 PFAKE 00 00 50.0 +14
HUMO LR LR
comp=Z,2µm,19.0s,MS5.6
MOD Modoc 95.51 340 PFAKE 00 00 50.0 +14
MOD LR LR
comp=Z,1µm,19.0s,MS5.4
MVCO Mesa Verde 95.95 330 PFAKE 00 00 50.0 +12
MVCO LR LR
comp=Z,2µm,20.0s,MS5.5
BMN Battle Mountai 96.02 338 PFAKE 00 00 50.0 +11

BMN LR LR
comp=Z,2µm,21.0s,MS5.6
MVU Marysvale 96.17 333 PFAKE 00 00 50.0 +11
MVU LR LR
comp=Z,2µm,20.0s,MS5.5
HKT Hockley 96.21 317 PFAKE 00 00 50.0 +10
HKT LR LR
comp=Z,2µm,20.0s,MS5.5
YBH Yreka Blue Hor 96.27 342 PFAKE 00 00 50.0 +10
YBH LR LR
comp=Z,1µm,20.0s,MS5.5
ANMO Albuquerque 97.09 328 P **P** **00 00 42.0 -1.7**
comp=Z,0.6nm,0.8s,mb4.1,baz=134,slow=12,SNR=3.1
ANMO Albuquerque 97.09 328 P **P** **00 00 42.0 -1.7**
ANMO Albuquerque 97.09 328 P **P** **00 00 42.0 -1.7**
ANMO LR LR
comp=Z,2µm,19.0s,MS5.5
WDC Whiskeytown Da 97.32 342 PFAKE 00 01 00.0 +15
WDC LR LR
comp=Z,2µm,21.0s,MS5.5
GUMO Guam 97.55 66 LR LR 00 46 45.5
comp=Z,600nm,19.5s,MS5.1,baz=180,slow=37
JCT Junction City 97.81 320 PFAKE 00 01 00.0 +13
JCT LR LR
comp=Z,2µm,21.0s,MS5.5
NVAR Mina Array Bea 98.19 338 PP PP 00 04 52.6 +5.8
comp=Z,0.6nm,0.5s,baz=40,slow=4.8,SNR=5.2
TPH Tonopah 98.19 337 PFAKE 00 01 00.0 +11
TPH LR LR
comp=Z,2µm,20.0s,MS5.5
WUAZ Wupatki 98.53 331 PFAKE 00 01 00.0 +10
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.5
TPNV Topopah Spring 98.92 336 PFAKE 00 01 00.0 +8.1
TPNV LR LR
comp=Z,2µm,21.0s,MS5.7
KVTX Kingsville 99.21 317 PFAKE 00 01 00.0 +6.6
KVTX LR LR
comp=Z,2µm,19.0s,MS5.6
TEIG Tepich 99.28 306 PFAKE 00 01 00.0 +6.2
TEIG LR LR
comp=Z,1µm,21.0s,MS5.3
MCCM Marconi Confer 99.71 341 PFAKE 00 01 10.0 +15
MCCM LR LR
comp=Z,1µm,20.0s,MS5.5
DAC Darwin (Calif) 99.96 336 PFAKE 00 01 10.0 +14
DAC LR LR
comp=Z,2µm,20.0s,MS5.6
TXAR Lajitas Array 100.62 323 P Pdif 00 00 58.9 -0.6
comp=Z,1.1nm,0.9s,baz=25,slow=3.3,SNR=6.0
TXAR PP PP 00 05 11.3 +5.5
comp=Z,0.5nm,0.9s,baz=58,slow=3.1,SNR=4.0
TXAR Lajitas Array 100.62 323 P Pdif 00 00 58.9 -0.5
TXAR 00 05 11.3
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 100.62 323 P Pdif 00 00 58.9 -0.5
MBWA Marble Bar 100.63 109 *e*Pdif Pdif 00 00 58.2 -1.2
MBWA LR LR
comp=Z,1µm,20.0s,MS5.5
SAO San Andreas Ge 100.63 339 PFAKE 00 01 10.0 +11
SAO LR LR
comp=Z,1µm,19.0s,MS5.4
TUC Tucson 101.14 329 PFAKE 00 01 10.0 +8.3
TUC LR LR
comp=Z,1µm,19.0s,MS5.5
BCIP Isla Barro Col 101.42 292 PFAKE 00 01 10.0 +7.0
BCIP LR LR
comp=Z,1µm,21.0s,MS5.3
PFO Pinyon Flat Ob 102.04 334 PFAKE 00 01 20.0 +14
PFO LR LR
comp=Z,2µm,20.0s,MS5.7
TGUH Tegucigalpa,Un 103.14 301 PFAKE 00 01 20.0 +9.4
TGUH LR LR
comp=Z,807nm,20.0s,MS5.2
FITZ Fitzroy Crossi 103.17 103 *e*Pdif Pdif 00 01 07.8 -2.9
NWAO Narrogin (SRO) 106.00 120 PFAKE 00 05 50.0 +15
NWAO LR LR
comp=Z,1µm,20.0s,MS5.4
OTAV Otavalo 106.38 284 PFAKE 00 05 50.0 +13
OTAV LR LR
comp=Z,1µm,22.0s,MS5.5
CPUP Villa Florida 106.53 249 PFAKE 00 05 50.0 +13
CPUP LR LR
comp=Z,224nm,20.0s,MS4.7
MAW Mawson 109.07 168 PFAKE 00 05 50.0 +10
MAW LR LR
comp=Z,2µm,20.0s,MS5.6
WRAB Tennant Creek 110.88 99 *e*PKIKP PKiKP 00 05 43.2 -1.7
WRAB MLR MLR
comp=Z,2µm,19.0s,MS5.6
WRAB Tennant Creek 110.88 99 *e*PKiKP PKiKP 00 05 43.2 -1.7
NNA Nana 112.90 273 PFAKE 00 06 00.0 +11
NNA LR LR
comp=Z,945nm,19.0s,MS5.4
LVC Limon Verde 113.01 259 PFAKE 00 06 00.0 +11
LVC LR LR
comp=Z,924nm,19.0s,MS5.4
PMG Port Moresby 114.47 82 PFAKE 00 06 00.0 +8.1
PMG LR LR
comp=Z,2µm,20.0s,MS5.8
PAYG Puerto Ayora 115.70 292 PFAKE 00 06 10.0 +16
PAYG LR LR
comp=Z,2µm,20.0s,MS5.6
TRQA Tornquist 116.27 241 PFAKE 00 06 10.0 +15
TRQA LR LR
comp=Z,1µm,21.0s,MS5.5
LCO Las Campanas 117.85 254 PFAKE 00 06 10.0 +12
LCO LR LR
comp=Z,1µm,19.0s,MS5.5
CTAO Charters Tower 120.14 92 *e*PKIKP PKPdf 00 06 00.8 -1.8
CTAO MLR MLR
comp=Z,1µm,19.0s,MS5.6
CTAO Charters Tower 120.14 92 *e*PKIKP PKPdf 00 06 00.8 -1.8
EFI East Falkland 120.33 226 PFAKE 00 06 10.0 +8.0
EFI LR LR
comp=Z,934nm,20.0s,MS5.4
CASY Casey 120.69 153 PFAKE 00 06 10.0 +7.7
CASY LR LR
comp=Z,872nm,20.0s,MS5.4
STKA Stephens Creek 122.78 106 PKP PKPdf 00 06 07.5 +0.2
comp=Z,3.5nm,0.8s,baz=320,slow=5.3,SNR=8.1
STKA Stephens Creek 122.78 106 *e*PKIKP PKPdf 00 06 05.5 -1.9
STKA Stephens Creek 122.78 106 *e*PKPdf PKPdf 00 06 05.5 -1.9
PLCA Paso Flores 123.38 242 PKP PKPdf 00 06 08.8 +0.6
comp=Z,4.0nm,1.0s,baz=112,slow=2.0,SNR=5.0
PLCA Paso Flores 123.38 242 PKP PKPdf 00 06 08.8 +0.6
PLCA LR LR
comp=Z,1µm,22.0s,MS5.4
HNR Honiara 124.13 73 PFAKE 00 06 20.0 +9.5
HNR LR LR
comp=Z,1µm,20.0s,MS5.5
PMSA Palmer Station 127.81 213 PFAKE 00 06 30.0 +14
PMSA LR LR
comp=Z,689nm,21.0s,MS5.3
QSPA South Pole Qui 129.28 180 PKP PKPdf 00 06 18.0 -0.4
comp=Z,4.2nm,0.9s,baz=260,slow=1.1,SNR=8.0
QSPA South Pole Qui 129.28 180 PKIKP PKPdf 00 06 18.0 -0.4
TAU Tasmania Unive 131.49 117 *e*PKIKP PKPdf 00 06 22.2 -1.4
TAU MLR MLR
comp=Z,814nm,21.0s,MS5.4
TAU Tasmania Unive 131.49 117 *e*PKIKP PKPdf 00 06 22.2 -1.4
VNDA Vanda 136.30 166 PFAKE 00 06 40.0 +8.3
VNDA LR LR
comp=Z,917nm,20.0s,MS5.5
FUNA Funafuti 136.79 54 PFAKE 00 06 50.0 +16
FUNA LR LR
comp=Z,3µm,19.0s,MS6.1
SBA Scott Base 137.02 167 PFAKE 00 06 40.0 +7.0
SBA LR LR
comp=Z,818nm,20.0s,MS5.5
XMAS Kiritimati 137.59 16 PFAKE 00 06 50.0 +14
XMAS LR LR
comp=Z,2µm,21.0s,MS5.9
AFI Afiamalu 146.44 48 PFAKE 00 07 00.0 +8.4
AFI LR LR
comp=Z,800nm,19.0s,MS5.5
RPZ Rata Peaks 148.50 112 PKPbc PKPbc 00 06 58.8 +1.0
comp=Z,22nm,0.3s,baz=255,slow=3.5,SNR=7.1
RPZ Rata Peaks 148.50 112 PKPbc PKPbc 00 06 58.8 +1.0
SNZO South Karori 150.84 106 PFAKE 00 07 10.0 +12
SNZO LR LR
comp=Z,862nm,19.0s,MS5.6

URZ Urewera 152.05 99 PKPbc PKPbc 00 07 04.0 -2.6
comp=Z,178nm,0.9s,baz=335,slow=5.8,SNR=6.9
URZ Urewera 152.05 99 PKPbc PKPbc 00 07 04.0 -2.5

CSEM ***26*** *23:55:33.0, 39.39N×3307E, h3km, MD3.6, After ISK*
DDA ***26*** *23:55:33.3, 3940N×3311E, h13km±1km, Md2.2*
ISK ***26*** *23:55:33.0, 39.39N×3307E, h3km, MD3.6*
ISCJB ***26*** *23:55:34.1±0.4, 3940N±004×3306E±003, h10km, Error ellipse: s-maj=5.3km s-min=3.6km az=161.3*
ISC 26 23:55:34.0±0.6, 3939N±004×3309E±004, h3km±7km, n18, σ0s74/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**92**	*e*PG	**Pg**	**23 55 42.8**	**-0.4**
LOD	**Lodumlu**	**0.56**	**333**	*e*PG	**Pg**	**23 55 44.2**	**-0.6**
LOD				*e*SG	**Sg**	**23 55 52.8**	**+0.7**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P	**Pg**	**23 55 52.2**	**-1.3**
CDAG				*i* S	**Sg**	**23 56 07.1**	**+0.4**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**23 55 54.5**	**-0.1**
KIZT				*e*SG	**Sg**	**23 56 08.7**	**+0.2**
KDHN	**Kadinhani**	**1.15**	**222**	*i* P	**Pg**	**23 55 55.8**	**-0.4**
KDHN				*i* S	**Sg**	**23 56 12.3**	**+1.2**
CANT	**Cankiri**	**1.28**	**18**	*e*PN	**Pn**	**23 55 57.6**	**-1.2**
LADK	**Ladik-KONYA**	**1.32**	**206**	*e*PN	**Pn**	**23 55 58.4**	**-0.9**
CORM	**Corum**	**1.42**	**56**	*e*PN	**Pn**	**23 56 00.8**	**0.0**
KONT	**Konya--Tatoy**	**1.55**	**202**	*e*PN	**Pn**	**23 56 01.7**	**-0.9**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**23 56 05.3**	**+0.2**
ESKT	**Eskisehir**	**1.74**	**275**	*i* P	**Pn**	**23 56 03.7**	**-1.5**
ESKT				*i* S	**Sg**	**23 56 30.3**	**+0.3**
ESKT	**Eskisehir**	**1.74**	**275**	*e*Pn	**Pn**	**23 56 04.5**	**-0.7**
NIG	**Nigde**	**1.74**	**137**	*e*PN	**Pn**	**23 56 05.4**	**+0.2**
TOS	**Tosya**	**1.79**	**23**	*e*PN	**Pn**	**23 56 06.3**	**+0.5**
MDU	**Mudurnu**	**1.80**	**307**	*e*PN	**Pn**	**23 56 06.3**	**+0.3**
BNN	**Bunyan**	**2.21**	**103**	*e*PN	**Pn**	**23 56 12.4**	**+0.9**
TOKT	**Tokat**	**2.81**	**70**	*e*PN	**Pn**	**23 56 20.8**	**+0.9**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**23 56 24.4**	**+1.1**

TEH ***27*** *00:04:57.1, 28.37N×56.85E, h14km, ML3.6*
IDC ***27*** *00:05:14.7±2.3, 27.99N×57.10E, h0km, mb3.7/6, mb1 3.7/6, mb1mx3.5/26, mbtmp3.7/6, Error ellipse: s-maj=71.8km s-min=26.5km az=144.0*
ISCJB ***27*** *00:05:17.7±1.2, 28.41N±003×57.12E±009, h5km±7km, mb3.5/6, Error ellipse: s-maj=12.7km s-min=5.3km az=9.0*
CSEM ***27*** *00:05:18.3±0.1, 28.43N×57.13E, h10km, ML3.8, Error ellipse: s-maj=6.5km s-min=2.7km az=102.0*
THR ***27*** *00:05:21.2±0.4, 28.44N×56.93E, h33km±4km, ML3.8*
NEIC ***27*** *00:05:23.6, 28.37N×56.85E, h14km, ML3.8(THR), MN3.6(TEH), After TEH.*
ISC 27 00:05:19.4±1.2, 2839N±003×5710E±008, h6km±7km, n46, σ1s24/53, mb3.5/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.06**	**208**	*e*Pg	**Pg**	**00 05 41.1**	**+1.4**
IBND	**Bandar-abas**	**1.06**	**208**	*e*Pg	**Pg**	**00 05 41.1**	**+1.4**
IBND				*e*		00 05 58.5	
BNDS	**Bandar-Abbas**	**1.28**	**220**	*e*Pg	**Pg**	**00 05 44.1**	**0.0**
BNDS				*e*Sg	**Sg**	**00 06 00.7**	**0.0**
BNDS				AML	AML	00 06 02.5	
	comp=E,3µm,0.6s						
BNDS				AML	AML	00 06 07.2	
	comp=N,3µm,0.5s						
BNDS	**Bandar-Abbas**	**1.28**	**220**	Pg	**Pg**	**00 05 44.0**	**0.0**
BNDS				Sg	**Sg**	**00 06 00.0**	**-0.6**
KRBR	**Kerman**	**1.62**	**349**	*e*Pg	**Pg**	**00 05 49.2**	**-1.3**
KRBR				*e*Sg	**Sg**	**00 06 09.9**	**-1.6**
KRBR				AML	AML	00 06 17.9	
	comp=E,948nm,0.4s						
KRBR				AML	AML	00 06 19.9	
	comp=N,690nm,0.4s						
KRBR	**Kerman**	**1.62**	**349**	Pg	**Pg**	**00 05 49.0**	**-1.5**
KRBR				Sg	**Sg**	**00 06 09.0**	**-2.5**
IBAF	**Bafgh**	**3.46**	**338**	*e*Pn	**Pn**	**00 06 16.3**	**+2.5**
IBAF				*e*		00 07 25.7	
NAZ	**Nazwa, Dubai**	**3.62**	**201**	P	**Pn**	**00 06 16.9**	**+0.8**
	SNR=5.8						
GHIR	**Ghir-Karzin**	**3.63**	**269**	*e*Pn	**Pn**	**00 06 15.1**	**-1.0**
GHIR	**Ghir-Karzin**	**3.63**	**269**	Pn	**Pn**	**00 06 15.0**	**-1.2**
ISRV	**Sarvestan**	**3.63**	**287**	*e*Pn	**Pn**	**00 06 16.1**	**-0.2**
ISRV				*e*		00 07 31.6	
IMEH	**Mehriz**	**3.69**	**325**	Pn	**Pn**	**00 06 18.1**	**+1.1**
IMEH	**Mehriz**	**3.69**	**325**	*e*Pn	**Pn**	**00 06 18.2**	**+1.2**
IMEH				*e*		00 06 35.6	
FAQ	**Al Faqa, Dubai**	**3.87**	**201**	P	**Pn**	**00 06 19.8**	**+0.3**
	SNR=58						
IMOK	**Mouk**	**3.91**	**281**	*e*Pn	**Pn**	**00 06 19.7**	**-0.3**
IMOK				*e*		00 07 30.2	
ASUD	**Al Ashush, Dub**	**4.07**	**203**	P	**Pn**	**00 06 23.0**	**+0.8**
	SNR=340						
IKOO	**Kooshah**	**4.35**	**22**	*e*Pn	**Pn**	**00 06 30.1**	**+4.0**
IKOO	**Kooshah**	**4.35**	**22**	*e*Pn	**Pn**	**00 06 30.1**	**+4.0**
IKOO				*e*		00 07 49.0	
ICHK	**Chekchek**	**4.50**	**329**	*e*Pn	**Pn**	**00 06 29.8**	**+1.7**
ICHK				*e*		00 06 45.0	
ISAD	**Sadrabad**	**4.59**	**321**	*e*Pn	**Pn**	**00 06 31.1**	**+1.7**
ISAD				*e*		00 06 50.0	
ITEG	**Tejag**	**4.71**	**17**	*e*Pn	**Pn**	**00 06 35.2**	**+4.1**
ITEG	**Tejag**	**4.71**	**17**	*e*Pn	**Pn**	**00 06 35.2**	**+4.1**
ITEG				*e*Lg		00 07 53.2	
ITEG				*e*		00 08 09.7	
NASN	**Na'in**	**5.75**	**321**	*e*Pn	**Pn**	**00 06 45.1**	**-0.2**
NASN	**Na'in**	**5.75**	**321**	Pn	**Pn**	**00 06 45.0**	**-0.3**
IZEF	**Zefreh**	**6.09**	**319**	Pn	**Pn**	**00 06 50.2**	**+0.2**
IZEF	**Zefreh**	**6.09**	**319**	*e*Pn	**Pn**	**00 06 50.3**	**+0.3**
IZEF				*e*		00 07 27.0	
SLWS		**6.79**	**240**	P	**Pn**	**00 06 58.0**	**-1.7**
SLWS		**6.79**	**240**	P	**Pn**	**00 06 58.0**	**-1.7**
SLWS				S	**Sn**	**00 08 11.5**	**-5.9**
IKLH	**Kolahrood**	**6.83**	**317**	Pn	**Pn**	**00 07 01.2**	**+1.0**
IKLH	**Kolahrood**	**6.83**	**317**	*e*Pn	**Pn**	**00 07 01.3**	**+1.1**
IKLH				*e*		00 08 59.0	
IPIR	**Pirpir**	**6.86**	**310**	Pn	**Pn**	**00 07 01.3**	**+0.8**
IPIR				Sn	**Sn**	**00 08 13.5**	**-5.4**
IPIR	**Pirpir**	**6.86**	**310**	*e*Pn	**Pn**	**00 07 01.4**	**+0.9**
IPIR				*e*Sn	**Sn**	**00 08 13.6**	**-5.3**
IPIR				*e*		00 08 19.9	
BTHS		**7.09**	**234**	P	**Pn**	**00 07 01.3**	**-2.4**
AKTK	**Aktyubinsk**	**22.03**	**2**	P	**P**	**00 10 14.7**	**+0.2**
AKTK	**Aktyubinsk**	**22.03**	**2**	P	**P**	**00 10 14.7**	**+0.1**
AKTO	**Aktyubinsk**	**22.03**	**2**	P	**P**	**00 10 14.7**	**+0.1**
	comp=N,0.8nm,0.5s,mb3.4,baz=172,slow=13,SNR=3.6						
BVAR	**Borovoye Array**	**26.51**	**18**	P	**P**	**00 10 57.4**	**-0.1**
	comp=N,0.5nm,0.8s,mb3.1,baz=181,slow=8.4,SNR=3.8						
MKAR	**Makanchi Array**	**26.95**	**40**	P	**P**	**00 11 01.2**	**-0.3**
	comp=N,0.4nm,0.7s,mb3.1,baz=227,slow=8.7,SNR=5.5						
MKAR	**Makanchi Array**	**26.95**	**40**	P	**P**	**00 11 01.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**53.55**	**266**	P	**P**	**00 14 37.5**	**-3.9**
	comp=N,1.1nm,0.6s,mb4.0,baz=63,slow=7.3,SNR=15						
TORD	**Torodi Ar. Bea**	**53.55**	**266**	P	**P**	**00 14 37.5**	**-3.9**
PETK	**Petropavlovsk-**	**73.76**	**38**	P	**P**	**00 16 52.0**	**-2.4**
	comp=N,3.0nm,0.9s,mb4.2,baz=307,slow=8.3,SNR=4.2						
PETK	**Petropavlovsk-**	**73.76**	**38**	P	**P**	**00 16 52.0**	**-2.4**
YKA	**Yellowknife Ar**	**89.20**	**356**	P	**P**	**00 18 13.7**	**-2.0**
	comp=N,0.1nm,0.6s,mb3.3,baz=1.3,slow=5.3,SNR=3.4						
YKA	**Yellowknife Ar**	**89.20**	**356**	P	**P**	**00 18 13.7**	**-2.1**
YKA	**Yellowknife Ar**	**89.20**	**356**	P	**P**	**00 18 13.7**	**-2.0**

IDC ***27*** *00:15:44.3±0.9, 52.24N×168.39W, h0km, mb3.7/12, mb1 3.9/13, mb1mx3.9/28, mbtmp3.8/13, ML3.5/1, Error ellipse: s-maj=31.0km s-min=14.8km az=0.0*
ISCJB ***27*** *00:15:46.8±2.1, 52.14N±007×168.3W±0.1, h31km±13km, mb3.7/11, Error ellipse: s-maj=14.1km s-min=8.4km az=40.6*
NEIC ***27*** *00:15:47.3, 52.13N×168.11W, h26km, ML3.3(AEIC), After AEIC.*
ISC 27 00:15:47.5±1.9, 5219N±006×1682W±01, h21km±12km, n19, σ0s73/23, mb3.7/11, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.87**	**335**	P	**Pb**	**00 16 03.1**	**-0.8**
NIKO				S	**Sb**	**00 16 16.2**	**+1.1**
OKFG	**Magazine Ridge**	**1.24**	**9**	P	**Pn**	**00 16 09.2**	**-0.4**
OKFG				S	**Sn**	**00 16 25.7**	**0.0**
OKCD	**Okmok Cone D**	**1.25**	**4**	P	**Pn**	**00 16 09.6**	**-0.1**
OKCD				S	**Sn**	**00 16 26.4**	**+0.5**

UNV Unalaska Valle 1.97 32 P **Pn** **00 16 19.1 -0.4**
UNV S **Sn** **00 16 43.0 -0.5**
KDAK Kodiak Island 10.59 52 Pn **Pn** **00 18 17.2 -0.6**
0.9nm,0.3s,baz=230,slow=7.2,SNR=5.5
FX1 Attu Island--F 11.35 281 Pn **Pn** **00 18 28.1 -0.1**
1.0nm,0.3s,baz=82,slow=23,SNR=7.1
PETK Petropavlovsk- 20.58 286 P **P** **00 20 24.5 -0.2**
5.4nm,0.6s,baz=84,slow=14,SNR=23
YKA Yellowknife Ar 29.84 49 P **P** **00 21 53.4 +0.7**
0.1nm,0.5s,mb2.8,baz=278,slow=7.6,SNR=6.1
YKA Yellowknife Ar 29.84 49 P **P** **00 21 53.4 +0.7**
PDAR Pinedale Array 39.76 80 P **P** **00 23 19.9 +1.4**
0.6nm,1.0s,mb3.3,baz=331,slow=5.4,SNR=4.1
KSRS Korea Array 46.11 278 P **P** **00 24 11.1 +1.1**
1.4nm,0.6s,mb4.0,baz=57,slow=8.4,SNR=5.4
TXAR Lajitas Array 52.06 90 P **P** **00 24 56.6 +1.0**
0.2nm,0.8s,mb3.1,baz=308,slow=4.4,SNR=3.1
KURK Kurchatov 62.97 319 P **P** **00 26 12.0 -0.1**
1.0nm,0.8s,mb4.0,baz=45,slow=8.1,SNR=2.4
BVAR Borovoye Array 64.25 325 P **P** **00 26 20.4 -0.2**
0.9nm,0.5s,mb4.1,baz=62,slow=6.6,SNR=8.3
MKAR Makanchi Array 64.43 314 P **P** **00 26 20.9 -0.9**
0.8nm,0.7s,mb3.8,baz=53,slow=6.5,SNR=8.2
AKASG Malin Array Be 76.43 349 P **P** **00 27 34.0 -1.0**
0.7nm,0.3s,mb4.0,baz=16,slow=6.4,SNR=3.1
CMAR Chiang Mai Arr 77.33 284 P **P** **00 27 41.4 +0.8**
0.7nm,0.3s,mb4.0,baz=28,slow=5.7,SNR=4.2
WRA Warramunga Arr 87.44 233 P **P** **00 28 31.9 -1.2**
0.2nm,0.5s,mb3.6,baz=36,slow=6.2,SNR=2.6
ASAR Alice Springs 90.81 231 P **P** **00 28 48.9 -0.1**
0.2nm,0.5s,mb3.7,baz=33,slow=3.5,SNR=3.6

ISCJB ***27*** *00:17:11.7±0.4, 436S±007×10122E±009, h25km, mb4.0/15, Error ellipse: s-maj=13.8km s-min=8.0km az=147.9*
NEIC ***27*** *00:17:12.7±4.3, 442S×10120E, h18km±27km, mb4.1/5, Error ellipse: s-maj=11.8km s-min=5.2km az=54.0*
IDC ***27*** *00:17:14.1±1.3, 441S×10120E, h25km±4km, mb3.9/11, mb1 4.0/12, mb1mx3.9/22, mbtmp3.9/12, ML3.7/1, Error ellipse: s-maj=52.9km s-min=13.4km az=55.0*
ISC 27 00:17:10.0±7.3, 443S±009×1012E±01, h1km±45km, n31, σ0s50/29, mb4.1/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.52**	**343**	Pn	**Pn**	**00 19 00.7**	**-0.3**
	1.3nm,0.3s,baz=143,slow=10,SNR=6.0						
KSM	**Kuching**	**10.85**	**57**	*e*Pn	**Pn**	**00 19 46.5**	**0.0**
CMAR	**Chiang Mai Arr**	**22.84**	**355**	P	**P**	**00 22 15.1**	**+0.3**
	3.1nm,0.6s,mb4.0,baz=183,slow=8.7,SNR=21						
MBWA	**Marble Bar**	**24.52**	**134**	P	**P**	**00 22 32.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**27.52**	**122**	*e*P	**P**	**00 22 58.7**	**+0.3**
	1.5nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**35.79**	**118**	P	**P**	**00 24 10.5**	**-0.5**
	1.1nm,0.8s,mb3.7,baz=304,slow=9.0,SNR=5.6						
WRAB	**Tennant Creek**	**35.79**	**118**	*e*P	**P**	**00 24 11.1**	**0.0**
	1.5nm,0.6s,mb4.0						
WB2	**Warramunga Arr**	**35.80**	**118**	P	**P**	**00 24 11.0**	**-0.2**
ASAR	**Alice Springs**	**36.90**	**124**	P	**P**	**00 24 20.4**	**-0.2**
	0.3nm,0.6s,mb3.2,baz=294,slow=7.5,SNR=3.7						
ASAR				pP		00 24 28.9	
	1.0nm,0.8s,baz=300,slow=8.3,SNR=6.0						
CTAO	**Charters Tower**	**46.53**	**114**	P	**P**	**00 25 39.0**	**-0.5**
STKA	**Stephens Creek**	**46.68**	**131**	P	**P**	**00 25 41.0**	**+0.4**
	1.2nm,0.7s,mb4.1,baz=300,slow=9.0,SNR=3.9						
STKA	**Stephens Creek**	**46.68**	**131**	P	**P**	**00 25 41.0**	**+0.4**
KSRS	**Korea Array**	**48.54**	**29**	P	**P**	**00 25 55.1**	**+0.3**
	1.3nm,0.5s,mb4.2,baz=216,slow=7.9,SNR=6.8						
SONM	**Songino Array**	**52.24**	**4**	P	**P**	**00 26 24.1**	**+1.4**
	3.9nm,0.7s,mb4.5,baz=181,slow=8.0,SNR=11						
MJAR	**Matsushiro Arr**	**53.45**	**37**	P	**P**	**00 26 30.9**	**-1.0**
	0.5nm,0.3s,mb3.9,baz=198,slow=7.9,SNR=4.8						
MK31	**Makanchi Array**	**53.67**	**344**	*e*P	**P**	**00 26 33.2**	**0.0**
MK31				*e*		00 26 41.7	
MKAR	**Makanchi Array**	**53.67**	**344**	P	**P**	**00 26 34.0**	**+0.7**
	2.6nm,0.8s,mb4.3,baz=147,slow=8.3,SNR=23						
MKAR				pP		00 26 41.0	
	1.9nm,0.7s,baz=152,slow=8.6,SNR=3.7						
MKAR	**Makanchi Array**	**53.67**	**344**	P	**P**	**00 26 34.0**	**+0.7**
MKAR				pP		00 26 41.0	
KURK	**Kurchatov**	**58.25**	**343**	P	**P**	**00 27 05.9**	**-0.1**
	1.1nm,0.3s,mb4.3,baz=160,slow=6.1,SNR=8.0						
KURK	**Kurchatov**	**58.25**	**343**	*e*P	**P**	**00 27 06.1**	**+0.1**
	4.5nm,1.0s,mb4.5						
ZALV	**Zalesovo Beam**	**59.76**	**349**	P	**P**	**00 27 16.6**	**+0.2**
	2.3nm,0.7s,mb4.3,baz=178,slow=5.3,SNR=10						
ZALV				pP		00 27 23.9	
	1.3nm,0.5s,baz=186,slow=4.5,SNR=3.3						
CASY	**Casey**	**62.09**	**176**	*e*P	**P**	**00 27 31.7**	**-0.4**
	44nm,1.0s						
BVAR	**Borovoye Array**	**62.85**	**340**	P	**P**	**00 27 37.1**	**-0.3**
	1.1nm,0.6s,mb4.2,baz=134,slow=8.5,SNR=6.7						
BVAR				pP		00 27 44.5	
	1.1nm,0.7s,baz=148,slow=8.7,SNR=4.5						
BRVK	**Borovoye**	**62.91**	**340**	*e*P	**P**	**00 27 37.4**	**-0.4**
	1.9nm,0.8s,mb4.3						
GNI	**Garni**	**68.08**	**316**	P	**P**	**00 28 11.0**	**-0.6**
MAW	**Mawson**	**68.24**	**195**	*e*P	**P**	**00 28 12.7**	**+0.6**
	0.8nm,0.9s,mb4.0						
KIV	**Kislovodsk**	**71.14**	**319**	P	**P**	**00 28 30.1**	**-0.2**
LSZ	**Lusaka**	**72.44**	**255**	P	**P**	**00 28 38.6**	**-0.2**
SNAA	**Sanae**	**90.21**	**198**	P	**P**	**00 30 11.8**	**-0.1**
TXAR	**Lajitas Array**	**145.84**	**41**	PKPbc	PKPbc	00 36 52.6	+0.8
	1.8nm,0.8s,baz=272,slow=1.4,SNR=18						
TXAR				pPKPbc	PKPab	00 37 00.6	+8.4
	0.7nm,0.7s,baz=321,slow=0.7,SNR=5.3						
TXAR	**Lajitas Array**	**145.84**	**41**	PKPbc	PKPbc	00 36 52.6	+0.8
TXAR				pPKPbc	PKPab	00 37 00.6	+8.4

CSEM ***27*** *00:17:33.1±0.1, 39.39N×3309E, h10km, MD2.8, Error ellipse: s-maj=1.9km s-min=1.4km az=166.0*
ISK ***27*** *00:17:33.4, 3941N×3311E, h11km, MD2.8*
ISCJB ***27*** *00:17:34.3±0.7, 3938N±005×3311E±005, h10km, Error ellipse: s-maj=7.6km s-min=5.2km az=154.2*
DDA ***27*** *00:17:34.1, 3940N×3311E, h6km±3km, Md3.0*
ISC 27 00:17:34.2±1.0, 3939N±005×3309E±006, h9km±10km, n8, σ0s90/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**92**	*e*PG	**Pg**	**00 17 43.4**	**-0.2**
KAMT				*e*SG	**Sg**	**00 17 50.1**	**+0.2**
LOD	**Lodumlu**	**0.56**	**333**	*e*PG	**Pg**	**00 17 44.6**	**-0.3**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P	**Pg**	**00 17 52.7**	**-1.0**
CDAG				*i* S	**Sg**	**00 18 08.5**	**+1.5**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PN	**Pn**	**00 17 54.7**	**-0.7**
ELDT	**Eldivan**	**1.13**	**13**	*i* P	**Pb**	**00 17 56.2**	**+0.4**
ELDT				*i* S	**Sb**	**00 18 11.4**	**+0.8**
KDHN	**Kadinhani**	**1.15**	**221**	*i* P	**Pb**	**00 17 55.6**	**-0.6**
KDHN				*i* S	**Sb**	**00 18 13.2**	**+1.9**
CORM	**Corum**	**1.42**	**56**	*e*PN	**Pn**	**00 17 59.8**	**-0.5**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**00 18 03.4**	**-1.2**

**IDC 27 00:37:11.0±10.0, 2415S×17983E, h498km±126km, mb3.5/6, mb1 3.7/6, mb1mx3.4/16, mbtmp3.5/

0.3nm,0.7s,baz=210,slow=7.1,SNR=4.1

CSEM ***27*** *00:47:29.9±0.1,3947N×3308E,h10km,MD2.8,Error ellipse: s-maj=1.6km s-min=1.2km az=7.0*
ISK ***27*** *00:47:30.2,3949N×3310E,h9km,MD2.8*
ISCJB ***27*** *00:47:31.1±0.7,3950N±006×3308E±005,h10km,Error ellipse: s-maj=9.2km s-min=5.2km az=163.3*
DDA ***27*** *00:47:32.3,3939N×3313E,h3km±3km,Md2.7*
ISC 27 00:47:31.2±0.7**,3948N**±006×**3307E**±005**,h10**km**,n10,**
σ0**86/14,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.47**	**330**	*e*PG	**Pg**	**00 47 39.9**	**-0.6**
KAMT	**Kaman**	**0.51**	**102**	*e*PG	**Pg**	**00 47 40.6**	**-0.6**
KAMT				*e*SG	**Sg**	**00 47 47.6**	**-0.3**
CDAG	**Cicekdag**	**1.02**	**81**	*i* P	**Pg**	**00 47 51.4**	**+0.5**
CDAG				*i* S	**Sg**	**00 48 04.9**	**+0.9**
CDAG	**Cicekdag**	**1.02**	**81**	*i* P	**Pg**	**00 47 51.3**	**+0.5**
CDAG				*i* S	**Sg**	**00 48 04.9**	**+0.9**
ELDT	**Eldivan**	**1.05**	**15**	*i* P	**Pg**	**00 47 54.8**	**+3.4**
KIZT	**Kizilcal**	**1.10**	**238**	*e*PN	**Pn**	**00 47 52.1**	**-0.5**
KDHN	**Kadinhani**	**1.21**	**218**	*i* P	**Pn**	**00 47 55.8**	**+1.6**
KDHN				*i* S	**Sb**	**00 48 09.8**	**0.0**
CORM	**Corum**	**1.39**	**59**	*e*PN	**Pn**	**00 47 56.2**	**-0.5**
YOZ	**Yozgat**	**1.75**	**84**	*e*PN	**Pn**	**00 48 00.6**	**-1.0**
NIG	**Nigde**	**1.82**	**138**	*e*PN	**Pn**	**00 48 02.4**	**-0.2**

ISCJB ***27*** *00:52:42.4±0.8,3939N±004×33.10E±004,h3km±8km, Error ellipse: s-maj=7.1km s-min=5.6km az=174.7*
CSEM ***27*** *00:52:42.2±0.1,3942N×3312E,h8km,MD3.1,Error ellipse: s-maj=1.3km s-min=1.3km az=15.0*
DDA ***27*** *00:52:42.8,3937N×3314E,h3km±1km,Md3.1*
ISK ***27*** *00:52:42.2,3941N×3311E,h6km,MD3.1*
ISC 27 00:52:42.9±0.6**,3939N**±004×**3312E**±004**,h7**km±6km**,n15,**
σ0**71/21,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**92**	*e*PG	**Pg**	**00 52 51.6**	**-0.2**
KAMT				*e*SG	**Sg**	**00 52 58.8**	**+1.0**
LOD	**Lodumlu**	**0.57**	**331**	*e*PG	**Pg**	**00 52 53.4**	**-0.5**
LOD				*e*SG	**Sg**	**00 53 01.4**	**+0.1**
CDAG	**Cicekdag**	**1.00**	**76**	*i* P	**Pg**	**00 53 02.2**	**+0.1**
CDAG				*i* S	**Sg**	**00 53 11.2**	**-3.9**
KIZT	**Kizilcal**	**1.09**	**243**	*e*PN	**Pn**	**00 53 03.8**	**-0.7**
KIZT				*e*SN	**Sn**	**00 53 19.0**	**-0.7**
ELDT	**Eldivan**	**1.12**	**12**	*i* P	**Pg**	**00 53 05.1**	**+0.6**
ELDT				*i* S	**Sg**	**00 53 11.2**	**-8.0**
KDHN	**Kadinhani**	**1.17**	**222**	*i* P	**Pg**	**00 53 05.4**	**+0.1**
KDHN				*i* S	**Sn**	**00 53 22.3**	**+0.6**
CANT	**Cankiri**	**1.28**	**17**	*e*PN	**Pn**	**00 53 06.6**	**-0.5**
LADK	**Ladik-KONYA**	**1.32**	**207**	*e*PN	**Pn**	**00 53 08.9**	**+1.1**
CORM	**Corum**	**1.41**	**55**	*e*PN	**Pn**	**00 53 08.9**	**0.0**
KONT	**Konya--Tatoy**	**1.56**	**203**	*e*PN	**Pn**	**00 53 11.4**	**+0.5**
YOZ	**Yozgat**	**1.72**	**81**	*e*PN	**Pn**	**00 53 13.4**	**+0.2**
NIG	**Nigde**	**1.73**	**137**	*e*PN	**Pg**	**00 53 14.2**	**-1.8**
ESKT	**Eskisehir**	**1.76**	**275**	*i* P	**Pg**	**00 53 17.1**	**+0.5**
SEYT	**Eskypehyr**	**1.76**	**275**	*i* P	**Pg**	**00 53 17.1**	**+0.5**
TOS	**Tosya**	**1.79**	**23**	*e*PN	**Pn**	**00 53 14.0**	**-0.1**

IDC ***27*** *01:12:38.1±2.3, 1048N×12392E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.6/20,mbtmp3.6/4, Error ellipse: s-maj=262.3km s-min=21.1km az=64.0*
ISCJB ***27*** *01:12:42.6±1.5,975N±004×12205E±005,h20km±12km, mb3.6/4,Error ellipse: s-maj=8.7km s-min=6.2km az=137.4*
MAN ***27*** *01:12:43, 977N×12211E,h18km,mb4.7,ML3.6,MS3.6*
ISC 27 01:12:41.8±1.5**,975N**±004×**12207E**±005**,h6**km±9km**,n13,**
σ0**92/19,mb3.6/4,1C,Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.01**	**30**	*e*P	**Pg**	**01 13 00.7**	**-0.5**
GUIM				*e*S	**Sg**	**01 13 14.1**	**-0.3**
CUYO	**Cuyo Island**	**1.50**	**317**	*e*P	**Pn**	**01 13 09.7**	**+0.4**
TBP	**Tagbilaran**	**1.77**	**92**	*e*P	**Pn**	**01 13 12.5**	**-0.4**
RCP	**Roxas**	**1.92**	**20**	*e*P	**Pn**	**01 13 15.4**	**+0.5**
RCP				*e*S	**Sn**	**01 13 38.8**	**-0.7**
PAGZ	**Pagadian**	**2.29**	**145**	*e*P	**Pn**	**01 13 21.3**	**+1.2**
PAGZ				*e*S	**Sn**	**01 13 49.0**	**+0.4**
OTRP	**Odiongan**	**2.60**	**359**	*e*P	**Pn**	**01 13 25.8**	**+1.5**
OTRP				*e*S	**Sn**	**01 13 56.4**	**+0.2**
MSLP	**Maasin**	**2.78**	**82**	*e*P	**Pn**	**01 13 26.6**	**-0.2**
MSLP				*e*S	**Sn**	**01 14 01.3**	**+0.6**
OCLP	**Ormoc**	**2.82**	**62**	*e*P	**Pn**	**01 13 26.8**	**-0.5**
ENLP	**El Nido**	**2.97**	**299**	*e*P	**Pn**	**01 13 30.7**	**+1.2**
ENPP				*e*S	**Sn**	**01 14 04.0**	**-1.5**
WRA	**Warramunga Arr**	**31.88**	**158**	P	**P**	**01 19 05.1**	**-2.8**
	0.4nm,0.4s,mb3.6,baz=341,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**35.17**	**161**	P	**P**	**01 19 35.2**	**-1.4**
	0.7nm,0.7s,mb3.7,baz=346,slow=7.8,SNR=12						
ASAR				PcP	PcP	01 22 06.3	-1.6
	0.5nm,0.7s,baz=341,slow=2.3,SNR=5.6						
MKAR	**Makanchi Array**	**50.00**	**325**	P	**P**	**01 21 37.2**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=118,slow=8.7,SNR=6.0						
KURK	**Kurchatov**	**54.21**	**327**	P	**P**	**01 22 08.7**	**+0.6**
	0.3nm,0.4s,mb3.6,baz=117,slow=9.3,SNR=3.8						

NEIC ***27*** *01:17:20.6,5234N×16802W,h13km,mb4.7/96, ML4.1(AEIC),ML4.3(PMR), After AEIC.*
MOS ***27*** *01:17:21.7±1.1,5250N×16825W,h33km,mb5.0/65,Error ellipse: s-maj=8.8km s-min=5.1km az=90.0*
ISCJB ***27*** *01:17:22.6±0.2,5247N±004×16821W±004,h41km, mb4.7/145,MS4.5/10, Error ellipse: s-maj=5.2km s-min=3.2km az=173.6*
SZGRF ***27*** *01:17:24.2,5234N×16766W,h33km,mb4.9,Fox Islands, Aleutian Islands, United States*
IDC ***27*** *01:17:24.4±0.6,5254N×16819W,h43km±4km,mb4.2/29, mb1 4.4/30,mb1mx4.3/33,mbtmp4.2/30,ML3.8/1,MS4.3/1, Ms1 4.3/1,ms1mx3.2/43,Error ellipse: s-maj=17.7km s-min=9.4km az=4.0*
BJI ***27*** *01:17:24.2,5317N×16874W,h33km,mB5.1,mb4.9,Ms4.7, Msz4.5*
ISC 27 01:17:24.7±0.2**,5253N**±004×**16820W**±004**,h43**km**,**
h43km±2.3km**:pP-P,n359,**σ0**96/**353**,mb4.7/145,MS4.5/10,**
80C-3D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.59**	**318**	P	**Pn**	**01 17 35.6**	**-1.1**
NIKO				S	**Sn**	**01 17 47.0**	**+1.6**
OKCE	**Okmok Cone E**	**0.90**	**1**	P	**Pn**	**01 17 40.7**	**-0.1**
OKFG	**Magazine Ridge**	**0.90**	**11**	P	**Pn**	**01 17 40.5**	**-0.3**
OKFG				S	**Sn**	**01 17 56.5**	**+3.9**
OKCD	**Okmok Cone D**	**0.90**	**3**	P	**Pn**	**01 17 41.0**	**0.0**
UNV	**Unalaska Valle**	**1.67**	**37**	P	**Pn**	**01 17 49.8**	**-1.6**
UNV				S	**Sn**	**01 18 11.7**	**+0.2**
AKLV	**Akutan Long Va**	**2.12**	**39**	P	**Pn**	**01 17 56.8**	**-0.7**
AKGG	**Akutan Green G**	**2.13**	**38**	P	**Pn**	**01 17 57.3**	**-0.5**
AKUT	**Akutan**	**2.17**	**41**	P	**Pn**	**01 17 57.3**	**-1.0**
FALS	**False Pass**	**3.68**	**49**	*e*Pn	**Pn**	**01 18 17.2**	**-1.7**
ATKA	**Atka Island**	**3.69**	**267**	P	**Pn**	**01 18 19.2**	**0.0**
ADK	**Adak**	**5.26**	**266**	P	**Pn**	**01 18 40.9**	**+0.3**
SDPT	**Sand Point**	**5.36**	**55**	*e*P	**Pn**	**01 18 40.4**	**-1.7**
OHAK	**Old Harbor**	**9.79**	**55**	P	**Pn**	**01 19 40.6**	**-2.1**
KDAK	**Kodiak Island**	**10.36**	**53**	P	**Pn**	**01 19 46.9**	**-3.6**
	4.7nm,0.3s,baz=268,slow=8.2,SNR=20						
FX1	**Attu Island--F**	**11.31**	**279**	P	**Pn**	**01 20 03.8**	**+0.3**
	2.3nm,0.3s,baz=158,slow=22,SNR=19						
GAMB	**Gambell**	**11.43**	**352**	*e*Pn	**Pn**	**01 20 06.1**	**+1.1**
	16nm,0.8s						
SEW	**Seward**	**12.84**	**46**	*e*Pn	**Pn**	**01 20 20.2**	**-4.1**
TNA	**Tin City**	**13.07**	**1**	*e*Pn	**Pn**	**01 20 29.0**	**+1.6**
	20nm,1.0s						
RC01	**Rabbit Creek A**	**13.21**	**42**	*e*Pn	**Pn**	**01 20 27.7**	**-1.7**
	21nm,0.8s						
PPLA	**Purkeypile**	**13.41**	**33**	*e*Pn	**Pn**	**01 20 33.7**	**+1.6**
	49nm,1.1s						
PMR	**Palmer**	**13.73**	**41**	*e*P	**Pn**	**01 20 35.7**	**-0.7**
CHUM	**Lake Minchumin**	**14.07**	**30**	*e*Pn	**Pn**	**01 20 42.4**	**+1.4**
	30nm,0.9s						
KTH	**Kantishna Hill**	**14.28**	**33**	*e*Pn	**Pn**	**01 20 43.5**	**-0.4**
	44nm,1.0s						
TRF	**Thorofare Moun**	**14.42**	**34**	*e*Pn	**Pn**	**01 20 47.2**	**+1.3**
	19nm,1.0s						
MCK	**McKinley**	**15.07**	**34**	*e*P	**Pn**	**01 20 55.5**	**+1.2**
MCK				pmax	pmax		
	comp=Z,25nm,1.1s						
MCK	**McKinley**	**15.07**	**34**	*e*Pn	**Pn**	**01 20 55.5**	**+1.2**
	comp=Z,25nm,1.1s						
PAX	**Paxson**	**15.91**	**40**	*e*P	**Pn**	**01 21 03.2**	**-2.1**
PAX				pmax	pmax		
	comp=Z,20nm,1.0s						
PAX	**Paxson**	**15.91**	**40**	*e*Pn	**Pn**	**01 21 03.2**	**-2.1**
	comp=Z,20nm,1.0s						
COLA	**College**	**16.16**	**32**	*e*P	**Pn**	**01 21 05.6**	**-2.8**
COLA				pmax	pmax		
	comp=Z,29nm,0.8s						
COLA	**College**	**16.16**	**32**	*e*Pn	**Pn**	**01 21 05.6**	**-2.9**
	comp=Z,29nm,0.8s						
MENT	**Mentasta**	**16.60**	**42**	*e*Pn	**Pn**	**01 21 11.8**	**-2.1**
COLD	**Coldfoot**	**17.17**	**24**	*e*Pn	**Pn**	**01 21 21.7**	**+0.7**
	comp=Z,31nm,1.0s						
EGAK	**Eagle**	**18.47**	**38**	*e*P	**Pn**	**01 21 34.4**	**-2.6**
	comp=Z,19nm,0.8s						
HYT	**Haines Junctio**	**18.64**	**51**	*e*Pn	**Pn**	**01 21 40.9**	**+1.9**
DAWY	**Dawson**	**18.84**	**41**	*e*P	**Pn**	**01 21 40.0**	**-1.5**
SKAG	**Skagway**	**19.49**	**56**	*e*P	**Pn**	**01 21 48.8**	**-0.4**
	comp=Z,41nm,0.7s						
BILL	**Bilibino**	**19.79**	**331**	*e*P	**Pn**	**01 21 51.3**	**-1.5**
BILL				pmax	pmax		
	comp=Z,20nm,1.2s						
BILL				MLR	MLR		
	comp=Z,700nm,17.0s						
BILL	**Bilibino**	**19.79**	**331**	*e*P	**Pn**	**01 21 51.9**	**-0.9**
	comp=Z,18nm,1.1s						
PET	**Petropavlovsk**	**19.96**	**285**	*e*P	**Pn**	**01 21 52.7**	**-2.2**
PET				pmax	pmax		
	comp=Z,46nm,0.8s						
PET	**Petropavlovsk**	**19.96**	**285**	*e*P	**Pn**	**01 21 52.4**	**-2.5**
	comp=Z,31nm,0.7s						
PETK	**Petropavlovsk-**	**20.51**	**285**	P	**P**	**01 21 58.6**	**-0.2**
	comp=Z,14nm,0.5s,baz=83,slow=14,SNR=43						
DLBC	**Dease Lake**	**22.19**	**59**	P	**P**	**01 22 15.0**	**-1.8**
	comp=Z,7.2nm,1.0s,mb4.1,baz=315,slow=8.6,SNR=2.4						
DLBC	**Dease Lake**	**22.19**	**59**	*e*P	**P**	**01 22 18.4**	**+1.6**
SEY	**Seymchan**	**23.09**	**312**	*e*P	**P**	**01 22 25.0**	**-1.3**
YKA	**Yellowknife Ar**	**29.60**	**49**	P	**P**	**01 23 25.2**	**0.0**
	comp=Z,2.3nm,0.9s,mb3.9,baz=272,slow=9.3,SNR=25						
YKA	**Yellowknife Ar**	**29.60**	**49**	P	**P**	**01 23 25.2**	**0.0**
YBH	**Yreka Blue Hor**	**32.27**	**91**	P	**P**	**01 23 50.0**	**+1.1**
	comp=Z,4.3nm,0.8s,mb4.4,baz=318,slow=7.3,SNR=6.2						
NEW	**Newport**	**32.28**	**77**	*e*P	**P**	**01 23 48.6**	**-0.3**
NEW				*e**PP	pP	01 24 02.2	+1.6
NEW				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NEW	**Newport**	**32.28**	**77**	*e*P	**P**	**01 23 48.6**	**-0.4**
	comp=Z,7.3nm,1.2s,mb4.4						
NEW				*e*pP	pP	01 24 02.2	+1.7
EDM	**Edmonton**	**32.43**	**66**	*e*P	**P**	**01 23 50.2**	**0.0**
TIXI	**Tiksi**	**32.97**	**329**	P	**P**	**01 23 53.1**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
TIXI	**Tiksi**	**32.97**	**329**	*e*P	**P**	**01 23 53.3**	**-1.4**
	comp=Z,38nm,2.4s,mb4.9						
YAK	**Yakutsk**	**33.60**	**311**	*e*P	**P**	**01 23 58.6**	**-1.8**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
MOD	**Modoc**	**33.64**	**89**	*e*P	**P**	**01 24 02.3**	**+1.4**
	comp=Z,37nm,1.7s,mb5.0						
BSMT	**Bassoo Peak**	**33.86**	**76**	*e*P	**P**	**01 24 02.7**	**0.0**
BSMT				*e*pP	pP	01 24 17.1	+2.7
WVOR	**Wild Horse Val**	**34.35**	**87**	*e*P	**P**	**01 24 06.9**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
WVOR	**Wild Horse Val**	**34.35**	**87**	*e*P	**P**	**01 24 06.9**	**-0.2**
	comp=Z,16nm,1.2s,mb4.8						
PAHR	**Pah Rah Range**	**35.50**	**91**	*e*P	**P**	**01 24 18.1**	**+1.1**
	comp=Z,43nm,1.6s,mb5.1						
HABR	**Khabarovsk**	**35.53**	**287**	*e*P	**P**	**01 24 15.6**	**-1.5**
HABR				*e**PP	pP	01 24 28.6	-0.2
HABR				*e*S	**S**	**01 29 50.2**	**+0.8**
HABR				*e**SS	sS	01 30 06.4	-2.5
HABR				*e*SS	SS	01 32 14.1	-11
HABR				*e*		01 34 29.8	
HABR				MLR	MLR		
	comp=Z,248nm,16.0s,MS4.1						
RES	**Resolute Bay**	**35.92**	**26**	*e*P	**P**	**01 24 18.1**	**-2.1**
RES				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
RES	**Resolute Bay**	**35.92**	**26**	*e*P	**P**	**01 24 18.1**	**-2.1**
	comp=Z,12nm,1.7s,mb4.5						
WAKR	**Walker**	**36.21**	**93**	*e*P	**P**	**01 24 24.2**	**+1.1**
HLID	**Hailey**	**36.29**	**82**	*e*P	**P**	**01 24 23.0**	**-0.7**
	comp=Z,3.7nm,1.1s,mb4.2						
EGMT	**Eagleton**	**36.74**	**73**	*e*P	**P**	**01 24 27.1**	**-0.3**
	comp=Z,22nm,1.1s,mb4.9						
BOZ	**Bozeman (W)**	**36.84**	**78**	*e*P	**P**	**01 24 23.4**	**-5.0**
BOZ				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.6						
BOZ	**Bozeman (W)**	**36.84**	**78**	*e*P	**P**	**01 24 23.4**	**-4.9**
	comp=Z,14nm,1.5s,mb4.6						
NVAR	**Mina Array Bea**	**36.95**	**92**	P	**P**	**01 24 30.4**	**+1.0**
	comp=Z,2.4nm,0.7s,mb4.2,baz=297,slow=8.7,SNR=8.8						
NVAR	**Mina Array Bea**	**36.95**	**92**	P	**P**	**01 24 30.4**	**+1.0**
KLR	**Kul'dur**	**37.08**	**290**	*e*P	**P**	**01 24 25.0**	**-5.4**
ELK	**Elko**	**37.41**	**87**	*e*P	**P**	**01 24 34.4**	**+1.2**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ELK	**Elko**	**37.41**	**87**	*e*P	**P**	**01 24 34.4**	**+1.1**
	comp=Z,9.0nm,1.3s,mb4.4						
YNR	**Norris Junctio**	**37.91**	**78**	*e*P	**P**	**01 24 38.8**	**+1.4**
FFC	**Flin Flon**	**38.02**	**60**	*e*P	**P**	**01 24 37.4**	**-0.9**
FFC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
FFC	**Flin Flon**	**38.02**	**60**	*e*P	**P**	**01 24 37.4**	**-0.8**
	comp=Z,5.5nm,1.0s,mb4.2						
LKWY	**Lake**	**38.16**	**78**	*e*P	**P**	**01 24 39.6**	**+0.1**
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
LKWY	**Lake**	**38.16**	**78**	*e*P	**P**	**01 24 39.6**	**+0.1**
	comp=Z,5.4nm,0.8s,mb4.3						
IMW	**Indian Meadow**	**38.20**	**80**	*e*P	**P**	**01 24 40.5**	**+0.6**
	comp=Z,5.1nm,0.9s,mb4.2						
IMW				*e*pP	pP	01 24 49.7	-2.0
RRI2	**Red Ridge**	**38.28**	**80**	*e*P	**P**	**01 24 41.2**	**+0.6**
	comp=Z,20nm,1.4s,mb4.7						
MOOW	**Moose Ponds**	**38.40**	**80**	*e*P	**P**	**01 24 41.5**	**-0.1**
	comp=Z,5.1nm,1.4s,mb4.1						
RLMT	**Red Lodge**	**38.53**	**77**	*e*P	**P**	**01 24 43.5**	**+0.9**
	comp=Z,12nm,0.9s,mb4.6						
REDW	**Red Top Meadow**	**38.55**	**80**	*e*P	**P**	**01 24 47.9**	**+5.0**
	comp=Z,13nm,1.3s,mb4.5						
LOHW	**Long Hollow**	**38.56**	**80**	*e*P	**P**	**01 24 43.3**	**+0.4**
	comp=Z,2.7nm,0.9s,mb4.0						
DUG	**Dugway**	**39.22**	**86**	*e*P	**P**	**01 24 49.0**	**+0.5**
DUG				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
DUG	**Dugway**	**39.22**	**86**	*e*P	**P**	**01 24 49.0**	**+0.5**
	comp=Z,12nm,1.2s,mb4.5						
BW06	**Boulder Array**	**39.67**	**80**	*e*P	**P**	**01 24 52.3**	**+0.1**
	comp=Z,11nm,1.3s,mb4.4						
MWC	**Mount Wilson**	**39.86**	**97**	*e*P	**P**	**01 24 52.0**	**-1.9**
MWC				pmax	pmax		
	comp=Z,91nm,0.9s,mb5.5						
MWC	**Mount Wilson**	**39.86**	**97**	*e*P	**P**	**01 24 52.0**	**-1.9**
	comp=Z,91nm,0.9s,mb5.5						
GSC	**Goldstone**	**39.89**	**95**	*e*P	**P**	**01 24 54.4**	**+0.3**
GSC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
GSC	**Goldstone**	**39.89**	**95**	*e*P	**P**	**01 24 54.4**	**+0.2**
	comp=Z,13nm,0.9s,mb4.7						
FCC	**Fort Churchill**	**40.28**	**51**	*e*P	**P**	**01 24 57.1**	**0.0**
	comp=Z,0.6nm,1.2s						
MAJO	**Matsushiro**	**40.42**	**269**	*e*P	**P**	**01 24 57.8**	**-0.7**
MAJO				*e**PP	pP	01 25 11.2	+0.9
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
MAJO	**Matsushiro**	**40.42**	**269**	*e*P	**P**	**01 24 57.8**	**-0.6**
	comp=Z,14nm,0.8s,mb4.7						
MAJO				*e*pP	pP	01 25 11.2	+0.9
MAT	**Matsushiro**	**40.42**	**269**	P	**P**	**01 24 57.7**	**-0.8**
MJAR	**Matsushiro Arr**	**40.42**	**269**	P	**P**	**01 24 57.1**	**-1.4**
	comp=Z,1.1nm,0.3s,mb4.1,baz=36,slow=7.2,SNR=5.6						
MJAR				pP	pP	01 25 09.8	-0.5
	comp=Z,4.4nm,0.7s,baz=47,slow=6.7,SNR=3.1						
TMUT	**Trail Mountain**	**40.74**	**86**	*e*P	**P**	**01 25 02.0**	**+0.9**
PFO	**Pinyon Flat Ob**	**41.25**	**96**	P	**P**	**01 25 05.8**	**+0.5**
	comp=Z,2.1nm,0.6s,mb4.0,baz=304,slow=7.9,SNR=4.1						
SRU	**San Rafael**	**41.28**	**85**	*e*P	**P**	**01 25 06.8**	**+1.3**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
SRU	**San Rafael**	**41.28**	**85**	*e*P	**P**	**01 25 06.8**	**+1.3**
	comp=Z,4.7nm,0.9s,mb4.1						
RSSD	**Black Hills**	**42.18**	**75**	*e*P	**P**	**01 25 12.4**	**-0.5**
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.2						
RSSD	**Black Hills**	**42.18**	**75**	*e*P	**P**	**01 25 12.4**	**-0.5**
	comp=Z,6.9nm,1.2s,mb4.2						
BOD	**Bodaibo**	**42.45**	**309**	*i*P	**P**	**01 25 12.7**	**-2.1**
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.4						
WUAZ	**Wupatki**	**43.06**	**90**	*e*P	**P**	**01 25 22.9**	**+2.8**
	comp=Z,14nm,1.1s,mb4.6						
ULM	**Lac du Bonnet**	**43.44**	**63**	P	**P**	**01 25 20.5**	**-2.4**
	comp=Z,2.0nm,0.6s,mb4.0,baz=2.2,slow=4.7,SNR=3.0						
ULM	**Lac du Bonnet**	**43.44**	**63**	*e*P	**P**	**01 25 22.1**	**-0.9**
	comp=Z,5.7nm,0.9s,mb4.3						
CN2	**Changchun**	**43.66**	**286**	*e*P	**P**	**01 25 24.0**	**-0.8**
CN2				*e*AP	pP	01 25 35.0	-1.7
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CN2				AMB	AMB		
	comp=Z,300nm,7.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS4.5						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS4.5						
CN2				LR	LR		
	comp=Z,600nm,19.0s,MS4.5						
SDCO	**Great Sand Dun**	**45.19**	**83**	*e*P	**P**	**01 25 36.9**	**-0.2**
	comp=Z,6.8nm,1.2s,mb4.3						
TUC	**Tucson**	**45.60**	**93**	*e*P	**P**	**01 25 39.9**	**-0.5**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TUC	**Tucson**	**45.60**	**93**	*e*P	**P**	**01 25 39.9**	**-0.5**
	comp=Z,3.8nm,1.0s,mb4.3						
KSRS	**Korea Array**	**46.09**	**277**	P	**P**	**01 25 44.6**	**+0.4**
	comp=Z,9.1nm,0.9s,mb4.7,baz=56,slow=7.4,SNR=22						
KSRS				pP	pP	01 25 56.2	-0.1
	comp=Z,5.6nm,0.8s,baz=57,slow=7.7,SNR=7.2						
ANMO	**Albuquerque**	**46.44**	**87**	P	**P**	**01 25 46.9**	**-0.1**
	comp=Z,2.7nm,1.1s,mb4.1,baz=357,slow=8.1,SNR=3.8						
ANMO	**Albuquerque**	**46.44**	**87**	*e*P	**P**	**01 25 44.0**	**-3.0**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LENM	**Lemitar**	**46.66**	**88**	*e*P	**P**	**01 25 49.6**	**+0.9**
LENM				*e*pP	pP	01 26 04.2	+3.5
ECSD	**EROS,Sioux Fal**	**46.74**	**71**	*e*P	**P**	**01 25 47.4**	**-1.9**
	comp=Z,5.8nm,0.9s,mb4.5						
LPM	**Los Pinos Moun**	**46.77**	**88**	*e*P	**P**	**01 25 49.2**	**-0.3**
LPM				*e*pP	pP	01 26 05.0	+3.4
AMTX	**Amarillo**	**49.40**	**83**	*e*P	**P**	**01 26 08.2**	**-1.6**
	comp=Z,44nm,1.8s,mb5.2						
SUMG	**Summit**	**50.41**	**17**	*e*P	**P**	**01 26 17.2**	**+0.2**
	comp=Z,24nm,1.1s,mb5.1						
WMOK	**Wichita Mounta**	**51.25**	**81**	*e*P	**P**	**01 26 23.1**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
WMOK	**Wichita Mounta**	**51.25**	**81**	*e*P	**P**	**01 26 23.1**	**-0.7**
	comp=Z,17nm,1.4s,mb4.8						
ULN	**Ulaanbaatar**	**51.47**	**301**	*e*P	**P**	**01 26 25.1**	**-0.2**
ULN	**Ulaanbaatar**	**51.47**	**301**	*e*P	**P**	**01 26 24.4**	**-0.9**
	comp=Z,5.4nm,0.8s,mb4.5						
SONM	**Songino Array**	**51.83**	**301**	P	**P**	**01 26 28.6**	**+0.5**
	comp=Z,4.5nm,1.0s,mb4.3,baz=54,slow=6.3,SNR=11						
SONM				pP	pP	01 26 40.3	+0.1
	comp=Z,5.2nm,1.0s,baz=56,slow=6.1,SNR=4.8						
TXAR	**Lajitas Array**	**52.03**	**90**	P	**P**	**01 26 29.1**	**-0.6**
	comp=Z,3.9nm,0.6s,mb4.5,baz=300,slow=5.3,SNR=63						
TXAR				pP	pP	01 26 40.6	-1.4
	comp=Z,8.1nm,0.8s,baz=294,slow=5.5,SNR=12						
HHC	**Hu-ho-hao-te**	**53.53**	**292**	*e*P	**P**	**01 26 37.5**	**-3.2**
HHC				AP	pP	01 26 53.0	+0.1
HHC				PCP	PcP	01 27 44.5	-2.5
HHC				PP	PP	01 28 39.3	-1.9

BRVK Borovoye 63.99 325 *e*P **P 01 27 52.8 -0.3**
BRVK pmax pmax
comp=Z,15nm,1.3s,mb4.9
BRVK Borovoye 63.99 325 *e*P **P 01 27 52.8 -0.3**
comp=Z,15nm,1.3s,mb4.8
MK31 Makanchi Array 64.21 314 *e*P **P 01 27 53.7 -1.0**
MKAR Makanchi Array 64.21 314 P **P 01 27 53.6 -1.0**
comp=Z,1.4nm,0.5s,mb4.2,baz=53,slow=6.7,SNR=26
ARU Arti 64.80 333 *c i*P **P 01 27 56.9 -1.4**
ARU S **S 01 36 35.4 -0.2**
ARU SS SS 01 40 50.4 +4.2
ARU pmax pmax
comp=Z,18nm,1.2s,mb5.0
ARU Arti 64.80 333 *e*P **P 01 27 57.9 -0.4**
comp=Z,29nm,1.4s,mb5.1
CD2 Chengdu 65.00 289 P **P 01 28 00.5 +0.4**
CD2 AP pP 01 28 11.0 -1.6
CD2 XP sP 01 28 14.8 -2.7
CD2 PCP PcP 01 28 33.8 +1.0
CD2 PP PP 01 30 25.3 +2.2
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,220nm,5.1s
CD2 LR LR
comp=N,270nm,9.0s
CD2 LR LR
comp=Z,290nm,10.2s,MS4.8
KAF Kangasniemi 65.13 353 *e*p **P 01 27 59.3 -1.1**
comp=Z,13nm,0.6s,mb5.1
KAF Kangasniemi 65.13 353 *e*P **P 01 27 59.3 -1.1**
KAF pmax pmax
comp=Z,13nm,0.6s,mb5.1
GYA Guiyang 66.59 283⇑ *i*P **P 01 28 10.5 +0.1**
GYA AP pP 01 28 21.0 -1.9
GYA XP sP 01 28 24.8 -3.0
GYA PP PP 01 30 39.0 +1.9
GYA AMB AMB
comp=Z,8.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,40nm,6.7s
GYA LR LR
comp=N,180nm,16.3s,MS4.5
GYA LR LR
comp=E,200nm,15.9s,MS4.5
GYA LR LR
comp=Z,250nm,17.2s,MS4.5
NB2 NORSAR Subarra 66.78 0 P **P 01 28 10.4 -0.6**
comp=Z,3.2nm,0.6s,mb4.5,baz=2.1,slow=6.5
NOA NORSAR Array B 66.78 0 P **P 01 28 09.9 -1.1**
comp=Z,6.4nm,0.8s,mb4.7,baz=0.3,slow=6.3,SNR=15
NOA pP pP 01 28 23.2 -0.4
comp=Z,4.6nm,0.9s,baz=0.2,slow=6.3,SNR=4.1
KMI Kunming 69.92 285 P **P 01 28 30.3 -0.9**
KMI AP pP 01 28 39.0 -4.8
KMI XP sP 01 28 43.0 -5.7
KMI PP PP 01 31 07.5 +1.6
KMI AMB AMB
comp=Z,12nm,1.7s,mb4.5
KMI AMB AMB
comp=Z,169nm,4.3s
KMI LR LR
comp=N,145nm,21.8s,MS4.5
KMI LR LR
comp=E,215nm,20.5s,MS4.5
KMI LR LR
comp=Z,202nm,21.1s,MS4.3
TKM2 Tokmak 2 70.18 316 *e*P **P 01 28 32.6 0.0**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TKM2 Tokmak 2 70.18 316 *e*P **P 01 28 32.6 0.0**
comp=Z,3.5nm,0.8s,mb4.3
AKTK Aktyubinsk 70.23 331 P **P 01 28 32.8 +0.1**
AKTO Aktyubinsk 70.23 331 P **P 01 28 32.8 +0.1**
comp=Z,11nm,0.8s,mb4.8,baz=38,slow=6.4,SNR=34
OBN Obninsk 70.78 345⇑ *e*P **P 01 28 35.0 -1.0**
OBN *e* 01 28 54.8
OBN pmax pmax
comp=Z,11nm,0.8s,mb4.8
LSA Lhasa 73.02 297 P **P 01 28 51.5 +1.6**
LSA AMB AMB
comp=Z,30nm,0.9s,mb5.2
SUW Suwalki 73.40 353 *e*P **P 01 28 51.0 -0.7**
SUW Suwalki 73.40 353 *e*P **P 01 28 51.0 -0.7**
SHL Shillong 75.83 293 *e*P **P 01 29 07.0 +0.8**
AKASG Malin Array Be 76.09 349 P **P 01 29 06.2 -1.1**
comp=Z,8.8nm,0.7s,mb4.8,baz=13,slow=5.7,SNR=23
AKASG Malin Array Be 76.09 349 P **P 01 29 06.2 -1.1**
AKBB Malin Array Si 76.09 349 *e*P **P 01 29 05.8 -1.5**
KIEV Kiev 76.10 349 *e*P **P 01 29 06.1 -1.3**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIEV Kiev 76.10 349 *e*P **P 01 29 06.1 -1.3**
comp=Z,7.2nm,0.8s,mb4.7
CLL Collm 76.53 359⇑ *i*P **P 01 29 09.6 -0.2**
CLL pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CLL Collm 76.53 359⇑ *i*P **P 01 29 09.6 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
TAPN Taplejung 76.73 298 *e*P **P 01 29 11.6 +0.3**
comp=Z,41nm,1.0s,mb5.3
KSP Ksiaz 76.93 357 *e*P **P 01 29 12.3 +0.3**
KSP Ksiaz 76.93 357 *e*P **P 01 29 12.2 +0.1**
BRG Berggiesshubel 76.96 359 *e*P **P 01 29 12.3 +0.1**
BRG pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
BRG Berggiesshubel 76.96 359 *e*P **P 01 29 12.3 +0.1**
comp=Z,5.9nm,1.2s,mb4.4
CHTO Chiang Mai 77.00 284 *e*P **P 01 29 12.3 -0.6**
CHTO pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CHTO Chiang Mai 77.00 284 *e*P **P 01 29 12.3 -0.6**
comp=Z,5.9nm,1.1s,mb4.4
GUN Gumba 77.27 299 *e*P **P 01 29 14.8 +0.4**
comp=Z,55nm,1.0s,mb5.4
UPC Upice 77.28 357 *e*P **P 01 29 14.3 +0.3**
CMAR Chiang Mai Arr 77.28 284 P **P 01 29 14.8 +0.3**
comp=Z,8.0nm,0.9s,mb4.7,baz=25,slow=6.2,SNR=30
PVCC Panska Ves 77.29 358 *e*P **P 01 29 14.6 +0.5**
ODAN Odare 77.29 298 *e*P **P 01 29 14.8 +0.3**
comp=Z,7.0nm,0.6s,mb4.8
JIRN Jiri 77.30 299 *e*P **P 01 29 15.1 +0.6**
comp=Z,76nm,1.0s,mb5.6
DPC Dobruska-Polom 77.42 357 *e*P **P 01 29 15.4 +0.6**
DPC *e*pP pP 01 29 21.9 -5.7
GIVF Givet 77.57 5 *e*P **P 01 29 15.6 -0.1**
comp=Z,59nm,1.4s,mb5.0
GIVF Givet 77.57 5 *e*P **P 01 29 15.6 -0.1**
GIVF pmax pmax
comp=Z,29nm,1.4s,mb5.0
GIVF Givet 77.57 5 *e*P **P 01 29 15.6 -0.1**
comp=Z,29nm,1.4s,mb5.0
BAIF Baives 77.58 5⇑ *i*P **P 01 29 15.8 +0.1**
comp=Z,14nm,1.0s,mb4.5
BAIF Baives 77.58 5⇑ *i*P **P 01 29 15.8 +0.1**
BAIF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BAIF Baives 77.58 5⇑ *i*P **P 01 29 15.8 +0.1**
comp=Z,6.9nm,1.0s,mb4.5
NKC Novy Kostel 77.61 360 *e*P **P 01 29 16.2 +0.3**
RAMN Ramite 77.65 298 *e*P **P 01 29 16.4 -0.1**
comp=Z,19nm,0.6s,mb5.2
KKN Kakani 77.69 300 *e*P **P 01 29 16.7 0.0**
comp=Z,16nm,0.5s,mb5.2
PKI Pulchoki 77.79 299 *e*P **P 01 29 17.4 +0.1**
comp=Z,34nm,0.9s,mb5.3
KWP Kalwaria 77.80 353 *e*P **P 01 29 17.3 +0.4**
KWP Kalwaria 77.80 353 ||*i*P **P 01 29 17.2 +0.3**
KWP Kalwaria 77.80 353 *e*P **P 01 29 17.3 +0.4**
PRU Pruhonice 77.83 358 *e*P **P 01 29 17.4 +0.3**
PRU *e*pP pP 01 29 25.5 -4.4
GKN Gorkha 77.86 300 *e*P **P 01 29 17.5 -0.1**
comp=Z,48nm,0.9s,mb5.4
OKC Ostrava-Krasne 77.87 356 *e*P **P 01 29 17.9 +0.6**
OKC *e*pP pP 01 29 25.0 -5.1
DMN Daman 77.92 300 *e*P **P 01 29 18.2 +0.2**
comp=Z,31nm,0.9s,mb5.2
DANN Dangsing 78.04 301 *e*P **P 01 29 19.0 +0.4**
comp=Z,45nm,0.7s,mb5.5
STHS Stebnicka Huta 78.11 354 *i*P **P 01 29 19.7 +1.0**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 78.11 354 *i*P **P 01 29 19.7 +1.0**
STHS Stebnicka Huta 78.11 354 *i*P **P 01 29 19.7 +1.0**
comp=Z,5.7nm,0.9s,mb4.5

GRA1 Grafenberg Arr 78.15 0 *e*P **P 01 29 19.6 +0.7**
comp=Z,10.0nm,1.0s,mb4.7
GRF Grafenberg Arr 78.15 0 *e*P **P 01 29 19.6 +0.7**
GRF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GRF Grafenberg Arr 78.15 0 *e*P **P 01 29 19.6 +0.7**
GRF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
GRF Grafenberg Arr 78.15 0 *e*P **P 01 29 19.6 +0.7**
comp=Z,10.0nm,1.0s,mb4.7
VRAC Vranov 78.46 357⇑ *i*P **P 01 29 20.6 0.0**
TREC Trest 78.50 358 *e*P **P 01 29 21.0 +0.2**
KOLN Koldanda 78.59 301 *e*P **P 01 29 21.5 -0.2**
comp=Z,41nm,1.1s,mb5.3
CRVS Cervenica-Dubn 78.61 354 *e*P **P 01 29 22.2 +0.8**
CRVS pmax pmax
comp=Z,39nm,2.3s,mb4.9
CRVS Cervenica-Dubn 78.61 354 *e*P **P 01 29 22.2 +0.8**
comp=Z,39nm,2.3s,mb4.9
ROSF Rostrenen 78.69 10 *e*P **P 01 29 22.1 +0.2**
KHC Kasperske Hory 78.70 359 *e*P **P 01 29 22.9 +1.0**
KHC *e*pP pP 01 29 32.5 -2.2
LDF La Druitiere 78.74 8 *e*P **P 01 29 21.8 -0.4**
comp=Z,32nm,1.1s,mb4.9
LDF La Druitiere 78.74 8 *e*P **P 01 29 21.8 -0.4**
LDF pmax pmax
comp=Z,16nm,1.1s,mb4.9
LDF La Druitiere 78.74 8 *e*P **P 01 29 21.8 -0.4**
comp=Z,16nm,1.1s,mb4.9
SGMF Saint Gilles 78.85 10 *e*P **P 01 29 22.5 -0.3**
GRR Gorron 78.88 9 *e*P **P 01 29 22.7 -0.2**
comp=Z,46nm,1.2s,mb5.0
GRR Gorron 78.88 9 *e*P **P 01 29 22.7 -0.2**
GRR pmax pmax
comp=Z,23nm,1.3s,mb5.0
GRR Gorron 78.88 9 *e*P **P 01 29 22.7 -0.2**
comp=Z,23nm,1.3s,mb5.0
GERES GERESS Array B 78.99 359 P **P 01 29 24.0 +0.5**
comp=Z,1.9nm,0.8s,mb4.1,baz=357,slow=2.9,SNR=14
KOLL Kolacno 79.11 356 *i*P **P 01 29 24.9 +0.7**
QUIF Quistinic 79.12 10⇑ *i*P **P 01 29 24.0 -0.2**
comp=Z,8.5nm,0.8s,mb4.4
QUIF Quistinic 79.12 10⇑ *i*P **P 01 29 24.0 -0.2**
QUIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
QUIF Quistinic 79.12 10⇑ *i*P **P 01 29 24.0 -0.2**
comp=Z,4.3nm,0.8s,mb4.4
VYHS Vyhne 79.17 355 *i*P **P 01 29 25.0 +0.5**
VYHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
VYHS Vyhne 79.17 355 *i*P **P 01 29 25.0 +0.5**
comp=Z,7.8nm,1.3s,mb4.5
MEZF Maizieres J'vi 79.18 5⇑ *i*P **P 01 29 24.9 +0.3**
SMOL Smolenice 79.22 356 *e*P **P 01 29 26.0 +1.2**
TRPA Tarpa 79.30 353⇑ *i*P **P 01 29 25.8 +0.6**
CDF Champ du Feu 79.36 3⇑ *i*P **P 01 29 25.6 0.0**
BUR08 Bucovina Ar. S 79.55 351 *e*P **P 01 29 26.0 -0.6**
ZST Bratislava 79.55 356 *i*P **P 01 29 27.6 +1.0**
ZST pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ZST Bratislava 79.55 356 *i*P **P 01 29 27.6 +1.0**
comp=Z,9.2nm,1.1s,mb4.6
BURAR Bucovina Array 79.58 351⇑ *i*P **P 01 29 26.0 -0.7**
PSZ Piszkesteto 79.69 354 *e*P **P 01 29 28.6 +1.2**
PSZ pmax pmax
comp=Z,12nm,1.2s,mb4.7
PSZ Piszkesteto 79.69 354⇑ *i*P **P 01 29 28.5 +1.1**
PSZ Piszkesteto 79.69 354 *e*P **P 01 29 28.6 +1.3**
comp=Z,12nm,1.2s,mb4.7
HAU Haudompre 79.73 4⇑ *i*P **P 01 29 27.8 +0.2**
comp=Z,11nm,0.9s,mb4.5
HAU Haudompre 79.73 4⇑ *i*P **P 01 29 27.8 +0.2**
HAU pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HAU Haudompre 79.73 4⇑ *i*P **P 01 29 27.8 +0.2**
comp=Z,5.3nm,0.9s,mb4.5
HINF Hinteralfeld 79.94 3⇑ *i*P **P 01 29 28.8 +0.1**
comp=Z,17nm,1.0s,mb4.6
HINF Hinteralfeld 79.94 3⇑ *i*P **P 01 29 28.8 +0.1**
HINF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
HINF Hinteralfeld 79.94 3⇑ *i*P **P 01 29 28.8 +0.1**
comp=Z,8.4nm,1.0s,mb4.6
KBL Kabul 79.98 315 *e*P **P 01 29 28.2 -1.0**
KBL pmax pmax
comp=Z,18nm,0.9s,mb5.0
KBL Kabul 79.98 315 *e*P **P 01 29 28.2 -0.9**
comp=Z,18nm,0.9s,mb5.0
KIV Kislovodsk 80.27 338 *e*P **P 01 29 31.2 +0.6**
KIV pmax pmax
comp=Z,17nm,1.2s,mb4.8
KIV Kislovodsk 80.27 338 *e*P **P 01 29 31.6 +1.0**
comp=Z,17nm,1.1s,mb4.9
LOR Lormes 80.35 5 *e*P **P 01 29 31.0 +0.1**
comp=Z,24nm,1.2s,mb4.7
LOR Lormes 80.35 5 *e*P **P 01 29 31.0 +0.1**
LOR pmax pmax
comp=Z,12nm,1.2s,mb4.7
LOR Lormes 80.35 5 *e*P **P 01 29 31.0 +0.1**
comp=Z,12nm,1.2s,mb4.7
MOTA Moosalm 80.50 0⇑ *i*P **P 01 29 32.3 +0.6**
comp=Z,9.6nm,1.1s,mb4.7,SNR=6.3
WATA Walderalm 80.51 0⇑ *i*P **P 01 29 32.4 +0.6**
comp=Z,3.7nm,0.6s,mb4.5
SSF Saint Saulge 80.53 6⇑ *i*P **P 01 29 32.1 +0.2**
comp=Z,23nm,1.1s,mb4.7
SSF Saint Saulge 80.53 6⇑ *i*P **P 01 29 32.1 +0.2**
SSF pmax pmax
comp=Z,12nm,1.1s,mb4.7
SSF Saint Saulge 80.53 6⇑ *i*P **P 01 29 32.1 +0.2**
comp=Z,12nm,1.1s,mb4.7
DRGR 80.62 352⇑ *i*P **P 01 29 32.7 +0.3**
MFF Saint Martin d 80.72 8⇑ *i*P **P 01 29 33.1 +0.2**
comp=Z,54nm,1.2s,mb5.1
MFF Saint Martin d 80.72 8⇑ *i*P **P 01 29 33.1 +0.2**
MFF pmax pmax
comp=Z,27nm,1.2s,mb5.0
MFF Saint Martin d 80.72 8⇑ *i*P **P 01 29 33.1 +0.2**
comp=Z,27nm,1.2s,mb5.0
KBA Koelnbreinsper 80.76 359⇑ *i*P **P 01 29 34.4 +1.3**
comp=Z,32nm,1.1s,mb5.2,SNR=7.2
AVF Avril sur Loir 80.79 6⇑ *i*P **P 01 29 33.3 0.0**
comp=Z,30nm,1.2s,mb4.8
AVF Avril sur Loir 80.79 6⇑ *i*P **P 01 29 33.3 0.0**
AVF pmax pmax
comp=Z,15nm,1.2s,mb4.8
AVF Avril sur Loir 80.79 6⇑ *i*P **P 01 29 33.3 0.0**
comp=Z,15nm,1.2s,mb4.8
FETA Feichten 80.82 1 *i*P **P 01 29 34.7 +1.2**
comp=Z,13nm,1.0s,mb4.8,SNR=14
SMF Signal de Mont 80.97 6⇑ *i*P **P 01 29 34.5 +0.3**
comp=Z,18nm,1.0s,mb4.6
SMF Signal de Mont 80.97 6⇑ *i*P **P 01 29 34.5 +0.3**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
SMF Signal de Mont 80.97 6⇑ *i*P **P 01 29 34.5 +0.3**
comp=Z,8.9nm,1.0s,mb4.7
BGF Bois d'Agland 80.99 6⇑ *i*P **P 01 29 34.5 +0.1**
comp=Z,23nm,1.2s,mb4.7
BGF Bois d'Agland 80.99 6⇑ *i*P **P 01 29 34.5 +0.1**
BGF pmax pmax
comp=Z,12nm,1.2s,mb4.7
BGF Bois d'Agland 80.99 6⇑ *i*P **P 01 29 34.5 +0.1**
comp=Z,12nm,1.2s,mb4.7
ABTA Abfaltersbach 81.10 360⇑ *i*P **P 01 29 35.5 +0.5**
comp=Z,12nm,1.2s,mb4.7
CABF La Chapelle 81.12 4⇑ *i*P **P 01 29 35.7 +0.7**
comp=Z,22nm,1.1s,mb4.7
CABF La Chapelle 81.12 4⇑ *i*P **P 01 29 35.7 +0.7**
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.7
CABF La Chapelle 81.12 4⇑ *i*P **P 01 29 35.7 +0.7**
comp=Z,11nm,1.1s,mb4.7
SOKA Soboth 81.13 358⇑ *i*P **P 01 29 35.8 +0.7**
comp=Z,24nm,1.3s,mb5.0
TCF Toulx Ste Croi 81.22 7⇑ *i*P **P 01 29 35.8 +0.2**
TUE Stuetta 81.35 2 *e*P **P 01 29 37.1 +0.8**
comp=Z,30nm,1.6s,mb5.0
VOIR 81.75 351⇑ *i*P **P 01 29 39.0 +0.6**
BZS Buzias 81.87 353⇑ *i*P **P 01 29 38.9 -0.1**
GZR Gura Zlata 82.00 352⇑ *i*P **P 01 29 40.4 +0.7**
RJF Les Rejaudoux 82.14 7 *e*P **P 01 29 40.4 -0.1**
LPL La Plagne 82.23 4 *e*P **P 01 29 42.6 +1.6**
comp=Z,16nm,1.2s,mb4.5
LPL La Plagne 82.23 4 *e*P **P 01 29 42.6 +1.6**
LPL pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
LPL La Plagne 82.23 4 *e*P **P 01 29 42.6 +1.6**
comp=Z,7.9nm,1.2s,mb4.5
LPG La Plagne 82.25 4 *e*P **P 01 29 42.7 +1.6**
comp=Z,14nm,1.1s,mb4.5
LPG La Plagne 82.25 4 *e*P **P 01 29 42.7 +1.6**
LPG pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
LPG La Plagne 82.25 4 *e*P **P 01 29 42.7 +1.6**
comp=Z,7.1nm,1.1s,mb4.5
LFF La Frestale 82.44 8 *e*P **P 01 29 42.3 +0.2**
comp=Z,52nm,1.0s,mb5.1
LFF La Frestale 82.44 8 *e*P **P 01 29 42.3 +0.2**
LFF pmax pmax
comp=Z,26nm,1.0s,mb5.1
LFF La Frestale 82.44 8 *e*P **P 01 29 42.3 +0.2**
comp=Z,26nm,1.0s,mb5.1
CAF Calviac 82.56 7 *e*P **P 01 29 43.0 +0.3**
comp=Z,44nm,1.4s,mb5.0
CAF Calviac 82.56 7 *e*P **P 01 29 43.0 +0.3**
CAF pmax pmax
comp=Z,22nm,1.4s,mb5.0
CAF Calviac 82.56 7 *e*P **P 01 29 43.0 +0.3**
comp=Z,22nm,1.4s,mb5.0
BNI Bardonecchia 82.70 4 *e*P **P 01 29 44.6 +1.2**
BNI pmax pmax
comp=Z,13nm,0.9s,mb5.0
BNI Bardonecchia 82.70 4 *e*P **P 01 29 44.6 +1.2**
comp=Z,14nm,0.9s,mb5.0
ORIF Oris-en-Rattie 82.80 4⇑ *i*P **P 01 29 44.8 +0.9**
comp=Z,20nm,1.0s,mb4.8
ORIF Oris-en-Rattie 82.80 4⇑ *i*P **P 01 29 44.8 +0.9**
ORIF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ORIF Oris-en-Rattie 82.80 4⇑ *i*P **P 01 29 44.8 +0.9**
comp=Z,9.8nm,1.0s,mb4.8
VIVF Saint-Julien-l 82.80 5⇑ *i*P **P 01 29 44.5 +0.6**
comp=Z,23nm,1.1s,mb4.8
VIVF Saint-Julien-l 82.80 5⇑ *i*P **P 01 29 44.5 +0.6**
VIVF pmax pmax
comp=Z,12nm,1.1s,mb4.8
VIVF Saint-Julien-l 82.80 5⇑ *i*P **P 01 29 44.5 +0.6**
comp=Z,12nm,1.1s,mb4.8
MBDF Montbardon 83.03 4⇑ *i*P **P 01 29 46.6 +1.5**
comp=Z,21nm,0.9s,mb4.8
MBDF Montbardon 83.03 4⇑ *i*P **P 01 29 46.6 +1.5**
MBDF pmax pmax
comp=Z,11nm,0.9s,mb4.9
MBDF Montbardon 83.03 4⇑ *i*P **P 01 29 46.6 +1.5**
comp=Z,11nm,0.9s,mb4.9
LASF Ste Croix 83.53 6 *e*P **P 01 29 48.5 +0.8**
comp=Z,30nm,1.1s,mb5.1
SMRF Simiane la Rot 83.72 5 *e*P **P 01 29 50.4 +1.7**
SBF Sospel 83.91 3⇑ *i*P **P 01 29 50.2 +0.6**
comp=Z,38nm,0.9s,mb5.2
SBF Sospel 83.91 3⇑ *i*P **P 01 29 50.2 +0.6**
SBF pmax pmax
comp=Z,19nm,0.9s,mb5.2
SBF Sospel 83.91 3⇑ *i*P **P 01 29 50.2 +0.6**
comp=Z,19nm,0.9s,mb5.2
SJPF Ste Jean 84.07 10⇑ *i*P **P 01 29 51.4 +0.9**
comp=Z,24nm,1.3s,mb4.9
SJPF Ste Jean 84.07 10⇑ *i*P **P 01 29 51.4 +0.9**
SJPF pmax pmax
comp=Z,12nm,1.3s,mb4.9
SJPF Ste Jean 84.07 10⇑ *i*P **P 01 29 51.4 +0.9**
comp=Z,12nm,1.3s,mb4.9
MTLF Montolieu 84.15 7 *e*P **P 01 29 51.5 +0.6**
comp=Z,23nm,1.0s,mb5.0
MTLF Montolieu 84.15 7 *e*P **P 01 29 51.5 +0.6**
MTLF pmax pmax
comp=Z,12nm,1.0s,mb5.0
MTLF Montolieu 84.15 7 *e*P **P 01 29 51.5 +0.6**
comp=Z,12nm,1.0s,mb5.0
FRF La Foret Royal 84.18 4 *e*P **P 01 29 51.7 +0.7**
comp=Z,41nm,1.0s,mb5.2
FRF La Foret Royal 84.18 4 *e*P **P 01 29 51.7 +0.7**
FRF pmax pmax
comp=Z,20nm,1.0s,mb5.2
FRF La Foret Royal 84.18 4 *e*P **P 01 29 51.7 +0.7**
comp=Z,20nm,1.0s,mb5.2
EPF Esparros 84.30 8⇑ *i*P **P 01 29 51.6 -0.1**
comp=Z,17nm,0.9s,mb4.9
EPF Esparros 84.30 8⇑ *i*P **P 01 29 51.6 -0.1**
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
EPF Esparros 84.30 8⇑ *i*P **P 01 29 51.6 -0.1**
comp=Z,8.6nm,0.9s,mb4.9
ETSF Etsaut 84.35 9⇑ *i*P **P 01 29 52.7 +0.8**
comp=Z,19nm,0.8s,mb5.0
ETSF Etsaut 84.35 9⇑ *i*P **P 01 29 52.7 +0.8**
ETSF pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
ETSF Etsaut 84.35 9⇑ *i*P **P 01 29 52.7 +0.8**
comp=Z,9.6nm,0.8s,mb5.0
LMR La Mourre 84.41 4 *e*P **P 01 29 52.9 +0.7**
PGF Pioggiola 85.27 2⇑ *i*P **P 01 29 57.2 +0.7**
comp=Z,71nm,1.1s,mb5.4
PGF Pioggiola 85.27 2⇑ *i*P **P 01 29 57.2 +0.7**
PGF pmax pmax
comp=Z,35nm,1.1s,mb5.4
PGF Pioggiola 85.27 2⇑ *i*P **P 01 29 57.2 +0.7**
comp=Z,35nm,1.1s,mb5.4
AQU L'Aquila 85.48 359 *e*P **P 01 29 58.2 +0.6**
AQU pmax pmax
comp=Z,13nm,0.8s,mb5.1
AQU L'Aquila 85.48 359 *e*P **P 01 29 58.2 +0.6**
comp=Z,13nm,0.8s,mb5.1
BRTR Keskin Array B 86.18 343 P **P 01 30 01.9 +0.8**
comp=Z,4.2nm,0.7s,mb4.8,baz=36,slow=2.3,SNR=14
MALT Malatya 86.61 339 *e*P **P 01 30 04.4 +1.2**
MALT pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
MALT Malatya 86.61 339 *e*P **P 01 30 04.4 +1.2**
comp=Z,3.0nm,1.1s,mb4.4
ESDC Sonseca Array 87.15 12 P **P 01 30 05.9 +0.1**
comp=Z,3.4nm,0.7s,mb4.7,baz=346,slow=4.5,SNR=28
WRAB Tennant Creek 87.65 233 *e*P **P 01 30 06.9 -1.4**
WRAB pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
WRAB Tennant Creek 87.65 233 *e*P **P 01 30 06.9 -1.5**
comp=Z,3.7nm,1.0s,mb4.6
WRA Warramunga Arr 87.67 233 P **P 01 30 06.7 -1.7**
comp=Z,0.7nm,0.5s,mb4.1,baz=32,slow=5.9,SNR=4.6
PSI Prapat 89.55 274 P **P 01 30 17.2 -0.3**
comp=Z,6.6nm,0.8s,mb5.0,baz=327,slow=17,SNR=4.3
HYB Hyderabad 89.69 299 *i*P **P 01 30 17.5 -0.7**
HYB *e* pP 01 30 30.0 -1.2
HYB Hyderabad 89.69 299 *e*P **P 01 30 17.5 -0.7**
ASAR Alice Springs 91.05 231 P **P 01 30 23.5 -0.7**
comp=Z,2.0nm,0.8s,mb4.5,baz=28,slow=4.5,SNR=19
KEST Kesra 92.08 2 P **P 01 30 28.8 -0.3**
comp=Z,1.5nm,1.1s,mb4.2,baz=153,slow=14,SNR=4.7
CPUP Villa Florida 123.00 91 *e*PKPdf PKPdf 01 36 15.3 -0.6
comp=Z,0.4nm,0.3s,baz=227,slow=1.1,SNR=5.1
CPUP Villa Florida 123.00 91 *e*PKPdf PKPdf 01 36 15.4 -0.5
PLCA Paso Flores 125.20 113 PKP PKPdf 01 36 19.9 +0.2
comp=Z,9nm,0.9s,baz=284,slow=4.2,SNR=1.8
PLCA Paso Flores 125.20 113 PKP PKPdf 01 36 19.9 +0.2
TRQA Tornquist 128.37 105 *e*PKPdf PKPdf 01 36 26.2 +0.4
QSPA South Pole Qui 142.29 180 PKP PKPdf 01 36 51.0 -0.6
comp=Z,0.8nm,0.3s,baz=27,slow=4.5,SNR=2.3
QSPA South Pole Qui 142.29 180 PKP PKPdf 01 36 51.0 +0.6
LBTB Lobatse 150.60 334 *e*PKIKP PKPdf 01 37 11.7 +5.6
BOSA Boshof 154.10 332 PKPbc PKPbc 01 37 18.8 -0.5
comp=Z,2.1nm,0.6s,baz=25,slow=6.9,SNR=4.1
BOSA Boshof 154.10 332 *e*PKPbc PKPbc 01 37 18.7 -0.6

IDC ***27*** *01:20:19.8±0.5, 52.47N×168.16W, h0km, mb4.5/29, mb1 4.7/30, mb1mx4.6/34, mbtmp4.5/30, ML3.9/1, Error ellipse: s-maj=18.7km s-min=9.4km az=4.0*
NEIC ***27*** *01:20:22.2, 52.24N×168.01W, h27km, mb4.9/107, ML4.3(AEIC), ML4.4(PMR), After AEIC.*
ISCJB ***27*** *01:20:22.6±0.9, 52.37N±0.03×168.13W±0.03, h27km±6km, mb4.8/159, MS4.6/9, Error ellipse: s-maj=5.8km s-min=2.6km az=20.9*
MOS ***27*** *01:20:23.7±0.9, 52.41N×168.20W, h33km, mb5.1/67, Error ellipse: s-maj=9.1km s-min=5.2km az=87.5*
SZGRF ***27*** *01:20:24.7, 52.02N×167.90W, h33km, mb4.9, Fox Islands, Aleutian Islands, United States*
BJI ***27*** *01:20:24.1, 53.02N×168.36W, h30km, mB5.2, mb4.8, Ms4.8, Msz4.6*
ISC 27 01:20:24.9±0.9**, 52.43N**±0.03×**168.12W**±0.03**, h30**km±5km**,**

h29km↓2.9km:pP-P,n645,σ0°70/650,mb4.8/159,MS4.6/9,
138C-154D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	Nikolski	0.70	321	P	Pb	01 20 38.0	-0.6
NIKO				S	Sb	01 20 50.4	+2.4
OKFG	Magazine Ridge	0.99	7	P	Pn	01 20 42.9	+0.2
OKFG				S	Sn	01 20 59.4	+3.7
OKCE	Okmok Cone E	1.00	359	P	Pn	01 20 42.9	+0.1
OKCD	Okmok Cone D	1.00	0	P	Pn	01 20 43.0	+0.1
UNV	Unalaska Valle	1.72	34	P	Pn	01 20 51.9	-0.8
UNV				S	Sn	01 21 13.8	+0.1
AKLV	Akutan Long Va	2.17	36	P	Pn	01 20 58.5	-0.4
AKGG	Akutan Green G	2.19	35	P	Pn	01 20 59.7	+0.6
AKUT	Akutan	2.22	39	P	Pn	01 20 59.1	-0.4
FALS	False Pass	3.71	47	P	Pn	01 21 19.0	-1.0
ADK	Adak	5.30	267	P	Pn	01 21 42.4	+0.6
SDPT	Sand Point	5.39	54	eP	Pn	01 21 43.0	0.0
OHAK	Old Harbor	9.81	55	eP	Pn	01 22 41.3	-2.3
	10nm,0.3s						
KDAK	Kodiak Island	10.38	53	Pn	Pn	01 22 48.6	-2.9
	6.9nm,0.3s,baz=247,slow=6.1,SNR=20						
KDAK	Kodiak Island	10.38	53	ePn	Pn	01 22 49.3	-2.2
SVW2	Sparrevohn	11.06	33	eP	Pn	01 23 01.8	+1.0
FX1	Attu Island--F	11.38	280	Pn	Pn	01 23 05.2	0.0
	2.5nm,0.3s,baz=52,slow=23,SNR=11						
TNA	Tin City	13.17	0	ePn	Pn	01 23 31.6	+2.0
RC01	Rabbit Creek A	13.26	42	ePn	Pn	01 23 27.7	-3.0
PPLA	Purkeypile	13.47	33	ePn	Pn	01 23 35.9	+2.2
PMR	Palmer	13.78	41	eP	Pn	01 23 37.0	-0.8
PMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PMR	Palmer	13.78	41	eP	Pn	01 23 37.0	-0.8
	comp=Z,4.2nm,0.6s						
KTH	Kantishna Hill	14.34	32	ePn	Pn	01 23 46.0	+0.5
TRF	Thorofare Moun	14.48	33	ePn	Pn	01 23 48.7	+1.2
MCK	McKinley	15.13	34	eP	Pn	01 23 57.2	+1.2
MCK				pmax	pmax		
	comp=Z,101nm,1.9s						
MCK	McKinley	15.13	34	ePn	Pn	01 23 57.2	+1.2
	comp=Z,101nm,1.9s						
PAX	Paxson	15.96	40	eP	Pn	01 24 05.1	-1.8
COLA	College	16.23	32	eP	Pn	01 24 07.9	-2.4
MENT	Mentasta	16.64	41	ePn	Pn	01 24 14.1	-1.4
COLD	Coldfoot	17.25	24	ePn	Pn	01 24 23.4	+0.4
PNL	Peninsula	17.50	54	ePn	Pn	01 24 26.4	+0.1
	comp=Z,63nm,0.9s						
EGAK	Eagle	18.52	38	eP	Pn	01 24 36.2	-2.6
	comp=Z,21nm,0.8s						
HYT	Haines Junctio	18.67	51	ePn	Pn	01 24 43.2	+2.6
DAWY	Dawson	18.89	41	eP	Pn	01 24 41.7	-1.4
SKAG	Skagway	19.51	56	eP	Pn	01 24 50.3	-0.3
	comp=Z,46nm,0.9s						
BILL	Bilibino	19.91	331	eP	Pn	01 24 54.2	-1.1
BILL				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	19.91	331	eP	Pn	01 24 54.2	-1.1
	comp=Z,20nm,1.0s						
PET	Petropavlovsk	20.04	285	eP	P	01 24 54.9	-0.2
PET				pmax	pmax		
	comp=Z,53nm,0.9s						
PET	Petropavlovsk	20.04	285	eP	P	01 24 54.7	-0.3
	comp=Z,61nm,1.1s						
PETK	Petropavlovsk-	20.58	286	P	P	01 25 00.5	-0.5
	comp=Z,16nm,0.5s,baz=85,slow=14,SNR=32						
DLBC	Dease Lake	22.20	59	P	P	01 25 16.8	-1.6
	comp=Z,5.0nm,1.1s,mb3.9,baz=216,slow=5.2,SNR=3.8						
SEY	Seymchan	23.19	312↑	eP	P	01 25 26.7	-2.1
B05A	Bryant	29.27	80	↑P	P	01 26 24.9	+0.9
	baz=29						
YKA	Yellowknife Ar	29.63	49	P	P	01 26 27.3	+0.3
	comp=Z,1.7nm,0.5s,mb4.0,baz=272,slow=8.2,SNR=15						
YKA				PcP	PcP	01 29 30.4	-0.3
	comp=Z,1.2nm,0.9s,baz=290,slow=2.3,SNR=5.4						
YKA				ScP	ScP	01 33 11.3	+1.1
	comp=Z,0.7nm,0.7s,baz=285,slow=3.4,SNR=8.0						
YKA	Yellowknife Ar	29.63	49	P	P	01 26 27.3	+0.3
YKA				PcP	PcP	01 29 30.4	-0.3
YKA				ScP	ScP	01 33 11.3	+1.1
F04A	Amboy	30.16	84	⇓P	P	01 26 32.4	+0.5
	baz=30						
G04A	Mulino	30.48	85	⇑P	P	01 26 35.0	+0.3
	baz=30						
A09A	Danville	31.07	76	⇓P	P	01 26 40.7	+0.8
	baz=31						
B09A	Rice	31.57	77	⇓P	P	01 26 44.6	+0.3
	baz=31						
G06A	Carlson Farm,	31.59	84	⇓P	P	01 26 44.5	0.0
	baz=32						
A10A	Northport	31.68	76	⇑P	P	01 26 45.3	+0.1
	baz=32						
HAWA	Hanford	31.68	81	eP	P	01 26 46.5	+1.1
	comp=Z,85nm,2.2s,mb5.2						
C09A	Chrisman Ranch	31.78	78	⇑P	P	01 26 46.2	+0.1
	baz=32						
YBH	Yreka Blue Hor	32.22	91	P	P	01 26 51.6	+1.5
	comp=Z,13nm,0.7s,mb4.9,baz=328,slow=5.3,SNR=18						
NEW	Newport	32.26	77	eP	P	01 26 50.0	-0.3
NEW				pmax	pmax		
	comp=Z,11nm,1.0s						
NEW	Newport	32.26	77	eP	P	01 26 50.0	-0.4
	comp=Z,11nm,1.0s,mb4.6						
A11A	Hall Mountain,	32.40	75	⇓P	P	01 26 51.8	+0.3
	baz=32						
EDM	Edmonton	32.43	66	eP	P	01 26 52.1	+0.3
F08A	Pendleton	32.44	82	⇓P	P	01 26 52.1	+0.2
	baz=32						
E09A	Wood Farm, Sta	32.46	80	⇓P	P	01 26 52.1	-0.1
	baz=32						
B11A	Sandpoint	32.63	76	⇓P	P	01 26 53.8	+0.3
	baz=32						
D10A	Wagner Farm, O	32.73	79	⇓P	P	01 26 54.4	-0.1
	baz=33						
K05A	Summer Lake	32.77	88	⇓P	P	01 26 55.9	+1.0
	baz=33						
A12A	Yaak River Ran	32.83	75	⇓P	P	01 26 55.3	0.0
	baz=33						
I07A	Izee	32.88	85	⇓P	P	01 26 55.9	+0.1
	baz=33						
J06A	Christmas Vall	32.93	87	⇓P	P	01 26 56.6	+0.3
	baz=33,SNR=5.7						
WDC	Whiskeytown Da	33.00	93	eP	P	01 26 58.0	+1.1
WDC				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
WDC	Whiskeytown Da	33.00	93	eP	P	01 26 58.0	+1.1
	comp=Z,31nm,1.3s,mb5.1						
TIXI	Tiksi	33.08	329↑	eP	P	01 26 56.4	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
TIXI	Tiksi	33.08	329	eP	P	01 26 56.7	-0.6
	comp=Z,4.8nm,1.0s,mb4.4						
E10A	Myers Farm, Un	33.10	80	⇓P	P	01 26 57.7	-0.1
	baz=33						
F10A	Beach Ranch, E	33.28	80	⇓P	P	01 26 59.6	+0.3
	baz=33						
J07A	Hines	33.38	86	⇓P	P	01 27 00.8	+0.6
	baz=33						
C12B	Naegeli Ranch,	33.49	77	⇑P	P	01 27 01.5	+0.4
	baz=33						
I08A	Drewsey	33.54	85	⇓P	P	01 27 01.7	+0.1
	baz=33						
MOD	Modoc	33.59	89	eP	P	01 27 03.1	+1.0
	comp=Z,19nm,1.0s,mb5.0						
H09A	Durkee	33.69	83	⇑P	P	01 27 03.2	+0.3
	baz=34						
G10A	Bishop Farm, J	33.70	81	⇑P	P	01 27 02.8	-0.1
	baz=34,SNR=7.0						
E11A	Bogner Ranch,	33.71	79	⇑P	P	01 27 02.5	-0.5
	baz=34						
YAK	Yakutsk	33.71	311↑	eP	P	01 27 00.6	-2.3
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
B13A	Whitefish	33.78	75	⇑P	P	01 27 03.7	+0.1
	baz=34						
K07A	Rock Creek Ran	33.80	87	⇓P	P	01 27 04.2	+0.3
	baz=34						
BSMT	Bassoo Peak	33.84	76	eP	P	01 27 04.7	+0.5
J08A	Circle Bar Ran	33.90	85	⇑P	P	01 27 05.4	+0.7
	baz=34						
F11A	Grangeville	33.97	80	⇓P	P	01 27 04.6	-0.7
	baz=34						
C13A	Hot Springs	34.04	76	⇑P	P	01 27 05.7	-0.3
	baz=34						
L07A	Adell	34.12	88	⇑P	P	01 27 07.1	+0.5
	baz=34						
A14A	Double T Ranch	34.12	73	⇓P	P	01 27 06.4	-0.2
	baz=34						
K08A	Mann Creek Ran	34.24	86	⇓P	P	01 27 08.0	+0.3
	baz=34						
H10A	Noah's Angus R	34.29	82	⇓P	P	01 27 08.0	-0.1
	baz=34,SNR=9.0						
WVOR	Wild Horse Val	34.31	87	eP	P	01 27 08.4	+0.1
WVOR				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
WVOR	Wild Horse Val	34.31	87	eP	P	01 27 08.4	+0.1
	comp=Z,17nm,1.0s,mb4.9						
J09A	Fry Pan Ranch,	34.34	85	⇓P	P	01 27 08.6	+0.1
	baz=34,SNR=5.2						
B14A	Marquette Ranc	34.49	74	⇑P	P	01 27 09.9	+0.1
	baz=34						
I10A	Payette	34.52	83	⇓P	P	01 27 10.4	+0.3
	baz=34						
A15A	Johnson Ranch,	34.52	73	⇓P	P	01 27 09.7	-0.4
	baz=34						
N06A	Buffalo Meadow	34.55	90	⇑P	P	01 27 11.0	+0.6
	baz=34,SNR=12						
M07A	Soldier Meadow	34.58	89	⇓P	P	01 27 11.2	+0.5
	baz=34,SNR=9.9						
L08A	Fields	34.63	87	⇓P	P	01 27 11.4	+0.4
	baz=34,SNR=6.2						
H11A	Donnelly	34.67	82	⇑P	P	01 27 11.3	-0.1
	baz=34						
K09A	Rome	34.72	86	⇑P	P	01 27 12.0	+0.2
	baz=35						
BEKR	Beckwourth	34.76	92	⇑P	P	01 27 12.3	+0.1
	baz=35,SNR=8.7						
O06A	Flanigan	34.91	91	⇓P	P	01 27 13.7	+0.2
	baz=35,SNR=7.8						
B15A	Bradely Ranch,	34.93	74	⇓P	P	01 27 13.3	-0.3
	baz=35						
D14A	Greenough	34.97	76	⇑P	P	01 27 13.6	-0.3
	baz=35						
M08A	Happy Creek Ra	35.03	88	⇓P	P	01 27 15.0	+0.4
	baz=35						
N07B	Gerlach	35.06	89	⇓P	P	01 27 15.5	+0.7
	baz=35,SNR=6.9						
F13A	Darby	35.12	79	⇓P	P	01 27 15.2	0.0
	baz=35						
I11A	Placerville	35.13	83	⇑P	P	01 27 15.2	-0.1
	baz=35						
L09A	Wilkinson Ranc	35.14	87	⇓P	P	01 27 16.0	+0.6
	baz=35						
P06A	Stead Airport,	35.16	92	⇓P	P	01 27 16.5	+0.9
	baz=35						
C15A	Salmond Ranch,	35.16	75	⇓P	P	01 27 15.5	-0.1
	baz=35,SNR=11						
K10A	MacKenzie Ranc	35.20	85	⇑P	P	01 27 16.5	+0.5
	baz=35,SNR=5.6						
A16A	West Butte Ran	35.20	73	⇓P	P	01 27 15.0	-0.9
	baz=35						
E14A	Clinton	35.31	77	⇑P	P	01 27 16.8	0.0
	baz=35						
B16A	M & M Farms, S	35.39	73	⇑P	P	01 27 16.7	-0.8
	baz=35						
PAHR	Pah Rah Range	35.45	91	eP	P	01 27 19.0	+0.8
	comp=Z,38nm,1.1s,mb5.2						
H12A	Diamond D Ranc	35.45	81	⇓P	P	01 27 18.1	0.0
	baz=35						
WCN	Washoe City	35.47	92	⇑P	P	01 27 18.8	+0.5
	baz=35,SNR=6.0						
MFID	Camas Ranch	35.48	83	⇓P	P	01 27 18.1	-0.2
	baz=35						
O07A	Toulon	35.49	90	⇑P	P	01 27 19.0	+0.6
	baz=35,SNR=10						
G13A	Cobalt	35.54	80	⇑P	P	01 27 18.6	-0.3
	baz=35						
D15A	Lincoln	35.57	76	⇑P	P	01 27 18.8	-0.3
	baz=35						
N08A	GE Springer Mi	35.58	89	⇓P	P	01 27 19.5	+0.3
	baz=36,SNR=7.6						
M09A	Marrel Ranch,	35.62	87	⇑P	P	01 27 20.1	+0.6
	baz=36						
C16A	Fuhringer Ranc	35.66	74	⇓P	P	01 27 19.3	-0.6
	baz=36,SNR=8.9						
K11A	Parker Ranch,	35.71	84	⇓P	P	01 27 20.5	+0.1
	baz=36,SNR=6.9						
A17A	Triple J Farms	35.73	72	⇑P	P	01 27 19.9	-0.6
	baz=36						
H13A	Challis	35.81	81	⇑P	P	01 27 21.2	0.0
	baz=36						
E15A	Deer Lodge	35.81	77	⇑P	P	01 27 21.0	-0.2
	baz=36						
L10A	Juniper Basin	35.84	86	⇑P	P	01 27 21.9	+0.4
	baz=36						
O08A	Rochester Mine	35.85	89	⇓P	P	01 27 22.3	+0.6
	baz=36,SNR=11						
N09A	Rock Creek Ran	35.91	88	⇑P	P	01 27 22.0	-0.1
	baz=36						
B17A	L&G Farms, Che	35.98	73	⇓P	P	01 27 22.3	-0.3
	baz=36						
RES	Resolute Bay	35.99	26	eP	P	01 27 21.3	-1.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
RES	Resolute Bay	35.99	26	eP	P	01 27 21.3	-1.1
	comp=Z,2.7nm,0.7s,mb4.3						
J12A	Stokes Ranch,	36.01	83	⇓P	P	01 27 23.0	0.0
	baz=36						
M10A	I.L. Ranch, Tu	36.12	87	⇑P	P	01 27 24.0	+0.2
	baz=36						
R06C	Coleville	36.14	93	⇓P	P	01 27 24.8	+0.7
	baz=36,SNR=15						
D16A	Dana Ranch, Ca	36.16	75	⇑P	P	01 27 24.3	+0.2
	baz=36						
WAKR	Walker	36.16	93	eP	P	01 27 25.4	+1.1
F15A	Butte	36.20	78	⇓P	P	01 27 24.6	+0.1
	baz=36						
L11A	Cat Creek Ranc	36.22	85	⇑P	P	01 27 24.9	+0.1
	baz=36,SNR=6.5						
A18A	Metzger Ranch,	36.24	72	⇓P	P	01 27 24.4	-0.3
	baz=36						
I13A	Wildhorse Cree	36.24	81	⇑P	P	01 27 24.8	-0.1
	baz=36						
HLID	Hailey	36.26	82	⇓P	P	01 27 25.0	0.0
	baz=36						
HLID	Hailey	36.26	82	eP	P	01 27 25.3	+0.3
	comp=Z,85nm,3.0s						
H14A	Leadore	36.32	80	⇓P	P	01 27 25.4	-0.2
	baz=36						
K12A	Draper Farm, C	36.48	84	⇓P	P	01 27 27.5	+0.6
	baz=36						
J13A	Cove Ranch, Pi	36.49	82	⇑P	P	01 27 27.1	+0.1
	baz=36,SNR=7.2						
O09A	Fish Creek Ran	36.52	89	⇑P	P	01 27 27.7	+0.4
	baz=36						
B18A	Beardsley Farm	36.53	72	⇓P	P	01 27 27.2	-0.1
	baz=36						
G15A	Dillon	36.55	79	⇑P	P	01 27 27.4	-0.2
	baz=36						
N10A	Dunphy	36.61	88	⇓P	P	01 27 28.7	+0.7
	baz=36						
M11A	Holland Ranch,	36.63	86	⇓P	P	01 27 28.7	+0.5
	baz=36						
I14A	Mackay	36.64	81	⇑P	P	01 27 28.6	+0.3
	baz=36,SNR=6.2						
L12A	House Creek Ra	36.69	85	⇑P	P	01 27 29.0	+0.3
	baz=37						
EGMT	Eagleton	36.72	73	⇓P	P	01 27 28.7	-0.2
	baz=37						
EGMT	Eagleton	36.72	73	eP	P	01 27 28.6	-0.4
	comp=Z,17nm,0.9s,mb4.9						
F16A	Kennard Place,	36.75	77	⇓P	P	01 27 29.6	+0.4
	baz=37						
H15A	Lima	36.75	80	⇓P	P	01 27 29.3	+0.1
	baz=37						
BOZ	Bozeman (W)	36.81	77	⇑P	P	01 27 29.7	-0.1
	baz=37						
BOZ	Bozeman (W)	36.81	77	eP	P	01 27 29.5	-0.3
E17A	Martinsdale	36.85	76	⇓P	P	01 27 29.9	-0.2
	baz=37						
Q08A	Gabbs	36.86	91	⇓P	P	01 27 30.5	+0.3
	baz=37,SNR=9.0						
O10A	Cortez Mining,	36.87	88	⇓P	P	01 27 30.6	+0.3
	baz=37						
NVAR	Mina Array Bea	36.90	92	P	P	01 27 31.3	+0.7
	comp=Z,10.0nm,0.7s,mb4.8,baz=295,slow=8.6,SNR=25						
NVAR	Mina Array Bea	36.90	92	P	P	01 27 31.3	+0.7
G16A	Moss Hill, Enn	36.93	78	⇓P	P	01 27 30.8	+0.1
	baz=37						
J14A	Carey	36.93	82	⇑P	P	01 27 31.0	+0.2
	baz=37						
K13A	Stover Farm, H	36.97	83	⇓P	P	01 27 31.7	+0.6
	baz=37						
N11A	Elko Archery C	37.02	87	⇑P	P	01 27 32.2	+0.7
	baz=37						
KLR	Kul'dur	37.16	290	eP	P	01 27 26.6	-6.0
M12A	Wells	37.17	86	⇑P	P	01 27 33.2	+0.4
	baz=37						
I15A	Monteview	37.18	80	⇓P	P	01 27 33.2	+0.3
	baz=37						
F17A	Fitzpatrick Pl	37.26	76	⇓P	P	01 27 33.8	+0.3
	baz=37						
Q09A	Carvers	37.34	91	⇓P	P	01 27 34.7	+0.5
	baz=37						
E18A	Harlowton	37.36	75	⇑P	P	01 27 34.3	-0.1
	baz=37						
ELK	Elko	37.37	87	eP	P	01 27 34.8	+0.3
ELK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ELK	Elko	37.37	87	eP	P	01 27 34.8	+0.3
	comp=Z,10nm,1.2s,mb4.5						
L13A	Double Diamond	37.37	84	⇑P	P	01 27 34.6	+0.1
	baz=37,SNR=5.7						
N12A	Clover Valley,	37.43	86	⇑P	P	01 27 35.3	+0.3
	baz=37,SNR=7.5						
O11A	Cowboy Ranch,	37.48	88	⇓P	P	01 27 35.9	+0.4
	baz=37						
G17A	Pierce Place,	37.52	77	⇓P	P	01 27 35.8	0.0
	baz=37						
H16A	Russell Place,	37.55	79	⇑P	P	01 27 36.2	+0.2
	baz=37						
RCTC	Rector, Farmer	37.69	96	⇑P	P	01 27 37.8	+0.6
	baz=38						
R09A	Tonopah	37.77	91	⇓P	P	01 27 38.2	+0.2
	baz=38,SNR=6.6						
TPH	Tonopah	37.79	92	eP	P	01 27 38.8	+0.7
TPH				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
TPH	Tonopah	37.79	92	eP	P	01 27 38.8	+0.7
	comp=Z,20nm,1.2s,mb4.7						
Q10A	Clear Creek Ra	37.82	90	⇑P	P	01 27 38.9	+0.5
	baz=38,SNR=11						
I16A	Newdale	37.85	80	⇓P	P	01 27 38.7	+0.1
	baz=38						
YNR	Norris Junctio	37.88	78	eP	P	01 27 40.1	+1.3
SMMC	Simmler	37.89	97	⇓P	P	01 27 39.3	+0.3
	baz=38						
O12A	Currie	37.95	87	⇑P	P	01 27 39.5	0.0
	baz=38,SNR=12						
S09A	Goldfield	38.01	92	⇓P	P	01 27 40.0	+0.1
	baz=38,SNR=8.1						
FFC	Flin Flon	38.03	59	eP	P	01 27 39.5	-0.5
M14A	Sheep Mountain	38.08	84	⇓P	P	01 27 40.8	+0.4
	baz=38						
VES	Vestal, Richgr	38.09	96	⇓P	P	01 27 40.5	-0.2
	baz=38,SNR=8.6						
J16A	Bone	38.11	81	⇓P	P	01 27 41.2	+0.4
	baz=38,SNR=6.3						
H17A	Grant Village	38.12	79	⇑P	P	01 27 41.2	+0.4
	baz=38						
LKWY	Lake	38.13	78	eP	P	01 27 42.6	+1.7
LKWY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
LKWY	Lake	38.13	78	eP	P	01 27 42.6	+1.7
	comp=Z,8.9nm,0.9s,mb4.5						
IMW	Indian Meadow	38.17	79	eP	P	01 27 41.9	+0.6
	comp=Z,7.9nm,0.9s,mb4.4						
RRI2	Red Ridge	38.25	80	eP	P	01 27 42.6	+0.7
	comp=Z,11nm,1.0s,mb4.5						
Q11A	Duckwater	38.27	89	⇓P	P	01 27 42.2	+0.1
	baz=38,SNR=5.8						
S10A	Tonopah Range,	38.27	91	⇓P	P	01 27 42.2	0.0
	baz=38,SNR=12						
PKM	Peak Mountain	38.27	98	⇑P	P	01 27 42.8	+0.5
	baz=38						
P12A	McGill	38.34	88	⇑P	P	01 27 42.8	+0.1
	baz=38,SNR=9.1						
L15A	Malad City	38.37	83	⇑P	P	01 27 43.3	+0.3
	baz=38						
MOOW	Moose Ponds	38.37	80	eP	P	01 27 42.9	0.0
	comp=Z,3.9nm,1.1s,mb4.0						
K16A	Soda Springs	38.38	81	⇓P	P	01 27 41.9	-1.1
	baz=38,SNR=11						
RLMT	Red Lodge	38.50	77	⇓P	P	01 27 44.2	+0.2
	baz=38						
RLMT	Red Lodge	38.50	77	eP	P	01 27 43.7	-0.3
	comp=Z,14nm,1.0s,mb4.7						
REDW	Red Top Meadow	38.52	80	eP	P	01 27 45.3	+1.1
	comp=Z,19nm,1.2s,mb4.5						
LOHW	Long Hollow	38.53	80	eP	P	01 27 44.3	0.0
	comp=Z,3.6nm,0.8s,mb4.2						
N14A	Grayback Hills	38.56	85	⇓P	P	01 27 44.0	-0.5
	baz=38,SNR=6.2						
J17A	Brown Place, J	38.61	80	⇑P	P	01 27 45.2	+0.3
	baz=38						
R11A	Troy Canyon, C	38.62	90	⇓P	P	01 27 44.8	-0.3
	baz=38,SNR=7.7						
M15A	Larsen Ranch,	38.65	84	⇑P	P	01 27 45.3	0.0
	baz=38						
Q12A	Willow Creek R	38.65	89	⇑P	P	01 27 45.3	-0.1
	baz=38,SNR=7.4						
P13A	Bates Ranch, G	38.89	87	⇓P	P	01 27 47.3	-0.1
	baz=39,SNR=8.6						
MPMC	Manual Prospec	38.92	94	⇓P	P	01 27 47.6	0.0
	baz=39,SNR=5.9						
N15A	Stansbury Isla	38.94	84	⇑P	P	01 27 47.2	-0.5
	baz=39,SNR=6.2						
L16A	Fish Haven	38.94	82	⇓P	P	01 27 47.0	-0.7
	baz=39,SNR=7.3						
I18A	Diamond G Ranc	38.96	79	⇑P	P	01 27 47.5	-0.3
	baz=39						
FURC	Furnace Creek,	39.04	93	⇓P	P	01 27 48.5	-0.1
	baz=39						
TPNV	Topopah Spring	39.10	92	eP	P	01 27 49.1	0.0
TPNV				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
TPNV	Topopah Spring	39.10	92	eP	P	01 27 49.1	0.0
	comp=Z,16nm,0.8s,mb4.8						
J18A	Kendall Valley	39.11	80	⇑P	P	01 27 49.2	+0.1
	baz=39						
DUG	Dugway	39.18	86	⇑P	P	01 27 49.9	+0.1
	baz=39						
DUG	Dugway	39.18	86	eP	P	01 27 50.1	+0.4
DUG				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
DUG	Dugway	39.18	86	eP	P	01 27 50.1	+0.4
	comp=Z,11nm,1.0s,mb4.5						
LRMC	Laurel Mountai	39.18	95	⇓P	P	01 27 49.8	-0.1
	baz=39						
Q13A	Wheeler Ranch,	39.20	88	⇑P	P	01 27 50.2	+0.3
	baz=39						
R12A	Pony Springs,	39.23	89	⇓P	P	01 27 49.9	-0.3
	baz=39,SNR=5.7						
M16A	Huntsville	39.23	83	⇑P	P	01 27 49.8	-0.3
	baz=39,SNR=6.5						
L17A	Cokeville	39.23	82	⇑P	P	01 27

BFSC Mount Baldy St 40.03 97 ⇓P P 01 27 57.0 +0.1
baz=40,SNR=6.4
K19A Absolon Red Bu 40.04 79 ⇓P P 01 27 56.3 -0.6
baz=40,SNR=13
L19A Farson 40.15 81 ⇓P P 01 27 57.5 -0.3
baz=40
S13A Holt Ranch, En 40.16 90 ⇓P P 01 27 57.6 -0.3
baz=40,SNR=9.9
P16A Fountain Green 40.24 85 ⇓P P 01 27 58.7 +0.1
baz=40
FCC Fort Churchill 40.31 51 *e*P P 01 27 59.2 +0.2
comp=Z,0.4nm,0.8s
V11A Goodsprings 40.32 93 ⇓P P 01 27 59.4 +0.1
baz=40
K20A Yellowstone Ra 40.44 79 ⇑P P 01 27 59.4 -0.8
baz=40,SNR=5.5
HEC Hector,Ludlow 40.44 95 ⇓P P 01 28 00.1 -0.2
baz=40
O17A Robinson Place 40.44 84 ⇑P P 01 28 00.1 -0.1
baz=40
MAJO Matsushiro 40.46 269 *e*P P 01 28 00.1 -0.4
MAT Matsushiro 40.46 269 P P 01 28 00.4 -0.1
MJAR Matsushiro Arr 40.46 269 P P 01 27 59.2 -1.3
comp=Z,0.8nm,0.3s,mb3.9,baz=45,slow=6.7,SNR=3.8
U12A Valley of Fire 40.48 91 ⇑P P 01 28 00.7 +0.1
baz=40
T13A Saint George 40.49 90 ⇑P P 01 28 00.5 -0.1
baz=40,SNR=8.3
M19A Rock Springs 40.62 81 ⇓P P 01 28 01.4 -0.3
baz=40
N18A Larsen Ranch, 40.62 82 ⇓P P 01 28 01.5 -0.2
baz=40
TMUT Trail Mountain 40.71 85 *e*P P 01 28 03.2 +0.7
MURC Murrieta 40.74 97 ⇓P P 01 28 02.4 -0.4
baz=41
V12A Nelson 40.75 93 ⇑P P 01 28 02.8 -0.1
baz=41,SNR=6.9
L20A Wamsutter 40.82 80 ⇑P P 01 28 02.6 -0.7
baz=41
U13A Pakoon Wash 40.84 91 ⇓P P 01 28 03.5 -0.1
baz=41,SNR=11
O18A Roosevelt 40.84 83 ⇑P P 01 28 03.4 -0.2
baz=41
P17A Butcher Ranch, 40.88 85 ⇓P P 01 28 03.6 -0.3
baz=41
GMRC Granite Mounta 40.88 94 ⇓P P 01 28 03.7 -0.3
baz=41,SNR=9.1
Q16A Castle Valley 40.96 86 ⇑P P 01 28 04.8 +0.2
baz=41,SNR=8.0
T14A Hurricane 40.97 90 ⇓P P 01 28 04.6 0.0
baz=41,SNR=7.2
N19A John Jarvie Ra 40.97 82 ⇑P P 01 28 03.8 -0.8
baz=41,SNR=6.0
S15A Panguitch 41.01 88 ⇓P P 01 28 05.0 0.0
baz=41
LDFC Landfair 41.02 93 *e*P P 01 28 05.1 0.0
comp=Z,19nm,0.7s,mb4.8
P18A Preston Nutter 41.09 84 ⇓P P 01 28 05.9 +0.3
baz=41,SNR=10
R16A Teasdale 41.17 87 ⇑P P 01 28 06.6 +0.4
baz=41,SNR=11
PFO Pinyon Flat Ob 41.19 96 P P 01 28 06.0 -0.5
comp=Z,5.2nm,0.6s,mb4.3,baz=328,slow=5.0,SNR=6.3
PFO Pinyon Flat Ob 41.19 96 ⇑P P 01 28 06.3 -0.2
baz=41
V13A Grand Canyon W 41.20 92 ⇓P P 01 28 06.6 0.0
baz=41,SNR=6.0
BELC Belle Mtn. 41.20 95 ⇓P P 01 28 06.5 -0.1
baz=41
M20A Sweetwater, Wa 41.22 81 ⇑P P 01 28 06.3 -0.3
baz=41
SRU San Rafael 41.24 85 ⇓P P 01 28 07.0 +0.2
baz=41,SNR=11
SRU San Rafael 41.24 85 *e*P P 01 28 07.6 +0.8
SRU pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
SRU San Rafael 41.24 85 *e*P P 01 28 07.6 +0.7
comp=Z,8.9nm,0.9s,mb4.4
109C Camp Elliot, M 41.29 98 ⇓P P 01 28 07.3 0.0
baz=41
U14A Mt Trumbull 41.32 90 ⇑P P 01 28 08.0 +0.5
baz=41,SNR=6.4
O19A Miners Draw (B 41.36 83 ⇓P P 01 28 08.0 +0.1
baz=41,SNR=7.7
T15A Red Dirt Ranch 41.42 89 ⇓P P 01 28 08.1 -0.3
baz=41
L21A Rawlins 41.43 80 ⇓P P 01 28 07.9 -0.5
baz=41,SNR=7.2
S16A Weppner Ranch, 41.45 88 ⇑P P 01 28 08.4 -0.2
baz=41,SNR=7.2
Q18A Rafter H Ranch 41.48 85 ⇓P P 01 28 08.3 -0.6
baz=41,SNR=9.7
R17A Hanksville Air 41.56 86 ⇑P P 01 28 09.0 -0.4
baz=41,SNR=6.7
N20A Spence Gulch, 41.56 82 ⇓P P 01 28 09.1 -0.3
baz=41
IRM Iron Mountain 41.61 95 ⇑P P 01 28 09.7 -0.2
baz=42,SNR=5.7
RWWY Rawlins 41.69 80 *e*P P 01 28 09.5 -0.9
comp=Z,147nm,2.8s,mb5.1
MONP Monument Peak 41.71 97 ⇑P P 01 28 10.8 +0.1
baz=42
W13A Hualapai Mount 41.76 92 ⇑P P 01 28 10.5 -0.6
baz=42,SNR=10.0
BC3 Big Chuckw Mtn 41.77 95 ⇑P P 01 28 11.1 -0.2
baz=42
P19A Cripple Cowboy 41.86 83 ⇓P P 01 28 11.5 -0.4
baz=42,SNR=12
U15A North Rim 41.86 90 ⇑P P 01 28 11.9 0.0
baz=42,SNR=9.3
V14A Boquillas Ranc 41.88 91 ⇓P P 01 28 11.8 -0.4
baz=42,SNR=6.6
S17A Black Ridge (B 41.99 87 ⇓P P 01 28 12.5 -0.5
baz=42,SNR=13
O20A White River Ci 42.00 82 ⇓P P 01 28 12.5 -0.5
baz=42,SNR=14
SWSC Sam W. Stewart 42.05 96 ⇓P P 01 28 13.4 -0.2
baz=42
N21A Black Mountain 42.06 81 ⇑P P 01 28 12.8 -0.7
baz=42
R18A Canyonlands Na 42.08 86 ⇑P P 01 28 12.6 -1.0
baz=42,SNR=6.8
Q19A Hogan Spring (42.10 84 ⇑P P 01 28 13.0 -1.0
baz=42,SNR=11
X13A Yucca 42.13 93 ⇑P P 01 28 13.6 -0.6
baz=42
RSSD Black Hills 42.17 75 *e*P P 01 28 15.4 +1.1
W14A Seligman 42.17 92 ⇓P P 01 28 14.2 -0.4
baz=42,SNR=5.5
M22A Cedar Creek Ra 42.23 80 ⇓P P 01 28 14.0 -0.8
baz=42,SNR=6.1
Y12C Blythe 42.27 94 ⇓P P 01 28 14.9 -0.4
baz=42
V15A Kaibab Nationa 42.33 90 ⇓P P 01 28 15.5 -0.3
baz=42,SNR=10
T17A Navajo Res., N 42.40 88 ⇓P P 01 28 16.0 -0.4
baz=42,SNR=5.1
O21A Pagoda 42.42 82 ⇓P P 01 28 15.9 -0.5
baz=42,SNR=6.1
S18A Hurst Farm, Bl 42.45 86 ⇓P P 01 28 16.0 -0.8
baz=42,SNR=11
R19A Curley Farm, L 42.52 85 ⇓P P 01 28 16.6 -0.7
baz=42,SNR=7.1
BOD Bodaibo 42.55 309 *e*P P 01 28 14.9 -2.4
BOD pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
GLA Glamis 42.56 95 ⇓P P 01 28 17.4 -0.4
baz=42,SNR=5.6
GLA Glamis 42.56 95 *e*P P 01 28 17.7 0.0
GLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
GLA Glamis 42.56 95 *e*P P 01 28 17.7 0.0
comp=Z,8.8nm,0.8s,mb4.5
Y13A Salome 42.65 94 ⇑P P 01 28 18.2 -0.2
baz=43
N22A Wattenberg Ran 42.67 80 ⇓P P 01 28 18.1 -0.4
baz=42
Q20A Ridgley Place, 42.69 84 ⇓P P 01 28 17.4 -1.4
baz=43,SNR=6.6
W15A Williams 42.70 91 ⇓P P 01 28 18.7 0.0
baz=43
U17A Shonto 42.75 88 ⇓P P 01 28 18.8 -0.3
baz=43
U16A Tuba City 42.76 89 ⇑P P 01 28 18.9 -0.3
baz=43
X14A Yava 42.79 92 ⇑P P 01 28 19.0 -0.5
baz=43,SNR=12
S19A Harvey Farm, M 42.94 86 ⇓P P 01 28 20.1 -0.7
baz=43,SNR=13
WUAZ Wupatki 43.02 90 *e*P P 01 28 21.8 +0.4
comp=Z,13nm,0.9s,mb4.7
112A Yuma 43.07 96 ⇓P P 01 28 21.4 -0.4
baz=43
Y14A Wickenburg 43.07 93 ⇓P P 01 28 21.5 -0.3
baz=43,SNR=8.3
X15A Humboldt 43.17 92 ⇑P P 01 28 22.4 -0.2
baz=43,SNR=6.0
W16A Flagstaff 43.20 91 ⇓P P 01 28 23.3 +0.5
baz=43,SNR=5.7
Q21A Lamborn Mesa, 43.21 83 ⇑P P 01 28 22.6 -0.3
baz=43
U18A Rough Rock, Ch 43.35 88 ⇓P P 01 28 24.2 +0.2
baz=43
113A Mohawk Valley, 43.41 95 ⇓P P 01 28 23.7 -0.8
baz=43
Y15A Casa Rosa Ranc 43.47 92 ⇑P P 01 28 25.0 -0.1
baz=43,SNR=6.8
Z14A Wintersburg 43.50 94 ⇑P P 01 28 25.2 -0.1
baz=43
R21A Cimarron 43.52 84 ⇓P P 01 28 25.3 0.0
baz=43
T19A Beclabito 43.60 87 ⇑P P 01 28 25.5 -0.5
baz=44,SNR=20
MVCO Mesa Verde 43.67 86 ⇓P P 01 28 26.4 -0.2
baz=44
X16A Lo Mia Camp, P 43.71 91 ⇑P P 01 28 26.8 -0.1
baz=44,SNR=8.4
W17A Winslow 43.71 90 ⇓P P 01 28 26.8 -0.2
baz=44
CN2 Changchun 43.73 286 *e*P P 01 28 26.0 -1.0
CN2 *e*AP pP 01 28 36.0 0.0
CN2 *e*S **S** **01 34 51.5 -3.6**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 AMB AMB
comp=Z,400nm,6.0s
CN2 LR LR
comp=N,400nm,18.0s,MS4.5
CN2 LR LR
comp=E,400nm,18.0s,MS4.5
CN2 LR LR
comp=Z,600nm,19.0s,MS4.5
ISCO Idaho Springs 43.80 81 *e*P P 01 28 29.1 +1.5
ISCO pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
ISCO Idaho Springs 43.80 81 *e*P P 01 28 29.1 +1.5
comp=Z,5.1nm,1.0s,mb4.2
Y16A Circle Bar Ran 44.05 92 ⇑P P 01 28 29.9 +0.3
baz=44,SNR=7.4
V19A Window Rock 44.31 88 ⇑P P 01 28 31.6 -0.2
baz=44
115A Sonoran Desert 44.39 94 ⇑P P 01 28 32.1 -0.3
baz=44
W19A Sanders 44.50 89 ⇑P P 01 28 32.9 -0.4
baz=44
X18A Snowflake 44.55 90 ⇑P P 01 28 33.9 +0.2
baz=44
214A Organ Pipe Nat 44.55 95 ⇓P P 01 28 33.3 -0.4
baz=44,SNR=6.7
Y17A Roosevelt 44.56 91 ⇓P P 01 28 33.5 -0.2
baz=44
116A Eloy 44.81 93 ⇑P P 01 28 35.5 -0.3
baz=45
X19A St. Johns 45.02 89 ⇓P P 01 28 37.2 -0.2
baz=45,SNR=5.0
SDCO Great Sand Dun 45.16 83 *e*P P 01 28 38.7 +0.2
comp=Z,11nm,1.1s,mb4.6
117A Oracle 45.39 93 ⇑P P 01 28 40.1 -0.3
baz=45,SNR=5.6
TUC Tucson 45.54 93 *e*P P 01 28 41.5 -0.1
TUC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TUC Tucson 45.54 93 *e*P P 01 28 41.5 -0.1
comp=Z,9.7nm,1.1s,mb4.7
118A Homack Ranch, 45.81 92 ⇑P P 01 28 43.4 -0.4
baz=46,SNR=8.5
217A Green Valley 45.89 93 ⇓P P 01 28 44.3 0.0
baz=46
119A Ashpeak Ranch, 46.14 91 ⇑P P 01 28 46.2 -0.1
baz=46,SNR=5.7
KSRS Korea Array 46.16 278 P P 01 28 47.0 +0.6
comp=Z,8.9nm,1.0s,mb4.7,baz=57,slow=7.6,SNR=17
218A Dragoon 46.23 93 ⇑P P 01 28 46.8 -0.2
baz=46,SNR=8.1
ANMO Albuquerque 46.40 87 P P 01 28 47.8 -0.5
comp=Z,4.3nm,1.1s,mb4.3,baz=321,slow=10,SNR=4.6
318A Bisbee 46.63 93 ⇑P P 01 28 49.9 -0.3
baz=46,SNR=6.6
219A White Tail Can 46.69 92 ⇓P P 01 28 49.9 -0.7
baz=47,SNR=9.2
ECSD ERDS,Sioux Fal 46.73 71 *e*P P 01 28 49.1 -1.7
comp=Z,113nm,2.5s,mb5.4
319A Douglas 47.11 93 ⇓P P 01 28 53.6 -0.3
baz=47
AMTX Amarillo 49.36 83 *e*P P 01 29 10.6 -0.7
comp=Z,10nm,0.9s,mb4.9
GDL2 Guadalupe Moun 49.55 88 *e*P P 01 29 12.6 -0.1
DAG Danmarks Havn 49.62 9 *i*P P 01 29 11.3 -1.4
DAG pmax pmax
comp=Z,12nm,0.7s,mb5.0
DAG Danmarks Havn 49.62 9 ⇑*i*P P 01 29 11.3 -1.4
comp=Z,12nm,0.7s,mb5.0
SUMG Summit 50.50 17 *e*P P 01 29 18.9 -0.4
comp=Z,24nm,0.8s,mb5.3
WMOK Wichita Mounta 51.22 81 *e*P P 01 29 24.5 -0.8
comp=Z,6.3nm,0.8s,mb4.6
BJI Beijing 51.49 288 P P 01 29 26.5 -0.8
BJI AMB AMB
comp=Z,11nm,0.8s,mb4.8
ULN Ulaanbaatar 51.56 301 ⇑*e*P P 01 29 27.0 -0.7
ULN Ulaanbaatar 51.56 301 *e*P P 01 29 27.4 -0.3
comp=Z,11nm,1.0s,mb4.7
ZAK Zakamensk 51.91 306 *e*P P 01 29 22.4 -7.8
ZAK pmax pmax
comp=Z,4.0nm,1.7s,mb4.1
SONM Songino Array 51.92 301 P P 01 29 30.6 +0.2
comp=Z,3.8nm,0.7s,mb4.5,baz=54,slow=7.5,SNR=12
TXAR Lajitas Array 51.98 90 P P 01 29 30.6 -0.5
comp=Z,15nm,0.8s,mb5.0,baz=297,slow=5.4,SNR=52
JCT Junction City 53.54 86 *e*P P 01 29 41.3 -1.3
comp=Z,16nm,0.8s,mb5.0
HHC Hu-ho-hao-te 53.61 292 *e*P P 01 29 43.5 +0.5
HHC AP pP 01 29 53.5 +1.4
HHC XP sP 01 29 57.8 +2.1
HHC PCP PcP 01 30 50.8 +1.6
HHC PP PP 01 31 45.5 +2.0
HHC PCS PcS 01 34 48.5 +0.3
HHC S **S** **01 37 11.8 -2.4**
HHC XS sS 01 37 28.0 -1.3
HHC SCS ScS 01 39 27.0 -2.9
HHC SS SS 01 40 51.3 -3.1
HHC AMB AMB
comp=Z,19nm,1.1s,mb4.9
HHC AMB AMB
comp=Z,309nm,10.1s
HHC LR LR
comp=N,291nm,14.3s,MS4.6
HHC LR LR
comp=E,243nm,13.1s,MS4.6
HHC LR LR
comp=Z,393nm,20.2s
SCHQ Schefferville 54.87 44 P P 01 29 51.3 -0.6
comp=Z,1.8nm,0.7s,mb4.2,baz=274,slow=11,SNR=4.8
NJ2 Nanjing 55.30 279 *e*P P 01 29 56.8 +1.5
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb5.4
WVT Waverly 56.79 73 *e*P P 01 30 04.5 -1.4
comp=Z,6.1nm,0.9s,mb4.6
KEV Kevo 57.63 354 *e*p P 01 30 10.6 -0.8
comp=Z,9.3nm,0.6s,mb5.0
KEV Kevo 57.63 354 *e*P P 01 30 10.6 -0.8
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ZALV Zalesovo Beam 57.89 318 P P 01 30 12.1 -1.3
comp=Z,1.2nm,0.5s,mb4.2,baz=40,slow=5.4,SNR=5.3
ARCES ARCESS Array B 57.94 354 P P 01 30 11.2 -2.4
comp=Z,11nm,0.9s,mb4.9,baz=353,slow=5.5,SNR=11
LONY Lake Ozonia 58.24 57 *e*P P 01 30 15.1 -0.9
WHN Wuhan 59.08 281 ⇑P P 01 30 22.8 +0.7
MIV Mineville/With 59.16 57 *e*P P 01 30 24.9 +2.4
XAN Xi'an 59.81 288 P P 01 30 26.0 -1.1
XAN AP pP 01 30 35.3 -1.0
XAN PP PP 01 32 37.8 -1.1
XAN S **S** **01 38 34.8 -1.5**
XAN SS SS 01 42 31.8 -0.3
XAN AMB AMB
comp=Z,14nm,1.1s,mb4.9
XAN LR LR
comp=E,150nm,21.4s
XAN LR LR
comp=Z,243nm,19.6s,MS4.3
GTA Gaotai 61.13 298 *e*P P 01 30 35.5 -0.5
GTA PP PP 01 32 50.3 -0.1
GTA S **S** **01 38 50.5 -2.6**
GTA SS SS 01 42 46.5 -6.0
GTA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,229nm,7.4s
GTA LR LR
comp=N,357nm,17.8s,MS4.7
GTA LR LR
comp=E,402nm,18.1s,MS4.7
GTA LR LR
comp=Z,271nm,18.4s,MS4.4
LZH Lanzhou 61.27 293 *e*P P 01 30 37.5 +0.5
LZH AP pP 01 30 48.0 +1.7
LZH XP sP 01 30 51.5 +1.7
LZH PP PP 01 32 54.0 +2.3
LZH *e*S **S** **01 38 51.0 -4.0**
LZH XS sS 01 39 10.0 -0.2
LZH SS SS 01 42 52.0 -2.9
LZH AMB AMB
comp=Z,31nm,1.1s,mb5.3
LZH AMB AMB
comp=Z,170nm,5.7s
LZH LR LR
comp=N,898nm,16.4s
LZH LR LR
comp=Z,916nm,17.8s,MS5.0
KURK Kurchatov 62.84 319 P P 01 30 47.5 +0.2
comp=Z,3.0nm,0.7s,mb4.5,baz=26,slow=7.9,SNR=10
KURK Kurchatov 62.84 319 ⇑*e*P P 01 30 45.8 -1.5
KURK pmax pmax
comp=Z,5.0nm,1.3s,mb4.5
KURK Kurchatov 62.84 319 *e*P P 01 30 46.3 -1.0
comp=Z,6.2nm,1.0s,mb4.7
JOF Joensuu 63.98 350 *e*p P 01 30 52.9 -1.8
comp=Z,8.4nm,0.9s,mb4.8
JOF Joensuu 63.98 350 *e*P P 01 30 52.9 -1.8
JOF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SVE Sverdlovsk 63.99 333 ⇓*e*P P 01 30 54.4 -0.4
SVE pmax pmax
comp=Z,20nm,1.1s,mb5.1
WMQ Urumqi 64.09 309 *e*P P 01 30 56.0 +0.3
BVAR Borovoye Array 64.10 325 P P 01 30 55.0 -0.5
comp=Z,9.8nm,0.7s,mb4.9,baz=45,slow=5.7,SNR=28
BRVK Borovoye 64.11 325 *e*P P 01 30 55.4 -0.2
comp=Z,14nm,0.9s,mb5.0
MK31 Makanchi Array 64.32 314 *e*P P 01 30 56.1 -1.1
MKAR Makanchi Array 64.32 314 P P 01 30 56.0 -1.1
comp=Z,3.5nm,0.9s,mb4.4,baz=54,slow=6.2,SNR=12
ARU Arti 64.91 333 *d i*P P 01 31 00.4 -0.4
ARU *e* 01 33 20.1
ARU S **S** **01 39 40.5 +0.6**
ARU SS SS 01 43 51.5 +0.9
ARU pmax pmax
comp=Z,14nm,1.0s,mb5.0
ARU Arti 64.91 333 *e*P P 01 31 00.0 -0.8
comp=Z,16nm,0.8s,mb5.1
CD2 Chengdu 65.08 289 P P 01 31 03.3 +1.0
CD2 AP pP 01 31 13.5 +1.9
CD2 XP sP 01 31 17.5 +2.3
CD2 PCP PcP 01 31 35.8 +0.8
CD2 PP PP 01 33 28.3 +3.0
CD2 S S 01 39 40.8 -1.9
CD2 XS sS 01 39 57.8 -0.2
CD2 SS SS 01 43 55.3 +0.8
CD2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
CD2 AMB AMB
comp=Z,120nm,4.5s
CD2 LR LR
comp=N,290nm,7.5s
CD2 LR LR
comp=Z,330nm,7.2s
KAF Kangasniemi 65.23 353 *e*p P 01 31 01.5 -1.3
comp=Z,18nm,0.6s,mb5.3
KAF Kangasniemi 65.23 353 *e*P P 01 31 01.5 -1.3
KAF pmax pmax
comp=Z,18nm,0.6s,mb5.3
CMIG Matias Romero 66.43 92 P P 01 31 09.2 -2.1
comp=Z,4.8nm,1.0s,mb4.5,baz=323,slow=4.5,SNR=4.5
GYA Guiyang 66.66 283 ⇓*i*P P 01 31 12.8 +0.2
GYA AP pP 01 31 23.0 +1.1
GYA XP sP 01 31 27.0 +1.6
GYA PP PP 01 33 41.0 +1.7
GYA SCP 01 35 41.0
GYA PCS 01 35 47.3
GYA S S 01 39 59.0 -3.1
GYA XS sS 01 40 16.0 -1.5
GYA SKS 01 41 03.3
GYA SS SS 01 44 17.3 -2.0
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,50nm,6.2s
GYA LR LR
comp=N,210nm,17.0s,MS4.6
GYA LR LR
comp=E,280nm,18.2s,MS4.6
GYA LR LR
comp=Z,320nm,18.5s,MS4.6
NB2 NORSAR Subarra 66.88 0 P P 01 31 12.7 -0.7
comp=Z,20nm,1.2s,mb5.0,baz=1.5,slow=6.5
NOA NORSAR Array B 66.88 0 P P 01 31 12.5 -0.9
comp=Z,8.9nm,0.9s,mb4.8,baz=0.1,slow=6.3,SNR=46
KMI Kunming 69.99 285 P P 01 31 33.3 -0.1
KMI AP pP 01 31 44.5 +1.7
KMI XP sP 01 31 49.8 +3.5
KMI PP PP 01 34 11.0 +2.9
KMI S S 01 40 36.5 -5.2
KMI XS sS 01 40 56.8 -0.4
KMI SS SS 01 45 09.8 -1.0
KMI AMB AMB
comp=Z,12nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,213nm,5.6s
KMI LR LR
comp=N,155nm,20.1s,MS4.5
KMI LR LR
comp=E,214nm,23.6s,MS4.5
KMI LR LR
comp=Z,263nm,24.5s,MS4.4
TKM2 Tokmak 2 70.29 316 *e*P P 01 31 35.2 +0.2
comp=Z,9.0nm,1.2s,mb4.6
AKTK Aktyubinsk 70.34 331 P P 01 31 35.0 -0.1
AKTO Aktyubinsk 70.34 331 P P 01 31 35.0 -0.1
comp=Z,16nm,0.8s,mb5.0,baz=42,slow=7.0,SNR=30
OBN Obninsk 70.89 345 ⇓*i*P P 01 31 37.4 -1.0
OBN pmax pmax
comp=Z,22nm,1.0s,mb5.0
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.6
OBN Obninsk 70.89 345 *e*P P 01 31 37.5 -1.0
comp=Z,25nm,1.1s,mb5.1
EKS2 Erkin-Say 71.27 317 *e*P P 01 31 41.2 +0.2
comp=Z,7.9nm,0.9s,mb4.6
LSA Lhasa 73.11 297 P P 01 31 53.8 +1.6
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
SUW Suwalki 73.51 353 *e*P P 01 31 53.0 -1.2
SUW Suwalki 73.51 353 *e*P P 01 31 53.0 -1.1
IBBN Ibbenburen 75.58 3 *e*P P 01 32 06.4 +0.2
comp=Z,27nm,1.2s,mb5.0
CLZ Clausthal 76.10 1 *e*P P 01 32 09.4 +0.3
CLZ pmax pmax
comp=Z,16nm,1.2s,mb4.8
CLZ Clausthal 76.10 1 *e*P P 01 32 09.4 +0.3
comp=Z,16nm,1.2s,mb4.8
AKASG Malin Array Be 76.20 349 P P 01 32 08.6 -1.2
comp=Z,2.7nm,0.5s,mb4.5,baz=11,slow=5.5,SNR=14
AKBB Malin Array Si 76.20 349 *e*P P 01 32 07.7 -2.0
KIEV Kiev 76.21 349 *e*P P 01 32 08.0 -1.8
comp=Z,8.1nm,0.8s,mb4.7
CLL Collm 76.64 359 *e*P P 01 32 12.0 -0.2
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 76.64 359 *e*P P 01 32 12.0 -0.2

comp=Z,5.0nm,0.9s,mb4.4
TAPN Taplejung 76.82 298 *e*P P 01 32 13.9 +0.3
comp=Z,19nm,0.7s,mb5.1
KSP Ksiaz 77.04 357 *e*P P 01 32 14.4 0.0
KSP Ksiaz 77.04 357 *e*P P 01 32 14.3 -0.1
BRG Berggiesshubel 77.06 359 *e*P P 01 32 14.6 0.0
comp=Z,12nm,1.2s,mb4.7
BRG Berggiesshubel 77.06 359 *e* P 01 32 14.7 +0.1
BRG Berggiesshubel 77.06 359 *e* P 01 32 14.7 +0.1
CHTO Chiang Mai 77.07 284 *e*P P 01 32 15.7 +0.5
comp=Z,8.9nm,1.3s,mb4.5
MOX Moxa 77.30 0 *e*P P 01 32 16.1 +0.2
MOX Moxa 77.30 0 *e*P P 01 32 16.0 +0.1
comp=Z,15nm,1.2s,mb4.8
CMAR Chiang Mai Arr 77.35 284 P P 01 32 17.0 +0.3
comp=Z,4.5nm,0.8s,mb4.4,baz=25,slow=6.0,SNR=14
GUN Gumba 77.36 299 *e*P P 01 32 16.9 +0.2
comp=Z,27nm,0.7s,mb5.3
UPC Upice 77.38 357 *e*P P 01 32 16.4 0.0
UPC *e*pP pP 01 32 22.1 -3.8
PVCC Panska Ves 77.39 358 *e*P P 01 32 17.0 +0.5
JIRN Jiri 77.40 299 *e*P P 01 32 17.2 +0.3
comp=Z,17nm,0.5s,mb5.2
OJC Ojcow 77.51 355 *e*P P 01 32 17.3 +0.2
DPC Dobruska-Polom 77.53 357 *e*P P 01 32 17.8 +0.6
DPC *e*pP pP 01 32 22.7 -4.0
LVV L'vov 77.61 352 *e*P P 01 32 17.9 +0.2
GIVF Givet 77.67 5 *e*P P 01 32 18.0 0.0
comp=Z,53nm,1.3s,mb5.0
GIVF Givet 77.67 5 *e*P P 01 32 18.0 0.0
GIVF pmax pmax
comp=Z,27nm,1.3s,mb5.0
GIVF Givet 77.67 5 *e*P P 01 32 18.0 0.0
comp=Z,27nm,1.3s,mb5.0
BAIF Baives 77.68 5 *e*P P 01 32 18.1 0.0
comp=Z,20nm,1.1s,mb4.7
BAIF Baives 77.68 5 *e*P P 01 32 18.1 0.0
BAIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BAIF Baives 77.68 5 *e*P P 01 32 18.1 0.0
comp=Z,10nm,1.1s,mb4.7
NKC Novy Kostel 77.72 360 *e*P P 01 32 18.6 +0.4
RAMN Ramite 77.74 298 *e*P P 01 32 18.5 -0.3
comp=Z,22nm,0.7s,mb5.2
PKI Pulchoki 77.88 299 *e*P P 01 32 19.7 +0.1
KWP Kalwaria 77.90 353 *e*P P 01 32 19.8 +0.5
KWP Kalwaria 77.90 353 ⇑*i*P P 01 32 19.8 +0.5
KWP Kalwaria 77.90 353 *e*P P 01 32 19.8 +0.5
PRU Pruhonice 77.94 358 *e*P P 01 32 19.5 0.0
PRU *e*pP pP 01 32 24.9 -4.1
GKN Gorkha 77.95 300 *e*P P 01 32 19.7 -0.2
comp=Z,10nm,0.5s,mb5.0
OKC Ostrava-Krasne 77.97 356 *e*P P 01 32 20.1 +0.4
OKC *e*pP pP 01 32 25.4 -3.8
DMN Daman 78.02 300 *e*P P 01 32 20.5 +0.2
comp=Z,24nm,1.0s,mb5.1
DANN Dangsing 78.13 301 *e*P P 01 32 21.3 +0.3
comp=Z,45nm,0.6s,mb5.5
STHS Stebnicka Huta 78.22 354 *i*P P 01 32 21.3 +0.2
STHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
STHS Stebnicka Huta 78.22 354 *i*P P 01 32 21.3 +0.2
STHS Stebnicka Huta 78.22 354 *i*P P 01 32 21.3 +0.2
comp=Z,11nm,1.1s,mb4.7
GRA1 Grafenberg Arr 78.26 0 *e*P P 01 32 21.8 +0.5
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 78.26 0 *e*P P 01 32 21.8 +0.5
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 78.26 0 *e*P P 01 32 21.8 +0.5
GRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
GRF Grafenberg Arr 78.26 0 *e*P P 01 32 21.8 +0.5
comp=Z,13nm,1.0s,mb4.8
NIE Niedzica 78.28 354 *e*P P 01 32 22.1 +0.7
VRAC Vranov 78.56 357 ⇑*i*P P 01 32 24.0 +1.0
TREC Trest 78.61 358 *e*P P 01 32 23.4 +0.2
FLN La Foliniere 78.64 8 *e*P P 01 32 23.1 -0.3
comp=Z,30nm,1.1s,mb4.8
FLN La Foliniere 78.64 8 *e*P P 01 32 23.1 -0.3
FLN pmax pmax
comp=Z,15nm,1.1s,mb4.8
FLN La Foliniere 78.64 8 *e*P P 01 32 23.1 -0.3
comp=Z,15nm,1.1s,mb4.8
KOLN Koldanda 78.68 301 *e*P P 01 32 23.5 -0.5
comp=Z,6.4nm,0.4s,mb4.9
CRVS Cervenica-Dubn 78.72 354 *e*P P 01 32 24.2 +0.4
CRVS pmax pmax
comp=Z,51nm,2.7s,mb5.0
CRVS Cervenica-Dubn 78.72 354 *e*P P 01 32 24.2 +0.4
CRVS Cervenica-Dubn 78.72 354 *e*P P 01 32 24.2 +0.4
comp=Z,51nm,2.7s,mb5.0
ROSF Rostrenen 78.79 10 *e*P P 01 32 24.3 +0.1
comp=Z,116nm,1.6s,mb5.3
ROSF Rostrenen 78.79 10 *e*P P 01 32 24.3 +0.1
ROSF pmax pmax
comp=Z,58nm,1.6s,mb5.3
ROSF Rostrenen 78.79 10 *e*P P 01 32 24.3 +0.1
comp=Z,58nm,1.6s,mb5.3
KHC Kasperske Hory 78.81 359 *e*P P 01 32 24.8 +0.5
KHC *e*pP pP 01 32 30.8 -3.0
LDF La Druitiere 78.84 8 *e*P P 01 32 24.1 -0.4
comp=Z,29nm,1.1s,mb4.8
LDF La Druitiere 78.84 8 *e*P P 01 32 24.1 -0.4
LDF pmax pmax
comp=Z,14nm,1.1s,mb4.8
LDF La Druitiere 78.84 8 *e*P P 01 32 24.1 -0.4
comp=Z,14nm,1.1s,mb4.8
SGMF Saint Gilles 78.94 10 *e*P P 01 32 25.0 -0.1
comp=Z,45nm,1.2s,mb5.0
SGMF Saint Gilles 78.94 10 *e*P P 01 32 25.0 -0.1
SGMF pmax pmax
comp=Z,22nm,1.2s,mb5.0
SGMF Saint Gilles 78.94 10 *e*P P 01 32 25.0 -0.1
comp=Z,22nm,1.2s,mb5.0
GRR Gorron 78.98 9 *e*P P 01 32 25.1 -0.1
GEC2 GERESS Array S 79.09 359 *e*P P 01 32 26.2 +0.3
GEC2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
GEC2 GERESS Array S 79.09 359 *e*P P 01 32 26.2 +0.3
comp=Z,10.0nm,1.2s,mb4.6
GERES GERESS Array B 79.09 359 P P 01 32 26.0 +0.1
comp=Z,3.0nm,0.9s,mb4.2,baz=18,slow=3.5,SNR=15
STU Stuttgart 79.15 2 *e*P P 01 32 25.7 -0.5
STU pmax pmax
comp=Z,11nm,1.1s,mb4.7
STU Stuttgart 79.15 2 *e*P P 01 32 26.4 +0.2
comp=Z,20nm,1.4s,mb4.8
STU Stuttgart 79.15 2 *e*P P 01 32 25.7 -0.5
comp=Z,11nm,1.1s,mb4.7
KOLL Kolacno 79.22 356 *i*P P 01 32 27.7 +1.1
MEZF Maizieres J'vi 79.28 5 *e*P P 01 32 27.4 +0.5
VYHS Vyhne 79.28 355 *i*P P 01 32 27.3 +0.4
VYHS pmax pmax
comp=Z,104nm,3.0s
VYHS Vyhne 79.28 355 *i*P P 01 32 27.3 +0.4
comp=Z,104nm,3.0s
SMOL Smolenice 79.33 356 *e*P P 01 32 28.5 +1.3
TRPA Tarpa 79.41 353 ⇑*i*P P 01 32 28.0 +0.4
CDF Champ du Feu 79.46 3 *e*P P 01 32 28.0 +0.1
comp=Z,36nm,1.5s,mb4.8
CDF Champ du Feu 79.46 3 *e*P P 01 32 28.0 +0.1
CDF pmax pmax
comp=Z,18nm,1.5s,mb4.8
CDF Champ du Feu 79.46 3 *e*P P 01 32 28.0 +0.1
comp=Z,18nm,1.5s,mb4.8
BFO Black Forest 79.58 2 *e*P P 01 32 28.8 +0.3
BFO pmax pmax
comp=Z,11nm,1.2s,mb4.7
BFO Black Forest 79.58 2 *e*P P 01 32 28.8 +0.3
comp=Z,11nm,1.2s,mb4.7
ECH Echery 79.65 3 *e*P P 01 32 28.9 0.0
ECH pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
ECH Echery 79.65 3 *e*P P 01 32 28.9 -0.1
comp=Z,8.6nm,0.9s,mb4.7
ZST Bratislava 79.66 356 *i*P P 01 32 30.0 +1.0
ZST pmax pmax
comp=Z,11nm,1.0s,mb4.7
ZST Bratislava 79.66 356 *i*P P 01 32 30.0 +1.0
ZST Bratislava 79.66 356 *i*P P 01 32 30.0 +1.0
comp=Z,11nm,1.0s,mb4.8
BUR08 Bucovina Ar. S 79.66 351 *e*P P 01 32 28.5 -0.5
BURAR Bucovina Array 79.69 351 ⇑*i*P P 01 32 29.1 0.0
PSZ Piszkesteto 79.80 355 *e*P P 01 32 29.8 +0.1
PSZ pmax pmax
comp=Z,14nm,1.2s,mb4.8
PSZ Piszkesteto 79.80 355 ⇑*i*P P 01 32 31.1 +1.4
PSZ Piszkesteto 79.80 355 *e*P P 01 32 29.8 0.0
comp=Z,14nm,1.2s,mb4.8
HAU Haudompre 79.83 4 *e*P P 01 32 30.1 +0.2
comp=Z,18nm,1.2s,mb4.6
HAU Haudompre 79.83 4 *e*P P 01 32 30.1 +0.2
HAU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
HAU Haudompre 79.83 4 *e*P P 01 32 30.1 +0.2
comp=Z,9.1nm,1.2s,mb4.6
CONA Conrad Observa 79.97 357 ⇑*i*P P 01 32 31.4 +0.8
comp=Z,13nm,1.0s,mb4.8,SNR=9.4
HINF Hinteralfeld 80.04 3 *e*P P 01 32 31.1 0.0
comp=Z,13nm,1.0s,mb4.5
HINF Hinteralfeld 80.04 3 *e*P P 01 32 31.1 0.0
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
HINF Hinteralfeld 80.04 3 *e*P P 01 32 31.1 0.0
comp=Z,6.4nm,1.0s,mb4.5
KBL Kabul 80.09 315 *e*P P 01 32 30.3 -1.2
KBL pmax pmax
comp=Z,20nm,1.0s,mb5.0
KBL Kabul 80.09 315 *e*P P 01 32 30.3 -1.2
comp=Z,20nm,1.0s,mb5.0
RJOB Jochberg 80.21 359 *e*P P 01 32 32.8 +0.8
comp=Z,10.0nm,1.1s,mb4.7
KIV Kislovodsk 80.39 338 *e*P P 01 32 33.2 +0.2
KIV pmax pmax
comp=Z,20nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,178nm,19.0s,MS4.4
KIV Kislovodsk 80.39 338 *e*P P 01 32 33.7 +0.7
comp=Z,17nm,0.9s,mb5.0
LOR Lormes 80.45 6 *e*P P 01 32 33.4 +0.2
comp=Z,30nm,1.2s,mb4.8
LOR Lormes 80.45 6 *e*P P 01 32 33.4 +0.2
LOR pmax pmax
comp=Z,15nm,1.2s,mb4.8
LOR Lormes 80.45 6 *e*P P 01 32 33.4 +0.2
comp=Z,15nm,1.2s,mb4.8
MOTA Moosalm 80.60 1 ⇓*i*P P 01 32 34.4 +0.4
comp=Z,16nm,1.1s,mb4.9,SNR=9.4
WATA Walderalm 80.61 0 ⇓*i*PcP P 01 32 35.0 +0.8
comp=Z,6.4nm,0.8s,mb4.6
SSF Saint Saulge 80.63 6 *e*P P 01 32 34.4 +0.2
comp=Z,10nm,0.9s,mb4.7
SSF Saint Saulge 80.63 6 *e*P P 01 32 34.4 +0.2
SSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SSF Saint Saulge 80.63 6 *e*P P 01 32 34.4 +0.2
comp=Z,8.6nm,0.9s,mb4.7
WTTA Wattenberg 80.69 0 ⇑*i*PcP P 01 32 35.4 +0.9
comp=Z,12nm,1.1s,mb4.8,SNR=7.2
DRGR 80.72 352 ⇑*i*P P 01 32 35.1 +0.4
MFF Saint Martin d 80.81 8 *e*P P 01 32 35.4 +0.2
comp=Z,48nm,1.0s,mb5.1
MFF Saint Martin d 80.81 8 *e*P P 01 32 35.4 +0.2
MFF pmax pmax
comp=Z,24nm,1.0s,mb5.1
MFF Saint Martin d 80.81 8 *e*P P 01 32 35.4 +0.2
comp=Z,24nm,1.0s,mb5.1
KBA Koelnbreinsper 80.86 359 ⇑*i*PcP P 01 32 36.6 +1.1
comp=Z,29nm,0.9s,mb5.2,SNR=11
AVF Avril sur Loir 80.89 6 *e*P P 01 32 35.6 0.0
comp=Z,27nm,1.2s,mb4.8
AVF Avril sur Loir 80.89 6 *e*P P 01 32 35.6 0.0
AVF pmax pmax
comp=Z,14nm,1.2s,mb4.8
AVF Avril sur Loir 80.89 6 *e*P P 01 32 35.6 0.0
comp=Z,14nm,1.2s,mb4.8
FETA Feichten 80.93 1 *i*PcP P 01 32 36.7 +0.9
comp=Z,18nm,0.9s,mb5.0,SNR=18
SMF Signal de Mont 81.07 6 *e*P P 01 32 36.6 0.0
comp=Z,28nm,1.1s,mb4.8
SMF Signal de Mont 81.07 6 *e*P P 01 32 36.6 0.0
SMF pmax pmax
comp=Z,14nm,1.1s,mb4.8
SMF Signal de Mont 81.07 6 *e*P P 01 32 36.6 0.0
comp=Z,14nm,1.1s,mb4.8
BGF Bois d'Agland 81.09 6 *e*P P 01 32 36.8 +0.1
comp=Z,25nm,1.1s,mb4.8
BGF Bois d'Agland 81.09 6 *e*P P 01 32 36.8 +0.1
BGF pmax pmax
comp=Z,12nm,1.0s,mb4.8
BGF Bois d'Agland 81.09 6 *e*P P 01 32 36.8 +0.1
comp=Z,12nm,1.0s,mb4.8
ABTA Abfaltersbach 81.20 360 *i*PcP P 01 32 38.3 +1.0
comp=Z,15nm,1.2s,mb4.8,SNR=7.5
CABF La Chapelle 81.22 4 *e*P P 01 32 38.1 +0.7
comp=Z,22nm,1.0s,mb4.8
CABF La Chapelle 81.22 4 *e*P P 01 32 38.1 +0.7
CABF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CABF La Chapelle 81.22 4 *e*P P 01 32 38.1 +0.7
comp=Z,11nm,1.0s,mb4.7
SOKA Soboth 81.24 358 ⇑*i*PcP P 01 32 38.1 +0.6
comp=Z,18nm,1.1s,mb4.9
TCF Toulx Ste Croi 81.31 7 *e*P P 01 32 37.8 -0.1
TUE Stuetta 81.46 2 *e*P P 01 32 38.2 -0.4
comp=Z,5.5nm,0.9s,mb4.5
VOIR 81.86 351 ⇑*i*P P 01 32 42.0 +1.2
BZS Buzias 81.98 353 ⇑*i*P P 01 32 41.4 0.0
GZR Gura Zlata 82.11 352 ⇑*i*P P 01 32 42.0 -0.1
RJF Les Rejaudoux 82.24 7 *e*P P 01 32 42.8 0.0
LPL La Plagne 82.33 4 *e*P P 01 32 44.8 +1.5
comp=Z,17nm,1.2s,mb4.5
LPL La Plagne 82.33 4 *e*P P 01 32 44.8 +1.5
LPL pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
LPL La Plagne 82.33 4 *e*P P 01 32 44.8 +1.5
comp=Z,8.6nm,1.2s,mb4.6
LPG La Plagne 82.36 4 *e*P P 01 32 45.2 +1.8
comp=Z,32nm,1.4s,mb4.8
LPG La Plagne 82.36 4 *e*P P 01 32 45.2 +1.8
LPG pmax pmax
comp=Z,16nm,1.4s,mb4.8
LPG La Plagne 82.36 4 *e*P P 01 32 45.2 +1.8
comp=Z,16nm,1.4s,mb4.8
LFF La Frestale 82.54 8 *e*P P 01 32 44.6 +0.2
comp=Z,20nm,0.6s,mb5.0
LFF La Frestale 82.54 8 *e*P P 01 32 44.6 +0.2
LFF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
LFF La Frestale 82.54 8 *e*P P 01 32 44.6 +0.2
comp=Z,9.9nm,0.6s,mb5.0
CAF Calviac 82.66 7 *e*P P 01 32 45.3 +0.3
comp=Z,17nm,1.0s,mb4.7
CAF Calviac 82.66 7 *e*P P 01 32 45.3 +0.3
CAF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CAF Calviac 82.66 7 *e*P P 01 32 45.3 +0.3
comp=Z,8.6nm,1.0s,mb4.7
BNI Bardonecchia 82.80 4 *e*P P 01 32 47.4 +1.7
BNI pmax pmax
comp=Z,18nm,1.1s,mb5.0
BNI Bardonecchia 82.80 4 *e*P P 01 32 47.4 +1.7
comp=Z,18nm,1.1s,mb5.0
ORIF Oris-en-Rattie 82.90 4 *e*P P 01 32 47.1 +0.9
comp=Z,16nm,1.0s,mb4.7
ORIF Oris-en-Rattie 82.90 4 *e*P P 01 32 47.1 +0.9
ORIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 82.90 4 *e*P P 01 32 47.1 +0.9
comp=Z,7.8nm,1.0s,mb4.7
VIVF Saint-Julien-l 82.90 5 *e*P P 01 32 46.9 +0.7
comp=Z,21nm,1.1s,mb4.8
VIVF Saint-Julien-l 82.90 5 *e*P P 01 32 46.9 +0.7
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.8
VIVF Saint-Julien-l 82.90 5 *e*P P 01 32 46.9 +0.7
comp=Z,11nm,1.1s,mb4.8
MBDF Montbardon 83.12 4 *e*P P 01 32 48.9 +1.5
comp=Z,22nm,0.8s,mb5.0
MBDF Montbardon 83.12 4 *e*P P 01 32 48.9 +1.5
MBDF pmax pmax
comp=Z,11nm,0.8s,mb4.9
MBDF Montbardon 83.12 4 *e*P P 01 32 48.9 +1.5
comp=Z,11nm,0.8s,mb5.0
SMRF Simiane la Rot 83.82 5 *e*P P 01 32 52.5 +1.5
comp=Z,64nm,1.5s,mb5.2
SMRF Simiane la Rot 83.82 5 *e*P P 01 32 52.5 +1.5
comp=Z,64nm,1.5s,mb5.5
SBF Sospel 84.01 3 *e*P P 01 32 52.6 +0.6
comp=Z,18nm,0.7s,mb5.0
SBF Sospel 84.01 3 *e*P P 01 32 52.6 +0.6
SBF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
SBF Sospel 84.01 3 *e*P P 01 32 52.6 +0.6
comp=Z,9.2nm,0.7s,mb5.0
SJPF Ste Jean 84.17 10 *e*P P 01 32 53.5 +0.7
comp=Z,6.0nm,0.7s,mb4.5
SJPF Ste Jean 84.17 10 *e*P P 01 32 53.5 +0.7
SJPF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
SJPF Ste Jean 84.17 10 *e*P P 01 32 53.5 +0.7
comp=Z,3.0nm,0.7s,mb4.5
MTLF Montolieu 84.25 7 *e*P P 01 32 53.8 +0.6
comp=Z,48nm,1.2s,mb5.2
MTLF Montolieu 84.25 7 *e*P P 01 32 53.8 +0.6
MTLF pmax pmax
comp=Z,24nm,1.2s,mb5.2
MTLF Montolieu 84.25 7 *e*P P 01 32 53.8 +0.6
comp=Z,24nm,1.2s,mb5.2
FRF La Foret Royal 84.28 4 *e*P P 01 32 53.9 +0.5
comp=Z,44nm,1.2s,mb5.2
FRF La Foret Royal 84.28 4 *e*P P 01 32 53.9 +0.5
FRF pmax pmax
comp=Z,22nm,1.2s,mb5.2
FRF La Foret Royal 84.28 4 *e*P P 01 32 53.9 +0.5
comp=Z,22nm,1.2s,mb5.2
EPF Esparros 84.40 8 *e*P P 01 32 53.7 -0.3
comp=Z,24nm,1.1s,mb4.9
EPF Esparros 84.40 8 *e*P P 01 32 53.7 -0.3
EPF pmax pmax
comp=Z,12nm,1.1s,mb4.9
EPF Esparros 84.40 8 *e*P P 01 32 53.7 -0.3
comp=Z,12nm,1.1s,mb4.9
ETSF Etsaut 84.44 9 *e*P P 01 32 54.9 +0.7
comp=Z,22nm,0.8s,mb5.0
ETSF Etsaut 84.44 9 *e*P P 01 32 54.9 +0.7
ETSF pmax pmax
comp=Z,11nm,0.8s,mb5.0
ETSF Etsaut 84.44 9 *e*P P 01 32 54.9 +0.7
comp=Z,11nm,0.8s,mb5.0
LMR La Mourre 84.50 4 *e*P P 01 32 55.1 +0.6
comp=Z,20nm,0.9s,mb4.9
LMR La Mourre 84.50 4 *e*P P 01 32 55.1 +0.6
LMR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
LMR La Mourre 84.50 4 *e*P P 01 32 55.1 +0.6
comp=Z,9.8nm,0.9s,mb4.9
PGF Pioggiola 85.37 2 *e*P P 01 32 59.2 +0.4
comp=Z,110nm,1.3s,mb5.5
PGF Pioggiola 85.37 2 *e*P P 01 32 59.2 +0.4
PGF pmax pmax
comp=Z,55nm,1.3s,mb5.5
PGF Pioggiola 85.37 2 *e*P P 01 32 59.2 +0.4
comp=Z,55nm,1.3s,mb5.5
AQU L'Aquila 85.59 359 *e*P P 01 33 00.4 +0.5
AQU pmax pmax
comp=Z,19nm,0.9s,mb5.3
AQU L'Aquila 85.59 359 *e*P P 01 33 00.4 +0.5
comp=Z,19nm,0.9s,mb5.3
BR131 Keskin Array S 86.29 343 *e*P P 01 33 04.6 +1.1
comp=Z,9.4nm,1.0s,mb5.0
BRTR Keskin Array B 86.29 343 P P 01 33 03.9 +0.4
comp=Z,6.3nm,0.9s,mb4.8,baz=62,slow=2.9,SNR=16
MALT Malatya 86.72 339 *e*P P 01 33 06.9 +1.3
MALT pmax pmax
comp=Z,4.0nm,1.2s,mb4.5
MALT Malatya 86.72 339 *e*P P 01 33 06.9 +1.3
comp=Z,3.8nm,1.2s,mb4.5
ESDC Sonseca Array 87.25 12 P P 01 33 07.9 -0.2
comp=Z,3.7nm,0.7s,mb4.7,baz=346,slow=4.7,SNR=20
WRA Warramunga Ar 87.64 233 P P 01 33 08.1 -2.0
comp=Z,0.7nm,0.4s,mb4.2,baz=32,slow=5.8,SNR=4.0
HYB Hyderabad 89.79 299 *i*P P P 01 33 21.0 +0.5
HYB Hyderabad 89.79 299 *e*P P 01 33 21.0 +0.5
ASAR Alice Springs 91.02 231 P P 01 33 24.9 -0.9
comp=Z,1.8nm,0.8s,mb4.5,baz=26,slow=4.3,SNR=12
STKA Stephens Creek 94.74 221 P P 01 33 44.1 +1.3
comp=Z,0.7nm,0.5s,mb4.3,baz=323,slow=5.1,SNR=3.5
TSUM Tsumeb 146.54 350 PKPbc PKPbc 01 40 03.0 -0.1
comp=Z,3.0nm,0.8s,baz=76,slow=3.6,SNR=5.7
MAW Mawson 151.39 218 PKPbc PKPbc 01 40 13.4 -0.6
comp=Z,2.2nm,0.5s,baz=124,slow=4.8,SNR=6.3
BOSA Boshof 154.21 332 PKPbc PKPbc 01 40 20.9 -0.5
comp=Z,2.6nm,0.9s,baz=117,slow=2.3,SNR=4.6
BOSA Boshof 154.21 332 PKPbc PKPbc 01 40 20.9 -0.6

BJI 27 01:24:57.1, 3940N×11803E, h15km, ML3.5, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJI	**Beijing**	**1.57**	**295**	PG	Pg	01 25 25.0	-2.2
BJI				SG	Sg	01 25 45.5	-2.1
BJI				Smax			
	comp=N,231nm,0.4s						
BJI				Smax			
	comp=E,1μm,0.7s						
DL2	**Dalian**	**2.84**	**99**	P	Pn	01 25 42.5	+0.6
DL2				PG	Pg	01 25 51.0	-0.5
DL2				SG	Sg	01 26 27.0	-1.4
DL2				Smax			
	comp=N,100nm,0.6s						
TIA	**Tai'an**	**3.26**	**193**	P	Pn	01 25 49.3	+1.6
TIA				PG	Pg	01 25 57.5	-2.1
TIA				S	Sn	01 26 27.5	+1.3
TIA				SG	Sg	01 26 39.8	-2.1
TIA				Smax			
	comp=N,63nm,0.3s						
TIA				Smax			
	comp=E,50nm,0.3s						
HHC	**Hu-ho-hao-te**	**5.16**	**288**	*e*P	Pn	01 26 16.3	+2.5
HHC				Smax			
	comp=N,32nm,0.4s						
HHC				Smax			
	comp=E,79nm,0.7s						

IDC 27 01:32:28.2±5.0, 1331S×16722E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.7/17, mbtmp3.7/4, Error ellipse: s-maj=134.6km s-min=49.9km az=116.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.89**	**228**	P	P	01 38 37.8	+0.1
	0.5nm,0.4s,baz=68,slow=9.7,SNR=3.2						
WRA	**Warramunga Arr**	**32.15**	**254**	P	P	01 38 58.1	+0.3
	0.5nm,0.4s,baz=86,slow=9.2,SNR=2.8						
ASAR	**Alice Springs**	**33.16**	**247**	P	P	01 39 06.4	-0.2
	0.5nm,0.6s,baz=73,slow=9.2,SNR=7.0						
MKAR	**Makanchi Array**	**96.15**	**316**	P	P	01 45 58.0	0.0
	0.3nm,0.6s,baz=102,slow=6.2,SNR=4.7						

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*CSEM **27** 01:35:23.4±0.6, 39.36N×3308E, h2km, MD2.7, Error ellipse: s-maj=14.8km s-min=4.2km az=30.0*
*ISK **27** 01:35:23.9, 39.35N×3306E, h6km, MD2.7*
*ISCJB **27** 01:35:24.5±0.9, 39.28N±007×3305E±006, h10km, Error ellipse: s-maj=9.7km s-min=6.4km az=168.2*
*DDA **27** 01:35:25.7, 39.40N×33.11E, h7km±1km, Md2.8*

ISC 27 01:35:24.8±1.0, 3932N±006×3305E±006, h1km±14km, n8, σ0s72/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.52**	**84**	*e*PG	**Pg**	**01 35 34.6**	**-0.2**
KAMT				*e*SG	**Sg**	**01 35 41.6**	**+0.1**
LOD	**Lodumlu**	**0.61**	**339**	*e*PG	**Pg**	**01 35 35.5**	**-1.0**
KIZT	**Kizilcal**	**1.01**	**245**	*e*PG	**Pg**	**01 35 43.9**	**-0.3**
CDAG	**Cicekdag**	**1.07**	**73**	*i*P	**Pg**	**01 35 44.9**	**-0.5**
CDAG				*i*S	**Sg**	**01 35 59.5**	**+0.4**
KDHN	**Kadinhani**	**1.08**	**223**	*i*P	**Pn**	**01 35 48.2**	**+1.2**
KDHN	**Kadinhani**	**1.08**	**223**	*i*P	**Pn**	**01 35 48.2**	**+1.2**
ELDT	**Eldivan**	**1.20**	**14**	*i*P	**Pg**	**01 35 48.7**	**+0.7**
ELDT				*i*S	**Sg**	**01 36 04.2**	**+0.7**
CORM	**Corum**	**1.49**	**54**	*e*PN	**Pn**	**01 35 51.5**	**-1.2**

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*ISCJB **27** 01:39:42.3±0.7, 764S±008×378E±0.1, h10km, mb4.0/8, Error ellipse: s-maj=17.9km s-min=10.2km az=15.1*
*IDC **27** 01:39:42.6±1.2, 768S×3784E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/25, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=32.9km s-min=23.5km az=107.0*
*NEIC **27** 01:39:44.3±0.6, 769S×3773E, h10km, mb4.2/2, Error*

ellipse: s-maj=15.1km s-min=11.6km az=102.0

ISC 27 01:39:44.5±0.7,**765S**×007×**378E**±01,**h10**km,**n20,**
σ0§**83**/20,**mb4.0/8,Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**12.05**	**230**	Pn	**Pn**	**01 42 34.6**	**-1.8**
	0.8nm,0.3s,baz=45,slow=11,SNR=15						
OPO	**Ambohidratompo**	**14.21**	**141**	Pn	**Pn**	**01 43 06.2**	**+0.2**
	0.3nm,0.3s,baz=291,slow=18,SNR=2.1						
MSNA	**Messina**	**16.39**	**206**	*e*P	**Pn**	**01 43 36.6**	**+1.8**
MSNA				AMb	AMB	01 43 42.4	
	comp=Z,18nm,1.8s						
SLR	**Silverton**	**20.12**	**206**	*e*P	**P**	**01 44 18.9**	**+0.2**
ERPM	**east rand prop**	**20.67**	**205**	*e*P	**P**	**01 44 24.9**	**+0.1**
ERPM				AMb	AMB	01 44 53.2	
	comp=Z,19nm,2.1s						
LBTB	**Lobatse**	**20.81**	**213**	*e*P	**P**	**01 44 25.4**	**-0.7**
	comp=Z,7.9nm,0.8s						
KSR	**Koster**	**20.84**	**208**	*e*P	**P**	**01 44 26.9**	**+0.4**
PRYS	**Parys**	**21.56**	**206**	*e*P	**P**	**01 44 34.1**	**-0.1**
PRYS				AMb	AMB	01 44 39.7	
	comp=Z,26nm,1.7s,mb4.4						
SEK	**Senekal**	**22.68**	**204**	*e*P	**P**	**01 44 45.7**	**-0.5**
SWZ	**Schweizer**	**22.72**	**210**	*e*P	**P**	**01 44 45.9**	**-0.7**
SWZ				AMb	AMB	01 45 19.9	
	comp=Z,33nm,1.9s,mb4.4						
BOSA	**Boshof**	**23.95**	**208**	P	**P**	**01 44 59.0**	**-0.1**
	comp=Z,2.8nm,0.6s,mb3.9,baz=32,slow=11,SNR=12						
BOSA	**Boshof**	**23.95**	**208**	*e*P	**P**	**01 44 59.0**	**-0.1**
	comp=Z,6.4nm,0.9s,mb4.0						
UPI	**Upington**	**25.83**	**215**	*e*P	**P**	**01 45 17.1**	**+0.9**
UPI				AMb	AMB	01 45 34.4	
	comp=Z,13nm,1.9s,mb4.2						
TORD	**Torodi Ar. Bea**	**41.35**	**300**	P	**P**	**01 47 32.8**	**+1.8**
	comp=Z,0.2nm,0.7s,mb2.8,baz=130,slow=7.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	**41.35**	**300**	P	**P**	**01 47 32.8**	**+1.8**
GERES	**GERESS Array B**	**60.09**	**342**	P	**P**	**01 49 51.5**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=170,slow=12,SNR=4.7						
ESDC	**Sonseca Array**	**60.86**	**324**	P	**P**	**01 49 57.3**	**0.0**
	comp=Z,1.9nm,1.0s,mb4.2,baz=134,slow=7.4,SNR=7.3						
MK31	**Makanchi Array**	**67.09**	**32**	*e*P	**P**	**01 50 37.8**	**-0.4**
MKAR	**Makanchi Array**	**67.09**	**32**	P	**P**	**01 50 37.7**	**-0.4**
	comp=Z,2.2nm,0.9s,mb4.2,baz=226,slow=6.1,SNR=11						
MKAR	**Makanchi Array**	**67.09**	**32**	P	**P**	**01 50 37.7**	**-0.4**

IDC 27 01:44:13.6±9.1,**587S**×**15083E**,**h62**km±66km,**mb3.3**/2,
mb1 3.7/3,**mb1mx3.3**/16,**mbtmp3.5**/3,**ML2.7**/1,**MS3.1**/1,
Ms1 3.1/1,**ms1mx2.9**/14,**Error ellipse: s-maj=125.2km**
s-min=56.2km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.06**	**226**	P	Pn	01 45 27.2	+0.2
	2.2nm,0.3s,baz=51,slow=10,SNR=8.5						
PMG				S	Sn	01 46 24.7	+0.6
	1.2nm,0.3s,baz=99,slow=19,SNR=8.2						
PMG				LR	LR	01 47 27.9	
	comp=Z,199nm,18.4s,baz=244,slow=38						
WRA	**Warramunga Arr**	**21.28**	**227**	P	P	01 48 54.9	-0.2
	1.4nm,0.4s,baz=54,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**24.05**	**221**	P	P	01 49 23.7	+0.5
	1.0nm,0.7s,baz=57,slow=8.7,SNR=11						
TORD	**Torodi Ar. Bea**	**148.74**	**286**	PKPbc	PKPbc	02 03 54.4	-0.7
	0.3nm,0.9s,baz=58,slow=1.8,SNR=3.8						

ISK 27 01:49:58.4,3938N×3312E,h17km,MD2.8
ISCJB 27 01:49:59.1±0.8,3940N±006×3311E±005,h14km±7km,
Error ellipse: s-maj=10.2km s-min=6.9km az=13.2
DDA 27 01:49:59.5,3952N×3308E,h21km,Md2.9
CSEM 27 01:49:59.0±0.5,3944N×3316E,h15km,MD2.8,Error
ellipse: s-maj=14.9km s-min=2.8km az=33.0

ISC 27 01:49:59.6±0.8,**3940N**±006×**3312E**±006,**h17**km±7km,**n7,**
σ0§**62**/10,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**94**	*e*PG	**Pg**	**01 50 08.2**	**-0.7**
KAMT				*e*SG	**Sg**	**01 50 15.2**	**+0.1**
LOD	**Lodumlu**	**0.56**	**331**	*e*PG	**Pg**	**01 50 10.1**	**-0.6**
LOD				*e*SG	**Sg**	**01 50 18.8**	**+0.7**
CDAG	**Cicekdag**	**0.99**	**77**	*i* P	**Pb**	**01 50 18.4**	**+0.1**
CDAG				*i* S	**Sn**	**01 50 33.1**	**+0.9**
KIZT	**Kizilcal**	**1.10**	**242**	*e*PN	**Pn**	**01 50 19.3**	**-0.8**
KDHN	**Kadinhani**	**1.18**	**222**	*i* P	**Pg**	**01 50 23.3**	**+1.0**
CANT	**Cankiri**	**1.26**	**18**	*e*PN	**Pn**	**01 50 22.1**	**-0.3**
CORM	**Corum**	**1.40**	**56**	*e*PN	**Pn**	**01 50 23.9**	**-0.3**

IDC 27 02:12:17.7±1.0,863S×157.12E,h0km,mb4.1/7,mb1 4.2/8,
mb1mx4.1/17,mbtmp4.1/8,ML4.0/1,MS3.3/4,Ms1 3.3/4,
ms1mx3.1/27,Error ellipse: s-maj=25.5km s-min=22.2km
az=143.0
ISCJB 27 02:12:21.0±3.5,87S±02×157.1E±0.1,h33km±36km,
mb4.1/8,Error ellipse: s-maj=30.3km s-min=15.9km
az=151.1
NEIC 27 02:12:22.6±0.5,862S×157.14E,h35km,mb4.4/2,Error
ellipse: s-maj=15.5km s-min=11.6km az=166.0

ISC 27 02:12:22.4±6.7,**86S**±01×**15713E**±007,**h32**km±49km,**n15,**
σ0§**58**/14,**mb4.1/8,Bougainville - Solomon Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.89**	**106**	Pn	**Pn**	**02 13 06.0**	**-0.2**
	23nm,0.3s,baz=265,slow=6.3,SNR=6.7						
HNR				Sn	**Sn**	**02 13 39.9**	**+0.1**
	34nm,0.3s,baz=235,slow=14,SNR=5.3						
HNR				LR	LR	02 14 07.1	
	comp=Z,275nm,18.4s,baz=120,slow=38						
PMG	**Port Moresby**	**9.88**	**265**	LR	LR	02 18 03.3	
	comp=Z,78nm,21.1s,baz=210,slow=35						
CTA	**Charters Tower**	**15.50**	**222**	LR	LR	02 21 03.7	
	comp=Z,238nm,19.3s,baz=52,slow=34						
WRAB	**Tennant Creek**	**24.73**	**241**	*e*P	**P**	**02 17 41.2**	**+0.1**
	8.0nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**24.75**	**241**	P	**P**	**02 17 41.1**	**0.0**
	4.7nm,0.8s,mb4.0,baz=66,slow=9.4,SNR=14						
WRA				LR	LR	02 26 30.4	
	comp=Z,130nm,20.9s,baz=275,slow=34						
ASAR	**Alice Springs**	**26.79**	**233**	P	**P**	**02 17 58.8**	**-0.8**
	1.2nm,1.0s,baz=66,slow=10,SNR=9.3						
STKA	**Stephens Creek**	**27.26**	**210**	P	**P**	**02 18 04.7**	**+0.9**
	2.3nm,0.7s,mb3.8,baz=40,slow=14,SNR=9.3						
KSRS	**Korea Array**	**53.38**	**331**	P	**P**	**02 21 39.9**	**+0.9**
	1.7nm,0.9s,mb4.0,baz=160,slow=7.5,SNR=7.6						
MK31	**Makanchi Array**	**86.03**	**318**	*e*P	**P**	**02 24 59.9**	**+0.2**
MKAR	**Makanchi Array**	**86.03**	**318**	P	**P**	**02 25 00.2**	**+0.5**
	1.0nm,0.7s,mb4.1,baz=107,slow=6.1,SNR=10						
MKAR	**Makanchi Array**	**86.03**	**318**	P	**P**	**02 25 00.2**	**+0.5**
ZALV	**Zalesovo Beam**	**86.72**	**326**	P	**P**	**02 25 02.4**	**-0.6**
	0.4nm,0.3s,mb4.1,baz=119,slow=5.1,SNR=2.9						
KURK	**Kurchatov**	**89.43**	**321**	*e*P	**P**	**02 25 14.9**	**-1.1**
	1.8nm,0.6s,mb4.6						
YKA	**Yellowknife Ar**	**96.79**	**28**	P	**P**	**02 25 49.7**	**+0.1**
	0.3nm,0.8s,mb3.8,baz=264,slow=5.5,SNR=6.0						
YKA	**Yellowknife Ar**	**96.79**	**28**	P	**P**	**02 25 49.7**	**+0.1**

CSEM 27 02:13:40.2±0.5,3962N×3310E,h6km±3km,MD2.9,Error
ellipse: s-maj=3.4km s-min=3.0km az=9.0
ISK 27 02:13:40.6,3963N×3314E,h8km,MD2.9
ISCJB 27 02:13:41.2±0.5,3961N±005×3309E±004,h10km,Error
ellipse: s-maj=6.7km s-min=4.6km az=165.8
DDA 27 02:13:42.6,3940N×3313E,h7km±2km,Md3.0

ISC 27 02:13:40.8±0.8,**3959N**±005×**3305E**±005,**h2**km±8km,**n13,**
σ0§**96**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.37**	**324**	*e*PG	**Pg**	**02 13 48.0**	**+0.2**
KAMT	**Kaman**	**0.56**	**113**	*e*PG	**Pg**	**02 13 51.4**	**-0.1**
KAMT				*e*SG	**Sg**	**02 13 58.3**	**-0.5**
CDAG	**Cicekdag**	**1.02**	**88**	*i* P	**Pg**	**02 14 01.2**	**+0.8**
CDAG				*i* S	**Sg**	**02 14 15.6**	**+1.9**
CANT	**Cankiri**	**1.10**	**23**	*e*PG	**Pg**	**02 14 01.1**	**-0.9**
KIZT	**Kizilcal**	**1.15**	**232**	*e*PN	**Pn**	**02 14 05.2**	**+1.2**
KDHN	**Kadinhani**	**1.29**	**214**	*i* P	**Pn**	**02 14 05.0**	**-0.9**
KDHN				*i* S	**Sg**	**02 14 21.3**	**-1.0**
CORM	**Corum**	**1.35**	**64**	*e*PN	**Pn**	**02 14 05.4**	**-1.3**
LADK	**Ladik-KONYA**	**1.49**	**201**	*e*PN	**Pn**	**02 14 09.1**	**+0.5**
TOS	**Tosya**	**1.62**	**27**	*e*PN	**Pn**	**02 14 10.2**	**-0.2**
ESKT	**Eskisehir**	**1.70**	**268**	*i* P	**Pn**	**02 14 14.9**	**+3.5**
ESKT				*i* S	**Sn**	**02 14 34.2**	**+0.4**
SEYT	**Eskypehyr**	**1.70**	**268**	*i* P	**Pn**	**02 14 14.9**	**+3.4**
SEYT				*i* S	**Sn**	**02 14 34.2**	**+0.4**
KONT	**Konya--Tatoy**	**1.73**	**198**	*e*PN	**Pn**	**02 14 12.2**	**+0.3**
YOZ	**Yozgat**	**1.76**	**88**	*e*PN	**Pn**	**02 14 11.2**	**-1.0**

CSEM 27 02:15:38.9,3941N×3311E,h7km,MD3.0,After ERD
DDA 27 02:15:38.9,3941N×3311E,h7km±2km,Md3.0
ISK 27 02:15:38.8,3946N×3314E,h16km,MD2.5
ISCJB 27 02:15:39.2±0.8,3943N±005×3311E±005,h10km±9km,
Error ellipse: s-maj=8.1km s-min=6.3km az=9.7

ISC 27 02:15:39.5±0.8,**3943N**±005×**3312E**±005,**h16**km±8km,**n12,**
σ0§**46**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**97**	*e*PG	**Pg**	**02 15 48.4**	**-0.4**
KAMT				*e*SG	**Sg**	**02 15 55.2**	**+0.1**
LOD	**Lodumlu**	**0.53**	**329**	*e*PG	**Pg**	**02 15 50.4**	**+0.3**
LOD				*e*SG	**Sg**	**02 15 57.4**	**+0.2**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P	**Pb**	**02 15 57.8**	**-0.4**
CDAG				*i* S	**Sb**	**02 16 17.1**	**+6.2**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P	**Pb**	**02 15 58.0**	**-0.2**
CDAG	**Cicekdag**	**0.99**	**78**	*i* P	**Pb**	**02 15 58.1**	**-0.1**
CDAG				*i* S	**Sb**	**02 16 12.5**	**+1.6**
ELDT	**Eldivan**	**1.08**	**12**	*i* P	**Pb**	**02 15 59.7**	**-0.1**
KIZT	**Kizilcal**	**1.11**	**241**	*e*PN	**Pn**	**02 16 00.5**	**+0.2**
KDHN	**Kadinhani**	**1.20**	**221**	*i* P	**Pn**	**02 16 01.1**	**-0.4**
KDHN				*i* S	**Sb**	**02 16 17.3**	**+0.3**
KDHN	**Kadinhani**	**1.20**	**221**	*i* P	**Pn**	**02 16 01.1**	**-0.4**
KDHN	**Kadinhani**	**1.20**	**221**	*i* P	**Pn**	**02 16 01.5**	**-0.1**
KDHN				*i* S	**Sb**	**02 16 17.1**	**+0.1**
KDHN	**Kadinhani**	**1.20**	**221**	*i* P	**Pn**	**02 16 01.1**	**-0.4**
KDHN				*i* S	**Sb**	**02 16 17.3**	**+0.3**
CANT	**Cankiri**	**1.23**	**18**	*e*PN	**Pn**	**02 16 01.4**	**-0.6**

ISCJB 27 02:24:29.9±1.6,522N±0.1×1683W±0.1,h34km±12km,
mb3.7/8,Error ellipse: s-maj=17.0km s-min=10.6km
az=174.6
IDC 27 02:24:29.1±1.9,5266N×16836W,h0km,mb3.8/9,
mb1 4.0/10,mb1mx3.8/28,mbtmp3.9/10,ML3.2/1,Error
ellipse: s-maj=54.6km s-min=17.4km az=176.0
NEIC 27 02:24:30.6,5230N×16808W,h8km,ML3.1(AEIC),
ML4.1(PMR),After AEIC.

ISC 27 02:24:31.0±1.9,**5223N**±008×**1682W**±01,**h26**km±12km,**n21,**
σ0§**90**/24,**mb3.7/8,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.83**	**334**	P	**Pb**	**02 24 46.2**	**-0.6**
NIKO				S	**Sb**	**02 24 58.5**	**+0.9**
OKFG	**Magazine Ridge**	**1.20**	**10**	P	**Pn**	**02 24 51.3**	**-0.8**
OKCD	**Okmok Cone D**	**1.21**	**4**	P	**Pn**	**02 24 51.8**	**-0.4**
OKCD				S	**Sn**	**02 25 08.2**	**+0.5**
UNV	**Unalaska Valle**	**1.93**	**32**	P	**Pn**	**02 25 01.4**	**-0.8**
AKLV	**Akutan Long Va**	**2.38**	**34**	P	**Pn**	**02 25 08.4**	**+0.1**
AKLV				S	**Sn**	**02 25 37.0**	**+0.4**
AKUT	**Akutan**	**2.42**	**37**	*e*P	**Pn**	**02 25 08.8**	**-0.1**
SDPT	**Sand Point**	**5.56**	**53**	*e*P	**Pn**	**02 25 53.4**	**+1.4**
KDAK	**Kodiak Island**	**10.56**	**52**	Pn	**Pn**	**02 26 57.9**	**-2.7**
	0.4nm,0.3s,baz=211,slow=12,SNR=3.9						
FX1	**Attu Island--F**	**11.34**	**281**	Pn	**Pn**	**02 27 11.9**	**+0.7**
	0.6nm,0.3s,baz=198,slow=21,SNR=7.4						
PETK	**Petropavlovsk-**	**20.57**	**286**	P	**P**	**02 29 07.7**	**+0.2**
	3.7nm,0.7s,baz=82,slow=14,SNR=3.3						
YKA	**Yellowknife Ar**	**29.82**	**49**	P	**P**	**02 30 36.0**	**+0.6**
	0.2nm,0.6s,mb3.1,baz=279,slow=7.9,SNR=7.8						
YKA	**Yellowknife Ar**	**29.82**	**49**	P	**P**	**02 30 36.0**	**+0.6**
TXAR	**Lajitas Array**	**52.06**	**90**	P	**P**	**02 33 40.7**	**+2.3**
	0.2nm,0.6s,mb3.2,baz=297,slow=5.5,SNR=4.7						
TXAR	**Lajitas Array**	**52.06**	**90**	P	**P**	**02 33 40.7**	**+2.3**
BVAR	**Borovoye Array**	**64.22**	**325**	P	**P**	**02 35 03.0**	**-0.1**
	0.7nm,0.5s,mb4.0,baz=32,slow=5.9,SNR=6.4						
MKAR	**Makanchi Array**	**64.40**	**314**	P	**P**	**02 35 03.7**	**-0.7**
	0.3nm,0.7s,mb3.5,baz=56,slow=9.2,SNR=4.3						
MKAR	**Makanchi Array**	**64.40**	**314**	P	**P**	**02 35 03.7**	**-0.7**
NOA	**NORSAR Array B**	**67.08**	**0**	P	**P**	**02 35 21.2**	**-0.3**
	1.4nm,0.9s,mb4.0,baz=2.9,slow=3.6,SNR=2.8						
HFS	**Hagfors**	**67.98**	**359**	P	**P**	**02 35 26.1**	**-1.0**
	3.5nm,0.9s,mb4.4,baz=29,slow=3.4,SNR=7.6						
AKASG	**Malin Array Be**	**76.39**	**349**	P	**P**	**02 36 16.8**	**-0.7**
	0.9nm,0.6s,mb3.9,baz=13,slow=5.7,SNR=3.0						
ESDC	**Sonseca Array**	**87.46**	**12**	P	**P**	**02 37 16.4**	**+0.5**
	0.2nm,0.5s,mb3.6,baz=342,slow=4.8,SNR=4.6						

CSEM 27 02:28:03.0±0.1,3938N×3308E,h2km,MD2.6,Error
ellipse: s-maj=1.7km s-min=1.4km az=157.0
ISK 27 02:28:03.3,3938N×3308E,h4km,MD2.6
ISCJB 27 02:28:04.8±0.6,3938N±004×3310E±004,h10km,Error
ellipse: s-maj=5.7km s-min=4.2km az=166.6
DDA 27 02:28:04.3,3939N×3310E,h9km±1km,Md2.9

ISC 27 02:28:04.7±0.6,**3938N**±004×**3309E**±004,**h4**km±8km,**n10,**
σ0§**75**/17,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**91**	*e*PG	**Pg**	**02 28 13.6**	**-0.4**
KAMT				*e*SG	**Sg**	**02 28 21.0**	**+0.7**
LOD	**Lodumlu**	**0.57**	**334**	*e*PG	**Pg**	**02 28 14.8**	**-0.9**
LOD				*e*SG	**Sg**	**02 28 23.6**	**+0.5**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P	**Pg**	**02 28 23.3**	**-1.0**
CDAG				*i* S	**Sg**	**02 28 38.1**	**+0.6**
KIZT	**Kizilcal**	**1.06**	**243**	*e*PG	**Pg**	**02 28 24.3**	**-0.8**
ELDT	**Eldivan**	**1.14**	**13**	*i* P	**Pg**	**02 28 26.2**	**-0.4**
ELDT				*i* S	**Sg**	**02 28 42.4**	**+0.9**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pg**	**02 28 25.9**	**-0.8**
KDHN				*i* S	**Sg**	**02 28 42.9**	**+1.4**
CANT	**Cankiri**	**1.29**	**18**	*e*PN	**Pn**	**02 28 28.9**	**-0.7**
ESKT	**Eskisehir**	**1.74**	**275**	*i* P	**Pn**	**02 28 36.5**	**+0.8**
ESKT				*i* S	**Sn**	**02 28 58.3**	**0.0**
SEYT	**Eskypehyr**	**1.74**	**275**	*i* P	**Pn**	**02 28 36.5**	**+0.8**
SEYT				*i* S	**Sn**	**02 28 58.3**	**0.0**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**02 28 35.7**	**-0.1**

VIE 27 02:29:23.5±0.8,3929N×2045E,h10km,mb3.2/4,Ms4.0/3,
Error ellipse: s-maj=8.1km s-min=4.1km az=136.0
ISCJB 27 02:29:24.0±0.6,3926N±002×2016E±003,h8km±4km,
Error ellipse: s-maj=4.1km s-min=3.5km az=153.3
ATH 27 02:29:24.2,3920N×2017E,h22km±5km,MD3.7/9
NEIC 27 02:29:24.7,3928N×2028E,h18km,MD3.7(ATH),After
ATH.
CSEM 27 02:29:25.3±0.1,3925N×2024E,h10km,Ms4.0,Error
ellipse: s-maj=2.9km s-min=1.9km az=74.0
THE 27 02:29:26.0,3927N×2032E,h1km±2km,ML3.7/9,Error
ellipse: s-maj=3.1km s-min=1.0km az=251.0

ISC 27 02:29:24.8±0.6,**3924N**±002×**2024E**±003,**h2**km±4km,**n65,**
σ0§**99**/106,**4C-1D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.30**	**14**	P	**Pg**	**02 29 29.5**	**-1.1**
IGT				S	**Sg**	**02 29 33.8**	**-0.7**
KEK	**Kerkira**	**0.58**	**324**	*e*PN	**Pg**	**02 29 35.7**	**-0.2**
KEK				*e*SN	**Sg**	**02 29 44.5**	**+1.0**
KEK	**Kerkira**	**0.58**	**324**	*e*PN	**Pg**	**02 29 35.7**	**-0.2**
KEK				*e*Sn	**Sg**	**02 29 44.6**	**+1.1**
JAN	**Janina**	**0.63**	**49**	P	**Pg**	**02 29 36.0**	**-0.9**
VLS	**Valsamata**	**1.10**	**165**	*e*PN	**Pn**	**02 29 45.0**	**-2.1**
VLS	**Valsamata**	**1.10**	**165**	*e*Pb	**Pb**	**02 29 45.5**	**-0.9**
VLS				*e*Sn	**Sn**	**02 30 02.9**	**0.0**
EVR	**Evrytania**	**1.27**	**104**	P	**Pg**	**02 29 49.8**	**+0.8**
THL	**Klokotos Trika**	**1.42**	**76**	P	**Pn**	**02 29 50.0**	**-1.5**
THL				S	**Sg**	**02 30 11.3**	**+1.1**
THL	**Klokotos Trika**	**1.42**	**76**	*e*PB	**Pn**	**02 29 49.9**	**-1.6**
THL				*e*SN	**Sn**	**02 30 10.9**	**+0.2**
THL	**Klokotos Trika**	**1.42**	**76**	*e*Pn	**Pn**	**02 29 49.9**	**-1.6**
THL				*e*Sn	**Sn**	**02 30 09.9**	**-0.8**
THL				S	**Sg**	**02 30 11.3**	**+1.1**
RLS	**Riolos of Patr**	**1.52**	**140**	*e*PN	**Pn**	**02 29 51.9**	**-1.1**
RLS	**Riolos of Patr**	**1.52**	**140**	*e*Pn	**Pn**	**02 29 52.9**	**-0.1**
AGG	**Agios Georgios**	**1.64**	**97**	P	**Pn**	**02 29 54.9**	**+0.2**
AGG				S	**Sn**	**02 30 16.1**	**-0.2**
FNA	**Florina**	**1.77**	**29**	P	**Pn**	**02 29 56.9**	**+0.4**
FNA				S	**Sn**	**02 30 20.1**	**+0.5**
OHR	**Ohrid**	**1.92**	**13**	P	**Pn**	**02 29 58.8**	**+0.3**
OHR				S	**Sn**	**02 30 24.4**	**+1.2**
OHR	**Ohrid**	**1.92**	**13**	*i* Pn	**Pn**	**02 29 59.1**	**+0.6**
OHR				*e*Sn	**Sn**	**02 30 24.1**	**+0.9**
OHR	**Ohrid**	**1.92**	**13**	*i* Pn	**Pn**	**02 29 59.1**	**+0.7**
OHR				*e*Sn	**Sn**	**02 30 24.2**	**+1.0**
LIT	**Litokhoron**	**1.94**	**63**	P	**Pn**	**02 29 59.1**	**+0.4**
LIT				S	**Sn**	**02 30 23.7**	**0.0**
BIA	**Bitola**	**1.96**	**25**	P	**Pn**	**02 30 00.6**	**+1.5**
BIA				S	**Sn**	**02 30 23.9**	**-0.4**
BIA	**Bitola**	**1.96**	**25**	*i* Pn	**Pn**	**02 30 00.7**	**+1.6**
BIA				S	**Sn**	**02 30 23.9**	**-0.4**
BIA	**Bitola**	**1.96**	**25**	*i* Pn	**Pn**	**02 30 00.7**	**+1.6**
BIA				*e*Sn	**Sn**	**02 30 28.5**	**+4.2**
TIR	**Tirane**	**2.12**	**352**	P	**Pn**	**02 30 02.1**	**+0.8**
TIR				S	**Sn**	**02 30 29.8**	**+1.5**
LKR	**Lokris**	**2.23**	**104**	P	**Pn**	**02 30 02.8**	**0.0**
LKR				S	**Sn**	**02 30 31.5**	**+0.6**
LKR	**Lokris**	**2.23**	**104**	*e*Pn	**Pn**	**02 30 03.2**	**+0.4**
LKR				S	**Sn**	**02 30 31.5**	**+0.6**
KRUS	**Krusevo**	**2.26**	**20**	*i* Pn	**Pn**	**02 30 03.8**	**+0.6**
KRUS	**Krusevo**	**2.26**	**20**	*i* Pn	**Pn**	**02 30 03.9**	**+0.7**
KRUS				*e*Sn	**Sn**	**02 30 35.1**	**+3.4**
NEO	**Neokhori**	**2.32**	**87**	*e*PN	**Pn**	**02 30 03.8**	**-0.2**
NEO	**Neokhori**	**2.32**	**87**	*e*Pb	**Pb**	**02 30 03.7**	**-3.6**
GRG	**Griva**	**2.39**	**43**	P	**Pn**	**02 30 05.2**	**+0.3**
GRG				S	**Sn**	**02 30 35.8**	**+1.1**
ITM	**Ithomi**	**2.45**	**147**	*e*PB	**Pb**	**02 30 06.0**	**-3.5**
ITM	**Ithomi**	**2.45**	**147**	*e*Pb	**Pb**	**02 30 06.9**	**-2.6**
THE	**Thessaloniki**	**2.52**	**56**	P	**Pn**	**02 30 07.1**	**+0.4**
THE				S	**Sn**	**02 30 37.5**	**-0.4**
TIP	**Timpagrande**	**2.70**	**270**	*e*PN	**Pn**	**02 30 09.6**	**+0.4**
TIP	**Timpagrande**	**2.70**	**270**	*e*Pg	**Pg**	**02 30 17.7**	**+1.1**
TIP	**Timpagrande**	**2.70**	**270**	*e*Pn	**Pn**	**02 30 09.6**	**+0.4**
TIP				*e*Pg	**Pg**	**02 30 17.7**	**+1.1**
PLG	**Polygyros**	**2.72**	**64**	P	**Pn**	**02 30 09.2**	**-0.3**
PLG				S	**Sn**	**02 30 42.4**	**-0.5**
PLG	**Polygyros**	**2.72**	**64**	*e*PN	**Pn**	**02 30 09.6**	**+0.1**
VAY	**Valandovo**	**2.74**	**40**	P	**Pn**	**02 30 10.4**	**+0.7**
VAY				S	**Sn**	**02 30 43.3**	**-0.1**
VAY	**Valandovo**	**2.74**	**40**	*i* Pn	**Pn**	**02 30 10.7**	**+1.0**
VAY				*e*Sn	**Sn**	**02 30 41.6**	**-1.8**
VAY				S	**Sn**	**02 30 43.3**	**-0.1**
VAY	**Valandovo**	**2.74**	**40**	*i* Pn	**Pn**	**02 30 10.8**	**+1.0**
VAY				*e*Sn	**Sn**	**02 30 41.7**	**-1.7**
VAY	**Valandovo**	**2.74**	**40**	P	**Pn**	**02 30 11.9**	**+2.2**
VAY				*e*S	**Sn**	**02 30 41.6**	**-1.8**
PAIG	**Paliouri**	**2.75**	**74**	P	**Pn**	**02 30 09.2**	**-0.7**
PAIG				S	**Sn**	**02 30 43.1**	**-0.5**
KNI	**Kendrikon**	**2.80**	**46**	P	**Pn**	**02 30 10.9**	**+0.3**
AOS	**Alonnisos**	**2.83**	**90**	P	**Pn**	**02 30 10.5**	**-0.5**
SOH	**Sokhos**	**2.87**	**56**	P	**Pn**	**02 30 10.8**	**-0.7**
SOH				S	**Sn**	**02 30 46.4**	**-0.2**
STIP	**Stip**	**2.87**	**31**	P	**Pn**	**02 30 11.6**	**+0.1**
STIP				S	**Sn**	**02 30 46.8**	**+0.2**
STIP	**Stip**	**2.87**	**31**	*i* Pn	**Pn**	**02 30 11.5**	**0.0**
STIP				*e*Sn	**Sn**	**02 30 46.9**	**+0.3**
STIP	**Stip**	**2.87**	**31**	*i* Pn	**Pn**	**02 30 11.5**	**0.0**
STIP				*e*Sn	**Sn**	**02 30 47.0**	**+0.4**
SKO	**Skopje**	**2.88**	**18**	*i* Pn	**Pn**	**02 30 11.9**	**+0.2**
DID	**Didima**	**2.92**	**125**	P	**Pn**	**02 30 12.3**	**0.0**
DID				S	**Sn**	**02 30 49.2**	**+1.2**
OUR	**Ouranopolis**	**3.08**	**68**	P	**Pn**	**02 30 15.1**	**+0.6**
VLI	**Veliai**	**3.30**	**139**	*e*PB	**Pb**	**02 30 19.9**	**-4.1**
VLI	**Veliai**	**3.30**	**139**	*e*Pn	**Pn**	**02 30 18.5**	**+1.1**
KKB	**Krupnik**	**3.40**	**39**	S	**Sn**	**02 30 58.1**	**-1.7**
CEL	**Celeste**	**3.53**	**255**	P	**Pn**	**

HAKT HAKKARI 3.46 106 *i* P **Pb 02 38 36.4 +0.2**

*IDC **27** 02:43:45.7±1.1,5267N×168.34W, h0km, mb3.9/14, mb1 4.2/14, mb1mx4.0/27, mbtmp3.9/14, Error ellipse: s-maj=35.8km s-min=15.1km az=9.0*
*NEIC **27** 02:43:46.0,52.13N×168.15W, h26km, mb3.7/1, ML3.5(AEIC), After AEIC.*
*ISCJB **27** 02:43:46.6±1.9, 5220N±008×1683W±0.1, h29km±12km, mb3.9/12, Error ellipse: s-maj=14.3km s-min=10.0km az=144.6*

ISC 27 02:43:48.8±2.0, 5233N±009×1683W±001, h28km±13km, n24, σ1§06/27, mb3.9/12, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.73**	**331**	P		**Pb**		**02 44 02.1**	**-0.9**
NIKO				S		**Sb**		**02 44 14.7**	**+2.0**
OKCE	**Okmok Cone E**	**1.10**	**3**	P		**Pn**		**02 44 08.4**	**+0.1**
OKFG	**Magazine Ridge**	**1.10**	**11**	P		**Pn**		**02 44 08.5**	**+0.1**
OKFG				S		**Sn**		**02 44 26.1**	**+3.4**
OKCD	**Okmok Cone D**	**1.10**	**5**	P		**Pn**		**02 44 08.4**	**0.0**
UNV	**Unalaska Valle**	**1.85**	**34**	P		**Pn**		**02 44 17.7**	**-1.0**
UNV				S		**Sn**		**02 44 42.1**	**+0.9**
AKLV	**Akutan Long Va**	**2.30**	**36**	P		**Pn**		**02 44 25.0**	**+0.1**
AKGG	**Akutan Green G**	**2.31**	**35**	P		**Pn**		**02 44 24.4**	**-0.6**
KDAK	**Kodiak Island**	**10.51**	**53**	Pn		**Pn**		**02 46 15.3**	**-2.1**
	1.4nm,0.3s,baz=355,slow=9.2,SNR=9.0								
KDAK	**Kodiak Island**	**10.51**	**53**	Pn		**Pn**		**02 46 15.3**	**-2.1**
COLA	**College**	**16.35**	**32**	*e*Pn		**Pn**		**02 47 34.9**	**-1.2**
	9.1nm,1.4s								
PETK	**Petropavlovsk-**	**20.52**	**286**	P		**P**		**02 48 24.4**	**-0.2**
	3.7nm,0.5s,baz=81,slow=14,SNR=18								
YKA	**Yellowknife Ar**	**29.76**	**49**	P		**P**		**02 49 52.6**	**+0.2**
	0.3nm,0.6s,baz=276,slow=8.0,SNR=12								
YBH	**Yreka Blue Hor**	**32.30**	**91**	P		**P**		**02 50 17.1**	**+2.0**
	1.3nm,0.6s,mb3.9,baz=288,slow=3.2,SNR=2.7								
NVAR	**Mina Array Bea**	**36.99**	**92**	P		**P**		**02 50 58.1**	**+2.5**
	0.7nm,0.7s,mb3.6,baz=299,slow=9.2,SNR=3.5								
PDAR	**Pinedale Array**	**39.74**	**80**	P		**P**		**02 51 19.4**	**+0.6**
	1.2nm,0.8s,mb3.7,baz=312,slow=4.3,SNR=11								
KSRS	**Korea Array**	**46.08**	**278**	P		**P**		**02 52 10.8**	**+0.8**
	1.5nm,0.8s,mb4.0,baz=56,slow=7.6,SNR=5.0								
TXAR	**Lajitas Array**	**52.07**	**90**	P		**P**		**02 52 56.5**	**+0.4**
	1.0nm,0.8s,mb3.8,baz=297,slow=5.4,SNR=15								
MKAR	**Makanchi Array**	**64.32**	**314**	P		**P**		**02 54 20.6**	**-0.9**
	0.6nm,0.8s,mb3.7,baz=51,slow=6.2,SNR=6.1								
NOA	**NORSAR Array B**	**66.98**	**0**	P		**P**		**02 54 37.9**	**-0.4**
	0.7nm,0.5s,mb3.9,baz=358,slow=6.2,SNR=3.0								
HFS	**Hagfors**	**67.88**	**359**	P		**P**		**02 54 43.0**	**-1.0**
	1.7nm,0.4s,mb4.4,baz=42,slow=4.6,SNR=17								
AKASG	**Malin Array Be**	**76.28**	**349**	P		**P**		**02 55 33.1**	**-1.3**
	1.3nm,0.5s,mb4.1,baz=13,slow=5.7,SNR=6.7								
CMAR	**Chiang Mai Arr**	**77.28**	**284**	P		**P**		**02 55 41.5**	**+0.8**
	1.4nm,0.3s,mb4.3,baz=27,slow=6.2,SNR=4.4								
GERES	**GERESS Array B**	**79.19**	**359**	P		**P**		**02 55 50.6**	**-0.1**
	0.6nm,0.8s,mb3.5,baz=6.8,slow=2.5,SNR=5.3								
ESDC	**Sonseca Array**	**87.36**	**12**	P		**P**		**02 56 32.5**	**-0.5**
	0.1nm,0.4s,mb3.4,baz=347,slow=3.5,SNR=4.2								

*CSEM **27** 02:46:00.8, 3943N×33.15E, h8km, MD2.6, After ISK*
*ISK **27** 02:46:00.8, 3943N×33.15E, h8km, MD2.6*
*ISCJB **27** 02:46:01.3±0.6, 3937N±004×33.13E±005, h10km, Error ellipse: s-maj=6.0km s-min=5.3km az=154.2*
*DDA **27** 02:46:01.4, 3940N×3317E, h5km±4km, Md2.5*

ISC 27 02:46:01.2±0.7, 3936N±004×3312E±005, h6km±12km, n7, σ0§70/12, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**89**	*e*PG		**Pg**		**02 46 09.7**	**-0.4**
KAMT				*e*SG		**Sg**		**02 46 16.5**	**+0.3**
LOD	**Lodumlu**	**0.59**	**333**	*e*PG		**Pg**		**02 46 11.6**	**-0.9**
LOD				*e*SG		**Sg**		**02 46 20.1**	**-0.3**
CDAG	**Cicekdag**	**1.01**	**74**	*i* P		**Pg**		**02 46 19.4**	**-1.1**
CDAG				*i* S		**Sg**		**02 46 37.4**	**+3.8**
KIZT	**Kizilcal**	**1.07**	**244**	*e*PN		**Pn**		**02 46 22.9**	**+0.2**
KDHN	**Kadinhani**	**1.14**	**223**	*i* P		**Pg**		**02 46 23.8**	**+0.7**
KDHN				*i* S		**Sg**		**02 46 37.9**	**0.0**
ELDT	**Eldivan**	**1.15**	**12**	*i* P		**Pg**		**02 46 23.5**	**+0.2**
ELDT				*i* S		**Sg**		**02 46 39.3**	**+1.0**
YOZ	**Yozgat**	**1.73**	**80**	*e*PN		**Pn**		**02 46 31.4**	**-0.3**

*ISCJB **27** 02:51:24.3±0.5, 3135S±005×1799W±0.1, h343km±6km, mb3.9/12, Error ellipse: s-maj=14.7km s-min=7.0km az=17.0*
*NEIC **27** 02:51:24.8±0.8, 3135S×17981W, h340km±9km, mb4.1/5, Error ellipse: s-maj=18.5km s-min=10.4km az=103.0*
*IDC **27** 02:51:24.9±0.7, 3113S×17990W, h342km±8km, mb3.7/7, mb1 3.8/9, mb1mx3.6/17, mbtmp3.7/9, Error ellipse: s-maj=14.6km s-min=11.7km az=107.0*

ISC 27 02:51:25.0±0.6, 3132S±005×1799W±01, h337km±6km, n55, σ1§29/53, mb3.9/12, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.68**	**40**	P		**Pn**		**02 52 21.1**	**+0.5**
	373nm,0.3s,baz=351,slow=1.2,SNR=22								
RAO				S		**S**		**02 53 03.1**	**-2.1**
	550nm,0.3s,baz=58,slow=22,SNR=6.8								
MXZ	**Matakaoa Point**	**6.40**	**193**	P		**Pn**		**02 53 02.3**	**+2.4**
MXZ				S		**S**		**02 54 13.7**	**-3.1**
PUZ	**Puketiti**	**6.90**	**192**	P		**Pn**		**02 53 09.9**	**+4.1**
MWZ	**Matawai**	**7.31**	**196**	P		**Pn**		**02 53 12.7**	**+2.1**
URZ	**Urewera**	**7.35**	**199**	P		**Pn**		**02 53 12.1**	**+1.1**
	4.0nm,0.3s,baz=352,slow=2.3,SNR=45								
URZ				S		**S**		**02 54 37.0**	**-0.2**
	25nm,0.3s,baz=73,slow=23,SNR=18								
URZ	**Urewera**	**7.35**	**199**	P		**Pn**		**02 53 13.0**	**+2.0**
KNZ	**Kokohu**	**7.93**	**194**	P		**Pn**		**02 53 21.1**	**+3.1**
BKZ	**Black Stump Fm**	**8.37**	**200**	P		**Pn**		**02 53 23.3**	**+0.2**
FWVZ	**Far West T-bar**	**8.74**	**204**	P		**Pn**		**02 53 29.7**	**+2.0**
WNVZ	**Wahianoa**	**8.79**	**204**	P		**Pn**		**02 53 29.0**	**+0.7**
MOVZ	**Moawhango**	**8.81**	**203**	P		**Pn**		**02 53 29.6**	**+1.1**
MRZ	**Mangatainoka R**	**10.01**	**200**	P		**Pn**		**02 53 42.2**	**-0.7**
KIW	**Kapiti Island**	**10.40**	**202**	P		**Pn**		**02 53 46.9**	**-0.7**
KIW				S		**S**		**02 55 39.3**	**-5.3**
MTW	**Mount Morrison**	**10.49**	**199**	P		**Pn**		**02 53 49.5**	**+0.8**
CAW	**Cannon Point**	**10.58**	**201**	P		**Pn**		**02 53 48.9**	**-0.8**
MRW	**Makara Radio**	**10.80**	**202**	P		**Pn**		**02 53 51.9**	**-0.5**
MSWZ	**Moikau Station**	**10.80**	**200**	P		**Pn**		**02 53 51.3**	**-1.1**
SNZO	**South Karori**	**10.87**	**202**	*e*Pn		**Pn**		**02 53 51.9**	**-1.3**
TCW	**Tory Channel**	**10.93**	**204**	P		**Pn**		**02 53 52.3**	**-1.6**
NNZ	**Nelson**	**11.26**	**207**	P		**Pn**		**02 53 56.0**	**-1.9**
QRZ	**Quartz Range**	**11.29**	**211**	P		**Pn**		**02 53 57.6**	**-0.6**
THZ	**Tophouse**	**11.91**	**207**	P		**Pn**		**02 54 02.7**	**-3.0**
RPZ	**Rata Peaks**	**14.29**	**208**	P		**P**		**02 54 32.0**	**-0.2**
	1.5nm,0.3s,baz=275,slow=4.2,SNR=7.5								
RPZ				S		**S**		**02 57 03.0**	**-4.5**
	3.3nm,0.3s,baz=15,slow=16,SNR=7.7								
CTA	**Charters Tower**	**32.37**	**282**	*e*P		**P**		**02 57 26.4**	**+2.2**
	4.6nm,0.5s,mb4.0								
CTAO	**Charters Tower**	**32.37**	**282**	*e*P		**P**		**02 57 26.4**	**+2.2**
	7.0nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**32.69**	**259**	P		**P**		**02 57 28.3**	**+1.4**
	8.6nm,0.8s,mb4.0,baz=93,slow=9.4,SNR=29								
STKA	**Stephens Creek**	**32.69**	**259**	*e*P		**P**		**02 57 28.3**	**+1.5**
	5.8nm,0.7s,mb3.9								
STKA	**Stephens Creek**	**32.69**	**259**	P		**P**		**02 57 28.3**	**+1.4**
COEN	**Coen**	**37.99**	**289**	*e*P		**P**		**02 58 12.3**	**+0.6**
	3.9nm,0.8s,mb3.7								
ASAR	**Alice Springs**	**41.45**	**269**	P		**P**		**02 58 40.4**	**+0.5**
	1.8nm,0.7s,mb3.4,baz=104,slow=7.6,SNR=35								
ASAR				ScP		ScP		03 03 44.5	-3.4
	0.6nm,0.7s,baz=112,slow=3.8,SNR=5.7								
ASAR				S		**S**		**03 04 27.7**	**-1.7**
	0.4nm,1.0s,baz=117,slow=14,SNR=3.5								
WB2	**Warramunga Arr**	**42.51**	**274**	*e*P		**P**		**02 58 48.5**	**0.0**
WRAB	**Tennant Creek**	**42.52**	**274**	*e*P		**P**		**02 58 48.3**	**-0.2**
	1.9nm,0.4s,mb3.6								
WRA	**Warramunga Arr**	**42.52**	**274**	P		**P**		**02 58 48.3**	**-0.3**
	2.2nm,0.3s,mb3.7,baz=111,slow=8.0,SNR=14								
WRA				ScP		ScP		03 03 49.4	-2.9
	1.0nm,0.9s,baz=110,slow=3.9,SNR=4.5								
WRA				S		**S**		**03 04 42.7**	**-2.4**
	0.8nm,0.9s,baz=107,slow=14,SNR=2.7								
FORT	**Forrest**	**44.24**	**257**	*e*P		**P**		**02 59 02.7**	**+0.6**
	14nm,0.7s,mb4.2								
VNDA	**Vanda**	**47.02**	**185**	P		**P**		**02 59 24.8**	**+1.9**
	1.0nm,0.6s,mb3.2,baz=16,slow=6.4,SNR=7.6								
VNDA	**Vanda**	**47.02**	**185**	P		**P**		**02 59 24.8**	**+1.9**
QSPA	**South Pole Qui**	**58.79**	**180**	P		**P**		**03 00 50.0**	**+1.9**
	20nm,0.9s,mb4.5,baz=28,slow=1.6,SNR=38								
SYO	**Syowa Base**	**75.84**	**194**	*e*P		**P**		**03 02 32.0**	**-2.2**
SNAA	**Sanae**	**77.27**	**179**	*e*		**P**		**03 02 41.6**	**-0.5**
SNAA				*e*				03 02 46.9	
SNAA	**Sanae**	**77.27**	**179**	*e*P		**P**		**03 02 41.6**	**-0.5**
	3.5nm,0.9s,mb4.1								
VNA3	**Neumayer Olymp**	**77.49**	**177**	*e*		**P**		**03 02 43.0**	**-0.3**
VNA3				*e*				03 02 49.0	
VNA2	**Neumayer--Watz**	**77.90**	**177**	*e*		**P**		**03 02 45.7**	**+0.1**
	baz=184,slow=4.1								
VNA2				*e*				03 02 52.0	
VNA1	**Neumayer--Stat**	**78.14**	**177**	*e*		**P**		**03 02 46.8**	**-0.1**
VNA1				*e*				03 02 52.0	
KSRS	**Korea Array**	**84.01**	**321**	P		**P**		**03 03 17.8**	**-0.1**
	1.1nm,0.7s,mb3.8,baz=138,slow=6.7,SNR=3.3								
PETK	**Petropavlovsk-**	**86.31**	**347**	P		**P**		**03 03 27.9**	**-1.0**
	3.2nm,0.8s,mb4.2,baz=112,slow=6.7,SNR=5.1								
PETK	**Petropavlovsk-**	**86.31**	**347**	P		**P**		**03 03 27.9**	**-1.0**
ARCES	**ARCESS Array B**	**139.13**	**347**	PKhKP				03 10 02.2	
	1.7nm,0.8s,baz=15,slow=0.9,SNR=5.4								
ARCES				PKP		PKPdf		03 10 11.1	+0.2
	3.6nm,1.0s,baz=63,slow=2.2,SNR=5.6								
ARCES	**ARCESS Array B**	**139.13**	**347**	PKP				03 10 02.2	
ARCES				PKP		PKPdf		03 10 11.1	+0.2
NB2	**NORSAR Subarra**	**149.39**	**349**	PKP		PKPdf		03 10 31.4	+2.6
	comp=Z,2.2nm,0.6s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	**149.39**	**349**	PKPbc		PKPbc		03 10 31.6	-1.9
	comp=Z,2.8nm,0.6s,baz=16,slow=4.2,SNR=8.9								
AKASG	**Malin Array Be**	**151.01**	**320**	PKPbc		PKPbc		03 10 35.9	-1.8
	comp=Z,2.3nm,0.7s,baz=60,slow=2.7,SNR=9.0								
AKASG	**Malin Array Be**	**151.01**	**320**	PKPbc		PKPbc		03 10 35.9	-1.8
CLL	**Collm**	**157.87**	**338**	*e*PKPab		PKPab		03 11 14.0	-2.0
GERES	**GERESS Array B**	**159.70**	**333**	PKPab		PKPab		03 11 21.1	-2.9
	comp=Z,0.4nm,0.7s,baz=24,slow=3.6,SNR=5.1								
TORD	**Torodi Ar. Bea**	**161.85**	**185**	PKPab		PKPab		03 11 32.8	-1.3
	comp=Z,1.2nm,0.8s,baz=167,slow=3.7,SNR=7.5								

*CSEM **27** 02:57:51.8, 39.36N×33.17E, h8km, MD2.6, After ISK*
*ISK **27** 02:57:51.8, 39.36N×33.17E, h8km, MD2.6*
*ISCJB **27** 02:57:52.2±1.1, 39.35N±006×33.16E±005, h5km±10km, Error ellipse: s-maj=10.3km s-min=6.5km az=8.9*
*DDA **27** 02:57:52.8, 39.37N×33.17E, h5km±1km, Md2.5*

ISC 27 02:57:52.5±1.0, 3934N±006×3316E±006, h10km±10km, n8, σ0§60/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.43**	**87**	*e*PG		**Pg**		**02 58 01.1**	**+0.2**
KAMT				*e*SG		**Sg**		**02 58 06.7**	**0.0**
LOD	**Lodumlu**	**0.62**	**331**	*e*PG		**Pg**		**02 58 03.6**	**-0.9**
LOD				*e*SG		**Sg**		**02 58 13.4**	**+0.7**
CDAG	**Cicekdag**	**0.98**	**73**	*i* P		**Pg**		**02 58 10.2**	**-1.2**
CDAG				*i* S		**Sg**		**02 58 25.0**	**+0.9**
KIZT	**Kizilcal**	**1.09**	**245**	*e*PN		**Pn**		**02 58 13.5**	**-0.4**
KDHN	**Kadinhani**	**1.15**	**225**	*i* P		**Pb**		**02 58 15.2**	**+0.7**
ELDT	**Eldivan**	**1.16**	**10**	*i* P		**Pb**		**02 58 14.8**	**+0.1**
CANT	**Cankiri**	**1.31**	**16**	*e*PN		**Pn**		**02 58 16.9**	**+0.1**
CORM	**Corum**	**1.41**	**53**	*e*PN		**Pn**		**02 58 18.1**	**-0.1**

*DDA **27** 03:03:01.8, 3730N×2866E, h7km±5km, Md3.3*
*NEIC **27** 03:03:01.0, 3730N×2861E, h6km, MD2.8(ISK), MD3.1(ATH), After ISK.*
*CSEM **27** 03:03:01.5±0.1, 3729N×2861E, h5km, MD2.8, Error ellipse: s-maj=2.3km s-min=2.0km az=139.0*
*ISCJB **27** 03:03:01.7±0.6, 3732N±002×2863E±003, h0km±6km, Error ellipse: s-maj=4.7km s-min=3.8km az=37.0*
*ISK **27** 03:03:01.1, 3730N×2860E, h2km, MD2.8*
*ATH **27** 03:03:03.6, 3721N×2844E, h4km±1km, MD3.1/4*

ISC 27 03:03:02.3±0.4, 3732N±002×2863E±003, h4km±5km, n21, σ1§09/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.33**	**237**	*e*PG		**Pg**		**03 03 08.1**	**-0.5**
YER				*e*SG		**Sg**		**03 03 13.6**	**+0.6**
TURN	**Turunc**	**0.44**	**183**	*i* P		**Pg**		**03 03 12.0**	**+1.2**
TURN				*i* S		**Sg**		**03 03 22.1**	**+5.6**
DENT	**Denizli**	**0.54**	**36**	*e*PG		**Pg**		**03 03 12.9**	**+0.3**
DENT				*e*SG		**Sg**		**03 03 21.9**	**+2.2**
DALT	**Dalyan (Mudla)**	**0.55**	**180**	*e*PG		**Pg**		**03 03 12.0**	**-0.7**
DALT				*e*SG		**Sg**		**03 03 19.8**	**0.0**
MLSB	**Milas**	**0.68**	**268**	*e*PG		**Pg**		**03 03 14.7**	**-0.7**
GOLH	**Golhisar**	**0.74**	**96**	*i* P		**Pg**		**03 03 15.5**	**-1.1**
BDRM	**Kayabasi**	**0.98**	**255**	*i* P		**Pg**		**03 03 19.8**	**-1.3**
BDRM				*i* S		**Sg**		**03 03 34.8**	**+1.0**
DAT	**Datca**	**1.03**	**235**	*e*PG		**Pg**		**03 03 20.9**	**-1.1**
ELL	**Elmali**	**1.17**	**119**	*e*PN		**Pn**		**03 03 25.4**	**0.0**
ARG	**Arkhangelos**	**1.17**	**200**	*e*PB		**Pb**		**03 03 22.6**	**-2.5**
MANT	**Manisa**	**1.17**	**357**	*i* P		**Pg**		**03 03 24.6**	**-0.1**
MANT				*i* S		**Sg**		**03 03 40.6**	**+0.6**
GCAM	**G?zelcaml?**	**1.18**	**289**	*i* P		**Pg**		**03 03 25.1**	**+0.3**
GCAM				*i* S		**Sg**		**03 03 42.2**	**+2.1**
KULA	**Kula-Manisa**	**1.20**	**1**	*e*PN		**Pn**		**03 03 24.8**	**-0.9**
KHAL	**Karahalli**	**1.25**	**33**	*i* P		**Pg**		**03 03 24.5**	**-1.8**
KHAL				*i* S		**Sg**		**03 03 42.1**	**-0.4**
AKAS	**Kas**	**1.33**	**144**	*i* P		**Pn**		**03 03 26.4**	**-1.3**
AKAS				*i* S		**Sb**		**03 03 47.7**	**+2.5**
KSL	**Kastellorizon**	**1.39**	**146**	*e*PB		**Pb**		**03 03 30.0**	**+1.2**
SMG	**Samos**	**1.48**	**286**	*e*PB		**Pb**		**03 03 29.4**	**-0.9**
IZM	**Izmir**	**1.53**	**315**	*e*PN		**Pn**		**03 03 30.0**	**-0.4**
BCK	**Bucak**	**1.56**	**84**	*e*PN		**Pn**		**03 03 31.4**	**+0.5**
BLCB	**Balcova**	**1.65**	**311**	*e*PN		**Pn**		**03 03 32.2**	**+0.2**
KARP	**Karpathos**	**2.13**	**214**	*e*PN		**Pn**		**03 03 39.5**	**+0.9**
KARP				*e*SN		**Sn**		**03 04 05.9**	**+0.4**

*ISCJB **27** 03:05:03.6±0.8, 2306S±004×7053W±008, h42km±6km, mb3.9/2, Error ellipse: s-maj=12.4km s-min=5.9km az=13.2*
*GUC **27** 03:05:03.8±0.9, 2306S×7041W, h38km±3km, ML3.9*
*NEIC **27** 03:05:03.8, 2306S×7041W, h38km, MG3.9(GUC), After GUC.*
*IDC **27** 03:05:03.4±5.4, 2181S×6973W, h0km, mb4.0/2, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, ML3.8/1, MS3.0/1, Ms1 2.9/1, ms1mx2.5/28, Error ellipse: s-maj=222.6km s-min=40.9km az=30.0*

ISC 27 03:05:04.5±0.8, 2303S±004×7052W±008, h33km±4km, n15, σ0§84/22, mb3.9/2, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.10**	**141**	*e*P		**Pb**		**03 05 09.7**	**-0.6**
MECH				*i* S		**Sb**		**03 05 14.4**	**+0.1**
MECH				AML		AML		03 05 15.4	
	comp=E,80μm,0.4s								
CEN1	**Los Morros**	**0.46**	**141**	*e*P		**Pb**		**03 05 14.7**	**+0.1**
CEN1				*i* S		**Sb**		**03 05 22.0**	**+0.6**
ANCH	**Antofagasta**	**0.66**	**171**	⇑*i*P		**Pn**		**03 05 13.2**	**-4.3**
ANCH				*i* S		**Sn**		**03 05 21.7**	**-5.0**
PECH	**Pedro de Valdi**	**0.89**	**61**	⇑*i*P		**Pn**		**03 05 19.6**	**-1.0**
PECH				*i* S		**Sn**		**03 05 30.8**	**-1.5**
PECH				AML		AML		03 05 35.0	
	comp=N,4μm,0.4s								
TOCH	**Tocopilla**	**0.97**	**18**	*e*P		**Pn**		**03 05 21.6**	**-0.2**
TOCH				*i* S		**Sn**		**03 05 34.7**	**+0.2**
TOCH				AML		AML		03 05 35.5	
	comp=E,5μm,0.2s								
MACH	**Maria Elena**	**1.08**	**40**	⇓*i*P		**Pn**		**03 05 23.1**	**-0.2**
MACH				*i* S		**Sn**		**03 05 37.3**	**+0.2**
LVC	**Limon Verde**	**1.54**	**75**	⇑*i*P		**Pn**		**03 05 29.9**	**+0.4**
LVC				*i* S		**Sn**		**03 05 49.1**	**+0.8**
CPN1	**Cerro Paranal**	**1.60**	**176**	⇓*i*P		**Pn**		**03 05 29.9**	**-0.5**
CPN1				*i* S		**Sn**		**03 05 51.1**	**+1.3**
CPN1				AML		AML		03 05 57.1	
	comp=E,2μm,0.7s								
PB01	**Plate Boundary**	**2.19**	**26**	⇑*i*P		**Pn**		**03 05 39.1**	**+0.5**
PB01				*i* S		**Sn**		**03 06 06.4**	**+1.9**
PB01				AML		AML		03 06 15.9	
	comp=E,981nm,0.5s								
ARE	**Arequipa**	**6.59**	**352**	*e*P		**Pn**		**03 06 46.0**	**+6.9**
CPUP	**Villa Florida**	**12.43**	**108**	Pn		**Pn**		**03 07 58.5**	**-0.6**
	comp=E,0.1nm,0.3s,baz=258,slow=9.3,SNR=2.6								
BDFB	**Brasilia**	**22.45**	**75**	LR		LR		03 19 38.1	
	comp=E,37nm,20.1s,baz=4.2,slow=41								
TORD	**Torodi Ar. Bea**	**79.27**	**71**	P		**P**		**03 17 05.3**	**-1.7**
	comp=E,1.9nm,0.8s,mb4.1,baz=254,slow=5.2,SNR=19								
YKA	**Yellowknife Ar**	**92.13**	**341**	P		**P**		**03 18 10.1**	**+0.2**
	comp=E,0.3nm,0.7s,mb3.7,baz=138,slow=4.5,SNR=11								
MKAR	**Makanchi Array**	**147.74**	**36**	PKPbc		PKPbc		03 24 45.0	-0.7
	comp=E,0.7nm,0.7s,baz=293,slow=3.8,SNR=6.5								

*ISCJB **27** 03:11:33.7±0.7, 5.4N±0.1×330E±0.1, h10km, mb3.8/11, MS3.5/4, Error ellipse: s-maj=20.0km s-min=13.3km az=21.8*
*IDC **27** 03:11:34.5±1.1, 5.47N×3288E, h0km, mb3.8/10, mb1 3.8/10, mb1mx3.7/21, mbtmp3.8/10, MS3.6/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=31.8km s-min=21.7km az=133.0*
*NEIC **27** 03:11:35.9±0.5, 5.43N×329.3E, h10km, mb3.9/2, Error ellipse: s-maj=16.3km s-min=10.8km az=111.0*

ISC 27 03:11:35.9±0.7, 543N±010×329E±01, h10km, n19, σ0§77/16, mb3.8/11, MS3.5/4, Sudan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**21.10**	**193**	P		**P**		**03 16 20.5**	**-0.2**
	2.8nm,1.0s,mb3.5,baz=10,slow=14,SNR=5.6								
LSZ				LR		LR		03 24 55.3	
	comp=Z,131nm,18.3s,MS3.4,baz=350,slow=38								
LSZ	**Lusaka**	**21.10**	**193**	P		**P**		**03 16 20.6**	**-0.2**
LSZ				LR		LR		03 24 55.3	
TSUM	**Tsumeb**	**28.77**	**211**	LR		LR		03 28 28.0	
	comp=Z,110nm,18.6s,MS3.5,baz=307,slow=35								
TOA0	**Torodi Ar. Sit**	**31.75**	**286**	*e*P		**P**		**03 18 01.9**	**+1.5**
TORD	**Torodi Ar. Bea**	**31.75**	**286**	P		**P**		**03 18 00.6**	**+0.2**
	1.1nm,0.8s,mb3.7,baz=92,slow=8.4,SNR=8.0								
TORD				LR		LR		03 30 04.1	
	comp=Z,79nm,20.1s,MS3.4,baz=70,slow=35								
BRTR	**Keskin Array B**	**34.15**	**1**	P		**P**		**03 18 21.2**	**0.0**
	0.6nm,0.9s,mb3.5,baz=168,slow=8.8,SNR=3.2								
BOSA	**Boshof**	**34.64**	**192**	LR		LR		03 31 41.9	
	comp=Z,98nm,18.3s,MS3.6,baz=184,slow=35								
BOSA	**Boshof**	**34.64**	**192**	*e*P		**P**		**03 18 25.5**	**0.0**
	2.3nm,0.9s,mb4.1								
DBIC	**Dimbokro**	**37.60**	**274**	P		**P**		**03 18 50.0**	**-1.1**
	0.8nm,0.4s,mb3.8,baz=62,slow=9.8,SNR=4.5								
DBIC	**Dimbokro**	**37.60**	**274**	*e*P		**P**		**03 18 50.3**	**-0.8**
	0.9nm,0.5s,mb3.8								
AKASG	**Malin Array Be**	**45.23**	**357**	P		**P**		**03 19 52.3**	**-0.9**
	1.0nm,0.6s,mb3.8,baz=174,slow=6.3,SNR=4.6								
GERES	**GERESS Array B**	**46.25**	**342**	P		**P**		**03 20 01.4**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=157,slow=7.2,SNR=6.0								
MKAR	**Makanchi Array**	**59.08**	**37**	P		**P**		**03 21 35.7**	**-0.7**
	0.6nm,0.8s,mb3.7,baz=234,slow=6.1,SNR=4.5								
MKAR	**Makanchi Array**	**59.08**	**37**	P		**P**		**03 21 35.7**	**-0.7**
ZALV	**Zalesovo Beam**	**63.95**	**31**	P		**P**		**03 22 09.7**	**+0.5**
	0.6nm,0.3s,mb4.1,baz=238,slow=8.0,SNR=2.5								
ARCES	**ARCESS Array B**	**64.20**	**357**	P		**P**		**03 22 09.8**	**-0.7**
	4.7nm,1.1s,mb4.4,baz=202,slow=6.3,SNR=4.7								
**ARC

ZLN	**Zelenaya**	**1.69**	**288**	*e*P		Pn	04 09 55.4 +1.3
BZGR	**Bezymyannyi-Gr**	**1.73**	**285**	*e*P		Pn	04 09 55.6 +0.9
CIRR	**Tsirk**	**1.75**	**291**	*e*P		Pn	04 09 56.0 +1.0
SRKR	**Sorokina**	**1.79**	**310**	*e*P		Pn	04 09 57.2 +1.6
SRKR				*i* S		Sn	04 10 21.0 +3.0
BZMR	**Bezymyannaya**	**1.84**	**284**	*e*P		Pn	04 09 57.4 +1.2
BZWR	**Bezymyannyi-We**	**1.84**	**285**	*e*P		Pn	04 09 57.7 +1.4
KLY	**Klyuchi**	**1.87**	**296**	*e*P		Pn	04 09 55.8 -0.8
KLY				*i* S		Sn	04 10 18.4 -1.4
KRSR	**Krestovskiy**	**1.88**	**293**	*e*P		Pn	04 09 57.1 +0.4
KRSR				*i* S		Sn	04 10 20.8 +0.8
KIRR	**Kirishev**	**1.92**	**284**	*e*P		Pn	04 09 59.0 +1.6
KIRR				*i* S		Sn	04 10 24.1 +2.9
KMNR	**Kamenistaya**	**1.95**	**278**	*e*P		Pn	04 09 59.4 +1.6
KPT	**Kopyto**	**1.99**	**284**	*e*P		Pn	04 09 59.7 +1.3
TUMR	**Tumrok**	**2.02**	**264**	*e*P		Pn	04 10 00.1 +1.4
KOZ	**Kozyrevsk**	**2.20**	**285**	*e*P		Pn	04 10 03.6 +2.4
SRDR	**Sredinnyy**	**2.35**	**291**	*e*P		Pn	04 10 05.0 +1.7
SRDR				*i* S		Sn	04 10 34.3 +2.4
KII	**Karymskiy**	**2.86**	**240**	P		Pn	04 10 11.8 +1.5
SPN	**Mys Shipunski**	**3.24**	**223**	P		Pn	04 10 17.6 +2.1
AVH	**Avacha**	**3.66**	**234**	*e*P		Pn	04 10 23.7 +2.4
GNL	**Ganaly**	**3.80**	**243**	*e*P		Pn	04 10 25.2 +2.0
RUS	**Russkaya**	**4.34**	**227**	P		Pn	04 10 32.9 +2.3

IDC ***27*** *04:11:19.8±0.7, 52.36N×168.37W, h0km, mb4.0/19, mb1 4.2/20, mb1mx4.2/27, mbtmp4.0/20, ML3.9/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/48, Error ellipse: s-maj=27.0km s-min=11.3km az=1.0*

BJI ***27*** *04:11:20.4, 52.20N×168.10W, h29km, mB5.1, mb4.7, Ms4.6, Msz4.4*

NEIC ***27*** *04:11:22.4, 52.19N×168.15W, h29km, mb4.4/27, ML3.9(AEIC), ML4.0(PMR), After AEIC.*

ISCJB ***27*** *04:11:24.8±0.9, 52.40N±007×168.45W±005, h41km±6km, mb4.3/49, MS3.8/11, Error ellipse: s-maj=11.0km s-min=5.2km az=175.4*

ISC 27 04:11:26.8±0.8, 5246N±007×16845W±005, h41km±6km, h34km±1.9km:pP-P,n94,σ1s09/97,mb4.3/49,MS3.8/11,2C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.57**	**335**	P	**Pn**	**04 11 37.8**	**-0.7**
NIKO				S	**Sn**	**04 11 49.9**	**+3.0**
OKCD	**Okmok Cone D**	**1.00**	**12**	P	**Pn**	**04 11 43.9**	**-0.4**
OKFG	**Magazine Ridge**	**1.01**	**19**	P	**Pn**	**04 11 43.7**	**-0.8**
OKFG				S	**Sn**	**04 12 01.4**	**+3.9**
UNV	**Unalaska Valle**	**1.82**	**39**	P	**Pn**	**04 11 53.5**	**-2.1**
UNV				S	**Sn**	**04 12 16.4**	**-1.0**
AKUT	**Akutan**	**2.33**	**43**	*e*Pn	**Pn**	**04 12 03.6**	**+1.1**
FALS	**False Pass**	**3.84**	**49**	*e*Pn	**Pn**	**04 12 25.2**	**+1.8**
ADK	**Adak**	**5.10**	**267**	P	**Pn**	**04 12 40.9**	**+0.3**
SDPT	**Sand Point**	**5.53**	**55**	*e*P	**Pn**	**04 12 45.0**	**-1.5**
KDAK	**Kodiak Island**	**10.53**	**53**	Pn	**Pn**	**04 13 50.5**	**-4.4**
	1.2nm,0.3s,baz=186,slow=7.4,SNR=11						
KDAK	**Kodiak Island**	**10.53**	**53**	Pn	**Pn**	**04 13 50.5**	**-4.4**
FX1	**Attu Island--F**	**11.17**	**279**	Pn	**Pn**	**04 14 03.6**	**-0.1**
	2.7nm,0.3s,baz=90,slow=16,SNR=18						
FX1				LR	LR	04 18 11.6	
	comp=Z,311nm,18.5s,baz=322,slow=37						
SEW	**Seward**	**13.00**	**46**	*e*Pn	**Pn**	**04 14 27.6**	**-1.1**
TNA	**Tin City**	**13.15**	**1**	*e*Pn	**Pn**	**04 14 31.6**	**+1.0**
RC01	**Rabbit Creek A**	**13.37**	**42**	*e*Pn	**Pn**	**04 14 32.8**	**-0.9**
PMR	**Palmer**	**13.89**	**41**	*e*Pn	**Pn**	**04 14 41.1**	**+0.3**
CHUM	**Lake Minchumin**	**14.21**	**30**	*e*Pn	**Pn**	**04 14 45.1**	**-0.1**
KTH	**Kantishna Hill**	**14.43**	**33**	*e*Pn	**Pn**	**04 14 47.9**	**-0.1**
	22nm,1.1s						
TRF	**Thorofare Moun**	**14.57**	**34**	*e*Pn	**Pn**	**04 14 50.9**	**+0.9**
MCK	**McKinley**	**15.22**	**34**	*e*Pn	**Pn**	**04 14 59.9**	**+1.4**
	199nm,2.9s						
PAX	**Paxson**	**16.07**	**40**	*e*Pn	**Pn**	**04 15 09.3**	**-0.1**
COLA	**College**	**16.31**	**32**	*e*Pn	**Pn**	**04 15 10.6**	**-1.9**
	20nm,1.1s						
COLD	**Coldfoot**	**17.30**	**24**	*e*Pn	**Pn**	**04 15 25.3**	**+0.5**
	13nm,1.1s						
EGAK	**Eagle**	**18.62**	**38**	*e*P	**Pn**	**04 15 41.1**	**0.0**
	20nm,1.4s						
HYT	**Haines Junctio**	**18.81**	**51**	*e*Pn	**Pn**	**04 15 45.5**	**+2.2**
DAWY	**Dawson**	**19.00**	**41**	*e*P	**Pn**	**04 15 43.6**	**-1.9**
SKAG	**Skagway**	**19.66**	**56**	*e*P	**Pn**	**04 15 52.1**	**-1.3**
	29nm,1.0s						
BILL	**Bilibino**	**19.79**	**332**	*e*P	**Pn**	**04 15 56.5**	**+1.6**
	7.5nm,1.0s						
PET	**Petropavlovsk**	**19.83**	**285**	*e*P	**Pn**	**04 15 53.6**	**-2.0**
	26nm,0.8s						
PETK	**Petropavlovsk-**	**20.38**	**285**	P	**P**	**04 15 59.7**	**0.0**
	11nm,0.5s,baz=83,slow=14,SNR=36						
PETK				LR	LR	04 23 19.3	
	comp=Z,83nm,18.7s,MS3.1,baz=296,slow=35						
DLBC	**Dease Lake**	**22.36**	**59**	P	**P**	**04 16 24.4**	**+3.6**
	2.9nm,0.8s,mb3.8,baz=261,slow=5.9,SNR=3.6						
DLBC	**Dease Lake**	**22.36**	**59**	P	**P**	**04 16 24.4**	**+3.6**
YKA	**Yellowknife Ar**	**29.76**	**49**	P	**P**	**04 17 28.7**	**-0.2**
	0.3nm,0.4s,mb3.3,baz=281,slow=7.9,SNR=11						
YKA				PcP	PcP	04 20 31.0	-0.5
	0.1nm,0.7s,baz=273,slow=2.6,SNR=3.6						
YKA				LR	LR	04 29 35.8	
	comp=Z,12nm,19.7s,MS2.5,baz=95,slow=37						
YKA	**Yellowknife Ar**	**29.76**	**49**	P	**P**	**04 17 28.7**	**-0.2**
YKA				PcP	PcP	04 20 31.1	-0.5
YKA				LR	LR	04 29 35.8	
YBH	**Yreka Blue Hor**	**32.42**	**91**	P	**P**	**04 17 51.7**	**-0.8**
	2.4nm,0.6s,mb4.2,baz=292,slow=5.4,SNR=3.2						
EDM	**Edmonton**	**32.60**	**66**	*e*P	**P**	**04 17 54.9**	**+0.9**
WVOR	**Wild Horse Val**	**34.51**	**87**	*e*P	**P**	**04 18 11.6**	**+0.9**
	2.3nm,0.8s,mb4.2						
EGMT	**Eagleton**	**36.91**	**73**	*e*P	**P**	**04 18 32.8**	**+1.6**
	6.2nm,0.9s,mb4.4						
NVAR	**Mina Array Bea**	**37.10**	**92**	P	**P**	**04 18 32.8**	**-0.2**
	1.1nm,0.7s,mb3.8,baz=304,slow=6.4,SNR=5.0						
IMW	**Indian Meadow**	**38.37**	**79**	*e*P	**P**	**04 18 44.4**	**+0.8**
	2.6nm,0.8s,mb4.0						
RRI2	**Red Ridge**	**38.44**	**80**	*e*P	**P**	**04 18 45.9**	**+1.6**
	91nm,2.6s,mb5.0						
RLMT	**Red Lodge**	**38.69**	**77**	*e*P	**P**	**04 18 46.7**	**+0.4**
	3.8nm,0.9s,mb4.1						
DUG	**Dugway**	**39.38**	**85**	*e*P	**P**	**04 18 52.3**	**+0.3**
	5.8nm,1.1s,mb4.2						
BW06	**Boulder Array**	**39.84**	**80**	*e*P	**P**	**04 18 57.1**	**+1.3**
	74nm,2.9s,mb4.9						
PDAR	**Pinedale Array**	**39.84**	**80**	P	**P**	**04 18 53.4**	**-2.5**
	1.5nm,0.9s,mb3.7,baz=288,slow=3.1,SNR=8.2						
MWC	**Mount Wilson**	**40.00**	**97**	*e*P	**P**	**04 18 57.1**	**-0.2**
	27nm,0.8s,mb5.0						
MJAR	**Matsushiro Arr**	**40.26**	**268**	P	**P**	**04 18 59.2**	**-0.2**
	1.0nm,0.3s,mb4.0,baz=47,slow=7.9,SNR=6.5						
MAJO	**Matsushiro**	**40.26**	**268**	*e*P	**P**	**04 18 59.8**	**+0.4**
	11nm,0.9s,mb4.6						
FCC	**Fort Churchill**	**40.45**	**51**	*e*P	**P**	**04 19 01.7**	**+0.9**
	0.4nm,0.9s						
SRU	**San Rafael**	**41.44**	**85**	*e*P	**P**	**04 19 09.3**	**+0.2**
	3.9nm,1.0s,mb4.0						
CN2	**Changchun**	**43.53**	**286**	*e*P	**P**	**04 19 25.5**	**-0.5**
CN2				*e*AP	pP	04 19 36.0	-1.6
CN2				*e*S	**S**	**04 25 51.0**	**-0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=E,300nm,15.0s,MS4.4						
CN2				LR	LR		
	comp=Z,400nm,16.0s,MS4.4						
ULM	**Lac du Bonnet**	**43.61**	**63**	LR	LR	04 37 30.8	
	comp=Z,102nm,22.0s,MS3.7,baz=290,slow=36						
SDCO	**Great Sand Dun**	**45.35**	**83**	*e*P	**P**	**04 19 41.7**	**+1.0**
	comp=Z,49nm,2.6s,mb4.9						
KSRS	**Korea Array**	**45.95**	**277**	P	**P**	**04 19 45.9**	**+0.5**
	comp=Z,5.2nm,0.8s,mb4.5,baz=57,slow=7.7,SNR=18						
KSRS				LR	LR	04 39 15.4	
	comp=Z,54nm,18.3s,MS3.5,baz=56,slow=36						
ULN	**Ulaanbaatar**	**51.37**	**301**	*e*P	**P**	**04 20 25.3**	**-1.6**
	comp=Z,2.7nm,0.8s,mb4.2						
WMOK	**Wichita Mounta**	**51.41**	**81**	*e*P	**P**	**04 20 27.3**	**-0.1**
	comp=Z,6.6nm,1.0s,mb4.5						
SONM	**Songino Array**	**51.74**	**301**	P	**P**	**04 20 30.0**	**+0.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=60,slow=8.8,SNR=4.2						
TXAR	**Lajitas Array**	**52.19**	**90**	P	**P**	**04 20 31.5**	**-1.7**
	comp=Z,1.3nm,0.9s,mb3.9,baz=301,slow=4.4,SNR=11						
HHC	**Hu-ho-hao-te**	**53.41**	**292**	*e*P	**P**	**04 20 42.8**	**+0.7**
HHC				AP	pP	04 20 53.0	-1.0
HHC				XP	sP	04 20 56.3	-2.5
HHC				PCP	PcP	04 21 50.0	+1.1
HHC				PP	PP	04 22 44.3	+1.9
HHC				PCS	PcS	04 25 47.8	0.0
HHC				S	**S**	**04 28 10.0**	**-1.2**
HHC				XS	sS	04 28 26.5	-4.4
HHC				SCS	ScS	04 30 25.3	-2.5
HHC				SS	SS	04 31 48.8	-2.2
HHC				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,88nm,3.7s						
HHC				LR	LR		
	comp=N,100nm,15.5s,MS4.1						
HHC				LR	LR		
	comp=E,70nm,15.5s,MS4.1						
HHC				LR	LR		
	comp=Z,154nm,17.8s,MS4.1						
NJ2	**Nanjing**	**55.09**	**279**	*e*P	**P**	**04 20 57.8**	**+3.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
OXF	**Oxford**	**57.17**	**75**	*e*P	**P**	**04 21 08.1**	**-1.1**
	comp=Z,17nm,0.8s,mb5.1						
ZALV	**Zalesovo Beam**	**57.74**	**318**	P	**P**	**04 21 12.5**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=38,slow=5.7,SNR=2.5						
ARCES	**ARCESS Array B**	**57.89**	**354**	P	**P**	**04 21 14.3**	**+0.5**
	comp=Z,1.2nm,0.7s,mb4.0,baz=4.9,slow=5.9,SNR=6.1						
ARCES	**ARCESS Array B**	**57.89**	**354**	P	**P**	**04 21 14.3**	**+0.5**
XAN	**Xi'an**	**59.61**	**287**	P	**P**	**04 21 25.5**	**-0.8**
XAN				AP	pP	04 21 34.8	-3.5
XAN				PP	PP	04 23 37.0	-0.8
XAN				S	**S**	**04 29 33.0**	**-0.3**
XAN				SS	SS	04 33 29.5	+0.8
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s,mb4.1						
XAN				LR	LR		
	comp=N,15nm,18.6s,MS3.6						
XAN				LR	LR		
	comp=E,33nm,16.1s,MS3.6						
XAN				LR	LR		
	comp=Z,64nm,23.4s						
GTA	**Gaotai**	**60.94**	**298**	*e*P	**P**	**04 21 35.3**	**0.0**
GTA				AP	pP	04 21 45.5	-1.8
GTA				XP	sP	04 21 50.0	-2.1
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.5						
LZH	**Lanzhou**	**61.08**	**292**	*e*P	**P**	**04 21 38.5**	**+2.2**
LZH				AP	pP	04 21 50.0	+1.7
LZH				XP	sP	04 21 55.5	+2.4
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.1						
LZH				AMB	AMB		
	comp=Z,75nm,4.5s						
KURK	**Kurchatov**	**62.68**	**319**	LR	LR	04 50 16.2	
	comp=Z,49nm,19.3s,MS3.7,baz=35,slow=37						
KURK	**Kurchatov**	**62.68**	**319**	*e*P	**P**	**04 21 46.8**	**0.0**
	comp=Z,2.6nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**63.96**	**325**	LR	LR	04 52 52.8	
	comp=Z,163nm,18.3s,MS4.2,baz=35,slow=39						
BRVK	**Borovoye**	**63.97**	**325**	*e*P	**P**	**04 21 55.7**	**+0.4**
	comp=Z,4.5nm,0.9s,mb4.5						
MK31	**Makanchi Array**	**64.15**	**314**	*e*P	**P**	**04 21 55.8**	**-0.7**
MKAR	**Makanchi Array**	**64.15**	**314**	P	**P**	**04 21 55.1**	**-1.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=46,slow=6.9,SNR=9.4						
CD2	**Chengdu**	**64.88**	**288**	P	**P**	**04 22 03.0**	**+1.4**
CD2				AP	pP	04 22 13.3	-0.4
CD2				XP	sP	04 22 17.3	-1.2
CD2				PCP	PcP	04 22 36.5	+1.9
CD2				PP	PP	04 24 27.5	+3.2
CD2				S	**S**	**04 30 39.3**	**-0.4**
CD2				XS	sS	04 30 56.5	-3.4
CD2				SS	SS	04 34 51.3	+0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,240nm,4.9s						
CD2				LR	LR		
	comp=N,370nm,4.4s						
CD2				LR	LR		
	comp=Z,200nm,5.3s						
GYA	**Guiyang**	**66.46**	**283**	⇑*i*P	**P**	**04 22 12.3**	**+0.5**
GYA				AP	pP	04 22 22.5	-1.5
GYA				XP	sP	04 22 26.5	-2.3
GYA				PP	PP	04 24 40.3	+2.1
GYA				S	S	04 30 57.5	-1.6
GYA				XS	sS	04 31 14.5	-4.9
GYA				SS	SS	04 35 15.0	-0.9
GYA				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,20nm,6.5s						
GYA				LR	LR		
	comp=N,110nm,13.8s,MS4.4						
GYA				LR	LR		
	comp=E,120nm,14.2s,MS4.4						
GYA				LR	LR		
	comp=Z,150nm,15.4s,MS4.3						
NOA	**NORSAR Array B**	**66.85**	**0**	P	**P**	**04 22 12.5**	**-1.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=333,slow=14,SNR=3.0						
KMI	**Kunming**	**69.79**	**285**	P	**P**	**04 22 34.3**	**+1.6**
KMI				AP	pP	04 22 41.5	-3.5
KMI				XP	sP	04 22 45.0	-4.7
KMI				AMB	AMB		
	comp=Z,11nm,1.5s,mb4.6						
AKASG	**Malin Array Be**	**76.14**	**349**	P	**P**	**04 23 08.2**	**-1.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=15,slow=5.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**77.14**	**283**	P	**P**	**04 23 15.6**	**-0.5**
	comp=Z,3.7nm,0.9s,mb4.3,baz=27,slow=6.3,SNR=12						
BAIF	**Baives**	**77.67**	**5**	*e*P	**P**	**04 23 17.6**	**-0.9**
GERES	**GERESS Array B**	**79.06**	**359**	P	**P**	**04 23 26.8**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=41,slow=9.1,SNR=3.5						
MEZF	**Maizieres J'vi**	**79.27**	**4**	*e*P	**P**	**04 23 26.9**	**-0.4**
PSZ	**Piszkesteto**	**79.75**	**354**	*e*P	**P**	**04 23 30.5**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.3						
CSNA	**Conrad Observa**	**79.93**	**357**	⇑*i*PcP	**P**	**04 23 32.8**	**+1.9**
	comp=Z,6.4nm,1.3s,mb4.4						
LOR	**Lormes**	**80.44**	**5**	*e*P	**P**	**04 23 33.2**	**-0.5**
	comp=Z,4.5nm,1.0s,mb4.1						
LOR	**Lormes**	**80.44**	**5**	*e*P	**P**	**04 23 33.2**	**-0.5**
	comp=Z,2.3nm,1.0s,mb4.1						
SSF	**Saint Saulge**	**80.62**	**6**	*e*P	**P**	**04 23 34.3**	**-0.4**
	comp=Z,13nm,1.1s,mb4.5						
SSF	**Saint Saulge**	**80.62**	**6**	*e*P	**P**	**04 23 34.3**	**-0.4**
	comp=Z,6.3nm,1.1s,mb4.5						
AVF	**Avril sur Loir**	**80.88**	**6**	*e*P	**P**	**04 23 35.5**	**-0.6**
DAVOX	**Davos/Dischmat**	**81.13**	**1**	LR	LR	04 57 03.4	
	comp=Z,107nm,19.1s,MS4.2,baz=164,slow=34						
BNI	**Bardonecchia**	**82.78**	**3**	*e*P	**P**	**04 23 47.1**	**+1.0**
	comp=Z,12nm,1.4s,mb4.8						
ORIF	**Oris-en-Rattie**	**82.88**	**4**	*e*P	**P**	**04 23 46.8**	**+0.2**
BRTR	**Keskin Array B**	**86.21**	**343**	P	**P**	**04 24 04.0**	**+0.4**
	comp=Z,0.9nm,0.6s,mb4.2,baz=1.4,slow=4.9,SNR=4.3						
ESDC	**Sonseca Array**	**87.26**	**12**	P	**P**	**04 24 08.9**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.9,baz=98,slow=32,SNR=2.8						
ASAR	**Alice Springs**	**90.88**	**231**	P	**P**	**04 24 23.0**	**-2.7**
	comp=Z,1.3nm,1.0s,mb4.2,baz=35,slow=4.3,SNR=7.2						

NEIC ***27*** *04:20:58.8, 44.46N×25.33E, h80km, MG2.8(BUC), After BUC.*

BUC ***27*** *04:20:58.3±0.5, 44.56N×25.68E, h2km±3km, MD3.4/3, Error ellipse: s-maj=3.7km s-min=2.3km az=37.0*

CSEM ***27*** *04:20:58.3±0.5, 44.56N×25.68E, h2km±3km, MD3.4/3, Error ellipse: s-maj=3.7km s-min=2.3km az=37.0, After BUC*

ISCJB ***27*** *04:21:00.1±0.6, 44.60N±003×25.68E±006, h10km, Error ellipse: s-maj=6.2km s-min=4.4km az=164.8*

ISC 27 04:20:59.9±0.8, 4460N±003×2574E±006, h1km±6km, n19, σ1s01/25, 6C-6D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUC1	**Bucharest**	**0.33**	**141**	⇓*i*P	**Pg**	**04 21 05.0**	**-1.1**
ISR	**Istrita**	**0.77**	**47**	⇓*i*P	**Pg**	**04 21 14.9**	**+0.2**
MLR	**Muntele Rosu**	**0.90**	**9**	⇑*i*P	**Pg**	**04 21 16.8**	**-0.4**
VOIR		**0.97**	**330**	⇓*i*P	**Pg**	**04 21 18.4**	**-0.1**
VOIR				*i* S	**Sg**	**04 21 32.6**	**+1.5**
VOIR		**0.97**	**330**	P	**Pg**	**04 21 18.1**	**-0.4**
SZH	**Strazhica**	**1.34**	**174**	*i* P	**Pn**	**04 21 26.6**	**+0.8**
SZH				*i* Sg	**Sg**	**04 21 46.0**	**+3.0**
PLOR	**Plostina**	**1.40**	**27**	⇑*i*P	**Pn**	**04 21 26.2**	**-0.4**
PLOR				*i* S	**Sg**	**04 21 46.2**	**+1.2**
VRI	**Vrincioaia**	**1.44**	**28**	⇑*i*P	**Pn**	**04 21 26.8**	**-0.4**
VRI				*i* S	**Sb**	**04 21 47.6**	**+1.1**
VRI	**Vrincioaia**	**1.44**	**28**	*i* Pg	**Pg**	**04 21 26.5**	**-1.1**
HARR	**Harsova**	**1.56**	**86**	⇑*i*P	**Pn**	**04 21 28.5**	**-0.3**
HARR	**Harsova**	**1.56**	**86**	P	**Pn**	**04 21 28.5**	**-0.3**
CVD	**Cernavoda**	**1.66**	**99**	⇓*i*P	**Pn**	**04 21 30.6**	**+0.4**
TIRR	**Tirgusor**	**1.91**	**93**	⇑*i*P	**Pn**	**04 21 33.7**	**+0.1**
TIRR				*i* S	**Sn**	**04 21 59.2**	**+0.8**
TIRR	**Tirgusor**	**1.91**	**93**	P	**Pn**	**04 21 33.8**	**+0.1**
PSN	**Preselentsi**	**1.98**	**117**	*i* Sg	**Sg**	**04 22 01.9**	**-1.7**
TLCR		**2.26**	**74**	⇓*i*P	**Pn**	**04 21 38.7**	**+0.3**
TLCR				*i* S	**Sn**	**04 22 06.9**	**0.0**
BURAR	**Bucovina Array**	**3.04**	**353**	⇓*i*P	**Pn**	**04 21 49.3**	**+0.2**
BUR08	**Bucovina Ar. S**	**3.07**	**353**	*e*Pn	**Pn**	**04 21 47.4**	**-2.1**
BZS	**Buzias**	**3.09**	**291**	⇑*i*P	**Pn**	**04 21 48.5**	**-1.4**

IDC ***27*** *04:39:57.0±1.2, 44.35N×39.03E, h0km, mb3.3/8, mb1 3.5/11, mb1mx3.5/27, mbtmp3.4/11, ML3.7/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/31, Error ellipse: s-maj=18.3km s-min=15.7km az=10.0*

MOS ***27*** *04:39:58.5±1.4, 44.49N×38.87E, h15km, mb4.0/3, Error ellipse: s-maj=13.2km s-min=8.2km az=34.1*

NEIC ***27*** *04:39:59.1±0.4, 44.47N×38.93E, h10km, Error ellipse: s-maj=8.5km s-min=5.8km az=30.0*

ISCJB ***27*** *04:40:00.5±0.7, 44.44N±006×38.85E±005, h34km±10km, mb3.3/7, Error ellipse: s-maj=10.1km s-min=5.8km az=6.7*

ISC 27 04:40:02.1±2.2, 4443N±005×3892E±005, h32km±19km, n34, σ0s97/39, mb3.3/7, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOC	**Sochi**	**1.03**	**146**	*e*PG	**Pn**	**04 40 18.9**	**-1.3**
SOC				*e*		04 40 32.0	
SOC				pmax	pmax		
	comp=Z,4μm,0.4s						
SOC				smax			
	comp=N,13μm,0.9s						
ANN	**Anapa**	**1.12**	**290**	*e*PG	**Pn**	**04 40 23.9**	**+2.4**
ANN				*e*S	**Sn**	**04 40 44.0**	**+8.2**
DOMR	**Dombai**	**2.27**	**119**	*i* PN	**Pn**	**04 40 37.5**	**+0.3**
KIV	**Kislovodsk**	**2.75**	**99**	*e*PN	**Pn**	**04 40 44.0**	**+0.1**
KIV				*e*S	**Sn**	**04 41 15.0**	**-1.0**
KIV	**Kislovodsk**	**2.75**	**99**	*e*Pn	**Pn**	**04 40 43.7**	**-0.2**
KIV				*e*Sn	**Sn**	**04 41 15.4**	**-0.6**
SUDU	**Sudak**	**2.83**	**281**	*e*PN	**Pn**	**04 40 45.6**	**+0.6**
SUDU				*e*S	**Sn**	**04 41 21.6**	**+3.6**
KUBR	**Kubataba**	**3.29**	**100**	*i* PN	**Pn**	**04 40 53.2**	**+1.8**
YAL	**Yalta**	**3.41**	**273**	*e*PN	**Pn**	**04 40 53.7**	**+0.7**
SEV	**Sevastopol'**	**3.76**	**274**	*e*PN	**Pn**	**04 40 57.0**	**-0.8**
GNI	**Garni**	**6.08**	**133**	LR	LR	04 43 59.7	
	comp=N,64nm,18.0s,baz=157,slow=41						
BRTR	**Keskin Array B**	**6.13**	**222**	Pn	**Pn**	**04 41 30.4**	**+0.1**
	comp=N,0.6nm,0.3s,baz=50,slow=13,SNR=8.1						
BRTR				Sn	**Sn**	**04 42 38.5**	**-0.8**
	baz=28,slow=25,SNR=3.0						
BRTR	**Keskin Array B**	**6.13**	**222**	P	**Pn**	**04 41 30.5**	**+0.2**
BRTR						04 42 38.5	
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**9.06**	**317**	Pn	**Pn**	**04 42 09.0**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=116,slow=10,SNR=6.6						
AKASG				Sn	**Sn**	**04 43 50.9**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=127,slow=24,SNR=4.8						
AKASG	**Malin Array Be**	**9.06**	**317**	P	**Pn**	**04 42 09.0**	**-1.5**
AKASG						04 43 50.9	
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG				smax			
	comp=N,1.0nm,0.3s						
MLR	**Muntele Rosu**	**9.26**	**281**	Pn	**Pn**	**04 42 13.8**	**+0.5**
	comp=N,0.2nm,0.3s,baz=139,slow=22,SNR=7.5						
BUR08	**Bucovina Ar. S**	**10.06**	**293**	*e*Pn	**Pn**	**04 42 22.6**	**-1.7**
NIE	**Niedzica**	**13.65**	**298**	*e*P	**Pn**	**04 43 13.8**	**+0.6**
OJC	**Ojcow**	**14.19**	**301**	*e*P	**Pn**	**04 43 18.5**	**-2.0**
DAVOX	**Davos/Dischmat**	**20.40**	**287**	P	**P**	**04 44 36.7**	**+0.6**
	comp=N,1.0nm,0.3s,baz=78,slow=13						
DAVOS	**Davos**	**20.46**	**287**	P	**P**	**04 44 36.7**	**0.0**
HFS	**Hagfors**	**21.82**	**325**	P	**P**	**04 44 50.7**	**-0.5**
	comp=N,3.6nm,0.9s,mb3.

GTA				AP	pP	04 49 18.3	-2.1
GTA				XP	sP	04 49 22.3	-1.5
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
RPZ	**Rata Peaks**	**52.68**	**147**	LR	LR	05 13 58.3	
	comp=Z,126nm,18.4s,MS4.0,baz=190,slow=39						
ULN	**Ulaanbaatar**	**55.29**	**338**	*e*P	**P**	**04 49 35.0**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.2						
SONM	**Songino Array**	**55.51**	**338**	P	**P**	**04 49 37.4**	**+0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=146,slow=13,SNR=2.4						
MKAR	**Makanchi Array**	**66.68**	**324**	P	**P**	**04 50 53.1**	**+0.5**
	comp=Z,5.1nm,0.5s,mb4.8,baz=113,slow=9.0,SNR=3.6						
MKAR				LR	LR	05 20 40.4	
	comp=Z,46nm,18.9s,MS3.7,baz=174,slow=37						
TKM2	**Tokmak 2**	**69.08**	**318**	*e*P	**P**	**04 51 07.3**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.5						
ZALV	**Zalesovo Beam**	**69.32**	**331**	P	**P**	**04 51 07.2**	**-1.8**
	comp=Z,1.9nm,0.7s,mb4.2,baz=104,slow=6.3,SNR=5.0						
ZALV	**Zalesovo Beam**	**69.32**	**331**	P	**P**	**04 51 07.2**	**-1.8**
AML	**Almayashu**	**70.06**	**317**	*e*P	**P**	**04 51 15.3**	**+1.5**
	comp=Z,8.2nm,0.8s,mb4.7						
EKS2	**Erkin-Say**	**70.20**	**317**	*e*P	**P**	**04 51 15.0**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.4						
KURK	**Kurchatov**	**70.77**	**326**	P	**P**	**04 51 16.6**	**-1.4**
	comp=Z,4.2nm,0.8s,mb4.4,baz=127,slow=6.3,SNR=5.7						
KURK	**Kurchatov**	**70.77**	**326**	*e*P	**P**	**04 51 18.0**	**0.0**
	comp=Z,6.7nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**76.36**	**326**	P	**P**	**04 51 49.8**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.1,baz=123,slow=7.8,SNR=8.9						
BRVK	**Borovoye**	**76.44**	**326**	*e*P	**P**	**04 51 51.3**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.3						
VNDA	**Vanda**	**76.56**	**174**	P	**P**	**04 51 52.0**	**+0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=359,slow=4.8,SNR=9.1						
VNDA				LR	LR	05 23 51.9	
	comp=Z,134nm,19.5s,MS4.3,baz=347,slow=34						
MAW	**Mawson**	**80.66**	**202**	LR	LR	05 25 07.1	
	comp=Z,71nm,18.8s,MS4.0,baz=294,slow=34						
ASF	**Jabal al Asfar**	**97.24**	**302**	LR	LR	05 40 29.4	
	comp=Z,21nm,18.8s,MS3.6,baz=250,slow=37						
ARCES	**ARCESS Array B**	**98.62**	**340**	LR	LR	05 43 12.6	
	comp=Z,62nm,19.9s,MS4.1,baz=4.6,slow=38						
TOA0	**Torodi Ar. Sit**	**131.59**	**285**	*e*PKPdf	PKPdf	04 59 15.7	+0.2
TORD	**Torodi Ar. Bea**	**131.59**	**285**	PKP	PKPdf	04 59 14.9	-0.5
	comp=Z,0.5nm,0.8s,baz=87,slow=1.3,SNR=5.0						

NNC ***27*** *04:47:33.2±2.1, 44.79N×85.88E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=16.6km s-min=10.3km az=121.0*

BJI 27 04:47:31.0, 44.34N×85.38E, h16km, ML2.9, 5C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**1.75**	**106**	PG	Pg	04 48 01.0	-3.5
WMQ				SG	Sg	04 48 26.0	-1.2
WMQ				Smax			
	comp=N,97nm,0.5s						
WMQ				Smax			
	comp=E,258nm,0.5s						
MK31	**Makanchi Array**	**3.28**	**320**	⇓Pn	Pn	04 48 24.9	+3.2
	comp=E,4.1nm,0.4s,baz=129,slow=16,SNR=236						
MK31				⇑Lg		04 49 15.5	
	comp=E,10nm,0.6s,baz=127,slow=29,SNR=4.0						
KURBB	**Kurchatov Arra**	**7.81**	**326**	⇑Pn	Pn	04 49 26.1	+2.2
	comp=E,0.2nm,0.4s,baz=133,slow=12						
KURBB				⇑Sn	Sn	04 50 54.4	+2.6
	comp=E,0.6nm,0.6s,baz=345,slow=26						
KURBB				⇓Lg		04 51 36.3	
	comp=E,3.4nm,0.7s,baz=237,slow=31						
KURK	**Kurchatov**	**7.85**	**327**	⇑Pn	Pn	04 49 26.4	+2.0
	comp=E,1.8nm,0.8s						
KURK				⇓Sn	Sn	04 50 55.2	+2.5
	comp=E,2.2nm,0.7s						
KURK				⇑Lg		04 51 36.7	
	comp=E,11nm,0.7s						

GCG ***27*** *04:48:43.3, 14.37N×90.25W, h0km, MD3.6*

CASC 27 04:48:44.6±2.3, 14.34N×90.23W, h8km±13km, MD3.2, 1C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.27**	**234**	⇓*i*P	Pg	04 48 50.1	+0.1
NBG	**Las Nubes**	**0.28**	**336**	*e*P	Pg	04 48 49.9	-0.2
NBG				*e*S	Sg	04 48 56.8	+3.0
PCG	**Pacaya**	**0.37**	**279**	*e*P	Pg	04 48 51.7	-0.1
PCG				*e*S	Sg	04 49 00.1	+3.3
FUG	**Fuego 3**	**0.60**	**281**	⇑*e*P	Pg	04 48 55.6	-0.6
FG6		**0.67**	**290**	*e*P	Pg	04 48 57.1	-0.4
MRL	**Marmol**	**0.90**	**36**	*e*P	Pg	04 49 01.9	0.0
MRL				*e*S	Sg	04 49 14.5	+1.0
JAT	**Jato**	**1.36**	**269**	*e*P	Pn	04 49 10.4	+0.4

IDC 27 05:01:51.8±1.5, 25.64S×69.75W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.6/2, Error ellipse: s-maj=69.3km s-min=41.9km az=23.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**63.62**	**327**	P	P	05 12 25.4	+0.7
	0.2nm,0.9s,baz=145,slow=11,SNR=2.7						
TORD	**Torodi Ar. Bea**	**79.48**	**70**	P	P	05 14 01.7	+1.0
	0.7nm,0.5s,baz=257,slow=5.4,SNR=18						
WRA	**Warramunga Arr**	**129.00**	**210**	PKP	PKPdf	05 21 02.6	+0.2
	0.3nm,0.7s,baz=158,slow=1.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**145.99**	**27**	PKPbc	PKPbc	05 21 31.4	-1.8
	0.7nm,0.4s,baz=298,slow=3.1,SNR=4.2						
MKAR	**Makanchi Array**	**149.37**	**39**	PKPbc	PKPbc	05 21 40.6	-2.0
	1.1nm,0.7s,baz=324,slow=2.4,SNR=13						

MAN 27 05:03:11, 13.07N×124.54E, h11km, mb4.2, ML3.0, MS2.7, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.57**	**167**	*e*P	Pg	05 03 22.6	+0.4
CNP				*e*S	Sg	05 03 31.1	+1.3
PVCP	**Virac**	**0.64**	**325**	*e*P	Pg	05 03 23.7	+0.3
BESP	**Borongan**	**1.71**	**149**	*e*P	Pn	05 03 41.0	+0.3
BESP				*e*S	Sn	05 04 03.0	+0.4
PLP	**Palo**	**1.94**	**167**	⇑*e*P	Pn	05 03 43.6	-0.3
PLP				*i* S	Sn	05 04 09.8	+1.4
RCP	**Roxas**	**2.31**	**230**	⇑*e*P	Sn	05 04 17.3	-0.1

FUNV 27 05:16:27.9, 6.69N×73.23W, h161km, MW3.5, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.48**	**38**	⇓*i*P	Pn	05 16 58.1	0.0
CAPV				*e*S	Sn	05 17 19.4	-1.8
VIGV	**El Vigia**	**2.82**	**41**	⇓*e*P	Pn	05 17 12.5	-1.0
VIGV				*e*S	Sn	05 17 44.6	-4.2
SOCV	**Socops**	**2.83**	**56**	⇓*e*P	Pn	05 17 12.8	-0.9
SOCV				*e*S	Sn	05 17 44.7	-4.3
ELOV	**Elorza**	**3.73**	**85**	*e*P	Pn	05 17 24.4	-0.6
VIRV	**Villa del Rosa**	**3.87**	**12**	*e*P	Pn	05 17 25.1	-1.7
VIRV				*e*S	Sn	05 18 07.8	-4.9
QARV	**Quebrada Arrib**	**4.40**	**37**	*e*P	Pn	05 17 32.6	-1.0
QARV				*e*S	Sn	05 18 20.3	-4.6
SANV	**Sanarito**	**4.60**	**52**	*e*P	Pn	05 17 35.6	-0.6
SANV				*e*S	Sn	05 18 24.9	-4.7
CURV	**Curarigua**	**4.62**	**44**	*e*P	Pn	05 17 35.2	-1.3
CURV				*e*S	Sn	05 18 25.2	-4.9
TEPV	**Terepaima**	**5.15**	**51**	*e*P	Pn	05 17 40.8	-2.7
SIQV	**Siquisique**	**5.18**	**40**	*e*P	Pn	05 17 41.8	-2.1
BAUV	**El Baul**	**5.60**	**66**	*e*P	Pn	05 17 47.1	-2.3
MONV	**Montecano**	**6.14**	**31**	*e*P	Pn	05 17 54.5	-2.1
TURV	**Turiamo**	**6.50**	**55**	*e*P	Pn	05 17 58.6	-2.8
CAOV	**Caicara del Or**	**6.88**	**84**	*e*P	Pn	05 18 03.7	-2.8

ISCJB ***27*** *05:20:47.3±0.4, 61.43N±0.004×150.17W±0.007, h53km±7km, Error ellipse: s-maj=6.0km s-min=5.9km az=173.1*
NEIC ***27*** *05:20:49.1, 61.47N×150.10W, h30km, ML3.4(AEIC), After AEIC.*
NEIC Felt [III] at Wasilla. Also felt at Anchorage and Eagle River.
IDC ***27*** *05:20:51.4±4.0, 60.71N×148.31W, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.4/23, mbtmp3.3/4, ML3.4/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/27, Error ellipse: s-maj=98.9km s-min=17.5km az=145.0*

ISC 27 05:20:48.5±0.4, 61.43N±0.003×150.14W±0.007, h42km±9km, n30, σ0°89/34, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIB	**Fire Island**	**0.26**	**183**	P	**Pn**	**05 20 57.6**	**+1.2**
RC01	**Rabbit Creek A**	**0.39**	**150**	P	**Pn**	**05 20 57.5**	**-0.3**
PMR	**Palmer**	**0.51**	**71**	P	**Pn**	**05 20 58.0**	**-1.4**
PMR				S	**Sn**	**05 21 06.1**	**-1.0**
GHO	**Glory Hole Cre**	**0.68**	**59**	P	**Pn**	**05 21 00.5**	**-1.2**
KNK	**Knik Glacier**	**0.81**	**90**	P	**Pn**	**05 21 02.9**	**-0.6**
SKT	**Skwentna**	**0.86**	**311**	P	**Pn**	**05 21 03.2**	**-0.9**
SKT				S	**Sn**	**05 21 15.2**	**-0.4**
SLKM	**Skilak Lake**	**0.92**	**182**	P	**Pn**	**05 21 04.9**	**0.0**
SML	**Sawmill**	**0.95**	**65**	P	**Pn**	**05 21 04.1**	**-1.2**
SML				S	**Sn**	**05 21 17.7**	**+0.2**
SEW	**Seward**	**1.37**	**165**	P	**Pn**	**05 21 11.1**	**0.0**
PPLA	**Purkeypile**	**1.76**	**328**	P	**Pn**	**05 21 16.2**	**-0.2**
TRF	**Thorofare Moun**	**2.03**	**358**	P	**Pn**	**05 21 19.9**	**-0.3**
KTH	**Kantishna Hill**	**2.17**	**351**	P	**Pn**	**05 21 22.0**	**0.0**
EYAK	**Cordova Ski Ar**	**2.32**	**110**	P	**Pn**	**05 21 25.6**	**+1.6**
MCK	**McKinley**	**2.38**	**13**	P	**Pn**	**05 21 25.3**	**+0.3**
SVW2	**Sparrevohn**	**2.65**	**265**	P	**Pn**	**05 21 28.8**	**+0.3**
CHUM	**Lake Minchumin**	**2.66**	**339**	*e*Pn	**Pn**	**05 21 28.7**	**-0.1**
PAX	**Paxson**	**2.68**	**53**	P	**Pn**	**05 21 29.7**	**+0.6**
BPAW	**Bear Paw Mtn.**	**2.71**	**352**	P	**Pn**	**05 21 29.2**	**-0.2**
MENT	**Mentasta**	**3.37**	**60**	Pn	**Pn**	**05 21 40.7**	**+2.2**
MENT				Sn	**Sn**	**05 22 25.2**	**+8.0**
DOT	**Dot Lake**	**3.59**	**49**	P	**Pn**	**05 21 42.7**	**+1.2**
COLA	**College**	**3.61**	**16**	P	**Pn**	**05 21 41.7**	**-0.1**
KDAK	**Kodiak Island**	**3.86**	**200**	Pn	**Pn**	**05 21 46.4**	**+1.2**
	3.2nm,0.3s,baz=173,slow=23,SNR=20						
KDAK				Sn	**Sn**	**05 22 28.0**	**-1.2**
	3.1nm,0.3s,baz=319,slow=20,SNR=2.6						
EGAK	**Eagle**	**5.29**	**47**	*e*Pn	**Pn**	**05 22 06.3**	**+1.6**
	27nm,0.6s						
DAWY	**Dawson**	**5.61**	**57**	P	**Pn**	**05 22 09.7**	**+0.5**
COLD	**Coldfoot**	**5.83**	**360**	P	**Pn**	**05 22 12.4**	**+0.3**
TNA	**Tin City**	**8.95**	**305**	P	**Pn**	**05 22 55.5**	**+0.5**
YKA	**Yellowknife Ar**	**16.62**	**71**	Pn	**Pn**	**05 24 36.2**	**-1.7**
	0.1nm,0.3s,baz=278,slow=9.9,SNR=22						
PDAR	**Pinedale Array**	**30.45**	**109**	P	**P**	**05 26 56.5**	**-0.2**
	0.4nm,0.5s,baz=327,slow=4.9,SNR=6.0						
TXAR	**Lajitas Array**	**44.24**	**115**	P	**P**	**05 28 52.9**	**-0.4**
	0.1nm,0.6s,baz=326,slow=4.7,SNR=2.5						
BORG	**Borgarnes**	**48.49**	**27**	LR	LR	05 50 04.6	
	comp=Z,73nm,19.7s,baz=161,slow=36						

IDC ***27*** *05:28:23.2±2.0, 52.31N×168.46W, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.8/28, mbtmp3.8/10, Error ellipse: s-maj=56.1km s-min=20.0km az=10.0*
ISCJB ***27*** *05:28:25.1±0.8, 52.07N±0.007×168.50W±0.1, h33km, mb3.8/9, Error ellipse: s-maj=12.8km s-min=9.9km az=174.9*
NEIC ***27*** *05:28:25.2, 52.15N×168.17W, h14km, ML3.5(AEIC), After AEIC.*

ISC 27 05:28:27.8±0.8, 52.18N±0.007×168.47W±0.01, h35km, n15, σ0°90/17, mb3.8/9, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.84**	**340**	P	**Pn**	**05 28 42.2**	**-1.0**
NIKO				S	**Sn**	**05 28 54.4**	**+0.1**
OKFG	**Magazine Ridge**	**1.26**	**13**	P	**Pn**	**05 28 48.6**	**-0.3**
OKFG				S	**Sn**	**05 29 06.1**	**+1.6**
UNV	**Unalaska Valle**	**2.01**	**33**	*e*Pn	**Pn**	**05 28 57.9**	**-1.2**
KDAK	**Kodiak Island**	**10.65**	**52**	Pn	**Pn**	**05 30 55.9**	**-1.8**
	0.6nm,0.3s,baz=124,slow=7.3,SNR=7.9						
PETK	**Petropavlovsk-**	**20.50**	**286**	P	**P**	**05 33 02.7**	**+0.2**
	4.6nm,0.5s,baz=84,slow=14,SNR=14						
PETK	**Petropavlovsk-**	**20.50**	**286**	P	**P**	**05 33 02.7**	**+0.2**
YKA	**Yellowknife Ar**	**29.90**	**49**	P	**P**	**05 34 32.4**	**+0.6**
	0.2nm,0.5s,mb3.1,baz=276,slow=7.7,SNR=9.5						
PDAR	**Pinedale Array**	**39.83**	**80**	P	**P**	**05 35 59.1**	**+1.7**
	0.2nm,0.4s,mb3.2,baz=281,slow=7.2,SNR=2.3						
TXAR	**Lajitas Array**	**52.14**	**90**	P	**P**	**05 37 34.6**	**+0.2**
	0.5nm,1.1s,mb3.4,baz=187,slow=2.0,SNR=3.5						
ARCES	**ARCESS Array B**	**58.17**	**354**	P	**P**	**05 38 16.7**	**-0.7**
	2.4nm,0.9s,mb4.2,baz=7.8,slow=7.3,SNR=2.9						
KURK	**Kurchatov**	**62.92**	**319**	P	**P**	**05 38 50.7**	**+0.6**
	0.5nm,0.4s,mb4.0,baz=45,slow=7.5,SNR=3.2						
BVAR	**Borovoye Array**	**64.21**	**325**	P	**P**	**05 38 58.5**	**0.0**
	0.8nm,0.5s,mb4.0,baz=48,slow=8.2,SNR=5.4						
MKAR	**Makanchi Array**	**64.38**	**314**	P	**P**	**05 38 59.4**	**-0.3**
	0.6nm,0.7s,mb3.7,baz=56,slow=7.4,SNR=6.1						
NOA	**NORSAR Array B**	**67.13**	**0**	P	**P**	**05 39 18.0**	**+0.8**
	1.1nm,0.9s,mb3.9,baz=244,slow=13,SNR=2.5						
HFS	**Hagfors**	**68.03**	**359**	P	**P**	**05 39 22.5**	**-0.4**
	3.0nm,0.7s,mb4.5,baz=53,slow=5.7,SNR=8.2						

MDD ***27*** *05:29:38.4±1.4, 37.18N×139.3W, h30km, mb3.8/10, Error ellipse: s-maj=17.9km s-min=11.4km az=144.0, PRXIMO*
NEIC ***27*** *05:29:39.7, 37.42N×136.4W, h0km, MG3.8(MDD), After MDD.*
CSEM ***27*** *05:29:40.2±0.2, 37.26N×137.2W, h10km, ML3.2/9, Error ellipse: s-maj=3.8km s-min=3.3km az=133.0*
INMG ***27*** *05:29:40.9±1.7, 37.16N×140.2W, h10km, ML2.4, Error ellipse: s-maj=7.0km s-min=3.7km az=128.0*

ISC 27 05:29:43.0±1.0, 37.49N±0.005×133.4W±0.006, h10km, n46, σ0°72/84, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**3.51**	**64**	*e*Pn	**Pn**	**05 30 37.9**	**+0.3**
PMAFR				*e*Sn	**Sn**	**05 31 21.4**	**+2.2**
PMAFR				A		05 31 23.3	
	12nm,0.7s						
PMAFR	**Mafra**	**3.51**	**64**	*e*Pn	**Pn**	**05 30 37.9**	**+0.3**
PMAFR				*e*Sn	**Sn**	**05 31 21.4**	**+2.2**
	12nm,0.7s						
PTEO	**Sao Teotonio**	**3.67**	**88**	*e*Pn	**Pn**	**05 30 39.2**	**-0.5**
PTEO				*e*Sn	**Sn**	**05 31 22.8**	**-0.2**
PTEO				A		05 31 23.1	
	5.7nm,1.0s						
PTEO	**Sao Teotonio**	**3.67**	**88**	*e*Pn	**Pn**	**05 30 39.2**	**-0.5**
PTEO				*e*Sn	**Sn**	**05 31 22.8**	**-0.2**
	5.7nm,1.0s						
MORF	**Marmelete**	**3.74**	**91**	*e*Pn	**Pn**	**05 30 40.2**	**-0.5**
MORF				*e*Sn	**Sn**	**05 31 24.4**	**-0.3**
MORF				A		05 31 31.7	
	6.9nm,0.3s						
MORF	**Marmelete**	**3.74**	**91**	*e*Pn	**Pn**	**05 30 40.2**	**-0.5**
MORF				*e*Sn	**Sn**	**05 31 24.4**	**-0.3**
	6.9nm,0.3s						
MOE	**Montemor**	**4.07**	**74**	*e*Pn	**Pn**	**05 30 46.1**	**+0.8**
MOE				*e*Sn	**Sn**	**05 31 34.0**	**+1.0**
PBDV	**Barranco-do-Ve**	**4.31**	**92**	*e*Pn	**Pn**	**05 30 48.6**	**0.0**
PBDV				*e*Sn	**Sn**	**05 31 38.0**	**-0.9**
PBDV				A		05 31 43.7	
	4.1nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.31**	**92**	*e*Pn	**Pn**	**05 30 48.6**	**0.0**
PBDV				*e*Sn	**Sn**	**05 31 38.0**	**-0.9**
	4.1nm,0.4s						
EVO	**Evora**	**4.33**	**74**	*e*Pn	**Pn**	**05 30 48.9**	**+0.1**
EVO				*e*Sn	**Sn**	**05 31 40.0**	**+0.6**
EVO				A		05 31 42.5	
	8.5nm,0.3s						
EVO	**Evora**	**4.33**	**74**	*e*Pn	**Pn**	**05 30 48.9**	**+0.1**
EVO				*e*Sn	**Sn**	**05 31 40.0**	**+0.6**
	8.5nm,0.3s						
PBEJ	**Beja**	**4.37**	**81**	*e*Sn	**Sn**	**05 31 41.0**	**+0.7**
PVAQ	**Vaqueiros**	**4.47**	**89**	*e*Pn	**Pn**	**05 30 50.5**	**-0.3**
PVAQ				*e*Sn	**Sn**	**05 31 42.7**	**-0.2**
PVAQ				A		05 31 47.8	
	4.0nm,0.3s						
PVAQ	**Vaqueiros**	**4.47**	**89**	*e*Pn	**Pn**	**05 30 50.5**	**-0.3**
PVAQ				*e*Sn	**Sn**	**05 31 42.7**	**-0.2**
	4.0nm,0.3s						
EGRO	**El Granado**	**4.65**	**88**	P	**Pn**	**05 30 52.8**	**-0.5**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**05 31 47.1**	**-0.2**
	2.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.65**	**88**	P	**Pn**	**05 30 52.8**	**-0.4**
	0.5nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**05 31 47.1**	**-0.2**
	2.7nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**4.73**	**71**	*e*Pn	**Pn**	**05 30 54.5**	**+0.2**
PESTR				*e*Sn	**Sn**	**05 31 49.7**	**+0.4**
PESTR				A		05 31 53.8	
	1.9nm,0.2s						
PESTR	**Estremoz**	**4.73**	**71**	*e*Pn	**Pn**	**05 30 54.5**	**+0.2**
PESTR				*e*Sn	**Sn**	**05 31 49.7**	**+0.4**
	1.9nm,0.2s						
PBAR	**Barrancos**	**5.03**	**80**	*e*Pn	**Pn**	**05 30 58.8**	**+0.3**
PBAR				*e*Sn	**Sn**	**05 31 56.7**	**0.0**
PMRV	**Marv??o**	**5.05**	**66**	*e*Pn	**Pn**	**05 30 58.8**	**+0.1**
PMRV				*e*Sn	**Sn**	**05 31 57.8**	**+0.7**
PMRV				A		05 32 01.4	
	3.3nm,0.4s						
PMRV	**Marv??o**	**5.05**	**66**	*e*Pn	**Pn**	**05 30 58.8**	**+0.1**
PMRV				*e*Sn	**Sn**	**05 31 57.8**	**+0.7**
	3.3nm,0.4s						
EBAD	**Badajoz**	**5.14**	**74**	P	**Pn**	**05 30 59.4**	**-0.6**
	0.4nm,0.0s,SNR=7.9						
EBAD				S	**Sn**	**05 31 58.8**	**-0.6**
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.14**	**74**	P	**Pn**	**05 30 59.4**	**-0.6**
	0.4nm,0.0s,SNR=7.9						
EBAD				S	**Sn**	**05 31 58.8**	**-0.6**
	0.5nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**5.15**	**61**	*e*Pn	**Pn**	**05 31 00.1**	**0.0**
PCBR				*e*Sn	**Sn**	**05 32 00.3**	**+0.7**
EMIN	**Mina Concepcio**	**5.30**	**85**	P	**Pn**	**05 31 02.2**	**+0.1**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**05 32 02.3**	**-0.9**
	0.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.30**	**85**	P	**Pn**	**05 31 02.2**	**0.0**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**05 32 02.3**	**-0.8**
	0.9nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**5.32**	**51**	*e*Sn	**Sn**	**05 32 04.8**	**+1.1**
MTE	**Manteigas**	**5.37**	**55**	*e*Pn	**Pn**	**05 31 03.1**	**0.0**
MTE				*e*Sn	**Sn**	**05 32 06.0**	**+1.0**
PVRL	**Vila Real**	**5.77**	**47**	*e*Sn	**Sn**	**05 32 14.6**	**-0.1**
PVRL				A		05 32 16.0	
	2.6nm,0.3s						
PVRL	**Vila Real**	**5.77**	**47**	*e*Sn	**Sn**	**05 32 14.6**	**-0.1**
	2.6nm,0.3s						
PCAB	**Cabril**	**5.88**	**43**	*e*Sn	**Sn**	**05 32 16.4**	**-1.1**
ELOB	**Lobios**	**5.97**	**41**	P	**Pn**	**05 31 12.1**	**+0.7**
	0.2nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**05 32 16.7**	**-3.1**
	0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.97**	**41**	P	**Pn**	**05 31 12.1**	**+0.8**
	0.2nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**05 32 16.7**	**-3.1**
	0.6nm,0.1s,SNR=7.9						
ESPR	**Espera**	**6.00**	**94**	P	**Pn**	**05 31 12.7**	**+0.9**
	0.8nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**05 32 21.2**	**+0.6**
	5.2nm,0.3s,SNR=7.9						
ESPR	**Espera**	**6.00**	**94**	P	**Pn**	**05 31 12.7**	**+0.9**
	0.8nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**05 32 21.2**	**+0.6**
	5.2nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**6.11**	**51**	*e*Pn	**Pn**	**05 31 13.5**	**+0.2**
MVO				*e*Sn	**Sn**	**05 32 22.9**	**-0.4**
EMAZ	**Mazaricos**	**6.39**	**30**	P	**Pn**	**05 31 16.9**	**-0.2**
	0.3nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**05 32 25.8**	**-4.4**
	0.1nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.39**	**30**	P	**Pn**	**05 31 16.9**	**-0.3**
	0.3nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**05 32 25.8**	**-4.4**
	0.1nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.67**	**48**	*e*Sn	**Sn**	**05 32 36.4**	**-0.5**
ECAL	**Calabor**	**6.76**	**47**	P	**Pn**	**05 31 22.4**	**+0.3**
	0.3nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**05 32 38.6**	**-0.5**
	0.4nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.76**	**47**	P	**Pn**	**05 31 22.4**	**+0.3**
	0.3nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**05 32 38.6**	**-0.5**
	0.4nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.97**	**82**	P	**Pn**	**05 31 24.3**	**-0.7**
	0.4nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**05 32 43.7**	**-0.6**
	0.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.97**	**82**	P	**Pn**	**05 31 24.3**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**05 32 43.7**	**-0.7**
	0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.66**	**71**	P	**Pn**	**05 31 34.3**	**-0.2**
	0.2nm,0.1s,baz=255,slow=13,SNR=8.6						
ESDC	**Sonseca Array**	**7.66**	**71**	P	**

TKM2 Tokmak 2 68.99 318 *eP* **P 05 41 36.6 +0.7**
comp=Z,3.4nm,0.8s,mb4.3
ZAA0 Zalesovo Array 69.26 332 *eP* **P 05 41 36.2 -1.2**
ZALV Zalesovo Beam 69.26 332 P **P 05 41 36.0 -1.4**
comp=Z,2.5nm,0.6s,mb4.3,baz=112,slow=6.6,SNR=9.7
AML Almayashu 69.96 317 *eP* **P 05 41 43.0 +1.0**
comp=Z,7.0nm,0.8s,mb4.6
KURK Kurchatov 70.69 326 P **P 05 41 45.7 -0.6**
comp=Z,4.4nm,0.7s,mb4.5,baz=119,slow=3.7,SNR=14
KURK LR LR 06 16 49.5
comp=Z,30nm,18.0s,MS3.6,baz=110,slow=39
KURK Kurchatov 70.69 326 P **P 05 41 45.7 -0.6**
KURK LR LR 06 16 49.5
UNV Unalaska Valle 74.61 32 *eP* **P 05 42 11.3 +1.8**
BRVK Borovoye 76.36 326 *eP* **P 05 42 19.1 -0.4**
comp=Z,5.1nm,0.8s,mb4.5
VNDA Vanda 76.56 174 P **P 05 42 19.9 -0.3**
comp=Z,1.2nm,0.7s,mb3.9,baz=337,slow=3.8,SNR=5.5
VNDA LR LR 06 14 21.5
comp=Z,197nm,18.6s,MS4.5,baz=348,slow=34
VNDA Vanda 76.56 174 P **P 05 42 19.9 -0.3**
VNDA LR LR 06 14 21.5
MAW Mawson 80.59 202 LR LR 06 14 46.0
comp=Z,116nm,19.5s,MS4.2,baz=216,slow=33
QSPA South Pole Qui 87.55 180 P **P 05 43 17.4 -0.3**
comp=Z,1.5nm,0.8s,mb4.3,baz=61,slow=5.4,SNR=5.2
QSPA LR LR 06 22 35.7
comp=Z,213nm,18.9s,MS4.6,baz=9.4,slow=36
ARCES ARCESS Array B 98.58 340 P **P 05 44 07.6 -1.1**
comp=Z,2.6nm,1.0s,mb4.7,baz=7.3,slow=22,SNR=2.2
TORD Torodi Ar. Bea 131.45 285 PKP PKPdf 05 49 43.1 -0.5
comp=Z,0.5nm,0.8s,baz=270,slow=0.9,SNR=3.1

DJA ***27*** *05:35:54,474S×14793E,h252km,Mw5.4/4*
MOS ***27*** *05:35:58.2±1.1,533S×14707E,h185km,mb4.6/6,Error ellipse: s-maj=14.8km s-min=8.5km az=90.3*
ISCJB ***27*** *05:35:59.4±0.2,544S±003×14708E±005,h195km, mb4.4/43,Error ellipse: s-maj=7.3km s-min=4.4km az=8.8*
IDC ***27*** *05:36:00.1±0.5,538S×14702E,h195km±4km,mb4.2/19, mb1 4.3/23,mb1mx4.3/24,mbtmp4.3/23,MS3.9/2, Ms1 3.9/2,ms1mx3.1/24,Error ellipse: s-maj=11.9km s-min=7.5km az=88.0*
NEIC ***27*** *05:36:00.5±0.2,540S×14704E,mb4.9/18,Error ellipse: s-maj=8.1km s-min=4.9km az=97.0*
BJI ***27*** *05:36:00.4,540S×14700E,h194km,mB4.9,mb4.5*
ISC 27 05:36:01.2±0.2,549S±003×14703E±005,h197km, h197km±2.1km:pP-P,n116,σ1s15/106,mb4.4/43,4C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**3.90**	**178**	P		**Pn**	**05 37 00.2**	**-1.3**
	265nm,0.3s,baz=13,slow=5.5,SNR=390							
PMG				S		**Sn**	**05 37 43.3**	**-5.8**
	68nm,0.3s,baz=26,slow=8.1,SNR=5.6							
PMG	**Port Moresby**	**3.90**	**178**	*e*Pn		**Pn**	**05 37 00.3**	**-1.3**
PMG				*e*Sn		**Sn**	**05 37 42.7**	**-6.4**
COEN	**Coen**	**9.23**	**204**	*e*Pn		**Pn**	**05 38 11.7**	**+1.1**
	266nm,0.8s							
COEN				*e*Sn		**Sn**	**05 39 51.6**	**-2.3**
HNR	**Honiara**	**13.39**	**108**	P		**Pn**	**05 39 02.0**	**-1.8**
	12nm,0.3s,baz=219,slow=14,SNR=7.8							
HNR				S		**Sn**	**05 41 34.2**	**+0.9**
	16nm,0.3s,baz=129,slow=7.5,SNR=2.2							
HNR	**Honiara**	**13.39**	**108**	*e*P		**Pn**	**05 39 02.4**	**-1.3**
HNR				pmax		pmax		
	comp=Z,367nm,0.9s							
HNR	**Honiara**	**13.39**	**108**	*e*Pn		**Pn**	**05 39 02.4**	**-1.4**
	comp=Z,367nm,0.9s							
HNR				*e*S		**Sn**	**05 41 43.2**	**+10**
CTA	**Charters Tower**	**14.53**	**183**	P		**Pn**	**05 39 18.8**	**+1.0**
	comp=Z,3.1nm,0.3s,baz=3.2,slow=13,SNR=28							
CTA				S		**Sn**	**05 41 59.6**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=294,slow=13,SNR=2.1							
CTA				LR		LR	05 44 40.5	
	comp=Z,612nm,20.9s,baz=83,slow=36							
CTA	**Charters Tower**	**14.53**	**183**	P		**Pn**	**05 39 18.8**	**+1.0**
CTA				S		**Sn**	**05 41 59.7**	**-0.7**
CTA	**Charters Tower**	**14.53**	**183**	*e*P		**Pn**	**05 39 19.4**	**+1.6**
	comp=Z,18nm,0.6s							
CTA	**Charters Tower**	**14.53**	**183**	P		**Pn**	**05 39 18.8**	**+1.0**
CTA				S		**Sn**	**05 41 59.6**	**-0.7**
CTA				LR		LR	05 44 40.5	
CTAO	**Charters Tower**	**14.53**	**183**	*e*P		**Pn**	**05 39 19.5**	**+1.7**
WRAB	**Tennant Creek**	**18.93**	**220**	*e*P		**P**	**05 40 08.0**	**+0.7**
WRAB				pmax		pmax		
	comp=Z,295nm,1.1s							
WRAB	**Tennant Creek**	**18.93**	**220**	*e*P		**P**	**05 40 08.0**	**+0.7**
	comp=Z,295nm,1.1s							
WB2	**Warramunga Arr**	**18.94**	**220**	*e*P		**P**	**05 40 08.1**	**+0.7**
WB2				*e*S		**S**	**05 43 30.4**	**-1.7**
WB2				*e*			05 43 39.8	
WRA	**Warramunga Arr**	**18.94**	**220**	P		**P**	**05 40 07.8**	**+0.3**
	comp=Z,47nm,0.3s,baz=38,slow=12,SNR=208							
WRA				S		**S**	**05 43 30.7**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=41,slow=19,SNR=25							
GUMO	**Guam**	**19.07**	**354**	P		**P**	**05 40 07.7**	**-1.3**
	comp=Z,4.7nm,0.3s,baz=180,slow=19,SNR=1.9							
EIDS	**Eidsvold**	**20.15**	**169**	*e*P		**P**	**05 40 21.2**	**+0.9**
	comp=Z,48nm,0.8s							
ASAR	**Alice Springs**	**22.06**	**214**	P		**P**	**05 40 41.2**	**+1.0**
	comp=Z,84nm,0.4s,mb5.6,baz=43,slow=8.7,SNR=510							
ASAR				S		**S**	**05 44 30.1**	**+1.0**
	comp=Z,37nm,0.9s,baz=31,slow=18,SNR=18							
FITZ	**Fitzroy Crossi**	**24.37**	**237**	*e*P		**P**	**05 41 01.0**	**-0.3**
	comp=Z,234nm,0.8s,mb5.9							
FITZ				*e*S		**S**	**05 45 10.9**	**+4.6**
FITZ	**Fitzroy Crossi**	**24.37**	**237**	*e*P		**P**	**05 41 01.2**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.4							
DZM	**Mont Dzumac**	**24.99**	**133**	*e*P		**P**	**05 41 05.9**	**-1.0**
ARMA	**Armidale**	**25.17**	**171**	*e*P		**P**	**05 41 09.6**	**+1.1**
STKA	**Stephens Creek**	**26.74**	**190**	P		**P**	**05 41 23.8**	**+1.3**
	comp=Z,2.3nm,0.3s,mb4.2,baz=5.1,slow=8.2,SNR=15							
STKA	**Stephens Creek**	**26.74**	**190**	*e*P		**P**	**05 41 23.1**	**+0.5**
	comp=Z,15nm,0.8s,mb4.7							
MBWA	**Marble Bar**	**30.71**	**237**	*e*P		**P**	**05 41 57.9**	**+0.1**
	comp=Z,22nm,0.6s,mb5.0							
FORT	**Forrest**	**30.84**	**213**	*e*P		**P**	**05 41 59.1**	**+0.3**
	comp=Z,25nm,0.5s,mb5.1							
FORT	**Forrest**	**30.84**	**213**	*e*P		**P**	**05 41 59.0**	**+0.2**
	comp=Z,42nm,0.7s,mb5.2							
TOO	**Toolangi**	**31.96**	**182**	*e*P		**P**	**05 42 09.5**	**+0.9**
KMBL	**Kambalda**	**34.91**	**219**	*e*P		**P**	**05 42 34.3**	**+0.1**
	comp=Z,59nm,0.7s,mb5.2							
MORW	**Morawa**	**37.53**	**228**	*e*P		**P**	**05 42 56.3**	**-0.1**
	comp=Z,11nm,0.9s,mb4.4							
NWAO	**Narrogin (SRO)**	**38.93**	**222**	P		**P**	**05 43 07.6**	**-0.4**
	comp=Z,5.4nm,0.7s,mb4.2,baz=273,slow=23,SNR=14							
NWAO	**Narrogin (SRO)**	**38.93**	**222**	*e*P		**P**	**05 43 08.3**	**+0.3**
NWAO				pmax		pmax		
	comp=Z,236nm,2.6s							
NWAO	**Narrogin (SRO)**	**38.93**	**222**	*e*P		**P**	**05 43 08.2**	**+0.3**
	comp=Z,236nm,2.6s,mb5.3							
MUN	**Mundaring**	**39.05**	**224**	*e*P		**P**	**05 43 09.1**	**+0.1**
AFI	**Afiamalu**	**41.40**	**105**	P		**P**	**05 43 27.7**	**-0.9**
	comp=Z,37nm,0.7s,mb4.9,baz=152,slow=2.9,SNR=7.3							
AFI	**Afiamalu**	**41.40**	**105**	*e*P		**P**	**05 43 27.9**	**-0.6**
AFI				pmax		pmax		
	comp=Z,24nm,0.7s,mb4.7							
AFI	**Afiamalu**	**41.40**	**105**	*e*P		**P**	**05 43 27.9**	**-0.6**
	comp=Z,24nm,0.7s,mb4.7							
URZ	**Urewera**	**42.55**	**144**	P		**P**	**05 43 37.5**	**0.0**
	comp=Z,11nm,0.4s,mb4.6,baz=299,slow=4.9,SNR=10							
MJAR	**Matsushiro Arr**	**42.62**	**349**	P		**P**	**05 43 35.5**	**-2.5**
	comp=Z,0.8nm,0.3s,mb3.6,baz=71,slow=21,SNR=2.9							
MJAR				pP		pP	05 44 18.5	-1.9
	comp=Z,5.4nm,1.0s,baz=170,slow=8.8,SNR=4.7							
MJAR	**Matsushiro Arr**	**42.62**	**349**	P		**P**	**05 43 35.5**	**-2.5**
MJAR				pP		pP	05 44 18.5	-1.9
MAJO	**Matsushiro**	**42.62**	**349**	*e*P		**P**	**05 43 38.5**	**+0.5**
MAJO				*e**PP		pP	05 44 21.4	+1.0
MAJO				pmax		pmax		
	comp=Z,33nm,1.4s,mb4.6							
MAJO	**Matsushiro**	**42.62**	**349**	*e*P		**P**	**05 43 38.5**	**+0.5**
	comp=Z,33nm,1.4s,mb4.6							
MAJO				*e*pP		pP	05 44 21.4	+1.0
RPZ	**Rata Peaks**	**43.55**	**155**	P		**P**	**05 43 45.8**	**+0.4**
	comp=Z,40nm,0.8s,mb4.8,baz=46,slow=7.1,SNR=8.5							
KSRS	**Korea Array**	**46.29**	**339**	P		**P**	**05 44 05.8**	**-1.3**
	comp=Z,0.9nm,0.4s,mb3.4,baz=164,slow=8.7,SNR=6.2							
KSRS				pP		pP	05 44 48.5	-1.6
	comp=Z,12nm,1.0s,baz=156,slow=9.4,SNR=13							
KSRS				LR		LR	06 00 09.6	
	comp=Z,113nm,22.0s,baz=261,slow=31							
GYA	**Guiyang**	**50.37**	**311**	*e*P		**P**	**05 44 41.3**	**+2.8**
GYA				AP		pP	05 45 26.3	+4.1
GYA				XP		sP	05 45 48.8	+4.7
GYA				PCP		PcP	05 45 56.0	+1.9
GYA				PP		PP	05 46 40.5	+4.4
GYA				SCP		ScP	05 49 31.5	+0.2
GYA				PCS		PcS	05 49 52.0	+0.3
GYA				S		**S**	**05 51 36.8**	**+0.4**
GYA				XS		sS	05 52 56.0	+3.1
GYA				SCS		ScS	05 54 07.3	-1.9
GYA				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.2							
GYA				AMB		AMB		
	comp=Z,110nm,4.8s							
KMI	**Kunming**	**52.71**	**307**	P		**P**	**05 44 57.8**	**+2.0**
KMI				AMB		AMB		
	comp=Z,12nm,1.3s,mb4.2							
CN2	**Changchun**	**52.79**	**340**	*e*P		**P**	**05 45 00.0**	**+4.0**
CN2				*e*AP		pP	05 45 46.0	+5.8
CN2				*e*S		**S**	**05 52 13.3**	**+4.4**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.3							
CN2				AMB		AMB		
	comp=Z,200nm,3.0s							
CMAR	**Chiang Mai Arr**	**53.04**	**298**	P		**P**	**05 44 58.3**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.5,baz=115,slow=6.5,SNR=5.3							
CMAR				pP		pP	05 45 39.3	-3.2
	comp=Z,3.0nm,0.8s,baz=121,slow=5.7,SNR=4.3							
XAN	**Xi'an**	**53.31**	**320**	P		**P**	**05 44 58.0**	**-2.0**
XAN				AP		pP	05 45 44.0	-0.2
XAN				PP		PP	05 47 04.0	+1.5
XAN				S		**S**	**05 52 19.5**	**+3.2**
XAN				AMB		AMB		
	comp=Z,5.0nm,0.7s,mb4.0							
XAN				LR		LR		
	comp=E,44nm,28.5s							
XAN				LR		LR		
	comp=Z,92nm,27.2s							
CD2	**Chengdu**	**54.94**	**314**	P		**P**	**05 45 13.8**	**+1.9**
CD2				AP		pP	05 46 00.0	+3.6
CD2				PCP		PcP	05 46 12.5	+1.2
CD2				XP		sP	05 46 22.5	+4.4
CD2				PP		PP	05 47 21.3	+4.1
CD2				PCS		PcS	05 50 11.0	-0.5
CD2				S		**S**	**05 52 38.5**	**+0.2**
CD2				XS		sS	05 53 59.5	+3.5
CD2				SS		SS	05 56 25.8	+0.7
CD2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.6							
CD2				AMB		AMB		
	comp=Z,130nm,4.1s							
CD2				LR		LR		
	comp=N,230nm,7.2s							
CD2				LR		LR		
	comp=Z,200nm,6.0s							
KLR	**Kul'dur**	**56.10**	**348**	*e*P		**P**	**05 45 18.0**	**-1.7**
KLR				*e*		pP	05 45 57.8	-6.6
LZH	**Lanzhou**	**57.84**	**319**	*e*P		**P**	**05 45 35.0**	**+2.7**
LZH				AP		pP	05 46 19.5	+2.3
LZH				XP		sP	05 46 42.8	+4.0
LZH				PP		PP	05 47 47.5	+4.6
LZH				*e*S		**S**	**05 53 17.0**	**+0.7**
LZH				XS		sS	05 54 39.0	+4.3
LZH				SS		SS	05 57 12.5	+1.9
LZH				AMB		AMB		
	comp=Z,32nm,1.4s,mb4.8							
LZH				AMB		AMB		
	comp=Z,180nm,4.5s							
PETK	**Petropavlovsk-**	**59.07**	**7**	P		**P**	**05 45 38.1**	**-2.3**
	comp=Z,1.7nm,0.6s,mb3.9,baz=181,slow=14,SNR=7.3							
GTA	**Gaotai**	**62.37**	**320**	*e*P		**P**	**05 46 03.8**	**+0.8**
GTA				AP		pP	05 46 46.8	-1.8
GTA				XP		sP	05 47 08.5	-1.5
GTA				AMB		AMB		
	comp=Z,6.0nm,1.2s,mb4.1							
ULN	**Ulaanbaatar**	**63.68**	**331**	*e*P		**P**	**05 46 12.2**	**+0.8**
ULN	**Ulaanbaatar**	**63.68**	**331**	*e*P		**P**	**05 46 11.4**	**0.0**
	comp=Z,9.5nm,1.1s,mb4.3							
ULN				*e*pP		pP	05 46 59.9	+2.8
SONM	**Songino Array**	**63.97**	**331**	P		**P**	**05 46 11.7**	**-1.6**
	comp=Z,1.9nm,0.6s,mb3.9,baz=147,slow=8.3,SNR=5.7							
SONM				pP		pP	05 46 58.0	-1.2
	comp=Z,3.4nm,0.7s,baz=165,slow=7.7,SNR=4.8							
CASY	**Casey**	**65.75**	**195**	*e*P		**P**	**05 46 24.6**	**+0.1**
	comp=Z,35nm,1.0s,mb5.0							
ZAK	**Zakamensk**	**67.21**	**331**	*e*P		**P**	**05 46 33.9**	**-0.1**
ZAK				*e*		pP	05 47 20.0	-0.2
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.3							
BOD	**Bodaibo**	**68.50**	**342**	*e*P		**P**	**05 46 39.1**	**-2.8**
YAK	**Yakutsk**	**68.64**	**351**	*i* P		**P**	**05 46 43.6**	**+0.9**
YAK				pmax		pmax		
	comp=Z,24nm,1.4s,mb4.6							
MOY	**Mondy**	**69.14**	**331**	*e*P		**P**	**05 46 46.6**	**+0.6**
VNDA	**Vanda**	**72.42**	**177**	P		**P**	**05 47 05.5**	**+0.1**
	comp=Z,13nm,0.8s,mb4.6,baz=329,slow=7.0,SNR=61							
VNDA	**Vanda**	**72.42**	**177**	*e*P		**P**	**05 47 05.7**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7							
SBA	**Scott Base**	**73.06**	**176**	*e*P		**P**	**05 47 11.0**	**+1.9**
	comp=Z,9.1nm,0.9s,mb4.4							
BILL	**Bilibino**	**74.60**	**7**	*e*P		**P**	**05 47 18.1**	**0.0**
BILL				*e*			05 47 27.1	
BILL				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb4.1							
MK31	**Makanchi Array**	**77.12**	**320**	*e*P		**P**	**05 47 32.8**	**0.0**
MKAR	**Makanchi Array**	**77.12**	**320**	P		**P**	**05 47 31.9**	**-1.0**
	comp=Z,0.8nm,0.4s,mb3.7,baz=99,slow=8.7,SNR=20							
MKAR				pP		pP	05 48 17.6	-2.7
	comp=Z,13nm,1.0s,baz=107,slow=7.1,SNR=17							
TIXI	**Tiksi**	**77.91**	**354**	*i* P		**P**	**05 47 35.4**	**-1.3**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.1							
TIXI	**Tiksi**	**77.91**	**354**	*e*P		**P**	**05 47 36.2**	**-0.4**
	comp=Z,3.5nm,0.8s,mb4.0							
ZAA0	**Zalesovo Array**	**78.60**	**328**	P		**P**	**05 47 36.8**	**-4.0**
ZALV	**Zalesovo Beam**	**78.60**	**328**	P		**P**	**05 47 39.5**	**-1.3**
	comp=Z,3.0nm,0.4s,mb4.3,baz=117,slow=5.2,SNR=14							
ZALV				pP		pP	05 48 26.3	-2.1
	comp=Z,2.4nm,0.6s,baz=118,slow=5.4,SNR=3.5							
KURK	**Kurchatov**	**80.82**	**323**	*i* P		**P**	**05 47 52.7**	**-0.1**
KURK				pmax		pmax		
	comp=Z,5.0nm,1.5s,mb3.9							
AML	**Almayashu**	**81.44**	**314**	*e*P		**P**	**05 47 57.0**	**+0.7**
	comp=Z,4.2nm,1.0s,mb4.0							
MAW	**Mawson**	**82.73**	**203**	P		**P**	**05 48 02.1**	**-0.4**
	comp=Z,4.3nm,0.7s,mb4.3,baz=94,slow=9.0,SNR=4.1							
MAW	**Mawson**	**82.73**	**203**	*e*P		**P**	**05 48 02.4**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.6							
MCK	**McKinley**	**83.75**	**24**	*e*P		**P**	**05 48 08.1**	**+0.4**
	comp=Z,63nm,1.9s,mb5.0							
MCK				*e*pP		pP	05 48 54.8	-1.2
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**05 48 11.3**	**+0.1**
	comp=Z,12nm,0.6s,mb4.8,baz=337,slow=0.8,SNR=42							
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**05 48 11.3**	**+0.1**
COLA	**College**	**84.67**	**23**	*i* P		**P**	**05 48 09.9**	**-2.4**
EGAK	**Eagle**	**87.29**	**24**	*e*P		**P**	**05 48 26.2**	**+1.0**
	comp=Z,12nm,1.1s,mb4.6							
HYT	**Haines Junctio**	**87.73**	**28**	*e*P		**P**	**05 48 28.4**	**+1.1**
DAWY	**Dawson**	**87.80**	**25**	*e*P		**P**	**05 48 28.4**	**+0.8**
SYO	**Syowa Base**	**91.08**	**200**	*e*P		**P**	**05 48 41.1**	**-1.8**
KHMM	**Horse Mountain**	**92.97**	**49**	*e*P		**P**	**05 48 53.0**	**+0.8**
YBH	**Yreka Blue Hor**	**93.81**	**49**	P		**P**	**05 48 56.5**	**+0.5**
	comp=Z,6.3nm,0.9s,mb4.6,baz=202,slow=3.4,SNR=7.3							
NVAR	**Mina Array Bea**	**97.03**	**52**	P		**P**	**05 49 11.6**	**+0.8**
	comp=Z,2.6nm,0.8s,mb4.5,baz=25,slow=6.8,SNR=11							
YKA	**Yellowknife Ar**	**98.71**	**28**	P		**P**	**05 49 17.1**	**-0.6**
	comp=Z,1.2nm,1.0s,mb4.2,baz=277,slow=4.2,SNR=5.5							
YKA				pP		pP	05 50 05.4	-1.4
	comp=Z,0.3nm,0.7s,baz=86,slow=9.1,SNR=4.9							
YKA				PKiKP		PKiKP	05 53 46.7	-1.2
	comp=Z,0.1nm,0.5s,baz=271,slow=1.3,SNR=6.2							
YKA	**Yellowknife Ar**	**98.71**	**28**	P		**P**	**05 49 17.1**	**-0.6**
YKA				pP		pP	05 50 05.4	-1.4
PDAR	**Pinedale Array**	**103.55**	**47**	Pdiff		Pdif	05 49 39.9	+0.4
	comp=Z,1.6nm,0.8s,baz=263,slow=2.3,SNR=11							
OBN	**Obninsk**	**106.12**	**326**	*e*P		Pdif	05 49 48.2	-2.7
OBN				*e*			06 00 08.7	
OBN				*e*PS		PS	06 03 38.7	-0.3
OBN				*e*SS		SS	06 09 06.5	+4.1
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TXAR	**Lajitas Array**	**109.49**	**61**	PKiKP		PKiKP	05 54 08.0	-0.8
	comp=Z,0.8nm,1.0s,baz=199,slow=2.7,SNR=4.5							
TXAR	**Lajitas Array**	**109.49**	**61**	PKPdf		PKiKP	05 54 08.0	-0.8
NOA	**NORSAR Array B**	**115.50**	**338**	PKP		PKPdf	05 54 18.4	-0.8
	comp=Z,1.4nm,0.8s,baz=321,slow=5.7,SNR=3.4							
NOA	**NORSAR Array B**	**115.50**	**338**	PKP		PKPdf	05 54 18.4	-0.8
FRB	**Frobisher Bay**	**116.44**	**17**	PKP		PKPdf	05 54 19.5	-1.5
	comp=Z,2.7nm,0.6s,baz=222,slow=3.5,SNR=10							
FRB	**Frobisher Bay**	**116.44**	**17**	PKP		PKPdf	05 54 19.5	-1.5
BRG	**Berggiesshubel**	**120.29**	**328**	*e*PKIKP		PKPdf	05 54 28.1	-0.7
BRG				pmax		pmax		
	comp=Z,2.0nm,0.9s							
BRG	**Berggiesshubel**	**120.29**	**328**	*e*PKP		PKPdf	05 54 28.1	-0.7
CLL	**Collm**	**120.55**	**328**	*e*PKiKP		PKiKP	05 54 29.0	-0.4
GERES	**GERESS Array B**	**121.50**	**326**	PKP		PKPdf	05 54 30.1	-1.1
	comp=Z,1.1nm,0.6s,baz=30,slow=1.1,SNR=11							
PLCA	**Paso Flores**	**122.53**	**147**	PKP		PKPdf	05 54 33.3	-0.2
	comp=Z,2.2nm,0.5s,baz=157,slow=2.2,SNR=12							
SCHQ	**Schefferville**	**123.76**	**23**	PKP		PKPdf	05 54 34.5	-0.8
	comp=Z,3.2nm,0.8s,baz=73,slow=4.6,SNR=5.2							
SADO	**Sadowa**	**123.90**	**38**	PKP		PKPdf	05 54 34.0	-1.9
	comp=Z,3.1nm,0.7s,baz=301,slow=12,SNR=3.0							
TKL	**Tuckaleechee C**	**124.57**	**50**	PKP		PKPdf	05 54 35.8	-1.7
	comp=Z,4.7nm,0.8s,baz=216,slow=8.1,SNR=5.5							
DAVOX	**Davos/Dischmat**	**124.79**	**325**	PKP		PKPdf	05 54 36.5	-1.0
	comp=Z,1.1nm,0.6s,baz=148,slow=5.6,SNR=5.2							
EKA	**Eskdalemuir Ar**	**124.86**	**340**	PKP		PKPdf	05 54 36.6	-0.8
	comp=Z,5.9nm,1.1s,baz=16,slow=4.0,SNR=3.5							
LBNH	**Lisbon**	**128.50**	**35**	*e*PKiKP		PKPdf	05 54 43.1	-1.6
SDV	**Santo Domingo**	**142.49**	**83**	*e*PKPdf		PKPdf	05 55 07.9	-3.7
TOA0	**Torodi Ar. Sit**	**144.99**	**285**	*e*PKPdf		PKPdf	05 55 15.0	-0.9
TORD	**Torodi Ar. Bea**	**144.99**	**285**	PKP		PKPdf	05 55 14.1	-1.8
	comp=Z,3.3nm,0.7s,baz=65,slow=3.6,SNR=32							
TORD				SKPbc		SKPbc	05 58 33.9	-2.9
	comp=Z,0.7nm,0.7s,baz=87,slow=2.9,SNR=3.2							
TORD	**Torodi Ar. Bea**	**144.99**	**285**	PKP		PKPdf	05 55 14.1	-1.8
TORD				SKPbc		SKPbc	05 58 33.9	-2.9
CBYP	**Canovanas**	**145.48**	**66**	*e*PKPdf		PKPdf	05 55 16.3	-0.4
MTP	**Monte Pirata**	**145.81**	**66**	*e*PKPdf		PKPdf	05 55 17.3	+0.1
DBIC	**Dimbokro**	**152.02**	**274**	PKPbc		PKPbc	05 55 33.5	-0.6
	comp=Z,1.3nm,0.6s,baz=78,slow=6.7,SNR=4.3							
BDFB	**Brasilia**	**154.26**	**145**	PKPbc		PKPbc	05 55 37.8	-1.0
	comp=Z,3.2nm,0.7s,baz=254,slow=1.2,SNR=14							

CSEM ***27*** *05:47:17.5±0.1,3943N×3309E,h2km,MD2.8,Error ellipse: s-maj=2.4km s-min=1.9km az=14.0*
ISK ***27*** *05:47:17.7,3940N×3305E,h6km,MD2.8*
ISCJB ***27*** *05:47:19.0±0.7,3944N±005×3307E±005,h10km,Error ellipse: s-maj=6.7km s-min=5.0km az=176.6*
DDA ***27*** *05:47:18.6,3942N×3310E,h9km±1km,Md3.0*
ISC 27 05:47:19.0±0.7,3942N±005×3307E±004,h7km±11km,n7, σ0s74/11,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KAMT	**Kaman**	**0.50**	**96**	*e*PG		**Pg**	**05 47 28.1**	**-0.6**
KAMT				*e*SG		**Sg**	**05 47 35.7**	**+0.5**
LOD	**Lodumlu**	**0.52**	**333**	*e*PG		**Pg**	**05 47 28.9**	**-0.1**
LOD				*e*SG		**Sg**	**05 47 36.5**	**+0.7**
CDAG	**Cicekdag**	**1.03**	**78**	*i* P		**Pg**	**05 47 37.7**	**-1.0**
CDAG				*i* S		**Sg**	**05 47 52.6**	**+0.6**
KIZT	**Kizilcal**	**1.07**	**240**	*e*PG		**Pg**	**05 47 38.1**	**-1.4**
KDHN	**Kadinhani**	**1.17**	**220**	*i* P		**Pg**	**05 47 41.2**	**-0.2**
KDHN				*i* S		**Sg**	**05 47 57.8**	**+1.3**
CORM	**Corum**	**1.42**	**57**	*e*PN		**Pn**	**05 47 45.0**	**-0.2**
YOZ	**Yozgat**	**1.75**	**82**	*e*PN		**Pn**	**05 47 50.2**	**+0.4**

NEIC ***27*** *05:50:17.9,1692N×10020W,h5km,MD3.8(MEX),After MEX.*
MEX 27 05:50:17.9±0.7,1692N×10020W,h5km±4km,MD3.8,3C, Near coast of Guerrero

| Code |

YKA Yellowknife Ar 91.97 24 P P 06 24 45.4 +0.8
0.0nm,0.5s,baz=242,slow=4.8,SNR=2.2

IDC 27 06:59:11.2±2.8, 2223N×14283E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/20, mbtmp3.4/3, Error ellipse: s-maj=371.2km s-min=28.4km az=108.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.73**	**192**	P	P	07 07 10.9	+0.7
	0.4nm,0.7s,baz=15,slow=8.2,SNR=2.3						
ASAR	**Alice Springs**	**46.44**	**191**	P	P	07 07 38.8	-1.0
	0.2nm,0.8s,baz=11,slow=7.6,SNR=4.4						
YKA	**Yellowknife Ar**	**76.14**	**28**	P	P	07 11 00.8	+0.1
	0.2nm,0.4s,baz=293,slow=6.0,SNR=7.8						

CSEM ***27*** *07:11:32.9±0.2, 3934N×33.15E, h13km±2km, MD2.8, Error ellipse: s-maj=4.7km s-min=2.9km az=159.0*
DDA ***27*** *07:11:32.7, 3941N×3312E, h7km±1km, Md2.6*
ISCJB ***27*** *07:11:33.2±0.9, 3935N±005×33.14E±005, h6km±9km, Error ellipse: s-maj=9.4km s-min=5.9km az=147.2*
ISK ***27*** *07:11:33.0, 3930N×3315E, h10km, MD2.8*
ISC 27 07:11:33.5±0.7, 3935N±005×3314E±005, h11km±9km, n12, σ0§58/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.44**	**87**	*e*PG	**Pg**	**07 11 42.0**	**-0.2**
KAMT				*e*SG	**Sg**	**07 11 48.9**	**+0.8**
LOD	**Lodumlu**	**0.61**	**332**	*e*PG	**Pg**	**07 11 46.1**	**+0.7**
CDAG	**Cicekdag**	**0.99**	**74**	*i* P	**Pg**	**07 11 51.5**	**-1.1**
KIZT	**Kizilcal**	**1.09**	**245**	*e*PG	**Pg**	**07 11 53.9**	**-0.5**
KDHN	**Kadinhani**	**1.15**	**224**	*i* P	**Pb**	**07 11 55.1**	**-0.3**
KDHN				*i* S	**Sg**	**07 12 10.9**	**+0.3**
KDHN	**Kadinhani**	**1.15**	**224**	*i* P	**Pb**	**07 11 54.7**	**-0.7**
ELDT	**Eldivan**	**1.16**	**11**	*i* P	**Pb**	**07 11 55.0**	**-0.5**
ELDT				*i* S	**Sg**	**07 12 10.9**	**0.0**
ELDT	**Eldivan**	**1.16**	**11**	*i* P	**Pb**	**07 11 54.9**	**-0.7**
ELDT	**Eldivan**	**1.16**	**11**	*i* P	**Pb**	**07 11 55.0**	**-0.6**
ELDT				*i* S	**Sg**	**07 12 10.9**	**0.0**
CORM	**Corum**	**1.42**	**54**	*e*PN	**Pn**	**07 11 59.0**	**-0.2**
YOZ	**Yozgat**	**1.71**	**80**	*e*PN	**Pn**	**07 12 03.8**	**+0.6**
ESKT	**Eskisehir**	**1.78**	**276**	*e*PN	**Pn**	**07 12 04.8**	**+0.6**

BJI ***27*** *07:14:05.8, 52.10N×168.30W, h25km, mB5.1, mb4.7*
NEIC ***27*** *07:14:07.9, 52.13N×168.29W, h26km, ML3.8(AEIC), ML4.0(PMR), After AEIC.*
ISCJB ***27*** *07:14:09.2±1.8, 5225N±007×16845W±008, h33km±11km, mb4.3/34, MS3.2/3, Error ellipse: s-maj=12.5km s-min=7.0km az=156.3*
MOS ***27*** *07:14:10.2±0.9, 5243N×16853W, h33km, mb5.1/12, Error ellipse: s-maj=16.2km s-min=8.7km az=102.7*
IDC ***27*** *07:14:13.3±0.8, 5253N×16847W, h46km±5km, mb3.8/18, mb1 4.0/19, mb1mx3.9/29, mbtmp3.9/19, MS3.2/3, Ms1 3.2/3, ms1mx3.0/40, Error ellipse: s-maj=26.2km s-min=11.4km az=179.0*
ISC 27 07:14:10.8±1.4, 5232N±006×16844W±007, h30km±8km, h45km±2.2km:pP-P, n81, σ0§96/84, mb4.3/34, MS3.2/3, 4C-2D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.70**	**339**	P	**Pb**	**07 14 23.6**	**-0.9**
NIKO				S	**Sb**	**07 14 35.6**	**+1.8**
OKCE	**Okmok Cone E**	**1.12**	**8**	P	**Pn**	**07 14 30.2**	**-0.2**
OKCD	**Okmok Cone D**	**1.13**	**10**	P	**Pn**	**07 14 30.1**	**-0.4**
OKFG	**Magazine Ridge**	**1.14**	**16**	P	**Pn**	**07 14 30.3**	**-0.3**
OKFG				S	**Sn**	**07 14 46.8**	**+1.7**
UNV	**Unalaska Valle**	**1.92**	**37**	*e*Pn	**Pn**	**07 14 40.0**	**-1.5**
UNV				S	**Sn**	**07 15 05.0**	**+0.4**
AKUT	**Akutan**	**2.42**	**40**	*e*Pn	**Pn**	**07 14 50.7**	**+2.5**
FALS	**False Pass**	**3.92**	**48**	*e*Pn	**Pn**	**07 15 05.3**	**-3.6**
SDPT	**Sand Point**	**5.61**	**54**	*e*P	**Pn**	**07 15 32.5**	**+0.5**
KDAK	**Kodiak Island**	**10.60**	**53**	P	**Pn**	**07 16 37.1**	**-3.4**
	0.6nm,0.3s,baz=138,slow=17,SNR=4.6						
FX1	**Attu Island--F**	**11.20**	**280**	P	**Pn**	**07 16 50.8**	**+2.1**
	1.2nm,0.3s,baz=285,slow=23,SNR=9.6						
SEW	**Seward**	**13.09**	**46**	*e*Pn	**Pn**	**07 17 13.6**	**-0.8**
COLA	**College**	**16.42**	**32**	*e*P	**Pn**	**07 17 57.0**	**-1.7**
PET	**Petropavlovsk**	**19.88**	**285**	⇓*i*P	**Pn**	**07 18 38.9**	**-2.1**
PET				pmax	pmax		
	comp=Z,27nm,1.2s						
BILL	**Bilibino**	**19.91**	**332**	*e*P	**Pn**	**07 18 40.1**	**-1.2**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PETK	**Petropavlovsk-**	**20.42**	**286**	P	**P**	**07 18 45.7**	**+0.5**
	comp=Z,11nm,0.6s,baz=84,slow=13,SNR=17						
PETK				sP	sP	07 19 01.0	+3.9
	comp=Z,5.0nm,0.5s,baz=82,slow=14,SNR=4.7						
SEY	**Seymchan**	**23.12**	**313**	⇑*e*P	**P**	**07 19 13.4**	**-0.6**
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**07 20 14.6**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.2,baz=276,slow=7.7,SNR=12						
YKA				pP	pP	07 20 27.1	+3.5
	comp=Z,0.5nm,0.5s,baz=274,slow=7.7,SNR=7.0						
YKA				PcP	PcP	07 23 17.2	-0.1
	comp=Z,0.3nm,0.9s,baz=283,slow=1.9,SNR=5.2						
YKA				LR	LR	07 33 33.4	
	comp=Z,10.0nm,18.7s,MS2.5,baz=315,slow=39						
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**07 20 14.6**	**-0.3**
YKA				*PP	pP	07 20 27.1	+3.5
YKA						07 23 17.2	
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**07 20 14.6**	**-0.3**
YKA				pP	pP	07 20 27.1	+3.5
YKA				PcP	PcP	07 23 17.2	-0.1
YKA				LR	LR	07 33 33.5	
YBH	**Yreka Blue Hor**	**32.41**	**91**	P	**P**	**07 20 39.0**	**+1.3**
	comp=Z,1.2nm,0.6s,mb3.9,baz=28,slow=17,SNR=3.1						
TIXI	**Tiksi**	**33.07**	**329**	⇑*i*P	**P**	**07 20 42.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
PDAR	**Pinedale Array**	**39.85**	**80**	P	**P**	**07 21 41.6**	**+0.3**
	comp=Z,0.8nm,0.9s,mb3.4,baz=290,slow=6.1,SNR=4.3						
PDAR				pP	pP	07 21 55.5	+5.3
	comp=Z,1.8nm,0.9s,baz=303,slow=4.8,SNR=8.0						
MJAR	**Matsushiro Arr**	**40.27**	**269**	P	**P**	**07 21 44.9**	**+0.1**
	comp=Z,0.8nm,0.3s,mb3.9,baz=45,slow=6.4,SNR=5.2						
MJAR	**Matsushiro Arr**	**40.27**	**269**	P	**P**	**07 21 44.9**	**+0.1**
BOD	**Bodaibo**	**42.47**	**309**	*e*P	**P**	**07 22 00.5**	**-2.1**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
KSRS	**Korea Array**	**45.98**	**277**	P	**P**	**07 22 31.8**	**+0.8**
	comp=Z,3.3nm,0.7s,mb4.4,baz=58,slow=7.6,SNR=12						
KSRS				pP	pP	07 22 45.0	+5.1
	comp=Z,2.2nm,0.7s,baz=48,slow=8.6,SNR=4.3						
KSRS				LR	LR	07 40 39.5	
	comp=Z,29nm,18.8s,MS3.2,baz=5.2,slow=34						
ULN	**Ulaanbaatar**	**51.45**	**301**	⇑*e*P	**P**	**07 23 12.9**	**+0.1**
SONM	**Songino Array**	**51.81**	**301**	P	**P**	**07 23 16.3**	**+0.7**
	comp=Z,0.6nm,0.3s,mb4.0,baz=63,slow=7.0,SNR=4.5						
TXAR	**Lajitas Array**	**52.18**	**90**	P	**P**	**07 23 18.8**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=297,slow=5.5,SNR=9.0						
TXAR				LR	LR	07 42 53.7	
	comp=Z,87nm,18.4s,MS3.8,baz=240,slow=33						
GTA	**Gaotai**	**61.01**	**298**	*e*P	**P**	**07 24 20.8**	**-0.3**
GTA				AP	pP	07 24 24.8	-5.6
GTA				XP	sP	07 24 28.5	-5.4
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.4						
KURK	**Kurchatov**	**62.79**	**319**	*e*P	**P**	**07 24 32.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.3						
BVAR	**Borovoye Array**	**64.07**	**325**	P	**P**	**07 24 40.9**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.3,baz=50,slow=7.9,SNR=8.2						
BVAR				pP	pP	07 24 53.5	+2.8
	comp=Z,1.3nm,0.7s,baz=69,slow=8.1,SNR=3.6						
MKAR	**Makanchi Array**	**64.25**	**314**	P	**P**	**07 24 42.0**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=44,slow=5.7,SNR=5.1						
ARU	**Arti**	**64.92**	**333**	*d*P	**P**	**07 24 46.6**	**-0.2**
ARU				*e*		07 27 05.3	
ARU				S	**S**	**07 33 25.2**	**-0.7**
ARU				SS	SS	07 37 33.8	-2.9
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
GYA	**Guiyang**	**66.50**	**283**	P	**P**	**07 24 58.8**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NOA	**NORSAR Array B**	**66.99**	**0**	P	**P**	**07 24 58.4**	**-1.7**
	comp=Z,1.3nm,0.8s,mb4.0,baz=0.1,slow=6.5,SNR=2.8						

AKTK	**Aktyubinsk**	**70.33**	**331**	P	**P**	**07 25 20.4**	**-0.7**
AKTO	**Aktyubinsk**	**70.33**	**331**	P	**P**	**07 25 20.4**	**-0.7**
	comp=Z,4.0nm,0.8s,mb4.4,baz=41,slow=4.8,SNR=16						
OBN	**Obninsk**	**70.94**	**345**	*e*P	**P**	**07 25 24.4**	**-0.3**
OBN				*e*S	S	07 34 40.6	+2.7
OBN				*e*SS	SS	07 39 11.7	+2.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AKASG	**Malin Array Be**	**76.27**	**349**	P	**P**	**07 25 55.2**	**-0.9**
	comp=Z,1.8nm,0.7s,mb4.1,baz=15,slow=5.8,SNR=5.0						
CMAR	**Chiang Mai Arr**	**77.18**	**283**	P	**P**	**07 26 02.3**	**+0.6**
	comp=Z,2.9nm,0.6s,mb4.4,baz=20,slow=6.5,SNR=14						
CMAR				pP	pP	07 26 14.7	+3.5
	comp=Z,1.5nm,0.4s,baz=25,slow=6.6,SNR=2.8						
BAIF	**Baives**	**77.80**	**5**	*e*P	**P**	**07 26 04.0**	**-0.7**
STHS	**Stebnicka Huta**	**78.30**	**354**	*e*P	**P**	**07 26 08.4**	**+0.9**
STHS				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.3						
STHS	**Stebnicka Huta**	**78.30**	**354**	*e*P	**P**	**07 26 08.4**	**+0.9**
STHS	**Stebnicka Huta**	**78.30**	**354**	*e*P	**P**	**07 26 08.4**	**+0.9**
	comp=Z,8.0nm,1.8s,mb4.3						
CRVS	**Cervenica-Dubn**	**78.80**	**353**	*e*P	**P**	**07 26 11.4**	**+1.2**
CRVS				pmax	pmax		
	comp=Z,35nm,2.6s,mb4.8						
CRVS	**Cervenica-Dubn**	**78.80**	**353**	*e*P	**P**	**07 26 11.4**	**+1.2**
	comp=Z,35nm,2.6s,mb4.8						
KHC	**Kasperske Hory**	**78.91**	**359**	⇑*e*P	**P**	**07 26 11.3**	**+0.5**
GERES	**GERESS Array B**	**79.19**	**359**	P	**P**	**07 26 12.4**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=330,slow=7.7,SNR=6.3						
VYHS	**Vyhne**	**79.37**	**355**	*e*P	**P**	**07 26 14.7**	**+1.3**
VYHS				pmax	pmax		
	comp=Z,82nm,3.3s						
VYHS	**Vyhne**	**79.37**	**355**	*e*P	**P**	**07 26 14.7**	**+1.3**
	comp=Z,82nm,3.3s						
CDF	**Champ du Feu**	**79.58**	**3**	*e*P	**P**	**07 26 14.5**	**0.0**
ZST	**Bratislava**	**79.75**	**356**	*e*P	**P**	**07 26 24.2**	**+8.8**
ZST				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
ZST	**Bratislava**	**79.75**	**356**	*e*pP	pP	07 26 24.2	-0.7
HINF	**Hinteralfeld**	**80.16**	**3**	*e*P	**P**	**07 26 17.6**	**0.0**
KIV	**Kislovodsk**	**80.41**	**338**	*e*P	**P**	**07 26 19.6**	**+0.5**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
LOR	**Lormes**	**80.57**	**5**	*e*P	**P**	**07 26 20.0**	**+0.1**
MFF	**Saint Martin d**	**80.94**	**8**	*e*P	**P**	**07 26 21.7**	**-0.2**
AVF	**Avril sur Loir**	**81.02**	**6**	*e*P	**P**	**07 26 22.1**	**-0.2**
	comp=Z,28nm,1.5s,mb4.7						
AVF	**Avril sur Loir**	**81.02**	**6**	*e*P	**P**	**07 26 22.1**	**-0.2**
AVF				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.7						
AVF	**Avril sur Loir**	**81.02**	**6**	*e*P	**P**	**07 26 22.1**	**-0.2**
	comp=Z,14nm,1.5s,mb4.7						
SMF	**Signal de Mont**	**81.19**	**5**	*e*P	**P**	**07 26 23.0**	**-0.2**
SMF				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**81.19**	**5**	*e*P	**P**	**07 26 23.0**	**-0.2**
	comp=Z,18nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**81.19**	**5**	*e*P	**P**	**07 26 23.0**	**-0.2**
	comp=Z,18nm,1.4s,mb4.8						
CABF	**La Chapelle**	**81.33**	**4**	*e*P	**P**	**07 26 24.6**	**+0.7**
	comp=Z,50nm,1.4s,mb4.9						
CABF	**La Chapelle**	**81.33**	**4**	*e*P	**P**	**07 26 24.6**	**+0.7**
CABF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
CABF	**La Chapelle**	**81.33**	**4**	*e*P	**P**	**07 26 24.6**	**+0.7**
	comp=Z,25nm,1.4s,mb5.0						
TCF	**Toulx Ste Croi**	**81.44**	**7**	*e*P	**P**	**07 26 24.5**	**0.0**
MBDF	**Montbardon**	**83.24**	**3**	*e*P	**P**	**07 26 35.5**	**+1.5**
	comp=Z,20nm,1.0s,mb4.8						
MBDF	**Montbardon**	**83.24**	**3**	*e*P	**P**	**07 26 35.5**	**+1.5**
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
MBDF	**Montbardon**	**83.24**	**3**	*e*P	**P**	**07 26 35.5**	**+1.5**
	comp=Z,9.9nm,1.0s,mb4.8						
ETSF	**Etsaut**	**84.58**	**9**	*e*P	**P**	**07 26 41.7**	**+0.9**
	comp=Z,12nm,0.9s,mb4.7						
ETSF	**Etsaut**	**84.58**	**9**	*e*P	**P**	**07 26 41.7**	**+0.9**
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
ETSF	**Etsaut**	**84.58**	**9**	*e*P	**P**	**07 26 41.7**	**+0.9**
	comp=Z,6.2nm,0.9s,mb4.7						
PGF	**Pioggiola**	**85.48**	**2**	*e*P	**P**	**07 26 45.6**	**+0.2**
	comp=Z,46nm,1.1s,mb5.2						
PGF	**Pioggiola**	**85.48**	**2**	*e*P	**P**	**07 26 45.6**	**+0.2**
PGF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.2						
PGF	**Pioggiola**	**85.48**	**2**	*e*P	**P**	**07 26 45.6**	**+0.2**
	comp=Z,23nm,1.1s,mb5.2						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**07 26 50.3**	**+0.6**
	comp=Z,1.0nm,0.3s,mb4.5,baz=354,slow=2.5,SNR=4.1						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**07 26 50.3**	**+0.6**
ESDC	**Sonseca Array**	**87.39**	**12**	P	**P**	**07 26 54.1**	**-0.6**
	comp=Z,0.3nm,0.3s,mb4.0,baz=352,slow=5.3,SNR=5.3						
ASAR	**Alice Springs**	**90.80**	**231**	P	**P**	**07 27 11.0**	**+0.2**
	comp=Z,0.5nm,0.8s,mb3.9,baz=26,slow=3.7,SNR=5.1						

GUC 27 07:19:34.1±0.5, 2144S×6951W, h69km±4km, ML3.7, 3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.39**	**3**	⇓*i*P	Pn	07 19 46.0	+0.2
PB01				*i* S	Sn	07 19 55.3	+0.9
PB01				AML	AML	07 19 55.9	
	comp=E,4μm,0.4s						
MACH	**Maria Elena**	**0.79**	**197**	*e*P	Pn	07 19 50.5	+0.5
MACH				*e*S	Sn	07 20 03.1	+1.4
TOCH	**Tocopilla**	**0.92**	**225**	*e*P	Pn	07 19 51.5	0.0
TOCH				*e*S	Sn	07 20 05.3	+0.9
TOCH				AML	AML	07 20 07.1	
	comp=E,5μm,0.2s						
PECH	**Pedro de Valdi**	**1.16**	**188**	⇓*i*P	Pn	07 19 55.4	+0.8
PECH				*i* S	Sn	07 20 11.5	+1.5
PECH				AML	AML	07 20 13.0	
	comp=E,4μm,0.9s						
LVC	**Limon Verde**	**1.29**	**155**	⇓*e*P	Pn	07 19 57.4	+1.1
LVC				*e*S	Sn	07 20 15.0	+2.1
LVC				AML	AML	07 20 16.9	
	comp=E,1μm,0.2s						
MECH	**Mejillones**	**1.87**	**208**	*e*P	Pn	07 20 04.8	+0.8
MECH				*e*S	Sn	07 20 28.5	+1.8
MECH				AML	AML	07 20 41.9	
	comp=N,784nm,0.6s						
CEN1	**Los Morros**	**2.04**	**198**	*e*P	Pn	07 20 09.3	+3.0
CEN1				*e*S	Sn	07 20 38.3	+7.4

CSEM ***27*** *07:29:09.2, 3944N×33.15E, h5km, MD2.6, After ISK*
ISK ***27*** *07:29:09.2, 3944N×33.15E, h5km, MD2.6*
DDA ***27*** *07:29:10.2, 3941N×3306E, h7km±1km, Md2.4*
ISCJB ***27*** *07:29:11.3±0.8, 3940N±005×33.16E±007, h10km, Error ellipse: s-maj=8.5km s-min=6.7km az=138.8*
ISC 27 07:29:11.0±1.4, 3941N±006×3312E±009, h6km±14km, n8, σ0§68/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**95**	*e*PG	**Pg**	**07 29 19.0**	**-0.8**
KAMT				*e*SG	**Sg**	**07 29 26.2**	**+0.4**
KIZT	**Kizilcal**	**1.10**	**242**	*e*PN	**Pn**	**07 29 32.0**	**-0.9**
ELDT	**Eldivan**	**1.10**	**12**	*i* P	**Pg**	**07 29 31.5**	**-0.6**
ELDT				*i* S	**Sg**	**07 29 47.3**	**+0.9**
KDHN	**Kadinhani**	**1.19**	**222**	*e*P	Px	07 29 25.2	
KDHN				*i* S	Sx	07 29 43.9	
LADK	**Ladik-KONYA**	**1.35**	**206**	*e*PN	**Pn**	**07 29 37.2**	**+0.9**
CORM	**Corum**	**1.39**	**56**	*e*PN	**Pn**	**07 29 36.3**	**-0.5**
KONT	**Konya--Tatoy**	**1.58**	**202**	*e*PN	**Pn**	**07 29 39.9**	**+0.5**
YOZ	**Yozgat**	**1.71**	**82**	*e*PN	**Pn**	**07 29 41.4**	**+0.1**

IDC ***27*** *07:32:29.8±0.9, 5242N×16842W, h0km, mb3.8/10, mb1 4.1/11, mb1mx3.9/26, mbtmp3.9/11, ML3.8/1, Error ellipse: s-maj=40.2km s-min=13.6km az=2.0*
NEIC ***27*** *07:32:30.8, 5207N×16824W, h26km, ML3.5(AEIC), After AEIC.*
ISCJB ***27*** *07:32:32.5±2.4, 52.19N±0.08×168.4W±0.1, h33km±16km, mb3.7/9, Error ellipse: s-maj=16.2km s-min=9.3km az=141.7*
ISC 27 07:32:34.2±2.5, 5228N±010×1683W±01, h32km±17km, n20, σ0§98/23, mb3.7/9, Fox Islands

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

NIKO	**Nikolski**	**0.77**	**336**	P	**Pb**	**07 32 47.3**	**-1.9**
NIKO				S	**Sb**	**07 33 00.2**	**+1.0**
OKCE	**Okmok Cone E**	**1.16**	**5**	P	**Pn**	**07 32 53.4**	**-0.7**
OKCD	**Okmok Cone D**	**1.16**	**7**	P	**Pn**	**07 32 54.3**	**+0.1**
OKFG	**Magazine Ridge**	**1.17**	**13**	P	**Pn**	**07 32 53.8**	**-0.4**
OKFG				S	**Sb**	**07 33 11.7**	**+1.2**
UNV	**Unalaska Valle**	**1.93**	**34**	P	**Pn**	**07 33 03.7**	**-1.0**
UNV				S	**Sn**	**07 33 27.8**	**+0.1**
KDAK	**Kodiak Island**	**10.58**	**52**	Pn	**Pn**	**07 35 01.7**	**-1.7**
	1.2nm,0.3s,baz=310,slow=13,SNR=12						
KDAK	**Kodiak Island**	**10.58**	**52**	Pn	**Pn**	**07 35 01.7**	**-1.7**
FX1	**Attu Island--F**	**11.27**	**280**	Pn	**Pn**	**07 35 13.2**	**+0.4**
	2.1nm,0.3s,baz=62,slow=23,SNR=8.4						
PETK	**Petropavlovsk-**	**20.49**	**286**	P	**P**	**07 37 09.3**	**+0.2**
	8.0nm,0.6s,baz=83,slow=14,SNR=26						
PETK	**Petropavlovsk-**	**20.49**	**286**	P	**P**	**07 37 09.3**	**+0.2**
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**07 38 38.6**	**+0.7**
	0.1nm,0.4s,mb2.9,baz=275,slow=8.7,SNR=8.4						
NVAR	**Mina Array Bea**	**37.03**	**92**	P	**P**	**07 39 42.7**	**+1.9**
	0.3nm,0.4s,mb3.5,baz=302,slow=7.4,SNR=3.6						
PDAR	**Pinedale Array**	**39.80**	**80**	P	**P**	**07 40 04.7**	**+0.7**
	0.5nm,0.5s,mb3.5,baz=297,slow=4.3,SNR=5.1						
KSRS	**Korea Array**	**46.04**	**278**	P	**P**	**07 40 53.3**	**-1.3**
	1.7nm,0.8s,mb4.0,baz=58,slow=7.0,SNR=5.7						
TXAR	**Lajitas Array**	**52.12**	**90**	P	**P**	**07 41 41.2**	**+0.1**
	0.4nm,0.7s,mb3.5,baz=304,slow=5.1,SNR=6.3						
TXAR	**Lajitas Array**	**52.12**	**90**	P	**P**	**07 41 41.2**	**+0.1**
MKAR	**Makanchi Array**	**64.33**	**314**	P	**P**	**07 43 05.4**	**-0.9**
	0.6nm,0.6s,mb3.8,baz=45,slow=7.0,SNR=8.3						
AKASG	**Malin Array Be**	**76.33**	**349**	P	**P**	**07 44 18.7**	**-0.8**
	1.0nm,0.4s,mb4.1,baz=15,slow=5.9,SNR=4.9						
CMAR	**Chiang Mai Arr**	**77.25**	**284**	P	**P**	**07 44 26.1**	**+0.9**
	1.1nm,0.3s,mb4.3,baz=24,slow=4.7,SNR=4.4						
ASAR	**Alice Springs**	**90.82**	**231**	P	**P**	**07 45 35.0**	**+1.0**
	0.2nm,0.6s,mb3.6,baz=35,slow=5.0,SNR=3.1						

ISK ***27*** *07:36:59.8, 3935N×33.15E, h5km, MD2.7*
ISCJB ***27*** *07:37:00.7±1.1, 3936N±005×33.12E±005, h5km±9km, Error ellipse: s-maj=8.8km s-min=5.5km az=142.9*
CSEM ***27*** *07:37:00.1±0.2, 3936N×3313E, h10km, MD2.7, Error ellipse: s-maj=6.3km s-min=4.5km az=150.0*
DDA ***27*** *07:37:00.3, 3940N×33.12E, h7km±2km, Md2.6*
ISC 27 07:37:00.7±0.7, 3935N±004×3311E±005, h2km±9km, n11, σ0§65/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.47**	**88**	*e*PG	**Pg**	**07 37 09.5**	**-0.2**
KAMT				*e*SG	**Sg**	**07 37 16.6**	**+0.8**
LOD	**Lodumlu**	**0.60**	**334**	*e*PG	**Pg**	**07 37 12.9**	**+0.7**
CDAG	**Cicekdag**	**1.01**	**74**	*i* P	**Pg**	**07 37 19.1**	**-1.1**
CDAG				*i* S	**Sg**	**07 37 33.2**	**-0.1**
KIZT	**Kizilcal**	**1.07**	**244**	*e*PN	**Pn**	**07 37 21.6**	**-1.1**
KDHN	**Kadinhani**	**1.14**	**223**	*i* P	**Pg**	**07 37 22.6**	**+0.1**
KDHN				*i* S	**Sg**	**07 37 37.4**	**+0.2**
ELDT	**Eldivan**	**1.16**	**12**	*i* P	**Pg**	**07 37 21.9**	**-1.1**
ELDT				*i* S	**Sg**	**07 37 38.5**	**+0.5**
ELDT	**Eldivan**	**1.16**	**12**	*i* P	**Pg**	**07 37 21.9**	**-1.1**
ELDT				*i* S	**Sg**	**07 37 38.5**	**+0.5**
LADK	**Ladik-KONYA**	**1.29**	**207**	*e*PN	**Pn**	**07 37 25.8**	**0.0**
CORM	**Corum**	**1.43**	**54**	*e*PN	**Pn**	**07 37 28.5**	**+0.8**
KONT	**Konya--Tatoy**	**1.52**	**203**	*e*PN	**Pn**	**07 37 29.6**	**+0.6**
YOZ	**Yozgat**	**1.73**	**80**	*e*PN	**Pn**	**07 37 31.7**	**-0.2**

CSEM ***27*** *07:46:55.0, 3982N×2026E, h18km, MD2.8/3, After ATH*
ATH 27 07:46:54.8, 3984N×2026E, h18km±3km, MD2.8/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.38**	**251**	*e*PB	Pg	07 47 02.4	-0.3
KEK				*e*SB	Sg	07 47 08.4	+0.5
JAN	**Janina**	**0.49**	**112**	*e*PB	Pb	07 47 04.8	-0.1
JAN				*e*SB	Sb	07 47 11.3	-0.4
JAN	**Janina**	**0.49**	**112**	*e*Pb	Pb	07 47 05.0	+0.1
JAN				*e*Sb	Sb	07 47 11.3	-0.4
VLS	**Valsamata**	**1.68**	**171**	*e*PN	Pn	07 47 25

ALT	Altintas	2.32	260	*e*PN		Pn	07 47 40.4	0.0	
BYBT	Boyabat	2.38	33	*e*PN		Pn	07 47 41.5	+0.2	
BOYT	Boyabat	2.40	36	*i* P		Pg	07 47 44.5	-2.7	
BOYT				*i* S		Sg	07 48 14.7	-3.6	
CAVI	Cavuskoy	2.57	287	*e*PN		Pn	07 47 43.6	-0.2	
ISP	Isparta	2.57	231	*e*PN		Pn	07 47 43.8	-0.2	
ISP	Isparta	2.57	231	*e*Pn		Pn	07 47 43.2	-0.7	
BZK	Bozkurt	2.58	16	*e*PN		Pn	07 47 44.1	+0.1	
ADVT	Abdulvahap	2.71	292	*e*PN		Pn	07 47 45.4	-0.5	
KARA	Karaisali	2.73	144	*e*PN		Pn	07 47 46.8	+0.7	
PINB	Pinarbasi	2.74	106	*i* P		Pn	07 47 46.3	+0.1	
PINB				*i* S		Sg	07 48 26.7	-2.4	
DIKM	Dikmen	2.74	37	*e*PN		Pn	07 47 46.5	+0.2	
BCK	Bucak	2.79	224	*e*PN		Pn	07 47 46.8	-0.2	
GDZ	Gediz	2.79	263	*i* P		Pn	07 47 46.3	-0.6	
GDZ				*i* S		Sg	07 48 30.2	-0.6	
KVT	Kavak	2.80	54	*e*PN		Pn	07 47 47.8	+0.8	
TOKT	Tokat	2.82	72	*e*PN		Pn	07 47 48.4	+1.0	
MERS	Mersin	2.86	155	*e*PN		Pn	07 47 48.9	+1.0	
SARI	SarD1z-Kayseri	2.96	105	*e*PN		Pn	07 47 47.8	-1.4	
KOZT	Kozan	2.96	132	*e*PN		Pn	07 47 49.4	+0.1	
KHAL	Karahalli	2.98	249	*i* P		Pn	07 47 48.8	-0.8	
KHAL				*i* S		Sn	07 48 24.0	-2.0	
SVSK	Karacayir	3.08	81	*e*PN		Pn	07 47 52.1	+1.1	
SILT	Sile	3.09	304	*e*PN		Pn	07 47 50.5	-0.5	
GEMT	Gemlik	3.11	289	*e*PN		Pn	07 47 50.8	-0.5	
ANTB	Antalya	3.19	217	*e*PN		Pn	07 47 52.6	+0.1	
ANDN	Andirin	3.21	125	*i* P		Pn	07 47 53.7	+0.9	
ANDN				*i* S		Sg	07 48 42.6	-1.7	
CEYT	Ceyhan	3.26	138	*e*PN		Pn	07 47 54.2	+0.8	
IKL	Isikli	3.28	171	*e*PN		Pn	07 47 54.2	+0.5	
ARMT	Armutlu	3.39	124	*e*PN		Pn	07 47 54.2	-1.0	
KRTS	Karatas	3.44	147	*e*PN		Pn	07 47 56.3	+0.4	
KLYT	Kilyos	3.53	301	*e*PN		Pn	07 47 56.8	-0.3	
GOLH	Golhisar	3.54	232	*i* P		Pn	07 47 57.7	+0.5	
GOLH				*i* S		Sn	07 48 38.4	-1.2	
KULA	Kula-Manisa	3.55	256	*e*PN		Pn	07 47 57.9	+0.5	
KMRS	Kahramanmaras	3.61	122	*e*PN		Pn	07 47 58.9	+0.7	
BGKT	Bogazkoy	3.68	299	*e*PN		Pn	07 47 58.9	-0.2	
KCT	Karacabey	3.69	284	*e*PN		Pn	07 47 58.4	-0.9	
CTKS	Kestanelik-??a	3.88	298	*e*PN		Pn	07 48 02.1	+0.2	
AKCD	Akcadag	3.99	106	*i* P		Pn	07 48 04.0	+0.6	
AKCD				*i* S		Sg	07 49 06.3	-2.9	
BALB	Balikesir	3.99	274	*e*PN		Pn	07 48 03.7	+0.2	
SLVT	Silivri	4.08	297	*e*PN		Pn	07 48 04.3	-0.4	
AKS	Akhisar	4.11	263	*e*PN		Pn	07 48 05.0	0.0	
KEMA	Kemaliye	4.23	91	*i* P		Pn	07 48 06.9	+0.2	
KEMA				*i* S		Sg	07 49 12.8	-4.2	
AKAS	Kas	4.23	221	*i* P		Pn	07 48 09.2	+2.4	
AKAS				*i* S		Sn	07 48 59.7	+2.9	
MYA	Malataya	4.36	104	*e*PN		Pn	07 48 10.0	+1.6	
LEF	Lefka	4.36	182	*e*PN		Pn	07 48 09.0	+0.5	
MALT	Malatya	4.36	104	*e*PN		Pn	07 48 10.5	+1.9	
MALT	Malatya	4.36	104	*e*Pn		Pn	07 48 09.1	+0.6	
MALT	Malatya	4.36	104	‖ *i*P		Pg	07 48 21.5	-3.2	
MALT	Malatya	4.36	104	*e*Pn		Pn	07 48 09.1	+0.6	
DALT	Dalyan (Mudla)	4.41	233	*e*PN		Pn	07 48 09.0	-0.2	
YER	Yerkesik	4.42	239	*e*PN		Pn	07 48 10.0	+0.7	
IZM	Izmir	4.63	258	*e*PN		Pn	07 48 12.7	+0.4	
PTK	Pertek	4.97	95	*e*PN		Pn	07 48 19.0	+2.1	
URFA	Urfa	4.97	112	*e*PN		Pn	07 48 18.5	+1.6	
SVRC	Sivrice-ELAZID	5.01	101	*e*PN		Pn	07 48 18.5	+1.1	
GUMT	Gumushane	5.04	77	*e*PN		Pn	07 48 19.6	+1.7	
DAT	Datca	5.11	239	*e*PN		Pn	07 48 20.1	+1.3	
EZC	Erzincan	5.24	85	*e*PN		Pn	07 48 17.4	-3.1	
EDRB	Edirne	5.34	298	*e*PN		Pn	07 48 22.7	+0.8	
ENEZ	Enez	5.43	286	*e*PN		Pn	07 48 23.0	+1.1	
GADA	Gvkgeada	5.54	280	*e*PN		Pn	07 48 25.9	+1.1	
TIRR	Tirgusor	6.05	327	‖ *i*P		Px	07 48 44.2		
HARR	Harsova	6.44	326	‖ *i*P		Pn	07 48 46.9	+10	
TLCR		6.50	333	‖ *i*P		Pn	07 48 39.6	+1.7	
MMAI	Mount Meron Ar	6.73	163	Pn		Pn	07 48 41.8	+0.7	
	0.9nm,0.3s,baz=320,slow=15,SNR=2.2								
IDI	Anoyia	7.72	240	Pn		Pn	07 48 54.4	-0.2	
	0.3nm,0.3s,baz=351,slow=19,SNR=2.0								
ASF	Jabal al Asfar	7.94	156	LR		LR	07 52 20.8		
	comp=Z,77nm,19.8s,baz=176,slow=40								
MLR	Muntele Rosu	7.97	321	Pn		Pn	07 48 58.3	+0.3	
	0.1nm,0.3s,baz=178,slow=16,SNR=2.4								
MLR				Sn		Sn	07 50 29.2	+0.4	
	0.8nm,0.3s,baz=130,slow=19,SNR=4.0								
VOIR		8.38	318	‖ *i*P		Pn	07 49 07.9	+4.2	
GNI	Garni	9.03	82	LR		LR	07 53 30.7		
	comp=Z,32nm,19.7s,baz=89,slow=43								
GZR	Gura Zlata	9.61	311	‖ *i*P		Pn	07 49 20.0	-0.6	
BURAR	Bucovina Array	9.91	328	‖ *i*P		Pn	07 49 29.9	+5.3	
EIL	Elat	9.91	170	LR		LR	07 54 23.9		
	comp=Z,61nm,18.7s,baz=300,slow=45								
DRGR		10.50	317	‖ *i*P		Pn	07 49 36.0	+3.3	
AKASG	Malin Array Be	11.54	348	Pn		Pn	07 49 46.3	-0.5	
	0.9nm,0.3s,baz=161,slow=13,SNR=3.3								
GERES	GERESS Array B	16.70	310	LR		LR	07 56 46.8		
	comp=Z,68nm,20.3s,baz=308,slow=35								
AKTK	Aktyubinsk	20.69	50	P		P	07 51 42.5	0.0	
AKTO	Aktyubinsk	20.69	50	P		P	07 51 42.5	0.0	
	3.4nm,0.8s,baz=247,slow=5.9,SNR=8.9								
NOA	NORSAR Array B	25.46	335	P		P	07 52 31.3	+1.0	
	1.4nm,0.9s,mb3.7,baz=141,slow=7.7,SNR=3.0								
ARCES	ARCESS Array B	30.38	355	P		P	07 53 13.2	-1.0	
	4.1nm,1.1s,mb4.2,baz=163,slow=8.9,SNR=7.0								
MKAR	Makanchi Array	36.17	62	P		P	07 54 05.3	+0.3	
	0.3nm,0.5s,mb3.3,baz=280,slow=8.6,SNR=3.8								
TORD	Torodi Ar. Bea	38.10	235	P		P	07 54 21.6	0.0	
	0.6nm,0.8s,mb3.4,baz=28,slow=9.7,SNR=5.7								
CMAR	Chiang Mai Arr	60.05	90	LR		LR	08 24 41.3		
	comp=Z,56nm,18.1s,baz=318,slow=38								
YKA	Yellowknife Ar	75.09	345	P		P	07 58 43.2	-1.0	
	0.2nm,0.6s,mb3.3,baz=30,slow=5.6,SNR=8.4								

IDC 27 07:47:39.2±31.0, 5245S×13968E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.7/11, mbtmp3.6/3, MS3.4/3, Ms1 3.4/3, ms1mx3.1/18, Error ellipse: s-maj=564.5km s-min=148.9km az=145.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	20.61	5	P		P	P	07 52 19.5	-0.3
	1.0nm,0.5s,baz=183,slow=16,SNR=9.6								
STKA				LR		LR	LR	07 58 42.7	
	comp=Z,137nm,18.4s,baz=209,slow=32								
VNDA	Vanda	26.46	169	LR		LR	LR	08 02 29.0	
	comp=Z,48nm,19.5s,baz=345,slow=34								
ASAR	Alice Springs	29.08	349	P		P	P	07 53 41.2	-0.1
	0.6nm,1.0s,baz=163,slow=10,SNR=6.9								
WRA	Warramunga Arr	32.71	351	P		P	P	07 54 13.8	+0.5
	1.5nm,1.1s,baz=175,slow=7.6,SNR=5.1								
PMG	Port Moresby	43.35	11	LR		LR	LR	08 13 00.9	
	comp=Z,46nm,18.3s,baz=93,slow=35								

IDC 27 07:55:29.3±1.8, 5266N×168.31W, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=49.0km s-min=17.8km az=177.0
ISCJB 27 07:55:30.3±0.9, 5223N±007×1682W±0.1, h33km, mb3.8/7, Error ellipse: s-maj=11.4km s-min=8.8km az=135.2
NEIC 27 07:55:32.1, 5238N×168.04W, h13km, ML3.2(AEIC), After AEIC.

ISC 27 07:55:33.1±0.9, 5235N±007×1682W±01, h35km, n15, σ0s73/18, mb3.8/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIKO	Nikolski	0.73	329	P		P	Pn	07 55 46.3	-0.7
NIKO				S		S	Sn	07 55 57.7	+0.8
OKFG	Magazine Ridge	1.08	10	P		P	Pn	07 55 51.0	-0.8
OKFG				S		S	Sn	07 56 06.4	+0.9
OKCD	Okmok Cone D	1.09	4	P		P	Pn	07 55 51.8	0.0
UNV	Unalaska Valle	1.83	34	P		P	Pn	07 56 01.3	-0.6
UNV				S		S	Sn	07 56 23.4	-0.4
FX1	Attu Island--F	11.33	280	Pn		Pn	Pn	07 58 12.5	+0.3
	0.6nm,0.3s,baz=97,slow=12,SNR=5.7								
FX1	Attu Island--F	11.33	280	Pn		Pn	Pn	07 58 12.5	+0.3
PETK	Petropavlovsk-	20.54	286	P		P	P	08 00 08.5	+0.3
	2.4nm,0.6s,baz=81,slow=14,SNR=8.9								
YKA	Yellowknife Ar	29.73	49	P		P	P	08 01 36.7	+1.2
	0.2nm,0.6s,mb3.0,baz=276,slow=8.6,SNR=4.8								
YKA	Yellowknife Ar	29.73	49	P		P	P	08 01 36.7	+1.2
TXAR	Lajitas Array	52.05	90	P		P	P	08 04 40.6	+1.5
	0.2nm,0.7s,mb3.1,baz=310,slow=5.6,SNR=3.2								
ARCES	ARCESS Array B	58.02	354	P		P	P	08 05 20.6	-1.1
	1.8nm,0.8s,mb4.1,baz=4.6,slow=6.1,SNR=5.6								
BVAR	Borovoye Array	64.13	325	P		P	P	08 06 03.1	-0.3
	0.6nm,0.4s,mb4.0,baz=61,slow=6.5,SNR=5.2								
MKAR	Makanchi Array	64.33	314	P		P	P	08 06 04.7	0.0
	0.4nm,0.8s,mb3.5,baz=31,slow=6.7,SNR=3.8								
NOA	NORSAR Array B	66.96	0	P		P	P	08 06 20.9	-0.6
	2.0nm,0.9s,mb4.2,baz=102,slow=5.9,SNR=2.8								
HFS	Hagfors	67.86	359	P		P	P	08 06 26.6	-0.6
	1.9nm,0.4s,mb4.5,baz=40,slow=4.8,SNR=19								

MOS 27 08:04:25.4±1.7, 5237N×159.21E, h76km, mb4.3/1, Error ellipse: s-maj=62.6km s-min=15.8km az=75.3

KRSC 27 08:04:26.1±1.2, 5234N×15925E, h82km±72km, ML4.2, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PET	Petropavlovsk	0.78	332	‖ *i*PN		Pn	Pn	08 04 43.7	+1.0
PET				*e*S		Sn	Sn	08 04 57.0	+2.0
PET				pmax		pmax			
	comp=Z,400nm,0.2s								
PET				pmax		pmax			
	comp=Z,330nm,0.2s								
PET				smax					
	comp=E,518nm,0.6s								
PET				smax					
	comp=N,500nm,0.3s								
PET				smax					
	comp=N,573nm,0.5s								
PET	Petropavlovsk	0.78	332	*e*P		Pn	Pn	08 04 44.0	+1.3
PET				*i* S		Sn	Sn	08 04 56.7	+1.7
NLC	Nalytchevo	0.83	4	*e*P		Pn	Pn	08 04 44.8	+1.5
NLC				*i* S		Sn	Sn	08 04 58.1	+1.9
SPN	Mys Shipunski	0.89	31	*e*P		Pn	Pn	08 04 45.8	+1.8
SPN				*i* S		Sn	Sn	08 05 00.1	+2.8
AVH	Avacha	0.98	342	*e*P		Pn	Pn	08 04 46.9	+2.0
GNL	Ganaly	1.57	330	*e*P		Pn	Pn	08 04 53.1	+0.8
KII	Karymskiy	1.70	4	*e*P		Pn	Pn	08 04 56.1	+2.0
SKR	Severo-Kuril's	2.57	231	*e*PN		Pn	Pn	08 05 03.9	-1.6
SKR				*e*S		Sn	Sn	08 05 32.4	-3.4
SKR				pmax		pmax			
	comp=Z,80nm,0.5s								
SKR				smax					
	comp=N,230nm,0.5s								
SKR				smax					
	comp=E,150nm,0.5s								
SKR				smax					
	comp=Z,80nm,0.5s								
MKZ	Mys Kozlova	2.67	33	*e*P		Pn	Pn	08 05 08.0	+1.1
MKZ				*i* S		Sn	Sn	08 05 38.9	+0.6
TUMR	Tumrok	3.00	10	P		Pn	Pn	08 05 13.8	+2.5
KMNR	Kamenistaya	3.47	9	*e*P		Pn	Pn	08 05 20.4	+2.6
BZMR	Bezymyannaya	3.68	11	*e*P		Pn	Pn	08 05 23.0	+2.5
KIRR	Kirishev	3.68	10	*e*P		Pn	Pn	08 05 23.1	+2.6
KPT	Kopyto	3.68	9	*e*P		Pn	Pn	08 05 22.7	+1.6
BZWR	Bezymyannyi-We	3.71	11	*e*P		Pn	Pn	08 05 23.4	+2.5
BZGR	Bezymyannyi-Gr	3.71	13	*e*P		Pn	Pn	08 05 23.5	+2.6
ZLN	Zelenaya	3.80	13	P		Pn	Pn	08 05 24.9	+2.8
CIRR	Tsirk	3.88	12	*e*P		Pn	Pn	08 05 26.3	+3.0
SRDR	Sredinnyy	4.00	4	P		Pn	Pn	08 05 25.9	+1.1
KBTR	Krutoberegovo	4.40	27	*e*P		Pn	Pn	08 05 31.7	+1.3
SRKR	Sorokina	4.46	14	P		Pn	Pn	08 05 33.7	+2.5

ISCJB 27 08:07:02.0±0.2, 3905S±003×17573E±005, h124km±2km, mb4.7/14, Error ellipse: s-maj=6.8km s-min=4.4km az=27.3
NEIC 27 08:07:03.6, 3895S×17567E, h117km, mb5.2/2, After WEL.
NEIC Felt widely on the North Island.
IDC 27 08:07:04.0±0.7, 3868S×17593E, h136km±9km, mb4.3/10, mb1 4.4/10, mb1mx4.3/14, mbtmp4.3/10, MS3.5/5, Ms1 3.5/5, ms1mx3.3/15, Error ellipse: s-maj=20.8km s-min=14.4km az=49.0

ISC 27 08:07:02.8±0.2, 3906S±003×17573E±005, h119km±2km, h122km±3.5km; pP-P, n113, σ1s11/103, mb4.7/14, 3C-4D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.09	344	P		P	Pn	08 07 19.7	+0.6
KATZ				S		S	Sn	08 07 32.4	+1.1
WTVZ	West Tongariro	0.12	243	P		P	Pn	08 07 19.7	+0.6
WTVZ				S		S	Sn	08 07 32.1	+0.7
RITZ	Rihia Road	0.13	51	P		P	Pn	08 07 19.9	+0.7
RITZ				S		S	Sn	08 07 32.4	+1.0
NGZ	Ngauruhoe	0.15	220	P		P	Pn	08 07 19.8	+0.6
RATZ	Rangitukua	0.20	10	P		P	Pn	08 07 19.6	+0.3
RATZ				S		S	Sn	08 07 32.1	+0.4
TUVZ	Tukino	0.21	195	P		P	Pn	08 07 20.5	+1.1
TWVZ	Taurewa	0.23	267	P		P	Pn	08 07 20.1	+0.7
FWVZ	Far West T-bar	0.24	215	P		P	Pn	08 07 19.8	+0.4
DRZ	Dome Shelter	0.25	210	P		P	Pn	08 07 20.7	+1.2
WNVZ	Wahianoa	0.28	200	P		P	Pn	08 07 20.8	+1.2
HATZ	Hinemaiaia	0.33	59	P		P	Pn	08 07 20.0	+0.2
HATZ				S		S	Sn	08 07 32.3	-0.2
MOVZ	Moawhango	0.35	177	P		P	Pn	08 07 20.7	+0.9
WATZ	Wairara	0.35	1	P		P	Pn	08 07 20.2	+0.3
WATZ				S		S	Sn	08 07 32.4	-0.3
WHTZ	Whakaora	0.43	25	P		P	Pn	08 07 20.8	+0.5
BKZ	Black Stump Fm	0.60	100	*e*P		P	Pn	08 07 20.8	-0.5
VRZ	Vera Road	0.76	265	P		P	Pn	08 07 22.5	0.0
HIZ	Hauiti	0.87	309	P		P	Pn	08 07 23.1	-0.5
WAZ	Wanganui	0.90	219	P		P	Pn	08 07 25.1	+1.3
UTU	Utuhina	0.96	23	P		P	Pn	08 07 24.6	+0.2
TSZ	Takapari Road	1.01	170	P		P	Pn	08 07 26.4	+1.5
RAEZ	Rainy Point	1.06	257	P		P	Pn	08 07 26.7	+1.4
EDRZ	Edgecumbe	1.24	40	P		P	Pn	08 07 27.0	-0.3
NEZ	North Egmont	1.28	260	P		P	Pn	08 07 29.1	+1.4
TOZ	Tahuroa Road	1.34	352	P		P	Pn	08 07 28.3	-0.1
URZ	Urewera	1.35	54	P		P	Pn	08 07 28.0	-0.4
	382nm,0.3s,baz=247,slow=6.1,SNR=1739								
URZ				S		S	Sn	08 07 45.6	+1.9
	3μm,0.3s,baz=98,slow=19,SNR=268								
URZ	Urewera	1.35	54	P		P	Pn	08 07 27.6	-0.8
PKE	Pukeiti	1.36	264	P		P	Pn	08 07 29.4	+0.8
TGRZ	Tauranga	1.40	18	P		P	Pn	08 07 28.8	-0.2
TGRZ				S		S	Sn	08 07 47.5	+2.6
NWEZ	Newall Road	1.46	261	P		P	Pn	08 07 30.4	+0.7
KNZ	Kokohu	1.52	89	P		P	Pn	08 07 30.6	+0.2
MWZ	Matawai	1.59	63	P		P	Pn	08 07 31.1	-0.1
BFZ	Birch Farm	1.67	166	P		P	Pn	08 07 32.6	+0.5
KIW	Kapiti Island	1.90	199	P		P	Pn	08 07 35.2	+0.2
WIZ	White Island	1.92	37	P		P	Pn	08 07 34.0	-1.2
MKAZ	Moumakai	2.00	347	P		P	Pn	08 07 35.7	-0.5
MTW	Mount Morrison	2.10	185	P		P	Pn	08 07 37.4	-0.1
OTAZ	Otara	2.20	343	P		P	Pn	08 07 38.6	-0.2
PUZ	Puketiti	2.22	64	P		P	Pn	08 07 38.2	-0.7
MRW	Makara Radio	2.30	200	P		P	Pn	08 07 39.7	-0.3
KUZ	Kuaotunu	2.31	360	P		P	Pn	08 07 39.1	-1.1
PAWZ	Paruwai Farm	2.33	186	P		P	Pn	08 07 40.1	-0.2
SNZO	South Karori	2.38	199	P		P	Pn	08 07 40.5	-0.5
MSWZ	Moikau Station	2.38	189	P		P	Pn	08 07 40.6	-0.4
TCW	Tory Channel	2.42	207	P		P	Pn	08 07 41.0	-0.5
BHW	Baring Head	2.43	195	P		P	Pn	08 07 41.2	-0.5
MXZ	Matakaoa Point	2.52	54	P		P	Pn	08 07 42.1	-0.8
MXZ				S		S	Sn	08 08 12.7	+0.5
NNZ	Nelson	2.81	219	P		P	Pn	08 07 45.4	-1.1
CMWZ	Cape Campbell	2.92	203	P		P	Pn	08 07 47.8	-0.2
QRZ	Quartz Range	3.02	233	P		P	Pn	08 07 48.0	-1.4
THZ	Tophouse	3.45	218	P		P	Pn	08 07 53.6	-1.4
DSZ	Denniston Nort	4.02	227	P		P	Pn	08 08 00.5	-2.1
OUZ	Omahuta	4.20	335	P		P	Pn	08 08 04.7	-0.3
LTZ	Lake Taylor	4.55	214	P		P	Pn	08 08 07.1	-2.5
CRLZ	Canterbury Las	5.08	206	P		P	Pn	08 08 13.6	-3.2
WVZ	Waitaha Valley	5.50	222	P		P	Pn	08 08 19.7	-2.8
RPZ	Rata Peaks	5.83	216	P		P	Pn	08 08 24.7	-2.1
	47nm,0.3s,baz=44,slow=2.6,SNR=103								
RPZ				S		S	Sn	08 09 26.7	-5.6
	63nm,0.3s,baz=315,slow=3.2,SNR=12								
RPZ	Rata Peaks	5.83	216	P		P	Pn	08 08 24.1	-2.7
FOZ	Fox Glacier	6.39	223	P		P	Pn	08 08 29.7	-4.8
LBZ	Lake Benmore	6.74	216	P		P	Pn	08 08 35.7	-3.5
ODZ	Otahua Downs	7.07	211	P		P	Pn	08 08 40.0	-3.7
JCZ	Jackson Bay	7.24	224	P		P	Pn	08 08 42.1	-3.8
WKZ	Wanaka	7.63	219	P		P	Pn	08 08 46.7	-4.5
EAZ	Earnscleugh	7.79	216	P		P	Pn	08 08 49.8	-3.6
TUZ	Tuapeka	8.23	211	P		P	Pn	08 08 56.2	-3.1
MLZ	Mavora Lakes	8.41	219	P		P	Pn	08 08 58.8	-3.0
WHZ	Wether Hill Ro	8.92	218	P		P	Pn	08 09 05.0	-3.7
ARMA	Armidale	21.55	286	*e*P		P	P	08 11 45.6	+3.0
TOO	Toolangi	23.72	264	*e*P		P	P	08 12 04.9	+1.1
AFI	Afiamalu	27.38	27	LR		LR	LR	08 22 46.7	
	comp=Z,37nm,18.1s,baz=223,slow=35								
RAR	Rarotonga	27.53	57	LR		LR	LR	08 21 03.8	
	comp=Z,100nm,18.2s,baz=27,slow=31								
STKA	Stephens Creek	28.59	274	P		P	P	08 12 49.1	+1.4
	12nm,0.7s,mb4.6,baz=105,slow=9.6,SNR=36								
STKA				LR		LR	LR	08 22 33.4	
	comp=Z,60nm,18.3s,baz=41,slow=32								
STKA	Stephens Creek	28.59	274	‖ *i*P		P	P	08 12 49.1	+1.4
	10nm,0.8s,mb4.5								
STKA	Stephens Creek	28.59	274	*e*P		P	P	08 12 49.0	+1.4
	1.9nm,0.8s,mb3.8								
CTA	Charters Tower	31.64	298	*e*P		P	P	08 13 15.6	+0.9
	2.0nm,0.4s,mb4.2								
TBI	Tubuai	33.41	72	*e*LR		LR	LR	08 22 34.1	
	157nm,36.8s								
PPT	Papeete	36.98	65	*e*LR		LR	LR	08 24 12.6	
	226nm,35.2s								
PPT	Papeete	36.98	65	LR		LR	LR	08 25 44.1	
	comp=Z,122nm,19.3s,baz=97,slow=30								
ASAR	Alice Springs	38.51	281	P		P	P	08 14 13.8	+0.2
	28nm,0.9s,mb5.1,baz=123,slow=7.5,SNR=160								
ASAR				PcP		PcP	PcP	08 16 22.0	-2.1
	1.6nm,0.7s,baz=114,slow=3.8,SNR=4.1								
ASAR				ScP		ScP	ScP	08 19 59.1	-1.9
	0.6nm,0.9s,baz=114,slow=4.2,SNR=5.0								
VNDA	Vanda	39.01	185	P		P	P	08 14 19.5	+2.3
	1.1nm,0.9s,mb3.7,baz=360,slow=6.4,SNR=3.2								
PMG	Port Moresby	39.05	312	P		P	P	08 14 16.2	-1.9
	15nm,0.8s,mb4.9,baz=112,slow=5.3,SNR=6.9								
FORT	Forrest	39.57	267	‖ *i*P		P	P	08 14 22.1	-0.3
	15nm,0.5s,mb5.1								
FORT	Forrest	39.57	267	*e*P		P	P	08 14 22.2	-0.2
	28nm,0.8s,mb5.2								
WB2	Warramunga Arr	40.32	286	‖ *i*P		P	P	08 14 28.6	-0.1
WRAB	Tennant Creek	40.33	286	P		P	P	08 14 28.0	-0.7
	335nm,0.8s,SNR=22								
WRAB	Tennant Creek	40.33	286	*e*P		P	P	08 14 28.5	-0.2
	33nm,0.7s,mb5.3								
WRA	Warramunga Arr	40.33	286	P		P	P	08 14 28.8	0.0
	26nm,0.6s,mb5.2,baz=124,slow=8.2,SNR=137								
FITZ	Fitzroy Crossi	48.02	281	‖ *i*P		P	P	08 15 30.0	0.0
	29nm,0.8s,mb5.2								
QSPA	South Pole Qui	51.06	180	P		P	P	08 15 55.9	+3.6
	4.0nm,0.4s,mb4.6,baz=23,slow=1.6,SNR=10								
QSPA	South Pole Qui	51.06	180	P		P	P	08 15 55.9	+3.6
MAW	Mawson	62.37	203	P		P	P	08 17 13.2	+1.0
	14nm,1.0s,mb4.9,baz=116,slow=9.9,SNR=5.4								
SYO	Syowa Base	67.47	196	‖ *i*P		P	P	08 17 44.4	-0.9
SYO	Syowa Base	67.47	196	‖ *e*P		PcP	PcP	08 18 13.4	+1.6
SYO	Syowa Base	67.47	196	‖ *e*P		sP	sP	08 18 31.6	+4

IDAH					*e*Sn		**Sn**	**09 23 09.0**	**-0.6**
IDAH	**Dahanechah**	**2.86**	**63**		*e*Pn		**Pn**	**09 22 35.4**	**+0.3**
IDAH					*e*Sn		**Sn**	**09 23 09.0**	**-0.6**
IDAH					*e*			09 23 24.0	
IPAR	**Pars**	**3.65**	**244**		*e*Pn		**Pn**	**09 22 49.0**	**+3.0**
IPAR	**Pars**	**3.65**	**244**		*e*Pn		**Pn**	**09 22 49.0**	**+3.0**
IPAR					*e*			09 24 02.5	
NASN	**Na'in**	**3.66**	**292**		*e*Pn		**Pn**	**09 22 46.7**	**+0.7**
NASN					AML		AML	09 23 54.7	
	comp=N,120nm,0.4s								
ISRV	**Sarvestan**	**3.84**	**238**		*e*Pn		**Pn**	**09 22 48.1**	**-0.4**
ISRV	**Sarvestan**	**3.84**	**238**		*e*Pn		**Pn**	**09 22 48.1**	**-0.4**
ZHSF	**Zahedan**	**3.88**	**118**		*e*Pn		**Pn**	**09 22 55.5**	**+6.3**
ZHSF					AML		AML	09 24 06.7	
	comp=N,87nm,0.7s								
ZHSF					AML		AML	09 24 12.5	
	comp=E,64nm,0.7s								
IZEF	**Zefreh**	**4.07**	**291**		*e*Pn		**Pn**	**09 22 51.8**	**+0.1**
BNDS	**Bandar-Abbas**	**4.12**	**188**		*e*Pn		**Pn**	**09 22 52.8**	**+0.5**
IMOK	**Mouk**	**4.32**	**237**		*e*Pn		**Pn**	**09 22 51.4**	**-3.7**
IANJ	**Anjilo**	**4.66**	**329**		*e*Pn		**Pn**	**09 22 59.5**	**-0.3**
IANJ	**Anjilo**	**4.66**	**329**		*e*Pn		**Pn**	**09 22 59.5**	**-0.3**
IANJ					*e*			09 24 27.2	
ISFB	**Sefidab**	**4.80**	**308**		*e*Pn		**Pn**	**09 23 01.5**	**-0.3**
ISFB	**Sefidab**	**4.80**	**308**		*e*Pn		**Pn**	**09 23 01.5**	**-0.3**
IKLH	**Kolahrood**	**4.80**	**294**		*e*Pn		**Pn**	**09 23 01.6**	**-0.2**
IKLH	**Kolahrood**	**4.80**	**294**		*e*Pn		**Pn**	**09 23 01.6**	**-0.2**
IMOG	**Moghan**	**5.06**	**24**		*e*Pn		**Pn**	**09 23 07.3**	**+2.0**
IMOG	**Moghan**	**5.06**	**24**		*e*Pn		**Pn**	**09 23 07.3**	**+2.0**
IPIR	**Pirpir**	**5.18**	**285**		*e*Pn		**Pn**	**09 23 08.8**	**+1.8**
IPIR	**Pirpir**	**5.18**	**285**		*e*Pn		**Pn**	**09 23 08.8**	**+1.8**
IPIR					*e*			09 24 41.8	
ISHM	**Shahmirzad**	**5.22**	**327**		*e*Pn		**Pn**	**09 23 07.5**	**-0.1**
ISHM	**Shahmirzad**	**5.22**	**327**		*e*Pn		**Pn**	**09 23 07.5**	**-0.1**
IPAY	**Payeh**	**5.26**	**19**		*e*Pn		**Pn**	**09 23 08.2**	**0.0**
IPAY	**Payeh**	**5.26**	**19**		*e*Pn		**Pn**	**09 23 08.2**	**0.0**
IAKL	**Akhelmad**	**5.34**	**17**		*e*Pn		**Pn**	**09 23 08.9**	**-0.3**
IAKL	**Akhelmad**	**5.34**	**17**		*e*Pn		**Pn**	**09 23 08.9**	**-0.3**
IAKL					*e*			09 24 47.4	
IFIR	**Firoozkooh**	**5.36**	**322**		*e*Pn		**Pn**	**09 23 09.4**	**-0.1**
IFIR	**Firoozkooh**	**5.36**	**322**		*e*Pn		**Pn**	**09 23 09.4**	**-0.1**
IFIR					*e*			09 24 12.8	
IVRN	**Varamin**	**5.53**	**311**		*e*Pn		**Pn**	**09 23 11.7**	**0.0**
IVRN	**Varamin**	**5.53**	**311**		*e*Pn		**Pn**	**09 23 11.7**	**0.0**
GHVR	**GHOM**	**5.53**	**304**		*e*Pn		**Pn**	**09 23 13.8**	**+2.0**
GHVR					AML		AML	09 25 17.5	
	comp=N,39nm,0.6s								
IMYA	**Miami**	**5.55**	**28**		*e*Pn		**Pn**	**09 23 11.9**	**-0.2**
IMYA	**Miami**	**5.55**	**28**		*e*Pn		**Pn**	**09 23 11.9**	**-0.2**
ISFR	**Sfrayin**	**5.63**	**10**		*e*Pn		**Pn**	**09 23 12.9**	**-0.3**
ISFR	**Sfrayin**	**5.63**	**10**		*e*Pn		**Pn**	**09 23 12.9**	**-0.3**
IDMV	**Damavand**	**5.72**	**317**		*e*Pn		**Pn**	**09 23 14.3**	**-0.1**
IDMV	**Damavand**	**5.72**	**317**		*e*Pn		**Pn**	**09 23 14.3**	**-0.1**
IDMV					*e*			09 25 08.1	
ASAO	**Ashtian**	**6.48**	**300**		*e*Pn		**Pn**	**09 23 26.0**	**+1.2**

IDC ***27*** *09:22:09.0±1.9, 59.5S×130.64E, h0km, mb3.8/2, mb1 4.0/4, mb1mx3.7/14, mbtmp3.8/4, ML4.2/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/20, Error ellipse: s-maj=132.2km s-min=25.7km az=68.0*

ISCJB ***27*** *09:22:12.0±1.4, 60.5S±0.1×130.6E±0.2, h33km, mb4.0/3, Error ellipse: s-maj=32.2km s-min=13.3km az=149.7*

NEIC ***27*** *09:22:14.8±3.7, 6.10S×130.46E, h36km±36km, mb4.3/2, Error ellipse: s-maj=38.0km s-min=18.3km az=221.0*

ISC 27 09:22:14.9±3.7,**61S**±02×**130 5E**±02,**h37**km±36km,**n9,** σ1§**38**/8,**mb4.0**/3,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.84**	**201**	*e*Pn	**Pn**	**09 25 12.8**	**-2.2**
FITZ				*e*Sn	Sx	09 27 22.7	
WRAB	**Tennant Creek**	**14.27**	**165**	*e*Pn	**Pn**	**09 25 35.0**	**+0.4**
WRAB				*e*Sn	Sx	09 28 01.1	
WRA	**Warramunga Arr**	**14.28**	**165**	Pn	**Pn**	**09 25 34.8**	**+0.2**
	1.2nm,0.3s,baz=348,slow=14,SNR=46						
WRA				Sn	Sx	09 27 59.4	
	1.2nm,0.3s,baz=350,slow=24,SNR=9.8						
ASAR	**Alice Springs**	**17.79**	**170**	P	**Pn**	**09 26 20.6**	**+1.0**
	0.5nm,0.3s,baz=346,slow=11,SNR=21						
ASAR				S	Sx	09 29 25.1	
	0.5nm,0.3s,baz=327,slow=15,SNR=6.4						
MBWA	**Marble Bar**	**18.24**	**214**	*e*Pn	**Pn**	**09 26 26.3**	**+1.0**
	9.0nm,1.2s						
KSM	**Kuching**	**21.48**	**290**	*e*P	**P**	**09 27 00.9**	**+0.3**
	47nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**27.68**	**159**	P	**P**	**09 27 58.5**	**-1.1**
	0.4nm,0.4s,mb3.4,baz=348,slow=8.7,SNR=4.3						
SONM	**Songino Array**	**57.73**	**341**	LR	LR	09 57 23.4	
	comp=Z,35nm,18.4s,baz=215,slow=37						
MKAR	**Makanchi Array**	**67.73**	**326**	P	**P**	**09 33 08.4**	**-0.1**
	0.5nm,0.5s,mb3.8,baz=124,slow=7.2,SNR=7.2						

NEIC ***27*** *09:24:55.0, 5228N×168.10W, h6km, ML3.2(AEIC), After AEIC.*

ISCJB ***27*** *09:24:55.5±1.8, 522N±0.1×1683W±0.1, h36km±15km, mb3.6/11, Error ellipse: s-maj=18.2km s-min=10.3km az=168.3*

IDC ***27*** *09:24:59.2±4.2, 5228N×168.37W, h52km±38km, mb3.5/12, mb1 3.7/13, mb1mx3.6/28, mbtmp3.5/13, ML3.3/1, Error ellipse: s-maj=30.3km s-min=14.6km az=3.0*

ISC 27 09:24:55.9±2.1,**5223N**±007×**1683W**±01,**h25**km±13km,**n20,** σ0§**76**/23,**mb3.6**/11,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.82**	**335**	P	**Pb**	**09 25 10.6**	**-0.9**
NIKO				S	**Sb**	**09 25 23.1**	**+0.8**
OKFG	**Magazine Ridge**	**1.20**	**11**	P	**Pn**	**09 25 16.7**	**-0.5**
OKFG				S	**Sn**	**09 25 33.9**	**+1.2**
OKCD	**Okmok Cone D**	**1.21**	**5**	P	**Pn**	**09 25 16.9**	**-0.3**
UNV	**Unalaska Valle**	**1.94**	**33**	P	**Pn**	**09 25 26.4**	**-0.9**
UNV				S	**Sn**	**09 25 50.2**	**-0.7**
FX1	**Attu Island--F**	**11.32**	**281**	P	**Pn**	**09 27 37.2**	**+1.4**
	0.6nm,0.3s,baz=24,slow=8.7,SNR=4.1						
FX1	**Attu Island--F**	**11.32**	**281**	P	**Pn**	**09 27 37.2**	**+1.4**
PETK	**Petropavlovsk-**	**20.54**	**286**	P	**P**	**09 29 32.0**	**-0.3**
	3.8nm,0.5s,baz=82,slow=13,SNR=26						
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**09 31 01.4**	**+0.8**
	0.2nm,0.6s,mb3.0,baz=272,slow=7.7,SNR=11						
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**09 31 01.4**	**+0.8**
NVAR	**Mina Array Bea**	**36.99**	**92**	P	**P**	**09 32 04.2**	**+1.0**
	0.4nm,0.7s,mb3.4,baz=324,slow=4.5,SNR=3.2						
PDAR	**Pinedale Array**	**39.77**	**80**	P	**P**	**09 32 27.3**	**+0.8**
	0.8nm,0.9s,mb3.5,baz=313,slow=4.9,SNR=6.0						
SONM	**Songino Array**	**51.95**	**301**	P	**P**	**09 34 01.7**	**-0.6**
	0.4nm,0.5s,mb3.6,baz=50,slow=7.8,SNR=3.2						
TXAR	**Lajitas Array**	**52.08**	**90**	P	**P**	**09 34 03.7**	**+0.1**
	0.3nm,0.7s,mb3.3,baz=316,slow=5.0,SNR=2.9						
TXAR	**Lajitas Array**	**52.08**	**90**	P	**P**	**09 34 03.7**	**+0.1**
BVAR	**Borovoye Array**	**64.20**	**325**	P	**P**	**09 35 27.4**	**-0.7**
	0.8nm,0.4s,mb4.1,baz=64,slow=6.8,SNR=5.1						
AKTO	**Aktyubinsk**	**70.47**	**331**	P	**P**	**09 36 07.7**	**-0.1**
	1.5nm,0.8s,mb4.0,baz=50,slow=6.1,SNR=4.8						
AKASG	**Malin Array Be**	**76.38**	**349**	P	**P**	**09 36 41.7**	**-0.9**
	0.9nm,0.4s,mb4.0,baz=14,slow=5.8,SNR=3.2						
CMAR	**Chiang Mai Arr**	**77.30**	**284**	P	**P**	**09 36 48.5**	**+0.3**
	0.5nm,0.3s,mb3.9,baz=34,slow=6.1,SNR=5.5						
WRA	**Warramunga Arr**	**87.44**	**232**	P	**P**	**09 37 40.1**	**-0.9**
	0.2nm,0.6s,mb3.5,baz=33,slow=5.8,SNR=4.0						
ASAR	**Alice Springs**	**90.82**	**231**	P	**P**	**09 37 57.2**	**+0.4**
	0.1nm,0.3s,mb3.6,baz=1.4,slow=5.0,SNR=4.5						

ISCJB ***27*** *09:39:39.8±1.0, 39.38N±005×33.15E±005, h11km±8km, Error ellipse: s-maj=8.9km s-min=5.9km az=146.3*

CSEM ***27*** *09:39:39.9, 3940N×3318E, h10km, MD2.7, After ISK*

DDA ***27*** *09:39:39.2, 3939N×3314E, h6km±1km, Md2.3*

ISK ***27*** *09:39:39.9, 3940N×3318E, h10km, MD2.7*

ISC 27 09:39:39.3±0.7,**3937N**±005×**3312E**±005,**h1**km±10km,**n9,** σ0§**86**/13,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.46**	**90**	PG	**Pg**	**09 39 48.1**	**0.0**
KAMT				*e*SG	**Sg**	**09 39 55.2**	**+1.2**
LOD	**Lodumlu**	**0.58**	**332**	*e*PG	**Pg**	**09 39 51.7**	**+1.2**
CDAG	**Cicekdag**	**1.00**	**75**	*i* P	**Pg**	**09 39 58.1**	**-0.4**
CDAG				*i* S	**Sg**	**09 40 11.0**	**-0.4**
KIZT	**Kizilcal**	**1.08**	**243**	*e*PN	**Pn**	**09 40 01.9**	**+0.3**
ELDT	**Eldivan**	**1.14**	**12**	*i* P	**Pg**	**09 40 00.7**	**-0.5**
ELDT				*i* S	**Sg**	**09 40 15.6**	**-0.3**
KDHN	**Kadinhani**	**1.16**	**223**	*i* P	**Pg**	**09 40 01.9**	**+0.4**
KDHN				*i* S	**Sg**	**09 40 14.8**	**-1.6**
LADK	**Ladik-KONYA**	**1.31**	**207**	*e*PN	**Pn**	**09 40 06.2**	**+1.5**
CORM	**Corum**	**1.41**	**55**	*e*PN	**Pn**	**09 40 05.7**	**-0.5**
YOZ	**Yozgat**	**1.72**	**80**	*e*PN	**Pn**	**09 40 09.4**	**-1.0**

ISCJB ***27*** *09:48:36.7±1.1, 394N±0.1×134.4E±008, h1km±20km, Error ellipse: s-maj=23.2km s-min=4.6km az=157.0*

CSEM ***27*** *09:48:36.0, 3938N×3313E, h5km, MD2.7, After ISK*

ISK ***27*** *09:48:36.0, 3938N×3313E, h5km, MD2.7*

DDA ***27*** *09:48:38.5, 3939N×3316E, h3km±1km, Md2.4*

ISC 27 09:48:37.7±0.7,**393N**±01×**3317E**±008,**h11**km±16km,**n8,** σ1§**09**/13,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.42**	**84**	PG	**Pg**	**09 48 45.1**	**-0.8**
KAMT				*e*SG	**Sg**	**09 48 51.9**	**+0.3**
CDAG	**Cicekdag**	**0.97**	**72**	*i* P	**Pg**	**09 48 57.4**	**+1.0**
CDAG				*i* S	**Sg**	**09 49 10.1**	**+1.0**
KIZT	**Kizilcal**	**1.10**	**246**	*e*PN	**Pn**	**09 48 57.3**	**-1.5**
KIZT				*e*SN	**Sg**	**09 49 12.8**	**-0.2**
KDHN	**Kadinhani**	**1.15**	**226**	*i* P	**Pg**	**09 49 01.5**	**+1.7**
KDHN				*i* S	**Sg**	**09 49 16.1**	**+1.4**
ELDT	**Eldivan**	**1.18**	**10**	*i* P	**Pn**	**09 49 00.5**	**+0.5**
ELDT				*i* S	**Sn**	**09 49 16.2**	**0.0**
CORM	**Corum**	**1.41**	**52**	*e*PN	**Pn**	**09 49 03.1**	**-0.2**
KONT	**Konya--Tatoy**	**1.52**	**205**	*e*PN	**Pg**	**09 49 05.5**	**-1.3**
YOZ	**Yozgat**	**1.69**	**79**	*e*PN	**Pg**	**09 49 08.0**	**-2.1**

ISCJB ***27*** *09:50:51.8±0.6, 3938N±004×3308E±005, h11km±7km, Error ellipse: s-maj=8.3km s-min=5.3km az=138.6*

CSEM ***27*** *09:50:51.5, 3935N×3308E, h12km, MD2.7, After ISK*

ISK ***27*** *09:50:51.5, 3935N×3308E, h12km, MD2.7*

DDA ***27*** *09:50:52.5, 3941N×3312E, h6km±1km, Md2.7*

ISC 27 09:50:52.5±0.6,**3938N**±004×**3309E**±005,**h15**km±7km,**n12,** σ0§**68**/15,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**91**	*e*PG	**Pg**	**09 51 01.9**	**-0.2**
KAMT				*e*SG	**Sg**	**09 51 08.6**	**0.0**
LOD	**Lodumlu**	**0.57**	**334**	*e*PG	**Pg**	**09 51 02.9**	**-0.8**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P	**Pg**	**09 51 11.5**	**-0.8**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**09 51 12.2**	**-0.9**
ELDT	**Eldivan**	**1.14**	**13**	*i* P	**Pg**	**09 51 14.4**	**-0.1**
ELDT				*i* S	**Sg**	**09 51 30.2**	**+0.9**
KDHN	**Kadinhani**	**1.15**	**222**	*i* P	**Pg**	**09 51 15.3**	**+0.6**
KDHN				*i* S	**Sg**	**09 51 30.9**	**+1.3**
LADK	**Ladik-KONYA**	**1.31**	**206**	*e*PN	**Pn**	**09 51 15.3**	**-1.0**
CORM	**Corum**	**1.43**	**56**	*e*PN	**Pn**	**09 51 18.7**	**+0.8**
KONT	**Konya--Tatoy**	**1.54**	**202**	*e*PN	**Pn**	**09 51 19.0**	**-0.5**
NIG	**Nigde**	**1.74**	**136**	*e*PN	**Pn**	**09 51 22.2**	**0.0**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**09 51 22.6**	**+0.4**
BNN	**Bunyan**	**2.21**	**103**	*e*PN	**Pn**	**09 51 29.0**	**+0.4**

NIED ***27*** *09:56:00, 3660N×141.40E, h32km, Mw3.7 Best double couple: M0 3.52000×10^14 NP1:φs 175.00000°, δ79.00000°, λ-54.00000°. NP2:φs 279.00000°, δ38.00000°, λ-162.00000°.*

ISCJB ***27*** *09:56:10.6±1.0, 3658N±005×14158E±008, h33km, mb3.6/5, Error ellipse: s-maj=9.6km s-min=7.2km az=18.0*

JMA ***27*** *09:56:12.7±0.1, 3657N×141.34E, h47km±2km, M3.7*

JMA Felt I J1.

NEIC ***27*** *09:56:12.8, 3658N×141.34E, h47km, MG3.7(JMA), After JMA.*

IDC ***27*** *09:56:16.7±3.4, 3646N×141.19E, h65km±26km, mb3.5/5, mb1 3.6/7, mb1mx3.3/25, mbtmp3.5/7, ML3.6/2, Error ellipse: s-maj=40.3km s-min=25.6km az=79.0*

ISC 27 09:56:12.9±1.0,**3659N**±005×**14145E**±008,**h35**km,**n18,** σ0§**88**/24,**mb3.6**/5,**1C-5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.71**	**272**	⇓P	**Pn**	**09 56 25.3**	**-1.1**
JHO				S	**Sn**	**09 56 34.1**	**-2.0**
ONAJ	**Iwakimizuishiy**	**0.73**	**314**	⇓P	**Pn**	**09 56 25.8**	**-0.9**
ONAJ				S	**Sn**	**09 56 35.8**	**-0.8**
JFK	**Kawauchi**	**0.90**	**329**	⇓P	**Pn**	**09 56 28.4**	**-0.6**
JFK				S	**Sn**	**09 56 40.2**	**-0.6**
JYT	**Yasato**	**1.08**	**251**	P	**Pn**	**09 56 30.3**	**-1.2**
JFT	**Otama**	**1.28**	**316**	⇓P	**Pn**	**09 56 34.9**	**+0.6**
JFT				S	**Sn**	**09 56 51.0**	**+0.8**
JMM	**Marumori**	**1.37**	**338**	⇓P	**Pn**	**09 56 35.3**	**-0.3**
JFY	**Yanaizu**	**1.61**	**301**	⇓P	**Pn**	**09 56 39.4**	**+0.5**
JAG	**Ashikaga**	**1.62**	**265**	P	**Pn**	**09 56 38.6**	**-0.3**
JKT	**Katashina**	**1.78**	**276**	P	**Pn**	**09 56 41.6**	**+0.5**
MJAR	**Matsushiro Arr**	**2.61**	**270**	P	**Pn**	**09 56 53.3**	**+0.8**
	40nm,0.3s,baz=102,slow=11,SNR=250						
MJAR				S	Sx	09 57 27.6	
	19nm,0.3s,baz=232,slow=28,SNR=8.1						
MAJO	**Matsushiro**	**2.61**	**270**	*e*Pn	**Pn**	**09 56 53.8**	**+1.2**
MAT	**Matsushiro**	**2.61**	**270**	P	**Pn**	**09 56 53.7**	**+1.1**
MAT				S	**Sn**	**09 57 24.5**	**+1.5**
ASAJ	**Asahikawa**	**7.56**	**6**	P	**Pn**	**09 58 06.2**	**+5.6**
	0.6nm,0.3s,baz=22,slow=5.4,SNR=2.8						
ASAJ				S	**Sn**	**09 59 25.4**	**+0.3**
	0.3nm,0.3s,baz=180,slow=20,SNR=2.7						
SONM	**Songino Array**	**28.06**	**305**	P	**P**	**10 02 01.6**	**+0.8**
	1.1nm,0.6s,mb3.7,baz=118,slow=8.6,SNR=8.7						
ZALV	**Zalesovo Beam**	**42.23**	**313**	P	**P**	**10 04 03.2**	**+0.9**
	0.6nm,0.3s,mb3.7,baz=101,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**44.38**	**302**	P	**P**	**10 04 19.1**	**-0.7**
	0.3nm,0.5s,mb3.3,baz=69,slow=8.2,SNR=2.1						
KURK	**Kurchatov**	**46.23**	**308**	P	**P**	**10 04 34.1**	**-0.3**
	0.7nm,0.3s,mb4.1,baz=86,slow=8.7,SNR=2.9						
WRA	**Warramunga Arr**	**56.63**	**188**	P	**P**	**10 05 51.9**	**-0.6**
	0.2nm,0.4s,mb3.5,baz=5.7,slow=7.3,SNR=5.5						

CSEM ***27*** *09:59:32.9±0.1, 3829N×3933E, h4km, MD3.5, Error ellipse: s-maj=1.3km s-min=1.1km az=175.0*

DDA ***27*** *09:59:32.3, 3827N×3935E, h5km±1km, Md3.5*

ISCJB ***27*** *09:59:33.0±0.5, 3826N±002×3933E±002, h0km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=178.8*

ISK ***27*** *09:59:33.2, 3829N×3934E, h5km, ML3.1*

ISC 27 09:59:33.9±0.4,**3828N**±002×**3935E**±002,**h3**km±4km,**n35,** σ0§**99**/47,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.10**	**342**	PG	**Pg**	**09 59 35.8**	**-0.2**
SVRC				*e*SG	**Sg**	**09 59 38.1**	**+0.7**
ELZG	**Elazig**	**0.36**	**307**	*i* P	**Pg**	**09 59 40.8**	**0.0**
ELZG				*i* S	**Sg**	**09 59 46.4**	**+0.8**
PTK	**Pertek**	**0.61**	**3**	PG	**Pg**	**09 59 44.8**	**-0.9**
DIYA	**Diyarbakir**	**0.71**	**120**	*i* P	**Pg**	**09 59 46.9**	**-0.5**
DIYA				*i* S	**Sg**	**09 59 58.3**	**+1.7**
MALT	**Malatya**	**0.72**	**273**	PG	**Pg**	**09 59 47.0**	**-0.9**
MYA	**Malataya**	**0.73**	**274**	PG	**Pg**	**09 59 47.1**	**-0.8**
DIY	**Diyarbakir**	**0.79**	**119**	*e*PG	**Pg**	**09 59 49.2**	**+0.1**
URFA	**Urfa**	**0.94**	**207**	*e*PG	**Pg**	**09 59 51.6**	**-0.2**
AKCD	**Akcadag**	**1.12**	**271**	*i* P	**Pg**	**09 59 54.2**	**-1.2**
AKCD				*i* S	**Sg**	**10 00 09.9**	**-0.1**
ATAB	**Bozova**	**1.16**	**226**	*i* P	**Pn**	**09 59 56.6**	**-0.4**
ATAB				*i* S	**Sn**	**10 00 12.3**	**-1.2**
KEMA	**Kemaliye**	**1.19**	**326**	*i* P	**Pg**	**09 59 55.5**	**-1.3**
KEMA				*i* S	**Sg**	**10 00 12.3**	**0.0**
MARD	**Mardin**	**1.49**	**130**	*i* P	**Pn**	**10 00 00.2**	**-1.3**
MARD				*i* S	**Sb**	**10 00 19.4**	**-2.1**
EZC	**Erzincan**	**1.51**	**14**	*e*PN	**Pn**	**10 00 01.1**	**-0.8**
BNGL	**BINGOL**	**1.56**	**64**	*i* P	**Pg**	**10 00 02.9**	**-1.0**
BNGL				*i* S	**Sg**	**10 00 26.1**	**+1.9**
BEST	**Besiri**	**1.56**	**104**	*i* P	**Pn**	**10 00 01.5**	**-1.2**
BEST				*i* S	**Sn**	**10 00 23.5**	**+0.1**
GZT	**Gaziantep**	**1.69**	**237**	*i* P	**Pn**	**10 00 03.5**	**-0.8**
GAZ	**Gaziantep**	**2.02**	**238**	*e*PN	**Pn**	**10 00 09.3**	**+0.4**
KMRS	**Kahramanmaras**	**2.08**	**249**	*e*PN	**Pn**	**10 00 09.6**	**-0.2**
SARI	**SarD1z-Kayseri**	**2.12**	**282**	*e*PN	**Pg**	**10 00 13.0**	**-1.6**
GUMT	**Gumushane**	**2.18**	**3**	*e*PN	**Pn**	**10 00 10.5**	**-0.6**
EZM	**Erzurum**	**2.26**	**43**	*e*PN	**Pn**	**10 00 12.1**	**-0.1**
TATV	**Tatvan**	**2.31**	**83**	*i* P	**Pn**	**10 00 13.9**	**+1.0**
TATV				*i* S	**Sg**	**10 00 44.0**	**-4.0**
KUZU	**Kuzuini**	**2.35**	**231**	*i* P	**Pg**	**10 00 19.5**	**+0.5**
KUZU				*i* S	**Sg**	**10 00 51.2**	**+1.7**
SVSK	**Karacayir**	**2.45**	**313**	*e*PN	**Pn**	**10 00 15.4**	**+0.6**
ANDN	**Andirin**	**2.48**	**255**	*i* P	**Pn**	**10 00 11.7**	**-3.4**
BNN	**Bunyan**	**2.80**	**283**	*e*PN	**Pn**	**10 00 20.0**	**+0.3**
KOZT	**Kozan**	**2.90**	**255**	*e*PN	**Pn**	**10 00 22.2**	**+1.2**
COBT	**Iskenderun**	**3.02**	**235**	*i* P	**Pg**	**10 00 31.5**	**-0.4**
COBT				*i* S	**Sg**	**10 01 12.5**	**+1.4**
AGRB	**Hanur-Agry**	**3.12**	**64**	*e*PN	**Pn**	**10 00 24.9**	**+0.9**
HTY	**Hatay**	**3.35**	**231**	*e*PN	**Pn**	**10 00 28.6**	**+1.4**
YOZ	**Yozgat**	**3.42**	**295**	*e*PN	**Pn**	**10 00 28.6**	**+0.4**
HKR	**Hakkari**	**3.54**	**100**	*e*PN	**Pn**	**10 00 30.7**	**+0.9**
BCA	**Borcka**	**3.61**	**28**	*e*PN	**Pn**	**10 00 31.6**	**+0.8**
NIG	**Nigde**	**3.74**	**269**	*e*PN	**Pn**	**10 00 33.5**	**+1.0**
CORM	**Corum**	**4.12**	**299**	*e*PN	**Pn**	**10 00 38.7**	**+0.8**

ISCJB ***27*** *10:02:01.9±0.8, 3939N±005×3308E±004, h4km±8km, Error ellipse: s-maj=8.3km s-min=4.6km az=152.8*

CSEM ***27*** *10:02:01.8±0.2, 3941N×3310E, h15km, MD2.8, Error ellipse: s-maj=5.0km s-min=3.0km az=167.0*

ISK ***27*** *10:02:01.7, 3939N×3309E, h13km, MD2.8*

DDA ***27*** *10:02:02.4, 3941N×3311E, h7km±1km, Md2.6*

ISC 27 10:02:02.5±0.7,**3940N**±005×**3309E**±004,**h11**km±7km,**n11,** σ0§**71**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**93**	*e*PG	**Pg**	**10 02 11.7**	**-0.3**
KAMT				*e*SG	**Sg**	**10 02 18.7**	**+0.3**
LOD	**Lodumlu**	**0.55**	**333**	*e*PG	**Pg**	**10 02 12.7**	**-0.6**
CDAG	**Cicekdag**	**1.02**	**77**	*i* P	**Pg**	**10 02 21.2**	**-1.0**
CDAG				*i* S	**Sg**	**10 02 36.0**	**+0.6**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**10 02 23.4**	**+0.2**
KIZT				*e*SG	**Sg**	**10 02 37.8**	**+0.7**
ELDT	**Eldivan**	**1.12**	**13**	*i* P	**Pg**	**10 02 24.3**	**+0.4**
ELDT				*i* S	**Sb**	**10 02 39.4**	**+0.8**
KDHN	**Kadinhani**	**1.16**	**221**	*i* P	**Pb**	**10 02 24.4**	**-0.1**
KDHN				*i* S	**Sb**	**10 02 40.7**	**+1.1**
CORM	**Corum**	**1.42**	**56**	*e*PN	**Pn**	**10 02 28.4**	**+0.1**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*PN	**Pn**	**10 02 28.8**	**-1.4**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**10 02 32.4**	**-0.3**
BNN	**Bunyan**	**2.21**	**103**	*e*PN	**Pn**	**10 02 39.7**	**+0.5**
ALT	**Altintas**	**2.34**	**263**	*e*PN	**Pn**	**10 02 39.7**	**-1.2**

HLW ***27*** *10:02:00.2, 3595N×2848E, h33km, Mb3.7*

ISCJB ***27*** *10:02:01.4±0.4, 3575N±004×2844E±007, h72km±12km, Error ellipse: s-maj=9.1km s-min=6.4km az=8.4*

CSEM ***27*** *10:02:01.4±0.1, 3572N×2846E, h60km, MD3.2, Error ellipse: s-maj=3.9km s-min=1.7km az=61.0*

DDA ***27*** *10:02:02.1, 3591N×2817E, h10km±5km, Md3.2*

ATH ***27*** *10:02:08.0, 36.12N×2769E, h25km±1km, MD3.1/5*

ISC 27 10:02:02.9±0.5,**3578N**±004×**2837E**±006,**h68**km±12km, **n25,** σ0§**80**/30,**1D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.48**	**336**	⇓*i*P	**Pn**	**10 02 16.1**	**+

ellipse: s-maj=7.6km s-min=5.0km az=148.6
ISK ***27*** *10:12:08.1, 39^43^N×033^06^E, h9^km^, MD2.8*
DDA ***27*** *10:12:09.3, 39^40^N×033^10^E, h7^km^±2^km^, Md2.8*

ISC 27 10:12:09.1±0.7, 3939N±004×3305E±005, h9^km^±9^km^, n10, σ1°05/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.51**	**92**	*e*PG	**Pg**	**10 12 18.3**	**-0.7**
KAMT				*e*SG	**Sg**	**10 12 25.9**	**+0.2**
LOD	**Lodumlu**	**0.55**	**336**	*e*PG	**Pg**	**10 12 18.4**	**-1.3**
KIZT	**Kizilcal**	**1.04**	**241**	*e*PG	**Pg**	**10 12 29.4**	**+0.3**
CDAG	**Cicekdag**	**1.05**	**77**	*i* P	**Pg**	**10 12 28.2**	**-1.0**
CDAG				*i* S	**Sg**	**10 12 43.4**	**+0.7**
KDHN	**Kadinhani**	**1.13**	**220**	*i* P	**Pg**	**10 12 28.1**	**-2.7**
KDHN				*i* S	**Sg**	**10 12 47.8**	**+2.3**
ELDT	**Eldivan**	**1.14**	**15**	*i* P	**Pg**	**10 12 31.1**	**+0.2**
ELDT				*i* S	**Sg**	**10 12 47.1**	**+1.4**
LADK	**Ladik-KONYA**	**1.30**	**205**	*e*PN	**Pn**	**10 12 33.4**	**-0.1**
CORM	**Corum**	**1.45**	**56**	*e*PN	**Pn**	**10 12 34.9**	**-0.6**
KONT	**Konya--Tatoy**	**1.54**	**201**	*e*PN	**Pn**	**10 12 36.8**	**+0.1**
YOZ	**Yozgat**	**1.77**	**81**	*e*PN	**Pn**	**10 12 40.5**	**+0.6**

NIED ***27*** *10:12:00, 40^60^N×143^80^E, h17^km^, Mw4.3 Best double couple: M₀2.75000×10^15^ NP1:φ=33.00000°, δ=78.00000°, λ=123.00000°. NP2:φ=141.00000°, δ=34.00000°, λ=21.00000°.*
IDC ***27*** *10:12:32.3±0.7, 4053N×14379E, h0^km^, mb4.0/15, mb1 4.1/17, mb1mx4.0/28, mbtmp3.9/17, ML3.4/2, MS3.8/9, Ms1 3.8/9, ms1mx3.4/41, Error ellipse: s-maj=18.5km s-min=16.9km az=136.0*
JMA ***27*** *10:12:33.9±0.2, 4556N×14377E, h24^km^, M4.2*
BJI ***27*** *10:12:33.5, 4028N×14357E, h15^km^, mB5.0, mb4.2, Ms4.1, Msz4.1*
ISCJB ***27*** *10:12:35.5±0.4, 4059N±002×14379E±004, h33^km^, mb4.2/27, MS3.8/11, Error ellipse: s-maj=4.9km s-min=3.0km az=25.7*
MOS ***27*** *10:12:35.8±1.5, 4060N×14391E, h33^km^, mb4.5/20, Error ellipse: s-maj=12.0km s-min=6.7km az=97.4*
NEIC ***27*** *10:12:37.0±2.6, 4057N×14378E, h30^km^±19^km^, mb4.6/3, MW4.2(NIED), Error ellipse: s-maj=9.9km s-min=7.2km az=107.0*

ISC 27 10:12:35.4±1.4, 4060N±003×14376E±005, h18^km^±9^km^, n95, σ1°16/104, mb4.2/27, MS3.8/11, 5C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**1.48**	**342**	*e*P	**Pn**	**10 13 01.6**	**+0.5**
ERM	**Erimo**	**1.48**	**342**	*e*Pn	**Pn**	**10 13 01.3**	**+0.2**
JEM	**Erimo**	**1.48**	**342**	P	**Pn**	**10 13 00.5**	**-0.6**
JEM				*e*S	**Sn**	**10 13 20.4**	**+0.4**
JTH	**Tanohata**	**1.59**	**246**	P	**Pn**	**10 13 01.0**	**-1.6**
JTH				*e*S	**Sn**	**10 13 21.2**	**-1.6**
JANG	**Nango**	**1.73**	**263**	P	**Pn**	**10 13 03.1**	**-1.4**
JANG				*e*S	**Sn**	**10 13 24.4**	**-1.6**
JNBK	**Urakawa-nobuka**	**1.84**	**336**	P	**Pn**	**10 13 05.9**	**-0.1**
JCH	**Churui**	**2.03**	**352**	P	**Pn**	**10 13 07.9**	**-0.8**
JCH				*e*S	**Sn**	**10 13 32.8**	**-0.8**
JOT	**Ohata**	**2.19**	**292**	P	**Pn**	**10 13 10.5**	**-0.4**
JOT				*e*S	**Sn**	**10 13 37.1**	**-0.5**
JOM	**Ohasama**	**2.20**	**240**	P	**Pn**	**10 13 10.6**	**-0.4**
JKB	**Kayabe**	**2.42**	**303**	P	**Pn**	**10 13 14.0**	**-0.1**
JKB				*e*S	**Sn**	**10 13 42.7**	**-0.5**
JAK	**Akkeshi**	**2.49**	**16**	P	**Pn**	**10 13 13.9**	**-1.1**
JAK				*e*S	**Sn**	**10 13 42.7**	**-2.3**
JMK	**Ichinoseki**	**2.56**	**231**	P	**Pn**	**10 13 15.4**	**-0.5**
JMK				*e*S	**Sn**	**10 13 45.0**	**-1.6**
JAR	**Ashorobuto**	**2.69**	**0**	P	**Pn**	**10 13 16.6**	**-1.2**
JAR				*e*S	**Sn**	**10 13 47.9**	**-2.0**
JFR	**Furan**	**2.70**	**342**	P	**Pn**	**10 13 18.2**	**+0.3**
JEW	**Eniwo**	**2.83**	**323**	P	**Pn**	**10 13 20.2**	**+0.6**
JEW				*e*S	**Sn**	**10 13 54.7**	**+1.5**
JYK	**Kaneyama**	**3.11**	**238**	P	**Pn**	**10 13 23.4**	**-0.1**
NEM2	**Nemuro 2**	**3.13**	**28**	P	**Pn**	**10 13 22.4**	**-1.4**
NEM2				*e*S	**Sn**	**10 13 57.1**	**-3.6**
JTKR	**Abashiri--Toko**	**3.37**	**2**	P	**Pn**	**10 13 26.5**	**-0.5**
JTKR				*e*S	**Sn**	**10 14 04.7**	**-1.8**
JHR	**Hokuryu**	**3.48**	**335**	P	**Pn**	**10 13 30.3**	**+1.7**
JHR				*e*S	**Sn**	**10 14 11.6**	**+2.2**
JOSM	**Okushiri--Mats**	**3.55**	**296**	P	**Pn**	**10 13 29.4**	**-0.1**
ASAJ	**Asahikawa**	**3.62**	**347**	Pn	**Pn**	**10 13 30.6**	**+0.2**
	2.2nm,0.3s,baz=215,slow=12,SNR=12						
ASAJ				LR	LR	10 15 41.2	
	comp=Z,473nm,19.0s,baz=208,slow=51						
YUK	**Yuzh-Kuril'sk**	**3.77**	**24**	*e*P	**Pn**	**10 13 32.0**	**-0.5**
YUK				*e*S	**Sn**	**10 14 13.0**	**-3.4**
YUK				pmax	pmax		
	comp=Z,410nm,0.2s						
YUK				pmax	pmax		
	comp=N,180nm,0.3s						
YUK				smax			
	comp=N,920nm,0.6s						
YUK				smax			
	comp=E,540nm,0.6s						
YUK				smax			
	comp=N,2μm,1.0s						
MAJO	**Matsushiro**	**5.94**	**229**	*e*P	**Pn**	**10 14 03.3**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,48nm,1.0s						
MAJO	**Matsushiro**	**5.94**	**229**	*e*Pn	**Pn**	**10 14 03.3**	**+0.9**
	comp=Z,48nm,1.0s						
MAT	**Matsushiro**	**5.94**	**229**	P	**Pn**	**10 14 03.0**	**+0.5**
MJAR	**Matsushiro Arr**	**5.94**	**229**	Pn	**Pn**	**10 14 03.1**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=305,slow=21,SNR=16						
MJAR	**Matsushiro Arr**	**5.94**	**229**	P	**Pn**	**10 14 03.1**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.39**	**354**	*e*P	**Pn**	**10 14 10.4**	**+1.9**
YSS				*e*S	**Sn**	**10 15 23.0**	**+2.0**
YSS				smax			
	comp=N,50nm,1.2s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
YSS				MLR	MLR		
	comp=N,600nm,13.0s						
YSS				MLR	MLR		
	comp=E,500nm,13.0s						
HABR	**Khabarovsk**	**10.02**	**325**	*e*P	**Pn**	**10 14 59.4**	**+1.1**
HABR				*e*		10 16 55.4	
KLR	**Kul'dur**	**12.11**	**319**	*e*P	**Pn**	**10 15 25.7**	**-1.1**
KLR				MLR	MLR		
	comp=Z,900nm,14.0s						
KSRS	**Korea Array**	**12.71**	**261**	LR	LR	10 20 26.1	
	comp=Z,298nm,18.1s,baz=162,slow=37						
PET	**Petropavlovsk**	**16.03**	**34**	*i* P	**Pn**	**10 16 16.3**	**-3.4**
HIA	**Hailar**	**19.02**	**305**	*i* P	**Pn**	**10 17 00.4**	**+3.6**
SEY	**Seymchan**	**22.95**	**10**	*e*P	**P**	**10 17 37.7**	**-0.6**
YAK	**Yakutsk**	**23.09**	**343**	*e*P	**P**	**10 17 43.1**	**+3.3**
YAK				*e*		10 21 38.5	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
YAK				MLR	MLR		
	comp=Z,179nm,14.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,124nm,14.0s,MS3.7						
YAK				MLR	MLR		
	comp=E,133nm,15.0s,MS3.7						
BOD	**Bodaibo**	**25.66**	**322**	*e*P	**P**	**10 18 03.1**	**-0.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
ULN	**Ulaanbaatar**	**27.09**	**298**	*e*P	**P**	**10 18 20.9**	**+4.1**
SONM	**Songino Array**	**27.53**	**298**	P	**P**	**10 18 21.3**	**+0.5**
	comp=Z,0.7nm,0.5s,mb3.6,baz=93,slow=8.6,SNR=6.3						
SONM	**Songino Array**	**27.53**	**298**	P	**P**	**10 18 21.3**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TLY	**Talaya**	**29.56**	**306**	*e*P	**P**	**10 18 41.4**	**+2.6**
TLY				*e*S	**S**	**10 23 41.1**	**+8.4**
TLY				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
TLY				MLR	MLR		
	comp=Z,123nm,13.0s,MS3.7						
BILL	**Bilibino**	**30.09**	**17**	*i* P	**P**	**10 18 44.2**	**+0.9**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.6						
BILL	**Bilibino**	**30.09**	**17**	*e*P	**P**	**10 18 44.0**	**+0.7**
	comp=Z,3.5nm,0.7s,mb4.2						
GTA	**Gaotai**	**33.42**	**283**	*e*P	**P**	**10 19 11.5**	**-1.4**
GTA				AP	pP	10 19 16.3	-2.1
GTA				XP	sP	10 19 19.0	-1.7
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.2						
HVS	**Khovu-Aksy**	**35.76**	**304**	*i* P	**P**	**10 19 36.9**	**+3.9**
HVS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ZAA0	**Zalesovo Array**	**40.97**	**309**	*e*P	**P**	**10 20 17.4**	**+0.7**
ZAA0				*e*pP	pP	10 20 22.2	-0.1
ZALV	**Zalesovo Beam**	**40.97**	**309**	P	**P**	**10 20 16.8**	**+0.1**
	comp=Z,3.0nm,0.4s,mb4.3,baz=86,slow=7.7,SNR=6.4						
ZALV				LR	LR	10 38 26.8	
	comp=Z,90nm,18.0s,MS3.7,baz=108,slow=38						
ZALV	**Zalesovo Beam**	**40.97**	**309**	P	**P**	**10 20 16.8**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
ZALV				MLR	MLR		
	comp=Z,90nm,18.0s,MS3.7						
NVS	**Novosibirsk**	**41.80**	**311**	*e*P	**P**	**10 20 24.1**	**+0.6**
MKAR	**Makanchi Array**	**43.87**	**299**	P	**P**	**10 20 40.7**	**+0.3**
	comp=Z,1.4nm,0.8s,mb3.7,baz=76,slow=10,SNR=7.5						
MKAR				LR	LR	10 40 14.4	
	comp=Z,82nm,18.2s,MS3.7,baz=349,slow=38						
MKAR	**Makanchi Array**	**43.87**	**299**	P	**P**	**10 20 40.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,82nm,18.2s						
MKAR	**Makanchi Array**	**43.87**	**299**	P	**P**	**10 20 40.7**	**+0.3**
MKAR				LR	LR	10 40 14.4	
CMAR	**Chiang Mai Arr**	**44.22**	**254**	LR	LR	10 38 27.8	
	comp=Z,18nm,18.2s,MS3.0,baz=15,slow=35						
COLA	**College**	**45.09**	**34**	*i* P	**P**	**10 20 49.2**	**-0.8**
KURK	**Kurchatov**	**45.26**	**306**	P	**P**	**10 20 52.5**	**+1.0**
	comp=Z,1.7nm,0.3s,mb4.3,baz=78,slow=8.6,SNR=4.0						
KURK	**Kurchatov**	**45.26**	**306**	P	**P**	**10 20 52.5**	**+1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
KURK	**Kurchatov**	**45.26**	**306**	P	**P**	**10 20 52.5**	**+1.0**
TAPN	**Taplejung**	**47.58**	**272**	*e*P	**P**	**10 21 17.4**	**+7.3**
	comp=Z,3.7nm,0.4s,mb4.8						
JIRN	**Jiri**	**48.58**	**273**	*e*P	**P**	**10 21 23.6**	**+5.8**
RAMN	**Ramite**	**48.64**	**272**	*e*P	**P**	**10 21 21.9**	**+3.7**
GUN	**Gumba**	**48.69**	**274**	*e*P	**P**	**10 21 25.2**	**+6.6**
	comp=Z,4.9nm,0.3s,mb5.0						
BVAR	**Borovoye Array**	**49.59**	**311**	P	**P**	**10 21 25.5**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.9,baz=80,slow=7.9,SNR=3.3						
BVAR				LR	LR	10 44 02.6	
	comp=Z,168nm,18.1s,MS4.1,baz=221,slow=38						
TKM2	**Tokmak 2**	**49.61**	**296**	*e*P	**P**	**10 21 26.3**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
TKM2	**Tokmak 2**	**49.61**	**296**	*e*P	**P**	**10 21 26.2**	**+0.8**
	comp=Z,11nm,1.1s,mb4.8						
BRVK	**Borovoye**	**49.64**	**311**	*e*P	**P**	**10 21 26.3**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
BRVK	**Borovoye**	**49.64**	**311**	*e*P	**P**	**10 21 26.3**	**+0.8**
	comp=Z,2.8nm,0.4s,mb4.7						
PMG	**Port Moresby**	**49.85**	**176**	*i* P	**P**	**10 21 30.3**	**+2.8**
PMG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DANN	**Dangsing**	**50.07**	**276**	*e*P	**P**	**10 21 33.9**	**+4.7**
ARU	**Arti**	**54.94**	**317**	*c i*P	**P**	**10 22 08.8**	**+4.0**
ARU				*e*		10 24 09.8	
ARU				S	**S**	**10 29 54.3**	**+8.9**
ARU				SS	SS	10 33 35.1	+6.8
ARU				pmax	pmax		
	comp=Z,10.0nm,2.5s,mb4.4						
RES	**Resolute Bay**	**58.69**	**15**	P	**P**	**10 22 31.7**	**+0.5**
	comp=Z,3.2nm,1.1s,mb4.3,baz=348,slow=6.7,SNR=5.8						
RES	**Resolute Bay**	**58.69**	**15**	P	**P**	**10 22 31.7**	**+0.5**
RES				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
RES	**Resolute Bay**	**58.69**	**15**	P	**P**	**10 22 31.7**	**+0.5**
YKA	**Yellowknife Ar**	**59.81**	**32**	P	**P**	**10 22 39.8**	**+0.7**
	comp=Z,7.7nm,1.1s,mb4.0,baz=298,slow=6.9,SNR=12						
YKA	**Yellowknife Ar**	**59.81**	**32**	P	**P**	**10 22 39.8**	**+0.7**
YKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	**Yellowknife Ar**	**59.81**	**32**	P	**P**	**10 22 39.8**	**+0.7**
WRAB	**Tennant Creek**	**60.85**	**190**	*i* P	**P**	**10 22 49.9**	**+3.3**
WRA	**Warramunga Arr**	**60.87**	**190**	P	**P**	**10 22 45.6**	**-1.1**
	comp=Z,1.9nm,1.0s,mb4.2,baz=6.4,slow=7.3,SNR=7.8						
WRA	**Warramunga Arr**	**60.87**	**190**	P	**P**	**10 22 45.6**	**-1.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	**ARCESS Array B**	**61.31**	**339**	LR	LR	10 55 42.6	
	comp=Z,106nm,19.0s,MS4.0,baz=156,slow=42						
ASAR	**Alice Springs**	**64.59**	**190**	P	**P**	**10 23 11.0**	**-0.5**
	comp=Z,1.6nm,1.1s,mb4.0,baz=352,slow=4.7,SNR=8.6						
ASAR	**Alice Springs**	**64.59**	**190**	P	**P**	**10 23 11.0**	**-0.5**
ASAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
OBN	**Obninsk**	**66.34**	**323**	*i* P	**P**	**10 23 23.9**	**+1.4**
OBN				*i*		10 25 51.1	
OBN				S	S	10 32 16.0	+4.9
OBN				eSS	SS	10 36 31.1	+4.4
OBN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
NVAR	**Mina Array Bea**	**71.42**	**55**	P	**P**	**10 23 55.2**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.9,baz=285,slow=7.7,SNR=8.2						
AKASG	**Malin Array Be**	**72.59**	**323**	P	**P**	**10 24 00.1**	**-1.1**
	comp=Z,0.3nm,0.3s,mb3.7,baz=24,slow=28,SNR=2.7						
FRB	**Frobisher Bay**	**72.88**	**14**	P	**P**	**10 24 02.8**	**+0.1**
	comp=Z,3.4nm,0.8s,mb4.4,baz=316,slow=7.8,SNR=7.2						
FRB	**Frobisher Bay**	**72.88**	**14**	P	**P**	**10 24 02.8**	**+0.1**
FRB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	**73.88**	**47**	P	**P**	**10 24 09.8**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.8,baz=270,slow=1.5,SNR=7.9						
GERES	**GERESS Array B**	**80.62**	**329**	LR	LR	11 04 02.4	
	comp=Z,90nm,18.2s,MS4.2,baz=315,slow=38						
ANMO	**Albuquerque**	**80.91**	**52**	P	**P**	**10 24 48.6**	**+0.1**
	comp=Z,1.6nm,1.1s,mb3.9,baz=312,slow=7.5,SNR=4.1						
ANMO	**Albuquerque**	**80.91**	**52**	P	**P**	**10 24 48.6**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PPT	**Papeete**	**84.65**	**118**	LR	LR	10 59 51.4	
	comp=Z,116nm,19.4s,MS4.3,baz=87,slow=34						
TXAR	**Lajitas Array**	**86.52**	**54**	P	**P**	**10 25 17.0**	**-0.4**
	comp=Z,1.2nm,1.0s,mb4.1,baz=294,slow=3.7,SNR=8.0						
TXAR	**Lajitas Array**	**86.52**	**54**	P	**P**	**10 25 17.0**	**-0.4**
TXAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SNAA	**Sanae**	**144.69**	**198**	*e*PKPdf	PKPdf	10 32 08.5	-1.1
SNAA				*e*		10 32 10.0	
SNAA				*e*		10 32 11.8	
SNAA				*e*		10 32 17.6	
SNAA				*e*		10 32 24.4	
SNAA				*e*		10 32 30.4	
VNA2	**Neumayer--Watz**	**146.25**	**197**	*e*PKPdf	PKPdf	10 32 13.6	+1.3
	baz=86,slow=6.1						
VNA2				*e*		10 32 16.0	
VNA2				*e*		10 32 17.8	
VNA2				*e*		10 32 23.3	
VNA2				*e*		10 32 29.3	
VNA2				*e*		10 32 35.1	
VNA3	**Neumayer Olymp**	**146.48**	**195**	*e*PKPdf	PKPdf	10 32 13.7	+1.0
VNA3				*e*		10 32 15.8	
VNA3				*e*		10 32 17.6	
VNA3				*e*		10 32 23.6	
VNA3				*e*		10 32 29.9	
VNA3				*e*		10 32 35.0	

ISCJB ***27*** *10:27:01.2±0.7, 1061N±005×6262W±004, h95^km^±7^km^, Error ellipse: s-maj=9.1km s-min=5.5km az=163.9*
FUNV ***27*** *10:27:02.4, 1065N×6258W, h92^km^, MW3.0*
NEIC ***27*** *10:27:04.8, 1069N×6244W, h88^km^, MD2.9(TRN), After TRN.*
TRN ***27*** *10:27:05.7, 1068N×6238W, h88^km^, MD2.9*

ISC 27 10:27:02.1±0.7, 1063N±005×6262W±004, h90^km^±8^km^, n17, σ0°95/30, 3C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.39**	**87**	*i* P	**Pn**	**10 27 16.3**	**+0.3**
GUIV				*e*S	**Sn**	**10 27 26.0**	**-0.4**
GUNV	**Guanoco**	**0.56**	**215**	*i* P	**Pn**	**10 27 18.7**	**+1.4**
GUNV				*e*S	**Sn**	**10 27 29.4**	**+0.7**
CRUV	**Carupano**	**0.61**	**275**	*i* P	**Pn**	**10 27 18.1**	**+0.4**
TCE	**Chacachacare**	**0.85**	**85**	*e*P	**Pn**	**10 27 22.2**	**+2.1**
TCE				*e*S	**Sn**	**10 27 32.5**	**-1.2**
ITEV	**Isla Los Testi**	**0.88**	**325**	*e*P	**Pn**	**10 27 20.5**	**0.0**
ITEV				*e*S	**Sn**	**10 27 34.0**	**-0.3**
TRN	**Trinidad (W)**	**1.19**	**89**	*e*P	**Pn**	**10 27 24.4**	**+0.3**
TRN				*e*S	**Sn**	**10 27 39.4**	**-1.2**
TBH	**Brigand Hill**	**1.53**	**95**	*e*P	**Pn**	**10 27 28.8**	**+0.6**
GRW	**Mount Saint Ca**	**1.79**	**31**	*e*P	**Pn**	**10 27 33.5**	**+2.0**
GRW				*e*S	**Sn**	**10 27 53.4**	**-0.6**
GRW	**Mount Saint Ca**	**1.79**	**31**	*e*P	**Pn**	**10 27 31.7**	**+0.2**
GRW				*e*S	**Sn**	**10 27 53.4**	**-0.6**
TPR	**Prospect**	**1.89**	**73**	*e*P	**Pn**	**10 27 33.7**	**+0.8**
TPR				*e*S	**Sn**	**10 27 54.1**	**-2.2**
TPR	**Prospect**	**1.89**	**73**	*e*P	**Pn**	**10 27 33.7**	**+0.8**
TPR				*e*S	**Sn**	**10 27 56.1**	**-0.2**
PCRV	**Puerto La Cruz**	**2.04**	**258**	*e*P	**Pn**	**10 27 35.3**	**+0.5**
PCRV				*e*S	**Sn**	**10 27 58.4**	**-1.3**
TOSP	**Speyside**	**2.15**	**72**	*e*P	**Pn**	**10 27 36.8**	**+0.5**
TOSP				*e*S	**Sn**	**10 27 57.5**	**-4.9**
RIOV	**Rio Grande**	**2.66**	**163**	*e*P	**Pn**	**10 27 43.4**	**+0.3**
LUEV	**Luepa**	**4.89**	**166**	*e*P	**Pn**	**10 28 11.8**	**-1.4**
CAOV	**Caicara del Or**	**4.91**	**228**	*e*P	**Pn**	**10 28 13.3**	**-0.2**
CAOV				*e*S	**Sn**	**10 29 04.8**	**-4.3**
BAUV	**El Baul**	**5.60**	**253**	*e*P	**Pn**	**10 28 21.8**	**-1.1**
BAUV				*e*S	**Sn**	**10 29 21.2**	**-4.8**

IDC 27 10:27:51.7±2.7, 216S×13426E, h0^km^, mb3.8/2, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=128.5km s-min=26.9km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.67**	**180**	P	**Pn**	**10 31 59.4**	**0.0**
	0.2nm,0.3s,baz=359,slow=12,SNR=10						
ASAR	**Alice Springs**	**21.38**	**181**	P	P	**10 32 41.0**	**+0.1**
	2.8nm,0.9s,baz=5.5,slow=12,SNR=16						
MKAR	**Makanchi Array**	**66.69**	**324**	P	P	**10 38 44.6**	**+0.1**
	0.8nm,0.5s,baz=110,slow=7.9,SNR=11						

ISCJB ***27*** *10:31:33.4±0.7, 1063N±007×6185W±003, h61^km^±7^km^, Error ellipse: s-maj=11.3km s-min=5.5km az=174.0*
NEIC ***27*** *10:31:33.6, 1085N×6187W, h52^km^, MD2.9(TRN), After TRN.*
FUNV ***27*** *10:31:33.0, 1065N×6169W, h31^km^, MW3.0*
TRN ***27*** *10:31:35.3, 1077N×6178W, h47^km^, MD2.9*

ISC 27 10:31:34.1±0.7, 1062N±006×6185W±003, h56^km^±7^km^, n19, σ1°20/30, 1C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCE	**Chacachacare**	**0.12**	**49**	*i* P	**Pn**	**10 31 43.0**	**+0.2**
TCE				*e*S	**Sn**	**10 31 48.3**	**-0.7**
GUIV	**Guiria**	**0.37**	**275**	*i* P	**Pn**	**10 31 43.9**	**-0.5**
GUIV				*e*S	**Sn**	**10 31 50.9**	**-1.0**
TRN	**Trinidad (W)**	**0.44**	**86**	*e*P	**Pn**	**10 31 45.5**	**+0.3**
TRN				*e*S	**Sn**	**10 31 52.2**	**-0.9**
TPP	**Pointe-a-Pierr**	**0.49**	**127**	*e*P	**Pn**	**10 31 46.5**	**+0.8**
TPP				*e*S	**Sn**	**10 31 56.3**	**+2.2**
TPP	**Pointe-a-Pierr**	**0.49**	**127**	*e*P	**Pn**	**10 31 46.5**	**+0.8**
TPP				*e*S	**Sn**	**10 31 54.2**	**+0.1**
TBH	**Brigand Hill**	**0.78**	**100**	*e*P	**Pn**	**10 31 50.2**	**+1.1**
GUNV	**Guanoco**	**1.17**	**247**	*e*P	**Pn**	**10 31 55.6**	**+1.4**
GUNV				*e*S	**Sn**	**10 32 11.7**	**+2.5**
TPR	**Prospect**	**1.20**	**62**	*e*P	**Pn**	**10 31 53.9**	**-0.7**
TPR				*e*S	**Sn**	**10 32 11.2**	**+1.3**
TPR	**Prospect**	**1.20**	**62**	*e*P	**Pn**	**10 31 56.3**	**+1.7**
TPR				*e*S	**Sn**	**10 32 13.2**	**+3.3**
CRUV	**Carupano**	**1.37**	**273**	*e*P	**Pn**	**10 31 56.9**	**0.0**
CRUV				*e*S	**Sn**	**10 32 15.1**	**+1.1**
TOSP	**Speyside**	**1.46**	**62**	*e*S	**Sn**	**10 32 14.3**	**-1.9**
ITEV	**Isla Los Testi**	**1.46**	**300**	*e*P	**Pn**	**10 31 57.9**	**-0.3**
ITEV				*e*S	**Sn**	**10 32 17.2**	**+0.9**
GRW	**Mount Saint Ca**	**1.55**	**7**	*e*P	**Pn**	**10 31 58.6**	**-0.8**
GRW	**Mount Saint Ca**	**1.55**	**7**	*e*P	**Pn**	**10 31 55.2**	**-4.2**
PCRV	**Puerto La Cruz**	**2.78**	**261**	*e*P	**Pn**	**10 32 16.2**	**0.0**
MERV	**Las Mercedes**	**4.59**	**253**	*e*S	**Sn**	**10 33 30.3**	**-2.7**
LUEV	**Luepa**	**4.76**	**175**	*e*P	**Pn**	**10 32 40.9**	**-2.4**
CAOV	**Caicara del Or**	**5.50**	**234**	*e*P	**Pn**	**10 32 53.5**	**0.0**
BAUV	**El Baul**	**6.33**	**255**	*e*P	**Pn**	**10 33 04.0**	**-0.8**
BAUV				*e*S	**Sn**	**10 34 11.4**	**-4.4**

ISCJB ***27*** *10:32:16.9±0.4, 4932N±002×676E±003, h0^km^, Error ellipse: s-maj=3.3km s-min=2.9km az=151.6*
BGR ***27*** *10:32:18.7±0.4, 4935N×675E, h1^km^, ML2.0/3, Error ellipse: s-maj=7.8km s-min=4.4km az=39.0*
LDG ***27*** *10:32:18.9±0.1, 4935N×682E, h1^km^, Md2.6/3, Ml2.4/17, Error ellipse: s-maj=1.5km s-min=0.8km az=54.0, Suspected

mb3.5/6, Error ellipse: s-maj=14.1km s-min=10.7km az=157.3

IDC 27 10:37:59.9±1.5, 5221N×168.34W, h0km, mb3.5/6, mb1 3.9/7, mb1mx3.6/27, mbtmp3.6/7, ML3.3/1, Error ellipse: s-maj=60.2km s-min=14.9km az=8.0

NEIC 27 10:38:03.4, 5226N×168.11W, h13km, ML3.2(AEIC), After AEIC.

ISC 27 10:38:03.7±2.3, 5224N±009×1682W±02, h22km±17km, n12, σ0§83/14, mb3.5/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.84**	**331**	P	**Pb**	**10 38 19.1**	**-0.5**
NIKO				S	**Sb**	**10 38 31.6**	**+1.2**
OKFG	**Magazine Ridge**	**1.18**	**8**	P	**Pn**	**10 38 23.6**	**-1.2**
OKFG				S	**Sn**	**10 38 40.8**	**+0.6**
OKCD	**Okmok Cone D**	**1.19**	**2**	P	**Pn**	**10 38 24.4**	**-0.5**
UNV	**Unalaska Valle**	**1.90**	**32**	P	**Pn**	**10 38 33.5**	**-1.2**
FX1	**Attu Island--F**	**11.37**	**281**	Pn	**Pn**	**10 40 44.8**	**+0.2**
	0.6nm,0.3s,baz=79,slow=19,SNR=5.4						
YKA	**Yellowknife Ar**	**29.78**	**49**	P	**P**	**10 44 08.9**	**+0.7**
	0.1nm,0.6s,mb2.8,baz=274,slow=8.2,SNR=5.2						
NVAR	**Mina Array Bea**	**36.94**	**92**	P	**P**	**10 45 12.0**	**+1.3**
	0.6nm,0.7s,mb3.5,baz=283,slow=8.0,SNR=3.3						
PDAR	**Pinedale Array**	**39.71**	**80**	P	**P**	**10 45 34.5**	**+0.5**
	0.9nm,0.9s,mb3.5,baz=320,slow=3.9,SNR=5.7						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**10 47 11.3**	**0.0**
	0.8nm,0.8s,mb3.7,baz=298,slow=6.0,SNR=9.2						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**10 47 11.3**	**0.0**
BVAR	**Borovoye Array**	**64.23**	**325**	P	**P**	**10 48 36.4**	**+0.1**
	0.3nm,0.3s,mb3.8,baz=46,slow=5.5,SNR=3.5						
MKAR	**Makanchi Array**	**64.42**	**314**	P	**P**	**10 48 36.6**	**-1.1**
	0.2nm,0.3s,mb3.6,baz=26,slow=6.7,SNR=2.9						

IDC 27 10:39:34.6±0.6, 5.12S×134.10E, h0km, mb4.0/8, mb1 4.3/12, mb1mx4.2/16, mbtmp4.2/12, ML4.2/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/23, Error ellipse: s-maj=34.4km s-min=14.8km az=63.0

ISCJB 27 10:39:36.9±0.5, 530S±007×134.10E±008, h33km, mb4.1/10, Error ellipse: s-maj=13.0km s-min=8.2km az=148.1

NEIC 27 10:39:39.5±0.6, 532S×134.00E, h35km, mb4.5/4, Error ellipse: s-maj=14.9km s-min=9.1km az=49.0

ISC 27 10:39:39.2±0.5, 531S±007×13406E±008, h35km, n28, σ1§16/27, mb4.1/10, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**12.43**	**134**	*e*Pn	**Pn**	**10 42 32.6**	**-1.1**
	9.4nm,0.6s						
COEN				*e*Sn	**Sn**	**10 44 42.5**	**-8.6**
PMG	**Port Moresby**	**13.62**	**108**	Pn	**Pn**	**10 42 48.8**	**-1.2**
	0.9nm,0.3s,baz=307,slow=16,SNR=3.4						
PMG				LR	LR	10 49 19.4	
	comp=Z,148nm,18.0s,baz=27,slow=43						
PMG	**Port Moresby**	**13.62**	**108**	*e*Pn	**Pn**	**10 42 49.2**	**-0.8**
PMG				LR	LR	10 49 19.4	
KAPI	**Kappang**	**14.25**	**271**	Pn	**Pn**	**10 43 00.5**	**+1.8**
	1.8nm,0.3s,baz=144,slow=9.1,SNR=6.7						
KAPI				LR	LR	10 48 16.7	
	comp=Z,79nm,21.9s,baz=346,slow=36						
KAPI	**Kappang**	**14.25**	**271**	*e*Pn	**Pn**	**10 42 58.6**	**0.0**
	25nm,0.7s						
KAPI				LR	LR	10 48 16.7	
WRAB	**Tennant Creek**	**14.54**	**179**	*e*Pn	**Pn**	**10 43 03.1**	**+0.6**
	54nm,0.6s						
WRAB				*e*Sn	**Sn**	**10 45 37.4**	**-5.1**
WRA	**Warramunga Arr**	**14.55**	**179**	Pn	**Pn**	**10 43 01.2**	**-1.5**
	0.7nm,0.3s,baz=358,slow=13,SNR=39						
WRA				Sn	**Sn**	**10 45 34.9**	**-7.9**
	0.9nm,0.3s,baz=358,slow=24,SNR=4.2						
FITZ	**Fitzroy Crossi**	**15.14**	**212**	*e*Pn	**Pn**	**10 43 08.4**	**-2.1**
	8.3nm,0.5s						
ASAR	**Alice Springs**	**18.25**	**180**	P	**Pn**	**10 43 53.1**	**+3.4**
	3.6nm,0.3s,baz=7.7,slow=12,SNR=90						
CTA	**Charters Tower**	**18.88**	**142**	P	**Pn**	**10 43 59.5**	**+2.1**
	0.8nm,0.3s,baz=322,slow=12,SNR=14						
CTAO	**Charters Tower**	**18.88**	**142**	*e*Pn	**Pn**	**10 43 59.7**	**+2.2**
	20nm,1.1s						
KSM	**Kuching**	**24.66**	**285**	*e*P	**P**	**10 44 56.5**	**-0.4**
	95nm,1.3s,mb5.2						
KSM				*e*pP		10 45 06.6	
FORT	**Forrest**	**25.96**	**192**	*e*P	**P**	**10 45 08.9**	**+0.4**
	17nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**27.36**	**166**	P	**P**	**10 45 22.8**	**+1.7**
	1.1nm,0.4s,mb3.7,baz=335,slow=9.1,SNR=8.4						
CMAR	**Chiang Mai Arr**	**41.91**	**305**	P	**P**	**10 47 26.4**	**-0.2**
	1.6nm,0.7s,mb3.8,baz=136,slow=7.0,SNR=9.2						
KSRS	**Korea Array**	**42.92**	**353**	P	**P**	**10 47 34.2**	**-0.4**
	4.4nm,0.8s,mb4.2,baz=176,slow=9.9,SNR=18						
SONM	**Songino Array**	**58.24**	**338**	P	**P**	**10 49 30.7**	**+0.7**
	0.5nm,0.6s,mb3.7,baz=149,slow=7.1,SNR=4.7						
SONM				PcP	PcP	10 50 21.2	+0.2
	0.3nm,0.5s,baz=146,slow=4.3,SNR=4.5						
MKAR	**Makanchi Array**	**69.11**	**325**	P	**P**	**10 50 42.2**	**+0.4**
	2.6nm,0.5s,mb4.4,baz=112,slow=8.3,SNR=24						
MKAR	**Makanchi Array**	**69.11**	**325**	P	**P**	**10 50 42.2**	**+0.4**
ZALV	**Zalesovo Beam**	**71.93**	**332**	P	**P**	**10 50 58.2**	**-0.6**
	1.2nm,0.4s,mb4.2,baz=128,slow=9.3,SNR=3.5						
VNDA	**Vanda**	**73.66**	**174**	P	**P**	**10 51 10.5**	**+1.7**
	0.3nm,0.5s,mb3.5,baz=317,slow=6.5,SNR=5.8						
BVAR	**Borovoye Array**	**78.84**	**327**	P	**P**	**10 51 38.5**	**0.0**
	baz=123,slow=8.5						
BVAR	**Borovoye Array**	**78.84**	**327**	P	**P**	**10 51 38.5**	**0.0**
AKTO	**Aktyubinsk**	**85.24**	**321**	P	**P**	**10 52 11.5**	**-0.7**
	0.8nm,0.7s,mb4.0,baz=105,slow=12,SNR=3.7						
TXAR	**Lajitas Array**	**120.61**	**59**	PKP	PKPdf	**10 58 28.4**	**+0.4**
	0.2nm,0.7s,baz=29,slow=2.1,SNR=3.5						
TORD	**Torodi Ar. Bea**	**132.41**	**283**	PKP	PKPdf	**10 58 51.0**	**+0.1**
	0.7nm,0.6s,baz=74,slow=2.1,SNR=5.6						
CPUP	**Villa Florida**	**146.67**	**161**	PKPbc	PKPbc	10 59 17.9	-0.1
	3.7nm,0.7s,baz=201,slow=3.5,SNR=13						
ROSC	**El Rosal**	**151.72**	**90**	PKPbc	PKPbc	10 59 33.1	+1.8
	10nm,0.6s,baz=96,slow=23,SNR=5.3						

IDC 27 10:44:01.5±4.3, 657N×8204W, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.4/18, mbtmp3.5/2, Error ellipse: s-maj=159.9km s-min=54.5km az=39.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**60.69**	**343**	P	P	10 54 14.4	0.0
	0.2nm,0.7s,baz=135,slow=7.0,SNR=6.0						
TORD	**Torodi Ar. Bea**	**82.46**	**78**	P	P	10 56 26.8	+0.2
	1.0nm,1.2s,baz=274,slow=5.9,SNR=3.7						
ASAR	**Alice Springs**	**141.52**	**240**	PKP	PKPdf	11 03 34.5	-1.1
	1.2nm,1.0s,baz=100,slow=2.1,SNR=4.0						

IDC 27 10:53:40.8±10.0, 326S×14356E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.4/15, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=363.3km s-min=30.7km az=94.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.87**	**208**	P	Pn	10 58 02.3	-0.9
	0.2nm,0.3s,baz=34,slow=12,SNR=14						
ASAR	**Alice Springs**	**22.33**	**204**	P	P	10 58 40.9	+0.5
	0.5nm,0.7s,baz=32,slow=9.6,SNR=5.8						
MKAR	**Makanchi Array**	**73.22**	**321**	P	P	11 05 13.9	+0.1
	0.2nm,0.7s,baz=95,slow=7.2,SNR=2.5						

ISCJB 27 10:58:41.4±0.5, 1466N±008×1443E±01, h25km, mb4.0/14, MS3.2/10, Error ellipse: s-maj=22.0km s-min=7.0km az=156.8

IDC 27 10:58:42.8±1.1, 1467N×1444E, h24km±5km, mb3.8/13, mb1 4.0/13, mb1mx3.9/23, mbtmp3.8/13, MS3.2/11, Ms1 3.3/11, ms1mx3.1/33, Error ellipse: s-maj=29.2km s-min=11.0km az=75.0

NEIC 27 10:58:42.8±0.4, 1466N×1444E, mb4.6/1, Error ellipse: s-maj=17.5km s-min=6.8km az=78.0

ISC 27 10:58:42.3±5.4, 1467N±007×1445E±02, h20km±40km, h26km±.6km: pP-P, n25, σ0§44/21, mb4.0/14, MS3.2/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.15**	**159**	Pn	**Pn**	**10 59 03.1**	**-0.1**
	167nm,0.3s,baz=360,slow=2.5,SNR=58						
GUMO				Sn	**Sn**	**10 59 18.5**	**+0.3**
	277nm,0.3s,baz=180,slow=19,SNR=42						
DAV	**Davao City (W)**	**20.00**	**250**	LR	LR	11 09 41.2	
	comp=Z,115nm,20.9s,baz=44,slow=33						
MJAR	**Matsushiro Arr**	**22.49**	**347**	P	**P**	**11 03 40.6**	**+0.2**
	1.2nm,0.8s,mb3.4,baz=178,slow=8.4,SNR=4.6						
MJAR				LR	LR	11 11 40.5	
	comp=Z,44nm,19.7s,MS2.9,baz=200,slow=35						
PMG	**Port Moresby**	**24.07**	**173**	LR	LR	11 11 47.9	
	comp=Z,45nm,18.1s,MS3.0,baz=86,slow=33						
KSRS	**Korea Array**	**27.03**	**330**	P	**P**	**11 04 23.6**	**+0.4**
	1.7nm,0.8s,mb3.7,baz=144,slow=9.6,SNR=6.7						
KSRS				pP	pP	11 04 30.8	+1.5
	1.5nm,0.7s,baz=144,slow=9.1,SNR=4.2						
KSRS				LR	LR	11 14 45.7	
	comp=Z,26nm,20.3s,MS2.8,baz=165,slow=36						
HNR	**Honiara**	**28.45**	**146**	LR	LR	11 14 15.4	
	comp=Z,71nm,21.6s,MS3.2,baz=150,slow=33						
WRAB	**Tennant Creek**	**35.79**	**196**	*e*P	**P**	**11 05 39.9**	**-0.4**
	5.8nm,0.7s,mb4.6						
WRAB				*e*pP	pP	11 05 47.6	+1.1
WRA	**Warramunga Arr**	**35.80**	**196**	P	**P**	**11 05 40.4**	**0.0**
	5.3nm,0.8s,mb4.5,baz=16,slow=9.4,SNR=7.0						
WRA				pP	pP	11 05 47.6	+1.0
	2.9nm,0.6s,baz=15,slow=9.5,SNR=11						
WRA				LR	LR	11 20 59.0	
	comp=Z,34nm,19.9s,MS3.1,baz=30,slow=37						
ASAR	**Alice Springs**	**39.47**	**195**	P	**P**	**11 06 12.3**	**+1.0**
	0.6nm,0.7s,mb3.5,baz=18,slow=11,SNR=12						
PETK	**Petropavlovsk-**	**39.76**	**12**	LR	LR	11 19 50.1	
	comp=Z,38nm,20.8s,MS3.2,baz=93,slow=32						
CMAR	**Chiang Mai Arr**	**43.70**	**281**	P	**P**	**11 06 45.6**	**-0.7**
	2.0nm,1.0s,mb3.8,baz=76,slow=6.4,SNR=11						
CMAR				pP	pP	11 06 53.4	+0.8
	1.0nm,0.4s,baz=72,slow=5.6,SNR=3.4						
CMAR				LR	LR	11 21 49.4	
	comp=Z,50nm,21.1s,MS3.4,baz=260,slow=32						
SONM	**Songino Array**	**45.62**	**324**	P	**P**	**11 07 00.8**	**-0.4**
	1.3nm,0.9s,mb3.9,baz=134,slow=9.2,SNR=8.0						
SONM				LR	LR	11 27 49.0	
	comp=Z,57nm,18.1s,MS3.5,baz=62,slow=38						
STKA	**Stephens Creek**	**46.36**	**183**	P	**P**	**11 07 06.3**	**-0.8**
	1.8nm,0.7s,mb4.1,baz=353,slow=4.5,SNR=7.7						
STKA	**Stephens Creek**	**46.36**	**183**	P	**P**	**11 07 06.3**	**-0.8**
AFI	**Afiamalu**	**51.79**	**121**	LR	LR	11 26 14.5	
	comp=Z,30nm,21.4s,MS3.3,baz=173,slow=32						
MK31	**Makanchi Array**	**60.44**	**316**	*e*P	**P**	**11 08 50.8**	**+0.3**
MK31				*e*pP	pP	11 08 58.0	+1.0
MKAR	**Makanchi Array**	**60.44**	**316**	P	**P**	**11 08 50.6**	**+0.2**
	3.2nm,0.9s,mb4.4,baz=91,slow=8.7,SNR=21						
ZALV	**Zalesovo Beam**	**60.52**	**324**	P	**P**	**11 08 50.5**	**-0.4**
	0.6nm,0.3s,mb4.2,baz=86,slow=7.6,SNR=4.3						
ZALV				LR	LR	11 35 54.7	
	comp=Z,18nm,20.2s,MS3.2,baz=17,slow=37						
ZALV	**Zalesovo Beam**	**60.52**	**324**	P	**P**	**11 08 50.5**	**-0.4**
ZALV				LR	LR	11 35 54.7	
BVAR	**Borovoye Array**	**68.83**	**321**	P	**P**	**11 09 45.5**	**+0.3**
	2.4nm,0.7s,mb4.3,baz=94,slow=7.2,SNR=14						
AKTK	**Aktyubinsk**	**76.59**	**319**	P	**P**	**11 10 31.7**	**+0.4**
AKTO	**Aktyubinsk**	**76.59**	**319**	P	**P**	**11 10 31.7**	**+0.4**
	0.5nm,0.5s,mb3.8,baz=66,slow=10.0,SNR=3.6						
YKA	**Yellowknife Ar**	**82.10**	**27**	P	**P**	**11 11 01.0**	**-0.1**
	0.4nm,0.7s,mb3.4,baz=285,slow=5.3,SNR=8.8						
YKA	**Yellowknife Ar**	**82.10**	**27**	P	**P**	**11 11 01.0**	**-0.1**
RES	**Resolute Bay**	**83.60**	**13**	P	**P**	**11 11 08.2**	**-0.6**
	0.5nm,0.5s,mb3.9,baz=256,slow=9.8,SNR=5.8						

ISCJB 27 11:13:31.5±0.5, 2421S±005×67.19W±006, h168km±6km, mb3.5/8, Error ellipse: s-maj=10.1km s-min=7.4km az=156.2

NEIC 27 11:13:32.8±0.8, 2432S×66.95W, h144km±13km, mb4.2/2, Error ellipse: s-maj=14.4km s-min=10.3km az=104.0

IDC 27 11:13:33.2±1.0, 2404S×6709W, h167km±9km, mb3.4/8, mb1 3.7/13, mb1mx3.6/21, mbtmp3.5/13, Error ellipse: s-maj=16.3km s-min=12.8km az=35.0

GUC 27 11:13:33.8±1.0, 2407S×6758W, h195km±13km, ML4.8

ISC 27 11:13:32.4±0.5, 2421S±005×6716W±006, h158km±6km, n35, σ1§10/44, mb3.5/8, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.60**	**323**	*e*P	**Pn**	**11 14 06.0**	**+2.4**
SPCH				*e*S	**Sn**	**11 14 31.9**	**+4.3**
LVC	**Limon Verde**	**2.26**	**314**	P	**Pn**	**11 14 12.8**	**+1.8**
	44nm,0.3s,baz=141,slow=5.4,SNR=709						
LVC				S	**Sn**	**11 14 42.1**	**+1.4**
	127nm,0.3s,baz=8.4,slow=22,SNR=78						
LVC	**Limon Verde**	**2.26**	**314**	*e*P	**Pn**	**11 14 12.5**	**+1.5**
LVC				*i* S	**Sn**	**11 14 42.0**	**+1.3**
LVC				AML	AML	11 14 44.6	
	comp=E,1μm,0.6s						
PECH	**Pedro de Valdi**	**2.81**	**304**	*e*P	**Pn**	**11 14 18.2**	**+0.6**
PECH				*e*S	**Sn**	**11 14 52.0**	**-0.7**
PECH				AML	AML	11 14 53.0	
	comp=E,10μm,0.2s						
CEN1	**Los Morros**	**2.90**	**286**	*e*P	**Pn**	**11 14 20.5**	**+1.7**
CEN1				*e*S	**Sn**	**11 14 55.4**	**+0.7**
CEN1				AML	AML	11 14 57.3	
	comp=N,954nm,0.3s						
ANCH	**Antofagasta**	**3.02**	**279**	*e*P	**Pn**	**11 14 21.0**	**+0.8**
ANCH				*e*S	**Sn**	**11 14 55.5**	**-1.8**
ANCH				AML	AML	11 14 58.5	
	comp=N,2μm,0.1s						
MACH	**Maria Elena**	**3.12**	**309**	*e*P	**Pn**	**11 14 22.5**	**+0.9**
MACH				*e*S	**Sn**	**11 14 58.6**	**-1.0**
MECH	**Mejillones**	**3.21**	**289**	*e*P	**Pn**	**11 14 22.8**	**+0.1**
MECH				*i* S	**Sn**	**11 15 00.8**	**-0.9**
MECH				AML	AML	11 15 05.1	
	comp=N,3μm,0.3s						
TOCH	**Tocopilla**	**3.50**	**306**	*e*P	**Pn**	**11 14 26.3**	**-0.1**
TOCH				*i* S	**Sn**	**11 15 05.7**	**-2.6**
TOCH				AML	AML	11 15 10.4	
	comp=E,2μm,0.4s						
LCO	**Las Campanas**	**5.74**	**213**	*e*Pn	**Pn**	**11 14 55.2**	**-0.4**
	comp=E,15nm,1.2s						
LCO				*e*Sn	**Sn**	**11 15 51.9**	**-9.1**
CFAA	**Coronel Fontan**	**7.43**	**187**	P	**Pn**	**11 15 17.9**	**-0.2**
	comp=E,0.3nm,0.3s,baz=2.2,slow=12,SNR=14						
CFAA				S	**Sn**	**11 16 38.4**	**-3.0**
	comp=E,0.4nm,0.3s,baz=237,slow=18,SNR=12						
ARE	**Arequipa**	**8.71**	**331**	*e*P	**Pn**	**11 15 41.0**	**+5.8**
ARE				*e*S	**Sn**	**11 16 56.0**	**-16**
CPUP	**Villa Florida**	**9.15**	**105**	P	**Pn**	**11 15 39.9**	**-1.0**
	comp=E,0.4nm,0.3s,baz=266,slow=11,SNR=8.0						
CPUP	**Villa Florida**	**9.15**	**105**	*e*Pn	**Pn**	**11 15 40.1**	**-0.8**
SIV	**San Ignacio**	**9.97**	**36**	P	**Pn**	**11 15 50.4**	**-1.5**
	comp=E,3.4nm,0.3s,baz=231,slow=12,SNR=28						
SIV				S	**Sn**	**11 17 29.3**	**-13**
	comp=E,0.2nm,0.3s,baz=233,slow=15,SNR=5.6						
TRQA	**Tornquist**	**14.50**	**163**	*e*Pn	**Pn**	**11 16 49.5**	**-0.6**
	comp=E,12nm,0.8s						
PLCA	**Paso Flores**	**16.73**	**189**	P	**Pn**	**11 17 17.8**	**+0.4**
	comp=E,0.4nm,0.3s,baz=10,slow=13,SNR=12						
PLCA	**Paso Flores**	**16.73**	**189**	P	**Pn**	**11 17 17.8**	**+0.4**
BDFB	**Brasilia**	**19.90**	**68**	P	**P**	**11 17 51.6**	**-0.1**
	comp=E,1.6nm,0.3s,baz=227,slow=17,SNR=29						
VNA3	**Neumayer Olymp**	**57.01**	**161**	*e*	**P**	**11 23 01.6**	**+0.5**
VNA3				*e*		11 23 05.2	
VNA2	**Neumayer--Watz**	**57.58**	**160**	*e*	**P**	**11 23 05.6**	**+0.5**
	baz=294,slow=8.7						
VNA2				*e*		11 23 09.3	
SNAA	**Sanae**	**59.21**	**161**	*e*	**P**	**11 23 16.5**	**+0.1**
SNAA				*e*		11 23 19.5	
TXAR	**Lajitas Array**	**63.76**	**325**	P	**P**	**11 23 47.2**	**-0.2**
	comp=E,0.1nm,0.4s,mb3.0,baz=150,slow=8.0,SNR=2.6						
QSPA	**South Pole Qui**	**66.00**	**180**	P	**P**	**11 24 02.5**	**+1.2**
	comp=E,2.8nm,0.5s,mb4.4,baz=166,slow=1.6,SNR=13						
QSPA	**South Pole Qui**	**66.00**	**180**	P	**P**	**11 24 02.5**	**+1.2**
VNDA	**Vanda**	**74.47**	**190**	P	**P**	**11 24 54.6**	**+1.8**
	comp=E,0.8nm,0.8s,mb3.5,baz=117,slow=4.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**76.78**	**69**	P	**P**	**11 25 05.8**	**-1.1**
	comp=E,1.1nm,0.3s,mb3.9,baz=262,slow=6.1,SNR=24						
PDAR	**Pinedale Array**	**77.25**	**329**	P	**P**	**11 25 08.7**	**-0.2**
	comp=E,0.2nm,0.8s,mb2.8,baz=98,slow=4.0,SNR=3.0						
NVAR	**Mina Array Bea**	**78.61**	**321**	P	**P**	**11 25 15.4**	**-1.1**
	comp=E,0.2nm,0.4s,mb3.1,baz=140,slow=7.1,SNR=2.4						
BOSA	**Boshof**	**80.77**	**117**	P	**P**	**11 25 29.2**	**+0.6**
	comp=E,4.2nm,0.8s,mb4.1,baz=240,slow=3.8,SNR=10						
YKA	**Yellowknife Ar**	**94.27**	**340**	P	**P**	**11 26 32.5**	**-0.5**
	comp=E,0.2nm,0.5s,mb3.5,baz=135,slow=4.2,SNR=12						
ASAR	**Alice Springs**	**128.21**	**205**	PKP	PKPdf	11 32 19.8	-0.8
	comp=E,0.6nm,0.7s,baz=154,slow=2.0,SNR=11						
WRA	**Warramunga Arr**	**131.38**	**207**	PKP	PKPdf	11 32 26.2	-0.5
	comp=E,0.6nm,0.7s,baz=158,slow=1.6,SNR=10						
ZALV	**Zalesovo Beam**	**143.64**	**28**	PKP	PKPdf	11 32 46.2	-1.9
	comp=E,1.1nm,0.5s,baz=329,slow=5.0,SNR=3.5						
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPbc	11 32 54.1	-1.6
	comp=E,0.9nm,0.5s,baz=285,slow=3.9,SNR=8.4						

IDC 27 11:14:22.2±1.8, 1908S×17722W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/18, mbtmp4.2/4, ML4.3/1, Error ellipse: s-maj=54.2km s-min=36.3km az=130.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.74**	**193**	P	Pn	11 18 53.8	-1.2
	0.8nm,0.3s,baz=300,slow=6.0,SNR=6.1						
STKA	**Stephens Creek**	**39.08**	**243**	P	P	11 21 51.2	0.0
	0.8nm,0.4s,baz=74,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**45.54**	**260**	P	P	11 22 44.1	+0.1
	1.8nm,0.3s,baz=96,slow=7.5,SNR=112						
ASAR	**Alice Springs**	**45.57**	**255**	P	P	11 22 44.0	-0.2
	3.2nm,0.7s,baz=94,slow=8.1,SNR=62						
BVAR	**Borovoye Array**	**118.46**	**321**	PKP	PKPdf	11 33 10.2	-1.4
	0.5nm,0.4s,baz=109,slow=4.6,SNR=4.8						
NOA	**NORSAR Array B**	**137.66**	**354**	PKP	PKPdf	11 33 45.6	-2.2
	2.3nm,0.9s,baz=5.3,slow=3.0,SNR=3.4						
AKASG	**Malin Array Be**	**142.12**	**333**	PKhKP		11 33 52.2	
	0.7nm,0.5s,baz=46,slow=3.3,SNR=8.6						
GERES	**GERESS Array B**	**149.02**	**346**	PKPbc	PKPbc	11 34 13.3	+1.1
	0.7nm,0.8s,baz=29,slow=3.0,SNR=5.2						

CSEM 27 11:18:04.8±0.6, 2990N×3635E, h10km, ML3.1, Error ellipse: s-maj=14.7km s-min=5.6km az=69.0

HLW 27 11:18:05.7, 2993N×3658E, h25km, Mb3.1

SGS 27 11:18:06.0, 3007N×3616E, h6km

GII 27 11:18:06.5±0.8, 2992N×3611E, h0km, ML2.2/2, EXPLOSION

ISC 27 11:18:05.1±0.9, 2988N±004×3630E±006, h0km, n18, σ0§50/27, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.10**	**262**	Pg	**Pg**	**11 18 26.3**	**+0.1**
AQBJ				Sg	**Sg**	**11 18 40.6**	**+0.1**
ZFRI	**Zfri**	**1.18**	**305**	Pg	**Pg**	**11 18 27.8**	**0.0**
ZFRI				Sg	**Sg**	**11 18 43.1**	**-0.1**
EIL	**Elat**	**1.20**	**260**	Pg	**Pg**	**11 18 27.9**	**-0.1**
EIL				Sg	**Sg**	**11 18 44.1**	**+0.6**
MBRI	**Mt Berech**	**1.21**	**266**	Pg	**Pg**	**11 18 27.8**	**-0.6**
MBRI				Sg	**Sg**	**11 18 44.4**	**+0.4**
PRNI	**Paran**	**1.22**	**293**	Pg	**Pg**	**11 18 28.1**	**-0.4**
PRNI				Sg	**Sg**	**11 18 44.4**	**+0.1**
JLOS		**1.35**	**212**	P	**Pg**	**11 18 30.8**	**-0.1**
JLOS		**1.35**	**212**	P	**Pg**	**11 18 30.8**	**-0.1**
JLOS				S	**Sg**	**11 18 49.5**	**+1.1**
KRMI	**Paran Flat**	**1.39**	**280**	Pg	**Pg**	**11 18 30.7**	**-1.1**
KRMI				Sg	**Sg**	**11 18 49.6**	**-0.2**
HBST	**Basata**	**1.52**	**244**	P	**Pn**	**11 18 33.5**	**0.0**
MZDA	**Masada**	**1.64**	**331**	Pn	**Pn**	**11 18 35.8**	**+0.6**
MZDA				Sn	**Sn**	**11 18 58.1**	**+1.2**
BDAS	**Al Bad'**	**1.79**	**216**	P	**Pn**	**11 18 37.5**	**+0.3**
HNKL	**Nakhl**	**2.02**	**272**	P	**Pn**	**11 18 40.5**	**+0.1**
HNKL				S	**Sn**	**11 19 05.8**	**-0.6**
RSHS		**2.06**	**220**	P	**Pn**	**11 18 40.1**	**-0.8**
HKAT	**Jabal Katrina**	**2.43**	**237**	P	**Pn**	**11 18 46.3**	**+0.2**
TR2		**2.71**	**237**	P	**Pn**	**11 18 49.8**	**-0.1**
TR1		**2.78**	**228**	P	**Pn**	**11 18 50.5**	**-0.5**
AMAG	**Maghara**	**2.78**	**287**	P	**Pn**	**11 18 50.7**	**-0.2**
SUZ		**3.02**	**270**	P	**Pn**	**11 18 54.4**	**+0.2**

CSEM 27 11:35:49.0±0.3, 4052N×1958E, h9km, ML2.8/9, Error ellipse: s-maj=6.5km s-min=3.5km az=31.0

NEIC 27 11:35:52.0, 4093N×1944E, h9km, ML2.8(PDG), After PDG.

PDG 27 11:35:52.0±0.2, 4093N×1944E, h9km, ML2.8/9, Error ellipse: s-maj=1.2km s-min=2.5km az=0.0

ISC 27 11:35:52.3±2.2, 4093N±009×1941E±008, h9km±10km, n26, σ1§30/49, 9C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.55**	**39**	*e*PG	**Pg**	**11 36 03.0**	**+0.1**
ULC	**Ulcinj**	**1.04**	**354**	↑*i*Pg	**Pg**	**11 36 11.4**	**-0.9**
ULC				*e*Sg	**Sg**	**11 36 27.7**	**+1.8**
OHR	**Ohrid**	**1.07**	**80**	*e*Sn	**Sg**	**11 36 27.3**	**+0.6**
BUM	**Brajici-Budva**	**1.42**	**345**	↑*i*Pg	**Pn**	**11 36 17.8**	**-0.5**
BUM				*e*Sg	**Sg**	**11 36 40.5**	**+2.

ellipse: s-maj=47.6km s-min=12.6km az=90.9

ISC 27 11:44:29.4±2.6,**6300S**±005×**1501E**±02,**h10**km±15km,
h13km±1.6km:**pP-P,n201**,σ1**908**/69,**mb5.0**/29,**MS4.9**/23,
19C-8D,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRV	**Dumont d'Urvil**	**5.65**	**225**	P	**Pn**	**11 45 53.0**	**-0.3**
DRV				R		11 47 00.0	
VNDA	**Vanda**	**15.06**	**170**	Pn	**Pn**	**11 47 55.6**	**-6.2**
	7.8nm,0.3s,baz=336,slow=13,SNR=238						
VNDA				Sn	**Sn**	**11 50 31.6**	**-17**
	6.0nm,0.3s,baz=180,slow=16,SNR=8.5						
VNDA				LR	LR	11 53 53.1	
	comp=Z,12μm,18.8s,baz=346,slow=38						
VNDA	**Vanda**	**15.06**	**170**	*e*P	**Pn**	**11 47 55.8**	**-6.0**
VNDA				*e*		11 50 30.8	
VNDA				pmax	pmax		
	comp=Z,104nm,0.5s						
VNDA	**Vanda**	**15.06**	**170**	*e*Pn	**Pn**	**11 47 55.8**	**-6.1**
	comp=Z,104nm,0.5s						
VNDA				*e*Sn	**Sn**	**11 50 30.8**	**-18**
SBA	**Scott Base**	**15.80**	**167**	*e*P	**Pn**	**11 48 05.1**	**-6.5**
SBA				*e*		11 50 49.3	
SBA				pmax	pmax		
	comp=Z,211nm,1.2s						
SBA	**Scott Base**	**15.80**	**167**	*e*Pn	**Pn**	**11 48 05.1**	**-6.5**
	comp=Z,211nm,1.2s						
SBA				*e*Sn	**Sn**	**11 50 49.3**	**-17**
TAU	**Tasmania Unive**	**20.19**	**354**	*e*P	**P**	**11 49 04.6**	**+0.7**
TAU				pmax	pmax		
	comp=Z,110nm,1.1s						
TAU	**Tasmania Unive**	**20.19**	**354**	*e*P	**P**	**11 49 04.6**	**+0.7**
	comp=Z,110nm,1.1s						
RPZ	**Rata Peaks**	**22.82**	**42**	LR	LR	11 56 42.4	
	comp=Z,5μm,20.1s,MS4.9,baz=194,slow=32						
MIR	**Mirnyy**	**23.83**	**236**k	*i*P	**P**	**11 49 43.0**	**+0.8**
MIR				*i*		11 50 10.0	
MIR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.2						
MIR				pmax	pmax		
	comp=Z,2μm,6.0s						
MIR				MLR	MLR		
	comp=Z,4μm,19.0s,MS4.9						
QSPA	**South Pole Qui**	**27.08**	**180**	P	**P**	**11 50 12.3**	**+0.8**
	comp=Z,27nm,0.9s,mb4.8,baz=359,slow=7.0,SNR=24						
QSPA				LR	LR	12 01 45.0	
	comp=Z,7μm,18.4s,MS5.2,baz=13,slow=38						
QSPA	**South Pole Qui**	**27.08**	**180**	P	**P**	**11 50 12.3**	**+0.8**
QSPA				LR	LR	12 01 45.0	
URZ	**Urewera**	**29.69**	**46**	P	**P**	**11 50 33.6**	**-1.5**
	comp=Z,8.6nm,0.8s,mb4.5,baz=190,slow=6.1,SNR=3.1						
URZ				LR	LR	12 00 57.4	
	comp=Z,2μm,20.7s,MS4.8,baz=6.9,slow=33						
STKA	**Stephens Creek**	**31.61**	**346**	P	**P**	**11 50 52.6**	**+0.5**
	comp=Z,11nm,1.0s,mb4.6,baz=161,slow=8.5,SNR=16						
STKA				LR	LR	12 00 41.8	
	comp=Z,2μm,19.8s,MS4.8,baz=162,slow=31						
STKA	**Stephens Creek**	**31.61**	**346**	*e*P	**P**	**11 50 52.8**	**+0.8**
	comp=Z,3.5nm,0.9s,mb4.2						
MAW	**Mawson**	**33.86**	**223**	P	**P**	**11 51 12.6**	**+1.2**
	comp=Z,8.8nm,0.8s,mb4.8,baz=134,slow=11,SNR=6.7						
MAW				LR	LR	12 05 26.0	
	comp=Z,5μm,18.4s,MS5.3,baz=115,slow=37						
MAW	**Mawson**	**33.86**	**223**	*e*P	**P**	**11 51 11.2**	**-0.2**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**33.86**	**223**	*e*P	**P**	**11 51 11.2**	**-0.3**
	comp=Z,4.1nm,0.9s,mb4.4						
FORT	**Forrest**	**35.19**	**326**	*e*P	**P**	**11 51 22.5**	**-0.8**
	comp=Z,88nm,1.1s,mb5.6						
NWAO	**Narrogin (SRO)**	**36.50**	**310**	P	**P**	**11 51 33.5**	**-1.0**
	comp=Z,13nm,0.7s,mb5.0,baz=170,slow=6.7,SNR=9.6						
NWAO	**Narrogin (SRO)**	**36.50**	**310**	P	**P**	**11 51 33.5**	**-1.0**
SYO	**Syowa Base**	**39.42**	**212**⇑	*e*P	**P**	**11 51 57.4**	**-1.4**
SYO	**Syowa Base**	**39.42**	**212**⇓	*e*pP	pP	11 52 00.4	-1.5
ASAR	**Alice Springs**	**40.79**	**337**	P	**P**	**11 52 09.9**	**-0.7**
	comp=Z,26nm,0.8s,mb4.9,baz=165,slow=8.3,SNR=158						
ASAR				PcP	PcP	11 54 11.8	+0.3
	comp=Z,2.7nm,0.8s,baz=160,slow=2.9,SNR=4.3						
ASAR				PKKP		12 16 00.7	
	comp=Z,0.6nm,1.0s,baz=191,slow=1.3,SNR=4.3						
ASAR	**Alice Springs**	**40.79**	**337**	P	**P**	**11 52 09.9**	**-0.7**
ASAR						11 54 11.9	
CTAO	**Charters Tower**	**42.96**	**355**	*e*P	**P**	**11 52 30.4**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,79nm,1.6s,mb5.2						
CTAO	**Charters Tower**	**42.96**	**355**	*e*P	**P**	**11 52 30.4**	**+2.1**
	comp=Z,79nm,1.6s,mb5.2						
NVL	**N'lazarevskaya**	**43.39**	**199**	*e*P	**P**	**11 52 31.2**	**-0.1**
NVL				*e*S	**S**	**11 58 58.1**	**-0.6**
NVL				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.0						
NVL				MLR	MLR		
	comp=N,2μm,13.9s,MS5.3						
NVL				MLR	MLR		
	comp=E,1μm,13.9s,MS5.3						
NVL				MLR	MLR		
	comp=Z,3μm,13.9s,MS5.4						
SNAA	**Sanae**	**44.32**	**192**	*e*P	**P**	**11 52 38.2**	**-0.5**
SNAA				*e*	pP	11 52 41.0	-0.9
SNAA				*e*		11 52 45.8	
SNAA				*e*		11 52 51.0	
SNAA				*e*		11 53 08.1	
SNAA				*e*		11 54 25.4	
SNAA				*e*		11 54 31.9	
SNAA	**Sanae**	**44.32**	**192**	*e*P	**P**	**11 52 38.1**	**-0.6**
SNAA				pmax	pmax		
	comp=Z,39nm,1.4s						
SNAA	**Sanae**	**44.32**	**192**	*e*P	**P**	**11 52 38.1**	**-0.6**
	comp=Z,39nm,1.4s,mb5.0						
WRA	**Warramunga Arr**	**44.36**	**339**	P	**P**	**11 52 38.0**	**-1.7**
	comp=Z,26nm,0.9s,mb5.0,baz=167,slow=7.1,SNR=88						
WRA				PcP	PcP	11 54 23.0	-0.4
	comp=Z,6.1nm,0.7s,baz=174,slow=3.3,SNR=12						
WRA				LR	LR	12 08 04.5	
	comp=Z,1μm,21.1s,MS4.8,baz=160,slow=32						
WRA	**Warramunga Arr**	**44.36**	**339**	P	**P**	**11 52 38.0**	**-1.6**
WRA						11 54 23.0	
WRAB	**Tennant Creek**	**44.37**	**339**	P	**P**	**11 52 38.9**	**-0.8**
	comp=Z,313nm,1.1s,mb6.0,SNR=14						
WRAB	**Tennant Creek**	**44.37**	**339***c*	*i*P	**P**	**11 52 38.6**	**-1.1**
WRAB	**Tennant Creek**	**44.37**	**339**	*e*P	**P**	**11 52 38.2**	**-1.4**
	comp=Z,56nm,1.0s,mb5.2						
VNA3	**Neumayer Olymp**	**45.30**	**189**	*e*P	**P**	**11 52 46.8**	**+0.3**
VNA3				*e*	pP	11 52 50.0	+0.3
VNA3				*e*		11 52 55.2	
VNA3				*e*		11 53 00.4	
VNA3				*e*		11 54 31.8	
VNA3				*e*		11 54 37.3	
VNA2	**Neumayer--Watz**	**45.44**	**190**	*e*P	**P**	**11 52 48.1**	**+0.5**
	baz=155,slow=5.8						
VNA2				*e*	pP	11 52 51.1	+0.3
VNA2				*e*		11 52 56.2	
VNA2				*e*		11 53 01.0	
VNA2				*e*		11 53 18.2	
VNA2				*e*		11 54 34.4	
VNA2				*e*		11 54 40.6	
VNA1	**Neumayer--Stat**	**45.77**	**190**	*e*P	**P**	**11 52 51.5**	**+1.2**
VNA1				*e*	pP	11 52 54.8	+1.3
VNA1				*e*		11 52 59.5	
MBWA	**Marble Bar**	**46.61**	**320**	*e*P	**P**	**11 52 55.9**	**-1.5**
	comp=Z,61nm,1.3s,mb5.4						
FITZ	**Fitzroy Crossi**	**47.93**	**328**	*e*P	**P**	**11 53 07.0**	**-0.7**
	comp=Z,36nm,1.1s,mb5.3						
PMG	**Port Moresby**	**53.54**	**356***c*	*i*P	**P**	**11 53 52.2**	**+2.1**
PMG				pmax	pmax		
	comp=Z,59nm,1.7s						
PMG	**Port Moresby**	**53.54**	**356**	*e*P	**P**	**11 53 52.3**	**+2.2**
	comp=Z,71nm,1.6s,mb5.3						
RAR	**Rarotonga**	**53.63**	**63**	LR	LR	12 11 46.7	
	comp=Z,270nm,19.5s,MS4.3,baz=255,slow=31						
TBI	**Tubuai**	**56.12**	**74**	*e*S	**S**	**12 01 57.1**	**-0.4**
	comp=Z,510nm,30.8s						
TBI				*e*LQ		12 08 12.1	
	comp=Z,817nm,26.8s						
TBI				*e*LR	LR	12 10 27.7	
	comp=Z,2μm,27.5s,baz=208						
USHA	**Ushuaia**	**58.73**	**155**	P	**P**	**11 54 24.9**	**-1.8**
	comp=Z,10.0nm,0.9s,mb4.8,baz=173,slow=15,SNR=3.7						
PPT	**Papeete**	**61.16**	**71**	*e*S	**S**	**12 03 03.1**	**0.0**
	comp=Z,676nm,29.5s						
PPT				*e*LR	LR	12 12 48.0	
	comp=Z,1μm,23.5s,baz=206						
PPT	**Papeete**	**61.16**	**71**	LR	LR	12 14 22.2	
	comp=Z,764nm,18.5s,MS4.9,baz=233,slow=29						
KAPI	**Kappang**	**61.98**	**325**	P	**P**	**11 54 51.2**	**+1.8**
	comp=Z,65nm,1.1s,mb5.7,baz=109,slow=14,SNR=3.4						
RKT	**Rikitea**	**62.84**	**88**	*e*S	**S**	**12 03 24.4**	**+0.1**
	comp=Z,231nm,27.8s						
RKT				*e*LQ		12 10 47.8	
	comp=Z,1μm,34.2s						
RKT				*e*LR	LR	12 13 31.9	
	comp=Z,785nm,28.8s						
EFI	**East Falkland**	**63.54**	**161**	*i*P	**P**	**11 54 58.9**	**-0.4**
PLCA	**Paso Flores**	**71.63**	**149**	*e*P	**P**	**11 55 51.1**	**+0.5**
	comp=Z,3.2nm,0.7s,mb4.4,baz=198,slow=6.0,SNR=12						
PLCA	**Paso Flores**	**71.63**	**149**	*e*P	**P**	**11 55 51.0**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PLCA	**Paso Flores**	**71.63**	**149**	*e*P	**P**	**11 55 51.0**	**+0.3**
	comp=Z,5.6nm,0.8s,mb4.5						
TAOE	**Nuku Hiva Isla**	**73.02**	**76**	*e*LR	LR	12 18 15.1	
	comp=Z,3μm,26.5s,baz=210						
PSI	**Prapat**	**75.95**	**307**	P	**P**	**11 56 14.4**	**-1.8**
	comp=Z,5.8nm,0.8s,mb4.6,baz=141,slow=14,SNR=4.3						
KULM	**Kulim**	**77.64**	**309**	*e*P	**P**	**11 56 25.1**	**-0.6**
	comp=Z,24nm,0.8s,mb5.2						
BOSA	**Boshof**	**78.77**	**227**	P	**P**	**11 56 32.8**	**+0.8**
	comp=Z,3.9nm,0.7s,mb4.4,baz=105,slow=2.6,SNR=9.5						
BOSA				LR	LR	12 26 21.0	
	comp=Z,1μm,21.2s,MS5.1,baz=158,slow=32						
CFAA	**Coronel Fontan**	**80.88**	**148**	P	**P**	**11 56 42.8**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1,baz=214,slow=4.6,SNR=24						
LCO	**Las Campanas**	**82.73**	**145**	P	**P**	**11 56 53.1**	**0.0**
CPUP	**Villa Florida**	**88.34**	**156**	P	**P**	**11 57 20.7**	**-0.4**
	comp=Z,6.0nm,0.7s,mb4.9,baz=173,slow=4.6,SNR=18						
CPUP				LR	LR	12 38 27.5	
	comp=Z,412nm,18.1s,MS4.9,baz=171,slow=37						
CPUP	**Villa Florida**	**88.34**	**156**	*e*P	**P**	**11 57 20.8**	**-0.3**
CPUP				pmax	pmax		
	comp=Z,21nm,0.6s						
CPUP	**Villa Florida**	**88.34**	**156**	*e*P	**P**	**11 57 20.8**	**-0.3**
	comp=Z,20nm,0.6s,mb5.5						
LVC	**Limon Verde**	**89.29**	**144**	P	**P**	**11 57 26.5**	**+0.9**
	comp=Z,10nm,1.1s,mb5.1,baz=221,slow=5.5,SNR=6.6						
LVC	**Limon Verde**	**89.29**	**144**	P	**P**	**11 57 26.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**90.47**	**312**	P	**P**	**11 57 31.6**	**+0.7**
	comp=Z,0.8nm,0.4s,mb4.4,baz=182,slow=4.5,SNR=11						
CMAR				LR	LR	12 35 27.7	
	comp=Z,518nm,21.1s,MS4.9,baz=164,slow=34						
CHTO	**Chiang Mai**	**90.80**	**312**	*e*P	**P**	**11 57 32.6**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
CHTO	**Chiang Mai**	**90.80**	**312**	*e*P	**P**	**11 57 32.6**	**+0.2**
	comp=Z,7.1nm,0.9s,mb5.0						
KMI	**Kunming**	**95.47**	**318**	P	**P**	**11 57 55.5**	**+1.7**
KMI				AP	pP	11 58 01.3	+4.1
KMI				XP	sP	11 58 03.5	+5.1
KMI				PP	PP	12 01 50.3	+5.3
KMI				S	S	12 09 11.0	+1.2
KMI				SS	SS	12 15 43.3	+4.9
KMI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb5.0						
KMI				AMB	AMB		
	comp=Z,102nm,4.3s						
KMI				LR	LR		
	comp=N,306nm,23.2s,MS4.8						
KMI				LR	LR		
	comp=E,239nm,26.7s,MS4.8						
KMI				LR	LR		
	comp=Z,410nm,23.2s,MS4.8						
GYA	**Guiyang**	**95.57**	**322**	*e*P	**P**	**11 57 56.8**	**+2.6**
GYA				PP	PP	12 01 51.8	+6.0
GYA				SKS		12 08 32.0	
GYA				S	S	12 09 12.8	+2.2
GYA				SS	SS	12 15 45.5	+5.6
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.5						
GYA				AMB	AMB		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=N,510nm,21.8s,MS5.1						
GYA				LR	LR		
	comp=E,420nm,20.2s,MS5.1						
GYA				LR	LR		
	comp=Z,550nm,19.4s,MS5.0						
MJAR	**Matsushiro Arr**	**99.66**	**350**	LR	LR	12 40 28.2	
	comp=Z,188nm,21.2s,MS4.6,baz=195,slow=34						
CD2	**Chengdu**	**100.59**	**321**	P	Pdif	11 58 18.5	+1.1
CD2				AP		11 58 22.5	
CD2				PP	PP	12 02 29.8	+5.5
CD2				S	Sdif	12 09 52.8	-1.6
CD2				XS		12 10 01.0	
CD2				SS	SS	12 16 55.5	+5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CD2				AMB	AMB		
	comp=Z,210nm,5.5s						
CD2				LR	LR		
	comp=N,360nm,17.4s						
CD2				LR	LR		
	comp=Z,520nm,25.2s						
XAN	**Xi'an**	**102.14**	**326**	P	Pdif	11 58 22.5	-1.8
XAN				AP		11 58 30.0	
XAN				PP	PP	12 02 38.5	+2.6
XAN				S	Sdif	12 10 09.8	+2.4
XAN				SS	SS	12 17 18.8	+6.9
XAN				AMB	AMB		
	comp=Z,1.0nm,0.5s						
XAN				AMB	AMB		
	comp=Z,20nm,11.9s						
XAN				LR	LR		
	comp=N,98nm,32.3s,MS4.3						
XAN				LR	LR		
	comp=E,131nm,35.7s,MS4.3						
XAN				LR	LR		
	comp=Z,631nm,36.9s,MS4.9						
BJI	**Beijing**	**106.22**	**334**	PDIF	Pdif	11 58 45.0	+2.6
BJI				PP	PP	12 03 08.0	+1.8
BJI				SS	SS	12 18 13.3	+5.5
BJI				LR	LR		
	comp=N,231nm,25.9s,MS4.7						
BJI				LR	LR		
	comp=E,159nm,26.7s,MS4.7						
BJI				LR	LR		
	comp=Z,211nm,35.9s						
HHC	**Hu-ho-hao-te**	**107.99**	**330**	PDIF	Pdif	11 58 48.0	-2.3
HHC				PP	PP	12 03 20.0	+0.8
HHC				S	Sdif	12 10 48.5	-7.6
HHC				PP	PP		
	comp=Z,77nm,5.5s						
HHC				LR	LR		
	comp=N,153nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=E,83nm,15.5s,MS4.7						
HHC				LR	LR		
	comp=Z,219nm,19.0s,MS4.7						
CN2	**Changchun**	**108.26**	**341**	PDIF	Pdif	11 58 57.3	+5.8
CN2				PP	PP		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=N,200nm,20.0s,MS4.7						
CN2				LR	LR		
	comp=E,100nm,20.0s,MS4.7						
CN2				LR	LR		
	comp=Z,200nm,20.0s,MS4.7						
GTA	**Gaotai**	**109.67**	**321**	PKP	PKiKP	12 03 02.0	+2.6
GTA				PP	PP	12 03 40.0	+8.6
GTA				PKS		12 06 37.5	
GTA				SS	SS	12 19 01.8	+7.4
GTA				PP	PP		
	comp=Z,135nm,7.1s						
GTA				LR	LR		
	comp=N,391nm,22.3s,MS5.0						
GTA				LR	LR		
	comp=E,202nm,18.1s,MS5.0						
GTA				LR	LR		
	comp=Z,435nm,20.5s,MS5.0						
WMQ	**Urumqi**	**117.44**	**314**	*e*PDIF	Pdif	11 59 32.3	0.0
WMQ				PKP	PKPdf	12 03 14.0	0.0
WMQ				PP	PP	12 04 31.3	+4.7
WMQ				PKS		12 06 49.5	
WMQ				SKKS	SKKSac	12 11 23.0	-2.9
WMQ				S	Sdif	12 12 12.5	-2.4
WMQ				SS	SS	12 20 39.0	+1.9
WMQ				LR	LR		
	comp=N,197nm,27.0s,MS4.7						
WMQ				LR	LR		
	comp=E,170nm,30.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,267nm,30.0s,MS4.7						
MK31	**Makanchi Array**	**121.87**	**312**	*e*PKIKP	PKPdf	12 03 22.3	-0.1
MKAR	**Makanchi Array**	**121.87**	**312**	PKP	PKPdf	12 03 22.0	-0.5
	comp=Z,0.8nm,0.7s,baz=188,slow=2.2,SNR=7.6						
TXAR	**Lajitas Array**	**123.04**	**90**	PKP	PKPdf	12 03 25.8	+0.5
	comp=Z,0.6nm,1.0s,baz=228,slow=3.2,SNR=3.7						
TXAR				PKKPab	PKKPab	12 13 16.7	+0.8
	comp=Z,0.2nm,0.7s,baz=81,slow=5.6,SNR=2.7						
TXAR	**Lajitas Array**	**123.04**	**90**	PKP	PKPdf	12 03 25.8	+0.5
TXAR				PKKPab	PKKPab	12 13 16.7	+0.8
NVAR	**Mina Array Bea**	**124.12**	**71**	PKP	PKPdf	12 03 28.1	+1.0
	comp=Z,0.7nm,0.6s,baz=223,slow=3.1,SNR=5.6						
YBH	**Yreka Blue Hor**	**124.99**	**66**	PKP	PKPdf	12 03 29.0	+0.3
	comp=Z,1.0nm,0.7s,baz=158,slow=5.4,SNR=2.2						
TOA0	**Torodi Ar. Sit**	**125.43**	**219**	*e*PKPdf	PKPdf	12 03 28.7	-1.6
TORD	**Torodi Ar. Bea**	**125.43**	**219**	PKP	PKPdf	12 03 30.4	+0.1
	comp=Z,2.3nm,0.9s,baz=228,slow=0.3,SNR=12						
TORD	**Torodi Ar. Bea**	**125.43**	**219**	PKP	PKPdf	12 03 30.4	+0.1
SEY	**Seymchan**	**125.63**	**1**	*i*PKIKP	PKPdf	12 03 29.2	+0.1
KURK	**Kurchatov**	**126.48**	**311**	PKP	PKPdf	12 03 30.8	-0.3
	comp=Z,1.9nm,0.7s,baz=146,slow=1.5,SNR=12						
ANMO	**Albuquerque**	**126.49**	**84**	*i*PKIKP	PKPdf	12 03 31.2	-0.5
ZALV	**Zalesovo Beam**	**127.21**	**318**	PKP	PKPdf	12 03 32.2	-0.2
	comp=Z,0.5nm,0.4s,baz=191,slow=5.9,SNR=2.8						
SDCO	**Great Sand Dun**	**129.24**	**82**	*e*PKPdf	PKPdf	12 03 33.8	-3.1
BILL	**Bilibino**	**131.27**	**8**	*i*PKIKP	PKPdf	12 03 40.0	+0.3
BILL				*e*		12 06 02.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,2.4s						
BVAR	**Borovoye Array**	**131.28**	**308**	PKP	PKPdf	12 03 41.0	+0.8
	comp=Z,1.0nm,0.7s,baz=131,slow=6.5,SNR=6.8						
PDAR	**Pinedale Array**	**131.49**	**75**	PKP	PKPdf	12 03 41.4	+0.4
	comp=Z,0.4nm,0.8s,baz=129,slow=1.1,SNR=4.3						
KIV	**Kislovodsk**	**135.56**	**280**	*i*PKIKP	PKPdf	12 03 48.9	+0.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRTR	**Keskin Array B**	**136.31**	**269**	PKP	PKPdf	12 03 51.6	+1.5
	comp=Z,1.0nm,0.8s,baz=177,slow=6.2,SNR=4.2						
WCI	**Wyandotte Cave**	**138.36**	**99**	*e*PKIKP	PKPdf	12 03 51.9	-2.1
ULM	**Lac du Bonnet**	**143.28**	**79**	PKhKP		12 03 58.5	
	comp=Z,3.4nm,0.9s,baz=213,slow=5.5,SNR=3.3						
ULM	**Lac du Bonnet**	**143.28**	**79**	PKP		12 03 58.5	
KEST	**Kesra**	**143.59**	**240**	PKP	PKPdf	12 04 03.0	-0.5
	comp=Z,3.0nm,0.8s,baz=270,slow=2.8,SNR=5.3						
FFC	**Flin Flon**	**143.74**	**69**	*e*PKHKP		12 03 59.4	
YKA	**Yellowknife Ar**	**143.87**	**52**	PKP	PKPdf	12 04 00.1	-3.0
	comp=Z,5.7nm,0.7s,baz=236,slow=2.8,SNR=70						
YKA	**Yellowknife Ar**	**143.87**	**52**	PKP	PKPdf	12 04 00.1	-3.0
KIS	**Kishinev**	**144.17**	**272**	*e*PKP	PKPdf	12 04 04.0	-0.1
VRI	**Vrincioaia**	**144.27**	**269**⇑	*i*P	PKPdf	12 04 02.7	-1.6
PLOR	**Plostina**	**144.30**	**268**⇓	*i*P	PKPdf	12 04 05.7	+1.3
VOIR		**144.71**	**266**⇑	*i*P	PKPdf	12 04 05.2	+0.1
SET	**Setif**	**145.53**	**236**	P	PKPdf	12 04 05.0	-1.8
GZR	**Gura Zlata**	**145.71**	**264**⇑	*i*P	PKPdf	12 04 08.1	+1.3
BURAR	**Bucovina Array**	**146.27**	**269**⇑	*i*P	PKPbc	12 04 10.1	+1.2
ETRT	**Tiaret**	**146.29**	**230**	P	PKPdf	12 04 16.0	+7.8
BUR08	**Bucovina Ar. S**	**146.30**	**269**	*e*PKPdf	PKPdf	12 04 09.6	+1.8
MOS	**Moscow**	**146.34**	**289**	*e*PKIKP	PKPdf	12 04 08.1	+0.6
MOS				*e*		12 07 35.0	
MOS				pmax	pmax		
	comp=Z,187nm,2.7s						
OBN	**Obninsk**	**146.39**	**288***c*	*i*PKIKP	PKPdf	12 04 09.0	+1.4
OBN				*i*		12 04 15.2	
OBN				*e*SS	SS	12 26 33.2	+3.5
OBN				pmax	pmax		
	comp=Z,24nm,0.9s						
BZS	**Buzias**	**146.41**	**263**⇑	*i*P	PKPdf	12 04 09.6	+1.6
EMHD	**Djebel Mahouad**	**146.43**	**233**	P	PKPab	12 04 11.0	+0.3
AKASG	**Malin Array Be**	**146.67**	**276**	PKPbc	PKPbc	12 04 08.3	-1.6
	comp=Z,6.8nm,0.8s,baz=123,slow=2.7,SNR=17						
AKBB	**Malin Array Si**	**146.67**	**276**	*e*PKIKP	PKPdf	12 04 08.7	+0.4
KIEV	**Kiev**	**146.67**	**276**	*e*PKIKP	PKPdf	12 04 07.7	-0.6
DRGR		**146.80**	**266**⇓	*i*P	PKPdf	12 04 10.2	+1.6
EBNR	**Beni Rached**	**147.02**	**231**	P	PKPdf	12 04 20.0	+11
TRPA	**Tarpa**	**147.87**	**267**⇑	*i*P	PKPbc	12 04 14.5	+1.1
PKSM	**Moragy**	**148.21**	**261**⇑	*i*P	PKPbc	12 04 15.2	+0.9
UZH	**Uzhgorod**	**148.35**	**268**	*e*PKHKP		12 04 05.8	
UZH				*e*		12 04 16.4	
LVV	**L'vov**	**148.41**	**271**	*e*PKP2	PKPbc	12 04 15.2	+0.5
PMAR	**Madeira**	**148.60**	**201**	*e*PKPab	PKPbc	12 04 18.3	-1.0
KWP	**Kalwaria**	**148.88**	**270**⇑	*i*P	PKPbc	12 04 15.9	0.0
KWP	**Kalwaria**	**148.88**	**270**	*e*PKPbc	PKPbc	12 04 16.1	+0.1
PSZ	**Piszkesteto**	**148.92**	**265**⇓	*e*	PKPbc	12 04 17.0	+0.9
CRVS	**Cervenica-Dubn**	**148.93**	**267**	*e*PKP	PKPbc	12 04 17.3	+1.2
BUD	**Budapest**	**148.99**	**263**⇓	*e*	PKPbc	12 04 18.9	+2.6
PGF	**Pioggiola**	**149.53**	**246**	*e*PKIKP	PKPbc	12 04 17.9	+0.1
	comp=Z,169nm,1.5s						
FCC	**Fort Churchill**	**149.66**	**68**	*e*PKHKP	PKPdf	12 04 16.6	+3.7
FCC				*e*		12 04 23.3	
NIE	**Niedzica**	**149.82**	**267**	*e*PKP	PKPbc	12 04 20.8	+2.5
VYHS	**Vyhne**	**149.82**	**264**	*i*PKP	PKPbc	12 04 20.4	+2.1
MNK	**Minsk**	**149.85**	**281**	*e*PKIKP	PKPbc	12 04 19.0	+0.8
KOLL	**Kolacno**	**150.08**	**264**	*i*PKP	PKPbc	12 04 20.0	+1.1
SOKA	**Soboth**	**150.18**	**258**⇑	*i*PKPbc	PKP

PRU	**Pruhonice**	**152.85**	**262**	*e*PKPbc	PKPbc	12 04 26.1	+0.8
PRU				*e*PKPab	PKPab	12 04 32.9	-3.6
LPG	**La Plagne**	**152.87**	**247**	*e*PKIKP	PKPbc	12 04 23.9	-1.6
	comp=Z,36nm,1.0s						
LPL	**La Plagne**	**152.89**	**247**	*e*PKIKP	PKPbc	12 04 23.9	-1.6
	comp=Z,49nm,1.2s						
DAVA	**Damuels**	**152.93**	**253**	⇓ *i*PKiKP	PKiKP	12 04 27.7	+2.0
	comp=Z,16nm,1.2s						
WET	**Wettzell**	**152.99**	**259**	*e*PKPbc	PKPbc	12 04 27.5	+1.9
PCBR	**Castelo Branco**	**153.19**	**221**	*e*PKPbc	PKPbc	12 04 26.8	+0.4
PCBR	**Castelo Branco**	**153.19**	**221**	*e*PKPab	PKPab	12 04 35.2	-3.0
VIVF	**Saint-Julien-l**	**153.21**	**244**	*e*PKIKP	PKPbc	12 04 23.9	-2.3
	comp=Z,52nm,1.4s						
MTE	**Manteigas**	**153.73**	**221**	*e*LR	LR	13 06 52.6	
	comp=Z,494nm,19.7s						
BRG	**Berggiesshubel**	**153.75**	**263**	*e*PKIKP	PKPbc	12 04 28.4	+1.2
BRG				pmax	pmax		
	comp=Z,8.0nm,1.5s						
NKC	**Novy Kostel**	**153.97**	**261**	*e*PKIKP	pPKPbc	12 04 35.4	+4.3
NKC				*e*		12 04 43.9	
NKC	**Novy Kostel**	**153.97**	**261**	*e*pPKP	pPKPbc	12 04 35.4	+4.3
NKC				*e*PKPab	PKPab	12 04 43.9	+2.7
GRF	**Grafenberg Arr**	**154.13**	**258**	*e*PKPbc	PKPbc	12 04 29.5	+1.4
MVO	**Moncorvo**	**154.27**	**223**	*e*LR	LR	13 08 45.6	
	comp=Z,449nm,16.9s						
CLL	**Collm**	**154.48**	**263**	*i* PKP2	PKPab	12 04 44.7	+1.4
CLL				pmax	pmax		
	comp=Z,23nm,1.6s						
CLL				MLR	MLR		
	comp=Z,300nm,18.3s,MS5.2						
CLL	**Collm**	**154.48**	**263**	*i* PKPab	PKPab	12 04 44.7	+1.4
	comp=Z,23nm,1.6s						
CLL				*i* pPKPab	pPKPab	12 04 50.9	+4.2
CLL				LmV		12 29 00.0	
	comp=Z,300nm,18.3s						
MOX	**Moxa**	**154.64**	**260**	*e*PKP	PKPab	12 04 47.5	+3.5
	comp=Z,33nm,1.5s						
MOX	**Moxa**	**154.64**	**260**	*e*PKP2	PKPab	12 04 47.5	+3.5
MOX				pmax	pmax		
	comp=Z,33nm,1.5s						
PBRG	**Braganca**	**154.76**	**224**	*e*PKPbc	PKPbc	12 04 30.4	+0.7
PBRG	**Braganca**	**154.76**	**224**	*e*PKPab	PKPab	12 04 47.4	+2.6
RES	**Resolute Bay**	**155.38**	**35**	PKPbc	PKPdf	12 04 27.6	+6.7
	comp=Z,0.9nm,0.8s,baz=239,slow=15,SNR=2.9						

IDC 27 11:48:04.9±1.4,**5185N**×**17378W**,**h0**km,**mb3.3**/3,
mb1 3.6/4,**mb1mx3.4**/25,**mbtmp3.4**/4,**ML2.8**/1,**Error ellipse: s-maj=53.9km s-min=17.8km az=177.0,**
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**8.06**	**283**	Pn	Pn	11 50 01.9	-1.1
	0.5nm,0.3s,baz=112,slow=19,SNR=3.9						
YKA	**Yellowknife Ar**	**32.62**	**48**	P	P	11 54 36.8	-1.0
	0.0nm,0.3s,baz=279,slow=9.3,SNR=2.7						
PDAR	**Pinedale Array**	**43.17**	**76**	P	P	11 56 08.3	+1.3
	0.3nm,0.7s,baz=280,slow=5.1,SNR=2.6						
ASAR	**Alice Springs**	**88.01**	**227**	P	P	12 00 56.1	-0.5
	0.3nm,0.9s,baz=27,slow=4.7,SNR=4.8						

IDC 27 11:57:38.4±21.0,**294S**×**11787E**,**h0**km,**mb3.9**/3,
mb1 4.1/3,**mb1mx3.6**/17,**mbtmp3.9**/3,**MS3.4**/1,**Ms1 3.4**/1,
ms1mx3.0/22,**Error ellipse: s-maj=496.5km**
s-min=220.4km az=19.0,Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**19.78**	**287**	LR	LR	12 09 06.4	
	comp=Z,123nm,20.9s,baz=243,slow=35						
WRA	**Warramunga Arr**	**23.32**	**138**	P	P	12 02 48.4	-0.1
	1.3nm,0.5s,baz=315,slow=9.9,SNR=22						
ASAR	**Alice Springs**	**25.79**	**144**	P	P	12 03 11.1	-0.2
	0.7nm,0.3s,baz=325,slow=8.5,SNR=68						
STKA	**Stephens Creek**	**36.42**	**145**	P	P	12 04 45.3	+0.4
	1.6nm,0.4s,baz=311,slow=8.9,SNR=4.2						

*DDA **27** 11:58:41.1,37.17N×3747E,h5km±2km,Md3.1*
*ISCJB **27** 11:58:43.4±1.1,3721N±008×3748E±006,h8km±6km,*
Error ellipse: s-maj=14.2km s-min=6.0km az=154.1
*CSEM **27** 11:58:43.0±0.2,3735N×3737E,h8km,MD2.7,Error*
ellipse: s-maj=8.1km s-min=4.1km az=142.0
*ISK **27** 11:58:43.0,3738N×3734E,h8km,MD2.7*
ISC 27 11:58:43.8±0.9,**3724N**±007×**3746E**±006,**h11**km±6km,**n9,**
σ1§12/13,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.14**	**36**	*i* P	**Pg**	**11 58 45.1**	**-1.9**
GZT				*i* S	**Sg**	**11 58 49.9**	**+0.5**
GAZ	**Gaziantep**	**0.21**	**251**	*e*PG	**Pg**	**11 58 47.9**	**-0.3**
GAZ				*e*SG	**Sg**	**11 58 52.2**	**+0.9**
ANDN	**Andirin**	**0.95**	**291**	*i* P	**Pg**	**11 59 00.3**	**-1.8**
ANDN				*i* S	**Sg**	**11 59 15.5**	**+1.0**
URFA	**Urfa**	**1.10**	**79**	*e*PN	**Pn**	**11 59 06.6**	**+1.6**
AKCD	**Akcadag**	**1.11**	**19**	*i* P	**Pb**	**11 59 04.4**	**-0.6**
AKCD				*i* S	**Sg**	**11 59 20.9**	**+1.2**
MALT	**Malatya**	**1.31**	**35**	*e*PN	**Pn**	**11 59 08.1**	**+0.1**
MYA	**Malataya**	**1.32**	**35**	*e*PN	**Pn**	**11 59 07.4**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.56**	**337**	*e*PN	**Pn**	**11 59 07.7**	**-3.6**
SVRC	**Sivrice-ELAZID**	**1.85**	**52**	*e*PN	**Pn**	**11 59 15.7**	**+0.3**

*JMA **27** 12:13:13.1±0.1,24.37N×122.44E,h56km±2km,M2.6*
TAP 27 12:13:14.2,2414N×1224.3E,h47km,**ML3.2,1C,C,**
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**59**	P	Pn	12 13 25.1	-1.6
YOJ				S	Sn	12 13 33.8	-2.0
ENA	**Nanau**	**0.69**	**295**	*i* P	Pn	12 13 27.9	+0.2
	baz=301						
ENA				S	Sn	12 13 38.3	+0.9
	baz=301						
TWC	**Suao**	**0.70**	**312**	P	Pn	12 13 28.1	+0.2
	baz=311						
TWC				S	Sn	12 13 38.0	+0.3
	baz=311						
TWD	**Chiawan**	**0.76**	**266**	*e*P	Pn	12 13 28.3	-0.3
	baz=255						
TWD				*e*S	Sn	12 13 39.0	-0.1
	baz=255						
TWE	**Neicheng**	**0.90**	**310**	*e*P	Pn	12 13 31.2	+0.7
	baz=302						
TWE				*e*S	Sn	12 13 43.7	+1.3
	baz=302						
ENTT	**Nioudou**	**0.93**	**302**	P	Pn	12 13 31.7	+0.9
	baz=302						
ENTT				S	Sn	12 13 44.8	+1.7
	baz=302						
TWB1	**Santiao Chiao**	**0.95**	**335**	*e*P	Pn	12 13 31.5	+0.3
	baz=335						
ESL	**Shilin**	**0.97**	**251**	*e*P	Pn	12 13 30.5	-0.8
	baz=243						
NNS	**Nan Shan**	**1.01**	**287**	*e*P	Pn	12 13 32.6	+0.7
	baz=287						
WHF	**Hehuan Shan**	**1.06**	**270**	P	Pn	12 13 33.1	+0.4
	baz=270						
WHF				S	Sn	12 13 47.8	+1.4
	baz=270						
NWF	**Wu-fen Shan**	**1.10**	**328**	P	Pn	12 13 33.6	+0.5
	baz=327						
NWF				*e*S	Sn	12 13 48.7	+1.6
	baz=327						
NSK	**Sanguang**	**1.11**	**299**	*e*P	Pn	12 13 34.3	+1.0
	baz=287						
NSK				*e*S	Sn	12 13 48.9	+1.3
	baz=287						
TWA	**Mucha**	**1.14**	**318**	*e*P	Pn	12 13 34.3	+0.6
	baz=329						
EHY	**Hungye**	**1.20**	**238**	*e*P	Pn	12 13 34.4	-0.1
	baz=234						
EHY				*e*S	Sn	12 13 49.8	+0.2
	baz=234						
IRIF	**Iriomote-Funau**	**1.20**	**81**	P	Pn	12 13 33.4	-1.2
IRIF				*e*S	Sn	12 13 48.7	-1.0
HATJ	**Hateruma jima**	**1.26**	**94**	P	Pn	12 13 35.2	-0.1
HATJ				*e*S	Sn	12 13 51.5	+0.4
TWF1	**Yuli**	**1.30**	**233**	*i* P	Pn	12 13 35.8	-0.1
	baz=247						
TWF1				*e*S	Sn	12 13 52.6	+0.5
	baz=247						
TWS1	**Kuangyinshan**	**1.33**	**316**	*e*P	Pn	12 13 38.1	+1.8
	baz=328						
TWS1				*e*S	Sn	12 13 55.8	+3.0
	baz=328						
NSTT	**Nanjuang**	**1.39**	**291**	*e*P	Pn	12 13 38.8	+1.7
	baz=290						
NSTT				*e*S	Sn	12 13 57.0	+2.7
	baz=290						
SMLT	**Sun Moon Lake**	**1.42**	**260**	⇑ *i*P	Pn	12 13 38.5	+1.0
	baz=259						
SMLT				*e*S	Sn	12 13 56.8	+1.7
	baz=259						
CHKT	**Chengkung**	**1.42**	**223**	*e*P	Pn	12 13 37.2	-0.4
	baz=216						
CHKT				*e*S	Sn	12 13 53.3	-1.9
	baz=216						
JKRS	**Kuro-shima**	**1.45**	**86**	P	Pn	12 13 37.5	-0.4
JKRS				*e*S	Sn	12 13 55.5	-0.2
TYC	**Yuchr**	**1.46**	**261**	P	Pn	12 13 39.0	+1.0
	baz=261						
YUS	**Yu-Shan**	**1.50**	**245**	*e*P	Pn	12 13 39.7	+1.1
	baz=237						
TWQ1	**Liyutan**	**1.53**	**278**	*e*P	Pn	12 13 41.0	+2.0
	baz=278						
JIJ	**Ishigaki jima**	**1.58**	**82**	P	Pn	12 13 38.5	-1.2
JIJ				S	Sn	12 13 57.4	-1.6
ELDTW	**Lidau**	**1.60**	**234**	*e*P	Pn	12 13 39.9	-0.1
	baz=225						
ALS	**Alishan**	**1.61**	**247**	P	Pn	12 13 41.4	+1.3
	baz=247						
CHN5	**Tsauling**	**1.69**	**252**	*e*P	Pn	12 13 43.0	+1.8
	baz=251						
CHN5				*e*S	Sn	12 14 04.2	+2.5
	baz=251						
TWG	**Pinlang**	**1.81**	**224**	*e*P	Pn	12 13 41.9	-1.0
	baz=233						
TWG				*e*S	Sn	12 14 03.5	-1.2
	baz=233						
STYT	**Tauyuan**	**1.82**	**238**	*e*P	Pn	12 13 44.1	+1.1
	baz=231						
STYT				*e*S	Sn	12 14 06.5	+1.7
	baz=231						
CHN4	**Tsaushan**	**1.86**	**245**	*e*P	Pn	12 13 45.2	+1.7
	baz=245						
CHN4				*e*S	Sn	12 14 09.1	+3.4
	baz=245						
WTP	**Ta-pu**	**1.89**	**242**	*e*P	Pn	12 13 45.4	+1.4
	baz=242						
WTP				*e*S	Sn	12 14 09.8	+3.2
	baz=242						
TWK	**Hsinying**	**1.98**	**244**	*e*P	Pn	12 13 46.5	+1.3
	baz=244						
TWK				*e*S	Sn	12 14 12.4	+3.6
	baz=244						
CHN1	**Nanshi**	**1.99**	**242**	*e*P	Pn	12 13 46.7	+1.4
	baz=241						
CHN1				*e*S	Sn	12 14 12.1	+3.2
	baz=241						
JTJ	**Tarama**	**2.13**	**76**	P	Pn	12 13 46.7	-0.6
JTJ				*e*S	Sn	12 14 11.3	-1.2
SSD	**Sandimen**	**2.16**	**230**	*e*P	Pn	12 13 48.9	+1.3
	baz=223						
SSD				*e*S	Sn	12 14 15.5	+2.4
	baz=223						

*NEIC **27** 12:19:44.5±1.7,39.12N×1027W,h10km,MN3.0(MDD),*
Error ellipse: s-maj=21.6km s-min=5.5km az=68.0
*IGIL **27** 12:19:46.4,39.13N×1021W,h10km,ML2.7*
*ISCJB **27** 12:19:46.9±0.6,3922N±002×978W±005,h10km,Error*
ellipse: s-maj=5.6km s-min=2.7km az=167.6
*MDD **27** 12:19:47.6±0.9,39.13N×1024W,h40km±15km,mbLg3.1/25,*
Error ellipse: s-maj=9.0km s-min=4.4km az=74.0,PRXIMO
*INMG **27** 12:19:48.5±1.1,39.13N×1021W,h31km,MD2.5,ML2.8,*
Error ellipse: s-maj=4.4km s-min=1.7km az=83.0
*CSEM **27** 12:19:52.0±0.4,39.13N×949W,h20km,ML3.7/2,Error*
ellipse: s-maj=8.1km s-min=5.1km az=80.0
ISC 27 12:19:47.7±0.6,**3921N**±002×**983W**±004,**h10**km,**n85,**
σ1§24/155,Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**0.49**	**121**	*e*P	**Pg**	**12 20 01.4**	**+4.1**
PMAFR				*e*S	**Sg**	**12 20 11.8**	**+8.0**
PMAFR				A		12 20 13.1	
	451nm,0.4s						
PMAFR	**Mafra**	**0.49**	**121**	P	**Pg**	**12 20 01.4**	**+4.1**
PMAFR				S	**Sg**	**12 20 11.8**	**+8.0**
	451nm,0.4s						
INMG	**Instituto de M**	**0.70**	**128**	*e*P	**Pg**	**12 20 05.0**	**+3.9**
INMG				*e*S	**Sg**	**12 20 15.7**	**+5.4**
LIS	**Lisbon**	**0.72**	**133**	*e*P	**Pg**	**12 20 02.8**	**+1.2**
LIS				*e*S	**Sg**	**12 20 14.5**	**+3.5**
LIS				*e*S	**Sg**	**12 20 14.5**	**+3.5**
LIS				AML	AML	12 20 16.0	
	comp=E,246nm,0.2s						
LIS	**Lisbon**	**0.72**	**133**	*e*P	**Pg**	**12 20 02.8**	**+1.2**
LIS				*e*S	**Sg**	**12 20 14.5**	**+3.5**
LIS	**Lisbon**	**0.72**	**133**	P	**Pg**	**12 20 02.8**	**+1.2**
LIS				S	**Sg**	**12 20 14.5**	**+3.5**
ALMR	**Almeirim**	**0.97**	**93**	*e*P	**Pg**	**12 20 08.5**	**+2.1**
ALMR				*e*S	**Sg**	**12 20 24.3**	**+5.3**
ALMR				*e*S	**Sg**	**12 20 24.4**	**+5.3**
ALMR				AML	AML	12 20 24.8	
	comp=N,88nm,0.1s						
MOE	**Montemor**	**1.34**	**120**	*e*P	**Pn**	**12 20 13.3**	**+0.9**
MOE				*e*S	**Sb**	**12 20 31.3**	**+1.2**
EVO	**Evora**	**1.57**	**115**	*e*Pn	**Pn**	**12 20 15.8**	**+0.2**
EVO				*e*Sn	**Sn**	**12 20 36.8**	**+0.9**
EVO				A		12 20 50.3	
	comp=N,76nm,0.6s						
EVO	**Evora**	**1.57**	**115**	*e*Pn	**Pn**	**12 20 15.8**	**+0.2**
EVO				*e*Sn	**Sn**	**12 20 36.8**	**+0.9**
	comp=N,76nm,0.6s						
PESTR	**Estremoz**	**1.78**	**100**	*e*Pn	**Pn**	**12 20 19.2**	**+0.8**
PESTR				*e*Sn	**Sn**	**12 20 42.2**	**+1.2**
PESTR				A		12 20 57.8	
	comp=N,37nm,0.5s						
PESTR	**Estremoz**	**1.78**	**100**	*e*Pn	**Pn**	**12 20 19.2**	**+0.8**
PESTR				*e*Sn	**Sn**	**12 20 42.2**	**+1.2**
	comp=N,37nm,0.5s						
PTEO	**Sao Teotonio**	**1.87**	**152**	*e*Pn	**Pn**	**12 20 17.8**	**-1.9**
PTEO				*e*Sn	**Sn**	**12 20 39.8**	**-3.6**
PTEO				A		12 20 41.5	
	comp=N,95nm,0.2s						
PTEO	**Sao Teotonio**	**1.87**	**152**	Pn	**Pn**	**12 20 17.8**	**-1.9**
PTEO				Sn	**Sn**	**12 20 39.8**	**-3.6**
	comp=N,47nm,0.2s						
PMRV	**Marv??o**	**1.90**	**83**	*e*Pn	**Pn**	**12 20 21.3**	**+1.2**
PMRV				*e*Sn	**Sn**	**12 20 46.0**	**+1.9**
PMRV				A		12 20 47.5	
	comp=N,44nm,0.3s						
PCBR	**Castelo Branco**	**1.93**	**70**	*e*Pn	**Pn**	**12 20 21.4**	**+1.0**
PCBR				*e*Sn	**Sn**	**12 20 46.5**	**+1.8**
PCBR				A		12 20 47.4	
	comp=N,24nm,0.5s						
PCBR	**Castelo Branco**	**1.93**	**70**	*e*Pn	**Pn**	**12 20 21.4**	**+1.0**
PCBR				*e*Sn	**Sn**	**12 20 46.5**	**+1.8**
	comp=N,24nm,0.5s						
PBEJ	**Beja**	**1.94**	**127**	*e*Pn	**Pn**	**12 20 20.6**	**0.0**
PBEJ				*e*Sn	**Sn**	**12 20 44.6**	**-0.4**
PBEJ				A		12 20 45.5	
	comp=N,24nm,0.2s						
PBEJ	**Beja**	**1.94**	**127**	*e*Pn	**Pn**	**12 20 20.6**	**0.0**
PBEJ				*e*Sn	**Sn**	**12 20 44.6**	**-0.4**
	comp=N,24nm,0.2s						
MORF	**Marmelete**	**2.11**	**154**	*e*Pn	**Pn**	**12 20 20.8**	**-2.2**
MORF				*e*Sn	**Sn**	**12 20 45.6**	**-3.7**
MORF				A		12 20 46.8	
	comp=N,87nm,0.2s						
MORF	**Marmelete**	**2.11**	**154**	Pn	**Pn**	**12 20 20.8**	**-2.2**
MORF				Sn	**Sn**	**12 20 45.6**	**-3.7**
	comp=N,87nm,0.2s						
PVIS	**Viseu**	**2.12**	**44**	*e*Pn	**Pn**	**12 20 24.1**	**+1.0**
PVIS				*e*Sn	**Sn**	**12 20 50.6**	**+1.2**
PVIS				A		12 20 52.2	
	comp=N,53nm,0.1s						
PVIS	**Viseu**	**2.12**	**44**	*e*Pn	**Pn**	**12 20 24.1**	**+1.0**
PVIS				*e*Sn	**Sn**	**12 20 50.6**	**+1.2**
	comp=N,53nm,0.1s						
MTE	**Manteigas**	**2.12**	**55**	*e*Pn	**Pn**	**12 20 24.6**	**+1.4**
MTE				*e*Sn	**Sn**	**12 20 51.0**	**+1.4**
MTE				A		12 20 53.1	
	comp=N,33nm,0.2s						
MTE	**Manteigas**	**2.12**	**55**	*e*Pn	**Pn**	**12 20 24.6**	**+1.4**
MTE				*e*Sn	**Sn**	**12 20 51.0**	**+1.4**
EBAD	**Badajoz**	**2.24**	**101**	P	**Pn**	**12 20 25.2**	**+0.4**
	comp=N,5.0nm,0.1s,SNR=42						
EBAD				S	**Sn**	**12 20 53.2**	**+0.7**
	comp=N,37nm,0.1s,SNR=12						
EBAD	**Badajoz**	**2.24**	**101**	P	**Pn**	**12 20 25.2**	**+0.4**
	comp=N,5.0nm,0.1s,SNR=42						
EBAD				S	**Sn**	**12 20 53.2**	**+0.8**
	comp=N,37nm,0.1s,SNR=12						
PBAR	**Barrancos**	**2.41**	**114**	*e*Pn	**Pn**	**12 20 27.7**	**+0.5**
PBAR				*e*Sn	**Sn**	**12 20 56.6**	**-0.2**
PBAR				A		12 20 59.9	
	comp=N,27nm,0.1s						
PBAR	**Barrancos**	**2.41**	**114**	*e*Pn	**Pn**	**12 20 27.7**	**+0.5**
PBAR				*e*Sn	**Sn**	**12 20 56.6**	**-0.2**
	comp=N,27nm,0.1s						
PVAQ	**Vaqueiros**	**2.45**	**137**	*e*Pn	**Pn**	**12 20 26.9**	**-0.8**
PVAQ				*e*Sn	**Sn**	**12 20 55.6**	**-2.1**
PVAQ				A		12 20 58.1	
	comp=N,66nm,0.4s						
PVAQ	**Vaqueiros**	**2.45**	**137**	*e*Pn	**Pn**	**12 20 26.9**	**-0.8**
PVAQ				*e*Sn	**Sn**	**12 20 55.6**	**-2.1**
	comp=N,66nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.47**	**142**	*e*Pn	**Pn**	**12 20 27.0**	**-0.9**
PBDV				*e*Sn	**Sn**	**12 20 55.6**	**-2.4**
PBDV				A		12 20 58.6	
	comp=N,44nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.47**	**142**	*e*Pn	**Pn**	**12 20 27.0**	**-0.9**
PBDV				*e*Sn	**Sn**	**12 20 55.6**	**-2.4**
	comp=N,44nm,0.3s						
EGRO	**El Granado**	**2.49**	**131**	P	**Pn**	**12 20 27.8**	**-0.4**
	comp=N,5.0nm,0.1s,SNR=28						
EGRO				S	**Sn**	**12 20 57.8**	**-0.8**
	comp=N,17nm,0.1s,SNR=7.6						
EGRO	**El Granado**	**2.49**	**131**	P	**Pn**	**12 20 27.8**	**-0.4**
	comp=N,5.0nm,0.1s,SNR=28						
EGRO				S	**Sn**	**12 20 57.8**	**-0.8**
	comp=N,17nm,0.1s,SNR=7.6						
PCAB	**Cabril**	**2.85**	**28**	*e*Pn	**Pn**	**12 20 33.4**	**+0.2**
PCAB				*e*Sn	**Sn**	**12 21 06.2**	**-1.4**
PCAB				A		12 21 10.7	
	comp=N,16nm,0.1s						
PCAB	**Cabril**	**2.85**	**28**	*e*Pn	**Pn**	**12 20 33.4**	**+0.2**
PCAB				*e*Sn	**Sn**	**12 21 06.2**	**-1.4**
	comp=N,16nm,0.1s						
EMIN	**Mina Concepcio**	**2.86**	**119**	P	**Pn**	**12 20 33.7**	**+0.3**
	comp=N,8.0nm,0.1s,SNR=64						
EMIN				S	**Sn**	**12 21 07.3**	**-0.6**
	comp=N,6.4nm,0.1s,SNR=9.1						
EMIN	**Mina Concepcio**	**2.86**	**119**	P	**Pn**	**12 20 33.7**	**+0.3**
	comp=N,8.0nm,0.1s,SNR=64						
EMIN				S	**Sn**	**12 21 07.3**	**-0.6**
	comp=N,6.4nm,0.1s,SNR=9.1						
MVO	**Moncorvo**	**2.90**	**47**	*e*Pn	**Pn**	**12 20 34.6**	**+0.7**
MVO				*e*Sn	**Sn**	**12 21 08.8**	**0.0**
MVO				A		12 21 10.8	
	comp=N,23nm,0.3s						
MVO	**Moncorvo**	**2.90**	**47**	*e*Pn	**Pn**	**12 20 34.6**	**+0.7**
MVO				*e*Sn	**Sn**	**12 21 08.8**	**0.0**
	comp=N,23nm,0.3s						
ELOB	**Lobios**	**2.98**	**26**	P	**Pn**	**12 20 35.0**	**+0.1**
	comp=N,2.1nm,0.1s,SNR=26						
ELOB				S	**Sn**	**12 21 09.7**	**-1.0**
	comp=N,9.0nm,0.1s,SNR=8.0						
ELOB	**Lobios**	**2.98**	**26**	P	**Pn**	**12 20 35.0**	**+0.1**
	comp=N,2.1nm,0.1s,SNR=26						
ELOB				S	**Sn**	**12 21 09.7**	**-1.0**
	comp=N,9.0nm,0.1s,SNR=8.0						
EPLA	**Plasencia**	**3.02**	**72**	P	**Pn**	**12 20 37.7**	**+2.2**
	comp=N,1.4nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**12 21 12.5**	**+0.8**
	comp=N,38nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**3.06**	**16**	P	**Pn**	**12 20 35.4**	**-0.6**
	comp=N,1.7nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**12 21 09.7**	**-3.0**
	comp=N,9.8nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**3.50**	**41**	*e*Pn	**Pn**	**12 20 42.5**	**+0.4**
PBRG				*e*Sn	**Sn**	**12 21 22.8**	**-0.8**
PBRG				A		12 21 26.5	
	comp=N,8.3nm,0.2s						
PBRG	**Braganca**	**3.50**	**41**	*e*Pn	**Pn**	**12 20 42.5**	**+0.4**
PBRG				*e*Sn	**Sn**	**12 21 22.8**	**-0.8**
	comp=N,8.3nm,0.2s						
ECAL	**Calabor**	**3.60**	**40**	P	**Pn**	**12 20 44.4**	**+0.9**
	comp=N,1.1nm,0.1s,SNR=15						
ECAL				S	**Sn**	**12 21 25.2**	**-0.9**
	comp=N,1.0nm,0.1s,SNR=4.8						
ECAL	**Calabor**	**3.60**	**40**	P	**Pn**	**12 20 44.4**	**+0.8**
	comp=N,1.1nm,0.1s,SNR=15						
ECAL				S	**Sn**	**12 21 25.2**	**-0.9**
	comp=N,1.0nm,0.1s,SNR=4.8						
ERUA	**La Rua**	**3.78**	**32**	P	**Pn**	**12 20 46.4**	**+0.5**
	comp=N,5.1nm,0.1s,SNR=7.9						
ERUA				S	**Sn**	**12 21 29.3**	**-1.1**
	comp=N,5.5nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**3.79**	**10**	P	**Pn**	**12 20 44.6**	**-1.5**
	comp=N,4.4nm,0.2s,SNR=20						
EMAZ	**Mazaricos**	**3.79**	**10**	P	**Pn**	**12 20 44.6**	**-1.5**
	comp=N,4.4nm,0.2s,SNR=20						
EMAZ				S	**Sn**	**12 21 25.1**	**-5.6**
	comp=N,19nm,0.1s,SNR=8.6						
STS	**Santiago**	**3.80**	**14**	P	**Pn**	**12 20 46.2**	**0.0**
	comp=N,4.8nm,0.2s,SNR=7.9						
STS				S	**Sn**	**12 21 27.9**	**-3.0**
	comp=N,11nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.91**	**125**	P	**Pn**	**12 20 48.6**	**+0.9**
	comp=N,2.8nm,0.1s,SNR=20						
ESPR				S	**Sn**	**12 21 32.1**	**-1.6**
	comp=N,53nm,0.3s,SNR=4.7						
ESPR	**Espera**	**3.91**	**125**	P	**Pn**	**12 20 48.6**	**+0.8**
	comp=N,2.8nm,0.1s,SNR=20						
ESPR				S	**Sn**	**12 21 32.1**	**-1.5**
	comp=N,53nm,0.3s,SNR=4.7						
EADA	**Adamuz**	**4.24**	**103**	P	**Pn**	**12 20 52.7**	**+0.4**
	comp=N,1.0nm,0.1s,SNR=67						
EADA				S	**Sn**	**12 21 41.2**	**-0.6**
	comp=N,2.7nm,0.1s,SNR=6.5						
EADA	**Adamuz**	**4.24**	**103**	P	**Pn**	**12

comp=N,2.2nm,0.2s,SNR=7.9
EBER Berja 5.94 111 P **Pn** **12 21 17.8 +2.2**
comp=N,0.8nm,0.1s,SNR=5.6
EBER S **Sn** **12 22 21.8 -2.0**
comp=N,2.2nm,0.2s,SNR=7.9
ETOR Torete 6.18 72 P **Pn** **12 21 20.9 +1.9**
comp=N,11nm,0.2s,SNR=7.9
ETOR S **Sn** **12 22 28.1 -1.6**
comp=N,16nm,0.2s,SNR=7.9
ETOB Tobarra 6.48 92 P **Pn** **12 21 24.1 +1.0**
comp=N,1.2nm,0.2s,SNR=7.9
ETOB S **Sn** **12 22 36.7 -0.4**
comp=N,1.6nm,0.3s,SNR=7.9
ECHE Chera 6.87 84 S **Sn** **12 22 44.9 -1.8**
comp=N,0.1nm,0.2s,SNR=7.9
EMOS Mosqueruela 7.30 78 P **Pn** **12 21 35.8 +1.5**
comp=N,0.4nm,0.1s,SNR=7.9
EMOS S **Sn** **12 22 55.8 -1.3**
comp=N,0.9nm,0.4s,SNR=7.9
EMOS Mosqueruela 7.30 78 P **Pn** **12 21 35.8 +1.5**
comp=N,0.4nm,0.1s,SNR=7.9
EMOS S **Sn** **12 22 55.8 -1.3**
comp=N,0.9nm,0.4s,SNR=7.9
ESAC San Caprasio 7.56 68 S **Sn** **12 23 03.3 -0.4**
comp=N,16nm,0.4s,SNR=7.9
ESAC San Caprasio 7.56 68 S **Sn** **12 23 03.3 -0.3**
comp=N,16nm,0.4s,SNR=7.9
EBIE Bielsa 8.31 62 S **Sn** **12 23 19.9 -2.0**
comp=N,0.9nm,0.3s,SNR=7.9
EBIE Bielsa 8.31 62 S **Sn** **12 23 19.9 -2.0**
comp=N,0.9nm,0.3s,SNR=7.9
EPOB Poblet 8.61 72 S **Sn** **12 23 27.5 -1.8**
comp=N,0.6nm,0.2s,SNR=7.9
EPOB Poblet 8.61 72 S **Sn** **12 23 27.5 -1.9**
comp=N,0.6nm,0.2s,SNR=7.9

*NEIC **27** 12:22:11.6±2.2, 39.17N×10.19W, h10km, MN2.8(MDD), Error ellipse: s-maj=29.7km s-min=6.9km az=71.0*
*ISCJB **27** 12:22:12.5±0.7, 39.23N±002.993W±006, h10km, Error ellipse: s-maj=6.3km s-min=3.0km az=169.9*
*IGIL **27** 12:22:13.6, 39.16N×1021W, h14km, ML2.3*
*CSEM **27** 12:22:14.8±0.3, 39.12N×1000W, h10km, ML3.6/15, Error ellipse: s-maj=7.4km s-min=3.3km az=87.0*
*MDD **27** 12:22:14.3±0.9, 39.15N×1023W, h40km±17km, mbLg2.8/11, Error ellipse: s-maj=9.7km s-min=4.6km az=77.0, PRXIMO*
*INMG **27** 12:22:15.2±1.2, 39.14N×1021W, h31km, ML2.5, Error ellipse: s-maj=4.9km s-min=2.0km az=81.0*

ISC 27 12:22:13.3±0.7, 3922N±002×994W±005, h10km, n68, σ1§25/130, 1C-4D, Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**0.58**	**117**	*e*P	**Pg**	**12 22 28.2**	**+3.7**
PMAFR				*e*S	**Sg**	**12 22 38.1**	**+6.1**
PMAFR				A		12 22 39.8	
	491nm,0.2s						
PMAFR	**Mafra**	**0.58**	**117**	*e*P	**Pg**	**12 22 28.2**	**+3.7**
PMAFR				*e*S	**Sg**	**12 22 38.1**	**+6.1**
	491nm,0.2s						
LIS	**Lisbon**	**0.80**	**129**	*e*P	**Pg**	**12 22 30.2**	**+1.6**
LIS				*e*S	**Sg**	**12 22 42.0**	**+3.0**
LIS				*e*S	**Sg**	**12 22 42.0**	**+3.0**
LIS				AML	AML	12 22 43.5	
	comp=N,99nm,0.2s						
LIS	**Lisbon**	**0.80**	**129**	*e*P	**Pg**	**12 22 30.2**	**+1.6**
LIS				*e*S	**Sg**	**12 22 42.0**	**+3.0**
ALMR	**Almeirim**	**1.06**	**93**	*e*P	**Pg**	**12 22 35.2**	**+1.5**
ALMR				*e*S	**Sg**	**12 22 51.0**	**+3.5**
ALMR				*e*S	**Sg**	**12 22 51.0**	**+3.5**
ALMR				AML	AML	12 22 51.2	
	comp=N,23nm,0.1s						
ALMR	**Almeirim**	**1.06**	**93**	*e*P	**Pg**	**12 22 35.2**	**+1.5**
ALMR				*e*S	**Sg**	**12 22 51.0**	**+3.5**
ALMR	**Almeirim**	**1.06**	**93**	P	**Pg**	**12 22 35.2**	**+1.5**
ALMR				S	**Sg**	**12 22 51.0**	**+3.5**
MOE	**Montemor**	**1.42**	**119**	*e*P	**Pn**	**12 22 40.0**	**+0.8**
MOE				*e*S	**Sn**	**12 22 58.1**	**+0.2**
EVO	**Evora**	**1.66**	**114**	*e*Pn	**Pn**	**12 22 42.8**	**+0.5**
EVO				*e*Sn	**Sn**	**12 23 03.6**	**0.0**
EVO				A		12 23 16.4	
	comp=N,43nm,0.1s						
EVO	**Evora**	**1.66**	**114**	*e*Pn	**Pn**	**12 22 42.8**	**+0.5**
EVO				*e*Sn	**Sn**	**12 23 03.6**	**0.0**
	comp=N,43nm,0.1s						
PESTR	**Estremoz**	**1.86**	**100**	*e*Pn	**Pn**	**12 22 45.9**	**+0.7**
PESTR				*e*Sn	**Sn**	**12 23 09.1**	**+0.3**
PESTR				A		12 23 20.4	
	comp=N,13nm,0.1s						
PESTR	**Estremoz**	**1.86**	**100**	*e*Pn	**Pn**	**12 22 45.9**	**+0.7**
PESTR				*e*Sn	**Sn**	**12 23 09.1**	**+0.3**
	comp=N,13nm,0.1s						
PTEO	**Sao Teotonio**	**1.93**	**150**	*e*Pn	**Pn**	**12 22 44.5**	**-1.6**
PTEO				*e*Sn	**Sn**	**12 23 06.3**	**-4.0**
PTEO				A		12 23 08.1	
	comp=N,39nm,0.3s						
PTEO	**Sao Teotonio**	**1.93**	**150**	*e*Pn	**Pn**	**12 22 44.5**	**-1.6**
PTEO				*e*Sn	**Sn**	**12 23 06.3**	**-4.0**
	comp=N,39nm,0.3s						
PMRV	**Marv??o**	**1.99**	**83**	*e*Pn	**Pn**	**12 22 48.0**	**+1.1**
PMRV				*e*Sn	**Sn**	**12 23 12.8**	**+0.9**
PMRV				A		12 23 14.1	
	comp=N,26nm,0.4s						
PMRV	**Marv??o**	**1.99**	**83**	*e*Pn	**Pn**	**12 22 48.0**	**+1.1**
PMRV				*e*Sn	**Sn**	**12 23 12.8**	**+0.9**
	comp=N,26nm,0.4s						
PCBR	**Castelo Branco**	**2.00**	**71**	*e*Pn	**Pn**	**12 22 48.5**	**+1.4**
PCBR				*e*Sn	**Sn**	**12 23 13.1**	**+0.9**
PCBR				A		12 23 17.5	
	comp=N,9.1nm,0.8s						
PCBR	**Castelo Branco**	**2.00**	**71**	*e*Pn	**Pn**	**12 22 48.5**	**+1.4**
PCBR				*e*Sn	**Sn**	**12 23 13.1**	**+0.9**
	comp=N,9.1nm,0.8s						
PBEJ	**Beja**	**2.02**	**126**	*e*Pn	**Pn**	**12 22 47.4**	**+0.1**
PBEJ				*e*Sn	**Sn**	**12 23 11.2**	**-1.3**
PBEJ				A		12 23 11.8	
	comp=N,9.8nm,0.2s						
PBEJ	**Beja**	**2.02**	**126**	*e*Pn	**Pn**	**12 22 47.4**	**+0.1**
PBEJ				*e*Sn	**Sn**	**12 23 11.2**	**-1.3**
	comp=N,9.8nm,0.2s						
MORF	**Marmelete**	**2.17**	**152**	*e*Pn	**Pn**	**12 22 47.5**	**-1.9**
MORF				*e*Sn	**Sn**	**12 23 12.4**	**-3.8**
MORF				A		12 23 13.5	
	comp=N,32nm,0.3s						
MORF	**Marmelete**	**2.17**	**152**	*e*Pn	**Pn**	**12 22 47.5**	**-1.9**
MORF				*e*Sn	**Sn**	**12 23 12.4**	**-3.8**
	comp=N,32nm,0.3s						
PVIS	**Viseu**	**2.17**	**46**	*e*Pn	**Pn**	**12 22 50.8**	**+1.4**
PVIS				*e*Sn	**Sn**	**12 23 16.7**	**+0.4**
PVIS				A		12 23 19.9	
	comp=N,36nm,0.1s						
PVIS	**Viseu**	**2.17**	**46**	*e*Pn	**Pn**	**12 22 50.8**	**+1.4**
PVIS				*e*Sn	**Sn**	**12 23 16.7**	**+0.4**
	comp=N,36nm,0.1s						
MTE	**Manteigas**	**2.19**	**57**	*e*Pn	**Pn**	**12 22 51.3**	**+1.6**
MTE				*e*Sn	**Sn**	**12 23 18.1**	**+1.3**
MTE				A		12 23 21.0	
	comp=N,17nm,0.1s						
MTE	**Manteigas**	**2.19**	**57**	*e*Pn	**Pn**	**12 22 51.3**	**+1.6**
MTE				*e*Sn	**Sn**	**12 23 18.1**	**+1.3**
	comp=N,17nm,0.1s						
EBAD	**Badajoz**	**2.33**	**101**	P	**Pn**	**12 22 51.9**	**+0.3**
	comp=N,1.0nm,0.1s,SNR=18						
EBAD				S	**Sn**	**12 23 20.8**	**+0.5**
	comp=N,12nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.33**	**101**	⇓P	**Pn**	**12 22 51.9**	**+0.3**
	comp=N,1.0nm,0.1s,SNR=18						
EBAD				S	**Sn**	**12 23 20.8**	**+0.5**
	comp=N,12nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.33**	**101**	⇓P	**Pn**	**12 22 51.9**	**+0.3**
EBAD				S	**Sn**	**12 23 20.8**	**+0.5**
PBAR	**Barrancos**	**2.50**	**114**	*e*Pn	**Pn**	**12 22 54.5**	**+0.5**
PBAR				*e*Sn	**Sn**	**12 23 23.8**	**-0.7**
PBAR				A		12 23 24.4	
	comp=N,12nm,0.2s						
PBAR	**Barrancos**	**2.50**	**114**	*e*Pn	**Pn**	**12 22 54.5**	**+0.5**
PBAR				*e*Sn	**Sn**	**12 23 23.8**	**-0.7**
	comp=N,12nm,0.2s						
PVAQ	**Vaqueiros**	**2.52**	**135**	*e*Pn	**Pn**	**12 22 53.6**	**-0.6**
PVAQ				*e*Sn	**Sn**	**12 23 22.7**	**-2.3**
PVAQ				A		12 23 24.9	
	comp=N,13nm,0.1s						
PVAQ	**Vaqueiros**	**2.52**	**135**	*e*Pn	**Pn**	**12 22 53.6**	**-0.6**
PVAQ				*e*Sn	**Sn**	**12 23 22.7**	**-2.3**
	comp=N,13nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.53**	**141**	*e*Pn	**Pn**	**12 22 53.7**	**-0.7**
PBDV				*e*Sn	**Sn**	**12 23 22.6**	**-2.7**
PBDV				A		12 23 26.9	
	comp=N,11nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.53**	**141**	*e*Pn	**Pn**	**12 22 53.7**	**-0.7**
PBDV				*e*Sn	**Sn**	**12 23 22.6**	**-2.7**
	comp=N,11nm,0.2s						
EGRO	**El Granado**	**2.56**	**130**	P	**Pn**	**12 22 53.4**	**-1.4**
	comp=N,0.5nm,0.1s,SNR=19						
EGRO				S	**Sn**	**12 23 24.8**	**-1.2**
	comp=N,3.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.56**	**130**	P	**Pn**	**12 22 54.4**	**-0.5**
	comp=N,0.5nm,0.1s,SNR=19						
EGRO				S	**Sn**	**12 23 24.8**	**-1.2**
	comp=N,3.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.56**	**130**	P	**Pn**	**12 22 53.4**	**-1.4**
EGRO				S	**Sn**	**12 23 24.8**	**-1.2**
PVRL	**Vila Real**	**2.67**	**39**	*e*Pn	**Pn**	**12 22 57.4**	**+1.1**
PVRL				*e*Sn	**Sn**	**12 23 27.5**	**-1.1**
PVRL				A		12 23 59.4	
	comp=N,21nm,0.1s						
PVRL	**Vila Real**	**2.67**	**39**	*e*Pn	**Pn**	**12 22 57.4**	**+1.1**
PVRL				*e*Sn	**Sn**	**12 23 27.5**	**-1.1**
	comp=N,21nm,0.1s						
PCAB	**Cabril**	**2.88**	**30**	*e*Pn	**Pn**	**12 23 00.1**	**+0.9**
PCAB				*e*Sn	**Sn**	**12 23 32.7**	**-1.3**
PCAB				A		12 23 34.1	
	comp=N,19nm,0.1s						
PCAB	**Cabril**	**2.88**	**30**	*e*Pn	**Pn**	**12 23 00.1**	**+0.9**
PCAB				*e*Sn	**Sn**	**12 23 32.7**	**-1.3**
	comp=N,19nm,0.1s						
EMIN	**Mina Concepcio**	**2.95**	**118**	P	**Pn**	**12 23 00.4**	**+0.3**
	comp=N,2.9nm,0.1s,SNR=18						
EMIN				S	**Sn**	**12 23 34.0**	**-1.5**
	comp=N,2.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.95**	**118**	⇓P	**Pn**	**12 23 00.4**	**+0.3**
	comp=N,2.9nm,0.1s,SNR=18						
EMIN				S	**Sn**	**12 23 34.0**	**-1.5**
	comp=N,2.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.95**	**118**	⇓P	**Pn**	**12 23 00.4**	**+0.3**
EMIN				S	**Sn**	**12 23 34.0**	**-1.5**
MVO	**Moncorvo**	**2.96**	**48**	*e*Pn	**Pn**	**12 23 01.5**	**+1.3**
MVO				*e*Sn	**Sn**	**12 23 35.0**	**-0.8**
MVO				A		12 23 37.6	
	comp=N,10.0nm,0.2s						
MVO	**Moncorvo**	**2.96**	**48**	*e*Pn	**Pn**	**12 23 01.5**	**+1.3**
MVO				*e*Sn	**Sn**	**12 23 35.0**	**-0.8**
	comp=N,10.0nm,0.2s						
ELOB	**Lobios**	**3.01**	**28**	P	**Pn**	**12 23 01.8**	**+0.9**
	comp=N,1.1nm,0.0s,SNR=7.9						
ELOB	**Lobios**	**3.01**	**28**	P	**Pn**	**12 23 01.8**	**+0.8**
	comp=N,1.1nm,0.0s,SNR=7.9						
ELOB				S	**Sn**	**12 23 35.4**	**-1.6**
	comp=N,4.5nm,0.1s,SNR=12						
EZAM	**Zamans**	**3.08**	**18**	P	**Pn**	**12 23 02.0**	**+0.1**
	comp=N,0.2nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**12 23 36.9**	**-1.8**
	comp=N,11nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**3.10**	**73**	P	**Pn**	**12 23 03.6**	**+1.4**
	comp=N,1.0nm,0.0s,SNR=4.0						
EPLA				S	**Sn**	**12 23 39.1**	**-0.1**
	SNR=7.9						
PBRG	**Braganca**	**3.55**	**42**	*e*Pn	**Pn**	**12 23 09.7**	**+1.3**
PBRG				*e*Sn	**Sn**	**12 23 48.9**	**-1.5**
ECAL	**Calabor**	**3.65**	**41**	P	**Pn**	**12 23 11.2**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**3.65**	**41**	P	**Pn**	**12 23 11.2**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**12 23 52.5**	**-0.4**
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**3.79**	**11**	P	**Pn**	**12 23 11.2**	**-0.6**
	comp=N,3.1nm,0.1s,SNR=18						
EMAZ	**Mazaricos**	**3.79**	**11**	⇑P	**Pn**	**12 23 11.2**	**-0.5**
	comp=N,3.1nm,0.1s,SNR=18						
EMAZ				S	**Sn**	**12 23 52.0**	**-4.5**
	comp=N,7.1nm,0.1s,SNR=6.9						
STS	**Santiago**	**3.81**	**16**	S	**Sn**	**12 23 53.3**	**-3.5**
	comp=N,7.5nm,0.1s,SNR=4.9						
ERUA	**La Rua**	**3.81**	**33**	P	**Pn**	**12 23 10.7**	**-1.3**
	comp=N,1.2nm,0.1s,SNR=4.0						
ERUA				S	**Sn**	**12 23 54.0**	**-2.9**
	comp=N,1.1nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.99**	**125**	P	**Pn**	**12 23 15.1**	**+0.7**
	comp=N,0.6nm,0.1s,SNR=7.7						
ESPR				S	**Sn**	**12 24 01.2**	**0.0**
	comp=N,3.6nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.99**	**125**	P	**Pn**	**12 23 15.1**	**+0.6**
	comp=N,0.6nm,0.1s,SNR=7.7						
ESPR				S	**Sn**	**12 24 01.2**	**0.0**
	comp=N,3.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.33**	**102**	P	**Pn**	**12 23 19.5**	**+0.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.33**	**102**	P	**Pn**	**12 23 19.5**	**+0.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**12 24 08.1**	**-1.4**
	comp=N,0.7nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**4.49**	**127**	P	**Pn**	**12 23 22.7**	**+1.4**
	comp=N,0.7nm,0.2s,SNR=4.0						
EPON	**Pontenova**	**4.61**	**26**	P	**Pn**	**12 23 23.4**	**+0.4**
	comp=N,2.4nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**4.61**	**26**	P	**Pn**	**12 23 23.4**	**+0.4**
	comp=N,2.4nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**12 24 13.4**	**-3.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**4.65**	**83**	P	**Pn**	**12 23 25.0**	**+1.5**
	comp=N,1.6nm,0.2s,SNR=5.3						
ESDC	**Sonseca Array**	**4.65**	**83**	P	**Pn**	**12 23 25.0**	**+1.5**
	comp=N,1.6nm,0.2s,baz=267,slow=14,SNR=5.3						
ESDC				S	**Sn**	**12 24 16.4**	**-1.1**
	baz=266,slow=24,SNR=7.9						
EBAN	**Banos Encina**	**4.93**	**100**	P	**Pn**	**12 23 27.7**	**+0.4**
	comp=N,0.4nm,0.0s,SNR=4.0						
EBAN				S	**Sn**	**12 24 21.7**	**-2.8**
	comp=N,0.4nm,0.1s,SNR=7.9						

*NDI **27** 12:25:23.0±2.5, 28.26N×84.34E, h10km, ML3.5*

ISC 27 12:26:00.4±1.6, 3188N±007×727E±01, h10km, n15, σ1§15/16, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.66**	**77**	*e*P	**Sg**	**12 27 26.1**	**+0.3**
SDNR	**Sundarnagar**	**3.70**	**95**	*e*P	**Pb**	**12 27 07.0**	**+1.1**
SDNR				*ex*	x	12 28 51.6	
KHET	**Khetri**	**4.68**	**143**	*e*P	**Pn**	**12 27 11.6**	**+0.5**
KHET				*e*S	**Sg**	**12 28 32.8**	**+2.1**
KHET				AML	AML	12 28 39.8	
	comp=E,31nm,0.4s						
KHET				AML	AML	12 28 40.9	
	comp=N,22nm,0.5s						
KLP	**Kalpa**	**4.79**	**93**	*e*P	Px	12 26 56.1	
KLP				*e*S	**Sn**	**12 28 01.9**	**-6.2**
KLP				AML	AML	12 29 43.2	
	comp=E,158nm,0.7s						
KLP				AML	AML	12 29 44.1	
	comp=N,122nm,0.7s						
SONA	**Sohna**	**5.28**	**132**	*e*P	**Pg**	**12 27 39.3**	**-2.2**
SONA				*e*S	**Sg**	**12 28 48.3**	**-1.6**
SONA				AML	AML	12 29 13.3	
	comp=N,34nm,0.7s						
SONA				AML	AML	12 29 14.4	
	comp=E,60nm,0.4s						
AJM	**Ajmer**	**5.66**	**162**	*ex*	x	12 27 04.0	
JOSI	**Joshimath**	**6.06**	**101**	*e*S	**Pn**	**12 27 26.3**	**-3.8**
JOSI				AML	AML	12 29 15.1	
	comp=N,59nm,0.7s						
JOSI				AML	AML	12 29 16.7	
	comp=E,52nm,0.7s						
DANN	**Dangsing**	**10.24**	**107**	*e*P	**Pn**	**12 28 28.0**	**+0.5**
	comp=E,7.1nm,0.4s						
KOLN	**Koldanda**	**10.36**	**111**	*e*P	**Pn**	**12 28 30.5**	**+1.5**
	comp=E,4.5nm,0.3s						
GKN	**Gorkha**	**11.09**	**107**	*e*P	**Pn**	**12 28 40.0**	**+0.9**
KKN	**Kakani**	**11.70**	**107**	*e*P	**Pn**	**12 28 46.8**	**-0.6**
	comp=E,3.7nm,0.3s						
PKIN	**Phulchoki**	**11.88**	**108**	*e*P	**Pn**	**12 28 49.4**	**-0.5**
GUN	**Gumba**	**12.14**	**106**	*e*P	**Pn**	**12 28 52.7**	**-0.7**
	comp=E,12nm,0.3s						
JIRN	**Jiri**	**12.49**	**106**	*e*P	**Pn**	**12 28 57.9**	**-0.3**
	comp=E,5.3nm,0.3s						
TAPN	**Taplejung**	**13.86**	**105**	*e*P	**Pn**	**12 29 16.0**	**-0.9**
	comp=E,4.6nm,0.6s						

*ISK **27** 12:26:48.9, 39.36N×3308E, h5km, MD2.6*
*ISCJB **27** 12:26:49.1±0.9, 39.39N±005×3309E±005, h4km±9km, Error ellipse: s-maj=8.6km s-min=5.4km az=145.3*
*CSEM **27** 12:26:49.0±0.1, 39.39N×3311E, h12km, MD2.6, Error ellipse: s-maj=3.2km s-min=2.5km az=122.0*
*DDA **27** 12:26:49.4, 39.39N×3313E, h10km±1km, Md2.7*

ISC 27 12:26:49.5±0.6, 3939N±004×3309E±005, h6km±10km, n9, σ0§48/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.49**	**92**	*e*PG	**Pg**	**12 26 59.0**	**+0.1**
KAMT				*e*SG	**Sg**	**12 27 05.8**	**+0.6**
LOD	**Lodumlu**	**0.56**	**334**	*e*PG	**Pg**	**12 27 00.6**	**+0.5**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P	**Pg**	**12 27 08.2**	**-0.9**
CDAG				*i* S	**Sg**	**12 27 21.9**	**-0.4**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PG	**Pg**	**12 27 09.3**	**-0.6**
ELDT	**Eldivan**	**1.13**	**13**	*i* P	**Pg**	**12 27 11.3**	**+0.1**
ELDT				*i* S	**Sg**	**12 27 25.7**	**-0.1**
KDHN	**Kadinhani**	**1.15**	**221**	*i* P	**Pg**	**12 27 11.6**	**+0.1**
KDHN				*i* S	**Sg**	**12 27 26.9**	**+0.5**
LADK	**Ladik-KONYA**	**1.31**	**206**	*e*PN	**Pn**	**12 27 14.0**	**-0.4**
KONT	**Konya--Tatoy**	**1.55**	**202**	*e*PN	**Pn**	**12 27 17.4**	**-0.2**
YOZ	**Yozgat**	**1.75**	**81**	*e*PN	**Pn**	**12 27 21.0**	**+0.7**

*DDA **27** 12:44:17.9, 3943N×3309E, h12km±1km, Md3.0*
*ISCJB **27** 12:44:18.2±1.0, 3942N±005×3307E±006, h7km±9km, Error ellipse: s-maj=10.1km s-min=5.8km az=44.2*
*CSEM **27** 12:44:18.0±0.1, 3944N×3309E, h15km, MD2.7, Error ellipse: s-maj=3.3km s-min=2.5km az=129.0*
*ISK **27** 12:44:18.2, 3943N×3307E, h10km, MD2.7*

ISC 27 12:44:18.5±0.9, 3943N±005×3307E±006, h12km±10km, n9, σ0§48/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.50**	**96**	*e*PG	**Pg**	**12 44 28.4**	**+0.1**
LOD	**Lodumlu**	**0.52**	**333**	*e*PG	**Pg**	**12 44 28.8**	**+0.1**
CDAG	**Cicekdag**	**1.03**	**78**	*i* P	**Pb**	**12 44 37.7**	**-0.5**
CDAG				*i* S	**Sb**	**12 44 51.2**	**-0.4**
KIZT	**Kizilcal**	**1.07**	**240**	*e*PG	**Pg**	**12 44 39.3**	**+0.1**
ELDT	**Eldivan**	**1.10**	**14**	*i* P	**Pb**	**12 44 39.0**	**-0.4**
ELDT				*i* S	**Sb**	**12 44 53.8**	**+0.1**
KDHN	**Kadinhani**	**1.17**	**220**	*i* P	**Pb**	**12 44 40.1**	**-0.5**
KDHN				*i* S	**Sb**	**12 44 55.0**	**-0.7**
LADK	**Ladik-KONYA**	**1.34**	**204**	*e*PN	**Pn**	**12 44 43.8**	**+0.8**
KONT	**Konya--Tatoy**	**1.58**	**201**	*e*PN	**Pn**	**12 44 46.8**	**+0.6**
YOZ	**Yozgat**	**1.75**	**82**	*e*PN	**Pn**	**12 44 49.4**	**+0.7**

*CSEM **27** 12:50:31.9±0.2, 37.11N×3750E, h20km, MD3.2, Error ellipse: s-maj=5.8km s-min=3.0km az=162.0*
*DDA **27** 12:50:31.4, 3720N×3743E, h7km±5km, Md3.2*
*ISCJB **27** 12:50:32.4±0.9, 37.13N±006×3753E±006, h15km±10km, Error ellipse: s-maj=11.0km s-min=5.7km az=142.9*
*ISK **27** 12:50:32.4, 37.18N×3754E, h14km, MD2.7*

ISC 27 12:50:31.9±1.0, 3711N±006×3754E±006, h13km±5km, n12, σ1§05/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZT	**Gaziantep**	**0.24**	**4**	*i* P	**Pg**	**12 50 34.4**	**-2.7**
GZT				*i* S	**Sg**	**12 50 39.2**	**-1.4**
GAZ	**Gaziantep**	**0.27**	**283**	*e*PG	**Pg**	**12 50 37.6**	**0.0**
GAZ				*e*SG	**Sg**	**12 50 43.4**	**+2.1**
KMRS	**Kahramanmaras**	**0.65**	**308**	*e*PG	**Pg**	**12 50 44.6**	**+0.1**
KMRS				*e*SG	**Sg**	**12 50 53.5**	**+0.5**
URFA	**Urfa**	**1.07**	**72**	*e*PG	**Pg**	**12 50 53.2**	**+0.7**
COBT	**Iskenderun**	**1.19**	**241**	*i* P	**Pn**	**12 50 53.8**	**-0.5**
COBT				*i* S	**Sb**	**12 51 08.7**	**-0.9**
AKCD	**Akcadag**	**1.22**	**14**	*i* P	**Pn**	**12 50 54.0**	**-0.6**
AKCD				*i* S	**Sb**	**12 51 11.4**	**+1.0**
AKCD	**Akcadag**	**1.22**	**14**	*i* P	**Pn**	**12 50 54.0**	**-0.6**
AKCD				*i* S	**Sb**	**12 51 11.4**	**+0.9**
MALT	**Malatya**	**1.39**	**30**	*e*PN	**Pn**	**12 50 57.6**	**+0.6**
MALT				*e*SN	**Sn**	**12 51 15.2**	**0.0**
MYA	**Malataya**	**1.40**	**30**	*e*PN	**Pn**	**12 50 57.4**	**+0.2**
KOZT	**Kozan**	**1.42**	**286**	*e*PN	**Pn**	**12 50 57.6**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.70**	**337**	*e*PN	**Pn**	**12 50 59.4**	**-1.9**
SVRC	**Sivrice-ELAZID**	**1.89**	**47**	*e*PN	**Pn**	**12 51 05.0**	**+1.2**

*ISCJB **27** 12:50:53.1±0.6, 147N±004×12723E±006, h158km±5km, mb4.5/35, Error ellipse: s-maj=11.0km s-min=5.7km az=157.6*
*DJA **27** 12:50:53, 151N×12735E, h140km, MLv4.8/5*
*BJI **27** 12:50:54.0, 150N×12740E, h162km, mB4.7, mb4.6*
*IDC **27** 12:50:54.5±1.6, 145N×12740E, h159km±13km, mb4.0/15, mb1 4.1/16, mb1mx4.1/18, mbtmp4.0/16, Error ellipse: s-maj=21.5km s-min=8.7km az=79.0*
*NEIC **27** 12:50:54.5±1.9, 146N×12736E, h163km±18km, mb4.7/8, Error ellipse: s-maj=15.1km s-min=6.5km az=70.0*

ISC 27 12:50:54.1±0.6, 143N±004×12727E±007, h154km±5km, n69, σ0§81/71, mb4.5/35, 2C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.66**	**171**	P	**Pn**	**12 51 16.4**	**-0.5**
LBMI	**Labuha**	**2.07**	**173**	P	**Pn**	**12 51 31.0**	**+0.7**
LBMI				S	**Sn**	**12 51 58.7**	**+0.5**
MNI	**Manado**	**2.42**	**270**	P	**Pn**	**12 51 33.0**	**-1.5**
SGSI	**Sangihe**	**2.83**	**322**	P	**Pn**	**12 51 38.5**	**-1.1**
AAI	**Ambon**

MJAR	**Matsushiro Arr**	**36.38**	**15**	P		**P**	**12 57 41.6**	**-1.9**
	1.1nm,0.4s,mb3.8,baz=191,slow=8.7,SNR=8.5							
XAN	**Xi'an**	**36.70**	**334**	P		**P**	**12 57 46.3**	**0.0**
XAN				AMB	AMB			
	comp=Z,11nm,0.8s,mb4.5							
XAN				AMB	AMB			
	comp=Z,147nm,8.2s							
ARMA	**Armidale**	**39.27**	**146**	*e*P		**P**	**12 58 08.9**	**+1.0**
LZH	**Lanzhou**	**40.75**	**330**	*e*P		**P**	**12 58 21.0**	**+1.0**
LZH				AMB	AMB			
	comp=Z,19nm,1.4s,mb4.5							
LZH				AMB	AMB			
	comp=Z,98nm,5.0s							
HHC	**Hu-ho-hao-te**	**41.74**	**342**	*e*P		**P**	**12 58 28.3**	**+0.3**
HHC				AMB	AMB			
	comp=Z,6.0nm,1.1s,mb4.1							
HHC				AMB	AMB			
	comp=Z,129nm,4.4s							
GTA	**Gaotai**	**45.34**	**330**	*e*P		**P**	**12 58 57.5**	**+0.6**
GTA				AMB	AMB			
	comp=Z,5.0nm,0.8s,mb4.2							
TAPN	**Taplejung**	**45.82**	**308**	*e*P		**P**	**12 59 01.0**	**+0.1**
	comp=Z,6.6nm,0.7s,mb4.4							
ODAN	**Odare**	**45.85**	**307**	*e*P		**P**	**12 59 00.9**	**-0.2**
	comp=Z,7.4nm,0.6s,mb4.5							
RAMN	**Ramite**	**46.52**	**307**	*e*P		**P**	**12 59 06.6**	**+0.2**
	comp=Z,7.6nm,0.5s,mb4.6							
JIRN	**Jiri**	**47.16**	**307**	*e*P		**P**	**12 59 11.1**	**-0.2**
	comp=Z,7.2nm,0.5s,mb4.6							
GUN	**Gumba**	**47.52**	**308**	*e*P		**P**	**12 59 14.5**	**+0.4**
	comp=Z,11nm,0.4s,mb4.9							
PKI	**Pulchoki**	**47.75**	**307**	*e*P		**P**	**12 59 15.5**	**-0.4**
PKIN	**Phulchoki**	**47.76**	**307**	*e*P		**P**	**12 59 15.9**	**-0.1**
KKN	**Kakani**	**47.95**	**307**	*e*P		**P**	**12 59 17.6**	**+0.2**
DMN	**Daman**	**48.01**	**307**	*e*P		**P**	**12 59 18.6**	**+0.7**
	comp=Z,5.2nm,0.5s,mb4.4							
GKN	**Gorkha**	**48.55**	**307**	*e*P		**P**	**12 59 21.8**	**-0.2**
	comp=Z,4.9nm,0.4s,mb4.5							
KOLN	**Koldanda**	**49.29**	**306**	*e*P		**P**	**12 59 28.2**	**+0.6**
	comp=Z,34nm,0.6s,mb5.1							
DANN	**Dangsing**	**49.40**	**307**	*e*P		**P**	**12 59 28.8**	**+0.3**
	comp=Z,26nm,0.6s,mb5.1							
SONM	**Songino Array**	**49.63**	**342**	P		**P**	**12 59 30.5**	**+0.6**
	comp=Z,2.0nm,0.5s,mb4.0,baz=160,slow=9.0,SNR=3.1							
HYB	**Hyderabad**	**50.42**	**291**	*i* P		**P**	**12 59 36.0**	**-0.3**
HYB	**Hyderabad**	**50.42**	**291**	*e*P		**P**	**12 59 36.0**	**-0.3**
PETK	**Petropavlovsk-**	**57.35**	**21**	P		**P**	**13 00 26.4**	**+0.3**
	comp=Z,2.1nm,0.5s,mb4.2,baz=187,slow=3.9,SNR=8.9							
MK31	**Makanchi Array**	**59.74**	**326**	*e*P		**P**	**13 00 42.7**	**0.0**
MKAR	**Makanchi Array**	**59.74**	**326**	P		**P**	**13 00 42.8**	**+0.1**
	comp=Z,7.8nm,0.5s,mb4.8,baz=120,slow=8.7,SNR=109							
MKAR				ScP		ScP	13 05 13.4	-1.1
	comp=Z,0.9nm,0.9s,baz=136,slow=5.4,SNR=4.3							
KZA	**Kyzart**	**61.67**	**318**	P		**P**	**13 00 57.2**	**+1.4**
	SNR=6.1							
TKM2	**Tokmak 2**	**61.82**	**319**	P		**P**	**13 00 57.5**	**+0.7**
	SNR=10.0							
TKM2	**Tokmak 2**	**61.82**	**319**	*e*P		**P**	**13 00 57.0**	**+0.2**
	comp=Z,5.2nm,0.6s,mb4.5							
USP	**Osipenovka**	**62.69**	**319**	P		**P**	**13 01 02.9**	**+0.3**
	SNR=10							
AML	**Almayashu**	**62.73**	**318**	P		**P**	**13 01 04.0**	**+1.1**
	SNR=7.0							
AML	**Almayashu**	**62.73**	**318**	*e*P		**P**	**13 01 03.7**	**+0.8**
	comp=Z,6.5nm,0.8s,mb4.5							
ZALV	**Zalesovo Beam**	**62.87**	**333**	P		**P**	**13 01 02.1**	**-1.5**
	comp=Z,1.2nm,0.3s,mb4.1,baz=123,slow=5.5,SNR=3.9							
EKS2	**Erkin-Say**	**62.90**	**318**	P		**P**	**13 01 04.9**	**+0.9**
	SNR=6.2							
KBL	**Kabul**	**63.35**	**308**	*e*P		**P**	**13 01 07.2**	**0.0**
	comp=Z,7.7nm,0.7s,mb4.6							
KURK	**Kurchatov**	**63.96**	**328**	*e*P		**P**	**13 01 10.2**	**-0.6**
	comp=Z,13nm,0.7s,mb4.9							
VNDA	**Vanda**	**81.09**	**173**	P		**P**	**13 02 51.9**	**+0.2**
	comp=Z,1.9nm,0.5s,mb4.0,baz=316,slow=7.1,SNR=28							
MAW	**Mawson**	**81.80**	**200**	P		**P**	**13 02 56.0**	**+0.6**
	comp=Z,4.2nm,0.5s,mb4.3,baz=73,slow=7.0,SNR=9.4							
BRTR	**Keskin Array B**	**91.89**	**310**	P		**P**	**13 03 43.5**	**-1.7**
	comp=Z,1.0nm,0.9s,mb3.9,baz=90,slow=6.3,SNR=3.9							
ARCES	**ARCESS Array B**	**92.78**	**340**	P		**P**	**13 03 47.3**	**-1.4**
	comp=Z,2.1nm,0.7s,mb4.4,baz=31,slow=2.8,SNR=6.9							
YKA	**Yellowknife Ar**	**101.36**	**25**	P		Pdif	13 04 27.0	-0.7
	comp=Z,0.1nm,0.4s,baz=292,slow=4.6,SNR=3.5							
TORD	**Torodi Ar. Bea**	**124.12**	**287**	PKP		PKPdf	13 09 34.9	-0.5
	comp=Z,1.6nm,0.7s,baz=62,slow=2.3,SNR=11							

*BJI **27** 12:51:04.7,5420N×16420W,h25km,mB5.2,mb4.4,Ms4.3, Msz4.2*
*NEIC **27** 12:51:09.8,5416N×164.16W,h26km,ML3.4(AEIC), ML3.5(PMR),After AEIC.*
*ISCJB **27** 12:51:10.2±0.8,542N±0.1×16423W±0.10,h50km±7km, mb3.8/5,Error ellipse: s-maj=23.4km s-min=5.3km az=159.1*
*IDC **27** 12:51:19.2±21.0,5469N×16140W,h0km,mb3.3/3, mb1 3.8/3,mb1mx3.4/25,mbtmp3.3/3,Error ellipse: s-maj=406.0km s-min=65.3km az=82.0*

ISC 27 12:51:10.8±2.0,542N±01×16424W±009,h34km±16km,n14, σ0§83/21,mb3.8/5,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.78**	**38**	P	**Pn**	**12 51 24.9**	**-0.4**
FALS				S	**Sn**	**12 51 36.2**	**+0.5**
AKUT	**Akutan**	**0.91**	**264**	P	**Pn**	**12 51 26.5**	**-0.5**
AKUT				S	**Sn**	**12 51 39.1**	**+0.2**
AKLV	**Akutan Long Va**	**1.01**	**266**	P	**Pn**	**12 51 28.1**	**-0.4**
AKLV				S	**Sn**	**12 51 42.5**	**+1.0**
AKGG	**Akutan Green G**	**1.03**	**268**	P	**Pn**	**12 51 28.7**	**-0.1**
AKGG				S	**Sn**	**12 51 43.5**	**+1.6**
UNV	**Unalaska Valle**	**1.39**	**254**	P	**Pn**	**12 51 33.3**	**-0.4**
UNV				S	**Sn**	**12 51 50.8**	**-0.1**
SDPT	**Sand Point**	**2.44**	**62**	P	**Pn**	**12 51 48.0**	**-0.1**
SDPT				S	**Sn**	**12 52 20.2**	**+3.4**
CHGN	**Chignik**	**3.92**	**56**	*e*P	**Pn**	**12 52 08.5**	**+0.1**
YKA	**Yellowknife Ar**	**26.67**	**52**	P	**P**	**12 56 45.0**	**-1.0**
	0.1nm,0.4s,mb2.7,baz=271,slow=7.9,SNR=5.5							
YKA	**Yellowknife Ar**	**26.67**	**52**	P	**P**	**12 56 45.0**	**-1.0**
NVAR	**Mina Array Bea**	**34.74**	**98**	P	**P**	**12 57 58.1**	**+0.7**
	0.6nm,0.6s,mb3.7,baz=299,slow=8.9,SNR=5.2							
TXAR	**Lajitas Array**	**49.73**	**95**	P	**P**	**13 00 00.3**	**+0.9**
	0.2nm,0.4s,mb3.5,baz=294,slow=5.4,SNR=8.2							
TXAR	**Lajitas Array**	**49.73**	**95**	P	**P**	**13 00 00.3**	**+0.9**
XAN	**Xi'an**	**61.45**	**289**	P	**P**	**13 01 22.3**	**-1.2**
XAN				AP	pP	13 01 31.5	-2.4
XAN				PP	PP	13 03 37.3	-1.4
XAN				S	**S**	**13 09 40.8**	**-1.3**
XAN				SS	SS	13 13 42.5	-0.2
XAN				AMB	AMB		
	comp=Z,2.0nm,0.6s,mb4.4						
XAN				LR	LR		
	comp=N,25nm,28.2s						
XAN				LR	LR		
	comp=E,39nm,21.9s						
XAN				LR	LR		
	comp=Z,32nm,15.7s						
GYA	**Guiyang**	**68.47**	**286**	*e*P	**P**	**13 02 08.5**	**-0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						

IDC 27 13:03:23.9±3.3,1665S×17482W,h0km,mb3.8/3, mb1 4.0/4,mb1mx3.7/18,mbtmp3.8/4,ML2.1/1,Error ellipse: s-maj=190.4km s-min=30.7km az=146.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.00**	**47**	Pn	Pn	13 04 26.7	+0.1
	7.2nm,0.3s,baz=182,slow=2.8,SNR=25						
AFI				Sn	Sn	13 05 00.6	-14
	12nm,0.3s,baz=55,slow=22,SNR=8.7						
STKA	**Stephens Creek**	**42.24**	**241**	P	P	13 11 19.3	+0.3
	0.5nm,0.5s,baz=81,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**48.24**	**258**	P	P	13 12 06.7	-0.2
	0.5nm,0.9s,baz=95,slow=6.8,SNR=13						
ASAR	**Alice Springs**	**48.44**	**253**	P	P	13 12 08.2	-0.2
	2.2nm,0.5s,baz=88,slow=8.6,SNR=44						

MOS 27 13:14:31.3±0.3,4305N×4681E,h15km,mb3.9/1,1D, Error ellipse: s-maj=22.3km s-min=14.3km az=126.6, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.03**	**151**	⇓*i*PG	Pg	13 14 34.8	+0.8
DBC				*i* S	Sg	13 14 39.8	+4.1
DBC				pmax	pmax		
	comp=Z,416nm,0.1s						
ARKR	**Arakani**	**0.46**	**163**	*e*PG	Pg	13 14 42.4	+1.9
ARKR				*e*S	Sg	13 14 53.7	+6.9
ARKR				pmax	pmax		
	comp=Z,61nm,0.2s						
MAK	**Makhachkala**	**0.52**	**99**	*e*PG	Pg	13 14 54.5	+13
GNBR	**Gunib**	**0.67**	**170**	*e*PG	Pg	13 14 44.7	+0.4
GNBR				*e*S	Sg	13 14 57.3	+4.1
SNJR	**Sundja**	**1.47**	**272**	*e*PG	Pg	13 14 57.5	-2.0
SNJR				*e*S	Sn	13 15 18.8	+2.8
BTKR	**Batakoyurt**	**1.69**	**282**	*e*PN	Pn	13 15 01.2	+1.0
BTKR				*i* S	Sn	13 15 25.3	+3.7
ARNR	**Ardon**	**1.86**	**275**	*e*PN	Pn	13 15 03.7	+1.1
ARNR				*e*S	Sn	13 15 29.6	+3.8
ZEI	**Tsey**	**2.16**	**264**	*e*PN	Pn	13 15 07.4	+0.7
ZEI				*e*S	Sn	13 15 36.5	+3.4

GUC 27 13:22:06.6±0.8,3706S×7066W,h160km,ML4.1,2D, Southern Argentina

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**1.22**	**292**	*e*P	Pn	13 22 34.4	+0.1
CCHI				*i* S	Sn	13 22 55.7	+0.3
CCHI				AML	AML	13 22 56.8	
	comp=N,511nm,0.4s						
CICH	**Cipreses**	**2.74**	**4**	⇓*i*P	Pn	13 22 52.4	+1.2
CICH				*i* S	Sn	13 23 27.1	+1.4
CACH	**El Canelo**	**2.94**	**1**	*e*P	Pn	13 22 54.1	+0.5
CACH				*i* S	Sn	13 23 29.1	-0.9
CHCH	**Chadas Angostu**	**3.12**	**0**	⇓*e*P	Pn	13 22 56.5	+0.6
CHCH				*i* S	Sn	13 23 34.3	+0.2
LNV	**Longovilo**	**3.16**	**349**	*e*P	Pn	13 22 55.8	-0.6
LMEL	**Las Melosas**	**3.23**	**7**	*e*P	Pn	13 22 58.5	+1.2
LMEL				*e*S	Sn	13 23 37.6	+1.1
FCH	**Farellones**	**3.74**	**5**	*e*P	Pn	13 23 03.7	0.0
FCH				*e*S	Sn	13 23 46.1	-2.1
FCH				AML	AML	13 23 50.0	
	comp=N,153nm,0.4s						
PEL	**Peldehue**	**3.91**	**360**	*e*P	Pn	13 23 05.3	-0.7
PEL				*e*S	Sn	13 23 48.2	-3.9
PEL				AML	AML	13 23 52.0	
	comp=E,417nm,0.4s						

*SZGRF **27** 13:27:00.9,1975S×17783W,h33km,Fiji Islands region*
*MOS **27** 13:27:43.7±1.5,2358S×17996W,h468km,mb4.9/18, Error ellipse: s-maj=15.0km s-min=10.7km az=143.2*
*NEIC **27** 13:27:48.8±1.1,2368S×17994E,h521km±12km,mb4.7/35, Error ellipse: s-maj=10.7km s-min=7.3km az=142.0*
*ISCJB **27** 13:27:48.2±1.3,2364S±006×17987E±006,h519km±15km, mb4.5/54,Error ellipse: s-maj=9.8km s-min=6.8km az=143.2*
*BJI **27** 13:27:48.2,2370S×17990E,h521km,mB5.0,mb4.5*
*IDC **27** 13:27:51.1±0.8,2363S×17989E,h541km±7km,mb3.8/15, mb1 4.0/15,mb1mx3.9/19,mbtmp3.8/15,Error ellipse: s-maj=13.8km s-min=10.0km az=155.0*

ISC 27 13:27:48.0±1.2,2369S±006×17995E±005,h507km±13km, h526km±4.7km;pP-P,n444,σ0§56/371,mb4.5/54, 140C-139D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.49**	**40**	P	**P**	**13 30 26.9**	**-5.0**
	0.7nm,0.3s,baz=343,slow=19,SNR=2.0						
AFI	**Afiamalu**	**12.49**	**40**	P	**P**	**13 30 26.9**	**-5.0**
AFI				Pn	**P**	**13 30 31.9**	**+0.1**
URZ	**Urewera**	**14.72**	**189**	P	**P**	**13 30 54.0**	**-1.0**
	1.8nm,0.3s,baz=47,slow=4.1,SNR=6.2						
URZ				S	**S**	**13 33 28.3**	**-1.0**
	1.9nm,0.3s,baz=97,slow=23,SNR=11						
FUNA	**Funafuti**	**15.10**	**357**	*e*P	**P**	**13 30 58.1**	**-1.2**
	42nm,1.0s						
RPZ	**Rata Peaks**	**21.27**	**198**	P	**P**	**13 31 57.4**	**-0.2**
	15nm,1.0s,mb4.5,baz=315,slow=4.3,SNR=3.6						
HNR	**Honiara**	**23.80**	**303**	P	**P**	**13 32 19.5**	**-1.1**
HNR				pmax	pmax		
	comp=Z,86nm,0.9s,mb5.2						
HNR	**Honiara**	**23.80**	**303**	P	**P**	**13 32 19.5**	**-1.1**
	comp=Z,86nm,0.9s,mb5.2						
ARMA	**Armidale**	**26.05**	**249**	*e*P	**P**	**13 32 42.7**	**+2.3**
EIDS	**Eidsvold**	**26.29**	**260**	*e*P	**P**	**13 32 43.9**	**+1.2**
	comp=Z,15nm,0.5s,mb4.7						
CTA	**Charters Tower**	**31.43**	**270**	P	**P**	**13 33 28.7**	**+1.3**
	comp=Z,58nm,0.4s,mb5.3,baz=96,slow=10,SNR=194						
CTA	**Charters Tower**	**31.43**	**270**	⇓*i*P	**P**	**13 33 28.7**	**+1.3**
	comp=Z,48nm,0.4s,mb5.3						
CTAO	**Charters Tower**	**31.43**	**270**	*e*P	**P**	**13 33 28.4**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,61nm,0.5s,mb5.3						
CTAO	**Charters Tower**	**31.43**	**270**	*e*P	**P**	**13 33 28.4**	**+1.0**
	comp=Z,61nm,0.5s,mb5.3						
TOO	**Toolangi**	**32.52**	**237**	*e*P	**P**	**13 33 37.9**	**+1.4**
TAU	**Tasmania Unive**	**33.04**	**227**	*e*P	**P**	**13 33 40.7**	**-0.1**
PMG	**Port Moresby**	**34.38**	**289**	P	**P**	**13 33 53.0**	**+0.5**
	comp=Z,44nm,0.7s,mb5.0,baz=94,slow=5.3,SNR=25						
PMG	**Port Moresby**	**34.38**	**289**	*e*P	**P**	**13 33 52.8**	**+0.3**
PMG				pmax	pmax		
	comp=Z,48nm,0.8s						
PMG	**Port Moresby**	**34.38**	**289**	*e*P	**P**	**13 33 52.8**	**+0.2**
	comp=Z,48nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**34.76**	**248**	P	**P**	**13 33 56.7**	**+1.2**
	comp=Z,4.9nm,0.5s,mb4.2,baz=95,slow=9.7,SNR=27						
STKA				PcP	PcP	13 36 15.2	+0.3
	comp=Z,1.6nm,0.7s,baz=63,slow=2.3,SNR=2.6						
STKA	**Stephens Creek**	**34.76**	**248**	⇓*i*P	**P**	**13 33 56.6**	**+1.2**
	comp=Z,3.9nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**34.76**	**248**	*e*P	**P**	**13 33 56.4**	**+1.0**
	comp=Z,1.3nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**42.02**	**260**	P	**P**	**13 34 55.1**	**+0.4**
	comp=Z,16nm,0.8s,mb4.5,baz=98,slow=7.2,SNR=168						
ASAR				S	**S**	**13 40 34.6**	**-2.1**
	comp=Z,1.0nm,0.9s,baz=92,slow=16,SNR=5.4						
WB2	**Warramunga Arr**	**42.36**	**266**	⇓*i*P	**P**	**13 34 57.2**	**-0.2**
WRAB	**Tennant Creek**	**42.37**	**266**	⇓*i*P	**P**	**13 34 56.9**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**42.37**	**266**	⇓*i*P	**P**	**13 34 56.9**	**-0.5**
	comp=Z,21nm,0.8s,mb4.6						
WRAB				*e*ScP	ScP	13 39 41.8	+0.2
WRA	**Warramunga Arr**	**42.37**	**266**	P	**P**	**13 34 57.4**	**-0.1**
	comp=Z,22nm,0.6s,mb4.8,baz=102,slow=8.2,SNR=298						
WRA				S	**S**	**13 40 38.0**	**-3.9**
	comp=Z,1.9nm,1.0s,baz=60,slow=18,SNR=7.9						
FORT	**Forrest**	**46.34**	**249**	*e*P	**P**	**13 35 27.8**	**-0.2**
	comp=Z,48nm,0.6s,mb5.1						
FORT	**Forrest**	**46.34**	**249**	⇓*i*P	**P**	**13 35 27.4**	**-0.6**
	comp=Z,52nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**50.80**	**265**	*e*P	**P**	**13 36 01.8**	**+0.4**
	comp=Z,17nm,0.6s,mb4.5						
MBWA	**Marble Bar**	**55.36**	**260**	*e*P	**P**	**13 36 33.7**	**-0.3**
	comp=Z,5.3nm,0.5s,mb4.1						
QSPA	**South Pole Qui**	**66.39**	**180**	P	**P**	**13 37 47.3**	**+1.7**
	comp=Z,9.2nm,0.8s,mb4.5,baz=26,slow=1.5,SNR=24						
QSPA	**South Pole Qui**	**66.39**	**180**	*e*P	**P**	**13 37 46.9**	**+1.2**
	comp=Z,9.8nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**71.70**	**326**	P	**P**	**13 38 17.7**	**-0.6**
	comp=Z,2.0nm,0.8s,mb3.7,baz=155,slow=6.4,SNR=5.0						
MAW	**Mawson**	**77.93**	**200**	P	**P**	**13 38 52.7**	**-0.1**
	comp=Z,3.5nm,0.9s,mb3.8,baz=131,slow=11,SNR=2.1						
YSS	**Yuzh-Sakhalins**	**77.93**	**335**	*e*P	**P**	**13 38 54.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**77.93**	**335**	P	**P**	**13 38 53.3**	**+0.3**
KSRS	**Korea Array**	**78.06**	**320**	P	**P**	**13 38 54.3**	**+0.4**
	comp=Z,0.6nm,0.7s,mb3.2,baz=138,slow=7.6,SNR=4.8						
PETK	**Petropavlovsk-**	**78.89**	**347**	P	**P**	**13 38 57.5**	**-0.5**
	comp=Z,4.4nm,0.6s,mb4.2,baz=118,slow=7.4,SNR=7.1						
MWC	**Mount Wilson**	**82.36**	**48**	*e*P	**P**	**13 39 17.6**	**+1.1**
MWC				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.0						
MWC	**Mount Wilson**	**82.36**	**48**	*e*P	**P**	**13 39 17.6**	**+1.1**
	comp=Z,41nm,0.8s,mb5.0						
ARVC	**Arvin**	**82.36**	**46**	⇑P	**P**	**13 39 16.6**	**+0.1**
	baz=82						
VES	**Vestal, Richgr**	**82.61**	**46**	⇑P	**P**	**13 39 17.5**	**-0.3**
	baz=83						
BFSC	**Mount Baldy St**	**82.64**	**48**	⇓P	**P**	**13 39 17.7**	**-0.3**
	baz=83						
MONP	**Monument Peak**	**82.73**	**49**	⇓P	**P**	**13 39 19.0**	**+0.6**
	baz=83						
PFO	**Pinyon Flat Ob**	**83.11**	**49**	⇓P	**P**	**13 39 20.3**	**0.0**
	baz=83						
SYO	**Syowa Base**	**83.20**	**193**	⇑*e*P	**P**	**13 39 18.3**	**-1.9**
SYO	**Syowa Base**	**83.20**	**193**	⇓*e*PcP	PcP	13 39 21.2	-2.2
WDC	**Whiskeytown Da**	**83.33**	**40**	*e*P	**P**	**13 39 21.6**	**+0.4**
WDC				pmax	pmax		
	comp=Z,141nm,2.8s,mb5.0						
WDC	**Whiskeytown Da**	**83.33**	**40**	*e*P	**P**	**13 39 21.6**	**+0.4**
	comp=Z,141nm,2.8s,mb5.0						
RRX	**Edison Barstow**	**83.45**	**48**	⇓P	**P**	**13 39 22.4**	**+0.4**
	baz=84						
BELC	**Belle Mtn.**	**83.64**	**49**	⇑P	**P**	**13 39 22.9**	**0.0**
	baz=84						
MPMC	**Manual Prospec**	**83.79**	**46**	⇓P	**P**	**13 39 23.7**	**0.0**
	baz=84						
GSC	**Goldstone**	**83.82**	**47**	⇓P	**P**	**13 39 23.9**	**+0.1**
	baz=84						
GSC	**Goldstone**	**83.82**	**47**	*e*P	**P**	**13 39 24.0**	**+0.2**
GSC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
GSC	**Goldstone**	**83.82**	**47**	*e*P	**P**	**13 39 24.0**	**+0.2**
	comp=Z,9.7nm,0.9s,mb4.3						
BC3	**Big Chuckw Mtn**	**83.82**	**49**	⇑P	**P**	**13 39 24.1**	**+0.2**
	baz=84						
MTUM	**Tungsten Hills**	**83.84**	**45**	*e*P	**P**	**13 39 24.4**	**+0.5**
HEC	**Hector,Ludlow**	**83.88**	**48**	⇓P	**P**	**13 39 24.0**	**-0.1**
	baz=84						
GLA	**Glamis**	**83.93**	**50**	⇑P	**P**	**13 39 23.6**	**-0.8**
	baz=84						
WAKR	**Walker**	**83.96**	**43**	*e*P	**P**	**13 39 24.9**	**+0.4**
R06C	**Coleville**	**83.97**	**43**	⇓P	**P**	**13 39 24.7**	**+0.3**
	baz=84						
LBCM	**Butte Creek Ri**	**84.20**	**41**	P	**P**	**13 39 25.6**	**0.0**
BEKR	**Beckwourth**	**84.21**	**42**	⇑P	**P**	**13 39 25.5**	**-0.1**
	baz=84						
WCN	**Washoe City**	**84.24**	**43**	⇓P	**P**	**13 39 26.0**	**+0.3**
	baz=84						
GMRC	**Granite Mounta**	**84.30**	**48**	⇓P	**P**	**13 39 26.4**	**+0.2**
	baz=84						
IRM	**Iron Mountain**	**84.31**	**49**	⇑P	**P**	**13 39 26.5**	**+0.3**
	baz=84						
GRAC	**Grapevine Rang**	**84.41**	**46**	⇓P	**P**	**13 39 27.3**	**+0.6**
	baz=85						
Y12C	**Blythe**	**84.52**	**50**	⇑P	**P**	**13 39 27.6**	**+0.3**
	baz=85						
113A	**Mohawk Valley,**	**84.53**	**51**	⇑P	**P**	**13 39 27.6**	**+0.2**
	baz=85						
NVAR	**Mina Array Bea**	**84.64**	**44**	P	**P**	**13 39 27.8**	**+0.1**
	comp=Z,5.2nm,0.9s,mb4.1,baz=225,slow=7.8,SNR=17						
PAHR	**Pah Rah Range**	**84.71**	**42**	*e*P	**P**	**13 39 28.2**	**+0.1**
	comp=Z,9.4nm,1.0s,mb4.4						
O06A	**Flanigan**	**84.71**	**42**	⇓P	**P**	**13 39 28.2**	**+0.1**
	baz=85						
U10A	**Ash Meadows, A**	**84.77**	**47**	⇑P	**P**	**13 39 29.2**	**+0.8**
	baz=85						
214A	**Organ Pipe Nat**	**84.78**	**52**	⇓P	**P**	**13 39 28.9**	**+0.3**
	baz=85						
LDFC	**Landfair**	**84.85**	**48**	*e*P	**P**	**13 39 28.8**	**0.0**
	comp=Z,57nm,1.2s,mb5.1						
SNAA	**Sanae**	**84.87**	**179**	*e*P	**P**	**13 39 27.3**	**-1.1**
SNAA				*e*		13 39 29.4	
SNAA	**Sanae**	**84.87**	**179**	*e*P	**P**	**13 39 27.1**	**-1.3**
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SNAA	**Sanae**	**84.87**	**179**	*e*P	**P**	**13 39 27.1**	**-1.3**
	comp=Z,1.6nm,0.5s,mb3.9						
Y13A	**Salome**	**85.05**	**50**	⇑P	**P**	**13 39 30.4**	**+0.5**
	baz=85						
V11A	**Goodsprings**	**85.05**	**47**	⇑P	**P**	**13 39 29.9**	**0.0**
	baz=85						
N06A	**Buffalo Meadow**	**85.06**	**41**	⇑P	**P**	**13 39 29.7**	**-0.1**
	baz=85						
VNA3	**Neumayer Olymp**	**85.08**	**177**	*e*P	**P**	**13 39 28.6**	**-0.9**
VNA3				*e*		13 39 31.0	
TPNV	**Topopah Spring**	**85.12**	**46**	*e*P	**P**	**13 39 30.4**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
TPNV	**Topopah Spring**	**85.12**	**46**	*e*P	**P**	**13 39 30.4**	**+0.2**
	comp=Z,6.5nm,0.7s,mb4.4						
Q08A	**Gabbs**	**85.12**	**44**	⇑P	**P**	**13 39 29.8**	**-0.3**
	baz=85,SNR=5.7						
TPH	**Tonopah**	**85.12**	**45**	*e*P	**P**	**13 39 29.4**	**-0.8**
TPH				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.4						
TPH	**Tonopah**	**85.12**	**45**	*e*P	**P**	**13 39 29.4**	**-0.8**
	comp=Z,13nm,1.3s,mb4.4						
O07A	**Toulon**	**85.30

N09A Rock Creek Ran 86.53 42 ⇑P P 13 39 37.0 +0.2
baz=87
318A Bisbee 86.57 54 ⇓P P 13 39 38.0 +0.8
baz=87,SNR=10
K07A Rock Creek Ran 86.58 40 ⇑P P 13 39 37.3 +0.4
baz=87,SNR=7.5
Q11A Duckwater 86.58 45 ⇑P P 13 39 36.8 -0.2
baz=87
117A Oracle 86.60 52 ⇑P P 13 39 38.0 +0.7
baz=87
GYA Guiyang 86.60 301 eP P 13 39 36.8 -0.7
GYA AP pP 13 41 34.3 +4.9
GYA XP sP 13 42 24.8 +3.8
GYA PP PP 13 43 10.8 +1.8
GYA SKS 13 49 12.0
GYA S S 13 49 29.0 -2.9
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,70nm,5.2s
H05A Madras 86.62 38 ⇑P P 13 39 36.9 -0.3
baz=87
T13A Saint George 86.72 47 ⇓P P 13 39 38.4 +0.6
baz=87
Y16A Circle Bar Ran 86.74 51 ⇑P P 13 39 38.6 +0.6
baz=87
I06A Prineville 86.77 39 ⇓P P 13 39 38.2 +0.3
baz=87,SNR=5.7
218A Dragoon 86.80 53 ⇑P P 13 39 39.1 +0.8
baz=87,SNR=10
L08A Fields 86.82 41 ⇑P P 13 39 38.2 +0.1
baz=87,SNR=6.6
BJI Beijing 86.85 316 P P 13 39 42.5 +4.2
BJI AMB AMB
comp=Z,6.0nm,0.6s,mb4.5
O10A Cortez Mining, 86.85 43 ⇓P P 13 39 38.1 -0.3
baz=87
VIPM Ingram Point 86.88 38 P P 13 39 38.7 +0.3
U14A Mt Trumbull 86.89 48 ⇑P P 13 39 39.2 +0.6
baz=87
P11A Circle Ranch, 86.91 44 ⇑P P 13 39 37.9 -0.7
baz=87
M09A Marrel Ranch, 86.91 42 ⇑P P 13 39 38.8 +0.2
baz=87
J07A Hines 86.95 40 ⇓P P 13 39 38.8 +0.1
baz=87
R12A Pony Springs, 86.97 46 ⇓P P 13 39 38.4 -0.5
baz=87
X16A Lo Mia Camp, P 87.04 50 ⇓P P 13 39 39.9 +0.5
baz=87,SNR=6.1
K08A Mann Creek Ran 87.05 40 ⇓P P 13 39 39.4 +0.2
baz=87,SNR=8.6
S13A Holt Ranch, En 87.06 47 ⇑P P 13 39 39.5 +0.1
baz=87,SNR=6.0
319A Douglas 87.06 54 ⇓P P 13 39 40.4 +0.8
baz=87,SNR=6.5
N10A Dunphy 87.09 43 ⇓P P 13 39 39.2 -0.3
baz=87
Y17A Roosevelt 87.10 51 ⇓P P 13 39 40.0 +0.3
baz=87
L09A Wilkinson Ranc 87.12 41 ⇓P P 13 39 39.8 +0.2
baz=87
H06A Lindquist Farm 87.18 38 ⇑P P 13 39 39.8 0.0
baz=87,SNR=5.4
118A Homack Ranch, 87.19 53 ⇓P P 13 39 40.8 +0.6
baz=87,SNR=6.7
Q12A Willow Creek R 87.22 45 ⇑P P 13 39 40.1 0.0
baz=87
I07A Izee 87.26 39 ⇑P P 13 39 40.2 0.0
baz=87,SNR=5.9
F05A White Salmon 87.26 37 ⇑P P 13 39 40.5 +0.3
baz=87
V15A Kaibab Nationa 87.26 49 ⇑P P 13 39 41.0 +0.6
baz=87,SNR=6.8
O11A Cowboy Ranch, 87.29 44 ⇓P P 13 39 40.4 -0.1
baz=88
T14A Hurricane 87.30 47 ⇑P P 13 39 41.4 +0.9
baz=88
R13A O'Grain Ranch, 87.31 46 ⇓P P 13 39 40.8 +0.3
baz=88
G06A Carlson Farm, 87.32 38 ⇑P P 13 39 40.5 +0.1
baz=88
W16A Flagstaff 87.33 50 ⇓P P 13 39 41.5 +0.8
baz=88
219A White Tail Can 87.39 53 ⇑P P 13 39 41.6 +0.5
baz=88,SNR=7.4
P12A McGill 87.41 45 ⇑P P 13 39 40.9 -0.1
baz=88
J08A Circle Bar Ran 87.43 40 ⇑P P 13 39 40.9 -0.1
baz=88,SNR=9.9
K09A Rome 87.49 41 ⇑P P 13 39 41.2 0.0
baz=88,SNR=13
U15A North Rim 87.50 48 ⇓P P 13 39 42.0 +0.5
baz=88,SNR=14
M10A I.L. Ranch, Tu 87.53 42 ⇓P P 13 39 41.6 +0.1
baz=88,SNR=8.9
F06A Goldendale 87.56 37 ⇓P P 13 39 41.9 +0.3
baz=88
S14A Cedar City 87.62 47 ⇑P P 13 39 42.0 0.0
baz=88
WUAZ Wupatki 87.66 50 ⇓P P 13 39 42.7 +0.4
baz=88
WUAZ Wupatki 87.66 50 eP P 13 39 42.8 +0.6
comp=Z,6.4nm,1.0s,mb4.3
I08A Drewsey 87.70 39 ⇑P P 13 39 42.2 0.0
baz=88,SNR=14
Q13A Wheeler Ranch, 87.70 45 ⇑P P 13 39 42.0 -0.3
baz=88,SNR=7.6
119A Ashpeak Ranch, 87.74 53 ⇑P P 13 39 43.6 +0.9
baz=88
T15A Red Dirt Ranch 87.75 48 ⇓P P 13 39 42.9 +0.2
baz=88
J09A Fry Pan Ranch, 87.85 40 ⇓P P 13 39 42.9 0.0
baz=88,SNR=11
G07A Ruggs Ranch, H 87.88 38 ⇑P P 13 39 43.1 +0.1
baz=88
L10A Juniper Basin 87.89 42 ⇓P P 13 39 43.1 -0.1
baz=88,SNR=14
ELK Elko 87.90 43 eP P 13 39 43.2 -0.1
ELK pmax pmax
comp=Z,9.0nm,1.3s
ELK Elko 87.90 43 eP P 13 39 43.1 -0.1
comp=Z,9.0nm,1.3s,mb4.3
E06A Yakima 87.93 36 ⇓P P 13 39 43.4 +0.1
baz=88
M11A Holland Ranch, 87.94 43 ⇓P P 13 39 43.6 +0.2
baz=88,SNR=8.0
P13A Bates Ranch, G 87.97 45 ⇑P P 13 39 43.9 +0.3
baz=88
H08A Prairie City 88.00 39 ⇑P P 13 39 43.9 +0.3
baz=88
K10A MacKenzie Ranc 88.05 41 ⇑P P 13 39 43.9 0.0
baz=88,SNR=9.1
N12A Clover Valley, 88.09 43 ⇑P P 13 39 44.5 +0.4
baz=88
S15A Panguitch 88.11 47 ⇑P P 13 39 45.2 +0.9
baz=88
F07A Phinny Hill Vi 88.11 37 ⇓P P 13 39 44.0 -0.1
baz=88
U16A Tuba City 88.15 49 ⇑P P 13 39 44.8 +0.2
baz=88,SNR=5.4
X18A Snowflake 88.16 51 ⇑P P 13 39 44.7 +0.1
baz=88,SNR=6.0
Q14A Sevier Lake (B 88.20 46 ⇓P P 13 39 44.9 +0.2
baz=88,SNR=9.4
I09A Lost Marbles R 88.22 40 ⇑P P 13 39 44.3 -0.3
baz=88,SNR=9.1
G08A Pilot Rock 88.29 38 ⇓P P 13 39 45.1 +0.2
baz=88,SNR=9.4
MXC Moxie City 88.33 37 P P 13 39 45.3 +0.2
L11A Cat Creek Ranc 88.38 42 ⇓P P 13 39 45.4 0.0
baz=88,SNR=9.9
EBG Ellensburg 88.38 36 P P 13 39 45.5 +0.2
A04A Legoe Bay, Lum 88.39 34 ⇑P P 13 39 46.8 +1.4
baz=89
D06A Cle Elum 88.41 36 ⇑P P 13 39 45.6 +0.1
baz=89
B05A Bryant 88.41 35 ⇓P P 13 39 45.2 -0.3
baz=89
M12A Wells 88.48 43 ⇓P P 13 39 45.9 -0.1
baz=89,SNR=6.1
J10A Berg Farm, Mel 88.48 41 ⇓P P 13 39 45.9 0.0
baz=89
K11A Parker Ranch, 88.55 41 ⇓P P 13 39 46.3 +0.1
baz=89,SNR=9.9
E07A Sunnyside 88.56 37 ⇓P P 13 39 46.3 +0.1
baz=89
PMR Palmer 88.56 14 eP P 13 39 43.7 -2.1
PMR pmax pmax
comp=Z,25nm,1.1s,mb5.0
PMR Palmer 88.56 14 eP P 13 39 43.7 -2.1
comp=Z,26nm,1.1s,mb5.0
XAN Xi'an 88.58 308 P P 13 39 46.0 -0.6
XAN AP pP 13 41 41.3 +2.2
XAN XP sP 13 42 34.3 +3.7
XAN PP PP 13 43 24.0 -0.5
XAN S S 13 49 48.8 -1.1
XAN SS SS 13 55 56.5 +0.1
XAN AMB AMB
comp=Z,1.0nm,0.5s,mb3.9
HAWA Hanford 88.63 37 eP P 13 39 46.8 +0.3
comp=Z,9.3nm,0.8s,mb4.7
P14A Drum Mountains 88.66 45 ⇓P P 13 39 46.9 +0.1
baz=89
H09A Durkee 88.67 39 ⇑P P 13 39 46.6 -0.1
baz=89,SNR=6.8
MSU Marysvale 88.68 47 eP P 13 39 47.2 +0.3
F08A Pendleton 88.70 38 ⇑P P 13 39 46.5 -0.3
baz=89
U17A Shonto 88.71 49 ⇓P P 13 39 47.6 +0.4
baz=89
V18A Ganado 88.77 50 ⇓P P 13 39 47.4 0.0
baz=89
Q15A Fillmore 88.80 46 ⇓P P 13 39 48.0 +0.5
baz=89
T17A Navajo Res., N 88.82 48 ⇓P P 13 39 47.9 +0.3
baz=89,SNR=6.8
L12A House Creek Ra 88.82 42 ⇓P P 13 39 48.3 +0.8
baz=89
C06A Tall Timber Ra 88.83 35 ⇑P P 13 39 47.5 +0.1
baz=89
W19A Sanders 88.85 51 ⇑P P 13 39 47.8 -0.1
baz=89
D07A Quincy 88.88 36 ⇑P P 13 39 47.8 +0.1
baz=89
M13A Montello 88.92 43 ⇑P P 13 39 48.0 0.0
baz=89,SNR=9.4
ETW Entiat 88.93 36 P P 13 39 48.0 +0.1
E08A Dider Farm, El 88.95 37 ⇑P P 13 39 47.9 -0.1
baz=89
G09A Cove 88.96 39 ⇓P P 13 39 47.8 -0.2
baz=89,SNR=6.2
R16A Teasdale 89.02 47 ⇓P P 13 39 49.1 +0.5
baz=89,SNR=5.6
MFID Camas Ranch 89.03 41 ⇑P P 13 39 48.4 -0.1
baz=89,SNR=11
KMI Kunming 89.12 298 P P 13 39 53.0 +3.7
KMI AMB AMB
comp=Z,8.0nm,1.4s,mb4.4
C07A Waterville 89.13 36 ⇑P P 13 39 48.3 -0.5
baz=89
F09A S2 Ranch, Elgi 89.14 38 ⇓P P 13 39 49.2 +0.3
baz=89
S17A Black Ridge (B 89.15 48 ⇓P P 13 39 48.7 -0.4
baz=89
DUG Dugway 89.15 45 ⇑P P 13 39 48.3 -0.8
baz=89
H10A Noah's Angus R 89.16 40 ⇓P P 13 39 48.3 -0.7
baz=89,SNR=7.0
K12A Draper Farm, C 89.16 42 ⇑P P 13 39 49.0 -0.1
baz=89,SNR=9.1
P15A Leamington 89.17 46 ⇑P P 13 39 49.5 +0.3
baz=89
U18A Rough Rock, Ch 89.17 49 ⇓P P 13 39 48.8 -0.5
baz=89
I11A Placerville 89.24 41 ⇓P P 13 39 49.2 -0.2
baz=89,SNR=13
N14A Grayback Hills 89.26 44 ⇑P P 13 39 49.9 +0.3
baz=89
G10A Bishop Farm, J 89.34 39 ⇓P P 13 39 49.4 -0.5
baz=90,SNR=6.2
D08A Wollman Farm, 89.37 37 ⇑P P 13 39 50.2 +0.3
baz=90
J12A Stokes Ranch, 89.38 41 ⇓P P 13 39 50.1 +0.1
baz=90,SNR=16
CMAR Chiang Mai Arr 89.41 290 P P 13 39 52.1 +1.3
comp=Z,0.4nm,0.3s,mb3.7,baz=137,slow=3.4,SNR=4.9
CMAR pP pP 13 41 50.8 +7.3
comp=Z,0.3nm,0.5s,baz=137,slow=3.2,SNR=2.3
O15A The Old Anders 89.42 45 ⇑P P 13 39 50.2 -0.1
baz=90
L13A Double Diamond 89.45 43 ⇓P P 13 39 50.5 0.0
baz=90,SNR=6.7
E09A Wood Farm, Sta 89.48 38 ⇓P P 13 39 50.3 -0.1
baz=90
M14A Sheep Mountain 89.51 44 ⇓P P 13 39 50.5 -0.2
baz=90,SNR=12
T18A Mexican Hat 89.53 49 ⇓P P 13 39 50.8 -0.1
baz=90,SNR=17
Q16A Castle Valley 89.56 47 ⇓P P 13 39 51.7 +0.7
baz=90,SNR=6.0
B07A Winthrop 89.57 35 ⇓P P 13 39 50.7 -0.1
baz=90
R17A Hanksville Air 89.61 47 ⇓P P 13 39 51.2 -0.1
baz=90,SNR=6.2
H11A Donnelly 89.65 40 ⇓P P 13 39 51.2 -0.1
baz=90,SNR=13
K13A Stover Farm, H 89.67 42 ⇓P P 13 39 51.7 +0.2
baz=90,SNR=10
F10A Beach Ranch, E 89.68 38 ⇓P P 13 39 50.6 -0.8
baz=90
D09A Jones Farm, Ri 89.71 37 ⇑P P 13 39 51.4 -0.1
baz=90
MPU Maple Canyon 89.83 46 eP P 13 39 52.3 +0.1
comp=Z,11nm,1.0s,mb4.6
B08A Colville Reser 89.92 36 ⇑P P 13 39 51.7 -0.7
baz=90
T19A Beclabito 89.96 49 ⇑P P 13 39 53.1 +0.2
baz=90
HLID Hailey 89.97 41 ⇑P P 13 39 53.0 +0.2
baz=90,SNR=8.8
HLID Hailey 89.97 41 eP P 13 39 53.0 +0.2
comp=Z,6.0nm,0.9s,mb4.4
HVU Hansel Valley 90.02 44 eP P 13 39 53.4 +0.3
HVU pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
HVU Hansel Valley 90.02 44 eP P 13 39 53.4 +0.3
comp=Z,8.8nm,0.7s,mb4.7
J13A Cove Ranch, Pi 90.03 42 ⇑P P 13 39 53.3 +0.3
baz=90,SNR=14
M15A Larsen Ranch, 90.06 44 ⇓P P 13 39 53.1 -0.2
baz=90,SNR=6.3
SRU San Rafael 90.09 47 ⇑P P 13 39 53.4 -0.1
baz=90,SNR=11
SRU San Rafael 90.09 47 eP P 13 39 53.8 +0.3
SRU pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SRU San Rafael 90.09 47 eP P 13 39 53.8 +0.3
comp=Z,9.9nm,0.8s,mb4.7
P17A Butcher Ranch, 90.13 46 ⇓P P 13 39 54.3 +0.7
baz=90
R18A Canyonlands Na 90.15 48 ⇓P P 13 39 53.2 -0.5
baz=90,SNR=6.7
C09A Chrisman Ranch 90.16 36 ⇓P P 13 39 53.3 -0.3
baz=90
K14A Jones Ranch, D 90.18 43 ⇓P P 13 39 53.8 0.0
baz=90,SNR=7.7
HHC Hu-ho-hao-te 90.24 315 eP P 13 39 54.8 +0.7
HHC AP pP 13 41 54.0 +7.0
HHC PP PP 13 43 41.5 +4.1
HHC SKS 13 49 33.8
HHC eS S 13 50 01.3 -3.4
HHC XS sS 13 53 33.0 +6.7
HHC SS SS 13 56 21.0 +1.0
HHC AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
HHC AMB AMB
comp=Z,168nm,5.5s
H12A Diamond D Ranc 90.25 40 ⇓P P 13 39 53.9 -0.2
baz=90,SNR=6.7
JLU Jordanelle 90.25 45 eP P 13 39 54.4 +0.3
D10A Wagner Farm, O 90.28 37 ⇓P P 13 39 53.4 -0.8
baz=90
DAU Daniels Canyon 90.28 45 eP P 13 39 55.7 +1.4
A08A Turner Farm, O 90.31 35 ⇓P P 13 39 54.0 -0.3
baz=90
S19A Harvey Farm, M 90.34 49 ⇑P P 13 39 54.2 -0.4
baz=90
I13A Wildhorse Cree 90.34 41 ⇑P P 13 39 54.4 -0.1
baz=90
Q18A Rafter H Ranch 90.35 47 ⇑P P 13 39 54.2 -0.5
baz=90,SNR=5.5
TXAR Lajitas Array 90.36 58 P P 13 39 55.5 +0.5
comp=Z,5.3nm,0.7s,mb4.5,baz=213,slow=6.5,SNR=61
L15A Malad City 90.39 44 ⇑P P 13 39 54.4 -0.4
baz=90,SNR=8.2
J14A Carey 90.39 42 ⇓P P 13 39 55.1 +0.4
baz=90,SNR=13
N16A Rees Ranch, Co 90.41 45 ⇓P P 13 39 55.0 +0.1
baz=91,SNR=6.3
MCK McKinley 90.49 13 eP P 13 39 52.5 -2.2
MCK pmax pmax
comp=Z,20nm,1.3s,mb4.8
MCK McKinley 90.49 13 eP P 13 39 52.5 -2.2
comp=Z,20nm,1.3s,mb4.8
M16A Huntsville 90.51 44 ⇓P P 13 39 55.2 -0.2
baz=91,SNR=5.5
O17A Robinson Place 90.51 46 ⇓P P 13 39 55.8 +0.4
baz=91,SNR=44
R19A Curley Farm, L 90.53 48 ⇑P P 13 39 55.3 -0.2
baz=91
P18A Preston Nutter 90.54 46 ⇓P P 13 39 55.6 +0.1
baz=91
B09A Rice 90.60 36 ⇓P P 13 39 55.0 -0.5
baz=91
H13A Challis 90.62 41 ⇑P P 13 39 55.8 0.0
baz=91,SNR=6.0
A09A Danville 90.69 35 ⇓P P 13 39 55.5 -0.5
baz=91
I14A Mackay 90.76 42 ⇓P P 13 39 56.7 +0.3
baz=91,SNR=9.1
N17A Moffit Pass 90.83 45 ⇑P P 13 39 56.8 0.0
baz=91,SNR=5.6
ANMO Albuquerque 90.87 52 eP P 13 39 57.3 +0.1
ANMO pmax pmax
comp=Z,9.0nm,1.2s
ANMO Albuquerque 90.87 52 eP P 13 39 57.3 +0.1
comp=Z,8.8nm,1.2s,mb4.6
G13A Cobalt 90.92 40 ⇓P P 13 39 56.7 -0.4
baz=91
CD2 Chengdu 90.93 303 P P 13 39 59.3 +1.7
CD2 AP pP 13 41 53.3 +2.8
CD2 XP sP 13 42 43.5 +1.8
CD2 PP PP 13 43 47.0 +4.1
CD2 SKS 13 49 42.0
CD2 S S 13 50 11.3 0.0
CD2 XS sS 13 53 33.0 -0.2
CD2 SS SS 13 56 34.0 +3.8
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,110nm,5.1s
L16A Fish Haven 91.00 44 ⇓P P 13 39 57.2 -0.4
baz=91,SNR=7.2
O18A Roosevelt 91.02 46 ⇑P P 13 39 57.8 0.0
baz=91
J15A Blackfoot 91.10 42 ⇑P P 13 39 58.5 +0.4
baz=91,SNR=7.8
H14A Leadore 91.18 41 ⇑P P 13 39 58.3 0.0
baz=91
M17A Scullys Gap (B 91.21 45 ⇑P P 13 39 58.1 -0.5
baz=91,SNR=6.6
A10A Northport 91.24 36 ⇓P P 13 39 57.6 -1.0
baz=91
F13A Darby 91.25 40 ⇓P P 13 39 57.8 -0.8
baz=91
K16A Soda Springs 91.33 43 ⇑P P 13 39 59.1 0.0
baz=92,SNR=5.7
I15A Monteview 91.38 42 ⇑P P 13 39 59.5 +0.1
baz=92
P19A Cripple Cowboy 91.39 47 ⇓P P 13 39 59.7 +0.2
baz=92
L17A Cokeville 91.40 44 ⇑P P 13 39 59.1 -0.3
baz=92
G14A Jackson 91.46 40 ⇓P P 13 39 59.4 -0.2
baz=92
Q20A Ridgley Place, 91.51 48 ⇓P P 13 39 59.8 -0.2
baz=92
M18A Lyman 91.57 45 ⇓P P 13 40 00.1 -0.1
baz=92,SNR=9.2
N18A Larsen Ranch, 91.60 46 ⇑P P 13 39 59.9 -0.5
baz=92,SNR=6.6
H15A Lima 91.61 41 ⇑P P 13 40 00.3 -0.1
baz=92
O19A Miners Draw (B 91.62 46 ⇓P P 13 40 00.1 -0.4
baz=92
K17A Gardner Place, 91.70 44 ⇓P P 13 40 00.9 +0.1
baz=92
COLA College 91.73 13 P P 13 39 58.0 -2.4
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
COLA College 91.73 13 P P 13 39 58.0 -2.4
comp=Z,2.5nm,0.6s,mb4.3
R21A Cimarron 91.74 49 ⇑P P 13 40 01.0 -0.1
baz=92
RRI2 Red Ridge 91.76 43 eP P 13 40 00.9 -0.2
comp=Z,6.0nm,1.1s,mb4.4
L18A Fontenelle, Gr 91.84 45 ⇑P P 13 40 01.6 +0.1
baz=92
A11A Hall Mountain, 91.87 36 ⇓P P 13 40 01.5 +0.1
baz=92
N19A John Jarvie Ra 91.89 46 ⇑P P 13 40 00.8 -0.9
baz=92
G15A Dillon 92.00 41 ⇑P P 13 40 02.1 -0.1
baz=92
BILL Bilibino 92.02 355 eP P 13 40 01.2 -0.5
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BILL Bilibino 92.02 355 eP P 13 40 00.2 -1.4
comp=Z,6.1nm,0.9s,mb4.5
REDW Red Top Meadow 92.06 43 eP P 13 40 02.2 -0.3
comp=Z,13nm,1.4s,mb4.7
O20A White River Ci 92.13 47 ⇑P P 13 40 03.3 +0.4
baz=92
J17A Brown Place, J 92.15 43 ⇓P P 13 40 02.6 -0.2
baz=92
K18A Toltan Ranch, 92.20 44 ⇓P P 13 40 03.1 0.0
baz=92
M19A Rock Springs 92.20 45 ⇓P P 13 40 02.6 -0.6
baz=92
A12A Yaak River Ran 92.25 37 ⇓P P 13 40 03.0 -0.2
baz=92
IMW Indian Meadow 92.28 43 eP P 13 40 03.6 +0.1
comp=Z,48nm,2.5s,mb5.0
F15A Butte 92.36 40 ⇑P P 13 40 04.1 +0.4
baz=92
L19A Farson 92.37 45 ⇑P P 13 40 03.8 -0.2
baz=92
G16A Moss Hill, Enn 92.44 41 ⇑P P 13 40 03.9 -0.3
baz=93
N20A Spence Gulch, 92.46 46 ⇓P P 13 40 04.0 -0.3
baz=93
CHMT Chamberlain Mo 92.48 39 eP P 13 40 02.0 -2.3
J18A Kendall Valley 92.51 43 ⇑P P 13 40 04.2 -0.3
baz=93
H16A Russell Place, 92.51 42 ⇓P P 13 40 04.8 +0.3
baz=93
BW06 Boulder Array 92.58 44 ⇑P P 13 40 04.7 -0.2
baz=93
PDAR Pinedale Array 92.58 44 P P 13 40 04.2 -0.6
comp=Z,2.8nm,0.7s,mb4.4,baz=213,slow=3.6,SNR=24
PDAR PP PP 13 43 44.8 -11
comp=Z,0.3nm,0.6s,baz=224,slow=3.8,SNR=4.6
BOZ Bozeman (W) 92.77 41 eP P 13 40 01.9 -3.8
BOZ pmax pmax
comp=Z,46nm,2.7s,mb5.0
BOZ Bozeman (W) 92.77 41 eP P 13 40 01.9 -3.7
comp=Z,46nm,2.7s,mb5.0
M20A Sweetwater, Wa 92.83 46 ⇑P P 13 40 05.8 -0.2
baz=93
F16A Kennard Place, 92.84 41 ⇓P P 13 40 05.9 -0.1
baz=93
SDCO Great Sand Dun 92.86 50 eP P 13 40 05.6 -0.7
comp=Z,2.6nm,0.8s,mb4.3
I18A Diamond G Ranc 92.88 43 ⇓P P 13 40 06.3 +0.1
baz=93
N21A Black Mountain 92.92 47 ⇓P P 13 40 06.0 -0.4
baz=93
D15A Lincoln 92.97 39 ⇓P P 13 40 06.1 -0.5
baz=93
L20A Wamsutter 92.98 45 ⇑P P 13 40 06.5 -0.2
baz=93
K19A Absolon Red Bu 93.06 44 ⇑P P 13 40 06.0 -1.0
baz=93
LZH Lanzhou 93.21 308 eP P 13 40 07.5 -0.4
LZH AP pP 13 42 03.3 +2.3
LZH XP sP 13 42 55.0 +2.8
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,69nm,4.3s
B14A Marquette Ranc 93.25 38 ⇑P P 13 40 06.7 -1.1
baz=93

K20A	**Yellowstone Ra** baz=94	**93.30**	**45**	⇓P		**P**	**13 40 07.0**	**-1.2**
C15A	**Salmond Ranch,** baz=94	**93.31**	**39**	⇓P		**P**	**13 40 07.0**	**-1.1**
A14A	**Double T Ranch** baz=94	**93.50**	**37**	⇑P		**P**	**13 40 08.7**	**-0.2**
N22A	**Wattenberg Ran** baz=94	**93.64**	**47**	⇑P		**P**	**13 40 09.5**	**-0.3**
M22A	**Cedar Creek Ra** baz=94	**93.83**	**46**	⇑P		**P**	**13 40 10.6**	**0.0**
RLMT	**Red Lodge** baz=94	**93.93**	**42**	⇓P		**P**	**13 40 10.6**	**-0.4**
F18A	**Big Timber** baz=94	**94.05**	**41**	⇓P		**P**	**13 40 11.2**	**-0.3**
D17A	**Six Diamond Ra** baz=94	**94.10**	**40**	⇑P		**P**	**13 40 11.0**	**-0.7**
E18A	**Harlowton** baz=94	**94.26**	**41**	⇑P		**P**	**13 40 12.1**	**-0.3**
C17A	**Wharram Farm,** baz=94	**94.30**	**39**	⇓P		**P**	**13 40 11.5**	**-1.2**
A16A	**West Butte Ran** baz=95	**94.50**	**38**	⇑P		**P**	**13 40 12.5**	**-1.0**
A18A	**Metzger Ranch,** baz=96	**95.48**	**39**	⇓P		**P**	**13 40 16.6**	**-1.3**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=241,slow=4.8,SNR=4.6	**100.20**	**25**	P		Pdif	13 40 38.2	-1.0
YKA	**Yellowknife Ar**	**100.20**	**25**	P		Pdif	13 40 38.2	-1.0
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=186,slow=1.5,SNR=3.8	**111.76**	**321**	PKiKP		PKiKP	13 45 21.9	-2.5
ZALV	**Zalesovo Beam**	**111.76**	**321**	PKPdf		PKiKP	13 45 21.9	-2.5
MKAR	**Makanchi Array** comp=Z,0.6nm,0.5s,baz=191,slow=1.1,SNR=14	**111.98**	**313**	PKiKP		PKiKP	13 45 23.4	-1.7
BOSA	**Boshof** comp=Z,1.1nm,0.7s,baz=180,slow=3.0,SNR=4.5	**122.56**	**206**	PKP		PKPdf	13 45 46.1	0.0
ARCES	**ARCESS Array B** comp=Z,4.0nm,0.8s,baz=31,slow=1.0,SNR=14	**131.68**	**348**	PKP		PKPdf	13 46 00.6	-1.6
ARCES	**ARCESS Array B**	**131.68**	**348**	PKP		PKPdf	13 46 00.6	-1.6
NB2	**NORSAR Subarra** comp=Z,2.6nm,0.6s,baz=15,slow=3.2	**141.87**	**351**	PKP			13 46 15.0	
NOA	**NORSAR Array B** comp=Z,4.1nm,0.7s,baz=16,slow=4.8,SNR=8.2	**141.87**	**351**	PKhKP			13 46 15.9	
HFS	**Hagfors** comp=Z,12nm,0.4s,baz=64,slow=3.4,SNR=79	**142.34**	**349**	PKhKP			13 46 16.8	
MALT	**Malatya**	**144.22**	**303**	⇑*i*P		PKPdf	13 46 21.1	-4.9
AKASG	**Malin Array Be** comp=Z,12nm,0.6s,baz=43,slow=4.0,SNR=46	**144.77**	**327**	PKP		PKPdf	13 46 25.2	-1.3
AKASG				pPKP		pPKPdf	13 48 31.5	+4.7
	comp=Z,0.2nm,0.2s,baz=32,slow=1.1,SNR=1.9							
AKASG	comp=Z,1.5nm,0.7s,baz=37,slow=3.1,SNR=4.8			SKPbc		SKPbc	13 49 15.7	-2.1
KIEV	**Kiev**	**144.78**	**327**	*e*PKHKP			13 46 24.3	
SUW	**Suwalki**	**145.06**	**336**	*e*PKP		PKPdf	13 46 26.6	-0.3
SUW	**Suwalki**	**145.06**	**336**	*e*PKP		PKPdf	13 46 26.6	-0.3
ASF	**Jabal al Asfar** comp=Z,3.2nm,0.6s,baz=42,slow=1.2,SNR=6.5	**146.41**	**293**	PKPbc		PKPbc	13 46 32.7	+0.4
BR131	**Keskin Array S**	**147.41**	**307**	*e*PKPbc		PKPbc	13 46 33.3	-1.4
BRTR	**Keskin Array B** comp=4.6,2.1nm,0.6s,baz=143,slow=4.6,SNR=8.9	**147.41**	**307**	PKPbc		PKPbc	13 46 33.4	-1.3
MMAI	**Mount Meron Ar** comp=Z,7.3nm,0.5s,baz=74,slow=6.2,SNR=14	**147.57**	**295**	PKPbc		PKPbc	13 46 35.5	+0.1
EIL	**Elat** comp=Z,4.9nm,0.6s,baz=301,slow=12,SNR=4.8	**148.24**	**288**	PKPbc		PKPbc	13 46 37.0	-0.1
EKA	**Eskdalemuir Ar** comp=Z,2.4nm,0.4s,baz=338,slow=2.4,SNR=18	**148.32**	**3**	PKPbc		PKPbc	13 46 34.9	-1.5
KWP	**Kalwaria**	**148.56**	**331**	*e*PKP		PKPbc	13 46 36.8	-0.5
KWP	**Kalwaria**	**148.56**	**331**	⇑*i*P		PKPbc	13 46 36.6	-0.6
KWP	**Kalwaria**	**148.56**	**331**	*e*PKP		PKPbc	13 46 36.8	-0.4
BUR08	**Bucovina Ar. S**	**148.76**	**326**	*e*PKPbc		PKPbc	13 46 37.2	-0.5
BURAR	**Bucovina Array**	**148.77**	**326**	*i*P		PKPbc	13 46 38.7	+0.9
OJC	**Ojcow**	**149.33**	**335**	*e*PKP		PKPbc	13 46 38.3	-0.8
STHS	**Stebnicka Huta**	**149.36**	**332**	*e*PKP		PKPbc	13 46 39.1	-0.1
CRVS	**Cervenica-Dubn**	**149.65**	**331**	*e*PKP		PKPbc	13 46 39.8	-0.1
MLR	**Muntele Rosu** comp=Z,2.1nm,0.4s,baz=304,slow=3.2,SNR=4.8	**149.72**	**322**	PKPbc		PKPbc	13 46 38.4	-1.8
TRPA	**Tarpa**	**149.73**	**329**	⇓*i*P		PKPbc	13 46 39.3	-0.8
NIE	**Niedzica**	**149.75**	**333**	*e*PKP		PKPbc	13 46 40.1	0.0
KSP	**Ksiaz**	**150.08**	**339**	*e*PKP		PKPbc	13 46 40.5	-0.3
KSP	**Ksiaz**	**150.08**	**339**	*e*PKP		PKPbc	13 46 40.3	-0.5
VOIR		**150.25**	**323**	⇓*i*P		PKPbc	13 46 41.1	-0.3
OKC	**Ostrava-Krasne**	**150.27**	**336**	*e*PKPbc		PKPbc	13 46 40.5	-0.8
UPC	**Upice**	**150.46**	**339**	*e*PKPbc		PKPbc	13 46 41.0	-0.7
DPC	**Dobruska-Polom**	**150.49**	**338**	*e*PKPbc		PKPbc	13 46 41.3	-0.5
DRGR		**150.59**	**327**	⇑*i*P		PKPbc	13 46 41.2	-1.0
CLL	**Collm**	**150.65**	**343**	*e*PKPbc		PKPbc	13 46 41.0	-1.1
CLL	**Collm** comp=Z,21nm,0.8s	**150.65**	**343**	⇑*i*PKPbc		PKPbc	13 46 41.2	-0.9
CLL	**Collm**	**150.65**	**343**	⇑*i*PKP		PKPbc	13 46 41.2	-0.9
CLL				*e*			13 48 29.0	
BRG	**Berggiesshubel**	**150.78**	**342**	*e*PKPbc		PKPbc	13 46 41.5	-1.0
BRG	**Berggiesshubel**	**150.78**	**342**	*i* PKP		PKPbc	13 46 41.7	-0.7
PVCC	**Panska Ves**	**150.90**	**341**	*e*PKPbc		PKPbc	13 46 42.3	-0.4
FBE	**Freiberg**	**150.90**	**342**	*e*PKPbc		PKPbc	13 46 42.1	-0.6
NEUB	**Neuenburg**	**151.05**	**345**	*e*PKPbc		PKPbc	13 46 42.4	-0.7
VYHS	**Vyhne**	**151.08**	**334**	*e*PKP		PKPbc	13 46 42.6	-0.6
VRAC	**Vranov** comp=Z,1.6nm,0.5s,baz=65,slow=4.9,SNR=2.2	**151.28**	**337**	PKPbc		PKPbc	13 46 42.9	-0.7
VRAC				PKPab		PKPab	13 46 54.0	0.0
	comp=Z,3.3nm,0.5s,baz=42,slow=4.6,SNR=4.7							
PRU	**Pruhonice**	**151.38**	**340**	*e*PKPbc		PKPbc	13 46 43.1	-0.8
TANN	**Tannenbergstha**	**151.60**	**343**	*e*PKPbc		PKPbc	13 46 43.6	-0.7
WERD	**Werda**	**151.61**	**343**	*e*PKPbc		PKPbc	13 46 43.4	-1.0
TREC	**Trest**	**151.67**	**338**	*e*PKPbc		PKPbc	13 46 43.6	-0.9
GUNZ	**Gunzen**	**151.68**	**343**	*e*PKPbc		PKPbc	13 46 44.0	-0.5
WERN	**Wernitzgruen**	**151.74**	**343**	*e*PKPbc		PKPbc	13 46 43.9	-0.8
NKC	**Novy Kostel**	**151.77**	**343**	*e*PKPbc		PKPbc	13 46 44.0	-0.7
BZS	**Buzias**	**151.95**	**327**	⇑*i*P		PKPbc	13 46 44.1	-1.2
MANZ	**Manzenberg**	**152.09**	**343**	*e*PKPbc		PKPbc	13 46 44.6	-0.8
KHC	**Kasperske Hory**	**152.43**	**340**	*e*PKPbc		PKPbc	13 46 45.3	-0.9
KHC				*e*PKPab		PKPab	13 46 58.6	-0.3
GERES	**GERESS Array B** comp=Z,2.6nm,0.9s,baz=48,slow=2.0,SNR=12	**152.65**	**340**	PKPbc		PKPbc	13 46 45.5	-1.2
GERES				PKPab		PKPab	13 46 59.0	-0.8
	comp=Z,1.6nm,1.0s,baz=15,slow=5.8,SNR=3.6							
GERES	comp=Z,0.5nm,0.8s,baz=53,slow=0.7,SNR=2.8			pPKPbc		pPKPbc	13 48 52.1	+5.9
GERES	**GERESS Array B**	**152.65**	**340**	PKIKP		PKPbc	13 46 45.5	-1.2
GERES							13 46 59.0	
PKSM	**Moragy**	**152.94**	**331**	⇑*i*P		PKPbc	13 46 46.2	-1.2
HAU	**Haudompre** comp=Z,13nm,0.9s	**155.21**	**350**	*e*PKP2		PKPab	13 47 09.4	-1.4
HINF	**Hinteralfeld**	**155.31**	**349**	*e*PKP2		PKPab	13 47 09.6	-1.6
DAVOS	**Davos**	**155.59**	**344**	PKP2		PKPab	13 47 12.5	+0.1
DAVOX	**Davos/Dischmat** comp=Z,3.8nm,0.6s,baz=346,slow=5.1,SNR=8.6	**155.62**	**343**	PKPab		PKPab	13 47 12.4	-0.1
LOR	**Lormes**	**156.27**	**353**	*e*PKP2		PKPab	13 47 13.9	-1.4
SSF	**Saint Saulge** comp=Z,8.9nm,0.7s	**156.51**	**354**	*e*PKP2		PKPab	13 47 15.1	-1.3
AVF	**Avril sur Loir**	**156.79**	**354**	*e*PKP2		PKPab	13 47 16.2	-1.4
SMF	**Signal de Mont** comp=Z,6.4nm,0.6s	**156.89**	**353**	*e*PKP2		PKPab	13 47 16.7	-1.3
TCF	**Toulx Ste Croi**	**157.38**	**356**	*e*PKP2		PKPab	13 47 18.5	-1.7
DBIC	**Dimbokro** comp=Z,3.2nm,1.1s,baz=158,slow=3.4,SNR=3.0	**162.46**	**164**	PKP		PKPdf	13 46 50.8	-1.5
ESDC	**Sonseca Array** comp=Z,0.5nm,0.6s,baz=346,slow=3.9,SNR=7.3	**163.73**	**11**	PKPab		PKPab	13 47 46.2	-2.0
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.6s,baz=292,slow=0.9,SNR=6.8	**169.38**	**189**	PKP		PKPdf	13 46 55.8	-1.9
TORD	comp=Z,1.5nm,0.9s,baz=189,slow=3.5,SNR=7.6			PKPab		PKPab	13 48 13.3	-0.3
TORD	**Torodi Ar. Bea**	**169.38**	**189**	PKP		PKPdf	13 46 55.8	-1.9
TORD				PKPab		PKPab	13 48 13.3	-0.3

IDC 27 13:36:34.1±4.5, 2949S×17700W, h143km±9km, mb3.2/3, mb1 3.3/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=74.1km s-min=30.6km az=108.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 61nm,0.3s,baz=128,slow=19,SNR=7.1	**0.83**	**286**	P	Pn	13 36 57.0	+0.2
RAO				S	Sn	13 37 14.7	+0.7
	266nm,0.3s,baz=106,slow=24,SNR=10						
STKA	**Stephens Creek** 0.5nm,0.4s,baz=110,slow=12,SNR=4.1	**35.54**	**255**	P	P	13 43 17.7	+0.2
ASAR	**Alice Springs** 0.2nm,0.4s,baz=101,slow=7.1,SNR=7.8	**44.03**	**266**	P	P	13 44 27.2	-0.5
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=110,slow=8.1,SNR=15	**44.94**	**271**	P	P	13 44 35.2	+0.2

IDC 27 13:42:22.0±2.4, 2841N×14320E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse: s-maj=72.6km s-min=24.1km az=81.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima** 8.1nm,0.3s,baz=264,slow=22,SNR=6.5	**1.59**	**215**	Pn	Pn	13 42 51.4	0.0
CBIJ				Sn	Sn	13 43 08.8	-3.8
	18nm,0.3s,baz=71,slow=23,SNR=10						
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=12,slow=8.5,SNR=19	**48.83**	**191**	P	P	13 51 09.5	+0.3
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=95,slow=10,SNR=2.8	**50.34**	**309**	P	P	13 51 20.3	-0.3
ASAR	**Alice Springs** 0.3nm,1.0s,baz=25,slow=7.3,SNR=3.6	**52.54**	**191**	P	P	13 51 36.8	-0.4
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=90,slow=7.2,SNR=3.6	**57.69**	**317**	P	P	13 52 14.5	+0.3

*ISCJB **27** 13:45:21.2±0.9, 4331N±004×4679E±005, h6km±9km, Error ellipse: s-maj=8.9km s-min=4.5km az=37.7*
*MOS **27** 13:45:24.5±3.7, 4321N×4648E, h18km, mb4.2/1, Error ellipse: s-maj=13.2km s-min=7.6km az=30.2*
MOS Felt (II-III) at Khasavyurt.
ISC 27 13:45:23.3±0.9, 4325N±006×4676E±006, h8km±11km, n17, σ1§21/29, 7C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.23**	**167**	PG	**Pg**	**13 45 28.0**	**+0.1**
BUJR	**Buynaksk**	**0.49**	**149**	PG	**Pg**	**13 45 41.0**	**+8.2**
BUJR				S	**Sg**	**13 45 47.0**	**+7.8**
MAK	**Makhachkala**	**0.61**	**117**	*e*PG	**Pg**	**13 45 41.0**	**+5.9**
MAK				*e*		13 45 51.8	
MAK				pmax	pmax		
	comp=Z,93nm,0.1s						
MAK				smax			
	comp=N,925nm,0.8s						
MAK				smax			
	comp=E,451nm,0.4s						
ARKR	**Arakani**	**0.66**	**165**	*e*PG	**Pg**	**13 45 35.0**	**-1.1**
ARKR				*e*S	**Sg**	**13 45 46.0**	**+1.3**
ARKR				pmax	pmax		
	comp=Z,54nm,0.2s						
GNBR	**Gunib**	**0.87**	**170**	*e*PG	**Pg**	**13 45 37.2**	**-2.8**
GNBR				*i* S	**Sg**	**13 45 52.0**	**+0.8**
SNJR	**Sundja**	**1.44**	**264**	⇑*e*PG	**Pg**	**13 45 51.2**	**+0.4**
SNJR				*e*S	**Sg**	**13 46 10.9**	**+1.5**
VLKR	**Vladikavkaz**	**1.54**	**263**	*e*PG	**Pg**	**13 45 52.7**	**0.0**
VLKR				*e*S	**Sg**	**13 46 13.4**	**+0.7**
TRKR	**Terskaya**	**1.55**	**289**	⇓*i*PG	**Pg**	**13 45 53.2**	**+0.2**
TRKR				*i* S	**Sg**	**13 46 14.5**	**+1.4**
BTKR	**Batakoyurt**	**1.62**	**275**	⇑*i*PG	**Pg**	**13 45 54.3**	**-0.1**
BTKR				*e*S	**Sg**	**13 46 14.4**	**+0.9**
ARNR	**Ardon**	**1.81**	**269**	*e*PG	**Pg**	**13 45 56.8**	**-1.2**
ARNR				*e*S	**Sg**	**13 46 21.1**	**-0.5**
PRTR	**Priterechnaya**	**1.87**	**287**	⇑*e*PN	**Pg**	**13 45 57.7**	**-1.5**
PRTR				*e*S	**Sg**	**13 46 23.0**	**-0.4**
ZEI	**Tsey**	**2.15**	**258**	⇑*e*PN	**Pg**	**13 46 01.1**	**-3.4**
ZEI				*e*S	**Sg**	**13 46 28.8**	**-3.6**
KUBR	**Kubataba**	**2.50**	**284**	*e*PN	**Pn**	**13 46 06.4**	**+2.2**
KIV	**Kislovodsk**	**3.04**	**285**	*e*PN	**Pn**	**13 46 09.4**	**-2.3**
GUMR	**Gum-Bashi**	**3.33**	**281**	*i* PN	**Pn**	**13 46 14.6**	**-1.0**
AKTO	**Aktyubinsk**	**10.54**	**43**	⇓Pn	**Pn**	**13 47 55.4**	**+0.9**
AKTO				⇑Sn	**Sn**	**13 49 43.8**	**-8.8**
	comp=Z,0.2nm,0.7s						
AB09	**Akbulak array** comp=Z,0.3nm,0.3s,baz=241,slow=2	**10.91**	**52**	⇑Pn	**Pn**	**13 48 00.3**	**+0.7**
AB09				⇑Sn	**Sn**	**13 49 55.5**	**-6.3**
	comp=Z,0.6nm,0.4s,baz=246,slow=25						

*BJI **27** 13:47:57.6, 3950N×3320E, h10km, mB5.1, mb4.8, Ms4.9, Msz4.5*
*CSEM **27** 13:47:57.9±0.0, 3945N×3309E, h8km, mb4.7/48, Ms3.7, Error ellipse: s-maj=1.1km s-min=0.8km az=174.0*
*ISK **27** 13:47:58.5, 3946N×3303E, h7km, ML4.8*
*DDA **27** 13:47:58.7, 3943N×3309E, h8km±1km, Md4.9*
*ISCJB **27** 13:47:59.0±0.4, 3948N±001×3309E±001, h13km±2km, mb4.7/97, MS3.9/30, Error ellipse: s-maj=2.2km s-min=1.7km az=2.9*
*IDC **27** 13:47:59.6±1.6, 3946N×3308E, h11km±10km, mb4.5/18, mb1 4.5/27, mb1mx4.4/33, mbtmp4.4/27, ML3.9/7, MS3.8/27, Ms1 3.8/27, ms1mx3.7/44, Error ellipse: s-maj=11.5km s-min=8.4km az=4.0*
*MOS **27** 13:47:59.0±1.0, 3948N×3321E, h16km, mb4.8/70, Error ellipse: s-maj=4.7km s-min=3.2km az=119.9*
*NEIC **27** 13:48:00.1±0.8, 3945N×3321E, h14km±5km, mb4.7/69, MS3.8/3, ML4.8(ISK), Error ellipse: s-maj=4.1km s-min=3.3km az=196.0*
NEIC Felt [III] at Ankara.
*THE **27** 13:48:01.7, 3950N×3288E, h0km±2km, Error ellipse: s-maj=8.2km s-min=1.2km az=68.0*
ISC 27 13:47:59.4±0.4, 3946N±001×3310E±001, h4km±2km, h12km±7km: pP-P, n574, σ1§11/603, mb4.7/97, MS3.9/30, 30C-20D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**100**	*e*PG	**Pg**	**13 48 08.5**	**-0.2**
BR131	**Keskin Array S**	**0.50**	**57**	*e*Pg	**Pg**	**13 48 08.8**	**-0.2**
BR131				*e*Sg	**Sg**	**13 48 14.8**	**-0.7**
BR131	**Keskin Array S**	**0.50**	**57**	*e*Pg	**Pg**	**13 48 08.8**	**-0.2**
BR131				*e*Sg	**Sg**	**13 48 14.8**	**-0.7**
BRTR	**Keskin Array B** 4μm,0.3s,baz=223,slow=19	**0.50**	**57**	Pg	**Pg**	**13 48 09.0**	**0.0**
BRTR				Lg		13 48 16.2	
	9μm,0.3s,baz=226,slow=29,SNR=88						
LOD	**Lodumlu**	**0.50**	**329**	*e*PG	**Pg**	**13 48 08.2**	**-0.9**
LOD				*e*SG	**Sg**	**13 48 15.3**	**-0.4**
CDAG	**Cicekdag**	**1.00**	**80**	⇑*i*P	**Pg**	**13 48 17.9**	**-0.7**
CDAG				*i* S	**Sg**	**13 48 31.2**	**-0.4**
ELDT	**Eldivan**	**1.06**	**14**	⇓*i*P	**Pg**	**13 48 19.3**	**-0.6**
ELDT				*i* S	**Sg**	**13 48 35.9**	**+2.2**
ELDT	**Eldivan**	**1.06**	**14**	*i* P	**Pg**	**13 48 19.3**	**-0.6**
ELDT				*i* S	**Sg**	**13 48 35.8**	**+2.1**
KIZT	**Kizilcal**	**1.11**	**239**	*e*PG	**Pg**	**13 48 19.1**	**-1.6**
KDHN	**Kadinhani**	**1.21**	**220**	⇑*i*P	**Pg**	**13 48 20.8**	**-1.8**
KDHN				*i* S	**Sg**	**13 48 38.2**	**0.0**
CANT	**Cankiri**	**1.22**	**19**	*e*PN	**Pn**	**13 48 22.4**	**-0.8**
CANT				*e*SN	**Sn**	**13 48 40.0**	**-0.2**
SGKT	**Sivrigoynuk**	**1.37**	**325**	⇑*i*P	**Pn**	**13 48 25.1**	**-0.3**
SGKT				*i* S	**Sb**	**13 48 50.4**	**+6.8**
LADK	**Ladik-KONYA**	**1.38**	**205**	*e*PN	**Pn**	**13 48 24.0**	**-1.4**
CORM	**Corum**	**1.38**	**58**	*e*PN	**Pn**	**13 48 25.3**	**-0.2**
AVNT	**Avonos**	**1.53**	**116**	*i* P	**Pn**	**13 48 22.3**	**-5.2**
AVNT				*i* S	**Sn**	**13 48 43.0**	**-4.8**
AVNT	**Avonos**	**1.53**	**116**	*i* S	**Sn**	**13 48 43.0**	**-4.8**
KONT	**Konya--Tatoy**	**1.61**	**201**	*e*PN	**Pn**	**13 48 27.9**	**-0.8**
ILGA	**Ilgaz**	**1.66**	**16**	⇓*i*P	**Pn**	**13 48 29.1**	**-0.3**
ILGA				*i* S	**Sn**	**13 48 53.7**	**+2.5**
BSTP	**Nigde**	**1.70**	**152**	⇑*i*P	**Pn**	**13 48 30.0**	**+0.1**
BSTP				*i* S	**Sn**	**13 49 00.1**	**+8.1**
YOZ	**Yozgat**	**1.73**	**83**	*e*PN	**Pn**	**13 48 30.5**	**+0.2**
TOS	**Tosya**	**1.73**	**24**	*e*PN	**Pn**	**13 48 30.0**	**-0.3**
ESKT	**Eskisehir**	**1.74**	**273**	⇑*i*P	**Pn**	**13 48 29.1**	**-1.4**
ESKT				*i* S	**Sn**	**13 48 51.2**	**-1.8**
ESKT	**Eskisehir**	**1.74**	**273**	*e*Pn	**Pn**	**13 48 29.3**	**-1.1**
SEYT	**Eskypehyr**	**1.74**	**273**	*i* P	**Pn**	**13 48 29.1**	**-1.3**
SEYT				*i* S	**Sn**	**13 48 51.2**	**-1.9**
CTKT	**Corum**	**1.75**	**48**	⇓*i*P	**Pn**	**13 48 31.1**	**+0.6**
CTKT				*i* S	**Sn**	**13 48 56.2**	**+3.0**
MDU	**Mudurnu**	**1.76**	**305**	*e*PN	**Pn**	**13 48 29.7**	**-1.0**
NIG	**Nigde**	**1.79**	**138**	*e*PN	**Pn**	**13 48 31.1**	**0.0**
SAFT	**Safranbolu**	**1.81**	**350**	*e*PN	**Pn**	**13 48 30.5**	**-0.9**
BORA	**Eskisehir**	**2.08**	**283**	⇑*i*P	**Pn**	**13 48 30.0**	**-1.2**
BORA				*i* S	**Sn**	**13 49 06.6**	**+5.0**
BALT	**Daday**	**2.09**	**6**	⇓*i*P	**Pn**	**13 48 34.8**	**-0.4**
BALT				*i* S	**Sn**	**13 49 04.8**	**+3.1**
SHUT	**Suhut-Afyon**	**2.18**	**246**	*e*PN	**Pn**	**13 48 35.6**	**-0.9**
GULT	**Gulveren**	**2.21**	**297**	*e*PN	**Pn**	**13 48 36.1**	**-0.8**
BNN	**Bunyan**	**2.22**	**105**	*e*PN	**Pn**	**13 48 37.5**	**+0.4**
KDZE	**Karadeniz Ereo**	**2.25**	**326**	*e*PN	**Pn**	**13 48 37.3**	**-0.1**
ALT	**Altintas**	**2.35**	**261**	*e*PN	**Pn**	**13 48 37.4**	**-1.5**
BYBT	**Boyabat**	**2.38**	**32**	*e*PN	**Pn**	**13 48 39.5**	**+0.2**
ISP	**Isparta**	**2.59**	**232**	*e*PN	**Pn**	**13 48 41.3**	**-0.8**
ISP	**Isparta**	**2.59**	**232**	P	**Pn**	**13 48 41.4**	**-0.7**
ISP				S	**Sn**	**13 49 13.4**	**-0.6**
ISP	**Isparta**	**2.59**	**232**	*e* ⇑P	**Pn**	**13 48 41.4**	**-0.7**
ISP	**Isparta**	**2.59**	**232**	*e*Pn	**Pn**	**13 48 41.6**	**-0.5**
ISP				S	**Sn**	**13 49 13.4**	**-0.6**
ISP	**Isparta**	**2.59**	**232**	⇓*i*P	**Pn**	**13 48 41.9**	**-0.2**
ISP	**Isparta**	**2.59**	**232**	*e*Pn	**Pn**	**13 48 41.6**	**-0.5**
BZK	**Bozkurt**	**2.59**	**15**	*e*PN	**Pn**	**13 48 42.1**	**-0.1**
CAVI	**Cavuskoy**	**2.61**	**288**	*e*PN	**Pn**	**13 48 41.4**	**-1.0**
KARA	**Karaisali**	**2.68**	**144**	*e*PN	**Pn**	**13 48 44.0**	**+0.7**
PINB	**Pinarbasi**	**2.69**	**106**	⇑*i*P	**Pn**	**13 48 44.0**	**+0.5**
PINB				*i* S	**Sg**	**13 49 25.3**	**-0.5**
DIKM	**Dikmen**	**2.74**	**36**	*e*PN	**Pn**	**13 48 44.6**	**+0.4**
TOKA	**Tokat**	**2.74**	**71**	⇓*i*P	**Pn**	**13 48 44.7**	**+0.5**
TOKA				*i* S	**Sn**	**13 49 20.6**	**+2.8**
ADVT	**Abdulvahap**	**2.76**	**292**	*e*PN	**Pn**	**13 48 43.3**	**-1.2**
KVT	**Kavak**	**2.78**	**53**	*e*PN	**Pn**	**13 48 45.1**	**+0.4**
TOKT	**Tokat**	**2.79**	**71**	*e*PN	**Pn**	**13 48 44.7**	**-0.2**
BCK	**Bucak**	**2.80**	**225**	*e*PN	**Pn**	**13 48 43.9**	**-1.1**
MERS	**Mersin**	**2.82**	**156**	*e*PN	**Pn**	**13 48 45.4**	**+0.1**
SARI	**SarD1z-Kayseri**	**2.91**	**104**	*e*PN	**Pn**	**13 48 46.1**	**-0.4**
KOZT	**Kozan**	**2.91**	**132**	*e*PN	**Pn**	**13 48 47.3**	**+0.7**
KHL	**Karahalli**	**3.01**	**249**	*e*PN	**Pn**	**13 48 46.8**	**-1.1**
SVSK	**Karacayir**	**3.04**	**80**	*e*PN	**Pn**	**13 48 48.8**	**+0.4**
SILT	**Sile**	**3.14**	**304**	*e*PN	**Pn**	**13 48 48.3**	**-1.3**
GEMT	**Gemlik**	**3.16**	**289**	*e*PN	**Pn**	**13 48 49.8**	**-0.1**
ANDN	**Andirin**	**3.16**	**125**	⇑*i*P	**Pn**	**13 48 51.3**	**+1.3**
ANDN				*i* S	**Sg**	**13 49 39.4**	**-1.6**
ANTB	**Antalya**	**3.20**	**218**	*e*PN	**Pn**	**13 48 49.8**	**-0.7**
CEYT	**Ceyhan**	**3.21**	**139**	*e*PN	**Pn**	**13 48 50.5**	**-0.1**
IKL	**Isikli**	**3.25**	**172**	*e*PN	**Pn**	**13 48 51.3**	**+0.1**
KRTS	**Karatas**	**3.39**	**147**	*e*PN	**Pn**	**13 48 54.2**	**+1.0**
ARMT	**Armutlu**	**3.44**	**290**	*e*PN	**Pn**	**13 48 52.6**	**-1.2**
DST	**Dursunbey**	**3.46**	**274**	*e*PN	**Pn**	**13 48 53.7**	**-0.4**
KMRS	**Kahramanmaras**	**3.56**	**122**	*e*PN	**Pn**	**13 48 56.4**	**+0.9**
KLYT	**Kilyos**	**3.58**	**301**	*e*PN	**Pn**	**13 48 55.7**	**0.0**
KULA	**Kula-Manisa**	**3.58**	**256**	*e*PN	**Pn**	**13 48 55.5**	**-0.2**
DENT	**Denizli**	**3.61**	**243**	*e*PN	**Pn**	**13 48 55.7**	**-0.4**
ELL	**Elmali**	**3.69**	**224**	*e*PN	**Pn**	**13 48 57.2**	**-0.1**
BGKT	**Bogazkoy**	**3.73**	**299**	*e*PN	**Pn**	**13 48 57.9**	**+0.1**
KCT	**Karacabey**	**3.74**	**284**	*e*PN	**Pn**	**13 48 57.2**	**-0.7**
CTKS	**Kestanelik-??a**	**3.93**	**298**	*e*PN	**Pn**	**13 49 00.8**	**+0.3**
AKCD	**Akcadag**	**3.94**	**106**	*i* P	**Pn**	**13 49 01.9**	**+1.2**
AKCD				*i* S	**Sg**	**13 50 01.5**	**-4.5**
CTT	**Catalca**	**3.95**	**297**	*e*PN	**Pn**	**13 49 00.8**	**0.0**
GAZ	**Gaziantep**	**3.96**	**124**	*e*PN	**Pn**	**13 49 03.0**	**+2.1**
EREN	**Erenkoy**	**4.01**	**167**	*e*PN	**Pn**	**13 49 03.0**

KNT **Kendrikon** 7.98 286 P **Pn** 13 49 55.4 -0.7
KKB **Krupnik** 7.98 291 *i* P **Pn** 13 49 55.9 -0.3
MLR **Muntele Rosu** 8.02 321 Pn **Pn** 13 49 57.3 +0.7
comp=Z,0.7nm,0.3s,baz=227,slow=6.0,SNR=6.5
MLR LR LR 13 53 49.4
comp=Z,427nm,19.6s,baz=320,slow=44
MLR **Muntele Rosu** 8.02 321 P **Pn** 13 49 57.3 +0.7
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR MLR MLR
comp=Z,427nm,19.6s
MLR **Muntele Rosu** 8.02 321 Pn **Pn** 13 49 57.3 +0.7
MLR LR LR 13 53 49.4
VTS **Vitosha** 8.11 296 *i* P **Pn** 13 49 56.9 -1.0
KIS **Kishinev** 8.16 339 *e*P **Pn** 13 49 58.0 -0.6
KIS *e*S **Sn** 13 51 31.0 -0.2
KIS MLR MLR
comp=Z,700nm,15.0s
KIS MLR MLR
comp=Z,900nm,13.0s
KIS **Kishinev** 8.16 339 *e*P **Pn** 13 49 58.0 -0.6
KIS *e*S **Sn** 13 51 31.0 -0.2
KIS LRM 13 54 10.0
comp=Z,700nm,15.0s
KIS **Kishinev** 8.16 339 *e*P **Pn** 13 49 58.0 -0.6
KIS *e*S **Sn** 13 51 31.0 -0.2
VAY **Valandovo** 8.25 286 *e*P **Pn** 13 49 58.3 -1.6
VAY *e*S **Sg** 13 52 29.1 +5.0
AGG **Agios Georgios** 8.37 270 P **Pn** 13 50 01.2 -0.3
CLDR **Caldiran** 8.40 89 *e*PN **Pn** 13 50 03.3 +1.4
VOIR 8.43 318⇑ *i*P **Pn** 13 50 03.6 +1.3
VOIR 8.43 318⇑ P **Pn** 13 50 03.6 +1.3
KIV **Kislovodsk** 8.46 55 *e*P **Pn** 13 50 03.6 +0.8
KIV *e*S **Sn** 13 51 38.2 -0.5
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,181nm,9.0s
KIV **Kislovodsk** 8.46 55 *e*Pn **Pn** 13 50 05.0 +2.3
comp=Z,44nm,1.2s
MSL **Mosul** 8.48 108 *e*P **Pn** 13 50 11.0 +8.0
MSL *e*S **Sn** 13 51 47.0 +7.8
CUKT **Cukurca** 8.55 102 *e*PN **Pn** 13 50 06.2 +2.3
GNI **Garni** 8.99 82 *e*PN **Pn** 13 50 12.0 +2.0
GNI **Garni** 8.99 82 Pn **Pn** 13 50 15.1 +5.1
comp=Z,0.3nm,0.3s,baz=313,slow=3.9,SNR=13
GNI LR LR 13 54 15.5
comp=Z,1µm,18.7s,baz=281,slow=42
GNI **Garni** 8.99 82 *e*P **Pn** 13 50 11.8 +1.8
GNI pmax pmax
comp=Z,57nm,1.0s
GNI **Garni** 8.99 82 *e*Pn **Pn** 13 50 11.8 +1.7
comp=Z,58nm,1.0s
GNI Pn **Pn** 13 50 15.1 +5.1
GNI LR LR 13 54 15.5
KRUS **Krusevo** 9.24 286 *i* P **Pn** 13 50 13.3 -0.1
EIL **Elat** 9.88 171 Pn **Pn** 13 50 22.6 +0.3
comp=Z,1.6nm,0.3s,baz=348,slow=10,SNR=7.8
EIL LR LR 13 55 30.7
comp=Z,253nm,18.1s,baz=193,slow=46
BURAR **Bucovina Array** 9.96 328⇓ *i*P **Pn** 13 50 23.6 +0.4
BURAR **Bucovina Array** 9.96 328⇓ P **Pn** 13 50 23.6 +0.3
BUR08 **Bucovina Ar. S** 9.99 328 *e*Pn **Pn** 13 50 23.5 -0.1
BUR08 **Bucovina Ar. S** 9.99 328 *e*Pn **Pn** 13 50 23.5 -0.1
BZS **Buzias** 10.47 310⇓ *i*P **Pn** 13 50 29.2 -1.0
BZS **Buzias** 10.47 310⇓ P **Pn** 13 50 29.2 -1.0
DRGR 10.55 317⇑ *i*P **Pn** 13 50 32.5 +1.2
DRGR 10.55 317⇑ P **Pn** 13 50 32.5 +1.2
BHD **Baghdad** 10.99 121 *e*P Px 13 50 48.0
MAK **Makhachkala** 11.40 67 *e*P **Pn** 13 50 43.4 +0.3
KIEV **Kiev** 11.57 348 *e*P **Pn** 13 50 41.6 -3.6
KIEV *e* 13 52 49.0
KIEV pmax pmax
comp=Z,14nm,0.8s
KIEV **Kiev** 11.57 348 *e*Pn **Pn** 13 50 41.6 -3.7
comp=Z,14nm,0.8s
KIEV *e*Sn **Sn** 13 52 49.0 -5.8
AKASG **Malin Array Be** 11.57 348 Pn **Pn** 13 50 42.0 -3.3
comp=Z,1.6nm,0.3s,baz=158,slow=13,SNR=6.3
AKASG **Malin Array Be** 11.57 348 P **Pn** 13 50 42.0 -3.3
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG **Malin Array Be** 11.57 348 Pn **Pn** 13 50 42.0 -3.3
AKBB **Malin Array Si** 11.57 348 Pn **Pn** 13 50 41.8 -3.5
AKBB **Malin Array Si** 11.57 348 Pn **Pn** 13 50 41.9 -3.4
UZH **Uzhgorod** 12.01 323 *e*P **Pn** 13 50 55.4 +4.1
VSR **Storozhevoye** 12.51 18 *e*P **Pn** 13 50 59.2 +1.1
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=N,80nm,0.9s
VSR pmax pmax
comp=E,30nm,0.8s
PKSM **Moragy** 12.57 307⇓ *i*P **Pn** 13 50 58.5 -0.4
KWP **Kalwaria** 12.57 327 *e*P **Pn** 13 50 57.2 -1.8
KWP **Kalwaria** 12.57 327 *e*P **Pn** 13 50 57.2 -1.8
TIP **Timpagrande** 12.66 274 *e*Pn **Pn** 13 51 00.4 +0.2
TIP **Timpagrande** 12.66 274 *e*Pn **Pn** 13 51 00.4 +0.1
VRHR **Novokhopersk** 13.09 24 *e*P **Pn** 13 51 03.9 -2.1
VRHR pmax pmax
comp=Z,7.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,40nm,1.4s
VAE **Valguarnera** 14.77 268 LR LR 13 56 34.2
comp=E,257nm,21.6s,baz=54,slow=35
OKC **Ostrava-Krasne** 14.84 319 *e*P **Pn** 13 51 34.0 +4.1
OKC *e*pP pP 13 51 39.8 +2.9
VISS **Visnje** 14.85 301 *i* P **Pn** 13 51 37.7 +7.7
PERS **Pernice** 14.96 305 *i* P **Pn** 13 51 41.1 +10
MIB **Mutribah** 15.15 125 *e*P **Pn** 13 51 34.0 -0.3
comp=E,49nm,0.8s
MIB **Mutribah** 15.15 125 *e*P **Pn** 13 51 34.0 -0.3
baz=125
MIB AMb AMB 13 51 37.8
comp=Z,49nm,0.8s,baz=125
VRAC **Vranov** 15.34 315 Pn **Pn** 13 51 38.4 +1.8
baz=140,slow=7.9,SNR=2.9
VRAC LR LR 13 57 30.1
comp=Z,249nm,22.0s,baz=133,slow=37
VRAC **Vranov** 15.34 315 *e*P **Pn** 13 51 38.6 +2.0
JAVS **Javornik** 15.39 301 *i* P **Pn** 13 51 45.3 +8.0
MNK **Minsk** 15.46 348 *e*P **Pn** 13 51 40.0 +1.8
NAY **Al-Naaiem** 15.48 127 *e*P **Pn** 13 51 37.7 -0.8
comp=Z,12nm,0.7s
NAY **Al-Naaiem** 15.48 127 *e*P **Pn** 13 51 37.7 -0.9
baz=127
NAY AMb AMB 13 51 47.3
comp=Z,12nm,0.7s,baz=127
OBN **Obninsk** 15.84 7⇑ *e*P **Pn** 13 51 40.6 -2.5
OBN *e*S **Sn** 13 54 34.8 -4.1
OBN pmax pmax
comp=Z,74nm,1.2s
OBN MLR MLR
comp=Z,100nm,14.0s
OBN **Obninsk** 15.84 7 *e*Pn **Pn** 13 51 40.2 -2.8
comp=Z,98nm,1.4s
RDF **Al-Radifah** 15.89 127 *e*P **Pn** 13 51 43.0 -1.0
comp=Z,56nm,1.2s
RDF **Al-Radifah** 15.89 127 *e*P **Pn** 13 51 43.0 -0.9
baz=127
RDF AMb AMB 13 51 46.6
comp=Z,56nm,1.2s,baz=127
MOA **Molln** 15.97 308⇑ *i*P **Pn** 13 51 49.6 +4.7
comp=Z,14nm,1.0s
SUW **Suwalki** 16.04 338 *e*P **Pn** 13 51 49.4 +3.6
SUW **Suwalki** 16.04 338 *e*Pn **Pn** 13 51 41.0 -4.7
SUW *e*P 13 51 49.4
DPC **Dobruska-Polom** 16.08 318 *e*P **Pn** 13 51 45.8 -0.5
QRN **Al-Qurain** 16.25 127 *e*P **Pn** 13 51 47.7 -0.9
baz=127
QRN AMb AMB 13 51 58.4
comp=Z,101nm,1.7s,baz=127
KBA **Koelnbreinsper** 16.25 304⇑ *i*pP pP 13 51 54.5 +1.8
comp=Z,22nm,1.0s
KSP **Ksiaz** 16.39 319 *e*P **Pn** 13 51 52.1 +1.9
MOS **Moscow** 16.57 9 *e*P **Pn** 13 51 48.6 -3.9
MOS pmax pmax
comp=Z,161nm,1.4s
ABTA **Abfaltersbach** 16.68 303⇑ *i*pP pP 13 51 59.2 +1.8
comp=Z,12nm,1.2s
GERES **GERESS Array B** 16.75 310 Pn **Pn** 13 51 55.7 +0.9
comp=Z,0.1nm,0.3s,baz=133,slow=11,SNR=5.8
GERES LR LR 13 58 58.3
comp=Z,359nm,19.5s,baz=210,slow=39
PRU **Pruhonice** 16.83 315 *e*P **Pn** 13 51 58.6 +2.8
PRU *ex* x 13 52 07.8
KHC **Kasperske Hory** 16.95 311 *e*P **Pn** 13 51 59.5 +2.2
KHC *e*pP pP 13 52 06.4 +6.0
BRG **Berggiesshubel** 17.63 317 *e*P **Pn** 13 52 07.7 +1.9
BRG pmax pmax
comp=Z,5.0nm,1.2s
BRG **Berggiesshubel** 17.63 317 *e*P **Pn** 13 52 07.7 +1.9
comp=Z,4.8nm,1.2s
BRG **Berggiesshubel** 17.63 317 *e*P **Pn** 13 52 07.7 +1.9
comp=Z,4.8nm,1.2s
MOTA **Moosalm** 17.78 303⇑ *i*Pn **Pn** 13 52 09.6 +1.9
comp=Z,20nm,1.0s
RETA **Reutte** 18.05 304⇑ *i*P **Pn** 13 52 13.2 +2.2
comp=Z,10nm,0.8s
CLL **Collm** 18.36 317 *e*P **Pn** 13 52 16.0 +1.2
CLL pmax pmax
comp=Z,29nm,2.0s
CLL MLR MLR
comp=Z,400nm,16.1s
CLL **Collm** 18.36 317 *e*P **Pn** 13 52 16.0 +1.2
comp=Z,29nm,2.0s
CLL *e*(PP) 13 52 24.0
DAVOX **Davos/Dischmat** 18.42 301 P **Pn** 13 52 17.9 +2.3
comp=Z,0.4nm,0.3s,baz=134,slow=9.7,SNR=6.9
DAVOX LR LR 14 00 22.1
comp=Z,446nm,18.1s,baz=91,slow=40
PGF **Pioggiola** 18.43 287 *e*P **Pn** 13 52 16.6 +0.8
comp=Z,68nm,1.1s
PGF **Pioggiola** 18.43 287 *e*P **Pn** 13 52 16.6 +0.8
PGF pmax pmax
comp=Z,34nm,1.1s
PGF **Pioggiola** 18.43 287 *e*P **Pn** 13 52 16.6 +0.8
comp=Z,34nm,1.1s
DAVOS **Davos** 18.49 301 P **Pn** 13 52 17.9 +1.4
GRA1 **Grafenberg Arr** 18.58 311 *e*P **Pn** 13 52 22.4 +4.9
comp=Z,15nm,1.4s
GRF **Grafenberg Arr** 18.58 311 *e*P **Pn** 13 52 22.4 +4.9
GRF pmax pmax
comp=Z,15nm,1.4s
GRF **Grafenberg Arr** 18.58 311 *e*P **Pn** 13 52 22.4 +4.9
GRF pmax pmax
comp=Z,15nm,1.4s
GRF **Grafenberg Arr** 18.58 311 *e*P **Pn** 13 52 22.4 +4.9
comp=Z,15nm,1.4s
TUE **Stuetta** 18.70 300 *e*Pn **Pn** 13 52 19.6 +0.6
TUE **Stuetta** 18.70 300 *e*Pn **Pn** 13 52 19.6 +0.6
comp=Z,12nm,0.8s
KEST **Kesra** 19.17 266 P **Pn** 13 52 24.9 +0.1
comp=Z,0.1nm,0.3s,baz=340,slow=2.5,SNR=8.4
KEST LR LR 14 01 11.1
comp=Z,104nm,19.1s,baz=342,slow=41
SPAK **Spaichingen-Ko** 19.50 304 *e*P **Pn** 13 52 31.9 +3.2
SAOF **Saorge** 19.56 292 *e*P **Pn** 13 52 30.3 +0.9
SBF **Sospel** 19.64 291 *e*P **Pn** 13 52 30.5 +0.2
comp=Z,87nm,0.9s
SBF **Sospel** 19.64 291 *e*P **Pn** 13 52 30.5 +0.2
SBF pmax pmax
comp=Z,44nm,0.9s
SBF **Sospel** 19.64 291 *e*P **Pn** 13 52 30.5 +0.2
comp=Z,44nm,0.9s
AUTN **L'Aution** 19.66 292 *e*P **Pn** 13 52 32.8 +2.3
LUCF **Luceram** 19.71 291 *e*P **Pn** 13 52 32.6 +1.5
TOUF **Mont Tournerai** 19.79 292 *e*P **Pn** 13 52 34.2 +2.1
MVIF **Mont Vial** 19.85 291 *e*P **Pn** 13 52 34.4 +1.6
BFO **Black Forest** 19.86 305 *e*P **Pn** 13 52 34.7 +1.8
BFO pmax pmax
comp=Z,27nm,1.1s
BFO **Black Forest** 19.86 305 *e*P **Pn** 13 52 34.7 +1.8
comp=Z,27nm,1.1s
FELD **Feldberg im Sc** 19.94 303 *e*P **Pn** 13 52 33.2 -0.7
CLZ **Clausthal** 20.04 316 *e*P **P** 13 52 33.6 +0.3
CLZ pmax pmax
comp=Z,34nm,1.6s
CLZ **Clausthal** 20.04 316 *e*P **P** 13 52 33.6 +0.3
comp=Z,34nm,1.6s
BBS **Basel-Blauen** 20.16 302 *e*P **P** 13 52 37.9 +3.3
MBDF **Montbardon** 20.19 294 *e*P **P** 13 52 35.6 +0.6
comp=Z,73nm,0.8s
MBDF **Montbardon** 20.19 294 *e*P **P** 13 52 35.6 +0.6
MBDF pmax pmax
comp=Z,36nm,0.8s
MBDF **Montbardon** 20.19 294 *e*P **P** 13 52 35.6 +0.6
comp=Z,36nm,0.8s
FRF **La Foret Royal** 20.20 290 *e*P **P** 13 52 35.4 +0.4
comp=Z,56nm,1.2s
FRF **La Foret Royal** 20.20 290 *e*P **P** 13 52 35.4 +0.4
FRF pmax pmax
comp=Z,28nm,1.2s
FRF **La Foret Royal** 20.20 290 *e*P **P** 13 52 35.4 +0.4
comp=Z,28nm,1.2s
LMR **La Mourre** 20.29 290 *e*P **P** 13 52 37.1 +1.1
comp=Z,61nm,1.3s
LMR **La Mourre** 20.29 290 *e*P **P** 13 52 37.1 +1.1
LMR pmax pmax
comp=Z,31nm,1.3s
LMR **La Mourre** 20.29 290 *e*P **P** 13 52 37.1 +1.1
comp=Z,31nm,1.3s
BNI **Bardonecchia** 20.29 295 *e*P **P** 13 52 37.9 +1.8
BNI pmax pmax
comp=Z,59nm,1.0s
BNI **Bardonecchia** 20.29 295 *e*P **P** 13 52 37.9 +1.8
comp=Z,59nm,1.0s
BNI **Bardonecchia** 20.29 295 *e*P **P** 13 52 37.9 +1.8
comp=Z,59nm,1.0s
LPG **La Plagne** 20.30 296 *e*P **P** 13 52 38.0 +1.8
comp=Z,46nm,0.9s
LPG **La Plagne** 20.30 296 *e*P **P** 13 52 38.0 +1.8
LPG pmax pmax
comp=Z,23nm,0.9s
LPG **La Plagne** 20.30 296 *e*P **P** 13 52 38.0 +1.8
comp=Z,23nm,0.9s
LPL **La Plagne** 20.32 296 *e*P **P** 13 52 38.0 +1.7
comp=Z,35nm,0.7s
LPL **La Plagne** 20.32 296 *e*P **P** 13 52 38.0 +1.7
LPL pmax pmax
comp=Z,17nm,0.7s
LPL **La Plagne** 20.32 296 *e*P **P** 13 52 38.0 +1.7
comp=Z,17nm,0.7s
LANF **Langenberg** 20.39 306 *e*P **P** 13 52 38.1 +1.0
RSL **Roselend** 20.41 296 *e*P **P** 13 52 37.9 +0.5
MOF **Molkenrain** 20.50 303 *e*P **P** 13 52 40.3 +2.0
CDF **Champ du Feu** 20.56 304 *e*P **P** 13 52 39.7 +0.7
ECH **Echery** 20.58 304 *e*P **P** 13 52 40.7 +1.5
ECH **Echery** 20.58 304 *e*P **P** 13 52 38.8 -0.4
ECH pmax pmax
comp=Z,50nm,1.1s
ECH **Echery** 20.58 304 *e*P **P** 13 52 38.8 -0.4
comp=Z,50nm,1.1s
OG25 **Le Caire** 20.66 293 *e*P **P** 13 52 41.4 +1.3
AKTK **Aktyubinsk** 20.67 50 P **P** 13 52 39.6 -0.6
AKTK **Aktyubinsk** 20.67 50 P **P** 13 52 39.6 -0.6
AKTK LR LR 14 03 25.7
AKTO **Aktyubinsk** 20.67 50 P **P** 13 52 39.6 -0.6
comp=Z,12nm,0.7s,baz=248,slow=12,SNR=36
AKTO LR LR 14 03 25.7
comp=Z,148nm,19.3s,MS3.4,baz=59,slow=45
AKTO **Aktyubinsk** 20.67 50 P **P** 13 52 39.6 -0.6
AKTO pmax pmax
comp=Z,12nm,0.7s
AKTO MLR MLR
comp=Z,148nm,19.3s,MS3.4
HINF **Hinteralfeld** 20.68 302 *e*P **P** 13 52 40.8 +0.6
comp=Z,43nm,1.2s
HINF **Hinteralfeld** 20.68 302 *e*P **P** 13 52 40.8 +0.6
HINF pmax pmax
comp=Z,21nm,1.2s
HINF **Hinteralfeld** 20.68 302 *e*P **P** 13 52 40.8 +0.6
comp=Z,21nm,1.2s
ORIF **Oris-en-Rattie** 20.84 294 *e*P **P** 13 52 43.0 +0.9
comp=Z,38nm,0.9s
ORIF *e*MLR MLR
comp=Z,512nm,21.6s,MS3.6
ORIF **Oris-en-Rattie** 20.84 294 *e*P **P** 13 52 43.0 +0.9
ORIF pmax pmax
comp=Z,19nm,0.9s
ORIF **Oris-en-Rattie** 20.84 294 *e*P **P** 13 52 43.0 +0.9
comp=Z,19nm,0.9s
CABF **La Chapelle** 20.93 299 *e*P **P** 13 52 43.4 +0.4
comp=Z,77nm,1.1s
CABF **La Chapelle** 20.93 299 *e*P **P** 13 52 43.4 +0.4
CABF pmax pmax
comp=Z,38nm,1.1s
CABF **La Chapelle** 20.93 299 *e*P **P** 13 52 43.4 +0.4
comp=Z,38nm,1.1s
SMRF **Simiane la Rot** 20.99 291 *e*P **P** 13 52 44.1 +0.4
comp=Z,71nm,1.3s
SMRF **Simiane la Rot** 20.99 291 *e*P **P** 13 52 44.1 +0.4
comp=Z,36nm,1.3s
HAU **Haudompre** 21.05 303 *e*P **P** 13 52 46.1 +1.8
comp=Z,58nm,1.1s,mb4.5
HAU *e*MLR MLR
comp=Z,318nm,18.8s,MS3.4
HAU **Haudompre** 21.05 303 *e*P **P** 13 52 46.1 +1.8
HAU pmax pmax
comp=Z,29nm,1.1s,mb4.5
HAU MLR MLR
comp=Z,320nm,18.8s,MS3.7
HAU **Haudompre** 21.05 303 *e*P **P** 13 52 46.1 +1.8
comp=Z,29nm,1.1s,mb4.5
HAU LR LR
comp=Z,320nm,18.8s,MS3.7
CASM **Ain Smara** 21.22 270 P **P** 13 52 49.0 +2.8
AB31 **Akbulak array** 21.45 54 P **P** 13 52 46.9 -1.7
AB31 pmax pmax
comp=Z,29nm,0.9s,mb4.6
DFRA **Djebel Bou Aff** 21.62 271 P **P** 13 52 54.0 +3.5
VIVF **Saint-Julien-l** 21.69 294 *e*P **P** 13 52 51.6 +0.4
comp=Z,35nm,1.0s,mb4.4
VIVF **Saint-Julien-l** 21.69 294 *e*P **P** 13 52 51.6 +0.4
VIVF pmax pmax
comp=Z,18nm,1.0s,mb4.5
VIVF **Saint-Julien-l** 21.69 294 *e*P **P** 13 52 51.6 +0.4
comp=Z,18nm,1.0s,mb4.4
KLMR **Klimovskoe** 21.79 8 *i* P **P** 13 52 51.4 -0.7
KLMR pmax pmax
comp=Z,135nm,1.2s,mb5.2
SSB **Saint Sauveur** 21.82 295 *e*P **P** 13 52 50.4 -2.2
SSB pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
SSB **Saint Sauveur** 21.82 295 *e*P **P** 13 52 50.4 -2.2
comp=Z,8.3nm,0.8s,mb4.2
SSB **Saint Sauveur** 21.82 295 *e*P **P** 13 52 50.4 -2.2
comp=Z,8.3nm,0.8s,mb4.2
MEZF **Maizieres J'vi** 22.01 303 *e*P **P** 13 52 56.5 +1.9
comp=Z,37nm,0.9s,mb4.5
MEZF **Maizieres J'vi** 22.01 303 *e*P **P** 13 52 56.5 +1.9
comp=Z,19nm,0.9s,mb4.5
WTSB **Winterswijk** 22.08 313 *e*P **P** 13 52 57.5 +2.3
comp=Z,60nm,1.4s,mb4.8
SET **Setif** 22.08 270 P **P** 13 52 59.0 +3.5
HGN **Heimansgroeve** 22.13 310 *e*P **P** 13 52 58.2 +2.4
comp=Z,22nm,1.3s,mb4.4
LASF **Ste Croix** 22.23 291 *e*P **P** 13 52 56.7 -0.3
comp=Z,43nm,1.2s,mb4.5
LASF **Ste Croix** 22.23 291 *e*P **P** 13 52 56.7 -0.3
comp=Z,21nm,1.2s,mb4.5
SMF **Signal de Mont** 22.47 298 *e*P **P** 13 52 59.2 -0.3
comp=Z,14nm,0.6s,mb4.2
SMF **Signal de Mont** 22.47 298 *e*P **P** 13 52 59.2 -0.3
SMF pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
SMF **Signal de Mont** 22.47 298 *e*P **P** 13 52 59.2 -0.3
comp=Z,6.9nm,0.6s,mb4.2
PLDF **La Plantade** 22.53 296 *e*P **P** 13 53 00.3 +0.1
LOR **Lormes** 22.55 300 *e*P **P** 13 53 00.8 +0.5
comp=Z,54nm,1.2s,mb4.5
LOR *e*MLR MLR
comp=Z,419nm,21.0s,MS3.5
LOR **Lormes** 22.55 300 *e*P **P** 13 53 00.8 +0.5
LOR pmax pmax
comp=Z,27nm,1.2s,mb4.5
LOR MLR MLR
comp=Z,420nm,21.0s,MS3.9
LOR **Lormes** 22.55 300 *e*P **P** 13 53 00.8 +0.5
comp=Z,27nm,1.2s,mb4.6
LOR LR LR
comp=Z,420nm,21.0s,MS3.9
GIVF **Givet** 22.59 307 *e*P **P** 13 53 01.8 +1.1
comp=Z,44nm,1.0s,mb4.5
GIVF **Givet** 22.59 307 *e*P **P** 13 53 01.8 +1.1
GIVF pmax pmax
comp=Z,22nm,1.0s,mb4.5
GIVF **Givet** 22.59 307 *e*P **P** 13 53 01.8 +1.1
comp=Z,22nm,1.0s,mb4.5
LBL **Lubilhac** 22.73 294 *e*P **P** 13 53 02.6 +0.3
SSF **Saint Saulge** 22.75 299 *e*P **P** 13 53 02.4 -0.1
comp=Z,62nm,1.4s,mb4.6
SSF **Saint Saulge** 22.75 299 *e*P **P** 13 53 02.4 -0.1
SSF pmax pmax
comp=Z,31nm,1.4s,mb4.5
SSF **Saint Saulge** 22.75 299 *e*P **P** 13 53 02.4 -0.1
comp=Z,31nm,1.4s,mb4.6
AVF **Avril sur Loir** 22.82 298 *e*P **P** 13 53 03.5 +0.3
comp=Z,110nm,1.1s,mb4.9
AVF **Avril sur Loir** 22.82 298 *e*P **P** 13 53 03.5 +0.3
AVF pmax pmax
comp=Z,55nm,1.1s,mb4.9
AVF **Avril sur Loir** 22.82 298 *e*P **P** 13 53 03.5 +0.3
comp=Z,55nm,1.1s,mb4.9
AGO **Saint Agoulin** 22.88 297 *e*P **P** 13 53 04.6 +0.7
PYM **Petit Puy Mans** 22.94 296 *e*P **P** 13 53 06.0 +1.5
BAIF **Baives** 22.95 307 *e*P **P** 13 53 05.4 +0.8
comp=Z,72nm,1.3s,mb4.7
BAIF **Baives** 22.95 307 *e*P **P** 13 53 05.4 +0.8
BAIF pmax pmax
comp=Z,36nm,1.3s,mb4.6
BAIF **Baives** 22.95 307 *e*P **P** 13 53 05.4 +0.8
comp=Z,36nm,1.3s,mb4.7
KAF **Kangasniemi** 23.06 352 *ep* **P** 13 53 04.0 -1.6
comp=Z,11nm,0.7s,mb4.4,baz=163,slow=9.8
KAF **Kangasniemi** 23.06 352 *e*P **P** 13 53 04.0 -1.6
KAF pmax pmax
comp=Z,11nm,0.7s,mb4.4
BGF **Bois d'Agland** 23.13 298 *e*P **P** 13 53 06.6 +0.1
comp=Z,23nm,0.8s,mb4.3
BGF **Bois d'Agland** 23.13 298 *e*P **P** 13 53 06.6 +0.1
BGF pmax pmax
comp=Z,12nm,0.8s,mb4.4
BGF **Bois d'Agland** 23.13 298 *e*P **P** 13 53 06.6 +0.1
comp=Z,12nm,0.8s,mb4.3
MTLF **Montolieu** 23.42 290 *e*P **P** 13 53 08.8 -0.8
comp=Z,43nm,1.3s,mb4.4
MTLF **Montolieu** 23.42 290 *e*P **P** 13 53 08.8 -0.8
MTLF pmax pmax
comp=Z,21nm,1.3s,mb4.4
MTLF **Montolieu** 23.42 290 *e*P **P** 13 53 08.8 -0.8
comp=Z,21nm,1.3s,mb4.4
JOF **Joensuu** 23.52 358 *ep* **P** 13 53 08.9 -1.5
comp=Z,9.5nm,0.7s,mb4.3
JOF **Joensuu** 23.52 358 *e*P **P** 13 53 08.9 -1.5
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
TCF **Toulx Ste Croi** 23.54 297 *e*P **P** 13 53 10.2 -0.6
comp=Z,24nm,0.8s,mb4.4
TCF **Toulx Ste Croi** 23.54 297 *e*P **P** 13 53 10.2 -0.6
TCF pmax pmax
comp=Z,12nm,0.8s,mb4.4
TCF **Toulx Ste Croi** 23.54 297 *e*P **P** 13 53 10.2 -0.6
comp=Z,12nm,0.8s,mb4.4
CAF **Calviac** 23.55 294 *e*P **P** 13 53 11.4 +0.5
comp=Z,12nm,0.7s,mb4.1
CAF **Calviac** 23.55 294 *e*P **P** 13 53 11.4 +0.5
CAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
CAF **Calviac** 23.55 294 *e*P **P** 13 53 11.4 +0.5
comp=Z,6.0nm,0.7s,mb4.1
ARU **Arti** 23.85 36⇑ *e*P **P** 13 53 12.7 -0.9
ARU pmax pmax
comp=Z,96nm,1.7s,mb5.0
ARU **Arti** 23.85 36 *e*P **P** 13 53 12.6 -1.0
comp=Z,327nm,2.2s,mb5.4
ARU **Arti** 23.85 36 *e*P **P** 13 53 12.6 -1.0
comp=Z,327nm,2.2s,mb5.4
RJF **Les Rejaudoux** 23.95 294 *e*P **P** 13 53 14.8 +0.2
comp=Z,95nm,1.6s,mb4.7
RJF *e*MLR MLR
comp=Z,494nm,23.0s,MS3.6
RJF **Les Rejaudoux** 23.95 294 *e*P **P** 13 53 14.8 +0.2
RJF pmax pmax
comp=Z,48nm,1.6s,mb4.7
RJF MLR MLR
comp=Z,490nm,23.0s,MS3.9
RJF **Les Rejaudoux** 23.95 294 *e*P **P** 13 53 14.8 +0.2
comp=Z,48nm,1.6s,mb4.7
RJF LR LR
comp=Z,490nm,23.0s,MS3.9
HFS **Hagfors** 24.02 336 P **P** 13 53 14.6 -0.4
comp=Z,8.7nm,0.8s,mb4.2,baz=144,slow=11,SNR=6.7
HFS **Hagfors** 24.02 336 P **P** 13 53 14.6 -0.5
HFS pmax pmax

MLS Moulis 24.25 289 *e*P **P 13 53 17.4 0.0**
EPF Esparros 24.80 289 *e*P **P 13 53 21.7 -0.7**
comp=Z,30nm,1.3s,mb4.3
EPF Esparros 24.80 289 *e*P **P 13 53 21.7 -0.7**
EPF pmax pmax
comp=Z,15nm,1.3s,mb4.4
EPF Esparros 24.80 289 *e*P **P 13 53 21.7 -0.7**
comp=Z,15nm,1.3s,mb4.3
RESF Ens 24.81 288 *e*P **P 13 53 23.7 +1.2**
SVE Sverdlovsk 25.03 37⇓*e*P **P 13 53 24.4 +0.1**
SVE pmax pmax
comp=Z,84nm,1.4s,mb5.1
SVE MLR MLR
comp=Z,715nm,17.0s,MS4.2
KONO Kongsberg 25.07 331 *e*P **P 13 53 24.4 -0.3**
KONO pmax pmax
comp=Z,50nm,1.3s,mb4.9
KONO Kongsberg 25.07 331 *e*P **P 13 53 24.4 -0.3**
comp=Z,50nm,1.3s,mb4.9
KONO Kongsberg 25.07 331 *e*P **P 13 53 24.4 -0.3**
comp=Z,50nm,1.3s,mb4.9
SOKR Solikamsk 25.09 29⇑*i*P **P 13 53 25.2 +0.4**
SOKR pmax pmax
comp=Z,80nm,1.4s,mb5.1
MFF Saint Martin d 25.19 297 *e*P **P 13 53 26.2 +0.3**
comp=Z,46nm,0.9s,mb4.7
MFF Saint Martin d 25.19 297 *e*P **P 13 53 26.2 +0.3**
MFF pmax pmax
comp=Z,23nm,0.9s,mb4.7
MFF Saint Martin d 25.19 297 *e*P **P 13 53 26.2 +0.3**
comp=Z,23nm,0.9s,mb4.7
LDF La Druitiere 25.40 302 *e*P **P 13 53 26.6 -1.2**
comp=Z,102nm,1.3s,mb4.9
LDF La Druitiere 25.40 302 *e*P **P 13 53 26.6 -1.2**
LDF pmax pmax
comp=Z,51nm,1.3s,mb4.9
LDF La Druitiere 25.40 302 *e*P **P 13 53 26.6 -1.2**
comp=Z,51nm,1.3s,mb4.9
NAO01 NORSAR Array S 25.47 334 P **P 13 53 27.7 -0.6**
comp=Z,16nm,0.9s,mb4.5
NAO01 NORSAR Array S 25.47 334 P **P 13 53 27.7 -0.6**
comp=Z,16nm,0.9s,mb4.5
ETSF Etsaut 25.47 289 *e*P **P 13 53 27.7 -0.8**
comp=Z,21nm,0.9s,mb4.4
ETSF Etsaut 25.47 289 *e*P **P 13 53 27.7 -0.8**
ETSF pmax pmax
comp=Z,11nm,0.9s,mb4.4
ETSF Etsaut 25.47 289 *e*P **P 13 53 27.7 -0.8**
comp=Z,11nm,0.9s,mb4.4
NB2 NORSAR Subarra 25.50 335 P **P 13 53 27.9 -0.7**
comp=Z,11nm,1.0s,mb4.4,baz=137,slow=10
NOA NORSAR Array B 25.50 335 P **P 13 53 28.1 -0.5**
comp=Z,7.4nm,1.0s,mb4.2,baz=138,slow=9.5,SNR=6.4
NOA LR LR 14 05 18.4
comp=Z,145nm,19.0s,MS3.5,baz=125,slow=41
NOA NORSAR Array B 25.50 335 P **P 13 53 28.1 -0.5**
NOA pmax pmax
comp=Z,7.0nm,1.0s
NOA MLR MLR
comp=Z,145nm,19.0s
FLN La Foliniere 25.66 302 *e*P **P 13 53 29.4 -0.8**
FLN *e*MLR MLR
comp=Z,357nm,19.5s,MS3.6
FLN La Foliniere 25.66 302 *e*P **P 13 53 29.4 -0.8**
FLN LR LR
comp=Z,360nm,19.5s,MS3.9
GRR Gorron 25.86 301 *e*P **P 13 53 31.4 -0.6**
comp=Z,53nm,0.7s,mb4.9
GRR Gorron 25.86 301 *e*P **P 13 53 31.4 -0.6**
GRR pmax pmax
comp=Z,27nm,0.7s,mb4.9
GRR Gorron 25.86 301 *e*P **P 13 53 31.4 -0.6**
comp=Z,26nm,0.7s,mb4.9
SJPF Ste Jean 25.94 289 *e*P **P 13 53 33.3 +0.6**
comp=Z,43nm,1.2s,mb4.5
SJPF Ste Jean 25.94 289 *e*P **P 13 53 33.3 +0.6**
SJPF pmax pmax
comp=Z,22nm,1.2s,mb4.6
SJPF Ste Jean 25.94 289 *e*P **P 13 53 33.3 +0.6**
comp=Z,22nm,1.2s,mb4.5
SGMF Saint Gilles 26.97 301 *e*P **P 13 53 42.6 +0.6**
comp=Z,59nm,1.2s,mb4.7
SGMF Saint Gilles 26.97 301 *e*P **P 13 53 42.6 +0.6**
SGMF pmax pmax
comp=Z,30nm,1.2s,mb4.7
SGMF Saint Gilles 26.97 301 *e*P **P 13 53 42.6 +0.6**
comp=Z,30nm,1.2s,mb4.7
ROSF Rostrenen 27.45 301 *e*P **P 13 53 46.0 -0.3**
ESDC Sonseca Array 28.44 282 P **P 13 53 53.8 -1.5**
comp=Z,1.5nm,0.5s,mb3.9,baz=69,slow=9.4,SNR=12
ESDC LR LR 14 06 05.8
comp=Z,143nm,18.5s,MS3.6,baz=335,slow=38
ESLA Sonseca Array 28.44 282 P **P 13 53 53.9 -1.4**
comp=Z,0.6nm,0.6s
ESLA Sonseca Array 28.44 282 P **P 13 53 53.9 -1.4**
comp=Z,0.6nm,0.6s
TAM Tamanrasset 28.70 243 *e*P **P 13 53 58.9 +1.2**
TAM pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
TAM Tamanrasset 28.70 243 *e*P **P 13 53 58.9 +1.2**
comp=Z,8.9nm,0.9s,mb4.5
TAM Tamanrasset 28.70 243 *e*P **P 13 53 58.9 +1.2**
comp=Z,8.9nm,0.9s,mb4.5
BRVK Borovoye 28.73 49 *e*P **P 13 53 55.3 -2.3**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BRVK Borovoye 28.73 49 *e*P **P 13 53 55.3 -2.3**
comp=Z,4.6nm,0.8s,mb4.3
BRVK Borovoye 28.73 49 *e*P **P 13 53 55.3 -2.4**
comp=Z,4.6nm,0.8s,mb4.3
BVAR Borovoye Array 28.78 49 P **P 13 53 56.4 -1.7**
comp=Z,0.9nm,0.7s,mb3.6,baz=260,slow=8.6,SNR=6.6
BVAR LR LR 14 08 57.9
comp=Z,202nm,18.1s,MS3.8,baz=264,slow=44
BVAR Borovoye Array 28.78 49 P **P 13 53 56.4 -1.7**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR MLR MLR
comp=Z,202nm,18.1s
EKA Eskdalemuir Ar 28.82 315 P **P 13 53 57.2 -1.2**
comp=Z,6.0nm,0.7s,mb4.4,baz=113,slow=9.3,SNR=9.1
EKA Eskdalemuir Ar 28.82 315 P **P 13 53 57.2 -1.2**
EKA pmax pmax
comp=Z,6.0nm,0.7s
ARCES ARCESS Array B 30.41 355 P **P 13 54 11.8 -0.6**
comp=Z,11nm,0.9s,mb4.6,baz=168,slow=8.6,SNR=29
ARCES LR LR 14 06 51.9
comp=Z,120nm,19.2s,MS3.6,baz=357,slow=37
ARCES ARCESS Array B 30.41 355 P **P 13 54 11.9 -0.5**
ARCES pmax pmax
comp=Z,11nm,0.9s
ARCES MLR MLR
comp=Z,120nm,19.2s
ARE0 ARCESS Array S 30.41 355 *e*P **P 13 54 11.9 -0.5**
ARE0 ARCESS Array S 30.41 355 *e*P **P 13 54 11.9 -0.5**
EKS2 Erkin-Say 30.63 71 *e*P **P 13 54 14.1 -0.6**
comp=Z,3.5nm,1.0s,mb4.1
EKS2 Erkin-Say 30.63 71 *e*P **P 13 54 14.1 -0.6**
comp=Z,3.5nm,1.0s,mb4.1
MDT Midelt 31.00 270 P **P 13 54 17.4 -0.6**
comp=Z,5.4nm,1.0s,mb4.3,baz=86,slow=12,SNR=7.2
MDT LR LR 14 09 35.2
comp=Z,62nm,18.5s,MS3.3,baz=2.1,slow=42
TKM2 Tokmak 2 31.92 70 *e*P **P 13 54 25.6 -0.4**
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
TKM2 Tokmak 2 31.92 70 *e*P **P 13 54 25.6 -0.4**
comp=Z,2.3nm,0.6s,mb4.2
TKM2 Tokmak 2 31.92 70 *e*P **P 13 54 25.6 -0.4**
comp=Z,2.3nm,0.6s,mb4.2
KURK Kurchatov 33.55 55 P **P 13 54 40.0 -0.1**
comp=Z,24nm,0.8s,mb4.5,baz=275,slow=8.8,SNR=70
KURK PcP PcP 13 57 19.6 -1.0
comp=Z,2.9nm,0.7s,baz=272,slow=3.5,SNR=6.3
KURK Kurchatov 33.55 55 P **P 13 54 40.0 -0.2**
KURK 13 57 19.6
KURK pmax pmax
comp=Z,24nm,0.8s,mb5.2
KURK Kurchatov 33.55 55 *e*P **P 13 54 39.8 -0.4**
comp=Z,20nm,0.9s,mb5.1
MK31 Makanchi Array 36.15 62 *e*P **P 13 55 02.5 -0.1**
MK31 Makanchi Array 36.15 62 *e*P **P 13 55 02.5 -0.2**
MKAR Makanchi Array 36.15 62 P **P 13 55 02.5 -0.1**
comp=Z,4.7nm,0.8s,mb4.5,baz=279,slow=7.2,SNR=34
MKAR PcP PcP 13 57 26.5 -1.8
comp=Z,1.4nm,0.8s,baz=268,slow=4.6,SNR=4.3
MKAR LR LR 14 12 18.3
comp=Z,138nm,18.0s,MS3.8,baz=28,slow=40
MKAR Makanchi Array 36.15 62 P **P 13 55 02.6 0.0**
MKAR 13 57 26.5
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR MLR MLR
comp=Z,138nm,18.0s
NVS Novosibirsk 36.55 48 *e*P **P 13 55 05.7 -0.3**
NVS *e* 13 56 27.5
NVS pmax pmax
comp=Z,21nm,1.3s,mb4.8
NVS pmax pmax
comp=E,10.0nm,1.4s
ZALV Zalesovo Beam 37.44 50 P **P 13 55 12.7 -0.8**
comp=E,3.6nm,0.6s,mb4.4,baz=265,slow=8.2,SNR=18
ZALV PcP PcP 13 57 30.7 -1.3
comp=E,1.0nm,0.5s,baz=260,slow=5.3,SNR=2.1
ZALV LR LR 14 12 30.7
comp=E,63nm,18.0s,MS3.5,baz=11,slow=39
ZALV Zalesovo Beam 37.44 50 P **P 13 55 12.7 -0.8**
ZALV 13 57 30.7
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
ZALV MLR MLR
comp=Z,63nm,18.0s,MS3.5
ZALV Zalesovo Beam 37.44 50 PcP PcP 13 57 30.7 -1.3
TOA0 Torodi Ar. Sit 38.12 235 *e*P **P 13 55 18.6 -1.1**
TOA0 Torodi Ar. Sit 38.12 235 *e*P **P 13 55 18.6 -1.0**
TORD Torodi Ar. Bea 38.12 235 P **P 13 55 18.3 -1.4**
comp=Z,14nm,0.9s,mb4.7,baz=34,slow=8.6,SNR=46
TORD PcP PcP 13 57 33.5 -1.3
comp=Z,2.8nm,1.0s,baz=17,slow=2.8,SNR=4.2
TORD LR LR 14 13 06.1
comp=Z,195nm,19.0s,MS3.9,baz=350,slow=40
SPITS Spitsbergen Ar 39.45 355 LR LR 14 11 39.2
comp=Z,115nm,19.3s,MS3.7,baz=190,slow=36
WMQ Urumqi 40.42 66 *e*P **P 13 55 38.8 +0.2**
WMQ AMB AMB
comp=Z,16nm,1.2s,mb4.6
WMQ LR LR
comp=N,175nm,24.0s,MS3.9
WMQ LR LR
comp=E,128nm,24.0s,MS3.9
WMQ LR LR
comp=Z,151nm,17.0s
DANN Dangsing 42.98 89 *e*P **P 13 55 59.8 -0.1**
comp=Z,73nm,0.8s,mb5.5
KOLN Koldanda 43.14 90 *e*P **P 13 56 00.6 -0.5**
comp=Z,30nm,0.7s,mb5.1
GKN Gorkha 43.83 89 *e*P **P 13 56 06.1 -0.6**
comp=Z,38nm,0.6s,mb5.3
DMN Daman 44.38 89 *e*P **P 13 56 10.7 -0.4**
comp=Z,70nm,0.7s,mb5.5
KKN Kakani 44.43 89 *e*P **P 13 56 10.7 -0.8**
comp=Z,29nm,0.7s,mb5.1
PKIN Phulchoki 44.62 89 *e*P **P 13 56 12.3 -0.8**
comp=Z,12nm,0.5s,mb4.9
PKI Pulchoki 44.64 89 *e*P **P 13 56 12.4 -0.8**
comp=Z,24nm,0.8s,mb5.1
GUN Gumba 44.84 88 *e*P **P 13 56 14.1 -0.6**
comp=Z,27nm,0.7s,mb5.2
HYB Hyderabad 45.03 106 *e*P **P 13 56 15.5 -0.8**
HYB Hyderabad 45.03 106 *i*P **P 13 56 15.5 -0.8**
JIRN Jiri 45.20 88 *e*P **P 13 56 17.2 -0.4**
comp=Z,26nm,0.7s,mb5.2
RAMN Ramite 45.87 89 *e*P **P 13 56 21.9 -1.0**
comp=Z,46nm,1.0s,mb5.4
ODAN Odare 46.52 89 *e*P **P 13 56 27.1 -1.0**
comp=Z,32nn,1.0s,mb5.2
TAPN Taplejung 46.53 88 *e*P **P 13 56 27.4 -0.7**
comp=Z,19nm,0.7s,mb5.2
DBIC Dimbokro 47.20 236 P **P 13 56 32.2 -1.3**
comp=Z,11nm,0.7s,mb4.9,baz=15,slow=9.6,SNR=17
DBIC LR LR 14 18 28.4
comp=Z,123nm,18.7s,MS3.9,baz=142,slow=39
DBIC Dimbokro 47.20 236 P **P 13 56 32.2 -1.3**
DBIC pmax pmax
comp=Z,11nm,0.7s
DBIC MLR MLR
comp=Z,123nm,18.7s
DBIC Dimbokro 47.20 236 *e*P **P 13 56 32.2 -1.3**
comp=Z,30nn,1.2s,mb5.1
DBIC Dimbokro 47.20 236 *e*P **P 13 56 32.2 -1.3**
comp=Z,30nn,1.2s,mb5.1
TIC Toumodi 47.33 237 *e*P **P 13 56 34.9 +0.4**
comp=Z,132nm,1.2s,mb5.8
KIC Kosan Boka 47.36 236 *e*P **P 13 56 34.5 -0.2**
comp=Z,166nm,1.1s
LIC Lamto 47.65 236 *e*P **P 13 56 37.4 +0.4**
comp=Z,86nm,0.9s,mb5.8
LSA Lhasa 48.05 83 P **P 13 56 40.5 +0.5**
LSA Lhasa 48.05 83 *e*P **P 13 56 40.3 +0.3**
LSA Lhasa 48.05 83 *e*P **P 13 56 40.3 +0.3**
TLY Talaya 49.02 51 *e*P **P 13 56 46.9 -0.2**
TLY pmax pmax
comp=Z,40nm,2.4s,mb5.0
GTA Gaotai 50.41 67 *e*P **P 13 56 57.8 -0.1**
GTA AP pP 13 57 01.5 +2.4
GTA XP sP 13 57 04.5 +4.9
GTA PP PP 13 58 54.0 +0.7
GTA S **S** **14 04 07.8 -4.0**
GTA XS sS 14 04 14.3 +0.5
GTA SS SS 14 07 35.8 -9.4
GTA AMB AMB
comp=Z,12nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,169nm,5.9s
GTA LR LR
comp=N,168nm,16.9s,MS4.3
GTA LR LR
comp=E,150nm,15.8s,MS4.3
GTA LR LR
comp=Z,170nm,15.2s,MS4.2
SONM Songino Array 51.86 55 LR LR 14 22 49.0
comp=Z,123nm,18.7s,MS4.0,baz=239,slow=40
ULN Ulaanbaatar 52.27 55 *e*P **P 13 57 11.6 -0.1**
ULN pmax pmax
comp=Z,12nm,1.5s,mb4.6
ULN Ulaanbaatar 52.27 55 *e*P **P 13 57 11.6 -0.1**
comp=Z,12nn,1.5s,mb4.6
ULN Ulaanbaatar 52.27 55 *e*P **P 13 57 11.6 -0.1**
comp=Z,12nn,1.5s,mb4.6
BOD Bodaibo 53.12 41⇑*i*P **P 13 57 16.3 -1.6**
BOD pmax pmax
comp=Z,14nn,1.0s,mb4.8
PALK Pallekele 53.31 114 P **P 13 57 18.3 -1.5**
PALK pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
PALK Pallekele 53.31 114 P **P 13 57 18.3 -1.5**
comp=Z,8.7nm,0.9s,mb4.7
PALK Pallekele 53.31 114 P **P 13 57 18.3 -1.5**
comp=Z,8.7nm,0.9s,mb4.7
LZH Lanzhou 54.69 70 *e*P **P 13 57 30.3 +0.6**
LZH AP pP 13 57 33.3 +2.4
LZH PP PP 13 59 34.0 +2.0
LZH *e*S **S** **14 05 07.0 -3.5**
LZH SS SS 14 08 46.5 -6.5
LZH AMB AMB
comp=Z,41nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,230nm,5.2s
LZH LR LR
comp=N,669nm,17.5s
LZH LR LR
comp=Z,828nm,18.2s,MS4.8
TIXI Tiksi 54.85 23⇑*e*P **P 13 57 29.6 -0.7**
TIXI pmax pmax
comp=Z,12nn,1.6s,mb4.7
TIXI Tiksi 54.85 23 *e*P **P 13 57 29.7 -0.6**
comp=Z,8.5nn,1.1s,mb4.7
TIXI Tiksi 54.85 23 *e*P **P 13 57 29.7 -0.6**
comp=Z,8.5nn,1.1s,mb4.7
CD2 Chengdu 57.05 75 P **P 13 57 48.5 +1.8**
CD2 PCP PcP 13 58 44.3 +2.6
CD2 PP PP 13 59 56.5 +3.3
CD2 PCS PcS 14 02 43.5 +0.8
CD2 S **S** **14 05 41.5 -0.6**
CD2 SS SS 14 09 29.8 -0.6
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CD2 AMB AMB
comp=Z,100nm,4.7s
CD2 LR LR
comp=N,270nn,10.3s
CD2 LR LR
comp=Z,388nm,12.6s,MS4.7
HHC Hu-ho-hao-te 58.01 61 *e*P **P 13 57 53.0 -0.3**
HHC AP pP 13 57 57.0 +2.5
HHC XP sP 13 57 59.5 +4.5
HHC PP PP 14 00 02.8 +1.3
HHC PCS PcS 14 02 45.0 -1.6
HHC S **S** **14 05 50.0 -4.4**
HHC XS sS 14 05 57.8 +1.5
HHC SCS ScS 14 07 38.0 -5.7
HHC SS SS 14 09 42.0 -3.0
HHC AMB AMB
comp=Z,23nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,148nm,4.3s
HHC LR LR
comp=N,145nm,20.2s,MS4.2
HHC LR LR
comp=E,74nm,19.0s,MS4.2
HHC LR LR
comp=Z,149nm,15.5s,MS4.2
YAK Yakutsk 58.91 33 *e*P **P 13 57 57.7 -1.6**
YAK pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
KMI Kunming 59.24 81 P **P 13 58 01.3 -0.8**
KMI AP pP 13 58 04.5 +1.2
KMI XP sP 13 58 05.8 +2.0
KMI AMB AMB
comp=Z,9.0nm,1.2s,mb4.7
XAN Xi'an 59.33 69 P **P 13 58 02.5 -0.1**
XAN PP PP 14 00 12.0 -1.4
XAN S **S** **14 06 10.8 -1.0**
XAN SS SS 14 10 06.3 +0.3
XAN AMB AMB
comp=Z,4.0nm,1.0s,mb4.4
HIA Hailar 59.48 49 P **P 13 58 03.1 -0.3**
HIA pmax pmax
comp=Z,7.0nm,0.9s
HIA Hailar 59.48 49 P **P 13 58 03.1 -0.3**
comp=Z,6.7nm,0.9s,mb4.7
HIA Hailar 59.48 49 P **P 13 58 03.1 -0.2**
comp=Z,6.7nm,0.9s,mb4.7
CHTO Chiang Mai 59.80 90 *e*P **P 13 58 03.5 -2.6**
CHTO *e* 13 58 11.6
CHTO pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CHTO Chiang Mai 59.80 90 *e*P **P 13 58 03.5 -2.5**
comp=Z,5.5nm,1.0s,mb4.5
CHTO *e* 13 58 11.6
CMAR Chiang Mai Ar 60.01 90 P **P 13 58 05.7 -1.8**
comp=Z,3.2nm,0.7s,mb4.5,baz=299,slow=8.1,SNR=29
CMAR Chiang Mai Ar 60.01 90 P **P 13 58 05.7 -1.8**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
TSUM Tsumeb 60.13 197 *e*P **P 13 58 08.1 +0.1**
comp=Z,21nm,1.8s,mb4.9
TSUM Tsumeb 60.13 197 *e*P **P 13 58 08.1 0.0**
comp=Z,21nm,1.8s,mb4.9
RES Resolute Bay 61.09 346 *e*P **P 13 58 13.4 -0.6**
RES pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
RES Resolute Bay 61.09 346 *e*P **P 13 58 13.4 -0.6**
comp=Z,2.3nm,0.8s,mb4.4
RES Resolute Bay 61.09 346 *e*P **P 13 58 13.4 -0.6**
comp=Z,2.3nm,0.8s,mb4.4
BJI Beijing 61.50 60 P **P 13 58 16.3 -1.0**
BJI S **S** **14 06 38.0 -1.4**
BJI SS SS 14 10 36.5 -3.2
BJI AMB AMB
comp=Z,19nm,0.8s,mb5.3
BJI AMB AMB
comp=Z,116nm,3.7s
BJI LR LR
comp=N,183nm,22.7s,MS4.4
BJI LR LR
comp=E,249nm,23.4s,MS4.4
BJI LR LR
comp=Z,114nm,19.9s,MS4.0
GYA Guiyang 61.52 78⇑*i*P **P 13 58 16.5 -1.2**
GYA PCP PcP 13 59 01.3 +1.7
GYA PP PP 14 00 33.0 +0.1
GYA SCP ScP 14 03 01.0 -1.0
GYA S **S** **14 06 34.3 -5.7**
GYA SS SS 14 10 35.0 -5.7
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,80nm,5.7s
GYA LR LR
comp=N,350nm,18.0s,MS4.7
GYA LR LR
comp=E,290nm,17.8s,MS4.7
GYA LR LR
comp=Z,460nm,18.2s,MS4.7
SCHQ Schefferville 63.96 321 LR LR 14 25 60.0
comp=Z,97nm,19.2s,MS4.0,baz=90,slow=36
LBTB Lobatse 64.52 188 *e*P **P 13 58 35.8 -1.5**
LBTB pmax pmax
comp=Z,11nm,0.8s,mb4.9
LBTB Lobatse 64.52 188 *e*P **P 13 58 35.8 -1.5**
comp=Z,11nn,0.8s,mb5.0
LBTB Lobatse 64.52 188 *e*P **P 13 58 35.8 -1.5**
comp=Z,11nn,0.8s,mb5.0
WHN Wuhan 65.06 70 P **P 13 58 40.8 -0.3**
CN2 Changchun 65.57 53 *e*P **P 13 58 42.5 -1.7**
KLR Kul'dur 66.32 45 *e*P **P 13 58 43.8 -5.1**
SEY Seymchan 67.07 26⇑*i*P **P 13 58 52.7 -0.8**
BILL Bilibino 67.22 17 *e*P **P 13 58 53.2 -1.1**
BILL *e* 14 01 26.0
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
BILL Bilibino 67.22 17 *e*P **P 13 58 53.4 -0.9**
comp=Z,17nm,1.3s,mb4.9
BILL Bilibino 67.22 17 *e*P **P 13 58 53.4 -1.0**
comp=Z,17nm,1.3s,mb4.9
BOSA Boshof 68.11 187 P **P 13 58 59.5 -0.8**
comp=Z,20nm,0.9s,mb5.2,baz=13,slow=6.6,SNR=24
BOSA Boshof 68.11 187 P **P 13 58 59.6 -0.7**
BOSA pmax pmax
comp=Z,20nm,0.9s,mb5.2
BOSA Boshof 68.11 187 *e*P **P 13 58 59.1 -1.2**
comp=Z,24nm,0.9s,mb5.2
BOSA Boshof 68.11 187 *e*P **P 13 58 59.1 -1.3**
comp=Z,24nm,0.9s,mb5.2
PSI Prapat 69.67 104 LR LR 14 29 58.5
comp=Z,102nm,21.1s,MS4.0,baz=181,slow=36
KSRS Korea Array 70.64 57 P **P 13 59 14.8 -1.3**
comp=Z,8.9nm,0.8s,mb4.8,baz=300,slow=5.5,SNR=28
KSRS LR LR 14 33 39.2
comp=Z,88nm,19.8s,MS4.0,baz=270,slow=39
KSRS Korea Array 70.64 57 P **P 13 59 14.9 -1.3**
KSRS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KSRS MLR MLR
comp=Z,89nm,19.8s,MS4.0
SUR Sutherland 72.38 191 *e*P **P 13 59 26.1 -0.3**
comp=Z,15nm,0.9s,mb4.9
FCC Fort Churchill 72.76 334 *e*P **P 13 59 28.0 -0.5**
FCC pmax pmax
comp=Z,1.0nm,2.1s
FCC Fort Churchill 72.76 334 *e*P **P 13 59 28.0 -0.5**
comp=Z,1.4nm,2.1s
YKA Yellowknife Ar 75.12 345 P **P 13 59 41.4 -0.9**
comp=Z,5.4nm,0.8s,mb4.5,baz=26,slow=5.8,SNR=70
YKA Yellowknife Ar 75.12 345 P **P 13 59 41.4 -0.9**
YKA pmax pmax
comp=Z,5.0nm,0.9s
COLA College 76.01 0 *e*P **P 13 59 47.2 -0.1**
COLA pmax pmax
comp=Z,12nn,1.1s,mb4.7
COLA College 76.01 0 *e*P **P 13 59 47.2 -0.1**
comp=Z,12nn,1.1s,mb4.7
COLA College 76.01 0 *e*P **P 13 59 47.2 -0.1**
comp=Z,12nn,1.1s,mb4.7
EGAK Eagle 76.01 357 *e*P **P 13 59 47.1 -0.2**
comp=Z,159nm,2.8s,mb5.5
EGAK Eagle 76.01 357 *e*P **P 13 59 47.1 -0.2**
comp=Z,159nm,2.8s,mb5.5
DAWY Dawson 76.65 357 *e*P **P 13 59 51.1 +0.1**
DAWY Dawson 76.65 357 *e*P **P 13 59 51.1 +0.1**
MJAR Matsushiro Arr 77.72 53 P **P 13 59 56.6 -0.9**
comp=Z,3.0nm,0.9s,mb4.2,baz=315,slow=3.1,SNR=6.1
MJAR Matsushiro Arr 77.72 53 P **P 13 59 56.6 -0.9**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
FFC Flin Flon 78.61 335 *e*P **P 14 00 00.9 -1.2**
FFC pmax pmax

	comp=Z,23nm,1.6s,mb4.9							
FFC	**Flin Flon**	**78.61**	**335**	*e*P		**P**	**14 00 00.9**	**-1.2**
	comp=Z,23nm,1.6s,mb4.9							
FFC	**Flin Flon**	**78.61**	**335**	*e*P		**P**	**14 00 00.8**	**-1.2**
	comp=Z,23nm,1.6s,mb4.9							
EDM	**Edmonton**	**83.24**	**340**	*e*P		**P**	**14 00 26.2**	**-0.6**
EDM	**Edmonton**	**83.24**	**340**	*e*P		**P**	**14 00 26.2**	**-0.6**
TKL	**Tuckaleechee C**	**85.28**	**313**	*e*P		**P**	**14 00 30.4**	**-7.1**
CPCT	**Cooper Cave**	**85.85**	**314**	*e*P		**P**	**14 00 39.7**	**-0.7**
CPCT	**Cooper Cave**	**85.85**	**314**	*e*P		**P**	**14 00 39.7**	**-0.7**
RSSD	**Black Hills**	**88.26**	**331**	*e*P		**P**	**14 00 51.1**	**-0.8**
RSSD					pmax	pmax		
	comp=Z,12nm,1.5s,mb4.9							
RSSD	**Black Hills**	**88.26**	**331**	*e*P		**P**	**14 00 51.1**	**-0.8**
	comp=Z,12nm,1.5s,mb4.9							
RSSD	**Black Hills**	**88.26**	**331**	*e*P		**P**	**14 00 51.1**	**-0.8**
	comp=Z,12nm,1.5s,mb4.9							
PHWY	**Pilot Hill**	**91.21**	**330**	*e*P		**P**	**14 01 05.1**	**-0.7**
	comp=Z,6.9nm,1.1s,mb4.9							
PHWY	**Pilot Hill**	**91.21**	**330**	*e*P		**P**	**14 01 05.1**	**-0.7**
	comp=Z,6.9nm,1.1s,mb4.9							
PDAR	**Pinedale Array**	**91.44**	**333**	PKKPbc		PKKPbc	14 18 24.6	-2.1
	comp=Z,0.4nm,0.6s,baz=151,slow=3.4,SNR=3.4							
BDFB	**Brasilia**	**93.11**	**252**	LR		LR	14 43 19.2	
	comp=Z,47nm,18.7s,MS4.0,baz=212,slow=36							
SDV	**Santo Domingo**	**94.84**	**286**	LR		LR	14 42 59.2	
	comp=Z,40nm,18.5s,MS3.9,baz=11,slow=35							
TXAR	**Lajitas Array**	**100.61**	**323**	P		Pdif	14 01 47.4	-1.2
	comp=Z,0.4nm,1.0s,baz=7,8,slow=10.0,SNR=4.2							
ASAR	**Alice Springs**	**112.69**	**103**	PKiKP		PKiKP	14 06 34.9	-2.5
	comp=Z,0.7nm,1.1s,baz=270,slow=1.9,SNR=4.6							
ASAR	**Alice Springs**	**112.69**	**103**	*i* PKIKP		PKiKP	14 06 34.9	-2.5
ASAR					pmax	pmax		
	comp=Z,1.0nm,1.1s							
STKA	**Stephens Creek**	**122.79**	**106**	PKP		PKPdf	14 06 54.4	-2.2
	comp=Z,0.9nm,0.6s,baz=320,slow=3.4,SNR=5.6							
PLCA	**Paso Flores**	**123.38**	**242**	PKP		PKPdf	14 06 55.8	-1.7
	comp=Z,1.5nm,0.8s,baz=60,slow=6.1,SNR=3.9							
PLCA	**Paso Flores**	**123.38**	**242**	PKiKP		PKPdf	14 06 55.8	-1.7
PLCA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
URZ	**Urewera**	**152.06**	**99**	PKPbc		PKPbc	14 07 52.3	-3.5
	comp=Z,8.2nm,0.9s,baz=248,slow=11,SNR=3.9							

MOS 27 13:50:34.9±0.4, 4272N×4702E, *h*40km, mb3.8/1, 1C-1D, Error ellipse: s-maj=58.1km s-min=15.3km az=19.7, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAK	**Makhachkala**	**0.43**	**56**	⇓*i*P	Pn	13 50 50.7	+6.0
MAK				*e*		13 50 55.0	
MAK				pmax	pmax		
	comp=Z,208nm,0.2s						
MAK				smax			
	comp=N,1μm,0.5s						
MAK				smax			
	comp=E,538nm,0.3s						
SNJR	**Sundja**	**1.66**	**283**	*e*P	Pn	13 51 03.9	+2.5
SNJR				*e*S	Sn	13 51 20.9	-0.5
VLKR	**Vladikavkaz**	**1.75**	**281**	*e*P	Pn	13 51 04.9	+2.2
VLKR				*e*S	Sn	13 51 22.5	-1.2
BTKR	**Batakoyurt**	**1.93**	**291**	*e*P	Pn	13 51 07.0	+1.9
BTKR				*e*S	Sn	13 51 26.3	-1.8
ARNR	**Ardon**	**2.06**	**284**	*e*P	Pn	13 51 08.4	+1.4
ARNR				*e*S	Sn	13 51 28.7	-2.7
KMSR	**Komsomolskaya**	**2.10**	**289**	*e*P	Pn	13 51 08.9	+1.4
KMSR				*e*S	Sn	13 51 29.7	-2.6
PRTR	**Priterechnaya**	**2.25**	**298**	*e*P	Pn	13 51 10.9	+1.4
PRTR				*e*S	Sn	13 51 33.1	-2.9
ZEI	**Tsey**	**2.30**	**272**	⇑*i*P	Pn	13 51 11.3	+1.1
ZEI				*e*S	Sn	13 51 34.0	-3.2

*NEIC **27** 13:56:52.2, 1605N×9828W, *h*8km, MD3.7(MEX), After MEX.*

MEX 27 13:56:52.2±0.5, 1605N×9828W, *h*8km±5km, MD3.7, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.37**	**23**	⇓*i*P	Pg	13 56 59.1	-0.3
PNIG				*i* S	Sg	13 57 04.3	0.0
ACX	**Acapulco**	**1.77**	**297**	*e*P	Pn	13 57 19.7	-3.5
ACX				*e*S	Sn	13 57 41.1	-4.8
VHO	**Vista Hermosa**	**1.79**	**55**	*i* P	Pn	13 57 20.6	-3.0
VHO				*i* S	Sn	13 57 41.3	-5.3
UTMO	**Huajuapan**	**1.82**	**14**	*i* P	Pn	13 57 21.4	-2.6
UTMO				*i* S	Sn	13 57 43.6	-3.7
HUIG	**Huatulco**	**2.11**	**97**	*e*P	Pn	13 57 25.9	-2.0
HUIG				*i* S	Sn	13 57 48.8	-5.4
CAIG	**El Cayaco**	**2.15**	**298**	*e*P	Pn	13 57 24.8	-3.6
CAIG				*i* S	Sn	13 57 51.1	-4.2
TPIG	**Tehuac#an**	**2.51**	**20**	*i* S	Sn	13 58 01.9	-2.3
CMIG	**Matias Romero**	**3.41**	**72**	*e*P	Pn	13 57 43.2	-2.6
CMIG				*i* S	Sn	13 58 22.0	-4.6

*ISCJB **27** 14:08:34.6±1.6, 3943N±006×33.11E±007, *h*7km±12km, Error ellipse: s-maj=11.9km s-min=5.8km az=138.5*
*CSEM **27** 14:08:34.4, 3947N×3312E, *h*10km, MD2.7, After ISK*
*DDA **27** 14:08:34.1, 3941N×3311E, *h*7km±2km, Md2.7*
*ISK **27** 14:08:34.4, 3947N×3312E, *h*10km, MD2.7*

ISC 27 14:08:34.6±0.8, 3943N±005×3309E±005, *h*6km±9km, n7, σ0§60/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.48**	**97**	*e*PG	**Pg**	**14 08 44.0**	**+0.1**
KAMT				*e*SG	**Sg**	**14 08 51.2**	**+0.9**
CDAG	**Cicekdag**	**1.01**	**79**	*i* P	**Pg**	**14 08 53.1**	**-0.8**
CDAG				*i* S	**Sg**	**14 09 07.0**	**0.0**
ELDT	**Eldivan**	**1.09**	**13**	*i* P	**Pg**	**14 08 55.6**	**+0.2**
ELDT				*i* S	**Sg**	**14 09 09.9**	**+0.3**
KIZT	**Kizilcal**	**1.09**	**240**	*e*PN	**Pn**	**14 08 56.0**	**-0.4**
KIZT				*e*SN	**Sn**	**14 09 12.7**	**+0.8**
KDHN	**Kadinhani**	**1.19**	**220**	*i* P	**Pg**	**14 08 56.4**	**-1.0**
KDHN				*i* S	**Sg**	**14 09 13.3**	**+0.5**
CORM	**Corum**	**1.40**	**57**	*e*PN	**Pn**	**14 09 00.9**	**+0.2**
YOZ	**Yozgat**	**1.73**	**82**	*e*PN	**Pn**	**14 09 04.5**	**-0.8**

IDC 27 14:24:02.5±7.9, 555S×15018E, h102km±55km, mb2.7/2, mb1 3.2/3, mb1mx3.0/16, mbtmp3.0/3, Error ellipse: s-maj=119.5km s-min=54.7km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.87**	**218**	P	Pn	14 25 13.3	-0.2
	10nm,0.3s,baz=36,slow=6.2,SNR=34						
PMG				S	Sn	14 26 09.2	+0.5
	3.4nm,0.3s,baz=46,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**21.03**	**226**	P	P	14 28 38.7	+0.4
	0.3nm,0.4s,baz=51,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**23.88**	**219**	P	P	14 29 07.2	+0.4
	0.4nm,0.6s,baz=56,slow=9.1,SNR=12						
TORD	**Torodi Ar. Bea**	**148.03**	**286**	PKPbc	PKPbc	14 43 36.3	-1.0
	0.2nm,0.3s,baz=55,slow=2.5,SNR=5.0						

*ISK **27** 14:24:13.8, 3936N×3307E, *h*27km, MD2.6*
*CSEM **27** 14:24:14.0±0.3, 3926N×3304E, *h*25km, MD2.6, Error ellipse: s-maj=14.6km s-min=7.2km az=150.0*
*DDA **27** 14:24:15.7, 3942N×3311E, *h*7km±3km, Md2.6*
*ISCJB **27** 14:24:16.1±0.8, 3940N±005×33.12E±006, *h*10km, Error ellipse: s-maj=8.7km s-min=6.0km az=145.6*

ISC 27 14:24:14.4±1.1, 3933N±007×3302E±007, *h*16km±10km, n8, σ1§08/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.54**	**85**	*e*PG	**Pg**	**14 24 25.5**	**+0.4**
KAMT				*e*SG	**Sg**	**14 24 32.1**	**-0.3**
KIZT	**Kizilcal**	**0.99**	**244**	*e*PG	**Pg**	**14 24 33.0**	**-0.6**
KDHN	**Kadinhani**	**1.07**	**221**	*i* P	**Pb**	**14 24 37.9**	**+3.4**
KDHN				*i* S	**Sb**	**14 24 54.8**	**+6.6**
CDAG	**Cicekdag**	**1.09**	**74**	*i* P	**Pb**	**14 24 34.7**	**-0.1**
CDAG				*i* S	**Sb**	**14 24 50.4**	**+1.6**
ELDT	**Eldivan**	**1.20**	**15**	*i* P	**Pn**	**14 24 36.9**	**+0.4**
ELDT				*i* S	**Sb**	**14 24 52.4**	**+0.4**
KONT	**Konya--Tatoy**	**1.47**	**201**	*e*PN	**Pn**	**14 24 39.5**	**-0.8**
CORM	**Corum**	**1.51**	**55**	*e*PN	**Pn**	**14 24 38.6**	**-2.0**
YOZ	**Yozgat**	**1.81**	**79**	*e*PN	**Pn**	**14 24 43.5**	**-1.3**

GUC 27 14:36:18.4±1.0, 2295S×7019W, h54km±7km, MD3.8, ML3.2, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.28**	**237**	*e*P	Pn	14 36 27.8	0.0
MECH				*e*S	Sn	14 36 35.4	+0.9
MECH				AML	AML	14 36 36.2	
	comp=N,2μm,0.4s						
CEN1	**Los Morros**	**0.44**	**181**	*e*P	Pn	14 36 31.7	+2.5
CEN1				*e*S	Sn	14 36 41.4	+4.4
CEN1				AML	AML	14 36 42.1	
	comp=E,692nm,0.2s						
PECH	**Pedro de Valdi**	**0.59**	**54**	*e*P	Pn	14 36 31.7	+0.8
PECH				*i* S	Sn	14 36 41.3	+1.3
PECH				AML	AML	14 36 41.8	
	comp=E,4μm,0.2s						
TOCH	**Tocopilla**	**0.85**	**359**	*e*P	Pn	14 36 34.8	+0.5
TOCH				*e*S	Sn	14 36 46.6	+0.7
TOCH				AML	AML	14 36 48.0	
	comp=N,2μm,0.1s						
PB04	**Plate Boundary**	**0.94**	**44**	⇓*i*P	Pn	14 36 31.9	-3.5
PB04				*i* S	Sn	14 36 41.6	-6.3
PB04				AML	AML	14 36 42.8	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**1.23**	**74**	*e*P	Pn	14 36 40.8	+1.5
LVC				*i* S	Sn	14 36 57.0	+2.2

*IDC **27** 14:44:22.4±2.1, 5225N×16847W, h12km±12km, mb4.9/26, mb1 5.1/27, mb1mx5.0/29, mbtmp4.9/27, ML4.7/1, MS5.1/7, Ms1 5.1/7, ms1mx4.6/26, Error ellipse: s-maj=17.6km s-min=7.3km az=177.0*
*ISCJB **27** 14:44:22.8±0.7, 5231N±003×16848W±002, h21km±4km, mb5.2/281, MS5.3/128, Error ellipse: s-maj=4.8km s-min=2.0km az=14.6*
*GCMT **27** 14:44:23.6±0.1, 52.12N×168.30W, h13km, MW5.6/112, Moment Tensor Solution. s96,c184; s112,c307; Duration: 1§6 Moment tensor: Scale 10^17^Nm; Mrr2.35±.03; Mθθ-1.92±.03; Mϕϕ-0.42±.02; Mrθ2.34±.09; Mθϕ-1.02±.02; Mϕr1.08±.07; Best double couple: Mo3.51700×10^17^ NP1:ϕ241.00000°, δ21.00000°, λ87.00000°. NP2:ϕ65.00000°, δ69.00000°, λ91.00000°. Principal axes: T 3.4750, Plg66.0000°, Azm337.0000°; N 0.0930, Plg1.0000°, Azm244.0000°; P -3.5590, Plg24.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **27** 14:44:23.6±1.4, 5227N×16838W, h18km±8km, mb5.3/170, MS5.4/91 Error ellipse: s-maj=5.3km s-min=2.9km az=185.0*
*MOS **27** 14:44:24.0±0.9, 5248N×16843W, h33km, mb5.4/123, MS5.2/22, Error ellipse: s-maj=7.2km s-min=6.1km az=95.7*
*BJI **27** 14:44:25.5, 5272N×16906W, h27km, mB5.5, mb5.3, Ms5.6, Msz5.4*
*SZGRF **27** 14:44:29.3, 5256N×16891W, h33km, mb5.3, MS5.0, Fox Islands, Aleutian Islands, United States*
*DJA **27** 14:44:45, 5256N×17066W, h137km, Mw5.3/4*

ISC 27 14:44:25.6±0.7, 5235N±003×16848W±002, h27km±4km, h27km±1.8km:pP-P, n1043, σ0§87/1014, mb5.2/281, MS5.3/128, 302C-175D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.66**	**340**	P	**Pb**	**14 44 38.8**	**+0.3**
NIKO				S	**Sb**	**14 44 50.6**	**+3.3**
OKCE	**Okmok Cone E**	**1.09**	**10**	P	**Pn**	**14 44 45.4**	**+0.4**
OKCD	**Okmok Cone D**	**1.10**	**12**	P	**Pn**	**14 44 45.6**	**+0.4**
OKFG	**Magazine Ridge**	**1.11**	**18**	P	**Pn**	**14 44 45.8**	**+0.5**
OKFG				S	**Sn**	**14 45 03.0**	**+3.2**
UNV	**Unalaska Valle**	**1.91**	**38**	P	**Pn**	**14 44 55.2**	**-1.2**
AKGG	**Akutan Green G**	**2.38**	**38**	P	**Pn**	**14 45 03.1**	**+0.3**
AKUT	**Akutan**	**2.42**	**41**	*e*Pn	**Pn**	**14 45 00.1**	**-3.2**
ATKA	**Atka Island**	**3.51**	**270**	P	**Pn**	**14 45 19.0**	**+0.7**
ATKA				S	**Sn**	**14 46 01.6**	**+2.6**
GSTR	**Great Sitkin T**	**4.67**	**270**	*e*Pn	**Pn**	**14 45 35.4**	**+1.3**
GSTR				*e*Sn	**Sn**	**14 46 29.7**	**+2.4**
SPIA	**Saint Paul Isl**	**4.94**	**349**	P	**Pn**	**14 45 41.0**	**+3.0**
ADK	**Adak**	**5.08**	**268**	*e*P	**Pn**	**14 45 40.5**	**+0.7**
ADK	**Adak**	**5.08**	**268**	P	**Pn**	**14 45 40.7**	**+0.9**
SDPT	**Sand Point**	**5.61**	**54**	P	**Pn**	**14 45 48.3**	**+1.2**
CHGN	**Chignik**	**7.09**	**52**	P	**Pn**	**14 46 08.6**	**+1.1**
OHAK	**Old Harbor**	**10.03**	**55**	*e*P	**Pn**	**14 46 46.6**	**-1.1**
	24nm,0.3s						
KDAK	**Kodiak Island**	**10.60**	**53**	Pn	**Pn**	**14 46 53.0**	**-2.5**
	1μm,0.7s,SNR=22						
KDAK	**Kodiak Island**	**10.60**	**53**	Pn	**Pn**	**14 46 53.1**	**-2.4**
	15nm,0.3s,baz=268,slow=8.0,SNR=38						
KDAK	**Kodiak Island**	**10.60**	**53**	*e*P	**Pn**	**14 46 52.5**	**-3.0**
KDAK				pmax	pmax		
	comp=Z,346nm,1.3s						
KDAK	**Kodiak Island**	**10.60**	**53**	*e*Pn	**Pn**	**14 46 52.5**	**-3.0**
	comp=Z,346nm,1.3s						
SMY	**Shemya**	**10.62**	**279**	*e*P	**Pn**	**14 46 57.5**	**+1.8**
SMY				pmax	pmax		
	comp=Z,171nm,1.1s						
SMY	**Shemya**	**10.62**	**279**	*e*P	**Pn**	**14 46 57.5**	**+1.8**
	comp=Z,171nm,1.1s						
FX1	**Attu Island--F**	**11.17**	**280**	Pn	**Pn**	**14 47 03.9**	**+0.6**
	comp=Z,18nm,0.3s,baz=106,slow=2.7,SNR=52						
FX1				Sn	**Sn**	**14 49 08.6**	**+1.4**
	comp=Z,4.0nm,0.3s,baz=62,slow=16,SNR=1.5						
SVW2	**Sparrevohn**	**11.25**	**34**	*e*P	**Pn**	**14 47 06.4**	**+2.1**
GAMB	**Gambell**	**11.58**	**353**	*e*Pn	**Pn**	**14 47 09.9**	**+1.1**
	comp=Z,3μm,0.6s						
RSO	**Redoubt South**	**11.88**	**41**	*e*Pn	**Pn**	**14 47 13.6**	**+0.6**
SEW	**Seward**	**13.09**	**46**	⇑*e*Pn	**Pn**	**14 47 27.2**	**-2.3**
	comp=Z,36nm,0.4s						
TNA	**Tin City**	**13.25**	**1**	*e*Pn	**Pn**	**14 47 33.9**	**+2.2**
	comp=Z,40nm,0.9s						
FIB	**Fire Island**	**13.32**	**41**	*e*P	**Pn**	**14 47 30.9**	**-1.7**
FIB				pmax	pmax		
	comp=Z,198nm,0.7s						
FIB	**Fire Island**	**13.32**	**41**	*e*Pn	**Pn**	**14 47 30.9**	**-1.7**
	comp=Z,198nm,0.7s						
RC01	**Rabbit Creek A**	**13.46**	**42**	*e*Pn	**Pn**	**14 47 31.2**	**-3.4**
	comp=Z,84nm,1.0s						
PPLA	**Pureypile**	**13.65**	**33**	*e*Pn	**Pn**	**14 47 39.1**	**+2.0**
	comp=Z,100nm,0.8s						
PMR	**Palmer**	**13.98**	**41**	*e*P	**Pn**	**14 47 40.1**	**-1.5**
PMR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PMR	**Palmer**	**13.98**	**41**	*e*P	**Pn**	**14 47 40.1**	**-1.5**
	comp=Z,8.5nm,0.5s						
CHUM	**Lake Minchumin**	**14.31**	**30**	*e*Pn	**Pn**	**14 47 47.8**	**+1.7**
	comp=Z,142nm,1.1s						
KTH	**Kantishna Hill**	**14.52**	**33**	⇓*e*Pn	**Pn**	**14 47 48.8**	**-0.2**
	comp=Z,169nm,1.1s						
TRF	**Thorofare Moun**	**14.67**	**34**	*e*Pn	**Pn**	**14 47 51.0**	**0.0**
	comp=Z,73nm,1.0s						
BPAW	**Bear Paw Mtn.**	**14.88**	**31**	*e*Pn	**Pn**	**14 47 54.3**	**+0.5**
	comp=Z,65nm,0.8s						
MCK	**McKinley**	**15.31**	**34**	*e*P	**Pn**	**14 47 57.5**	**-2.0**
MCK				pmax	pmax		
	comp=Z,89nm,1.1s						
MCK	**McKinley**	**15.31**	**34**	*e*Pn	**Pn**	**14 47 57.5**	**-2.0**
	comp=Z,89nm,1.2s						
PAX	**Paxson**	**16.16**	**40**	*e*Pn	**Pn**	**14 48 07.7**	**-2.8**
	comp=Z,45nm,0.6s						
COLA	**College**	**16.41**	**32**	*c i*P	**Pn**	**14 48 10.8**	**-2.8**
COLA	**College**	**16.41**	**32**	*e*Pn	**Pn**	**14 48 10.1**	**-3.5**
	comp=Z,92nm,1.0s						
MENT	**Mentasta**	**16.84**	**41**	*e*P	**Pn**	**14 48 17.0**	**-2.1**
COLD	**Coldfoot**	**17.40**	**24**	*e*Pn	**Pn**	**14 48 26.1**	**+0.1**
	comp=Z,88nm,1.0s						
PNL	**Peninsula**	**17.72**	**54**	*e*Pn	**Pn**	**14 48 28.3**	**-1.7**
	comp=Z,170nm,0.8s						
EGAK	**Eagle**	**18.72**	**38**	*e*P	**Pn**	**14 48 39.2**	**-3.0**
	comp=Z,89nm,1.0s						
DAWY	**Dawson**	**19.09**	**41**	*e*P	**Pn**	**14 48 43.8**	**-2.8**
DAWY				*e*ScP	ScP	14 56 43.0	+0.3
SIT	**Sitka**	**19.60**	**63**	*e*P	**Pn**	**14 48 51.5**	**-1.3**
SIT				pmax	pmax		
	comp=Z,260nm,1.3s						
SIT	**Sitka**	**19.60**	**63**	*e*P	**Pn**	**14 48 51.5**	**-1.3**
	comp=Z,204nm,1.3s						
SKAG	**Skagway**	**19.73**	**56**	*e*P	**Pn**	**14 48 53.3**	**-1.1**
	comp=Z,316nm,1.4s						
PET	**Petropavlovsk**	**19.84**	**285**	*i* P	**Pn**	**14 48 53.8**	**-1.9**
PET				*e*S	**Sn**	**14 52 33.8**	**-3.9**
PET				pmax	pmax		
	comp=Z,183nm,0.7s						
PET				pmax	pmax		
	comp=Z,2μm,14.0s						
PET				pmax	pmax		
	comp=Z,2μm,13.0s						
PET				MLR	MLR		
	comp=Z,7μm,18.0s						
PET				MLR	MLR		
	comp=Z,6μm,15.0s						
PET	**Petropavlovsk**	**19.84**	**285**	*e*P	**Pn**	**14 48 53.7**	**-2.0**
	comp=Z,119nm,0.8s						
BILL	**Bilibino**	**19.87**	**332**	*c i*P	**Pn**	**14 48 53.7**	**-2.2**
BILL				pmax	pmax		
	comp=Z,14nm,0.5s						
BILL	**Bilibino**	**19.87**	**332**	⇑*e*P	**Pn**	**14 48 55.2**	**-0.7**
	comp=Z,131nm,1.3s						
PETK	**Petropavlovsk-**	**20.39**	**286**	P	**P**	**14 49 00.2**	**+0.2**
	comp=Z,130nm,0.5s,baz=83,slow=14,SNR=938						
PETK				S	**S**	**14 52 48.1**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=76,slow=12,SNR=1.7						
CRAG	**Craig**	**20.92**	**67**	*e*P	**P**	**14 49 06.8**	**+1.1**
	comp=Z,297nm,1.6s						
SKR	**Severo-Kuril's**	**21.96**	**280**	*e*P	**P**	**14 49 16.0**	**-0.9**
SKR				*e*		14 49 42.0	
SKR				*e*PPP		14 49 54.0	
SKR				S	**S**	**14 53 22.0**	**+4.3**
SKR				*e*SS		14 54 06.0	
SKR				pmax	pmax		
	comp=Z,3μm,8.0s						
SKR				smax			
	comp=N,5μm,18.0s						
SKR				smax			
	comp=E,3μm,14.0s						
SKR				MLR	MLR		
	comp=N,7μm,18.0s,MS5.2						
SKR				MLR	MLR		
	comp=E,6μm,18.0s,MS5.2						
SKR				MLR	MLR		
	comp=Z,6μm,18.0s,MS5.0						
DLBC	**Dease Lake**	**22.43**	**59**	P	**P**	**14 49 22.3**	**+0.5**
	comp=Z,44nm,1.2s,mb4.8,baz=264,slow=9.4,SNR=9.6						
DLBC				S	**S**	**14 53 30.9**	**+4.3**
	comp=Z,5.7nm,1.1s,baz=112,slow=23,SNR=2.3						
DLBC	**Dease Lake**	**22.43**	**59**	*e*P	**P**	**14 49 23.1**	**+1.2**
SEY	**Seymchan**	**23.08**	**313**	⇑*e*P	**P**	**14 49 28.2**	**-0.5**
SEY	**Seymchan**	**23.08**	**313**	⇑*e*P	**P**	**14 49 28.3**	**-0.4**
BBB	**Bella Bella**	**24.48**	**74**	S	**S**	**14 54 02.9**	**+2.3**
	comp=Z,26nm,1.2s,baz=337,slow=7.5,SNR=1.9						
BBB				LR	LR	14 58 42.8	
	comp=Z,5μm,19.1s,MS5.0,baz=288,slow=35						
A05A	**Maple Falls**	**29.20**	**78**	⇓P	**P**	**14 50 25.5**	**+0.9**
	baz=29						
B05A	**Bryant**	**29.51**	**79**	⇑P	**P**	**14 50 28.4**	**+1.2**
	baz=29						
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**14 50 30.0**	**-0.1**
	comp=Z,6.7nm,0.6s,mb4.6,baz=277,slow=7.6,SNR=99						
YKA				PcP	PcP	14 53 31.8	-0.6
	comp=Z,2.9nm,0.7s,baz=287,slow=2.3,SNR=4.1						
YKA				ScP	ScP	14 57 12.8	+0.5
	comp=Z,3.8nm,1.0s,baz=280,slow=2.7,SNR=8.3						
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**14 50 30.0**	**0.0**
YKA				PcP	PcP	14 53 31.8	-0.6
YKA				ScP	ScP	14 57 12.8	+0.5
H02A	**Toledo**	**30.05**	**87**	⇓P	**P**	**14 50 31.9**	**-0.1**
	baz=30						
LON	**Longmire**	**30.36**	**82**	*e*P	**P**	**14 50 36.2**	**+1.4**
LON				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
LON	**Longmire**	**30.36**	**82**	*e*P	**P**	**14 50 36.2**	**+1.4**
	comp=Z,14nm,0.9s,mb4.7						
H03A	**Soap Creek Ran**	**30.48**	**86**	⇑P	**P**	**14 50 37.0**	**+1.1**
	baz=30						
I02A	**Mapleton**	**30.50**	**88**	⇑P	**P**	**14 50 36.5**	**+0.4**
	baz=30						
COR	**Corvallis**	**30.52**	**86**	PFAKE		14 50 50.0	+14
COR				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
B07A	**Winthrop**	**30.61**	**78**	⇑P	**P**	**14 50 37.5**	**+0.5**
	baz=30,SNR=6.0						
G04A	**Mulino**	**30.71**	**85**	⇑P	**P**	**14 50 38.6**	**+0.7**
	baz=30						
D06A	**Cle Elum**	**30.74**	**80**	⇓P	**P**	**14 50 38.8**	**+0.7**
	baz=31						
I03A	**Eugene**	**30.86**	**87**	⇑P	**P**	**14 50 40.4**	**+1.3**
	baz=31						
A08A	**Turner Farm, O**	**30.90**	**76**	⇑P	**P**	**14 50 39.5**	**0.0**
	baz=31,SNR=5.1						
E06A	**Yakima**	**30.96**	**82**	⇑P	**P**	**14 50 40.9**	**+0.7**
	baz=31						
C07A	**Waterville**	**30.99**	**79**	⇑P	**P**	**14 50 40.5**	**+0.2**
	baz=31,SNR=9.7						
EBG	**Ellensburg**	**31.04**	**81**	P	**P**	**14 50 42.1**	**+1.3**
B08A	**Colville Reser**	**31.12**	**77**	⇓P	**P**	**14 50 41.6**	**+0.1**
	baz=31,SNR=8.7						
H04A	**Detroit Lake**	**31.15**	**86**	⇓P	**P**	**14 50 42.4**	**+0.6**
	baz=31,SNR=8.5						
D07A	**Quincy**	**31.27**	**80**	⇓P	**P**	**14 50 43.1**	**+0.3**
	baz=31						
A09A	**Danville**	**31.30**	**76**	⇓P	**P**	**14 50 43.1**	**+0.1**
	baz=31,SNR=7.1						
G05A	**Wamic**	**31.40**	**84**	⇓P	**P**	**14 50 44.7**	**+0.8**
	baz=31						
EPH	**Ephrata**	**31.42**	**79**	P	**P**	**14 50 44.5**	**+0.4**
F06A	**Goldendale**	**

comp=Z,3µm,20.4s,MS5.0,baz=305,slow=31
YBH Yreka Blue Hor 32.44 91 *e*P **P 14 50 54.4 +1.3**
YBH pmax pmax
comp=Z,29nm,1.0s
YBH Yreka Blue Hor 32.44 91 *e*P **P 14 50 54.4 +1.3**
comp=Z,29nm,1.0s,mb5.1
NEW Newport 32.49 76 *e*P **P 14 50 53.0 -0.5**
NEW pmax pmax
comp=Z,22nm,0.9s
NEW Newport 32.49 76 *e*P **P 14 50 53.0 -0.5**
comp=Z,22nm,0.9s,mb5.0
A11A Hall Mountain, 32.63 75 ⇑P **P 14 50 55.0 +0.2**
baz=32,SNR=12
EDM Edmonton 32.66 66 *e*P **P 14 50 54.5 -0.5**
F08A Pendleton 32.66 81 ⇑P **P 14 50 55.6 +0.5**
baz=32
E09A Wood Farm, Sta 32.69 80 ⇓P **P 14 50 55.4 +0.1**
baz=32,SNR=15
I06A Prineville 32.75 85 ⇓P **P 14 50 56.6 +0.8**
baz=33
G08A Pilot Rock 32.81 82 ⇓P **P 14 50 56.8 +0.4**
baz=33,SNR=11
B11A Sandpoint 32.86 76 ⇑P **P 14 50 56.5 -0.2**
baz=33,SNR=10
D10A Wagner Farm, O 32.96 78 ⇑P **P 14 50 57.2 -0.4**
baz=33,SNR=8.0
K05A Summer Lake 32.99 88 ⇓P **P 14 50 58.8 +0.8**
baz=33,SNR=13
TIXI Tiksi 33.03 329⇑ *e*P **P 14 50 57.1 -0.9**
TIXI pmax pmax
comp=Z,20nm,1.3s,mb4.9
TIXI Tiksi 33.03 329 *e*P **P 14 50 57.0 -1.0**
comp=Z,10nm,0.6s,mb4.9
A12A Yaak River Ran 33.06 74 ⇑P **P 14 50 58.7 +0.2**
baz=33,SNR=11
I07A Izee 33.10 85 ⇓P **P 14 50 59.7 +0.7**
baz=33,SNR=9.6
J06A Christmas Vall 33.16 86 ⇓P **P 14 51 00.0 +0.6**
baz=33,SNR=22
WDC Whiskeytown Da 33.21 92 *e*P **P 14 51 00.7 +0.8**
WDC pmax pmax
comp=Z,32nm,0.9s,mb5.2
WDC Whiskeytown Da 33.21 92 *e*P **P 14 51 00.7 +0.8**
comp=Z,32nm,0.9s,mb5.3
F09A S2 Ranch, Elgi 33.23 81 ⇓P **P 14 51 00.5 +0.5**
baz=33,SNR=20
E10A Myers Farm, Un 33.33 79 ⇓P **P 14 51 01.0 +0.1**
baz=33,SNR=17
H08A Prairie City 33.38 83 ⇑P **P 14 51 01.4 +0.1**
baz=33,SNR=8.3
F10A Beach Ranch, E 33.52 80 ⇑P **P 14 51 02.7 +0.2**
baz=33,SNR=8.3
D11A Klaveano Farm, 33.52 78 ⇑P **P 14 51 01.8 -0.7**
baz=33,SNR=9.7
G09A Cove 33.53 82 ⇓P **P 14 51 02.9 +0.3**
baz=33,SNR=16
YAK Yakutsk 33.59 311*c iP* **P 14 51 01.0 -2.0**
YAK *e**PP pP 14 51 11.9 +0.9
YAK *e* 14 53 41.3
YAK *e*S **S 14 56 18.6 -4.7**
YAK *e*SSS 14 58 48.0
YAK pmax pmax
comp=Z,43nm,0.9s,mb5.4
YAK pmax pmax
comp=E,15nm,1.0s
YAK smax
comp=E,2µm,18.9s
YAK MLR MLR
comp=Z,9µm,19.0s,MS5.5
YAK MLR MLR
comp=N,5µm,20.0s,MS5.5
YAK MLR MLR
comp=E,7µm,17.0s,MS5.5
YAK Yakutsk 33.59 311 *e*P **P 14 51 00.8 -2.2**
comp=E,58nm,0.6s,mb5.7
J07A Hines 33.60 86 ⇑P **P 14 51 03.5 +0.2**
baz=33
C12B Naegeli Ranch, 33.73 76 ⇑P **P 14 51 04.0 -0.3**
baz=34
I08A Drewsey 33.77 84 ⇓P **P 14 51 05.0 +0.3**
baz=34,SNR=9.0
MOD Modoc 33.82 88 *e*P **P 14 51 05.6 +0.4**
comp=E,35nm,1.0s,mb5.2
HOPS Hopland 33.85 95 PFAKE 14 51 20.0 +15
HOPS LR LR
comp=Z,4µm,20.0s,MS5.1
ERM Erimo 33.86 272 P **P 14 51 05.4 -0.1**
comp=Z,306nm,1.2s,mb6.1,SNR=12
ERM Erimo 33.86 272 P **P 14 51 04.9 -0.6**
ERM pmax pmax
comp=Z,68nm,1.0s,mb5.5
ERM Erimo 33.86 272 *e*P **P 14 51 04.7 -0.9**
comp=Z,68nm,1.0s,mb5.5
ERM LR LR
comp=Z,5µm,20.0s,MS5.2
H09A Durkee 33.92 82 ⇑P **P 14 51 06.3 +0.3**
baz=34,SNR=7.8
G10A Bishop Farm, J 33.92 81 ⇑P **P 14 51 06.4 +0.3**
baz=34,SNR=51
E11A Bogner Ranch, 33.94 79 ⇓P **P 14 51 05.6 -0.6**
baz=34,SNR=10
B13A Whitefish 34.01 75 ⇑P **P 14 51 06.3 -0.4**
baz=34,SNR=6.1
K07A Rock Creek Ran 34.02 86 ⇑P **P 14 51 07.3 +0.4**
baz=34,SNR=14
WALA Waterton Lakes 34.03 73 *e*P **P 14 51 06.2 -0.7**
comp=Z,1.1nm,1.1s,mb3.7
BMO Blue Mountains 34.04 82 *e*P **P 14 51 07.2 +0.1**
comp=Z,26nm,1.2s,mb5.0
BMO LR LR
comp=Z,5µm,22.0s,MS5.2
J08A Circle Bar Ran 34.12 85 ⇑P **P 14 51 07.8 -0.1**
baz=34,SNR=15
F11A Grangeville 34.20 80 ⇓P **P 14 51 08.4 -0.1**
baz=34,SNR=21
I09A Lost Marbles R 34.24 84 ⇑P **P 14 51 08.9 +0.2**
baz=34
C13A Hot Springs 34.28 76 ⇑P **P 14 51 08.8 -0.3**
baz=34,SNR=17
L07A Adell 34.34 88 ⇑P **P 14 51 10.0 +0.3**
baz=34,SNR=10
A14A Double T Ranch 34.35 73 ⇑P **P 14 51 09.5 -0.2**
baz=34,SNR=10
K08A Mann Creek Ran 34.46 86 ⇓P **P 14 51 11.4 +0.7**
baz=34,SNR=18
MCCM Marconi Confer 34.50 96 PFAKE 14 51 20.0 +8.9
MCCM LR LR
comp=Z,4µm,22.0s,MS5.1
H10A Noah's Angus R 34.52 82 ⇓P **P 14 51 11.5 +0.3**
baz=34,SNR=76
WVOR Wild Horse Val 34.54 86 *e*P **P 14 51 11.6 +0.2**
WVOR pmax pmax
comp=Z,46nm,1.1s,mb5.3
WVOR Wild Horse Val 34.54 86 *e*P **P 14 51 11.6 +0.3**
comp=Z,46nm,1.1s,mb5.3
J09A Fry Pan Ranch, 34.57 84 ⇑P **P 14 51 11.8 +0.2**
baz=34,SNR=25
D13A Huson 34.63 77 ⇓P **P 14 51 11.7 -0.4**
baz=34,SNR=6.3
B14A Marquette Ranc 34.73 74 ⇑P **P 14 51 12.6 -0.4**
baz=34,SNR=11
I10A Payette 34.75 83 ⇑P **P 14 51 13.7 +0.5**
baz=35
A15A Johnson Ranch, 34.76 73 ⇑P **P 14 51 12.5 -0.8**
baz=35
N06A Buffalo Meadow 34.77 90 ⇑P **P 14 51 14.1 +0.7**
baz=35,SNR=24
M07A Soldier Meadow 34.81 88 ⇓P **P 14 51 14.6 +0.9**
baz=35,SNR=28
L08A Fields 34.85 87 ⇑P **P 14 51 14.6 +0.5**
baz=35,SNR=28
H11A Donnelly 34.90 81 ⇑P **P 14 51 14.6 +0.1**
baz=35,SNR=26
K09A Rome 34.95 85 ⇑P **P 14 51 15.3 +0.4**
baz=35,SNR=9.5
BEKR Beckwourth 34.98 91 ⇓P **P 14 51 15.5 +0.2**
baz=35,SNR=11
MSO Missoula 35.06 77 *e*P **P 14 51 14.8 -1.1**
comp=Z,22nm,1.1s,mb5.0
E13A Victor 35.11 78 ⇑P **P 14 51 16.0 -0.3**
baz=35,SNR=17
O06A Flanigan 35.12 91 ⇑P **P 14 51 16.2 -0.3**
baz=35,SNR=13
B15A Bradely Ranch, 35.17 74 ⇑P **P 14 51 16.4 -0.4**
baz=35,SNR=9.6
D14A Greenough 35.20 76 ⇓P **P 14 51 16.7 -0.3**
baz=35,SNR=25
M08A Happy Creek Ra 35.26 88 ⇓P **P 14 51 18.2 +0.6**
baz=35,SNR=21
N07B Gerlach 35.28 89 ⇓P **P 14 51 18.5 +0.7**
baz=35,SNR=13
F13A Darby 35.35 79 ⇑P **P 14 51 18.0 -0.4**
baz=35,SNR=37
I11A Placerville 35.36 82 ⇑P **P 14 51 18.5 +0.1**
baz=35,SNR=37
C15A Salmond Ranch, 35.40 75 ⇓P **P 14 51 18.4 -0.4**
baz=35,SNR=49
HABR Khabarovsk 35.41 287*c iP* **P 14 51 18.4 -0.5**
HABR *e**SP sP 14 51 32.7 +2.5
HABR *e*PPP 14 52 52.9
HABR *e* 14 53 47.4
HABR *e*S **S 14 56 51.9 +0.2**
HABR *e**SS sS 14 57 10.0 +5.1
HABR *e*SSS 14 59 34.0
HABR *e* 15 01 35.8
HABR pmax pmax
comp=Z,130nm,1.3s,mb5.7
HABR pmax pmax
comp=E,64nm,1.1s
HABR pmax pmax
comp=N,32nm,1.4s
HABR MLR MLR
comp=N,2µm,16.0s,MS5.2
HABR MLR MLR
comp=Z,2µm,15.0s,MS4.9
HABR MLR MLR
comp=E,3µm,15.0s,MS5.2
K10A MacKenzie Ranc 35.42 85 ⇑P **P 14 51 19.3 +0.3**
baz=35,SNR=26
A16A West Butte Ran 35.44 72 ⇓P **P 14 51 18.1 -0.9**
baz=35,SNR=10.0
E14A Clinton 35.54 77 ⇑P **P 14 51 19.7 -0.3**
baz=35,SNR=11
B16A M & M Farms, S 35.62 73 ⇓P **P 14 51 19.8 -0.9**
baz=35
H12A Diamond D Ranc 35.68 81 ⇓P **P 14 51 21.0 -0.2**
baz=36,SNR=21
WCN Washoe City 35.69 92 ⇑P **P 14 51 21.7 +0.4**
baz=36,SNR=9.3
MFID Camas Ranch 35.71 83 ⇓P **P 14 51 21.4 0.0**
baz=36,SNR=17
O07A Toulon 35.71 90 ⇓P **P 14 51 21.9 +0.4**
baz=36,SNR=21
G13A Cobalt 35.77 80 ⇑P **P 14 51 21.9 -0.1**
baz=36,SNR=34
N08A GE Springer Mi 35.80 88 ⇑P **P 14 51 22.5 +0.3**
baz=36,SNR=21
D15A Lincoln 35.81 76 ⇑P **P 14 51 22.0 -0.2**
baz=36,SNR=26
M09A Marrel Ranch, 35.84 87 ⇓P **P 14 51 22.9 +0.3**
baz=36,SNR=9.3
C16A Fuhringer Ranc 35.89 74 ⇓P **P 14 51 22.5 -0.5**
baz=36,SNR=24
K11A Parker Ranch, 35.94 84 ⇓P **P 14 51 23.9 +0.5**
baz=36,SNR=21
A17A Triple J Farms 35.96 72 ⇓P **P 14 51 22.9 -0.7**
baz=36,SNR=11
H13A Challis 36.04 80 ⇑P **P 14 51 24.2 -0.1**
baz=36,SNR=22
E15A Deer Lodge 36.04 77 ⇓P **P 14 51 23.8 -0.5**
baz=36,SNR=20
L10A Juniper Basin 36.06 85 ⇑P **P 14 51 24.7 +0.2**
baz=36,SNR=18
O08A Rochester Mine 36.08 89 ⇑P **P 14 51 25.5 +0.9**
baz=36,SNR=26
P07A Fallon 36.08 91 ⇓P **P 14 51 25.1 +0.4**
baz=36
N09A Rock Creek Ran 36.13 88 ⇑P **P 14 51 25.4 +0.3**
baz=36,SNR=8.1
RES Resolute Bay 36.15 26 P **P 14 51 23.3 -1.6**
RES pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
RES Resolute Bay 36.15 26 *e*P **P 14 51 23.0 -1.9**
comp=Z,1.1nm,0.4s,mb4.1
G14A Jackson 36.16 79 ⇑P **P 14 51 25.3 0.0**
baz=36,SNR=24
B17A L&G Farms, Che 36.21 73 ⇑P **P 14 51 25.0 -0.7**
baz=36,SNR=11
J12A Stokes Ranch, 36.24 83 ⇑P **P 14 51 26.4 +0.3**
baz=36,SNR=31
SAO San Andreas Ge 36.26 96 *e*P **P 14 51 25.8 -0.4**
SAO pmax pmax
comp=Z,32nm,1.0s,mb5.2
SAO San Andreas Ge 36.26 96 *e*P **P 14 51 25.8 -0.5**
comp=Z,32nm,1.0s,mb5.2
M10A I.L. Ranch, Tu 36.34 86 ⇓P **P 14 51 27.8 +0.9**
baz=36,SNR=9.1
R06C Coleville 36.36 92 ⇓P **P 14 51 27.7 +0.6**
baz=36,SNR=14
D16A Dana Ranch, Ca 36.39 75 ⇓P **P 14 51 27.2 0.0**
baz=36,SNR=16
F15A Butte 36.43 77 ⇓P **P 14 51 27.3 -0.3**
baz=36,SNR=6.6
L11A Cat Creek Ranc 36.45 85 ⇓P **P 14 51 27.8 0.0**
baz=36,SNR=28
A18A Metzger Ranch, 36.47 71 ⇑P **P 14 51 26.8 -1.1**
baz=36,SNR=9.3
I13A Wildhorse Cree 36.47 81 ⇑P **P 14 51 28.1 +0.1**
baz=36,SNR=30
P08A Dixie Valley 36.48 90 ⇑P **P 14 51 28.6 +0.5**
baz=36
HLID Hailey 36.49 82 ⇑P **P 14 51 28.3 +0.2**
baz=37,SNR=25
HLID Hailey 36.49 82 *e*P **P 14 51 27.9 -0.2**
comp=Z,25nm,1.2s,mb5.0
H14A Leadore 36.55 80 ⇓P **P 14 51 28.6 0.0**
baz=36,SNR=22
E16A East Helena 36.56 76 ⇓P **P 14 51 28.5 -0.2**
baz=36,SNR=16
BMN Battle Mountai 36.56 88 *e*P **P 14 51 27.4 -1.4**
BMN pmax pmax
comp=Z,18nm,1.1s,mb4.8
BMN MLR MLR
comp=Z,3µm,20.0s,MS5.1
BMN Battle Mountai 36.56 88 *e*P **P 14 51 27.4 -1.4**
comp=Z,18nm,1.1s,mb4.8
BMN LR LR
comp=Z,3µm,20.0s,MS5.1
DLMT Dillon 36.62 78 *e*P **P 14 51 27.1 -2.1**
comp=Z,35nm,1.2s,mb5.1
K12A Draper Farm, C 36.70 83 ⇑P **P 14 51 30.3 +0.3**
baz=36,SNR=14
J13A Cove Ranch, Pi 36.72 82 ⇓P **P 14 51 30.2 0.0**
baz=36,SNR=44
O09A Fish Creek Ran 36.74 89 ⇑P **P 14 51 30.8 +0.5**
baz=37,SNR=11
B18A Beardsley Farm 36.76 72 ⇓P **P 14 51 29.9 -0.5**
baz=36,SNR=11
G15A Dillon 36.78 78 ⇑P **P 14 51 30.6 -0.1**
baz=37,SNR=29
N10A Dunphy 36.83 87 ⇑P **P 14 51 31.4 +0.3**
baz=37
D17A Six Diamond Ra 36.84 74 ⇓P **P 14 51 30.9 -0.2**
baz=37,SNR=15
I14A Mackay 36.87 81 ⇑P **P 14 51 31.2 -0.1**
baz=37,SNR=36
L12A House Creek Ra 36.91 84 ⇓P **P 14 51 32.0 +0.2**
baz=37,SNR=14
EGMT Eagleton 36.95 73 ⇓P **P 14 51 31.7 -0.3**
baz=37,SNR=12
EGMT Eagleton 36.95 73 *e*P **P 14 51 30.7 -1.4**
comp=Z,68nm,1.0s,mb5.4
EGMT LR LR
comp=Z,4µm,20.0s,MS5.2
KLR Kul'dur 36.98 290 *e*P **P 14 51 27.0 -5.2**
KLR pmax pmax
comp=E,38nm,1.2s
KLR pmax pmax
comp=Z,43nm,1.2s,mb5.2
KLR MLR MLR
comp=E,4µm,17.0s
KLR MLR MLR
comp=Z,6µm,17.0s,MS5.4
F16A Kennard Place, 36.98 77 ⇑P **P 14 51 32.3 0.0**
baz=37,SNR=9.5
H15A Lima 36.98 79 ⇓P **P 14 51 32.3 -0.1**
baz=37,SNR=26
BOZ Bozeman (W) 37.05 77 ⇓P **P 14 51 32.6 -0.2**
baz=37,SNR=28
BOZ Bozeman (W) 37.05 77 *e*P **P 14 51 32.4 -0.5**
BOZ pmax pmax
comp=Z,37nm,1.3s,mb5.0
BOZ MLR MLR
comp=Z,2µm,19.0s,MS4.9
BOZ Bozeman (W) 37.05 77 *e*P **P 14 51 32.4 -0.4**
comp=Z,37nm,1.3s,mb5.1
BOZ LR LR
comp=Z,2µm,19.0s,MS4.9
Q08A Gabbs 37.08 91 ⇓P **P 14 51 33.6 +0.4**
baz=37
E17A Martinsdale 37.09 76 ⇓P **P 14 51 33.1 0.0**
baz=37,SNR=41
O10A Cortez Mining, 37.09 88 ⇓P **P 14 51 33.6 +0.3**
baz=37,SNR=8.0
NVAR Mina Array Bea 37.12 92 P **P 14 51 34.2 +0.7**
comp=Z,9.9nm,0.8s,mb4.7,baz=296,slow=7.7,SNR=39
P09A Austin 37.14 89 ⇑P **P 14 51 34.6 +0.9**
baz=37,SNR=5.6
J14A Carey 37.16 82 ⇑P **P 14 51 34.1 +0.3**
baz=37,SNR=30
G16A Moss Hill, Enn 37.16 78 ⇑P **P 14 51 33.4 -0.5**
baz=37,SNR=23
K13A Stover Farm, H 37.20 83 ⇓P **P 14 51 34.4 +0.3**
baz=37,SNR=10
N11A Elko Archery C 37.24 87 ⇓P **P 14 51 35.2 +0.7**
baz=37
R08A Mina 37.29 92 ⇑P **P 14 51 35.7 +0.7**
baz=37
D18A Linhart Farms, 37.34 74 ⇓P **P 14 51 35.1 -0.2**
baz=37,SNR=12
M12A Wells 37.40 85 ⇓P **P 14 51 36.2 +0.4**
baz=37,SNR=16
I15A Monteview 37.41 80 ⇑P **P 14 51 36.2 +0.2**
baz=37,SNR=9.9
F17A Fitzpatrick Pl 37.49 76 ⇓P **P 14 51 36.6 0.0**
baz=37,SNR=32
Q09A Carvers 37.56 90 ⇓P **P 14 51 38.1 +0.9**
baz=37
E18A Harlowton 37.59 75 ⇓P **P 14 51 37.7 +0.2**
baz=37,SNR=20
L13A Double Diamond 37.60 84 ⇓P **P 14 51 38.1 +0.6**
baz=37,SNR=21
NRGR Nerungri 37.63 304 *e*P **P 14 51 36.7 -1.0**
N12A Clover Valley, 37.65 86 ⇓P **P 14 51 38.9 +0.9**
baz=38,SNR=18
O11A Cowboy Ranch, 37.70 87 ⇓P **P 14 51 39.0 +0.5**
baz=38,SNR=10.0
G17A Pierce Place, 37.75 77 ⇓P **P 14 51 38.8 0.0**
baz=38,SNR=15
H16A Russell Place, 37.78 78 ⇓P **P 14 51 39.1 0.0**
baz=38,SNR=26
J15A Blackfoot 37.78 81 ⇓P **P 14 51 39.7 +0.6**
baz=38,SNR=6.0
K14A Jones Ranch, D 37.81 82 ⇑P **P 14 51 40.2 +0.9**
baz=38
M13A Montello 37.89 85 ⇓P **P 14 51 40.2 +0.2**
baz=38,SNR=8.8
RCTC Rector, Farmer 37.90 95 ⇓P **P 14 51 41.0 +0.8**
baz=38
R09A Tonopah 37.99 91 ⇓P **P 14 51 41.2 +0.3**
baz=38,SNR=21
TPH Tonopah 38.01 91 *e*P **P 14 51 41.3 +0.2**
TPH pmax pmax
comp=Z,31nm,1.1s,mb5.0
TPH Tonopah 38.01 91 *e*P **P 14 51 41.3 +0.2**
comp=Z,31nm,1.1s,mb5.0
Q10A Clear Creek Ra 38.04 90 ⇑P **P 14 51 42.0 +0.6**
baz=38,SNR=20
F18A Big Timber 38.05 76 ⇑P **P 14 51 41.2 -0.2**
baz=38,SNR=14
I16A Newdale 38.09 79 ⇓P **P 14 51 42.0 +0.3**
baz=38,SNR=12
SMMC Simmler 38.10 97 ⇓P **P 14 51 42.2 +0.4**
baz=38
O12A Currie 38.18 87 ⇑P **P 14 51 42.6 +0.1**
baz=38,SNR=43
S09A Goldfield 38.23 92 ⇑P **P 14 51 42.8 -0.1**
baz=38,SNR=14
FFC Flin Flon 38.26 59 *e*P **P 14 51 41.8 -1.2**
FFC pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
FFC MLR MLR
comp=Z,8µm,19.0s,MS5.6
FFC Flin Flon 38.26 59 *e*P **P 14 51 41.8 -1.2**
comp=Z,8.7nm,0.9s,mb4.5
FFC LR LR
comp=Z,8µm,19.0s,MS5.6
M14A Sheep Mountain 38.30 84 ⇓P **P 14 51 43.6 +0.1**
baz=38,SNR=16
VES Vestal, Richgr 38.30 96 ⇓P **P 14 51 43.5 -0.1**
baz=38
H17A Grant Village 38.35 78 ⇑P **P 14 51 45.5 +1.6**
baz=38,SNR=42
IMW Indian Meadow 38.40 79 *e*P **P 14 51 44.1 -0.2**
comp=Z,36nm,1.0s,mb5.0
DCID1 Drake Creek 38.42 80 *e*P **P 14 51 45.2 +0.7**
comp=Z,86nm,1.1s,mb5.4
R10A Warm Springs 38.44 90 ⇓P **P 14 51 45.3 +0.6**
baz=38
G18A Lazy EL Ranch, 38.45 76 ⇑P **P 14 51 44.5 -0.3**
baz=38
RRI2 Red Ridge 38.48 80 *e*P **P 14 51 44.9 -0.1**
comp=Z,60nm,1.0s,mb5.3
S10A Tonopah Range, 38.49 91 ⇓P **P 14 51 45.6 +0.5**
baz=38,SNR=20
Q11A Duckwater 38.49 89 ⇑P **P 14 51 45.3 +0.2**
baz=38,SNR=10
P12A McGill 38.56 88 ⇑P **P 14 51 46.0 +0.3**
baz=38,SNR=22
L15A Malad City 38.60 83 ⇓P **P 14 51 46.0 0.0**
baz=38,SNR=10
GRAC Grapevine Rang 38.60 93 ⇑P **P 14 51 47.0 +1.0**
baz=38
MOOW Moose Ponds 38.60 79 *e*P **P 14 51 45.9 -0.1**
comp=Z,13nm,1.0s,mb4.6
K16A Soda Springs 38.61 81 ⇓P **P 14 51 47.6 +1.6**
baz=38,SNR=67
I17A Pilgram Creek 38.61 79 ⇓P **P 14 51 46.5 +0.4**
baz=38
RLMT Red Lodge 38.74 76 ⇓P **P 14 51 47.2 +0.1**
baz=38,SNR=42
RLMT Red Lodge 38.74 76 *e*P **P 14 51 46.7 -0.4**
comp=Z,51nm,1.0s,mb5.2
REDW Red Top Meadow 38.75 80 *e*P **P 14 51 47.5 +0.2**
comp=Z,60nm,1.2s,mb5.2
SNOW Snow King Moun 38.76 80 *e*P **P 14 51 48.1 +0.8**
comp=Z,41nm,1.2s,mb5.0
LOHW Long Hollow 38.76 79 *e*P **P 14 51 46.9 -0.5**
comp=Z,15nm,1.1s,mb4.6
N14A Grayback Hills 38.78 85 ⇑P **P 14 51 47.8 +0.2**
baz=39
J17A Brown Place, J 38.84 80 ⇑P **P 14 51 48.3 +0.3**
baz=39,SNR=18
R11A Troy Canyon, C 38.84 90 ⇓P **P 14 51 48.3 +0.2**
baz=39,SNR=18
Q12A Willow Creek R 38.87 88 ⇓P **P 14 51 48.9 +0.5**
baz=39,SNR=18
M15A Larsen Ranch, 38.87 83 ⇓P **P 14 51 47.8 -0.5**
baz=39,SNR=9.1
DAC Darwin (Calif) 38.93 94 PFAKE 14 52 00.0 +11
DAC LR LR
comp=Z,2µm,22.0s,MS4.9
P13A Bates Ranch, G 39.12 87 ⇓P **P 14 51 50.5 +0.1**
baz=39,SNR=24
MPMC Manual Prospec 39.13 94 ⇓P **P 14 51 51.1 +0.5**
baz=39,SNR=11
N15A Stansbury Isla 39.17 84 ⇓P **P 14 51 51.2 +0.4**
baz=39
L16A Fish Haven 39.17 82 ⇓P **P 14 51 51.0 +0.2**
baz=39,SNR=21
I18A Diamond G Ranc 39.19 79 ⇓P **P 14 51 51.2 +0.3**
baz=39
FURC Furnace Creek, 39.25 93 ⇑P **P 14 51 52.0 +0.5**
baz=39
J18A Kendall Valley 39.34 79 ⇓P **P 14 51 52.3 +0.1**
baz=39,SNR=29
DUG Dugway 39.40 85 ⇓P **P 14 51 53.0 +0.2**
baz=39,SNR=27
DUG Dugway 39.40 85 *e*P **P 14 51 53.0 +0.2**
DUG pmax pmax
comp=Z,32nm,1.1s,mb5.0
DUG MLR MLR
comp=Z,3µm,19.0s,MS5.1
DUG Dugway 39.40 85 *e*P **P 14 51 53.0 +0.2**
comp=Z,32nm,1.1s,mb5.0
DUG LR LR
comp=Z,3µm,19.0s,MS5.1
R12A Pony Springs, 39.45 89 ⇓P **P 14 51 53.5 +0.3**
baz=39,SNR=6.9
M16A Huntsville 39.46 83 ⇓P **P 14 51 53.2 0.0**
baz=39,SNR=15
L17A Cokeville 39.46 81 ⇑P **P 14 51 53.2 0.0**
baz=39,SNR=8.2
O15A The Old Anders 39.56 85 ⇓P **P 14 51 54.0 -0.1**

baz=39
P14A Drum Mountains 39.61 86 ⇑P P 14 51 54.9 +0.3
baz=39,SNR=8.0
K18A Toltan Ranch, 39.66 80 ⇑P P 14 51 55.0 +0.2
baz=40,SNR=17
S12A Delamar Landin 39.76 90 ⇑P P 14 51 56.3 +0.6
baz=40,SNR=7.9
T11A Corn Creek, Al 39.76 91 ⇓P P 14 51 56.0 +0.2
baz=40,SNR=17
N16A Rees Ranch, Co 39.83 83 ⇓P P 14 51 56.2 -0.1
baz=40
Q14A Sevier Lake (B 39.86 87 ⇑P P 14 51 56.0 -0.5
baz=40,SNR=22
BW06 Boulder Array 39.87 80 ⇓P P 14 51 56.5 -0.1
baz=40,SNR=86
BW06 Boulder Array 39.87 80 PFAKE 14 52 10.0 +13
BW06 LR LR
comp=Z,3μm,20.0s,MS5.1
PDAR Pinedale Array 39.87 80 P P 14 51 56.2 -0.4
comp=Z,43nm,1.0s,mb5.1,baz=305,slow=4.7,SNR=113
R13A O'Grain Ranch, 39.94 89 ⇑P P 14 51 57.9 +0.7
baz=40
M17A Scullys Gap (B 39.95 82 ⇑P P 14 51 56.8 -0.5
baz=40,SNR=24
MWC Mount Wilson 40.01 97 eP P 14 51 57.9 +0.1
MWC pmax pmax
comp=Z,30nm,1.3s,mb4.9
MWC Mount Wilson 40.01 97 eP P 14 51 57.9 +0.1
comp=Z,30nm,1.3s,mb4.9
GSC Goldstone 40.05 94 ⇓P P 14 51 58.1 -0.1
baz=40,SNR=16
GSC Goldstone 40.05 94 eP P 14 51 58.1 -0.1
GSC pmax pmax
comp=Z,48nm,1.2s,mb5.1
GSC Goldstone 40.05 94 eP P 14 51 58.0 -0.1
comp=Z,48nm,1.2s,mb5.1
L18A Fontenelle, Gr 40.07 81 ⇑P P 14 51 57.8 -0.4
baz=40,SNR=22
P15A Leamington 40.11 86 ⇓P P 14 51 58.9 +0.3
baz=40,SNR=12
N17A Moffit Pass 40.16 83 ⇑P P 14 51 58.8 -0.3
baz=40,SNR=10
MJAR Matsushiro Arr 40.24 269 P P 14 51 59.5 -0.3
comp=Z,12nm,0.8s,mb4.7,baz=47,slow=7.1,SNR=34
MAJO Matsushiro 40.24 269 eP P 14 51 59.3 -0.4
MAJO pmax pmax
comp=Z,74nm,1.0s,mb5.4
MAJO Matsushiro 40.24 269 eP P 14 51 59.3 -0.5
comp=Z,74nm,1.0s,mb5.4
MAT Matsushiro 40.24 269 P P 14 51 59.4 -0.3
MAT S **S 14 58 04.0 -1.1**
BFSC Mount Baldy St 40.24 96 ⇓P P 14 51 60.0 +0.2
baz=40
K19A Absolon Red Bu 40.27 79 ⇑P P 14 51 59.3 -0.6
baz=40,SNR=68
M18A Lyman 40.34 82 ⇓P P 14 51 60.0 -0.5
baz=40,SNR=8.5
L19A Farson 40.38 80 ⇓P P 14 52 00.6 -0.2
baz=40,SNR=15
S13A Holt Ranch, En 40.38 89 ⇑P P 14 52 00.8 -0.1
baz=40,SNR=15
R14A James Farms, M 40.44 88 ⇓P P 14 52 01.8 +0.4
baz=40
ALE Alert 40.49 11 P P 14 52 01.0 -0.3
comp=Z,124nm,0.5s,mb5.9,SNR=19
FCC Fort Churchill 40.53 51 eP P 14 52 01.2 -0.7
FCC pmax pmax
comp=Z,1.0nm,0.7s
FCC Fort Churchill 40.53 51 eP P 14 52 01.1 -0.7
comp=Z,1.4nm,0.7s,mb3.7
MDJ Mudanjiang 40.62 285 P P 14 52 01.3 -1.5
MDJ AP pP 14 52 06.8 -4.2
MDJ XP sP 14 52 10.0 -4.2
MDJ PCP PcP 14 54 04.0 -0.3
MDJ PCS PcS 14 57 54.8 -0.1
MDJ S **S 14 58 11.3 +0.7**
MDJ AMB AMB
comp=Z,14nm,0.7s,mb4.7
MDJ AMB AMB
comp=Z,483nm,8.7s
MDJ LR LR
comp=N,878nm,15.3s,MS5.3
MDJ LR LR
comp=E,4μm,17.2s,MS5.3
MDJ LR LR
comp=Z,5μm,17.2s,MS5.4
MDJ Mudanjiang 40.62 285 eP P 14 52 00.2 -2.7
comp=Z,8.5nm,0.7s,mb4.5
HEC Hector,Ludlow 40.66 94 ⇑P P 14 52 03.2 0.0
baz=40
K20A Yellowstone Ra 40.67 79 ⇓P P 14 52 02.5 -0.8
baz=40,SNR=25
O17A Robinson Place 40.67 84 ⇑P P 14 52 03.5 +0.3
baz=40,SNR=8.7
S14A Cedar City 40.69 88 ⇑P P 14 52 03.9 +0.4
baz=40
U12A Valley of Fire 40.70 91 ⇑P P 14 52 04.2 +0.6
baz=40
T13A Saint George 40.71 90 ⇓P P 14 52 03.9 +0.3
baz=40
M19A Rock Springs 40.85 81 ⇓P P 14 52 04.5 -0.2
baz=41,SNR=6.1
N18A Larsen Ranch, 40.85 82 ⇓P P 14 52 04.1 -0.7
baz=41,SNR=8.4
V12A Nelson 40.97 92 ⇑P P 14 52 05.6 -0.2
baz=41
L20A Wamsutter 41.05 80 ⇓P P 14 52 06.1 -0.2
baz=41,SNR=9.3
U13A Pakoon Wash 41.06 91 ⇓P P 14 52 06.6 +0.1
baz=41
O18A Roosevelt 41.07 83 ⇓P P 14 52 06.7 +0.1
baz=41,SNR=11
GMRC Granite Mounta 41.10 94 ⇓P P 14 52 06.9 +0.1
baz=41,SNR=12
P17A Butcher Ranch, 41.11 85 ⇓P P 14 52 06.7 -0.2
baz=41
T14A Hurricane 41.19 89 ⇓P P 14 52 07.8 +0.3
baz=41
Q16A Castle Valley 41.19 86 ⇓P P 14 52 08.2 +0.7
baz=41,SNR=10
N19A John Jarvie Ra 41.20 82 ⇑P P 14 52 06.9 -0.7
baz=41,SNR=19
P18A Preston Nutter 41.32 84 ⇑P P 14 52 08.8 +0.3
baz=41,SNR=34
R16A Teasdale 41.39 87 ⇓P P 14 52 09.7 +0.5
baz=41,SNR=15
PFO Pinyon Flat Ob 41.40 96 LR LR 15 05 23.8
comp=Z,2μm,20.5s,MS4.9,baz=302,slow=30
PFO Pinyon Flat Ob 41.40 96 ⇓P P 14 52 09.4 0.0
baz=41
PFO Pinyon Flat Ob 41.40 96 eP P 14 52 09.1 -0.3
PFO pmax pmax
comp=Z,19nm,1.1s,mb4.6
PFO Pinyon Flat Ob 41.40 96 eP P 14 52 09.1 -0.2
comp=Z,19nm,1.1s,mb4.6
PFO e 14 52 28.9
V13A Grand Canyon W 41.42 91 ⇓P P 14 52 09.5 0.0
baz=41
M20A Sweetwater, Wa 41.45 80 ⇑P P 14 52 09.5 -0.1
baz=41,SNR=22
SRU San Rafael 41.47 85 ⇑P P 14 52 10.0 +0.2
baz=41,SNR=10
U14A Mt Trumbull 41.54 90 ⇓P P 14 52 10.5 +0.1
baz=41
O19A Miners Draw (B 41.59 82 ⇓P P 14 52 10.5 -0.3
baz=41,SNR=13
T15A Red Dirt Ranch 41.65 89 ⇓P P 14 52 11.3 0.0
baz=42,SNR=7.9
L21A Rawlins 41.66 79 ⇓P P 14 52 11.0 -0.4
baz=42,SNR=32
S16A Weppner Ranch, 41.68 87 ⇓P P 14 52 11.3 -0.3
baz=42
Q18A Rafter H Ranch 41.71 85 ⇓P P 14 52 11.7 -0.1
baz=42,SNR=24
R17A Hanksville Air 41.78 86 ⇓P P 14 52 12.6 +0.2
baz=42,SNR=14
IRM Iron Mountain 41.83 94 ⇑P P 14 52 12.7 -0.1
baz=42
RWWY Rawlins 41.92 79 eP P 14 52 12.0 -1.5
comp=Z,66nm,1.3s,mb5.1
W13A Hualapai Mount 41.98 92 ⇑P P 14 52 14.5 +0.5
baz=42,SNR=10
U15A North Rim 42.08 89 ⇑P P 14 52 14.9 0.0
baz=42,SNR=16
P19A Cripple Cowboy 42.08 83 ⇓P P 14 52 14.6 -0.3
baz=42,SNR=30
V14A Boquillas Ranc 42.10 91 ⇑P P 14 52 15.3 +0.2
baz=42
S17A Black Ridge (B 42.22 87 ⇑P P 14 52 15.6 -0.4
baz=42
O20A White River Ci 42.23 82 ⇓P P 14 52 15.7 -0.3
baz=42,SNR=36
N21A Black Mountain 42.28 81 ⇑P P 14 52 15.9 -0.6
baz=42,SNR=26
R18A Canyonlands Na 42.30 85 ⇓P P 14 52 16.7 0.0
baz=42,SNR=9.3
Q19A Hogan Spring (42.33 84 ⇑P P 14 52 16.5 -0.4
baz=42,SNR=20
X13A Yucca 42.34 93 ⇓P P 14 52 17.0 -0.1
baz=42
W14A Seligman 42.39 91 ⇓P P 14 52 17.4 0.0
baz=42,SNR=6.4
RSSD Black Hills 42.40 75 eP P
RSSD pmax pmax
comp=Z,31nm,1.4s,mb4.8
RSSD Black Hills 42.40 75 eP P 14 52 16.1 -1.3
comp=Z,31nm,1.4s,mb4.8
BOD Bodaibo 42.43 309 eP P 14 52 15.5 -1.9
BOD pmax pmax
comp=Z,34nm,0.7s,mb5.1
M22A Cedar Creek Ra 42.46 79 ⇓P P 14 52 17.7 -0.2
baz=42,SNR=42
Y12C Blythe 42.49 94 ⇑P P 14 52 18.3 +0.1
baz=42
V15A Kaibab Nationa 42.55 90 ⇓P P 14 52 19.1 +0.4
baz=42,SNR=21
T17A Navajo Res., N 42.63 88 ⇓P P 14 52 19.3 0.0
baz=42,SNR=7.8
O21A Pagoda 42.65 81 ⇑P P 14 52 19.1 -0.3
baz=42,SNR=25
S18A Hurst Farm, Bl 42.68 86 ⇓P P 14 52 19.7 -0.1
baz=42,SNR=14
R19A Curley Farm, L 42.75 85 ⇓P P 14 52 20.3 0.0
baz=43,SNR=11
GLA Glamis 42.78 95 ⇓P P 14 52 20.9 +0.4
baz=43
Y13A Salome 42.87 93 ⇑P P 14 52 21.7 +0.4
baz=43
N22A Wattenberg Ran 42.90 80 ⇓P P 14 52 21.2 -0.3
baz=43,SNR=25
Q20A Ridgley Place, 42.92 83 ⇑P P 14 52 21.1 -0.5
baz=43,SNR=11
U17A Shonto 42.97 88 ⇑P P 14 52 22.2 +0.1
baz=43,SNR=7.9
U16A Tuba City 42.98 89 ⇓P P 14 52 22.4 +0.3
baz=43,SNR=6.4
X14A Yava 43.00 92 ⇑P P 14 52 22.8 +0.4
baz=43,SNR=10.0
T18A Mexican Hat 43.11 87 ⇓P P 14 52 22.4 -0.8
baz=43,SNR=22
S19A Harvey Farm, M 43.17 85 ⇓P P 14 52 23.5 -0.2
baz=43,SNR=9.6
WUAZ Wupatki 43.24 90 ⇑P P 14 52 25.0 +0.7
baz=43,SNR=12
WUAZ Wupatki 43.24 90 eP P 14 52 24.6 +0.4
comp=Z,22nm,0.9s,mb4.9
Y14A Wickenburg 43.29 93 ⇑P P 14 52 24.6 -0.1
baz=43
X15A Humboldt 43.39 91 ⇓P P 14 52 25.6 +0.1
baz=43
W16A Flagstaff 43.42 90 ⇑P P 14 52 25.9 +0.2
baz=43,SNR=12
Q21A Lamborn Mesa, 43.44 83 ⇑P P 14 52 25.5 -0.3
baz=43,SNR=16
CN2 Changchun 43.54 286 ⇑P P 14 52 26.0 -0.6
CN2 eXP sP 14 52 36.0 -2.1
CN2 AMB AMB
comp=Z,80nm,0.6s,mb5.6
CN2 AMB AMB
comp=Z,400nm,5.0s
CN2 LR LR
comp=N,4μm,17.0s,MS5.5
CN2 LR LR
comp=E,3μm,17.0s,MS5.5
CN2 LR LR
comp=Z,4μm,18.0s,MS5.4
U18A Rough Rock, Ch 43.57 87 ⇑P P 14 52 27.2 +0.2
baz=43
113A Mohawk Valley, 43.62 94 ⇓P P 14 52 27.6 +0.2
baz=44
ULM Lac du Bonnet 43.68 63 P P 14 52 26.4 -1.2
comp=Z,5.2nm,0.6s,mb4.4,baz=303,slow=7.0,SNR=6.0
ULM S **S 14 58 56.9 +1.4**
comp=Z,1.8nm,0.6s,baz=5.7,slow=5.8,SNR=2.0
Y15A Casa Rosa Ranc 43.69 92 ⇑P P 14 52 28.3 +0.4
baz=44
R21A Cimarron 43.74 84 ⇑P P 14 52 28.0 -0.3
baz=44,SNR=27
HIA Hailar 43.75 296 eP P 14 52 27.3 -0.9
HIA pmax pmax
comp=Z,16nm,0.6s
HIA Hailar 43.75 296 eP P 14 52 27.2 -0.9
comp=Z,16nm,0.6s,mb4.9
T19A Beclabito 43.82 86 ⇑P P 14 52 28.8 -0.2
baz=44,SNR=40
MVCO Mesa Verde 43.90 86 ⇑P P 14 52 29.6 0.0
baz=44
MVCO Mesa Verde 43.90 86 eP P 14 52 29.1 -0.4
comp=Z,15nm,0.8s,mb4.8
X16A Lo Mia Camp, P 43.93 91 ⇑P P 14 52 29.9 +0.1
baz=44
W17A Winslow 43.93 90 ⇓P P 14 52 30.7 +0.8
baz=44
V18A Ganado 43.99 88 ⇑P P 14 52 30.4 0.0
baz=44
ISCO Idaho Springs 44.03 81 eP P 14 52 29.9 -0.7
ISCO pmax pmax
comp=Z,24nm,1.2s,mb4.8
ISCO Idaho Springs 44.03 81 eP P 14 52 29.9 -0.7
comp=Z,24nm,1.2s,mb4.8
Y16A Circle Bar Ran 44.27 91 ⇓P P 14 52 32.8 +0.2
baz=44
W18A Petrified Fore 44.51 89 ⇓P P 14 52 34.9 +0.4
baz=44
V19A Window Rock 44.54 88 ⇑P P 14 52 35.0 +0.3
baz=44
115A Sonoran Desert 44.61 93 ⇓P P 14 52 35.6 +0.3
baz=44
W19A Sanders 44.72 88 ⇑P P 14 52 36.5 +0.2
baz=44
AGMN Agassiz Refuge 44.74 65 eP P 14 52 34.4 -1.8
comp=Z,35nm,1.1s,mb5.1
AGMN LR LR
comp=Z,5μm,19.0s,MS5.4
214A Organ Pipe Nat 44.76 95 ⇓P P 14 52 37.3 +0.7
baz=45
X18A Snowflake 44.77 90 ⇓P P 14 52 36.7 +0.2
baz=45
Y17A Roosevelt 44.78 91 ⇓P P 14 52 36.4 -0.3
baz=45
X19A St. Johns 45.24 89 ⇑P P 14 52 41.0 +0.6
baz=45
SDCO Great Sand Dun 45.39 83 eP P 14 52 41.0 -0.4
comp=Z,17nm,1.0s,mb4.8
OGNE Ogallala 45.47 77 eP P 14 52 41.0 -1.1
comp=Z,31nm,0.8s,mb5.2
117A Oracle 45.61 92 ⇓P P 14 52 43.4 +0.1
baz=45
TUC Tucson 45.76 92 eP P 14 52 44.5 0.0
TUC pmax pmax
comp=Z,27nm,1.4s,mb5.0
TUC Tucson 45.76 92 eP P 14 52 44.5 0.0
comp=Z,27nm,1.4s,mb5.0
SNY Shenyang 45.82 285 ⇑P P 14 52 44.5 -0.3
SNY S **S 14 59 26.3 -0.5**
SNY XS sS 14 59 38.5 -1.8
SNY SS SS 15 02 42.0 -9.1
SNY AMB AMB
comp=Z,41nm,1.0s,mb5.3
SNY AMB AMB
comp=Z,790nm,8.9s
SNY LR LR
comp=E,4μm,16.6s
SNY LR LR
comp=Z,5μm,16.7s,MS5.6
KSRS Korea Array 45.95 277 P P 14 52 46.5 +0.6
comp=Z,33nm,0.8s,mb5.3,baz=56,slow=7.4,SNR=102
KSRS PcP PcP 14 54 21.0 -1.3
comp=Z,8.9nm,0.8s,baz=58,slow=3.8,SNR=4.3
KSRS S **S 14 59 30.4 +1.7**
comp=Z,1.5nm,1.1s,baz=81,slow=33,SNR=3.0
KSRS LR LR 15 10 24.0
comp=Z,2μm,20.2s,MS5.1,baz=51,slow=34
118A Homack Ranch, 46.03 91 ⇓P P 14 52 46.8 +0.2
baz=46
217A Green Valley 46.11 93 ⇑P P 14 52 47.8 +0.5
baz=46
119A Ashpeak Ranch, 46.35 91 ⇑P P 14 52 49.5 +0.3
baz=46
218A Dragoon 46.44 92 ⇓P P 14 52 50.2 +0.4
baz=46
ANMO Albuquerque 46.62 86 LR LR 15 11 42.1
comp=Z,2μm,18.2s,MS5.2,baz=132,slow=35
ANMO Albuquerque 46.62 86 eP P 14 52 50.6 -0.6
ANMO pmax pmax
comp=Z,16nm,1.1s
ANMO MLR MLR
comp=Z,3μm,20.0s
ANMO Albuquerque 46.62 86 eP P 14 52 50.6 -0.6
comp=Z,16nm,1.1s,mb4.9
ANMO LR LR
comp=Z,3μm,20.0s,MS5.2
318A Bisbee 46.85 93 ⇑P P 14 52 53.4 +0.4
baz=47
219A White Tail Can 46.91 92 ⇑P P 14 52 53.8 +0.4
baz=47
ECSD EROS,Sioux Fal 46.97 70 eP P 14 52 51.4 -2.4
comp=Z,19nm,0.9s,mb5.0
ECSD LR LR
comp=Z,4μm,20.0s,MS5.4
EYMN Ely 47.35 63 eP P 14 52 55.0 -1.7
comp=Z,29nm,1.1s,mb5.1
EYMN LR LR
comp=Z,3μm,21.0s,MS5.3
CBKS Cedar Bluff 48.19 78 eP P 14 53 02.3 -1.0
CBKS pmax pmax
comp=Z,74nm,1.1s,mb5.6
CBKS MLR MLR
comp=Z,2μm,19.0s,MS5.0
CBKS Cedar Bluff 48.19 78 eP P 14 53 02.3 -1.0
comp=Z,74nm,1.1s,mb5.6
CBKS LR LR
comp=Z,2μm,19.0s,MS5.0
DL2 Dalian 48.81 283 P P 14 53 06.0 -2.1
DL2 PP PP 14 54 56.0 -5.2
DL2 S **S 15 00 10.5 +1.1**
DL2 AMB AMB
comp=Z,20nm,1.7s,mb4.9
DL2 AMB AMB
comp=Z,320nm,9.9s
DL2 LR LR
comp=N,1μm,18.2s
DL2 LR LR
comp=Z,1μm,18.4s,MS5.0
KBS Kingsbay 48.98 360 eP P 14 53 10.1 +1.1
KBS AMS AMS 15 17 26.3
comp=Z,4μm,18.4s,MS5.4
AMTX Amarillo 49.59 83 eP P 14 53 11.7 -2.5
comp=Z,44nm,1.1s,mb5.4
AMTX LR LR
comp=Z,2μm,20.0s,MS5.1
DAG Danmarks Havn 49.73 9⇑iP P 14 53 14.0 -0.6
DAG pmax pmax
comp=Z,36nm,0.4s,mb5.8
DAG Danmarks Havn 49.73 9⇑iP P 14 53 14.0 -0.6
comp=Z,36nm,0.4s,mb5.8
KSU1 Kansas State U 49.87 75 eP P 14 53 14.6 -1.6
comp=Z,43nm,1.0s,mb5.4
SCIA State Center 50.06 70 eP P 14 53 15.7 -1.9
comp=Z,34nm,1.0s,mb5.3
SUMG Summit 50.64 17 eP P 14 53 21.6 0.0
comp=Z,94nm,1.1s,mb5.6
TLY Talaya 50.79 307 eP P 14 53 23.0 0.0
TLY e 14 55 20.7
TLY ePPP 14 56 18.6
TLY eS **S 15 00 53.6 +17**
TLY pmax pmax
comp=Z,30nm,0.7s,mb5.3
TLY MLR MLR
comp=Z,3μm,17.0s,MS5.4
TLY Talaya 50.79 307 eP P 14 53 22.8 -0.2
comp=Z,28nm,0.8s,mb5.2
JFWS Jewell Farm 51.12 68 P P 14 53 23.4 -2.2
JFWS pmax pmax
comp=Z,33nm,0.9s,mb5.3
JFWS Jewell Farm 51.12 68 eP P 14 53 23.0 -2.6
comp=Z,33nm,0.9s,mb5.3
BJI Beijing 51.30 288 P P 14 53 27.0 0.0
BJI PP PP 14 55 23.8 0.0
BJI S **S 15 00 43.0 -1.1**
BJI AMB AMB
comp=Z,46nm,0.8s,mb5.5
BJI AMB AMB
comp=Z,648nm,9.8s
BJI LR LR
comp=N,5μm,18.8s,MS5.7
BJI LR LR
comp=E,4μm,17.9s,MS5.7
BJI LR LR
comp=Z,4μm,17.9s,MS5.5
BJT Baijiatuau 51.32 288 P P 14 53 27.0 -0.1
BJT pmax pmax
comp=Z,45nm,0.8s
BJT MLR MLR
comp=Z,3μm,20.0s
BJT Baijiatuau 51.32 288 P P 14 53 27.0 -0.1
comp=Z,45nm,0.8s,mb5.5
BJT LR LR
comp=Z,3μm,20.0s,MS5.3
ULN Ulaanbaatar 51.41 301⇑eP P 14 53 27.4 -0.3
ULN Ulaanbaatar 51.41 301⇑iP P 14 53 27.1 -0.6
comp=Z,26nm,0.5s,mb5.4
WMOK Wichita Mounta 51.45 81 eP P 14 53 26.5 -1.7
WMOK pmax pmax
comp=Z,20nm,0.8s,mb5.1
WMOK Wichita Mounta 51.45 81 eP P 14 53 26.5 -1.6
comp=Z,20nm,0.8s,mb5.1
ZAK Zakamensk 51.77 305 eP P 14 53 29.6 -0.8
ZAK e 14 54 44.0
ZAK pmax pmax
comp=Z,17nm,1.5s,mb4.8
SONM Songino Array 51.77 301 P P 14 53 30.3 -0.1
comp=Z,15nm,0.6s,mb5.1,baz=56,slow=7.0,SNR=28
SONM PcP PcP 14 54 43.7 +0.4
comp=Z,5.1nm,0.7s,baz=70,slow=3.3,SNR=3.4
MOY Mondy 52.09 308 eP P 14 53 32.1 -0.6
MOY pmax pmax
comp=Z,30nm,1.3s,mb5.1
TXAR Lajitas Array 52.20 90 P P 14 53 33.2 -0.6
comp=Z,10nm,0.7s,mb4.9,baz=298,slow=5.3,SNR=67
TXAR Lajitas Array 52.20 90 P P 14 53 33.2 -0.7
GLMI Grayling 53.02 62 PFAKE 14 53 50.0 +10
GLMI LR LR
comp=Z,3μm,21.0s,MS5.2
HDIL Hopedale 53.19 69 eP P 14 53 37.9 -3.1
comp=Z,188nm,1.4s,mb5.8
HDIL LR LR
comp=Z,5μm,20.0s,MS5.5
TIA Tai'an 53.27 284 ⇑P P 14 53 41.5 -0.2
HHC Hu-ho-hao-te 53.43 292 eP P 14 53 43.0 +0.2
HHC AP pP 14 53 50.5 -0.6
HHC XP sP 14 53 54.8 +0.4
HHC PP PP 14 55 43.8 +0.8
HHC PCS PcS 14 58 48.0 -0.6
HHC S **S 15 01 09.8 -3.4**
HHC XS sS 15 01 23.5 -3.4
HHC SCS ScS 15 03 27.5 -2.6
HHC SS SS 15 04 51.0 -1.9
HHC AMB AMB
comp=Z,25nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,707nm,8.6s
HHC LR LR
comp=N,2μm,19.0s,MS5.4
HHC LR LR
comp=E,3μm,19.0s,MS5.4
HHC LR LR
comp=Z,3μm,17.8s,MS5.4
GUMO Guam 53.57 241 PFAKE 14 54 00.0 +16
GUMO LR LR
comp=Z,932nm,19.0s,MS4.9
JCT Junction City 53.76 86 eP P 14 53 43.5 -1.9
JCT pmax pmax
comp=Z,45nm,1.1s,mb5.3
JCT Junction City 53.76 86 eP P 14 53 43.5 -1.9
comp=Z,45nm,1.1s,mb5.3
FVM French Village 54.24 72 eP P 14 53 46.0 -2.8
FVM pmax pmax
comp=Z,20nm,0.8s,mb5.1
FVM French Village 54.24 72 eP P 14 53 46.0 -2.8
comp=Z,20nm,0.8s,mb5.1
SSE Sheshan 54.34 276 P P 14 53 48.8 -0.7

SSE S **S** **15 01 27.8 +2.1**
SSE XS sS 15 01 41.0 +1.6
SSE AMB AMB
comp=Z,29nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,66nm,6.2s
SSE LR LR
comp=N,945nm,31.0s,MS4.8
SSE LR LR
comp=E,850nm,31.0s,MS4.8
SSE LR LR
comp=Z,2μm,17.6s
BTO Baotou 54.47 292 *e*P **P** **14 53 51.0 +0.6**
MIAR Mount Ida 54.72 78 *e*P **P** **14 53 50.0 -2.2**
MIAR pmax pmax
comp=Z,47nm,1.1s,mb5.4
MIAR Mount Ida 54.72 78 *e*P **P** **14 53 50.0 -2.3**
comp=Z,47nm,1.1s,mb5.4
SCHQ Schefferville 55.07 44 P **P** **14 53 53.9 -0.6**
comp=Z,24nm,1.0s,mb5.2,baz=354,slow=7.7,SNR=12
NJ2 Nanjing 55.09 279 *e*P **P** **14 53 54.5 -0.5**
NJ2 AP pP 14 54 02.3 -1.0
NJ2 XP sP 14 54 05.8 -0.8
NJ2 PP PP 14 55 59.5 +1.4
NJ2 S **S** **15 01 35.0 -0.8**
NJ2 XS sS 15 01 48.0 -1.5
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
NJ2 AMB AMB
comp=Z,1μm,4.3s
NJ2 LR LR
comp=N,2μm,14.4s,MS5.3
NJ2 LR LR
comp=E,874nm,17.1s,MS5.3
NJ2 LR LR
comp=Z,3μm,16.6s,MS5.5
OLIL Olney 55.09 70 *e*P **P** **14 53 52.9 -2.0**
comp=Z,51nm,0.9s,mb5.6
AAM Ann Arbor 55.21 64 PFAKE 14 54 10.0 +14
AAM LR LR
comp=Z,3μm,19.0s,MS5.3
USIN University of 55.86 71 *e*P **P** **14 53 58.1 -2.3**
comp=Z,47nm,0.8s,mb5.6
WCI Wyandotte Cave 56.47 69 *e*P **P** **14 54 03.1 -1.7**
WCI pmax pmax
comp=Z,20nm,0.9s,mb5.2
WCI Wyandotte Cave 56.47 69 *e*P **P** **14 54 03.1 -1.7**
comp=Z,20nm,0.9s,mb5.2
HKT Hockley 56.56 83 *e*P **P** **14 54 04.1 -1.4**
HKT pmax pmax
comp=Z,36nm,1.4s,mb5.2
HKT Hockley 56.56 83 *e*P **P** **14 54 04.1 -1.4**
comp=Z,36nm,1.4s,mb5.2
ACSO Alum Creek Sta 56.98 66 P **P** **14 54 06.1 -2.3**
comp=Z,18nm,1.1s,mb5.0
ACSO LR LR
comp=Z,3μm,20.0s,MS5.4
WVT Waverly 57.02 72 *e*P **P** **14 54 06.2 -2.6**
WVT pmax pmax
comp=Z,26nm,1.0s,mb5.2
WVT Waverly 57.02 72 *e*P **P** **14 54 06.2 -2.6**
comp=Z,26nm,1.0s,mb5.2
OXF Oxford 57.22 75 *e*P **P** **14 54 08.0 -2.1**
OXF pmax pmax
comp=Z,146nm,0.9s,mb6.0
OXF Oxford 57.22 75 *e*P **P** **14 54 08.0 -2.1**
comp=Z,146nm,0.9s,mb6.0
ERPA Erie 57.34 62 PFAKE 14 54 20.0 +9.1
ERPA LR LR
comp=Z,4μm,20.0s,MS5.5
KEV Kevo 57.68 354 *e*p **P** **14 54 11.2 -1.7**
comp=Z,17nm,0.7s,mb5.2
KEV Kevo 57.68 354 *e*P **P** **14 54 11.2 -1.7**
KEV pmax pmax
comp=Z,17nm,0.7s,mb5.2
NVS Novosibirsk 57.80 320 *e*P **P** **14 54 12.2 -1.7**
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=E,18nm,1.3s
NVS pmax pmax
comp=Z,30nm,1.3s,mb5.2
ZALV Zalesovo Beam 57.80 318 P **P** **14 54 13.1 -0.9**
comp=Z,5.5nm,0.5s,mb4.8,baz=38,slow=7.5,SNR=29
ZALV PcP PcP 14 55 06.3 0.0
comp=Z,4.5nm,0.5s,baz=44,slow=5.8,SNR=6.5
ZALV Zalesovo Beam 57.80 318 P **P** **14 54 13.1 -0.9**
ZALV PcP PcP 14 55 06.3 0.0
ARCES ARCESS Array B 57.99 354 P **P** **14 54 14.1 -1.0**
comp=Z,14nm,0.7s,mb5.1,baz=3.0,slow=7.2,SNR=38
ARCES PcP PcP 14 55 05.7 -1.1
comp=Z,7.1nm,0.6s,baz=18,slow=5.1,SNR=4.1
ARE0 ARCESS Array S 57.99 354 *e*P **P** **14 54 13.9 -1.2**
VBMS Vicksburg 58.17 77 *e*P **P** **14 54 14.9 -2.0**
comp=Z,33nm,0.4s,mb5.7
TRO Tromso 58.21 357 *e*P **P** **14 54 13.2 -3.4**
TRO *e*S **S** **15 02 31.2 +15**
KTK1 Kautokeino 58.64 355 *e*P **P** **14 54 20.2 +0.6**
LVZ Lovozero 58.83 350 P **P** **14 54 20.8 -0.1**
comp=Z,503nm,0.6s,mb6.7,SNR=6.7
LVZ Lovozero 58.83 350⇑ *e*P **P** **14 54 20.3 -0.6**
LVZ pmax pmax
comp=Z,239nm,2.5s,mb5.8
LVZ Lovozero 58.83 350⇑ *e*P **P** **14 54 20.4 -0.5**
LVZ LR LR
comp=Z,4μm,19.0s,MS5.5
WHN Wuhan 58.88 281 ⇑P **P** **14 54 21.5 -0.3**
WHN S **S** **15 02 27.0 +1.3**
WHN LR LR
comp=N,2μm,13.3s,MS5.6
WHN LR LR
comp=E,3μm,15.4s,MS5.6
WHN LR LR
comp=Z,4μm,16.3s,MS5.6
MCWV Mont Chateau 59.12 64 *e*P **P** **14 54 20.9 -2.4**
comp=Z,29nm,0.7s,mb5.4
MCWV LR LR
comp=Z,4μm,19.0s,MS5.5
TZTN Tazewell 59.21 69 *e*P **P** **14 54 21.5 -2.6**
comp=Z,40nm,1.3s,mb5.3
TZTN *e* 14 54 35.0
APA Apatity 59.28 350 ⇓*i*P **P** **14 54 24.2 +0.2**
APA pmax pmax
comp=Z,32nm,1.4s,mb5.2
APA MLR MLR
comp=Z,3μm,19.0s,MS5.4
BINY Binghamton 59.42 60 PFAKE 14 54 40.0 +15
BINY LR LR
comp=Z,4μm,20.0s,MS5.6
SSPA Standing Stone 59.50 62 *e*P **P** **14 54 23.5 -2.5**
comp=Z,25nm,0.9s,mb5.2
XAN Xi'an 59.62 287 P **P** **14 54 26.8 -0.1**
XAN AP pP 14 54 37.5 +2.1
XAN AMB AMB
comp=Z,42nm,1.2s,mb5.3
XAN AMB AMB
comp=Z,609nm,10.8s
XAN LR LR
comp=N,933nm,17.5s,MS5.4
XAN LR LR
comp=E,2μm,19.0s,MS5.4
XAN LR LR
comp=Z,4μm,17.5s,MS5.6
LRAL Lakeview Retre 59.68 74 *e*P **P** **14 54 24.1 -3.2**
comp=Z,13nm,0.8s,mb5.0
LRAL LR LR
comp=Z,3μm,21.0s,MS5.3
SSLB Suanglung 59.75 270 *e*P **P** **14 54 27.0 -1.0**
comp=Z,169nm,1.3s,mb5.9
LBNH Lisbon 60.08 55 PFAKE 14 54 40.0 +10
LBNH LR LR
comp=Z,4μm,19.0s,MS5.6
QZH Quanzhou 60.35 273 ⇓*i*P **P** **14 54 32.3 +0.3**
QZH S **S** **15 02 49.3 +4.4**
QZH AMB AMB
comp=Z,210nm,1.5s,mb6.0
QZH AMB AMB
comp=Z,1μm,4.1s
QZH LR LR
comp=N,920nm,9.1s
QZH LR LR
comp=E,4μm,16.4s
QZH LR LR
comp=Z,2μm,22.0s
BLA Blacksburg 60.52 66 *e*P **P** **14 54 31.1 -1.9**
BLA pmax pmax
comp=Z,31nm,0.8s,mb5.5
BLA MLR MLR
comp=Z,4μm,20.0s,MS5.6
BLA Blacksburg 60.52 66 *e*P **P** **14 54 31.1 -1.9**
comp=Z,31nm,0.8s,mb5.5
BLA LR LR
comp=Z,4μm,20.0s,MS5.6
GTA Gaotai 60.97 298 P **P** **14 54 35.8 -0.3**
GTA AP pP 14 54 42.8 -1.7
GTA XP sP 14 54 46.3 -1.4
GTA AMB AMB
comp=Z,41nm,0.8s,mb5.6
GTA AMB AMB
comp=Z,652nm,6.5s
GTA LR LR
comp=N,3μm,19.6s,MS5.8
GTA LR LR
comp=E,6μm,18.1s,MS5.8
GTA LR LR
comp=Z,6μm,19.6s,MS5.7
BRAL Brewton 61.09 76 PFAKE 14 54 50.0 +13
BRAL LR LR
comp=Z,2μm,22.0s,MS5.3
LZH Lanzhou 61.10 292 ⇓P **P** **14 54 37.5 +0.5**
LZH AP pP 14 54 44.5 -0.9
LZH XP sP 14 54 47.0 -1.6
LZH PP PP 14 56 53.5 +2.2
LZH *e*S **S** **15 02 53.3 -0.9**
LZH XS sS 15 03 04.0 -4.1
LZH SS SS 15 06 52.3 -1.2
LZH AMB AMB
comp=Z,76nm,1.0s,mb5.8
LZH AMB AMB
comp=Z,550nm,4.5s
LZH LR LR
comp=N,7μm,16.3s
LZH LR LR
comp=Z,9μm,17.0s,MS6.0
GOGA Godfrey 61.48 72 *e*P **P** **14 54 36.8 -2.8**
GOGA pmax pmax
comp=Z,22nm,1.1s,mb5.2
GOGA MLR MLR
comp=Z,4μm,20.0s,MS5.6
GOGA Godfrey 61.48 72 *e*P **P** **14 54 36.8 -2.8**
comp=Z,22nm,1.1s,mb5.2
GOGA LR LR
comp=Z,4μm,20.0s,MS5.6
CBN Corbin 61.51 64 PFAKE 14 54 50.0 +10
CBN LR LR
comp=Z,3μm,21.0s,MS5.5
FUNA Funafuti 61.55 194 PFAKE 14 54 50.0 +10
FUNA LR LR
comp=Z,4μm,22.0s,MS5.6
MOR8 Moi Rana 61.78 359 *e*P **P** **14 54 39.5 -1.6**
MOR8 Moi Rana 61.78 359 *e*P **P** **14 54 39.5 -1.6**
SOKR Solikamsk 62.61 336 *c i*P **P** **14 54 46.4 -0.3**
SOKR pmax pmax
comp=Z,60nm,1.4s,mb5.5
KURK Kurchatov 62.75 319 P **P** **14 54 47.1 -0.7**
comp=Z,158nm,0.6s,mb6.3,SNR=22
KURK Kurchatov 62.75 319 LR LR 15 23 56.0
comp=Z,2μm,18.7s,MS5.3,baz=25,slow=38
KURK Kurchatov 62.75 319 *e*P **P** **14 54 47.1 -0.7**
KURK pmax pmax
comp=Z,27nm,0.9s,mb5.4
KURK MLR MLR
comp=Z,4μm,19.0s,MS5.6
KURK Kurchatov 62.75 319 *e*P **P** **14 54 47.1 -0.8**
comp=Z,27nm,0.9s,mb5.4
KURK LR LR
comp=Z,4μm,19.0s,MS5.6
CNNC Cliffs of the 63.35 66 PFAKE 14 55 00.0 +7.9
CNNC LR LR
comp=Z,4μm,21.0s,MS5.6
NHSC New Hope 63.60 69 *e*P **P** **14 54 52.4 -1.4**
comp=Z,92nm,1.1s,mb5.7
SVE Sverdlovsk 63.96 332⇑ *e*P **P** **14 54 56.3 +0.6**
SVE *e*S **S** **15 03 46.3 +17**
SVE pmax pmax
comp=Z,71nm,1.1s,mb5.6
WMQ Urumqi 63.97 309 *e*P **P** **14 54 56.3 +0.3**
WMQ XP sP 14 55 08.0 +0.3
WMQ PP PP 14 57 19.0 +2.6
WMQ S **S** **15 03 29.3 -0.7**
WMQ XS sS 15 03 42.3 -1.7
WMQ SCS ScS 15 04 45.0 -2.6
WMQ AMB AMB
comp=Z,63nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,700nm,6.0s
WMQ LR LR
comp=N,3μm,20.0s,MS5.8
WMQ LR LR
comp=E,6μm,20.0s,MS5.8
WMQ LR LR
comp=Z,3μm,17.0s,MS5.5
JOF Joensuu 64.02 350 *e*p **P** **14 54 54.9 -1.1**
comp=Z,26nm,0.6s,mb5.4
JOF Joensuu 64.02 350 *e*P **P** **14 54 54.9 -1.1**
JOF pmax pmax
comp=Z,26nm,0.6s,mb5.4
BVA0 Borovoye Array 64.03 325 P **P** **14 54 56.0 -0.3**
BVA0 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
BRVK Borovoye 64.04 325 P **P** **14 54 56.5 +0.2**
comp=Z,228nm,0.6s,mb6.4,SNR=32
BRVK Borovoye 64.04 325 *e*P **P** **14 54 55.8 -0.5**
BRVK pmax pmax
comp=Z,55nm,1.1s,mb5.5
BRVK MLR MLR
comp=Z,8μm,19.0s,MS5.9
BRVK Borovoye 64.04 325 *e*P **P** **14 54 55.8 -0.5**
comp=Z,55nm,1.1s,mb5.5
BRVK LR LR
comp=Z,8μm,19.0s,MS5.9
MK31 Makanchi Array 64.21 314 *i*P **P** **14 54 56.4 -1.2**
MK31 pmax pmax
comp=Z,17nm,0.7s,mb5.2
MK31 Makanchi Array 64.21 314 *e*P **P** **14 54 56.3 -1.3**
MKAR Makanchi Array 64.21 314 P **P** **14 54 56.4 -1.1**
comp=Z,14nm,0.7s,mb5.1,baz=50,slow=7.3,SNR=174
MKAR Makanchi Array 64.21 314 P **P** **14 54 56.4 -1.1**
ARU Arti 64.88 333 P **P** **14 55 01.0 -0.8**
comp=Z,379nm,0.6s,mb6.6,SNR=19
ARU Arti 64.88 333 *e*P **P** **14 55 00.3 -1.5**
ARU *e* 14 55 32.6
ARU *e* 14 57 24.0
ARU S **S** **15 03 39.3 -1.6**
ARU SS sS 15 07 48.7 -2.8
ARU Arti 64.88 333 *e*P **P** **14 55 01.3 -0.5**
comp=Z,38nm,0.6s,mb5.6
ARU LR LR
comp=Z,3μm,19.0s,MS5.5
CD2 Chengdu 64.89 288 P **P** **14 55 02.8 +0.5**
CD2 AP pP 14 55 10.5 -0.3
CD2 XP sP 14 55 13.8 -0.2
CD2 PCP PcP 14 55 34.0 -1.1
CD2 PP PP 14 57 29.5 +4.7
CD2 PCS 14 59 37.0
CD2 S **S** **15 03 45.5 +3.7**
CD2 XS sS 15 03 58.0 +2.2
CD2 AMB AMB
comp=Z,90nm,1.0s,mb5.8
CD2 AMB AMB
comp=Z,1μm,9.9s
CD2 LR LR
comp=N,2μm,19.2s
CD2 LR LR
comp=Z,3μm,18.0s,MS5.6
GZH Guangzhou 64.93 276 P **P** **14 54 58.8 -3.8**
GZH S **S** **15 03 39.0 -3.4**
GZH LR LR
comp=N,986nm,15.5s,MS5.4
GZH LR LR
comp=E,2μm,16.3s,MS5.4
GZH LR LR
comp=Z,2μm,17.4s,MS5.4
KLMR Klimovskoe 64.94 345 *e*P **P** **14 55 00.0 -2.1**
KLMR pmax pmax
comp=Z,52nm,1.2s,mb5.4
KAF Kangasniemi 65.28 352 *e*p **P** **14 55 02.9 -1.4**
comp=Z,51nm,0.5s,mb5.8,baz=6.4,slow=6.1
KAF Kangasniemi 65.28 352 *e*P **P** **14 55 02.9 -1.4**
KAF pmax pmax
comp=Z,51nm,0.5s,mb5.8
DOMB Dombas 65.94 1 *e*P **P** **14 55 07.9 -0.6**
DOMB AMb AMB 14 55 14.5
comp=Z,167nm,3.8s
AFI Afiamalu 66.05 184 PFAKE 14 55 20.0 +10
AFI LR LR
comp=Z,2μm,19.0s,MS5.2
GYA Guiyang 66.46 283 ⇑*i*P **P** **14 55 12.8 +0.3**
GYA AP pP 14 55 20.5 -0.5
GYA XP sP 14 55 23.8 -0.4
GYA PCP PcP 14 55 42.3 +0.4
GYA PP PP 14 57 41.5 +2.8
GYA SCP 14 59 44.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,180nm,9.3s
GYA LR LR
comp=N,1μm,17.5s,MS5.2
GYA LR LR
comp=E,990nm,19.2s,MS5.2
GYA LR LR
comp=Z,1μm,20.0s,MS5.2
DWPF Disney 66.54 74 PFAKE 14 55 20.0 +7.1
DWPF LR LR
comp=Z,2μm,20.0s,MS5.2
CMIG Matias Romero 66.65 92 P **P** **14 55 12.4 -1.3**
comp=Z,3.6nm,0.7s,mb4.5,baz=309,slow=5.3,SNR=8.0
NB2 NORSAR Subarra 66.96 0 P **P** **14 55 14.5 -0.6**
comp=Z,15nm,0.6s,mb5.2,baz=359,slow=6.2
NOA NORSAR Array B 66.96 0 P **P** **14 55 14.8 -0.3**
comp=Z,11nm,0.6s,mb5.1,baz=0.2,slow=6.2,SNR=34
NOA NORSAR Array B 66.96 0 P **P** **14 55 14.8 -0.3**
NAO01 NORSAR Array S 67.15 0 *e*P **P** **14 55 14.5 -1.8**
comp=Z,13nm,0.9s,mb5.0
TEIG Tepich 68.32 85 P **P** **14 55 23.1 -1.2**
comp=Z,6.3nm,0.7s,mb4.8,baz=14,slow=8.3,SNR=3.3
KONO Kongsberg 68.34 1 *e*P **P** **14 55 23.8 -0.1**
KONO Kongsberg 68.34 1 *e*P **P** **14 55 22.9 -0.9**
VSU Vasula 68.85 351 *e*P **P** **14 55 26.4 -0.6**
KMI Kunming 69.80 285 P **P** **14 55 32.5 -0.9**
KMI AP pP 14 55 43.3 +1.3
KMI XP sP 14 55 46.3 +1.2
KMI AMB AMB
comp=Z,38nm,1.1s,mb5.2
KMI AMB AMB
comp=Z,577nm,7.7s
KMI LR LR
comp=N,1μm,14.0s,MS5.6
KMI LR LR
comp=E,2μm,14.0s,MS5.6
KMI LR LR
comp=Z,2μm,14.0s,MS5.5
DAV Davao City (W) 69.83 255 PFAKE 14 55 50.0 +16
DAV LR LR
comp=Z,3μm,22.0s,MS5.5
QIZ Qiongzhong 70.12 276 P **P** **14 55 36.8 +1.3**
QIZ S S 15 04 47.5 +2.7
QIZ XS sS 15 05 00.8 +1.9
QIZ SKS 15 05 32.5
QIZ SCS ScS 15 05 35.0 -1.1
QIZ AMB AMB
comp=Z,21nm,1.7s,mb4.8
QIZ AMB AMB
comp=Z,504nm,9.2s
QIZ LR LR
comp=N,1μm,16.4s
QIZ LR LR
comp=Z,1μm,16.4s,MS5.3
MOS Moscow 70.13 345 *e*P **P** **14 55 33.5 -1.5**
MOS pmax pmax
comp=Z,124nm,0.7s,mb6.0
TKM2 Tokmak 2 70.19 315 *e*P **P** **14 55 35.5 0.0**
TKM2 pmax pmax
comp=Z,34nm,1.2s,mb5.2
TKM2 Tokmak 2 70.19 315 P **P** **14 55 36.0 +0.4**
SNR=20
TKM2 Tokmak 2 70.19 315 *e*P **P** **14 55 35.5 -0.1**
comp=Z,34nm,1.2s,mb5.2
AKTK Aktyubinsk 70.30 330 *i*P **P** **14 55 35.8 -0.2**
AKTO Aktyubinsk 70.30 330 *i*P **P** **14 55 35.7 -0.3**
AKTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
USP Ospenovka 70.38 316 P **P** **14 55 37.1 +0.4**
SNR=41
CHMS Chumysh 70.49 316 P **P** **14 55 37.8 +0.4**
SNR=12
FRU Bishkek 70.68 316 *e*P **P** **14 55 29.0 -10**
FRU pmax pmax
comp=Z,80nm,1.6s,mb5.4
FRU MLR MLR
comp=Z,4μm,16.0s,MS5.8
KBK Karagaybulak 70.68 316 P **P** **14 55 39.1 +0.6**
SNR=33
AB31 Akbulak array 70.73 329 P **P** **14 55 38.5 -0.2**
AB31 pmax pmax
comp=Z,36nm,0.5s,mb5.6
AAK Ala-Archa 70.89 316 P **P** **14 55 40.4 +0.5**
SNR=24
OBN Obninsk 70.90 345 P **P** **14 55 39.0 -0.7**
comp=Z,832nm,0.4s,SNR=5.0
OBN Obninsk 70.90 345⇑ *e*P **P** **14 55 38.8 -0.9**
OBN *e**PP pP 14 55 48.5 +0.3
OBN *e**SP sP 14 55 53.9 +2.5
OBN *e* 14 55 57.4
OBN pmax pmax
comp=Z,47nm,0.6s,mb5.6
OBN Obninsk 70.90 345 *e*P **P** **14 55 38.4 -1.3**
comp=Z,64nm,0.4s,mb5.9
KZA Kyzart 71.02 315 P **P** **14 55 41.6 +1.0**
SNR=14
EKS2 Erkin-Say 71.18 316 P **P** **14 55 41.9 +0.3**
SNR=30
EKS2 Erkin-Say 71.18 316 *e*P **P** **14 55 41.7 +0.1**
comp=Z,38nm,1.1s,mb5.2
EKS2 LR LR
comp=Z,4μm,19.0s,MS5.7
PPT Papeete 71.54 161 *e*S S 15 04 52.8 -8.2
comp=Z,1μm,23.8s
PPT *e*LQ 15 13 53.7
PPT comp=Z,849nm,24.0s *e*LR LR 15 17 13.1
comp=Z,3μm,24.8s,baz=350
AML Almayashu 71.65 316 P **P** **14 55 45.6 +1.2**
SNR=22
AML Almayashu 71.65 316 *e*P **P** **14 55 45.1 +0.7**
AML comp=Z,26nm,1.0s,mb5.1 LR LR
comp=Z,2μm,19.0s,MS5.4
ISAL Salakas 71.77 351 *e*P **P** **14 55 44.7 -0.2**
IDID Didziasalis 71.96 351 *e*P **P** **14 55 45.8 -0.2**
IIGN Ignalina 71.97 351 *e*P **P** **14 55 46.1 0.0**
ESK Eskdalemuir 72.01 9 PFAKE 14 56 00.0 +14
ESK LR LR
comp=Z,3μm,19.0s,MS5.5
KK31 Karatay Array 72.16 319 *i*P **P** **14 55 47.0 -0.5**
KK31 pmax pmax
comp=Z,20nm,0.7s,mb5.2
KK31 Karatay Array 72.16 319 *i*P **P** **14 55 47.1 -0.4**
PMG Port Moresby 72.27 226 *e*P **P** **14 55 47.1 -1.3**
PMG pmax pmax
comp=Z,16nm,1.1s
PMG Port Moresby 72.27 226 *e*P **P** **14 55 46.7 -1.7**
comp=Z,10nm,0.9s,mb4.8
MNK Minsk 72.65 350 *e*P **P** **14 55 47.0 -3.2**
LSA Lhasa 72.94 296 P **P** **14 55 53.5 +1.2**
LSA AP pP 14 55 59.5 -1.4
LSA XP sP 14 56 02.3 -1.8
LSA S S 15 05 21.8 +4.6
LSA AMB AMB
comp=Z,50nm,0.7s,mb5.5
LSA AMB AMB
comp=Z,630nm,10.3s
LSA LR LR
comp=N,1μm,16.6s,MS5.5
LSA LR LR
comp=E,1μm,16.1s,MS5.5
LSA Lhasa 72.94 296 *e*P **P** **14 55 53.8 +1.5**
LSA pmax pmax
comp=Z,42nm,0.8s,mb5.4
LSA Lhasa 72.94 296 *e*P **P** **14 55 53.8 +1.5**
comp=Z,42nm,0.8s,mb5.4
SUW Suwalki 73.56 353 *e*P **P** **14 55 55.0 -0.6**
SUW Suwalki 73.56 353 *e*P **P** **14 55 55.0 -0.6**
TGUH Tegucigalpa,Un 73.65 88 P **P** **14 55 57.4 +0.8**
VRHR Novokhopersk 73.84 341 *e*P **P** **14 55 55.5 -1.7**
VRHR pmax pmax
comp=N,50nm,0.4s

VRHR pmax pmax
comp=Z,30nm,0.4s,mb5.6
VRHR pmax pmax
comp=E,40nm,0.6s
VRHR MLR MLR
comp=E,2µm,19.0s
VRHR MLR MLR
comp=Z,2µm,19.0s,MS5.5
BSEG Bad Segeberg 74.08 1 *e*P **P 14 56 00.0 +1.4**
comp=Z,29nm,1.2s,mb5.1
VSR Storozhevoye 74.20 342 *e*P **P 14 55 58.7 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR MLR MLR
comp=N,830nm,16.0s,MS5.2
VSR MLR MLR
comp=Z,740nm,16.0s,MS5.1
VSR MLR MLR
comp=E,640nm,17.0s,MS5.2
VORD Divnogorie 74.42 342 *e*P **P 14 55 59.4 -1.2**
VORD pmax pmax
comp=Z,30nm,0.6s,mb5.4
VORD pmax pmax
comp=N,30nm,0.5s
VORD pmax pmax
comp=E,30nm,0.6s
VORD MLR MLR
comp=Z,3µm,18.0s,MS5.6
VORD MLR MLR
comp=N,2µm,16.0s,MS5.6
VORD MLR MLR
comp=E,2µm,20.0s,MS5.6
NRDL Niedersach Rie 75.52 1 *e*P **P 14 56 06.8 -0.2**
comp=Z,55nm,1.5s,mb5.3
RUE Ruedersdorf 75.52 359 *e*P **P 14 56 05.6 -1.4**
comp=Z,18nm,0.4s,mb5.4
IBBN Ibbenburen 75.67 2 *e*P **P 14 56 08.4 +0.6**
comp=Z,63nm,1.3s,mb5.4
SHL Shillong 75.74 293⇑ *i*P **P 14 56 09.0 +0.3**
SHL *ex* x 14 57 33.0
SHL *ex* x 15 05 51.0
CLZ Clausthal 76.17 1 *e*P **P 14 56 11.1 +0.4**
CLZ pmax pmax
comp=Z,69nm,1.4s,mb5.4
CLZ Clausthal 76.17 1 *e*P **P 14 56 11.1 +0.4**
comp=Z,69nm,1.4s,mb5.4
AKASG Malin Array Be 76.23 349 P **P 14 56 10.0 -1.1**
comp=Z,32nm,0.5s,mb5.5,baz=11,slow=5.6,SNR=56
AKBB Malin Array Si 76.23 349 *e*P **P 14 56 10.0 -1.1**
KIEV Kiev 76.24 349 *e*P **P 14 56 09.9 -1.2**
KIEV pmax pmax
comp=Z,37nm,0.6s,mb5.5
KIEV Kiev 76.24 349 *e*P **P 14 56 09.9 -1.2**
comp=Z,37nm,0.6s,mb5.5
KKM Kota Kinabalu 76.27 262 PFAKE 14 56 20.0 +8.2
KKM LR LR
comp=Z,1µm,21.0s,MS5.2
KKTK Khon Kaen 76.45 279⇑ P **P 14 56 13.2 +0.4**
comp=Z,370nm,0.7s,mb6.4
GTBY Guantanamo Bay 76.49 75 PFAKE 14 56 20.0 +7.0
GTBY LR LR
comp=Z,2µm,20.0s,MS5.4
BUG Bochum−Univer 76.52 3 *e*P **P 14 56 12.3 -0.4**
comp=Z,48nm,1.1s,mb5.3
TAPN Taplejung 76.66 297 *e*P **P 14 56 14.3 +0.4**
comp=Z,65nm,0.5s,mb5.8
CLL Collm 76.71 359⇓ *i*P **P 14 56 13.1 -0.6**
CLL *i* 14 56 24.1
CLL pmax pmax
comp=Z,25nm,1.3s,mb5.0
CLL Collm 76.71 359 *e*P **P 14 56 13.4 -0.3**
comp=Z,25nm,1.3s,mb5.0
CLL Collm 76.71 359⇓ *i*P **P 14 56 13.1 -0.6**
comp=Z,25nm,1.3s,mb5.0
CLL *i* PcP PcP 14 56 24.1 -0.9
CLL *i* pPcP 14 56 28.9
CLL *i* x x 14 56 38.1
CLL *e*PP PP 14 59 18.0 +12
CLL *e*S S 15 06 08.0 +10
comp=N,500nm,16.5s
CLL *e*S S 15 06 08.0 +10
comp=E,400nm,21.0s
CLL *e*PPS 15 06 48.0
CLL *e*SS SS 15 11 08.0 +15
CLL *ex* x 15 15 06.0
CLL Collm 76.71 359⇓ *i*P **P 14 56 13.1 -0.6**
comp=E,25nm,1.3s,mb5.0
CLL *i* 14 56 24.1
CLL *e*S S 15 06 08.0 +10
CHG Chiang Mai 76.88 284⇓ P **P 14 56 14.3 -0.9**
comp=E,23nm,0.9s,mb5.1
CHTO Chiang Mai 76.88 284 *e*P **P 14 56 14.6 -0.6**
CHTO pmax pmax
comp=Z,37nm,1.3s,mb5.2
CHTO MLR MLR
comp=Z,2µm,19.0s,MS5.3
CHTO Chiang Mai 76.88 284 *e*P **P 14 56 14.6 -0.5**
comp=Z,37nm,1.3s,mb5.2
CHTO LR LR
comp=Z,2µm,19.0s,MS5.3
UCC Uccle 77.05 5 P **P 14 56 15.0 -0.7**
KSP Ksiaz 77.10 357 *e*P **P 14 56 16.3 +0.3**
KSP Ksiaz 77.10 357⇑ *e*P **P 14 56 16.1 +0.1**
KSP *e*S S 15 06 11.0 +8.3
KSP *e*SS SS 15 10 53.0 -5.8
BEBN Eben Emael 77.11 4 P **P 14 56 16.4 +0.4**
BRG Berggiesshubel 77.13 358 *e*P **P 14 56 16.1 0.0**
BRG pmax pmax
comp=Z,20nm,1.2s,mb4.9
BRG MLR MLR
comp=N,626nm,18.9s,MS5.1
BRG MLR MLR
comp=E,514nm,19.1s,MS5.1
BRG MLR MLR
comp=Z,840nm,18.7s,MS5.1
BRG Berggiesshubel 77.13 358 *e*P **P 14 56 16.0 -0.1**
comp=Z,34nm,1.2s,mb5.2
BRG Berggiesshubel 77.13 358 *e*P **P 14 56 16.1 0.0**
comp=Z,20nm,1.2s,mb4.9
BRG *i* 14 57 39.7
BRG S S 15 06 10.0 +7.0
BRG SS SS 15 11 17.0 +18
BRG *e* 15 22 09.8
BRG LR LR
comp=Z,840nm,18.7s,MS5.1
HGN Heimansgroeve 77.15 4 *e*P **P 14 56 16.0 -0.2**
comp=Z,52nm,1.3s,mb5.3
CM31 Chiang Mai Arr 77.15 283 PFAKE 14 56 30.0 +13
CM31 LR LR
comp=Z,2µm,19.0s,MS5.4
CMAR Chiang Mai Arr 77.15 283 P **P 14 56 17.1 +0.3**
comp=Z,35nm,1.0s,mb5.3,baz=26,slow=6.1,SNR=146
TBI Tubuai 77.19 162 *e*S S 15 05 54.5 -10
comp=Z,591nm,29.0s
TBI Tubuai 77.19 162 *e*LQ 15 16 11.1
comp=Z,621nm,27.5s
TBI *e*LR LR 15 19 39.4
comp=Z,2µm,33.5s,baz=347
GUN Gumba 77.21 299 *e*P **P 14 56 17.5 +0.6**
comp=Z,82nm,0.6s,mb5.9
ODAN Odare 77.22 297 *e*P **P 14 56 17.2 +0.2**
comp=Z,28nm,0.5s,mb5.5
JIRN Jiri 77.24 299 *e*P **P 14 56 17.8 +0.7**
comp=Z,102nm,0.6s,mb6.0
MEM Membach 77.31 4 P **P 14 56 17.2 0.0**
comp=Z,35nm,1.4s,mb5.1
SNF Seneffe 77.33 5 P **P 14 56 17.7 +0.5**
comp=Z,14nm,1.3s,mb4.7
MOX Moxa 77.38 360 *e*P **P 14 56 17.7 +0.2**
comp=Z,42nm,1.3s,mb5.2
MOX pmax pmax
comp=Z,1µm,18.0s
MOX Moxa 77.38 360 *e*P **P 14 56 17.7 +0.2**
MOX pmax pmax
comp=Z,42nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,1µm,18.0s,MS5.2
MOX Moxa 77.38 360 *e*P **P 14 56 17.6 +0.1**
comp=Z,51nm,1.4s,mb5.3
AGT Agartala 77.42 293 *e*P **P 14 56 15.0 -3.2**
AGT *i* x x 14 56 39.0
UPC Upice 77.44 357⇑ *i*P **P 14 56 18.1 +0.2**
UPC *ex* x 14 56 29.8
PVCC Panska Ves 77.46 358⇑ *e*P **P 14 56 18.4 +0.4**
PVCC *ex* x 14 56 30.3
PVCC AMS AMS 15 43 10.0
comp=Z,1µm,12.3s
BCLA Clavier 77.47 4 P **P 14 56 17.9 -0.1**
comp=Z,22nm,1.3s,mb4.9
OJC Ojcow 77.56 355 *e*P **P 14 56 18.6 0.0**
RAMN Ramite 77.58 298 *e*P **P 14 56 19.2 +0.2**
comp=Z,63nm,0.4s,mb5.9
DPC Dobruska-Polom 77.59 357⇑ *i*P **P 14 56 19.4 +0.7**
DPC AMS AMS 15 37 50.0
comp=Z,2µm,17.7s
TANN Tannenbergstha 77.61 359 *e*P **P 14 56 18.1 -0.7**
comp=Z,21nm,1.3s,mb4.9
KKN Kakani 77.62 299 *e*P **P 14 56 19.5 +0.2**
comp=Z,42nm,0.6s,mb5.5
LVV L'vov 77.65 352 *i* P **P 14 56 17.6 -1.5**
LVV *e* 14 56 30.6
PKI Pulchoki 77.73 299 *e*P **P 14 56 19.9 0.0**
comp=Z,61nm,0.8s,mb5.6
PKIN Phulchoki 77.73 299 *e*P **P 14 56 19.9 0.0**
DOU Dourbes 77.76 5 P **P 14 56 17.9 -1.7**
comp=Z,17nm,1.8s,mb4.7
GIVF Givet 77.76 4⇑ *i*P **P 14 56 19.8 +0.1**
comp=Z,89nm,1.1s,mb5.3
GIVF Givet 77.76 4⇑ *i*P **P 14 56 19.8 +0.1**
GIVF pmax pmax
comp=Z,45nm,1.1s,mb5.3
GIVF Givet 77.76 4⇑ *i*P **P 14 56 19.8 +0.1**
comp=Z,44nm,1.1s,mb5.3
TNS Taunus Mts 77.77 2 *e*P **P 14 56 19.8 +0.1**
TNS pmax pmax
comp=Z,29nm,1.3s,mb5.0
TNS Taunus Mts 77.77 2 *e*P **P 14 56 19.8 +0.1**
comp=Z,29nm,1.3s,mb5.0
BAIF Baives 77.78 5⇑ *i*P **P 14 56 20.0 +0.3**
comp=Z,50nm,1.0s,mb5.1
BAIF Baives 77.78 5⇑ *i*P **P 14 56 20.0 +0.3**
BAIF pmax pmax
comp=Z,25nm,1.0s,mb5.1
BAIF Baives 77.78 5⇑ *i*P **P 14 56 20.0 +0.3**
comp=Z,25nm,1.0s,mb5.1
NKC Novy Kostel 77.79 359⇑ *i*P **P 14 56 20.3 +0.5**
NKC AMS AMS 15 42 00.0
comp=Z,1µm,18.8s
GKN Gorkha 77.80 300 *e*P **P 14 56 20.3 +0.1**
comp=Z,26nm,0.4s,mb5.5
DMN Daman 77.86 299 *e*P **P 14 56 20.9 +0.3**
comp=Z,27nm,0.6s,mb5.4
KWP Kalwaria 77.95 353⇓ *i*P **P 14 56 21.0 +0.3**
KWP Kalwaria 77.95 353 *e*P **P 14 56 21.2 +0.5**
KWP LR LR
comp=Z,2µm,19.0s,MS5.5
DANN Dangsing 77.98 301 *e*P **P 14 56 21.8 +0.5**
comp=Z,161nm,0.5s,mb6.2
PRU Pruhonice 78.00 358⇑ *i*P **P 14 56 21.2 +0.2**
PRU *ex* x 14 56 34.6
PRU AMS AMS 15 41 00.0
comp=Z,2µm,17.9s
OKC Ostrava-Krasne 78.03 356⇑ *i*P **P 14 56 21.6 +0.4**
OKC *ex* x 14 56 34.4
OKC AMS AMS 15 42 10.0
comp=Z,2µm,17.4s
OKC Ostrava-Krasne 78.03 356⇑ *i*P **P 14 56 21.6 +0.4**
OKC *e* 14 56 34.4
MANZ Manzenberg 78.04 360 *e*P **P 14 56 21.3 +0.1**
comp=Z,17nm,1.3s,mb4.8
ROTZ Rotzenmuhle 78.26 360 *e*P **P 14 56 23.0 +0.6**
comp=Z,38nm,1.4s,mb5.1
STHS Stebnicka Huta 78.27 354 *i* P **P 14 56 23.8 +1.3**
STHS pmax pmax
comp=Z,32nm,1.2s,mb5.1
STHS Stebnicka Huta 78.27 354 *i* P **P 14 56 23.8 +1.3**
comp=Z,32nm,1.2s,mb5.1
NIE Niedzica 78.33 354 *e*P **P 14 56 23.5 +0.7**
GRA1 Grafenberg Arr 78.33 0 *e*P **P 14 56 23.4 +0.6**
comp=Z,82nm,1.4s,mb5.5
GRA1 *e*S S 15 06 30.4 +14
GRA1 *e*SS SS 15 11 44.8 +27
GRA1 LR LR
comp=Z,800nm,21.4s,MS5.0
GRF Grafenberg Arr 78.33 0 *e*P **P 14 56 23.4 +0.6**
GRF *e*S S 15 06 30.4 +14
GRF pmax pmax
comp=Z,82nm,1.4s,mb5.5
GRF MLR MLR
comp=Z,800nm,21.4s,MS5.0
GRF Grafenberg Arr 78.33 0 *e*P **P 14 56 23.4 +0.6**
GRF *e*S S 15 06 30.4 +14
GRF pmax pmax
comp=Z,82nm,1.4s,mb5.5
GRF MLR MLR
comp=Z,800nm,21.4s,MS5.0
GRF Grafenberg Arr 78.33 0 *e*P **P 14 56 23.4 +0.6**
comp=Z,82nm,1.4s,mb5.5
GRF *e*S S 15 06 30.4 +14
GRF *e*SS SS 15 11 44.8 +27
GRF *e*L 15 35 50.8
comp=Z,769nm,21.4s
TOD Tromm 78.39 2 *e*P **P 14 56 23.4 +0.2**
KOLN Koldanda 78.53 301 *e*P **P 14 56 24.4 +0.1**
comp=Z,37nm,0.6s,mb5.5
VRAC Vranov 78.62 357⇑ *i*P **P 14 56 25.1 +0.6**
VRAC Vranov 78.62 357 P **P 14 56 25.3 +0.8**
TREC Trest 78.67 357⇑ *e*P **P 14 56 25.0 +0.3**
TREC AMS AMS 15 38 50.0
comp=Z,2µm,16.9s
FLN La Foliniere 78.75 8⇑ *i*P **P 14 56 24.9 -0.2**
comp=Z,56nm,1.0s,mb5.2
FLN *e*MLR MLR
comp=Z,2µm,19.2s,MS5.1
FLN La Foliniere 78.75 8⇑ *i*P **P 14 56 24.9 -0.2**
FLN pmax pmax
comp=Z,28nm,1.0s,mb5.2
FLN MLR MLR
comp=Z,2µm,19.3s,MS5.4
FLN La Foliniere 78.75 8⇑ *i*P **P 14 56 24.9 -0.2**
comp=Z,28nm,1.0s,mb5.2
FLN LR LR
comp=Z,2µm,19.3s,MS5.4
CRVS Cervenica-Dubn 78.77 353 *i* P **P 14 56 25.5 +0.2**
CRVS pmax pmax
comp=Z,581nm,4.1s
CRVS Cervenica-Dubn 78.77 353 *i* P **P 14 56 25.5 +0.2**
comp=Z,580nm,4.1s
WET Wettzell 78.87 359 *e*P **P 14 56 26.3 +0.5**
WET pmax pmax
comp=Z,43nm,1.5s,mb5.2
WET Wettzell 78.87 359 *e*P **P 14 56 26.3 +0.5**
comp=Z,43nm,1.5s,mb5.2
KHC Kasperske Hory 78.88 359⇑ *i*P **P 14 56 26.6 +0.7**
KHC *ex* x 14 56 39.3
KHC AMS AMS 15 40 40.0
comp=Z,3µm,17.8s
ROSF Rostrenen 78.90 10 *e*P **P 14 56 25.9 -0.1**
LDF La Druitiere 78.94 8⇑ *i*P **P 14 56 25.9 -0.3**
comp=Z,51nm,0.9s,mb5.2
LDF La Druitiere 78.94 8⇑ *i*P **P 14 56 25.9 -0.3**
LDF pmax pmax
comp=Z,25nm,0.9s,mb5.1
LDF La Druitiere 78.94 8⇑ *i*P **P 14 56 25.9 -0.3**
comp=Z,25nm,0.9s,mb5.2
UZH Uzhgorod 78.98 353 *e*P **P 14 56 26.0 -0.4**
UZH *e* 14 56 38.0
UZH *i* 14 56 43.4
UZH *e*S S 15 06 21.0 -2.0
UZH *e* 15 06 33.0
LANF Langenberg 79.00 2 *e*P **P 14 56 26.9 +0.4**
SGMF Saint Gilles 79.05 10⇑ *i*P **P 14 56 26.8 0.0**
comp=Z,74nm,1.1s,mb5.2
SGMF Saint Gilles 79.05 10⇑ *i*P **P 14 56 26.8 0.0**
SGMF pmax pmax
comp=Z,37nm,1.1s,mb5.2
SGMF Saint Gilles 79.05 10⇑ *i*P **P 14 56 26.8 0.0**
comp=Z,37nm,1.1s,mb5.2
GRR Gorron 79.08 8⇑ *i*P **P 14 56 26.9 -0.1**
comp=Z,56nm,0.9s,mb5.2
GRR Gorron 79.08 8⇑ *i*P **P 14 56 26.9 -0.1**
GRR pmax pmax
comp=Z,28nm,0.9s,mb5.2
GRR Gorron 79.08 8⇑ *i*P **P 14 56 26.9 -0.1**
comp=Z,28nm,0.9s,mb5.2
GEC2 GERESS Array S 79.16 359 *e*P **P 14 56 27.7 +0.3**
GEC2 pmax pmax
comp=Z,23nm,1.0s,mb5.1
GEC2 GERESS Array S 79.16 359 *e*P **P 14 56 27.7 +0.3**
comp=Z,23nm,1.0s,mb5.1
GERES GERESS Array B 79.16 359 P **P 14 56 27.8 +0.4**
comp=Z,10nm,0.9s,mb4.8,baz=8.6,slow=4.5,SNR=60
STU Stuttgart 79.23 2 *e*P **P 14 56 28.0 +0.2**
STU pmax pmax
comp=Z,57nm,1.1s,mb5.4
STU Stuttgart 79.23 2 *e*P **P 14 56 28.1 +0.3**
comp=Z,52nm,1.3s,mb5.3
STU Stuttgart 79.23 2 *e*P **P 14 56 28.0 +0.2**
comp=Z,57nm,1.1s,mb5.4
KOLL Kolacno 79.28 355 *i* P **P 14 56 28.7 +0.7**
VYHS Vyhne 79.34 355 *i* P **P 14 56 29.1 +0.7**
VYHS pmax pmax
comp=Z,26nm,1.1s,mb5.1
VYHS Vyhne 79.34 355 *i* P **P 14 56 29.1 +0.7**
comp=Z,26nm,1.1s,mb5.1
MEZF Maizieres J'vi 79.37 4⇑ *i*P **P 14 56 29.1 +0.5**
SMOL Smolenice 79.39 356 *i* P **P 14 56 29.8 +1.2**
SMOL Smolenice 79.39 356 *i* P **P 14 56 29.9 +1.3**
TRPA Tarpa 79.45 353⇑ *i*P **P 14 56 29.3 +0.3**
CDF Champ du Feu 79.55 3⇑ *i*P **P 14 56 29.9 +0.4**
comp=Z,41nm,0.9s,mb5.0
CDF Champ du Feu 79.55 3⇑ *i*P **P 14 56 29.9 +0.4**
CDF pmax pmax
comp=Z,21nm,0.9s,mb5.1
CDF Champ du Feu 79.55 3⇑ *i*P **P 14 56 29.9 +0.4**
comp=Z,20nm,0.9s,mb5.1
BFO Black Forest 79.66 2 P **P 14 56 30.6 +0.5**
comp=Z,124nm,1.1s,mb5.8,SNR=9.9
BFO Black Forest 79.66 2 *e*P **P 14 56 30.2 +0.1**
comp=Z,32nm,1.2s,mb5.1
BFO LR LR
comp=Z,2µm,19.0s,MS5.5
THEF They Montfort 79.69 4 *e*P **P 14 56 30.8 +0.5**
ZST Bratislava 79.72 356 *i* P **P 14 56 31.7 +1.3**
ZST pmax pmax
comp=Z,75nm,1.4s,mb5.4
ZST Bratislava 79.72 356 *i* P **P 14 56 31.7 +1.3**
comp=Z,75nm,1.4s,mb5.4
BURAR Bucovina Array 79.72 351⇑ *i*P **P 14 56 30.4 -0.1**
BURAR Bucovina Array 79.72 351⇑ P **P 14 56 30.4 -0.1**
ECH Echery 79.74 3 *e*P **P 14 56 30.8 +0.2**
ECH Echery 79.74 3 *e*P **P 14 56 30.5 -0.1**
ECH pmax pmax
comp=Z,52nm,1.1s,mb5.4
ECH MLR MLR
comp=Z,2µm,20.0s,MS5.4
ECH Echery 79.74 3 *e*P **P 14 56 30.5 -0.1**
comp=Z,52nm,1.1s,mb5.4
ECH LR LR
comp=Z,2µm,20.0s,MS5.4
LIBD Limburg 79.82 3 *e*P **P 14 56 31.4 +0.4**
PSZ Piszkesteto 79.85 354⇑ *e*P **P 14 56 32.0 +0.8**
PSZ Piszkesteto 79.85 354⇑ *i*P **P 14 56 32.2 +1.0**
PSZ Piszkesteto 79.85 354 *e*P **P 14 56 31.7 +0.5**
comp=Z,54nm,1.3s,mb5.3
FUR Furstenfeldbru 79.86 0 *e*P **P 14 56 31.6 +0.4**
FUR pmax pmax
comp=Z,32nm,0.7s,mb5.4
FUR Furstenfeldbru 79.86 0 *e*P **P 14 56 31.6 +0.4**
comp=Z,32nm,0.7s,mb5.4
SPAK Spaichingen-Ko 79.90 2 *e*P **P 14 56 32.1 +0.7**
HAU Haudompre 79.92 4⇑ *i*P **P 14 56 31.8 +0.2**
comp=Z,55nm,0.9s,mb5.2
HAU *e*MLR MLR
comp=Z,1µm,20.5s,MS5.0
HAU Haudompre 79.92 4⇑ *i*P **P 14 56 31.8 +0.2**
HAU pmax pmax
comp=Z,28nm,0.9s,mb5.2
HAU MLR MLR
comp=Z,1µm,20.5s,MS5.3
HAU Haudompre 79.92 4⇑ *i*P **P 14 56 31.8 +0.2**
comp=Z,28nm,0.9s,mb5.2
HAU LR LR
comp=Z,1µm,20.5s,MS5.3
KIS Kishinev 79.92 348 *e*P **P 14 56 30.0 -1.6**
KIS *e* 15 07 14.0
KIS MLR MLR
comp=Z,2µm,17.0s,MS5.6
KIS MLR MLR
comp=N,3µm,18.0s
KIS MLR MLR
comp=Z,3µm,18.0s
CONA Conrad Observa 80.03 357 *i* P **P 14 56 33.0 +0.8**
comp=Z,66nm,1.3s,mb5.4,SNR=27
CSNA Conrad Observa 80.03 357⇑ *i*P **P 14 56 33.0 +0.9**
comp=Z,62nm,1.3s,mb5.4
MAK Makhachkala 80.10 334 *e*P **P 14 56 31.5 -1.1**
MAK *i* 14 59 35.0
MAK *e* 15 06 46.8
MAK pmax pmax
comp=Z,509nm,1.4s,mb6.3
FELD Feldberg im Sc 80.10 2 *e*P **P 14 56 32.7 +0.1**
MOF Molkenrain 80.10 3 *e*P **P 14 56 32.7 +0.2**
CAL Calcutta 80.12 294 *ex* P **P 14 56 33.6 +0.6**
CAL *ex* SKSac 15 06 48.6 -0.1
HINF Hinteralfeld 80.13 3⇑ *i*P **P 14 56 32.8 +0.1**
comp=Z,26nm,0.7s,mb5.0
HINF Hinteralfeld 80.13 3⇑ *i*P **P 14 56 32.8 +0.1**
HINF pmax pmax
comp=Z,13nm,0.7s,mb5.0
HINF Hinteralfeld 80.13 3⇑ *i*P **P 14 56 32.8 +0.1**
comp=Z,13nm,0.7s,mb5.0
MOA Molln 80.15 358⇑ *i*P **P 14 56 33.1 +0.4**
comp=Z,32nm,1.0s,mb5.2,SNR=17
SOP Sopron 80.25 357⇑ *e*P **P 14 56 34.3 +1.0**
RJOB Jochberg 80.28 359 *e*P **P 14 56 33.8 +0.3**
comp=Z,24nm,0.8s,mb5.2
BUD Budapest 80.33 355⇑ *e*P **P 14 56 34.3 +0.5**
KIV Kislovodsk 80.37 338 P **P 14 56 35.7 +1.6**
comp=Z,313nm,0.9s,mb6.2,SNR=8.2
KIV Kislovodsk 80.37 338 *e*P **P 14 56 33.9 -0.2**
KIV *e*S S 15 06 38.9 +1.0
KIV *e*SS SS 15 11 52.7 +4.5
KIV pmax pmax
comp=Z,54nm,1.0s,mb5.4
KIV pmax pmax
comp=Z,475nm,9.2s
KIV Kislovodsk 80.37 338 *e*P **P 14 56 34.2 +0.2**
comp=Z,58nm,1.0s,mb5.5
KIV LR LR
comp=Z,2µm,21.0s,MS5.4
BOK Bokaro 80.47 297 *e*P **P 14 56 35.2 +0.3**
BOK AMb AMB 14 56 36.2
comp=Z,28nm,0.6s,mb5.3
BBS Basel-Blauen 80.50 3 *e*P **P 14 56 35.1 +0.4**
RETA Reutte 80.54 1⇑ *i*P **P 14 56 35.4 +0.5**
comp=Z,45nm,1.5s,mb5.2,SNR=9.5
LOR Lormes 80.54 5⇑ *i*P **P 14 56 35.1 +0.2**
comp=Z,86nm,1.2s,mb5.3
LOR *e*MLR MLR
comp=Z,2µm,19.8s,MS5.2
LOR Lormes 80.54 5⇑ *i*P **P 14 56 35.1 +0.2**
LOR pmax pmax
comp=Z,43nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,2µm,19.8s,MS5.5
LOR Lormes 80.54 5⇑ *i*P **P 14 56 35.1 +0.2**
comp=Z,43nm,1.2s,mb5.3
LOR LR LR
comp=Z,2µm,19.8s,MS5.5
LOMF Lomont 80.59 3 *e*P **P 14 56 35.8 +0.6**
RKT Rikitea 80.65 149 *e*S S 15 06 32.2 -8.8
comp=Z,610nm,27.2s
RKT *e*SS SS 15 11 49.0 -5.8
comp=Z,468nm,26.5s
RKT *e*LQ 15 18 12.1
comp=Z,247nm,22.5s
RKT *e*LR LR 15 21 30.6
comp=Z,3µm,24.8s,baz=342
MOTA Moosalm 80.68 0⇑ *i*P **P 14 56 36.2 +0.5**
comp=Z,39nm,1.0s,mb5.3,SNR=25
WATA Walderalm 80.69 360⇓ *i*P **P 14 56 36.4 +0.7**
comp=Z,14nm,0.5s,mb5.1,SNR=14
ARSA Arzberg 80.72 357⇑ *i*P **P 14 56 36.8 +0.9**
comp=Z,52nm,1.5s,mb5.2,SNR=17
SSF Saint Saulge 80.73 6⇑ *i*P **P 14 56 36.2 +0.3**
comp=Z,56nm,0.9s,mb5.2
SSF Saint Saulge 80.73 6⇑ *i*P **P 14 56 36.2 +0.3**
SSF pmax pmax
comp=Z,28nm,0.9s,mb5.2
SSF Saint Saulge 80.73 6⇑ *i*P **P 14 56 36.2 +0.3**
comp=Z,28nm,0.9s,mb5.2
WTTA Wattenberg 80.76 360 *i* P **P 14 56 37.1 +1.0**
comp=Z,38nm,0.7s,mb5.4,SNR=26

DRGR 80.77 352⇑ *iP* **P** 14 56 35.9 -0.2
DRGR 80.77 352 P **P** 14 56 36.0 -0.1
MFF **Saint Martin d** 80.92 8⇑ *iP* **P** 14 56 37.2 +0.3
comp=Z,90nm,0.9s,mb5.4
MFF **Saint Martin d** 80.92 8⇑ *iP* **P** 14 56 37.2 +0.3
MFF pmax pmax
comp=Z,45nm,0.9s,mb5.4
MFF **Saint Martin d** 80.92 8⇑ *iP* **P** 14 56 37.2 +0.3
comp=Z,45nm,0.9s,mb5.4
KBA **Koelnbreinsper** 80.94 359 *i* P **P** 14 56 38.3 +1.3
comp=Z,152nm,1.5s,mb5.7,SNR=62
AVF **Avril sur Loir** 80.99 6⇑ *iP* **P** 14 56 37.4 +0.1
comp=Z,42nm,0.7s,mb5.2
AVF **Avril sur Loir** 80.99 6⇑ *iP* **P** 14 56 37.4 +0.1
AVF pmax pmax
comp=Z,21nm,0.7s,mb5.2
AVF **Avril sur Loir** 80.99 6⇑ *iP* **P** 14 56 37.4 +0.1
comp=Z,21nm,0.7s,mb5.2
FETA **Feichten** 81.00 1⇑ *iP* **P** 14 56 38.3 +0.9
comp=Z,74nm,1.3s,mb5.5,SNR=44
SIM **Simferopol'** 81.14 344⇓ *eP* **P** 14 56 32.3 -5.9
SIM *eS* S 15 06 47.0 +1.1
SIM pmax pmax
comp=Z,31nm,1.3s,mb5.1
SMF **Signal de Mont** 81.16 5⇑ *iP* **P** 14 56 38.4 +0.2
comp=Z,111nm,1.1s,mb5.4
SMF **Signal de Mont** 81.16 5⇑ *iP* **P** 14 56 38.4 +0.2
SMF pmax pmax
comp=Z,55nm,1.1s,mb5.4
SMF **Signal de Mont** 81.16 5⇑ *iP* **P** 14 56 38.4 +0.2
comp=Z,55nm,1.1s,mb5.4
BGF **Bois d'Agland** 81.19 6⇑ *iP* **P** 14 56 38.5 +0.1
comp=Z,50nm,0.8s,mb5.2
BGF **Bois d'Agland** 81.19 6⇑ *iP* **P** 14 56 38.5 +0.1
BGF pmax pmax
comp=Z,25nm,0.8s,mb5.2
BGF **Bois d'Agland** 81.19 6⇑ *iP* **P** 14 56 38.5 +0.1
comp=Z,25nm,0.8s,mb5.2
ABTA **Abfaltersbach** 81.28 359⇓ *iP* **P** 14 56 39.2 +0.4
comp=Z,64nm,1.3s,mb5.4,SNR=21
VRI **Vrincioaia** 81.29 349⇑ *iP* **P** 14 56 39.4 +0.5
VRI **Vrincioaia** 81.29 349 ⇑ P **P** 14 56 39.4 +0.4
SOKA **Soboth** 81.30 358⇓ *iP* **P** 14 56 39.7 +0.7
comp=Z,111nm,1.4s,mb5.6
CABF **La Chapelle** 81.31 4⇑ *iP* **P** 14 56 39.8 +0.8
comp=Z,110nm,1.1s,mb5.4
CABF **La Chapelle** 81.31 4⇑ *iP* **P** 14 56 39.8 +0.8
CABF pmax pmax
comp=Z,55nm,1.0s,mb5.4
CABF **La Chapelle** 81.31 4⇑ *iP* **P** 14 56 39.8 +0.8
comp=Z,55nm,1.0s,mb5.4
PERS **Pernice** 81.34 357 *i* P **P** 14 56 39.8 +0.6
ABKT **Ailbek** 81.36 324 P **P** 14 56 39.4 -0.1
comp=Z,420nm,0.9s,mb6.4,SNR=37
MYKA **Terra Mystica** 81.38 359⇑ *iP* **P** 14 56 39.8 +0.4
comp=Z,29nm,1.2s,mb5.1
SOC **Sochi** 81.39 340 *eP* **P** 14 56 38.3 -1.2
SOC *e* pP 14 56 44.9 -3.3
SOC *e*PPP 15 01 36.5
SOC *e*S S 15 06 52.3 +3.8
SOC *e*SS SS 15 12 08.4 +5.1
SOC pmax pmax
comp=Z,53nm,1.1s,mb5.4
TCF **Toulx Ste Croi** 81.41 7⇑ *iP* **P** 14 56 39.6 0.0
comp=Z,42nm,0.9s,mb5.0
TCF **Toulx Ste Croi** 81.41 7⇑ *iP* **P** 14 56 39.6 0.0
TCF pmax pmax
comp=Z,21nm,0.9s,mb5.1
TCF **Toulx Ste Croi** 81.41 7⇑ *iP* **P** 14 56 39.6 0.0
comp=Z,21nm,0.9s,mb5.1
OBKA **Obir** 81.48 358⇑ *iP* **P** 14 56 40.4 +0.5
comp=Z,35nm,0.8s,mb5.4,SNR=12
ONI **Oni** 81.49 337 P **P** 14 56 40.6 +0.6
TUE **Stuetta** 81.54 2 *eP* **P** 14 56 40.8 +0.5
comp=Z,78nm,1.3s,mb5.5
PKSM **Moragy** 81.62 355 P **P** 14 56 40.5 -0.2
TLCR 81.71 348⇑ *iP* **P** 14 56 41.1 0.0
AGO **Saint Agoulin** 81.71 6 *eP* **P** 14 56 42.8 +1.6
PLDF **La Plantade** 81.82 6 *eP* **P** 14 56 43.5 +1.8
OG05 **Jujurieux** 81.85 4 *eP* **P** 14 56 42.5 +0.6
GOR **Gori** 81.89 336 P **P** 14 56 43.4 +1.2
VOIR 81.90 350⇓ *iP* **P** 14 56 42.5 +0.4
VOIR 81.90 350 P **P** 14 56 42.6 +0.5
BCIP **Isla Barro Col** 81.99 85 PFAKE 14 56 50.0 +6.9
BCIP LR LR
comp=Z,712nm,20.0s,MS5.0
MTA **Mtatsminda** 81.99 335 P **P** 14 56 43.3 +0.6
PYM **Petit Puy Mans** 82.00 6 *eP* **P** 14 56 44.1 +1.4
BZS **Buzias** 82.02 353⇑ *iP* **P** 14 56 42.5 -0.3
BZS **Buzias** 82.02 353 P **P** 14 56 42.7 -0.1
DGRG **David-gareji** 82.07 335 P **P** 14 56 43.8 +0.7
JAVS **Javornik** 82.11 358 *iP* **P** 14 56 42.9 -0.3
GZR **Gura Zlata** 82.15 352⇓ *iP* **P** 14 56 43.7 +0.2
GZR **Gura Zlata** 82.15 352 P **P** 14 56 43.5 0.0
CTA **Charters Tower** 82.18 222 *eP* **P** 14 56 41.8 -2.0
comp=Z,7.6nm,0.8s,mb4.7
CTAO **Charters Tower** 82.18 222 *eP* **P** 14 56 42.1 -1.7
CTAO pmax pmax
comp=Z,26nm,1.0s,mb5.1
CTAO MLR MLR
comp=Z,690nm,20.0s,MS5.0
CTAO **Charters Tower** 82.18 222 *eP* **P** 14 56 42.1 -1.7
comp=Z,26nm,1.0s,mb5.1
CTAO LR LR
comp=Z,690nm,20.0s,MS5.0
VISS **Visnje** 82.18 358 *i* P **P** 14 56 43.6 -0.1
RSL **Roselend** 82.25 3 *eP* **P** 14 56 45.1 +1.1
RJF **Les Rejaudoux** 82.34 7⇑ *iP* **P** 14 56 44.4 -0.1
comp=Z,22nm,0.7s,mb4.9
RJF *e*MLR MLR
comp=Z,2μm,19.2s,MS5.2
RJF **Les Rejaudoux** 82.34 7⇑ *iP* **P** 14 56 44.4 -0.1
RJF pmax pmax
comp=Z,11nm,0.7s,mb4.9
RJF MLR MLR
comp=Z,2μm,19.3s,MS5.5
RJF **Les Rejaudoux** 82.34 7⇑ *iP* **P** 14 56 44.4 -0.1
comp=Z,11nm,0.7s,mb4.9
RJF LR LR
comp=Z,2μm,19.3s,MS5.5
LPL **La Plagne** 82.42 3⇑ *iP* **P** 14 56 46.5 +1.6
comp=Z,12nm,0.5s,mb4.8
LPL **La Plagne** 82.42 3⇑ *iP* **P** 14 56 46.5 +1.6
LPL pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
LPL **La Plagne** 82.42 3⇑ *iP* **P** 14 56 46.5 +1.6
comp=Z,6.1nm,0.5s,mb4.8
LPG **La Plagne** 82.44 3⇑ *iP* **P** 14 56 46.7 +1.7
comp=Z,25nm,0.8s,mb4.9
LPG **La Plagne** 82.44 3⇑ *iP* **P** 14 56 46.7 +1.7
LPG pmax pmax
comp=Z,12nm,0.8s,mb4.9
LPG **La Plagne** 82.44 3⇑ *iP* **P** 14 56 46.7 +1.7
comp=Z,12nm,0.8s,mb4.9
BOJS **Bojanci** 82.47 357 *i* P **P** 14 56 45.4 +0.2
TIRR **Tirgusor** 82.47 348 *eP* **P** 14 56 44.2 -1.0
TIRR pmax pmax
comp=Z,46nm,1.1s,mb5.3
TIRR **Tirgusor** 82.47 348⇑ *iP* **P** 14 56 45.0 -0.2
TIRR **Tirgusor** 82.47 348 *eP* **P** 14 56 44.2 -1.0
comp=Z,46nm,1.1s,mb5.3
LBL **Lubilhac** 82.53 6 *eP* **P** 14 56 47.2 +1.7
SSB **Saint Sauveur** 82.56 5 *eP* **P** 14 56 46.1 +0.5
SSB pmax pmax
comp=Z,29nm,1.2s,mb5.2
SSB **Saint Sauveur** 82.56 5 *eP* **P** 14 56 46.1 +0.5
comp=Z,29nm,1.2s,mb5.2
LFF **La Frestale** 82.64 8⇑ *iP* **P** 14 56 46.4 +0.3
comp=Z,89nm,0.8s,mb5.6
LFF **La Frestale** 82.64 8⇑ *iP* **P** 14 56 46.4 +0.3
LFF pmax pmax
comp=Z,45nm,0.8s,mb5.5
LFF **La Frestale** 82.64 8⇑ *iP* **P** 14 56 46.4 +0.3
comp=Z,45nm,0.8s,mb5.5
GRN **Grenoble** 82.66 4 *eP* **P** 14 56 47.1 +1.0
GDM **Grand'Maison** 82.71 4 *eP* **P** 14 56 47.6 +1.2
CAF **Calviac** 82.76 7⇑ *iP* **P** 14 56 47.1 +0.4
comp=Z,42nm,0.9s,mb5.1
CAF **Calviac** 82.76 7⇑ *iP* **P** 14 56 47.1 +0.4
CAF pmax pmax
comp=Z,21nm,0.9s,mb5.2
CAF **Calviac** 82.76 7⇑ *iP* **P** 14 56 47.1 +0.4
comp=Z,21nm,0.9s,mb5.2
BNI **Bardonecchia** 82.89 3 *eP* **P** 14 56 48.6 +1.3
BNI pmax pmax
comp=Z,42nm,0.9s,mb5.5
BNI MLR MLR
comp=Z,2μm,20.0s,MS5.5
BNI **Bardonecchia** 82.89 3 *eP* **P** 14 56 48.6 +1.3
comp=Z,42nm,0.9s,mb5.5
BNI LR LR
comp=Z,2μm,20.0s,MS5.5
KAPI **Kappang** 82.96 252 PFAKE 14 57 00.0 +12
KAPI LR LR
comp=Z,666nm,20.0s,MS5.0
ORIF **Oris-en-Rattie** 82.99 4⇑ *iP* **P** 14 56 48.9 +1.1
comp=Z,31nm,0.7s,mb5.1
ORIF *e*MLR MLR
comp=Z,2μm,20.8s,MS5.2
ORIF **Oris-en-Rattie** 82.99 4⇑ *iP* **P** 14 56 48.9 +1.1
ORIF pmax pmax
comp=Z,15nm,0.7s,mb5.1
ORIF **Oris-en-Rattie** 82.99 4⇑ *iP* **P** 14 56 48.9 +1.1
comp=Z,15nm,0.7s,mb5.1
VIVF **Saint-Julien-l** 82.99 5⇑ *iP* **P** 14 56 48.5 +0.6
comp=Z,30nm,0.8s,mb5.1
VIVF **Saint-Julien-l** 82.99 5⇑ *iP* **P** 14 56 48.5 +0.6
VIVF pmax pmax
comp=Z,15nm,0.8s,mb5.1
VIVF **Saint-Julien-l** 82.99 5⇑ *iP* **P** 14 56 48.5 +0.6
comp=Z,15nm,0.8s,mb5.1
BCA **Borcka** 83.00 338 *eP* **P** 14 56 47.0 -1.0
OG22 **Abries** 83.12 3 *eP* **P** 14 56 50.3 +1.7
MBDF **Montbardon** 83.21 3⇑ *iP* **P** 14 56 50.6 +1.6
comp=Z,70nm,0.7s,mb5.5
MBDF **Montbardon** 83.21 3⇑ *iP* **P** 14 56 50.6 +1.6
MBDF pmax pmax
comp=Z,35nm,0.7s,mb5.5
MBDF **Montbardon** 83.21 3⇑ *iP* **P** 14 56 50.6 +1.6
comp=Z,35nm,0.7s,mb5.5
GNI **Garni** 83.46 335 *eP* **P** 14 56 51.2 +0.8
GNI **Garni** 83.46 335 *cP* **P** 14 56 51.3 +0.9
GNI pmax pmax
comp=Z,16nm,1.4s
GNI **Garni** 83.46 335⇑ *iP* **P** 14 56 51.4 +1.0
GNI LR LR
comp=Z,3μm,19.0s,MS5.7
KSM **Kuching** 83.46 264 PFAKE 14 57 00.0 +9.3
KSM LR LR
comp=Z,526nm,21.0s,MS4.9
SURF **Saint Ours** 83.46 3 *eP* **P** 14 56 52.3 +2.0
MTP **Monte Pirata** 83.50 69 *eP* **P** 14 56 49.6 -1.3
comp=Z,28nm,0.9s,mb5.3
OG25 **Le Caire** 83.54 4 *eP* **P** 14 56 51.8 +1.1
LASF **Ste Croix** 83.72 6⇑ *iP* **P** 14 56 52.5 +0.8
VLC **Villacollemand** 83.86 1 *eP* **P** 14 56 52.1 -0.2
comp=Z,21nm,0.6s,mb5.5
SMRF **Simiane la Rot** 83.91 4⇑ *iP* **P** 14 56 54.0 +1.4
comp=Z,71nm,1.1s,mb5.4
SMRF **Simiane la Rot** 83.91 4⇑ *iP* **P** 14 56 54.0 +1.4
comp=Z,71nm,1.1s,mb5.7
TOUF **Mont Tournerai** 83.94 3 *eP* **P** 14 56 53.7 +0.9
AUTN **L'Aution** 83.97 3 *eP* **P** 14 56 53.5 +0.6
SAOF **Saorge** 83.98 3 *eP* **P** 14 56 53.7 +0.7
VILF **Villemus** 84.04 4 *eP* **P** 14 56 55.2 +1.9
MVIF **Mont Vial** 84.06 3 *eP* **P** 14 56 54.3 +0.9
LUCF **Luceram** 84.07 3 *eP* **P** 14 56 54.1 +0.7
DIKM **Dikmen** 84.14 342 *eP* **P** 14 56 54.7 +2.8
AJM **Ajmer** 84.16 307 *eP* **P** 14 56 53.2 -1.0
AJM AMb AMB 14 57 08.2
comp=Z,34nm,1.2s,mb5.4
REVF **Revere** 84.22 3 *eP* **P** 14 56 54.8 +0.6
SJPF **Ste Jean** 84.28 9⇑ *iP* **P** 14 56 55.4 +0.9
comp=Z,21nm,0.6s,mb5.2
SJPF **Ste Jean** 84.28 9⇑ *iP* **P** 14 56 55.4 +0.9
SJPF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
SJPF **Ste Jean** 84.28 9⇑ *iP* **P** 14 56 55.4 +0.9
comp=Z,10nm,0.6s,mb5.1
TAVF **Tavernes** 84.29 4 *eP* **P** 14 56 55.7 +1.1
MTLF **Montolieu** 84.35 7⇑ *iP* **P** 14 56 55.4 +0.6
comp=Z,46nm,0.8s,mb5.4
MTLF **Montolieu** 84.35 7⇑ *iP* **P** 14 56 55.4 +0.6
MTLF pmax pmax
comp=Z,23nm,0.8s,mb5.4
MTLF **Montolieu** 84.35 7⇑ *iP* **P** 14 56 55.4 +0.6
comp=Z,23nm,0.8s,mb5.4
FRF **La Foret Royal** 84.37 4⇑ *iP* **P** 14 56 55.5 +0.5
comp=Z,72nm,0.8s,mb5.5
FRF **La Foret Royal** 84.37 4⇑ *iP* **P** 14 56 55.5 +0.5
FRF pmax pmax
comp=Z,36nm,0.8s,mb5.5
FRF **La Foret Royal** 84.37 4⇑ *iP* **P** 14 56 55.5 +0.5
comp=Z,36nm,0.8s,mb5.5
LARF **Larrau** 84.37 9 *eP* **P** 14 56 56.2 +1.2
GUMT **Gumushane** 84.43 339 *eP* **P** 14 56 55.8 +0.5
AGRB **Hanur-Agry** 84.44 336 *eP* **P** 14 56 54.2 -1.2
EPF **Esparros** 84.50 8⇑ *iP* **P** 14 56 55.5 -0.1
comp=Z,40nm,0.9s,mb5.2
EPF **Esparros** 84.50 8⇑ *iP* **P** 14 56 55.5 -0.1
EPF pmax pmax
comp=Z,20nm,0.9s,mb5.2
EPF **Esparros** 84.50 8⇑ *iP* **P** 14 56 55.5 -0.1
comp=Z,20nm,0.9s,mb5.2
EZM **Erzurum** 84.53 337 *eP* **P** 14 56 57.0 +1.1
ETSF **Etsaut** 84.55 9⇑ *iP* **P** 14 56 56.7 +0.8
comp=Z,52nm,0.6s,mb5.5
ETSF **Etsaut** 84.55 9⇑ *iP* **P** 14 56 56.7 +0.8
ETSF pmax pmax
comp=Z,26nm,0.6s,mb5.5
ETSF **Etsaut** 84.55 9⇑ *iP* **P** 14 56 56.7 +0.8
comp=Z,26nm,0.6s,mb5.5
BERF **Bertagne** 84.58 4 *eP* **P** 14 56 57.4 +1.4
LMR **La Mourre** 84.59 4⇑ *iP* **P** 14 56 56.8 +0.7
comp=Z,70nm,1.1s,mb5.4
LMR **La Mourre** 84.59 4⇑ *iP* **P** 14 56 56.8 +0.7
LMR pmax pmax
comp=Z,35nm,1.1s,mb5.4
LMR **La Mourre** 84.59 4⇑ *iP* **P** 14 56 56.8 +0.7
comp=Z,35nm,1.1s,mb5.4
VIEF **Viey** 84.62 8 *eP* **P** 14 56 57.4 +1.2
CMLA **Cha da Macela** 84.63 29 PFAKE 14 57 10.0 +14
CMLA LR LR
comp=Z,3μm,20.0s,MS5.6
MLS **Moulis** 84.64 8 *eP* **P** 14 56 56.7 +0.4
PCAB **Cabril** 84.80 15 *eP* **P** 14 56 55.7 -1.4
PBRG **Braganca** 84.89 14 *eP* **P** 14 56 57.7 +0.1
comp=Z,30nm,1.9s,mb5.1
EZC **Erzincan** 85.03 338 *eP* **P** 14 57 00.3 +1.9
BHPL **Bhopal** 85.44 303 *eP* **P** 14 56 59.5 -1.2
BHPL AMb AMB 14 57 00.8
comp=Z,25nm,0.9s,mb5.3
SVSK **Kacayir** 85.47 341 *eP* **P** 14 56 59.1 -1.5
MVO **Moncorvo** 85.48 14 *eP* **P** 14 57 01.6 +1.0
comp=Z,38nm,1.5s,mb5.3
AQU **L'Aquila** 85.66 359 *eP* **P** 14 57 01.8 +0.4
AQU pmax pmax
comp=Z,34nm,0.7s,mb5.7
AQU MLR MLR
comp=Z,1μm,19.0s,MS5.3
AQU **L'Aquila** 85.66 359 *eP* **P** 14 57 01.8 +0.3
comp=Z,34nm,0.7s,mb5.7
AQU LR LR
comp=Z,1μm,19.0s,MS5.3
SKO **Skopje** 85.66 353 *iP* **P** 14 57 02.2 +0.7
PVIS **Viseu** 85.79 15 *eP* **P** 14 57 03.2 +1.1
STIP **Stip** 85.88 352 *iP* **P** 14 57 02.1 -0.4
PTK **Pertek** 85.94 339 *eP* **P** 14 57 01.2 -1.7
ANWB **Willy Bob** 85.97 66 PFAKE 14 57 10.0 +6.6
ANWB LR LR
comp=Z,2μm,21.0s,MS5.6
MTE **Manteigas** 86.15 14 *eP* **P** 14 57 05.7 +1.8
VAY **Valandovo** 86.21 352 *iP* **P** 14 57 04.0 -0.3
KRUS **Krusevo** 86.28 353 *iP* **P** 14 57 04.8 +0.3
BR131 **Keskin Array S** 86.30 343 *eP* **P** 14 57 05.0 +0.4
comp=Z,12nm,0.6s,mb5.3
BR131 LR LR
comp=Z,603nm,20.0s,MS5.0
BRTR **Keskin Array B** 86.30 343 P **P** 14 57 05.2 +0.6
comp=Z,12nm,0.6s,mb5.3,baz=15,slow=2.6,SNR=57
NGP **Nagpur** 86.30 300 *eP* **P** 14 57 03.1 -1.9
NGP AMb AMB 14 57 19.5
comp=Z,35nm,3.2s
KULM **Kulim** 86.38 274 *eP* **P** 14 57 05.3 -0.1
comp=Z,27nm,1.0s,mb5.4
KULM LR LR
comp=Z,781nm,21.0s,MS5.1
SVRC **Sivrice-ELAZID** 86.45 338 *eP* **P** 14 57 03.9 -1.5
OHR **Ohrid** 86.56 353 *iP* **P** 14 57 04.8 -1.1
BIA **Bitola** 86.62 353 *iP* **P** 14 57 05.0 -1.2
PCBR **Castelo Branco** 86.71 15 *eP* **P** 14 57 07.6 +0.9
MALT **Malatya** 86.71 339 *eP* **P** 14 57 07.5 +0.8
MALT pmax pmax
comp=Z,28nm,1.4s,mb5.3
MALT MLR MLR
comp=Z,1μm,20.0s,MS5.2
MALT **Malatya** 86.71 339⇑ *iP* **P** 14 57 08.1 +1.4
MALT **Malatya** 86.71 339 *eP* **P** 14 57 07.5 +0.8
comp=Z,28nm,1.4s,mb5.3
MALT LR LR
comp=Z,1μm,20.0s,MS5.2
BNN **Bunyan** 86.73 341 *eP* **P** 14 57 04.5 -2.3
VIS **Vishakhapatnam** 86.76 295 *eP* **P** 14 57 05.0 -2.3
VIS AMb AMB 14 57 08.2
comp=Z,19nm,0.8s,mb5.4
PMRV **Marv??o** 87.12 15 *eP* **P** 14 57 08.7 0.0
comp=Z,29nm,1.6s,mb5.3
ESDC **Sonseca Array** 87.36 12 P **P** 14 57 09.4 -0.4
comp=Z,4.6nm,0.5s,mb5.0,baz=350,slow=4.5,SNR=30
ESLA **Sonseca Array** 87.36 12 *eP* **P** 14 57 09.4 -0.4
comp=Z,1.0nm,0.6s,mb4.2
ESLA LR LR
comp=Z,11μm,20.0s,MS6.2
WRAB **Tennant Creek** 87.41 232 *eP* **P** 14 57 08.6 -1.5
WRAB **Tennant Creek** 87.41 232 *eP* **P** 14 57 08.2 -1.9
comp=Z,27nm,1.2s,mb5.3
WB2 **Warramunga Arr** 87.42 232 *eP* **P** 14 57 08.3 -1.9
WRA **Warramunga Arr** 87.42 232 P **P** 14 57 08.4 -1.8
comp=Z,6.0nm,0.6s,mb5.0,baz=34,slow=6.1,SNR=34
WRA LR LR 15 33 05.2
comp=Z,684nm,21.1s,MS5.0,baz=35,slow=34
PAB **San Pablo** 87.44 12 *eP* **P** 14 57 10.0 -0.2
PAB pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
PAB **San Pablo** 87.44 12 *eP* **P** 14 57 10.0 -0.2
comp=Z,9.3nm,1.1s,mb4.9
PESTR **Estremoz** 87.64 15 *eP* **P** 14 57 11.2 0.0
CUC **Castrocucco** 87.95 357 PFAKE 14 57 20.0 +7.3
CUC LR LR
comp=Z,1μm,20.0s,MS5.4
PBAR **Barrancos** 88.41 15 *eP* **P** 14 57 14.2 -0.7
comp=Z,28nm,1.8s,mb5.2
PBEJ **Beja** 88.42 15 *eP* **P** 14 57 14.4 -0.5
ISP **Isparta** 88.66 345 PFAKE 14 57 30.0 +14
ISP LR LR
comp=Z,886nm,19.0s,MS5.2
FDF **Fort de France** 88.69 67 PFAKE 14 57 30.0 +13
FDF LR LR
comp=Z,4μm,22.0s,MS5.7
PVAQ **Vaqueiros** 89.05 15 *eP* **P** 14 57 18.7 +0.8
ARMA **Armidale** 89.50 214 *eP* **P** 14 57 20.0 +0.2
HYB **Hyderabad** 89.63 298⇑ *iP* **P** 14 57 20.5 -0.4
HYB *e*SKS 15 07 52.0
HYB **Hyderabad** 89.63 298 *eP* **P** 14 57 20.5 -0.4
CEL **Celeste** 89.68 357 PFAKE 14 57 30.0 +9.2
CEL LR LR
comp=Z,960nm,19.0s,MS5.2
OTAV **Otavalo** 89.83 90 P **P** 14 57 21.9 0.0
comp=Z,14nm,1.1s,mb5.2
FITZ **Fitzroy Crossi** 90.31 240 *eP* **P** 14 57 22.7 -1.2
comp=Z,15nm,1.0s,mb5.3
GRGR **Grenville** 90.50 69 PFAKE 14 57 40.0 +15
GRGR LR LR
comp=Z,2μm,21.0s,MS5.5
ASAR **Alice Springs** 90.80 231 P **P** 14 57 24.9 -1.1
comp=Z,8.6nm,0.7s,mb5.2,baz=34,slow=4.7,SNR=59
BBGH **Gun Hill** 90.88 67 PFAKE 14 57 40.0 +13
BBGH LR LR
comp=Z,3μm,21.0s,MS5.8
CSS **Prodhromos** 90.98 342 *eP* **P** 14 57 26.3 -0.7
comp=Z,25nm,1.2s,mb5.4
CSS LR LR
comp=Z,838nm,21.0s,MS5.2
KEST **Kesra** 92.26 2 P **P** 14 57 33.1 +0.2
comp=Z,1.8nm,0.6s,mb4.6,baz=73,slow=2.2,SNR=8.1
MIB **Mutribah** 92.39 329 *eP* **P** 14 57 32.7 -0.8
baz=329
MIB AMb AMB 14 57 34.0
comp=Z,56nm,0.8s,mb6.0,baz=329
NAY **Al-Naaiem** 92.94 329 *eP* **P** 14 57 34.8 -1.3
baz=329
NAY AMb AMB 14 57 50.6
comp=Z,19nm,1.6s,mb5.3,baz=329
RDF **Al-Radifah** 93.14 329 *eP* **P** 14 57 35.4 -1.6
baz=329
RDF AMb AMB 14 57 39.1
comp=Z,33nm,0.9s,mb5.8,baz=329
STKA **Stephens Creek** 94.54 221 P **P** 14 57 41.9 -1.2
comp=Z,1.1nm,0.7s,mb4.4,baz=336,slow=6.8,SNR=4.6
STKA **Stephens Creek** 94.54 221 *eP* **P** 14 57 41.6 -1.5
comp=Z,3.7nm,1.2s,mb4.7
CAN **Canberra** 94.87 214 PFAKE 14 58 00.0 +15
CAN LR LR
comp=Z,579nm,19.0s,MS5.1
KOD **Kodaikanal** 96.12 295 *eP* **P** 14 57 50.7 -0.2
KOD AMb AMB 14 58 22.7
comp=Z,19nm,2.2s,mb5.1
TORD **Torodi Ar. Bea** 114.22 10 PKP PKiKP 15 03 01.0 -1.6
comp=Z,0.9nm,0.6s,baz=345,slow=1.9,SNR=6.6
TORD PKKPbc PKKPbc 15 13 39.9 -0.7
comp=Z,1.0nm,0.6s,baz=168,slow=2.6,SNR=5.9
DBIC **Dimbokro** 119.57 19 PKP PKPdf 15 03 11.6 -1.3
comp=Z,1.7nm,0.6s,baz=329,slow=6.0,SNR=3.6
DBIC **Dimbokro** 119.57 19 PKP PKPdf 15 03 11.6 -1.3
DBIC LR LR
comp=Z,2μm,19.0s,MS5.7
BDFB **Brasilia** 120.75 75 PFAKE 15 03 30.0 +15
BDFB LR LR
comp=Z,853nm,22.0s,MS5.3
CPUP **Villa Florida** 123.17 91 PFAKE 15 03 30.0 +11
CPUP LR LR
comp=Z,152nm,20.0s,MS4.7
DRV **Dumont d'Urvil** 124.91 202 SP SP 15 15 12.0 +5.5
DRV SS SS 15 22 12.0 +7.7
DRV L 15 36 00.0
DRV R 15 42 00.0
PLCA **Paso Flores** 125.29 113 PKP PKPdf 15 03 20.1 -2.8
comp=Z,1.5nm,0.7s,baz=332,slow=12,SNR=3.9
CASY **Casey** 133.11 213 PFAKE 15 03 50.0 +13
CASY LR LR
comp=Z,730nm,21.0s,MS5.4
ABPO **Ambohimpanom** 136.64 306 PFAKE 15 04 00.0 +15
ABPO LR LR
comp=Z,940nm,20.0s,MS5.5
EFI **East Falkland** 138.70 118 PFAKE 15 04 00.0 +12
EFI LR LR
comp=Z,1μm,20.0s,MS5.6
QSPA **South Pole Qui** 142.12 180 *e*PKPdf PKPdf 15 03 46.5 -6.8
TSUM **Tsumeb** 146.58 350 *e*PKPdf PKPdf 15 04 03.9 +1.1
LBTB **Lobatse** 150.68 333 *e*PKIKP PKPbc 15 04 14.9 +0.1
MAW **Mawson** 151.20 218 PKPbc PKPbc 15 04 13.6 -1.1
comp=Z,8.7nm,0.9s,baz=340,slow=1.2,SNR=4.7
MAW **Mawson** 151.20 218 *e*PKPbc PKPbc 15 04 12.1 -2.6
BOSA **Boshof** 154.18 331 PKPbc PKPbc 15 04 22.3 -0.2
comp=Z,2.5nm,0.5s,baz=327,slow=4.4,SNR=5.6
BOSA **Boshof** 154.18 331 PFAKE 15 04 30.0 +16
BOSA LR LR
comp=Z,2μm,21.0s,MS5.9
VNA3 **Neumayer Olymp** 158.80 161 *e*PKPdf PKPdf 15 04 16.0 -3.0
VNA3 *e* 15 04 23.2
VNA3 *e* 15 04 32.3
VNA2 **Neumayer--Watz** 159.50 162 *e*PKPdf PKPdf 15 04 16.8 -3.1
VNA2 *e* 15 04 24.8
VNA2 *e* 15 04 33.6
VNA1 **Neumayer--Stat** 159.56 161 *e*PKPdf PKPdf 15 04 33.0 +13

ISCJB **27** *14:45:42.3±2.0, 52.13N±005×16838W±006, h0km±12km, mb5.2/80, MS5.2/2, Error ellipse: s-maj=8.7km s-min=5.5km az=147.8*
IDC **27** *14:45:44.5±0.7, 52.37N×168.47W, h0km, mb4.8/22, mb1 5.0/23, mb1mx4.9/28, mbtmp4.8/23, ML4.4/1, MS5.2/2, Ms1 5.2/2, ms1mx4.3/26, Error ellipse: s-maj=22.8km s-min=11.2km az=177.0*
NEIC **27** *14:45:45.9±0.3, 52.29N×168.42W, h10km, mb5.2/50, Error ellipse: s-maj=7.3km s-min=4.1km az=160.0*
BJI **27** *14:45:46.4, 52.96N×168.87W, h10km, mB5.2, mb5.4, Ms5.1, Msz4.8*
MOS **27** *14:45:47.5±0.6, 52.45N×168.50W, h33km, mb5.4/43, Error ellipse: s-maj=14.3km s-min=11.0km az=100.7*
SZGRF **27** *14:45:53.7, 52.73N×168.13W, h33km, mb5.4, Fox Islands, Aleutian Islands, United States*
ISC 27 14:45:46.5±1.6, 5223N±006×16838W±007, h15km±8km,

n201,σ0.84/206, mb5.0/80, MS5.2/2, 69C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.80**	**339**	P	**Pg**	**14 46 01.7**	**-0.2**
NIKO				S	**Sg**	**14 46 14.0**	**+1.8**
OKCD	**Okmok Cone D**	**1.21**	**8**	P	**Pn**	**14 46 09.0**	**+0.1**
OKFG	**Magazine Ridge**	**1.21**	**13**	P	**Pn**	**14 46 08.6**	**-0.3**
OKFG				S	**Sb**	**14 46 26.1**	**+1.5**
UNV	**Unalaska Valle**	**1.97**	**34**	P	**Pn**	**14 46 18.8**	**-0.5**
UNV				S	**Sn**	**14 46 44.1**	**+0.3**
GSTR	**Great Sitkin T**	**4.73**	**271**	Pn	**Pn**	**14 46 59.1**	**+1.9**
CHGN	**Chignik**	**7.12**	**51**	*e*Pn	**Pn**	**14 47 28.6**	**-1.3**
KDAK	**Kodiak Island**	**10.63**	**52**	Pn	**Pn**	**14 48 16.7**	**-1.3**
	5.0nm,0.3s,baz=238,slow=8.5,SNR=3.4						
KDAK				Sn	**Sn**	**14 50 06.0**	**-11**
	0.8nm,0.3s,baz=81,slow=20,SNR=1.8						
KDAK	**Kodiak Island**	**10.63**	**52**	Pn	**Pn**	**14 48 16.7**	**-1.3**
KDAK				Sn	**Sn**	**14 50 06.0**	**-11**
FX1	**Attu Island--F**	**11.26**	**281**	Pn	**Pn**	**14 48 27.4**	**+0.8**
	8.2nm,0.3s,baz=217,slow=17,SNR=3.4						
FX1	**Attu Island--F**	**11.26**	**281**	Pn	**Pn**	**14 48 27.4**	**+0.8**
PMR	**Palmer**	**14.03**	**41**	*e*P	**Pn**	**14 49 09.9**	**+5.5**
KTH	**Kantishna Hill**	**14.59**	**32**	*e*Pn	**Pn**	**14 49 11.6**	**-0.5**
PAX	**Paxson**	**16.21**	**40**	*e*P	**Pn**	**14 49 32.0**	**-1.4**
COLA	**College**	**16.48**	**32**	*e*P	**Pn**	**14 49 36.1**	**-0.7**
MENT	**Mentasta**	**16.89**	**41**	*e*Pn	**Pn**	**14 49 40.5**	**-1.5**
SKAG	**Skagway**	**19.75**	**56**	*e*P	**Pn**	**14 50 17.0**	**+0.1**
	103nm,1.0s						
PET	**Petropavlovsk**	**19.94**	**285**	*i* P	**Pn**	**14 50 17.5**	**-1.7**
PET				pmax	pmax		
	comp=Z,120nm,0.8s						
PET	**Petropavlovsk**	**19.94**	**285**	*e*P	**Pn**	**14 50 17.1**	**-2.1**
	comp=Z,81nm,0.7s						
PETK	**Petropavlovsk-**	**20.48**	**286**	P	**P**	**14 50 23.7**	**+0.2**
	comp=Z,79nm,0.5s,baz=83,slow=14,SNR=13						
PETK	**Petropavlovsk-**	**20.48**	**286**	P	**P**	**14 50 23.7**	**+0.2**
YKA	**Yellowknife Ar**	**29.87**	**49**	P	**P**	**14 51 53.2**	**+0.2**
	comp=Z,2.5nm,0.4s,mb4.3,baz=276,slow=8.4,SNR=5.1						
YKA				PcP	PcP	14 54 55.3	-0.1
	comp=Z,1.9nm,0.6s,baz=284,slow=2.0,SNR=3.6						
YKA				ScP	ScP	14 58 36.5	-0.2
	comp=Z,0.9nm,0.8s,baz=282,slow=3.1,SNR=4.4						
YKA	**Yellowknife Ar**	**29.87**	**49**	P	**P**	**14 51 53.2**	**+0.2**
YKA				PcP	PcP	14 54 55.3	-0.1
YKA				ScP	ScP	14 58 36.5	-0.2
YBH	**Yreka Blue Hor**	**32.37**	**90**	P	**P**	**14 52 17.4**	**+2.2**
	comp=Z,6.2nm,0.6s,mb4.6,baz=259,slow=2.4,SNR=5.0						
TIXI	**Tiksi**	**33.17**	**329**	*e*P	**P**	**14 52 20.9**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TIXI	**Tiksi**	**33.17**	**329**	*e*P	**P**	**14 52 20.9**	**-0.9**
	comp=Z,11nm,0.8s,mb4.8						
YAK	**Yakutsk**	**33.72**	**311**	*e*P	**P**	**14 52 24.5**	**-2.2**
YAK				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.5						
YAK	**Yakutsk**	**33.72**	**311**	*e*P	**P**	**14 52 24.5**	**-2.2**
	comp=Z,41nm,0.6s,mb5.5						
ERM	**Erimo**	**33.93**	**272**	*e*P	**P**	**14 52 29.2**	**+0.4**
ERM				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
ERM	**Erimo**	**33.93**	**272**	*e*P	**P**	**14 52 29.2**	**+0.4**
	comp=Z,55nm,1.1s,mb5.4						
RES	**Resolute Bay**	**36.23**	**26**	P	**P**	**14 52 46.6**	**-1.7**
	comp=Z,3.7nm,0.5s,mb4.6,baz=299,slow=3.5,SNR=4.1						
NVAR	**Mina Array Bea**	**37.05**	**92**	P	**P**	**14 52 57.7**	**+2.0**
	comp=Z,2.5nm,1.0s,mb4.0,baz=61,slow=22,SNR=1.8						
PDAR	**Pinedale Array**	**39.83**	**80**	P	**P**	**14 53 19.6**	**+0.6**
	comp=Z,8.5nm,0.8s,mb4.5,baz=289,slow=4.3,SNR=2.2						
MAJO	**Matsushiro**	**40.30**	**269**	*e*P	**P**	**14 53 22.0**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
MAJO	**Matsushiro**	**40.30**	**269**	*e*P	**P**	**14 53 22.0**	**-0.9**
	comp=Z,60nm,1.0s,mb5.3						
MJAR	**Matsushiro Arr**	**40.30**	**269**	P	**P**	**14 53 21.8**	**-1.1**
	comp=Z,5.8nm,0.6s,mb4.5,baz=50,slow=7.7,SNR=5.3						
MJAR				LR	LR	15 08 59.9	
	comp=Z,4μm,20.1s,MS5.3,baz=60,slow=35						
FCC	**Fort Churchill**	**40.56**	**50**	*e*P	**P**	**14 53 24.5**	**-0.3**
FCC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FCC	**Fort Churchill**	**40.56**	**50**	*e*P	**P**	**14 53 24.4**	**-0.3**
	comp=Z,0.9nm,0.7s						
MDJ	**Mudanjiang**	**40.72**	**285**	*e*P	**P**	**14 53 23.3**	**-2.9**
	comp=Z,10.0nm,0.7s,mb4.5						
CN2	**Changchun**	**43.64**	**286**	*e*P	**P**	**14 53 49.5**	**-0.6**
HIA	**Hailar**	**43.86**	**296**	*e*P	**P**	**14 53 50.6**	**-1.2**
HIA				pmax	pmax		
	comp=Z,16nm,0.7s						
HIA	**Hailar**	**43.86**	**296**	*e*P	**P**	**14 53 50.5**	**-1.2**
	comp=Z,16nm,0.7s,mb4.8						
KSRS	**Korea Array**	**46.03**	**278**	P	**P**	**14 54 10.1**	**+0.9**
	comp=Z,23nm,0.8s,mb5.1,baz=55,slow=7.5,SNR=8.6						
TLY	**Talaya**	**50.91**	**307**	*e*P	**P**	**14 54 46.4**	**-0.2**
TLY				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
TLY	**Talaya**	**50.91**	**307**	*e*P	**P**	**14 54 46.4**	**-0.3**
	comp=Z,21nm,0.9s,mb5.1						
BJT	**Baijiatuan**	**51.42**	**288**	P	**P**	**14 54 50.0**	**-0.6**
ULN	**Ulaanbaatar**	**51.53**	**301**	*e*P	**P**	**14 54 51.1**	**-0.2**
ULN				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
ULN	**Ulaanbaatar**	**51.53**	**301**	*e*P	**P**	**14 54 51.1**	**-0.2**
	comp=Z,19nm,0.6s,mb5.2						
SONM	**Songino Array**	**51.89**	**301**	P	**P**	**14 54 54.2**	**+0.2**
	comp=Z,6.1nm,0.5s,mb4.8,baz=69,slow=4.8,SNR=5.6						
TXAR	**Lajitas Array**	**52.14**	**90**	P	**P**	**14 54 56.3**	**+0.2**
	comp=Z,3.9nm,0.7s,mb4.5,baz=310,slow=7.3,SNR=1.9						
SCHQ	**Schefferville**	**55.12**	**44**	P	**P**	**14 55 17.6**	**0.0**
	comp=Z,12nm,0.9s,mb4.9,baz=305,slow=7.0,SNR=2.8						
KEV	**Kevo**	**57.81**	**354**	*e*P	**P**	**14 55 35.7**	**-0.8**
KEV				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
KEV	**Kevo**	**57.81**	**354**	*e*P	**P**	**14 55 35.7**	**-0.8**
	comp=Z,30nm,0.9s,mb5.3						
ZALV	**Zalesovo Beam**	**57.93**	**318**	P	**P**	**14 55 36.9**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.6,baz=35,slow=8.1,SNR=3.7						
ZALV				PcP	PcP	14 56 31.1	+1.4
	comp=Z,2.8nm,0.5s,baz=40,slow=6.2,SNR=3.8						
ARCES	**ARCESS Array B**	**58.12**	**354**	P	**P**	**14 55 36.6**	**-2.1**
	comp=Z,12nm,0.8s,mb5.0,baz=13,slow=5.6,SNR=3.9						
ARCES				PcP	PcP	14 56 31.0	+0.8
	comp=Z,2.8nm,0.5s,baz=24,slow=4.1,SNR=3.9						
ARE0	**ARCESS Array S**	**58.12**	**354**	P	**P**	**14 55 37.4**	**-1.3**
GTA	**Gaotai**	**61.08**	**298**	*e*P	**P**	**14 55 59.0**	**-0.6**
GTA				AP	pP	14 56 03.3	-1.0
GTA				XP	sP	14 56 06.5	+0.4
GTA				AMB	AMB		
	comp=Z,23nm,0.8s,mb5.4						
BRVK	**Borovoye**	**64.18**	**325**	*e*P	**P**	**14 56 19.3**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
BRVK	**Borovoye**	**64.18**	**325**	*e*P	**P**	**14 56 19.2**	**-0.8**
	comp=Z,33nm,0.9s,mb5.4						
MKAR	**Makanchi Array**	**64.34**	**314**	P	**P**	**14 56 20.3**	**-0.9**
	comp=Z,9.9nm,0.7s,mb4.9,baz=47,slow=6.4,SNR=8.2						
MKAR	**Makanchi Array**	**64.34**	**314**	P	**P**	**14 56 20.3**	**-0.9**
NOA	**NORSAR Array B**	**67.08**	**0**	P	**P**	**14 56 38.1**	**-0.5**
	comp=Z,14nm,0.8s,mb5.0,baz=0.1,slow=6.3,SNR=5.1						
NOA				LR	LR	15 26 47.7	
	comp=Z,1μm,19.6s,MS5.1,baz=335,slow=37						
NAO01	**NORSAR Array S**	**67.27**	**0**	*e*P	**P**	**14 56 38.2**	**-1.6**
	comp=Z,3.7nm,0.6s,mb4.6						
KONO	**Kongsberg**	**68.46**	**1**	*e*P	**P**	**14 56 46.4**	**-0.9**
KONO				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
KONO	**Kongsberg**	**68.46**	**1**	*e*P	**P**	**14 56 46.4**	**-1.0**
	comp=Z,31nm,1.0s,mb5.3						
KMI	**Kunming**	**69.89**	**285**	P	**P**	**14 56 57.8**	**+1.0**
KMI				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.0						
OBN	**Obninsk**	**71.03**	**345**	*e*P	**P**	**14 57 01.0**	**-2.3**
	comp=Z,57nm,0.7s,mb5.6						
AKASG	**Malin Array Be**	**76.36**	**349**	P	**P**	**14 57 33.6**	**-1.0**
	comp=Z,18nm,0.4s,mb5.4,baz=15,slow=5.9,SNR=17						
TAPN	**Taplejung**	**76.77**	**298**	*e*P	**P**	**14 57 37.8**	**+0.5**
	comp=Z,35nm,0.5s,mb5.5						
CLL	**Collm**	**76.83**	**359**	*i* P	**P**	**14 57 37.3**	**+0.1**
	comp=Z,12nm,1.2s,mb4.7						
CMAR	**Chiang Mai Arr**	**77.24**	**284**	P	**P**	**14 57 40.5**	**+0.5**
	comp=Z,19nm,0.9s,mb5.0,baz=26,slow=6.4,SNR=7.3						
GUN	**Gumba**	**77.32**	**299**	*e*P	**P**	**14 57 41.0**	**+0.6**
	comp=Z,46nm,0.5s,mb5.7						
ODAN	**Odare**	**77.33**	**297**	*e*P	**P**	**14 57 42.0**	**+1.5**
	comp=Z,18nm,0.6s,mb5.2						
JIRN	**Jiri**	**77.35**	**299**	*e*P	**P**	**14 57 41.3**	**+0.7**
	comp=Z,54nm,0.6s,mb5.7						
UPC	**Upice**	**77.57**	**357**	*e*P	**P**	**14 57 41.7**	**+0.3**
PVCC	**Panska Ves**	**77.58**	**358**	*e*P	**P**	**14 57 42.1**	**+0.6**
RAMN	**Ramite**	**77.69**	**298**	*e*P	**P**	**14 57 42.6**	**+0.1**
	comp=Z,72nm,0.7s,mb5.7						
DPC	**Dobruska-Polom**	**77.72**	**357**	*e*P	**P**	**14 57 42.8**	**+0.6**
KKN	**Kakani**	**77.74**	**300**	*e*P	**P**	**14 57 43.2**	**+0.5**
	comp=Z,14nm,0.5s,mb5.2						
PKI	**Pulchoki**	**77.84**	**299**	*e*P	**P**	**14 57 43.5**	**+0.2**
PKIN	**Phulchoki**	**77.84**	**299**	*e*P	**P**	**14 57 42.9**	**-0.4**
	comp=Z,26nm,0.7s,mb5.3						
GIVF	**Givet**	**77.88**	**4**	*e*P	**P**	**14 57 43.0**	**-0.1**
	comp=Z,29nm,1.0s,mb4.9						
GIVF	**Givet**	**77.88**	**4**	*e*P	**P**	**14 57 43.0**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GIVF	**Givet**	**77.88**	**4**	*e*P	**P**	**14 57 43.0**	**-0.1**
	comp=Z,14nm,1.0s,mb4.9						
BAIF	**Baives**	**77.89**	**5**	*e*P	**P**	**14 57 43.2**	**0.0**
	comp=Z,30nm,0.9s,mb4.9						
BAIF	**Baives**	**77.89**	**5**	*e*P	**P**	**14 57 43.2**	**0.0**
BAIF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
BAIF	**Baives**	**77.89**	**5**	*e*P	**P**	**14 57 43.2**	**0.0**
	comp=Z,15nm,0.9s,mb4.9						
NKC	**Novy Kostel**	**77.91**	**359**	*e*P	**P**	**14 57 43.4**	**+0.1**
GKN	**Gorkha**	**77.91**	**300**	*e*P	**P**	**14 57 43.6**	**-0.1**
	comp=Z,26nm,0.4s,mb5.5						
DANN	**Dangsing**	**78.10**	**301**	*e*P	**P**	**14 57 45.3**	**+0.6**
	comp=Z,92nm,0.5s,mb6.0						
PRU	**Pruhonice**	**78.13**	**358**	*e*P	**P**	**14 57 44.9**	**+0.4**
OKC	**Ostrava-Krasne**	**78.16**	**356**	*e*P	**P**	**14 57 45.3**	**+0.6**
GRA1	**Grafenberg Arr**	**78.45**	**0**	*e*P	**P**	**14 57 46.9**	**+0.6**
	comp=Z,34nm,1.1s,mb5.2						
GRF	**Grafenberg Arr**	**78.45**	**0**	*e*P	**P**	**14 57 46.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
GRF	**Grafenberg Arr**	**78.45**	**0**	*e*P	**P**	**14 57 46.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
GRF	**Grafenberg Arr**	**78.45**	**0**	*e*P	**P**	**14 57 46.9**	**+0.6**
	comp=Z,34nm,1.1s,mb5.2						
KOLN	**Kolonda**	**78.65**	**301**	*e*P	**P**	**14 57 47.9**	**+0.1**
	comp=Z,12nm,0.4s,mb5.2						
TREC	**Trest**	**78.80**	**357**	*e*P	**P**	**14 57 48.3**	**+0.1**
FLN	**La Foliniere**	**78.86**	**8⇑**	*i*P	**P**	**14 57 48.2**	**-0.3**
	comp=Z,29nm,0.9s,mb4.9						
FLN	**La Foliniere**	**78.86**	**8⇑**	*i*P	**P**	**14 57 48.2**	**-0.3**
FLN				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
FLN	**La Foliniere**	**78.86**	**8⇑**	*i*P	**P**	**14 57 48.2**	**-0.3**
	comp=Z,15nm,0.9s,mb4.9						
KHC	**Kasperske Hory**	**79.00**	**359**	*e*P	**P**	**14 57 50.2**	**+0.9**
LDF	**La Druitiere**	**79.05**	**8⇑**	*i*P	**P**	**14 57 49.2**	**-0.4**
	comp=Z,20nm,0.6s,mb4.9						
LDF	**La Druitiere**	**79.05**	**8⇑**	*i*P	**P**	**14 57 49.2**	**-0.4**
LDF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
LDF	**La Druitiere**	**79.05**	**8⇑**	*i*P	**P**	**14 57 49.2**	**-0.4**
	comp=Z,10nm,0.6s,mb4.9						
SGMF	**Saint Gilles**	**79.16**	**10**	*e*P	**P**	**14 57 50.0**	**-0.2**
GRR	**Gorron**	**79.19**	**8**	*e*P	**P**	**14 57 50.3**	**-0.1**
	comp=Z,73nm,1.1s,mb5.2						
GRR	**Gorron**	**79.19**	**8**	*e*P	**P**	**14 57 50.3**	**-0.1**
GRR				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.2						
GRR	**Gorron**	**79.19**	**8**	*e*P	**P**	**14 57 50.3**	**-0.1**
	comp=Z,36nm,1.1s,mb5.2						
GERES	**GERESS Array B**	**79.28**	**359**	P	**P**	**14 57 51.5**	**+0.6**
	comp=Z,6.9nm,0.8s,mb4.6,baz=7.6,slow=4.0,SNR=7.4						
QUIF	**Quistinic**	**79.43**	**10**	*e*P	**P**	**14 57 51.5**	**-0.2**
MEZF	**Maizieres J'vi**	**79.49**	**4**	*e*P	**P**	**14 57 52.2**	**+0.2**
CDF	**Champ du Feu**	**79.67**	**3⇑**	*i*P	**P**	**14 57 53.1**	**+0.1**
	comp=Z,30nm,1.0s,mb4.9						
CDF	**Champ du Feu**	**79.67**	**3⇑**	*i*P	**P**	**14 57 53.1**	**+0.1**
CDF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
CDF	**Champ du Feu**	**79.67**	**3⇑**	*i*P	**P**	**14 57 53.1**	**+0.1**
	comp=Z,15nm,1.0s,mb4.9						
HAU	**Haudompre**	**80.04**	**4⇑**	*i*P	**P**	**14 57 55.2**	**+0.2**
	comp=Z,31nm,0.9s,mb5.0						
HAU	**Haudompre**	**80.04**	**4⇑**	*i*P	**P**	**14 57 55.2**	**+0.2**
HAU				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
HAU	**Haudompre**	**80.04**	**4⇑**	*i*P	**P**	**14 57 55.2**	**+0.2**
	comp=Z,15nm,0.9s,mb4.9						
HINF	**Hinteralfeld**	**80.25**	**3⇑**	*i*P	**P**	**14 57 56.1**	**0.0**
	comp=Z,23nm,0.8s,mb4.9						
HINF	**Hinteralfeld**	**80.25**	**3⇑**	*i*P	**P**	**14 57 56.1**	**0.0**
HINF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
HINF	**Hinteralfeld**	**80.25**	**3⇑**	*i*P	**P**	**14 57 56.1**	**0.0**
	comp=Z,11nm,0.8s,mb4.8						
KIV	**Kislovodsk**	**80.51**	**338**	*e*P	**P**	**14 57 57.8**	**+0.2**
KIV				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
KIV	**Kislovodsk**	**80.51**	**338**	*e*P	**P**	**14 57 57.8**	**+0.2**
	comp=Z,28nm,0.9s,mb5.2						
LOR	**Lormes**	**80.66**	**5⇑**	*i*P	**P**	**14 57 58.4**	**+0.1**
	comp=Z,67nm,1.2s,mb5.2						
LOR	**Lormes**	**80.66**	**5⇑**	*i*P	**P**	**14 57 58.4**	**+0.1**
LOR				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
LOR	**Lormes**	**80.66**	**5⇑**	*i*P	**P**	**14 57 58.4**	**+0.1**
	comp=Z,34nm,1.2s,mb5.2						
SSF	**Saint Saulge**	**80.84**	**6⇑**	*i*P	**P**	**14 57 59.5**	**+0.2**
	comp=Z,34nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**80.84**	**6⇑**	*i*P	**P**	**14 57 59.5**	**+0.2**
SSF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**80.84**	**6⇑**	*i*P	**P**	**14 57 59.5**	**+0.2**
	comp=Z,17nm,0.9s,mb5.0						
MFF	**Saint Martin d**	**81.03**	**8⇑**	*i*P	**P**	**14 58 00.5**	**+0.2**
	comp=Z,51nm,0.9s,mb5.2						
MFF	**Saint Martin d**	**81.03**	**8⇑**	*i*P	**P**	**14 58 00.5**	**+0.2**
MFF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
MFF	**Saint Martin d**	**81.03**	**8⇑**	*i*P	**P**	**14 58 00.5**	**+0.2**
	comp=Z,26nm,0.9s,mb5.2						
AVF	**Avril sur Loir**	**81.10**	**6⇑**	*i*P	**P**	**14 58 00.7**	**0.0**
	comp=Z,36nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**81.10**	**6⇑**	*i*P	**P**	**14 58 00.7**	**0.0**
AVF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**81.10**	**6⇑**	*i*P	**P**	**14 58 00.7**	**0.0**
	comp=Z,18nm,0.9s,mb5.0						
SMF	**Signal de Mont**	**81.28**	**5⇑**	*i*P	**P**	**14 58 01.7**	**0.0**
	comp=Z,52nm,1.0s,mb5.1						
SMF	**Signal de Mont**	**81.28**	**5⇑**	*i*P	**P**	**14 58 01.7**	**0.0**
SMF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
SMF	**Signal de Mont**	**81.28**	**5⇑**	*i*P	**P**	**14 58 01.7**	**0.0**
	comp=Z,26nm,1.0s,mb5.1						
BGF	**Bois d'Agland**	**81.30**	**6⇑**	*i*P	**P**	**14 58 01.9**	**+0.1**
	comp=Z,28nm,0.9s,mb4.9						
BGF	**Bois d'Agland**	**81.30**	**6⇑**	*i*P	**P**	**14 58 01.9**	**+0.1**
BGF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
BGF	**Bois d'Agland**	**81.30**	**6⇑**	*i*P	**P**	**14 58 01.9**	**+0.1**
	comp=Z,14nm,0.9s,mb4.9						
CABF	**La Chapelle**	**81.42**	**4⇑**	*i*P	**P**	**14 58 03.1**	**+0.7**
	comp=Z,40nm,0.9s,mb5.1						
CABF	**La Chapelle**	**81.42**	**4⇑**	*i*P	**P**	**14 58 03.1**	**+0.7**
CABF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
CABF	**La Chapelle**	**81.42**	**4⇑**	*i*P	**P**	**14 58 03.1**	**+0.7**
	comp=Z,20nm,0.9s,mb5.0						
PERS	**Pernice**	**81.47**	**358**	*i* P	**P**	**14 58 03.2**	**+0.5**
TCF	**Toulx Ste Croi**	**81.53**	**7⇑**	*i*P	**P**	**14 58 02.8**	**-0.2**
	comp=Z,18nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**81.53**	**7⇑**	*i*P	**P**	**14 58 02.8**	**-0.2**
TCF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**81.53**	**7⇑**	*i*P	**P**	**14 58 02.8**	**-0.2**
	comp=Z,9.0nm,0.9s,mb4.7						
JAVS	**Javornik**	**82.23**	**358**	*i* P	**P**	**14 58 06.4**	**-0.3**
VISS	**Visnje**	**82.30**	**358**	*i* P	**P**	**14 58 07.2**	**+0.1**
RJF	**Les Rejaudoux**	**82.45**	**7⇑**	*i*P	**P**	**14 58 07.6**	**-0.3**
	comp=Z,41nm,1.1s,mb5.0						
RJF	**Les Rejaudoux**	**82.45**	**7⇑**	*i*P	**P**	**14 58 07.6**	**-0.3**
RJF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
RJF	**Les Rejaudoux**	**82.45**	**7⇑**	*i*P	**P**	**14 58 07.6**	**-0.3**
	comp=Z,20nm,1.1s,mb5.0						
LPL	**La Plagne**	**82.54**	**3**	*e*P	**P**	**14 58 09.7**	**+1.4**
	comp=Z,25nm,0.9s,mb4.9						
LPL	**La Plagne**	**82.54**	**3**	*e*P	**P**	**14 58 09.7**	**+1.4**
LPL				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
LPL	**La Plagne**	**82.56**	**3**	*e*P	**P**	**14 58 09.7**	**+1.4**
	comp=Z,12nm,0.9s,mb4.9						
LPG	**La Plagne**	**82.56**	**3**	*e*P	**P**	**14 58 09.9**	**+1.5**
BOJS	**Bojanci**	**82.59**	**357**	*i* P	**P**	**14 58 08.6**	**0.0**
TIRR	**Tirgusor**	**82.61**	**348**	*e*P	**P**	**14 58 08.3**	**-0.4**
TIRR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
TIRR	**Tirgusor**	**82.61**	**348**	*e*P	**P**	**14 58 08.3**	**-0.4**
	comp=Z,19nm,1.0s,mb5.1						
LFF	**La Frestale**	**82.75**	**8⇑**	*i*P	**P**	**14 58 09.7**	**+0.2**
	comp=Z,44nm,0.6s,mb5.4						
LFF	**La Frestale**	**82.75**	**8⇑**	*i*P	**P**	**14 58 09.7**	**+0.2**
LFF				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
LFF	**La Frestale**	**82.75**	**8⇑**	*i*P	**P**	**14 58 09.7**	**+0.2**
	comp=Z,22nm,0.6s,mb5.4						
CAF	**Calviac**	**82.87**	**7⇑**	*i*P	**P**	**14 58 10.3**	**+0.2**
	comp=Z,26nm,0.8s,mb5.0						
CAF	**Calviac**	**82.87**	**7⇑**	*i*P	**P**	**14 58 10.3**	**+0.2**
CAF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
CAF	**Calviac**	**82.87**	**7⇑**	*i*P	**P**	**14 58 10.3**	**+0.2**
	comp=Z,13nm,0.8s,mb5.0						
ORIF	**Oris-en-Rattie**	**83.10**	**4**	*e*P	**P**	**14 58 12.1**	**+0.8**
	comp=Z,18nm,0.7s,mb4.9						
ORIF	**Oris-en-Rattie**	**83.10**	**4**	*e*P	**P**	**14 58 12.1**	**+0.8**
ORIF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
ORIF	**Oris-en-Rattie**	**83.10**	**4**	*e*P	**P**	**14 58 12.1**	**+0.8**
	comp=Z,9.1nm,0.7s,mb4.9						
VIVF	**Saint-Julien-l**	**83.11**	**5⇑**	*i*P	**P**	**14 58 11.8**	**+0.5**
	comp=Z,28nm,0.9s,mb5.0						
VIVF	**Saint-Julien-l**	**83.11**	**5⇑**	*i*P	**P**	**14 58 11.8**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
VIVF	**Saint-Julien-l**	**83.11**	**5⇑**	*i*P	**P**	**14 58 11.8**	**+0.5**
	comp=Z,14nm,0.9s,mb5.0						
MBDF	**Montbardon**	**83.33**	**3⇑**	*i*P	**P**	**14 58 13.9**	**+1.5**
	comp=Z,38nm,0.8s,mb5.2						
MBDF	**Montbardon**	**83.33**	**3⇑**	*i*P	**P**	**14 58 13.9**	**+1.5**
MBDF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
MBDF	**Montbardon**	**83.33**	**3⇑**	*i*P	**P**	**14 58 13.9**	**+1.5**
	comp=Z,19nm,0.8s,mb5.2						
LASF	**Ste Croix**	**83.84**	**6**	*e*P	**P**	**14 58 15.9**	**+0.8**
SMRF	**Simiane la Rot**	**84.03**	**4**	*e*P	**P**	**14 58 17.2**	**+1.2**
	comp=Z,70nm,1.1s,mb5.4						
SMRF	**Simiane la Rot**	**84.03**	**4**	*e*P	**P**	**14 58 17.2**	**+1.2**

YKA				ScP		ScP	15 03 27.9	-0.1
	0.2nm,0.7s,baz=288,slow=3.3,SNR=3.8							
YBH	**Yreka Blue Hor**	**32.33**	**91**	P		**P**	**14 57 08.9**	**+1.6**
	1.4nm,0.7s,mb3.9,baz=325,slow=9.9,SNR=4.1							
TIXI	**Tiksi**	**33.12**	**329**	*eP*		**P**	**14 57 13.0**	**-0.9**
YAK	**Yakutsk**	**33.70**	**311**	*eP*		**P**	**14 57 15.8**	**-3.2**
	16nm,0.7s,mb5.1							
NVAR	**Mina Array Bea**	**37.01**	**92**	P		**P**	**14 57 49.0**	**+1.2**
	1.1nm,0.8s,mb3.7,baz=279,slow=8.5,SNR=4.2							
PDAR	**Pinedale Array**	**39.77**	**80**	P		**P**	**14 58 12.1**	**+1.2**
	0.5nm,0.5s,mb3.5,baz=294,slow=3.1,SNR=5.5							
MJAR	**Matsushiro Arr**	**40.34**	**269**	P		**P**	**14 58 14.4**	**-1.3**
	1.1nm,0.8s,mb3.6,baz=197,slow=29,SNR=3.8							
MAJO	**Matsushiro**	**40.35**	**269**	*eP*		**P**	**14 58 14.8**	**-0.9**
	6.4nm,1.0s,mb4.3							
FCC	**Fort Churchill**	**40.47**	**51**	*eP*		**P**	**14 58 16.6**	**+0.1**
	0.9nm,1.4s,mb3.3							
HIA	**Hailar**	**43.86**	**296**	*eP*		**P**	**14 58 42.5**	**-1.7**
	2.9nm,0.6s,mb4.2							
KSRS	**Korea Array**	**46.06**	**278**	P		**P**	**14 59 02.2**	**+0.3**
	4.2nm,0.8s,mb4.4,baz=54,slow=7.5,SNR=11							
SPITS	**Spitsbergen Ar**	**49.74**	**359**	P		**P**	**14 59 29.3**	**-0.6**
	5.5nm,0.7s,mb4.7,baz=58,slow=6.3,SNR=13							
ULN	**Ulaanbaatar**	**51.52**	**301**	*eP*		**P**	**14 59 42.8**	**-0.9**
	3.2nm,0.4s,mb4.6							
SONM	**Songino Array**	**51.88**	**301**	P		**P**	**14 59 47.1**	**+0.7**
	1.8nm,0.6s,mb4.2,baz=70,slow=4.9,SNR=3.1							
TXAR	**Lajitas Array**	**52.10**	**90**	P		**P**	**14 59 47.9**	**-0.4**
	0.4nm,0.6s,mb3.5,baz=290,slow=3.8,SNR=3.9							
ZALV	**Zalesovo Beam**	**57.90**	**318**	P		**P**	**15 00 28.1**	**-1.7**
	1.3nm,0.7s,mb4.1,baz=48,slow=2.2,SNR=3.7							
ARCES	**ARCESS Array B**	**58.04**	**354**	P		**P**	**15 00 29.7**	**-0.9**
	3.5nm,0.8s,mb4.4,baz=357,slow=6.4,SNR=7.3							
ARCES				PcP		PcP	15 01 21.1	-1.1
	1.6nm,0.7s,baz=340,slow=6.4,SNR=4.2							
GTA	**Gaotai**	**61.08**	**298**	*eP*		**P**	**15 00 51.8**	**-0.2**
GTA				AP		pP	15 00 55.8	-3.1
GTA				XP		sP	15 00 59.5	-2.0
GTA				AMB		AMB		
	comp=Z,4.0nm,0.6s,mb4.7							
JOF	**Joensuu**	**64.08**	**350**	*ep*		**P**	**15 01 10.8**	**-0.8**
	comp=Z,2.5nm,0.3s,mb4.7							
BRVK	**Borovoye**	**64.13**	**325**	*eP*		**P**	**15 01 11.3**	**-0.8**
	comp=Z,4.8nm,0.9s,mb4.5							
MKAR	**Makanchi Array**	**64.31**	**314**	P		**P**	**15 01 12.4**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=47,slow=6.3,SNR=11							
KAF	**Kangasniemi**	**65.33**	**352**	*ep*		**P**	**15 01 18.7**	**-1.1**
	comp=Z,2.3nm,0.4s,mb4.6,baz=6.2,slow=6.1							
GYA	**Guiyang**	**66.58**	**283**	*eP*		**P**	**15 01 29.0**	**+0.7**
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.8							
NOA	**NORSAR Array B**	**67.00**	**0**	P		**P**	**15 01 29.2**	**-1.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=0.8,slow=6.2,SNR=3.3							
AKASG	**Malin Array Be**	**76.29**	**349**	P		**P**	**15 02 25.9**	**-0.7**
	comp=Z,4.0nm,0.4s,mb4.7,baz=15,slow=5.9,SNR=16							
TAPN	**Taplejung**	**76.77**	**298**	*eP*		**P**	**15 02 30.0**	**+0.3**
	comp=Z,7.3nm,0.5s,mb4.9							
CMAR	**Chiang Mai Arr**	**77.26**	**284**	P		**P**	**15 02 32.8**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=26,slow=6.0,SNR=15							
GUN	**Gumba**	**77.32**	**299**	*eP*		**P**	**15 02 33.1**	**+0.3**
	comp=Z,7.5nm,0.4s,mb5.0							
ODAN	**Odare**	**77.33**	**297**	*eP*		**P**	**15 02 33.8**	**+0.9**
JIRN	**Jiri**	**77.35**	**299**	*eP*		**P**	**15 02 33.3**	**+0.4**
	comp=Z,11nm,0.5s,mb5.0							
RAMN	**Ramite**	**77.69**	**298**	*eP*		**P**	**15 02 34.9**	**0.0**
	comp=Z,5.9nm,0.4s,mb4.9							
KKN	**Kakani**	**77.73**	**300**	*eP*		**P**	**15 02 36.1**	**+1.0**
	comp=Z,10nm,0.5s,mb5.0							
DMN	**Daman**	**77.97**	**300**	*eP*		**P**	**15 02 36.6**	**+0.2**
DANN	**Dangsing**	**78.09**	**301**	*eP*		**P**	**15 02 37.3**	**+0.2**
	comp=Z,19nm,0.5s,mb5.3							
KOLN	**Koldanda**	**78.64**	**301**	*eP*		**P**	**15 02 40.1**	**0.0**
GERES	**GERESS Array B**	**79.20**	**359**	P		**P**	**15 02 43.2**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.8,baz=5.7,slow=5.4,SNR=5.8							
HAU	**Haudompre**	**79.95**	**4**	*eP*		**P**	**15 02 47.4**	**+0.5**
SSF	**Saint Saulge**	**80.75**	**6**	*eP*		**P**	**15 02 51.9**	**+0.7**
	comp=Z,7.8nm,0.9s,mb4.9							
MFF	**Saint Martin d**	**80.94**	**8**	*eP*		**P**	**15 02 52.9**	**+0.7**
	comp=Z,24nm,1.1s,mb4.7							
AVF	**Avril sur Loir**	**81.02**	**6**	*eP*		**P**	**15 02 52.9**	**+0.3**
SMF	**Signal de Mont**	**81.19**	**5**	*eP*		**P**	**15 02 54.0**	**+0.4**
CABF	**La Chapelle**	**81.34**	**4**	*eP*		**P**	**15 02 55.3**	**+1.0**
	comp=Z,60nm,1.5s,mb5.0							
CAF	**Calviac**	**82.78**	**7**	*eP*		**P**	**15 03 02.5**	**+0.5**
	comp=Z,10nm,0.8s,mb4.6							
ORIF	**Oris-en-Rattie**	**83.02**	**4**	*eP*		**P**	**15 03 04.5**	**+1.3**
	comp=Z,5.0nm,0.7s,mb4.4							
MBDF	**Montbardon**	**83.24**	**4**	*eP*		**P**	**15 03 06.2**	**+1.8**
MTLF	**Montolieu**	**84.37**	**7**	*eP*		**P**	**15 03 10.9**	**+0.7**
	comp=Z,8.4nm,0.9s,mb4.6							
FRF	**La Foret Royal**	**84.40**	**4**	*eP*		**P**	**15 03 11.2**	**+0.9**
	comp=Z,20nm,1.0s,mb4.9							
EPF	**Esparros**	**84.53**	**8**	*eP*		**P**	**15 03 11.2**	**+0.2**
	comp=Z,6.9nm,0.8s,mb4.5							
ETSF	**Etsaut**	**84.57**	**9**	*eP*		**P**	**15 03 12.1**	**+0.9**
	comp=Z,11nm,0.9s,mb4.7							
BRTR	**Keskin Array B**	**86.37**	**343**	P		**P**	**15 03 21.1**	**+1.0**
	comp=Z,1.2nm,0.6s,mb4.3,baz=20,slow=2.0,SNR=6.0							
ESDC	**Sonseca Array**	**87.38**	**12**	P		**P**	**15 03 25.8**	**+0.6**
	comp=Z,0.3nm,0.3s,mb4.0,baz=353,slow=3.8,SNR=4.5							
ESDC	**Sonseca Array**	**87.38**	**12**	P		**P**	**15 03 25.8**	**+0.6**
WRA	**Warramunga Arr**	**87.48**	**232**	P		**P**	**15 03 24.1**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.9,baz=34,slow=6.0,SNR=4.0							
ASAR	**Alice Springs**	**90.86**	**231**	P		**P**	**15 03 41.2**	**-0.3**
	comp=Z,0.8nm,0.7s,mb4.2,baz=36,slow=3.8,SNR=6.5							

NEIC ***27*** *14:57:42.3, 1737N×9492W, h134km, MD4.3(MEX), After MEX.*

MEX 27 14:57:42.3±1.1, 1737N×9492W, h134km±8km, MD4.3, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.28**	**172**	*i* P	Pn	14 57 60.0	-0.9
CMIG				*i* S	Sn	14 58 13.0	-2.0
TUIG	**Tuzandepetl**	**0.81**	**36**	*i* P	Pn	14 58 02.1	-1.8
TUIG				*i* S	Sn	14 58 18.4	-2.0
VHO	**Vista Hermosa**	**1.76**	**260**	*i* P	Pn	14 58 13.4	-0.2
VHO				*i* S	Sn	14 58 36.3	-1.2
TGIG		**1.82**	**109**	*i* P	Pn	14 58 13.6	-0.7
TGIG				*i* S	Sn	14 58 36.6	-2.3
HUIG	**Huatulco**	**1.96**	**216**	*i* P	Pn	14 58 13.7	-2.4
HUIG				*i* S	Sn	14 58 40.6	-1.3
SCX	**San Cristobal**	**2.28**	**106**	*i* P	Pn	14 58 19.1	-0.9
SCX				*i* S	Sn	14 58 46.3	-2.5
PCIG		**2.33**	**135**	*i* P	Pn	14 58 20.1	-0.5
PCIG				*i* S	Sn	14 58 47.5	-2.4
TPIG	**Tehuac#an**	**2.54**	**294**	*i* P	Pn	14 58 22.4	-0.8
TPIG				*i* S	Sn	14 58 53.1	-1.7
UTMO	**Huajuapan**	**2.78**	**280**	*i* P	Pn	14 58 25.8	-0.5
UTMO				*i* S	Sn	14 58 54.9	-5.3
CCIG	**Comitan**	**2.88**	**112**	*i* P	Pn	14 58 27.1	-0.5
CCIG				*i* S	Sn	14 59 00.1	-2.4
PNIG	**Pinotepa**	**3.22**	**253**	*i* P	Pn	14 58 29.0	-2.9
PNIG				*i* S	Sn	14 59 05.9	-4.4
THIG		**3.54**	**133**	*eP*	Pn	14 59 08.7	+33
THIG				*i* S	Sn	14 59 42.4	+25
IIO	**Organos**	**4.23**	**302**	*i* P	Pn	14 58 44.8	-0.4
IIO				*i* S	Sn	14 59 37.8	+3.8
MZVM		**4.47**	**294**	*eP*	Pn	14 58 47.6	-0.8
MZVM				*i* S	Sn	14 59 38.0	-1.8
PLIG	**Platanillo**	**4.48**	**284**	*eP*	Pn	14 58 47.4	-1.1
PLIG				*i* S	Sn	14 59 37.5	-2.4
MEIG	**Mezcala**	**4.51**	**278**	*i* P	Pn	14 58 47.6	-1.3
MEIG				*i* S	Sn	14 59 40.5	-0.2
CAIG	**El Cayaco**	**5.12**	**267**	*eP*	Pn	14 58 54.8	-2.3
CAIG				*i* S	Sn	14 59 52.7	-2.6
TEIG	**Tepich**	**6.91**	**65**	*i* P	Pn	14 59 17.1	-3.9
TEIG				*i* S	Sn	15 00 33.4	-4.9

ISCJB ***27*** *15:01:04.9±1.6, 5215N±007×16831W±007, h26km±10km, mb4.1/23, Error ellipse: s-maj=12.3km s-min=6.0km az=156.2*
BJI ***27*** *15:01:04.0, 5230N×16830W, h26km, mb4.5*
NEIC ***27*** *15:01:07.3±1.6, 5232N×16834W, h26km±10km, mb4.3/8, Error ellipse: s-maj=11.8km s-min=5.2km az=165.0*
IDC ***27*** *15:01:07.1±4.0, 5237N×16844W, h22km±25km, mb3.8/17, mb1 4.0/18, mb1mx4.0/26, mbtmp3.8/18, ML3.9/1, Error ellipse: s-maj=25.1km s-min=12.9km az=176.0*
ISC 27 15:01:07.2±1.9, 5223N±008×16830W±007, h27km±12km, n43, σ1§04/52, mb4.1/23, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.81**	**336**	P	**Pb**	**15 01 21.6**	**-1.0**
NIKO				*e*Sg	**Sb**	**15 01 34.3**	**+1.0**
NIKO				S	**Sb**	**15 01 34.5**	**+1.3**
OKCE	**Okmok Cone E**	**1.20**	**4**	P	**Pn**	**15 01 27.9**	**-0.3**
OKFG	**Magazine Ridge**	**1.20**	**11**	P	**Pn**	**15 01 28.1**	**-0.1**
OKFG				S	**Sb**	**15 01 46.0**	**+1.6**
OKCD	**Okmok Cone D**	**1.20**	**5**	P	**Pn**	**15 01 28.0**	**-0.2**
UNV	**Unalaska Valle**	**1.95**	**33**	*e*Pn	**Pn**	**15 01 37.2**	**-1.2**
UNV				P		15 01 37.7	
UNV				S	**Sn**	**15 02 02.1**	**+0.2**
UNV				*e*Sn	**Sn**	**15 02 02.5**	**+0.5**
ADK	**Adak**	**5.18**	**269**	*e*Pn	**Pn**	**15 02 22.7**	**-0.1**
ADK				*e*Sn	**Sn**	**15 03 21.6**	**-0.1**
SDPT	**Sand Point**	**5.59**	**53**	*e*P	**Pn**	**15 02 28.3**	**-0.1**
OHAK	**Old Harbor**	**10.01**	**54**	*e*P	**Pn**	**15 03 28.2**	**-0.8**
	10.0nm,0.3s						
KDAK	**Kodiak Island**	**10.59**	**52**	Pn	**Pn**	**15 03 35.2**	**-1.7**
	1.9nm,0.3s,baz=209,slow=8.3,SNR=14						
KDAK				Sn	**Sn**	**15 05 26.1**	**-8.3**
	0.3nm,0.3s,baz=322,slow=19,SNR=2.2						
KDAK	**Kodiak Island**	**10.59**	**52**	*e*Pn	**Pn**	**15 03 34.9**	**-2.0**
KDAK				Pn	**Pn**	**15 03 35.2**	**-1.7**
KDAK				Sn	**Sn**	**15 05 26.1**	**-8.3**
FX1	**Attu Island--F**	**11.30**	**281**	Pn	**Pn**	**15 03 47.2**	**+0.5**
	3.1nm,0.3s,baz=209,slow=23,SNR=24						
RC01	**Rabbit Creek A**	**13.48**	**42**	*e*Pn	**Pn**	**15 04 14.7**	**-1.7**
PMR	**Palmer**	**14.00**	**40**	*e*Pn	**Pn**	**15 04 25.9**	**+2.5**
KTH	**Kantishna Hill**	**14.56**	**32**	*e*Pn	**Pn**	**15 04 31.7**	**+0.5**
	49nm,1.6s						
PAX	**Paxson**	**16.18**	**40**	*e*Pn	**Pn**	**15 04 44.8**	**-7.6**
	5.1nm,0.9s						
COLA	**College**	**16.45**	**32**	*e*Pn	**Pn**	**15 04 53.9**	**-1.8**
	9.9nm,1.0s						
PET	**Petropavlovsk**	**19.98**	**285**	P	**Pn**	**15 05 32.2**	**-6.8**
PETK	**Petropavlovsk-**	**20.53**	**286**	P	**P**	**15 05 42.9**	**-0.2**
	8.6nm,0.6s,baz=82,slow=14,SNR=40						
DLBC	**Dease Lake**	**22.40**	**59**	P	**P**	**15 05 56.9**	**-6.2**
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**15 07 12.5**	**+0.9**
	0.2nm,0.3s,mb3.3,baz=276,slow=8.2,SNR=6.7						
YKA				PcP	PcP	15 10 14.2	+0.1
	0.2nm,0.8s,baz=284,slow=2.4,SNR=4.8						
YKA				ScP	ScP	15 13 55.1	+1.1
	0.1nm,0.4s,baz=258,slow=3.0,SNR=4.1						
YKA	**Yellowknife Ar**	**29.84**	**49**	P	**P**	**15 07 12.6**	**+0.9**
YKA				PcP	PcP	15 10 14.2	+0.1
YKA				ScP	ScP	15 13 55.1	+1.1
TIXI	**Tiksi**	**33.19**	**329**	*eP*	**P**	**15 07 39.6**	**-1.4**
	1.5nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**37.01**	**92**	P	**P**	**15 08 16.4**	**+2.2**
	0.5nm,0.7s,mb3.5,baz=297,slow=9.8,SNR=3.2						
PDAR	**Pinedale Array**	**39.78**	**80**	P	**P**	**15 08 38.7**	**+1.2**
	1.2nm,0.9s,mb3.6,baz=289,slow=4.5,SNR=4.0						
MAJO	**Matsushiro**	**40.35**	**269**	*eP*	**P**	**15 08 41.6**	**-0.7**
	4.5nm,0.8s,mb4.2						
MJAR	**Matsushiro Arr**	**40.35**	**269**	P	**P**	**15 08 42.5**	**+0.3**
	0.8nm,0.4s,mb3.8,baz=159,slow=11,SNR=4.6						
HIA	**Hailar**	**43.90**	**296**	P	**P**	**15 09 10.0**	**-1.0**
	4.6nm,0.9s,mb4.2						
KSRS	**Korea Array**	**46.07**	**278**	P	**P**	**15 09 29.3**	**+0.8**
	4.0nm,0.8s,mb4.4,baz=51,slow=7.5,SNR=15						
ULN	**Ulaanbaatar**	**51.57**	**301**	*eP*	**P**	**15 10 10.3**	**-0.2**
	7.7nm,1.1s,mb4.5						
TXAR	**Lajitas Array**	**52.09**	**90**	P	**P**	**15 10 15.8**	**+1.2**
	0.5nm,0.8s,mb3.5,baz=316,slow=5.2,SNR=4.6						
ZALV	**Zalesovo Beam**	**57.96**	**318**	P	**P**	**15 10 55.8**	**-1.0**
	0.4nm,0.3s,mb3.9,baz=62,slow=3.5,SNR=3.6						
ARCES	**ARCESS Array B**	**58.12**	**354**	P	**P**	**15 10 56.5**	**-1.1**
	4.4nm,1.0s,mb4.4,baz=350,slow=8.1,SNR=7.3						
BRVK	**Borovoye**	**64.20**	**325**	*eP*	**P**	**15 11 39.3**	**+0.3**
	5.1nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**64.37**	**314**	P	**P**	**15 11 39.4**	**-0.9**
	1.7nm,0.7s,mb4.2,baz=47,slow=5.9,SNR=18						
GYA	**Guiyang**	**66.60**	**283**	*eP*	**P**	**15 11 57.8**	**+2.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
NOA	**NORSAR Array B**	**67.08**	**0**	P	**P**	**15 11 57.0**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=353,slow=6.0,SNR=3.7						
AKASG	**Malin Array Be**	**76.37**	**349**	P	**P**	**15 12 52.7**	**-0.8**
	comp=Z,0.9nm,0.3s,mb4.2,baz=17,slow=7.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	**77.29**	**284**	P	**P**	**15 13 00.1**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.2,baz=26,slow=6.4,SNR=19						
GERES	**GERESS Array B**	**79.28**	**359**	P	**P**	**15 13 10.3**	**+0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=15,slow=5.5,SNR=7.3						
KIV	**Kislovodsk**	**80.53**	**338**	P	**P**	**15 13 18.2**	**+1.7**
	comp=Z,5.6nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**87.44**	**232**	P	**P**	**15 13 51.2**	**-0.7**
	comp=Z,0.5nm,1.0s,mb3.7,baz=312,slow=23,SNR=3.4						
ESDC	**Sonseca Array**	**87.46**	**12**	P	**P**	**15 13 52.2**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.8,baz=349,slow=6.2,SNR=3.7						
ASAR	**Alice Springs**	**90.81**	**231**	P	**P**	**15 14 07.8**	**0.0**
	comp=Z,1.1nm,0.9s,mb4.2,baz=40,slow=3.8,SNR=8.0						

IDC ***27*** *15:13:02.8±0.5, 5228N×16844W, h0km, mb5.1/32, mb1 5.2/33, mb1mx5.2/35, mbtmp5.1/33, ML4.6/1, MS5.0/19, Ms1 5.0/19, ms1mx4.6/55, Error ellipse: s-maj=15.9km s-min=9.7km az=172.0*
ISCJB ***27*** *15:13:02.1±1.1, 5227N±003×16846W±002, h2km±6km, mb5.3/234, MS5.1/35, Error ellipse: s-maj=4.9km s-min=2.3km az=12.2*
GCMT ***27*** *15:13:04.2±0.1, 52.14N×16827W, h13km, MW5.4/108, Moment Tensor Solution. s77,c150; s108,c220; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr 1.26±.03; Mθθ 0.94±.02; Mϕϕ -0.31±.02; Mrθ 1.04±.06; Mθϕ -0.53±.01; Mϕr 0.47±.04; Best double couple: Mo 1.69200×10^17 NP1:ϕ237.00000°, δ24.00000°, λ84.00000°. NP2:ϕ64.00000°, δ66.00000°, λ93.00000°. Principal axes: T 1.7040, Plg69.0000°, Azm340.0000°; N -0.0230, Plg3.0000°, Azm243.0000°; P -1.6800, Plg21.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***27*** *15:13:04.2±1.0, 5224N×16834W, h9km±5km, mb5.4/134, MS5.0/1, ML4.7(AEIC), ML5.2(PMR) Error ellipse: s-maj=5.0km s-min=2.7km az=173.0*
BJI ***27*** *15:13:04.7, 5270N×16899W, h8km, mB5.8, mb5.5, Ms5.4, Msz5.2*
MOS ***27*** *15:13:06.4±0.9, 5222N×16851W, h33km, mb5.6/107, MS4.9/7, Error ellipse: s-maj=8.6km s-min=4.1km az=96.1*
SZGRF ***27*** *15:13:10.2, 5237N×16838W, h33km, mb5.4, Fox Islands, Aleutian Islands, United States*
DJA ***27*** *15:13:26, 5291N×17064W, h115km, Mw5.6/4*
ISC 27 15:13:06.4±0.9, 5235N±003×16844W±002, h17km±5km, h22km±1.7km: pP-P, n903, σ0§80/898, mb5.3/234, MS5.1/35, 269C-147D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.67**	**338**	P	**Pg**	**15 13 21.1**	**+1.5**
NIKO				S	**Sg**	**15 13 34.3**	**+5.7**
OKCE	**Okmok Cone E**	**1.09**	**9**	P	**Pb**	**15 13 27.5**	**+0.7**
OKCE				S	**Sb**	**15 13 47.4**	**+6.7**
OKCD	**Okmok Cone D**	**1.10**	**10**	P	**Pb**	**15 13 27.6**	**+0.7**
UNV	**Unalaska Vale**	**1.90**	**37**	P	**Pn**	**15 13 37.0**	**-1.0**
UNV				S	**Sn**	**15 14 03.0**	**+1.6**
AKUT	**Akutan**	**2.40**	**41**	*eP*	**Pn**	**15 13 43.9**	**-1.0**
ATKA	**Atka Island**	**3.54**	**270**	P	**Pn**	**15 14 01.4**	**+1.0**
GSTR	**Great Sitkin T**	**4.69**	**270**	*e*Pn	**Pn**	**15 14 16.4**	**+0.1**
GSTR				*e*Sn	**Sn**	**15 15 12.5**	**+2.3**
SPIA	**Saint Paul Isl**	**4.95**	**349**	P	**Pn**	**15 14 23.1**	**+3.2**
ADK	**Adak**	**5.10**	**268**	*eP*	**Pn**	**15 14 22.9**	**+1.0**
ADK				*e*		15 15 20.8	
ADK				smax			
	comp=N,750nm,0.8s						
ADK	**Adak**	**5.10**	**268**	P	**Pn**	**15 14 23.2**	**+1.3**
SDPT	**Sand Point**	**5.59**	**54**	P	**Pn**	**15 14 28.7**	**+0.1**
CHGN	**Chignik**	**7.07**	**52**	*eP*	**Pn**	**15 14 50.2**	**+1.2**
OHAK	**Old Harbor**	**10.01**	**55**	P	**Pn**	**15 15 27.4**	**-1.9**
KDAK	**Kodiak Island**	**10.59**	**53**	*e*Pn	**Pn**	**15 15 35.0**	**-2.1**
	comp=N,662nm,0.4s,SNR=19						
KDAK	**Kodiak Island**	**10.59**	**53**	Pn	**Pn**	**15 15 34.8**	**-2.3**
	comp=N,10nm,0.3s,baz=258,slow=8.1,SNR=36						
KDAK				Sn	**Sn**	**15 17 26.7**	**-8.4**
	comp=N,0.8nm,0.3s,baz=273,slow=12,SNR=2.0						
KDAK	**Kodiak Island**	**10.59**	**53**	*e*P	**Pn**	**15 15 34.3**	**-2.8**
KDAK				pmax	pmax		
	comp=Z,71nm,0.7s						
KDAK	**Kodiak Island**	**10.59**	**53**	*e*Pn	**Pn**	**15 15 34.3**	**-2.8**
	comp=Z,71nm,0.7s						
FX1	**Attu Island--F**	**11.20**	**280**	Pn	**Pn**	**15 15 45.2**	**-0.3**
	comp=Z,14nm,0.3s,baz=114,slow=3.7,SNR=51						
FX1				Sn	**Sn**	**15 17 52.7**	**+2.6**
	comp=Z,1.2nm,0.3s,baz=89,slow=21,SNR=1.8						
SVW2	**Sparrevohn**	**11.24**	**34**	*eP*	**Pn**	**15 15 50.3**	**+4.3**
RSO	**Redoubt South**	**11.87**	**41**	*ePn*	**Pn**	**15 15 54.2**	**-0.4**
SEW	**Seward**	**13.07**	**46**	*ePn*	**Pn**	**15 16 08.9**	**-2.1**
	comp=Z,87nm,0.9s						
SEW				*e*Sn	**Sn**	**15 18 27.8**	**-8.1**
TNA	**Tin City**	**13.25**	**1**	*ePn*	**Pn**	**15 16 15.6**	**+2.1**
	comp=Z,47nm,1.0s						
FIB	**Fire Island**	**13.31**	**41**	P	**Pn**	**15 16 10.5**	**-3.8**
RC01	**Rabbit Creek A**	**13.45**	**42**	*ePn*	**Pn**	**15 16 14.3**	**-1.8**
	comp=Z,42nm,0.7s						
PPLA	**Purkeypile**	**13.64**	**33**	*ePn*	**Pn**	**15 16 21.2**	**+2.4**
	comp=Z,70nm,0.6s						
PMR	**Palmer**	**13.96**	**41**	*eP*	**Pn**	**15 16 22.6**	**-0.6**
PMR				pmax	pmax		
	comp=Z,11nm,0.6s						
PMR	**Palmer**	**13.96**	**41**	*eP*	**Pn**	**15 16 22.6**	**-0.6**
	comp=Z,11nm,0.6s						
CHUM	**Lake Minchumin**	**14.30**	**30**	*ePn*	**Pn**	**15 16 27.9**	**+0.1**
	comp=Z,81nm,0.7s						
KTH	**Kantishna Hill**	**14.51**	**33**	*ePn*	**Pn**	**15 16 31.1**	**+0.5**
	comp=Z,115nm,0.9s						
TRF	**Thorofare Moun**	**14.66**	**34**	*ePn*	**Pn**	**15 16 32.2**	**-0.4**
	comp=Z,38nm,0.8s						
BPAW	**Bear Paw Mtn.**	**14.87**	**31**	Pn	**Pn**	**15 16 31.5**	**-4.0**
	comp=Z,129nm,0.8s						
MCK	**McKinley**	**15.30**	**34**	*eP*	**Pn**	**15 16 40.0**	**-1.2**
MCK				pmax	pmax		
	comp=Z,47nm,0.9s						
MCK	**McKinley**	**15.30**	**34**	*ePn*	**Pn**	**15 16 40.0**	**-1.2**
	comp=Z,47nm,0.9s						
PAX	**Paxson**	**16.15**	**40**	P	**Pn**	**15 16 50.2**	**-2.0**
PAX	**Paxson**	**16.15**	**40**	*ePn*	**Pn**	**15 16 49.4**	**-2.8**
	comp=Z,35nm,0.6s						
PAX				*e*Sn	**Sn**	**15 19 47.9**	**-2.8**
COLA	**College**	**16.40**	**32**	*eP*	**Pn**	**15 16 53.2**	**-2.2**
COLA	**College**	**16.40**	**32**	*ePn*	**Pn**	**15 16 51.9**	**-3.5**
	comp=Z,111nm,0.8s						
MENT	**Mentasta**	**16.83**	**41**	*eP*	**Pn**	**15 17 01.0**	**+0.1**
COLD	**Coldfoot**	**17.40**	**24**	*ePn*	**Pn**	**15 17 08.2**	**+0.3**
	comp=Z,70nm,1.0s						
PNL	**Peninsula**	**17.70**	**54**	*ePn*	**Pn**	**15 17 08.9**	**-2.8**
	comp=Z,106nm,0.8s						
EGAK	**Eagle**	**18.70**	**38**	*eP*	**Pn**	**15 17 21.1**	**-2.8**
	comp=Z,59nm,0.8s						
DAWY	**Dawson**	**19.07**	**41**	*eP*	**Pn**	**15 17 26.3**	**-2.1**
SIT	**Sitka**	**19.58**	**63**	*eP*	**Pn**	**15 17 33.6**	**-1.0**
SIT				pmax	pmax		
	comp=Z,71nm,1.0s						
SIT	**Sitka**	**19.58**	**63**	*eP*	**Pn**	**15 17 33.6**	**-1.0**
	comp=Z,71nm,1.0s						
SKAG	**Skagway**	**19.71**	**56**	*eP*	**Pn**	**15 17 35.5**	**-0.6**
	comp=Z,87nm,0.6s						

D09A **Jones Farm, Ri** 32.31 79 ⇓P P 15 19 34.6 +0.5
baz=32
G07A **Ruggs Ranch, H** 32.37 83 ⇓P P 15 19 35.1 +0.4
baz=32
YBH **Yreka Blue Hor** 32.41 91 *e*P P 15 19 36.2 +1.1
YBH pmax pmax
comp=Z,12nm,0.7s
YBH **Yreka Blue Hor** 32.41 91 *e*P P 15 19 36.2 +1.1
comp=Z,12nm,0.7s,mb4.8
A11A **Hall Mountain,** 32.60 75 ⇓P P 15 19 37.0 +0.3
baz=32,SNR=7.7
EDM **Edmonton** 32.64 66 *e*P P 15 19 36.2 -0.7
F08A **Pendleton** 32.64 81 ⇑P P 15 19 37.4 +0.4
baz=32
E09A **Wood Farm, Sta** 32.67 80 ⇑P P 15 19 37.6 +0.3
baz=32
I06A **Prineville** 32.72 85 ⇓P P 15 19 38.5 +0.8
baz=32
G08A **Pilot Rock** 32.78 82 ⇑P P 15 19 39.0 +0.7
baz=33
B11A **Sandpoint** 32.84 76 ⇓P P 15 19 38.5 -0.2
baz=33
D10A **Wagner Farm, O** 32.93 78 ⇑P P 15 19 39.1 -0.5
baz=33
K05A **Summer Lake** 32.97 88 ⇓P P 15 19 41.0 +1.1
baz=33,SNR=7.1
TIXI **Tiksi** 33.05 329⇑ *e*P P 15 19 39.6 -0.7
TIXI pmax pmax
comp=Z,24nm,0.8s,mb5.2
TIXI **Tiksi** 33.05 329 *e*P P 15 19 39.3 -1.0
comp=Z,23nm,0.8s,mb5.2
TIXI *e*PcP PcP 15 22 22.1 -1.2
I07A **Izee** 33.08 85 ⇓P P 15 19 41.5 +0.6
baz=33
J06A **Christmas Vall** 33.13 86 ⇓P P 15 19 42.1 +0.8
baz=33,SNR=8.8
F09A **S2 Ranch, Elgi** 33.21 81 ⇑P P 15 19 42.7 +0.7
baz=33
E10A **Myers Farm, Un** 33.31 79 ⇓P P 15 19 43.2 +0.3
baz=33
H08A **Prairie City** 33.36 83 ⇑P P 15 19 44.0 +0.7
baz=33
F10A **Beach Ranch, E** 33.49 80 ⇓P P 15 19 45.0 +0.6
baz=33
D11A **Klaveano Farm,** 33.50 78 ⇑P P 15 19 44.5 0.0
baz=33
G09A **Cove** 33.51 82 ⇑P P 15 19 45.3 +0.7
baz=33
J07A **Hines** 33.58 86 ⇑P P 15 19 46.2 +1.0
baz=33
YAK **Yakutsk** 33.61 311 *e*P P 15 19 42.8 -2.5
YAK *e* 15 22 24.0
YAK pmax pmax
comp=Z,93nm,0.9s,mb5.7
YAK pmax pmax
comp=E,24nm,1.1s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK MLR MLR
comp=Z,4μm,16.0s,MS5.2
YAK MLR MLR
comp=E,3μm,16.0s,MS5.2
YAK MLR MLR
comp=N,3μm,18.0s,MS5.2
YAK **Yakutsk** 33.61 311 *e*P P 15 19 43.3 -2.0
comp=N,115nm,0.8s,mb5.9
YAK *e*PcP PcP 15 22 24.2 -0.9
C12B **Naegeli Ranch,** 33.70 76 ⇓P P 15 19 46.8 +0.6
baz=34
I08A **Drewsey** 33.74 84 ⇓P P 15 19 47.4 +0.7
baz=34
A13A **Flathead Natio** 33.77 74 ⇑P P 15 19 46.8 0.0
baz=34
ERM **Erimo** 33.89 272 P P 15 19 48.4 +0.5
comp=N,510nm,1.1s,mb6.4,SNR=11
ERM **Erimo** 33.89 272 *e*P P 15 19 48.1 +0.2
ERM pmax pmax
comp=Z,115nm,1.1s,mb5.7
ERM **Erimo** 33.89 272 *e*P P 15 19 48.1 +0.2
comp=Z,115nm,1.1s,mb5.7
H09A **Durkee** 33.90 82 ⇓P P 15 19 49.0 +1.0
baz=34
G10A **Bishop Farm, J** 33.90 81 ⇓P P 15 19 49.0 +1.0
baz=34,SNR=8.6
E11A **Bogner Ranch,** 33.91 79 ⇓P P 15 19 48.1 0.0
baz=34
B13A **Whitefish** 33.99 75 ⇓P P 15 19 48.9 +0.1
baz=34
K07A **Rock Creek Ran** 33.99 87 ⇓P P 15 19 49.4 +0.5
baz=34,SNR=6.6
J08A **Circle Bar Ran** 34.10 85 ⇑P P 15 19 50.3 +0.6
baz=34
F11A **Grangeville** 34.18 80 ⇑P P 15 19 50.3 -0.1
baz=34
I09A **Lost Marbles R** 34.22 84 ⇓P P 15 19 50.9 +0.1
baz=34
C13A **Hot Springs** 34.25 76 ⇓P P 15 19 50.7 -0.3
baz=34,SNR=7.2
L07A **Adell** 34.32 88 ⇑P P 15 19 51.6 -0.1
baz=34
A14A **Double T Ranch** 34.33 73 ⇑P P 15 19 51.2 -0.5
baz=34,SNR=10
K08A **Mann Creek Ran** 34.44 86 ⇑P P 15 19 52.7 0.0
baz=34,SNR=6.1
H10A **Noah's Angus R** 34.49 82 ⇓P P 15 19 54.0 +0.9
baz=34,SNR=14
J09A **Fry Pan Ranch,** 34.55 84 ⇓P P 15 19 54.3 +0.7
baz=34,SNR=9.3
D13A **Huson** 34.60 77 ⇓P P 15 19 53.8 -0.3
baz=34
B14A **Marquette Ranc** 34.70 74 ⇑P P 15 19 55.0 +0.1
baz=34
A15A **Johnson Ranch,** 34.73 73 ⇓P P 15 19 54.6 -0.6
baz=34
N06A **Buffalo Meadow** 34.75 90 ⇑P P 15 19 56.0 +0.6
baz=35,SNR=9.2
M07A **Soldier Meadow** 34.78 88 ⇓P P 15 19 56.3 +0.6
baz=35,SNR=11
L08A **Fields** 34.83 87 ⇓P P 15 19 56.6 +0.5
baz=35,SNR=11
H11A **Donnelly** 34.88 81 ⇓P P 15 19 56.0 -0.4
baz=35
K09A **Rome** 34.92 85 ⇓P P 15 19 56.9 +0.1
baz=35
BEKR **Beckwourth** 34.95 91 ⇓P P 15 19 57.2 +0.1
baz=35,SNR=8.4
MSO **Missoula** 35.04 77 *e*P P 15 19 57.0 -0.9
comp=Z,13nm,1.1s,mb4.8
E13A **Victor** 35.09 78 ⇑P P 15 19 58.2 -0.1
baz=35
O06A **Flanigan** 35.10 91 ⇓P P 15 19 58.8 +0.4
baz=35,SNR=6.4
B15A **Bradely Ranch,** 35.14 74 ⇓P P 15 19 58.4 -0.3
baz=35
D14A **Greenough** 35.18 76 ⇓P P 15 19 58.9 -0.1
baz=35
M08A **Happy Creek Ra** 35.23 88 ⇑P P 15 19 60.0 +0.4
baz=35,SNR=9.6
N07B **Gerlach** 35.26 89 ⇓P P 15 20 00.4 +0.6
baz=35,SNR=5.4
F13A **Darby** 35.33 79 ⇑P P 15 20 00.6 +0.2
baz=35,SNR=8.7
I11A **Placerville** 35.33 82 ⇑P P 15 20 00.6 +0.2
baz=35
L09A **Wilkinson Ranc** 35.34 86 ⇑P P 15 20 01.0 +0.5
baz=35
C15A **Salmond Ranch,** 35.37 75 ⇑P P 15 20 00.5 -0.3
baz=35,SNR=24
K10A **MacKenzie Ranc** 35.40 85 ⇓P P 15 20 01.3 +0.3
baz=35,SNR=7.6
A16A **West Butte Ran** 35.41 72 ⇓P P 15 20 00.6 -0.5
baz=35
HABR **Khabarovsk** 35.44 287*c* *i*P P 15 20 00.9 -0.3
HABR *e**PP pP 15 20 11.4 +4.8
HABR *e* 15 21 19.8
HABR *e* 15 22 29.9
HABR *e*S **S 15 25 34.9 -0.2**
HABR *e**SS sS 15 25 52.6 +8.6
HABR *e*SS SS 15 27 59.6 -9.5
HABR *e* 15 30 17.9
HABR pmax pmax
comp=Z,201nm,1.2s,mb5.9
HABR pmax pmax
comp=E,96nm,1.0s
HABR pmax pmax
comp=N,29nm,0.9s
HABR MLR MLR
comp=Z,1μm,16.0s,MS4.7
HABR MLR MLR
comp=N,1μm,17.0s,MS4.8
HABR MLR MLR
comp=E,759nm,18.0s,MS4.8
E14A **Clinton** 35.52 77 ⇓P P 15 20 01.6 -0.3
baz=35,SNR=6.2
H12A **Diamond D Ranc** 35.66 81 ⇓P P 15 20 03.3 0.0
baz=36,SNR=5.4
WCN **Washoe City** 35.67 92 ⇑P P 15 20 03.4 0.0
baz=36,SNR=6.5
MFID **Camas Ranch** 35.68 83 ⇑P P 15 20 03.8 +0.3
baz=36
O07A **Toulon** 35.69 90 ⇓P P 15 20 04.0 +0.5
baz=36,SNR=8.4
G13A **Cobalt** 35.75 80 ⇓P P 15 20 03.8 -0.2
baz=36
N08A **GE Springer Mi** 35.77 88 ⇓P P 15 20 04.8 +0.5
baz=36,SNR=14
D15A **Lincoln** 35.78 76 ⇑P P 15 20 03.7 -0.5
baz=36
M09A **Marrel Ranch,** 35.82 87 ⇑P P 15 20 04.9 +0.3
baz=36
C16A **Fuhringer Ranc** 35.87 74 ⇑P P 15 20 04.6 -0.4
baz=36,SNR=13
K11A **Parker Ranch,** 35.91 84 ⇓P P 15 20 05.6 +0.1
baz=36,SNR=7.9
A17A **Triple J Farms** 35.94 72 ⇑P P 15 20 05.0 -0.5
baz=36
H13A **Challis** 36.02 80 ⇑P P 15 20 06.0 -0.3
baz=36
E15A **Deer Lodge** 36.02 77 ⇑P P 15 20 05.7 -0.6
baz=36
L10A **Juniper Basin** 36.04 85 ⇓P P 15 20 06.8 +0.3
baz=36
N09A **Rock Creek Ran** 36.10 88 ⇑P P 15 20 07.3 +0.2
baz=36
G14A **Jackson** 36.14 79 ⇓P P 15 20 07.1 -0.2
baz=36,SNR=7.2
RES **Resolute Bay** 36.14 26 *e*P P 15 20 05.1 -1.9
RES *e* 15 22 31.3
RES pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
RES **Resolute Bay** 36.14 26 *e*P P 15 20 05.1 -2.0
comp=Z,10nm,0.8s,mb4.8
RES *e*PcP PcP 15 22 31.3 -0.9
B17A **L&G Farms, Che** 36.19 73 ⇓P P 15 20 07.1 -0.6
baz=36,SNR=5.6
J12A **Stokes Ranch,** 36.22 83 ⇑P P 15 20 08.2 +0.2
baz=36,SNR=13
M10A **I.L. Ranch, Tu** 36.32 86 ⇑P P 15 20 09.2 +0.3
baz=36
R06C **Coleville** 36.33 93 ⇑P P 15 20 09.6 +0.6
baz=36,SNR=9.3
D16A **Dana Ranch, Ca** 36.36 75 ⇓P P 15 20 09.3 +0.1
baz=36
F15A **Butte** 36.41 77 ⇓P P 15 20 09.4 -0.2
baz=36
L11A **Cat Creek Ranc** 36.43 85 ⇓P P 15 20 10.3 +0.5
baz=36,SNR=11
I13A **Wildhorse Cree** 36.45 81 ⇑P P 15 20 10.3 +0.3
baz=36,SNR=11
HLID **Hailey** 36.46 82 ⇓P P 15 20 10.4 +0.3
baz=36,SNR=8.8
H14A **Leadore** 36.52 80 ⇑P P 15 20 10.6 0.0
baz=36
C17A **Wharram Farm,** 36.53 74 ⇓P P 15 20 10.2 -0.5
baz=36
E16A **East Helena** 36.54 76 ⇓P P 15 20 10.7 0.0
baz=36
K12A **Draper Farm, C** 36.68 84 ⇓P P 15 20 12.5 +0.6
baz=36
J13A **Cove Ranch, Pi** 36.70 82 ⇓P P 15 20 12.4 +0.3
baz=36,SNR=12
B18A **Beardsley Farm** 36.74 72 ⇑P P 15 20 11.9 -0.5
baz=36,SNR=9.5
G15A **Dillon** 36.76 78 ⇑P P 15 20 12.2 -0.4
baz=37,SNR=10
D17A **Six Diamond Ra** 36.81 74 ⇑P P 15 20 13.0 -0.1
baz=37
M11A **Holland Ranch,** 36.83 86 ⇓P P 15 20 13.1 -0.1
baz=37
I14A **Mackay** 36.84 81 ⇑P P 15 20 13.4 0.0
baz=37,SNR=14
L12A **Hose Creek Ra** 36.89 84 ⇓P P 15 20 14.4 +0.6
baz=37,SNR=6.0
EGMT **Eagleton** 36.93 73 ⇑P P 15 20 13.8 -0.3
baz=37
EGMT **Eagleton** 36.93 73 *e*P P 15 20 13.4 -0.7
comp=Z,50nm,0.9s,mb5.3
F16A **Kennard Place,** 36.95 77 ⇑P P 15 20 14.1 -0.1
baz=37
H15A **Lima** 36.96 79 ⇓P P 15 20 13.4 -0.9
baz=37,SNR=6.8
KLR **Kul'dur** 37.00 290 *e*P P 15 20 09.7 -4.9
KLR pmax pmax
comp=E,38nm,1.2s
KLR pmax pmax
comp=Z,50nm,1.2s,mb5.2
BOZ **Bozeman (W)** 37.02 77 ⇓P P 15 20 14.4 -0.5
baz=37,SNR=7.6
Q08A **Gabbs** 37.06 91 ⇓P P 15 20 15.2 0.0
baz=37
E17A **Martinsdale** 37.06 76 ⇓P P 15 20 15.1 -0.1
baz=37
O10A **Cortez Mining,** 37.06 88 ⇑P P 15 20 15.9 +0.6
baz=37
NVAR **Mina Array Bea** 37.10 92 P P 15 20 15.9 +0.4
comp=Z,8.2nm,0.7s,mb4.7,baz=295,slow=8.3,SNR=48
J14A **Carey** 37.14 82 ⇑P P 15 20 16.1 +0.3
baz=37,SNR=12
G16A **Moss Hill, Enn** 37.14 78 ⇓P P 15 20 15.0 -0.8
baz=37,SNR=9.5
D18A **Linhart Farms,** 37.31 74 ⇓P P 15 20 17.8 +0.5
baz=37
M12A **Wells** 37.37 85 ⇓P P 15 20 18.1 +0.2
baz=37
F17A **Fitzpatrick Pl** 37.47 76 ⇑P P 15 20 18.5 -0.1
baz=37,SNR=6.9
ELK **Elko** 37.57 86 *e*P P 15 20 18.8 -0.7
ELK pmax pmax
comp=Z,52nm,1.8s
ELK **Elko** 37.57 86 *e*P P 15 20 18.8 -0.8
comp=Z,52nm,1.8s,mb5.0
E18A **Harlowton** 37.57 75 ⇑P P 15 20 19.5 0.0
baz=37
L13A **Double Diamond** 37.58 84 ⇓P P 15 20 20.2 +0.6
baz=37,SNR=7.1
N12A **Clover Valley,** 37.63 86 ⇑P P 15 20 20.3 +0.3
baz=37,SNR=6.3
O11A **Owboy Ranch,** 37.68 87 ⇓P P 15 20 20.8 +0.3
baz=38
G17A **Pierce Place,** 37.73 77 ⇓P P 15 20 20.3 -0.5
baz=38
J15A **Blackfoot** 37.75 81 ⇓P P 15 20 21.2 +0.1
baz=38,SNR=10
H16A **Russell Place,** 37.75 78 ⇓P P 15 20 20.6 -0.5
baz=38,SNR=7.6
M13A **Montello** 37.86 85 ⇑P P 15 20 22.3 +0.3
baz=38
R09A **Tonopah** 37.97 91 ⇓P P 15 20 23.0 +0.1
baz=38,SNR=8.8
Q10A **Clear Creek Ra** 38.02 90 ⇓P P 15 20 23.4 0.0
baz=38,SNR=7.3
F18A **Big Timber** 38.03 76 ⇓P P 15 20 23.3 -0.1
baz=38
I16A **Newdale** 38.06 80 ⇓P P 15 20 23.7 0.0
baz=38
O12A **Currie** 38.15 87 ⇓P P 15 20 24.5 +0.1
baz=38,SNR=7.4
S09A **Goldfield** 38.20 92 ⇑P P 15 20 24.8 -0.1
baz=38
FFC **Flin Flon** 38.24 59 *e*P P 15 20 23.9 -1.1
FFC pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
FFC **Flin Flon** 38.24 59 *e*P P 15 20 23.9 -1.2
comp=Z,5.9nm,0.8s,mb4.4
VES **Vestal, Richgr** 38.28 96 ⇓P P 15 20 25.6 0.0
baz=38
M14A **Sheep Mountain** 38.28 84 ⇑P P 15 20 25.6 +0.1
baz=38,SNR=5.8
H17A **Grant Village** 38.32 78 ⇓P P 15 20 26.8 +0.9
baz=38,SNR=9.3
IMW **Indian Meadow** 38.38 79 *e*P P 15 20 26.0 -0.3
comp=Z,10nm,0.8s,mb4.6
DCID1 **Drake Creek** 38.40 80 P P 15 20 26.5 0.0
comp=Z,34nm,1.1s,mb5.0
R10A **Warm Springs** 38.41 90 ⇓P P 15 20 27.1 +0.4
baz=38
G18A **Lazy EL Ranch,** 38.43 76 ⇓P P 15 20 26.4 -0.3
baz=38
RRI2 **Red Ridge** 38.46 80 *e*P P 15 20 26.9 -0.1
comp=Z,27nm,1.1s,mb4.9
S10A **Tonopah Range,** 38.46 91 ⇑P P 15 20 26.9 -0.2
baz=38,SNR=9.9
Q11A **Duckwater** 38.46 89 ⇑P P 15 20 27.5 +0.4
baz=38
P12A **McGill** 38.53 88 ⇑P P 15 20 28.0 +0.3
baz=38,SNR=11
GRAC **Grapevine Rang** 38.57 93 ⇑P P 15 20 28.5 +0.4
baz=38
L15A **Malad City** 38.57 83 ⇓P P 15 20 28.2 +0.3
baz=38
K16A **Soda Springs** 38.58 81 ⇓P P 15 20 29.2 +1.1
baz=38,SNR=18
I17A **Pilgram Creek** 38.59 79 ⇑P P 15 20 27.8 -0.2
baz=38
RLMT **Red Lodge** 38.71 76 ⇑P P 15 20 29.3 +0.2
baz=38,SNR=13
RLMT **Red Lodge** 38.71 76 *e*P P 15 20 28.7 -0.4
comp=Z,36nm,1.0s,mb5.1
N14A **Grayback Hills** 38.76 85 ⇑P P 15 20 29.7 +0.1
baz=39,SNR=8.1
R11A **Troy Canyon, C** 38.81 90 ⇓P P 15 20 30.3 +0.3
baz=39
Q12A **Willow Creek R** 38.85 88 ⇓P P 15 20 30.5 +0.2
baz=39
M15A **Larsen Ranch,** 38.85 83 ⇓P P 15 20 30.5 +0.2
baz=39
K17A **Gardner Place,** 39.03 81 ⇑P P 15 20 32.0 +0.2
baz=39
P13A **Bates Ranch, G** 39.09 87 ⇑P P 15 20 32.6 +0.3
baz=39
MPMC **Manual Prospec** 39.11 94 ⇓P P 15 20 33.0 +0.4
baz=39
L16A **Fish Haven** 39.15 82 ⇓P P 15 20 32.9 +0.1
baz=39,SNR=11
I18A **Diamond G Ranc** 39.16 79 ⇓P P 15 20 32.7 -0.2
baz=39,SNR=6.9
FURC **Furnace Creek,** 39.23 93 ⇓P P 15 20 33.9 +0.4
baz=39
J18A **Kendall Valley** 39.32 79 ⇓P P 15 20 33.7 -0.5
baz=39,SNR=6.3
DUG **Dugway** 39.38 85 ⇓P P 15 20 35.3 +0.6
baz=39
DUG **Dugway** 39.38 85 *e*P P 15 20 35.0 +0.2
DUG pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
DUG **Dugway** 39.38 85 *e*P P 15 20 35.0 +0.2
comp=Z,10nm,0.9s,mb4.5
Q13A **Wheeler Ranch,** 39.40 88 ⇓P P 15 20 35.5 +0.6
baz=39
R12A **Pony Springs,** 39.43 89 ⇓P P 15 20 35.8 +0.6
baz=39
M16A **Huntsville** 39.44 83 ⇑P P 15 20 35.0 -0.2
baz=39,SNR=22
O15A **The Old Anders** 39.54 85 ⇓P P 15 20 36.8 +0.7
baz=39
P14A **Drum Mountains** 39.59 86 ⇑P P 15 20 37.0 +0.5
baz=39
K18A **Toltan Ranch,** 39.63 80 ⇓P P 15 20 36.6 -0.2
baz=39,SNR=9.8
S12A **Delamar Landin** 39.73 90 ⇓P P 15 20 38.2 +0.5
baz=40
T11A **Corn Creek, Al** 39.74 91 ⇑P P 15 20 37.7 -0.1
baz=40
Q14A **Sevier Lake (B** 39.83 87 ⇑P P 15 20 38.1 -0.4
baz=40,SNR=9.2
BW06 **Boulder Array** 39.85 80 ⇓P P 15 20 37.9 -0.7
baz=40,SNR=31
PDAR **Pinedale Array** 39.85 80 P P 15 20 38.1 -0.5
comp=Z,17nm,0.7s,mb4.9,baz=305,slow=4.0,SNR=121
R13A **O'Grain Ranch,** 39.91 89 ⇑P P 15 20 39.4 +0.2
baz=40
M17A **Scullys Gap (B** 39.93 82 ⇓P P 15 20 38.8 -0.5
baz=40,SNR=6.6
GSC **Goldstone** 40.03 94 ⇑P P 15 20 40.6 +0.4
baz=40
GSC **Goldstone** 40.03 94 *e*P P 15 20 39.8 -0.4
GSC pmax pmax
comp=Z,25nm,1.0s,mb4.9
GSC **Goldstone** 40.03 94 *e*P P 15 20 39.8 -0.4
comp=Z,25nm,1.0s,mb4.9
L18A **Fontenelle, Gr** 40.05 81 ⇑P P 15 20 39.9 -0.4
baz=40,SNR=8.8
N17A **Moffit Pass** 40.14 83 ⇑P P 15 20 41.1 0.0
baz=40
K19A **Absolon Red Bu** 40.24 79 ⇓P P 15 20 41.2 -0.7
baz=40,SNR=36
MAJO **Matsushiro** 40.26 269 *e*P P 15 20 41.9 -0.2
MAJO pmax pmax
comp=Z,96nm,0.9s,mb5.5
MAJO **Matsushiro** 40.26 269 *e*P P 15 20 41.9 -0.2
comp=Z,96nm,0.9s,mb5.5
MAT **Matsushiro** 40.26 269 P P 15 20 41.8 -0.3
MAT *e*S **S 15 26 56.0 +7.5**
MJAR **Matsushiro Arr** 40.26 269 P P 15 20 41.6 -0.6
comp=Z,26nm,0.9s,mb4.9,baz=51,slow=7.4,SNR=44
MJAR PcP PcP 15 22 45.3 -0.3
comp=Z,5.8nm,1.1s,baz=244,slow=0.9,SNR=4.4
M18A **Lyman** 40.32 82 ⇑P P 15 20 42.2 -0.3
baz=40
L19A **Farson** 40.35 80 ⇑P P 15 20 42.6 -0.2
baz=40,SNR=8.0
S13A **Holt Ranch, En** 40.35 89 ⇓P P 15 20 43.5 +0.6
baz=40
ALE **Alert** 40.48 11 P P 15 20 43.0 -0.5
comp=Z,61nm,0.6s,mb5.5,SNR=5.7
FCC **Fort Churchill** 40.52 51 *e*P P 15 20 43.3 -0.6
FCC pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
FCC **Fort Churchill** 40.52 51 *e*P P 15 20 43.3 -0.6
comp=Z,1.7nm,0.8s
V11A **Goodsprings** 40.52 93 ⇓P P 15 20 44.6 +0.4
baz=40
HEC **Hector,Ludlow** 40.63 94 ⇑P P 15 20 45.4 +0.2
baz=40
K20A **Yellowstone Ra** 40.64 79 ⇓P P 15 20 44.1 -1.1
baz=40,SNR=16
MDJ **Mudanjiang** 40.65 285 P P 15 20 43.8 -1.4
MDJ AP pP 15 20 50.0 -0.7
MDJ XP sP 15 20 52.8 0.0
MDJ AMB AMB
comp=Z,29nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,1μm,14.8s
MDJ LR LR
comp=E,2μm,16.1s
MDJ LR LR
comp=Z,2μm,17.0s,MS5.1
MDJ **Mudanjiang** 40.65 285 *e*P P 15 20 43.4 -1.8
comp=Z,20nm,0.8s,mb4.8
T13A **Saint George** 40.68 90 ⇑P P 15 20 46.2 +0.6
baz=40
N18A **Larsen Ranch,** 40.83 82 ⇓P P 15 20 46.1 -0.6
baz=41,SNR=5.7
V12A **Nelson** 40.94 92 ⇓P P 15 20 48.2 +0.5
baz=41
L20A **Wamsutter** 41.02 80 ⇓P P 15 20 48.0 -0.4
baz=41
U13A **Pakoon Wash** 41.04 91 ⇑P P 15 20 49.1 +0.6
baz=41,SNR=5.1
O18A **Roosevelt** 41.05 83 ⇑P P 15 20 49.2 +0.6
baz=41
GMRC **Granite Mounta** 41.08 94 ⇑P P 15 20 49.4 +0.5
baz=41
P17A **Butcher Ranch,** 41.09 85 ⇑P P 15 20 49.4 +0.5
baz=41
Q16A **Castle Valley** 41.16 86 ⇓P P 15 20 49.5 0.0
baz=41
N19A **John Jarvie Ra** 41.18 82 ⇑P P 15 20 49.2 -0.4
baz=41,SNR=9.9
P18A **Preston Nutter** 41.29 84 ⇑P P 15 20 50.8 +0.2
baz=41,SNR=9.7
R16A **Teasdale** 41.37 87 ⇓P P 15 20 51.2 0.0
baz=41
M20A **Sweetwater, Wa** 41.42 80 ⇑P P 15 20 51.0 -0.6
baz=41,SNR=6.7
SRU **San Rafael** 41.44 85 ⇓P P 15 20 52.0 +0.2
baz=41,SNR=7.4
O19A **Miners Draw (B** 41.57 82 ⇑P P 15 20 52.6 -0.3
baz=41,SNR=20
JHJ **Hachijo jima 2** 41.58 263 LR LR 15 37 59.1
comp=Z,588nm,18.4s,MS4.5,baz=37,slow=36
L21A **Rawlins** 41.63 79 ⇑P P 15 20 52.6 -0.7
baz=41,SNR=22
S16A **Weppner Ranch,** 41.65 87 ⇓P P 15 20 53.5 -0.1

baz=42
Q18A Rafter H Ranch 41.68 85 ⇓P P 15 20 53.4 -0.4
baz=42,SNR=8.9
R17A Hanksville Air 41.76 86 ⇓P P 15 20 54.6 +0.2
baz=42
RWWY Rawlins 41.89 79 eP P 15 20 54.5 -1.0
comp=Z,8.8nm,0.7s,mb4.5
W13A Hualapai Mount 41.95 92 ⇓P P 15 20 56.0 0.0
baz=42
U15A North Rim 42.06 89 ⇑P P 15 20 57.2 +0.3
baz=42
P19A Cripple Cowboy 42.06 83 ⇓P P 15 20 56.5 -0.4
baz=42,SNR=18
V14A Boquillas Ranc 42.08 91 ⇑P P 15 20 57.3 +0.3
baz=42
S17A Black Ridge (B 42.20 87 ⇑P P 15 20 58.0 0.0
baz=42
O20A White River Ci 42.20 82 ⇓P P 15 20 57.8 -0.3
baz=42,SNR=11
N21A Black Mountain 42.26 81 ⇑P P 15 20 57.8 -0.7
baz=42,SNR=20
R18A Canyonlands Na 42.28 85 ⇑P P 15 20 58.0 -0.7
baz=42
Q19A Hogan Spring (42.31 84 ⇓P P 15 20 58.7 -0.2
baz=42,SNR=14
X13A Yucca 42.32 93 ⇑P P 15 20 58.5 -0.5
baz=42
W14A Seligman 42.37 91 ⇓P P 15 20 59.2 -0.2
baz=42
M22A Cedar Creek Ra 42.43 79 ⇑P P 15 20 59.0 -0.9
baz=42,SNR=8.3
BOD Bodaibo 42.45 309 eP P 15 20 57.7 -2.1
BOD pmax pmax
comp=Z,34nm,0.8s,mb5.0
V15A Kaibab Nationa 42.53 90 ⇓P P 15 21 00.5 -0.2
baz=42,SNR=5.5
T17A Navajo Res., N 42.60 88 ⇓P P 15 21 00.8 -0.5
baz=42
O21A Pagoda 42.62 81 ⇑P P 15 21 00.6 -0.8
baz=42,SNR=16
S18A Hurst Farm, Bl 42.65 86 ⇓P P 15 21 01.1 -0.7
baz=42
N22A Wattenberg Ran 42.88 80 ⇓P P 15 21 02.8 -0.7
baz=43,SNR=8.9
W15A Williams 42.89 91 ⇑P P 15 21 03.8 +0.1
baz=43
Q20A Ridgley Place, 42.90 83 ⇓P P 15 21 02.8 -0.9
baz=43,SNR=5.6
X14A Yava 42.98 92 ⇓P P 15 21 04.5 +0.1
baz=43,SNR=7.5
T18A Mexican Hat 43.08 87 ⇓P P 15 21 04.3 -0.9
baz=43
S19A Harvey Farm, M 43.14 85 ⇑P P 15 21 05.4 -0.3
baz=43
WUAZ Wupatki 43.21 90 ⇓P P 15 21 06.0 -0.3
baz=43
WUAZ Wupatki 43.21 90 eP P 15 21 05.8 -0.5
comp=Z,13nm,0.9s,mb4.7
Q21A Lamborn Mesa, 43.41 83 ⇑P P 15 21 07.6 -0.3
baz=43
U18A Rough Rock, Ch 43.55 87 ⇓P P 15 21 09.6 +0.6
baz=43
CN2 Changchun 43.56 286 ⇑P P 15 21 07.5 -1.5
CN2 eXP sP 15 21 16.5 -0.1
CN2 eS **S 15 27 34.3 -2.8**
CN2 AMB AMB
comp=Z,40nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,17.0s,MS5.2
CN2 LR LR
comp=E,2μm,17.0s,MS5.2
CN2 LR LR
comp=Z,2μm,18.0s,MS5.1
ULM Lac du Bonnet 43.66 63 P P 15 21 08.2 -1.4
comp=Z,5.6nm,0.7s,mb4.4,baz=305,slow=8.0,SNR=7.5
ULM LR LR 15 39 34.1
comp=Z,3μm,20.1s,MS5.1,baz=76,slow=36
R21A Cimarron 43.72 84 ⇑P P 15 21 10.1 -0.2
baz=44,SNR=8.4
HIA Hailar 43.77 296 eP P 15 21 10.1 -0.5
HIA e 15 22 56.0
HIA pmax pmax
comp=Z,43nm,0.9s
HIA Hailar 43.77 296 eP P 15 21 10.1 -0.5
comp=Z,43nm,0.9s,mb5.2
HIA ePcP PcP 15 22 56.0 -1.0
T19A Beclabito 43.80 86 ⇑P P 15 21 10.6 -0.4
baz=44,SNR=20
MVCO Mesa Verde 43.88 86 P P 15 21 09.9 -1.7
comp=Z,19nm,1.3s,mb4.7
MVCO e 15 21 28.0
ISCO Idaho Springs 44.00 81 eP P 15 21 12.5 -0.1
ISCO pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
ISCO Idaho Springs 44.00 81 eP P 15 21 12.5 -0.1
comp=Z,6.2nm,0.9s,mb4.3
Y16A Circle Bar Ran 44.24 91 ⇑P P 15 21 15.0 +0.4
baz=44
CBIJ Chichi jima 44.45 255 LR LR 15 36 37.5
comp=Z,1μm,21.5s,MS4.9,baz=303,slow=32
OGNE Ogallala 45.45 77 eP P 15 21 22.4 -1.7
comp=Z,111nm,1.8s,mb5.4
OGNE e 15 21 40.0
TUC Tucson 45.73 93 eP P 15 21 25.2 -1.3
TUC pmax pmax
comp=Z,13nm,1.3s,mb4.7
TUC Tucson 45.73 93 eP P 15 21 25.2 -1.3
comp=Z,13nm,1.3s,mb4.7
KSRS Korea Array 45.97 277 P P 15 21 28.8 +0.5
comp=Z,63nm,0.9s,mb5.5,baz=54,slow=7.5,SNR=136
KSRS PcP PcP 15 23 05.4 +0.6
comp=Z,5.6nm,0.9s,baz=66,slow=4.1,SNR=4.8
KSRS LR LR 15 39 27.1
comp=Z,1μm,19.8s,MS4.8,baz=48,slow=34
118A Homack Ranch, 46.01 92 ⇓P P 15 21 28.9 +0.3
baz=46
ANMO Albuquerque 46.60 86⇑eP P 15 21 32.5 -0.8
ANMO pmax pmax
comp=Z,19nm,2.5s
318A Bisbee 46.82 93 ⇑P P 15 21 35.0 0.0
baz=47
DL2 Dalian 48.84 283 P P 15 21 49.5 -1.0
DL2 AMB AMB
comp=Z,40nm,0.8s,mb5.5
SPITS Spitsbergen Ar 49.70 359 P P 15 21 55.6 -1.1
comp=Z,22nm,0.8s,mb5.2,baz=54,slow=4.4,SNR=26
DAG Danmarks Havn 49.73 9⇑iP P 15 21 56.0 -0.9
DAG pmax pmax
comp=Z,42nm,0.8s,mb5.5
DAG Danmarks Havn 49.73 9⇑iP P 15 21 56.0 -0.9
comp=Z,42nm,0.8s,mb5.5
KSU1 Kansas State U 49.84 75 eP P 15 21 57.0 -1.2
comp=Z,23nm,0.8s,mb5.3
SUMG Summit 50.63 17 eP P 15 22 03.5 -0.3
comp=Z,124nm,0.9s,mb5.8
TLY Talaya 50.81 307 P P 15 22 05.4 0.0
comp=Z,349nm,0.8s,mb6.3,SNR=8.9
TLY Talaya 50.81 307 eP P 15 22 05.1 -0.3
TLY pmax pmax
comp=Z,48nm,0.8s,mb5.5
TLY Talaya 50.81 307 eP P 15 22 05.0 -0.3
comp=Z,49nm,0.8s,mb5.5
BJI Beijing 51.32 288 P P 15 22 08.5 -0.9
BJI AMB AMB
comp=Z,74nm,0.9s,mb5.6
BJI AMB AMB
comp=Z,228nm,4.6s
BJT Baijiatuau 51.34 288 eP P 15 22 08.6 -0.9
BJT pmax pmax
comp=Z,73nm,0.9s
BJT Baijiatuau 51.34 288 eP P 15 22 08.6 -1.0
comp=Z,73nm,0.9s,mb5.6
WMOK Wichita Mounta 51.42 81 eP P 15 22 08.7 -1.5
WMOK pmax pmax
comp=Z,12nm,0.7s,mb4.9
WMOK Wichita Mounta 51.42 81 eP P 15 22 08.7 -1.6
comp=Z,12nm,0.7s,mb4.9
ULN Ulaanbaatar 51.43 301 eP P 15 22 09.5 -0.6
ULN pmax pmax
comp=Z,54nm,0.8s,mb5.5
ULN Ulaanbaatar 51.43 301 eP P 15 22 09.5 -0.6
comp=Z,54nm,0.8s,mb5.5
SONM Songino Array 51.80 301 P P 15 22 13.1 +0.3
comp=Z,37nm,1.0s,mb5.3,baz=47,slow=8.4,SNR=32
SONM PcP PcP 15 23 25.7 0.0
comp=Z,9.7nm,0.9s,baz=73,slow=2.0,SNR=4.7
SONM LR LR 15 45 11.6
comp=Z,2μm,18.4s,MS5.1,baz=60,slow=37
SONM Songino Array 51.80 301 P P 15 22 13.1 +0.3
SONM 15 23 25.7
MOY Mondy 52.11 308 eP P 15 22 15.1 0.0
MOY pmax pmax
comp=Z,58nm,2.1s,mb5.1
TXAR Lajitas Array 52.18 90 P P 15 22 14.9 -1.0
comp=Z,6.6nm,0.7s,mb4.7,baz=298,slow=5.4,SNR=82
TXAR PcP PcP 15 23 26.0 -1.5
comp=Z,3.8nm,0.8s,baz=328,slow=4.6,SNR=1.6
TXAR LR LR 15 43 14.5
comp=Z,984nm,18.5s,MS4.9,baz=200,slow=35
TXAR Lajitas Array 52.18 90 P P 15 22 14.9 -1.0
TXAR 15 23 26.0
HDIL Hopedale 53.17 69 eP P 15 22 20.4 -2.6
comp=Z,23nm,0.7s,mb5.2
TIA Tai'an 53.30 284 eP P 15 22 24.0 -0.1
HHC Hu-ho-hao-te 53.46 292 eP P 15 22 25.5 +0.3
HHC AP pP 15 22 33.0 +2.2
HHC XP sP 15 22 36.0 +3.1
HHC PP PP 15 24 27.0 +1.6
HHC S **S 15 29 51.8 -4.9**
HHC XS sS 15 30 06.5 +0.7
HHC SCS ScS 15 32 09.5 -4.1
HHC SS SS 15 33 32.5 -3.8
HHC AMB AMB
comp=Z,52nm,1.0s,mb5.4
HHC AMB AMB
comp=Z,2μm,7.0s
HHC LR LR
comp=N,1μm,13.4s,MS5.5
HHC LR LR
comp=E,3μm,15.3s,MS5.5
HHC LR LR
comp=Z,2μm,17.9s,MS5.3
JCT Junction City 53.74 86 eP P 15 22 26.4 -1.0
JCT pmax pmax
comp=Z,18nm,0.9s,mb5.0
JCT Junction City 53.74 86 eP P 15 22 26.4 -1.0
comp=Z,18nm,0.9s,mb5.0
FVM French Village 54.22 72 eP P 15 22 28.9 -1.9
FVM pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
FVM French Village 54.22 72 eP P 15 22 28.9 -1.9
comp=Z,10nm,0.6s,mb4.9
SSE Sheshan 54.36 276 P P 15 22 33.5 +1.5
SSE AMB AMB
comp=Z,84nm,0.9s,mb5.7
SSE AMB AMB
comp=Z,1μm,6.6s
BTO Baotou 54.50 292 eP P 15 22 33.5 +0.7
SCHQ Schefferville 55.06 44 P P 15 22 35.9 -0.8
comp=Z,24nm,0.8s,mb5.3,baz=318,slow=8.2,SNR=22
SCHQ LR LR 15 48 47.4
comp=Z,3μm,19.5s,MS5.3,baz=316,slow=39
OLIL Olney 55.07 70 eP P 15 22 34.2 -2.8
comp=Z,25nm,0.8s,mb5.3
NJ2 Nanjing 55.11 279 eP P 15 22 37.5 +0.1
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
USIN University of 55.84 71 eP P 15 22 39.9 -2.7
comp=Z,31nm,0.7s,mb5.5
HVS Khovu-Aksy 55.91 311 iP P 15 22 43.0 +0.2
SADO Sadowa 55.97 59 LR LR 15 47 38.2
comp=Z,2μm,18.7s,MS5.2,baz=182,slow=37
HKT Hockley 56.54 83 eP P 15 22 46.9 -0.7
HKT pmax pmax
comp=Z,29nm,1.5s,mb5.1
HKT Hockley 56.54 83 eP P 15 22 46.9 -0.8
comp=Z,29nm,1.5s,mb5.1
OXF Oxford 57.20 75 eP P 15 22 49.5 -2.7
OXF pmax pmax
comp=Z,72nm,0.8s,mb5.8
OXF Oxford 57.20 75 eP P 15 22 49.5 -2.7
comp=Z,72nm,0.8s,mb5.8
KEV Kevo 57.69 354 ep P 15 22 53.7 -1.5
comp=Z,40nm,0.8s,mb5.5
KEV Kevo 57.69 354 eP P 15 22 53.7 -1.5
KEV pmax pmax
comp=Z,40nm,0.8s,mb5.5
NVS Novosibirsk 57.81 320 eP P 15 22 55.4 -0.9
NVS e 15 32 39.4
ZALV Zalesovo Beam 57.82 318 P P 15 22 56.7 +0.4
comp=Z,13nm,0.8s,mb5.0,baz=38,slow=7.5,SNR=8.3
ZALV LR LR 15 49 34.9
comp=Z,947nm,18.8s,MS4.9,baz=58,slow=38
ZALV Zalesovo Beam 57.82 318 P P 15 22 56.7 +0.4
ZALV LR LR 15 49 34.9
ARCES ARCESS Array B 58.00 354 P P 15 22 56.1 -1.2
comp=Z,36nm,0.9s,mb5.4,baz=11,slow=6.8,SNR=32
ARCES LR LR 15 49 53.2
comp=Z,1μm,18.3s,MS5.1,baz=12,slow=38
ARE0 ARCESS Array S 58.00 354 eP P 15 22 55.4 -2.0
LVZ Lovozero 58.84 350 P P 15 23 02.7 -0.5
comp=Z,774nm,0.8s,mb6.8,SNR=9.1
LVZ Lovozero 58.84 350⇑eP P 15 23 02.4 -0.8
LVZ pmax pmax
comp=Z,134nm,1.0s,mb5.9
LVZ Lovozero 58.84 350⇑eP P 15 23 02.5 -0.7
WHN Wuhan 58.90 281 ⇓P P 15 23 04.3 +0.1
APA Apatity 59.28 350⇑iP P 15 23 06.0 -0.3
APA pmax pmax
comp=Z,31nm,1.0s,mb5.3
XAN Xi'an 59.65 287 P P 15 23 09.8 +0.4
XAN AP pP 15 23 14.3 -0.7
XAN PP PP 15 25 19.3 -1.4
XAN S **S 15 31 17.0 -1.8**
XAN SS SS 15 35 13.8 -0.2
XAN AMB AMB
comp=Z,25nm,1.0s,mb5.2
XAN AMB AMB
comp=Z,182nm,18.7s
XAN LR LR
comp=N,213nm,17.4s
XAN LR LR
comp=E,993nm,23.9s
XAN LR LR
comp=Z,1μm,21.7s,MS5.0
LRAL Lakeview Retre 59.66 74 eP P 15 23 04.9 -4.5
comp=Z,12nm,0.9s,mb4.9
SSLB Suanglung 59.78 270 eP P 15 23 09.2 -1.2
comp=Z,95nm,1.2s,mb5.7
YULB Yu-li 59.86 270 eP P 15 23 09.5 -1.4
comp=Z,47nm,1.1s,mb5.4
QZH Quanzhou 60.37 273⇑iP P 15 23 15.8 +1.3
QZH eS **S 15 31 33.0 +4.7**
QZH AMB AMB
comp=Z,160nm,1.3s,mb5.9
QZH LR LR
comp=N,2μm,20.2s,MS5.5
QZH LR LR
comp=E,3μm,16.6s,MS5.5
QZH LR LR
comp=Z,2μm,16.3s,MS5.2
BLA Blacksburg 60.50 66 eP P 15 23 11.8 -3.3
BLA pmax pmax
comp=Z,42nm,0.9s,mb5.5
BLA Blacksburg 60.50 66 eP P 15 23 11.8 -3.3
comp=Z,42nm,0.9s,mb5.5
GTA Gaotai 60.99 298 P P 15 23 18.0 -0.5
GTA AP pP 15 23 24.8 +0.7
GTA XP sP 15 23 28.3 +2.1
GTA PP PP 15 25 36.0 +3.5
GTA S **S 15 31 34.0 -1.9**
GTA SS SS 15 35 36.0 +1.2
GTA AMB AMB
comp=Z,32nm,0.8s,mb5.5
GTA AMB AMB
comp=Z,3μm,5.3s
GTA LR LR
comp=N,1μm,18.1s,MS5.5
GTA LR LR
comp=E,3μm,18.7s,MS5.5
GTA LR LR
comp=Z,3μm,19.0s,MS5.5
LZH Lanzhou 61.12 292 eP P 15 23 19.0 -0.4
LZH AP pP 15 23 25.0 0.0
LZH XP sP 15 23 27.5 +0.4
LZH PP PP 15 25 35.5 +1.8
LZH eS **S 15 31 31.0 -6.7**
LZH XS sS 15 31 49.0 +2.1
LZH SS SS 15 35 34.5 -2.4
LZH AMB AMB
comp=Z,127nm,1.0s,mb6.0
LZH AMB AMB
comp=Z,623nm,4.5s
LZH LR LR
comp=N,2μm,17.0s
LZH LR LR
comp=Z,4μm,18.3s,MS5.6
SOKR Solikamsk 62.62 336⇑iP P 15 23 28.2 -0.9
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.6
KURK Kurchatov 62.76 319 P P 15 23 30.4 +0.1
comp=Z,33nm,0.8s,mb5.5,baz=46,slow=7.2,SNR=7.2
KURK Kurchatov 62.76 319⇑eP P 15 23 29.7 -0.5
KURK pmax pmax
comp=Z,27nm,1.0s,mb5.3
SVE Sverdlovsk 63.97 332⇑eP P 15 23 38.6 +0.5
SVE pmax pmax
comp=Z,73nm,1.1s,mb5.6
WMQ Urumqi 63.99 309 eP P 15 23 39.3 +0.9
WMQ AMB AMB
comp=Z,62nm,1.0s,mb5.6
WMQ LR LR
comp=N,3μm,22.0s,MS5.5
WMQ LR LR
comp=E,2μm,20.0s,MS5.5
WMQ LR LR
comp=Z,2μm,17.0s,MS5.3
JOF Joensuu 64.03 350 ep P 15 23 36.3 -2.1
comp=Z,40nm,0.8s,mb5.5
JOF Joensuu 64.03 350 eP P 15 23 36.3 -2.1
JOF pmax pmax
comp=Z,40nm,0.8s,mb5.5
BVA0 Borovoye Array 64.05 325 iP P 15 23 38.3 -0.4
BVA0 pmax pmax
comp=Z,13nm,0.9s,mb5.0
BVAR Borovoye Array 64.05 325 P P 15 23 38.3 -0.3
comp=Z,54nm,0.8s,mb5.7,baz=50,slow=5.7,SNR=197
BVAR LR LR 15 54 46.0
comp=Z,4μm,18.1s,MS5.7,baz=303,slow=39
BRVK Borovoye 64.06 325 P P 15 23 38.0 -0.7
comp=Z,396nm,0.8s,mb6.5,SNR=52
BRVK Borovoye 64.06 325 eP P 15 23 38.0 -0.7
BRVK pmax pmax
comp=Z,70nm,0.9s,mb5.7
BRVK Borovoye 64.06 325 eP P 15 23 38.0 -0.7
comp=Z,70nm,0.9s,mb5.7
MK31 Makanchi Array 64.23 314⇑eP P 15 23 38.7 -1.3
MK31 pmax pmax
comp=Z,35nm,0.8s,mb5.4
MK31 Makanchi Array 64.23 314⇑eP P 15 23 38.8 -1.2
MKAR Makanchi Array 64.23 314 P P 15 23 39.2 -0.8
comp=Z,28nm,0.8s,mb5.4,baz=50,slow=6.5,SNR=27
MKAR LR LR 15 52 48.4
comp=Z,2μm,18.1s,MS5.2,baz=39,slow=37
MKAR Makanchi Array 64.23 314 P P 15 23 39.2 -0.8
MKAR LR LR 15 52 48.4
ARU Arti 64.89 333 P P 15 23 43.6 -0.5
comp=Z,478nm,1.2s,mb6.4,SNR=28
ARU Arti 64.89 333c iP P 15 23 43.6 -0.5
ARU e 15 26 06.0
ARU eS **S 15 32 23.9 -0.3**
ARU SS SS 15 36 39.6 +4.8
ARU pmax pmax
comp=Z,85nm,1.0s,mb5.7
ARU Arti 64.89 333⇑eP P 15 23 43.4 -0.7
comp=Z,65nm,0.8s,mb5.7
CD2 Chengdu 64.92 289 P P 15 23 45.5 +0.8
CD2 AP pP 15 23 51.8 +1.4
CD2 XP sP 15 23 54.5 +2.0
CD2 PCP PcP 15 24 19.0 +1.2
CD2 PP PP 15 26 10.3 +3.1
CD2 S **S 15 32 24.0 -1.3**
CD2 XS sS 15 32 34.0 -0.6
CD2 SS SS 15 36 37.0 +0.6
CD2 AMB AMB
comp=Z,120nm,1.1s,mb5.8
CD2 AMB AMB
comp=Z,1μm,11.2s
CD2 LR LR
comp=N,1μm,19.2s
CD2 LR LR
comp=Z,2μm,17.4s,MS5.3
KLMR Klimovskoe 64.95 345 eP P 15 23 43.1 -1.3
KLMR pmax pmax
comp=Z,44nm,1.1s,mb5.4
KAF Kangasniemi 65.28 352 ep P 15 23 44.4 -2.2
comp=Z,84nm,0.8s,mb5.8,baz=6.4,slow=6.1
KAF Kangasniemi 65.28 352 eP P 15 23 44.4 -2.2
KAF pmax pmax
comp=Z,84nm,0.8s,mb5.8
GYA Guiyang 66.49 283⇑iP P 15 23 55.0 +0.1
GYA AP pP 15 24 01.3 +0.7
GYA XP sP 15 24 04.0 +1.3
GYA PCP PcP 15 24 24.5 +0.1
GYA PP PP 15 26 23.3 +2.2
GYA SCP 15 28 25.5
GYA S S 15 32 42.8 -1.8
GYA XS sS 15 32 52.3 -1.6
GYA SKS 15 33 46.0
GYA SS SS 15 37 00.5 -0.6
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,160nm,8.7s
GYA LR LR
comp=N,870nm,17.8s,MS5.1
GYA LR LR
comp=E,760nm,18.2s,MS5.1
GYA LR LR
comp=Z,1μm,19.0s,MS5.1
NOA NORSAR Array B 66.96 0 P P 15 23 56.9 -0.5
comp=Z,25nm,0.8s,mb5.3,baz=0.7,slow=6.3,SNR=49
KONO Kongsberg 68.34 1 eP P 15 24 05.3 -0.8
KONO Kongsberg 68.34 1 eP P 15 24 05.4 -0.7
VSU Vasula 68.86 352 eP P 15 24 08.8 -0.5
VSU pmax pmax
comp=Z,148nm,0.9s,mb5.9
VSU Vasula 68.86 352 eP P 15 24 08.9 -0.4
KMI Kunming 69.82 285 P P 15 24 16.0 +0.2
KMI AP pP 15 24 22.0 +0.5
KMI XP sP 15 24 24.5 +0.9
KMI PP PP 15 26 53.0 +3.0
KMI S S 15 33 24.5 +0.1
KMI XS sS 15 33 33.5 -0.3
KMI AMB AMB
comp=Z,61nm,1.0s,mb5.5
KMI LR LR
comp=N,460nm,20.3s,MS4.8
KMI LR LR
comp=E,313nm,19.7s,MS4.8
KMI LR LR
comp=Z,748nm,15.5s,MS5.0
MOS Moscow 70.14 345 eP P 15 24 16.5 -0.8
MOS e 15 24 37.9
MOS pmax pmax
comp=Z,129nm,1.0s,mb5.8
TKM2 Tokmak 2 70.21 315 P P 15 24 17.6 -0.3
TKM2 pmax pmax
comp=Z,40nm,1.4s,mb5.2
TKM2 Tokmak 2 70.21 315 P P 15 24 18.2 +0.2
SNR=23
TKM2 Tokmak 2 70.21 315⇑iP P 15 24 17.8 -0.2
comp=Z,35nm,1.2s,mb5.2
AKTK Aktyubinsk 70.31 331 P P 15 24 18.1 -0.3
AKTO Aktyubinsk 70.31 331 P P 15 24 18.1 -0.3
comp=Z,66nm,0.8s,mb5.6,baz=45,slow=6.2,SNR=176
AKTO Aktyubinsk 70.31 331 P P 15 24 18.0 -0.4
AKTO pmax pmax
comp=Z,16nm,0.9s,mb5.0
USP Ospenovka 70.39 316 P P 15 24 19.3 +0.2
SNR=41
CHMS Chumysh 70.51 316 P P 15 24 20.4 +0.7
SNR=15
FRU Bishkek 70.70 316 eP P 15 24 21.0 +0.1
FRU e 15 24 42.5
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.5
KBK Karagaybulak 70.70 316 P P 15 24 21.4 +0.5
SNR=43
AB31 Akbulak array 70.75 329 P P 15 24 20.8 -0.3
AB31 pmax pmax
comp=Z,72nm,0.9s,mb5.6
OBN Obninsk 70.91 345⇑eP P 15 24 20.9 -1.1
OBN e 15 24 33.2
OBN e 15 24 41.5

OBN *e* 15 27 04.7
OBN pmax pmax
comp=Z,77nm,0.8s,mb5.7
OBN MLR MLR
comp=Z,900nm,17.0s,MS5.1
OBN Obninsk 70.91 345⇑ *eP* **P 15 24 20.5 -1.5**
comp=Z,75nm,0.8s,mb5.7
AAK Ala-Archa 70.91 316 P **P 15 24 22.6 +0.4**
SNR=38
KZA Kyzart 71.04 315 P **P 15 24 23.9 +0.9**
SNR=19
EKS2 Erkin-Say 71.19 316 P **P 15 24 24.4 +0.5**
SNR=38
EKS2 Erkin-Say 71.19 316⇑ *iP* **P 15 24 24.0 +0.1**
comp=Z,34nm,0.9s,mb5.3
PPT Papeete 71.53 161 *eS* S 15 33 38.9 -5.2
comp=Z,2µm,25.0s
PPT *eSS* SS 15 38 13.4 -6.4
comp=Z,385nm,23.0s
PPT *eLQ* 15 42 34.2
comp=Z,590nm,24.0s
PPT *eLR* LR 15 45 53.6
comp=Z,2µm,29.5s,baz=355
PPT Papeete 71.53 161 LR LR 15 51 05.2
comp=Z,743nm,18.6s,MS5.0,baz=297,slow=32
AML Almayashu 71.66 316 P **P 15 24 27.8 +1.0**
SNR=23
AML Almayashu 71.66 316⇑ *eP* **P 15 24 26.9 +0.1**
comp=Z,32nm,0.9s,mb5.3
ISAL Salakas 71.77 351 *eP* **P 15 24 26.9 -0.3**
IDID Didziasalis 71.97 351 *eP* **P 15 24 28.0 -0.4**
IIGN Ignalina 71.98 351 *eP* **P 15 24 28.3 -0.2**
ESK Eskdalemuir 72.00 9 *eP* **P 15 24 28.5 -0.1**
ESK pmax pmax
comp=Z,32nm,1.0s,mb5.2
ESK Eskdalemuir 72.00 9 *eP* **P 15 24 28.4 -0.1**
comp=Z,32nm,1.0s,mb5.2
KK31 Karatay Array 72.18 319⇑ *eP* **P 15 24 29.4 -0.5**
KK31 pmax pmax
comp=Z,46nm,0.9s,mb5.4
KK31 Karatay Array 72.18 319⇑ *eP* **P 15 24 29.5 -0.4**
PMG Port Moresby 72.29 226 P **P 15 24 30.2 -0.6**
comp=Z,16nm,1.0s,mb4.9,baz=218,slow=5.8,SNR=4.3
PMG Port Moresby 72.29 226 *eP* **P 15 24 29.5 -1.3**
PMG *e* 15 24 41.2
PMG pmax pmax
comp=Z,16nm,1.0s
PMG Port Moresby 72.29 226 *eP* **P 15 24 29.5 -1.3**
comp=Z,16nm,1.0s,mb4.9
PMG *e* 15 24 41.1
LSA Lhasa 72.97 296 P **P 15 24 36.3 +1.5**
LSA AMB AMB
comp=Z,60nm,0.9s,mb5.5
LSA Lhasa 72.97 296⇑ *iP* **P 15 24 35.7 +0.9**
LSA pmax pmax
comp=Z,52nm,0.9s,mb5.5
LSA Lhasa 72.97 296⇑ *iP* **P 15 24 35.7 +1.0**
comp=Z,52nm,0.9s,mb5.5
DMUB Kingscourt 73.00 11 *eP* **P 15 24 34.4 -0.2**
SUW Suwalki 73.56 353 *eP* **P 15 24 37.1 -0.8**
SUW Suwalki 73.56 353 *eP* **P 15 24 37.1 -0.8**
DLF Lyons Farm 73.64 11 *eP* **P 15 24 34.7 -3.6**
VRHR Novokhopersk 73.85 341 *eP* **P 15 24 38.3 -1.3**
VRHR pmax pmax
comp=Z,60nm,0.8s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.9s
BSEG Bad Segeberg 74.08 1 *eP* **P 15 24 40.7 -0.2**
BSEG pmax pmax
comp=Z,42nm,0.9s,mb5.4
BSEG Bad Segeberg 74.08 1 *eP* **P 15 24 40.7 -0.2**
comp=Z,42nm,0.9s,mb5.4
VSR Storozhevoye 74.21 342 *eP* **P 15 24 40.7 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,5.0nm,0.5s
IMP Imphal 75.21 291 *eP* **P 15 24 49.0 +1.1**
NRDL Niedersach Rie 75.52 1 *eP* **P 15 24 48.8 -0.5**
comp=Z,32nm,1.0s,mb5.2
IBBN Ibbenburen 75.67 2 *eP* **P 15 24 49.9 -0.2**
comp=Z,70nm,1.0s,mb5.5
SHL Shillong 75.77 293⇑ *iP* **P 15 24 51.0 -0.1**
CLZ Clausthal 76.18 1 *eP* **P 15 24 53.1 +0.1**
CLZ pmax pmax
comp=Z,54nm,1.0s,mb5.4
CLZ Clausthal 76.18 1 *eP* **P 15 24 53.1 +0.1**
comp=Z,54nm,1.0s,mb5.4
AKASG Malin Array Be 76.24 349 P **P 15 24 52.1 -1.3**
comp=Z,13nm,0.5s,mb5.1,baz=14,slow=5.7,SNR=62
AKBB Malin Array Si 76.24 349 *eP* **P 15 24 51.9 -1.5**
KIEV Kiev 76.25 349 *eP* **P 15 24 51.8 -1.7**
KIEV pmax pmax
comp=Z,24nm,0.8s,mb5.2
KIEV Kiev 76.25 349 *eP* **P 15 24 51.8 -1.7**
comp=Z,24nm,0.8s,mb5.2
KKTK Khon Kaen 76.48 279 P **P 15 24 55.4 +0.1**
comp=Z,617nm,0.8s,mb6.6
BUG Bochum--Univer 76.52 3 *eP* **P 15 24 54.4 -0.6**
comp=Z,28nm,0.9s,mb5.2
TAPN Taplejung 76.68 297 *eP* **P 15 24 56.5 +0.2**
comp=Z,43nm,0.7s,mb5.5
CLL Collm 76.71 359⇑ *iP* **P 15 24 55.5 -0.5**
CLL *e* 15 25 03.0
CLL pmax pmax
comp=Z,29nm,1.0s,mb5.2
CLL MLR MLR
comp=Z,800nm,19.2s,MS5.0
CLL Collm 76.71 359 *eP* **P 15 24 55.3 -0.7**
comp=Z,29nm,1.0s,mb5.2
CLL Collm 76.71 359⇑ *iP* **P 15 24 55.5 -0.5**
comp=Z,29nm,1.0s,mb5.2
CLL *e*(sP) sP 15 25 03.0 -0.9
CLL Lm 16 05 00.0
comp=N,600nm,20.5s
CLL Lm 16 05 00.0
comp=E,400nm,20.8s
CLL Lm 16 05 00.0
comp=Z,800nm,19.2s
CLL Collm 76.71 359⇑ *iP* **P 15 24 55.5 -0.5**
comp=Z,29nm,1.0s,mb5.2
CLL *e* 15 25 03.0
CLL LR LR
comp=Z,800nm,19.2s,MS5.0
CHG Chiang Mai 76.90 284 ⇑P **P 15 24 57.4 -0.2**
comp=Z,25nm,1.1s,mb5.0
CHTO Chiang Mai 76.90 284⇑ *iP* **P 15 24 57.0 -0.6**
CHTO pmax pmax
comp=Z,27nm,1.1s,mb5.1
CHTO Chiang Mai 76.90 284⇑ *iP* **P 15 24 57.0 -0.6**
comp=Z,27nm,1.1s,mb5.1
KSP Ksiaz 77.11 357 *eP* **P 15 24 58.4 +0.1**
KSP Ksiaz 77.11 357⇑ *eP* **P 15 24 58.3 0.0**
BRG Berggiesshubel 77.13 358 *eP* **P 15 24 58.4 0.0**
BRG pmax pmax
comp=Z,20nm,1.0s,mb5.0
BRG Berggiesshubel 77.13 358 *eP* **P 15 24 58.0 -0.4**
comp=Z,33nm,1.0s,mb5.2
BRG Berggiesshubel 77.13 358 *eP* **P 15 24 58.4 -0.1**
comp=Z,20nm,1.0s,mb5.0
HGN Heimansgroeve 77.15 4 *eP* **P 15 24 58.6 +0.1**
comp=Z,36nm,1.1s,mb5.2
CMAR Chiang Mai Arr 77.17 283 P **P 15 24 59.3 +0.1**
comp=Z,40nm,0.9s,mb5.4,baz=26,slow=6.4,SNR=156
TBI Tubuai 77.18 162 *eS* S 15 34 40.2 -7.0
comp=Z,1µm,28.8s
TBI Tubuai 77.18 162 *eLR* LR 15 48 19.1
comp=Z,1µm,30.2s,baz=339
GUN Gumba 77.23 299 *eP* **P 15 24 59.8 +0.4**
comp=Z,160nm,1.1s,mb5.9
ODAN Odare 77.24 297 *eP* **P 15 24 59.4 -0.1**
comp=Z,37nm,0.8s,mb5.4
JIRN Jiri 77.26 299 *eP* **P 15 25 00.0 +0.4**
comp=Z,75nm,0.7s,mb5.7
MEM Membach 77.31 4 P **P 15 24 59.7 +0.3**
comp=Z,24nm,1.2s,mb5.0
SNF Seneffe 77.33 5 P **P 15 24 59.7 +0.2**
MOX Moxa 77.38 360 *eP* **P 15 25 00.0 +0.2**
comp=Z,46nm,1.1s,mb5.3
MOX Moxa 77.38 360 *eP* **P 15 25 00.0 +0.2**
MOX pmax pmax
comp=Z,46nm,1.1s,mb5.3
MOX Moxa 77.38 360 *eP* **P 15 24 59.6 -0.2**
comp=Z,42nm,1.0s,mb5.3
UPC Upice 77.45 357 *eP* **P 15 25 00.3 +0.1**
PVCC Panska Ves 77.47 358 *eP* **P 15 25 00.9 +0.6**
BCLA Clavier 77.47 4 P **P 15 24 59.9 -0.4**
OJC Ojcow 77.57 355 *eP* **P 15 25 01.1 +0.2**
DPC Dobruska-Polom 77.60 357 *eP* **P 15 25 01.4 +0.4**
RAMN Ramite 77.60 298 *eP* **P 15 25 01.5 0.0**
comp=Z,136nm,0.8s,mb5.9
TANN Tannenbergstha 77.61 359 *eP* **P 15 25 00.9 -0.2**
comp=Z,26nm,1.3s,mb5.0
KKN Kakani 77.65 299 *eP* **P 15 25 02.0 +0.3**
comp=Z,132nm,1.4s,mb5.7
LVV L'vov 77.66 352 *eP* **P 15 25 01.6 +0.2**
LVV *e* 15 25 20.2
PKI Pulchoki 77.75 299 *eP* **P 15 25 02.4 +0.1**
comp=Z,102nm,1.1s,mb5.7
PKIN Phulchoki 77.75 299 *eP* **P 15 25 02.1 -0.2**
DOU Dourbes 77.76 5 P **P 15 25 01.7 -0.2**
comp=Z,20nm,1.1s,mb5.0
GIVF Givet 77.76 4⇑ *iP* **P 15 25 01.9 -0.1**
comp=Z,80nm,1.0s,mb5.3
GIVF Givet 77.76 4⇑ *iP* **P 15 25 01.9 -0.1**
GIVF pmax pmax
comp=Z,40nm,1.0s,mb5.3
GIVF Givet 77.76 4⇑ *iP* **P 15 25 01.9 -0.1**
comp=Z,40nm,1.0s,mb5.3
TNS Taunus Mts 77.77 2 *eP* **P 15 25 01.7 -0.3**
TNS pmax pmax
comp=Z,34nm,1.0s,mb5.2
TNS Taunus Mts 77.77 2 *eP* **P 15 25 01.7 -0.3**
comp=Z,34nm,1.0s,mb5.2
BAIF Baives 77.78 5⇑ *iP* **P 15 25 02.2 +0.1**
comp=Z,78nm,1.0s,mb5.3
BAIF Baives 77.78 5⇑ *iP* **P 15 25 02.2 +0.1**
BAIF pmax pmax
comp=Z,39nm,1.0s,mb5.3
BAIF Baives 77.78 5⇑ *iP* **P 15 25 02.2 +0.1**
comp=Z,39nm,1.0s,mb5.3
NKC Novy Kostel 77.79 359 *eP* **P 15 25 02.5 +0.4**
GKN Gorkha 77.82 300 *eP* **P 15 25 02.5 -0.2**
comp=Z,160nm,1.3s,mb5.8
DMN Daman 77.88 299 *eP* **P 15 25 03.2 +0.2**
comp=Z,117nm,1.3s,mb5.7
KWP Kalwaria 77.95 353 *eP* **P 15 25 03.3 +0.3**
KWP Kalwaria 77.95 353⇑ *iP* **P 15 25 03.2 +0.1**
KWP Kalwaria 77.95 353 *eP* **P 15 25 03.3 +0.2**
DANN Dangsing 78.00 301 *eP* **P 15 25 04.0 +0.3**
comp=Z,129nm,0.7s,mb5.9
PRU Pruhonice 78.01 358 *eP* **P 15 25 03.5 +0.2**
OKC Ostrava-Krasne 78.04 356 *eP* **P 15 25 03.9 +0.4**
MANZ Manzenberg 78.04 360 *eP* **P 15 25 03.3 -0.2**
comp=Z,20nm,1.1s,mb5.0
ABH Alteburg 78.09 3 *eP* **P 15 25 03.7 -0.1**
RUP Ruppelstein 78.25 3 *eP* **P 15 25 04.6 -0.1**
ROTZ Rotzenmuhle 78.26 360 *eP* **P 15 25 05.0 +0.3**
comp=Z,38nm,1.4s,mb5.1
WLF Walferdange 78.26 4 P **P 15 25 04.9 +0.2**
comp=Z,24nm,1.3s,mb5.0
WLF Walferdange 78.26 4 *eP* **P 15 25 04.8 +0.1**
WLF pmax pmax
comp=Z,28nm,0.9s,mb5.2
WLF Walferdange 78.26 4 *eP* **P 15 25 04.8 +0.1**
comp=Z,36nm,1.1s,mb5.2
WLF Walferdange 78.26 4 *eP* **P 15 25 04.8 +0.1**
comp=Z,28nm,0.9s,mb5.2
STHS Stebnicka Huta 78.28 354 *iP* **P 15 25 05.9 +1.1**
STHS pmax pmax
comp=Z,39nm,1.0s,mb5.3
STHS Stebnicka Huta 78.28 354 *iP* **P 15 25 05.9 +1.1**
comp=Z,39nm,1.0s,mb5.3
GRA1 Grafenberg Arr 78.33 0 *eP* **P 15 25 05.4 +0.2**
comp=Z,59nm,1.0s,mb5.5
GRF Grafenberg Arr 78.33 0 *eP* **P 15 25 05.4 +0.2**
GRF pmax pmax
comp=Z,59nm,1.0s,mb5.5
GRF Grafenberg Arr 78.33 0 *eP* **P 15 25 05.4 +0.2**
GRF pmax pmax
comp=Z,59nm,1.0s,mb5.5
GRF Grafenberg Arr 78.33 0 *eP* **P 15 25 05.4 +0.2**
comp=Z,59nm,1.0s,mb5.5
NIE Niedzica 78.33 354 *eP* **P 15 25 05.7 +0.5**
TOD Tromm 78.39 2 *eP* **P 15 25 05.7 +0.2**
KOLN Koldanda 78.55 301 *eP* **P 15 25 06.7 0.0**
comp=Z,47nm,0.9s,mb5.4
VRAC Vranov 78.63 357⇑ *iP* **P 15 25 07.2 +0.4**
VRAC Vranov 78.63 357 P **P 15 25 07.8 +1.0**
KTD Kalmit 78.66 2 *eP* **P 15 25 07.0 0.0**
TREC Trest 78.68 357 *eP* **P 15 25 06.9 -0.2**
THN Thein Dam 78.73 309 *eP* **P 15 25 05.9 -1.7**
FLN La Foliniere 78.74 8⇑ *iP* **P 15 25 07.0 -0.4**
comp=Z,48nm,0.9s,mb5.1
FLN La Foliniere 78.74 8⇑ *iP* **P 15 25 07.0 -0.4**
FLN pmax pmax
comp=Z,24nm,0.9s,mb5.1
FLN La Foliniere 78.74 8⇑ *iP* **P 15 25 07.0 -0.4**
comp=Z,24nm,0.9s,mb5.1
CRVS Cervenica-Dubn 78.77 353 *iP* **P 15 25 08.3 +0.7**
CRVS pmax pmax
comp=Z,20nm,1.0s,mb5.0
CRVS Cervenica-Dubn 78.77 353 *iP* **P 15 25 08.3 +0.7**
comp=Z,20nm,1.0s,mb5.0
WET Wettzell 78.88 359 *eP* **P 15 25 08.3 +0.1**
WET pmax pmax
comp=Z,33nm,1.2s,mb5.1
WET Wettzell 78.88 359 *eP* **P 15 25 08.3 +0.1**
comp=Z,33nm,1.2s,mb5.1
KHC Kasperske Hory 78.88 359 *eP* **P 15 25 08.4 +0.2**
ROSF Rostrenen 78.90 10 *eP* **P 15 25 08.1 -0.2**
LDF La Druitiere 78.94 8⇑ *iP* **P 15 25 08.0 -0.5**
comp=Z,55nm,0.8s,mb5.2
LDF La Druitiere 78.94 8⇑ *iP* **P 15 25 08.0 -0.5**
LDF pmax pmax
comp=Z,27nm,0.8s,mb5.2
LDF La Druitiere 78.94 8⇑ *iP* **P 15 25 08.0 -0.5**
comp=Z,27nm,0.8s,mb5.2
UZH Uzhgorod 78.98 353 *eP* **P 15 25 05.6 -3.1**
UZH *e* 15 25 20.0
LANF Langenberg 79.00 3 *eP* **P 15 25 08.7 -0.1**
SGMF Saint Gilles 79.05 10⇑ *iP* **P 15 25 08.8 -0.3**
comp=Z,81nm,1.2s,mb5.2
SGMF Saint Gilles 79.05 10⇑ *iP* **P 15 25 08.8 -0.3**
SGMF pmax pmax
comp=Z,40nm,1.2s,mb5.2
SGMF Saint Gilles 79.05 10⇑ *iP* **P 15 25 08.8 -0.3**
comp=Z,40nm,1.2s,mb5.2
GRR Gorron 79.08 8⇑ *iP* **P 15 25 09.1 -0.2**
comp=Z,97nm,1.2s,mb5.3
GRR Gorron 79.08 8⇑ *iP* **P 15 25 09.1 -0.2**
GRR pmax pmax
comp=Z,48nm,1.2s,mb5.3
GRR Gorron 79.08 8⇑ *iP* **P 15 25 09.1 -0.2**
comp=Z,48nm,1.2s,mb5.3
GEC2 GERESS Array S 79.17 359 *eP* **P 15 25 09.7 0.0**
GEC2 pmax pmax
comp=Z,34nm,1.0s,mb5.2
GEC2 GERESS Array S 79.17 359 *eP* **P 15 25 09.7 0.0**
comp=Z,34nm,1.0s,mb5.2
GERES GERESS Array B 79.17 359 P **P 15 25 10.3 +0.5**
comp=Z,19nm,0.8s,mb5.1,baz=5.7,slow=4.0,SNR=110
STU Stuttgart 79.24 2 *eP* **P 15 25 10.4 +0.3**
STU pmax pmax
comp=Z,30nm,0.8s,mb5.3
STU Stuttgart 79.24 2 *eP* **P 15 25 09.8 -0.3**
comp=Z,36nm,0.9s,mb5.3
STU Stuttgart 79.24 2 *eP* **P 15 25 10.4 +0.3**
comp=Z,30nm,0.8s,mb5.3
KECS Kecovo 79.26 354 *iP* **P 15 25 10.4 +0.2**
KOLL Kolacno 79.28 355 *iP* **P 15 25 11.2 +0.8**
QUIF Quistinic 79.32 10 *eP* **P 15 25 10.4 -0.2**
VYHS Vyhne 79.34 355 *iP* **P 15 25 11.2 +0.5**
VYHS pmax pmax
comp=Z,35nm,1.0s,mb5.2
VYHS Vyhne 79.34 355 *iP* **P 15 25 11.2 +0.5**
comp=Z,35nm,1.0s,mb5.2
MEZF Maizieres J'vi 79.37 4⇑ *iP* **P 15 25 11.0 +0.1**
comp=Z,62nm,1.1s,mb5.2
MEZF Maizieres J'vi 79.37 4⇑ *iP* **P 15 25 11.0 +0.1**
comp=Z,62nm,1.1s,mb5.5
SMOL Smolenice 79.39 356 *iP* **P 15 25 12.3 +1.3**
SMOL Smolenice 79.39 356 *iP* **P 15 25 12.4 +1.4**
TRPA Tarpa 79.46 353⇑ *iP* **P 15 25 11.4 0.0**
CDF Champ du Feu 79.55 3⇑ *iP* **P 15 25 12.0 +0.2**
comp=Z,61nm,1.1s,mb5.2
CDF Champ du Feu 79.55 3⇑ *iP* **P 15 25 12.0 +0.2**
CDF pmax pmax
comp=Z,30nm,1.1s,mb5.1
CDF Champ du Feu 79.55 3⇑ *iP* **P 15 25 12.0 +0.2**
comp=Z,30nm,1.1s,mb5.1
BFO Black Forest 79.66 2 P **P 15 25 12.3 -0.1**
comp=Z,161nm,0.9s,mb6.0,SNR=7.5
BFO Black Forest 79.66 2 *eP* **P 15 25 12.2 -0.2**
BFO pmax pmax
comp=Z,37nm,1.0s,mb5.3
BFO Black Forest 79.66 2 *eP* **P 15 25 12.2 -0.2**
comp=Z,37nm,1.0s,mb5.3
THEF They Montfort 79.69 4 *eP* **P 15 25 12.6 0.0**
BUR08 Bucovina Ar. S 79.70 351⇑ *iP* **P 15 25 12.0 -0.7**
ZST Bratislava 79.72 356 *iP* **P 15 25 14.0 +1.2**
ZST pmax pmax
comp=Z,63nm,1.1s,mb5.5
ZST Bratislava 79.72 356 *iP* **P 15 25 14.0 +1.2**
comp=Z,63nm,1.1s,mb5.5
BURAR Bucovina Array 79.73 351⇓ *iP* **P 15 25 12.8 0.0**
BURAR Bucovina Array 79.73 351⇓ *iP* **P 15 25 12.8 0.0**
ECH Echery 79.74 3 *eP* **P 15 25 13.1 +0.2**
ECH Echery 79.74 3 *eP* **P 15 25 12.4 -0.5**
ECH pmax pmax
comp=Z,53nm,0.9s,mb5.5
ECH Echery 79.74 3 *eP* **P 15 25 12.4 -0.5**
comp=Z,53nm,0.9s,mb5.5
LIBD Limburg 79.82 3 *eP* **P 15 25 14.3 +1.0**
PSZ Piszkesteto 79.86 354⇓ *eP* **P 15 25 14.7 +1.2**
PSZ Piszkesteto 79.86 354⇑ *iP* **P 15 25 14.3 +0.8**
PSZ Piszkesteto 79.86 354 *eP* **P 15 25 14.1 +0.6**
comp=Z,56nm,1.1s,mb5.4
FUR Furstenfeldbru 79.86 0 *eP* **P 15 25 13.6 +0.1**
FUR pmax pmax
comp=Z,74nm,1.0s,mb5.6
FUR Furstenfeldbru 79.86 0 *eP* **P 15 25 13.6 +0.1**
comp=Z,74nm,1.0s,mb5.6
SPAK Spaichingen-Ko 79.90 2 *eP* **P 15 25 13.9 +0.2**
HAU Haudompre 79.92 4⇑ *iP* **P 15 25 13.9 0.0**
comp=Z,74nm,0.9s,mb5.3
HAU Haudompre 79.92 4⇑ *iP* **P 15 25 13.9 0.0**
HAU pmax pmax
comp=Z,37nm,0.9s,mb5.3
HAU Haudompre 79.92 4⇑ *iP* **P 15 25 13.9 0.0**
comp=Z,37nm,0.9s,mb5.3
KIS Kishinev 79.93 348 *eP* **P 15 25 14.0 +0.1**
KBL Kabul 80.00 315⇑ *iP* **P 15 25 13.5 -1.1**
KBL pmax pmax
comp=Z,47nm,0.9s,mb5.4
KBL Kabul 80.00 315⇑ *iP* **P 15 25 13.4 -1.1**
comp=Z,47nm,0.9s,mb5.4
CONA Conrad Observa 80.03 357⇑ *ipP* **P 15 25 15.2 +0.7**
comp=Z,64nm,1.1s,mb5.5,SNR=21
CSNA Conrad Observa 80.03 357⇑ *ipP* **P 15 25 15.2 +0.7**
comp=Z,59nm,1.1s,mb5.4
MOF Molkenrain 80.11 3 *eP* **P 15 25 14.8 -0.1**
FELD Feldberg im Sc 80.11 2 *eP* **P 15 25 15.0 +0.1**
MAK Makhachkala 80.11 334 *eP* **P 15 25 16.0 +1.0**
HINF Hinteralfeld 80.13 3⇑ *iP* **P 15 25 14.9 -0.1**
comp=Z,64nm,0.9s,mb5.2
HINF Hinteralfeld 80.13 3⇑ *iP* **P 15 25 14.9 -0.1**
HINF pmax pmax
comp=Z,32nm,0.9s,mb5.2
HINF Hinteralfeld 80.13 3⇑ *iP* **P 15 25 14.9 -0.1**
comp=Z,32nm,0.9s,mb5.2
SOP Sopron 80.25 357⇓ *eP* **P 15 25 17.0 +1.3**
RJOB Jochberg 80.29 359 *eP* **P 15 25 15.8 0.0**
comp=Z,54nm,0.9s,mb5.5
BUD Budapest 80.34 355⇓ *eP* **P 15 25 17.4 +1.3**
KIV Kislovodsk 80.38 338 P **P 15 25 17.9 +1.5**
comp=Z,502nm,1.1s,mb6.4,SNR=13
KIV Kislovodsk 80.38 338 *eP* **P 15 25 16.9 +0.5**
KIV pmax pmax
comp=Z,89nm,1.0s,mb5.7
KIV Kislovodsk 80.38 338⇑ *eP* **P 15 25 16.8 +0.4**
comp=Z,88nm,0.9s,mb5.7
HYF Humbligny 80.47 6 *eP* **P 15 25 17.1 +0.3**
BBS Basel-Blauen 80.50 3 *eP* **P 15 25 16.5 -0.5**
RETA Reutte 80.54 1⇑ *ipP* **P 15 25 17.7 +0.5**
comp=Z,21nm,0.8s,mb5.1,SNR=14
LOR Lormes 80.54 5⇑ *iP* **P 15 25 17.2 0.0**
comp=Z,74nm,1.0s,mb5.3
LOR Lormes 80.54 5⇑ *iP* **P 15 25 17.2 0.0**
LOR pmax pmax
comp=Z,37nm,1.0s,mb5.3
LOR Lormes 80.54 5⇑ *iP* **P 15 25 17.2 0.0**
comp=Z,37nm,1.0s,mb5.3
LOMF Lomont 80.59 3 *eP* **P 15 25 17.8 +0.3**
RKT Rikitea 80.63 149 *eS* S 15 35 16.7 -7.4
comp=Z,335nm,24.6s
RKT *eSS* SS 15 40 29.7 -8.0
comp=Z,370nm,24.0s
RKT *eLR* LR 15 50 11.4
comp=Z,1µm,29.5s,baz=346
MOTA Moosalm 80.68 0⇑ *ipP* **P 15 25 18.5 +0.5**
comp=Z,66nm,0.8s,mb5.4,SNR=24
WATA Walderalm 80.69 360⇑ *ipP* **P 15 25 18.5 +0.5**
comp=Z,58nm,1.1s,mb5.4
ARSA Arzberg 80.72 357 *i* pP **P 15 25 19.1 +0.9**
comp=Z,42nm,1.1s,mb5.3,SNR=14
SSF Saint Saulge 80.73 6⇑ *iP* **P 15 25 18.3 +0.1**
comp=Z,78nm,1.0s,mb5.3
SSF Saint Saulge 80.73 6⇑ *iP* **P 15 25 18.3 +0.1**
SSF pmax pmax
comp=Z,39nm,1.0s,mb5.3
SSF Saint Saulge 80.73 6⇑ *iP* **P 15 25 18.3 +0.1**
comp=Z,39nm,1.0s,mb5.3
DAVA Damuels 80.73 1⇑ *ipP* **P 15 25 19.3 +1.1**
comp=Z,27nm,0.9s,mb5.2
WTTA Wattenberg 80.77 360 *i* pP **P 15 25 19.2 +0.8**
comp=Z,62nm,1.1s,mb5.5,SNR=34
DRGR 80.78 352 ⇓P **P 15 25 18.1 -0.4**
DRGR 80.78 352 ⇓*i*P **P 15 25 18.0 -0.5**
DRGR 80.78 352 P **P 15 25 18.8 +0.4**
MFF Saint Martin d 80.92 8⇑ *iP* **P 15 25 19.3 +0.1**
comp=Z,119nm,0.9s,mb5.5
MFF Saint Martin d 80.92 8⇑ *iP* **P 15 25 19.3 +0.1**
MFF pmax pmax
comp=Z,59nm,0.9s,mb5.5
MFF Saint Martin d 80.92 8⇑ *iP* **P 15 25 19.3 +0.1**
comp=Z,59nm,0.9s,mb5.5
KBA Koelnbreinsper 80.94 359 *i* pP **P 15 25 20.5 +1.2**
comp=Z,127nm,0.9s,mb5.8,SNR=90
AVF Avril sur Loir 80.99 6⇑ *iP* **P 15 25 19.5 -0.1**
comp=Z,83nm,1.0s,mb5.3
AVF Avril sur Loir 80.99 6⇑ *iP* **P 15 25 19.5 -0.1**
AVF pmax pmax
comp=Z,41nm,1.0s,mb5.3
AVF Avril sur Loir 80.99 6⇑ *iP* **P 15 25 19.5 -0.1**
comp=Z,42nm,1.0s,mb5.3
FETA Feichten 81.00 1 *i* pP **P 15 25 20.4 +0.7**
comp=Z,80nm,1.0s,mb5.6,SNR=90
SIM Simferopol' 81.15 344 P **P 15 25 14.8 -5.7**
SIM pmax pmax
comp=Z,27nm,1.4s,mb5.0
SMF Signal de Mont 81.16 5⇑ *iP* **P 15 25 20.5 -0.1**
comp=Z,109nm,1.0s,mb5.4
SMF Signal de Mont 81.16 5⇑ *iP* **P 15 25 20.5 -0.1**
SMF pmax pmax
comp=Z,54nm,1.0s,mb5.4
SMF Signal de Mont 81.16 5⇑ *iP* **P 15 25 20.5 -0.1**
comp=Z,54nm,1.0s,mb5.4
BGF Bois d'Agland 81.19 6⇑ *iP* **P 15 25 20.6 -0.1**
comp=Z,40nm,0.8s,mb5.1
BGF Bois d'Agland 81.19 6⇑ *iP* **P 15 25 20.6 -0.1**
BGF pmax pmax
comp=Z,20nm,0.8s,mb5.1
BGF Bois d'Agland 81.19 6⇑ *iP* **P 15 25 20.6 -0.1**
comp=Z,20nm,0.8s,mb5.1
ABTA Abfaltersbach 81.28 359⇑ *ipP* **P 15 25 21.1 0.0**
comp=Z,60nm,1.3s,mb5.4,SNR=13
VRI Vrincioaia 81.30 349⇓ *iP* **P 15 25 21.9 +0.6**
VRI Vrincioaia 81.30 349⇓ *iP* **P 15 25 21.9 +0.6**
CABF La Chapelle 81.31 4⇑ *iP* **P 15 25 22.0 +0.7**
comp=Z,122nm,0.9s,mb5.5
CABF La Chapelle 81.31 4⇑ *iP* **P 15 25 22.0 +0.7**
CABF pmax pmax
comp=Z,61nm,0.9s,mb5.5
CABF La Chapelle 81.31 4⇑ *iP* **P 15 25 22.0 +0.7**
comp=Z,61nm,0.9s,mb5.5
SOKA Soboth 81.31 358⇑ *ipP* **P 15 25 21.8 +0.5**
comp=Z,66nm,1.1s,mb5.5
PLOR Plostina 81.32 349⇑ *iP* **P 15 25 22.6 +1.2**
PERS Pernice 81.35 358 *iP* **P 15 25 21.9 +0.4**
ABKT Ailbek 81.38 324 P **P 15 25 22.0 +0.1**
comp=Z,532nm,0.9s,mb6.5,SNR=33
ABKT Ailbek 81.38 324 P **P 15 25 22.9 +1.0**

comp=Z,532nm,0.9s,mb6.5,SNR=33
SOC Sochi 81.40 340 *e*P **P 15 25 21.4 -0.5**
SOC *e*S S 15 35 39.1 +7.2
TCF Toulx Ste Croi 81.41 7⇑*i*P **P 15 25 21.7 -0.2**
comp=Z,46nm,0.9s,mb5.1
TCF Toulx Ste Croi 81.41 7⇑*i*P **P 15 25 21.7 -0.2**
TCF pmax pmax
comp=Z,23nm,0.9s,mb5.1
TCF Toulx Ste Croi 81.41 7⇑*i*P **P 15 25 21.7 -0.2**
comp=Z,23nm,0.9s,mb5.1
OBKA Obir 81.49 358⇑*i*P **P 15 25 22.7 +0.4**
comp=Z,61nm,0.8s,mb5.6,SNR=11
ONI Oni 81.50 337 P **P 15 25 22.1 -0.4**
TUE Stuetta 81.54 2⇑*i*P **P 15 25 23.3 +0.7**
comp=Z,23nm,0.9s,mb5.1
PKSM Moragy 81.63 355⇑*i*P **P 15 25 22.2 -0.8**
AGO Saint Agoulin 81.71 6 *e*P **P 15 25 24.1 +0.6**
TLCR 81.71 348⇓*i*P **P 15 25 23.1 -0.4**
TLCR 81.71 348⇓P **P 15 25 23.1 -0.4**
PLDF La Plantade 81.82 6 *e*P **P 15 25 25.0 +0.9**
OGO5 Jujurieux 81.85 4 *e*P **P 15 25 24.6 +0.4**
GOR Gori 81.90 336 P **P 15 25 25.9 +1.3**
VOIR 81.90 350⇑*i*P **P 15 25 25.1 +0.6**
VOIR 81.90 350 P **P 15 25 24.6 +0.1**
PYM Petit Puy Mans 82.00 6 *e*P **P 15 25 25.3 +0.3**
MTA Mtatsminda 82.00 336 P **P 15 25 25.4 +0.3**
BZS Buzias 82.03 353⇑*i*P **P 15 25 24.6 -0.6**
BZS Buzias 82.03 353 P **P 15 25 24.8 -0.3**
DGRG David-gareji 82.08 335 P **P 15 25 25.8 +0.3**
JAVS Javornik 82.11 358 *i*P **P 15 25 25.2 -0.4**
GZR Gura Zlata 82.16 352⇓*i*P **P 15 25 25.8 0.0**
GZR Gura Zlata 82.16 352 P **P 15 25 25.6 -0.2**
VISS Visnje 82.19 358 *i*P **P 15 25 25.7 -0.3**
CTA Charters Tower 82.19 222 P **P 15 25 24.9 -1.3**
comp=Z,5.9nm,0.7s,mb4.6,baz=30,slow=9.9,SNR=5.3
CTA Charters Tower 82.19 222 *e*P pP 15 25 36.5 +4.6
comp=Z,5nm,0.9s
CTAO Charters Tower 82.19 222 P **P 15 25 26.0 -0.2**
CTAO *e* 15 25 36.6
CTAO pmax pmax
comp=Z,11nm,0.8s,mb4.8
CTAO Charters Tower 82.19 222 P **P 15 25 26.0 -0.2**
comp=Z,11nm,0.8s,mb4.8
CTAO *e* 15 25 36.6
RSL Roselend 82.25 3 *e*P **P 15 25 27.2 +0.9**
COLF Collangettes 82.28 6 *e*P **P 15 25 27.7 +1.2**
HARR Harsova 82.31 348⇑*i*P **P 15 25 26.9 +0.2**
HARR Harsova 82.31 348 P **P 15 25 26.6 0.0**
RJF Les Rejaudoux 82.34 7⇑*i*P **P 15 25 26.5 -0.3**
comp=Z,49nm,1.0s,mb5.1
RJF Les Rejaudoux 82.34 7⇑*i*P **P 15 25 26.5 -0.3**
RJF pmax pmax
comp=Z,24nm,1.0s,mb5.1
RJF Les Rejaudoux 82.34 7⇑*i*P **P 15 25 26.5 -0.3**
comp=Z,24nm,1.0s,mb5.1
LPL La Plagne 82.42 3⇑*i*P **P 15 25 28.5 +1.3**
comp=Z,35nm,0.9s,mb5.0
LPL La Plagne 82.42 3⇑*i*P **P 15 25 28.5 +1.3**
LPL pmax pmax
comp=Z,18nm,0.9s,mb5.0
LPL La Plagne 82.42 3⇑*i*P **P 15 25 28.5 +1.3**
comp=Z,18nm,0.9s,mb5.0
LPG La Plagne 82.44 3⇑*i*P **P 15 25 28.9 +1.6**
comp=Z,46nm,1.0s,mb5.1
LPG La Plagne 82.44 3⇑*i*P **P 15 25 28.9 +1.6**
LPG pmax pmax
comp=Z,23nm,1.0s,mb5.1
LPG La Plagne 82.44 3⇑*i*P **P 15 25 28.9 +1.6**
comp=Z,23nm,1.0s,mb5.1
BOJS Bojanci 82.47 357 *i*P **P 15 25 27.5 0.0**
TIRR Tirgusor 82.48 348⇓*i*P **P 15 25 27.5 0.0**
TIRR Tirgusor 82.48 348⇓P **P 15 25 27.5 -0.1**
LBL Lubilhac 82.53 6 *e*P **P 15 25 28.3 +0.5**
SSB Saint Sauveur 82.56 5 *e*P **P 15 25 28.2 +0.2**
SSB Saint Sauveur 82.56 5 *e*P **P 15 25 28.0 0.0**
SSB pmax pmax
comp=Z,27nm,0.9s,mb5.3
SSB Saint Sauveur 82.56 5 *e*P **P 15 25 28.0 0.0**
comp=Z,27nm,0.9s,mb5.3
LFF La Frestale 82.64 8⇑*i*P **P 15 25 28.4 0.0**
comp=Z,95nm,0.8s,mb5.6
LFF La Frestale 82.64 8⇑*i*P **P 15 25 28.4 0.0**
LFF pmax pmax
comp=Z,47nm,0.8s,mb5.6
LFF La Frestale 82.64 8⇑*i*P **P 15 25 28.4 0.0**
comp=Z,47nm,0.8s,mb5.6
CAF Calviac 82.76 7⇑*i*P **P 15 25 29.1 +0.1**
comp=Z,74nm,1.0s,mb5.4
CAF Calviac 82.76 7⇑*i*P **P 15 25 29.1 +0.1**
CAF pmax pmax
comp=Z,37nm,1.0s,mb5.4
CAF Calviac 82.76 7⇑*i*P **P 15 25 29.1 +0.1**
comp=Z,37nm,1.0s,mb5.4
BNI Bardonecchia 82.89 3⇑*e*P **P 15 25 30.9 +1.3**
BNI pmax pmax
comp=Z,49nm,0.8s,mb5.6
BNI Bardonecchia 82.89 3⇑*e*P **P 15 25 30.9 +1.2**
comp=Z,49nm,0.8s,mb5.6
ORIF Oris-en-Rattie 82.99 4⇑*i*P **P 15 25 30.9 +0.7**
comp=Z,34nm,0.8s,mb5.2
ORIF Oris-en-Rattie 82.99 4⇑*i*P **P 15 25 30.9 +0.7**
ORIF pmax pmax
comp=Z,17nm,0.8s,mb5.1
ORIF Oris-en-Rattie 82.99 4⇑*i*P **P 15 25 30.9 +0.7**
comp=Z,17nm,0.8s,mb5.1
VIVF Saint-Julien-l 82.99 5⇑*i*P **P 15 25 30.6 +0.4**
comp=Z,51nm,0.8s,mb5.3
VIVF Saint-Julien-l 82.99 5⇑*i*P **P 15 25 30.6 +0.4**
VIVF pmax pmax
comp=Z,25nm,0.8s,mb5.3
VIVF Saint-Julien-l 82.99 5⇑*i*P **P 15 25 30.6 +0.4**
comp=Z,26nm,0.8s,mb5.3
OG22 Abries 83.12 3 *e*P **P 15 25 32.5 +1.6**
ARTV Artvin 83.19 337 *i*P **P 15 25 31.8 +0.5**
MBDF Montbardon 83.21 3⇑*i*P **P 15 25 32.6 +1.3**
comp=Z,66nm,0.8s,mb5.4
MBDF Montbardon 83.21 3⇑*i*P **P 15 25 32.6 +1.3**
MBDF pmax pmax
comp=Z,33nm,0.8s,mb5.4
MBDF Montbardon 83.21 3⇑*i*P **P 15 25 32.6 +1.3**
comp=Z,33nm,0.8s,mb5.4
DAGI Agillar 83.29 337 *i*P **P 15 25 32.3 +0.5**
GNI Garni 83.47 335 *e*P **P 15 25 33.2 +0.5**
GNI pmax pmax
comp=Z,21nm,0.8s
GNI Garni 83.47 335 *e*P **P 15 25 33.2 +0.4**
comp=Z,21nm,0.8s,mb5.2
DDEM Demirkent 83.51 337 *i*P **P 15 25 33.8 +0.9**
OG25 Le Caire 83.54 4 *e*P **P 15 25 35.0 +2.0**
LASF Ste Croix 83.72 6 *e*P **P 15 25 34.6 +0.6**
comp=Z,57nm,1.1s,mb5.3
VLC Villacollemand 83.86 1 *e*P **P 15 25 34.0 -0.7**
comp=Z,24nm,0.8s,mb5.4
SMRF Simiane la Rot 83.91 4⇑*i*P **P 15 25 36.1 +1.1**
comp=Z,72nm,1.0s,mb5.5
SMRF Simiane la Rot 83.91 4⇑*i*P **P 15 25 36.1 +1.1**
comp=Z,72nm,1.0s,mb5.8
TOUF Mont Tournerai 83.94 3 *e*P **P 15 25 36.0 +0.9**
AUTN L'Aution 83.97 3 *e*P **P 15 25 36.0 +0.8**
SAOF Saorge 83.98 3 *e*P **P 15 25 35.9 +0.6**
VILF Villemus 84.04 4 *e*P **P 15 25 36.9 +1.3**
MVIF Mont Vial 84.06 3 *e*P **P 15 25 36.3 +0.6**
LUCF Luceram 84.07 3 *e*P **P 15 25 37.1 +1.4**
AJM Ajmer 84.18 307 *e*P **P 15 25 35.8 -0.9**
AJM AMb AMB 15 25 38.0
comp=Z,26nm,0.8s,mb5.4
CALN Calern 84.19 3 *e*P **P 15 25 37.8 +1.4**
REVF Revere 84.22 3 *e*P **P 15 25 36.8 +0.3**
GRSN GIRESUNGRSN 84.25 340 *i*P **P 15 25 37.1 +0.3**
HOMI Horasan 84.28 337 *i*P **P 15 25 37.7 +0.9**
SJPF Ste Jean 84.28 9⇑*i*P **P 15 25 37.4 +0.6**
comp=Z,29nm,0.8s,mb5.2
SJPF Ste Jean 84.28 9⇑*i*P **P 15 25 37.4 +0.6**
SJPF pmax pmax
comp=Z,15nm,0.8s,mb5.2
SJPF Ste Jean 84.28 9⇑*i*P **P 15 25 37.4 +0.6**
comp=Z,15nm,0.8s,mb5.2
TAVF Tavernes 84.29 4 *e*P **P 15 25 38.1 +1.2**
DYDN Diyadin 84.31 336 *i*P **P 15 25 38.6 +1.5**
MTLF Montolieu 84.35 7⇑*i*P **P 15 25 37.5 +0.3**
comp=Z,82nm,1.0s,mb5.5
MTLF Montolieu 84.35 7⇑*i*P **P 15 25 37.5 +0.3**
MTLF pmax pmax
comp=Z,41nm,1.0s,mb5.5
MTLF Montolieu 84.35 7⇑*i*P **P 15 25 37.5 +0.3**
comp=Z,41nm,1.0s,mb5.5
LARF Larrau 84.37 9 *e*P **P 15 25 38.1 +0.8**
FRF La Foret Royal 84.37 4 *e*P **P 15 25 37.6 +0.3**
comp=Z,107nm,0.9s,mb5.7
FRF La Foret Royal 84.37 4 *e*P **P 15 25 37.6 +0.3**
FRF pmax pmax
comp=Z,53nm,0.9s,mb5.7
FRF La Foret Royal 84.37 4 *e*P **P 15 25 37.6 +0.3**
comp=Z,53nm,0.9s,mb5.7
GELF Grande-Etoile 84.50 4 *e*P **P 15 25 39.0 +1.1**
EPF Esparros 84.50 8⇑*i*P **P 15 25 37.6 -0.4**
comp=Z,64nm,0.9s,mb5.5
EPF Esparros 84.50 8⇑*i*P **P 15 25 37.6 -0.4**
EPF pmax pmax
comp=Z,32nm,0.9s,mb5.5
EPF Esparros 84.50 8⇑*i*P **P 15 25 37.6 -0.4**
comp=Z,32nm,0.9s,mb5.5
ERZM Erzurum 84.54 337 *i*P **P 15 25 40.1 +1.9**
ETSF Etsaut 84.55 9⇑*i*P **P 15 25 38.8 +0.6**
comp=Z,87nm,0.8s,mb5.7
ETSF Etsaut 84.55 9⇑*i*P **P 15 25 38.8 +0.6**
ETSF pmax pmax
comp=Z,44nm,0.8s,mb5.6
ETSF Etsaut 84.55 9⇑*i*P **P 15 25 38.8 +0.6**
comp=Z,44nm,0.8s,mb5.6
BERF Bertagne 84.58 4 *e*P **P 15 25 39.7 +1.4**
LMR La Mourre 84.59 4 *e*P **P 15 25 38.9 +0.5**
comp=Z,93nm,1.0s,mb5.6
LMR La Mourre 84.59 4 *e*P **P 15 25 38.9 +0.5**
LMR pmax pmax
comp=Z,47nm,1.0s,mb5.6
LMR La Mourre 84.59 4 *e*P **P 15 25 38.9 +0.5**
comp=Z,47nm,1.0s,mb5.6
BALT Daday 84.60 344 *i*P **P 15 25 40.2 +1.7**
VIEF Viey 84.62 8 *e*P **P 15 25 39.4 +0.8**
KOPT Kop Dagi 84.63 338 *i*P **P 15 25 40.7 +2.1**
MLS Moulis 84.64 8 *e*P **P 15 25 39.0 +0.3**
RESF Ens 84.72 8 *e*P **P 15 25 40.1 +1.0**
PCAB Cabril 84.79 15 *e*P **P 15 25 39.6 +0.2**
PBRG Braganca 84.89 14 *e*P **P 15 25 40.0 +0.1**
comp=Z,28nm,1.9s,mb5.1
ILGA Ilgaz 85.01 343 *i*P **P 15 25 42.6 +2.1**
CTKT Corum 85.23 342 *i*P **P 15 25 43.4 +1.7**
PVRL Vila Real 85.26 14 *e*P **P 15 25 43.0 +1.2**
VALF Valcebollere 85.27 7 *e*P **P 15 25 42.5 +0.7**
BHPL Bhopal 85.46 303 *e*P **P 15 25 42.0 -1.1**
BHPL AMb AMB 15 25 44.3
comp=Z,43nm,1.3s,mb5.4
MVO Moncorvo 85.48 14 *e*P **P 15 25 43.3 +0.4**
comp=Z,37nm,1.7s,mb5.2
BNGL BINGOL 85.49 337 *i*P **P 15 25 44.9 +1.9**
ELDT Eldivan 85.60 343 *i*P **P 15 25 45.6 +2.1**
AQU L'Aquila 85.66 359 *e*P **P 15 25 43.3 -0.5**
AQU pmax pmax
comp=Z,63nm,0.8s,mb5.9
AQU L'Aquila 85.66 359 *e*P **P 15 25 43.3 -0.5**
comp=Z,63nm,0.8s,mb5.9
SKO Skopje 85.67 353 *i*P **P 15 25 44.6 +0.8**
HENT Hendek 85.70 345 *i*P **P 15 25 44.8 +0.8**
SGKT Sivrigoynuk 85.75 344 *i*P **P 15 25 44.9 +0.7**
PVIS Viseu 85.78 15 *e*P **P 15 25 44.9 +0.5**
KEMA Kemaliye 85.79 339 *i*P **P 15 25 45.5 +1.0**
STIP Stip 85.88 352 *e*P **P 15 25 44.4 -0.5**
HAKT HAKKARI 86.18 335 *i*P **P 15 25 55.5 +9.1**
VAY Valandovo 86.22 352 *i*P **P 15 25 46.2 -0.3**
CDAG Cicekdag 86.28 343 *i*P **P 15 25 47.4 +0.6**
KRUS Krusevo 86.28 353 *i*P **P 15 25 47.0 +0.2**
BR131 Keskin Array S 86.31 343 *e*P **P 15 25 47.1 0.0**
comp=Z,16nm,0.8s,mb5.4
BRTR Keskin Array B 86.31 343 P **P 15 25 47.4 +0.4**
comp=Z,22nm,0.8s,mb5.4,baz=28,slow=2.2,SNR=59
NGP Nagpur 86.33 300 *e*P **P 15 25 45.7 -1.7**
TIR Tirane 86.40 354 *e*P **P 15 25 46.8 -0.7**
TIR pmax pmax
comp=Z,63nm,0.9s,mb5.8
TIR Tirane 86.40 354 *e*P **P 15 25 46.8 -0.7**
comp=Z,63nm,0.9s,mb5.8
KULM Kulm 86.41 274⇑*e*P **P 15 25 47.1 -0.8**
comp=Z,44nm,1.1s,mb5.6
BEST Besiri 86.47 337 *i*P **P 15 25 49.6 +1.7**
OHR Ohrid 86.57 353 *i*P **P 15 25 47.1 -1.2**
BIA Bitola 86.62 353 *e*P **P 15 25 47.5 -1.1**
ULDT Uludag 86.62 347 *i*P **P 15 25 49.0 +0.4**
BORA Eskisehir 86.69 346 *i*P **P 15 25 49.0 +0.2**
MALT Malatya 86.72 339⇑*e*P **P 15 25 49.6 +0.5**
MALT pmax pmax
comp=Z,22nm,1.4s,mb5.2
MALT Malatya 86.72 339⇑*i*P **P 15 25 50.0 +0.9**
MALT Malatya 86.72 339⇑*e*P **P 15 25 49.6 +0.5**
comp=Z,22nm,1.4s,mb5.2
VIS Vishakhapatnam 86.79 295 *e*P **P 15 25 48.1 -1.6**
ESKT Eskisehir 86.98 345 *i*P **P 15 25 50.5 +0.2**
ESDC Sonseca Array 87.36 12 P **P 15 25 52.1 -0.1**
comp=Z,12nm,0.8s,mb5.2,baz=346,slow=4.6,SNR=44
ESDC LR LR 16 08 53.0
comp=Z,774nm,18.3s,MS5.2,baz=330,slow=38
ESLA Sonseca Array 87.36 12 *e*P **P 15 25 51.4 -0.8**
comp=Z,3.3nm,0.8s,mb4.6
WRAB Tennant Creek 87.43 232 *e*P **P 15 25 50.3 -2.2**
WRAB pmax pmax
comp=Z,24nm,1.1s,mb5.3
WRAB Tennant Creek 87.43 232 *e*P **P 15 25 50.2 -2.3**
comp=Z,24nm,1.1s,mb5.3
WRA Warramunga Arr 87.44 232 P **P 15 25 50.5 -2.1**
comp=Z,8.1nm,1.0s,mb4.9,baz=36,slow=6.0,SNR=23
PESTR Estremoz 87.64 15 *e*P **P 15 25 53.1 -0.4**
comp=Z,22nm,2.1s,mb5.0
KDHN Kadinhani 87.75 344 *i*P **P 15 25 53.7 -0.4**
AKL Akola 87.76 302 *e*P **P 15 25 52.7 -1.7**
GZT Gaziantep 87.83 340 *i*P **P 15 25 55.2 +0.7**
ANDN Andirin 87.87 341 *i*P **P 15 25 55.9 +1.2**
KHAL Karahalli 88.31 346 *i*P **P 15 25 56.4 -0.3**
MANT Manisa 88.33 347 *i*P **P 15 25 56.5 -0.3**
PBAR Barrancos 88.40 15 *e*P **P 15 25 56.0 -1.2**
comp=Z,26nm,1.2s,mb5.3
PBEJ Beja 88.42 15 *e*P **P 15 25 57.8 +0.6**
PVAQ Vaqueiros 89.05 15 *e*P **P 15 25 59.3 -0.9**
PSI Prapat 89.42 274 P **P 15 26 01.6 -0.6**
comp=Z,36nm,0.9s,mb5.7,baz=291,slow=1.9,SNR=20
ARMA Armidale 89.51 214 *e*P pP 15 26 14.2 +6.2
HYB Hyderabad 89.65 298 *i*P **P 15 26 02.5 -0.8**
HYB Hyderabad 89.65 298 *e*P **P 15 26 02.5 -0.8**
AKAS Kas 90.39 345 *i*P **P 15 26 05.6 -0.9**
ASAR Alice Springs 90.82 231 P **P 15 26 06.6 -1.8**
comp=Z,16nm,0.9s,mb5.3,baz=25,slow=4.8,SNR=15
CSS Prodhromos 90.99 342 *e*P **P 15 26 10.4 +1.1**
comp=Z,16nm,1.0s,mb5.3
KEST Kesra 92.27 2 P **P 15 26 15.3 +0.1**
comp=Z,2.5nm,0.9s,mb4.5,baz=182,slow=1.4,SNR=5.5
MIB Mutribah 92.41 329 *e*P **P 15 26 14.7 -1.3**
baz=330
MIB AMb AMB 15 26 17.4
comp=Z,105nm,0.9s,mb6.2,baz=330
NAY Al-Naaiem 92.95 329 *e*P **P 15 26 17.1 -1.4**
baz=329
NAY AMb AMB 15 26 19.3
comp=Z,19nm,1.0s,mb5.5,baz=329
ASF Jabal al Asfar 92.96 339 P **P 15 26 18.7 +0.2**
comp=Z,13nm,0.8s,mb5.4,baz=254,slow=3.5,SNR=18
RDF Al-Radifah 93.16 329 *e*P **P 15 26 18.9 -0.5**
baz=329
RDF AMb AMB 15 26 26.2
comp=Z,64nm,1.3s,mb5.9,baz=329
MDT Midelt 94.02 14 LR LR 16 14 06.3
comp=Z,558nm,18.6s,MS5.0,baz=2.0,slow=39
STKA Stephens Creek 94.55 221 P **P 15 26 23.9 -1.5**
comp=Z,1.2nm,0.7s,mb4.4,baz=358,slow=10,SNR=3.8
STKA Stephens Creek 94.55 221 *e*P **P 15 26 24.2 -1.3**
comp=Z,3.9nm,0.9s,mb4.8
STKA Stephens Creek 94.55 221 P **P 15 26 23.9 -1.5**
EIL Elat 95.80 340 LR LR 16 22 28.8
comp=Z,599nm,18.1s,MS5.1,baz=65,slow=44
KOD Kodaikanal 96.15 295 *e*P **P 15 26 32.9 -0.4**
TORD Torodi Ar. Bea 114.22 11 PKP PKiKP 15 31 43.0 -1.9
comp=Z,1.1nm,0.9s,baz=341,slow=2.5,SNR=5.7
TORD PKKPbc PKKPbc 15 42 21.9 -1.1
comp=Z,0.5nm,0.7s,baz=183,slow=2.7,SNR=3.2
TORD PKKPab PKKPab 15 42 33.2 -0.9
comp=Z,1.4nm,0.9s,baz=145,slow=1.0,SNR=6.0
TORD PKKP PKKPdf 15 42 41.4 -2.7
comp=Z,2.3nm,0.9s,baz=178,slow=3.8,SNR=7.6
TORD Torodi Ar. Bea 114.22 11 PKP PKiKP 15 31 43.0 -1.9
TORD PKKPbc PKKPbc 15 42 21.9 -1.1
TORD PKKPab PKKPab 15 42 33.2 -0.9
TORD PKKP PKKPdf 15 42 41.4 -2.7
DBIC Dimbokro 119.56 19 PKP PKPdf 15 31 54.1 -1.2
comp=Z,2.2nm,0.8s,baz=5.2,slow=9.0,SNR=3.9
QSPA South Pole Qui 142.11 180 PKPdf PKPdf 15 32 37.2 +1.5
TSUM Tsumeb 146.58 350 *e*PKPdf PKPdf 15 32 46.2 +1.0
LBTB Lobatse 150.69 333 *e*PKIKP PKPbc 15 32 57.0 -0.2
MAW Mawson 151.21 218 PKPbc PKPbc 15 32 56.2 -0.9
comp=Z,9.0nm,0.9s,baz=69,slow=3.7,SNR=5.9
BOSA Boshof 154.19 331 PKPbc PKPbc 15 33 04.8 -0.2
comp=Z,5.9nm,0.8s,baz=47,slow=4.1,SNR=8.4
SYO Syowa Base 158.72 208⇑*e*PKPab PKPab 15 33 39.0 +1.8
VNA3 Neumayer Olymp 158.79 161 *e*PKPdf PKPab 15 33 37.1 -0.3
VNA3 *e* 15 33 49.7
VNA3 *e* 15 33 58.0
VNA2 Neumayer--Watz 159.49 162 *e*PKPdf PKPab 15 33 39.6 -0.9
VNA2 *e* 15 33 50.8
VNA2 *e* 15 33 59.9

DDA ***27*** *15:13:21.9, 39.41N×33.11E, h4km±1km, Md2.9*
ISCJB ***27*** *15:13:22.6±1.4, 39.37N±0.05°×33.11E±0.06, h5km±12km, Error ellipse: s-maj=10.8km s-min=5.2km az=140.4*
CSEM ***27*** *15:13:22.5±0.2, 39.36N×33.13E, h12km, MD2.7, Error ellipse: s-maj=7.5km s-min=3.8km az=156.0*
ISK ***27*** *15:13:22.5, 39.36N×33.13E, h6km, MD2.7*
ISC 27 15:13:22.4±0.8,**3937N**±005×**3308E**±005,**h1**km±8km,**n12,**
σ**0**°**63**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**90**	*e*PG	**Pg**	**15 13 31.3**	**-0.5**
KAMT				*e*SG	**Sg**	**15 13 38.7**	**+0.6**
CDAG	**Cicekdag**	**1.03**	**75**	*i* P	**Pg**	**15 13 40.9**	**-1.3**
CDAG				*i* S	**Sg**	**15 13 56.0**	**+0.5**
CDAG	**Cicekdag**	**1.03**	**75**	*i* P	**Pg**	**15 13 40.8**	**-1.3**
CDAG				*i* S	**Sg**	**15 13 56.0**	**+0.5**
KIZT	**Kizilcal**	**1.06**	**243**	*e*PN	**Pn**	**15 13 43.7**	**-0.7**
KIZT				*e*SN	**Sn**	**15 13 59.0**	**-0.7**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pg**	**15 13 44.4**	**+0.2**
KDHN				*i* S	**Sg**	**15 13 58.8**	**-0.1**
ELDT	**Eldivan**	**1.15**	**13**	*i* P	**Pg**	**15 13 44.5**	**0.0**
ELDT				*i* S	**Sg**	**15 13 59.5**	**+0.1**
LADK	**Ladik-KONYA**	**1.30**	**206**	*e*PN	**Pn**	**15 13 48.7**	**+1.0**
CORM	**Corum**	**1.44**	**55**	*e*PN	**Pn**	**15 13 49.5**	**-0.2**
KONT	**Konya--Tatoy**	**1.53**	**202**	*e*PN	**Pn**	**15 13 51.0**	**+0.1**
ESKT	**Eskisehir**	**1.74**	**276**	*e*PN	**Pn**	**15 13 54.8**	**+1.1**
YOZ	**Yozgat**	**1.75**	**80**	*e*PN	**Pn**	**15 13 53.3**	**-0.6**
SVSK	**Karacayir**	**3.07**	**79**	*e*PN	**Pn**	**15 14 12.4**	**+0.4**

ISCJB ***27*** *15:14:51.9±0.8, 39.38N±0.04°×33.06E±0.04, h4km±6km, Error ellipse: s-maj=6.6km s-min=4.7km az=165.0*
ISK ***27*** *15:14:51.6, 39.36N×33.06E, h9km, MD2.8*
CSEM ***27*** *15:14:51.3±0.2, 39.38N×33.08E, h5km, MD2.8, Error ellipse: s-maj=5.0km s-min=3.7km az=164.0*
DDA ***27*** *15:14:52.6, 39.40N×33.10E, h14km±2km, Md3.3*
ISC 27 15:14:52.6±0.6,**3938N**±004×**3308E**±004,**h9**km±6km,**n13,**
σ**0**°**73**/21,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**91**	*e*PG	**Pg**	**15 15 02.1**	**0.0**
KAMT				*e*SG	**Sg**	**15 15 09.5**	**+0.9**
LOD	**Lodumlu**	**0.57**	**335**	*e*PG	**Pg**	**15 15 02.5**	**-1.1**
LOD				*e*SG	**Sg**	**15 15 11.7**	**+0.7**
CDAG	**Cicekdag**	**1.03**	**76**	*i* P	**Pg**	**15 15 11.9**	**-0.4**
CDAG				*i* S	**Sg**	**15 15 26.1**	**+0.3**
CDAG	**Cicekdag**	**1.03**	**76**	*i* P	**Pg**	**15 15 11.9**	**-0.5**
CDAG				*i* S	**Sg**	**15 15 26.1**	**+0.3**
KIZT	**Kizilcal**	**1.06**	**242**	*e*PG	**Pg**	**15 15 12.1**	**-0.8**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pn**	**15 15 15.0**	**+0.3**
KDHN				*i* S	**Sn**	**15 15 31.8**	**+1.4**
ELDT	**Eldivan**	**1.14**	**13**	*i* P	**Pn**	**15 15 14.9**	**0.0**
ELDT				*i* S	**Sn**	**15 15 30.5**	**-0.2**
LADK	**Ladik-KONYA**	**1.30**	**206**	*e*PN	**Pn**	**15 15 15.6**	**-1.4**
CORM	**Corum**	**1.44**	**56**	*e*PN	**Pn**	**15 15 19.4**	**+0.5**
KONT	**Konya--Tatoy**	**1.54**	**202**	*e*PN	**Pn**	**15 15 20.0**	**-0.1**
ESKT	**Eskisehir**	**1.73**	**275**	*i* P	**Pn**	**15 15 22.6**	**-0.3**
ESKT				*i* S	**Sg**	**15 15 49.2**	**+0.9**
SEYT	**Eskypehyr**	**1.73**	**275**	*i* P	**Pn**	**15 15 22.6**	**-0.3**
SEYT				*i* S	**Sg**	**15 15 49.2**	**+0.9**
YOZ	**Yozgat**	**1.75**	**81**	*e*PN	**Pn**	**15 15 22.6**	**-0.6**

ISCJB ***27*** *15:21:19.0±0.8, 208S±0.09°×1350E±0.2, h33km, mb3.8/5, Error ellipse: s-maj=27.0km s-min=12.0km az=164.7*
IDC ***27*** *15:21:18.1±2.1, 2.15S×134.29E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=76.3km s-min=36.4km az=76.0*
NEIC ***27*** *15:21:21.0±0.7, 2.10S×134.92E, h35km, mb3.8/1, Error ellipse: s-maj=26.9km s-min=12.0km az=73.0*
ISC 27 15:21:21.1±0.8,**210S**±0.09°×**1350E**±0.2,**h35**km,**n11,**
σ**0**°**86**/11,**mb3.8/5,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek** 5.7nm,0.6s	**17.73**	**182**	*e*Pn	**Pn**	**15 25 25.4**	**0.0**
WB2	**Warramunga Arr**	**17.74**	**182**	*e*P	**Pn**	**15 25 25.5**	**0.0**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=359,slow=12,SNR=39	**17.74**	**182**	P	**Pn**	**15 25 25.9**	**+0.4**
FITZ	**Fitzroy Crossi** 8.5nm,0.5s	**18.34**	**209**	*e*P	**Pn**	**15 25 25.9**	**-7.0**
HNR	**Honiara**	**25.89**	**107**	*e*P	**P**	**15 26 49.5**	**-0.6**
CMAR	**Chiang Mai Arr** 0.8nm,0.9s,mb3.3,baz=123,slow=5.7,SNR=3.8	**40.91**	**302**	P	**P**	**15 28 57.7**	**-2.7**
MKAR	**Makanchi Array** 1.5nm,0.5s,mb4.2,baz=114,slow=8.1,SNR=12	**67.05**	**324**	P	**P**	**15 32 11.2**	**+0.4**
ZALV	**Zalesovo Beam** 0.7nm,0.5s,mb3.9,baz=122,slow=7.6,SNR=3.3	**69.56**	**331**	P	**P**	**15 32 26.4**	**+0.1**
ZALV	**Zalesovo Beam**	**69.56**	**331**	P	**P**	**15 32 26.4**	**+0.1**
KURK	**Kurchatov** 1.2nm,0.7s,mb3.9,baz=123,slow=5.4,SNR=7.7	**71.09**	**326**	P	**P**	**15 32 36.1**	**+0.3**
BVAR	**Borovoye Array** 0.9nm,0.8s,mb3.7,baz=98,slow=6.0,SNR=3.6	**76.69**	**326**	P	**P**	**15 33 09.7**	**+1.2**

ISCJB ***27*** *15:26:59.3±0.8, 5230N±0.03°×16839W±0.02, h20km±5km, mb5.3/260, MS4.9/24, Error ellipse: s-maj=4.7km s-min=2.1km az=14.6*
IDC ***27*** *15:26:59.2±2.9, 52.32N×168.35W, h12km±17km, mb4.9/38, mb1 5.1/39, mb1mx5.0/41, mbtmp4.9/39, ML4.5/1, MS4.8/12, Ms1 4.8/12, ms1mx4.4/53, Error ellipse: s-maj=14.7km s-min=7.6km az=178.0*
NEIC ***27*** *15:26:59.7±1.1, 52.26N×168.29W, h15km±6km, mb5.4/153, ML4.8(AEIC), Error ellipse: s-maj=5.1km s-min=2.8km az=179.0*
GCMT ***27*** *15:26:59.7±0.2, 52.19N×168.24W, h14km, MW5.2/91, Moment Tensor Solution. s50,c78; s91,c178; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr 0.71±.03; Mθθ -0.50±.02; Mφφ -0.21±.02; Mrθ 0.53±.04; Mθφ -0.35±.01; Mφr 0.24±.04; Best double couple: M0 0.93300×10^17 NP1: φs230.00000°, δ26.00000°, λ79.00000°. NP2: φs62.00000°, δ64.00000°, λ95.00000°. Principal axes: T 0.9240, Plg70.0000°, Azm343.0000°; N 0.0170, Plg5.0000°, Azm240.0000°; P -0.9420, Plg19.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***27*** *15:27:00.6, 52.91N×168.95W, h15km, mB5.5, mb5.5, Ms5.3, Msz5.1*
MOS ***27*** *15:27:00.8±0.9, 52.26N×168.42W, h33km, mb5.7/108, MS4.8/5, Error ellipse: s-maj=8.0km s-min=4.1km az=94.3*
SZGRF ***27*** *15:27:04.3, 52.34N×168.36W, h33km, mb5.5, Fox Islands, Aleutian Islands, United States*
DJA ***27*** *15:27:05, 5230N×168.83W, h40km, mb5.4/10*
ISC 27 15:27:02.3±0.8,**5237N**±003×**16839W**±002,**h28**km±5km,
h34km±1.5km:**pP-P,n950,**σ**0**°**80**/947,**mb5.3**/260,**MS4.9**/24,
332C-146D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.67**	**335**	P	**Pb**	**15 27 15.7**	**+0.3**

AKLV **Akutan Long Va** 2.32 38 P Pn 15 27 38.1 -0.5
AKUT **Akutan** 2.37 41 eP Pn 15 27 39.5 +0.2
ATKA **Atka Island** 3.57 270 P Pn 15 27 56.5 +0.8
ATKA S Sn 15 28 38.8 +1.9
GSTR **Great Sitkin T** 4.72 270 ePn Pn 15 28 12.8 +1.2
GSTR eSn Sn 15 29 07.5 +2.2
SPIA **Saint Paul Isl** 4.94 348 P Pn 15 28 17.4 +2.8
ADK **Adak** 5.13 268 eP Pn 15 28 17.3 +0.1
ADK **Adak** 5.13 268 P Pn 15 28 18.1 +0.9
SDPT **Sand Point** 5.56 54 P Pn 15 28 22.6 -0.4
CHGN **Chignik** 7.04 52 eP Pn 15 28 43.8 +0.4
OHAK **Old Harbor** 9.98 55 P Pn 15 29 22.0 -1.6
KDAK **Kodiak Island** 10.55 53 Pn Pn 15 29 29.0 -2.5
637nm,0.9s,SNR=21
KDAK **Kodiak Island** 10.55 53 Pn Pn 15 29 28.8 -2.7
12nm,0.3s,baz=244,slow=4.7,SNR=48
KDAK Sn Sn 15 31 19.5 -9.0
baz=165,slow=12,SNR=1.8
KDAK **Kodiak Island** 10.55 53 ePn Pn 15 29 29.4 -2.1
SVW2 **Sparrevohn** 11.21 34 eP Pn 15 29 43.4 +3.0
FX1 **Attu Island--F** 11.22 280 Pn Pn 15 29 40.8 +0.1
11nm,0.3s,baz=280,slow=6.1,SNR=36
FX1 Sn Sn 15 31 44.9 -0.2
0.8nm,0.3s,baz=278,slow=23,SNR=3.1
FX1 LR LR 15 33 58.9
comp=Z,6µm,18.2s,baz=346,slow=37
FX1 **Attu Island--F** 11.22 280 P Pn 15 29 40.8 +0.1
FX1 15 31 44.9
GAMB **Gambell** 11.57 353 ePn Pn 15 29 47.1 +1.8
3µm,0.6s
RSO **Redoubt South** 11.84 41 ePn Pn 15 29 49.1 +0.1
SEW **Seward** 13.04 46 ePn Pn 15 30 02.6 -2.8
61nm,0.8s
TNA **Tin City** 13.24 1 ePn Pn 15 30 09.8 +1.8
27nm,0.7s
FIB **Fire Island** 13.28 41 P Pn 15 30 06.9 -1.8
RC01 **Rabbit Creek A** 13.41 42 ePn Pn 15 30 06.9 -3.7
67nm,0.9s
PPLA **Purkeypile** 13.61 33 ePn Pn 15 30 14.6 +1.4
236nm,1.2s
PMR **Palmer** 13.93 41 eP Pn 15 30 16.1 -1.5
PMR pmax pmax
comp=Z,15nm,0.8s
PMR **Palmer** 13.93 41 eP Pn 15 30 16.1 -1.5
comp=Z,15nm,0.8s
CHUM **Lake Minchumin** 14.27 30 ePn Pn 15 30 23.4 +1.2
comp=Z,83nm,0.9s
KTH **Kantishna Hill** 14.48 33 ePn Pn 15 30 24.9 -0.2
comp=Z,161nm,0.9s
BPAW **Bear Paw Mtn.** 14.84 31 ePn Pn 15 30 30.2 +0.3
comp=Z,135nm,0.9s
MCK **McKinley** 15.27 34 P Pn 15 30 34.7 -0.9
MCK pmax pmax
comp=Z,39nm,0.8s
MCK **McKinley** 15.27 34 ePn Pn 15 30 33.9 -1.7
comp=Z,39nm,0.8s
PAX **Paxson** 16.12 40 ePn Pn 15 30 43.7 -2.9
comp=Z,37nm,0.8s
COLA **College** 16.37 32 eP Pn 15 30 46.7 -3.0
COLA **College** 16.37 32 ePn Pn 15 30 45.5 -4.2
comp=Z,138nm,0.9s
MENT **Mentasta** 16.80 41 eP Pn 15 30 55.2 0.0
COLD **Coldfoot** 17.37 24 ePn Pn 15 31 02.1 -0.2
comp=Z,66nm,0.9s
PNL **Peninsula** 17.67 54 ePn Pn 15 31 02.2 -3.8
comp=Z,156nm,0.9s
EGAK **Eagle** 18.67 38 eP Pn 15 31 14.8 -3.5
comp=Z,62nm,0.9s
DAWY **Dawson** 19.04 41 eP Pn 15 31 20.1 -2.6
SIT **Sitka** 19.55 63 eP Pn 15 31 28.0 -0.8
SIT pmax pmax
comp=Z,96nm,0.9s
SIT **Sitka** 19.55 63 eP Pn 15 31 28.0 -0.8
comp=Z,96nm,0.9s
SKAG **Skagway** 19.68 56 eP Pn 15 31 29.4 -1.0
comp=Z,196nm,1.0s
BILL **Bilibino** 19.88 332⇑ eP Pn 15 31 31.0 -1.7
BILL eS Sn 15 35 11.0 -4.1
BILL pmax pmax
comp=Z,147nm,1.2s
BILL MLR MLR
comp=Z,4µm,15.0s
BILL **Bilibino** 19.88 332 eP Pn 15 31 31.3 -1.4
comp=Z,132nm,1.0s
PET **Petropavlovsk** 19.89 285⇓ iP Pn 15 31 30.8 -2.1
PET pmax pmax
comp=Z,279nm,0.7s
PET **Petropavlovsk** 19.89 285 eP Pn 15 31 30.7 -2.2
comp=Z,170nm,0.8s
PEA0B **Petropavlovsk-** 20.44 286⇑ iP P 15 31 36.5 -0.6
PETK **Petropavlovsk-** 20.44 286 P P 15 31 37.0 -0.1
comp=Z,163nm,0.6s,baz=82,slow=14,SNR=375
PETK LR LR 15 38 23.4
comp=Z,975nm,21.1s,MS4.1,baz=90,slow=33
CRAG **Craig** 20.86 67 eP P 15 31 41.2 -0.6
comp=Z,114nm,1.2s
SKR **Severo-Kuril's** 22.01 280 eP P 15 31 54.4 +0.3
DLBC **Dease Lake** 22.37 59 P P 15 31 57.9 0.0
comp=Z,27nm,0.9s,mb4.7,baz=271,slow=11,SNR=20
DLBC **Dease Lake** 22.37 59 eP P 15 31 57.7 -0.2
SEY **Seymchan** 23.11 313⇑ eP P 15 32 04.9 -0.7
BBB **Bella Bella** 24.43 74 LR LR 15 40 01.8
comp=Z,1µm,18.7s,MS4.5,baz=24,slow=32
YKA **Yellowknife Ar** 29.79 49 P P 15 33 06.0 -0.2
comp=Z,9.5nm,0.9s,mb4.5,baz=265,slow=8.6,SNR=67
YKA PcP PcP 15 36 09.4 +0.4
comp=Z,4.8nm,0.8s,baz=287,slow=2.2,SNR=8.7
YKA ScP ScP 15 39 49.7 +1.0
comp=Z,3.1nm,0.9s,baz=281,slow=3.2,SNR=11
YKA LR LR 15 46 46.8
comp=Z,379nm,18.8s,MS4.0,baz=195,slow=40
YKA **Yellowknife Ar** 29.79 49 P P 15 33 06.0 -0.2
YKA 15 36 09.4
YKA **Yellowknife Ar** 29.79 49 P P 15 33 06.0 -0.2
YKA PcP PcP 15 36 09.4 +0.4
YKA ScP ScP 15 39 49.7 +1.0
YKA LR LR 15 46 46.8
I02A **Mapleton** 30.45 88 ⇑P P 15 33 12.6 +0.4
baz=30
D06A **Cle Elum** 30.68 80 ⇑P P 15 33 13.9 -0.3
baz=30
I03A **Eugene** 30.80 88 ⇑P P 15 33 15.7 +0.4
baz=31
A08A **Turner Farm, O** 30.84 76 ⇓P P 15 33 15.6 -0.1
baz=31,SNR=5.8
C07A **Waterville** 30.93 79 ⇓P P 15 33 16.5 +0.1
baz=31,SNR=6.4
F05A **White Salmon** 30.94 83 ⇑P P 15 33 16.4 -0.1
baz=31
B08A **Colville Reser** 31.07 78 ⇑P P 15 33 17.8 +0.2
baz=31,SNR=7.8
H04A **Detroit Lake** 31.10 86 ⇑P P 15 33 18.1 +0.2
baz=31
YUK **Yuzh-Kuril'sk** 31.15 273 P P 15 33 17.5 -0.9
YUK pmax pmax
comp=Z,190nm,0.5s,mb6.2
D07A **Quincy** 31.21 80 ⇑P P 15 33 19.3 +0.4
baz=31
A09A **Danville** 31.25 76 ⇓P P 15 33 19.7 +0.5
baz=31,SNR=8.4
G05A **Wamic** 31.34 84 ⇑P P 15 33 21.0 +0.9
baz=31
F06A **Goldendale** 31.41 83 ⇓P P 15 33 21.5 +0.8
baz=31
C08A **Higginbotham F** 31.50 78 ⇓P P 15 33 21.9 +0.4
baz=31
E07A **Sunnyside** 31.58 81 ⇓P P 15 33 23.1 +0.9
baz=31
YSS **Yuzh-Sakhalins** 31.58 280⇑ eP P 15 33 21.6 -0.6
YSS pmax pmax
comp=E,20nm,0.8s
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.2
YSS MLR MLR
comp=E,1µm,16.0s
YSS MLR MLR
comp=Z,1µm,16.0s,MS4.7
YSS **Yuzh-Sakhalins** 31.58 280⇑ iP P 15 33 21.7 -0.5
comp=Z,21nm,0.7s,mb5.1
B09A **Rice** 31.75 77 ⇑P P 15 33 24.0 +0.4
baz=32,SNR=6.2
A10A **Northport** 31.85 75 ⇑P P 15 33 24.9 +0.3
baz=32
HAWA **Hanford** 31.86 81 eP P 15 33 25.1 +0.4
comp=Z,27nm,1.0s,mb5.0
F07A **Phinny Hill Vi** 31.86 82 ⇓P P 15 33 25.7 +1.0
baz=32
D08A **Wollman Farm,** 31.91 79 ⇑P P 15 33 25.5 +0.5
baz=32,SNR=7.5
I05A **Bend** 31.93 86 ⇑P P 15 33 25.7 +0.4
baz=32
C09A **Chrisman Ranch** 31.95 78 ⇓P P 15 33 25.8 +0.4
baz=32
E08A **Dider Farm, El** 32.10 81 ⇑P P 15 33 26.4 -0.3
baz=32
H06A **Lindquist Farm** 32.20 84 ⇓P P 15 33 27.7 +0.1
baz=32
D09A **Jones Farm, Ri** 32.28 79 ⇑P P 15 33 28.2 -0.1
baz=32
G07A **Ruggs Ranch, H** 32.33 83 ⇓P P 15 33 29.7 +0.9
baz=32
YBH **Yreka Blue Hor** 32.38 91 P P 15 33 30.0 +0.8
comp=Z,19nm,0.8s,mb5.0,baz=311,slow=4.7,SNR=8.5
YBH LR LR 15 44 31.9
comp=Z,2µm,18.3s,MS4.7,baz=314,slow=32
YBH **Yreka Blue Hor** 32.38 91 eP P 15 33 30.4 +1.1
YBH pmax pmax
comp=Z,31nm,1.0s
YBH **Yreka Blue Hor** 32.38 91 eP P 15 33 30.4 +1.2
comp=Z,30nm,1.0s,mb5.1
NEW **Newport** 32.43 76 eP P 15 33 29.9 +0.3
NEW pmax pmax
comp=Z,15nm,0.8s
NEW **Newport** 32.43 76 eP P 15 33 29.9 +0.3
comp=Z,15nm,0.8s,mb4.9
A11A **Hall Mountain,** 32.57 75 ⇑P P 15 33 31.4 +0.5
baz=32,SNR=11
EDM **Edmonton** 32.60 66 eP P 15 33 30.5 -0.6
EDM e 15 33 41.4
F08A **Pendleton** 32.61 81 ⇓P P 15 33 31.6 +0.4
baz=32
E09A **Wood Farm, Sta** 32.64 80 ⇓P P 15 33 31.6 +0.2
baz=32,SNR=8.4
I06A **Prineville** 32.69 85 ⇑P P 15 33 32.5 +0.5
baz=32
G08A **Pilot Rock** 32.75 82 ⇓P P 15 33 32.6 +0.2
baz=33
B11A **Sandpoint** 32.80 76 ⇑P P 15 33 33.2 +0.3
baz=33,SNR=5.6
K05A **Summer Lake** 32.94 88 ⇓P P 15 33 35.2 +1.1
baz=33,SNR=6.4
A12A **Yaak River Ran** 33.00 74 ⇑P P 15 33 35.2 +0.6
baz=33,SNR=13
TIXI **Tiksi** 33.05 329 P P 15 33 33.7 -1.1
TIXI pmax pmax
comp=Z,18nm,0.8s,mb5.0
TIXI **Tiksi** 33.05 329⇑ iP P 15 33 33.7 -1.1
comp=Z,18nm,0.8s,mb5.0
TIXI ePcP PcP 15 36 16.4 -1.2
I07A **Izee** 33.05 85 ⇑P P 15 33 35.3 +0.2
baz=33
J06A **Christmas Vall** 33.10 86 ⇑P P 15 33 35.8 +0.3
baz=33,SNR=10
ASAJ **Asahikawa** 33.10 275 P P 15 33 35.4 -0.1
comp=Z,50nm,1.0s,mb5.4,baz=31,slow=6.0,SNR=18
ASAJ PcP PcP 15 36 18.4 +0.2
comp=Z,8.5nm,0.9s,baz=1.7,slow=5.1,SNR=3.7
ASAJ LR LR 15 45 32.5
comp=Z,2µm,18.7s,MS4.9,baz=81,slow=34
WDC **Whiskeytown Da** 33.16 92 eP P 15 33 36.1 0.0
WDC pmax pmax
comp=Z,33nm,1.0s,mb5.2
WDC **Whiskeytown Da** 33.16 92 eP P 15 33 36.1 0.0
comp=Z,33nm,1.0s,mb5.2
F09A **S2 Ranch, Elgi** 33.18 81 ⇓P P 15 33 36.5 +0.3
baz=33,SNR=7.6
E10A **Myers Farm, Un** 33.28 79 ⇑P P 15 33 37.0 0.0
baz=33,SNR=7.0
H08A **Prairie City** 33.33 83 ⇓P P 15 33 38.2 +0.7
baz=33
F10A **Beach Ranch, E** 33.46 80 ⇑P P 15 33 38.3 -0.3
baz=33
D11A **Klaveano Farm,** 33.47 78 ⇓P P 15 33 38.3 -0.4
baz=33,SNR=5.5
G09A **Cove** 33.48 82 ⇑P P 15 33 39.4 +0.6
baz=33,SNR=12
YAK **Yakutsk** 33.62 311 eP P 15 33 37.2 -2.7
YAK e 15 36 18.1
YAK e 15 44 00.2
YAK pmax pmax
comp=Z,86nm,0.9s,mb5.7
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK **Yakutsk** 33.62 311⇑ iP P 15 33 37.7 -2.1
comp=N,105nm,0.8s,mb5.8
YAK ePcP PcP 15 36 18.5 -0.8
C12B **Naegeli Ranch,** 33.67 76 ⇑P P 15 33 40.2 -0.2
baz=34,SNR=5.1
I08A **Drewsey** 33.71 84 ⇓P P 15 33 41.1 +0.3
baz=34
A13A **Flathead Natio** 33.73 74 ⇑P P 15 33 41.2 +0.2
baz=34,SNR=6.6
MOD **Modoc** 33.76 89 eP P 15 33 41.5 +0.2
comp=N,27nm,1.0s,mb5.1
H09A **Durkee** 33.86 82 ⇓P P 15 33 43.1 +1.0
baz=34
G10A **Bishop Farm, J** 33.87 81 ⇓P P 15 33 42.6 +0.4
baz=34,SNR=22
E11A **Bogner Ranch,** 33.88 79 ⇓P P 15 33 41.8 -0.5
baz=34
ERM **Erimo** 33.92 272 P P 15 33 43.5 +0.9
comp=N,316nm,0.8s,mb6.3,SNR=8.8
ERM **Erimo** 33.92 272 eP P 15 33 42.3 -0.3
ERM pmax pmax
comp=Z,66nm,1.0s,mb5.5
ERM **Erimo** 33.92 272⇓ iP P 15 33 42.5 -0.1
comp=Z,44nm,1.0s,mb5.3
K07A **Rock Creek Ran** 33.96 87 ⇑P P 15 33 43.6 +0.5
baz=34,SNR=7.8
J08A **Circle Bar Ran** 34.07 85 ⇑P P 15 33 44.0 +0.1
baz=34
F11A **Grangeville** 34.15 80 ⇓P P 15 33 44.6 0.0
baz=34,SNR=8.5
I09A **Lost Marbles R** 34.18 84 ⇑P P 15 33 45.3 +0.4
baz=34
C13A **Hot Springs** 34.22 76 ⇑P P 15 33 45.5 +0.3
baz=34,SNR=15
L07A **Adell** 34.29 88 ⇓P P 15 33 46.3 +0.4
baz=34,SNR=6.6
A14A **Double T Ranch** 34.30 73 ⇓P P 15 33 46.1 +0.2
baz=34,SNR=17
K08A **Mann Creek Ran** 34.41 86 ⇓P P 15 33 47.2 +0.3
baz=34,SNR=12
H10A **Noah's Angus R** 34.46 82 ⇑P P 15 33 47.7 +0.3
baz=34,SNR=37
WVOR **Wild Horse Val** 34.48 87 eP P 15 33 47.7 +0.2
WVOR pmax pmax
comp=Z,22nm,0.9s,mb5.1
WVOR **Wild Horse Val** 34.48 87 eP P 15 33 47.7 +0.2
comp=Z,22nm,0.9s,mb5.1
J09A **Fry Pan Ranch,** 34.51 85 ⇓P P 15 33 48.1 +0.3
baz=34,SNR=15
D13A **Huson** 34.57 77 ⇑P P 15 33 47.6 -0.6
baz=34
B14A **Marquette Ranc** 34.67 74 ⇓P P 15 33 48.8 -0.3
baz=34,SNR=10
I10A **Payette** 34.69 83 ⇑P P 15 33 50.1 +0.7
baz=34
A15A **Johnson Ranch,** 34.70 73 ⇓P P 15 33 48.8 -0.6
baz=34,SNR=8.3
N06A **Buffalo Meadow** 34.72 90 ⇓P P 15 33 49.8 +0.2
baz=35,SNR=12
M07A **Soldier Meadow** 34.75 88 ⇓P P 15 33 50.2 +0.3
baz=35,SNR=14
L08A **Fields** 34.80 87 ⇓P P 15 33 50.4 +0.1
baz=35,SNR=12
H11A **Donnelly** 34.84 81 ⇑P P 15 33 50.8 +0.2
baz=35,SNR=9.7
K09A **Rome** 34.89 85 ⇓P P 15 33 50.8 -0.3
baz=35,SNR=5.6
BEKR **Beckwourth** 34.92 92 ⇓P P 15 33 51.3 -0.1
baz=35,SNR=12
O06A **Flanigan** 35.07 91 ⇓P P 15 33 52.9 +0.3
baz=35,SNR=8.1
B15A **Bradely Ranch,** 35.11 74 ⇑P P 15 33 52.4 -0.5
baz=35,SNR=8.8
D14A **Greenough** 35.14 76 ⇑P P 15 33 53.1 -0.1
baz=35,SNR=14
M08A **Happy Creek Ra** 35.20 88 ⇓P P 15 33 54.5 +0.8
baz=35,SNR=7.4
N07B **Gerlach** 35.23 89 ⇓P P 15 33 54.3 +0.3
baz=35
F13A **Darby** 35.30 79 ⇓P P 15 33 54.8 +0.3
baz=35,SNR=16
I11A **Placerville** 35.30 82 ⇓P P 15 33 55.2 +0.6
baz=35,SNR=19
L09A **Wilkinson Ranc** 35.31 86 ⇓P P 15 33 55.4 +0.7
baz=35
C15A **Salmond Ranch,** 35.34 75 ⇑P P 15 33 55.2 +0.3
baz=35,SNR=30
K10A **MacKenzie Ranc** 35.37 85 ⇑P P 15 33 55.7 +0.5
baz=35,SNR=12
A16A **West Butte Ran** 35.38 72 ⇓P P 15 33 54.6 -0.6
baz=35,SNR=8.2
HABR **Khabarovsk** 35.46 287 deP P 15 33 52.6 -3.3
HABR e*PP pP 15 34 02.2 -1.9
HABR e*SP sP 15 34 07.4 -0.1
HABR e 15 35 12.6
HABR e 15 36 20.9
HABR eS S 15 39 25.9 -3.1
HABR e*SS sS 15 39 44.1 +1.6
HABR eSS SS 15 41 49.6 -14
HABR e 15 44 08.2
HABR pmax pmax
comp=Z,139nm,1.0s,mb5.8
HABR pmax pmax
comp=E,79nm,0.9s
HABR pmax pmax
comp=N,28nm,0.9s
HABR MLR MLR
comp=Z,983nm,17.0s,MS4.6
HABR MLR MLR
comp=E,617nm,12.0s,MS4.7
HABR MLR MLR
comp=N,557nm,13.0s,MS4.7
E14A **Clinton** 35.48 77 ⇓P P 15 33 56.1 0.0
baz=35,SNR=12
B16A **M & M Farms, S** 35.56 73 ⇑P P 15 33 56.3 -0.5
baz=35
H12A **Diamond D Ranc** 35.63 81 ⇓P P 15 33 57.4 0.0
baz=35,SNR=11
WCN **Washoe City** 35.64 92 ⇓P P 15 33 57.8 +0.3
baz=36,SNR=9.0
MFID **Camas Ranch** 35.65 83 ⇑P P 15 33 58.2 +0.6
baz=36,SNR=9.0
O07A **Toulon** 35.65 90 ⇑P P 15 33 58.3 +0.6
baz=36,SNR=12
G13A **Cobalt** 35.72 80 ⇓P P 15 33 58.4 +0.2
baz=36,SNR=16
N08A **GE Springer Mi** 35.74 88 ⇓P P 15 33 58.7 +0.3
baz=36,SNR=16
D15A **Lincoln** 35.75 76 ⇓P P 15 33 58.4 0.0
baz=36,SNR=14
C16A **Fuhringer Ranc** 35.84 74 ⇓P P 15 33 59.2 0.0
baz=36,SNR=17
K11A **Parker Ranch,** 35.88 84 ⇓P P 15 34 00.2 +0.6
baz=36,SNR=9.7
A17A **Triple J Farms** 35.90 72 ⇑P P 15 33 59.0 -0.7
baz=36,SNR=6.9
H13A **Challis** 35.98 80 ⇑P P 15 34 00.5 +0.1
baz=36,SNR=11
E15A **Deer Lodge** 35.99 77 ⇓P P 15 34 00.2 -0.3
baz=36,SNR=12
L10A **Juniper Basin** 36.01 85 ⇑P P 15 34 01.2 +0.5
baz=36,SNR=10
G14A **Jackson** 36.10 79 ⇓P P 15 34 01.4 -0.1
baz=36,SNR=16
RES **Resolute Bay** 36.12 26 P P 15 33 60.0 -1.3
comp=N,4.3nm,0.3s,mb4.8,baz=251,slow=12,SNR=38
RES PcP PcP 15 36 26.4 +0.1
comp=N,9.3nm,0.8s,baz=244,slow=3.9,SNR=6.1
RES **Resolute Bay** 36.12 26 P P 15 33 59.5 -1.7
RES pmax pmax
comp=Z,15nm,0.9s,mb4.9
RES **Resolute Bay** 36.12 26⇑ eP P 15 33 58.9 -2.3
comp=Z,15nm,0.9s,mb4.9
RES ePcP PcP 15 36 26.0 -0.4
B17A **L&G Farms, Che** 36.16 73 ⇓P P 15 34 01.6 -0.3
baz=36,SNR=11
J12A **Stokes Ranch,** 36.19 83 ⇓P P 15 34 02.5 +0.3
baz=36,SNR=14
M10A **I.L. Ranch, Tu** 36.28 86 ⇑P P 15 34 03.4 +0.3
baz=36,SNR=7.4
R06C **Coleville** 36.30 93 ⇓P P 15 34 03.9 +0.7
baz=36,SNR=13
D16A **Dana Ranch, Ca** 36.33 75 ⇓P P 15 34 03.3 -0.1
baz=36
F15A **Butte** 36.37 77 ⇓P P 15 34 03.4 -0.4
baz=36
L11A **Cat Creek Ranc** 36.40 85 ⇓P P 15 34 04.2 +0.3
baz=36,SNR=15
A18A **Metzger Ranch,** 36.41 71 ⇓P P 15 34 03.5 -0.6
baz=36,SNR=8.8
I13A **Wildhorse Cree** 36.42 81 ⇑P P 15 34 04.6 +0.5
baz=36,SNR=24
HLID **Hailey** 36.43 82 ⇓P P 15 34 04.7 +0.4
baz=36,SNR=12
HLID **Hailey** 36.43 82 eP P 15 34 04.5 +0.2
comp=Z,30nm,1.3s,mb5.1
H14A **Leadore** 36.49 80 ⇑P P 15 34 04.8 +0.1
baz=36,SNR=9.3
C17A **Wharram Farm,** 36.50 74 ⇑P P 15 34 04.2 -0.6
baz=36
E16A **East Helena** 36.51 76 ⇑P P 15 34 04.7 -0.2
baz=36,SNR=6.5
K12A **Draper Farm, C** 36.65 84 ⇑P P 15 34 07.1 +1.0
baz=36,SNR=10.0
J13A **Cove Ranch, Pi** 36.67 82 ⇓P P 15 34 06.7 +0.4
baz=36,SNR=23
O09A **Fish Creek Ran** 36.68 89 ⇑P P 15 34 06.5 0.0
baz=36
B18A **Beardsley Farm** 36.70 72 ⇑P P 15 34 06.1 -0.4
baz=36,SNR=11
G15A **Dillon** 36.73 78 ⇑P P 15 34 06.3 -0.5
baz=36,SNR=16
N10A **Dunphy** 36.77 87 ⇑P P 15 34 07.3 +0.1
baz=37
D17A **Six Diamond Ra** 36.78 74 ⇑P P 15 34 07.3 +0.1
baz=37,SNR=6.5
M11A **Holland Ranch,** 36.80 86 ⇓P P 15 34 08.1 +0.7
baz=37
I14A **Mackay** 36.81 81 ⇑P P 15 34 08.1 +0.6
baz=37,SNR=19
L12A **House Creek Ra** 36.86 84 ⇓P P 15 34 08.4 +0.5
baz=37,SNR=9.0
EGMT **Eagleton** 36.90 73 ⇑P P 15 34 07.9 -0.3
baz=37,SNR=10
EGMT **Eagleton** 36.90 73 eP P 15 34 07.5 -0.7
comp=Z,75nm,1.0s,mb5.5
F16A **Kennard Place,** 36.92 77 ⇑P P 15 34 07.6 -0.8
baz=37
H15A **Lima** 36.93 79 ⇑P P 15 34 08.4 -0.1
baz=37,SNR=14
BOZ **Bozeman (W)** 36.99 77 ⇓P P 15 34 08.7 -0.3
baz=37,SNR=15
KLR **Kul'dur** 37.02 290 eP P 15 34 04.0 -5.2
KLR pmax pmax
comp=E,32nm,1.2s
KLR pmax pmax
comp=Z,47nm,1.2s,mb5.2
Q08A **Gabbs** 37.03 91 ⇓P P 15 34 09.5 +0.1
baz=37
E17A **Martinsdale** 37.03 76 ⇑P P 15 34 09.2 -0.1
baz=37,SNR=11
O10A **Cortez Mining,** 37.03 88 ⇓P P 15 34 09.9 +0.5
baz=37
NVAR **Mina Array Bea** 37.07 92 P P 15 34 09.7 0.0
comp=Z,12nm,0.8s,mb4.8,baz=295,slow=8.1,SNR=58
G16A **Moss Hill, Enn** 37.11 78 ⇑P P 15 34 09.9 -0.1
baz=37,SNR=11
J14A **Carey** 37.11 82 ⇓P P 15 34 10.6 +0.6
baz=37,SNR=26
K13A **Stover Farm, H** 37.14 83 ⇓P P 15 34 11.0 +0.7
baz=37,SNR=6.7
D18A **Linhart Farms,** 37.28 74 ⇑P P 15 34 11.4 0.0
baz=37
M12A **Wells** 37.34 85 ⇑P P 15 34 12.8 +0.8
baz=37,SNR=9.6
I15A **Monteview** 37.36 80 ⇓P P 15 34 12.7 +0.6
baz=37
F17A **Fitzpatrick Pl** 37.44 76 ⇑P P 15 34 12.6 -0.2
baz=37,SNR=11
E18A **Harlowton** 37.53 75 ⇓P P 15 34 13.5 -0.1
baz=37
L13A **Double Diamond** 37.54 84 ⇓P P 15 34 14.3 +0.6
baz=37,SNR=18
N12A **Clover Valley,** 37.59 86 ⇑P P 15 34 14.5 +0.3
baz=37,SNR=12
O11A **Cowboy Ranch,** 37.65 87 ⇓P P 15 34 14.7 +0.1
baz=38

G17A **Pierce Place,** 37.69 77 ⇓P P 15 34 15.1 +0.1
baz=38,SNR=6.8
H16A **Russell Place,** 37.72 78 ⇑P P 15 34 15.3 +0.1
baz=38,SNR=9.8
M13A **Montello** 37.83 85 ⇓P P 15 34 16.6 +0.5
baz=38,SNR=8.1
R09A **Tonopah** 37.94 91 ⇓P P 15 34 17.1 0.0
baz=38,SNR=10
TPH **Tonopah** 37.95 91 *e*P P 15 34 16.9 -0.3
comp=Z,88nm,0.7s,mb5.6
Q10A **Clear Creek Ra** 37.99 90 ⇑P P 15 34 18.1 +0.6
baz=38,SNR=11
F18A **Big Timber** 38.00 76 ⇑P P 15 34 17.4 -0.1
baz=38,SNR=6.0
I16A **Newdale** 38.03 80 ⇓P P 15 34 18.1 +0.3
baz=38,SNR=6.7
O12A **Currie** 38.12 87 ⇓P P 15 34 19.1 +0.4
baz=38,SNR=10
S09A **Goldfield** 38.17 92 ⇑P P 15 34 19.2 +0.1
baz=38
FFC **Flin Flon** 38.21 59 *e*P P 15 34 17.7 -1.5
FFC pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
FFC **Flin Flon** 38.21 59 *e*P P 15 34 17.7 -1.5
comp=Z,10nm,1.0s,mb4.5
M14A **Sheep Mountain** 38.25 84 ⇑P P 15 34 20.0 +0.3
baz=38,SNR=10
H17A **Grant Village** 38.29 78 ⇑P P 15 34 20.4 +0.4
baz=38,SNR=15
IMW **Indian Meadow** 38.35 79 *e*P P 15 34 21.1 +0.7
comp=Z,27nm,1.0s,mb4.9
DCID1 **Drake Creek** 38.37 80 *e*P P 15 34 21.6 +1.0
comp=Z,35nm,1.0s,mb5.0
R10A **Warm Springs** 38.38 90 ⇓P P 15 34 21.0 +0.2
baz=38
G18A **Lazy EL Ranch,** 38.40 76 ⇑P P 15 34 20.6 -0.3
baz=38
RRI2 **Red Ridge** 38.42 80 *e*P P 15 34 22.1 +0.9
comp=Z,50nm,1.2s,mb5.1
S10A **Tonopah Range,** 38.43 91 ⇓P P 15 34 21.2 0.0
baz=38,SNR=15
Q11A **Duckwater** 38.43 89 ⇑P P 15 34 21.9 +0.6
baz=38,SNR=7.9
CWC **Cottonwood Cre** 38.47 94 ⇑P P 15 34 22.3 +0.7
baz=38
P12A **McGill** 38.50 88 ⇓P P 15 34 22.3 +0.5
baz=38,SNR=12
L15A **Malad City** 38.54 83 ⇓P P 15 34 22.4 +0.3
baz=38
K16A **Soda Springs** 38.55 81 ⇑P P 15 34 23.4 +1.2
baz=38,SNR=33
I17A **Pilgram Creek** 38.55 79 ⇑P P 15 34 22.6 +0.4
baz=38
RLMT **Red Lodge** 38.68 76 ⇓P P 15 34 23.7 +0.4
baz=38,SNR=14
RLMT **Red Lodge** 38.68 76 *e*P P 15 34 23.4 +0.1
comp=Z,33nm,0.9s,mb5.1
REDW **Red Top Meadow** 38.70 80 *e*P P 15 34 24.0 +0.6
comp=Z,46nm,1.2s,mb5.1
N14A **Grayback Hills** 38.73 85 ⇓P P 15 34 24.2 +0.5
baz=38,SNR=7.3
J17A **Brown Place, J** 38.78 80 ⇑P P 15 34 24.7 +0.5
baz=39
R11A **Troy Canyon, C** 38.78 90 ⇑P P 15 34 24.0 -0.2
baz=39,SNR=12
Q12A **Willow Creek R** 38.82 88 ⇓P P 15 34 25.1 +0.6
baz=39,SNR=9.3
M15A **Larsen Ranch,** 38.82 83 ⇓P P 15 34 24.6 +0.2
baz=39,SNR=7.3
K17A **Gardner Place,** 39.00 81 ⇑P P 15 34 26.1 +0.1
baz=39
P13A **Bates Ranch, G** 39.06 87 ⇑P P 15 34 27.5 +0.9
baz=39,SNR=10
MPMC **Manual Prospec** 39.08 94 ⇑P P 15 34 27.0 +0.2
baz=39
N15A **Stansbury Isla** 39.11 84 ⇓P P 15 34 26.6 -0.3
baz=39
L16A **Fish Haven** 39.12 82 ⇑P P 15 34 27.8 +0.9
baz=39,SNR=19
I18A **Diamond G Ranc** 39.13 79 ⇑P P 15 34 27.4 +0.4
baz=39,SNR=9.9
FURC **Furnace Creek,** 39.20 93 ⇑P P 15 34 28.0 +0.3
baz=39
J18A **Kendall Valley** 39.28 79 ⇓P P 15 34 28.7 +0.4
baz=39,SNR=9.0
DUG **Dugway** 39.35 85 ⇓P P 15 34 29.3 +0.4
baz=39,SNR=18
DUG **Dugway** 39.35 85 *e*P P 15 34 29.0 +0.1
DUG pmax pmax
comp=Z,30nm,1.2s,mb4.9
DUG **Dugway** 39.35 85 *e*P P 15 34 29.0 +0.1
comp=Z,30nm,1.2s,mb4.9
Q13A **Wheeler Ranch,** 39.37 88 ⇓P P 15 34 29.5 +0.5
baz=39,SNR=6.1
R12A **Pony Springs,** 39.40 89 ⇑P P 15 34 29.7 +0.4
baz=39,SNR=6.7
M16A **Huntsville** 39.40 83 ⇑P P 15 34 29.4 0.0
baz=39,SNR=10
L17A **Cokeville** 39.41 81 ⇓P P 15 34 29.7 +0.3
baz=39
P14A **Drum Mountains** 39.56 86 ⇓P P 15 34 30.8 +0.1
baz=39
K18A **Toltan Ranch,** 39.60 80 ⇑P P 15 34 31.3 +0.3
baz=39,SNR=12
T11A **Corn Creek, Al** 39.71 91 ⇓P P 15 34 31.8 -0.2
baz=40,SNR=11
N16A **Rees Ranch, Co** 39.77 83 ⇑P P 15 34 32.5 0.0
baz=40
Q14A **Sevier Lake (B** 39.80 87 ⇑P P 15 34 33.6 +0.9
baz=40,SNR=12
BW06 **Boulder Array** 39.82 80 ⇑P P 15 34 32.8 0.0
baz=40,SNR=46
PDAR **Pinedale Array** 39.82 80 P P 15 34 32.5 -0.3
comp=Z,22nm,0.8s,mb5.0,baz=303,slow=4.7,SNR=152
PDAR LR LR 15 48 44.8
comp=Z,760nm,18.9s,MS4.6,baz=121,slow=33
M17A **Scullys Gap (B** 39.90 82 ⇓P P 15 34 33.7 +0.2
baz=40,SNR=10
SHOC **Shoshone** 39.92 93 ⇑P P 15 34 34.4 +0.6
baz=40
GSC **Goldstone** 40.00 94 ⇓P P 15 34 34.4 0.0
baz=40,SNR=6.8
GSC **Goldstone** 40.00 94 *e*P P 15 34 34.0 -0.4
GSC pmax pmax
comp=Z,26nm,1.0s,mb4.9
GSC **Goldstone** 40.00 94 *e*P P 15 34 34.0 -0.4
comp=Z,26nm,1.0s,mb4.9
L18A **Fontenelle, Gr** 40.01 81 ⇓P P 15 34 34.6 +0.2
baz=40,SNR=17
P15A **Leamington** 40.05 86 ⇑P P 15 34 35.5 +0.7
baz=40,SNR=7.1
N17A **Moffit Pass** 40.11 83 ⇓P P 15 34 35.4 +0.1
baz=40
BFSC **Mount Baldy St** 40.19 96 ⇑P P 15 34 36.2 +0.2
baz=40
K19A **Absolon Red Bu** 40.21 79 ⇓P P 15 34 35.7 -0.4
baz=40,SNR=54
M18A **Lyman** 40.29 82 ⇓P P 15 34 36.7 0.0
baz=40,SNR=8.3
MJAR **Matsushiro Arr** 40.29 269 P P 15 34 36.8 0.0
comp=Z,22nm,1.0s,mb4.8,baz=52,slow=7.5,SNR=42
MJAR PcP PcP 15 36 40.1 +0.1
comp=Z,4.2nm,0.9s,baz=67,slow=1.8,SNR=5.1
MJAR ScP ScP 15 40 27.4 +0.4
comp=Z,1.5nm,0.9s,baz=38,slow=6.2,SNR=3.1
MJAR **Matsushiro Arr** 40.29 269 P P 15 34 36.8 0.0
MJAR 15 36 40.1
MAJO **Matsushiro** 40.30 269⇑ *i*P P 15 34 36.2 -0.6
MAJO pmax pmax
comp=Z,86nm,0.9s,mb5.5
MAJO **Matsushiro** 40.30 269⇑ *i*P P 15 34 36.1 -0.7
comp=Z,86nm,0.9s,mb5.5
MAT **Matsushiro** 40.30 269 P P 15 34 36.4 -0.4
MAT *e*S S 15 41 11.0 +29
L19A **Farson** 40.32 80 ⇓P P 15 34 36.9 -0.1
baz=40,SNR=9.1
S13A **Holt Ranch, En** 40.32 89 ⇑P P 15 34 37.1 0.0
baz=40,SNR=6.1
ALE **Alert** 40.46 11 P P 15 34 37.3 -0.4
comp=Z,91nm,0.6s,mb5.7,SNR=8.3
FCC **Fort Churchill** 40.48 51⇑ *e*P P 15 34 37.2 -0.9
comp=Z,2.1nm,0.8s,mb3.9
FCC *e* 15 34 51.2
V11A **Goodsprings** 40.49 93 ⇓P P 15 34 38.4 0.0
baz=40
HEC **Hector,Ludlow** 40.60 94 ⇓P P 15 34 39.5 +0.1
baz=40
K20A **Yellowstone Ra** 40.61 79 ⇑P P 15 34 38.9 -0.5
baz=40,SNR=14
O17A **Robinson Place** 40.62 84 ⇑P P 15 34 39.8 +0.4
baz=40,SNR=9.8
MDJ **Mudanjiang** 40.67 285 P P 15 34 38.0 -1.9
MDJ AMB AMB
comp=Z,26nm,0.8s,mb4.9
MDJ AMB AMB
comp=Z,909nm,13.0s
MDJ **Mudanjiang** 40.67 285 *e*P P 15 34 38.0 -1.9
comp=Z,19nm,0.8s,mb4.8
M19A **Rock Springs** 40.79 81 ⇓P P 15 34 40.7 -0.2
baz=41
N18A **Larsen Ranch,** 40.79 82 ⇑P P 15 34 40.4 -0.5
baz=41,SNR=8.6
V12A **Nelson** 40.91 92 ⇑P P 15 34 42.6 +0.6
baz=41
L20A **Wamsutter** 40.99 80 ⇑P P 15 34 42.3 -0.2
baz=41
U13A **Pakoon Wash** 41.01 91 ⇑P P 15 34 42.9 +0.2
baz=41,SNR=7.9
O18A **Roosevelt** 41.02 83 ⇓P P 15 34 43.4 +0.6
baz=41
GMRC **Granite Mounta** 41.05 94 ⇑P P 15 34 43.0 -0.1
baz=41
P17A **Butcher Ranch,** 41.05 85 ⇓P P 15 34 43.2 +0.2
baz=41
T14A **Hurricane** 41.13 89 ⇓P P 15 34 44.4 +0.6
baz=41
Q16A **Castle Valley** 41.13 86 ⇓P P 15 34 44.2 +0.5
baz=41,SNR=7.2
N19A **John Jarvie Ra** 41.14 82 ⇓P P 15 34 43.2 -0.5
baz=41,SNR=11
LDFC **Landfair** 41.18 93 *e*P P 15 34 43.2 -1.0
comp=Z,64nm,1.2s,mb5.1
P18A **Preston Nutter** 41.26 84 ⇑P P 15 34 45.3 +0.5
baz=41,SNR=20
R16A **Teasdale** 41.34 87 ⇑P P 15 34 46.0 +0.6
baz=41,SNR=7.7
PFO **Pinyon Flat Ob** 41.35 96 P P 15 34 44.3 -1.2
comp=Z,6.7nm,1.0s,mb4.2,baz=346,slow=3.5,SNR=2.8
V13A **Grand Canyon W** 41.36 91 ⇓P P 15 34 46.2 +0.6
baz=41
M20A **Sweetwater, Wa** 41.39 80 ⇓P P 15 34 45.9 +0.2
baz=41,SNR=11
SRU **San Rafael** 41.41 85 ⇑P P 15 34 45.9 0.0
baz=41,SNR=15
U14A **Mt Trumbull** 41.49 90 ⇓P P 15 34 47.2 +0.5
baz=41
O19A **Miners Draw (B** 41.53 83 ⇑P P 15 34 46.9 -0.1
baz=41,SNR=24
T15A **Red Dirt Ranch** 41.59 89 ⇑P P 15 34 48.0 +0.5
baz=41
L21A **Rawlins** 41.60 79 ⇓P P 15 34 47.4 -0.1
baz=41,SNR=21
S16A **Seppner Ranch,** 41.62 87 ⇑P P 15 34 47.9 +0.2
baz=41
Q18A **Rafter H Ranch** 41.65 85 ⇑P P 15 34 47.4 -0.6
baz=42,SNR=18
R17A **Hanksville Air** 41.73 86 ⇑P P 15 34 47.7 -0.9
baz=42,SNR=13
N20A **Spence Gulch,** 41.73 81 ⇑P P 15 34 48.3 -0.3
baz=42
RWWY **Rawlins** 41.86 80 *e*P P 15 34 49.2 -0.4
comp=Z,34nm,1.1s,mb4.9
W13A **Hualapai Mount** 41.92 92 ⇑P P 15 34 49.8 -0.4
baz=42,SNR=8.9
U15A **North Rim** 42.03 89 ⇑P P 15 34 50.9 -0.1
baz=42,SNR=11
P19A **Cripple Cowboy** 42.03 83 ⇓P P 15 34 50.5 -0.5
baz=42,SNR=24
V14A **Boquillas Ranc** 42.05 91 ⇓P P 15 34 50.7 -0.5
baz=42,SNR=5.2
S17A **Black Ridge (B** 42.16 87 ⇑P P 15 34 51.9 -0.2
baz=42,SNR=9.2
O20A **White River Ci** 42.17 82 ⇓P P 15 34 51.5 -0.7
baz=42,SNR=28
N21A **Black Mountain** 42.23 81 ⇑P P 15 34 52.0 -0.7
baz=42,SNR=22
R18A **Canyonlands Na** 42.24 85 ⇓P P 15 34 52.0 -0.8
baz=42
Q19A **Hogan Spring (** 42.27 84 ⇑P P 15 34 52.2 -0.8
baz=42,SNR=18
X13A **Yucca** 42.29 93 ⇑P P 15 34 52.4 -0.8
baz=42
W14A **Seligman** 42.34 91 ⇑P P 15 34 53.7 +0.1
baz=42
RSSD **Black Hills** 42.34 75 *e*P P 15 34 52.3 -1.2
RSSD *e* 15 36 44.0
RSSD pmax pmax
comp=Z,14nm,1.0s,mb4.5
RSSD **Black Hills** 42.34 75 *e*P P 15 34 52.3 -1.2
comp=Z,14nm,1.0s,mb4.5
RSSD *e*PcP PcP 15 36 44.0 -2.5
M22A **Cedar Creek Ra** 42.40 79 ⇓P P 15 34 53.3 -0.8
baz=42,SNR=19
Y12C **Blythe** 42.43 94 ⇓P P 15 34 54.5 +0.1
baz=42
BOD **Bodaibo** 42.46 309⇓ *i*P P 15 34 52.5 -1.8
BOD pmax pmax
comp=Z,36nm,0.7s,mb5.1
V15A **Kaibab Nationa** 42.49 90 ⇓P P 15 34 55.4 +0.5
baz=42,SNR=16
T17A **Navajo Res., N** 42.57 88 ⇓P P 15 34 55.0 -0.4
baz=42
O21A **Pagoda** 42.59 81 ⇑P P 15 34 55.3 -0.3
baz=42,SNR=25
S18A **Hurst Farm, BI** 42.62 86 ⇑P P 15 34 55.5 -0.4
baz=42,SNR=10
R19A **Curley Farm, L** 42.69 85 ⇓P P 15 34 56.1 -0.3
baz=42,SNR=8.3
Y13A **Salome** 42.81 94 ⇓P P 15 34 57.4 -0.1
baz=43
N22A **Wattenberg Ran** 42.85 80 ⇓P P 15 34 57.3 -0.4
baz=43,SNR=9.3
Q20A **Ridgley Place,** 42.87 84 ⇑P P 15 34 57.4 -0.5
baz=43,SNR=11
U17A **Shonto** 42.91 88 ⇑P P 15 34 58.3 +0.1
baz=43
U16A **Tuba City** 42.92 89 ⇑P P 15 34 58.5 +0.1
baz=43
X14A **Yava** 42.95 92 ⇑P P 15 34 58.8 +0.2
baz=43,SNR=8.4
T18A **Mexican Hat** 43.05 87 ⇓P P 15 34 58.4 -1.0
baz=43,SNR=16
S19A **Harvey Farm, M** 43.11 85 ⇑P P 15 34 59.2 -0.7
baz=43,SNR=10
WUAZ **Wupatki** 43.18 90 ⇓P P 15 34 59.9 -0.6
baz=43
WUAZ **Wupatki** 43.18 90 *e*P P 15 34 57.0 -3.5
comp=Z,15nm,0.9s,mb4.7
Y14A **Wickenburg** 43.24 93 ⇑P P 15 35 00.3 -0.6
baz=43
X15A **Humboldt** 43.34 91 ⇓P P 15 35 01.1 -0.7
baz=43
W16A **Flagstaff** 43.37 90 ⇓P P 15 35 03.2 +1.3
baz=43,SNR=6.9
Q21A **Lamborn Mesa,** 43.38 83 ⇑P P 15 35 01.8 -0.3
baz=43,SNR=8.2
CN2 **Changchun** 43.59 286 ⇑P P 15 35 03.3 -0.3
CN2 *e*AP pP 15 35 14.8 +2.8
CN2 *e*S S 15 41 28.5 -2.5
CN2 AMB AMB
comp=Z,70nm,0.8s,mb5.4
CN2 AMB AMB
comp=Z,1μm,6.0s
CN2 LR LR
comp=N,1μm,17.0s,MS5.0
CN2 LR LR
comp=E,1μm,17.0s,MS5.0
CN2 LR LR
comp=Z,2μm,18.0s,MS5.0
ULM **Lac du Bonnet** 43.62 63 P P 15 35 02.4 -1.4
comp=Z,5.9nm,0.9s,mb4.3,baz=321,slow=8.9,SNR=5.2
ULM LR LR 15 52 53.5
comp=Z,2μm,18.1s,MS5.1,baz=325,slow=36
ULM **Lac du Bonnet** 43.62 63 *e*P P 15 35 01.9 -1.9
comp=Z,16nm,0.9s,mb4.8
Y15A **Casa Rosa Ranc** 43.64 92 ⇑P P 15 35 04.5 +0.4
baz=44
R21A **Cimarron** 43.69 84 ⇑P P 15 35 04.3 -0.2
baz=44,SNR=16
T19A **Beclabito** 43.77 86 ⇓P P 15 35 04.7 -0.5
baz=44,SNR=28
HIA **Hailar** 43.79 296⇑ *i*P P 15 35 04.1 -1.1
HIA **Hailar** 43.79 296⇑ *i*P P 15 35 03.9 -1.3
comp=Z,24nm,0.8s,mb5.0
HIA *e*PcP PcP 15 36 51.2 -0.2
MVCO **Mesa Verde** 43.84 86 ⇑P P 15 35 04.7 -1.0
baz=44
MVCO **Mesa Verde** 43.84 86 *e*P P 15 35 03.5 -2.2
comp=Z,21nm,0.9s,mb4.9
X16A **Lo Mia Camp, P** 43.87 91 ⇓P P 15 35 06.2 +0.2
baz=44
ISCO **Idaho Springs** 43.97 81 *e*P P 15 35 05.8 -0.9
ISCO pmax pmax
comp=Z,17nm,1.4s,mb4.6
ISCO **Idaho Springs** 43.97 81 *e*P P 15 35 05.8 -0.9
comp=Z,17nm,1.4s,mb4.6
Y16A **Circle Bar Ran** 44.21 92 ⇑P P 15 35 09.3 +0.6
baz=44
W18A **Petrified Fore** 44.45 89 ⇑P P 15 35 10.9 +0.2
baz=44
W19A **Sanders** 44.67 89 ⇓P P 15 35 12.2 -0.2
baz=44
AGMN **Agassiz Refuge** 44.69 65 *e*P P 15 35 10.5 -1.8
comp=Z,19nm,0.8s,mb5.0
Y17A **Roosevelt** 44.72 91 ⇑P P 15 35 12.6 -0.3
baz=45
SDCO **Great Sand Dun** 45.33 83 *e*P P 15 35 17.4 -0.2
comp=Z,11nm,0.8s,mb4.8
117A **Oracle** 45.55 92 ⇓P P 15 35 19.7 +0.3
baz=45
TUC **Tucson** 45.71 93 *e*P P 15 35 19.7 -1.0
TUC pmax pmax
comp=Z,16nm,1.1s,mb4.9
TUC **Tucson** 45.71 93 *e*P P 15 35 19.7 -1.0
comp=Z,16nm,1.1s,mb4.8
118A **Homack Ranch,** 45.98 92 ⇓P P 15 35 23.0 +0.2
baz=46
KSRS **Korea Array** 46.00 277 P P 15 35 23.3 +0.4
comp=Z,54nm,0.8s,mb5.5,baz=54,slow=7.6,SNR=150
KSRS PcP PcP 15 36 59.5 +0.3
comp=Z,6.7nm,0.9s,baz=53,slow=4.4,SNR=4.6
KSRS LR LR 15 52 49.3
comp=Z,1μm,18.8s,MS4.8,baz=43,slow=34
119A **Ashpeak Ranch,** 46.30 91 ⇑P P 15 35 25.0 -0.3
baz=46
ANMO **Albuquerque** 46.57 86 P P 15 35 26.9 -0.5
comp=Z,4.7nm,1.0s,mb4.4,baz=329,slow=10,SNR=7.1
ANMO PcP PcP 15 37 01.9 +0.7
comp=Z,1.6nm,0.7s,baz=24,slow=4.5,SNR=1.8
ANMO **Albuquerque** 46.57 86 *e*P P 15 35 26.8 -0.6
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO **Albuquerque** 46.57 86 *e*P P 15 35 26.8 -0.6
comp=Z,12nm,1.1s,mb4.7
219A **White Tail Can** 46.85 92 ⇑P P 15 35 29.6 -0.1
baz=47
ECSD **EROS,Sioux Fal** 46.91 71 *e*P P 15 35 27.8 -2.2
comp=Z,26nm,1.0s,mb5.1
EYMN **Ely** 47.30 63 *e*P P 15 35 30.9 -2.0
comp=Z,22nm,1.0s,mb5.0
CBKS **Cedar Bluff** 48.13 78 *e*P P 15 35 37.4 -2.1
CBKS pmax pmax
comp=Z,36nm,0.9s,mb5.4
CBKS **Cedar Bluff** 48.13 78 *e*P P 15 35 37.4 -2.1
comp=Z,36nm,0.9s,mb5.4
DL2 **Dalian** 48.86 283 P P 15 35 44.3 -0.8
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
SPB4 **Spitsbergen Ar** 49.69 359 *e*P P 15 35 48.7 -2.2
DAG **Danmarks Havn** 49.70 9⇑ *i*P P 15 35 50.0 -1.1
DAG pmax pmax
comp=Z,50nm,0.8s,mb5.6
DAG **Danmarks Havn** 49.70 9⇑ *i*P P 15 35 50.0 -1.1
comp=Z,50nm,0.8s,mb5.6
KSU1 **Kansas State U** 49.81 75 *e*P P 15 35 51.0 -1.4
comp=Z,18nm,0.8s,mb5.1
SUMG **Summit** 50.61 17 *e*P P 15 35 57.7 -0.3
comp=Z,143nm,1.0s,mb5.8
TLY **Talaya** 50.82 307 P P 15 36 00.7 +0.8
comp=Z,264nm,0.8s,mb6.2,SNR=7.5
TLY **Talaya** 50.82 307 *e*P P 15 35 59.7 -0.2
TLY *e* 15 43 07.9
TLY pmax pmax
comp=Z,47nm,1.0s,mb5.4
TLY **Talaya** 50.82 307 *e*P P 15 35 59.7 -0.1
comp=Z,34nm,0.8s,mb5.3
JFWS **Jewell Farm** 51.06 68 *e*P P 15 35 58.9 -2.9
JFWS pmax pmax
comp=Z,19nm,0.7s,mb5.1
JFWS **Jewell Farm** 51.06 68 *e*P P 15 35 58.9 -2.9
comp=Z,19nm,0.7s,mb5.1
BJI **Beijing** 51.35 288 P P 15 36 04.5 +0.5
BJI AMB AMB
comp=Z,61nm,0.8s,mb5.6
BJT **Baijiatuau** 51.37 288 *e*P P 15 36 04.4 +0.3
BJT pmax pmax
comp=Z,45nm,0.8s
BJT **Baijiatuau** 51.37 288 *e*P P 15 36 04.4 +0.3
comp=Z,45nm,0.8s,mb5.5
WMOK **Wichita Mounta** 51.39 81 *e*P P 15 36 03.6 -0.8
WMOK pmax pmax
comp=Z,22nm,0.8s,mb5.1
WMOK **Wichita Mounta** 51.39 81 *e*P P 15 36 03.6 -0.8
comp=Z,22nm,0.8s,mb5.1
ULN **Ulaanbaatar** 51.45 301 ⇓P P 15 35 04.4 -0.2
SNR=14
ULN **Ulaanbaatar** 51.45 301⇑ *i*P P 15 36 04.0 -0.6
ULN pmax pmax
comp=Z,46nm,0.8s,mb5.5
ULN **Ulaanbaatar** 51.45 301⇑ *i*P P 15 36 04.0 -0.6
comp=Z,46nm,0.8s,mb5.5
ZAK **Zakamensk** 51.81 305 *e*P P 15 36 05.5 -1.8
ZAK *e* 15 37 20.2
ZAK pmax pmax
comp=Z,16nm,1.4s,mb4.8
SONM **Songino Array** 51.81 301 P P 15 36 07.8 +0.4
comp=Z,33nm,1.0s,mb5.2,baz=47,slow=8.3,SNR=23
SONM PcP PcP 15 37 20.0 -0.1
comp=Z,5.2nm,0.7s,baz=102,slow=2.1,SNR=2.8
MOY **Mondy** 52.12 308 *e*P P 15 36 09.6 0.0
MOY pmax pmax
comp=Z,37nm,1.1s,mb5.2
TXAR **Lajitas Array** 52.15 90 P P 15 36 09.3 -0.8
comp=Z,17nm,0.9s,mb5.0,baz=298,slow=4.7,SNR=33
TXAR **Lajitas Array** 52.15 90 P P 15 36 09.3 -0.8
HDIL **Hopedale** 53.13 69 *e*P P 15 36 14.8 -2.4
comp=Z,26nm,0.7s,mb5.3
TIA **Tai'an** 53.32 284 ⇑P P 15 36 17.5 -1.2
HHC **Hu-ho-hao-te** 53.48 292 *e*P P 15 36 20.0 +0.2
HHC AP pP 15 36 30.3 +2.0
HHC XP sP 15 36 34.0 +2.4
HHC PP PP 15 38 21.3 +1.2
HHC S S 15 43 47.0 -3.4
HHC XS sS 15 44 03.3 -1.1
HHC SCS ScS 15 46 03.3 -3.7
HHC SS SS 15 47 26.0 -4.2
HHC AMB AMB
comp=Z,31nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,703nm,9.8s
HHC LR LR
comp=N,2μm,14.3s,MS5.3
HHC LR LR
comp=E,1μm,14.3s,MS5.3
HHC LR LR
comp=Z,1μm,17.8s,MS4.9
JCT **Junction City** 53.71 86 *e*P P 15 36 17.1 -4.5
JCT pmax pmax
comp=Z,14nm,0.3s,mb5.4
JCT **Junction City** 53.71 86 *e*P P 15 36 17.1 -4.5
comp=Z,14nm,0.3s,mb5.4
FVM **French Village** 54.19 72 *e*P P 15 36 21.2 -3.8
FVM pmax pmax
comp=Z,25nm,0.9s,mb5.1
FVM **French Village** 54.19 72 *e*P P 15 36 21.2 -3.8
comp=Z,25nm,0.9s,mb5.1
BTO **Baotou** 54.52 292 *e*P P 15 36 27.5 +0.2
MIAR **Mount Ida** 54.66 78 *e*P P 15 36 27.0 -1.5
MIAR pmax pmax
comp=Z,29nm,1.1s,mb5.2
MIAR **Mount Ida** 54.66 78 *e*P P 15 36 27.0 -1.5
comp=Z,29nm,1.1s,mb5.2
SCHQ **Schefferville** 55.03 44 P P 15 36 30.1 -0.7
comp=Z,29nm,0.9s,mb5.3,baz=319,slow=7.9,SNR=24
SCHQ **Schefferville** 55.03 44 *e*P P 15 36 30.0 -0.8
comp=Z,39nm,0.9s,mb5.4
OLIL **Olney** 55.03 70 *e*P P 15 36 29.4 -1.7
comp=Z,18nm,0.6s,mb5.3
NJ2 **Nanjing** 55.14 279 *e*P P 15 36 34.5 +2.5
NJ2 AMB AMB
comp=Z,50nm,0.8s,mb5.6
USIN **University of** 55.80 71 *e*P P 15 36 34.8 -1.9
comp=Z,34nm,0.7s,mb5.5

HVS Khovu-Aksy 55.92 311 *eP* **P 15 36 37.3 0.0**
SADO Sadowa 55.94 59 P **P 15 36 36.3 -1.2**
comp=Z,9,7nm,0.8s,mb4.9,baz=308,slow=7.3,SNR=6.6
OXF Oxford 57.16 75 *eP* **P 15 36 45.0 -1.3**
comp=Z,114nm,1.0s,mb5.9
KEV Kevo 57.67 354 *ep* **P 15 36 47.2 -2.2**
comp=Z,38nm,0.8s,mb5.5
KEV Kevo 57.67 354 *eP* **P 15 36 47.2 -2.2**
KEV pmax pmax
comp=Z,38nm,0.8s,mb5.5
NVS Novosibirsk 57.82 320⇑ *iP* **P 15 36 48.8 -1.9**
NVS pmax pmax
comp=Z,30nm,1.0s,mb5.3
NVS pmax pmax
comp=N,28nm,1.9s
NVS pmax pmax
comp=E,40nm,1.9s
ZALV Zalesovo Beam 57.83 318 P **P 15 36 50.2 -0.6**
comp=E,9.6nm,0.7s,mb4.9,baz=38,slow=7.5,SNR=40
ZALV PcP PcP 15 37 42.5 -0.5
comp=E,4.3nm,0.7s,baz=15,slow=6.2,SNR=3.8
ZALV Zalesovo Beam 57.83 318 P **P 15 36 50.2 -0.6**
ZALV PcP PcP 15 37 42.5 -0.5
ARCES ARCESS Array B 57.99 354 P **P 15 36 50.9 -0.8**
comp=E,37nm,0.8s,mb5.4,baz=19,slow=7.7,SNR=38
ARCES PcP PcP 15 37 42.6 -0.8
comp=E,8.3nm,0.8s,baz=12,slow=6.2,SNR=3.7
ARE0 ARCESS Array S 57.99 354 *eP* **P 15 36 50.6 -1.1**
LVZ Lovozero 58.83 350 P **P 15 36 57.0 -0.5**
comp=E,779nm,0.9s,mb6.7,SNR=11
LVZ Lovozero 58.83 350⇑ *eP* **P 15 36 56.6 -0.9**
LVZ pmax pmax
comp=Z,139nm,1.0s,mb5.9
LVZ Lovozero 58.83 350⇑ *eP* **P 15 36 56.7 -0.8**
WHN Wuhan 58.93 281 ⇑P **P 15 36 58.5 -0.3**
APA Apatity 59.27 350⇑ *iP* **P 15 37 03.0 +2.4**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
APA MLR MLR
comp=Z,2μm,16.0s,MS5.2
LRAL Lakeview Retre 59.62 74 *eP* **P 15 37 01.4 -2.2**
comp=Z,9.1nm,0.8s,mb4.9
TKL Tuckaleechee C 59.65 70 P **P 15 37 01.6 -2.1**
comp=Z,3.7nm,0.7s,mb4.5,baz=263,slow=8.3,SNR=4.1
XAN Xi'an 59.67 287 P **P 15 37 04.0 +0.1**
XAN AP pP 15 37 12.5 0.0
XAN PP PP 15 39 15.0 -0.4
XAN S **S 15 45 11.5 -1.0**
XAN SS SS 15 49 08.5 +0.6
XAN AMB AMB
comp=Z,23nm,1.1s,mb5.1
XAN LR LR
comp=N,251nm,18.0s,MS4.8
XAN LR LR
comp=E,702nm,19.5s,MS4.8
XAN LR LR
comp=Z,1μm,21.5s,MS4.9
SSLB Suanglung 59.81 270 *eP* **P 15 37 03.7 -1.2**
comp=Z,74nm,0.9s,mb5.7
BLA Blacksburg 60.46 66 *eP* **P 15 37 08.3 -1.0**
BLA pmax pmax
comp=Z,41nm,0.9s,mb5.5
BLA Blacksburg 60.46 66 *eP* **P 15 37 08.3 -0.9**
comp=Z,41nm,0.9s,mb5.5
GTA Gaotai 61.01 298 P **P 15 37 12.5 -0.5**
GTA AP pP 15 37 22.5 +0.9
GTA XP sP 15 37 27.0 +2.1
GTA PP PP 15 39 30.3 +3.2
GTA S **S 15 45 23.8 -5.7**
GTA XS sS 15 45 39.3 -4.4
GTA SS SS 15 49 23.5 -5.1
GTA AMB AMB
comp=Z,54nm,1.0s,mb5.6
GTA AMB AMB
comp=Z,170nm,6.8s
GTA LR LR
comp=N,922nm,16.6s,MS5.4
GTA LR LR
comp=E,2μm,17.8s,MS5.4
GTA LR LR
comp=Z,2μm,20.2s,MS5.2
LZH Lanzhou 61.14 292 ⇓P **P 15 37 14.5 +0.6**
LZH AP pP 15 37 24.8 +2.3
LZH PP PP 15 39 31.0 +2.6
LZH eS **S 15 45 29.8 -1.5**
LZH SS SS 15 49 29.5 -1.3
LZH AMB AMB
comp=Z,114nm,1.0s,mb6.0
LZH AMB AMB
comp=Z,602nm,5.4s
LZH LR LR
comp=N,2μm,16.0s
LZH LR LR
comp=Z,4μm,18.3s,MS5.6
SOKR Solikamsk 62.62 336*c iP* **P 15 37 23.2 -0.2**
SOKR pmax pmax
comp=Z,60nm,0.9s,mb5.7
KURK Kurchatov 62.77 319 *i* P **P 15 37 23.3 -1.3**
comp=Z,182nm,1.0s,mb6.2,SNR=22
KURK Kurchatov 62.77 319 *i* P **P 15 37 23.7 -0.9**
SVE Sverdlovsk 63.97 332⇑ *eP* **P 15 37 32.9 +0.5**
SVE pmax pmax
comp=Z,79nm,1.0s,mb5.7
WMQ Urumqi 64.00 309 P **P 15 37 33.0 +0.1**
WMQ AMB AMB
comp=Z,56nm,1.0s,mb5.5
WMQ LR LR
comp=N,2μm,19.5s,MS5.3
WMQ LR LR
comp=E,1μm,19.5s,MS5.3
WMQ LR LR
comp=Z,995nm,18.0s,MS5.0
JOF Joensuu 64.02 350 *ep* **P 15 37 30.8 -1.8**
comp=Z,41nm,0.8s,mb5.5
JOF Joensuu 64.02 350 *eP* **P 15 37 30.8 -1.8**
JOF pmax pmax
comp=Z,41nm,0.8s,mb5.5
BVAR Borovoye Array 64.05 325 P **P 15 37 32.8 -0.2**
comp=Z,72nm,0.9s,mb5.7,baz=50,slow=6.1,SNR=206
BRVK Borovoye 64.06 325 P **P 15 37 32.2 -0.9**
comp=Z,359nm,0.9s,mb6.4,SNR=35
BRVK Borovoye 64.06 325⇑ *iP* **P 15 37 32.6 -0.5**
BRVK pmax pmax
comp=Z,62nm,0.9s,mb5.6
BRVK Borovoye 64.06 325⇑ *iP* **P 15 37 32.6 -0.5**
comp=Z,62nm,0.9s,mb5.6
MKAR Makanchi Array 64.24 314 P **P 15 37 33.7 -0.7**
comp=Z,26nm,0.8s,mb5.3,baz=50,slow=6.5,SNR=60
MKAR Makanchi Array 64.24 314 P **P 15 37 33.7 -0.7**
ARU Arti 64.89 333 P **P 15 37 38.8 +0.3**
comp=Z,509nm,0.8s,mb6.6,SNR=28
ARU Arti 64.89 333 *eP* **P 15 37 38.0 -0.5**
ARU *eS* **S 15 46 16.8 -0.8**
ARU SS SS 15 50 35.0 +6.7
ARU Arti 64.89 333 *iP* **P 15 37 37.8 -0.7**
comp=Z,105nm,1.0s,mb5.8
CD2 Chengdu 64.94 289 P **P 15 37 39.5 +0.3**
CD2 AP pP 15 37 50.0 +2.1
CD2 XP sP 15 37 53.8 +2.7
CD2 PCP PcP 15 38 12.8 +0.6
CD2 PP PP 15 40 04.3 +2.4
CD2 PCS 15 42 15.5
CD2 S **S 15 46 16.5 -2.4**
CD2 XS sS 15 46 33.5 +0.3
CD2 SS SS 15 50 29.8 -0.5
CD2 AMB AMB
comp=Z,100nm,1.0s,mb5.8
CD2 AMB AMB
comp=Z,790nm,10.8s
CD2 LR LR
comp=N,2μm,18.3s
CD2 LR LR
comp=Z,2μm,18.1s,MS5.3
KLMR Klimovskoe 64.94 345 *eP* **P 15 37 36.4 -2.3**
KLMR pmax pmax
comp=Z,53nm,1.1s,mb5.5
KAF Kangasniemi 65.27 352 *ep* **P 15 37 38.9 -2.0**
comp=Z,88nm,0.8s,mb5.8,baz=6.0,slow=6.1
KAF Kangasniemi 65.27 352 *eP* **P 15 37 38.9 -2.0**
KAF pmax pmax
comp=Z,88nm,0.8s,mb5.8
GYA Guiyang 66.52 283⇑ *iP* **P 15 37 49.5 +0.1**
GYA AP pP 15 38 00.0 +1.9
GYA XP sP 15 38 04.0 +2.6
GYA PCP PcP 15 38 19.8 +1.1
GYA PP PP 15 40 18.0 +2.3
GYA SCP 15 42 18.5
GYA PCS 15 42 24.8
GYA S S 15 46 35.8 -2.5
GYA XS sS 15 46 52.8 +0.2
GYA SKS 15 47 41.5
GYA SS SS 15 50 54.3 -0.7
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.2
GYA AMB AMB
comp=Z,150nm,8.9s
GYA LR LR
comp=N,800nm,18.3s,MS5.1
GYA LR LR
comp=E,730nm,19.0s,MS5.1
GYA LR LR
comp=Z,1μm,17.8s,MS5.1
CMIG Matias Romero 66.60 92 P **P 15 37 48.4 -1.7**
comp=Z,2.1nm,0.7s,mb4.3,baz=1.7,slow=6.5,SNR=4.0
NOA NORSAR Array B 66.94 0 P **P 15 37 51.2 -0.4**
comp=Z,27nm,0.8s,mb5.3,baz=0.3,slow=6.3,SNR=61
TEIG Tepich 68.27 85 P **P 15 37 58.2 -2.4**
comp=Z,11nm,0.9s,mb4.9,baz=181,slow=9.3,SNR=6.2
KONO Kongsberg 68.33 1⇑ *eP* **P 15 37 59.2 -1.1**
VSU Vasula 68.85 352⇑ *iP* **P 15 38 03.2 -0.4**
VSU pmax pmax
comp=Z,129nm,0.7s,mb6.0
VSU Vasula 68.85 352⇑ *iP* **P 15 38 03.3 -0.3**
KMI Kunming 69.85 285 P **P 15 38 10.5 +0.2**
KMI AP pP 15 38 22.8 +3.7
KMI PP PP 15 40 48.3 +3.7
KMI S S 15 47 15.0 -3.0
KMI SS SS 15 51 45.3 -1.2
KMI AMB AMB
comp=Z,43nm,0.9s,mb5.4
KMI LR LR
comp=N,482nm,19.9s,MS4.9
KMI LR LR
comp=E,521nm,18.7s,MS4.9
KMI LR LR
comp=Z,557nm,16.7s,MS4.9
DAV Davao City (W) 69.89 255 LR LR 16 04 33.3
comp=Z,983nm,20.6s,MS5.0,baz=45,slow=32
MOS Moscow 70.13 345 *eP* **P 15 38 08.1 -3.5**
MOS *i* 15 42 36.9
MOS pmax pmax
comp=Z,144nm,0.8s,mb6.0
TKM2 Tokmak 2 70.22 315⇑ *eP* **P 15 38 12.2 -0.1**
TKM2 pmax pmax
comp=Z,36nm,1.3s,mb5.1
TKM2 Tokmak 2 70.22 315 P **P 15 38 12.5 +0.1**
SNR=22
TKM2 Tokmak 2 70.22 315⇑ *eP* **P 15 38 12.2 -0.1**
comp=Z,36nm,1.3s,mb5.1
AKTK Aktyubinsk 70.31 331 P **P 15 38 12.4 -0.3**
AKTO Aktyubinsk 70.31 331 P **P 15 38 12.4 -0.3**
comp=Z,69nm,0.8s,mb5.6,baz=40,slow=6.4,SNR=214
USP Ospenovka 70.40 316 P **P 15 38 13.6 +0.2**
SNR=25
CHMS Chumysh 70.52 316 P **P 15 38 14.4 +0.3**
SNR=16
FRU Bishkek 70.71 316 *eP* **P 15 38 15.5 +0.2**
FRU *e* 15 38 37.5
FRU pmax pmax
comp=Z,110nm,1.8s,mb5.5
KBK Karagaybulak 70.71 316 P **P 15 38 15.6 +0.3**
SNR=35
AB31 Akbulak array 70.75 329 P **P 15 38 14.8 -0.7**
AB31 pmax pmax
comp=Z,57nm,0.7s,mb5.6
OBN Obninsk 70.90 345 P **P 15 38 15.6 -0.7**
comp=Z,656nm,0.8s,mb6.6,SNR=5.4
OBN Obninsk 70.90 345⇑ *eP* **P 15 38 15.2 -1.1**
OBN *e* 15 38 26.7
OBN *e* 15 38 34.4
OBN *eS* S 15 47 27.8 -1.7
OBN pmax pmax
comp=Z,98nm,0.8s,mb5.8
OBN MLR MLR
comp=Z,600nm,17.0s,MS4.9
OBN Obninsk 70.90 345 *eP* **P 15 38 15.2 -1.1**
comp=Z,82nm,0.8s,mb5.7
AAK Ala-Archa 70.92 316 P **P 15 38 17.0 +0.3**
SNR=44
KZA Kyzart 71.05 315 P **P 15 38 18.0 +0.6**
SNR=24
EKS2 Erkin-Say 71.20 316 P **P 15 38 18.7 +0.3**
SNR=34
EKS2 Erkin-Say 71.20 316⇑ *eP* **P 15 38 18.4 +0.1**
comp=Z,34nm,0.9s,mb5.3
PPT Papeete 71.54 161 LR LR 16 04 18.7
comp=Z,653nm,18.1s,MS4.9,baz=302,slow=31
AML Almayashu 71.67 316 P **P 15 38 22.3 +1.1**
SNR=28
AML Almayashu 71.67 316⇑ *iP* **P 15 38 21.8 +0.7**
comp=Z,32nm,0.9s,mb5.3
ISAL Salakas 71.76 351 *eP* **P 15 38 21.2 -0.3**
IDID Didziasalis 71.95 351 *eP* **P 15 38 22.1 -0.5**
IIGN Ignalina 71.97 351 *eP* **P 15 38 22.0 -0.8**
KK31 Karatay Array 72.19 319⇑ *eP* **P 15 38 23.7 -0.5**
KK31 pmax pmax
comp=Z,45nm,0.9s,mb5.4
KK31 Karatay Array 72.19 319⇑ *eP* **P 15 38 23.8 -0.4**
PMG Port Moresby 72.32 226 P **P 15 38 24.3 -1.0**
comp=Z,13nm,0.9s,mb4.9,baz=45,slow=6.8,SNR=6.5
PMG Port Moresby 72.32 226⇑ *eP* **P 15 38 24.0 -1.3**
PMG pmax pmax
comp=Z,16nm,1.0s
PMG Port Moresby 72.32 226⇑ *eP* **P 15 38 23.7 -1.6**
comp=Z,28nm,0.8s,mb5.2
MNK Minsk 72.65 350 *eP* **P 15 38 24.0 -2.8**
DMUB Kingscourt 72.98 11 *eP* **P 15 38 27.8 -1.0**
LSA Lhasa 72.99 297 P **P 15 38 30.5 +1.3**
LSA AMB AMB
comp=Z,50nm,0.9s,mb5.4
LSA Lhasa 72.99 297⇑ *iP* **P 15 38 30.1 +0.9**
LSA pmax pmax
comp=Z,83nm,1.1s,mb5.6
LSA Lhasa 72.99 297⇑ *iP* **P 15 38 30.1 +0.9**
comp=Z,83nm,1.1s,mb5.6
SUW Suwalki 73.55 353 *eP* **P 15 38 31.3 -0.8**
SUW Suwalki 73.55 353 *eP* **P 15 38 31.3 -0.8**
TGUH Tegucigalpa,Un 73.59 88 P **P 15 38 33.1 +0.1**
comp=Z,46nm,1.0s,mb5.4
DLF Lyons Farm 73.62 11 *eP* **P 15 38 28.2 -4.3**
VRHR Novokhopersk 73.84 341 *eP* **P 15 38 32.9 -1.0**
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.6
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.4s
BSEG Bad Segeberg 74.06 1 *eP* **P 15 38 34.9 -0.2**
BSEG pmax pmax
comp=Z,43nm,1.0s,mb5.3
BSEG Bad Segeberg 74.06 1 *eP* **P 15 38 34.9 -0.2**
comp=Z,43nm,1.0s,mb5.3
VSR Storozhevoye 74.20 342 *eP* **P 15 38 35.2 -0.8**
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,9.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD Divnogorie 74.42 342 *eP* **P 15 38 35.7 -1.5**
VORD pmax pmax
comp=Z,40nm,0.8s,mb5.4
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
GKP Gorka Klasztor 74.63 356 *eP* **P 15 38 38.8 +0.3**
GKP Gorka Klasztor 74.63 356 *eP* **P 15 38 38.8 +0.4**
NRDL Niedersach Rie 75.50 1 *eP* **P 15 38 43.0 -0.5**
comp=Z,52nm,1.3s,mb5.3
IBBN Ibbenburen 75.65 2 *eP* **P 15 38 44.2 -0.1**
comp=Z,77nm,1.0s,mb5.6
SHL Shillong 75.79 293⇑ *iP* **P 15 38 46.0 +0.4**
WTSB Wilderswijk 75.96 3 *eP* **P 15 38 46.3 +0.2**
comp=Z,44nm,1.1s,mb5.3
CLZ Clausthal 76.16 1 *eP* **P 15 38 47.4 +0.2**
CLZ pmax pmax
comp=Z,58nm,1.0s,mb5.5
CLZ Clausthal 76.16 1 *eP* **P 15 38 47.4 +0.2**
comp=Z,58nm,1.0s,mb5.5
AKASG Malin Array Be 76.23 349 P **P 15 38 46.5 -1.2**
comp=Z,28nm,0.6s,mb5.4,baz=12,slow=5.8,SNR=72
AKASG Malin Array Be 76.23 349 P **P 15 38 46.5 -1.2**
AKBB Malin Array Si 76.23 349⇑ *iP* **P 15 38 46.3 -1.4**
KIEV Kiev 76.24 349⇑ *iP* **P 15 38 46.4 -1.3**
KIEV pmax pmax
comp=Z,50nm,1.0s,mb5.4
KIEV Kiev 76.24 349⇑ *iP* **P 15 38 46.4 -1.3**
comp=Z,50nm,1.0s,mb5.4
BUG Bochum-Univer 76.50 3 *eP* **P 15 38 48.5 -0.7**
comp=Z,42nm,0.9s,mb5.4
KKTK Khon Kaen 76.51 279 ⇓P **P 15 38 50.5 +0.8**
comp=Z,556nm,0.9s,mb6.5
CLL Collm 76.69 359⇑ *iP* **P 15 38 50.1 -0.2**
CLL *e* pP 15 38 57.0 -2.1
CLL pmax pmax
comp=Z,31nm,1.0s,mb5.2
CLL Collm 76.69 359 *eP* **P 15 38 49.6 -0.7**
comp=Z,31nm,1.0s,mb5.2
CLL Collm 76.69 359⇑ *iP* **P 15 38 50.1 -0.2**
comp=Z,31nm,1.0s,mb5.2
CLL *es*P sP 15 38 57.0 -5.3
TAPN Taplejung 76.70 297 *eP* **P 15 38 50.8 +0.1**
comp=Z,108nm,1.1s,mb5.7
CHG Chiang Mai 76.92 284⇑ P **P 15 38 51.8 -0.3**
comp=Z,26nm,0.7s,mb5.3
CHTO Chiang Mai 76.92 284⇑ *iP* **P 15 38 51.6 -0.5**
CHTO pmax pmax
comp=Z,36nm,1.4s,mb5.1
CHTO Chiang Mai 76.92 284⇑ *iP* **P 15 38 51.6 -0.5**
comp=Z,36nm,1.4s,mb5.1
UCC Uccle 77.03 5 P **P 15 38 51.8 -0.4**
KSP Ksiaz 77.09 357 *eP* **P 15 38 52.7 +0.2**
KSP Ksiaz 77.09 357⇑ *eP* **P 15 38 52.5 0.0**
KSP *ep*P pP 15 39 00.6 -0.7
BRG Berggiesshubel 77.12 358 *i* P **P 15 38 52.7 0.0**
BRG pmax pmax
comp=Z,23nm,1.1s,mb5.0
BRG Berggiesshubel 77.12 358 *eP* **P 15 38 52.3 -0.4**
comp=Z,38nm,1.1s,mb5.2
BRG Berggiesshubel 77.12 358 *i* P **P 15 38 52.7 0.0**
comp=Z,23nm,1.1s,mb5.0
HGN Heimansgroeve 77.13 4⇑ *eP* **P 15 38 52.6 -0.1**
comp=Z,66nm,1.2s,mb5.4
CMAR Chiang Mai Arr 77.20 284 P **P 15 38 53.8 +0.1**
comp=Z,39nm,0.9s,mb5.4,baz=26,slow=6.5,SNR=215
GUN Gumba 77.25 299 *eP* **P 15 38 54.1 +0.3**
comp=Z,123nm,0.7s,mb5.9
ODAN Odare 77.26 297 *eP* **P 15 38 53.8 -0.1**
comp=Z,86nm,1.1s,mb5.6
JIRN Jiri 77.28 299 *eP* **P 15 38 54.4 +0.4**
comp=Z,105nm,0.7s,mb5.8
MEM Membach 77.29 4 P **P 15 38 53.0 -0.6**
comp=Z,30nm,1.1s,mb5.1
SNF Seneffe 77.31 5 P **P 15 38 53.8 0.0**
comp=Z,11nm,1.3s,mb4.6
MOX Moxa 77.36 360 *eP* **P 15 38 54.0 -0.1**
comp=Z,55nm,1.1s,mb5.4
MOX Moxa 77.36 360 *eP* **P 15 38 54.0 -0.1**
MOX pmax pmax
comp=Z,55nm,1.1s,mb5.4
MOX Moxa 77.36 360 *eP* **P 15 38 53.8 -0.3**
comp=Z,44nm,1.0s,mb5.3
UPC Upice 77.44 357 *eP* **P 15 38 54.4 -0.1**
UPC *ep*P pP 15 39 04.0 +0.7
BCLA Clavier 77.45 4 P **P 15 38 54.4 -0.1**
comp=Z,25nm,1.3s,mb5.0
PVCC Panska Ves 77.45 358 *eP* **P 15 38 55.3 +0.8**
OJC Ojcow 77.56 355 *eP* **P 15 38 55.5 +0.4**
DPC Dobruska-Polom 77.58 357 *eP* **P 15 38 55.8 +0.5**
DPC *ep*P pP 15 39 07.5 +3.4
TANN Tannenbergstha 77.59 359 *eP* **P 15 38 55.3 0.0**
comp=Z,238nm,2.7s,mb5.7
RAMN Ramite 77.62 298 *eP* **P 15 38 55.8 -0.1**
comp=Z,136nm,0.8s,mb5.9
LVV L'vov 77.65 352 *i* P **P 15 38 55.2 -0.4**
KKN Kakani 77.66 300 *eP* **P 15 38 56.3 +0.2**
comp=Z,38nm,0.7s,mb5.4
DOU Dourbes 77.74 5 P **P 15 38 56.2 +0.1**
comp=Z,25nm,1.2s,mb5.0
GIVF Givet 77.75 4⇑ *iP* **P 15 38 56.1 -0.1**
comp=Z,102nm,1.0s,mb5.4
GIVF Givet 77.75 4⇑ *iP* **P 15 38 56.1 -0.1**
GIVF pmax pmax
comp=Z,51nm,1.0s,mb5.4
GIVF Givet 77.75 4⇑ *iP* **P 15 38 56.1 -0.1**
comp=Z,51nm,1.0s,mb5.4
TNS Taunus Mts 77.75 2 *eP* **P 15 38 56.0 -0.2**
TNS pmax pmax
comp=Z,38nm,1.1s,mb5.2
TNS Taunus Mts 77.75 2 *eP* **P 15 38 56.0 -0.2**
comp=Z,38nm,1.1s,mb5.2
BAIF Baives 77.76 5⇑ *iP* **P 15 38 56.4 +0.1**
comp=Z,55nm,0.9s,mb5.2
BAIF Baives 77.76 5⇑ *iP* **P 15 38 56.4 +0.1**
BAIF pmax pmax
comp=Z,27nm,0.9s,mb5.2
BAIF Baives 77.76 5⇑ *iP* **P 15 38 56.4 +0.1**
comp=Z,27nm,0.9s,mb5.2
PKI Pulchoki 77.77 299 *eP* **P 15 38 56.6 -0.1**
PKIN Phulchoki 77.77 299 *eP* **P 15 38 56.6 -0.1**
comp=Z,43nm,0.7s,mb5.5
NKC Novy Kostel 77.78 359 *eP* **P 15 38 56.7 +0.3**
GKN Gorkha 77.84 300 *eP* **P 15 38 56.9 -0.2**
comp=Z,95nm,0.9s,mb5.7
DMN Daman 77.90 300 *eP* **P 15 38 57.7 +0.3**
comp=Z,92nm,1.0s,mb5.7
KWP Kalwaria 77.94 353 *eP* **P 15 38 57.7 +0.4**
KWP Kalwaria 77.94 353⇑ *iP* **P 15 38 57.5 +0.2**
KWP Kalwaria 77.94 353 *eP* **P 15 38 57.7 +0.4**
PRU Pruhonice 77.99 358 *eP* **P 15 38 57.7 +0.1**
OKC Ostrava-Krasne 78.02 356 *eP* **P 15 38 58.2 +0.5**
OKC *ep*P pP 15 39 05.7 -0.9
DANN Dangsing 78.02 301 *eP* **P 15 38 58.4 +0.3**
comp=Z,140nm,0.7s,mb6.0
MANZ Manzenberg 78.02 360 *eP* **P 15 38 57.6 -0.1**
comp=Z,29nm,1.2s,mb5.1
ABH Alteburg 78.07 3 *eP* **P 15 38 58.1 +0.1**
RUP Ruppelstein 78.24 3 *eP* **P 15 38 58.8 -0.1**
WLF Walferdange 78.24 4 P **P 15 38 58.9 -0.1**
WLF Walferdange 78.24 4⇑ *eP* **P 15 38 59.2 +0.2**
WLF pmax pmax
comp=Z,17nm,0.8s,mb5.0
WLF Walferdange 78.24 4 *eP* **P 15 38 59.1 +0.1**
comp=Z,41nm,1.0s,mb5.3
WLF Walferdange 78.24 4⇑ *eP* **P 15 38 59.2 +0.3**
comp=Z,17nm,0.8s,mb5.0
ROTZ Rotzenmuhle 78.24 360 *eP* **P 15 38 59.3 +0.3**
comp=Z,33nm,1.2s,mb5.1
STHS Stebnicka Huta 78.26 354 *i* P **P 15 39 00.1 +1.0**
STHS pmax pmax
comp=Z,45nm,1.0s,mb5.3
STHS Stebnicka Huta 78.26 354 *i* P **P 15 39 00.1 +1.0**
comp=Z,45nm,1.0s,mb5.3
GRA1 Grafenberg Arr 78.32 0 *eP* **P 15 38 59.7 +0.3**
comp=Z,70nm,1.0s,mb5.5
GRF Grafenberg Arr 78.32 0 *eP* **P 15 38 59.7 +0.3**
GRF pmax pmax
comp=Z,70nm,1.0s,mb5.5
GRF Grafenberg Arr 78.32 0 *eP* **P 15 38 59.7 +0.3**
GRF pmax pmax
comp=Z,70nm,1.0s,mb5.5
GRF Grafenberg Arr 78.32 0 *eP* **P 15 38 59.7 +0.3**
comp=Z,70nm,1.0s,mb5.5
NIE Niedzica 78.32 354 *eP* **P 15 38 59.9 +0.5**
TOD Tromm 78.38 2 *eP* **P 15 38 59.6 -0.1**
KOLN Koldanda 78.57 301 *eP* **P 15 39 01.1 -0.1**
comp=Z,50nm,0.9s,mb5.4
VRAC Vranov 78.61 357⇑ *iP* **P 15 39 01.5 +0.5**
VRAC Vranov 78.61 357 P **P 15 39 01.7 +0.7**
TREC Trest 78.66 357 *eP* **P 15 39 01.4 +0.1**
FLN La Foliniere 78.72 8⇑ *iP* **P 15 39 01.2 -0.4**
comp=Z,90nm,1.1s,mb5.3
FLN La Foliniere 78.72 8⇑ *iP* **P 15 39 01.2 -0.4**
FLN pmax pmax
comp=Z,45nm,1.1s,mb5.3
FLN La Foliniere 78.72 8⇑ *iP* **P 15 39 01.2 -0.4**
comp=Z,45nm,1.1s,mb5.3
THN Thein Dam 78.74 309 *ex* x 15 39 00.8
CRVS Cervenica-Dubn 78.76 353 *i* P **P 15 39 02.1 +0.3**
CRVS pmax pmax
comp=Z,142nm,2.4s,mb5.5
CRVS Cervenica-Dubn 78.76 353 *i* P **P 15 39 02.1 +0.3**
comp=Z,142nm,2.4s,mb5.5
WET Wettzell 78.86 359 *eP* **P 15 39 02.7 +0.3**
WET pmax pmax
comp=Z,36nm,1.3s,mb5.1

WET Wettzell 78.86 359 *eP* **P 15 39 02.7 +0.3**
comp=Z,36nm,1.3s,mb5.1

KHC Kasperske Hvr 78.87 359 *eP* **P 15 39 02.4 0.0**
KHC *epP* pP 15 39 14.5 +3.2

ROSF Rostrenen 78.88 10⇑ *iP* **P 15 39 02.3 -0.2**
comp=Z,97nm,1.2s,mb5.3

ROSF Rostrenen 78.88 10⇑ *iP* **P 15 39 02.3 -0.2**
ROSF pmax pmax
comp=Z,49nm,1.2s,mb5.3

ROSF Rostrenen 78.88 10⇑ *iP* **P 15 39 02.3 -0.2**
comp=Z,49nm,1.2s,mb5.3

LDF La Druitiere 78.92 8⇑ *iP* **P 15 39 02.3 -0.4**
comp=Z,66nm,0.9s,mb5.3

LDF La Druitiere 78.92 8⇑ *iP* **P 15 39 02.3 -0.4**
LDF pmax pmax
comp=Z,33nm,0.9s,mb5.3

LDF La Druitiere 78.92 8⇑ *iP* **P 15 39 02.3 -0.4**
comp=Z,33nm,0.9s,mb5.3

UZH Uzhgorod 78.97 353⇓ *jP* **P 15 39 02.0 -1.0**
UZH *j* 15 39 13.8
LANF Langenberg 78.98 3 *eP* **P 15 39 03.3 +0.3**

SGMF Saint Gilles 79.03 10⇑ *iP* **P 15 39 03.2 -0.1**
comp=Z,102nm,1.0s,mb5.4

SGMF Saint Gilles 79.03 10⇑ *iP* **P 15 39 03.2 -0.1**
SGMF pmax pmax
comp=Z,51nm,1.0s,mb5.4

SGMF Saint Gilles 79.03 10⇑ *iP* **P 15 39 03.2 -0.1**
comp=Z,51nm,1.0s,mb5.4

GRR Gorron 79.06 8⇑ *iP* **P 15 39 03.3 -0.2**
comp=Z,72nm,0.9s,mb5.3

GRR Gorron 79.06 8⇑ *iP* **P 15 39 03.3 -0.2**
GRR pmax pmax
comp=Z,36nm,0.9s,mb5.3

GRR Gorron 79.06 8⇑ *iP* **P 15 39 03.3 -0.2**
comp=Z,36nm,0.9s,mb5.3

GEC2 GERESS Array S 79.15 359 *eP* **P 15 39 04.0 0.0**
GEC2 pmax pmax
comp=Z,40nm,1.1s,mb5.3

GEC2 GERESS Array S 79.15 359 *eP* **P 15 39 04.0 0.0**
comp=Z,40nm,1.1s,mb5.3

GERES GERESS Array S 79.15 359 P **P 15 39 04.5 +0.5**
comp=Z,18nm,0.8s,mb5.0,baz=5.5,slow=4.2,SNR=112

STU Stuttgart 79.22 2⇑ *eP* **P 15 39 04.3 0.0**
STU pmax pmax
comp=Z,38nm,0.9s,mb5.3

STU Stuttgart 79.22 2 *eP* **P 15 39 04.1 -0.2**
comp=Z,47nm,1.0s,mb5.4

STU Stuttgart 79.22 2⇑ *eP* **P 15 39 04.3 -0.1**
comp=Z,38nm,0.9s,mb5.3

KOLL Kolacno 79.27 355 *iP* **P 15 39 05.5 +0.9**

QUIF Quistinic 79.30 10⇑ *iP* **P 15 39 04.7 -0.1**
comp=Z,87nm,1.2s,mb5.2

QUIF Quistinic 79.30 10⇑ *iP* **P 15 39 04.7 -0.1**
QUIF pmax pmax
comp=Z,43nm,1.3s,mb5.2

QUIF Quistinic 79.30 10⇑ *iP* **P 15 39 04.7 -0.1**
comp=Z,43nm,1.3s,mb5.2

VYHS Vyhne 79.33 355 *iP* **P 15 39 05.5 +0.5**
VYHS pmax pmax
comp=Z,39nm,1.0s,mb5.3

VYHS Vyhne 79.33 355 *iP* **P 15 39 05.5 +0.5**
comp=Z,39nm,1.0s,mb5.3

MEZF Maizieres J'vi 79.36 4⇑ *iP* **P 15 39 05.3 +0.2**
comp=Z,59nm,1.0s,mb5.2

MEZF Maizieres J'vi 79.36 4⇑ *iP* **P 15 39 05.3 +0.2**
comp=Z,59nm,1.0s,mb5.5

SMOL Smolenice 79.38 356 *iP* **P 15 39 06.8 +1.6**

SDDR Presa de Saban 79.42 73 *eP* **P 15 39 05.3 -0.6**
comp=Z,34nm,1.4s,mb5.1

TRPA Tarpa 79.45 353⇑ *iP* **P 15 39 05.9 +0.3**

CDF Champ du Feu 79.53 3⇑ *iP* **P 15 39 06.3 +0.2**
comp=Z,77nm,1.0s,mb5.3

CDF Champ du Feu 79.53 3⇑ *iP* **P 15 39 06.3 +0.2**
CDF pmax pmax
comp=Z,39nm,1.0s,mb5.3

CDF Champ du Feu 79.53 3⇑ *iP* **P 15 39 06.3 +0.2**
comp=Z,38nm,1.0s,mb5.3

BFO Black Forest 79.64 2 P **P 15 39 07.7 +1.0**
comp=Z,190nm,1.0s,mb6.0,SNR=12

BFO Black Forest 79.64 2 *eP* **P 15 39 06.5 -0.2**
BFO pmax pmax
comp=Z,37nm,1.0s,mb5.3

BFO Black Forest 79.64 2 *eP* **P 15 39 06.5 -0.2**
comp=Z,37nm,1.0s,mb5.3

THEF They Montfort 79.67 4 *eP* **P 15 39 06.8 0.0**

BUR08 Bucovina Ar. S 79.69 351⇑ *iP* **P 15 39 06.5 -0.5**

ZST Bratislava 79.71 356 *iP* **P 15 39 08.4 +1.4**
ZST pmax pmax
comp=Z,69nm,1.0s,mb5.5

ZST Bratislava 79.71 356 *iP* **P 15 39 08.4 +1.4**
comp=Z,69nm,1.0s,mb5.5
ZST *e* 16 06 04.9

BURAR Bucovina Array 79.72 351⇑ *iP* **P 15 39 07.0 -0.1**

BURAR Bucovina Array 79.72 351⇑ *iP* **P 15 39 07.0 -0.1**

ECH Echery 79.72 3⇑ *eP* **P 15 39 07.2 +0.1**
ECH pmax pmax
comp=Z,60nm,0.9s,mb5.5

ECH Echery 79.72 3⇑ *eP* **P 15 39 07.2 +0.1**
comp=Z,60nm,0.9s,mb5.5

LIBD Limburg 79.80 3 *eP* **P 15 39 07.9 +0.4**

PSZ Piszkesteto 79.84 354⇓ *eP* **P 15 39 08.5 +0.7**

PSZ Piszkesteto 79.84 354⇑ *iP* **P 15 39 08.2 +0.4**

PSZ Piszkesteto 79.84 354⇑ *iP* **P 15 39 08.2 +0.5**
comp=Z,49nm,1.0s,mb5.4

FUR Furstenfeldbru 79.85 0 *eP* **P 15 39 07.9 +0.1**
FUR pmax pmax
comp=Z,84nm,1.2s,mb5.5

FUR Furstenfeldbru 79.85 0 *eP* **P 15 39 07.9 +0.1**
comp=Z,84nm,1.2s,mb5.5

SPAK Spaichingen-Ko 79.88 2 *eP* **P 15 39 08.3 +0.3**

HAU Haudompre 79.91 4⇑ *iP* **P 15 39 08.2 +0.1**
comp=Z,91nm,1.0s,mb5.4

HAU Haudompre 79.91 4⇑ *iP* **P 15 39 08.2 +0.1**
HAU pmax pmax
comp=Z,46nm,1.0s,mb5.4

HAU Haudompre 79.91 4⇑ *iP* **P 15 39 08.2 +0.1**
comp=Z,46nm,1.0s,mb5.4

KIS Kishinev 79.92 348 *eP* **P 15 39 07.0 -1.2**

KBL Kabul 80.02 315⇑ *iP* **P 15 39 07.6 -1.3**
KBL pmax pmax
comp=Z,63nm,0.9s,mb5.5

KBL Kabul 80.02 315⇑ *iP* **P 15 39 07.6 -1.3**
comp=Z,63nm,0.9s,mb5.5

CONA Conrad Observa 80.02 357 *iP* **P 15 39 09.5 +0.8**
comp=Z,74nm,1.0s,mb5.6,SNR=51

CSNA Conrad Observa 80.02 357⇑ *ipP* **P 15 39 09.6 +0.9**
comp=Z,69nm,1.0s,mb5.5

MOF Molkenrain 80.09 3 *eP* **P 15 39 09.2 +0.1**

FELD Feldberg im Sc 80.09 2 *eP* **P 15 39 09.2 +0.1**

HINF Hinteralfeld 80.11 3⇑ *iP* **P 15 39 09.2 0.0**
comp=Z,69nm,0.9s,mb5.3

HINF Hinteralfeld 80.11 3⇑ *iP* **P 15 39 09.2 0.0**
HINF pmax pmax
comp=Z,35nm,0.9s,mb5.3

HINF Hinteralfeld 80.11 3⇑ *iP* **P 15 39 09.2 0.0**
comp=Z,34nm,0.9s,mb5.3

MOA Molln 80.14 358⇑ *iP* **P 15 39 09.6 +0.3**
comp=Z,25nm,1.0s,mb5.1,SNR=17

RJOB Jochberg 80.27 359 *eP* **P 15 39 10.1 0.0**
comp=Z,40nm,0.9s,mb5.3

BUD Budapest 80.33 355⇓ *eP* **P 15 39 11.8 +1.4**

KIV Kislovodsk 80.38 338 P **P 15 39 11.0 +0.3**
comp=Z,530nm,0.9s,mb6.5,SNR=19

KIV Kislovodsk 80.38 338 *eP* **P 15 39 10.7 0.0**
KIV pmax pmax
comp=Z,91nm,1.0s,mb5.7

KIV Kislovodsk 80.38 338⇑ *iP* **P 15 39 11.0 +0.3**
comp=Z,95nm,1.0s,mb5.7

HYF Humbligny 80.45 6⇑ *iP* **P 15 39 11.4 +0.4**

BBS Basel-Blauen 80.49 3 *eP* **P 15 39 11.1 -0.1**

LOR Lormes 80.52 5⇑ *iP* **P 15 39 11.5 +0.1**
comp=Z,103nm,1.0s,mb5.4

LOR Lormes 80.52 5⇑ *iP* **P 15 39 11.5 +0.1**
LOR pmax pmax
comp=Z,52nm,1.0s,mb5.4

LOR Lormes 80.52 5⇑ *iP* **P 15 39 11.5 +0.1**
comp=Z,52nm,1.0s,mb5.4

RETA Reutte 80.52 1⇓ *jP* **P 15 39 12.0 +0.5**
comp=Z,33nm,0.9s,mb5.2,SNR=20

LOMF Lomont 80.58 3 *eP* **P 15 39 12.2 +0.5**

MOTA Moosalm 80.67 0⇑ *iP* **P 15 39 12.7 +0.5**
comp=Z,70nm,0.9s,mb5.6,SNR=32

WATA Walderalm 80.68 0⇑ *iP* **P 15 39 12.8 +0.6**
comp=Z,53nm,0.9s,mb5.5,SNR=21

ARSA Arzberg 80.71 357⇑ *ipP* **P 15 39 13.3 +0.8**
comp=Z,49nm,0.9s,mb5.4,SNR=19

SSF Saint Saulge 80.71 6⇑ *iP* **P 15 39 12.5 +0.1**
comp=Z,94nm,0.9s,mb5.4

SSF Saint Saulge 80.71 6⇑ *iP* **P 15 39 12.5 +0.1**
SSF pmax pmax
comp=Z,47nm,0.9s,mb5.4

SSF Saint Saulge 80.71 6⇑ *iP* **P 15 39 12.5 +0.1**
comp=Z,47nm,0.9s,mb5.4

DAVA Damuels 80.72 1⇑ *iP* **P 15 39 12.9 +0.4**
comp=Z,33nm,1.0s,mb5.2

WTTA Wattenberg 80.75 360 *ipP* **P 15 39 13.5 +0.8**
comp=Z,71nm,0.9s,mb5.6,SNR=37

DRGR 80.76 352⇑ *iP* **P 15 39 12.4 -0.3**

DRGR 80.76 352 P **P 15 39 12.9 +0.2**

MFF Saint Martin d 80.90 8⇑ *iP* **P 15 39 13.6 +0.2**
comp=Z,163nm,0.9s,mb5.6

MFF Saint Martin d 80.90 8⇑ *iP* **P 15 39 13.6 +0.2**
MFF pmax pmax
comp=Z,81nm,0.9s,mb5.7

MFF Saint Martin d 80.90 8⇑ *iP* **P 15 39 13.6 +0.2**
comp=Z,81nm,0.9s,mb5.7

KBA Koelnbreinsper 80.92 359 *ipP* **P 15 39 14.7 +1.2**
comp=Z,179nm,0.9s,mb6.0,SNR=145

AVF Avril sur Loir 80.97 6⇑ *iP* **P 15 39 13.8 0.0**
comp=Z,87nm,0.9s,mb5.4

AVF Avril sur Loir 80.97 6⇑ *iP* **P 15 39 13.8 0.0**
AVF pmax pmax
comp=Z,43nm,0.9s,mb5.4

AVF Avril sur Loir 80.97 6⇑ *iP* **P 15 39 13.8 0.0**
comp=Z,43nm,0.9s,mb5.4

FETA Feichten 80.99 1⇑ *ipP* **P 15 39 14.8 +0.9**
comp=Z,92nm,0.9s,mb5.7,SNR=81

SMF Signal de Mont 81.14 5⇑ *iP* **P 15 39 14.8 0.0**
comp=Z,147nm,1.0s,mb5.6

SMF Signal de Mont 81.14 5⇑ *iP* **P 15 39 14.8 0.0**
SMF pmax pmax
comp=Z,73nm,1.0s,mb5.6

SMF Signal de Mont 81.14 5⇑ *iP* **P 15 39 14.8 0.0**
comp=Z,73nm,1.0s,mb5.6

SIM Simferopol' 81.14 344⇓ *eP* **P 15 39 08.2 -6.6**
SIM pmax pmax
comp=Z,26nm,1.0s,mb5.1

BGF Bois d'Agland 81.17 6⇑ *iP* **P 15 39 14.9 0.0**
comp=Z,84nm,1.0s,mb5.3

BGF Bois d'Agland 81.17 6⇑ *iP* **P 15 39 14.9 0.0**
BGF pmax pmax
comp=Z,42nm,1.0s,mb5.3

BGF Bois d'Agland 81.17 6⇑ *iP* **P 15 39 14.9 0.0**
comp=Z,42nm,1.0s,mb5.3

ABTA Abfaltersbach 81.26 359⇑ *iP* **P 15 39 15.8 +0.4**
comp=Z,57nm,1.0s,mb5.4,SNR=20

CABF La Chapelle 81.29 4⇑ *iP* **P 15 39 16.2 +0.7**
comp=Z,168nm,1.0s,mb5.6

CABF La Chapelle 81.29 4⇑ *iP* **P 15 39 16.2 +0.7**
CABF pmax pmax
comp=Z,84nm,1.0s,mb5.6

CABF La Chapelle 81.29 4⇑ *iP* **P 15 39 16.2 +0.7**
comp=Z,84nm,1.0s,mb5.6

VRI Vrincioaia 81.29 349⇓ *jP* **P 15 39 15.6 +0.1**

VRI Vrincioaia 81.29 349⇓ *jP* **P 15 39 15.7 +0.1**

SOKA Soboth 81.29 358⇑ *iP* **P 15 39 16.2 +0.6**
comp=Z,98nm,1.0s,mb5.7

PERS Pernice 81.33 358 *iP* **P 15 39 16.4 +0.7**

ODB Odobesti 81.34 349 P **P 15 39 17.1 +1.3**

MYKA Terra Mystica 81.37 359⇑ *iP* **P 15 39 16.2 +0.3**
comp=Z,33nm,1.1s,mb5.2

ABKT Ailbek 81.38 325 P **P 15 39 16.2 0.0**
comp=Z,628nm,0.9s,mb6.5,SNR=35

SOC Sochi 81.39 340 *eP* **P 15 39 15.3 -0.9**

TCF Toulx Ste Croi 81.39 7⇑ *iP* **P 15 39 16.1 0.0**
comp=Z,45nm,0.8s,mb5.1

TCF Toulx Ste Croi 81.39 7⇑ *iP* **P 15 39 16.1 0.0**
TCF pmax pmax
comp=Z,23nm,0.8s,mb5.2

TCF Toulx Ste Croi 81.39 7⇑ *iP* **P 15 39 16.1 0.0**
comp=Z,23nm,0.8s,mb5.2

OBKA Obir 81.47 358⇓ *jP* **P 15 39 17.1 +0.6**
comp=Z,58nm,0.8s,mb5.5,SNR=27

ONI Oni 81.50 337 S **P 15 39 17.3 +0.6**

TUE Stuetta 81.52 2⇑ *iP* **P 15 39 17.8 +1.0**
comp=Z,91nm,1.4s,mb5.5

PKSM Moragy 81.62 355⇑ *iP* **P 15 39 16.6 -0.7**

PKSM Moragy 81.62 355 P **P 15 39 16.8 -0.5**

AGO Saint Agoulin 81.69 6 *eP* **P 15 39 18.3 +0.6**

TLCR 81.70 348⇑ *iP* **P 15 39 17.5 -0.3**

TLCR 81.70 348⇑ P **P 15 39 17.5 -0.3**

PLDF La Plantade 81.80 6 *eP* **P 15 39 19.0 +0.7**

OG05 Jujurieux 81.83 4 *eP* **P 15 39 19.0 +0.6**

VOIR 81.89 350⇑ *iP* **P 15 39 19.5 +0.8**

VOIR 81.89 350 P **P 15 39 19.2 +0.5**

GOR Gori 81.90 336 S **P 15 39 20.5 +1.6**

PYM Petit Puy Mans 81.98 6 *eP* **P 15 39 19.4 +0.2**

MTA Mtatsminda 82.00 336 S **P 15 39 19.8 +0.4**

BZS Buzias 82.02 353⇑ *iP* **P 15 39 18.9 -0.5**

BZS Buzias 82.02 353 P **P 15 39 19.0 -0.4**

DGRG David-gareji 82.08 335 S **P 15 39 15.8 -4.0**

JAVS Javornik 82.10 358 *iP* **P 15 39 19.4 -0.5**

GZR Gura Zlata 82.15 352⇓ *jP* **P 15 39 20.2 +0.1**

GZR Gura Zlata 82.15 352 P **P 15 39 20.2 +0.1**

VISS Visnje 82.17 358 *iP* **P 15 39 19.8 -0.4**

CTA Charters Tower 82.22 222 *eP* **P 15 39 19.9 -0.8**
comp=Z,14nm,0.9s,mb4.9,baz=32,slow=6.6,SNR=8.5

CTA Charters Tower 82.22 222 *eP* **P 15 39 19.6 -1.0**
comp=Z,9.1nm,0.9s,mb4.7
CTA *e* 15 39 30.8

RSL Roselend 82.23 4 *eP* **P 15 39 21.6 +1.1**

COLF Collangettes 82.26 6 *eP* **P 15 39 22.2 +1.5**

HARR Harsova 82.31 348⇑ *iP* **P 15 39 21.3 +0.4**

HARR Harsova 82.31 348 P **P 15 39 21.3 +0.4**

RJF Les Rejaudoux 82.32 7⇑ *iP* **P 15 39 20.8 -0.2**
comp=Z,55nm,1.0s,mb5.2

RJF Les Rejaudoux 82.32 7⇑ *iP* **P 15 39 20.8 -0.2**
RJF pmax pmax
comp=Z,28nm,1.0s,mb5.2

RJF Les Rejaudoux 82.32 7⇑ *iP* **P 15 39 20.8 -0.2**
comp=Z,28nm,1.0s,mb5.1

LPL La Plagne 82.41 3⇑ *iP* **P 15 39 22.9 +1.5**
comp=Z,51nm,1.0s,mb5.1

LPL La Plagne 82.41 3⇑ *iP* **P 15 39 22.9 +1.5**
LPL pmax pmax
comp=Z,26nm,1.0s,mb5.1

LPL La Plagne 82.41 3⇑ *iP* **P 15 39 22.9 +1.5**
comp=Z,26nm,1.0s,mb5.1

LPG La Plagne 82.43 3⇑ *iP* **P 15 39 23.1 +1.6**
comp=Z,35nm,0.8s,mb5.0

LPG La Plagne 82.43 3⇑ *iP* **P 15 39 23.1 +1.6**
LPG pmax pmax
comp=Z,17nm,0.8s,mb5.0

LPG La Plagne 82.43 3⇑ *iP* **P 15 39 23.1 +1.6**
comp=Z,17nm,0.8s,mb5.0

BOJS Bojnci 82.46 357 *iP* **P 15 39 21.2 -0.5**

TIRR Tirgusor 82.47 348⇑ *iP* **P 15 39 21.7 -0.1**

TIRR Tirgusor 82.47 348⇑ P **P 15 39 21.7 -0.1**

LBL Lubilhac 82.52 6 *eP* **P 15 39 22.9 +0.9**

SSB Saint Sauveur 82.54 5 *eP* **P 15 39 22.7 +0.5**

SSB Saint Sauveur 82.54 5 *eP* **P 15 39 21.6 -0.6**
SSB pmax pmax
comp=Z,32nm,0.9s,mb5.3

SSB Saint Sauveur 82.54 5 *eP* **P 15 39 21.6 -0.6**
comp=Z,32nm,0.9s,mb5.3

LFF La Frestale 82.62 8⇑ *iP* **P 15 39 22.8 +0.2**
comp=Z,111nm,0.8s,mb5.6

LFF La Frestale 82.62 8⇑ *iP* **P 15 39 22.8 +0.2**
LFF pmax pmax
comp=Z,56nm,0.8s,mb5.7

LFF La Frestale 82.62 8⇑ *iP* **P 15 39 22.8 +0.2**
comp=Z,56nm,0.8s,mb5.6

GRN Grenoble 82.64 4 *eP* **P 15 39 23.6 +0.9**

GDM Grand'Maison 82.69 4 *eP* **P 15 39 24.0 +1.1**

CAF Calviac 82.74 7⇑ *iP* **P 15 39 23.4 +0.2**
comp=Z,59nm,0.9s,mb5.3

CAF Calviac 82.74 7⇑ *iP* **P 15 39 23.4 +0.2**
CAF pmax pmax
comp=Z,29nm,0.9s,mb5.3

CAF Calviac 82.74 7⇑ *iP* **P 15 39 23.4 +0.2**
comp=Z,29nm,0.9s,mb5.3

BNI Bardonecchia 82.87 4 *eP* **P 15 39 25.5 +1.7**
BNI pmax pmax
comp=Z,54nm,0.8s,mb5.6

BNI Bardonecchia 82.87 4 *eP* **P 15 39 25.5 +1.6**
comp=Z,54nm,0.8s,mb5.6

ORIF Oris-en-Rattie 82.97 4⇑ *iP* **P 15 39 25.3 +0.9**
comp=Z,38nm,0.7s,mb5.2

ORIF Oris-en-Rattie 82.97 4⇑ *iP* **P 15 39 25.3 +0.9**
ORIF pmax pmax
comp=Z,19nm,0.7s,mb5.2

ORIF Oris-en-Rattie 82.97 4⇑ *iP* **P 15 39 25.3 +0.9**
comp=Z,19nm,0.7s,mb5.2

VIVF Saint-Julien-l 82.97 5⇑ *iP* **P 15 39 24.9 +0.5**
comp=Z,55nm,0.9s,mb5.3

VIVF Saint-Julien-l 82.97 5⇑ *iP* **P 15 39 24.9 +0.5**
VIVF pmax pmax
comp=Z,28nm,0.9s,mb5.3

VIVF Saint-Julien-l 82.97 5⇑ *iP* **P 15 39 24.9 +0.5**
comp=Z,28nm,0.9s,mb5.3

OG22 Abries 83.11 3 *eP* **P 15 39 26.8 +1.7**

MBDF Montbardon 83.20 3⇑ *iP* **P 15 39 27.0 +1.4**
comp=Z,108nm,0.9s,mb5.6

MBDF Montbardon 83.20 3⇑ *iP* **P 15 39 27.0 +1.4**
MBDF pmax pmax
comp=Z,54nm,0.9s,mb5.6

MBDF Montbardon 83.20 3⇑ *iP* **P 15 39 27.0 +1.4**
comp=Z,54nm,0.9s,mb5.6

DAGI Agillar 83.29 337 *iP* **P 15 39 26.7 +0.6**

SURF Saint Ours 83.44 3 *eP* **P 15 39 28.6 +1.8**

GNI Garni 83.47 335⇓ *jP* **P 15 39 27.9 +0.8**
SNR=7.6

GNI Garni 83.47 335 *eP* **P 15 39 27.5 +0.5**
GNI pmax pmax
comp=Z,65nm,1.3s

GNI Garni 83.47 335 *eP* **P 15 39 27.5 +0.4**
comp=Z,66nm,1.3s,mb5.5

DDEM Demirkent 83.50 337 *iP* **P 15 39 28.1 +0.9**

KSM Kuching 83.52 264 *eP* **P 15 39 26.3 -1.3**
comp=Z,45nm,1.0s,mb5.6

OG25 Le Caire 83.53 4 *eP* **P 15 39 28.2 +0.9**

DIGO Kars 83.56 336 *iP* **P 15 39 29.2 +1.7**

LASF Ste Croix 83.70 6⇑ *iP* **P 15 39 28.9 +0.7**
comp=Z,37nm,1.0s,mb5.2

VLC Villacollemand 83.85 1 *eP* **P 15 39 29.2 +0.3**
comp=Z,30nm,0.9s,mb5.4

SMRF Simiane la Rot 83.90 4⇑ *iP* **P 15 39 30.4 +1.2**
comp=Z,122nm,1.2s,mb5.6

SMRF Simiane la Rot 83.90 4⇑ *iP* **P 15 39 30.4 +1.2**
comp=Z,122nm,1.2s,mb5.9

TOUF Mont Tournerai 83.93 3 *eP* **P 15 39 30.3 +1.0**

AUTN L'Aution 83.95 3 *eP* **P 15 39 30.0 +0.6**

SAOF Saorge 83.96 3 *eP* **P 15 39 29.8 +0.3**

VILF Villemus 84.03 4 *eP* **P 15 39 31.0 +1.2**

MVIF Mont Vial 84.04 3 *eP* **P 15 39 30.8 +0.9**

PRAF Pradon 84.05 5 *eP* **P 15 39 31.2 +1.3**

LUCF Luceram 84.05 3 *eP* **P 15 39 30.7 +0.8**

REVF Revere 84.20 3 *eP* **P 15 39 31.0 +0.3**

GRSN GIRESUNGRSN 84.25 340 *iP* **P 15 39 31.3 +0.3**

SJPF Ste Jean 84.25 9⇑ *iP* **P 15 39 31.7 +0.7**
comp=Z,52nm,0.9s,mb5.3

SJPF Ste Jean 84.25 9⇑ *iP* **P 15 39 31.7 +0.7**
SJPF pmax pmax
comp=Z,26nm,0.9s,mb5.4

SJPF Ste Jean 84.25 9⇑ *iP* **P 15 39 31.7 +0.7**
comp=Z,26nm,0.9s,mb5.4

HOMI Horasan 84.27 337 *iP* **P 15 39 32.6 +1.5**

TAVF Tavernes 84.28 4 *eP* **P 15 39 32.3 +1.2**

MTLF Montolieu 84.33 7⇑ *iP* **P 15 39 31.8 +0.4**
comp=Z,103nm,1.0s,mb5.6

MTLF Montolieu 84.33 7⇑ *iP* **P 15 39 31.8 +0.4**
MTLF pmax pmax
comp=Z,52nm,1.0s,mb5.6

MTLF Montolieu 84.33 7⇑ *iP* **P 15 39 31.8 +0.4**
comp=Z,52nm,1.0s,mb5.6

LARF Larrau 84.35 9 *eP* **P 15 39 32.5 +1.0**

FRF La Foret Royal 84.36 4⇑ *iP* **P 15 39 31.9 +0.4**
comp=Z,112nm,0.9s,mb5.7

FRF La Foret Royal 84.36 4⇑ *iP* **P 15 39 31.9 +0.4**
FRF pmax pmax
comp=Z,56nm,0.9s,mb5.7

FRF La Foret Royal 84.36 4⇑ *iP* **P 15 39 31.9 +0.4**
comp=Z,56nm,0.9s,mb5.7

GELF Grande-Etoile 84.48 5 *eP* **P 15 39 33.4 +1.3**

EPF Esparros 84.48 8⇑ *iP* **P 15 39 31.9 -0.3**
comp=Z,64nm,0.9s,mb5.5

EPF Esparros 84.48 8⇑ *iP* **P 15 39 31.9 -0.3**
EPF pmax pmax
comp=Z,32nm,0.9s,mb5.5

EPF Esparros 84.48 8⇑ *iP* **P 15 39 31.9 -0.3**
comp=Z,32nm,0.9s,mb5.5

ETSF Etsaut 84.53 9⇑ *iP* **P 15 39 33.1 +0.7**
comp=Z,86nm,0.8s,mb5.7

ETSF Etsaut 84.53 9⇑ *iP* **P 15 39 33.1 +0.7**
ETSF pmax pmax
comp=Z,43nm,0.8s,mb5.6

ETSF Etsaut 84.53 9⇑ *iP* **P 15 39 33.1 +0.7**
comp=Z,43nm,0.8s,mb5.6

ERZM Erzurum 84.53 337 *iP* **P 15 39 34.2 +1.8**

BERF Bertagne 84.56 4 *eP* **P 15 39 33.6 +1.0**

LMR La Mourre 84.58 4⇑ *iP* **P 15 39 33.2 +0.6**
comp=Z,108nm,1.0s,mb5.6

LMR La Mourre 84.58 4⇑ *iP* **P 15 39 33.2 +0.6**
LMR pmax pmax
comp=Z,54nm,1.0s,mb5.6

LMR La Mourre 84.58 4⇑ *iP* **P 15 39 33.2 +0.6**
comp=Z,54nm,1.0s,mb5.6

BALT Daday 84.59 344 *iP* **P 15 39 34.1 +1.3**

VIEF Viey 84.60 9 *eP* **P 15 39 33.6 +0.8**

KOPT Kop Dagi 84.63 338 *iP* **P 15 39 35.0 +2.1**

RESF Ens 84.70 8 *eP* **P 15 39 34.4 +1.1**

PCAB Cabril 84.77 15 *eP* **P 15 39 33.9 +0.3**

PBRG Braganca 84.87 14 *eP* **P 15 39 34.6 +0.5**
comp=Z,36nm,2.3s,mb5.1

CARF Carcanieres 84.94 7 *eP* **P 15 39 34.8 +0.3**

ILGA Ilgaz 85.00 343 *iP* **P 15 39 36.4 +1.5**

CTKT Corum 85.22 343 *iP* **P 15 39 36.8 +0.8**

MVO Moncorvo 85.45 14 *eP* **P 15 39 37.1 0.0**
comp=Z,36nm,1.8s,mb5.2

BNGL BINGOL 85.49 337 *iP* **P 15 39 38.5 +1.2**

ELDT Eldivan 85.60 343 *iP* **P 15 39 40.1 +2.3**
ELDT *iP* 15 39 40.1

AQU L'Aquila 85.65 359 *eP* **P 15 39 38.1 +0.1**
AQU pmax pmax
comp=Z,78nm,0.8s,mb6.0

AQU L'Aquila 85.65 359 *eP* **P 15 39 38.1 +0.1**
comp=Z,78nm,0.8s,mb6.0

SKO Skopje 85.65 353 *iP* **P 15 39 38.8 +0.7**

HENT Hendek 85.69 345 *iP* **P 15 39 38.6 +0.4**

SGKT Sivrigoynuk 85.75 345 *iP* **P 15 39 40.1 +1.6**

PVIS Viseu 85.76 15 *eP* **P 15 39 38.8 +0.2**
comp=Z,28nm,1.1s,mb5.4

KEMA Kemaliye 85.79 339 *iP* **P 15 39 39.9 +1.1**

STIP Stip 85.87 352 *iP* **P 15 39 38.7 -0.4**

HAKT HAKKARI 86.18 335 *iP* **P 15 39 49.7 +8.9**

VAY Valandovo 86.21 352 *iP* **P 15 39 40.1 -0.7**

KRUS Krusevo 86.27 353 *iP* **P 15 39 41.4 +0.3**

BRTR Keskin Array B 86.30 343 P **P 15 39 41.7 +0.4**
comp=Z,23nm,0.8s,mb5.5,baz=27,slow=2.2,SNR=71

TIR Tirane 86.39 354 *eP* **P 15 39 40.3 -1.4**
TIR pmax pmax
comp=Z,62nm,0.8s,mb5.9

TIR Tirane 86.39 354 *eP* **P 15 39 40.3 -1.4**
comp=Z,62nm,0.8s,mb5.9

KULM Kulim 86.44 274 *eP* **P 15 39 42.3 0.0**
comp=Z,31nm,0.9s,mb5.5

BEST Besiri 86.47 337 *iP* **P 15 39 42.6 +0.5**

OHR Ohrid 86.56 353 *iP* **P 15 39 41.9 -0.6**

BIA Bitola 86.61 353 *iP* **P 15 39 41.8 -1.0**

ULDT Uludag 86.62 347 *iP* **P 15 39 43.5 +0.7**

BORA Eskisehir 86.68 346 *iP* **P 15 39 43.5 +0.4**

PCBR Castelo Branco 86.68 15 *eP* **P 15 39 42.6 -0.6**

MALT Malatya 86.72 339 *eP* **P 15 39 44.1 +0.7**
MALT pmax pmax
comp=Z,13nm,1.1s,mb5.1

MALT Malatya 86.72 339⇑ *iP* **P 15 39 44.2 +0.8**

MALT Malatya 86.72 339 *eP* **P 15 39 44.1 +0.7**
comp=Z,13nm,1.1s,mb5.1

AKCD Akcadag 86.85 340 *iP* **P 15 39 45.5 +1.5**

ESKT Eskisehir 86.97 345 *iP* **P 15 39 45.4 +0.9**

PMRV Marv??o 87.10 15 *eP* **P 15 39 45.2 0.0**

PMAFR Mafra 87.25 16 *eP* **P 15 39 46.3 +0.3**
comp=Z,113nm,2.4s,mb5.7

ESDC Sonseca Array 87.34 12 P **P 15 39 46.4 0.0**
comp=Z,17nm,0.8s,mb5.3,baz=348,slow=4.6,SNR=61

ESLA Sonseca Array 87.34 12 *eP* **P 15 39 45.7 -0.6**
comp=Z,4.1nm,0.8s,mb4.7

PAB San Pablo 87.42 12 *eP* **P 15 39 46.1 -0.6**
PAB pmax pmax
comp=Z,10.0nm,0.8s,mb5.1

PAB San Pablo 87.42 12 *eP* **P 15 39 46.1 -0.6**
comp=Z,10nm,0.8s,mb5.1

WRAB Tennant Creek 87.46 232 *eP* **P 15 39 44.9 -2.1**
WRAB pmax pmax
comp=Z,13nm,0.9s,mb5.2

WRAB Tennant Creek 87.46 232 *eP* **P 15 39 44.9 -2.1**

	comp=Z,13nm,0.9s,mb5.2								
WB2	**Warramunga Arr**	**87.47**	**232**	*e*P		**P**	**15 39 45.5**	**-1.5**
WB2				*e*			15 39 56.8	
WRA	**Warramunga Arr**	**87.47**	**232**	P		**P**	**15 39 45.2**	**-1.9**
	comp=Z,7.7nm,0.9s,mb4.9,baz=39,slow=5.8,SNR=46							
GDZ	**Gediz**	**87.60**	**346**	*i* P		**P**	**15 39 47.5**	**-0.1**
PESTR	**Estremoz**	**87.62**	**15**	*e*P		**P**	**15 39 47.0**	**-0.7**
SDV	**Santo Domingo**	**87.74**	**78**	P		**P**	**15 39 47.7**	**-0.9**
	comp=Z,5.2nm,0.8s,mb4.8,baz=234,slow=0.7,SNR=7.9							
GZT	**Gaziantep**	**87.83**	**340**	*i* P		**P**	**15 39 49.1**	**+0.4**
EVO	**Evora**	**87.88**	**15**	*e*P		**P**	**15 39 49.0**	**0.0**
KHAL	**Karahalli**	**88.30**	**346**	*i* P		**P**	**15 39 50.8**	**-0.2**
MANT	**Manisa**	**88.32**	**347**	*i* P		**P**	**15 39 50.9**	**-0.1**
PBAR	**Barrancos**	**88.38**	**15**	*e*P		**P**	**15 39 50.6**	**-0.7**
	comp=Z,35nm,1.2s,mb5.5							
PBEJ	**Beja**	**88.39**	**15**	*e*P		**P**	**15 39 52.0**	**+0.6**
ISP	**Isparta**	**88.66**	**345**	*e*P		**P**	**15 39 51.7**	**-1.0**
MORF	**Marmelete**	**88.97**	**16**	*e*P		**P**	**15 39 54.5**	**+0.4**
PVAQ	**Vaqueiros**	**89.03**	**15**	*e*P		**P**	**15 39 54.1**	**-0.3**
GOLH	**Golhisar**	**89.40**	**346**	*i* P		**P**	**15 39 55.8**	**-0.4**
PSI	**Prapat**	**89.44**	**274**	P		**P**	**15 39 56.4**	**-0.3**
PSI				LR		LR	16 15 21.7	
	comp=Z,1µm,21.9s,MS5.4,baz=328,slow=32							
ARMA	**Armidale**	**89.54**	**214**	*e*P		**P**	**15 39 56.5**	**-0.1**
ARMA				*e*			15 40 08.2	
HYB	**Hyderabad**	**89.67**	**299**	*i* P		**P**	**15 39 57.0**	**-0.7**
HYB	**Hyderabad**	**89.67**	**299**	*e*P		**P**	**15 39 57.0**	**-0.7**
OTAV	**Otavalo**	**89.78**	**90**	P		**P**	**15 39 56.4**	**-1.8**
FITZ	**Fitzroy Crossi**	**90.37**	**240**	*e*P		**P**	**15 39 58.6**	**-2.1**
	comp=Z,15nm,0.9s,mb5.3							
ASAR	**Alice Springs**	**90.85**	**231**	P		**P**	**15 40 02.0**	**-0.8**
	comp=Z,11nm,0.9s,mb5.2,baz=35,slow=4.4,SNR=71							
CSS	**Prodhromos**	**90.99**	**342**	*e*P		**P**	**15 40 03.0**	**-0.6**
	comp=Z,18nm,0.9s,mb5.4							
POO	**Poona**	**91.23**	**303**	*ex*		x	15 40 02.0	
KEST	**Kesra**	**92.25**	**2**	P		**P**	**15 40 08.9**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.7,baz=28,slow=10,SNR=5.8							
MIB	**Mutribah**	**92.41**	**329**	*e*P		**P**	**15 40 09.5**	**-0.8**
	baz=329							
MIB					AMb	AMB	15 40 11.1	
	comp=Z,107nm,0.8s,mb6.2,baz=329							
NAY	**Al-Naaiem**	**92.95**	**329**	*e*P		**P**	**15 40 11.3**	**-1.5**
	baz=329							
NAY					AMb	AMB	15 40 16.9	
	comp=Z,17nm,1.5s,mb5.2,baz=329							
RDF	**Al-Radifah**	**93.16**	**329**	*e*P		**P**	**15 40 12.8**	**-0.9**
	baz=329							
RDF					AMb	AMB	15 40 16.1	
	comp=Z,51nm,1.0s,mb5.9,baz=329							
STKA	**Stephens Creek**	**94.58**	**221**	P		**P**	**15 40 19.0**	**-0.9**
	comp=Z,2.0nm,0.9s,mb4.5,baz=46,slow=8.0,SNR=4.8							
STKA	**Stephens Creek**	**94.58**	**221**	*e*P		**P**	**15 40 19.6**	**-0.3**
	comp=Z,2.8nm,1.4s,mb4.5							
STKA				*e*			15 40 30.2	
TORD	**Torodi Ar. Bea**	**114.20**	**11**	PKP		PKiKP	15 45 37.4	-1.8
	comp=Z,1.2nm,0.8s,baz=343,slow=2.8,SNR=5.9							
TORD					PKKPab	PKKPab	15 56 22.6	-5.9
	comp=Z,2.0nm,1.1s,baz=182,slow=2.5,SNR=6.0							
DBIC	**Dimbokro**	**119.54**	**19**	PKP		PKPdf	15 45 47.5	-1.9
	comp=Z,2.9nm,0.8s,baz=136,slow=3.0,SNR=5.0							
QSPA	**South Pole Qui**	**142.13**	**180**	*e*PKPpre			15 46 24.3	
TSUM	**Tsumeb**	**146.57**	**350**	*e*PKPdf		PKPdf	15 46 40.0	+0.6
LBTB	**Lobatse**	**150.69**	**333**	*e*PKiKP		PKPbc	15 46 51.1	-0.4
MAW	**Mawson**	**151.24**	**218**	PKPbc		PKPbc	15 46 50.2	-1.2
	comp=Z,9.7nm,0.9s,baz=44,slow=8.4,SNR=7.2							
MAW	**Mawson**	**151.24**	**218**	*e*PKPbc		PKPbc	15 46 49.5	-1.9
BOSA	**Boshof**	**154.19**	**332**	PKP		PKPdf	15 46 49.1	-1.9
	comp=Z,3.3nm,1.0s,baz=89,slow=5.0,SNR=3.5							
BOSA					PKPbc	PKPbc	15 46 59.0	-0.2
	comp=Z,9.4nm,0.9s,baz=314,slow=1.2,SNR=8.3							
BOSA	**Boshof**	**154.19**	**332**	PKP		PKPdf	15 46 49.1	-1.9
BOSA					PKPbc	PKPbc	15 46 59.0	-0.2
SYO	**Syowa Base**	**158.75**	**208**	*es*PKPdf			15 47 10.2	
VNA3	**Neumayer Olymp**	**158.80**	**161**	*e*PKPdf		PKPdf	15 46 57.3	+1.6
VNA3				*e*			15 47 06.8	
VNA2	**Neumayer--Watz**	**159.50**	**162**	*e*PKPdf		PKPdf	15 47 00.5	+4.0
VNA2				*e*			15 47 07.6	
VNA2				*e*			15 47 36.7	
VNA2				*e*			15 47 47.9	
VNA1	**Neumayer--Stat**	**159.55**	**161**	*e*PKPdf		PKPab	15 47 35.6	+0.6
VNA1				*e*			15 47 46.2	
SNAA	**Sanae**	**159.59**	**167**	*e*PKPdf		PKPab	15 47 33.4	-1.8
SNAA				*e*			15 47 44.2	

NEIC ***27*** *15:39:05.2±0.5, 52.30N×168.20W, h10km, mb4.1/6, ML3.5(AEIC), Error ellipse: s-maj=10.0km s-min=6.7km az=158.0*

IDC ***27*** *15:39:06.4±4.4, 52.51N×168.30W, h15km±27km, mb3.8/17, mb1 4.0/18, mb1mx3.9/28, mbtmp3.8/18, ML3.1/1, Error ellipse: s-maj=29.2km s-min=13.8km az=2.0*

ISCJB ***27*** *15:39:08.6±1.3, 52.4N±0.1×168.33W±0.09, h49km±9km, mb3.9/19, Error ellipse: s-maj=18.2km s-min=7.8km az=162.5*

ISC 27 15:39:09.0±1.1**, 5238N**±009×**16829W**±008**, h35**km±9km**, n38**, σ1$01/41**, mb3.9**/19**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.69**	**330**	P	**Pn**	**15 39 22.0**	**-0.1**
NIKO				S	**Sn**	**15 39 34.3**	**+2.7**
OKCE	**Okmok Cone E**	**1.05**	**4**	P	**Pn**	**15 39 27.2**	**+0.1**
OKCD	**Okmok Cone D**	**1.06**	**6**	P	**Pn**	**15 39 27.6**	**+0.3**
UNV	**Unalaska Valle**	**1.82**	**36**	P	**Pn**	**15 39 37.0**	**-0.7**
UNV				S	**Sn**	**15 40 00.3**	**+0.8**
FALS	**False Pass**	**3.82**	**48**	*e*Pn	**Pn**	**15 40 05.8**	**+0.6**
ADK	**Adak**	**5.20**	**268**	*e*Pn	**Pn**	**15 40 24.7**	**+0.6**
ADK				*e*Sn	**Sn**	**15 41 20.6**	**-2.1**
KDAK	**Kodiak Island**	**10.49**	**53**	Pn	**Pn**	**15 41 34.9**	**-1.7**
	0.8nm,0.3s,baz=170,slow=16,SNR=4.4						
KDAK	**Kodiak Island**	**10.49**	**53**	Pn	**Pn**	**15 41 34.9**	**-1.7**
FX1	**Attu Island--F**	**11.28**	**280**	Pn	**Pn**	**15 41 48.2**	**+0.7**
	0.5nm,0.3s,baz=113,slow=18,SNR=4.6						
PMR	**Palmer**	**13.88**	**41**	Pn	**Pn**	**15 42 23.4**	**+0.5**
KTH	**Kantishna Hill**	**14.44**	**32**	*e*Pn	**Pn**	**15 42 31.4**	**+0.9**
	12nm,0.9s						
PAX	**Paxson**	**16.07**	**40**	*e*Pn	**Pn**	**15 42 49.0**	**-2.8**
	3.7nm,0.6s						
COLA	**College**	**16.32**	**32**	*e*Pn	**Pn**	**15 42 53.4**	**-1.7**
	12nm,0.9s						
COLD	**Coldfoot**	**17.33**	**24**	*e*Pn	**Pn**	**15 43 07.3**	**-0.4**
	8.4nm,1.1s						
PETK	**Petropavlovsk-**	**20.50**	**286**	P	**P**	**15 43 43.7**	**+0.1**
	4.2nm,0.6s,baz=83,slow=14,SNR=7.1						
PETK	**Petropavlovsk-**	**20.50**	**286**	P	**P**	**15 43 43.7**	**+0.1**
YKA	**Yellowknife Ar**	**29.74**	**49**	P	**P**	**15 45 11.4**	**-0.1**
	0.5nm,0.8s,mb3.3,baz=269,slow=8.5,SNR=8.4						
YKA				PcP	PcP	15 48 13.0	-1.4
	0.1nm,0.6s,baz=289,slow=2.4,SNR=4.4						
YKA				ScP	ScP	15 51 55.8	+2.5
	0.2nm,0.6s,baz=234,slow=3.0,SNR=2.7						
YKA	**Yellowknife Ar**	**29.74**	**49**	P	**P**	**15 45 11.4**	**-0.1**
YKA				PcP	PcP	15 48 13.0	-1.4
YKA				ScP	ScP	15 51 55.8	+2.5
TIXI	**Tiksi**	**33.07**	**329**	*e*P	**P**	**15 45 40.4**	**-0.3**
	8.4nm,1.7s,mb4.4						
NVAR	**Mina Array Bea**	**37.00**	**92**	P	**P**	**15 46 16.2**	**+1.3**
	0.7nm,0.8s,mb3.6,baz=317,slow=10,SNR=4.0						
PDAR	**Pinedale Array**	**39.75**	**80**	P	**P**	**15 46 38.3**	**+0.4**
	1.2nm,0.9s,mb3.6,baz=309,slow=5.2,SNR=5.6						
KSRS	**Korea Array**	**46.06**	**277**	P	**P**	**15 47 29.8**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=52,slow=6.9,SNR=6.7						
ULN	**Ulaanbaatar**	**51.50**	**301**	P	**P**	**15 48 07.6**	**-3.0**
	2.3nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**52.09**	**90**	P	**P**	**15 48 15.3**	**0.0**
	1.0nm,0.7s,mb3.9,baz=299,slow=5.7,SNR=7.8						
ZALV	**Zalesovo Beam**	**57.86**	**318**	P	**P**	**15 48 56.7**	**+0.1**
	0.4nm,0.3s,mb3.9,baz=13,slow=14,SNR=2.0						
KURK	**Kurchatov**	**62.80**	**319**	P	**P**	**15 49 31.6**	**+1.1**
	0.6nm,0.6s,mb3.9,baz=46,slow=7.9,SNR=4.9						
BVAR	**Borovoye Array**	**64.08**	**325**	P	**P**	**15 49 38.1**	**-0.7**
	1.3nm,0.5s,mb4.2,baz=51,slow=6.4,SNR=11						
BRVK	**Borovoye**	**64.09**	**325**	P	**P**	**15 49 38.5**	**-0.4**
	2.1nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**64.28**	**314**	P	**P**	**15 49 39.7**	**-0.5**
	0.6nm,0.8s,mb3.7,baz=41,slow=11,SNR=4.6						
NOA	**NORSAR Array B**	**66.93**	**0**	P	**P**	**15 49 56.7**	**-0.4**
	1.3nm,0.9s,mb4.0,baz=18,slow=9.3,SNR=3.4						
NOA	**NORSAR Array B**	**66.93**	**0**	P	**P**	**15 49 56.7**	**-0.4**
AKASG	**Malin Array Be**	**76.23**	**349**	P	**P**	**15 50 51.9**	**-1.4**
	1.4nm,0.5s,mb4.2,baz=14,slow=5.8,SNR=5.5						
CMAR	**Chiang Mai Arr**	**77.26**	**284**	P	**P**	**15 50 59.9**	**+0.4**
	1.4nm,0.8s,mb4.0,baz=25,slow=6.9,SNR=9.1						
BRTR	**Keskin Array B**	**86.31**	**343**	P	**P**	**15 51 48.0**	**+1.0**
	1.3nm,0.6s,mb4.3,baz=11,slow=2.0,SNR=6.4						
ESDC	**Sonseca Array**	**87.31**	**12**	P	**P**	**15 51 52.2**	**+0.3**
	0.4nm,0.4s,mb4.0,baz=340,slow=4.0,SNR=5.6						
ESDC	**Sonseca Array**	**87.31**	**12**	P	**P**	**15 51 52.2**	**+0.3**
WRA	**Warramunga Arr**	**87.53**	**232**	P	**P**	**15 51 54.4**	**+1.4**
	0.4nm,0.8s,mb3.7,baz=29,slow=5.7,SNR=2.6						
ASAR	**Alice Springs**	**90.91**	**231**	P	**P**	**15 52 08.8**	**0.0**
	0.3nm,0.9s,mb3.6,baz=5.7,slow=1.9,SNR=2.9						

IDC ***27*** *15:43:58.1±0.8, 52.27N×168.35W, h0km, mb3.9/16, mb1 4.1/17, mb1mx4.0/28, mbtmp3.9/17, ML3.5/1, Error ellipse: s-maj=26.6km s-min=14.1km az=176.0*

ISCJB ***27*** *15:43:59.6±2.5, 52.1N±0.1×168.28W±0.08, h26km±16km, mb3.9/15, Error ellipse: s-maj=18.4km s-min=7.2km az=164.3*

NEIC ***27*** *15:43:60.0, 52.07N×168.27W, h26km, ML3.5(AEIC), After AEIC.*

ISC 27 15:43:59.8±2.0**, 5216N**±007×**16826W**±008**, h13**km±11km**, n32**, σ0$79/35**, mb3.9/15**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.89**	**336**	P	**Pg**	**15 44 16.8**	**-0.3**
NIKO				S	**Sg**	**15 44 28.8**	**+0.1**
OKCE	**Okmok Cone E**	**1.27**	**3**	P	**Pn**	**15 44 23.1**	**-0.2**
OKFG	**Magazine Ridge**	**1.27**	**9**	P	**Pn**	**15 44 23.7**	**+0.5**
OKFG				S	**Sb**	**15 44 40.9**	**+1.1**
OKCD	**Okmok Cone D**	**1.27**	**4**	P	**Pn**	**15 44 23.3**	**-0.1**
UNV	**Unalaska Valle**	**2.00**	**32**	P	**Pn**	**15 44 32.8**	**-0.4**
FALS	**False Pass**	**3.96**	**45**	*e*Pn	**Pn**	**15 44 57.4**	**-2.8**
ADK	**Adak**	**5.21**	**270**	*e*Pn	**Pn**	**15 45 18.0**	**+0.7**
ADK				*e*Sn	**Sn**	**15 46 16.1**	**-1.1**
KDAK	**Kodiak Island**	**10.61**	**52**	Pn	**Pn**	**15 46 31.0**	**-0.4**
	0.9nm,0.3s,baz=108,slow=18,SNR=14						
KDAK	**Kodiak Island**	**10.61**	**52**	Pn	**Pn**	**15 46 31.0**	**-0.4**
FX1	**Attu Island--F**	**11.34**	**281**	Pn	**Pn**	**15 46 42.2**	**+0.8**
	1.1nm,0.3s,baz=236,slow=22,SNR=13						
FX1	**Attu Island--F**	**11.34**	**281**	Pn	**Pn**	**15 46 42.2**	**+0.8**
RC01	**Rabbit Creek A**	**13.52**	**41**	*e*Pn	**Pn**	**15 47 10.2**	**-0.8**
KTH	**Kantishna Hill**	**14.61**	**32**	*e*P	**Pn**	**15 47 27.2**	**+1.2**
PAX	**Paxson**	**16.22**	**39**	*e*Pn	**Pn**	**15 47 46.4**	**-0.8**
COLA	**College**	**16.50**	**32**	*e*Pn	**Pn**	**15 47 50.3**	**-0.3**
PETK	**Petropavlovsk-**	**20.57**	**286**	P	**P**	**15 48 38.1**	**0.0**
	7.4nm,0.5s,baz=83,slow=14,SNR=45						
YKA	**Yellowknife Ar**	**29.87**	**49**	P	**P**	**15 50 07.4**	**+0.9**
	0.3nm,0.5s,mb3.3,baz=277,slow=7.6,SNR=7.3						
PDAR	**Pinedale Array**	**39.77**	**80**	P	**P**	**15 51 32.1**	**0.0**
	0.3nm,0.4s,mb3.4,baz=332,slow=5.5,SNR=3.1						
KSRS	**Korea Array**	**46.11**	**278**	P	**P**	**15 52 24.1**	**+0.6**
	1.7nm,0.8s,mb4.0,baz=57,slow=7.6,SNR=5.8						
ULN	**Ulaanbaatar**	**51.63**	**301**	*e*P	**P**	**15 53 05.3**	**-0.4**
TXAR	**Lajitas Array**	**52.07**	**90**	P	**P**	**15 53 10.7**	**+1.5**
	0.3nm,0.6s,mb3.4,baz=45,slow=0.7,SNR=3.2						
ARCES	**ARCESS Array B**	**58.20**	**354**	P	**P**	**15 53 51.8**	**-1.1**
	4.7nm,1.1s,mb4.5,baz=356,slow=7.4,SNR=4.6						
KURK	**Kurchatov**	**62.98**	**319**	P	**P**	**15 54 25.9**	**+0.1**
	0.5nm,0.5s,mb3.9,baz=46,slow=7.7,SNR=5.6						
BVAR	**Borovoye Array**	**64.27**	**325**	P	**P**	**15 54 33.9**	**-0.3**
	2.0nm,0.7s,mb4.3,baz=53,slow=6.4,SNR=11						
MKAR	**Makanchi Array**	**64.44**	**314**	P	**P**	**15 54 34.6**	**-0.9**
	0.9nm,0.7s,mb3.9,baz=52,slow=7.9,SNR=7.8						
NOA	**NORSAR Array B**	**67.15**	**0**	P	**P**	**15 54 52.0**	**-0.7**
	3.1nm,1.0s,mb4.3,baz=148,slow=22,SNR=3.2						
AKASG	**Malin Array Be**	**76.45**	**349**	P	**P**	**15 55 48.0**	**-0.8**
	2.1nm,0.4s,mb4.4,baz=16,slow=6.1,SNR=6.4						
CMAR	**Chiang Mai Arr**	**77.33**	**284**	P	**P**	**15 55 54.9**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=24,slow=6.1,SNR=8.6						
GERES	**GERESS Array B**	**79.36**	**359**	P	**P**	**15 56 05.6**	**+0.6**
	0.6nm,0.7s,mb3.6,baz=28,slow=6.0,SNR=4.1						
BRTR	**Keskin Array B**	**86.53**	**343**	P	**P**	**15 56 43.6**	**+1.3**
	0.8nm,0.6s,mb4.1,baz=344,slow=2.1,SNR=4.3						
WRA	**Warrmunga Arr**	**87.41**	**233**	P	**P**	**15 56 46.2**	**-0.5**
	0.2nm,0.8s,mb3.4,baz=32,slow=5.4,SNR=3.0						
ASAR	**Alice Springs**	**90.79**	**231**	P	**P**	**15 57 03.0**	**+0.5**
	0.4nm,0.8s,mb3.8,baz=27,slow=4.8,SNR=4.0						

ISCJB ***27*** *15:51:33.0±0.5, 1075N×004×6263W±003, h101km±6km, Error ellipse: s-maj=6.8km s-min=4.1km az=158.5*

FUNV ***27*** *15:51:33.1, 1086N×6251W, h99km, MW3.7*

TRN ***27*** *15:51:35.7, 1079N×6248W, h98km, MD3.5*

NEIC ***27*** *15:51:35.0, 1078N×6250W, h104km, MD3.5(TRN), After TRN.*

ISC 27 15:51:33.9±0.5**, 1076N**×004×**6262W**±003**, h96**km±6km**, n30**, σ1$07/49**, 6C-4D**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.41**	**106**	*e*P	**Pn**	**15 51 48.3**	**-0.3**
GUIV				*e*S	**Sn**	**15 51 59.0**	**-0.5**
CRUV	**Carupano**	**0.61**	**262**	*i*P	**Pn**	**15 51 49.8**	**-0.3**
CRUV				*e*S	**Sn**	**15 52 02.1**	**0.0**
GUNV	**Guanoco**	**0.67**	**208**	*i*P	**Pn**	**15 51 51.3**	**+0.7**
GUNV				*e*S	**Sn**	**15 52 04.9**	**+1.8**
ITEV	**Isla Los Testi**	**0.78**	**320**	*i*P	**Pn**	**15 51 50.8**	**-0.8**
ITEV				*e*S	**Sn**	**15 52 03.3**	**-1.6**
TCE	**Chacachacare**	**0.86**	**94**	*e*P	**Pn**	**15 51 52.9**	**+0.4**
TCE				*e*S	**Sn**	**15 52 06.6**	**+0.2**
TRN	**Trinidad (W)**	**1.20**	**95**	*i*P	**Pn**	**15 51 56.7**	**+0.5**
TRN				*e*S	**Sn**	**15 52 12.3**	**-0.9**
TPP	**Pointe-a-Pierr**	**1.23**	**111**	*e*P	**Pn**	**15 51 57.5**	**+0.8**
TPP				*e*S	**Sn**	**15 52 12.9**	**-0.9**
TPP	**Pointe-a-Pierr**	**1.23**	**111**	*e*P	**Pn**	**15 51 57.5**	**+0.8**
TPP				*e*S	**Sn**	**15 52 14.9**	**+1.1**
TBH	**Brigand Hill**	**1.55**	**100**	*i*P	**Pn**	**15 52 01.4**	**+0.8**
TBH				*e*S	**Sn**	**15 52 20.0**	**-0.8**
TBH	**Brigand Hill**	**1.55**	**100**	*i*P	**Pn**	**15 52 01.4**	**+0.8**
TBH				*e*S	**Sn**	**15 52 22.3**	**+1.5**
GRGR	**Grenville**	**1.66**	**35**	P	**Pn**	**15 52 01.0**	**-0.9**
GRW	**Mount Saint Ca**	**1.68**	**34**	*e*P	**Pn**	**15 52 02.0**	**-0.2**
ORIV	**Oritupano**	**1.85**	**205**	*e*P	**Pn**	**15 52 05.0**	**+0.7**
ORIV				*e*S	**Sn**	**15 52 28.5**	**+1.0**
TPR	**Prospect**	**1.86**	**77**	*e*P	**Pn**	**15 52 04.6**	**+0.1**
TPR				*e*S	**Sn**	**15 52 26.3**	**-1.5**
TPR	**Prospect**	**1.86**	**77**	*e*P	**Pn**	**15 52 04.6**	**+0.1**
TPR				*e*S	**Sn**	**15 52 27.6**	**-0.2**
PCRV	**Puerto La Cruz**	**2.06**	**254**	*i*P	**Pn**	**15 52 07.7**	**+0.6**
TOSP	**Speyside**	**2.12**	**75**	*e*P	**Pn**	**15 52 06.3**	**-1.5**
TOSP				*e*S	**Sn**	**15 52 31.1**	**-2.6**
IBAV	**Isla La Blanqu**	**2.19**	**299**	*i*P	**Pn**	**15 52 08.1**	**-0.7**
FCV	**Fort Charlotte**	**2.74**	**29**	*e*P	**Pn**	**15 52 17.7**	**+1.7**
FCV				*e*S	**Sn**	**15 52 50.7**	**+2.2**
FCV	**Fort Charlotte**	**2.74**	**29**	*e*P	**Pn**	**15 52 17.7**	**+1.7**
FCV				*e*S	**Sn**	**15 52 52.0**	**+3.5**
PRGV	**PARIAGUAN**	**2.81**	**225**	*e*P	**Pn**	**15 52 17.2**	**+0.2**
SVB	**Belmont**	**2.84**	**28**	*e*P	**Pn**	**15 52 19.1**	**+1.8**
SVB				*e*S	**Sn**	**15 52 53.6**	**+2.8**
SVV	**Soufriere Volc**	**2.89**	**28**	*e*P	**Pn**	**15 52 18.2**	**+0.1**
CUPV	**Cœpira**	**3.19**	**258**	*i*P	**Pn**	**15 52 22.4**	**+0.4**
CUPV				*e*S	**Sn**	**15 52 59.6**	**+0.3**
BIRV	**Birongo**	**3.60**	**266**	*e*P	**Pn**	**15 52 28.3**	**+0.8**
MERV	**Las Mercedes**	**3.92**	**248**	*e*P	**Pn**	**15 52 31.6**	**-0.3**
CAOV	**Caicara del Or**	**5.00**	**227**	*e*P	**Pn**	**15 52 45.4**	**-1.1**
LUEV	**Luepa**	**5.02**	**167**	*e*P	**Pn**	**15 52 45.2**	**-1.6**
TURV	**Turiamo**	**5.14**	**267**	*e*P	**Pn**	**15 52 48.3**	**-0.2**
BAUV	**El Baul**	**5.64**	**252**	*e*P	**Pn**	**15 52 53.7**	**-1.5**
BAUV				*e*S	**Sn**	**15 53 55.1**	**-3.5**

BJI ***27*** *15:53:42.2, 5184N×17846E, h76km, mB5.5, mb5.3, Ms5.1, Msz4.8*

MOS ***27*** *15:53:43.5±1.1, 5170N×17864E, h86km, mb5.3/73, MS4.2/5, Error ellipse: s-maj=6.7km s-min=6.1km az=87.5*

ISCJB ***27*** *15:53:43.4±0.1, 5170N±003×17859E±002, h84km, mb5.2/199, Error ellipse: s-maj=4.8km s-min=1.7km az=0.8*

GCMT ***27*** *15:53:44.6±0.2, 5164N×17859E, h84km±2km, MW5.2/100, Moment Tensor Solution. s65,c96; s100,c170; Duration: 1s0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.12±.20; Mθθ=1.89±.23; Mϕϕ 5.01±.20; Mrθ 4.89±.13; Mθϕ=2.83±.18; Mϕr=3.30±.12; Best double couple: M₀7.84700×10¹⁶ NP1:φs196.00000°, δ33.00000°, λ-27.00000°. NP2:φs309.00000°, δ76.00000°, λ-120.00000°. Principal axes: T 8.2270, Plg25.0000°, Azm62.0000°; N -0.7590, Plg29.0000°, Azm317.0000°; P -7.4680, Plg50.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***27*** *15:53:44.6±0.2, 5166N×17861E, mb5.4/133 Error ellipse: s-maj=5.6km s-min=2.7km az=175.0*

IDC ***27*** *15:53:45.0±0.3, 5169N×17864E, h85km±2km, mb4.7/27, mb1 4.9/30, mb1mx4.9/33, mbtmp4.8/30, MS4.2/15, Ms1 4.2/15, ms1mx4.0/46, Error ellipse: s-maj=10.9km s-min=6.7km az=179.0*

DJA ***27*** *15:54:01, 5173N×17849E, h229km, Mw5.6/4*

SZGRF ***27*** *15:54:03.5, 5155N×17920E, h33km, mb4.8, Rat Islands, Aleutian Islands, United States*

ISC 27 15:53:45.4±0.1**, 5174N**±003×**17859E**±002**, h86**km**, h86**km±.6km**:pP-P, n844**, σ0$84/819**, mb5.2/198, 236C-181D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**2.93**	**292**	P	**Pn**	**15 54 29.3**	**-0.5**
SMY				S	**Sn**	**15 55 04.0**	**0.0**
ADK	**Adak**	**2.94**	**85**	*e*P	**Pn**	**15 54 29.5**	**-0.4**
ADK				*e*		15 55 03.4	
ADK	**Adak**	**2.94**	**85**	P	**Pn**	**15 54 29.5**	**-0.4**
ADK				S	**Sn**	**15 55 04.0**	**-0.3**
GSTR	**Great Sitkin T**	**3.33**	**82**	*e*Pn	**Pn**	**15 54 34.9**	**-0.4**
FX1	**Attu Island--F**	**3.52**	**291**	P	**Pn**	**15 54 36.6**	**-1.1**
	212nm,0.3s,baz=194,slow=4.9,SNR=362						
FX1				S	**Sn**	**15 55 16.8**	**-1.5**
	260nm,0.3s,baz=248,slow=22,SNR=4.7						
FX1	**Attu Island--F**	**3.52**	**291**	P	**Pn**	**15 54 36.9**	**-0.9**
FX1				S	**Sn**	**15 55 16.4**	**-1.8**
ATKA	**Atka Island**	**4.49**	**81**	P	**Pn**	**15 54 50.8**	**0.0**
ATKA				S	**Sn**	**15 55 41.7**	**-0.1**
OKCE	**Okmok Cone E**	**8.25**	**73**	P	**Pn**	**15 55 43.8**	**+1.8**
SPIA	**Saint Paul Isl**	**8.48**	**46**	P	**Pn**	**15 55 48.3**	**+3.1**
AKGG	**Akutan Green G**	**9.63**	**69**	P	**Pn**	**15 56 02.8**	**+2.0**
AKLV	**Akutan Long Va**	**9.64**	**69**	P	**Pn**	**15 56 02.5**	**+1.5**
AKUT	**Akutan**	**9.74**	**70**	*e*P	**Pn**	**15 56 03.3**	**+0.9**
	356nm,0.4s						
PET	**Petropavlovsk**	**12.25**	**284**	*e*P	**Pn**	**15 56 37.6**	**+1.2**
PET				*e*S	**Sn**	**15 58 43.2**	**-7.6**
PET				pmax	pmax		
	comp=Z,77nm,1.0s						
PET				smax			
	comp=N,177nm,1.0s						
PET				MLR	MLR		
	comp=Z,1µm,18.0s						
PET	**Petropavlovsk**	**12.25**	**284**	*e*Pn	**Pn**	**15 56 36.2**	**-0.3**
	comp=Z,33nm,0.3s						
PET				*e*Sn	**Sn**	**15 58 42.5**	**-8.3**
PETK	**Petropavlovsk-**	**12.82**	**284**	P	**Pn**	**15 56 45.0**	**+0.9**
	comp=Z,8.3nm,0.3s,baz=99,slow=20,SNR=156						
PETK				S	**Sn**	**15 58 57.3**	**-7.4**
	comp=Z,3.3nm,0.3s,baz=69,slow=20,SNR=3.6						
PETK				LR	L

ERM	**Erimo**	**25.87**	**262**	*e*P		**P**	**15 59 09.1**	**+0.4**
	comp=Z,30nm,0.9s,mb4.7							
ERM				*ep*P		pP	15 59 28.8	+0.6
SKAG	**Skagway**	**26.67**	**55**	*e*P		**P**	**15 59 16.1**	**+0.3**
	comp=Z,95nm,1.4s,mb5.1							
SIT	**Sitka**	**26.93**	**60**	*e*P		**P**	**15 59 17.6**	**-0.5**
SIT				pmax	pmax			
	comp=Z,40nm,0.8s,mb5.0							
SIT	**Sitka**	**26.93**	**60**	*e*P		**P**	**15 59 17.6**	**-0.5**
	comp=Z,40nm,0.8s,mb5.0							
HABR	**Khabarovsk**	**27.80**	**281**	*e*P		**P**	**15 59 25.1**	**-0.9**
HABR				*e**PP		pP	15 59 45.8	+0.2
HABR				*e**SP		sP	15 59 55.8	+0.2
HABR				*e*			16 00 15.5	
HABR				*e*			16 02 38.8	
HABR				*e*S		**S**	**16 04 02.5**	**0.0**
HABR				*e**SS		sS	16 04 38.4	+2.0
HABR				*e*SS		SS	16 05 27.9	-35
HABR				*e*			16 10 03.9	
HABR				pmax	pmax			
	comp=Z,27nm,0.9s,mb4.8							
HABR				pmax	pmax			
	comp=E,16nm,0.9s							
HABR				pmax	pmax			
	comp=N,23nm,1.6s							
HABR				MLR	MLR			
	comp=Z,116nm,12.0s							
HABR				MLR	MLR			
	comp=Z,180nm,13.0s							
YAK	**Yakutsk**	**27.95**	**311**	*e*P		pP	15 59 44.9	-1.9
YAK				pmax	pmax			
	comp=Z,65nm,0.9s,mb5.2							
YAK				pmax	pmax			
	comp=E,42nm,1.0s							
YAK				pmax	pmax			
	comp=N,12nm,1.3s							
YAK	**Yakutsk**	**27.95**	**311**	P		**P**	**15 59 26.0**	**-1.2**
	comp=N,34nm,1.4s,mb4.7							
YAK				*ep*P		pP	15 59 45.8	-1.0
YAK				*e*ScP		ScP	16 06 12.0	-1.0
KLR	**Kul'dur**	**29.51**	**284**⇑	*i*P		**P**	**15 59 37.3**	**-3.9**
KLR				pmax	pmax			
	comp=E,64nm,1.2s							
KLR				pmax	pmax			
	comp=Z,68nm,1.2s,mb5.2							
DLBC	**Dease Lake**	**29.52**	**57**	P		**P**	**15 59 41.9**	**+0.7**
	comp=Z,13nm,0.7s,mb4.7,baz=69,slow=19							
DLBC				ScP		ScP	16 06 17.8	-0.1
	comp=Z,6.2nm,0.9s,baz=28,slow=2.2,SNR=4.9							
DLBC				LR		LR	16 11 56.5	
	comp=Z,806nm,20.1s,baz=83,slow=37							
DLBC	**Dease Lake**	**29.52**	**57**	*e*P		**P**	**15 59 42.0**	**+0.8**
TIXI	**Tiksi**	**29.52**	**331**	P		**P**	**15 59 42.6**	**+1.6**
TIXI				*e**PP		pP	16 00 00.7	0.0
TIXI				*e*			16 06 16.0	
TIXI				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.3							
TIXI	**Tiksi**	**29.52**	**331**	P		**P**	**15 59 42.6**	**+1.6**
	comp=Z,6.1nm,0.7s,mb4.3							
TIXI				*ep*P		pP	16 00 00.7	0.0
TIXI				*e*ScP		ScP	16 06 16.0	-1.8
MAJO	**Matsushiro**	**32.25**	**258**	*e*P		**P**	**16 00 05.3**	**-0.1**
MAJO				*e**PP		pP	16 00 24.2	-1.0
MAJO				*e*			16 02 50.7	
MAJO				pmax	pmax			
	comp=Z,92nm,1.3s,mb5.3							
MAJO	**Matsushiro**	**32.25**	**258**	*e*P		**P**	**16 00 05.3**	**-0.1**
	comp=Z,92nm,1.3s,mb5.3							
MAJO				*ep*P		pP	16 00 24.2	-1.0
MAJO				*e*PcP		PcP	16 02 50.7	-1.1
MAT	**Matsushiro**	**32.25**	**258**	P		**P**	**16 00 05.6**	**+0.2**
MAT				*e*S		**S**	**16 05 21.0**	**+8.7**
MJAR	**Matsushiro Arr**	**32.25**	**258**	P		**P**	**16 00 05.7**	**+0.4**
	comp=Z,12nm,0.8s,mb4.7,baz=49,slow=7.7,SNR=39							
MJAR				PcP		PcP	16 02 51.3	-0.4
	comp=Z,3.0nm,0.6s,baz=78,slow=1.5,SNR=7.6							
MJAR				pPcP			16 03 15.3	
	comp=Z,0.8nm,0.4s,baz=65,slow=1.6,SNR=2.6							
MJAR				ScP		ScP	16 06 28.4	+1.0
	comp=Z,2.9nm,1.0s,baz=90,slow=1.1,SNR=6.1							
MJAR				LR		LR	16 10 45.3	
	comp=Z,274nm,20.2s,baz=60,slow=32							
MJAR	**Matsushiro Arr**	**32.25**	**258**	P		**P**	**16 00 05.7**	**+0.3**
MJAR							16 02 51.3	
MJAR				pmax	pmax			
	comp=Z,12nm,0.8s							
MJAR	**Matsushiro Arr**	**32.25**	**258**	P		**P**	**16 00 05.7**	**+0.4**
MJAR				PcP		PcP	16 02 51.3	-0.4
MJAR				pPcP			16 03 15.3	
MJAR				ScP		ScP	16 06 28.4	+1.0
MJAR				LR		LR	16 10 45.3	
MDJ	**Mudanjiang**	**32.91**	**277**	P		**P**	**16 00 10.3**	**-0.8**
MDJ				AP		pP	16 00 30.0	-0.9
MDJ				XP		sP	16 00 38.5	-2.3
MDJ				PCP		PcP	16 02 52.8	-0.6
MDJ				S		**S**	**16 05 23.0**	**+0.6**
MDJ				XS		sS	16 05 55.8	-0.7
MDJ				AMB	AMB			
	comp=Z,11nm,0.8s,mb4.7							
MDJ				AMB	AMB			
	comp=Z,864nm,14.4s							
MDJ				LR	LR			
	comp=N,459nm,16.1s							
MDJ				LR	LR			
	comp=E,369nm,13.4s							
MDJ				LR	LR			
	comp=Z,531nm,13.4s							
CN2	**Changchun**	**35.88**	**279**	*e*P		**P**	**16 00 35.5**	**-1.2**
CN2				*e*AP		pP	16 00 55.5	-1.2
CN2				*e*S		**S**	**16 06 06.5**	**-1.6**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
CN2				AMB	AMB			
	comp=Z,700nm,7.0s							
CN2				LR	LR			
	comp=N,300nm,12.0s							
CN2				LR	LR			
	comp=E,300nm,12.0s							
CN2				LR	LR			
	comp=Z,500nm,14.0s							
YKA	**Yellowknife Ar**	**36.16**	**46**	P		**P**	**16 00 39.2**	**+0.3**
	comp=Z,57nm,0.7s,mb5.6,baz=283,slow=8.2,SNR=625							
YKA				pP		pP	16 00 59.8	+0.9
	comp=Z,26nm,0.6s,baz=282,slow=8.2,SNR=8.4							
YKA				ScP		ScP	16 06 39.7	-1.1
	comp=Z,6.5nm,0.8s,baz=296,slow=3.2,SNR=17							
YKA				tx		tx	16 07 19.8	
	comp=Z,1.0nm,0.6s,baz=291,slow=3.5,SNR=4.6							
YKA				LR		LR	16 15 18.3	
	comp=Z,56nm,18.8s,baz=150,slow=36							
YKA	**Yellowknife Ar**	**36.16**	**46**	P		**P**	**16 00 39.2**	**+0.3**
YKA				*PP		pP	16 00 59.8	+0.9
YKA				pmax	pmax			
	comp=Z,57nm,0.7s							
YKA				MLR	MLR			
	comp=Z,56nm,18.8s							
YKA	**Yellowknife Ar**	**36.16**	**46**	P		**P**	**16 00 39.2**	**+0.3**
YKA				pP		pP	16 00 59.9	+0.9
YKA				ScP		ScP	16 06 39.7	-1.1
YKA				LR		LR	16 15 18.3	
BOD	**Bodaibo**	**36.45**	**306**⇑	*i*P		**P**	**16 00 40.3**	**-1.1**
BOD				pmax	pmax			
	comp=Z,22nm,0.8s,mb5.1							
HIA	**Hailar**	**36.63**	**290**	*d i*P		**P**	**16 00 42.4**	**-0.7**
HIA	**Hailar**	**36.63**	**290**	*e*P		**P**	**16 00 42.3**	**-0.7**
	comp=Z,45nm,1.3s,mb5.2							
HIA				*ep*P		pP	16 01 01.4	-1.7
B04A	**Port Angeles**	**36.64**	**72**	⇑P		**P**	**16 00 43.0**	**-0.1**
	baz=36							
VDB	**Vedder Mountai**	**37.02**	**70**	P		**P**	**16 00 45.9**	**-0.5**
A05A	**Maple Falls**	**37.04**	**70**	⇓P		**P**	**16 00 46.1**	**-0.5**
	baz=37,SNR=8.3							
C04A	**Brinnon**	**37.12**	**72**	⇑P		**P**	**16 00 47.1**	**-0.1**
	baz=37,SNR=10							
B05A	**Bryant**	**37.38**	**71**	⇓P		**P**	**16 00 48.9**	**-0.5**
	baz=37,SNR=8.3							
D04A	**Dobbs Creek Ra**	**37.51**	**73**	⇓P		**P**	**16 00 51.2**	**+0.6**
	baz=37							
KSRS	**Korea Array**	**38.01**	**268**	P		**P**	**16 00 55.8**	**+0.9**
	comp=Z,20nm,0.8s,mb5.0,baz=58,slow=8.2,SNR=67							
KSRS				pP		pP	16 01 16.4	+1.5
	comp=Z,11nm,0.9s,baz=55,slow=8.1,SNR=6.3							
KSRS				PcP		PcP	16 03 09.1	+0.5
	comp=Z,6.0nm,0.8s,baz=48,slow=3.3,SNR=8.6							
KSRS				pPcP			16 03 31.3	
	comp=Z,2.9nm,0.8s,baz=70,slow=3.1,SNR=4.3							
KSRS				LR		LR	16 15 30.9	
	comp=Z,366nm,18.3s,baz=7.6,slow=34							
G03A	**Yamhill**	**38.13**	**76**	⇓P		**P**	**16 00 56.1**	**+0.4**
	baz=38							
C06A	**Tall Timber Ra**	**38.25**	**71**	⇓P		**P**	**16 00 56.7**	**0.0**
	baz=38							
LON	**Longmire**	**38.28**	**73**	P		**P**	**16 00 57.3**	**+0.3**
LON				pmax	pmax			
	comp=Z,34nm,0.7s,mb5.3							
LON	**Longmire**	**38.28**	**73**	*e*P		**P**	**16 00 56.7**	**-0.3**
	comp=Z,34nm,0.7s,mb5.3							
LON				*ep*P		pP	16 01 26.0	+8.8
RCM	**Mount Rainier-**	**38.29**	**73**	P		**P**	**16 00 58.2**	**+1.2**
B07A	**Winthrop**	**38.44**	**70**	⇓P		**P**	**16 00 58.0**	**-0.4**
	baz=38,SNR=24							
H03A	**Soap Creek Ran**	**38.46**	**77**	⇑P		**P**	**16 00 59.1**	**+0.6**
	baz=38							
I02A	**Mapleton**	**38.49**	**78**	⇑P		**P**	**16 00 59.3**	**+0.5**
	baz=38							
D06A	**Cle Elum**	**38.63**	**72**	⇑P		**P**	**16 00 59.8**	**-0.1**
	baz=38,SNR=19							
G04A	**Mulino**	**38.67**	**76**	⇑P		**P**	**16 01 00.7**	**+0.3**
	baz=38							
A08A	**Turner Farm, O**	**38.70**	**69**	⇑P		**P**	**16 00 60.0**	**-0.5**
	baz=38,SNR=19							
TBM	**Table Mountain**	**38.79**	**72**	P		**P**	**16 01 01.1**	**-0.2**
I03A	**Eugene**	**38.84**	**78**	⇑P		**P**	**16 01 02.7**	**+1.0**
	baz=39							
C07A	**Waterville**	**38.85**	**71**	⇑P		**P**	**16 01 01.0**	**-0.7**
	baz=39,SNR=13							
E06A	**Yakima**	**38.88**	**73**	⇑P		**P**	**16 01 02.2**	**+0.2**
	baz=39							
F05A	**White Salmon**	**38.93**	**74**	⇓P		**P**	**16 01 02.4**	**0.0**
	baz=39							
EBG	**Ellensburg**	**38.94**	**72**	P		**P**	**16 01 02.8**	**+0.3**
B08A	**Colville Reser**	**38.95**	**70**	⇑P		**P**	**16 01 02.1**	**-0.5**
	baz=39,SNR=24							
A09A	**Danville**	**39.09**	**68**	⇑P		**P**	**16 01 03.5**	**-0.2**
	baz=39,SNR=35							
HOOD	**Mount Hood Mea**	**39.11**	**75**	*e*P		**P**	**16 01 03.0**	**-1.0**
	comp=Z,35nm,0.6s,mb5.4							
H04A	**Detroit Lake**	**39.12**	**76**	⇑P		**P**	**16 01 04.2**	**+0.1**
	baz=39,SNR=7.9							
D07A	**Quincy**	**39.15**	**72**	⇓P		**P**	**16 01 03.9**	**-0.4**
	baz=39,SNR=15							
G05A	**Wamic**	**39.35**	**75**	⇑P		**P**	**16 01 06.4**	**+0.4**
	baz=39,SNR=5.8							
F06A	**Goldendale**	**39.40**	**74**	⇑P		**P**	**16 01 06.1**	**-0.2**
	baz=39,SNR=11							
C08A	**Higginbotham F**	**39.40**	**70**	⇑P		**P**	**16 01 05.6**	**-0.8**
	baz=39,SNR=14							
E07A	**Sunnyside**	**39.54**	**72**	⇑P		**P**	**16 01 07.3**	**-0.3**
	baz=39,SNR=12							
B09A	**Rice**	**39.61**	**69**	⇓P		**P**	**16 01 07.8**	**-0.3**
	baz=39,SNR=28							
A10A	**Northport**	**39.67**	**68**	⇑P		**P**	**16 01 08.2**	**-0.4**
	baz=40,SNR=30							
H05A	**Madras**	**39.72**	**76**	⇓P		**P**	**16 01 09.0**	**0.0**
	baz=40							
G06A	**Carlson Farm,**	**39.77**	**75**	⇓P		**P**	**16 01 09.4**	**0.0**
	baz=40							
HUMO	**Hull Mountain**	**39.79**	**79**	*e*P		**P**	**16 01 10.2**	**+0.6**
	comp=Z,40nm,0.9s,mb5.2							
HUMO				*ep*P		pP	16 01 31.1	+1.2
OD2	**Odessa Site #2**	**39.79**	**71**	P		**P**	**16 01 08.8**	**-0.8**
BBOR	**Butler Butte**	**39.80**	**79**	P		**P**	**16 01 11.3**	**+1.6**
HAWA	**Hanford**	**39.82**	**72**	*e*P		**P**	**16 01 09.4**	**-0.4**
	comp=Z,68nm,0.7s,mb5.6							
D08A	**Wollman Farm,**	**39.84**	**71**	⇓P		**P**	**16 01 09.3**	**-0.6**
	baz=40,SNR=14							
F07A	**Phinny Hill Vi**	**39.84**	**73**	⇑P		**P**	**16 01 10.0**	**0.0**
	baz=40,SNR=22							
C09A	**Chrisman Ranch**	**39.84**	**70**	⇑P		**P**	**16 01 09.4**	**-0.6**
	baz=40,SNR=20							
H2OWA	**Water**	**39.88**	**72**	P		**P**	**16 01 10.2**	**-0.1**
I05A	**Bend**	**39.96**	**76**	⇓P		**P**	**16 01 11.2**	**+0.1**
	baz=40,SNR=7.4							
E08A	**Dider Farm, El**	**40.05**	**72**	⇑P		**P**	**16 01 11.3**	**-0.4**
	baz=40,SNR=23							
EDM	**Edmonton**	**40.05**	**60**	P		**P**	**16 01 11.1**	**-0.6**
EDM	**Edmonton**	**40.05**	**60**	*e*P		**P**	**16 01 10.8**	**-0.8**
EDM				*e*ScP		ScP	16 06 54.1	-1.7
RES	**Resolute Bay**	**40.09**	**24**	P		**P**	**16 01 12.5**	**+0.8**
RES				pmax	pmax			
	comp=Z,67nm,1.2s,mb5.3							
RES	**Resolute Bay**	**40.09**	**24**	*e*P		**P**	**16 01 12.1**	**+0.4**
	comp=Z,67nm,1.2s,mb5.3							
RES				*ep*P		pP	16 01 33.1	+1.1
RES				*e*ScP		ScP	16 06 53.7	-1.9
D09A	**Jones Farm, Ri**	**40.20**	**71**	⇑P		**P**	**16 01 12.2**	**-0.8**
	baz=40,SNR=10							
B10A	**Chitwood Farm,**	**40.20**	**69**	⇓P		**P**	**16 01 12.3**	**-0.6**
	baz=40,SNR=7.0							
H06A	**Lindquist Farm**	**40.21**	**75**	⇓P		**P**	**16 01 13.0**	**-0.1**
	baz=40,SNR=7.4							
NEW	**Newport**	**40.28**	**69**⇑	*e*P		**P**	**16 01 12.6**	**-1.0**
NEW				pmax	pmax			
	comp=Z,51nm,0.7s							
NEW	**Newport**	**40.28**	**69**⇑	*e*P		**P**	**16 01 12.6**	**-1.0**
	comp=Z,51nm,0.7s,mb5.5							
G07A	**Ruggs Ranch, H**	**40.33**	**74**	⇑P		**P**	**16 01 13.8**	**-0.3**
	baz=40,SNR=8.6							
A11A	**Hall Mountain,**	**40.37**	**67**	⇓P		**P**	**16 01 14.0**	**-0.4**
	baz=40,SNR=52							
C10A	**Spilker Farm,**	**40.40**	**69**	⇑P		**P**	**16 01 14.1**	**-0.4**
	baz=40							
YBH	**Yreka Blue Hor**	**40.44**	**80**	*e*P		**P**	**16 01 16.6**	**+1.6**
YBH				*e**PP		pP	16 01 37.1	+1.8
YBH				pmax	pmax			
	comp=Z,103nm,0.9s							
YBH	**Yreka Blue Hor**	**40.44**	**80**	*e*P		**P**	**16 01 16.6**	**+1.6**
	comp=Z,103nm,0.9s,mb5.7							
YBH				*ep*P		pP	16 01 37.1	+1.8
LAMM	**Antelope Mount**	**40.56**	**81**	P		**P**	**16 01 17.6**	**+1.6**
E09A	**Wood Farm, Sta**	**40.58**	**71**	⇓P		**P**	**16 01 15.2**	**-0.9**
	baz=40,SNR=22							
F08A	**Pendleton**	**40.58**	**73**	⇑P		**P**	**16 01 15.5**	**-0.6**
	baz=40,SNR=16							
B11A	**Sandpoint**	**40.63**	**68**	⇑P		**P**	**16 01 15.6**	**-0.9**
	baz=40,SNR=8.5							
I06A	**Prineville**	**40.72**	**76**	⇑P		**P**	**16 01 17.2**	**0.0**
	baz=41							
G08A	**Pilot Rock**	**40.74**	**74**	⇓P		**P**	**16 01 16.9**	**-0.5**
	baz=41,SNR=17							
A12A	**Yaak River Ran**	**40.79**	**67**	⇑P		**P**	**16 01 17.3**	**-0.5**
	baz=41,SNR=24							
D10A	**Wagner Farm, O**	**40.80**	**70**	⇓P		**P**	**16 01 16.9**	**-1.0**
	baz=41,SNR=56							
K05A	**Summer Lake**	**40.98**	**78**	⇑P		**P**	**16 01 20.6**	**+1.1**
	baz=41,SNR=22							
B12A	**Libby**	**41.06**	**68**	⇓P		**P**	**16 01 19.4**	**-0.7**
	baz=41,SNR=13							
I07A	**Izee**	**41.07**	**75**	⇓P		**P**	**16 01 20.1**	**0.0**
	baz=41,SNR=25							
J06A	**Christmas Vall**	**41.14**	**77**	⇑P		**P**	**16 01 21.3**	**+0.6**
	baz=41,SNR=43							
F09A	**S2 Ranch, Elgi**	**41.14**	**72**	⇓P		**P**	**16 01 20.4**	**-0.3**
	baz=41,SNR=25							
E10A	**Myers Farm, Un**	**41.20**	**71**	⇓P		**P**	**16 01 20.4**	**-0.8**
	baz=41,SNR=48							
WDC	**Whiskeytown Da**	**41.21**	**82**	P		**P**	**16 01 22.6**	**+1.2**
WDC				pmax	pmax			
	comp=Z,100nm,1.1s,mb5.6							
WDC	**Whiskeytown Da**	**41.21**	**82**	*e*P		**P**	**16 01 22.3**	**+0.9**
	comp=Z,104nm,1.1s,mb5.6							
WDC				*ep*P		pP	16 01 43.0	+1.3
H08A	**Prairie City**	**41.33**	**74**	⇓P		**P**	**16 01 21.6**	**-0.6**
	baz=41,SNR=5.4							
D11A	**Klaveano Farm,**	**41.36**	**70**	⇑P		**P**	**16 01 21.3**	**-1.2**
	baz=41,SNR=24							
F10A	**Beach Ranch, E**	**41.40**	**72**	⇑P		**P**	**16 01 22.4**	**-0.4**
	baz=41,SNR=24							
G09A	**Cove**	**41.45**	**73**	⇓P		**P**	**16 01 23.0**	**-0.3**
	baz=41,SNR=37							
C12B	**Naegeli Ranch,**	**41.52**	**68**	⇑P		**P**	**16 01 23.1**	**-0.7**
	baz=41,SNR=33							
J07A	**Hines**	**41.58**	**76**	⇑P		**P**	**16 01 24.8**	**+0.5**
	baz=41							
WALA	**Waterton Lakes**	**41.72**	**66**	*e*P		**P**	**16 01 24.7**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.0							
I08A	**Drewsey**	**41.72**	**75**	⇑P		**P**	**16 01 25.7**	**+0.2**
	baz=42,SNR=18							
B13A	**Whitefish**	**41.75**	**67**	⇓P		**P**	**16 01 25.0**	**-0.7**
	baz=42,SNR=28							
E11A	**Bogner Ranch,**	**41.80**	**71**	⇑P		**P**	**16 01 24.7**	**-1.4**
	baz=42,SNR=18							
MOD	**Modoc**	**41.81**	**79**	*e*P		**P**	**16 01 26.8**	**+0.5**
	comp=Z,78nm,0.8s,mb5.5							
MOD				*ep*P		pP	16 01 47.4	+0.7
MOD				*e*PcP		PcP	16 03 15.1	-5.6
G10A	**Bishop Farm, J**	**41.83**	**72**	⇓P		**P**	**16 01 25.8**	**-0.5**
	baz=42,SNR=79							
HOPS	**Hopland**	**41.83**	**84**	*e*P		**P**	**16 01 26.9**	**+0.4**
	comp=Z,130nm,1.0s,mb5.6							
HOPS				*ep*P		pP	16 01 47.8	+0.9
H09A	**Durkee**	**41.85**	**74**	⇑P		**P**	**16 01 26.6**	**+0.1**
	baz=42,SNR=24							
BMO	**Blue Mountains**	**41.96**	**73**	*e*P		**P**	**16 01 27.0**	**-0.4**
	comp=Z,50nm,0.8s,mb5.3							
BMO				*e*			16 01 58.4	
K07A	**Rock Creek Ran**	**42.00**	**77**	⇑P		**P**	**16 01 28.5**	**+0.7**
	baz=42,SNR=83							
A14A	**Double T Ranch**	**42.04**	**66**	⇑P		**P**	**16 01 27.4**	**-0.7**
	baz=42,SNR=138							
C13A	**Hot Springs**	**42.05**	**68**	⇑P		**P**	**16 01 27.3**	**-0.8**
	baz=42,SNR=20							
F11A	**Grangeville**	**42.08**	**71**	⇑P		**P**	**16 01 27.1**	**-1.3**
	baz=42,SNR=20							
J08A	**Circle Bar Ran**	**42.09**	**76**	⇑P		**P**	**16 01 28.7**	**+0.2**
	baz=42,SNR=22							
I09A	**Lost Marbles R**	**42.19**	**74**	⇑P		**P**	**16 01 28.9**	**-0.4**
	baz=42,SNR=16							
L07A	**Adell**	**42.33**	**78**	⇓P		**P**	**16 01 31.3**	**+0.9**
	baz=42,SNR=65							
D13A	**Huson**	**42.42**	**69**	⇓P		**P**	**16 01 30.0**	**-1.2**
	baz=42							
A15A	**Johnson Ranch,**	**42.43**	**65**	⇓P		**P**	**16 01 29.8**	**-1.4**
	baz=42,SNR=23							
H10A	**Noah's Angus R**	**42.44**	**73**	⇑P		**P**	**16 01 31.0**	**-0.3**
	baz=42							
K08A	**Mann Creek Ran**	**42.44**	**76**	⇓P		**P**	**16 01 31.8**	**+0.5**
	baz=42							
B14A	**Marquette Ranc**	**42.44**	**67**	⇓P		**P**	**16 01 30.5**	**-0.8**
	baz=42,SNR=68							
WVOR	**Wild Horse Val**	**42.52**	**77**	*e*P		**P**	**16 01 32.3**	**+0.3**
WVOR				*e**PP		pP	16 01 53.7	+1.3
WVOR				*e*			16 03 12.4	
WVOR				pmax	pmax			
	comp=Z,69nm,0.8s,mb5.4							
WVOR	**Wild Horse Val**	**42.52**	**77**	*e*P		**P**	**16 01 32.3**	**+0.3**
	comp=Z,69nm,0.8s,mb5.4							
WVOR				*ep*P		pP	16 01 53.7	+1.2
WVOR				*e*PP		PP	16 03 12.3	+0.5
WVOR				*e*ScP		ScP	16 07 05.3	-0.4
J09A	**Fry Pan Ranch,**	**42.53**	**75**	⇓P		**P**	**16 01 32.1**	**+0.1**
	baz=42							
ALE	**Alert**	**42.55**	**10**	P		**P**	**16 01 32.0**	**+0.2**
	comp=Z,194nm,0.9s,mb5.8,SNR=10							
I10A	**Payette**	**42.68**	**74**	⇑P		**P**	**16 01 33.8**	**+0.5**
	baz=42							
N06A	**Buffalo Meadow**	**42.77**	**80**	⇑P		**P**	**16 01 35.1**	**+1.0**
	baz=43							
M07A	**Soldier Meadow**	**42.80**	**79**	⇑P		**P**	**16 01 35.4**	**+1.1**
	baz=43							
H11A	**Donnelly**	**42.81**	**73**	⇓P		**P**	**16 01 33.9**	**-0.4**
	baz=43,SNR=24							
L08A	**Fields**	**42.84**	**77**	⇑P		**P**	**16 01 35.4**	**+0.9**
	baz=43							
MSO	**Missoula**	**42.87**	**69**	*e*P		**P**	**16 01 33.7**	**-1.0**
	comp=Z,28nm,0.8s,mb5.0							
MSO				*e*ScP		ScP	16 07 02.6	-4.5
B15A	**Bradely Ranch,**	**42.87**	**66**	⇑P		**P**	**16 01 33.6**	**-1.2**
	baz=43,SNR=60							
K09A	**Rome**	**42.92**	**76**	⇑P		**P**	**16 01 35.3**	**+0.1**
	baz=43							
E13A	**Victor**	**42.93**	**69**	⇑P		**P**	**16 01 34.2**	**-1.0**
	baz=43,SNR=25							
BEKR	**Beckwourth**	**42.98**	**81**	⇓P		**P**	**16 01 36.2**	**+0.5**
	baz=43,SNR=62							
D14A	**Greenough**	**42.98**	**68**	⇑P		**P**	**16 01 34.6**	**-1.1**
	baz=43,SNR=90							
J10A	**Berg Farm, Mel**	**43.08**	**75**	⇓P		**P**	**16 01 36.2**	**-0.3**
	baz=43							
A16A	**West Butte Ran**	**43.09**	**65**	⇑P		**P**	**16 01 34.8**	**-1.7**
	baz=43,SNR=58							
O06A	**Flanigan**	**43.12**	**80**	⇑P		**P**	**16 01 37.9**	**+1.0**
	baz=43							
C15A	**Salmond Ranch,**	**43.13**	**67**	⇑P		**P**	**16 01 36.7**	**-0.2**
	baz=43							
F13A	**Darby**	**43.20**	**70**	⇓P		**P**	**16 01 36.7**	**-0.8**
	baz=43							
M08A	**Happy Creek Ra**	**43.25**	**78**	⇓P		**P**	**16 01 38.9**	**+1.0**
	baz=43							
N07B	**Gerlach**	**43.28**	**79**	⇑P		**P**	**16 01 39.3**	**+1.1**
	baz=43							
I11A	**Placerville**	**43.29**	**74**	⇑P		**P**	**16 01 38.0**	**-0.2**
	baz=43							
B16A	**M & M Farms, S**	**43.31**	**66**	⇑P		**P**	**16 01 37.1**	**-1.2**
	baz=43,SNR=22							
L09A	**Wilkinson Ranc**	**43.34**	**77**	⇓P		**P**	**16 01 39.6**	**+1.0**
	baz=43							
E14A	**Clinton**	**43.35**	**69**	⇓P		**P**	**16 01 37.6**	**-1.1**
	baz=43,SNR=29							
P06A	**Stead Airport

I13A	**Wildhorse Cree** baz=44	**44.38**	**72**	⇑P		**P**	**16 01 46.9**	**-0.1**
B18A	**Beardsley Farm** baz=44	**44.41**	**65**	⇑P		**P**	**16 01 46.1**	**-0.9**
HLID	**Hailey** baz=44	**44.41**	**73**	⇑P		**P**	**16 01 47.1**	**0.0**
HLID	**Hailey** comp=Z,39nm,0.9s,mb5.1	**44.41**	**73**	*e*P		**P**	**16 01 46.7**	**-0.4**
HLID					*ep*P	pP	16 02 08.3	+0.6
L11A	**Cat Creek Ranc** baz=44	**44.41**	**75**	⇑P		**P**	**16 01 47.6**	**+0.3**
H14A	**Leadore** baz=44	**44.42**	**71**	⇑P		**P**	**16 01 46.8**	**-0.4**
DLMT	**Dillon** comp=Z,13nm,0.8s,mb4.7	**44.45**	**70**	*e*P		**P**	**16 01 46.1**	**-1.3**
DLMT					*e*ScP	ScP	16 07 12.1	-1.5
P08A	**Dixie Valley** baz=44	**44.48**	**80**	⇑P		**P**	**16 01 49.1**	**+1.4**
TLY	**Talaya**	**44.49**	**301**	*e*P		**P**	**16 01 48.4**	**+0.7**
TLY	comp=Z,28nm,1.5s,mb4.8				pmax	pmax		
TLY	**Talaya**	**44.49**	**301**	*e*P		**P**	**16 01 47.8**	**+0.1**
TLY					*ep*P	pP	16 02 07.5	-0.7
Q07A	**Schurz** baz=44	**44.49**	**81**	⇓P		**P**	**16 01 48.7**	**+0.8**
BMN	**Battle Mountai**	**44.56**	**78**	*e*P		**P**	**16 01 48.8**	**+0.4**
BMN					*e**PP	pP	16 02 09.3	+0.3
BMN	comp=Z,82nm,0.9s,mb5.5				pmax	pmax		
BMN	**Battle Mountai** comp=Z,82nm,0.9s,mb5.5	**44.56**	**78**	*e*P		**P**	**16 01 48.8**	**+0.4**
BMN					*ep*P	pP	16 02 09.2	+0.3
D17A	**Six Diamond Ra** baz=44	**44.56**	**67**	⇓P		**P**	**16 01 47.5**	**-0.8**
EGMT	**Eagleton** baz=44	**44.62**	**65**	⇓P		**P**	**16 01 47.7**	**-1.1**
EGMT	**Eagleton** comp=Z,74nm,0.8s,mb5.5	**44.62**	**65**	*e*P		**P**	**16 01 47.4**	**-1.4**
G15A	**Dillon** baz=44	**44.63**	**70**	⇓P		**P**	**16 01 47.7**	**-1.2**
ULN	**Ulaanbaatar**	**44.63**	**295**	*e*P		**P**	**16 01 49.4**	**+0.5**
ULN					*e**PP	pP	16 02 09.7	+0.2
ULN	comp=Z,29nm,0.9s,mb5.0				pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,29nm,0.9s,mb5.0	**44.63**	**295**	*e*P		**P**	**16 01 49.4**	**+0.5**
ULN					*ep*P	pP	16 02 09.7	+0.2
ULN					*e*ScP	ScP	16 07 14.3	0.0
J13A	**Cove Ranch, Pi** baz=44	**44.64**	**73**	⇑P		**P**	**16 01 49.2**	**+0.2**
K12A	**Draper Farm, C** baz=44	**44.65**	**74**	⇓P		**P**	**16 01 49.5**	**+0.5**
O09A	**Fish Creek Ran** baz=45	**44.73**	**79**	⇓P		**P**	**16 01 50.8**	**+1.0**
I14A	**Mackay** baz=45	**44.77**	**72**	⇑P		**P**	**16 01 50.2**	**+0.2**
F16A	**Kennard Place,** baz=45	**44.78**	**69**	⇓P		**P**	**16 01 49.0**	**-1.1**
N10A	**Dunphy** baz=45	**44.82**	**78**	⇓P		**P**	**16 01 51.3**	**+0.8**
M11A	**Holland Ranch,** baz=45	**44.83**	**76**	⇓P		**P**	**16 01 51.2**	**+0.7**
E17A	**Martinsdale** baz=45	**44.85**	**68**	⇓P		**P**	**16 01 50.2**	**-0.4**
H15A	**Lima** baz=45	**44.85**	**71**	⇓P		**P**	**16 01 50.1**	**-0.6**
BOZ	**Bozeman (W)** baz=45	**44.86**	**69**	⇑P		**P**	**16 01 50.2**	**-0.5**
BOZ	**Bozeman (W)**	**44.86**	**69**	⇑*e*P		**P**	**16 01 49.9**	**-0.8**
BOZ					*e**PP	pP	16 02 10.2	-1.1
BOZ					*e**SP	sP	16 02 19.8	-1.3
BOZ	comp=Z,51nm,0.8s,mb5.3				pmax	pmax		
BOZ	**Bozeman (W)** comp=Z,51nm,0.8s,mb5.3	**44.86**	**69**	⇑*e*P		**P**	**16 01 49.9**	**-0.8**
BOZ					*ep*P	pP	16 02 10.2	-1.1
BOZ					*es*P	sP	16 02 19.8	-1.3
BOZ					*e*ScP	ScP	16 07 15.0	-0.2
L12A	**House Creek Ra** baz=45	**44.87**	**75**	⇓P		**P**	**16 01 51.5**	**+0.7**
G16A	**Moss Hill, Enn** baz=45	**44.99**	**70**	⇑P		**P**	**16 01 51.1**	**-0.7**
SONM	**Songino Array** comp=Z,15nm,0.8s,mb4.8,baz=56,slow=10.0,SNR=14	**45.02**	**295**	P		**P**	**16 01 53.0**	**+1.0**
SONM					pP	pP	16 02 11.8	-0.7
SONM	comp=Z,8.7nm,0.6s,baz=60,slow=8.6,SNR=6.1				PcP	PcP	16 03 31.7	+0.3
SONM	comp=Z,9.4nm,0.7s,baz=68,slow=2.4,SNR=4.0				pPcP		16 03 54.6	
SONM	comp=Z,3.2nm,0.6s,baz=30,slow=3.6,SNR=2.3				ScP	ScP	16 07 16.0	+0.1
SONM	**Songino Array** comp=Z,4.6nm,0.8s,baz=60,slow=3.6,SNR=5.9	**45.02**	**295**	P		**P**	**16 01 53.0**	**+1.0**
SONM					*P	pP	16 02 11.8	-0.8
SONM							16 03 31.7	
SONM	comp=Z,15nm,0.8s				pmax	pmax		
D18A	**Linhart Farms,** baz=45	**45.04**	**66**	⇑P		**P**	**16 01 52.0**	**-0.2**
J14A	**Carey** baz=45	**45.08**	**73**	⇓P		**P**	**16 01 52.8**	**+0.3**
O10A	**Cortez Mining,** baz=45	**45.08**	**78**	⇓P		**P**	**16 01 53.9**	**+1.4**
Q08A	**Gabbs** baz=45	**45.08**	**81**	⇑P		**P**	**16 01 53.4**	**+0.9**
NVAR	**Mina Array Bea** comp=Z,58nm,0.8s,mb5.4,baz=294,slow=7.7,SNR=267	**45.12**	**81**	P		**P**	**16 01 53.9**	**+1.0**
NVAR					pP	pP	16 02 13.7	+0.2
NVAR	comp=Z,64nm,0.7s,baz=289,slow=7.4,SNR=12				sP	sP	16 02 23.3	0.0
NVAR	comp=Z,44nm,0.8s,baz=293,slow=5.6,SNR=4.8				ScP	ScP	16 07 16.4	-0.1
NVAR	comp=Z,7.7nm,0.8s,baz=307,slow=3.8,SNR=12				tx	tx	16 07 56.0	
NVAR	**Mina Array Bea** comp=Z,2.7nm,0.8s,baz=300,slow=4.4,SNR=4.0	**45.12**	**81**	P		**P**	**16 01 53.9**	**+1.0**
NVAR					pP	pP	16 02 13.7	+0.2
NVAR					sP	sP	16 02 23.3	0.0
NVAR					ScP	ScP	16 07 16.4	-0.1
K13A	**Stover Farm, H** baz=45	**45.13**	**74**	⇑P		**P**	**16 01 53.5**	**+0.6**
P09A	**Austin** baz=45	**45.14**	**79**	⇓P		**P**	**16 01 54.1**	**+1.1**
N11A	**Elko Archery C** baz=45	**45.23**	**77**	⇓P		**P**	**16 01 54.5**	**+0.8**
FFC	**Flin Flon** comp=Z,131nm,0.7s,mb5.8,SNR=10.0	**45.25**	**53**	P		**P**	**16 01 52.9**	**-0.8**
FFC	**Flin Flon** comp=Z,17nm,1.0s,mb4.7	**45.25**	**53**	*e*P		**P**	**16 01 52.4**	**-1.3**
FFC					pmax	pmax		
FFC	**Flin Flon** comp=Z,17nm,1.0s,mb4.7	**45.25**	**53**	*e*P		**P**	**16 01 52.4**	**-1.3**
FFC					*e*ScP	ScP	16 07 15.4	-1.3
F17A	**Fitzpatrick Pl** baz=45	**45.27**	**68**	⇓P		**P**	**16 01 53.5**	**-0.4**
R08A	**Mina** baz=45	**45.29**	**81**	⇓P		**P**	**16 01 55.4**	**+1.1**
MLAC	**Mammoth Lakes** baz=45	**45.29**	**83**	⇑P		**P**	**16 01 55.5**	**+1.2**
I15A	**Monteview** baz=45	**45.30**	**71**	⇑P		**P**	**16 01 54.2**	**0.0**
E18A	**Harlowton** baz=45	**45.33**	**67**	⇓P		**P**	**16 01 54.2**	**-0.2**
M12A	**Wells** baz=45	**45.36**	**76**	⇓P		**P**	**16 01 55.4**	**+0.6**
ZAK	**Zakamensk**	**45.36**	**300**	*e*P		**P**	**16 01 55.0**	**+0.4**
ZAK	comp=Z,12nm,1.3s,mb4.5				pmax	pmax		
TIA	**Tai'an**	**45.50**	**275**	⇓P		**P**	**16 01 56.0**	**+0.1**
L13A	**Double Diamond** baz=45	**45.55**	**74**	⇓P		**P**	**16 01 56.4**	**+0.2**
Q09A	**Carvers** baz=45	**45.56**	**80**	⇓P		**P**	**16 01 57.4**	**+1.1**
G17A	**Pierce Place,** baz=45	**45.56**	**69**	⇑P		**P**	**16 01 55.9**	**-0.3**
ELK	**Elko**	**45.57**	**77**	⇑*e*P		**P**	**16 01 56.8**	**+0.4**
ELK					*e**PP	pP	16 02 16.9	-0.2
ELK	comp=Z,72nm,0.9s				pmax	pmax		
ELK	**Elko** comp=Z,72nm,0.9s,mb5.4	**45.57**	**77**	⇑*e*P		**P**	**16 01 56.8**	**+0.4**
ELK					*ep*P	pP	16 02 16.9	-0.1
ELK					*e*ScP	ScP	16 07 17.5	-0.8
H16A	**Russell Place,** baz=45	**45.62**	**70**	⇑P		**P**	**16 01 56.3**	**-0.4**
N12A	**Clover Valley,** baz=46	**45.63**	**76**	⇑P		**P**	**16 01 57.6**	**+0.7**
J15A	**Blackfoot** baz=46	**45.67**	**72**	⇓P		**P**	**16 01 57.5**	**+0.3**
O11A	**Cowboy Ranch,** baz=46	**45.69**	**78**	⇓P		**P**	**16 01 57.7**	**+0.4**
K14A	**Jones Ranch, D** baz=46	**45.73**	**73**	⇓P		**P**	**16 01 57.5**	**-0.2**
F18A	**Big Timber** baz=46	**45.82**	**68**	⇑P		**P**	**16 01 57.8**	**-0.5**
M13A	**Montello** baz=46	**45.85**	**75**	⇑P		**P**	**16 01 59.0**	**+0.5**
RCTC	**Rector, Farmer** baz=46	**45.88**	**84**	⇓P		**P**	**16 01 59.7**	**+0.8**
MOY	**Mondy**	**45.90**	**302**	*e*P		**P**	**16 01 59.1**	**+0.3**
I16A	**Newdale** baz=46	**45.95**	**71**	⇑P		**P**	**16 01 59.4**	**0.0**
P11A	**Circle Ranch,** baz=46	**45.98**	**78**	⇓P		**P**	**16 02 00.4**	**+0.7**
R09A	**Tonopah** baz=46	**45.99**	**81**	⇓P		**P**	**16 02 00.5**	**+0.8**
TPH	**Tonopah**	**46.00**	**81**	⇑*i*P		**P**	**16 02 00.5**	**+0.6**
TPH					*e**PP	pP	16 02 20.9	+0.4
TPH					*e**SP	sP	16 02 30.3	0.0
TPH	comp=Z,127nm,0.9s,mb5.7				pmax	pmax		
TPH	**Tonopah** comp=Z,127nm,0.9s,mb5.7	**46.00**	**81**	⇑*i*P		**P**	**16 02 00.5**	**+0.6**
TPH					*ep*P	pP	16 02 20.9	+0.4
TPH					*es*P	sP	16 02 30.3	0.0
TPH					*e*ScP	ScP	16 07 18.5	-1.6
HHC	**Hu-ho-hao-te**	**46.02**	**284**	*e*P		**P**	**16 02 01.0**	**+1.1**
HHC					AP	pP	16 02 19.3	-1.3
HHC					XP	sP	16 02 28.5	-1.9
HHC					PCP	PcP	16 03 37.0	+2.0
HHC					PP	PP	16 03 50.0	+0.9
HHC					PCS	PcS	16 07 30.0	+0.5
HHC					S	**S**	**16 08 38.8**	**+0.3**
HHC					XS	sS	16 09 11.0	-2.9
HHC					SCS	ScS	16 11 46.0	-0.7
HHC					SS	SS	16 11 56.8	-7.2
HHC					AMB	AMB		
HHC	comp=Z,45nm,1.0s,mb5.2				AMB	AMB		
HHC	comp=Z,1μm,11.3s				LR	LR		
HHC	comp=N,316nm,14.3s				LR	LR		
HHC	comp=E,279nm,15.5s				LR	LR		
HHC	comp=Z,408nm,14.3s							
TIN	**Tinemaha** baz=46	**46.03**	**83**	⇑P		**P**	**16 02 01.3**	**+1.3**
Q10A	**Clear Creek Ra** baz=46	**46.04**	**80**	⇓P		**P**	**16 02 01.1**	**+1.0**
SMMC	**Simmler** baz=46	**46.05**	**86**	⇑P		**P**	**16 02 01.2**	**+0.9**
O12A	**Currie** baz=46	**46.16**	**77**	⇑P		**P**	**16 02 01.8**	**+0.7**
H17A	**Grant Village** baz=46	**46.19**	**70**	⇓P		**P**	**16 02 02.2**	**+1.0**
S09A	**Goldfield** baz=46	**46.22**	**81**	⇓P		**P**	**16 02 02.2**	**+0.6**
G18A	**Lazy EL Ranch,** baz=46	**46.24**	**68**	⇑P		**P**	**16 02 00.8**	**-0.8**
M14A	**Sheep Mountain** baz=46	**46.25**	**75**	⇑P		**P**	**16 02 02.0**	**+0.2**
IMW	**Indian Meadow** comp=Z,38nm,1.0s,mb5.1	**46.26**	**71**	⇑*e*P		**P**	**16 02 00.9**	**-0.9**
VES	**Vestal, Richgr** baz=46	**46.28**	**85**	⇓P		**P**	**16 02 02.2**	**+0.2**
DCID1	**Drake Creek** comp=Z,28nm,1.0s,mb5.0	**46.30**	**71**	*e*P		**P**	**16 01 59.2**	**-2.8**
RRI2	**Red Ridge** comp=Z,38nm,0.8s,mb5.2	**46.36**	**71**	*e*P		**P**	**16 02 02.4**	**-0.2**
RRI2					*ep*P	pP	16 02 23.8	+0.5
R10A	**Warm Springs** baz=46	**46.44**	**80**	⇑P		**P**	**16 02 03.9**	**+0.6**
I17A	**Pilgram Creek** baz=46	**46.46**	**70**	⇑P		**P**	**16 02 03.5**	**+0.2**
MOOW	**Moose Ponds** comp=Z,10nm,0.8s,mb4.6	**46.46**	**71**	*e*P		**P**	**16 02 02.8**	**-0.6**
MOOW					*ep*P	pP	16 02 24.3	+0.2
MOOW					*e*ScP	ScP	16 07 21.9	-0.1
Q11A	**Duckwater** baz=46	**46.48**	**79**	⇑P		**P**	**16 02 04.1**	**+0.5**
S10A	**Tonopah Range,** baz=46	**46.48**	**81**	⇑P		**P**	**16 02 04.5**	**+0.9**
K16A	**Soda Springs** baz=46	**46.51**	**72**	⇑P		**P**	**16 02 04.8**	**+1.1**
CWC	**Cottonwood Cre** baz=46	**46.51**	**83**	⇑P		**P**	**16 02 04.5**	**+0.7**
RLMT	**Red Lodge** baz=46	**46.52**	**68**	⇑P		**P**	**16 02 03.7**	**-0.1**
RLMT	**Red Lodge** comp=Z,66nm,0.9s,mb5.4	**46.52**	**68**	⇑*i*P		**P**	**16 02 03.1**	**-0.7**
RLMT					*ep*P	pP	16 02 24.6	+0.1
RLMT					*e*ScP	ScP	16 07 21.8	-0.4
L15A	**Malad City** baz=46	**46.53**	**74**	⇑P		**P**	**16 02 04.0**	**+0.1**
P12A	**McGill** baz=46	**46.55**	**78**	⇑P		**P**	**16 02 04.6**	**+0.5**
GRAC	**Grapevine Rang** baz=46	**46.59**	**82**	⇓P		**P**	**16 02 05.3**	**+0.8**
SNOW	**Snow King Moun** comp=Z,13nm,0.7s,mb4.8	**46.63**	**71**	*e*P		**P**	**16 02 05.2**	**+0.5**
LOHW	**Long Hollow** comp=Z,12nm,0.8s,mb4.7	**46.63**	**71**	*e*P		**P**	**16 02 04.2**	**-0.4**
LOHW					*ep*P	pP	16 02 24.8	-0.6
REDW	**Red Top Meadow** comp=Z,32nm,1.4s,mb4.8	**46.63**	**71**	*e*P		**P**	**16 02 03.9**	**-0.7**
REDW					*ePP	PP	16 03 50.6	-4.7
GUMO	**Guam** comp=Z,198nm,21.0s,baz=179,slow=30	**46.70**	**228**	LR		LR	16 17 20.2	
O13A	**Hicks Ranch, I** baz=46	**46.70**	**77**	⇑P		**P**	**16 02 05.9**	**+0.6**
J17A	**Brown Place, J** baz=46	**46.71**	**71**	⇑P		**P**	**16 02 05.5**	**+0.2**
N14A	**Grayback Hills** baz=47	**46.74**	**75**	⇑P		**P**	**16 02 05.9**	**+0.3**
M15A	**Larsen Ranch,** baz=47	**46.82**	**74**	⇑P		**P**	**16 02 06.0**	**-0.2**
R11A	**Troy Canyon, C** baz=47	**46.84**	**80**	⇓P		**P**	**16 02 06.6**	**+0.2**
Q12A	**Willow Creek R** baz=47	**46.87**	**78**	⇓P		**P**	**16 02 06.8**	**+0.2**
FCC	**Fort Churchill**	**46.88**	**45**	⇑*i*P		**P**	**16 02 05.8**	**-0.6**
FCC					*e**PP	pP	16 02 27.2	0.0
FCC	**Fort Churchill** comp=Z,1.1nm,0.8s	**46.88**	**45**	⇑*i*P		**P**	**16 02 05.8**	**-0.6**
FCC					*ep*P	pP	16 02 27.1	0.0
FCC					*e*ScP	ScP	16 07 21.2	-2.3
ARVC	**Arvin** baz=47	**46.90**	**85**	⇑P		**P**	**16 02 07.0**	**+0.2**
K17A	**Gardner Place,** baz=47	**46.95**	**72**	⇑P		**P**	**16 02 06.5**	**-0.7**
I18A	**Diamond G Ranc** baz=47	**47.03**	**70**	⇑P		**P**	**16 02 08.0**	**+0.1**
L16A	**Fish Haven** baz=47	**47.09**	**73**	⇓P		**P**	**16 02 08.2**	**-0.1**
BTO	**Baotou**	**47.10**	**285**	*e*P		**P**	**16 02 09.5**	**+1.1**
P13A	**Bates Ranch, G** baz=47	**47.10**	**77**	⇓P		**P**	**16 02 08.6**	**+0.2**
N15A	**Stansbury Isla** baz=47	**47.12**	**75**	⇓P		**P**	**16 02 08.8**	**+0.2**
MPMC	**Manual Prospec** baz=47	**47.12**	**83**	⇓P		**P**	**16 02 09.2**	**+0.6**
NJ2	**Nanjing**	**47.18**	**269**	*e*P		**P**	**16 02 08.5**	**-0.6**
NJ2					AP	pP	16 02 27.3	-2.5
NJ2					XP	sP	16 02 36.0	-3.6
NJ2					PP	PP	16 04 00.5	0.0
NJ2					S	**S**	**16 08 53.0**	**-2.2**
NJ2					XS	sS	16 09 28.0	-2.7
NJ2	comp=Z,40nm,0.6s,mb5.3				AMB	AMB		
NJ2	comp=Z,2μm,4.3s				AMB	AMB		
NJ2	comp=N,4μm,16.6s				LR	LR		
NJ2	comp=E,1μm,15.3s				LR	LR		
NJ2	comp=Z,6μm,14.4s				LR	LR		
J18A	**Kendall Valley** baz=47	**47.21**	**71**	⇓P		**P**	**16 02 08.9**	**-0.3**
FURC	**Furnace Creek,** baz=47	**47.25**	**82**	⇓P		**P**	**16 02 10.4**	**+0.8**
OSI	**Osito Adit**	**47.30**	**86**	⇑P		**P**	**16 02 10.7**	**+0.7**
OSI	**Osito Adit** comp=Z,70nm,0.8s,mb5.4	**47.30**	**86**	⇑*i*P		**P**	**16 02 10.4**	**+0.4**
OSI					*ep*P	pP	16 02 31.0	+0.2
OSI					*es*P	sP	16 02 40.1	-0.4
L17A	**Cokeville** baz=47	**47.37**	**73**	⇑P		**P**	**16 02 10.1**	**-0.3**
DUG	**Dugway** baz=47	**47.37**	**76**	⇑P		**P**	**16 02 10.8**	**+0.3**
DUG	**Dugway**	**47.37**	**76**	⇑*i*P		**P**	**16 02 10.6**	**+0.1**
DUG					*e**PP	pP	16 02 31.7	+0.4
DUG	comp=Z,120nm,1.1s,mb5.5				pmax	pmax		
DUG	**Dugway** comp=Z,120nm,1.1s,mb5.5	**47.37**	**76**	⇑*i*P		**P**	**16 02 10.6**	**+0.1**
DUG					*ep*P	pP	16 02 31.7	+0.4
DUG					*e*ScP	ScP	16 07 23.5	-2.4
LRMC	**Laurel Mountai** baz=47	**47.38**	**84**	⇓P		**P**	**16 02 10.6**	**0.0**
M16A	**Huntsville** baz=47	**47.40**	**74**	⇑P		**P**	**16 02 10.5**	**-0.2**
Q13A	**Wheeler Ranch,** baz=47	**47.41**	**78**	⇑P		**P**	**16 02 11.5**	**+0.7**
BLG	**Laguna Peak** baz=47	**47.42**	**86**	⇑P		**P**	**16 02 11.0**	**+0.1**
R12A	**Pony Springs,** baz=47	**47.45**	**79**	⇑P		**P**	**16 02 11.6**	**+0.5**
O15A	**The Old Anders** baz=47	**47.53**	**75**	⇓P		**P**	**16 02 11.9**	**+0.2**
K18A	**Toltan Ranch,** baz=47	**47.54**	**71**	⇓P		**P**	**16 02 11.8**	**+0.1**
P14A	**Drum Mountains** baz=47	**47.59**	**77**	⇑P		**P**	**16 02 12.7**	**+0.5**
U10A	**Ash Meadows, A** baz=47	**47.61**	**82**	⇑P		**P**	**16 02 13.1**	**+0.8**
BW06	**Boulder Array** baz=48	**47.74**	**71**	⇑P		**P**	**16 02 13.0**	**-0.4**
PDAR	**Pinedale Array** comp=Z,62nm,0.8s,mb5.5,baz=302,slow=3.7,SNR=312	**47.74**	**71**	P		**P**	**16 02 12.8**	**-0.6**
PDAR	comp=Z,28nm,0.6s,baz=323,slow=3.3,SNR=7.8				pP	pP	16 02 33.5	-0.6
PDAR	comp=Z,7.8nm,1.0s,baz=294,slow=1.5,SNR=13				ScP	ScP	16 07 26.9	-0.5
PDAR	comp=Z,2.2nm,1.0s,baz=128,slow=2.4,SNR=3.0				tx	tx	16 08 05.0	
PDAR	comp=Z,0.3nm,0.9s,baz=40,slow=44,SNR=2.1				S	**S**	**16 09 00.7**	**-2.3**
PDAR	comp=Z,236nm,21.3s,baz=350,slow=33				LR	LR	16 19 39.7	
PDAR	**Pinedale Array**	**47.74**	**71**	P		**P**	**16 02 12.8**	**-0.6**
PDAR					pP	pP	16 02 33.5	-0.6
PDAR					ScP	ScP	16 07 26.9	-0.5
PDAR					S	**S**	**16 09 00.7**	**-2.3**
PDAR					LR	LR	16 19 39.7	
S12A	**Delamar Landin** baz=48	**47.75**	**80**	⇑P		**P**	**16 02 14.2**	**+0.8**
T11A	**Corn Creek, Al** baz=48	**47.76**	**80**	⇑P		**P**	**16 02 14.1**	**+0.5**
N16A	**Rees Ranch, Co** baz=48	**47.77**	**74**	⇓P		**P**	**16 02 13.8**	**+0.2**
DECC	**Green Verdugo** baz=48	**47.79**	**86**	⇑P		**P**	**16 02 14.0**	**+0.3**
Q14A	**Sevier Lake (B** baz=48	**47.84**	**77**	⇑P		**P**	**16 02 14.6**	**+0.5**
M17A	**Scullys Gap (B** baz=48	**47.87**	**73**	⇓P		**P**	**16 02 14.2**	**-0.2**
PASC	**Pasadena Art C** comp=Z,256nm,1.1s,mb6.0	**47.93**	**86**	*e*P		**P**	**16 02 14.3**	**-0.6**
PASC					*ep*P	pP	16 02 35.2	-0.5
PASC					*es*P	sP	16 02 44.4	-1.0
R13A	**O'Grain Ranch,** baz=48	**47.93**	**79**	⇓P		**P**	**16 02 15.3**	**+0.5**
L18A	**Fontenelle, Gr** baz=48	**47.97**	**72**	⇑P		**P**	**16 02 14.7**	**-0.4**
MWC	**Mount Wilson**	**47.97**	**86**	*e*P		**P**	**16 02 15.7**	**+0.5**
MWC					*e**PP	pP	16 02 35.7	-0.3
MWC	comp=Z,135nm,1.1s,mb5.7				pmax	pmax		
MWC	**Mount Wilson** comp=Z,135nm,1.1s,mb5.7	**47.97**	**86**	*e*P		**P**	**16 02 15.7**	**+0.5**
MWC					*ep*P	pP	16 02 35.7	-0.3
SHOC	**Shoshone** baz=48	**47.97**	**83**	⇓P		**P**	**16 02 15.6**	**+0.4**
GSC	**Goldstone** baz=48	**48.04**	**84**	⇓P		**P**	**16 02 16.1**	**+0.4**
GSC	**Goldstone**	**48.04**	**84**	⇓*i*P		**P**	**16 02 16.0**	**+0.3**
GSC					*e**PP	pP	16 02 36.1	-0.4
GSC					*e*		16 04 04.1	
GSC	comp=Z,116nm,0.7s,mb5.8				pmax	pmax		
GSC	**Goldstone** comp=Z,116nm,0.7s,mb5.8	**48.04**	**84**	⇓*i*P		**P**	**16 02 16.0**	**+0.3**
GSC					*ep*P	pP	16 02 36.1	-0.4
GSC					*e*PP	PP	16 04 04.1	-4.2
GSC					*e*ScP	ScP	16 07 27.9	-0.8
P15A	**Leamington** baz=48	**48.08**	**76**	⇑P		**P**	**16 02 16.2**	**+0.2**
N17A	**Moffit Pass** baz=48	**48.10**	**74**	⇓P		**P**	**16 02 15.6**	**-0.5**
K19A	**Absolon Red Bu** baz=48	**48.13**	**71**	⇑P		**P**	**16 02 15.4**	**-0.9**
U11A	**Corn Creek** baz=48	**48.19**	**81**	⇓P		**P**	**16 02 17.3**	**+0.5**
BFSC	**Mount Baldy St** baz=48	**48.21**	**85**	⇑P		**P**	**16 02 17.5**	**+0.5**
M18A	**Lyman** baz=48	**48.26**	**73**	⇓P		**P**	**16 02 17.0**	**-0.3**
L19A	**Farson** baz=48	**48.27**	**72**	⇓P		**P**	**16 02 16.6**	**-0.7**
S13A	**Holt Ranch, En** baz=48	**48.38**	**79**	⇓P		**P**	**16 02 18.8**	**+0.5**
Q15A	**Fillmore** baz=48	**48.38**	**77**	⇑P		**P**	**16 02 18.4**	**+0.1**
T12A	**Moapa** baz=48	**48.40**	**81**	⇓P		**P**	**16 02 18.6**	**+0.1**
P16A	**Fountain Green** baz=48	**48.43**	**76**	⇓P		**P**	**16 02 19.0**	**+0.3**
TUQ	**Turquoise Moun** baz=48	**48.49**	**83**	⇑P		**P**	**16 02 19.6**	**+0.4**
K20A	**Yellowstone Ra** baz=48	**48.52**	**70**	⇓P		**P**	**16 02 18.4**	**-0.9**
V11A	**Goodsprings** baz=48	**48.54**	**82**	⇓P		**P**	**16 02 20.3**	**+0.8**
O17A	**Robinson Place** baz=48	**48.62**	**74**	⇑P		**P**	**16 02 20.7**	**+0.6**
HEC	**Hector,Ludlow** baz=48	**48.64**	**84**	⇑P		**P**	**16 02 20.6**	**+0.3**
S14A	**Cedar City** baz=48	**48.68**	**79**	⇓P		**P**	**16 02 21.1**	**+0.5**
U12A	**Valley of Fire** baz=48	**48.70**	**81**	⇑P		**P**	**16 02 21.5**	**+0.8**
T13A	**Saint George** baz=48	**48.71**	**80**	⇑P		**P**	**16 02 21.5**	**+0.6**
M19A	**Rock Springs** baz=49	**48.75**	**72**	⇓P		**P**	**16 02 20.8**	**-0.3**
MURC	**Murrieta** baz=49	**48.92**	**86**	⇓P		**P**	**16 02 22.5**	**0.0**
L20A	**Wamsutter** baz=49	**48.92**	**71**	⇓P		**P**	**16 02 21.7**	**-0.7**
V12A	**Nelson** baz=49	**48.97**	**82**	⇓P		**P**	**16 02 23.1**	**+0.3**
O18A	**Roosevelt** baz=49	**49.01**	**74**	⇑P		**P**	**16 02 23.1**	**0.0**
U13A	**Pakoon Wash** baz=49	**49.06**	**80**	⇓P		**P**	**16 02 24.2**	**+0.6**
P17A	**Butcher Ranch,** baz=49	**49.07**	**75**	⇑P		**P**	**16 02 23.4**	**-0.2**
GMRC	**Granite Mounta** baz=49	**49.09**	**83**	⇓P		**P**	**16 02 23.9**	**+0.2**
N19A	**John Jarvie Ra** baz=49	**49.12**	**73**	⇓P		**P**	**16 02 23.3**	**-0.5**
Q16A	**Castle Valley** baz=49	**49.16**	**76**	⇓P		**P**	**16 02 24.7**	**+0.5**
T14A	**Hurricane** baz=49	**49.18**	**79**	⇓P		**P**	**16 02 25.0**	**+0.5**
S15A	**Panguitch** baz=49	**49.23**	**78**	⇑P		**P**	**16 02 25.5**	**+0.7**
LDFC	**Landfair** comp=Z,142nm,0.9s,mb5.9	**49.23**	**83**	*e*P		**P**	**16 02 24.9**	**+0.1**
LDFC					*ep*P	pP	16 02 45.2	-0.5
W12A	**Cal Nev Ari** baz

comp=Z,19nm,0.9s,mb5.0,baz=329,slow=4.2,SNR=12
PFO pP pP 16 02 46.5 -0.3
comp=Z,28nm,0.9s,baz=281,slow=5.7,SNR=3.8
PFO Pinyon Flat Ob 49.37 85 ⇑P P 16 02 25.9 -0.1
baz=49
PFO Pinyon Flat Ob 49.37 85 P P 16 02 26.1 +0.1
PFO *PP pP 16 02 46.5 -0.4
PFO pmax pmax
comp=Z,19nm,1.0s,mb5.0
PFO pmax pmax
comp=Z,28nm,0.9s,mb5.2
PFO Pinyon Flat Ob 49.37 85⇑*i*P P 16 02 25.5 -0.5
comp=Z,35nm,0.9s,mb5.3
PFO *e*pP pP 16 02 46.6 -0.3
PFO *e*sP sP 16 02 55.7 -0.9
PFO *e*ScP ScP 16 07 33.9 -0.5
R16A Teasdale 49.37 77 ⇑P P 16 02 26.8 +0.9
baz=49
BELC Belle Mtn. 49.40 84 ⇑P P 16 02 26.0 -0.2
baz=49
V13A Grand Canyon W 49.42 81 ⇓P P 16 02 26.7 +0.4
baz=49
SRU San Rafael 49.43 75 ⇓P P 16 02 26.4 +0.1
baz=49
109C Camp Elliot, M 49.45 86 ⇑P P 16 02 26.7 +0.1
baz=49
L21A Rawlins 49.52 71 ⇑P P 16 02 26.3 -0.7
baz=49
O19A Miners Draw (B 49.52 73 ⇓P P 16 02 26.9 0.0
baz=49
U14A Mt Trumbull 49.54 80 ⇑P P 16 02 28.1 +0.9
baz=49
T15A Red Dirt Ranch 49.64 79 ⇓P P 16 02 28.8 +0.9
baz=50
S16A Weppner Ranch, 49.66 78 ⇑P P 16 02 28.9 +0.7
baz=50
Q18A Rafter H Ranch 49.67 75 ⇑P P 16 02 28.1 0.0
baz=50
N20A Spence Gulch, 49.70 72 ⇓P P 16 02 28.1 -0.2
baz=50
R17A Hanksville Air 49.76 76 ⇑P P 16 02 28.9 +0.1
baz=50
RWWY Rawlins 49.78 71 *e*P P 16 02 27.6 -1.3
comp=Z,29nm,0.9s,mb5.2
IRM Iron Mountain 49.81 84 ⇑P P 16 02 29.5 +0.2
baz=50
MONP Monument Peak 49.88 86 ⇑P P 16 02 30.3 +0.5
baz=50
SPB4 Spitsbergen Ar 49.89 355 *e*P P 16 02 29.1 -0.2
SPB4 *e*pP pP 16 02 51.1 +0.9
BC3 Big Chuckw Mtn 49.96 84 ⇓P P 16 02 30.5 +0.1
baz=50
W13A Hualapai Mount 49.97 82 ⇓P P 16 02 30.9 +0.4
baz=50
P19A Cripple Cowboy 50.02 74 ⇑P P 16 02 30.6 -0.2
baz=50
U15A North Rim 50.08 79 ⇑P P 16 02 32.3 +1.0
baz=50
V14A Boquillas Ranc 50.10 81 ⇑P P 16 02 32.0 +0.5
baz=50
RSSD Black Hills 50.12 66 *e*P P 16 02 29.7 -1.8
RSSD *e**PP pP 16 02 50.8 -1.6
RSSD pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
RSSD Black Hills 50.12 66 *e*P P 16 02 29.7 -1.8
comp=Z,9.2nm,0.6s,mb4.9
RSSD *e*pP pP 16 02 50.8 -1.7
O20A White River Ci 50.15 73 ⇓P P 16 02 31.3 -0.4
baz=50
N21A Black Mountain 50.18 72 ⇑P P 16 02 31.6 -0.4
baz=50
T16A Glen Canyon Da 50.20 78 ⇑P P 16 02 31.7 -0.4
baz=50
S17A Black Ridge (B 50.20 77 ⇓P P 16 02 32.4 +0.2
baz=50
SWSC Sam W. Stewart 50.23 85 ⇑P P 16 02 32.3 -0.2
baz=50
DVTC Desert V Tower 50.23 86 ⇓P P 16 02 32.6 +0.1
baz=50
R18A Canyonlands Na 50.27 76 ⇑P P 16 02 32.0 -0.7
baz=50
Q19A Hogan Spring (50.28 75 ⇓P P 16 02 32.1 -0.6
baz=50
M22A Cedar Creek Ra 50.32 71 ⇑P P 16 02 32.5 -0.6
baz=50
X13A Yucca 50.34 82 ⇑P P 16 02 33.2 -0.1
baz=50
W14A Seligman 50.39 81 ⇓P P 16 02 33.9 +0.3
baz=50
Y12C Blythe 50.47 83 ⇓P P 16 02 34.5 +0.2
baz=50
V15A Kaibab Nationa 50.55 80 ⇑P P 16 02 35.9 +1.0
baz=50
O21A Pagoda 50.55 72 ⇓P P 16 02 34.5 -0.3
baz=50
T17A Navajo Res., N 50.62 78 ⇑P P 16 02 35.1 -0.2
baz=50
S18A Hurst Farm, Bl 50.66 76 ⇓P P 16 02 36.0 +0.4
baz=50
R19A Curley Farm, L 50.71 75 ⇓P P 16 02 36.0 0.0
baz=50
GLA Glamis 50.76 84 ⇓P P 16 02 36.9 +0.5
baz=51
GLA Glamis 50.76 84 *e*P P 16 02 36.4 0.0
GLA *e**PP pP 16 02 57.0 -0.4
GLA pmax pmax
comp=Z,110nm,0.7s,mb6.0
GLA Glamis 50.76 84 *e*P P 16 02 36.4 0.0
comp=Z,110nm,0.7s,mb6.0
GLA *e*pP pP 16 02 57.0 -0.5
N22A Wattenberg Ran 50.78 71 ⇑P P 16 02 36.5 -0.1
baz=51
ULM Lac du Bonnet 50.84 56 P P 16 02 35.6 -1.2
comp=Z,17nm,0.6s,mb5.3,baz=305,slow=7.7,SNR=24
ULM ScP ScP 16 07 39.2 -1.2
comp=Z,2.5nm,0.6s,baz=335,slow=7.3,SNR=2.9
ULM LR LR 16 24 57.0
comp=Z,387nm,18.2s,baz=114,slow=37
ULM Lac du Bonnet 50.84 56 P P 16 02 35.6 -1.2
ULM ScP ScP 16 07 39.2 -1.2
ULM LR LR 16 24 57.0
Y13A Salome 50.86 83 ⇑P P 16 02 37.4 +0.2
baz=51
Q20A Ridgley Place, 50.87 74 ⇑P P 16 02 36.5 -0.6
baz=51
W15A Williams 50.91 80 ⇑P P 16 02 38.4 +0.8
baz=51
U17A Shonto 50.96 78 ⇑P P 16 02 37.9 0.0
baz=51
U16A Tuba City 50.97 79 ⇑P P 16 02 38.2 +0.1
baz=51
X14A Yava 51.00 82 ⇑P P 16 02 38.8 +0.6
baz=51
WHN Wuhan 51.01 272 ⇓P P 16 02 38.0 -0.3
T18A Mexican Hat 51.09 77 ⇓P P 16 02 38.6 -0.2
baz=51
S19A Harvey Farm, M 51.14 76 ⇓P P 16 02 39.0 -0.3
baz=51
WUAZ Wupatki 51.24 80 ⇓P P 16 02 40.4 +0.4
baz=51
WUAZ Wupatki 51.24 80⇑*i*P P 16 02 40.5 +0.6
comp=Z,87nm,0.8s,mb5.8
WUAZ *e*pP pP 16 03 01.2 +0.1
WUAZ *e*sP sP 16 03 10.1 -0.6
WUAZ *e*ScP ScP 16 07 40.4 -2.0
Y14A Wickenburg 51.29 82 ⇑P P 16 02 40.2 -0.2
baz=51
DAG Danmarks Havn 51.29 5⇓*e*P P 16 02 39.7 -0.2
DAG pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
DAG Danmarks Havn 51.29 5⇓*i*P P 16 02 39.7 -0.2
comp=Z,5.1nm,0.4s,mb4.9
DAG Danmarks Havn 51.29 5⇓*e*P P 16 02 39.7 -0.2
comp=Z,5.1nm,0.4s,mb4.9
Q21A Lamborn Mesa, 51.37 74 ⇑P P 16 02 40.7 -0.3
baz=51
X15A Humboldt 51.39 81 ⇑P P 16 02 41.8 +0.7
baz=51
W16A Flagstaff 51.42 80 ⇑P P 16 02 42.1 +0.8
baz=51
U18A Rough Rock, Ch 51.56 78 ⇓P P 16 02 42.6 +0.3
baz=51
113A Mohawk Valley, 51.60 84 ⇑P P 16 02 42.5 -0.3
baz=51
R21A Cimarron 51.69 74 ⇑P P 16 02 43.4 +0.1
baz=52
Y15A Casa Rosa Ranc 51.69 82 ⇑P P 16 02 43.7 +0.3
baz=52
Z14A Wintersburg 51.71 83 ⇑P P 16 02 43.0 -0.6
baz=52
SSLB Suanglung 51.75 260 *e*P P 16 02 43.6 -0.4
comp=Z,108nm,1.1s,mb5.8
T19A Beclabito 51.80 77 ⇑P P 16 02 44.3 +0.1
baz=52
YULB Yu-li 51.84 259 *e*P P 16 02 43.6 -1.0
comp=Z,102nm,1.3s,mb5.7
MVCO Mesa Verde 51.87 76 ⇓P P 16 02 44.7 0.0
baz=52
MVCO Mesa Verde 51.87 76 *e*P P 16 02 44.2 -0.5
comp=Z,118nm,1.3s,mb5.8
MVCO *e*pP pP 16 03 06.0 +0.2
ISCO Idaho Springs 51.92 72 *e*P P 16 02 44.8 -0.2
ISCO pmax pmax
comp=Z,16nm,0.9s,mb5.0
ISCO Idaho Springs 51.92 72 *e*P P 16 02 44.8 -0.2
comp=Z,16nm,0.9s,mb5.1
X16A Lo Mia Camp, P 51.93 81 ⇓P P 16 02 45.8 +0.7
baz=52
W17A Winslow 51.93 80 ⇓P P 16 02 45.3 +0.2
baz=52
V18A Ganado 51.99 78 ⇑P P 16 02 46.1 +0.5
baz=52
XAN Xi'an 51.99 279 P P 16 02 45.8 +0.2
XAN AP pP 16 03 05.0 -1.7
XAN PP PP 16 04 43.8 -0.4
XAN S **S** **16 10 02.5 +0.2**
XAN AMB AMB
comp=Z,19nm,1.1s,mb5.0
XAN LR LR
comp=N,96nm,27.9s
XAN LR LR
comp=E,301nm,22.9s
XAN LR LR
comp=Z,285nm,24.2s
AGMN Agassiz Refuge 52.04 58 P P 16 02 43.3 -2.4
comp=Z,22nm,0.3s,mb5.7
Z15A Gila River Ind 52.24 82 ⇓P P 16 02 47.4 -0.1
baz=52
Y16A Circle Bar Ran 52.26 81 ⇑P P 16 02 48.2 +0.6
baz=52
TPUB Ta-pu 52.31 260 *e*P P 16 02 46.9 -1.2
comp=Z,82nm,0.9s,mb5.8
QZH Quanzhou 52.36 263⇓*i*P P 16 02 48.5 +0.1
QZH AMB AMB
comp=Z,170nm,0.9s,mb6.1
W18A Petrified Fore 52.50 79 ⇑P P 16 02 49.8 +0.4
baz=52
V19A Window Rock 52.52 78 ⇓P P 16 02 50.1 +0.5
baz=52
ZALV Zalesovo Beam 52.59 312 P P 16 02 49.3 -0.5
comp=Z,3.5nm,0.4s,mb4.7,baz=50,slow=6.4,SNR=18
ZALV PcP PcP 16 03 59.2 +0.5
comp=Z,5.3nm,0.6s,baz=64,slow=6.8,SNR=4.1
ZALV pPcP 16 04 22.0
comp=Z,12nm,0.7s,baz=25,slow=3.9,SNR=7.6
ZALV ScP ScP 16 07 49.0 +1.1
comp=Z,6.1nm,0.8s,baz=38,slow=5.6,SNR=9.7
ZALV Zalesovo Beam 52.59 312 P P 16 02 49.3 -0.4
ZALV 16 03 59.3
ZALV pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
115A Sonoran Desert 52.60 83 ⇑P P 16 02 50.6 +0.5
baz=52
Z16A Peralta Trail, 52.66 82 ⇓P P 16 02 50.9 +0.3
baz=52
214A Organ Pipe Nat 52.75 84 ⇑P P 16 02 51.6 +0.4
baz=53
NVS Novosibirsk 52.75 314 *e*P P 16 02 50.3 -0.6
NVS *e**PP pP 16 03 07.8 -4.3
NVS *e*S **S** **16 10 08.6 -3.5**
NVS *e* 16 12 31.7
NVS pmax pmax
comp=Z,21nm,1.3s,mb5.0
NVS pmax pmax
comp=E,12nm,1.1s
NVS smax
comp=E,35nm,2.2s
X18A Snowflake 52.77 79 ⇑P P 16 02 52.1 +0.8
baz=53
Y17A Roosevelt 52.78 81 ⇑P P 16 02 52.0 +0.6
baz=53
116A Eloy 53.02 83 ⇓P P 16 02 53.6 +0.4
baz=53
X19A St. Johns 53.24 79 ⇓P P 16 02 55.7 +0.9
baz=53
Z17A San Carlos Hig 53.28 81 ⇓P P 16 02 55.8 +0.7
baz=53
SDCO Great Sand Dun 53.32 73 *e*P P 16 02 55.3 -0.1
comp=E,19nm,1.0s,mb5.1
SDCO *e*pP pP 16 03 17.0 +0.5
SDCO *e*ScP ScP 16 07 50.6 -0.8
SUMG Summit 53.33 13 *e*P P 16 02 55.9 +0.9
comp=E,58nm,0.8s,mb5.7
SUMG *e*pP pP 16 03 17.2 +1.1
117A Oracle 53.60 82 ⇓P P 16 02 58.1 +0.6
baz=53
Z18A Geronimo 53.69 81 ⇑P P 16 02 58.8 +0.7
baz=54
LZH Lanzhou 53.72 284 ⇑P P 16 02 59.3 +1.0
LZH AP pP 16 03 20.0 +0.5
LZH XP sP 16 03 30.0 +0.9
LZH PCP PcP 16 04 04.0 +0.7
LZH PP PP 16 05 02.5 +2.8
LZH S **S** **16 10 24.0 -1.7**
LZH XS sS 16 11 03.5 +1.6
LZH SS SS 16 14 03.3 -3.7
LZH AMB AMB
comp=Z,80nm,1.2s,mb5.6
LZH AMB AMB
comp=Z,340nm,6.2s
LZH LR LR
comp=E,924nm,16.3s
LZH LR LR
comp=Z,1μm,17.0s
TUC Tucson 53.76 82 *e*P P 16 02 58.8 +0.2
TUC *e**PP pP 16 03 19.4 -0.4
TUC pmax pmax
comp=Z,40nm,0.8s,mb5.5
TUC Tucson 53.76 82 *e*P P 16 02 58.8 +0.1
comp=Z,40nm,0.8s,mb5.5
TUC *e*pP pP 16 03 19.4 -0.5
GTA Gaotai 53.91 290 ⇓P P 16 03 00.5 +0.8
GTA AP pP 16 03 20.3 -0.6
GTA XP sP 16 03 28.0 -2.5
GTA S **S** **16 10 32.0 +3.7**
GTA XS sS 16 11 04.0 -0.5
GTA SS SS 16 14 10.8 +0.8
GTA AMB AMB
comp=Z,66nm,1.0s,mb5.6
GTA AMB AMB
comp=Z,470nm,7.7s
GTA LR LR
comp=N,353nm,13.7s
GTA LR LR
comp=E,197nm,14.0s
GTA LR LR
comp=Z,295nm,14.6s
Z19A T-Link Ranch, 54.02 80 ⇑P P 16 03 01.2 +0.7
baz=54
118A Homack Ranch, 54.03 81 ⇑P P 16 03 01.2 +0.6
baz=54
217A Green Valley 54.10 83 ⇑P P 16 03 01.7 +0.5
baz=54
119A Ashpeak Ranch, 54.35 81 ⇓P P 16 03 03.7 +0.7
baz=54
218A Dragoon 54.44 82 ⇑P P 16 03 04.0 +0.4
baz=54
ECSD EROS,Sioux Fal 54.52 62 *e*P P 16 03 01.7 -2.3
comp=Z,14nm,0.8s,mb5.0
ECSD *e*pP pP 16 03 23.7 -1.6
EYMN Ely 54.53 56 *e*P P 16 03 02.7 -1.3
comp=Z,58nm,1.0s,mb5.6
EYMN *e*pP pP 16 03 23.1 -2.1
ANMO Albuquerque 54.60 77 P P 16 03 04.5 -0.2
comp=Z,11nm,1.0s,mb4.8,baz=309,slow=8.6,SNR=19
ANMO Albuquerque 54.60 77⇑*i*eP P 16 03 04.7 -0.1
ANMO pmax pmax
comp=Z,13nm,0.8s
ANMO Albuquerque 54.60 77 *e*P P 16 03 04.6 -0.2
comp=Z,33nm,1.3s,mb5.2
ANMO *e*pP pP 16 03 25.2 -0.8
318A Bisbee 54.84 82 ⇑P P 16 03 06.9 +0.4
baz=55
219A White Tail Can 54.91 81 ⇑P P 16 03 07.3 +0.4
baz=55
319A Douglas 55.33 82 ⇑P P 16 03 10.4 +0.4
baz=55
CBKS Cedar Bluff 56.00 69 *e*P P 16 03 13.8 -0.9
CBKS *e**PP pP 16 03 34.5 -1.6
CBKS *e**SP sP 16 03 44.7 -0.9
CBKS pmax pmax
comp=Z,74nm,1.0s,mb5.7
CBKS Cedar Bluff 56.00 69 *e*P P 16 03 13.8 -1.0
comp=Z,74nm,1.0s,mb5.7
CBKS *e*pP pP 16 03 34.5 -1.6
CBKS *e*sP sP 16 03 44.6 -1.0
CD2 Chengdu 57.30 280 P P 16 03 24.0 -0.1
CD2 AP pP 16 03 43.3 -2.2
CD2 XP sP 16 03 52.0 -3.0
CD2 PCP PcP 16 04 18.0 +0.7
CD2 PP PP 16 05 33.5 +1.7
CD2 PCS PcS 16 08 17.0 -1.5
CD2 S **S** **16 11 12.0 -1.6**
CD2 XS sS 16 11 45.0 -5.2
CD2 SS SS 16 15 03.3 -0.4
CD2 AMB AMB
comp=Z,70nm,0.9s,mb5.7
CD2 AMB AMB
comp=Z,740nm,11.6s
CD2 LR LR
comp=N,720nm,15.0s
CD2 LR LR
comp=Z,470nm,10.2s
ARCES ARCESS Array B 57.45 349 P P 16 03 23.7 -0.8
comp=Z,7.0nm,1.1s,mb4.6,baz=37,slow=7.7,SNR=15
ARCES pP 16 03 46.5 +0.6
comp=Z,11nm,0.8s,baz=27,slow=5.6,SNR=7.7
ARCES LR LR 16 28 58.8
comp=Z,240nm,18.3s,baz=352,slow=37
ARCES ARCESS Array B 57.45 349 P P 16 03 23.7 -0.8
ARCES *PP pP 16 03 46.5 +0.6
ARCES pmax pmax
comp=Z,7.0nm,1.1s
ARCES MLR MLR
comp=Z,240nm,18.3s
ARCES ARCESS Array B 57.45 349 P P 16 03 23.6 -0.8
ARCES pP pP 16 03 46.5 +0.6
ARCES LR LR 16 28 58.8
KURK Kurchatov 57.58 312 P P 16 03 25.2 -0.5
comp=Z,221nm,0.5s,mb6.5,SNR=29
KURK Kurchatov 57.58 312 ScP ScP 16 08 10.5 +0.6
comp=Z,8.2nm,1.0s,baz=84,slow=12,SNR=7.6
KURK S **S** **16 11 17.7 +1.0**
comp=Z,1.9nm,0.8s,baz=311,slow=24,SNR=4.4
KURK Kurchatov 57.58 312 *e*P P 16 03 25.6 -0.1
KURK *e**PP pP 16 03 46.3 -0.8
KURK pmax pmax
comp=Z,49nm,1.0s,mb5.5
KURK Kurchatov 57.58 312 *e*P P 16 03 25.6 -0.2
comp=Z,49nm,1.0s,mb5.5
KURK *e*pP pP 16 03 46.3 -0.8
KURK *e*ScP ScP 16 08 10.7 +0.8
KSU1 Kansas State U 57.61 67 *e*P P 16 03 24.3 -1.8
comp=Z,52nm,1.0s,mb5.5
KSU1 *e*pP pP 16 03 45.5 -2.0
SCIA State Center 57.61 62 *e*P P 16 03 25.1 -1.0
comp=Z,74nm,0.8s,mb5.8
WMQ Urumqi 57.77 301 P P 16 03 28.3 +1.2
WMQ XP sP 16 03 56.5 -1.6
WMQ PCP PcP 16 04 19.8 +0.9
WMQ AMB AMB
comp=Z,15nm,1.5s,mb4.8
WMQ LR LR
comp=N,155nm,20.0s
WMQ LR LR
comp=E,295nm,20.0s
WMQ LR LR
comp=Z,224nm,18.0s
MK31 Makanchi Array 58.52 307⇑*e*P P 16 03 31.6 -0.7
MK31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
MK31 Makanchi Array 58.52 307 *e*P P 16 03 31.5 -0.8
MKAR Makanchi Array 58.52 307 P P 16 03 31.9 -0.4
comp=Z,10nm,0.6s,mb5.0,baz=52,slow=5.9,SNR=115
MKAR pP pP 16 03 52.5 -1.3
comp=Z,3.9nm,0.5s,baz=27,slow=6.5,SNR=6.1
MKAR ScP ScP 16 08 15.2 +1.0
comp=Z,2.4nm,0.9s,baz=56,slow=3.1,SNR=4.3
MKAR S **S** **16 11 31.1 +2.0**
comp=Z,0.4nm,0.8s,baz=306,slow=21,SNR=3.7
MKAR Makanchi Array 58.52 307 P P 16 03 31.9 -0.4
MKAR *PP pP 16 03 52.5 -1.3
MKAR S **S** **16 11 31.1 +2.0**
MKAR pmax pmax
comp=Z,10.0nm,0.6s
MKAR Makanchi Array 58.52 307 P P 16 03 31.9 -0.4
MKAR pP pP 16 03 52.5 -1.3
MKAR ScP ScP 16 08 15.2 +1.0
MKAR S **S** **16 11 31.1 +2.0**
JFWS Jewell Farm 58.53 59 *e*P P 16 03 29.7 -2.8
JFWS *e**PP pP 16 03 51.6 -2.4
JFWS pmax pmax
comp=Z,65nm,0.9s,mb5.7
JFWS Jewell Farm 58.53 59 *e*P P 16 03 29.7 -2.8
comp=Z,65nm,0.9s,mb5.7
JFWS *e*pP pP 16 03 51.6 -2.4
GYA Guiyang 58.67 274⇓*i*P P 16 03 33.3 -0.3
GYA AP pP 16 03 55.3 +0.2
GYA XP sP 16 04 06.3 +1.6
GYA PCP PcP 16 04 23.8 +1.0
GYA PP PP 16 05 44.3 +0.3
GYA SCP ScP 16 08 12.5 -2.6
GYA PCS PcS 16 08 23.0 -1.7
GYA S **S** **16 11 25.5 -6.0**
GYA XS sS 16 12 06.5 -1.7
GYA SS SS 16 15 19.8 -5.4
GYA AMB AMB
comp=Z,30nm,0.9s,mb5.3
GYA AMB AMB
comp=Z,200nm,5.6s
GYA LR LR
comp=N,960nm,15.0s
GYA LR LR
comp=E,850nm,14.5s
GYA LR LR
comp=Z,1μm,14.9s
WMOK Wichita Mounta 59.34 72 *e*P P 16 03 37.7 -0.5
WMOK *e**PP pP 16 03 58.5 -1.2
WMOK *e* 16 04 19.7
WMOK pmax pmax
comp=Z,23nm,0.8s,mb5.3
WMOK Wichita Mounta 59.34 72 *e*P P 16 03 37.7 -0.6
comp=Z,23nm,0.8s,mb5.3
WMOK *e*pP pP 16 03 58.5 -1.2
WMOK *e*PcP PcP 16 04 19.7 -5.6
WMOK *e*ScP ScP 16 08 16.8 -1.2
BVA0 Borovoye Array 59.55 318 *i* P P 16 03 39.7 +0.4
BVA0 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BVAR Borovoye Array 59.55 318 P P 16 03 39.9 +0.5
comp=Z,13nm,0.4s,mb5.3,baz=57,slow=6.8,SNR=3.3
BVAR ScP ScP 16 08 18.2 -0.4
comp=Z,7.3nm,1.0s,baz=45,slow=5.0,SNR=5.2
BVAR S **S** **16 11 43.7 +1.6**
comp=Z,1.8nm,1.0s,baz=58,slow=11,SNR=5.4
BVAR LR LR 16 33 54.8
comp=Z,363nm,19.3s,baz=317,slow=40
BVAR Borovoye Array 59.55 318 P P 16 03 39.9 +0.6
BVAR S **S** **16 11 43.7 +1.6**
BVAR pmax pmax
comp=Z,13nm,0.4s
BVAR pmax pmax
comp=N,7.0nm,1.0s
BVAR smax
comp=N,2.0nm,1.0s
BVAR MLR MLR
comp=Z,363nm,19.3s
BRVK Borovoye 59.57 318 P P 16 03 40.7 +1.2
comp=Z,167nm,0.5s,mb6.3,SNR=11
BRVK Borovoye 59.57 318 *e*P P 16 03 39.3 -0.2
BRVK pmax pmax
comp=Z,35nm,0.7s,mb5.5
BRVK Borovoye 59.57 318 *e*P P 16 03 39.3 -0.1
comp=Z,35nm,0.7s,mb5.5
BRVK *e*ScP ScP 16 08 18.5 -0.2
TXAR Lajitas Array 60.20 80 P P 16 03 44.3 +0.1
comp=Z,26nm,0.8s,mb5.3,baz=298,slow=4.5,SNR=191
TXAR pP pP 16 04 05.0 -0.7

comp=Z,32nm,0.6s,baz=297,slow=4.9,SNR=17
TXAR ScP ScP 16 08 20.8 -1.1
comp=Z,2.0nm,0.8s,baz=273,slow=3.1,SNR=6.5
TXAR S **S** **16 11 51.4 +0.2**
comp=Z,0.1nm,0.4s,baz=40,slow=35,SNR=3.4
TXAR Lajitas Array 60.20 80 P **P** **16 03 44.3 +0.1**
TXAR *PP pP 16 04 05.0 -0.8
TXAR S **S** **16 11 51.4 +0.2**
TXAR pmax pmax
comp=Z,26nm,0.8s
TXAR Lajitas Array 60.20 80 P **P** **16 03 44.3 +0.1**
TXAR pP pP 16 04 05.0 -0.7
TXAR ScP ScP 16 08 20.8 -1.1
TXAR S **S** **16 11 51.4 +0.2**
SVE Sverdlovsk 60.40 326⇑ *eP* **P** **16 03 46.4 +1.3**
SVE pmax pmax
comp=Z,37nm,1.3s,mb5.2
HDIL Hopedale 60.68 61 *eP* **P** **16 03 45.5 -1.8**
comp=Z,56nm,0.6s,mb5.8
HDIL *epP* pP 16 04 06.3 -2.6
SCHQ Schefferville 60.72 37 P **P** **16 03 46.9 -0.4**
comp=Z,25nm,0.6s,mb5.4,baz=323,slow=6.8,SNR=60
SCHQ Schefferville 60.72 37 P **P** **16 03 46.9 -0.4**
ARU Arti 61.42 327 P **P** **16 03 53.3 +1.3**
comp=Z,257nm,0.4s,mb6.6,SNR=9.1
ARU Arti 61.42 327*d* *iP* **P** **16 03 53.0 +1.0**
ARU *e*PP pP 16 04 14.8 +1.1
ARU *e* 16 06 08.3
ARU *e*PPP 16 07 37.8
ARU *eS* **S** **16 12 09.5 +3.5**
ARU SS SS 16 16 13.6 +6.6
ARU pmax pmax
comp=Z,33nm,1.0s,mb5.3
ARU Arti 61.42 327 *eP* **P** **16 03 52.5 +0.5**
comp=Z,23nm,0.6s,mb5.4
ARU *epP* pP 16 04 13.8 +0.2
JCT Junction City 61.73 76 *eP* **P** **16 03 53.3 -1.2**
JCT *e*PP pP 16 04 15.2 -1.0
JCT pmax pmax
comp=Z,22nm,0.6s,mb5.4
JCT Junction City 61.73 76 *eP* **P** **16 03 53.3 -1.3**
comp=Z,22nm,0.6s,mb5.4
JCT *epP* pP 16 04 15.2 -1.0
FVM French Village 61.87 64 *eP* **P** **16 03 53.4 -1.9**
FVM *e*PP pP 16 04 13.9 -3.1
FVM pmax pmax
comp=Z,18nm,0.6s,mb5.3
FVM French Village 61.87 64 *eP* **P** **16 03 53.4 -1.9**
comp=Z,18nm,0.6s,mb5.3
FVM *epP* pP 16 04 13.9 -3.1
KMI Kunming 62.06 276 P **P** **16 03 56.8 0.0**
KMI AP pP 16 04 18.3 -0.2
KMI XP sP 16 04 28.5 +0.5
KMI PP PP 16 06 16.8 +2.8
KMI S **S** **16 12 13.0 -1.9**
KMI XS sS 16 12 50.5 -1.4
KMI AMB AMB
comp=Z,19nm,1.0s,mb5.1
KMI AMB AMB
comp=Z,287nm,4.7s
KMI LR LR
comp=N,539nm,18.3s
KMI LR LR
comp=E,380nm,14.8s
KMI LR LR
comp=Z,411nm,20.9s
MIAR Mount Ida 62.52 68 *eP* **P** **16 03 58.7 -1.0**
MIAR *e* pP 16 04 20.3 -1.2
MIAR pmax pmax
comp=Z,74nm,1.0s,mb5.6
MIAR Mount Ida 62.52 68 *eP* **P** **16 03 58.7 -1.1**
comp=Z,74nm,1.0s,mb5.6
MIAR *e* pP 16 04 20.3 -1.1
OLIL Olney 62.62 62 *eP* **P** **16 03 59.1 -1.2**
comp=Z,61nm,0.9s,mb5.5
OLIL *epP* pP 16 04 21.0 -1.1
SIUC Southern Illin 62.73 63 *eP* **P** **16 03 59.3 -1.8**
comp=Z,16nm,0.8s,mb5.0
JOF Joensuu 62.81 344 *ep* **P** **16 04 00.5 -0.7**
comp=Z,2.4nm,0.4s,mb4.5
JOF Joensuu 62.81 344 *eP* **P** **16 04 00.5 -0.7**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
HNR Honiara 63.01 201 LR LR 16 24 24.9
comp=Z,257nm,21.3s,baz=232,slow=29
HNR Honiara 63.01 201 *eP* **P** **16 04 01.7 -1.4**
HNR pmax pmax
comp=Z,91nm,1.0s,mb5.7
HNR Honiara 63.01 201 *eP* **P** **16 04 01.7 -1.4**
comp=Z,91nm,1.0s,mb5.7
UALR University of 63.07 67 *eP* **P** **16 04 02.0 -1.3**
comp=Z,16nm,0.8s,mb5.0
UALR *epP* pP 16 04 23.1 -2.0
USIN University of 63.41 62 *eP* **P** **16 04 04.2 -1.3**
comp=Z,47nm,0.8s,mb5.5
USIN *epP* pP 16 04 26.3 -1.1
WCI Wyandotte Cave 63.97 61 *eP* **P** **16 04 07.9 -1.3**
WCI pmax pmax
comp=Z,33nm,0.9s,mb5.2
WCI Wyandotte Cave 63.97 61 *eP* **P** **16 04 07.9 -1.3**
comp=Z,33nm,0.9s,mb5.2
ACSO Alum Creek Sta 64.28 57 *eP* **P** **16 04 09.9 -1.4**
comp=Z,24nm,0.9s,mb5.0
ACSO *epP* pP 16 04 32.2 -0.8
KAF Kangasniemi 64.38 346 *ep* **P** **16 04 11.3 -0.2**
comp=Z,1.3nm,0.3s,mb4.2
KAF Kangasniemi 64.38 346 *eP* **P** **16 04 11.3 -0.2**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
TKM2 Tokmak 2 64.61 308 *eP* **P** **16 04 14.0 +0.6**
TKM2 *e*PP pP 16 04 33.2 -2.0
TKM2 pmax pmax
comp=Z,14nm,0.9s,mb4.8
TKM2 Tokmak 2 64.61 308 P **P** **16 04 13.9 +0.5**
SNR=14
TKM2 Tokmak 2 64.61 308 *eP* **P** **16 04 13.9 +0.6**
comp=Z,14nm,0.9s,mb4.8
TKM2 *epP* pP 16 04 33.2 -2.0
WVT Waverly 64.64 63 *eP* **P** **16 04 12.1 -1.6**
WVT *e*PP pP 16 04 35.1 -0.4
WVT pmax pmax
comp=Z,25nm,0.8s,mb5.1
WVT Waverly 64.64 63 *eP* **P** **16 04 12.1 -1.6**
comp=Z,25nm,0.8s,mb5.1
WVT *epP* pP 16 04 35.1 -0.4
USP Ospenovka 64.89 309 P **P** **16 04 16.2 +1.0**
SNR=32
OXF Oxford 64.93 66 *eP* **P** **16 04 14.3 -1.2**
comp=Z,168nm,0.9s,mb5.9
OXF *epP* pP 16 04 37.1 -0.3
CHMS Chumysh 64.97 308 P **P** **16 04 16.5 +0.8**
SNR=6.0
KBK Karagaybulak 65.13 308 P **P** **16 04 17.6 +0.8**
SNR=20
FRU Bishkek 65.16 308 *eP* **P** **16 04 17.5 +0.6**
FRU *e* 16 04 51.0
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.0
AAK Ala-Archa 65.37 308 P **P** **16 04 19.3 +1.0**
SNR=14
KZA Kyzart 65.41 307 P **P** **16 04 20.0 +1.5**
SNR=10
EKS2 Erkin-Say 65.70 309 P **P** **16 04 21.5 +1.1**
SNR=21
EKS2 Erkin-Say 65.70 309 *eP* **P** **16 04 21.1 +0.7**
comp=Z,20nm,0.9s,mb4.9
EKS2 *epP* pP 16 04 42.2 -0.1
LSA Lhasa 65.78 288 P **P** **16 04 22.8 +1.7**
LSA AMB AMB
comp=Z,50nm,0.8s,mb5.4
LSA Lhasa 65.78 288 *eP* **P** **16 04 22.8 +1.7**
LSA *e*PP pP 16 04 42.5 -0.5
LSA pmax pmax
comp=Z,42nm,0.8s,mb5.3
LSA Lhasa 65.78 288 *eP* **P** **16 04 22.8 +1.7**
comp=Z,42nm,0.8s,mb5.3
LSA *epP* pP 16 04 42.5 -0.5
AML Almayashu 66.14 308 P **P** **16 04 24.9 +1.7**
SNR=13
AML Almayashu 66.14 308 *eP* **P** **16 04 24.3 +1.1**
comp=Z,13nm,0.8s,mb4.8
AML *epP* pP 16 04 45.1 0.0
AKTK Aktyubinsk 66.43 323 P **P** **16 04 25.9 +0.9**
AKTK pP pP 16 04 47.5 +0.6
AKTK S S 16 13 11.2 +3.1
AKTO Aktyubinsk 66.43 323 P **P** **16 04 25.9 +0.9**
comp=Z,24nm,0.6s,mb5.2,baz=53,slow=7.4,SNR=105
AKTO pP pP 16 04 47.5 +0.6
comp=Z,13nm,0.6s,baz=348,slow=0.5,SNR=7.2
AKTO S S 16 13 11.2 +3.1
comp=Z,0.9nm,0.9s,baz=350,slow=23,SNR=6.3
AKTO Aktyubinsk 66.43 323 P **P** **16 04 25.9 +0.9**
AKTO *PP pP 16 04 47.5 +0.6
AKTO S S 16 13 11.2 +3.1
AKTO pmax pmax
comp=Z,25nm,0.6s,mb5.2
AKTO smax
comp=N,1.0nm,0.9s
SSPA Standing Stone 66.59 54 *eP* **P** **16 04 24.8 -1.3**
comp=N,24nm,0.9s,mb5.0
SSPA *epP* pP 16 04 45.7 -2.4
PMG Port Moresby 66.65 214 LR LR 16 33 15.3
comp=N,155nm,18.4s,baz=60,slow=36
PMG Port Moresby 66.65 214⇑ *eP* **P** **16 04 25.8 -0.9**
PMG pmax pmax
comp=Z,32nm,1.3s
PMG Port Moresby 66.65 214 *eP* **P** **16 04 25.4 -1.3**
comp=Z,18nm,0.8s,mb5.0
AB31 Akbulak array 66.65 321 P **P** **16 04 26.8 +0.4**
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
KK31 Karatay Array 66.93 311⇑ *eP* **P** **16 04 28.3 +0.1**
KK31 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
NB2 NORSAR Subarra 67.12 353 P **P** **16 04 28.5 -0.6**
comp=Z,1.9nm,0.6s,mb4.1,baz=5.9,slow=6.5
NB2 NORSAR Subarra 67.12 353 P pP 16 04 51.1 0.0
comp=Z,36nm,1.1s,baz=7.8,slow=6.5
NOA NORSAR Array B 67.12 353 P **P** **16 04 28.4 -0.7**
comp=Z,2.4nm,1.0s,mb4.0,baz=9.5,slow=6.5,SNR=5.5
NOA pP pP 16 04 51.2 +0.2
comp=Z,23nm,1.0s,baz=7.4,slow=6.4,SNR=14
NOA NORSAR Array B 67.12 353 P **P** **16 04 28.4 -0.7**
NOA *PP pP 16 04 51.3 +0.2
NOA pmax pmax
comp=Z,2.0nm,1.0s
NOA NORSAR Array B 67.12 353 P **P** **16 04 28.4 -0.7**
NOA pP pP 16 04 51.2 +0.2
TKL Tuckaleechee C 67.22 61 *eP* **P** **16 04 28.9 -1.3**
LRAL Lakeview Retre 67.38 65 *eP* **P** **16 04 28.9 -2.3**
comp=Z,13nm,0.8s,mb4.8
LRAL *epP* pP 16 04 51.6 -1.6
IMP Imphal 67.72 282 *eP* **P** **16 04 33.0 -0.5**
SHL Shillong 68.38 284⇓ *iP* **P** **16 04 38.5 +0.9**
OBN Obninsk 68.94 338 *eP* **P** **16 04 41.1 +0.5**
OBN *e*PP pP 16 05 03.0 +0.3
OBN *e*SP sP 16 05 13.0 +0.9
OBN *e* 16 07 14.9
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
GOGA Godfrey 69.07 62 *eP* **P** **16 04 40.0 -1.8**
GOGA pmax pmax
comp=Z,32nm,1.0s,mb5.1
GOGA Godfrey 69.07 62 *eP* **P** **16 04 40.0 -1.8**
comp=Z,32nm,1.0s,mb5.1
CHTO Chiang Mai 69.09 274 *eP* **P** **16 04 41.2 -0.9**
CHTO pmax pmax
comp=Z,27nm,0.9s,mb5.1
CHTO Chiang Mai 69.09 274 *eP* **P** **16 04 41.2 -0.9**
comp=Z,27nm,0.9s,mb5.1
CMAR Chiang Mai Arr 69.36 274 P **P** **16 04 43.6 -0.1**
comp=Z,22nm,0.8s,mb5.0,baz=26,slow=7.0,SNR=132
CMAR pP pP 16 05 05.0 -0.8
comp=Z,12nm,0.8s,baz=26,slow=7.4,SNR=8.2
CMAR Chiang Mai Arr 69.36 274 P **P** **16 04 43.7 -0.1**
CMAR *PP pP 16 05 05.0 -0.8
CMAR pmax pmax
comp=Z,23nm,0.8s
CMAR pmax pmax
comp=Z,13nm,0.8s
TAPN Taplejung 69.55 288 *eP* **P** **16 04 45.8 +1.0**
comp=Z,149nm,0.8s,mb5.9
ODAN Odare 70.10 288 *eP* **P** **16 04 48.9 +0.7**
comp=Z,60nm,0.8s,mb5.5
GUN Gumba 70.20 290 *eP* **P** **16 04 50.0 +1.1**
JIRN Jiri 70.21 290 *eP* **P** **16 04 50.1 +1.2**
comp=Z,156nm,0.7s,mb6.0
RAMN Ramite 70.50 289 *eP* **P** **16 04 51.5 +0.8**
comp=Z,189nm,0.6s,mb6.1
KKN Kakani 70.64 290 *eP* **P** **16 04 52.5 +1.0**
comp=Z,118nm,0.7s,mb5.8
PKI Pulchoki 70.73 290 *eP* **P** **16 04 52.8 +0.7**
PKIN Phulchoki 70.74 290 *eP* **P** **16 04 52.8 +0.7**
comp=Z,55nm,0.5s,mb5.7
PLIG Platanillo 70.81 85 *i* P **P** **16 04 52.5 -0.2**
PLIG *i* S pP 16 05 11.6 -3.2
GKN Gorkha 70.86 291 *eP* **P** **16 04 53.5 +0.7**
DMN Daman 70.88 290 *eP* **P** **16 04 53.9 +0.9**
comp=Z,40nm,0.5s,mb5.5
NHSC New Hope 71.09 60 *eP* **P** **16 04 54.1 -0.1**
comp=Z,67nm,1.1s,mb5.5
DANN Dangsing 71.11 292 *eP* **P** **16 04 55.3 +1.0**
comp=Z,205nm,0.9s,mb6.0
KOLN Koldanda 71.64 292 *eP* **P** **16 04 58.1 +0.6**
comp=Z,92nm,0.9s,mb5.6
PMOR Pomariorio Ree 72.57 146 *eT* 17 23 58.4
comp=Z,52nm,0.2s
BOK Bokaro 73.30 287 *eP* **P** **16 05 07.9 +0.4**
KBL Kabul 74.32 306 *eP* **P** **16 05 12.8 -0.5**
KBL *e*PP pP 16 05 33.3 -2.3
KBL *e*SP sP 16 05 44.7 -0.2
KBL pmax pmax
comp=Z,30nm,0.8s,mb5.1
KBL Kabul 74.32 306 *eP* **P** **16 05 12.8 -0.5**
comp=Z,30nm,0.8s,mb5.1
KBL *epP* pP 16 05 33.3 -2.3
KBL *es*P sP 16 05 44.7 -0.2
PPT Papeete 74.40 149 *eLR* LR 16 27 33.6
comp=Z,409nm,29.5s
PPT Papeete 74.40 149 *eT* 17 26 16.2
comp=Z,51nm,0.2s
PPT Papeete 74.40 149 LR LR 16 32 53.5
comp=Z,302nm,19.6s,baz=165,slow=32
TIAR Tiarei 74.46 148 *eT* 17 26 21.0
comp=Z,255nm,0.2s
DMUB Kingscourt 74.63 3 *eP* pP 16 05 37.1 0.0
CMIG Matias Romero 74.65 82 *i* P **P** **16 05 15.7 +0.3**
CMIG *i* S pP 16 05 35.6 -2.1
CMIG Matias Romero 74.65 82 *i* P **P** **16 05 16.3 +0.9**
CMIG Matias Romero 74.65 82 *i* S pP 16 05 35.6 -2.1
AKASG Malin Array Be 74.68 340 P **P** **16 05 14.0 -1.1**
comp=Z,3.1nm,0.3s,mb4.5,baz=20,slow=6.3,SNR=14
AKASG pP pP 16 05 36.8 -0.6
comp=Z,2.8nm,0.3s,baz=22,slow=6.0,SNR=5.1
AKASG Malin Array Be 74.68 340 P **P** **16 05 14.0 -1.1**
AKASG *PP pP 16 05 36.8 -0.6
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKBB Malin Array Si 74.68 340 *eP* **P** **16 05 14.5 -0.6**
AKBB *e*PP pP 16 05 37.2 -0.2
KIEV Kiev 74.69 340 *eP* **P** **16 05 14.6 -0.5**
KIEV pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
KIEV Kiev 74.69 340 *eP* **P** **16 05 14.6 -0.5**
comp=Z,9.1nm,0.5s,mb4.8
TVO Taravao 74.70 148 *eT* 17 26 35.2
comp=Z,86nm,0.3s
HUIG Huatulco 74.90 84 *i* P **P** **16 05 16.9 0.0**
HUIG *i* S pP 16 05 38.8 -0.4
HUIG Huatulco 74.90 84 *i* P **P** **16 05 17.6 +0.8**
HUIG Huatulco 74.90 84 *i* S pP 16 05 38.8 -0.4
MEH Mehetia 75.18 147 *eT* 17 27 14.5
comp=Z,1μm,0.3s
DLF Lyons Farm 75.25 3 *eP* PcP 16 05 36.2 +4.9
GOF Gofitskoye 76.24 329 *eP* **P** **16 05 25.5 +1.4**
CLL Collm 76.61 351 *epP* pP 16 05 50.0 +1.5
ABKT Ailbek 76.70 316 P **P** **16 05 27.7 +0.9**
comp=Z,92nm,1.2s,mb5.4,SNR=7.6
PCIG 76.73 82 *i* P **P** **16 05 24.9 -2.3**
PCIG *i* S pP 16 05 49.4 -0.3
CTA Charters Tower 76.91 211 *eP* **P** **16 05 27.3 -0.7**
comp=Z,39nm,0.9s,mb5.1
KWP Kalwaria 76.94 344⇑ *iP* **P** **16 05 29.1 +1.1**
KWP Kalwaria 76.94 344 *eP* **P** **16 05 28.4 +0.4**
comp=Z,44nm,0.9s,mb5.2
CCIG Comitan 76.95 80 *i* P **P** **16 05 30.2 +1.7**
UPC Upice 77.06 349 *epP* pP 16 05 49.2 -1.9
DPC Dobruska-Polom 77.18 348 *epP* pP 16 05 51.7 0.0
KIV Kislovodsk 77.34 329 *eP* **P** **16 05 31.1 +0.8**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.6
KIV Kislovodsk 77.34 329 *eP* **P** **16 05 31.4 +1.1**
comp=Z,10nm,0.8s,mb4.6
STHS Stebnicka Huta 77.39 345 *eP* **P** **16 05 30.5 0.0**
STHS *e*PCP PcP 16 05 41.7 +1.1
STHS *epP* pP 16 05 57.7 +4.8
OKC Ostrava-Krasne 77.44 347 *eP* pP 16 05 54.2 +1.0
KOLS Kolonicke sedl 77.69 344 *eP* **P** **16 05 29.1 -3.0**
AJM Ajmer 77.70 297 *eP* **P** **16 05 31.8 -0.8**
AJM AMb AMB 16 05 33.6
comp=Z,35nm,0.9s,mb5.1
NKC Novy Kostel 77.73 351 *epP* pP 16 05 53.6 -1.2
PRU Pruhonice 77.75 350 *epP* pP 16 05 57.6 +2.7
MEM Membach 77.84 355 AP pP 16 05 57.5 +2.1
CRVS Cervenica-Dubn 77.85 345 *eP* **P** **16 05 29.9 -3.2**
CRVS *e* 16 05 41.3
CRVS Cervenica-Dubn 77.85 345 *eP* **P** **16 05 29.9 -3.2**
CRVS *e*PCP PcP 16 05 41.3 -1.4
CRVS *es*P sP 16 06 09.7 +4.8
UZH Uzhgorod 77.98 344 *eP* **P** **16 05 40.2 +6.4**
UZH *i* sP 16 06 06.8 +1.2
BCLA Clavier 78.06 356 AP pP 16 05 58.3 +1.7
VRAC Vranov 78.17 348⇑ *iP* pP 16 05 52.8 -4.5
GRF Grafenberg Arr 78.38 352 *eP* pP 16 06 00.4 +2.0
comp=Z,14nm,1.5s
KULM Kulim 78.40 264 *eP* **P** **16 05 35.6 -1.0**
comp=Z,48nm,1.4s,mb5.0
BUR08 Bucovina Ar. S 78.40 342 *eP* **P** **16 05 36.2 0.0**
BUR08 *epP* pP 16 05 58.9 +0.3
TRPA Tarpa 78.42 344⇓ *iP* **P** **16 05 36.6 +0.4**
BURAR Bucovina Array 78.43 342⇓ *iP* **P** **16 05 37.1 +0.8**
BURAR Bucovina Array 78.43 342 ⇓P **P** **16 05 37.1 +0.9**
VYHS Vyhne 78.66 346 *eP* **P** **16 05 35.9 -1.6**
VYHS *e*PCP PcP 16 05 44.7 -1.5
VYHS *epP* pP 16 06 00.4 +0.4
BHPL Bhopal 78.66 293 *eP* **P** **16 05 37.3 -0.7**
KHC Kasperske Hory 78.70 350 *eP* **P** **16 05 37.5 -0.2**
KHC *epP* pP 16 06 02.1 +1.9
GERES GERESS Array B 78.97 350 P **P** **16 05 38.9 -0.3**
comp=Z,0.4nm,0.5s,baz=29,slow=6.4,SNR=6.9
GERES pP pP 16 06 03.0 +1.3
comp=Z,1.4nm,0.7s,baz=11,slow=5.9,SNR=6.1
GERES LR LR 16 41 21.8
comp=Z,256nm,18.5s,baz=265,slow=36
GERES GERESS Array B 78.97 350 P **P** **16 05 38.9 -0.3**
GERES *PP pP 16 06 03.0 +1.3
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,256nm,18.5s
PSZ Piszkesteto 79.06 346 P **P** **16 05 37.1 -2.6**
PSZ *e*PP pP 16 06 01.6 -0.6
PSZ pmax pmax
comp=Z,13nm,1.1s,mb4.7
PSZ Piszkesteto 79.06 346 P **P** **16 05 37.1 -2.6**
comp=Z,13nm,1.1s,mb4.7
PSZ *epP* pP 16 06 01.6 -0.6
NGP Nagpur 79.35 290 *eP* **P** **16 05 39.4 -2.3**
NGP AMb AMB 16 05 42.0
comp=Z,47nm,1.0s,mb5.3
VIS Vishakhapatnam 79.48 285 *eP* **P** **16 05 42.5 +0.1**
DRGR 79.69 343⇑ *iP* **P** **16 05 43.4 +0.3**
DRGR 79.69 343 ⇑P **P** **16 05 43.4 +0.3**
TBI Tubuai 79.85 150 *eT* 17 33 05.2
comp=Z,12nm,0.2s
MEZF Maizieres J'vi 79.99 356 *eP* **P** **16 05 45.4 +0.7**
GNI Garni 80.05 326 P **P** **16 05 46.5 +1.3**
comp=Z,1.5nm,0.3s,mb4.2,baz=8.2,slow=11,SNR=5.4
GNI Garni 80.05 326 *eP* **P** **16 05 47.2 +2.0**
GNI pmax pmax
comp=Z,34nm,1.4s
GNI Garni 80.05 326 *eP* **P** **16 05 47.2 +2.0**
comp=Z,34nm,1.4s,mb5.0
EIDS Eidsvold 80.49 205 *eP* **P** **16 05 46.5 -1.0**
comp=Z,34nm,1.1s,mb5.1
KBA Koelnbreinsper 80.75 350⇑ *iP* **P** **16 05 49.8 +0.9**
comp=Z,14nm,1.1s,mb4.7
AKL Akola 80.88 292 *eP* **P** **16 05 49.7 -0.3**
AKL AMb AMB 16 05 52.0
comp=Z,39nm,0.9s,mb5.2
PKSM Moragy 80.92 346⇑ *iP* **P** **16 05 51.2 +1.5**
PKSM Moragy 80.92 346 ⇑P **P** **16 05 51.2 +1.5**
SOKA Soboth 80.95 349⇑ *iP* **P** **16 05 51.2 +1.2**
comp=Z,6.2nm,0.9s,mb4.4
GZR Gura Zlata 81.02 343⇓ *iP* **P** **16 05 51.1 +0.8**
GZR Gura Zlata 81.02 343 ⇓P **P** **16 05 51.1 +0.7**
WRAB Tennant Creek 81.16 222 P **P** **16 05 50.0 -1.2**
comp=Z,252nm,0.9s,mb6.0,SNR=16
WRAB Tennant Creek 81.16 222 *eP* **P** **16 05 49.7 -1.5**
WRAB pmax pmax
comp=Z,42nm,1.0s,mb5.2
WRAB Tennant Creek 81.16 222 *eP* **P** **16 05 49.6 -1.6**
comp=Z,42nm,1.0s,mb5.2
WB2 Warramunga Arr 81.16 222⇓ *iP* **P** **16 05 49.9 -1.3**
WRA Warramunga Arr 81.17 222 P **P** **16 05 50.0 -1.3**
comp=Z,25nm,0.8s,mb5.1,baz=34,slow=5.9,SNR=13
WRA pP pP 16 06 14.1 +0.2
comp=Z,6.4nm,0.7s,baz=31,slow=5.9,SNR=4.4
WRA PP PP 16 08 50.3 -7.7
comp=Z,5.3nm,1.2s,baz=26,slow=9.0,SNR=5.0
DAVOS Davos 81.33 352 P **P** **16 05 51.2 -0.7**
DAVOX Davos/Dischmat 81.38 352 P **P** **16 05 51.2 -1.0**
comp=Z,1.2nm,0.8s,mb4.0,baz=359,slow=11,SNR=4.8
PSI Prapat 81.40 264 P **P** **16 05 52.0 -0.8**
comp=Z,50nm,0.9s,mb5.4,baz=359,slow=3.5,SNR=37
PSI pP pP 16 06 14.8 -0.7
comp=Z,22nm,0.8s,baz=225,slow=4.0,SNR=4.4
PSI Prapat 81.40 264 P **P** **16 05 52.0 -0.8**
PSI *PP pP 16 06 14.8 -0.7
PSI pmax pmax
comp=Z,50nm,0.9s,mb5.3
PSI pmax pmax
comp=Z,22nm,0.8s,mb5.0
PSI Prapat 81.40 264 P **P** **16 05 52.0 -0.8**
PSI pP pP 16 06 14.8 -0.7
SSF Saint Saulge 81.49 357 *eP* **P** **16 05 53.5 +0.7**
TGUH Tegucigalpa,Un 81.64 78 *eP* **P** **16 05 54.5 +0.4**
comp=Z,51nm,0.9s,mb5.4
TGUH *epP* pP 16 06 17.6 +1.0
AVF Avril sur Loir 81.77 357 *eP* **P** **16 05 54.9 +0.7**
SMF Signal de Mont 81.89 356 *eP* **P** **16 05 55.8 +0.9**
comp=Z,12nm,0.8s,mb4.5
SMF Signal de Mont 81.89 356 *eP* **P** **16 05 55.8 +0.9**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SMF Signal de Mont 81.89 356 *eP* **P** **16 05 55.8 +0.9**
comp=Z,6.1nm,0.8s,mb4.5
HYB Hyderabad 82.56 289 *eP* **P** **16 05 58.5 -0.3**
HYB *e* pP 16 06 21.0 -0.5
HYB pmax pmax
comp=Z,75nm,1.0s,mb5.5
HYB Hyderabad 82.56 289 *i* P **P** **16 05 58.5 -0.3**
comp=Z,75nm,1.0s,mb5.5
HYB *e* 16 06 03.0
HYB *epP* pP 16 06 21.0 -0.5
HYB Hyderabad 82.56 289 *eP* **P** **16 05 58.5 -0.3**
comp=Z,75nm,1.0s,mb5.5
HYB *e* pP 16 06 21.0 -0.5
LPG La Plagne 82.89 354 *eP* **P** **16 06 00.8 +0.7**
FITZ Fitzroy Crossi 83.42 230⇓ *iP* **P** **16 06 02.7 -0.4**
comp=Z,96nm,0.8s,mb5.7
FITZ Fitzroy Crossi 83.42 230 *eP* **P** **16 06 02.6 -0.5**
comp=Z,79nm,0.9s,mb5.5
FITZ *epP* pP 16 06 22.9 -2.9
MALT Malatya 83.81 330⇑ *iP* **P** **16 06 07.0 +2.1**
MALT Malatya 83.81 330 *eP* **P** **16 06 06.2 +1.2**
comp=Z,18nm,1.1s,mb4.8
MALT *epP* pP 16 06 27.9 +0.3
BR131 Keskin Array S 83.92 334 *eP* **P** **16 06 05.8 +0.2**
comp=Z,2.4nm,0.6s,mb4.2
BRTR Keskin Array B 83.92 334 P **P** **16 06 06.2 +0.6**
comp=Z,3.8nm,0.8s,mb4.3,baz=44,slow=2.7,SNR=13
BRTR sP sP 16 06 38.0 +0.5
comp=Z,6.0nm,0.7s,baz=54,slow=2.4,SNR=7.9
BRTR Keskin Array B 83.92 334 P **P** **16 06 06.2 +0.7**
BRTR *SP sP 16 06 38.1 +0.6
BRTR pmax pmax
comp=Z,4.0nm,0.8s
POO Poona 84.42 293 *eP* **P** **16 06 07.6 -0.8**
POO AMb AMB 16 06 10.7
comp=Z,56nm,1.8s,mb5.1
SMRF Simiane la Rot 84.47 355 *eP* **P** **16 06 08.6 +0.4**

comp=Z,47nm,1.3s,mb4.9
SMRF Simiane la Rot 84.47 355 *e*P **P 16 06 08.6 +0.4**
comp=Z,47nm,1.3s,mb5.2
ASAR Alice Springs 84.68 220 P **P 16 06 08.7 -0.6**
comp=Z,23nm,0.9s,mb5.1,baz=24,slow=5.3,SNR=227
ASAR Alice Springs 84.68 220 P **P 16 06 08.7 -0.6**
ASAR pmax pmax
comp=Z,23nm,0.9s
ARMA Armidale 85.17 203 *e*P **P 16 06 12.3 +0.7**
KAD Karad 85.19 292 *e*P **P 16 06 12.2 -0.1**
KAD AMb AMB 16 06 15.9
comp=Z,43nm,1.0s,mb5.3
MVO Moncorvo 87.35 4 *ep*P pP 16 06 45.7 +0.3
MIB Mutribah 88.23 319 *e*P **P 16 06 26.5 -0.3**
baz=319
MIB AMb AMB 16 06 27.5
comp=Z,79nm,0.9s,mb5.7,baz=319
UMR Umm Al-Rimmam 88.30 319 *e*P **P 16 06 26.2 -1.0**
baz=319
UMR AMb AMB 16 06 27.3
comp=Z,60nm,0.8s,mb5.7,baz=319
RIV Riverview 88.54 203 *e*P **P 16 06 28.4 +0.5**
PCBR Castelo Branco 88.65 5 *ep*P pP 16 06 51.5 -0.1
NAY Al-Naaiem 88.75 319 *e*P **P 16 06 28.6 -0.8**
baz=319
NAY AMb AMB 16 06 29.4
comp=Z,28nm,0.9s,mb5.3,baz=319
KOD Kodaikanal 88.84 285 *e*P **P 16 06 29.5 -0.4**
MBWA Marble Bar 88.90 233 *e*P **P 16 06 28.4 -1.4**
comp=Z,50nm,0.8s,mb5.6
MBWA *ep*P pP 16 06 51.3 -1.6
RDF Al-Radifah 88.91 319 *e*P **P 16 06 29.7 -0.4**
baz=319
RDF AMb AMB 16 06 30.8
comp=Z,69nm,1.0s,mb5.6,baz=319
QRN Al-Qurain 88.92 318 *e*P **P 16 06 29.1 -1.0**
baz=318
QRN AMb AMB 16 06 29.6
comp=Z,73nm,1.5s,mb5.5,baz=318
ESDC Sonseca Array 88.94 2 P **P 16 06 30.6 +0.6**
comp=Z,0.2nm,0.3s,baz=349,slow=5.0,SNR=3.6
ESDC pP pP 16 06 52.8 -0.2
comp=Z,0.7nm,0.5s,baz=7.1,slow=4.9,SNR=2.6
STKA Stephens Creek 89.37 211 P **P 16 06 31.9 +0.1**
comp=Z,64nm,1.0s,mb5.6,baz=352,slow=5.9,SNR=123
STKA Stephens Creek 89.37 211 *e*P **P 16 06 31.8 0.0**
comp=Z,33nm,0.8s,mb5.4
STKA *e* pP 16 06 56.1 +1.3
STKA Stephens Creek 89.37 211 *e*P **P 16 06 31.8 0.0**
comp=Z,18nm,1.1s,mb5.0
STKA *ep*P pP 16 06 55.8 +0.9
MMAI Mount Meron Ar 89.63 330 P **P 16 06 32.7 -0.7**
comp=Z,0.7nm,0.4s,mb4.1,baz=5.7,slow=2.9,SNR=2.9
EVO Evora 89.92 5 *ep*P pP 16 06 57.7 +0.1
CNB Canberra Magne 90.39 204 *e*P **P 16 06 37.1 +0.6**
FORT Forrest 93.36 222 *e*P **P 16 06 49.7 -0.7**
comp=Z,20nm,0.6s,mb5.6
TOO Toolangi 93.53 206 *e*P **P 16 06 50.9 -0.1**
OTAV Otavalo 97.83 80 P **P 16 07 12.4 +1.2**
comp=Z,5.8nm,0.6s,mb5.3
OTAV *ep*P pP 16 07 31.2 -3.2
NWAO Narrogin (SRO) 99.96 229 P Pdif 16 07 18.8 -1.9
comp=Z,7.9nm,0.9s,baz=30,slow=4.2,SNR=4.1
NWAO Narrogin (SRO) 99.96 229 P Pdif 16 07 18.8 -1.9
NWAO pmax pmax
comp=Z,8.0nm,0.9s
TORD Torodi Ar. Bea 115.33 357 PKP PKPdf 16 12 15.9 -1.2
comp=Z,1.4nm,0.5s,baz=345,slow=2.2,SNR=12
TORD SKP 16 15 43.2
comp=Z,1.4nm,0.8s,baz=342,slow=2.8,SNR=3.9
TORD PKKPbc PKKPbc 16 22 50.0 +0.7
comp=Z,1.1nm,0.6s,baz=163,slow=2.9,SNR=6.6
TORD PKKPab PKKPab 16 22 55.5 -4.2
comp=Z,5.4nm,0.8s,baz=186,slow=3.8,SNR=18
TORD PKKP PKKPdf 16 23 12.1 -0.1
comp=Z,1.2nm,0.8s,baz=182,slow=2.7,SNR=2.5
DBIC Dimbokro 121.75 4 PKP PKPdf 16 12 27.6 -1.8
comp=Z,3.5nm,0.5s,baz=342,slow=2.2,SNR=11
DBIC SKP 16 15 56.6
comp=Z,3.2nm,0.9s,baz=247,slow=1.0,SNR=3.3
DBIC PKKPbc PKKPbc 16 22 26.7 +0.5
comp=Z,4.3nm,0.9s,baz=164,slow=6.2,SNR=4.7
DBIC Dimbokro 121.75 4 PKP PKPdf 16 12 27.6 -1.8
DBIC SKP 16 15 56.6
DBIC PKKPbc PKKPbc 16 22 26.7 +0.5
TIC Toumodi 121.77 4 *e*PKP1 PKPdf 16 12 28.1 -1.4
comp=Z,9.5nm,0.2s
KIC Kosan Boka 122.06 4 *e*PKP1 PKPdf 16 12 28.8 -1.2
comp=Z,17nm,0.7s
LIC Lamto 122.18 4 *e*PKP1 PKPdf 16 12 29.0 -1.3
comp=Z,25nm,0.9s
BDFB Brasilia 128.42 63 PKP PKPdf 16 12 41.7 -0.3
comp=Z,1.0nm,0.7s,baz=142,slow=24,SNR=3.5
BDFB pPKP pPKPdf 16 13 04.3 -1.6
comp=Z,3.8nm,0.8s,baz=232,slow=3.4,SNR=5.5
BDFB Brasilia 128.42 63 PKIKP PKPdf 16 12 41.7 -0.3
BDFB 16 13 04.4
BDFB pmax pmax
comp=Z,1.0nm,0.7s
VNDA Vanda 129.41 185 PKP PKPdf 16 12 42.5 +0.4
comp=Z,1.6nm,0.8s,baz=335,slow=11,SNR=7.4
VNDA SKPbc 16 15 56.0
comp=Z,4.5nm,1.0s,baz=331,slow=4.4,SNR=8.0
VNDA SKP 16 16 07.2
comp=Z,4.3nm,1.1s,baz=279,slow=3.8,SNR=3.6
VNDA PKKPbc 16 21 52.1
comp=Z,3.0nm,1.2s,baz=26,slow=1.6,SNR=3.6
VNDA Vanda 129.41 185 PKP PKPdf 16 12 42.5 +0.4
VNDA SKPbc 16 15 56.0
VNDA SKP 16 16 07.2
VNDA PKKPbc 16 21 52.1
CPUP Villa Florida 131.16 81 PKP PKPdf 16 12 46.4 -0.5
comp=Z,0.9nm,0.5s,baz=80,slow=1.7,SNR=4.8
CPUP pPKP pPKPdf 16 13 09.3 -1.6
comp=Z,1.2nm,0.5s,baz=286,slow=2.3,SNR=4.6
CPUP SKPbc SKPbc 16 16 02.7 -1.1
comp=Z,16nm,0.7s,baz=303,slow=3.5,SNR=47
PLCA Paso Flores 132.64 105 PKP PKPdf 16 12 49.1 -0.2
comp=Z,4.1nm,0.7s,baz=307,slow=2.8,SNR=10
PLCA pPKP pPKPdf 16 13 12.1 -1.2
comp=Z,5.1nm,0.7s,baz=303,slow=1.2,SNR=6.6
PLCA SKPbc SKPbc 16 16 08.1 -0.4
comp=Z,13nm,1.0s,baz=313,slow=4.3,SNR=12
LSZ Lusaka 136.62 316 SKPbc SKPbc 16 16 21.3 -0.9
comp=Z,2.3nm,0.6s,baz=37,slow=3.1,SNR=8.0
QSPA South Pole Qui 141.49 180 PKhKP 16 12 58.3
comp=Z,12nm,0.8s,baz=331,slow=1.1,SNR=26
QSPA PKP PKPdf 16 13 04.0 -0.5
comp=Z,19nm,0.9s,baz=334,slow=2.1,SNR=14
QSPA SKPbc SKPbc 16 16 31.0 -2.5
comp=Z,10nm,1.1s,baz=62,slow=7.0,SNR=5.2
QSPA South Pole Qui 141.49 180 *e*PKPpre 16 12 57.6
QSPA PKP PKPdf 16 13 04.0 -0.5
QSPA SKPbc SKPbc 16 16 31.0 -2.5
QSPA *e*SKP 16 16 32.0
TSUM Tsumeb 144.26 328 PKP PKPdf 16 13 10.0 -1.1
comp=Z,11nm,0.8s,baz=349,slow=6.4,SNR=22
TSUM pPKP pPKPdf 16 13 33.9 -1.2
comp=Z,9.5nm,0.8s,baz=94,slow=4.3,SNR=6.2
TSUM SKPbc SKPbc 16 16 41.7 -0.6
comp=Z,7.4nm,1.1s,baz=61,slow=2.1,SNR=4.1
TSUM Tsumeb 144.26 328 *e*PKPdf PKPdf 16 13 09.9 -1.3
TSUM *ep*PKPdf pPKPdf 16 13 32.7 -2.4
TSUM *e*SKP 16 16 41.0
EFI East Falkland 145.66 113 *e*PKPdf PKPdf 16 13 12.1 -0.4
EFI *ep*PKPdf pPKPdf 16 13 33.9 -2.6
MAW Mawson 145.77 218 PKPbc PKPbc 16 13 12.3 -0.7
comp=Z,40nm,0.5s,baz=88,slow=4.7,SNR=56
MAW pPKPbc pPKPbc 16 13 36.6 0.0
comp=Z,19nm,0.6s,baz=56,slow=14,SNR=3.3
MAW Mawson 145.77 218 *e*PKPdf PKPdf 16 13 11.7 -0.5
LBTB Lobatse 146.30 312 *e*PKPdf PKPdf 16 13 14.6 +0.1
LBTB *e*PKPbc PKPbc 16 13 16.2 +0.4
LBTB *ep*PKPdf pPKPdf 16 13 38.7 +0.2
LBTB *e*SKP 16 16 47.2
BOSA Boshof 149.50 309 PKPbc PKPbc 16 13 24.5 +0.2
comp=Z,16nm,0.4s,baz=38,slow=2.5,SNR=60
BOSA pPKPbc pPKPbc 16 13 47.4 -0.7
comp=Z,17nm,0.6s,baz=342,slow=3.9,SNR=5.5
BOSA Boshof 149.50 309 *e*PKPbc PKPbc 16 13 24.3 +0.1
BOSA *ep*PKPdf pPKPdf 16 13 45.1 +1.4
SYO Syowa Base 154.11 213↓ *e*PKPdf PKPdf 16 13 26.4 +1.1
SYO Syowa Base 154.11 213↓ *i*X 16 13 45.4
SNAA Sanae 159.99 179 *e*PKPdf PKPdf 16 13 31.0 -1.7
SNAA *e* 16 13 54.8
SNAA *e* 16 14 11.3
SNAA *e* 16 14 17.2
VNA3 Neumayer Olymp 160.07 172 *e*PKPdf PKPdf 16 13 30.5 -2.3
VNA3 *e* 16 13 33.4
VNA3 *e* 16 13 45.5
VNA3 *e* 16 13 55.0
VNA3 *e* 16 14 12.2
VNA3 *e* 16 14 16.8
VNA2 Neumayer--Watz 160.55 174 *e*PKPdf PKPdf 16 13 32.0 -1.3
baz=360,slow=2.1
VNA2 *e* 16 13 34.6
VNA2 *e* 16 13 47.0
VNA2 *e* 16 13 57.3
VNA2 *e* 16 14 14.7
VNA2 *e* 16 14 19.8
VNA1 Neumayer--Stat 160.76 173 *e*PKPdf PKPdf 16 13 30.8 -2.8
VNA1 *e* 16 13 33.3
VNA1 *e* 16 14 15.6

BJI ***27*** *16:09:38.4, 493S×101.37E, h10km, mB5.2, mb4.9, Ms4.8, Ms4.5*
ISCJB ***27*** *16:09:43.9±0.3, 452S±004×101.13E±004, h24km, mb4.8/65, MS4.3/12, Error ellipse: s-maj=7.2km s-min=4.7km az=41.6*
MOS ***27*** *16:09:45.8±1.0, 429S×101.32E, h33km, mb5.0/22, Error ellipse: s-maj=14.1km s-min=7.2km az=106.6*
DJA ***27*** *16:09:45, 456S×101.03E, h15km, Mw5.2/4*
NEIC ***27*** *16:09:45.8±0.3, 452S×101.15E, mb4.8/20, Error ellipse: s-maj=11.5km s-min=6.7km az=61.0*
IDC ***27*** *16:09:46.5±0.5, 447S×101.22E, h26km±2km, mb4.4/21, mb1 4.4/22, mb1mx4.3/27, mbtmp4.4/22, ML4.7/1, MS4.0/3, Ms1 4.1/3, ms1mx3.6/33, Error ellipse: s-maj=18.7km s-min=9.6km az=48.0*
ISC 27 16:09:46.2±0.3, 452S±004×10115E±004, h26km, h26km±1.2km:pP-P, n150,σ1s22/144, mb4.8/65, MS4.3/12, 14C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.68**	**59**	P	**Pn**	**16 10 13.5**	**-0.5**
PDSI	**Padang**	**3.65**	**349**	P	**Pn**	**16 10 40.7**	**-0.4**
KLI	**Kotabumi**	**3.71**	**95**	P	**Pn**	**16 10 45.3**	**+3.4**
PMBI	**Palembang**	**3.94**	**66**	P	**Pn**	**16 10 45.8**	**+0.6**
PPI	**Padang Panjang**	**4.11**	**349**	P	**Pn**	**16 10 47.5**	**+0.1**
DBJI	**Dramaga**	**5.93**	**110**	P	**Pn**	**16 11 12.8**	**+0.4**
	207nm,1.4s,1.0nm						
CBJI	**Citeko**	**5.98**	**109**	P	**Pn**	**16 11 17.7**	**+4.6**
GSI	**Gunungsitoli**	**6.80**	**328**	P	**Pn**	**16 11 24.6**	**+0.2**
	102nm,0.8s,2µm0.7nm						
MYKOM	**Kota Tinggi**	**6.83**	**23**	⇑P	**Pn**	**16 11 27.0**	**+2.2**
MYKOM	**Kota Tinggi**	**6.83**	**23**	P	**Pn**	**16 11 23.8**	**-1.0**
LEM	**Lembang**	**6.83**	**110**	P	**Pn**	**16 11 26.0**	**+1.2**
	150nm,1.1s,0.7nm						
PSI	**Prapat**	**7.61**	**343**	Pn	**Pn**	**16 11 33.5**	**-2.0**
	12nm,0.3s,baz=189,slow=19,SNR=46						
FRIM	**Kepong**	**7.72**	**4**	⇑P	**Pn**	**16 11 37.2**	**+0.1**
COCO	**West Island**	**8.73**	**209**	*e*P	**Pn**	**16 11 48.5**	**-2.5**
COCO				pmax	pmax		
	comp=Z,133nm,0.6s						
COCO	**West Island**	**8.73**	**209**	*e*Pn	**Pn**	**16 11 48.5**	**-2.5**
	comp=Z,134nm,0.6s						
COCO				*e*Sn	**Sn**	**16 13 16.3**	**-12**
COCO	**West Island**	**8.73**	**209**	P	**Pn**	**16 11 48.2**	**-2.8**
	comp=Z,177nm,0.9s						
IPM	**Ipoh**	**8.94**	**359**	⇑P	**Pn**	**16 11 55.4**	**+1.6**
IPM	**Ipoh**	**8.94**	**359**	P	**Pn**	**16 11 55.4**	**+1.6**
	comp=Z,37nm,1.1s						
KULM	**Kulim**	**9.76**	**357**	*e*Pn	**Pn**	**16 12 04.0**	**-1.0**
	comp=Z,27nm,1.1s						
KULM	**Kulim**	**9.76**	**357**	⇓P	**Pn**	**16 12 04.9**	**-0.2**
KSM	**Kuching**	**10.92**	**57**	P	**Pn**	**16 12 23.0**	**+2.1**
BSI	**Banda Aceh**	**11.54**	**330**	P	**Pn**	**16 12 28.1**	**-1.4**
	comp=Z,89nm,0.9s,comp=Z,1µm						
SBUM	**Sibu**	**13.05**	**58**	⇓P	**Pn**	**16 12 55.0**	**+4.8**
BTM	**Bintulu**	**14.18**	**57**	⇑P	**Pn**	**16 13 14.3**	**+8.8**
KAPI	**Kappang**	**18.54**	**92**	LR	LR	16 21 49.3	
	comp=Z,330nm,20.8s,baz=279,slow=39						
TSM	**Tawau**	**18.86**	**63**	⇑P	**Pn**	**16 14 06.2**	**+0.8**
SDKM	**Sandakan**	**18.94**	**58**	⇓P	**Pn**	**16 14 06.6**	**+0.4**
PCI	**Palu**	**19.00**	**80**	P	**Pn**	**16 14 08.1**	**+1.0**
	comp=Z,109nm,1.4s,comp=Z,1µm						
MYLDM	**Lunad Datu**	**19.83**	**61**	⇑P	**Pn**	**16 14 15.3**	**-1.6**
KDI	**Kendari**	**21.42**	**89**	P	**P**	**16 14 34.8**	**+2.3**
CM31	**Chiang Mai Arr**	**22.94**	**355**	*e*P	**P**	**16 14 46.8**	**-1.8**
	comp=Z,22nm,0.8s,mb4.6						
CMAR	**Chiang Mai Arr**	**22.94**	**355**	P	**P**	**16 14 46.8**	**-1.8**
	comp=Z,16nm,0.8s,mb4.5,baz=183,slow=8.6,SNR=60						
CMAR				PcP	PcP	16 18 39.6	+1.0
	comp=Z,0.8nm,0.8s,baz=214,slow=2.5,SNR=4.4						
CMAR				LR	LR	16 24 13.3	
	comp=Z,276nm,20.1s,MS3.7,baz=45,slow=38						
CMAR	**Chiang Mai Arr**	**22.94**	**355**	P	**P**	**16 14 46.8**	**-1.8**
CMAR						16 18 39.6	
CHTO	**Chiang Mai**	**23.29**	**355**	*e*P	**P**	**16 14 51.5**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**23.29**	**355**	*e*P	**P**	**16 14 51.5**	**-0.8**
	comp=Z,21nm,1.0s,mb4.5						
MBWA	**Marble Bar**	**24.48**	**134**	P	pP	16 15 11.8	+0.8
	comp=Z,9.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**27.49**	**121**	*e*P	**P**	**16 15 30.6**	**-0.1**
	comp=Z,34nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	**27.49**	**121**	*e*P	**P**	**16 15 30.5**	**-0.2**
	comp=Z,26nm,1.0s,mb4.7						
FITZ				*e*	pP	16 15 37.9	-0.4
KMI	**Kunming**	**29.51**	**3**	P	**P**	**16 15 49.5**	**+0.9**
KMI				AP	pP	16 15 53.5	-2.7
KMI				PP	PP	16 16 48.3	-7.2
KMI				S	**S**	**16 20 46.0**	**+4.2**
KMI				SS	SS	16 22 20.0	-28
KMI				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.7						
KMI				LR	LR		
	comp=N,539nm,19.0s,MS4.3						
KMI				LR	LR		
	comp=E,472nm,17.4s,MS4.3						
KMI				LR	LR		
	comp=Z,411nm,15.9s,MS4.2						
GYA	**Guiyang**	**31.26**	**10**↓	*i*P	**P**	**16 16 04.0**	**0.0**
GYA				PP	PP	16 17 06.5	-8.4
GYA				PCP	PcP	16 18 58.5	+0.2
GYA				S	**S**	**16 21 08.3**	**-0.9**
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,100nm,5.1s						
GYA				LR	LR		
	comp=N,760nm,13.5s,MS4.7						
GYA				LR	LR		
	comp=E,680nm,13.0s,MS4.7						
GYA				LR	LR		
	comp=Z,970nm,12.8s,MS4.7						
NWAO	**Narrogin (SRO)**	**32.01**	**154**	LR	LR	16 28 53.5	
	comp=Z,500nm,18.9s,MS4.2,baz=340,slow=36						
ODAN	**Odare**	**33.92**	**338**	*e*P	**P**	**16 16 28.8**	**+1.5**
	comp=Z,62nm,0.9s,mb5.5						
TAPN	**Taplejung**	**34.24**	**338**	*e*P	**P**	**16 16 32.1**	**+2.0**
	comp=Z,95nm,0.9s,mb5.7						
RAMN	**Ramite**	**34.30**	**337**	*e*P	**P**	**16 16 32.6**	**+1.9**
	comp=Z,45nm,0.9s,mb5.4						
JIRN	**Jiri**	**35.10**	**337**	*e*P	**P**	**16 16 39.4**	**+1.8**
	comp=Z,87nm,0.9s,mb5.7						
CD2	**Chengdu**	**35.32**	**4**	P	**P**	**16 16 39.0**	**-0.4**
CD2				AP	pP	16 16 43.0	-4.1
CD2				PP	PP	16 17 59.8	-0.1
CD2				PCP	PcP	16 19 06.0	-3.6
CD2				S	**S**	**16 22 14.5**	**+2.4**
CD2				XS	sS	16 22 22.5	-2.3
CD2				SS	SS	16 24 36.0	-10
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
CD2				AMB	AMB		
	comp=Z,310nm,7.2s						
CD2				LR	LR		
	comp=N,570nm,12.6s						
CD2				LR	LR		
	comp=Z,360nm,12.6s,MS4.3						
LSA	**Lhasa**	**35.35**	**345**	P	**P**	**16 16 41.0**	**+1.3**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LSA	**Lhasa**	**35.35**	**345**	*e*P	**P**	**16 16 40.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LSA	**Lhasa**	**35.35**	**345**	*e*P	**P**	**16 16 40.5**	**+0.8**
	comp=Z,8.1nm,0.9s,mb4.7						
GUN	**Gumba**	**35.45**	**336**	*e*P	**P**	**16 16 42.3**	**+1.7**
	comp=Z,63nm,0.8s,mb5.6						
DMN	**Daman**	**35.50**	**335**	*e*P	**P**	**16 16 42.4**	**+1.4**
KKN	**Kakani**	**35.59**	**335**	*e*P	**P**	**16 16 42.9**	**+1.2**
	comp=Z,24nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**35.76**	**118**	P	**P**	**16 16 43.0**	**-0.4**
	comp=Z,4.4nm,0.8s,mb4.5,baz=306,slow=9.2,SNR=28						
WRA				pP	pP	16 16 50.3	-0.8
	comp=Z,13nm,0.9s,baz=292,slow=9.8,SNR=28						
WRA				PcP	PcP	16 19 10.5	-0.6
	comp=Z,1.0nm,0.8s,baz=281,slow=3.2,SNR=3.6						
WRAB	**Tennant Creek**	**35.77**	**118**	*e*P	**P**	**16 16 43.4**	**-0.1**
WRAB	**Tennant Creek**	**35.77**	**118**	*e*P	**P**	**16 16 42.8**	**-0.6**
	comp=Z,20nm,0.8s,mb5.1						
WRAB				*e*	pP	16 16 50.5	-0.6
WB2	**Warramunga Arr**	**35.77**	**118**	*e*P	**P**	**16 16 43.2**	**-0.3**
GKN	**Gorkha**	**36.04**	**335**	*e*P	**P**	**16 16 47.0**	**+1.3**
KOLN	**Koldanda**	**36.30**	**333**	*e*P	**P**	**16 16 49.4**	**+1.6**
	comp=Z,37nm,0.9s,mb5.3						
DANN	**Dangsing**	**36.72**	**334**	*e*P	**P**	**16 16 52.8**	**+1.3**
ASAR	**Alice Springs**	**36.87**	**124**	P	**P**	**16 16 53.3**	**+0.5**
	comp=Z,5.2nm,1.2s,mb4.2,baz=297,slow=8.0,SNR=13						
ASAR				pP	pP	16 17 01.0	+0.5
	comp=Z,7.6nm,0.8s,baz=298,slow=8.0,SNR=22						
ASAR				PcP	PcP	16 19 14.8	+0.4
	comp=Z,1.6nm,0.8s,baz=300,slow=2.8,SNR=6.2						
WHN	**Wuhan**	**37.08**	**19**	⇓P	**P**	**16 16 54.5**	**0.0**
XAN	**Xi'an**	**39.05**	**10**	P	**P**	**16 17 10.3**	**-0.7**
XAN				AP	pP	16 17 15.0	-3.8
XAN				PP	PP	16 18 42.0	+1.1
XAN				S	**S**	**16 23 14.8**	**+6.0**
XAN				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
XAN				LR	LR		
	comp=N,69nm,20.1s,MS3.7						
XAN				LR	LR		
	comp=E,93nm,18.0s,MS3.7						
XAN				LR	LR		
	comp=Z,260nm,20.1s,MS4.0						
NJ2	**Nanjing**	**40.08**	**24**	*e*P	**P**	**16 17 18.3**	**-1.4**
NJ2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.4						
LZH	**Lanzhou**	**40.47**	**3**	*e*P	**P**	**16 17 23.8**	**+1.0**
LZH				AP	pP	16 17 32.0	+1.4
LZH				PP	PP	16 19 01.3	+4.9
LZH				*e*S	**S**	**16 23 33.3**	**+3.2**
LZH				SS	SS	16 26 30.0	-0.2
LZH				AMB	AMB		
	comp=Z,39nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,200nm,5.3s						
LZH				LR	LR		
	comp=E,469nm,13.9s						
LZH				LR	LR		
	comp=Z,678nm,14.5s,MS4.6						
GTA	**Gaotai**	**43.73**	**359**	*e*P	**P**	**16 17 49.8**	**+0.4**
GTA				AP	pP	16 17 53.5	-3.7
GTA				XP	sP	16 17 56.5	-3.8
GTA				PP	PP	16 19 30.5	-1.0
GTA				S	**S**	**16 24 19.5**	**+1.4**
GTA				XS	sS	16 24 28.5	-2.5
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.6						
GTA				AMB	AMB		
	comp=Z,502nm,5.9s						
GTA				LR	LR		
	comp=N,234nm,16.4s,MS4.5						
GTA				LR	LR		
	comp=E,417nm,17.2s,MS4.5						
GTA				LR	LR		
	comp=Z,199nm,14.0s,MS4.2						
PMG	**Port Moresby**	**45.90**	**99**	P	**P**	**16 18 05.8**	**-1.4**
	comp=Z,9.6nm,1.0s,mb4.7,baz=189,slow=7.0,SNR=3.8						
PMG	**Port Moresby**	**45.90**	**99**⇑	*e*P	**P**	**16 18 07.5**	**+0.4**
PMG				pmax	pmax		
	comp=Z,23nm,1.7s						
PMG	**Port Moresby**	**45.90**	**99**	*e*P	**P**	**16 18 04.1**	**-3.0**
	comp=Z,23nm,1.2s,mb5.0						
HHC	**Hu-ho-hao-te**	**46.15**	**11**	*e*P	**P**	**16 18 09.0**	**+0.4**
HHC				AP	pP	16 18 12.8	-3.6
HHC				XP	sP	16 18 15.8	-3.7
HHC				PP	PP	16 19 56.5	-0.7
HHC				PCS	PcS	16 23 37.0	-1.7
HHC				S	**S**	**16 24 54.0**	**+0.9**
HHC				XS	sS	16 25 01.0	-5.0
HHC				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.1						
HHC				AMB	AMB		
	comp=Z,321nm,6.3s						
HHC				LR	LR		
	comp=N,222nm,15.5s,MS4.3						
HHC				LR	LR		
	comp=E,176nm,17.8s,MS4.3						
HHC				LR	LR		
	comp=Z,225nm,15.5s,MS4.2						
BJI	**Beijing**	**46.45**	**16**	P	**P**	**16 18 09.5**	**-1.5**
BJI				AMB	AMB		
	comp=Z,28nm,0.9s,mb5.2						
BJI				AMB	AMB		
	comp=Z,204nm,4.0s						
CTA	**Charters Tower**	**46.52**	**113**	P	**P**	**16 18 12.2**	**+0.3**
	comp=Z,9.3nm,1.0s,mb4.7,baz=296,slow=9.9,SNR=4.5						
CTA				pP	pP	16 18 20.4	+0.7
	comp=Z,11nm,0.9s,baz=289,slow=12,SNR=5.3						
CTA	**Charters Tower**	**46.52**	**113**	*e*P	**P**	**16 18 12.7**	**+0.8**
	comp=Z,8.7nm,0.9s,mb4.7						
CTA	**Charters Tower**	**46.52**	**113**	P	**P**	**16 18 12.2**	**+0.3**
CTA				pP	pP	16 18 20.4	+0.7
CTAO	**Charters Tower**	**46.52**	**113**	*e*P	**P**	**16 18 12.5**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
CTAO	**Charters Tower**	**46.52**	**113**	*e*P	**P**	**16 18 12.5**	**+0.6**
	comp=Z,13nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**46.63**	**131**	P	**P**	**16 18 11.9**	**-0.7**
	comp=Z,2.9nm,0.8s,mb4.2,baz=291,slow=7.5,SNR=7.7						
STKA				pP	pP	16 18 19.7	-0.8
	comp=Z,10nm,0.9s,baz=305,slow=7.5,SNR=14						
STKA	**Stephens Creek**	**46.63**	**131**	*e*P	**P**	**16 18 11.7**	**-1.0**
	comp=Z,7.5nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**46.63**	**131**	*e*P	**P**	**16 18 12.5**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.2						
KSRS	**Korea Array**	**48.63**	**29**	P	**P**	**16 18 27.0**	**-1.0**
	comp=Z,10nm,0.9s,mb4.9,baz=218,slow=7.7,SNR=36						
KSRS				pP	pP	16 18 35.2	-0.7
	comp=Z,4.6nm,0.9s,baz=212,slow=7.3,SNR=6.6						
KBL	**Kabul**	**49.24**	**325**	P	**P**	**16 18 31.3**	**-1.4**
WMQ	**Urumqi**	**49.63**	**347**	P	**P**	**16 18 36.3**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,37nm,1.0s,mb5.4						
WMQ				LR	LR		
	comp=N,136nm,17.0s,MS4.2						
WMQ				LR	LR		
	comp=E,130nm,17.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,100nm,19.5s,MS3.8						
SONM	**Songino Array**	**52.34**	**4**	P	**P**	**16 18 56.9**	**+1.1**
	comp=Z,20nm,0.8s,mb5.1,baz=186,slow=9.0,SNR=18						
ULN	**Ulaanbaatar**	**52.42**	**5**	*e*P	**P**	**16 18 57.2**	**+0.8**
ULN				*e*		16 19 14.4	
ULN				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**52.42**	**5**	*e*P	**P**	**16 18 57.1**	**+0.7**
	comp=Z,16nm,0.9s,mb5.0						
ULN				*e*		16 19 14.3	
TKM2	**Tokmak 2**	**52.59**	**336**	*e*P	**P**	**16 18 58.4**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s,

MAJO pmax pmax
comp=Z,14nm,1.1s,mb4.8
MAJO Matsushiro 53.54 37 *e*P **P 16 19 02.1 -2.8**
comp=Z,14nm,1.1s,mb4.8
MAT Matsushiro 53.54 37 P **P 16 19 02.7 -2.2**
MJAR Matsushiro Arr 53.54 37 P **P 16 19 03.1 -1.8**
comp=Z,8.4nm,0.9s,mb4.7,baz=219,slow=7.6,SNR=27
MK31 Makanchi Array 53.75 344⇑ *e*P **P 16 19 06.3 0.0**
MK31 pmax pmax
comp=Z,12nm,0.8s,mb4.9
MK31 Makanchi Array 53.75 344 *e*P **P 16 19 06.2 -0.1**
MKAR Makanchi Array 53.75 344 P **P 16 19 06.5 +0.2**
comp=Z,11nm,0.8s,mb4.8,baz=148,slow=8.1,SNR=73
MKAR Makanchi Array 53.75 344 P **P 16 19 06.5 +0.2**
OPO Ambohidratompo 54.47 250 P **P 16 19 13.2 +1.1**
comp=Z,2.1nm,0.7s,mb4.2,baz=180,slow=6.1,SNR=3.1
ZAK Zakamensk 54.71 2 *e*P **P 16 19 12.1 -1.1**
ZAK pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
MDJ Mudanjiang 55.16 24 P **P 16 19 16.3 -0.3**
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.9
MDJ AMB AMB
comp=Z,128nm,5.1s
HIA Hailar 55.96 15 *e*P **P 16 19 20.9 -1.3**
TLY Talaya 56.02 2 *e*P pP 16 19 34.0 +3.4
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.9
KURK Kurchatov 58.34 343 P **P 16 19 38.9 -0.1**
comp=Z,11nm,0.8s,mb4.9,baz=122,slow=17,SNR=49
KURK Kurchatov 58.34 343⇑ *e*P **P 16 19 38.9 -0.1**
KURK pmax pmax
comp=Z,18nm,0.8s,mb5.2
KURK Kurchatov 58.34 343 *e*P **P 16 19 38.8 -0.2**
comp=Z,17nm,0.9s,mb5.1
KURK *e* pP 16 19 47.1 +0.1
KLR Kul'dur 59.77 23 *e*P **P 16 19 44.7 -4.3**
ZALV Zalesovo Beam 59.84 349 P **P 16 19 49.1 -0.2**
comp=Z,12nm,0.8s,mb5.0,baz=178,slow=5.3,SNR=51
ZALV pP pP 16 19 57.9 +0.5
comp=Z,3.4nm,0.4s,baz=180,slow=4.4,SNR=7.1
HABR Khabarovsk 60.51 25 *e*P **P 16 19 51.9 -2.2**
HABR *e* 16 20 37.0
HABR *e*PPP 16 23 28.0
HABR *e*S **S 16 28 05.2 -2.9**
HABR *e**SS sS 16 28 22.1 +0.7
HABR *e* 16 29 39.3
HABR *e*SS SS 16 32 04.0 -2.7
HABR MLR MLR
comp=Z,225nm,18.0s,MS4.3
NVS Novosibirsk 61.00 348 *e*P **P 16 19 56.3 -0.9**
NVS pmax pmax
comp=Z,13nm,1.4s,mb4.9
NVS pmax pmax
comp=E,12nm,1.6s
ASAJ Asahikawa 61.06 33 P **P 16 19 57.0 -0.8**
comp=E,3.3nm,0.4s,mb4.9,baz=277,slow=33,SNR=11
BVAR Borovoye Array 62.93 340 P **P 16 20 09.8 -0.5**
comp=E,6.1nm,0.8s,mb4.8,baz=134,slow=8.5,SNR=35
BVAR pP pP 16 20 18.0 -0.3
comp=E,3.9nm,0.7s,baz=139,slow=9.8,SNR=11
BRVK Borovoye 62.99 340 *e*P **P 16 20 09.9 -0.8**
BRVK *e* pP 16 20 17.5 -1.3
BOD Bodaibo 63.00 8 *e*P **P 16 20 08.0 -2.6**
BOD pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
YSS Yuzh-Sakhalins 63.02 31 *e*P **P 16 20 10.2 -0.8**
YSS *e* pP 16 20 18.4 -0.7
YSS pmax pmax
comp=Z,20nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 63.02 31 *e*P **P 16 20 10.2 -0.8**
comp=Z,20nm,1.0s,mb5.2
YSS *e* pP 16 20 18.4 -0.7
AB31 Akbulak array 64.39 331 P **P 16 20 19.6 -0.4**
AB31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AKTK Aktyubinsk 66.11 331 P **P 16 20 31.0 -0.1**
AKTO Aktyubinsk 66.11 331 P **P 16 20 31.0 -0.1**
comp=Z,2.0nm,0.9s,mb4.2,baz=146,slow=8.5,SNR=5.0
SVE Sverdlovsk 69.44 338⇑ *e*P **P 16 20 52.7 +0.8**
SVE pmax pmax
comp=Z,21nm,0.9s,mb5.1
YAK Yakutsk 69.89 14 *e*P **P 16 20 52.2 -2.4**
YAK *e* 16 23 23.4
YAK pmax pmax
comp=Z,26nm,1.0s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK Yakutsk 69.89 14 *e*P **P 16 20 53.2 -1.4**
comp=E,26nm,0.9s,mb5.2
ARU Arti 69.96 336 *c i*P **P 16 20 53.9 -1.3**
ARU *e* 16 23 25.8
ARU *e*S S 16 30 01.2 -2.5
ARU SS SS 16 34 32.7 -0.7
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ARU Arti 69.96 336 *e*P **P 16 20 54.4 -0.8**
comp=Z,12nm,1.1s,mb4.7
ARU *e* pP 16 21 03.0 -0.4
MMAI Mount Meron Ar 72.45 307 P **P 16 21 12.7 +2.0**
comp=Z,0.2nm,0.3s,mb3.5,baz=146,slow=39,SNR=2.6
PETK Petropavlovsk- 74.41 31 P **P 16 21 23.7 +1.9**
comp=Z,31nm,0.6s,mb5.4,baz=84,slow=14,SNR=137
BRTR Keskin Array B 75.86 313 P **P 16 21 30.1 -0.5**
comp=Z,0.6nm,0.7s,mb3.6,baz=140,slow=6.5,SNR=3.9
BRTR pP pP 16 21 39.0 +0.1
comp=Z,3.1nm,1.0s,baz=134,slow=6.9,SNR=8.1
SEY Seymchan 77.53 21⇑ *e*P **P 16 21 39.4 -0.1**
TIXI Tiksi 78.16 9⇑ *e*P **P 16 21 41.1 -1.7**
TIXI pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TIXI Tiksi 78.16 9 *e*P **P 16 21 40.9 -1.9**
comp=Z,7.7nm,1.0s,mb4.6
VNDA Vanda 79.48 169 *e*P **P 16 21 58.0 +7.9**
VNDA pmax pmax
comp=Z,4.0nm,0.9s
VNDA Vanda 79.48 169 *e*P **P 16 21 58.0 +7.9**
comp=Z,4.4nm,0.9s,mb4.4
OBN Obninsk 79.53 328 *e*P **P 16 21 51.4 +0.7**
OBN *e**PP pP 16 21 59.6 +0.7
OBN *e* 16 24 49.4
OBN *e*S S 16 31 49.5 -1.1
OBN pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
AKASG Malin Array Be 82.17 322 P **P 16 22 02.9 -2.0**
comp=Z,0.4nm,0.5s,mb3.6,baz=307,slow=25,SNR=3.4
BUR08 Bucovina Ar. S 83.92 319 *e*P **P 16 22 14.6 +0.6**
QSPA South Pole Qui 85.46 180 P **P 16 22 26.5 +5.3**
comp=Z,1.8nm,0.8s,mb4.3,baz=318,slow=6.9,SNR=5.8
QSPA South Pole Qui 85.46 180 *e*P **P 16 22 26.3 +5.1**
ARCES ARCESS Array B 89.22 340 P **P 16 22 40.3 +0.8**
comp=Z,4.6nm,0.8s,mb4.8,baz=126,slow=8.2,SNR=6.1
ARCES pP pP 16 22 48.4 +0.5
comp=Z,4.2nm,0.9s,baz=40,slow=2.1,SNR=2.9
SNAA Sanae 90.11 198 *e*P **P 16 22 45.3 +1.6**
SNAA pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 90.11 198 *e*P **P 16 22 45.3 +1.7**
comp=Z,5.4nm,0.9s,mb4.9
GERES GERESS Array B 91.69 319 P **P 16 22 50.0 -1.4**
comp=Z,0.1nm,0.3s,mb3.6,baz=87,slow=8.1,SNR=4.8
GERES pP pP 16 22 59.1 -0.7
comp=Z,0.8nm,0.8s,baz=73,slow=4.6,SNR=5.3
YKA Yellowknife Ar 116.42 18 PKP PKPdf 16 28 25.8 -1.6
comp=Z,0.2nm,0.7s,baz=297,slow=2.7,SNR=3.0
YKA pPKP pPKPdf 16 28 35.2 -0.7
comp=Z,0.5nm,0.8s,baz=304,slow=1.9,SNR=4.4
YKA Yellowknife Ar 116.42 18 PKP PKPdf 16 28 25.8 -1.6
YKA pPKP pPKPdf 16 28 35.2 -0.8
NVAR Mina Array Bea 130.77 41 PKP PKPdf 16 28 55.7 +0.1
NVAR pPKP pPKPdf 16 29 06.0 +1.8
comp=Z,0.3nm,0.5s,baz=254,slow=2.3,SNR=3.0
comp=Z,0.6nm,0.7s,baz=265,slow=5.4,SNR=3.5
WMOK Wichita Mounta 144.71 29 *e*PKIKP PKPdf 16 29 19.6 -1.7
WMOK *e* 16 29 27.9
OLIL Olney 144.92 13 *e*PKPdf PKPdf 16 29 20.1 -1.5
OLIL *e* 16 29 28.6
WCI Wyandotte Cave 145.77 10 *e*PKPdf PKPdf 16 29 22.6 -0.4
WCI *e* 16 29 31.2
TXAR Lajitas Array 145.92 41 PKPbc PKPbc 16 29 25.1 +0.9
comp=Z,8.8nm,0.9s,baz=292,slow=1.4,SNR=42
TXAR pPKPbc pPKPbc 16 29 32.8 +0.1
comp=Z,5.5nm,0.8s,baz=307,slow=0.8,SNR=14

MIAR Mount Ida 147.15 23 *e*PKP2 PKPab 16 29 27.5 -1.7
WVT Waverly 147.47 14 *e*PKPbc PKPbc 16 29 28.2 -0.3
WVT *e* 16 29 36.2
JCT Junction City 147.49 35 *e*PKP2 PKPab 16 29 29.0 -1.7
TKL Tuckaleechee C 148.68 8 *e*PKP2 PKPbc 16 29 31.3 -0.4

IDC ***27*** *16:16:44.6±0.7, 52.35N×168.52W, h0km, mb4.4/23, mb1 4.6/24, mb1mx4.5/31, mbtmp4.4/24, ML3.9/1, MS4.2/3, Ms1 4.2/3, ms1mx3.4/37, Error ellipse: s-maj=22.1km s-min=11.3km az=176.0*
ISCJB ***27*** *16:16:47.1±1.1, 52.34N±0.006×168.53W±0.005, h25km±6km, mb4.7/93, MS4.4/11, Error ellipse: s-maj=10.8km s-min=4.9km az=164.7*
MOS ***27*** *16:16:48.7±1.1, 52.44N×168.66W, h33km, mb5.1/44, Error ellipse: s-maj=11.4km s-min=6.1km az=99.4*
NEIC ***27*** *16:16:49.2±1.2, 52.39N×168.48W, h27km±7km, mb4.8/53, Error ellipse: s-maj=9.3km s-min=3.9km az=165.0*
BJI ***27*** *16:16:50.5, 53.19N×169.09W, h27km, mB5.3, mb4.8, Ms4.8, Msz4.5*
SZGRF ***27*** *16:16:51.4, 52.32N×168.50W, h33km, mb5.0, Fox Islands, Aleutian Islands, United States*
ISC 27 16:16:49.6±1.0, 52.40N±0.006×168.52W±0.005, h29km±6km, h35km±2.0km: pP-P, n245, σ0.991/251, mb4.7/93, MS4.4/11, 20C-8D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
NIKO	**Nikolski**	**0.61**	**341**	P	**Pb**	**16 17 01.9**	**+0.1**
NIKO				S	**Sb**	**16 17 13.4**	**+3.4**
OKCE	**Okmok Cone E**	**1.05**	**12**	P	**Pn**	**16 17 08.8**	**+0.5**
OKCD	**Okmok Cone D**	**1.06**	**13**	P	**Pn**	**16 17 08.6**	**+0.2**
UNV	**Unalaska Valle**	**1.89**	**39**	P	**Pn**	**16 17 19.0**	**-0.8**
AKUT	**Akutan**	**2.40**	**42**	*e*P	**Pn**	**16 17 27.0**	**+0.2**
ATKA	**Atka Island**	**3.49**	**269**	P	**Pn**	**16 17 43.8**	**+2.0**
ADK	**Adak**	**5.05**	**267**	P	**Pn**	**16 18 04.8**	**+1.5**
SDPT	**Sand Point**	**5.60**	**55**	*e*P	**Pn**	**16 18 10.5**	**-0.3**
CHGN	**Chignik**	**7.08**	**53**	*e*P	**Pn**	**16 18 31.8**	**+0.7**
KDAK	**Kodiak Island** 1.6nm,0.3s,baz=322,slow=22,SNR=18	**10.59**	**53**	Pn	**Pn**	**16 19 17.5**	**-1.7**
KDAK	**Kodiak Island**	**10.59**	**53**	*e*Pn	**Pn**	**16 19 17.3**	**-1.9**
FX1	**Attu Island--F** 2.6nm,0.3s,baz=238,slow=19,SNR=17	**11.14**	**280**	Pn	**Pn**	**16 19 26.7**	**0.0**
SVW2	**Sparrevohn**	**11.22**	**34**	*e*Pn	**Pn**	**16 19 27.6**	**-0.2**
RSO	**Redoubt South**	**11.86**	**41**	*e*Pn	**Pn**	**16 19 37.9**	**+1.4**
SEW	**Seward**	**13.07**	**46**	*e*Pn	**Pn**	**16 19 51.4**	**-1.7**
TNA	**Tin City**	**13.20**	**1**	Pn	**Pn**	**16 19 52.5**	**-2.3**
RC01	**Rabbit Creek A**	**13.44**	**42**	*e*Pn	**Pn**	**16 19 57.1**	**-1.0**
PMR	**Palmer**	**13.96**	**41**	*e*P	**Pn**	**16 20 04.4**	**-0.7**
KTH	**Kantishna Hill** 16nm,1.0s	**14.49**	**33**	*e*Pn	**Pn**	**16 20 12.7**	**+0.3**
PAX	**Paxson**	**16.14**	**40**	*e*P	**Pn**	**16 20 30.1**	**-3.9**
PAX				pmax	pmax		
comp=Z,5.0nm,0.6s							
PAX	**Paxson**	**16.14**	**40**	*e*Pn	**Pn**	**16 20 30.1**	**-3.9**
comp=Z,5.0nm,0.6s							
COLA	**College**	**16.38**	**32**	*e*P	**Pn**	**16 20 34.4**	**-2.6**
COLA				pmax	pmax		
comp=Z,12nm,0.8s							
COLA	**College**	**16.38**	**32**	*e*Pn	**Pn**	**16 20 34.4**	**-2.7**
comp=Z,12nm,0.8s							
MENT	**Mentasta**	**16.82**	**42**	*e*Pn	**Pn**	**16 20 43.7**	**+1.0**
PNL	**Peninsula**	**17.71**	**54**	*e*Pn	**Pn**	**16 20 53.9**	**+0.2**
comp=Z,122nm,1.4s							
EGAK	**Eagle**	**18.69**	**38**	*e*Pn	**Pn**	**16 21 02.7**	**-3.0**
comp=Z,6.7nm,0.7s							
PET	**Petropavlovsk**	**19.81**	**285**⇓	*i*P	**Pn**	**16 21 17.0**	**-2.1**
PET				pmax	pmax		
comp=Z,60nm,0.8s							
PET	**Petropavlovsk**	**19.81**	**285**	*e*P	**Pn**	**16 21 17.6**	**-1.5**
comp=Z,39nm,0.7s							
BILL	**Bilibino**	**19.82**	**332**⇑	*e*P	**Pn**	**16 21 15.7**	**-3.4**
BILL				pmax	pmax		
comp=Z,16nm,1.0s							
BILL				MLR	MLR		
comp=Z,300nm,13.0s							
BILL	**Bilibino**	**19.82**	**332**	*e*P	**Pn**	**16 21 19.0**	**-0.1**
comp=Z,14nm,0.9s							
PETK	**Petropavlovsk-** comp=Z,264nm,18.1s,MS3.6,baz=340,slow=35	**20.35**	**285**	LR	LR	16 28 32.6	
DLBC	**Dease Lake**	**22.42**	**59**	P	**P**	**16 21 46.2**	**+0.7**
comp=Z,2.3nm,0.8s,mb3.7,baz=273,slow=15,SNR=4.4							
DLBC	**Dease Lake**	**22.42**	**59**	P	**P**	**16 21 46.2**	**+0.7**
SEY	**Seymchan**	**23.03**	**312**⇑	*e*P	**P**	**16 21 50.1**	**-1.8**
YKA	**Yellowknife Ar**	**29.83**	**49**	P	**P**	**16 22 53.6**	**0.0**
comp=Z,1.9nm,0.7s,mb3.9,baz=272,slow=8.6,SNR=26							
YKA				PcP	PcP	16 25 56.1	0.0
comp=Z,0.9nm,0.7s,baz=280,slow=2.0,SNR=8.0							
YSS	**Yuzh-Sakhalins**	**31.50**	**280**	*e*P	**P**	**16 23 08.5**	**-0.1**
YSS				pmax	pmax		
comp=Z,17nm,1.4s,mb4.7							
YSS	**Yuzh-Sakhalins** comp=Z,17nm,1.4s,mb4.7	**31.50**	**280**	*e*P	**P**	**16 23 08.5**	**-0.1**
EDM	**Edmonton**	**32.66**	**66**	*e*P	**P**	**16 23 18.1**	**-0.6**
TIXI	**Tiksi**	**32.98**	**329**⇑	*e*P	**P**	**16 23 20.6**	**-0.7**
TIXI				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.3							
TIXI	**Tiksi**	**32.98**	**329**	*e*P	**P**	**16 23 20.4**	**-0.9**
comp=Z,2.4nm,0.7s,mb4.2							
YAK	**Yakutsk**	**33.54**	**311**	*e*P	**P**	**16 23 24.3**	**-2.0**
YAK				pmax	pmax		
comp=Z,21nm,1.0s,mb5.0							
YAK	**Yakutsk** comp=Z,15nm,0.6s,mb5.1	**33.54**	**311**	*e*P	**P**	**16 23 23.9**	**-2.4**
ERM	**Erimo**	**33.84**	**272**	*e*P	**P**	**16 23 29.2**	**+0.1**
ERM				pmax	pmax		
comp=Z,49nm,1.1s,mb5.3							
ERM	**Erimo** comp=Z,49nm,1.1s,mb5.3	**33.84**	**272**	*e*P	**P**	**16 23 29.2**	**+0.1**
HABR	**Khabarovsk**	**35.38**	**287**	*e*P	**P**	**16 23 40.7**	**-1.6**
HABR				*e**PP	pP	16 23 50.0	-0.9
HABR				*e**SP	sP	16 23 53.8	-0.7
HABR				*e*		16 24 59.6	
HABR				*e*S	**S**	**16 29 14.2**	**-0.5**
HABR				*e**SS	sS	16 29 29.9	+1.0
HABR				*e*SS	SS	16 31 34.7	-14
HABR				*e*		16 33 57.3	
HABR				MLR	MLR		
comp=Z,163nm,12.0s,MS4.0							
EGMT	**Eagleton** comp=Z,10nm,0.8s,mb4.7	**36.96**	**73**	P	**P**	**16 23 55.0**	**-0.9**
NVAR	**Mina Array Bea** comp=Z,0.9nm,0.7s,mb3.7,baz=290,slow=9.2,SNR=5.1	**37.15**	**92**	P	**P**	**16 23 57.2**	**-0.3**
NVAR	**Mina Array Bea**	**37.15**	**92**	P	**P**	**16 23 57.2**	**-0.3**
RLMT	**Red Lodge** comp=Z,6.1nm,1.0s,mb4.3	**38.75**	**76**	*e*P	**P**	**16 24 10.8**	**-0.2**
PDAR	**Pinedale Array** comp=Z,3.7nm,0.8s,mb4.2,baz=303,slow=4.8,SNR=30	**39.89**	**80**	P	**P**	**16 24 20.4**	**-0.1**
MJAR	**Matsushiro Arr** comp=Z,5.0nm,0.9s,mb4.2,baz=50,slow=7.3,SNR=12	**40.22**	**268**	P	**P**	**16 24 23.2**	**-0.1**
MAJO	**Matsushiro**	**40.22**	**268**	*e*P	**P**	**16 24 22.9**	**-0.4**
MAJO				*e*		16 24 35.3	
MAJO				pmax	pmax		
comp=Z,23nm,0.9s,mb4.9							
MAJO	**Matsushiro** comp=Z,23nm,0.9s,mb4.9	**40.22**	**268**	*e*P	**P**	**16 24 22.9**	**-0.4**
MAJO				*e*		16 24 35.3	
MAT	**Matsushiro**	**40.22**	**268**	P	**P**	**16 24 23.2**	**-0.1**
MDJ	**Mudanjiang**	**40.59**	**284**	P	**P**	**16 24 24.5**	**-1.8**
MDJ				AP	pP	16 24 33.0	-2.0
MDJ				XP	sP	16 24 36.5	-2.1
MDJ				PP	PP	16 25 57.5	-2.3
MDJ				PCP	PcP	16 26 27.3	-0.6
MDJ				SCP	ScP	16 30 14.3	-0.6
MDJ				PCS	PcS	16 30 18.3	-0.1
MDJ				S	**S**	**16 30 32.5**	**-1.2**
MDJ				AMB	AMB		
comp=Z,7.0nm,1.1s,mb4.2							
MDJ				AMB	AMB		
comp=Z,161nm,5.9s							
MDJ				LR	LR		
comp=N,145nm,12.7s,MS4.4							
MDJ				LR	LR		
comp=E,259nm,11.7s,MS4.4							
MDJ				LR	LR		
comp=Z,280nm,13.3s,MS4.3							
BOD	**Bodaibo**	**42.38**	**309**⇓	*i*P	**P**	**16 24 39.1**	**-1.7**
BOD				pmax	pmax		
comp=Z,7.0nm,0.7s,mb4.4							
CN2	**Changchun**	**43.51**	**286**	*e*P	**P**	**16 24 49.0**	**-1.1**
CN2				*e*XP	sP	16 25 04.0	+1.6
CN2				*e*S	**S**	**16 31 13.5**	**-3.2**
CN2				AMB	AMB		
comp=Z,20nm,0.7s,mb5.0							
CN2				AMB	AMB		
comp=Z,200nm,4.0s							
CN2				LR	LR		
comp=N,200nm,14.0s,MS4.5							
CN2				LR	LR		
comp=E,400nm,14.0s,MS4.5							
CN2				LR	LR		
comp=Z,500nm,15.0s,MS4.5							
HIA	**Hailar**	**43.70**	**296**	*e*P	**P**	**16 24 51.1**	**-0.5**
KSRS	**Korea Array**	**45.92**	**277**	P	**P**	**16 25 10.1**	**+0.7**
comp=Z,12nm,0.8s,mb4.9,baz=55,slow=7.4,SNR=42							
KSRS				LR	LR	16 42 15.7	
comp=Z,210nm,18.3s,MS4.1,baz=251,slow=33							
ANMO	**Albuquerque**	**46.65**	**86**	*e*P	**P**	**16 25 13.8**	**-1.3**
SUMG	**Summit** comp=Z,12nm,0.9s,mb4.8	**50.60**	**17**	*e*P	**P**	**16 25 44.9**	**-0.1**
TLY	**Talaya**	**50.74**	**307**	*e*P	**P**	**16 25 45.7**	**-0.6**
BJI	**Beijing**	**51.26**	**288**	P	**P**	**16 25 50.5**	**+0.1**
BJI				AMB	AMB		
comp=Z,13nm,0.9s,mb4.9							
BJI				AMB	AMB		
comp=Z,201nm,4.9s							
ULN	**Ulaanbaatar**	**51.37**	**301**⇑	*e*P	**P**	**16 25 50.8**	**-0.3**
ULN	**Ulaanbaatar** comp=Z,5.2nm,0.6s,mb4.6	**51.37**	**301**	*e*P	**P**	**16 25 50.5**	**-0.6**
ZAK	**Zakamensk**	**51.73**	**305**	*e*P	**P**	**16 25 52.6**	**-1.1**
ZAK				pmax	pmax		
comp=Z,5.0nm,1.3s,mb4.3							
SONM	**Songino Array** comp=Z,4.0nm,0.5s,mb4.6,baz=72,slow=4.8,SNR=4.5	**51.73**	**301**	P	**P**	**16 25 53.8**	**-0.1**
TXAR	**Lajitas Array** comp=Z,2.0nm,0.7s,mb4.2,baz=299,slow=5.4,SNR=13	**52.23**	**90**	P	**P**	**16 25 57.1**	**-0.7**
HHC	**Hu-ho-hao-te**	**53.39**	**292**	*e*P	**P**	**16 26 06.8**	**+0.6**
HHC				AP	pP	16 26 16.8	+1.6
HHC				XP	sP	16 26 20.5	+1.8
HHC				PP	PP	16 28 08.0	+1.6
HHC				PCS	PcS	16 31 12.8	+0.7
HHC				S	**S**	**16 33 32.8**	**-3.4**
HHC				XS	sS	16 33 49.3	-1.7
HHC				SCS	ScS	16 35 49.5	-3.8
HHC				SS	SS	16 37 10.8	-5.1
HHC				AMB	AMB		
comp=Z,8.0nm,0.7s,mb4.8							
HHC				AMB	AMB		
comp=Z,367nm,5.3s							
HHC				LR	LR		
comp=N,162nm,16.7s,MS4.4							
HHC				LR	LR		
comp=E,257nm,15.5s,MS4.4							
HHC				LR	LR		
comp=Z,264nm,14.3s,MS4.4							
NJ2	**Nanjing**	**55.06**	**279**	*e*P	**P**	**16 26 21.8**	**+3.3**
NJ2				AMB	AMB		
comp=Z,20nm,0.5s,mb5.4							
ZALV	**Zalesovo Beam** comp=Z,2.1nm,0.8s,mb4.2,baz=36,slow=7.7,SNR=7.3	**57.75**	**318**	P	**P**	**16 26 37.1**	**-0.2**
ARCES	**ARCESS Array B** comp=Z,5.3nm,0.9s,mb4.6,baz=8.2,slow=6.7,SNR=8.2	**57.94**	**354**	P	**P**	**16 26 37.4**	**-1.1**
WHN	**Wuhan**	**58.84**	**281**	⇓P	**P**	**16 26 45.5**	**+0.2**
XAN	**Xi'an**	**59.59**	**287**	P	**P**	**16 26 51.0**	**+0.6**
XAN				AP	pP	16 26 58.8	-0.7
XAN				PP	PP	16 29 00.8	-1.0
XAN				S	**S**	**16 34 57.0**	**-1.4**
XAN				SS	SS	16 38 53.5	0.0
XAN				AMB	AMB		
comp=Z,4.0nm,0.9s,mb4.5							
XAN				LR	LR		
comp=N,66nm,30.8s							
XAN				LR	LR		
comp=E,80nm,18.9s							
XAN				LR	LR		
comp=Z,110nm,17.6s							
GTA	**Gaotai**	**60.93**	**298**	*e*P	**P**	**16 26 59.5**	**0.0**
GTA				AP	pP	16 27 11.8	+3.2
GTA				XP	sP	16 27 17.8	+5.7
GTA				PP	PP	16 29 17.0	+3.5
GTA				S	**S**	**16 35 16.8**	**+1.4**
GTA				AMB	AMB		
comp=Z,9.0nm,1.0s,mb4.8							
GTA				AMB	AMB		
comp=Z,389nm,7.4s							
GTA				LR	LR		
comp=N,363nm,18.1s,MS4.7							
GTA				LR	LR		
comp=E,215nm,15.2s,MS4.7							
GTA				LR	LR		
comp=Z,206nm,13.4s,MS4.5							
LZH	**Lanzhou**	**61.06**	**292**	*e*P	**P**	**16 27 01.5**	**+1.1**
LZH				AP	pP	16 27 12.0	+2.5
LZH				XP	sP	16 27 15.8	+2.8
LZH				PP	PP	16 29 18.0	+3.3
LZH				*e*S	**S**	**16 35 16.0**	**-1.2**
LZH				XS	sS	16 35 33.0	+0.8
LZH				SS	SS	16 39 16.0	-0.5
LZH				AMB	AMB		
comp=Z,25nm,1.0s,mb5.3							
LZH				AMB	AMB		
comp=Z,120nm,4.2s							
LZH				LR	LR		
comp=E,432nm,15.3s							
LZH				LR	LR		
comp=Z,945nm,17.6s,MS5.0							
KURK	**Kurchatov** comp=Z,4.2nm,0.8s,mb4.7,baz=37,slow=6.9,SNR=10	**62.70**	**319**	P	**P**	**16 27 11.7**	**+0.5**
KURK	**Kurchatov**	**62.70**	**319**	*e*P	**P**	**16 27 10.2**	**-1.0**
KURK				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.5							
KURK	**Kurchatov** comp=Z,3.2nm,0.7s,mb4.6	**62.70**	**319**	*e*P	**P**	**16 27 10.2**	**-1.0**
WMQ	**Urumqi**	**63.92**	**308**	*e*P	**P**	**16 27 19.8**	**+0.4**
WMQ				AMB	AMB		
comp=Z,8.0nm,1.0s,mb4.7							
JOF	**Joensuu**	**63.97**	**350**	*e*p	**P**	**16 27 18.4**	**-1.0**
comp=Z,4.8nm,0.7s,mb4.6							
BVAR	**Borovoye Array** comp=Z,4.7nm,0.5s,mb4.8,baz=54,slow=6.2,SNR=31	**63.98**	**325**	P	**P**	**16 27 19.5**	**-0.2**
BVAR				PcP	PcP	16 27 55.5	+0.6
comp=Z,1.6nm,0.5s,baz=38,slow=7.5,SNR=3.6							
BRVK	**Borovoye**	**63.99**	**325**	*e*P	**P**	**16 27 19.5**	**-0.2**
BRVK				pmax	pmax		
comp=Z,7.0nm,1.0s,mb4.7							
BRVK	**Borovoye** comp=Z,7.0nm,1.0s,mb4.7	**63.99**	**325**	*e*P	**P**	**16 27 19.4**	**-0.3**
MK31	**Makanchi Array**	**64.16**	**314**	*e*P	**P**	**16 27 19.6**	**-1.4**
MKAR	**Makanchi Array** comp=Z,4.1nm,0.7s,mb4.5,baz=48,slow=6.3,SNR=28	**64.16**	**314**	P	**P**	**16 27 20.4**	**-0.6**
ARU	**Arti**	**64.83**	**333**	*d i*P	**P**	**16 27 24.4**	**-0.7**
ARU				S	**S**	**16 36 03.9**	**+0.2**
ARU				SS	SS	16 40 19.8	+5.6
ARU				pmax	pmax		
comp=Z,18nm,1.2s,mb5.0							
CD2	**Chengdu**	**64.86**	**288**	P	**P**	**16 27 26.8**	**+1.1**
CD2				AP	pP	16 27 39.5	+4.6
CD2				PCP	PcP	16 28 00.0	+1.1
CD2				PP	PP	16 29 51.0	+2.8
CD2				PCS		16 32 02.5	
CD2				S	**S**	**16 36 02.0**	**-2.8**
CD2				SS	SS	16 40 14.3	-1.7
CD2				AMB	AMB		
comp=Z,20nm,0.8s,mb5.2							
CD2				AMB	AMB		
comp=Z,140nm,6.1s							
CD2				LR	LR		
comp=N,370nm,8.4s							
CD2				LR	LR		
comp=Z,220nm,9.0s							
KAF	**Kangasniemi**	**65.23**	**352**	*e*p	**P**	**16 27 26.6**	**-1.1**
comp=Z,11nm,0.6s,mb5.1							
KAF	**Kangasniemi**	**65.23**	**352**	*e*P	**P**	**16 27 26.6**	**-1.1**
KAF				pmax	pmax		
comp=Z,11nm,0.6s,mb5.1							
GYA	**Guiyang**	**66.43**	**283**⇑	*i*P	**P**	**16 27 36.5**	**+0.5**
GYA				AP	pP	16 27 49.0	+3.8
GYA				XP	sP	16 27 54.

GYA				LR	LR		
	comp=N,210nm,16.3s,MS4.5						
GYA				LR	LR		
	comp=E,120nm,16.7s,MS4.5						
GYA				LR	LR		
	comp=Z,180nm,15.9s,MS4.4						
NB2	**NORSAR Subarra**	**66.91**	**0**	P	**P**	**16 27 37.8**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=3,3,slow=6.2						
NOA	**NORSAR Array B**	**66.91**	**0**	P	**P**	**16 27 37.8**	**-0.6**
	comp=Z,2.7nm,0.7s,mb4.4,baz=360,slow=6.3,SNR=8.0						
KMI	**Kunming**	**69.76**	**285**	P	**P**	**16 27 56.0**	**-0.9**
KMI				AP	pP	16 28 04.8	-1.3
KMI				XP	sP	16 28 09.8	+0.2
KMI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
OBN	**Obninsk**	**70.85**	**345**	*eP*	**P**	**16 28 01.8**	**-1.3**
OBN				*e*		16 28 22.2	
OBN				pmax	pmax		
	comp=Z,44nm,2.5s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
OBN	**Obninsk**	**70.85**	**345**	P	**P**	**16 28 01.5**	**-1.6**
	comp=Z,23nm,0.7s,mb5.2						
LSA	**Lhasa**	**72.90**	**296**	P	**P**	**16 28 17.5**	**+1.7**
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
LSA	**Lhasa**	**72.90**	**296**	*eP*	**P**	**16 28 17.4**	**+1.6**
LSA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
LSA	**Lhasa**	**72.90**	**296**	*eP*	**P**	**16 28 17.4**	**+1.6**
	comp=Z,14nm,0.9s,mb4.9						
AKASG	**Malin Array Be**	**76.18**	**348**	P	**P**	**16 28 33.4**	**-1.1**
	comp=Z,6.1nm,0.5s,mb4.8,baz=15,slow=5.9,SNR=21						
TAPN	**Taplejung**	**76.62**	**297**	*eP*	**P**	**16 28 37.7**	**+0.3**
BRG	**Berggiesshubel**	**77.08**	**358**	*eP*	**P**	**16 28 39.4**	**-0.2**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
BRG	**Berggiesshubel**	**77.08**	**358**	*eP*	**P**	**16 28 39.4**	**-0.1**
	comp=Z,6.0nm,1.3s,mb4.4						
CMAR	**Chiang Mai Arr**	**77.12**	**283**	P	**P**	**16 28 40.8**	**+0.5**
	comp=Z,10.0nm,0.9s,mb4.8,baz=26,slow=6.4,SNR=60						
GUN	**Gumba**	**77.16**	**299**	*eP*	**P**	**16 28 41.0**	**+0.6**
ODAN	**Odare**	**77.18**	**297**	*eP*	**P**	**16 28 40.5**	**0.0**
JIRN	**Jiri**	**77.19**	**299**	*eP*	**P**	**16 28 41.4**	**+0.8**
UPC	**Upice**	**77.40**	**357**	*eP*	**P**	**16 28 41.8**	**+0.5**
PVCC	**Panska Ves**	**77.41**	**358**	*eP*	**P**	**16 28 41.8**	**+0.4**
RAMN	**Ramite**	**77.54**	**298**	*eP*	**P**	**16 28 42.7**	**+0.2**
	comp=Z,47nm,0.9s,mb5.4						
DPC	**Dobruska-Polom**	**77.54**	**357**	*eP*	**P**	**16 28 42.8**	**+0.6**
KKN	**Kakani**	**77.58**	**299**	*eP*	**P**	**16 28 43.4**	**+0.7**
PKI	**Pulchoki**	**77.69**	**299**	*eP*	**P**	**16 28 43.5**	**+0.2**
BAIF	**Baives**	**77.73**	**5**	*eP*	**P**	**16 28 43.2**	**0.0**
NKC	**Novy Kostel**	**77.74**	**359**	*eP*	**P**	**16 28 43.5**	**+0.2**
GKN	**Gorkha**	**77.75**	**300**	*eP*	**P**	**16 28 43.8**	**+0.1**
DMN	**Daman**	**77.82**	**299**	*eP*	**P**	**16 28 44.5**	**+0.4**
KWP	**Kalwaria**	**77.90**	**353**	*ǁiP*	**P**	**16 28 44.8**	**+0.7**
DANN	**Dangsing**	**77.94**	**301**	*eP*	**P**	**16 28 45.3**	**+0.6**
	comp=Z,28nm,0.5s,mb5.4						
PRU	**Pruhonice**	**77.95**	**358**	*eP*	**P**	**16 28 45.0**	**+0.5**
OKC	**Ostrava-Krasne**	**77.98**	**356**	*eP*	**P**	**16 28 45.2**	**+0.6**
STHS	**Stebnicka Huta**	**78.22**	**354**	*iP*	**P**	**16 28 46.9**	**+1.0**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**78.22**	**354**	*iP*	**P**	**16 28 46.9**	**+1.0**
	comp=Z,4.1nm,0.8s,mb4.4						
GRA1	**Grafenberg Arr**	**78.28**	**0**	*eP*	**P**	**16 28 46.8**	**+0.5**
	comp=Z,15nm,1.2s,mb4.8						
GRF	**Grafenberg Arr**	**78.28**	**0**	*eP*	**P**	**16 28 46.8**	**+0.5**
GRF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
GRF	**Grafenberg Arr**	**78.28**	**0**	*eP*	**P**	**16 28 46.8**	**+0.5**
GRF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
GRF	**Grafenberg Arr**	**78.28**	**0**	*eP*	**P**	**16 28 46.8**	**+0.5**
	comp=Z,15nm,1.2s,mb4.8						
KOLN	**Koldanda**	**78.49**	**301**	*eP*	**P**	**16 28 48.0**	**+0.2**
	comp=Z,16nm,0.8s,mb5.0						
VRAC	**Vranov**	**78.58**	**357**	*ǁiP*	**P**	**16 28 49.1**	**+1.2**
TREC	**Trest**	**78.62**	**357**	*eP*	**P**	**16 28 48.0**	**-0.2**
FLN	**La Foliniere**	**78.70**	**8**	*eP*	**P**	**16 28 48.1**	**-0.5**
	comp=Z,44nm,1.1s,mb5.0						
FLN	**La Foliniere**	**78.70**	**8**	*eP*	**P**	**16 28 48.1**	**-0.5**
FLN				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
FLN	**La Foliniere**	**78.70**	**8**	*eP*	**P**	**16 28 48.1**	**-0.5**
	comp=Z,22nm,1.1s,mb5.0						
KHC	**Kasperske Hory**	**78.83**	**359**	*eP*	**P**	**16 28 48.0**	**-1.3**
KHC	**Kasperske Hory**	**78.83**	**359**	*eP*	**P**	**16 28 49.8**	**+0.5**
LDF	**La Druitiere**	**78.90**	**8**	*eP*	**P**	**16 28 49.1**	**-0.6**
	comp=Z,30nm,1.1s,mb4.8						
LDF	**La Druitiere**	**78.90**	**8**	*eP*	**P**	**16 28 49.1**	**-0.6**
LDF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
LDF	**La Druitiere**	**78.90**	**8**	*eP*	**P**	**16 28 49.1**	**-0.6**
	comp=Z,15nm,1.1s,mb4.8						
SGMF	**Saint Gilles**	**79.01**	**10**	*eP*	**P**	**16 28 49.9**	**-0.4**
GERES	**GERESS Array B**	**79.11**	**359**	P	**P**	**16 28 51.3**	**+0.4**
	comp=Z,2.1nm,0.9s,mb4.8,baz=356,slow=4.3,SNR=14						
QUIF	**Quistinic**	**79.28**	**10**	*eP*	**P**	**16 28 51.6**	**-0.2**
VYHS	**Vyhne**	**79.29**	**355**	*iP*	**P**	**16 28 52.4**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
VYHS	**Vyhne**	**79.29**	**355**	*iP*	**P**	**16 28 52.4**	**+0.6**
	comp=Z,6.8nm,1.2s,mb4.5						
MEZF	**Maizieres J'vi**	**79.33**	**4**	*eP*	**P**	**16 28 52.3**	**+0.3**
TRPA	**Tarpa**	**79.40**	**352**	*ǁiP*	**P**	**16 28 53.3**	**+0.8**
BUR08	**Bucovina Ar. S**	**79.65**	**351**	*eP*	**P**	**16 28 53.8**	**0.0**
ZST	**Bratislava**	**79.67**	**356**	*iP*	**P**	**16 28 55.4**	**+1.5**
ZST				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
ZST	**Bratislava**	**79.67**	**356**	*iP*	**P**	**16 28 55.4**	**+1.5**
	comp=Z,9.8nm,1.1s,mb4.7						
BURAR	**Bucovina Array**	**79.67**	**351**	*ǁiP*	**P**	**16 28 54.0**	**+0.1**
HAU	**Haudompre**	**79.88**	**3**	*eP*	**P**	**16 28 55.1**	**+0.1**
	comp=Z,14nm,0.9s,mb4.6						
HAU	**Haudompre**	**79.88**	**3**	*eP*	**P**	**16 28 55.1**	**+0.1**
HAU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
HAU	**Haudompre**	**79.88**	**3**	*eP*	**P**	**16 28 55.1**	**+0.1**
	comp=Z,7.0nm,0.9s,mb4.6						
KBL	**Kabul**	**79.94**	**315**	*eP*	**P**	**16 28 54.7**	**-0.9**
KBL				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
KBL	**Kabul**	**79.94**	**315**	*eP*	**P**	**16 28 54.7**	**-0.9**
	comp=Z,24nm,1.3s,mb5.0						
CONA	**Conrad Observa**	**79.98**	**357**	*iP*	**P**	**16 28 56.5**	**+0.9**
	comp=Z,15nm,1.2s,mb4.8						
CSNA	**Conrad Observa**	**79.98**	**357**	*iP*	**P**	**16 28 56.5**	**+0.9**
	comp=Z,13nm,1.2s,mb4.8						
HINF	**Hinteralfeld**	**80.08**	**3**	*eP*	**P**	**16 28 56.1**	**-0.1**
	comp=Z,14nm,0.9s,mb4.6						
HINF	**Hinteralfeld**	**80.08**	**3**	*eP*	**P**	**16 28 56.1**	**-0.1**
HINF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
HINF	**Hinteralfeld**	**80.08**	**3**	*eP*	**P**	**16 28 56.1**	**-0.1**
	comp=Z,7.2nm,0.9s,mb4.6						
KIV	**Kislovodsk**	**80.32**	**338**	*eP*	**P**	**16 28 56.5**	**-1.0**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
KIV	**Kislovodsk**	**80.32**	**338**	*eP*	**P**	**16 28 58.9**	**+1.4**
	comp=Z,10nm,0.8s,mb4.8						
LOR	**Lormes**	**80.50**	**5**	*eP*	**P**	**16 28 58.4**	**0.0**
	comp=Z,26nm,1.2s,mb4.7						
LOR	**Lormes**	**80.50**	**5**	*eP*	**P**	**16 28 58.4**	**0.0**
LOR				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
LOR	**Lormes**	**80.50**	**5**	*eP*	**P**	**16 28 58.4**	**0.0**
	comp=Z,13nm,1.2s,mb4.7						
SSF	**Saint Saulge**	**80.68**	**6**	*ǁiP*	**P**	**16 28 59.5**	**+0.1**
	comp=Z,18nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**80.68**	**6**	*ǁiP*	**P**	**16 28 59.5**	**+0.1**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**80.68**	**6**	*ǁiP*	**P**	**16 28 59.5**	**+0.1**
	comp=Z,9.1nm,1.0s,mb4.7						
DRGR		**80.72**	**352**	*ǁiP*	**P**	**16 28 59.8**	**+0.2**
MFF	**Saint Martin d**	**80.87**	**8**	*eP*	**P**	**16 29 00.5**	**+0.1**
	comp=Z,47nm,1.1s,mb5.0						
MFF	**Saint Martin d**	**80.87**	**8**	*eP*	**P**	**16 29 00.5**	**+0.1**
MFF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
MFF	**Saint Martin d**	**80.87**	**8**	*eP*	**P**	**16 29 00.5**	**+0.1**
	comp=Z,23nm,1.1s,mb5.0						
KBA	**Koelnbreinsper**	**80.89**	**359**	*ǁiP*	**P**	**16 29 01.8**	**+1.3**
	comp=Z,27nm,1.0s,mb5.1						
AVF	**Avril sur Loir**	**80.94**	**6**	*eP*	**P**	**16 29 00.7**	**-0.1**
	comp=Z,13nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**80.94**	**6**	*eP*	**P**	**16 29 00.7**	**-0.1**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**80.94**	**6**	*eP*	**P**	**16 29 00.7**	**-0.1**
	comp=Z,6.4nm,0.8s,mb4.6						
FETA	**Feichten**	**80.95**	**1**	*ǁiP*	**P**	**16 29 01.6**	**+0.7**
	comp=Z,14nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**81.12**	**5**	*ǁiP*	**P**	**16 29 01.7**	**0.0**
	comp=Z,28nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**81.12**	**5**	*ǁiP*	**P**	**16 29 01.7**	**0.0**
SMF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**81.12**	**5**	*ǁiP*	**P**	**16 29 01.7**	**0.0**
	comp=Z,14nm,1.0s,mb4.8						
DAVOS	**Davos**	**81.13**	**1**	P	**P**	**16 29 03.8**	**+2.0**
BGF	**Bois d'Agland**	**81.14**	**6**	*eP*	**P**	**16 29 01.7**	**-0.2**
	comp=Z,22nm,0.9s,mb4.8						
BGF	**Bois d'Agland**	**81.14**	**6**	*eP*	**P**	**16 29 01.7**	**-0.2**
BGF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
BGF	**Bois d'Agland**	**81.14**	**6**	*eP*	**P**	**16 29 01.7**	**-0.2**
	comp=Z,11nm,0.9s,mb4.8						
DAVOX	**Davos/Dischmat**	**81.19**	**1**	P	**P**	**16 29 03.8**	**+1.7**
	comp=Z,3.8nm,0.6s,mb4.5,baz=348,slow=14						
CABF	**La Chapelle**	**81.26**	**4**	*eP*	**P**	**16 29 03.2**	**+0.7**
	comp=Z,30nm,1.0s,mb4.9						
CABF	**La Chapelle**	**81.26**	**4**	*eP*	**P**	**16 29 03.2**	**+0.7**
CABF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
CABF	**La Chapelle**	**81.26**	**4**	*eP*	**P**	**16 29 03.2**	**+0.7**
	comp=Z,15nm,1.0s,mb4.9						
TCF	**Toulx Ste Croi**	**81.37**	**6**	*eP*	**P**	**16 29 02.9**	**-0.2**
	comp=Z,8.9nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**81.37**	**6**	*eP*	**P**	**16 29 02.9**	**-0.2**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**81.37**	**6**	*eP*	**P**	**16 29 02.9**	**-0.2**
	comp=Z,4.4nm,0.8s,mb4.4						
BZS	**Buzias**	**81.97**	**353**	*ǁiP*	**P**	**16 29 06.2**	**-0.1**
GZR	**Gura Zlata**	**82.10**	**352**	*ǁiP*	**P**	**16 29 07.0**	**+0.1**
LPL	**La Plagne**	**82.38**	**3**	*eP*	**P**	**16 29 09.8**	**+1.4**
LPG	**La Plagne**	**82.40**	**3**	*eP*	**P**	**16 29 10.1**	**+1.6**
	comp=Z,10.0nm,1.0s,mb4.4						
LPG	**La Plagne**	**82.40**	**3**	*eP*	**P**	**16 29 10.1**	**+1.6**
LPG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
LPG	**La Plagne**	**82.40**	**3**	*eP*	**P**	**16 29 10.1**	**+1.6**
	comp=Z,5.0nm,1.0s,mb4.4						
LFF	**La Frestale**	**82.60**	**8**	*eP*	**P**	**16 29 09.7**	**+0.2**
	comp=Z,34nm,0.9s,mb5.1						
LFF	**La Frestale**	**82.60**	**8**	*eP*	**P**	**16 29 09.7**	**+0.2**
LFF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
LFF	**La Frestale**	**82.60**	**8**	*eP*	**P**	**16 29 09.7**	**+0.2**
	comp=Z,17nm,0.9s,mb5.1						
CAF	**Calviac**	**82.72**	**7**	*eP*	**P**	**16 29 10.4**	**+0.3**
	comp=Z,8.9nm,0.8s,mb4.6						
CAF	**Calviac**	**82.72**	**7**	*eP*	**P**	**16 29 10.4**	**+0.3**
CAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
CAF	**Calviac**	**82.72**	**7**	*eP*	**P**	**16 29 10.4**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.5						
BNI	**Bardonecchia**	**82.84**	**3**	*eP*	**P**	**16 29 12.5**	**+1.7**
BNI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
BNI	**Bardonecchia**	**82.84**	**3**	*eP*	**P**	**16 29 12.5**	**+1.7**
	comp=Z,9.0nm,1.0s,mb4.8						
ORIF	**Orl-en-Ratte**	**82.94**	**4**	*eP*	**P**	**16 29 12.2**	**+0.9**
VIVF	**Saint-Julien-l**	**82.95**	**5**	*eP*	**P**	**16 29 12.0**	**+0.7**
	comp=Z,11nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**82.95**	**5**	*eP*	**P**	**16 29 12.0**	**+0.7**
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
VIVF	**Saint-Julien-l**	**82.95**	**5**	*eP*	**P**	**16 29 12.0**	**+0.7**
	comp=Z,5.3nm,0.9s,mb4.6						
MBDF	**Montbardon**	**83.17**	**3**	*eP*	**P**	**16 29 13.9**	**+1.4**
	comp=Z,12nm,0.8s,mb4.7						
MBDF	**Montbardon**	**83.17**	**3**	*eP*	**P**	**16 29 13.9**	**+1.4**
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MBDF	**Montbardon**	**83.17**	**3**	*eP*	**P**	**16 29 13.9**	**+1.4**
	comp=Z,6.2nm,0.8s,mb4.7						
GNI	**Garni**	**83.40**	**335**	*eP*	**P**	**16 29 13.9**	**+0.1**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LASF	**Ste Croix**	**83.68**	**6**	*eP*	**P**	**16 29 15.9**	**+0.8**
	comp=Z,16nm,1.0s,mb4.8						
SMRF	**Simiane la Rot**	**83.87**	**4**	*eP*	**P**	**16 29 17.4**	**+1.3**
	comp=Z,28nm,1.1s,mb5.0						
SMRF	**Simiane la Rot**	**83.87**	**4**	*eP*	**P**	**16 29 17.4**	**+1.3**
	comp=Z,28nm,1.0s,mb5.3						
SJPF	**Ste Jean**	**84.23**	**9**	*eP*	**P**	**16 29 18.6**	**+0.6**
	comp=Z,13nm,0.8s,mb4.8						
SJPF	**Ste Jean**	**84.23**	**9**	*eP*	**P**	**16 29 18.6**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
SJPF	**Ste Jean**	**84.23**	**9**	*eP*	**P**	**16 29 18.6**	**+0.6**
	comp=Z,6.7nm,0.8s,mb4.8						
MTLF	**Montolieu**	**84.30**	**7**	*eP*	**P**	**16 29 18.7**	**+0.4**
	comp=Z,27nm,1.1s,mb5.0						
MTLF	**Montolieu**	**84.30**	**7**	*eP*	**P**	**16 29 18.7**	**+0.4**
MTLF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
MTLF	**Montolieu**	**84.30**	**7**	*eP*	**P**	**16 29 18.7**	**+0.4**
	comp=Z,14nm,1.1s,mb5.0						
FRF	**La Foret Royal**	**84.33**	**4**	*eP*	**P**	**16 29 18.9**	**+0.5**
	comp=Z,14nm,0.7s,mb4.9						
FRF	**La Foret Royal**	**84.33**	**4**	*eP*	**P**	**16 29 18.9**	**+0.5**
FRF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
FRF	**La Foret Royal**	**84.33**	**4**	*eP*	**P**	**16 29 18.9**	**+0.5**
	comp=Z,7.1nm,0.7s,mb4.9						
EPF	**Esparros**	**84.46**	**8**	*eP*	**P**	**16 29 18.8**	**-0.3**
	comp=Z,14nm,0.9s,mb4.8						
EPF	**Esparros**	**84.46**	**8**	*eP*	**P**	**16 29 18.8**	**-0.3**
EPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
EPF	**Esparros**	**84.46**	**8**	*eP*	**P**	**16 29 18.8**	**-0.3**
	comp=Z,6.8nm,0.9s,mb4.8						
ETSF	**Etsaut**	**84.51**	**9**	*eP*	**P**	**16 29 20.0**	**+0.6**
	comp=Z,19nm,0.8s,mb5.0						
ETSF	**Etsaut**	**84.51**	**9**	*eP*	**P**	**16 29 20.0**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
ETSF	**Etsaut**	**84.51**	**9**	*eP*	**P**	**16 29 20.0**	**+0.6**
	comp=Z,9.7nm,0.8s,mb5.0						
LMR	**La Mourre**	**84.55**	**4**	*eP*	**P**	**16 29 20.1**	**+0.5**
	comp=Z,14nm,0.9s,mb4.8						
LMR	**La Mourre**	**84.55**	**4**	*eP*	**P**	**16 29 20.1**	**+0.5**
LMR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
LMR	**La Mourre**	**84.55**	**4**	*eP*	**P**	**16 29 20.1**	**+0.5**
	comp=Z,7.1nm,0.9s,mb4.8						
BRTR	**Keskin Array B**	**86.25**	**343**	P	**P**	**16 29 28.9**	**+0.7**
	comp=Z,4.0nm,0.8s,mb4.7,baz=46,slow=2.6,SNR=12						
ESDC	**Sonseca Array**	**87.32**	**12**	P	**P**	**16 29 33.5**	**+0.1**
	comp=Z,2.1nm,0.6s,mb4.5,baz=349,slow=4.2,SNR=16						
WRAB	**Tennant Creek**	**87.42**	**232**	*eP*	**P**	**16 29 32.2**	**-1.7**
WRA	**Warramunga Arr**	**87.43**	**232**	P	**P**	**16 29 32.4**	**-1.6**
	comp=Z,1.4nm,0.7s,mb4.3,baz=36,slow=5.7,SNR=17						
PSI	**Prapat**	**89.37**	**274**	P	**P**	**16 29 43.8**	**+0.4**
	comp=Z,6.5nm,0.7s,mb5.0,baz=353,slow=2.6,SNR=5.8						
HYB	**Hyderabad**	**89.59**	**298**	*iP*	**P**	**16 29 44.0**	**-0.4**
HYB	**Hyderabad**	**89.59**	**298**	*eP*	**P**	**16 29 44.0**	**-0.4**
ASAR	**Alice Springs**	**90.81**	**231**	P	**P**	**16 29 49.0**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.5,baz=33,slow=4.4,SNR=26						
MIB	**Mutribah**	**92.34**	**329**	*eP*	**P**	**16 29 56.6**	**-0.4**
MIB				AMb	AMB	16 29 57.4	
	comp=Z,27nm,0.9s,mb5.6						
STKA	**Stephens Creek**	**94.56**	**221**	LR	LR	17 07 12.9	
	comp=Z,358nm,20.6s,MS4.8,baz=206,slow=32						
TORD	**Torodi Ar. Bea**	**114.18**	**10**	PKP	PKiKP	16 35 24.4	-1.7
	comp=Z,0.1nm,0.5s,baz=42,slow=2.3,SNR=2.5						
TSUM	**Tsumeb**	**146.53**	**350**	PKPbc	PKPbc	16 36 26.5	-1.4
	comp=Z,3.3nm,0.8s,baz=350,slow=5.1,SNR=5.8						

CSEM ***27*** *16:37:46.4, 39.39N×33.12E, h4km, MD2.6, After ISK*
DDA ***27*** *16:37:46.2, 3942N×33.12E, h7km±1km, Md2.6*
ISK ***27*** *16:37:46.4, 39.39N×33.12E, h4km, MD2.6*
ISCJB ***27*** *16:37:47.2±0.7, 3942N±005×33.11E±005, h10km, Error ellipse: s-maj=7.8km s-min=4.9km az=146.3*
ISC 27 16:37:46.6±0.8, 3943N±005×3308E±005, h1km±10km, n8, σ0§63/12, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.49**	**96**	*e*PG	**Pg**	**16 37 55.7**	**-0.4**
KAMT				*e*SG	**Sg**	**16 38 03.1**	**+0.6**
CDAG	**Cicekdag**	**1.02**	**78**	*i* P	**Pg**	**16 38 05.2**	**-1.0**
CDAG				*i* S	**Sg**	**16 38 19.2**	**-0.2**
KIZT	**Kizilcal**	**1.08**	**240**	*e*PN	**Pn**	**16 38 07.7**	**-1.1**
ELDT	**Eldivan**	**1.10**	**14**	*i* P	**Pg**	**16 38 07.2**	**-0.4**
ELDT				*i* S	**Sg**	**16 38 22.8**	**+0.9**
KDHN	**Kadinhani**	**1.17**	**220**	*i* P	**Pg**	**16 38 08.9**	**-0.2**
KDHN				*i* S	**Sg**	**16 38 25.2**	**+0.8**
CORM	**Corum**	**1.41**	**57**	*e*PN	**Pn**	**16 38 13.7**	**+0.3**
YOZ	**Yozgat**	**1.75**	**82**	*e*PN	**Pn**	**16 38 18.3**	**+0.3**
NIG	**Nigde**	**1.78**	**137**	*e*PN	**Pn**	**16 38 18.9**	**+0.5**

DDA ***27*** *16:47:21.7, 37.97N×35.19E, h5km±9km, Md3.1*
ISK ***27*** *16:47:22.3, 3788N×35.13E, h2km, MD3.2*
CSEM ***27*** *16:47:22.5±0.1, 3787N×35.10E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.1km az=69.0*
ISCJB ***27*** *16:47:23.8±0.3, 3787N±002×35.15E±003, h10km, Error ellipse: s-maj=3.9km s-min=3.0km az=41.3*
ISC 27 16:47:24.2±0.3, 3789N±002×3517E±003, h10km, n27, σ1§12/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIG	**Nigde**	**0.49**	**297**	*e*Pg	**Pg**	**16 47 32.0**	**-1.9**
NIG				*e*Sg	**Sg**	**16 47 39.8**	**-0.6**
NIG				*e*SG	**Sg**	**16 47 39.8**	**-0.6**
NIG	**Nigde**	**0.49**	**297**	*e*PG	**Pg**	**16 47 32.0**	**-1.9**
KARA	**Karaisali**	**0.63**	**188**	*e*PG	**Pg**	**16 47 35.2**	**-1.3**
KARA				*e*SG	**Sg**	**16 47 44.3**	**-0.5**
KOZT	**Kozan**	**0.66**	**128**	*e*PG	**Pg**	**16 47 35.7**	**-1.3**
KOZT				*e*SG	**Sg**	**16 47 45.9**	**+0.2**
GULE	**Gulek**	**0.68**	**208**	*i* P	Px	16 47 13.8	
GULE				*i* S	Sx	16 47 25.4	
BSTP	**Nigde**	**0.84**	**275**	*i* P	**Pg**	**16 47 39.9**	**-0.5**
BSTP				*i* S	**Sg**	**16 47 52.4**	**+1.0**
AVNT	**Avonos**	**0.92**	**345**	*i* P	**Pg**	**16 47 35.1**	**-7.0**
AVNT				*i* S	**Sg**	**16 47 49.1**	**-5.0**
ANDN	**Andirin**	**0.98**	**108**	*i* P	**Pg**	**16 47 42.2**	**-0.9**
ANDN				*i* S	**Sg**	**16 47 55.0**	**-0.9**
CEYT	**Ceyhan**	**0.99**	**152**	*e*PG	**Pg**	**16 47 42.5**	**-0.8**
CEYT				*e*SG	**Sg**	**16 47 58.0**	**+1.9**
BNN	**Bunyan**	**1.10**	**29**	*e*PN	**Pg**	**16 47 43.9**	**-1.5**
MERS	**Mersin**	**1.14**	**207**	*e*PN	**Pg**	**16 47 44.8**	**-1.4**
PINB	**Pinarbasi**	**1.25**	**51**	*i* P	**Pn**	**16 47 46.2**	**-1.6**
PINB				*i* S	**Sb**	**16 48 03.9**	**-0.2**
KMRS	**Kahramanmaras**	**1.42**	**105**	*e*PN	**Pn**	**16 47 51.0**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.44**	**56**	*e*PN	**Pn**	**16 47 45.3**	**-5.1**
COBT	**Iskenderun**	**1.62**	**147**	*i* P	**Pn**	**16 47 53.5**	**+0.7**
COBT				*i* S	**Sn**	**16 48 15.1**	**+1.4**
YOZ	**Yozgat**	**1.75**	**4**	*e*PN	**Pn**	**16 47 55.1**	**+0.5**
CDAG	**Cicekdag**	**1.84**	**340**	*i* P	**Pn**	**16 47 55.7**	**-0.2**
CDAG				*i* S	**Sn**	**16 48 20.9**	**+

	comp=Z,2µm,8.0s							
SKR					A		16 51 34.8	
	comp=Z,3µm,8.0s							
SKR					A		16 51 34.8	
	comp=Z,270nm,0.2s							
SKR					A		16 51 34.8	
	comp=Z,470nm,0.2s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,3µm,18.0s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,8µm,18.0s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,3µm,18.0s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,2µm,18.0s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,6µm,18.0s							
SKR					AMS	AMS	16 52 30.0	
	comp=Z,4µm,18.0s							
YUK	**Yuzh-Kuril'sk**	**6.01**	**257**	*e*P	**Pn**		**16 50 49.0**	**-0.3**
YUK				*e*S	**Sn**		**16 51 53.8**	**-4.8**
YUK				pmax	pmax			
	comp=E,190nm,0.4s							
YUK				pmax	pmax			
	comp=Z,390nm,0.4s							
YUK				pmax	pmax			
	comp=N,160nm,0.5s							
YUK				smax				
	comp=N,2µm,0.5s							
YUK				smax				
	comp=E,2µm,0.5s							
YUK				smax				
	comp=N,6µm,1.0s							
YUK				MLR	MLR			
	comp=N,4µm,16.0s							
YUK				MLR	MLR			
	comp=E,3µm,17.0s							
YUK	**Yuzh-Kuril'sk**	**6.01**	**257**	*e*P	**Pn**		**16 50 49.0**	**-0.3**
YUK				AMB	AMB		16 50 50.5	
	comp=E,160nm,0.5s							
YUK				AMB	AMB		16 50 50.5	
	comp=E,190nm,0.3s							
YUK				AMB	AMB		16 50 50.5	
	comp=E,390nm,0.4s							
YUK				*e*S	**Sn**		**16 51 53.8**	**-4.8**
YUK				A			16 52 03.0	
	comp=E,2µm,0.5s							
YUK				A			16 52 03.0	
	comp=E,2µm,0.5s							
YUK				A			16 52 07.0	
	comp=E,6µm,1.0s							
YUK				AMS	AMS		16 53 15.0	
	comp=E,3µm,17.0s							
YUK				AMS	AMS		16 53 15.0	
	comp=E,4µm,16.0s							
NEM2	**Nemuro 2**	**6.33**	**252**	P	**Pn**		**16 50 52.2**	**-1.6**
NEM2				*e*S	**Sn**		**16 51 58.3**	**-8.3**
JRA	**Rausu**	**6.54**	**258**	P	**Pn**		**16 50 57.3**	**+0.6**
JRA				*e*S	**Sn**		**16 52 08.0**	**-3.8**
JNK	**Nakash**	**6.94**	**256**	P	**Pn**		**16 51 02.1**	**0.0**
JNK				*e*S	**Sn**		**16 52 16.0**	**-5.5**
JAK	**Akkeshi**	**7.18**	**251**	P	**Pn**		**16 51 04.0**	**-1.4**
JAK				*e*S	**Sn**		**16 52 19.7**	**-7.8**
JTKR	**Abashiri--Toko**	**7.37**	**260**	P	**Pn**		**16 51 08.8**	**+0.8**
JAR	**Ashorobuto**	**7.69**	**256**	P	**Pn**		**16 51 12.5**	**+0.2**
JAR				*e*S	**Sn**		**16 52 35.3**	**-4.6**
JMP	**Maruseppu**	**7.74**	**261**	P	**Pn**		**16 51 13.9**	**+0.9**
JMP				*e*S	**Sn**		**16 52 38.8**	**-2.4**
JOB	**Onbets**	**7.80**	**253**	P	**Pn**		**16 51 13.7**	**-0.1**
PEA0B	**Petropavlovsk-**	**7.82**	**17**	*e*Pn	**Pn**		**16 51 12.6**	**-1.6**
PEA0B				*e*Sn	**Sn**		**16 52 40.4**	**-2.7**
PETK	**Petropavlovsk-**	**7.82**	**17**	Pn	**Pn**		**16 51 12.4**	**-1.6**
	comp=E,7.9nm,0.3s,baz=193,slow=12,SNR=229							
PETK				Sn	**Sn**		**16 52 43.9**	**+0.9**
	comp=E,0.5nm,0.3s,baz=130,slow=14,SNR=3.6							
PETK				LR	LR		16 54 14.3	
	comp=E,503nm,21.1s,baz=200,slow=38							
PETK	**Petropavlovsk-**	**7.82**	**17**	P	**Pn**		**16 51 12.5**	**-1.6**
PETK							16 52 43.9	
YSS	**Yuzh-Sakhalins**	**7.88**	**283**⇑	*i*P	**Pn**		**16 51 17.7**	**+2.7**
YSS				*e*S	**Sn**		**16 52 40.3**	**-4.4**
YSS				pmax	pmax			
	comp=Z,130nm,0.8s							
YSS				smax				
	comp=N,60nm,1.0s							
YSS				MLR	MLR			
	comp=E,2µm,14.0s							
YSS				MLR	MLR			
	comp=Z,2µm,14.0s							
YSS	**Yuzh-Sakhalins**	**7.88**	**283**⇑	*i*P	**Pn**		**16 51 17.7**	**+2.7**
YSS				AMB	AMB		16 51 19.0	
	comp=Z,130nm,0.8s							
YSS				*i* sP			16 51 28.2	
YSS				*e*S	**Sn**		**16 52 40.3**	**-4.4**
YSS				A			16 52 50.0	
	comp=Z,60nm,1.0s							
YSS				*e*LQ			16 53 02.0	
YSS				AMS	AMS		16 55 31.0	
	comp=Z,2µm,14.0s							
YSS				AMS	AMS		16 55 31.0	
	comp=Z,2µm,14.0s							
YSS	**Yuzh-Sakhalins**	**7.88**	**283**	*e*Pn	**Pn**		**16 51 17.5**	**+2.5**
	comp=Z,101nm,0.8s							
PET	**Petropavlovsk**	**7.96**	**21**	*e*P	**Pn**		**16 51 14.2**	**-1.8**
PET				pmax	pmax			
	comp=Z,23nm,0.6s							
PET				MLR	MLR			
	comp=Z,900nm,12.0s							
PET	**Petropavlovsk**	**7.96**	**21**	*e*Pn	**Pn**		**16 51 12.9**	**-3.0**
PET				*e*Sn	**Sn**		**16 52 36.0**	**-10**
JSE	**Soyaes**	**8.07**	**269**	P	**Pn**		**16 51 19.7**	**+2.1**
JKK2	**Kamakawa 2**	**8.20**	**261**	P	**Pn**		**16 51 20.5**	**+1.1**
JCH	**Churui**	**8.23**	**252**	P	**Pn**		**16 51 19.3**	**-0.5**
JCH				*e*S	**Sn**		**16 52 45.6**	**-7.7**
ASAJ	**Asahikawa**	**8.24**	**263**	Pn	**Pn**		**16 51 21.4**	**+1.5**
	comp=Z,3.7nm,0.3s,baz=81,slow=18,SNR=42							
ASAJ				LR	LR		16 54 54.6	
	comp=Z,822nm,18.7s,baz=83,slow=40							
ASAJ	**Asahikawa**	**8.24**	**263**	P	**Pn**		**16 51 21.4**	**+1.5**
ASAJ	**Asahikawa**	**8.24**	**263**	P	**Pn**		**16 51 21.5**	**+1.6**
ASAJ				pmax	pmax			
	comp=Z,4.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,822nm,18.7s							
JWK2	**Keihoku**	**8.51**	**272**	P	**Pn**		**16 51 27.4**	**+3.9**
JFR	**Furan**	**8.54**	**257**	P	**Pn**		**16 51 25.3**	**+1.3**
JFR				*e*S	**Sn**		**16 52 56.4**	**-4.4**
ERM	**Erimo**	**8.64**	**249**	Pn	**Pn**		**16 51 25.8**	**+0.4**
	comp=Z,734nm,0.6s,SNR=49							
ERM	**Erimo**	**8.64**	**249**	*e*P	**Pn**		**16 51 26.0**	**+0.6**
ERM	**Erimo**	**8.64**	**249**	*e*Pn	**Pn**		**16 51 25.1**	**-0.3**
	comp=Z,78nm,0.6s							
ERM				*e*Sn	**Sn**		**16 52 54.5**	**-8.9**
JEM	**Erimo**	**8.64**	**249**	P	**Pn**		**16 51 25.2**	**-0.2**
JAB	**Ashibetsu**	**8.68**	**260**	P	**Pn**		**16 51 27.5**	**+1.6**
UGL	**Uglegorsk**	**8.78**	**297**	*e*P	**Pn**		**16 51 30.0**	**+2.8**
UGL				AMB	AMB		16 51 32.0	
	comp=Z,66nm,0.8s							
UGL				AMB	AMB		16 51 35.0	
	comp=Z,500nm,6.0s							
UGL				AMB	AMB		16 51 35.0	
	comp=Z,800nm,6.0s							
UGL				AMB	AMB		16 51 35.0	
	comp=Z,1µm,6.0s							
UGL				AMS	AMS		16 56 04.0	
	comp=Z,1µm,15.0s							
UGL				AMS	AMS		16 56 04.0	
	comp=Z,2µm,15.0s							
UGL				AMS	AMS		16 56 04.0	
	comp=Z,600nm,10.0s							
JNBK	**Urakawa-nobuka**	**8.79**	**251**	P	**Pn**		**16 51 25.8**	**-1.6**
JBT2	**Biratori 2**	**8.84**	**255**	P	**Pn**		**16 51 27.2**	**-0.9**
JBT2				*e*S	**Sn**		**16 53 01.5**	**-6.7**
TYV	**Tymovskoe**	**9.16**	**309**	*e*P	**Pn**		**16 51 32.0**	**-0.5**
TYV				AMB	AMB		16 51 37.1	
	comp=Z,36nm,1.1s							
TYV				AMB	AMB		16 51 37.1	
	comp=Z,63nm,1.1s							
JEW	**Eniwo**	**9.44**	**257**	P	**Pn**		**16 51 36.9**	**+0.6**
JEW				*e*S	**Sn**		**16 53 16.9**	**-5.9**
JNB	**Noboribetsu**	**9.86**	**256**	P	**Pn**		**16 51 42.1**	**0.0**
JNB				*e*S	**Sn**		**16 53 26.4**	**-6.8**
JKB	**Kayabe**	**10.11**	**253**	P	**Pn**		**16 51 44.0**	**-1.5**
JKB				*e*S	**Sn**		**16 53 29.3**	**-10**
JYM2	**Yakumo 2**	**10.45**	**255**	P	**Pn**		**16 51 49.5**	**-0.8**
JYM2				*e*S	**Sn**		**16 53 39.3**	**-8.5**
JSH	**Shimam**	**10.47**	**258**	P	**Pn**		**16 51 50.8**	**+0.3**
JANG	**Nango**	**10.56**	**244**	P	**Pn**		**16 51 48.5**	**-3.2**
JTH	**Tanohata**	**10.59**	**241**	P	**Pn**		**16 51 48.4**	**-3.7**
JTH				*e*S	**Sn**		**16 53 37.3**	**-14**
JTM	**Tenmabayashi**	**10.62**	**247**	P	**Pn**		**16 51 50.2**	**-2.3**
JTM				*e*S	**Sn**		**16 53 40.6**	**-11**
OKH	**Okha**	**10.64**	**322**	*e*P	**Pn**		**16 51 56.0**	**+3.2**
OKH				*e*LQ			16 55 52.0	
OKH				AMS	AMS		16 57 09.6	
	comp=Z,2µm,14.0s							
OKH				AMS	AMS		16 57 09.6	
	comp=Z,1µm,11.0s							
OKH				AMS	AMS		16 57 09.6	
	comp=Z,3µm,14.0s							
JSR	**Shiriuchi**	**10.68**	**252**	P	**Pn**		**16 51 51.9**	**-1.4**
JSR				*e*S	**Sn**		**16 53 42.3**	**-11**
JOSM	**Okushiri--Mats**	**11.08**	**256**	P	**Pn**		**16 51 57.8**	**-1.0**
JOSM				*e*S	**Sn**		**16 53 55.3**	**-7.8**
OFUJ	**Ofunato**	**11.24**	**238**	P	**Pn**		**16 51 58.4**	**-2.6**
NKL	**Nikolayevsk**	**11.44**	**316**	*e*P	**Pn**		**16 52 01.0**	**-2.6**
NKL				AMB	AMB		16 52 05.2	
	comp=Z,190nm,2.2s							
NKL				AMB	AMB		16 52 05.2	
	comp=Z,280nm,2.5s							
NKL				AMB	AMB		16 52 09.0	
	comp=Z,400nm,6.0s							
NKL				AMB	AMB		16 52 09.0	
	comp=Z,1µm,6.0s							
NKL				AMB	AMB		16 52 09.0	
	comp=Z,500nm,6.0s							
NKL				*e*L			16 54 55.0	
NKL				AMS	AMS		16 57 32.0	
	comp=Z,2µm,14.0s							
NKL				AMS	AMS		16 57 32.0	
	comp=Z,1µm,14.0s							
NKL				AMS	AMS		16 57 32.0	
	comp=Z,4µm,14.0s							
JRG	**Rokugo**	**11.68**	**242**	P	**Pn**		**16 52 04.2**	**-2.8**
JRG				*e*S	**Sn**		**16 54 06.2**	**-12**
JIO	**Ouri**	**11.84**	**237**	P	**Pn**		**16 52 05.2**	**-4.0**
JIO				*e*S	**Sn**		**16 54 07.4**	**-14**
TEY	**Ternei**	**12.25**	**273**	*e*P	**Pn**		**16 52 18.0**	**+3.2**
TEY				AMB	AMB		16 52 19.5	
	comp=Z,30nm,0.8s							
TEY				AMB	AMB		16 52 20.0	
	comp=Z,40nm,0.8s							
TEY				AMB	AMB		16 52 23.0	
	comp=Z,40nm,1.0s							
JYA	**Atsumi**	**12.73**	**241**	*e*S	**Sn**		**16 54 31.8**	**-12**
JFK	**Kawauchi**	**12.85**	**234**	P	**Pn**		**16 52 19.3**	**-3.8**
JFK				*e*S	**Sn**		**16 54 31.8**	**-15**
HABR	**Khabarovsk**	**13.21**	**289**	*i* P	**Pn**		**16 52 31.3**	**+3.5**
HABR				*e*			16 54 56.9	
HABR				pmax	pmax			
	comp=E,23nm,0.9s							
HABR				pmax	pmax			
	comp=Z,17nm,0.9s							
HABR				pmax	pmax			
	comp=N,10.0nm,1.0s							
HABR				MLR	MLR			
	comp=N,134nm,13.0s							
HABR				MLR	MLR			
	comp=Z,264nm,14.0s							
HABR				MLR	MLR			
	comp=E,530nm,15.0s							
JFY	**Yanaizu**	**13.51**	**237**	P	**Pn**		**16 52 30.2**	**-1.8**
FX1	**Attu Island--F**	**14.41**	**53**	Pn	**Pn**		**16 52 41.4**	**-2.9**
	comp=E,3.2nm,0.3s,baz=135,slow=21,SNR=16							
FX1	**Attu Island--F**	**14.41**	**53**	P	**Pn**		**16 52 41.4**	**-2.9**
FX1				pmax	pmax			
	comp=Z,3.0nm,0.3s							
FX1	**Attu Island--F**	**14.41**	**53**	Pn	**Pn**		**16 52 41.4**	**-2.9**
MJAR	**Matsushiro Arr**	**14.97**	**238**	Pn	**Pn**		**16 52 50.6**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=30							
MAJO	**Matsushiro**	**14.97**	**238**	*e*P	**Pn**		**16 52 49.6**	**-2.4**
MAJO				pmax	pmax			
	comp=Z,220nm,0.9s							
MAJO	**Matsushiro**	**14.97**	**238**	*e*Pn	**Pn**		**16 52 49.6**	**-2.4**
	comp=Z,203nm,0.8s							
MAJO				*e*			16 53 00.1	
MAT	**Matsushiro**	**14.97**	**238**	P	**Pn**		**16 52 50.4**	**-1.6**
MAT				S	**Sn**		**16 55 35.0**	**-3.3**
KLR	**Kul'dur**	**15.45**	**291**	*e*P	**Pn**		**16 52 50.0**	**-8.2**
KLR				pmax	pmax			
	comp=E,110nm,1.8s							
KLR				pmax	pmax			
	comp=Z,92nm,1.8s							
MDJ	**Mudanjiang**	**17.23**	**275**	P	**Pn**		**16 53 20.0**	**-1.1**
MDJ				XP	sP		16 53 26.0	+2.1
MDJ				S	**Sn**		**16 56 32.3**	**-0.8**
MDJ				PCP	PcP		16 58 03.8	-0.6
MDJ				SCP	ScP		17 01 38.5	-1.5
MDJ				PCS	PcS		17 01 39.8	-0.5
MDJ				AMB	AMB			
	comp=Z,107nm,0.7s							
MDJ				AMB	AMB			
	comp=Z,273nm,5.9s							
MDJ				LR	LR			
	comp=N,595nm,13.0s							
MDJ				LR	LR			
	comp=E,278nm,14.4s							
MDJ				LR	LR			
	comp=Z,650nm,13.0s							
MDJ	**Mudanjiang**	**17.23**	**275**	*e*Pn	**Pn**		**16 53 20.2**	**-0.9**
	comp=Z,88nm,0.8s							
SEY	**Seymchan**	**17.32**	**358**⇑	*e*P	**Pn**		**16 53 21.4**	**-0.6**
ZEA	**Zeya**	**18.99**	**305**	*e*P	**Pn**		**16 53 38.1**	**-4.6**
ZEA				AMB	AMB		16 53 43.0	
	comp=Z,500nm,4.0s							
ZEA				AMB	AMB		16 53 43.0	
	comp=Z,500nm,4.0s							
ZEA				AMB	AMB		16 53 43.5	
	comp=Z,69nm,1.0s							
ZEA				AMB	AMB		16 53 43.5	
	comp=Z,58nm,1.2s							
ZEA				*e*S	**Sn**		**16 57 12.0**	**-3.6**
ZEA				A			16 57 16.0	
	comp=Z,300nm,10.0s							
ZEA				eLQ			17 00 10.0	
CN2	**Changchun**	**20.32**	**275**	*e*P	**P**		**16 53 56.0**	**-0.6**
CN2				*e*AP			16 54 05.0	
CN2				*e*S	**S**		**16 57 36.0**	**-8.8**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.9s							
CN2				AMB	AMB			
	comp=Z,200nm,4.0s							
CN2				LR	LR			
	comp=N,1µm,15.0s,MS4.4							
CN2				LR	LR			
	comp=E,600nm,15.0s,MS4.4							
CN2				LR	LR			
	comp=Z,900nm,17.0s,MS4.2							
KSRS	**Korea Array**	**21.10**	**256**	P	**P**		**16 54 07.0**	**+1.9**
	comp=Z,28nm,0.7s,mb4.7,baz=62,slow=11,SNR=48							
KSRS				PcP	PcP		16 58 11.8	+0.5
	comp=Z,4.2nm,0.9s,baz=89,slow=0.6,SNR=8.6							
KSRS				LR	LR		17 02 51.7	
	comp=Z,320nm,18.0s,MS3.8,baz=174,slow=38							
KSRS	**Korea Array**	**21.10**	**256**	P	**P**		**16 54 07.0**	**+1.9**
KSRS							16 58 11.9	
KSRS				pmax	pmax			
	comp=Z,28nm,0.7s,mb4.7							
KSRS				MLR	MLR			
	comp=Z,320nm,18.0s,MS3.8							
CLNS	**Chul'man**	**21.19**	**312**	*e*P	**P**		**16 54 05.8**	**-0.1**
CLNS				*e*			16 54 25.8	
CLNS				*e*S	**S**		**16 58 01.2**	**-0.6**
CLNS				*e*			16 58 09.6	
CLNS				*e*SS			16 58 27.6	
CLNS				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.1							
CLNS				smax				
	comp=E,18nm,1.5s							
CLNS				smax				
	comp=N,56nm,1.5s							
CLNS				MLR	MLR			
	comp=N,348nm,16.0s,MS4.2							
CLNS				MLR	MLR			
	comp=E,744nm,16.0s,MS4.2							
CLNS				MLR	MLR			
	comp=Z,696nm,16.0s,MS4.1							
NRGR	**Nerungri**	**21.22**	**312**	*e*P	**P**		**16 54 07.0**	**+0.8**
YAK	**Yakutsk**	**21.55**	**328**	*e*P	**P**		**16 54 07.0**	**-2.8**
YAK				*e*			16 54 27.1	
YAK				*e*S	**S**		**16 57 59.5**	**-9.4**
YAK				*e*			16 58 12.9	
YAK				pmax	pmax			
	comp=Z,25nm,0.9s,mb4.6							
YAK				smax				
	comp=E,346nm,1.9s							
YAK				smax				
	comp=N,338nm,1.5s							
YAK	**Yakutsk**	**21.55**	**328**	*e*P	**P**		**16 54 06.5**	**-3.3**
	comp=N,34nm,0.6s,mb5.0							
HIA	**Hailar**	**23.31**	**291**	*e*P	**P**		**16 54 24.6**	**-3.9**
HIA	**Hailar**	**23.31**	**291**	*e*P	**P**		**16 54 23.8**	**-4.8**
	comp=N,22nm,1.0s,mb4.5							
BILL	**Bilibino**	**23.31**	**12**⇑	*e*P	**P**		**16 54 26.7**	**-1.7**
BILL				*e**SP	sP		16 54 40.4	+11
BILL				*e*			16 58 15.6	
BILL				S	**S**		**16 58 37.4**	**-3.7**
BILL				pmax	pmax			
	comp=Z,87nm,1.7s,mb4.9							
BILL				MLR	MLR			
	comp=Z,500nm,16.0s,MS4.1							
BILL	**Bilibino**	**23.31**	**12**	*e*P	**P**		**16 54 27.4**	**-1.0**
	comp=Z,78nm,1.3s,mb5.0							
DL2	**Dalian**	**24.76**	**266**	P	**P**		**16 54 41.3**	**-1.0**
DL2				S	**S**		**16 58 59.5**	**-5.6**
DL2				AMB	AMB			
	comp=Z,30nm,1.0s,mb4.8							
DL2				LR	LR			
	comp=N,210nm,26.9s							
DL2				LR	LR			
	comp=Z,240nm,16.6s							
BOD	**Bodaibo**	**27.15**	**311**	*e*P	**P**		**16 55 00.4**	**-3.3**
BOD				pmax	pmax			
	comp=Z,20nm,2.1s,mb4.3							
BJI	**Beijing**	**28.10**	**272**	P	**P**		**16 55 15.0**	**+2.6**
BJI				AMB	AMB			
	comp=Z,54nm,1.0s,mb5.1							
BJI				AMB	AMB			
	comp=Z,257nm,4.1s							
BJI				LR	LR			
	comp=N,459nm,15.9s,MS4.4							
BJI				LR	LR			
	comp=E,649nm,17.8s,MS4.4							
BJI				LR	LR			
	comp=Z,438nm,15.9s,MS4.1							
BJT	**Baijiatuan**	**28.11**	**272**	*e*P	**P**		**16 55 12.8**	**+0.3**
BJT				pmax	pmax			
	comp=Z,43nm,0.8s							
BJT	**Baijiatuan**	**28.11**	**272**	*e*P	**P**		**16 55 12.8**	**+0.3**
	comp=Z,43nm,0.8s,mb5.1							
TIXI	**Tiksi**	**28.67**	**344**⇑	*e*P	**P**		**16 55 14.9**	**-2.2**
TIXI				pmax	pmax			
	comp=Z,27nm,1.7s,mb4.7							
TIXI	**Tiksi**	**28.67**	**344**	*e*P	**P**		**16 55 15.1**	**-2.0**
	comp=Z,24nm,1.2s,mb4.8							
TIA	**Tai'an**	**29.19**	**264**	*e*P	**P**		**16 55 23.0**	**+0.9**
NJ2	**Nanjing**	**30.29**	**256**	*e*P	**P**		**16 55 33.0**	**+1.1**
NJ2				AMB	AMB			
	comp=Z,40nm,0.6s,mb5.3							
HHC	**Hu-ho-hao-te**	**31.00**	**276**	*e*P	**P**		**16 55 39.8**	**+1.7**
HHC				AP	pP		16 55 43.5	+4.6
HHC				XP	sP		16 55 46.5	+7.2
HHC				PCP	PcP		16 58 36.8	+2.8
HHC				S	**S**		**17 00 41.5**	**-1.9**
HHC				XS	sS		17 00 49.0	+4.2
HHC				PCS	PcS		17 02 18.8	+0.9
HHC				AMB	AMB			
	comp=Z,64nm,0.7s,mb5.6							
HHC				AMB	AMB			
	comp=Z,277nm,3.8s							
HHC				LR	LR			
	comp=N,453nm,14.2s,MS4.4							
HHC				LR	LR			
	comp=E,303nm,14.2s,MS4.4							
HHC				LR	LR			
	comp=Z,503nm,16.4s,MS4.3							
ULN	**Ulaanbaatar**	**31.84**	**291**	⇑P	**P**		**16 55 45.6**	**+0.1**
	SNR=6.8							
ULN	**Ulaanbaatar**	**31.84**	**291**⇑	*e*P	**P**		**16 55 44.7**	**-0.7**
ULN	**Ulaanbaatar**	**31.84**	**291**	*e*P	**P**		**16 55 44.1**	**-1.3**
	comp=Z,19nm,1.1s,mb4.8							
SONM	**Songino Array**	**32.28**	**291**	P	**P**		**16 55 51.4**	**+2.1**
	comp=Z,9.1nm,0.9s,mb4.6,baz=78,slow=9.7,SNR=4.3							
SONM				LR	LR		17 08 44.6	
	comp=Z,226nm,19.3s,MS3.9,baz=77,slow=36							
SONM	**Songino Array**	**32.28**	**291**	P	**P**		**16 55 51.4**	**+2.1**
SONM				pmax	pmax			
	comp=Z,9.0nm,0.9s							
SONM				MLR	MLR			
	comp=Z,226nm,19.3s							
TLY	**Talaya**	**33.22**	**299**	*e*P	**P**		**16 55 56.6**	**-0.9**
TLY				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
TLY	**Talaya**	**33.22**	**299**	*e*P	**P**		**16 55 56.7**	**-0.8**
	comp=Z,29nm,1.2s,mb5.1							
ZAK	**Zakamensk**	**33.69**	**297**	*e*P	**P**		**16 55 58.9**	**-2.7**
ZAK				*e*			16 57 20.5	
ZAK				*e*			16 58 37.2	
ZAK				pmax	pmax			
	comp=Z,12nm,1.7s,mb4.5							
WHN	**Wuhan**	**34.27**	**258**	⇑P	**P**		**16 56 07.3**	**+0.4**
TPUB	**Ta-pu**	**35.03**	**242**	*e*P	**P**		**16 56 13.0**	**-0.5**
	comp=Z,28nm,0.8s,mb5.2							
PMR	**Palmer**	**35.96**	**43**	*e*P	**P**		**16 56 20.2**	**-0.8**
PMR				pmax	pmax			
	comp=Z,23nm,1.1s,mb5.0							
PMR	**Palmer**	**35.96**	**43**	*e*P	**P**		**16 56 20.2**	**-0.8**
	comp=Z,23nm,1.1s,mb5.0							
XAN	**Xi'an**	**36.05**	**267**	P	**P**		**16 56 23.0**	**+0.8**
XAN				AP	pP		16 56 25.5	+2.5
XAN				PP	PP		16 57 42.8	-1.1
XAN				S	**S**		**17 02 00.5**	**-1.3**
XAN				AMB	AMB			
	comp=Z,13nm,1.0s,mb4.8							
XAN				LR	LR			
	comp=N,55nm,15.7s,MS3.7							
XAN				LR	LR			
	comp=E,102nm,18.5s,MS3.7							
XAN				LR	LR			
	comp=Z,200nm,16.4s,MS4.0							
MCK	**McKinley**	**36.08**	**39**	*e*P	**P**		**16 56 22.0**	**-0.1**
MCK				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
MCK	**McKinley**	**36.08**	**39**	*e*P	**P**		**16 56 22.0**	**-0.1**
	comp=Z,19nm,1.0s,mb5.0							
COLA	**College**	**36.61**	**37**	*e*P	**P**		**16 56 25.9**	**-0.6**
COLA				pmax	pmax			
	comp=Z,18nm,1.0s,mb4.9							
COLA	**College**	**36.61**	**37**	*e*P	**P**		**16 56 25.9**	**-0.6**
	comp=Z,18nm,1.0s,mb4.8							
LZH	**Lanzhou**	**38.55**	**274**	*e*P	**P**		**16 56 45.0**	**+1.7**
LZH				AP	pP		16 56 48.5	+4.3
LZH				XP	sP		16 56 49.5	+5.0
LZH				PP	PP		16 58 17.0	+5.7
LZH				*e*S	**S**		**17 02 40.0**	**+0.2**
LZH				XS	sS		17 02 44.5	+3.3
LZH				AMB	AMB			
	comp=Z,74nm,1.6s,mb5.2							
LZH				AMB	AMB			
	comp=Z,340nm,4.3s							
LZH				LR	LR			
	comp=E,1µm,14.6s							
LZH				LR	LR			
	comp=Z,2µm,15.8s,MS4.9							
HVS	**Khovu-Aksy**	**39.41**	**300**	*e*P	**P**		**16

CD2 PP PP 16 58 47.0 +4.4
CD2 PCP PcP 16 59 06.8 +1.6
CD2 PCS PcS 17 02 56.8 +0.3
CD2 S **S** **17 03 19.5 -3.3**
CD2 XS sS 17 03 35.8 +12
CD2 SS SS 17 06 19.0 -7.4
CD2 AMB AMB
comp=Z,90nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,240nm,10.8s
CD2 LR LR
comp=N,280nm,6.6s
CD2 LR LR
comp=Z,420nm,13.2s,MS4.5
GYA Guiyang 42.10 259⇓*i* P **P** **16 57 13.3 +0.5**
GYA AP pP 16 57 17.3 +3.6
GYA PP PP 16 58 55.0 +4.9
GYA PCP PcP 16 59 08.8 +1.3
GYA SCP ScP 17 02 58.3 -0.4
GYA S **S** **17 03 32.5 -0.5**
GYA XS sS 17 03 38.8 +4.4
GYA AMB AMB
comp=Z,50nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,260nm,5.8s
GYA LR LR
comp=N,720nm,14.0s,MS4.8
GYA LR LR
comp=E,510nm,14.7s,MS4.8
GYA LR LR
comp=Z,920nm,14.2s,MS4.8
SIT Sitka 43.62 48 P **P** **16 57 21.5 -3.3**
ZAA0 Zalesovo Array 43.74 307 *e*P **P** **16 57 23.8 -2.0**
ZAA0 *e*PcP PcP 16 59 11.5 -1.0
ZALV Zalesovo Beam 43.74 307 P **P** **16 57 24.5 -1.3**
comp=Z,3.5nm,0.6s,mb4.2,baz=60,slow=7.5,SNR=15
ZALV PcP PcP 16 59 12.1 -0.5
comp=Z,8.3nm,0.8s,baz=85,slow=3.1,SNR=15
ZALV LR LR 17 16 42.8
comp=Z,210nm,18.2s,MS4.1,baz=48,slow=38
ZALV Zalesovo Beam 43.74 307 P **P** **16 57 24.5 -1.3**
ZALV 16 59 12.1
ZALV pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
ZALV MLR MLR
comp=Z,210nm,18.2s,MS4.1
NVS Novosibirsk 44.33 309 *e*P **P** **16 57 29.6 -0.9**
NVS *e* 16 59 12.6
NVS pmax pmax
comp=Z,72nm,2.4s,mb5.0
NVS pmax pmax
comp=N,27nm,2.3s
NVS pmax pmax
comp=E,27nm,1.8s
KMI Kunming 45.66 261 P **P** **16 57 42.3 +0.8**
KMI AP pP 16 57 51.3 +8.9
KMI XP sP 16 57 55.8 +13
KMI PP PP 16 59 31.3 +3.1
KMI S **S** **17 04 20.5 -4.5**
KMI XS sS 17 04 36.8 +10
KMI SS SS 17 07 35.8 -13
KMI AMB AMB
comp=Z,29nm,1.2s,mb5.1
KMI AMB AMB
comp=Z,135nm,3.9s
KMI LR LR
comp=N,233nm,19.4s,MS4.2
KMI LR LR
comp=E,175nm,23.2s,MS4.2
KMI LR LR
comp=Z,159nm,19.4s,MS4.0
WMQ Urumqi 45.89 293 P **P** **16 57 45.0 +1.9**
WMQ PCP PcP 16 59 20.5 +0.4
WMQ S **S** **17 04 28.0 +0.1**
WMQ XS sS 17 04 35.0 +5.6
WMQ AMB AMB
comp=Z,26nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,438nm,4.5s
WMQ LR LR
comp=N,146nm,15.5s,MS4.2
WMQ LR LR
comp=E,151nm,15.0s,MS4.2
WMQ LR LR
comp=Z,202nm,15.5s,MS4.2
DLBC Dease Lake 45.91 45 *e*P **P** **16 57 44.2 +1.1**
MK31 Makanchi Array 47.98 299⇑*e*P **P** **16 57 59.3 -0.1**
MK31 pmax pmax
comp=Z,17nm,0.7s,mb5.2
MK31 Makanchi Array 47.98 299⇓*e*P **P** **16 57 59.2 -0.2**
MK31 *e*PcP PcP 16 59 26.9 -0.6
MKAR Makanchi Array 47.98 299 P **P** **16 57 59.4 0.0**
comp=Z,12nm,0.8s,mb5.0,baz=67,slow=7.8,SNR=89
MKAR PcP PcP 16 59 27.2 -0.3
comp=Z,5.4nm,0.7s,baz=70,slow=4.2,SNR=4.9
MKAR LR LR 17 18 56.2
comp=Z,368nm,19.2s,MS4.4,baz=61,slow=37
MKAR Makanchi Array 47.98 299 P **P** **16 57 59.4 0.0**
MKAR 16 59 27.2
MKAR pmax pmax
comp=Z,12nm,0.8s
MKAR MLR MLR
comp=Z,368nm,19.2s
KURK Kurchatov 48.47 305 P **P** **16 58 02.8 -0.3**
comp=Z,147nm,0.7s,mb6.1,SNR=8.5
KURK Kurchatov 48.47 305 ⇓P **P** **16 58 03.3 +0.2**
SNR=10
KURK Kurchatov 48.47 305 P **P** **16 58 04.1 +1.0**
comp=Z,13nm,0.6s,mb5.1,baz=295,slow=25,SNR=28
KURK LR LR 17 19 07.7
comp=Z,154nm,20.9s,MS4.0,baz=105,slow=37
KURK Kurchatov 48.47 305 P **P** **16 58 04.1 +1.0**
KURK pmax pmax
comp=Z,13nm,0.6s,mb5.1
KURK MLR MLR
comp=Z,155nm,20.9s,MS4.0
KURK Kurchatov 48.47 305 *e*P **P** **16 58 02.5 -0.6**
comp=Z,16nm,0.8s,mb5.1
POHA Pohakuloa 48.71 105 *e*P **P** **16 58 04.6 -0.7**
LSA Lhasa 50.95 275 P **P** **16 58 24.5 +2.2**
LSA Lhasa 50.95 275 *e*P **P** **16 58 24.0 +1.7**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
LSA Lhasa 50.95 275 *e*P **P** **16 58 24.0 +1.7**
comp=Z,9.3nm,0.6s,mb4.9
YKA Yellowknife Ar 51.42 36 P **P** **16 58 25.3 0.0**
comp=Z,8.7nm,0.8s,mb4.8,baz=296,slow=7.3,SNR=95
YKA PcP PcP 16 59 39.2 -0.6
comp=Z,3.3nm,0.9s,baz=301,slow=3.5,SNR=7.0
YKA Yellowknife Ar 51.42 36 P **P** **16 58 25.3 0.0**
YKA 16 59 39.2
YKA pmax pmax
comp=Z,9.0nm,0.8s
YKA Yellowknife Ar 51.42 36 P **P** **16 58 25.3 0.0**
YKA PcP PcP 16 59 39.2 -0.6
RES Resolute Bay 51.66 18 *e*P **P** **16 58 27.5 +0.5**
RES pmax pmax
comp=Z,16nm,1.0s,mb4.9
RES Resolute Bay 51.66 18 *e*P **P** **16 58 27.5 +0.5**
comp=Z,16nm,1.0s,mb4.9
BVA0 Borovoye Array 52.01 310 *i* P **P** **16 58 29.4 -0.5**
BVA0 pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BVAR Borovoye Array 52.01 310 LR LR 17 21 16.6
comp=Z,350nm,21.3s,MS4.4,baz=100,slow=37
BRVK Borovoye 52.05 310 P **P** **16 58 30.7 +0.5**
comp=Z,76nm,0.7s,mb5.7,SNR=8.4
BRVK Borovoye 52.05 310 ⇓P **P** **16 58 31.0 +0.7**
SNR=6.5
BRVK Borovoye 52.05 310⇑*i* P **P** **16 58 30.3 +0.1**
BRVK pmax pmax
comp=Z,22nm,1.0s,mb5.0
BRVK Borovoye 52.05 310⇑*i* P **P** **16 58 30.3 +0.1**
comp=Z,14nm,1.0s,mb4.8
CHTO Chiang Mai 52.48 258 ⇓P **P** **16 58 35.2 +1.4**
SNR=8.6
CHTO Chiang Mai 52.48 258⇓*i* P **P** **16 58 34.5 +0.7**
CHTO pmax pmax
comp=Z,25nm,1.0s,mb5.1
CHTO Chiang Mai 52.48 258⇓*i* P **P** **16 58 34.5 +0.7**
comp=Z,25nm,0.9s,mb5.2
CM31 Chiang Mai Arr 52.73 258 *e*P **P** **16 58 36.2 +0.6**
CM31 *e*PcP PcP 16 59 45.3 -0.1
CMAR Chiang Mai Arr 52.73 258 P **P** **16 58 36.6 +1.0**
comp=Z,15nm,0.8s,mb5.0,baz=36,slow=7.6,SNR=153
CMAR PcP PcP 16 59 46.1 +0.8
comp=Z,4.0nm,0.8s,baz=15,slow=3.1,SNR=9.1
CMAR LR LR 17 23 29.6
comp=Z,157nm,18.0s,MS4.1,baz=50,slow=39
CMAR Chiang Mai Arr 52.73 258 P **P** **16 58 36.6 +1.0**
CMAR 16 59 46.1
CMAR pmax pmax
comp=Z,15nm,0.8s
CMAR MLR MLR
comp=Z,157nm,18.0s
SHL Shillong 52.97 270⇓*i* P **P** **16 58 39.0 +1.7**
TKM2 Tokmak 2 54.02 297⇓*i* P **P** **16 58 46.2 +1.3**
TKM2 pmax pmax
comp=Z,70nm,1.5s,mb5.4
TKM2 Tokmak 2 54.02 297 P **P** **16 58 46.5 +1.6**
SNR=22
TKM2 Tokmak 2 54.02 297⇓*i* P **P** **16 58 46.2 +1.3**
comp=Z,70nm,1.5s,mb5.4
CHMS Chumysh 54.51 298 P **P** **16 58 49.6 +1.2**
SNR=15
USP Ospenovka 54.52 298 P **P** **16 58 49.8 +1.3**
SNR=83
KBK Karagaybulak 54.57 297 P **P** **16 58 50.4 +1.5**
SNR=35
FRU Bishkek 54.68 298 *e*P **P** **16 58 51.0 +1.3**
FRU pmax pmax
comp=Z,80nm,1.8s,mb5.5
KZA Kyzart 54.69 297 P **P** **16 58 52.3 +2.5**
SNR=23
TAPN Taplejung 54.78 275 *e*P **P** **16 58 51.8 +1.2**
comp=Z,24nm,0.8s,mb5.3
AAK Ala-Archa 54.86 297 P **P** **16 58 52.4 +1.4**
SNR=29
SVE Sverdlovsk 55.03 318⇑*e*P **P** **16 58 53.1 +1.1**
SVE pmax pmax
comp=Z,23nm,0.9s,mb5.2
PMG Port Moresby 55.17 188 LR LR 17 19 58.4
comp=Z,304nm,19.5s,MS4.4,baz=255,slow=33
EKS2 Erkin-Say 55.29 298 P **P** **16 58 55.5 +1.4**
SNR=42
ODAN Odare 55.31 274 *e*P **P** **16 58 55.2 +0.8**
comp=Z,51nm,1.2s,mb5.4
B07A Winthrop 55.56 54⇑P **P** **16 58 55.3 -0.6**
baz=55
AML Almayashu 55.63 297 P **P** **16 58 58.7 +2.1**
SNR=21
AML Almayashu 55.63 297⇓*i* P **P** **16 58 58.3 +1.7**
comp=Z,32nm,1.1s,mb5.3
JIRN Jiri 55.65 276 *e*P **P** **16 58 58.3 +1.4**
comp=Z,46nm,0.8s,mb5.5
GUN Gumba 55.71 276 *e*P **P** **16 58 58.4 +1.1**
comp=Z,45nm,0.8s,mb5.6
A08A Turner Farm, O 55.77 53 ⇓P **P** **16 58 57.0 -0.4**
baz=56,SNR=5.8
RAMN Ramite 55.80 275 *e*P **P** **16 58 58.8 +0.8**
comp=Z,112nm,1.0s,mb5.8
D06A Cle Elum 55.82 55⇑P **P** **16 58 57.5 -0.3**
baz=56
G04A Mulino 55.93 58 ⇓P **P** **16 58 58.7 0.0**
baz=56
C07A Waterville 56.00 54 ⇓P **P** **16 58 59.0 -0.1**
baz=56
B08A Colville Reser 56.05 53⇑P **P** **16 58 59.0 -0.5**
baz=56,SNR=5.4
A09A Danville 56.14 52 ⇓P **P** **16 58 59.9 -0.1**
baz=56,SNR=12
KKN Kakani 56.20 277 *e*P **P** **16 59 02.0 +1.1**
comp=Z,58nm,0.9s,mb5.6
ARU Arti 56.22 318 P **P** **16 59 00.4 -0.1**
comp=Z,232nm,0.9s,mb6.2,SNR=13
ARU Arti 56.22 318*c i*P **P** **16 59 00.2 -0.3**
ARU S **S** **17 06 48.1 -2.3**
ARU SS SS 17 10 33.3 -2.9
ARU pmax pmax
comp=Z,76nm,1.7s,mb5.5
ARU Arti 56.22 318 *e*P **P** **16 58 60.0 -0.5**
comp=Z,40nm,0.9s,mb5.5
PKI Pulchoki 56.25 276 *e*P **P** **16 59 02.1 +0.9**
PKIN Phulchoki 56.26 276 *e*P **P** **16 59 02.0 +0.8**
comp=Z,23nm,0.7s,mb5.3
D07A Quincy 56.32 55⇑P **P** **16 59 01.3 -0.1**
baz=56
H04A Detroit Lake 56.39 58 ⇓P **P** **16 59 02.1 +0.1**
baz=56
DMN Daman 56.44 277 *e*P **P** **16 59 03.8 +1.3**
comp=Z,60nm,1.0s,mb5.6
GKN Gorkha 56.52 277 *e*P **P** **16 59 04.1 +1.0**
comp=Z,89nm,1.1s,mb5.7
C08A Higginbotham F 56.53 54 ⇓P **P** **16 59 02.4 -0.5**
baz=56
G05A Wamic 56.60 57 ⇓P **P** **16 59 03.4 0.0**
baz=56
EDM Edmonton 56.62 46 *e*P **P** **16 59 02.7 -0.7**
EDM *e* 16 59 13.8
F06A Goldendale 56.63 57 ⇓P **P** **16 59 03.7 +0.1**
baz=56
B09A Rice 56.68 53⇑P **P** **16 59 03.3 -0.6**
baz=56,SNR=5.3
A10A Northport 56.71 52 ⇓P **P** **16 59 03.6 -0.5**
baz=56,SNR=5.3
E07A Sunnyside 56.73 55 ⇓P **P** **16 59 04.3 -0.1**
baz=56
DANN Dangsing 56.92 278 *e*P **P** **16 59 07.5 +1.6**
comp=Z,38nm,0.6s,mb5.6
C09A Chrisman Ranch 56.95 53⇑P **P** **16 59 05.5 -0.4**
baz=57
H05A Madras 56.98 58 ⇓P **P** **16 59 06.3 +0.1**
baz=57
D08A Wollman Farm, 56.99 55 ⇓P **P** **16 59 05.5 -0.7**
baz=57
G06A Carlson Farm, 57.01 57⇑P **P** **16 59 06.3 0.0**
baz=57
F07A Phinny Hill Vi 57.06 56⇑P **P** **16 59 06.6 -0.1**
baz=57
KK31 Karatay Array 57.06 300⇑*e*P **P** **16 59 07.3 +0.6**
KK31 pmax pmax
comp=Z,30nm,0.7s,mb5.4
E08A Dider Farm, El 57.23 55 ⇓P **P** **16 59 07.7 -0.2**
baz=57
D09A Jones Farm, Ri 57.34 54 ⇓P **P** **16 59 08.2 -0.5**
baz=57
NEW Newport 57.34 53 *e*P **P** **16 59 08.2 -0.4**
NEW pmax pmax
comp=Z,14nm,1.2s
NEW Newport 57.34 53 *e*P **P** **16 59 08.2 -0.4**
comp=Z,14nm,1.2s,mb4.9
A11A Hall Mountain, 57.38 51⇑P **P** **16 59 09.1 +0.2**
baz=57,SNR=8.7
KOLN Koldanda 57.39 278 *e*P **P** **16 59 10.3 +1.1**
comp=Z,62nm,1.0s,mb5.6
H06A Lindquist Farm 57.46 57⇑P **P** **16 59 09.6 +0.1**
baz=57,SNR=5.2
G07A Ruggs Ranch, H 57.56 57 ⇓P **P** **16 59 10.4 +0.2**
baz=57
B11A Sandpoint 57.66 52⇑P **P** **16 59 10.6 -0.3**
baz=57,SNR=7.6
DAG Danmarks Havn 57.74 358⇓*i* P **P** **16 59 10.0 -1.0**
DAG pmax pmax
comp=Z,21nm,1.3s,mb5.0
DAG Danmarks Havn 57.74 358⇓*i* P **P** **16 59 10.0 -1.0**
comp=Z,21nm,1.3s,mb5.0
E09A Wood Farm, Sta 57.74 55 ⇓P **P** **16 59 11.1 -0.4**
baz=58,SNR=7.3
F08A Pendleton 57.78 56⇑P **P** **16 59 11.7 -0.1**
baz=58
D10A Wagner Farm, O 57.93 54⇑P **P** **16 59 12.3 -0.5**
baz=58
G08A Pilot Rock 57.96 56 ⇓P **P** **16 59 13.0 -0.1**
baz=58,SNR=5.5
K05A Summer Lake 58.26 60 ⇓P **P** **16 59 16.0 +0.8**
baz=58
BOK Bokaro 58.29 273 *e*P **P** **16 59 14.9 -0.8**
I07A Izee 58.32 58 ⇓P **P** **16 59 15.8 +0.2**
baz=58
KSM Kuching 58.33 234 P **P** **16 59 16.3 +0.3**
comp=Z,18nm,0.9s,mb5.1
F09A S2 Ranch, Elgi 58.33 55 ⇓P **P** **16 59 15.9 +0.3**
baz=58
E10A Myers Farm, Un 58.35 54 ⇓P **P** **16 59 15.7 0.0**
baz=58
J06A Christmas Vall 58.41 59 ⇓P **P** **16 59 16.6 +0.4**
baz=58
D11A Klaveano Farm, 58.47 53⇑P **P** **16 59 15.8 -0.8**
baz=58,SNR=8.1
APA Apatity 58.56 337⇓*e*P **P** **16 59 17.4 +0.5**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,2μm,15.0s,MS5.3
H08A Prairie City 58.56 57 ⇓P **P** **16 59 17.2 -0.1**
baz=58
C12B Naegeli Ranch, 58.57 52⇑P **P** **16 59 17.2 0.0**
baz=58,SNR=6.0
F10A Beach Ranch, E 58.57 55 ⇓P **P** **16 59 16.8 -0.5**
baz=58
G09A Cove 58.65 56 ⇓P **P** **16 59 18.0 +0.2**
baz=58
WALA Waterton Lakes 58.65 50 *e*P **P** **16 59 17.7 -0.1**
comp=Z,0.6nm,1.2s
B13A Whitefish 58.74 51 ⇓P **P** **16 59 18.3 -0.2**
baz=58,SNR=18
J07A Hines 58.84 58⇑P **P** **16 59 19.5 +0.2**
baz=59
E11A Bogner Ranch, 58.93 54⇑P **P** **16 59 18.9 -0.9**
baz=59,SNR=6.0
A14A Double T Ranch 58.97 50⇑P **P** **16 59 19.7 -0.4**
baz=59,SNR=6.9
G10A Bishop Farm, J 59.02 55 ⇓P **P** **16 59 20.5 0.0**
baz=59,SNR=5.5
ARCES ARCESS Array B 59.06 341 P **P** **16 59 18.9 -1.5**
comp=Z,12nm,0.8s,mb4.9,baz=50,slow=3.2,SNR=15
ARCES LR LR 17 26 38.0
comp=Z,276nm,19.6s,MS4.4,baz=280,slow=38
ARCES ARCESS Array B 59.06 341 P **P** **16 59 18.9 -1.5**
ARCES pmax pmax
comp=Z,12nm,0.8s
ARCES MLR MLR
comp=Z,276nm,19.6s
ARE0 ARCESS Array S 59.06 341 *e*P **P** **16 59 19.9 -0.5**
H09A Durkee 59.07 56 ⇓P **P** **16 59 20.8 +0.1**
baz=59,SNR=5.1
C13A Hot Springs 59.09 52⇑P **P** **16 59 20.8 -0.1**
baz=59,SNR=5.2
F11A Granville 59.23 54 ⇓P **P** **16 59 21.8 -0.1**
baz=59,SNR=9.5
K07A Rock Creek Ran 59.27 59 ⇓P **P** **16 59 22.5 +0.3**
baz=59,SNR=5.3
A15A Johnson Ranch, 59.34 50 ⇓P **P** **16 59 21.9 -0.6**
baz=59
J08A Circle Bar Ran 59.35 58 ⇓P **P** **16 59 22.7 0.0**
baz=59
B14A Marquette Ranc 59.40 51⇑P **P** **16 59 22.6 -0.5**
baz=59,SNR=10
I09A Lost Marbles R 59.42 57⇑P **P** **16 59 23.2 -0.1**
baz=59
D13A Huson 59.49 52⇑P **P** **16 59 23.3 -0.3**
baz=59,SNR=7.2
AB31 Akbulak array 59.59 311 P **P** **16 59 24.7 +0.4**
AB31 pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
L07A Adell 59.61 60⇑P **P** **16 59 24.6 0.0**
baz=59
H10A Noah's Angus R 59.65 56⇑P **P** **16 59 24.6 -0.2**
baz=59,SNR=7.7
K08A Mann Creek Ran 59.71 58 ⇓P **P** **16 59 25.3 +0.1**
baz=59,SNR=9.4
J09A Fry Pan Ranch, 59.78 58 ⇓P **P** **16 59 25.9 +0.2**
baz=60,SNR=7.1
B15A Bradely Ranch, 59.82 50 ⇓P **P** **16 59 25.3 -0.6**
baz=60,SNR=7.9
AKTO Aktyubinsk 59.90 313 LR LR 17 26 48.8
comp=Z,340nm,20.7s,MS4.5,baz=240,slow=38
AKTO Aktyubinsk 59.90 313 *i* P **P** **16 59 26.5 +0.1**
AKTO pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
I10A Payette 59.91 56 ⇓P **P** **16 59 26.5 -0.1**
baz=60
THN Thein Dam 59.93 287 *e*P **P** **16 59 25.7 -1.2**
MSO Missoula 59.93 52 *e*P **P** **16 59 25.9 -0.8**
comp=Z,22nm,1.2s,mb5.1
A16A West Butte Ran 59.96 49⇑P **P** **16 59 26.3 -0.5**
baz=60,SNR=6.4
H11A Donnelly 60.01 55 ⇓P **P** **16 59 27.1 -0.1**
baz=60,SNR=6.1
E13A Victor 60.02 53⇑P **P** **16 59 27.0 -0.3**
baz=60,SNR=7.0
D14A Greenough 60.02 52⇑P **P** **16 59 26.9 -0.4**
baz=60,SNR=20
N06A Buffalo Meadow 60.05 61⇑P **P** **16 59 27.7 +0.1**
baz=60,SNR=6.3
M07A Soldier Meadow 60.08 60⇑P **P** **16 59 28.0 +0.2**
baz=60,SNR=11
C15A Salmond Ranch, 60.11 51 ⇓P **P** **16 59 28.2 +0.3**
baz=60,SNR=22
L08A Fields 60.11 59 ⇓P **P** **16 59 27.7 -0.2**
baz=60
K09A Rome 60.18 58 ⇓P **P** **16 59 28.3 -0.1**
baz=60
B16A M & M Farms, S 60.22 50 ⇓P **P** **16 59 28.4 -0.2**
baz=60,SNR=10
BEKR Beckwourth 60.25 62⇑P **P** **16 59 28.9 -0.2**
baz=60,SNR=7.2
F13A Darby 60.33 54⇑P **P** **16 59 29.0 -0.4**
baz=60,SNR=12
O06A Flanigan 60.40 62 ⇓P **P** **16 59 30.0 0.0**
baz=60,SNR=8.0
E14A Clinton 60.42 53⇑P **P** **16 59 29.7 -0.4**
baz=60,SNR=7.9
A17A Triple J Farms 60.44 49⇑P **P** **16 59 29.5 -0.6**
baz=60,SNR=6.6
M08A Happy Creek Ra 60.53 60 ⇓P **P** **16 59 30.8 -0.1**
baz=60
C16A Fuhringer Ranc 60.56 51⇑P **P** **16 59 30.8 -0.2**
baz=60,SNR=14
N07B Gerlach 60.56 61⇑P **P** **16 59 31.2 0.0**
baz=60
D15A Lincoln 60.59 52 ⇓P **P** **16 59 31.1 -0.1**
baz=60,SNR=6.7
K10A MacKenzie Ranc 60.64 58 ⇓P **P** **16 59 31.8 +0.2**
baz=60
B17A L&G Farms, Che 60.78 50 ⇓P **P** **16 59 32.2 -0.3**
baz=60
G13A Cobalt 60.80 54 ⇓P **P** **16 59 32.4 -0.3**
baz=60,SNR=23
MFID Camas Ranch 60.88 57 ⇓P **P** **16 59 33.3 +0.1**
baz=61,SNR=6.9
E15A Deer Lodge 60.89 52⇑P **P** **16 59 33.1 -0.2**
baz=61,SNR=17
A18A Metzger Ranch, 60.90 49⇑P **P** **16 59 32.8 -0.5**
baz=61
WCN Washoe City 60.96 62 ⇓P **P** **16 59 34.1 +0.2**
baz=61
O07A Toulon 60.99 61 ⇓P **P** **16 59 34.2 +0.2**
baz=61,SNR=9.0
N08A GE Springer Mi 61.07 60 ⇓P **P** **16 59 34.4 -0.2**
baz=61,SNR=7.0
H13A Challis 61.10 55 ⇓P **P** **16 59 34.3 -0.4**
baz=61,SNR=12
M09A Marrel Ranch, 61.10 59⇑P **P** **16 59 35.4 +0.6**
baz=61
D16A Dana Ranch, Ca 61.13 51 ⇓P **P** **16 59 35.0 +0.2**
baz=61,SNR=13
K11A Parker Ranch, 61.14 57 ⇓P **P** **16 59 34.8 -0.2**
baz=61,SNR=5.8
G14A Jackson 61.14 54 ⇓P **P** **16 59 34.6 -0.4**
baz=61
FFC Flin Flon 61.17 40 P **P** **16 59 35.6 +0.6**
comp=Z,175nm,0.9s,mb6.2,SNR=12
FFC Flin Flon 61.17 40 *e*P **P** **16 59 34.9 -0.1**
FFC pmax pmax
comp=Z,29nm,0.9s,mb5.4
FFC Flin Flon 61.17 40 *e*P **P** **16 59 34.9 -0.1**
comp=Z,29nm,0.9s,mb5.4
KULM Kulim 61.17 246 *e*P **P** **16 59 35.9 +0.3**
C17A Wharram Farm, 61.19 50 ⇓P **P** **16 59 34.9 -0.4**
baz=61,SNR=17
B18A Beardsley Farm 61.26 49 ⇓P **P** **16 59 35.4 -0.3**
baz=61,SNR=12
L10A Juniper Basin 61.30 58 ⇓P **P** **16 59 36.1 0.0**
baz=61,SNR=6.7
F15A Butte 61.33 53⇑P **P** **16 59 36.2 -0.1**
baz=61,SNR=19
KLMR Klimovskoe 61.34 329 *e*P **P** **16 59 34.7 -1.4**
KLMR *e* 17 01 50.8
KLMR pmax pmax
comp=Z,88nm,1.5s,mb5.7
E16A East Helena 61.36 52 ⇓P **P** **16 59 36.6 +0.2**
baz=61
J12A Stokes Ranch, 61.40 56⇑P **P** **16 59 36.8 0.0**
baz=61,SNR=8.5
N09A Rock Creek Ran 61.40 60 ⇓P **P** **16 59 36.8 0.0**
baz=61,SNR=5.9
EGMT Eagleton 61.49 49⇑P **P** **16 59 36.9 -0.4**
baz=61,SNR=9.6
EGMT Eagleton 61.49 49 *e*P **P** **16 59 37.3 0.0**

comp=Z,27nm,1.0s,mb5.3
EGMT *e* 16 59 48.2
D17A Six Diamond Ra 61.52 51 ⇑P **P 16 59 37.3 -0.2**
baz=61,SNR=12
I13A Wildhorse Cree 61.57 55 ⇓P **P 16 59 38.0 +0.1**
baz=61,SNR=16
H14A Leadore 61.57 54 ⇑P **P 16 59 37.8 -0.1**
baz=61
M10A I.L. Ranch, Tu 61.59 59 ⇑P **P 16 59 38.3 +0.2**
baz=61,SNR=8.2
HLID Hailey 61.61 56 ⇑P **P 16 59 38.2 0.0**
baz=61,SNR=10
HLID Hailey 61.61 56 *eP* **P 16 59 37.9 -0.3**
comp=Z,4.4nm,0.7s,mb4.7
HLID *ePcP PcP* 17 00 20.1 +0.3
R06C Coleville 61.62 63 ⇓P **P 16 59 38.6 +0.2**
baz=61,SNR=8.9
L11A Cat Creek Ranc 61.67 58 ⇓P **P 16 59 38.8 +0.2**
baz=61,SNR=11
SUMG Summit 61.73 4 *eP* **P 16 59 38.8 +0.2**
comp=Z,25nm,0.9s,mb5.3
G15A Dillon 61.74 53 ⇓P **P 16 59 38.5 -0.5**
baz=62,SNR=7.1
P08A Dixie Valley 61.76 61 ⇓P **P 16 59 39.9 +0.7**
baz=62
FCC Fort Churchill 61.83 33 *eP* **P 16 59 38.3 -1.0**
comp=Z,1.0nm,0.9s,mb4.0
FCC *e* 16 59 49.7
FCC *ePP PP* 17 01 55.0 +0.2
F16A Kennard Place, 61.84 52 ⇓P **P 16 59 39.8 +0.1**
baz=62,SNR=9.9
J13A Cove Ranch, Pi 61.85 56 ⇑P **P 16 59 39.8 0.0**
baz=62,SNR=9.5
E17A Martinsdale 61.85 51 ⇑P **P 16 59 40.3 +0.5**
baz=62,SNR=14
K12A Draper Farm, C 61.88 57 ⇑P **P 16 59 39.9 -0.2**
baz=62,SNR=5.2
BOZ Bozeman (W) 61.92 52 ⇓P **P 16 59 40.6 +0.3**
baz=62,SNR=25
BOZ Bozeman (W) 61.92 52 *eP* **P 16 59 40.3 0.0**
BOZ *pmax pmax*
comp=Z,32nm,1.4s,mb5.3
BOZ Bozeman (W) 61.92 52 *eP* **P 16 59 40.2 0.0**
comp=Z,32nm,1.4s,mb5.2
BOZ *e* 16 59 51.4
I14A Mackay 61.94 55 ⇓P **P 16 59 40.7 +0.2**
baz=62,SNR=13
D18A Linhart Farms, 61.98 50 ⇑P **P 16 59 41.0 +0.4**
baz=62,SNR=5.6
H15A Lima 61.98 54 ⇓P **P 16 59 40.5 -0.2**
baz=62
O09A Fish Creek Ran 62.02 60 ⇓P **P 16 59 41.1 +0.2**
baz=62
G16A Moss Hill, Enn 62.08 53 ⇓P **P 16 59 41.5 +0.2**
baz=62,SNR=29
M11A Holland Ranch, 62.09 58 ⇑P **P 16 59 41.9 +0.5**
baz=62,SNR=5.2
L12A House Creek Ra 62.12 57 ⇓P **P 16 59 41.8 +0.2**
baz=62
J14A Carey 62.27 55 ⇓P **P 16 59 43.5 +0.9**
baz=62,SNR=20
E18A Harlowton 62.30 51 ⇓P **P 16 59 43.2 +0.4**
baz=62,SNR=7.0
F17A Fitzpatrick Pl 62.30 52 ⇓P **P 16 59 43.0 +0.2**
baz=62,SNR=8.5
Q08A Gabbs 62.36 62 ⇑P **P 16 59 43.2 0.0**
baz=62
NVAR Mina Array Bea 62.39 62 P **P 16 59 44.1 +0.6**
comp=Z,10.0nm,0.8s,mb5.0,baz=288,slow=7.0,SNR=47
NVAR *PcP PcP* 17 00 22.7 -0.4
comp=Z,2.3nm,0.7s,baz=302,slow=5.2,SNR=3.7
NVAR Mina Array Bea 62.39 62 P **P 16 59 44.1 +0.6**
NVAR *PcP PcP* 17 00 22.7 -0.4
MLAC Mammoth Lakes 62.55 63 ⇓P **P 16 59 45.6 +1.0**
baz=62
JOF Joensuu 62.56 334 *ep* **P 16 59 40.4 -3.9**
comp=Z,11nm,0.7s,mb5.1
JOF Joensuu 62.56 334 *eP* **P 16 59 40.4 -3.9**
JOF *pmax pmax*
comp=Z,11nm,0.7s,mb5.1
G17A Pierce Place, 62.62 52 ⇓P **P 16 59 45.2 +0.3**
baz=62
M12A Wells 62.62 58 ⇓P **P 16 59 45.5 +0.5**
baz=62,SNR=9.6
H16A Russell Place, 62.72 53 ⇑P **P 16 59 45.7 +0.1**
baz=62,SNR=12
L13A Double Diamond 62.78 57 ⇓P **P 16 59 46.4 +0.3**
baz=62,SNR=9.3
F18A Big Timber 62.82 51 ⇓P **P 16 59 46.4 +0.1**
baz=62,SNR=6.4
Q09A Carvers 62.84 61 ⇑P **P 16 59 46.8 +0.3**
baz=63
J15A Blackfoot 62.85 55 ⇓P **P 16 59 46.9 +0.4**
baz=63
N12A Clover Valley, 62.90 58 ⇓P **P 16 59 47.4 +0.6**
baz=63
K14A Jones Ranch, D 62.95 56 ⇓P **P 16 59 47.8 +0.6**
baz=63
O11A Cowboy Ranch, 62.97 59 ⇓P **P 16 59 47.6 +0.3**
baz=63,SNR=6.2
KBL Kabul 63.04 293 P **P 16 59 47.7 -0.2**
KBL *pmax pmax*
comp=Z,24nm,1.0s,mb5.3
KBL Kabul 63.04 293 *eP* **P 16 59 47.6 -0.3**
comp=Z,24nm,0.9s,mb5.3
I16A Newdale 63.09 54 ⇓P **P 16 59 48.7 +0.6**
baz=63,SNR=6.0
M13A Montello 63.10 58 ⇓P **P 16 59 48.0 -0.2**
baz=63,SNR=7.0
G18A Lazy EL Ranch, 63.27 52 ⇑P **P 16 59 49.0 -0.2**
baz=63
R09A Tonopah 63.27 62 ⇓P **P 16 59 49.3 0.0**
baz=63,SNR=11
TPH Tonopah 63.28 62 *eP* **P 16 59 49.4 0.0**
TPH *pmax pmax*
comp=Z,18nm,1.0s,mb5.2
TPH Tonopah 63.28 62 *eP* **P 16 59 49.4 0.0**
comp=Z,18nm,1.0s,mb5.2
TPH *e* 16 59 59.9
H17A Grant Village 63.28 53 ⇑P **P 16 59 51.1 +1.7**
baz=63,SNR=15
Q10A Clear Creek Ra 63.32 61 ⇑P **P 16 59 50.0 +0.3**
baz=63,SNR=9.4
IMW Indian Meadow 63.39 54 *eP* **P 16 59 50.9 +0.8**
comp=Z,22nm,1.1s,mb5.2
IMW *e* 17 00 01.5
O12A Currie 63.43 59 ⇓P **P 16 59 50.4 0.0**
baz=63,SNR=14
DCID1 Drake Creek 63.44 54 *eP* **P 16 59 51.3 +0.8**
comp=Z,19nm,0.8s,mb5.3
M14A Sheep Mountain 63.49 57 ⇓P **P 16 59 50.9 +0.1**
baz=63,SNR=5.5
S09A Goldfield 63.50 62 ⇓P **P 16 59 51.0 +0.1**
baz=63,SNR=7.4
RRI2 Red Ridge 63.52 54 *eP* **P 16 59 51.7 +0.8**
comp=Z,28nm,1.0s,mb5.2
RRI2 *e* 17 00 02.2
RLMT Red Lodge 63.56 52 ⇑P **P 16 59 51.6 +0.4**
baz=63,SNR=11
RLMT Red Lodge 63.56 52 *eP* **P 16 59 51.6 +0.5**
comp=Z,28nm,1.2s,mb5.2
I17A Pilgram Creek 63.58 53 ⇑P **P 16 59 52.4 +1.1**
baz=63,SNR=16
MOOW Moose Ponds 63.59 54 *eP* **P 16 59 51.9 +0.5**
comp=Z,17nm,1.3s,mb4.9
K16A Soda Springs 63.69 55 ⇓P **P 16 59 52.9 +0.9**
baz=63,SNR=12
R10A Warm Springs 63.72 61 ⇓P **P 16 59 52.5 +0.2**
baz=64
L15A Malad City 63.74 56 ⇓P **P 16 59 52.6 +0.2**
baz=64
S10A Tonopah Range, 63.76 62 ⇓P **P 16 59 52.7 +0.1**
baz=64,SNR=12
Q11A Duckwater 63.77 61 ⇓P **P 16 59 52.6 -0.1**
baz=64,SNR=5.1
SNOW Snow King Moun 63.77 54 *eP* **P 16 59 53.4 +0.8**
comp=Z,41nm,1.2s,mb5.3
REDW Red Top Meadow 63.77 54 *eP* **P 16 59 53.0 +0.4**
comp=Z,40nm,1.3s,mb5.3
P12A McGill 63.83 60 ⇓P **P 16 59 53.2 +0.1**
baz=64,SNR=5.1
J17A Brown Place, J 63.85 54 ⇓P **P 16 59 54.0 +0.8**
baz=64,SNR=11
GRAC Grapevine Rang 63.86 63 ⇑P **P 16 59 53.5 +0.3**
baz=64,SNR=6.7
O13A Hicks Ranch, I 63.98 59 ⇑P **P 16 59 54.2 +0.2**
baz=64
N14A Grayback Hills 64.00 57 ⇑P **P 16 59 54.3 +0.2**
baz=64
M15A Larsen Ranch, 64.05 57 ⇑P **P 16 59 54.6 +0.2**
baz=64,SNR=11
VIS Vishakhapatnam 64.09 269 *eP* **P 16 59 55.3 +0.3**
VIS *AMb AMB* 16 59 56.7
comp=Z,26nm,1.2s,mb5.1
R11A Troy Canyon, C 64.12 61 ⇓P **P 16 59 55.1 +0.2**
baz=64,SNR=22
I18A Diamond G Ranc 64.15 53 ⇓P **P 16 59 55.5 +0.4**
baz=64,SNR=6.8
Q12A Willow Creek R 64.15 60 ⇑P **P 16 59 55.2 0.0**
baz=64,SNR=5.3
L16A Fish Haven 64.29 56 ⇓P **P 16 59 56.2 +0.1**
baz=64
J18A Kendall Valley 64.34 54 ⇓P **P 16 59 56.4 +0.1**
baz=64,SNR=7.8
N15A Stansbury Isla 64.36 57 ⇑P **P 16 59 56.2 -0.3**
baz=64
MPMC Manual Prospec 64.37 64 ⇑P **P 16 59 56.7 0.0**
baz=64,SNR=10.0
P13A Bates Ranch, G 64.38 59 ⇑P **P 16 59 56.5 -0.1**
baz=64
AJM Ajmer 64.38 282 *eP* **P 16 59 57.2 +0.3**
AJM *AMb AMB* 17 00 00.2
comp=Z,36nm,1.8s,mb5.1
OSI Osito Adit 64.50 66 ⇑P **P 16 59 57.6 +0.1**
baz=64
FURC Furnace Creek, 64.51 63 ⇑P **P 16 59 57.7 +0.1**
baz=64,SNR=8.9
BHPL Bhopal 64.56 278 *eP* **P 16 59 57.7 -0.4**
BHPL *AMb AMB* 16 59 59.1
comp=Z,32nm,1.5s,mb5.1
L17A Cokeville 64.56 55 ⇑P **P 16 59 58.0 +0.2**
baz=64,SNR=5.3
TPNV Topopah Spring 64.59 62 *eP* **P 16 59 57.2 -0.9**
TPNV *pmax pmax*
comp=Z,24nm,1.1s,mb5.1
TPNV Topopah Spring 64.59 62 *eP* **P 16 59 57.2 -0.9**
comp=Z,24nm,1.1s,mb5.1
BLG Laguna Peak 64.59 67 ⇓P **P 16 59 57.9 -0.3**
baz=64
M16A Huntsville 64.62 56 ⇑P **P 16 59 58.4 +0.2**
baz=64,SNR=5.4
DUG Dugway 64.63 58 ⇑P **P 16 59 58.5 +0.2**
baz=64,SNR=14
DUG Dugway 64.63 58 *eP* **P 16 59 57.8 -0.5**
DUG *pmax pmax*
comp=Z,15nm,1.0s,mb5.0
DUG Dugway 64.63 58 *eP* **P 16 59 57.8 -0.5**
comp=Z,15nm,1.0s,mb5.0
KAF Kangasniemi 64.67 336 *ep* **P 16 59 53.1 -5.1**
comp=Z,8.9nm,0.8s,mb4.8
KAF Kangasniemi 64.67 336 *eP* **P 16 59 53.1 -5.1**
KAF *pmax pmax*
comp=Z,9.0nm,0.8s,mb4.8
Q13A Wheeler Ranch, 64.69 60 ⇑P **P 16 59 59.0 +0.3**
baz=64,SNR=9.2
K18A Toltan Ranch, 64.69 54 ⇓P **P 16 59 58.9 +0.2**
baz=64,SNR=7.4
R12A Pony Springs, 64.73 60 ⇓P **P 16 59 58.9 -0.1**
baz=64,SNR=8.1
O15A The Old Anders 64.78 58 ⇓P **P 16 59 59.3 +0.1**
baz=64
NGP Nagpur 64.80 275 *eP* **P 16 59 58.4 -1.2**
NGP *AMb AMB* 16 59 59.9
comp=Z,27nm,0.0s
P14A Drum Mountains 64.86 58 ⇑P **P 16 59 59.7 -0.1**
baz=65,SNR=7.6
U10A Ash Meadows, A 64.87 63 ⇓P **P 17 00 00.8 +0.9**
baz=65
BW06 Boulder Array 64.89 54 ⇓P **P 16 59 59.8 -0.2**
baz=65,SNR=25
PDAR Pinedale Array 64.89 54 P **P 16 59 59.9 -0.1**
comp=Z,10nm,0.9s,mb4.8,baz=289,slow=2.1,SNR=57
N16A Rees Ranch, Co 65.00 56 ⇑P **P 17 00 01.0 +0.3**
baz=65
S12A Delamar Landin 65.04 61 ⇑P **P 17 00 01.4 +0.4**
baz=65,SNR=9.9
T11A Corn Creek, Al 65.04 62 ⇑P **P 17 00 01.1 +0.1**
baz=65,SNR=17
M17A Scullys Gap (B 65.08 56 ⇓P **P 17 00 00.8 -0.4**
baz=65
Q14A Sevier Lake (B 65.12 59 ⇓P **P 17 00 01.5 0.0**
baz=65,SNR=15
L18A Fontenelle, Gr 65.15 55 ⇓P **P 17 00 01.5 -0.1**
baz=65,SNR=7.2
R13A O'Grain Ranch, 65.21 60 ⇑P **P 17 00 02.0 -0.1**
baz=65
K19A Absolon Red Bu 65.25 53 ⇑P **P 17 00 01.9 -0.4**
baz=65,SNR=9.0
GSC Goldstone 65.28 64 ⇑P **P 17 00 02.0 -0.6**
baz=65
N17A Moffit Pass 65.32 56 ⇓P **P 17 00 02.7 -0.1**
baz=65,SNR=12
P15A Leamington 65.34 58 ⇑P **P 17 00 02.9 0.0**
baz=65,SNR=5.6
BFSC Mount Baldy St 65.41 66 ⇑P **P 17 00 03.7 +0.2**
baz=65
L19A Farson 65.43 54 ⇑P **P 17 00 03.4 0.0**
baz=65
M18A Lyman 65.45 55 ⇓P **P 17 00 03.4 -0.2**
baz=65
K20A Yellowstone Ra 65.64 53 ⇑P **P 17 00 04.0 -0.8**
baz=65
S13A Holt Ranch, En 65.66 61 ⇑P **P 17 00 05.2 +0.2**
baz=65,SNR=5.5
MOS Moscow 65.67 326 *eP* **P 17 00 02.6 -2.2**
MOS *pmax pmax*
comp=Z,140nm,1.9s,mb5.7
T12A Moapa 65.68 62 ⇑P **P 17 00 05.4 +0.2**
baz=65
TUQ Turquoise Moun 65.75 64 ⇑P **P 17 00 05.6 0.0**
baz=66
V11A Goodsprings 65.80 63 ⇑P **P 17 00 06.1 +0.1**
baz=66
CTAO Charters Tower 65.83 188 *eP* **P 17 00 05.6 -0.5**
CTAO *pmax pmax*
comp=Z,18nm,1.3s,mb4.9
CTAO Charters Tower 65.83 188 *eP* **P 17 00 05.6 -0.5**
comp=Z,18nm,1.3s,mb5.0
O17A Robinson Place 65.85 57 ⇑P **P 17 00 06.5 +0.3**
baz=66
HEC Hetor,Ludlow 65.88 64 ⇓P **P 17 00 06.4 -0.1**
baz=66,SNR=5.8
M19A Rock Springs 65.93 55 ⇓P **P 17 00 06.0 -0.6**
baz=66
N18A Larsen Ranch, 65.97 55 ⇑P **P 17 00 06.8 -0.1**
baz=66
T13A Saint George 65.99 61 ⇓P **P 17 00 07.1 -0.1**
baz=66
L20A Wamsutter 66.07 54 ⇓P **P 17 00 07.3 -0.3**
baz=66,SNR=5.9
MURC Murrieta 66.11 66 ⇓P **P 17 00 08.1 +0.1**
baz=66
O18A Roosevelt 66.23 56 ⇑P **P 17 00 09.2 +0.5**
baz=66
V12A Nelson 66.23 63 ⇓P **P 17 00 08.7 0.0**
baz=66
N19A John Jarvie Ra 66.31 55 ⇓P **P 17 00 09.0 -0.1**
baz=66,SNR=6.8
P17A Butcher Ranch, 66.32 57 ⇓P **P 17 00 09.3 +0.1**
baz=66
GMRC Granite Mounta 66.33 64 ⇓P **P 17 00 09.4 0.0**
baz=66,SNR=6.1
U13A Pakoon Wash 66.34 62 ⇓P **P 17 00 09.7 +0.3**
baz=66,SNR=15
Q16A Castle Valley 66.42 58 ⇓P **P 17 00 10.1 +0.2**
baz=66
T14A Hurricane 66.47 61 ⇓P **P 17 00 10.4 +0.2**
baz=66,SNR=5.1
M20A Sweetwater, Wa 66.49 54 ⇓P **P 17 00 10.5 +0.2**
baz=66,SNR=10
P18A Preston Nutter 66.51 57 ⇓P **P 17 00 10.6 +0.2**
baz=66,SNR=6.4
AKL Akola 66.51 276 *eP* **P 17 00 10.6 -0.2**
OBN Obninsk 66.54 326 ⇓*eP* **P 17 00 09.2 -1.2**
OBN *e* 17 00 21.3
OBN *e* 17 00 39.1
OBN *eSS SS* 17 13 14.5 -3.0
OBN *pmax pmax*
comp=Z,113nm,1.7s,mb5.6
OBN *MLR MLR*
comp=Z,200nm,15.0s,MS4.5
OBN Obninsk 66.54 326 *eP* **P 17 00 09.6 -0.8**
comp=Z,17nm,0.5s,mb5.3
L21A Rawlins 66.64 53 ⇓P **P 17 00 11.3 +0.1**
baz=66,SNR=7.8
R16A Teasdale 66.65 59 ⇓P **P 17 00 12.1 +0.7**
baz=66,SNR=9.7
SRU San Rafael 66.68 57 ⇓P **P 17 00 11.6 +0.1**
baz=66,SNR=8.4
V13A Grand Canyon W 66.69 62 ⇓P **P 17 00 11.9 +0.2**
baz=66,SNR=12
O19A Miners Draw (B 66.73 56 ⇓P **P 17 00 11.6 -0.2**
baz=66,SNR=7.0
U14A Mt Tembull 66.82 61 ⇓P **P 17 00 13.1 +0.6**
baz=67
N20A Spence Gulch, 66.88 55 ⇑P **P 17 00 13.1 +0.4**
baz=67,SNR=12
AFI Afiamalu 66.89 144 LR LR 17 24 38.3
comp=Z,126nm,19.2s,MS4.2,baz=270,slow=32
RWWY Rawlins 66.91 54 *eP* **P 17 00 12.6 -0.4**
comp=Z,13nm,1.0s,mb4.9
Q18A Rafter H Ranch 66.92 57 ⇑P **P 17 00 12.9 -0.2**
baz=67,SNR=6.2
T15A Red Dirt Ranch 66.92 60 ⇓P **P 17 00 13.0 -0.1**
baz=67
ULM Lac du Bonnet 66.93 41 P **P 17 00 12.2 -0.7**
comp=Z,8.4nm,0.7s,mb4.9,baz=307,slow=7.0,SNR=12
S16A Weppner Ranch, 66.94 59 ⇓P **P 17 00 13.6 +0.4**
baz=67,SNR=9.0
R17A Hanksville Air 67.02 58 ⇓P **P 17 00 13.3 -0.4**
baz=67,SNR=9.0
RSSD Black Hills 67.05 50 *eP* **P 17 00 13.2 -0.6**
RSSD *pmax pmax*
comp=Z,21nm,1.0s,mb5.1
RSSD Black Hills 67.05 50 *eP* **P 17 00 13.2 -0.6**
comp=Z,21nm,1.0s,mb5.1
IRM Iron Mountain 67.06 64 ⇓P **P 17 00 13.6 -0.4**
baz=67,SNR=5.5
MONP Monument Peak 67.07 66 ⇑P **P 17 00 14.2 +0.1**
baz=67
BC3 Big Chuckw Mtn 67.19 65 ⇑P **P 17 00 14.7 -0.2**
baz=67
W13A Hualapai Mount 67.24 63 ⇑P **P 17 00 14.9 -0.3**
baz=67
P19A Cripple Cowboy 67.25 56 ⇓P **P 17 00 14.9 -0.2**
baz=67,SNR=9.7
VRHR Novokhopersk 67.34 321 *eP* **P 17 00 15.5 -0.1**
VRHR *pmax pmax*
comp=Z,40nm,0.6s,mb5.6
VRHR *pmax pmax*
comp=N,30nm,0.7s
VRHR *pmax pmax*
comp=E,40nm,0.7s
N21A Black Mountain 67.35 54 ⇓P **P 17 00 15.7 0.0**
baz=67,SNR=8.7
U15A North Rim 67.36 61 ⇑P **P 17 00 16.5 +0.5**
baz=67,SNR=11
V14A Boquillas Ranc 67.38 62 ⇑P **P 17 00 16.2 +0.2**
baz=67,SNR=18
DVTC Desert V Tower 67.42 66 ⇑P **P 17 00 16.5 +0.1**
baz=67
M22A Cedar Creek Ra 67.45 53 ⇓P **P 17 00 16.8 +0.4**
baz=67,SNR=18
VSU Vasula 67.45 333 *eP* **P 17 00 16.1 0.0**
VSU *pmax pmax*
comp=Z,55nm,1.5s,mb5.4
S17A Black Ridge (B 67.48 59 ⇑P **P 17 00 16.4 -0.3**
baz=67
Q19A Hogan Spring (67.53 57 ⇓P **P 17 00 16.5 -0.5**
baz=67,SNR=16
R18A Canyonlands Na 67.53 58 ⇓P **P 17 00 16.3 -0.7**
baz=67,SNR=8.7
X13A Yucca 67.60 63 ⇑P **P 17 00 17.0 -0.5**
baz=67,SNR=8.6
HYB Hyderabad 67.64 272 *i* P **P 17 00 18.0 +0.1**
HYB Hyderabad 67.64 272 *eP* **P 17 00 18.0 +0.1**
W14A Seligman 67.67 62 ⇓P **P 17 00 18.0 +0.1**
baz=67,SNR=16
ABKT Ailbek 67.68 302 P **P 17 00 19.7 +1.8**
comp=Z,111nm,1.3s,mb5.7,SNR=11
WRAB Tennant Creek 67.69 200 P **P 17 00 17.0 -1.0**
comp=Z,272nm,0.8s,mb6.3,SNR=18
WRAB Tennant Creek 67.69 200 *c iP* **P 17 00 17.6 -0.4**
WRAB Tennant Creek 67.69 200 *eP* **P 17 00 17.5 -0.5**
comp=Z,57nm,1.1s,mb5.5
WB2 Warramunga Arr 67.70 200 *eP* **P 17 00 17.8 -0.3**
WRA Warramunga Arr 67.70 200 P **P 17 00 17.8 -0.3**
comp=Z,32nm,0.9s,mb5.3,baz=18,slow=6.8,SNR=100
WRA *pmax pmax*
WRA Warramunga Arr 67.70 200 P **P 17 00 17.8 -0.3**
comp=Z,32nm,0.9s
Y12C Blythe 67.72 64 ⇓P **P 17 00 18.1 -0.1**
baz=68
V15A Kaibab Nationa 67.83 61 ⇓P **P 17 00 19.0 +0.1**
baz=68,SNR=8.8
T17A Navajo Res., N 67.89 59 ⇑P **P 17 00 19.1 -0.1**
baz=68
S18A Hurst Farm, Bl 67.92 58 ⇑P **P 17 00 19.2 -0.3**
baz=68,SNR=6.0
N22A Wattenberg Ran 67.93 54 ⇓P **P 17 00 19.4 0.0**
baz=68,SNR=7.3
R19A Curley Farm, L 67.96 57 ⇓P **P 17 00 19.5 -0.2**
baz=68
GLA Glamis 67.98 65 ⇓P **P 17 00 20.0 +0.1**
baz=68
Q20A Ridgley Place, 68.09 56 ⇑P **P 17 00 20.2 -0.3**
baz=68
U17A Shonto 68.24 60 ⇓P **P 17 00 21.2 -0.2**
baz=68
U16A Tuba City 68.26 60 ⇓P **P 17 00 21.9 +0.3**
baz=68,SNR=8.4
X14A Yava 68.27 63 ⇓P **P 17 00 21.7 0.0**
baz=68,SNR=9.8
AGMN Agassiz Refuge 68.31 42 *eP* **P 17 00 20.8 -0.9**
comp=Z,59nm,1.4s,mb5.4
AGMN *e* 17 00 30.9
VSR Storozhevoye 68.33 322 *eP* **P 17 00 21.7 -0.1**
VSR *pmax pmax*
comp=N,20nm,0.8s
VSR *pmax pmax*
comp=E,30nm,0.8s
VSR *pmax pmax*
comp=Z,20nm,0.8s,mb5.2
T18A Mexican Hat 68.36 59 ⇓P **P 17 00 21.4 -0.8**
baz=68,SNR=6.8
S19A Harvey Farm, M 68.40 58 ⇓P **P 17 00 22.1 -0.3**
baz=68,SNR=6.6
VORD Divnogorie 68.46 322 *eP* **P 17 00 22.1 -0.5**
VORD *pmax pmax*
comp=N,60nm,0.8s
VORD *pmax pmax*
comp=E,50nm,0.8s
VORD *pmax pmax*
comp=Z,80nm,0.8s,mb5.8
FITZ Fitzroy Crossi 68.49 209 *eP* **P 17 00 23.6 +0.5**
comp=Z,21nm,0.8s,mb5.2
FITZ Fitzroy Crossi 68.49 209 *eP* **P 17 00 23.4 +0.3**
comp=Z,16nm,1.0s,mb5.0
WUAZ Wupatki 68.52 61 ⇑P **P 17 00 23.7 +0.4**
baz=68
Y14A Wickenburg 68.55 63 ⇓P **P 17 00 23.2 -0.3**
baz=68
Q21A Lamborn Mesa, 68.59 56 ⇑P **P 17 00 23.8 +0.1**
baz=68,SNR=7.1
X15A Humboldt 68.67 62 ⇓P **P 17 00 24.5 +0.3**
baz=68,SNR=9.8
W16A Flagstaff 68.70 61 ⇑P **P 17 00 24.7 +0.3**
baz=68
U18A Rough Rock, Ch 68.84 59 ⇑P **P 17 00 25.1 -0.1**
baz=69
113A Mohawk Valley, 68.84 65 ⇑P **P 17 00 25.3 0.0**
baz=69
R21A Cimarron 68.92 56 ⇓P **P 17 00 25.9 +0.3**
baz=69,SNR=12
Y15A Casa Rosa Ranc 68.96 63 ⇓P **P 17 00 26.0 0.0**
baz=69,SNR=6.3
T19A Beclabito 69.07 59 ⇓P **P 17 00 26.4 -0.3**
baz=69
ISCO Idaho Springs 69.07 54 *eP* **P 17 00 26.9 +0.3**
ISCO *pmax pmax*
comp=Z,12nm,0.9s,mb4.8
ISCO Idaho Springs 69.07 54 *eP* **P 17 00 26.9 +0.3**
comp=Z,12nm,0.9s,mb4.8
MVCO Mesa Verde 69.13 58 ⇓P **P 17 00 27.0 -0.1**
baz=69,SNR=6.6
MVCO Mesa Verde 69.13 58 *eP* **P 17 00 26.7 -0.3**
comp=Z,16nm,1.0s,mb4.9
X16A Lo Mia Camp, P 69.20 62 ⇓P **P 17 00 27.7 +0.2**
baz=69,SNR=6.7
W17A Winslow 69.21 61 ⇓P **P 17 00 27.9 +0.3**
baz=69
V18A Ganado 69.27 60 ⇑P **P 17 00 28.0 +0.1**
baz=69,SNR=9.8
NB2 NORSAR Subarra 69.44 342 P **P 17 00 27.9 -0.6**

comp=Z,21nm,0.9s,mb5.1,baz=28,slow=6.2
NOA NORSAR Array B 69.44 342 P P 17 00 28.2 -0.2
comp=Z,13nm,0.8s,mb4.9,baz=27,slow=6.2,SNR=20
NOA LR LR 17 36 58.1
comp=Z,167nm,19.4s,MS4.3,baz=25,slow=41
NOA NORSAR Array B 69.44 342 P **P 17 00 28.3 -0.2**
NOA pmax pmax
comp=Z,13nm,0.8s
NOA MLR MLR
comp=Z,167nm,19.4s
Y16A Circle Bar Ran 69.54 62 ⇑P **P 17 00 29.7 +0.1**
baz=69
V19A Window Rock 69.80 59 ⇓P **P 17 00 31.4 +0.2**
baz=70
115A Sonoran Desert 69.85 64 ⇑P **P 17 00 31.9 +0.4**
baz=70
IDID Didziasalis 69.97 331 *e*P **P 17 00 31.9 +0.1**
ISAL Salakas 69.97 331 *e*P **P 17 00 31.9 0.0**
214A Organ Pipe Nat 69.98 65 ⇓P **P 17 00 32.4 0.0**
baz=70
X18A Snowflake 70.05 61 ⇑P **P 17 00 33.4 +0.7**
baz=70
Y17A Roosevelt 70.05 62 ⇓P **P 17 00 32.9 +0.1**
baz=70,SNR=5.9
IIGN Ignalina 70.12 331 *e*P **P 17 00 32.9 +0.1**
POO Poona 70.18 276 *e*P **P 17 00 34.1 +0.4**
POO AMb AMB 17 00 39.5
comp=Z,30nm,1.4s,mb5.0
MAK Makhachkala 70.24 312 *e*P **P 17 00 29.1 -4.6**
MAK MLR MLR
comp=Z,589nm,15.0s,MS5.0
MNK Minsk 70.25 330 *e*P **P 17 00 31.0 -2.6**
116A Eloy 70.28 63 ⇓P **P 17 00 34.5 +0.4**
baz=70
X19A St. Johns 70.52 61 ⇓P **P 17 00 35.8 +0.2**
baz=70,SNR=7.2
KAD Karad 70.77 275 *e*P **P 17 00 37.0 -0.3**
117A Oracle 70.87 63 ⇓P **P 17 00 38.0 +0.2**
baz=71
ECSD EROS,Sioux Fal 71.19 46 *e*P **P 17 00 37.9 -1.6**
comp=Z,31nm,1.5s,mb5.0
ECSD *e* 17 00 49.0
Z19A T-Link Ranch, 71.30 61 ⇓P **P 17 00 41.1 +0.7**
baz=71
118A Homack Ranch, 71.31 62 ⇑P **P 17 00 40.4 0.0**
baz=71,SNR=8.4
217A Green Valley 71.36 64 ⇑P **P 17 00 40.8 0.0**
baz=71
ASAR Alice Springs 71.39 199 P **P 17 00 41.5 +0.7**
comp=Z,23nm,0.8s,mb5.2,baz=13,slow=5.3,SNR=218
ASAR Alice Springs 71.39 199 P **P 17 00 41.5 +0.7**
ASAR pmax pmax
comp=Z,23nm,0.8s
119A Ashpeak Ranch, 71.63 62 ⇓P **P 17 00 42.5 +0.1**
baz=71
218A Dragoon 71.71 63 ⇓P **P 17 00 43.0 +0.1**
baz=72
ANMO Albuquerque 71.87 58 *e*P **P 17 00 43.2 -0.6**
ANMO pmax pmax
comp=Z,8.0nm,1.1s
ANMO Albuquerque 71.87 58 *e*P **P 17 00 43.2 -0.6**
comp=Z,8.2nm,1.1s,mb4.6
ANMO *e* 17 00 54.2
KIV Kislovodsk 71.99 315 P **P 17 00 45.0 +0.7**
comp=Z,368nm,0.9s,mb6.3,SNR=11
KIV Kislovodsk 71.99 315 ⇑P **P 17 00 46.3 +2.0**
SNR=11
KIV Kislovodsk 71.99 315 *e*P **P 17 00 43.0 -1.3**
KIV pmax pmax
comp=Z,81nm,1.2s,mb5.5
KIV Kislovodsk 71.99 315 *e*P **P 17 00 45.4 +1.1**
comp=Z,58nm,0.9s,mb5.5
318A Bisbee 72.11 63 ⇓P **P 17 00 45.3 0.0**
baz=72
219A White Tail Can 72.18 62 ⇓P **P 17 00 45.8 +0.1**
baz=72,SNR=6.0
SUW Suwalki 72.23 332 *e*P **P 17 00 45.0 -0.6**
SUW Suwalki 72.23 332 *e*P **P 17 00 44.2 -1.4**
SUW pmax pmax
comp=Z,114nm,1.1s,mb5.7
SUW Suwalki 72.23 332 *e*P **P 17 00 44.2 -1.4**
comp=Z,114nm,1.1s,mb5.7
DGRG David-gareji 72.42 312 P **P 17 00 54.5 +7.5**
MTA Mtatsminda 72.55 312 P **P 17 00 48.8 +1.1**
319A Douglas 72.59 63 ⇑P **P 17 00 48.3 +0.1**
baz=72,SNR=6.3
ONI Oni 72.60 314 P **P 17 00 47.3 -0.7**
GOR Gori 72.69 313 P **P 17 00 50.3 +1.8**
AKASG Malin Array Be 72.78 327 P **P 17 00 48.7 -0.2**
comp=Z,44nm,0.7s,mb5.5,baz=33,slow=6.0,SNR=77
AKASG Malin Array Be 72.78 327 P **P 17 00 48.7 -0.2**
AKASG pmax pmax
comp=Z,45nm,0.7s
AKBB Malin Array Si 72.78 327 *e*P **P 17 00 48.2 -0.7**
KIEV Kiev 72.79 327 *e*P **P 17 00 48.4 -0.6**
KIEV pmax pmax
comp=Z,58nm,0.8s,mb5.6
KIEV Kiev 72.79 327 *e*P **P 17 00 48.4 -0.6**
comp=Z,58nm,0.8s,mb5.6
PALK Pallekele 73.16 263 P **P 17 00 50.0 -1.7**
PALK pmax pmax
comp=Z,13nm,0.9s,mb4.9
PALK Pallekele 73.16 263 P **P 17 00 50.0 -1.8**
comp=Z,13nm,0.9s,mb4.8
KOD Kodaikanal 73.34 268 *e*P **P 17 00 53.1 +0.3**
KOD AMb AMB 17 00 54.6
comp=Z,27nm,1.1s,mb5.1
MBWA Marble Bar 73.44 213 *e*P **P 17 00 53.3 +0.2**
GNI Garni 73.69 311 ⇓P **P 17 00 56.8 +2.3**
SNR=10
GNI Garni 73.69 311 P **P 17 00 54.7 +0.2**
comp=Z,5.8nm,0.5s,mb4.8,baz=148,slow=20,SNR=13
GNI Garni 73.69 311 P **P 17 00 54.7 +0.2**
GNI pmax pmax
comp=Z,6.0nm,0.5s
GNI Garni 73.69 311 *e*P **P 17 00 55.7 +1.1**
comp=Z,70nm,1.4s,mb5.4
SOC Sochi 73.72 316 *e*P **P 17 00 53.4 -1.2**
SOC *e* 17 03 40.5
SOC *e*S S 17 10 20.2 -5.8
SOC *e*SSS 17 18 18.7
SCHQ Schefferville 74.06 23 P **P 17 00 56.1 -0.2**
comp=Z,12nm,0.8s,mb4.9,baz=1.0,slow=6.8,SNR=12
SCHQ Schefferville 74.06 23 *e*P **P 17 00 56.0 -0.4**
SCIA State Center 74.23 46 *e*P **P 17 00 56.8 -0.9**
comp=Z,44nm,0.7s,mb5.5
SCIA *e* 17 01 07.6
SIM Simferopol' 75.28 320⇑*e*P **P 17 00 56.7 -7.0**
SIM pmax pmax
comp=Z,27nm,0.8s,mb5.2
LVV L'vov 75.43 329 *i* P **P 17 01 04.2 -0.2**
ARMA Armidale 75.77 182 ⇓*i*P **P 17 01 07.6 +1.2**
KIS Kishinev 75.91 325 *e*P **P 17 01 07.0 -0.2**
BSEG Bad Segeberg 76.05 339 *e*P **P 17 01 08.0 +0.1**
BSEG pmax pmax
comp=Z,26nm,1.0s,mb5.1
BSEG Bad Segeberg 76.05 339 *e*P **P 17 01 08.0 +0.1**
comp=Z,26nm,1.0s,mb5.1
KWP Kalwaria 76.06 330 *e*P **P 17 01 08.7 +0.7**
KWP Kalwaria 76.06 330 *e*P **P 17 01 08.6 +0.6**
KWP pmax pmax
comp=Z,144nm,1.0s,mb5.9
KWP Kalwaria 76.06 330 ⇓*i*P **P 17 01 08.5 +0.5**
KWP Kalwaria 76.06 330 *e*P **P 17 01 08.6 +0.6**
comp=Z,144nm,1.0s,mb5.9
WMOK Wichita Mounta 76.50 54 *e*P **P 17 01 10.2 -0.6**
WMOK *e* 17 01 20.7
WMOK pmax pmax
comp=Z,13nm,1.0s,mb4.8
WMOK Wichita Mounta 76.50 54 *e*P **P 17 01 10.2 -0.6**
comp=Z,13nm,1.0s,mb4.8
WMOK *e* 17 01 20.7
OJC Ojcow 76.55 332 *e*P **P 17 01 10.9 +0.1**
STHS Stebnicka Huta 76.75 330 *i* P **P 17 01 12.9 +0.9**
STHS pmax pmax
comp=Z,25nm,1.0s,mb5.1
STHS Stebnicka Huta 76.75 330 *i* P **P 17 01 12.9 +0.9**
comp=Z,25nm,1.0s,mb5.1
BUR08 Bucovina Ar. S 76.80 327 *e*P **P 17 01 12.6 +0.3**
BURAR Bucovina Array 76.82 327 ⇓*i*P **P 17 01 12.5 +0.1**
UZH Uzhgorod 77.05 329 ⇓*i*P **P 17 01 13.3 -0.3**
UZH *e* 17 01 27.0
CRVS Cervenica-Dubn 77.11 330 *i* P **P 17 01 14.3 +0.3**
CRVS pmax pmax
comp=Z,47nm,1.9s,mb5.1
CRVS Cervenica-Dubn 77.11 330 *i* P **P 17 01 14.3 +0.3**
comp=Z,47nm,1.9s,mb5.1
KSP Ksiaz 77.13 334 *e*P **P 17 01 14.3 +0.3**
KSP Ksiaz 77.13 334⇓*e*P **P 17 01 14.1 0.0**
HDIL Hopedale 77.19 44 *e*P **P 17 01 13.4 -1.2**
comp=Z,25nm,0.6s,mb5.3
TLCR 77.38 324⇓*i*P **P 17 01 16.1 +0.5**
TRPA Tarpa 77.38 329⇑*i*P **P 17 01 16.1 +0.6**
NRDL Niedersach Rie 77.41 338 *e*P **P 17 01 15.5 -0.1**
comp=Z,38nm,1.2s,mb5.2
OKC Ostrava-Krasne 77.42 332 *e*P **P 17 01 16.0 +0.3**
TXAR Lajitas Array 77.48 61 P **P 17 01 16.2 -0.2**
comp=Z,22nm,0.9s,mb5.1,baz=301,slow=4.0,SNR=148
TXAR Lajitas Array 77.48 61 P **P 17 01 16.2 -0.2**
TXAR pmax pmax
comp=Z,22nm,0.9s
UPC Upice 77.51 334 *e*P **P 17 01 16.6 +0.4**
DPC Dobruska-Polom 77.56 334 *e*P **P 17 01 16.9 +0.4**
VRI Vrincioaia 77.67 325⇑*i*P **P 17 01 18.5 +1.3**
CLL Collm 77.69 336⇓*i*P **P 17 01 16.9 -0.3**
CLL *e*S S 17 11 18.0 +8.3
CLL pmax pmax
comp=Z,60nm,1.0s,mb5.5
CLL Collm 77.69 336 *e*P **P 17 01 17.0 -0.2**
comp=Z,60nm,1.1s,mb5.4
CLL Collm 77.69 336⇓*i*P **P 17 01 16.9 -0.3**
comp=Z,60nm,1.0s,mb5.5
CLL *e*PP PP 17 04 10.0 -1.6
CLL *e*S S 17 11 18.0 +8.3
CLL *e*(SSS) 17 19 12.0
CLL Collm 77.69 336⇓*i*P **P 17 01 16.9 -0.3**
comp=Z,60nm,1.0s,mb5.5
CLL S S 17 11 18.0 +8.3
BRG Berggiesshubel 77.81 335 *e*P **P 17 01 18.1 +0.2**
BRG pmax pmax
comp=Z,20nm,1.3s,mb4.9
BRG Berggiesshubel 77.81 335 *e*P **P 17 01 17.6 -0.3**
comp=Z,36nm,1.3s,mb5.1
BRG Berggiesshubel 77.81 335 *e*P **P 17 01 18.1 +0.3**
comp=Z,20nm,1.3s,mb4.9
PVCC Panska Ves 77.93 335 *e*P **P 17 01 18.6 0.0**
CLZ Clausthal 77.93 338 *e*P **P 17 01 18.7 +0.2**
CLZ pmax pmax
comp=Z,86nm,1.2s,mb5.6
CLZ Clausthal 77.93 338 *e*P **P 17 01 18.7 +0.2**
comp=Z,86nm,1.2s,mb5.6
STKA Stephens Creek 78.00 191 P **P 17 01 19.2 +0.2**
comp=Z,7.4nm,0.8s,mb4.7,baz=351,slow=7.5,SNR=21
STKA LR LR 17 35 42.4
comp=Z,244nm,19.7s,MS4.5,baz=206,slow=36
STKA Stephens Creek 78.00 191 *e*P **P 17 01 19.1 +0.1**
comp=Z,4.6nm,0.6s,mb4.6
STKA Stephens Creek 78.00 191 *e*P **P 17 01 18.4 -0.6**
comp=Z,1.8nm,1.1s,mb3.9
HARR Harova 78.15 324⇓*i*P **P 17 01 20.1 +0.2**
IBBN Ibbenburen 78.17 340 *e*P **P 17 01 19.7 -0.2**
comp=Z,62nm,1.1s,mb5.5
MALT Malatya 78.33 314 *e*P **P 17 01 22.1 +1.1**
MALT pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
MALT Malatya 78.33 314⇓*i*P **P 17 01 22.5 +1.5**
MALT Malatya 78.33 314 *e*P **P 17 01 22.1 +1.1**
comp=Z,7.7nm,0.7s,mb4.7
VYHS Vyhne 78.36 331 *i* P **P 17 01 21.4 +0.4**
VYHS pmax pmax
comp=Z,13nm,1.1s,mb4.8
VYHS Vyhne 78.36 331 *i* P **P 17 01 21.3 +0.3**
VYHS Vyhne 78.36 331 *i* P **P 17 01 21.4 +0.4**
comp=Z,13nm,1.1s,mb4.8
VRAC Vranov 78.38 333⇓*i*P **P 17 01 22.6 +1.5**
PRU Pruhonice 78.42 335 *e*P **P 17 01 21.1 -0.2**
PRU *ex* x 17 01 32.6
KOLL Kolacno 78.43 332 *i* P **P 17 01 22.8 +1.4**
DRGR 78.45 328⇓*i*P **P 17 01 21.8 +0.3**
PSZ Piszkesteto 78.50 330 *e*P **P 17 01 19.7 -2.0**
PSZ pmax pmax
comp=Z,25nm,1.2s,mb5.0
PSZ Piszkesteto 78.50 330⇑*e*P **P 17 01 22.7 +1.0**
PSZ Piszkesteto 78.50 330⇓*i*P **P 17 01 22.4 +0.7**
PSZ Piszkesteto 78.50 330 *e*P **P 17 01 19.7 -2.0**
comp=Z,25nm,1.2s,mb5.0
FVM French Village 78.59 47 *e*P **P 17 01 21.2 -1.3**
FVM pmax pmax
comp=Z,12nm,0.8s,mb4.9
FVM French Village 78.59 47 *e*P **P 17 01 21.2 -1.2**
comp=Z,12nm,0.8s,mb4.9
TANN Tannenbergstha 78.65 336 *e*P **P 17 01 22.6 +0.1**
comp=Z,36nm,1.7s,mb5.0
MOX Moxa 78.68 337 *e*P **P 17 01 23.0 +0.3**
comp=Z,53nm,1.6s,mb5.2
MOX Moxa 78.68 337 *e*P **P 17 01 23.0 +0.3**
MOX pmax pmax
comp=Z,53nm,1.6s,mb5.2
MOX Moxa 78.68 337 *e*P **P 17 01 22.6 -0.1**
comp=Z,40nm,1.2s,mb5.2
RAR Rarotonga 78.70 137 LR LR 17 30 15.6
comp=Z,154nm,19.5s,MS4.3,baz=86,slow=31
WTSB Winterswijk 78.72 340 *e*P **P 17 01 22.3 -0.5**
comp=Z,25nm,1.2s,mb5.0
TREC Trest 78.74 334 *e*P **P 17 01 23.4 +0.3**
NKC Novy Kostel 78.81 336 *e*P **P 17 01 23.4 0.0**
JCT Junction City 78.99 58 *e*P **P 17 01 24.3 -0.5**
JCT *e* 17 01 35.5
JCT pmax pmax
comp=Z,37nm,1.2s,mb5.2
JCT Junction City 78.99 58 *e*P **P 17 01 24.2 -0.5**
comp=Z,37nm,1.2s,mb5.2
JCT *e* 17 01 35.5
BUG Bochum--Univer 79.09 340 *e*P **P 17 01 25.2 +0.3**
comp=Z,55nm,1.5s,mb5.3
MANZ Manzenberg 79.13 336 *e*P **P 17 01 25.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
BUD Budapest 79.17 331⇑*e*P **P 17 01 26.4 +1.0**
ZST Bratislava 79.19 332 *i* P **P 17 01 26.3 +0.7**
ZST pmax pmax
comp=Z,18nm,1.1s,mb4.9
ZST Bratislava 79.19 332 *i* P **P 17 01 26.3 +0.7**
comp=Z,18nm,1.1s,mb4.9
ROTZ Rotzenmuhle 79.30 336 *e*P **P 17 01 26.5 +0.4**
comp=Z,29nm,1.2s,mb5.1
KHC Kasperske Hory 79.47 335 *e*P **P 17 01 27.3 +0.3**
KHC *e* 17 01 30.5
KHC Kasperske Hory 79.47 335 *e*P **P 17 01 27.3 +0.3**
KHC pP pP 17 01 30.5 +2.5
KHC Kasperske Hory 79.47 335 *e*P **P 17 01 27.0 -0.1**
comp=Z,13nm,1.5s,mb4.6
MIAR Mount Ida 79.53 51 *e*P **P 17 01 25.4 -2.3**
MIAR pmax pmax
comp=Z,16nm,1.1s,mb4.9
MIAR Mount Ida 79.53 51 *e*P **P 17 01 25.4 -2.2**
comp=Z,16nm,1.1s,mb4.9
BRTR Keskin Array B 79.59 317 P **P 17 01 28.4 +0.5**
comp=Z,7.8nm,0.8s,mb4.7,baz=81,slow=4.2,SNR=35
BRTR Keskin Array B 79.59 317 P **P 17 01 28.4 +0.5**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
GZR Gura Zlata 79.60 327⇓*i*P **P 17 01 26.2 -1.6**
GRA1 Grafenberg Arr 79.65 336 *e*P **P 17 01 28.4 +0.4**
comp=Z,48nm,1.1s,mb5.3
GRF Grafenberg Arr 79.65 336 *e*P **P 17 01 28.4 +0.4**
GRF pmax pmax
comp=Z,48nm,1.1s,mb5.3
GRF Grafenberg Arr 79.65 336 *e*P **P 17 01 28.4 +0.4**
GRF pmax pmax
comp=Z,48nm,1.1s,mb5.3
GRF Grafenberg Arr 79.65 336 *e*P **P 17 01 28.4 +0.4**
comp=Z,48nm,1.1s,mb5.3
FORT Forrest 79.66 202 *e*P **P 17 01 29.1 +1.0**
comp=Z,68nm,0.8s,mb5.6
FORT Forrest 79.66 202 *e*P **P 17 01 28.9 +0.8**
comp=Z,80nm,0.8s,mb5.7
WET Wettzell 79.66 335 *e*P **P 17 01 28.5 +0.4**
WET pmax pmax
comp=Z,39nm,1.2s,mb5.2
WET Wettzell 79.66 335 *e*P **P 17 01 28.5 +0.4**
comp=Z,39nm,1.2s,mb5.2
GEC2 GERESS Array S 79.69 335 *e*P **P 17 01 28.2 0.0**
GEC2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 79.69 335 *e*P **P 17 01 28.2 0.0**
comp=Z,10.0nm,0.9s,mb4.8
GEC2 GERESS Array S 79.69 335 *e*P **P 17 01 28.1 -0.1**
comp=Z,3um,1.2s
GERES GERESS Array B 79.69 335 P **P 17 01 28.2 0.0**
comp=Z,4.4nm,0.7s,mb4.5,baz=34,slow=5.0,SNR=21
GERES LR LR 17 42 49.4
comp=Z,170nm,18.2s,MS4.4,baz=184,slow=40
GERES GERESS Array B 79.69 335 P **P 17 01 28.2 0.0**
GERES pmax pmax
comp=Z,4.0nm,0.7s
GERES MLR MLR
comp=Z,170nm,18.2s
MIB Mutribah 79.75 302 *e*P **P 17 01 28.7 -0.2**
baz=302
MIB AMb AMB 17 01 30.1
comp=Z,60nm,0.9s,mb5.5,baz=302
SOP Sopron 79.82 332⇑*e*P **P 17 01 30.0 +1.0**
CONA Conrad Observa 79.83 333⇑*i*pP pP 17 01 30.4 +0.4
comp=Z,20nm,0.9s
CSNA Conrad Observa 79.83 333⇑*i*pP pP 17 01 30.4 +0.4
comp=Z,18nm,0.9s
BZS Buzias 79.85 328⇓*i*P **P 17 01 28.9 -0.3**
TNS Taunus Mts 79.91 338 *e*P **P 17 01 29.5 +0.1**
TNS pmax pmax
comp=Z,33nm,1.1s,mb5.2
TNS Taunus Mts 79.91 338 *e*P **P 17 01 29.5 +0.1**
comp=Z,33nm,1.1s,mb5.2
HGN Heimansgroeve 80.04 340 *e*P **P 17 01 30.1 0.0**
comp=Z,53nm,1.6s,mb5.2
MEM Membach 80.16 340 P **P 17 01 31.2 +0.4**
comp=Z,27nm,1.3s,mb5.0
NAY Al-Naaiem 80.21 302 *e*P **P 17 01 31.2 -0.2**
baz=302
NAY AMb AMB 17 01 32.6
comp=Z,43nm,1.1s,mb5.3,baz=302
RDF Al-Radifah 80.26 301 *e*P **P 17 01 31.4 -0.3**
baz=301
RDF AMb AMB 17 01 32.6
comp=Z,85nm,1.1s,mb5.6,baz=301
TOD Tromm 80.38 338 *e*P **P 17 01 32.5 +0.5**
PKSM Moragy 80.40 330⇓*i*P **P 17 01 32.0 -0.2**
BCLA Clavier 80.51 340 P **P 17 01 32.9 +0.3**
comp=Z,25nm,1.6s,mb4.9
SNF Seneffe 80.66 341 P **P 17 01 32.5 -0.9**
comp=Z,16nm,1.5s,mb4.7
RUP Ruppelstein 80.75 339 *e*P **P 17 01 34.5 +0.6**
GIVF Givet 80.92 340 *e*P **P 17 01 35.4 +0.6**
WLF Walferdange 81.00 340 P **P 17 01 37.4 +2.0**
WLF Walferdange 81.00 340 *e*P **P 17 01 36.0 +0.7**
comp=Z,43nm,1.4s,mb5.2
FUR Furstenfeldbru 81.01 336 *e*P **P 17 01 35.7 +0.3**
FUR pmax pmax
comp=Z,30nm,1.0s,mb5.2
FUR Furstenfeldbru 81.01 336 *e*P **P 17 01 35.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
PPT Papeete 81.03 126 LR LR 17 32 50.5
comp=Z,190nm,20.6s,MS4.4,baz=262,slow=32
STU Stuttgart 81.04 337 *e*P **P 17 01 35.7 +0.2**
STU pmax pmax
comp=Z,11nm,0.6s,mb5.0
STU Stuttgart 81.04 337 *e*P **P 17 01 35.5 0.0**
comp=Z,26nm,0.9s,mb5.2
STU Stuttgart 81.04 337 *e*P **P 17 01 35.6 +0.1**
comp=Z,11nm,0.6s,mb5.0
BAIF Baives 81.10 341 *e*P **P 17 01 35.5 -0.3**
comp=Z,48nm,1.3s,mb5.0
BAIF Baives 81.10 341 *e*P **P 17 01 35.5 -0.3**
BAIF pmax pmax
comp=Z,24nm,1.3s,mb5.0
BAIF Baives 81.10 341 *e*P **P 17 01 35.5 -0.3**
comp=Z,24nm,1.3s,mb5.0
PERS Pernice 81.21 333 *i* P **P 17 01 36.9 +0.4**
LANF Langenberg 81.22 338 *e*P **P 17 01 36.4 -0.1**
WVT Waverly 81.34 46 *e*P **P 17 01 36.1 -1.3**
WVT pmax pmax
comp=Z,11nm,0.8s,mb4.8
WVT Waverly 81.34 46 *e*P **P 17 01 36.1 -1.3**
comp=Z,11nm,0.8s,mb4.8
KBA Koelnbreinsper 81.37 334⇑*i*pP pP 17 01 37.9 -0.3
comp=Z,21nm,0.9s
WATA Walderalm 81.67 335⇑*i*pP pP 17 01 39.7 -0.1
comp=Z,23nm,1.2s
BFO Black Forest 81.68 338 P **P 17 01 39.6 +0.7**
comp=Z,105nm,1.1s,mb5.7,SNR=5.1
BFO Black Forest 81.68 338 *e*P **P 17 01 38.5 -0.4**
BFO pmax pmax
comp=Z,26nm,1.1s,mb5.1
BFO Black Forest 81.68 338 *e*P **P 17 01 38.9 0.0**
comp=Z,34nm,1.2s,mb5.2
BFO Black Forest 81.68 338 *e*P **P 17 01 38.5 -0.5**
comp=Z,26nm,1.1s,mb5.1
WTTA Wattenberg 81.72 335⇑*i*pP pP 17 01 40.2 +0.1
comp=Z,39nm,1.3s,SNR=9.9
SPAK Spaichingen-Ko 81.76 337 *e*P **P 17 01 40.3 +0.9**
RETA Reutte 81.77 336⇑*i*pP pP 17 01 40.0 -0.4
comp=Z,21nm,1.1s
OXF Oxford 81.78 48 *e*P **P 17 01 39.0 -0.7**
OXF pmax pmax
comp=Z,50nm,1.1s,mb5.4
OXF Oxford 81.78 48 *e*P **P 17 01 39.0 -0.8**
comp=Z,50nm,1.1s,mb5.4
MOTA Moosalm 81.80 336⇑*i*pP pP 17 01 40.0 -0.5
comp=Z,27nm,1.0s,SNR=15
CDF Champ du Feu 81.88 338 *e*P **P 17 01 39.6 -0.4**
comp=Z,39nm,1.1s,mb5.0
CDF Champ du Feu 81.88 338 *e*P **P 17 01 39.6 -0.4**
CDF pmax pmax
comp=Z,20nm,1.1s,mb5.0
CDF Champ du Feu 81.88 338 *e*P **P 17 01 39.6 -0.4**
comp=Z,20nm,1.1s,mb5.0
VISS Visnje 82.03 332 *i* P **P 17 01 40.6 -0.3**
ECH Echery 82.09 338 *e*P **P 17 01 41.6 +0.5**
BOJS Bojanci 82.17 332 *i* P **P 17 01 42.1 +0.6**
FELD Feldberg im Sc 82.18 338 *e*P **P 17 01 41.4 -0.2**
FETA Feichten 82.20 336⇑*i*pP pP 17 01 42.5 -0.1
comp=Z,19nm,1.3s,SNR=7.2
MEZF Maizieres J'vi 82.35 340 *e*P **P 17 01 42.3 -0.2**
comp=Z,47nm,1.0s,mb5.1
MEZF Maizieres J'vi 82.35 340 *e*P **P 17 01 42.3 -0.2**
comp=Z,47nm,1.0s,mb5.4
THEF They Montfort 82.38 339 *e*P **P 17 01 42.9 +0.3**
HAU Haudompre 82.49 339 *e*P **P 17 01 42.7 -0.5**
HAU *e*MLR MLR
comp=Z,397nm,21.8s,MS4.4
HAU Haudompre 82.49 339 *e*P **P 17 01 42.7 -0.5**
HAU LR LR
comp=Z,400nm,21.8s,MS4.7
HINF Hinteralfeld 82.54 338 *e*P **P 17 01 42.8 -0.6**
LOMF Lomont 82.98 338 *e*P **P 17 01 46.8 +1.1**
TUE Stuetta 83.10 336 *e*P **P 17 01 46.6 +0.3**
comp=Z,7.9nm,0.8s,mb4.8
FLN La Foliniere 83.34 343 *e*P **P 17 01 47.6 0.0**
FLN *e*MLR MLR
comp=Z,233nm,19.8s,MS4.3
FLN La Foliniere 83.34 343 *e*P **P 17 01 47.6 0.0**
FLN LR LR
comp=Z,230nm,19.8s,MS4.5
LDF La Druitiere 83.42 343 *e*P **P 17 01 48.0 0.0**
CSS Prodhromos 83.50 315 *e*P **P 17 01 48.8 +0.1**
comp=Z,69nm,1.4s,mb5.6
GRR Gorron 83.77 343 *e*P **P 17 01 50.0 +0.2**
comp=Z,25nm,0.9s,mb5.1
GRR Gorron 83.77 343 *e*P **P 17 01 50.0 +0.2**
GRR pmax pmax
comp=Z,13nm,0.9s,mb5.1
GRR Gorron 83.77 343 *e*P **P 17 01 50.0 +0.2**
comp=Z,12nm,0.9s,mb5.0
LOR Lormes 83.79 340⇑*i*P **P 17 01 50.3 +0.4**
comp=Z,25nm,0.8s,mb5.1
LOR *e*MLR MLR
comp=Z,305nm,21.0s,MS4.3
LOR Lormes 83.79 340⇑*i*P **P 17 01 50.3 +0.4**
LOR pmax pmax
comp=Z,13nm,0.8s,mb5.1
LOR MLR MLR
comp=Z,310nm,21.0s,MS4.7
LOR Lormes 83.79 340⇑*i*P **P 17 01 50.3 +0.4**
comp=Z,13nm,0.8s,mb5.1
LOR LR LR
comp=Z,310nm,21.0s,MS4.7
CABF La Chapelle 83.85 338 *e*P **P 17 01 50.0 -0.3**
comp=Z,32nm,1.1s,mb5.1
CABF La Chapelle 83.85 338 *e*P **P 17 01 50.0 -0.3**
CABF pmax pmax
comp=Z,16nm,1.1s,mb5.1
CABF La Chapelle 83.85 338 *e*P **P 17 01 50.0 -0.3**
comp=Z,16nm,1.1s,mb5.1
SSF Saint Saulge 84.07 340⇑*i*P **P 17 01 51.7 +0.3**
comp=Z,15nm,0.8s,mb4.9
SSF Saint Saulge 84.07 340⇑*i*P **P 17 01 51.7 +0.3**
SSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SSF Saint Saulge 84.07 340⇑*i*P **P 17 01 51.7 +0.3**

comp=Z,7.7nm,0.8s,mb4.9
HYF Humbligny 84.08 341 *e*P **P** **17 01 51.3 -0.1**
SGMF Saint Gilles 84.23 344 *e*P **P** **17 01 52.3 +0.2**
AVF Avril sur Loir 84.36 340⇑*i*P **P** **17 01 53.2 +0.3**
comp=Z,23nm,0.8s,mb5.0
AVF Avril sur Loir 84.36 340⇑*i*P **P** **17 01 53.2 +0.3**
AVF pmax pmax
comp=Z,11nm,0.8s,mb5.0
AVF Avril sur Loir 84.36 340⇑*i*P **P** **17 01 53.2 +0.3**
comp=Z,11nm,0.8s,mb5.0
SMF Signal de Mont 84.38 340⇑*i*P **P** **17 01 53.5 +0.5**
comp=Z,73nm,1.2s,mb5.4
SMF Signal de Mont 84.38 340⇑*i*P **P** **17 01 53.5 +0.5**
SMF pmax pmax
comp=Z,36nm,1.2s,mb5.4
SMF Signal de Mont 84.38 340⇑*i*P **P** **17 01 53.5 +0.5**
comp=Z,36nm,1.2s,mb5.4
MUN Mundaring 84.54 212 *e*P **P** **17 01 54.0 +0.3**
QUIF Quistinic 84.67 345 *e*P **P** **17 01 54.2 -0.2**
LPL La Plagne 84.70 338 *e*P **P** **17 01 55.3 +0.7**
comp=Z,33nm,0.9s,mb5.2
LPL La Plagne 84.70 338 *e*P **P** **17 01 55.3 +0.7**
LPL pmax pmax
comp=Z,17nm,0.9s,mb5.2
LPL La Plagne 84.70 338 *e*P **P** **17 01 55.3 +0.7**
comp=Z,16nm,0.9s,mb5.2
BGF Bois d'Agland 84.70 340 *e*P **P** **17 01 54.7 +0.1**
comp=Z,13nm,0.7s,mb4.9
BGF Bois d'Agland 84.70 340 *e*P **P** **17 01 54.7 +0.1**
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
BGF Bois d'Agland 84.70 340 *e*P **P** **17 01 54.7 +0.1**
comp=Z,6.7nm,0.7s,mb4.9
LPG La Plagne 84.71 338 *e*P **P** **17 01 55.3 +0.7**
comp=Z,28nm,0.8s,mb5.1
LPG La Plagne 84.71 338 *e*P **P** **17 01 55.3 +0.7**
LPG pmax pmax
comp=Z,14nm,0.8s,mb5.1
LPG La Plagne 84.71 338 *e*P **P** **17 01 55.3 +0.7**
comp=Z,14nm,0.8s,mb5.1
NWAO Narrogin (SRO) 85.03 210 *e*P **P** **17 01 56.6 +0.5**
NWAO pmax pmax
comp=Z,32nm,1.0s
NWAO Narrogin (SRO) 85.03 210 *e*P **P** **17 01 56.6 +0.5**
comp=Z,32nm,1.0s,mb5.4
PLDF La Plantade 85.07 340 *e*P **P** **17 01 56.7 +0.3**
TCF Toulx Ste Croi 85.10 341 *e*P **P** **17 01 56.3 -0.3**
MFF Saint Martin d 85.33 342 *e*P **P** **17 01 57.3 -0.4**
comp=Z,16nm,1.0s,mb4.8
MFF Saint Martin d 85.33 342 *e*P **P** **17 01 57.3 -0.4**
MFF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
MFF Saint Martin d 85.33 342 *e*P **P** **17 01 57.3 -0.4**
comp=Z,8.1nm,1.0s,mb4.8
MBDF Montbardon 85.42 337 *e*P **P** **17 01 58.0 -0.2**
ORIF Oris-en-Rattie 85.48 338 *e*P **P** **17 01 58.9 +0.4**
comp=Z,37nm,0.8s,mb5.3
ORIF *e*MLR MLR
comp=Z,309nm,20.5s,MS4.4
ORIF Oris-en-Rattie 85.48 338 *e*P **P** **17 01 58.9 +0.4**
ORIF pmax pmax
comp=Z,18nm,0.8s,mb5.2
ORIF Oris-en-Rattie 85.48 338 *e*P **P** **17 01 58.9 +0.4**
comp=Z,18nm,0.8s,mb5.3
GOGA Godfrey 85.68 45 *e*P **P** **17 01 51.1 -8.6**
GOGA pmax pmax
comp=Z,11nm,0.8s,mb5.1
GOGA Godfrey 85.68 45 *e*P **P** **17 01 51.1 -8.7**
comp=Z,11nm,0.8s,mb5.1
VIVF Saint-Julien-l 85.85 339 *e*P **P** **17 02 00.5 +0.2**
comp=Z,16nm,0.8s,mb5.0
VIVF Saint-Julien-l 85.85 339 *e*P **P** **17 02 00.5 +0.2**
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
VIVF Saint-Julien-l 85.85 339 *e*P **P** **17 02 00.5 +0.2**
comp=Z,7.8nm,0.8s,mb5.0
RJF Les Rejaudoux 86.19 341 *e*P **P** **17 02 00.8 -1.2**
RJF *e*MLR MLR
comp=Z,224nm,22.0s,MS4.2
RJF Les Rejaudoux 86.19 341 *e*P **P** **17 02 00.8 -1.2**
RJF LR LR
comp=Z,220nm,22.0s,MS4.5
CAF Calviac 86.42 340 *e*P **P** **17 02 03.2 0.0**
comp=Z,13nm,0.9s,mb4.9
CAF Calviac 86.42 340 *e*P **P** **17 02 03.2 0.0**
CAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
CAF Calviac 86.42 340 *e*P **P** **17 02 03.2 0.0**
comp=Z,6.6nm,0.9s,mb4.9
SMRF Simiane la Rot 86.43 338 *e*P **P** **17 02 03.5 +0.3**
FRF La Foret Royal 86.53 337 *e*P **P** **17 02 03.2 -0.5**
LFF La Freslade 86.71 341 *e*P **P** **17 02 03.4 -1.2**
LMR La Mourre 86.78 337 *e*P **P** **17 02 04.6 -0.3**
comp=Z,38nm,0.9s,mb5.3
LMR La Mourre 86.78 337 *e*P **P** **17 02 04.6 -0.3**
LMR pmax pmax
comp=Z,19nm,0.9s,mb5.3
LMR La Mourre 86.78 337 *e*P **P** **17 02 04.6 -0.3**
comp=Z,19nm,0.9s,mb5.3
MTLF Montolieu 87.88 340 *e*P **P** **17 02 10.0 -0.3**
EPF Esparros 88.62 341 *e*P **P** **17 02 12.8 -1.0**
ESDC Sonseca Array 92.76 343 P P **17 02 31.5 -1.6**
comp=Z,0.2nm,0.3s,mb4.0,baz=18,slow=4.8,SNR=5.2
KEST Kesra 92.90 332 P **P** **17 02 33.1 -0.7**
comp=Z,1.7nm,0.8s,mb4.5,baz=64,slow=6.9,SNR=4.5
TORD Torodi Ar. Bea 116.33 330 PKP PKPdf 17 08 03.1 -1.7
comp=Z,1.5nm,0.9s,baz=352,slow=1.9,SNR=6.3
VNDA Vanda 123.02 178 PKP PKPdf 17 08 14.6 -1.2
comp=Z,2.1nm,0.8s,baz=4.2,slow=2.2,SNR=7.8
VNDA PKKP PKKPdf 17 18 42.4 -4.3
comp=Z,2.0nm,1.2s,baz=112,slow=2.6,SNR=3.1
VNDA Vanda 123.02 178 PKP PKPdf 17 08 14.6 -1.2
VNDA PKKP PKKPdf 17 18 42.4 -4.3
DBIC Dimbokro 124.56 334 PKP PKPdf 17 08 19.6 -1.1
comp=Z,7.0nm,1.0s,baz=305,slow=2.1,SNR=6.4
DBIC Dimbokro 124.56 334 PKIKP PKPdf 17 08 19.6 -1.1
DBIC pmax pmax
comp=Z,7.0nm,1.0s
TIC Toumodi 124.63 334 *e*PKP1 PKPdf 17 08 18.9 -1.9
comp=Z,7.7nm,0.2s
KIC Kosan Boka 124.81 334 *e*PKP1 PKPdf 17 08 18.4 -2.8
comp=Z,30nm,1.0s
LIC Lamto 125.03 334 *e*PKP1 PKPdf 17 08 19.3 -2.3
comp=Z,42nm,1.5s
LIC Lamto 125.03 334 *e*PKIKP PKPdf 17 08 20.0 -1.6
comp=Z,30nm,1.2s
LSZ Lusaka 125.63 286 *e*PKIKP PKPdf 17 08 22.4 -0.2
QSPA South Pole Qui 135.41 180 *e*PKPpre 17 08 25.6
QSPA *e*PKPdf PKPdf 17 08 36.7 -2.6
BDFB Brasilia 144.82 39 PKP PKPdf 17 08 56.4 -1.7
comp=Z,6.7nm,0.7s,baz=278,slow=5.7,SNR=17
BDFB Brasilia 144.82 39 PKIKP PKPdf 17 08 56.4 -1.7
BDFB pmax pmax
comp=Z,7.0nm,0.7s
PLCA Paso Flores 147.48 97 PKPbc PKPbc 17 09 04.2 -0.3
comp=Z,21nm,1.0s,baz=276,slow=2.6,SNR=32
PLCA Paso Flores 147.48 97 *e*PKPbc PKPbc 17 09 03.4 -1.1
CPUP Villa Florida 148.44 63 PKPbc PKPbc 17 09 07.0 -0.4
comp=Z,18nm,0.8s,baz=306,slow=2.8,SNR=43
CPUP Villa Florida 148.44 63 PKP2 PKPbc 17 09 07.0 -0.5
CPUP pmax pmax
comp=Z,18nm,0.8s
CPUP Villa Florida 148.44 63 *e*PKPdf PKPdf 17 09 03.2 -0.7
CPUP *e*PKPbc PKPbc 17 09 06.7 -0.8
CPUP PKPbc PKPbc 17 09 07.0 -0.4
NVL N'lazarevskaya 148.90 203 *e*PKP2 PKPdf 17 09 04.9 +1.6
NVL pmax pmax
comp=Z,41nm,1.3s
SNAA Sanae 151.69 195 *e*PKPdf PKPbc 17 09 12.5 -1.4
SNAA *e* 17 09 24.4
SNAA *e* 17 09 33.8
SNAA *e* 17 12 56.1
SNAA *e* 17 12 59.0
SNAA *e* 18 21 49.3
SNAA Sanae 151.69 195 *e*PKPbc PKPbc 17 09 12.4 -1.6
SNAA *e*SKP 17 12 49.9
TRQA Tornquist 152.33 87 *e*PKPdf PKPdf 17 09 06.3 -3.3
TRQA *e*PKPbc PKPbc 17 09 15.2 -1.3
VNA2 Neumayer--Watz 153.11 193 *e*PKPdf PKPdf 17 09 08.8 -1.0
VNA2 *e* 17 09 16.4
VNA2 *e* 17 09 27.3
VNA2 *e* 17 09 29.6
VNA2 *e* 17 09 35.9
VNA2 *e* 17 13 01.9
VNA2 *e* 17 13 04.6
VNA3 Neumayer Olymp 153.17 192 *e*PKPdf PKPdf 17 09 08.5 -1.4
VNA3 *e* 17 09 16.2
VNA3 *e* 17 09 26.8
VNA3 *e* 17 09 29.1
VNA3 *e* 17 09 36.3
VNA3 *e* 17 13 02.3
VNA3 *e* 17 13 05.7
VNA1 Neumayer--Stat 153.49 193 *e*PKPdf PKPbc 17 09 17.6 -0.4
VNA1 *e* 17 09 28.7
VNA1 *e* 17 09 31.1
VNA1 *e* 17 09 38.2

ISCJB ***27*** *16:55:15.1±0.3, 4076N±002×2321E±003, h11km±3km, Error ellipse: s-maj=4.0km s-min=3.3km az=17.4*
NEIC ***27*** *16:55:15.3, 4072N×2317E, h25km, MD3.4(ATH), After ATH.*
CSEM ***27*** *16:55:15.2±0.1, 4075N×2314E, h10km, ML3.9/5, Error ellipse: s-maj=1.8km s-min=1.6km az=64.0*
ATH ***27*** *16:55:15.3, 4072N×2317E, h25km, MD3.4/11*
THE ***27*** *16:55:16.3, 4072N×2317E, h8km±1km, ML3.9/5, Error ellipse: s-maj=1.2km s-min=0.7km az=52.0*
SOF ***27*** *16:55:16.3, 4071N×2314E, h22km, MD2.9*
SKO ***27*** *16:55:16.9, 4075N×2299E, h15km, M2.8, ML3.1*

ISC 27 16:55:15.6±0.3, 4075N±002×2320E±003, h11km±2km, n52, σ0°91/68, 4C, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SOH	**Sokhos**	**0.14**	**57**	P	**Pg**		**16 55 20.1**	**+1.2**
SOH				S	**Sg**		**16 55 22.9**	**+1.6**
HORT	**Hortiatis**	**0.17**	**207**	P	**Pg**		**16 55 19.6**	**+0.2**
HORT				S	**Sg**		**16 55 21.9**	**-0.1**
THE	**Thessaloniki**	**0.21**	**237**	P	**Pg**		**16 55 20.1**	**-0.1**
THE				S	**Sg**		**16 55 22.6**	**-0.6**
PLG	**Polygyros**	**0.42**	**153**	*e*PB	**Pg**		**16 55 23.9**	**0.0**
PLG				*e*SB	**Sg**		**16 55 29.6**	**+0.2**
PLG	**Polygyros**	**0.42**	**153**	P	**Pg**		**16 55 24.2**	**+0.3**
PLG				*e*Sb	**Sg**		**16 55 29.6**	**+0.2**
KNT	**Kendrikon**	**0.47**	**331**	P	**Pg**		**16 55 25.2**	**+0.3**
GRG	**Griva**	**0.64**	**289**	P	**Pg**		**16 55 28.0**	**-0.1**
OUR	**Ouranopolis**	**0.72**	**124**	P	**Pg**		**16 55 29.8**	**+0.2**
VAY	**Valandovo**	**0.75**	**320**	⇑*i*Pg	**Pg**		**16 55 29.5**	**-0.6**
VAY				*e*Sg	**Sg**		**16 55 40.1**	**+0.3**
VAY	**Valandovo**	**0.75**	**320**	⇑*i*Pg	**Pg**		**16 55 29.5**	**-0.6**
VAY				*e*Sg	**Sg**		**16 55 40.1**	**+0.3**
VAY				*e*Lg			16 55 41.0	
	comp=E,497nm,0.4s							
VAY				*e*Lg			16 55 42.1	
	comp=N,592nm,0.4s							
NVR	**Nevrokopi**	**0.78**	**39**	*e*PN	**Pn**		**16 55 31.4**	**-1.2**
NVR				*e*SN	**Sn**		**16 55 42.8**	**-1.4**
LIT	**Litokhoron**	**0.84**	**220**	P	**Pg**		**16 55 31.2**	**-0.7**
PAIG	**Paliouri**	**0.90**	**156**	P	**Pg**		**16 55 31.8**	**-1.1**
PAIG				S	**Sg**		**16 55 46.0**	**+1.4**
MMB	**Musomiste**	**0.93**	**25**	*i* Pg	**Pg**		**16 55 33.3**	**-0.3**
MMB	**Musomiste**	**0.93**	**25**	Pg	**Pg**		**16 55 33.4**	**-0.2**
MMB	**Musomiste**	**0.93**	**25**	*i* Pg	**Pg**		**16 55 33.3**	**-0.3**
KKB	**Krupnik**	**1.12**	**356**	*i* Pg	**Pg**		**16 55 36.8**	**-0.4**
KKB	**Krupnik**	**1.12**	**356**	Pg	**Pg**		**16 55 36.7**	**-0.5**
KKB	**Krupnik**	**1.12**	**356**	*i* Pg	**Pg**		**16 55 36.8**	**-0.4**
KZN	**Kozani**	**1.18**	**248**	*e*PN	**Pn**		**16 55 37.4**	**-0.5**
KZN				*e*SN	**Sn**		**16 55 53.4**	**-0.5**
STIP	**Stip**	**1.22**	**321**	*i* Pn	**Pn**		**16 55 39.3**	**+0.8**
STIP				*e*Sn	**Sn**		**16 55 57.4**	**+2.5**
STIP	**Stip**	**1.22**	**321**	*i* Pn	**Pn**		**16 55 39.3**	**+0.8**
STIP				*e*Sn	**Sn**		**16 55 57.5**	**+2.5**
STIP				*e*Lg			16 55 57.5	
	comp=N,92nm,0.2s							
STIP				*e*Lg			16 55 57.7	
	comp=E,126nm,0.3s							
FNA	**Florina**	**1.39**	**272**	P	**Pn**		**16 55 41.1**	**+0.3**
NEO	**Neokhori**	**1.44**	**179**	*e*PN	**Pn**		**16 55 41.8**	**+0.2**
NEO				*e*SN	**Sn**		**16 56 00.3**	**-0.1**
NEO	**Neokhori**	**1.44**	**179**	*e*Pn	**Pn**		**16 55 42.0**	**+0.4**
NEO				*e*Sn	**Sn**		**16 56 00.1**	**-0.3**
BIA	**Bitola**	**1.45**	**281**	*i* Pn	**Pn**		**16 55 41.8**	**+0.1**
BIA				*e*Lg			16 56 05.4	
	comp=E,50nm,0.3s							
BIA				*e*Lg			16 56 06.5	
	comp=N,32nm,0.3s							
RZN	**Rozhen**	**1.48**	**50**	*i* Pg	**Pg**		**16 55 44.6**	**+0.6**
RZN	**Rozhen**	**1.48**	**50**	Pg	**Pg**		**16 55 43.9**	**-0.1**
RZN	**Rozhen**	**1.48**	**50**	*i* Pg	**Pg**		**16 55 44.6**	**+0.6**
THL	**Klokotos Trika**	**1.49**	**218**	*e*PN	**Pn**		**16 55 42.4**	**+0.1**
KRUS	**Krusevo**	**1.60**	**293**	*i* Pn	**Pn**		**16 55 43.9**	**+1.1**
KRUS				*e*Lg			16 56 10.2	
	comp=E,17nm,0.3s							
KRUS				*e*Lg			16 56 10.4	
	comp=N,34nm,0.4s							
LIA	**Limnos Island**	**1.74**	**119**	*e*PN	**Pn**		**16 55 46.0**	**+0.3**
PLD	**Plovdiv**	**1.77**	**39**	*i* Pg	**Pg**		**16 55 49.9**	**+0.4**
PLD	**Plovdiv**	**1.77**	**39**	Pg	**Pg**		**16 55 50.0**	**+0.5**
PLD	**Plovdiv**	**1.77**	**39**	*i* Pg	**Pg**		**16 55 49.9**	**+0.4**
RDO	**Rodhopi**	**1.81**	**77**	*e*PB	**Pb**		**16 55 47.3**	**-1.5**
VTS	**Vitosha**	**1.84**	**0**	*i* Pg	**Pg**		**16 55 51.3**	**+0.3**
VTS	**Vitosha**	**1.84**	**0**	P	**Pn**		**16 55 48.8**	**+1.7**
VTS	**Vitosha**	**1.84**	**0**	*i* P	**Pn**		**16 55 48.9**	**+1.8**
VTS				*i* Pg	**Pg**		**16 55 51.3**	**+0.3**
AGG	**Agios Georgios**	**1.85**	**202**	P	**Pn**		**16 55 47.1**	**-0.1**
AGG				S	**Sn**		**16 56 11.5**	**+1.0**
KDZ	**Kurdzhali**	**1.90**	**61**	*i* Pg	**Pg**		**16 55 50.6**	**-1.5**
KDZ	**Kurdzhali**	**1.90**	**61**	Pg	**Pg**		**16 55 50.4**	**-1.7**
KDZ	**Kurdzhali**	**1.90**	**61**	*i* Pg	**Pg**		**16 55 50.6**	**-1.5**
PGB	**Panagyurishte**	**1.94**	**22**	*i* Pg	**Pg**		**16 55 52.2**	**-0.7**
LKR	**Lokris**	**2.10**	**184**	*e*PN	**Pn**		**16 55 50.7**	**0.0**
JAN	**Janina**	**2.10**	**240**	*e*PN	**Pn**		**16 55 50.5**	**-0.2**
EVR	**Evrytania**	**2.12**	**211**	*e*PB	**Pb**		**16 55 51.4**	**-2.6**
DIM	**Dimitrovgrad**	**2.19**	**53**	*i* Pg	**Pg**		**16 55 57.6**	**+0.1**
PRK	**Paraskevi**	**2.79**	**121**	*e*PN	**Pn**		**16 56 01.0**	**+0.8**
GZR	**Gura Zlata**	**4.65**	**356**	⇑*i*P	**Pg**		**16 56 42.2**	**-2.6**
BZS	**Buzias**	**5.00**	**347**	⇑*i*P	**Pn**		**16 56 30.9**	**+0.4**
BZS	**Buzias**	**5.00**	**347**	S	**Pg**		**16 56 46.8**	**-4.6**

ISCJB ***27*** *16:55:33.3±0.3, 4985N±002×1844E±003, h0km, Error ellipse: s-maj=3.4km s-min=2.3km az=11.7*
IPEC ***27*** *16:55:34.3±0.2, 4978N×1858E, h0km±2km, ML2.5/3, Error ellipse: s-maj=2.2km s-min=1.1km az=160.0*
CSEM ***27*** *16:55:34.4±0.2, 4978N×1855E, h2km, ML3.2/7, Error ellipse: s-maj=4.1km s-min=2.5km az=9.0*
NEIC ***27*** *16:55:35.2±0.5, 4982N×1843E, h5km, MG2.8(WAR), Error ellipse: s-maj=9.1km s-min=5.3km az=204.0*
VIE ***27*** *16:55:35.1±0.6, 4970N×1847E, h0km, mb2.3/3, ML2.5/4, Error ellipse: s-maj=4.4km s-min=3.0km az=78.0 22 km SE of Ostrava Suspected Mining induced.*
PRU ***27*** *16:55:36.0, 4984N×1845E, h0km*

ISC 27 16:55:34.7±0.3, 4981N±002×1848E±003, h0km, n40, σ1°812/74, 9C-5D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.22**	**279**	*e*PG	**Pg**		**16 55 40.4**	**+1.5**
OKC				*e*SG	**Sg**		**16 55 43.7**	**+1.9**
	comp=Z,323nm,0.6s							
RAC	**Raciborz**	**0.34**	**326**	*e*Pg	**Pg**		**16 55 42.5**	**+1.3**
RAC				*e*Sg	**Sg**		**16 55 48.1**	**+2.6**
OJC	**Ojcow**	**0.94**	**63**	*e*Pg	**Pg**		**16 55 52.2**	**-0.6**
OJC				*e*Sg	**Sg**		**16 56 04.5**	**-0.5**
JAVC	**Velka Javorina**	**1.09**	**210**	*e*Pg	**Pg**		**16 55 56.5**	**+1.0**
JAVC				*e*Sg	**Sg**		**16 56 13.1**	**+3.5**
	comp=Z,44nm,0.6s							
KOLL	**Kolacno**	**1.23**	**183**	*i* PN	**Pn**		**16 55 58.6**	**-0.5**
KOLL				*e*SN	**Sn**		**16 56 16.3**	**-0.1**
NIE	**Niedzica**	**1.25**	**107**	*e*Pg	**Pg**		**16 55 58.4**	**-0.3**
NIE				*e*Sg	**Sg**		**16 56 16.8**	**+1.9**
VRAC	**Vranov**	**1.33**	**249**	*e*Pg	**Pg**		**16 55 59.8**	**-0.3**
VRAC				*e*Sg	**Sg**		**16 56 17.7**	**+0.4**
	comp=Z,74nm,0.6s							
VRAC				S	**Sg**		**16 56 18.2**	**+0.9**
VRAC	**Vranov**	**1.33**	**249**	⇑*i*P	**Pg**		**16 56 00.4**	**+0.3**
VYHS	**Vyhne**	**1.33**	**170**	*i* PN	**Pn**		**16 55 59.9**	**-0.6**
SMOL	**Smolenice**	**1.47**	**209**	*i* PN	**Pn**		**16 56 02.3**	**-0.1**
SMOL				*e*SN	**Sn**		**16 56 24.0**	**+1.8**
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG	**Pg**		**16 56 02.8**	**-0.6**
DPC				*e*SG	**Sg**		**16 56 23.3**	**+0.6**
	comp=Z,36nm,0.6s							
KRUC	**Moravsky**	**1.55**	**242**	*e*Pn	**Pn**		**16 56 03.7**	**+0.1**
KRUC				*e*Sg	**Sg**		**16 56 24.3**	**-0.3**
	comp=Z,42nm,0.6s							
UPC	**Upice**	**1.74**	**295**	*e*PG	**Pg**		**16 56 06.9**	**-1.1**
UPC				*e*SG	**Sg**		**16 56 30.9**	**+0.4**
KSP	**Ksiaz**	**1.75**	**307**	*e*Pn	**Pn**		**16 56 02.4**	**-3.8**
KSP				*e*Pg	**Pg**		**16 56 05.8**	**-2.4**
KSP				*e*Sn	**Sn**		**16 56 30.2**	**+1.1**
KSP				*e*Sg	**Sg**		**16 56 34.7**	**+3.9**
KSP	**Ksiaz**	**1.75**	**307**	*e*Pg	**Pg**		**16 56 07.7**	**-0.5**
KSP				*e*Sg	**Sg**		**16 56 29.9**	**-0.9**
KSP	**Ksiaz**	**1.75**	**307**	*e*Pn	**Pn**		**16 56 05.5**	**-0.7**
KSP				*e*Pg	**Pg**		**16 56 07.7**	**-0.5**
KSP				*e*Sg	**Sg**		**16 56 29.9**	**-0.9**
STHS	**Stebnicka Huta**	**1.84**	**101**	*i* PN	**Pn**		**16 56 09.7**	**+2.2**
STHS				*e*SN	**Sn**		**16 56 36.4**	**+5.0**
ZST	**Bratislava**	**1.85**	**210**	*i* PN	**Pn**		**16 56 07.9**	**+0.3**
ZST				*e*SN	**Sn**		**16 56 31.9**	**+0.2**
TREC	**Trest**	**2.02**	**256**	*e*PN	**Pn**		**16 56 09.3**	**-0.6**
TREC				*e*PG	**Pg**		**16 56 11.3**	**-2.1**
TREC				*e*SG	**Sg**		**16 56 40.3**	**+0.8**
PSZ	**Piszkesteto**	**2.10**	**153**	*e*Pn	**Pn**		**16 56 10.6**	**-0.5**
PSZ				S	**Sn**		**16 56 32.7**	**-5.3**
PSZ	**Piszkesteto**	**2.10**	**153**	⇑*i*P	**Pn**		**16 56 10.7**	**-0.4**
PSZ	**Piszkesteto**	**2.10**	**153**	*e*Pn	**Pn**		**16 56 10.7**	**-0.5**
CRVS	**Cervenica-Dubn**	**2.15**	**114**	*e*PN	**Pn**		**16 56 14.8**	**+3.1**
CONA	**Conrad Observa**	**2.55**	**224**	⇓*i*Pn	**Pn**		**16 56 16.7**	**-0.6**
CONA				⇓*i*Sn	**Sn**		**16 56 48.3**	**-0.8**
CSNA	**Conrad Observa**	**2.56**	**224**	⇓*i*Pn	**Pn**		**16 56 16.8**	**-0.5**
CSNA				⇓*i*Sn	**Sn**		**16 56 48.3**	**-0.8**
CSNA	**Conrad Observa**	**2.56**	**224**	Pn	**Pn**		**16 56 16.8**	**-0.5**
CSNA				Sn	**Sn**		**16 56 48.3**	**-0.8**
PRU	**Pruhonice**	**2.56**	**276**	*e*PN	**Pn**		**16 56 16.7**	**-0.6**
PRU				*e*PG	**Pg**		**16 56 21.5**	**-2.2**
PRU				*e*SG	**Sg**		**16 56 57.2**	**+0.4**
	comp=Z,16nm,0.6s							
PVCC	**Panska Ves**	**2.62**	**288**	*e*PG	**Pg**		**16 56 23.2**	**-1.7**
PVCC				*e*SG	**Sg**		**16 56 58.5**	**-0.3**
	comp=Z,24nm,0.4s							
TRPA	**Tarpa**	**3.15**	**121**	⇑*i*P	**Pn**		**16 56 24.8**	**-0.8**
ARSA	**Arzberg**	**3.23**	**219**	⇑*i*Pn	**Pn**		**16 56 25.9**	**-0.6**
ARSA				⇑*i*Sg	**Sg**		**16 57 20.5**	**+2.2**
	comp=Z,5.4nm,0.7s							
KHC	**Kasperske Hory**	**3.27**	**260**	*e*PN	**Pn**		**16 56 27.3**	**+0.1**
KHC				*e*PG	**Pg**		**16 56 34.3**	**-3.1**
KHC				*e*SG	**Sg**		**16 57 19.5**	**-0.2**
	comp=Z,13nm,0.5s							
MOA	**Molln**	**3.41**	**237**	⇑*i*Pn	**Pn**		**16 56 28.6**	**-0.5**
MOA				⇑*i*Pg	**Pg**		**16 56 39.0**	**-0.9**
MOA	**Molln**	**3.41**	**237**	Pg	**Pg**		**16 56 39.0**	**-0.9**
PKSM	**Moragy**	**3.60**	**178**	⇓*i*P	**Pn**		**16 56 31.0**	**-0.7**
CLL	**Collm**	**3.81**	**295**	*e*Pg	**Pg**		**16 56 45.0**	**-2.6**
CLL				*e*Sg	**Sg**		**16 57 38.0**	**+1.1**
	comp=Z,12nm,0.7s							
NKC	**Novy Kostel**	**3.92**	**279**	*e*SG	**Sg**		**16 57 41.3**	**+0.9**
	comp=Z,9.1nm,0.4s							
DRGR		**4.13**	**135**	⇑*i*P	**Pn**		**16 56 38.6**	**-0.4**
BUR08	**Bucovina Ar. S**	**4.94**	**113**	*e*Pn	**Pn**		**16 56 50.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**4.94**	**113**	*e*Pn	**Pn**		**16 56 50.5**	**+0.3**
BURAR	**Bucovina Array**	**4.97**	**114**	⇑*i*P	**Pn**		**16 56 51.3**	**+0.8**

IDC 27 17:15:28.7±9.8, 1163S×16582E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, MS3.8/4, Ms1 3.8/4, ms1mx3.2/33, Error ellipse: s-maj=299.0km s-min=54.8km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.17**	**290**	LR	LR		17 18 47.0	
	comp=Z,124nm,18.6s,baz=342,slow=32							
URZ	**Urewera**	**28.37**	**161**	LR	LR		17 31 18.0	
	comp=Z,117nm,19.2s,baz=322,slow=34							
WRA	**Warramunga Arr**	**31.36**	**251**	P	P		17 21 51.8	+0.4
	0.7nm,0.9s,baz=84,slow=9.3,SNR=6.0							
ASAR	**Alice Springs**	**32.60**	**244**	P	P		17 22 01.9	-0.3
	0.3nm,0.7s,baz=66,slow=8.8,SNR=5.5							
MKAR	**Makanchi Array**	**94.00**	**317**	P	P		17 28 48.7	-0.1
	0.8nm,0.8s,baz=91,slow=3.8,SNR=5.8							
PMSA	**Palmer Station**	**95.14**	**161**	LR	LR		18 06 08.2	
	comp=Z,149nm,18.5s,baz=297,slow=32							
USHA	**Ushuaia**	**99.66**	**152**	LR	LR		18 07 14.8	
	comp=Z,108nm,18.8s,baz=207,slow=31							

IDC ***27*** *17:25:01.9±0.9, 8.12S×11851E, h0km, mb4.0/6, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, ML3.9/2, MS3.2/2, Ms1 3.3/2, ms1mx3.0/29, Error ellipse: s-maj=42.1km s-min=16.5km az=65.0*
ISCJB ***27*** *17:25:03.3±4.9, 8.14S±006×1186E±0.1, h26km±37km, mb4.0/6, Error ellipse: s-maj=24.9km s-min=9.3km az=1.6*
NEIC ***27*** *17:25:04.2±5.4, 8.16S×11846E, h17km±35km, mb4.2/2, Error ellipse: s-maj=20.1km s-min=8.5km az=79.0*
DJA ***27*** *17:25:08, 803S×11862E, h30km, MLv4.6/4*

ISC 27 17:25:05.5±4.9, 812S±006×1186E±01, h25km±38km, n15, σ0°64/16, mb4.0/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.29**	**20**	Pn	**Pn**		**17 25 55.8**	**+0.4**
	21nm,0.3s,baz=191,slow=5.8,SNR=43							
KAPI				Sn	**Sn**		**17 26 33.2**	**-0.5**
	15nm,0.3s,baz=180,slow=15,SNR=3.8							
KAPI				LR	LR		17 27 29.2	
	comp=Z,287nm,19.5s,baz=357,slow=44							
FITZ	**Fitzroy Crossi**	**12.06**	**146**	*e*P	**Pn**		**17 27 56.5**	**+0.6**
	8.8nm,0.8s							
MBWA	**Marble Bar**	**13.01**	**175**	*e*P	**Pn**		**17 28 08.3**	**-0.6**
MBWA				*e*S	**Sn**		**17 30 23.4**	**-10**
WRA	**Warramunga Arr**	**19.25**	**129**	P	**Pn**		**17 29 28.5**	**-0.7**
	0.3nm,0.3s,baz=302,slow=12,SNR=10							
WRAB	**Tennant Creek**	**19.25**	**129**	*e*P	**Pn**		**17 29 29.0**	**-

JTN			S	Sn	17 28 50.4	+0.1
JAGN	**Aguni-jima**	**2.91**	**244**	P	Pn	17 28 19.1	+0.5
JAGN				S	Sn	17 28 51.7	-0.7
JKE	**Kume jima 2**	**3.39**	**243**	P	Pn	17 28 25.3	0.0
JKE				S	Sn	17 29 03.6	-0.7

ISK ***27*** *17:28:14.1, 37.11N×29.13E, h10km, MD2.9*
CSEM ***27*** *17:28:14.5±0.1, 37.14N×2908E, h12km, MD2.9, Error ellipse: s-maj=3.0km s-min=1.8km az=146.0*
ISCJB ***27*** *17:28:15.0±0.6, 37.10N±004×2910E±004, h9km±7km, Error ellipse: s-maj=7.2km s-min=5.1km az=168.0*
DDA ***27*** *17:28:16.7, 3723N×2905E, h8km±7km, Md2.9*

ISC 27 17:28:15.6±0.6,**3710N**±004×**2909E**±004,**h14**km±6km,**n16**, σ1🙂**03**/25,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.40**	**70**	*i* P	**Pg**	**17 28 23.8**	**+0.1**
GOLH				*i* S	**Sg**	**17 28 31.9**	**+2.7**
TURN	**Turunc**	**0.45**	**240**	*i* P	**Pg**	**17 28 28.9**	**+4.5**
TURN				*i* S	**Sg**	**17 28 40.4**	**+10**
DALT	**Dalyan (Mudla)**	**0.49**	**228**	*e*PG	**Pg**	**17 28 24.9**	**-0.4**
DALT				*e*SG	**Sg**	**17 28 32.4**	**+0.7**
YER	**Yerkesik**	**0.64**	**273**	*e*PG	**Pg**	**17 28 27.6**	**-0.5**
YER				*e*SG	**Sg**	**17 28 37.6**	**+0.9**
DENT	**Denizli**	**0.66**	**356**	*e*PG	**Pg**	**17 28 27.1**	**-1.3**
ELL	**Elmali**	**0.75**	**118**	*e*PG	**Pg**	**17 28 28.3**	**-1.8**
AKAS	**Kas**	**0.96**	**154**	*i* P	**Pb**	**17 28 35.6**	**+1.7**
AKAS				*i* S	**Sb**	**17 28 55.0**	**+8.6**
AYDN	**Tasoluk**	**1.11**	**301**	*i* P	**Pb**	**17 28 35.4**	**-1.2**
AYDN				*i* S	**Sb**	**17 28 51.4**	**+0.5**
AYDN	**Tasoluk**	**1.11**	**301**	*i* P	**Pb**	**17 28 35.4**	**-1.2**
AYDN				*i* S	**Sb**	**17 28 51.3**	**+0.4**
BCK	**Bucak**	**1.25**	**73**	*e*PN	**Pn**	**17 28 37.6**	**-1.0**
DAT	**Datca**	**1.26**	**253**	*e*PN	**Pn**	**17 28 38.8**	**+0.1**
KHAL	**Karahalli**	**1.31**	**14**	*i* P	**Pn**	**17 28 39.1**	**-0.3**
KHAL				*i* S	**Sb**	**17 28 57.5**	**+0.9**
ISP	**Isparta**	**1.35**	**56**	*e*PN	**Pn**	**17 28 40.0**	**0.0**
MANT	**Manisa**	**1.45**	**343**	*i* P	**Pn**	**17 28 40.3**	**-1.0**
MANT				*i* S	**Sn**	**17 29 01.6**	**+1.5**
KULA	**Kula-Manisa**	**1.45**	**347**	*e*PN	**Pn**	**17 28 40.6**	**-0.7**
SHUT	**Suhut-Afyon**	**1.86**	**38**	*e*PN	**Pn**	**17 28 47.1**	**+0.2**

ISCJB ***27*** *17:29:06.9±0.7, 37.17N±004×2903E±005, h1km±11km, Error ellipse: s-maj=7.4km s-min=5.6km az=37.4*
ISK ***27*** *17:29:06.1, 37.17N×2898E, h5km, MD2.8*
CSEM ***27*** *17:29:06.1±0.1, 3715N×2899E, h2km, MD2.8, Error ellipse: s-maj=3.7km s-min=2.6km az=178.0*
DDA ***27*** *17:29:08.3, 3721N×2893E, h7km±16km, Md2.8*

ISC 27 17:29:07.4±0.6,**3717N**±004×**2903E**±005,**h2**km±9km,**n11**, σ1🙂**16**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.43**	**81**	*i* P	**Pg**	**17 29 14.6**	**-1.0**
GOLH				*i* S	**Sg**	**17 29 29.0**	**+7.8**
TURN	**Turunc**	**0.45**	**229**	*i* P	**Pg**	**17 29 19.1**	**+3.0**
TURN				*i* S	**Sg**	**17 29 36.8**	**+15**
DALT	**Dalyan (Mudla)**	**0.51**	**218**	*e*PG	**Pg**	**17 29 16.0**	**-1.1**
DALT				*e*SG	**Sg**	**17 29 24.5**	**+0.8**
DENT	**Denizli**	**0.58**	**0**	*e*PG	**Pg**	**17 29 17.8**	**-0.8**
DENT				*e*SG	**Sg**	**17 29 27.9**	**+1.7**
YER	**Yerkesik**	**0.60**	**267**	*e*PG	**Pg**	**17 29 18.2**	**-0.7**
YER				*e*SG	**Sg**	**17 29 26.7**	**0.0**
ELL	**Elmali**	**0.82**	**121**	*e*PG	**Pg**	**17 29 23.7**	**+0.6**
AKAS	**Kas**	**1.04**	**154**	*i* P	**Pg**	**17 29 27.4**	**0.0**
AKAS				*i* S	**Sg**	**17 29 46.9**	**+6.1**
DAT	**Datca**	**1.25**	**250**	*e*PN	**Pn**	**17 29 30.8**	**-1.0**
KHAL	**Karahalli**	**1.25**	**17**	*i* P	**Pg**	**17 29 29.0**	**-2.5**
KHAL				*i* S	**Sg**	**17 29 52.6**	**+5.0**
ISP	**Isparta**	**1.35**	**60**	*e*PN	**Pn**	**17 29 34.6**	**+1.2**
KULA	**Kula-Manisa**	**1.37**	**348**	*e*PN	**Pn**	**17 29 33.8**	**+0.1**

ISCJB ***27*** *17:39:50.0±1.0, 2389N±002×12239E±002, h12km±7km, Error ellipse: s-maj=4.1km s-min=2.9km az=159.9*
TAP ***27*** *17:39:50.7, 2391N×12226E, h8km, ML2.9, D*
JMA ***27*** *17:39:51.9±0.4, 2408N×12236E, h27km, M2.1*

ISC 27 17:39:49.6±0.5,**2390N**±003×**12238E**±002,**h9**km±3km,**n37**, σ0🙂**73**/68,**1C**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=276	**0.71**	**277**	*e*P	**Pg**	**17 40 03.3**	**-0.1**
HWA				*e*S	**Sg**	**17 40 12.6**	**-0.1**
EHP	**Heping Village** baz=310	**0.72**	**305**	*e*P	**Pg**	**17 40 04.0**	**+0.5**
TWD	**Chiawan** baz=285	**0.74**	**284**	*e*P	**Pg**	**17 40 04.4**	**+0.5**
TWD				S	**Sg**	**17 40 13.5**	**-0.1**
ENA	**Nanau** baz=317	**0.79**	**312**⇑	*i*P	**Pg**	**17 40 05.2**	**+0.4**
ENA				*e*S	**Sg**	**17 40 15.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.81**	**45**	P	**Pg**	**17 40 05.3**	**+0.2**
YOJ				S	**Sg**	**17 40 14.8**	**-0.8**
TWC	**Suao** baz=331	**0.86**	**326**	P	**Pg**	**17 40 06.0**	**-0.1**
TWC				*e*S	**Sg**	**17 40 17.6**	**+0.2**
ESL	**Shilin** baz=262	**0.87**	**265**	P	**Pg**	**17 40 06.1**	**-0.3**
ESL				S	**Sg**	**17 40 17.5**	**-0.3**
ILA	**Ilan** baz=331	**1.04**	**326**	*e*P	**Pg**	**17 40 08.8**	**-0.9**
EHY	**Hungye** baz=244	**1.05**	**248**	P	**Pg**	**17 40 09.4**	**-0.3**
EHY				S	**Sg**	**17 40 23.1**	**-0.2**
TWE	**Neicheng** baz=326	**1.05**	**322**	P	**Pg**	**17 40 09.8**	**0.0**
TWE				*e*S	**Sg**	**17 40 24.1**	**+0.6**
ENTT	**Nioudou** baz=318	**1.05**	**315**	P	**Pg**	**17 40 10.0**	**+0.2**
ENTT				S	**Sg**	**17 40 23.7**	**+0.3**
WHF	**Hehuan Shan** baz=284	**1.05**	**284**	*e*P	**Pg**	**17 40 09.5**	**-0.3**
WHF				*e*S	**Sg**	**17 40 22.4**	**-1.1**
NNS	**Nan Shan** baz=303	**1.07**	**301**	P	**Pg**	**17 40 10.1**	**-0.1**
NNS				*e*S	**Sg**	**17 40 23.7**	**-0.4**
TWF1	**Yuli** baz=237	**1.13**	**242**	P	**Pg**	**17 40 11.1**	**-0.3**
TWF1				*e*S	**Sg**	**17 40 25.8**	**-0.2**
TWT	**Tachien** baz=288	**1.16**	**288**	*e*P	**Pb**	**17 40 11.5**	**-0.3**
TWT				*e*S	**Sg**	**17 40 26.8**	**-0.1**
TWB1	**Santiao Chiao** baz=347	**1.16**	**342**	P	**Pb**	**17 40 12.3**	**+0.4**
TWB1				*e*S	**Sg**	**17 40 28.5**	**+1.4**
NSK	**Sanguang** baz=312	**1.22**	**310**	P	**Pb**	**17 40 12.2**	**-0.6**
NSK				*e*S	**Sb**	**17 40 28.2**	**-0.4**
NWF	**Wu-fen Shan** baz=339	**1.29**	**335**	*e*P	**Pn**	**17 40 12.6**	**-1.3**
TWA	**Mucha** baz=329	**1.30**	**326**	P	**Pn**	**17 40 14.0**	**-0.1**
TWA				*e*S	**Sb**	**17 40 31.8**	**+0.6**
IRIF	**Iriomote-Funau**	**1.31**	**70**	P	**Pn**	**17 40 14.3**	**+0.2**
IRIF				S	**Sb**	**17 40 30.2**	**-1.1**
SMLT	**Sun Moon Lake** baz=268	**1.36**	**270**	*e*P	**Pn**	**17 40 14.7**	**0.0**
SMLT				*e*S	**Sb**	**17 40 31.5**	**-1.2**
TYC	**Yuchr** baz=269	**1.40**	**271**	*e*P	**Pn**	**17 40 15.7**	**+0.4**
TYC				*e*S	**Sb**	**17 40 33.1**	**-0.7**
	baz=269						
ELDTW	**Lidau** baz=237	**1.44**	**241**	*e*P	**Pn**	**17 40 15.1**	**-0.8**
ELDTW				*e*S	**Sn**	**17 40 33.0**	**-1.9**
NSTT	**Nanjuang** baz=301	**1.46**	**300**	*e*P	**Pn**	**17 40 16.9**	**+0.7**
NSTT				*e*S	**Sn**	**17 40 34.8**	**-0.6**
TWS1	**Kuangyinshan** baz=327	**1.49**	**324**	*e*P	**Pn**	**17 40 16.2**	**-0.4**
ALS	**Alishan** baz=253	**1.50**	**255**	*e*P	**Pn**	**17 40 16.6**	**0.0**
ALS				*e*S	**Sn**	**17 40 35.8**	**-0.5**
JKRS	**Kuro-shima**	**1.53**	**77**	P	**Pn**	**17 40 18.3**	**+1.2**
JKRS				*e*S	**Sn**	**17 40 37.9**	**+0.8**
TWQ1	**Liyutan** baz=287	**1.54**	**287**	*e*P	**Pn**	**17 40 17.4**	**+0.1**
TWQ1				*e*S	**Sn**	**17 40 37.1**	**-0.3**
TCU	**Taichung** baz=279	**1.58**	**279**	*e*P	**Pn**	**17 40 18.9**	**+1.1**
CHN5	**Tsauling** baz=257	**1.59**	**260**	*e*P	**Pn**	**17 40 18.2**	**+0.2**
CHN5				*e*S	**Sn**	**17 40 38.0**	**-0.6**
TWG	**Pinlang** baz=224	**1.61**	**229**	*e*P	**Pn**	**17 40 18.8**	**+0.5**
STYT	**Tauyuan** baz=241	**1.66**	**244**	*e*P	**Pn**	**17 40 19.6**	**+0.6**
STYT				*e*S	**Sn**	**17 40 39.7**	**-0.7**
JIJ	**Ishigaki jima** baz=246	**1.68**	**74**	P	**Pn**	**17 40 18.8**	**-0.4**
JIJ				S	**Sn**	**17 40 39.0**	**-1.8**
CHN4	**Tsaushan** baz=249	**1.73**	**252**	*e*P	**Pn**	**17 40 20.1**	**+0.3**
CHN4				*e*S	**Sn**	**17 40 43.4**	**+1.3**
WTP	**Ta-pu** baz=246	**1.75**	**249**	*e*P	**Pn**	**17 40 21.0**	**+0.9**
WTP				*e*S	**Sn**	**17 40 43.1**	**+0.5**
CHN1	**Nanshi** baz=245	**1.84**	**248**	*e*P	**Pn**	**17 40 23.0**	**+1.5**
CHN1				*e*S	**Sn**	**17 40 46.5**	**+1.6**
SSD	**Sandimen** baz=232	**1.97**	**235**	*e*P	**Pn**	**17 40 24.9**	**+1.6**
SSD				*e*S	**Sn**	**17 40 48.1**	**-0.1**
	baz=232						

IDC ***27*** *17:42:38.7±0.6, 5111N×17931W, h0km, mb4.2/19, mb1 4.4/20, mb1mx4.4/25, mbtmp4.3/20, ML4.7/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/46, Error ellipse: s-maj=20.3km s-min=13.5km az=164.0*
BJI ***27*** *17:42:41.1, 5100N×17920W, h40km, mB5.1, mb4.7, Ms4.7, Msz4.6*
MOS ***27*** *17:42:41.9±1.1, 5106N×17920W, h33km, mb4.8/27, Error ellipse: s-maj=11.3km s-min=7.4km az=107.3*
NEIC ***27*** *17:42:43.1, 5100N×17920W, h16km, mb4.6/31, ML4.3(AEIC), After AEIC.*
ISCJB ***27*** *17:42:46.2±0.8, 5128N±007×17922W±003, h59km±6km, mb4.5/61, MS4.2/10, Error ellipse: s-maj=11.0km s-min=3.3km az=5.4*

ISC 27 17:42:48.0±0.7,**5133N**±007×**17921W**±003,**h59**km±5km, **h36**km±6.0km:**pP-P**,**n280**,σ0🙂**73**/280,**mb4.5**/61,**MS4.2**/10, **72C-66D**,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.67**	**69**	P	**Pn**	**17 43 13.2**	**-1.7**
ADK				S	**Sn**	**17 43 36.0**	**+0.8**
ATKA	**Atka Island**	**3.24**	**72**	P	**Pn**	**17 43 35.4**	**-0.8**
SMY	**Shemya**	**4.37**	**291**	P	**Pn**	**17 43 51.7**	**0.0**
SMY				S	**Sn**	**17 44 44.4**	**+3.2**
FX1	**Attu Island--F** 11nm,0.3s,baz=217,slow=5.6,SNR=37	**4.95**	**291**	Pn	**Pn**	**17 43 58.3**	**-1.5**
FX1				Sn	**Sn**	**17 45 06.5**	**+11**
	22nm,0.3s,baz=156,slow=23,SNR=8.4						
FX1				LR	LR	17 45 43.7	
	comp=Z,536nm,20.3s,baz=252,slow=37						
FX1	**Attu Island--F**	**4.95**	**291**	P	**Pn**	**17 44 00.4**	**+0.7**
SPIA	**Saint Paul Isl**	**7.87**	**38**	P	**Pn**	**17 44 42.3**	**+2.8**
UNV	**Unalaska Valle**	**8.14**	**67**	*e*P	**Pn**	**17 44 42.8**	**-0.6**
PET	**Petropavlovsk**	**13.69**	**286**	*e*P	**Pn**	**17 46 00.8**	**+1.9**
PET				*e*S	**Sn**	**17 48 32.2**	**+3.1**
PET				pmax	pmax		
	comp=Z,32nm,0.6s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PETK	**Petropavlovsk-** comp=Z,0.2nm,0.3s,baz=111,slow=19,SNR=3.1	**14.26**	**286**	Pn	**Pn**	**17 46 05.2**	**-1.3**
PETK				LR	LR	17 49 44.6	
	comp=Z,86nm,21.5s,baz=103,slow=30						
OHAK	**Old Harbor**	**16.19**	**59**	*e*Pn	**Pn**	**17 46 26.5**	**-4.8**
KDAK	**Kodiak Island** comp=Z,8nm,0.3s,baz=311,slow=18,SNR=12	**16.67**	**57**	Pn	**Pn**	**17 46 33.0**	**-4.4**
BILL	**Bilibino**	**18.21**	**342**⇑	*e*P	**Pn**	**17 46 55.8**	**-0.3**
BILL				pmax	pmax		
	comp=Z,20nm,1.2s						
BILL				MLR	MLR		
	comp=Z,500nm,18.0s						
BILL	**Bilibino** comp=Z,8.9nm,0.8s	**18.21**	**342**	*e*P	**Pn**	**17 46 55.5**	**-0.6**
PPLA	**Purkeypile** comp=Z,22nm,0.6s	**18.52**	**41**	*e*P	**Pn**	**17 47 01.4**	**+1.4**
SEW	**Seward** comp=Z,10nm,0.6s	**18.78**	**51**	*e*P	**Pn**	**17 47 00.5**	**-2.6**
CHUM	**Lake Minchumin** comp=Z,12nm,0.6s	**18.93**	**38**	*e*P	**Pn**	**17 47 04.1**	**-0.8**
SEY	**Seymchan**	**19.11**	**318**	*e*P	**Pn**	**17 47 06.4**	**-0.7**
KTH	**Kantishna Hill** comp=Z,24nm,0.6s	**19.33**	**40**	*e*P	**Pn**	**17 47 09.0**	**-0.6**
TRF	**Thorofare Moun** comp=Z,125nm,1.6s	**19.54**	**41**	*e*P	**Pn**	**17 47 10.5**	**-1.6**
MCK	**McKinley**	**20.21**	**40**	*e*P	**P**	**17 47 18.5**	**+0.9**
MCK				pmax	pmax		
	comp=Z,333nm,2.9s						
MCK	**McKinley** comp=Z,333nm,2.9s	**20.21**	**40**	*e*Pn	**P**	**17 47 18.5**	**+1.0**
COLA	**College**	**21.11**	**38**	*e*P	**P**	**17 47 27.9**	**+0.6**
COLA	**College** comp=Z,10.0nm,0.8s,mb4.2	**21.11**	**38**	*e*P	**P**	**17 47 26.3**	**-1.0**
PAX	**Paxson**	**21.41**	**44**	*e*P	**P**	**17 47 29.7**	**-0.8**
PAX				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
PAX	**Paxson** comp=Z,9.9nm,0.6s,mb4.3	**21.41**	**44**	*e*P	**P**	**17 47 29.7**	**-0.7**
COLD	**Coldfoot** comp=Z,9.2nm,0.9s,mb4.1	**21.43**	**31**	*e*P	**P**	**17 47 30.7**	**0.0**
EGAK	**Eagle** comp=Z,28nm,1.1s,mb4.6	**23.76**	**41**	*e*P	**P**	**17 47 54.2**	**-0.3**
DAWY	**Dawson**	**24.32**	**43**	*e*P	**P**	**17 47 59.0**	**-0.6**
YSS	**Yuzh-Sakhalins**	**25.07**	**275**⇑	*e*P	**P**	**17 48 06.9**	**+0.3**
YSS				pmax	pmax		
	comp=E,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.8						
YSS	**Yuzh-Sakhalins** comp=Z,14nm,0.8s,mb4.5	**25.07**	**275**	*e*P	**P**	**17 48 07.2**	**+0.6**
HABR	**Khabarovsk**	**29.24**	**283**	*e*P	**P**	**17 48 40.3**	**-3.6**
HABR				*e**SP	sP	17 48 54.5	-11
HABR				*e*		17 49 33.8	
HABR				*e*		17 51 46.3	
HABR				*e*S	**S**	**17 53 31.2**	**-1.0**
HABR				*e**SS	sS	17 53 48.1	-8.9
HABR				*e*SS	SS	17 54 57.8	-40
HABR				*e*		17 55 29.3	
HABR				*e*		17 59 20.9	
HABR				MLR	MLR		
	comp=Z,110nm,16.0s,MS3.6						
YAK	**Yakutsk**	**29.26**	**311**⇑	*e*P	**P**	**17 48 44.1**	**+0.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
TIXI	**Tiksi**	**30.56**	**331**	*e*P	**P**	**17 48 56.5**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.8						
KLR	**Kul'dur**	**30.95**	**286**	*e*P	**P**	**17 48 53.7**	**-5.4**
MJAR	**Matsushiro Arr** comp=Z,0.3nm,0.5s,mb3.5,baz=25,slow=3.2,SNR=3.2	**33.52**	**261**	P	**P**	**17 49 19.1**	**-2.6**
YKA	**Yellowknife Ar** comp=Z,3.4nm,0.6s,mb4.5,baz=281,slow=8.1,SNR=66	**35.45**	**46**	P	**P**	**17 49 37.6**	**-0.5**
YKA				PcP	PcP	17 52 06.4	+0.1
	comp=Z,0.3nm,0.5s,baz=289,slow=3.1,SNR=4.0						
YKA				ScP	ScP	17 55 51.0	+4.2
	comp=Z,0.2nm,0.7s,baz=290,slow=3.3,SNR=4.0						
YKA				LR	LR	18 06 18.5	
	comp=Z,37nm,20.1s,MS3.1,baz=230,slow=40						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**17 49 37.6**	**-0.5**
YKA				PcP	PcP	17 52 06.4	+0.1
YKA				ScP	ScP	17 55 51.0	+4.2
YKA				LR	LR	18 06 18.5	
B07A	**Winthrop** baz=37	**37.28**	**71**	⇓P	**P**	**17 49 54.0**	**+0.2**
A08A	**Turner Farm, O** baz=37	**37.56**	**69**	⇑P	**P**	**17 49 56.3**	**+0.1**
C07A	**Waterville** baz=38	**37.68**	**72**	⇓P	**P**	**17 49 57.1**	**-0.1**
B08A	**Colville Reser** baz=38	**37.80**	**70**	⇓P	**P**	**17 49 58.6**	**+0.4**
BOD	**Bodaibo**	**37.80**	**307**	*e*P	**P**	**17 49 56.4**	**-1.7**
BOD				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
A09A	**Danville** baz=38	**37.95**	**69**	⇓P	**P**	**17 49 59.4**	**-0.1**
HIA	**Hailar**	**38.07**	**292**	*e*P	**P**	**17 49 58.8**	**-1.7**
C08A	**Higginbotham F** baz=38	**38.24**	**71**	⇑P	**P**	**17 50 01.9**	**0.0**
B09A	**Rice** baz=38	**38.46**	**70**	⇑P	**P**	**17 50 03.8**	**0.0**
A10A	**Northport** baz=38	**38.55**	**68**	⇑P	**P**	**17 50 04.6**	**+0.1**
RSW	**Rattlesnake Hi**	**38.59**	**73**	*e*P	**P**	**17 50 07.6**	**+2.8**
HAWA	**Hanford**	**38.62**	**73**	*e*P	**P**	**17 50 06.2**	**+1.0**
F07A	**Phinny Hill Vi** baz=38	**38.63**	**74**	⇑P	**P**	**17 50 05.8**	**+0.5**
D08A	**Wollman Farm,** baz=38	**38.66**	**72**	⇓P	**P**	**17 50 05.6**	**+0.1**
C09A	**Chrisman Ranch** baz=38	**38.69**	**71**	⇑P	**P**	**17 50 05.9**	**+0.3**
E08A	**Dider Farm, El** baz=39	**38.86**	**73**	⇑P	**P**	**17 50 07.4**	**+0.3**
EDM	**Edmonton**	**39.06**	**61**	*e*P	**P**	**17 50 08.7**	**0.0**
A11A	**Hall Mountain,** baz=39,SNR=7.4	**39.26**	**68**	⇓P	**P**	**17 50 10.1**	**-0.3**
KSRS	**Korea Array** comp=Z,4.2nm,0.9s,mb4.2,baz=59,slow=8.3,SNR=12	**39.38**	**271**	P	**P**	**17 50 10.9**	**-0.7**
KSRS	**Korea Array**	**39.38**	**271**	P	**P**	**17 50 11.0**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
E09A	**Wood Farm, Sta** baz=39	**39.39**	**72**	⇑P	**P**	**17 50 11.7**	**+0.1**
D10A	**Wagner Farm, O** baz=40	**39.64**	**71**	⇑P	**P**	**17 50 14.0**	**+0.4**
I07A	**Izee** baz=40	**39.83**	**76**	⇓P	**P**	**17 50 15.9**	**+0.6**
E10A	**Myers Farm, Un** baz=40	**40.03**	**72**	⇑P	**P**	**17 50 16.4**	**-0.4**
F10A	**Beach Ranch, E** baz=40	**40.22**	**72**	⇑P	**P**	**17 50 18.2**	**-0.3**
G09A	**Cove** baz=40	**40.24**	**74**	⇓P	**P**	**17 50 18.8**	**+0.1**
WALA	**Waterton Lakes**	**40.63**	**67**	*e*P	**P**	**17 50 22.4**	**+0.7**
G10A	**Bishop Farm, J** baz=40	**40.63**	**73**	⇓P	**P**	**17 50 21.8**	**-0.1**
B13A	**Whitefish** baz=40	**40.64**	**68**	⇓P	**P**	**17 50 21.6**	**-0.3**
BSMT	**Bassoo Peak**	**40.71**	**69**	*e*P	**P**	**17 50 23.5**	**+1.0**
K07A	**Rock Creek Ran** baz=41	**40.74**	**78**	⇓P	**P**	**17 50 23.1**	**+0.3**
C13A	**Hot Springs** baz=41	**40.92**	**69**	⇓P	**P**	**17 50 24.7**	**+0.5**
A14A	**Double T Ranch** baz=41,SNR=7.8	**40.95**	**66**	⇑P	**P**	**17 50 24.0**	**-0.4**
K08A	**Mann Creek Ran** baz=41	**41.19**	**77**	⇓P	**P**	**17 50 27.0**	**+0.5**
H10A	**Noah's Angus R** baz=41	**41.23**	**74**	⇑P	**P**	**17 50 26.8**	**0.0**
D13A	**Huson** baz=41	**41.28**	**69**	⇑P	**P**	**17 50 26.9**	**-0.3**
OHCM	**Honcut**	**41.29**	**84**	*e*P	**P**	**17 50 31.1**	**+3.8**
B14A	**Marquette Ranc** baz=41	**41.34**	**67**	⇑P	**P**	**17 50 27.7**	**+0.1**
N06A	**Buffalo Meadow** baz=41	**41.48**	**81**	⇑P	**P**	**17 50 29.7**	**+0.8**
M07A	**Soldier Meadow** baz=41	**41.53**	**80**	⇓P	**P**	**17 50 30.0**	**+0.8**
L08A	**Fields** baz=41	**41.58**	**78**	⇓P	**P**	**17 50 30.4**	**+0.8**
H11A	**Donnelly** baz=42	**41.61**	**73**	⇓P	**P**	**17 50 30.9**	**+1.0**
MSO	**Missoula**	**41.73**	**70**	*e*P	**P**	**17 50 30.9**	**+0.1**
B15A	**Bradely Ranch,** baz=42,SNR=7.2	**41.77**	**67**	⇑P	**P**	**17 50 30.6**	**-0.6**
D14A	**Greenough** baz=42	**41.85**	**69**	⇓P	**P**	**17 50 31.6**	**-0.3**
M08A	**Happy Creek Ra** baz=42	**41.98**	**79**	⇓P	**P**	**17 50 33.1**	**+0.1**
A16A	**West Butte Ran** baz=42,SNR=6.3	**42.01**	**66**	⇑P	**P**	**17 50 32.7**	**-0.4**
C15A	**Salmond Ranch,** baz=42,SNR=9.7	**42.02**	**68**	⇓P	**P**	**17 50 32.8**	**-0.4**
F13A	**Darby** baz=42	**42.04**	**71**	⇓P	**P**	**17 50 33.2**	**-0.1**
I11A	**Placerville** baz=42	**42.08**	**74**	⇓P	**P**	**17 50 33.8**	**+0.1**
E14A	**Clinton** baz=42	**42.20**	**70**	⇑P	**P**	**17 50 34.6**	**-0.1**
B16A	**M & M Farms, S** baz=42	**42.22**	**66**	⇑P	**P**	**17 50 34.5**	**-0.3**
MFID	**Camas Ranch** baz=42	**42.43**	**75**	⇓P	**P**	**17 50 37.1**	**+0.5**
D15A	**Lincoln** baz=42	**42.45**	**69**	⇑P	**P**	**17 50 36.4**	**-0.3**
G13A	**Cobalt** baz=42,SNR=6.3	**42.47**	**72**	⇑P	**P**	**17 50 36.6**	**-0.3**
C16A	**Fuhringer Ranc** baz=42	**42.51**	**67**	⇓P	**P**	**17 50 36.7**	**-0.4**
A17A	**Triple J Farms** baz=42	**42.52**	**65**	⇓P	**P**	**17 50 36.9**	**-0.4**
E15A	**Deer Lodge** baz=42	**42.70**	**69**	⇑P	**P**	**17 50 38.3**	**-0.4**
L10A	**Juniper Basin** baz=43	**42.79**	**77**	⇑P	**P**	**17 50 39.7**	**+0.1**
B17A	**L&G Farms, Che** baz=43,SNR=7.1	**42.80**	**66**	⇑P	**P**	**17 50 39.3**	**-0.2**
J12A	**Stokes Ranch,** baz=43	**42.96**	**75**	⇑P	**P**	**17 50 41.0**	**+0.1**
D16A	**Dana Ranch, Ca** baz=43	**43.02**	**68**	⇓P	**P**	**17 50 41.4**	**+0.1**
M10A	**I.L. Ranch, Tu** baz=43	**43.07**	**78**	⇑P	**P**	**17 50 41.9**	**+0.1**
F15A	**Butte** baz=43	**43.10**	**70**	⇓P	**P**	**17 50 41.8**	**-0.2**
C17A	**Wharram Farm,** baz=43,SNR=5.9	**43.16**	**67**	⇑P	**P**	**17 50 42.2**	**-0.2**
L11A	**Cat Creek Ranc** baz=43	**43.18**	**76**	⇓P	**P**	**17 50 42.8**	**+0.1**
I13A	**Wildhorse Cree** baz=43,SNR=6.6	**43.18**	**73**	⇓P	**P**	**17 50 42.3**	**-0.4**
HLID	**Hailey** baz=43,SNR=8.0	**43.20**	**74**	⇑P	**P**	**17 50 42.7**	**-0.1**
H14A	**Leadore** baz=43	**43.24**	**72**	⇓P	**P**	**17 50 43.1**	**0.0**
B18A	**Beardsley Farm** baz=43	**43.33**	**65**	⇑P	**P**	**17 50 43.6**	**-0.2**
K12A	**Draper Farm, C** baz=43	**43.43**	**75**	⇓P	**P**	**17 50 44.7**	**0.0**
J13A	**Cove Ranch, Pi** baz=43,SNR=7.5	**43.44**	**74**	⇓P	**P**	**17 50 44.2**	**-0.5**
D17A	**Six Diamond Ra** baz=43	**43.46**	**67**	⇑P	**P**	**17 50 44.4**	**-0.4**
G15A	**Dillon** baz=43	**43.47**	**71**	⇓P	**P**	**17 50 44.4**	**-0.5**
EGMT	**Eagleton** baz=43	**43.53**	**66**	⇓P	**P**	**17 50 45.0**	**-0.4**
EGMT	**Eagleton** comp=Z,6.7nm,0.7s,mb4.5	**43.53**	**66**	*e*P	**P**	**17 50 44.5**	**-0.9**
I14A	**Mackay** baz=43	**43.58**	**73**	⇑P	**P**	**17 50 45.7**	**-0.1**
M11A	**Holland Ranch,** baz=43	**43.58**	**77**	⇓P	**P**	**17 50 46.1**	**+0.2**
L12A	**House Creek Ra** baz=44	**43.64**	**76**	⇑P	**P**	**17 50 46.6**	**+0.2**
F16A	**Kenn

baz=44
H15A Lima 43.68 72 ⇑P P 17 50 46.6 0.0
baz=44
BOZ Bozeman (W) 43.71 70 ⇓P P 17 50 46.6 -0.3
baz=44
BOZ Bozeman (W) 43.71 70 eP P 17 50 46.4 -0.5
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
BOZ Bozeman (W) 43.71 70 eP P 17 50 46.4 -0.5
comp=Z,4.1nm,0.7s,mb4.3
E17A Martinsdale 43.73 68 ⇓P P 17 50 47.2 +0.2
baz=44
NVAR Mina Array Bea 43.81 82 P P 17 50 48.5 +0.7
comp=Z,1.6nm,0.6s,mb3.9,baz=297,slow=7.1,SNR=8.8
NVAR Mina Array Bea 43.81 82 P P 17 50 48.5 +0.7
J14A Carey 43.88 74 ⇓P P 17 50 48.5 +0.2
baz=44
D18A Linhart Farms, 43.95 67 ⇑P P 17 50 48.9 +0.2
baz=44,SNR=6.1
F17A Fitzpatrick Pl 44.14 69 ⇑P P 17 50 50.3 0.0
baz=44
E18A Harlowton 44.22 68 ⇓P P 17 50 51.3 +0.3
baz=44
N12A Clover Valley, 44.38 77 ⇑P P 17 50 52.7 +0.4
baz=44
H16A Russell Place, 44.46 71 ⇑P P 17 50 53.5 +0.6
baz=44
F18A Big Timber 44.69 68 ⇑P P 17 50 54.8 +0.1
baz=44
R09A Tonopah 44.69 82 ⇑P P 17 50 54.9 0.0
baz=45
O12A Currie 44.90 78 ⇑P P 17 50 56.5 0.0
baz=45
M14A Sheep Mountain 45.03 76 ⇑P P 17 50 57.8 +0.4
baz=45
H17A Grant Village 45.03 71 ⇑P P 17 50 57.4 0.0
baz=45
G18A Lazy EL Ranch, 45.11 69 ⇑P P 17 50 58.0 0.0
baz=45
RRI2 Red Ridge 45.18 72 eP P 17 50 59.2 +0.6
comp=Z,3.4nm,0.6s,mb4.3
S10A Tonopah Range, 45.19 82 ⇑P P 17 50 59.6 +0.8
baz=45
P12A McGill 45.28 79 ⇓P P 17 50 59.9 +0.4
baz=45
K16A Soda Springs 45.32 73 ⇑P P 17 51 00.5 +0.8
baz=45,SNR=9.0
L15A Malad City 45.32 75 ⇑P P 17 50 60.0 +0.2
baz=45
RLMT Red Lodge 45.39 69 ⇓P P 17 51 00.2 -0.1
baz=45
RLMT Red Lodge 45.39 69 eP P 17 50 59.9 -0.4
comp=Z,6.8nm,0.8s,mb4.5
L16A Fish Haven 45.89 74 ⇓P P 17 51 04.2 0.0
baz=46
J18A Kendall Valley 46.03 72 ⇓P P 17 51 04.8 -0.6
baz=46
ULN Ulaanbaatar 46.05 296 eP P 17 51 05.5 0.0
ULN pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ULN Ulaanbaatar 46.05 296 eP P 17 51 05.5 0.0
comp=Z,4.9nm,0.6s,mb4.6
DUG Dugway 46.13 77 ⇓P P 17 51 06.2 0.0
baz=46
DUG Dugway 46.13 77 eP P 17 51 04.9 -1.3
DUG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
DUG Dugway 46.13 77 eP P 17 51 04.9 -1.3
comp=Z,7.7nm,0.9s,mb4.6
M16A Huntsville 46.18 75 ⇓P P 17 51 06.7 +0.1
baz=46,SNR=6.2
P14A Drum Mountains 46.34 78 ⇓P P 17 51 08.1 +0.3
baz=46
K18A Toltan Ranch, 46.36 72 ⇑P P 17 51 08.3 +0.4
baz=46
SONM Songino Array 46.44 296 P P 17 51 06.9 -1.6
comp=Z,2.6nm,0.4s,mb4.5,baz=63,slow=7.1,SNR=3.2
SONM Songino Array 46.44 296 P P 17 51 06.9 -1.6
SONM pmax pmax
comp=Z,3.0nm,0.4s
T11A Corn Creek, Al 46.46 82 ⇑P P 17 51 08.5 -0.3
baz=46
BW06 Boulder Array 46.57 72 ⇑P P 17 51 09.6 0.0
baz=46
PDAR Pinedale Array 46.57 72 P P 17 51 10.8 +1.3
comp=Z,3.5nm,0.5s,mb4.6,baz=310,slow=2.2,SNR=41
Q14A Sevier Lake (B 46.58 78 ⇓P P 17 51 09.9 +0.1
baz=46
ZAK Zakamensk 46.76 301 eP P 17 51 11.3 +0.3
ZAK pmax pmax
comp=Z,11nm,1.3s,mb4.6
L18A Fontenelle, Gr 46.78 73 ⇓P P 17 51 11.2 0.0
baz=47
K19A Absolon Red Bu 46.96 71 ⇑P P 17 51 12.4 -0.3
baz=47,SNR=6.9
L19A Farson 47.08 73 ⇓P P 17 51 13.6 0.0
baz=47
K20A Yellowstone Ra 47.36 71 ⇓P P 17 51 15.6 -0.1
baz=47
HHC Hu-ho-hao-te 47.46 286 eP P 17 51 17.0 +0.5
HHC PCP PcP 17 52 48.5 +2.5
HHC PP PP 17 53 07.5 -0.5
HHC PCS PcS 17 56 42.3 +1.0
HHC S **S** **17 58 05.0 -1.5**
HHC XS sS 17 58 27.3 -5.0
HHC AMB AMB
comp=Z,8.0nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,139nm,6.2s
HHC LR LR
comp=N,394nm,16.7s,MS4.6
HHC LR LR
comp=E,238nm,14.3s,MS4.6
HHC LR LR
comp=Z,406nm,19.0s,MS4.4
N19A John Jarvie Ra 47.91 74 ⇑P P 17 51 20.3 +0.2
baz=48
P18A Preston Nutter 48.04 76 ⇓P P 17 51 21.3 +0.3
baz=48
M20A Sweetwater, Wa 48.15 73 ⇑P P 17 51 22.2 +0.4
baz=48
SRU San Rafael 48.19 76 ⇓P P 17 51 22.0 -0.2
baz=48
U14A Mt Trumbull 48.25 81 ⇓P P 17 51 22.5 -0.2
baz=48
O19A Miners Draw (B 48.31 74 ⇓P P 17 51 23.5 +0.4
baz=48,SNR=9.0
L21A Rawlins 48.35 72 ⇓P P 17 51 23.4 0.0
baz=48,SNR=5.4
T15A Red Dirt Ranch 48.36 80 ⇓P P 17 51 23.5 -0.1
baz=48
Q18A Rafter H Ranch 48.44 76 ⇓P P 17 51 24.4 +0.3
baz=48
N20A Spence Gulch, 48.50 73 ⇑P P 17 51 24.9 +0.2
baz=48
R17A Hanksville Air 48.51 77 ⇓P P 17 51 24.8 +0.2
baz=48
U15A North Rim 48.79 80 ⇑P P 17 51 26.8 -0.1
baz=49
V14A Boquillas Ranc 48.80 82 ⇓P P 17 51 26.6 -0.4
baz=49
P19A Cripple Cowboy 48.81 75 ⇑P P 17 51 26.8 -0.1
baz=49,SNR=10
N21A Black Mountain 48.99 73 ⇑P P 17 51 27.6 -0.7
baz=49
R18A Canyonlands Na 49.03 77 ⇑P P 17 51 28.2 -0.4
baz=49
M22A Cedar Creek Ra 49.15 72 ⇑P P 17 51 29.8 +0.2
baz=49
V15A Kaibab Nationa 49.26 81 ⇑P P 17 51 30.3 -0.2
baz=49
T17A Navajo Res., N 49.35 79 ⇑P P 17 51 31.0 -0.1
baz=49
T18A Mexican Hat 49.83 78 ⇓P P 17 51 34.5 -0.3
baz=50
ULM Lac du Bonnet 49.93 56 LR LR 18 15 02.7
comp=Z,140nm,19.0s,MS4.0,baz=271,slow=39
SPITS Spitsbergen Ar 50.41 356 P P 17 51 38.9 +0.2
comp=Z,17nm,0.6s,mb5.3,baz=11,slow=7.8,SNR=36
SPITS Spitsbergen Ar 50.41 356 P P 17 51 38.9 +0.2
SPITS pmax pmax
comp=Z,17nm,0.6s
T19A Beclabito 50.55 78 ⇓P P 17 51 40.1 -0.2
baz=50
X18A Snowflake 51.48 81 ⇑P P 17 51 47.5 +0.2
baz=51
ANMO Albuquerque 53.35 78 eP P 17 52 01.4 +0.3
XAN Xi'an 53.42 281 P P 17 52 02.0 +0.4

XAN AP pP 17 52 13.0 -4.1
XAN PP PP 17 54 02.0 -0.2
XAN AMB AMB
comp=Z,3.0nm,0.6s,mb4.4
XAN LR LR
comp=N,163nm,23.3s,MS4.5
XAN LR LR
comp=E,466nm,24.9s,MS4.5
XAN LR LR
comp=Z,716nm,23.9s,MS4.6
ZALV Zalesovo Beam 53.88 313 P P 17 52 03.6 -1.1
comp=Z,0.5nm,0.3s,mb3.9,baz=43,slow=8.5,SNR=4.8
ZALV Zalesovo Beam 53.88 313 P P 17 52 03.6 -1.1
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
LZH Lanzhou 55.15 286 eP P 17 52 16.0 +1.8
LZH AP pP 17 52 27.5 -2.3
LZH XP sP 17 52 33.5 -3.0
LZH AMB AMB
comp=Z,18nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,70nm,4.5s
GTA Gaotai 55.35 292 eP P 17 52 15.3 -0.2
GTA AP pP 17 52 22.5 -8.7
GTA XP sP 17 52 26.0 -12
GTA PP PP 17 54 20.0 +0.6
GTA AMB AMB
comp=Z,8.0nm,1.0s,mb4.7
GTA AMB AMB
comp=Z,107nm,6.2s
GTA LR LR
comp=N,662nm,19.3s,MS4.8
GTA LR LR
comp=E,555nm,19.3s,MS4.8
GTA LR LR
comp=Z,1μm,19.0s,MS4.9
ARCES ARCESS Array B 58.10 350 P P 17 52 34.1 -0.4
comp=Z,2.8nm,0.6s,mb4.5,baz=28,slow=8.8,SNR=12
ARCES LR LR 18 19 44.5
comp=Z,107nm,18.2s,MS4.0,baz=195,slow=38
ARCES ARCESS Array B 58.10 350 P P 17 52 34.2 -0.4
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES MLR MLR
comp=Z,107nm,18.2s
CD2 Chengdu 58.73 282 P P 17 52 41.0 +1.4
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
KURK Kurchatov 58.87 313⇑ eP P 17 52 39.7 -0.5
KURK pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KURK Kurchatov 58.87 313 eP P 17 52 39.6 -0.7
comp=Z,8.9nm,0.6s,mb5.0
TXAR Lajitas Array 58.91 81 P P 17 52 38.8 -2.1
comp=Z,0.9nm,0.6s,mb4.0,baz=307,slow=4.6,SNR=11
TXAR Lajitas Array 58.91 81 P P 17 52 38.8 -2.0
TXAR pmax pmax
comp=Z,1.0nm,0.6s
WMQ Urumqi 59.16 303 P P 17 52 43.0 +0.7
WMQ AMB AMB
comp=Z,15nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,206nm,5.0s
WMQ LR LR
comp=N,594nm,18.0s,MS4.9
WMQ LR LR
comp=E,542nm,18.0s,MS4.9
WMQ LR LR
comp=Z,699nm,18.0s,MS4.8
MK31 Makanchi Array 59.87 308 eP P 17 52 46.2 -0.9
MKAR Makanchi Array 59.87 308 P P 17 52 46.5 -0.7
comp=Z,4.0nm,0.5s,mb4.7,baz=50,slow=5.7,SNR=90
MKAR Makanchi Array 59.87 308 P P 17 52 46.5 -0.7
MKAR pmax pmax
comp=Z,4.0nm,0.5s
GYA Guiyang 60.07 276 P P 17 52 50.3 +1.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
BVAR Borovoye Array 60.77 320 LR LR 18 20 26.6
comp=Z,224nm,19.5s,MS4.3,baz=53,slow=37
KMI Kunming 63.48 278 P P 17 53 13.8 +2.0
KMI AMB AMB
comp=Z,5.0nm,1.3s,mb4.5
JOF Joensuu 63.58 345 ep P 17 53 11.0 -0.9
comp=Z,2.6nm,0.4s,mb4.6
JOF Joensuu 63.58 345 eP P 17 53 11.0 -0.9
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KAF Kangasniemi 65.11 347 ep P 17 53 20.7 -1.1
comp=Z,1.8nm,0.4s,mb4.5
KAF Kangasniemi 65.11 347 eP P 17 53 20.7 -1.1
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
EKS2 Erkin-Say 67.03 310 eP P 17 53 35.3 +0.8
comp=Z,7.0nm,0.6s,mb4.9
LSA Lhasa 67.22 289 eP P 17 53 36.6 +0.7
LSA pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
LSA Lhasa 67.22 289 eP P 17 53 36.6 +0.7
comp=Z,5.3nm,0.7s,mb4.7
AML Almayashu 67.47 310 eP P 17 53 37.5 +0.2
comp=Z,4.6nm,0.6s,mb4.7
NB2 NORSAR Subarra 67.68 355 P P 17 53 37.9 -0.4
comp=Z,1.4nm,0.6s,mb4.2,baz=5.9,slow=6.5
NOA NORSAR Array B 67.68 355 P P 17 53 38.1 -0.2
comp=Z,1.1nm,0.5s,mb4.2,baz=338,slow=3.4,SNR=12
NOA NORSAR Array B 67.68 355 P P 17 53 38.1 -0.2
NOA pmax pmax
comp=Z,1.0nm,0.5s
OBN Obninsk 69.83 339⇑ eP P 17 53 52.1 +0.4
OBN e pP 17 54 10.2 +2.3
OBN e 17 56 26.8
OBN eS S 18 02 59.2 +3.0
OBN pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
CMAR Chiang Mai Arr 70.76 276 P P 17 53 56.2 -1.8
comp=Z,0.9nm,0.7s,mb3.8,baz=23,slow=6.5,SNR=9.9
CMAR Chiang Mai Arr 70.76 276 P P 17 53 56.2 -1.8
CMAR pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 75.52 342 P P 17 54 25.0 -0.5
comp=Z,22nm,0.5s,mb5.4,baz=20,slow=6.6,SNR=93
AKASG Malin Array Be 75.52 342 P P 17 54 25.0 -0.6
AKASG pmax pmax
comp=Z,22nm,0.5s
AKASG Malin Array Be 75.52 342 P P 17 54 25.0 -0.6
AKBB Malin Array Si 75.52 342 eP P 17 54 24.9 -0.7
KIEV Kiev 75.53 342 eP P 17 54 25.0 -0.6
KIEV pmax pmax
comp=Z,25nm,0.5s,mb5.4
KIEV Kiev 75.53 342 eP P 17 54 24.9 -0.7
comp=Z,25nm,0.5s,mb5.4
KBL Kabul 75.67 308 eP P 17 54 26.2 -0.5
OJC Ojcow 77.55 348 eP P 17 54 37.0 0.0
KWP Kalwaria 77.70 346 eP P 17 54 38.4 +0.5
KWP pmax pmax
comp=Z,30nm,0.6s,mb5.4
KWP Kalwaria 77.70 346⇓ iP P 17 54 38.6 +0.7
KWP Kalwaria 77.70 346 eP P 17 54 38.4 +0.5
comp=Z,30nm,0.6s,mb5.4
STHS Stebnicka Huta 78.13 347 eP P 17 54 42.1 +1.8
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
STHS Stebnicka Huta 78.13 347 eP P 17 54 42.1 +1.8
comp=Z,5.4nm,0.7s,mb4.6
KIV Kislovodsk 78.39 331 eP P 17 54 43.2 +1.4
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CRVS Cervenica-Dubn 78.60 346 eP P 17 54 43.0 +0.1
CRVS pmax pmax
comp=Z,18nm,2.0s,mb4.7
CRVS Cervenica-Dubn 78.60 346 eP P 17 54 43.0 +0.1
comp=Z,18nm,2.0s,mb4.6
BAIF Baives 78.95 358 eP P 17 54 44.7 -0.1
comp=Z,26nm,1.1s,mb4.8
BAIF Baives 78.95 358 eP P 17 54 44.7 -0.1
BAIF pmax pmax
comp=Z,13nm,1.1s,mb4.8
BAIF Baives 78.95 358 eP P 17 54 44.7 -0.1
comp=Z,13nm,1.1s,mb4.8
TRPA Tarpa 79.19 345⇑ iP P 17 54 46.6 +0.5
BUR08 Bucovina Ar. S 79.21 343 eP P 17 54 46.5 +0.2
BURAR Bucovina Array 79.23 343⇑ iP P 17 54 46.8 +0.4
KHC Kasperske Hory 79.33 351 eP P 17 54 47.0 +0.1

VYHS Vyhne 79.37 348 eP P 17 54 47.3 +0.2
VYHS pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
VYHS Vyhne 79.37 348 eP P 17 54 47.3 +0.2
comp=Z,3.4nm,1.4s,mb4.1
GERES GERESS Array B 79.60 351 P P 17 54 48.3 0.0
comp=Z,1.8nm,0.6s,mb4.2,baz=26,slow=5.5,SNR=24
GERES GERESS Array B 79.60 351 P P 17 54 48.3 0.0
GERES pmax pmax
comp=Z,2.0nm,0.6s
DRGR 80.46 345⇓ iP P 17 54 53.3 +0.3
LDF La Druitiere 80.46 1 eP P 17 54 52.6 -0.4
comp=Z,7.8nm,0.6s,mb4.5
MEZF Maizieres J'vi 80.49 357 eP P 17 54 52.6 -0.5
CDF Champ du Feu 80.49 356 eP P 17 54 53.0 -0.1
VRI Vrincioaia 80.64 342⇑ iP P 17 54 54.8 +0.8
SGMF Saint Gilles 80.76 2 eP P 17 54 53.9 -0.7
comp=Z,17nm,0.8s,mb4.7
TLCR 80.86 340⇓ iP P 17 54 56.0 +0.8
GNI Garni 81.15 327⇑ eP P 17 54 57.1 +0.3
GNI pmax pmax
comp=Z,17nm,2.5s
KBA Koelnbreinsper 81.39 351⇑ iP P 17 54 58.7 +0.8
comp=Z,13nm,0.6s,mb5.0
LOR Lormes 81.75 358 eP P 17 54 59.5 -0.4
BZS Buzias 81.78 345⇓ iP P 17 55 00.2 +0.2
WRA Warramunga Arr 81.80 224 P P 17 54 56.5 -3.8
comp=Z,0.9nm,0.8s,mb3.8,baz=32,slow=6.0,SNR=8.6
WRA Warramunga Arr 81.80 224 P P 17 54 56.5 -3.8
WRA pmax pmax
comp=Z,1.0nm,0.8s
GZR Gura Zlata 81.81 345⇓ iP P 17 55 00.7 +0.5
MFF Saint Martin d 82.45 1 eP P 17 55 03.1 -0.4
MALT Malatya 84.85 331 eP P 17 55 16.8 +0.8
MALT pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
MALT Malatya 84.85 331 eP P 17 55 16.8 +0.8
comp=Z,2.0nm,0.7s,mb4.4
BR131 Keskin Array S 84.89 335 eP P 17 55 16.2 0.0
comp=Z,2.3nm,0.7s,mb4.4
BRTR Keskin Array B 84.89 335 P P 17 55 16.9 +0.7
comp=Z,2.7nm,0.7s,mb4.5,baz=66,slow=2.7,SNR=13
BRTR Keskin Array B 84.89 335 P P 17 55 16.9 +0.8
BRTR pmax pmax
comp=Z,3.0nm,0.7s
ASAR Alice Springs 85.27 222 P P 17 55 15.9 -2.2
comp=Z,0.9nm,0.7s,mb4.0,baz=27,slow=5.1,SNR=14
ASAR Alice Springs 85.27 222 P P 17 55 15.9 -2.2
ASAR pmax pmax
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 89.28 4 P P 17 55 37.2 -0.2
comp=Z,0.3nm,0.4s,mb4.0,baz=2.5,slow=4.1,SNR=3.2
STKA Stephens Creek 89.74 213 P P 17 55 38.2 -1.1
comp=Z,1.9nm,0.8s,mb4.5,baz=333,slow=2.3,SNR=4.0
TORD Torodi Ar. Bea 115.80 359 PKP PKPdf 18 01 22.0 -1.9
comp=Z,0.3nm,0.7s,baz=2.4,slow=2.6,SNR=2.8
TSUM Tsumeb 145.31 331 PKPbc PKPbc 18 02 19.1 +0.2
comp=Z,5.0nm,0.6s,baz=349,slow=6.0,SNR=23
BOSA Boshof 150.82 312 PKPbc PKPbc 18 02 33.8 +0.4
comp=Z,2.5nm,0.6s,baz=32,slow=3.6,SNR=11
BOSA Boshof 150.82 312 PKIKP PKPbc 18 02 33.8 +0.4
BOSA pmax pmax
comp=Z,3.0nm,0.6s

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*IDC **27** 17:52:06.7±0.3, 961N×12607E, h0km, mb5.4/26, mb1 5.4/26, mb1mx5.4/28, mbtmp5.4/26, MS4.5/24, Ms1 4.5/24, ms1mx4.4/36, Error ellipse: s-maj=15.3km s-min=9.8km az=80.0*
*MAN **27** 17:52:10, 965N×12635E, h5km, mb5.8, ML4.9, MS5.4*
*MOS **27** 17:52:10.3±0.9, 965N×1261 0E, h33km, mb5.8/56, MS4.4/18, Error ellipse: s-maj=9.5km s-min=4.6km az=112.9*
*BJI **27** 17:52:11.1, 924N×12624E, h77km, mB5.2, mb5.4, Ms4.7, Msz4.5*
*ISCJB **27** 17:52:14.6±0.4, 966N±002×12626E±003, h72km±3km, mb5.5/154, Error ellipse: s-maj=4.6km s-min=2.9km az=168.1*
*GCMT **27** 17:52:16.6±0.2, 969N×12642E, h37km, MW5.2/81, Moment Tensor Solution. s51,c77; s81,c133; Duration: 1!0 Moment tensor: Scale 10^17^Nm; Mrr0.58±.02; Mθθ0.18±.01; Mϕϕ-0.76±.01; Mrθ0.21±.02; Mrϕ0.17±.01; Mθϕ0.23±.02; Best double couple: M0.77400×10^17^ NP1:ϕs145.00000°, δ43.00000°, λ52.00000°. NP2: ϕs13.00000°, δ58.00000°, λ120.00000°. Principal axes: T 0.7260, Plg64.0000°, Azm336.0000°; N 0.0950, Plg25.0000°, Azm175.0000°; P -0.8220, Plg8.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **27** 17:52:16.6±0.6, 960N×126.14E, h77km±5km, mb5.5/73 Error ellipse: s-maj=5.2km s-min=3.2km az=80.0*
NEIC Felt [IV PIVS] at General Luna; [III PIVS] at Butuan, Dapa and Surigao; [II PIVS] at Bislig.
*DJA **27** 17:52:19, 978N×12635E, h105km, Mw5.4/20*

ISC 27 17:52:16.3±0.3, 965N±002×12625E±003, h74km±2km, h72km±2.9km:pP-P, n513, σ1s05/476, mb5.5/153, 72C-24D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.76**	**280**	*i* P	Pn	**17 52 27.3**	**-4.9**
SCPH				*i* S	Sn	**17 52 38.5**	**-5.5**
BUTP	**Butuan**	**0.92**	**223**	*e*P	Pn	**17 52 29.4**	**-4.6**
BUTP				*e*S	Sn	**17 52 44.1**	**-3.1**
MSLP	**Maasin**	**1.45**	**289**	*e*P	Pn	**17 52 38.9**	**-1.9**
MSLP				*e*S	Sn	**17 53 00.2**	**+0.9**
BIPH	**Bislig**	**1.46**	**176**⇑	*e*P	Pn	**17 52 36.2**	**-4.7**
BIPH				*e*S	Sn	**17 52 58.4**	**-1.0**
PLP	**Palo**	**1.96**	**320**⇓	*e*P	Pn	**17 52 45.5**	**-2.0**
PLP				*i* S	Sn	**17 53 12.0**	**+0.8**
BESP	**Borongan**	**2.10**	**338**	*e*P	Pn	**17 52 46.7**	**-2.7**
BESP				*e*S	Sn	**17 53 16.5**	**+1.9**
BUKP	**Musuan**	**2.12**	**214**	*e*P	Pn	**17 52 48.2**	**-1.4**
BUKP				*e*S	Sn	**17 53 16.1**	**+1.1**
OCLP	**Ormoc**	**2.13**	**311**	*e*P	Pn	**17 52 49.2**	**-0.6**
OCLP				*e*S	Sn	**17 53 17.7**	**+2.3**
LLP	**Lapu-Lapu**	**2.34**	**287**⇓	*e*P	Pn	**17 52 52.0**	**-0.7**
LLP				*e*S	Sn	**17 53 22.8**	**+2.3**
TBP	**Tagbilaran**	**2.35**	**271**	*i* P	Pn	**17 52 51.8**	**-1.0**
TBP				*i* S	Sn	**17 53 20.8**	**0.0**
DAV	**Davao City (W)**	**2.65**	**195**	Pn	Pn	**17 52 56.6**	**-0.3**
	538nm,0.3s,baz=264,slow=1.1,SNR=19						
DAV				S	Sn	**17 53 23.5**	**-4.4**
	662nm,0.3s,baz=116,slow=23,SNR=9.0						
DAV	**Davao City (W)**	**2.65**	**195**	*e*P	Pn	**17 52 56.3**	**-0.6**
DMPH	**Davao City--Mi**	**2.66**	**196**	*e*P	Pn	**17 52 56.2**	**-0.7**
KCP	**Kidapawan**	**2.87**	**204**⇑	*i*P	Pn	**17 52 58.8**	**-1.0**
KCP				*i* S	Sn	**17 53 34.1**	**+0.9**
SNPH	**Sibulan**	**2.99**	**264**	*i* P	Pn	**17 53 01.5**	**+0.1**
CTBH	**Cotabato--PC H**	**3.12**	**220**⇑	*e*P	Pn	**17 53 02.4**	**-0.9**
CTBH				*i* S	Sn	**17 53 41.3**	**+1.8**
CNP	**Catarman**	**3.24**	**331**	*e*P	Pn	**17 53 02.3**	**-2.5**
MMPH	**Masbate**	**3.73**	**316**	*i* P	Pn	**17 53 11.0**	**-0.5**
GUIM	**Jordan**	**3.73**	**285**	*e*P	Pn	**17 53 11.1**	**-0.5**
GUIM				*e*S	Sn	**17 53 56.7**	**+2.3**
GSPH	**General Santos**	**3.77**	**200**	*e*P	Pn	**17 53 13.0**	**+0.9**
GSPH				*e*S	Sn	**17 53 58.0**	**+2.8**
RCP	**Roxas**	**3.93**	**299**⇑	*e*P	Pn	**17 53 15.0**	**+0.7**
IPIL	**Ipil**	**4.08**	**243**	*e*P	Pn	**17 53 15.6**	**-0.8**
KALP	**Kalibo**	**4.34**	**298**⇑	*e*P	Pn	**17 53 19.4**	**-0.4**
PVCP	**Virac**	**4.43**	**333**	*e*P	Pn	**17 53 17.3**	**-3.7**
PVCP				*e*S	Sn	**17 54 11.3**	**0.0**
OTRP	**Odiongan**	**4.95**	**303**	*e*P	Pn	**17 53 28.1**	**-0.1**
AUQP	**San Andres**	**5.06**	**317**	*e*P	Pn	**17 53 29.9**	**+0.3**
CUYO	**Cuyo Island**	**5.29**	**283**	*e*P	Pn	**17 53 32.5**	**-0.2**
GQP	**Guinayangan**	**5.63**	**319**	*e*P	Pn	**17 53 36.9**	**-0.7**
SJMP	**San Jose**	**5.76**	**299**	*e*P	Pn	**17 53 40.0**	**+0.8**
BUSP	**Coron**	**6.39**	**292**	*e*P	Pn	**17 53 48.2**	**+0.4**
POLP	**Polilio Island**	**6.57**	**321**	*e*P	Pn	**17 53 48.9**	**-1.5**
ENPP	**El Nido**	**6.89**	**284**	*e*P	Pn	**17 53 54.5**	**-0.2**
LUBP	**Lubang**	**7.14**	**305**	*e*P	Pn	**17 53 59.9**	**+1.7**
BALP	**Baler**	**7.58**	**323**	*e*P	Pn	**17 54 03.5**	**-0.6**
PALP	**Palanan**	**8.25**	**334**	*e*P	Pn	**17 54 10.5**	**-2.8**
BATP	**Bataraza**	**8.38**	**265**	*e*P	Pn	**17 54 14.6**	**-0.5**
CAUP	**Cauayan**	**8.43**	**330**	*e*P	Pn	**17 54 12.8**	**-2.9**
SCZP	**Santa Cruz**	**8.68**	**315**	*e*P	Pn	**17 54 21.5**	**+2.4**
MYLDM	**Lahad Datu**	**8.88**	**241**	⇓P	Pn	**17 54 23.8**	**+1.9**
BOLP	**Bolinao**	**9.10**	**318**	*e*P	Pn	**17 54 23.9**	**-1.1**
SGCP	**Mt. Cagua**	**9.46**	**335**	*e*P	Pn	**17 54 26.1**	**-3.7**

ABRA Dolores 9.60 327 *e*P Pn **17 54 29.5 -2.2**
KDM Kudat 9.71 254 ⇑P Pn **17 54 35.3 +2.1**
SDKM Sandakan 9.82 247 ⇓P Pn **17 54 37.5 +2.8**
TSM Tawau 9.87 238 ⇑P Pn **17 54 37.5 +2.1**
TWG Pinlang 14.00 340 *e*Pn Pn **17 55 33.6 +2.3**
108nm,0.6s
YULB Yu-li 14.46 341 *e*Pn Pn **17 55 38.8 +1.5**
76nm,0.6s
TPUB Ta-pu 14.60 339 *e*Pn Pn **17 55 40.5 +1.4**
413nm,0.8s
SSLB Suanglung 14.94 341 *e*Pn Pn **17 55 43.3 -0.2**
211nm,0.8s
NACB Ninganchiao 15.11 343 *e*Pn Pn **17 55 46.8 +1.2**
57nm,0.8s
YHNB Yeheng 15.64 343 *e*Pn Pn **17 55 52.4 0.0**
217nm,1.1s
SBUM Sibu 15.67 244 ⇓P Pn **17 55 55.4 +2.5**
TATO Taipei 15.90 344 *e*Pn Pn **17 55 54.6 -1.1**
204nm,1.1s
KAPI Kappang 15.94 204 Pn Pn **17 55 54.6 -1.6**
2.2nm,0.3s,baz=28,slow=6.7,SNR=11
KAPI LR LR 18 02 41.3
comp=Z,2μm,19.8s,baz=243,slow=40
KAPI Kappang 15.94 204 *e*Pn Pn **17 55 54.6 -1.7**
190nm,1.4s
QZH Quanzhou 16.86 335 ⇓*i*P Pn **17 56 10.3 +2.6**
QZH S **S** **17 59 19.0 -1.8**
QZH AMB AMB
comp=Z,160nm,0.8s
QZH LR LR
comp=N,2μm,13.7s
QZH LR LR
comp=E,2μm,18.6s
QZH LR LR
comp=Z,2μm,16.2s
JOW Kunigami 17.20 6 P Pn **17 56 12.9 +1.1**
comp=Z,5.9nm,0.3s,baz=224,slow=6.6,SNR=17
JOW LR LR 18 01 37.9
comp=Z,1μm,20.2s,baz=69,slow=33
KSM Kuching 17.81 244 *e*Pn Pn **17 56 20.4 +1.0**
comp=Z,96nm,1.0s
KSM Kuching 17.81 244 ⇑P Pn **17 56 21.4 +2.0**
GZH Guangzhou 18.20 319 P Pn **17 56 26.0 +2.0**
GZH LR LR
comp=N,2μm,18.0s
GZH LR LR
comp=E,1μm,19.2s
QIZ Qiongzhong 18.41 302 P Pn **17 56 24.5 -2.1**
QIZ AP pP 17 56 39.0 -1.7
QIZ XP sP 17 56 49.3 -0.8
QIZ S **S** **17 59 47.0 -5.3**
QIZ XS sS 18 00 07.5 -9.2
QIZ AMB AMB
comp=Z,97nm,0.9s
QIZ AMB AMB
comp=Z,434nm,10.2s
QIZ LR LR
comp=N,1μm,21.0s
QIZ LR LR
comp=Z,2μm,20.6s
QIZ Qiongzhong 18.41 302 *e*P Pn **17 56 25.6 -1.0**
comp=Z,86nm,0.8s
SSE Sheshan 21.85 348 P **P** **17 57 03.0 +0.1**
SSE S **S** **18 01 03.3 +3.1**
SSE AMB AMB
comp=Z,216nm,1.1s,mb5.4
SSE LR LR
comp=N,307nm,22.6s
SSE LR LR
comp=E,335nm,22.3s
SSE LR LR
comp=Z,489nm,22.0s
CBIJ Chichi jima 22.97 39 P **P** **17 57 13.7 -1.0**
comp=Z,328nm,0.6s,mb5.8,baz=223,slow=3.5,SNR=17
CBIJ LR LR 18 04 14.5
comp=Z,748nm,20.0s,baz=72,slow=32
KAKA Kakadu 23.05 164 *e*P x 17 57 13.6
comp=Z,95nm,0.6s
KAKA Kakadu 23.05 164 *e*P x 17 57 13.5
comp=Z,295nm,0.6s
KTGM Kuala Trenggan 23.31 261 ⇓P **P** **17 57 19.6 +1.4**
NJ2 Nanjing 23.32 344 *e*P **P** **17 57 17.5 -0.5**
NJ2 AP 17 57 34.5
NJ2 XP sP 17 57 43.3 +0.2
NJ2 PP 17 57 51.3
NJ2 S **S** **18 01 21.0 -4.0**
NJ2 AMB AMB
comp=Z,140nm,1.1s,mb5.2
NJ2 AMB AMB
comp=Z,1μm,3.5s
NJ2 LR LR
comp=N,2μm,16.0s
NJ2 LR LR
comp=E,2μm,15.8s
NJ2 LR LR
comp=Z,7μm,16.4s
WHN Wuhan 23.56 334 P **P** **17 57 20.8 +0.6**
WHN S **S** **18 01 30.3 +1.4**
WHN LR LR
comp=N,2μm,21.5s
WHN LR LR
comp=E,1μm,14.0s
WHN LR LR
comp=Z,3μm,18.2s
MYKOM Kota Tinggi 23.60 252 ⇑P **P** **17 57 22.7 +2.0**
KGM Kluang 24.02 253 ⇑P **P** **17 57 26.7 +2.1**
GYA Guiyang 24.96 315 P **P** **17 57 32.5 -0.5**
GYA AP 17 57 49.5
GYA XP sP 17 57 58.8 -0.1
GYA PP 17 58 13.0
GYA S **S** **18 01 48.5 -3.0**
GYA XS sS 18 02 18.0 -3.2
GYA SS 18 02 52.5
GYA AMB AMB
comp=Z,50nm,0.9s,mb4.9
GYA AMB AMB
comp=Z,360nm,7.8s
GYA LR LR
comp=N,2μm,17.0s
GYA LR LR
comp=E,4μm,17.1s
GYA LR LR
comp=Z,5μm,18.0s
FRIM Kepong 25.27 257 ⇓P **P** **17 57 37.4 +1.4**
IPM Ipoh 25.55 260 P **P** **17 57 40.0 +1.6**
JHJ Hachijo jima 2 26.48 26 LR LR 18 07 56.9
comp=Z,793nm,18.8s,baz=65,slow=36
KMI Kunming 27.13 308 P **P** **17 57 53.5 +0.9**
KMI AP pP 17 58 08.3 -1.7
KMI XP sP 17 58 17.8 -0.9
KMI PP 17 58 44.3
KMI S **S** **18 02 27.8 +1.9**
KMI XS sS 18 02 55.5 -0.3
KMI SS 18 03 45.3
KMI AMB AMB
comp=Z,31nm,0.8s,mb4.9
KMI AMB AMB
comp=Z,129nm,5.2s
KMI LR LR
comp=N,508nm,19.0s
KMI LR LR
comp=E,721nm,23.4s
KMI LR LR
comp=Z,911nm,26.4s
FITZ Fitzroy Crossi 27.58 181 ⇑*i*P **P** **17 57 56.4 -0.3**
comp=Z,140nm,0.8s,mb5.5
FITZ Fitzroy Crossi 27.58 181 *e*P **P** **17 57 56.1 -0.6**
comp=Z,180nm,1.1s,mb5.5
TIA Tai'an 27.71 344 ⇑P **P** **17 57 58.0 +0.3**
TIA AMB AMB
comp=Z,68nm,1.0s,mb5.1
KSRS Korea Array 27.72 3 P **P** **17 57 58.0 +0.2**
comp=Z,41nm,0.8s,mb5.0,baz=179,slow=10,SNR=108
KSRS PcP PcP 18 01 14.1 +1.1
comp=Z,3.2nm,0.8s,baz=184,slow=2.7,SNR=5.6
KSRS ScP ScP 18 04 55.5 +8.2
comp=Z,3.4nm,1.0s,baz=178,slow=3.8,SNR=4.8
KSRS LR LR 18 08 34.2
comp=Z,536nm,20.6s,baz=176,slow=36
CMAR Chiang Mai Arr 27.86 291 P **P** **17 57 59.0 -0.3**
comp=Z,27nm,0.7s,mb4.9,baz=102,slow=7.0,SNR=220
CMAR PcP PcP 18 01 15.2 +1.6
comp=Z,12nm,0.9s,baz=86,slow=0.8,SNR=16
CMAR ScP ScP 18 04 51.3 +3.1
comp=Z,3.5nm,1.0s,baz=51,slow=1.1,SNR=8.4
CMAR LR LR 18 09 35.1
comp=Z,896nm,18.2s,baz=121,slow=38
CHTO Chiang Mai 27.95 292 P **P** **17 58 00.1 0.0**
SNR=22
CHTO Chiang Mai 27.95 292 *e*P **P** **17 57 59.4 -0.7**
CHTO *e* 18 01 14.1
CHTO pmax pmax
comp=Z,37nm,1.0s,mb4.9
CHTO Chiang Mai 27.95 292 *e*P **P** **17 57 59.4 -0.6**
comp=Z,37nm,1.0s,mb4.9
CHTO *e*PcP PcP 18 01 14.1 +0.2
PSI Prapat 27.99 258 P **P** **17 57 58.4 -2.1**
comp=Z,41nm,0.6s,mb5.1,baz=86,slow=4.9,SNR=47
PSI PcP PcP 18 01 13.6 -0.5
comp=Z,28nm,0.9s,baz=19,slow=2.8,SNR=8.3
PSI Prapat 27.99 258 P **P** **17 57 58.4 -2.0**
PSI 18 01 13.6
PSI pmax pmax
comp=Z,41nm,0.6s,mb5.1
PMG Port Moresby 28.14 132 P **P** **17 58 00.9 -0.8**
comp=Z,42nm,0.8s,mb5.0,baz=346,slow=5.3,SNR=21
PMG Port Moresby 28.14 132 P **P** **17 58 00.9 -0.8**
PMG pmax pmax
comp=Z,42nm,0.8s
PMG Port Moresby 28.14 132 *e*P **P** **17 58 00.4 -1.2**
comp=Z,37nm,0.8s,mb5.0
MAJO Matsushiro 28.89 20 *e*P **P** **17 58 05.4 -2.7**
MAJO pmax pmax
comp=Z,16nm,0.8s,mb4.7
MAJO Matsushiro 28.89 20 *e*P **P** **17 58 05.4 -2.7**
comp=Z,16nm,0.8s,mb4.7
MAT Matsushiro 28.89 20 P **P** **17 58 06.3 -1.8**
MAT S **S** **18 02 56.0 +2.8**
MJAR Matsushiro Arr 28.89 20 P **P** **17 58 06.8 -1.3**
comp=Z,13nm,0.7s,mb4.6,baz=195,slow=9.5,SNR=33
MJAR PcP PcP 18 01 16.9 +1.1
comp=Z,2.3nm,0.7s,baz=184,slow=2.9,SNR=4.0
MJAR LR LR 18 09 25.8
comp=Z,788nm,18.6s,baz=205,slow=36
MJAR Matsushiro Arr 28.89 20 P **P** **17 58 06.9 -1.2**
MJAR 18 01 16.9
MJAR pmax pmax
comp=Z,13nm,0.7s
MJAR MLR MLR
comp=Z,788nm,18.6s
MJAR Matsushiro Arr 28.89 20 P **P** **17 58 06.8 -1.3**
MJAR PcP PcP 18 01 16.9 +1.0
MJAR LR LR 18 09 25.8
XAN Xi'an 29.02 329 P **P** **17 58 10.3 +0.9**
XAN AP pP 17 58 27.0 +0.2
XAN S **S** **18 02 58.3 +2.9**
XAN AMB AMB
comp=Z,24nm,0.8s,mb4.9
XAN LR LR
comp=N,163nm,23.3s
XAN LR LR
comp=E,466nm,24.9s
XAN LR LR
comp=Z,716nm,23.9s
DL2 Dalian 29.42 353 ⇑*i*P **P** **17 58 13.8 +1.0**
DL2 S **S** **18 03 03.5 +1.9**
DL2 AMB AMB
comp=Z,120nm,0.7s,mb5.6
DL2 AMB AMB
comp=Z,260nm,3.2s
DL2 LR LR
comp=N,280nm,21.0s
DL2 LR LR
comp=Z,380nm,19.3s
CD2 Chengdu 29.75 319 P **P** **17 58 14.0 -1.9**
CD2 AP pP 17 58 31.5 -1.9
CD2 XP sP 17 58 40.8 -1.2
CD2 PP PP 17 59 13.5 -11
CD2 PCP PcP 18 01 16.0 -2.2
CD2 S **S** **18 03 03.8 -3.2**
CD2 XS sS 18 03 34.5 -2.5
CD2 SS SS 18 04 44.0 -32
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,250nm,5.5s
CD2 LR LR
comp=N,1μm,16.2s
CD2 LR LR
comp=Z,2μm,15.6s
WRAB Tennant Creek 30.46 165 P **P** **17 58 20.0 -2.2**
comp=Z,124nm,0.7s,mb5.7,SNR=8.8
WRAB Tennant Creek 30.46 165 *e*P **P** **17 58 20.2 -2.0**
WRAB pmax pmax
comp=Z,20nm,0.6s,mb4.9
WRAB Tennant Creek 30.46 165 *e*P **P** **17 58 20.2 -2.0**
comp=Z,20nm,0.6s,mb4.9
WRA Warramunga Arr 30.47 165 P **P** **17 58 20.1 -2.1**
comp=Z,11nm,0.7s,mb4.6,baz=348,slow=9.3,SNR=23
WRA PcP PcP 18 01 20.6 +0.5
comp=Z,8.5nm,0.6s,baz=342,slow=3.3,SNR=7.3
WRA Warramunga Arr 30.47 165 P **P** **17 58 20.1 -2.1**
WRA 18 01 20.6
WRA pmax pmax
comp=Z,11nm,0.7s
WB2 Warramunga Arr 30.47 165 *e*P **P** **17 58 20.4 -1.9**
WB2 *e*S **S** **18 03 13.1 -5.2**
MBWA Marble Bar 31.28 192 *e*P **P** **17 58 28.7 -0.7**
comp=Z,57nm,0.6s,mb5.5
MBWA *e*PcP PcP 18 01 21.8 -0.5
BJT Baijiatuau 31.55 345 *e*P **P** **17 58 31.3 -0.3**
BJT pmax pmax
comp=Z,163nm,0.6s
BJT Baijiatuau 31.55 345 *e*P **P** **17 58 31.3 -0.3**
comp=Z,163nm,0.6s,mb5.9
BJI Beijing 31.57 345 P **P** **17 58 31.5 -0.2**
BJI S **S** **18 03 31.0 -4.1**
BJI AMB AMB
comp=Z,228nm,0.9s,mb5.9
BJI LR LR
comp=N,480nm,21.8s
BJI LR LR
comp=E,310nm,18.4s
BJI LR LR
comp=Z,386nm,23.2s
LZH Lanzhou 33.27 326 ⇓P **P** **17 58 46.5 -0.2**
LZH AP pP 17 59 04.0 -0.3
LZH XP sP 17 59 13.0 0.0
LZH PP PP 18 00 00.5 -2.8
LZH S **S** **18 04 00.3 -1.5**
LZH XS sS 18 04 34.0 +2.1
LZH SS SS 18 06 08.0 -20
LZH AMB AMB
comp=Z,50nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,179nm,4.0s
LZH LR LR
comp=E,2μm,16.7s
LZH LR LR
comp=Z,2μm,17.5s
HHC Hu-ho-hao-te 33.69 340 *e*P **P** **17 58 50.8 +0.5**
HHC AP pP 17 59 09.0 +1.1
HHC XP sP 17 59 17.8 +1.3
HHC PP PP 18 00 04.0 -3.8
HHC PCP PcP 18 01 27.8 -0.8
HHC *e*S **S** **18 04 07.8 -0.2**
HHC XS sS 18 04 39.3 +1.1
HHC PCS PcS 18 05 13.0 -1.5
HHC SS SS 18 06 18.0 -18
HHC AMB AMB
comp=Z,134nm,0.9s,mb5.8
HHC AMB AMB
comp=Z,124nm,4.5s
HHC LR LR
comp=N,413nm,16.3s
HHC LR LR
comp=E,421nm,16.3s
HHC LR LR
comp=Z,416nm,15.3s
ASAR Alice Springs 33.95 167 P **P** **17 58 51.5 -1.1**
comp=Z,8.1nm,0.5s,mb4.8,baz=353,slow=7.1,SNR=205
ASAR PcP PcP 18 01 30.1 +0.5
comp=Z,13nm,0.7s,baz=353,slow=2.4,SNR=11
ASAR Alice Springs 33.95 167 P **P** **17 58 51.6 -1.1**
ASAR 18 01 30.1
ASAR pmax pmax
comp=Z,8.0nm,0.5s
CN2 Changchun 34.03 359 *e*P **P** **17 58 53.0 -0.2**
CN2 *e*AP pP 17 59 10.0 -0.8
CN2 *e*S **S** **18 04 13.0 -0.2**
CN2 AMB AMB
comp=Z,60nm,0.7s,mb5.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,600nm,17.0s
IMP Imphal 34.22 300 *e*P **P** **17 58 55.0 -0.1**
IMP *ex* x 18 01 31.0
MDJ Mudanjiang 34.96 4 P **P** **17 59 02.3 +1.1**
MDJ AP pP 17 59 18.0 -0.9
MDJ XP sP 17 59 27.3 -0.2
MDJ PP PP 18 00 23.3 +1.5
MDJ PCP PcP 18 01 32.5 +0.3
MDJ S **S** **18 04 31.5 +4.0**
MDJ SCP ScP 18 05 11.0 -0.4
MDJ PCS PcS 18 05 19.0 +0.2
MDJ SCS ScS 18 09 14.3 -0.7
MDJ AMB AMB
comp=Z,118nm,1.1s,mb5.6
MDJ AMB AMB
comp=Z,186nm,3.5s
MDJ LR LR
comp=N,311nm,17.4s
MDJ LR LR
comp=E,255nm,15.8s
MDJ LR LR
comp=Z,425nm,16.6s
MDJ Mudanjiang 34.96 4 *e*P **P** **17 59 02.0 +0.8**
comp=Z,126nm,1.0s,mb5.7
ERM Erimo 35.50 22 *e*P **P** **17 59 07.0 +1.1**
ERM pmax pmax
comp=Z,24nm,0.9s,mb5.1
ERM Erimo 35.50 22 *e*P **P** **17 59 07.0 +1.1**
comp=Z,24nm,0.9s,mb5.1
CTA Charters Tower 35.51 146 P **P** **17 59 06.3 +0.1**
comp=Z,21nm,0.7s,mb5.2,baz=323,slow=10,SNR=41
CTA ScP ScP 18 05 20.8 +6.9
comp=Z,7.9nm,1.1s,baz=261,slow=2.9,SNR=3.5
CTA LR LR 18 12 32.3
comp=Z,458nm,21.8s,baz=134,slow=34
CTA Charters Tower 35.51 146 ⇑*i*P **P** **17 59 06.2 0.0**
comp=Z,17nm,0.6s,mb5.2
CTA Charters Tower 35.51 146 P **P** **17 59 06.3 +0.1**
CTA ScP ScP 18 05 20.8 +6.9
CTA LR LR 18 12 32.3
CTAO Charters Tower 35.51 146 *e*P **P** **17 59 05.9 -0.3**
CTAO pmax pmax
comp=Z,18nm,0.6s,mb5.2
CTAO Charters Tower 35.51 146 *e*P **P** **17 59 05.9 -0.4**
comp=Z,18nm,0.6s,mb5.2
SHL Shillong 36.23 300 ⇑*i*P **P** **17 59 11.0 -1.4**
SHL *e*S **S** **18 04 50.0 +2.4**
ASAJ Asahikawa 37.15 20 P **P** **17 59 21.4 +1.4**
comp=Z,50nm,0.9s,mb5.5,baz=228,slow=12,SNR=30
ASAJ LR LR 18 15 03.2
comp=Z,686nm,18.7s,baz=216,slow=37
ASAJ Asahikawa 37.15 20 P **P** **17 59 21.4 +1.4**
ASAJ pmax pmax
comp=Z,50nm,0.9s
ASAJ MLR MLR
comp=Z,686nm,18.7s
GTA Gaotai 37.88 326 P **P** **17 59 25.8 -0.4**
GTA AP pP 17 59 43.3 -0.7
GTA XP sP 17 59 53.0 +0.4
GTA PP PP 18 00 55.0 +1.0
GTA PCP PcP 18 01 42.0 +0.9
GTA S **S** **18 05 09.3 -3.0**
GTA AMB AMB
comp=Z,44nm,0.9s,mb5.3
GTA AMB AMB
comp=Z,163nm,6.2s
GTA LR LR
comp=N,662nm,19.6s
GTA LR LR
comp=E,560nm,19.9s
GTA LR LR
comp=Z,1μm,20.5s
LSA Lhasa 38.37 306 *e*P **P** **17 59 30.5 0.0**
LSA *e* 18 01 44.3
LSA pmax pmax
comp=Z,37nm,1.0s,mb5.2
LSA Lhasa 38.37 306 *e*P **P** **17 59 30.5 +0.1**
comp=Z,37nm,1.0s,mb5.2
LSA *e*PcP PcP 18 01 44.2 +1.4
HNR Honiara 38.53 119 LR LR 18 12 31.4
comp=Z,484nm,21.0s,baz=88,slow=32
HABR Khabarovsk 39.40 9*c i*P **P** **17 59 39.7 +1.0**
HABR *e**SP sP 17 59 51.9 -13
HABR *e* 18 01 08.6
HABR *e*PPP 18 01 30.9
HABR *e* 18 01 46.3
HABR *e*S **S** **18 05 40.3 +5.4**
HABR *e**SS sS 18 05 54.7 -11
HABR *e*SSS 18 08 56.8
HABR pmax pmax
comp=Z,92nm,0.7s,mb5.7
HABR pmax pmax
comp=N,41nm,1.0s
HABR pmax pmax
comp=E,45nm,0.9s
HABR MLR MLR
comp=Z,185nm,16.0s
KLR Kul'dur 39.72 6 ⇓*i*P **P** **17 59 38.2 -3.2**
KLR pmax pmax
comp=E,28nm,1.4s
KLR pmax pmax
comp=Z,80nm,1.4s,mb5.4
YSS Yuzh-Sakhalins 39.74 18 ⇑*i*P **P** **17 59 41.7 +0.1**
YSS pmax pmax
comp=Z,60nm,0.9s,mb5.4
YSS Yuzh-Sakhalins 39.74 18 ⇑*e*P **P** **17 59 40.4 -1.2**
HIA Hailar 39.86 353 ⇑*i*P **P** **17 59 42.9 +0.3**
FORT Forrest 40.23 178 *e*P **P** **17 59 46.1 +0.2**
comp=Z,255nm,0.5s,mb6.3
FORT Forrest 40.23 178 *e*P **P** **17 59 46.0 +0.1**
comp=Z,216nm,0.4s,mb6.3
TAPN Taplejung 40.35 301 *e*P **P** **17 59 46.9 -0.1**
comp=Z,47nm,0.4s,mb5.7
ODAN Odare 40.47 300 *e*P **P** **17 59 48.0 0.0**
comp=Z,143nm,0.6s,mb6.0
BOK Bokaro 40.97 295 *e*P **P** **17 59 52.9 +0.7**
BOK AMb AMB 17 59 54.0
comp=Z,98nm,1.1s,mb5.6
RAMN Ramite 41.17 300 *e*P **P** **17 59 53.9 +0.2**
comp=Z,128nm,0.7s,mb5.9
ULN Ulaanbaatar 41.40 340 ⇑P **P** **17 59 55.6 +0.3**
SNR=12
ULN Ulaanbaatar 41.40 340 ⇑*i*P **P** **17 59 55.4 +0.2**
ULN *e* 18 01 52.4
ULN pmax pmax
comp=Z,41nm,0.8s,mb5.3
ULN Ulaanbaatar 41.40 340 ⇑*i*P **P** **17 59 55.4 +0.2**
comp=Z,41nm,0.8s,mb5.3
ULN *e*PcP PcP 18 01 52.4 +0.2
ULN *e*ScP ScP 18 05 36.3 +0.6
SONM Songino Array 41.59 340 P **P** **17 59 56.9 +0.1**
comp=Z,8.6nm,0.5s,mb4.7,baz=151,slow=9.5,SNR=6.6
SONM PcP PcP 18 01 52.7 0.0
comp=Z,13nm,0.7s,baz=185,slow=4.5,SNR=4.6
SONM LR LR 18 20 03.2
comp=Z,402nm,18.1s,baz=137,slow=40
SONM Songino Array 41.59 340 P **P** **17 59 56.9 +0.1**
SONM 18 01 52.7
SONM pmax pmax
comp=Z,9.0nm,0.5s
SONM MLR MLR
comp=Z,402nm,18.1s
JIRN Jiri 41.73 301 *e*P **P** **17 59 58.5 +0.2**
comp=Z,164nm,0.6s,mb5.9
GUN Gumba 42.07 301 *e*P **P** **18 00 01.0 -0.1**
comp=Z,183nm,0.8s,mb5.9
PKI Pulchoki 42.36 301 *e*P **P** **18 00 03.0 -0.5**
comp=Z,47nm,0.5s,mb5.5
PKIN Phulchoki 42.38 301 *e*P **P** **18 00 03.0 -0.6**
comp=Z,57nm,0.6s,mb5.5
VIS Vishakhapatnam 42.39 286 *e*P **P** **18 00 03.9 +0.1**
VIS AMb AMB 18 00 06.2
comp=Z,116nm,0.6s,mb5.8
MUN Mundaring 42.49 193 *e*P **P** **18 00 04.8 +0.4**
KKN Kakani 42.54 301 *e*P **P** **18 00 04.4 -0.5**
comp=Z,61nm,0.8s,mb5.4
DMN Daman 42.63 300 *e*P **P** **18 00 05.3 -0.4**
GKN Gorkha 43.14 301 *e*P **P** **18 00 09.1 -0.7**

comp=Z,50nm,0.5s,mb5.5
NWAO Narrogin (SRO) 43.20 191 P **P** **18 00 11.5 +1.4**
SNR=7.6
NWAO Narrogin (SRO) 43.20 191 P **P** **18 00 10.7 +0.6**
comp=Z,150nm,0.7s,mb5.8,baz=17,slow=8.7,SNR=62
NWAO Narrogin (SRO) 43.20 191 *e*P **P** **18 00 10.8 +0.7**
NWAO pmax pmax
comp=Z,132nm,0.8s
NWAO Narrogin (SRO) 43.20 191 *e*P **P** **18 00 10.8 +0.7**
comp=Z,132nm,0.8s,mb5.7
CIT Chita 43.50 349 *e*P **P** **18 00 09.3 -3.0**
STKA Stephens Creek 43.83 161 P **P** **18 00 14.8 -0.3**
comp=Z,15nm,0.3s,mb5.1,baz=339,slow=7.6,SNR=54
STKA Stephens Creek 43.83 161 *e*P **P** **18 00 14.6 -0.5**
comp=Z,24nm,0.7s,mb5.0
STKA Stephens Creek 43.83 161 *e*P **P** **18 00 14.3 -0.8**
comp=Z,7.1nm,0.8s,mb4.5
KOLN Koldamda 43.96 300 *e*P **P** **18 00 16.1 -0.3**
comp=Z,128nm,0.9s,mb5.7
DANN Dangsing 43.98 301 *e*P **P** **18 00 16.2 -0.4**
comp=Z,165nm,0.6s,mb5.9
ZAK Zakamensk 44.83 339 *e*P **P** **18 00 21.5 -1.4**
ZAK *e* 18 02 02.9
ZAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
ALBI Allahabad 44.93 296 *ex* **P** **18 00 21.0 -3.1**
PALK Pallekele 45.09 271 P **P** **18 00 26.1 +0.5**
comp=Z,124nm,0.5s,mb5.9,SNR=12
PALK Pallekele 45.09 271⇑*iP* **P** **18 00 26.8 +1.2**
PALK *e* 18 02 06.1
PALK pmax pmax
comp=Z,19nm,0.8s,mb4.9
PALK Pallekele 45.09 271⇑*iP* **P** **18 00 26.8 +1.2**
comp=Z,19nm,0.8s,mb4.9
PALK *e*PcP PcP 18 02 06.1 +0.8
TLY Talaya 45.81 341 P **P** **18 00 30.8 +0.2**
comp=Z,328nm,0.7s,mb6.2,SNR=11
TLY Talaya 45.81 341 *e*P **P** **18 00 30.6 0.0**
TLY pmax pmax
comp=Z,37nm,0.7s,mb5.2
TLY MLR MLR
comp=Z,258nm,18.0s
TLY Talaya 45.81 341 *e*P **P** **18 00 30.6 0.0**
comp=Z,38nm,0.7s,mb5.2
ADE Adelaide 45.91 166⇑*iP* **P** **18 00 32.4 +0.7**
MOY Mondy 46.71 339 *e*P **P** **18 00 38.1 +0.4**
MOY pmax pmax
comp=Z,42nm,1.4s,mb5.0
ARMA Armidale 46.71 149 *e*P **P** **18 00 38.3 +0.3**
NGP Nagpur 46.76 290 *e*P **P** **18 00 37.8 -0.7**
NGP AMb AMB 18 00 40.5
comp=Z,144nm,1.4s,mb5.5
NRGR Nerungri 46.91 359 *i*P **P** **18 00 40.6 +1.4**
NRGR S **S** **18 07 28.8 +4.3**
NRGR smax
comp=N,55nm,0.7s
HYB Hyderabad 46.91 285 *e*P **P** **18 00 40.5 +0.7**
HYB pmax pmax
comp=Z,175nm,1.0s,mb5.7
HYB Hyderabad 46.91 285 *i*P **P** **18 00 40.5 +0.7**
comp=Z,175nm,1.0s,mb5.7
HYB *e* pP 18 01 01.5 +3.3
HYB *e* 18 01 12.5
HYB *e*PcP PcP 18 02 12.0 +0.4
HYB *e* 18 02 36.5
HYB Hyderabad 46.91 285 *e*P **P** **18 00 40.5 +0.7**
comp=Z,175nm,1.0s,mb5.7
CLNS Chul'man 47.09 359 *e*P **P** **18 00 41.7 +1.2**
CLNS *e* 18 02 18.0
CLNS *e* 18 02 37.6
CLNS *e* 18 10 24.5
CLNS pmax pmax
comp=Z,232nm,1.0s,mb5.9
CLNS pmax pmax
comp=E,60nm,1.0s
CLNS pmax pmax
comp=N,128nm,1.0s
WMQ Urumqi 47.70 322 P **P** **18 00 45.5 0.0**
WMQ AP pP 18 01 05.3 +1.4
WMQ PCP PcP 18 02 14.5 +0.6
WMQ S **S** **18 07 34.8 -1.3**
WMQ XS sS 18 08 08.0 +0.5
WMQ AMB AMB
comp=Z,25nm,1.5s,mb4.8
WMQ AMB AMB
comp=Z,319nm,4.0s
WMQ LR LR
comp=N,594nm,19.0s
WMQ LR LR
comp=E,542nm,19.0s
WMQ LR LR
comp=Z,699nm,18.0s
KOD Kodaikanal 48.02 275 *e*P **P** **18 00 49.6 +1.2**
KOD AMb AMB 18 00 51.6
comp=Z,84nm,1.2s,mb5.4
BHPL Bhopal 48.51 292 *e*P **P** **18 00 52.2 +0.1**
BHPL AMb AMB 18 00 53.3
comp=Z,98nm,0.9s,mb5.7
AKL Akola 48.60 289 *e*P **P** **18 00 53.1 +0.2**
AKL AMb AMB 18 00 54.2
comp=Z,147nm,1.3s,mb5.8
LATR Latur 48.86 286 *e*P **P** **18 00 54.7 -0.2**
BOD Bodaibo 48.98 351⇓*iP* **P** **18 00 55.4 +0.3**
BOD pmax pmax
comp=Z,50nm,1.1s,mb5.4
CAN Canberra 49.63 155 *e*P **P** **18 01 01.1 +0.7**
CAN pmax pmax
comp=Z,42nm,1.0s,mb5.3
CAN Canberra 49.63 155 *e*P **P** **18 01 01.1 +0.7**
comp=Z,42nm,1.0s,mb5.3
CNB Canberra Magne 49.77 155 *e*P **P** **18 01 02.2 +0.7**
PEA0B Petropavlovsk- 50.21 24 *e*P **P** **18 01 05.9 +1.3**
PETK Petropavlovsk- 50.21 24 P **P** **18 01 05.9 +1.3**
comp=Z,29nm,0.6s,mb5.4,baz=199,slow=2.9,SNR=72
PETK LR LR 18 22 21.5
comp=Z,275nm,19.4s,baz=211,slow=36
TOO Toolangi 50.31 160 *e*P **P** **18 01 06.4 +0.9**
DZM Mont Dzumac 50.47 129 *e*P **P** **18 01 06.2 -0.9**
DZM Mont Dzumac 50.47 129 *e*P **P** **18 01 06.8 -0.2**
comp=Z,50nm,0.6s,mb5.6
PET Petropavlovsk 50.53 25 *e*P **P** **18 01 08.5 +1.5**
PET *e*S **S** **18 08 22.0 +6.4**
PET pmax pmax
comp=Z,63nm,1.4s,mb5.5
PET pmax pmax
comp=Z,100nm,16.0s
PET MLR MLR
comp=Z,500nm,20.0s
PET Petropavlovsk 50.53 25⇑*eP* **P** **18 01 08.3 +1.3**
NORM Noumea 50.59 129 *e*P **P** **18 01 08.6 +0.7**
LASL Noumea 50.64 129 *e*P **P** **18 01 09.2 +0.9**
KAD Karad 51.08 284 *ex* **P** **18 01 14.1 +2.4**
KAD AMb AMB 18 01 16.0
comp=Z,65nm,0.7s,mb5.8
GOA Goa 51.40 282 *e*P **P** **18 01 14.3 +0.2**
GOA AMb AMB 18 01 16.5
comp=Z,82nm,0.9s,mb5.8
POO Poona 51.43 286⇑*iP* **P** **18 01 12.0 -2.4**
comp=Z,90nm,1.0s,mb5.8
POO *e*P 18 01 14.4
POO AMb AMB 18 01 15.5
comp=Z,59nm,0.6s,mb5.8
AJM Ajmer 51.48 296 *e*P **P** **18 01 14.2 -0.5**
AJM AMb AMB 18 01 15.5
comp=Z,89nm,0.8s,mb5.8
YAK Yakutsk 52.34 2*c iP* **P** **18 01 20.8 +0.4**
YAK *e**PP pP 18 01 36.9 -2.1
YAK *e* 18 02 29.4
YAK *e* 18 03 17.7
YAK *e*S **S** **18 08 42.5 +2.3**
YAK pmax pmax
comp=Z,305nm,0.9s,mb6.3
YAK pmax pmax
comp=N,119nm,1.0s
YAK pmax pmax
comp=E,28nm,1.0s
YAK pmax pmax
comp=Z,24nm,1.0s,mb5.2
YAK smax
comp=E,102nm,3.0s
YAK smax
comp=N,56nm,2.4s
YAK Yakutsk 52.34 2⇑*iP* **P** **18 01 20.5 +0.1**
comp=N,375nm,0.9s,mb6.4
YAK *e*PcP PcP 18 02 29.5 -1.0

MK31 Makanchi Array 52.51 323⇑*eP* **P** **18 01 21.5 -0.4**
MK31 pmax pmax
comp=Z,41nm,0.5s,mb5.7
MK31 Makanchi Array 52.51 323⇑*iP* **P** **18 01 21.4 -0.5**
MK31 *e*PcP PcP 18 02 31.5 +0.1
MKAR Makanchi Array 52.51 323 P **P** **18 01 21.3 -0.6**
comp=Z,57nm,0.6s,mb5.8,baz=122,slow=6.6,SNR=458
MKAR PcP PcP 18 02 31.8 +0.3
comp=Z,12nm,0.5s,baz=103,slow=5.5,SNR=7.2
MKAR ScP ScP 18 06 28.3 +6.0
comp=Z,1.2nm,0.9s,baz=120,slow=2.8,SNR=3.0
MKAR LR LR 18 25 25.9
comp=Z,621nm,20.0s,baz=113,slow=38
ULHL Ulahol 54.40 316 P **P** **18 01 36.4 +0.6**
SNR=5.8
KZA Kyzart 55.03 315 P **P** **18 01 41.3 +0.9**
SNR=58
TKM2 Tokmak 2 55.09 316 P **P** **18 01 40.9 0.0**
SNR=37
ZAA0 Zalesovo Array 55.16 332 *eP* **P** **18 01 39.6 -1.5**
ZALV Zalesovo Beam 55.16 332 P **P** **18 01 39.9 -1.2**
comp=Z,37nm,0.6s,mb5.6,baz=116,slow=6.9,SNR=172
ZALV PcP PcP 18 02 40.5 -1.0
comp=Z,6.2nm,0.4s,baz=137,slow=5.8,SNR=5.7
ZALV LR LR 18 27 33.3
comp=Z,202nm,19.6s,baz=120,slow=39
ZALV Zalesovo Beam 55.16 332 P **P** **18 01 39.9 -1.2**
ZALV 18 02 40.5
ZALV pmax pmax
comp=Z,37nm,0.6s,mb5.6
ZALV MLR MLR
comp=Z,202nm,19.6s
KBK Karagaybulak 55.44 316 P **P** **18 01 43.6 +0.3**
SNR=56
UCH Uchtor 55.59 315 P **P** **18 01 45.5 +1.1**
SNR=18
UCH Uchtor 55.59 315 *eP* **P** **18 01 45.2 +0.7**
comp=Z,3μm,0.9s
BHJ Bhuj 55.62 292 *eP* **P** **18 01 44.8 -0.2**
BHJ AMb AMB 18 01 48.3
comp=Z,100nm,0.6s,mb6.0
CHMS Chumysh 55.70 316 P **P** **18 01 44.7 -0.5**
SNR=25
FRU Bishkek 55.73 316 *eP* **P** **18 01 44.0 -1.4**
AAK Ala-Archa 55.75 315 P **P** **18 01 45.7 +0.1**
SNR=14
USP Ospenovka 55.97 316 P **P** **18 01 46.8 -0.3**
SNR=70
AML Almayashu 56.13 315 P **P** **18 01 49.0 +0.7**
SNR=80
AML Almayashu 56.13 315⇑*iP* **P** **18 01 48.6 +0.3**
comp=Z,76nm,0.8s,mb5.8
EKS2 Erkin-Say 56.25 315 P **P** **18 01 49.4 +0.3**
SNR=15
SEY Seymchan 56.42 14⇑*eP* **P** **18 01 50.3 +0.3**
NVS Novosibirsk 56.43 332⇑*iP* **P** **18 01 48.9 -1.3**
NVS pmax pmax
comp=Z,48nm,0.8s,mb5.6
NVS pmax pmax
comp=N,25nm,0.8s
NVS pmax pmax
comp=E,27nm,0.8s
KURK Kurchatov 56.56 326 P **P** **18 01 50.1 -1.1**
comp=E,519nm,0.9s,mb6.6,SNR=58
KURK Kurchatov 56.56 326 P **P** **18 01 51.0 -0.2**
SNR=27
KURK Kurchatov 56.56 326⇑*eP* **P** **18 01 50.5 -0.7**
KURK pmax pmax
comp=Z,112nm,1.3s,mb5.7
KURK Kurchatov 56.56 326⇑*iP* **P** **18 01 50.4 -0.8**
comp=Z,80nm,0.9s,mb5.8
FX1 Attu Island--F 57.27 32 P **P** **18 01 57.8 +1.6**
comp=Z,140nm,0.9s,mb6.0,baz=218,slow=0.7,SNR=23
FX1 Attu Island--F 57.27 32 P **P** **18 01 57.8 +1.7**
FX1 pmax pmax
comp=Z,140nm,0.9s
KBL Kabul 57.67 305⇑*iP* **P** **18 01 59.0 -0.3**
KBL pmax pmax
comp=Z,115nm,0.6s,mb6.1
KBL Kabul 57.67 305⇑*iP* **P** **18 01 59.0 -0.3**
comp=Z,115nm,0.6s,mb6.1
KK31 Karatay Array 58.67 315⇑*eP* **P** **18 02 05.4 -0.7**
TIXI Tiksi 61.97 1⇑*eP* **P** **18 02 28.0 -0.1**
TIXI pmax pmax
comp=Z,304nm,1.0s,mb6.3
TIXI Tiksi 61.97 1⇑*iP* **P** **18 02 28.1 0.0**
comp=Z,264nm,0.9s,mb6.3
BVA0 Borovoye Array 62.16 326 *iP* **P** **18 02 29.1 -0.6**
BVA0 pmax pmax
comp=Z,12nm,1.0s,mb4.9
BRVK Borovoye 62.23 326 P **P** **18 02 29.8 -0.4**
comp=Z,585nm,1.1s,mb6.5,SNR=71
BRVK Borovoye 62.23 326 P **P** **18 02 30.0 -0.2**
SNR=32
BRVK Borovoye 62.23 326⇑*iP* **P** **18 02 29.5 -0.7**
BRVK pmax pmax
comp=Z,99nm,0.9s,mb5.8
BRVK Borovoye 62.23 326⇑*iP* **P** **18 02 29.5 -0.7**
comp=Z,98nm,0.9s,mb5.8
BILL Bilibino 64.00 16⇑*eP* **P** **18 02 42.5 +0.8**
BILL *e* 18 03 16.0
BILL *e*S **S** **18 11 17.7 +5.8**
BILL *e*SS SS 18 15 28.6 +7.0
BILL pmax pmax
comp=Z,120nm,1.3s,mb5.6
BILL MLR MLR
comp=Z,200nm,20.0s
BILL Bilibino 64.00 16⇑*eP* **P** **18 02 42.2 +0.6**
comp=Z,77nm,0.8s,mb5.6
BIDO Bidbid 66.21 291 P **P** **18 02 56.5 -0.3**
SNR=9.3
ABKT Ailbek 66.90 307 P **P** **18 03 01.9 +1.0**
comp=Z,570nm,0.8s,mb6.5,SNR=27
HOQ Hoqain 66.96 292 P **P** **18 03 01.6 0.0**
SNR=8.1
AB31 Akbulak array 67.33 319 P **P** **18 03 02.7 -0.7**
AB31 pmax pmax
comp=Z,62nm,0.7s,mb5.5
SVE Sverdlovsk 68.72 327⇓*eP* **P** **18 03 11.6 -0.4**
SVE pmax pmax
comp=Z,129nm,1.0s,mb5.7
AKTK Aktyubinsk 68.78 320 *i*P **P** **18 03 11.9 -0.6**
AKTO Aktyubinsk 68.78 320 *i*P **P** **18 03 11.9 -0.6**
ARU Arti 69.73 327 P **P** **18 03 17.6 -0.6**
comp=Z,1μm,0.5s,SNR=53
ARU Arti 69.73 327 *eP* **P** **18 03 17.4 -0.8**
ARU *e* 18 05 48.9
ARU *e*PPP 18 07 35.0
ARU S S 18 12 25.8 +4.5
ARU Arti 69.73 327⇑*iP* **P** **18 03 17.3 -0.9**
comp=Z,117nm,0.6s,mb5.9
RBK Rabkut 70.13 285 P **P** **18 03 22.1 +0.6**
SNR=5.3
WHFO Wadi Hawf 70.52 286 P **P** **18 03 23.6 -0.2**
SNR=6.8
ABTO Aybut 71.01 285 P **P** **18 03 27.4 +0.6**
SNR=5.3
SOKR Solikamsk 71.37 330*d iP* **P** **18 03 28.2 0.0**
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.3
TNA Tin City 71.37 24⇑*iP* **P** **18 03 29.3 +1.2**
comp=Z,15nm,0.7s,mb4.9
MSEY Mahe Island 71.93 262 P **P** **18 03 32.8 +0.4**
comp=Z,182nm,0.7s,mb6.0,SNR=5.8
CHGN Chignik 73.89 34⇑*eP* **P** **18 03 43.5 +0.2**
QRN Al-Qurain 75.24 297 *eP* **P** **18 03 50.5 -1.1**
baz=297
QRN AMb AMB 18 03 51.6
comp=Z,112nm,0.5s,mb5.8,baz=297
UMR Umm Al-Rimmam 75.37 298 *eP* **P** **18 03 51.3 -1.0**
baz=298
UMR AMb AMB 18 03 53.0
comp=Z,82nm,0.6s,mb5.6,baz=298
KBD Kabd 75.41 298 *eP* **P** **18 03 51.5 -1.0**
baz=298
KBD AMb AMB 18 03 53.4
comp=Z,54nm,0.7s,mb5.4,baz=298
RDF Al-Radifah 75.55 297 *eP* **P** **18 03 52.3 -1.1**
baz=297
RDF AMb AMB 18 03 53.7
comp=Z,93nm,0.8s,mb5.6,baz=297
MIB Mutribah 75.69 298 *eP* **P** **18 03 52.9 -1.2**
baz=298
MIB AMb AMB 18 03 54.4
comp=Z,120nm,0.8s,mb5.7,baz=298
NAY Al-Naaiem 75.80 298 *eP* **P** **18 03 53.8 -1.0**
baz=298

NAY AMb AMB 18 03 55.0
comp=Z,93nm,1.0s,mb5.5,baz=298
SVW2 Sparrevohn 75.89 29 *eP* **P** **18 03 56.5 +1.9**
CASY Casey 76.60 186 *eP* **P** **18 03 59.2 +0.8**
CASY Casey 76.60 186⇓*eP* **P** **18 03 59.3 +0.8**
comp=Z,43nm,0.7s,mb5.3
OHAK Old Harbor 76.78 33 *eP* **P** **18 04 01.0 +1.2**
DGRG David-gareji 76.86 310 P **P** **18 04 01.5 +1.0**
KDAK Kodiak Island 77.19 33 P **P** **18 04 03.0 +1.0**
comp=Z,539nm,1.6s,mb6.0,SNR=10
KDAK Kodiak Island 77.19 33 P **P** **18 04 03.7 +1.7**
comp=Z,50nm,0.7s,mb5.4,baz=240,slow=4.3,SNR=18
KDAK Kodiak Island 77.19 33 *eP* **P** **18 04 03.2 +1.2**
KDAK pmax pmax
comp=Z,204nm,1.5s,mb5.6
KDAK Kodiak Island 77.19 33 *eP* **P** **18 04 03.2 +1.2**
comp=Z,204nm,1.5s,mb5.6
MTA Mtatsminda 77.29 311 P **P** **18 04 03.0 0.0**
GNI Garni 77.38 309⇓P **P** **18 04 04.2 +0.8**
SNR=6.9
GNI Garni 77.38 309⇑*eP* **P** **18 04 01.2 -2.3**
CHUM Lake Minchumin 77.62 27 *eP* **P** **18 04 05.8 +1.4**
comp=Z,15nm,0.8s,mb4.8
PPLA Purkeypile 77.62 28 *eP* **P** **18 04 05.6 +1.3**
comp=Z,17nm,0.8s,mb4.8
GOR Gori 77.79 311 P **P** **18 04 06.9 +1.2**
BPAW Bear Paw Mtn. 78.22 26 *eP* **P** **18 04 08.8 +1.2**
comp=Z,80nm,0.9s,mb5.5
KTH Kantishna Hill 78.23 27 *eP* **P** **18 04 08.3 +0.6**
comp=Z,16nm,0.9s,mb4.8
ONI Oni 78.25 312 P **P** **18 04 09.0 +0.7**
TRF Thorofare Moun 78.51 27 *eP* **P** **18 04 10.2 +1.0**
comp=Z,44nm,1.0s,mb5.2
COLD Coldfoot 78.67 23 *eP* **P** **18 04 11.9 +1.8**
comp=Z,55nm,0.9s,mb5.4
RC01 Rabbit Creek A 78.72 30 *eP* **P** **18 04 10.6 +0.1**
comp=Z,32nm,0.8s,mb5.2
KIV Kislovodsk 78.75 313 P **P** **18 04 11.4 +0.4**
comp=Z,766nm,0.7s,mb6.6,SNR=14
KIV Kislovodsk 78.75 313⇑P **P** **18 04 11.0 0.0**
SNR=12
KIV Kislovodsk 78.75 313 *eP* **P** **18 04 10.8 -0.2**
KIV pmax pmax
comp=Z,88nm,0.7s,mb5.7
KIV MLR MLR
comp=Z,329nm,17.0s
SEW Seward 78.86 31 *eP* **P** **18 04 11.3 +0.1**
comp=Z,48nm,0.9s,mb5.3
PMR Palmer 79.02 29 *eP* **P** **18 04 12.0 -0.1**
PMR pmax pmax
comp=Z,70nm,1.2s,mb5.4
PMR Palmer 79.02 29 *eP* **P** **18 04 12.0 -0.1**
comp=Z,70nm,1.2s,mb5.4
MCK McKinley 79.12 27 *eP* **P** **18 04 12.8 +0.2**
MCK pmax pmax
comp=Z,94nm,0.8s,mb5.7
MCK McKinley 79.12 27 *eP* **P** **18 04 12.8 +0.3**
comp=Z,94nm,0.8s,mb5.7
VRHR Novokhopersk 79.19 320 *eP* **P** **18 04 12.0 -1.3**
VRHR pmax pmax
comp=Z,100nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.7s
COLA College 79.59 26*c iP* **P** **18 04 15.4 +0.3**
COLA College 79.59 26 *eP* **P** **18 04 15.0 -0.1**
comp=E,22nm,0.8s,mb5.0
MIR Mirnyy 79.78 193⇓*iP* **P** **18 04 17.0 +1.0**
MIR *i* pP 18 04 34.0 -1.9
MIR pmax pmax
comp=Z,500nm,0.8s,mb6.4
KLMR Klimovskoe 80.05 330 *i*P **P** **18 04 17.3 -0.4**
KLMR pmax pmax
comp=Z,193nm,1.2s,mb5.8
VORD Divnogorie 80.67 320 *eP* **P** **18 04 19.5 -1.7**
VORD pmax pmax
comp=Z,60nm,0.9s,mb5.4
VORD pmax pmax
comp=N,60nm,0.7s
VORD pmax pmax
comp=E,120nm,0.9s
PAX Paxson 80.70 28 *eP* **P** **18 04 22.3 +1.2**
PAX pmax pmax
comp=Z,92nm,1.4s,mb5.4
PAX Paxson 80.70 28 *eP* **P** **18 04 22.3 +1.2**
comp=Z,92nm,1.4s,mb5.4
VSR Storozhevoye 80.73 320 *eP* **P** **18 04 20.5 -1.1**
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.0s
SOC Sochi 80.92 313 *eP* **P** **18 04 20.3 -2.5**
SOC *e*S S 18 14 24.6 -1.2
SOC MLR MLR
comp=Z,16μm,21.0s
MOS Moscow 81.33 325 *eP* **P** **18 04 22.8 -1.8**
MOS pmax pmax
comp=Z,171nm,0.8s,mb5.9
MENT Mentasta 81.50 28 *eP* **P** **18 04 25.7 +0.3**
LVZ Lovozero 81.73 338⇑*eP* **P** **18 04 26.0 -0.5**
OBN Obninsk 81.98 325⇑*eP* **P** **18 04 27.3 -0.8**
OBN S S 18 14 40.4 +4.2
OBN pmax pmax
comp=Z,108nm,1.2s,mb5.5
OBN MLR MLR
comp=Z,300nm,19.0s
OBN Obninsk 81.98 325 *eP* **P** **18 04 27.1 -1.0**
comp=Z,54nm,0.9s,mb5.4
APA Apatity 82.24 337⇓*iP* **P** **18 04 29.6 +0.4**
APA pmax pmax
comp=Z,88nm,1.0s,mb5.5
APA MLR MLR
comp=Z,2μm,14.0s
MALT Malatya 82.40 308⇑*iP* **P** **18 04 31.5 +0.9**
MALT Malatya 82.40 308 *eP* **P** **18 04 30.8 +0.2**
EGAK Eagle 82.45 26 *eP* **P** **18 04 31.1 +0.8**
comp=Z,21nm,0.8s,mb5.0
DAWY Dawson 83.30 26 *eP* **P** **18 04 36.5 +1.8**
JOF Joensuu 83.73 333 *ep* **P** **18 04 35.8 -1.2**
comp=Z,84nm,0.5s,mb5.8
JOF Joensuu 83.73 333 *eP* **P** **18 04 35.8 -1.2**
JOF pmax pmax
comp=Z,84nm,0.5s,mb5.8
PNL Peninsula 83.94 31 *eP* **P** **18 04 40.1 +2.0**
comp=Z,61nm,0.9s,mb5.4
KEV Kevo 84.20 340 *ep* **P** **18 04 39.0 -0.3**
comp=Z,30nm,0.7s,mb5.2
KEV Kevo 84.20 340 *eP* **P** **18 04 39.0 -0.3**
KEV pmax pmax
comp=Z,31nm,0.7s,mb5.2
SPB4 Spitsbergen Ar 84.62 349 *eP* **P** **18 04 41.5 +0.3**
PUL Pulkovo 84.72 330⇑*eP* **P** **18 04 42.1 +0.1**
ARCES ARCESS Array B 84.76 340 P **P** **18 04 42.0 -0.1**
comp=Z,64nm,0.6s,mb5.7,baz=78,slow=6.7,SNR=359
ARCES LR LR 18 47 27.4
comp=Z,405nm,18.4s,baz=297,slow=39
ARCES ARCESS Array B 84.76 340 P **P** **18 04 42.0 -0.1**
ARCES pmax pmax
comp=Z,64nm,0.6s
ARCES MLR MLR
comp=Z,405nm,18.4s
ARE0 ARCESS Array S 84.76 340 *eP* **P** **18 04 41.7 -0.4**
SIM Simferopol' 84.77 315*c iP* **P** **18 04 34.9 -7.7**
SIM pmax pmax
comp=Z,93nm,0.9s,mb5.7
KBS Kingsbay 85.13 350⇑*eP* **P** **18 04 43.9 +0.1**
KTK1 Kautokeino 85.68 339 *eP* **P** **18 04 47.2 +0.5**
BRTR Keskin Array B 85.91 309 P **P** **18 04 48.1 -0.3**
comp=Z,18nm,0.7s,mb5.1,baz=103,slow=4.1,SNR=25
BRTR Keskin Array B 85.91 309 P **P** **18 04 48.2 -0.2**
BRTR pmax pmax
comp=Z,18nm,0.7s
SKAG Skagway 86.02 30 *eP* **P** **18 04 50.4 +1.9**
KAF Kangasniemi 86.16 332 *ep* **P** **18 04 47.7 -1.5**
comp=Z,76nm,0.5s,mb5.9,baz=74,slow=4.5
KAF Kangasniemi 86.16 332 *eP* **P** **18 04 47.7 -1.5**
KAF pmax pmax
comp=Z,76nm,0.5s,mb5.9
VSU Vasula 86.79 329 *eP* **P** **18 04 52.2 -0.1**
CSS Prodhromos 86.92 305 *eP* **P** **18 04 52.6 -0.9**
comp=Z,84nm,0.7s,mb5.8
TRO Tromso 86.95 340 *eP* **P** **18 04 49.3 -3.6**
AKASG Malin Array Be 87.03 321 P **P** **18 04 52.7 -0.9**

comp=Z,8,4nm,0.5s,mb4.9,baz=66,slow=4.4,SNR=50
AKASG LR LR 18 48 30.5
comp=Z,220nm,19.4s,baz=80,slow=39
AKASG Malin Array Be 87.03 321 P P 18 04 52.7 -1.0
AKASG pmax pmax
comp=Z,8.0nm,0.5s
AKASG MLR MLR
comp=Z,220nm,19.4s
AKASG Malin Array Be 87.03 321 P P 18 04 52.7 -0.9
AKASG LR LR 18 48 30.5
AKBB Malin Array Si 87.03 321 *eP* **P 18 04 52.5 -1.2**
PPT Papeete 87.39 108 *eS* S 18 15 40.8 +10
comp=Z,288nm,27.0s
PPT Papeete 87.39 108 *e*LR LR 18 32 46.5
comp=Z,406nm,23.5s,baz=300
PPT Papeete 87.39 108 LR LR 18 37 03.5
comp=Z,184nm,19.7s,baz=30,slow=31
IDID Didziasalis 87.51 326 *eP* **P 18 04 55.5 -0.4**
IIGN Ignalina 87.78 326 *eP* **P 18 04 56.6 -0.6**
ISAL Salakas 87.79 326 *eP* **P 18 04 56.8 -0.4**
ALE Alert 87.88 1 P **P 18 04 58.0 +0.8**
comp=Z,111nm,0.6s,mb6.1,SNR=8.2
TLCR 88.42 315⇑ *iP* **P 18 05 00.0 -0.4**
TBI Tubuai 88.59 114 *e*LR LR 18 33 27.5
comp=Z,443nm,26.0s
TIRR Tirgusor 88.86 315⇓ *i*P **P 18 05 02.0 -0.5**
DLBC Dease Lake 88.93 31 P **P 18 05 03.2 +0.7**
comp=Z,9.6nm,0.9s,mb4.8,baz=279,slow=0.4,SNR=8.5
MAW Mawson 89.11 200 LR LR 18 38 20.3
comp=Z,182nm,21.2s,baz=55,slow=31
MAW Mawson 89.11 200 *eP* **P 18 05 03.2 +0.1**
MAW pmax pmax
comp=Z,17nm,1.3s
MAW Mawson 89.11 200 *eP* **P 18 05 04.0 +0.9**
comp=Z,33nm,1.3s,mb5.2
MAW Mawson 89.11 200 *eP* **P 18 05 03.2 +0.2**
comp=Z,17nm,1.3s,mb4.9
HARR Harsova 89.14 315⇑ *iP* **P 18 05 03.9 +0.1**
VNDA Vanda 89.32 173 P **P 18 05 04.3 +0.4**
comp=Z,8.2nm,0.7s,mb4.9,baz=316,slow=6.1,SNR=26
VNDA LR LR 18 43 38.5
comp=Z,189nm,18.4s,baz=332,slow=35
VNDA Vanda 89.32 173 P **P 18 05 04.3 +0.4**
VNDA pmax pmax
comp=Z,8.0nm,0.7s
VNDA MLR MLR
comp=Z,189nm,18.4s
VNDA Vanda 89.32 173 P **P 18 05 04.3 +0.4**
VNDA LR LR 18 43 38.5
VRI Vrincioaia 89.70 316⇓ *iP* **P 18 05 06.6 +0.2**
PLOR Plostina 89.76 316⇓ *iP* **P 18 05 06.1 -0.6**
MOR8 Moi Rana 89.81 338 *eP* **P 18 05 04.4 -2.1**
SUW Suwalki 89.84 325 *eP* **P 18 05 06.0 -0.9**
SUW Suwalki 89.84 325 *eP* **P 18 05 06.0 -0.9**
STOK Stokkvaagen 90.27 338 *eP* **P 18 05 07.8 -0.9**
STOK AMb AMB 18 05 13.8
comp=Z,156nm,3.7s
BURAR Bucovina Array 90.29 318⇑ *iP* **P 18 05 09.2 +0.1**
BUR08 Bucovina Ar. S 90.29 318 *eP* **P 18 05 09.0 -0.1**
MLR Muntele Rosu 90.33 316 LR LR 18 49 53.6
comp=Z,565nm,21.3s,baz=328,slow=38
VOIR 90.95 316⇓ *iP* **P 18 05 11.4 -0.9**
KWP Kalwaria 91.35 321 *eP* **P 18 05 14.1 +0.1**
KWP Kalwaria 91.35 321⇑ *iP* **P 18 05 14.1 +0.1**
KWP Kalwaria 91.35 321 *eP* **P 18 05 14.1 +0.1**
DAG Danmarks Havn 91.36 352⇓ *iP* **P 18 05 13.1 -0.4**
DAG pmax pmax
comp=Z,69nm,1.0s,mb5.7
DAG Danmarks Havn 91.36 352⇓ *iP* **P 18 05 13.1 -0.4**
comp=Z,69nm,1.0s,mb5.7
NSS Namsos 91.44 337 *eP* **P 18 05 12.1 -2.0**
NSS *ep*P pP 18 05 35.3 +0.9
UZH Uzhgorod 91.90 320⇑ *iP* **P 18 05 16.7 +0.1**
RES Resolute Bay 92.11 10 *eP* **P 18 05 17.9 +0.9**
RES pmax pmax
comp=Z,39nm,0.8s,mb5.7
RES Resolute Bay 92.11 10 *eP* **P 18 05 17.9 +0.8**
comp=Z,39nm,0.8s,mb5.7
DRGR 92.16 318⇑ *iP* **P 18 05 17.5 -0.3**
STHS Stebnicka Huta 92.33 321 *i* P **P 18 05 18.9 +0.4**
STHS pmax pmax
comp=Z,16nm,0.9s,mb5.2
STHS Stebnicka Huta 92.33 321 *i* P **P 18 05 18.9 +0.4**
comp=Z,16nm,0.9s,mb5.2
CRVS Cervenica-Dubn 92.35 320 *i* P **P 18 05 19.1 +0.5**
CRVS pmax pmax
comp=Z,46nm,0.9s,mb5.7
CRVS Cervenica-Dubn 92.35 320 *i* P **P 18 05 19.1 +0.5**
comp=Z,46nm,0.9s,mb5.7
HFS Hagfors 92.59 332 LR LR 18 47 59.6
comp=Z,325nm,19.2s,baz=66,slow=36
NIE Niedzica 92.91 321 *eP* **P 18 05 21.8 +0.6**
OJC Ojcow 92.97 322 *eP* **P 18 05 21.3 -0.2**
BZS Buzias 93.22 317⇑ *iP* **P 18 05 21.9 -0.9**
NB2 NORSAR Subarra 93.30 334 P **P 18 05 21.7 -1.1**
comp=Z,22nm,0.7s,mb5.6,baz=67,slow=4.6
NOA NORSAR Array B 93.30 334 P **P 18 05 21.6 -1.1**
comp=Z,22nm,0.8s,mb5.6,baz=64,slow=4.6,SNR=44
NOA LR LR 18 50 39.1
comp=Z,272nm,19.4s,baz=70,slow=38
NOA NORSAR Array B 93.30 334 P **P 18 05 21.7 -1.1**
NOA pmax pmax
comp=Z,22nm,0.8s
NOA MLR MLR
comp=Z,272nm,19.5s
NOA NORSAR Array B 93.30 334 P **P 18 05 21.6 -1.1**
NOA LR LR 18 50 39.1
NAO01 NORSAR Array S 93.53 334 *eP* **P 18 05 22.6 -1.2**
comp=Z,7.4nm,0.5s,mb5.3
OKC Ostrava-Krasne 94.10 322 *eP* **P 18 05 26.6 -0.1**
MOL Molde 94.11 336 *eP* **P 18 05 26.3 -0.1**
VYHS Vyhne 94.12 320 *i* P **P 18 05 26.9 +0.1**
VYHS pmax pmax
comp=Z,9.0nm,1.5s,mb4.9
VYHS Vyhne 94.12 320 *i* P **P 18 05 26.9 +0.1**
comp=Z,9.3nm,1.5s,mb4.9
YKA Yellowknife Ar 94.33 24 P **P 18 05 28.3 +0.9**
comp=Z,29nm,0.7s,mb5.7,baz=302,slow=4.7,SNR=482
YKA PKKPbc PKKPbc 18 22 26.1 -3.5
comp=Z,1.4nm,0.7s,baz=124,slow=2.9,SNR=16
YKA Yellowknife Ar 94.33 24 P **P 18 05 28.3 +0.8**
YKA pmax pmax
comp=Z,29nm,0.7s
YKA Yellowknife Ar 94.33 24 P **P 18 05 28.3 +0.9**
YKA PKKPbc PKKPbc 18 22 26.1 -3.5
KOLL Kolacno 94.37 321 *i* P **P 18 05 29.0 +1.0**
KSP Ksiaz 94.85 323 *eP* **P 18 05 30.3 +0.2**
KSP Ksiaz 94.85 323 *eP* **P 18 05 29.9 -0.2**
PKSM Moragy 95.01 318⇑ *iP* **P 18 05 30.3 -0.6**
DPC Dobruska-Polom 95.02 323 *eP* **P 18 05 30.9 0.0**
DPC *ex* x 18 05 39.3
UPC Upice 95.14 323 *eP* **P 18 05 31.8 +0.4**
UPC *ex* x 18 05 39.1
VRAC Vranov 95.23 322 LR LR 18 50 03.7
comp=Z,247nm,18.3s,baz=76,slow=36
TREC Trest 95.91 322 *eP* **P 18 05 35.2 +0.2**
PVCC Panska Ves 95.99 323 *eP* **P 18 05 35.7 +0.4**
PRU Pruhonice 96.21 323 *eP* **P 18 05 36.0 -0.3**
PRU *ex* x 18 05 44.7
BRG Berggiesshubel 96.22 324 *eP* **P 18 05 36.3 0.0**
BRG pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
BRG Berggiesshubel 96.22 324 *e*Pdiff **P 18 05 36.1 -0.2**
BRG Berggiesshubel 96.22 324 *eP* **P 18 05 36.3 0.0**
comp=Z,9.4nm,1.2s,mb5.1
CLL Collm 96.58 325 *i* P **P 18 05 37.6 -0.4**
CLL *e* pP 18 05 54.0 -4.3
CLL pmax pmax
comp=Z,24nm,1.5s,mb5.4
CLL MLR MLR
comp=Z,300nm,19.3s
CLL Collm 96.58 325 *e*Pdiff **P 18 05 37.6 -0.4**
CLL Collm 96.58 325 *i* P **P 18 05 37.6 -0.4**
comp=Z,24nm,1.5s,mb5.4
CLL *e*(pP) pP 18 05 54.0 -4.3
CLL Lm 18 53 00.0
comp=Z,300nm,19.3s
ARSA Arzberg 96.65 320⇑ *i*PcP PcP 18 05 38.0 -0.5
comp=Z,8.0nm,1.3s
BSEG Bad Segeberg 96.93 328 *e*Pdiff **P 18 05 39.3 -0.2**
KHC Kasperske Hory 97.13 322 *eP* **P 18 05 40.3 -0.2**
PERS Pernice 97.14 320 *i* P **P 18 05 39.5 -1.1**
GEC2 GERESS Array S 97.17 322 *e*Pdiff **P 18 05 40.7 0.0**
GERES GERESS Array B 97.17 322 P **P 18 05 40.9 +0.2**
comp=Z,9.7nm,0.8s,mb5.3,baz=65,slow=4.7,SNR=73
GERES LR LR 18 51 27.1
comp=Z,295nm,21.9s,baz=325,slow=37
GERES GERESS Array B 97.17 322 P **P 18 05 40.9 +0.2**
GERES pmax pmax
comp=Z,10.0nm,0.8s
GERES MLR MLR
comp=Z,295nm,21.9s
MOA Molln 97.21 321 *i* PcP PcP 18 05 41.0 0.0
comp=Z,27nm,0.9s,SNR=23
TANN Tannenbergstha 97.26 324 *e*Pdiff **P 18 05 41.3 +0.2**
SUMG Summit 97.34 355 *eP* **P 18 05 41.9 +0.9**
comp=Z,19nm,1.0s,mb5.5
NKC Novy Kostel 97.35 324 *eP* **P 18 05 41.7 +0.2**
BOJS Bojanci 97.47 319 *i* P **P 18 05 42.1 0.0**
WET Wettzell 97.54 323 *e*Pdiff **P 18 05 42.3 -0.1**
VISS Visnje 97.63 319 *i* P **P 18 05 42.8 0.0**
MOX Moxa 97.66 324 *e*PDIFF **P 18 05 42.7 -0.2**
comp=Z,18nm,1.5s,mb5.4
MOX Moxa 97.66 324 *eP* **P 18 05 42.7 -0.2**
MOX pmax pmax
comp=Z,18nm,1.5s,mb5.4
MOX Moxa 97.66 324 *e*Pdiff **P 18 05 42.6 -0.3**
ROTZ Rotzenmuhle 97.68 323 *e*Pdiff **P 18 05 43.2 +0.2**
NRDL Niedersach Rie 97.69 326 *e*Pdiff **P 18 05 43.1 +0.1**
SYO Syowa Base 97.74 201⇑ *eP* **P 18 05 36.4 -6.3**
SYO Syowa Base 97.74 201⇓ *eP* **P 18 05 41.5 -1.2**
CLZ Clausthal 97.84 326 *e*Pdiff **P 18 05 43.6 0.0**
JAVS Javornik 98.10 319 *i* P **P 18 05 45.0 0.0**
RJOB Jochberg 98.17 321 *e*Pdiff **P 18 05 45.3 +0.1**
GRA1 Grafenberg Arr 98.30 324 *e*Pdif **P 18 05 45.6 -0.1**
GRF Grafenberg Arr 98.30 324 *e*Pdiff **P 18 05 45.6 -0.1**
FUR Furstenfeldbru 98.92 322 *e*Pdiff **P 18 05 48.9 +0.3**
IBBN Ibbenburen 99.05 327 *e*Pdiff **P 18 05 49.3 +0.2**
WTTA Wattenberg 99.08 321⇑ *i*Pdiff **P 18 05 48.8 -0.4**
comp=Z,18nm,0.9s,mb5.6,SNR=10
WATA Wardalm 99.08 321⇑ *i*Pdiff **P 18 05 48.7 -0.7**
comp=Z,5.6nm,0.7s,mb5.2
MOTA Moosalm 99.37 321⇑ *i*Pdiff **P 18 05 50.0 -0.6**
comp=Z,12nm,0.9s,mb5.4
QSPA South Pole Qui 99.52 180 *eP* Pdif 18 05 51.5 +0.5
FETA Feichten 99.74 321⇑ *i*Pdiff Pdif 18 05 51.9 -0.1
comp=Z,17nm,1.1s,SNR=13
STU Stuttgart 99.89 323 *e*Pdiff Pdif 18 05 53.2 +0.5
CDF Champ du Feu 101.19 324 *e*P Pdif 18 05 58.4 -0.1
comp=Z,25nm,1.2s
CDF Champ du Feu 101.19 324 *e*P Pdif 18 05 58.4 -0.1
CDF pmax pmax
comp=Z,13nm,1.2s
CDF Champ du Feu 101.19 324 *e*P Pdif 18 05 58.4 -0.1
comp=Z,13nm,1.2s
WLF Walferdange 101.23 325 *e*Pdiff Pdif 18 05 59.7 +1.0
HINF Hinteralfeld 101.72 323 *e*P Pdif 18 06 00.7 -0.2
GIVF Givet 101.75 326 *e*P Pdif 18 06 00.9 -0.1
comp=Z,33nm,1.0s
GIVF Givet 101.75 326 *e*P Pdif 18 06 00.9 -0.1
GIVF pmax pmax
comp=Z,17nm,1.0s
GIVF Givet 101.75 326 *e*P Pdif 18 06 00.9 -0.1
comp=Z,17nm,1.0s
HAU Haudompre 101.93 323 *e*P Pdif 18 06 01.6 -0.2
BAIF Baives 102.11 326 *e*P Pdif 18 06 01.0 -1.6
EKA Eskdalemuir Ar 102.77 333 PKKPbc PKKPbc 18 21 59.6 -6.3
comp=Z,3.6nm,0.9s,baz=246,slow=8.0,SNR=5.2
LPG La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
comp=Z,21nm,1.1s
LPG La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
LPG pmax pmax
comp=Z,10.0nm,1.1s
LPG La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
comp=Z,10nm,1.1s
LPL La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
comp=Z,16nm,1.1s
LPL La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
LPL pmax pmax
comp=Z,8.0nm,1.1s
LPL La Plagne 102.89 321 *e*P Pdif 18 06 06.5 +0.4
comp=Z,7.8nm,1.1s
NVAR Mina Array Bea 103.28 47 Pdiff Pdif 18 06 10.1 +2.3
comp=Z,1.9nm,0.8s,baz=277,slow=4.9,SNR=10
NVAR PKKPbc PKKPbc 18 22 04.1 +0.3
comp=Z,1.3nm,0.7s,baz=127,slow=4.0,SNR=10.0
NVAR PKKP PKKPdf 18 22 22.8 +11
comp=Z,1.8nm,0.7s,baz=133,slow=4.7,SNR=7.8
NVAR Mina Array Bea 103.28 47 Pdif Pdif 18 06 10.1 +2.3
NVAR PKKPbc PKKPbc 18 22 04.1 +0.3
NVAR PKKP PKKPdf 18 22 22.8 +11
ORIF Oris-en-Rattie 103.71 321 *e*P Pdif 18 06 09.8 +0.1
comp=Z,17nm,1.2s
ORIF Oris-en-Rattie 103.71 321 *e*P Pdif 18 06 09.8 +0.1
ORIF pmax pmax
comp=Z,9.0nm,1.2s
ORIF Oris-en-Rattie 103.71 321 *e*P Pdif 18 06 09.8 +0.1
comp=Z,8.6nm,1.2s
AVF Avril sur Loir 104.30 323 *e*P Pdif 18 06 12.6 +0.3
comp=Z,90nm,1.8s
AVF Avril sur Loir 104.30 323 *e*P Pdif 18 06 12.6 +0.3
AVF pmax pmax
comp=Z,45nm,1.8s
AVF Avril sur Loir 104.30 323 *e*P Pdif 18 06 12.6 +0.3
comp=Z,45nm,1.8s
PDAR Pinedale Array 107.18 40 Pdiff Pdif 18 06 27.8 +2.7
comp=Z,0.5nm,0.8s,baz=286,slow=5.4,SNR=3.1
PDAR PKKPbc PKKPbc 18 21 51.2 -0.9
comp=Z,0.9nm,0.6s,baz=138,slow=5.3,SNR=8.7
PDAR PKKP PKKPdf 18 22 04.5 +0.2
comp=Z,4.5nm,0.7s,baz=122,slow=6.2,SNR=24
MVCO Mesa Verde 110.74 44 *e*PKIKP PKKPab 18 21 50.4 -1.1
VNA2 Neumayer--Watz 112.40 195 *e*PKiKP PKiKP 18 10 43.6 +0.3
baz=43,slow=0.6
VNA2 *e* 18 10 48.2
VNA2 *e* 18 11 30.2
VNA2 *e* 18 21 34.0
VNA2 *e* 18 21 42.6
VNA3 Neumayer Olymp 112.75 194 *e*PKiKP PKiKP 18 10 43.9 0.0
VNA3 *e* 18 10 47.6
VNA3 *e* 18 11 31.2
VNA3 *e* 18 21 32.0
VNA3 *e* 18 21 41.5
ANMO Albuquerque 113.31 45⇑ *i*PKIKP PKiKP 18 10 46.7 +0.6
ANMO pmax pmax
comp=Z,4.0nm,1.7s
TXAR Lajitas Array 118.24 49 PKP PKPdf 18 10 57.2 +1.4
comp=Z,1.2nm,0.5s,baz=0.4,slow=1.6,SNR=17
TXAR PKKPbc PKKPbc 18 21 16.9 +2.1
comp=Z,2.2nm,0.8s,baz=126,slow=6.4,SNR=15
TXAR Lajitas Array 118.24 49 PKP PKPdf 18 10 57.2 +1.4
TXAR PKKPbc PKKPbc 18 21 16.9 +2.1
JCT Junction City 120.44 46 *e*PKIKP PKPdf 18 11 00.3 +0.3
TOA0 Torodi Ar. Sit 120.47 291 *e*PKPdf PKPdf 18 10 59.8 -0.6
TORD Torodi Ar. Bea 120.47 291 PKP PKPdf 18 10 59.9 -0.5
comp=Z,5.6nm,0.6s,baz=58,slow=1.9,SNR=45
TORD Torodi Ar. Bea 120.47 291 PKP PKPdf 18 10 59.9 -0.5
MIAR Mount Ida 122.08 39 *e*PKIKP PKPdf 18 11 03.8 +0.8
WVT Waverly 124.29 33 *e*PKIKP PKPdf 18 11 07.4 +0.2
KIC Kosan Boka 128.65 286 *e*PKIKP PKPdf 18 11 16.6 +0.5
comp=Z,80nm,1.0s
DBIC Dimbokro 128.66 287 PKP PKPdf 18 11 16.7 +0.6
comp=Z,6.5nm,0.7s,baz=8.5,slow=1.7,SNR=10
DBIC Dimbokro 128.66 287 PKIKP PKPdf 18 11 16.7 +0.6
DBIC pmax pmax
comp=Z,7.0nm,0.7s
TIC Toumodi 128.82 287 *e*PKIKP PKPdf 18 11 16.7 +0.3
comp=Z,9.7nm,0.2s
LIC Lamto 128.96 286 *e*PKIKP PKPdf 18 11 16.9 +0.2
comp=Z,35nm,0.9s
LIC Lamto 128.96 286⇑ *i*PKIKP PKPdf 18 11 16.9 +0.2
comp=Z,33nm,0.9s
GRTK Grand Turk 144.64 29 *e*PKPdf PKPdf 18 11 45.3 -0.1
PLCA Paso Flores 145.65 157 PKPbc PKPbc 18 11 48.2 +1.4
comp=Z,44nm,0.8s,baz=218,slow=3.3,SNR=131
PLCA Paso Flores 145.65 157 PKP2 PKPab 18 11 48.3 +1.1
PLCA pmax pmax
comp=Z,44nm,0.8s
SDDR Presa de Saban 146.71 31 *e*PKPbc PKPbc 18 11 52.0 +1.3
BCIP Isla Barro Col 148.00 55 *e*PKPbc PKPbc 18 11 53.9 -0.6
CRPR Cabo Rojo, PR 149.52 26 *e*PKPbc PKPbc 18 11 58.2 0.0
CBYP Canovanas 149.79 23 *e*PKPbc PKPbc 18 11 58.4 -0.4
MTP Monte Pirata 150.07 23 *e*PKPbc PKPbc 18 12 00.6 +1.1
TRQA Tornquist 150.76 167 *e*PKPbc PKPbc 18 12 00.9 +0.3
OTAV Otavalo 153.52 70 *e*PKPbc PKPbc 18 12 09.5 +1.9
OTAV *e*PKPab PKPab 18 12 23.4 +3.2
SDV Santo Domingo 155.07 43 *e*PKPdf PKPdf 18 12 02.9 +0.9
NNA Nana 157.20 98 PKPab PKPab 18 12 38.2 +2.4
comp=Z,21nm,0.9s,baz=268,slow=7.9,SNR=7.5
CPUP Villa Florida 163.07 169 PKP PKPdf 18 12 11.5 +0.6
comp=Z,1.5nm,0.6s,baz=5.4,slow=3.3,SNR=3.9
CPUP PKPab PKPab 18 13 00.8 0.0
comp=Z,0.6nm,0.9s,baz=159,slow=6.5,SNR=8.1
CPUP Villa Florida 163.07 169 PKIKP PKPdf 18 12 11.5 +0.6
CPUP 18 13 00.8
CPUP pmax pmax
comp=Z,2.0nm,0.6s
CPUP pmax pmax
comp=Z,1.0nm,1.0s
SIV San Ignacio 170.48 132 PKP PKPdf 18 12 17.9 +1.1
comp=Z,5.6nm,0.9s,baz=129,slow=1.5,SNR=20
SIV PKPab PKPab 18 13 35.2 +1.3
comp=Z,1.9nm,0.8s,baz=173,slow=2.9,SNR=3.5
BDFB Brasilia 171.83 223 PKPab PKPab 18 13 39.5 -0.4
comp=Z,4.9nm,0.8s,baz=141,slow=9.7,SNR=9.1
BDFB Brasilia 171.83 223 PKP2 PKPab 18 13 39.5 -0.4
BDFB pmax pmax
comp=Z,5.0nm,0.8s

*CSEM **27** 17:56:12.5,39.40N×33.14E,h6km,MD4.2,After ERD*
*DDA **27** 17:56:12.5,39.40N×33.14E,h6km±2km,Md4.2*
*ISK **27** 17:56:12.2,39.40N×33.11E,h5km,ML4.0*
*ISCJB **27** 17:56:14.1±0.2,**3942N**±002×**3311E**±002,**h10**km,**n56,***
*σ1°**04**/69,**4C-4D,Turkey***

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.47**	**96**	PG		**Pg**		**17 56 21.8**	**-2.2**
KAMT				*e*SG		**Sg**		**17 56 30.7**	**+0.6**
LOD	**Lodumlu**	**0.54**	**330**	PG		**Pg**		**17 56 23.7**	**-1.7**
LOD				*e*SG		**Sg**		**17 56 32.6**	**0.0**
DAD	**Ankara**	**0.56**	**331**⇓	*i*P		**Pg**		**17 56 24.1**	**-1.7**
DAD				*e*S		**Sg**		**17 56 33.0**	**-0.3**
CDAG	**Cicekdag**	**0.99**	**78**⇑	*i*P		**Pg**		**17 56 31.4**	**-2.6**
CDAG				*i* S		**Sg**		**17 56 45.5**	**-1.4**
ELDT	**Eldivan**	**1.10**	**13**⇓	*i*P		**Pg**		**17 56 33.4**	**-2.6**
ELDT				⇓ *i*P				17 56 33.4	
ELDT				*e*S		**Sg**		**17 56 49.8**	**-0.4**
KIZT	**Kizilcal**	**1.10**	**241**	PN		**Pg**		**17 56 33.5**	**-2.5**
KIZT				*e*SN		**Sg**		**17 56 50.0**	**-0.2**
KDHN	**Kadinhani**	**1.19**	**221**⇑	*i*P		**Pb**		**17 56 34.8**	**-2.6**
KDHN				*i* S		**Sb**		**17 56 51.0**	**-1.8**
CANT	**Cankiri**	**1.25**	**18**	PN		**Pn**		**17 56 37.5**	**-0.9**
CANT				*e*SN		**Sg**		**17 56 57.0**	**+1.9**
LADK	**Ladik-KONYA**	**1.35**	**206**	PN		**Pn**		**17 56 38.3**	**-1.4**
CORM	**Corum**	**1.39**	**56**	PN		**Pn**		**17 56 39.2**	**-1.1**
SGKT	**Sivrigoynuk**	**1.41**	**325**⇑	*i*P		**Pn**		**17 56 39.7**	**-0.9**
SGKT				*e*S		**Sg**		**17 57 00.7**	**+0.4**
KONT	**Konya--Tatoy**	**1.58**	**202**	PN		**Pn**		**17 56 42.2**	**-0.7**
KONT				*e*SN		**Sg**		**17 57 03.7**	**+0.3**
ILGA	**Ilgaz**	**1.70**	**16**⇓	*i*P		**Pn**		**17 56 43.4**	**-1.2**
ILGA				*i* S		**Sn**		**17 57 07.4**	**+1.1**
ILGA	**Ilgaz**	**1.70**	**16**	*i* P		**Pn**		**17 56 43.3**	**-1.2**
ILGA				*i* S		**Sn**		**17 57 07.4**	**+1.1**
YOZ	**Yozgat**	**1.72**	**82**	PN		**Pn**		**17 56 44.2**	**-0.6**
NIG	**Nigde**	**1.75**	**138**	PN		**Pn**		**17 56 44.5**	**-0.7**
ESKT	**Eskisehir**	**1.76**	**274**	PN		**Pn**		**17 56 45.7**	**+0.4**
TOS	**Tosya**	**1.76**	**23**	PN		**Pn**		**17 56 44.6**	**-0.8**
CTKT	**Corum**	**1.76**	**46**⇑	*i*P		**Pn**		**17 56 45.0**	**-0.4**
CTKT				*e*S		**Sn**		**17 57 08.7**	**-0.1**
MDU	**Mudurnu**	**1.80**	**306**	PN		**Pn**		**17 56 45.8**	**0.0**
SAFT	**Safranbolu**	**1.85**	**350**	PN		**Pn**		**17 56 47.4**	**+0.8**
SHUT	**Suhut-Afyon**	**2.18**	**247**	PN		**Pn**		**17 56 50.8**	**-0.3**
BNN	**Bunyan**	**2.20**	**104**	PN		**Pn**		**17 56 51.4**	**0.0**
GULT	**Gulveren**	**2.24**	**298**	*e*PN		**Pn**		**17 56 51.9**	**-0.1**
KDZE	**Karadeniz Ereo**	**2.29**	**327**	*e*PN		**Pn**		**17 56 53.2**	**+0.6**
ALT	**Hintas**	**2.36**	**262**	*e*PN		**Pn**		**17 56 53.7**	**+0.1**
HDMB	**Hadim**	**2.50**	**192**	*e*PN		**Pn**		**17 56 55.1**	**-0.4**
ISP	**Isparta**	**2.58**	**233**	*e*PN		**Pn**		**17 56 57.0**	**+0.4**
BZK	**Bozkurt**	**2.63**	**15**	*e*PN		**Pn**		**17 56 58.4**	**+1.0**
KARA	**Karaisali**	**2.64**	**144**	*e*PN		**Pn**		**17 56 57.4**	**0.0**
CAVI	**Cavuskoy**	**2.64**	**288**	*e*PN		**Pn**		**17 56 57.9**	**+0.4**
DIKM	**Dikmen**	**2.77**	**36**	*e*PN		**Pn**		**17 56 59.5**	**+0.3**
MERS	**Mersin**	**2.78**	**156**	*e*PN		**Pn**		**17 56 59.5**	**+0.2**
BCK	**Bucak**	**2.78**	**226**	*e*PN		**Pn**		**17 56 59.3**	**-0.1**
ADVT	**Abdulvahap**	**2.79**	**292**	*e*PN		**Pn**		**17 56 59.3**	**-0.2**
TOKT	**Tokat**	**2.79**	**70**	*e*PN		**Pn**		**17 56 59.7**	**+0.2**
KVT	**Kavak**	**2.79**	**53**	*e*PN		**Pn**		**17 57 00.7**	**+1.1**
KOZT	**Kozan**	**2.88**	**131**	*e*PN		**Pn**		**17 57 01.6**	**+0.9**
SARI	**SarD1z-Kayseri**	**2.88**	**104**	*e*PN		**Pn**		**17 56 59.4**	**-1.4**
SVSK	**Karacayir**	**3.04**	**79**	*e*PN		**Pn**		**17 57 03.4**	**+0.5**
SILT	**Sile**	**3.17**	**304**	*e*PN		**Pn**		**17 57 05.9**	**+1.1**
ANTB	**Antalya**	**3.17**	**218**	*e*PN		**Pn**		**17 57 05.3**	**+0.5**
CEYT	**Ceyhan**	**3.17**	**138**	*e*PN		**Pn**		**17 57 05.3**	**+0.5**
GEMT	**Gemlik**	**3.19**	**290**	*e*PN		**Pn**		**17 57 06.2**	**+1.3**
IKL	**Isikli**	**3.21**	**172**	*e*PN		**Pn**		**17 57 05.9**	**+0.7**
KRTS	**Karatas**	**3.35**	**147**	*e*PN		**Pn**		**17 57 08.1**	**+0.8**
ARMT	**Armutlu**	**3.46**	**291**	*e*PN		**Pn**		**17 57 09.5**	**+0.7**
DST	**Dursunbey**	**3.48**	**275**	*e*PN		**Pn**		**17 57 09.9**	**+1.0**
KMRS	**Kahramanmaras**	**3.53**	**122**	*e*PN		**Pn**		**17 57 10.9**	**+1.1**
KULA	**Kula-Manisa**	**3.59**	**257**	*e*PN		**Pn**		**17 57 10.9**	**+0.4**
KLYT	**Kilyos**	**3.61**	**302**	*e*PN		**Pn**		**17 57 12.5**	**+1.7**
ELL	**Elmali**	**3.67**	**225**	*e*PN		**Pn**		**17 57 12.7**	**+1.0**
EREN	**Erenkoy**	**3.97**	**167**	*e*PN		**Pn**		**17 57 16.4**	**+0.7**
HTY	**Hatay**	**4.07**	**143**	*e*PN		**Pn**		**17 57 18.7**	**+1.6**
MYA	**Malataya**	**4.29**	**103**	*e*PN		**Pn**		**17 57 21.5**	**+1.4**
MALT	**Malatya**	**4.29**	**103**	*e*PN		**Pn**		**17 57 21.9**	**+1.8**

*IDC **27** 17:58:41.2±22.0,960N×12606E,h0km,mb4.1/4,*
mb1 4.2/4,mb1mx3.8/20,mbtmp4.1/4,Error ellipse:
s-maj=735.9km s-min=69.8km az=17.0
*ISCJB **27** 17:58:45.7±1.3,967N±003×12640E±006,h18km±8km,*
mb4.1/4,Error ellipse: s-maj=9.4km s-min=5.6km az=1.5
*MAN **27** 17:58:45,965N×12629E,h7km,mb4.9,ML3.8,MS3.9*
*ISC **27** 17:58:45.9±1.2,**966N**±003×**12635E**±006,**h7**km±6km,**n20,***
*σ1°**00**/32,**mb4.1**/4,**1C-3D,Mindanao***

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.86**	**278**⇓	*i*P		**Pg**		**17 59 01.6**	**-0.8**
SCPH				*i* S		**Sg**		**17 59 13.6**	**+0.1**
BUTP	**Butuan**	**0.99**	**227**	*e*P		**Pg**		**17 59 04.2**	**-0.7**
BUTP				*e*S		**Sg**		**17 59 18.2**	**+0.3**
MSLP	**Maasin**	**1.54**	**288**	*e*P		**Pn**		**17 59 13.2**	**-0.6**
MSLP				*e*S		**Sn**		**17 59 33.8**	**-0.3**
PLP	**Palo**	**2.02**	**318**⇓	*e*P		**Pn**		**17 59 20.5**	**+0.1**
PLP				*i* S		**Sn**		**17 59 45.1**	**-0.7**
BESP	**Borongan**	**2.13**	**335**	*e*P		**Pn**		**17 59 22.0**	**+0.1**
BESP				*e*S		**Sn**		**17 59 51.0**	**+2.3**
BUKP	**Musuan**	**2.18**	**216**	*e*P		**Pn**		**17 59 23.4**	**+0.9**
BUKP				*e*S		**Sn**		**17 59 50.7**	**+0.9**
OCLP	**Ormoc**	**2.20**	**309**	*e*P		**Pn**		**17 59 23.7**	**+0.8**
OCLP				*e*S		**Sn**		**17 59 52.6**	**+2.2**
LLP	**Lapu-Lapu**	**2.44**	**286**⇑	*e*P		**Pn**		**17 59 26.7**	**+0.6**
LLP				*e*S		**Sn**		**17 59 55.8**	**-0.4**
TBP	**Tagbilaran**	**2.45**	**271**	*e*P		**Pn**		**17 59 26.0**	**-0.3**
TBP				*e*S		**Sn**		**17 59 55.5**	**-1.1**
KCP	**Kidapawan**	**2.91**	**205**⇓	*e*P		**Pn**		**17 59 32.0**	**-0.7**
KCP				*e*S		**Sn**		**18 00 08.5**	**+0.6**
CNP	**Catarman**	**3.28**	**330**	*e*P		**Pn**		**17 59

MSLP			*e*S	Sn	18 02 48.5	+2.7
PLP	**Palo**	**2.05 320**‖	*e*P	Pn	18 02 32.6	+0.2
PLP			*e*S	Sn	18 02 59.0	+0.4
BUKP	**Musuan**	**2.09 216**	*e*P	Pn	18 02 35.8	+2.9
BUKP			*e*S	Sn	18 03 04.9	+5.4
BESP	**Borongan**	**2.19 337**	*e*P	Pn	18 02 34.4	0.0
BESP			*e*S	Sn	18 03 04.5	+2.6
OCLP	**Ormoc**	**2.23 311**	*e*P	Pn	18 02 35.9	+1.1
OCLP			*e*S	Sn	18 03 04.9	+2.1
TBP	**Tagbilaran**	**2.42 273**	*e*P	Pn	18 02 38.3	+0.8
LLP	**Lapu-Lapu**	**2.42 288**‖	*e*P	Pn	18 02 38.6	+1.1
LLP			*e*S	Sn	18 03 09.4	+1.7
PAGZ	**Pagadian**	**3.36 240**	*e*P	Pn	18 02 52.0	+1.5
PAGZ			*e*S	Sn	18 03 29.8	-1.2
RCP	**Roxas**	**4.02 300**‖	*e*P	Pn	18 03 01.2	+1.6

ISCJB ***27*** *18:03:20.2±0.5, 972N±003×12658E±004, h33km, mb4.2/14, Error ellipse: s-maj=5.4km s-min=3.9km az=178.0*
MAN ***27*** *18:03:20, 963N×12636E, h1km, mb5.1, ML4.1, MS4.3*
NEIC ***27*** *18:03:26.8±1.8, 961N×12608E, h81km±17km, mb4.5/2, Error ellipse: s-maj=22.1km s-min=11.0km az=61.0*
IDC ***27*** *18:03:27.8±2.9, 961N×12610E, h89km±30km, mb3.8/11, mb1 3.9/12, mb1mx3.7/23, mbtmp3.8/12, MS3.4/1, Ms1 3.4/1, ms1mx3.0/34, Error ellipse: s-maj=31.6km s-min=19.9km az=68.0*

ISC 27 18:03:18.0±1.1, 971N±003×12652E±004, h4km±6km, n37, σ1°49/51, mb4.2/14, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.02 274**	*i* P		**Pg**	**18 03 37.1**	**-0.6**
SCPH			*i* S		**Sg**	**18 03 48.7**	**-2.2**
BUTP	**Butuan**	**1.15 231**	*e*P		**Pg**	**18 03 39.5**	**-0.7**
BUTP			*e*S		**Sg**	**18 03 53.8**	**-1.3**
BIPH	**Bislig**	**1.52 186**‖	*e*P		**Pn**	**18 03 45.9**	**-0.1**
BIPH			*i* S		**Sn**	**18 04 04.1**	**-2.1**
MSLP	**Maasin**	**1.69 285**	*e*P		**Pn**	**18 03 48.9**	**+0.5**
MSLP			*e*S		**Sn**	**18 04 10.4**	**-0.1**
PLP	**Palo**	**2.10 314**‖	*e*P		**Pn**	**18 03 55.2**	**+1.2**
PLP			*i* S		**Sn**	**18 04 20.3**	**-0.3**
BESP	**Borongan**	**2.17 331**	*e*P		**Pn**	**18 03 56.3**	**+1.4**
BESP			*e*S		**Sn**	**18 04 26.9**	**+4.7**
OCLP	**Ormoc**	**2.31 306**	*e*P		**Pn**	**18 03 59.4**	**+2.5**
OCLP			*e*S		**Sn**	**18 04 27.4**	**+1.6**
BUKP	**Musuan**	**2.32 219**	*e*P		**Pn**	**18 03 58.3**	**+1.4**
BUKP			*e*S		**Sn**	**18 04 25.0**	**-0.9**
LLP	**Lapu-Lapu**	**2.59 284**‖	*i*P		**Pn**	**18 04 02.6**	**+1.9**
LLP			*e*S		**Sn**	**18 04 33.4**	**+0.7**
TBP	**Tagbilaran**	**2.62 270**	*e*P		**Pn**	**18 04 01.7**	**+0.6**
TBP			*e*S		**Sn**	**18 04 32.2**	**-1.3**
DAV	**Davao City (W)**	**2.78 200**	P		**Pn**	**18 04 06.1**	**+2.7**
	37nm,0.3s,baz=50,slow=14,SNR=2.6						
DAV			S		**Sn**	**18 04 39.3**	**+2.0**
	46nm,0.3s,baz=260,slow=21,SNR=5.9						
DAV			LR	LR		18 05 10.9	
	comp=Z,814nm,20.2s,baz=214,slow=40						
KCP	**Kidapawan**	**3.03 208**‖	*e*P		**Pn**	**18 04 08.6**	**+1.8**
KCP			*e*S		**Sn**	**18 04 45.0**	**+1.5**
SNPH	**Sibulan**	**3.26 264**	*e*P		**Pn**	**18 04 11.5**	**+1.5**
PAGZ	**Pagadian**	**3.61 240**	*e*P		**Pn**	**18 04 15.4**	**+0.7**
PAGZ			*e*S		**Sn**	**18 04 57.1**	**-0.7**
GUIM	**Jordan**	**3.98 284**	*e*P		**Pn**	**18 04 21.3**	**+1.4**
RCP	**Roxas**	**4.15 297**‖	*e*P		**Pn**	**18 04 24.7**	**+2.6**
PVCP	**Virac**	**4.51 329**	*e*P		**Pn**	**18 04 28.1**	**+0.9**
PVCP			*e*S		**Sn**	**18 05 20.1**	**+0.1**
KSRS	**Korea Array**	**27.66 2**	P		**P**	**18 09 08.0**	**+1.1**
	1.4nm,0.8s,mb3.6,baz=192,slow=11,SNR=4.1						
CMAR	**Chiang Mai Arr**	**28.10 291**	P		**P**	**18 09 09.2**	**-2.0**
	0.8nm,0.8s,mb3.4,baz=103,slow=7.4,SNR=6.6						
ASAR	**Alice Springs**	**33.94 168**	P		**P**	**18 10 02.3**	**-0.3**
	0.5nm,0.3s,mb3.9,baz=351,slow=7.5,SNR=15						
STKA	**Stephens Creek**	**43.79 161**	*e*P		**P**	**18 11 25.9**	**+0.9**
PETK	**Petropavlovsk-**	**50.05 24**	P		**P**	**18 12 15.9**	**+2.3**
	3.0nm,0.9s,mb4.3,baz=218,slow=7.0,SNR=4.4						
MK31	**Makanchi Array**	**52.62 323**	*e*P		**P**	**18 12 30.9**	**-2.2**
MKAR	**Makanchi Array**	**52.62 323**	P		**P**	**18 12 31.4**	**-1.8**
	0.8nm,0.3s,mb4.1,baz=115,slow=7.4,SNR=27						
ZALV	**Zalesovo Beam**	**55.24 331**	P		**P**	**18 12 49.5**	**-2.6**
	0.7nm,0.3s,mb4.1,baz=127,slow=6.5,SNR=4.5						
KURK	**Kurchatov**	**56.67 326**	P		**P**	**18 13 00.6**	**-1.9**
	0.8nm,0.4s,mb4.2,baz=122,slow=7.6,SNR=12						
KURK	**Kurchatov**	**56.67 326**	P		**P**	**18 13 00.6**	**-1.9**
TIXI	**Tiksi**	**61.91 1**	*e*P		**P**	**18 13 38.1**	**-0.2**
	9.7nm,1.3s,mb4.8						
BVAR	**Borovoye Array**	**62.27 325**	P		**P**	**18 13 39.5**	**-1.6**
	1.4nm,0.9s,mb4.1,baz=128,slow=9.6,SNR=6.5						
BRVK	**Borovoye**	**62.34 325**	*e*P		**P**	**18 13 39.1**	**-2.5**
JOF	**Joensuu**	**83.81 333**	*e*p		**P**	**18 15 46.7**	**-1.7**
	1.2nm,0.3s,mb4.5						
ARCES	**ARCESS Array B**	**84.81 340**	P		**P**	**18 15 51.9**	**-1.4**
	2.6nm,0.7s,mb4.5,baz=77,slow=6.2,SNR=15						
ARCES	**ARCESS Array B**	**84.81 340**	P		**P**	**18 15 51.9**	**-1.4**
KAF	**Kangasniemi**	**86.24 332**	*e*p		**P**	**18 15 58.5**	**-2.1**
	1.1nm,0.4s,mb4.4						
HFS	**Hagfors**	**92.66 332**	P		**P**	**18 16 28.0**	**-3.0**
	1.4nm,0.6s,mb4.6,baz=104,slow=5.4,SNR=4.9						
YKA	**Yellowknife Ar**	**94.17 24**	P		**P**	**18 16 38.2**	**+0.4**
	0.7nm,0.7s,mb4.2,baz=300,slow=4.4,SNR=11						
YKA	**Yellowknife Ar**	**94.17 24**	P		**P**	**18 16 38.2**	**+0.4**

MAN 27 18:09:16, 958N×12614E, h2km, mb4.1, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.67 287**	*e*P		Pg	18 09 29.9	+0.9
SCPH			*e*S		Sg	18 09 41.5	+3.8
BUTP	**Butuan**	**0.80 220**	*e*P		Pg	18 09 32.6	+1.4
BUTP			*e*S		Sg	18 09 46.3	+4.7
MSLP	**Maasin**	**1.38 294**	*e*P		Pn	18 09 42.7	+0.5
MSLP			*e*S		Sg	18 10 01.8	+1.5
BUKP	**Musuan**	**2.00 212**	*e*P		Pn	18 09 52.1	+1.3
BUKP			*e*S		Sn	18 10 17.7	+1.3
OCLP	**Ormoc**	**2.10 314**	*e*P		Pn	18 09 52.6	+0.4
BESP	**Borongan**	**2.12 341**	*e*P		Pn	18 09 43.6	-8.9
BESP			*e*S		Sn	18 10 20.8	+1.2

ISCJB ***27*** *18:15:10.7±0.5, 3277N±008×3996W±008, h10km, mb4.4/36, MS4.0/16, Error ellipse: s-maj=12.2km s-min=8.8km az=156.1*
IDC ***27*** *18:15:10.9±0.6, 3281N×3993W, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.1/29, mbtmp4.1/20, MS4.0/15, Ms1 4.0/15, ms1mx3.6/47, Error ellipse: s-maj=19.1km s-min=14.2km az=165.0*
NEIC ***27*** *18:15:12.6±0.3, 3279N×3994W, h10km, mb4.7/15, Error ellipse: s-maj=10.2km s-min=6.8km az=156.0*
CSEM ***27*** *18:15:13.7±0.1, 3276N×4003W, h33km, mb4.6/14, Ms3.5, Error ellipse: s-maj=4.9km s-min=3.5km az=154.0*

ISC 27 18:15:12.7±0.5, 3276N±008×3994W±008, h10km, n81, σ0°81/69, mb4.4/36, MS4.0/16, 3C-2D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**27.89 125**		LR	LR	18 29 18.9	
	comp=Z,358nm,19.2s,MS4.0,baz=145,slow=30						
SCHQ	**Schefferville**	**29.07 327**		LR	LR	18 31 09.2	
	comp=Z,438nm,19.6s,MS4.1,baz=302,slow=33						
MDT	**Midelt**	**29.61 80**		LR	LR	18 30 27.8	
	comp=Z,58nm,19.5s,MS3.2,baz=307,slow=31						
ESDC	**Sonseca Array**	**29.69 66**	P		**P**	**18 21 16.4**	**-2.2**
	0.1nm,0.3s,baz=144,slow=36,SNR=3.0						
SJPF	**Ste Jean**	**31.98 60**	*e*P		**P**	**18 21 39.2**	**+0.3**
	26nm,1.1s,mb4.7						
SJPF	**Ste Jean**	**31.98 60**	*e*P		**P**	**18 21 39.2**	**+0.3**
	13nm,1.1s,mb4.7						
MFF	**Saint Martin d**	**33.23 54**	*e*P		**P**	**18 21 50.2**	**+0.5**
	66nm,1.4s,mb5.1						
MFF	**Saint Martin d**	**33.23 54**	*e*P		**P**	**18 21 50.2**	**+0.5**
	33nm,1.4s,mb5.1						
LFF	**La Frestale**	**33.59 57**	*e*P		**P**	**18 21 53.2**	**+0.3**
	31nm,1.0s,mb4.9						
LFF	**La Frestale**	**33.59 57**	*e*P		**P**	**18 21 53.2**	**+0.3**
	16nm,1.0s,mb4.9						
EKA	**Eskdalemuir Ar**	**34.15 38**	P		**P**	**18 21 56.8**	**-0.8**
	3.9nm,0.9s,mb4.3,baz=323,slow=8.9,SNR=4.1						
EKA	**Eskdalemuir Ar**	**34.15 38**	P		**P**	**18 21 56.8**	**-0.8**

MTLF	**Montolieu**	**34.51 60**	*e*P		**P**	**18 22 01.1**	**+0.2**
	16nm,1.0s,mb4.6						
MTLF	**Montolieu**	**34.51 60**	*e*P		**P**	**18 22 01.1**	**+0.2**
	7.9nm,1.0s,mb4.6						
TCF	**Toulx Ste Croi**	**34.79 55**	*e*P		**P**	**18 22 04.1**	**+0.8**
	31nm,1.0s,mb4.9						
TCF	**Toulx Ste Croi**	**34.79 55**	*e*P		**P**	**18 22 04.1**	**+0.8**
	16nm,1.0s,mb4.9						
AVF	**Avril sur Loir**	**35.64 54**	*e*P		**P**	**18 22 11.0**	**+0.4**
FRB	**Frobisher Bay**	**35.77 339**	P		**P**	**18 22 10.8**	**-0.7**
	4.7nm,0.9s,mb4.4,baz=137,slow=6.4,SNR=6.6						
FRB			LR	LR		18 35 38.4	
	comp=Z,215nm,18.6s,MS3.9,baz=184,slow=34						
SMF	**Signal de Mont**	**35.95 54**	*e*P		**P**	**18 22 13.6**	**+0.3**
	36nm,1.2s,mb4.9						
SMF	**Signal de Mont**	**35.95 54**	*e*P		**P**	**18 22 13.6**	**+0.3**
	18nm,1.2s,mb4.9						
LOR	**Lormes**	**36.04 53**	*e*P		**P**	**18 22 13.5**	**-0.6**
	18nm,1.1s,mb4.6						
LOR	**Lormes**	**36.04 53**	*e*P		**P**	**18 22 13.5**	**-0.6**
	9.1nm,1.1s,mb4.6						
BAIF	**Baives**	**36.73 49**	*e*P		**P**	**18 22 18.8**	**-1.1**
SDV	**Santo Domingo**	**37.01 237**	P		**P**	**18 22 24.2**	**+1.6**
	6.7nm,1.0s,mb4.4,baz=115,slow=7.4,SNR=4.5						
MEZF	**Maizieres J'vi**	**37.01 51**	*e*P		**P**	**18 22 21.4**	**-0.9**
	35nm,1.1s,mb4.8						
MEZF	**Maizieres J'vi**	**37.01 51**	*e*P		**P**	**18 22 21.4**	**-0.9**
	17nm,1.1s,mb4.8						
HAU	**Haudompre**	**37.80 52**	*e*P		**P**	**18 22 29.6**	**+0.6**
HAU			*e*MLR	MLR			
	comp=Z,166nm,17.0s,MS3.6						
HAU	**Haudompre**	**37.80 52**	*e*P		**P**	**18 22 29.6**	**+0.6**
HAU			LR	LR			
	comp=Z,170nm,17.0s,MS3.9						
LPL	**La Plagne**	**37.86 56**	*e*P		**P**	**18 22 30.3**	**+0.7**
	comp=Z,10nm,1.0s,mb4.2						
LPL	**La Plagne**	**37.86 56**	*e*P		**P**	**18 22 30.3**	**+0.7**
	comp=Z,5.2nm,1.0s,mb4.2						
HINF	**Hinteralfeld**	**38.12 53**	*e*P		**P**	**18 22 31.8**	**+0.1**
CDF	**Champ du Feu**	**38.47 52**	*e*P		**P**	**18 22 33.8**	**-0.8**
	comp=Z,21nm,1.1s,mb4.5						
CDF	**Champ du Feu**	**38.47 52**	*e*P		**P**	**18 22 33.8**	**-0.8**
	comp=Z,11nm,1.1s,mb4.5						
TUE	**Stuetta**	**39.73 55**	*e*P		**P**	**18 22 46.2**	**+1.0**
	comp=Z,28nm,1.6s,mb4.8						
TUE	**Stuetta**	**39.73 55**	*e*P		**P**	**18 22 46.2**	**+1.1**
	comp=Z,28nm,1.6s,mb4.8						
DAVOX	**Davos/Dischmat**	**40.10 55**	P		**P**	**18 22 49.3**	**+1.0**
	comp=Z,5.3nm,0.9s,mb4.3,baz=282,slow=8.6,SNR=13						
GRA1	**Grafenberg Arr**	**41.17 50**	*e*P		**P**	**18 22 57.6**	**+0.5**
GRF	**Grafenberg Arr**	**41.17 50**	*e*P		**P**	**18 22 57.6**	**+0.5**
TIC	**Toumodi**	**41.56 121**	*e*P		**P**	**18 23 06.5**	**+5.8**
	comp=Z,12nm,0.2s,mb5.2						
DBIC	**Dimbokro**	**41.66 121**	P		**P**	**18 23 00.7**	**-0.9**
	comp=Z,2.1nm,0.9s,mb3.8,baz=299,slow=9.1,SNR=3.5						
DBIC			LR	LR		18 37 30.2	
	comp=Z,136nm,21.9s,MS3.8,baz=308,slow=32						
DBIC	**Dimbokro**	**41.66 121**	P		**P**	**18 23 00.6**	**-0.9**
LIC	**Lamto**	**41.84 121**	*e*P		**P**	**18 23 02.8**	**-0.2**
	comp=Z,20nm,0.9s,mb4.8						
LIC	**Lamto**	**41.84 121**	*e*P		**P**	**18 23 02.8**	**-0.2**
	comp=Z,14nm,0.9s,mb4.3						
KIC	**Kosan Boka**	**41.96 121**	*e*P		**P**	**18 23 03.0**	**-0.9**
	comp=Z,180nm,2.2s,mb5.3						
CLL	**Collm**	**42.44 48**	*i* P		**P**	**18 23 07.8**	**+0.4**
	comp=Z,8.0nm,1.3s,mb4.2						
CLL			*i* sP		sP	18 23 14.1	+2.3
	comp=Z,13nm,1.2s						
TORD	**Torodi Ar. Bea**	**42.68 107**	P		**P**	**18 23 09.9**	**+0.1**
	comp=Z,3.3nm,1.0s,mb4.0,baz=302,slow=7.0,SNR=9.6						
TORD			LR	LR		18 39 28.5	
	comp=Z,128nm,18.2s,MS3.9,baz=275,slow=34						
GERES	**GERESS Array B**	**42.75 52**	P		**P**	**18 23 09.6**	**-0.4**
	comp=Z,1.3nm,0.9s,mb3.7,baz=270,slow=6.4,SNR=6.5						
BRG	**Berggiesshubel**	**43.00 49**	*i* P		**P**	**18 23 12.5**	**+0.5**
	comp=Z,5.2nm,1.2s,mb4.1						
BRG	**Berggiesshubel**	**43.00 49**	*i* P		**P**	**18 23 12.5**	**+0.5**
	comp=Z,5.2nm,1.2s,mb4.1						
NOA	**NORSAR Array B**	**43.30 34**	P		**P**	**18 23 12.9**	**-1.5**
	comp=Z,3.4nm,1.0s,mb4.0,baz=248,slow=7.8,SNR=3.6						
NOA	**NORSAR Array B**	**43.30 34**	P		**P**	**18 23 12.9**	**-1.5**
HFS	**Hagfors**	**44.25 35**	P		**P**	**18 23 19.6**	**-2.3**
	comp=Z,6.7nm,0.9s,mb4.3,baz=221,slow=13,SNR=3.0						
ULM	**Lac du Bonnet**	**44.28 310**	LR	LR		18 39 05.8	
	comp=Z,222nm,20.4s,MS4.1,baz=61,slow=32						
PKSM	**Morogy**	**46.16 55**‖	*i*P		**P**	**18 23 37.6**	**+0.2**
BZS	**Buzias**	**48.29 56**‖	*i*P		**P**	**18 23 54.9**	**+0.9**
BDFB	**Brasilia**	**48.74 190**	LR	LR		18 40 34.5	
	comp=Z,73nm,18.5s,MS3.7,baz=154,slow=31						
DRGR		**48.91 54**‖	*i*P		**P**	**18 23 58.7**	**+0.1**
RES	**Resolute Bay**	**49.63 343**	LR	LR		18 41 31.1	
	comp=Z,172nm,20.9s,MS4.0,baz=48,slow=32						
BURAR	**Bucovina Array**	**50.50 53**‖	*i*P		**P**	**18 24 12.3**	**+1.5**
VOIR		**50.71 56**‖	*i*P		**P**	**18 24 13.1**	**+0.7**
KIEV	**Kiev**	**52.67 48**	*e*P		**P**	**18 24 26.8**	**-0.2**
	comp=Z,14nm,1.2s,mb4.8						
KIEV	**Kiev**	**52.67 48**	*e*P		**P**	**18 24 26.8**	**-0.2**
	comp=Z,14nm,1.2s,mb4.8						
AKASG	**Malin Array Be**	**52.68 48**	P		**P**	**18 24 26.4**	**-0.7**
	comp=Z,8.0nm,0.9s,mb4.7,baz=273,slow=6.6,SNR=7.0						
TXAR	**Lajitas Array**	**53.98 285**	P		**P**	**18 24 37.1**	**+0.2**
	comp=Z,1.1nm,0.9s,mb3.8,baz=90,slow=8.8,SNR=4.6						
TXAR			LR	LR		18 46 00.4	
	comp=Z,142nm,18.6s,MS4.1,baz=5.0,slow=34						
YKA	**Yellowknife Ar**	**54.52 327**	P		**P**	**18 24 39.5**	**-0.8**
	comp=Z,1.1nm,1.0s,mb3.9,baz=84,slow=7.4,SNR=7.9						
YKA			PcP	PcP		18 25 40.5	-3.1
	comp=Z,0.2nm,0.5s,baz=88,slow=4.1,SNR=4.5						
YKA	**Yellowknife Ar**	**54.52 327**	P		**P**	**18 24 39.5**	**-0.8**
YKA	**Yellowknife Ar**	**54.52 327**	PcP	PcP		18 25 40.5	-3.1
YKA	**Yellowknife Ar**	**54.52 327**	P		**P**	**18 24 39.5**	**-0.8**
YKA			PcP	PcP		18 25 40.5	-3.1
PDAR	**Pinedale Array**	**54.52 302**	P		**P**	**18 24 40.8**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.1,baz=64,slow=6.9,SNR=9.0						
PDAR			LR	LR		18 49 44.6	
	comp=Z,253nm,18.2s,MS4.3,baz=360,slow=38						
BRTR	**Keskin Array B**	**58.23 60**	P		**P**	**18 25 07.8**	**+0.6**
	comp=Z,2.9nm,1.0s,mb4.3,baz=262,slow=4.6,SNR=8.8						
CPUP	**Villa Florida**	**61.05 198**	P		**P**	**18 25 26.2**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.7,baz=267,slow=20,SNR=1.9						
CPUP	**Villa Florida**	**61.05 198**	P		**P**	**18 25 26.2**	**-0.4**
NVAR	**Mina Array Bea**	**62.17 300**	P		**P**	**18 25 34.0**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.9,baz=69,slow=4.9,SNR=4.1						
DLBC	**Dease Lake**	**62.78 324**	LR	LR		18 51 46.6	
	comp=Z,384nm,18.7s,MS4.6,baz=24,slow=35						
BBB	**Bella Bella**	**63.84 317**	LR	LR		18 53 02.9	
	comp=Z,148nm,21.5s,MS4.1,baz=218,slow=36						
KDAK	**Kodiak Island**	**73.68 329**	LR	LR		18 56 47.7	
	comp=Z,310nm,20.2s,MS4.6,baz=94,slow=34						
PLCA	**Paso Flores**	**78.41 203**	P		**P**	**18 27 12.8**	**-0.4**
	comp=Z,2.3nm,1.0s,mb4.1,baz=97,slow=7.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**81.34 29**	P		**P**	**18 27 30.1**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.7,baz=284,slow=6.0,SNR=5.0						
MKAR	**Makanchi Array**	**85.26 36**	P		**P**	**18 27 50.0**	**+0.5**
	comp=Z,2.0nm,0.9s,mb4.2,baz=321,slow=3.1,SNR=12						
PETK	**Petropavlovsk-**	**93.12 349**	LR	LR		19 11 04.9	
	comp=Z,62nm,19.1s,MS4.1,baz=184,slow=36						
ASAR	**Alice Springs**	**169.44 32**	PKPab	PKPab		18 36 34.1	+0.7
	comp=Z,0.8nm,0.9s,baz=321,slow=4.4,SNR=4.9						

MAN 27 18:20:38, 953N×12609E, h2km, mb4.4, ML3.3, MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.64 293**	*e*P		Pg	18 20 51.2	+0.9
SCPH			*e*S		Sg	18 21 02.3	+3.6
BUTP	**Butuan**	**0.73 220**	*e*P		Pg	18 20 53.9	+1.9
BUTP			*e*S		Sg	18 21 07.4	+5.9
MSLP	**Maasin**	**1.35 296**	*e*P		Pn	18 21 03.5	-0.4
MSLP			*e*S		Sg	18 21 23.8	+2.3
BUKP	**Musuan**	**1.93 212**	*e*P		Pn	18 21 13.6	+1.7
BUKP			*e*S		Sn	18 21 43.8	+7.0
PAGZ	**Pagadian**	**3.16 238**	*e*P		Pn	18 21 29.6	+0.8

IDC 27 18:28:28.3±8.6, 645S×12559E, h465km±120km, mb3.0/2, mb1 3.2/4, mb1mx2.9/17, mbtmp3.0/4, Error ellipse: s-maj=310.8km s-min=36.1km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.87 148**		P	P	18 31 48.8	+0.4
	0.8nm,0.3s,baz=323,slow=11,SNR=72						
ASAR	**Alice Springs**	**18.89 156**		P	P	18 32 19.0	+0.3
	0.7nm,0.3s,baz=340,slow=11,SNR=79						
STKA	**Stephens Creek**	**29.38 151**		P	P	18 33 52.0	-0.3
	1.4nm,0.5s,baz=325,slow=9.3,SNR=8.1						
MKAR	**Makanchi Array**	**65.43 329**	P		P	18 38 24.1	+0.1
	0.3nm,0.4s,baz=125,slow=7.4,SNR=11						

MAN 27 18:31:03, 945N×12529E, h0km, mb4.0, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.39 31**	*e*P		Pg	18 31 12.2	+1.8
SCPH			*i* S		Sg	18 31 23.6	+8.2
BUTP	**Butuan**	**0.58 145**	*e*P		Pg	18 31 14.6	+0.5
BUTP			*e*S		Sg	18 31 28.6	+6.9
MSLP	**Maasin**	**0.80 328**	*e*P		Pg	18 31 18.5	+0.1
BUKP	**Musuan**	**1.58 188**	*e*P		Pn	18 31 33.0	+0.8
BUKP			*e*S		Sn	18 32 04.3	+11
OCLP	**Ormoc**	**1.73 337**	*e*P		Pn	18 31 34.3	0.0

ISCJB ***27*** *18:37:48.7±0.4, 961N±003×122.18E±003, h33km, mb3.8/6, Error ellipse: s-maj=5.5km s-min=3.7km az=41.2*
MAN ***27*** *18:37:48, 962N×122.18E, h35km, mb5.1, ML4.1, MS4.3*
IDC ***27*** *18:37:49.3±1.2, 870N×12156E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/21, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.7/33, Error ellipse: s-maj=92.5km s-min=17.8km az=57.0*

ISC 27 18:37:49.9±0.4, 962N±003×12221E±003, h35km, n27, σ1°03/36, mb3.8/6, 1C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.05 105**	*e*P		**Pn**	**18 38 06.5**	**-1.7**
SNPH			*i* S		**Sn**	**18 38 21.5**	**-0.1**
GUIM	**Jordan**	**1.07 21**	*e*P		**Pn**	**18 38 06.8**	**-1.5**
GUIM			*e*S		**Sn**	**18 38 20.7**	**-1.3**
TBP	**Tagbilaran**	**1.64 87**	*e*P		**Pn**	**18 38 16.3**	**+0.1**
CUYO	**Cuyo Island**	**1.69 316**	*e*P		**Pn**	**18 38 16.8**	**-0.1**
CUYO			*e*S		**Sn**	**18 38 38.0**	**+0.6**
IPIL	**Ipil**	**1.86 169**	*e*P		**Pn**	**18 38 18.8**	**-0.4**
IPIL			*e*S		**Sn**	**18 38 40.3**	**-1.2**
LLP	**Lapu-Lapu**	**1.87 68**‖	*e*P		**Pn**	**18 38 19.2**	**-0.2**
LLP			*e*S		**Sn**	**18 38 41.0**	**-0.8**
RCP	**Roxas**	**2.00 15**‖	*e*P		**Pn**	**18 38 22.9**	**+1.8**
KALP	**Kalibo**	**2.05 4**‖	*e*P		**Pn**	**18 38 26.6**	**+4.7**
PAGZ	**Pagadian**	**2.11 146**	*e*P		**Pn**	**18 38 23.8**	**+1.1**
PAGZ			*e*S		**Sn**	**18 38 55.1**	**+7.3**
MSLP	**Maasin**	**2.66 79**	*e*P		**Pn**	**18 38 31.5**	**+1.2**
MSLP			*e*S		**Sn**	**18 39 06.8**	**+5.3**
OCLP	**Ormoc**	**2.76 59**	*e*P		**Pn**	**18 38 32.1**	**+0.4**
SJMP	**San Jose**	**3.02 339**	*e*P		**Pn**	**18 38 35.5**	**+0.3**
SJMP			*e*S		**Sn**	**18 39 09.8**	**-0.3**
BUSP	**Coron**	**3.08 320**	*e*P		**Pn**	**18 38 36.1**	**0.0**
BUSP			*e*S		**Sn**	**18 39 11.1**	**-0.6**
PLP	**Palo**	**3.13 60**‖	*e*P		**Pn**	**18 38 36.5**	**-0.2**
ENPP	**El Nido**	**3.16 300**	*e*P		**Pn**	**18 38 37.1**	**-0.1**
ENPP			*e*S		**Sn**	**18 39 11.9**	**-1.7**
BUKP	**Musuan**	**3.31 121**	*e*P		**Pn**	**18 38 43.5**	**+4.2**
BUTP	**Butuan**	**3.43 101**	*e*P		**Pn**	**18 38 44.1**	**+3.2**
BUTP			*e*S		**Sn**	**18 39 31.6**	**+11**
BATP	**Bataraza**	**4.42 260**	*e*P		**Pn**	**18 38 54

IDC 27 18:50:26.0±46.0, 1792S×17204W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.7/3, Error ellipse: s-maj=884.2km s-min=188.6km az=82.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.97**	**242**	P	P	18 58 33.3	-1.8
	1.1nm,0.8s,baz=66,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**50.58**	**259**	P	P	18 59 26.3	-0.6
	0.2nm,0.5s,baz=94,slow=6.8,SNR=11						
ASAR	**Alice Springs**	**50.61**	**254**	P	P	18 59 28.6	+1.5
	1.4nm,0.5s,baz=88,slow=8.1,SNR=32						

MAN 27 18:55:27,956N×12634E, h10km, mb3.8, ML2.5, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.87**	**285**	*eP*	Pg	18 55 43.2	-0.5
SCPH				*eS*	Sg	18 55 55.0	-0.1
BUTP	**Butuan**	**0.92**	**231**	*eP*	Pg	18 55 46.0	+1.3
BUTP				*eS*	Sg	18 56 00.1	+3.3
MSLP	**Maasin**	**1.57**	**292**	*eP*	Pn	18 55 55.3	+0.4
MSLP				*eS*	Sn	18 56 16.9	+1.6
BUKP	**Musuan**	**2.09**	**217**	*eP*	Pn	18 56 03.2	+1.0
BUKP				*eS*	Sn	18 56 33.3	+5.0

*IDC **27** 18:55:41.3±0.9, 4123S×17334E, h241km±11km, mb2.5/2, mb1 3.1/4, mb1mx3.0/14, mbtmp3.0/4, Error ellipse: s-maj=32.0km s-min=10.1km az=132.0*
*ISCJB **27** 18:55:42.4±0.4, 4093S±005×17280E±008, h231km±5km, Error ellipse: s-maj=12.2km s-min=4.2km az=40.5*
*NEIC **27** 18:55:44.8, 4093S×17288E, h221km, MG4.3(WEL), After WEL.*

ISC 27 18:55:43.2±0.4, 4093S±005×17281E±008, h227km±5km, n64, σ0§70/68, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.23**	**295**	P	**Pn**	**18 56 13.8**	**+1.0**
QRZ				S	**S**	**18 56 35.1**	**-0.8**
NNZ	**Nelson**	**0.52**	**124**	P	**Pn**	**18 56 14.3**	**+0.8**
NNZ				S	**S**	**18 56 36.1**	**-1.1**
THZ	**Tophouse**	**0.84**	**175**	P	**Pn**	**18 56 16.1**	**+1.3**
THZ				S	**S**	**18 56 38.9**	**-0.8**
DSZ	**Denniston Nort**	**1.12**	**222**	P	**Pn**	**18 56 17.4**	**+0.9**
BSWZ	**Blackbirch Sta**	**1.12**	**135**	P	**Pn**	**18 56 17.4**	**+0.9**
TCW	**Tory Channel**	**1.15**	**105**	P	**Pn**	**18 56 17.5**	**+0.8**
MRW	**Makara Radio**	**1.46**	**103**	P	**Pn**	**18 56 19.6**	**+0.6**
SNZO	**South Karori**	**1.48**	**106**	P	**Pn**	**18 56 19.6**	**+0.5**
WEL	**Wellington**	**1.52**	**104**	P	**Pn**	**18 56 20.2**	**+0.7**
KHZ	**Kahutara**	**1.59**	**160**	P	**Pn**	**18 56 20.3**	**+0.3**
KIW	**Kapiti Island**	**1.59**	**88**	P	**Pn**	**18 56 20.7**	**+0.6**
BHW	**Baring Head**	**1.63**	**108**	P	**Pn**	**18 56 20.8**	**+0.4**
CAW	**Cannon Point**	**1.72**	**97**	P	**Pn**	**18 56 21.7**	**+0.6**
NWEZ	**Newall Road**	**1.84**	**27**	*eP*	**Pn**	**18 56 22.8**	**+0.5**
LTZ	**Lake Taylor**	**1.90**	**192**	P	**Pn**	**18 56 23.4**	**+0.7**
MSWZ	**Moikau Station**	**1.91**	**106**	P	**Pn**	**18 56 23.3**	**+0.5**
NEZ	**North Egmont**	**1.92**	**31**	P	**Pn**	**18 56 23.4**	**+0.3**
PKE	**Pukeiti**	**1.95**	**28**	P	**Pn**	**18 56 23.7**	**+0.3**
PAWZ	**Paruwai Farm**	**2.03**	**104**	P	**Pn**	**18 56 24.4**	**+0.4**
WAZ	**Wanganui**	**2.03**	**56**	P	**Pn**	**18 56 25.0**	**+0.9**
RAEZ	**Rainy Point**	**2.04**	**37**	P	**Pn**	**18 56 24.6**	**+0.4**
MTW	**Mount Morrison**	**2.05**	**97**	P	**Pn**	**18 56 24.7**	**+0.5**
MRZ	**Mangatainoka R**	**2.12**	**84**	P	**Pn**	**18 56 25.3**	**+0.4**
VRZ	**Vera Road**	**2.34**	**40**	P	**Pn**	**18 56 26.8**	**-0.4**
TSZ	**Takapari Road**	**2.55**	**71**	P	**Pn**	**18 56 29.9**	**+0.5**
WVZ	**Waitaha Valley**	**2.65**	**215**	P	**Pn**	**18 56 30.7**	**+0.4**
CRLZ	**Canterbury Las**	**2.65**	**183**	P	**Pn**	**18 56 30.2**	**-0.2**
WNVZ	**Wahianoa**	**2.67**	**54**	P	**Pn**	**18 56 30.7**	**+0.1**
DRZ	**Dome Shelter**	**2.68**	**53**	P	**Pn**	**18 56 31.0**	**+0.2**
FWVZ	**Far West T-bar**	**2.68**	**52**	P	**Pn**	**18 56 30.7**	**-0.1**
MOVZ	**Moawhango**	**2.72**	**57**	P	**Pn**	**18 56 30.9**	**-0.3**
TUVZ	**Tukino**	**2.74**	**54**	P	**Pn**	**18 56 31.5**	**+0.1**
TWVZ	**Taurewa**	**2.74**	**48**	P	**Pn**	**18 56 30.9**	**-0.5**
NGZ	**Ngauruhoe**	**2.76**	**52**	P	**Pn**	**18 56 31.5**	**-0.2**
MQZ	**McQueen's Vall**	**2.78**	**182**	P	**Pn**	**18 56 31.3**	**-0.5**
WTVZ	**West Tongariro**	**2.80**	**51**	P	**Pn**	**18 56 31.7**	**-0.3**
HIZ	**Hauiti**	**2.88**	**34**	P	**Pn**	**18 56 32.4**	**-0.6**
KATZ	**Kakaramea**	**2.95**	**50**	P	**Pn**	**18 56 33.6**	**-0.2**
RITZ	**Rihia Road**	**3.04**	**51**	P	**Pn**	**18 56 34.9**	**+0.1**
RATZ	**Rangitukua**	**3.07**	**49**	P	**Pn**	**18 56 35.2**	**+0.1**
RPZ	**Rata Peaks**	**3.08**	**204**	P	**Pn**	**18 56 34.9**	**-0.2**
	20nm,0.3s,baz=19,slow=1.5,SNR=97						
RPZ				S	**S**	**18 57 14.2**	**-1.9**
	13nm,0.3s,baz=352,slow=21,SNR=21						
RPZ	**Rata Peaks**	**3.08**	**204**	P	**Pn**	**18 56 35.5**	**+0.4**
WATZ	**Wairara**	**3.16**	**46**	P	**Pn**	**18 56 36.0**	**-0.1**
HATZ	**Hinemaiaia**	**3.24**	**52**	P	**Pn**	**18 56 36.3**	**-0.7**
BKZ	**Black Stump Fm**	**3.33**	**59**	P	**Pn**	**18 56 37.6**	**-0.4**
FOZ	**Fox Glacier**	**3.51**	**220**	P	**Pn**	**18 56 39.1**	**-1.0**
LBZ	**Lake Benmore**	**3.96**	**208**	P	**Pn**	**18 56 45.5**	**+0.1**
KNZ	**Kokohu**	**4.19**	**65**	P	**Pn**	**18 56 48.1**	**-0.2**
URZ	**Urewera**	**4.26**	**53**	P	**Pn**	**18 56 47.7**	**-1.5**
	21nm,0.3s,baz=255,slow=8.1,SNR=135						
URZ				S	**S**	**18 57 38.0**	**-3.3**
	8.6nm,0.3s,baz=42,slow=14,SNR=7.1						
URZ	**Urewera**	**4.26**	**53**	P	**Pn**	**18 56 47.7**	**-1.4**
JCZ	**Jackson Bay**	**4.34**	**222**	P	**Pn**	**18 56 50.0**	**-0.1**
ODZ	**Otahua Downs**	**4.41**	**200**	P	**Pn**	**18 56 50.4**	**-0.5**
MWZ	**Matawai**	**4.47**	**56**	P	**Pn**	**18 56 50.8**	**-0.9**
WKZ	**Wanaka**	**4.79**	**214**	P	**Pn**	**18 56 54.9**	**-0.7**
EAZ	**Earnscleugh**	**5.01**	**210**	P	**Pn**	**18 56 57.2**	**-1.1**
PUZ	**Puketiti**	**5.09**	**58**	P	**Pn**	**18 56 58.2**	**-1.1**
MSZ	**Milford Sound**	**5.19**	**222**	P	**Pn**	**18 57 00.4**	**-0.1**
MXZ	**Matakaoa Point**	**5.43**	**54**	P	**Pn**	**18 57 02.5**	**-1.1**
TUZ	**Tuapeka**	**5.53**	**204**	P	**Pn**	**18 57 05.0**	**+0.2**
MLZ	**Mavora Lakes**	**5.57**	**216**	P	**Pn**	**18 57 05.9**	**+0.6**
WHZ	**Wether Hill Ro**	**6.10**	**214**	P	**Pn**	**18 57 11.1**	**-0.9**
ASAR	**Alice Springs**	**36.76**	**286**	P	**P**	**19 02 30.0**	**+0.9**
	0.2nm,0.8s,baz=128,slow=6.9,SNR=4.8						
WRA	**Warramunga Arr**	**38.80**	**291**	P	**P**	**19 02 46.7**	**+0.6**
	0.2nm,0.4s,baz=126,slow=8.4,SNR=7.7						
TORD	**Torodi Ar. Bea**	**151.25**	**198**	PKPbc	PKPbc	19 15 05.7	-4.2
	0.3nm,0.9s,baz=156,slow=3.9,SNR=3.0						

*KMA **27** 19:03:21.6, 3498N×12964E, ML2.7*
*ISCJB **27** 19:03:22.5±0.7, 3495N±003×12962E±006, h10km, Error ellipse: s-maj=7.2km s-min=3.9km az=168.3*
*JMA **27** 19:03:23.2±0.1, 3491N×12966E, h8km, M3.1*

ISC 27 19:03:22.4±0.7, 3495N±003×12964E±006, h10km, n9, σ0§73/15, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTU	**Tsushima**	**0.47**	**205**	P	**Pg**	**19 03 32.0**	**+0.5**
JTU				S	**Sg**	**19 03 37.8**	**+0.1**
KSBUS	**Busan**	**0.53**	**305**	P	**Pg**	**19 03 32.2**	**-0.4**
KSBUS				S	**Sg**	**19 03 38.9**	**-0.6**
KSDAG	**Daegu**	**1.02**	**324**	P	**Pg**	**19 03 41.2**	**-0.8**
JII	**Iki**	**1.15**	**176**	P	**Pb**	**19 03 44.4**	**0.0**
JII				*eS*	**Sb**	**19 03 59.4**	**0.0**
KSPHA	**Pohang**	**1.26**	**350**	P	**Pn**	**19 03 45.2**	**-0.9**
KSPHA				S	**Sb**	**19 04 02.0**	**-0.6**
KSJIN	**Jinju**	**1.34**	**280**	P	**Pn**	**19 03 46.3**	**-0.9**
KSJIN				S	**Sb**	**19 04 05.1**	**+0.3**
JTY	**Toyota**	**1.36**	**120**	P	**Pn**	**19 03 47.2**	**-0.2**
KSYOD	**Yeongdeok**	**1.56**	**353**	P	**Pn**	**19 03 50.8**	**+0.6**
KSYOD				S	**Sn**	**19 04 12.0**	**+1.6**
KSCPR	**CHUPUNGNYEONG**	**1.86**	**314**	S	**Sn**	**19 04 19.3**	**+1.4**

MAN 27 19:04:16, 941N×12594E, h0km, mb4.1, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.54**	**216**	*eP*	Pg	19 04 29.0	+2.7
BUTP				*eS*	Sg	19 04 40.6	+7.4
SCPH	**Surigao**	**0.58**	**310**	*eP*	Pg	19 04 27.3	+0.2
SCPH				*eS*	Sg	19 04 39.3	+4.7
MSLP	**Maasin**	**1.28**	**304**	*eP*	Pg	19 04 40.8	+0.1
MSLP				*eS*	Sg	19 05 01.9	+4.6
BUKP	**Musuan**	**1.75**	**210**	*eP*	Pn	19 04 48.5	+0.9

MAN 27 19:22:43,952N×12588E, h3km, mb3.6, ML2.3, MS1.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.47**	**305**	*eP*	Pg	19 22 52.3	+0.4
SCPH				*eS*	Sg	19 23 04.8	+6.8
BUTP	**Butuan**	**0.60**	**205**	*eP*	Pg	19 22 55.1	+0.5
BUTP				*eS*	Sg	19 23 09.1	+6.7
MSLP	**Maasin**	**1.18**	**302**	*eP*	Pg	19 23 05.8	+0.2
MSLP				*eS*	Sg	19 23 25.5	+4.7
BUKP	**Musuan**	**1.82**	**206**	*eP*	Pn	19 23 14.4	-0.8
BUKP				*eS*	Sn	19 23 39.1	+0.4

MAN 27 19:31:33,961N×12608E, h17km, mb4.9, ML3.8, MS3.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.61**	**286**	*eP*	Pg	19 31 45.9	+0.9
SCPH				*eS*	Sg	19 31 57.7	+4.5
BUTP	**Butuan**	**0.78**	**215**	*eP*	Pb	19 31 48.6	+0.4
BUTP				*eS*	Sb	19 32 01.3	+2.7
MSLP	**Maasin**	**1.31**	**293**	*eP*	Pn	19 31 58.1	+1.6
MSLP				*eS*	Sn	19 32 21.0	+7.3
PLP	**Palo**	**1.89**	**325**	↓*eP*	Pn	19 32 04.1	-0.4
PLP				*eS*	Sn	19 32 29.4	+1.5
BUKP	**Musuan**	**2.00**	**210**	*eP*	Pn	19 32 06.4	+0.5
BUKP				*eS*	Sn	19 32 32.3	+1.8
OCLP	**Ormoc**	**2.04**	**315**	*eP*	Pn	19 31 58.9	-7.6
BESP	**Borongan**	**2.08**	**342**	*eP*	Pn	19 32 08.4	+1.3
TBP	**Tagbilaran**	**2.19**	**272**	*eP*	Pn	19 32 10.3	+1.6
PAGZ	**Pagadian**	**3.19**	**237**	*eP*	Pn	19 32 24.0	+1.5
PAGZ				*eS*	Sn	19 33 06.8	+6.6
GUIM	**Jordan**	**3.58**	**287**	*eP*	Pn	19 32 28.3	+0.5

*ISCJB **27** 19:37:02.6±0.7, 1563N±008×5960E±007, h10km, mb4.0/12, MS3.4/10, Error ellipse: s-maj=11.6km s-min=9.7km az=22.0*
*IDC **27** 19:37:02.7±0.8, 1542N×5977E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/25, mbtmp4.0/11, MS3.5/10, Ms1 3.5/10, ms1mx3.2/30, Error ellipse: s-maj=22.3km s-min=18.8km az=112.0*
*CSEM **27** 19:37:03.1±0.6, 1566N×5958E, h8km, mb4.5/2, Error ellipse: s-maj=23.7km s-min=6.2km az=26.0*
*NEIC **27** 19:37:04.2±0.6, 1544N×5975E, h10km, mb4.5/2, Error ellipse: s-maj=16.1km s-min=13.2km az=108.0*

ISC 27 19:37:04.4±0.7, 1561N±008×5961E±007, h10km, n42, σ1§11/35, mb4.0/12, MS3.4/10, 3C-2D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBK	**Rabkut**	**5.52**	**291**	⇑P	**Pn**	**19 38 27.8**	**+1.1**
	SNR=22						
ABTO	**Aybut**	**6.30**	**287**	⇑P	**Pn**	**19 38 39.0**	**+1.5**
	SNR=11						
WBK	**Wadi Bani Khal**	**6.99**	**355**	⇓P	**Pn**	**19 38 46.4**	**-0.5**
	SNR=12						
SMDO	**Samad**	**7.56**	**349**	⇑P	**Pn**	**19 38 53.9**	**-0.8**
	SNR=19						
BIDO	**Bidbid**	**8.00**	**350**	⇓P	**Pn**	**19 39 00.1**	**-0.6**
	SNR=10						
RDF	**Al-Radifah**	**17.31**	**322**	*eP*	**Pn**	**19 41 04.7**	**-1.6**
	66nm,1.1s						
RDF	**Al-Radifah**	**17.31**	**322**	*eP*	**Pn**	**19 41 04.7**	**-1.6**
	baz=345						
RDF				AMb	AMB	19 41 07.1	
	comp=Z,66nm,1.1s,baz=345						
KBD	**Kabd**	**17.41**	**323**	*eP*	**Pn**	**19 41 07.2**	**-0.3**
	comp=Z,36nm,0.8s						
KBD	**Kabd**	**17.41**	**323**	*eP*	**Pn**	**19 41 07.2**	**-0.4**
	baz=345						
KBD				AMb	AMB	19 41 08.6	
	comp=Z,36nm,0.9s,baz=345						
NAY	**Al-Naaiem**	**17.73**	**322**	*eP*	**Pn**	**19 41 09.3**	**-2.2**
	comp=Z,18nm,1.2s						
NAY	**Al-Naaiem**	**17.73**	**322**	*eP*	**Pn**	**19 41 09.3**	**-2.2**
	baz=344						
NAY				AMb	AMB	19 41 16.1	
	comp=Z,18nm,1.2s,baz=344						
MIB	**Mutribah**	**18.09**	**323**	*eP*	**Pn**	**19 41 14.8**	**-1.1**
	comp=Z,51nm,0.8s						
MIB	**Mutribah**	**18.09**	**323**	*eP*	**Pn**	**19 41 14.8**	**-1.0**
	baz=345						
MIB				AMb	AMB	19 41 27.4	
	comp=Z,51nm,0.8s,baz=345						
KBL	**Kabul**	**20.68**	**23**	*eP*	**P**	**19 41 46.8**	**+2.2**
	comp=Z,20nm,0.9s						
KBL	**Kabul**	**20.68**	**23**	*eP*	**P**	**19 41 46.8**	**+2.2**
	comp=Z,20nm,0.9s						
ASF	**Jabal al Asfar**	**26.43**	**313**	LR	LR	19 54 10.1	
	comp=Z,84nm,18.6s,MS3.3,baz=167,slow=38						
EIL	**Elat**	**26.64**	**306**	LR	LR	19 52 03.0	
	comp=Z,49nm,21.4s,MS3.0,baz=96,slow=34						
GNI	**Garni**	**27.68**	**335**	LR	LR	19 55 37.3	
	comp=Z,115nm,18.3s,MS3.5,baz=324,slow=40						
MMAI	**Mount Meron Ar**	**27.95**	**313**	LR	LR	19 55 19.0	
	comp=Z,75nm,18.1s,MS3.3,baz=50,slow=39						
BRTR	**Keskin Array B**	**33.04**	**322**	P	**P**	**19 43 43.6**	**+3.6**
	comp=Z,0.4nm,0.4s,mb3.7,baz=131,slow=15,SNR=4.3						
AKTK	**Aktyubinsk**	**34.76**	**358**	P	**P**	**19 43 55.8**	**+1.0**
AKTK	**Aktyubinsk**	**34.76**	**358**	P	**P**	**19 43 55.8**	**+0.9**
AKTO	**Aktyubinsk**	**34.76**	**358**	P	**P**	**19 43 55.8**	**+0.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=171,slow=7.9,SNR=4.8						
MKAR	**Makanchi Array**	**36.38**	**27**	P	**P**	**19 44 09.4**	**+0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=215,slow=9.3,SNR=16						
MKAR				LR	LR	19 59 51.8	
	comp=Z,49nm,20.3s,MS3.3,baz=26,slow=38						
CMAR	**Chiang Mai Arr**	**37.66**	**80**	P	**P**	**19 44 20.8**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.4,baz=277,slow=8.1,SNR=3.5						
KURK	**Kurchatov**	**38.23**	**20**	P	**P**	**19 44 24.2**	**-0.2**
	comp=Z,1.7nm,0.3s,mb4.2,baz=215,slow=8.3,SNR=6.7						
KURK	**Kurchatov**	**38.23**	**20**	P	**P**	**19 44 24.2**	**-0.2**
BVAR	**Borovoye Array**	**38.29**	**11**	P	**P**	**19 44 25.7**	**+0.8**
	comp=Z,1.3nm,0.7s,mb3.8,baz=191,slow=6.9,SNR=12						
ARU	**Arti**	**40.76**	**359**	*eP*	**P**	**19 44 45.7**	**+0.3**
ARU	**Arti**	**40.76**	**359**	*eP*	**P**	**19 44 45.7**	**+0.3**
	comp=Z,10.0nm,1.0s,mb4.4						
ZAA0	**Zalesovo Array**	**43.03**	**22**	*eP*	**P**	**19 45 04.1**	**0.0**
ZAA0	**Zalesovo Array**	**43.03**	**22**	*eP*	**P**	**19 45 04.0**	**0.0**
ZALV	**Zalesovo Beam**	**43.03**	**22**	P	**P**	**19 45 04.2**	**+0.1**
	comp=Z,4.4nm,0.8s,mb4.2,baz=228,slow=8.9,SNR=15						
ZALV				LR	LR	20 02 18.5	
	comp=Z,34nm,18.4s,MS3.3,baz=341,slow=35						
BOSA	**Boshof**	**55.11**	**217**	P	**P**	**19 46 36.7**	**-0.3**
	comp=Z,2.5nm,0.6s,mb4.5,baz=46,slow=5.1,SNR=12						
BOSA				LR	LR	20 08 09.5	
	comp=Z,88nm,19.1s,MS3.9,baz=337,slow=34						
BOSA	**Boshof**	**55.11**	**217**	P	**P**	**19 46 36.7**	**-0.3**
BOSA				LR	LR	20 08 09.5	
TORD	**Torodi Ar. Bea**	**56.01**	**276**	P	**P**	**19 46 44.7**	**+0.9**
	comp=Z,1.8nm,1.1s,mb4.0,baz=72,slow=5.6,SNR=6.6						
TORD	**Torodi Ar. Bea**	**56.01**	**276**	P	**P**	**19 46 44.7**	**+0.9**
NOA	**NORSAR Array B**	**56.98**	**334**	LR	LR	20 11 35.1	
	comp=Z,53nm,18.2s,MS3.7,baz=270,slow=36						
KSRS	**Korea Array**	**63.56**	**56**	LR	LR	20 19 43.4	
	comp=Z,15nm,18.3s,MS3.2,baz=301,slow=40						
WRA	**Warramunga Arr**	**81.48**	**113**	P	**P**	**19 49 20.8**	**-1.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=302,slow=4.2,SNR=18						
ASAR	**Alice Springs**	**82.39**	**117**	P	**P**	**19 49 25.4**	**-1.8**
	comp=Z,1.0nm,0.9s,mb3.8,baz=299,slow=5.7,SNR=8.7						
PETK	**Petropavlovsk-**	**82.44**	**37**	LR	LR	20 28 19.1	
	comp=Z,30nm,18.3s,MS3.7,baz=224,slow=37						

MAN 27 19:51:36, 963N×12623E, h9km, mb4.6, ML3.4, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.75**	**282**	*eP*	Pg	19 51 50.7	+0.3
SCPH				*eS*	Sg	19 52 02.2	+2.0
BUTP	**Butuan**	**0.89**	**223**	*eP*	Pg	19 51 53.2	+0.2
BUTP				*eS*	Sg	19 52 07.2	+2.6
MSLP	**Maasin**	**1.44**	**291**	*eP*	Pn	19 52 02.6	+0.3
MSLP				*eS*	Sn	19 52 24.4	+3.0
PLP	**Palo**	**1.96**	**321**	↓*eP*	Pn	19 52 09.8	+0.4
PLP				*i S*	Sn	19 52 35.6	+1.3
BUKP	**Musuan**	**2.08**	**214**	*eP*	Pn	19 52 11.6	+0.5
BUKP				*eS*	Sn	19 52 38.6	+1.4
BESP	**Borongan**	**2.11**	**338**	*eP*	Pn	19 52 12.1	+0.5
BESP				*eS*	Sn	19 52 41.1	+3.1
OCLP	**Ormoc**	**2.13**	**312**	*eP*	Pn	19 52 12.1	+0.3
LLP	**Lapu-Lapu**	**2.33**	**287**	⇑*eP*	Pn	19 52 15.3	+0.8
LLP				*eS*	Sn	19 52 44.2	+0.8
TBP	**Tagbilaran**	**2.34**	**272**	*eP*	Pn	19 52 15.1	+0.5
CNP	**Catarman**	**3.25**	**332**	*eP*	Pn	19 52 26.9	-0.4
PAGZ	**Pagadian**	**3.32**	**238**	*eP*	Pn	19 52 29.1	+0.9
PAGZ				*eS*	Sn	19 53 09.9	+2.1
GUIM	**Jordan**	**3.72**	**286**	*eP*	Pn	19 52 34.7	+1.1
GUIM				*eS*	Sn	19 53 16.1	-1.5
PVCP	**Virac**	**4.44**	**333**	*eP*	Pn	19 52 44.7	+1.1

*ISCJB **27** 20:04:56.8±0.7, 140N±0.1×1445E±02, h193km±8km, mb3.4/8, Error ellipse: s-maj=39.4km s-min=19.2km az=176.9*
*IDC **27** 20:04:57.7±0.5, 1399N×14472E, h187km±5km, mb3.2/7, mb1 3.4/7, mb1mx3.2/21, mbtmp3.2/7, Error ellipse: s-maj=32.3km s-min=15.5km az=90.0*
*NEIC **27** 20:04:58.3±1.0, 1399N×14461E, h195km±10km, mb4.3/1, Error ellipse: s-maj=34.3km s-min=17.3km az=91.0*

ISC 27 20:04:58.0±0.7, 140N±01×1446E±02, h191km±7km, n11, σ0§93/12, mb3.5/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.46**	**148**	P	**Pn**	**20 05 24.9**	**+1.0**
	105nm,0.3s,baz=180,slow=2.4,SNR=83						
GUMO				S	**Sn**	**20 05 43.3**	**-0.6**
	148nm,0.3s,baz=360,slow=24,SNR=10						
MJAR	**Matsushiro Arr**	**23.18**	**347**	P	**P**	**20 09 46.4**	**-1.3**
	2.2nm,0.7s,mb3.7,baz=174,slow=11,SNR=6.9						
MJAR	**Matsushiro Arr**	**23.18**	**347**	P	**P**	**20 09 46.4**	**-1.4**
KSRS	**Korea Array**	**27.70**	**331**	P	**P**	**20 10 28.8**	**+0.3**
	1.5nm,0.7s,mb3.8,baz=142,slow=8.9,SNR=5.9						
WRA	**Warramunga Arr**	**35.20**	**197**	P	**P**	**20 11 34.4**	**+0.3**
	0.3nm,0.4s,mb3.3,baz=13,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**38.86**	**196**	P	**P**	**20 12 04.0**	**-0.9**
	0.2nm,0.9s,mb2.7,baz=16,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**61.04**	**316**	P	**P**	**20 14 52.7**	**+1.2**
	0.7nm,0.5s,mb3.8,baz=91,slow=8.8,SNR=16						
KURK	**Kurchatov**	**64.12**	**320**	*eP*	**P**	**20 15 11.3**	**-0.6**
	6.9nm,1.5s,mb4.3						
BRVK	**Borovoye**	**69.53**	**322**	*eP*	**P**	**20 15 46.4**	**+0.5**
YKA	**Yellowknife Ar**	**82.62**	**27**	P	**P**	**20 16 58.4**	**-1.2**
	0.1nm,0.3s,mb3.0,baz=290,slow=5.4,SNR=3.7						
NVAR	**Mina Array Bea**	**86.86**	**51**	P	**P**	**20 17 22.8**	**+1.4**
	0.5nm,0.6s,mb3.5,baz=262,slow=6.1,SNR=4.0						

*ISCJB **27** 20:20:21.0±0.6, 3936N±005×3319E±005, h10km, Error ellipse: s-maj=7.3km s-min=4.8km az=151.2*
*ISK **27** 20:20:20.0, 3942N×3318E, h5km, MD2.8*
*CSEM **27** 20:20:20.0, 3942N×3318E, h5km, MD2.8, After ISK*
*DDA **27** 20:20:20.1, 3936N×3319E, h7km±1km, Md2.2*

ISC 27 20:20:20.7±0.7, 3936N±004×3316E±005, h8km±9km, n9, σ0§73/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.42**	**89**	*e*PG	**Pg**	**20 20 28.6**	**-0.4**
KAMT				*e*SG	**Sg**	**20 20 34.7**	**+0.1**
LOD	**Lodumlu**	**0.61**	**330**	*e*PG	**Pg**	**20 20 31.5**	**-1.0**
CDAG	**Cicekdag**	**0.97**	**74**	*i* P	**Pg**	**20 20 38.3**	**-1.1**
CDAG				*i* S	**Sg**	**20 20 52.2**	**+0.2**
KIZT	**Kizilcal**	**1.11**	**245**	*e*PN	**Pn**	**20 20 42.1**	**-0.5**
ELDT	**Eldivan**	**1.15**	**10**	*i* P	**Pg**	**20 20 43.5**	**+0.7**
ELDT				*i* S	**Sg**	**20 20 58.6**	**+1.0**
KDHN	**Kadinhani**	**1.17**	**225**	*i* P	**Pg**	**20 20 42.7**	**-0.5**
KDHN				*i* S	**Sg**	**20 20 59.2**	**+0.9**
CORM	**Corum**	**1.39**	**54**	*e*PN	**Pn**	**20 20 46.1**	**-0.4**
NIG	**Nigde**	**1.69**	**137**	*e*PN	**Pn**	**20 20 51.7**	**+1.2**
YOZ	**Yozgat**	**1.69**	**80**	*e*PN	**Pn**	**20 20 50.3**	**-0.3**

*ISCJB **27** 20:20:37.8±0.5, 3595N±003×1007W±004, h10km, Error ellipse: s-maj=5.2km s-min=3.6km az=177.5*
*NEIC **27** 20:20:40.7, 3609N×1017W, h0km, MN3.1(MDD), After MDD.*
*MDD **27** 20:20:40.3±0.9, 3588N×1036W, h30km, mbLg3.2/18, Error ellipse: s-maj=10.0km s-min=6.1km az=89.0, PRXIMO*
*CSEM **27** 20:20:41.3±0.2, 3578N×976W, h10km, ML3.9/12, Error ellipse: s-maj=5.5km s-min=2.7km az=77.0*
*INMG **27** 20:20:42.3±1.0, 3596N×1036W, h31km, ML2.8, Error ellipse: s-maj=4.4km s-min=2.8km az=78.0*
*LDG **27** 20:20:43.0±0.3, 3604N×1027W, h20km, Ml3.

	5.2nm,0.1s								
EMIN	**Mina Concepcio**	**3.20**	**56**		P		**Pn**	**20 21 32.0**	**+0.9**
	3.4nm,0.1s,SNR=70								
EMIN					S		**Sn**	**20 22 09.6**	**+0.2**
	5.2nm,0.1s								
PBAR	**Barrancos**	**3.21**	**47**		*e*Pn		**Pn**	**20 21 32.1**	**+0.8**
PBAR					*e*Sn		**Sn**	**20 22 10.2**	**+0.6**
PBAR					A			20 22 12.3	
	12nm,0.4s								
PBAR	**Barrancos**	**3.21**	**47**		*e*Pn		**Pn**	**20 21 32.1**	**+0.8**
PBAR					*e*Sn		**Sn**	**20 22 10.2**	**+0.6**
	12nm,0.4s								
PESTR	**Estremoz**	**3.44**	**33**		*e*Pn		**Pn**	**20 21 34.5**	**0.0**
PESTR					*e*Sn		**Sn**	**20 22 14.3**	**-1.0**
PESTR					A			20 22 16.2	
	11nm,0.1s								
PESTR	**Estremoz**	**3.44**	**33**		*e*Pn		**Pn**	**20 21 34.5**	**0.0**
PESTR					*e*Sn		**Sn**	**20 22 14.3**	**-1.0**
	11nm,0.1s								
AVE	**Averroes**	**3.45**	**141**		P		**Pn**	**20 21 32.2**	**-2.4**
AVE					S		**Sn**	**20 22 09.0**	**-6.5**
ESPR	**Espera**	**3.46**	**74**		P		**Pn**	**20 21 35.9**	**+1.2**
	54nm,0.2s,SNR=18								
ESPR					S		**Sn**	**20 22 16.5**	**+0.8**
	38nm,0.2s								
ESPR	**Espera**	**3.46**	**74**	⇑	P		**Pn**	**20 21 35.9**	**+1.2**
	54nm,0.2s,SNR=18								
ESPR					S		**Sn**	**20 22 16.5**	**+0.8**
	38nm,0.2s								
EBAD	**Badajoz**	**3.63**	**40**		P		**Pn**	**20 21 37.3**	**+0.2**
	1.4nm,0.1s,SNR=32								
EBAD					S		**Sn**	**20 22 19.4**	**-0.7**
	14nm,0.1s,SNR=14								
EBAD	**Badajoz**	**3.63**	**40**		P		**Pn**	**20 21 37.3**	**+0.2**
	1.4nm,0.1s,SNR=32								
EBAD					S		**Sn**	**20 22 19.4**	**-0.7**
	14nm,0.1s,SNR=14								
EJIF	**Jimena Fronter**	**3.70**	**82**		P		**Pn**	**20 21 40.0**	**+2.0**
	2.9nm,0.1s,SNR=18								
EJIF					S		**Sn**	**20 22 22.4**	**+0.8**
	3.9nm,0.3s,SNR=7.9								
PMRV	**Marv??o**	**4.00**	**31**		*e*Pn		**Pn**	**20 21 42.2**	**+0.1**
PMRV					*e*Sn		**Sn**	**20 22 27.0**	**-1.9**
PMRV					A			20 22 28.8	
	14nm,0.1s								
PMRV	**Marv??o**	**4.00**	**31**		*e*Pn		**Pn**	**20 21 42.2**	**+0.1**
PMRV					*e*Sn		**Sn**	**20 22 27.0**	**-1.9**
	14nm,0.1s								
EMIJ	**Mijas**	**4.27**	**81**		P		**Pn**	**20 21 46.2**	**+0.4**
	2.4nm,0.2s,SNR=5.5								
EMIJ					S		**Sn**	**20 22 35.6**	**-0.1**
	3.2nm,0.2s,SNR=7.9								
PCBR	**Castelo Branco**	**4.32**	**27**		*e*Pn		**Pn**	**20 21 46.6**	**+0.1**
PCBR					*e*Sn		**Sn**	**20 22 34.4**	**-2.5**
PCBR					A			20 22 36.9	
	9.6nm,0.2s								
PCBR	**Castelo Branco**	**4.32**	**27**		*e*Pn		**Pn**	**20 21 46.6**	**+0.1**
PCBR					*e*Sn		**Sn**	**20 22 34.4**	**-2.5**
	9.6nm,0.2s								
CIA	**Chichaoua**	**4.55**	**166**		*i* P		**Pn**	**20 21 45.0**	**-4.8**
CIA	**Chichaoua**	**4.55**	**166**		P		**Pn**	**20 21 45.0**	**-4.8**
CIA					S		**Sn**	**20 22 30.0**	**-13**
MIF	**Mishlifen**	**4.71**	**122**		*i* P		**Pn**	**20 21 51.0**	**-1.0**
MIF					*i* S		**Sn**	**20 22 40.0**	**-6.7**
IFR	**Ifrane**	**4.73**	**120**		P		**Pn**	**20 21 50.6**	**-1.5**
IFR					S		**Sn**	**20 22 40.2**	**-6.8**
KIB	**El Ksiba**	**4.75**	**135**		*i* P		**Pn**	**20 21 50.0**	**-2.4**
KIB					*i* S		**Sn**	**20 22 40.0**	**-7.5**
MTE	**Manteigas**	**4.79**	**23**		*e*Sn		**Sn**	**20 22 45.2**	**-3.5**
MTE					A			20 22 48.9	
	9.7nm,0.3s								
MTE	**Manteigas**	**4.79**	**23**		*e*Sn		**Sn**	**20 22 45.2**	**-3.5**
	9.7nm,0.3s								
TZC	**Tazercounte**	**4.83**	**142**		*i* P		**Pn**	**20 21 51.0**	**-2.6**
TZC					*i* S		**Sn**	**20 22 40.0**	**-10**
EADA	**Adamuz**	**4.85**	**62**		P		**Pn**	**20 21 54.8**	**+1.0**
	9.9nm,0.1s,SNR=18								
EADA					S		**Sn**	**20 22 48.2**	**-1.8**
EADA	**Adamuz**	**4.85**	**62**	⇑	P		**Pn**	**20 21 54.8**	**+1.0**
	9.9nm,0.1s,SNR=18								
EADA					S		**Sn**	**20 22 48.1**	**-1.8**
	4.1nm,0.1s,SNR=7.9								
ELOJ	**Sierra Loja**	**4.85**	**75**		P		**Pn**	**20 21 55.3**	**+1.5**
	2.0nm,0.2s,SNR=7.9								
ELOJ					S		**Sn**	**20 22 51.2**	**+1.2**
	1.9nm,0.2s,SNR=7.9								
ELUQ	**Luque**	**4.86**	**70**		P		**Pn**	**20 21 55.2**	**+1.2**
	SNR=4.0								
PVIS	**Viseu**	**4.99**	**19**		*e*Pn		**Pn**	**20 21 56.3**	**+0.6**
PVIS					*e*Sn		**Sn**	**20 22 49.5**	**-3.8**
PVIS					A			20 22 54.2	
	13nm,0.1s								
PVIS	**Viseu**	**4.99**	**19**		*e*Pn		**Pn**	**20 21 56.3**	**+0.6**
PVIS					*e*Sn		**Sn**	**20 22 49.5**	**-3.8**
	13nm,0.1s								
CZD	**Col de Zad**	**5.06**	**124**		*i* P		**Pn**	**20 21 56.0**	**-0.8**
CZD					*i* S		**Sn**	**20 22 48.0**	**-7.3**
ERON	**Agron**	**5.10**	**77**		P		**Pn**	**20 21 58.9**	**+1.7**
	3.7nm,0.6s,SNR=7.9								
OUK	**Oukaimeden**	**5.11**	**159**		*i* P		**Pn**	**20 21 54.0**	**-3.4**
OUK	**Oukaimeden**	**5.11**	**159**		P		**Pn**	**20 21 54.0**	**-3.4**
OUK					S		**Sn**	**20 22 44.0**	**-12**
TZK	**Tazeka**	**5.15**	**110**		*e*P		**Pn**	**20 21 56.0**	**-1.9**
TZK					*i* S		**Sn**	**20 22 50.0**	**-7.4**
EGUA	**Guajares**	**5.26**	**79**		P		**Pn**	**20 22 00.2**	**+0.7**
	2.7nm,0.2s,SNR=7.9								
EGUA					S		**Sn**	**20 23 00.1**	**-0.1**
	8.1nm,0.3s,SNR=7.9								
ECOG	**Cogollos-Vega**	**5.33**	**74**		P		**Pn**	**20 22 02.1**	**+1.6**
	3.4nm,0.2s,SNR=7.9								
EBAN	**Banos Encina**	**5.42**	**65**		P		**Pn**	**20 22 02.2**	**+0.5**
	6.8nm,0.2s,SNR=18								
EBAN					S		**Sn**	**20 23 01.6**	**-2.5**
	2.6nm,0.1s								
PVRL	**Vila Real**	**5.56**	**18**		*e*Pn		**Pn**	**20 22 03.4**	**-0.1**
PVRL					*e*Sn		**Sn**	**20 23 02.5**	**-4.9**
PVRL					A			20 23 07.0	
	18nm,0.3s								
PVRL	**Vila Real**	**5.56**	**18**		*e*Pn		**Pn**	**20 22 03.4**	**-0.1**
PVRL					*e*Sn		**Sn**	**20 23 02.5**	**-4.9**
	18nm,0.3s								
MVO	**Moncorvo**	**5.65**	**23**		*e*Pn		**Pn**	**20 22 04.2**	**-0.6**
MVO					*e*Sn		**Sn**	**20 23 05.8**	**-4.0**
MVO					A			20 23 09.5	
	8.5nm,0.4s								
MVO	**Moncorvo**	**5.65**	**23**		*e*Pn		**Pn**	**20 22 04.2**	**-0.6**
MVO					*e*Sn		**Sn**	**20 23 05.8**	**-4.0**
	8.5nm,0.4s								
EBER	**Berja**	**5.81**	**79**		P		**Pn**	**20 22 07.8**	**+0.8**
	0.7nm,0.2s,SNR=7.9								
EBER					S		**Sn**	**20 23 13.8**	**+0.2**
	3.9nm,0.3s,SNR=7.9								
EBER	**Berja**	**5.81**	**79**		P		**Pn**	**20 22 07.8**	**+0.8**
	0.7nm,0.2s,SNR=7.9								
EBER					S		**Sn**	**20 23 13.8**	**+0.1**
	3.9nm,0.3s,SNR=7.9								
EQES	**Quesada**	**5.84**	**70**		P		**Pn**	**20 22 08.0**	**+0.5**
	2.3nm,0.1s,SNR=15								
EQES					S		**Sn**	**20 23 14.2**	**-0.3**
	1.0nm,0.1s								
EQES	**Quesada**	**5.84**	**70**		P		**Pn**	**20 22 08.0**	**+0.6**
	2.3nm,0.1s,SNR=15								
EQES					S		**Sn**	**20 23 14.2**	**-0.3**
	1.0nm,0.1s								
PCAB	**Cabril**	**5.90**	**15**		*e*Pn		**Pn**	**20 22 08.6**	**+0.4**
PCAB					*e*Sn		**Sn**	**20 23 10.2**	**-5.7**
PCAB					A			20 23 15.5	
	6.1nm,0.1s								
PCAB	**Cabril**	**5.90**	**15**		*e*Pn		**Pn**	**20 22 08.6**	**+0.4**
PCAB					*e*Sn		**Sn**	**20 23 10.2**	**-5.7**
	6.1nm,0.1s								
ESDC	**Sonseca Array**	**6.02**	**51**		P		**Pn**	**20 22 10.7**	**+0.8**
	6.5nm,0.1s,SNR=81								
ESDC	**Sonseca Array**	**6.02**	**51**		P		**Pn**	**20 22 10.7**	**+0.8**
	6.5nm,0.1s,baz=238,slow=13,SNR=81								
ESDC					S		**Sn**	**20 23 17.0**	**-1.9**
	3.7nm,0.2s,baz=239,slow=24,SNR=17								
ELOB	**Lobios**	**6.04**	**14**		P		**Pn**	**20 22 09.6**	**-0.6**
	0.5nm,0.1s,SNR=4.6								
ELOB					S		**Sn**	**20 23 13.1**	**-6.3**
	6.1nm,0.2s,SNR=8.7								
ZFT	**Errachidia**	**6.15**	**129**		*i* P		**Pn**	**20 22 10.0**	**-1.7**
ZFT	**Errachidia**	**6.15**	**129**		P		**Pn**	**20 22 10.0**	**-1.7**
ZFT					S		**Sn**	**20 23 13.0**	**-9.0**
EZAM	**Zamans**	**6.22**	**9**		P		**Pn**	**20 22 12.6**	**0.0**
	0.5nm,0.2s,SNR=7.9								
EZAM					S		**Sn**	**20 23 16.6**	**-7.1**
	1.6nm,0.2s,SNR=7.9								
PBRG	**Braganca**	**6.32**	**23**		*e*Pn		**Pn**	**20 22 14.4**	**+0.3**
PBRG					*e*Sn		**Sn**	**20 23 21.8**	**-4.5**
PBRG					A			20 23 24.6	
	4.3nm,0.4s								
PBRG	**Braganca**	**6.32**	**23**		*e*Pn		**Pn**	**20 22 14.4**	**+0.3**
PBRG					*e*Sn		**Sn**	**20 23 21.8**	**-4.5**
	4.3nm,0.4s								
ECAL	**Calabor**	**6.45**	**22**		P		**Pn**	**20 22 15.4**	**-0.4**
	1.4nm,0.1s,SNR=11								
ECAL					S		**Sn**	**20 23 24.8**	**-4.6**
	5.3nm,0.2s								
GUD	**Guadarrama**	**6.53**	**43**	⇓	P		**Pn**	**20 22 17.5**	**+0.7**
	3.1nm,0.2s,SNR=18								
GUD					S		**Sn**	**20 23 27.6**	**-3.7**
	3.5nm,0.3s,SNR=7.9								
EVIA	**Vianos**	**6.53**	**64**		P		**Pn**	**20 22 17.3**	**+0.4**
	1.6nm,0.1s,SNR=8.5								
EVIA					S		**Sn**	**20 23 29.4**	**-2.1**
	1.1nm,0.1s,SNR=4.0								
EMAZ	**Mazaricos**	**6.98**	**6**		P		**Pn**	**20 22 20.6**	**-2.4**
	1.0nm,0.1s,SNR=7.9								
EMAZ					S		**Sn**	**20 23 33.7**	**-8.7**
	6.4nm,0.1s,SNR=8.0								
ETOB	**Tobarra**	**7.24**	**66**		P		**Pn**	**20 22 26.7**	**+0.1**
	2.8nm,0.2s,SNR=19								
ETOB					S		**Sn**	**20 23 45.9**	**-2.9**
	7.9nm,1.0s								
ETOB	**Tobarra**	**7.24**	**66**		P		**Pn**	**20 22 26.7**	**+0.1**
	2.8nm,0.2s,SNR=19								
ETOB					S		**Sn**	**20 23 45.9**	**-3.0**
	7.9nm,1.0s								
EPON	**Pontenova**	**7.63**	**16**		S		**Sn**	**20 23 51.9**	**-6.7**
	0.8nm,0.1s,SNR=7.9								
ETOR	**Torete**	**7.88**	**50**	⇑	P		**Pn**	**20 22 36.1**	**+0.7**
	8.0nm,0.2s,SNR=18								
ETOR					S		**Sn**	**20 24 01.2**	**-3.4**
	7.8nm,0.2s,SNR=7.9								
ECHE	**Chera**	**8.00**	**61**		S		**Sn**	**20 24 04.5**	**-3.1**
	1.1nm,0.2s,SNR=4.0								
EARI	**Arriondas**	**8.17**	**25**		P		**Pn**	**20 22 40.1**	**+0.7**
	0.2nm,0.1s,SNR=7.9								
EARI	**Arriondas**	**8.17**	**25**		P		**Pn**	**20 22 40.1**	**+0.7**
	0.2nm,0.1s,SNR=7.9								
EARI					S		**Sn**	**20 24 06.8**	**-4.9**
	0.5nm,0.2s,SNR=7.9								
EBEN	**Beniarda**	**8.24**	**68**		P		**Pn**	**20 22 42.0**	**+1.6**
	SNR=4.0								
EBEN	**Beniarda**	**8.24**	**68**		P		**Pn**	**20 22 42.0**	**+1.5**
	SNR=4.0								
EMOS	**Mosqueruela**	**8.68**	**57**		P		**Pn**	**20 22 48.3**	**+2.0**
	0.4nm,0.1s,SNR=7.9								
EMOS	**Mosqueruela**	**8.68**	**57**		P		**Pn**	**20 22 48.3**	**+2.0**
	0.4nm,0.1s,SNR=7.9								
EMOS					S		**Sn**	**20 24 19.9**	**-4.4**
	1.0nm,0.3s,SNR=7.9								
ECRI	**Cripan**	**8.79**	**39**		P		**Pn**	**20 22 48.6**	**+0.8**
	1.8nm,0.3s,SNR=4.0								
ELAN	**Lanestosa**	**8.82**	**33**		S		**Sn**	**20 24 21.4**	**-6.3**
	1.1nm,0.5s,SNR=7.9								
IZUN	**Zunzarren**	**9.51**	**41**		P		**Pn**	**20 22 58.4**	**+0.6**
	0.3nm,0.2s,SNR=4.0								
IZUN	**Zunzarren**	**9.51**	**41**		P		**Pn**	**20 22 58.4**	**+0.6**
	0.3nm,0.2s,SNR=4.0								
EORO	**Oroz-Betelu**	**9.62**	**42**		P		**Pn**	**20 23 00.4**	**+1.2**
	0.2nm,0.1s,SNR=4.0								
EORO	**Oroz-Betelu**	**9.62**	**42**		P		**Pn**	**20 23 00.4**	**+1.2**
	0.2nm,0.1s,SNR=4.0								
ELIZ	**Elizondo**	**9.69**	**40**		P		**Pn**	**20 23 00.8**	**+0.7**
	2.9nm,0.4s,SNR=7.9								
ELIZ					S		**Sn**	**20 24 44.5**	**-4.5**
	3.5nm,0.5s,SNR=4.0								
EALK	**Alkurruntz**	**9.74**	**40**		S		**Sn**	**20 24 44.9**	**-5.3**
	9.4nm,0.5s,SNR=4.0								
SJPF	**Ste Jean**	**9.81**	**41**		*e*Pn		**Pn**	**20 23 02.2**	**+0.3**
SJPF					*e*Sn		**Sn**	**20 24 45.4**	**-6.7**
	6.2nm,0.8s								
SJPF	**Ste Jean**	**9.81**	**41**		*e*Pn		**Pn**	**20 23 02.2**	**+0.3**
SJPF					*e*Sn		**Sn**	**20 24 45.4**	**-6.7**
	3.1nm,0.8s								
ETSF	**Etsaut**	**10.03**	**44**		*e*Pn		**Pn**	**20 23 05.6**	**+0.7**
ETSF					*e*Sn		**Sn**	**20 24 51.2**	**-6.3**
	1.0nm,0.4s								
ETSF	**Etsaut**	**10.03**	**44**		*e*Pn		**Pn**	**20 23 05.6**	**+0.7**
ETSF					*e*Sn		**Sn**	**20 24 51.2**	**-6.3**
	0.5nm,0.4s								
EBIE	**Bielsa**	**10.30**	**47**		P		**Pn**	**20 23 09.2**	**+0.6**
	0.6nm,0.2s,SNR=7.9								
EBIE	**Bielsa**	**10.30**	**47**		P		**Pn**	**20 23 09.2**	**+0.6**
	0.6nm,0.2s,SNR=7.9								
EBIE					S		**Sn**	**20 24 58.7**	**-5.4**
	0.9nm,0.4s,SNR=7.9								
EPF	**Esparros**	**10.63**	**46**		*e*Pn		**Pn**	**20 23 13.7**	**+0.6**
EPF					*e*Sn		**Sn**	**20 25 06.5**	**-5.6**
	1.2nm,0.4s								
EPF	**Esparros**	**10.63**	**46**		*e*Pn		**Pn**	**20 23 13.7**	**+0.6**
EPF					*e*Sn		**Sn**	**20 25 06.5**	**-5.6**
	0.6nm,0.4s								
LFF	**La Frestale**	**12.10**	**39**		*e*Pn		**Pn**	**20 23 32.6**	**-0.6**
ROSF	**Rostrenen**	**13.29**	**20**		*e*Pn		**Pn**	**20 23 47.9**	**-1.5**

MAN 27 20:28:26,965N×12630E,h10km,mb4.5,ML3.4,MS3.3, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.81**	**280**	*e*P	Pg	20 28 41.8	+0.1
SCPH				*e*S	Sg	20 28 52.6	+0.4
BUTP	**Butuan**	**0.95**	**225**	*e*P	Pg	20 28 44.2	-0.1
BUTP				*e*S	Sg	20 28 58.1	+1.4
BIPH	**Bislig**	**1.46**	**178**	⇓ *i* P	Pn	20 28 50.9	-1.4
BIPH				*i* S	Sn	20 29 07.6	-3.9
PLP	**Palo**	**1.99**	**319**	⇓ *e*P	Pn	20 29 01.1	+1.4
PLP				*e*S	Sn	20 29 26.2	+1.5
BESP	**Borongan**	**2.12**	**337**	*e*P	Pn	20 29 02.1	+0.6
BESP				*e*S	Sn	20 29 33.2	+5.3
BUKP	**Musuan**	**2.14**	**215**	*e*P	Pn	20 29 02.8	+1.0
BUKP				*e*S	Sn	20 29 30.1	+1.7
TBP	**Tagbilaran**	**2.40**	**271**	*e*P	Pn	20 29 06.3	+0.9
TBP				*e*S	Sn	20 29 35.2	+0.3
PAGZ	**Pagadian**	**3.39**	**238**	*e*P	Pn	20 29 20.4	+1.3
PAGZ				*e*S	Sn	20 30 02.2	+2.8
GUIM	**Jordan**	**3.78**	**285**	*e*P	Pn	20 29 26.3	+1.9
GUIM				*e*S	Sn	20 30 11.1	+2.2
IPIL	**Ipil**	**4.12**	**244**	*e*P	Pn	20 29 30.8	+1.7

*ISCJB **27** 20:38:14.9±0.8,3942N±002×3305E±003,h1km±6km, Error ellipse: s-maj=4.4km s-min=3.9km az=43.6*
*CSEM **27** 20:38:14.1±0.1,3945N×3307E,h2km,MD3.5,Error ellipse: s-maj=1.5km s-min=1.3km az=9.0*
*DDA **27** 20:38:14.4,3942N×3310E,h10km±1km,Md3.3*
*ISK **27** 20:38:14.9,3942N×3306E,h5km,MD3.5*
ISC 27 20:38:15.5±0.6,3942N±002×3304E±003,h2km±5km,n34, σ0°73/41,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.51**	**335**	*e*PG	**Pg**	**20 38 25.4**	**+0.1**
LOD				*e*SG	**Sg**	**20 38 33.0**	**+1.0**
KAMT	**Kaman**	**0.52**	**96**	*e*PG	**Pg**	**20 38 24.3**	**-1.1**
KAMT				*e*SG	**Sg**	**20 38 33.0**	**+0.7**
CDAG	**Cicekdag**	**1.05**	**79**	*i* P	**Pg**	**20 38 33.6**	**-2.0**
CDAG				*i* S	**Sg**	**20 38 50.1**	**+1.0**
KIZT	**Kizilcal**	**1.05**	**239**	*e*PG	**Pg**	**20 38 35.4**	**-0.3**
ELDT	**Eldivan**	**1.11**	**15**	*i* P	**Pg**	**20 38 36.2**	**-0.4**
ELDT				*i* S	**Sg**	**20 38 51.5**	**+0.5**
KDHN	**Kadinhani**	**1.16**	**219**	*i* P	**Pg**	**20 38 36.5**	**-1.1**
KDHN				*i* S	**Sg**	**20 38 53.3**	**+0.7**
CANT	**Cankiri**	**1.26**	**20**	*e*PN	**Pn**	**20 38 39.4**	**-0.8**
CANT				*e*SN	**Sn**	**20 38 57.2**	**-0.5**
LADK	**Ladik-KONYA**	**1.33**	**204**	*e*PN	**Pn**	**20 38 40.0**	**-1.1**
LADK				*e*SN	**Sn**	**20 38 58.7**	**-0.6**
CORM	**Corum**	**1.44**	**58**	*e*PN	**Pn**	**20 38 41.4**	**-1.1**
KONT	**Konya--Tatoy**	**1.57**	**200**	*e*PN	**Pn**	**20 38 44.4**	**0.0**
ESKT	**Eskisehir**	**1.70**	**274**	*e*PN	**Pn**	**20 38 45.9**	**-0.2**
ESKT	**Eskisehir**	**1.70**	**274**	*i* P	**Pn**	**20 38 45.5**	**-0.7**
SEYT	**Eskypehyr**	**1.70**	**274**	*i* P	**Pn**	**20 38 45.5**	**-0.7**
MDU	**Mudurnu**	**1.75**	**307**	*e*PN	**Pn**	**20 38 46.6**	**-0.3**
YOZ	**Yozgat**	**1.77**	**82**	*e*PN	**Pn**	**20 38 46.7**	**-0.5**
TOS	**Tosya**	**1.78**	**25**	*e*PN	**Pn**	**20 38 46.2**	**-1.0**
NIG	**Nigde**	**1.79**	**136**	*e*PN	**Pn**	**20 38 47.6**	**+0.2**
SAFT	**Safranbolu**	**1.83**	**352**	*e*PN	**Pn**	**20 38 48.3**	**+0.3**
SHUT	**Suhut-Afyon**	**2.13**	**247**	*e*PN	**Pn**	**20 38 52.2**	**+0.1**
GULT	**Gulveren**	**2.19**	**298**	*e*PN	**Pn**	**20 38 53.1**	**+0.2**
BNN	**Bunyan**	**2.25**	**104**	*e*PN	**Pn**	**20 38 53.9**	**+0.1**
ALT	**Altintas**	**2.31**	**262**	*e*PN	**Pn**	**20 38 55.0**	**+0.5**
HDMB	**Hadim**	**2.49**	**190**	*e*PN	**Pn**	**20 38 57.8**	**+0.7**
CAVI	**Cavuskoy**	**2.59**	**289**	*e*PN	**Pn**	**20 38 58.7**	**+0.4**
KARA	**Karaisali**	**2.68**	**143**	*e*PN	**Pn**	**20 39 00.1**	**+0.6**
KARA	**Karaisali**	**2.68**	**143**	*e*Pn	**Pn**	**20 39 00.1**	**+0.5**
DIKM	**Dikmen**	**2.79**	**36**	*e*PN	**Pn**	**20 39 02.3**	**+1.1**
MERS	**Mersin**	**2.81**	**155**	*e*PN	**Pn**	**20 39 01.6**	**+0.2**
KVT	**Kavak**	**2.83**	**53**	*e*PN	**Pn**	**20 39 02.0**	**+0.3**
KOZT	**Kozan**	**2.92**	**131**	*e*PN	**Pn**	**20 39 03.4**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.94**	**103**	*e*PN	**Pn**	**20 39 02.5**	**-0.8**
SVSK	**Karacayir**	**3.09**	**80**	*e*PN	**Pn**	**20 39 05.7**	**+0.4**
IKL	**Isikli**	**3.22**	**171**	*e*PN	**Pn**	**20 39 07.8**	**+0.7**
KMRS	**Kahramanmaras**	**3.58**	**121**	*e*PN	**Pn**	**20 39 13.2**	**+1.2**

*BJI **27** 20:51:54.6,2783N×7179W,h14km,mB5.4,mb5.0,Ms5.0, Ms2.4.5*
*ISCJB **27** 20:51:55.8±0.2,2759N±003×7102W±004,h10km, mb4.3/47,MS3.7/15,Error ellipse: s-maj=5.5km s-min=2.8km az=146.7*
*IDC **27** 20:51:56.2±0.5,2776N×7109W,h0km,mb4.1/23, mb1 4.4/27,mb1mx4.3/31,mbtmp4.2/27,ML4.6/5,MS3.7/16, Ms1 3.6/16,ms1mx3.4/44,Error ellipse: s-maj=12.8km s-min=12.1km az=61.0*
*NEIC **27** 20:51:57.5±0.2,2768N×7108W,h10km,mb4.6/39,Error ellipse: s-maj=6.7km s-min=2.9km az=57.0*
ISC 27 20:51:58.0±0.2,2764N±003×7104W±004,h10km,n268, σ0°93/288,mb4.3/47,MS3.7/15,62C-67D,Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRTK	**Grand Turk**	**6.10**	**181**	*e*Pn	**Pn**	**20 53 27.8**	**-0.5**
GRTK				*e*Sn	**Sn**	**20 54 30.6**	**-7.6**
MOAC	**Moa**	**7.82**	**208**	*e*P	**Pn**	**20 53 51.6**	**-0.3**
	baz=67						
MOAC				*e*S	**Sn**	**20 55 09.2**	**-11**
	comp=N,10nm,0.3s						
MOAC				*e*			
	comp=E,10nm,0.3s						
MASC	**Masc**	**7.99**	**202**	*e*P	**Pn**	**20 53 54.4**	**+0.2**
	baz=28						
MASC				*e*S	**Sn**	**20 55 16.8**	**-7.8**
	comp=N,531nm,0.2s						
MASC				*e*			
	comp=E,604nm,0.2s						
HLGC	**Holguin**	**8.13**	**215**	*e*P	**Pn**	**20 53 57.3**	**+1.1**
HLGC				*e*S	**Sn**	**20 55 20.5**	**-7.7**
GTBY	**Guantanamo Bay**	**8.54**	**207**	*e*Pn	**Pn**	**20 53 58.4**	**-3.3**
GTBY				*e*Sn	**Sn**	**20 55 25.3**	**-13**
SDDR	**Presa de Saban**	**8.62**	**182**	*e*Pn	**Pn**	**20 54 02.4**	**-0.5**
SDDR				*e*Sn	**Sn**	**20 55 29.4**	**-11**
RCC	**Rio Carpintero**	**8.72**	**210**	*e*P	**Pn**	**20 54 00.6**	**-3.7**
	baz=42						
RCC				*e*S	**Sn**	**20 55 24.9**	**-18**
	comp=N,80nm,0.7s						
RCC				*e*			
	comp=E,73nm,0.4s						
DWPF	**Disney**	**9.21**	**275**	*e*Pn	**Pn**	**20 54 06.5**	**-4.5**
DWPF				*e*Sn	**Sn**	**20 55 41.2**	**-13**
LMGC	**Las Mercedes**	**9.31**	**217**	*e*P	**Pn**	**20 54 11.4**	**-0.9**
	baz=43						
LMGC				*e*S	Px	20 54 41.2	
	comp=N,12nm,0.6s						
LMGC				*e*			
	comp=E,8.0nm,0.6s						
CNNC	**Cliffs of the**	**9.57**	**324**	Pn	**Pn**	**20 54 14.9**	**-0.9**
CNNC				*e*Sn	**Sn**	**20 55 49.0**	**-14**
NHSC	**New Hope**	**9.59**	**307**	*e*Pn	**Pn**	**20 54 16.4**	**+0.3**
NHSC				*e*Sn	**Sn**	**20 55 49.7**	**-14**

TEIG S Sn 20 59 04.0 -11
comp=E,1.9nm,0.3s,baz=339,slow=23,SNR=8.5
TEIG LR LR 21 02 35.1
comp=E,310nm,19.4s,baz=85,slow=37
TEIG Tepich 17.39 249 *e*Pn **Pn 20 55 56.6 -4.3**
TEIG *e*Sn **Sn 20 58 56.5 -18**
VBMS Vicksburg 17.49 290 Pn **Pn 20 55 59.6 -2.4**
OLIL Olney 18.03 312 *e*Pn **Pn 20 56 06.2 -2.5**
comp=E,38nm,0.8s
SIUC Southern Illin 18.28 308 *e*Pn **Pn 20 56 12.3 +0.5**
comp=E,23nm,0.8s
SADO Sadowa 18.28 341 P **Pn 20 56 09.8 -1.9**
comp=E,0.4nm,0.3s,baz=127,slow=20,SNR=2.6
SADO LR LR 21 02 44.8
comp=E,308nm,18.3s,baz=202,slow=36
SADO Sadowa 18.28 341 P **Pn 20 56 09.8 -2.0**
SADO LR LR 21 02 44.8
PCRV Puerto La Cruz 18.39 160 P **Pn 20 56 14.9 +1.7**
comp=E,1.5nm,0.3s,baz=271,slow=1.8,SNR=7.2
SDV Santo Domingo 18.66 179 P **Pn 20 56 18.2 +1.7**
comp=E,0.6nm,0.3s,baz=13,slow=6.6,SNR=13
SDV LR LR 21 03 34.8
comp=E,180nm,18.8s,baz=348,slow=37
SDV Santo Domingo 18.66 179 *e*Pn **Pn 20 56 18.0 +1.5**
comp=E,16nm,0.8s
FVM French Village 19.25 307 *e*P **Pn 20 56 23.0 -0.5**
comp=E,34nm,0.6s
FVM *e*S **Sn 20 59 39.5 -20**
SLM Saint Louis 19.42 309 *e*Pn **Pn 20 56 24.9 -0.7**
comp=E,41nm,0.7s
UALR University of 19.54 297 *e*P **Pn 20 56 26.3 -0.7**
comp=E,23nm,1.1s
HDIL Hopedale 19.81 315 *e*P **Pn 20 56 27.8 -2.4**
comp=E,26nm,0.8s
JFWS Jewell Farm 21.79 319 *e*P **P 20 56 48.5 -1.6**
comp=E,58nm,0.7s,mb5.1
JFWS *e* 20 56 57.2
HKT Hockley 21.84 282 *e*P **P 20 56 52.1 +1.3**
comp=E,12nm,1.0s,mb4.3
ROSC El Rosal 22.88 188 P **P 20 57 04.3 +2.5**
comp=E,34nm,0.7s,mb4.9,baz=74,slow=16,SNR=16
ROSC El Rosal 22.88 188 *e*P **P 20 57 04.7 +2.8**
SCIA State Center 23.03 314 *e*P **P 20 57 01.7 -1.6**
comp=E,36nm,1.2s,mb4.7
KSU1 Kansas State U 24.14 305 *e*P **P 20 57 12.5 -1.6**
comp=E,20nm,0.8s,mb4.6
CMIG Matias Romero 24.38 250 P **P 20 57 16.3 -0.2**
comp=E,0.6nm,0.4s,mb3.4,baz=59,slow=17,SNR=1.3
CMIG LR LR 21 06 48.0
comp=E,182nm,21.5s,MS3.5,baz=60,slow=37
WMOK Wichita Mounta 24.71 294 *e*P **P 20 57 19.1 -0.3**
comp=E,38nm,1.9s,mb4.6
JCT Junction City 25.27 283 *e*P **P 20 57 24.6 0.0**
comp=E,18nm,0.8s,mb4.7
EYMN Ely 25.78 327 *e*P **P 20 57 28.9 -0.1**
comp=E,47nm,1.2s,mb4.9
ECSD EROS,Sioux Fal 26.11 315 *e*P **P 20 57 30.7 -1.2**
comp=E,72nm,1.9s,mb4.9
CBKS Cedar Bluff 26.36 302 *e*P **P 20 57 33.6 -0.8**
comp=E,47nm,0.8s,mb5.1
CBKS *e* 20 57 44.3
CBKS *e*ScP ScP 21 04 42.2 +2.2
SCHQ Schefferville 27.34 5 P **P 20 57 42.4 -0.6**
comp=E,5.2nm,1.1s,mb4.0,baz=238,slow=13,SNR=2.6
SCHQ LR LR 21 07 58.1
comp=E,147nm,19.3s,MS3.6,baz=229,slow=35
OTAV Otavalo 28.16 196 P **P 20 57 53.6 +3.0**
comp=E,3.6nm,0.8s,mb4.0
AGMN Agassiz Refuge 28.21 324 *e*P **P 20 57 49.9 -1.0**
comp=E,16nm,1.3s,mb4.5
TXAR Lajitas Array 28.68 281 P **P 20 57 54.4 -0.8**
comp=E,1.2nm,0.7s,mb3.8,baz=104,slow=9.2,SNR=8.6
TXAR LR LR 21 10 03.8
comp=E,92nm,20.5s,MS3.4,baz=5.0,slow=38
TXAR Lajitas Array 28.68 281 P **P 20 57 54.4 -0.8**
TXAR LR LR 21 10 03.9
ULM Lac du Bonnet 29.46 327 P **P 20 57 59.9 -2.0**
comp=E,4.4nm,0.8s,mb4.2,baz=113,slow=6.7,SNR=5.7
ULM LR LR 21 10 06.0
comp=E,97nm,20.1s,MS3.4,baz=213,slow=37
ANMO Albuquerque 31.02 292 *e*P **P 20 58 16.9 +1.1**
comp=E,2.9nm,0.8s,mb4.2
PHWY Pilot Hill 31.26 305 *e*P **P 20 58 17.6 -0.3**
comp=E,5.7nm,0.8s,mb4.5
119A Ashpeak Ranch, 33.34 288 ⇑P **P 20 58 36.0 -0.3**
baz=33
S19A Harvey Farm, M 33.41 297 ⇑P **P 20 58 37.6 +0.8**
baz=33
W19A Sanders 33.42 293 ⇓P **P 20 58 38.0 +1.0**
baz=33
O19A Miners Draw (B 33.76 302 ⇓P **P 20 58 40.4 +0.5**
baz=34
X18A Snowflake 33.87 291 ⇓P **P 20 58 41.0 +0.2**
baz=34
118A Homack Ranch, 33.90 288 ⇓P **P 20 58 42.6 +1.4**
baz=34
N19A John Jarvie Ra 33.91 303 ⇓P **P 20 58 41.7 +0.5**
baz=34
318A Bisbee 33.98 286 ⇓P **P 20 58 41.1 -0.8**
baz=34
R18A Canyonlands Na 34.08 298 ⇑P **P 20 58 42.9 +0.2**
baz=34
S18A Hurst Farm, BI 34.08 297 ⇑P **P 20 58 42.8 +0.1**
baz=34
K19A Absolon Red Bu 34.08 306 ⇑P **P 20 58 42.3 -0.4**
baz=34
Q18A Rafter H Ranch 34.35 300 ⇑P **P 20 58 44.9 -0.1**
baz=34
117A Oracle 34.55 288 ⇓P **P 20 58 45.8 -1.1**
baz=34
PDAR Pinedale Array 34.58 306 P **P 20 58 46.6 -0.3**
comp=E,1.2nm,0.7s,mb4.0,baz=114,slow=9.1,SNR=10.0
BW06 Boulder Array 34.58 306 ⇑P **P 20 58 46.4 -0.5**
baz=34
TUC Tucson 34.61 288 *e*P **P 20 58 48.3 +1.0**
comp=E,8.0nm,1.3s,mb4.5
Y17A Roosevelt 34.61 290 ⇑P **P 20 58 45.8 -1.5**
baz=34
SRU San Rafael 34.65 300 ⇑P **P 20 58 47.1 -0.5**
baz=34
R17A Hanksville Air 34.72 298 ⇓P **P 20 58 48.0 -0.2**
baz=34
I18A Diamond G Ranc 34.98 308 ⇓P **P 20 58 49.8 -0.6**
baz=35
FCC Fort Churchill 34.98 339 *e*P **P 20 58 49.8 -0.5**
comp=E,0.5nm,0.8s,mb3.5
RLMT Red Lodge 34.98 310 ⇑P **P 20 58 50.4 0.0**
baz=35
J18A Kendall Valley 35.01 307 ⇓P **P 20 58 50.6 0.0**
baz=35
WUAZ Wupatki 35.06 293 ⇑P **P 20 58 50.8 -0.3**
baz=35
X16A Lo Mia Camp, P 35.10 291 ⇑P **P 20 58 50.6 -1.0**
baz=35
W16A Flagstaff 35.18 292 ⇑P **P 20 58 52.1 -0.1**
baz=35
216A Three Points, 35.19 287 ⇓P **P 20 58 52.1 -0.2**
baz=35
G18A Lazy EL Ranch, 35.24 310 ⇑P **P 20 58 51.3 -1.4**
baz=35
L17A Cokeville 35.39 305 ⇑P **P 20 58 54.2 +0.3**
baz=35
F18A Big Timber 35.52 311 ⇑P **P 20 58 55.0 0.0**
baz=35
LOHW Long Hollow 35.52 307 *e*P **P 20 58 54.8 -0.2**
comp=E,4.9nm,0.8s,mb4.5
J17A Brown Place, J 35.54 307 ⇓P **P 20 58 54.9 -0.3**
baz=35
I17A Pilgram Creek 35.57 308 ⇑P **P 20 58 56.1 +0.6**
baz=35
REDW Red Top Meadow 35.64 307 *e*P **P 20 58 56.0 -0.1**
comp=E,71nm,2.5s,mb5.2
V15A Kaibab Nationa 35.72 294 ⇓P **P 20 58 57.1 +0.3**
baz=36
115A Sonoran Desert 35.80 288 ⇑P **P 20 58 58.2 +0.5**
baz=36
U15A North Rim 35.83 295 ⇑P **P 20 58 59.0 +1.2**
baz=36
E18A Harlowton 35.85 312 ⇓P **P 20 58 58.6 +0.8**
baz=36
RRI2 Red Ridge 35.97 307 *e*P **P 20 58 58.6 -0.3**
comp=E,7.0nm,0.7s,mb4.7
RRI2 *e* 20 59 07.3
FRB Frobisher Bay 36.15 2 LR LR 21 12 32.5
comp=E,277nm,20.0s,MS4.0,baz=240,slow=34
F17A Fitzpatrick Pl 36.15 311 ⇑P **P 20 59 01.4 +1.1**
baz=36
J16A Bone 36.16 306 ⇓P **P 20 59 01.4 +0.9**
baz=36
EGMT Eagleton 36.22 315 ⇓P **P 20 59 01.8 +0.8**
baz=36
X14A Yava 36.30 291 ⇑P **P 20 59 02.2 +0.3**
baz=36
214A Organ Pipe Nat 36.34 287 ⇑P **P 20 59 03.1 +0.9**
baz=36
B18A Beardsley Farm 36.37 315 ⇑P **P 20 59 03.4 +1.2**
baz=36
E17A Martinsdale 36.44 312 ⇓P **P 20 59 03.8 +1.0**
baz=36
L15A Malad City 36.48 304 ⇑P **P 20 59 03.7 +0.4**
baz=36
D17A Six Diamond Ra 36.53 313 ⇓P **P 20 59 04.2 +0.5**
baz=36,SNR=6.5
DUG Dugway 36.54 301 ⇑P **P 20 59 04.4 +0.6**
baz=36
A18A Metzger Ranch, 36.60 316 ⇓P **P 20 59 04.6 +0.5**
baz=36
P14A Drum Mountains 36.67 300 ⇓P **P 20 59 05.1 +0.2**
baz=36
BOZ Bozeman (W) 36.73 310 ⇑P **P 20 59 05.6 +0.2**
baz=37
C17A Wharram Farm, 36.73 314 ⇑P **P 20 59 05.5 +0.2**
baz=37,SNR=6.8
G16A Moss Hill, Enn 36.74 310 ⇑P **P 20 59 05.8 +0.4**
baz=37
F16A Kennard Place, 36.76 310 ⇑P **P 20 59 05.6 0.0**
baz=37
Q14A Sevier Lake (B 36.77 299 ⇓P **P 20 59 06.2 +0.4**
baz=37
B17A L&G Farms, Che 36.97 315 ⇑P **P 20 59 07.6 +0.2**
baz=37
E16A East Helena 37.00 312 ⇓P **P 20 59 08.5 +0.8**
baz=37
X13A Yucca 37.07 292 ⇓P **P 20 59 08.9 +0.5**
baz=37
M14A Sheep Mountain 37.11 303 ⇓P **P 20 59 08.9 +0.2**
baz=37
A17A Triple J Farms 37.13 316 ⇓P **P 20 59 08.9 +0.2**
baz=37
S13A Holt Ranch, En 37.13 297 ⇑P **P 20 59 09.1 +0.2**
baz=37
K14A Jones Ranch, D 37.15 305 ⇓P **P 20 59 09.1 +0.1**
baz=37
H15A Lima 37.18 308 ⇓P **P 20 59 09.3 +0.1**
baz=37
U13A Pakoon Wash 37.18 295 ⇓P **P 20 59 08.5 -0.8**
baz=37
V13A Grand Canyon W 37.19 294 ⇑P **P 20 59 08.5 -0.9**
baz=37
Q13A Wheeler Ranch, 37.34 299 ⇓P **P 20 59 11.4 +0.7**
baz=37
F15A Butte 37.36 310 ⇓P **P 20 59 11.9 +1.1**
baz=37
P13A Bates Ranch, G 37.38 300 ⇓P **P 20 59 12.4 +1.4**
baz=37
C16A Fuhringer Ranc 37.42 314 ⇓P **P 20 59 11.2 0.0**
baz=37,SNR=5.7
J14A Carey 37.53 306 ⇓P **P 20 59 12.2 0.0**
baz=37,SNR=12
I14A Mackay 37.60 307 ⇑P **P 20 59 14.2 +1.4**
baz=37
E15A Deer Lodge 37.61 311 ⇓P **P 20 59 13.5 +0.6**
baz=38
H14A Leadore 37.68 308 ⇓P **P 20 59 14.2 +0.8**
baz=38
A16A West Butte Ran 37.69 315 ⇑P **P 20 59 13.2 -0.2**
baz=38,SNR=5.4
D15A Lincoln 37.70 312 ⇓P **P 20 59 13.6 +0.1**
baz=38,SNR=5.2
M13A Montello 37.70 303 ⇑P **P 20 59 13.9 +0.2**
baz=38
G14A Jackson 37.88 309 ⇓P **P 20 59 15.5 +0.3**
baz=38
V12A Nelson 37.89 293 ⇑P **P 20 59 15.4 0.0**
baz=38
C15A Salmond Ranch, 37.96 313 ⇑P **P 20 59 16.2 +0.4**
baz=38,SNR=6.3
J13A Cove Ranch, Pi 38.02 306 ⇓P **P 20 59 16.7 +0.4**
baz=38
I13A Wildhorse Cree 38.07 307 ⇑P **P 20 59 17.2 +0.5**
baz=38,SNR=6.6
P12A McGill 38.07 300 ⇓P **P 20 59 17.6 +0.8**
baz=38
B15A Bradely Ranch, 38.09 314 ⇓P **P 20 59 17.7 +0.8**
baz=38
HLID Hailey 38.22 306 ⇑P **P 20 59 18.4 +0.4**
baz=38,SNR=5.7
HLID Hailey 38.22 306 *e*P **P 20 59 18.6 +0.6**
comp=E,4.3nm,0.9s,mb4.2
H13A Challis 38.29 308 ⇑P **P 20 59 19.1 +0.5**
baz=38
D14A Greenough 38.36 312 ⇓P **P 20 59 19.8 +0.7**
baz=38
A15A Johnson Ranch, 38.41 315 ⇓P **P 20 59 20.1 +0.6**
baz=38
BC3 Big Chuckw Mtn 38.45 290 ⇓P **P 20 59 21.5 +1.4**
baz=38
R11A Troy Canyon, C 38.53 298 ⇓P **P 20 59 21.1 +0.4**
baz=38
GMRC Granite Mounta 38.57 292 ⇓P **P 20 59 22.0 +0.9**
baz=38
F13A Darby 38.60 310 ⇓P **P 20 59 22.0 +0.8**
baz=38
Q11A Duckwater 38.61 298 ⇑P **P 20 59 22.0 +0.7**
baz=38
J12A Stokes Ranch, 38.66 306 ⇓P **P 20 59 22.5 +0.8**
baz=38
H12A Diamond D Ranc 38.71 308 ⇑P **P 20 59 22.2 +0.1**
baz=38
A14A Double T Ranch 38.84 315 ⇑P **P 20 59 23.1 -0.1**
baz=39
M11A Holland Ranch, 38.93 303 ⇓P **P 20 59 23.9 -0.1**
baz=39
L11A Cat Creek Ranc 38.98 304 ⇑P **P 20 59 24.9 +0.4**
baz=39
D13A Huson 38.99 312 ⇓P **P 20 59 24.7 +0.2**
baz=39
TPNV Topopah Spring 39.02 295 ⇓P **P 20 59 24.8 -0.1**
baz=39
JTMT Jette 39.04 313 *e*P **P 20 59 25.8 +1.0**
MFID Camas Ranch 39.21 306 ⇑P **P 20 59 26.8 +0.4**
baz=39
C13A Hot Springs 39.22 313 ⇓P **P 20 59 27.2 +0.9**
baz=39
S10A Tonopah Range, 39.31 297 ⇓P **P 20 59 28.0 +0.7**
baz=39
MONP Monument Peak 39.31 289 ⇑P **P 20 59 28.4 +1.0**
baz=39
L10A Juniper Basin 39.50 304 ⇓P **P 20 59 29.6 +0.8**
baz=39
R09A Tonopah 39.70 297 ⇓P **P 20 59 30.3 -0.2**
baz=40
G11A Walters Elk Ra 39.85 309 ⇓P **P 20 59 32.5 +0.8**
baz=40
K10A MacKenzie Ranc 39.88 305 ⇑P **P 20 59 32.3 +0.4**
baz=40,SNR=5.6
GRAC Grapevine Rang 39.92 296 ⇑P **P 20 59 33.2 +0.8**
baz=40
E11A Bogner Ranch, 40.00 310 ⇓P **P 20 59 33.4 +0.5**
baz=40
MPMC Manual Prospec 40.03 294 ⇑P **P 20 59 34.1 +0.8**
baz=40
A12A Yaak River Ran 40.24 314 ⇑P **P 20 59 35.5 +0.7**
baz=40
G10A Bishop Farm, J 40.43 308 ⇓P **P 20 59 37.0 +0.6**
baz=40
K09A Rome 40.50 304 ⇓P **P 20 59 37.7 +0.7**
baz=40
B11A Sandpoint 40.57 313 ⇓P **P 20 59 37.7 +0.1**
baz=40
J09A Fry Pan Ranch, 40.59 305 ⇑P **P 20 59 38.5 +0.7**
baz=40
F10A Beach Ranch, E 40.62 309 ⇓P **P 20 59 38.0 0.0**
baz=40
NVAR Mina Array Bea 40.67 298 P **P 20 59 37.6 -0.9**
comp=E,1.4nm,0.8s,mb3.7,baz=81,slow=6.4,SNR=8.4
A11A Hall Mountain, 40.70 314 ⇑P **P 20 59 39.9 +1.3**
baz=40
D10A Wagner Farm, O 40.86 311 ⇑P **P 20 59 40.1 +0.2**
baz=41
G09A Cove 40.88 308 ⇓P **P 20 59 39.5 -0.7**
baz=41
L08A Fields 40.90 303 ⇑P **P 20 59 40.0 -0.4**
baz=41
K08A Mann Creek Ran 41.06 304 ⇓P **P 20 59 42.4 +0.8**
baz=41
O07A Toulon 41.17 300 ⇑P **P 20 59 43.0 +0.4**
baz=41
N07B Gerlach 41.27 301 ⇑P **P 20 59 44.5 +1.0**
baz=41
H08A Prairie City 41.40 307 ⇓P **P 20 59 44.8 +0.4**
baz=41
M07A Soldier Meadow 41.45 302 ⇓P **P 20 59 45.2 +0.2**
baz=41
K07A Rock Creek Ran 41.61 304 ⇓P **P 20 59 46.5 +0.3**
baz=41
F08A Pendleton 41.66 309 ⇑P **P 20 59 47.0 +0.4**
baz=42
O06A Flanigan 41.89 300 ⇓P **P 20 59 48.3 -0.2**
baz=42
BSC Santa Cruz Isl 41.90 291 ⇓P **P 20 59 48.2 -0.5**
baz=42
N06A Buffalo Meadow 41.92 301 ⇑P **P 20 59 49.3 +0.5**
baz=42
I07A Izee 41.94 306 ⇑P **P 20 59 49.4 +0.5**
baz=42
D08A Wollman Farm, 41.97 311 ⇑P **P 20 59 49.4 +0.4**
baz=42
BEKR Beckwourth 42.29 300 ⇑P **P 20 59 51.8 -0.1**
baz=42
A08A Turner Farm, O 42.56 313 ⇑P **P 20 59 52.9 -1.0**
baz=42
YKA Yellowknife Ar 44.99 333 P **P 21 00 12.1 -1.1**
comp=E,2.3nm,0.8s,mb4.0,baz=119,slow=8.6,SNR=26
YKA PcP PcP 21 01 51.7 -2.4
comp=E,0.8nm,1.0s,baz=104,slow=5.2,SNR=3.6
YKA LR LR 21 18 01.8
comp=E,17nm,21.4s,MS2.9,baz=250,slow=35
YKA Yellowknife Ar 44.99 333 P **P 21 00 12.2 -1.1**
YKA PcP PcP 21 01 51.7 -2.4
YKA LR LR 21 18 01.8
SUMG Summit 48.30 13 *e*P **P 21 00 39.5 +0.5**
comp=E,211nm,2.9s
BDFB Brasilia 48.47 150 P **P 21 00 42.4 +1.4**
comp=E,1.1nm,0.6s,mb4.1,baz=333,slow=20,SNR=5.2
BDFB LR LR 21 20 42.8
comp=E,37nm,19.0s,MS3.4,baz=5.5,slow=36
BDFB Brasilia 48.47 150 *e*P **P 21 00 44.0 +3.0**
comp=E,2.3nm,0.9s,mb4.2
RES Resolute Bay 48.66 352 LR LR 21 21 40.9
comp=E,159nm,18.2s,MS4.0,baz=359,slow=37
DLBC Dease Lake 50.73 324 P **P 21 00 58.3 +0.5**
comp=E,2.4nm,0.9s,mb4.2,baz=144,slow=14,SNR=2.6
ESK Eskdalemuir 55.25 40 P **P 21 01 29.2 -1.9**
comp=E,13nm,1.1s,mb4.9
CPUP Villa Florida 55.26 165 P **P 21 01 31.4 0.0**
comp=E,1.9nm,0.6s,mb4.3,baz=358,slow=8.2,SNR=7.1
CPUP LR LR 21 27 22.0
comp=E,43nm,18.3s,MS3.6,baz=194,slow=38
CPUP Villa Florida 55.26 165 *e*P **P 21 01 32.1 +0.7**
comp=E,8.3nm,0.6s,mb4.9
EKA Eskdalemuir Ar 55.28 40 P **P 21 01 30.2 -1.1**
comp=E,2.2nm,1.1s,mb4.1,baz=272,slow=6.3,SNR=3.4
ESDC Sonseca Array 55.93 59 P **P 21 01 36.1 -0.2**
comp=E,1.8nm,0.8s,mb4.2,baz=283,slow=6.7,SNR=11
DAWY Dawson 56.06 330 *e*P **P 21 01 38.1 +1.3**
MDT Midelt 56.79 67 LR LR 21 21 31.3
comp=E,58nm,20.1s,MS3.7,baz=336,slow=31
MEZF Maizieres J'vi 60.89 48 *e*P **P 21 02 20.3 +9.5**
comp=E,18nm,0.8s,mb5.0
CABF La Chapelle 61.93 50 *e*P **P 21 02 25.8 +7.9**
comp=E,31nm,1.2s,mb5.0
NOA NORSAR Array B 62.53 33 P **P 21 02 21.5 -0.1**
comp=E,0.8nm,0.8s,mb3.9,baz=263,slow=18,SNR=2.5
LPL La Plagne 62.59 51 *e*P Px 21 02 32.5
LPG La Plagne 62.61 51 *e*P Px 21 02 33.1
DAVOX Davos/Dischmat 64.44 49 P **P 21 02 34.9 +0.4**
comp=E,1.5nm,0.8s,mb4.1,baz=314,slow=9.7,SNR=4.2
DBIC Dimbokro 65.85 95 P **P 21 02 44.4 +0.2**
comp=E,2.8nm,0.8s,mb4.4,baz=328,slow=5.0,SNR=4.5
DBIC LR LR 21 25 22.6
comp=E,72nm,20.8s,MS3.9,baz=290,slow=30
DBIC Dimbokro 65.85 95 *e*P **P 21 02 44.3 +0.1**
comp=E,6.1nm,1.0s,mb4.6
GERES GERESS Array B 66.41 46 P **P 21 02 46.3 -1.0**
comp=E,2.0nm,0.9s,mb4.2,baz=290,slow=5.5,SNR=11
KEST Kesra 67.11 61 P **P 21 02 52.8 +0.8**
comp=E,1.9nm,1.0s,mb4.1,baz=352,slow=17,SNR=2.9
PLCA Paso Flores 68.03 180 P **P 21 02 58.4 +1.1**
comp=E,4.6nm,1.0s,mb4.5,baz=343,slow=7.9,SNR=5.5
PLCA LR LR 21 31 41.5
comp=E,45nm,18.9s,MS3.7,baz=4.2,slow=35
PLCA Paso Flores 68.03 180 *e*P **P 21 02 57.9 +0.5**
comp=E,5.8nm,1.0s,mb4.6
TOA0 Torodi Ar. Sit 68.85 86 *e*P **P 21 03 03.7 +0.5**
TORD Torodi Ar. Bea 68.85 86 P **P 21 03 02.1 -1.1**
comp=E,1.4nm,0.9s,mb3.9,baz=294,slow=6.3,SNR=8.0
TORD LR LR 21 28 43.8
comp=E,108nm,18.1s,MS4.1,baz=300,slow=32
KWP Kalwaria 71.76 43 P **P 21 03 21.0 +0.5**
AKASG Malin Array Be 75.19 40 P **P 21 03 39.8 -0.9**
comp=E,0.2nm,0.3s,mb3.5,baz=274,slow=5.9,SNR=4.3
MLR Muntele Rosu 75.39 46 P **P 21 03 42.8 +0.8**
comp=E,6.1nm,1.1s,mb4.4,baz=21,slow=8.7,SNR=4.6
BILL Bilibino 75.68 341 *e*P **P 21 03 42.6 -0.5**
comp=E,10nm,1.4s,mb4.6
BILL *e* 21 03 51.3
TIXI Tiksi 80.01 354 *e*P **P 21 04 06.8 -0.4**
comp=E,3.6nm,0.8s,mb4.3
TIXI *e* 21 04 14.9
ZALV Zalesovo Beam 96.10 14 P **P 21 05 23.7 -2.0**
comp=E,0.4nm,0.4s,mb4.2,baz=330,slow=8.7,SNR=4.0
HHC Hu-ho-hao-te 111.82 358 *e*PKP PKiKP 21 10 31.0 -2.3
HHC PP PP 21 11 14.5 0.0
HHC PKS 21 14 05.8
HHC SKS SKSdf 21 17 38.3 -7.3
HHC SKKS SKKSac 21 18 04.0 -15
HHC PP PP
comp=Z,105nm,5.1s
HHC LR LR
comp=N,133nm,16.6s,MS4.9
HHC LR LR
comp=E,194nm,15.5s,MS4.9
HHC LR LR
comp=Z,100nm,15.5s,MS4.5
LZH Lanzhou 116.43 5 *e*PKP PKPdf 21 10 36.5 -5.8
LZH XPKP 21 10 41.3
XAN Xi'an 118.66 0 PKP PKPdf 21 10 47.3 +0.6
XAN PP PP 21 12 08.0 +5.3
XAN SS SS 21 28 21.5 +1.7
XAN LR LR
comp=Z,39nm,15.2s,MS4.2
CD2 Chengdu 121.56 5 PKP PKPdf 21 10 52.3 0.0
GYA Guiyang 126.17 3 *e*PDIF Pdif 21 07 37.5 -2.2
GYA PKP PKPdf 21 10 58.8 -2.5
GYA PP PP 21 12 56.3 +2.6
GYA PP PP
comp=Z,70nm,7.8s
KMI Kunming 127.20 7 PKP PKPdf 21 10 58.5 -4.8
STKA Stephens Creek 151.42 254 PKPbc PKPbc 21 11 51.0 -1.4
comp=Z,3.0nm,1.0s,baz=80,slow=2.4,SNR=5.4
WRA Warramunga Arr 155.58 283 PKP PKPdf 21 11 52.1 -0.5
comp=Z,1.8nm,1.1s,baz=44,slow=1.4,SNR=4.8
WRA PKPab PKPab 21 12 17.8 -0.8
comp=Z,0.2nm,0.3s,baz=340,slow=11,SNR=5.0

IDC ***27*** *21:01:34.8±1.9,3553N×14081E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/22,mbtmp3.5/4,MS2.6/2,Ms1 2.6/2, ms1mx2.3/22,Error ellipse: s-maj=55.0km s-min=16.1km az=44.0*

ISCJB ***27*** *21:01:35.6±1.1,3609N±004×14136E±009,h25km±8km, mb3.7/5,Error ellipse: s-maj=11.7km s-min=7.2km az=6.9*

JMA ***27*** *21:01:36.8±0.2,3604N×14125E,h38km±2km,M3.3*

NEIC ***27*** *21:01:37.1±0.9,3593N×14142E,h35km,MG3.3(JMA), Error ellipse: s-maj=16.9km s-min=16.6km az=137.0*

ISC 27 21:01:35.7±1.4,3607N±005×14136E±008,h18km±9km, n19,σ1s00/21,mb3.7/5,2C-3D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.55**	**228**	⇑P		**Pg**	**21 01 46.7**	**0.0**
CHOJ				*e*S		**Sg**	**21 01 54.2**	**+0.1**
JHO	**Hitachi**	**0.84**	**310**	⇓P		**Pb**	**21 01 51.5**	**-0.2**
JYT	**Yasato**	**0.96**	**280**	⇓P		**Pb**	**21 01 52.7**	**-1.1**
JYT				S		**Sb**	**21 02 02.3**	**-3.8**
ONAJ	**Iwakimizuishiy**	**1.13**	**336**	⇑P		**Pn**	**21 01 56.0**	**-0.5**
ONAJ				*e*S		**Sb**	**21 02 11.1**	**+0.2**
JFK	**Kawauchi**	**1.35**	**343**	P		**Pn**	**21 01 59.2**	**-0.5**
BSO3	**Boso 3**	**1.44**	**209**	P		**Pn**	**21 02 01.7**	**+0.8**

BSO1	**Boso 1**	**1.45**	**193**	P		**Pn**	**21 02 02.0**	**+1.1**
JAG	**Ashikaga**	**1.58**	**284**	⇓P		**Pn**	**21 02 01.8**	**-1.0**
MJAR	**Matsushiro Arr**	**2.59**	**281**	Pg		**Pg**	**21 02 16.2**	**-9.1**
	5.1nm,0.3s,baz=108,slow=8.2,SNR=39							
MJAR				Lg			21 02 48.6	
	4.4nm,0.3s,baz=104,slow=30,SNR=6.6							
MAJO	**Matsushiro**	**2.59**	**281**	*e*Pn		**Pn**	**21 02 17.4**	**+0.7**
MAT	**Matsushiro**	**2.59**	**281**	P		**Pn**	**21 02 17.1**	**+0.4**
MAT				*e*Sn		**Sn**	**21 02 47.8**	**+0.1**
ERM	**Erimo**	**6.10**	**13**	Pn		**Pn**	**21 03 05.3**	**+0.5**
ASAJ	**Asahikawa**	**8.09**	**6**	LR		LR	21 07 35.0	
	comp=Z,32nm,19.9s,baz=178,slow=42							
KSRS	**Korea Array**	**10.87**	**281**	LR		LR	21 08 03.7	
	comp=Z,32nm,20.8s,baz=175,slow=37							
ZALV	**Zalesovo Beam**	**42.54**	**313**	P		**P**	**21 09 32.1**	**+2.1**
	0.4nm,0.5s,mb3.4,baz=102,slow=6.1,SNR=2.1							
MKAR	**Makanchi Array**	**44.60**	**303**	P		**P**	**21 09 47.9**	**+1.2**
	0.4nm,0.7s,mb3.4,baz=92,slow=9.7,SNR=6.1							
WRA	**Warramunga Arr**	**56.10**	**188**	P		**P**	**21 11 11.1**	**-2.7**
	0.5nm,0.6s,mb3.7,baz=2.5,slow=7.1,SNR=3.7							
ASAR	**Alice Springs**	**59.83**	**188**	P		**P**	**21 11 38.4**	**-1.6**
	0.3nm,1.0s,mb3.3,baz=0.0,slow=8.3,SNR=4.7							
NEW	**Newport**	**70.85**	**44**	*e*P		**P**	**21 12 50.9**	**-0.3**
	6.6nm,1.0s,mb4.5							

ISCJB ***27*** *21:08:48.5±0.7, 45.11N±006×10686W±006, h0km, Error ellipse: s-maj=10.0km s-min=5.0km az=24.1*
NEIC ***27*** *21:08:49.1±0.7, 45.13N×10683W, h0km, ML3.0, Error ellipse: s-maj=9.8km s-min=6.4km az=216.0, Suspected Mining explosion.*
NEIC 40 km [25 miles] NNE of Sheridan.
IDC ***27*** *21:08:49.1±1.0, 44.75N×106.55W, h0km, mb1 3.9/3, mb1mx3.5/24, mbtmp3.6/3, ML3.5/3, Error ellipse: s-maj=63.0km s-min=7.7km az=139.0*

ISC 27 21:08:49.4±0.6, 4513N±006×10686W±005, h0km, n23, σ0≌91/27, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLMT	**Red Lodge**	**1.71**	**271**	*e*Pn	**Pn**	**21 09 19.7**	**-0.7**
RLMT				*e*Sn	**Sn**	**21 09 42.4**	**-0.5**
GCMT	**Greycliff**	**2.09**	**289**	*e*Pn	**Pn**	**21 09 25.3**	**-0.3**
GCMT				*e*Sn	**Sn**	**21 09 53.1**	**+0.9**
RSSD	**Black Hills**	**2.25**	**116**	*e*Pn	**Pn**	**21 09 27.4**	**-0.5**
RSSD				*e*Sn	**Sn**	**21 09 57.8**	**+1.4**
YNR	**Norris Junctio**	**2.75**	**263**	*e*Pn	**Pn**	**21 09 32.9**	**-1.8**
YFT	**Old Faithful**	**2.92**	**258**	*e*Pn	**Pn**	**21 09 37.2**	**+0.2**
YMR	**Madison River**	**2.96**	**262**	Pn	**Pn**	**21 09 37.7**	**+0.1**
BW06	**Boulder Array**	**3.07**	**220**	*e*Pn	**Pn**	**21 09 39.5**	**+0.5**
PDAR	**Pinedale Array**	**3.07**	**220**	Pn	**Pn**	**21 09 39.9**	**+0.8**
	8.3nm,0.3s,baz=53,slow=17,SNR=184						
PDAR				Pg	**Pg**	**21 09 46.4**	**-1.8**
	12nm,0.3s,baz=48,slow=16,SNR=41						
PDAR				Lg		21 10 19.7	
	5.3nm,0.3s,baz=51,slow=22,SNR=20						
LOHW	**Long Hollow**	**3.09**	**242**	*e*Pn	**Pn**	**21 09 39.4**	**0.0**
MOOW	**Moose Ponds**	**3.11**	**245**	Pn	**Pn**	**21 09 39.0**	**-0.7**
IMW	**Indian Meadow**	**3.17**	**249**	*e*Pn	**Pn**	**21 09 41.7**	**+1.2**
QLMT	**Earthquake Lak**	**3.26**	**266**	*e*Pn	**Pn**	**21 09 42.8**	**+1.0**
SNOW	**Snow King Moun**	**3.26**	**241**	*e*Pn	**Pn**	**21 09 42.2**	**+0.5**
REDW	**Red Top Meadow**	**3.37**	**240**	*e*P	**Pn**	**21 09 43.1**	**-0.1**
BOZ	**Bozeman (W)**	**3.40**	**280**	*e*Pn	**Pn**	**21 09 42.9**	**-0.8**
RWWY	**Rawlins**	**3.45**	**184**	*e*Pn	**Pn**	**21 09 44.1**	**-0.3**
EGMT	**Eagleton**	**3.52**	**326**	*e*Pn	**Pn**	**21 09 45.8**	**+0.5**
RRI2	**Red Ridge**	**3.67**	**242**	*e*Pn	**Pn**	**21 09 46.8**	**-0.6**
PHWY	**Pilot Hill**	**3.96**	**165**	*e*Pn	**Pn**	**21 09 50.9**	**-0.5**
MCMT	**McKenzie Canyo**	**4.26**	**268**	*e*Pn	**Pn**	**21 09 56.8**	**+1.2**
ISCO	**Idaho Springs**	**5.41**	**170**	*e*Pn	**Pn**	**21 10 11.2**	**0.0**
	8.5nm,0.9s						
ULM	**Lac du Bonnet**	**9.00**	**51**	Pn	**Pn**	**21 10 59.3**	**-1.2**
	1.9nm,0.3s,baz=244,slow=12,SNR=16						
ULM				Lg		21 13 26.4	
	0.4nm,0.3s,baz=154,slow=8.2,SNR=3.5						
NVAR	**Mina Array Bea**	**10.85**	**236**	Pn	**Pn**	**21 11 28.9**	**+2.9**
	0.1nm,0.3s,baz=50,slow=12,SNR=2.8						

ISCJB ***27*** *21:40:13.7±0.5, 3762N±003×6920E±007, h10km, mb3.6/4, Error ellipse: s-maj=7.6km s-min=4.2km az=175.9*
IDC ***27*** *21:40:14.0±2.2, 3751N×6950E, h0km, mb3.2/2, mb1 3.5/6, mb1mx3.4/24, mbtmp3.5/6, ML3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=44.5km s-min=20.2km az=143.0*
NNC ***27*** *21:40:16.5±2.3, 3775N×6928E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=23.2km s-min=13.4km az=167.0*
MOS ***27*** *21:40:19.5±1.4, 3798N×6945E, h33km, mb4.3/2, Error ellipse: s-maj=18.6km s-min=9.6km az=76.5*
NEIC ***27*** *21:40:22.2±1.1, 3794N×6938E, h46km±13km, mb3.8/4, Error ellipse: s-maj=12.3km s-min=10.1km az=92.0*

ISC 27 21:40:15.9±0.5, 3763N±003×6921E±006, h10km, n51, σ1≌38/54, mb3.6/4, 4C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.08**	**182**	*e*Pn	**Pg**	**21 41 12.5**	**-2.5**
KBL				*e*Sn	**Sg**	**21 41 55.7**	**+0.7**
KK31	**Karatay Array**	**5.56**	**10**	Pn	**Pn**	**21 41 39.7**	**+1.1**
	0.8nm,0.3s,baz=190,slow=10,SNR=38						
KK31				⇓Pg	**Pg**	**21 41 56.3**	**-6.1**
	3.3nm,0.5s,baz=190,slow=17,SNR=5.0						
KK31				⇑Lg		21 43 08.6	
	19nm,0.5s,baz=192,slow=27,SNR=7.6						
AML	**Almayashu**	**5.67**	**36**	P	**Pn**	**21 41 41.4**	**+1.2**
	SNR=9.0						
AML	**Almayashu**	**5.67**	**36**	*e*Pn	**Pn**	**21 41 41.3**	**+1.2**
	22nm,0.6s						
AML				*e*Sn	**Sn**	**21 42 42.5**	**-2.8**
EKS2	**Erkin-Say**	**6.13**	**33**	*e*Pn	**Pn**	**21 41 48.8**	**+2.4**
	14nm,0.9s						
UCH	**Uchtor**	**6.14**	**40**	Pn	**Pn**	**21 41 47.8**	**+1.2**
KZA	**Kyzart**	**6.43**	**44**	P	**Pn**	**21 41 51.8**	**+1.2**
	SNR=20						
AAK	**Ala-Archa**	**6.43**	**37**	P	**Pn**	**21 41 51.9**	**+1.2**
	SNR=15						
KBK	**Karagaybulak**	**6.67**	**39**	P	**Pn**	**21 41 55.1**	**+1.1**
	SNR=9.3						
CHMS	**Chumysh**	**6.83**	**37**	P	**Pn**	**21 41 56.9**	**+0.7**
	SNR=7.1						
USP	**Ospenovka**	**6.93**	**34**	P	**Pn**	**21 41 58.4**	**+0.9**
	SNR=11						
TKM2	**Tokmak 2**	**7.20**	**41**	⇓Pn	**Pn**	**21 42 02.5**	**+1.3**
	5.8nm,0.8s						
TKM2				⇓Sn	**Sn**	**21 43 23.1**	**+0.2**
	7.5nm,0.8s						
TKM2				⇓Lg		21 43 60.0	
	11nm,0.7s						
TKM2	**Tokmak 2**	**7.20**	**41**	*e*PN	**Pn**	**21 42 01.2**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TKM2	**Tokmak 2**	**7.20**	**41**	P	**Pn**	**21 42 02.2**	**+1.0**
	SNR=8.6						
TKM2	**Tokmak 2**	**7.20**	**41**	*e*Pn	**Pn**	**21 42 01.2**	**+0.1**
	comp=Z,5.3nm,0.5s						
THN	**Thein Dam**	**7.44**	**132**	*e*P	**Pn**	**21 42 07.2**	**+2.7**
MK31	**Makanchi Array**	**13.32**	**42**	P	**Pn**	**21 43 23.2**	**-1.8**
	comp=Z,1.8nm,0.8s,baz=226,slow=12,SNR=15						
MK31	**Makanchi Array**	**13.32**	**42**	*e*Pn	**Pn**	**21 43 23.4**	**-1.6**
MKAR	**Makanchi Array**	**13.32**	**42**	Pn	**Pn**	**21 43 22.8**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=230,slow=13,SNR=17						
MKAR				Lg		21 47 12.6	
	comp=Z,0.1nm,0.3s,baz=189,slow=22,SNR=5.0						
AB09	**Akbulak array**	**13.43**	**333**	⇓P	**Pn**	**21 43 25.4**	**-1.0**
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**14.60**	**24**	⇑P	**Pn**	**21 43 03.0**	**+0.6**
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**14.71**	**24**	⇑P	**Pn**	**21 43 03.4**	**-0.5**
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**14.71**	**24**	Pn	**Pn**	**21 43 38.6**	**-5.3**
	comp=Z,0.0nm,0.3s,baz=212,slow=12,SNR=2.8						
KURK				Lg		21 47 57.0	
	comp=Z,0.0nm,0.3s,baz=221,slow=29,SNR=4.6						
AKTK	**Aktyubinsk**	**15.10**	**332**	Pn	**Pn**	**21 43 48.0**	**-1.1**
AKTO	**Aktyubinsk**	**15.10**	**332**	⇑P	**Pn**	**21 43 49.3**	**+0.2**
	comp=Z,1.3nm,0.8s						
AKTO	**Aktyubinsk**	**15.10**	**332**	Pn	**Pn**	**21 43 48.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=6.8						
DANN	**Dangsing**	**15.31**	**123**	*e*P	**Pn**	**21 43 51.5**	**-0.5**
	comp=Z,12nm,0.7s						
BVA0	**Borovoye Array**	**15.42**	**3**	⇓P	**Pn**	**21 43 53.0**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=277,slow=3.1,SNR=10.0						
BVAR	**Borovoye Array**	**15.42**	**3**	Pn	**Pn**	**21 43 53.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=162,slow=9.4,SNR=12						
BRVK	**Borovoye**	**15.45**	**2**	P	**Pn**	**21 43 52.5**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**15.45**	**2**	Pn	**Pn**	**21 43 52.5**	**-1.2**
	comp=Z,0.8nm,0.4s						
GKN	**Gorkha**	**16.12**	**122**	*e*P	**Pn**	**21 44 02.5**	**-0.1**
	comp=Z,16nm,0.5s						
DMN	**Daman**	**16.69**	**122**	*e*P	**Pn**	**21 44 08.8**	**-1.1**
KKN	**Kakani**	**16.69**	**121**	*e*P	**Pn**	**21 44 09.3**	**-0.6**
	comp=Z,10nm,0.6s						
GUN	**Gumba**	**17.02**	**120**	*e*P	**Pn**	**21 44 15.9**	**+1.8**
	comp=Z,20nm,0.5s						
JIRN	**Jiri**	**17.39**	**120**	*e*P	**Pn**	**21 44 18.5**	**-0.2**
	comp=Z,11nm,0.4s						
RAMN	**Ramite**	**18.13**	**121**	*e*P	**Pn**	**21 44 24.8**	**-3.0**
	comp=Z,13nm,0.6s						
TAPN	**Taplejung**	**18.64**	**118**	*e*P	**Pn**	**21 44 33.9**	**-0.2**
	comp=Z,4.8nm,0.5s						
ODAN	**Odare**	**18.73**	**120**	*e*P	**Pn**	**21 44 32.8**	**-2.3**
	comp=Z,8.4nm,0.5s						
ZAA0	**Zalesovo Array**	**19.55**	**28**	*e*P	**Pn**	**21 44 41.5**	**-3.2**
ZALV	**Zalesovo Beam**	**19.55**	**28**	P	**Pn**	**21 44 41.3**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=219,slow=11,SNR=8.5						
LSA	**Lhasa**	**19.87**	**107**	*e*P	**Pn**	**21 44 49.4**	**+0.5**
LSA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LSA	**Lhasa**	**19.87**	**107**	*e*P	**Pn**	**21 44 49.4**	**+0.5**
	comp=Z,6.5nm,1.1s						
KIV	**Kislovodsk**	**21.00**	**296**	*e*P	**P**	**21 45 02.7**	**+3.3**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KIV	**Kislovodsk**	**21.00**	**296**	*e*P	**P**	**21 45 02.7**	**+3.3**
	comp=Z,2.3nm,0.5s						
ULN	**Ulaanbaatar**	**29.35**	**57**	*e*P	**P**	**21 46 17.1**	**-1.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
ULN	**Ulaanbaatar**	**29.35**	**57**	*e*P	**P**	**21 46 17.1**	**-1.7**
	comp=Z,4.1nm,1.0s,mb4.1						
EIL	**Elat**	**29.48**	**265**	LR	LR	22 00 52.6	
	comp=Z,33nm,21.9s,baz=13,slow=42						
CMAR	**Chiang Mai Arr**	**32.25**	**118**	P	**P**	**21 46 47.6**	**+2.9**
	comp=Z,0.8nm,0.7s,mb3.6,baz=308,slow=8.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**64.33**	**267**	P	**P**	**21 50 52.9**	**+0.9**
	comp=Z,0.2nm,0.7s,mb3.2,baz=48,slow=4.8,SNR=4.0						
YKA	**Yellowknife Ar**	**80.18**	**2**	P	**P**	**21 52 26.9**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.3,baz=352,slow=5.6,SNR=4.5						

ATH ***27*** *21:43:51.6, 3699N×2952E, h5km±1km, MD3.3/4*
CSEM ***27*** *21:43:54.9±0.1, 3695N×2933E, h5km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.4km az=163.0*
ISCJB ***27*** *21:43:55.4±0.5, 3694N±003×2934E±003, h2km±5km, Error ellipse: s-maj=4.4km s-min=3.6km az=158.3*
ISK ***27*** *21:43:55.0, 3695N×2933E, h6km, MD3.1*
DDA ***27*** *21:43:55.7, 3696N×2931E, h7km±7km, Md2.8*
NEIC ***27*** *21:43:55.0, 3695N×2933E, h5km, MD3.1(ISK), MD3.3(ATH), After ISK.*

ISC 27 21:43:56.0±0.5, 3693N±003×2933E±003, h5km±4km, n31, σ0≌89/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**31**	*i* P	**Pg**	**21 44 02.4**	**-0.4**
GOLH				*i* S	**Sg**	**21 44 08.3**	**+0.9**
ELL	**Elmali**	**0.50**	**112**	*e*PG	**Pg**	**21 44 04.4**	**-1.1**
ELL				*e*SG	**Sg**	**21 44 13.1**	**+1.2**
DALT	**Dalyan (Mudla)**	**0.58**	**254**	*e*PG	**Pg**	**21 44 06.5**	**-0.6**
DALT				*e*SG	**Sg**	**21 44 15.1**	**+0.4**
TURN	**Turunc**	**0.59**	**264**	*i* P	**Pg**	**21 44 11.6**	**+4.3**
TURN				*i* S	**Sg**	**21 44 24.7**	**+10**
-AKAS	**Kas**	**0.73**	**163**	*i* P	**Pg**	**21 44 09.3**	**-0.7**
AKAS				*i* S	**Sg**	**21 44 22.8**	**+3.3**
DENT	**Denizli**	**0.85**	**344**	*e*PG	**Pg**	**21 44 11.6**	**-0.8**
DENT				*e*SG	**Sg**	**21 44 23.5**	**+0.1**
YER	**Yerkesik**	**0.86**	**284**	*e*PG	**Pg**	**21 44 12.6**	**0.0**
ANTB	**Antalya**	**1.06**	**91**	*e*PG	**Pg**	**21 44 16.0**	**-0.3**
BCK	**Bucak**	**1.13**	**62**	*e*PN	**Pn**	**21 44 16.4**	**-2.0**
ARG	**Arkhangelos**	**1.21**	**234**	*e*PB	**Pb**	**21 44 17.5**	**-1.8**
ARG				*e*SB	**Sb**	**21 44 36.5**	**+1.3**
MLSB	**Milas**	**1.30**	**287**	*e*PN	**Pn**	**21 44 20.5**	**-0.2**
ISP	**Isparta**	**1.30**	**46**	*e*PN	**Pn**	**21 44 20.8**	**0.0**
ISP	**Isparta**	**1.30**	**46**	*e*Pn	**Pn**	**21 44 20.3**	**-0.5**
ISP				*e*Sn	**Sn**	**21 44 37.9**	**-0.8**
ISP	**Isparta**	**1.30**	**46**	*e*Pn	**Pn**	**21 44 20.3**	**-0.6**
ISP				*e*Sn	**Sn**	**21 44 37.9**	**-0.8**
AYDN	**Tasoluk**	**1.37**	**302**	*i* P	**Pn**	**21 44 21.9**	**+0.2**
AYDN				*i* S	**Sb**	**21 44 41.3**	**+1.5**
KHL	**Karahalli**	**1.40**	**6**	*e*PN	**Pn**	**21 44 21.6**	**-0.5**
DAT	**Datca**	**1.42**	**262**	*e*PN	**Pn**	**21 44 22.0**	**-0.5**
KHAL	**Karahalli**	**1.44**	**5**	*i* P	**Pn**	**21 44 22.5**	**-0.2**
KHAL				*i* S	**Sb**	**21 44 43.6**	**+1.7**
BDRM	**Kayabasi**	**1.52**	**276**	*i* P	**Pn**	**21 44 22.9**	**-0.8**
BDRM				*i* S	**Sn**	**21 44 43.7**	**-0.2**
KULA	**Kula-Manisa**	**1.67**	**342**	*e*PN	**Pn**	**21 44 25.4**	**-0.4**
MANT	**Manisa**	**1.67**	**339**	*i* P	**Pn**	**21 44 25.4**	**-0.5**
MANT				*i* S	**Sn**	**21 44 48.0**	**+0.3**
SMG	**Samos**	**2.13**	**292**	*e*PN	**Pn**	**21 44 32.2**	**-0.1**
IZM	**Izmir**	**2.20**	**312**	*e*PN	**Pn**	**21 44 32.6**	**-0.6**
KARP	**Karpathos**	**2.24**	**232**	*e*PN	**Pn**	**21 44 34.2**	**+0.6**
AKS	**Akhisar**	**2.28**	**329**	*e*PN	**Pn**	**21 44 34.4**	**+0.1**
HDMB	**Hadim**	**2.52**	**88**	*e*PN	**Pn**	**21 44 38.5**	**+0.9**
KONT	**Konya--Tatoy**	**2.61**	**66**	*e*PN	**Pn**	**21 44 38.5**	**-0.3**
KIZT	**Kizilcal**	**2.80**	**45**	*e*PN	**Pn**	**21 44 41.7**	**+0.3**
NPS	**Neapolis**	**3.44**	**242**	*e*PN	**Pn**	**21 44 50.8**	**+0.5**
BR131	**Keskin Array S**	**4.38**	**49**	*e*Pn	**Pn**	**21 45 05.3**	**+2.1**
BR131	**Keskin Array S**	**4.38**	**49**	*e*Pn	**Pn**	**21 45 05.3**	**+2.1**

IDC 27 21:48:02.9±12.0, 360S×1161W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/23, mbtmp3.8/3, ML3.5/1, MS3.4/6, Ms1 3.4/6, ms1mx3.2/24, Error ellipse: s-maj=399.1km s-min=96.1km az=147.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**11.76**	**34**	*e*PKIKP	Pn	21 50 54.9	+2.8
	26nm,1.3s						
KIC	**Kosan Boka**	**12.03**	**35**	*e*PKIKP	Pn	21 50 55.5	-0.3
	61nm,1.3s						
TIC	**Toumodi**	**12.11**	**33**	*e*PKIKP	Pn	21 50 55.2	-1.7
	7.6nm,0.2s						
DBIC	**Dimbokro**	**12.22**	**33**	Pn	Pn	21 50 58.6	+0.2
	0.3nm,0.3s,baz=207,slow=16,SNR=5.3						
DBIC				Sn	Sn	21 53 09.3	-6.2
	0.1nm,0.3s,baz=115,slow=17,SNR=2.4						
DBIC				LR	LR	21 54 39.9	
	comp=Z,164nm,19.3s,baz=174,slow=32						
TORD	**Torodi Ar. Bea**	**21.24**	**38**	P	P	21 52 50.6	-0.1
	3.3nm,1.0s,baz=226,slow=10,SNR=13						
TORD				LR	LR	21 59 45.9	
	comp=Z,94nm,18.8s,baz=220,slow=33						
BDFB	**Brasilia**	**37.76**	**249**	LR	LR	22 08 49.7	
	comp=Z,19nm,19.1s,baz=262,slow=33						
LSZ	**Lusaka**	**40.85**	**109**	LR	LR	22 09 51.4	
	comp=Z,60nm,19.3s,baz=261,slow=32						
CPUP	**Villa Florida**	**49.25**	**238**	LR	LR	22 14 39.1	
	comp=Z,50nm,19.9s,baz=4.1,slow=32						
GERES	**GERESS Array B**	**56.68**	**20**	P	P	21 57 48.2	+0.1
	0.5nm,0.7s,baz=193,slow=8.6,SNR=4.8						
PLCA	**Paso Flores**	**64.42**	**226**	LR	LR	22 22 46.1	
	comp=Z,40nm,18.6s,baz=183,slow=32						

IDC ***27*** *21:51:04.1±2.2, 191S×10029E, h0km, mb4.3/8, mb1 4.4/8, mb1mx4.1/20, mbtmp4.3/8, Error ellipse: s-maj=100.6km s-min=16.9km az=58.0*
ISCJB ***27*** *21:51:08.0±1.2, 207S±007×10021E±0.10, h44km±10km, mb4.6/18, Error ellipse: s-maj=18.6km s-min=6.7km az=149.7*
NEIC ***27*** *21:51:10.8±1.1, 184S×10049E, h44km±10km, mb4.6/5, Error ellipse: s-maj=33.7km s-min=5.9km az=58.0*
DJA ***27*** *21:51:11, 183S×10022E, h16km, MLv4.3/7*

ISC 27 21:51:10.2±1.0, 199S±006×10028E±010, h41km±9km, n38, σ0≌83/40, mb4.6/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**1.09**	**10**	P	**Pn**	**21 51 28.6**	**-0.4**
PDSI				S	**Sn**	**21 51 41.6**	**-1.3**
PPI	**Padang Panjang**	**1.53**	**4**	P	**Pn**	**21 51 35.2**	**+0.1**
RGRI	**Rengat**	**2.62**	**52**	P	**Pn**	**21 51 52.5**	**+2.4**
KSI	**Kapahiang**	**2.84**	**126**	P	**Pn**	**21 51 58.9**	**+5.9**
GSI	**Gunungsitoli**	**4.25**	**320**	P	**Pn**	**21 52 12.3**	**-0.1**
PSI	**Prapat**	**4.95**	**344**	Pn	**Pn**	**21 52 20.9**	**-1.2**
	1.2nm,0.3s,baz=270,slow=2.0,SNR=6.1						
PSI	**Prapat**	**4.95**	**344**	Pn	**Pn**	**21 52 20.9**	**-1.2**
MYKOM	**Kota Tinggi**	**5.18**	**44**	P	**Pn**	**21 52 26.1**	**+0.8**
	47nm,0.6s,0.2nm						
IPM	**Ipoh**	**6.47**	**7**	P	**Pn**	**21 52 46.6**	**+3.6**
XMIS	**Christmas Isla**	**9.98**	**148**	*e*Pn	**Pn**	**21 53 31.5**	**+0.4**
XMIS				*e*Sn	**Sn**	**21 55 21.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**20.36**	**356**	P	**P**	**21 55 40.9**	**-2.5**
	3.9nm,0.6s,baz=187,slow=10.0,SNR=35						
ODAN	**Odare**	**31.26**	**337**	*e*P	**P**	**21 57 26.0**	**-0.3**
	3.7nm,0.5s,mb4.5						
TAPN	**Taplejung**	**31.59**	**338**	*e*P	**P**	**21 57 29.8**	**+0.7**
	6.0nm,0.4s,mb4.8						
RAMN	**Ramite**	**31.66**	**336**	*e*P	**P**	**21 57 30.5**	**+0.8**
	2.4nm,0.3s,mb4.5						
JIRN	**Jiri**	**32.45**	**336**	*e*P	**P**	**21 57 37.5**	**+0.8**
	7.0nm,0.3s,mb4.9						
LSA	**Lhasa**	**32.70**	**345**	*e*P	**P**	**21 57 39.7**	**+0.9**
	1.5nm,0.4s,mb4.3						
GUN	**Gumba**	**32.80**	**336**	*e*P	**P**	**21 57 40.3**	**+0.6**
	12nm,0.3s,mb5.3						
DMN	**Daman**	**32.86**	**335**	*e*P	**P**	**21 57 40.2**	**0.0**
KKN	**Kakani**	**32.94**	**335**	*e*P	**P**	**21 57 41.1**	**+0.1**
GKN	**Gorkha**	**33.40**	**334**	*e*P	**P**	**21 57 45.2**	**+0.2**
	6.2nm,0.3s,mb5.0						
KOLN	**Koldanda**	**33.66**	**333**	*e*P	**P**	**21 57 47.7**	**+0.4**
DANN	**Dangsing**	**34.09**	**333**	*e*P	**P**	**21 57 51.9**	**+1.0**
WRA	**Warramunga Arr**	**37.75**	**121**	P	**P**	**21 58 21.8**	**-0.7**
	2.6nm,0.4s,mb4.3,baz=304,slow=9.0,SNR=9.3						
WRAB	**Tennant Creek**	**37.76**	**121**	*e*P	**P**	**21 58 22.2**	**-0.3**
WB2	**Warramunga Arr**	**37.76**	**121**	*e*P	**P**	**21 58 21.9**	**-0.7**
ASAR	**Alice Springs**	**39.03**	**126**	P	**P**	**21 58 33.3**	**+0.1**
	1.7nm,0.5s,mb4.1,baz=300,slow=7.9,SNR=30						
STKA	**Stephens Creek**	**48.94**	**132**	P	**P**	**21 59 53.1**	**+0.5**
	0.8nm,0.5s,mb4.0,baz=314,slow=11,SNR=6.4						
SONM	**Songino Array**	**49.91**	**5**	P	**P**	**21 59 59.6**	**0.0**
	2.0nm,0.5s,mb4.4,baz=186,slow=8.9,SNR=3.9						
TKM2	**Tokmak 2**	**49.94**	**336**	*e*P	**P**	**21 59 59.3**	**-0.7**
	7.5nm,0.7s,mb4.8						
AML	**Almayashu**	**50.08**	**334**	*e*P	**P**	**22 00 02.0**	**+0.9**
	3.8nm,0.6s,mb4.6						
EKS2	**Erkin-Say**	**50.48**	**335**	*e*P	**P**	**22 00 04.8**	**+0.8**
	6.7nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**51.10**	**344**	*e*P	**P**	**22 00 08.2**	**-0.4**
MKAR	**Makanchi Array**	**51.10**	**344**	P	**P**	**22 00 08.3**	**-0.3**
	5.0nm,0.6s,mb4.6,baz=149,slow=8.0,SNR=64						
MKAR	**Makanchi Array**	**51.10**	**344**	P	**P**	**22 00 08.3**	**-0.3**
KURK	**Kurchatov**	**55.68**	**343**	*e*P	**P**	**22 00 41.6**	**-0.6**
	3.6nm,0.9s,mb4.4						
ZAA0	**Zalesovo Array**	**57.21**	**349**	*e*P	**P**	**22 00 52.2**	**-0.9**
ZALV	**Zalesovo Beam**	**57.21**	**349**	P	**P**	**22 00 52.1**	**-0.9**
	4.0nm,0.5s,mb4.7,baz=176,slow=5.9,SNR=34						
ARCES	**ARCESS Array B**	**86.56**	**340**	P	**P**	**22 03 48.1**	**-0.6**
	5.3nm,1.1s,mb4.7,baz=81,slow=7.5,SNR=4.4						

IDC ***27*** *22:01:43.0±0.9, 1871N×14660E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/21, mbtmp3.7/9, Error ellipse: s-maj=38.0km s-min=19.7km az=90.0*
ISCJB ***27*** *22:01:46.5±0.8, 187N±0.1×1465E±02, h33km, mb3.6/9, Error ellipse: s-maj=33.1km s-min=16.

T 2.9990, Plg2.0000°, Azm62.0000°; N -0.1570, Plg21.0000°, Azm153.0000°; P -2.8330, Plg69.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 27 22:39:51.0±0.5, 280S±01×133W±01, h10km, n24, σ0§81/17, mb3.9/15, MS4.1/15, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSUM	**Tsumeb**	**29.51**	**80**	P	**P**	**22 45 55.8**	**+0.2**
	2.5nm,0.9s,mb4.0,baz=216,slow=16,SNR=4.3						
TSUM				LR	LR	22 55 57.5	
	comp=Z,550nm,18.1s,MS4.2,baz=276,slow=33						
SUR	**Sutherland**	**29.70**	**107**	LR	**P**	22 54 58.8	
	comp=Z,500nm,20.1s,MS4.1,baz=260,slow=31						
BOSA	**Boshof**	**33.82**	**100**	P	**P**	**22 46 27.8**	**-5.7**
	2.6nm,1.1s,mb4.1,baz=185,slow=11,SNR=1.8						
BOSA				LR	LR	22 57 57.7	
	comp=Z,458nm,18.7s,MS4.2,baz=281,slow=32						
BDFB	**Brasilia**	**34.40**	**284**	P	**P**	**22 46 38.0**	**-0.7**
	2.2nm,1.0s,mb4.1,baz=98,slow=19,SNR=3.8						
BDFB				LR	LR	22 58 07.6	
	comp=Z,268nm,20.5s,MS4.0,baz=110,slow=32						
DBIC	**Dimbokro**	**35.37**	**15**	P	**P**	**22 46 45.6**	**-1.3**
	4.0nm,1.1s,mb4.3,baz=157,slow=5.9,SNR=3.7						
DBIC				LR	LR	22 58 09.1	
	comp=Z,114nm,18.0s,MS3.7,baz=170,slow=31						
CPUP	**Villa Florida**	**39.10**	**262**	P	**P**	**22 47 18.6**	**0.0**
	0.8nm,0.6s,mb3.7,baz=62,slow=7.8,SNR=4.6						
CPUP				LR	LR	23 01 45.7	
	comp=Z,186nm,18.1s,MS4.0,baz=90,slow=34						
LSZ	**Lusaka**	**40.35**	**81**	P	**P**	**22 47 28.2**	**-0.9**
	1.7nm,0.8s,mb3.9,baz=250,slow=6.9,SNR=3.6						
VNA2	**Neumayer--Watz**	**43.14**	**177**	*e*	**P**	**22 47 51.5**	**+0.3**
	baz=337,slow=8.9						
VNA2				*e*		22 47 59.7	
VNA2				*e*		22 48 03.5	
TORD	**Torodi Ar. Bea**	**43.35**	**21**	P	**P**	**22 47 53.3**	**-0.2**
	1.9nm,0.7s,mb4.0,baz=198,slow=9.2,SNR=12						
TORD				LR	LR	23 02 23.7	
	comp=Z,406nm,19.8s,MS4.3,baz=195,slow=31						
VNA3	**Neumayer Olymp**	**43.37**	**178**	*e*	**P**	**22 47 52.8**	**-0.3**
VNA3				*e*		22 48 01.0	
VNA3				*e*		22 48 05.2	
SIV	**San Ignacio**	**45.66**	**275**	P	**P**	**22 48 12.8**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=99,slow=7.3,SNR=6.9						
CFAA	**Coronel Fontan**	**47.45**	**252**	P	**P**	**22 48 24.4**	**-1.6**
	0.3nm,0.5s,mb3.5,baz=46,slow=8.1,SNR=6.6						
PLCA	**Paso Flores**	**48.22**	**239**	P	**P**	**22 48 32.9**	**+1.0**
	1.8nm,0.9s,mb4.1,baz=197,slow=8.9,SNR=3.3						
PLCA				LR	LR	23 04 53.1	
	comp=Z,155nm,20.4s,MS4.0,baz=105,slow=31						
MAW	**Mawson**	**59.20**	**154**	LR	LR	23 11 43.2	
	comp=Z,91nm,20.1s,MS3.9,baz=106,slow=32						
KEST	**Kesra**	**66.84**	**20**	LR	LR	23 17 12.5	
	comp=Z,129nm,20.8s,MS4.1,baz=151,slow=34						
ROSC	**El Rosal**	**67.23**	**289**	LR	LR	23 18 30.5	
	comp=Z,151nm,19.0s,MS4.2,baz=172,slow=34						
ESDC	**Sonseca Array**	**67.84**	**8**	P	**P**	**22 50 49.9**	**+0.8**
	0.2nm,0.4s,mb3.5,baz=180,slow=6.3,SNR=3.2						
VNDA	**Vanda**	**74.73**	**179**	LR	LR	23 19 08.1	
	comp=Z,192nm,18.4s,MS4.4,baz=177,slow=32						
GERES	**GERESS Array B**	**80.17**	**18**	P	**P**	**22 52 01.3**	**+0.2**
	0.3nm,0.7s,mb3.3,baz=212,slow=3.5,SNR=3.0						
GERES				LR	LR	23 23 44.7	
	comp=Z,119nm,19.4s,MS4.2,baz=272,slow=33						
BRTR	**Keskin Array B**	**80.25**	**35**	P	**P**	**22 52 02.5**	**+0.7**
	1.6nm,0.7s,mb4.1,baz=185,slow=6.7,SNR=8.4						
BRTR				LR	LR	23 28 14.9	
	comp=Z,32nm,18.8s,MS3.7,baz=140,slow=36						
AKASG	**Malin Array Be**	**86.85**	**25**	P	**P**	**22 52 35.0**	**-0.4**
	1.2nm,0.6s,mb4.3,baz=219,slow=4.1,SNR=4.2						
NOA	**NORSAR Array B**	**90.89**	**12**	P	**P**	**22 52 55.7**	**+1.5**
	1.1nm,0.7s,mb4.3,baz=196,slow=6.5,SNR=3.1						
NOA				LR	LR	23 32 36.8	
	comp=Z,94nm,19.3s,MS4.2,baz=205,slow=35						
ASAR	**Alice Springs**	**119.69**	**145**	PKP	PKPdf	22 58 38.8	-3.1
	0.4nm,0.7s,baz=195,slow=1.9,SNR=7.0						
KSRS	**Korea Array**	**146.19**	**64**	PKPbc	PKPbc	22 59 31.2	-0.4
	2.2nm,0.7s,baz=275,slow=4.5,SNR=6.7						

*IDC **27** 22:45:47.8±2.7, 5.04S×102.65E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/21, mbtmp3.9/8, MS2.9/1, Ms1 2.9/1, ms1mx2.6/23, Error ellipse: s-maj=139.8km s-min=17.5km az=53.0*

*ISCJB **27** 22:45:52.4±1.5, 47S±04×1032E±05, h33km, mb4.4/15, Error ellipse: s-maj=83.2km s-min=11.2km az=140.9*

*NEIC **27** 22:45:53.6±1.7, 4.92S×102.86E, h35km, Error ellipse: s-maj=87.5km s-min=9.8km az=54.0*

ISC 27 22:45:55.0±1.4, 47S±03×1033E±04, h35km, n21, σ0§52/19, mb4.3/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**8.59**	**330**	LR	LR	22 51 41.6	
	comp=Z,77nm,20.4s,baz=352,slow=41						
CMAR	**Chiang Mai Arr**	**23.36**	**350**	P	**P**	**22 51 00.7**	**0.0**
	1.1nm,0.6s,mb3.5,baz=181,slow=8.6,SNR=7.7						
WRA	**Warramunga Arr**	**33.85**	**119**	P	**P**	**22 52 34.8**	**+0.4**
	0.8nm,0.5s,mb3.9,baz=294,slow=9.5,SNR=4.5						
ODAN	**Odare**	**34.89**	**335**	*eP*	**P**	**22 52 43.6**	**+0.3**
	11nm,0.6s,mb5.0						
ASAR	**Alice Springs**	**35.06**	**126**	P	**P**	**22 52 44.8**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=294,slow=7.2,SNR=5.5						
TAPN	**Taplejung**	**35.19**	**336**	*eP*	**P**	**22 52 46.6**	**+0.7**
	18nm,0.9s,mb5.0						
RAMN	**Ramite**	**35.31**	**334**	*eP*	**P**	**22 52 47.6**	**+0.7**
	6.9nm,0.6s,mb4.7						
JIRN	**Jiri**	**36.11**	**334**	*eP*	**P**	**22 52 54.3**	**+0.5**
	12nm,0.7s,mb5.0						
GUN	**Gumba**	**36.46**	**334**	*eP*	**P**	**22 52 57.2**	**+0.4**
	17nm,0.6s,mb5.1						
GKN	**Gorkha**	**37.11**	**332**	*eP*	**P**	**22 53 02.1**	**-0.2**
KOLN	**Koldanda**	**37.41**	**331**	*eP*	**P**	**22 53 04.7**	**-0.1**
	3.1nm,0.5s,mb4.4						
DANN	**Dangsing**	**37.81**	**331**	*eP*	**P**	**22 53 08.1**	**-0.1**
	8.0nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**44.96**	**132**	P	**P**	**22 54 06.9**	**0.0**
	1.3nm,0.8s,mb3.8,baz=302,slow=9.1,SNR=3.3						
MK31	**Makanchi Array**	**54.49**	**342**	*eP*	**P**	**22 55 19.3**	**+0.2**
MKAR	**Makanchi Array**	**54.49**	**342**	P	**P**	**22 55 18.6**	**-0.4**
	2.5nm,0.6s,mb4.3,baz=149,slow=8.9,SNR=33						
KURK	**Kurchatov**	**59.09**	**342**	P	**P**	**22 55 50.5**	**-1.2**
	0.8nm,0.7s,mb3.9,baz=160,slow=6.9,SNR=5.2						
KURK	**Kurchatov**	**59.09**	**342**	P	**P**	**22 55 50.5**	**-1.2**
ZAA0	**Zalesovo Array**	**60.40**	**348**	*eP*	**P**	**22 56 00.7**	**+0.1**
ZALV	**Zalesovo Beam**	**60.40**	**348**	P	**P**	**22 56 00.7**	**0.0**
	3.1nm,0.6s,mb4.5,baz=163,slow=5.7,SNR=19						
BVAR	**Borovoye Array**	**63.81**	**339**	P	**P**	**22 56 22.3**	**-1.2**
	0.8nm,0.5s,mb4.0,baz=147,slow=9.3,SNR=12						
TXAR	**Lajitas Array**	**144.60**	**43**	PKPbc	PKPdf	23 05 28.6	0.0
	1.6nm,0.7s,baz=275,slow=0.4,SNR=8.1						

DJA 27 22:53:40,938S×11337E, h45km, MLv4.0/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRKI	**Karangkates**	**1.52**	**323**	P	Pn	22 54 04.9	+0.2
NBBI	**Negara**	**1.59**	**51**	P	Pn	22 54 06.4	+0.7
NBBI				S	Sn	22 54 26.5	+1.4
DNP	**Denpasar**	**1.95**	**69**	P	Pn	22 54 11.1	+0.5
SJI	**Sawahan**	**2.28**	**316**	P	Pn	22 54 15.9	+0.8
KHKI	**Kahang-Kahang**	**2.43**	**66**	P	Pn	22 54 17.7	+0.5

*JMA **27** 23:07:39.9±0.1, 24.35N×122.19E, h69km, M2.0*

*ISCJB **27** 23:07:40.5±0.4, 24.40N±0.03×122.19E±0.02, h52km±7km, Error ellipse: s-maj=4.9km s-min=3.2km az=156.6*

*TAP **27** 23:07:40.2, 24.40N×122.15E, h56km, ML3.0, D*

ISC 27 23:07:41.0±0.5, 2441N±003×12219E±002, h50km±9km, n34, σ0§71/63, 2C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.37**	**302**	P	**Pn**	**23 07 50.9**	**+0.1**
	baz=306						
TWC				S	**Sn**	**23 07 58.2**	**+0.5**
	baz=306						
ENA	**Nanau**	**0.41**	**272**	⇓*iP*	**Pn**	**23 07 51.1**	**-0.1**
	baz=273						
ENA				*i* S	**Sn**	**23 07 59.1**	**+0.5**
	baz=273						
ILA	**Ilan**	**0.53**	**311**	*e*S	**Sn**	**23 08 01.6**	**+0.5**
	baz=314						
TWE	**Neicheng**	**0.57**	**303**	⇑*iP*	**Pn**	**23 07 53.0**	**-0.1**
	baz=305						
TWE				*i* S	**Sn**	**23 08 02.2**	**+0.5**
	baz=305						
ENTT	**Nioudou**	**0.61**	**292**	⇑*iP*	**Pn**	**23 07 53.4**	**-0.2**
	baz=293						
ENTT				S	**Sn**	**23 08 03.1**	**+0.4**
	baz=293						
TWB1	**Santiao Chiao**	**0.62**	**343**	*eP*	**Pn**	**23 07 53.1**	**-0.6**
	baz=345						
TWB1				*eS*	**Sn**	**23 08 01.8**	**-1.1**
	baz=345						
TWD	**Chiawan**	**0.64**	**239**	P	**Pn**	**23 07 53.3**	**-0.6**
	baz=237						
TWD				S	**Sn**	**23 08 03.1**	**-0.1**
	baz=237						
HWA	**Hwalien**	**0.69**	**231**	*eP*	**Pn**	**23 07 54.2**	**-0.4**
	baz=229						
NNS	**Nan Shan**	**0.75**	**272**	*eP*	**Pn**	**23 07 54.6**	**-0.7**
	baz=272						
NNS				*eS*	**Sn**	**23 08 05.6**	**-0.1**
	baz=272						
YOJ	**Yonaguni jima**	**0.75**	**86**	P	**Pn**	**23 07 55.5**	**+0.1**
YOJ				*eS*	**Sn**	**23 08 06.9**	**+1.1**
NWF	**Wu-fen Shan**	**0.75**	**330**	*eP*	**Pn**	**23 07 56.1**	**+0.7**
	baz=332						
NWF				*eS*	**Sn**	**23 08 05.1**	**-0.8**
	baz=332						
TWA	**Mucha**	**0.79**	**316**	*eP*	**Pn**	**23 07 55.5**	**-0.4**
	baz=317						
TWA				*eS*	**Sn**	**23 08 07.4**	**+0.6**
	baz=317						
NSK	**Sanguang**	**0.80**	**289**	*eP*	**Pn**	**23 07 55.5**	**-0.6**
	baz=290						
NSK				*eS*	**Sn**	**23 08 06.2**	**-0.9**
	baz=290						
WHF	**Hehuan Shan**	**0.89**	**253**	*eP*	**Pn**	**23 07 56.9**	**-0.3**
	baz=252						
WHF				*eS*	**Sn**	**23 08 08.7**	**-0.3**
	baz=252						
ESL	**Shilin**	**0.91**	**229**	*eP*	**Pn**	**23 07 56.3**	**-1.3**
	baz=228						
ESL				*eS*	**Sn**	**23 08 08.4**	**-1.3**
	baz=228						
TWT	**Tachien**	**0.94**	**260**	*eP*	**Pn**	**23 07 57.7**	**-0.2**
	baz=260						
TWT				*eS*	**Sn**	**23 08 10.4**	**+0.1**
	baz=260						
TWS1	**Kuangyinshan**	**0.98**	**314**	*eP*	**Pn**	**23 07 58.0**	**-0.4**
	baz=316						
TWS1				*eS*	**Sn**	**23 08 11.2**	**-0.1**
	baz=316						
TWY	**Chenhua**	**1.01**	**328**	*eS*	**Sn**	**23 08 12.8**	**+0.7**
	baz=329						
NCU	**National Centr**	**1.07**	**301**	*eS*	**Sn**	**23 08 13.9**	**+0.5**
	baz=302						
NSTT	**Nanjuang**	**1.10**	**282**	*eP*	**Pn**	**23 08 00.0**	**-0.1**
	baz=282						
NSTT				*eS*	**Sn**	**23 08 14.1**	**-0.2**
	baz=282						
EHY	**Hungye**	**1.20**	**222**	*eP*	**Pn**	**23 07 59.9**	**-1.6**
	baz=220						
EHY				*eS*	**Sn**	**23 08 16.7**	**0.0**
	baz=220						
SMLT	**Sun Moon Lake**	**1.29**	**246**	*eP*	**Pn**	**23 08 03.4**	**+0.7**
	baz=245						
SMLT				*eS*	**Sn**	**23 08 19.4**	**+0.6**
	baz=245						
TYC	**Yuchr**	**1.32**	**248**	*eP*	**Pn**	**23 08 03.0**	**0.0**
	baz=247						
TYC				*eS*	**Sn**	**23 08 19.4**	**-0.1**
	baz=247						
TWF1	**Yuli**	**1.34**	**218**	*eP*	**Pn**	**23 08 01.8**	**-1.5**
	baz=216						
TWF1				*eS*	**Sn**	**23 08 19.9**	**-0.1**
	baz=216						
IRIF	**Iriomote-Funau**	**1.41**	**93**	P	**Pn**	**23 08 03.9**	**-0.3**
IRIF				*eS*	**Sn**	**23 08 21.8**	**+0.2**
CHKT	**Chengkung**	**1.51**	**210**	*eP*	**Pn**	**23 08 05.5**	**-0.2**
	baz=209						
CHKT				*eS*	**Sn**	**23 08 21.4**	**-2.8**
	baz=209						
ALS	**Alishan**	**1.55**	**235**	*eP*	**Pn**	**23 08 06.9**	**+0.6**
	baz=234						
ALS				*eS*	**Sn**	**23 08 25.1**	**-0.2**
	baz=234						
CHN5	**Tsauling**	**1.60**	**240**	*eP*	**Pn**	**23 08 07.8**	**+0.8**
	baz=239						
CHN5				*eS*	**Sn**	**23 08 27.3**	**+0.8**
	baz=239						
JIJ	**Ishigaki jima**	**1.78**	**91**	P	**Pn**	**23 08 09.0**	**-0.3**
JIJ				S	**Sn**	**23 08 30.6**	**-0.2**
CHN4	**Tsaushan**	**1.81**	**234**	*eP*	**Pn**	**23 08 10.1**	**+0.4**
	baz=233						
CHN4				*eS*	**Sn**	**23 08 31.7**	**+0.3**
	baz=233						
WTP	**Ta-pu**	**1.85**	**231**	*eP*	**Pn**	**23 08 10.8**	**+0.5**
	baz=230						
WTP				*eS*	**Sn**	**23 08 34.2**	**+1.7**
	baz=230						
TWK	**Hsinying**	**1.93**	**234**	*eS*	**Sn**	**23 08 35.2**	**+0.6**
	baz=233						
CHN1	**Nanshi**	**1.95**	**232**	*eP*	**Pn**	**23 08 12.8**	**+1.1**
	baz=230						
CHN1				*eS*	**Sn**	**23 08 36.5**	**+1.4**
	baz=230						
JTJ	**Tarama**	**2.30**	**84**	P	**Pn**	**23 08 16.8**	**+0.4**
JTJ				*eS*	**Sn**	**23 08 44.2**	**+0.7**

*ISCJB **27** 23:30:03.2±0.5, 24.37N±0.05×122.96E±0.02, h47km±8km, Error ellipse: s-maj=9.0km s-min=3.5km az=175.5*

*TAP **27** 23:30:04.0, 24.35N×122.85E, h19km±1km, ML3.1, D*

*JMA **27** 23:30:03.6±0.1, 24.42N×122.99E, h49km±1km, M2.4*

ISC 27 23:30:03.8±0.5, 2440N±005×12296E±002, h44km±8km, n26, σ0§93/46, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.08**	**35**	P	**Pn**	**23 30 11.0**	**+0.2**
YOJ				S	**Sn**	**23 30 16.3**	**+0.6**
IRIF	**Iriomote-Funau**	**0.70**	**95**	P	**Pn**	**23 30 16.8**	**-0.6**
IRIF				S	**Sn**	**23 30 27.0**	**-0.1**
JKRS	**Kuro-shima**	**0.97**	**99**	P	**Pn**	**23 30 20.9**	**0.0**
JKRS				S	**Sn**	**23 30 33.4**	**-0.2**
TWC	**Suao**	**1.03**	**282**	P	**Pn**	**23 30 21.2**	**-0.6**
	baz=285						
TWC				*eS*	**Sn**	**23 30 33.5**	**-1.7**
	baz=285						
TWB1	**Santiao Chiao**	**1.07**	**305**	P	**Pn**	**23 30 22.5**	**+0.2**
	baz=309						
TWB1				*eS*	**Sn**	**23 30 35.9**	**-0.2**
	baz=309						
JIJ	**Ishigaki jima**	**1.08**	**92**	P	**Pn**	**23 30 21.8**	**-0.6**
JIJ				S	**Sn**	**23 30 35.2**	**-1.0**
TWE	**Neicheng**	**1.22**	**286**	*eP*	**Pn**	**23 30 24.9**	**+0.5**
	baz=288						
TWE				*eS*	**Sn**	**23 30 39.1**	**-0.7**
	baz=288						
TWD	**Chiawan**	**1.29**	**256**	*eS*	**Sn**	**23 30 40.4**	**-0.9**
	baz=256						
ENTT	**Nioudou**	**1.29**	**281**	*eP*	**Pn**	**23 30 26.8**	**+1.4**
	baz=283						
NSK	**Sanguang**	**1.49**	**281**	*eP*	**Pn**	**23 30 27.8**	**-0.3**
	baz=283						
WHF	**Hehuan Shan**	**1.57**	**261**	*eP*	**Pn**	**23 30 29.0**	**-0.1**
	baz=261						
WHF				*eS*	**Sn**	**23 30 48.0**	**-0.2**
	baz=261						
JTJ	**Tarama**	**1.60**	**81**	P	**Pn**	**23 30 29.8**	**+0.2**
JTJ				S	**Sn**	**23 30 49.0**	**-0.1**
EHY	**Hungye**	**1.74**	**240**	*eP*	**Pn**	**23 30 30.1**	**-1.4**
	baz=239						
EHY				*eS*	**Sn**	**23 30 49.4**	**-3.2**
	baz=239						
TWF1	**Yuli**	**1.84**	**236**	*eP*	**Pn**	**23 30 32.4**	**-0.6**
	baz=235						
TWF1				*eS*	**Sn**	**23 30 52.9**	**-2.2**
	baz=235						
SMLT	**Sun Moon Lake**	**1.95**	**255**	*eP*	**Pn**	**23 30 35.6**	**+1.1**
	baz=255						
SMLT				*eS*	**Sn**	**23 30 57.5**	**-0.2**
	baz=255						
TYC	**Yuchr**	**1.98**	**256**	*eP*	**Pn**	**23 30 35.3**	**+0.4**
	baz=256						
TYC				*eS*	**Sn**	**23 30 58.1**	**-0.4**
	baz=256						
YUS	**Yu-Shan**	**2.05**	**244**	*eP*	**Pn**	**23 30 36.2**	**+0.5**
	baz=243						
YUS				*eS*	**Sn**	**23 30 59.0**	**-1.1**
	baz=243						
ALS	**Alishan**	**2.16**	**246**	P	**Pn**	**23 30 38.0**	**+0.7**
	baz=245						
ALS				*eS*	**Sn**	**23 31 02.5**	**-0.4**
	baz=245						
CHN5	**Tsauling**	**2.23**	**250**	*eP*	**Pn**	**23 30 39.9**	**+1.6**
	baz=249						
CHN5				*eS*	**Sn**	**23 31 05.3**	**+0.6**
	baz=249						
WGK	**Gukeng**	**2.31**	**253**	*eP*	**Pn**	**23 30 39.5**	**+0.2**
	baz=252						
STYT	**Tauyuan**	**2.36**	**239**	*eP*	**Pn**	**23 30 41.2**	**+1.2**
	baz=238						
STYT				*eS*	**Sn**	**23 31 07.8**	**-0.1**
	baz=238						
CHN4	**Tsaushan**	**2.41**	**245**	*eP*	**Pn**	**23 30 43.0**	**+2.3**
	baz=244						
CHN4				*eS*	**Sn**	**23 31 10.2**	**+1.3**
	baz=244						
WTP	**Ta-pu**	**2.44**	**242**	*eP*	**Pn**	**23 30 41.6**	**+0.5**
	baz=241						
WTP				*eS*	**Sn**	**23 31 10.3**	**+0.7**
	baz=241						
CHY	**Chiayi**	**2.49**	**249**	*eS*	**Sn**	**23 31 09.3**	**-1.6**
	baz=249						
TWK	**Hsinying**	**2.53**	**244**	*eS*	**Sn**	**23 31 12.0**	**0.0**
	baz=243						
CHN1	**Nanshi**	**2.54**	**242**	*eP*	**Pn**	**23 30 44.4**	**+1.9**
	baz=241						
CHN1				*eS*	**Sn**	**23 31 12.5**	**+0.4**
	baz=241						

*ISCJB **27** 23:44:19.1±0.9, 3672N±007×4223E±006, h10km, Error ellipse: s-maj=11.3km s-min=5.0km az=30.1*

*CSEM **27** 23:44:19.3±0.5, 3671N×4228E, h2km, MD3.3, Error ellipse: s-maj=20.1km s-min=9.2km az=23.0*

*DDA **27** 23:44:26.4, 37.14N×42.19E, h7km, Md3.3*

ISC 27 23:44:19.9±0.9, 3676N±007×4226E±006, h10km, n6, σ1§32/12, 1C, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul**	**0.77**	**118**	*eP*g	**Pg**	**23 44 34.0**	**-0.9**
MSL				*i* Sg	**Sg**	**23 44 45.0**	**+0.1**
MARD	**Mardin**	**1.31**	**295**	⇑*iP*	**Pn**	**23 44 43.8**	**-0.5**
MARD				*i* S	**Sb**	**23 45 04.1**	**+2.7**
BEST	**Besiri**	**1.38**	**325**	*i* P	**Pn**	**23 44 43.3**	**-1.9**
BEST				*i* S	**Sb**	**23 45 01.8**	**-1.6**
HAKT	**HAKKARI**	**1.40**	**55**	*i* P	**Pn**	**23 44 47.2**	**+1.6**
HAKT				*i* S	**Sn**	**23 45 04.7**	**+0.6**
DIYA	**Diyarbakir**	**2.06**	**305**	*i* P	**Pn**	**23 44 55.7**	**+1.1**
DIYA				*i* S	**Sn**	**23 45 24.3**	**+4.0**
BNGL	**BINGOL**	**2.35**	**338**	*i* P	**Pn**	**23 44 57.2**	**-1.5**
BNGL				*i* S	**Sn**	**23 45 28.2**	**+0.6**

ISK 27 23:52:09.6, 4074N×2916E, h9km, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARMT	**Armutlu**	**0.28**	**233**	*eP*G	Pg	23 52 16.5	+1.3
ARMT				*eS*G	Sg	23 52 20.0	+1.0
GEMT	**Gemlik**	**0.30**	**175**	*eP*G	Pg	23 52 16.3	+0.7
GEMT				*eS*G	Sg	23 52 20.3	+0.7
KLYT	**Kilyos**	**0.52**	**350**	*eP*G	Pg	23 52 20.3	+0.5
KLYT				*eS*G	Sg	23 52 28.1	+1.5
BGKT	**Bogazkoy**	**0.53**	**327**	*eP*G	Pg	23 52 21.4	+1.5
BGKT				*eS*G	Sg	23 52 28.4	+1.5
ADVT	**Abdulvahap**	**0.54**	**124**	*eP*G	Pg	23 52 20.5	+0.5
SILT	**Sile**	**0.56**	**41**	*eP*G	Pg	23 52 20.5	+0.1
SILT				*eS*G	Sg	23 52 29.2	+1.5
CTT	**Catalca**	**0.69**	**307**	*eP*G	Pg	23 52 22.8	-0.1
CTKS	**Kestanelik-??a**	**0.70**	**316**	*eP*G	Pg	23 52 23.7	+0.5
CTKS				*eS*G	Sg	23 52 32.8	+0.5
KCT	**Karacabey**	**0.77**	**233**	*eP*G	Pg	23 52 25.2	+0.8
GULT	**Gulveren**	**1.08**	**106**	*eP*G	Pg	23 52 30.6	+0.3
DST	**Dursunbey**	**1.20**	**200**	*eP*N	Pn	23 52 32.9	+0.3

*ISCJB **27** 23:55:40.5±0.7, 8.31N±0.03×71.16W±0.03, h8km±4km, mb3.6/2, Error ellipse: s-maj=5.5km s-min=4.4km az=160.0*

*NEIC **27** 23:55:40.7, 8.29N×71.23W, h1km, MW3.7(CAR), After CAR.*

NEIC Felt at Ejido.

*FUNV **27** 23:55:40.7, 8.29N×71.23W, h1km, MW3.7*

*IDC **27** 23:55:41.5±1.8, 8.21N×70.94W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, ML3.2/2, Error ellipse: s-maj=36.5km s-min=11.6km az=125.0*

ISC 27 23:55:40.7±0.7, 829N±003×7118W±003, h5km±5km, n28, σ1§08/39, mb3.6/2, 2C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.32**	**92**	⇓*iP*	**Pg**	**23 55 47.6**	**+0.7**
SOCV				*eS*	**Sg**	**23 55 52.9**	**+1.8**
VIGV	**El Vigia**	**0.57**	**342**	⇑*iP*	**Pg**	**23 55 51.1**	**-0.7**
VIGV				*eS*	**Sg**	**23 55 59.8**	**+0.5**
SDV	**Santo Domingo**	**0.80**	**43**	Pg	**Pg**	**23 55 55.4**	**-0.7**
	494nm,0.3s,baz=232,slow=7.7,SNR=3053						
SDV				Lg		23 56 06.0	
	3µm,0.3s,baz=87,slow=18,SNR=150						
SDV	**Santo Domingo**	**0.80**	**43**	*eP*g	**Pg**	**23 55 55.6**	**-0.5**
SDV				*eS*g	**Sg**	**23 56 05.9**	**-0.6**
CAPV	**Capacho**	**1.20**	**249**	*eP*	**Pg**	**23 56 02.3**	**-1.4**
CAPV				*eS*	**Sg**	**23 56 18.7**	**-0.6**
QARV	**Quebrada Arrib**	**2.01**	**19**	*eP*	**Pn**	**23 56 16.3**	**+0.9**
QARV				*eS*	**Sn**	**23 56 42.0**	**+1.1**
SANV	**Sanarito**	**2.02**	**53**	*eP*	**Pn**	**23 56 15.5**	**0.0**
SANV				*eS*	**Sn**	**23 56 42.0**	**+0.9**
CURV	**Curarigua**	**2.09**	**35**	*eP*	**Pn**	**23 56 17.6**	**+1.1**
CURV				*eS*	**Sn**	**23 56 42.9**	**0.0**
ELOV	**Elorza**	**2.12**	**127**	*eP*	**Pn**	**23 56

IMP	**Imphal**	**2.67**	**355**	*e*P		**Pn**	**00 06 44.0**	**+3.7**
SHL	**Shillong**	**4.04**	**329**	*e*P		**Pn**	**00 07 01.5**	**+2.8**
SHL				*e*S		**Sn**	**00 07 42.5**	**-2.4**
CMAR	**Chiang Mai Arr**	**5.75**	**128**	P		**Pn**	**00 07 20.1**	**-1.8**
	0.2nm,0.3s,baz=309,slow=14,SNR=6.5							
ODAN	**Odare**	**7.80**	**309**	*e*Pn		**Pn**	**00 07 50.6**	**+0.9**
ODAN				*e*Sn		**Sn**	**00 09 15.5**	**-0.8**
	74nm,0.2s							
TAPN	**Taplejung**	**7.87**	**313**	*e*Pn		**Pn**	**00 07 52.8**	**+2.1**
TAPN				*e*Sn		**Sn**	**00 09 18.4**	**+0.2**
	44nm,0.2s							
LSA	**Lhasa**	**8.04**	**341**	*e*Pn		**Pn**	**00 07 52.7**	**-0.3**
	8.6nm,0.3s							
LSA				*e*Sn		**Sn**	**00 09 15.6**	**-6.5**
RAMN	**Ramite**	**8.43**	**306**	*e*Pn		**Pn**	**00 07 59.2**	**+0.9**
JIRN	**Jiri**	**9.13**	**309**	*e*Pn		**Pn**	**00 08 09.4**	**+1.6**
JIRN				*e*Sn		**Sn**	**00 09 47.6**	**-1.2**
	57nm,0.3s							
GUN	**Gumba**	**9.50**	**309**	*e*Pn		**Pn**	**00 08 15.0**	**+2.1**
GUN				*e*Sn		**Sn**	**00 09 56.7**	**-1.1**
	57nm,0.4s							
PKI	**Pulchoki**	**9.65**	**306**	*e*Pn		**Pn**	**00 08 15.6**	**+0.6**
KKN	**Kakani**	**9.87**	**307**	*e*Pn		**Pn**	**00 08 19.0**	**+1.1**
KKN				*e*Sn		**Sn**	**00 10 04.2**	**-2.6**
	19nm,0.2s							
GKN	**Gorkha**	**10.46**	**306**	*e*Pn		**Pn**	**00 08 25.7**	**-0.3**
GKN				*e*Sn		**Sn**	**00 10 18.6**	**-2.6**
	52nm,0.3s							
KOLN	**Koldanda**	**11.14**	**302**	*e*Pn		**Pn**	**00 08 34.5**	**-0.7**
KOLN				*e*Sn		**Sn**	**00 10 32.1**	**-5.7**
	27nm,0.5s							
DANN	**Dangsing**	**11.30**	**305**	*e*Pn		**Pn**	**00 08 37.6**	**+0.2**
KBL	**Kabul**	**25.29**	**305**	P		**P**	**00 11 17.2**	**+1.0**
MK31	**Makanchi Array**	**26.44**	**341**	*e*P		**P**	**00 11 26.6**	**+0.1**
MKAR	**Makanchi Array**	**26.44**	**341**	P		**P**	**00 11 26.9**	**+0.5**
	0.2nm,0.4s,mb2.9,baz=145,slow=11,SNR=10							
MKAR	**Makanchi Array**	**26.44**	**341**	P		**P**	**00 11 26.9**	**+0.5**
EKS2	**Erkin-Say**	**26.65**	**325**	*e*P		**P**	**00 11 28.9**	**+0.5**
KURK	**Kurchatov**	**31.04**	**341**	*e*P		**P**	**00 12 07.1**	**-0.2**
	0.6nm,0.7s,mb3.4							
BRVK	**Borovoye**	**35.90**	**335**	*e*P		**P**	**00 12 49.6**	**+0.2**
	1.6nm,0.4s,mb4.3							
GNI	**Garni**	**45.38**	**305**	P		**P**	**00 14 08.7**	**+1.1**
OBN	**Obninsk**	**53.73**	**323**	P		**P**	**00 15 10.6**	**-0.1**
WRA	**Warramunga Arr**	**57.31**	**14**	P		**P**	**00 15 35.6**	**-1.3**
	0.3nm,0.4s,mb3.7,baz=323,slow=7.2,SNR=2.6							
ASAR	**Alice Springs**	**59.69**	**137**	P		**P**	**00 15 51.8**	**-1.5**
	0.3nm,0.5s,mb3.6,baz=327,slow=7.3,SNR=4.7							
ARCES	**ARCESS Array B**	**62.04**	**338**	P		**P**	**00 16 07.8**	**-0.8**
	3.0nm,1.0s,mb4.3,baz=96,slow=8.3,SNR=2.7							
PSZ	**Piszkesteto**	**63.53**	**314**	P		**P**	**00 16 18.9**	**+0.1**
GERES	**GERESS Array B**	**67.53**	**315**	P		**P**	**00 16 45.2**	**+0.6**
	0.2nm,0.6s,mb3.1,baz=52,slow=7.9,SNR=2.5							
STU	**Stuttgart**	**70.48**	**316**	P		**P**	**00 17 02.9**	**+0.1**

*ISCJB **28** 00:14:00.8±2.2, 1074S±008×1614E±0.1, h70km±17km, mb3.9/16, Error ellipse: s-maj=20.9km s-min=12.2km az=20.5*

*IDC **28** 00:14:00.8±4.0, 1077S×16145E, h56km±33km, mb3.8/11, mb1 4.0/11, mb1mx3.9/18, mbtmp3.7/11, MS3.7/4, Ms1 3.7/4, ms1mx3.3/22, Error ellipse: s-maj=29.6km s-min=21.3km az=103.0*

*NEIC **28** 00:14:01.0±1.4, 1073S×16145E, h60km±11km, mb4.1/6, Error ellipse: s-maj=11.3km s-min=7.0km az=107.0*

ISC 28 00:14:01.1±2.2, 1073S±008×1614E±01, h59km±18km, n40, σ0$64/37, mb4.0/16, MS3.7/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**1.95**	**311**	P		**Pn**	**00 14 32.0**	**+0.1**
	99nm,0.3s,baz=114,slow=2.6,SNR=24							
HNR				S		**Sn**	**00 15 01.2**	**+5.9**
	231nm,0.3s,baz=175,slow=17,SNR=10							
HNR	**Honiara**	**1.95**	**311**	P		**Pn**	**00 14 32.0**	**+0.1**
HNR				S		**Sn**	**00 15 01.2**	**+5.9**
CTA	**Charters Tower**	**17.33**	**236**	LR		LR	00 23 51.2	
	comp=Z,184nm,19.8s,baz=51,slow=34							
CTAO	**Charters Tower**	**17.33**	**236**	Pn		**Pn**	**00 17 59.0**	**0.0**
WRAB	**Tennant Creek**	**27.64**	**247**	*e*P		**P**	**00 19 43.9**	**+0.5**
	1.0nm,0.4s,mb3.8							
WB2	**Warramunga Arr**	**27.64**	**247**	P		**P**	**00 19 43.4**	**-0.1**
WRA	**Warramunga Arr**	**27.65**	**247**	P		**P**	**00 19 43.3**	**-0.3**
	0.4nm,0.3s,mb3.5,baz=75,slow=8.4,SNR=3.2							
WRA				LR		LR	00 30 08.9	
	comp=Z,179nm,20.1s,MS3.6,baz=75,slow=35							
WRA	**Warramunga Arr**	**27.65**	**247**	P		**P**	**00 19 43.3**	**-0.3**
WRA				LR		LR	00 30 08.9	
ASAR	**Alice Springs**	**29.20**	**240**	P		**P**	**00 19 57.2**	**-0.2**
	0.8nm,0.8s,mb3.5,baz=67,slow=9.0,SNR=6.9							
TAU	**Tasmania Univ**	**34.34**	**199**	*e*P		**P**	**00 20 41.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**35.38**	**254**	*e*P		**P**	**00 20 51.6**	**+0.1**
	17nm,1.4s,mb4.8							
MBWA	**Marble Bar**	**41.30**	**250**	P		**P**	**00 21 40.6**	**-0.7**
KKM	**Kota Kinabalu**	**48.00**	**288**	P		**P**	**00 22 34.4**	**-0.3**
MJAR	**Matsushiro Arr**	**51.85**	**336**	P		**P**	**00 23 03.3**	**-0.1**
	0.6nm,0.3s,mb4.0,baz=160,slow=8.4,SNR=3.7							
MAJO	**Matsushiro**	**51.86**	**336**	P		**P**	**00 23 03.1**	**-0.4**
NACB	**Ninganchiao**	**52.13**	**312**	*e*P		**P**	**00 23 06.2**	**+0.5**
	12nm,0.6s,mb5.0							
KSRS	**Korea Array**	**57.31**	**329**	LR		LR	00 48 06.0	
	comp=Z,53nm,18.7s,MS3.7,baz=220,slow=36							
MDJ	**Mudanjiang**	**62.17**	**335**	P		**P**	**00 24 16.4**	**+0.1**
ENH	**Enshi**	**64.45**	**311**	*e*P		**P**	**00 24 30.4**	**-1.3**
	0.5nm,0.4s,mb3.9							
VNDA	**Vanda**	**66.78**	**180**	P		**P**	**00 24 46.1**	**+0.2**
	1.1nm,0.9s,mb3.9,baz=344,slow=7.4,SNR=5.3							
VNDA				LR		LR	00 48 35.2	
	comp=Z,55nm,19.3s,MS3.8,baz=87,slow=31							
VNDA	**Vanda**	**66.78**	**180**	*e*P		**P**	**00 24 46.6**	**+0.7**
	1.2nm,0.7s,mb4.0							
VNDA				LR		LR	00 48 35.2	
CMAR	**Chiang Mai Arr**	**68.12**	**295**	P		**P**	**00 24 56.2**	**+0.8**
	0.5nm,0.3s,mb4.0,baz=124,slow=5.3,SNR=4.5							
ULN	**Ulaanbaatar**	**75.60**	**326**	*e*P		**P**	**00 25 40.4**	**+0.8**
	1.9nm,0.8s,mb4.1							
SONM	**Songino Array**	**75.95**	**325**	P		**P**	**00 25 43.6**	**+2.0**
	2.0nm,0.7s,mb4.1,baz=154,slow=10,SNR=2.8							
SONM	**Songino Array**	**75.95**	**325**	P		**P**	**00 25 43.6**	**+2.0**
LSA	**Lhasa**	**78.62**	**303**	*e*P		**P**	**00 25 57.4**	**+0.3**
QSPA	**South Pole Qui**	**79.27**	**180**	P		**P**	**00 25 59.9**	**+0.2**
	1.5nm,0.8s,mb4.0,baz=309,slow=3.8,SNR=4.3							
QSPA	**South Pole Qui**	**79.27**	**180**	P		**P**	**00 25 59.9**	**+0.2**
TLY	**Talaya**	**79.55**	**328**	*e*P		**P**	**00 26 01.9**	**+0.4**
PMR	**Palmer**	**81.77**	**22**	*e*P		**P**	**00 26 12.1**	**-1.1**
COLA	**College**	**84.35**	**19**	P		**P**	**00 26 26.3**	**-0.2**
NVAR	**Mina Array Bea**	**89.08**	**51**	P		**P**	**00 26 51.2**	**+1.0**
	0.7nm,0.7s,mb4.1,baz=233,slow=7.9,SNR=6.9							
NVAR	**Mina Array Bea**	**89.08**	**51**	P		**P**	**00 26 51.2**	**+1.0**
MK31	**Makanchi Array**	**90.41**	**318**	*e*P		**P**	**00 26 55.8**	**-0.4**
MKAR	**Makanchi Array**	**90.41**	**318**	P		**P**	**00 26 55.3**	**-0.8**
	0.4nm,0.6s,mb3.9,baz=99,slow=5.7,SNR=3.6							
PDAR	**Pinedale Array**	**96.47**	**48**	P		**P**	**00 27 24.1**	**-0.1**
	0.4nm,0.8s,mb3.9,baz=304,slow=0.3,SNR=3.1							
YKA	**Yellowknife Ar**	**96.65**	**28**	P		**P**	**00 27 23.7**	**-0.7**
	0.3nm,0.6s,mb3.9,baz=259,slow=4.7,SNR=8.0							
CPUP	**Villa Florida**	**127.31**	**135**	PKP		PKPdf	00 32 59.1	-0.8
	1.0nm,0.6s,baz=168,slow=3.2,SNR=5.4							
SIV	**San Ignacio**	**130.25**	**122**	PKP		PKPdf	00 33 05.2	-0.5
	1.2nm,0.9s,baz=286,slow=11,SNR=5.0							
TORD	**Torodi Ar. Bea**	**160.03**	**279**	PKPab		PKPab	00 34 33.8	-0.9
	0.6nm,0.9s,baz=84,slow=4.5,SNR=2.7							

*IDC **28** 00:22:08.0±4.3, 3580N×7114E, h0km, mb3.6/2, mb1 3.5/6, mb1mx3.4/26, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=69.5km s-min=51.9km az=150.0*

*MOS **28** 00:22:24.9±1.4, 3686N×7101E, h109km, mb4.2/2, Error ellipse: s-maj=20.3km s-min=9.3km az=79.9*

*ISCJB **28** 00:22:25.7±0.7, 3691N±007×709E±0.1, h110km±9km, mb3.7/3, Error ellipse: s-maj=17.4km s-min=6.3km az=34.2*

*NEIC **28** 00:22:26.0±1.0, 3680N×7103E, h109km±11km, mb4.1/6, Error ellipse: s-maj=19.9km s-min=9.2km az=132.0*

*NNC **28** 00:22:30.7±3.1, 3769N×7034E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=24.4km s-min=23.5km az=159.0*

ISC 28 00:22:27.3±0.7, 3695N±006×708E±01, h104km±8km, n34, σ0$99/41, mb3.7/3, 5C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**2.80**	**212**	*e*Pn		**Pn**	**00 23 09.5**	**-0.9**
KBL				*e*Sn		**Sn**	**00 23 43.7**	**+0.1**
AML	**Almayashu**	**5.64**	**22**	P		**Pn**	**00 23 49.0**	**+0.4**
	SNR=37							
AML	**Almayashu**	**5.64**	**22**	*e*Pn		**Pn**	**00 23 48.8**	**+0.3**
	11nm,0.3s							
AML				*e*Sn		**Sn**	**00 24 49.6**	**-2.3**
EKS2	**Erkin-Say**	**6.15**	**21**	P		**Pn**	**00 23 56.2**	**+0.7**
	SNR=25							
EKS2	**Erkin-Say**	**6.15**	**21**	*e*Pn		**Pn**	**00 23 56.2**	**+0.7**
	4.6nm,0.6s							
EKS2				*e*Sn		**Sn**	**00 25 05.2**	**+0.8**
KK31	**Karatay Array**	**6.16**	**358**	Pn		**Pn**	**00 23 55.7**	**+0.1**
	0.7nm,0.3s,baz=189,slow=4.4,SNR=24							
KK31				⇑Sn		**Sn**	**00 25 01.9**	**-2.6**
	2.3nm,0.3s,baz=191,slow=23,SNR=5.5							
KZA	**Kyzart**	**6.17**	**32**	P		**Pn**	**00 23 55.9**	**+0.2**
	SNR=6.9							
AAK	**Ala-Archa**	**6.35**	**25**	P		**Pn**	**00 23 59.0**	**+0.8**
	SNR=8.9							
ULHL	**Ulahol**	**6.75**	**37**	P		**Pn**	**00 24 04.5**	**+0.9**
	SNR=6.8							
CHMS	**Chumysh**	**6.76**	**25**	P		**Pn**	**00 24 04.1**	**+0.3**
	SNR=12							
USP	**Ospenovka**	**6.92**	**23**	P		**Pn**	**00 24 05.5**	**-0.4**
	SNR=12							
TKM2	**Tokmak 2**	**7.01**	**30**	⇑Pn		**Pn**	**00 24 07.5**	**+0.3**
	5.1nm,0.5s							
TKM2				⇑Sn		**Sn**	**00 25 26.1**	**+0.9**
	2.3nm,0.5s							
TKM2				⇑Lg			00 26 03.4	
	5.6nm,1.2s							
TKM2	**Tokmak 2**	**7.01**	**30**	*e*PN		**Pn**	**00 24 07.6**	**+0.5**
TKM2				*e*			00 25 29.8	
TKM2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
TKM2	**Tokmak 2**	**7.01**	**30**	P		**Pn**	**00 24 07.5**	**+0.3**
	SNR=7.0							
TKM2	**Tokmak 2**	**7.01**	**30**	*e*Pn		**Pn**	**00 24 07.5**	**+0.4**
	comp=Z,7.3nm,0.5s							
TKM2				*e*Sn		**Sn**	**00 25 29.8**	**+4.6**
MK31	**Makanchi Array**	**13.02**	**37**	*e*P		**Pn**	**00 25 24.4**	**-3.7**
MKAR	**Makanchi Array**	**13.02**	**37**	Pn		**Pn**	**00 25 26.1**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=221,slow=15,SNR=2.9							
AB09	**Akbulak array**	**14.64**	**331**	⇑Pn		**Pn**	**00 25 48.0**	**-1.0**
	comp=Z,0.4nm,0.5s							
AB09				⇓Sn		**Sn**	**00 28 22.1**	**-8.2**
	comp=Z,1.4nm,0.9s							
KURK	**Kurchatov**	**14.86**	**20**	Pn		**Pn**	**00 25 47.8**	**-4.0**
	comp=Z,0.0nm,0.3s,baz=206,slow=10,SNR=3.3							
BVAR	**Borovoye Array**	**16.08**	**359**	Pn		**Pn**	**00 26 06.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=9.1,SNR=6.4							
BRVK	**Borovoye**	**16.12**	**359**	*e*P		**Pn**	**00 26 08.2**	**+0.7**
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**16.12**	**359**	*e*Pn		**Pn**	**00 26 08.2**	**+0.7**
	comp=Z,0.9nm,0.3s							
AKTK	**Aktyubinsk**	**16.32**	**330**	P		**Pn**	**00 26 11.6**	**+1.5**
AKTO	**Aktyubinsk**	**16.32**	**330**	P		**Pn**	**00 26 11.6**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=154,slow=8.1,SNR=6.5							
ZALV	**Zalesovo Beam**	**19.57**	**25**	P		**P**	**00 26 47.0**	**+0.3**
	comp=Z,2.6nm,0.3s,baz=217,slow=11,SNR=14							
GNI	**Garni**	**20.62**	**287**	P		**P**	**00 26 58.2**	**0.0**
ARU	**Arti**	**21.16**	**341**	*e*P		**P**	**00 27 04.0**	**+0.2**
ARU				pmax	pmax			
	comp=Z,13nm,1.4s,mb4.1							
ARU	**Arti**	**21.16**	**341**	*e*P		**P**	**00 27 04.0**	**+0.2**
	comp=Z,13nm,1.4s,mb4.1							
PSZ	**Piszkesteto**	**38.51**	**303**	P		**P**	**00 29 38.7**	**-0.5**
WLF	**Walferdange**	**47.34**	**307**	*e*P		**P**	**00 30 50.3**	**0.0**
WLF				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.9							
WLF	**Walferdange**	**47.34**	**307**	*e*P		**P**	**00 30 50.2**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.0							
YKA	**Yellowknife Ar**	**80.81**	**3**	P		**P**	**00 34 29.3**	**+0.4**
	comp=Z,0.1nm,0.4s,mb3.0,baz=349,slow=5.4,SNR=5.7							
YKA	**Yellowknife Ar**	**80.81**	**3**	P		**P**	**00 34 29.3**	**+0.4**
DLBC	**Dease Lake**	**83.39**	**11**	P		**P**	**00 34 41.3**	**-1.1**

*ISCJB **28** 01:42:38.3±0.5, 4639S±006×337E±0.2, h10km, mb4.4/17, MS4.2/24, Error ellipse: s-maj=17.0km s-min=8.0km az=165.7*

*IDC **28** 01:42:38.5±0.6, 4640S×3383E, h0km, mb4.4/14, mb1 4.6/16, mb1mx4.4/21, mbtmp4.5/16, ML4.6/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/31, Error ellipse: s-maj=26.4km s-min=13.2km az=63.0*

*NEIC **28** 01:42:40.0±0.3, 4639S×3374E, h10km, mb4.7/9, Error ellipse: s-maj=15.5km s-min=7.3km az=69.0*

*GCMT **28** 01:42:40.0±0.2, 4636S×3368E, h16km±1km, MW5.1/67, Moment Tensor Solution. s37,c53; s67,c97; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.37±.16; Mθθ=3.61±.17; Mϕϕ=-3.24±.15; Mrθ=1.01±.38; Mrϕ=3.08±.13; Mθϕ=0.00±.40; Best double couple: Mϕ4.70600×10^16 NP1:ϕs24.0000°, δ79.0000°, λ177.00000°. NP2: ϕs114.0000°, δ87.00000°, λ11.00000°. Principal axes: T 4.9590, Plg10.0000°, Azm339.0000°; N -0.5030, Plg79.0000°, Azm132.0000°; P -4.4540, Plg5.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 01:42:40.0±0.5, 4638S±006×338E±02, h10km, n58, σ0$77/33, mb4.4/17, MS4.2/24, 2D, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SUR	**Sutherland**	**17.18**	**320**	P		**Pn**	**01 46 38.5**	**-1.5**
	2.2nm,0.3s,baz=133,slow=11,SNR=23							
SUR				LR		LR	01 51 58.3	
	comp=Z,1μm,19.7s,baz=151,slow=32							
BOSA	**Boshof**	**18.96**	**336**	P		**Pn**	**01 46 59.8**	**-2.2**
	1.3nm,0.3s,baz=158,slow=12,SNR=35							
BOSA				LR		LR	01 52 50.2	
	comp=Z,866nm,21.8s,baz=146,slow=32							
BOSA	**Boshof**	**18.96**	**336**	*e*P		**Pn**	**01 46 59.8**	**-2.2**
	32nm,1.1s							
BOSA				LR		LR	01 52 50.2	
LBTB	**Lobatse**	**22.31**	**340**	*e*P		**P**	**01 47 37.8**	**+0.2**
	17nm,0.4s,mb4.8							
SYO	**Syowa Base**	**22.88**	**175**	‖*e*P		**P**	**01 47 38.8**	**-4.5**
SYO	**Syowa Base**	**22.88**	**175**	‖*e*P		**P**	**01 47 42.0**	**-1.3**
MAW	**Mawson**	**26.05**	**155**	P		**P**	**01 48 13.4**	**+0.3**
	26nm,0.9s,mb4.8,baz=280,slow=15,SNR=12							
MAW				LR		LR	01 55 39.2	
	comp=Z,472nm,21.3s,MS4.0,baz=316,slow=30							
TSUM	**Tsumeb**	**30.21**	**328**	P		**P**	**01 48 51.1**	**+0.5**
	5.6nm,0.8s,mb4.3,baz=154,slow=11,SNR=9.3							
TSUM				LR		LR	02 00 03.8	
	comp=Z,818nm,19.4s,MS4.4,baz=156,slow=35							
TSUM	**Tsumeb**	**30.21**	**328**	*e*P		**P**	**01 48 50.9**	**+0.2**
	9.8nm,1.0s,mb4.5							
TSUM				LR		LR	02 00 03.8	
SNAA	**Sanae**	**30.65**	**202**	*e*		**P**	**01 48 53.9**	**-0.1**
SNAA				*e*			01 49 04.1	
SNAA	**Sanae**	**30.65**	**202**	*e*P		**P**	**01 48 52.6**	**-1.4**
	7.3nm,0.8s,mb4.6							
LSZ	**Lusaka**	**31.36**	**350**	P		**P**	**01 49 01.0**	**+0.2**
	6.4nm,0.8s,mb4.5,baz=171,slow=9.5,SNR=19							
LSZ				LR		LR	01 59 24.5	
	comp=Z,371nm,18.7s,MS4.1,baz=133,slow=32							
LSZ	**Lusaka**	**31.36**	**350**	*e*P		**P**	**01 49 00.6**	**-0.2**
	6.7nm,0.8s,mb4.5							
LSZ				LR		LR	01 59 24.5	
VNA2	**Neumayer--Watz**	**31.48**	**204**	*e*		**P**	**01 49 01.8**	**+0.4**
	baz=52,slow=9.5							
VNA2				*e*			01 49 11.8	
VNA1	**Neumayer--Stat**	**31.60**	**205**	*e*		**P**	**01 49 03.1**	**+0.6**
VNA1				*e*			01 49 13.4	
VNA3	**Neumayer Olymp**	**32.29**	**205**	*e*		**P**	**01 49 07.9**	**-0.6**
VNA3				*e*			01 49 18.3	
QSPA	**South Pole Qui**	**43.84**	**180**	P		**P**	**01 50 45.4**	**-0.3**
	7.9nm,0.6s,mb4.7,baz=256,slow=3.0,SNR=27							
VNDA	**Vanda**	**52.30**	**167**	P		**P**	**01 51 50.7**	**-0.4**
	10nm,0.7s,mb4.9,baz=248,slow=7.4,SNR=70							
VNDA				LR		LR	02 11 59.4	
	comp=Z,434nm,21.1s,MS4.5,baz=218,slow=34							
VNDA	**Vanda**	**52.30**	**167**	*e*P		**P**	**01 51 50.5**	**-0.6**
	11nm,0.7s,mb4.9							
VNDA				LR		LR	02 11 59.4	
DBIC	**Dimbokro**	**63.01**	**316**	P		**P**	**01 53 07.6**	**+0.4**
	4.2nm,1.0s,mb4.5,baz=138,slow=7.2,SNR=3.8							
DBIC				LR		LR	02 14 22.1	
	comp=Z,108nm,21.7s,MS4.0,baz=137,slow=30							

*NIED **28** 01:51:00.4200N×14260E, h44km, Mw4.1 Best double couple: M0 1.79000×10^15 NP1:ϕs137.00000°, δ75.00000°, λ105.00000°. NP2:ϕs271.00000°, δ21.00000°, λ46.00000°.*

*MOS **28** 01:51:37.7±1.0, 4206N×14255E, h58km, mb4.4/20, Error ellipse: s-maj=12.3km s-min=8.6km az=66.1*

*JMA **28** 01:51:38.6±0.1, 4202N×14256E, h50km±2km, M4.3 JMA Felt II J1.*

*NEIC **28** 01:51:38.8±0.7, 4215N×14252E, h46km±7km, mb4.3/11, Error ellipse: s-maj=9.3km s-min=5.5km az=152.0*

NEIC Recorded [2 JMA] in south-central and southeastern Hokkaido; [1 JMA] in the Tomakomai area. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures.

*ISCJB **28** 01:51:38.0±0.3, 4201N±003×14254E±004, h57km±2km, mb4.5/33, MS3.4/2, Error ellipse: s-maj=6.1km s-min=3.7km az=144.5*

*IDC **28** 01:51:40.8±1.8, 4207N×14251E, h68km±14km, mb3.8/15, mb1 4.1/18, mb1mx3.9/26, mbtmp3.9/18, MS3.1/6, Ms1 3.1/6, ms1mx2.9/43, Error ellipse: s-maj=18.5km s-min=11.0km az=118.0*

ISC 28 01:51:39.1±0.3, 4204N±003×14253E±004, h50km±3km, n93, σ0$97/108, mb4.5/33, MS3.4/2, 3C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.29**	**34**	P		**Pn**	**01 51 47.4**	**-0.7**
JNBK				*e*S		**Sn**	**01 51 54.5**	**0.0**
ERM	**Erimo**	**0.47**	**93**	*e*Pn		**Pn**	**01 51 49.3**	**-0.7**
ERM				*e*Sn		**Sn**	**01 51 56.7**	**-0.9**
JEM	**Erimo**	**0.47**	**93**	⇓P		**Pn**	**01 51 49.4**	**-0.5**
JEM				*e*S		**Sn**	**01 51 57.0**	**-0.7**
JBT2	**Biratori 2**	**0.75**	**350**	⇑P		**Pn**	**01 51 53.1**	**-0.4**
JBT2				*e*S		**Sn**	**01 52 04.6**	**+0.7**
JCH	**Churui**	**0.84**	**47**	⇓P		**Pn**	**01 51 54.2**	**-0.5**
JCH				*e*S		**Sn**	**01 52 06.0**	**0.0**
JFR	**Furan**	**1.12**	**2**	⇓P		**Pn**	**01 51 58.2**	**-0.3**
JKB	**Kayabe**	**1.13**	**263**	⇓P		**Pn**	**01 51 58.1**	**-0.5**
JKB				*e*S		**Sn**	**01 52 12.5**	**-0.5**
JEW	**Eniwo**	**1.13**	**315**	⇑P		**Pn**	**01 51 58.6**	**0.0**
JNB	**Noboribetsu**	**1.19**	**292**	⇑P		**Pn**	**01 51 58.5**	**-0.9**
JNB				*e*S		**Sn**	**01 52 13.7**	**-0.7**
JOB	**Onbets**	**1.29**	**48**	⇓P		**Pn**	**01 52 01.2**	**+0.4**
JOB				*e*S		**Sn**	**01 52 18.3**	**+1.4**
JOT	**Ohata**	**1.29**	**240**	⇓P		**Pn**	**01 52 00.1**	**-0.7**
JOT				*e*S		**Sn**	**01 52 16.1**	**-0.8**
JAB	**Ashibetsu**	**1.48**	**351**	P		**Pn**	**01 52 04.0**	**+0.7**
JAR	**Ashorobuto**	**1.55**	**36**	⇓P		**Pn**	**01 52 04.0**	**-0.3**
JAR				*e*S		**Sn**	**01 52 22.9**	**-0.3**
ASAJ	**Asahikawa**	**2.08**	**1**	P		**Pn**	**01 52 12.2**	**+0.8**
	62nm,0.3s,baz=219,slow=8.8,SNR=74							
ASAJ				S		**Sn**	**01 52 38.2**	**+2.1**
	41nm,0.3s,baz=74,slow=32,SNR=9.6							
ASAJ				LR		LR	01 53 09.3	
	comp=Z,306nm,18.4s,baz=331,slow=43							
ASAJ	**Asahikawa**	**2.08**	**1**	PN		**Pn**	**01 52 12.3**	**+0.8**
ASAJ				S		**Sn**	**01 52 38.2**	**+2.1**
ASAJ				pmax	pmax			
	comp=Z,62nm,0.3s							
ASAJ				smax				
	comp=N,41nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.15**	**50**	*e*PN		**Pn**	**01 52 27.5**	**+1.3**
YUK				*i* S		**Sn**	**01 53 05.5**	**+3.0**
YUK				pmax	pmax			
	comp=Z,340nm,0.5s							
YUK				smax				
	comp=N,5μm,2.0s							
YUK				smax				
	comp=E,2μm,2.0s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=E,1μm,0.5s							
MAJO	**Matsushiro**	**6.43**	**213**	*e*PN		**Pn**	**01 53 12.6**	**+1.3**

MAJO					pmax	pmax		
	comp=Z,42nm,0.7s							
MAJO	**Matsushiro**	**6.43**	**213**	*e*Pn	**Pn**		**01 53 12.6**	**+1.3**
	comp=Z,42nm,0.7s							
MAT	**Matsushiro**	**6.43**	**213**	P	**Pn**		**01 53 12.9**	**+1.6**
MAT				*e*S	**Sn**		**01 54 25.0**	**+1.7**
MJAR	**Matsushiro Arr**	**6.43**	**213**	P	**Pn**		**01 53 12.9**	**+1.7**
	comp=Z,4.7nm,0.3s,baz=23,slow=16,SNR=22							
MJAR				LR	LR		01 56 18.4	
	comp=Z,121nm,20.1s,baz=35,slow=43							
MJAR	**Matsushiro Arr**	**6.43**	**213**	PN	**Pn**		**01 53 12.9**	**+1.6**
MJAR				pmax	pmax			
	comp=Z,5.0nm,0.3s							
MJAR				MLR	MLR			
	comp=Z,121nm,20.1s							
MJAR	**Matsushiro Arr**	**6.43**	**213**	P	**Pn**		**01 53 12.9**	**+1.7**
MJAR				LR	LR		01 56 18.4	
JHJ	**Hachijo jima 2**	**9.17**	**195**	P	**Pn**		**01 53 45.6**	**-3.1**
	comp=Z,31nm,0.3s,baz=217,slow=9.2,SNR=10.0							
JHJ				S	**Sn**		**01 55 23.2**	**-7.3**
	comp=Z,14nm,0.3s,baz=72,slow=20,SNR=3.6							
KSRS	**Korea Array**	**12.14**	**253**	P	**Pn**		**01 54 31.9**	**+2.6**
	comp=Z,1.5nm,0.3s,baz=63,slow=14,SNR=17							
KSRS				S	**Sn**		**01 56 50.8**	**+7.7**
	comp=Z,0.9nm,0.3s,baz=66,slow=24,SNR=6.2							
KSRS				LR	LR		01 58 44.4	
	comp=Z,95nm,19.1s,baz=60,slow=35							
KSRS	**Korea Array**	**12.14**	**253**	PN	**Pn**		**01 54 31.9**	**+2.6**
KSRS				S	**Sn**		**01 56 50.8**	**+7.7**
KSRS				pmax	pmax			
	comp=Z,2.0nm,0.3s							
KSRS				smax				
	comp=N,1.0nm,0.3s							
KSRS				MLR	MLR			
	comp=Z,95nm,19.1s							
PETK	**Petropavlovsk-**	**15.04**	**37**	P	**Pn**		**01 55 06.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=209,slow=8.7,SNR=7.9							
PETK				LR	LR		02 00 51.9	
	comp=Z,46nm,21.5s,baz=40,slow=37							
BJT	**Baijiatuau**	**19.97**	**273**	*e*P	**Pn**		**01 56 06.2**	**-3.0**
BJT				pmax	pmax			
	comp=Z,15nm,0.6s							
BJT	**Baijiatuau**	**19.97**	**273**	*e*P	**Pn**		**01 56 06.2**	**-3.0**
	comp=Z,15nm,0.6s							
FX1	**Attu Island--F**	**23.20**	**52**	LR	LR		02 05 11.1	
	comp=Z,64nm,19.8s,MS3.1,baz=66,slow=35							
ULN	**Ulaanbaatar**	**25.62**	**295**	*e*P	**P**		**01 57 03.3**	**-0.4**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb3.8							
ULN	**Ulaanbaatar**	**25.62**	**295**	*e*P	**P**		**01 57 03.3**	**-0.4**
	comp=Z,1.8nm,0.6s,mb3.8							
SONM	**Songino Array**	**26.06**	**295**	P	**P**		**01 57 07.9**	**+0.2**
	comp=Z,1.2nm,0.5s,mb3.7,baz=78,slow=8.6,SNR=3.5							
SONM	**Songino Array**	**26.06**	**295**	P	**P**		**01 57 07.9**	**+0.2**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZAA0	**Zalesovo Array**	**39.35**	**308**	*e*P	**P**		**01 59 03.0**	**-0.3**
ZALV	**Zalesovo Beam**	**39.35**	**308**	P	**P**		**01 59 03.2**	**-0.1**
	comp=Z,1.6nm,0.4s,mb4.1,baz=80,slow=9.2,SNR=8.9							
ZALV	**Zalesovo Beam**	**39.35**	**308**	P	**P**		**01 59 03.2**	**-0.1**
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.2							
NANT	**Nan**	**42.31**	**250**	⇓P	**P**		**01 59 26.0**	**-2.1**
	comp=Z,125nm,0.9s,mb5.5							
MK31	**Makanchi Array**	**42.37**	**298**	*e*P	**P**		**01 59 28.1**	**-0.2**
MKAR	**Makanchi Array**	**42.37**	**298**	P	**P**		**01 59 28.1**	**-0.1**
	comp=Z,1.6nm,0.6s,mb3.8,baz=83,slow=10,SNR=18							
MKAR	**Makanchi Array**	**42.37**	**298**	P	**P**		**01 59 28.2**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KDAK	**Kodiak Island**	**42.88**	**45**	P	**P**		**01 59 31.5**	**-0.8**
	comp=Z,3.7nm,0.4s,mb4.5,baz=305,slow=12,SNR=8.8							
CHG	**Chiang Mai**	**43.54**	**251**	P	**P**		**01 59 43.5**	**+5.5**
CHTO	**Chiang Mai**	**43.54**	**251**	*e*P	**P**		**01 59 38.9**	**+0.9**
CHTO				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.4							
CHTO	**Chiang Mai**	**43.54**	**251**	*e*P	**P**		**01 59 38.9**	**+0.9**
	comp=Z,5.3nm,0.6s,mb4.5							
KURK	**Kurchatov**	**43.68**	**304**	*e*P	**P**		**01 59 38.0**	**-0.8**
KURK				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.2							
KURK	**Kurchatov**	**43.68**	**304**	*e*P	**P**		**01 59 38.0**	**-0.7**
	comp=Z,3.2nm,0.6s,mb4.2							
CMAR	**Chiang Mai Arr**	**43.77**	**251**	P	**P**		**01 59 40.0**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.9,baz=29,slow=6.7,SNR=3.4							
CMAR	**Chiang Mai Arr**	**43.77**	**251**	P	**P**		**01 59 40.1**	**+0.2**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
COLA	**College**	**44.43**	**35**	*e*P	**P**		**01 59 44.4**	**-0.2**
COLA				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.1							
COLA	**College**	**44.43**	**35**	*e*P	**P**		**01 59 44.4**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.2							
TAPN	**Taplejung**	**46.64**	**270**	*e*P	**P**		**02 00 03.8**	**+1.2**
	comp=Z,7.1nm,0.4s,mb5.0							
ODAN	**Odare**	**47.15**	**270**	*e*P	**P**		**02 00 07.8**	**+1.3**
	comp=Z,27nm,1.0s,mb5.1							
JIRN	**Jiri**	**47.60**	**271**	*e*P	**P**		**02 00 11.0**	**+0.9**
	comp=Z,5.7nm,0.3s,mb5.0							
RAMN	**Ramite**	**47.68**	**270**	*e*P	**P**		**02 00 10.9**	**+0.2**
	comp=Z,19nm,0.7s,mb5.2							
GUN	**Gumba**	**47.70**	**272**	*e*P	**P**		**02 00 11.3**	**+0.5**
	comp=Z,30nm,0.4s							
BVAR	**Borovoye Array**	**47.96**	**309**	LR	LR		02 21 27.6	
	comp=Z,70nm,19.4s,MS3.6,baz=288,slow=37							
TKM2	**Tokmak 2**	**48.16**	**295**	*e*P	**P**		**02 00 14.6**	**+0.4**
TKM2				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
TKM2	**Tokmak 2**	**48.16**	**295**	*e*P	**P**		**02 00 14.6**	**+0.4**
	comp=Z,4.9nm,0.8s,mb4.6							
KKN	**Kakani**	**48.21**	**272**	*e*P	**P**		**02 00 14.4**	**-0.4**
	comp=Z,12nm,0.5s,mb5.2							
PKI	**Pulchoki**	**48.23**	**272**	*e*P	**P**		**02 00 15.4**	**+0.4**
	comp=Z,12nm,0.5s,mb5.2							
PKIN	**Phulchoki**	**48.24**	**272**	*e*P	**P**		**02 00 15.3**	**+0.3**
GKN	**Gorkha**	**48.57**	**273**	*e*P	**P**		**02 00 17.5**	**-0.1**
	comp=Z,8.8nm,0.4s,mb5.2							
DANN	**Dangsing**	**49.04**	**274**	*e*P	**P**		**02 00 21.9**	**+0.8**
	comp=Z,46nm,0.5s							
KOLN	**Koldanda**	**49.47**	**273**	*e*P	**P**		**02 00 24.9**	**+0.5**
	comp=Z,7.3nm,0.4s,mb5.0							
EKS2	**Erkin-Say**	**49.49**	**295**	*e*P	**P**		**02 00 24.1**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.4							
KBL	**Kabul**	**56.54**	**288**	*e*P	**P**		**02 01 15.4**	**-1.0**
KBL				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.3							
KBL	**Kabul**	**56.54**	**288**	*e*P	**P**		**02 01 15.4**	**-1.0**
	comp=Z,3.4nm,0.9s,mb4.4							
RES	**Resolute Bay**	**57.55**	**15**	P	**P**		**02 01 21.8**	**-1.2**
	comp=Z,3.3nm,0.5s,mb4.7,baz=313,slow=6.5,SNR=20							
RES	**Resolute Bay**	**57.55**	**15**	*e*P	**P**		**02 01 21.2**	**-1.7**
RES				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.6							
RES	**Resolute Bay**	**57.55**	**15**	P	**P**		**02 01 21.8**	**-1.1**
RES				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.6							
RES	**Resolute Bay**	**57.55**	**15**	*e*P	**P**		**02 01 21.2**	**-1.7**
	comp=Z,3.5nm,0.5s,mb4.7							
YKA	**Yellowknife Ar**	**59.08**	**32**	P	**P**		**02 01 33.4**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.8,baz=308,slow=6.5,SNR=18							
YKA	**Yellowknife Ar**	**59.08**	**32**	P	**P**		**02 01 33.4**	**-0.3**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
YKA	**Yellowknife Ar**	**59.08**	**32**	P	**P**		**02 01 33.4**	**-0.3**
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**		**02 01 36.0**	**-1.6**
	comp=Z,3.5nm,0.8s,mb4.4,baz=28,slow=10,SNR=3.7							
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**		**02 01 36.0**	**-1.5**
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.8s							
JOF	**Joensuu**	**61.98**	**331**	*e*p	**P**		**02 01 58.1**	**+4.6**
	comp=Z,4.0nm,0.7s,mb4.7							
JOF	**Joensuu**	**61.98**	**331**	*e*P	**P**		**02 01 58.1**	**+4.6**
JOF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7							
WRA	**Warramunga Arr**	**62.13**	**189**	P	**P**		**02 01 54.4**	**-0.6**
	comp=Z,1.1nm,0.5s,mb4.2,baz=7.0,slow=6.9,SNR=7.5							
WRA	**Warramunga Arr**	**62.13**	**189**	P	**P**		**02 01 54.4**	**-0.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**65.86**	**189**	P	**P**		**02 02 19.3**	**-0.1**
	comp=Z,0.8nm,0.9s,mb3.8,baz=5.3,slow=6.5,SNR=7.5							
ASAR	**Alice Springs**	**65.86**	**189**	P	**P**		**02 02 19.3**	**-0.1**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
FCC	**Fort Churchill**	**69.16**	**28**	*e*P	**P**		**02 02 39.4**	**-0.5**
	comp=Z,0.1nm,0.5s							
NOA	**NORSAR Array B**	**69.91**	**337**	P	**P**		**02 02 43.8**	**-0.7**
	comp=Z,1.4nm,0.7s,mb4.0,baz=38,slow=6.1,SNR=3.9							
NOA	**NORSAR Array B**	**69.91**	**337**	P	**P**		**02 02 43.8**	**-0.7**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**71.35**	**55**	P	**P**		**02 02 53.2**	**-0.5**
	comp=Z,1.9nm,0.7s,mb4.1,baz=317,slow=6.5,SNR=2.1							
MOOW	**Moose Ponds**	**72.28**	**47**	*e*P	**P**		**02 03 00.2**	**+1.1**
	comp=Z,3.6nm,1.1s,mb4.2							
DUG	**Dugway**	**73.47**	**51**	*e*P	**P**		**02 03 06.9**	**+0.7**
DUG				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
DUG	**Dugway**	**73.47**	**51**	*e*P	**P**		**02 03 06.9**	**+0.7**
	comp=Z,2.1nm,0.7s,mb4.2							
PDAR	**Pinedale Array**	**73.58**	**47**	P	**P**		**02 03 07.8**	**+0.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=255,slow=2.7,SNR=7.1							
GERES	**GERESS Array B**	**78.91**	**328**	P	**P**		**02 03 35.6**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=46,slow=6.2,SNR=3.7							
TXAR	**Lajitas Array**	**86.41**	**53**	P	**P**		**02 04 17.1**	**+0.9**
	comp=Z,1.5nm,0.6s,mb4.4,baz=304,slow=3.4,SNR=10.0							
TXAR	**Lajitas Array**	**86.41**	**53**	P	**P**		**02 04 17.2**	**+0.9**
TXAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							

*ISCJB **28** 01:59:41.6±0.8,3642N±004×121.14W±006,h10km,Error ellipse: s-maj=8.1km s-min=4.2km az=136.3*
*NEIC **28** 01:59:42.4,3653N×121.11W,h6km,ML3.0(NCEDC), After NCEDC.*

ISC 28 01:59:43.1±0.8,3644N±004×12105W±005,h10km,n16, σ1°22/28,4C-10D,Central California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
SAO	**San Andreas Ge**	**0.46**	**316**	*e*Pg	**Pg**		**01 59 49.1**	**-3.0**
SAO				*e*Sg	**Sg**		**01 59 54.4**	**-3.8**
SMMC	**Simmler**	**1.41**	**143**	⇓P	**Pn**		**02 00 08.7**	**-0.1**
	baz=1.5,SNR=11							
RCTC	**Rector, Farmer**	**1.47**	**94**	⇓P	**Pn**		**02 00 09.0**	**-0.6**
	baz=1.5,SNR=13							
RCTC				⇓S	**Sn**		**02 00 27.7**	**-1.2**
	baz=1.5							
MLAC	**Mammoth Lakes**	**2.13**	**55**	⇑P	**Pn**		**02 00 19.8**	**+1.0**
	baz=2.1,SNR=9.4							
MLAC				⇓Sb	**Sb**		**02 00 48.7**	**+0.3**
	baz=2.1							
ISA	**Isabella**	**2.23**	**110**	⇓Sb	**Sb**		**02 00 50.4**	**-0.6**
	baz=2.3							
CWC	**Cottonwood Cre**	**2.39**	**89**	⇓Sb	**Sb**		**02 00 55.5**	**-0.4**
	baz=2.4							
R06C	**Coleville**	**2.44**	**31**	⇓P	**Pn**		**02 00 24.0**	**+1.0**
	baz=2.4,SNR=18							
R06C				⇓S	**Sn**		**02 00 55.0**	**+2.1**
	baz=2.4							
MPMC	**Manual Prospec**	**2.90**	**96**	⇓Pb	**Pb**		**02 00 33.4**	**-1.6**
	baz=3.0,SNR=21							
EDW2	**Edwards Air Fo**	**2.94**	**121**	⇑Sb	**Sb**		**02 01 11.8**	**+0.3**
	baz=3.0							
WCN	**Washoe City**	**3.04**	**19**	⇑P	**Pn**		**02 00 32.5**	**+1.2**
	baz=3.0							
MWC	**Mount Wilson**	**3.29**	**131**	*e*Pn	**Pn**		**02 00 36.1**	**+1.3**
MWC				*e*Pg	**Pg**		**02 00 44.9**	**-1.4**
MWC				*e*Sn	**Sn**		**02 01 15.4**	**+1.4**
S09A	**Goldfield**	**3.32**	**66**	⇓Pb	**Pb**		**02 00 41.5**	**-0.6**
	baz=3.3,SNR=12							
TPH	**Tonopah**	**3.46**	**61**	*e*Pn	**Pn**		**02 00 36.7**	**-0.4**
TPH				*e*Pg	**Pg**		**02 00 47.3**	**-2.2**
BEKR	**Beckwourth**	**3.47**	**9**	⇑P	**Pn**		**02 00 38.5**	**+1.4**
	baz=3.4							
GSC	**Goldstone**	**3.63**	**107**	*e*Pn	**Pn**		**02 00 40.2**	**+0.9**
GSC				*e*Sn	**Sn**		**02 01 24.9**	**+2.7**
GSC				*e*Sg	**Sg**		**02 01 39.6**	**-0.1**
TPNV	**Topopah Spring**	**3.89**	**81**	*e*Pn	**Pn**		**02 00 44.5**	**+1.5**
TPNV				*e*Pb	**Pb**		**02 00 51.4**	**-0.5**
TPNV				*e*Pg	**Pg**		**02 00 56.9**	**-0.8**
TPNV				*e*Sg	**Sg**		**02 01 47.1**	**-1.0**

IDC 28 02:05:26.3±3.6,213S×14032E,h0km,mb3.6/5,mb1 3.7/6, mb1mx3.6/16,mbtmp3.6/6,ML3.8/1,Error ellipse: s-maj=152.2km s-min=23.8km az=89.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
WRA	**Warramunga Arr**	**18.64**	**198**	P		Pn	02 09 45.4	-0.6
	0.3nm,0.3s,baz=16,slow=11,SNR=3.6							
ASAR	**Alice Springs**	**22.29**	**196**	P		P	02 10 25.8	+0.5
	0.9nm,0.6s,baz=28,slow=11,SNR=17							
MKAR	**Makanchi Array**	**70.32**	**322**	P		P	02 16 41.2	-0.6
	0.3nm,0.5s,baz=107,slow=8.3,SNR=7.6							
ZALV	**Zalesovo Beam**	**72.25**	**329**	P		P	02 16 53.8	+0.5
	0.5nm,0.4s,baz=112,slow=3.9,SNR=3.1							
KURK	**Kurchatov**	**74.18**	**324**	P		P	02 17 05.1	+0.3
	0.2nm,0.4s,baz=118,slow=5.3,SNR=2.6							
BVAR	**Borovoye Array**	**79.77**	**325**	P		P	02 17 36.6	+0.4
	0.5nm,0.5s,baz=120,slow=8.8,SNR=5.0							

*ISK **28** 02:08:39.9,3944N×3318E,h5km,MD2.8*
*DDA **28** 02:08:39.9,3940N×3318E,h7km±1km,Md2.4*
*CSEM **28** 02:08:39.9,3944N×3318E,h5km,MD2.8,After ISK*
*ISCJB **28** 02:08:40.2±1.2,3943N±007×3317E±005,h5km±16km, Error ellipse: s-maj=12.2km s-min=6.2km az=13.4*

ISC 28 02:08:40.5±0.7,3941N±005×3316E±004,h7km±11km,n6, σ0°71/10,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
KAMT	**Kaman**	**0.43**	**95**	*e*PG	**Pg**		**02 08 48.6**	**-0.3**
KAMT				*e*SG	**Sg**		**02 08 54.7**	**+0.1**
LOD	**Lodumlu**	**0.56**	**328**	*e*PG	**Pg**		**02 08 50.5**	**-1.0**
LOD				*e*SG	**Sg**		**02 08 59.7**	**+0.9**
CDAG	**Cicekdag**	**0.96**	**77**	*i* P	**Pg**		**02 08 58.1**	**-1.0**
CDAG				*i* S	**Sg**		**02 09 12.5**	**+0.9**
KIZT	**Kizilcal**	**1.12**	**242**	*e*PN	**Pn**		**02 09 02.4**	**-0.3**
KDHN	**Kadinhani**	**1.20**	**223**	*i* P	**Pg**		**02 09 03.0**	**-0.6**
KDHN				*i* S	**Sg**		**02 09 20.1**	**+0.9**
YOZ	**Yozgat**	**1.69**	**82**	*e*PN	**Pn**		**02 09 10.9**	**+0.4**

*ISCJB **28** 02:17:35.0±2.7,79S±02×1165E±03,h288km±24km, mb3.6/11,Error ellipse: s-maj=46.2km s-min=16.8km az=147.2*
*IDC **28** 02:17:35.8±2.5,792S×11651E,h282km±21km,mb3.3/8, mb1 3.5/9,mb1mx3.3/18,mbtmp3.4/9,Error ellipse: s-maj=35.5km s-min=13.1km az=58.0*
*NEIC **28** 02:17:36.2±2.0,787S×11658E,h288km±18km,mb3.8/3, Error ellipse: s-maj=32.0km s-min=10.7km az=55.0*

ISC 28 02:17:35.6±2.7,79S±02×1165E±02,h279km±24km,n19, σ0°68/14,mb3.6/11,Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
KAPI	**Kappang**	**4.31**	**48**	P		**Pn**	**02 18 44.1**	**-0.2**
	9.4nm,0.3s,baz=229,slow=6.0,SNR=23							
WRA	**Warramunga Arr**	**21.00**	**127**	P		**P**	**02 21 58.2**	**0.0**
	0.4nm,0.6s,mb2.9,baz=300,slow=12,SNR=3.1							
ASAR	**Alice Springs**	**22.88**	**135**	P		**P**	**02 22 15.7**	**+0.3**
	0.4nm,0.6s,mb3.0,baz=310,slow=8.9,SNR=9.7							
ASAR				ScP		ScP	02 29 07.7	-0.3
	0.8nm,0.5s,baz=313,slow=2.4,SNR=8.9							
CMAR	**Chiang Mai Arr**	**31.41**	**327**	P		**P**	**02 23 32.8**	**+1.5**
	1.0nm,0.4s,mb3.7,baz=148,slow=6.5,SNR=6.0							
KSRS	**Korea Array**	**46.36**	**13**	P		**P**	**02 25 35.5**	**+1.2**
	2.1nm,0.8s,mb3.5,baz=190,slow=6.7,SNR=6.4							
MJAR	**Matsushiro Arr**	**48.67**	**23**	P		**P**	**02 25 51.6**	**-0.5**
	1.2nm,0.6s,mb3.4,baz=191,slow=8.8,SNR=4.8							
SONM	**Songino Array**	**56.21**	**352**	P		**P**	**02 26 46.7**	**-0.2**
	2.2nm,0.6s,mb3.7,baz=166,slow=9.0,SNR=5.6							
KBL	**Kabul**	**61.60**	**316**	*e*P		**P**	**02 27 23.1**	**-0.9**
	2.0nm,0.6s,mb3.9							
MK31	**Makanchi Array**	**62.39**	**334**	*e*P		**P**	**02 27 28.9**	**-0.1**
MKAR	**Makanchi Array**	**62.39**	**334**	P		**P**	**02 27 29.2**	**+0.2**
	1.4nm,0.5s,mb3.9,baz=156,slow=6.9,SNR=32							
TKM2	**Tokmak 2**	**62.80**	**327**	*e*P		**P**	**02 27 31.9**	**+0.1**
	1.0nm,0.4s,mb3.8							
KURK	**Kurchatov**	**66.95**	**335**	*e*P		**P**	**02 27 58.0**	**-0.3**
	1.0nm,0.6s,mb3.7							
ZALV	**Zalesovo Beam**	**67.17**	**340**	P		**P**	**02 27 58.5**	**-1.1**
	1.6nm,0.5s,mb4.0,baz=156,slow=4.7,SNR=7.3							
ZALV	**Zalesovo Beam**	**67.17**	**340**	P		**P**	**02 27 58.5**	**-1.1**
YKA	**Yellowknife Ar**	**114.18**	**23**	PKP		PKiKP	02 35 40.8	-0.6
	0.1nm,0.5s,baz=306,slow=2.1,SNR=5.6							
TORD	**Torodi Ar. Bea**	**115.85**	**281**	PKP		PKPdf	02 35 45.5	-0.6
	0.6nm,0.7s,baz=38,slow=2.2,SNR=8.4							
TORD	**Torodi Ar. Bea**	**115.85**	**281**	PKP		PKPdf	02 35 45.5	-0.6
DBIC	**Dimbokro**	**121.88**	**273**	PKP		PKPdf	02 35 56.9	-0.8
	2.6nm,1.0s,baz=192,slow=9.3,SNR=2.8							
DBIC	**Dimbokro**	**121.88**	**273**	PKP		PKPdf	02 35 56.9	-0.8

*ISCJB **28** 02:24:20.9±0.6,1565S±009×7177W±009,h137km±7km, mb3.5/6,Error ellipse: s-maj=18.5km s-min=9.5km az=137.3*
*IDC **28** 02:24:21.0±1.8,1564S×7174W,h122km±21km,mb3.4/5, mb1 3.3/10,mb1mx3.2/24,mbtmp3.2/10,Error ellipse: s-maj=26.4km s-min=13.6km az=50.0*
*NEIC **28** 02:24:21.9±0.6,1565S×7168W,h130km±7km,mb3.7/1, Error ellipse: s-maj=12.7km s-min=8.2km az=57.0*

ISC 28 02:24:21.8±0.6,1562S±009×7175W±009,h132km±7km, n16,σ0°77/20,mb3.5/6,1C,Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
ARE	**Arequipa**	**0.88**	**164**	⇑*i*P		**Pn**	**02 24 44.2**	**+0.4**
ARE				*i* S		**Sn**	**02 25 01.2**	**+0.7**
NNA	**Nana**	**6.12**	**305**	P		**Pn**	**02 25 50.8**	**+0.7**
	4.3nm,0.3s,baz=134,slow=12,SNR=6.8							
NNA				S		**Sn**	**02 26 57.4**	**-1.6**
	5.8nm,0.3s,baz=201,slow=21,SNR=7.4							
LVC	**Limon Verde**	**7.46**	**159**	P		**Pn**	**02 26 06.9**	**-1.1**
	1.1nm,0.3s,baz=339,slow=9.9,SNR=12							
LVC				S		**Sn**	**02 27 24.7**	**-6.4**
	9.7nm,0.3s,baz=194,slow=18,SNR=19							
LVC	**Limon Verde**	**7.46**	**159**	*e*Pn		**Pn**	**02 26 06.3**	**-1.7**
LVC				S		**Sn**	**02 27 24.7**	**-6.4**
SIV	**San Ignacio**	**10.28**	**94**	P		**Pn**	**02 26 45.6**	**-0.3**
	0.3nm,0.3s,baz=277,slow=9.6,SNR=4.9							
CFAA	**Coronel Fontan**	**16.24**	**169**	P		**Pn**	**02 28 02.9**	**+0.6**
	0.1nm,0.3s,baz=345,slow=12,SNR=8.1							
CPUP	**Villa Florida**	**17.16**	**131**	P		**Pn**	**02 28 12.7**	**-0.9**
	0.3nm,0.3s,baz=293,slow=9.7,SNR=3.2							
BDFB	**Brasilia**	**22.85**	**93**	P		**P**	**02 29 13.7**	**-0.3**
	0.6nm,0.5s,mb3.3,baz=356,slow=27,SNR=3.8							
SDV	**Santo Domingo**	**24.37**	**3**	P		**P**	**02 29 28.6**	**+0.8**
	1.0nm,0.4s,mb3.7,baz=229,slow=9.3,SNR=2.9							
PLCA	**Paso Flores**	**25.05**	**178**	P		**P**	**02 29 33.6**	**-0.1**
	1.7nm,1.0s,mb3.5,baz=5.3,slow=14,SNR=3.2							
SNAA	**Sanae**	**68.69**	**162**	*e*P		**P**	**02 35 11.2**	**+0.6**
	0.6nm,0.5s,mb3.6							
TOA0	**Torodi Ar. Sit**	**78.05**	**73**	*e*P		**P**	**02 36 06.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**78.05**	**73**	P		**P**	**02 36 06.5**	**0.0**
	1.2nm,0.7s,mb3.6,baz=267,slow=4.3,SNR=16							
TORD	**Torodi Ar. Bea**	**78.05**	**73**	P		**P**	**02 36 06.5**	**0.0**
YKA	**Yellowknife Ar**	**84.78**	**342**	P		**P**	**02 36 41.8**	**+1.0**
	0.3nm,0.7s,mb3.1,baz=137,slow=5.1,SNR=7.8							
YKA	**Yellowknife Ar**	**84.78**	**342**	P		**P**	**02 36 41.8**	**+1.0**

*ISCJB **28** 02:40:32.2±6.5,133S±01×167.1E±01,h196km±59km, mb4.2/22,Error ellipse: s-maj=26.0km s-min=15.7km az=149.1*
*IDC **28** 02:40:32.6±1.9,1326S×16708E,h183km±15km,mb4.1/14, mb1 4.2/14,mb1mx4.0/20,mbtmp4.1/14,MS3.1/1, Ms1 3.1/1,ms1mx2.7/24,Error ellipse: s-maj=18.6km s-min=13.5km az=82.0*
*NEIC **28** 02:40:33.2±3.6,1327S×167.11E,h192km±32km,mb4.4/10, Error ellipse: s-maj=16.1km s-min=10.3km az=64.0*

ISC 28 02:40:33.0±6.0,132S±01×1671E±01,h189km±54km,n54, σ0°80/32,mb4.3/22,3C,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
HNR	**Honiara**	**7.98**	**297**	LR		LR	02 44 48.5	
	comp=Z,127nm,18.3s,baz=132,slow=32			

	36nm,1.0s						
VIVF	**Saint-Julien-l**	**145.11 338**	*e*PKP1	PKPbc	02 59 48.1	+0.1
	13nm,0.9s						
FRF	**La Foret Royal**	**145.42 335**	*e*PKP1	PKPbc	02 59 49.1	+0.1
SMRF	**Simiane la Rot**	**145.51 336**	*e*PKP1	PKPbc	02 59 50.0	+0.7
LFF	**La Frestale**	**146.33 342**	*e*PKP1	PKPbc	02 59 52.2	+0.5
MTLF	**Montolieu**	**147.30 339**	*e*PKP1	PKPbc	02 59 55.2	+0.8
	9.6nm,0.8s						
KEST	**Kesra**	**149.96 322**	PKPbc	PKPbc	03 00 01.6	+0.1
	1.8nm,0.9s,baz=315,slow=4.3,SNR=6.8						
ESDC	**Sonseca Array**	**152.51 345**	PKPbc	PKPbc	03 00 07.7	+0.5
	1.9nm,0.8s,baz=19,slow=2.7,SNR=11						
ESDC			PKPab	PKPab	03 00 19.0	+0.8
	0.5nm,0.5s,baz=6.2,slow=3.8,SNR=5.2						
ESDC	**Sonseca Array**	**152.51 345**	PKPbc	PKPbc	03 00 07.7	+0.5
ESDC			PKPab	PKPab	03 00 19.0	+0.8
TORD	**Torodi Ar. Bea**	**165.81 271**	PKP	PKPdf	03 00 15.7	-0.5
	1.9nm,1.1s,baz=51,slow=1.0,SNR=6.2						
TORD			PKPab	PKPab	03 01 16.2	-0.5
	0.9nm,0.8s,baz=76,slow=4.5,SNR=5.7						

*NEIC **28** 02:47:05.9, 33.04S×70.30W, h93km, MD3.4(GUC), After GUC.*

GUC 28 02:47:05.9±0.5, 33.04S×70.30W, h93km±3km, MD3.4, ML3.9, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.29 179**	⇓	*i* P	Pn	02 47 30.4	+0.8
FCH				*i* S	Sn	02 47 31.6	+1.9
PEL	**Peldehue**	**0.34 251**	⇓	*i* P	Pn	02 47 20.1	+0.3
PEL				*i* S	Sn	02 47 31.1	+0.9
PEL				AML	AML	02 47 31.9	
	comp=N,8μm,0.2s						
CLCH	**Cerro Calan**	**0.41 209**		*i* P	Pn	02 47 20.6	+0.4
CLCH				*i* S	Sn	02 47 32.0	+1.0
CLCH				AML	AML	02 47 33.9	
	comp=E,7μm,0.3s						
RCDM	**Rinconada Maip**	**0.62 223**		*i* P	Pn	02 47 21.4	-0.6
RCDM				*i* S	Sn	02 47 33.6	-0.2
LMEL	**Las Melosas**	**0.81 174**	⇓	*i* P	Pn	02 47 24.6	+0.8
LMEL				*i* S	Sn	02 47 38.6	+1.5
CHCH	**Chadas Angostu**	**0.94 198**	⇑	*i* P	Pn	02 47 25.6	+0.4
CHCH				*i* S	Sn	02 47 40.1	+0.6
CACH	**El Canelo**	**1.11 193**	⇑	*i* P	Pn	02 47 27.9	+0.9
CACH				*i* S	Sn	02 47 44.6	+1.7
CICH	**Cipreses**	**1.29 185**		*i* S	Sn	02 47 47.9	+1.3

IDC 28 03:14:50.0±1.8, 1570S×17464W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/17, mbtmp4.0/6, Error ellipse: s-maj=175.4km s-min=20.9km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.85 240**		P	P	03 22 50.8	+0.7
	1.4nm,0.8s,baz=86,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**48.61 257**		P	P	03 23 35.6	-0.2
	0.8nm,0.5s,baz=90,slow=6.9,SNR=7.2						
ASAR	**Alice Springs**	**48.88 252**		P	P	03 23 37.5	-0.3
	11nm,0.6s,baz=88,slow=7.8,SNR=176						
NVAR	**Mina Array Bea**	**75.35 43**		P	P	03 26 36.5	+1.2
	0.6nm,0.7s,baz=209,slow=7.2,SNR=3.9						
TXAR	**Lajitas Array**	**81.77 57**		P	P	03 27 10.6	-0.4
	0.4nm,0.7s,baz=263,slow=13,SNR=3.4						
PDAR	**Pinedale Array**	**83.29 42**		P	P	03 27 18.7	+0.1
	0.5nm,0.5s,baz=193,slow=3.7,SNR=4.8						

*IDC **28** 03:31:01.4±0.6, 4.24N×126.85E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.2/19, mbtmp4.2/11, MS3.1/4, Ms1 3.1/4, ms1mx2.8/37, Error ellipse: s-maj=37.5km s-min=13.8km az=71.0*

*ISCJB **28** 03:31:04.4±0.5, 4.22N±008×1268E±02, h33km, mb4.3/19, MS3.1/2, Error ellipse: s-maj=25.3km s-min=7.8km az=159.2*

*NEIC **28** 03:31:08.3±3.2, 4.19N×126.85E, h53km±30km, mb4.4/7, Error ellipse: s-maj=20.2km s-min=6.7km az=67.0*

ISC 28 03:31:06.6±0.5, 4.21N±008×1268E±02, h35km, n36, σ0s73/27, mb4.3/19, MS3.1/2, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.10 336**		LR	LR	03 32 37.5	
	comp=Z,180nm,18.6s,baz=239,slow=31						
KAPI	**Kappang**	**11.57 218**		LR	LR	03 38 37.6	
	comp=Z,84nm,21.1s,baz=262,slow=39						
KAKA	**Kakadu**	**17.71 162**		*e*P	x	03 35 06.5	
	6.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.20 183**		*e*P	**P**	**03 36 00.3**	**+0.3**
	19nm,1.8s,mb4.2						
PMG	**Port Moresby**	**24.36 124**		LR	LR	03 46 12.1	
	comp=Z,38nm,19.3s,MS2.9,baz=230,slow=37						
WRAB	**Tennant Creek**	**25.10 163**		*e*P	**P**	**03 36 27.4**	**-0.8**
	4.5nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**25.11 163**		P	**P**	**03 36 27.7**	**-0.5**
	3.3nm,0.5s,mb4.1,baz=344,slow=10,SNR=12						
WRA				PcP	PcP	03 40 02.2	-0.1
	0.4nm,0.5s,baz=337,slow=2.1,SNR=3.4						
WB2	**Warramunga Arr**	**25.11 163**	⇑	*i* P	**P**	**03 36 27.6**	**-0.7**
WB2	**Warramunga Arr**	**25.11 163**		*e*P	**P**	**03 36 27.6**	**-0.7**
ASAR	**Alice Springs**	**28.55 166**		P	**P**	**03 36 59.0**	**-0.2**
	0.9nm,0.6s,mb3.7,baz=345,slow=6.7,SNR=14						
ASAR				PcP	PcP	03 40 10.5	+0.2
	0.7nm,0.4s,baz=350,slow=2.3,SNR=8.5						
CMAR	**Chiang Mai Arr**	**30.72 300**		P	**P**	**03 37 19.8**	**+1.2**
	1.0nm,0.4s,mb4.0,baz=115,slow=6.8,SNR=11						
CHTO	**Chiang Mai**	**30.86 300**		*e*P	**P**	**03 37 20.0**	**+0.1**
	2.8nm,0.6s,mb4.3						
FORT	**Forrest**	**34.81 178**		*e*P	**P**	**03 37 54.1**	**0.0**
	7.2nm,0.7s,mb4.7						
FORT	**Forrest**	**34.81 178**		*e*P	**P**	**03 37 54.0**	**-0.1**
	6.7nm,0.6s,mb4.8						
HNR	**Honiara**	**35.68 112**		LR	LR	03 51 38.5	
	comp=Z,42nm,19.0s,MS3.2,baz=2.0,slow=35						
NWAO	**Narrogin (SRO)**	**38.03 193**		P	**P**	**03 38 22.4**	**+0.8**
	7.5nm,0.8s,mb4.5,baz=17,slow=11,SNR=2.9						
STKA	**Stephens Creek**	**38.54 160**		P	**P**	**03 38 26.4**	**+0.5**
	5.9nm,0.7s,mb4.5,baz=331,slow=7.3,SNR=19						
STKA				PcP	PcP	03 40 38.7	+0.4
	1.5nm,0.6s,baz=319,slow=3.5,SNR=2.8						
STKA	**Stephens Creek**	**38.54 160**		*e*P	**P**	**03 38 26.1**	**+0.2**
	5.9nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**38.54 160**		P	**P**	**03 38 26.4**	**+0.5**
STKA				PcP	PcP	03 40 38.7	+0.4
ARMA	**Armidale**	**41.81 147**		*e*P	**P**	**03 38 54.3**	**+1.2**
ULN	**Ulaanbaatar**	**46.70 342**		*e*P	**P**	**03 39 32.8**	**+0.8**
	2.4nm,0.7s,mb4.2						
SONM	**Songino Array**	**46.88 341**		P	**P**	**03 39 34.0**	**+0.7**
	1.4nm,0.5s,mb4.1,baz=152,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**46.88 341**		P	**P**	**03 39 34.0**	**+0.7**
PETK	**Petropavlovsk-**	**54.96 22**		P	**P**	**03 40 35.0**	**+1.0**
	2.4nm,0.8s,mb4.3,baz=156,slow=7.7,SNR=3.5						
MK31	**Makanchi Array**	**57.22 325**		*e*P	**P**	**03 40 50.1**	**-0.2**
MKAR	**Makanchi Array**	**57.22 325**		P	**P**	**03 40 50.1**	**-0.3**
	2.2nm,0.5s,mb4.5,baz=120,slow=8.1,SNR=66						
ZALV	**Zalesovo Beam**	**60.21 333**		P	**P**	**03 41 10.1**	**-0.9**
	0.9nm,0.4s,mb4.2,baz=104,slow=6.3,SNR=4.3						
EKS2	**Erkin-Say**	**60.57 317**		*e*P	**P**	**03 41 14.0**	**+0.4**
	2.2nm,0.7s,mb4.4						
KURK	**Kurchatov**	**61.39 327**		*e*P	**P**	**03 41 18.5**	**-0.6**
	5.8nm,0.6s,mb4.9						
BRVK	**Borovoye**	**67.05 327**		*e*P	**P**	**03 41 55.7**	**-0.4**
	2.2nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**90.04 340**		P	**P**	**03 44 01.2**	**-1.1**
	2.0nm,0.7s,mb4.5,baz=69,slow=6.6,SNR=4.8						
AKASG	**Malin Array Be**	**91.59 321**		P	**P**	**03 44 08.8**	**-1.1**
	0.2nm,0.3s,mb3.9,baz=58,slow=7.1,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**122.86 288**		*e*PKPdf	PKPdf	03 49 59.7	-0.4
TORD	**Torodi Ar. Bea**	**122.86 288**		PKP	PKPdf	03 50 00.0	-0.1
	1.4nm,0.7s,baz=85,slow=1.6,SNR=9.6						
DBIC	**Dimbokro**	**130.57 282**		PKP	PKPdf	03 50 15.7	+0.8
	1.8nm,0.9s,baz=130,slow=19,SNR=3.8						
CFAA	**Coronel Fontan**	**149.29 154**		PKP	PKPdf	03 50 48.1	+0.1
	0.4nm,0.7s,baz=243,slow=6.8,SNR=3.1						
CFAA				PKPbc	PKPbc	03 50 52.6	+0.3
	0.3nm,0.5s,baz=239,slow=3.3,SNR=7.3						

*IDC **28** 03:34:07.3±0.4, 19.19N×64.70W, h0km, mb4.5/28, mb1 4.7/29, mb1mx4.6/33, mbtmp4.5/29, ML4.9/1, MS4.6/32, Ms1 4.6/32, ms1mx4.4/49, Error ellipse: s-maj=11.9km s-min=9.4km az=69.0*

*TRN **28** 03:34:07.5, 19.30N×64.70W, h9km, MD5.1*

*MOS **28** 03:34:11.6±1.1, 19.33N×64.68W, h33km, mb5.1/36, Error ellipse: s-maj=8.2km s-min=5.7km az=122.7*

*BJI **28** 03:34:11.0, 19.20N×64.70W, h14km, mB5.6, Ms5.5, Msz5.2*

*ISCJB **28** 03:34:12.2±0.4, 19.19N±003×64.65W±002, h42km±4km, mb4.9/112, MS4.7/35, Error ellipse: s-maj=5.2km s-min=2.8km az=24.8*

*GCMT **28** 03:34:13.4±0.2, 19.36N×64.74W, h19km, MW5.2/81, Moment Tensor Solution. s60,c87; s81,c138; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.65±.02; $M_{\theta\theta}$-0.51±.01; $M_{\phi\phi}$-0.13±.02; $M_{r\theta}$-0.45±.03; $M_{\theta\phi}$0.23±.01; $M_{\phi r}$0.30±.04; Best double couple: $M_0$0.83300×10^{17} NP1:ϕs111.00000°, δ25.00000°, λ81.00000°. NP2: ϕs300.00000°, δ65.00000°, λ94.00000°. Principal axes: T 0.8500, Plg70.0000°, Azm219.0000°; N -0.0350, Plg4.0000°, Azm119.0000°; P -0.8160, Plg20.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*RSPR **28** 03:34:13.4, 1923N×6468W, h14km±4km, MD5.0/20, MD5.0/20*

*NEIC **28** 03:34:13.4, 1923N×6468W, h14km, mb5.1/89, MW5.1, MD5.0(RSPR), MD5.1(TRN), Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M_{rr}4.65; $M_{\theta\theta}$-3.89; $M_{\phi\phi}$-0.75; $M_{r\theta}$-2.29; $M_{\theta\phi}$-2.66; $M_{\phi r}$0.70; Best double couple: $M_0$5.60000×10^{16} NP1:ϕs41.00000°, δ39.00000°, λ59.00000°. NP2:ϕs259.00000°, δ57.00000°, λ113.00000°. Principal axes: T 5.5300, Plg68.0000°, Azm217.0000°; N 0.1500, Plg19.0000°, Azm66.0000°; P -5.6800, Plg9.0000°, Azm332.0000°; After RSPR.*

NEIC Felt [III] on Saint Thomas. Also felt on Saint John. Felt [III] at San Juan, Puerto Rico. Also felt at Aguas Buenas, Culebra, Guaynabo, Humacao, Rio Grande and Trujillo Alto.

ISC 28 03:34:12.5±0.8, 1920N±002×6468W±002, h27km±6km, n603, σ0s77/574, mb4.9/111, MS4.7/35, 179C-144D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.57 145**	⇓	*e*P	**Pb**	**03 34 23.9**	**-0.1**
TBVI	**Tortola**	**0.79 176**	⇓	*e*P	**Pb**	**03 34 26.9**	**-0.7**
STVI	**Saint Thomas**	**0.89 197**	⇓	*e*P	**Pb**	**03 34 28.3**	**-1.0**
MTP	**Monte Pirata**	**1.38 217**	⇓	*e*P	**Pn**	**03 34 35.7**	**-0.3**
CDVI	**St. Croix**	**1.45 183**	⇓	*e*P	**Pn**	**03 34 38.0**	**+1.0**
CBYP	**Canovanas**	**1.45 230**	⇓	*e*P	**Pn**	**03 34 36.8**	**-0.2**
HUMP	**Col San Antoni**	**1.53 227**	⇓	*e*P	**Pn**	**03 34 37.7**	**-0.4**
CPD	**Cerro la Pandu**	**1.65 225**	⇓	*e*P	**Pn**	**03 34 39.1**	**-0.6**
SJG	**San Juan**	**1.77 232**	⇓	*e*P	**Pn**	**03 34 40.9**	**-0.4**
SJG	**San Juan**	**1.77 232**	⇓	*e*P	**Pn**	**03 34 40.6**	**-0.7**
SJG	**San Juan**	**1.77 232**	⇓	*e*P	**Pn**	**03 34 40.6**	**-0.7**
SJG	**San Juan**	**1.77 232**	⇓	*e*P	**Pn**	**03 34 40.9**	**-0.4**
SMRT	**St. Maarten**	**1.91 127**	⇓	*e*P	**Pn**	**03 34 42.7**	**-0.5**
SABA	**Saba**	**2.08 139**	⇓	*e*P	**Pn**	**03 34 45.7**	**0.0**
CELP	**Cerrillos**	**2.12 238**	⇓	*e*P	**Pn**	**03 34 45.9**	**-0.3**
AOPR	**Arecibo Observ**	**2.14 247**	⇓	*e*Pg	**Pn**	**03 34 49.0**	**+2.4**
OBIP	**Obispado Ponce**	**2.16 238**	⇓	*e*P	**Pn**	**03 34 46.5**	**-0.3**
ICM	**Isla Caja Muer**	**2.18 234**	⇓	*e*P	**Pn**	**03 34 47.2**	**+0.2**
LRS	**Lares**	**2.24 246**	⇓	*e*P	**Pn**	**03 34 47.4**	**-0.5**
SEUS	**St. Eustatius**	**2.34 136**	⇓	*e*P	**Pn**	**03 34 49.0**	**-0.3**
SEUS	**St. Eustatius**	**2.34 136**	⇓	*e*P	**Pn**	**03 34 49.1**	**-0.2**
AGPR	**Aguadilla, PR**	**2.42 253**	⇓	*e*P	**Pn**	**03 34 49.7**	**-0.6**
GBPR	**Guanica, Bosqu**	**2.42 240**	⇓	*e*P	**Pn**	**03 34 50.5**	**+0.2**
AGP	**Aguadilla**	**2.46 252**		*e*Pn	**Pn**	**03 34 50.2**	**-0.8**
LSP	**Las Mesas**	**2.50 246**	⇓	*e*P	**Pn**	**03 34 51.4**	**0.0**
MPR	**Mayaguez**	**2.53 247**	⇓	*e*P	**Pn**	**03 34 51.3**	**-0.6**
CRPR	**Cabo Rojo, PR**	**2.59 243**	⇓	*e*P	**Pn**	**03 34 52.7**	**-0.1**
SKI	**Saint Kitts**	**2.62 135**		*e*P	**Pn**	**03 34 54.0**	**+0.9**
SKI				*e*S	**Sn**	**03 35 29.4**	**+5.3**
ANWB	**Willy Bob**	**3.14 119**		*e*Pn	**Pn**	**03 35 00.2**	**-0.1**
IMO	**Isla Mona**	**3.25 251**	⇑	*e*P	**Pn**	**03 35 01.5**	**-0.2**
BPA	**Boggy Peak**	**3.44 128**	⇓	*e*P	**Pn**	**03 35 04.4**	**+0.1**
BPA				*e*S	**Sn**	**03 35 46.2**	**+2.0**
BPA	**Boggy Peak**	**3.44 128**	⇓	*e*P	**Pn**	**03 35 04.4**	**+0.1**
BPA				*e*S	**Sn**	**03 35 44.0**	**-0.2**
LZG	**Guadaloupe-1**	**4.12 137**	⇑	*i*P	**Pn**	**03 35 14.1**	**+0.4**
SCG	**Saint Claude**	**4.26 137**		*e*P	**Pn**	**03 35 16.5**	**+0.8**
DOG	**Dongo Capester**	**4.30 137**		*e*P	**Pn**	**03 35 16.8**	**+0.6**
TBG	**Guadaloupe-3**	**4.42 139**		*e*P	**Pn**	**03 35 18.5**	**+0.7**
DEG	**La Desirade**	**4.49 129**		*e*P	**Pn**	**03 35 17.8**	**-1.1**
MGG	**Marie-Galante**	**4.58 135**		*e*P	**Pn**	**03 35 20.3**	**+0.2**
DWS	**Wesley**	**4.84 138**		*e*P	**Pn**	**03 35 25.1**	**+1.5**
DWS				*e*S	**Sn**	**03 36 19.6**	**+0.8**
DWS	**Wesley**	**4.84 138**		*e*P	**Pn**	**03 35 21.8**	**-1.8**
DWS				*e*S	**Sn**	**03 36 19.6**	**+0.8**
DLPL	**La Plaine**	**5.06 139**		*e*P	**Pn**	**03 35 27.5**	**+0.9**
DLPL				*e*S	**Sn**	**03 36 26.2**	**+1.9**
FDF	**Fort de France**	**5.58 142**		*e*P	**Pn**	**03 35 34.2**	**+0.3**
FDF				pmax	pmax		
	comp=Z,332nm,0.6s						
FDF	**Fort de France**	**5.58 142**		*e*P	**Pn**	**03 35 34.6**	**+0.7**
FDF	**Fort de France**	**5.58 142**		*e*Pn	**Pn**	**03 35 34.2**	**+0.4**
	comp=Z,332nm,0.6s						
BIM	**Bigot**	**5.80 143**		*e*P	**Pn**	**03 35 38.0**	**+1.1**
SDDR	**Presa de Saban**	**6.25 269**	⇓	*e*P	**Pn**	**03 35 43.8**	**+0.7**
GRTK	**Grand Turk**	**6.47 292**		*e*Pn	**Pn**	**03 35 43.0**	**-3.0**
GRTK				*e*Sn	**Sn**	**03 36 51.1**	**-8.0**
MCLT	**Moule a Chique**	**6.54 146**		*e*P	**Pn**	**03 35 48.0**	**+1.0**
MCLT				*e*S	**Sn**	**03 37 02.5**	**+1.8**
MCLT	**Moule a Chique**	**6.54 146**		*e*P	**Pn**	**03 35 50.1**	**+3.1**
MCLT				*e*S	**Sn**	**03 37 05.0**	**+4.4**
GRGR	**Grenville**	**7.61 157**		*e*Pn	**Pn**	**03 36 00.4**	**-1.3**
	comp=Z,659nm,1.1s						
TPR	**Prospect**	**8.82 154**		*e*P	**Pn**	**03 36 19.9**	**+1.6**
TPR	**Prospect**	**8.82 154**		*e*P	**Pn**	**03 36 20.4**	**+2.1**
TCE	**Chacachacare**	**8.92 161**		*e*P	**Pn**	**03 36 20.8**	**+1.1**
TCE	**Chacachacare**	**8.92 161**		*e*P	**Pn**	**03 36 22.9**	**+3.3**
PCRV	**Puerto La Cruz**	**8.97 180**		Pn	**Pn**	**03 36 20.2**	**-0.3**
	comp=Z,12nm,0.3s,baz=322,slow=3.2,SNR=55						
PCRV				Sn	**Sn**	**03 37 56.8**	**-3.9**
	comp=Z,4.7nm,0.3s,baz=338,slow=19,SNR=2.2						
PCRV				LR	LR	03 39 51.5	
	comp=Z,4μm,18.5s,baz=2.3,slow=38						
MASC	**Masc**	**9.05 278**		*e*P	**Pn**	**03 36 18.4**	**-3.1**
	baz=85						
MASC				*e*S	**Sn**	**03 37 51.8**	**-11**
	comp=N,528nm,0.4s						
MASC				*e*			
	comp=E,652nm,0.4s						
TRN	**Trinidad (W)**	**9.07 159**		*e*P	**Pn**	**03 36 23.6**	**+1.7**
TRN	**Trinidad (W)**	**9.07 159**		*e*P	**Pn**	**03 36 24.7**	**+2.9**
TBH	**Brigand Hill**	**9.35 158**		*e*P	**Pn**	**03 36 25.9**	**+0.4**
TBH	**Brigand Hill**	**9.35 158**		*e*P	**Pn**	**03 36 30.0**	**+4.5**
MOAC	**Moa**	**9.78 280**		*e*P	**Pn**	**03 36 27.4**	**-4.0**
GTBY	**Guantanamo Bay**	**9.86 276**		*e*Pn	**Pn**	**03 36 28.5**	**-4.1**
	comp=E,57nm,0.6s						
LMGC	**Las Mercedes**	**11.65 276**		*e*P	**Pn**	**03 36 53.0**	**-4.0**
	baz=102						
LMGC				*e*S	**Sn**	**03 38 52.6**	**-14**
	comp=N,73nm,1.3s						
LMGC				*e*			
	comp=E,112nm,1.0s						
SDV	**Santo Domingo**	**11.77 210**		Pn	**Pn**	**03 36 59.7**	**+1.0**
	comp=E,18nm,0.3s,baz=67,slow=8.7,SNR=32						
SDV				Sn	**Sn**	**03 39 07.9**	**-1.3**
	comp=E,2.5nm,0.3s,baz=14,slow=18,SNR=2.9						
SDV				LR	LR	03 41 54.1	
	comp=E,5μm,18.6s,baz=38,slow=40						
SDV	**Santo Domingo**	**11.77 210**		*e*Pn	**Pn**	**03 36 59.6**	**+0.9**
	comp=E,387nm,1.2s						
SDV				*e*Sn	**Sn**	**03 39 10.1**	**+0.8**
MGV	**Manicaragua**	**14.61 284**		*e*P	**Pn**	**03 37 30.3**	**-7.2**
ROSC	**El Rosal**	**17.09 215**		P	**Pn**	**03 38 10.9**	**+1.3**
	comp=E,16nm,0.3s,baz=84,slow=20,SNR=46						
ROSC				S	**Sn**	**03 41 17.3**	**-1.6**
	comp=E,0.7nm,0.3s,baz=90,slow=20,SNR=3.1						
ROSC				LR	LR	03 45 32.5	
	comp=E,4μm,18.4s,baz=21,slow=40						
ROSC	**El Rosal**	**17.09 215**		*e*P	**Pn**	**03 38 10.4**	**+0.7**
SOR	**Soroa**	**17.48 285**		*e*P	**Pn**	**03 38 13.5**	**-1.0**
DWPF	**Disney**	**17.71 303**		*e*Pn	**Pn**	**03 38 17.0**	**-0.3**
	comp=E,49nm,0.6s						
DWPF				*e*Sn	**Sn**	**03 41 16.6**	**-17**
BCIP	**Isla Barro Col**	**17.75 238**		*e*Pn	**Pn**	**03 38 16.8**	**-1.0**
NHSC	**New Hope**	**19.59 318**		*e*Pn	**Pn**	**03 38 38.1**	**-2.0**
	comp=E,113nm,0.4s						
NHSC				*e*S	**Sn**	**03 42 08.2**	**-11**
CNNC	**Cliffs of the**	**19.79 326**		*e*Pn	**Pn**	**03 38 44.5**	**+2.0**
	comp=E,195nm,0.3s						
CBN	**Corbin**	**21.92 332**		*e*P	**P**	**03 39 04.4**	**+0.6**
	comp=E,188nm,0.5s,mb5.8						
CBN				*e*		03 39 14.2	
GOGA	**Godfrey**	**21.94 314**		*e*P	**P**	**03 39 03.3**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.0						
GOGA	**Godfrey**	**21.94 314**		*e*P	**P**	**03 39 03.3**	**-0.8**
	comp=Z,39nm,0.6s,mb5.0						
TEIG	**Tepich**	**22.23 277**		P	**P**	**03 39 07.0**	**-0.4**
	comp=Z,30nm,0.8s,mb4.8,baz=77,slow=4.1,SNR=9.9						
TEIG				LR	LR	03 48 29.0	
	comp=Z,1μm,19.0s,MS4.4,baz=252,slow=39						
TEIG	**Tepich**	**22.23 277**		*e*P	**P**	**03 39 07.5**	**+0.2**
	comp=Z,61nm,0.9s,mb5.0						
TGUH	**Tegucigalpa,Un**	**22.24 260**		*e*P	**P**	**03 39 07.9**	**+0.6**
	comp=Z,246nm,1.4s,mb5.5						
BLA	**Blacksburg**	**22.62 326**		*e*P	**P**	**03 39 10.3**	**-0.9**
BLA				*e*S	**S**	**03 43 14.7**	**-3.2**
BLA				pmax	pmax		
	comp=Z,127nm,0.7s,mb5.5						
BLA	**Blacksburg**	**22.62 326**		*e*P	**P**	**03 39 10.3**	**-1.0**
	comp=Z,128nm,0.7s,mb5.5						
BLA				*e*S	**S**	**03 43 14.7**	**-3.2**
OTAV	**Otavalo**	**23.19 217**		*e*P	**P**	**03 39 16.1**	**-1.4**
	comp=Z,281nm,1.4s,mb5.5						
OTAV				*e*S	**S**	**03 43 32.5**	**+4.9**
BRAL	**Brewton**	**23.38 305**		*e*P	**P**	**03 39 19.2**	**-0.1**
	comp=Z,183nm,1.2s,mb5.4						
TKL	**Tuckaleechee C**	**23.51 318**		P	**P**	**03 39 19.4**	**-1.1**
	comp=Z,4.1nm,0.6s,mb4.0,baz=145,slow=9.2,SNR=7.2						
TKL				S	**S**	**03 43 32.4**	**0.0**
	comp=Z,9.8nm,0.4s,baz=124,slow=13,SNR=4.4						
TKL				LR	LR	03 47 40.1	
	comp=Z,1μm,21.1s,MS4.3,baz=127,slow=35						
TKL	**Tuckaleechee C**	**23.51 318**		*e*P	**P**	**03 39 20.0**	**-0.5**
TKL				*e*		03 39 37.3	
TKL				*e*S	**S**	**03 43 31.4**	**-1.0**
TZTN	**Tazewell**	**23.94 320**		*e*P	**P**	**03 39 24.5**	**+0.1**
	comp=Z,19nm,0.4s,mb4.9						
TZTN				*e*S	**S**	**03 43 37.1**	**-2.3**
SSPA	**Standing Stone**	**24.18 335**		*e*P	**P**	**03 39 27.7**	**+1.1**
	comp=Z,26nm,0.4s,mb5.0						
SSPA				*e*		03 39 46.1	
SSPA				*e*S	**S**	**03 43 45.5**	**+2.3**
MCWV	**Mont Chateau**	**24.22 331**		*e*P	**P**	**03 39 25.9**	**-1.1**
	comp=Z,48nm,0.4s,mb5.3						
MCWV				*e*		03 39 48.7	
MCWV				*e*S	**S**	**03 43 48.4**	**+4.5**
LRAL	**Lakeview Retre**	**24.25 309**		*e*P	**P**	**03 39 27.2**	**-0.1**
	comp=Z,19nm,0.3s,mb5.0						
BINY	**Binghamton**	**24.85 340**		*e*P	**P**	**03 39 32.7**	**0.0**
	comp=Z,129nm,1.8s,mb5.2						
BINY				*e*S	**S**	**03 43 58.0**	**+4.0**
ACSO	**Alum Creek Sta**	**26.20 327**		*e*P	**P**	**03 39 44.6**	**-0.4**
	comp=Z,105nm,1.0s,mb5.3						
PKME	**Peaks-Kenny Pk**	**26.27 353**		*e*P	**P**	**03 39 45.3**	**-0.2**
WVT	**Waverly**	**26.44 314**		*e*P	**P**	**03 39 45.5**	**-1.7**
WVT				pmax	pmax		
	comp=Z,15nm,0.4s,mb4.9						
WVT	**Waverly**	**26.44 314**		*e*P	**P**	**03 39 45.5**	**-1.7**
	comp=Z,15nm,0.4s,mb4.9						
WVT				*e*S	**S**	**03 44 37.2**	**+18**
VBMS	**Vicksburg**	**26.56 304**		*e*P	**P**	**03 39 48.7**	**+0.3**
	comp=Z,90nm,1.3s,mb5.1						
WCI	**Wyandotte Cave**	**26.69 320**		*e*P	**P**	**03 39 49.9**	**+0.4**
WCI

baz=42,SNR=26
LVC **Limon Verde** 41.77 186 P P 03 41 57.1 -2.6
comp=Z,10nm,0.5s,mb4.7,baz=31,slow=5.4,SNR=4.7
LVC **Limon Verde** 41.77 186 eP P 03 41 57.0 -2.7
319A **Douglas** 41.85 296 ⇓P P 03 42 00.4 0.0
baz=42
Q21A **Lamborn Mesa,** 41.85 307 ⇑P P 03 42 00.6 +0.3
baz=42,SNR=17
M22A **Cedar Creek Ra** 41.89 311 ⇑P P 03 42 00.8 +0.2
baz=42,SNR=10.0
219A **White Tail Can** 41.90 297 ⇑P P 03 42 01.3 +0.5
baz=42,SNR=7.0
Z19A **T-Link Ranch,** 42.07 299 ⇑P P 03 42 02.7 +0.6
baz=42
O21A **Pagoda** 42.15 309 ⇓P P 03 42 03.0 +0.2
baz=42,SNR=6.6
MVCO **Mesa Verde** 42.16 305 ⇑P P 03 42 03.0 +0.2
baz=42
X19A **St. Johns** 42.26 300 ⇑P P 03 42 04.4 +0.7
baz=42,SNR=8.5
N21A **Black Mountain** 42.35 310 ⇑P P 03 42 04.8 +0.4
baz=42,SNR=6.4
RWWY **Rawlins** 42.42 311 eP P 03 42 05.7 +0.7
comp=Z,34nm,1.3s,mb4.8
Q20A **Ridgley Place,** 42.42 307 ⇑P P 03 42 05.1 +0.1
baz=42,SNR=31
W19A **Sanders** 42.45 301 ⇓P P 03 42 05.7 +0.4
baz=42,SNR=5.5
318A **Bisbee** 42.46 296 ⇑P P 03 42 05.8 +0.4
baz=42
T19A **Beclabito** 42.49 304 ⇓P P 03 42 05.6 0.0
baz=42,SNR=22
218A **Dragoon** 42.56 297 ⇓P P 03 42 07.1 +0.9
baz=42,SNR=8.1
118A **Homack Ranch,** 42.57 298 ⇑P P 03 42 06.6 +0.3
baz=42,SNR=7.7
L21A **Rawlins** 42.62 312 ⇑P P 03 42 06.2 -0.3
baz=43,SNR=15
O20A **White River Ci** 42.70 309 ⇑P P 03 42 07.2 0.0
baz=43
W18A **Petrified Fore** 42.73 301 ⇑P P 03 42 08.1 +0.6
baz=43,SNR=12
S19A **Harvey Farm, M** 42.77 305 ⇓P P 03 42 08.1 +0.3
baz=43,SNR=23
X18A **Snowflake** 42.81 300 ⇑P P 03 42 08.9 +0.7
baz=43,SNR=12
N20A **Spence Gulch,** 42.91 310 ⇑P P 03 42 08.8 -0.1
baz=43
R19A **Curley Farm, L** 42.99 306 ⇓P P 03 42 09.6 -0.1
baz=43,SNR=6.0
V18A **Ganado** 42.99 302 ⇑P P 03 42 09.5 -0.1
baz=43
M20A **Sweetwater, Wa** 43.05 311 ⇑P P 03 42 10.4 +0.4
baz=43,SNR=6.7
Z17A **San Carlos Hig** 43.07 298 ⇓P P 03 42 10.1 -0.2
baz=43
U18A **Rough Rock, Ch** 43.07 303 ⇓P P 03 42 10.5 +0.1
baz=43,SNR=9.4
P19A **Cripple Cowboy** 43.11 308 ⇓P P 03 42 10.2 -0.4
baz=43,SNR=7.5
Q19A **Hogan Spring (** 43.15 307 ⇑P P 03 42 10.8 -0.1
baz=43,SNR=8.2
217A **Green Valley** 43.19 296 ⇑P P 03 42 12.1 +0.7
baz=43,SNR=7.1
117A **Oracle** 43.21 297 ⇓P P 03 42 12.1 +0.7
baz=43,SNR=14
T18A **Mexican Hat** 43.22 304 ⇓P P 03 42 11.4 -0.1
baz=43,SNR=26
TUC **Tucson** 43.22 297 eP P 03 42 11.6 +0.1
TUC pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
TUC **Tucson** 43.22 297 eP P 03 42 11.6 +0.1
comp=Z,9.5nm,1.0s,mb4.5
L20A **Wamsutter** 43.32 311 ⇓P P 03 42 12.5 +0.3
baz=43,SNR=13
O19A **Miners Draw (B** 43.39 309 ⇓P P 03 42 12.7 -0.1
baz=43,SNR=11
S18A **Hurst Farm, Bl** 43.43 305 ⇓P P 03 42 13.1 -0.1
baz=43,SNR=15
Y17A **Roosevelt** 43.43 299 ⇓P P 03 42 13.7 +0.5
baz=43,SNR=9.6
R18A **Canyonlands Na** 43.50 306 ⇑P P 03 42 13.5 -0.2
baz=44,SNR=22
K20A **Yellowstone Ra** 43.52 312 ⇑P P 03 42 13.5 -0.4
baz=44,SNR=13
N19A **John Jarvie Ra** 43.59 310 ⇓P P 03 42 13.9 -0.5
baz=44,SNR=9.4
U17A **Shonto** 43.73 303 ⇓P P 03 42 15.3 -0.4
baz=44
M19A **Rock Springs** 43.75 310 ⇑P P 03 42 15.3 -0.4
baz=44
216A **Three Points,** 43.76 296 ⇑P P 03 42 15.6 -0.3
baz=44
Q18A **Rafter H Ranch** 43.85 307 ⇑P P 03 42 16.5 0.0
baz=44,SNR=8.0
Z16A **Peralta Trail,** 43.87 298 ⇑P P 03 42 16.7 -0.1
baz=44
T17A **Navajo Res., N** 43.92 304 ⇑P P 03 42 17.5 +0.4
baz=44,SNR=6.8
K19A **Absolon Red Bu** 43.93 312 ⇓P P 03 42 16.6 -0.5
baz=44,SNR=17
Y16A **Circle Bar Ran** 43.98 299 ⇑P P 03 42 18.3 +0.7
baz=44,SNR=7.5
N18A **Larsen Ranch,** 43.98 310 ⇑P P 03 42 17.8 +0.3
baz=44
X16A **Lo Mia Camp, P** 44.02 300 ⇑P P 03 42 18.8 +0.9
baz=44,SNR=6.0
116A **Eloy** 44.02 297 ⇑P P 03 42 18.0 0.0
baz=44
O18A **Roosevelt** 44.04 308 ⇓P P 03 42 18.1 +0.1
baz=44
S17A **Black Ridge (B** 44.04 305 ⇓P P 03 42 18.6 +0.5
baz=44,SNR=12
P18A **Preston Nutter** 44.05 308 ⇓P P 03 42 18.3 +0.1
baz=44,SNR=9.2
L19A **Farson** 44.07 311 ⇑P P 03 42 18.3 0.0
baz=44,SNR=5.4
WUAZ **Wupatki** 44.12 301 ⇓P P 03 42 19.2 +0.5
baz=44,SNR=15
WUAZ **Wupatki** 44.12 301 eP P 03 42 19.4 +0.6
comp=Z,31nm,1.2s,mb4.9
WUAZ eP cP P cP 03 44 04.5 +0.9
R17A **Hanksville Air** 44.13 306 ⇓P P 03 42 18.9 +0.1
baz=44,SNR=11
SRU **San Rafael** 44.14 307 ⇓P P 03 42 18.8 -0.1
baz=44,SNR=8.6
W16A **Flagstaff** 44.18 301 ⇓P P 03 42 19.9 +0.6
baz=44,SNR=7.2
M18A **Lyman** 44.39 310 ⇓P P 03 42 20.5 -0.3
baz=44,SNR=5.2
P17A **Butcher Ranch,** 44.39 307 ⇓P P 03 42 20.8 -0.1
baz=44,SNR=8.6
PDAR **Pinedale Array** 44.41 312 P P 03 42 20.3 -0.7
comp=Z,7.0nm,0.5s,mb4.6,baz=109,slow=8.9,SNR=67
PDAR ScP ScP 03 47 56.1 +1.2
comp=Z,2.4nm,1.1s,baz=123,slow=4.4,SNR=5.0
PDAR LR LR 04 03 33.3
comp=Z,689nm,18.2s,MS4.6,baz=29,slow=40
BW06 **Boulder Array** 44.41 312 ⇑P P 03 42 20.8 -0.1
baz=44,SNR=27
BW06 **Boulder Array** 44.41 312 eP P 03 42 20.1 -0.8
comp=Z,38nm,1.3s,mb5.0
115A **Sonoran Desert** 44.47 297 ⇑P P 03 42 21.3 -0.4
baz=44
Z15A **Gila River Ind** 44.47 298 ⇓P P 03 42 21.3 -0.3
baz=44
L18A **Fontenelle, Gr** 44.50 311 ⇓P P 03 42 21.7 0.0
baz=44,SNR=6.4
O17A **Robinson Place** 44.56 308 ⇑P P 03 42 22.4 +0.2
baz=44,SNR=22
Q16A **Castle Valley** 44.59 306 ⇑P P 03 42 22.4 -0.1
baz=45,SNR=7.9
X15A **Humboldt** 44.68 300 ⇑P P 03 42 24.0 +0.8
baz=45,SNR=12
S16A **Weppner Ranch,** 44.68 305 ⇑P P 03 42 23.3 +0.1
baz=45,SNR=9.3
Y15A **Casa Rosa Ranc** 44.69 299 ⇑P P 03 42 24.0 +0.7
baz=45,SNR=11
R16A **Teasdale** 44.70 305 ⇑P P 03 42 23.5 +0.2
baz=45,SNR=8.8
K18A **Toltan Ranch,** 44.71 312 ⇓P P 03 42 23.8 +0.4
baz=45,SNR=19
W15A **Williams** 44.79 301 ⇓P P 03 42 25.3 +1.1
baz=45,SNR=5.2
V15A **Kaibab Nationa** 44.81 302 ⇑P P 03 42 24.7 +0.5
baz=45
M17A **Scullys Gap (B** 44.83 310 ⇑P P 03 42 24.4 0.0
baz=45,SNR=11
J18A **Kendall Valley** 44.87 313 ⇑P P 03 42 24.4 -0.2
baz=45,SNR=23
I18A **Diamond G Ranc** 44.88 313 ⇑P P 03 42 24.7 0.0
baz=45,SNR=23
214A **Organ Pipe Nat** 44.90 296 ⇑P P 03 42 24.8 -0.2
baz=45
FCC **Fort Churchill** 44.92 339 eP P 03 42 22.6 -2.1
comp=Z,0.3nm,0.7s
RLMT **Red Lodge** 44.98 315 ⇓P P 03 42 26.3 +0.9
baz=45,SNR=5.3
RLMT **Red Lodge** 44.98 315 eP P 03 42 23.5 -1.9
comp=Z,36nm,1.4s,mb5.0
P16A **Fountain Green** 45.11 307 ⇓P P 03 42 26.8 +0.2
baz=45
Z14A **Wintersburg** 45.13 298 ⇓P P 03 42 26.8 -0.1
baz=45
L17A **Cokeville** 45.15 311 ⇓P P 03 42 26.6 -0.3
baz=45,SNR=14
T15A **Red Dirt Ranch** 45.17 303 ⇓P P 03 42 27.6 +0.5
baz=45,SNR=10
X14A **Yava** 45.21 300 ⇓P P 03 42 28.6 +1.1
baz=45,SNR=9.9
G18A **Lazy EL Ranch,** 45.24 315 ⇓P P 03 42 27.7 +0.2
baz=45
Y14A **Wickenburg** 45.24 299 ⇓P P 03 42 28.4 +0.7
baz=45,SNR=8.7
N16A **Reese Ranch, Co** 45.25 309 ⇑P P 03 42 27.8 +0.1
baz=45,SNR=9.7
S15A **Panguitch** 45.27 304 ⇓P P 03 42 28.3 +0.4
baz=45,SNR=10
K17A **Gardner Place,** 45.37 312 ⇓P P 03 42 28.6 0.0
baz=45,SNR=9.6
FFC **Flin Flon** 45.38 330 eP P 03 42 26.3 -2.2
FFC pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
FFC **Flin Flon** 45.38 330 eP P 03 42 26.3 -2.2
comp=Z,4.8nm,0.8s,mb4.4
LOHW **Long Hollow** 45.40 313 eP P 03 42 28.5 -0.3
comp=Z,20nm,1.0s,mb4.9
J17A **Brown Place, J** 45.40 313 ⇓P P 03 42 28.9 +0.1
baz=45,SNR=18
SNOW **Snow King Moun** 45.45 313 eP P 03 42 29.4 +0.1
comp=Z,12nm,0.6s,mb4.9
W14A **Seligman** 45.46 301 ⇑P P 03 42 30.5 +1.0
baz=45,SNR=5.9
I17A **Pilgrim Creek** 45.47 313 ⇑P P 03 42 30.4 +1.0
baz=45,SNR=10
M16A **Huntsville** 45.49 309 ⇑P P 03 42 29.2 -0.4
baz=46,SNR=23
REDW **Red Top Meadow** 45.49 312 eP P 03 42 29.6 +0.1
comp=Z,83nm,1.5s,mb5.3
L16A **Fish Haven** 45.53 310 ⇑P P 03 42 29.5 -0.4
baz=46,SNR=13
Q15A **Fillmore** 45.53 306 ⇓P P 03 42 29.9 0.0
baz=46,SNR=8.6
V14A **Boquillas Ranc** 45.53 301 ⇓P P 03 42 30.0 -0.1
baz=46,SNR=7.0
MOOW **Moose Ponds** 45.53 313 eP P 03 42 29.9 0.0
comp=Z,13nm,0.9s,mb4.9
F18A **Big Timber** 45.54 316 ⇓P P 03 42 30.1 +0.2
baz=46,SNR=6.7
P15A **Leamington** 45.57 307 ⇑P P 03 42 30.2 -0.1
baz=46,SNR=7.1
U14A **Mt Trumbull** 45.70 302 ⇑P P 03 42 32.0 +0.6
baz=46
IMW **Indian Meadow** 45.71 313 eP P 03 42 31.9 +0.6
comp=Z,11nm,0.6s,mb5.0
DCID1 **Drake Creek** 45.79 313 eP P 03 42 32.7 +0.7
comp=Z,34nm,1.0s,mb5.2
RRI2 **Red Ridge** 45.82 312 eP P 03 42 32.2 +0.1
comp=Z,15nm,0.6s,mb5.1
CPUP **Villa Florida** 45.82 171 P P 03 42 29.4 -2.9
comp=Z,22nm,0.8s,mb5.1,baz=336,slow=7.7,SNR=37
CPUP LR LR 04 03 06.0
comp=Z,372nm,18.9s,MS4.3,baz=72,slow=38
CPUP **Villa Florida** 45.82 171 eP P 03 42 29.4 -2.9
CPUP pmax pmax
comp=Z,102nm,0.8s
CPUP **Villa Florida** 45.82 171 eP P 03 42 29.4 -2.9
comp=Z,102nm,0.8s,mb5.8
K16A **Soda Springs** 45.86 312 ⇑P P 03 42 32.4 -0.1
baz=46,SNR=28
R14A **James Farms, M** 45.89 305 ⇓P P 03 42 33.2 +0.4
baz=46
E18A **Harlowton** 45.91 317 ⇑P P 03 42 32.9 +0.1
baz=46
S14A **Cedar City** 45.91 304 ⇓P P 03 42 33.1 +0.1
baz=46
Y13A **Salome** 45.91 299 ⇑P P 03 42 33.3 +0.3
baz=46
X13A **Yucca** 45.99 300 ⇑P P 03 42 33.5 -0.2
baz=46
J16A **Bone** 46.00 312 ⇑P P 03 42 33.7 +0.1
baz=46,SNR=6.3
G17A **Pierce Place,** 46.02 315 ⇑P P 03 42 34.6 +0.9
baz=46
N15A **Stansbury Isla** 46.04 309 ⇓P P 03 42 34.2 +0.2
baz=46,SNR=5.6
D18A **Linhart Farms,** 46.06 318 ⇑P P 03 42 34.2 +0.2
baz=46
I16A **Newdale** 46.08 313 ⇓P P 03 42 34.4 +0.2
baz=46,SNR=8.8
W13A **Hualapai Mount** 46.10 301 ⇑P P 03 42 34.8 +0.3
baz=46,SNR=9.1
DUG **Dugway** 46.11 308 ⇓P P 03 42 34.8 +0.3
baz=46,SNR=13
DUG **Dugway** 46.11 308 eP P 03 42 34.1 -0.4
DUG pmax pmax
comp=Z,39nm,1.5s,mb5.1
DUG **Dugway** 46.11 308 eP P 03 42 34.1 -0.4
comp=Z,39nm,1.5s,mb5.1
M15A **Larsen Ranch,** 46.13 309 ⇑P P 03 42 34.4 -0.2
baz=46,SNR=15
F17A **Fitzpatrick Pl** 46.16 316 ⇓P P 03 42 35.4 +0.6
baz=46,SNR=6.0
H16A **Russell Place,** 46.17 314 ⇑P P 03 42 35.6 +0.8
baz=46,SNR=11
P14A **Drum Mountains** 46.17 307 ⇓P P 03 42 35.4 +0.3
baz=46,SNR=14
L15A **Malad City** 46.21 310 ⇓P P 03 42 35.0 -0.3
baz=46,SNR=34
Q14A **Sevier Lake (B** 46.21 306 ⇑P P 03 42 36.1 +0.8
baz=46,SNR=21
V13A **Grand Canyon W** 46.27 302 ⇑P P 03 42 36.6 +0.8
baz=46,SNR=9.7
U13A **Pakoon Wash** 46.33 302 ⇑P P 03 42 37.3 +1.0
baz=46,SNR=10.0
EGMT **Eagleton** 46.34 319 ⇓P P 03 42 36.8 +0.6
baz=46
EGMT **Eagleton** 46.34 319 eP P 03 42 35.8 -0.4
comp=Z,20nm,1.2s,mb4.9
T13A **Saint George** 46.37 303 ⇑P P 03 42 36.9 +0.3
baz=46
S13A **Holt Ranch, En** 46.42 304 ⇑P P 03 42 37.6 +0.6
baz=46,SNR=7.9
E17A **Martinsdale** 46.48 317 ⇓P P 03 42 37.9 +0.6
baz=46
B18A **Beardsley Farm** 46.50 319 ⇑P P 03 42 37.7 +0.3
baz=46
N14A **Grayback Hills** 46.53 308 ⇑P P 03 42 38.1 +0.3
baz=46,SNR=35
R13A **O'Grain Ranch,** 46.60 305 ⇑P P 03 42 39.0 +0.6
baz=47,SNR=6.5
D17A **Six Diamond Ra** 46.61 317 ⇑P P 03 42 38.6 +0.3
baz=47,SNR=16
J15A **Blackfoot** 46.61 312 ⇓P P 03 42 38.6 +0.2
baz=47,SNR=7.3
G16A **Moss Hill, Enn** 46.71 315 ⇑P P 03 42 40.1 +1.0
baz=47,SNR=6.5
BOZ **Bozeman (W)** 46.72 315 ⇓P P 03 42 39.3 +0.1
baz=47
A18A **Metzger Ranch,** 46.74 320 ⇑P P 03 42 39.8 +0.4
baz=47,SNR=10
F16A **Kennard Place,** 46.76 315 ⇑P P 03 42 39.5 -0.1
baz=47
Q13A **Wheeler Ranch,** 46.78 306 ⇑P P 03 42 40.0 +0.2
baz=47,SNR=8.8
M14A **Sheep Mountain** 46.79 309 ⇑P P 03 42 39.5 -0.3
baz=47,SNR=22
I15A **Monteview** 46.81 313 ⇓P P 03 42 40.4 +0.5
baz=47,SNR=15
C17A **Wharram Farm,** 46.83 318 ⇑P P 03 42 40.1 0.0
baz=47,SNR=6.8
P13A **Bates Ranch, G** 46.87 306 ⇑P P 03 42 41.0 +0.5
baz=47,SNR=18
K14A **Jones Ranch, D** 46.92 311 ⇑P P 03 42 40.7 -0.1
baz=47,SNR=35
V12A **Nelson** 46.95 301 ⇑P P 03 42 41.7 +0.5
baz=47,SNR=7.4
T12A **Moapa** 46.97 303 ⇑P P 03 42 41.8 +0.4
baz=47
E16A **East Helena** 47.04 316 ⇓P P 03 42 41.7 +0.1
baz=47
IRM **Iron Mountain** 47.04 299 ⇓P P 03 42 42.5 +0.6
baz=47,SNR=7.4
B17A **L&G Farms, Che** 47.09 319 ⇑P P 03 42 41.8 -0.2
baz=47
LDFC **Landfair** 47.09 300 eP P 03 42 43.7 +1.4
comp=Z,33nm,0.9s,mb5.3
H15A **Lima** 47.09 314 ⇑P P 03 42 43.0 +0.8
baz=47,SNR=9.9
D16A **Dana Ranch, Ca** 47.12 317 ⇓P P 03 42 42.5 +0.2
baz=47
R12A **Pony Springs,** 47.12 305 ⇓P P 03 42 43.2 +0.7
baz=47,SNR=8.7
G15A **Dillon** 47.15 314 ⇓P P 03 42 43.0 +0.4
baz=47,SNR=13
S12A **Delamar Landin** 47.20 304 ⇓P P 03 42 44.0 +0.9
baz=47,SNR=5.6
BC3 **Big Chuckw Mtn** 47.25 298 ⇓P P 03 42 43.5 0.0
baz=47
A17A **Triple J Farms** 47.27 320 ⇓P P 03 42 43.0 -0.5
baz=47
DLMT **Dillon** 47.28 315 eP P 03 42 45.1 +1.5
comp=Z,25nm,1.2s,mb5.0
J14A **Carey** 47.35 312 ⇑P P 03 42 44.6 +0.4
baz=47,SNR=39
F15A **Butte** 47.35 315 ⇓P P 03 42 44.2 +0.1
baz=47
M13A **Montello** 47.36 309 ⇑P P 03 42 44.4 +0.1
baz=47,SNR=5.1
L13A **Double Diamond** 47.36 310 ⇑P P 03 42 44.2 0.0
baz=47,SNR=15
Q12A **Willow Creek R** 47.41 306 ⇓P P 03 42 45.5 +0.8
baz=47,SNR=9.3
T11A **Corn Creek, Al** 47.44 303 ⇑P P 03 42 45.6 +0.6
baz=47,SNR=5.2
I14A **Mackay** 47.46 312 ⇓P P 03 42 45.8 +0.8
baz=47,SNR=13
C16A **Fuhringer Ranc** 47.51 318 ⇑P P 03 42 45.3 0.0
baz=48
GMRC **Granite Mounta** 47.51 300 ⇓P P 03 42 46.1 +0.6
baz=48,SNR=5.2
P12A **McGill** 47.55 306 ⇓P P 03 42 46.3 +0.5
baz=48,SNR=9.0
O12A **Currie** 47.57 307 ⇓P P 03 42 46.4 +0.5
baz=48,SNR=5.8
H14A **Leadore** 47.59 313 ⇑P P 03 42 46.7 +0.7
baz=48,SNR=6.9
K13A **Stover Farm, H** 47.59 311 ⇓P P 03 42 46.5 +0.4
baz=48,SNR=25
E15A **Deer Lodge** 47.63 316 ⇓P P 03 42 46.6 +0.3
baz=48
B16A **M & M Farms, S** 47.70 319 ⇑P P 03 42 47.0 +0.3
baz=48
BELC **Belle Mtn.** 47.73 299 ⇓P P 03 42 47.4 +0.1
baz=48
D15A **Lincoln** 47.75 317 ⇓P P 03 42 48.0 +0.8
baz=48,SNR=7.0
TUQ **Turquoise Moun** 47.79 301 ⇓P P 03 42 48.2 +0.5
baz=48,SNR=9.0
A16A **West Butte Ran** 47.82 319 ⇓P P 03 42 48.0 +0.2
baz=48,SNR=20
G14A **Jackson** 47.83 314 ⇓P P 03 42 48.6 +0.7
baz=48,SNR=5.2
J13A **Cove Ranch, Pi** 47.84 312 ⇑P P 03 42 48.1 +0.2
baz=48,SNR=18
R11A **Troy Canyon, C** 47.89 305 ⇑P P 03 42 49.1 +0.6
baz=48,SNR=15
N12A **Clover Valley,** 47.90 308 ⇑P P 03 42 48.8 +0.3
baz=48,SNR=15
I13A **Wildhorse Cree** 47.92 312 ⇓P P 03 42 49.0 +0.4
baz=48,SNR=13
M12A **Wells** 47.92 309 ⇑P P 03 42 48.7 +0.1
baz=48,SNR=17
MONP **Monument Peak** 48.00 297 ⇓P P 03 42 49.5 +0.1
baz=48
Q11A **Duckwater** 48.02 305 ⇑P P 03 42 49.7 +0.3
baz=48,SNR=16
ELK **Elko** 48.03 308 eP P 03 42 49.3 -0.2
ELK pmax pmax
comp=Z,35nm,1.3s
ELK **Elko** 48.03 308 eP P 03 42 49.3 -0.2
comp=Z,35nm,1.3s,mb5.2
HLID **Hailey** 48.05 312 ⇑P P 03 42 49.8 +0.2
baz=48,SNR=15
HLID **Hailey** 48.05 312 eP P 03 42 50.0 +0.4
comp=Z,42nm,1.5s,mb5.2
C15A **Salmond Ranch,** 48.05 318 ⇑P P 03 42 49.5 0.0
baz=48,SNR=12
SHOC **Shoshone** 48.13 301 ⇓P P 03 42 50.2 -0.1
baz=48
L12A **House Creek Ra** 48.15 310 ⇓P P 03 42 50.3 -0.1
baz=48,SNR=5.5
K12A **Draper Farm, C** 48.18 310 ⇑P P 03 42 50.7 +0.1
baz=48,SNR=20
H13A **Challis** 48.19 313 ⇑P P 03 42 51.3 +0.6
baz=48,SNR=6.5
E14A **Clinton** 48.19 316 ⇑P P 03 42 51.1 +0.4
baz=48
B15A **Bradely Ranch,** 48.20 318 ⇑P P 03 42 50.6 0.0
baz=48
TPNV **Topopah Spring** 48.22 303 ⇓P P 03 42 52.0 +1.0
baz=48,SNR=8.2
TPNV **Topopah Spring** 48.22 303 eP P 03 42 51.7 +0.7
TPNV pmax pmax
comp=Z,13nm,0.9s,mb5.0
TPNV **Topopah Spring** 48.22 303 eP P 03 42 51.7 +0.7
comp=Z,13nm,0.9s,mb5.0
U10A **Ash Meadows, A** 48.22 302 ⇑P P 03 42 52.1 +1.0
baz=48,SNR=6.6
O11A **Cowboy Ranch,** 48.23 307 ⇑P P 03 42 51.7 +0.7
baz=48,SNR=48
LCO **Las Campanas** 48.28 187 eP P 03 42 49.0 -2.5
comp=Z,38nm,1.2s,mb5.3
G13A **Cobalt** 48.31 314 ⇑P P 03 42 52.0 +0.4
baz=48
D14A **Greenough** 48.40 317 ⇑P P 03 42 52.4 +0.2
baz=48
N11A **Elko Archery C** 48.41 308 ⇓P P 03 42 52.5 0.0
baz=48
R10A **Warm Springs** 48.44 304 ⇓P P 03 42 53.6 +1.0
baz=48,SNR=9.6
J12A **Stokes Ranch,** 48.45 311 ⇑P P 03 42 53.2 +0.5
baz=48,SNR=12
GSC **Goldstone** 48.50 300 ⇓P P 03 42 53.2 0.0
baz=48
A15A **Johnson Ranch,** 48.53 319 ⇑P P 03 42 53.6 +0.4
baz=48,SNR=6.2
M11A **Holland Ranch,** 48.57 309 ⇓P P 03 42 53.8 +0.2
baz=48,SNR=27
Q10A **Clear Creek Ra** 48.59 305 ⇑P P 03 42 54.3 +0.5
baz=48,SNR=11
H12A **Diamond D Ranc** 48.60 313 ⇑P P 03 42 54.3 +0.5
baz=49
S10A **Tonopah Range,** 48.62 304 ⇓P P 03 42 54.8 +0.8
baz=49,SNR=29
FURC **Furnace Creek,** 48.65 302 ⇑P P 03 42 54.8 +0.4
baz=49
E13A **Victor** 48.66 316 ⇓P P 03 42 54.7 +0.5
baz=49,SNR=8.2
B14A **Marquette Ranc** 48.66 318 ⇑P P 03 42 54.7 +0.5
baz=49
L11A **Cat Creek Ranc** 48.69 310 ⇓P P 03 42 54.8 +0.2
baz=49,SNR=12
P10A **Eureka** 48.76 306 ⇑P P 03 42 55.1 0.0
baz=49
O10A **Cortez Mining,** 48.90 307 ⇑P P 03 42 56.2 0.0
baz=49
A14A **Double T Ranch** 48.96 319 ⇑P P 03 42 56.1 -0.4
baz=49
N10A **Dunphy** 48.97 308 ⇓P P 03 42 56.8 0.0
baz=49
MFID **Camas Ranch** 49.01 311 ⇓P P 03 42 57.1 +0.1
baz=49,SNR=11
K11A **Parker Ranch,** 49.02 310 ⇑P P 03 42 57.0 -0.1
baz=49,SNR=6.9
D13A **Huson** 49.03 316 ⇓P P 03 42 57.0 -0.1
baz=49
R09A **Tonopah** 49.03 304 ⇑P P 03 42 57.8 +0.5
baz=49,SNR=11
S09A **Goldfield** 49.09 304 ⇓P P 03 42 57.7 +0.1
baz=49,SNR=10
GRAC **Grapevine Rang** 49.12 303 ⇑P P 03 42 58.2 +0.3
baz=49
MPMC **Manual Prospec** 49.12 301 ⇓P P 03 42 58.3 +0.4

baz=49
F12A Elk City 49.18 314 ⇑P P 03 42 58.5 +0.3
baz=49
L10A Juniper Basin 49.20 309 ⇓P P 03 42 58.9 +0.5
baz=49,SNR=22
I11A Placerville 49.22 312 ⇓P P 03 42 58.7 +0.1
baz=49,SNR=9.1
LRMC Laurel Mountai 49.23 301 ⇑P P 03 42 58.8 0.0
baz=49
P09A Austin 49.26 306 ⇓P P 03 42 59.3 +0.4
baz=49
C13A Hot Springs 49.28 317 ⇑P P 03 42 59.3 +0.3
baz=49
O09A Fish Creek Ran 49.40 307 ⇓P P 03 43 00.1 +0.1
baz=49,SNR=20
EDW2 Edwards Air Fo 49.43 300 ⇓P P 03 43 00.5 +0.2
baz=49
H11A Donnelly 49.44 313 ⇑P P 03 43 00.3 +0.1
baz=49,SNR=5.3
BMN Battle Mountai 49.46 307 *e*P P 03 43 00.3 -0.2
BMN pmax pmax
comp=Z,28nm,1.1s,mb5.2
BMN Battle Mountai 49.46 307 *e*P P 03 43 00.3 -0.2
comp=Z,28nm,1.1s,mb5.2
K10A MacKenzie Ranc 49.62 310 ⇓P P 03 43 01.9 +0.2
baz=50,SNR=10
CWC Cottonwood Cre 49.63 302 ⇑P P 03 43 01.6 -0.2
baz=50
J10A Berg Farm, Mel 49.68 311 ⇑P P 03 43 02.3 +0.2
baz=50,SNR=13
N09A Rock Creek Ran 49.76 308 ⇓P P 03 43 03.0 +0.2
baz=50,SNR=11
Q08A Gabbs 49.78 305 ⇑P P 03 43 02.9 0.0
baz=50,SNR=13
G11A Walters Elk Ra 49.78 314 ⇓P P 03 43 02.7 -0.1
baz=50
M09A Marrel Ranch, 49.80 308 ⇑P P 03 43 03.1 +0.1
baz=50,SNR=10
F11A Grangeville 49.83 314 ⇓P P 03 43 03.3 +0.1
baz=50,SNR=8.5
I10A Payette 49.85 312 ⇑P P 03 43 02.8 -0.5
baz=50
H10A Noah's Angus R 49.92 313 ⇓P P 03 43 03.0 -0.9
baz=50
E11A Bogner Ranch, 49.98 315 ⇑P P 03 43 04.5 +0.2
baz=50,SNR=14
NVAR Mina Array Bea 50.01 304 P P 03 43 04.9 +0.2
comp=Z,11nm,1.0s,mb4.8,baz=98,slow=6.5,SNR=43
NVAR ScP ScP 03 48 20.9 +2.3
comp=Z,1.9nm,1.0s,baz=136,slow=4.8,SNR=6.8
L09A Wilkinson Ranc 50.06 309 ⇓P P 03 43 05.0 0.0
baz=50,SNR=10
O08A Rochester Mine 50.15 307 ⇑P P 03 43 05.7 0.0
baz=50,SNR=11
B12A Libby 50.16 318 ⇓P P 03 43 05.5 -0.2
baz=50
N08A GE Springer Mi 50.20 307 ⇑P P 03 43 06.3 +0.1
baz=50,SNR=36
K09A Rome 50.23 310 ⇑P P 03 43 06.4 +0.1
baz=50,SNR=15
D11A Klaveano Farm, 50.25 316 ⇓P P 03 43 06.1 -0.2
baz=50,SNR=5.8
G10A Bishop Farm, J 50.34 313 ⇓P P 03 43 06.6 -0.5
baz=50
A12A Yaak River Ran 50.34 318 ⇑P P 03 43 06.7 -0.3
baz=50
BMO Blue Mountains 50.37 313 *e*P P 03 43 07.0 -0.3
BMO pmax pmax
comp=Z,26nm,1.7s,mb5.0
BMO Blue Mountains 50.37 313 *e*P P 03 43 07.0 -0.3
comp=Z,26nm,1.7s,mb5.0
J09A Fry Pan Ranch, 50.37 311 ⇑P P 03 43 06.9 -0.4
baz=50
VES Vestal, Richgr 50.39 301 ⇑P P 03 43 07.6 -0.1
baz=50
EDM Edmonton 50.47 324 *e*P P 03 43 07.2 -0.7
I09A Lost Marbles R 50.49 312 ⇓P P 03 43 07.7 -0.6
baz=50
M08A Happy Creek Ra 50.49 308 ⇑P P 03 43 08.4 +0.2
baz=50,SNR=8.2
RCTC Rector, Farmer 50.55 302 ⇓P P 03 43 08.6 -0.3
baz=50
H09A Durkee 50.58 312 ⇓P P 03 43 08.2 -0.7
baz=50
L08A Fields 50.59 309 ⇑P P 03 43 08.8 -0.2
baz=50,SNR=17
CFAA Coronel Fontan 50.63 184 P P 03 43 07.3 -2.0
comp=Z,0.9nm,0.5s,mb4.0,baz=351,slow=7.7,SNR=24
B11A Sandpoint 50.65 317 ⇓P P 03 43 08.9 -0.4
baz=51
O07A Toulon 50.67 307 ⇑P P 03 43 09.7 0.0
baz=51,SNR=19
BSC Santa Cruz Isl 50.74 299 ⇓P P 03 43 10.3 0.0
baz=51
K08A Mann Creek Ran 50.78 310 ⇓P P 03 43 10.6 +0.2
baz=51
G09A Cove 50.79 313 ⇓P P 03 43 10.6 +0.1
baz=51
A11A Hall Mountain, 50.80 318 ⇓P P 03 43 10.5 +0.1
baz=51
N07B Gerlach 50.83 307 ⇑P P 03 43 10.6 -0.3
baz=51
WVOR Wild Horse Val 50.84 309 *e*P P 03 43 10.8 -0.1
WVOR pmax pmax
comp=Z,29nm,1.4s,mb5.0
WVOR Wild Horse Val 50.84 309 *e*P P 03 43 10.8 -0.1
comp=Z,29nm,1.4s,mb5.0
D10A Wagner Farm, O 50.87 316 ⇑P P 03 43 11.3 +0.3
baz=51
J08A Circle Bar Ran 50.89 311 ⇑P P 03 43 11.4 +0.1
baz=51,SNR=9.9
R06C Coleville 50.92 304 ⇑P P 03 43 12.1 +0.5
baz=51,SNR=7.0
PKM Peak Mountain 50.93 300 ⇓P P 03 43 11.7 0.0
baz=51
I08A Drewsey 51.06 311 ⇑P P 03 43 13.1 +0.6
baz=51
M07A Soldier Meadow 51.07 308 ⇑P P 03 43 13.1 +0.4
baz=51,SNR=16
NEW Newport 51.09 317 *e*P P 03 43 11.2 -1.4
NEW pmax pmax
comp=Z,13nm,0.7s
NEW Newport 51.09 317 *e*P P 03 43 11.2 -1.5
comp=Z,13nm,0.7s,mb5.0
SMMC Simmler 51.10 300 ⇓P P 03 43 12.6 -0.4
baz=51
H08A Prairie City 51.25 312 ⇑P P 03 43 13.9 0.0
baz=51,SNR=7.2
L07A Adell 51.29 309 ⇓P P 03 43 14.2 -0.1
baz=51,SNR=6.5
O06A Flanigan 51.40 306 ⇑P P 03 43 14.7 -0.4
baz=51
N06A Buffalo Meadow 51.48 307 ⇑P P 03 43 15.1 -0.6
baz=51,SNR=9.6
F08A Pendleton 51.59 314 ⇑P P 03 43 16.3 -0.1
baz=52
G08A Pilot Rock 51.61 313 ⇓P P 03 43 16.4 -0.2
baz=52
I07A Izee 51.76 311 ⇑P P 03 43 17.7 -0.1
baz=52,SNR=5.3
BEKR Beckwourth 51.77 306 ⇑P P 03 43 17.4 -0.5
baz=52
B09A Rice 51.79 317 ⇑P P 03 43 17.7 -0.2
baz=52
D08A Wollman Farm, 51.96 315 ⇑P P 03 43 19.5 +0.3
baz=52
J06A Christmas Vall 52.08 310 ⇓P P 03 43 20.3 +0.2
baz=52
A09A Danville 52.21 318 ⇑P P 03 43 20.7 -0.3
baz=52
I06A Prineville 52.23 311 ⇓P P 03 43 21.0 -0.3
baz=52
E07A Sunnyside 52.48 314 ⇑P P 03 43 22.4 -0.6
baz=52
A08A Turner Farm, O 52.64 317 ⇓P P 03 43 22.7 -1.6
baz=53
MDT Midelt 55.01 63 P P 03 43 42.5 +0.7
comp=Z,5.6nm,1.0s,mb4.5,baz=261,slow=8.6,SNR=6.7
YKA Yellowknife Ar 55.11 334 P P 03 43 39.8 -2.2
comp=Z,6.0nm,0.6s,mb4.8,baz=109,slow=7.5,SNR=87
YKA LR LR 04 07 08.1
comp=Z,93nm,19.2s,MS3.9,baz=40,slow=36
YKA PKPPKP 04 13 59.3
comp=Z,1.4nm,1.3s,baz=313,slow=3.1,SNR=4.1
YKA Yellowknife Ar 55.11 334 P P 03 43 39.8 -2.2
YKA LR LR 04 07 08.1
YKA P'P' 04 13 59.3
SUMG Summit 55.45 9 *e*P P 03 43 43.8 -0.5
comp=Z,34nm,1.0s,mb5.3
ESDC Sonseca Array 55.62 55 P P 03 43 46.1 -0.1
comp=Z,1.2nm,0.7s,mb4.0,baz=275,slow=7.0,SNR=9.8
ESDC LR LR 04 01 52.4
comp=Z,351nm,21.7s,MS4.4,baz=275,slow=30
TRQA Tornquist 57.01 177 *e*P P 03 43 55.7 -0.2
comp=Z,21nm,1.7s,mb4.9
RES Resolute Bay 57.84 351 P P 03 44 01.9 +0.5
comp=Z,2.3nm,0.8s,mb4.2,baz=163,slow=9.3,SNR=8.0
RES Resolute Bay 57.84 351 *e*P P 03 43 58.7 -2.7
RES pmax pmax
comp=Z,27nm,1.8s,mb5.0
RES Resolute Bay 57.84 351 *e*P P 03 43 58.7 -2.6
comp=Z,26nm,1.8s,mb5.0
SJPF Ste Jean 57.86 51 *e*P P 03 44 02.3 +0.3
comp=Z,70nm,1.4s,mb5.2
SJPF Ste Jean 57.86 51 *e*P P 03 44 02.3 +0.3
SJPF pmax pmax
comp=Z,35nm,1.4s,mb5.2
SJPF Ste Jean 57.86 51 *e*P P 03 44 02.3 +0.3
comp=Z,35nm,1.4s,mb5.2
EPF Esparros 59.01 51 *e*P P 03 44 09.2 -0.8
comp=Z,30nm,1.0s,mb5.0
EPF Esparros 59.01 51 *e*P P 03 44 09.2 -0.8
EPF pmax pmax
comp=Z,15nm,1.0s,mb5.0
EPF Esparros 59.01 51 *e*P P 03 44 09.2 -0.8
comp=Z,15nm,1.0s,mb5.0
TIC Toumodi 59.22 94 *e*P P 03 44 10.4 -1.5
comp=Z,109nm,1.1s,mb5.8
LIC Lamto 59.34 94 ⇑*i*P P 03 44 12.3 -0.5
comp=Z,60nm,1.3s,mb5.2
LIC Lamto 59.34 94 *e*P P 03 44 12.3 -0.5
comp=Z,60nm,1.3s,mb5.5
LIC Lamto 59.34 94 ⇑*i*P P 03 44 12.3 -0.5
comp=Z,30nm,1.3s,mb5.2
DBIC Dimbokro 59.36 94 P P 03 44 12.6 -0.4
comp=Z,15nm,0.8s,mb5.1,baz=273,slow=7.9,SNR=21
DBIC LR LR 04 07 33.1
comp=Z,438nm,18.1s,MS4.6,baz=260,slow=34
DBIC Dimbokro 59.36 94 *e*P P 03 44 12.2 -0.7
DBIC pmax pmax
comp=Z,15nm,0.8s
DBIC Dimbokro 59.36 94 *e*P P 03 44 12.2 -0.8
comp=Z,15nm,0.8s,mb5.1
LFF La Fresiale 59.38 49 *e*P P 03 44 13.1 +0.6
KIC Kosan Boka 59.57 94 *e*P P 03 44 13.9 -0.4
comp=Z,89nm,1.0s,mb5.8
PLCA Paso Flores 59.88 185 P P 03 44 14.9 -0.9
comp=Z,6.1nm,1.0s,mb4.6,baz=347,slow=9.8,SNR=7.5
PLCA LR LR 04 12 49.8
comp=Z,456nm,19.3s,MS4.6,baz=38,slow=39
PLCA Paso Flores 59.88 185 *e*P P 03 44 14.1 -1.7
PLCA pmax pmax
comp=Z,18nm,1.1s
PLCA Paso Flores 59.88 185 *e*P P 03 44 14.1 -1.7
comp=Z,18nm,1.1s,mb5.0
RJF Les Rejaudoux 59.95 48 *e*P P 03 44 15.0 -1.4
comp=Z,9.5nm,0.7s,mb4.6
RJF Les Rejaudoux 59.95 48 *e*P P 03 44 15.0 -1.4
RJF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
RJF Les Rejaudoux 59.95 48 *e*P P 03 44 15.0 -1.4
comp=Z,4.8nm,0.7s,mb4.6
TCF Toulx Ste Croi 60.48 47 *e*P P 03 44 19.3 -0.7
JMIC Jan Mayen 61.23 18 LR LR 04 05 58.6
comp=Z,897nm,19.9s,MS4.9,baz=78,slow=31
SSF Saint Saulge 61.40 46 *e*P P 03 44 26.7 +0.4
SMF Signal de Mont 61.62 47 *e*P P 03 44 28.9 +1.1
LOR Lormes 61.65 46 *e*P P 03 44 27.5 -0.5
comp=Z,12nm,0.8s,mb4.8
LOR Lormes 61.65 46 *e*P P 03 44 27.5 -0.5
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
LOR Lormes 61.65 46 *e*P P 03 44 27.5 -0.5
comp=Z,6.0nm,0.8s,mb4.8
BAIF Baives 62.01 43 *e*P P 03 44 30.5 +0.2
ALE Alert 63.38 0 P P 03 44 37.0 -2.0
comp=Z,61nm,0.9s,mb5.7,SNR=6.5
TOA0 Torodi Ar. Sit 63.72 84 *e*P P 03 44 40.9 -1.4
TORD Torodi Ar. Bea 63.72 84 P P 03 44 41.4 -0.9
comp=Z,3.3nm,0.8s,mb4.4,baz=273,slow=6.9,SNR=23
TORD PKKP 04 05 26.8
comp=Z,0.6nm,1.0s,baz=167,slow=4.5,SNR=3.9
TORD LR LR 04 11 29.2
comp=Z,723nm,18.2s,MS4.9,baz=280,slow=35
TORD PKPPKP 04 13 42.7
comp=Z,2.3nm,1.1s,baz=86,slow=2.0,SNR=7.1
TAM Tamanrasset 65.08 73 *e*P P 03 44 52.3 +1.2
TAM pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TAM Tamanrasset 65.08 73 *e*P P 03 44 52.3 +1.2
comp=Z,6.0nm,0.8s,mb4.7
KEST Kesra 66.32 59 P P 03 44 57.1 -1.7
comp=Z,3.6nm,1.2s,mb4.3,baz=255,slow=12,SNR=2.8
FETA Feichten 66.34 46 ⇑*i*P P 03 44 58.3 -0.5
comp=Z,5.6nm,1.2s,mb4.5
GRA1 Grafenberg Arr 66.54 43 *e*P sP 03 45 11.7 +0.1
comp=Z,4.0nm,1.0s
GRF Grafenberg Arr 66.54 43 *e*P sP 03 45 11.7 +0.1
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
GRF Grafenberg Arr 66.54 43 *e*P sP 03 45 11.7 +0.1
comp=Z,4.0nm,1.0s
NOA NORSAR Array B 66.56 31 LR LR 04 11 09.8
comp=Z,535nm,19.1s,MS4.8,baz=275,slow=33
EGAK Eagle 67.04 333 *e*P P 03 45 01.7 -1.2
comp=Z,11nm,1.0s,mb4.8
NKC Novy Kostel 67.31 43 *e*P sP 03 45 20.1 +3.6
NKC *ex* x 03 45 35.0
CLL Collm 67.60 42 *e*(sP) sP 03 45 17.0 -1.3
CLL Collm 67.60 42 P sP 03 45 21.0 +2.7
HFS Hagfors 67.77 32 LR LR 04 10 37.9
comp=Z,805nm,19.0s,MS5.0,baz=246,slow=32
KHC Kasperske Hory 68.11 44 *e*P sP 03 45 21.9 +0.3
KHC pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KHC Kasperske Hory 68.11 44 *e*P sP 03 45 21.9 +0.3
comp=Z,10nm,0.8s
GERES GERESS Array B 68.21 44 P P 03 45 09.4 -1.2
comp=Z,0.4nm,0.6s,mb3.6,baz=284,slow=7.7,SNR=3.9
BRG Berggiesshubel 68.22 42 *e*P P 03 45 17.2 +6.5
BRG pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
BRG Berggiesshubel 68.22 42 *e*P P 03 45 17.2 +6.5
comp=Z,6.7nm,1.4s,mb4.5
SPITS Spitsbergen Ar 69.50 13 P P 03 45 17.1 -1.1
comp=Z,2.7nm,0.7s,mb4.3,baz=48,slow=2.9,SNR=4.0
SPITS LR LR 04 14 23.1
comp=Z,504nm,19.6s,MS4.8,baz=240,slow=35
UPC Upice 69.56 42 *e*P sP 03 45 34.0 +3.4
DPC Dobruska-Polom 69.77 42 *e*P P 03 45 24.1 +3.8
DPC *ex* x 03 45 35.3
COLA College 69.90 333 *e*P P 03 45 19.2 -1.6
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
COLA College 69.90 333 *e*P P 03 45 19.2 -1.6
comp=Z,7.0nm,0.8s,mb4.6
VAE Valguarnera 70.10 56 LR LR 04 10 27.0
comp=Z,411nm,21.8s,MS4.6,baz=165,slow=31
MCK McKinley 70.43 332 *e*P P 03 45 24.0 -0.1
MCK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MCK McKinley 70.43 332 *e*P P 03 45 24.0 -0.1
comp=Z,6.0nm,0.8s,mb4.6
EFI East Falkland 70.81 176 *e*P P 03 45 26.2 -0.2
KTH Kantishna Hill 71.33 332 *e*P P 03 45 28.2 -1.4
comp=Z,30nm,1.2s,mb5.1
PKSM Moragy 71.84 47 ⇓*i*P P 03 45 31.9 -1.1
PKSM Moragy 71.84 47 ⇓P P 03 45 31.9 -1.1
ARCES ARCESS Array B 72.24 22 P P 03 45 33.9 -1.0
comp=Z,1.2nm,0.5s,mb4.0,baz=275,slow=5.7,SNR=7.9
ARCES LR LR 04 11 45.2
comp=Z,280nm,20.6s,MS4.5,baz=233,slow=31
ARCES ARCESS Array B 72.24 22 P P 03 45 33.9 -1.0
ARCES LR LR 04 11 45.2
PSZ Piszkesteto 72.42 45 *e*P P 03 45 35.7 -0.7
PSZ pmax pmax
comp=Z,38nm,1.8s,mb5.0
PSZ Piszkesteto 72.42 45 *e*P P 03 45 35.7 -0.7
comp=Z,38nm,1.8s,mb5.0
SVW2 Sparrevohn 73.83 330 *e*P P 03 45 43.4 -1.1
KWP Kalwaria 73.95 43 *e*P P 03 45 44.2 -1.2
KWP pmax pmax
comp=Z,17nm,1.0s,mb4.9
KWP Kalwaria 73.95 43 *e*P P 03 45 44.2 -1.3
comp=Z,17nm,1.0s,mb4.9
BZS Buzias 73.99 47 ⇑*i*P P 03 45 47.6 +1.8
DRGR 74.51 45 ⇑*i*P P 03 45 47.7 -1.0
DRGR 74.51 45 ⇓P P 03 45 50.6 +1.9
APA Apatity 75.47 23 ⇓*e*P P 03 45 58.0 +4.1
APA pmax pmax
comp=Z,51nm,1.5s,mb5.2
APA MLR MLR
comp=Z,2μm,26.0s,MS5.2
BURAR Bucovina Array 76.00 44 ⇑*i*P P 03 46 00.2 +2.9
VOIR 76.39 46 ⇑*i*P P 03 46 08.4 +8.8
VOIR 76.39 46 ⇓P P 03 46 02.2 +2.7
MLR Muntele Rosu 76.99 46 LR LR 04 14 29.8
comp=Z,406nm,18.3s,MS4.8,baz=273,slow=32
AKASG Malin Array Be 77.80 40 P P 03 46 09.8 +2.4
comp=Z,0.2nm,0.3s,baz=313,slow=5.1,SNR=3.8
AKASG LR LR 04 15 44.0
comp=Z,631nm,19.6s,baz=285,slow=32
IDI Anoyia 78.82 56 LR LR 04 17 33.6
comp=Z,228nm,18.4s,MS4.5,baz=29,slow=33
OBN Obninsk 80.69 35 ⇑*e*P P 03 46 15.8 -7.3
OBN *e*S S 03 56 18.7 -10
OBN *e*SS SS 04 01 42.2 +0.7
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PMSA Palmer Station 83.71 180 *e*P P 03 46 37.7 -0.7
comp=Z,43nm,0.9s,mb5.6
BR131 Keskin Array S 84.11 50 *e*P P 03 46 40.4 -0.8
comp=Z,6.4nm,1.0s,mb4.7
BRTR Keskin Array B 84.11 50 P P 03 46 40.7 -0.6
comp=Z,1.5nm,1.0s,mb4.1,baz=265,slow=7.4,SNR=6.2
BRTR LR LR 04 18 42.1
comp=Z,152nm,18.4s,MS4.4,baz=27,slow=32
BILL Bilibino 85.47 343 ⇑*e*P P 03 46 43.8 -3.7
BILL *e*S S 03 57 08.8 -8.1
BILL pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.9
BILL Bilibino 85.47 343 *e*P P 03 46 45.7 -1.8
comp=Z,17nm,1.3s,mb5.0
MMAI Mount Meron Ar 87.81 56 LR LR 04 21 51.0
comp=Z,99nm,20.7s,MS4.2,baz=320,slow=33
MALT Malatya 88.09 50 *e*P P 03 46 59.9 -1.1
MALT pmax pmax
comp=Z,16nm,1.3s,mb5.1
MALT Malatya 88.09 50 *e*P P 03 46 59.9 -1.0
comp=Z,16nm,1.3s,mb5.1
TIXI Tiksi 88.91 356 *e*P P 03 47 01.3 -2.8
TIXI pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
TIXI Tiksi 88.91 356 *e*P P 03 47 02.8 -1.3
comp=Z,2.8nm,0.7s,mb4.7
TSUM Tsumeb 89.24 111 LR LR 04 21 41.0
comp=Z,456nm,19.1s,MS4.9,baz=289,slow=32
TSUM Tsumeb 89.24 111 *e*P P 03 47 06.4 -0.2
comp=Z,5.8nm,1.0s,mb4.9
ASF Jabal al Asfar 89.29 56 P P 03 47 04.4 -2.3
baz=355,slow=4.0
GNI Garni 91.77 46 LR LR 04 25 38.8
comp=Z,124nm,20.0s,MS4.3,baz=125,slow=34
SEY Seymchan 93.11 344 *e*P P 03 47 21.8 -2.0
SUR Sutherland 96.40 122 LR LR 04 23 49.0
comp=Z,384nm,18.1s,MS4.9,baz=108,slow=31
VNA1 Neumayer--Stat 97.70 164 *e*P P 03 47 45.0 +0.6
VNA1 *e* 03 47 49.8
VNA1 *e* 03 47 55.7
VNA3 Neumayer Olymp 97.70 164 *e*P P 03 47 44.6 +0.2
VNA3 *e* 03 47 56.1
VNA3 *e* 03 48 02.3
VNA2 Neumayer--Watz 98.10 164 *e*P P 03 47 46.2 +0.1
VNA2 *e* 03 47 51.6
VNA2 *e* 03 47 57.9
BVAR Borovoye Array 98.25 26 LR LR 04 26 59.2
comp=Z,275nm,21.6s,MS4.7,baz=340,slow=32
SNAA Sanae 99.73 164 *e*P Pdif 03 47 53.5 -0.5
SNAA *e* 03 48 02.5
SNAA Sanae 99.73 164 *e*P Pdif 03 47 53.3 -0.7
SNAA pmax pmax
comp=Z,14nm,1.4s
SNAA Sanae 99.73 164 *e*Pdif Pdif 03 47 53.3 -0.8
comp=Z,14nm,1.4s
KURK Kurchatov 103.26 23 PKKPbc PKKPbc 04 04 00.8 -5.1
comp=Z,0.7nm,0.8s,baz=144,slow=1.8,SNR=4.3
MKAR Makanchi Array 107.87 23 PKKPbc PKKPbc 04 03 49.0 -2.8
comp=Z,1.2nm,0.9s,baz=123,slow=4.5,SNR=5.7
WMQ Urumqi 112.36 21 *e*PDIF Pdif 03 48 51.5 +1.3
WMQ PKP PKiKP 03 52 46.3 +0.1
WMQ PP PP 03 53 36.8 +6.1
WMQ PKS 03 56 27.0
WMQ SKS SKSdf 03 59 53.5 -3.2
WMQ SKKS SKKSac 04 00 31.8 -0.7
WMQ S Sdif 04 01 08.3 -3.0
WMQ SS SS 04 09 11.3 +3.1
WMQ PP PP
comp=Z,23nm,18.0s
WMQ LR LR
comp=N,227nm,24.0s,MS4.8
WMQ LR LR
comp=E,121nm,20.0s,MS4.8
WMQ LR LR
comp=Z,143nm,21.0s,MS4.5
CN2 Changchun 116.62 352 *e*PKP PKPdf 03 52 54.5 +0.1
CN2 *e*PP PP 03 54 05.8 +5.2
CN2 LR LR
comp=N,600nm,18.0s,MS5.3
CN2 LR LR
comp=E,400nm,18.0s,MS5.3
CN2 LR LR
comp=Z,600nm,19.0s,MS5.2
VNDA Vanda 117.42 190 PKP PKPdf 03 52 54.9 0.0
comp=Z,1.2nm,1.0s,baz=195,slow=3.8,SNR=3.0
HHC Hu-ho-hao-te 120.16 3 *e*PKP PKPdf 03 53 01.3 0.0
HHC PP PP 03 54 25.3 +0.3
HHC PKS 03 56 36.0
HHC SKS SKSdf 04 00 08.3 -3.4
HHC PP PP
comp=Z,81nm,5.6s
HHC LR LR
comp=N,273nm,19.0s,MS5.1
HHC LR LR
comp=E,308nm,17.8s,MS5.1
HHC LR LR
comp=Z,604nm,20.2s,MS5.2
BJI Beijing 121.06 359 PKP PKPdf 03 53 03.8 +0.8
BJI PP PP 03 54 33.5 +2.3
BJI LR LR
comp=N,468nm,34.6s
BJI LR LR
comp=E,424nm,27.1s
BJI LR LR
comp=Z,451nm,21.8s
MAW Mawson 121.51 159 PKP PKPdf 03 53 02.5 -0.5
comp=Z,5.2nm,0.8s,baz=172,slow=5.0,SNR=6.6
LZH Lanzhou 123.95 11 *e*PKP PKPdf 03 53 05.0 -3.7
LZH XPKP 03 53 14.0
LZH PP PP 03 54 52.0 +1.1
LZH PP PP
comp=Z,160nm,6.3s
NJ2 Nanjing 128.93 356 *e*PKP PKPdf 03 53 17.5 -0.8
CD2 Chengdu 128.95 13 PKP PKPdf 03 53 18.0 -0.4
CD2 XPKP 03 53 22.5
CD2 PP PP 03 55 29.5 +5.4
CD2 PKS 03 56 53.3
CD2 SKS SKSdf 04 00 24.5 -4.1
CD2 SKKS SKKSac 04 02 16.5 -4.7
CD2 SS SS 04 12 42.3 +1.7
CD2 PP PP
comp=Z,150nm,5.5s
CD2 LR LR
comp=N,470nm,16.2s
CD2 LR LR
comp=Z,720nm,17.4s,MS5.4
GYA Guiyang 133.84 11 *e*PDIF Pdif 03 50 26.5 +0.8
GYA PKP PKPdf 03 53 28.8 +1.0
GYA PP PP 03 56 01.0 +5.3
GYA PKS 03 57 03.8
GYA SKS SKSdf 04 00 37.0 -0.6
GYA SKKS SKKSac 04 02 51.5 +0.1
GYA SS SS 04 13 43.8 +3.5
GYA PP PP
comp=Z,120nm,7.6s
GYA LR LR
comp=N,290nm,21.0s,MS5.0
GYA LR LR
comp=E,180nm,20.1s,MS5.0

GYA					LR	LR			
	comp=Z,200nm,21.0s,MS4.8								
KMI	**Kunming**	**134.27**	**16**		PKP	PKPdf	03 53 30.8	+2.2	
CMAR	**Chiang Mai Arr**	**139.27**	**24**		PKP	PKPdf	03 53 37.9	-0.1	
	comp=Z,0.7nm,0.4s,baz=298,slow=3.8,SNR=6.4								
ARMA	**Armidale**	**145.34**	**244**	*e*	PKP	PKPdf	03 53 48.9	+0.5	
CNB	**Canberra Magne**	**145.95**	**235**	*e*	PKP	PKPdf	03 53 50.5	+1.2	
CAN	**Canberra**	**146.23**	**235**	*e*	PKP2	PKPdf	03 53 50.6	+0.8	
PMG	**Port Moresby**	**147.70**	**283**		PKPbc	PKPbc	03 53 55.8	+0.1	
	comp=Z,32nm,0.9s,baz=360,slow=4.5,SNR=6.6								
PMG	**Port Moresby**	**147.70**	**283**	*e*	PKPbc	PKPbc	03 53 55.6	-0.1	
TOO	**Toolangi**	**147.96**	**229**	*e*	PKP	PKPbc	03 53 55.5	-0.2	
CTA	**Charters Tower**	**150.87**	**263**		PKPbc	PKPbc	03 54 02.5	-1.0	
	comp=Z,24nm,1.1s,baz=170,slow=2.2,SNR=7.1								
CTA					PKPab	PKPab	03 54 09.5	-1.3	
	comp=Z,13nm,0.8s,baz=39,slow=4.6,SNR=6.0								
CTA	**Charters Tower**	**150.87**	**263**		PKPbc	PKPbc	03 54 02.5	-1.0	
CTA					PKPab	PKPab	03 54 09.5	-1.3	
CTAO	**Charters Tower**	**150.87**	**263**	*e*	PKIKP	PKPbc	03 54 03.3	-0.1	
COEN	**Coen**	**152.82**	**277**	*e*	PKPbc	PKPbc	03 54 07.4	-0.6	
PSI	**Prapat**	**152.83**	**38**		PKPbc	PKPbc	03 54 06.6	-1.5	
	comp=Z,7.4nm,1.0s,baz=134,slow=4.6,SNR=5.0								
STKA	**Stephens Creek**	**153.22**	**237**		PKP	PKPdf	03 54 01.1	+0.1	
	comp=Z,1.9nm,0.8s,baz=14,slow=1.0,SNR=3.3								
STKA					PKPbc	PKPbc	03 54 08.0	-0.4	
	comp=Z,6.2nm,0.8s,baz=45,slow=2.2,SNR=13								
STKA	**Stephens Creek**	**153.22**	**237**	*e*	PKP	PKPbc	03 54 07.9	-0.5	
	comp=Z,4.9nm,0.8s								
STKA	**Stephens Creek**	**153.22**	**237**		PKP	PKPdf	03 54 01.1	+0.1	
STKA				*e*	PKPbc	PKPbc	03 54 07.7	-0.7	
STKA					PKPbc	PKPbc	03 54 08.0	-0.4	
WRAB	**Tennant Creek**	**162.05**	**265**	*e*	PKIKP	PKPdf	03 54 10.9	-1.3	
WRAB				*e*			03 54 57.8		
WRA	**Warramunga Arr**	**162.06**	**264**		PKP	PKPdf	03 54 11.5	-0.8	
	comp=Z,4.9nm,1.0s,baz=56,slow=1.0,SNR=16								
WRA					PKPab	PKPab	03 54 58.1	-0.7	
	comp=Z,5.8nm,0.8s,baz=83,slow=4.2,SNR=12								
ASAR	**Alice Springs**	**162.14**	**252**		PKP	PKPdf	03 54 10.5	-1.7	
	comp=Z,3.1nm,0.9s,baz=117,slow=1.7,SNR=18								
ASAR					PKPab	PKPab	03 54 58.2	-0.8	
	comp=Z,6.8nm,0.9s,baz=112,slow=3.8,SNR=16								
FORT	**Forrest**	**163.70**	**223**	*e*	PKP	PKPab	03 55 04.6	-0.9	
	comp=Z,14nm,0.7s								
FORT	**Forrest**	**163.70**	**223**	*e*	PKPab	PKPab	03 55 04.2	-1.3	

*PRU **28** 03:49:46.9,5007N×1918E,h0km*

WAR 28 03:49:46.5,5010N×1922E,ML2.7,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.39**	**72**	*e*Pg	Pg	03 49 54.2	+0.2
OJC				*e*Sg	Sg	03 50 00.0	+0.9
RAC	**Raciborz**	**0.66**	**269**	*e*Pg	Pg	03 49 59.7	+0.6
RAC				*e*Sg	Sg	03 50 08.7	+1.1
OKC	**Ostrava-Krasne**	**0.74**	**250**	*e*PG	Pg	03 50 00.0	-0.6
OKC				*e*SG	Sg	03 50 09.0	-1.2
	comp=Z,47nm,0.5s						
NIE	**Niedzica**	**0.99**	**133**	*e*Pg	Pg	03 50 05.4	0.0
NIE				*e*Sg	Sg	03 50 21.0	+2.9
STHS	**Stebnicka Huta**	**1.48**	**117**	*e*PN	Pn	03 50 15.6	+1.2
STHS				*e*SN	Sn	03 50 36.6	+2.2
KOLL	**Kolacno**	**1.61**	**200**	*e*SN	Sn	03 50 37.6	0.0
VYHS	**Vyhne**	**1.63**	**189**	*e*PN	Pn	03 50 15.4	-1.0
VYHS				*e*SN	Sn	03 50 36.8	-1.2
DPC	**Dobruska-Polom**	**1.88**	**279**	*e*PG	Pg	03 50 18.6	-3.8
DPC				*e*SG	Sg	03 50 42.9	-3.8
	comp=Z,27nm,0.6s						
CRVS	**Cervenica-Dubn**	**1.89**	**128**	*e*PN	Pn	03 50 22.3	+2.3
CRVS				*e*SN	Sn	03 50 47.0	+2.5
UPC	**Upice**	**2.09**	**282**	*e*SG	Sg	03 50 49.7	-4.0
UPC	**Upice**	**2.09**	**282**	*e*Sg	Sg	03 50 49.7	-4.0
ZST	**Bratislava**	**2.36**	**217**	*e*PG	Pg	03 50 32.9	+1.3
ZST				*e*		03 51 07.4	
PRU	**Pruhonice**	**3.02**	**270**	*e*SG	Sg	03 51 18.4	-4.9
	comp=Z,40nm,1.5s						
BRG	**Berggiesshubel**	**3.46**	**285**	Sg	Sg	03 51 37.3	-0.1
KHC	**Kasperske Hory**	**3.79**	**257**	*e*PG	Pg	03 51 00.0	+0.9
KHC				*e*SG	Sg	03 51 43.9	-4.3
	comp=Z,10nm,0.8s						
KHC	**Kasperske Hory**	**3.79**	**257**	*e*Sg	Sg	03 51 43.9	-4.3
CLL	**Collm**	**4.13**	**289**	*e*Sg	Sg	03 52 00.0	+0.9
CLL	**Collm**	**4.13**	**289**	*e*SG	Sg	03 52 00.0	+0.9
MOX	**Moxa**	**4.89**	**279**	*e*SG	Sg	03 52 21.1	-2.5

IDC 28 03:49:47.7±0.8,673N×7290W,h162km±10km,mb2.9/1, mb1 3.3/4,mb1mx3.0/22,mbtmp3.2/4,MS3.2/1,Ms1 3.2/1, ms1mx3.1/5,Error ellipse: s-maj=47.0km s-min=7.8km az=132.0,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.34**	**218**	P	Pn	03 50 29.1	+1.6
	4.3nm,0.3s,baz=267,slow=15,SNR=27						
ROSC				S	Sn	03 50 59.3	+0.9
	14nm,0.3s,baz=254,slow=23,SNR=9.2						
SDV	**Santo Domingo**	**3.10**	**46**	P	Pn	03 50 38.4	+1.6
	6.6nm,0.3s,baz=223,slow=1.8,SNR=61						
SDV				S	Sn	03 51 15.4	+0.5
	6.1nm,0.3s,baz=264,slow=23,SNR=11						
SDV				LR	LR	03 51 54.9	
	comp=Z,381nm,18.5s,baz=57,slow=41						
PCRV	**Puerto La Cruz**	**8.86**	**67**	P	Pn	03 51 52.0	-0.5
	0.6nm,0.3s,baz=329,slow=5.9,SNR=2.6						
YKA	**Yellowknife Ar**	**63.42**	**340**	P	P	03 59 59.5	-0.2
	0.2nm,0.5s,baz=133,slow=6.6,SNR=8.1						
ASAR	**Alice Springs**	**149.24**	**234**	PKPbc	PKPbc	04 09 17.7	-0.2
	0.1nm,0.3s,baz=101,slow=3.9,SNR=3.6						
WRA	**Warramunga Arr**	**150.49**	**241**	PKPbc	PKPbc	04 09 20.8	-0.3
	0.3nm,0.5s,baz=107,slow=2.2,SNR=5.1						

*IDC **28** 03:53:15.8±10.0,731S×12841E,h102km±102km,mb3.7/5, mb1 3.8/7,mb1mx3.6/16,mbtmp3.7/7,ML4.2/2,Error ellipse: s-maj=61.8km s-min=37.3km az=63.0*

*ISCJB **28** 03:53:17.6±3.4,75S±0.1×1283E±0.2,h141km±34km, mb3.8/5,Error ellipse: s-maj=39.6km s-min=14.8km az=166.1*

*NEIC **28** 03:53:18.1±3.0,743S×12828E,h123km±30km,mb4.0/2, Error ellipse: s-maj=35.8km s-min=19.6km az=75.0*

ISC 28 03:53:23.0±2.6,78S±01×1283E±02,h186km±26km,n15, σ0§83/16,mb3.8/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.38**	**141**	*e*Pn	x	03 54 54.6	
	62nm,0.2s						
KAKA				*e*Sn	x	03 56 03.0	
WRAB	**Tennant Creek**	**13.44**	**155**	*e*Pn	**Pn**	**03 56 26.3**	**-0.2**
WRAB				*e*P		03 56 32.3	
WRAB				*e*Sn	**Sn**	**03 58 50.2**	**-6.0**
WRA	**Warramunga Arr**	**13.44**	**155**	P	**Pn**	**03 56 26.0**	**-0.6**
	0.9nm,0.3s,baz=340,slow=11,SNR=8.1						
WRA				S	**Sn**	**03 58 48.7**	**-7.6**
	3.1nm,0.3s,baz=333,slow=23,SNR=11						
COEN	**Coen**	**15.84**	**114**	*e*P	**Pn**	**03 56 56.7**	**+0.6**
	6.6nm,0.6s						
ASAR	**Alice Springs**	**16.70**	**162**	P	**Pn**	**03 57 10.3**	**+3.9**
	1.4nm,0.3s,baz=337,slow=10,SNR=89						
ASAR				S	**S**	**04 00 10.4**	**-0.1**
	0.8nm,0.3s,baz=318,slow=16,SNR=8.4						
STKA	**Stephens Creek**	**27.00**	**154**	P	**P**	**03 58 51.2**	**+3.5**
	1.1nm,0.4s,mb3.8,baz=337,slow=5.8,SNR=4.6						
STKA	**Stephens Creek**	**27.00**	**154**	P	**P**	**03 58 51.2**	**+3.5**
PETK	**Petropavlovsk-**	**65.58**	**19**	P	**P**	**04 03 45.8**	**-0.8**
	1.6nm,0.6s,mb4.0,baz=200,slow=3.0,SNR=5.7						
MK31	**Makanchi Array**	**67.96**	**328**	*e*P	**P**	**04 04 02.9**	**+1.1**
MKAR	**Makanchi Array**	**67.96**	**328**	P	**P**	**04 04 01.9**	**+0.1**
	0.7nm,0.5s,mb3.6,baz=116,slow=7.2,SNR=12						
MKAR	**Makanchi Array**	**67.96**	**328**	P	**P**	**04 04 01.9**	**+0.1**
ZALV	**Zalesovo Beam**	**71.54**	**335**	P	**P**	**04 04 22.6**	**-0.8**
	0.5nm,0.4s,mb3.6,baz=96,slow=9.3,SNR=3.7						
KURK	**Kurchatov**	**72.31**	**329**	P	**P**	**04 04 28.5**	**+0.4**
	1.3nm,0.6s,mb3.8,baz=131,slow=5.2,SNR=7.5						
KURK	**Kurchatov**	**72.31**	**329**	*e*P	**P**	**04 04 28.0**	**-0.2**
	1.9nm,0.7s,mb3.9						
TOA0	**Torodi Ar. Sit**	**127.31**	**281**	*e*PKPdf	PKPdf	04 12 10.0	+3.5

*IDC **28** 04:05:28.8±1.4,4440N×1043E,h0km,mb3.4/2,mb1 3.7/6, mb1mx3.6/24,mbtmp3.5/6,ML3.9/4,MS3.9/1,Ms1 3.9/1,*

ms1mx2.9/28,Error ellipse: s-maj=36.6km s-min=16.2km az=126.0

*ISCJB **28** 04:05:30.6±0.2,4459N×002×1026E±002,h10km,mb3.9/5, Error ellipse: s-maj=2.7km s-min=1.7km az=161.2*

ISC 28 04:05:32.2±0.2,4458N±002×1028E±002,h10km,n256, σ0§95/293,mb3.9/5,18C-17D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.42**	**170**	*e*Pg	**Pg**	**04 05 40.2**	**-0.3**
VLC				*e*Sg	**Sg**	**04 05 47.9**	**+1.8**
CGRP	**Cima Grappa**	**1.69**	**39**	↑*e*Pn	**Pn**	**04 06 01.1**	**-0.7**
CGRP	**Cima Grappa**	**1.69**	**39**	*e*Pn	**Pn**	**04 06 01.0**	**-0.7**
MTLO	**Montello**	**1.78**	**45**	↑*i*Pn	**Pn**	**04 06 02.7**	**-0.4**
VARN	**Col Varnada, M**	**1.91**	**42**	↓*e*Pn	**Pn**	**04 06 04.4**	**-0.5**
TUE	**Stuetta**	**2.01**	**341**	*e*Pn	**Pn**	**04 06 06.6**	**+0.5**
SAOF	**Saorge**	**2.05**	**254**	Pn	**Pn**	**04 06 05.9**	**-0.8**
CAE	**Caneva**	**2.09**	**46**	↑*e*Pn	**Pn**	**04 06 06.5**	**-0.7**
AUTN	**L'Aution**	**2.13**	**255**	Pn	**Pn**	**04 06 07.7**	**-0.1**
SBF	**Sospel**	**2.17**	**252**	*e*Pn	**Pn**	**04 06 07.2**	**-1.1**
LUCF	**Luceram**	**2.22**	**253**	Pn	**Pn**	**04 06 08.3**	**-0.7**
DAVOX	**Davos/Dischmat**	**2.22**	**353**	Pn	**Pn**	**04 06 10.7**	**+1.6**
	25nm,0.3s,baz=172,slow=11,SNR=347						
DAVOX	**Davos/Dischmat**	**2.22**	**353**	Pn	**Pn**	**04 06 10.7**	**+1.6**
CSO	**Casso**	**2.22**	**40**	↓*e*Pn	**Pn**	**04 06 08.7**	**-0.4**
PGF	**Pioggiola**	**2.23**	**205**	*e*Pn	**Pn**	**04 06 07.7**	**-1.5**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**04 06 32.9**	**-3.9**
	227nm,0.4s,SNR=1.0						
PGF	**Pioggiola**	**2.23**	**205**	*e*Pn	**Pn**	**04 06 07.7**	**-1.5**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**04 06 32.9**	**-3.9**
	114nm,0.4s,SNR=1.0						
TOUF	**Mont Tournerai**	**2.25**	**257**	Pn	**Pn**	**04 06 09.3**	**-0.2**
REVF	**Revere**	**2.26**	**249**	Pn	**Pn**	**04 06 08.3**	**-1.3**
MLNI	**Malnisio**	**2.27**	**45**	↑*e*Pn	**Pn**	**04 06 09.1**	**-0.6**
DAVOS	**Davos**	**2.29**	**352**	P	**Pn**	**04 06 10.7**	**+0.7**
MVIF	**Mont Vial**	**2.35**	**254**	Pn	**Pn**	**04 06 10.6**	**-0.2**
OG22	**Abries**	**2.39**	**277**	Pn	**Pn**	**04 06 12.8**	**+1.4**
TLI	**Talmassons**	**2.40**	**55**	↓*i*Pn	**Pn**	**04 06 11.0**	**-0.5**
FETA	**Feichten**	**2.46**	**7**	*e*Pn	**Pn**	**04 06 13.9**	**+1.5**
	SNR=100						
SURF	**Saint Ours**	**2.48**	**269**	Pn	**Pn**	**04 06 12.6**	**-0.1**
SURF	**Saint Ours**	**2.48**	**269**	Pn	**Pn**	**04 06 12.7**	**0.0**
SURF	**Saint Ours**	**2.48**	**269**	Pn	**Pn**	**04 06 12.7**	**0.0**
MBDF	**Montbardon**	**2.51**	**275**	*e*Pn	**Pn**	**04 06 12.4**	**-0.6**
	SNR=1.0						
MBDF	**Montbardon**	**2.51**	**275**	*e*Pn	**Pn**	**04 06 12.4**	**-0.6**
	SNR=1.0						
MPRI	**Monte Prat**	**2.53**	**48**	↓*e*Pn	**Pn**	**04 06 12.9**	**-0.5**
CSMI	**Casera Mimoias**	**2.55**	**40**	↓*e*Pn	**Pn**	**04 06 14.0**	**+0.4**
CALN	**Calern**	**2.58**	**253**	Pn	**Pn**	**04 06 13.6**	**-0.4**
BUA	**Buia**	**2.59**	**50**	↓*i*Pn	**Pn**	**04 06 13.7**	**-0.4**
BNI	**Bardonecchia**	**2.61**	**282**	*e*Pn	**Pn**	**04 06 15.8**	**+1.4**
BNI	**Bardonecchia**	**2.61**	**282**	*e*Pn	**Pn**	**04 06 15.8**	**+1.4**
BOO	**Bordano**	**2.64**	**48**	*e*Pn	**Pn**	**04 06 14.1**	**-0.7**
SCE	**Schlegeis**	**2.66**	**22**	↑*i*Pn	**Pn**	**04 06 15.4**	**+0.3**
BAD	**Bernadia**	**2.67**	**50**	↑*e*Pn	**Pn**	**04 06 14.4**	**-0.8**
LPG	**La Plagne**	**2.67**	**291**	*e*Pn	**Pn**	**04 06 15.2**	**0.0**
	SNR=1.0						
LPG	**La Plagne**	**2.67**	**291**	*e*Pn	**Pn**	**04 06 15.2**	**0.0**
	SNR=1.0						
ABTA	**Abfaltersbach**	**2.67**	**35**	*e*Pn	**Pn**	**04 06 16.3**	**+1.0**
	SNR=36						
COLI	**Coloredo**	**2.68**	**53**	↑*e*Pn	**Pn**	**04 06 14.8**	**-0.6**
LPL	**La Plagne**	**2.69**	**292**	*e*Pn	**Pn**	**04 06 15.7**	**+0.2**
	SNR=1.0						
LPL	**La Plagne**	**2.69**	**292**	*e*Pn	**Pn**	**04 06 15.7**	**+0.2**
	SNR=1.0						
DAVA	**Damuels**	**2.73**	**354**	*e*Pn	**Pn**	**04 06 18.0**	**+2.0**
	SNR=262						
ZOU	**Zoufplan**	**2.74**	**43**	↓*e*Pn	**Pn**	**04 06 16.3**	**+0.2**
FRF	**La Foret Royal**	**2.81**	**250**	*e*Sn	**Sn**	**04 06 50.2**	**-0.9**
	215nm,0.3s,SNR=1.0						
FRF				*e*Sn	**Sn**	**04 06 50.2**	**-0.9**
FRF	**La Foret Royal**	**2.81**	**250**	*e*Pn	**Pn**	**04 06 15.7**	**-1.5**
FRF	**La Foret Royal**	**2.81**	**250**	*e*Sn	**Sn**	**04 06 50.2**	**-0.9**
	430nm,0.3s,SNR=1.0						
SKDS	**Skadanscina**	**2.82**	**69**	*i*Pn	**Pn**	**04 06 16.2**	**-1.1**
RSL	**Roselend**	**2.82**	**295**	Pn	**Pn**	**04 06 19.7**	**+2.4**
PLRO	**Paularo**	**2.82**	**45**	↓*e*Pn	**Pn**	**04 06 17.6**	**+0.3**
MOTA	**Moosalm**	**2.83**	**11**	↑*e*Pn	**Pn**	**04 06 19.7**	**+2.3**
	SNR=83						
WTTA	**Wattenberg**	**2.85**	**19**	↑*e*Pn	**Pn**	**04 06 18.8**	**+1.1**
	SNR=62						
DRE	**Drenchia**	**2.86**	**55**	↑*e*Pn	**Pn**	**04 06 17.2**	**-0.6**
WATA	**Walderalm**	**2.90**	**18**	↑*i*Pn	**Pn**	**04 06 19.3**	**+0.8**
	SNR=233						
RETA	**Reutte**	**2.93**	**6**	*i*Pn	**Pn**	**04 06 20.5**	**+1.6**
	SNR=51						
VOY	**Vojsko**	**2.93**	**59**	*e*Pn	**Pn**	**04 06 18.1**	**-0.8**
LSR	**Lussari**	**2.97**	**49**	↑*e*Pn	**Pn**	**04 06 19.4**	**+0.1**
LMR	**La Mourre**	**3.00**	**247**	*e*Sn	**Sn**	**04 06 53.3**	**-2.3**
	589nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**3.00**	**247**	*e*Sn	**Sn**	**04 06 53.3**	**-2.3**
	295nm,0.4s,SNR=1.0						
LMR				*e*Sn	**Sn**	**04 06 53.3**	**-2.3**
LMR	**La Mourre**	**3.00**	**247**	*e*Pn	**Pn**	**04 06 18.2**	**-1.5**
OSPF	**L'Ospedale**	**3.02**	**196**	Pn	**Pn**	**04 06 19.4**	**-0.6**
OG25	**Le Caire**	**3.02**	**268**	Pn	**Pn**	**04 06 21.4**	**+1.3**
GDM	**Grand'Maison**	**3.03**	**283**	Pn	**Pn**	**04 06 23.6**	**+3.5**
OG01	**Vacheresse**	**3.08**	**306**	Pn	**Pn**	**04 06 22.4**	**+1.5**
MYKA	**Terra Mystica**	**3.13**	**48**	↑*i*Pn	**Pn**	**04 06 21.6**	**+0.1**
ORIF	**Oris-en-Rattie**	**3.16**	**278**	*e*Pn	**Pn**	**04 06 23.1**	**+1.2**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.16**	**278**	*e*Pn	**Pn**	**04 06 23.1**	**+1.2**
	SNR=1.0						
AQU	**L'Aquila**	**3.18**	**133**	*e*Pn	**Pn**	**04 06 24.6**	**+2.4**
AQU	**L'Aquila**	**3.18**	**133**	*e*Pn	**Pn**	**04 06 24.6**	**+2.4**
TAVF	**Tavernes**	**3.19**	**254**	Pn	**Pn**	**04 06 22.2**	**-0.2**
STOF	**St-Etienne Org**	**3.19**	**261**	Pn	**Pn**	**04 06 23.7**	**+1.3**
NVLJ	**Novalja**	**3.28**	**89**	*e*Pn	**Pn**	**04 06 23.1**	**-0.5**
GRN	**Grenoble**	**3.29**	**283**	Pn	**Pn**	**04 06 25.6**	**+1.8**
GRN	**Grenoble**	**3.29**	**283**	Pn	**Pn**	**04 06 25.8**	**+2.0**
KBA	**Koelnbreinsper**	**3.29**	**39**	↑*i*Pn	**Pn**	**04 06 24.2**	**+0.4**
	SNR=29						
LJU	**Ljubljana**	**3.33**	**62**	*i*Pn	**Pn**	**04 06 24.4**	**+0.1**
VILF	**Villemus**	**3.36**	**259**	Pn	**Pn**	**04 06 25.0**	**+0.2**
SMRF	**Simiane la Rot**	**3.43**	**262**	*e*Pn	**Pn**	**04 06 25.8**	**+0.1**
BBS	**Basel-Blauen**	**3.48**	**327**	Pn	**Pn**	**04 06 26.6**	**+0.3**
BERF	**Bertagne**	**3.55**	**251**	Pn	**Pn**	**04 06 26.8**	**-0.5**
OCF	**Saint Nazaire**	**3.56**	**272**	Pn	**Pn**	**04 06 28.9**	**+1.4**
OG26	**St.-Nazaire-De**	**3.56**	**272**	Pn	**Pn**	**04 06 28.9**	**+1.4**
OBKA	**Obir**	**3.57**	**56**	*i*Pn	**Pn**	**04 06 27.8**	**+0.3**
	SNR=11						
CABF	**La Chapelle**	**3.58**	**306**	*e*Pn	**Pn**	**04 06 28.3**	**+0.6**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**04 07 10.6**	**+0.6**
	219nm,0.5s,SNR=1.0						
CABF	**La Chapelle**	**3.58**	**306**	*e*Pn	**Pn**	**04 06 28.3**	**+0.6**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**04 07 10.6**	**+0.6**
	110nm,0.5s,SNR=1.0						
BGLD	**Berchtesgaden**	**3.62**	**31**	↑*i*Pn	**Pn**	**04 06 29.5**	**+1.3**
BOJS	**Bojanci**	**3.64**	**74**	*i*Pn	**Pn**	**04 06 28.3**	**-0.3**
TREF	**Trevaresse**	**3.66**	**257**	Pn	**Pn**	**04 06 28.5**	**-0.3**
FELD	**Feldberg im Sc**	**3.66**	**335**	Pn	**Pn**	**04 06 29.3**	**+0.5**
LOMF	**Lomont**	**3.67**	**320**	Pn	**Pn**	**04 06 29.0**	**0.0**
GELF	**Grande-Etoile**	**3.70**	**253**	Pn	**Pn**	**04 06 29.2**	**-0.2**
OG05	**Jujurieux**	**3.71**	**295**	Pn	**Pn**	**04 06 30.5**	**+1.0**
PRAF	**Pradon**	**3.76**	**260**	Pn	**Pn**	**04 06 30.0**	**-0.2**
MOF	**Molkenrain**	**3.94**	**327**	Pn	**Pn**	**04 06 32.6**	**-0.1**
SOKA	**Soboth**	**3.94**	**56**	↓*i*Pn	**Pn**	**04 06 32.8**	**+0.1**
PERS	**Pernice**	**3.97**	**57**	*i*Pn	**Pn**	**04 06 33.2**	**+0.1**
PERS	**Pernice**	**3.97**	**57**	*i*Pn	**Pn**	**04 06 33.2**	**+0.2**
BFO	**Black Forest**	**3.99**	**341**	*e*Pn	**Pn**	**04 06 33.4**	**0.0**
VIVF	**Saint-Julien-l**	**4.01**	**276**	*e*Pn	**Pn**	**04 06 33.8**	**+0.2**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**04 07 20.5**	**-0.1**
	112nm,0.5s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.01**	**276**	*e*Pn	**Pn**	**04 06 33.8**	**+0.2**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**04 07 20.5**	**-0.1**
	56nm,0.5s,SNR=1.0						
HINF	**Hinteralfeld**	**4.02**	**325**	*e*Pn	**Pn**	**04 06 33.8**	**0.0**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**04 07 21.0**	**+0.1**
	302nm,0.4s,SNR=1.0						
HINF	**Hinteralfeld**	**4.02**	**325**	*e*Pn	**Pn**	**04 06 33.8**	**0.0**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**04 07 21.0**	**+0.1**
	151nm,0.4s,SNR=1.0						
SSB	**Saint Sauveur**	**4.14**	**282**	Pn	**Pn**	**04 06 35.5**	**+0.1**
SSB	**Saint Sauveur**	**4.14**	**282**	*e*Pn	**Pn**	**04 06 35.2**	**-0.2**
ECH	**Echery**	**4.23**	**330**	*e*P	**Pn**	**04 06 35.9**	**-0.8**
ECH				*e*	**Sn**	**04 07 22.3**	**-3.9**
ECH	**Echery**	**4.23**	**330**	Pn	**Pn**	**04 06 36.6**	**-0.1**
ECH				*e*Sn	**Sn**	**04 07 22.3**	**-3.8**
ECH	**Echery**	**4.23**	**330**	*e*Pn	**Pn**	**04 06 35.9**	**-0.8**
STU	**Stuttgart**	**4.26**	**350**	*e*Pn	**Pn**	**04 06 36.5**	**-0.7**
MOA	**Molln**	**4.28**	**39**	*i*Pn	**Pn**	**04 06 38.2**	**+0.8**
	SNR=37						
CDF	**Champ du Feu**	**4.36**	**333**	*e*Pn	**Pn**	**04 06 37.9**	**-0.6**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**04 07 29.3**	**0.0**
	287nm,0.4s						
CDF	**Champ du Feu**	**4.36**	**333**	*e*Pn	**Pn**	**04 06 37.9**	**-0.6**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**04 07 29.3**	**0.0**
	143nm,0.4s						
HAU	**Haudompre**	**4.38**	**323**	*e*Pn	**Pn**	**04 06 38.6**	**-0.1**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**04 07 29.8**	**0.0**
	391nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**4.38**	**323**	*e*Pn	**Pn**	**04 06 38.6**	**-0.1**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**04 07 29.8**	**0.0**
	196nm,0.4s,SNR=1.0						
ARSA	**Arzberg**	**4.53**	**52**	↑*i*Pn	**Pn**	**04 06 40.2**	**-0.6**
	SNR=33						
LASF	**Ste Croix**	**4.64**	**266**	*e*Pn	**Pn**	**04 06 41.5**	**-0.8**
	SNR=1.0						
LASF	**Ste Croix**	**4.64**	**266**	*e*Pn	**Pn**	**04 06 41.5**	**-0.8**
	SNR=1.0						
THEF	**They Montfort**	**4.71**	**322**	Pn	**Pn**	**04 06 43.5**	**+0.3**
LANF	**Langenberg**	**4.72**	**340**	Pn	**Pn**	**04 06 43.1**	**-0.3**
COLF	**Collangettes**	**4.76**	**284**	Pn	**Pn**	**04 06 44.5**	**+0.5**
GEC2	**GERESS Array S**	**4.87**	**28**	*e*Pn	**Pn**	**04 06 44.9**	**-0.6**
GERES	**GERESS Array B**	**4.87**	**28**	Pn	**Pn**	**04 06 45.2**	**-0.3**
	3.4nm,0.3s,baz=204,slow=13,SNR=320						
GERES	**GERESS Array B**	**4.87**	**28**	P	**Pn**	**04 06 45.2**	**-0.3**
GERES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
SMF	**Signal de Mont**	**4.97**	**297**	*e*Pn	**Pn**	**04 06 46.7**	**-0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**04 07 42.7**	**-1.6**
	comp=Z,249nm,0.6s						
SMF	**Signal de Mont**	**4.97**	**297**	*e*Pn	**Pn**	**04 06 46.7**	**-0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**04 07 42.7**	**-1.6**
	comp=Z,125nm,

CLL	**Collm**	**6.98**	**14**	*i* Pn		**Pn**	**04 07 13.0**	**-1.4**
DPC	**Dobruska-Polom**	**7.08**	**33**	*e*PN		**Pn**	**04 07 14.6**	**-1.1**
VYHS	**Vyhne**	**7.08**	**53**	*e*PN		**Pn**	**04 07 15.1**	**-0.7**
VYHS	**Vyhne**	**7.08**	**53**	*e*P		**Pn**	**04 07 15.1**	**-0.7**
VYHS	**Vyhne**	**7.08**	**53**	*e*Pn		**Pn**	**04 07 15.1**	**-0.7**
UPC	**Upice**	**7.09**	**31**	*e*PN		**Pn**	**04 07 15.3**	**-0.6**
ETOS	**Mallorca**	**7.34**	**232**	P		**Pn**	**04 07 19.7**	**+0.3**
	comp=Z,9.0nm,0.3s,SNR=7.9							
ETOS	**Mallorca**	**7.34**	**232**	P		**Pn**	**04 07 19.7**	**+0.3**
EPF	**Esparros**	**7.36**	**261**	*e*Pn		**Pn**	**04 07 19.1**	**-0.5**
PSZ	**Piszkesteto**	**7.45**	**60**	*e*P		**Pn**	**04 07 22.6**	**+1.7**
PSZ					pmax	pmax		
	comp=Z,18nm,0.8s							
PSZ	**Piszkesteto**	**7.45**	**60**	⇑*i*P		**Pn**	**04 07 20.6**	**-0.3**
PSZ	**Piszkesteto**	**7.45**	**60**	*e*Pn		**Pn**	**04 07 22.5**	**+1.6**
	comp=Z,18nm,0.8s							
PSZ	**Piszkesteto**	**7.45**	**60**	*e*Pn		**Pn**	**04 07 22.6**	**+1.6**
	comp=Z,18nm,0.8s							
KSP	**Ksiaz**	**7.46**	**31**	*e*Pn		**Pn**	**04 07 20.5**	**-0.5**
EPOB	**Poblet**	**7.48**	**248**	P		**Pn**	**04 07 22.3**	**+1.0**
	comp=Z,1.0nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**7.48**	**248**	P		**Pn**	**04 07 22.3**	**+1.0**
EBIE	**Bielsa**	**7.60**	**259**	P		**Pn**	**04 07 24.1**	**+1.2**
	comp=Z,2.6nm,0.3s,SNR=7.9							
EBIE	**Bielsa**	**7.60**	**259**	P		**Pn**	**04 07 24.1**	**+1.2**
ETSF	**Etsaut**	**8.03**	**262**	*e*Pn		**Pn**	**04 07 28.4**	**-0.4**
BZS	**Buzias**	**8.09**	**79**	⇓*i*P		**Pn**	**04 07 31.1**	**+1.5**
BZS	**Buzias**	**8.09**	**79**	⇓P		**Pn**	**04 07 31.1**	**+1.5**
LDF	**La Druitiere**	**8.21**	**303**	*e*Pn		**Pn**	**04 07 32.1**	**+0.7**
ESAC	**San Caprasio**	**8.36**	**254**	P		**Pn**	**04 07 34.1**	**+0.7**
	comp=Z,11nm,0.3s,SNR=7.9							
ESAC	**San Caprasio**	**8.36**	**254**	P		**Pn**	**04 07 34.1**	**+0.7**
BOLS	**Boljevac**	**8.42**	**91**	*e*Pn		**Pn**	**04 07 33.2**	**-1.0**
SJPF	**Ste Jean**	**8.45**	**264**	*e*Pn		**Pn**	**04 07 33.8**	**-0.8**
BARS	**Barje**	**8.54**	**98**	*e*Pn		**Pn**	**04 07 35.9**	**+0.1**
EIBI	**Ibiza**	**8.68**	**233**	P		**Pn**	**04 07 37.9**	**+0.2**
	comp=Z,3.3nm,0.3s,SNR=7.9							
EIBI	**Ibiza**	**8.68**	**233**	P		**Pn**	**04 07 37.9**	**+0.2**
GZR	**Gura Zlata**	**8.89**	**80**	⇓*i*P		**Pn**	**04 07 41.9**	**+1.2**
GZR	**Gura Zlata**	**8.89**	**80**	⇓P		**Pn**	**04 07 41.9**	**+1.2**
EMOS	**Mosqueruela**	**8.99**	**246**	P		**Pn**	**04 07 43.3**	**+1.2**
	comp=Z,0.5nm,0.2s,SNR=8.0							
EMOS	**Mosqueruela**	**8.99**	**246**	P		**Pn**	**04 07 43.3**	**+1.2**
ETOR	**Torete**	**9.83**	**252**	P		**Pn**	**04 07 54.9**	**+1.4**
	comp=Z,9.8nm,0.3s,SNR=7.9							
ETOR	**Torete**	**9.83**	**252**	P		**Pn**	**04 07 54.9**	**+1.4**
KWP	**Kalwaria**	**9.86**	**55**	*e*P		**Pn**	**04 07 56.4**	**+2.5**
KWP					pmax	pmax		
	comp=Z,12nm,0.8s							
KWP	**Kalwaria**	**9.86**	**55**	*e*Pn		**Pn**	**04 07 56.4**	**+2.5**
	comp=Z,12nm,0.8s							
ETOB	**Tobarra**	**10.65**	**240**	P		**Pn**	**04 08 04.0**	**-0.8**
	comp=Z,0.2nm,0.2s,SNR=4.7							
ETOB	**Tobarra**	**10.65**	**240**	P		**Pn**	**04 08 04.0**	**-0.8**
BUR08	**Bucovina Ar. S**	**10.80**	**68**	*e*Pn		**Pn**	**04 08 08.6**	**+1.8**
BUR08	**Bucovina Ar. S**	**10.80**	**68**	*e*Pn		**Pn**	**04 08 08.6**	**+1.8**
EARI	**Arriondas**	**11.25**	**269**	P		**Pn**	**04 08 14.5**	**+1.6**
	comp=Z,0.1nm,0.4s,SNR=7.9							
EARI	**Arriondas**	**11.25**	**269**	P		**Pn**	**04 08 14.5**	**+1.6**
GUD	**Guadarrama**	**11.34**	**255**	P		**Pn**	**04 08 14.0**	**-0.2**
	comp=Z,2.3nm,0.4s,SNR=7.9							
GUD	**Guadarrama**	**11.34**	**255**	P		**Pn**	**04 08 14.1**	**-0.2**
ESDC	**Sonseca Array**	**11.65**	**250**	Pn		**Pn**	**04 08 18.2**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=56,slow=14,SNR=13							
ESDC	**Sonseca Array**	**11.65**	**250**	P		**Pn**	**04 08 19.2**	**+0.7**
	comp=Z,1.2nm,0.3s,SNR=7.9							
ESDC	**Sonseca Array**	**11.65**	**250**	P		**Pn**	**04 08 19.2**	**+0.7**
ESLA	**Sonseca Array**	**11.65**	**250**	*e*Pn		**Pn**	**04 08 18.5**	**0.0**
	comp=Z,2.3nm,0.9s							
ESLA	**Sonseca Array**	**11.65**	**250**	*e*Pn		**Pn**	**04 08 18.5**	**0.0**
	comp=Z,2.3nm,0.9s							
PAB	**San Pablo**	**11.98**	**250**	*e*P		**Pn**	**04 08 23.1**	**+0.2**
PAB					pmax	pmax		
	comp=Z,7.0nm,0.6s							
PAB	**San Pablo**	**11.98**	**250**	*e*Pn		**Pn**	**04 08 23.1**	**+0.2**
	comp=Z,7.0nm,0.6s							
MALT	**Malatya**	**21.94**	**97**	*e*P		**P**	**04 10 27.0**	**+1.2**
MALT					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7							
MALT	**Malatya**	**21.94**	**97**	*e*P		**P**	**04 10 27.0**	**+1.2**
	comp=Z,2.9nm,1.0s,mb3.7							
MALT	**Malatya**	**21.94**	**97**	*e*P		**P**	**04 10 27.0**	**+1.2**
	comp=Z,2.9nm,1.0s,mb3.7							
GNI	**Garni**	**25.72**	**88**	*e*P		**P**	**04 11 02.7**	**+0.1**
	comp=Z,25nm,1.3s,mb4.6							
GNI	**Garni**	**25.72**	**88**	*e*P		**P**	**04 11 02.7**	**+0.1**
	comp=Z,25nm,1.3s,mb4.6							
GNI	**Garni**	**25.72**	**88**	*e*P		**P**	**04 11 02.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**32.17**	**196**	P		**P**	**04 11 57.2**	**-2.9**
	comp=Z,0.7nm,0.8s,mb3.5,baz=7.7,slow=7.4,SNR=5.2							
EKS2	**Erkin-Say**	**44.97**	**69**	*e*P		**P**	**04 13 47.7**	**+0.4**
	comp=Z,9.4nm,1.1s,mb4.5							
EKS2	**Erkin-Say**	**44.97**	**69**	*e*P		**P**	**04 13 47.7**	**+0.4**
	comp=Z,9.4nm,1.1s,mb4.5							
YKA	**Yellowknife Ar**	**64.55**	**335**	P		**P**	**04 16 07.3**	**-1.6**
	comp=Z,0.2nm,0.6s,mb3.3,baz=39,slow=6.3,SNR=7.0							
YKA	**Yellowknife Ar**	**64.55**	**335**	P		**P**	**04 16 07.3**	**-1.6**
YKA	**Yellowknife Ar**	**64.55**	**335**	P		**P**	**04 16 07.3**	**-1.6**

MOS **28** *04:05:31.2±1.0, 44.61N×1032E, h20km, mb4.2/9, Error ellipse: s-maj=4.2km s-min=3.7km az=83.2*

LDG **28** *04:05:32.5±0.1, 44.59N×1045E, h10km, Md3.7/2, Ml4.3/30, Error ellipse: s-maj=3.6km s-min=3.0km az=14.0*

STR **28** *04:05:32.1±0.6, 44.48N×1049E, h10km, Ml4.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

NEIC **28** *04:05:33.0, 44.48N×1021E, h14km, mb4.1/3, ML4.1(ROM), ML4.3(LDG), ML4.0(STR), ML4.6(SZGRF), After ROM.*

NEIC Felt [IV] at Collecchio, Medesano, Parma and Reggio nell'Emilia; [III] at Langhirano and Lesignano de Bagni. Felt in much of western Emilia-Romagna and in northwestern Tuscany.

PRU **28** *04:05:38.0, 45.41N×986E, h0km, M4.1*

ISCJB **28** *04:05:42.6±0.1, 44.65N×1029E×002, h10km, mb4.1/12, Error ellipse: s-maj=1.7km s-min=1.5km az=24.7*

CSEM **28** *04:05:43.8±0.1, 44.49N×1022E, h10km, ML5.0/5, Error ellipse: s-maj=1.5km s-min=1.2km az=24.0*

ROM **28** *04:05:44.4±0.3, 44.51N×1018E, h4km±3km, Ml4.1/41, Error ellipse: s-maj=1.8km s-min=1.6km az=44.0*

GEN **28** *04:05:44.3, 44.57N×1029E, h0km, ML4.0*

SZGRF **28** *04:05:45.2, 44.68N×1018E, h10km, mb4.6, Northern Italy*

BGR **28** *04:05:45.2±0.7, 44.68N×1018E, h10km, ML4.6, Error ellipse: s-maj=8.9km s-min=7.8km az=100.0*

IDC **28** *04:05:46.0±2.1, 44.51N×1042E, h34km±18km, mb4.0/10, mb1 4.1/20, mb1mx3.9/33, mbtmp3.9/20, ML4.0/9, MS4.2/1, Ms1 4.2/1, ms1mx3.0/47, Error ellipse: s-maj=13.7km s-min=10.8km az=106.0*

ISC 28 04:05:44.1±0.1, 44.60N±001×1024E±002, h10km, n304, σ1§37/418, mb4.1/12, 12C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.17**	**230**	P	**Pg**	**04 05 48.5**	**+0.8**
GRAM				S	**Sg**	**04 05 51.8**	**+1.6**
ERBM	**Eremo**	**0.22**	**146**	Pg	**Pg**	**04 05 49.1**	**+0.5**
ERBM				Sg	**Sg**	**04 05 53.2**	**+1.6**
	10μm,0.7s						
ERBM	**Eremo**	**0.22**	**146**	Pg	**Pg**	**04 05 49.1**	**+0.5**
ERBM				Sg	**Sg**	**04 05 53.2**	**+1.6**
	10μm,0.7s						
VALM	**Valbona**	**0.25**	**179**	P	**Pg**	**04 05 48.9**	**-0.3**
VALM				S	**Sg**	**04 05 53.0**	**+0.4**
NOVE	**Novellara**	**0.39**	**59**	Pg	**Pg**	**04 05 54.0**	**+2.2**
NOVE				Sg	**Sg**	**04 06 03.6**	**+6.6**
	35μm,0.8s						
NOVE	**Novellara**	**0.39**	**59**	Pg	**Pg**	**04 05 54.0**	**+2.2**
NOVE				Sg	**Sg**	**04 06 03.6**	**+6.6**
	35μm,0.8s						
SARO	**Sassorosso**	**0.43**	**165**	P	**Pg**	**04 05 51.3**	**-1.2**
SARO				S	**Sg**	**04 05 57.3**	**-0.8**
VLC	**Villacollemand**	**0.45**	**167**	Pg	**Pg**	**04 05 53.1**	**+0.2**
VLC				Sg	**Sg**	**04 05 58.9**	**+0.1**
	24μm,1.3s						
VLC	**Villacollemand**	**0.45**	**167**	Pg	**Pg**	**04 05 53.1**	**+0.2**
VLC				Sg	**Sg**	**04 05 58.9**	**+0.1**
	24μm,1.3s						
SC2M	**Scurtabo**	**0.54**	**249**	Pg	**Pg**	**04 05 54.8**	**+0.1**
SC2M	**Scurtabo**	**0.54**	**249**	P	**Pg**	**04 05 55.3**	**+0.6**
SC2M				Sg	**Sg**	**04 06 03.1**	**+1.3**
	24μm,0.6s						
SC2M	**Scurtabo**	**0.54**	**249**	Pg	**Pg**	**04 05 54.8**	**+0.1**
SC2M				Sg	**Sg**	**04 06 03.1**	**+1.3**
	24μm,0.6s						
BDI	**Bagni Di Lucca**	**0.59**	**155**	Pg	**Pg**	**04 05 55.2**	**-0.4**
BDI				Sg	**Sg**	**04 06 02.9**	**-0.4**
	6μm,0.6s						
BDI	**Bagni Di Lucca**	**0.59**	**155**	Pg	**Pg**	**04 05 55.2**	**-0.4**
BDI				Sg	**Sg**	**04 06 02.9**	**-0.4**
	6μm,0.6s						
BOB	**Bobbio (Coli)**	**0.59**	**287**	Pg	**Pg**	**04 05 57.5**	**+1.9**
BOB				Sg	**Sg**	**04 06 06.5**	**+3.1**
	21μm,1.0s						
BOB	**Bobbio (Coli)**	**0.59**	**287**	Pg	**Pg**	**04 05 57.5**	**+1.9**
BOB				Sg	**Sg**	**04 06 06.5**	**+3.1**
	21μm,1.0s						
RAVA	**Ravarino**	**0.64**	**76**	Pg	**Pg**	**04 05 58.8**	**+2.2**
RAVA				Sg	**Sg**	**04 06 10.8**	**+5.8**
	61μm,1.7s						
RAVA	**Ravarino**	**0.64**	**76**	Pg	**Pg**	**04 05 58.8**	**+2.2**
RAVA				Sg	**Sg**	**04 06 10.8**	**+5.8**
	61μm,1.7s						
SBPO	**S.Benedetto Po**	**0.66**	**46**	Pg	**Pg**	**04 05 59.3**	**+2.4**
SBPO				Sg	**Sg**	**04 06 11.3**	**+5.8**
	23μm,0.6s						
SBPO	**S.Benedetto Po**	**0.66**	**46**	Pg	**Pg**	**04 05 59.3**	**+2.4**
SBPO				Sg	**Sg**	**04 06 11.3**	**+5.8**
	23μm,0.6s						
MAIM	**Mastiano**	**0.71**	**165**	P	**Pg**	**04 05 57.4**	**-0.3**
MAIM	**Mastiano**	**0.71**	**165**	Pg	**Pg**	**04 05 58.1**	**+0.4**
MAIM				Sg	**Sg**	**04 06 05.6**	**-1.4**
	4μm,0.7s						
MAIM	**Mastiano**	**0.71**	**165**	Pg	**Pg**	**04 05 58.1**	**+0.4**
MAIM				Sg	**Sg**	**04 06 05.6**	**-1.4**
	4μm,0.7s						
FNVD	**Fontana Vidola**	**0.76**	**124**	Pg	**Pg**	**04 05 59.2**	**+0.4**
FNVD				Sg	**Sg**	**04 06 11.1**	**+2.3**
FNVD	**Fontana Vidola**	**0.76**	**124**	Pg	**Pg**	**04 05 59.2**	**+0.4**
FNVD				Sg	**Sg**	**04 06 11.1**	**+2.3**
FIU	**Minerbio Fiu**	**0.89**	**87**	Pg	**Pn**	**04 06 04.1**	**+1.4**
FIU				Sg	**Sn**	**04 06 18.3**	**+2.7**
	22μm,1.1s						
FIU	**Minerbio Fiu**	**0.89**	**87**	Pg	**Pn**	**04 06 04.1**	**+1.4**
FIU				Sg	**Sn**	**04 06 18.3**	**+2.7**
	22μm,1.1s						
PII	**Pisa**	**0.90**	**167**	Pg	**Pg**	**04 06 00.6**	**-0.8**
PII	**Pisa**	**0.90**	**167**	Pg	**Pg**	**04 06 00.6**	**-0.8**
GENL	**Genova Univers**	**0.93**	**259**	P	**Pn**	**04 06 02.8**	**-0.4**
GENL				S	**Sn**	**04 06 15.3**	**-1.3**
CRMI	**Carmignano**	**0.96**	**147**	Pg	**Pg**	**04 06 02.6**	**0.0**
CRMI				Sg	**Sg**	**04 06 15.3**	**+0.2**
	2μm,0.5s						
CRMI	**Carmignano**	**0.96**	**147**	Pg	**Pg**	**04 06 02.6**	**0.0**
CRMI				Sg	**Sg**	**04 06 15.3**	**+0.2**
	2μm,0.5s						
SALO	**Salr**	**1.04**	**11**	Pg	**Pg**	**04 06 05.7**	**+1.6**
SALO				Sg	**Sg**	**04 06 21.9**	**+4.3**
	31μm,0.8s						
SALO	**Salr**	**1.04**	**11**	Pg	**Pg**	**04 06 05.7**	**+1.6**
SALO				Sg	**Sg**	**04 06 21.9**	**+4.3**
	31μm,0.8s						
CMPO	**Campotto Po**	**1.12**	**90**	Pg	**Pg**	**04 06 07.2**	**+1.7**
	25μm,1.1s						
CMPO	**Campotto Po**	**1.12**	**90**	Pg	**Pg**	**04 06 07.2**	**+1.7**
	25μm,1.1s						
GROG	**Isola di Gorgo**	**1.20**	**192**	Pg	**Pg**	**04 06 05.4**	**-1.7**
	3μm,0.6s						
GROG	**Isola di Gorgo**	**1.20**	**192**	Pg	**Pg**	**04 06 05.4**	**-1.7**
	3μm,0.6s						
MAGA	**Magasa**	**1.21**	**13**	Pg	**Pg**	**04 06 07.7**	**+0.4**
MAGA				Sg	**Sg**	**04 06 25.5**	**+2.5**
	35μm,0.4s						
MAGA	**Magasa**	**1.21**	**13**	Pg	**Pg**	**04 06 07.7**	**+0.4**
MAGA				Sg	**Sg**	**04 06 25.5**	**+2.5**
	35μm,0.4s						
FAEN	**Faenza**	**1.21**	**104**	Pg	**Pn**	**04 06 09.4**	**+2.4**
FAEN				Sg	**Sn**	**04 06 26.2**	**+2.7**
FAEN	**Faenza**	**1.21**	**104**	Pg	**Pn**	**04 06 09.4**	**+2.4**
FAEN				Sg	**Sn**	**04 06 26.2**	**+2.7**
PCP	**Piancastagn**	**1.22**	**268**	Pg	**Pn**	**04 06 08.5**	**+1.4**
PCP				Sg	**Sn**	**04 06 23.9**	**+0.3**
	2μm,0.5s						
PCP	**Piancastagn**	**1.22**	**268**	Pg	**Pn**	**04 06 08.5**	**+1.4**
PCP				Sg	**Sn**	**04 06 23.9**	**+0.3**
	2μm,0.5s						
MDI	**Monti di Nese**	**1.24**	**342**	Pg	**Pg**	**04 06 07.8**	**-0.1**
MDI				Sg	**Sg**	**04 06 27.6**	**+3.6**
	5μm,0.5s						
MDI	**Monti di Nese**	**1.24**	**342**	Pg	**Pg**	**04 06 07.8**	**-0.1**
MDI				Sg	**Sg**	**04 06 27.6**	**+3.6**
	5μm,0.5s						
TEOL	**Teolo**	**1.27**	**53**	*e*Pn	**Pn**	**04 06 08.9**	**+1.1**
SFI	**Santa Sofia**	**1.34**	**120**	Pg	**Pg**	**04 06 11.1**	**+1.2**
SFI				Sg	**Sg**	**04 06 29.9**	**+2.6**
	3μm,0.9s						
SFI	**Santa Sofia**	**1.34**	**120**	Pg	**Pg**	**04 06 11.1**	**+1.2**
SFI				Sg	**Sg**	**04 06 29.9**	**+2.6**
	3μm,0.9s						
CSNT	**Castellina Chi**	**1.35**	**146**	Pg	**Pg**	**04 06 10.3**	**+0.2**
CSNT				Sg	**Sg**	**04 06 27.0**	**-0.7**
	2μm,0.5s						
CSNT	**Castellina Chi**	**1.35**	**146**	Pg	**Pg**	**04 06 10.3**	**+0.2**
CSNT				Sg	**Sg**	**04 06 27.0**	**-0.7**
	2μm,0.5s						
QLNO	**Quiliano**	**1.39**	**259**	Pg	**Pg**	**04 06 08.8**	**-1.9**
QLNO				Sg	**Sg**	**04 06 28.1**	**-0.6**
	2μm,0.7s						
QLNO	**Quiliano**	**1.39**	**259**	Pg	**Pg**	**04 06 08.8**	**-1.9**
QLNO				Sg	**Sg**	**04 06 28.1**	**-0.6**
	2μm,0.7s						
MABI	**Malga Bissina**	**1.47**	**7**	Pg	**Pn**	**04 06 11.3**	**+0.7**
MABI				Sg	**Sn**	**04 06 34.3**	**+4.4**
	2μm,0.4s						
MABI	**Malga Bissina**	**1.47**	**7**	Pg	**Pn**	**04 06 11.3**	**+0.7**
MABI				Sg	**Sn**	**04 06 34.3**	**+4.4**
	2μm,0.4s						
FIN	**Finale Ligure**	**1.51**	**256**	Pg	**Pn**	**04 06 10.1**	**-1.1**
FIN				Sg	**Sn**	**04 06 30.6**	**-0.3**
FIN	**Finale Ligure**	**1.51**	**256**	Pg	**Pn**	**04 06 10.1**	**-1.1**
FIN				Sg	**Sn**	**04 06 30.6**	**-0.3**
CRE	**Caprese Michel**	**1.57**	**128**	Pg	**Pn**	**04 06 12.3**	**+0.3**
CRE				Sg	**Sn**	**04 06 33.2**	**+0.8**
	1μm,1.1s						
CRE	**Caprese Michel**	**1.57**	**128**	Pg	**Pn**	**04 06 12.3**	**+0.3**
CRE				Sg	**Sn**	**04 06 33.2**	**+0.8**
	1μm,1.1s						
MUGIO	**Muggio**	**1.57**	**328**	Pg	**Pg**	**04 06 15.4**	**+1.1**
MUGIO				Sg	**Sg**	**04 06 36.5**	**+1.8**
MUGIO	**Muggio**	**1.57**	**328**	Pg	**Pg**	**04 06 15.4**	**+1.1**
MUGIO				Sg	**Sg**	**04 06 36.5**	**+1.8**
CTI	**Castel Tesino**	**1.76**	**34**	Pg	**Pn**	**04 06 15.0**	**+0.4**
	3μm,0.4s						
CTI	**Castel Tesino**	**1.76**	**34**	Pg	**Pn**	**04 06 15.0**	**+0.4**
	3μm,0.4s						
CAFI	**Castiglion Fio**	**1.78**	**135**	Pg	**Pn**	**04 06 15.1**	**+0.3**
CAFI	**Castiglion Fio**	**1.78**	**135**	Pg	**Pn**	**04 06 15.1**	**+0.3**
BERNI	**Berninapass**	**1.82**	**355**	Pg	**Pn**	**04 06 16.9**	**+1.4**
BERNI	**Berninapass**	**1.82**	**355**	Pg	**Pn**	**04 06 16.9**	**+1.4**
IMI	**Imperia**	**1.82**	**249**	Pg	**Pn**	**04 06 14.4**	**-1.1**
	2μm,1.2s						
IMI				S	**Sn**	**04 06 36.8**	**-1.8**
IMI	**Imperia**	**1.82**	**249**	Pg	**Pn**	**04 06 14.4**	**-1.1**
	2μm,1.2s						
CASP	**Castiglione de**	**1.86**	**166**	Pg	**Pn**	**04 06 14.1**	**-1.9**
	645nm,0.5s						
CASP	**Castiglione de**	**1.86**	**166**	Pg	**Pn**	**04 06 14.1**	**-1.9**
	645nm,0.5s						
BRMO	**Bormio**	**1.88**	**3**	Pg	**Pn**	**04 06 18.7**	**+2.4**
	892nm,0.7s						
BRMO	**Bormio**	**1.88**	**3**	Pg	**Pn**	**04 06 18.7**	**+2.4**
	892nm,0.7s						
ARCI	**Arcidosso**	**1.96**	**152**	Pg	**Pn**	**04 06 18.1**	**+0.7**
	773nm,1.2s						
ARCI	**Arcidosso**	**1.96**	**152**	Pg	**Pn**	**04 06 18.1**	**+0.7**
	773nm,1.2s						
PIEI	**Pieia**	**1.96**	**122**	Pg	**Pg**	**04 06 21.9**	**+0.2**
	1μm,1.1s						
PIEI	**Pieia**	**1.96**	**122**	Pg	**Pg**	**04 06 21.9**	**+0.2**
	1μm,1.1s						
NEGI	**Seborga**	**1.97**	**249**	P	**Pn**	**04 06 16.2**	**-1.4**
NEGI				S	**Sn**	**04 06 39.5**	**-2.8**
TUE	**Stuetta**	**1.98**	**342**	Pg	**Pn**	**04 06 19.0**	**+1.4**
	1μm,0.4s						
TUE	**Stuetta**	**1.98**	**342**	*e*Sn	**Pn**	**04 06 18.1**	**+0.5**
TUE	**Stuetta**	**1.98**	**342**	Pg	**Pn**	**04 06 19.0**	**+1.4**
	1μm,0.4s						
TRAV	**Traversella**	**1.99**	**298**	P	**Pn**	**04 06 20.0**	**+2.2**
TRAV	**Traversella**	**1.99**	**298**	Pg	**Pg**	**04 06 22.1**	**-0.2**
	3μm,0.8s						
TRAV	**Traversella**	**1.99**	**298**	Pg	**Pg**	**04 06 22.1**	**-0.2**
	3μm,0.8s						
APPI	**Appiano**	**2.00**	**20**	Pg	**Pn**	**04 06 19.3**	**+1.3**
	4μm,0.5s						
APPI	**Appiano**	**2.00**	**20**	Pg	**Pn**	**04 06 19.3**	**+1.3**
	4μm,0.5s						
FUORN	**Ofenpass-Fuorn**	**2.02**	**0**	Pg	**Pn**	**04 06 20.0**	**+1.8**
FUORN	**Ofenpass-Fuorn**	**2.02**	**0**	Pg	**Pn**	**04 06 20.0**	**+1.8**
ENR	**Entracque**	**2.06**	**261**	P	**Pn**	**04 06 18.2**	**-0.5**
ENR				S	**Sn**	**04 06 44.4**	**0.0**
MURB	**Monte Urbino**	**2.12**	**128**	Pg	**Pn**	**04 06 21.3**	**+1.7**
	2μm,0.5s						
MURB	**Monte Urbino**	**2.12**	**128**	Pg	**Pn**	**04 06 21.3**	**+1.7**
	2μm,0.5s						
STV	**Sant Anna di V**	**2.12**	**261**	P	**Pn**	**04 06 19.3**	**-0.3**
STV	**Sant Anna di V**	**2.12**	**261**	Pg	**Pn**	**04 06 19.8**	**+0.2**
	1μm,1.4s						
STV	**Sant Anna di V**	**2.12**	**261**	Pg	**Pn**	**04 06 19.8**	**+0.2**
	1μm,1.4s						
SACS	**San Casciano d**	**2.12**	**145**	Pg	**Pn**	**04 06 20.5**	**+0.9**
	519nm,1.0s						
SBF	**Sospel**	**2.15**	**251**	*e*Pg	**Pn**	**04 06 14.3**	**-5.7**
	SNR=1.0						
SBF				*e*Sg	**Sn**	**04 06 43.1**	**-3.5**
	844nm,0.3s						
SBF	**Sospel**	**2.15**	**251**	*e*Pg	**Pn**	**04 06 14.3**	**-5.7**
	SNR=1.0						
SBF				*e*Sg	**Sn**	**04 06 43.1**	**-3.5**
	422nm,0.3s						
SBF	**Sospel**	**2.15**	**251**	*e*Pg	**Pn**	**04 06 14.3**	**-5.7**
SBF				*e*Sg	**Sn**	**04 06 43.1**	**-3.5**
RSP	**Reno Superiore**	**2.19**	**286**	P	**Pn**	**04 06 21.8**	**+1.3**
RSP	**Reno Superiore**	**2.19**	**286**	Pg	**Pg**	**04 06 24.6**	**-1.4**
	1μm,0.8s						
RSP	**Reno Superiore**	**2.19**	**286**	Pg	**Pg**	**04 06 24.6**	**-1.4**
	1μm,0.8s						
DAVOX	**Davos/Dischmat**	**2.20**	**353**	Pn	**Pn**	**04 06 22.3**	**+1.6**
	81nm,0.3s,baz=179,slow=14,SNR=80						
DAVOX					Sn	**Sn**	**04 06 48.9**	**+1.0**
	76nm,0.3s,baz=137,slow=11,SNR=5.6						
DAVOX	**Davos/Dischmat**	**2.20**	**353**	Pg	**Pn**	**04 06 22.7**	**+2.1**
DAVOX	**Davos/Dischmat**	**2.20**	**353**	Pn	**Pn**	**04 06 22.3**	**+1.6**
DAVOX	**Davos/Dischmat**	**2.20**	**353**	Pg	**Pn**	**04 06 22.7**	**+2.1**
TOUF	**Mont Tournerai**	**2.23**	**256**	Pg	**Pn**	**04 06 21.1**	**0.0**
ARVD	**Arcevia**	**2.23**	**119**	Pg	**Pn**	**04 06 22.3**	**+1.2**
	1μm,1.4s						
ARVD	**Arcevia**	**2.23**	**119**	Pg	**Pn**	**04 06 22.3**	**+1.2**
	1μm,1.4s						
PZZ	**Stroppo**	**2.24**	**269**	P	**Pn**	**04 06 22.1**	**+0.9**
PZZ	**Stroppo**	**2.24**	**269**	Pg	**Pn**	**04 06 22.7**	**+1.5**
	1μm,0.7s						
PZZ	**Stroppo**	**2.24**	**269**	Pg	**Pn**	**04 06 22.7**	**+1.5**
	1μm,0.7s						
LSD	**Lago del Serru**	**2.37**	**292**	P	**Pn**	**04 06 25.6**	**+2.6**
LSD	**Lago del Serru**	**2.37**	**292**	Pg	**Pn**	**04 06 26.0**	**+3.0**
	490nm,0.7s						
LSD	**Lago del Serru**	**2.37**	**292**	Pg	**Pn**	**04 06 26.0**	**+3.0**
	490nm,0.7s						
MBDF	**Montbardon**	**2.48**	**274**	*e*Sg	**Sn**	**04 06 55.9**	**+1.1**
	869nm,0.6s,SNR=1.0						
MBDF	**Montbardon**	**2.48**	**274**	*e*Sg	**Sn**	**04 06 55.9**	**+1.1**
	435nm,0.6s,SNR=1.0						
MRGE	**Morge**	**2.54**	**299**	Pg	**Pn**	**04 06 28.1**	**+2.8**
**MRGE

	51nm,0.6s,SNR=1.0								
LASF	**Ste Croix**	**4.61**	**266**	*e*Sg		**Sb**	**04 08 01.0**	**+0.4**
	26nm,0.6s,SNR=1.0								
LANF	**Langenberg**	**4.69**	**340**	Pg		**Pn**	**04 06 54.8**	**-0.1**
LANF	**Langenberg**	**4.69**	**340**			**Pn**	**04 06 54.8**	**-0.1**
GEC2	**GERESS Array S**	**4.87**	**28**	*e*Pn		**Pn**	**04 06 57.0**	**-0.3**
GEC2				*e*Sn		**Sn**	**04 07 52.6**	**-1.1**
GEC2	**GERESS Array S**	**4.87**	**28**	*e*Pg		**Pn**	**04 06 57.1**	**-0.2**
GERES	**GERESS Array B**	**4.87**	**28**	Pn		**Pn**	**04 06 57.0**	**-0.4**
	14nm,0.3s,baz=204,slow=12,SNR=53								
GERES				Sn		**Sn**	**04 07 51.7**	**-2.0**
	33nm,0.3s,baz=212,slow=23,SNR=5.3								
GERES				Lg			04 08 20.5		
	19nm,0.3s,baz=200,slow=31,SNR=4.9								
WET	**Wettzell**	**4.89**	**21**	*e*Sn		**Sn**	**04 07 51.7**	**-2.6**
KHC	**Kasperske Hory**	**5.08**	**26**	*ex*		**Pn**	**04 07 00.1**	**-0.1**
KHC				*ex*		**Sn**	**04 07 56.2**	**-2.6**
GRA1	**Grafenberg Arr**	**5.14**	**7**	Pn		**Pn**	**04 06 59.8**	**-1.2**
GRA1				Sn		**Sn**	**04 07 58.4**	**-2.0**
GRA1	**Grafenberg Arr**	**5.14**	**7**	*e*Pn		**Pn**	**04 06 59.8**	**-1.2**
GRA1				*e*Sn		**Sn**	**04 07 58.0**	**-2.4**
GRF	**Grafenberg Arr**	**5.14**	**7**	*e*Pn		**Pn**	**04 06 59.8**	**-1.2**
GRF				*e*Sn		**Sn**	**04 07 58.0**	**-2.0**
GRF	**Grafenberg Arr**	**5.14**	**7**	*e*P		**Pn**	**04 06 59.8**	**-1.2**
GRF				*e*		**Pg**	04 07 58.0	
GRF	**Grafenberg Arr**	**5.14**	**7**	*e*Pn		**Pn**	**04 06 59.8**	**-1.2**
GRF				*e*Sn		**Sn**	**04 07 58.0**	**-2.4**
GRF				*e*Sn		**Sn**	**04 07 58.4**	**-2.0**
ROTZ	**Rotzenmuhle**	**5.34**	**14**	*e*Pn		**Pn**	**04 07 02.7**	**-1.1**
ROTZ				*e*Sn		**Sn**	**04 08 01.8**	**-3.5**
SOP	**Sopron**	**5.36**	**53**‖	*e*PB		**Pn**	**04 07 03.9**	**-0.2**
MANZ	**Manzenberg**	**5.54**	**13**	*e*Sn		**Sn**	**04 08 06.5**	**-3.7**
STON	**Ston**	**5.67**	**105**	*e*Pn		**Pn**	**04 07 07.2**	**-1.2**
STON				Sn		**Sn**	**04 08 08.2**	**-5.3**
TNS	**Taunus Mts**	**5.76**	**348**	*e*Pn		**Pn**	**04 07 09.6**	**+0.1**
TNS				*e*Sn		**Sn**	**04 08 13.1**	**-2.5**
NKC	**Novy Kostel**	**5.83**	**14**	*ex*		**Pn**	**04 07 09.4**	**-1.2**
CAF	**Calviac**	**5.83**	**276**	*e*Sg		**Sg**	**04 08 40.6**	**-11**
	24nm,0.6s,SNR=1.0								
WERN	**Wernitzgruen**	**5.87**	**13**	*e*Sn		**Sn**	**04 08 14.7**	**-3.8**
TREC	**Trest**	**5.91**	**36**	*ex*		**Sn**	**04 07 11.2**	**-0.4**
ZST	**Bratislava**	**5.95**	**50**	*e*		**Sn**	**04 08 17.3**	**-3.1**
ZST	**Bratislava**	**5.95**	**50**	*e*		**Pn**	**04 07 11.9**	**-0.3**
ZST				*e*		**Pg**	**04 07 38.5**	**+0.5**
ZST	**Bratislava**	**5.95**	**50**	*e*		**Pn**	**04 07 11.9**	**-0.3**
ZST				*e*		**Pg**	**04 07 38.5**	**+0.5**
ZST				*e*Sn		**Sn**	**04 08 17.3**	**-3.1**
ZST				*e*		**Sg**	**04 09 04.8**	**+10**
TANN	**Tannenbergstha**	**6.01**	**14**	*e*Pn		**Pn**	**04 07 11.9**	**-1.1**
MOX	**Moxa**	**6.12**	**8**	*e*PN		**Pn**	**04 08 13.8**	**-0.7**
MOX				*e*SN		**Sn**	**04 08 20.9**	**-3.6**
MOX	**Moxa**	**6.12**	**8**	*e*Pn		**Pn**	**04 07 13.7**	**-0.8**
MOX				*e*Sn		**Sn**	**04 08 20.8**	**-3.7**
MOX	**Moxa**	**6.12**	**8**	Sn		**Sn**	**04 08 20.8**	**-3.7**
MOX	**Moxa**	**6.12**	**8**	*e*Pn		**Pn**	**04 07 13.8**	**-0.7**
MOX				*e*Sg		**Pg**	**04 07 41.7**	**+0.5**
MOX				*e*Sn		**Sn**	**04 08 20.9**	**-3.6**
MOX	**Moxa**	**6.12**	**8**	*e*SG		**Pg**	**04 07 41.7**	**+0.5**
PRU	**Pruhonice**	**6.13**	**27**	*ex*		**Pn**	**04 07 13.9**	**-0.8**
PRU				*ex*		**Sn**	**04 08 21.2**	**-3.6**
RJF	**Les Rejaudoux**	**6.23**	**280**	*e*Sg		**Sg**	**04 08 52.4**	**-12**
	25nm,0.7s,SNR=1.0								
SMOL	**Smolenice**	**6.31**	**49**	*e*		**Sn**	**04 08 23.4**	**-5.9**
SMOL	**Smolenice**	**6.31**	**49**	*e*		**Pn**	**04 07 17.3**	**+0.1**
SMOL				*e*			04 08 03.5		
SMOL	**Smolenice**	**6.31**	**49**	*e*SN		**Sn**	**04 08 23.4**	**-5.9**
SMOL				*e*		**Sg**	**04 09 17.8**	**+11**
SMOL	**Smolenice**	**6.31**	**49**	*e*		**Pn**	**04 07 17.3**	**+0.1**
SMOL				*e*			04 08 03.5		
SMOL				*e*Sn		**Sn**	**04 08 23.4**	**-5.9**
SMOL				*e*		**Sg**	**04 09 17.8**	**+11**
VRAC	**Vranov**	**6.41**	**40**	Pn		**Pn**	**04 07 17.6**	**-0.8**
	1.0nm,0.3s,baz=244,slow=12,SNR=7.5								
VRAC				Sn		**Sn**	**04 08 28.3**	**-3.3**
	5.1nm,0.3s,baz=298,slow=19,SNR=4.0								
VRAC				Lg			04 09 08.9		
	3.2nm,0.3s,baz=158,slow=18,SNR=3.7								
PVCC	**Panska Ves**	**6.61**	**25**	*ex*		**Pn**	**04 07 21.0**	**-0.3**
PVCC				*ex*		**Sn**	**04 08 32.7**	**-4.0**
GIVF	**Givet**	**6.62**	**328**	*e*Sg		**Sg**	**04 09 06.8**	**-10**
	56nm,0.7s,SNR=1.0								
BRG	**Berggiesshubel**	**6.75**	**20**	*e*Pn		**Pn**	**04 07 23.1**	**-0.1**
BRG	**Berggiesshubel**	**6.75**	**20**			**Sn**	**04 08 36.0**	**-4.1**
BRG				smax					
	comp=N,66nm,1.1s								
BRG				MLR	MLR				
	comp=N,387nm,15.6s								
BRG				MLR	MLR				
	comp=E,268nm,14.5s								
BRG				MLR	MLR				
	comp=Z,645nm,10.7s								
BRG	**Berggiesshubel**	**6.75**	**20**	Pg		**Pn**	**04 07 22.7**	**-0.5**
BRG				Sn		**Sn**	**04 08 36.0**	**-4.1**
BRG				Sg		**Sg**	**04 09 17.1**	**-3.7**
BUD	**Budapest**	**6.76**	**62**‖	*e*PB		**Pn**	**04 07 29.2**	**+5.9**
BAIF	**Baives**	**6.83**	**325**	*e*Sg		**Sg**	**04 09 13.2**	**-10**
	comp=Z,36nm,0.6s,SNR=1.0								
KOLL	**Kolacno**	**6.89**	**52**	*e*		**Pn**	**04 07 24.2**	**-0.8**
KOLL				*e*		**Pg**	**04 07 58.3**	**+2.4**
KOLL	**Kolacno**	**6.89**	**52**	*e*SN		**Sn**	**04 08 37.2**	**-6.2**
KOLL	**Kolacno**	**6.89**	**52**	*e*		**Pn**	**04 07 24.2**	**-0.8**
KOLL				*e*		**Pg**	**04 07 58.3**	**+2.4**
KOLL				*e*Sn		**Sn**	**04 08 37.2**	**-6.2**
CLL	**Collm**	**6.96**	**14**	*e*Pn		**Pn**	**04 07 24.5**	**-1.6**
CLL	**Collm**	**6.96**	**14**	*i* Pn(2)		**Pn**	**04 07 24.6**	**-1.5**
CLL				*e*Pg		**Pg**	**04 07 54.0**	**-3.4**
CLL				*e*Sn		**Sn**	**04 08 43.0**	**-2.3**
CLL				*e*Sg		**Sg**	**04 09 32.0**	**+4.5**
	comp=Z,121nm,1.0s								
CLL	**Collm**	**6.96**	**14**	*e*Pg		**Pg**	**04 07 54.0**	**-3.4**
CLL				*e*Sg		**Sg**	**04 09 32.0**	**+4.5**
DPC	**Dobruska-Polom**	**7.08**	**33**	*ex*		**Pn**	**04 07 26.7**	**-0.9**
UPC	**Upice**	**7.08**	**31**	*ex*		**Pn**	**04 07 27.0**	**-0.7**
UPC				*ex*		x	04 08 44.7		
VYHS	**Vyhne**	**7.09**	**54**	*e*		**Sn**	**04 08 43.2**	**-5.2**
VYHS	**Vyhne**	**7.09**	**54**	*e*		**Pn**	**04 07 27.4**	**-0.4**
VYHS				*e*			04 08 16.7		
VYHS	**Vyhne**	**7.09**	**54**	*e*SN		**Sn**	**04 08 43.2**	**-5.2**
VYHS				*e*			04 09 46.5		
VYHS	**Vyhne**	**7.09**	**54**	*e*		**Pn**	**04 07 27.4**	**-0.4**
VYHS				*e*			04 08 16.7		
VYHS				*e*Sn		**Sn**	**04 08 43.2**	**-5.2**
VYHS				*e*			04 09 46.5		
CLZ	**Clausthal**	**7.25**	**1**	*e*Pn		**Pn**	**04 07 29.0**	**-1.0**
KSP	**Ksiaz**	**7.46**	**31**	*e*Pn		**Pn**	**04 07 32.7**	**-0.2**
KSP				*e*Pg		**Pg**	**04 08 04.1**	**-2.7**
KSP				*e*Sn		**Sn**	**04 09 07.5**	**+10**
KSP				*e*Sg		**Sg**	**04 09 44.0**	**+0.6**
KSP	**Ksiaz**	**7.46**	**31**	*e*		**Pn**	**04 07 32.1**	**-0.8**
KSP				*e*Sn		**Sn**	**04 08 53.6**	**-3.9**
PSZ	**Piszkesteto**	**7.47**	**60**‖	*e*Pn		**Pn**	**04 07 33.8**	**+0.8**
MFF	**Saint Martin d**	**7.56**	**289**	*e*Sn		**Sn**	**04 08 45.9**	**-14**
	comp=Z,26nm,0.6s,SNR=1.0								
MFF	**Saint Martin d**	**7.56**	**289**	*e*Sn		**Sn**	**04 08 45.9**	**-14**
	comp=Z,13nm,0.6s,SNR=1.0								
TIR	**Tirane**	**7.77**	**111**	*e*P		**Pn**	**04 07 35.3**	**-1.8**
TIR				*e*			04 08 52.4		
TIR				pmax	pmax				
	comp=Z,33nm,0.5s								
TIR	**Tirane**	**7.77**	**111**	*e*Pn		**Pn**	**04 07 35.3**	**-1.9**
	comp=Z,33nm,0.5s								
TIR				*e*Sn		**Sn**	**04 08 52.4**	**-13**
VAE	**Valguarnera**	**7.78**	**155**	Pn		**Pn**	**04 07 35.3**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=90,slow=19,SNR=2.4								
EORO	**Oroz-Betelu**	**8.54**	**263**	P		**Pn**	**04 07 40.2**	**-7.5**
	comp=Z,1.1nm,0.3s,SNR=7.9								
GRR	**Gorron**	**8.54**	**300**	*e*Sn		**Sn**	**04 09 09.8**	**-14**
	comp=Z,21nm,0.5s,SNR=1.0								
EALK	**Alkurruntz**	**8.60**	**265**	P		**Pn**	**04 07 41.5**	**-7.0**
	comp=Z,1.5nm,0.5s,SNR=5.8								
EALK	**Alkurruntz**	**8.60**	**265**	P		**Pn**	**04 07 41.5**	**-7.0**
ELIZ	**Elizondo**	**8.62**	**265**	P		**Pn**	**04 07 41.3**	**-7.6**
	comp=Z,0.9nm,0.3s,SNR=8.8								
ELIZ	**Elizondo**	**8.62**	**265**	P		**Pn**	**04 07 41.3**	**-7.6**
IZUN	**Zunzarren**	**8.65**	**263**	P		**Pn**	**04 07 42.0**	**-7.2**
	comp=Z,1.0nm,0.3s,SNR=7.9								
KRUS	**Krusevo**	**8.69**	**108**	*i* P		**Pn**	**04 07 50.2**	**+0.5**
IUSE	**Utxeti**	**8.69**	**263**	P		**Pn**	**04 07 42.5**	**-7.3**
	comp=Z,0.5nm,0.2s,SNR=5.1								
IUNC	**Unciti**	**8.71**	**262**	P		**Pn**	**04 07 42.9**	**-7.1**
	comp=Z,1.2nm,0.2s,SNR=5.6								
EARA	**Aranguren**	**8.76**	**262**	P		**Pn**	**04 07 43.5**	**-7.3**
	comp=Z,1.3nm,0.3s,SNR=5.2								
CRVS	**Cervenica-Dubn**	**8.82**	**57**	*e*PN		**Pn**	**04 07 51.9**	**+0.3**
KEST	**Kesra**	**8.88**	**185**	Pn		**Pn**	**04 07 52.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=240,slow=12,SNR=3.6								
BIA	**Bitola**	**8.89**	**110**	*e*P		**Pn**	**04 07 51.7**	**-0.9**
STHS	**Stebnicka Huta**	**8.93**	**53**	*e*PN		**Pn**	**04 07 54.6**	**+1.6**
STHS				*e*			04 09 07.9		
STHS	**Stebnicka Huta**	**8.93**	**53**	*e*SN		**Sn**	**04 09 31.6**	**-1.9**
STHS	**Stebnicka Huta**	**8.93**	**53**	*e*Pn		**Pn**	**04 07 54.6**	**+1.6**
STHS				*e*			04 09 07.9		
STHS				*e*Sn		**Sn**	**04 09 31.6**	**-1.9**
DRGR		**9.00**	**72**	*i*P		**Pn**	**04 07 53.4**	**-0.6**
DRGR		**9.00**	**72**	⇑P		**Pn**	**04 07 53.4**	**-0.6**
STIP	**Stip**	**9.20**	**104**	*i* P		**Pn**	**04 07 55.6**	**-1.2**
UZH	**Uzhgorod**	**9.22**	**60**	*e*P		**Pn**	**04 07 59.6**	**+2.6**
ECRI	**Cripan**	**9.46**	**262**	P		**Pn**	**04 07 52.6**	**-7.8**
	comp=Z,0.8nm,0.2s,SNR=7.9								
KWP	**Kalwaria**	**9.87**	**55**‖	*i*P		**Pn**	**04 08 07.6**	**+1.7**
ELAN	**Lanestosa**	**9.97**	**267**	P		**Pn**	**04 07 59.3**	**-8.0**
	comp=Z,0.4nm,0.2s,SNR=4.7								
ELAN	**Lanestosa**	**9.97**	**267**	P		**Pn**	**04 07 59.3**	**-8.0**
VOIR		**10.52**	**80**⇑	*i*P		**Pn**	**04 08 11.8**	**-3.0**
VOIR		**10.52**	**80**⇑	P		**Pn**	**04 08 11.8**	**-3.0**
BURAR	**Bucovina Array**	**10.83**	**69**⇑	*i*P		**Pn**	**04 08 18.3**	**-0.7**
BURAR	**Bucovina Array**	**10.83**	**69**⇑	P		**Pn**	**04 08 18.3**	**-0.7**
MLR	**Muntele Rosu**	**11.15**	**80**	Pn		**Pn**	**04 08 21.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=295,slow=19,SNR=2.2								
ESDC	**Sonseca Array**	**11.63**	**250**	Pn		**Pn**	**04 08 30.4**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=60,slow=14,SNR=35								
ESDC	**Sonseca Array**	**11.63**	**250**	Pn		**Pn**	**04 08 30.4**	**+0.3**
EKA	**Eskdalemuir Ar**	**13.75**	**326**	Pn		**Pn**	**04 09 00.8**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=141,slow=14,SNR=5.3								
AKASG	**Malin Array Be**	**14.16**	**58**	Pn		**Pn**	**04 09 04.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=246,slow=16,SNR=3.0								
HFS	**Hagfors**	**15.70**	**6**	Pn		**Pn**	**04 09 26.3**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=185,slow=16,SNR=8.0								
NOA	**NORSAR Array B**	**16.48**	**2**	Pn		**Pn**	**04 09 34.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=183,slow=12,SNR=3.3								
KAF	**Kangasniemi**	**19.89**	**22**	*e*p		**Pn**	**04 10 11.9**	**-5.0**
	comp=Z,5.5nm,0.6s								
KAF	**Kangasniemi**	**19.89**	**22**	*e*P		**Pn**	**04 10 11.9**	**-5.0**
KAF				pmax	pmax				
	comp=Z,6.0nm,0.6s								
JOF	**Joensuu**	**21.99**	**26**	*e*p		**P**	**04 10 35.7**	**-2.3**
	comp=Z,6.2nm,0.7s,mb4.2								
JOF	**Joensuu**	**21.99**	**26**	*e*P		**P**	**04 10 35.7**	**-2.3**
JOF				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.1								
KIV	**Kislovodsk**	**23.16**	**80**	*e*P		**P**	**04 10 50.2**	**-0.4**
KIV				pmax	pmax				
	comp=Z,12nm,1.1s,mb4.2								
ASF	**Jabal al Asfar**	**24.18**	**112**	P		**P**	**04 10 59.1**	**-1.4**
	comp=Z,9.1nm,1.1s,mb4.1,baz=173,slow=4.6,SNR=8.6								
ASF	**Jabal al Asfar**	**24.18**	**112**	P		**P**	**04 10 59.1**	**-1.4**
ASF				pmax	pmax				
	comp=Z,9.0nm,1.1s								
GNI	**Garni**	**25.75**	**88**	P		**P**	**04 11 13.4**	**-1.3**
	comp=Z,8.4nm,0.9s,mb4.3,baz=42,slow=9.0,SNR=4.8								
GNI	**Garni**	**25.75**	**88**	*e**PP		**P**	**04 11 14.1**	**-0.6**
GNI				pmax	pmax				
	comp=Z,25nm,1.3s								
GNI	**Garni**	**25.75**	**88**	*e*pP		**P**	**04 11 14.1**	**-0.7**
ARCES	**ARCESS Array B**	**26.18**	**12**	P		**P**	**04 11 17.9**	**-0.4**
	comp=Z,3.0nm,0.8s,mb3.9,baz=341,slow=11,SNR=4.0								
ARCES	**ARCESS Array B**	**26.18**	**12**	P		**P**	**04 11 17.9**	**-0.4**
ARCES				pmax	pmax				
	comp=Z,3.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**32.18**	**196**	P		**P**	**04 12 10.1**	**-2.1**
	comp=Z,1.5nm,0.7s,mb3.9,baz=14,slow=8.7,SNR=12								
FRB	**Frobisher Bay**	**46.49**	**323**	P		**P**	**04 14 09.6**	**-1.4**
	comp=Z,1.1nm,0.5s,mb4.0,baz=82,slow=11,SNR=5.1								
FRB	**Frobisher Bay**	**46.49**	**323**	P		**P**	**04 14 09.6**	**-1.4**
FRB				pmax	pmax				
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**48.72**	**60**	P		**P**	**04 14 26.4**	**-2.1**
	comp=Z,1.4nm,0.7s,mb4.1,baz=283,slow=6.1,SNR=8.3								
MKAR	**Makanchi Array**	**48.72**	**60**	P		**P**	**04 14 26.4**	**-2.1**
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
SONM	**Songino Array**	**62.26**	**49**	P		**P**	**04 16 03.3**	**-2.5**
	comp=Z,2.0nm,0.9s,mb4.3,baz=316,slow=8.2,SNR=4.1								
SONM	**Songino Array**	**62.26**	**49**	P		**P**	**04 16 03.3**	**-2.6**
SONM				pmax	pmax				
	comp=Z,2.0nm,0.9s								
YKA	**Yellowknife Ar**	**64.52**	**335**	P		**P**	**04 16 19.5**	**-1.1**
	comp=Z,2.6nm,0.6s,mb4.5,baz=41,slow=6.2,SNR=83								
CMAR	**Chiang Mai Arr**	**76.37**	**78**	P		**P**	**04 17 31.4**	**-2.3**
	comp=Z,1.0nm,0.4s,mb4.1,baz=298,slow=7.4,SNR=6.9								
CMAR	**Chiang Mai Arr**	**76.37**	**78**	P		**P**	**04 17 31.4**	**-2.3**
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
TXAR	**Lajitas Array**	**84.94**	**307**	P		**P**	**04 18 19.0**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.7,baz=58,slow=4.7,SNR=4.3								
TXAR	**Lajitas Array**	**84.94**	**307**	P		**P**	**04 18 19.0**	**-0.5**
VNDA	**Vanda**	**145.05**	**170**	PKP		PKPdf	04 25 16.5	-3.6
	comp=Z,4.6nm,0.9s,baz=263,slow=4.3,SNR=3.6								

*ISCJB **28** 04:09:53.2±0.8,272S±02×1756W±0.1,h33km,mb4.5/7, Error ellipse: s-maj=28.3km s-min=10.0km az=142.8*
*IDC **28** 04:09:55.0±0.7,27.18S×17564W,h32km±4km,mb4.0/4, mb1 4.4/5,mb1mx4.1/15,mbtmp4.1/5,ML4.7/1,MS2.9/1, Ms1 2.9/1,ms1mx2.7/26,Error ellipse: s-maj=35.8km s-min=20.8km az=140.0*
*NEIC **28** 04:09:54.3±0.4,2726S×17557W,mb4.5/3,Error ellipse: s-maj=18.5km s-min=11.4km az=139.0*
ISC 28 04:09:55.1±0.8,272S±02×1755W±01,h35km, h35km±.7km:pP-P,n26,σ0§79/15,mb4.5/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.91**	**226**	Pn	**Pn**	**04 10 38.5**	**-0.4**
	106nm,0.3s,baz=107,slow=19,SNR=4.3						
RAO				LR	LR	04 11 09.9	
	comp=Z,223nm,19.9s,baz=199,slow=26						
RAO				Sn	**Sn**	**04 11 13.9**	**+1.1**
	1µm,0.3s,baz=59,slow=23,SNR=21						
URZ	**Urewera**	**12.61**	**208**	Sn	**Sn**	**04 15 02.3**	**-8.8**
	2.9nm,0.3s,baz=349,slow=22,SNR=9.9						
STKA	**Stephens Creek**	**37.41**	**252**	P	**P**	**04 17 04.7**	**-0.1**
	0.7nm,0.4s,mb3.9,baz=103,slow=15,SNR=4.0						
FORT	**Forrest**	**49.03**	**252**	*e*P	**P**	**04 18 37.4**	**-1.3**
	4.4nm,0.4s,mb4.8						
PMSA	**Palmer Station**	**74.24**	**156**	*e*P	**P**	**04 21 26.8**	**-1.3**
	79nm,1.1s,mb5.6						
SNAA	**Sanae**	**81.23**	**178**	*e*	**P**	**04 22 06.5**	**-0.4**
SNAA				*e*	pP	04 22 17.6	-0.4
SNAA	**Sanae**	**81.23**	**178**	*e*P	**P**	**04 22 06.6**	**-0.3**
	6.3nm,1.1s,mb4.5						
VNA3	**Neumayer Olymp**	**81.29**	**175**	*e*	**P**	**04 22 07.1**	**-0.1**
VNA3				*e*	pP	04 22 17.3	-1.0
VNA2	**Neumayer--Watz**	**81.75**	**176**	*e*	**P**	**04 22 10.1**	**+0.4**
VNA2				*e*	pP	04 22 20.6	-0.2
PLCA	**Paso Flores**	**83.05**	**132**	P	**P**	**04 22 17.6**	**+0.6**
	1.3nm,0.7s,mb4.1,baz=250,slow=2.5,SNR=5.1						
PLCA	**Paso Flores**	**83.05**	**132**	*e*P	**P**	**04 22 17.5**	**+0.4**
	1.5nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	**84.44**	**42**	P	**P**	**04 22 25.2**	**+1.2**
	2.5nm,0.8s,mb4.4,baz=219,slow=8.4,SNR=16						
NVAR				pP	pP	04 22 35.4	+0.3
	2.1nm,0.8s,baz=222,slow=8.7,SNR=9.4						
NVAR	**Mina Array Bea**	**84.44**	**42**	P	**P**	**04 22 25.2**	**+1.2**
NVAR				pP	pP	04 22 35.4	+0.3
TXAR	**Lajitas Array**	**88.84**	**56**	P	**P**	**04 22 46.1**	**+0.4**
	1.0nm,0.9s,mb4.2,baz=202,slow=1.9,SNR=5.8						
TXAR				pP	pP	04 22 56.8	-0.1
	0.5nm,0.6s,baz=211,slow=7.1,SNR=4.2						
MK31	**Makanchi Array**	**117.38**	**311**	*e*PKPdf	PKPdf	04 28 35.5	-1.2
MK31				*e*pPKPdf	pPKPdf	04 28 46.4	-1.7
MKAR	**Makanchi Array**	**117.38**	**311**	PKP	PKPdf	04 28 35.5	-1.1
	0.4nm,0.4s,baz=108,slow=0.5,SNR=4.7						
MKAR				pPKP	pPKPdf	04 28 46.0	-2.2
	0.4nm,0.4s,baz=132,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**117.38**	**311**	PKP	PKPdf	04 28 35.5	-1.1
MKAR				pPKP	pPKPdf	04 28 46.0	-2.2
KURK	**Kurchatov**	**120.40**	**315**	PKP	PKPdf	04 28 42.4	0.0
	0.6nm,0.7s,baz=108,slow=2.4,SNR=3.0						
KURK				pPKP	pPKPdf	04 28 52.4	-1.5
	0.6nm,0.6s,baz=118,slow=2.1,SNR=3.3						
ARCES	**ARCESS Array B**	**135.93**	**350**	PKP	PKPdf	04 29 10.6	-0.8
	3.2nm,0.9s,baz=49,slow=2.7,SNR=4.3						
NB2	**NORSAR Subarra**	**145.90**	**354**	PKP	PKPdf	04 29 30.0	+0.5
	comp=Z,2.2nm,0.7s,baz=8.7,slow=2.1						
NOA	**NORSAR Array B**	**145.90**	**354**	PKPbc	PKPbc	04 29 30.2	+0.1
	comp=Z,1.3nm,0.7s,baz=14,slow=2.3,SNR=3.6						
NOA				pPKPbc	pPKPbc	04 29 40.9	-0.7
	comp=Z,1.2nm,0.7s,baz=14,slow=4.6,SNR=2.6						
HFS	**Hagfors**	**146.51**	**352**	PKPbc	PKPbc	04 29 31.8	-0.2
	comp=Z,4.0nm,0.7s,baz=95,slow=4.9,SNR=7.3						
HFS				pPKPbc	pPKPbc	04 29 41.6	-1.8
	comp=Z,3.0nm,0.7s,baz=64,slow=3.4,SNR=2.1						
AKASG	**Malin Array Be**	**149.94**	**328**	PKPbc	PKPbc	04 29 41.5	+0.1
	comp=Z,1.0nm,0.5s,baz=46,slow=3.9,SNR=6.1						
BRTR	**Keskin Array B**	**152.80**	**305**	PKPbc	PKPbc	04 29 47.3	-1.0
	comp=Z,1.0nm,0.8s,baz=57,slow=5.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**165.74**	**169**	PKP	PKPdf	04 29 55.7	-1.1
	comp=Z,0.5nm,1.0s,baz=191,slow=4.3,SNR=4.0						
TORD				PKPab	PKPab	04 30 56.8	+1.0
	comp=Z,3.2nm,1.0s,baz=187,slow=3.0,SNR=20						
TORD	**Torodi Ar. Bea**	**165.74**	**169**	PKP	PKPdf	04 29 55.7	-1.1
TORD				PKPab	PKPab	04 30 56.8	+1.0

*NOU **28** 04:11:13.0±0.9,1305S×16683E,h30km,MD4.1,ML4.6*
*ISCJB **28** 04:11:15.7±1.3,1364S±003×16652E±004,h15km±8km, mb5.3/84,MS5.3/211,Error ellipse: s-maj=7.2km s-min=4.6km az=0.6*
*LDG **28** 04:11:15.7±0.3,1326S×16668E,h10km,Mb5.6/4, Ms5.2/10,Error ellipse: s-maj=36.5km s-min=11.5km az=85.0*
*BJI **28** 04:11:17.4,1364S×167.14E,h40km,mB5.5,mb5.2,Ms5.2, Msz5.0*
*IDC **28** 04:11:17.0±1.6,1365S×16645E,h15km±9km,mb4.9/23, mb1 5.0/24,mb1mx5.0/25,mbtmp4.9/24,ML5.5/1,MS5.1/26, Ms1 5.1/26,ms1mx5.0/31,Error ellipse: s-maj=14.4km s-min=10.6km az=130.0*
*MOS **28** 04:11:18.6±1.1,1360S×16648E,h33km,mb5.5/49, MS5.2/34,Error ellipse: s-maj=9.0km s-min=7.1km az=122.0*
*GCMT **28** 04:11:19.8±0.1,1364S×16639E,h28km,MW5.6/100, Moment Tensor Solution. s100,c191; s93,c225; Duration: 1§6 Moment tensor: Scale 1017Nm; Mrr3.23±.04; Mθθ0.28±.04; Mφφ-3.52±.04; Mrθ0.12±.08; Mθφ0.02±

comp=Z,9μm,18.8s,MS5.4,baz=53,slow=36
STKA Stephens Creek 29.21 227 *e*P **P 04 17 19.5 +0.6**
comp=Z,38nm,0.6s,mb5.3
STKA *e*S **S 04 22 11.4 +2.0**
STKA Stephens Creek 29.21 227 *e*P **P 04 17 19.2 +0.3**
comp=Z,78nm,1.8s,mb5.1
RPZ Rata Peaks 30.23 174 P **P 04 17 28.8 +1.0**
comp=Z,29nm,0.7s,mb5.1,baz=214,slow=2.1,SNR=6.8
RPZ LR LR 04 28 13.8
comp=Z,3μm,20.9s,MS4.9,baz=357,slow=34
TOO Toolangi 30.35 214 *e*P **P 04 17 29.6 +0.7**
WB2 Warramunga Arr 31.44 254⇑*i*P **P 04 17 37.5 -1.3**
WB2 *e*S **S 04 22 49.2 +4.6**
WB2 Warramunga Arr 31.44 254 *e*P **P 04 17 37.6 -1.1**
WRAB Tennant Creek 31.44 254 P **P 04 17 37.0 -1.8**
comp=Z,180nm,0.9s,mb5.9,SNR=15
WRAB Tennant Creek 31.44 254⇑*i*P **P 04 17 37.6 -1.2**
WRAB Tennant Creek 31.44 254 *e*P **P 04 17 37.3 -1.5**
comp=Z,32nm,1.0s,mb5.1
WRAB LR LR
comp=Z,10μm,20.0s,MS5.5
WRA Warramunga Arr 31.45 254 P **P 04 17 37.3 -1.6**
comp=Z,10nm,0.7s,mb4.8,baz=84,slow=7.8,SNR=74
WRA PcP PcP 04 20 30.9 -0.9
comp=Z,6.3nm,0.9s,baz=82,slow=2.6,SNR=6.3
WRA S **S 04 22 42.1 -2.7**
comp=Z,1.1nm,1.1s,baz=93,slow=14,SNR=3.0
WRA ScP ScP 04 24 13.7 +1.0
comp=Z,4.4nm,1.0s,baz=82,slow=3.7,SNR=7.0
WRA PKiKP PKiKP 04 27 58.8 -2.7
comp=Z,1.3nm,0.5s,baz=359,slow=0.6,SNR=8.9
WRA LR LR 04 29 37.2
comp=Z,6μm,19.9s,MS5.3,baz=80,slow=35
WRA Warramunga Arr 31.45 254 P **P 04 17 37.3 -1.6**
WRA 04 20 30.9
WRA S **S 04 22 42.1 -2.7**
WRA pmax pmax
comp=Z,10.0nm,0.7s
WRA smax
comp=N,1.0nm,1.1s
WRA Warramunga Arr 31.45 254 P **P 04 17 37.3 -1.6**
WRA PcP PcP 04 20 30.9 -0.9
WRA S **S 04 22 42.1 -2.7**
WRA ScP ScP 04 24 13.7 +1.0
ASAR Alice Springs 32.45 247 P **P 04 17 46.1 -1.5**
comp=N,22nm,0.8s,mb5.1,baz=73,slow=9.8,SNR=188
ASAR PcP PcP 04 20 32.7 -1.8
comp=N,8.8nm,1.1s,baz=88,slow=3.1,SNR=5.4
ASAR S **S 04 23 00.8 +0.5**
comp=N,1.5nm,1.1s,baz=71,slow=16,SNR=3.7
ASAR ScP ScP 04 24 17.6 +1.6
comp=N,4.1nm,0.8s,baz=87,slow=3.1,SNR=11
ASAR PKiKP PKiKP 04 27 59.6 -2.4
comp=N,1.0nm,0.5s,baz=97,slow=1.4,SNR=13
ASAR Alice Springs 32.45 247 P **P 04 17 46.1 -1.5**
ASAR PcP PcP 04 20 32.7 -1.8
ASAR S **S 04 23 00.8 +0.5**
ASAR ScP ScP 04 24 17.6 +1.6
RAR Rarotonga 32.94 108 LR LR 04 28 46.0
comp=N,5μm,20.4s,MS5.2,baz=291,slow=32
RAR Rarotonga 32.94 108 PFAKE 04 18 00.0 +8.0
RAR LR LR
comp=Z,5μm,21.0s,MS5.2
KAKA Kakadu 33.23 268 *e*P x 04 17 54.1
comp=Z,19nm,0.6s
KAKA Kakadu 33.23 268 *e*P x 04 17 53.9
comp=Z,69nm,0.7s
MOO Moorlands 33.25 207 *e*P **P 04 17 55.5 +1.1**
TAU Tasmania Unive 33.57 206 *e*P **P 04 17 58.1 +0.9**
TAU pmax pmax
comp=Z,60nm,0.9s,mb5.5
TAU MLR MLR
comp=Z,4μm,22.0s,MS5.1
TAU Tasmania Unive 33.57 206 *e*P **P 04 17 58.1 +0.9**
comp=Z,60nm,0.9s,mb5.5
TAU LR LR
comp=Z,4μm,22.0s,MS5.1
GUMO Guam 34.54 321 LR LR 04 31 02.6
comp=Z,3μm,20.2s,MS5.0,baz=296,slow=34
GUMO Guam 34.54 321 PFAKE 04 18 20.0 +14
GUMO LR LR
comp=Z,3μm,19.0s,MS5.1
XMAS Kiritimati 38.94 69 PFAKE 04 18 50.0 +6.6
XMAS LR LR
comp=Z,3μm,21.0s,MS5.1
FORT Forrest 39.29 238 *e*P **P 04 18 45.6 -0.5**
comp=Z,47nm,0.6s,mb5.4
FORT Forrest 39.29 238 *e*P **P 04 18 45.8 -0.4**
comp=Z,59nm,0.7s,mb5.4
FITZ Fitzroy Crossi 39.56 258 *e*P **P 04 18 47.2 -1.4**
comp=Z,37nm,1.1s,mb5.0
FITZ *e*S **S 04 24 49.1 -0.2**
FITZ Fitzroy Crossi 39.56 258 *e*P **P 04 18 47.9 -0.7**
comp=Z,31nm,1.1s,mb5.0
PPT Papeete 42.36 101 *e*S **S 04 25 39.9 +8.9**
comp=Z,2μm,26.8s
PPT *e*LQ 04 29 14.0
comp=Z,4μm,30.2s
PPT *e*LR LR 04 30 59.3
comp=Z,4μm,24.0s,baz=272
PPT Papeete 42.36 101 LR LR 04 32 45.6
comp=Z,2μm,20.0s,MS4.9,baz=270,slow=30
TBI Tubuai 42.67 110 *e*S **S 04 25 42.7 +7.2**
comp=Z,1μm,26.8s
TBI *e*LQ 04 29 22.8
comp=Z,4μm,26.2s
TBI *e*LR LR 04 31 11.3
comp=Z,5μm,23.8s,baz=279
MIDW Midway 44.41 20 PFAKE 04 19 40.0 +12
MIDW LR LR
comp=Z,4μm,19.0s,MS5.3
MBWA Marble Bar 45.19 254 *e*P **P 04 19 34.8 +0.4**
comp=Z,57nm,1.3s,mb5.2
MBWA LR LR
comp=Z,7μm,19.0s,MS5.6
DAV Davao City (W) 45.59 294 PFAKE 04 19 50.0 +12
DAV LR LR
comp=Z,2μm,19.0s,MS5.0
KAPI Kappang 46.91 276 PFAKE 04 20 00.0 +12
KAPI LR LR
comp=Z,1μm,22.0s,MS4.8
NWAO Narrogin (SRO) 48.74 238 P **P 04 20 00.1 -1.8**
comp=Z,18nm,0.7s,mb5.2,baz=73,slow=5.7,SNR=15
NWAO PP PP 04 21 57.1 +1.9
comp=Z,16nm,1.0s,baz=79,slow=8.4,SNR=3.8
NWAO Narrogin (SRO) 48.74 238 *e*P **P 04 20 01.3 -0.6**
NWAO pmax pmax
comp=Z,42nm,0.9s
NWAO MLR MLR
comp=Z,3μm,19.0s
NWAO Narrogin (SRO) 48.74 238 *e*P **P 04 20 01.2 -0.7**
comp=Z,42nm,0.9s,mb5.5
NWAO LR LR
comp=Z,3μm,19.0s,MS5.2
MUN Mundaring 49.42 240 *e*P **P 04 20 06.3 -0.9**
POHA Pohakuloa 49.92 49 PFAKE 04 20 20.0 +8.9
POHA LR LR
comp=Z,5μm,20.0s,MS5.5
KKM Kota Kinabalu 53.67 288 *e*P **P 04 20 39.3 +0.1**
comp=Z,118nm,1.1s,mb5.7
DRV Dumont d'Urvil 55.87 192 P **P 04 20 55.0 +0.8**
DRV S **S 04 28 41.0 +1.8**
DRV SS SS 04 32 30.0 +4.9
DRV L 04 35 00.0
DRV R 04 38 00.0
RKT Rikitea 55.98 109 *e*S **S 04 28 47.6 +5.5**
comp=Z,361nm,28.0s
RKT *e*SS SS 04 32 36.0 +7.6
comp=Z,808nm,26.8s
RKT *e*LQ 04 34 58.8
comp=Z,787nm,25.8s
RKT *e*LR LR 04 37 26.3
comp=Z,2μm,25.5s,baz=271
MJAR Matsushiro Arr 56.62 333 P **P 04 20 58.6 -1.4**
comp=Z,34nm,1.0s,mb5.3,baz=166,slow=7.3,SNR=37
MJAR LR LR 04 42 28.6
comp=Z,925nm,19.9s,MS4.9,baz=120,slow=33
MAJO Matsushiro 56.62 333 *e*P **P 04 20 59.5 -0.5**
MAJO MLR MLR
comp=Z,1μm,20.0s,MS5.0
MAT Matsushiro 56.62 333 P **P 04 20 59.2 -0.8**
MAT S **S 04 28 44.0 -5.9**
KSM Kuching 57.73 281 *e*P **P 04 21 09.3 +0.9**
comp=Z,44nm,1.1s,mb5.4
KSM *e*pP pP 04 21 20.0 +1.5
YHNB Yeheng 58.25 311 *e*P **P 04 21 13.2 +1.4**
comp=Z,55nm,0.9s,mb5.6
YHNB LR LR
comp=Z,1μm,19.0s,MS5.0
TATO Taipei 58.34 311 PFAKE 04 21 20.0 +7.6
TATO LR LR
comp=Z,2μm,20.0s,MS5.2
ERM Erimo 59.42 340 PFAKE 04 21 30.0 +10
ERM LR LR
comp=Z,2μm,21.0s,MS5.2
QZH Quanzhou 60.48 309⇑*i*P **P 04 21 26.8 -0.4**
QZH S **S 04 29 41.0 +0.3**
QZH AMB AMB
comp=Z,1μm,6.4s
QZH LR LR
comp=N,1μm,17.8s,MS5.3
QZH LR LR
comp=E,1μm,16.7s,MS5.3
QZH LR LR
comp=Z,1μm,18.2s,MS5.0
ASAJ Asahikawa 61.48 341 LR LR 04 43 49.8
comp=Z,2μm,20.9s,MS5.3,baz=183,slow=32
KSRS Korea Array 62.45 326 P **P 04 21 40.0 -0.2**
comp=Z,9.5nm,0.8s,mb5.0,baz=143,slow=7.2,SNR=21
KSRS LR LR 04 46 06.8
comp=Z,533nm,20.4s,MS4.7,baz=120,slow=34
GZH Guangzhou 63.59 305 P **P 04 21 48.8 +0.7**
GZH S **S 04 30 21.5 +1.5**
GZH LR LR
comp=N,331nm,10.6s,MS5.0
GZH LR LR
comp=E,518nm,14.9s,MS5.0
GZH LR LR
comp=Z,963nm,17.4s,MS5.0
VNDA Vanda 63.94 181 P **P 04 21 49.5 -0.1**
comp=Z,9.5nm,0.9s,mb4.8,baz=354,slow=7.9,SNR=33
VNDA LR LR 04 45 55.7
comp=Z,1μm,20.6s,MS5.0,baz=37,slow=32
VNDA Vanda 63.94 181 *e*P **P 04 21 49.6 0.0**
VNDA pmax pmax
comp=Z,56nm,1.4s
VNDA MLR MLR
comp=Z,1μm,20.0s
VNDA Vanda 63.94 181 *e*P **P 04 21 49.6 0.0**
comp=Z,56nm,1.4s,mb5.4
VNDA LR LR
comp=Z,1μm,20.0s,MS5.1
YSS Yuzh-Sakhalins 63.97 342⇑*e*P **P 04 21 49.7 -0.4**
YSS pmax pmax
comp=Z,68nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 63.97 342⇑*e*P **P 04 21 49.8 -0.3**
YSS LR LR
comp=Z,569nm,20.0s,MS4.8
SBA Scott Base 64.23 180 PFAKE 04 22 00.0 +8.5
SBA LR LR
comp=Z,2μm,20.0s,MS5.2
CASY Casey 64.29 202 *e*P **P 04 21 51.6 -0.4**
CASY Casey 64.29 202 *e*P **P 04 21 51.4 -0.6**
CASY LR LR
comp=Z,2μm,20.0s,MS5.2
NJ2 Nanjing 64.41 316 *e*P **P 04 21 55.5 +2.1**
NJ2 PP PP 04 24 20.0 +4.5
NJ2 S **S 04 30 27.0 -2.9**
NJ2 XS sS 04 30 47.0 +0.3
NJ2 AMB AMB
comp=Z,20nm,1.1s,mb5.1
NJ2 AMB AMB
comp=Z,300nm,5.8s
NJ2 LR LR
comp=N,300nm,19.4s
NJ2 LR LR
comp=E,760nm,26.6s
NJ2 LR LR
comp=Z,740nm,25.9s
QIZ Qiongzhong 64.61 299 P **P 04 21 56.5 +1.6**
QIZ S **S 04 30 32.5 -0.3**
QIZ XS sS 04 30 54.3 +4.7
QIZ SS SS 04 34 44.5 +0.4
QIZ AMB AMB
comp=Z,30nm,1.3s,mb5.2
QIZ LR LR
comp=E,419nm,20.9s
QIZ LR LR
comp=Z,638nm,25.4s,MS4.7
QIZ Qiongzhong 64.61 299 PFAKE 04 22 10.0 +15
QIZ LR LR
comp=Z,623nm,19.0s,MS4.8
SKR Severo-Kuril's 64.68 353 *e*P **P 04 21 56.0 +1.3**
SKR *e* 04 30 46.0
SKR MLR MLR
comp=N,3μm,20.0s,MS5.7
SKR MLR MLR
comp=E,3μm,20.0s,MS5.7
SKR MLR MLR
comp=Z,3μm,20.0s,MS5.5
FX1 Attu Island--F 66.48 4 LR LR 04 45 26.9
comp=Z,2μm,20.5s,MS5.3,baz=191,slow=31
WHN Wuhan 66.70 312⇑P **P 04 22 11.0 +2.8**
WHN S S 04 31 03.5 +5.6
WHN AMB AMB
comp=Z,60nm,1.2s,mb5.5
WHN LR LR
comp=N,2μm,18.6s
WHN LR LR
comp=E,1μm,23.8s
WHN LR LR
comp=Z,2μm,17.1s,MS5.4
PET Petropavlovsk 66.72 355 *e*P **P 04 22 08.5 +0.7**
PET *e*S S 04 30 53.9 -3.4
PET *e*SS SS 04 35 14.2 -1.7
PET pmax pmax
comp=Z,400nm,15.9s
PET pmax pmax
comp=Z,700nm,15.6s
PET Petropavlovsk 66.72 355 PFAKE 04 22 20.0 +12
PET LR LR
comp=Z,2μm,21.0s,MS5.2
ADK Adak 66.84 11 PFAKE 04 22 20.0 +11
ADK LR LR
comp=Z,3μm,20.0s,MS5.4
PETK Petropavlovsk- 66.90 354 P **P 04 22 08.7 -0.2**
comp=Z,8.8nm,0.7s,mb4.9,baz=133,slow=6.1,SNR=9.9
PETK LR LR 04 46 23.0
comp=Z,856nm,20.1s,MS5.0,baz=175,slow=32
MDJ Mudanjiang 66.99 332 P **P 04 22 10.0 +0.3**
MDJ AP pP 04 22 22.0 +2.1
MDJ XP sP 04 22 26.8 +3.0
MDJ PP PP 04 24 36.3 -1.5
MDJ S S 04 31 04.8 +3.9
MDJ SS SS 04 35 21.0 +0.6
MDJ AMB AMB
comp=Z,80nm,1.2s,mb5.6
MDJ AMB AMB
comp=Z,407nm,5.9s
MDJ LR LR
comp=N,505nm,24.5s,MS4.7
MDJ LR LR
comp=E,359nm,27.8s,MS4.7
MDJ LR LR
comp=Z,487nm,25.6s,MS4.6
MDJ Mudanjiang 66.99 332 *e*P **P 04 22 10.1 +0.4**
comp=Z,99nm,1.1s,mb5.8
MDJ LR LR
comp=Z,766nm,20.0s,MS4.9
DL2 Dalian 67.01 323 P **P 04 22 10.5 +0.5**
DL2 S S 04 31 00.5 -0.9
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
DL2 AMB AMB
comp=Z,180nm,3.1s
DL2 LR LR
comp=N,300nm,20.8s
DL2 LR LR
comp=Z,400nm,22.7s,MS4.6
COCO West Island 67.76 262 PFAKE 04 22 30.0 +15
COCO LR LR
comp=Z,2μm,20.0s,MS5.2
HABR Khabarovsk 67.86 338 *e*P **P 04 22 15.0 -0.1**
HABR *e**SP sP 04 22 27.0 -2.2
HABR *e* 04 22 39.1
HABR *e*S S 04 31 12.6 +1.4
HABR *e**SS sS 04 31 28.6 +0.5
HABR *e* 04 32 10.8
HABR *e*SS SS 04 35 35.2 +1.5
HABR pmax pmax
comp=N,64nm,1.0s
HABR pmax pmax
comp=Z,150nm,1.0s,mb6.0
HABR pmax pmax
comp=E,115nm,1.1s
SNY Shenyang 67.91 327⇑P **P 04 22 17.3 +1.7**
SNY AMB AMB
comp=Z,19nm,1.0s,mb5.1
SNY LR LR
comp=N,885nm,18.0s
SNY LR LR
comp=E,408nm,24.3s
SNY LR LR
comp=Z,797nm,20.7s,MS4.9
CN2 Changchun 68.35 329⇑P **P 04 22 18.8 +0.5**
CN2 *e*AP pP 04 22 31.8 +3.2
CN2 *e*XP sP 04 22 37.0 +4.6
CN2 *e*S S 04 31 14.0 -3.3
CN2 AMB AMB
comp=Z,70nm,1.0s,mb5.7
CN2 AMB AMB
comp=Z,600nm,14.0s
CN2 LR LR
comp=N,700nm,20.0s,MS5.0
CN2 LR LR
comp=E,500nm,20.0s,MS5.0
CN2 LR LR
comp=Z,600nm,25.0s,MS4.7
KLR Kul'dur 69.73 336 *e*P **P 04 22 23.6 -3.1**
GYA Guiyang 70.53 305⇑*i*P **P 04 22 32.8 +0.6**
GYA AP pP 04 22 46.0 +3.5
GYA XP sP 04 22 51.3 +5.0
GYA PP PP 04 25 13.3 +4.5
GYA S S 04 31 45.5 +1.9
GYA XS sS 04 32 07.3 +6.7
GYA SKS 04 32 26.8
GYA SS SS 04 36 21.8 +6.1
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,260nm,8.7s
GYA LR LR
comp=N,860nm,18.0s,MS5.2
GYA LR LR
comp=E,780nm,18.5s,MS5.2
GYA LR LR
comp=Z,1μm,19.2s,MS5.1
BJT Baijiatuau 70.97 321 *e*P **P 04 22 33.8 -0.8**
BJT pmax pmax
comp=Z,70nm,1.1s
BJT MLR MLR
comp=Z,1μm,21.0s
BJT Baijiatuau 70.97 321 *e*P **P 04 22 33.8 -0.8**
comp=Z,70nm,1.1s,mb5.5
BJT LR LR
comp=Z,1μm,21.0s,MS5.2
BJI Beijing 70.98 321 P **P 04 22 35.0 +0.4**
BJI PP PP 04 25 14.0 +1.6
BJI S S 04 31 50.0 +1.7
BJI SS SS 04 36 25.0 +2.8
BJI AMB AMB
comp=Z,40nm,1.1s,mb5.3
BJI AMB AMB
comp=Z,524nm,5.3s
BJI LR LR
comp=N,918nm,22.6s,MS5.1
BJI LR LR
comp=E,895nm,21.8s,MS5.1
BJI LR LR
comp=Z,1μm,22.6s,MS5.0
XAN Xi'an 72.44 313 P **P 04 22 43.5 -0.1**
XAN AP pP 04 22 57.5 +3.6
XAN PP PP 04 25 24.8 -0.3
XAN S S 04 31 56.5 -8.9
XAN AMB AMB
comp=Z,15nm,1.3s,mb4.8
XAN AMB AMB
comp=Z,434nm,11.3s
XAN LR LR
comp=N,199nm,18.2s,MS4.8
XAN LR LR
comp=E,509nm,19.5s,MS4.8
XAN LR LR
comp=Z,794nm,18.2s,MS5.0
NANT Nan 72.45 295 P **P 04 22 42.0 -1.9**
KMI Kunming 73.15 302 P **P 04 22 49.5 +1.6**
KMI AP pP 04 23 02.5 +4.2
KMI PCP PcP 04 23 06.3 +1.8
KMI XP sP 04 23 07.5 +5.4
KMI PP PP 04 25 34.5 +3.2
KMI S S 04 32 13.5 -0.3
KMI XS sS 04 32 35.0 +4.2
KMI AMB AMB
comp=Z,35nm,1.0s,mb5.2
KMI AMB AMB
comp=Z,385nm,5.6s
KMI LR LR
comp=N,354nm,18.2s,MS5.0
KMI LR LR
comp=E,691nm,18.2s,MS5.0
KMI LR LR
comp=Z,665nm,17.6s,MS5.0
CM31 Chiang Mai Arr 73.88 294 PFAKE 04 23 00.0 +7.7
CM31 LR LR
comp=Z,380nm,19.0s,MS4.7
CMAR Chiang Mai Arr 73.88 294 P **P 04 22 53.1 +0.8**
comp=Z,24nm,0.9s,mb5.1,baz=121,slow=4.3,SNR=61
CMAR Chiang Mai Arr 73.88 294 P **P 04 22 53.2 +0.9**
CMAR pmax pmax
comp=Z,24nm,0.9s
CHG Chiang Mai 74.00 294⇑P **P 04 22 53.9 +0.8**
comp=Z,24nm,1.1s,mb5.0
CHTO Chiang Mai 74.00 294 *e*P **P 04 22 53.6 +0.5**
CHTO pmax pmax
comp=Z,29nm,1.1s,mb5.1
CHTO MLR MLR
comp=Z,479nm,20.0s,MS4.8
CHTO Chiang Mai 74.00 294 *e*P **P 04 22 53.6 +0.6**
comp=Z,29nm,1.1s,mb5.1
CHTO LR LR
comp=Z,479nm,20.0s,MS4.8
HHC Hu-ho-hao-te 74.31 320 *e*P **P 04 22 55.5 +1.1**
HHC AP pP 04 23 08.5 +3.8
HHC XP sP 04 23 14.3 +5.7
HHC PP PP 04 25 43.8 +3.0
HHC *e*S S 04 32 23.8 -2.4
HHC XS sS 04 32 48.0 +4.7
HHC SKS 04 32 54.5
HHC SCS ScS 04 32 59.0 -3.8
HHC SS SS 04 37 13.5 +0.5
HHC AMB AMB
comp=Z,35nm,1.3s,mb5.1
HHC AMB AMB
comp=Z,371nm,7.3s
HHC LR LR
comp=N,408nm,17.3s,MS4.9
HHC LR LR
comp=E,332nm,16.5s,MS4.9
HHC LR LR
comp=Z,597nm,17.3s,MS4.9
CD2 Chengdu 74.80 308 P **P 04 22 58.0 +0.5**
CD2 AP pP 04 23 11.5 +3.7
CD2 XP sP 04 23 16.8 +5.1
CD2 PP PP 04 25 48.8 +3.6
CD2 S S 04 32 31.5 -0.7
CD2 XS sS 04 32 53.8 +4.5
CD2 SS SS 04 37 22.8 +1.9
CD2 AMB AMB
comp=Z,40nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,530nm,10.6s
CD2 LR LR
comp=N,630nm,15.6s
CD2 LR LR
comp=Z,520nm,15.6s,MS4.9
HIA Hailar 74.99 330⇑*i*P **P 04 22 58.3 +0.1**
HIA MLR MLR
comp=Z,886nm,19.0s
BTO Baotou 75.15 319 *e*P **P 04 23 00.0 +0.7**
QSPA South Pole Qui 76.39 180 PFAKE 04 23 20.0 +14
QSPA LR LR
comp=Z,417nm,19.0s,MS4.8
LZH Lanzhou 77.08 312⇓P **P 04 23 11.8 +1.5**
LZH AP pP 04 23 24.5 +3.8
LZH XP sP 04 23 29.5 +4.9
LZH PP PP 04 26 08.5 +4.1
LZH S S 04 32 57.0 -0.1

LZH XS sS 04 33 19.0 +4.8
LZH SS SS 04 38 01.0 +5.8
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,410nm,5.9s
LZH LR LR
comp=E,640nm,16.2s
LZH LR LR
comp=Z,955nm,18.7s,MS5.1
SEY Seymchan 77.11 353 *e*P **P 04 23 08.1 -1.8**
SEY Seymchan 77.11 353 *e*P **P 04 23 08.2 -1.7**
NRGR Nerungri 78.18 338 *e*P **P 04 23 17.2 +1.2**
NRGR S S 04 33 23.1 +15
NRGR smax
comp=N,44nm,0.8s
CLNS Chul'man 78.25 338 *e*P **P 04 23 17.2 +0.8**
CLNS *e* pP 04 23 26.1 -0.7
CLNS *e**PP pP 04 23 28.5 +1.7
CLNS *e* 04 26 14.0
CLNS *e*S S 04 33 11.6 +2.7
CLNS *e* 04 34 02.5
CLNS *e*SS SS 04 38 15.1 +3.0
CLNS pmax pmax
comp=Z,53nm,1.2s,mb5.3
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS pmax pmax
comp=N,29nm,1.2s
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
CLNS smax
comp=N,200nm,11.8s
CLNS smax
comp=E,197nm,11.8s
CLNS MLR MLR
comp=Z,269nm,16.0s,MS4.7
KDAK Kodiak Island 78.68 21 P **P 04 23 19.6 +0.9**
comp=Z,10nm,0.6s,mb4.9,baz=342,slow=6.8,SNR=6.0
KDAK LR LR 04 52 42.0
comp=Z,3μm,19.7s,MS5.7,baz=234,slow=32
CIT Chita 79.78 330 *e*P **P 04 23 25.5 +0.6**
CIT pmax pmax
comp=Z,169nm,2.2s,mb5.6
YAK Yakutsk 80.78 343 *c i*P **P 04 23 29.5 -0.6**
YAK *e* pP 04 23 36.5 -4.0
YAK *e**PP pP 04 23 42.2 +1.7
YAK *e* 04 26 31.0
YAK *e*S S 04 33 34.0 -1.5
YAK *e* 04 33 47.1
YAK *e*SS SS 04 38 54.5 +4.7
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=Z,54nm,1.3s,mb5.3
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,13nm,0.8s,mb4.9
YAK pmax pmax
comp=N,117nm,3.0s
YAK pmax pmax
comp=E,35nm,2.0s
YAK smax
comp=E,6.0nm,1.1s
YAK smax
comp=N,79nm,3.7s
YAK MLR MLR
comp=Z,2μm,23.0s,MS5.5
YAK MLR MLR
comp=N,1μm,21.0s,MS5.4
YAK MLR MLR
comp=E,784nm,18.0s,MS5.4
YAK Yakutsk 80.78 343 *e*P **P 04 23 29.1 -0.9**
comp=E,45nm,0.8s,mb5.5
YAK LR LR
comp=Z,1μm,22.0s,MS5.2
ULN Ulaanbaatar 80.85 324 *e*P **P 04 23 31.1 +0.4**
ULN pmax pmax
comp=Z,55nm,1.2s,mb5.4
ULN MLR MLR
comp=Z,633nm,21.0s,MS5.0
ULN Ulaanbaatar 80.85 324 *e*P **P 04 23 31.1 +0.4**
comp=Z,55nm,1.2s,mb5.4
ULN LR LR
comp=Z,633nm,21.0s,MS5.0
SONM Songino Array 81.21 324 P **P 04 23 32.7 +0.1**
comp=Z,16nm,1.0s,mb4.9,baz=131,slow=5.0,SNR=26
SONM LR LR 04 57 28.8
comp=Z,824nm,21.1s,MS5.1,baz=345,slow=34
TNA Tin City 81.25 10 *e*P **P 04 23 33.4 +0.9**
comp=Z,13nm,1.0s,mb4.8
GTA Gaotai 81.41 314 P **P 04 23 35.0 +1.0**
GTA AP pP 04 23 48.8 +4.4
GTA XP sP 04 23 53.3 +5.1
GTA PP PP 04 26 44.5 +4.0
GTA S S 04 33 45.3 +2.3
GTA XS sS 04 34 06.5 +6.2
GTA SS SS 04 39 07.5 +7.3
GTA AMB AMB
comp=Z,35nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,446nm,7.7s
GTA LR LR
comp=N,452nm,18.1s,MS5.0
GTA LR LR
comp=E,324nm,17.2s,MS5.0
GTA LR LR
comp=Z,458nm,17.0s,MS4.9
BILL Bilibino 81.44 360 *e*P **P 04 23 31.0 -2.5**
BILL *e* 04 26 43.1
BILL *e*S S 04 33 37.9 -4.3
BILL *e*SS SS 04 39 06.7 +7.3
BILL pmax pmax
comp=Z,40nm,1.2s,mb5.2
BILL Bilibino 81.44 360 *e*P **P 04 23 32.1 -1.3**
comp=Z,19nm,0.6s,mb5.2
BILL LR LR
comp=Z,786nm,20.0s,MS5.1
RC01 Rabbit Creek A 82.13 20 *e*P **P 04 23 38.2 +1.0**
comp=Z,41nm,1.1s,mb5.3
MAW Mawson 82.64 202 P **P 04 23 39.7 -0.3**
comp=Z,14nm,0.9s,mb5.0,baz=117,slow=8.8,SNR=8.3
MAW LR LR 04 54 13.7
comp=Z,1μm,21.7s,MS5.3,baz=95,slow=31
MAW Mawson 82.64 202 *e*P **P 04 23 38.8 -1.2**
comp=Z,12nm,1.1s,mb4.8
MAW Mawson 82.64 202 *e*P **P 04 23 39.2 -0.8**
comp=Z,2.9nm,0.9s,mb4.3
PMR Palmer 82.69 20 *e*P **P 04 23 41.6 +1.4**
PMR pmax pmax
comp=Z,28nm,1.0s,mb5.2
PMR Palmer 82.69 20 *e*P **P 04 23 41.6 +1.4**
comp=Z,28nm,1.0s,mb5.2
BOD Bodaibo 83.19 335 *e*P **P 04 23 42.1 -0.7**
BOD pmax pmax
comp=Z,20nm,1.8s,mb4.8
CHUM Lake Minchumin 83.44 17 *e*P **P 04 23 45.0 +1.1**
comp=Z,19nm,1.1s,mb5.0
MCCM Marconi Confer 83.61 48 PFAKE 04 24 00.0 +15
MCCM LR LR
comp=Z,3μm,19.0s,MS5.8
TRF Thorofare Moun 83.71 18 *e*P **P 04 23 46.1 +0.8**
comp=Z,19nm,0.8s,mb5.3
HOPS Hopland 83.81 48 PFAKE 04 24 00.0 +14
HOPS LR LR
comp=Z,4μm,19.0s,MS5.8
SAO San Andreas Ge 84.15 50 PFAKE 04 24 00.0 +12
SAO LR LR
comp=Z,4μm,19.0s,MS5.8
ZAK Zakamensk 84.26 325 *e*P **P 04 23 48.3 -0.2**
ZAK pmax pmax
comp=Z,48nm,1.3s,mb5.5
MCK McKinley 84.32 18 *e*P **P 04 23 46.9 -1.6**
MCK pmax pmax
comp=Z,44nm,1.0s,mb5.5
MCK McKinley 84.32 18 *e*P **P 04 23 46.9 -1.6**
comp=Z,44nm,1.0s,mb5.5
LSA Lhasa 84.40 302 P **P 04 23 50.5 +0.8**
LSA AP pP 04 24 05.5 +5.3
LSA XP sP 04 24 11.0 +7.0
LSA S S 04 34 14.3 +0.5
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.2
LSA LR LR
comp=N,190nm,16.4s,MS4.8
LSA LR LR
comp=E,290nm,16.1s,MS4.8
LSA LR LR
comp=Z,410nm,14.9s,MS4.9
LSA Lhasa 84.40 302 *e*P **P 04 23 51.1 +1.4**
LSA pmax pmax
comp=Z,27nm,0.9s,mb5.4
LSA MLR MLR
comp=Z,423nm,19.0s,MS4.8
LSA Lhasa 84.40 302 *e*P **P 04 23 51.1 +1.4**
comp=Z,26nm,0.9s,mb5.4
LSA LR LR
comp=Z,423nm,19.0s,MS4.8
TLY Talaya 84.70 326 P **P 04 23 50.5 -0.1**
comp=Z,242nm,1.5s,mb6.1,SNR=9.6
TLY Talaya 84.70 326 *e*P **P 04 23 50.5 -0.1**
TLY *e* 04 27 07.1
TLY *e*S S 04 34 13.1 -2.8
TLY *e*PS 04 35 39.6
TLY *e*SS SS 04 39 48.7 +0.4
TLY pmax pmax
comp=Z,79nm,1.4s,mb5.7
TLY MLR MLR
comp=Z,515nm,17.0s,MS5.0
TLY Talaya 84.70 326 *e*P **P 04 23 50.2 -0.5**
comp=Z,85nm,1.3s,mb5.7
TLY LR LR
comp=Z,646nm,21.0s,MS5.0
WDC Whiskeytown Da 84.80 46 PFAKE
WDC LR LR 04 24 00.0 +8.6
comp=Z,2μm,20.0s,MS5.4
YBH Yreka Blue Hor 85.12 45 P **P 04 23 54.3 +1.3**
comp=Z,2.3nm,0.5s,mb4.6,baz=309,slow=7.9,SNR=8.2
YBH LR LR 05 01 19.1
comp=Z,671nm,18.1s,MS5.1,baz=250,slow=35
YBH Yreka Blue Hor 85.12 45 P **P 04 23 54.3 +1.3**
YBH pmax pmax
comp=Z,2.0nm,0.5s
YBH MLR MLR
comp=Z,671nm,18.1s
HUMO Hull Mountain 85.30 44 PFAKE 04 24 00.0 +6.1
HUMO LR LR
comp=Z,2μm,19.0s,MS5.5
COLA College 85.48 18 *e*P **P 04 23 52.4 -1.9**
COLA pmax pmax
comp=Z,48nm,0.9s,mb5.6
COLA MLR MLR
comp=Z,1μm,20.0s,MS5.3
COLA College 85.48 18 *e*P **P 04 23 52.4 -1.8**
comp=Z,48nm,0.9s,mb5.6
COLA LR LR
comp=Z,1μm,20.0s,MS5.3
MOY Mondy 86.14 325 *e*P **P 04 23 58.3 +0.5**
MOY pmax pmax
comp=Z,90nm,2.3s,mb5.6
WRAK Wrangell Islan 86.18 29 PFAKE
WRAK LR LR 04 24 10.0 +12
comp=Z,2μm,22.0s,MS5.4
TAPN Taplejung 86.55 299 *e*P **P 04 24 00.8 +0.4**
comp=Z,110nm,1.3s,mb5.9
COLD Coldfoot 86.55 15 *e*P **P 04 23 59.9 +0.4**
comp=Z,22nm,1.0s,mb5.3
NLWA Neilton Lookou 86.63 40 PFAKE 04 24 10.0 +10
NLWA LR LR
comp=Z,2μm,20.0s,MS5.5
ODAN Odare 86.68 298 *e*P **P 04 24 01.4 +0.3**
comp=Z,147nm,1.1s,mb6.1
MOD Modoc 86.86 46 PFAKE 04 24 10.0 +8.4
MOD LR LR
comp=Z,2μm,22.0s,MS5.4
DAC Darwin (Calif) 86.89 52 PFAKE 04 24 10.0 +8.1
DAC LR LR
comp=Z,2μm,21.0s,MS5.5
PFO Pinyon Flat Ob 86.92 55 LR LR 04 57 54.4
comp=Z,3μm,18.2s,MS5.7,baz=303,slow=32
PFO Pinyon Flat Ob 86.92 55 PFAKE 04 24 10.0 +7.9
PFO LR LR
comp=Z,3μm,19.0s,MS5.7
NVAR Mina Array Bea 87.08 49 P **P 04 24 04.1 +1.4**
comp=Z,1.7nm,0.8s,mb4.3,baz=232,slow=8.1,SNR=10
NVAR PKKPbc PKKPbc 04 41 58.0 +1.7
comp=Z,0.3nm,0.5s,baz=72,slow=6.5,SNR=3.7
RAMN Ramite 87.38 298 *e*P **P 04 24 04.6 +0.1**
comp=Z,35nm,0.7s,mb5.7
EGAK Eagle 87.51 20 *e*P **P 04 24 03.8 -0.4**
comp=Z,20nm,0.9s,mb5.3
EGAK LR LR
comp=Z,2μm,20.0s,MS5.4
PALK Pallekele 87.70 278 *e*P **P 04 24 05.1 -1.2**
PALK pmax pmax
comp=Z,16nm,1.0s,mb5.2
PALK Pallekele 87.70 278 *e*P **P 04 24 05.0 -1.3**
comp=Z,16nm,1.0s,mb5.2
TPH Tonopah 87.76 50 PFAKE 04 24 20.0 +14
TPH LR LR
comp=Z,2μm,20.0s,MS5.5
JIRN Jiri 87.93 299 *e*P **P 04 24 07.4 +0.3**
comp=Z,28nm,0.6s,mb5.7
TPNV Topopah Spring 88.13 51 PFAKE 04 24 20.0 +12
TPNV LR LR
comp=Z,2μm,20.0s,MS5.5
WVOR Wild Horse Val 88.20 46 PFAKE 04 24 20.0 +12
WVOR LR LR
comp=Z,2μm,19.0s,MS5.4
GUN Gumba 88.27 299 *e*P **P 04 24 08.8 +0.1**
comp=Z,72nm,0.8s,mb5.9
BMN Battle Mountai 88.53 48 PFAKE 04 24 20.0 +10
BMN LR LR
comp=Z,2μm,19.0s,MS5.5
PKI Pulchoki 88.57 299 *e*P **P 04 24 10.2 0.0**
comp=Z,38nm,0.5s,mb6.0
PKIN Phulchoki 88.58 299 *e*P **P 04 24 10.1 -0.1**
comp=Z,35nm,0.5s,mb6.0
KKN Kakani 88.74 299 *e*P **P 04 24 10.9 -0.1**
TIXI Tiksi 88.76 349 *e*P **P 04 24 08.5 -1.5**
TIXI pmax pmax
comp=Z,13nm,1.0s,mb5.2
TIXI Tiksi 88.76 349 *e*P **P 04 24 08.2 -1.9**
comp=Z,12nm,1.0s,mb5.2
TIXI LR LR
comp=Z,905nm,21.0s,MS5.2
DMN Daman 88.84 299 *e*P **P 04 24 11.5 +0.1**
comp=Z,123nm,0.9s,mb6.2
GKN Gorkha 89.35 299 *e*P **P 04 24 13.3 -0.5**
SYO Syowa Base 89.56 197 *e*P **P 04 24 11.4 -2.6**
BMO Blue Mountains 89.93 44 PFAKE 04 24 30.0 +14
BMO LR LR
comp=Z,1μm,19.0s,MS5.4
ELK Elko 90.06 48 PFAKE 04 24 30.0 +13
ELK LR LR
comp=Z,2μm,21.0s,MS5.6
KOLN Koldanda 90.17 298 *e*P **P 04 24 16.8 -0.9**
DANN Dangsing 90.19 299 *e*P **P 04 24 17.0 -0.7**
TUC Tucson 91.10 57 PFAKE 04 24 30.0 +8.1
TUC LR LR
comp=Z,1μm,20.0s,MS5.3
NEW Newport 91.17 40 PFAKE 04 24 30.0 +8.2
NEW LR LR
comp=Z,1μm,20.0s,MS5.3
WMQ Urumqi 91.47 315 P **P 04 24 23.3 0.0**
WMQ XP sP 04 24 40.8 +3.1
WMQ PP PP 04 28 04.0 +2.4
WMQ SKS 04 34 49.0
WMQ S S 04 35 16.8 -3.8
WMQ XS sS 04 35 39.5 +1.3
WMQ AMB AMB
comp=Z,21nm,1.5s,mb5.2
WMQ AMB AMB
comp=Z,332nm,4.5s
WMQ LR LR
comp=N,355nm,21.0s,MS4.9
WMQ LR LR
comp=E,277nm,20.0s,MS4.9
WMQ LR LR
comp=Z,483nm,19.5s,MS5.0
WUAZ Wupatki 91.48 54 PFAKE 04 24 30.0 +6.4
WUAZ LR LR
comp=Z,2μm,19.0s,MS5.5
HLID Hailey 91.50 46 PFAKE 04 24 30.0 +6.5
HLID LR LR
comp=Z,1μm,20.0s,MS5.4
MVU Marysvale 91.65 51 PFAKE 04 24 40.0 +16
MVU LR LR
comp=Z,2μm,20.0s,MS5.6
DUG Dugway 91.67 49 PFAKE 04 24 40.0 +16
DUG LR LR
comp=Z,3μm,19.0s,MS5.8
HYB Hyderabad 92.14 287 *i*P **P 04 24 27.0 0.0**
HYB Hyderabad 92.14 287 *e*P **P 04 24 27.0 0.0**
DGAR Diego Garcia 92.24 262 PFAKE 04 24 40.0 +12
DGAR LR LR
comp=Z,1μm,19.0s,MS5.3
MSO Missoula 92.78 43 PFAKE 04 24 40.0 +11
MSO LR LR
comp=Z,594nm,20.0s,MS5.0
PMSA Palmer Station 93.03 161 PFAKE 04 24 40.0 +10
PMSA LR LR
comp=Z,1μm,19.0s,MS5.4
BOZ Bozeman (W) 93.99 44 PFAKE 04 24 50.0 +15
BOZ LR LR
comp=Z,1μm,20.0s,MS5.3
NVL N'lazarevskaya 94.04 188 *e*P **P 04 24 33.0 -1.8**
NVL pmax pmax
comp=Z,35nm,1.1s,mb5.7
MVCO Mesa Verde 94.16 53 PFAKE 04 24 50.0 +14
MVCO LR LR
comp=Z,1μm,20.0s,MS5.4
SNAA Sanae 94.61 183 *e*P **P 04 24 35.5 -1.8**
SNAA *e* 04 24 37.2
SNAA *e* 04 24 50.6
SNAA Sanae 94.61 183 *e*P **P 04 24 35.7 -1.6**
SNAA pmax pmax
comp=Z,51nm,1.2s
SNAA Sanae 94.61 183 *e*P **P 04 24 35.7 -1.6**
comp=Z,51nm,1.2s,mb5.8
BW06 Boulder Array 94.70 47 PFAKE 04 24 50.0 +12
BW06 LR LR
comp=Z,1μm,20.0s,MS5.4
PDAR Pinedale Array 94.70 47 P **P 04 24 39.2 +0.9**
comp=Z,0.4nm,0.5s,mb4.1,baz=183,slow=3.0,SNR=4.1
PDAR LR LR 05 02 18.7
comp=Z,1μm,19.4s,MS5.3,baz=255,slow=32
ANMO Albuquerque 95.24 55 LR LR 05 00 03.8
comp=Z,1μm,20.3s,MS5.4,baz=78,slow=31
ANMO Albuquerque 95.24 55 PFAKE 04 24 50.0 +9.1
ANMO LR LR
comp=Z,2μm,20.0s,MS5.5
VNA3 Neumayer Olymp 95.30 181 *e*P **P 04 24 38.7 -1.8**
VNA3 *e* 04 24 41.0
VNA3 *e* 04 24 58.4
RLMT Red Lodge 95.47 45 PFAKE 04 24 50.0 +8.3
RLMT LR LR
comp=Z,861nm,20.0s,MS5.2
VNA2 Neumayer--Watz 95.55 182 *e*P **P 04 24 40.3 -1.4**
VNA2 *e* 04 24 42.0
VNA2 *e* 04 24 59.5
EGMT Eagleton 95.83 42 PFAKE 04 24 50.0 +6.7
EGMT LR LR
comp=Z,797nm,21.0s,MS5.2
VNA1 Neumayer--Stat 95.86 182 *e*P **P 04 24 41.7 -1.4**
VNA1 *e* 04 24 43.9
VNA1 *e* 04 24 55.2
MK31 Makanchi Array 95.94 317 *e*P **P 04 24 43.5 -0.3**
MKAR Makanchi Array 95.94 317 P **P 04 24 43.6 -0.2**
comp=Z,20nm,1.0s,mb5.5,baz=99,slow=6.3,SNR=43
MKAR PKiKP PKiKP 04 29 21.1 -1.6
comp=Z,0.7nm,0.5s,baz=120,slow=2.0,SNR=5.9
MKAR PKKPbc PKKPbc 04 41 30.3 -3.6
comp=Z,0.5nm,0.6s,baz=294,slow=1.8,SNR=4.6
MKAR LR LR 05 08 11.5
comp=Z,411nm,19.8s,MS4.9,baz=89,slow=36
ZAA0 Zalesovo Array 96.10 324 *e*P **P 04 24 42.6 -1.7**
ZALV Zalesovo Beam 96.10 324 P **P 04 24 42.4 -2.0**
comp=Z,16nm,0.9s,mb5.5,baz=108,slow=4.8,SNR=48
ZALV LR LR 05 06 47.8
comp=Z,345nm,20.3s,MS4.8,baz=295,slow=35
ZALV Zalesovo Beam 96.10 324 P **P 04 24 42.4 -1.9**
ZALV pmax pmax
comp=Z,16nm,0.9s,mb5.5
ZALV MLR MLR
comp=Z,345nm,20.3s,MS4.8
TXAR Lajitas Array 96.35 61 P **P 04 24 45.9 -0.2**
comp=Z,0.2nm,0.6s,baz=209,slow=10,SNR=2.5
TXAR PKKPbc PKKPbc 04 41 36.0 +4.0
comp=Z,1.2nm,1.1s,baz=121,slow=11,SNR=3.6
TXAR LR LR 05 03 33.0
comp=Z,776nm,18.3s,baz=315,slow=32
SDCO Great Sand Dun 96.60 53 PFAKE 04 25 00.0 +13
SDCO LR LR
comp=Z,2μm,19.0s,MS5.5
YKA Yellowknife Ar 96.89 27 P **P 04 24 46.3 -1.4**
comp=Z,2.0nm,0.5s,mb4.8,baz=259,slow=4.6,SNR=28
YKA PKiKP PKiKP 04 29 22.0 -1.9
comp=Z,0.1nm,0.4s,baz=250,slow=1.5,SNR=5.4
YKA PKKPbc PKKPbc 04 41 27.6 -4.2
comp=Z,0.2nm,0.7s,baz=75,slow=2.9,SNR=6.0
YKA LR LR 05 08 46.0
comp=Z,85nm,18.0s,MS4.3,baz=30,slow=36
ISCO Idaho Springs 96.94 51 PFAKE 04 25 00.0 +11
ISCO LR LR
comp=Z,2μm,20.0s,MS5.6
NVS Novosibirsk 97.22 325 *e*P **P 04 24 48.2 -1.2**
NVS pmax pmax
comp=Z,68nm,2.3s,mb5.7
NVS pmax pmax
comp=E,35nm,2.2s
RSSD Black Hills 98.92 47 PFAKE 04 25 10.0 +13
RSSD LR LR
comp=Z,677nm,20.0s,MS5.1
AMTX Amarillo 99.08 56 PFAKE 04 25 10.0 +12
AMTX LR LR
comp=Z,1μm,20.0s,MS5.4
KURK Kurchatov 99.12 320 P **P 04 24 55.9 -2.1**
comp=Z,3.2nm,0.9s,mb4.8,baz=96,slow=4.2,SNR=10
KURK LR LR 05 11 09.0
comp=Z,359nm,18.7s,MS4.9,baz=90,slow=36
KURK Kurchatov 99.12 320 *e*P **P 04 24 57.0 -1.0**
KURK pmax pmax
comp=Z,15nm,2.5s,mb5.1
KURK Kurchatov 99.12 320 *e*Pdif **P 04 24 56.5 -1.5**
comp=Z,3.0nm,0.9s,mb4.8
KURK LR LR
comp=Z,610nm,21.0s,MS5.1
OGNE Ogallala 99.84 50 PFAKE 04 25 10.0 +8.7
OGNE LR LR
comp=Z,3μm,20.0s,MS5.7
TKM2 Tokmak 2 99.84 312 PFAKE 04 25 10.0 +8.7
TKM2 LR LR
comp=Z,488nm,20.0s,MS5.0
JCT Junction City 99.86 61 PFAKE 04 25 10.0 +8.6
JCT LR LR
comp=Z,1μm,20.0s,MS5.4
UCH Uchtor 100.52 311 PFAKE 04 25 20.0 +16
UCH LR LR
comp=Z,218nm,19.0s,MS4.7
KVTX Kingsville 101.02 64 PFAKE 04 25 20.0 +14
KVTX LR LR
comp=Z,830nm,20.0s,MS5.2
AML Almayashu 101.11 311 PFAKE 04 25 20.0 +13
AML LR LR
comp=Z,487nm,21.0s,MS5.0
EKS2 Erkin-Say 101.12 311 PFAKE 04 25 20.0 +13
EKS2 LR LR
comp=Z,444nm,19.0s,MS5.0
CBKS Cedar Bluff 101.25 53 PFAKE 04 25 20.0 +12
CBKS LR LR
comp=Z,2μm,19.0s,MS5.6
WMOK Wichita Mounta 101.41 57 PFAKE 04 25 20.0 +12
WMOK LR LR
comp=Z,1μm,21.0s,MS5.3
FFC Flin Flon 101.83 36 PFAKE 04 25 20.0 +10
FFC LR LR
comp=Z,2μm,20.0s,MS5.7
PAYG Puerto Ayora 102.62 94 PFAKE 04 25 30.0 +16
PAYG LR LR
comp=Z,1μm,20.0s,MS5.5
HKT Hockley 103.17 62 PFAKE 04 25 30.0 +14
HKT LR LR
comp=Z,834nm,20.0s,MS5.3
KSU1 Kansas State U 103.71 53 PFAKE 04 25 30.0 +12
KSU1 LR LR
comp=Z,2μm,19.0s,MS5.7
ECSD EROS,Sioux Fal 104.18 48 PFAKE 04 25 30.0 +9.4
ECSD LR LR
comp=Z,552nm,20.0s,MS5.1
EFI East Falkland 104.34 153 PFAKE 04 25 30.0 +8.7
EFI LR LR
comp=Z,938nm,21.0s,MS5.3

NATX Nacogdoches 104.42 60 PFAKE 04 25 30.0 +8.4
NATX LR LR
comp=Z,1µm,20.0s,MS5.4
PLCA Paso Flores 104.42 139 PFAKE 04 25 30.0 +8.4
PLCA LR LR
comp=Z,660nm,21.0s,MS5.2
BVAR Borovoye Array 104.46 322 Pdiff Pdif 04 25 20.2 -1.7
comp=Z,4.8nm,1.1s,baz=90,slow=3.7,SNR=11
BVAR PKiKP PKiKP 04 29 36.2 -1.6
comp=Z,1.4nm,0.7s,baz=100,slow=3.4,SNR=4.8
BVAR Borovoye Array 104.46 322 P Pdif 04 25 20.2 -1.6
BVAR *i* 04 29 36.2
BVAR pmax pmax
comp=Z,5.0nm,1.1s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BRVK Borovoye 104.53 322 *e*P Pdif 04 25 21.4 -0.7
BRVK pmax pmax
comp=Z,4.0nm,0.9s
BRVK MLR MLR
comp=Z,3µm,19.0s,MS5.9
BRVK Borovoye 104.53 322 *e*Pdif Pdif 04 25 21.4 -0.7
comp=Z,3.8nm,0.9s
BRVK LR LR
comp=Z,810nm,21.0s,MS5.2
AGMN Agassiz Refuge 105.06 43 PFAKE 04 29 50.0 +11
AGMN LR LR
comp=Z,896nm,20.0s,MS5.3
ULM Lac du Bonnet 105.17 41 PFAKE 04 29 50.0 +11
ULM LR LR
comp=Z,1µm,19.0s,MS5.5
MIAR Mount Ida 105.64 58 PFAKE 04 29 50.0 +9.4
MIAR LR LR
comp=Z,855nm,20.0s,MS5.3
SCIA State Center 106.53 50 PFAKE 04 29 50.0 +8.0
SCIA LR LR
comp=Z,3µm,20.0s,MS5.8
VBMS Vicksburg 107.97 60 PFAKE 04 30 00.0 +15
VBMS LR LR
comp=Z,966nm,19.0s,MS5.4
EYMN Ely 107.97 44 PFAKE 04 30 00.0 +16
EYMN LR LR
comp=Z,1µm,19.0s,MS5.5
TGUH Tegucigalpa,Un 108.61 80 PFAKE 04 30 00.0 +13
TGUH LR LR
comp=Z,476nm,20.0s,MS5.1
TEIG Tepich 108.61 73 PFAKE 04 30 00.0 +13
TEIG LR LR
comp=Z,659nm,19.0s,MS5.2
JFWS Jewell Farm 108.77 49 PFAKE 04 30 00.0 +14
JFWS LR LR
comp=Z,1µm,19.0s,MS5.5
OXF Oxford 109.06 58 PFAKE 04 30 00.0 +13
OXF LR LR
comp=Z,731nm,21.0s,MS5.2
MSEY Mahe Island 109.25 260 PFAKE 04 30 00.0 +12
MSEY LR LR
comp=Z,898nm,20.0s,MS5.3
LCO Las Campanas 110.34 128 PFAKE 04 30 00.0 +10
LCO LR LR
comp=Z,805nm,19.0s,MS5.3
WVT Waverly 110.44 56 PFAKE 04 30 00.0 +11
WVT LR LR
comp=Z,1µm,20.0s,MS5.4
BRAL Brewton 110.82 62 PFAKE 04 30 00.0 +10
BRAL LR LR
comp=Z,894nm,19.0s,MS5.4
LRAL Lakeview Retre 110.98 60 PFAKE 04 30 00.0 +9.4
LRAL LR LR
comp=Z,1µm,20.0s,MS5.5
ARU Arti 111.20 325 *i* PKIKP PKiKP 04 29 47.6 -2.7
ARU 04 30 32.0
ARU 04 36 26.2
ARU SS SS 04 46 09.3 +9.0
ARU Arti 111.20 325 *e*PKP PKiKP 04 29 48.5 -1.7
ARU LR LR
comp=Z,697nm,21.0s,MS5.2
TRQA Tornquist 111.37 141 PFAKE 04 30 00.0 +8.7
TRQA LR LR
comp=Z,594nm,19.0s,MS5.2
WCI Wyandotte Cave 111.71 54 PFAKE 04 30 00.0 +8.2
WCI LR LR
comp=Z,2µm,20.0s,MS5.7
ABPO Ambohimpanom 112.01 243 PFAKE 04 30 00.0 +7.0
ABPO LR LR
comp=Z,1µm,20.0s,MS5.6
NNA Nana 112.18 109 PFAKE 04 30 00.0 +6.6
NNA LR LR
comp=Z,941nm,22.0s,MS5.3
AKTK Aktyubinsk 112.19 319 PKPdf PKiKP 04 29 51.1 -1.2
AKTO Aktyubinsk 112.19 319 PKiKP PKiKP 04 29 51.1 -1.2
comp=Z,3.4nm,0.6s,baz=96,slow=4.3,SNR=11
AKTO Aktyubinsk 112.19 319 *i* PKIKP PKiKP 04 29 51.2 -1.2
AKTO pmax pmax
comp=Z,3.0nm,0.6s
GLMI Grayling 112.81 47 PFAKE 04 30 00.0 +6.3
GLMI LR LR
comp=Z,780nm,21.0s,MS5.3
KBS Kingsbay 113.55 355 PFAKE 04 30 10.0 +16
KBS LR LR
comp=Z,900nm,19.0s,MS5.4
AAM Ann Arbor 113.64 50 PFAKE 04 30 10.0 +15
AAM LR LR
comp=Z,2µm,20.0s,MS5.8
GOGA Godfrey 113.95 59 PFAKE 04 30 10.0 +14
GOGA LR LR
comp=Z,1µm,20.0s,MS5.4
ACSO Alum Creek Sta 114.25 52 PFAKE 04 30 10.0 +13
ACSO LR LR
comp=Z,2µm,20.0s,MS5.8
OTAV Otavalo 114.31 96 PFAKE 04 30 10.0 +12
OTAV LR LR
comp=Z,659nm,21.0s,MS5.2
LVC Limon Verde 114.81 123 PFAKE 04 30 10.0 +12
LVC LR LR
comp=Z,469nm,21.0s,MS5.1
BCIP Isla Barro Col 114.92 86 PFAKE 04 30 10.0 +11
BCIP LR LR
comp=Z,402nm,20.0s,MS5.0
DWPF Disney 115.56 65 PFAKE 04 30 10.0 +10
DWPF LR LR
comp=Z,542nm,21.0s,MS5.1
ERPA Erie 116.37 50 PFAKE 04 30 10.0 +9.3
ERPA LR LR
comp=Z,2µm,21.0s,MS5.8
BLA Blacksburg 116.39 55 PFAKE 04 30 10.0 +9.2
BLA LR LR
comp=Z,1µm,22.0s,MS5.5
MCWV Mont Chateau 116.69 52 PFAKE 04 30 10.0 +8.7
MCWV LR LR
comp=Z,3µm,20.0s,MS5.9
NHSC New Hope 116.71 60 PFAKE 04 30 10.0 +8.4
NHSC LR LR
comp=Z,1µm,19.0s,MS5.5
LVZ Lovozero 117.55 341 PFAKE 04 30 10.0 +7.9
LVZ LR LR
comp=Z,1µm,21.0s,MS5.6
SSPA Standing Stone 118.10 51 PFAKE 04 30 10.0 +6.0
SSPA LR LR
comp=Z,2µm,20.0s,MS5.7
APA Apatity 118.12 341 *i* PKIKP PKPdf 04 30 00.0 -3.3
APA pmax pmax
comp=Z,34nm,1.3s
APA MLR MLR
comp=Z,2µm,20.0s,MS5.8
KEV Kevo 118.49 345 *e*PKP PKPdf 04 30 01.0 -2.9
KEV LR LR
comp=Z,1µm,19.0s,MS5.6
CNNC Cliffs of the 118.53 57 PFAKE 04 30 20.0 +15
CNNC LR LR
comp=Z,1µm,20.0s,MS5.6
CBN Corbin 118.73 54 PFAKE 04 30 20.0 +15
CBN LR LR
comp=Z,2µm,19.0s,MS5.7
ARCES ARCESS Array B 119.02 345 PKP PKPdf 04 30 03.6 -1.4
comp=Z,10nm,0.5s,baz=74,slow=1.9,SNR=232
ARCES PKKPbc PKKPbc 04 40 17.6 -4.1
comp=Z,5.5nm,1.0s,baz=172,slow=1.1,SNR=7.2
BINY Binghamton 119.32 49 PFAKE 04 30 20.0 +14
BINY LR LR
comp=Z,3µm,19.0s,MS5.9
KLMR Klimovskoe 119.40 333 *e*PKIKP PKPdf 04 30 01.4 -4.5
NCB Newcomb 120.30 47 PFAKE 04 30 20.0 +12
NCB LR LR
comp=Z,1µm,20.0s,MS5.5

JOF Joensuu 121.61 338 *e*pkp PKPdf 04 30 07.9 -2.2
CPUP Villa Florida 121.70 133 PKP PKPdf 04 30 09.1 -2.4
comp=Z,0.4nm,0.3s,baz=91,slow=1.2,SNR=5.4
CPUP PKKPbc PKKPbc 04 40 09.5 -1.2
comp=Z,1.8nm,0.8s,baz=288,slow=5.0,SNR=3.5
CPUP Villa Florida 121.70 133 PKP PKPdf 04 30 09.1 -2.4
CPUP PKKPbc PKKPbc 04 40 09.5 -1.2
CPUP LR LR
comp=Z,103nm,19.0s,MS4.5
SCHQ Schefferville 121.76 33 PKP PKPdf 04 30 09.0 -1.6
comp=Z,2.8nm,0.8s,baz=287,slow=10,SNR=4.4
SCHQ Schefferville 121.76 33 PKP PKPdf 04 30 09.0 -1.6
SCHQ LR LR
comp=Z,1µm,20.0s,MS5.6
VRHR Novokhopersk 122.19 322 *e*PKIKP PKPdf 04 30 09.5 -2.1
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
GNI Garni 122.91 309 PKP PKPdf 04 30 11.4 -1.9
comp=E,3.8nm,0.5s,baz=356,slow=12,SNR=5.1
GNI Garni 122.91 309 *e*PKPdf PKPdf 04 30 12.2 -1.1
GNI LR LR
comp=Z,501nm,19.0s,MS5.2
OBN Obninsk 123.41 328⇓ *i*PKIKP PKPdf 04 30 12.6 -1.2
OBN *e* 04 31 53.9
OBN *e* 04 37 05.9
OBN *e*SS SS 04 48 39.8 +0.9
OBN pmax pmax
comp=Z,27nm,1.1s
OBN Obninsk 123.41 328⇑ *e*PKP PKPdf 04 30 11.2 -2.6
OBN LR LR
comp=Z,835nm,19.0s,MS5.4
PKME Peaks-Kenny Pk 123.44 44 PFAKE 04 30 30.0 +16
PKME LR LR
comp=Z,1µm,19.0s,MS5.6
KIV Kislovodsk 123.59 314 *i* PKIKP PKPdf 04 30 12.5 -2.0
KIV pmax pmax
comp=Z,16nm,1.0s
KIV Kislovodsk 123.59 314 *e*PKPdf PKPdf 04 30 14.2 -0.3
KIV LR LR
comp=Z,448nm,19.0s,MS5.2
VSR Storozhevoye 123.60 323 *e*PKIKP PKPdf 04 30 13.0 -1.3
VSR pmax pmax
comp=Z,9.0nm,0.6s
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,9.0nm,0.8s
VORD Divnogorie 123.62 323 *e*PKIKP PKPdf 04 30 12.5 -1.8
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=N,8.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.9s
SUR Sutherland 123.73 215 PKP PKPdf 04 30 14.3 -0.9
comp=E,9.2nm,1.0s,baz=124,slow=3.6,SNR=4.8
SUR Sutherland 123.73 215 *e*PKPdf PKPdf 04 30 14.8 -0.4
SUR LR LR
comp=Z,1µm,19.0s,MS5.6
BOSA Boshof 123.76 221 PKP PKPdf 04 30 14.7 -0.6
comp=Z,7.8nm,1.0s,baz=196,slow=1.7,SNR=10
BOSA Boshof 123.76 221 PKIKP PKPdf 04 30 14.7 -0.6
BOSA pmax pmax
comp=Z,8.0nm,1.0s
BOSA Boshof 123.76 221 *e*PKPdf PKPdf 04 30 14.4 -1.0
BOSA LR LR
comp=Z,762nm,20.0s,MS5.3
SDV Santo Domingo 123.81 88 PFAKE 04 30 30.0 +14
SDV LR LR
comp=Z,355nm,19.0s,MS5.0
KAF Kangasniemi 123.92 339 *e*pkp PKPdf 04 30 12.0 -2.5
SDDR Presa de Saban 124.42 76 PFAKE 04 30 30.0 +13
SDDR LR LR
comp=Z,503nm,21.0s,MS5.2
SIV San Ignacio 124.47 120 PKKPbc 04 39 59.7
comp=Z,1.1nm,0.9s,baz=233,slow=3.6,SNR=4.6
ANN Anapa 126.96 316 *i* PKIKP PKPdf 04 30 17.8 -3.1
ANN pmax pmax
comp=Z,105nm,1.4s
MALT Malatya 128.08 308 PFAKE 04 30 30.0 +6.7
MALT LR LR
comp=Z,458nm,20.0s,MS5.2
SJG San Juan 129.23 78 PFAKE 04 30 40.0 +14
SJG LR LR
comp=Z,547nm,20.0s,MS5.2
NB2 NORSAR Subarra1 29.39 345 PKP PKPdf 04 30 23.8 -1.2
comp=Z,3.9nm,0.6s,baz=44,slow=2.6
NOA NORSAR Array B 129.39 345 PKP PKPdf 04 30 24.1 -0.9
comp=Z,5.2nm,0.7s,baz=32,slow=2.0,SNR=9.5
NOA NORSAR Array B 129.39 345 PKIKP PKPdf 04 30 24.1 -0.9
NOA pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 129.44 326 PKP PKPdf 04 30 24.4 -1.1
comp=Z,14nm,1.0s,baz=62,slow=2.1,SNR=22
AKASG Malin Array Be 129.44 326 PKIKP PKPdf 04 30 24.4 -1.0
AKASG pmax pmax
comp=Z,14nm,1.0s
AKBB Malin Array Si 129.44 326 *e*PKIKP PKPdf 04 30 24.7 -0.7
KIEV Kiev 129.46 326 PFAKE 04 30 40.0 +15
KIEV LR LR
comp=Z,882nm,19.0s,MS5.5
HFS Hagfors 129.47 343 PKP PKPdf 04 30 24.0 -1.2
comp=Z,5.9nm,0.7s,baz=93,slow=6.4,SNR=10
HFS Hagfors 129.47 343 PKIKP PKPdf 04 30 24.0 -1.2
HFS pmax pmax
comp=Z,6.0nm,0.7s
LSZ Lusaka 129.80 237 PKP PKPdf 04 30 26.5 -0.7
baz=192,slow=4.0
LSZ Lusaka 129.80 237 *e*PKPdf PKPdf 04 30 26.2 -0.9
LSZ LR LR
comp=Z,1µm,19.0s,MS5.6
ASF Jabal al Asfar 130.57 301 PKP PKPdf 04 30 26.7 -1.5
comp=Z,2.0nm,0.5s,baz=55,slow=2.8,SNR=4.0
ASF SKPbc SKPbc 04 33 51.7 +2.2
comp=Z,6.8nm,1.0s,baz=312,slow=0.7,SNR=5.8
BR131 Keskin Array S 131.27 311 *e*PKPdf PKPdf 04 30 28.8 -0.5
BRTR Keskin Array B 131.27 311 PKP PKPdf 04 30 27.9 -1.3
comp=Z,2.6nm,0.8s,baz=143,slow=4.6,SNR=10
BRTR Keskin Array B 131.27 311 PKIKP PKPdf 04 30 28.0 -1.3
BRTR pmax pmax
comp=Z,3.0nm,0.8s
MMAI Mount Meron Ar 131.65 302 PKP PKPdf 04 30 30.0 -0.2
comp=Z,1.8nm,0.4s,baz=68,slow=8.3,SNR=5.6
TLCR 132.41 320⇓ *i*P PKPdf 04 30 30.2 -1.0
TLCR 132.41 320⇓ P PKPdf 04 30 30.2 -1.1
EIL Elat 132.62 298 PKP PKPdf 04 30 31.1 -1.1
comp=Z,7.7nm,0.8s,baz=311,slow=2.9,SNR=6.1
CSS Prodhromos 132.88 305 PFAKE 04 30 40.0 +7.5
CSS LR LR
comp=Z,478nm,20.0s,MS5.2
HARR Harsova 133.20 320⇓ *i*P PKPdf 04 30 27.0 -5.7
HARR Harsova 133.20 320⇓ P PKPdf 04 30 27.0 -5.7
BUR08 Bucovina Ar. S 133.31 325 *e*PKPdf PKPdf 04 30 32.9 0.0
BURAR Bucovina Array 133.32 324⇑ *i*P PKPdf 04 30 32.5 -0.4
BURAR Bucovina Array 133.32 324⇑ P PKPdf 04 30 32.5 -0.4
KWP Kalwaria 133.50 328⇓ *i*P PKPdf 04 30 32.0 -1.2
KWP Kalwaria 133.50 328 *e*PKPdf PKPdf 04 30 33.0 -0.2
MLR Muntele Rosu 134.03 322 PKP PKPdf 04 30 34.0 -0.3
comp=Z,10nm,1.0s,baz=47,slow=3.4,SNR=10
MLR SKPbc SKPbc 04 34 03.3 +2.1
comp=Z,3.1nm,0.9s,baz=214,slow=23,SNR=3.5
ISP Isparta 134.20 310 PFAKE 04 30 50.0 +15
ISP LR LR
comp=Z,437nm,21.0s,MS5.2
UZH Uzhgorod 134.33 327⇑ *i*PKIKP PKPdf 04 30 34.0 -0.7
UZH *i* 04 44.0
UZH *i* 04 50.2
STHS Stebnicka Huta 134.38 329 *e*PKP PKPdf 04 30 35.0 +0.2
STHS *e* 04 47.6
OJC Ojcow 134.57 330 *e*PKP PKPdf 04 30 34.5 -0.6
CRVS Cervenica-Dubn 134.59 328 *e*PKP PKPdf 04 30 35.1 -0.1
CRVS *e*SKPDF 04 34 05.8
VOIR 134.59 322⇑ *i*P PKPdf 04 30 32.0 -3.3
VOIR 134.59 322⇑ P PKPdf 04 30 32.0 -3.3
BDFB Brasilia 135.11 129 PKP PKPdf 04 30 36.8 -0.4
comp=Z,1.3nm,0.6s,baz=298,slow=20,SNR=4.1
BDFB Brasilia 135.11 129 PKP PKPdf 04 30 36.8 -0.4
BDFB LR LR
comp=Z,451nm,22.0s,MS5.2
DRGR 135.19 325⇓ *i*P PKPdf 04 30 35.5 -0.9
DRGR 135.19 325⇓ P PKPdf 04 30 35.5 -1.0

TSUM Tsumeb 135.31 224 *e*PKPdf PKPdf 04 30 36.1 -1.3
TSUM LR LR
comp=Z,1µm,22.0s,MS5.6
OKC Ostrava-Krasne 135.62 331 *e*PKP PKPdf 04 30 37.0 -0.1
OKC *e*SKP 04 34 08.2
BSEG Bad Segeberg 135.64 340 *e*PKIKP PKPdf 04 30 36.3 -0.7
KSP Ksiaz 135.75 333 *e*PKIKP PKPdf 04 30 36.5 -0.8
KSP MLR MLR
comp=Z,2µm,21.8s,MS5.8
GZR Gura Zlata 135.96 323⇑ *i*P PKPdf 04 30 36.4 -1.5
GZR Gura Zlata 135.96 323⇑ P PKPdf 04 30 36.4 -1.5
PSZ Piszkesteto 136.02 328⇓ *e*PKP PKPdf 04 30 37.8 -0.1
PSZ Piszkesteto 136.02 328⇑ *i*P PKPdf 04 30 35.7 -2.2
PSZ Piszkesteto 136.02 328 *e*PKPdf PKPdf 04 30 37.4 -0.5
PSZ LR LR
comp=Z,854nm,20.0s,MS5.5
DPC Dobruska-Polom 136.09 333 *e*PKP PKPdf 04 30 37.3 -0.7
DPC *e*SKP 04 34 09.4
UPC Upice 136.12 333 *e*PKP PKPdf 04 30 37.5 -0.5
UPC *e*SKP 04 34 09.9
VYHS Vyhne 136.19 329 *e*PKIKP PKPdf 04 30 37.1 -1.1
VYHS *e* 04 30 53.9
VYHS Vyhne 136.19 329 *e*PKP PKPdf 04 30 37.1 -1.1
VYHS *e* 04 30 53.9
VYHS *e*SKPDF 04 34 09.8
KOLL Kolacno 136.35 330 *e*PKP PKPdf 04 30 38.0 -0.5
KOLL *e*SKPDF 04 34 11.0
BZS Buzias 136.50 324⇓ *i*P PKPdf 04 30 35.1 -3.8
VRAC Vranov 136.71 331 SKPbc SKPbc 04 34 11.6 +2.1
comp=Z,5.5nm,1.0s,baz=84,slow=6.0,SNR=4.2
PVCC Panska Ves 136.72 334 *e*PKP PKPdf 04 30 39.3 +0.1
PVCC *e*SKP 04 34 11.6
BRG Berggiesshubel 136.73 335 *e*PKIKP PKPdf 04 30 38.4 -0.7
BRG 04 30 51.5
BRG pmax pmax
comp=Z,13nm,1.4s
BRG MLR MLR
comp=N,337nm,18.0s,MS5.2
BRG MLR MLR
comp=E,306nm,20.8s,MS5.2
BRG MLR MLR
comp=Z,737nm,18.7s,MS5.4
BRG Berggiesshubel 136.73 335 *e*PKP PKPdf 04 30 38.4 -0.7
BRG pPKP pPKPdf 04 30 51.5 +1.5
BRG SKP 04 34 11.2
BRG PKS 04 34 18.4
BRG LR LR
comp=Z,740nm,18.7s,MS5.4
BUD Budapest 136.75 328⇓ *e*PKP PKPdf 04 30 38.8 -0.5
CLL Collm 136.78 336 *i* PKPdf PKPdf 04 30 38.0 -1.2
comp=Z,19nm,1.3s
CLL *e*PP PP 04 33 22.0 +0.6
CLL *i* SKPdf SKPdf 04 34 11.4 -0.5
comp=Z,10.0nm,1.0s
CLL *i* PKSab 04 34 20.4
comp=Z,15nm,1.1s
CLL Lm 05 38 00.0
comp=N,600nm,18.5s
CLL Lm 05 38 00.0
comp=E,100nm,18.3s
CLL Lm 05 38 00.0
comp=Z,700nm,18.5s
PRU Pruhonice 137.14 334 *e*PKP PKPdf 04 30 39.7 -0.2
PRU *e*SKP 04 34 12.3
TREC Trest 137.23 332 *e*PKP PKPdf 04 30 39.7 -0.4
TREC *e*SKP 04 34 13.3
TREC AMS AMS 05 31 10.0
comp=Z,900nm,18.9s
ZST Bratislava 137.24 330 *e*PKP PKPdf 04 30 40.2 0.0
ZST *e* 04 30 54.1
CLZ Clausthal 137.34 338 *e*PKIKP PKPdf 04 30 40.3 0.0
EKA Eskdalemuir Ar 137.62 351 PKP PKPdf 04 30 41.1 +0.5
comp=Z,1.6nm,0.6s,baz=0.5,slow=2.4,SNR=4.2
EKA Eskdalemuir Ar 137.62 351 PKIKP PKPdf 04 30 41.2 +0.5
EKA pmax pmax
comp=Z,2.0nm,0.6s
PKSM Moragy 137.77 327⇑ *i*P PKPdf 04 30 40.3 -0.9
PKSM Moragy 137.77 327⇑ P PKPdf 04 30 40.3 -0.9
NKC Novy Kostel 137.83 335 *e*SKP SKPdf 04 34 15.2 +1.4
SOP Sopron 137.86 330⇓ *e*PKP PKPdf 04 30 41.0 -0.3
KHC Kasperske Hory 138.20 333 *e*PKP PKPdf 04 30 41.1 -0.8
KHC *ex* x 04 30 44.5
KHC *e*SKP 04 34 15.7
KHC AMS AMS 05 30 00.0
comp=Z,700nm,17.8s
GEC2 GERESS Array S 138.36 333 *e*PKIKP PKPdf 04 30 42.2 0.0
GERES GERESS Array B 138.36 333 PKhKP 04 30 32.9
comp=Z,0.9nm,0.6s,baz=45,slow=5.8,SNR=7.7
GERES PKP PKPdf 04 30 42.0 -0.2
comp=Z,5.0nm,0.9s,baz=34,slow=1.7,SNR=16
GERES SKPbc SKPbc 04 34 16.3 +2.0
comp=Z,5.0nm,0.9s,baz=40,slow=2.3,SNR=16
GERES GERESS Array B 138.36 333 *i* PKHKP 04 30 32.9
GERES 04 40 02.0
GERES pmax pmax
comp=Z,1.0nm,0.6s
WET Wettzell 138.49 334 *e*PKIKP PKPdf 04 30 41.5 -0.9
GRA1 Grafenberg Arr 138.75 336 *e*PKPdf PKPdf 04 30 44.3 +1.4
GRF Grafenberg Arr 138.75 336 *e*PKIKP PKPdf 04 30 44.3 +1.4
SOKA Soboth 139.31 330⇑ *i*PKPdf PKPdf 04 30 43.2 -0.8
comp=Z,6.4nm,1.0s
TNS Taunus Mts 139.37 338 *e*PKIKP PKPdf 04 30 43.7 -0.3
TNS MLR MLR
comp=Z,400nm,21.7s,MS5.1
KBA Koelnbreinsper 139.82 331⇑ *i*PKPdf PKPdf 04 30 44.0 -1.0
comp=Z,10nm,0.9s
MEM Membach 139.87 341 PKP PKPdf 04 30 44.3 -0.6
TIR Tirane 139.98 320 PFAKE 04 31 00.0 +15
TIR LR LR
comp=Z,863nm,21.0s,MS5.5
BOJS Bojanci 140.01 328 *i* PKPdf PKPdf 04 30 38.2 -7.2
BOJS *i* PKPbc PKPdf 04 30 45.2 -0.1
VISS Visnje 140.02 329 *i* PKPdf PKPdf 04 30 37.9 -7.5
VISS *i* PKPbc PKPdf 04 30 45.0 -0.4
UCC Uccle 140.21 342 PKP PKPdf 04 30 44.8 -0.8
STU Stuttgart 140.28 337 *e*PKIKP PKPdf 04 30 46.5 +0.8
RUP Ruppelstein 140.29 339 PKIKP PKPdf 04 30 45.8 +0.1
JAVS Javornik 140.34 330 *i* PKPdf PKPdf 04 30 38.3 -7.6
WTTA Wattenberg 140.46 333⇑ *i*PKPdf PKPdf 04 30 38.6 -7.5
comp=Z,3.4nm,0.3s
WTTA ⇓ *i*PKPdf PKPdf 04 30 45.1 -1.0
MOTA Moosalm 140.63 334⇑⇑ *i*PKPdf PKPdf 04 30 38.4 -8.0
comp=Z,5.1nm,0.6s
WLF Walferdange 140.63 340 PKP PKPdf 04 30 44.8 -1.5
WLF Walferdange 140.63 340 *e*PKPdf PKPdf 04 30 46.2 -0.1
WLF LR LR
comp=Z,1µm,19.0s,MS5.7
DOU Dourbes 140.76 342 PKP PKPdf 04 30 45.1 -1.4
FETA Feichten 141.04 334⇓ *i*PKPdf PKPdf 04 30 40.6 -6.6
comp=Z,2.6nm,0.5s
DAVA Damuels 141.20 335⇑ *i*PKPdf PKPdf 04 30 41.3 -6.1
comp=Z,3.0nm,0.7s
CDF Champ du Feu 141.30 338 *e*PKP1 PKPdf 04 30 39.3 -8.3
comp=Z,27nm,1.1s
FELD Feldberg im Sc 141.47 337 PKP PKPdf 04 30 48.0 +0.1
DAVOS Davos 141.59 334 PKHKP 04 30 42.7
DAVOX Davos/Dischmat 141.59 334 PKhKP 04 30 42.7
comp=Z,7.1nm,0.6s,baz=261,slow=2.5,SNR=21
DAVOX SKPbc SKPbc 04 34 25.3 +2.3
comp=Z,4.7nm,0.9s,baz=314,slow=16,SNR=4.8
HINF Hinteralfeld 141.96 338 *e*PKP1 PKPdf 04 30 42.6 -6.2
HAU Haudompre 141.98 338 *e*PKP1 PKPdf 04 30 42.0 -6.8
HAU *e*MLR MLR
comp=Z,776nm,19.5s,MS5.2
HAU Haudompre 141.98 338 *e*PKP PKPdf 04 30 42.0 -6.8
HAU LR LR
comp=Z,780nm,19.5s,MS5.5
TUE Stuetta 142.06 334 *e*PKPpre 04 30 43.9
TUE *e*PKPdf PKPdf 04 30 48.4 -0.6
TUE LR LR
comp=Z,858nm,21.0s,MS5.5
AQU L'Aquila 143.15 326 *e*PKIKP PKPdf 04 30 47.3 -3.8
AQU MLR MLR
comp=Z,722nm,20.0s,MS5.4
TIP Timpagrande 143.17 319 *e*PKPdf PKPdf 04 30 48.4 -2.9
TIP LR LR
comp=Z,577nm,20.0s,MS5.3
CUC Castrocucco 143.28 321 PFAKE 04 31 00.0 +8.6
CUC LR LR
comp=Z,963nm,22.0s,MS5.5
FLN La Foliniere 143.37 346 *e*PKP1 PKPdf 04 30 47.3 -3.9
comp=Z,31nm,0.7s
FLN *e*MLR MLR
comp=Z,912nm,18.2s,MS5.3

FLN	**La Foliniere**	**143.37**	**346**	*e*PKP	PKPdf	04 30 47.3	-3.9
FLN				LR	LR			
	comp=Z,910nm,18.3s,MS5.6							
VLC	**Villacollemand**	**143.38**	**331**	PFAKE		04 31 00.0	+8.6
VLC				LR	LR			
	comp=Z,806nm,21.0s,MS5.5							
LDF	**La Druitiere**	**143.43**	**345**	*e*PKP1	PKPdf	04 30 47.4	-4.0
	comp=Z,20nm,0.8s							
LOR	**Lormes**	**143.47**	**340**	*e*PKP1	PKPdf	04 30 47.0	-4.5
	comp=Z,10nm,0.6s							
LOR				*e*MLR	MLR			
	comp=Z,886nm,17.8s,MS5.3							
LOR	**Lormes**	**143.47**	**340**	*e*PKP	PKPdf	04 30 47.0	-4.5
LOR				LR	LR			
	comp=Z,890nm,17.8s,MS5.6							
SSF	**Saint Saulge**	**143.77**	**340**	*e*PKP1	PKPdf	04 30 48.4	-3.6
	comp=Z,40nm,1.0s							
GRR	**Gorron**	**143.80**	**346**	*e*PKP1	PKPdf	04 30 48.1	-3.9
	comp=Z,14nm,0.5s							
HYF	**Humbligny**	**143.87**	**341**	*e*PKP1	PKPdf	04 30 50.1	-2.1
LPL	**La Plagne**	**143.91**	**336**	*e*PKP1	PKPdf	04 30 49.7	-2.6
	comp=Z,15nm,0.6s							
LPG	**La Plagne**	**143.92**	**336**	*e*PKP1	PKPdf	04 30 49.9	-2.4
	comp=Z,22nm,0.7s							
SMF	**Signal de Mont**	**144.02**	**340**	*e*PKP1	PKPdf	04 30 49.3	-3.2
	comp=Z,58nm,1.2s							
AVF	**Avril sur Loir**	**144.06**	**340**	*e*PKP1	PKPdf	04 30 49.3	-3.2
	comp=Z,61nm,1.3s							
CEL	**Celeste**	**144.25**	**319**	*e*PKPdf	PKPdf	04 30 50.1	-3.0
CEL				LR	LR			
	comp=Z,454nm,22.0s,MS5.2							
SGMF	**Saint Gilles**	**144.31**	**348**	*e*PKP1	PKPdf	04 30 50.0	-2.9
	comp=Z,50nm,0.7s							
BNI	**Bardonecchia**	**144.31**	**335**	*e*PKIKP	PKPdf	04 30 51.2	-1.8
BNI				MLR	MLR			
	comp=Z,886nm,21.0s,MS5.5							
ROSF	**Rostrenen**	**144.38**	**348**	*e*PKP1	PKPdf	04 30 50.0	-3.0
	comp=Z,133nm,1.3s							
GDM	**Grand'Maison**	**144.41**	**336**	PKP	PKPdf	04 30 51.6	-1.6
BGF	**Bois d'Agland**	**144.43**	**341**	*e*PKP1	PKPdf	04 30 50.8	-2.4
	comp=Z,111nm,1.2s							
GRN	**Grenoble**	**144.53**	**336**	PKP	PKPdf	04 30 52.3	-1.1
MBDF	**Montbardon**	**144.54**	**335**	*e*PKP1	PKPdf	04 30 51.2	-2.2
	comp=Z,45nm,0.8s							
SURF	**Saint Ours**	**144.73**	**335**	PKP	PKPdf	04 30 52.7	-1.1
ORIF	**Oris-en-Rattie**	**144.75**	**336**	*e*PKP1	PKPdf	04 30 52.4	-1.4
	comp=Z,103nm,0.7s							
ORIF				*e*MLR	MLR			
	comp=Z,641nm,22.5s,MS5.0							
QUIF	**Quistinic**	**144.76**	**348**	*e*PKP1	PKPdf	04 30 51.1	-2.6
	comp=Z,54nm,0.8s							
AGO	**Saint Agoulin**	**144.78**	**340**	PKP	PKPdf	04 30 53.5	-0.3
SAOF	**Saorge**	**144.81**	**333**	PKP	PKPdf	04 30 52.2	-1.7
AUTN	**L'Aution**	**144.85**	**333**	PKP	PKPdf	04 30 52.5	-1.5
TCF	**Toulx Ste Croi**	**144.87**	**341**	*e*PKP1	PKPdf	04 30 52.3	-1.7
	comp=Z,81nm,1.1s							
TOUF	**Mont Tournerai**	**144.92**	**334**	PKP	PKPdf	04 30 52.8	-1.3
SSB	**Saint Sauveur**	**144.95**	**338**	*e*PKIKP	PKPdf	04 30 52.7	-1.4
SBF	**Sospel**	**144.96**	**333**	*e*PKP1	PKPdf	04 30 52.4	-1.8
	comp=Z,235nm,0.9s							
LUCF	**Luceram**	**144.97**	**333**	PKP	PKPdf	04 30 52.7	-1.5
MVIF	**Mont Vial**	**145.05**	**334**	PKP	PKPdf	04 30 53.2	-1.2
REVF	**Revere**	**145.09**	**333**	PKP	PKPdf	04 30 53.0	-1.4
PYM	**Petit Puy Mans**	**145.09**	**340**	PKP	PKPdf	04 30 54.7	+0.4
PGF	**Pioggiola**	**145.26**	**330**	*e*PKP1	PKPbc	04 30 53.7	-0.8
	comp=Z,117nm,0.8s							
VIVF	**Saint-Julien-l**	**145.26**	**337**	*e*PKP1	PKPbc	04 30 54.0	-0.4
	comp=Z,183nm,1.2s							
MFF	**Saint Martin d**	**145.28**	**344**	*e*PKP1	PKPbc	04 30 53.5	-0.9
	comp=Z,139nm,0.8s							
CALN	**Calern**	**145.28**	**334**	PKP	PKPdf	04 30 53.8	-1.0
LBL	**Lubilhac**	**145.46**	**339**	PKP	PKPdf	04 30 56.5	+1.5
STOF	**St-Etienne Org**	**145.50**	**335**	PKP	PKPdf	04 30 56.0	+0.9
FRF	**La Foret Royal**	**145.54**	**334**	*e*PKP1	PKPbc	04 30 54.4	-0.9
	comp=Z,93nm,0.7s							
SMRF	**Simiane la Rot**	**145.65**	**335**	*e*PKP1	PKPbc	04 30 54.4	-1.3
	comp=Z,50nm,0.7s							
VAE	**Valguarnera**	**145.66**	**319**	PKPbc	PKPbc	04 30 56.0	0.0
	comp=Z,46nm,1.1s,baz=306,slow=5.1,SNR=5.9							
VILF	**Villemus**	**145.69**	**335**	PKP	PKPdf	04 30 55.7	+0.2
TAVF	**Tavernes**	**145.75**	**334**	PKP	PKPdf	04 30 55.5	0.0
LMR	**La Mourre**	**145.78**	**334**	*e*PKP1	PKPbc	04 30 55.2	-0.9
	comp=Z,114nm,0.7s							
PRAF	**Pradon**	**145.96**	**336**	PKP	PKPdf	04 30 56.4	+0.5
RJF	**Les Rejaudoux**	**145.97**	**341**	*e*PKP1	PKPbc	04 30 56.0	-0.6
RJF				*e*MLR	MLR			
	comp=Z,788nm,22.8s,MS5.1							
RJF	**Les Rejaudoux**	**145.97**	**341**	*e*PKP	PKPdf	04 30 56.0	+0.1
RJF				LR	LR			
	comp=Z,790nm,22.8s,MS5.4							
TREF	**Trevaresse**	**146.02**	**335**	PKP	PKPdf	04 30 56.4	+0.4
CAF	**Calviac**	**146.13**	**340**	*e*PKP1	PKPbc	04 30 55.2	-1.9
	comp=Z,81nm,1.3s							
BERF	**Bertagne**	**146.15**	**335**	PKP	PKPdf	04 30 57.0	+0.8
GELF	**Grande-Etoile**	**146.20**	**335**	PKP	PKPdf	04 30 56.8	+0.5
LASF	**Ste Croix**	**146.24**	**337**	*e*PKP1	PKPbc	04 30 56.9	-0.5
	comp=Z,40nm,0.6s							
WDD	**Wield Dalam**	**146.52**	**316**	PFAKE		04 31 10.0	+13
WDD				LR	LR			
	comp=Z,381nm,20.0s,MS5.2							
LFF	**La Frestale**	**146.54**	**342**	*e*PKP1	PKPbc	04 30 57.6	-0.7
	comp=Z,41nm,0.6s							
MTLF	**Montolieu**	**147.47**	**339**	*e*PKP1	PKPbc	04 31 00.4	-0.6
	comp=Z,48nm,0.5s							
SJAF	**Saint Jean de**	**147.97**	**337**	PKP	PKPbc	04 31 01.3	-1.1
FILF	**Fillols**	**148.02**	**337**	PKP	PKPbc	04 31 01.7	-0.8
MLS	**Moulis**	**148.20**	**340**	PKP	PKPbc	04 31 02.1	-0.9
VALF	**Valcebollere**	**148.36**	**338**	PKP	PKPbc	04 31 02.9	-0.5
EPF	**Esparros**	**148.38**	**341**	*e*PKP1	PKPbc	04 31 02.5	-1.0
	comp=Z,11nm,0.6s							
VIEF	**Viey**	**148.62**	**341**	PKP	PKPbc	04 31 04.1	0.0
ETSF	**Etsaut**	**148.78**	**342**	*e*PKP1	PKPbc	04 31 04.2	-0.3
	comp=Z,29nm,0.7s							
LARF	**Larrau**	**148.79**	**342**	PKP	PKPbc	04 31 04.1	-0.4
SJPF	**Ste Jean**	**148.79**	**343**	*e*PKP1	PKPbc	04 31 04.0	-0.5
	comp=Z,16nm,0.7s							
KEST	**Kesra**	**149.93**	**321**	PKPbc	PKPbc	04 31 07.5	-0.1
	comp=Z,26nm,0.6s,baz=300,slow=0.4,SNR=91							
RCBR	**Riachuelo**	**150.49**	**129**	*e*PKPbc	PKPbc	04 31 11.8	+2.2
RCBR				LR	LR			
	comp=Z,832nm,22.0s,MS5.5							
CKFL	**Kef-Lekhel**	**151.00**	**325**	P	PKPbc	04 31 10.3	+0.2
CASM	**Ain Smara**	**151.23**	**325**	P	PKPbc	04 31 10.3	-0.4
PBRG	**Braganca**	**151.33**	**350**	*e*PKPbc	PKPbc	04 31 09.7	-1.0
DFRA	**Djebel Bou Aff**	**151.36**	**326**	P	PKPbc	04 31 11.3	+0.4
PCAB	**Cabril**	**151.63**	**351**	*e*PKPbc	PKPbc	04 31 10.5	-0.9
SET	**Setif**	**151.87**	**326**	P	PKPbc	04 31 11.3	-0.8
MVO	**Moncorvo**	**152.00**	**350**	*e*PKPbc	PKPbc	04 31 11.6	-0.7
PVRL	**Vila Real**	**152.00**	**351**	*e*PKPbc	PKPbc	04 31 11.8	-0.5
PVIS	**Viseu**	**152.58**	**351**	*e*PKPbc	PKPbc	04 31 12.7	-0.9
ESDC	**Sonseca Array**	**152.74**	**344**	PKPbc	PKPbc	04 31 13.3	-0.7
	comp=Z,6.2nm,0.6s,baz=12,slow=2.6,SNR=34							
ESDC	**Sonseca Array**	**152.74**	**344**	PKPbc	PKPbc	04 31 13.3	-0.7
ESLA	**Sonseca Array**	**152.74**	**344**	PFAKE		04 31 20.0	+13
ESLA				LR	LR			
	comp=Z,4μm,20.0s,MS6.2							
MTE	**Manteigas**	**152.83**	**350**	*e*PKPbc	PKPbc	04 31 13.5	-0.6
MTE	**Manteigas**	**152.83**	**350**	*e*PKPbc	PKPbc	04 31 13.1	-1.1
PAB	**San Pablo**	**152.97**	**344**	*e*PKIKP	PKPbc	04 31 13.8	-0.7
PAB				MLR	MLR			
	comp=Z,914nm,20.0s,MS5.6							
PCBR	**Castelo Branco**	**153.37**	**350**	*e*PKPdf	PKPdf	04 31 08.8	+1.0
PCBR	**Castelo Branco**	**153.37**	**350**	*e*PKPbc	PKPbc	04 31 14.3	-1.0
CMLA	**Cha da Macela**	**153.66**	**22**	eLR	LR	05 23 02.5	
PMRV	**Marv??o**	**153.75**	**349**	*e*PKPbc	PKPbc	04 31 15.2	-1.0
PESTR	**Estremoz**	**154.33**	**349**	*e*PKPbc	PKPbc	04 31 18.4	+0.9
PBAR	**Barrancos**	**154.90**	**348**	*e*PKPab	PKPab	04 31 33.8	0.0
PBEJ	**Beja**	**155.20**	**349**	*e*PKPab	PKPab	04 31 34.0	-1.1
SFS	**San Fernando**	**156.35**	**345**	PFAKE		04 31 20.0	+8.0
SFS				LR	LR			
	comp=Z,1μm,20.0s,MS5.8							
MDT	**Midelt**	**159.27**	**339**	PKPab	PKPab	04 31 53.6	+0.8
	comp=Z,7.1nm,1.1s,baz=89,slow=4.5,SNR=5.9							
TOA0	**Torodi Ar. Sit**	**165.27**	**270**	*e*PKPdf	PKPdf	04 31 20.5	-1.7
TOA0				*e*PKPab	PKPab	04 32 19.8	-0.1
TORD	**Torodi Ar. Bea**	**165.27**	**270**	PKP	PKPdf	04 31 20.5	-1.7
	comp=Z,8.9nm,1.0s,baz=94,slow=1.2,SNR=30							
TORD				PKPab	PKPab	04 32 19.6	-0.2
	comp=Z,3.8nm,1.0s,baz=87,slow=2.7,SNR=5.2							
TORD				PP	PP	04 36 14.4	+7.5
	comp=Z,2.0nm,1.2s,baz=93,slow=3.0,SNR=3.6							
TORD	**Torodi Ar. Bea**	**165.27**	**270**	PKP	PKPdf	04 31 20.5	-1.7
TORD				PKPab	PKPab	04 32 19.6	-0.2
TORD				PP	PP	04 36 14.4	+7.5
KIC	**Kosan Boka**	**168.80**	**231**	*e*PKIKP	PKPdf	04 31 22.9	-2.0
	comp=Z,103nm,1.1s							
LIC	**Lamto**	**168.93**	**229**	⇑*i*PKIKP	PKPdf	04 31 22.8	-2.2
	comp=Z,34nm,1.0s							
LIC				*e*MLR	MLR			
	comp=Z,2μm,21.8s							
LIC	**Lamto**	**168.93**	**229**	*e*PKIKP	PKPdf	04 31 22.8	-2.2
	comp=Z,51nm,1.1s							
LIC	**Lamto**	**168.93**	**229**	⇑*i*PKPdf	PKPdf	04 31 22.8	-2.2
LIC				LR	LR			
	comp=Z,820nm,21.8s							
DBIC	**Dimbokro**	**169.09**	**232**	PKP	PKPdf	04 31 22.6	-2.5
	comp=Z,12nm,1.0s,baz=349,slow=0.8,SNR=10							
DBIC	**Dimbokro**	**169.09**	**232**	*e*PKPdf	PKPdf	04 31 23.3	-1.8
DBIC				LR	LR			
	comp=Z,2μm,20.0s							
TIC	**Toumodi**	**169.20**	**231**	*e*PKIKP	PKPdf	04 31 23.1	-2.0
	comp=Z,54nm,0.9s							

*ISCJB **28** 04:12:27.2±1.5, 1933N±006×6471W±007, h15km±16km, Error ellipse: s-maj=13.9km s-min=7.8km az=139.0*
*TRN **28** 04:12:27.2, 19.12N×6476W, h9km*
*NEIC **28** 04:12:29.0, 1935N×6458W, h25km±3km, MD3.7(RSPR), After RSPR.*
*RSPR **28** 04:12:29.0, 1936N×6458W, h25km±32km, MD3.7/15, MD3.7/15*

ISC 28 04:12:28.2±1.2, 1925N±006×6471W±006, h12km±7km, n25, σ0°55/43, 16C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.63**	**146**	⇑*e*P		**Pg**		**04 12 41.0**	**+0.6**
ABV	**Anegada**	**0.63**	**146**	⇑*e*P		**Pg**		**04 12 41.5**	**+1.0**
TBVI	**Tortola**	**0.84**	**174**	⇑*i*P		**Pg**		**04 12 44.0**	**-0.3**
TBVI	**Tortola**	**0.84**	**174**	⇑*i*P		**Pg**		**04 12 44.3**	**-0.1**
STVI	**Saint Thomas**	**0.93**	**195**	⇑*e*P		**Pg**		**04 12 45.6**	**-0.5**
STVI				*e*S		**Sg**		**04 12 58.7**	**+0.5**
MTP	**Monte Pirata**	**1.40**	**215**	⇓*e*P		**Pn**		**04 12 52.8**	**-0.7**
MTP				*e*S		**Sn**		**04 13 11.0**	**-0.9**
CBYP	**Canovanas**	**1.46**	**228**	⇓*e*P		**Pn**		**04 12 53.7**	**-0.6**
CBYP				*e*S		**Sn**		**04 13 13.4**	**0.0**
CDVI	**St. Croix**	**1.50**	**182**	⇓*e*P		**Pn**		**04 12 54.8**	**0.0**
CDVI				*e*S		**Sn**		**04 13 13.9**	**-0.3**
HUMP	**Col San Antoni**	**1.55**	**225**	⇓*e*P		**Pn**		**04 12 54.9**	**-0.6**
HUMP				*e*S		**Sn**		**04 13 14.8**	**-0.7**
CPD	**Cerro la Pandu**	**1.67**	**224**	⇑*e*P		**Pn**		**04 12 57.0**	**-0.2**
CPD				*e*S		**Sn**		**04 13 18.9**	**+0.4**
SJG	**San Juan**	**1.78**	**230**	⇑*e*P		**Pn**		**04 12 57.8**	**-0.9**
SJG	**San Juan**	**1.78**	**230**	⇓*e*P		**Pn**		**04 12 57.9**	**-0.8**
SJG				*e*S		**Sn**		**04 13 21.6**	**+0.4**
SJG	**San Juan**	**1.78**	**230**	⇓*e*P		**Pn**		**04 12 57.9**	**-0.8**
SJG				*e*S		**Sn**		**04 13 21.5**	**+0.3**
SJG				*e*S		**Sn**		**04 13 21.6**	**+0.4**
SJG	**San Juan**	**1.78**	**230**	⇑*e*P		**Pn**		**04 12 57.8**	**-0.9**
SJG				*e*S		**Sn**		**04 13 21.5**	**+0.3**
CELP	**Cerrillos**	**2.13**	**237**	⇑*e*P		**Pn**		**04 13 03.3**	**-0.2**
CELP				*e*S		**Sn**		**04 13 30.0**	**+0.2**
OBIP	**Obispado Ponce**	**2.17**	**237**	⇑*e*P		**Pn**		**04 13 03.9**	**-0.2**
OBIP				*e*S		**Sn**		**04 13 30.6**	**-0.2**
ICM	**Isla Caja Muer**	**2.19**	**232**	⇑*e*P		**Pn**		**04 13 04.6**	**+0.2**
ICM	**Isla Caja Muer**	**2.19**	**232**	⇑*e*P		**Pn**		**04 13 04.6**	**+0.2**
ICM				*e*S		**Sn**		**04 13 32.1**	**+0.8**
ICM	**Isla Caja Muer**	**2.19**	**232**	⇑*e*P		**Pn**		**04 13 04.6**	**+0.2**
ICM				*e*S		**Sn**		**04 13 32.1**	**+0.8**
LRS	**Lares**	**2.24**	**245**	⇑*e*P		**Pn**		**04 13 05.2**	**+0.2**
LRS				*e*S		**Sn**		**04 13 33.5**	**+0.9**
LRS	**Lares**	**2.24**	**245**	⇑*e*P		**Pn**		**04 13 05.2**	**+0.2**
LRS				*e*S		**Sn**		**04 13 33.5**	**+0.9**
AGPR	**Aguadilla, PR**	**2.41**	**251**	⇑*e*P		**Pn**		**04 13 07.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**2.59**	**242**	⇑*e*P		**Pn**		**04 13 09.9**	**-0.1**
CRPR				*e*S		**Sn**		**04 13 42.4**	**+1.1**
LZG	**Guadaloupe-1**	**4.17**	**137**	*e*P		**Pn**		**04 13 32.5**	**+0.9**
SDDR	**Presa de Saban** 22nm,0.5s	**6.23**	**269**	*e*Pn		**Pn**		**04 14 00.5**	**+0.6**
SDDR				*e*Sn		**Sn**		**04 15 10.8**	**-0.3**

*ISCJB **28** 04:13:00.9±1.0, 3941N±005×3309E±004, h3km±9km, Error ellipse: s-maj=7.6km s-min=5.1km az=1.6*
*CSEM **28** 04:13:00.8, 3943N×3311E, h7km, MD3.0, After ISK*
*DDA **28** 04:13:00.8, 3941N×3311E, h6km±1km, Md2.4*
*ISK **28** 04:13:00.8, 3943N×3311E, h7km, MD3.0*

ISC 28 04:13:01.5±0.7, 3941N±004×3309E±004, h6km±6km, n11, σ0°81/17, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**95**	PG		**Pg**		**04 13 10.3**	**-0.5**
KAMT				*e*SG		**Sg**		**04 13 17.4**	**+0.2**
LOD	**Lodumlu**	**0.54**	**332**	*e*PG		**Pg**		**04 13 11.4**	**-0.4**
LOD				*e*SG		**Sg**		**04 13 19.3**	**+0.5**
CDAG	**Cicekdag**	**1.01**	**78**	*i* P		**Pg**		**04 13 20.1**	**-0.9**
CDAG				*i* S		**Sg**		**04 13 35.4**	**+1.3**
KIZT	**Kizilcal**	**1.08**	**241**	*e*PN		**Pn**		**04 13 21.8**	**-1.3**
KIZT				*e*SN		**Sn**		**04 13 38.1**	**-0.3**
KDHN	**Kadinhani**	**1.17**	**221**	*i* P		**Pg**		**04 13 23.3**	**-0.5**
KDHN				*i* S		**Sg**		**04 13 39.5**	**+0.4**
CANT	**Cankiri**	**1.26**	**19**	*e*PN		**Pn**		**04 13 25.2**	**-0.4**
CORM	**Corum**	**1.41**	**57**	*e*PN		**Pn**		**04 13 27.0**	**-0.7**
KONT	**Konya--Tatoy**	**1.57**	**201**	*e*PN		**Pn**		**04 13 30.2**	**+0.3**
ESKT	**Eskisehir**	**1.74**	**274**	*e*P		**Pn**		**04 13 35.2**	**+3.1**
ESKT				*i* S		**Sn**		**04 13 55.1**	**+0.5**
YOZ	**Yozgat**	**1.74**	**82**	*e*PN		**Pn**		**04 13 32.0**	**-0.2**
NIG	**Nigde**	**1.76**	**137**	*e*PN		**Pn**		**04 13 33.4**	**+0.9**

*TRN **28** 04:15:15.0, 1908N×6476W, h16km*
*NEIC **28** 04:15:16.1, 1935N×6468W, h23km, MD3.2(RSPR), After RSPR.*
*RSPR **28** 04:15:16.1, 1935N×6468W, h23km±31km, MD3.2/7, MD3.2/7*

ISC 28 04:15:14.9±1.6, 1924N±007×6478W±008, h13km±8km, n16, σ0°41/27, 12C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.66**	**140**	⇑*e*P		**Pg**		**04 15 28.0**	**+0.3**
ABV	**Anegada**	**0.66**	**140**	⇑*e*P		**Pg**		**04 15 28.3**	**+0.5**
ABV				*e*S		**Sg**		**04 15 36.8**	**+0.3**
TBVI	**Tortola**	**0.83**	**170**	⇑*e*P		**Pg**		**04 15 30.5**	**-0.6**
TBVI				*e*S		**Sg**		**04 15 41.6**	**-0.3**
STVI	**Saint Thomas**	**0.90**	**191**	⇑*e*P		**Pg**		**04 15 31.9**	**-0.5**
STVI				*e*S		**Sg**		**04 15 44.7**	**+0.6**
MTP	**Monte Pirata**	**1.35**	**213**	⇑*e*P		**Pn**		**04 15 39.2**	**-0.3**
MTP				*e*S		**Sn**		**04 15 57.3**	**0.0**
CBYP	**Canovanas**	**1.41**	**227**	⇑*e*P		**Pn**		**04 15 40.1**	**-0.2**
CBYP	**Canovanas**	**1.41**	**227**	⇑*e*P		**Pn**		**04 15 40.8**	**+0.6**
CBYP				*e*S		**Sn**		**04 15 59.2**	**+0.6**
CBYP	**Canovanas**	**1.41**	**227**	⇑*e*P		**Pn**		**04 15 40.1**	**-0.2**
CBYP				*e*S		**Sn**		**04 15 59.2**	**+0.6**
CDVI	**St. Croix**	**1.48**	**180**	⇓*e*P		**Pn**		**04 15 41.4**	**+0.1**
CDVI				*e*S		**Sn**		**04 16 00.5**	**+0.1**
CDVI	**St. Croix**	**1.48**	**180**	⇓*e*P		**Pn**		**04 15 41.4**	**+0.1**
CDVI				*e*S		**Sn**		**04 16 00.1**	**-0.4**
HUMP	**Col San Antoni**	**1.49**	**223**	⇑*e*P		**Pn**		**04 15 40.9**	**-0.5**
HUMP				*e*S		**Sn**		**04 16 00.6**	**-0.1**
CPD	**Cerro la Pandu**	**1.61**	**222**	⇑*e*P		**Pn**		**04 15 43.4**	**+0.4**
CPD				*e*S		**Sn**		**04 16 03.6**	**-0.1**
CPD	**Cerro la Pandu**	**1.61**	**222**	⇑*e*P		**Pn**		**04 15 43.4**	**+0.4**
CPD				*e*S		**Sn**		**04 16 03.6**	**-0.1**
SJG	**San Juan**	**1.72**	**230**	⇑*e*P		**Pn**		**04 15 44.2**	**-0.4**
CRPR	**Cabo Rojo, PR**	**2.53**	**241**	⇓*e*P		**Pn**		**04 15 56.1**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.53**	**241**	⇓*e*P		**Pn**		**04 15 56.7**	**+1.0**

*TRN **28** 04:33:08.7, 19.11N×6474W, h16km*
*RSPR **28** 04:33:10.5, 1931N×6462W, h25km±27km, MD3.3/8, MD3.3/8*
*NEIC **28** 04:33:10.5, 1931N×6462W, h25km, MD3.3(RSPR), After RSPR.*

ISC 28 04:33:08.7±1.6, 1927N±007×6476W±008, h11km±8km, n17, σ0°49/26, 14C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.67**	**143**	⇑*e*P		**Pg**		**04 33 21.6**	**0.0**
ABV				*e*S		**Sg**		**04 33 30.5**	**+0.1**
TBVI	**Tortola**	**0.86**	**171**	⇑*e*P		**Pg**		**04 33 24.6**	**-0.6**
TBVI				*e*S		**Sg**		**04 33 36.2**	**-0.2**
STVI	**Saint Thomas**	**0.93**	**192**	⇑*e*P		**Pg**		**04 33 26.1**	**-0.5**
STVI				*e*S		**Sg**		**04 33 39.5**	**+0.8**
STVI	**Saint Thomas**	**0.93**	**192**	⇑*e*P		**Pg**		**04 33 26.1**	**-0.5**
STVI				*e*S		**Sg**		**04 33 39.5**	**+0.8**
MTP	**Monte Pirata**	**1.39**	**213**	⇑*e*P		**Pn**		**04 33 33.5**	**-0.4**
MTP				*e*S		**Sn**		**04 33 51.8**	**-0.4**
CBYP	**Canovanas**	**1.44**	**227**	⇑*e*P		**Pn**		**04 33 34.4**	**-0.3**
CBYP				*e*S		**Sn**		**04 33 52.8**	**-0.7**
CDVI	**St. Croix**	**1.51**	**180**	⇑*e*P		**Pn**		**04 33 35.8**	**+0.3**
CDVI				*e*S		**Sn**		**04 33 55.7**	**+0.5**
HUMP	**Col San Antoni**	**1.52**	**223**	⇑*e*P		**Pn**		**04 33 35.5**	**-0.4**
HUMP				*e*S		**Sn**		**04 33 55.7**	**+0.1**
CPD	**Cerro la Pandu**	**1.64**	**222**	*e*S		**Sn**		**04 33 58.4**	**-0.2**
CPD	**Cerro la Pandu**	**1.64**	**222**	*e*S		**Sn**		**04 33 58.4**	**-0.2**
SJG	**San Juan**	**1.75**	**229**	⇓*e*P		**Pn**		**04 33 38.7**	**-0.2**
SJG				*e*S		**Sn**		**04 34 01.5**	**+0.3**
LSP	**Las Mesas**	**2.46**	**244**	⇑*e*P		**Pn**		**04 33 49.8**	**+1.1**
LSP	**Las Mesas**	**2.46**	**244**	⇑*e*P		**Pn**		**04 33 50.0**	**+1.3**
LSP	**Las Mesas**	**2.46**	**244**	⇑*e*P		**Pn**		**04 33 50.4**	**+1.7**
LSP	**Las Mesas**	**2.46**	**244**	⇑*e*P		**Pn**		**04 33 50.0**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.56**	**241**	⇑*e*P		**Pn**		**04 33 50.4**	**+0.3**

*NEIC **28** 04:54:53.8, 1920N×6467W, h4km, MD3.5(RSPR), After RSPR.*

RSPR 28 04:54:53.8, 1920N×6467W, h4km±5km, MD3.5/11, MD3.5/11, 22C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.56**	**146**	⇑*e*P		Pg		04 55 04.9	+0.3
ABV				*e*S		Sg		04 55 13.4	+1.5
TBVI	**Tortola**	**0.78**	**177**	⇑*e*P		Pg		04 55 07.8	-0.9
TBVI				*e*S		Sg		04 55 18.8	0.0
STVI	**Saint Thomas**	**0.88**	**198**	⇑*e*P		Pg		04 55 09.3	-1.5
STVI				*e*S		Sg		04 55 21.7	-0.6
MTP	**Monte Pirata**	**1.38**	**218**	⇓*e*P		Pn		04 55 16.7	-3.2
MTP				*e*S		Sb		04 55 35.1	-3.0
CDVI	**St. Croix**	**1.44**	**184**	⇑*e*P		Pn		04 55 18.9	-1.8
CDVI				*e*S		Sb		04 55 37.8	-2.1
CBYP	**Canovanas**	**1.46**	**231**	⇑*e*P		Pn		04 55 17.6	-3.3
CBYP				*e*S		Sb		04 55 37.8	-2.6
CBYP	**Canovanas**	**1.46**	**231**	⇑*e*P		Pn		04 55 17.6	-3.3
CBYP				*e*S		Sb		04 55 37.1	-3.3
HUMP	**Col San Antoni**	**1.54**	**227**	⇑*e*P		Pn		04 55 18.9	-3.1
HUMP				*e*S		Sn	

comp=Z,100nnm,1.0s
QZH LR LR
comp=N,2μm,14.6s
QZH LR LR
comp=Z,1μm,24.7s
JOW Kunigami 10.68 30 Pn **Pn 05 16 01.4 +0.3**
comp=Z,12nm,0.3s,baz=212,slow=10,SNR=13
JOW Sn **Sn 05 17 56.0 -3.5**
comp=Z,12nm,0.3s,baz=115,slow=29,SNR=10
DAV Davao City (W) 10.94 163 LR LR 05 20 52.6
comp=Z,2μm,20.6s,baz=342,slow=41
QIZ Qiongzhong 11.96 279 P **Pn 05 16 20.0 +1.3**
QIZ *e*S **Sn 05 18 36.3 +5.3**
QIZ AMB AMB
comp=Z,32nm,1.7s
QIZ LR LR
comp=E,729nm,17.7s
QIZ LR LR
comp=Z,1μm,17.0s
QIZ Qiongzhong 11.96 279 *e*Pn **Pn 05 16 17.9 -0.8**
QIZ *e*Sn **Sn 05 18 25.9 -5.1**
NJ2 Nanjing 14.72 348 *e*P **Pn 05 16 58.3 +2.1**
NJ2 AMB AMB
comp=Z,20nm,0.5s
WHN Wuhan 14.79 332 P **Pn 05 16 58.5 +1.3**
WHN S **Sn 05 19 37.5 -2.4**
WHN AMB AMB
comp=Z,81nm,1.2s
WHN LR LR
comp=N,2μm,15.7s
WHN LR LR
comp=E,1μm,22.0s
WHN LR LR
comp=Z,2μm,16.8s
GYA Guiyang 16.99 304⇑ *i*P **Pn 05 17 27.0 +1.5**
GYA AP pP 05 17 34.8 -1.3
GYA XP sP 05 17 39.3 -1.1
GYA S **Sn 05 20 32.3 -1.0**
GYA XS sS 05 20 44.0 -13
GYA AMB AMB
comp=Z,20nm,1.0s
GYA AMB AMB
comp=Z,90nm,4.8s
GYA LR LR
comp=N,2μm,13.0s
GYA LR LR
comp=E,1μm,13.5s
GYA LR LR
comp=Z,3μm,14.0s
TIA Tai'an 19.09 347 ⇓P **Pn 05 17 51.8 +0.6**
TIA AMB AMB
comp=Z,27nm,1.0s
KMI Kunming 19.72 296 P **Pn 05 17 59.0 +0.2**
KMI AP pP 05 18 08.8 +2.6
KMI XP sP 05 18 13.0 +2.4
KMI PP 05 18 20.0
KMI S **Sn 05 21 36.0 -3.5**
KMI XS sS 05 21 49.0 -3.2
KMI SS 05 22 03.8
KMI AMB AMB
comp=Z,12nm,0.9s
KMI AMB AMB
comp=Z,300nm,6.2s
KMI LR LR
comp=N,631nm,16.1s
KMI LR LR
comp=E,683nm,16.6s
KMI LR LR
comp=Z,959nm,16.1s
KSM Kuching 19.94 218 *e*P **Pn 05 17 58.1 -3.3**
comp=Z,80nm,1.6s
XAN Xi'an 20.30 326 P **P 05 18 05.0 +1.6**
XAN AP 05 18 15.0
XAN PP 05 18 27.5
XAN S **S 05 21 53.3 +4.0**
XAN AMB AMB
comp=Z,72nm,1.1s
XAN AMB AMB
comp=Z,72nm,2.8s
XAN LR LR
comp=N,1μm,23.0s,MS4.8
XAN LR LR
comp=E,5μm,22.5s,MS4.8
XAN LR LR
comp=Z,5μm,13.8s
KSRS Korea Array 20.36 13 P **P 05 18 05.1 +1.1**
comp=Z,16nm,0.8s,baz=194,slow=11,SNR=37
KSRS LR LR 05 27 32.9
comp=Z,156nm,19.7s,MS3.4,baz=200,slow=41
DL2 Dalian 21.22 358 P **P 05 18 14.0 +0.7**
DL2 *e*S **S 05 22 07.5 +0.1**
DL2 AMB AMB
comp=Z,40nm,1.2s,mb4.6
DL2 AMB AMB
comp=Z,80nm,3.2s
DL2 LR LR
comp=N,100nm,16.7s
DL2 LR LR
comp=Z,200nm,17.1s,MS3.6
CD2 Chengdu 21.46 311 P **P 05 18 17.3 +1.3**
CD2 AP 05 18 26.3
CD2 XP sP 05 18 30.5 +1.0
CD2 PP 05 18 42.5
CD2 S **S 05 22 10.5 -1.8**
CD2 PCP PcP 05 22 18.3 -0.1
CD2 XS sS 05 22 25.0 -1.8
CD2 SS 05 22 47.8
CD2 AMB AMB
comp=Z,120nm,1.2s,mb5.1
CD2 AMB AMB
comp=Z,470nm,10.9s
CD2 LR LR
comp=N,770nm,15.6s
CD2 LR LR
comp=Z,870nm,15.6s,MS4.3
GUMO Guam 22.05 97 P **P 05 18 24.0 +1.6**
comp=Z,70nm,0.6s,mb5.3,baz=196,slow=19,SNR=3.6
GUMO LR LR 05 24 54.7
comp=Z,637nm,20.1s,MS4.0,baz=313,slow=31
CHTO Chiang Mai 22.27 277 *e*P **P 05 18 24.8 +0.1**
CHTO pmax pmax
comp=Z,34nm,1.1s,mb4.7
CHTO Chiang Mai 22.27 277 *e*P **P 05 18 24.8 +0.1**
comp=Z,34nm,1.1s,mb4.7
CM31 Chiang Mai Arr 22.27 276 *e*P **P 05 18 25.0 +0.2**
comp=Z,28nm,0.9s,mb4.7
CMAR Chiang Mai Arr 22.27 276 P **P 05 18 25.5 +0.7**
comp=Z,8.7nm,0.4s,mb4.5,baz=90,slow=8.2,SNR=82
CMAR PcP PcP 05 22 20.6 +0.4
comp=Z,1.2nm,0.4s,baz=80,slow=0.3,SNR=7.7
CMAR ScP ScP 05 25 55.0 -0.2
comp=Z,0.6nm,0.3s,baz=75,slow=1.3,SNR=8.7
CMAR Chiang Mai Arr 22.27 276 P **P 05 18 25.5 +0.7**
CMAR 05 22 20.6
KAPI Kappang 22.63 187 LR LR 05 27 46.2
comp=Z,212nm,19.8s,MS3.6,baz=115,slow=38
BJT Baijiatuao 22.96 348 *e*P **P 05 18 32.1 +0.3**
BJT pmax pmax
comp=Z,25nm,0.7s
BJT Baijiatuao 22.96 348 *e*P **P 05 18 32.1 +0.3**
comp=Z,25nm,0.7s,mb4.8
BJI Beijing 22.98 348 P **P 05 18 31.5 -0.5**
BJI S **S 05 22 43.5 +3.4**
BJI AMB AMB
comp=Z,35nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,158nm,5.2s
BJI LR LR
comp=N,279nm,21.9s,MS3.8
BJI LR LR
comp=E,341nm,23.8s,MS3.8
BJI LR LR
comp=Z,196nm,26.6s,MS3.4
MJAR Matsushiro Arr 23.49 34 P **P 05 18 38.3 +1.0**
comp=Z,1.2nm,0.5s,mb3.5,baz=212,slow=8.2,SNR=3.7
MJAR LR LR 05 28 50.4
comp=Z,155nm,18.1s,MS3.5,baz=45,slow=39
SNY Shenyang 24.16 2 ⇓P **P 05 18 43.5 +0.2**
SNY AMB AMB
comp=Z,28nm,1.2s,mb4.6
SNY LR LR
comp=N,157nm,14.4s,MS4.1
SNY LR LR
comp=E,456nm,15.0s,MS4.1
SNY LR LR
comp=Z,472nm,15.6s,MS4.1
LZH Lanzhou 24.64 322 *e*P **P 05 18 49.5 +1.6**
LZH AP 05 19 00.5
LZH XP sP 05 19 03.5 +1.7
LZH PP 05 19 26.3
LZH S **S 05 23 07.0 -0.1**
LZH XS sS 05 23 21.5 -1.8
LZH SS 05 24 03.5
LZH AMB AMB
comp=Z,92nm,1.4s,mb5.1
LZH AMB AMB
comp=Z,250nm,5.6s
LZH LR LR
comp=N,2μm,13.0s
LZH LR LR
comp=Z,2μm,15.2s,MS4.8
HHC Hu-ho-hao-te 24.95 340 *e*P **P 05 18 51.5 +0.9**
HHC AP 05 19 00.5
HHC XP sP 05 19 05.8 +1.2
HHC PP 05 19 28.8
HHC S **S 05 23 12.0 0.0**
HHC XS sS 05 23 25.3 -2.8
HHC SS 05 24 10.3
HHC PCS PcS 05 26 05.8 +0.2
HHC AMB AMB
comp=Z,40nm,1.1s,mb4.9
HHC AMB AMB
comp=Z,153nm,5.3s
HHC LR LR
comp=N,482nm,14.9s,MS4.2
HHC LR LR
comp=E,211nm,14.9s,MS4.2
HHC LR LR
comp=Z,473nm,16.8s,MS4.1
BTO Baotou 25.26 338 *e*P **P 05 18 54.5 +1.1**
CN2 Changchun 26.24 5 *e*P **P 05 19 05.0 +2.8**
CN2 *e*XP sP 05 19 18.5 +2.3
CN2 *e*S **S 05 23 35.5 +3.3**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.1
CN2 LR LR
comp=E,400nm,17.0s,MS4.1
CN2 LR LR
comp=Z,400nm,15.0s,MS4.1
PSI Prapat 27.30 240 P **P 05 19 10.8 -1.3**
comp=Z,2.9nm,0.6s,mb4.0,baz=17,slow=7.6,SNR=3.0
MDJ Mudanjiang 27.60 11 P **P 05 19 15.5 +1.0**
MDJ AP pP 05 19 24.0 -0.3
MDJ AMB AMB
comp=Z,24nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,155nm,8.6s
MDJ Mudanjiang 27.60 11 *e*P **P 05 19 15.6 +1.1**
comp=Z,24nm,0.9s,mb4.8
MDJ *e*pP pP 05 19 23.8 -0.5
MDJ *e*sP sP 05 19 30.1 +1.7
GTA Gaotai 29.24 323 *e*P **P 05 19 30.0 +0.8**
GTA AP pP 05 19 39.0 0.0
GTA XP sP 05 19 43.8 +0.6
GTA PCP PcP 05 22 36.5 +0.8
GTA S **S 05 24 21.0 +1.3**
GTA XS sS 05 24 35.0 -1.0
GTA SCP ScP 05 26 14.0 -0.9
GTA AMB AMB
comp=Z,11nm,1.8s,mb4.3
GTA AMB AMB
comp=Z,124nm,5.7s
GTA LR LR
comp=N,227nm,11.9s,MS4.1
GTA LR LR
comp=E,210nm,15.5s,MS4.1
GTA LR LR
comp=Z,196nm,14.6s,MS3.9
LSA Lhasa 30.91 299 P **P 05 19 45.3 +1.2**
LSA AMB AMB
comp=Z,40nm,0.8s,mb5.3
LSA Lhasa 30.91 299 *e*P **P 05 19 46.2 +2.1**
LSA pmax pmax
comp=Z,49nm,1.1s,mb5.2
LSA Lhasa 30.91 299 *e*P **P 05 19 46.2 +2.2**
comp=Z,49nm,1.1s,mb5.2
ULN Ulaanbaatar 32.67 341 *e*P **P 05 20 00.3 +1.0**
ULN pmax pmax
comp=Z,26nm,1.4s,mb5.0
ULN Ulaanbaatar 32.67 341 *e*P **P 05 20 00.3 +1.0**
comp=Z,26nm,1.4s,mb5.0
SONM Songino Array 32.85 340 P **P 05 20 01.9 +1.0**
comp=Z,7.6nm,0.8s,mb4.7,baz=163,slow=9.0,SNR=11
TAPN Taplejung 33.35 293 *e*P **P 05 20 05.6 +0.1**
ODAN Odare 33.55 292 *e*P **P 05 20 07.2 -0.1**
comp=Z,39nm,0.5s,mb5.6
RAMN Ramite 34.27 292 *e*P **P 05 20 13.5 0.0**
comp=Z,36nm,0.6s,mb5.5
JIRN Jiri 34.73 293 *e*P **P 05 20 17.7 +0.2**
GUN Gumba 35.04 294 *e*P **P 05 20 20.2 0.0**
comp=Z,88nm,0.9s,mb5.7
PKI Pulchoki 35.40 293 *e*P **P 05 20 22.8 -0.5**
KKN Kakani 35.55 293 *e*P **P 05 20 23.7 -0.8**
DMN Daman 35.67 293 *e*P **P 05 20 24.9 -0.7**
ZAK Zakamensk 36.09 339 *e*P **P 05 20 28.4 -0.4**
ZAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GKN Gorkha 36.14 293 *e*P **P 05 20 28.6 -1.0**
PMG Port Moresby 36.35 136 LR LR 05 33 56.5
comp=Z,97nm,19.2s,MS3.6,baz=21,slow=34
DANN Dangsing 36.96 294 *e*P **P 05 20 35.9 -0.7**
comp=Z,36nm,0.9s,mb5.2
KOLN Koldanda 37.02 293 *e*P **P 05 20 36.5 -0.6**
comp=Z,51nm,1.1s,mb5.3
TLY Talaya 37.08 341 *e*P **P 05 20 37.3 0.0**
TLY *e*S **S 05 26 17.0 -4.0**
TLY pmax pmax
comp=Z,16nm,0.7s,mb5.0
TLY MLR MLR
comp=Z,410nm,18.0s,MS4.3
TLY Talaya 37.08 341 *e*P **P 05 20 38.4 +1.1**
comp=Z,18nm,0.7s,mb5.0
COEN Coen 37.50 145 *e*P **P 05 20 39.6 -1.6**
comp=Z,8.7nm,0.8s,mb4.5
MOY Mondy 37.96 338 *e*P **P 05 20 45.7 +1.0**
WRAB Tennant Creek 39.13 162 *e*P **P 05 20 52.8 -2.1**
WRAB Tennant Creek 39.13 162 *e*P **P 05 20 52.9 -1.9**
comp=Z,42nm,1.2s,mb5.0
WRAB *e*pP pP 05 21 02.8 -2.1
WRA Warramunga Arr 39.13 162 P **P 05 20 52.3 -2.6**
comp=Z,13nm,0.9s,mb4.7,baz=342,slow=9.5,SNR=35
WB2 Warramunga Arr 39.14 162 *e*P **P 05 20 52.6 -2.3**
WB2 Warramunga Arr 39.14 162 *e*P **P 05 20 52.8 -2.1**
WB2 *e*pP pP 05 21 02.5 -2.5
WMQ Urumqi 39.16 319 P **P 05 20 56.8 +1.8**
WMQ AP pP 05 21 06.8 +1.8
WMQ PP PP 05 22 32.5 +7.4
WMQ AMB AMB
comp=Z,11nm,1.0s,mb4.5
WMQ AMB AMB
comp=Z,328nm,6.0s
WMQ LR LR
comp=N,800nm,23.0s,MS4.5
WMQ LR LR
comp=E,200nm,20.0s,MS4.5
WMQ LR LR
comp=Z,359nm,16.0s,MS4.3
BOD Bodaibo 40.62 353 *e*P **P 05 21 07.7 +0.9**
BOD pmax pmax
comp=Z,6.0nm,1.6s,mb4.0
HYB Hyderabad 41.70 277 *i* P **P 05 21 16.5 +0.2**
HYB Hyderabad 41.70 277 *e*P **P 05 21 16.5 +0.2**
ASAR Alice Springs 42.55 164 P **P 05 21 21.6 -1.4**
comp=Z,2.0nm,0.6s,mb4.0,baz=350,slow=8.1,SNR=26
MK31 Makanchi Array 43.94 320⇑ *e*P **P 05 21 34.6 +0.5**
MK31 pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
MK31 Makanchi Array 43.94 320 *e*P **P 05 21 34.9 +0.8**
MKAR Makanchi Array 43.94 320 P **P 05 21 34.6 +0.6**
comp=Z,13nm,0.7s,mb4.8,baz=113,slow=9.6,SNR=120
MKAR PcP PcP 05 23 18.7 -0.9
comp=Z,9.1nm,1.1s,baz=98,slow=5.0,SNR=4.4
CTA Charters Tower 44.21 147 P **P 05 21 36.2 -0.3**
comp=Z,31nm,1.0s,mb5.0,baz=324,slow=12
CTA LR LR 05 43 14.3
comp=Z,187nm,18.4s,MS4.0,baz=42,slow=40
CTAO Charters Tower 44.21 147 *e*P **P 05 21 36.4 -0.1**

ISCJB ***28*** *05:08:25.0±1.1, 3867N±002×2463E±003, h1km±8km, Error ellipse: s-maj=3.9km s-min=3.3km az=156.3*
CSEM ***28*** *05:08:25.4±0.1, 3870N×2463E, h8km, ML3.6/3, Error ellipse: s-maj=1.2km s-min=1.2km az=178.0*
NEIC ***28*** *05:08:26.0, 3868N×2468E, h28km, ML3.6(ATH), After ATH.*
THE ***28*** *05:08:26.9, 3869N×2464E, h12km±1km, ML3.6/3, Error ellipse: s-maj=1.5km s-min=0.5km az=350.0*
ATH ***28*** *05:08:26.1, 3868N×2468E, h28km±1km, MD3.3/11, ML3.6*
SOF ***28*** *05:08:44.8, 4008N×2422E, h10km, MD2.9*
ISC 28 05:08:26.1±0.8, 3867N±002×2464E±003, h9km±7km, n44, σ0§90/61, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.78**	**310**	P	**Pg**	**05 08 40.8**	**-0.3**
PTL	**Penteli**	**0.87**	**225**	*e*PN	**Pn**	**05 08 43.4**	**-1.1**
PTL				*e*SN	**Sn**	**05 08 55.8**	**-1.4**
ATH	**Athens Observa**	**1.00**	**227**⇑	*i*PN	**Pn**	**05 08 46.0**	**-0.4**
ATH				*e*SN	**Sn**	**05 09 00.5**	**-0.1**
SIGR	**SIGRI**	**1.09**	**60**	P	**Pg**	**05 08 47.2**	**+0.1**
SIGR				S	**Sg**	**05 09 02.1**	**+0.8**
CHOS	**Chios island**	**1.14**	**104**	P	**Pb**	**05 08 48.4**	**+0.3**
CHOS				S	**Sg**	**05 09 04.1**	**+1.1**
NEO	**Neokhori**	**1.27**	**300**	*e*PN	**Pn**	**05 08 50.5**	**+0.4**
NEO				*e*SN	**Sn**	**05 09 08.1**	**+0.8**
NEO	**Neokhori**	**1.27**	**300**	*e*Pn	**Pn**	**05 08 50.5**	**+0.4**
NEO				*e*Sn	**Sn**	**05 09 08.3**	**+1.0**
NAIG	**Nisos Aigina**	**1.28**	**225**	*e*PN	**Pn**	**05 08 50.5**	**+0.3**
NAIG				*e*SN	**Sn**	**05 09 08.0**	**+0.5**
LKR	**Lokris**	**1.28**	**270**	P	**Pn**	**05 08 49.4**	**-0.8**
LKR				S	**Sb**	**05 09 07.0**	**-0.1**
LKR	**Lokris**	**1.28**	**270**	*e*PN	**Pn**	**05 08 50.2**	**0.0**
LKR	**Lokris**	**1.28**	**270**	*e*Pn	**Pn**	**05 08 50.0**	**-0.2**
LKR				S	**Sb**	**05 09 07.0**	**-0.1**
LIA	**Limnos Island**	**1.30**	**19**	*e*PN	**Pn**	**05 08 49.6**	**-0.8**
LIA	**Limnos Island**	**1.30**	**19**	*e*Pn	**Pn**	**05 08 49.4**	**-1.0**
LIA				S	**Sb**	**05 09 06.9**	**-0.6**
LOS	**Limnos**	**1.31**	**15**	P	**Pn**	**05 08 50.2**	**-0.4**
XOR	**Xorichti**	**1.33**	**302**	P	**Pn**	**05 08 49.9**	**-0.9**
PRK	**Paraskevi**	**1.40**	**65**	P	**Pn**	**05 08 52.0**	**+0.2**
PRK				S	**Sb**	**05 09 10.1**	**-0.2**
PRK	**Paraskevi**	**1.40**	**65**	*e*Pn	**Pn**	**05 08 51.4**	**-0.4**
PRK				S	**Sb**	**05 09 10.1**	**-0.2**
PAIG	**Paliouri**	**1.46**	**330**	P	**Pn**	**05 08 51.9**	**-0.8**
PAIG				S	**Sn**	**05 09 11.8**	**-0.1**
LTK	**Loutraki**	**1.46**	**244**	P	**Pn**	**05 08 52.4**	**-0.3**
LTK				S	**Sn**	**05 09 12.5**	**+0.5**
DID	**Didima**	**1.60**	**224**	P	**Pn**	**05 08 54.1**	**-0.5**
DID				S	**Sn**	**05 09 15.6**	**+0.2**
OUR	**Ouranopolis**	**1.74**	**343**	P	**Pn**	**05 08 55.5**	**-1.0**
APE	**Apeiranthos**	**1.74**	**156**	P	**Pn**	**05 08 56.5**	**0.0**
APE				S	**Sn**	**05 09 19.4**	**+0.5**
APE	**Apeiranthos**	**1.74**	**156**	*e*PB	**Pb**	**05 08 56.2**	**-2.1**
AGG	**Agios Georgios**	**1.84**	**282**	P	**Pn**	**05 08 57.7**	**-0.1**
AGG				S	**Sn**	**05 09 21.9**	**+0.7**
PLG	**Polygyros**	**1.94**	**332**	*e*PN	**Pn**	**05 08 58.7**	**-0.5**
PLG	**Polygyros**	**1.94**	**332**	P	**Pn**	**05 08 58.5**	**-0.7**
SMG	**Samos**	**1.98**	**118**	*e*PB	**Pb**	**05 09 00.0**	**-2.3**
LIT	**Litokhoron**	**2.20**	**311**	P	**Pn**	**05 09 02.5**	**-0.3**
THL	**Klokotos Trika**	**2.23**	**295**	*e*PN	**Pn**	**05 09 03.4**	**+0.2**
THL	**Klokotos Trika**	**2.23**	**295**	P	**Pn**	**05 09 03.1**	**-0.1**
HORT	**Hortiatis**	**2.27**	**329**	P	**Pn**	**05 09 03.6**	**-0.1**
SOH	**Sokhos**	**2.37**	**336**	P	**Pn**	**05 09 04.8**	**-0.3**
ALN	**Alexandroupoli**	**2.48**	**25**	P	**Pn**	**05 09 05.6**	**-1.0**
RLS	**Riolos of Patr**	**2.57**	**257**	P	**Pn**	**05 09 09.8**	**+1.9**
ITM	**Ithomi**	**2.61**	**236**	P	**Pn**	**05 09 10.6**	**+2.2**
NVR	**Nevrokopi**	**2.75**	**348**	P	**Pn**	**05 09 10.4**	**+0.1**
KNT	**Kendrikon**	**2.83**	**332**	P	**Pn**	**05 09 11.6**	**+0.1**
GRG	**Griva**	**2.86**	**324**	P	**Pn**	**05 09 12.0**	**+0.1**
MMB	**Musomiste**	**3.00**	**347**	*i* P	**Pn**	**05 09 13.3**	**-0.5**
RZN	**Rozhen**	**3.02**	**1**	*e*P	**Pn**	**05 09 15.8**	**+1.7**
KDZ	**Kurdzhali**	**3.04**	**11**	*e*P	**Pn**	**05 09 17.0**	**+2.7**
KKB	**Krupnik**	**3.41**	**340**	*i* P	**Pn**	**05 09 19.5**	**0.0**
KARP	**Karpathos**	**3.71**	**146**	P	**Pn**	**05 09 25.0**	**+1.4**
VTS	**Vitosha**	**4.07**	**345**	*e*P	**Pn**	**05 09 30.0**	**+1.5**

MOS ***28*** *05:13:28.5±1.0, 1761N×12232E, h33km, mb5.1/32, Error ellipse: s-maj=12.6km s-min=6.1km az=121.6*
BJI ***28*** *05:13:28.7, 1756N×12246E, h39km, mB4.9, mb4.9, Ms4.4, Msz4.3*
ISCJB ***28*** *05:13:28.3±0.2, 1764N±002×12243E±003, h32km, mb4.8/92, MS4.1/20, Error ellipse: s-maj=4.0km s-min=2.7km az=177.8*
MAN ***28*** *05:13:29, 1763N×12236E, h28km, mb5.4, ML4.3, MS4.8*
MAN INTENSITY III - TUGUEGARAO, CAGAYAN; INTENSITY II - CAUAYAN, ISABELA.
IDC ***28*** *05:13:30.3±2.2, 1747N×12228E, h37km±18km, mb4.4/24, mb1 4.5/25, mb1mx4.5/29, mbtmp4.5/25, ML4.7/1, MS4.0/9, Ms1 4.0/9, ms1mx3.7/30, Error ellipse: s-maj=16.8km s-min=10.7km az=70.0*
NEIC ***28*** *05:13:30.1±0.6, 1751N×12235E, h36km±5km, mb4.9/36, Error ellipse: s-maj=5.8km s-min=4.4km az=70.0*
NEIC Felt [IV PIVS] at Callao; [III PIVS] at Ilagan and Tuguegarao City; [II PIVS] at Aparri, Cauayan and Pasuquin.
ISC 28 05:13:30.5±0.2, 1762N±002×12235E±003, h34km±1.3km; pP-P, n227, σ1§06/245, mb4.8/92, MS4.1/20, 15C-22D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.55**	**173**⇓	*e*P	**Pn**	**05 13 41.1**	**-0.8**
PALP				*e*S	**Sb**	**05 13 52.0**	**+2.1**
SGCP	**Mt. Cagua**	**0.69**	**335**	*e*P	**Pn**	**05 13 43.1**	**-0.7**
CAUP	**Cauayan**	**0.84**	**217**	*e*P	**Pn**	**05 13 45.9**	**0.0**
CAUP				*e*S	**Sn**	**05 14 07.1**	**+10**
APYP	**Conner**	**1.09**	**283**	*e*P	**Pn**	**05 13 48.4**	**-0.8**
APYP				*e*S	**Sn**	**05 14 02.8**	**-0.3**
ABRA	**Dolores**	**1.57**	**271**	*e*P	**Pn**	**05 13 55.7**	**-0.2**
ABRA				*e*S	**Sn**	**05 14 14.7**	**-0.2**
PIP	**Pasuquin**	**1.80**	**293**⇓	*i*P	**Pn**	**05 13 58.8**	**-0.2**
PIP				*i* S	**Sn**	**05 14 21.9**	**+1.2**
BALP	**Baler**	**2.01**	**202**	*e*P	**Pn**	**05 14 02.1**	**+0.2**
BALP				*e*S	**Sn**	**05 14 27.2**	**+1.4**
PCPH	**Palayan**	**2.37**	**211**⇑	*e*P	**Pn**	**05 14 07.4**	**+0.4**
PCPH				*e*S	**Sn**	**05 14 38.2**	**+3.4**
BOLP	**Bolinao**	**2.64**	**243**	*e*P	**Pn**	**05 14 11.7**	**+1.1**
POLP	**Polilio Island**	**2.90**	**188**	*e*P	**Pn**	**05 14 14.3**	**+0.1**
POLP				*e*S	**Sn**	**05 14 47.1**	**-0.8**
SCZP	**Santa Cruz**	**2.97**	**232**	*e*P	**Pn**	**05 14 16.9**	**+1.8**
GQP	**Guinayangan**	**3.69**	**179**⇓	*e*P	**Pn**	**05 14 26.5**	**+1.4**
GQP				*e*S	**Sn**	**05 15 09.1**	**+1.7**
TGY	**Tagaytay City**	**3.75**	**202**⇑	*e*P	**Pn**	**05 14 29.1**	**+3.2**
TGY				*e*S	Px	05 14 44.6	
PVCP	**Virac**	**4.36**	**156**⇓	*e*P	**Pn**	**05 14 34.5**	**+0.2**
PVCP				*e*S	**Sn**	**05 15 14.5**	**-9.4**
LUBP	**Lubang**	**4.36**	**208**	*e*P	**Pn**	**05 14 36.5**	**+2.2**
TWG	**Pinlang** 83nm,0.6s	**5.32**	**347**	*e*Pn	**Pn**	**05 14 48.3**	**+0.9**
TWG				*e*Sn	**Sn**	**05 15 52.2**	**+4.7**
CNP	**Catarman**	**5.54**	**156**	*e*P	**Pn**	**05 14 52.8**	**+2.2**
YULB	**Yu-li** 72nm,0.7s	**5.83**	**350**	*e*Pn	**Pn**	**05 14 54.9**	**+0.3**
YULB				*e*Sn	**Sn**	**05 16 00.6**	**+0.3**
TPUB	**Ta-pu** 103nm,0.7s	**5.88**	**344**	*e*Pn	**Pn**	**05 14 56.2**	**+1.0**
TPUB				*e*Sn	**Sn**	**05 16 07.8**	**+6.3**
SSLB	**Suanglung** 68nm,0.7s	**6.28**	**348**	*e*Pn	**Pn**	**05 15 02.0**	**+1.4**
NACB	**Ninganchiao** 54nm,0.6s	**6.56**	**354**	*e*Pn	**Pn**	**05 15 05.2**	**+0.6**
NACB				*e*Sn	**Sn**	**05 16 13.7**	**-4.6**
TATO	**Taipei**	**7.37**	**354**	Pn	**Pn**	**05 15 16.1**	**+0.4**
TATO				*e*Sn	**Sn**	**05 16 39.3**	**+1.3**
QZH	**Quanzhou**	**8.09**	**335**	P	**Pn**	**05 15 25.3**	**-0.2**
QZH				S	**Sn**	**05 16 54.0**	**-1.8**
QZH				AMB	AMB		

comp=Z,31nm,0.9s,mb5.0
PETK Petropavlovsk- 44.85 30 P **P** 05 21 42.0 +0.7
comp=Z,7.2nm,0.8s,mb4.6,baz=212,slow=3.8,SNR=8.6
PET Petropavlovsk 45.25 30 *e*P **P** 05 21 43.2 -1.2
PET pmax pmax
comp=Z,16nm,1.3s,mb4.7
HNR Honiara 45.84 123 LR LR 05 37 41.3
comp=Z,298nm,19.9s,MS4.2,baz=159,slow=32
ZAA0 Zalesovo Array 46.40 330 *e*P **P** **05 21 53.1 -0.4**
ZALV Zalesovo Beam 46.40 330 P **P** **05 21 53.2 -0.2**
comp=Z,10nm,0.9s,mb4.8,baz=114,slow=7.2,SNR=39
ZALV PcP PcP 05 23 26.9 -1.0
comp=Z,1.1nm,0.3s,baz=104,slow=5.0,SNR=3.2
UCH Uchtor 47.40 312 *e*P **P** **05 22 03.8 +2.2**
comp=Z,11nm,1.0s,mb4.7
AAK Ala-Archa 47.53 312 *e*P **P** **05 22 02.5 0.0**
AAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
NVS Novosibirsk 47.67 330 *e*P **P** **05 22 02.8 -0.6**
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.9
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
KURK Kurchatov 47.91 324 LR LR 05 44 14.7
comp=E,296nm,18.7s,MS4.3,baz=160,slow=38
KURK Kurchatov 47.91 324⇑ *e*P **P** **05 22 05.4 +0.1**
KURK pmax pmax
comp=Z,35nm,0.8s,mb5.4
KURK Kurchatov 47.91 324 *e*P **P** **05 22 05.5 +0.2**
comp=Z,33nm,0.9s,mb5.4
AML Almayashu 47.96 311 *e*P **P** **05 22 07.1 +1.3**
comp=Z,21nm,1.1s,mb5.1
SEY Seymchan 49.82 17⇑ *e*P **P** **05 22 17.8 -1.9**
KBL Kabul 50.20 300 *e*P **P** **05 22 23.5 +0.4**
comp=Z,33nm,1.2s,mb5.2
KK31 Karatay Array 50.48 312⇑ *e*P **P** **05 22 25.1 0.0**
KK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
NWAO Narrogin (SRO) 50.49 186 P **P** **05 22 22.6 -2.6**
comp=Z,4.6nm,0.6s,mb4.7,baz=16,slow=9.7
STKA Stephens Creek 52.55 159 P **P** **05 22 39.3 -1.3**
comp=Z,4.1nm,0.8s,mb4.4,baz=344,slow=9.5,SNR=7.5
STKA Stephens Creek 52.55 159 *e*P **P** **05 22 35.5 -5.1**
comp=Z,4.7nm,1.0s,mb4.4
STKA Stephens Creek 52.55 159 *e*P **P** **05 22 39.4 -1.2**
comp=Z,2.0nm,1.2s,mb3.9
STKA *e*pP pP 05 22 51.1 +0.1
BVA0 Borovoye Array 53.51 324 *i* P **P** **05 22 47.7 +0.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BVAR Borovoye Array 53.51 324 P **P** **05 22 47.7 +0.2**
comp=Z,9.0nm,0.8s,mb4.8,baz=113,slow=11,SNR=37
BVAR PcP PcP 05 23 53.8 -0.3
comp=Z,4.4nm,0.7s,baz=114,slow=3.7,SNR=6.7
BVAR ScP ScP 05 27 47.4 -2.0
comp=Z,0.9nm,0.8s,baz=146,slow=3.1,SNR=4.1
BRVK Borovoye 53.58 324 *e*P **P** **05 22 48.4 +0.4**
comp=Z,24nm,1.0s,mb5.1
TIXI Tiksi 54.17 3⇑ *e*P **P** **05 22 50.9 -1.1**
TIXI pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
TIXI Tiksi 54.17 3 *e*P **P** **05 22 51.3 -0.7**
comp=Z,5.1nm,0.8s,mb4.5
BILL Bilibino 57.51 18⇑ *e*P **P** **05 23 16.2 +0.2**
BILL *e* 05 25 23.5
BILL *e*S **S** **05 31 01.4 -10**
BILL pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BILL Bilibino 57.51 18 *e*P **P** **05 23 16.1 +0.1**
comp=Z,7.1nm,0.8s,mb4.8
BILL *e*pP pP 05 23 26.2 -0.2
AB31 Akbulak array 58.90 317 P **P** **05 23 25.6 -0.4**
AB31 pmax pmax
comp=Z,12nm,0.4s,mb5.3
SVE Sverdlovsk 60.02 326⇑ *e*P **P** **05 23 34.2 +0.6**
SVE pmax pmax
comp=Z,47nm,0.9s,mb5.5
AKTK Aktyubinsk 60.31 318 P **P** **05 23 35.6 -0.1**
AKTO Aktyubinsk 60.31 318 P **P** **05 23 35.6 -0.1**
comp=Z,7.4nm,0.5s,mb5.0,baz=94,slow=8.2,SNR=31
AKTO Aktyubinsk 60.31 318 P **P** **05 23 35.2 -0.5**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ARU Arti 61.05 325⇓ *i* P **P** **05 23 40.1 -0.5**
ARU pmax pmax
comp=Z,30nm,1.0s,mb5.4
ARU Arti 61.05 325 *e*P **P** **05 23 40.2 -0.4**
comp=Z,25nm,0.5s,mb5.6
RDF Al-Radifah 68.66 295 *e*P **P** **05 24 29.6 -1.1**
baz=295
RDF AMb AMB 05 24 33.1
comp=Z,55nm,1.3s,mb5.3,baz=295
MIB Mutribah 68.71 296 *e*P **P** **05 24 29.4 -1.6**
baz=296
MIB AMb AMB 05 24 39.7
comp=Z,18nm,1.6s,mb4.8,baz=296
NAY Al-Naaiem 68.88 295 *e*P **P** **05 24 30.3 -1.8**
baz=295
NAY AMb AMB 05 24 33.8
comp=Z,12nm,0.6s,mb5.0,baz=295
KIV Kislovodsk 70.64 311 *e*P **P** **05 24 43.1 +0.5**
KIV pmax pmax
comp=Z,14nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,326nm,20.0s,MS4.6
KIV Kislovodsk 70.64 311 *e*P **P** **05 24 43.3 +0.7**
comp=Z,20nm,0.9s,mb5.1
VRHR Novokhopersk 70.71 319 *e*P **P** **05 24 41.5 -1.4**
VRHR pmax pmax
comp=Z,40nm,1.0s,mb5.3
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.6s
KLMR Klimovskoe 71.31 329 *e*P **P** **05 24 44.8 -1.5**
KLMR pmax pmax
comp=Z,26nm,1.0s,mb5.1
VORD Divnogorie 72.19 319 *e*P **P** **05 24 50.6 -1.2**
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VORD pmax pmax
comp=N,8.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 72.24 319 *e*P **P** **05 24 51.6 -0.6**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.2s
OBN Obninsk 73.36 323⇑ *e*P **P** **05 24 57.9 -0.8**
OBN *e* 05 27 39.9
OBN *e*S S 05 34 22.3 -2.8
OBN pmax pmax
comp=Z,67nm,2.5s,mb5.1
APA Apatity 73.47 336⇓ *e*P **P** **05 24 58.7 -0.5**
APA pmax pmax
comp=Z,16nm,1.0s,mb4.9
MALT Malatya 74.63 306 *e*P **P** **05 25 07.6 +1.1**
comp=Z,5.0nm,1.0s,mb4.4
JOF Joensuu 74.96 332 *e*p **P** **05 25 06.8 -1.1**
comp=Z,5.4nm,0.5s,mb4.7
JOF Joensuu 74.96 332 *e*P **P** **05 25 06.8 -1.1**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KEV Kevo 75.46 339 *e*p **P** **05 25 09.7 -1.0**
comp=Z,4.5nm,0.6s,mb4.6
KEV Kevo 75.46 339 *e*P **P** **05 25 09.7 -1.0**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ARCES ARCESS Array B 76.02 339 P **P** **05 25 13.6 -0.3**
comp=Z,7.1nm,0.9s,mb4.6,baz=46,slow=5.2,SNR=13
SPB4 Spitsbergen Ar 76.11 348 *e*P **P** **05 25 14.6 +0.3**
KAF Kangasniemi 77.40 331 *e*p **P** **05 25 20.1 -1.7**
comp=Z,4.7nm,0.5s,mb4.7
KAF Kangasniemi 77.40 331 *e*P **P** **05 25 20.1 -1.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
BRTR Keskin Array B 78.00 308 P **P** **05 25 25.3 -0.3**
comp=Z,0.6nm,0.5s,mb3.8,baz=139,slow=4.3,SNR=4.9
AKASG Malin Array Be 78.52 320 P **P** **05 25 27.3 -0.9**
comp=Z,7.0nm,0.8s,mb4.6,baz=63,slow=5.3,SNR=12
KIEV Kiev 78.53 320 *e*P **P** **05 25 26.8 -1.5**
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
KIEV Kiev 78.53 320 *e*P **P** **05 25 26.8 -1.5**
comp=Z,6.4nm,0.8s,mb4.6
SUW Suwalki 81.19 324 *e*P **P** **05 25 41.9 -0.8**
SUW Suwalki 81.19 324 *e*P **P** **05 25 41.9 -0.7**
BURAR Bucovina Array 81.88 317⇓ *i*P **P** **05 25 46.5 +0.1**
BURAR Bucovina Array 81.88 317⇓ *i*P **P** **05 25 46.5 +0.1**
BUR08 Bucovina Ar. S 81.88 317 *e*P **P** **05 25 46.3 -0.1**
VOIR 82.63 315⇓ *i*P **P** **05 25 50.5 +0.1**
VOIR 82.63 315⇓ P **P** **05 25 50.5 +0.1**
KWP Kalwaria 82.84 320 *e*P **P** **05 25 51.8 +0.4**
KWP Kalwaria 82.84 320⇑ *i*P **P** **05 25 51.4 0.0**
DAG Danmarks Havn 82.99 352⇓ *e*P **P** **05 25 51.6 -0.1**
DAG pmax pmax
comp=Z,19nm,1.1s,mb5.0
DAG Danmarks Havn 82.99 352⇓ *i*P **P** **05 25 51.6 -0.1**
comp=Z,19nm,1.1s,mb5.0
DAG Danmarks Havn 82.99 352⇓ *e*P **P** **05 25 51.6 -0.1**
comp=Z,19nm,1.1s,mb5.0
DRGR 83.76 317⇓ *i*P **P** **05 25 56.3 +0.1**
DRGR 83.76 317⇓ P **P** **05 25 56.3 +0.2**
STHS Stebnicka Huta 83.81 320 *e*P **P** **05 25 59.9 +3.5**
STHS *e* 05 26 18.2
STHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
STHS Stebnicka Huta 83.81 320 *e*P **P** **05 25 59.9 +3.5**
STHS *e* 05 26 18.2
STHS Stebnicka Huta 83.81 320 *e*P **P** **05 25 59.9 +3.5**
comp=Z,4.4nm,1.2s,mb4.5
STHS *e* 05 26 18.2
CRVS Cervenica-Dubn 83.85 319 *e*P **P** **05 25 57.8 +1.2**
CRVS *e* pP 05 26 07.3 -0.1
CRVS pmax pmax
comp=Z,12nm,1.4s,mb4.8
CRVS Cervenica-Dubn 83.85 319 *e*P **P** **05 25 57.8 +1.2**
CRVS *e*pP pP 05 26 07.3 -0.1
CRVS Cervenica-Dubn 83.85 319 *e*P **P** **05 25 57.8 +1.2**
comp=Z,12nm,1.4s,mb4.8
CRVS *e* pP 05 26 07.3 -0.1
NIE Niedzica 84.39 320 *e*P **P** **05 26 00.1 +0.8**
OJC Ojcow 84.42 321 *e*P **P** **05 25 59.4 0.0**
NB2 NORSAR Subarra 84.53 333 P **P** **05 25 58.9 -0.9**
comp=Z,14nm,1.0s,mb5.0,baz=64,slow=5.3
NOA NORSAR Array B 84.53 333 P **P** **05 25 59.0 -0.7**
comp=Z,8.4nm,0.9s,mb4.9,baz=64,slow=5.0,SNR=12
BZS Buzias 84.86 316⇓ *i*P **P** **05 26 00.2 -1.6**
BZS Buzias 84.86 316⇓ P **P** **05 26 00.2 -1.6**
RES Resolute Bay 84.94 9 *e*P **P** **05 26 01.6 0.0**
RES pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
RES Resolute Bay 84.94 9 *e*P **P** **05 26 01.6 -0.1**
comp=Z,9.6nm,1.1s,mb4.8
PSZ Piszkesteto 85.17 319 *e*P **P** **05 26 03.1 -0.2**
PSZ pmax pmax
comp=Z,18nm,1.4s,mb5.0
PSZ Piszkesteto 85.17 319 *e*P **P** **05 26 03.1 -0.2**
comp=Z,18nm,1.4s,mb5.0
OKC Ostrava-Krasne 85.55 321 *e*P **P** **05 26 03.5 +0.2**
VYHS Vyhne 85.62 320 *e*P **P** **05 26 05.5 -0.1**
VYHS *e* 05 26 10.8
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
VYHS Vyhne 85.62 320 *e*P **P** **05 26 05.5 -0.1**
VYHS *e* 05 26 10.8
VYHS Vyhne 85.62 320 *e*P **P** **05 26 05.5 -0.1**
comp=Z,5.5nm,1.1s,mb4.7
VYHS *e* 05 26 10.8
KOLL Kolacno 85.86 320 *e*P **P** **05 26 07.4 +0.7**
KOLL *e* 05 26 24.6
KSP Ksiaz 86.25 322 *e*P **P** **05 26 08.5 -0.1**
PKSM Moragy 86.59 317⇓ *i*P **P** **05 26 09.7 -0.7**
PKSM Moragy 86.59 317⇓ P **P** **05 26 09.7 -0.7**
VRAC Vranov 86.68 321 P **P** **05 26 11.2 +0.4**
comp=Z,4.9nm,0.9s,mb4.7,baz=68,slow=4.2,SNR=3.6
VRAC Vranov 86.68 321⇑ *i*P **P** **05 26 11.2 +0.4**
VRAC Vranov 86.68 321⇑ P **P** **05 26 11.2 +0.5**
CLL Collm 87.95 324 *e*P **P** **05 26 15.0 -1.8**
YKA Yellowknife Ar 88.57 23 P **P** **05 26 20.0 +0.5**
comp=Z,4.3nm,0.8s,mb4.8,baz=309,slow=4.4,SNR=60
GERES GERESS Array B 88.61 321 P **P** **05 26 19.6 -0.4**
comp=Z,2.0nm,0.9s,mb4.4,baz=59,slow=3.8,SNR=14
SUMG Summit 89.12 354 *e*P **P** **05 26 23.1 +1.2**
comp=Z,9.4nm,0.9s,mb5.1
WTTA Wattenberg 90.55 320⇓ *i*PcP **P** **05 26 28.6 -0.5**
comp=Z,6.4nm,0.7s,mb5.0
FETA Feichten 91.21 320⇑ *i*P **P** **05 26 30.4 -1.8**
comp=Z,4.8nm,1.0s,mb4.8
DAVOX Davos/Dischmat 91.84 321 P **P** **05 26 35.2 +0.1**
comp=Z,2.7nm,0.6s,mb4.8,baz=188,slow=23,SNR=9.2
DAVOS Davos 91.86 321 P **P** **05 26 35.2 0.0**
HAU Haudompre 93.32 323 *e*P **P** **05 26 40.3 -1.6**
LPG La Plagne 94.36 320 *e*P **P** **05 26 46.9 +0.1**
comp=Z,19nm,1.0s,mb5.2
LPG La Plagne 94.36 320 *e*P **P** **05 26 46.9 +0.1**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
LPG La Plagne 94.36 320 *e*P **P** **05 26 46.9 +0.1**
comp=Z,9.4nm,1.0s,mb5.2
LPL La Plagne 94.36 321 *e*P **P** **05 26 46.8 0.0**
comp=Z,14nm,0.9s,mb5.1
LPL La Plagne 94.36 321 *e*P **P** **05 26 46.8 0.0**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
LPL La Plagne 94.36 321 *e*P **P** **05 26 46.8 0.0**
comp=Z,6.8nm,0.9s,mb5.1
MBDF Montbardon 94.74 320 *e*P **P** **05 26 47.6 -0.9**
ORIF Oris-en-Rattie 95.19 320 *e*P **P** **05 26 50.1 -0.5**
SSF Saint Saulge 95.46 323 *e*P **P** **05 26 50.8 -0.9**
comp=Z,6.9nm,1.0s,mb4.7
SSF Saint Saulge 95.46 323 *e*P **P** **05 26 50.8 -0.9**
SSF pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
SSF Saint Saulge 95.46 323 *e*P **P** **05 26 50.8 -0.9**
comp=Z,3.5nm,1.0s,mb4.7
AVF Avril sur Loir 95.69 323 *e*P **P** **05 26 51.9 -0.9**
comp=Z,8.5nm,1.0s,mb4.8
AVF Avril sur Loir 95.69 323 *e*P **P** **05 26 51.9 -0.9**
AVF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
AVF Avril sur Loir 95.69 323 *e*P **P** **05 26 51.9 -0.9**
comp=Z,4.3nm,1.0s,mb4.8
VIVF Saint-Julien-l 95.95 321 *e*P **P** **05 26 52.6 -1.4**
LASF Ste Croix 96.86 320 *e*P **P** **05 26 56.7 -1.5**
TORD Torodi Ar. Bea 113.94 294 PKiKP PKiKP 05 32 05.5 -1.2
comp=Z,9.8nm,0.7s,baz=56,slow=2.4,SNR=5.7
VNA2 Neumayer--Watz 118.98 197 *e*PKPdf PKPdf 05 32 14.5 -0.3
baz=39,slow=1.9
VNA2 *e* 05 32 20.7
VNA3 Neumayer Olymp 119.42 196 *e*PKPdf PKPdf 05 32 14.6 -1.0
VNA3 *e* 05 32 20.9
VNA3 *e* 05 32 28.8
DBIC Dimbokro 122.56 290 PKP PKPdf 05 32 22.4 -1.0
comp=Z,2.5nm,0.7s,baz=46,slow=3.2,SNR=6.0
KIC Kosan Boka 122.59 290 *e*PKIKP PKPdf 05 32 22.3 -1.2
comp=Z,19nm,0.6s
TIC Toumodi 122.72 290 *e*PKIKP PKPdf 05 32 22.4 -1.3
comp=Z,6.0nm,0.2s
LIC Lamto 122.91 290 *e*PKIKP PKPdf 05 32 22.9 -1.2
comp=Z,12nm,0.6s
SDV Santo Domingo 150.71 27 *e*PKPbc PKPbc 05 33 20.0 -0.1
PLCA Paso Flores 154.41 157 PKP PKPdf 05 33 19.7 +0.5
comp=Z,1.3nm,0.8s,baz=280,slow=3.5,SNR=3.1
PLCA PKPbc PKPbc 05 33 27.4 -0.2
comp=Z,0.6nm,0.6s,baz=336,slow=4.4,SNR=3.1

*CSEM **28** 05:19:33.0±0.2, 3700N×2935E, h25km, ML2.8, Error ellipse: s-maj=5.5km s-min=4.1km az=5.0*
*ISK **28** 05:19:33.0, 3703N×2932E, h18km, MD2.8*
*ISCJB **28** 05:19:34.1±0.6, 3698N±005×2927E±004, h10km, Error ellipse: s-maj=6.5km s-min=4.8km az=177.2*
*DDA **28** 05:19:37.8, 3697N×2966E, h13km, Md2.9, Ml2.8*
ISC 28 05:19:34.4±0.7, 3699N±005×2932E±006, h31km±10km, n8, σ0s84/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.31**	**38**	*i* P	**Pb**	**05 19 41.5**	**-0.5**
GOLH				*i* S	**Sb**	**05 19 48.0**	**+0.8**
ELL	**Elmali**	**0.53**	**117**	*e*PG	**Pb**	**05 19 44.6**	**-0.6**
ELL				*e*SG	**Sb**	**05 19 52.4**	**-0.3**
TURN	**Turunc**	**0.59**	**259**	*i* P	Px	05 19 50.9	
TURN				*i* S	Sx	05 20 05.3	
DALT	**Dalyan (Mudla)**	**0.59**	**248**	*e*PG	**Pb**	**05 19 46.0**	**-0.3**
DALT				*e*SG	**Sb**	**05 19 54.4**	**-0.1**
AKAS	**Kas**	**0.79**	**163**	*i* P	**Pb**	**05 19 48.2**	**-1.4**
AKAS				*i* S	**Sb**	**05 20 01.8**	**+1.9**
YER	**Yerkesik**	**0.84**	**280**	*e*PG	**Pn**	**05 19 49.4**	**-0.7**
DAT	**Datca**	**1.43**	**260**	*e*PN	**Pn**	**05 19 58.6**	**+0.5**
BLCB	**Balcova**	**2.28**	**308**	*e*PN	**Pn**	**05 20 10.7**	**+0.8**

IDC 28 05:22:27.6±5.3, 657S×12888E, h250km±70km, mb3.3/1, mb1 3.5/3, mb1mx3.3/15, mbtmp3.3/3, Error ellipse: s-maj=92.6km s-min=47.8km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.31**	**159**	P	Pn	05 25 41.5	+1.9
	0.8nm,0.3s,baz=337,slow=12,SNR=16						
WRA				S	S	05 28 18.4	+0.5
	0.2nm,0.3s,baz=335,slow=20,SNR=7.0						
ASAR	**Alice Springs**	**17.67**	**165**	P	P	05 26 17.9	+1.2
	0.6nm,0.3s,baz=346,slow=12,SNR=18						
ASAR				S	S	05 29 28.1	+1.1
	0.4nm,0.3s,baz=345,slow=21,SNR=37						
STKA	**Stephens Creek**	**27.84**	**156**	P	P	05 27 52.5	-1.6
	0.9nm,0.5s,baz=331,slow=12,SNR=4.3						

*BJI **28** 05:24:11.2, 502N×9573E, h24km, mB5.4, mb5.0, Ms5.4, Msz5.2*
*ISCJB **28** 05:24:13.7±0.2, 547N±002×9575E±002, h21km, mb5.0/144, MS5.0/53, Error ellipse: s-maj=4.0km s-min=2.8km az=42.9*
*IDC **28** 05:24:14.8±0.5, 549N×9577E, h21km±3km, mb4.6/26, mb1 4.6/28, mb1mx4.6/29, mbtmp4.6/28, ML4.4/2, MS4.8/22, Ms1 4.8/22, ms1mx4.7/31, Error ellipse: s-maj=12.7km s-min=9.0km az=53.0*
*GCMT **28** 05:24:14.8±0.2, 563N×9595E, h26km, MW5.4/94, Moment Tensor Solution. s70,c111; s94,c164; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr0.32±.03; Mθθ-1.23±.02; Mφφ0.91±.02; Mrθ-0.59±.04; Mrφ-0.07±.02; Mθr-0.78±.05; Best double couple: Mo1.48000×10^17 NP1:φs129.00000°, δ47.00000°, λ167.00000°. NP2:φs227.00000°, δ81.00000°, λ43.00000°. Principal axes: T 1.4810, Plg36.0000°, Azm98.0000°; N 0.0010, Plg46.0000°, Azm237.0000°; P -1.4800, Plg22.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **28** 05:24:14.8±0.2, 542N×9566E, mb5.1/64 Error ellipse: s-maj=8.5km s-min=5.5km az=52.0*
NEIC Felt [IV] at Lhokseumawe and [III] at Banda Aceh. Also felt at Kathu and Phuket, Thailand.
*MOS **28** 05:24:15.3±1.2, 550N×9586E, h33km, mb5.2/57, MS4.7/10, Error ellipse: s-maj=8.8km s-min=5.3km az=117.1*
*DJA **28** 05:24:16, 545N×9582E, h12km, Mw5.6/20*
ISC 28 05:24:15.7±0.2, 547N±002×9572E±002, h23km, h23km±.8km:pP-P, n392, σ1s33/385, mb5.0/143, MS5.0/53, 33C-9D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**0.42**	**274**	P	**Pb**	**05 24 26.3**	**+1.8**
BSI				S	**Sb**	**05 24 34.8**	**+4.3**
PSI	**Prapat**	**4.15**	**130**	Pn	**Pn**	**05 25 19.2**	**+1.4**
	18nm,0.3s,baz=323,slow=13,SNR=96						
PSI				Lg		05 26 22.8	
	61nm,0.3s,baz=116,slow=23,SNR=4.1						
PSI	**Prapat**	**4.15**	**130**	Pn	**Pn**	**05 25 19.2**	**+1.4**
PSI				Lg		05 26 22.8	
GSI	**Gunungsitoli**	**4.53**	**156**	P	**Pn**	**05 25 24.6**	**+1.6**
KULM	**Kulim**	**4.91**	**92**	⇑P	**Pn**	**05 25 27.3**	**-0.9**
SNG	**Songkhla**	**5.16**	**71**	P	**Pn**	**05 25 29.0**	**-2.6**
	2μm,1.1s						
IPM	**Ipoh**	**5.38**	**100**	⇓P	**Pn**	**05 25 33.3**	**-1.3**
IPM	**Ipoh**	**5.38**	**100**	P	**Pn**	**05 25 32.8**	**-1.9**
	784nm,0.7s,9.1nm						
FRIM	**Kepong**	**6.29**	**110**	⇓P	**Pn**	**05 25 45.9**	**-1.3**
PBA	**Port Blair**	**6.81**	**335**	*e*P	x	05 26 33.7	
PBA				*e*S	x	05 28 28.9	
KTGM	**Kuala Trenggan**	**7.38**	**91**	⇑P	**Pn**	**05 26 01.4**	**-0.9**
PPI	**Padang Panjang**	**7.51**	**141**	P	**Pn**	**05 26 04.5**	**+0.5**
	209nm,0.8s,4μm2.2nm						
PDSI	**Padang**	**7.91**	**143**	P	**Pn**	**05 26 11.3**	**+1.8**
	190nm,0.8s,3μm4.6nm						
NNT	**Nongplab**	**8.11**	**29**	P	**Pn**	**05 26 12.8**	**+0.6**
KGM	**Kluang**	**8.32**	**114**	⇑P	**Pn**	**05 26 13.9**	**-1.3**
MYKOM	**Kota Tinggi**	**8.90**	**114**	⇑P	**Pn**	**05 26 21.3**	**-1.8**
MYKOM	**Kota Tinggi**	**8.90**	**114**	P	**Pn**	**05 26 21.1**	**-1.9**
	112nm,0.7s,1μm0.5nm						
NST	**Nakhon Sawan**	**11.03**	**23**	P	**Pn**	**05 26 51.0**	**-1.2**
KSI	**Kapahiang**	**11.37**	**143**	P	**Pn**	**05 26 56.4**	**-0.5**
	407nm,0.7s						
CM31	**Chiang Mai Arr**	**13.29**	**13**	*e*Pn	**Pn**	**05 27 25.1**	**+2.0**
CMAR	**Chiang Mai Arr**	**13.29**	**13**	Pn	**Pn**	**05 27 23.4**	**+0.2**
	0.7nm,0.3s,baz=199,slow=13,SNR=34						
CMAR				Lg		05 31 12.7	
	2.2nm,0.3s,baz=183,slow=27,SNR=27						
CMAR				LR	LR	05 32 15.8	
	comp=Z,2μm,18.4s,baz=198,slow=36						
UBT	**Ubonrachathani**	**13.34**	**43**	P	Px	05 27 35.5	
CHTO	**Chiang Mai**	**13.63**	**13**	*e*P	**Pn**	**05 27 29.7**	**+1.9**
NANT	**Nan**	**14.11**	**20**	⇑P	**Pn**	**05 27 36.0**	**+1.6**
	2μm,1.0s						
PALK	**Pallekele**	**15.03**	**278**	*e*P	**Pn**	**05 27 51.6**	**+4.7**
PALK				*e*S	**Sn**	**05 30 29.3**	**-3.5**
PALK				pmax	pmax		
	comp=Z,168nm,1.5s						
PALK	**Pallekele**	**15.03**	**278**	*e*P	**Pn**	**05 27 51.6**	**+4.7**
	comp=Z,168nm,1.5s						
PALK				*e*S	**Sn**	**05 30 29.3**	**-3.5**
PALK	**Pallekele**	**15.03**	**278**	P	**Pn**	**05 27 52.0**	**+5.1**
	comp=Z,41nm,1.9s,comp=Z,798nm						
KSM	**Kuching**	**15.09**	**105**	*e*Pn	**Pn**	**05 27 48.9**	**+1.2**
	comp=Z,182nm,1.2s						
KSM	**Kuching**	**15.09**	**105**	P	**Pn**	**05 27 49.5**	**+1.8**
	comp=Z,127nm,1.2s,comp=Z,2μm						
STKI	**Sintang**	**16.62**	**108**	P	**Pn**	**05 28 08.8**	**+1.3**
	comp=Z,195nm,1.3s,comp=Z,6μm						
SBUM	**Sibu**	**16.73**	**100**	P	**Pn**	**05 28 10.1**	**+1.2**
	comp=Z,186nm,1.7s,comp=Z,3μm						
MDRS	**Chennai**	**17.02**	**297**	*ex*	x	05 28 02.2	
MDRS				*ex*	x	05 29 27.2	
VIS	**Vishakhapatnam**	**17.18**	**316**	*e*P	**Pn**	**05 28 13.8**	**-0.5**
VIS				AMb	AMB	05 28 21.9	
	comp=Z,126nm,1.0s						
VIS				*ex*	x	05 31 11.5	
BWNR	**Bhubaneshwar**	**17.61**	**328**	*e*P	**Pn**	**05 28 19.0**	**-0.7**
BWNR				*ex*	x	05 31 24.8	
CAL	**Calcutta**	**18.41**	**338**	*e*P	**Pn**	**05 28 29.3**	**-0.3**
CAL				*ex*	x	05 32 04.0	
XMIS	**Christmas Isla**	**18.68**	**148**	*e*P	**Pn**	**05 28 33.6**	**+0.7**
XMIS	**Christmas Isla**	**18.68**	**148**	P	**Pn**	**05 28 34.0**	**+1.1**
KOD	**Kodaikanal**	**18.68**	**286**	*e*P	**Pn**	**05 28 34.0**	**+1.0**
KOD				AMb	AMB	05 28 42.6	
	comp=Z,90nm,1.8s						
QIZ	**Qiongzhong**	**19.27**	**44**	P	**Pn**	**05 28 40.8**	**+0.8**
QIZ				XP	sP	05 28 49.3	+1.1
QIZ				S	**Sn**	**05 32 08.5**	**-7.1**
QIZ				SS		05 32 41.3	
QIZ				AMB	AMB		
	comp=Z,48nm,1.6s						
QIZ				AMB	AMB		
	comp=Z,841nm,9.1s						
QIZ				LR	LR		
	comp=N,10μm,16.2s						
QIZ				LR	LR		
	comp=E,9μm,17.9s						
QIZ				LR	LR		
	comp=Z,4μm,16.6s						
QIZ	**Qiongzhong**	**19.27**	**44**	*e*P	**Pn**	**05 28 40.4**	**+0.4**
	comp=Z,63nm,1.3s						
IMP	**Imphal**	**19.28**	**355**	*ex*	x	05 28 34.0	
IMP				*e*S	**Sn**	**05 32 15.0**	**-0.8**
PLKI	**Palangkaraya**	**19.75**	**112**	P	**Pn**	**05 28 46.9**	**+1.1**
	comp=Z,330nm,1.1s,comp=Z,6μm						
SHL	**Shillong**	**20.32**	**350**	*e*P	**P**	**05 28 50.5**	**+0.2**
SHL				*e*S	**S**	**05 32 40.0**	**+2.8**
KKM	**Kota Kinabalu**	**20.40**	**87**	*e*P	**P**	**05 28 52.6**	**+1.3**
	comp=Z,940nm,1.6s						
KKM	**Kota Kinabalu**	**20.40**	**87**	P	**P**	**05 28 52.9**	**+1.5**
	comp=Z,431nm,2.5s,comp=Z,5μm						
BOK	**Bokaro**	**20.53**	**334**	*e*P	**P**	**05 28 51.2**	**-1.5**

BOK AMb AMB 05 29 01.9
comp=Z,105nm,1.1s
HYB Hyderabad 20.57 307 *eP* **P 05 28 54.5 +1.4**
HYB *eS* **S 05 32 46.0 +3.8**
HYB pmax pmax
comp=Z,62nm,0.8s
HYB Hyderabad 20.57 307 ⇓*iP* **P 05 28 54.5 +1.4**
comp=Z,62nm,0.8s
HYB *e* 05 29 02.0
HYB *ePP* 05 29 16.0
HYB *eS* **S 05 32 40.0 -2.2**
HYB LR LR 05 39 58.0
comp=Z,3.0nm,15.0s
HYB Hyderabad 20.57 307 *eP* **P 05 28 54.5 +1.4**
comp=Z,62nm,0.8s
HYB *eS* **S 05 32 46.0 +3.8**
HYB *e* 05 39 58.0
KMI Kunming 20.67 18 P **P 05 28 57.8 +3.6**
KMI AP 05 29 04.5
KMI XP sP 05 29 06.5 +3.1
KMI PP 05 29 20.3
KMI S **S 05 32 44.8 +0.6**
KMI XS sS 05 32 53.8 -0.5
KMI PCP PcP 05 33 05.8 +1.7
KMI SS 05 33 15.5
KMI SCP ScP 05 36 41.0 +1.5
KMI AMB AMB
comp=Z,14nm,1.1s
KMI AMB AMB
comp=Z,388nm,5.4s
KMI LR LR
comp=N,7μm,9.3s
KMI LR LR
comp=E,12μm,11.6s
KMI LR LR
comp=Z,8μm,9.9s
SJI Sawahan 20.70 129 P **P 05 28 56.0 +1.5**
comp=Z,101nm,1.8s,comp=Z,3μm
BBKI Banjar Baru 21.06 114 P **P 05 28 59.2 +0.7**
comp=Z,398nm,0.9s,comp=Z,5μm,mb5.7
KMMI Kalianget 22.05 124 P **P 05 29 10.9 +1.8**
SMKI Samarinda 22.25 105 P **P 05 29 13.8 +2.5**
comp=Z,237nm,1.5s,comp=Z,8μm,mb5.4
NGP Nagpur 22.46 315 *eP* **P 05 29 13.9 +0.5**
NGP *ex* x 05 29 18.8
comp=Z,52nm,1.0s
NGP *ex* x 05 33 20.3
MYLDM Lahad Datu 22.69 90 P **P 05 29 16.8 +0.9**
comp=Z,454nm,1.5s,comp=Z,4μm,mb5.7
LATR Latur 22.70 306 *eP* **P 05 29 18.0 +2.0**
ODAN Odare 22.71 340 *eP* **P 05 29 18.9 +2.9**
comp=Z,41nm,0.6s,mb5.0
TAPN Taplejung 23.06 342 *eP* **P 05 29 16.2 -3.5**
comp=Z,90nm,0.9s,mb5.2
RAMN Ramite 23.06 339 *eP* **P 05 29 23.8 +4.1**
GYA Guiyang 23.34 25⇑*iP* **P 05 29 23.0 +0.3**
GYA AP 05 29 28.5
GYA XP sP 05 29 31.8 -0.2
GYA PP 05 29 55.8
GYA PCP PcP 05 33 08.0 -1.4
GYA S **S 05 33 34.8 +0.7**
GYA SS 05 34 24.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,190nm,5.4s
GYA LR LR
comp=N,3μm,14.9s,MS5.1
GYA LR LR
comp=E,3μm,12.8s,MS5.1
GYA LR LR
comp=Z,4μm,12.5s,MS5.1
AKL Akola 23.64 312 *eP* **P 05 29 26.9 +1.2**
AKL AMb AMB 05 29 36.0
comp=Z,235nm,2.4s,mb5.2
ALBI Allahabad 23.81 327 *ex* **P 05 29 24.0 -3.2**
JIRN Jiri 23.86 339 *eP* **P 05 29 26.3 -1.3**
comp=Z,43nm,0.8s,mb5.0
PKI Pulchoki 24.07 337 *eP* **P 05 29 31.0 +1.5**
KHKI Kahang-Kahang 24.13 125 P **P 05 29 29.6 -0.6**
comp=Z,224nm,1.2s,comp=Z,3μm,mb5.5
KAD Karad 24.13 301 *eP* **P 05 29 30.4 +0.2**
KAD AMb AMB 05 29 40.5
comp=Z,64nm,1.3s,mb4.9
GUN Gumba 24.20 338 *eP* **P 05 29 27.9 -2.8**
comp=Z,47nm,0.5s,mb5.1
DMN Daman 24.22 337 *eP* **P 05 29 32.8 +1.9**
comp=Z,62nm,0.7s,mb5.2
KKN Kakani 24.32 337 *eP* **P 05 29 31.0 -0.8**
comp=Z,50nm,0.9s,mb4.9
LSA Lhasa 24.48 350 P **P 05 29 34.0 +0.7**
LSA AP 05 29 42.8
LSA XP sP 05 29 46.8 +3.9
LSA S **S 05 34 01.0 +8.5**
LSA LR LR
comp=N,680nm,15.0s,MS4.7
LSA LR LR
comp=E,2μm,14.3s,MS4.7
LSA LR LR
comp=Z,1μm,14.0s,MS4.6
LSA Lhasa 24.48 350 *eP* **P 05 29 34.4 +1.1**
LSA pmax pmax
comp=Z,89nm,0.8s,mb5.2
LSA Lhasa 24.48 350 *eP* **P 05 29 34.4 +1.1**
comp=Z,89nm,0.8s,mb5.2
GKN Gorkha 24.76 336 *eP* **P 05 29 34.9 -0.9**
comp=Z,133nm,0.8s,mb5.5
PCI Palu 24.91 104 P **P 05 29 39.2 +1.9**
comp=Z,234nm,1.6s,comp=Z,3μm,mb5.5
BHPL Bhopal 24.97 317 *eP* **P 05 29 35.5 -2.2**
BHPL AMb AMB 05 29 47.7
comp=Z,114nm,1.0s,mb5.3
POO Poona 24.98 303 *eP* **P 05 29 37.9 0.0**
POO AMb AMB 05 29 47.4
comp=Z,68nm,1.4s,mb5.0
KOLN Koldanda 24.99 334 *eP* **P 05 29 42.4 +4.5**
comp=Z,20nm,0.7s,mb4.7
DANN Dangsing 25.43 335 *eP* **P 05 29 40.9 -1.0**
comp=Z,71nm,0.7s,mb5.3
KAPI Kappang 26.16 113 P **P 05 29 48.1 -0.6**
comp=Z,385nm,1.8s,mb5.6,SNR=5.4
KAPI Kappang 26.16 113 P **P 05 29 46.5 -2.2**
comp=Z,40nm,0.8s,mb5.0,baz=294,slow=9.2,SNR=13
KAPI LR LR 05 40 56.8
comp=Z,2μm,20.2s,MS4.6,baz=295,slow=38
KAPI Kappang 26.16 113 *eP* **P 05 29 48.7 0.0**
comp=Z,106nm,1.1s,mb5.3
CD2 Chengdu 26.41 16 P **P 05 29 51.3 +0.5**
CD2 AP pP 05 29 56.8 -0.8
CD2 XP sP 05 30 00.0 -0.4
CD2 PP 05 30 34.3
CD2 PCP PcP 05 33 17.0 +0.9
CD2 S **S 05 34 21.0 -2.1**
CD2 AMB AMB
comp=Z,60nm,0.7s,mb5.2
CD2 AMB AMB
comp=Z,560nm,10.2s
CD2 LR LR
comp=N,15μm,14.4s
CD2 LR LR
comp=Z,8μm,10.2s,MS5.5
QZH Quanzhou 29.27 46⇑*iP* **P 05 30 16.8 +0.4**
QZH S **S 05 35 08.5 +0.3**
QZH AMB AMB
comp=Z,910nm,3.0s
QZH LR LR
comp=N,10μm,13.6s,MS5.7
QZH LR LR
comp=E,6μm,12.6s,MS5.7
QZH LR LR
comp=Z,6μm,17.8s
MNI Manado 29.34 97 P **P 05 30 17.9 +0.7**
comp=Z,235nm,0.7s,mb6.0
DAV Davao City (W) 29.72 85 LR LR 05 45 07.8
comp=Z,2μm,18.2s,MS4.7,baz=340,slow=42
WHN Wuhan 30.49 33 P **P 05 30 27.0 -0.1**
WHN S **S 05 35 24.3 -3.0**
WHN AMB AMB
comp=Z,60nm,1.2s,mb5.2
WHN LR LR
comp=N,14μm,15.5s,MS5.9
WHN LR LR
comp=E,14μm,15.5s,MS5.9
WHN LR LR
comp=Z,9μm,12.2s,MS5.6
XAN Xi'an 30.96 22 P **P 05 30 31.5 +0.3**
XAN AP pP 05 30 38.8 +0.8
XAN S **S 05 35 37.5 +3.0**
XAN AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
XAN LR LR
comp=N,981nm,23.5s,MS5.0
XAN LR LR
comp=E,3μm,22.1s,MS5.0
XAN LR LR
comp=Z,2μm,19.8s,MS4.8
LZH Lanzhou 31.37 13 *eP* **P 05 30 35.5 +0.6**
LZH AP pP 05 30 42.5 +0.8
LZH XP sP 05 30 45.3 +0.8
LZH PP PP 05 31 40.0 -6.0
LZH S **S 05 35 39.3 -1.7**
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,330nm,4.0s
LZH LR LR
comp=E,6μm,14.2s
LZH LR LR
comp=Z,8μm,15.4s,MS5.5
TNTI Ternate 31.93 97 P **P 05 30 38.0 -2.1**
comp=Z,70nm,1.3s,mb5.3
LBMI Labuha 32.31 100 P **P 05 30 44.3 +0.9**
comp=Z,102nm,0.9s,comp=Z,1μm,mb5.7
THN Thein Dam 32.69 328 *ex* x 05 31 02.9
AAI Ambon 33.69 105 P **P 05 30 55.6 +0.1**
comp=Z,139nm,1.0s,comp=Z,3μm,mb5.8
GTA Gaotai 33.99 6 P **P 05 30 58.5 +0.8**
GTA AP pP 05 31 07.8 +3.2
GTA XP sP 05 31 12.0 +4.6
GTA PP PP 05 32 12.3 -2.6
GTA S **S 05 36 19.8 -1.9**
GTA AMB AMB
comp=Z,15nm,0.7s,mb5.0
GTA AMB AMB
comp=Z,290nm,5.3s
GTA LR LR
comp=N,2μm,11.9s,MS5.2
GTA LR LR
comp=E,1μm,11.9s,MS5.2
GTA LR LR
comp=Z,3μm,11.9s,MS5.2
NJ2 Nanjing 34.17 36 *eP* **P 05 31 01.3 +1.9**
NJ2 AP pP 05 31 08.3 +2.0
NJ2 XP sP 05 31 11.3 +2.2
NJ2 PP PP 05 32 16.5 -0.5
NJ2 S **S 05 36 24.0 -0.7**
NJ2 XS sS 05 36 35.0 -1.0
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
NJ2 AMB AMB
comp=Z,340nm,4.9s
NJ2 LR LR
comp=N,2μm,16.3s,MS5.3
NJ2 LR LR
comp=E,4μm,16.2s,MS5.3
NJ2 LR LR
comp=Z,4μm,16.2s,MS5.2
SSE Sheshan 34.95 40 P **P 05 31 08.5 +2.3**
SSE S **S 05 36 36.0 -0.7**
SSE AMB AMB
comp=Z,44nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,155nm,3.6s
SSE LR LR
comp=N,3μm,17.3s,MS5.1
SSE LR LR
comp=E,921nm,17.4s,MS5.1
SSE LR LR
comp=Z,2μm,18.0s,MS4.8
MBWA Marble Bar 35.43 139 *eP* **P 05 31 09.1 -1.3**
comp=Z,112nm,1.8s,mb5.5
BTO Baotou 37.27 18 *eP* **P 05 31 26.0 +0.2**
JOW Kunigami 37.60 52 P **P 05 31 28.1 -0.8**
comp=Z,27nm,0.7s,mb5.1,baz=258,slow=10,SNR=5.8
FITZ Fitzroy Crossi 37.68 129⇑*iP* **P 05 31 28.1 -1.6**
comp=Z,43nm,0.6s,mb5.4
FITZ Fitzroy Crossi 37.68 129 *eP* **P 05 31 28.1 -1.5**
comp=Z,23nm,0.6s,mb5.1
FITZ Fitzroy Crossi 37.68 129 P **P 05 31 28.3 -1.4**
comp=Z,94nm,0.7s,mb5.6
HHC Hu-ho-hao-te 37.98 20 *eP* **P 05 31 33.8 +1.9**
HHC AP pP 05 31 39.5 +0.7
HHC XP sP 05 31 43.0 +1.4
HHC PP PP 05 33 04.3 +5.3
HHC *eS* **S 05 37 24.5 +1.7**
HHC PCS PcS 05 37 37.0 +0.9
HHC SS SS 05 40 00.8 -9.4
HHC SCS ScS 05 41 43.0 0.0
HHC AMB AMB
comp=Z,31nm,1.3s,mb4.9
HHC AMB AMB
comp=Z,618nm,6.9s
HHC LR LR
comp=N,6μm,13.1s,MS5.6
HHC LR LR
comp=E,3μm,14.3s,MS5.6
HHC LR LR
comp=Z,5μm,14.1s,MS5.5
KBL Kabul 38.02 323 *eP* **P 05 31 36.1 +3.7**
KBL pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
KBL Kabul 38.02 323 *eP* **P 05 31 36.0 +3.7**
comp=Z,6.2nm,0.7s,mb4.5
WMQ Urumqi 38.84 351 *eP* **P 05 31 42.0 +2.9**
WMQ XP sP 05 31 51.8 +3.0
WMQ PP PP 05 33 15.3 +7.0
WMQ S **S 05 37 39.0 +3.3**
WMQ XS sS 05 37 48.8 +1.7
WMQ SS SS 05 40 22.5 -4.9
WMQ SCS ScS 05 41 48.5 +0.7
WMQ AMB AMB
comp=Z,30nm,1.6s,mb4.8
WMQ LR LR
comp=N,507nm,18.0s,MS4.8
WMQ LR LR
comp=E,1μm,19.0s,MS4.8
WMQ LR LR
comp=Z,597nm,27.0s
BJI Beijing 39.04 25 P **P 05 31 42.8 +2.0**
BJI PP PP 05 33 13.5 +3.0
BJI S **S 05 37 42.0 +3.3**
BJI SS SS 05 40 29.3 -2.1
BJI AMB AMB
comp=Z,55nm,1.3s,mb5.1
BJI LR LR
comp=N,2μm,19.1s,MS5.1
BJI LR LR
comp=E,2μm,16.9s,MS5.1
BJI LR LR
comp=Z,1μm,18.4s,MS4.8
KAKA Kakadu 40.72 117 *eP* x 05 31 52.6
comp=Z,23nm,0.6s
DL2 Dalian 40.72 32 P **P 05 31 55.5 +0.7**
DL2 S **S 05 38 02.5 -1.5**
DL2 AMB AMB
comp=Z,30nm,1.2s,mb4.8
DL2 AMB AMB
comp=Z,150nm,7.7s
DL2 LR LR
comp=N,2μm,12.7s,MS5.2
DL2 LR LR
comp=E,2μm,12.8s,MS5.2
TKM2 Tokmak 2 41.33 338 *eP* **P 05 32 00.5 +0.7**
TKM2 pmax pmax
comp=Z,31nm,1.3s,mb4.8
TKM2 Tokmak 2 41.33 338 *eP* **P 05 32 00.5 +0.7**
comp=Z,31nm,1.3s,mb4.8
AML Almayashu 41.43 335 *eP* **P 05 32 00.8 +0.2**
comp=Z,31nm,0.7s,mb5.0
AAK Ala-Archa 41.52 336⇑*eP* **P 05 32 01.5 +0.2**
AAK pmax pmax
comp=Z,13nm,2.5s,mb4.1
AAK MLR MLR
comp=Z,600nm,19.0s,MS4.5
AAK Ala-Archa 41.52 336 *eP* **P 05 32 02.4 +1.1**
comp=Z,27nm,1.0s,mb4.8
AAK Ala-Archa 41.52 336 P **P 05 32 02.7 +1.4**
comp=Z,14nm,1.1s,mb4.5
MUN Mundaring 42.05 154 *eP* **P 05 32 06.6 +0.9**
MK31 Makanchi Array 42.77 346 *i* P **P 05 32 10.5 -0.9**
MK31 pmax pmax
comp=Z,31nm,1.0s,mb5.0
MK31 Makanchi Array 42.77 346 *eP* **P 05 32 10.9 -0.6**
MKAR Makanchi Array 42.77 346 P **P 05 32 10.5 -0.9**
comp=Z,5.0nm,0.8s,mb4.3,baz=163,slow=7.8,SNR=24
MKAR LR LR 05 55 16.3
comp=Z,658nm,18.3s,MS4.6,baz=274,slow=44
SONM Songino Array 43.19 11 P **P 05 32 15.0 +0.2**
comp=Z,4.8nm,0.7s,mb4.4,baz=190,slow=7.5,SNR=8.0
SONM pP pP 05 32 21.9 +0.1
comp=Z,23nm,0.8s,baz=188,slow=8.6,SNR=28
NWAO Narrogin (SRO) 43.31 153 P **P 05 32 16.6 +0.6**
comp=Z,39nm,0.6s,mb5.3,baz=326,slow=8.5,SNR=42
NWAO LR LR 05 51 01.9
comp=Z,1μm,18.6s,MS4.8,baz=338,slow=37
NWAO Narrogin (SRO) 43.31 153 *eP* **P 05 32 16.0 0.0**
NWAO pmax pmax
comp=Z,30nm,0.7s
NWAO Narrogin (SRO) 43.31 153 *eP* **P 05 32 16.0 0.0**
comp=Z,30nm,0.7s,mb5.1
KSRS Korea Array 43.31 38 P **P 05 32 15.1 -0.9**
comp=Z,4.5nm,0.6s,mb4.4,baz=221,slow=9.3,SNR=14
KSRS LR LR 05 50 21.4
comp=Z,1μm,19.3s,MS4.8,baz=56,slow=36
ULN Ulaanbaatar 43.34 11⇑*eP* **P 05 32 16.6 +0.5**
ULN Ulaanbaatar 43.34 11 *eP* **P 05 32 16.8 +0.8**
comp=Z,18nm,0.8s,mb4.8
ULN Ulaanbaatar 43.34 11 P **P 05 32 18.4 +2.3**
comp=Z,28nm,0.8s,mb5.1
KK31 Karatay Array 43.60 333 P **P 05 32 18.3 +0.1**
KK31 pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
SNY Shenyang 43.89 30 ⇓P **P 05 32 21.5 +0.9**
SNY S **S 05 38 51.0 +0.3**
SNY AMB AMB
comp=Z,32nm,1.5s,mb4.8
SNY LR LR
comp=N,3μm,18.0s,MS5.4
SNY LR LR
comp=E,2μm,16.8s,MS5.4
SNY LR LR
comp=Z,3μm,15.9s,MS5.2
ZAK Zakamensk 45.21 7 *eP* **P 05 32 33.3 +2.3**
ZAK pmax pmax
comp=Z,17nm,1.3s,mb4.7
WRA Warramunga Arr 45.60 125 P **P 05 32 33.6 -0.9**
comp=Z,81nm,0.7s,mb5.8,baz=304,slow=9.2,SNR=238
WRA PcP PcP 05 34 12.0 -0.9
comp=Z,7.2nm,0.6s,baz=317,slow=2.9,SNR=5.2
WRA S **S 05 39 14.7 -1.4**
comp=Z,0.9nm,0.9s,baz=296,slow=14,SNR=2.5
WRA LR LR 05 53 59.9
comp=Z,1μm,19.5s,MS4.8,baz=300,slow=39
WRA Warramunga Arr 45.60 125 P **P 05 32 33.6 -1.0**
WRA 05 34 12.0
WRA S **S 05 39 14.7 -1.4**
WRA Warramunga Arr 45.60 125 P **P 05 32 33.6 -0.9**
WRA PcP PcP 05 34 12.0 -0.9
WRA S **S 05 39 14.7 -1.4**
WRA LR LR 05 53 59.9
WRAB Tennant Creek 45.61 125 P **P 05 32 33.0 -1.6**
comp=Z,881nm,0.6s,SNR=82
WRAB Tennant Creek 45.61 125 *eP* **P 05 32 33.7 -0.9**
comp=Z,89nm,0.7s,mb5.8
WRAB Tennant Creek 45.61 125 P **P 05 32 33.8 -0.8**
WB2 Warramunga Arr 45.61 125⇑*iP* **P 05 32 33.5 -1.1**
WB2 Warramunga Arr 45.61 125 *eP* **P 05 32 33.6 -1.0**
CN2 Changchun 46.27 30 *eP* **P 05 32 40.0 +0.5**
CN2 *eXP* sP 05 32 53.8 +4.5
CN2 *eS* **S 05 39 24.8 -0.3**
CN2 SS SS 05 42 42.8 -8.0
CN2 AMB AMB
comp=Z,20nm,1.3s,mb4.9
CN2 AMB AMB
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,2μm,15.0s,MS5.4
CN2 LR LR
comp=E,2μm,15.0s,MS5.4
CN2 LR LR
comp=Z,1μm,19.0s,MS4.9
TLY Talaya 46.53 7 *eP* pP 05 32 48.3 -0.1
TLY *eS* **S 05 39 47.3 +19**
TLY pmax pmax
comp=Z,18nm,1.0s,mb5.0
TLY MLR MLR
comp=Z,683nm,13.0s,MS4.8
TLY Talaya 46.53 7 *eP* **P 05 32 43.2 +1.8**
comp=Z,15nm,0.8s,mb5.0
TLY *e* pP 05 32 50.1 +1.8
ABKT Ailbek 47.03 319 P **P 05 32 45.6 +0.1**
comp=Z,367nm,0.7s,SNR=6.3
ASAR Alice Springs 47.18 129 P **P 05 32 46.4 -0.5**
comp=Z,27nm,0.6s,mb5.4,baz=300,slow=7.9,SNR=280
ASAR PcP PcP 05 34 17.8 -0.5
comp=Z,19nm,0.7s,baz=310,slow=4.3,SNR=8.8
ASAR ScP ScP 05 38 10.8 -0.3
comp=Z,0.9nm,0.7s,baz=302,slow=5.3,SNR=3.8
ASAR S **S 05 39 35.8 -2.8**
comp=Z,1.0nm,0.9s,baz=287,slow=12,SNR=4.9
ASAR Alice Springs 47.18 129 P **P 05 32 46.4 -0.5**
ASAR 05 34 17.8
ASAR S **S 05 39 35.8 -2.9**
KURK Kurchatov 47.31 345 P **P 05 32 46.8 -0.8**
comp=Z,3.8nm,0.6s,mb4.5,baz=197,slow=6.0,SNR=22
KURK ScP ScP 05 38 08.4 -2.7
comp=Z,1.4nm,0.7s,baz=157,slow=3.0,SNR=3.4
KURK Kurchatov 47.31 345⇑*eP* **P 05 32 48.6 +1.1**
KURK pmax pmax
comp=Z,14nm,1.7s,mb4.6
KURK MLR MLR
comp=Z,800nm,23.0s,MS4.6
KURK Kurchatov 47.31 345 *eP* **P 05 32 47.9 +0.3**
comp=Z,29nm,0.9s,mb5.2
FORT Forrest 47.49 141⇑*iP* **P 05 32 49.6 +0.4**
comp=Z,224nm,0.6s,mb6.3
FORT Forrest 47.49 141 *eP* **P 05 32 49.6 +0.4**
comp=Z,226nm,0.6s,mb6.3
HIA Hailar 48.15 21 *eP* **P 05 32 54.5 +0.5**
HIA pmax pmax
comp=Z,75nm,0.9s
HIA Hailar 48.15 21 *eP* **P 05 32 54.5 +0.4**
comp=Z,75nm,0.9s,mb5.7
MDJ Mudanjiang 48.96 32 P **P 05 33 01.3 +0.9**
MDJ AP pP 05 33 08.5 +1.1
MDJ PP PP 05 34 56.0 +2.0
MDJ SCP ScP 05 38 19.0 +0.7
MDJ S **S 05 40 05.5 +2.2**
MDJ XS sS 05 40 16.0 +1.1
MDJ SCS ScS 05 42 52.5 +1.1
MDJ SS SS 05 43 37.3 +2.9
MDJ AMB AMB
comp=Z,39nm,1.6s,mb5.2
MDJ AMB AMB
comp=Z,110nm,4.5s
MDJ LR LR
comp=N,2μm,16.5s,MS5.4
MDJ LR LR
comp=E,2μm,16.2s,MS5.4
MDJ LR LR
comp=Z,2μm,15.9s,MS5.2
MDJ Mudanjiang 48.96 32 *eP* **P 05 33 00.8 +0.5**
comp=Z,174nm,1.8s,mb5.8
ZAA0 Zalesovo Array 49.14 352 *eP* **P 05 33 02.0 +0.4**
ZALV Zalesovo Beam 49.14 352 P **P 05 33 01.9 +0.4**
comp=Z,4.9nm,0.5s,mb4.8,baz=178,slow=7.5,SNR=24
ZALV LR LR 05 59 32.4
comp=Z,591nm,18.8s,MS4.6,baz=350,slow=43
ZALV Zalesovo Beam 49.14 352 P **P 05 33 01.9 +0.4**
ZALV LR LR 05 59 32.4
CBIJ Chichi jima 49.14 59 P **P 05 33 00.9 -1.1**
comp=Z,148nm,0.7s,mb6.1,baz=277,slow=15,SNR=5.3
MAJO Matsushiro 49.66 46 *eP* **P 05 33 06.0 +0.1**
MAJO pmax pmax
comp=Z,139nm,1.9s,mb5.7
MAJO Matsushiro 49.66 46 *eP* **P 05 33 06.0 +0.1**
comp=Z,139nm,1.9s,mb5.7
MAT Matsushiro 49.66 46 P **P 05 33 04.9 -1.0**
MAT *eS* **S 05 40 11.0 -2.4**
MJAR Matsushiro Arr 49.66 46 P **P 05 33 06.3 +0.4**
comp=Z,8.0nm,0.8s,mb4.8,baz=241,slow=9.3,SNR=14
MJAR LR LR 05 56 17.6
comp=Z,2μm,18.4s,MS5.1,baz=250,slow=39
NVS Novosibirsk 50.25 351 *eP* **P 05 33 14.1 +4.1**
NVS *eS* **S 05 40 15.2 -5.7**
NVS pmax pmax
comp=Z,36nm,1.7s,mb5.1
NVS pmax pmax

NVS smax
comp=N,22nm,1.6s
COEN Coen 50.89 113 *e*P **P** **05 33 14.6 -0.9**
comp=N,3.8nm,0.6s,mb4.5
RDF Al-Radifah 51.13 303 *e*P **P** **05 33 16.6 -0.5**
baz=303
RDF AMb AMB 05 33 24.9
comp=Z,67nm,1.6s,mb5.3,baz=303
VOSK Vostochnaya 51.31 341 P sP 05 33 33.3 +5.4
VOSK pmax pmax
comp=Z,24nm,0.9s,mb5.1
NAY Al-Naaiem 51.48 303 *e*P **P** **05 33 19.2 -0.6**
baz=303
NAY AMb AMB 05 33 27.5
comp=Z,33nm,0.9s,mb5.3,baz=303
MIB Mutribah 51.57 304 *e*P **P** **05 33 19.4 -1.0**
baz=304
MIB AMb AMB 05 33 28.0
comp=Z,87nm,1.3s,mb5.5,baz=304
BVA0 Borovoye Array 51.76 341 P **P** **05 33 22.7 +1.3**
BVA0 pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BVAR Borovoye Array 51.76 341 P **P** **05 33 21.3 -0.1**
comp=Z,5.0nm,0.8s,mb4.5,baz=144,slow=11,SNR=13
BRVK Borovoye 51.82 341 *e*P **P** **05 33 22.9 +1.1**
BRVK pmax pmax
comp=Z,20nm,0.8s,mb5.1
BRVK Borovoye 51.82 341 *e*P **P** **05 33 22.9 +1.0**
comp=Z,20nm,0.8s,mb5.1
AB31 Akbulak array 53.08 331 P **P** **05 33 30.3 -0.9**
AB31 pmax pmax
comp=Z,12nm,0.6s,mb5.0
KLR Kul'dur 53.19 29 *e*P **P** **05 33 29.0 -3.0**
KLR *e* 05 35 28.0
KLR *e*S **S** **05 41 00.0 -1.6**
KLR *e*SS SS 05 44 40.0 -1.4
KLR pmax pmax
comp=Z,130nm,1.6s,mb5.6
KLR smax
comp=N,900nm,9.5s
KLR smax
comp=E,1μm,9.5s
KLR MLR MLR
comp=E,1μm,13.0s
KLR MLR MLR
comp=Z,4μm,13.0s,MS5.6
PMG Port Moresby 53.35 106 P **P** **05 33 33.5 -0.4**
comp=Z,16nm,0.8s,mb5.0,baz=272,slow=1.9,SNR=4.7
BOD Bodaibo 54.14 12 *e*P **P** **05 33 39.2 +0.3**
BOD pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
HABR Khabarovsk 54.33 31 *e*P **P** **05 33 38.9 -1.6**
HABR *e**PP pP 05 33 47.1 -0.5
HABR *e**SP sP 05 33 50.8 +0.5
HABR *e* 05 34 41.1
HABR *e**SS sS 05 41 30.3 +1.4
HABR *e* 05 43 27.6
HABR *e*SS SS 05 45 02.0 +2.5
HABR *e*SSS 05 46 58.2
HABR MLR MLR
comp=Z,1μm,18.0s,MS5.0
AKTO Aktyubinsk 54.80 331 P **P** **05 33 40.5 -3.3**
AKTO pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
BHD Baghdad 55.06 307 *e* **P** **05 33 49.0 +3.0**
CTA Charters Tower 55.78 119 P **P** **05 33 50.6 -0.8**
comp=Z,10nm,0.7s,mb5.0,baz=293,slow=8.6,SNR=13
CTA Charters Tower 55.78 119 *e*P **P** **05 33 50.5 -0.9**
comp=Z,24nm,1.8s,mb4.9
CTAO Charters Tower 55.78 119 *e*P **P** **05 33 50.7 -0.7**
CTAO pmax pmax
comp=Z,15nm,0.8s,mb5.1
CTAO Charters Tower 55.78 119 *e*P **P** **05 33 50.7 -0.7**
comp=Z,15nm,0.8s,mb5.1
CLNS Chul'man 56.16 19 *e*P **P** **05 33 57.3 +3.8**
CLNS *e**PP pP 05 34 15.5 +15
CLNS *e* 05 34 53.4
CLNS *e* 05 36 03.0
CLNS *e*PPP 05 37 17.7
CLNS *e*S **S** **05 41 41.4 0.0**
CLNS *e*SS SS 05 45 20.1 -8.0
CLNS pmax pmax
comp=Z,22nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,19nm,1.0s
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CLNS pmax pmax
comp=E,9.0nm,1.1s
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS smax
comp=E,146nm,10.7s
CLNS smax
comp=N,162nm,13.0s
CLNS MLR MLR
comp=N,2μm,16.0s,MS5.4
CLNS MLR MLR
comp=Z,3μm,16.0s,MS5.4
CLNS MLR MLR
comp=E,2μm,16.0s,MS5.4
ADE Adelaide 57.04 138 *e*P **P** **05 34 00.8 +0.7**
GNI Garni 57.23 315⇑ *e*P **P** **05 34 04.2 +2.8**
GNI pmax pmax
comp=Z,19nm,1.0s
GNI MLR MLR
comp=Z,300nm,16.0s
GNI Garni 57.23 315 *e*P **P** **05 34 05.1 +3.7**
comp=Z,19nm,0.8s,mb5.2
DGRG David-gareji 57.32 317 P **P** **05 34 02.0 0.0**
STKA Stephens Creek 57.32 133 P **P** **05 34 01.7 -0.5**
comp=Z,23nm,0.6s,mb5.4,baz=311,slow=6.6,SNR=84
STKA LR LR 06 01 13.6
comp=Z,902nm,18.8s,MS4.9,baz=299,slow=39
STKA Stephens Creek 57.32 133⇑ *i*P **P** **05 34 01.5 -0.7**
comp=Z,20nm,0.6s,mb5.3
STKA Stephens Creek 57.32 133 *e*P **P** **05 34 01.0 -1.1**
comp=Z,5.2nm,0.7s,mb4.7
YSS Yuzh-Sakhalins 57.74 36⇓ *i*P **P** **05 34 04.2 -0.7**
YSS pmax pmax
comp=Z,48nm,1.2s,mb5.4
MTA Mtatsminda 57.81 317 P **P** **05 34 05.7 +0.2**
ARU Arti 58.70 337⇑ *e*P **P** **05 34 14.0 +2.6**
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,2μm,23.0s,MS5.0
ARU Arti 58.70 337 *e*P **P** **05 34 15.1 +3.7**
comp=Z,7.1nm,0.8s,mb4.8
ONI Oni 59.08 317 P **P** **05 34 17.6 +3.2**
KIV Kislovodsk 60.14 318 *e*P **P** **05 34 22.9 +1.3**
KIV pmax pmax
comp=Z,39nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,283nm,18.0s,MS4.5
KIV Kislovodsk 60.14 318 *e*P **P** **05 34 25.3 +3.7**
comp=Z,34nm,0.9s,mb5.4
MALT Malatya 61.21 311 *e*P **P** **05 34 33.6 +4.6**
MALT pmax pmax
comp=Z,30nm,1.4s,mb5.2
MALT Malatya 61.21 311⇑ *i*P **P** **05 34 31.1 +2.1**
MALT Malatya 61.21 311 *e*P **P** **05 34 33.6 +4.6**
comp=Z,30nm,1.4s,mb5.2
YAK Yakutsk 61.79 17 *e*P **P** **05 34 32.2 -0.2**
YAK *e**PP pP 05 34 40.6 +1.0
YAK *e* 05 35 13.8
YAK *e* 05 36 52.2
YAK *e*S **S** **05 42 52.4 -1.7**
YAK *e**SS sS 05 43 07.0 +1.0
YAK pmax pmax
comp=Z,23nm,1.1s,mb5.2
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
YAK pmax pmax
comp=N,3.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK smax
comp=E,121nm,2.5s
YAK smax
comp=N,80nm,2.7s
YAK MLR MLR
comp=Z,3μm,16.0s,MS5.5
YAK MLR MLR
comp=E,2μm,14.0s,MS5.5
YAK MLR MLR
comp=N,2μm,16.0s,MS5.5
TOO Toolangi 63.04 137⇑ *i*P **P** **05 34 42.1 +0.8**
VRHR Novokhopersk 63.79 325 *e*P **P** **05 34 47.6 +1.6**
VRHR *e**PP pP 05 34 56.5 +3.3
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.4s
ANN Anapa 63.96 318 *e*P **P** **05 34 48.5 +1.3**
ANN *e*S **S** **05 43 26.8 +4.8**
ANN pmax pmax
comp=Z,162nm,1.8s,mb5.8
ARMA Armidale 64.26 127⇑ *i*P **P** **05 34 49.9 +0.4**
CSS Prodhromos 64.34 306 *e*P **P** **05 34 54.6 +4.6**
comp=Z,26nm,0.9s,mb5.2
CAN Canberra 64.39 133 *e*P **P** **05 34 50.0 -0.2**
CAN pmax pmax
comp=Z,24nm,0.6s,mb5.4
CAN Canberra 64.39 133 *e*P **P** **05 34 50.0 -0.2**
comp=Z,24nm,0.6s,mb5.4
CNB Canberra Magne 64.65 133 *e*P **P** **05 34 51.6 -0.3**
VORD Divnogorie 65.07 324 *e*P **P** **05 34 56.2 +1.8**
VORD *e**PP pP 05 35 03.5 +1.9
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.9s
BR131 Keskin Array S 65.18 311 *e*P **P** **05 34 53.8 -1.5**
BRTR Keskin Array B 65.18 311 P **P** **05 34 53.5 -1.8**
comp=E,2.0nm,0.6s,mb4.3,baz=130,slow=7.5,SNR=10
BRTR pP pP 05 34 59.5 -3.0
comp=E,7.5nm,0.6s,baz=129,slow=7.0,SNR=20
VSR Storozhevoye 65.25 325 *e*P **P** **05 34 58.0 +2.5**
VSR *e**PP pP 05 35 05.3 +2.5
VSR pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.6s
HNR Honiara 65.69 103 P **P** **05 34 57.4 -1.7**
comp=E,82nm,0.8s,mb5.8,baz=244,slow=6.6,SNR=4.2
HNR Honiara 65.69 103 *e*P **P** **05 34 58.7 -0.4**
HNR pmax pmax
comp=Z,47nm,0.6s,mb5.7
HNR Honiara 65.69 103 *e*P **P** **05 34 58.7 -0.4**
comp=Z,47nm,0.6s,mb5.7
ISP Isparta 67.15 309 *e*P **P** **05 35 11.3 +3.3**
MOS Moscow 67.94 329 *e*P **P** **05 35 16.7 +4.1**
MOS pmax pmax
comp=Z,52nm,1.0s,mb5.5
OBN Obninsk 68.24 328⇑ *e*P **P** **05 35 16.2 +1.7**
OBN *e* 05 37 52.6
OBN *e*S S 05 44 21.1 +7.4
OBN pmax pmax
comp=Z,41nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,600nm,19.0s,MS4.8
PETK Petropavlovsk- 69.06 35 LR LR 06 08 44.7
comp=Z,426nm,18.1s,MS4.7,baz=252,slow=39
TIXI Tiksi 69.28 11 *e*P **P** **05 35 19.3 -1.4**
TIXI pmax pmax
comp=Z,13nm,0.7s,mb5.0
TIXI Tiksi 69.28 11 *e*P **P** **05 35 19.3 -1.4**
comp=Z,12nm,0.7s,mb5.0
PET Petropavlovsk 69.57 35⇑ *e*P **P** **05 35 22.3 -0.5**
PET pmax pmax
comp=Z,34nm,1.7s,mb5.0
LSZ Lusaka 69.97 252 LR LR 06 02 43.6
comp=Z,700nm,18.5s,MS4.9,baz=16,slow=33
LSZ Lusaka 69.97 252 *e*P **P** **05 35 27.4 +1.4**
LSZ *e* pP 05 35 34.3 +1.0
LSZ pmax pmax
comp=Z,46nm,1.5s,mb5.2
LSZ Lusaka 69.97 252 *e*P **P** **05 35 27.4 +1.3**
comp=Z,46nm,1.5s,mb5.2
LSZ *e* pP 05 35 34.3 +1.0
TIRR Tirgusor 70.05 315⇑ *i*P **P** **05 35 23.7 -2.3**
HARR Harsova 70.44 316⇓ *i*P **P** **05 35 27.2 -1.2**
SEY Seymchan 70.46 24 *e*P **P** **05 35 27.7 -0.4**
AKASG Malin Array Be 71.00 322 P **P** **05 35 28.4 -3.3**
comp=Z,2.6nm,0.5s,mb4.5,baz=95,slow=5.2,SNR=4.8
AKASG LR LR 06 14 26.6
comp=Z,343nm,18.4s,MS4.6,baz=100,slow=42
KIEV Kiev 71.01 322 *e*P **P** **05 35 34.1 +2.4**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KIEV Kiev 71.01 322 *e*P **P** **05 35 34.1 +2.4**
comp=Z,7.8nm,0.8s,mb4.7
VRI Vrincioaia 71.51 317⇓ *i*P **P** **05 35 34.8 -0.1**
PLOR Plostina 71.56 317⇑ *i*P **P** **05 35 38.9 +3.7**
VOIR 72.59 316⇑ *i*P **P** **05 35 39.1 -2.2**
BURAR Bucovina Array 72.87 318⇓ *i*P **P** **05 35 41.1 -1.8**
BUR08 Bucovina Ar. S 72.89 318 *e*P **P** **05 35 42.2 -0.8**
BUR08 *e* pP 05 35 48.0 -2.4
JOF Joensuu 73.68 335 ep **P** **05 35 44.4 -3.0**
DRGR 74.41 317⇑ *i*P **P** **05 35 50.9 -1.1**
LBTB Lobatse 74.50 242 *e*P **P** **05 35 54.7 +1.8**
LBTB *e* pP 05 36 01.7 +1.4
LBTB pmax pmax
comp=Z,28nm,1.0s,mb5.2
LBTB Lobatse 74.50 242 *e*P **P** **05 35 54.7 +1.7**
comp=Z,28nm,1.0s,mb5.1
LBTB *e* pP 05 36 01.7 +1.4
APA Apatity 74.64 339 *e*P pP 05 36 03.0 +2.7
APA MLR MLR
comp=Z,2μm,24.0s,MS5.2
KWP Kalwaria 74.87 320 *e*P **P** **05 35 58.4 +3.8**
KWP pmax pmax
comp=Z,23nm,0.9s,mb5.1
KWP Kalwaria 74.87 320⇓ *i*P **P** **05 35 53.8 -0.8**
KWP Kalwaria 74.87 320 *e*P **P** **05 35 58.4 +3.8**
comp=Z,23nm,0.9s,mb5.1
UZH Uzhgorod 74.97 319 *e*P **P** **05 35 46.4 -8.8**
UZH *e* 05 35 56.0
UZH *e* 05 36 12.8
SUW Suwalki 75.36 324 *e*P **P** **05 36 01.0 +3.7**
SUW pmax pmax
comp=Z,38nm,0.8s,mb5.4
SUW Suwalki 75.36 324 *e*P **P** **05 36 01.0 +3.6**
comp=Z,38nm,0.8s,mb5.4
SUW *e* 05 36 01.6
CRVS Cervenica-Dubn 75.56 319 *e*P **P** **05 36 03.6 +5.0**
CRVS pmax pmax
comp=Z,12nm,1.0s,mb4.8
CRVS Cervenica-Dubn 75.56 319 *e*P **P** **05 36 03.6 +5.0**
comp=Z,12nm,1.0s,mb4.8
CRVS Cervenica-Dubn 75.56 319 *e*pP pP 05 36 03.6 -2.4
KAF Kangasniemi 75.63 333 *e*p **P** **05 35 56.8 -1.9**
comp=Z,6.5nm,0.5s,mb4.8
KAF Kangasniemi 75.63 333 *e*P **P** **05 35 56.8 -1.9**
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
BOSA Boshof 75.66 239 P **P** **05 36 00.2 +0.6**
comp=Z,9.1nm,0.7s,mb4.8,baz=86,slow=5.1,SNR=22
BOSA LR LR 06 08 23.9
comp=Z,516nm,18.1s,MS4.9,baz=58,slow=35
BOSA Boshof 75.66 239 *e*P **P** **05 36 01.2 +1.6**
BOSA *e* pP 05 36 08.0 +1.0
BOSA pmax pmax
comp=Z,60nm,1.4s,mb5.3
BOSA Boshof 75.66 239 *e*P **P** **05 36 01.1 +1.6**
comp=Z,60nm,1.4s,mb5.3
BOSA *e* pP 05 36 08.0 +1.0
STHS Stebnicka Huta 75.78 320 *e*P **P** **05 36 05.1 +5.3**
STHS pmax pmax
comp=Z,12nm,0.8s,mb4.9
STHS Stebnicka Huta 75.78 320 *e*P **P** **05 36 01.8 +2.0**
STHS *e*pP pP 05 36 05.1 -2.1
STHS Stebnicka Huta 75.78 320 *e*P **P** **05 36 05.1 +5.3**
comp=Z,12nm,0.8s,mb4.9
PSZ Piszkesteto 76.46 318 *e*P **P** **05 36 08.4 +4.4**
PSZ *e* pP 05 36 15.6 +4.4
PSZ pmax pmax
comp=Z,11nm,0.8s,mb4.8
PSZ Piszkesteto 76.46 318⇑ *e*pP **P** **05 36 08.8 +5.0**
PSZ Piszkesteto 76.46 318⇑ *i*P **P** **05 36 08.1 +4.3**
PSZ Piszkesteto 76.46 318 *e*P **P** **05 36 08.2 +4.5**
comp=Z,11nm,0.8s,mb4.8
PSZ *e* pP 05 36 15.6 +4.4
MAW Mawson 76.52 192 P **P** **05 36 03.0 -0.6**
comp=Z,8.0nm,0.7s,mb4.8,baz=17,slow=6.1,SNR=7.0
OJC Ojcow 76.81 320 *e*P **P** **05 36 08.7 +3.0**
BUD Budapest 77.00 317 *e*pP pP 05 36 14.0 -0.2
PKSM Moragy 77.13 316⇑ *i*P **P** **05 36 06.1 -1.5**
VYHS Vyhne 77.23 318 *e*P **P** **05 36 12.9 +4.8**
VYHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VYHS Vyhne 77.23 318 *e*P **P** **05 36 07.6 -0.5**
VYHS *e*pP pP 05 36 12.9 -2.6
VYHS Vyhne 77.23 318 *e*P **P** **05 36 12.9 +4.8**
comp=Z,3.5nm,0.8s,mb4.3
KEV Kevo 77.61 341 *e*p **P** **05 36 13.4 +3.6**
comp=Z,5.5nm,0.7s,mb4.6
KEV Kevo 77.61 341 *e*P **P** **05 36 13.4 +3.6**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BILL Bilibino 77.74 21⇑ *e*P **P** **05 36 09.4 -1.1**
BILL *e* 05 39 02.6
BILL *e*S S 05 46 05.3 +4.0
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.5
BILL MLR MLR
comp=Z,2μm,16.0s,MS5.5
OKC Ostrava-Krasne 77.83 320 *e*P **P** **05 36 17.0 +5.6**
ARCES ARCESS Array B 78.05 340 P **P** **05 36 10.4 -1.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=79,slow=6.3,SNR=6.5
ARCES pP pP 05 36 17.4 -2.2
comp=Z,2.9nm,0.5s,baz=92,slow=6.0,SNR=3.6
ARCES LR LR 06 13 37.1
comp=Z,1μm,20.2s,MS5.2,baz=115,slow=38
ARCES ARCESS Array B 78.05 340 P **P** **05 36 10.4 -1.8**
ARCES *PP pP 05 36 17.4 -2.2
ARCES ARCESS Array B 78.05 340 P **P** **05 36 10.4 -1.8**
ARCES pP pP 05 36 17.4 -2.2
ARCES LR LR 06 13 37.1
ZST Bratislava 78.36 318 *e*P **P** **05 36 15.2 +0.8**
ZST *e* 05 36 19.8
ZST pmax pmax
comp=Z,14nm,0.8s,mb4.9
ZST Bratislava 78.36 318 *e*P **P** **05 36 19.8 +5.4**
ZST pmax pmax
comp=Z,14nm,0.8s,mb4.9
ZST Bratislava 78.36 318 *e*P **P** **05 36 15.2 +0.8**
ZST *e*pP pP 05 36 19.8 -2.0
ZST Bratislava 78.36 318 *e*P **P** **05 36 19.8 +5.4**
comp=Z,14nm,0.8s,mb4.9
SOP Sopron 78.68 317⇑ *e*PcP PcP 05 36 21.2 -3.8
DPC Dobruska-Polom 79.04 320 *e*P **P** **05 36 23.1 +5.0**
KSP Ksiaz 79.10 321 *e*P **P** **05 36 22.3 +3.9**
CONA Conrad Observa 79.17 318⇑ *i*pP **P** **05 36 23.6 +4.8**
comp=Z,5.5nm,0.9s,mb4.5
CSNA Conrad Observa 79.17 318⇑ *i*pP **P** **05 36 23.6 +4.8**
comp=Z,4.7nm,0.9s,mb4.4
UPC Upice 79.25 320 *e*P **P** **05 36 25.7 +6.4**
SUR Sutherland 80.28 236 P **P** **05 36 28.9 +3.7**
comp=Z,224nm,1.2s,mb6.0,SNR=8.8
SUR Sutherland 80.28 236 *e*P **P** **05 36 28.0 +2.8**
comp=Z,29nm,0.9s,mb5.2
SUR *e* pP 05 36 34.7 +2.1
VOY Vojsko 80.41 316 *e*(P) **P** **05 36 24.5 -1.1**
VOY *e* pP 05 36 30.3 -2.7
VOY *e* 05 36 37.3
VOY *e* 05 36 55.7
BRG Berggiesshubel 80.59 321 *e*P **P** **05 36 32.1 +5.6**
BRG pmax pmax
comp=Z,11nm,1.4s,mb4.6
BRG Berggiesshubel 80.59 321 *e*P **P** **05 36 32.0 +5.6**
comp=Z,11nm,1.4s,mb4.6
BRG *e* 05 36 52.3
TSUM Tsumeb 80.65 250 *e*P **P** **05 36 29.5 +2.1**
comp=Z,24nm,1.4s,mb4.9
TSUM *e* pP 05 36 36.0 +1.2
GERES GERESS Array B 80.65 318 P **P** **05 36 25.5 -1.3**
comp=Z,1.0nm,0.6s,mb3.9,baz=76,slow=4.1,SNR=11
GERES pP pP 05 36 32.5 -1.8
comp=Z,4.7nm,0.7s,baz=85,slow=5.3,SNR=23
GERES LR LR 06 16 11.3
comp=Z,331nm,18.1s,MS4.7,baz=278,slow=39
GERES GERESS Array B 80.65 318 P **P** **05 36 25.6 -1.3**
GERES *PP pP 05 36 32.5 -1.8
KHC Kasperske Hory 80.75 319 *e*P **P** **05 36 31.8 +4.4**
KHC Kasperske Hory 80.75 319 *e*P **P** **05 36 26.0 -1.4**
KHC *ex* x 05 36 31.8
KHC *ex* x 05 36 54.5
GRA1 Grafenberg Arr 82.30 319 *e*P **P** **05 36 35.1 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
GRF Grafenberg Arr 82.30 319 *e*P **P** **05 36 35.1 -0.5**
GRF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
GRF Grafenberg Arr 82.30 319 *e*P **P** **05 36 35.1 -0.5**
comp=Z,4.0nm,0.7s,mb4.5
SPITS Spitsbergen Ar 82.50 348 LR LR 06 22 59.8
comp=Z,617nm,18.4s,MS5.0,baz=355,slow=43
NB2 NORSAR Subarra 82.58 331 P **P** **05 36 40.5 +3.7**
comp=Z,8.1nm,1.1s,mb4.7,baz=89,slow=6.2
NOA NORSAR Array B 82.58 331 P **P** **05 36 36.0 -0.8**
comp=Z,1.8nm,1.0s,mb4.1,baz=82,slow=6.8,SNR=2.8
NOA LR LR 06 17 06.9
comp=Z,461nm,19.1s,MS4.9,baz=85,slow=38
NOA NORSAR Array B 82.58 331 P **P** **05 36 36.0 -0.8**
NOA LR LR 06 17 06.9
TUE Stuetta 83.57 316 *e*P **P** **05 36 43.7 +1.5**
comp=Z,8.5nm,0.8s,mb4.9
SYO Syowa Base 83.59 198⇑ *e*P **P** **05 36 42.6 +0.8**
SYO Syowa Base 83.59 198⇑ *e*PcP PcP 05 36 48.0 +2.0
KEST Kesra 83.90 305 P **P** **05 36 44.0 -0.2**
comp=Z,1.2nm,0.6s,mb4.2,baz=199,slow=7.7,SNR=8.2
KEST pP pP 05 36 50.0 -1.6
comp=Z,3.6nm,0.5s,baz=138,slow=0.7,SNR=9.2
PGF Pioggiola 83.92 312 *e*P **P** **05 36 42.7 -1.4**
CDF Champ du Feu 84.92 318 *e*P **P** **05 36 48.2 -0.8**
SBF Sospel 85.01 313 *e*P **P** **05 36 48.7 -0.9**
comp=Z,44nm,0.8s,mb5.3
SBF Sospel 85.01 313 *e*P **P** **05 36 48.7 -0.9**
SBF pmax pmax
comp=Z,22nm,0.8s,mb5.3
SBF Sospel 85.01 313 *e*P **P** **05 36 48.7 -0.9**
comp=Z,22nm,0.8s,mb5.3
LPG La Plagne 85.42 315 *e*P **P** **05 36 51.0 -0.6**
comp=Z,24nm,0.9s,mb5.0
LPG La Plagne 85.42 315 *e*P **P** **05 36 51.0 -0.6**
LPG pmax pmax
comp=Z,12nm,0.9s,mb5.0
LPG La Plagne 85.42 315 *e*P **P** **05 36 51.0 -0.6**
comp=Z,12nm,0.9s,mb5.0
LPL La Plagne 85.43 315 *e*P **P** **05 36 50.9 -0.8**
comp=Z,25nm,0.8s,mb5.1
LPL La Plagne 85.43 315 *e*P **P** **05 36 50.9 -0.8**
LPL pmax pmax
comp=Z,12nm,0.8s,mb5.1
LPL La Plagne 85.43 315 *e*P **P** **05 36 50.9 -0.8**
comp=Z,12nm,0.8s,mb5.1
MBDF Montbardon 85.44 314 *e*P **P** **05 36 50.2 -1.6**
comp=Z,15nm,0.9s,mb4.8
MBDF Montbardon 85.44 314 *e*P **P** **05 36 50.2 -1.6**
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
MBDF Montbardon 85.44 314 *e*P **P** **05 36 50.2 -1.6**
comp=Z,7.6nm,0.9s,mb4.8
HAU Haudompre 85.56 318 *e*P **P** **05 36 50.8 -1.4**
comp=Z,22nm,1.0s,mb5.1
HAU *e*MLR MLR
comp=Z,383nm,20.8s,MS4.5
HAU Haudompre 85.56 318 *e*P **P** **05 36 50.8 -1.4**
HAU pmax pmax
comp=Z,11nm,1.0s,mb5.0
HAU MLR MLR
comp=Z,380nm,20.8s,MS4.8
HAU Haudompre 85.56 318 *e*P **P** **05 36 50.8 -1.4**
comp=Z,11nm,1.0s,mb5.0
HAU LR LR
comp=Z,380nm,20.8s,MS4.8
FRF La Foret Royal 85.60 313 *e*P **P** **05 36 51.6 -1.0**
LMR La Mourre 85.71 313 *e*P **P** **05 36 51.3 -1.8**
CABF La Chapelle 85.81 316 *e*P **P** **05 36 52.5 -1.0**
comp=Z,25nm,0.9s,mb5.1
CABF La Chapelle 85.81 316 *e*P **P** **05 36 52.5 -1.0**
CABF pmax pmax

comp=Z,12nm,0.9s,mb5.1
CABF La Chapelle 85.81 316 *e*P **P** 05 36 52.5 -1.0
comp=Z,12nm,0.9s,mb5.1
ORIF Oris-en-Rattie 86.06 315 *e*P **P** 05 36 53.5 -1.3
ORIF *e*MLR MLR
comp=Z,533nm,22.0s,MS4.6
SMRF Simiane la Rot 86.35 314 *e*P **P** 05 36 55.2 -1.0
MEZF Maizieres J'vi 86.39 318 *e*P **P** 05 36 54.8 -1.5
GIVF Givet 86.42 320 *e*P **P** 05 36 55.3 -1.2
BAIF Baives 86.82 320 *e*P **P** 05 36 57.5 -0.9
comp=Z,30nm,1.1s,mb5.1
BAIF Baives 86.82 320 *e*P **P** 05 36 57.5 -0.9
BAIF pmax pmax
comp=Z,15nm,1.1s,mb5.1
BAIF Baives 86.82 320 *e*P **P** 05 36 57.5 -0.9
comp=Z,15nm,1.1s,mb5.1
VIVF Saint-Julien-l 86.93 315 *e*P **P** 05 36 57.4 -1.7
comp=Z,11nm,0.8s,mb4.8
VIVF Saint-Julien-l 86.93 315 *e*P **P** 05 36 57.4 -1.7
VIVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 86.93 315 *e*P **P** 05 36 57.4 -1.7
comp=Z,5.3nm,0.8s,mb4.8
LOR Lormes 87.29 317 *e*P **P** 05 36 59.3 -1.5
comp=Z,20nm,1.0s,mb5.0
LOR *e*MLR MLR
comp=Z,342nm,21.2s,MS4.4
LOR Lormes 87.29 317 *e*P **P** 05 36 59.3 -1.5
LOR pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,340nm,21.3s,MS4.7
LOR Lormes 87.29 317 *e*P **P** 05 36 59.3 -1.5
comp=Z,10nm,1.0s,mb5.0
LOR LR LR
comp=Z,340nm,21.3s,MS4.7
SMF Signal de Mont 87.36 316 *e*P **P** 05 36 58.9 -2.2
comp=Z,13nm,0.8s,mb4.9
SMF Signal de Mont 87.36 316 *e*P **P** 05 36 58.9 -2.2
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
SMF Signal de Mont 87.36 316 *e*P **P** 05 36 58.9 -2.2
comp=Z,6.3nm,0.8s,mb4.9
SSF Saint Saulge 87.55 317 *e*P **P** 05 37 00.6 -1.4
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 87.55 317 *e*P **P** 05 37 00.6 -1.4
SSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
SSF Saint Saulge 87.55 317 *e*P **P** 05 37 00.6 -1.4
comp=Z,8.0nm,1.0s,mb4.9
AVF Avril sur Loir 87.68 317 *e*P **P** 05 37 00.7 -1.9
BGF Bois d'Agland 88.05 316 *e*P **P** 05 37 02.9 -1.5
TAM Tamanrasset 88.09 293 *e*P **P** 05 37 06.5 +1.4
TAM *e* pP 05 37 12.2 -0.4
TAM pmax pmax
comp=Z,20nm,1.5s,mb5.1
TAM Tamanrasset 88.09 293 *e*P **P** 05 37 06.5 +1.4
comp=Z,20nm,1.5s,mb5.1
TAM *e* pP 05 37 12.2 -0.4
TCF Toulx Ste Croi 88.51 316 *e*P **P** 05 37 05.8 -0.8
VNDA Vanda 90.27 169 *e*P **P** 05 37 14.5 +0.3
comp=Z,1.6nm,0.7s,mb4.5,baz=291,slow=7.0,SNR=9.3
VNDA LR LR 06 16 36.7
comp=Z,292nm,18.3s,MS4.8,baz=304,slow=35
VNDA Vanda 90.27 169 *e*P **P** 05 37 14.1 -0.1
VNDA pmax pmax
comp=Z,18nm,1.6s
VNDA Vanda 90.27 169 *e*P **P** 05 37 14.1 -0.1
comp=Z,18nm,1.6s,mb5.2
ETSF Etsaut 90.90 313 *e*P **P** 05 37 16.1 -1.8
comp=Z,10nm,0.8s,mb4.9
ETSF Etsaut 90.90 313 *e*P **P** 05 37 16.1 -1.8
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
ETSF Etsaut 90.90 313 *e*P **P** 05 37 16.1 -1.8
comp=Z,5.3nm,0.8s,mb4.9
TOA0 Torodi Ar. Sit 92.67 283 *e*P **P** 05 37 26.7 0.0
TOA0 *e* pP 05 37 33.3 -0.9
TORD Torodi Ar. Bea 92.67 283 P **P** 05 37 26.9 +0.2
comp=Z,4.0nm,0.7s,mb5.0,baz=88,slow=4.7,SNR=34
TORD pP pP 05 37 33.0 -1.1
comp=Z,5.8nm,0.6s,baz=90,slow=4.6,SNR=22
TORD PP PP 05 41 14.4 +5.7
comp=Z,2.7nm,1.2s,baz=70,slow=5.6,SNR=5.7
TORD PKKPbc PKKPbc 05 54 38.0 -0.5
comp=Z,0.6nm,0.5s,baz=302,slow=3.2,SNR=16
TORD LR LR 06 17 56.8
comp=Z,526nm,19.4s,MS5.0,baz=305,slow=35
ESDC Sonseca Array 93.96 310 P **P** 05 37 31.8 -0.3
comp=Z,0.8nm,0.6s,mb4.4,baz=78,slow=4.2,SNR=4.1
ESDC pP pP 05 37 37.8 -1.8
comp=Z,0.5nm,0.5s,baz=64,slow=4.4,SNR=3.9
QSPA South Pole Qui 95.38 180 LR LR 06 17 28.2
comp=Z,750nm,18.8s,MS5.2,baz=125,slow=34
DBIC Dimbokro 99.82 278 P Pdif 05 38 00.2 +2.0
comp=Z,2.4nm,0.9s,baz=88,slow=6.4,SNR=3.8
DBIC pP 05 38 06.9
comp=Z,2.8nm,0.7s,baz=341,slow=3.1,SNR=4.0
DBIC LR LR 06 23 05.0
comp=Z,328nm,19.4s,MS4.8,baz=54,slow=35
DBIC Dimbokro 99.82 278 P Pdif 05 38 00.2 +2.0
DBIC *PP 05 38 06.9
DBIC Dimbokro 99.82 278 P Pdif 05 38 00.2 +2.0
DBIC pP 05 38 06.9
DBIC LR LR 06 23 05.0
YKA Yellowknife Ar 108.37 14 PKiKP PKiKP 05 42 40.3 -1.8
comp=Z,0.3nm,0.9s,baz=332,slow=1.5,SNR=4.1
YKA PP PP 05 43 12.3 +6.6
comp=Z,1.1nm,0.9s,baz=328,slow=7.5,SNR=6.7
YKA PKKPbc PKKPbc 05 53 51.8 -3.2
comp=Z,0.2nm,0.6s,baz=153,slow=3.4,SNR=7.0
YKA PKKPab PKKPab 05 54 05.6 -1.9
comp=Z,0.4nm,0.7s,baz=144,slow=3.0,SNR=7.2
YKA Yellowknife Ar 108.37 14 PKPdf PKiKP 05 42 40.3 -1.8
YKA PP PP 05 43 12.3 +6.7
YKA PKKPbc PKKPbc 05 53 51.9 -3.2
YKA PKKPab PKKPab 05 54 05.6 -1.9
TBI Tubuai 114.92 113 *e*LR LR 06 17 22.7
comp=Z,402nm,25.2s
PPT Papeete 115.17 107 *e*LR LR 06 17 28.5
comp=Z,210nm,23.0s
EGMT Eagleton 122.22 20 *e*PKPdf PKPdf 05 43 07.7 -1.3
ULM Lac du Bonnet 123.61 9 PKP PKPdf 05 43 09.3 -2.3
comp=Z,5.6nm,0.6s,baz=348,slow=2.6,SNR=9.2
ULM Lac du Bonnet 123.61 9 PKP PKPdf 05 43 09.3 -2.3
RRI2 Red Ridge 125.60 24 *e*PKPdf PKPdf 05 43 14.8 -0.8
NVAR Mina Array Bea 126.12 33 PKP PKPdf 05 43 16.6 -0.1
comp=Z,2.2nm,0.6s,baz=299,slow=1.8,SNR=22
PDAR Pinedale Array 126.79 23 PKP PKPdf 05 43 16.4 -1.5
comp=Z,1.5nm,0.6s,baz=92,slow=1.8,SNR=13
RKT Rikitea 128.14 115 *e*LR LR 06 23 29.0
comp=Z,300nm,28.2s
MIAR Mount Ida 139.25 12 *e*PKIKP PKPdf 05 43 41.0 -0.6
TXAR Lajitas Array 140.70 27 PKhKP 05 43 36.7
comp=Z,0.4nm,0.6s,baz=308,slow=3.3,SNR=5.5
TXAR PKP PKPdf 05 43 42.6 -1.8
comp=Z,1.4nm,0.6s,baz=9.3,slow=1.7,SNR=5.3
TXAR SKPbc SKPbc 05 47 16.9 -2.8
comp=Z,0.8nm,0.7s,baz=81,slow=0.2,SNR=3.8
TXAR Lajitas Array 140.70 27 PKP PKPdf 05 43 42.6 -1.8
TXAR SKPbc SKPbc 05 47 16.9 -2.8
JCT Junction City 141.29 22 *e*PKIKP PKPdf 05 43 44.5 -0.9
PLCA Paso Flores 142.79 197 PKP PKPdf 05 43 44.5 -3.3
comp=Z,2.3nm,0.6s,baz=192,slow=4.1,SNR=13
BDFB Brasilia 143.00 251 PKP PKPdf 05 43 46.1 -2.6
comp=Z,1.9nm,0.8s,baz=161,slow=7.4,SNR=7.2
CPUP Villa Florida 146.94 228 PKPbc PKPbc 05 43 55.6 -1.7
comp=Z,6.0nm,0.6s,baz=85,slow=2.1,SNR=29
CPUP Villa Florida 146.94 228 *e*PKPdf PKPdf 05 43 55.5 +0.1
CPUP *e*PKPbc PKPbc 05 43 57.1 -0.2
FCH Farellones 149.37 203 *e*P PKPbc 05 44 03.4 0.0
CFAA Coronel Fontan 149.96 208 PKP PKPdf 05 44 00.1 0.0
comp=Z,0.6nm,0.8s,baz=130,slow=0.6,SNR=8.2
CFAA PKPbc PKPbc 05 44 05.0 0.0
comp=Z,2.5nm,0.8s,baz=180,slow=2.6,SNR=8.2
SIV San Ignacio 154.94 244 PKP PKPdf 05 44 07.1 -0.8
comp=Z,0.6nm,0.7s,baz=121,slow=2.7,SNR=6.7
SIV PKPbc PKPbc 05 44 15.4 -1.2
comp=Z,1.9nm,0.6s,baz=114,slow=6.2,SNR=16
SIV PKPab PKPab 05 44 32.4 +0.4
comp=Z,2.7nm,0.7s,baz=117,slow=8.0,SNR=8.8
LVC Limon Verde 157.40 220 PKPab PKPab 05 44 43.1 +1.0
comp=Z,5.0nm,0.7s,baz=274,slow=3.9,SNR=5.7
ROSC El Rosal 165.72 316 PKP PKPdf 05 44 19.2 -0.6
comp=Z,4.5nm,0.6s,baz=106,slow=11,SNR=4.5
ATAH Atahualpa 173.95 255 PKP PKPdf 05 44 22.6 -2.0

2007 DEC

comp=Z,3.4nm,0.8s,baz=96,slow=14,SNR=4.0

ISCJB ***28*** *05:24:52.0±0.7, 382N±0.1×1343E±0.2, h475km±23km, mb3.3/4, Error ellipse: s-maj=27.0km s-min=21.6km az=1.0*
IDC ***28*** *05:24:52.0±2.3, 3765N×134.35E, h500km±89km, mb2.8/4, mb1 2.8/5, mb1mx2.6/25, mbtmp2.8/5, Error ellipse: s-maj=163.2km s-min=112.0km az=21.0*
JMA ***28*** *05:24:52.2±0.4, 3829N×134.11E, h442km, M3.4*
ISC 28 05:24:53.0±0.6, 382N±01×1344E±02, h480km±23km, n14, σ0°66/18, mb3.3/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSD	**Sado**	**3.03**	**92**	P	**P**	**05 26 01.4**	**-1.1**
JNG	**Nsakai**	**3.43**	**120**	P	**P**	**05 26 05.2**	**-0.3**
MAT	**Matsushiro**	**3.43**	**117**	P	**P**	**05 26 04.8**	**-0.7**
MJAR	**Matsushiro Arr**	**3.43**	**117**	P	**P**	**05 26 05.3**	**-0.3**
	1.6nm,0.3s,baz=297,slow=10,SNR=20						
JRY	**Ryogami san**	**4.18**	**120**	P	**P**	**05 26 12.9**	**+1.3**
JRY				*e*S	**S**	**05 27 16.5**	**+0.8**
JFT	**Otama**	**4.73**	**96**	P	**P**	**05 26 16.5**	**+0.1**
JOD2	**Odawara 2**	**4.75**	**126**	P	**P**	**05 26 16.9**	**+0.3**
JRG	**Rokugo**	**5.00**	**74**	P	**P**	**05 26 18.9**	**+0.1**
JRG				S	**S**	**05 27 29.1**	**+0.2**
JMM	**Marumori**	**5.04**	**92**	P	**P**	**05 26 20.3**	**+1.1**
JMM				*e*S	**S**	**05 27 28.9**	**-0.7**
BSO1	**Boso 1**	**6.35**	**122**	P	**P**	**05 26 32.2**	**+0.2**
BSO1				*e*S	**S**	**05 27 52.1**	**-0.8**
SONM	**Songino Array**	**22.54**	**304**	P	**P**	**05 29 16.1**	**+0.6**
	0.7nm,0.4s,mb3.4,baz=125,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**38.77**	**300**	P	**P**	**05 31 34.1**	**-0.9**
	0.3nm,0.5s,mb3.0,baz=86,slow=9.4,SNR=5.9						
KURK	**Kurchatov**	**40.82**	**306**	P	**P**	**05 31 51.5**	**0.0**
	0.9nm,0.4s,mb3.5,baz=86,slow=9.0,SNR=5.3						
BVAR	**Borovoye Array**	**45.65**	**311**	P	**P**	**05 32 29.4**	**+0.1**
	0.6nm,0.4s,mb3.3,baz=97,slow=6.0,SNR=4.7						

NEIC ***28*** *05:25:02.2±4.3, 3572N×206E, h10km, MG3.1(MDD), Error ellipse: s-maj=52.5km s-min=10.7km az=142.0*
CSEM ***28*** *05:25:08.9±0.3, 3637N×151E, h10km, ML3.0, Error ellipse: s-maj=6.5km s-min=5.4km az=76.0*
ISCJB ***28*** *05:25:09.6±0.8, 3638N±008×154E±006, h7km±11km, Error ellipse: s-maj=14.8km s-min=6.7km az=154.9*
CRAAG ***28*** *05:25:09.5, 3635N×146E, Ml3.0*
MDD ***28*** *05:25:11.8±0.8, 3622N×151E, h10km±11km, mb3.5/12, mbLg2.0/6, Error ellipse: s-maj=14.4km s-min=8.1km az=177.0, PRXIMO*
ISC 28 05:25:10.2±0.7, 3633N±007×158E±006, h8km±8km, n29, σ1§15/47, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.06**	**224**	P	**Pg**	**05 25 12.0**	**0.0**
ECHA	**Ech Chlef**	**0.25**	**223**	P	**Pg**	**05 25 15.0**	**-0.2**
ECHF	**Ech Chlef**	**0.26**	**228**	P	**Pg**	**05 25 15.0**	**-0.4**
EANR	**'Ain N'Sour**	**0.54**	**226**	P	**Pg**	**05 25 20.0**	**-0.7**
OKGL	**Djebel Kef Gue**	**0.81**	**249**	P	**Pg**	**05 25 30.0**	**+4.1**
EMHD	**Djebel Mahouad**	**1.12**	**96**	P	**Pb**	**05 25 33.0**	**+1.2**
OJBR	**Djebel Berber**	**1.25**	**234**	P	**Pn**	**05 25 26.0**	**-8.0**
ABA	**Alger-Bouzarea**	**1.26**	**68**	P	**Pn**	**05 25 39.0**	**+4.8**
EIBI	**Ibiza**	**2.70**	**356**	P	**Pn**	**05 25 54.6**	**+0.7**
	2.7nm,0.1s,SNR=14						
EIBI				S	**Sn**	**05 26 25.3**	**-1.5**
	8.7nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.70**	**356**	P	**Pn**	**05 25 54.6**	**+0.7**
	2.7nm,0.1s,SNR=14						
EIBI				S	**Sn**	**05 26 25.3**	**-1.4**
	8.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.39**	**314**	P	**Pn**	**05 26 04.4**	**+0.9**
	0.7nm,0.1s,SNR=15						
ETOB				S	**Sn**	**05 26 44.7**	**+0.8**
	1.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.39**	**314**	P	**Pn**	**05 26 04.4**	**+0.9**
	0.7nm,0.1s,SNR=15						
ETOB				S	**Sn**	**05 26 44.7**	**+0.7**
	1.9nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.57**	**15**	P	**Pn**	**05 26 05.4**	**-0.5**
	0.4nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**05 26 47.4**	**-0.8**
	0.8nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.57**	**15**	P	**Pn**	**05 26 05.5**	**-0.4**
	0.4nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**05 26 47.4**	**-0.8**
	0.8nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.64**	**280**	P	**Pn**	**05 26 06.5**	**-0.4**
	1.3nm,0.2s,SNR=16						
EBER				S	**Sn**	**05 26 50.4**	**+0.4**
	0.9nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.64**	**280**	P	**Pn**	**05 26 06.5**	**-0.4**
	1.3nm,0.2s,SNR=16						
EBER				S	**Sn**	**05 26 50.4**	**+0.3**
	0.9nm,0.2s,SNR=7.9						
ECHE	**Chera**	**3.83**	**329**	P	**Pn**	**05 26 11.7**	**+2.3**
	0.4nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**05 26 55.2**	**+0.6**
	0.7nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**3.98**	**307**	P	**Pn**	**05 26 13.8**	**+2.2**
	0.6nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**05 26 59.7**	**+1.3**
	1.3nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.00**	**293**	P	**Pn**	**05 26 12.9**	**+1.1**
	1.1nm,0.1s,SNR=15						
EQES				S	**Sn**	**05 26 59.3**	**+0.4**
	1.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.00**	**293**	P	**Pn**	**05 26 12.9**	**+1.1**
	1.1nm,0.1s,SNR=15						
EQES				S	**Sn**	**05 26 59.3**	**+0.4**
	1.3nm,0.1s,SNR=7.9						
EGUA	**Guajares**	**4.17**	**278**	P	**Pn**	**05 26 12.6**	**-1.6**
	0.4nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.34**	**339**	P	**Pn**	**05 26 17.8**	**+1.3**
	0.6nm,0.1s,SNR=11						
EMOS				S	**Sn**	**05 27 05.5**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.34**	**339**	P	**Pn**	**05 26 17.8**	**+1.3**
	0.6nm,0.1s,SNR=11						
EMOS				S	**Sn**	**05 27 05.5**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.03**	**356**	P	**Pn**	**05 26 25.5**	**-0.5**
	0.3nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**05 27 23.5**	**-0.8**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.03**	**356**	P	**Pn**	**05 26 25.5**	**-0.4**
	0.3nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**05 27 23.5**	**-0.8**
	0.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**5.13**	**274**	P	**Pn**	**05 26 25.2**	**-2.1**
	0.5nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**5.13**	**274**	P	**Pn**	**05 26 25.2**	**-2.1**
EADA	**Adamuz**	**5.24**	**292**	P	**Pn**	**05 26 27.8**	**-1.1**
EADA				S	**Sn**	**05 27 26.0**	**-3.5**
	0.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.24**	**292**	P	**Pn**	**05 26 27.7**	**-1.2**
	0.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**05 27 26.0**	**-3.6**
	0.5nm,0.1s,SNR=7.9						

ISCJB ***28*** *05:59:39.5±0.3, 2697S±002×2673E±003, h10km, mb4.3/12, Error ellipse: s-maj=3.8km s-min=2.8km az=135.8*
PRE ***28*** *05:59:39.0±0.7, 2692S×2674E, h2km, ML4.2*
IDC ***28*** *05:59:40.4±0.9, 2689S×2667E, h0km, mb4.1/8, mb1 4.3/12, mb1mx4.1/25, mbtmp4.3/12, ML4.5/3, Error ellipse: s-maj=26.4km s-min=11.3km az=113.0*
NEIC ***28*** *05:59:40.8±0.6, 2688S×2673E, h5km, mb4.3/2, Error ellipse: s-maj=15.1km s-min=8.1km az=95.0*
ISC 28 05:59:40.8±0.3, 2693S±002×2675E±003, h10km, (h8km±4km:pP-P), n50, σ1§24/78, mb4.3/12, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.55**	**90**	*e*P	**Pg**	**05 59 49.8**	**-1.7**
PRYS				*e*S	**Sg**	**05 59 57.1**	**-1.6**
PRYS				AML	AML	06 00 02.5	
	comp=Z,3μm,0.6s						
KLOF	**Kloof**	**0.97**	**54**	*e*P	**Pg**	**05 59 57.3**	**-2.1**
KLOF				*e*S	**Sg**	**06 00 11.0**	**-1.0**
KLOF				AML	AML	06 00 15.8	
	comp=Z,5μm,0.1s						
KSR	**Koster**	**1.08**	**7**	*e*P	**Pg**	**05 59 59.5**	**-2.1**
KSR				*e*S	**Sg**	**06 00 14.7**	**-1.0**
KSR				AML	AML	06 00 22.0	
	comp=Z,3μm,0.8s						
SWZ	**Schweizer**	**1.28**	**258**	*e*P	**Pn**	**06 00 03.4**	**-1.4**
SWZ				*e*S	**Sb**	**06 00 21.3**	**-0.3**
SWZ				AML	AML	06 00 26.2	
	comp=Z,5μm,0.6s						
ERPM	**east rand prop**	**1.46**	**67**	*e*P	**Pn**	**06 00 07.6**	**+0.4**
ERPM				*e*S	**Sn**	**06 00 28.6**	**+2.1**
ERPM				AML	AML	06 00 41.6	
	comp=Z,392nm,0.9s						
SEK	**Senekal**	**1.59**	**151**	*e*P	**Pn**	**06 00 08.8**	**-0.3**
SEK				*e*S	**Sn**	**06 00 30.7**	**+1.0**
SEK				AML	AML	06 00 33.7	
	comp=Z,2μm,0.3s						
SLR	**Silverton**	**1.82**	**50**	*e*P	**Pn**	**06 00 12.0**	**-0.2**
SLR				*e*S	**Sn**	**06 00 36.2**	**+0.9**
SLR				AML	AML	06 00 38.6	
	comp=Z,4μm,0.4s						
BOSA	**Boshof**	**2.13**	**218**	Pn	**Pn**	**06 00 17.4**	**+0.9**
	comp=Z,105nm,0.3s,baz=43,slow=16,SNR=890						
BOSA				Pg	**Pg**	**06 00 19.6**	**-2.2**
	comp=Z,105nm,0.3s,baz=41,slow=17,SNR=246						
BOSA				Sn	**Sn**	**06 00 44.1**	**+1.0**
	comp=Z,217nm,0.3s,baz=321,slow=18,SNR=22						
BOSA				Lg		06 00 47.0	
	comp=Z,217nm,0.3s,baz=317,slow=19,SNR=21						
BOSA				Rg		06 00 56.1	
	comp=Z,264nm,0.3s,baz=328,slow=17,SNR=8.3						
BOSA	**Boshof**	**2.13**	**218**	*e*P	**Pn**	**06 00 15.9**	**-0.6**
BOSA				*e*S	**Sn**	**06 00 43.6**	**+0.6**
BOSA				AML	AML	06 00 48.1	
	comp=Z,529nm,0.3s						
LBTB	**Lobatse**	**2.17**	**331**	*e*Pn	**Pn**	**06 00 18.4**	**+1.4**
LBTB				*e*S	**Sn**	**06 00 47.8**	**+3.9**
LBTB	**Lobatse**	**2.17**	**331**	*e*P	**Pn**	**06 00 16.7**	**-0.3**
LBTB				*e*S	**Sn**	**06 00 44.4**	**+0.5**
LBTB				AML	AML	06 00 49.0	
	comp=Z,2μm,0.3s						
HVD	**Gariep Dam**	**3.82**	**196**	*e*P	**Pn**	**06 00 39.8**	**+0.1**
HVD				*e*S	**Sn**	**06 01 23.7**	**-1.0**
HVD				AML	AML	06 01 44.3	
	comp=Z,257nm,0.5s						
KSD	**Kokstad**	**4.30**	**148**	*e*P	**Pn**	**06 00 45.9**	**-0.3**
KSD				*e*S	**Sn**	**06 01 34.8**	**-1.6**
KSD				AML	AML	06 01 54.4	
	comp=Z,1μm,0.7s						
POGA	**Pongola**	**4.36**	**97**	*e*P	**Pn**	**06 00 48.4**	**+1.3**
POGA				*e*S	**Sn**	**06 01 38.9**	**+0.9**
POGA				AML	AML	06 01 59.7	
	comp=Z,299nm,0.6s						
UPI	**Upington**	**5.08**	**252**	*e*P	**Pn**	**06 00 57.2**	**+0.2**
UPI				*e*S	**Sn**	**06 01 53.7**	**-2.0**
UPI				AML	AML	06 02 22.0	
	comp=Z,164nm,0.5s						
MSNA	**Messina**	**5.45**	**34**	*e*P	**Pn**	**06 01 00.7**	**-1.4**
MSNA				*e*S	**Sn**	**06 02 00.9**	**-4.0**
MSNA				AML	AML	06 02 36.5	
	comp=Z,138nm,0.6s						
SOE	**Somerset East**	**5.85**	**190**	*e*P	**Pn**	**06 01 08.6**	**+1.0**
SOE				*e*S	**Sn**	**06 02 13.2**	**-1.6**
GRM	**Grahamstown**	**6.37**	**182**	*e*P	**Pn**	**06 01 14.8**	**+0.1**
GRM				*e*S	**Sn**	**06 02 25.1**	**-2.3**
GRM				AML	AML	06 03 07.8	
	comp=Z,116nm,0.5s						
SUR	**Sutherland**	**7.49**	**222**	Pn	**Pn**	**06 01 31.2**	**+1.0**
	comp=Z,8.5nm,0.3s,baz=56,slow=13,SNR=57						
SUR				Sn	**Sn**	**06 02 52.9**	**-2.2**
	comp=Z,7.2nm,0.3s,baz=20,slow=19,SNR=7.0						
SUR				Lg		06 03 35.0	
	comp=Z,22nm,0.3s,baz=324,slow=23,SNR=5.7						
SUR	**Sutherland**	**7.49**	**222**	*e*Pn	**Pn**	**06 01 30.6**	**+0.5**
SUR				*e*Sn	**Sn**	**06 02 50.6**	**-4.5**
SUR				Sn	**Sn**	**06 02 52.9**	**-2.2**
SUR	**Sutherland**	**7.49**	**222**	*e*P	**Pn**	**06 01 30.3**	**+0.2**
SUR				*e*S	**Sn**	**06 02 52.0**	**-3.1**
CVNA	**Calvinia**	**7.60**	**232**	*e*P	**Pn**	**06 01 31.7**	**0.0**
CVNA				*e*S	**Sn**	**06 02 54.4**	**-3.6**
CVNA				AML	AML	06 03 37.1	
	comp=Z,88nm,0.5s						
CER	**Ceres**	**9.09**	**223**	*e*P	**Pn**	**06 01 52.5**	**+0.5**
CER				*e*S	**Sn**	**06 03 29.5**	**-5.0**
CER				AML	AML	06 04 35.0	
	comp=Z,52nm,0.7s						
ELIM	**Elim**	**9.73**	**217**	*e*P	**Pn**	**06 02 01.3**	**+0.5**
ELIM				*e*S	**Sn**	**06 03 45.2**	**-4.9**
ELIM				AML	AML	06 04 55.4	
	comp=Z,54nm,0.5s						
TSUM	**Tsumeb**	**11.41**	**310**	Pn	**Pn**	**06 02 23.0**	**-0.9**
	comp=Z,2.0nm,0.3s,baz=132,slow=12,SNR=19						
TSUM				Sn	**Sn**	**06 04 24.8**	**-6.7**
	comp=Z,0.9nm,0.3s,baz=241,slow=19,SNR=4.2						
TSUM				Lg		06 05 34.0	
	comp=Z,2.1nm,0.3s,baz=95,slow=18,SNR=4.9						
TSUM	**Tsumeb**	**11.41**	**310**	*e*Pn	**Pn**	**06 02 23.1**	**-0.8**
TSUM				Sn	**Sn**	**06 04 24.8**	**-6.7**
TSUM				*e*Sn	**Sn**	**06 04 27.7**	**-3.8**
TSUM				Lg		06 05 34.0	
LSZ	**Lusaka**	**11.67**	**7**	Pn	**Pn**	**06 02 25.9**	**-1.6**
	comp=Z,3.1nm,0.3s,baz=188,slow=12,SNR=51						
LSZ				Sn	**Sn**	**06 04 32.3**	**-5.7**
	comp=Z,2.0nm,0.3s,baz=180,slow=10,SNR=5.2						
LSZ				Lg		06 05 41.3	
	comp=Z,2.7nm,0.3s,baz=66,slow=22,SNR=7.3						
LSZ	**Lusaka**	**11.67**	**7**	*e*Pn	**Pn**	**06 02 25.7**	**-1.8**
LSZ				*e*Sn	**Sn**	**06 04 33.5**	**-4.5**
LSZ				Lg		06 05 41.3	
KIC	**Kosan Boka**	**45.00**	**313**	*e*P	**P**	**06 07 57.4**	**+0.8**
	comp=Z,23nm,1.0s,mb5.0						
LIC	**Lamto**	**45.08**	**312**	*e*P	**P**	**06 07 58.1**	**+0.8**
	comp=Z,39nm,1.6s,mb5.0						
DBIC	**Dimbokro**	**45.30**	**313**	P	**P**	**06 07 59.1**	**0.0**
	comp=Z,0.7nm,0.4s,mb3.9,baz=135,slow=9.6,SNR=3.2						
DBIC	**Dimbokro**	**45.30**	**313**	*e*P	**P**	**06 07 59.6**	**+0.5**
	comp=Z,1.7nm,0.6s,mb4.0						
TIC	**Toumodi**	**45.39**	**313**	*e*P	**P**	**06 08 00.7**	**+0.9**
	comp=Z,17nm,0.3s,mb5.4						
TORD	**Torodi Ar. Bea**	**46.68**	**325**	P	**P**	**06 08 10.5**	**+0.6**
	comp=Z,4.4nm,0.7s,mb4.5,baz=141,slow=7.0,SNR=36						
SNAA	**Sanae**	**47.70**	**192**	*e*	**P**	**06 08 18.9**	**+1.7**
SNAA				*e*	pP	06 08 21.3	+0.9
SNAA	**Sanae**	**47.70**	**192**	*e*P	**P**	**06 08 18.1**	**+0.9**
	comp=Z,3.6nm,0.8s,mb4.5						
VNA1	**Neumayer--Stat**	**48.05**	**195**	*e*	**P**	**06 08 22.0**	**+2.1**
VNA1				*e*	pP	06 08 24.1	+1.0
VNA2	**Neumayer--Watz**	**48.06**	**194**	*e*	**P**	**06 08 21.8**	**+1.8**
	baz=15,slow=6.4						

MKAZ	**Moumakai**	**1.60**	**255**	P	Pn	06 01 11.1	-0.2
TOZ	**Tahuroa Road**	**1.63**	**231**	P	Pn	06 01 11.3	-0.5
PUZ	**Puketiti**	**1.64**	**146**	P	Pn	06 01 13.3	+1.4
MWZ	**Matawai**	**1.66**	**168**	P	Pn	06 01 10.9	-1.2
OTAZ	**Otara**	**1.76**	**262**	P	Pn	06 01 14.9	+1.3
WTAZ	**Waiatarua**	**2.04**	**263**	P	Pn	06 01 18.4	+1.0
WCZ	**Waipu Caves**	**2.35**	**288**	P	Pn	06 01 22.5	+0.8
HIZ	**Hauiti**	**2.53**	**224**	P	Pn	06 01 24.3	+0.1

*KNET **28** 06:14:19.9±0.5, 41.17N×7324E, h6km±2km, ml3.1, Error ellipse: s-maj=3.2km s-min=2.7km az=129.0*

ISC 28 06:14:20.8±1.5, 4084N±010×730E±01, h35km, n12, σ1§14/20, 11C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.38**	**21**	P	**Pn**	**06 14 39.9**	**-3.6**
	360nm,0.2s,SNR=1094						
AML				⇓S	**Sn**	**06 14 55.2**	**-5.4**
	217nm,0.2s						
UCH	**Uchtor**	**1.78**	**39**	⇑P	**Pn**	**06 14 47.4**	**-1.6**
	14nm,0.2s,SNR=11						
UCH				⇓S	**Sn**	**06 15 08.7**	**-1.7**
	62nm,0.2s						
EKS2	**Erkin-Say**	**1.90**	**17**	⇓P	**Pn**	**06 14 49.1**	**-1.6**
	26nm,0.2s,SNR=32						
EKS2				⇓S	**Sn**	**06 15 12.3**	**-1.2**
	92nm,0.2s						
KZA	**Kyzart**	**2.08**	**53**	⇑P	**Pn**	**06 14 52.7**	**-0.5**
	36nm,0.2s,SNR=36						
KZA				⇑S	**Sn**	**06 15 19.2**	**+1.4**
	75nm,0.2s						
AAK	**Ala-Archa**	**2.10**	**31**	⇑P	**Pn**	**06 14 52.8**	**-0.6**
	45nm,0.2s,SNR=53						
AAK				⇑S	**Sn**	**06 15 17.3**	**-1.0**
	173nm,0.2s						
KBK	**Karagaybulak**	**2.32**	**38**	⇓P	**Pn**	**06 14 56.9**	**+0.5**
	52nm,0.3s,SNR=39						
KBK				⇑S	**Sn**	**06 15 24.7**	**+1.1**
	417nm,0.4s						
CHMS	**Chumysh**	**2.51**	**30**	⇓P	**Pn**	**06 14 59.7**	**+0.7**
	60nm,0.3s,SNR=36						
CHMS				⇑S	**Sn**	**06 15 29.8**	**+1.4**
	120nm,0.4s						
USP	**Ospenovka**	**2.66**	**24**	P	**Pn**	**06 15 01.3**	**+0.1**
	86nm,0.2s,SNR=196						
USP				⇓S	**Sn**	**06 15 33.5**	**+1.4**
	160nm,0.3s						
ULHL	**Ulahol**	**2.80**	**59**	⇑P	**Pn**	**06 15 03.1**	**+0.2**
	4.3nm,0.2s,SNR=13						
TKM2	**Tokmak 2**	**2.83**	**42**	⇑Pn	**Pn**	**06 15 04.1**	**+0.7**
	29nm,0.3s						
TKM2				⇑Lg		06 15 39.3	
	98nm,0.5s						
TKM2	**Tokmak 2**	**2.83**	**42**	⇓P	**Pn**	**06 15 04.1**	**+0.7**
	29nm,0.2s,SNR=24						
KK31	**Karatay Array**	**2.93**	**321**	⇑Pn	**Pn**	**06 15 06.2**	**+1.3**
	16nm,0.7s,baz=133,slow=11,SNR=93						
KK31				Lg		06 15 46.9	
	30nm,0.5s,baz=139,slow=24,SNR=9.8						

*ISCJB **28** 06:18:07.4±0.4, 759S±005×3761E±009, h10km, mb4.1/17, MS3.5/2, Error ellipse: s-maj=13.3km s-min=7.0km az=17.2*

*IDC **28** 06:18:07.7±0.7, 760S×3757E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.0/27, mbtmp4.1/15, ML4.2/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/30, Error ellipse: s-maj=21.6km s-min=15.2km az=124.0*

*NEIC **28** 06:18:09.1±0.5, 764S×3757E, h10km, mb4.3/5, Error ellipse: s-maj=14.0km s-min=10.3km az=116.0*

ISC 28 06:18:09.5±0.4, 759S±005×3759E±009, h10km, n37, σ0§88/36, mb4.1/17, MS3.5/2, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**11.97**	**229**	Pn	**Pn**	**06 20 58.6**	**-1.7**
	1.1nm,0.3s,baz=56,slow=10,SNR=6.3						
LSZ				Lg		06 24 23.9	
	1.9nm,0.3s,baz=155,slow=21,SNR=8.6						
LSZ				LR	LR	06 26 14.7	
	comp=Z,189nm,20.4s,baz=62,slow=41						
LSZ	**Lusaka**	**11.97**	**229**	Pn	**Pn**	**06 20 58.6**	**-1.7**
LSZ				Lg		06 24 23.9	
OPO	**Ambohidratompo**	**14.37**	**140**	Pn	**Pn**	**06 21 32.1**	**-1.0**
	1.3nm,0.3s,baz=273,slow=18,SNR=4.1						
MSNA	**Messina**	**16.38**	**206**	*e*P	**Pn**	**06 21 59.7**	**-0.1**
MSNA				AMb	AMB	06 22 07.8	
	comp=Z,34nm,1.3s						
SLR	**Silverton**	**20.11**	**205**	*e*P	**P**	**06 22 44.6**	**+1.0**
SLR				AMb	AMB	06 23 17.9	
	comp=Z,22nm,2.1s						
POGA	**Pongola**	**20.48**	**195**	*e*P	**P**	**06 22 46.6**	**-1.0**
POGA				AMb	AMB	06 23 16.9	
	comp=Z,18nm,1.3s						
ERPM	**east rand prop**	**20.67**	**204**	*e*P	**P**	**06 22 49.1**	**-0.5**
LBTB	**Lobatse**	**20.78**	**212**	*e*P	**P**	**06 22 50.2**	**-0.7**
	comp=Z,13nm,0.9s						
LBTB				*e*S	**S**	**06 26 35.8**	**-7.1**
KSR	**Koster**	**20.83**	**208**	*e*P	**P**	**06 22 52.5**	**+1.1**
KSR				AMb	AMB	06 23 02.6	
	comp=Z,16nm,2.1s						
PRYS	**Parys**	**21.55**	**206**	*e*P	**P**	**06 22 59.5**	**+0.3**
PRYS				AMb	AMB	06 23 11.7	
	comp=Z,18nm,1.6s,mb4.3						
TSUM	**Tsumeb**	**22.60**	**237**	P	**P**	**06 23 10.4**	**0.0**
	comp=Z,5.5nm,1.0s,mb3.9,baz=81,slow=3.3,SNR=5.7						
TSUM				Lg		06 30 03.5	
	comp=Z,7.1nm,1.0s,baz=154,slow=23,SNR=3.9						
TSUM				LR	LR	06 31 42.2	
	comp=Z,132nm,19.2s,MS3.4,baz=137,slow=36						
TSUM	**Tsumeb**	**22.60**	**237**	*e*P	**P**	**06 23 10.8**	**+0.3**
	comp=Z,13nm,1.3s,mb4.2						
TSUM				Lg		06 30 03.5	
SEK	**Senekal**	**22.67**	**203**	*e*P	**P**	**06 23 11.6**	**+0.4**
SWZ	**Schweizer**	**22.70**	**209**	*e*P	**P**	**06 23 11.0**	**-0.4**
SWZ				AMb	AMB	06 23 18.9	
	comp=Z,49nm,1.5s,mb4.7						
BOSA	**Boshof**	**23.94**	**208**	P	**P**	**06 23 23.5**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.1,baz=38,slow=10,SNR=17						
BOSA				Lg		06 30 34.7	
	comp=Z,5.0nm,0.8s,baz=295,slow=19,SNR=2.3						
BOSA				LR	LR	06 31 47.7	
	comp=Z,226nm,20.0s,MS3.6,baz=107,slow=34						
BOSA	**Boshof**	**23.94**	**208**	*e*P	**P**	**06 23 24.1**	**+0.2**
	comp=Z,6.4nm,0.7s,mb4.2						
BOSA				Lg		06 30 34.7	
HVD	**Gariep Dam**	**25.55**	**205**	*e*P	**P**	**06 23 39.9**	**+1.3**
UPI	**Upington**	**25.79**	**215**	*e*P	**P**	**06 23 41.8**	**+1.0**
UPI				AMb	AMB	06 24 09.9	
	comp=Z,19nm,1.4s,mb4.4						
SUR	**Sutherland**	**29.19**	**210**	Lg		06 33 23.3	
	comp=Z,8.7nm,1.0s,baz=118,slow=18,SNR=3.1						
TORD	**Torodi Ar. Bea**	**41.17**	**300**	P	**P**	**06 25 54.6**	**0.0**
	comp=Z,0.3nm,0.7s,mb3.1,baz=109,slow=7.8,SNR=3.5						
TORD				PcP	PcP	06 27 53.5	-0.5
	comp=Z,1.3nm,1.0s,baz=104,slow=3.3,SNR=5.2						
DBIC	**Dimbokro**	**44.64**	**287**	P	**P**	**06 26 20.9**	**-1.8**
	comp=Z,1.4nm,0.5s,mb4.1,baz=104,slow=12,SNR=2.9						
DBIC	**Dimbokro**	**44.64**	**287**	P	**P**	**06 26 20.9**	**-1.8**
BRTR	**Keskin Array B**	**47.21**	**356**	P	**P**	**06 26 43.4**	**+0.8**
	comp=Z,1.5nm,0.9s,mb3.9,baz=152,slow=5.6,SNR=5.4						
AKASG	**Malin Array Be**	**58.50**	**354**	P	**P**	**06 28 06.4**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.6,baz=187,slow=8.2,SNR=4.3						
AKASG	**Malin Array Be**	**58.50**	**354**	P	**P**	**06 28 06.4**	**+0.6**
GERES	**GERESS Array B**	**59.98**	**342**	P	**P**	**06 28 15.6**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.9,baz=218,slow=8.5,SNR=7.7						
ESDC	**Sonseca Array**	**60.71**	**324**	P	**P**	**06 28 22.2**	**+0.9**
	comp=Z,3.0nm,0.9s,mb4.4,baz=134,slow=7.0,SNR=11						
ESLA	**Sonseca Array**	**60.71**	**324**	*e*P	**P**	**06 28 21.6**	**+0.3**
	comp=Z,4.6nm,1.4s,mb4.4						
MAW	**Mawson**	**62.31**	**169**	P	**P**	**06 28 32.5**	**+0.8**
	comp=Z,1.5nm,0.4s,mb4.5,baz=319,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**65.81**	**66**	P	**P**	**06 28 56.0**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.2,baz=260,slow=8.0,SNR=8.8						
MK31	**Makanchi Array**	**67.12**	**32**	*e*P	**P**	**06 29 02.8**	**-0.5**
MKAR	**Makanchi Array**	**67.12**	**32**	P	**P**	**06 29 02.8**	**-0.6**
	comp=Z,4.9nm,0.9s,mb4.5,baz=224,slow=6.6,SNR=18						
KURK	**Kurchatov**	**68.03**	**27**	P	**P**	**06 29 08.0**	**-1.0**
	comp=Z,0.8nm,0.4s,mb4.1,baz=228,slow=6.7,SNR=5.2						
KURK	**Kurchatov**	**68.03**	**27**	*e*P	**P**	**06 29 11.1**	**+2.1**
	comp=Z,4.8nm,1.3s,mb4.4						
ZALV	**Zalesovo Beam**	**73.01**	**27**	P	**P**	**06 29 38.2**	**-1.2**
	comp=Z,0.6nm,0.3s,mb4.0,baz=236,slow=6.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**73.01**	**27**	P	**P**	**06 29 38.2**	**-1.2**
NVAR	**Mina Array Bea**	**142.36**	**328**	PKP	PKPdf	06 37 40.1	-2.8
	comp=Z,0.4nm,0.7s,baz=72,slow=5.1,SNR=4.7						

*IDC **28** 06:19:03.8±10.0, 4473S×16789E, h0km, mb3.8/1, mb1 4.2/1, mb1mx3.5/13, mbtmp3.8/1, Error ellipse: s-maj=582.4km s-min=52.2km az=49.0*

*ISCJB **28** 06:19:09.0±0.9, 45.17S±005×16701E±010, h33km, Error ellipse: s-maj=9.7km s-min=6.7km az=177.3*

*NEIC **28** 06:19:09.4, 45.15S×16702E, h29km, ML4.2(WEL), After WEL.*

ISC 28 06:19:10.3±0.9, 4524S±005×16704E±010, h35km, n20, σ0§90/22, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.25**	**162**	P	**Pn**	**06 19 17.3**	**-0.4**
DCZ				S	**Sn**	**06 19 21.9**	**-0.8**
MLZ	**Mavora Lakes**	**0.80**	**98**	P	**Pn**	**06 19 24.1**	**-1.0**
MLZ				S	**Sn**	**06 19 34.0**	**-1.8**
MSZ	**Milford Sound**	**0.84**	**48**	*e*P	**Pn**	**06 19 23.7**	**-1.9**
WHZ	**Wether Hill Ro**	**0.91**	**136**	P	**Pn**	**06 19 26.8**	**+0.2**
WHZ				S	**Sn**	**06 19 39.4**	**+0.9**
WKZ	**Wanaka**	**1.46**	**74**	P	**Pn**	**06 19 35.3**	**+1.2**
EAZ	**Earnscleugh**	**1.60**	**91**	P	**Pn**	**06 19 36.9**	**+0.9**
EAZ				S	**Sn**	**06 19 56.7**	**+1.3**
TUZ	**Tuapeka**	**1.95**	**113**	P	**Pn**	**06 19 41.5**	**+0.6**
LBZ	**Lake Benmore**	**2.39**	**70**	P	**Pn**	**06 19 47.1**	**+0.2**
FOZ	**Fox Glacier**	**2.53**	**50**	P	**Pn**	**06 19 50.2**	**+1.4**
ODZ	**Otahua Downs**	**2.56**	**87**	P	**Pn**	**06 19 49.1**	**-0.1**
RPZ	**Rata Peaks**	**3.25**	**64**	P	**Pn**	**06 19 58.7**	**0.0**
WVZ	**Waitaha Valley**	**3.42**	**52**	P	**Pn**	**06 20 00.8**	**-0.3**
MQZ	**McQueen's Vall**	**4.29**	**71**	P	**Pn**	**06 20 12.5**	**-0.6**
LTZ	**Lake Taylor**	**4.50**	**59**	P	**Pn**	**06 20 14.6**	**-1.2**
KHZ	**Kahutara**	**5.48**	**61**	P	**Pn**	**06 20 29.6**	**+0.3**
THZ	**Tophouse**	**5.50**	**53**	P	**Pn**	**06 20 29.4**	**-0.2**
NNZ	**Nelson**	**6.13**	**51**	P	**Pn**	**06 20 38.7**	**+0.5**
WRA	**Warramunga Arr**	**36.94**	**302**	P	**P**	**06 26 16.4**	**+0.5**
	1.2nm,0.8s,baz=137,slow=7.8,SNR=6.2						
BRTR	**Keskin Array B**	**145.58**	**278**	PKPbc	PKPbc	06 38 45.0	+0.5
	1.7nm,0.8s,baz=90,slow=1.4,SNR=5.6						
TORD	**Torodi Ar. Bea**	**145.68**	**206**	PKPbc	PKPbc	06 38 45.9	+0.4
	1.3nm,0.7s,baz=138,slow=1.8,SNR=9.8						

CASC 28 06:32:25.5±1.6, 1469N×9222W, h93km±10km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.67**	**123**	*e*P	Pn	06 32 43.2	+1.2
JAT				*e*S	Sn	06 32 54.4	0.0
FG6		**1.30**	**95**	*e*P	Pn	06 32 49.7	+0.8
FG6				*e*S	Sn	06 33 09.7	+3.2
FUG	**Fuego 3**	**1.35**	**100**	*e*P	Pn	06 32 50.0	+0.5
FUG				*e*S	Sn	06 33 08.0	+0.2
IXG	**Ixpaco**	**1.78**	**106**	*e*P	Pn	06 32 55.5	+0.6
IXG				*e*S	Sn	06 33 18.9	+1.5
SBLS	**San Blas**	**2.65**	**108**	*e*P	x	06 33 07.5	
SBLS				*e*S	x	06 33 40.6	
SNJE	**San Jose**	**2.66**	**108**	*e*P	x	06 33 07.6	
SNJE				*e*S	x	06 33 40.2	
LFRS	**El Faro**	**3.24**	**109**	*e*P	x	06 33 15.3	
LFRS				*e*S	x	06 33 53.1	

IDC 28 06:42:35.5±8.6, 713S×12942E, h111km±81km, mb3.4/2, mb1 3.7/5, mb1mx3.5/16, mbtmp3.6/5, ML3.8/3, Error ellipse: s-maj=120.7km s-min=21.2km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.84**	**282**	P	Pn	06 44 54.7	+0.7
	0.2nm,0.3s,baz=240,slow=5.6,SNR=4.1						
WRA	**Warramunga Arr**	**13.60**	**160**	P	Pn	06 45 42.3	-1.6
	1.0nm,0.3s,baz=341,slow=12,SNR=20						
WRA				S	Sn	06 48 02.9	-11
	1.4nm,0.3s,baz=339,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.00**	**166**	P	Pn	06 46 25.2	-1.2
	0.4nm,0.3s,baz=337,slow=10,SNR=45						
ASAR				S	S	06 49 26.9	-9.3
	0.3nm,0.3s,baz=350,slow=26,SNR=6.9						
STKA	**Stephens Creek**	**27.11**	**157**	P	P	06 48 09.0	+1.0
	0.6nm,0.5s,baz=332,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**68.02**	**327**	P	P	06 53 22.8	0.0
	0.4nm,0.4s,baz=116,slow=8.2,SNR=12						

*NEIC **28** 06:47:39.6±1.6, 25.19S×17741W, h113km±15km, mb4.2/4, Error ellipse: s-maj=21.3km s-min=12.9km az=124.0*

*ISCJB **28** 06:47:41.7±2.2, 254S±01×1776W±01, h139km±19km, mb4.1/12, Error ellipse: s-maj=20.1km s-min=18.3km az=9.0*

*IDC **28** 06:47:43.3±2.6, 2543S×17751W, h145km±22km, mb4.0/9, mb1 4.2/11, mb1mx4.1/17, mbtmp4.1/11, Error ellipse: s-maj=21.0km s-min=18.8km az=153.0*

ISC 28 06:47:39.8±1.3, 2522S±008×1774W±01, h113km±13km, n32, σ1§17/28, mb4.3/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.04**	**186**	P	**Pn**	**06 48 40.4**	**+0.8**
	71nm,0.3s,baz=216,slow=19,SNR=4.5						
RAO				S	**Sn**	**06 49 26.4**	**+0.3**
	291nm,0.3s,baz=86,slow=22,SNR=13						
AFI	**Afiamalu**	**12.45**	**26**	P	**Pn**	**06 50 31.1**	**-2.0**
	5.7nm,0.3s,baz=172,slow=5.2,SNR=7.4						
AFI				S	**Sn**	**06 52 38.8**	**-11**
	15nm,0.3s,baz=199,slow=23,SNR=6.6						
URZ	**Urewera**	**13.80**	**198**	P	**Pn**	**06 50 50.8**	**+0.3**
	4.3nm,0.3s,baz=269,slow=1.7,SNR=18						
URZ				S	**Sn**	**06 53 06.1**	**-16**
	4.3nm,0.3s,baz=179,slow=23,SNR=13						
TOO	**Toolangi**	**33.74**	**240**	*e*P	**P**	**06 54 10.0**	**-0.5**
CTAO	**Charters Tower**	**33.83**	**271**	*e*P	**P**	**06 54 13.9**	**+2.5**
	28nm,1.3s,mb4.9						
STKA	**Stephens Creek**	**36.43**	**250**	P	**P**	**06 54 32.8**	**-0.8**
	3.7nm,0.5s,mb4.6,baz=84,slow=8.7,SNR=20						
STKA				PcP	PcP	06 56 54.4	-1.1
	1.7nm,0.5s,baz=122,slow=4.7,SNR=4.5						
STKA	**Stephens Creek**	**36.43**	**250**	*e*P	**P**	**06 54 33.5**	**-0.1**
	2.5nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**36.43**	**250**	*e*P	**P**	**06 54 33.2**	**-0.4**
	0.7nm,0.5s,mb3.9						
STKA				PcP	PcP	06 56 54.4	-1.1
ASAR	**Alice Springs**	**44.13**	**261**	P	**P**	**06 55 37.2**	**0.0**
	5.2nm,0.5s,mb4.5,baz=94,slow=7.7,SNR=120						
ASAR				PcP	PcP	06 57 19.0	-1.4
	2.5nm,1.2s,baz=99,slow=5.9,SNR=2.8						
WB2	**Warramunga Arr**	**44.64**	**267**	*e*P	**P**	**06 55 40.9**	**-0.4**
WB2	**Warramunga Arr**	**44.64**	**267**	*e*P	**P**	**06 55 41.0**	**-0.3**
WRAB	**Tennant Creek**	**44.65**	**267**	*e*P	**P**	**06 55 41.2**	**-0.1**
	3.0nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**44.65**	**267**	P	**P**	**06 55 40.3**	**-1.1**
	3.7nm,0.6s,mb4.3,baz=104,slow=7.8,SNR=19						
WRA				PcP	PcP	06 57 21.8	-0.4
	1.5nm,0.9s,baz=99,slow=3.5,SNR=4.8						
FORT	**Forrest**	**48.05**	**250**	*e*P	**P**	**06 56 06.5**	**-1.4**
	51nm,0.6s						
FORT	**Forrest**	**48.05**	**250**	*e*P	**P**	**06 56 06.3**	**-1.5**
	52nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.06**	**266**	*e*P	**P**	**06 56 45.8**	**+0.2**
	5.4nm,0.9s,mb4.6						
VNDA	**Vanda**	**53.28**	**186**	P	**P**	**06 56 45.8**	**-0.6**
	1.6nm,0.6s,mb4.2,baz=325,slow=6.7,SNR=7.5						
VNDA	**Vanda**	**53.28**	**186**	*e*P	**P**	**06 56 47.6**	**+1.3**
	2.2nm,0.9s,mb4.2						
MAW	**Mawson**	**77.32**	**200**	P	**P**	**06 59 20.5**	**-1.0**
	4.8nm,0.5s,mb4.5,baz=119,slow=8.1,SNR=15						
PETK	**Petropavlovsk-**	**80.95**	**345**	P	**P**	**06 59 43.3**	**+2.1**
	1.9nm,0.6s,mb4.1,baz=133,slow=4.9,SNR=5.9						
VNA2	**Neumayer--Watz**	**83.86**	**177**	*e*	**P**	**06 59 54.8**	**-1.5**
VNA1	**Neumayer--Stat**	**84.09**	**176**	*e*	**P**	**06 59 56.3**	**-1.2**
NVAR	**Mina Array Bea**	**84.11**	**43**	P	**P**	**06 59 59.6**	**+1.6**
	0.9nm,0.6s,mb3.8,baz=223,slow=7.9,SNR=8.5						
PDAR	**Pinedale Array**	**92.04**	**43**	P	**P**	**07 00 36.9**	**+1.1**
	0.4nm,0.6s,mb3.8,baz=238,slow=2.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**92.17**	**289**	P	**P**	**07 00 38.8**	**+1.7**
	0.8nm,0.3s,mb4.4,baz=134,slow=3.0,SNR=5.3						
MKAR	**Makanchi Array**	**114.77**	**312**	PKP	PKiKP	07 06 05.2	-1.5
	0.8nm,0.8s,baz=64,slow=2.8,SNR=4.8						
ARCES	**ARCESS Array B**	**133.64**	**349**	PKP	PKPdf	07 06 40.5	-1.7
	1.6nm,0.6s,baz=61,slow=1.4,SNR=11						
MALT	**Malatya**	**147.04**	**302**	*e*PKPbc	PKPbc	07 07 10.1	+0.6
AKASG	**Malin Array Be**	**147.33**	**328**	PKPbc	PKPbc	07 07 09.1	-0.8
	1.9nm,0.6s,baz=47,slow=2.9,SNR=10						
BRTR	**Keskin Array B**	**150.24**	**307**	PKPbc	PKPbc	07 07 17.4	-0.3
	1.6nm,0.6s,baz=142,slow=5.2,SNR=6.1						
ESDC	**Sonseca Array**	**164.58**	**19**	PKPab	PKPab	07 08 25.8	0.0
	0.7nm,0.4s,baz=325,slow=0.4,SNR=9.5						
TORD	**Torodi Ar. Bea**	**167.96**	**176**	PKP	PKPdf	07 07 31.9	-1.6
	0.6nm,0.8s,baz=354,slow=3.0,SNR=3.6						
TORD				PKPab	PKPab	07 08 38.9	-2.3
	0.9nm,0.9s,baz=174,slow=4.3,SNR=4.8						

*IDC **28** 07:00:43.9±0.7, 5232N×16836W, h0km, mb4.2/22, mb1 4.4/23, mb1mx4.3/29, mbtmp4.2/23, ML3.9/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/33, Error ellipse: s-maj=23.5km s-min=11.5km az=178.0*

*ISCJB **28** 07:00:45.8±1.2, 5224N±005×16837W±004, h24km±7km, mb4.5/82, MS3.8/11, Error ellipse: s-maj=7.7km s-min=3.8km az=12.1*

*MOS **28** 07:00:47.8±1.4, 5247N×16852W, h33km, mb4.8/22, Error ellipse: s-maj=12.5km s-min=7.0km az=94.1*

*NEIC **28** 07:00:49.1±1.8, 5233N×16831W, h32km±11km, mb4.6/30, ML3.9(AEIC), Error ellipse: s-maj=10.7km s-min=5.2km az=176.0*

*BJI **28** 07:00:51.1, 53.12N×16922W, h31km, mB4.9, mb4.6, Ms4.6, Msz4.4*

ISC 28 07:00:48.2±1.2, 5230N±005×16837W±004, h27km±7km, h35km±.6km: pP-P, n256, σ0§94/261, mb4.5/82, MS3.8/10, 51C-43D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.74**	**337**	P	**Pb**	**07 01 01.7**	**-0.7**
NIKO				S	**Sb**	**07 01 14.9**	**+2.9**
OKCE	**Okmok Cone E**	**1.14**	**6**	P	**Pn**	**07 01 08.0**	**-0.3**
OKCD	**Okmok Cone D**	**1.14**	**8**	P	**Pn**	**07 01 08.4**	**0.0**
UNV	**Unalaska Valle**	**1.92**	**35**	*e*Pn	**Pn**	**07 01 17.6**	**-1.5**
AKLV	**Akutan Long Va**	**2.37**	**37**	P	**Pn**	**07 01 25.2**	**0.0**
AKGG	**Akutan Green G**	**2.38**	**36**	P	**Pn**	**07 01 25.6**	**+0.2**
AKUT	**Akutan**	**2.41**	**39**	P	**Pn**	**07 01 25.7**	**-0.1**
ATKA	**Atka Island**	**3.58**	**271**	P	**Pn**	**07 01 42.7**	**+0.9**
FALS	**False Pass**	**3.91**	**47**	*e*Pn	**Pn**	**07 01 45.6**	**-0.8**
SPIA	**Saint Paul Isl**	**5.01**	**348**	P	**Pn**	**07 02 03.0**	**+1.5**
ADK	**Adak**	**5.14**	**269**	P	**Pn**	**07 02 04.0**	**+0.7**
SDPT	**Sand Point**	**5.58**	**54**	P	**Pn**	**07 02 08.8**	**-0.6**
KDAK	**Kodiak Island**	**10.58**	**53**	Pn	**Pn**	**07 03 15.2**	**-2.6**
	3.0nm,0.3s,baz=254,slow=9.1,SNR=35						
FX1	**Attu Island--F**	**11.25**	**280**	Pn	**Pn**	**07 03 29.2**	**+2.2**
	2.8nm,0.3s,baz=240,slow=23,SNR=5.7						
SKT	**Skwentna**	**13.29**	**37**	P	**Pn**	**07 03 56.4**	**+1.7**
TNA	**Tin City**	**13.30**	**1**	*e*Pn	**Pn**	**07 03 57.0**	**+2.1**
	174nm,2.9s						
RC01	**Rabbit Creek A**	**13.46**	**42**	*e*Pn	**Pn**	**07 03 55.1**	**-2.0**
PPLA	**Purkeypile**	**13.66**	**33**	*e*Pn	**Pn**	**07 04 02.1**	**+2.2**
	15nm,0.6s						
CHUM	**Lake Minchumin**	**14.32**	**30**	*e*Pn	**Pn**	**07 04 10.5**	**+1.7**
	18nm,0.9s						
KTH	**Kantishna Hill**	**14.53**	**32**	P	**Pn**	**07 04 13.0**	**+1.3**
BPAW	**Bear Paw Mtn.**	**14.89**	**31**	*e*Pn	**Pn**	**07 04 17.3**	**+0.7**
	21nm,0.8s						
MCK	**McKinley**	**15.32**	**34**	*e*P	**Pn**	**07 04 20.4**	**-1.8**
MCK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MCK	**McKinley**	**15.32**	**34**	*e*P	**Pn**	**07 04 20.4**	**-1.8**
	comp=Z,7.8nm,0.9s						
IM3	**Indian Mountai**	**15.57**	**23**	P	**Pn**	**07 04 27.9**	**+2.5**
PAX	**Paxson**	**16.16**	**40**	P	**Pn**	**07 04 32.2**	**-0.9**
COLA	**College**	**16.42**	**32**	*e*P	**Pn**	**07 04 34.9**	**-1.4**
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
COLA	**College**	**16.42**	**32**	*e*P	**Pn**	**07 04 34.9**	**-1.4**
	comp=Z,20nm,0.8s						
MENT	**Mentasta**	**16.84**	**41**	*e*P	**Pn**	**07 04 39.3**	**-2.4**
COLD	**Coldfoot**	**17.43**	**24**	P	**Pn**	**07 04 49.6**	**+0.7**
BCA3	**Beaver Creek A**	**17.69**	**42**	P	**Pn**	**07 04 50.6**	**-1.6**
EGAK	**Eagle**	**18.72**	**38**	*e*P	**Pn**	**07 05 02.1**	**-2.7**
	comp=Z,7.8nm,0.8s						
HYT	**Haines Junctio**

L11A Cat Creek Ranc 36.39 85 ⇓P P 07 07 50.2 +0.3
baz=36
I13A Wildhorse Cree 36.41 81 ⇓P P 07 07 50.0 -0.2
baz=36
HLID Hailey 36.43 82 ⇓P P 07 07 50.2 0.0
baz=36
J13A Cove Ranch, Pi 36.66 82 ⇓P P 07 07 52.6 +0.3
baz=36
G15A Dillon 36.73 78 ⇑P P 07 07 52.3 -0.5
baz=37
I14A Mackay 36.81 81 ⇑P P 07 07 53.8 +0.3
baz=37
EGMT Eagleton 36.91 73 ⇑P P 07 07 54.0 -0.2
baz=37
EGMT Eagleton 36.91 73 *e*P P 07 07 54.2 0.0
comp=Z,96nm,2.6s,mb5.2
H15A Lima 36.93 79 ⇓P P 07 07 54.6 +0.1
baz=37
Q08A Gabbs 37.01 91 ⇓P P 07 07 55.7 +0.5
baz=37
E17A Martinsdale 37.03 76 ⇑P P 07 07 55.1 -0.3
baz=37
NVAR Mina Array Bea 37.05 92 P P 07 07 56.8 +1.2
comp=Z,1.6nm,0.8s,mb3.9,baz=284,slow=9.1,SNR=10
J14A Carey 37.10 82 ⇑P P 07 07 55.9 0.0
baz=37
D18A Linhart Farms, 37.29 74 ⇑P P 07 07 57.4 -0.1
baz=37
I15A Monteview 37.36 80 ⇑P P 07 07 58.2 +0.1
baz=37
L13A Double Diamond 37.54 84 ⇑P P 07 07 59.6 0.0
baz=37
G17A Pierce Place, 37.70 77 ⇓P P 07 08 01.2 +0.2
baz=38
J15A Blackfoot 37.72 81 ⇑P P 07 08 01.2 0.0
baz=38
H16A Russell Place, 37.72 78 ⇓P P 07 08 01.4 +0.2
baz=38
M13A Montello 37.82 85 ⇑P P 07 08 02.4 +0.3
baz=38
R09A Tonopah 37.92 91 ⇑P P 07 08 03.1 +0.1
baz=38
I16A Newdale 38.03 79 ⇓P P 07 08 04.4 +0.6
baz=38
O12A Currie 38.11 87 ⇓P P 07 08 05.0 +0.4
baz=38
S09A Goldfield 38.16 92 ⇑P P 07 08 05.5 +0.6
baz=38
M14A Sheep Mountain 38.24 84 ⇓P P 07 08 05.6 -0.1
baz=38
J16A Bone 38.29 80 ⇓P P 07 08 07.1 +1.1
baz=38
IMW Indian Meadow 38.35 79 *e*P P 07 08 07.1 +0.6
comp=Z,5.3nm,1.1s,mb4.2
RRI2 Red Ridge 38.42 80 *e*P P 07 08 08.4 +1.3
comp=Z,78nm,2.6s,mb5.0
K16A Soda Springs 38.55 81 ⇓P P 07 08 09.0 +0.8
baz=38,SNR=6.2
REDW Red Top Meadow 38.70 80 *e*P P 07 08 11.3 +1.9
comp=Z,33nm,2.0s,mb4.7
ISA Isabella 38.72 95 ⇓P P 07 08 10.0 +0.2
baz=39
N14A Grayback Hills 38.72 85 ⇑P P 07 08 09.7 +0.1
baz=39
J17A Brown Place, J 38.78 80 ⇓P P 07 08 10.7 +0.6
baz=39
J18A Kendall Valley 39.28 79 ⇑P P 07 08 14.2 -0.2
baz=39
M16A Huntsville 39.40 83 ⇑P P 07 08 15.3 -0.1
baz=39
L17A Cokeville 39.40 81 ⇓P P 07 08 15.2 -0.2
baz=39
K18A Toltan Ranch, 39.60 80 ⇑P P 07 08 17.3 +0.3
baz=40
BW06 Boulder Array 39.81 80 ⇑P P 07 08 18.6 -0.2
baz=40,SNR=7.7
BW06 Boulder Array 39.81 80 *e*P P 07 08 18.6 -0.2
comp=Z,9.3nm,1.2s,mb4.4
PDAR Pinedale Array 39.81 80 P P 07 08 18.8 0.0
comp=Z,3.9nm,0.8s,mb4.2,baz=312,slow=4.5,SNR=31
M17A Scullys Gap (B 39.89 82 ⇓P P 07 08 19.5 +0.1
baz=40
L18A Fontenelle, Gr 40.01 81 ⇓P P 07 08 20.5 +0.1
baz=40
K19A Absolon Red Bu 40.21 79 ⇓P P 07 08 21.6 -0.4
baz=40,SNR=9.7
S13A Holt Ranch, En 40.31 89 ⇓P P 07 08 22.9 0.0
baz=40
FCC Fort Churchill 40.51 51 *e*P P 07 08 24.3 -0.1
comp=Z,0.4nm,0.8s
K20A Yellowstone Ra 40.61 79 ⇓P P 07 08 24.9 -0.4
baz=40
MDJ Mudanjiang 40.70 285 P P 07 08 25.0 -1.1
MDJ AMB AMB
comp=Z,6.0nm,1.0s,mb4.2
MDJ AMB AMB
comp=Z,57nm,6.0s
MDJ LR LR
comp=N,76nm,29.5s,MS3.5
MDJ LR LR
comp=E,55nm,29.5s,MS3.5
N19A John Jarvie Ra 41.14 82 ⇑P P 07 08 29.3 -0.4
baz=41
M20A Sweetwater, Wa 41.39 80 ⇑P P 07 08 31.2 -0.6
baz=41
SRU San Rafael 41.40 85 ⇑P P 07 08 32.4 +0.4
baz=41
SRU San Rafael 41.40 85 *e*P P 07 08 33.1 +1.2
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
SRU San Rafael 41.40 85 *e*P P 07 08 33.0 +1.1
comp=Z,4.0nm,0.8s,mb4.1
O19A Miners Draw (B 41.53 82 ⇑P P 07 08 32.4 -0.6
baz=41,SNR=6.8
L21A Rawlins 41.60 79 ⇑P P 07 08 33.3 -0.2
baz=42
S16A Weppner Ranch, 41.61 87 ⇓P P 07 08 33.7 +0.1
baz=42
Q18A Rafter H Ranch 41.65 85 ⇓P P 07 08 34.0 +0.1
baz=42
R17A Hanksville Air 41.72 86 ⇑P P 07 08 34.3 -0.2
baz=42
N20A Spence Gulch, 41.73 81 ⇑P P 07 08 34.4 -0.2
baz=42
P19A Cripple Cowboy 42.02 83 ⇑P P 07 08 37.4 +0.4
baz=42
S17A Black Ridge (B 42.15 87 ⇑P P 07 08 37.8 -0.3
baz=42
O20A White River Ci 42.17 82 ⇑P P 07 08 37.9 -0.3
baz=42,SNR=7.8
N21A Black Mountain 42.23 81 ⇓P P 07 08 38.0 -0.7
baz=42
Q19A Hogan Spring (42.27 84 ⇑P P 07 08 38.5 -0.5
baz=42
M22A Cedar Creek Ra 42.40 79 ⇑P P 07 08 40.0 -0.1
baz=42
BOD Bodaibo 42.51 309 *e*P P 07 08 39.0 -1.8
BOD pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
O21A Pagoda 42.59 81 ⇓P P 07 08 41.5 -0.1
baz=42
N22A Wattenberg Ran 42.85 80 ⇓P P 07 08 43.8 +0.1
baz=43
Q20A Ridgley Place, 42.86 83 ⇓P P 07 08 43.9 +0.1
baz=43
S19A Harvey Farm, M 43.10 85 ⇑P P 07 08 45.8 0.0
baz=43
CN2 Changchun 43.62 286 *e*P P 07 08 49.0 -0.9
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
T19A Beclabito 43.76 86 ⇓P P 07 08 51.1 0.0
baz=44
HIA Hailar 43.83 296 ⇑*i*P P 07 08 48.2 -3.3
SDCO Great Sand Dun 45.33 83 *e*P P 07 09 03.8 +0.2
comp=Z,3.0nm,1.0s,mb4.1
KSRS Korea Array 46.02 277 P P 07 09 09.8 +0.8
comp=Z,3.6nm,0.8s,mb4.4,baz=53,slow=7.2,SNR=9.4
KSRS LR LR 07 26 45.8
comp=Z,60nm,19.8s,MS3.5,baz=25,slow=34
SUMG Summit 50.67 17 *e*P P 07 09 44.3 -0.2
comp=Z,23nm,1.1s,mb5.0
TLY Talaya 50.87 307 ⇑*i*P P 07 09 43.4 -2.9
TLY pmax pmax
comp=Z,26nm,2.5s,mb4.7
BJI Beijing 51.38 288 P P 07 09 49.3 -0.9
BJI AMB AMB
comp=Z,7.0nm,0.6s,mb4.8
WMOK Wichita Mounta 51.39 81 *e*P P 07 09 49.6 -0.8
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
WMOK Wichita Mounta 51.39 81 *e*P P 07 09 49.6 -0.8
comp=Z,3.0nm,0.8s,mb4.3
ULN Ulaanbaatar 51.50 301 *d i*P P 07 09 51.1 +0.1
ULN Ulaanbaatar 51.50 301 *e*P P 07 09 51.0 0.0
comp=Z,7.2nm,1.1s,mb4.5
SONM Songino Array 51.86 301 P P 07 09 54.5 +0.8
comp=Z,1.5nm,0.6s,mb4.1,baz=71,slow=6.2,SNR=3.0
TXAR Lajitas Array 52.14 90 P P 07 09 55.9 -0.1
comp=Z,1.8nm,0.8s,mb4.0,baz=303,slow=4.9,SNR=12
HHC Hu-ho-hao-te 53.52 292 *e*P P 07 10 06.3 +0.3
HHC AP pP 07 10 16.5 +2.3
HHC XP sP 07 10 20.3 +2.9
HHC PP PP 07 12 07.5 +1.1
HHC PCS PcS 07 15 12.0 +0.4
HHC S **S** **07 17 33.5 -3.5**
HHC XS sS 07 17 49.5 -1.0
HHC SCS ScS 07 19 49.5 -3.9
HHC SS SS 07 21 12.3 -4.6
HHC AMB AMB
comp=Z,5.0nm,0.9s,mb4.4
HHC AMB AMB
comp=Z,74nm,5.8s
HHC LR LR
comp=N,159nm,11.9s,MS4.5
HHC LR LR
comp=E,262nm,14.3s,MS4.5
HHC LR LR
comp=Z,174nm,15.5s,MS4.2
SCHQ Schefferville 55.07 44 P P 07 10 16.9 -0.2
comp=Z,5.5nm,0.9s,mb4.6,baz=303,slow=11,SNR=4.4
SCHQ Schefferville 55.07 44 *e*P P 07 10 16.7 -0.4
comp=Z,4.5nm,0.8s,mb4.5
KEV Kevo 57.74 354 *e*p P 07 10 33.7 -2.2
comp=Z,5.8nm,0.6s,mb4.8
KEV Kevo 57.74 354 *e*P P 07 10 33.7 -2.2
KEV pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
ZALV Zalesovo Beam 57.89 318 P P 07 10 36.5 -0.7
comp=Z,0.5nm,0.3s,mb4.0,baz=43,slow=6.9,SNR=4.6
ZALV LR LR 07 36 54.9
comp=Z,61nm,18.2s,MS3.8,baz=76,slow=38
ARCES ARCESS Array B 58.06 354 P P 07 10 37.5 -0.6
comp=Z,2.4nm,0.7s,mb4.3,baz=7.6,slow=11,SNR=6.2
ARCES PcP PcP 07 11 30.1 +0.4
comp=Z,5.9nm,1.0s,baz=44,slow=5.4,SNR=3.7
XAN Xi'an 59.70 287 P P 07 10 48.5 -1.6
XAN AP pP 07 10 58.3 -0.1
XAN PP PP 07 13 00.5 -1.2
XAN S **S** **07 18 57.3 -1.8**
XAN AMB AMB
comp=Z,1.0nm,0.5s,mb4.1
XAN LR LR
comp=N,32nm,17.8s,MS3.7
XAN LR LR
comp=E,41nm,19.5s,MS3.7
XAN LR LR
comp=Z,79nm,20.2s,MS3.8
GTA Gaotai 61.05 298 *e*P P 07 10 58.5 -0.8
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb4.5
LZH Lanzhou 61.18 293 *e*P P 07 11 02.5 +2.3
LZH AP pP 07 11 13.0 +4.5
LZH XP sP 07 11 16.5 +4.8
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,77nm,5.0s
KURK Kurchatov 62.83 319 P P 07 11 11.2 +0.2
comp=Z,2.3nm,0.8s,mb4.4,baz=48,slow=7.5,SNR=14
WMQ Urumqi 64.06 309 *e*P P 07 11 21.0 +1.8
WMQ LR LR
comp=N,122nm,20.0s,MS4.2
WMQ LR LR
comp=E,82nm,21.5s,MS4.2
WMQ LR LR
comp=Z,56nm,18.0s,MS3.8
JOF Joensuu 64.08 350 *e*p P 07 11 17.7 -1.4
comp=Z,4.9nm,0.6s,mb4.7
BRVK Borovoye 64.12 325 *e*P P 07 11 19.6 +0.1
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
BRVK Borovoye 64.12 325 *e*P P 07 11 19.6 +0.1
comp=Z,3.9nm,0.6s,mb4.6
MK31 Makanchi Array 64.30 314 *e*P P 07 11 18.3 -2.5
MKAR Makanchi Array 64.30 314 P P 07 11 19.8 -1.0
comp=Z,2.5nm,0.7s,mb4.4,baz=48,slow=6.6,SNR=26
MKAR Makanchi Array 64.30 314 P P 07 11 19.8 -1.0
ARU Arti 64.96 333 *c i*P P 07 11 24.3 -0.6
ARU *e* 07 13 44.2
ARU S **S** **07 20 08.6 +4.1**
ARU SS SS 07 24 21.0 +5.6
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ARU Arti 64.96 333 *e*P P 07 11 24.2 -0.7
comp=Z,6.8nm,0.6s,mb4.8
CD2 Chengdu 64.97 289 P P 07 11 26.5 +1.1
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
KAF Kangasniemi 65.34 352 *e*p P 07 11 25.6 -1.7
comp=Z,10.0nm,0.6s,mb5.0
KAF Kangasniemi 65.34 352 *e*P P 07 11 25.6 -1.7
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
GYA Guiyang 66.54 283 P P 07 11 35.8 +0.2
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
NB2 NORSAR Subarra 67.01 0 P P 07 11 37.2 -0.8
comp=Z,2.1nm,0.6s,mb4.3,baz=359,slow=6.2
NOA NORSAR Array B 67.01 0 P P 07 11 37.5 -0.5
comp=Z,3.0nm,0.7s,mb4.4,baz=360,slow=6.3,SNR=8.1
OBN Obninsk 70.97 345 ⇑*e*P P 07 12 00.7 -2.0
OBN *e*S S 07 21 08.6 -7.8
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
AAK Ala-Archa 70.98 316 *i*P P 07 12 02.4 -0.6
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
AKASG Malin Array Be 76.30 349 P P 07 12 33.0 -1.1
comp=Z,4.5nm,0.4s,mb4.7,baz=15,slow=5.9,SNR=22
CMAR Chiang Mai Arr 77.23 284 P P 07 12 40.4 +0.6
comp=Z,1.4nm,0.3s,mb4.8,baz=30,slow=6.6,SNR=9.2
DPC Dobruska-Polom 77.65 357 *e*P P 07 12 42.0 +0.3
GIVF Givet 77.81 4 *e*P P 07 12 42.7 +0.1
BAIF Baives 77.83 5 *e*P P 07 12 43.0 +0.3
STHS Stebnicka Huta 78.33 354 *e*P P 07 12 40.7 -4.8
STHS *e* 07 12 45.9
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
STHS Stebnicka Huta 78.33 354 *e*P P 07 12 40.7 -4.8
STHS *e* 07 12 45.9
CRVS Cervenica-Dubn 78.83 353 *e*P P 07 12 40.8 -7.4
KHC Kasperske Hory 78.94 359 *e*P P 07 12 49.7 +0.9
ROSF Rostrenen 78.94 10 *e*P P 07 12 49.1 +0.3
LDF La Druitiere 78.99 8 *e*P P 07 12 48.8 -0.3
GRR Gorron 79.13 8 *e*P P 07 12 49.8 -0.1
comp=Z,21nm,0.8s,mb4.8
GERES GERESS Array B 79.22 359 P P 07 12 50.9 +0.6
comp=Z,1.6nm,0.8s,mb4.0,baz=3.4,slow=4.5,SNR=13
QUIF Quistinic 79.37 10 *e*P P 07 12 50.9 -0.3
VYHS Vyhne 79.40 355 *e*P P 07 12 51.1 -0.2
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 79.40 355 *e*P P 07 12 51.0 -0.3
VYHS *e* 08 05 44.8
MEZF Maizieres J'vi 79.42 4 *e*P P 07 12 52.0 +0.5
CDF Champ du Feu 79.60 3 *e*P P 07 12 52.9 +0.5
ZST Bratislava 79.78 356 *e*P P 07 12 54.6 +1.2
ZST pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ZST Bratislava 79.78 356 *e*P P 07 12 54.6 +1.2
comp=Z,5.4nm,0.7s,mb4.6
HAU Haudompre 79.97 4 *e*P P 07 12 54.7 +0.2
CONA Conrad Observa 80.09 357 ⇑*i*P P 07 12 56.1 +1.0
comp=Z,7.3nm,1.0s,mb4.5
CSNA Conrad Observa 80.09 357 ⇑*i*P P 07 12 56.0 +0.9
comp=Z,6.8nm,1.0s,mb4.5
HINF Hinteralfeld 80.18 3 *e*P P 07 12 55.8 +0.2
comp=Z,5.8nm,0.7s,mb4.3
HINF Hinteralfeld 80.18 3 *e*P P 07 12 55.8 +0.2
HINF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
HINF Hinteralfeld 80.18 3 *e*P P 07 12 55.8 +0.2
comp=Z,2.9nm,0.7s,mb4.3
KIV Kislovodsk 80.45 338 *e*P P 07 12 54.7 -2.4
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,51nm,18.0s,MS3.9
LOR Lormes 80.59 5 *e*P P 07 12 58.0 +0.2
comp=Z,15nm,1.1s,mb4.5
MOTA Moosalm 80.73 0 ⇓*i*P P 07 12 59.0 +0.4
comp=Z,4.0nm,0.7s,mb4.5
SSF Saint Saulge 80.78 6 *e*P P 07 12 59.2 +0.4
comp=Z,7.1nm,0.8s,mb4.4
WTTA Wattenberg 80.82 360 ⇑*i*P P 07 13 00.1 +1.0
comp=Z,7.6nm,0.7s,mb4.8
MFF Saint Martin d 80.96 8 *e*P P 07 13 00.2 +0.4
comp=Z,30nm,1.0s,mb4.9
MFF Saint Martin d 80.96 8 *e*P P 07 13 00.2 +0.4
MFF pmax pmax
comp=Z,15nm,1.0s,mb4.9
MFF Saint Martin d 80.96 8 *e*P P 07 13 00.2 +0.4
comp=Z,15nm,1.0s,mb4.9
KBA Koelnbreinsper 80.99 359 ⇓*i*P P 07 13 01.1 +1.2
comp=Z,13nm,0.7s,mb5.0
AVF Avril sur Loir 81.04 6 *e*P P 07 13 00.4 +0.2
comp=Z,7.5nm,0.7s,mb4.4
FETA Feichten 81.06 1 ⇑*i*P P 07 13 01.2 +0.9
comp=Z,7.7nm,0.9s,mb4.7
SMF Signal de Mont 81.21 5 *e*P P 07 13 01.4 +0.3
comp=Z,12nm,0.9s,mb4.5
BGF Bois d'Agland 81.24 6 *e*P P 07 13 01.4 +0.1
CABF La Chapelle 81.36 4 *e*P P 07 13 02.8 +0.9
comp=Z,18nm,0.9s,mb4.7
CABF La Chapelle 81.36 4 *e*P P 07 13 02.8 +0.9
CABF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CABF La Chapelle 81.36 4 *e*P P 07 13 02.8 +0.9
comp=Z,9.2nm,0.9s,mb4.7
TCF Toulx Ste Croi 81.46 7 *e*P P 07 13 02.5 0.0
OBKA Obir 81.54 358 ⇑*i*P P 07 13 03.5 +0.7
comp=Z,6.6nm,0.7s,mb4.7
RJF Les Rejaudoux 82.39 7 *e*P P 07 13 07.5 +0.1
LPG La Plagne 82.49 3 *e*P P 07 13 09.6 +1.7
comp=Z,5.9nm,0.9s,mb4.2
LPG La Plagne 82.49 3 *e*P P 07 13 09.6 +1.7
LPG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
LPG La Plagne 82.49 3 *e*P P 07 13 09.6 +1.7
comp=Z,3.0nm,0.9s,mb4.2
LFF La Frestale 82.69 8 *e*P P 07 13 09.4 +0.5
comp=Z,16nm,0.8s,mb4.8
LFF La Frestale 82.69 8 *e*P P 07 13 09.4 +0.5
LFF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LFF La Frestale 82.69 8 *e*P P 07 13 09.4 +0.5
comp=Z,8.3nm,0.8s,mb4.8
CAF Calviac 82.81 7 *e*P P 07 13 10.7 +1.2
comp=Z,9.1nm,0.8s,mb4.5
CAF Calviac 82.81 7 *e*P P 07 13 10.7 +1.2
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
CAF Calviac 82.81 7 *e*P P 07 13 10.7 +1.2
comp=Z,4.6nm,0.8s,mb4.6
ORIF Oris-en-Rattie 83.04 4 *e*P P 07 13 11.8 +1.1
comp=Z,7.9nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.04 4 *e*P P 07 13 11.8 +1.1
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ORIF Oris-en-Rattie 83.04 4 *e*P P 07 13 11.8 +1.1
comp=Z,4.0nm,0.9s,mb4.5
VIVF Saint-Julien-l 83.04 5 *e*P P 07 13 11.5 +0.7
comp=Z,5.6nm,0.7s,mb4.4
VIVF Saint-Julien-l 83.04 5 *e*P P 07 13 11.5 +0.7
VIVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
VIVF Saint-Julien-l 83.04 5 *e*P P 07 13 11.5 +0.7
comp=Z,2.8nm,0.7s,mb4.4
MBDF Montbardon 83.26 3 *e*P P 07 13 13.5 +1.6
comp=Z,8.3nm,0.6s,mb4.6
MBDF Montbardon 83.26 3 *e*P P 07 13 13.5 +1.6
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MBDF Montbardon 83.26 3 *e*P P 07 13 13.5 +1.6
comp=Z,4.2nm,0.6s,mb4.7
LASF Ste Croix 83.77 6 *e*P P 07 13 15.5 +1.0
SMRF Simiane la Rot 83.96 4 *e*P P 07 13 16.9 +1.4
SBF Sospel 84.15 3 *e*P P 07 13 17.9 +1.4
comp=Z,39nm,0.8s,mb5.3
SJPF Ste Jean 84.32 9 *e*P P 07 13 18.3 +1.0
MTLF Montolieu 84.39 7 *e*P P 07 13 18.4 +0.7
comp=Z,4.9nm,0.6s,mb4.5
FRF La Foret Royal 84.42 4 *e*P P 07 13 18.6 +0.7
EPF Esparros 84.55 8 *e*P P 07 13 18.4 -0.1
comp=Z,8.0nm,0.8s,mb4.6
ETSF Etsaut 84.60 9 *e*P P 07 13 19.8 +1.0
comp=Z,18nm,0.9s,mb4.9
PGF Pioggiola 85.50 2 *e*P P 07 13 23.9 +0.6
comp=Z,50nm,1.0s,mb5.4
BRTR Keskin Array B 86.37 343 P P 07 13 28.3 +0.6
comp=Z,2.2nm,0.6s,mb4.5,baz=29,slow=2.0,SNR=4.4
BRTR LR LR 07 59 35.7
comp=Z,42nm,18.1s,MS3.9,baz=97,slow=41
ESDC Sonseca Array 87.40 12 P P 07 13 33.5 +0.8
comp=Z,1.3nm,0.6s,mb4.4,baz=345,slow=4.7,SNR=8.7
WRA Warramunga Arr 87.44 232 P P 07 13 31.4 -1.5
comp=Z,0.2nm,0.3s,mb3.8,baz=32,slow=5.1,SNR=5.3
ASAR Alice Springs 90.82 231 P P 07 13 47.5 -1.3
comp=Z,1.4nm,0.9s,mb4.3,baz=32,slow=5.1,SNR=8.6

*VIE **28** 07:03:35.0±0.6, 44.29N×9.67E, h10km, mb2.2/1, ML2.6/2, Error ellipse: s-maj=6.0km s-min=1.8km az=49.0 60 km ESE of Genova*
*CSEM **28** 07:03:50.5±0.4, 44.63N×1029E, h10km, ML2.0, Error ellipse: s-maj=6.2km s-min=5.3km az=86.0*
*ISCJB **28** 07:03:52.9±0.8, 44.59N±004.×1024E±005, h10km, Error ellipse: s-maj=5.3km s-min=4.9km az=144.5*
*GEN **28** 07:03:52.0, 44.57N×1030E, h24km, ML2.0*
*ROM **28** 07:03:52.8±0.3, 44.56N×1027E, h24km±3km, Md2.4/4, Ml1.9/3, Error ellipse: s-maj=2.6km s-min=1.7km az=29.0*

ISC 28 07:03:53.6±0.8, 4457N±004×1024E±005, h10km, n15, σ0.970/25, 3C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERBM	**Eremo**	**0.20**	**140**	⇑*i*	Pg	**07 03 58.1**	**+0.3**
ERBM	**Eremo**	**0.20**	**140**	⇑*i*	Pg	**07 03 58.1**	**+0.3**
ERBM				Sg	**Sg**	**07 04 02.3**	**+1.8**
	101nm,0.2s						
VALM	**Valbona**	**0.22**	**178**	P	**Pg**	**07 03 57.7**	**-0.5**
BACM	**Baccana**	**0.31**	**202**	P	**Pg**	**07 03 59.2**	**-0.7**
GSCL	**Gusciola**	**0.33**	**131**	Pg	**Pg**	**07 04 00.2**	**0.0**
GSCL	**Gusciola**	**0.33**	**131**	Pg	**Pg**	**07 04 00.2**	**0.0**
GSCL				Sg	**Sg**	**07 04 04.8**	**+0.1**
	37nm,0.5s						
SARO	**Sassorosso**	**0.40**	**163**	P	**Pg**	**07 04 00.2**	**-1.3**
SARO				S	**Sg**	**07 04 06.4**	**-0.5**
VLC	**Villacollemand**	**0.42**	**165**	Pg	**Pg**	**07 04 01.7**	**-0.2**
VLC				Sg	**Sg**	**07 04 08.0**	**+0.5**
VLC	**Villacollemand**	**0.42**	**165**	Pg	**Pg**	**07 04 01.7**	**-0.2**
VLC				Sg	**Sg**	**07 04 08.0**	**+0.5**
	85nm,0.8s						
SC2M	**Scurtabo**	**0.53**	**252**	Pg	**Pg**	**07 04 03.9**	**0.0**
SC2M				Sg	**Sg**	**07 04 11.9**	**+1.1**
SC2M	**Scurtabo**	**0.53**	**252**	Pg	**Pg**	**07 04 03.9**	**0.0**
SC2M				Sg	**Sg**	**07 04 11.9**	**+1.1**
	114nm,0.3s						
BDI	**Bagni Di Lucca**	**0.57**	**153**	Pg	**Pg**	**07 04 04.1**	**-0.6**
BDI				Sg	**Sg**	**07 04 12.3**	**+0.2**
BDI	**Bagni Di Lucca**	**0.57**	**153**	Pg	**Pg**	**07 04 04.1**	**-0.6**
BDI				Sg	**Sg**	**07 04 12.3**	**+0.2**
TEOL	**Teolo**	**1.29**	**52**	*e*Pg	**Pg**	**07 04 17.8**	**-0.6**
TEOL				*e*Sg	**Sg**	**07 04 35.6**	**+0.5**
DAVA	**Damuels**	**2.73**	**355**	⇓*i*	Pn	Px	07 04 23.3	
DAVA				⇑*i*	Sg	**Sg**	**07 05 14.8**	**-6.5**
	2.7nm,0.2s						

*IDC **28** 07:05:11.1±0.8, 1835N×12105E, h0km, mb3.7/8, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, MS3.4/1, Ms1 3.4/1, ms1mx2.7/25, Error ellipse: s-maj=30.3km s-min=18.6km az=69.0*
*NEIC **28** 07:05:15.9±0.5, 1833N×12103E, h35km, Error ellipse:*

s-maj=16.0km s-min=8.0km az=87.0
NEIC Felt [II PIVS] at Pasuquin.
*ISCJB **28** 07:05:17.4±0.5, 1866N±004×12063E±007, h33km, mb3.7/7, Error ellipse: s-maj=9.9km s-min=4.8km az=174.2*
*MAN **28** 07:05:17, 1848N×12074E, h3km, mb4.9, ML3.9, MS3.9*
MAN INTENSITY II - PASUQUIN, ILOCOS NORTE.

ISC 28 07:05:15.7±1.5, 1860N±004×12063E±007, h7km±11km, n23, σ1°912/26, mb3.7/7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.94**	**175**	*eP*	**Pg**	**07 05 32.9**	**-1.0**
SGCP	**Mt. Cagua**	**1.39**	**104**	*eP*	**Pn**	**07 05 41.0**	**+0.6**
CAUP	**Cauayan**	**2.00**	**145**	*eP*	**Pn**	**07 05 50.4**	**+0.5**
CAUP				*eS*	**Sn**	**07 06 15.2**	**0.0**
PALP	**Palanan**	**2.29**	**131**	*eP*	**Pn**	**07 05 54.6**	**+0.6**
BOLP	**Bolinao**	**2.31**	**197**	*eP*	**Pn**	**07 05 56.2**	**+2.0**
BOLP				*eS*	**Sn**	**07 06 24.2**	**+1.4**
SCZP	**Santa Cruz**	**2.89**	**194**	*eP*	**Pn**	**07 06 02.7**	**+0.5**
SCZP				*eS*	**Sg**	**07 06 43.4**	**-5.1**
BALP	**Baler**	**2.98**	**162**	*eP*	**Pn**	**07 06 04.0**	**+0.6**
BALP				*eS*	**Sn**	**07 06 36.6**	**-2.9**
PCPH	**Palayan**	**3.05**	**172**	*eP*	**Pn**	**07 06 05.1**	**+0.7**
TWG	**Pinlang**	**4.22**	**6**	*ePn*	**Pn**	**07 06 20.9**	**+0.3**
YULB	**Yu-li** 21nm,0.6s	**4.81**	**7**	*ePn*	**Pn**	**07 06 29.5**	**+0.8**
SSLB	**Suanglung**	**5.18**	**3**	*ePn*	**Pn**	**07 06 32.8**	**-0.9**
NACB	**Ninganchiao**	**5.62**	**9**	*ePn*	**Pn**	**07 06 40.0**	**+0.2**
YHNB	**Yeheng**	**6.08**	**6**	*ePn*	**Pn**	**07 06 47.6**	**+1.4**
QIZ	**Qiongzhong** 21nm,0.9s	**10.23**	**274**	*ePn*	**Pn**	**07 07 40.6**	**-2.5**
CMAR	**Chiang Mai Arr** 1.3nm,0.3s,baz=92,slow=8.1,SNR=3.1	**20.57**	**273**	P	**P**	**07 09 55.6**	**+0.3**
KAPI	**Kappang** comp=Z,78nm,18.1s,baz=257,slow=38	**23.48**	**182**	LR	LR	07 20 07.3	
MJAR	**Matsushiro Arr** 0.9nm,0.3s,mb3.6,baz=199,slow=11,SNR=2.8	**23.65**	**37**	P	**P**	**07 10 23.1**	**-4.8**
WRA	**Warramunga Arr** 0.3nm,0.4s,mb3.2,baz=340,slow=9.1,SNR=5.3	**40.59**	**160**	P	**P**	**07 12 49.2**	**-7.0**
WRA				PcP	PcP	07 14 55.2	-3.3
MKAR	**Makanchi Array** 1.1nm,0.6s,baz=341,slow=3.2,SNR=7.0	**42.15**	**321**	P	**P**	**07 13 08.9**	**+0.1**
ASAR	**Alice Springs** 0.5nm,0.3s,mb3.7,baz=340,slow=6.8,SNR=12	**43.95**	**162**	P	**P**	**07 13 17.6**	**-6.0**
KURK	**Kurchatov** 2.0nm,0.7s,mb4.1,baz=123,slow=8.0,SNR=8.8	**46.16**	**324**	P	**P**	**07 13 40.5**	**-0.4**
STKA	**Stephens Creek** 0.4nm,0.4s,mb3.7,baz=321,slow=13,SNR=3.1	**54.06**	**158**	P	**P**	**07 14 33.3**	**-7.7**
YKA	**Yellowknife Ar** 0.9nm,0.7s,mb4.1,baz=313,slow=4.6,SNR=21	**88.30**	**22**	P	**P**	**07 18 05.2**	**-2.7**

IDC 28 07:05:47.3±7.4, 699S×14925E, h86km±51km, mb2.9/1, mb1 3.2/3, mb1mx3.0/16, mbtmp3.0/3, ML3.2/2, Error ellipse: s-maj=123.4km s-min=53.5km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 11nm,0.3s,baz=11,slow=16,SNR=19	**3.17**	**221**	P	Pn	07 06 34.9	-0.2
PMG				S	Sn	07 07 12.4	+0.5
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=52,slow=11,SNR=2.2	**19.37**	**227**	P	Pn	07 10 06.2	-2.0
ASAR	**Alice Springs** 0.4nm,0.4s,baz=53,slow=9.4,SNR=11	**22.18**	**220**	P	P	07 10 36.8	+0.3
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=67,slow=2.7,SNR=3.2	**147.50**	**283**	PKPbc	PKPbc	07 25 22.1	-0.4

*ISCJB **28** 07:10:46.0±0.7, 3954N±006×3309E±005, h10km, Error ellipse: s-maj=9.4km s-min=5.6km az=171.9*
*CSEM **28** 07:10:45.1, 3957N×3311E, h8km, MD2.7, After ISK*
*ISK **28** 07:10:45.1, 3957N×3311E, h8km, MD2.7*
*DDA **28** 07:10:47.3, 3941N×3311E, h7km±1km, Md2.4*

ISC 28 07:10:46.0±0.9, 3951N±006×3305E±005, h4km±10km, n8, σ0°87/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.43**	**330**	*ePG*	**Pg**	**07 10 53.6**	**-0.7**
KAMT	**Kaman**	**0.54**	**105**	*ePG*	**Pg**	**07 10 55.6**	**-0.7**
KAMT				*eSG*	**Sg**	**07 11 02.8**	**-0.4**
CDAG	**Cicekdag**	**1.03**	**83**	*iP*	**Pg**	**07 11 06.1**	**+0.4**
CDAG				*iS*	**Sg**	**07 11 22.1**	**+3.0**
KIZT	**Kizilcal**	**1.11**	**235**	*ePN*	**Pn**	**07 11 07.9**	**-0.3**
KDHN	**Kadinhani**	**1.23**	**216**	*iP*	**Pg**	**07 11 10.0**	**+0.5**
KDHN				*iS*	**Sg**	**07 11 25.1**	**-0.3**
LADK	**Ladik-KONYA**	**1.42**	**202**	*ePN*	**Pn**	**07 11 12.6**	**+0.1**
ESKT	**Eskisehir**	**1.70**	**271**	*eP*	**Pn**	**07 11 17.5**	**+1.1**
ESKT				*iS*	**Sn**	**07 11 46.8**	**+8.2**
YOZ	**Yozgat**	**1.76**	**85**	*ePN*	**Pn**	**07 11 16.1**	**-1.1**

*NEIC **28** 07:10:49.4, 1980N×6793W, h42km, MD3.7(RSPR), After RSPR.*

RSPR 28 07:10:49.4, 1980N×6793W, h42km±29km, MD3.7/17, MD3.7/17, 15C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.53**	**149**	*eP*	Pn	07 11 12.5	-1.8
AGPR				*eS*	Sn	07 11 31.1	-1.8
IMO	**Isla Mona**	**1.68**	**179**	*eP*	Pn	07 11 12.9	-3.3
IMO				*eS*	Sn	07 11 30.7	-5.9
LSP	**Las Mesas**	**1.80**	**153**	*eP*	Pn	07 11 16.0	-1.9
LSP				*eS*	Sn	07 11 38.6	-0.9
LRS	**Lares**	**1.81**	**145**	*eP*	Pn	07 11 16.9	-1.3
CRPR	**Cabo Rojo, PR**	**1.94**	**156**	*eP*	Pn	07 11 18.3	-1.6
CRPR				*eS*	Sn	07 11 41.2	-1.8
GBPR	**Guanica, Bosqu**	**2.07**	**151**	*eP*	Pn	07 11 21.1	-0.5
GBPR	**Guanica, Bosqu**	**2.07**	**151**	*eS*	Sn	07 11 45.4	-0.8
CELP	**Cerrillos**	**2.14**	**143**	*eP*	Pn	07 11 22.4	-0.1
CELP				*eS*	Sn	07 11 47.2	-0.6
OBIP	**Obispado Ponce**	**2.15**	**144**	*eP*	Pn	07 11 22.4	-0.3
OBIP				*eS*	Sn	07 11 47.4	-0.8
ICM	**Isla Caja Muer**	**2.32**	**145**	*eP*	Pn	07 11 26.4	+1.4
ICM				*eS*	Sn	07 11 51.8	-0.5
SJG	**San Juan**	**2.38**	**134**	*eP*	Pn	07 11 25.6	-0.2
SJG				*eS*	Sn	07 11 53.2	-0.5
SJG	**San Juan**	**2.38**	**134**	*eP*	Pn	07 11 25.5	-0.3
SJG				*eS*	Sn	07 11 53.0	-0.8
CBYP	**Canovanas**	**2.48**	**127**	*eP*	Pn	07 11 26.7	-0.6
CBYP				*eS*	Sn	07 11 55.2	-1.1
HUMP	**Col San Antoni**	**2.57**	**129**	*eP*	Pn	07 11 27.8	-0.6
HUMP				*eS*	Sn	07 11 57.4	-1.0
CPD	**Cerro la Pandu**	**2.59**	**132**	*eP*	Pn	07 11 28.4	-0.4
CPD				*eS*	Sn	07 11 58.1	-0.9
MTP	**Monte Pirata**	**2.81**	**126**	*eP*	Pn	07 11 30.7	-1.2
MTP				*eS*	Sn	07 12 03.7	-0.9
STVI	**Saint Thomas**	**3.16**	**117**	*eP*	Pn	07 11 36.4	-0.2
STVI				*eS*	Sn	07 12 12.4	-0.8
SDDR	**Presa de Saban**	**3.27**	**256**	*ePn*	Pn	07 11 38.5	+0.4
TBVI	**Tortola**	**3.42**	**113**	*eP*	Pn	07 11 40.4	+0.2
TBVI				*eS*	Sn	07 12 18.3	-1.2

NEIC 28 07:11:29.8, 3815S×17624E, h150km, MG4.0(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.69**	**99**	P	Pn	07 11 52.3	+0.1
MWZ	**Matawai**	**1.03**	**101**	P	Pn	07 11 55.0	+0.2
MWZ				S	Sn	07 12 14.1	+0.3
BKZ	**Black Stump Fm**	**1.03**	**169**	P	Pn	07 11 54.9	+0.1
BKZ				S	Sn	07 12 14.0	0.0
WTVZ	**West Tongariro**	**1.09**	**208**	P	Pn	07 11 55.5	+0.2
TWVZ	**Taurewa**	**1.11**	**214**	P	Pn	07 11 55.7	+0.2
NGZ	**Ngauruhoe**	**1.14**	**206**	P	Pn	07 11 56.2	+0.5
HIZ	**Hauiti**	**1.15**	**251**	P	Pn	07 11 56.1	+0.3
TUVZ	**Tukino**	**1.21**	**202**	P	Pn	07 11 56.7	+0.3
FWVZ	**Far West T-bar**	**1.23**	**206**	P	Pn	07 11 56.6	0.0
WNVZ	**Wahianoa**	**1.28**	**203**	P	Pn	07 11 57.2	+0.1
MOVZ	**Moawhango**	**1.31**	**197**	P	Pn	07 11 57.0	-0.4
KNZ	**Kokohu**	**1.42**	**128**	P	Pn	07 11 58.6	+0.1
VRZ	**Vera Road**	**1.52**	**230**	P	Pn	07 11 59.6	+0.1
PUZ	**Puketiti**	**1.59**	**88**	P	Pn	07 11 59.9	-0.4
MXZ	**Matakaoa Point**	**1.74**	**71**	P	Pn	07 12 01.7	-0.2
WAZ	**Wanganui**	**1.88**	**211**	P	Pn	07 12 02.0	-1.5
TSZ	**Takapari Road**	**1.92**	**186**	P	Pn	07 12 03.1	-0.8
BFZ	**Birch Farm**	**2.53**	**180**	P	Pn	07 12 09.5	-1.7
MRZ	**Mangatainoka R**	**2.56**	**191**	P	Pn	07 12 09.6	-2.0
KIW	**Kapiti Island**	**2.90**	**200**	P	Pn	07 12 13.3	-2.5
MTW	**Mount Morrison**	**3.06**	**191**	P	Pn	07 12 14.9	-2.9
CAW	**Cannon Point**	**3.09**	**197**	P	Pn	07 12 15.5	-2.7
MRW	**Makara Radio**	**3.30**	**201**	P	Pn	07 12 17.9	-3.0
MSWZ	**Moikau Station**	**3.35**	**193**	P	Pn	07 12 18.3	-3.2
SNZO	**South Karori**	**3.37**	**200**	P	Pn	07 12 18.5	-3.3
TCW	**Tory Channel**	**3.41**	**206**	P	Pn	07 12 19.2	-3.2
BHW	**Baring Head**	**3.42**	**198**	P	Pn	07 12 19.1	-3.4
NNZ	**Nelson**	**3.78**	**215**	P	Pn	07 12 23.3	-3.7
ORZ	**Quartz Range**	**3.92**	**226**	P	Pn	07 12 24.7	-4.3
BSWZ	**Blackbirch Sta**	**4.00**	**206**	P	Pn	07 12 26.4	-3.5
THZ	**Tophouse**	**4.43**	**214**	P	Pn	07 12 31.5	-4.0
KHZ	**Kahutara**	**4.74**	**205**	P	Pn	07 12 35.5	-4.1
DSZ	**Denniston Nort**	**4.95**	**222**	P	Pn	07 12 37.9	-4.6
LTZ	**Lake Taylor**	**5.53**	**212**	P	Pn	07 12 45.3	-4.8
MQZ	**McQueen's Vall**	**6.18**	**205**	P	Pn	07 12 52.8	-6.0
ODZ	**Otahua Downs**	**8.06**	**210**	P	Pn	07 13 17.8	-6.1

*CSEM **28** 07:30:51.3±0.1, 4454N×1026E, h11km±1km, ML2.3/5, Error ellipse: s-maj=2.3km s-min=2.1km az=93.0*
*LDG **28** 07:30:51.5±0.2, 4444N×1032E, h2km, Ml2.5/9, Error ellipse: s-maj=3.6km s-min=1.9km az=96.0*
*GEN **28** 07:30:51.2, 4459N×1031E, h0km, ML1.0*
*VIE **28** 07:30:51.6±0.4, 4449N×1006E, h10km, mb2.3/4, ML2.6/4, Error ellipse: s-maj=6.5km s-min=1.5km az=71.0*
*ROM **28** 07:30:52.1±0.1, 4451N×1025E, h23km±4km, Md2.3/8, Ml2.2/5, Error ellipse: s-maj=3.4km s-min=2.2km az=175.0*
*ISCJB **28** 07:30:52.3±0.3, 4450N±003×1021E±003, h24km±4km, Error ellipse: s-maj=5.1km s-min=3.7km az=153.8*

ISC 28 07:30:52.4±0.3, 4452N±002×1025E±004, h17km±4km, n45, σ0°95/76, 2C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.13**	**257**	P	**Pg**	**07 30 56.1**	**-0.2**
ERBM	**Eremo**	**0.16**	**131**	*Pg*	**Pg**	**07 30 56.8**	**+0.2**
ERBM	**Eremo**	**0.16**	**131**	*Pg*	**Pg**	**07 30 56.8**	**+0.2**
ERBM	326nm,0.4s			*Sg*	**Sg**	**07 31 01.1**	**+1.7**
VALM	**Valbona**	**0.17**	**180**	P	**Pg**	**07 30 56.5**	**-0.3**
BACM	**Baccana**	**0.27**	**207**	P	**Pg**	**07 30 57.8**	**-0.6**
GSCL	**Gusciola**	**0.30**	**125**	*Pg*	**Pg**	**07 30 58.6**	**-0.2**
GSCL	48nm,0.2s			*Sg*	**Sg**	**07 31 03.4**	**+0.3**
GSCL	**Gusciola**	**0.30**	**125**	*Pg*	**Pg**	**07 30 58.6**	**-0.2**
GSCL	48nm,0.2s			*Sg*	**Sg**	**07 31 03.4**	**+0.3**
SARO	**Sassorosso**	**0.35**	**162**	P	**Pg**	**07 30 58.9**	**-0.9**
VLC	**Villacollemand**	**0.38**	**165**	*Pg*	**Pg**	**07 30 59.4**	**-0.7**
VLC	103nm,0.7s			*Sg*	**Sg**	**07 31 06.0**	**+0.6**
VLC	**Villacollemand**	**0.38**	**165**	*Pg*	**Pg**	**07 30 59.4**	**-0.7**
VLC	103nm,0.7s			*Sg*	**Sg**	**07 31 06.0**	**+0.6**
BDI	**Bagni Di Lucca**	**0.52**	**151**	*Pg*	**Pg**	**07 31 02.7**	**-0.1**
BDI	59nm,0.5s			*Sg*	**Sg**	**07 31 10.6**	**+0.8**
BDI	**Bagni Di Lucca**	**0.52**	**151**	*Pg*	**Pg**	**07 31 02.7**	**-0.1**
BDI	59nm,0.5s			*Sg*	**Sg**	**07 31 10.6**	**+0.8**
SC2M	**Scurtabo**	**0.52**	**257**	*Pg*	**Pg**	**07 31 03.1**	**+0.3**
SC2M				*Sg*	**Sg**	**07 31 10.3**	**+0.4**
SC2M	**Scurtabo**	**0.52**	**257**	*Pg*	**Pg**	**07 31 03.1**	**+0.3**
SC2M				*Sg*	**Sg**	**07 31 10.3**	**+0.4**
MAIM	**Mastiano**	**0.63**	**164**	*Pg*	**Pg**	**07 31 04.6**	**-0.2**
MAIM				*Sg*	**Sg**	**07 31 13.9**	**+0.7**
MAIM	**Mastiano**	**0.63**	**164**	*Pg*	**Pg**	**07 31 04.6**	**-0.2**
MAIM				*Sg*	**Sg**	**07 31 13.9**	**+0.7**
PII	**Pisa** 31nm,0.2s	**0.82**	**166**	*Pg*	**Pg**	**07 31 07.9**	**-0.5**
PII	**Pisa** 31nm,0.2s	**0.82**	**166**	*Pg*	**Pg**	**07 31 07.9**	**-0.5**
PCP	**Piancastagn**	**1.22**	**272**	P	**Pn**	**07 31 15.4**	**+0.9**
PCP				S	**Sb**	**07 31 31.9**	**+1.6**
MAGA	**Magasa**	**1.28**	**12**	*Pg*	**Pg**	**07 31 15.0**	**-2.1**
MAGA				*Sg*	**Sg**	**07 31 33.0**	**-0.8**
MAGA	**Magasa**	**1.28**	**12**	*Pg*	**Pg**	**07 31 15.0**	**-2.1**
MAGA	143nm,0.4s			*Sg*	**Sg**	**07 31 33.0**	**-0.8**
TEOL	**Teolo**	**1.31**	**50**	*ePg*	**Pg**	**07 31 16.4**	**-1.2**
TEOL				*eSg*	**Sg**	**07 31 34.4**	**-0.4**
CTI	**Castel Tesino**	**1.82**	**32**	*Pg*	**Pg**	**07 31 22.7**	**-4.6**
CTI	26nm,0.3s			*Sg*	**Sg**	**07 31 45.8**	**-5.2**
SBF	**Sospel**	**2.13**	**253**	*ePn*	**Pn**	**07 31 26.5**	**-0.5**
SBF	5.8nm,0.3s			*eSn*	**Sn**	**07 31 52.1**	**-0.9**
SBF	**Sospel**	**2.13**	**253**	*ePn*	**Pn**	**07 31 26.5**	**-0.5**
SBF	2.9nm,0.3s			*eSn*	**Sn**	**07 31 52.1**	**-0.9**
PGF	**Pioggiola**	**2.17**	**205**	*ePn*	**Pn**	**07 31 26.3**	**-1.3**
MBDF	**Montbardon**	**2.49**	**276**	*ePn*	**Pn**	**07 31 32.6**	**+0.6**
MBDF	2.8nm,0.3s			*eSn*	**Sn**	**07 32 02.3**	**+0.3**
MBDF	**Montbardon**	**2.49**	**276**	*ePn*	**Pn**	**07 31 32.6**	**+0.6**
MBDF	1.4nm,0.3s			*eSn*	**Sn**	**07 32 02.3**	**+0.3**
LPG	**La Plagne**	**2.67**	**293**	*eP*	**Pn**	**07 31 37.9**	**+3.5**
LPG	1.4nm,0.3s			*eSn*	**Sn**	**07 32 06.8**	**+0.5**
LPG	**La Plagne**	**2.67**	**293**	*ePn*	**Pn**	**07 31 34.7**	**+0.3**
LPG	0.7nm,0.3s			*eSn*	**Sn**	**07 32 06.8**	**+0.5**
LPL	**La Plagne** 2.8nm,0.3s	**2.68**	**293**	*eSn*	**Sn**	**07 32 07.3**	**+0.6**
LPL	**La Plagne** 1.4nm,0.3s	**2.68**	**293**	*eSn*	**Sn**	**07 32 07.3**	**+0.6**
FRF	**La Foret Royal**	**2.77**	**251**	*ePn*	**Pn**	**07 31 35.4**	**-0.4**
FRF	6.2nm,0.4s			*eSn*	**Sn**	**07 32 07.3**	**-1.5**
FRF	**La Foret Royal**	**2.77**	**251**	*ePn*	**Pn**	**07 31 35.4**	**-0.4**
FRF	3.1nm,0.4s			*eSn*	**Sn**	**07 32 07.3**	**-1.5**
DAVA	**Damuels**	**2.78**	**355**	*iPn*	**Pn**	**07 31 37.0**	**+1.0**
DAVA				*iSn*	**Sn**	**07 32 12.0**	**+3.0**
WTTA	**Wattenberg**	**2.91**	**19**	*iPn*	**Pn**	**07 31 39.1**	**+1.3**
WTTA				*iSn*	**Sn**	**07 32 16.1**	**+3.8**
LMR	**La Mourre** 6.4nm,0.3s	**2.95**	**248**	*ePn*	**Pn**	**07 31 37.6**	**-0.7**
LMR				*eSn*	**Sn**	**07 32 11.9**	**-1.4**
LMR	**La Mourre** 3.2nm,0.3s	**2.95**	**248**	*ePn*	**Pn**	**07 31 37.6**	**-0.7**
LMR				*eSn*	**Sn**	**07 32 11.9**	**-1.4**
ORIF	**Oris-en-Rattie**	**3.14**	**279**	*eP*	**Pn**	**07 31 44.0**	**+3.1**
CABF	**La Chapelle**	**3.59**	**307**	*ePn*	**Pn**	**07 31 47.9**	**+0.8**
HINF	**Hinteralfeld** 1.6nm,0.3s	**4.05**	**326**	*ePn*	**Pn**	**07 31 53.7**	**+0.2**
HINF				*eSn*	**Sn**	**07 32 39.5**	**-1.0**
HINF	**Hinteralfeld** 0.8nm,0.3s	**4.05**	**326**	*ePn*	**Pn**	**07 31 53.7**	**+0.2**
HINF				*eSn*	**Sn**	**07 32 39.5**	**-1.0**
CDF	**Champ du Feu** 1.5nm,0.3s	**4.40**	**333**	*ePn*	**Pn**	**07 31 58.6**	**+0.4**
CDF				*eSn*	**Sn**	**07 32 49.0**	**0.0**
HAU	**Haudompre** 3.8nm,0.3s	**4.41**	**324**	*eSn*	**Sn**	**07 32 48.7**	**-0.6**
HAU	**Haudompre** 1.9nm,0.3s	**4.41**	**324**	*eSn*	**Sn**	**07 32 48.7**	**-0.6**

*ISCJB **28** 07:33:26.2±0.4, 1095N±003×6228W±002, h91km±5km, Error ellipse: s-maj=5.1km s-min=3.6km az=150.6*
*FUNV **28** 07:33:28.3, 1098N×6221W, h73km, MW3.5*
*NEIC **28** 07:33:30.5, 1105N×6212W, h66km, MD3.4(TRN), After TRN.*
*TRN **28** 07:33:30.4, 1106N×6214W, h64km, MD3.4*

ISC 28 07:33:27.5±0.4, 1096N±003×6228W±002, h81km±6km, n36, σ0°90/56, 2C-5D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**171**	*eP*	**Pn**	**07 33 40.3**	**+0.3**
GUIV				*eS*	**Sn**	**07 33 48.8**	**-0.4**
TCE	**Chacachacare**	**0.57**	**117**	*iP*	**Pn**	**07 33 42.7**	**+0.7**
TCE				*eS*	**Sn**	**07 33 52.0**	**-0.8**
TRN	**Trinidad (W)**	**0.91**	**110**	*iP*	**Pn**	**07 33 46.4**	**+0.9**
TRN				*iS*	**Sn**	**07 33 58.6**	**-0.5**
ITEV	**Isla Los Testi**	**0.93**	**295**	*eP*	**Pn**	**07 33 46.1**	**+0.3**
ITEV				*eS*	**Sn**	**07 33 59.3**	**-0.1**
CRUV	**Carupano**	**0.99**	**253**	*iP*	**Pn**	**07 33 47.0**	**+0.5**
CRUV				*eS*	**Sn**	**07 34 00.8**	**+0.2**
BUAY	**Buenos Aires**	**1.03**	**146**	*eP*	**Pn**	**07 33 50.5**	**+3.6**
GUNV	**Guanoco**	**1.03**	**220**	*eP*	**Pn**	**07 33 47.7**	**+0.7**
GUNV				*eS*	**Sn**	**07 34 02.6**	**+1.1**
TPP	**Pointe-a-Pierr**	**1.03**	**128**	*eP*	**Pn**	**07 33 48.4**	**+1.4**
TBH	**Brigand Hill**	**1.28**	**112**	*iP*	**Pn**	**07 33 51.0**	**+1.0**
TBH				*eS*	**Sn**	**07 34 07.5**	**+0.5**
GRGR	**Grenville**	**1.31**	**28**	*ePn*	**Pn**	**07 33 49.8**	**-0.7**
GRGR				*eSn*	**Sn**	**07 34 07.8**	**0.0**
GRW	**Mount Saint Ca**	**1.33**	**27**	*eP*	**Pn**	**07 33 51.5**	**+0.8**
TPR	**Prospect**	**1.49**	**81**	*eP*	**Pn**	**07 33 53.4**	**+0.7**
TPR				*eS*	**Sn**	**07 34 10.8**	**-0.9**
TPR	**Prospect**	**1.49**	**81**	*eP*	**Sn**	**07 33 53.4**	**+0.7**
TPR				*eS*	**Sn**	**07 34 12.2**	**+0.4**
TOSP	**Speyside**	**1.74**	**79**	*iP*	**Pn**	**07 33 55.3**	**-0.7**
TOSP				*eS*	**Sn**	**07 34 15.3**	**-2.3**
ORIV	**Oritupano**	**2.19**	**211**	*eP*	**Pn**	**07 34 02.8**	**+0.9**
ORIV				*eS*	**Sn**	**07 34 27.2**	**-1.0**
FCV	**Fort Charlotte**	**2.40**	**25**	*eP*	**Pn**	**07 34 05.2**	**+0.3**
FCV				*eS*	**Sn**	**07 34 31.9**	**-1.6**
FCV	**Fort Charlotte**	**2.40**	**25**	*eP*	**Pn**	**07 34 05.2**	**+0.3**
FCV				*eS*	**Sn**	**07 34 32.9**	**-0.5**
IBAV	**Isla La Blanqu**	**2.42**	**291**	*eP*	**Pn**	**07 34 05.0**	**+0.1**
IBAV				*eS*	**Sn**	**07 34 32.8**	**-0.9**
PCRV	**Puerto La Cruz**	**2.45**	**252**	*eP*	**Pn**	**07 34 06.5**	**+1.0**
PCRV				*eS*	**Sn**	**07 34 33.6**	**-0.9**
SVB	**Belmont**	**2.51**	**23**	*eP*	**Pn**	**07 34 07.2**	**+1.0**
SVB				*eS*	**Sn**	**07 34 34.4**	**-1.5**
SVV	**Soufriere Volc**	**2.56**	**24**	*eP*	**Pn**	**07 34 08.1**	**+1.2**
RIOV	**Rio Grande**	**2.91**	**171**	*eP*	**Pn**	**07 34 12.0**	**+0.3**
RIOV				*eS*	**Sn**	**07 34 43.1**	**-2.5**
PRGV	**PARIAGUAN**	**3.20**	**227**	*eP*	**Pn**	**07 34 15.8**	**+0.2**
PRGV				*eS*	**Sn**	**07 34 52.1**	**-0.6**
CUPV	**Cœpira**	**3.57**	**256**	*eP*	**Pn**	**07 34 21.4**	**+0.8**
CUPV				*eS*	**Sn**	**07 35 00.1**	**-1.6**
BIRV	**Birongo**	**3.96**	**263**	*eP*	**Pn**	**07 34 26.7**	**+0.8**
MERV	**Las Mercedes**	**4.31**	**247**	*eP*	**Pn**	**07 34 31.2**	**+0.6**
LUEV	**Luepa**	**5.15**	**171**	*eP*	**Pn**	**07 34 40.8**	**-1.4**
CAOV	**Caicara del Or**	**5.39**	**228**	*eP*	**Pn**	**07 34 44.6**	**-0.7**
TURV	**Turiamo**	**5.49**	**265**	*eP*	**Pn**	**07 34 47.3**	**+0.5**
BAUV	**El Baul**	**6.02**	**251**	*eP*	**Pn**	**07 34 53.9**	**-0.2**
TEPV	**Terepaima**	**6.88**	**262**	*eP*	**Pn**	**07 35 06.0**	**+0.3**
SANV	**Sanarito**	**7.29**	**259**	*eP*	**Pn**	**07 35 11.9**	**+0.6**
SIQV	**Siquisique**	**7.41**	**268**	*eP*	**Pn**	**07 35 12.8**	**-0.1**
MONV	**Montecano**	**7.61**	**278**	*eP*	**Pn**	**07 35 15.0**	**-0.7**
CURV	**Curarigua**	**7.62**	**264**	*eP*	**Pn**	**07 35 16.2**	**+0.4**
SOCV	**Socops**	**8.87**	**253**	*eP*	**Pn**	**07 35 31.5**	**-1.4**

*CSEM **28** 07:40:35.8, 3954N×3313E, h5km, MD2.7, After ISK*
*DDA **28** 07:40:36.9, 3942N×3310E, h7km±1km, Md2.1*

ISK 28 07:40:35.8, 3954N×3313E, h5km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**110**	*ePG*	Pg	07 40 46.4	+1.4
KAMT				*eSG*	Sg	07 40 53.6	+2.3
CDAG	**Cicekdag**	**0.96**	**84**	*iP*	Pg	07 40 56.1	+1.8
CDAG				*iS*	Sg	07 41 11.9	+5.1
KIZT	**Kizilcal**	**1.17**	**236**	*ePN*	Pn	07 40 58.8	-0.1
KIZT				*eSN*	Sn	07 41 16.4	+1.2
KDHN	**Kadinhani**	**1.29**	**218**	*eP*	Pn	07 40 59.7	-0.7
KDHN				*iS*	Sg	07 41 15.6	-1.5
YOZ	**Yozgat**	**1.69**	**86**	*ePN*	Pn	07 41 07.6	+1.6

*TRN **28** 07:47:19.4, 1910N×6478W, h9km*
*ISCJB **28** 07:47:20.3±1.0, 1929N±006×6462W±005, h41km±12km, mb3.5/3, Error ellipse: s-maj=10.5km s-min=7.3km az=179.6*
*IDC **28** 07:47:21.8±7.0, 1929N×6415W, h57km±62km, mb3.2/3, mb1 3.7/6, mb1mx3.3/25, mbtmp3.6/6, ML3.5/3, MS3.0/1, Ms1 2.9/1, ms1mx2.5/15, Error ellipse: s-maj=79.8km s-min=27.0km az=68.0*
*NEIC **28** 07:47:21.4, 1918N×6455W, h58km, MD3.7(RSPR), After RSPR.*
*RSPR **28** 07:47:21.4, 1918N×6455W, h59km±6km, MD3.7/17, MD3.7/17*

ISC 28 07:47:21.3±1.1, 1925N±006×6460W±005, h35km±15km, n27, σ0°96/41, mb3.5/3, 10C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.58**	**154**	*eP*	**Pn**	**07 47 32.6**	**-0.5**
TBVI	**Tortola**	**

TBVI	**Tortola**	**0.83 179**	*e*S	**Sn**	**08 16 40.9**	**-0.3**
TBVI	**Tortola**	**0.83 179**	*e*P	**Pn**	**08 16 29.3**	**-0.8**
TBVI			*e*S	**Sn**	**08 16 40.9**	**-0.3**
TBVI	**Tortola**	**0.83 179**	*j i*P	**Pn**	**08 16 29.1**	**-0.9**
TBVI			*e*S	**Sn**	**08 16 40.9**	**-0.3**
STVI	**Saint Thomas**	**0.94 199**	*e*P	**Pn**	**08 16 30.8**	**-0.9**
STVI	**Saint Thomas**	**0.94 199**	*e*P	**Pn**	**08 16 31.1**	**-0.5**
STVI			*e*S	**Sn**	**08 16 44.0**	**0.0**
STVI			*e*S	**Sn**	**08 16 44.3**	**+0.3**
STVI	**Saint Thomas**	**0.94 199**	*e*P	**Pn**	**08 16 30.8**	**-0.9**
STVI			*e*S	**Sn**	**08 16 44.0**	**0.0**
MTP	**Monte Pirata**	**1.44 217**	*e*S	**Sn**	**08 16 56.2**	**0.0**
MTP	**Monte Pirata**	**1.44 217**	*e*P	**Pn**	**08 16 38.1**	**-0.4**
MTP	**Monte Pirata**	**1.44 217**	*e*S	**Sn**	**08 16 56.2**	**0.0**
MTP	**Monte Pirata**	**1.44 217**	*e*P	**Pn**	**08 16 38.1**	**-0.3**
MTP			*e*S	**Sn**	**08 16 56.2**	**0.0**
MTP			*e*S	**Sn**	**08 16 56.2**	**0.0**
MTP	**Monte Pirata**	**1.44 217**	*e*P	**Pn**	**08 16 38.1**	**-0.4**
MTP			*e*S	**Sn**	**08 16 56.2**	**0.0**
CDVI	**St. Croix**	**1.50 185**	*e*P	**Pn**	**08 16 40.2**	**+1.0**
CDVI	**St. Croix**	**1.50 185**	*e*S	**Sn**	**08 17 00.4**	**+2.8**
CDVI	**St. Croix**	**1.50 185**	*e*P	**Pn**	**08 16 40.5**	**+1.2**
CDVI			*e*S	**Sn**	**08 17 00.4**	**+2.8**
CDVI	**St. Croix**	**1.50 185**	*e*P	**Pn**	**08 16 40.2**	**+1.0**
CDVI			*e*S	**Sn**	**08 17 00.4**	**+2.8**
CBYP	**Canovanas**	**1.51 230**	*e*P	**Pn**	**08 16 39.1**	**-0.4**
CBYP	**Canovanas**	**1.51 230**	*e*S	**Sn**	**08 16 58.2**	**+0.2**
CBYP	**Canovanas**	**1.51 230**	*e*P	**Pn**	**08 16 39.0**	**-0.4**
CBYP	**Canovanas**	**1.51 230**	*e*S	**Sn**	**08 16 57.1**	**-0.9**
CBYP	**Canovanas**	**1.51 230**	*e*P	**Pn**	**08 16 39.3**	**-0.1**
CBYP	**Canovanas**	**1.51 230**	*e*P	**Pn**	**08 16 39.6**	**+0.1**
CBYP			*e*S	**Sn**	**08 16 57.1**	**-0.9**
CBYP			*e*S	**Sn**	**08 16 58.2**	**+0.2**
CBYP	**Canovanas**	**1.51 230**	*e*P	**Pn**	**08 16 39.0**	**-0.4**
CBYP			*e*S	**Sn**	**08 16 57.1**	**-0.9**
CBYP			*e*S	**Sn**	**08 16 58.2**	**+0.2**
HUMP	**Col San Antoni**	**1.59 226**	*e*S	**Sn**	**08 16 60.0**	**-0.1**
HUMP	**Col San Antoni**	**1.59 226**	*e*P	**Pn**	**08 16 40.2**	**-0.4**
HUMP	**Col San Antoni**	**1.59 226**	*e*S	**Sn**	**08 17 00.1**	**0.0**
HUMP	**Col San Antoni**	**1.59 226**	*e*P	**Pn**	**08 16 40.2**	**-0.4**
HUMP	**Col San Antoni**	**1.59 226**	*e*P	**Pn**	**08 16 40.2**	**-0.4**
HUMP			*e*S	**Sn**	**08 16 60.0**	**-0.1**
HUMP			*e*S	**Sn**	**08 17 00.9**	**+0.9**
HUMP	**Col San Antoni**	**1.59 226**	*e*P	**Pn**	**08 16 40.2**	**-0.4**
HUMP			*e*S	**Sn**	**08 16 60.0**	**-0.1**
HUMP			*e*S	**Sn**	**08 17 00.1**	**0.0**
CPD	**Cerro la Pandu**	**1.71 225**	*e*P	**Pn**	**08 16 42.0**	**-0.1**
CPD	**Cerro la Pandu**	**1.71 225**	*e*P	**Pn**	**08 16 42.1**	**-0.1**
CPD	**Cerro la Pandu**	**1.71 225**	*e*P	**Pn**	**08 16 42.5**	**+0.3**
CPD	**Cerro la Pandu**	**1.71 225**	*e*P	**Pn**	**08 16 42.6**	**+0.4**
CPD			*e*S	**Sn**	**08 17 01.9**	**-1.0**
CPD	**Cerro la Pandu**	**1.71 225**	*e*P	**Pn**	**08 16 42.1**	**-0.1**
CPD			*e*S	**Sn**	**08 17 01.9**	**-1.0**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.5**	**-0.3**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.6**	**-0.2**
SJG			*e*S	**Sn**	**08 17 05.7**	**-0.1**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.3**	**-0.5**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.5**	**-0.3**
SJG			*e*S	**Sn**	**08 17 06.3**	**+0.4**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.5**	**-0.3**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.5**	**-0.3**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.6**	**-0.2**
SJG			*e*S	**Sn**	**08 17 05.7**	**-0.1**
SJG			*e*S	**Sn**	**08 17 05.8**	**-0.1**
SJG			*e*S	**Sn**	**08 17 05.8**	**-0.1**
SJG			*e*S	**Sn**	**08 17 06.3**	**+0.4**
SJG	**San Juan**	**1.83 232**	*e*P	**Pn**	**08 16 43.3**	**-0.5**
SJG			*e*S	**Sn**	**08 17 05.8**	**-0.1**
SMRT	**St. Maarten**	**1.90 129**	*e*P	**Pn**	**08 16 44.5**	**-0.3**
SABA	**Saba**	**2.09 141**	*e*P	**Pn**	**08 16 47.1**	**-0.3**
CELP	**Cerrillos**	**2.18 238**	*e*P	**Pn**	**08 16 48.3**	**-0.4**
CELP			*e*S	**Sn**	**08 17 14.6**	**0.0**
CELP	**Cerrillos**	**2.18 238**	*e*P	**Pn**	**08 16 48.5**	**-0.1**
CELP			*e*S	**Sn**	**08 17 14.4**	**-0.2**
CELP	**Cerrillos**	**2.18 238**	*e*P	**Pn**	**08 16 48.5**	**-0.1**
CELP			*e*S	**Sn**	**08 17 14.4**	**-0.2**
CELP			*e*S	**Sn**	**08 17 14.6**	**0.0**
CELP	**Cerrillos**	**2.18 238**	*e*P	**Pn**	**08 16 48.3**	**-0.4**
CELP			*e*S	**Sn**	**08 17 14.6**	**0.0**
OBIP	**Obispado Ponce**	**2.22 238**	*e*P	**Pn**	**08 16 49.1**	**-0.1**
OBIP	**Obispado Ponce**	**2.22 238**	*e*P	**Pn**	**08 16 49.1**	**-0.1**
OBIP	**Obispado Ponce**	**2.22 238**	*e*P	**Pn**	**08 16 49.8**	**+0.6**
OBIP			*e*S	**Sn**	**08 17 15.6**	**0.0**
OBIP			*e*S	**Sn**	**08 17 16.9**	**+1.4**
OBIP	**Obispado Ponce**	**2.22 238**	*e*P	**Pn**	**08 16 49.1**	**-0.1**
OBIP			*e*S	**Sn**	**08 17 15.6**	**0.0**
OBIP			*e*S	**Sn**	**08 17 16.1**	**+0.6**
ICM	**Isla Caja Muer**	**2.24 233**	*e*P	**Pn**	**08 16 49.4**	**-0.1**
ICM	**Isla Caja Muer**	**2.24 233**	*e*P	**Pn**	**08 16 50.1**	**+0.6**
ICM	**Isla Caja Muer**	**2.24 233**	*e*S	**Sn**	**08 17 15.5**	**-0.5**
ICM	**Isla Caja Muer**	**2.24 233**	*e*P	**Pn**	**08 16 50.6**	**+1.1**
ICM			*e*S	**Sn**	**08 17 15.5**	**-0.5**
ICM	**Isla Caja Muer**	**2.24 233**	*e*P	**Pn**	**08 16 50.1**	**+0.6**
ICM			*e*S	**Sn**	**08 17 15.5**	**-0.5**
LRS	**Lares**	**2.30 246**	*e*P	**Pn**	**08 16 50.2**	**0.0**
LRS	**Lares**	**2.30 246**	*e*P	**Pn**	**08 16 50.7**	**+0.4**
LRS	**Lares**	**2.30 246**	*e*P	**Pn**	**08 16 50.7**	**+0.4**
LRS	**Lares**	**2.30 246**	*e*P	**Pn**	**08 16 50.7**	**+0.4**
AGPR	**Aguadilla, PR**	**2.47 252**	*e*P	**Pn**	**08 16 52.4**	**-0.2**
GBPR	**Guanica, Bosqu**	**2.48 240**	*e*P	**Pn**	**08 16 52.9**	**+0.2**
GBPR	**Guanica, Bosqu**	**2.48 240**	*e*P	**Pn**	**08 16 53.8**	**+1.1**
GBPR	**Guanica, Bosqu**	**2.48 240**	*e*P	**Pn**	**08 16 53.8**	**+1.1**
GBPR			*e*S	**Sn**	**08 17 21.5**	**-0.4**
LSP	**Las Mesas**	**2.56 246**	*e*P	**Pn**	**08 16 53.8**	**-0.1**
LSP	**Las Mesas**	**2.56 246**	*e*P	**Pn**	**08 16 53.9**	**+0.1**
LSP	**Las Mesas**	**2.56 246**	*e*P	**Pn**	**08 16 53.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.65 243**	*e*P	**Pn**	**08 16 55.4**	**+0.2**
SDDR	**Presa de Saban** 23nm,0.5s	**6.29 269**	*e*Pn	**Pn**	**08 17 45.6**	**+0.3**
PCRV	**Puerto La Cruz** 0.9nm,0.3s,baz=338,slow=12,SNR=9.2	**9.02 180**	Pn	**Pn**	**08 18 23.9**	**+1.1**
PCRV			Sn	**Sn**	**08 19 54.7**	**-8.6**
	0.3nm,0.3s,baz=336,slow=6.2,SNR=3.1					
SDV	**Santo Domingo** 1.0nm,0.3s,baz=84,slow=11,SNR=11	**11.83 210**	Pn	**Pn**	**08 19 04.7**	**+3.5**
SDV			Sn	**Sn**	**08 21 10.3**	**-1.8**
	0.2nm,0.3s,baz=39,slow=17,SNR=2.5					
SDV			LR	LR	08 23 39.8	
	comp=Z,76nm,19.8s,baz=349,slow=37					
SDV	**Santo Domingo** 7.9nm,0.8s	**11.83 210**	*e*Pn	**Pn**	**08 19 04.8**	**+3.6**
ROSC	**El Rosal** 1.2nm,0.3s,baz=86,slow=19,SNR=2.9	**17.15 215**	P	**Pn**	**08 20 14.3**	**+2.4**
TXAR	**Lajitas Array** 0.3nm,0.8s,mb3.2,baz=103,slow=12,SNR=3.4	**36.81 293**	P	**P**	**08 23 19.6**	**-0.2**
PDAR	**Pinedale Array** 0.7nm,0.9s,mb3.4,baz=108,slow=9.5,SNR=4.2	**44.41 312**	P	**P**	**08 24 23.2**	**+1.0**
CPUP	**Villa Florida** 0.4nm,0.3s,mb3.8,baz=359,slow=7.3,SNR=3.6	**45.86 171**	P	**P**	**08 24 36.2**	**+2.4**
NVAR	**Mina Array Bea** 0.4nm,0.8s,mb3.5,baz=81,slow=7.7,SNR=3.1	**50.02 304**	P	**P**	**08 25 06.6**	**+0.5**
YKA	**Yellowknife Ar** 0.7nm,0.6s,mb3.9,baz=110,slow=7.5,SNR=15	**55.08 334**	P	**P**	**08 25 41.8**	**-1.3**
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,mb3.4,baz=293,slow=7.1,SNR=2.3	**63.67 85**	P	**P**	**08 26 41.0**	**-2.3**

*CSEM **28** 08:29:33.7, 39.10N×3308E, h9km, MD3.0, After ISK*
*ISK **28** 08:29:33.7, 39.10N×3308E, h9km, MD3.0*
*DDA **28** 08:29:36.0, 3942N×3311E, h6km±1km, Md2.2*
*ISCJB **28** 08:29:37.3±0.9, 3937N±005×3316E±005, h11km±8km, Error ellipse: s-maj=8.6km s-min=5.7km az=158.8*

ISC 28 08:29:37.2±0.7,**3937N**±005×**3315E**±005,**h8**km±8km,**n10, s0°96/15,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.44**	**90**	PG	**Pg**	**08 29 45.3**	**-0.4**
KAMT				*e*SG	**Sg**	**08 29 52.9**	**+1.4**
LOD	**Lodumlu**	**0.60**	**330**	*e*PG	**Pg**	**08 29 50.1**	**+1.4**
CDAG	**Cicekdag**	**0.98**	**75**	*i* P	**Pg**	**08 29 55.2**	**-0.9**
CDAG				*i* S	**Sg**	**08 30 09.6**	**+0.8**
KIZT	**Kizilcal**	**1.10**	**244**	*e*PG	**Pg**	**08 29 52.3**	**-6.0**
ELDT	**Eldivan**	**1.14**	**11**	*i* P	**Pg**	**08 29 57.6**	**-1.4**
ELDT				*i* S	**Sg**	**08 30 13.6**	**-0.3**
KDHN	**Kadinhani**	**1.17**	**224**	*i* P	**Pg**	**08 29 59.0**	**-0.6**
KDHN				*i* S	**Sg**	**08 30 14.5**	**-0.3**
CORM	**Corum**	**1.40**	**54**	*e*PN	**Pn**	**08 30 03.0**	**+0.1**
YOZ	**Yozgat**	**1.70**	**80**	*e*PN	**Pn**	**08 30 06.0**	**-1.2**
ESKT	**Eskisehir**	**1.78**	**276**	*e*P	**Pn**	**08 30 10.1**	**+1.9**
ESKT				*i* S	**Sn**	**08 30 31.4**	**+0.4**

MDU	**Mudurnu**	**1.84 307**	*e*PN	**Pn**	**08 30 08.4**	**-0.7**

IDC 28 08:32:56.1±4.8,**628S**×**12835E**,**h340**km±55km,**mb3.2/2, mb1 3.2/4,mb1mx3.0/15,mbtmp3.1/4,Error ellipse: s-maj=134.6km s-min=13.9km az=69.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.3s,baz=332,slow=13,SNR=13	**14.78**	**157**	P	P	08 36 08.5	-0.3
WRA				S	S	08 38 46.2	-2.4
	0.3nm,0.3s,baz=333,slow=20,SNR=6.1						
ASAR	**Alice Springs** 0.5nm,0.3s,baz=341,slow=11,SNR=51	**18.10**	**163**	P	P	08 36 45.4	+0.8
ASAR				S	S	08 39 55.3	+1.2
	0.3nm,0.3s,baz=345,slow=21,SNR=24						
STKA	**Stephens Creek** 1.0nm,0.6s,baz=342,slow=9.6,SNR=3.7	**28.32**	**156**	P	P	08 38 18.9	-0.6
MKAR	**Makanchi Array** 0.7nm,0.4s,baz=122,slow=8.3,SNR=8.1	**66.73**	**327**	P	P	08 43 11.5	+0.1

*ISCJB **28** 08:34:00.8±0.6, 1495N±005×9310W±004, h61km±14km, Error ellipse: s-maj=9.2km s-min=4.9km az=26.1*
*NEIC **28** 08:34:02.1, 1493N×9303W, h69km, MD4.1(MEX), After MEX.*
*CASC **28** 08:34:02.7±1.8, 1522N×9290W, h34km±999km, MD3.9*
*MEX **28** 08:34:02.1±0.8, 1493N×9303W, h69km±10km, MD4.1*

ISC 28 08:34:01.9±0.6,**1497N**±005×**9305W**±004,**h57**km±17km, **n21,s0°83/27,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.75**	**347**	*i* P	**Pn**	**08 34 16.6**	**0.0**
PCIG				*i* S	**Sn**	**08 34 28.3**	**+1.0**
THIG		**0.76**	**95**	*i* P	**Pn**	**08 34 15.5**	**-1.2**
THIG				*i* S	**Sn**	**08 34 26.9**	**-0.7**
JAT	**Jato**	**1.52**	**115**	*e*P	**Pn**	**08 34 27.1**	**+0.4**
CCIG	**Comitan**	**1.57**	**34**	*i* P	**Pn**	**08 34 28.1**	**+0.5**
CCIG				*i* S	**Sn**	**08 34 46.7**	**-0.1**
TGIG		**1.80**	**358**	*i* P	**Pn**	**08 34 29.6**	**-0.9**
TGIG				*i* S	**Sn**	**08 34 52.3**	**0.0**
SCX	**San Cristobal**	**1.80**	**13**	*e*P	**Pn**	**08 34 31.0**	**+0.4**
SCX				*i* S	**Sn**	**08 34 52.2**	**-0.1**
FG6		**2.14**	**101**	*e*P	**Pn**	**08 34 36.2**	**+1.0**
FG6				*e*S	**Sn**	**08 35 00.8**	**+0.2**
FUG	**Fuego 3**	**2.20**	**103**	*e*P	**Pn**	**08 34 36.3**	**+0.2**
NBG	**Las Nubes**	**2.64**	**98**	*e*P	**Pn**	**08 34 45.6**	**+3.5**
CMIG	**Matias Romero**	**2.75**	**320**	*i* P	**Pn**	**08 34 43.6**	**+0.1**
CMIG				*i* S	**Sn**	**08 35 15.7**	**+0.1**
HUIG	**Huatulco**	**3.06**	**285**	*i* P	**Pn**	**08 34 47.1**	**-0.7**
HUIG				*i* S	**Sn**	**08 35 22.2**	**-0.9**
RTR	**El Retiro**	**3.47**	**108**	*e*P	x	08 34 55.0	
RTR				*e*S	x	08 35 35.7	
SBLS	**San Blas**	**3.51**	**108**	*e*P	x	08 34 54.8	
SBLS				*e*S	x	08 35 36.0	
SNJE	**San Jose**	**3.51**	**108**	*e*P	x	08 34 54.9	
SNJE				*e*S	x	08 35 36.5	
BOQS	**Boqueron**	**3.85**	**108**	*e*P	x	08 34 59.8	
BOQS				*e*S	x	08 35 44.2	
VHO	**Vista Hermosa**	**4.11**	**301**	*i* P	**Pn**	**08 35 04.2**	**+2.0**
VHO				*i* S	**Sn**	**08 35 49.1**	**0.0**
LCBS	**La Ceiba**	**4.16**	**108**	*e*P	x	08 35 02.9	
LCBS				*e*S	x	08 35 49.8	
SNVI	**San Vicente**	**4.30**	**108**	*e*P	x	08 35 05.6	
SNVI				*e*S	x	08 35 54.1	
PNIG	**Pinotepa**	**5.09**	**287**	*i* P	**Pn**	**08 35 16.0**	**+0.3**
PNIG				*i* S	**Sn**	**08 36 12.4**	**-0.7**
UTMO	**Huajuapan**	**5.37**	**303**	*i* P	**Pn**	**08 35 19.7**	**+0.2**
UTMO				*i* S	**Sn**	**08 36 20.4**	**+0.2**
TEIG	**Tepich**	**6.93**	**40**	*e*P	**Pn**	**08 35 38.5**	**-2.4**
TEIG				*i* S	**Sn**	**08 36 52.0**	**-6.4**

*TRN **28** 08:36:26.8, 19.12N×6469W, h28km*
*NEIC **28** 08:36:27.9, 19.12N×6457W, h66km, MD3.7(RSPR), After RSPR.*
*RSPR **28** 08:36:27.9, 19.12N×6457W, h66km±3km, MD3.6/9, MD3.6/9*

ISC 28 08:36:27.7±1.3,**1921N**±010×**6462W**±007,**h47**km±32km, **n20,s0°65/38,17C-1D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.55**	**150**	*e*P	**Pn**	**08 36 38.9**	**-0.5**
ABV				*e*S	**Sn**	**08 36 48.8**	**+1.0**
TBVI	**Tortola**	**0.79**	**180**	*e*P	**Pn**	**08 36 41.7**	**-0.8**
TBVI				*e*S	**Sn**	**08 36 52.9**	**-0.4**
STVI	**Saint Thomas**	**0.91**	**200**	*e*P	**Pn**	**08 36 43.3**	**-0.9**
STVI				*e*S	**Sn**	**08 36 56.3**	**+0.1**
MTP	**Monte Pirata**	**1.42**	**219**	*e*P	**Pn**	**08 36 50.8**	**-0.3**
MTP				*e*S	**Sn**	**08 37 07.4**	**-1.1**
CDVI	**St. Croix**	**1.46**	**185**	*e*P	**Pn**	**08 36 53.3**	**+1.7**
CDVI				*e*S	**Sn**	**08 37 10.5**	**+1.0**
CBYP	**Canovanas**	**1.50**	**232**	*e*P	**Pn**	**08 36 51.7**	**-0.5**
CBYP				*e*S	**Sn**	**08 37 10.6**	**+0.1**
CBYP	**Canovanas**	**1.50**	**232**	*e*P	**Pn**	**08 36 51.7**	**-0.5**
CBYP				*e*S	**Sn**	**08 37 10.1**	**-0.4**
HUMP	**Col San Antoni**	**1.58**	**228**	*e*P	**Pn**	**08 36 52.8**	**-0.4**
HUMP				*e*S	**Sn**	**08 37 12.3**	**-0.2**
CPD	**Cerro la Pandu**	**1.69**	**227**	*e*P	**Pn**	**08 36 54.5**	**-0.3**
CPD				*e*S	**Sn**	**08 37 14.6**	**-0.7**
SJG	**San Juan**	**1.81**	**233**	*e*P	**Pn**	**08 36 55.9**	**-0.6**
SJG				*e*S	**Sn**	**08 37 18.3**	**0.0**
SJG	**San Juan**	**1.81**	**233**	*e*P	**Pn**	**08 36 55.9**	**-0.6**
SJG	**San Juan**	**1.81**	**233**	*e*P	**Pn**	**08 36 56.6**	**+0.2**
SJG				*e*S	**Sn**	**08 37 17.9**	**-0.4**
SJG				*e*S	**Sn**	**08 37 18.3**	**0.0**
SJG	**San Juan**	**1.81**	**233**	*e*P	**Pn**	**08 36 56.6**	**+0.2**
SJG				*e*S	**Sn**	**08 37 17.9**	**-0.4**
CELP	**Cerrillos**	**2.17**	**239**	*e*P	**Pn**	**08 37 01.2**	**-0.2**
CELP				*e*S	**Sn**	**08 37 27.3**	**+0.2**
OBIP	**Obispado Ponce**	**2.21**	**239**	*e*P	**Pn**	**08 37 01.6**	**-0.3**
OBIP				*e*S	**Sn**	**08 37 27.8**	**-0.2**
ICM	**Isla Caja Muer**	**2.23**	**234**	*e*P	**Pn**	**08 37 02.2**	**+0.1**
ICM				*e*S	**Sn**	**08 37 28.5**	**0.0**
LRS	**Lares**	**2.30**	**247**	*e*P	**Pn**	**08 37 03.1**	**+0.1**
LRS				*e*S	**Sn**	**08 37 30.8**	**+0.7**
LSP	**Las Mesas**	**2.55**	**247**	*e*S	**Sn**	**08 37 37.3**	**+0.9**
LSP	**Las Mesas**	**2.55**	**247**	*e*S	**Sn**	**08 37 37.3**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.65**	**243**	*e*P	**Pn**	**08 37 08.7**	**+0.8**
CRPR				*e*S	**Sn**	**08 37 39.8**	**+1.0**

*IDC **28** 08:52:13.4±0.7, 1232N×14453E, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.3/23, mbtmp4.2/14, MS3.9/20, Ms1 3.9/20, ms1mx3.8/31, Error ellipse: s-maj=23.9km s-min=13.9km az=96.0*
*NEIC **28** 08:52:16.2±4.4, 1228N×14450E, h17km±27km, mb4.7/10, Error ellipse: s-maj=11.0km s-min=7.0km az=95.0*
*BJI **28** 08:52:16.2, 1230N×14450E, h16km, mB5.0, mb4.4*
*ISCJB **28** 08:52:17.1±0.4, 1226N±005×14440E±009, h33km, mb4.4/28, MS3.9/19, Error ellipse: s-maj=12.5km s-min=7.1km az=13.7*
*MOS **28** 08:52:17.1±0.9, 1228N×14439E, h33km, mb4.9/7, Error ellipse: s-maj=19.8km s-min=12.7km az=88.8*

ISC 28 08:52:19.0±0.4,**1230N**±005×**14448E**±009,**h35**km,**n56, s0°78/42,mb4.4/28,MS3.9/19,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.34**	**16**	Pn	**Pn**	**08 52 40.3**	**-0.9**
	226nm,0.3s,baz=266,slow=1.5,SNR=51						
GUMO				Sn	**Sn**	**08 52 57.4**	**-0.4**
	468nm,0.3s,baz=197,slow=19,SNR=24						
DAV	**Davao City (W)**	**19.34**	**256**	LR	LR	09 02 51.3	
	comp=Z,226nm,19.7s,baz=88,slow=33						
JHJ	**Hachijo jima 2**	**21.17**	**349**	LR	LR	09 04 36.2	
	comp=Z,291nm,18.8s,MS3.7,baz=292,slow=35						
PMG	**Port Moresby**	**21.72**	**173**	LR	LR	09 03 57.0	
	comp=Z,146nm,19.2s,MS3.4,baz=286,slow=32						
MJAR	**Matsushiro Arr** 1.0nm,0.5s,mb3.6,baz=159,slow=6.6,SNR=3.7	**24.79**	**348**	P	**P**	**08 57 33.7**	**-3.9**
MJAR				LR	LR	09 07 02.1	
	comp=Z,377nm,18.2s,MS3.9,baz=180,slow=36						
MAT	**Matsushiro**	**24.79**	**348**	P	pP	08 57 48.3	+0.6
MAT				S	**S**	**09 02 02.0**	**+4.1**
SSLB	**Suanglung** 26nm,0.9s,mb4.8	**25.07**	**300**	*e*P	**P**	**08 57 40.0**	**-0.4**

COEN	**Coen** 6.7nm,0.8s,mb4.2	**26.12**	**183**	*e*P	**P**	**08 57 49.5**	**-0.3**
KSRS	**Korea Array** 0.6nm,0.4s,mb3.6,baz=147,slow=9.2,SNR=3.5	**29.11**	**332**	P	**P**	**08 58 14.5**	**-2.0**
KSRS				LR	LR	09 09 29.8	
	comp=Z,107nm,18.8s,MS3.5,baz=282,slow=36						
CTA	**Charters Tower** comp=Z,92nm,18.1s,MS3.5,baz=233,slow=33	**32.23**	**177**	LR	LR	09 10 07.8	
WRAB	**Tennant Creek**	**33.54**	**197**	*e*P	**P**	**08 58 55.1**	**-0.5**
WRAB	comp=L,11nm,0.8s,mb4.8			pmax	pmax		
WRAB	**Tennant Creek** comp=L,11nm,0.8s,mb4.8	**33.54**	**197**	*e*P	**P**	**08 58 55.0**	**-0.6**
WB2	**Warramunga Arr**	**33.55**	**197**	*e*P	**P**	**08 58 55.2**	**-0.5**
WRA	**Warramunga Arr** comp=Z,8.8nm,0.9s,mb4.7,baz=19,slow=9.5,SNR=24	**33.55**	**197**	P	**P**	**08 58 55.6**	**-0.2**
WRA				LR	LR	09 14 01.7	
	comp=Z,157nm,18.6s,MS3.8,baz=15,slow=39						
ASAR	**Alice Springs** comp=Z,3.8nm,0.9s,mb4.2,baz=18,slow=6.4,SNR=18	**37.21**	**196**	P	**P**	**08 59 26.9**	**-0.2**
XAN	**Xi'an**	**38.91**	**310**	P	**P**	**08 59 47.3**	**+5.9**
XAN	comp=Z,6.0nm,0.9s,mb4.3			AMB	AMB		
CD2	**Chengdu**	**41.86**	**303**	P	**P**	**09 00 05.8**	**-0.1**
CD2	comp=Z,20nm,0.6s,mb4.9			AMB	AMB		
PETK	**Petropavlovsk-** comp=Z,88nm,19.3s,MS3.6,baz=11,slow=34	**42.06**	**12**	LR	LR	09 16 08.0	
LZH	**Lanzhou**	**43.54**	**310**	*e*P	**P**	**09 00 20.5**	**+1.0**
LZH				AP	pP	09 00 30.5	+0.7
LZH				XP	sP	09 00 34.5	+0.5
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
STKA	**Stephens Creek** comp=Z,1.5nm,0.8s,mb3.8,baz=354,slow=9.2,SNR=4.0	**44.01**	**184**	P	**P**	**09 00 22.3**	**-0.9**
CMAR	**Chiang Mai Arr** comp=Z,5.8nm,0.8s,mb4.3,baz=84,slow=6.0,SNR=24	**44.24**	**284**	P	**P**	**09 00 26.8**	**+1.4**
CMAR				LR	LR	09 18 42.2	
	comp=Z,118nm,18.8s,MS3.8,baz=102,slow=36						
SONM	**Songino Array** comp=Z,1.5nm,0.5s,mb4.2,baz=167,slow=8.7,SNR=3.0	**47.57**	**326**	P	**P**	**09 00 50.6**	**-0.6**
SONM				LR	LR	09 21 15.5	
	comp=Z,275nm,18.5s,MS4.3,baz=173,slow=37						
GTA	**Gaotai**	**47.75**	**313**	*e*P	**P**	**09 00 53.0**	**+0.3**
GTA				AP	pP	09 00 57.3	-5.9
GTA				XP	sP	09 01 00.5	-6.8
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**62.16**	**317**	*e*P	**P**	**09 02 36.6**	**-0.1**
MKAR	**Makanchi Array** comp=Z,1.1nm,0.4s,mb4.3,baz=89,slow=8.5,SNR=26	**62.16**	**317**	P	**P**	**09 02 36.9**	**+0.1**
MKAR				LR	LR	09 30 42.8	
	comp=Z,98nm,19.1s,MS4.0,baz=276,slow=37						
ZALV	**Zalesovo Beam** comp=Z,89nm,19.1s,MS4.0,baz=62,slow=37	**62.45**	**325**	LR	LR	09 30 47.3	
KURK	**Kurchatov** comp=Z,2.5nm,0.6s,mb4.4,baz=284,slow=32,SNR=6.1	**65.33**	**320**	P	**P**	**09 02 57.2**	**-0.3**
KURK				LR	LR	09 32 12.5	
	comp=Z,171nm,18.5s,MS4.3,baz=110,slow=37						
KURK	**Kurchatov**	**65.33**	**320**	*e*P	**P**	**09 02 56.9**	**-0.7**
KURK	comp=Z,4.0nm,0.7s,mb4.6			pmax	pmax		
KURK	**Kurchatov** comp=Z,3.7nm,0.7s,mb4.5	**65.33**	**320**	*e*P	**P**	**09 02 56.9**	**-0.6**
BVAR	**Borovoye Array** comp=Z,2.3nm,0.6s,mb4.3,baz=94,slow=8.5,SNR=8.0	**70.70**	**322**	P	**P**	**09 03 30.9**	**-0.4**
BVAR				LR	LR	09 36 02.4	
	comp=Z,322nm,18.1s,MS4.6,baz=162,

SJG	San Juan	1.75	230⇓	eP	Pn	08 58 18.5	-0.2
SJG				eS	Sn	08 58 41.2	+0.3
SJG	San Juan	1.75	230⇓	eP	Pn	08 58 18.5	-0.2
SJG	San Juan	1.75	230⇓	eP	Pn	08 58 18.5	-0.1
SJG				eS	Sn	08 58 41.2	+0.3
SJG				eS	Sn	08 58 41.2	+0.3
SJG	San Juan	1.75	230⇓	eP	Pn	08 58 18.5	-0.1
SJG				eS	Sn	08 58 41.2	+0.3
CELP	Cerrillos	2.10	237⇓	eP	Pn	08 58 23.7	+0.3
OBIP	Obispado Ponce	2.14	236⇑	eP	Pn	08 58 24.0	0.0
OBIP				eS	Sn	08 58 50.3	-0.2
ICM	Isla Caja Muer	2.16	232⇑	eP	Pn	08 58 25.0	+0.7

IDC 28 09:00:15.0±3.6, 5240N×3555E, h0km, mb3.3/1, mb1 3.9/2, mb1mx3.5/21, mbtmp3.7/2, ML3.0/2, Error ellipse: s-maj=67.2km s-min=15.6km az=136.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.30	249	Pn	Pn	09 01 20.0	-1.6
	0.9nm,0.3s,baz=60,slow=15,SNR=3.4						
AKASG				Pg	Pg	09 01 28.3	-9.0
	2.6nm,0.3s,baz=59,slow=15,SNR=7.2						
AKASG				Sn	Sn	09 02 11.8	-0.6
	2.7nm,0.3s,baz=59,slow=20,SNR=5.4						
AKASG				Lg		09 02 25.1	
	3.5nm,0.3s,baz=67,slow=30,SNR=6.3						
ARCES	ARCESS Array B	17.82	348	Pn	Pn	09 04 18.4	-5.6
	0.1nm,0.3s,baz=175,slow=14,SNR=3.1						
YKA	Yellowknife Ar	63.05	345	P	P	09 10 43.4	+0.2
	0.2nm,0.4s,baz=15,slow=6.5,SNR=5.5						

RSPR 28 09:02:40.1, 19.10N×64.47W, h74km±6km, MD3.0/4, MD3.0/4
NEIC 28 09:02:40.1, 19.10N×64.47W, h74km, MD3.0(RSPR), After RSPR.
ISC 28 09:02:39.5±3.1, 19.1N±0.4×64.5W±0.4, h72km±50km, n11, σ0.50/15, 9C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.41	161	eS	Sn	09 03 00.8	+0.1
ABV	Anegada	0.41	161	eS	Sn	09 03 00.8	+0.1
TBVI	Tortola	0.71	191⇑	eP	Pn	09 02 54.3	-0.4
TBVI				eS	Sn	09 03 06.7	+0.8
TBVI	Tortola	0.71	191⇑	eP	Pn	09 02 54.3	-0.4
TBVI				eS	Sn	09 03 06.1	+0.1
STVI	Saint Thomas	0.89	211⇑	eP	Pn	09 02 56.1	-0.7
STVI	Saint Thomas	0.89	211⇑	eP	Pn	09 02 56.7	-0.1
STVI				eS	Sn	09 03 09.1	-0.4
STVI	Saint Thomas	0.89	211⇑	eP	Pn	09 02 56.1	-0.7
STVI				eS	Sn	09 03 09.1	-0.4
MTP	Monte Pirata	1.44	225⇑	eP	Pn	09 03 04.1	+0.3
MTP	Monte Pirata	1.44	225⇑	eP	Pn	09 03 05.0	+1.2
HUMP	Col San Antoni	1.63	233⇑	eP	Pn	09 03 06.0	-0.2
HUMP	Col San Antoni	1.63	233⇑	eP	Pn	09 03 06.4	+0.2

NEIC 28 09:21:02.5, 17.61N×94.92W, h139km, MD3.9(MEX), After MEX.
MEX 28 09:21:02.5±0.7, 17.61N×94.92W, h139km±7km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.52	176	i P	Pn	09 21 21.3	-1.4
CMIG				i S	Sn	09 21 35.8	-2.2
OXX	Oaxaca	1.80	253	eP	Pn	09 21 33.8	-0.8
OXX				i S	Sn	09 21 57.2	-1.9
VHO	Vista Hermosa	1.81	253	i P	Pn	09 21 33.8	-1.0
VHO				i S	Sn	09 21 58.8	-0.6
TGIG		1.91	115	i P	Pn	09 21 35.0	-0.8
TGIG				i S	Sn	09 21 59.5	-1.9
HUIG	Huatulco	2.15	212	i P	Pn	09 21 37.7	-1.1
HUIG				i S	Sn	09 22 04.8	-1.9
TPIG	Tehuac#an	2.46	290	i P	Pn	09 21 41.2	-1.4
TPIG				i S	Sn	09 22 11.0	-2.4
PCIG		2.50	139	i P	Pn	09 21 42.0	-1.1
PCIG				i S	Sn	09 22 12.4	-2.0
UTMO	Huajuapan	2.76	275	i P	Pn	09 21 45.3	-1.0
UTMO				i S	Sn	09 22 18.9	-1.2
CCIG	Comitan	2.97	116	i P	Pn	09 21 48.2	-0.9
CCIG				i S	Sn	09 22 23.3	-1.8
PNIG	Pinotepa	3.30	249	i P	Pn	09 21 49.7	-3.6
PNIG				i S	Sn	09 22 29.6	-3.0

CSEM 28 09:28:52.3, 39.10N×33.23E, h14km, MD2.9, After ISK
DDA 28 09:28:52.5, 39.39N×33.11E, h9km, Md2.1
ISK 28 09:28:52.3, 39.10N×33.23E, h14km, MD2.9
ISCJB 28 09:28:53.3±0.7, 39.36N±0.05×33.16E±0.06, h10km, Error ellipse: s-maj=8.8km s-min=5.2km az=145.5
ISC 28 09:28:53.0±1.0, 39.39N±0.06×33.12E±0.08, h8km±12km, n7, σ0.59/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	Kaman	0.46	92	PG	Pg	09 29 01.8	-0.1
KAMT				eSG	Sg	09 29 08.8	+0.8
LOD	Lodumlu	0.57	332	ePG	Pg	09 29 09.4	+5.4
CDAG	Cicekdag	1.00	76	i P	Pg	09 29 11.6	-0.5
CDAG				i S	Sg	09 29 29.8	+4.7
KIZT	Kizilcal	1.09	243	ePG	Pg	09 29 13.3	-0.5
ELDT	Eldivan	1.13	12	eP	Pb	09 29 14.8	+0.1
ELDT				i S	Sb	09 29 30.1	+0.5
KDHN	Kadinhani	1.16	222	i P	Pb	09 29 15.3	-0.1
KDHN				i S	Sb	09 29 31.2	+0.7
YOZ	Yozgat	1.72	81	ePN	Pn	09 29 22.3	-1.0

ISCJB 28 09:49:40.0±0.5, 41.03S±0.07×91.1W±0.1, h10km, mb4.3/18, MS4.2/16, Error ellipse: s-maj=13.9km s-min=10.2km az=1.7
IDC 28 09:49:39.8±0.9, 41.04S×91.12W, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.3/20, mbtmp4.2/13, ML3.4/1, MS4.2/16, Ms1 4.2/16, ms1mx4.0/24, Error ellipse: s-maj=25.0km s-min=19.8km az=123.0
NEIC 28 09:49:41.3±0.6, 41.08S×91.09W, h10km, mb4.6/11, Error ellipse: s-maj=14.4km s-min=13.3km az=100.0
GCMT 28 09:49:41.3±0.3, 41.20S×91.38W, h18km±1km, MW5.0/75, Moment Tensor Solution. s41,c53; s75,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.82±.15; $M_{\theta\theta}$1.69±.16; $M_{\phi\phi}$-0.86±.13; $M_{r\theta}$-0.98±.32; $M_{\theta\phi}$-3.89±.11; $M_{\phi r}$-0.20±.26; Best double couple: $M_0$4.22900×10^{16} NP1:ϕ_s351.00000°,δ75.00000°,λ-5.00000°. NP2: ϕ_s82.00000°,δ85.00000°,λ-165.00000°. Principal axes: T 4.5910, Plg7.0000°, Azm215.0000°; N -0.7270, Plg74.0000°, Azm99.0000°; P -3.8680, Plg14.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
ISC 28 09:49:42.1±0.5, 41.03S±0.07×91.0W±0.1, h10km, n42, σ1.05/33, mb4.3/18, MS4.2/16, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	15.48	96	Pn	Pn	09 53 22.2	+1.9
	0.0nm,0.3s,baz=332,slow=8.6,SNR=2.4						
PLCA	Paso Flores	15.48	96	ePn	Pn	09 53 22.1	+1.8
	13nm,1.4s						
USHA	Ushuaia	20.36	140	LR	LR	10 00 36.3	
	comp=Z,1μm,18.7s,MS4.2,baz=273,slow=32						
CFAA	Coronel Fontan	20.57	70	P	P	09 54 22.2	+1.2
	1.4nm,0.9s,baz=228,slow=9.8,SNR=14						
CFAA				LR	LR	10 00 29.2	
	comp=Z,98nm,21.6s,MS3.1,baz=238,slow=31						
CFAA	Coronel Fontan	20.57	70	P	P	09 54 22.2	+1.2
CFAA				LR	LR	10 00 29.2	
TRQA	Tornquist	22.54	92	eP	P	09 54 42.6	+0.5
	45nm,1.8s,mb4.6						
LVC	Limon Verde	26.14	52	P	P	09 55 15.6	-0.8
	10.0nm,0.9s,mb4.4,baz=219,slow=18,SNR=5.4						
LVC				LR	LR	10 03 08.4	
	comp=Z,775nm,20.4s,MS4.2,baz=217,slow=31						
LVC	Limon Verde	26.14	52	eP	P	09 55 15.6	-0.7
	16nm,1.0s,mb4.5						
PMSA	Palmer Station	28.38	156	LR	LR	10 03 25.0	
	comp=Z,440nm,20.6s,MS4.0,baz=324,slow=29						
CPUP	Villa Florida	31.41	73	P	P	09 56 02.5	-0.8
	0.5nm,0.5s,mb3.6,baz=244,slow=9.3,SNR=3.0						
CPUP				LR	LR	10 07 13.2	
	comp=Z,391nm,18.1s,MS4.1,baz=226,slow=34						
NNA	Nana	31.49	27	P	P	09 56 04.2	+0.1
	12nm,0.8s,mb4.8,baz=216,slow=11,SNR=8.9						
NNA				LR	LR	10 05 23.8	
	comp=Z,477nm,20.5s,MS4.2,baz=130,slow=30						
NNA	Nana	31.49	27	eP	P	09 56 03.3	-0.7
	18nm,1.1s,mb4.8						
ATAH	Atahualpa	35.70	22	P	P	09 56 40.5	-0.2
	3.5nm,0.6s,mb4.5,baz=127,slow=8.2,SNR=7.6						
SIV	San Ignacio	35.94	55	P	P	09 56 42.4	-0.4
	6.9nm,0.8s,mb4.6,baz=231,slow=7.6,SNR=34						
RKT	Rikitea	40.83	282	eLR	LR	10 08 37.9	
	375nm,27.5s						
OTAV	Otavalo	42.63	19	eP	P	09 57 38.8	+0.2
	12nm,1.4s,mb4.4						
BDFB	Brasilia	44.90	69	P	P	09 57 56.3	-0.7
	1.5nm,0.8s,mb3.9,baz=176,slow=19,SNR=3.7						
BDFB				LR	LR	10 16 18.3	
	comp=Z,303nm,18.1s,MS4.3,baz=39,slow=36						
ROSC	El Rosal	48.15	23	LR	LR	10 17 06.5	
	comp=Z,306nm,18.3s,MS4.3,baz=360,slow=34						
VNA3	Neumayer Olymp	49.04	155	e	P	09 58 28.7	+0.1
VNA3				e		09 58 36.3	
QSPA	South Pole Qui	49.21	180	P	P	09 58 30.1	+0.3
	0.7nm,0.3s,mb4.2,baz=78,slow=14,SNR=3.3						
QSPA				LR	LR	10 15 13.5	
	comp=Z,251nm,20.2s,MS4.2,baz=324,slow=31						
QSPA	South Pole Qui	49.21	180	P	P	09 58 30.1	+0.3
QSPA				LR	LR	10 15 13.5	
VNA1	Neumayer--Stat	49.59	154	e	P	09 58 33.7	+0.9
VNA1				e		09 58 41.0	
VNA2	Neumayer--Watz	49.82	155	e	P	09 58 34.8	+0.2
VNA2				e		09 58 42.4	
SNAA	Sanae	51.10	156	e	P	09 58 43.2	-1.1
SNAA				e		09 58 51.5	
SNAA	Sanae	51.10	156	eP	P	09 58 43.1	-1.2
	5.0nm,1.1s,mb4.4						
TBI	Tubuai	51.57	271	eS	S	10 06 12.6	+3.4
	144nm,28.2s						
TBI				eLR	LR	10 13 24.6	
	489nm,26.2s						
SDV	Santo Domingo	53.09	25	eP	P	09 58 58.1	-1.6
	3.6nm,0.3s,mb4.8						
VNDA	Vanda	53.86	195	P	P	09 59 03.3	-1.4
	4.0nm,1.2s,mb4.2,baz=137,slow=6.4,SNR=5.4						
VNDA				LR	LR	10 16 21.0	
	comp=Z,240nm,21.6s,MS4.2,baz=125,slow=30						
VNDA	Vanda	53.86	195	eP	P	09 59 03.5	-1.1
	9.1nm,1.5s,mb4.5						
PPT	Papeete	55.07	277	eS	S	10 07 00.0	+3.1
	189nm,26.5s						
PPT				eLR	LR	10 15 05.4	
	266nm,28.0s						
MAW	Mawson	69.90	170	LR	LR	10 30 58.9	
	comp=Z,119nm,19.3s,MS4.2,baz=4.0,slow=36						
MAW	Mawson	69.90	170	eP	P	10 00 49.2	-3.4
	0.7nm,0.6s,mb3.8						
TXAR	Lajitas Array	70.98	348	P	P	10 00 59.0	-0.6
	3.1nm,0.9s,mb4.2,baz=172,slow=8.3,SNR=12						
TXAR				LR	LR	10 25 51.2	
	comp=Z,129nm,18.3s,MS4.2,baz=95,slow=31						
TXAR	Lajitas Array	70.98	348	P	P	10 00 59.0	-0.6
TXAR				LR	LR	10 25 51.2	
TUC	Tucson	75.22	343	eP	P	10 01 25.9	+1.3
	4.4nm,0.9s,mb4.4						
LDFC	Landfair	78.91	340	eP	P	10 01 47.3	+2.0
	10nm,0.9s,mb4.8						
NVAR	Mina Array Bea	82.91	339	P	P	10 02 06.8	+0.2
	1.1nm,0.9s,mb3.9,baz=170,slow=5.5,SNR=5.9						
PDAR	Pinedale Array	85.08	346	P	P	10 02 16.6	-0.9
	2.5nm,0.8s,mb4.4,baz=159,slow=4.9,SNR=18						
BOSA	Boshof	89.02	128	LR	LR	10 36 57.4	
	comp=Z,106nm,20.1s,MS4.3,baz=151,slow=32						
STKA	Stephens Creek	92.71	223	LR	LR	10 35 25.4	
	comp=Z,149nm,20.8s,MS4.4,baz=204,slow=30						
SCHQ	Schefferville	97.70	14	LR	LR	10 45 23.5	
	comp=Z,116nm,18.9s,MS4.4,baz=20,slow=34						
CTA	Charters Tower	99.28	233	LR	LR	10 40 33.0	
	comp=Z,148nm,18.2s,MS4.5,baz=232,slow=31						

ISCJB 28 10:00:27.5±0.5, 26.71S±0.07×175.90W±0.09, h40km, mb4.4/20, MS3.9/4, Error ellipse: s-maj=13.0km s-min=8.7km az=39.2
NEIC 28 10:00:28.1±0.4, 26.75S×175.83W, h35km, mb4.8/7, Error ellipse: s-maj=12.1km s-min=9.1km az=144.0
IDC 28 10:00:29.3±0.5, 26.73S×175.80W, h40km±3km, mb4.0/13, mb1 4.2/13, mb1mx4.2/16, mbtmp4.0/13, ML4.7/1, MS3.9/5, Ms1 3.9/5, ms1mx3.4/21, Error ellipse: s-maj=16.6km s-min=13.4km az=151.0
ISC 28 10:00:29.3±0.5, 26.71S±0.07×175.86W±0.09, h42km±1.1km:pP-P, n53, σ0.91/39, mb4.4/20, MS3.9/4, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.12	215	Pn	Pn	10 01 15.6	-0.4
	88nm,0.3s,baz=86,slow=18,SNR=4.7						
RAO				Sn	Sn	10 01 53.3	+1.4
	110nm,0.3s,baz=121,slow=19,SNR=4.5						
RAO	Raoul Island	3.12	215	ePn	Pn	10 01 14.2	-1.7
URZ	Urewera	12.95	205	Sn	Sn	10 05 44.4	-8.9
	2.4nm,0.3s,baz=185,slow=14,SNR=15						
RAR	Rarotonga	15.69	73	Pn	Pn	10 03 55.6	-12
	3.6nm,0.3s,baz=219,slow=7.6,SNR=10						
RAR				Sn	Sn	10 06 32.0	-28
	1.8nm,0.3s,baz=41,slow=17,SNR=4.2						
RAR				LR	LR	10 08 10.5	
	comp=Z,314nm,18.4s,baz=278,slow=30						
RPZ	Rata Peaks	20.01	209	P	P	10 04 58.8	+0.4
	6.1nm,0.8s,baz=45,slow=4.3,SNR=3.2						
TBI	Tubuai	24.14	88	eLR	LR	10 11 16.8	
	455nm,27.5s						
PPT	Papeete	25.95	75	eLR	LR	10 12 02.9	
	518nm,25.5s						
CTA	Charters Tower	35.29	273	P	P	10 07 21.4	+0.9
	6.4nm,0.8s,mb4.6,baz=110,slow=8.4,SNR=6.7						
CTA				pP	pP	10 07 33.1	+1.1
	9.7nm,0.7s,baz=100,slow=12,SNR=4.0						
CTA				LR	LR	10 19 31.3	
	comp=Z,130nm,21.0s,MS3.7,baz=53,slow=32						
CTA	Charters Tower	35.29	273	eP	P	10 07 21.4	+0.9
	9.3nm,1.1s,mb4.6						
CTA				epP	pP	10 07 34.1	+2.1
CTAO	Charters Tower	35.29	273	eP	P	10 07 20.8	+0.3
	15nm,0.9s,mb4.9						
RKT	Rikitea	37.15	94	eLR	LR	10 17 10.7	
	291nm,29.8s						
STKA	Stephens Creek	37.28	252	P	P	10 07 38.9	+1.5
	0.9nm,0.8s,mb3.7,baz=125,slow=16,SNR=2.9						
STKA				pP	pP	10 07 49.7	+0.8
	2.8nm,0.7s,baz=97,slow=9.9,SNR=4.8						
STKA	Stephens Creek	37.28	252	eP	P	10 07 37.6	+0.2
	1.7nm,1.0s,mb3.8						
STKA				epP	pP	10 07 49.8	+0.9
STKA	Stephens Creek	37.28	252	eP	P	10 07 36.7	-0.7
	1.5nm,1.1s,mb3.7						
BBOO	Buckleboo	41.90	250	eP	P	10 08 14.9	-0.8
	3.1nm,1.3s,mb3.8						
BBOO				eS	sP	10 08 27.3	-5.1
ASAR	Alice Springs	45.33	262	P	P	10 08 42.5	-1.0
	1.0nm,0.8s,mb3.7,baz=92,slow=7.0,SNR=13						
WB2	Warramunga Arr	45.98	267	eP	P	10 08 48.2	-0.5
WB2				epP	pP	10 08 59.7	-0.8
WB2	Warramunga Arr	45.98	267	eP	P	10 08 47.9	-0.8
WB2				e	pP	10 08 59.6	-0.9
WRAB	Tennant Creek	45.99	267	eP	P	10 08 48.2	-0.5
	20nm,0.8s,mb5.1						
WRAB				e	pP	10 08 59.4	-1.1
WRA	Warramunga Arr	45.99	267	P	P	10 08 48.3	-0.4
	2.6nm,0.6s,mb4.3,baz=107,slow=7.6,SNR=35						
WRA				pP	pP	10 08 59.8	-0.7
	20nm,0.7s,baz=106,slow=7.8,SNR=29						
FORT	Forrest	48.91	251	eP	P	10 09 09.4	-1.9
	8.3nm,0.8s,mb4.8						
FORT				epP	pP	10 09 20.2	-3.0
VNDA	Vanda	51.94	186	P	P	10 09 34.8	+1.2
	1.6nm,0.9s,mb3.9,baz=304,slow=8.9,SNR=4.8						
VNDA	Vanda	51.94	186	eP	P	10 09 32.4	-1.1
	7.2nm,1.4s,mb4.4						
VNDA				e	pP	10 09 41.3	-4.2
FITZ	Fitzroy Crossi	54.37	266	eP	P	10 09 54.2	+2.0
	13nm,1.4s,mb4.7						
FITZ				epP	pP	10 10 04.3	+0.1
GUMO	Guam	55.32	312	LR	LR	10 30 44.6	
	comp=Z,87nm,20.9s,MS3.8,baz=88,slow=33						
NWAO	Narrogin (SRO)	57.52	246	eP	P	10 10 10.4	-4.2
	37nm,1.5s,mb5.2						
MBWA	Marble Bar	58.59	261	eP	P	10 10 22.0	-0.3
	8.9nm,0.9s,mb4.8						
QSPA	South Pole Qui	63.39	180	P	P	10 10 54.5	+0.7
	9.9nm,0.9s,mb4.9,baz=13,slow=2.3,SNR=23						
MJAR	Matsushiro Arr	76.35	323	P	P	10 12 15.2	+1.2
	1.1nm,0.7s,mb3.9,baz=161,slow=6.0,SNR=4.0						
MJAR				pP	pP	10 12 26.6	+0.1
	6.3nm,0.8s,baz=163,slow=5.9,SNR=9.7						
MAT	Matsushiro	76.35	323	P	sP	10 12 28.4	-2.9
SNAA	Sanae	81.77	178	e	P	10 12 42.7	-0.5
SNAA				e	pP	10 12 55.9	+0.1
SNAA				e		10 13 01.1	
SNAA				e		10 13 07.9	
SNAA	Sanae	81.77	178	eP	P	10 12 42.5	-0.8
	6.2nm,0.9s,mb4.5						
SNAA				e	pP	10 12 55.1	-0.7
VNA3	Neumayer Olymp	81.83	176	e	P	10 12 42.9	-0.7
VNA3				e	pP	10 12 55.2	-1.0
VNA3				e		10 12 59.9	
VNA3				e		10 13 08.0	
VNA2	Neumayer--Watz	82.29	176	e	P	10 12 46.0	0.0
	baz=215,slow=2.8						
VNA2				e	pP	10 12 59.8	+1.2
VNA2				e		10 13 05.3	
VNA2				e		10 13 13.1	
VNA1	Neumayer--Stat	82.51	176	e	P	10 12 47.4	+0.2
VNA1				e	pP	10 13 00.8	+1.0
VNA1				e		10 13 05.4	
VNA1				e		10 13 12.9	
PETK	Petropavlovsk-	82.75	344	pP	pP	10 13 00.8	-0.2
	4.5nm,0.7s,baz=138,slow=7.6,SNR=3.6						
KSRS	Korea Array	82.81	318	P	P	10 12 50.2	+1.1
	1.2nm,0.7s,mb4.0,baz=137,slow=7.1,SNR=3.0						
KSRS				pP	pP	10 13 02.1	+0.4
	2.8nm,0.7s,baz=142,slow=6.5,SNR=7.1						
PLCA	Paso Flores	83.62	132	P	P	10 12 53.2	-0.3
	2.8nm,0.9s,mb4.4,baz=235,slow=6.3,SNR=6.9						
PLCA				pP	pP	10 13 04.8	-1.3
	3.0nm,0.9s,baz=222,slow=6.4,SNR=6.5						
PLCA				LR	LR	10 39 31.1	
	comp=Z,94nm,21.4s,MS4.1,baz=83,slow=28						
PLCA	Paso Flores	83.62	132	P	P	10 12 53.2	-0.3
PLCA				pP	pP	10 13 04.8	-1.3
PLCA				LR	LR	10 39 31.1	
NVAR	Mina Array Bea	84.25	42	P	P	10 12 57.1	+0.6
	3.8nm,1.0s,mb4.5,baz=218,slow=8.7,SNR=16						
NVAR				pP	pP	10 13 09.3	+0.2
	1.8nm,0.9s,baz=222,slow=8.5,SNR=5.8						
NVAR	Mina Array Bea	84.25	42	P	P	10 12 57.1	+0.6
NVAR				pP	pP	10 13 09.3	+0.2
TUC	Tucson	85.33	50	eP	P	10 13 02.3	+0.2
	6.4nm,1.1s,mb4.7						
TUC				e	pP	10 13 14.6	-0.2
PSI	Prapat	86.97	275	pP	pP	10 13 23.1	-0.3
	10nm,0.9s,baz=194,slow=8.3,SNR=5.2						
TXAR	Lajitas Array	88.80	56	P	P	10 13 19.4	+0.4
	3.0nm,0.8s,mb4.7,baz=213,slow=8.1,SNR=33						
TXAR				pP	pP	10 13 31.2	-0.5
	1.8nm,0.8s,baz=217,slow=8.7,SNR=8.6						
TXAR				LR	LR	10 45 23.4	
	comp=Z,64nm,18.7s,MS4.1,baz=185,slow=30						
PDAR	Pinedale Array	92.16	42	P	P	10 13 33.6	-0.7
	1.0nm,0.9s,mb4.1,baz=224,slow=4.1,SNR=5.9						
BOSA	Boshof	121.38	202	PKP	PKPdf	10 19 18.8	+0.3
	2.6nm,0.9s,baz=156,slow=12,SNR=3.1						
NB2	NORSAR Subarra	145.35	354	PKP	PKPdf	10 20 01.8	-0.1
	comp=Z,3.6nm,0.8s,baz=10,slow=3.8						
NOA	NORSAR Array B	145.35	354	PKPbc	PKPbc	10 20 01.4	-0.4
	comp=Z,7.6nm,0.9s,baz=11,slow=2.4,SNR=13						
NOA				pPKPbc	pPKPbc	10 20 14.2	-0.7
	comp=Z,7.3nm,0.8s,baz=7.8,slow=2.3,SNR=6.9						
NOA	NORSAR Array B	145.35	354	PKPbc	PKPbc	10 20 01.4	-0.4
NOA				pPKPbc	pPKPbc	10 20 14.2	-0.6
AKASG	Malin Array Be	149.34	328	PKPbc	PKPbc	10 20 13.1	-0.2
	comp=Z,2.3nm,0.8s,baz=41,slow=4.4,SNR=7.5						
AKASG				pPKPbc	pPKPbc	10 20 25.3	-1.1
	comp=Z,3.1nm,0.7s,baz=42,slow=2.9,SNR=5.7						
AKASG	Malin Array Be	149.34	328	PKPbc	PKPbc	10 20 13.1	-0.2
AKASG				pPKPbc	pPKPbc	10 20 25.3	-1.1
BRTR	Keskin Array B	152.25	305	PKPbc	PKPbc	10 20 19.5	-1.0
	comp=Z,1.4nm,0.9s,baz=48,slow=1.8,SNR=4.7						
BRTR				PKPab	PKPab	10 20 32.2	+1.7
	comp=Z,2.2nm,1.0s,baz=93,slow=2.5,SNR=5.2						
TORD	Torodi Ar. Bea	166.31	170	PKP	PKPdf	10 20 28.5	-2.2
	comp=Z,0.7nm,0.9s,baz=282,slow=1.5,SNR=3.6						
TORD				PKPab	PKPab	10 21 32.3	+0.5
	comp=Z,3.4nm,0.9s,baz=182,slow=4.0,SNR=14						
TORD				pPKPab	pPKPab	10 21 44.1	-0.4
	comp=Z,2.9nm,0.8s,baz=180,slow=3.4,SNR=8.0						

NEIC 28 10:26:22.5±3.7, 24.38N×122.26E, h10km, Error ellipse: s-maj=40.3km s-min=12.7km az=73.0
ISCJB 28 10:26:25.8±0.7, 24.36N±0.02×122.09E±0.04, h14km±4km, Error ellipse: s-maj=5.6km s-min=2.7km az=179.7
TAP 28 10:26:26.4, 24.40N×121.96E, h31km, ML3.7, C
ISC 28 10:26:26.2±0.6, 24.38N±0.02×122.06E±0.03, h17km±2km, n51, σ0.92/90, 3C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.29	280⇓	iP	Pg	10 26 33.2	+0.6
	baz=278						
TWC	Suao	0.30	320⇓	iP	Pg	10 26 33.5	+0.8
	baz=334						
TWC				i S	Sg	10 26 38.0	+1.0
	baz=334						
NACB	Ninganchiao	0.47	244	eP	Pg	10 26 35.4	-0.3
NACB				eS	Sg	10 26 42.7	+0.6
TWE	Neicheng	0.49	314	i P	Pg	10 26 36.2	+0.1
	baz=320						
TWE				i S	Sg	10 26 43.0	+0.2
	baz=320						
TWD	Chiawan	0.52	235	i P	Pg	10 26 36.8	+0.3
	baz=233						
TWD				S	Sg	10 26 44.9	+1.5
	baz=233						
ENTT	Nioudou	0.52	300⇑	iP	Pg	10 26 36.5	-0.1
	baz=306						
ENTT				S	Sg	10 26 43.7	+0.1
	baz=306						
HWA	Hwalien	0.57	226	eP	Pg	10 26 38.2	+0.6
	baz=226						
NNS	Nan Shan	0.63	276	i P	Pg	10 26 38.1	-0.5
	baz=277						
NNS				S	Sg	10 26 46.7	-0.3
	baz=277						
TWB1	Santiao Chiao	0.63	354	i P	Pg	10 26 39.4	+0.7
	baz=4.0						
TWB1				S	Sg	10 26 48.4	+1.3
	baz=4.0						
YHNB	Yeheng	0.69	295⇓	iP	Pg	10 26 38.9	-0.8
YHNB				eS	Sg	10 26 47.3	-1.5
NSK	Sanguang	0.70	295⇑	iP	Pg	10 26 39.3	-0.7
	baz=296						
NSK				S	Sg	10 26 48.0	-1.4
	baz=296						
NWF	Wu-fen Shan	0.73	340	P	Pb	10 26 41.0	+0.4
	baz=347						
NWF				S	Sg	10 26 51.1	+0.7
	baz=347						
WHF	Hehuan Shan	0.76	252⇑	iP	Pb	10 26 40.6	-0.4
	baz=247						
WHF				S	Sb	10 26 51.1	0.0
	baz=247						
TATO	Taipei	0.79	319	eP	Pb	10 26 40.5	-1.1
TATO				eS	Sb	10 26 51.9	-0.1
ESL	Shilin	0.80	226	i P	Pb	10 26 40.8	-0.9
	baz=232						
ESL				eS	Sb	10 26 52.3	0.0
	baz=232						
TWT	Tachien	0.81	261	i P	Pb	10 26 41.7	-0.3
	baz=258						
TWT				S	Sb	10 26 52.4	-0.3
	baz=258						
TAP1	Taipei	0.82	324	i P	Pb	10 26 42.3	+0.3
	baz=328						
TAP1				S	Sb	10 26 52.9	+0.1
	baz=328						
TWS1	Kuangyinshan	0.93	321	P	Pb	10 26 43.6	-0.3

	baz=325								
TWS1				*i*	S		**Sb**	10 26 56.6	**+0.6**
	baz=325								
TWY	**Chenhua**	**0.99**	**335**		P		**Pb**	10 26 45.0	**+0.1**
	baz=340								
TWY					S		**Sb**	10 26 56.8	**-0.8**
	baz=340								
NCU	**National Centr**	**0.99**	**307**		P		**Pb**	10 26 44.9	**0.0**
	baz=308								
NCU					S		**Sb**	10 26 57.6	**-0.1**
	baz=308								
NSTT	**Nanjuang**	**1.00**	**285**	*i*	P		**Pb**	10 26 44.7	**-0.4**
	baz=284								
NSTT				*i*	S		**Sb**	10 26 57.7	**-0.2**
	baz=284								
HSN	**Hsinchu**	**1.08**	**293**	*e*	P		**Pb**	10 26 46.2	**-0.2**
	baz=307								
HSN				*i*	S		**Sb**	10 27 00.1	**-0.2**
	baz=307								
EHY	**Hungye**	**1.10**	**218**		P		**Pb**	10 26 44.9	**-1.9**
	baz=211								
EHY				*e*	S		**Sb**	10 26 59.8	**-1.0**
	baz=211								
SMLT	**Sun Moon Lake**	**1.17**	**245**		P		**Pn**	10 26 46.9	**-0.9**
	baz=234								
SMLT					S		**Sb**	10 27 03.5	**+0.6**
	baz=234								
SSLB	**Suanglung**	**1.17**	**240**	*e*	P		**Pn**	10 26 45.7	**-2.1**
SSLB				*e*	S		**Sb**	10 27 02.0	**-0.9**
TWQ1	**Liyutan**	**1.17**	**269**		P		**Pn**	10 26 47.8	**-0.1**
	baz=267								
TWQ1				*i*	S		**Sb**	10 27 03.0	**0.0**
	baz=267								
TYC	**Yuchr**	**1.20**	**247**		P		**Pn**	10 26 47.3	**-0.9**
	baz=243								
TYC					S		**Sb**	10 27 03.3	**-0.3**
	baz=243								
YULB	**Yu-li**	**1.20**	**216**	*e*	P		**Pn**	10 26 45.7	**-2.6**
YULB				*e*	S		**Sb**	10 27 01.9	**-1.9**
TWF1	**Yuli**	**1.24**	**214**	*i*	P		**Pn**	10 26 46.9	**-1.9**
	baz=220								
TCU	**Taichung**	**1.28**	**260**	*e*	P		**Pn**	10 26 49.0	**-0.4**
	baz=257								
TCU				*e*	S		**Sb**	10 27 06.5	**+0.3**
	baz=257								
YUS	**Yu-Shan**	**1.34**	**229**		P		**Pn**	10 26 49.9	**-0.3**
	baz=211								
YUS					S		**Sn**	10 27 07.4	**-0.4**
	baz=211								
WNT	**Mingjian**	**1.35**	**249**	*e*	P		**Pn**	10 26 50.0	**-0.4**
	baz=245								
CHKT	**Chengkung**	**1.42**	**207**	*e*	P		**Pn**	10 26 51.9	**+0.6**
	baz=185								
CHKT				*e*	S		**Sn**	10 27 09.5	**-0.2**
	baz=185								
ALS	**Alishan**	**1.44**	**233**		P		**Pn**	10 26 51.5	**0.0**
	baz=217								
ALS					S		**Sn**	10 27 11.4	**+1.4**
	baz=217								
CHN5	**Tsauling**	**1.48**	**239**		P		**Pn**	10 26 52.7	**+0.6**
	baz=234								
CHN5					S		**Sn**	10 27 12.7	**+1.5**
	baz=234								
ELDTW	**Lidau**	**1.52**	**219**		P		**Pn**	10 26 51.2	**-1.5**
	baz=202								
WGK	**Gukeng**	**1.53**	**244**	*e*	P		**Pn**	10 26 53.9	**+1.1**
	baz=240								
WGK				*e*	S		**Sn**	10 27 13.2	**+0.8**
	baz=240								
CHN4	**Tsaushan**	**1.69**	**233**		P		**Pn**	10 26 56.1	**+1.1**
	baz=214								
CHN4					S		**Sn**	10 27 17.2	**+1.0**
	baz=214								
TPUB	**Ta-pu**	**1.69**	**231**	*e*	P		**Pn**	10 26 55.5	**+0.4**
TPUB				*e*	S		**Sn**	10 27 17.6	**+1.3**
STYT	**Tauyuan**	**1.70**	**225**		P		**Pn**	10 26 55.5	**+0.4**
	baz=211								
STYT					S		**Sn**	10 27 16.9	**+0.4**
	baz=211								
CHY	**Chiayi**	**1.73**	**240**	*e*	S		**Sn**	10 27 17.9	**+0.5**
	baz=237								
WTP	**Ta-pu**	**1.74**	**230**		P		**Pn**	10 26 56.6	**+0.9**
	baz=225								
WTP				*e*	S		**Sn**	10 27 18.6	**+1.1**
	baz=225								
TWG	**Pinlang**	**1.79**	**210**	*e*	Pn		**Pn**	10 26 56.0	**-0.5**
TWG	**Pinlang**	**1.79**	**210**	*e*	P		**Pn**	10 26 56.1	**-0.3**
	baz=192								
TWK	**Hsinying**	**1.81**	**233**	*e*	P		**Pn**	10 26 57.7	**+0.9**
	baz=227								
TWK				*e*	S		**Sn**	10 27 19.8	**+0.5**
	baz=227								
WSF	**Szhu**	**1.83**	**247**		S		**Sn**	10 27 20.4	**+0.6**
	baz=243								
CHN1	**Nanshi**	**1.84**	**230**		P		**Pn**	10 26 57.7	**+0.7**
	baz=225								
CHN1					S		**Sn**	10 27 21.5	**+1.6**
	baz=225								
SSD	**Sandimen**	**2.09**	**219**	*e*	P		**Pn**	10 27 02.4	**+1.9**
	baz=212								
LAY	**Lan-yu**	**2.37**	**191**	*e*	P		**Pn**	10 27 02.9	**-1.5**
	baz=175								
SCZT	**Fangliau**	**2.39**	**214**	*e*	P		**Pn**	10 27 06.4	**+1.7**
	baz=193								
PNG	**Penghu**	**2.43**	**251**	*e*	P		**Pn**	10 27 03.9	**-1.3**
	baz=247								
PNG				*e*	S		**Sn**	10 27 31.9	**-2.6**
	baz=247								

*ISK **28** 10:34:51.8, 3686N×29.10E, h9km, ML3.8*
*HLW **28** 10:34:51.4, 3725N×29.19E, h33km, Mb3.8*
*ISCJB **28** 10:34:52.8±0.2, 3684N±002×2925E±002, h10km, mb3.8/8, Error ellipse: s-maj=2.6km s-min=2.2km az=146.7*
*NEIC **28** 10:34:53.0, 3708N×2920E, h8km, mb4.0/2, ML3.8(ATH), ML3.8(ISK), After ISK.*
*CSEM **28** 10:34:53.9±0.1, 3696N×2927E, h10km, MD3.7, Error ellipse: s-maj=2.1km s-min=1.4km az=19.0*
*MOS **28** 10:34:53.1±1.4, 3700N×2925E, h11km, mb4.0/2, Error ellipse: s-maj=8.9km s-min=6.8km az=105.4*
*DDA **28** 10:34:53.4, 3697N×2925E, h23km±1km, Md3.7*
*GII **28** 10:34:58.8±0.0, 3662N×2928E, h15km±1km, mb4.2/1, ML3.7/3*
*IDC **28** 10:34:58.2±1.2, 3690N×2929E, h44km±17km, mb3.7/8, mb1 3.9/16, mb1mx3.8/31, mbtmp3.8/16, ML4.0/8, MS3.0/3, Ms1 3.0/3, ms1mx2.6/45, Error ellipse: s-maj=15.8km s-min=10.2km az=172.0*

ISC 28 10:34:55.0±0.6,**3691N**±002×**2924E**±002,**h13**km±4km, **n141**,σ1§**14**/163,**mb3.8**/8,**2C-7D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.41**	**38**	*i* P	**Pg**	**10 35 00.6**	**-2.5**
GOLH				*i* S	**Sg**	**10 35 07.9**	**-0.8**
TURN	**Turunc**	**0.52**	**266**	*i* P	Px	10 35 08.9	
TURN				*i* S	Sx	10 35 21.9	
ELL	**Elmali**	**0.56**	**107**	*e* PG	**Pg**	**10 35 04.5**	**-1.4**
ELL				*e* SG	**Sg**	**10 35 14.9**	**+1.6**
AKAS	**Kas**	**0.74**	**157**	*i* P	**Pg**	**10 35 09.5**	**+0.2**
AKAS				*i* S	**Sg**	**10 35 24.2**	**+5.2**
KSL	**Kastellorizon**	**0.81**	**160**	*e* P	**Pg**	**10 35 10.5**	**-0.1**
ANTB	**Antalya**	**1.13**	**90**	*e* PN	**Pn**	**10 35 16.0**	**-0.5**
ARG	**Arkhangelos**	**1.14**	**233**	*e* P	**Pb**	**10 35 15.3**	**-1.2**
ARG	**Arkhangelos**	**1.14**	**233**	P	**Pb**	**10 35 15.9**	**-0.6**
ARG				*e* Sn	**Sn**	**10 35 35.0**	**+3.0**
BCK	**Bucak**	**1.21**	**63**	*e* PN	**Pn**	**10 35 16.6**	**-0.9**
AYDN	**Tasoluk**	**1.32**	**305**	*i* P	**Pn**	**10 35 18.3**	**-0.7**
AYDN				*i* S	**Sb**	**10 35 37.1**	**+0.7**
ISP	**Isparta**	**1.37**	**47**	*e* PN	**Pn**	**10 35 18.9**	**-0.9**
ISP				*e* SN	**Sn**	**10 35 39.2**	**+1.4**
ISP	**Isparta**	**1.37**	**47**	P	**Pn**	**10 35 18.8**	**-1.0**
KHL	**Karahalli**	**1.43**	**9**	*e* PN	**Pn**	**10 35 19.5**	**-1.1**
BDRM	**Kayabasi**	**1.45**	**277**	*i* P	**Pn**	**10 35 20.6**	**-0.2**
BDRM				*i* S	**Sn**	**10 35 40.6**	**+0.9**
BDRM	**Kayabasi**	**1.45**	**277**	*i* P	**Pn**	**10 35 20.6**	**-0.3**
BDRM				*i* S	**Sn**	**10 35 40.6**	**+0.9**
KHAL	**Karahalli**	**1.47**	**8**	*i* P	**Pn**	**10 35 20.2**	**-1.0**
KHAL				*i* S	**Sn**	**10 35 40.0**	**-0.3**
MANT	**Manisa**	**1.67**	**341**	*i* P	**Pn**	**10 35 23.0**	**-0.9**
NISR	**Nisiros**	**1.73**	**261**	*e* P	**Pn**	**10 35 25.5**	**+0.8**
GCAM	**G?zelcaml?**	**1.79**	**297**	*i* P	**Pn**	**10 35 25.1**	**-0.4**
GCAM				*i* S	**Sn**	**10 35 49.0**	**+1.0**
SHUT	**Suhut-Afyon**	**1.94**	**32**	*e* PN	**Pn**	**10 35 27.5**	**-0.1**
SMG	**Samos**	**2.08**	**293**	*e* P	**Pn**	**10 35 29.4**	**-0.1**
SMG	**Samos**	**2.08**	**293**	P	**Pn**	**10 35 29.5**	**0.0**
KARP	**Karpathos**	**2.17**	**232**	*e* Pn	**Pn**	**10 35 32.2**	**+1.5**
KARP				*e* Sn	**Sn**	**10 36 00.0**	**+2.6**
KARP	**Karpathos**	**2.17**	**232**	P	**Pn**	**10 35 32.7**	**+2.0**
GDZ	**Gediz**	**2.18**	**5**	*i* P	**Pn**	**10 35 30.5**	**-0.4**
ALT	**Altintas**	**2.25**	**18**	*e* PN	**Pn**	**10 35 31.4**	**-0.4**
AKHS	**Akhisar**	**2.27**	**330**	*i* P	**Pn**	**10 35 30.9**	**-1.2**
HDMB	**Hadim**	**2.60**	**88**	*e* PN	**Pn**	**10 35 36.7**	**+0.1**
KONT	**Konya--Tatoy**	**2.69**	**67**	*e* PN	**Pn**	**10 35 38.3**	**+0.4**
KDHN	**Kadinhani**	**2.79**	**54**	*i* P	**Pn**	**10 35 32.7**	**-6.6**
LADK	**Ladik-KONYA**	**2.79**	**62**	*e* PN	**Pn**	**10 35 39.4**	**+0.1**
KIZT	**Kizilcal**	**2.86**	**46**	*e* PN	**Pn**	**10 35 41.0**	**+0.6**
ESKT	**Eskisehir**	**2.89**	**25**	*e* PN	**Pn**	**10 35 40.2**	**-0.5**
APE	**Apeiranthos**	**2.98**	**274**	*e* P	**Pn**	**10 35 43.0**	**+1.1**
APE	**Apeiranthos**	**2.98**	**274**	P	**Pn**	**10 35 43.7**	**+1.8**
APE	**Apeiranthos**	**2.98**	**274**	P	**Pn**	**10 35 43.7**	**+1.8**
BORA	**Eskisehir**	**3.11**	**17**	*i* P	**Pn**	**10 35 44.6**	**+0.9**
PPCY	**Paphos**	**3.23**	**128**	P	**Pn**	**10 35 47.4**	**+2.0**
ALFC	**Alevga**	**3.23**	**122**	P	**Pn**	**10 35 47.4**	**+2.0**
	2.9nm,0.6s						
PRK	**Paraskevi**	**3.31**	**316**	*e* P	**Pn**	**10 35 46.3**	**-0.1**
CAVI	**Cavuskoy**	**3.32**	**8**	*e* PN	**Pn**	**10 35 46.3**	**-0.2**
NPS	**Neapolis**	**3.37**	**242**	*e* P	**Pn**	**10 35 48.7**	**+1.4**
NPS	**Neapolis**	**3.37**	**242**	P	**Pn**	**10 35 49.2**	**+1.9**
NPS	**Neapolis**	**3.37**	**242**	P	**Pn**	**10 35 49.2**	**+1.9**
IKL	**Isikli**	**3.64**	**99**	*e* PN	**Pn**	**10 35 51.3**	**+0.4**
SZAC	**Souni-Zanaja**	**3.66**	**125**	P	**Pn**	**10 35 53.2**	**+2.0**
MAMC	**Mammari**	**3.66**	**117**	P	**Pn**	**10 35 55.9**	**+4.6**
CSS	**Prodhromos**	**3.85**	**119**	*e* Pn	**Pn**	**10 35 53.7**	**-0.1**
IDI	**Anoyia**	**3.88**	**247**	P	**Pn**	**10 35 56.1**	**+1.8**
	15nm,0.3s,baz=58,slow=15,SNR=54						
IDI				S	**Sn**	**10 36 40.5**	**+0.8**
	22nm,0.3s,baz=331,slow=17,SNR=8.6						
MERS	**Mersin**	**4.23**	**89**	*e* PN	**Pn**	**10 36 00.5**	**+1.4**
KAMT	**Kaman**	**4.29**	**54**	*e* PN	**Pn**	**10 36 01.3**	**+1.4**
NIG	**Nigde**	**4.43**	**73**	*e* PN	**Pn**	**10 36 03.2**	**+1.4**
BR131	**Keskin Array S**	**4.45**	**50**	*e* Pn	**Pn**	**10 36 02.0**	**-0.2**
BR131	**Keskin Array S**	**4.45**	**50**	*e* Pn	**Pn**	**10 36 02.0**	**-0.1**
BRTR	**Keskin Array B**	**4.45**	**50**	P	**Pn**	**10 36 02.9**	**+0.7**
	3.0nm,0.3s,baz=238,slow=16,SNR=42						
BRTR				S	**Sn**	**10 36 57.5**	**+3.6**
	1.1nm,0.3s,baz=229,slow=25,SNR=9.8						
KARA	**Karaisali**	**4.66**	**84**	*e* PN	**Pn**	**10 36 05.9**	**+0.9**
KRTS	**Karatas**	**4.94**	**92**	*e* PN	**Pn**	**10 36 10.5**	**+1.7**
VLI	**Veliai**	**5.06**	**270**	*e* P	**Pn**	**10 36 12.5**	**+1.9**
KOZT	**Kozan**	**5.29**	**82**	*e* PN	**Pn**	**10 36 15.1**	**+1.5**
HTY	**Hatay**	**5.61**	**96**	*e* PN	**Pn**	**10 36 20.1**	**+2.1**
HMAT	**Matruh**	**6.07**	**198**	P	**Pn**	**10 36 23.6**	**-0.8**
HMAT				S	**Sn**	**10 37 30.9**	**-2.9**
KMRS	**Kahramanmaras**	**6.14**	**82**	*e* PN	**Pn**	**10 36 27.4**	**+2.1**
SARI	**SarD1z-Kayseri**	**6.16**	**71**	*e* PN	**Pn**	**10 36 24.0**	**-1.7**
MMC7	**Mount Meron ar**	**6.37**	**126**	Pn	**Pn**	**10 36 28.6**	**+0.2**
MMC1	**Mount Meron ar**	**6.37**	**126**	Pn	**Pn**	**10 36 28.8**	**+0.2**
MMB3	**Mount Meron ar**	**6.37**	**126**	Pn	**Pn**	**10 36 28.8**	**+0.2**
OFRI	**'Ofer**	**6.38**	**131**	Pn	**Pn**	**10 36 29.1**	**+0.5**
MMAI	**Mount Meron Ar**	**6.38**	**126**	P	**Pn**	**10 36 28.9**	**+0.2**
	7.7nm,0.3s,baz=319,slow=11,SNR=24						
MMAI				S	**Sn**	**10 37 41.3**	**0.0**
	5.1nm,0.3s,baz=306,slow=23,SNR=5.0						
KSHT	**Keshet**	**6.67**	**124**	Pn	**Pn**	**10 36 33.9**	**+1.3**
MMLI	**Mount Malkishu**	**6.77**	**129**	Pn	**Pn**	**10 36 34.3**	**+0.3**
AANS		**6.84**	**164**	P	**Pn**	**10 36 34.7**	**-0.4**
AANS				S	**Sn**	**10 37 50.2**	**-2.7**
HMDT	**Nahal Hemdat**	**6.96**	**130**	Pn	**Pn**	**10 36 37.3**	**+0.7**
AMAG	**Maghara**	**7.07**	**151**	P	**Pn**	**10 36 37.7**	**-0.4**
HMYD	**Mayadein**	**7.22**	**169**	P	**Pn**	**10 36 39.9**	**-0.2**
HMYD	**Mayadein**	**7.22**	**169**	P	**Pn**	**10 36 39.9**	**-0.3**
	2µm,0.5s						
KOT	**Kottamia**	**7.29**	**162**	P	**Pn**	**10 36 41.0**	**-0.2**
KOT				S	**Sn**	**10 38 01.0**	**-2.9**
HHAG	**Hagoal**	**7.34**	**160**	P	**Pn**	**10 36 41.5**	**-0.3**
HHAG				S	**Sn**	**10 38 02.2**	**-2.8**
DSI	**Dead Sea**	**7.36**	**135**	Pn	**Pn**	**10 36 42.3**	**+0.2**
KZIT	**Kziot**	**7.36**	**143**	Pn	**Pn**	**10 36 42.5**	**+0.3**
RTMI	**Retamim**	**7.39**	**141**	Pn	**Pn**	**10 36 42.0**	**-0.5**
MALT	**Malatya**	**7.42**	**76**	⇓*i* P	**Pn**	**10 36 41.7**	**-1.2**
MALT	**Malatya**	**7.42**	**76**	⇓P	**Pn**	**10 36 41.7**	**-1.3**
HSAF	**As Saff**	**7.53**	**164**	P	**Pn**	**10 36 44.3**	**-0.1**
MZDA	**Masada**	**7.55**	**136**	Pn	**Pn**	**10 36 44.8**	**+0.1**
TIRR	**Tirgusor**	**7.56**	**355**	⇑*i* P	**Pn**	**10 36 44.7**	**-0.1**
TIRR	**Tirgusor**	**7.56**	**355**	⇑P	**Pn**	**10 36 44.6**	**-0.2**
GLL	**Jalalah**	**7.60**	**164**	P	**Pn**	**10 36 45.1**	**-0.3**
SUZ		**7.67**	**156**	P	**Pn**	**10 36 46.0**	**-0.4**
ASF	**Jabal al Asfar**	**7.89**	**125**	P	**Pn**	**10 36 51.3**	**+1.9**
	0.7nm,0.3s,baz=150,slow=2.8,SNR=5.0						
ASF				S	**Sn**	**10 38 20.7**	**+2.3**
	baz=347,slow=19,SNR=2.3						
ASF				LR	LR	10 40 35.2	
	comp=Z,43nm,18.6s,baz=344,slow=43						
ASF	**Jabal al Asfar**	**7.89**	**125**	P	**Pn**	**10 36 51.3**	**+1.9**
ASF				S	**Sn**	**10 38 20.7**	**+2.2**
HNKL	**Nakhl**	**8.01**	**149**	P	**Pn**	**10 36 50.7**	**-0.4**
ZAF		**8.10**	**159**	P	**Pn**	**10 36 52.0**	**-0.2**
ZNM		**8.11**	**157**	P	**Pn**	**10 36 52.1**	**-0.3**
ZNM				S	**Sn**	**10 38 20.5**	**-3.5**
PRNI	**Paran**	**8.12**	**142**	Pn	**Pn**	**10 36 51.9**	**-0.6**
KRMI	**Paran Flat**	**8.18**	**144**	Pn	**Pn**	**10 36 52.1**	**-1.2**
BARS	**Barje**	**8.21**	**318**	*e* Pn	**Pn**	**10 36 55.2**	**+1.5**
SWA2		**8.28**	**208**	P	**Pn**	**10 36 54.2**	**-0.6**
MBRI	**Mt Berech**	**8.54**	**145**	Pn	**Pn**	**10 36 57.8**	**-0.5**
MBRI				S	**Sn**	**10 38 32.3**	**-2.2**
AQBJ	**Aqaba**	**8.65**	**144**	Pn	**Pn**	**10 37 00.5**	**+0.6**
EIL	**Elat**	**8.66**	**145**	P	**Pn**	**10 36 59.7**	**-0.2**
	5.4nm,0.3s,baz=249,slow=3.2,SNR=18						
EIL				S	**Sn**	**10 38 34.0**	**-3.4**
	1.9nm,0.3s,baz=304,slow=24,SNR=4.0						
EIL	**Elat**	**8.66**	**145**	P	**Pn**	**10 36 59.7**	**-0.2**
EIL				S	**Sn**	**10 38 34.0**	**-3.4**
EIL	**Elat**	**8.66**	**145**	Pn	**Pn**	**10 36 59.5**	**-0.4**
EIL				Sn	**Sn**	**10 38 35.0**	**-2.4**
MLR	**Muntele Rosu**	**8.92**	**345**	P	**Pn**	**10 37 04.8**	**+1.3**
	1.2nm,0.3s,baz=215,slow=12,SNR=9.0						
VOIR		**9.08**	**341**	⇓*i* P	**Pn**	**10 37 05.6**	**-0.1**
VOIR		**9.08**	**341**	⇓P	**Pn**	**10 37 05.6**	**0.0**
VRI	**Vrincioaia**	**9.14**	**349**	⇓*i* P	**Pn**	**10 37 06.0**	**-0.5**
VRI	**Vrincioaia**	**9.14**	**349**	⇓P	**Pn**	**10 37 06.0**	**-0.5**
HKAT	**Jabal Katrina**	**9.27**	**153**	P	**Pn**	**10 37 08.6**	**+0.2**
TR2		**9.30**	**155**	P	**Pn**	**10 37 08.5**	**-0.3**
TR1		**9.73**	**155**	P	**Pn**	**10 37 14.2**	**-0.4**
HHRG	**Al Ghardaqah**	**10.34**	**158**	⇓P	**Pn**	**10 37 22.9**	**-0.1**
HEDF	**Idfu**	**12.25**	**163**	P	**Pn**	**10 37 49.8**	**+0.6**
GNI	**Garni**	**12.56**	**70**	LR	LR	10 43 52.4	
	comp=Z,72nm,21.1s,baz=86,slow=43						
AKASG	**Malin Array Be**	**13.78**	**360**	P	**Pn**	**10 38 11.1**	**+1.2**
	0.6nm,0.3s,baz=169,slow=13,SNR=3.7						
AKASG		**13.78**	**360**	P	**Pn**	**10 38 11.1**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	**GERESS Array B**	**16.45**	**321**	P	**Pn**	**10 38 47.8**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=8.5						
MBDF	**Montbardon**	**18.68**	**302**	*e* P	**Pn**	**10 39 10.4**	**-2.6**
LPG	**La Plagne**	**18.93**	**304**	*e* P	**Pn**	**10 39 15.0**	**-1.0**
LPL	**La Plagne**	**18.95**	**304**	*e* P	**Pn**	**10 39 14.8**	**-1.5**
ORIF	**Oris-en-Rattie**	**19.34**	**302**	*e* P	**Pn**	**10 39 20.0**	**-1.0**
CABF	**La Chapelle**	**19.74**	**307**	*e* P	**Pn**	**10 39 23.8**	**-2.0**
	comp=Z,14nm,0.8s						
CABF	**La Chapelle**	**19.74**	**307**	*e* P	**Pn**	**10 39 23.8**	**-2.0**
CABF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CABF	**La Chapelle**	**19.74**	**307**	*e* P	**Pn**	**10 39 23.8**	**-2.0**
	comp=Z,6.8nm,0.8s						
VIVF	**Saint-Julien-l**	**20.15**	**301**	*e* P	**P**	**10 39 27.6**	**-1.2**
	comp=Z,9.3nm,0.7s						
VIVF	**Saint-Julien-l**	**20.15**	**301**	*e* P	**P**	**10 39 27.6**	**-1.2**
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VIVF	**Saint-Julien-l**	**20.15**	**301**	*e* P	**P**	**10 39 27.6**	**-1.2**
	comp=Z,4.7nm,0.7s						
AKTK	**Aktyubinsk**	**24.63**	**48**	P	**P**	**10 40 13.7**	**-1.2**
AKTO	**Aktyubinsk**	**24.63**	**48**	P	**P**	**10 40 13.7**	**-1.2**
	comp=Z,1.4nm,0.7s,mb3.6,baz=259,slow=11,SNR=5.8						
HFS	**Hagfors**	**25.29**	**342**	P	**P**	**10 40 21.1**	**+0.3**
	comp=Z,0.8nm,0.3s,mb3.7,baz=190,slow=41,SNR=4.1						
ESDC	**Sonseca Array**	**26.13**	**286**	P	**P**	**10 40 28.0**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.6,baz=78,slow=11,SNR=5.7						
ESDC	**Sonseca Array**	**26.13**	**286**	P	**P**	**10 40 28.0**	**-0.6**
BVAR	**Borovoye Array**	**32.74**	**47**	LR	LR	10 56 24.5	
	comp=Z,60nm,19.9s,baz=132,slow=39						
ARCES	**ARCESS Array B**	**32.74**	**358**	P	**P**	**10 41 26.1**	**-1.0**
	comp=Z,2.0nm,0.8s,mb4.1,baz=154,slow=9.0,SNR=4.2						
TOA0	**Torodi Ar. Sit**	**34.17**	**233**	*e* P	**P**	**10 41 38.9**	**-1.1**
TOA0	**Torodi Ar. Sit**	**34.17**	**233**	*e* P	**P**	**10 41 38.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**34.17**	**233**	P	**P**	**10 41 39.9**	**-0.1**
	comp=Z,2.9nm,0.4s,mb4.5,baz=33,slow=8.7,SNR=38						
TORD	**Torodi Ar. Bea**	**34.17**	**233**	P	**P**	**10 41 39.9**	**-0.1**
KURK	**Kurchatov**	**37.50**	**52**	P	**P**	**10 42 06.2**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.7,baz=274,slow=8.3,SNR=5.3						
MKAR	**Makanchi Array**	**40.04**	**59**	P	**P**	**10 42 28.5**	**-1.1**
	comp=Z,0.9nm,0.7s,mb3.6,baz=285,slow=6.5,SNR=6.4						
YKA	**Yellowknife Ar**	**76.75**	**344**	P	**P**	**10 46 44.9**	**-0.7**
	comp=Z,0.6nm,0.7s,mb3.6,baz=28,slow=5.9,SNR=12						
YKA	**Yellowknife Ar**	**76.75**	**344**	P	**P**	**10 46 44.9**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*CSEM **28** 10:40:13.5±0.2, 4456N×10.17E, h15km, ML1.0, Error ellipse: s-maj=3.9km s-min=1.9km az=90.0*
*GEN **28** 10:40:14.2, 4457N×1026E, h23km, ML1.0*
*ISCJB **28** 10:40:15.2±0.7, 4451N±005×10.16E±008, h19km±7km, Error ellipse: s-maj=9.7km s-min=7.3km az=153.2*
*ROM **28** 10:40:15.0±0.3, 4452N×1022E, h20km±4km, Md2.2/7, Ml1.7/4, Error ellipse: s-maj=5.7km s-min=2.6km az=74.0*
*VIE **28** 10:40:15.2±0.4, 4455N×10.18E, h10km, mb2.2/2, ML2.6/5, Error ellipse: s-maj=6.5km s-min=1.9km az=81.0 92 km W of Bologna*

ISC 28 10:40:15.2±0.7,**4454N**±003×**1020E**±007,**h12**km±7km,**n23**, σ0§**78**/37,**1C-1D**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.11**	**242**	P	**Pg**	**10 40 19.3**	**+1.1**
ERBM	**Eremo**	**0.20**	**129**	Pg	**Pg**	**10 40 19.9**	**+0.4**
ERBM				Sg	**Sg**	**10 40 23.9**	**+1.4**
	61nm,0.1s						
ERBM	**Eremo**	**0.20**	**129**	Pg	**Pg**	**10 40 19.9**	**+0.4**
ERBM				Sg	**Sg**	**10 40 23.9**	**+1.4**
	61nm,0.1s						
VALM	**Valbona**	**0.20**	**170**	P	**Pg**	**10 40 19.6**	**+0.1**
BACM	**Baccana**	**0.28**	**199**	P	**Pg**	**10 40 21.0**	**0.0**
GSCL	**Gusciola**	**0.34**	**125**	Pg	**Pg**	**10 40 22.0**	**0.0**
GSCL				Sg	**Sg**	**10 40 26.7**	**+0.1**
GSCL	**Gusciola**	**0.34**	**125**	Pg	**Pg**	**10 40 22.0**	**0.0**
GSCL				Sg	**Sg**	**10 40 26.7**	**+0.1**
SARO	**Sassorosso**	**0.39**	**158**	P	**Pg**	**10 40 22.1**	**-0.8**
VLC	**Villacollemand**	**0.41**	**161**	Pg	**Pg**	**10 40 22.7**	**-0.6**
VLC				Sg	**Sg**	**10 40 29.2**	**+0.5**
	59nm,0.7s						
VLC	**Villacollemand**	**0.41**	**161**	Pg	**Pg**	**10 40 22.7**	**-0.6**
VLC				Sg	**Sg**	**10 40 29.2**	**+0.5**
	59nm,0.7s						
BDI	**Bagni Di Lucca**	**0.56**	**149**	Pg	**Pg**	**10 40 25.6**	**-0.5**
BDI				Sg	**Sg**	**10 40 33.7**	**+0.2**
	43nm,0.5s						
BDI	**Bagni Di Lucca**	**0.56**	**149**	Pg	**Pg**	**10 40 25.6**	**-0.5**
BDI				Sg	**Sg**	**10 40 33.7**	**+0.2**
	43nm,0.5s						
PZZT	**Monte Pizzetto**	**0.63**	**131**	Pg	**Pg**	**10 40 27.0**	**-0.4**
PZZT				Sg	**Sg**	**10 40 36.4**	**+0.7**
	91nm,0.5s						
PZZT	**Monte Pizzetto**	**0.63**	**131**	Pg	**Pg**	**10 40

1.4nm,0.6s,mb4.2,baz=131,slow=5.9,SNR=5.7
KSRS LR LR 11 45 35.6
comp=Z,27nm,18.5s,MS3.6,baz=285,slow=35
NVAR Mina Array Bea 84.32 42 P **P 11 10 01.3 +0.2**
0.3nm,0.7s,mb3.6,baz=239,slow=10,SNR=2.4
TXAR Lajitas Array 88.89 56 P **P 11 10 23.9 +0.2**
0.2nm,0.7s,mb3.6,baz=258,slow=4.2,SNR=3.1
TXAR pP pP 11 10 36.0 -1.1
1.1nm,0.8s,baz=209,slow=7.2,SNR=8.0
CMAR Chiang Mai Arr 93.86 289 P **P 11 10 48.0 +1.0**
0.7nm,0.6s,mb4.3,baz=127,slow=4.5,SNR=3.3
MKAR Makanchi Array 116.70 311 PKP PKPdf 11 16 12.8 -0.2
0.7nm,0.5s,baz=140,slow=0.5,SNR=6.8
MKAR pPKP pPKPdf 11 16 25.8 -1.1
0.6nm,0.6s,baz=54,slow=3.1,SNR=3.9
MKAR Makanchi Array 116.70 311 PKP PKPdf 11 16 12.8 -0.2
MKAR pPKP pPKPdf 11 16 25.8 -1.1
NB2 NORSAR Subarra145.31 354 PKP PKPdf 11 17 06.6 +0.5
comp=Z,3.1nm,0.7s,baz=16,slow=4.1
NOA NORSAR Array B 145.31 354 PKPbc PKPbc 11 17 06.6 +0.6
comp=Z,3.8nm,0.7s,baz=6.0,slow=2.6,SNR=9.2
NOA pPKP pPKPdf 11 17 18.8 -1.2
comp=Z,5.2nm,0.8s,baz=9.9,slow=2.3,SNR=6.9
AKASG Malin Array Be 149.25 328 PKPbc PKPbc 11 17 17.2 -0.1
comp=Z,1.1nm,0.5s,baz=42,slow=3.5,SNR=5.4
AKASG pPKPbc pPKPbc 11 17 29.5 -1.7
comp=Z,3.3nm,0.8s,baz=42,slow=3.8,SNR=4.4
BRTR Keskin Array B 152.14 305 PKPbc PKPbc 11 17 24.9 +0.4
comp=Z,1.1nm,0.6s,baz=145,slow=5.1,SNR=3.9
BRTR PKPab PKPab 11 17 35.9 +1.6
comp=Z,2.8nm,0.9s,baz=78,slow=3.3,SNR=6.5
TORD Torodi Ar. Bea 166.35 170 PKP PKPdf 11 17 33.5 -1.5
comp=Z,0.6nm,1.1s,baz=196,slow=1.0,SNR=2.6
TORD PKPab PKPab 11 18 36.5 +0.3
comp=Z,1.3nm,0.8s,baz=185,slow=4.1,SNR=7.4
TORD pPKPab pPKPab 11 18 48.3 -1.4
comp=Z,1.4nm,0.8s,baz=184,slow=3.7,SNR=7.0

*IDC **28** 11:36:01.1±0.9, 1230N×144.54E, h0km, mb3.6/6, mb1 4.0/6, mb1mx3.8/21, mbtmp3.6/6, MS3.2/1, Ms1 3.2/1, ms1mx2.3/39, Error ellipse: s-maj=36.5km s-min=16.0km az=107.0*
*NEIC **28** 11:36:02.2±0.7, 1223N×144.58E, h10km, mb4.0/3, Error ellipse: s-maj=23.0km s-min=11.9km az=100.0*
*ISCJB **28** 11:36:04.1±0.7, 1223N±008×1445E±02, h33km, mb3.7/9, Error ellipse: s-maj=24.6km s-min=8.6km az=16.4*
ISC 28 11:36:05.9±0.7, 1227N±007×1446E±02, h35km, n11, σ0§90/11, mb3.7/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.34**	**12**	Pn		**Pn**		**11 36 27.6**	**-0.5**
	48nm,0.3s,baz=174,slow=5.2,SNR=18								
GUMO				Sn		**Sn**		**11 36 44.4**	**-0.2**
	150nm,0.3s,baz=343,slow=23,SNR=15								
MJAR	**Matsushiro Arr**	**24.84**	**348**	LR		LR		11 50 08.2	
	comp=Z,45nm,18.3s,baz=70,slow=34								
WRAB	**Tennant Creek**	**33.55**	**198**	*e*P		**P**		**11 42 42.7**	**+0.1**
	1.6nm,0.6s,mb4.1								
WRA	**Warramunga Arr**	**33.56**	**198**	P		**P**		**11 42 43.1**	**+0.4**
	2.3nm,0.7s,mb4.2,baz=21,slow=9.8,SNR=24								
ASAR	**Alice Springs**	**37.21**	**196**	P		**P**		**11 43 14.2**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=19,slow=11,SNR=12								
STKA	**Stephens Creek**	**43.99**	**184**	*e*P		**P**		**11 44 07.3**	**-2.6**
	0.3nm,0.7s,mb3.1								
CM31	**Chiang Mai Arr**	**44.34**	**284**	P		**P**		**11 44 12.8**	**-0.2**
	2.1nm,0.7s,mb4.0								
CMAR	**Chiang Mai Arr**	**44.34**	**284**	P		**P**		**11 44 13.7**	**+0.6**
	0.5nm,0.4s,mb3.6,baz=73,slow=7.6,SNR=4.6								
MKAR	**Makanchi Array**	**62.24**	**317**	P		**P**		**11 46 24.0**	**-0.2**
	0.2nm,0.5s,mb3.5,baz=90,slow=7.6,SNR=5.2								
YKA	**Yellowknife Ar**	**84.15**	**27**	P		**P**		**11 48 33.1**	**-0.1**
	0.2nm,0.7s,mb3.4,baz=285,slow=5.0,SNR=8.4								
NVAR	**Mina Array Bea**	**87.96**	**51**	P		**P**		**11 48 54.4**	**+1.9**
	0.4nm,0.7s,mb3.7,baz=264,slow=8.7,SNR=3.1								

*IDC **28** 11:50:44.3±1.1, 5231N×168.00W, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.8/30, mbtmp3.8/14, ML3.7/1, Error ellipse: s-maj=33.7km s-min=17.5km az=174.0*
*ISCJB **28** 11:50:45.5±2.5, 521N±0.1×1682W±0.1, h22km±15km, mb3.7/12, Error ellipse: s-maj=17.8km s-min=10.5km az=156.2*
*NEIC **28** 11:50:48.2, 52.16N×168.27W, h26km, ML3.1(AEIC), After AEIC.*
ISC 28 11:50:47.1±3.2, 5215N±007×1682W±01, h18km±19km, n21, σ0§81/23, mb3.7/12, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.91**	**334**	P		P	**Pb**	**11 51 03.8**	**-0.6**
NIKO				S		S	**Sb**	**11 51 15.9**	**-0.4**
OKFG	**Magazine Ridge**	**1.27**	**8**	P		**Pn**		**11 51 10.1**	**+0.1**
OKCE	**Okmok Cone E**	**1.27**	**1**	P		**Pn**		**11 51 10.0**	**-0.1**
OKCD	**Okmok Cone D**	**1.28**	**2**	P		**Pn**		**11 51 10.2**	**+0.1**
UNV	**Unalaska Valle**	**1.98**	**30**	P		**Pn**		**11 51 20.0**	**+0.3**
UNV				S		**Sn**		**11 51 44.7**	**+0.6**
AKLV	**Akutan Long Va**	**2.42**	**33**	P		**Pn**		**11 51 27.8**	**+2.0**
KDAK	**Kodiak Island**	**10.59**	**52**	Pn		**Pn**		**11 53 17.9**	**+0.2**
	0.6nm,0.3s,baz=87,slow=13,SNR=7.0								
PETK	**Petropavlovsk-**	**20.61**	**286**	P		**P**		**11 55 25.1**	**0.0**
	5.4nm,0.6s,baz=83,slow=14,SNR=30								
YKA	**Yellowknife Ar**	**29.84**	**49**	P		**P**		**11 56 51.0**	**-1.9**
	0.1nm,0.4s,mb2.9,baz=274,slow=11,SNR=2.7								
YKA	**Yellowknife Ar**	**29.84**	**49**	P		**P**		**11 56 51.0**	**-1.9**
PDAR	**Pinedale Array**	**39.74**	**80**	P		**P**		**11 58 18.7**	**+0.4**
	0.1nm,0.3s,mb3.0,baz=234,slow=7.7,SNR=2.3								
KSRS	**Korea Array**	**46.15**	**278**	P		**P**		**11 59 11.6**	**+1.2**
	2.0nm,0.8s,mb4.1,baz=64,slow=11,SNR=4.3								
TXAR	**Lajitas Array**	**52.03**	**90**	P		**P**		**11 59 53.9**	**-1.6**
	0.2nm,0.8s,mb3.1,baz=306,slow=7.7,SNR=2.4								
KURK	**Kurchatov**	**63.01**	**319**	P		**P**		**12 01 13.1**	**+0.6**
	0.2nm,0.3s,mb3.8,baz=38,slow=7.4,SNR=4.4								
BVAR	**Borovoye Array**	**64.30**	**325**	P		**P**		**12 01 20.9**	**0.0**
	1.2nm,0.7s,mb4.0,baz=78,slow=7.7,SNR=6.6								
MKAR	**Makanchi Array**	**64.47**	**314**	P		**P**		**12 01 21.8**	**-0.4**
	0.6nm,0.7s,mb3.7,baz=53,slow=7.4,SNR=6.4								
HFS	**Hagfors**	**68.06**	**359**	P		**P**		**12 01 44.2**	**-0.8**
	2.4nm,0.9s,mb4.2,baz=48,slow=8.6,SNR=5.7								
AKTO	**Aktyubinsk**	**70.56**	**331**	P		**P**		**12 02 00.2**	**-0.4**
	0.8nm,0.5s,mb3.9,baz=40,slow=5.4,SNR=5.8								
AKASG	**Malin Array Be**	**76.46**	**349**	P		**P**		**12 02 34.8**	**-0.6**
	1.2nm,0.4s,mb4.2,baz=16,slow=6.0,SNR=4.0								
CMAR	**Chiang Mai Arr**	**77.37**	**284**	P		**P**		**12 02 41.8**	**+0.8**
	0.4nm,0.4s,mb3.7,baz=27,slow=6.4,SNR=6.1								
ASAR	**Alice Springs**	**90.81**	**231**	P		**P**		**12 03 49.7**	**+0.6**
	0.2nm,0.8s,mb3.5,baz=30,slow=4.8,SNR=2.9								

*HLW **28** 11:59:11.2, 3549N×2692E, h20km, Mb3.9*
*CSEM **28** 11:59:12.9±0.1, 3524N×2693E, h69km±3km, MD3.4, Error ellipse: s-maj=2.8km s-min=2.1km az=54.0*
*ISCJB **28** 11:59:13.2±0.3, 3523N±003×2688E±004, h83km±7km, Error ellipse: s-maj=5.4km s-min=4.9km az=138.4*
*ATH **28** 11:59:17.4, 3550N×2665E, h49km±1km, MD3.4/4*
*NEIC **28** 11:59:17.4, 3550N×2665E, h49km, MG3.4(ATH), After ATH.*
*THE **28** 11:59:17.7, 3541N×2672E, h26km±5km, Error ellipse: s-maj=6.5km s-min=0.6km az=127.0*
*DDA **28** 11:59:25.8, 3601N×2751E, h5km, Md3.4*
ISC 28 11:59:14.7±0.4, 3524N±003×2685E±004, h72km±8km, n47, σ1§08/63, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.40**	**40**	*e*P		**P**	**Pn**	**11 59 28.3**	**+1.6**
KARP				*e*S		**S**	**Sn**	**11 59 36.1**	**+0.6**
KARP	**Karpathos**	**0.40**	**40**	P		**P**	**Pn**	**11 59 28.4**	**+1.7**
ZKR	**Zakros**	**0.54**	**257**	P		**P**	**Pn**	**11 59 27.5**	**-0.4**
ZKR				S		**S**	**Sn**	**11 59 35.5**	**-2.2**
ZKR	**Zakros**	**0.54**	**257**	P		**P**	**Pn**	**11 59 27.7**	**-0.2**
ZKR				S		**S**	**Sn**	**11 59 35.5**	**-2.2**
NPS	**Neapolis**	**1.01**	**272**	*e*P		**P**	**Pn**	**11 59 34.0**	**+0.6**
NPS	**Neapolis**	**1.01**	**272**	P		**P**	**Pn**	**11 59 34.1**	**+0.7**
LAST	**Lasithi**	**1.13**	**266**	P		**P**	**Pn**	**11 59 35.1**	**+0.3**
LAST				S		**S**	**Sn**	**11 59 49.6**	**-0.3**
LAST	**Lasithi**	**1.13**	**266**	P		**P**	**Pn**	**11 59 35.9**	**+1.1**
ARG	**Arkhangelos**	**1.42**	**46**	*e*P		**P**	**Pn**	**11 59 41.7**	**+3.1**
THR1	**Thera Island**	**1.60**	**315**	P		**P**	**Pn**	**11 59 40.6**	**-0.3**
IDI	**Anoyia**	**1.61**	**272**	P		**P**	**Pn**	**11 59 42.9**	**+1.9**
THR6	**Thira Island,**	**1.62**	**314**	P		**P**	**Pn**	**11 59 41.1**	**-0.2**
THR3	**Thira Island,**	**1.66**	**315**	P		**P**	**Pn**	**11 59 41.3**	**-0.4**
THR5	**Thira Island,**	**1.69**	**314**	P		**P**	**Pn**	**11 59 41.7**	**-0.5**
BDRM	**Kayabasi**	**1.88**	**15**	*i* P		**P**	**Pn**	**11 59 45.5**	**+0.7**
BDRM				*i* S		**S**	**Sn**	**12 00 07.4**	**-0.2**
APE	**Apeiranthos**	**2.11**	**330**	P		**P**	**Pn**	**11 59 47.6**	**-0.2**
APE				S		**S**	**Sn**	**12 00 10.7**	**-2.5**
APE	**Apeiranthos**	**2.11**	**330**	*e*P		**P**	**Pn**	**11 59 47.5**	**-0.3**
APE				S		**S**	**Sn**	**12 00 10.7**	**-2.5**
TURN	**Turunc**	**2.16**	**41**	*i* P		**P**	**Pn**	**11 59 47.1**	**-1.3**
TURN				*i* S		**S**	**Sn**	**12 00 09.2**	**-5.1**
TURN	**Turunc**	**2.16**	**41**	*i* P		**P**	**Pn**	**11 59 47.1**	**-1.4**
TURN				*i* S		**S**	**Sn**	**12 00 09.1**	**-5.2**
KARN	**Karanos**	**2.41**	**275**	P		**P**	**Pn**	**11 59 52.9**	**+1.1**
KARN				S		**S**	**Sn**	**12 00 19.6**	**-0.6**
AKAS	**Kas**	**2.45**	**65**	*i* P		**P**	**Pn**	**11 59 55.3**	**+2.9**
AKAS				*i* S		**S**	**Sn**	**12 00 21.4**	**+0.1**
GOLH	**Golhisar**	**2.96**	**47**	*i* P		**P**	**Pn**	**12 00 02.7**	**+3.4**
GOLH				*i* S		**S**	**Sn**	**12 00 36.9**	**+3.2**
CHOS	**Chios island**	**3.20**	**349**	P		**P**	**Pn**	**12 00 03.0**	**+0.4**
CHOS				S		**S**	**Sn**	**12 00 37.9**	**-1.7**
MANT	**Manisa**	**3.52**	**22**	*i* P		**P**	**Pn**	**12 00 07.2**	**+0.3**
SLUM		**3.98**	**201**	P		**P**	**Pn**	**12 00 13.7**	**+0.4**
HMAT	**Matruh**	**4.14**	**177**	P		**P**	**Pn**	**12 00 16.5**	**+1.0**
SWA2		**6.10**	**192**	P		**P**	**Pn**	**12 00 43.1**	**+0.9**
HMYD	**Mayadein**	**6.37**	**147**	P		**P**	**Pn**	**12 00 46.1**	**+0.2**
KOT	**Kottamia**	**6.76**	**140**	P		**P**	**Pn**	**12 00 51.2**	**0.0**
KOT				S		**S**	**Sn**	**12 02 04.3**	**-2.5**
HSAF	**As Saff**	**6.87**	**143**	P		**P**	**Pn**	**12 00 52.9**	**+0.1**
HHAG	**Hagoal**	**6.88**	**139**	P		**P**	**Pn**	**12 00 52.8**	**-0.1**
HHAG				S		**S**	**Sn**	**12 02 07.2**	**-2.6**
GLL	**Jalalah**	**6.98**	**143**	P		**P**	**Pn**	**12 00 54.4**	**+0.1**
AMAG	**Maghara**	**7.04**	**129**	P		**P**	**Pn**	**12 00 54.6**	**-0.4**
AWBH		**7.12**	**165**	P		**P**	**Pn**	**12 00 57.1**	**+1.0**
RSH		**7.17**	**125**	P		**P**	**Pn**	**12 00 55.9**	**-0.9**
SUZ		**7.38**	**135**	P		**P**	**Pn**	**12 00 59.4**	**-0.3**
HRSH	**Kfar Ka'horesh**	**7.45**	**108**	P		**P**	**Pn**	**12 00 55.9**	**-4.7**
ZAF		**7.65**	**139**	P		**P**	**Pn**	**12 01 03.4**	**0.0**
ZNM		**7.76**	**137**	P		**P**	**Pn**	**12 01 04.7**	**-0.2**
ZNM				S		**S**	**Sn**	**12 02 27.8**	**-3.3**
HNKL	**Nakhl**	**8.01**	**129**	P		**P**	**Pn**	**12 01 08.0**	**-0.4**
HFRF	**Wahat Farafira**	**8.16**	**171**	⇓P		**P**	**Pn**	**12 01 11.2**	**+0.7**
HFRF	**Wahat Farafira**	**8.16**	**171**	P		**P**	**Pn**	**12 01 11.1**	**+0.7**
TR2		**8.99**	**138**	P		**P**	**Pn**	**12 01 21.3**	**-0.5**
HKAT	**Jabal Katrina**	**9.04**	**136**	P		**P**	**Pn**	**12 01 22.1**	**-0.3**
TR1		**9.41**	**138**	P		**P**	**Pn**	**12 01 27.4**	**-0.1**
HHRG	**Al Ghardaqah**	**9.85**	**142**	P		**P**	**Pn**	**12 01 33.4**	**0.0**
HDK1	**Dakhla**	**9.91**	**166**	P		**P**	**Pn**	**12 01 35.7**	**+1.4**

*CSEM **28** 12:32:17.7, 3013N×3624E, h6km, ML2.6, After SNSN*
*SGS **28** 12:32:17.7, 3013N×3624E, h6km*
*ISCJB **28** 12:32:18.3±1.1, 2991N±005×3626E±007, h0km, Error ellipse: s-maj=9.8km s-min=5.4km az=147.8*
*GII **28** 12:32:20.5±1.3, 2993N×3613E, h0km, ML2.1/1, EXPLOSION*
ISC 28 12:32:18.6±1.1, 2991N±005×3630E±007, h0km, n12, σ0§78/15, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.10**	**261**	Pg		**Pg**		**12 32 40.8**	**+1.1**
ZFRI	**Zfri**	**1.17**	**304**	Pg		**Pg**		**12 32 40.8**	**-0.2**
EIL	**Elat**	**1.19**	**259**	Pg		**Pg**		**12 32 41.4**	**-0.1**
EIL				Sg		**Sg**		**12 32 56.8**	**-0.2**
PRNI	**Paran**	**1.21**	**292**	Pg		**Pg**		**12 32 41.5**	**-0.2**
PRNI				Sg		**Sg**		**12 32 57.9**	**+0.5**
MBRI	**Mt Berech**	**1.21**	**265**	Pg		**Pg**		**12 32 41.8**	**0.0**
JLOS		**1.36**	**211**	P		**Pg**		**12 32 43.9**	**-0.9**
JLOS		**1.36**	**211**	P		**Pg**		**12 32 43.8**	**-0.9**
JLOS				S		**Sg**		**12 33 03.3**	**+0.9**
KRMI	**Paran Flat**	**1.38**	**279**	Pg		**Pg**		**12 32 44.0**	**-1.1**
TBKS	**Tabuk**	**1.69**	**173**	S		**Sn**		**12 33 12.6**	**+0.8**
TBKS	**Tabuk**	**1.69**	**173**	P		**Pn**		**12 32 49.0**	**-0.4**
DSI	**Dead Sea**	**1.84**	**335**	Pn		**Pn**		**12 32 52.5**	**+1.1**
RSHS		**2.07**	**220**	P		**Pn**		**12 32 53.1**	**-1.5**

*DJA **28** 12:38:39, 025S×127.29E, h219km, MLv4.0/3*
*IDC **28** 12:38:43.6±2.1, 036N×127.07E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/16, mbtmp3.7/3, Error ellipse: s-maj=163.8km s-min=27.4km az=66.0*
*ISCJB **28** 12:38:56.3±0.8, 022N±0.10×127.1E±0.1, h128km±7km, mb3.7/3, Error ellipse: s-maj=22.8km s-min=10.9km az=142.1*
ISC 28 12:38:57.5±0.8, 020N±010×1271E±01, h122km±7km, n6, σ0§40/9, mb3.7/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.64**	**27**	P		P	**Pn**	**12 39 16.6**	**+0.1**
TNTI				S		S	**Sn**	**12 39 30.8**	**-0.1**
LBMI	**Labuha**	**0.93**	**153**	P		P	**Pn**	**12 39 19.1**	**+0.1**
LBMI				S		S	**Sn**	**12 39 35.3**	**0.0**
MNI	**Manado**	**2.56**	**299**	P		P	**Pn**	**12 39 47.7**	**+10**
MNI				S		S	**Sn**	**12 40 09.3**	**0.0**
WRA	**Warramunga Arr**	**21.24**	**161**	P		P	**P**	**12 43 33.1**	**-0.8**
	1.4nm,0.3s,mb3.7,baz=340,slow=11,SNR=25								
ASAR	**Alice Springs**	**24.63**	**165**	P		P	**P**	**12 44 07.5**	**+0.8**
	0.8nm,0.3s,mb3.6,baz=344,slow=11,SNR=33								
MKAR	**Makanchi Array**	**60.65**	**326**	P		P	**P**	**12 48 55.6**	**0.0**
	0.3nm,0.4s,mb3.7,baz=117,slow=8.8,SNR=3.6								

*CSEM **28** 12:41:45.9±0.2, 3942N×3310E, h2km, MD2.7, Error ellipse: s-maj=8.0km s-min=4.2km az=148.0*
*DDA **28** 12:41:46.8, 3938N×3311E, h5km±1km, Md2.8*
*ISK **28** 12:41:47.4, 3939N×3313E, h5km, MD2.7*
*ISCJB **28** 12:41:48.1±0.6, 3937N±005×3313E±005, h10km, Error ellipse: s-maj=8.5km s-min=4.6km az=146.1*
ISC 28 12:41:47.6±0.8, 3939N±005×3309E±006, h4km±10km, n8, σ0§63/12, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.48**	**92**	*e*PG		**Pg**		**12 41 56.7**	**-0.1**
KAMT				*e*SG		**Sg**		**12 42 03.4**	**+0.3**
CDAG	**Cicekdag**	**1.02**	**76**	*i* P		**Pg**		**12 42 06.3**	**-0.8**
CDAG				*i* S		**Sg**		**12 42 20.5**	**+0.3**
KIZT	**Kizilcal**	**1.07**	**242**	*e*PN		**Pn**		**12 42 08.8**	**-0.5**
ELDT	**Eldivan**	**1.13**	**13**	*i* P		**Pg**		**12 42 08.1**	**-1.2**
ELDT				*i* S		**Sg**		**12 42 25.0**	**+1.2**
KDHN	**Kadinhani**	**1.15**	**222**	*i* P		**Pg**		**12 42 09.3**	**-0.4**
KDHN				*i* S		**Sg**		**12 42 25.3**	**+0.7**
LADK	**Ladik-KONYA**	**1.32**	**206**	*e*PN		**Pn**		**12 42 13.2**	**+0.5**
CORM	**Corum**	**1.42**	**56**	*e*PN		**Pn**		**12 42 14.2**	**0.0**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN		**Pn**		**12 42 18.6**	**+0.1**

*DDA **28** 12:47:19.5, 3940N×3307E, h7km±4km, Md2.9*
*CSEM **28** 12:47:19.5, 3937N×3310E, h7km, MD3.0, After ISK*
*ISK **28** 12:47:19.5, 3937N×3310E, h7km, MD3.0*
*ISCJB **28** 12:47:20.2±0.7, 3940N±006×3308E±005, h10km, Error ellipse: s-maj=9.6km s-min=5.0km az=158.0*
ISC 28 12:47:20.3±0.7, 3939N±007×3308E±005, h8km±10km, n8, σ0§69/11, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**92**	*e*PG		**Pg**		**12 47 29.3**	**-0.5**
KAMT				*e*SG		**Sg**		**12 47 36.1**	**-0.2**
LOD	**Lodumlu**	**0.55**	**334**	*e*PG		**Pg**		**12 47 31.3**	**+0.3**
CDAG	**Cicekdag**	**1.03**	**77**	*i* P		**Pg**		**12 47 38.9**	**-1.2**
CDAG				*i* S		**Sg**		**12 47 54.8**	**+1.5**
KIZT	**Kizilcal**	**1.06**	**242**	*e*PG		**Pg**		**12 47 40.2**	**-0.5**
KDHN	**Kadinhani**	**1.15**	**221**	*i* P		**Pg**		**12 47 42.1**	**-0.2**
KDHN				*i* S		**Sg**		**12 47 58.0**	**+0.8**
CORM	**Corum**	**1.43**	**56**	*e*PN		**Pn**		**12 47 45.9**	**-0.6**
YOZ	**Yozgat**	**1.75**	**81**	*e*PN		**Pn**		**12 47 51.4**	**+0.4**
TOS	**Tosya**	**1.79**	**23**	*e*PN		**Pn**		**12 47 51.7**	**+0.2**

*ISCJB **28** 12:47:58.9±0.3, 4935N±001×673E±003, h0km, Error ellipse: s-maj=2.7km s-min=2.1km az=14.8*
*NEIC **28** 12:47:59.9, 4937N×673E, h1km, ML2.2(LEDBW), ML2.5(STR), After STR.*
*STR **28** 12:47:59.9±0.3, 4937N×673E, h1km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BNS **28** 12:48:00.9±0.7, 4936N×682E, h1km, ML1.7*
*BGR **28** 12:48:00.2±1.4, 4934N×674E, h1km, ML2.2/2, Error ellipse: s-maj=23.3km s-min=8.9km az=90.0*
*LDG **28** 12:48:00.5±0.1, 4938N×677E, h1km, Ml2.7/8, Error ellipse: s-maj=1.0km s-min=0.9km az=130.0, Suspected Mining induced.*
*CSEM **28** 12:48:00.6±0.0, 4938N×677E, h2km, ML2.7/9, Error ellipse: s-maj=1.0km s-min=0.7km az=106.0*
ISC 28 12:47:59.9±0.3, 4936N±001×674E±003, h0km, n42, σ0§77/72, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.40**	**31**	*e*Pg		**Pg**		**12 48 07.5**	**-0.1**
RUP				Sg		**Sg**		**12 48 12.6**	**-0.2**
WLF	**Walferdange**	**0.49**	**309**	P		**Pg**		**12 48 11.2**	**+1.9**
ABH	**Alteburg**	**0.74**	**45**	Pg		**Pg**		**12 48 13.9**	**-0.2**
ABH				Sg		**Sg**		**12 48 24.1**	**+0.4**
LANF	**Langenberg**	**0.80**	**118**	*e*Pg		**Pg**		**12 48 15.3**	**+0.1**
LANF				*e*Sg		**Sg**		**12 48 26.8**	**+1.3**
BGG	**Burgeitz**	**0.93**	**24**	*e*Pg		**Pg**		**12 48 17.9**	**+0.1**
HILG	**Hillesheim**	**0.93**	**358**	*e*Pg		**Pg**		**12 48 18.4**	**+0.6**
CDF	**Champ du Feu**	**1.01**	**159**	*e*Pn		**Pn**		**12 48 19.7**	**-1.7**
CDF				*e*Sg		**Sg**		**12 48 33.0**	**+0.6**
	25nm,0.2s								
CDF	**Champ du Feu**	**1.01**	**159**	*e*Pn		**Pn**		**12 48 19.7**	**-1.7**
CDF				*e*Sg		**Sg**		**12 48 33.0**	**+0.6**
	12nm,0.2s								
RFYF	**Reffroy**	**1.11**	**229**	*e*Pn		**Pn**		**12 48 21.8**	**-0.9**
	baz=49								
RFYF				*e*Sg		**Sg**		**12 48 36.2**	**+0.7**
	23nm,0.2s								
RFYF	**Reffroy**	**1.11**	**229**	*e*Pn		**Pn**		**12 48 21.8**	**-0.9**
RFYF				*e*Sg		**Sg**		**12 48 36.2**	**+0.7**
	12nm,0.2s								
ECH	**Echery**	**1.18**	**166**	Pg		**Pg**		**12 48 23.1**	**+0.6**
ECH				Sg		**Sg**		**12 48 38.5**	**+0.7**
STB	**Steinbach**	**1.24**	**3**	*e*Pg		**Pg**		**12 48 23.9**	**+0.3**
STB				*e*Sg		**Sg**		**12 48 40.7**	**+1.1**
	16nm,0.7s								
THEF	**They Montfort**	**1.24**	**204**	Pg		**Pg**		**12 48 24.1**	**+0.4**
THEF				Sg		**Sg**		**12 48 39.8**	**+0.1**
THEF	**They Montfort**	**1.24**	**204**	Pg		**Pg**		**12 48 24.1**	**+0.4**
THEF				*e*Sg		**Sg**		**12 48 39.9**	**+0.2**
KOE	**Koeppel**	**1.24**	**31**	*e*Pg		**Pg**		**12 48 23.7**	**-0.1**
MEM	**Membach**	**1.34**	**340**	P		**Pg**		**12 48 26.1**	**+0.6**
MEM	**Membach**	**1.34**	**340**	P		**Pg**		**12 48 26.0**	**+0.5**
TOD	**Tromm**	**1.37**	**79**	Pg		**Pg**		**12 48 25.3**	**-0.8**
HAU	**Haudompre**	**1.38**	**191**	*e*Pg		**Pg**		**12 48 26.6**	**+0.2**
HAU				*e*Sg		**Sg**		**12 48 45.2**	**+0.9**
	23nm,0.4s								
HAU	**Haudompre**	**1.38**	**191**	*e*Pg		**Pg**		**12 48 26.6**	**+0.2**
HAU				*e*Sg		**Sg**		**12 48 45.2**	**+0.9**
	11nm,0.4s								
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pn		**Pn**		**12 48 25.2**	**-1.5**
TNS				*e*Sg		**Sg**		**12 48 45.4**	**+0.4**
	SNR=2.3								
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pg		**Pg**		**12 48 27.1**	**+0.2**
	baz=53								
MEZF				*e*Sg		**Sg**		**12 48 45.8**	**+0.7**
	11nm,0.4s								
MEZF	**Maizieres J'vi**	**1.41**	**233**	*e*Pg		**Pg**		**12 48 27.1**	**+0.2**
MEZF				*e*Sg		**Sg**		**12 48 45.8**	**+0.7**
	5.5nm,0.4s								
GIVF	**Givet**	**1.45**	**302**	*e*Pg		**Pg**		**12 48 27.4**	**-0.3**
GIVF				*e*Sg		**Sg**		**12 48 46.6**	**+0.2**
	14nm,0.3s								
GIVF	**Givet**	**1.45**	**302**	*e*Pg		**Pg**		**12 48 27.4**	**-0.3**
GIVF				*e*Sg		**Sg**		**12 48 46.6**	**+0.2**
	6.9nm,0.3s								
BFO	**Black Forest**	**1.47**	**134**	*e*Pg		**Pg**		**12 48 28.0**	**-0.2**
BFO				*e*Sg		**Sg**		**12 48 46.0**	**-1.1**
	SNR=6.6								
BFO	**Black Forest**	**1.47**	**134**	Pg		**Pg**

	comp=Z,92nm,20.8s,MS3.7,baz=220,slow=35						
KEST	**Kesra**	**49.21**	**41**	LR	LR	13 27 29.1	
	comp=Z,48nm,22.0s,MS3.4,baz=209,slow=34						
PLCA	**Paso Flores**	**56.47**	**218**	P	**P**	**13 09 20.7**	**+0.6**
	1.2nm,0.7s,mb4.0,baz=33,slow=8.1,SNR=5.0						
PLCA				LR	LR	13 33 32.2	
	comp=Z,93nm,18.7s,MS3.9,baz=14,slow=36						
SUR	**Sutherland**	**56.68**	**130**	*e*P	**P**	**13 09 19.3**	**-2.5**
	7.2nm,1.1s,mb4.6						
BOSA	**Boshof**	**58.76**	**124**	P	**P**	**13 09 37.4**	**+1.0**
	2.2nm,0.8s,mb4.2,baz=331,slow=14,SNR=3.0						
BOSA				LR	LR	13 29 47.9	
	comp=Z,105nm,19.0s,MS4.0,baz=167,slow=31						
BOSA	**Boshof**	**58.76**	**124**	P	**P**	**13 09 37.4**	**+1.0**
BOSA				LR	LR	13 29 47.9	
GERES	**GERESS Array B**	**59.87**	**31**	P	**P**	**13 09 46.0**	**+2.2**
	0.9nm,0.8s,mb3.9,baz=224,slow=7.4,SNR=7.0						
GERES				LR	LR	13 37 39.7	
	comp=Z,97nm,19.5s,MS4.0,baz=270,slow=38						
GERES	**GERESS Array B**	**59.87**	**31**	P	**P**	**13 09 46.0**	**+2.2**
GERES				LR	LR	13 37 39.7	
NOA	**NORSAR Array B**	**67.19**	**20**	LR	LR	13 34 52.6	
	comp=Z,59nm,19.2s,MS3.8,baz=60,slow=32						
BRTR	**Keskin Array B**	**68.08**	**47**	P	**P**	**13 10 39.1**	**+1.1**
	2.0nm,0.9s,mb4.1,baz=258,slow=7.7,SNR=4.6						
BRTR				LR	LR	13 40 54.4	
	comp=Z,52nm,19.1s,MS3.8,baz=46,slow=36						
AKASG	**Malin Array Be**	**69.32**	**35**	P	**P**	**13 10 47.1**	**+1.6**
	3.4nm,0.8s,mb4.3,baz=242,slow=7.0,SNR=13						
TXAR	**Lajitas Array**	**77.07**	**300**	P	**P**	**13 11 30.6**	**-1.2**
	0.1nm,0.4s,mb3.1,baz=109,slow=6.0,SNR=5.1						
ARCES	**ARCESS Array B**	**77.26**	**17**	LR	LR	13 44 31.7	
	comp=Z,194nm,19.5s,MS4.4,baz=3.7,slow=35						
ANMO	**Albuquerque**	**80.04**	**305**	LR	LR	13 42 18.8	
	comp=Z,90nm,20.2s,MS4.1,baz=158,slow=32						
PDAR	**Pinedale Array**	**83.22**	**313**	P	**P**	**13 12 05.3**	**+0.6**
	0.3nm,0.8s,mb3.4,baz=117,slow=8.5,SNR=4.0						
PDAR				LR	LR	13 46 37.0	
	comp=Z,101nm,18.9s,MS4.2,baz=242,slow=34						
YKA	**Yellowknife Ar**	**87.73**	**332**	LR	LR	13 47 16.8	
	comp=Z,11nm,18.7s,MS3.3,baz=100,slow=33						
ASAR	**Alice Springs**	**151.29**	**144**	PKPbc	PKPbc	13 19 32.8	+0.2
	0.4nm,0.5s,baz=198,slow=2.0,SNR=13						

MEX 28 13:03:15.1±0.4, 1623N×9808W, h20km±10km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**345**	*i* P	Pb	13 03 18.9	-0.9
PNIG				*i* S	Sb	13 03 22.1	-1.0
VHO	**Vista Hermosa**	**1.54**	**57**	*i* P	Pn	13 03 39.4	-2.1
VHO				*i* S	Sn	13 03 57.2	-3.6
UTMO	**Huajuapan**	**1.62**	**9**	*i* P	Pn	13 03 39.6	-2.9
UTMO				*i* S	Sn	13 03 58.5	-4.2
CAIG	**El Cayaco**	**2.25**	**292**	*e*P	Pn	13 03 47.9	-3.3
CAIG				*i* S	Sn	13 04 15.8	-2.6
CMIG	**Matias Romero**	**3.18**	**74**	*e*P	Pn	13 04 04.5	+0.4
CMIG				*i* S	Sn	13 04 38.3	-3.1

*NEIC **28** 13:04:11.0, 1867N×10167W, h75km, MD3.9(MEX), After MEX.*

MEX 28 13:04:11.0±0.7, 1868N×10163W, h78km±10km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**1.08**	**23**	*i* P	Pn	13 04 30.1	-0.8
MOIG				*i* S	Sn	13 04 44.1	-1.6
MOIG	**Morelia**	**1.08**	**23**	*i* P	Pn	13 04 31.0	+0.1
MOIG				*i* S	Sn	13 04 43.2	-2.5
ZIIG	**Zihuatanejo**	**1.08**	**172**	*i* P	Pn	13 04 29.6	-1.4
ZIIG				*i* S	Sn	13 04 44.2	-1.6
MMIG	**Aquila**	**1.67**	**257**	*i* P	Pn	13 04 37.4	-1.2
MMIG				*i* S	Sn	13 04 57.2	-2.2
MEIG	**Mezcala**	**2.05**	**111**	*e*P	Pn	13 04 41.6	-1.9
MEIG				*i* S	Sn	13 05 07.1	-1.2
CAIG	**El Cayaco**	**2.08**	**141**	*i* P	Pn	13 04 43.1	-0.8
CAIG				*i* S	Sn	13 05 07.1	-1.9
MZVM		**2.33**	**77**	*i* P	Pn	13 04 45.5	-1.8
MZVM				*i* S	Sn	13 05 14.7	-0.3
ACX	**Acapulco**	**2.43**	**138**	*e*P	Pn	13 04 47.3	-1.4
ACX				*i* S	Sn	13 05 15.7	-1.8
UTMO	**Huajuapan**	**3.73**	**103**	*i* P	Pn	13 05 06.3	0.0
UTMO				*i* S	Sn	13 05 48.6	-0.5
PNIG	**Pinotepa**	**4.04**	**124**	*e*P	Pn	13 05 12.4	+1.9
PNIG				*i* S	Sn	13 05 58.0	+1.3
CMIG	**Matias Romero**	**6.62**	**103**	*i* P	Pn	13 05 46.6	+1.0
CMIG				*i* S	Sn	13 06 58.3	-1.3

*NEIC **28** 13:08:33.6, 6051N×13723W, h1km, ML3.2(AEIC), ML3.4(PGC), After PGC.*

PGC 28 13:08:33.6±0.0, 6051N×13723W, h1km, ML3.4/5, 9D, 31km southeast of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYT	**Haines Junctio**	**0.34**	**337**	⇓P	Pg	13 08 39.7	-0.5
HYT				⇓S	Sg	13 08 44.0	-0.6
PLBC	**Pleasant Camp**	**1.14**	**157**	⇑P	Pg	13 08 54.1	-1.4
PLBC				⇓S	Sg	13 09 09.4	-0.9
WHY	**Whitehorse**	**1.17**	**82**	⇓P	Pg	13 08 54.5	-1.5
WHY				⇑S	Sg	13 09 09.7	-1.4
WHY	**Whitehorse**	**1.17**	**82**	P	Pg	13 08 54.4	-1.6
WHY				S	Sg	13 09 09.7	-1.4
PNL	**Peninsula**	**1.38**	**233**	P	Pn	13 08 59.4	-0.5
PNL				S	Sg	13 09 18.9	+1.1
SKAG	**Skagway**	**1.42**	**137**	P	Pn	13 08 58.8	-1.8
SKAG				S	Sg	13 09 17.4	-1.9
BCA3	**Beaver Creek A**	**3.35**	**322**	P	Pn	13 09 26.3	-0.7
SIT	**Sitka**	**3.60**	**163**	P	Pn	13 09 29.4	-1.1
DAWY	**Dawson**	**3.71**	**345**	⇓Pn	Pn	13 09 31.5	-0.4
DAWY				⇓Pg	Pg	13 09 41.0	-3.6
DAWY				⇓Sn	Sn	13 10 13.8	-2.4
DAWY				⇑Sg	Sg	13 10 28.5	-4.1
DAWY	**Dawson**	**3.71**	**345**	P	Pn	13 09 31.6	-0.3
DLBC	**Dease Lake**	**4.22**	**116**	⇑Pn	Pn	13 09 37.9	-1.1
DLBC				⇓Pg	Pg	13 09 50.2	-4.3
DLBC				⇓Sg	Sg	13 10 42.8	-6.3
DLBC	**Dease Lake**	**4.22**	**116**	P	Pn	13 09 37.9	-1.1
EGAK	**Eagle**	**4.65**	**339**	*e*Pn	Pn	13 09 44.4	-0.4
EGAK				*e*Sn	Sn	13 10 38.0	-1.3
BM3	**Burnt Mountain**	**7.65**	**338**	P	Pn	13 10 26.0	0.0
COLD	**Coldfoot**	**8.82**	**325**	*e*Pn	Pn	13 10 41.5	-0.6
	1.6nm,0.6s						
COLD				*e*Sn	Sn	13 12 19.4	-2.6

*CSEM **28** 13:44:23.8±0.1, 3749N×3559E, h8km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.4km az=15.0*
*ISCJB **28** 13:44:24.1±0.7, 3753N±004×3555E±004, h4km±6km, Error ellipse: s-maj=6.2km s-min=4.3km az=25.4*
*DDA **28** 13:44:24.3, 3755N×3558E, h16km±3km, Md3.2*
*ISK **28** 13:44:24.1, 3753N×3559E, h8km, MD3.3*

ISC 28 13:44:24.9±0.6, 3749N±004×3556E±004, h7km±5km, n25, σ0§89/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.21**	**92**	PG	**Pg**	**13 44 28.2**	**-1.0**
KOZT				*e*SG	**Sg**	**13 44 32.1**	**+0.1**
KARA	**Karaisali**	**0.46**	**241**	PG	**Pg**	**13 44 33.9**	**0.0**
CEYT	**Ceyhan**	**0.50**	**163**	PG	**Pg**	**13 44 35.8**	**+1.2**
ANDN	**Andirin**	**0.63**	**82**	*i* P	**Pg**	**13 44 36.6**	**-0.5**
ANDN				*i* S	**Sg**	**13 44 46.7**	**+1.4**
NIG	**Nigde**	**0.97**	**310**	*e*PG	**Pg**	**13 44 42.7**	**-1.0**
KMRS	**Kahramanmaras**	**1.07**	**89**	*e*PG	**Pg**	**13 44 44.1**	**-1.3**
COBT	**Iskenderun**	**1.12**	**150**	*i* P	**Pg**	**13 44 46.0**	**-0.3**
COBT				*i* S	**Sg**	**13 45 03.4**	**+2.5**
COBT	**Iskenderun**	**1.12**	**150**	*i* P	**Pg**	**13 44 46.0**	**-0.4**
COBT				*i* S	**Sg**	**13 45 03.4**	**+2.5**
GAZ	**Gaziantep**	**1.35**	**103**	*e*PN	**Pn**	**13 44 49.2**	**-1.0**
PINB	**Pinarbasi**	**1.36**	**29**	*i* P	**Pn**	**13 44 49.2**	**-1.0**
PINB				*i* S	**Sb**	**13 45 09.7**	**+1.5**
AVNT	**Avonos**	**1.40**	**337**	*i* P	**Pn**	**13 44 45.8**	**-5.1**
AVNT				*i* S	**Sb**	**13 45 05.2**	**-4.2**
KUZU	**Kuzuini**	**1.41**	**120**	*i* P	**Pn**	**13 44 49.9**	**-1.0**
KUZU				*i* S	**Sb**	**13 45 08.7**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.49**	**37**	*e*PN	**Pn**	**13 44 45.9**	**-6.1**
GZT	**Gaziantep**	**1.60**	**94**	*i* P	**Pn**	**13 44 53.0**	**-0.6**
AKCD	**Akcadag**	**2.03**	**66**	*i* P	**Pn**	**13 44 59.7**	**+0.1**
AKCD				*i* S	**Sn**	**13 45 25.7**	**+0.5**
YOZ	**Yozgat**	**2.15**	**355**	*e*PN	**Pn**	**13 45 01.6**	**+0.4**
DARE	**Darende-Malaty**	**2.29**	**50**	*e*PN	**Pn**	**13 44 56.1**	**-7.0**
CDAG	**Cicekdag**	**2.33**	**337**	*i* P	**Pn**	**13 45 04.5**	**+0.9**
CDAG				*i* S	**Sn**	**13 45 37.2**	**+4.9**
CDAG	**Cicekdag**	**2.33**	**337**	*i* P	**Pn**	**13 45 03.6**	**0.0**
KAMT	**Kaman**	**2.37**	**323**	*e*PN	**Pn**	**13 45 04.4**	**+0.3**
HDMB	**Hadim**	**2.51**	**259**	*e*PN	**Pn**	**13 45 06.3**	**+0.3**
KONT	**Konya--Tatoy**	**2.58**	**281**	*e*PN	**Pn**	**13 45 07.7**	**+0.7**
SVSK	**Karacayir**	**2.67**	**24**	*e*PN	**Pn**	**13 45 08.4**	**+0.1**
CORM	**Corum**	**2.78**	**345**	*e*PN	**Pn**	**13 45 10.2**	**+0.4**
KDHN	**Kadinhani**	**2.91**	**292**	*i* P	**Pn**	**13 45 11.0**	**-0.6**

*ISCJB **28** 14:27:09.3±4.5, 36S±01×1396E±05, h4km±27km, mb3.6/2, Error ellipse: s-maj=81.9km s-min=17.0km az=176.4*
*IDC **28** 14:27:09.3±3.5, 358S×13992E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.8/12, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=106.0km s-min=27.9km az=84.0*
*NEIC **28** 14:27:15.9±2.1, 367S×13960E, h35km, mb3.8/1, Error ellipse: s-maj=54.5km s-min=14.8km az=88.0*

ISC 28 14:27:17.1±3.7, 37S±01×1394E±04, h39km±31km, n9, σ1§12/8, mb3.6/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.28**	**217**	*e*P	Px	14 29 57.1	
	43nm,0.6s						
KAKA	**Kakadu**	**11.28**	**217**	*e*Pn	x	14 29 57.0	
	132nm,0.6s						
WRAB	**Tennant Creek**	**16.84**	**197**	*e*Pn	**Pn**	**14 31 11.6**	**+1.5**
	7.5nm,1.0s						
WRAB				*e*Sn	Sx	14 34 05.3	
WB2	**Warramunga Arr**	**16.85**	**197**	*e*P	**Pn**	**14 31 09.3**	**-0.9**
WB2				*e*S	Sx	14 34 04.7	
WRA	**Warramunga Arr**	**16.86**	**197**	P	**Pn**	**14 31 09.3**	**-0.9**
	0.5nm,0.3s,baz=18,slow=12,SNR=27						
WRA				S	Sx	14 34 06.6	
	0.2nm,0.3s,baz=11,slow=22,SNR=6.0						
FITZ	**Fitzroy Crossi**	**19.64**	**222**	*e*P	**Pn**	**14 31 44.1**	**-0.1**
	18nm,1.6s						
ASAR	**Alice Springs**	**20.52**	**195**	P	**P**	**14 31 52.8**	**+0.6**
	2.0nm,0.7s,baz=26,slow=10,SNR=31						
ASAR				S	**S**	**14 35 39.6**	**-0.2**
	1.5nm,0.7s,baz=14,slow=28,SNR=5.1						
CMAR	**Chiang Mai Arr**	**45.55**	**300**	P	**P**	**14 35 33.9**	**+0.4**
	0.3nm,0.7s,mb3.4,baz=126,slow=5.7,SNR=3.9						
MKAR	**Makanchi Array**	**71.02**	**322**	P	**P**	**14 38 30.5**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=107,slow=6.6,SNR=13						

*ISCJB **28** 14:32:01.8±0.5, 3003N±005×1394E±01, h396km±6km, mb3.2/7, Error ellipse: s-maj=15.4km s-min=7.7km az=169.3*
*IDC **28** 14:32:02.5±0.8, 3000N×13938E, h388km±11km, mb2.9/7, mb1 3.1/12, mb1mx3.0/25, mbtmp3.1/12, Error ellipse: s-maj=26.4km s-min=12.2km az=70.0*
*JMA **28** 14:32:02.9±0.3, 3014N×13969E, h398km±5km, M3.6*
*NEIC **28** 14:32:03.3±1.5, 3012N×13941E, h405km±18km, MG3.6(JMA), Error ellipse: s-maj=28.3km s-min=17.7km az=84.0*

ISC 28 14:32:02.7±0.5, 3003N±005×1395E±01, h388km±6km, n26, σ0§99/31, mb3.2/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.09**	**5**	P	**Pn**	**14 33 07.1**	**+1.5**
	7.2nm,0.3s,baz=143,slow=20,SNR=2.9						
JHJ				S	**S**	**14 33 55.0**	**-1.6**
	8.9nm,0.3s,baz=288,slow=19,SNR=2.6						
CBIJ	**Chichi jima**	**3.79**	**140**	P	**Pn**	**14 33 12.6**	**+0.5**
	24nm,0.3s,baz=284,slow=22,SNR=9.4						
CBIJ				S	**S**	**14 34 07.3**	**-0.8**
	34nm,0.3s,baz=308,slow=23,SNR=11						
CBIJ	**Chichi jima**	**3.79**	**140**	P	**Pn**	**14 33 12.5**	**+0.4**
BSO1	**Boso 1**	**4.78**	**15**	P	**Pn**	**14 33 22.6**	**+0.9**
BSO1				*e*S	**S**	**14 34 26.2**	**+0.3**
BSO3	**Boso 3**	**4.84**	**10**	*e*S	**S**	**14 34 25.6**	**-1.3**
JIE	**Ise**	**4.93**	**332**	P	**Pn**	**14 33 25.2**	**+1.9**
BSO4	**Boso 4**	**5.00**	**8**	*e*S	**S**	**14 34 30.1**	**+0.1**
JOD2	**Odawara 2**	**5.22**	**357**	P	**Pn**	**14 33 27.5**	**+1.2**
JHU	**Hanno**	**5.80**	**359**	P	**Pn**	**14 33 32.1**	**-0.5**
JHU				*e*S	**S**	**14 34 41.7**	**-4.1**
JRY	**Ryogami san**	**5.98**	**356**	P	**Pn**	**14 33 35.0**	**+0.4**
JRY				*e*S	**S**	**14 34 46.3**	**-3.1**
JYT	**Yasato**	**6.21**	**6**	P	**Pn**	**14 33 36.9**	**-0.1**
JAG	**Ashikaga**	**6.37**	**360**	P	**Pn**	**14 33 37.9**	**-1.0**
MJAR	**Matsushiro Arr**	**6.57**	**351**	P	**Pn**	**14 33 41.3**	**+0.2**
	0.9nm,0.3s,baz=171,slow=11,SNR=12						
JHO	**Hitachi**	**6.62**	**8**	P	**Pn**	**14 33 41.8**	**+0.1**
JHS	**Saijyo**	**7.29**	**314**	P	**Pn**	**14 33 50.2**	**+1.0**
JMK	**Ichinoseki**	**9.01**	**9**	P	**Pn**	**14 34 10.5**	**+1.5**
JOW	**Kunigami**	**10.35**	**255**	P	**Pn**	**14 34 24.4**	**-0.4**
	1.0nm,0.3s,baz=14,slow=8.3,SNR=3.5						
KSRS	**Korea Array**	**12.11**	**311**	P	**P**	**14 34 44.1**	**+0.2**
	0.7nm,0.3s,baz=125,slow=9.9,SNR=18						
ZALV	**Zalesovo Beam**	**45.71**	**318**	P	**P**	**14 39 45.0**	**-1.5**
	0.6nm,0.3s,mb3.4,baz=115,slow=6.5,SNR=3.1						
MKAR	**Makanchi Array**	**46.77**	**308**	P	**P**	**14 39 53.4**	**-1.4**
	0.4nm,0.4s,mb3.1,baz=84,slow=11,SNR=13						
MKAR	**Makanchi Array**	**46.77**	**308**	P	**P**	**14 39 53.4**	**-1.4**
WRA	**Warramunga Arr**	**49.93**	**186**	P	**P**	**14 40 18.9**	**+0.1**
	0.5nm,0.9s,mb2.8,baz=359,slow=7.6,SNR=7.9						
ASAR	**Alice Springs**	**53.66**	**186**	P	**P**	**14 40 45.4**	**-0.6**
	0.4nm,0.8s,mb2.7,baz=360,slow=7.1,SNR=3.6						
ARCES	**ARCESS Array B**	**69.98**	**340**	P	**P**	**14 42 33.0**	**+0.2**
	4.1nm,1.0s,mb3.9,baz=67,slow=9.3,SNR=4.8						
YKA	**Yellowknife Ar**	**70.70**	**28**	P	**P**	**14 42 38.0**	**+0.7**
	0.2nm,0.6s,mb2.8,baz=297,slow=6.1,SNR=3.1						
BRTR	**Keskin Array B**	**82.26**	**312**	P	**P**	**14 43 41.9**	**0.0**
	0.9nm,0.8s,mb3.5,baz=104,slow=6.1,SNR=1.5						

*CSEM **28** 14:47:40.4±0.2, 3941N×3305E, h8km, MD3.2, Error ellipse: s-maj=7.5km s-min=3.7km az=149.0*
*ISK **28** 14:47:40.3, 3946N×3306E, h8km, MD3.2*
*ISCJB **28** 14:47:41.7±0.6, 3942N±005×3308E±005, h10km, Error ellipse: s-maj=7.4km s-min=4.8km az=147.7*
*DDA **28** 14:47:42.7, 3941N×3310E, h6km±2km, Md3.1*

ISC 28 14:47:41.0±1.1, 3943N±005×3305E±005, h3km±8km, n12, σ0§70/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.50**	**335**	PG	**Pg**	**14 47 50.1**	**-0.6**
KAMT	**Kaman**	**0.52**	**97**	PG	**Pg**	**14 47 51.4**	**+0.5**
KAMT				SG	**Sg**	**14 47 57.9**	**+0.1**
CDAG	**Cicekdag**	**1.04**	**79**	*i* P	**Pg**	**14 48 01.6**	**+0.7**
CDAG				*i* S	**Sn**	**14 48 17.1**	**-0.5**
CDAG	**Cicekdag**	**1.04**	**79**	*i* P	**Pg**	**14 48 01.6**	**+0.6**
CDAG				*i* S	**Sn**	**14 48 17.1**	**-0.5**
KIZT	**Kizilcal**	**1.06**	**239**	PN	**Pn**	**14 48 01.5**	**-1.2**
ELDT	**Eldivan**	**1.09**	**15**	*i* P	**Pn**	**14 48 04.3**	**+1.0**
ELDT				*i* S	**Sn**	**14 48 19.5**	**+0.6**
KDHN	**Kadinhani**	**1.16**	**219**	*i* P	**Pn**	**14 48 04.8**	**+0.6**
KDHN				*i* S	**Sn**	**14 48 21.8**	**+1.2**
LADK	**Ladik-KONYA**	**1.34**	**204**	PN	**Pn**	**14 48 06.1**	**-0.5**
CORM	**Corum**	**1.43**	**58**	*e*PN	**Pn**	**14 48 07.0**	**-0.8**
KONT	**Konya--Tatoy**	**1.58**	**200**	*e*PN	**Pn**	**14 48 09.8**	**-0.1**
YOZ	**Yozgat**	**1.77**	**83**	PN	**Pn**	**14 48 12.1**	**-0.5**
NIG	**Nigde**	**1.80**	**137**	PN	**Pn**	**14 48 12.5**	**-0.4**

*ISCJB **28** 14:50:04.2±3.6, 462N±02×1530E±02, h15km±25km, mb3.6/10, MS3.4/2, Error ellipse: s-maj=28.4km s-min=11.7km az=149.9*
*MOS **28** 14:50:07.6±1.9, 4635N×15294E, h35km, mb4.2/5, Error ellipse: s-maj=17.7km s-min=12.2km az=69.8*
*IDC **28** 14:50:11.4±3.8, 4654N×15309E, h52km±31km, mb3.3/6, mb1 3.6/8, mb1mx3.4/23, mbtmp3.4/8, ML3.2/2, MS3.0/2, Ms1 3.2/2, ms1mx2.7/16, Error ellipse: s-maj=51.9km s-min=22.2km az=167.0*

ISC 28 14:50:09.0±1.6, 463N±01×1530E±01, h35km±13km, n21, σ1§25/21, mb3.6/10, MS3.4/2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.88**	**24**	*e*PN	**Pn**	**14 51 20.5**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.06**	**279**	*e*PN	**Pn**	**14 51 48.4**	**-1.4**
PETK	**Petropavlovsk-**	**7.49**	**22**	P	**Pn**	**14 51 54.8**	**-0.9**
	0.4nm,0.3s,baz=169,slow=13,SNR=23						
PETK				LR	LR	14 55 04.3	
	comp=Z,45nm,18.4s,baz=127,slow=41						
ASAJ	**Asahikawa**	**7.63**	**257**	P	**Pn**	**14 52 01.9**	**+4.3**
	0.3nm,0.3s,baz=260,slow=33,SNR=3.6						
ERM	**Erimo**	**8.24**	**242**	*e*PN	**Pn**	**14 52 07.3**	**+1.4**
HIA	**Hailar**	**22.42**	**290**	*e*P	**P**	**14 55 03.2**	**-1.1**
BILL	**Bilibino**	**22.87**	**13**	*e*P	**P**	**14 55 09.6**	**+0.7**
BILL				*e*S	**S**	**14 59 19.4**	**+3.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.1						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.4						
TIXI	**Tiksi**	**27.89**	**344**	*e*P	**P**	**14 55 57.4**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
COLA	**College**	**36.57**	**38**	*e*P	**P**	**14 57 11.7**	**+0.7**
MKAR	**Makanchi Array**	**47.06**	**298**	P	**P**	**14 58 36.6**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.6,baz=60,slow=7.2,SNR=4.7						
MKAR	**Makanchi Array**	**47.06**	**298**	*e*P	**P**	**14 58 37.4**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**47.54**	**304**	*e*P	**P**	**14 58 39.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
YKA	**Yellowknife Ar**	**51.36**	**36**	P	**P**	**14 59 07.1**	**-2.4**
	comp=Z,0.2nm,0.6s,mb3.3,baz=296,slow=7.5,SNR=2.9						
YKA	**Yellowknife Ar**	**51.36**	**36**	P	**P**	**14 59 07.1**	**-2.5**
CMAR	**Chiang Mai Arr**	**52.16**	**257**	LR	LR	15 20 16.4	
	comp=Z,42nm,21.0s,MS3.5,baz=190,slow=34						
NVAR	**Mina Array Bea**	**62.75**	**62**	P	**P**	**15 00 29.1**	**-1.4**
	comp=Z,0.4nm,0.6s,mb3.7,baz=289,slow=5.6,SNR=3.2						
PDAR	**Pinedale Array**	**65.11**	**54**	P	**P**	**15 00 46.2**	**+0.3**
	comp=Z,0.5nm,0.9s,mb3.5,baz=303,slow=4.1,SNR=3.5						
KIV	**Kislovodsk**	**71.05**	**314**	*e*P	**P**	**15 01 26.4**	**+3.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
AKASG	**Malin Array Be**	**71.88**	**326**	P	**P**	**15 01 28.1**	**+0.1**
	comp=Z,0.9nm,0.4s,mb4.0,baz=35,slow=6.2,SNR=3.7						
AKASG	**Malin Array Be**	**71.88**	**326**	P	**P**	**15 01 28.1**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**77.82**	**60**	P	**P**	**15 02 03.0**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=285,slow=3.8,SNR=6.4						

*NEIC **28** 14:53:27.6, 33.19S×71.00W, h73km, MD3.5(GUC), After GUC.*
NEIC Felt [II] at Rancagua and Santiago.

GUC 28 14:53:27.6±0.8, 3319S×7100W, h73km±3km, MD3.5, ML3.7, 16C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.22**	**357**	⇑*i*P	Pn	14 53 39.3	+0.7
ROCH				*i* S	Sn	14 53 47.9	+1.3
PEL	**Peldehue**	**0.27**	**80**	⇓*i*P	Pn	14 53 39.3	+0.5
PEL				*i* S	Sn	14 53 48.0	+0.9
PEL				AML	AML	14 53 49.0	
	comp=E,5μm,0.3s						
RCDM	**Rinconada Maip**	**0.34**	**152**	⇑*i*P	Pn	14 53 39.5	+0.2
RCDM				*i* S	Sn	14 53 48.4	+0.5
RCDM	**Rinconada Maip**	**0.34**	**152**	⇑*i*P	Pn	14 53 39.5	+0.2
RCDM				*i* S	Sn	14 53 48.4	+0.5
RCDM				AML	AML	14 53 49.1	
	comp=N,17μm,0.1s						
SAN	**Santiago**	**0.38**	**133**	⇑*i*P	Pn	14 53 40.2	+0.5
SAN				*i* S	Sn	14 53 49.2	+0.8
SAN	**Santiago**	**0.38**	**133**	⇑*i*P	Pn	14 53 40.2	+0.5
SAN				*i* S	Sn	14 53 49.2	+0.8
SAN				AML	AML	14 53 49.7	
	comp=N,3μm,0.1s						
CLCH	**Cerro Calan**	**0.44**	**118**	⇑*i*P	Pn	14 53 40.7	+0.6
CLCH				*i* S	Sn	14 53 50.4	+1.1
CLCH				AML	AML	14 53 51.6	
	comp=E,4μm,0.7s						
TACH	**Talagante**	**0.46**	**174**	⇑*i*P	Pn	14 53 40.6	+0.3
TACH				*i* S	Sn	14 53 49.9	+0.2
ANTU	**Antumapu**	**0.48**	**141**	⇑*i*P	Pn	14 53 40.8	+0.3
ANTU				*i* S	Sn	14 53 50.8	+0.8
ANTU	**Antumapu**	**0.48**	**141**	⇑*i*P	Pn	14 53 40.8	+0.3
ANTU				*i* S	Sn	14 53 50.8	+0.8
ANTU				AML	AML	14 53 51.5	
	comp=E,19μm,0.2s						
IHA	**Instituto Hidr**	**

QIZ	**Qiongzhong**	**28.82**	**340**	P	**P**	**15 07 07.6**	**-4.4**
	90nm,1.8s,mb5.1						
STKA	**Stephens Creek**	**31.08**	**142**	P	**P**	**15 07 34.4**	**+2.6**
	7.3nm,0.4s,mb4.7,baz=316,slow=8.6,SNR=20						
STKA	**Stephens Creek**	**31.08**	**142**	*e*P	**P**	**15 07 33.8**	**+2.0**
	2.9nm,0.8s,mb4.0						
PALK	**Pallekele**	**41.82**	**291**	*e*P	**P**	**15 09 02.0**	**-0.7**
	15nm,1.1s,mb4.3						
MKAR	**Makanchi Array**	**64.14**	**332**	P	**P**	**15 11 45.7**	**+1.0**
	1.3nm,0.5s,mb3.8,baz=154,slow=7.0,SNR=26						
MKAR	**Makanchi Array**	**64.14**	**332**	P	**P**	**15 11 45.7**	**+1.0**
ZALV	**Zalesovo Beam**	**68.62**	**339**	P	**P**	**15 12 12.7**	**-0.3**
	1.2nm,0.4s,mb3.8,baz=148,slow=5.6,SNR=5.1						
KURK	**Kurchatov**	**68.66**	**333**	P	**P**	**15 12 13.7**	**+0.4**
	0.7nm,0.2s,mb3.9,baz=136,slow=6.9,SNR=3.1						

*NEIC **28** 15:07:35.7, 19.14N×6454W, h67km, MD3.5(RSPR), After RSPR.*
*TRN **28** 15:07:35.2, 1907N×6472W, h20km*
*RSPR **28** 15:07:35.7, 19.14N×6454W, h67km±3km, MD3.5/7, MD3.5/7*

ISC 28 15:07:36.1±1.5, 192N±01×6459W±009, h48km±37km, n19, σ0s54/29, 12C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.52**	**152**⇓	*e*P	**Pn**	**15 07 47.1**	**-0.4**
ABV				*e*S	**Sn**	**15 07 56.1**	**+0.5**
TBVI	**Tortola**	**0.77**	**182**	*e*P	**Pn**	**15 07 50.1**	**-0.6**
TBVI	**Tortola**	**0.77**	**182**	*e*P	**Pn**	**15 07 50.9**	**+0.2**
TBVI				*e*S	**Sn**	**15 08 01.2**	**-0.1**
TBVI	**Tortola**	**0.77**	**182**⇑	*e*P	**Pn**	**15 07 50.1**	**-0.6**
TBVI				*e*S	**Sn**	**15 08 01.2**	**-0.1**
STVI	**Saint Thomas**	**0.90**	**202**⇑	*e*P	**Pn**	**15 07 51.8**	**-0.7**
STVI				*e*S	**Sn**	**15 08 04.5**	**+0.1**
MTP	**Monte Pirata**	**1.42**	**220**⇓	*e*P	**Pn**	**15 07 58.9**	**-0.6**
MTP				*e*S	**Sn**	**15 08 16.9**	**0.0**
CDVI	**St. Croix**	**1.44**	**187**⇑	*e*P	**Pn**	**15 08 01.2**	**+1.4**
CBYP	**Canovanas**	**1.51**	**233**⇑	*e*P	**Pn**	**15 08 00.1**	**-0.5**
CBYP				*e*S	**Sn**	**15 08 19.3**	**+0.2**
HUMP	**Col San Antoni**	**1.58**	**229**⇑	*e*P	**Pn**	**15 08 01.1**	**-0.6**
HUMP	**Col San Antoni**	**1.58**	**229**⇑	*e*P	**Pn**	**15 08 01.9**	**+0.2**
HUMP				*e*S	**Sn**	**15 08 20.4**	**-0.6**
HUMP	**Col San Antoni**	**1.58**	**229**⇑	*e*P	**Pn**	**15 08 01.1**	**-0.6**
HUMP				*e*S	**Sn**	**15 08 20.4**	**-0.6**
SJG	**San Juan**	**1.82**	**234**	*e*S	**Sn**	**15 08 26.5**	**-0.5**
SJG	**San Juan**	**1.82**	**234**	*e*S	**Sn**	**15 08 27.4**	**+0.4**
SJG	**San Juan**	**1.82**	**234**	*e*S	**Sn**	**15 08 26.5**	**-0.5**
SJG				*e*S	**Sn**	**15 08 27.4**	**+0.4**
CELP	**Cerrillos**	**2.19**	**240**⇑	*e*P	**Pn**	**15 08 09.6**	**-0.4**
CELP				*e*S	**Sn**	**15 08 36.3**	**+0.5**
AOPR	**Arecibo Observ**	**2.21**	**248**	*e*S	**Sn**	**15 08 36.7**	**+0.2**
AOPR	**Arecibo Observ**	**2.21**	**248**	*e*S	**Sn**	**15 08 36.7**	**+0.2**
LSP	**Las Mesas**	**2.57**	**247**⇑	*e*P	**Pn**	**15 08 15.9**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.66**	**244**⇑	*e*P	**Pn**	**15 08 17.0**	**+0.5**

TAP 28 15:08:10.8, 2171N×12026E, h33km±1km, ML3.5, 1D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEN	**Hengchun**	**0.53**	**56**	*i* P	Pb	15 08 21.8	-0.1
	baz=56						
HEN				S	Sb	15 08 29.6	0.0
	baz=56						
TWK1	**Hengchun**	**0.56**	**65**⇓	*i* P	Pb	15 08 21.9	-0.5
	baz=65						
TWK1				*i* S	Sb	15 08 30.3	0.0
	baz=65						
TSEB	**Hengchuen, Pin**	**0.62**	**72**	*i* P	Pn	15 08 22.4	-1.0
	baz=70						
TSEB				*i* S	Sb	15 08 31.1	-0.9
	baz=70						
SCZT	**Fangliau**	**0.74**	**27**	P	Pn	15 08 24.9	-0.1
	baz=26						
SCZT				*e*S	Sn	15 08 34.3	-0.7
	baz=26						
KAU	**Kaohsiung**	**0.86**	**3**	*e*P	Pn	15 08 28.0	+1.4
	baz=2.0						
KAU				*e*S	Sn	15 08 39.7	+1.7
	baz=2.0						
TAW	**Tawu**	**0.88**	**42**	*e*P	Pn	15 08 27.5	+0.7
	baz=42						
SSD	**Sandimen**	**1.09**	**18**	P	Pn	15 08 29.7	0.0
	baz=18						
SSD				*e*S	Sn	15 08 42.6	-1.1
	baz=18						
ECL	**Taimali**	**1.09**	**36**	*e*P	Pn	15 08 30.5	+0.7
	baz=36						
TWM1	**Shoushan**	**1.12**	**8**	*e*P	Pn	15 08 29.7	-0.4
	baz=7.0						
TWM1				*e*S	Sn	15 08 43.9	-0.6
	baz=7.0						
LAY	**Lan-yu**	**1.24**	**74**	*e*P	Pn	15 08 30.0	-1.8
	baz=74						
LAY				*e*S	Sn	15 08 43.9	-3.6
	baz=74						
TWG	**Pinlang**	**1.34**	**34**	*e*P	Pn	15 08 33.8	+0.7
	baz=34						
CHN3	**Shinhua**	**1.36**	**4**	*e*P	Pn	15 08 35.1	+1.6
	baz=4.0						
CHN3				*e*S	Sn	15 08 50.9	+0.4
	baz=4.0						
CHN1	**Nanshi**	**1.49**	**10**	*e*P	Pn	15 08 36.7	+1.4
	baz=9.0						
STYT	**Tauyuan**	**1.52**	**18**	*e*P	Pn	15 08 36.3	+0.7
	baz=17						
WTP	**Ta-pu**	**1.56**	**12**	*e*P	Pn	15 08 37.2	+0.9
	baz=12						
TWK	**Hsinying**	**1.57**	**8**	*e*P	Pn	15 08 37.0	+0.7
	baz=7.0						
TWK				*e*S	Sn	15 08 55.1	-0.4
	baz=7.0						
ELDTW	**Lidau**	**1.63**	**25**	*e*P	Pn	15 08 37.8	+0.6
	baz=25						
CHN4	**Tsaushan**	**1.66**	**11**	*e*P	Pn	15 08 37.5	-0.2
	baz=10.0						
CHN4				*e*S	Sn	15 08 56.6	-1.2
	baz=10.0						
CHKT	**Chengkung**	**1.72**	**36**	*e*P	Pn	15 08 38.6	+0.2
	baz=36						
CHKT				*e*S	Sn	15 08 58.9	-0.4
	baz=36						
ALS	**Alishan**	**1.86**	**16**	*e*P	Pn	15 08 41.1	+0.7
	baz=15						
TWF1	**Yuli**	**1.90**	**30**	*e*P	Pn	15 08 41.5	+0.6
	baz=30						
CHN5	**Tsauling**	**1.92**	**12**	*e*P	Pn	15 08 41.3	+0.2
	baz=11						
CHN5				*e*S	Sn	15 09 03.3	-0.9
	baz=11						
WSF	**Szhu**	**1.92**	**359**	*e*P	Pn	15 08 40.9	-0.3
	baz=358						
WSF				S	Sn	15 09 03.6	-0.6
	baz=358						
PNG	**Penghu**	**1.96**	**341**	P	Pn	15 08 42.1	+0.3
	baz=340						
PNG				S	Sn	15 09 05.4	+0.2
	baz=340						
WGK	**Gukeng**	**1.99**	**8**	*e*S	Sn	15 09 05.6	-0.3
	baz=8.0						
EHY	**Hungye**	**2.04**	**29**	*e*P	Pn	15 08 43.7	+0.8
	baz=28						
SMLT	**Sun Moon Lake**	**2.24**	**15**	*e*P	Pn	15 08 46.7	+1.1
	baz=15						
TYC	**Yuchr**	**2.25**	**14**	*e*P	Pn	15 08 46.8	+1.0
	baz=14						
ESL	**Shilin**	**2.36**	**27**	*e*P	Pn	15 08 48.8	+1.5
	baz=27						
WHF	**Hehuan Shan**	**2.60**	**21**	*e*P	Pn	15 08 52.4	+1.9
	baz=20						
TWQ1	**Liyutan**	**2.67**	**10**	*e*P	Pn	15 08 53.8	+2.3
	baz=10.0						
TWQ1				*e*S	Sn	15 09 22.5	-0.2
	baz=10.0						
NSTT	**Nanjuang**	**2.99**	**13**	*e*P	Pn	15 08 57.6	+1.7
	baz=13						
NSK	**Sanguang**	**3.12**	**19**	*e*P	Pn	15 08 59.4	+1.7
	baz=18						
ENTT	**Nioudou**	**3.16**	**22**	*e*P	Pn	15 08 58.9	+0.7
	baz=22						
KNM	**Kinmen**	**3.18**	**328**	P	Pn	15 09 00.1	+1.6
	baz=325						
KNM				*e*S	Sn	15 09 36.3	+1.0
	baz=325						

*IDC **28** 15:09:20.9±0.7, 1367S×16678E, h0km, mb4.5/13, mb1 4.5/14, mb1mx4.4/19, mbtmp4.5/14, ML4.6/1, MS3.8/10, Ms1 3.7/10, ms1mx3.5/23, Error ellipse: s-maj=25.8km s-min=17.9km az=118.0*
*LDG **28** 15:09:23.1±0.3, 1327S×16664E, h10km, Mb5.1/3, Error ellipse: s-maj=34.5km s-min=10.2km az=86.0*
*ISCJB **28** 15:09:24.2±3.9, 1365S±005×1667E±0.1, h28km±26km, mb4.8/41, MS3.8/11, Error ellipse: s-maj=17.3km s-min=8.8km az=175.3*
*MOS **28** 15:09:25.2±0.9, 1367S×16654E, h33km, mb5.0/10, Error ellipse: s-maj=13.3km s-min=11.4km az=125.0*
*BJI **28** 15:09:25.0, 1319S×16672E, h18km, mB5.1, mb4.9, Ms4.8*
*NEIC **28** 15:09:26.5±0.4, 1363S×16665E, h35km, mb4.6/10, Error ellipse: s-maj=13.0km s-min=9.7km az=109.0*

ISC 28 15:09:28.2±1.5, 1367S±005×16665E±010, h47km±13km, n118, σ0s96/76, mb4.8/41, MS3.8/11, 5C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.80**	**302**	Pn	**Pn**	**15 11 19.1**	**-0.2**
	7.6nm,0.3s,baz=91,slow=8.2,SNR=5.1						
HNR				Sn	**Sn**	**15 12 37.7**	**-8.6**
	2.2nm,0.3s,baz=321,slow=6.8,SNR=1.5						
HNR				LR	LR	15 13 59.0	
	comp=Z,360nm,20.1s,baz=127,slow=35						
HNR	**Honiara**	**7.80**	**302**	P	**Pn**	**15 11 19.1**	**-0.1**
HNR						15 12 37.7	
DZM	**Mont Dzumac**	**8.36**	**181**	*e*P	**Pn**	**15 11 27.1**	**+0.3**
DZM				*e*S	**Sn**	**15 12 57.9**	**-2.0**
DZM	**Mont Dzumac**	**8.36**	**181**	*e*Pn	**Pn**	**15 11 27.0**	**+0.2**
	22nm,0.5s						
DZM				*e*Sn	**Sn**	**15 13 00.9**	**+0.9**
CTA	**Charters Tower**	**20.53**	**249**	P	**P**	**15 14 03.2**	**+0.5**
	7.1nm,0.7s,baz=82,slow=14,SNR=8.6						
CTA				LR	LR	15 21 04.3	
	comp=Z,164nm,19.1s,MS3.4,baz=51,slow=34						
CTAO	**Charters Tower**	**20.53**	**249**	*e*P	**P**	**15 14 01.7**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTAO	**Charters Tower**	**20.53**	**249**	*e*P	**P**	**15 14 01.7**	**-1.1**
	comp=Z,6.9nm,0.7s						
RMQ	**Roma**	**21.06**	**230**	*e*P	**P**	**15 14 10.1**	**+1.6**
	comp=Z,78nm,1.1s,mb5.0						
ARMA	**Armidale**	**21.68**	**217**	*e*P	**P**	**15 14 16.6**	**+1.5**
QLP	**Quilpie**	**24.61**	**235**	*e*P	**P**	**15 14 44.8**	**+0.6**
URZ	**Urewera**	**26.20**	**161**	LR	LR	15 24 18.2	
	comp=Z,236nm,18.1s,MS3.8,baz=152,slow=34						
STKA	**Stephens Creek**	**29.25**	**228**	P	**P**	**15 15 26.9**	**+1.0**
	comp=Z,6.8nm,0.7s,mb4.5,baz=46,slow=8.5,SNR=22						
STKA				ScP	ScP	15 22 13.9	+3.8
	comp=Z,2.1nm,1.0s,baz=360,slow=19,SNR=3.2						
STKA				LR	LR	15 27 06.8	
	comp=Z,337nm,18.3s,MS4.0,baz=24,slow=36						
STKA	**Stephens Creek**	**29.25**	**228**	*e*P	**P**	**15 15 26.5**	**+0.6**
	comp=Z,4.7nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**29.25**	**228**	*e*P	**P**	**15 15 25.8**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.7						
WB2	**Warramunga Arr**	**31.51**	**254**	*e*P	**P**	**15 15 44.6**	**-1.4**
WRAB	**Tennant Creek**	**31.51**	**254**	*e*P	**P**	**15 15 51.2**	**+5.2**
WRAB	**Tennant Creek**	**31.51**	**254**	*e*P	**P**	**15 15 44.0**	**-2.0**
	comp=Z,5.5nm,1.1s,mb4.3						
WRA	**Warramunga Arr**	**31.52**	**254**	P	**P**	**15 15 44.6**	**-1.6**
	comp=Z,2.8nm,0.8s,mb4.2,baz=85,slow=9.0,SNR=24						
WRA				PcP	PcP	15 18 38.2	-0.1
	comp=Z,1.4nm,0.8s,baz=84,slow=2.9,SNR=6.8						
WRA				PKiKP	PKiKP	15 26 06.1	-1.6
	comp=Z,0.5nm,0.6s,baz=340,slow=0.5,SNR=10						
WRA	**Warramunga Arr**	**31.52**	**254**	P	**P**	**15 15 44.6**	**-1.6**
WRA				PcP	PcP	15 18 38.2	-0.1
ASAR	**Alice Springs**	**32.51**	**247**	P	**P**	**15 15 53.4**	**-1.4**
	comp=Z,1.6nm,0.6s,mb4.2,baz=76,slow=9.4,SNR=41						
ASAR				ScP	ScP	15 22 24.6	+3.4
	comp=Z,0.7nm,0.8s,baz=70,slow=3.0,SNR=5.3						
ASAR				PKiKP	PKiKP	15 26 06.7	-1.7
	comp=Z,0.3nm,0.5s,baz=109,slow=1.6,SNR=8.3						
ASAR	**Alice Springs**	**32.51**	**247**	P	**P**	**15 15 53.4**	**-1.4**
ASAR				ScP	ScP	15 22 24.6	+3.4
BBOO	**Buckleboo**	**33.77**	**230**	*e*P	**P**	**15 16 05.7**	**0.0**
	comp=Z,5.6nm,0.7s,mb4.6						
GUMO	**Guam**	**34.63**	**321**	LR	LR	15 28 03.0	
	comp=Z,76nm,19.2s,MS3.5,baz=130,slow=32						
PPT	**Papeete**	**42.27**	**101**	*e*LR	LR	15 29 03.6	
	comp=Z,102nm,25.2s						
TBI	**Tubuai**	**42.57**	**110**	*e*LR	LR	15 29 46.8	
	comp=Z,123nm,22.8s						
NWAO	**Narrogin (SRO)**	**48.79**	**238**	P	**P**	**15 18 07.9**	**-0.9**
	comp=Z,11nm,1.0s,mb4.8,baz=76,slow=8.3,SNR=2.6						
NWAO				LR	LR	15 38 55.0	
	comp=Z,104nm,18.2s,MS3.9,baz=20,slow=36						
MJAR	**Matsushiro Arr**	**56.69**	**333**	P	**P**	**15 19 06.4**	**-0.6**
	comp=Z,9.2nm,1.1s,mb4.7,baz=168,slow=7.2,SNR=8.6						
MAT	**Matsushiro**	**56.69**	**333**	P	**P**	**15 19 05.9**	**-1.1**
KSRS	**Korea Array**	**62.53**	**326**	P	**P**	**15 19 47.8**	**+0.6**
	comp=Z,3.7nm,0.9s,mb4.5,baz=145,slow=6.9,SNR=7.7						
KSRS				LR	LR	15 44 23.3	
	comp=Z,33nm,19.6s,MS3.5,baz=30,slow=34						
VNDA	**Vanda**	**63.91**	**181**	P	**P**	**15 19 56.6**	**+0.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=7.9,slow=6.1,SNR=6.1						
YSS	**Yuzh-Sakhalins**	**64.04**	**342**⇑	*e*P	**P**	**15 19 57.2**	**+0.2**
YSS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
PETK	**Petropavlovsk-**	**66.95**	**354**	P	**P**	**15 20 15.5**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=135,slow=3.1,SNR=3.5						
PETK				LR	LR	15 45 41.4	
	comp=Z,49nm,18.9s,MS3.8,baz=304,slow=33						
HABR	**Khabarovsk**	**67.93**	**338**	*e*P	**P**	**15 20 22.9**	**+0.9**
HABR				*e*		15 22 52.7	
HABR				*e*S	S	15 29 11.1	-6.2
HABR				*e*		15 30 04.0	
HABR				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.5						
HABR				pmax	pmax		
	comp=N,14nm,0.9s						
HABR				pmax	pmax		
	comp=E,28nm,1.0s						
HABR				MLR	MLR		
	comp=Z,42nm,17.0s,MS3.7						
CN2	**Changchun**	**68.43**	**329**	*e*P	**P**	**15 20 25.8**	**+0.6**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
KMI	**Kunming**	**73.24**	**302**	P	**P**	**15 20 56.5**	**+1.6**
KMI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**73.97**	**294**	P	**P**	**15 21 00.5**	**+1.2**
	comp=Z,4.7nm,0.8s,mb4.5,baz=124,slow=4.9,SNR=39						
HHC	**Hu-ho-hao-te**	**74.39**	**320**	*e*P	**P**	**15 21 02.5**	**+1.2**
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,118nm,3.9s						
HHC				LR	LR		
	comp=N,160nm,15.5s,MS4.6						
HHC				LR	LR		
	comp=E,154nm,15.5s,MS4.6						
HIA	**Hailar**	**75.07**	**330**	*e*P	**P**	**15 21 05.2**	**+0.2**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
HIA	**Hailar**	**75.07**	**330**	*e*P	**P**	**15 21 05.2**	**+0.2**
	comp=Z,23nm,1.0s,mb5.1						
QSPA	**South Pole Qui**	**76.36**	**180**	*e*P	**P**	**15 21 12.8**	**+0.9**
	comp=Z,8.0nm,0.9s,mb4.7						
SEY	**Seymchan**	**77.16**	**353**⇑	*e*P	**P**	**15 21 16.5**	**-0.1**
LZH	**Lanzhou**	**77.17**	**312**	*e*P	**P**	**15 21 19.0**	**+1.8**
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,115nm,4.9s						
CLNS	**Chul'man**	**78.32**	**338**	*e*P	**P**	**15 21 23.6**	**+0.4**
CLNS				pmax	pmax		
	comp=N,6.0nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK	**Yakutsk**	**80.84**	**343**	*e*P	**P**	**15 21 35.6**	**-1.1**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
ULN	**Ulaanbaatar**	**80.93**	**324**⇑	*e*P	**P**	**15 21 37.6**	**+0.1**
ULN	**Ulaanbaatar**	**80.93**	**324**	*e*P	**P**	**15 21 36.9**	**-0.6**
	comp=E,15nm,1.3s,mb4.8						
BILL	**Bilibino**	**81.48**	**360**⇓	*e*P	**P**	**15 21 39.8**	**-0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BILL	**Bilibino**	**81.48**	**360**	*e*P	**P**	**15 21 38.4**	**-1.6**
	comp=Z,4.0nm,0.6s,mb4.5						
GTA	**Gaotai**	**81.50**	**314**	*e*P	**P**	**15 21 42.3**	**+1.5**
GTA				AP	pP	15 21 49.5	-5.0
GTA				XP	sP	15 21 52.5	-7.2
GTA				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.5						
MAW	**Mawson**	**82.64**	**202**	LR	LR	15 53 43.2	
	comp=Z,67nm,20.1s,MS4.0,baz=115,slow=32						
BOD	**Bodaibo**	**83.26**	**335**	*e*P	**P**	**15 21 48.1**	**-1.4**
MCK	**McKinley**	**84.33**	**18**	P	**P**	**15 21 57.1**	**+2.2**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
MCK	**McKinley**	**84.33**	**18**	P	**P**	**15 21 57.1**	**+2.2**
	comp=Z,1.6nm,0.5s,mb4.4						
TLY	**Talaya**	**84.78**	**326**	*e*P	**P**	**15 21 58.0**	**+0.6**
TLY				pmax	pmax		
	comp=Z,23nm,1.7s,mb5.0						
COLA	**College**	**85.49**	**18**	*e*P	**P**	**15 21 59.6**	**-1.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
COLA	**College**	**85.49**	**18**	*e*P	**P**	**15 21 59.6**	**-1.0**
	comp=Z,4.9nm,0.9s,mb4.6						
TAPN	**Taplejung**	**86.64**	**299**	*e*P	**P**	**15 22 07.8**	**+0.6**
	comp=Z,20nm,1.1s,mb5.2						
ODAN	**Odare**	**86.77**	**298**	*e*P	**P**	**15 22 08.5**	**+0.6**
	comp=Z,30nm,0.9s,mb5.5						
RAMN	**Ramite**	**87.48**	**298**	*e*P	**P**	**15 22 10.9**	**-0.4**
JIRN	**Jiri**	**88.03**	**299**	*e*P	**P**	**15 22 14.5**	**+0.6**
GUN	**Gumba**	**88.36**	**299**	*e*P	**P**	**15 22 15.9**	**+0.4**
	comp=Z,23nm,0.8s,mb5.5						
PKI	**Pulchoki**	**88.67**	**299**	*e*P	**P**	**15 22 17.3**	**+0.4**
	comp=Z,16nm,0.6s,mb5.5						
TIXI	**Tiksi**	**88.82**	**349**⇑	*e*P	**P**	**15 22 16.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.5						
KKN	**Kakani**	**88.84**	**299**	*e*P	**P**	**15 22 18.0**	**+0.3**
	comp=Z,19nm,0.6s,mb5.6						
DMN	**Daman**	**88.94**	**299**	*e*P	**P**	**15 22 18.7**	**+0.5**
	comp=Z,37nm,0.7s						
GKN	**Gorkha**	**89.44**	**299**	*e*P	**P**	**15 22 20.3**	**-0.3**
	comp=Z,22nm,0.7s,mb5.6						
KOLN	**Koldanda**	**90.27**	**298**	*e*P	**P**	**15 22 23.7**	**-0.7**
	comp=Z,11nm,0.8s,mb5.2						
DANN	**Dangsing**	**90.28**	**299**	*e*P	**P**	**15 22 24.0**	**-0.5**
	comp=Z,16nm,0.7s,mb5.5						
SNAA	**Sanae**	**94.57**	**183**	*e*P	**P**	**15 22 42.3**	**-1.2**
SNAA				*e*		15 22 44.9	
SNAA	**Sanae**	**94.57**	**183**	*e*P	**P**	**15 22 42.2**	**-1.3**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SNAA	**Sanae**	**94.57**	**183**	*e*P	**P**	**15 22 42.2**	**-1.3**
	comp=Z,7.0nm,1.1s,mb5.0						
VNA3	**Neumayer Olymp**	**95.26**	**181**	*e*P	**P**	**15 22 46.0**	**-0.6**
VNA3				*e*		15 22 48.2	
VNA2	**Neumayer--Watz**	**95.52**	**182**	*e*P	**P**	**15 22 47.6**	**-0.2**
	baz=190,slow=5.2						
VNA2				*e*		15 22 49.6	
MK31	**Makanchi Array**	**96.03**	**317**	*e*P	**P**	**15 22 49.9**	**-0.6**
MKAR	**Makanchi Array**	**96.03**	**317**	P	**P**	**15 22 50.5**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.8,baz=100,slow=6.4,SNR=14						
MKAR				PKiKP	PKiKP	15 27 28.0	-1.1
	comp=Z,0.2nm,0.5s,baz=279,slow=0.3,SNR=3.8						
ZAA0	**Zalesovo Array**	**96.19**	**324**	*e*P	**P**	**15 22 49.5**	**-1.6**
ZALV	**Zalesovo Beam**	**96.19**	**324**	P	**P**	**15 22 49.8**	**-1.3**
	comp=Z,5.4nm,0.9s,mb5.0,baz=108,slow=4.8,SNR=18						
TXAR	**Lajitas Array**	**96.30**	**61**	LR	LR	15 59 49.9	
	comp=Z,55nm,18.7s,MS4.1,baz=345,slow=32						
YKA	**Yellowknife Ar**	**96.88**	**27**	P	**P**	**15 22 53.1**	**-0.9**
	comp=Z,0.2nm,0.5s,mb3.8,baz=258,slow=4.7,SNR=8.0						
ARCES	**ARCESS Array B**	**119.08**	**345**	PKP	PKPdf	15 28 10.8	-0.5
	comp=Z,1.3nm,0.3s,baz=73,slow=1.9,SNR=48						
ARCES	**ARCESS Array B**	**119.08**	**345**	PKP	PKPdf	15 28 10.8	-0.5
OBN	**Obninsk**	**123.49**	**328**⇑	*i* PKiKP	PKPdf	15 28 18.8	-1.4
OBN				*e*		15 30 04.7	
OBN				pmax	pmax		
	comp=Z,46nm,2.5s						
NOA	**NORSAR Array B**	**129.45**	**345**	PKP	PKPdf	15 28 31.1	-0.3
	comp=Z,2.2nm,0.8s,baz=33,slow=2.1,SNR=3.6						
AKASG	**Malin Array Be**	**129.53**	**326**	PKP	PKPdf	15 28 30.9	-1.0
	comp=Z,0.4nm,0.4s,baz=60,slow=1.8,SNR=6.2						
ASF	**Jabal al Asfar**	**130.66**	**301**	PKP	PKPdf	15 28 34.2	-0.4
	comp=Z,1.3nm,0.4s,baz=26,slow=2.0						
BRTR	**Keskin Array B**	**131.37**	**311**	PKP	PKPdf	15 28 37.2	+1.6
	comp=Z,1.4nm,0.6s,baz=27,slow=1.6,SNR=3.7						
KHC	**Kasperske Hory**	**138.27**	**333**	*e*PKP	PKPdf	15 28 48.5	+0.2
GERES	**GERESS Array B**	**138.43**	**333**	PKP	PKPdf	15 28 48.6	+0.1
	comp=Z,1.1nm,0.7s,baz=48,slow=2.0,SNR=8.8						
GERES				SKPbc	SKPbc	15 32 23.7	+4.3
	comp=Z,0.2nm,0.6s,baz=129,slow=0.9,SNR=3.4						
CDF	**Champ du Feu**	**141.37**	**338**	*e*PKP1		15 28 46.6	
DAVOS	**Davos**	**141.66**	**334**	PKiKP		15 28 49.9	
DAVOX	**Davos/Dischmat**	**141

*KRSC **28** 16:14:44.7±0.4, 5357N×16082E, h30km±30km, ML4.3*
*NEIC **28** 16:14:45.2±0.5, 5392N×16059E, h35km, mb4.4/3, Error ellipse: s-maj=14.5km s-min=8.8km az=150.0*
*MOS **28** 16:14:45.0±1.1, 5358N×16081E, h29km, mb4.2/6, Error ellipse: s-maj=12.7km s-min=7.2km az=79.3*
*IDC **28** 16:14:49.4±2.4, 5382N×16048E, h74km±21km, mb3.2/12, mb1 3.5/12, mb1mx3.4/22, mbtmp3.2/12, Error ellipse: s-maj=25.9km s-min=18.2km az=137.0*

ISC 28 16:14:46.2±0.5, 5354N±003×16082E±008, h56km±4km, n62, σ1§20/81, mb3.6/16, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.65**	**228**	*e*P	**Pn**	**16 14 58.6**	**-1.0**
SPN				*i* S	**Sn**	**16 15 07.9**	**-1.4**
KII	**Karymskiy**	**0.96**	**302**	*e*P	**Pn**	**16 15 02.0**	**-1.5**
NLC	**Nalytchevo**	**0.96**	**248**	*e*P	**Pn**	**16 15 02.7**	**-0.8**
NLC				*i* S		**16 15 15.4**	**-0.8**
MKZ	**Mys Kozlova**	**1.15**	**27**	*e*P	**Pn**	**16 15 03.9**	**-2.2**
MKZ				*i* S	**Sn**	**16 15 18.0**	**-2.9**
AVH	**Avacha**	**1.28**	**259**	*e*P	**Pn**	**16 15 07.7**	**0.0**
AVH				*i* S	**Sn**	**16 15 24.4**	**+0.6**
PET	**Petropavlovsk**	**1.40**	**249**	*i*PN	**Pn**	**16 15 09.0**	**-0.4**
PET				*e*S	**Sn**	**16 15 26.2**	**-0.6**
PET				pmax	pmax		
	comp=Z,215nm,0.4s						
PET				smax			
	comp=E,546nm,0.4s						
PET				smax			
	comp=N,478nm,0.4s						
PET	**Petropavlovsk**	**1.40**	**249**	*e*P	**Pn**	**16 15 09.1**	**-0.3**
PET				*i* S	**Sn**	**16 15 26.7**	**-0.1**
PET	**Petropavlovsk**	**1.40**	**249**	*e*Pn	**Pn**	**16 15 08.6**	**-0.8**
PET				Sn	**Sn**	**16 15 26.6**	**-0.2**
GNL	**Ganaly**	**1.72**	**276**	*e*P	**Pn**	**16 15 14.1**	**+0.3**
RUS	**Russkaya**	**1.78**	**233**	*e*P	**Pn**	**16 15 14.2**	**-0.3**
RUS				*i* S	**Sn**	**16 15 35.5**	**-0.5**
TUMR	**Tumrok**	**1.79**	**348**	*e*P	**Pn**	**16 15 14.3**	**-0.4**
TUMR				*i* S	**Sn**	**16 15 35.6**	**-0.8**
PEA0B	**Petropavlovsk-**	**1.92**	**258**	*e*Pn	**Pn**	**16 15 16.6**	**+0.1**
PEA0B				*e*Sn	**Sn**	**16 15 41.2**	**+1.7**
PETK	**Petropavlovsk-**	**1.92**	**258**	P	**Pn**	**16 15 16.9**	**+0.4**
	comp=N,28nm,0.3s,baz=76,slow=18,SNR=822						
PETK				S	**Sn**	**16 15 41.2**	**+1.7**
	comp=N,21nm,0.3s,baz=39,slow=17,SNR=7.6						
GRL	**Gorelyy**	**1.93**	**240**	*e*P	**Pn**	**16 15 17.5**	**+0.9**
KMNR	**Kamenistaya**	**2.25**	**352**	*e*P	**Pn**	**16 15 21.4**	**+0.5**
KMNR				*i* S	**Sn**	**16 15 48.9**	**+1.4**
BZMR	**Bezymyannaya**	**2.41**	**356**	*e*P	**Pn**	**16 15 23.7**	**+0.6**
BZMR				*i* S	**Sn**	**16 15 52.6**	**+1.2**
KIRR	**Kirishev**	**2.44**	**354**	*e*P	**Pn**	**16 15 24.5**	**+1.0**
KPT	**Kopyto**	**2.46**	**352**	*e*P	**Pn**	**16 15 24.4**	**+0.6**
ZLN	**Zelenaya**	**2.49**	**360**	*e*P	**Pn**	**16 15 24.9**	**+0.7**
ZLN				*i* S	**Sn**	**16 15 54.6**	**+1.3**
KOZ	**Kozyrevsk**	**2.59**	**348**	*e*P	**Pn**	**16 15 25.4**	**-0.1**
KOZR	**Kozyr**	**2.59**	**348**	PN	**Pn**	**16 15 25.4**	**-0.2**
MIPR	**Malaya Ipel'ka**	**2.77**	**244**	*e*P	**Pn**	**16 15 29.6**	**+1.6**
KLY	**Klyuchi**	**2.79**	**358**	*e*P	**Pn**	**16 15 28.5**	**+0.3**
KLY				*i* S	**Sn**	**16 16 00.9**	**+0.3**
SRDR	**Sredinnyy**	**2.86**	**348**	*e*P	**Pn**	**16 15 28.8**	**-0.4**
KBTR	**Krutoberegovo**	**2.92**	**22**	*e*P	**Pn**	**16 15 30.0**	**0.0**
KBTR				*i* S	**Sn**	**16 16 03.2**	**-0.6**
SRKR	**Sorokina**	**3.13**	**3**	*e*P	**Pn**	**16 15 33.5**	**+0.5**
SRKR				*i* S	**Sn**	**16 16 10.1**	**+1.0**
SKR	**Severo-Kuril's**	**4.07**	**227**	*e*PN	**Pn**	**16 15 50.0**	**+4.2**
FX1	**Attu Island--F**	**7.44**	**90**	P	**Pn**	**16 16 32.5**	**+0.5**
	comp=N,6.9nm,0.3s,baz=290,slow=22,SNR=16						
FX1				S	**Sn**	**16 17 50.5**	**-4.4**
	comp=N,3.0nm,0.3s,baz=143,slow=20,SNR=2.9						
BILL	**Bilibino**	**14.78**	**8**	*e*P	**Pn**	**16 18 10.4**	**-1.2**
BILL				*e*S	**Sn**	**16 20 49.3**	**-4.5**
BILL				pmax	pmax		
	comp=Z,4.0nm,2.5s						
YAK	**Yakutsk**	**18.48**	**310**	*e*P	**Pn**	**16 18 54.2**	**-3.7**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	**Tiksi**	**22.87**	**334**	*e*P	**P**	**16 19 43.4**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.1						
MJAR	**Matsushiro Arr**	**23.16**	**232**	P	**P**	**16 19 50.7**	**+3.0**
	comp=Z,0.7nm,0.6s,mb3.3,baz=306,slow=19,SNR=3.0						
MJAR	**Matsushiro Arr**	**23.16**	**232**	P	**P**	**16 19 50.7**	**+3.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**23.16**	**232**	P	**P**	**16 19 50.7**	**+3.0**
HIA	**Hailar**	**25.72**	**277**	*e*P	**P**	**16 20 08.2**	**-2.7**
YKA	**Yellowknife Ar**	**42.54**	**43**	P	**P**	**16 22 36.7**	**+1.1**
	comp=Z,0.2nm,0.5s,mb3.1,baz=298,slow=7.8,SNR=3.9						
YKA	**Yellowknife Ar**	**42.54**	**43**	P	**P**	**16 22 36.7**	**+1.1**
KURK	**Kurchatov**	**47.87**	**302**	*e*P	**P**	**16 23 14.9**	**-3.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KURK	**Kurchatov**	**47.87**	**302**	*e*P	**P**	**16 23 14.9**	**-3.1**
	comp=Z,1.1nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**48.36**	**296**	P	**P**	**16 23 19.1**	**-2.7**
	comp=Z,0.4nm,0.8s,mb3.5,baz=54,slow=6.7,SNR=4.1						
MKAR	**Makanchi Array**	**48.36**	**296**	*e*P	**P**	**16 23 20.7**	**-1.1**
ARCES	**ARCESS Array B**	**53.00**	**342**	P	**P**	**16 23 55.0**	**-1.4**
	comp=Z,2.4nm,0.8s,mb4.2,baz=40,slow=7.1,SNR=3.8						
ARCES	**ARCESS Array B**	**53.00**	**342**	P	**P**	**16 23 55.0**	**-1.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**55.28**	**296**	*e*P	**P**	**16 24 12.7**	**-0.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.9						
AAK	**Ala-Archa**	**55.28**	**296**	P	**P**	**16 24 12.1**	**-1.3**
	comp=Z,15nm,1.7s,mb4.7						
PDAR	**Pinedale Array**	**56.93**	**61**	P	**P**	**16 24 27.4**	**+2.2**
	comp=Z,0.2nm,0.6s,mb3.4,baz=293,slow=4.8,SNR=2.6						
JOF	**Joensuu**	**57.35**	**335**	*e*p	**P**	**16 24 25.2**	**-2.6**
CMAR	**Chiang Mai Arr**	**58.70**	**258**	P	**P**	**16 24 39.2**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.7,baz=26,slow=7.5,SNR=3.4						
CMAR	**Chiang Mai Arr**	**58.70**	**258**	P	**P**	**16 24 39.2**	**+1.3**
KAF	**Kangasniemi**	**59.25**	**337**	*e*p	**P**	**16 24 39.7**	**-1.4**
	comp=Z,1.7nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**59.25**	**337**	*e*P	**P**	**16 24 39.7**	**-1.4**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
NOA	**NORSAR Array B**	**63.24**	**344**	P	**P**	**16 25 07.6**	**-0.5**
	comp=Z,1.3nm,0.9s,mb4.1,baz=22,slow=6.5,SNR=3.8						
NOA	**NORSAR Array B**	**63.24**	**344**	P	**P**	**16 25 07.6**	**-0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	**NORSAR Array B**	**63.24**	**344**	P	**P**	**16 25 07.6**	**-0.5**
AKASG	**Malin Array Be**	**68.46**	**329**	P	**P**	**16 25 41.0**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.8,baz=29,slow=7.1,SNR=3.1						
TXAR	**Lajitas Array**	**70.06**	**68**	P	**P**	**16 25 54.0**	**+1.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=296,slow=5.5,SNR=4.4						
GERES	**GERESS Array B**	**74.27**	**338**	P	**P**	**16 26 16.4**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=25,slow=6.6,SNR=4.5						
WRA	**Warramunga Arr**	**76.67**	**206**	P	**P**	**16 26 32.1**	**+1.3**
	comp=Z,0.6nm,1.1s,mb3.5,baz=23,slow=6.2,SNR=3.4						
WRA	**Warramunga Arr**	**76.67**	**206**	P	**P**	**16 26 32.1**	**+1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	**Warramunga Arr**	**76.67**	**206**	P	**P**	**16 26 32.1**	**+1.3**
ASAR	**Alice Springs**	**80.34**	**205**	P	**P**	**16 26 53.0**	**+2.0**
	comp=Z,0.2nm,0.7s,mb3.1,baz=21,slow=4.9,SNR=4.5						
ASAR	**Alice Springs**	**80.34**	**205**	*e*P	**P**	**16 26 53.4**	**+2.5**

*IDC **28** 16:22:33.6±1.4, 207S×100.12E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/22, mbtmp4.1/12, MS3.1/1, Ms1 3.1/1, ms1mx2.7/24, Error ellipse: s-maj=48.5km s-min=16.1km az=56.0*
*NEIC **28** 16:22:37.1±0.8, 235S×99.82E, h35km, mb4.2/4, Error ellipse: s-maj=27.1km s-min=11.7km az=57.0*
*ISCJB **28** 16:22:41.4±1.5, 20S±0.1×1002E±0.1, h75km±10km, mb4.1/14, Error ellipse: s-maj=24.3km s-min=10.5km az=138.1*
*DJA **28** 16:22:42, 187S×100.19E, h10km, MLv4.3/6*

ISC 28 16:22:42.5±1.5, 20S±01×1002E±01, h66km±10km, n27, σ0§95/27, mb4.1/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**1.09**	**12**	P	**Pn**	**16 23 00.1**	**-1.9**
PDSI				S	**Sn**	**16 23 16.2**	**-0.2**
PPI	**Padang Panjang**	**1.52**	**6**	P	**Pn**	**16 23 06.7**	**-1.0**
KSI	**Kapahiang**	**2.89**	**125**	P	**Pn**	**16 23 32.6**	**+6.4**
GSI	**Gunungsitoli**	**4.21**	**321**	P	**Pn**	**16 23 45.4**	**+1.2**
PMBI	**Palembang**	**4.63**	**102**	P	**Pn**	**16 23 52.0**	**+1.9**
PSI	**Prapat**	**4.92**	**345**	Pn	**Pn**	**16 23 54.2**	**+0.1**
	2.3nm,0.3s,baz=76,slow=4.1,SNR=6.3						
PSI				LR	LR	16 26 16.4	
	comp=Z,181nm,18.3s,baz=200,slow=46						
MYKOM	**Kota Tinggi**	**5.21**	**44**	P	**Pn**	**16 23 58.5**	**+0.6**
IPM	**Ipoh**	**6.47**	**7**	P	**Pn**	**16 24 16.6**	**+1.4**
KULM	**Kulim**	**7.23**	**3**	*e*Pn	**Pn**	**16 24 25.1**	**-0.5**
	4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.35**	**356**	P	**P**	**16 27 12.5**	**-1.1**
	2.2nm,0.5s,baz=186,slow=10,SNR=22						
PALK	**Pallekele**	**21.55**	**295**	P	**P**	**16 27 19.8**	**-6.8**
	24nm,1.4s,mb4.3						
WRA	**Warramunga Arr**	**37.80**	**121**	P	**P**	**16 29 52.0**	**-0.8**
	1.2nm,0.6s,mb3.9,baz=307,slow=9.6,SNR=19						
WRAB	**Tennant Creek**	**37.81**	**121**	*e*P	**P**	**16 29 50.4**	**-2.4**
	3.2nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**39.08**	**126**	P	**P**	**16 30 03.2**	**-0.2**
	1.3nm,0.6s,mb3.9,baz=304,slow=7.9,SNR=46						
KSRS	**Korea Array**	**46.89**	**30**	P	**P**	**16 31 06.5**	**+0.2**
	1.9nm,0.8s,mb3.9,baz=222,slow=8.6,SNR=4.6						
STKA	**Stephens Creek**	**48.99**	**132**	P	**P**	**16 31 23.1**	**+0.4**
	0.5nm,0.4s,mb3.8,baz=319,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**48.99**	**132**	*e*P	**P**	**16 31 22.2**	**-0.5**
	0.2nm,0.6s,mb3.2						
MK31	**Makanchi Array**	**51.07**	**344**	*e*P	**P**	**16 31 38.1**	**0.0**
MKAR	**Makanchi Array**	**51.07**	**344**	P	**P**	**16 31 38.7**	**+0.6**
	2.0nm,0.6s,mb4.3,baz=159,slow=8.5,SNR=41						
MJAR	**Matsushiro Arr**	**52.12**	**39**	P	**P**	**16 31 46.8**	**+0.6**
	2.9nm,1.0s,mb4.2,baz=203,slow=12,SNR=4.0						
KURK	**Kurchatov**	**55.65**	**344**	P	**P**	**16 32 11.5**	**-0.2**
	1.1nm,0.7s,mb4.0,baz=160,slow=7.5,SNR=5.8						
ZALV	**Zalesovo Beam**	**57.19**	**349**	P	**P**	**16 32 22.6**	**+0.1**
	2.0nm,0.5s,mb4.4,baz=180,slow=7.0,SNR=16						
ASAJ	**Asahikawa**	**59.47**	**34**	P	**P**	**16 32 39.8**	**+1.2**
	3.1nm,0.8s,mb4.4,baz=246,slow=12,SNR=4.8						
BVAR	**Borovoye Array**	**60.24**	**340**	P	**P**	**16 32 43.6**	**-0.1**
	1.1nm,0.5s,mb4.2,baz=139,slow=9.0,SNR=7.8						
TIXI	**Tiksi**	**75.80**	**9**	*e*P	**P**	**16 34 20.2**	**-0.7**
	1.3nm,0.6s,mb3.8						
ARCES	**ARCESS Array B**	**86.53**	**340**	P	**P**	**16 35 18.5**	**+0.6**
	5.6nm,1.0s,mb4.4,baz=107,slow=5.8,SNR=3.0						
TXAR	**Lajitas Array**	**144.55**	**38**	PKP	PKPdf	16 42 11.8	-0.4
	0.3nm,0.5s,baz=287,slow=1.5,SNR=12						

*CSEM **28** 16:32:11.9±0.3, 3228N×570W, h5km, MD3.5, Error ellipse: s-maj=7.0km s-min=5.4km az=172.0*
*ISCJB **28** 16:32:14.6±0.7, 3232N±005×570W±004, h17km±8km, Error ellipse: s-maj=8.2km s-min=5.3km az=172.4*
*MDD **28** 16:32:14.2±0.7, 3231N×567W, h0km±10km, mb3.7/3, mbLg2.4/1, Error ellipse: s-maj=6.9km s-min=4.2km az=177.0, PRXIMO*
*CNRM **28** 16:32:14.6, 3228N×567W, h0km, MD3.5*

ISC 28 16:32:14.0±0.9, 3231N±005×568W±005, h13km±7km, n12, σ1§21/23, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIB	**El Ksiba**	**0.40**	**311**	*i* P	**Pg**	**16 32 21.5**	**-0.5**
KIB				*i* S	**Sg**	**16 32 28.0**	**+0.5**
TZC	**Tazercounte**	**0.70**	**257**	*i* P	**Pg**	**16 32 27.0**	**-0.7**
TZC				*i* S	**Sg**	**16 32 38.0**	**+1.0**
CZD	**Col de Zad**	**0.90**	**37**	*i* P	**Pb**	**16 32 30.0**	**-1.4**
CZD				*i* S	**Sb**	**16 32 43.0**	**-0.3**
MIF	**Mishlifen**	**1.16**	**19**	*i* P	**Pn**	**16 32 36.0**	**+0.1**
MIF				*i* S	**Sb**	**16 32 54.0**	**+3.2**
ZFT	**Errachidia**	**1.16**	**103**	*i* P	**Pn**	**16 32 35.0**	**-0.9**
ZFT				*i* S	**Sb**	**16 32 52.0**	**+1.2**
IFR	**Ifrane**	**1.29**	**21**	P	**Pn**	**16 32 36.9**	**-0.8**
IFR				S	**Sb**	**16 32 55.3**	**+0.7**
AVE	**Averroes**	**1.76**	**304**	P	**Pn**	**16 32 45.3**	**+1.2**
AVE				S	**Sn**	**16 33 06.0**	**-0.4**
TZK	**Tazeka**	**2.17**	**35**	*i* P	**Pn**	**16 32 52.0**	**+2.2**
RSA	**Sarsar**	**2.56**	**357**	*e*P	**Pn**	**16 32 58.0**	**+2.8**
RSA				*e*S	**Sn**	**16 33 27.0**	**+0.8**
EMIN	**Mina Concepcio**	**5.50**	**352**	P	**Pn**	**16 33 33.8**	**-1.8**
	0.5nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**16 34 34.7**	**-4.0**
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.91**	**8**	P	**Pn**	**16 33 39.9**	**-1.3**
	0.2nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**16 34 43.1**	**-5.7**
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**6.52**	**351**	P	**Pn**	**16 33 48.7**	**-0.9**
	0.8nm,0.1s,SNR=5.9						
EBAD				S	**Sn**	**16 34 58.5**	**-5.3**
	1.8nm,0.3s,SNR=7.9						

IDC 28 16:36:28.4±2.1, 135N×12605E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/15, mbtmp3.2/3, Error ellipse: s-maj=179.3km s-min=26.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.67**	**159**	P	P	16 41 31.6	+0.1
	0.6nm,0.9s,baz=338,slow=10,SNR=8.5						
ASAR	**Alice Springs**	**26.01**	**163**	P	P	16 42 03.1	-0.1
	0.2nm,0.8s,baz=345,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**59.13**	**326**	P	P	16 46 30.9	+0.2
	0.2nm,0.5s,baz=116,slow=8.6,SNR=4.9						

IDC 28 17:02:07.6±4.2, 468S×13002E, h264km±50km, mb2.6/1, mb1 3.2/3, mb1mx2.9/14, mbtmp2.9/3, Error ellipse: s-maj=145.4km s-min=17.0km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.74**	**165**	P	Pn	17 05 34.4	-1.7
	0.3nm,0.3s,baz=346,slow=13,SNR=36						
WRA				S	S	17 08 24.6	-2.4
	0.1nm,0.3s,baz=342,slow=26,SNR=3.7						
ASAR	**Alice Springs**	**19.24**	**169**	P	P	17 06 12.9	+0.2
	0.9nm,0.3s,baz=349,slow=12,SNR=79						
ASAR				S	S	17 09 37.4	+1.0
	0.1nm,0.3s,baz=354,slow=25,SNR=4.9						
MKAR	**Makanchi Array**	**66.31**	**326**	P	P	17 12 28.0	+0.1
	0.1nm,0.5s,baz=112,slow=9.0,SNR=3.3						

IDC 28 17:10:58.2±2.9, 686S×12880E, h0km, mb3.5/1, mb1 3.7/3, mb1mx3.5/14, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=288.4km s-min=32.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.83**	**149**	*e*P	x	17 12 44.2	
	6.3nm,0.2s						
KAKA				*e*S	x	17 13 50.8	
KNA	**Kununurra**	**8.84**	**180**	*e*P	Pn	17 13 14.1	+6.8
	12nm,0.2s						
KNA				*e*S	Sn	17 14 42.7	-4.9
FITZ	**Fitzroy Crossi**	**11.59**	**195**	*e*P	Pn	17 13 51.2	+6.2
	18nm,1.5s						
FITZ				*e*S	Sn	17 15 50.3	-5.0
WRA	**Warramunga Arr**	**14.07**	**158**	Pn	Pn	17 14 18.6	-0.4
	0.4nm,0.3s,baz=337,slow=14,SNR=24						
WRA				Sn	Sn	17 16 37.7	-18
	0.4nm,0.3s,baz=333,slow=23,SNR=5.2						
WB2	**Warramunga Arr**	**14.08**	**158**	*e*P	Pn	17 14 18.9	-0.1
WB2				*e*S	Sn	17 16 40.7	-15
ASAR	**Alice Springs**	**17.42**	**164**	P	Pn	17 15 03.1	+0.4
	0.1nm,0.3s,baz=338,slow=9.1,SNR=10.0						
ASAR				S	Sn	17 18 06.4	-11
	0.4nm,0.3s,baz=343,slow=25,SNR=6.8						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	17 21 55.9	+0.1
	0.1nm,0.3s,baz=110,slow=6.1,SNR=4.1						

*TEH **28** 17:11:30.0, 2734N×5676E, h10km, ML3.7*
*IDC **28** 17:11:38.7±2.3, 2739N×5660E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/26, mbtmp3.8/12, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/42, Error ellipse: s-maj=49.2km s-min=20.1km az=160.0*
*ISCJB **28** 17:11:40.1±0.8, 2758N±003×5670E±004, h9km±5km, mb3.8/13, Error ellipse: s-maj=5.6km s-min=4.8km az=168.3*
*CSEM **28** 17:11:40.3±0.2, 2748N×5675E, h18km, mb4.2/3, Error ellipse: s-maj=6.1km s-min=2.4km az=167.0*
*MOS **28** 17:11:41.8±1.4, 2748N×5667E, h33km, mb4.0/10, Error ellipse: s-maj=16.6km s-min=10.8km az=83.1*
*THR **28** 17:11:41.2±0.4, 2744N×5663E, h13km±4km, ML3.7*
*NEIC **28** 17:11:41.7, 2747N×5660E, h14km, mb3.9/7, ML3.7(THR), MN3.7(TEH), After THR.*
*OMAN **28** 17:12:00.1, 2636N×5670E, h50km*

ISC 28 17:11:41.8±0.8, 2753N±003×5669E±004, h9km±5km, n101, σ1§26/112, mb3.8/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.15**	**238**	*e*Pg	**Pg**	**17 11 45.3**	**+0.2**
IBND				*e*Sg	**Sg**	**17 11 48.0**	**+0.6**
IBND	**Bandar-abas**	**0.15**	**238**	*e*Pg	**Pg**	**17 11 45.3**	**+0.2**
IBND				*e*Sg	**Sg**	**17 11 48.0**	**+0.6**
BNDS	**Bandar-Abbas**	**0.48**	**254**	*e*Pg	**Pg**	**17 11 49.5**	**-1.5**
BNDS				*e*Sg	**Sg**	**17 11 55.9**	**-1.5**
BNDS	**Bandar-Abbas**	**0.48**	**254**	Pg	**Pg**	**17 11 49.0**	**-2.0**
BANOM	**Banah**	**1.64**	**192**	P	**Pn**	**17 12 11.9**	**+1.2**
	SNR=228						
BANOM	**Banah**	**1.64**	**192**	Pn	**Pn**	**17 12 12.1**	**+1.4**
	SNR=10						
BANOM				Sn	**Sn**	**17 12 32.8**	**+1.0**
KRBR	**Kerman**	**2.44**	**1**	*e*Pn	**Pn**	**17 12 24.3**	**+2.5**
KRBR				AML	AML	17 13 00.6	
	comp=N,419nm,0.5s						
KRBR				AML	AML	17 13 08.1	
	comp=E,466nm,0.7s						
KRBR	**Kerman**	**2.44**	**1**	Pn	**Pn**	**17 12 24.0**	**+2.2**
HATD	**Hatta, Dubai**	**2.74**	**191**	Pn	**Pn**	**17 12 26.8**	**+0.9**
FAQ	**Al Faqa, Dubai**	**2.94**	**200**	Pn	**Pn**	**17 12 30.0**	**+1.3**
	SNR=7.9						
ASUD	**Al Ashush, Dub**	**3.14**	**203**	Pn	**Pn**	**17 12 33.2**	**+1.8**
	SNR=40						
GHIR	**Ghir-Karzin**	**3.36**	**284**	*e*Pn	**Pn**	**17 12 35.1**	**+0.7**
GHIR				*e*Sg	**Sg**	**17 13 30.7**	**+1.0**
GHIR				AML	AML	17 13 38.1	
	comp=N,115nm,0.6s						
GHIR	**Ghir-Karzin**	**3.36**	**284**	Pn	**Pn**	**17 12 35.0**	**+0.6**
ISRV	**Sarvestan**	**3.65**	**301**	Pn	**Pn**	**17 12 39.3**	**+0.9**
ISRV				*e*Sn	**Sn**	**17 13 22.5**	**+1.0**
ISRV	**Sarvestan**	**3.65**	**301**	*e*Pn	**Pn**	**17 12 39.3**	**+0.9**
ISRV				*e*Sn	**Sn**	**17 13 22.1**	**+0.6**
ISRV				*e*		17 14 02.1	
IMOK	**Mouk**	**3.81**	**294**	*e*Pn	**Pn**	**17 12 41.3**	**+0.6**
IMOK				*e*Sn	**Sn**	**17 13 26.1**	**+0.5**
IMOK	**Mouk**	**3.81**	**294**	*e*Pn	**Pn**	**17 12 41.3**	**+0.6**
IMOK				*e*Sn	**Sn**	**17 13 26.1**	**+0.5**
IMOK				*e*		17 13 57.1	
IPAR	**Pars**	**3.94**	**307**	Pn	**Pn**	**17 12 43.4**	**+1.0**
IPAR	**Pars**	**3.94**	**307**	*e*Pn	**Pn**	**17 12 43.5**	**+1.1**
IPAR				*e*		17 13 58.0	
IBAF	**Bafgh**	**4.16**	**347**	Pn	**Pn**	**17 12 45.8**	**+0.4**
IBAF	**Bafgh**	**4.16**	**347**	*e*Pn	**Pn**	**17 12 45.9**	**+0.5**
IBAF				*e*		17 13 32.8	
IBAF				*e*Sn	**Sn**	**17 13 35.7**	**+1.5**
BIDO	**Bidbid**	**4.20**	**162**	P	**Pn**	**17 12 47.4**	**+1.5**
	SNR=6.8						
IMEH	**Mehriz**	**4.25**	**335**	Pn	**Pn**	**17 12 48.3**	**+1.7**
IMEH	**Mehriz**	**4.25**	**335**	*e*Pn	**Pn**	**17 12 48.4**	**+1.8**
IMEH				*e*Sn	**Sn**	**17 13 37.6**	**+1.2**
IMEH				*e*		17 13 40.9	
ISAD	**Sadrabad**	**5.09**	**330**	*e*Pn	**Pn**	**17 13 00.3**	**+2.1**
ISAD				*e*		17 14 08.2	
ICHK	**Chekchek**	**5.10**	**338**	Pn	**Pn**	**17 12 59.7**	**+1.4**
ICHK	**Chekchek**	**5.10**	**338**	*e*Pn	**Pn**	**17 12 59.8**	**+1.5**
ICHK				*e*		17 13 59.5	
IKOO	**Kooshah**	**5.28**	**22**	*e*Pn	**Pn**	**17 13 04.0**	**+3.3**
IKOO				*e*		17 13 23.2	
ITEG	**Tejag**	**5.64**	**18**	*e*Pn	**Pn**	**17 13 14.5**	**+8.8**
ITEG				*e*		17 15 00.1	
IDAH	**Dahanechah**	**5.88**	**27**	*e*Pn	**Pn**	**17 13 08.2**	**-0.8**
IDAH	**Dahanechah**	**5.88**	**27**	*e*Pn	**Pn**	**17 13 08.2**	**-0.8**
IDAH				*e*		17 13 37.6	
IDAH				*e*Sn	**Sn**	**17 14 15.3**	**-1.2**
SLWS		**6.07**	**245**	P	**Pn**	**17 13 10.3**	**-1.4**
BTHS		**6.30**	**238**	P	**Pn**	**17 13 12.5**	**-2.4**
IZEF	**Zefreh**	**6.54**	**326**	*e*Pn	**Pn**	**17 13 18.1**	**

MK31	**Makanchi Array**	**27.84**	**39**	*eP*	**P**	**17 17 31.5**	**+0.2**
MK31	**Makanchi Array**	**27.84**	**39**	*e*P	**P**	**17 17 31.5**	**+0.1**
MKAR	**Makanchi Array**	**27.84**	**39**	P	**P**	**17 17 31.0**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.1,baz=225,slow=8.3,SNR=8.7						
KURK	**Kurchatov**	**28.53**	**30**	P	**P**	**17 17 36.7**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.6,baz=230,slow=8.7,SNR=5.0						
KURK	**Kurchatov**	**28.53**	**30**	P	**P**	**17 17 36.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
AKASG	**Malin Array Be**	**31.14**	**325**	P	**P**	**17 17 58.5**	**-2.1**
	comp=Z,1.5nm,0.5s,mb4.1,baz=127,slow=8.6,SNR=6.1						
AKASG	**Malin Array Be**	**31.14**	**325**	P	**P**	**17 17 58.5**	**-2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**31.14**	**325**	P	**P**	**17 17 58.5**	**-2.1**
ZALV	**Zalesovo Beam**	**33.51**	**30**	P	**P**	**17 18 20.4**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.2,baz=263,slow=7.3,SNR=6.2						
ZALV	**Zalesovo Beam**	**33.51**	**30**	P	**P**	**17 18 20.4**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ZALV	**Zalesovo Beam**	**33.51**	**30**	P	**P**	**17 18 20.4**	**-0.9**
TIP	**Timpagrande**	**35.06**	**300**	P	**P**	**17 18 34.4**	**-0.6**
	comp=Z,8.6nm,0.9s,mb4.7						
TIP	**Timpagrande**	**35.06**	**300**	P	**P**	**17 18 34.4**	**-0.6**
	comp=Z,8.6nm,0.9s,mb4.7						
JOF	**Joensuu**	**39.10**	**342**	*ep*	**P**	**17 19 05.2**	**-3.8**
GERES	**GERESS Array B**	**39.26**	**315**	P	**P**	**17 19 08.0**	**-2.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=92,slow=5.4,SNR=7.5						
GERES	**GERESS Array B**	**39.26**	**315**	P	**P**	**17 19 08.0**	**-2.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	**Kangasniemi**	**40.01**	**338**	*ep*	**P**	**17 19 15.5**	**-1.0**
NOA	**NORSAR Array B**	**45.19**	**331**	P	**P**	**17 19 59.5**	**+0.8**
	comp=Z,1.5nm,0.8s,mb3.9,baz=134,slow=5.0,SNR=3.4						
NOA	**NORSAR Array B**	**45.19**	**331**	P	**P**	**17 19 59.5**	**+0.8**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TOA0	**Torodi Ar. Sit**	**53.12**	**266**	*eP*	**P**	**17 20 57.1**	**-3.0**
TORD	**Torodi Ar. Bea**	**53.12**	**266**	P	**P**	**17 20 57.5**	**-2.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=56,slow=6.9,SNR=8.3						
YKA	**Yellowknife Ar**	**90.02**	**356**	P	**P**	**17 24 41.2**	**-0.2**
	comp=Z,0.3nm,0.8s,mb3.7,baz=3.6,slow=5.2,SNR=3.9						
YKA	**Yellowknife Ar**	**90.02**	**356**	P	**P**	**17 24 41.2**	**-0.2**

*IDC **28** 17:24:26.7±2.1, 497N×9397E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, ML4.0/1, Error ellipse: s-maj=93.2km s-min=19.4km az=58.0*
*NEIC **28** 17:24:32.2±1.1, 507N×9421E, h35km, Error ellipse: s-maj=26.1km s-min=13.0km az=49.0*
*ISCJB **28** 17:24:42.4±5.4, 58N±02×952E±03, h119km±45km, mb3.7/6, Error ellipse: s-maj=61.0km s-min=18.7km az=141.3*

ISC 28 17:24:43.0±5.2, 58N±03×951E±03, h108km±43km, n10, σ0§19/11, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.52**	**95**	*e*P*n*	**Pn**	**17 26 02.9**	**+0.1**
KULM				*e*Sn	**Sn**	**17 27 05.1**	**0.0**
CMAR	**Chiang Mai Arr**	**13.16**	**16**	Pn	**Pn**	**17 27 51.1**	**+5.4**
	0.2nm,0.3s,baz=210,slow=7.5,SNR=7.4						
MK31	**Makanchi Array**	**42.35**	**347**	*e*P	**P**	**17 32 26.1**	**-0.3**
MKAR	**Makanchi Array**	**42.35**	**347**	P	**P**	**17 32 26.4**	**0.0**
	0.9nm,0.6s,mb3.7,baz=170,slow=8.3,SNR=9.8						
WRA	**Warramunga Arr**	**46.26**	**125**	P	**P**	**17 32 58.0**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=301,slow=9.2,SNR=13						
KURK	**Kurchatov**	**46.88**	**346**	P	**P**	**17 33 02.2**	**-0.1**
	0.9nm,0.4s,mb3.9,baz=170,slow=7.3,SNR=4.4						
KURK	**Kurchatov**	**46.88**	**346**	P	**P**	**17 33 01.9**	**-0.3**
ASAR	**Alice Springs**	**47.83**	**129**	P	**P**	**17 33 09.8**	**-0.2**
	0.3nm,0.6s,mb3.3,baz=301,slow=7.6,SNR=9.0						
ZALV	**Zalesovo Beam**	**48.77**	**352**	P	**P**	**17 33 17.1**	**+0.4**
	0.6nm,0.3s,mb4.1,baz=156,slow=7.3,SNR=3.4						
BVAR	**Borovoye Array**	**51.29**	**341**	P	**P**	**17 33 35.9**	**0.0**
	0.4nm,0.5s,mb3.8,baz=146,slow=10,SNR=3.8						

IDC 28 17:37:50.4±8.2, 554S×15245E, h75km±58km, mb3.2/3, mb1 3.3/4, mb1mx3.2/16, mbtmp3.2/4, ML2.5/1, Error ellipse: s-maj=98.2km s-min=39.1km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.50**	**233**	P	Pn	17 39 24.1	+0.7
	0.7nm,0.3s,baz=48,slow=4.5,SNR=5.6						
PMG				S	Sn	17 40 41.2	+5.0
	2.0nm,0.3s,baz=310,slow=22,SNR=7.5						
WRA	**Warramunga Arr**	**22.70**	**229**	P	P	17 42 46.1	+0.2
	0.4nm,0.5s,baz=57,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**25.37**	**223**	P	P	17 43 10.7	0.0
	0.4nm,0.7s,baz=58,slow=9.6,SNR=8.3						
ASAR				PcP	PcP	17 46 41.8	+0.1
	0.2nm,0.5s,baz=57,slow=2.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**81.57**	**326**	P	P	17 49 59.4	-0.5
	1.0nm,0.4s,baz=104,slow=6.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**150.19**	**287**	PKPbc	PKPbc	17 57 33.7	-0.1
	0.7nm,0.6s,baz=52,slow=2.2,SNR=5.7						

*NEIC **28** 17:47:36.8±0.4, 427N×12553E, h100km, mb3.9/2, Error ellipse: s-maj=33.0km s-min=8.7km az=72.0*
*IDC **28** 17:47:37.3±9.9, 428N×12557E, h103km±94km, mb3.7/7, mb1 3.9/7, mb1mx3.6/18, mbtmp3.7/7, Error ellipse: s-maj=58.8km s-min=16.9km az=78.0*
*ISCJB **28** 17:47:38.2±1.0, 43N±01×1256E±03, h130km±11km, mb4.0/10, Error ellipse: s-maj=51.9km s-min=12.4km az=164.1*

ISC 28 17:47:39.1±1.0, 43N±01×1256E±03, h121km±12km, n16, σ0§28/16, mb4.1/10, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.91**	**340**	*i*P	**Pn**	**17 48 11.6**	**+0.1**
GSPH				*e*S	**Sn**	**17 48 36.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.24**	**180**	*e*P	**P**	**17 52 26.2**	**0.0**
	8.3nm,0.4s,mb4.4						
WRAB	**Tennant Creek**	**25.56**	**161**	*e*P	**P**	**17 52 56.5**	**-0.4**
	11nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**25.56**	**161**	P	**P**	**17 52 56.4**	**-0.5**
	4.2nm,0.6s,mb4.1,baz=340,slow=10,SNR=22						
WB2	**Warramunga Arr**	**25.57**	**161**	*e*P	**P**	**17 52 57.0**	**+0.1**
ASAR	**Alice Springs**	**28.94**	**164**	P	**P**	**17 53 27.1**	**0.0**
	0.9nm,0.3s,mb3.8,baz=339,slow=7.4,SNR=54						
MJAR	**Matsushiro Arr**	**34.14**	**18**	P	**P**	**17 54 12.6**	**+0.1**
	2.3nm,1.0s,mb4.0,baz=194,slow=7.5,SNR=3.5						
BBOO	**Buckleboo**	**38.20**	**166**	*i*P	**P**	**17 54 47.6**	**+0.5**
	6.6nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**39.05**	**158**	P	**P**	**17 54 54.7**	**+0.4**
	1.4nm,0.4s,mb4.1,baz=327,slow=4.6,SNR=8.0						
STKA	**Stephens Creek**	**39.05**	**158**	*e*P	**P**	**17 54 54.6**	**+0.4**
	4.2nm,1.4s,mb4.1						
STKA	**Stephens Creek**	**39.05**	**158**	P	**P**	**17 54 54.5**	**+0.3**
	0.6nm,0.8s,mb3.5						
MK31	**Makanchi Array**	**56.46**	**326**	*e*P	**P**	**17 57 01.9**	**-6.4**
MK31				*e*PcP	PcP	17 58 03.9	+0.1
MKAR	**Makanchi Array**	**56.46**	**326**	P	**P**	**17 57 08.7**	**+0.3**
	0.3nm,0.5s,mb3.6,baz=121,slow=7.4,SNR=12						
MKAR				PcP	PcP	17 58 03.9	+0.1
	0.2nm,0.4s,baz=110,slow=5.2,SNR=5.0						
KURK	**Kurchatov**	**60.67**	**328**	P	**P**	**17 57 37.1**	**-0.3**
	0.2nm,0.4s,mb3.5,baz=128,slow=6.7,SNR=4.7						
ARCES	**ARCESS Array B**	**89.54**	**340**	P	**P**	**18 00 22.3**	**-0.2**
	3.3nm,0.9s,mb4.5,baz=92,slow=4.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**121.67**	**288**	PKP	PKPdf	18 06 20.0	+0.3
	0.1nm,0.3s,baz=14,slow=2.3,SNR=3.5						

ATH 28 17:48:50.2, 3748N×2315E, h10km, MD3.5/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.78**	**193**	*e*P*b*	**Pb**	**17 49 05.0**	**-0.8**
ITM	**Ithomi**	**1.02**	**253**	*e*P*b*	**Pb**	**17 49 09.5**	**-0.4**
VLS	**Valsamata**	**2.14**	**290**	*e*P*n*	**Pn**	**17 49 28.5**	**+2.5**

*MOS **28** 18:03:31.5±1.5, 3868S×17643E, h48km, mb5.1/12, Error ellipse: s-maj=13.7km s-min=10.4km az=87.7*
*BJI **28** 18:03:35.5, 3931S×17655E, h94km, mB5.7, mb5.3*
*ISCJB **28** 18:03:36.4±0.2, 3889S±002×17628E±004, h88km±1km, mb4.9/42, Error ellipse: s-maj=5.5km s-min=3.6km az=22.0*
*NEIC **28** 18:03:37.9, 3878S×17630E, h80km, mb5.0/20, ML5.5(WEL), After WEL.*
NEIC Felt on much of the North Island.
*IDC **28** 18:03:38.4±0.5, 3856S×17664E, h101km±5km, mb4.6/13, mb1 4.6/13, mb1mx4.6/15, mbtmp4.6/13, MS3.7/8, Ms1 3.7/8, ms1mx3.4/22, Error ellipse: s-maj=16.1km s-min=12.9km az=68.0*

ISC 28 18:03:37.2±0.2, 3890S±002×17628E±004, h81km±2km, h91km±2.8km; pP-P, n226, σ1§25/177, mb4.9/42, 2C-3D, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATZ	**Hinemaiaia**	**0.15**	**272**	P	**Pn**	**18 03 49.4**	**+0.5**
HATZ				S	**Sn**	**18 03 57.7**	**+0.1**
BKZ	**Black Stump Fm**	**0.32**	**149**	P	**Pn**	**18 03 50.9**	**+1.2**
BKZ				S	**Sn**	**18 04 00.6**	**+1.7**
RITZ	**Rihia Road**	**0.34**	**256**	P	**Pn**	**18 03 51.0**	**+1.2**
WHTZ	**Whakaora**	**0.34**	**312**	P	**Pn**	**18 03 50.2**	**+0.3**
RATZ	**Rangitukua**	**0.40**	**274**	P	**Pn**	**18 03 50.8**	**+0.5**
KATZ	**Kakaramea**	**0.47**	**260**	P	**Pn**	**18 03 51.7**	**+0.9**
WATZ	**Wairara**	**0.47**	**294**	P	**Pn**	**18 03 51.0**	**+0.2**
WTVZ	**West Tongariro**	**0.58**	**248**	P	**Pn**	**18 03 52.9**	**+1.1**
NGZ	**Ngauruhoe**	**0.60**	**242**	P	**Pn**	**18 03 53.4**	**+1.5**
TUVZ	**Tukino**	**0.61**	**233**	P	**Pn**	**18 03 53.7**	**+1.6**
MOVZ	**Moawhango**	**0.66**	**219**	P	**Pn**	**18 03 53.9**	**+1.4**
FWVZ	**Far West T-bar**	**0.67**	**238**	P	**Pn**	**18 03 53.6**	**+0.9**
DRZ	**Dome Shelter**	**0.67**	**236**	P	**Pn**	**18 03 54.4**	**+1.7**
TWVZ	**Taurewa**	**0.68**	**255**	P	**Pn**	**18 03 53.7**	**+1.0**
WNVZ	**Wahianoa**	**0.68**	**231**	P	**Pn**	**18 03 54.4**	**+1.6**
UTU	**Utuhina**	**0.72**	**354**	P	**Pn**	**18 03 52.9**	**-0.3**
MKRZ	**Makatiti**	**0.77**	**11**	P	**Pn**	**18 03 53.5**	**-0.2**
EDRZ	**Edgecumbe**	**0.87**	**25**	P	**Pn**	**18 03 54.0**	**-0.8**
KARZ	**Kaharoa**	**0.88**	**358**	P	**Pn**	**18 03 54.3**	**-0.6**
LIRZ	**Lichensteins R**	**0.90**	**5**	P	**Pn**	**18 03 54.5**	**-0.6**
URZ	**Urewera**	**0.91**	**46**	P	**Pn**	**18 03 54.6**	**-0.7**
	15µm,0.3s,baz=248,slow=7.6						
URZ				S	**Sn**	**18 04 07.8**	**+1.6**
	8µm,0.3s,baz=324,slow=23,SNR=11						
URZ	**Urewera**	**0.91**	**46**	P	**Pn**	**18 03 54.7**	**-0.6**
URZ				S	**Sn**	**18 04 07.6**	**+1.4**
MARZ	**Manawahe**	**0.96**	**19**	P	**Pn**	**18 03 55.0**	**-0.9**
KNZ	**Kokohu**	**1.09**	**97**	P	**Pn**	**18 03 57.7**	**+0.3**
MWZ	**Matawai**	**1.13**	**60**	P	**Pn**	**18 03 57.8**	**0.0**
TGRZ	**Tauranga**	**1.17**	**359**	P	**Pn**	**18 03 57.7**	**-0.6**
HIZ	**Hauiti**	**1.18**	**288**	P	**Pn**	**18 03 58.5**	**0.0**
TSZ	**Takapari Road**	**1.19**	**192**	P	**Pn**	**18 03 59.5**	**+0.9**
VRZ	**Vera Road**	**1.21**	**259**	P	**Pn**	**18 03 59.4**	**+0.6**
TOZ	**Tahuroa Road**	**1.32**	**332**	P	**Pn**	**18 03 59.3**	**-0.9**
WAZ	**Wanganui**	**1.32**	**229**	P	**Pn**	**18 04 01.9**	**+1.6**
RAEZ	**Rainy Point**	**1.52**	**255**	P	**Pn**	**18 04 05.0**	**+2.2**
WIZ	**White Island**	**1.54**	**28**	P	**Pn**	**18 04 01.7**	**-1.4**
NEZ	**North Egmont**	**1.74**	**257**	P	**Pn**	**18 04 07.9**	**+2.2**
DFE	**Dawson Falls**	**1.75**	**255**	P	**Pn**	**18 04 05.0**	**-0.8**
PUZ	**Puketiti**	**1.75**	**63**	P	**Pn**	**18 04 04.9**	**-1.0**
BFZ	**Birch Farm**	**1.78**	**181**	P	**Pn**	**18 04 06.5**	**+0.3**
PKE	**Pukeiti**	**1.81**	**260**	P	**Pn**	**18 04 08.3**	**+1.7**
MRZ	**Mangatainoka R**	**1.84**	**197**	P	**Pn**	**18 04 07.3**	**+0.3**
NWEZ	**Newall Road**	**1.92**	**258**	P	**Pn**	**18 04 09.5**	**+1.5**
MKAZ	**Moumakai**	**1.99**	**333**	*e*P	**Pn**	**18 04 07.5**	**-1.5**
MXZ	**Matakaoa Point**	**2.08**	**51**	P	**Pn**	**18 04 09.8**	**-0.3**
MXZ				S	**Sn**	**18 04 38.6**	**+3.9**
KUZ	**Kuaotunu**	**2.19**	**348**	P	**Pn**	**18 04 11.1**	**-0.6**
OTAZ	**Otara**	**2.22**	**331**	P	**Pn**	**18 04 11.9**	**-0.2**
KIW	**Kapiti Island**	**2.23**	**208**	P	**Pn**	**18 04 12.3**	**+0.2**
MTW	**Mount Morrison**	**2.34**	**195**	P	**Pn**	**18 04 13.1**	**-0.5**
WTAZ	**Waiatarua**	**2.38**	**325**	P	**Pn**	**18 04 14.3**	**+0.1**
CAW	**Cannon Point**	**2.40**	**203**	P	**Pn**	**18 04 14.1**	**-0.3**
KAAZ	**Kauri Point**	**2.42**	**328**	P	**Pn**	**18 04 14.5**	**-0.2**
PAWZ	**Paruwai Farm**	**2.57**	**195**	P	**Pn**	**18 04 15.9**	**-0.8**
MRW	**Makara Radio**	**2.63**	**207**	P	**Pn**	**18 04 16.9**	**-0.6**
MSWZ	**Moikau Station**	**2.64**	**197**	P	**Pn**	**18 04 16.8**	**-0.8**
WEL	**Wellington**	**2.65**	**205**	P	**Pn**	**18 04 17.3**	**-0.5**
SNZO	**South Karori**	**2.70**	**206**	P	**Pn**	**18 04 17.6**	**-0.8**
BHW	**Baring Head**	**2.73**	**203**	P	**Pn**	**18 04 18.1**	**-0.8**
TCW	**Tory Channel**	**2.78**	**213**	P	**Pn**	**18 04 18.8**	**-0.7**
NNZ	**Nelson**	**3.21**	**223**	P	**Pn**	**18 04 24.3**	**-1.1**
CMWZ	**Cape Campbell**	**3.26**	**208**	P	**Pn**	**18 04 25.4**	**-0.6**
WCZ	**Waipu Caves**	**3.33**	**332**	P	**Pn**	**18 04 26.1**	**-0.9**
BSWZ	**Blackbirch Sta**	**3.36**	**212**	P	**Pn**	**18 04 26.3**	**-1.1**
QRZ	**Quartz Range**	**3.47**	**235**	P	**Pn**	**18 04 27.9**	**-1.0**
THZ	**Tophouse**	**3.85**	**221**	P	**Pn**	**18 04 32.5**	**-1.6**
KHZ	**Kahutara**	**4.09**	**210**	P	**Pn**	**18 04 35.3**	**-2.0**
OUZ	**Omahuta**	**4.25**	**329**	P	**Pn**	**18 04 39.3**	**-0.3**
DSZ	**Dennistoun Nort**	**4.45**	**299**	P	**Pn**	**18 04 40.0**	**-2.0**
LTZ	**Lake Taylor**	**4.93**	**217**	P	**Pn**	**18 04 40.9**	**-7.9**
CRLZ	**Canterbury Las**	**5.43**	**209**	P	**Pn**	**18 04 52.5**	**-3.0**
MQZ	**McQueen's Vall**	**5.53**	**208**	P	**Pn**	**18 04 53.1**	**-3.8**
WVZ	**Waitaha Valley**	**5.92**	**223**	P	**Pn**	**18 05 00.4**	**-1.8**
RPZ	**Rata Peaks**	**6.22**	**218**	P	**Pn**	**18 05 04.2**	**-2.1**
	19nm,0.3s,baz=352,slow=0.6,SNR=52						
RPZ				S	**Sn**	**18 06 10.8**	**-5.1**
	98nm,0.3s,baz=242,slow=19,SNR=20						
RPZ	**Rata Peaks**	**6.22**	**218**	P	**Pn**	**18 05 02.8**	**-3.5**
FOZ	**Fox Glacier**	**6.81**	**225**	P	**Pn**	**18 05 10.3**	**-4.1**
LBZ	**Lake Benmore**	**7.13**	**218**	P	**Pn**	**18 05 16.0**	**-2.8**
ODZ	**Otahua Downs**	**7.44**	**213**	P	**Pn**	**18 05 18.9**	**-4.0**
JCZ	**Jackson Bay**	**7.66**	**229**	P	**Pn**	**18 05 21.9**	**-4.0**
WKZ	**Wanaka**	**8.03**	**220**	P	**Pn**	**18 05 27.5**	**-3.5**
EAZ	**Earnscleugh**	**8.18**	**217**	P	**Pn**	**18 05 29.6**	**-3.5**
MSZ	**Milford Sound**	**8.50**	**225**	P	**Pn**	**18 05 35.1**	**-2.3**
TUZ	**Tuapeka**	**8.60**	**213**	P	**Pn**	**18 05 35.7**	**-3.0**
MLZ	**Mavora Lakes**	**8.82**	**220**	P	**Pn**	**18 05 39.1**	**-2.7**
WHZ	**Wether Hill Ro**	**9.32**	**219**	P	**Pn**	**18 05 45.3**	**-3.2**
DZM	**Mont Dzumac**	**18.77**	**330**	*e*P	**Pn**	**18 07 51.1**	**-0.2**
	48nm,1.0s						
CNB	**Canberra Magne**	**21.73**	**271**	*e*P	**P**	**18 08 24.5**	**+2.7**
TAU	**Tasmania Unive**	**22.20**	**250**	*e*P	**P**	**18 08 28.7**	**+2.0**
YNG	**Young**	**22.81**	**273**	*e*P	**P**	**18 08 34.8**	**+1.6**
	6.3nm,0.8s,mb4.0						
TOO	**Toolangi**	**24.17**	**263**	*e*P	**P**	**18 08 47.2**	**+1.4**
CMSA	**Cobar Meteorol**	**25.96**	**277**	*e*P	**P**	**18 09 03.4**	**+1.3**
	2.0nm,0.4s,mb4.2						
AFI	**Afiamalu**	**27.04**	**26**	P	**P**	**18 09 10.1**	**-1.7**
AFI				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.0						
AFI	**Afiamalu**	**27.04**	**26**	P	**P**	**18 09 10.1**	**-1.8**
	comp=Z,41nm,0.8s,mb5.0						
RAR	**Rarotonga**	**27.08**	**56**	LR	LR	18 17 31.4	
	comp=Z,129nm,21.5s,baz=127,slow=31						
STKA	**Stephens Creek**	**29.01**	**273**	P	**P**	**18 09 30.9**	**+1.5**
	comp=Z,12nm,0.8s,mb4.6,baz=103,slow=9.9,SNR=29						
STKA				ScP	ScP	18 16 04.1	-6.0
	comp=Z,1.6nm,0.8s,baz=82,slow=8.7,SNR=3.5						
STKA	**Stephens Creek**	**29.01**	**273**	*e*P	**P**	**18 09 30.8**	**+1.5**
	comp=Z,12nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**29.01**	**273**	*e*P	**P**	**18 09 30.6**	**+1.2**
	comp=Z,2.2nm,0.8s,mb3.8						
QLP	**Quilpie**	**29.47**	**285**	*e*P	**P**	**18 09 37.6**	**+4.1**
CTA	**Charters Tower**	**31.95**	**297**	P	**P**	**18 09 57.1**	**+1.7**
	comp=Z,1.5nm,0.4s,mb4.1,baz=21,slow=20,SNR=3.6						
CTAO	**Charters Tower**	**31.95**	**297**	*e*P	**P**	**18 09 56.6**	**+1.2**
HNR	**Honiara**	**32.79**	**329**	P	**P**	**18 10 02.5**	**-0.3**
	comp=Z,119nm,0.8s,mb5.8,baz=23,slow=0.6,SNR=9.6						
HNR	**Honiara**	**32.79**	**329**	*e*P	**P**	**18 10 02.6**	**-0.1**
HNR				pmax	pmax		
	comp=Z,119nm,0.9s,mb5.7						
HNR	**Honiara**	**32.79**	**329**	*e*P	**P**	**18 10 02.6**	**-0.1**
	comp=Z,119nm,0.9s,mb5.7						
TBI	**Tubuai**	**32.94**	**72**	*e*LR	LR	18 18 51.1	
	comp=Z,245nm,35.2s						
BBOO	**Buckleboo**	**32.97**	**268**	*e*P	**P**	**18 10 04.1**	**-0.1**
	comp=Z,14nm,0.7s,mb4.9						
PPT	**Papeete**	**36.52**	**64**	*e*LR	LR	18 20 09.0	
	comp=Z,445nm,34.2s						
PPT	**Papeete**	**36.52**	**64**	LR	LR	18 22 05.8	
	comp=Z,63nm,18.9s,baz=106,slow=31						
COEN	**Coen**	**38.33**	**301**	*e*P	**P**	**18 10 50.7**	**+0.5**
	comp=Z,7.3nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**38.91**	**280**	P	**P**	**18 10 55.1**	**+0.1**
	comp=Z,27nm,0.3s,mb5.5,baz=116,slow=5.8,SNR=2013						
ASAR				PcP	PcP	18 13 03.2	-1.1
	comp=Z,2.6nm,0.8s,baz=120,slow=6.9,SNR=3.1						
ASAR				ScP	ScP	18 16 39.0	-6.2
	comp=Z,1.9nm,0.6s,baz=119,slow=3.8,SNR=10.0						
ASAR				S	**S**	**18 16 43.9**	**-3.5**
	comp=Z,1.1nm,0.6s,baz=132,slow=15,SNR=9.3						
ASAR	**Alice Springs**	**38.91**	**280**	P	**P**	**18 10 55.1**	**+0.1**
ASAR						18 13 03.2	
ASAR				S	**S**	**18 16 43.9**	**-3.5**
ASAR	**Alice Springs**	**38.91**	**280**	P	**P**	**18 10 55.1**	**+0.1**
ASAR				PcP	PcP	18 13 03.2	-1.1
ASAR				ScP	ScP	18 16 39.0	-6.2
ASAR				S	**S**	**18 16 43.9**	**-3.5**
VNDA	**Vanda**	**39.21**	**185**	P	**P**	**18 10 59.8**	**+2.9**
	comp=Z,6.1nm,0.8s,mb4.5,baz=3.7,slow=8.2,SNR=29						
VNDA				ScP	ScP	18 16 43.6	-1.9
	comp=Z,2.0nm,0.9s,baz=16,slow=2.1,SNR=4.5						
VNDA				LR	LR	18 23 30.7	
	comp=Z,133nm,22.0s,baz=13,slow=30						
VNDA	**Vanda**	**39.21**	**185**	*e*P	**P**	**18 10 59.6**	**+2.7**
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VNDA	**Vanda**	**39.21**	**185**	*e*P	**P**	**18 10 59.5**	**+2.6**
	comp=Z,6.3nm,0.9s,mb4.5						
SBA	**Scott Base**	**39.27**	**183**	*e*P	**P**	**18 11 01.2**	**+3.8**
SBA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
SBA	**Scott Base**	**39.27**	**183**	*e*P	**P**	**18 11 01.1**	**+3.8**
	comp=Z,19m,1.1s,mb4.8						
PMG	**Port Moresby**	**39.27**	**311**	P	**P**	**18 10 58.5**	**+0.4**
	comp=Z,22nm,0.7s,mb5.1,baz=90,slow=5.8,SNR=14						
PMG	**Port Moresby**	**39.27**	**311**	*e*P	**P**	**18 10 58.7**	**+0.6**
PMG				pmax	pmax		
	comp=Z,18nm,1.0s						
PMG	**Port Moresby**	**39.27**	**311**	*e*P	**P**	**18 10 58.4**	**+0.3**
	comp=Z,20nm,0.7s,mb5.1						
FORT	**Forrest**	**40.02**	**267**	*e*P	**P**	**18 11 03.6**	**-0.5**
	comp=Z,24nm,0.4s,mb5.4						
WB2	**Warramunga Arr**	**40.70**	**285**	*e*P	**P**	**18 11 09.7**	**-0.1**
WB2	**Warramunga Arr**	**40.70**	**285**	*e*P	**P**	**18 11 09.6**	**-0.3**
WRAB	**Tennant Creek**	**40.70**	**285**	P	**P**	**18 11 10.1**	**+0.2**
	comp=Z,131nm,0.4s,mb6.1,SNR=5.3						
WRAB	**Tennant Creek**	**40.70**	**285**	*e*P	**P**	**18 11 10.2**	**+0.3**
WRAB	**Tennant Creek**	**40.70**	**285**	*e*P	**P**	**18 11 09.7**	**-0.2**
	comp=Z,9.5nm,0.4s,mb5.0						
WRA	**Warramunga Arr**	**40.71**	**285**	P	**P**	**18 11 09.8**	**-0.1**
	comp=Z,7.5nm,0.3s,mb4.9,baz=124,slow=8.2,SNR=195						
WRA				ScP	ScP	18 16 44.7	-7.5
	comp=Z,1.2nm,0.6s,baz=119,slow=3.7,SNR=7.5						
WRA				S	**S**	**18 17 13.3**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=127,slow=16,SNR=4.7						
KMBL	**Kambalda**	**44.56**	**262**	*e*P	**P**	**18 11 40.4**	**-0.7**
	comp=Z,77nm,0.8s,mb5.5						
CASY	**Casey**	**45.45**	**211**	*e*P	**P**	**18 11 48.2**	**+0.7**
CASY	**Casey**	**45.45**	**211**	*e*P	**P**	**18 11 48.1**	**+0.5**
	comp=Z,100nm,0.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**47.48**	**258**	*e*P	**P**	**18 12 02.6**	**-1.3**
NWAO				pmax	pmax		
	comp=Z,11nm,0.6s						
NWAO	**Narrogin (SRO)**	**47.48**	**258**	*e*P	**P**	**18 12 02.6**	**-1.4**
	comp=Z,11nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**48.41**	**280**	*e*P	**P**	**18 12 11.6**	**+0.3

KMI	**Kunming**	**93.65**	**299**	P	**P**	**18 16 46.5**	**+1.9**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb5.2						
ISA	**Isabella**	**95.56**	**48**	*e*P	**P**	**18 16 55.6**	**+2.5**
ISA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
ISA	**Isabella**	**95.56**	**48**	*e*P	**P**	**18 16 55.6**	**+2.5**
	comp=Z,2.4nm,0.8s,mb4.7						
XAN	**Xi'an**	**95.68**	**310**	P	**P**	**18 16 52.5**	**-1.2**
XAN				AP	pP	18 17 17.0	+1.4
XAN				PP	PP	18 20 48.0	+1.4
XAN				S	S	18 28 06.5	+2.4
XAN				SS	SS	18 34 39.5	+3.7
XAN				AMB	AMB		
	comp=Z,1.0nm,0.4s,mb4.6						
XAN				LR	LR		
	comp=N,14nm,15.4s						
XAN				LR	LR		
	comp=E,30nm,18.5s						
XAN				LR	LR		
	comp=Z,53nm,19.5s						
NVAR	**Mina Array Bea**	**97.59**	**46**	P	**P**	**18 17 03.1**	**+0.9**
	comp=Z,1.2nm,0.7s,mb4.6,baz=226,slow=8.9,SNR=7.4						
CPUP	**Villa Florida**	**98.02**	**133**	P	**P**	**18 17 04.9**	**+0.2**
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CPUP	**Villa Florida**	**98.02**	**133**	P	**P**	**18 17 04.9**	**+0.3**
	comp=Z,5.5nm,0.7s,mb5.2						
HHC	**Hu-ho-hao-te**	**98.90**	**316**	*e*P	**P**	**18 17 08.0**	**0.0**
HHC				AP	pP	18 17 34.0	+4.0
HHC				XP	sP	18 17 44.3	+5.6
HHC				PP	PP	18 21 12.8	+1.6
HHC				SKS		18 27 36.0	
HHC				S	S	18 28 26.0	-5.2
HHC				XS	sS	18 29 12.0	+2.8
HHC				SS	SS	18 35 20.0	-0.8
HHC				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.6						
HHC				AMB	AMB		
	comp=Z,120nm,4.2s						
LZH	**Lanzhou**	**100.14**	**308**	*e*P	Pdif	18 17 14.0	+0.1
LZH				AP		18 17 38.0	
LZH				XP		18 17 47.5	
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,54nm,4.3s						
WMQ	**Urumqi**	**114.68**	**307**	*e*PKP	PKiKP	18 22 06.5	-1.1
YKA	**Yellowknife Ar**	**115.13**	**29**	PKP	PKiKP	18 22 05.3	-2.6
	comp=Z,0.6nm,0.5s,baz=244,slow=1.5,SNR=16						
YKA				PKKPbc	PKKPbc	18 32 43.0	-1.6
	comp=Z,0.6nm,0.5s,baz=50,slow=3.9,SNR=19						
YKA	**Yellowknife Ar**	**115.13**	**29**	PKP	PKiKP	18 22 05.3	-2.6
YKA				PKKPbc	PKKPbc	18 32 43.0	-1.6
TIKI	**Tiksi**	**115.21**	**345**	*i* PKiKP	PKPdf	18 22 03.6	-4.2
TKL	**Tuckaleechee C**	**118.21**	**66**	PKP	PKPdf	18 22 13.5	-1.2
	comp=Z,1.2nm,0.5s,baz=138,slow=6.1,SNR=4.0						
MK31	**Makanchi Array**	**119.45**	**308**	*e*PKIKP	PKPdf	18 22 14.1	-2.6
MKAR	**Makanchi Array**	**119.45**	**308**	PKP	PKPdf	18 22 14.1	-2.6
	comp=Z,1.8nm,0.5s,baz=203,slow=1.4,SNR=49						
ZALV	**Zalesovo Beam**	**121.08**	**316**	PKhKP		18 22 16.1	
	comp=Z,0.8nm,0.4s,baz=186,slow=4.5,SNR=3.7						
FCC	**Fort Churchill**	**122.08**	**38**	*e*PKIKP	PKPdf	18 22 18.4	-3.0
KBL	**Kabul**	**122.95**	**290**	*e*PKIKP	PKPdf	18 22 21.8	-2.1
KURK	**Kurchatov**	**123.29**	**311**	PKP	PKPdf	18 22 21.6	-2.3
	comp=Z,4.0nm,0.6s,baz=117,slow=1.9,SNR=8.3						
KURK	**Kurchatov**	**123.29**	**311**	*i* PKIKP	PKPdf	18 22 22.2	-1.8
SADO	**Sadowa**	**125.37**	**58**	PKP	PKPdf	18 22 25.8	-2.4
	comp=Z,6.9nm,0.6s,baz=236,slow=2.5,SNR=5.3						
RES	**Resolute Bay**	**126.77**	**19**	PKP	PKPdf	18 22 27.6	-2.4
	comp=Z,1.5nm,0.4s,baz=267,slow=2.0,SNR=11						
RES	**Resolute Bay**	**126.77**	**19**	*e*PKP	PKPdf	18 22 27.5	-2.5
BVAR	**Borovoye Array**	**128.86**	**312**	PKP	PKPdf	18 22 31.8	-2.7
	comp=Z,1.1nm,0.5s,baz=173,slow=0.8,SNR=12						
BVAR				SKPbc		18 25 43.4	
	comp=Z,0.9nm,0.7s,baz=117,slow=2.6,SNR=4.9						
SPITS	**Spitsbergen Ar**	**139.73**	**354**	PKP	PKPdf	18 22 54.3	0.0
	comp=Z,8.2nm,0.6s,baz=5.6,slow=9.4,SNR=12						
SPITS				SKPbc	SKPbc	18 26 16.9	-5.6
	comp=Z,4.1nm,0.5s,baz=96,slow=3.9,SNR=9.1						
KEV	**Kevo**	**145.06**	**342**	*e*pkp	PKPdf	18 23 00.8	-3.1
KIV	**Kislovodsk**	**145.20**	**294**	*i* PKIKP	PKPdf	18 23 04.4	-0.5
KIV	**Kislovodsk**	**145.20**	**294**	PKPdf	PKPdf	18 23 03.2	-1.7
KLMR	**Klimovskoe**	**145.45**	**324**	*e*PKP2	PKPab	18 23 02.4	-2.8
ARCES	**ARCESS Array B**	**145.58**	**342**	PKPbc	PKPbc	18 23 03.3	-1.9
	comp=Z,22nm,0.6s,baz=52,slow=4.2,SNR=92						
ARCES				SKPbc	SKPbc	18 26 31.9	-5.2
	comp=Z,3.5nm,0.8s,baz=34,slow=0.4,SNR=4.1						
ARCES	**ARCESS Array B**	**145.58**	**342**	PKPbc	PKPbc	18 23 03.3	-1.9
ARCES				SKPbc	SKPbc	18 26 31.9	-5.2
MALT	**Malatya**	**147.27**	**282**	PKIKP	PKPdf	18 23 06.6	-2.0
LIC	**Lamto**	**147.45**	**178**	*e*PKIKP	PKPbc	18 23 12.4	+0.2
	comp=Z,12nm,0.5s						
LIC	**Lamto**	**147.45**	**178**	*e*PKP1	PKPbc	18 23 12.4	+0.2
	comp=Z,42nm,0.7s						
KIC	**Kosan Boka**	**147.60**	**178**	*e*PKP1	PKPbc	18 23 12.8	+0.2
	comp=Z,83nm,1.0s						
TIC	**Toumodi**	**147.87**	**178**	*e*PKP1	PKPbc	18 23 13.8	+0.4
	comp=Z,29nm,0.4s						
DBIC	**Dimbokro**	**147.90**	**178**	PKPbc	PKPbc	18 23 12.9	-0.5
	comp=Z,5.1nm,0.4s,baz=134,slow=3.8,SNR=27						
DBIC	**Dimbokro**	**147.90**	**178**	*e*PKPdf	PKPdf	18 23 08.7	-1.7
DBIC				PKPbc	PKPbc	18 23 12.9	-0.5
DBIC				*e*PKPbc	PKPbc	18 23 13.8	+0.4
JOF	**Joensuu**	**148.05**	**330**	*e*pkp	PKPdf	18 23 08.6	-0.5
OBN	**Obninsk**	**148.63**	**314**	*i* PKIKP	PKPdf	18 23 11.3	+1.0
OBN				pmax	pmax		
	comp=Z,35nm,1.5s						
KAF	**Kangasniemi**	**150.41**	**332**	*e*pkp	PKPdf	18 23 15.4	+2.5
BRTR	**Keskin Array B**	**151.22**	**284**	PKPbc	PKPbc	18 23 18.8	-2.1
	comp=Z,3.4nm,0.7s,baz=140,slow=4.8,SNR=19						
BR131	**Keskin Array S**	**151.22**	**284**	*e*PKPdf	PKPdf	18 23 14.7	-0.2
BR131				*e*PKPbc	PKPbc	18 23 18.4	-2.5
TOA0	**Torodi Ar. Sit**	**153.91**	**192**	*e*PKPbc	PKPbc	18 23 27.4	-0.2
TOA0				*e*PKPab	PKPab	18 23 40.8	-0.1
TORD	**Torodi Ar. Bea**	**153.91**	**192**	PKPbc	PKPbc	18 23 27.8	+0.2
	comp=Z,2.0nm,0.5s,baz=279,slow=0.4,SNR=4.1						
TORD				PKPab	PKPab	18 23 41.0	+0.1
	comp=Z,8.5nm,0.7s,baz=164,slow=4.2,SNR=26						
AKASG	**Malin Array Be**	**154.04**	**308**	PKPbc	PKPbc	18 23 24.1	-2.6
	comp=Z,1.6nm,0.5s,baz=60,slow=2.8,SNR=8.5						
AKASG				PKPab	PKPab	18 23 38.6	-2.0
	comp=Z,4.5nm,0.7s,baz=64,slow=4.2,SNR=12						
NOA	**NORSAR Array B**	**155.96**	**342**	PKPbc	PKPdf	18 23 28.2	+7.3
	comp=Z,2.5nm,0.8s,baz=35,slow=2.1,SNR=4.8						
NOA				PKPab	PKPab	18 23 46.4	-2.1
	comp=Z,1.9nm,0.6s,baz=27,slow=3.4,SNR=4.9						
UZH	**Uzhgorod**	**158.94**	**306**	*i* PKP2	PKPab	18 24 01.4	-0.4
BRG	**Berggiesshubel**	**162.73**	**320**	*e*PKP2	PKPab	18 24 16.7	-1.6
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CLL	**Collm**	**162.93**	**322**	*i* PKP2	PKPab	18 24 17.9	-1.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**162.93**	**322**	*i* PKPab	PKPab	18 24 17.9	-1.2
	comp=Z,9.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**163.55**	**359**	PKPab	PKPab	18 24 18.8	-2.8
	comp=Z,1.9nm,0.7s,baz=0.0,slow=2.1,SNR=5.0						
GERES	**GERESS Array B**	**164.01**	**314**	PKPab	PKPab	18 24 23.2	-0.8
	comp=Z,0.9nm,0.9s,baz=44,slow=4.1,SNR=6.0						
DAVOX	**Davos/Dischmat**	**167.30**	**313**	PKPab	PKPab	18 24 37.5	-1.0
	comp=Z,2.5nm,0.9s,baz=171,slow=5.8,SNR=5.3						
LPG	**La Plagne**	**169.82**	**314**	*e*PKP2	PKPab	18 24 50.4	+0.7
MBDF	**Montbardon**	**170.25**	**310**	*e*PKP2	PKPab	18 24 52.9	+1.3
	comp=Z,5.9nm,0.8s						
SSF	**Saint Saulge**	**170.28**	**329**	*e*PKP2	PKPab	18 24 49.8	-1.8
	comp=Z,7.7nm,0.7s						
SMF	**Signal de Mont**	**170.47**	**327**	*e*PKP2	PKPab	18 24 50.6	-1.9
AVF	**Avril sur Loir**	**170.56**	**329**	*e*PKP2	PKPab	18 24 51.1	-1.8
	comp=Z,11nm,0.9s						
ESDC	**Sonseca Array**	**179.20**	**14**	PKPab		18 25 28.4	
	comp=Z,1.0nm,0.7s,baz=342,slow=5.0,SNR=5.1						

IDC 28 18:07:30.4±9.3, 287S×10062E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.6/3, MS2.7/1, Ms1 2.7/1, ms1mx2.0/31, Error ellipse: s-maj=466.3km s-min=27.5km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.89**	**343**	LR	LR	18 11 08.0	
	comp=Z,73nm,18.6s,baz=42,slow=38						
WRA	**Warramunga Arr**	**37.02**	**120**	P	P	18 14 41.0	-1.2
	0.4nm,0.7s,baz=310,slow=8.7,SNR=3.4						
ASAR	**Alice Springs**	**38.24**	**126**	P	P	18 14 53.4	+1.0
	0.4nm,0.5s,baz=298,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**52.03**	**344**	P	P	18 16 41.7	0.0
	0.6nm,0.5s,baz=158,slow=8.7,SNR=11						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	18 27 09.2	-0.5
	0.4nm,0.5s,baz=249,slow=1.1,SNR=4.6						

*TRN **28** 18:18:06.0, 19.17N×6467W, h22km*
TRN Felt V.I.
*RSPR **28** 18:18:07.3, 1920N×6452W, h66km±6km, MD4.2/17, MD4.2/17*
*NEIC **28** 18:18:07.3, 1920N×6452W, h66km, mb4.6/18, After RSPR.*
NEIC Felt [III] on Saint Thomas. Also felt on Tortola.
*ISCJB **28** 18:18:07.6±0.6, 1924N±004×6464W±002, h43km±7km, mb4.3/33, MS3.8/11, Error ellipse: s-maj=7.4km s-min=3.8km az=6.8*
*BJI **28** 18:18:09.2, 1920N×6450W, h65km, mB5.4, Ms4.6, Msz4.3*
*IDC **28** 18:18:11.6±1.9, 1906N×6470W, h71km±19km, mb3.7/19, mb1 4.0/22, mb1mx3.9/31, mbtmp3.8/22, MS3.8/14, Ms1 3.8/14, ms1mx3.5/38, Error ellipse: s-maj=14.9km s-min=10.5km az=31.0*

ISC 28 18:18:07.5±0.9, 1925N±003×6466W±002, h25km±7km, n103, σ1‡08/116, mb4.3/33, MS3.8/11, 10C-14D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.60**	**149**	*i* P	**Pb**	**18 18 19.1**	**-0.3**
TBVI	**Tortola**	**0.83**	**177**	*i* P	**Pb**	**18 18 22.1**	**-1.2**
TBVI	**Tortola**	**0.83**	**177**	*i* P	**Pb**	**18 18 22.6**	**-0.7**
STVI	**Saint Thomas**	**0.94**	**198**	*e*P	**Pn**	**18 18 23.9**	**-1.2**
STVI				*e*S	**Sb**	**18 18 37.3**	**+0.2**
MTP	**Monte Pirata**	**1.43**	**217**	*e*P	**Pn**	**18 18 30.9**	**-0.9**
MTP				*e*S	**Sn**	**18 18 49.2**	**-0.5**
CDVI	**St. Croix**	**1.50**	**184**	*e*P	**Pn**	**18 18 33.2**	**+0.5**
CDVI				*e*S	**Sn**	**18 18 52.3**	**+0.9**
CDVI	**St. Croix**	**1.50**	**184**	*e*P	**Pn**	**18 18 33.2**	**+0.5**
CDVI				*e*S	**Sn**	**18 18 52.0**	**+0.6**
CBYP	**Canovanas**	**1.50**	**230**	*e*P	**Pn**	**18 18 31.8**	**-1.0**
CBYP				*e*S	**Sn**	**18 18 51.6**	**+0.1**
HUMP	**Col San Antoni**	**1.58**	**226**	*e*P	**Pn**	**18 18 33.0**	**-0.9**
HUMP	**Col San Antoni**	**1.58**	**226**	*e*P	**Pn**	**18 18 33.4**	**-0.5**
HUMP				*e*S	**Sn**	**18 18 53.2**	**-0.3**
HUMP	**Col San Antoni**	**1.58**	**226**	*e*P	**Pn**	**18 18 33.0**	**-0.9**
HUMP				*e*S	**Sn**	**18 18 53.2**	**-0.3**
CPD	**Cerro la Pandu**	**1.70**	**225**	*e*P	**Pn**	**18 18 34.9**	**-0.6**
CPD				*e*S	**Sn**	**18 18 57.0**	**+0.5**
SJG	**San Juan**	**1.81**	**232**	*e*P	**Pn**	**18 18 36.3**	**-0.8**
SJG	**San Juan**	**1.81**	**232**	*e*P	**Pn**	**18 18 36.3**	**-0.8**
SJG	**San Juan**	**1.81**	**232**	*e*P	**Pn**	**18 18 36.4**	**-0.7**
SJG				*e*S	**Sn**	**18 18 58.9**	**-0.4**
CELP	**Cerrillos**	**2.17**	**238**	*e*P	**Pn**	**18 18 41.5**	**-0.4**
AOPR	**Arecibo Observ**	**2.18**	**246**	*e*P	**Pn**	**18 18 41.7**	**-0.5**
AOPR				*e*S	**Sn**	**18 19 09.7**	**+1.3**
ICM	**Isla Caja Muer**	**2.23**	**233**	*e*P	**Pn**	**18 18 43.1**	**+0.3**
ICM	**Isla Caja Muer**	**2.23**	**233**	*e*P	**Pn**	**18 18 43.7**	**+0.9**
ICM				*e*S	**Sn**	**18 19 09.5**	**0.0**
ICM	**Isla Caja Muer**	**2.23**	**233**	*e*P	**Pn**	**18 18 43.1**	**+0.3**
ICM				*e*S	**Sn**	**18 19 09.5**	**0.0**
LRS	**Lares**	**2.28**	**246**	*e*P	**Pn**	**18 18 43.3**	**-0.3**
AGPR	**Aguadilla, PR**	**2.45**	**252**	*e*P	**Pn**	**18 18 45.3**	**-0.6**
AGPR				*e*S	**Sn**	**18 19 15.8**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.46**	**239**	*e*P	**Pn**	**18 18 46.5**	**+0.4**
GBPR				*e*S	**Sn**	**18 19 14.9**	**-0.4**
LSP	**Las Mesas**	**2.54**	**245**	*e*P	**Pn**	**18 18 46.7**	**-0.4**
CRPR	**Cabo Rojo, PR**	**2.63**	**242**	*e*P	**Pn**	**18 18 49.0**	**+0.5**
CRPR				*e*S	**Sn**	**18 19 20.8**	**+1.2**
SKI	**Saint Kitts**	**2.64**	**136**	*e*P	**Pn**	**18 18 49.5**	**+1.0**
SKI				*e*S	**Sn**	**18 19 18.4**	**-1.3**
ANWB	**Willy Bob**	**3.15**	**120**	*e*Pn	**Pn**	**18 18 57.0**	**+1.5**
LZG	**Guadaloupe-1**	**4.14**	**138**	*e*P	**Pn**	**18 19 09.5**	**+0.5**
BCG	**Bois Riant Cap**	**4.28**	**137**	*e*P	**Pn**	**18 19 11.5**	**+0.5**
SCG	**Saint Claude**	**4.28**	**138**	*e*P	**Pn**	**18 19 12.1**	**+1.0**
HMG	**Houelmont**	**4.30**	**139**	*e*P	**Pn**	**18 19 12.2**	**+0.9**
DEG	**La Desirade**	**4.50**	**130**	*e*P	**Pn**	**18 19 14.2**	**0.0**
MGG	**Marie-Galante**	**4.60**	**136**	*e*P	**Pn**	**18 19 15.7**	**+0.3**
FDF	**Fort de France**	**5.61**	**143**	*e*Pn	**Pn**	**18 19 31.1**	**+1.8**
SDDR	**Presa de Saban**	**6.28**	**269**	*e*P	**Pn**	**18 19 39.5**	**+1.0**
SDDR				*e*S	**Sn**	**18 20 51.5**	**+2.1**
GRGR	**Grenville**	**7.64**	**157**	Pn	**Pn**	**18 20 00.9**	**+3.6**
PCRV	**Puerto La Cruz**	**9.02**	**180**	P	**Pn**	**18 20 17.7**	**+1.4**
	3.7nm,0.3s,baz=310,slow=4.6,SNR=14						
PCRV				S	**Sn**	**18 21 47.8**	**-9.3**
	0.4nm,0.3s,baz=271,slow=1.8,SNR=1.7						
PCRV				LR	LR	18 23 47.5	
	comp=Z,512nm,18.4s,baz=16,slow=38						
MASC	**Masc**	**9.07**	**277**	*e*P	**Pn**	**18 20 14.3**	**-2.5**
MASC				*e*S	**Sn**	**18 21 53.3**	**-4.8**
	comp=N,153nm,0.7s						
MASC				*e*			
	comp=E,199nm,0.8s						
GTBY	**Guantanamo Bay**	**9.88**	**276**	Pn	**Pn**	**18 20 26.7**	**-1.2**
SDV	**Santo Domingo**	**11.82**	**210**	P	**Pn**	**18 20 55.4**	**+0.9**
	comp=E,1.7nm,0.3s,baz=73,slow=10,SNR=17						
SDV				S	**Sn**	**18 22 57.3**	**-8.4**
	comp=E,0.6nm,0.3s,baz=52,slow=20,SNR=1.7						
SDV				LR	LR	18 25 50.3	
	comp=E,534nm,18.8s,baz=129,slow=39						
SDV	**Santo Domingo**	**11.82**	**210**	*e*Pn	**Pn**	**18 20 55.5**	**+0.9**
	comp=E,62nm,0.8s						
SDV				*e*Sn	**Sn**	**18 23 09.5**	**+3.8**
ROSC	**El Rosal**	**17.14**	**215**	P	**Pn**	**18 22 06.5**	**+1.1**
	comp=E,2.9nm,0.3s,baz=92,slow=12,SNR=9.3						
ROSC				LR	LR	18 29 28.9	
	comp=E,417nm,18.1s,baz=20,slow=40						
ROSC	**El Rosal**	**17.14**	**215**	*e*Pn	**Pn**	**18 22 05.6**	**+0.2**
DWPF	**Disney**	**17.70**	**303**	*e*Pn	**Pn**	**18 22 10.9**	**-1.4**
	comp=E,49nm,1.0s						
BCIP	**Isla Barro Col**	**17.79**	**238**	Pn	**Pn**	**18 22 11.0**	**-2.5**
NHSC	**New Hope**	**19.57**	**318**	*e*P	**Pn**	**18 22 38.1**	**+3.1**
	comp=E,45nm,0.7s						
CBN	**Corbin**	**21.89**	**332**	*e*P	**P**	**18 23 03.2**	**+4.6**
	comp=E,53nm,0.5s,mb5.2						
GOGA	**Godfrey**	**21.93**	**314**	*e*P	**P**	**18 23 00.6**	**+1.6**
	comp=E,18nm,1.0s,mb4.5						
GOGA				*e*S	**S**	**18 26 55.9**	**-4.1**
TEIG	**Tepich**	**22.25**	**276**	P	**P**	**18 23 03.1**	**+0.5**
	comp=E,8.2nm,1.0s,mb4.1,baz=15,slow=22,SNR=2.7						
TGUH	**Tegucigalpa,Un**	**22.27**	**260**	*e*P	**P**	**18 23 05.2**	**+2.3**
	comp=E,42nm,1.0s,mb4.8						
BLA	**Blacksburg**	**22.59**	**326**	*e*P	**P**	**18 23 06.9**	**+0.8**
	comp=E,49nm,0.8s,mb5.0						
BLA				*e*S	**S**	**18 27 04.7**	**-8.1**
OTAV	**Otavalo**	**23.24**	**217**	*e*P	**P**	**18 23 12.4**	**-0.8**
	comp=E,22nm,0.8s,mb4.6						
TKL	**Tuckaleechee C**	**23.49**	**318**	P	**P**	**18 23 15.5**	**0.0**
	comp=E,2.4nm,0.7s,mb3.7,baz=139,slow=10,SNR=3.8						
TKL				S	**S**	**18 27 26.5**	**-0.9**
	comp=E,1.7nm,0.4s,baz=254,slow=20,SNR=2.6						
TKL				LR	LR	18 31 07.0	
	comp=E,89nm,21.9s,MS3.2,baz=167,slow=33						
TKL	**Tuckaleechee C**	**23.49**	**318**	*e*P	**P**	**18 23 15.2**	**-0.3**
TKL				*e*		18 23 32.2	
TKL				*e*S	**S**	**18 27 32.2**	**+4.8**
SSPA	**Standing Stone**	**24.14**	**335**	*e*P	**P**	**18 23 25.8**	**+4.4**
	comp=E,22nm,1.1s,mb4.5						
SSPA				*e*		18 23 42.0	
SSPA				*e*S	**S**	**18 27 43.0**	**+5.1**
LRAL	**Lakeview Retre**	**24.24**	**309**	*e*P	**P**	**18 23 23.5**	**+1.1**
	comp=E,11nm,0.9s,mb4.3						
WVT	**Waverly**	**26.42**	**314**	P	**P**	**18 23 43.6**	**+1.4**
OXF	**Oxford**	**26.70**	**310**	P	pP	18 23 55.4	+3.2
SADO	**Sadowa**	**28.16**	**338**	LR	LR	18 33 49.4	
	comp=E,204nm,20.3s,MS3.7,baz=198,slow=33						
ATAH	**Atahualpa**	**29.39**	**209**	P	pP	18 24 18.1	+1.6
	comp=E,4.2nm,0.6s,baz=1.2,slow=6.8,SNR=4.1						
ATAH				LR	LR	18 35 34.6	
	comp=E,106nm,22.0s,MS3.4,baz=3.2,slow=36						
NNA	**Nana**	**33.28**	**202**	*e*P	**P**	**18 24 37.2**	**-5.9**
SIV	**San Ignacio**	**35.20**	**174**	P	**P**	**18 24 57.3**	**-2.4**
	comp=E,7.7nm,0.8s,mb4.7,baz=20,slow=10,SNR=31						
TXAR	**Lajitas Array**	**36.80**	**293**	P	**P**	**18 25 13.1**	**-0.3**
	comp=E,0.9nm,0.8s,mb3.7,baz=113,slow=9.6,SNR=8.8						
BDFB	**Brasilia**	**38.34**	**154**	P	**P**	**18 25 24.2**	**-2.3**
	comp=E,1.1nm,0.5s,mb3.9,baz=153,slow=21,SNR=3.4						
ULM	**Lac du Bonnet**	**39.65**	**329**	P	**P**	**18 25 35.1**	**-2.0**
	comp=E,1.9nm,0.7s,mb3.9,baz=109,slow=4.9,SNR=3.4						
SDCO	**Great Sand Dun**	**39.97**	**306**	*e*P	**P**	**18 25 39.1**	**-1.0**
	comp=E,5.9nm,0.9s,mb4.3						
ANMO	**Albuquerque**	**40.06**	**302**	*e*P	**P**	**18 25 41.0**	**+0.2**
	comp=E,3.2nm,1.0s,mb4.0						
LVC	**Limon Verde**	**41.81**	**186**	P	**P**	**18 25 53.2**	**-2.0**
	comp=E,3.0nm,0.7s,mb4.0,baz=59,slow=5.8,SNR=2.6						
LVC	**Limon Verde**	**41.81**	**186**	P	**P**	**18 25 48.1**	**-7.1**
	comp=E,5.4nm,0.6s,mb4.3						
LVC				P		18 25 53.2	
WUAZ	**Wupatki**	**44.12**	**301**	P	**P**	**18 26 14.4**	**+0.6**
	comp=E,6.5nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**44.40**	**312**	P	**P**	**18 26 16.8**	**+0.8**
	comp=E,1.5nm,0.6s,mb3.9,baz=116,slow=9.7,SNR=15						
CPUP	**Villa Florida**	**45.86**	**171**	P	**P**	**18 26 24.7**	**-3.0**
	comp=E,5.0nm,0.7s,mb4.6,baz=329,slow=6.1,SNR=13						
CPUP				LR	LR	18 45 02.3	
	comp=E,49nm,19.2s,MS3.5,baz=232,slow=35						
CPUP	**Villa Florida**	**45.86**	**171**	*e*P	**P**	**18 26 24.2**	**-3.6**
	comp=E,24nm,0.8s,mb5.2						
BOZ	**Bozeman (W)**	**46.70**	**315**	*e*P	**P**	**18 26 33.7**	**-0.5**
	comp=E,4.7nm,0.6s,mb4.6						
HLID	**Hailey**	**48.03**	**312**	*e*P	**P**	**18 26 45.3**	**+0.7**
NVAR	**Mina Array Bea**	**50.01**	**304**	P	**P**	**18 27 00.3**	**+0.4**
	comp=E,1.7nm,0.9s,mb4.1,baz=111,slow=3.3,SNR=6.1						
NEW	**Newport**	**51.07**	**317**	*e*P	**P**	**18 27 07.5**	**-0.2**
	comp=E,4.6nm,0.7s,mb4.5						
YBH	**Yreka Blue Hor**	**53.74**	**308**	P	**P**	**18 27 25.7**	**-1.9**
	comp=E,2.9nm,0.8s,mb4.2,baz=64,slow=3.2,SNR=4.8						
MDT	**Midelt**	**54.97**	**63**	P	**P**	**18 27 37.7**	**+0.9**
	comp=E,1.4nm,0.7s,mb4.1,baz=275,slow=6.5,SNR=4.8						
MDT				LR	LR	18 45 23.7	
	comp=E,114nm,18.4s,MS4.0,baz=120,slow=30						
YKA	**Yellowknife Ar**	**55.07**	**334**	P	**P**	**18 27 35.5**	**-1.4**
	comp=E,2.0nm,0.7s,mb4.3,baz=110,slow=7.5,SNR=32						
YKA	**Yellowknife Ar**	**55.07**	**334**	P	**P**	**18 27 35.5**	**-1.4**
SUMG	**Summit**	**55.40**	**9**	*e*P	**P**	**18 27 39.3**	**+0.1**
	comp=E,12nm,1.0s,mb4.9						
ESDC	**Sonseca Array**	**55.58**	**55**	P	**P**	**18 27 41.5**	**+0.5**
	comp=E,0.4nm,0.5s,mb3.7,baz=263,slow=7.2,SNR=4.6						
ESDC				LR	LR	18 45 22.8	
	comp=E,96nm,21.4s,MS3.9,baz=315,slow=29						
DBIC	**Dimbokro**	**59.34**	**94**	P	**P**	**18 28 05.7**	**-2.3**
	comp=E,3.1nm,0.8s,mb4.4,baz=266,slow=7.2,SNR=3.8						
DBIC	**Dimbokro**	**59.34**	**94**	*e*P	**P**	**18 28 07.3**	**-0.6**
	comp=E,3.7nm,0.7s,mb4.5						
PLCA	**Paso Flores**	**59.92**	**185**	P	**P**	**18 28 07.2**	**-4.1**
	comp=E,1.5nm,1.1s,mb3.9,baz=359,slow=13,SNR=1.7						
PLCA	**Paso Flores**	**59.92**	**185**	P	**P**	**18 28 07.2**	**-4.1**
PLCA				*e*P		18 28 12.0	
DLBC	**Dease Lake**	**60.93**	**327**	P	**P**	**18 28 17.6**	**-0.5**
	comp=E,2.3nm,0.9s,mb4.3,baz=309,slow=10,SNR=2.3						
TORD	**Torodi Ar. Bea**	**63.69**	**85**	P	**P**	**18 28 36.7**	**-0.6**
	comp=E,1.1nm,0.7s,mb4.0,baz=292,slow=6.5,SNR=6.8						

	2.1nm,0.6s								
AGMN	**Agassiz Refuge**	**7.90**	**52**	*e*Pn		**Pn**	**19 02 09.0**	**+0.2**
	12nm,0.5s								
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn		**Pn**	**19 02 24.0**	**-0.7**
	1.0nm,0.3s,baz=227,slow=14,SNR=7.2								
ULM				Lg			19 04 55.5		
	0.7nm,0.3s,baz=309,slow=23,SNR=5.5								
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn		**Pn**	**19 02 24.0**	**-0.7**
ULM				Lg			19 04 55.5		
WUAZ	**Wupatki**	**9.55**	**212**	*e*Pn		**Pn**	**19 02 30.2**	**-1.2**
	4.4nm,0.6s								
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn		**Pn**	**19 02 53.4**	**-1.2**
	0.1nm,0.3s,baz=64,slow=13,SNR=2.6								
YKA	**Yellowknife Ar**	**19.51**	**347**	P		**Pn**	**19 04 34.9**	**-7.6**
	0.0nm,0.3s,baz=162,slow=13,SNR=2.7								

CSEM ***28*** *19:00:13.6±0.1, 39.39N×33.13E, h2km, MD3.4, Error ellipse: s-maj=2.3km s-min=2.0km az=76.0*
DDA ***28*** *19:00:13.4, 39.38N×33.14E, h10km±1km, MD3.7*
ISK ***28*** *19:00:13.7, 39.38N×33.14E, h3km, MD3.4*
ISCJB ***28*** *19:00:14.9±0.3, 3937N±002×3317E±003, h10km, Error ellipse: s-maj=3.7km s-min=3.3km az=31.4*

ISC 28 19:00:15.2±0.3, 3937N±002×3317E±003, h10km, n31, σ1§19/42, 3C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KAMT	**Kaman**	**0.42**	**90**	PG		**Pg**	**19 00 22.4**	**-1.0**
LOD	**Lodumlu**	**0.61**	**329**	*e*PG		**Pg**	**19 00 25.3**	**-1.7**
LOD				*e*SG		**Sg**	**19 00 34.4**	**-0.5**
CDAG	**Cicekdag**	**0.96**	**74**	*i*P		**Pg**	**19 00 32.2**	**-1.5**
CDAG				*i* S		**Sg**	**19 00 44.7**	**-1.6**
KIZT	**Kizilcal**	**1.12**	**244**	*e*PN		**Pn**	**19 00 35.0**	**-1.9**
ELDT	**Eldivan**	**1.14**	**10**	*i* P		**Pb**	**19 00 35.3**	**-1.6**
ELDT				*i* S		**Sb**	**19 00 50.2**	**-1.5**
KDHN	**Kadinhani**	**1.18**	**224**	*i* P		**Pb**	**19 00 35.8**	**-1.9**
KDHN				*i* S		**Sb**	**19 00 52.0**	**-1.1**
CANT	**Cankiri**	**1.28**	**15**	*e*PN		**Pn**	**19 00 38.9**	**-0.3**
CANT				*e*SN		**Sn**	**19 00 56.7**	**+0.3**
LADK	**Ladik-KONYA**	**1.33**	**209**	*e*PN		**Pn**	**19 00 39.1**	**-0.7**
LADK				*e*SN		**Sn**	**19 00 58.2**	**+0.6**
CORM	**Corum**	**1.38**	**54**	*e*PN		**Pn**	**19 00 40.4**	**-0.2**
AVNT	**Avonos**	**1.44**	**114**	*i*P		**Pn**	**19 00 37.0**	**-4.4**
AVNT				*e*S		**Sn**	**19 00 58.4**	**-1.9**
AVNT	**Avonos**	**1.44**	**114**	*i* P		**Pn**	**19 00 37.0**	**-4.3**
AVNT				*e*S		**Sn**	**19 00 58.3**	**-1.9**
SGKT	**Sivrigoynuk**	**1.48**	**325**	*i* P		**Pn**	**19 00 41.2**	**-0.7**
SGKT				*e*S		**Sn**	**19 01 03.9**	**+2.7**
KONT	**Konya--Tatoy**	**1.56**	**204**	*e*PN		**Pn**	**19 00 43.2**	**+0.2**
YOZ	**Yozgat**	**1.68**	**80**	*e*PN		**Pn**	**19 00 45.5**	**+0.8**
NIG	**Nigde**	**1.69**	**138**	*e*PN		**Pn**	**19 00 46.1**	**+1.4**
CTKT	**Corum**	**1.76**	**44**	*i*P		**Pn**	**19 00 46.6**	**+0.8**
CTKT				*e*S		**Sn**	**19 01 10.6**	**+2.3**
TOS	**Tosya**	**1.79**	**21**	*e*PN		**Pn**	**19 00 47.0**	**+0.8**
ESKT	**Eskisehir**	**1.80**	**275**	*e*PN		**Pn**	**19 00 46.4**	**0.0**
MDU	**Mudurnu**	**1.86**	**307**	*e*PN		**Pn**	**19 00 47.8**	**+0.6**
SAFT	**Safranbolu**	**1.90**	**349**	*e*PN		**Pn**	**19 00 48.4**	**+0.7**
BALT	**Daday**	**2.17**	**4**	*i*P		**Pn**	**19 00 54.1**	**+2.7**
BALT				*e*S		**Sn**	**19 01 16.8**	**-1.5**
GULT	**Gulveren**	**2.30**	**298**	*e*PN		**Pn**	**19 00 53.5**	**+0.3**
ALT	**Altintas**	**2.40**	**263**	*e*PN		**Pn**	**19 00 55.1**	**+0.5**
HDMB	**Hadim**	**2.46**	**193**	*e*PN		**Pn**	**19 00 56.2**	**+0.8**
KARA	**Karaisali**	**2.58**	**144**	*e*PN		**Pn**	**19 00 58.5**	**+1.5**
CAVI	**Cavuskoy**	**2.70**	**289**	*e*PN		**Pn**	**19 00 59.5**	**+0.8**
DIKM	**Dikmen**	**2.78**	**34**	*e*PN		**Pn**	**19 01 00.5**	**+0.7**
KVT	**Kavak**	**2.79**	**51**	*e*PN		**Pn**	**19 01 01.4**	**+1.6**
KOZT	**Kozan**	**2.81**	**131**	*e*PN		**Pn**	**19 01 00.4**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.83**	**103**	*e*PN		**Pn**	**19 01 00.3**	**-0.1**
SVSK	**Karacayir**	**3.00**	**78**	*e*PN		**Pn**	**19 01 03.9**	**+1.0**

ISCJB ***28*** *19:07:36.7±0.6, 4150N±003×2373E±003, h2km±5km, Error ellipse: s-maj=4.9km s-min=3.6km az=140.4*
CSEM ***28*** *19:07:36.3±0.1, 4151N×2370E, h10km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.6km az=148.0*
SOF ***28*** *19:07:37.2, 4150N×2370E, h13km, MD2.7*
THE ***28*** *19:07:37.2, 4149N×2373E, h4km±1km, ML2.6/7, Error ellipse: s-maj=1.6km s-min=0.5km az=300.0*

ISC 28 19:07:37.4±0.4, 4151N±002×2372E±003, h9km±4km, n23, σ0§71/39, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMB	**Musomiste**	**0.08**	**4**	*i* P		**Pg**	**19 07 39.8**	**+0.2**
KKB	**Krupnik**	**0.59**	**307**	*i* P		**Pg**	**19 07 48.5**	**-0.4**
KNT	**Kendrikon**	**0.71**	**241**	P		**Pg**	**19 07 50.5**	**-0.6**
KNT				S		**Sg**	**19 08 00.9**	**+0.6**
SOH	**Sokhos**	**0.74**	**202**	P		**Pg**	**19 07 51.1**	**-0.6**
SOH				S		**Sg**	**19 08 01.4**	**+0.1**
RZN	**Rozhen**	**0.77**	**76**	*i* P		**Pg**	**19 07 53.6**	**+1.5**
VAY	**Valandovo**	**0.89**	**258**	P		**Pg**	**19 07 54.5**	**+0.1**
VAY	**Valandovo**	**0.89**	**258**	*e*Pg		**Pg**	**19 07 55.2**	**+0.8**
VAY				*e*Sg		**Sg**	**19 08 05.6**	**-0.3**
VAY	**Valandovo**	**0.89**	**258**	*e*Pg		**Pg**	**19 07 55.2**	**+0.8**
VAY				*e*Sg		**Sg**	**19 08 05.7**	**-0.2**
VAY				*e*Lg			19 08 06.3	
	comp=N,20nm,0.2s							
VAY				*e*Lg			19 08 07.2	
	comp=E,15nm,0.3s							
PLD	**Plovdiv**	**0.94**	**51**	P		**Pg**	**19 07 54.7**	**-0.8**
PLD				S		**Sg**	**19 08 08.7**	**+0.9**
HORT	**Hortiatis**	**1.03**	**207**	P		**Pg**	**19 07 56.5**	**-0.6**
HORT				S		**Sg**	**19 08 10.7**	**+0.3**
THE	**Thessaloniki**	**1.05**	**213**	P		**Pg**	**19 07 56.9**	**-0.6**
THE				S		**Sg**	**19 08 10.9**	**-0.2**
PGB	**Panagyurishte**	**1.09**	**18**	*i* P		**Pg**	**19 07 58.2**	**-0.1**
GRG	**Griva**	**1.14**	**241**	P		**Pb**	**19 07 58.7**	**-0.4**
GRG				S		**Sg**	**19 08 14.8**	**+0.8**
VTS	**Vitosha**	**1.15**	**341**	*e*P		**Pb**	**19 07 58.3**	**-1.0**
PLG	**Polygyros**	**1.16**	**190**	P		**Pb**	**19 07 59.0**	**-0.4**
PLG				S		**Sg**	**19 08 14.9**	**+0.4**
STIP	**Stip**	**1.17**	**280**	P		**Pb**	**19 07 59.2**	**-0.4**
STIP				S		**Sb**	**19 08 16.0**	**+1.2**
STIP	**Stip**	**1.17**	**280**	*e*Pg		**Pg**	**19 08 00.1**	**+0.4**
STIP				*e*Sg		**Sg**	**19 08 15.3**	**+0.8**
STIP				S		**Sb**	**19 08 16.0**	**+1.2**
STIP	**Stip**	**1.17**	**280**	*e*Pg		**Pg**	**19 08 00.1**	**+0.4**
STIP				*e*Sg		**Sg**	**19 08 15.3**	**+0.4**
STIP				*e*Lg			19 08 17.4	
	comp=E,29nm,0.4s							
STIP				*e*Lg			19 08 18.2	
	comp=N,22nm,0.3s							
OUR	**Ouranopolis**	**1.19**	**170**	P		**Pb**	**19 07 59.2**	**-0.9**
KDZ	**Kurdzhali**	**1.28**	**83**	*i* P		**Pn**	**19 08 00.5**	**-0.8**
PAIG	**Paliouri**	**1.58**	**181**	P		**Pn**	**19 08 04.5**	**-1.0**
PAIG				S		**Sn**	**19 08 26.9**	**+0.9**
ALN	**Alexandroupoli**	**1.86**	**108**	P		**Pn**	**19 08 09.2**	**-0.1**
ALN				S		**Sn**	**19 08 34.2**	**+1.4**
LIA	**Limnos Island**	**1.96**	**145**	P		**Pn**	**19 08 09.6**	**-1.1**
LIA				S		**Sn**	**19 08 35.9**	**+0.6**

NIED ***28*** *19:22:00, 30.00N×142.50E, h8km, Mw5.1 Best double couple: M0:4.25000×10^16 NP1:φs190.00000°, δ55.00000°, λ103.00000°. NP2:φs348.00000°, δ37.00000°, λ72.00000°.*
GCMT ***28*** *19:22:49.3±0.3, 29.76N×142.43E, h18km, MW5.1/88, Moment Tensor Solution. s31,c41; s88,c144; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.95±.22; Mθθ0.10±.12; Mφφ-5.05±.15; Mrθ1.26±.31; Mrφ0.07±.09; Mθφ3.22±.31; Best double couple: M0:6.07900×10^16 NP1:φs168.00000°, δ30.00000°, λ69.00000°. NP2: φs11.00000°, δ62.00000°, λ102.00000°. Principal axes: T 6.1470, Plg70.0000°, Azm306.0000°; N -0.1390, Plg10.0000°, Azm186.0000°; P -6.0110, Plg17.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***28*** *19:22:49.4±0.8, 3000N±002×14209E±002, h10km±4km, mb5.0/118, MS4.7/46 Error ellipse: s-maj=3.7km s-min=2.9km az=12.8*
NEIC ***28*** *19:22:49.3±2.9, 2997N×14222E, h5km±17km, mb5.1/59, MW5.0(NIED), Error ellipse: s-maj=6.3km s-min=4.6km az=121.0*
DJA ***28*** *19:22:50, 3021N×14280E, h10km, mb5.2/10*
BJI ***28*** *19:22:50.9, 2998N×142.18E, h33km, mB5.1, mb5.0, Ms4.9, Msz4.7*
JMA ***28*** *19:22:50.1±0.2, 3002N×14254E, h49km, M5.0*

MOS ***28*** *19:22:52.1±1.1, 2991N×142.16E, h33km, mb5.1/51, MS4.6/16, Error ellipse: s-maj=10.0km s-min=5.2km az=112.1*
IDC ***28*** *19:22:53.4±4.9, 2992N×142.16E, h30km±35km, mb4.4/18, mb1 4.6/22, mb1mx4.6/25, mbtmp4.5/22, ML4.3/4, MS4.6/28, Ms1 4.6/28, ms1mx4.5/40, Error ellipse: s-maj=18.0km s-min=11.1km az=83.0*

ISC 28 19:22:52.3±0.9, 2999N±002×14212E±002, h19km±5km, h36km±.8km: pP-P, n544, σ0§79/564, mb5.0/118, MS4.7/46, 114C-121D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CBIJ	**Chichi jima**	**2.88**	**179**	Pn		**Pn**	**19 23 36.5**	**-0.7**
	45nm,0.3s,baz=300,slow=22,SNR=13							
CBIJ				Sn		**Sn**	**19 24 08.1**	**-3.3**
	542nm,0.3s,baz=171,slow=23,SNR=20							
CBIJ	**Chichi jima**	**2.88**	**179**	P		**Pn**	**19 23 35.2**	**-2.0**
CBIJ				*e*S		**Sn**	**19 24 09.2**	**-2.2**
JHHJ	**Haha-jima-NKT**	**3.35**	**179**	P		**Pn**	**19 23 42.7**	**-0.9**
JHHJ				*e*S		**Sn**	**19 24 19.2**	**-3.6**
JHJ2	**Mitsune**	**3.68**	**328**	P		**Pn**	**19 23 48.5**	**+0.3**
JHJ2				*e*S		**Sn**	**19 24 31.0**	**-0.1**
JHJ	**Hachijo jima 2**	**3.70**	**328**	Pn		**Pn**	**19 23 49.0**	**+0.6**
	27nm,0.3s,baz=85,slow=21,SNR=12							
JHJ				Sn		**Sn**	**19 24 31.4**	**-0.1**
	92nm,0.3s,baz=82,slow=22,SNR=5.3							
JHJ				LR		LR	19 25 13.7	
	comp=Z,7μm,19.6s,baz=111,slow=37							
BSO1	**Boso 1**	**4.75**	**349**	P		**Pn**	**19 24 01.4**	**-1.5**
BSO1				*e*S		**Sn**	**19 24 54.4**	**-3.0**
BSO2	**Boso 2**	**4.89**	**347**	*e*S		**Sn**	**19 24 59.5**	**-1.3**
BSO3	**Boso 3**	**4.99**	**345**	P		**Pn**	**19 24 06.0**	**-0.1**
BSO3				*e*S		**Sn**	**19 25 01.9**	**-1.4**
JOD2	**Odawara 2**	**5.85**	**335**	P		**Pn**	**19 24 18.5**	**+0.6**
JOD2				*e*S		**Sn**	**19 25 22.8**	**-1.6**
JIE	**Ise**	**6.35**	**315**	P		**Pn**	**19 24 26.1**	**+1.3**
JWZ	**Kozaga**	**6.50**	**305**	*e*S		**Sn**	**19 25 46.7**	**+6.2**
JRY	**Ryogami san**	**6.59**	**337**	P		**Pn**	**19 24 28.4**	**+0.3**
JRY				*e*S		**Sn**	**19 25 42.8**	**+0.1**
MJAR	**Matsushiro Arr**	**7.31**	**334**	Pn		**Pn**	**19 24 38.6**	**+0.6**
	14nm,0.3s,baz=160,slow=11,SNR=52							
MJAR				Sn		**Sn**	**19 26 01.4**	**+0.9**
	6.7nm,0.3s,baz=162,slow=13,SNR=10.0							
MJAR				LR		LR	19 27 34.7	
	comp=Z,4μm,18.8s,baz=155,slow=38							
MJAR	**Matsushiro Arr**	**7.31**	**334**	P		**Pn**	**19 24 38.6**	**+0.6**
MJAR							19 26 01.4	
MJAR				pmax		pmax		
	comp=Z,14nm,0.3s							
MJAR				smax				
	comp=N,7.0nm,0.3s							
MJAR				MLR		MLR		
	comp=Z,4μm,18.8s							
MAJO	**Matsushiro**	**7.31**	**334**	*e*P		**Pn**	**19 24 38.2**	**+0.2**
MAJO				pmax		pmax		
	comp=Z,130nm,0.5s							
MAJO	**Matsushiro**	**7.31**	**334**	*e*Pn		**Pn**	**19 24 38.2**	**+0.2**
	comp=Z,130nm,0.5s							
MAJO				*e*Sn		**Sn**	**19 25 48.1**	**-12**
MAT	**Matsushiro**	**7.31**	**334**	P		**Pn**	**19 24 38.5**	**+0.5**
MAT				S		**Sn**	**19 25 58.0**	**-2.5**
MAT				P		**Pn**	**19 24 38.5**	**+0.5**
MAT	**Matsushiro**	**7.31**	**334**	*e*S		**Sn**	**19 25 57.8**	**-2.7**
JYA	**Atsumi**	**8.81**	**348**	P		**Pn**	**19 24 57.2**	**-1.4**
JMK	**Ichinoseki**	**8.97**	**355**	P		**Pn**	**19 24 57.9**	**-2.9**
JMK				*e*S		**Sn**	**19 26 31.0**	**-10**
JOT	**Ohata**	**11.40**	**356**	*e*S		**Sn**	**19 27 35.5**	**-5.4**
ERM	**Erimo**	**12.03**	**4**	*e*P		**Pn**	**19 25 40.1**	**-2.6**
JOW	**Kunigami**	**12.59**	**259**	LR		LR	19 30 51.8	
	comp=Z,2μm,18.7s,baz=294,slow=38							
KSRS	**Korea Array**	**13.96**	**306**	Pn		**Pn**	**19 26 12.0**	**+3.0**
	comp=Z,1.2nm,0.3s,baz=109,slow=13,SNR=41							
KSRS				LR		LR	19 31 13.9	
	comp=Z,1μm,20.0s,baz=335,slow=36							
KSRS	**Korea Array**	**13.96**	**306**	P		**Pn**	**19 26 12.0**	**+3.0**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.3s							
KSRS				MLR		MLR		
	comp=Z,1μm,20.0s							
ASAJ	**Asahikawa**	**14.11**	**1**	Pn		**Pn**	**19 26 08.0**	**-3.0**
	comp=Z,1.6nm,0.3s,baz=202,slow=12,SNR=12							
ASAJ				Sn		**Sn**	**19 28 33.9**	**-13**
	comp=Z,0.4nm,0.3s,baz=291,slow=32,SNR=4.4							
GUMO	**Guam**	**16.52**	**171**	LR		LR	19 32 29.1	
	comp=Z,1μm,18.1s,baz=2.4,slow=35							
YSS	**Yuzh-Sakhalins**	**16.95**	**1**	*e*P		**Pn**	**19 26 48.6**	**+0.4**
YSS				pmax		pmax		
	comp=Z,118nm,1.3s							
YSS	**Yuzh-Sakhalins**	**16.95**	**1**	*e*Pn		**Pn**	**19 26 45.4**	**-2.8**
	comp=Z,116nm,1.3s							
MDJ	**Mudanjiang**	**17.65**	**329**	P		**Pn**	**19 26 57.5**	**+0.6**
MDJ				AP		pP	19 27 06.8	+3.6
MDJ				XP		sP	19 27 10.8	+5.1
MDJ				S		**Sn**	**19 30 13.8**	**+0.8**
MDJ				AMB		AMB		
	comp=Z,131nm,1.3s							
MDJ				AMB		AMB		
	comp=Z,449nm,4.8s							
MDJ				LR		LR		
	comp=N,2μm,16.9s							
MDJ				LR		LR		
	comp=E,2μm,15.5s							
MDJ				LR		LR		
	comp=Z,3μm,16.9s							
MDJ	**Mudanjiang**	**17.65**	**329**	*e*Pn		**Pn**	**19 26 55.6**	**-1.4**
	comp=Z,208nm,1.3s							
SSE	**Sheshan**	**18.07**	**279**	P		**Pn**	**19 27 03.0**	**+0.7**
SSE				S		**Sn**	**19 30 23.5**	**+0.1**
SSE				AMB		AMB		
	comp=Z,35nm,0.7s							
SSE				AMB		AMB		
	comp=Z,437nm,6.6s							
SSE				LR		LR		
	comp=N,2μm,15.1s							
SSE				LR		LR		
	comp=E,789nm,15.2s							
SSE				LR		LR		
	comp=Z,2μm,14.7s							
TATO	**Taipei**	**18.97**	**260**	*e*Pn		**Pn**	**19 27 12.9**	**-0.4**
	comp=Z,335nm,1.3s							
SNY	**Shenyang**	**19.06**	**313**	P		**Pn**	**19 27 12.5**	**-1.8**
SNY				AMB		AMB		
	comp=Z,50nm,1.3s							
SNY				LR		LR		
	comp=N,2μm,12.9s							
SNY				LR		LR		
	comp=E,2μm,13.8s							
SNY				LR		LR		
	comp=Z,3μm,12.9s							
DL2	**Dalian**	**19.07**	**303**	P		**Pn**	**19 27 15.8**	**+1.4**
DL2				*e*S		**Sn**	**19 30 51.3**	**+3.9**
DL2				AMB		AMB		
	comp=Z,60nm,0.9s							
DL2				AMB		AMB		
	comp=Z,200nm,8.6s							
DL2				LR		LR		
	comp=N,900nm,14.9s							
DL2				LR		LR		
	comp=E,1μm,14.9s							
CN2	**Changchun**	**19.13**	**321**	*e*P		**Pn**	**19 27 13.3**	**-1.8**
CN2				*e*AP		pP	19 27 21.5	+2.0
CN2				*e*S		**Sn**	**19 30 42.5**	**-6.3**
CN2				AMB		AMB		
	comp=Z,50nm,1.0s							
CN2				AMB		AMB		
	comp=Z,200nm,3.0s							
CN2				LR		LR		
	comp=N,1μm,14.0s							
CN2				LR		LR		
	comp=E,3μm,14.0s							
CN2				LR		LR		
	comp=Z,2μm,15.0s							
NACB	**Ninganchiao**	**19.16**	**257**	*e*Pn		**Pn**	**19 27 10.9**	**-4.7**
	comp=Z,39nm,0.7s							
YHNB	**Yeheng**	**19.17**	**259**	*e*P		**Pn**	**19 27 14.9**	**-0.8**
	comp=Z,198nm,1.3s							
HABR	**Khabarovsk**	**19.24**	**346**	*e*P		**Pn**	**19 27 12.4**	**-3.9**
HABR				*e*			19 30 50.7	
HABR				MLR		MLR		
	comp=Z,664nm,12.0s							
YULB	**Yu-li**	**19.72**	**255**	*e*P		**Pn**	**19 27 21.1**	**-1.2**
	comp=Z,78nm,0.8s							
SSLB	**Suanglung**	**19.85**	**257**	*e*P		**Pn**	**19 27 23.7**	**-0.1**
	comp=Z,177nm,1.1s							
SSLB				*e*S		**Sn**	**19 31 05.7**	**-0.9**
NJ2	**Nanjing**	**20.04**	**282**	*e*P		**P**	**19 27 25.3**	**+1.1**
NJ2				AP			19 27 34.3	
NJ2				XP		sP	19 27 37.5	+5.4
NJ2				PP			19 27 44.5	
NJ2				S		**S**	**19 31 06.5**	**-2.3**
NJ2				AMB		AMB		
	comp=Z,40nm,0.9s							
NJ2				AMB		AMB		
	comp=Z,260nm,11.0s							
NJ2				LR		LR		
	comp=N,610nm,19.8s,MS4.4							
NJ2				LR		LR		
	comp=E,1μm,15.1s,MS4.4							
NJ2				LR		LR		
	comp=Z,1μm,15.1s,MS4.4							
TWG	**Pinlang**	**20.14**	**254**	*e*P		**P**	**19 27 25.2**	**-0.2**
	comp=Z,232nm,1.4s							
TPUB	**Ta-pu**	**20.32**	**256**	*e*P		**P**	**19 27 28.1**	**+0.9**
	comp=Z,145nm,1.0s							
KLR	**Kul'dur**	**20.77**	**341**	*e*P		**P**	**19 27 28.0**	**-4.0**
KLR				*e*S		**S**	**19 31 16.5**	**-6.5**
KLR				smax				
	comp=N,1μm,9.0s							
KLR				smax				
	comp=E,700nm,9.0s							
QZH	**Quanzhou**	**21.46**	**262**	P		**P**	**19 27 40.0**	**+0.4**
QZH				S		**S**	**19 31 35.3**	**-1.6**
QZH				AMB		AMB		
	comp=Z,100nm,0.6s,mb5.3							
QZH				AMB		AMB		
	comp=Z,580nm,2.8s,mb5.4							
QZH				LR		LR		
	comp=E,2μm,14.2s							
QZH				LR		LR		
	comp=Z,2μm,20.2s							
TIA	**Tai'an**	**21.81**	**293**	*e*P		**P**	**19 27 42.3**	**-1.0**
BJT	**Baijiatuan**	**23.42**	**302**	*e*P		**P**	**19 27 58.3**	**-2.1**
BJT				pmax		pmax		
	comp=Z,48nm,0.8s							
BJT	**Baijiatuau**	**23.42**	**302**	*e*P		**P**	**19 27 58.3**	**-2.0**
	comp=Z,48nm,0.8s,mb5.0							
BJI	**Beijing**	**23.43**	**302**	P		**P**	**19 27 58.3**	**-2.1**
BJI				S		**S**	**19 32 11.5**	**-0.9**
BJI				AMB		AMB		
	comp=Z,81nm,1.0s,mb5.1							
BJI				AMB		AMB		
	comp=Z,376nm,6.0s							
BJI				LR		LR		
	comp=N,2μm,13.8s,MS4.9							
BJI				LR		LR		
	comp=E,2μm,14.8s,MS4.9							
BJI				LR		LR		
	comp=Z,1μm,21.2s							
WHN	**Wuhan**	**23.97**	**278**	⇓P		**P**	**19 28 04.5**	**-1.1**
WHN				S		**S**	**19 32 24.0**	**+2.5**
WHN				LR		LR		
	comp=N,2μm,13.2s,MS5.0							
WHN				LR		LR		
	comp=E,3μm,13.0s,MS5.0							
WHN				LR		LR		
	comp=Z,4μm,13.6s,MS5.1							
HIA	**Hailar**	**25.68**	**325**	*e*P		**P**	**19 28 21.2**	**+0.3**
HIA				pmax		pmax		
	comp=Z,103nm,0.9s							
HIA	**Hailar**	**25.68**	**325**	*e*P		**P**	**19 28 21.2**	**+0.4**
	comp=Z,104nm,0.9s,mb5.4							
PETK	**Petropavlovsk-**	**25.76**	**22**	P		**P**	**19 28 22.7**	**+1.1**
	comp=Z,2.7nm,0.7s,mb3.9,baz=161,slow=9.2,SNR=2.6							
PET	**Petropavlovsk**	**26.01**	**23**	*e*P		**P**	**19 28 24.5**	**+0.7**
PET				*e*S		**S**	**19 32 52.4**	**-1.1**
PET				pmax		pmax		
	comp=Z,100nm,12.0s							
PET				MLR		MLR		
	comp=Z,1μm,17.0s,MS4.4							
PET	**Petropavlovsk**	**26.01**	**23**	*e*P		**P**	**19 28 23.2**	**-0.7**
	comp=Z,55nm,1.3s,mb4.9							
GZH	**Guangzhou**	**26.60**	**262**	P		**P**	**19 28 30.3**	**+0.8**
GZH				S		**S**	**19 32 59.5**	**-4.0**
GZH				LR		LR		
	comp=N,842nm,12.9s							
GZH				LR		LR		
	comp=E,656nm,18.4s							
GZH				LR		LR		
	comp=Z,1μm,18.4s							
HHC	**Hu-ho-hao-te**	**27.03**	**302**	*e*P		**P**	**19 28 32.3**	**-0.9**
HHC				AP		pP	19 28 42.0	+3.0
HHC				XP		sP	19 28 45.5	+4.1
HHC				PP			19 29 18.5	
HHC				*e*S		**S**	**19 33 05.5**	**-4.4**
HHC				XS		sS	19 33 21.5	+2.0
HHC				SS			19 34 20.3	
HHC				SCS		ScS	19 39 19.0	-5.5
HHC				AMB		AMB		
	comp=Z,21nm,1.2s,mb4.5							
HHC				AMB		AMB		
	comp=Z,295nm,5.0s							
HHC				LR		LR		
	comp=N,2μm,14.2s,MS5.0							
HHC				LR		LR		
	comp=E,3μm,16.4s,MS5.0							
HHC				LR		LR		
	comp=Z,3μm,16.4s,MS4.9							
DAV	**Davao City (W)**	**27.60**	**218**	LR		LR	19 37 46.5	
	comp=Z,804nm,18.6s,MS4.3,baz=57,slow=32							
BTO	**Baotou**	**28.12**	**301**	*e*P		**P**	**19 28 42.5**	**-0.5**
XAN	**Xi'an**	**28.37**	**287**	P		**P**	**19 28 43.3**	**-2.0**
XAN				AP		pP	19 28 54.0	+2.9
XAN				S		**S**	**19 33 32.3**	**+1.1**
XAN				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.5							
XAN				AMB		AMB		
	comp=Z,264nm,8.8s							
XAN				LR		LR		
	comp=N,404nm,15.0s,MS4.5							
XAN				LR		LR		
	comp=E,861nm,14.5s,MS4.5							
XAN				LR		LR		
	comp=Z,1μm,16.1s,MS4.6							
CLNS	**Chul'man**	**29.44**	**341**	*e*P		**P**	**19 28 52.5**	**-2.0**
CLNS				*e**PP		pP	19 29 01.6	+1.3

ULN Ulaanbaatar 32.24 314 P **P** **19 29 20.7 +1.4**
SNR=32
ULN Ulaanbaatar 32.24 314 *e*P **P** **19 29 20.0 +0.7**
ULN pmax pmax
comp=Z,94nm,1.3s,mb5.5
ULN Ulaanbaatar 32.24 314 *e*P **P** **19 29 19.9 +0.6**
comp=Z,94nm,1.3s,mb5.5
LZH Lanzhou 32.51 291 *e*P **P** **19 29 21.0 -0.8**
LZH AP pP 19 29 32.3 +4.6
LZH XP sP 19 29 35.8 +5.7
LZH PP PP 19 30 31.0 -4.4
LZH S **S** **19 34 36.0 0.0**
LZH XS sS 19 34 51.0 +5.3
LZH SS SS 19 36 30.5 -25
LZH AMB AMB
comp=Z,56nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,190nm,4.8s
LZH LR LR
comp=N,1µm,14.7s
LZH LR LR
comp=Z,2µm,15.5s,MS4.9
CD2 Chengdu 32.98 281 P **P** **19 29 27.0 +1.0**
CD2 AP pP 19 29 36.8 +4.9
CD2 XP sP 19 29 40.5 +6.3
CD2 PCP PcP 19 32 10.5 +0.7
CD2 S **S** **19 34 42.3 -1.1**
CD2 XS sS 19 34 58.3 +5.2
CD2 SS SS 19 36 43.0 -23
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,200nm,6.5s
CD2 LR LR
comp=N,2µm,16.1s
CD2 LR LR
comp=Z,1µm,14.3s,MS4.8
YAK Yakutsk 33.07 349 *e*P **P** **19 29 25.4 -1.0**
YAK *e**PP pP 19 29 35.6 +3.3
YAK *e* 19 30 35.5
YAK *e* 19 32 09.6
YAK *e*S **S** **19 34 42.5 -1.6**
YAK *e* 19 39 51.5
YAK pmax pmax
comp=Z,16nm,1.0s,mb4.9
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,12nm,1.6s
YAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,12nm,1.5s
YAK smax
comp=E,285nm,6.2s
YAK smax
comp=N,107nm,4.2s
YAK MLR MLR
comp=Z,870nm,17.0s,MS4.5
YAK MLR MLR
comp=N,549nm,12.0s
YAK MLR MLR
comp=E,368nm,19.0s
YAK Yakutsk 33.07 349 *e*P **P** **19 29 24.1 -2.3**
comp=E,27nm,0.8s,mb5.2
SEY Seymchan 33.62 8⇑ *e*P **P** **19 29 31.6 +0.4**
BOD Bodaibo 33.94 333 *e*P **P** **19 29 33.6 -0.5**
BOD pmax pmax
comp=Z,16nm,1.3s,mb4.8
KMI Kunming 35.13 272 P **P** **19 29 46.0 +1.3**
KMI AP pP 19 29 56.5 +5.9
KMI XP sP 19 30 00.5 +7.5
KMI PP PP 19 31 05.3 +0.8
KMI PCP PcP 19 32 17.5 +1.4
KMI S **S** **19 35 15.5 -1.3**
KMI XS sS 19 35 32.8 +6.3
KMI SCP ScP 19 35 59.5 -1.3
KMI SS SS 19 37 32.0 -18
KMI SCS ScS 19 40 01.5 -3.3
KMI AMB AMB
comp=Z,7.0nm,1.3s,mb4.4
KMI AMB AMB
comp=Z,151nm,4.5s
KMI LR LR
comp=N,563nm,13.5s,MS4.7
KMI LR LR
comp=E,601nm,12.9s,MS4.7
KMI LR LR
comp=Z,552nm,14.7s,MS4.4
ZAK Zakamensk 35.45 316 *e*P **P** **19 29 47.9 +0.7**
ZAK pmax pmax
comp=Z,25nm,1.4s,mb5.0
IRK Irkutsk 35.57 320 *e*P **P** **19 29 51.0 +2.8**
IRK pmax pmax
comp=Z,38nm,3.2s
TLY Talaya 35.71 318 P **P** **19 29 52.9 +3.5**
comp=Z,124nm,1.5s,mb5.6,SNR=5.7
TLY Talaya 35.71 318 P **P** **19 29 53.0 +3.6**
SNR=5.3
TLY Talaya 35.71 318 P **P** **19 29 53.0 +3.6**
SNR=5.3
TLY Talaya 35.71 318 P **P** **19 29 53.0 +3.6**
SNR=5.3
TLY Talaya 35.71 318 *e*P **P** **19 29 52.3 +2.9**
TLY *e* 19 31 13.5
TLY *e*S **S** **19 35 29.0 +4.0**
TLY *e*SS SS 19 37 50.6 -10
TLY pmax pmax
comp=Z,30nm,1.2s,mb5.1
TLY MLR MLR
comp=Z,2µm,16.0s,MS5.0
TLY Talaya 35.71 318 *e*P **P** **19 29 48.3 -1.1**
comp=Z,23nm,1.0s,mb5.1
GTA Gaotai 35.76 297 *e*P **P** **19 29 49.0 -1.0**
GTA AP pP 19 29 58.5 +2.7
GTA XP sP 19 30 02.5 +4.3
GTA PP PP 19 31 12.5 +1.3
GTA S **S** **19 35 24.3 -1.8**
GTA XS sS 19 35 40.5 +4.7
GTA SS SS 19 37 50.3 -12
GTA AMB AMB
comp=Z,17nm,1.7s,mb4.7
GTA AMB AMB
comp=Z,183nm,5.6s
GTA LR LR
comp=N,692nm,14.6s,MS4.8
GTA LR LR
comp=E,1µm,15.2s,MS4.8
GTA LR LR
comp=Z,1µm,16.7s,MS4.8
MOY Mondy 37.24 317 *e*P **P** **19 30 03.4 +0.9**
MOY pmax pmax
comp=Z,84nm,4.1s
NANT Nan 39.14 263 ⇑P **P** **19 30 15.0 -3.9**
comp=Z,206nm,1.0s,mb5.8
CHTO Chiang Mai 40.65 264 P **P** **19 30 31.2 -0.3**
SNR=7.7
CHTO Chiang Mai 40.65 264 P **P** **19 30 31.2 -0.3**
SNR=7.7
CHTO Chiang Mai 40.65 264 P **P** **19 30 31.2 -0.3**
SNR=7.7
CHTO Chiang Mai 40.65 264 *e*P **P** **19 30 30.4 -1.0**
CHTO *e* 19 32 34.5
CHTO pmax pmax
comp=Z,14nm,0.8s,mb4.6
CHTO Chiang Mai 40.65 264 *e*P **P** **19 30 30.4 -1.0**
comp=Z,14nm,0.8s,mb4.6
CHTO *e*PcP PcP 19 32 34.5 +1.4
BILL Bilibino 40.66 14⇓ *e*P **P** **19 30 30.8 -0.1**
BILL *e*S **S** **19 36 40.2 +0.6**
BILL pmax pmax
comp=Z,33nm,2.5s,mb4.5
BILL MLR MLR
comp=Z,600nm,19.0s,MS4.5
BILL Bilibino 40.66 14 *e*P **P** **19 30 30.5 -0.4**
comp=Z,6.3nm,0.6s,mb4.4
CM31 Chiang Mai Arr 40.80 264 *e*P **P** **19 30 32.0 -0.6**
comp=Z,7.1nm,0.7s,mb4.4
CMAR Chiang Mai Arr 40.80 264 P **P** **19 30 32.2 -0.5**
comp=Z,4.4nm,0.7s,mb4.2,baz=64,slow=5.7,SNR=43
CMAR PcP PcP 19 32 34.3 +0.6
comp=Z,1.4nm,0.9s,baz=135,slow=0.3,SNR=3.8
CMAR LR LR 19 48 60.0
comp=Z,863nm,18.9s,MS4.6,baz=79,slow=38
CMAR Chiang Mai Arr 40.80 264 P **P** **19 30 32.2 -0.5**
CMAR 19 32 34.3
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CMAR MLR MLR
comp=Z,863nm,18.9s
KSM Kuching 41.44 233 *e*P **P** **19 30 39.1 +1.2**
TIXI Tiksi 42.34 354⇑ *e*P **P** **19 30 46.7 +2.1**
TIXI pmax pmax
comp=Z,15nm,2.5s,mb4.2
TIXI Tiksi 42.34 354 *e*P **P** **19 30 43.1 -1.5**
comp=Z,4.9nm,0.7s,mb4.2
KAKA Kakadu 43.47 194 *e*P x 19 30 55.1
comp=Z,14nm,0.8s
COEN Coen 43.70 179 *e*P **P** **19 30 56.6 +0.4**
comp=Z,7.3nm,0.9s,mb4.4
LSA Lhasa 43.91 283 *e*P **P** **19 30 58.9 +1.0**
LSA pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
LSA Lhasa 43.91 283 *e*P **P** **19 30 58.9 +1.1**
comp=Z,5.5nm,1.0s,mb4.2
SHL Shillong 44.39 277 *e*P **P** **19 31 02.0 +0.2**
SHL *ex* x 19 36 42.0
WMQ Urumqi 44.89 303 P **P** **19 31 05.8 +0.3**
WMQ XP sP 19 31 20.3 +6.4
WMQ PCP PcP 19 32 47.0 +0.1
WMQ PP PP 19 32 51.5 +1.1
WMQ S **S** **19 37 41.0 -1.4**
WMQ XS sS 19 37 57.0 +4.8
WMQ SS SS 19 40 53.8 -10
WMQ AMB AMB
comp=Z,53nm,1.3s,mb5.2
WMQ AMB AMB
comp=Z,294nm,4.5s
WMQ LR LR
comp=N,726nm,23.0s
WMQ LR LR
comp=E,204nm,29.0s
WMQ LR LR
comp=Z,453nm,20.0s,MS4.4
KULM Kulim 46.14 246 *e*P **P** **19 31 15.2 -0.6**
comp=Z,20nm,0.9s,mb5.1
ZAA0 Zalesovo Array 47.30 317 *e*P **P** **19 31 23.7 -0.6**
ZAA0 *e*PcP PcP 19 32 54.8 -0.3
ZALV Zalesovo Beam 47.30 317 P **P** **19 31 24.2 -0.1**
comp=Z,3.8nm,0.5s,mb4.6,baz=102,slow=6.2,SNR=24
ZALV PcP PcP 19 32 54.8 -0.3
comp=Z,5.0nm,0.8s,baz=93,slow=3.3,SNR=4.6
ZALV LR LR 19 51 32.9
comp=Z,578nm,19.0s,MS4.6,baz=102,slow=36
ZALV Zalesovo Beam 47.30 317 P **P** **19 31 24.3 -0.1**
ZALV 19 32 54.8
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ZALV MLR MLR
comp=Z,578nm,19.0s,MS4.6
TAPN Taplejung 47.44 281 *e*P **P** **19 31 25.9 +0.1**
comp=Z,10nm,0.5s,mb5.0
ODAN Odare 47.86 280 *e*P **P** **19 31 29.2 +0.1**
comp=Z,26nm,0.6s,mb5.5
NVS Novosibirsk 48.32 318 *i* P **P** **19 31 31.9 -0.3**
NVS *e*S **S** **19 38 30.1 -1.0**
NVS *e*SS SS 19 41 20.1 -40
NVS pmax pmax
comp=Z,23nm,1.1s,mb5.1
NVS pmax pmax
comp=N,7.0nm,0.9s
NVS pmax pmax
comp=E,32nm,1.4s
NVS smax
comp=N,26nm,2.2s
NVS smax
comp=E,29nm,2.7s
RAMN Ramite 48.50 281 *e*P **P** **19 31 34.0 -0.1**
comp=E,30nm,0.6s,mb5.5
MK31 Makanchi Array 48.63 308 *e*P **P** **19 31 35.0 +0.2**
MKAR Makanchi Array 48.63 308 P **P** **19 31 35.2 +0.5**
comp=E,31nm,0.8s,mb5.4,baz=90,slow=9.5,SNR=234
MKAR LR LR 19 53 02.6
comp=E,468nm,19.6s,MS4.5,baz=89,slow=37
MKAR Makanchi Array 48.63 308 P **P** **19 31 35.3 +0.5**
MKAR pmax pmax
comp=Z,31nm,0.9s
MKAR MLR MLR
comp=Z,468nm,19.6s
JIRN Jiri 48.65 282 *e*P **P** **19 31 35.8 +0.6**
comp=Z,32nm,0.4s,mb5.7
GUN Gumba 48.84 282 *e*P **P** **19 31 37.0 +0.4**
comp=Z,39nm,0.5s,mb5.7
PKI Pulchoki 49.33 282 *e*P **P** **19 31 40.5 +0.1**
comp=Z,9.2nm,0.5s,mb5.1
KKN Kakani 49.38 282 *e*P **P** **19 31 41.1 +0.3**
comp=Z,14nm,0.6s,mb5.2
DMN Daman 49.58 282 *e*P **P** **19 31 42.4 +0.1**
comp=Z,16nm,0.6s,mb5.2
GKN Gorkha 49.86 283 *e*P **P** **19 31 44.4 -0.1**
comp=Z,25nm,0.7s,mb5.3
CTA Charters Tower 49.95 175 P **P** **19 31 44.1 -0.9**
comp=Z,8.2nm,0.8s,mb4.8,baz=356,slow=8.4,SNR=8.2
CTA Charters Tower 49.95 175 P **P** **19 31 44.1 -0.9**
CTA pmax pmax
comp=Z,8.0nm,0.8s
CTA Charters Tower 49.95 175 *e*P **P** **19 31 44.6 -0.4**
comp=Z,6.2nm,0.8s,mb4.7
CTAO Charters Tower 49.95 175 P **P** **19 31 44.3 -0.7**
CTAO pmax pmax
comp=Z,32nm,1.3s,mb5.2
CTAO Charters Tower 49.95 175 P **P** **19 31 44.3 -0.7**
comp=Z,32nm,1.3s,mb5.2
BOK Bokaro 50.12 277 *e*P **P** **19 31 46.5 0.0**
BOK AMb AMB 19 31 50.9
comp=Z,39nm,1.3s,mb5.3
WRAB Tennant Creek 50.19 190 P **P** **19 31 46.0 -0.9**
comp=Z,176nm,1.1s,mb6.0,SNR=17
WRAB Tennant Creek 50.19 190 *e*P **P** **19 31 45.6 -1.3**
WRAB pmax pmax
comp=Z,46nm,1.1s,mb5.4
WRAB Tennant Creek 50.19 190 *e*P **P** **19 31 45.6 -1.3**
comp=Z,46nm,1.1s,mb5.4
WB2 Warramunga Arr 50.20 190 *e*P **P** **19 31 46.0 -0.9**
WB2 Warramunga Arr 50.20 190 *e*P **P** **19 31 46.0 -1.0**
WRA Warramunga Arr 50.20 190 P **P** **19 31 45.9 -1.1**
comp=Z,16nm,0.7s,mb5.2,baz=9.1,slow=8.1,SNR=88
WRA LR LR 19 51 05.6
comp=Z,519nm,21.8s,MS4.5,baz=15,slow=34
WRA Warramunga Arr 50.20 190 P **P** **19 31 45.9 -1.1**
WRA pmax pmax
comp=Z,16nm,0.7s
WRA MLR MLR
comp=Z,519nm,21.8s
FITZ Fitzroy Crossi 50.38 201 *e*P **P** **19 31 47.1 -1.2**
comp=Z,16nm,1.0s,mb5.0
DANN Dangsing 50.50 283 *e*P **P** **19 31 49.9 +0.6**
KOLN Koldanda 50.81 283 *e*P **P** **19 31 51.8 +0.2**
comp=Z,92nm,1.1s,mb5.6
KURK Kurchatov 50.95 313 P **P** **19 31 52.8 +0.4**
comp=Z,150nm,1.1s,mb5.8,SNR=22
KURK Kurchatov 50.95 313 P **P** **19 31 52.8 +0.5**
SNR=13
KURK Kurchatov 50.95 313 P **P** **19 31 52.8 +0.5**
SNR=13
KURK Kurchatov 50.95 313 P **P** **19 31 52.8 +0.5**
SNR=13
KURK Kurchatov 50.95 313 LR LR 19 54 16.5
comp=Z,796nm,18.8s,MS4.8,baz=75,slow=37
KURK Kurchatov 50.95 313⇑ *e*P **P** **19 31 52.4 0.0**
KURK pmax pmax
comp=Z,60nm,1.7s,mb5.2
KURK Kurchatov 50.95 313 *e*P **P** **19 31 52.2 -0.2**
comp=Z,55nm,1.3s,mb5.3
KDAK Kodiak Island 52.11 38 P **P** **19 31 59.9 -1.0**
comp=Z,9.2nm,0.8s,mb4.8,baz=20,slow=12,SNR=3.9
KDAK Kodiak Island 52.11 38 P **P** **19 31 59.9 -1.0**
TKM2 Tokmak 2 53.75 303 P **P** **19 32 14.8 +1.5**
SNR=7.2
TKM2 Tokmak 2 53.75 303 *e*P **P** **19 32 13.8 +0.5**
comp=Z,163nm,1.8s,mb5.7
ASAR Alice Springs 53.93 189 P **P** **19 32 13.5 -1.1**
comp=Z,2.8nm,0.6s,mb4.4,baz=16,slow=8.3,SNR=47
ASAR Alice Springs 53.93 189 P **P** **19 32 13.5 -1.1**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
KSH Kashi 54.09 299 ⇑P **P** **19 32 19.8 +4.0**
KSH AP pP 19 32 29.8 +7.9
KSH XP sP 19 32 34.0 +10
KSH PCP PcP 19 33 23.5 +3.0
KSH PP PP 19 34 23.3 +6.1
KSH SCP ScP 19 37 17.8 +0.1
KSH PCS PcS 19 37 21.5 +1.7
KSH S **S** **19 39 53.3 +2.0**
KSH XS sS 19 40 10.0 +8.7
KSH SCS ScS 19 42 03.0 -1.3
KSH AMB AMB
comp=Z,34nm,0.8s,mb5.3
KSH AMB AMB
comp=Z,700nm,5.2s
KSH LR LR
comp=N,1µm,7.0s
KSH LR LR
comp=E,1µm,8.0s
KSH LR LR
comp=Z,2µm,19.0s,MS5.2
MCK McKinley 54.26 31 *e*P **P** **19 32 15.4 -1.3**
MCK pmax pmax
comp=Z,52nm,1.5s,mb5.2
MCK McKinley 54.26 31 *e*P **P** **19 32 15.4 -1.2**
comp=Z,52nm,1.5s,mb5.2
KBK Karagaybulak 54.27 303 P **P** **19 32 18.2 +1.2**
SNR=17
CHMS Chumysh 54.35 304 P **P** **19 32 18.5 +0.9**
SNR=12
USP Ospenovka 54.49 304 P **P** **19 32 19.2 +0.6**
SNR=12
AAK Ala-Archa 54.60 303 P **P** **19 32 20.9 +1.4**
comp=Z,133nm,1.1s,mb5.9,SNR=6.5
AAK Ala-Archa 54.60 303⇑ *e*P **P** **19 32 20.2 +0.7**
AAK pmax pmax
comp=Z,25nm,1.7s,mb5.0
AAK Ala-Archa 54.60 303 P **P** **19 32 20.3 +0.9**
SNR=9.0
AAK Ala-Archa 54.60 303 *e*P **P** **19 32 19.7 +0.2**
comp=Z,42nm,1.4s,mb5.3
VIS Vishakhapatnam 54.63 271 *e*P **P** **19 32 20.3 +0.3**
VIS AMb AMB 19 32 21.5
comp=Z,45nm,1.1s,mb5.4
UCH Uchtor 54.66 303 P **P** **19 32 21.8 +1.9**
SNR=5.6
UCH Uchtor 54.66 303 *e*P **P** **19 32 21.3 +1.4**
comp=Z,38nm,1.4s,mb5.2
COLA College 54.81 29 *e*P **P** **19 32 20.9 +0.2**
COLA College 54.81 29 P **P** **19 32 21.6 +0.9**
comp=Z,4.3nm,0.6s,mb4.7
EKS2 Erkin-Say 55.12 303 P **P** **19 32 24.5 +1.3**
SNR=6.7
EKS2 Erkin-Say 55.12 303 *e*P **P** **19 32 23.6 +0.4**
comp=Z,34nm,1.4s,mb5.2
SMLA Simla 55.20 289 *i* P **P** **19 32 23.8 -0.1**
SMLA AMb AMB 19 32 27.6
comp=Z,46nm,3.0s,mb5.0
AML Almayashu 55.27 303 P **P** **19 32 26.2 +1.9**
SNR=29
AML Almayashu 55.27 303 *e*P **P** **19 32 25.9 +1.5**
comp=Z,87nm,1.1s,mb5.7
BVA0 Borovoye Array 55.90 316 *i* P **P** **19 32 28.9 +0.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
BVAR Borovoye Array 55.90 316 LR LR 19 57 20.5
comp=Z,929nm,18.6s,MS4.9,baz=81,slow=37
BRVK Borovoye 55.96 316 P **P** **19 32 30.0 +0.9**
SNR=10
BRVK Borovoye 55.96 316 P **P** **19 32 30.0 +0.9**
SNR=10
BRVK Borovoye 55.96 316 P **P** **19 32 30.0 +0.9**
SNR=10
BRVK Borovoye 55.96 316 *e*P **P** **19 32 28.5 -0.6**
BRVK pmax pmax
comp=Z,27nm,1.0s,mb5.2
BRVK Borovoye 55.96 316 *e*P **P** **19 32 28.5 -0.7**
comp=Z,27nm,1.0s,mb5.2
NGP Nagpur 56.97 277 *ex* x 19 32 30.4
NGP AMb AMB 19 32 33.3
comp=Z,50nm,1.8s,mb5.2
KK31 Karatay Array 57.38 304 *i* P **P** **19 32 39.8 +0.4**
KK31 pmax pmax
comp=Z,76nm,0.9s,mb5.7
AKL Akola 58.89 277 *e*P **P** **19 32 50.3 +0.1**
AKL AMb AMB 19 32 51.4
comp=Z,49nm,1.3s,mb5.4
HYB Hyderabad 58.89 273 *i* P **P** **19 32 50.0 -0.3**
HYB Hyderabad 58.89 273 *e*P **P** **19 32 50.0 -0.3**
KBL Kabul 60.72 295 *e*P **P** **19 33 02.5 -0.2**
comp=Z,27nm,1.2s,mb5.2
SVE Sverdlovsk 60.92 322⇑ *e*P **P** **19 33 04.5 +0.9**
SVE pmax pmax
comp=Z,36nm,1.2s,mb5.4
SVE MLR MLR
comp=Z,990nm,16.0s,MS5.0
CMSA Cobar Meteorol 61.28 177 *e*P **P** **19 33 06.6 +0.3**
comp=Z,4.3nm,0.6s,mb4.8
SIT Sitka 61.45 38 *e*P **P** **19 33 03.8 -3.4**
STKA Stephens Creek 61.53 181 P **P** **19 33 06.6 -1.4**
comp=Z,1.8nm,0.4s,mb4.6,baz=359,slow=13,SNR=14
STKA LR LR 19 59 03.2
comp=Z,430nm,19.8s,MS4.6,baz=19,slow=35
STKA Stephens Creek 61.53 181 *e*P **P** **19 33 07.2 -0.7**
comp=Z,4.1nm,0.8s,mb4.6
STKA Stephens Creek 61.53 181 *e*P **P** **19 33 07.1 -0.8**
comp=Z,1.3nm,0.9s,mb4.1
FORT Forrest 61.90 194 *e*P **P** **19 33 09.8 -0.6**
comp=Z,33nm,0.7s,mb5.6
FORT Forrest 61.90 194 *e*P **P** **19 33 09.6 -0.9**
comp=Z,37nm,0.7s,mb5.6
ARU Arti 62.12 321 P **P** **19 33 11.6 -0.2**
comp=Z,239nm,0.7s,SNR=11
ARU Arti 62.12 321 *d* *i* P **P** **19 33 12.5 +0.7**
ARU *e* 19 35 31.6
ARU *e*S **S** **19 41 36.7 +0.9**
ARU SS SS 19 45 38.5 +0.3
ARU pmax pmax
comp=Z,53nm,1.2s,mb5.5
ARU Arti 62.12 321 *e*P **P** **19 33 11.6 -0.2**
comp=Z,54nm,1.1s,mb5.6
POO Poona 62.50 276 *e*P **P** **19 33 14.3 -0.6**
POO AMb AMB 19 33 15.5
comp=Z,48nm,1.1s,mb5.6
BBOO Buckleboo 62.72 186 *e*P **P** **19 33 15.6 -0.3**
comp=Z,6.2nm,0.8s,mb4.8
KAD Karad 62.72 275 *e*P **P** **19 33 15.8 -0.6**
KAD AMb AMB 19 33 16.9
comp=Z,52nm,1.1s,mb5.6
KOD Kodaikanal 63.04 266 *e*P **P** **19 33 18.3 -0.2**
KOD AMb AMB 19 33 24.7
comp=Z,31nm,1.4s,mb5.2
AB31 Akbulak array 63.06 313 P **P** **19 33 18.1 -0.1**
AB31 pmax pmax
comp=Z,19nm,0.7s,mb5.3
AKTO Aktyubinsk 63.94 315 P **P** **19 33 24.4 +0.4**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
YNG Young 64.21 174 *e*P **P** **19 33 26.2 +0.4**
comp=Z,6.3nm,1.0s,mb4.6
NWAO Narrogin (SRO) 66.87 203 P **P** **19 33 41.6 -1.4**
ABKT Ailbek 67.91 302 P **P** **19 33 51.2 +1.5**
comp=Z,189nm,1.0s,mb6.1,SNR=13
RES Resolute Bay 69.27 14 *e*P **P** **19 33 56.9 -0.7**
RES pmax pmax
comp=Z,11nm,1.1s,mb4.7
RES Resolute Bay 69.27 14 *e*P **P** **19 33 56.9 -0.7**
comp=Z,11nm,1.1s,mb4.7
APA Apatity 69.37 337 *e*P **P** **19 34 00.0 +1.7**
APA pmax pmax
comp=Z,49nm,1.4s,mb5.2
APA MLR MLR
comp=Z,4µm,27.0s,MS5.5
YKA Yellowknife Ar 69.64 29 P **P** **19 33 59.2 -0.8**
comp=Z,5.4nm,0.6s,mb4.6,baz=294,slow=6.4,SNR=55
YKA LR LR 20 03 40.9
comp=Z,20nm,18.7s,MS3.4,baz=90,slow=35
YKA Yellowknife Ar 69.64 29 P **P** **19 33 59.2 -0.8**
YKA pmax pmax
comp=Z,5.0nm,0.6s
YKA MLR MLR
comp=Z,20nm,18.7s
YKA Yellowknife Ar 69.64 29 P **P** **19 33 59.2 -0.8**
YKA LR LR 20 03 40.9
KEV Kevo 70.24 340 *ep* **P** **19 34 04.8 +1.2**
ARCES ARCESS Array B 70.80 341 P **P** **19 34 06.4 -0.6**
comp=Z,4.5nm,0.8s,mb4.5,baz=69,slow=7.9,SNR=6.2
ARCES LR LR 20 10 47.3
comp=Z,586nm,20.2s,MS4.8,baz=63,slow=40
ARCES ARCESS Array B 70.80 341 P **P** **19 34 06.4 -0.7**

ARCES pmax pmax
comp=Z,5.0nm,0.8s
ARCES MLR MLR
comp=Z,586nm,20.2s
JOF Joensuu 72.48 333 *ep* **P 19 34 16.5 -0.7**
comp=Z,7.0nm,0.6s,mb4.8
JOF Joensuu 72.48 333 *eP* **P 19 34 16.5 -0.7**
JOF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
DAG Danmarks Havn 72.83 355⇑ *eP* **P 19 34 19.4 +0.3**
DAG pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
DAG Danmarks Havn 72.83 355⇑ *iP* **P 19 34 19.4 +0.3**
comp=Z,4.0nm,0.6s,mb4.5
DAG Danmarks Havn 72.83 355⇑ *eP* **P 19 34 19.4 +0.3**
comp=Z,4.0nm,0.6s,mb4.5
H04A Detroit Lake 73.31 48 ⇑P **P 19 34 22.2 -0.4**
baz=73
C07A Waterville 73.33 44 ⇑P **P 19 34 22.1 -0.5**
baz=73
MAK Makhachkala 73.36 310 *eP* **P 19 34 24.5 +1.7**
MAK *e* 19 37 12.2
MAK *e*PPP 19 38 49.0
MAK *e*S S 19 43 50.0 -0.8
MAK *e* 19 44 34.1
MAK MLR MLR
comp=Z,2μm,16.0s,MS5.5
A09A Danville 73.63 43 ⇓P **P 19 34 24.6 +0.3**
baz=73
C08A Higginbotham F 73.90 44 ⇑P **P 19 34 25.8 -0.1**
baz=74
E07A Sunnyside 73.96 45 ⇑P **P 19 34 25.9 -0.4**
baz=74
G06A Carlson Farm, 74.06 47 ⇓P **P 19 34 26.0 -0.9**
baz=74
OBN Obninsk 74.13 325⇓ *eP* **P 19 34 27.9 +0.7**
OBN *e* 19 37 10.9
OBN *e*S S 19 44 00.5 +1.3
OBN pmax pmax
comp=Z,78nm,2.5s,mb5.2
OBN MLR MLR
comp=Z,700nm,15.0s,MS5.1
B09A Rice 74.14 43 ⇑P **P 19 34 26.9 -0.5**
baz=74
A10A Northport 74.23 42 ⇓P **P 19 34 27.9 0.0**
baz=74
D08A Wollman Farm, 74.30 45 ⇑P **P 19 34 28.1 -0.3**
baz=74
HOQ Hoqain 74.35 288 P **P 19 34 29.8 +0.8**
SNR=7.5
HOQ Hoqain 74.35 288 P **P 19 34 29.8 +0.8**
SNR=7.5
HOQ Hoqain 74.35 288 P **P 19 34 29.8 +0.8**
SNR=7.5
G07A Ruggs Ranch, H 74.66 46 ⇑P **P 19 34 30.4 0.0**
baz=74
D09A Jones Farm, Ri 74.67 44 ⇑P **P 19 34 30.5 0.0**
baz=74
KAF Kangasniemi 74.86 334 *ep* **P 19 34 30.5 -0.7**
comp=Z,3.6nm,0.5s,mb4.6
KAF Kangasniemi 74.86 334 *eP* **P 19 34 30.5 -0.7**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
I06A Prineville 74.91 48 ⇓P **P 19 34 32.0 +0.1**
baz=75
A11A Hall Mountain, 74.94 42 ⇑P **P 19 34 32.0 0.0**
baz=75
E09A Wood Farm, Sta 75.03 45 ⇑P **P 19 34 32.5 0.0**
baz=75
G08A Pilot Rock 75.09 46 ⇓P **P 19 34 33.3 +0.4**
baz=75
ARQ Araqi 75.10 289 P **P 19 34 34.8 +1.4**
SNR=8.3
ARQ Araqi 75.10 289 P **P 19 34 34.8 +1.4**
SNR=8.3
B11A Sandpoint 75.19 42 ⇑P **P 19 34 33.8 +0.4**
baz=75
J06A Christmas Vall 75.27 48 ⇓P **P 19 34 34.2 +0.2**
baz=75
GOF Gofitskoye 75.30 314 *eP* **P 19 34 33.0 -1.1**
A12A Yaak River Ran 75.36 42 ⇓P **P 19 34 34.7 +0.3**
baz=75
H08A Prairie City 75.63 47 ⇑P **P 19 34 36.1 +0.1**
baz=75
MTA Mtatsminda 75.72 310 P **P 19 34 38.4 +1.8**
TBLG Delisi 75.74 310 P **P 19 34 38.9 +2.2**
J07A Hines 75.76 48 ⇑P **P 19 34 37.1 +0.3**
baz=76
G09A Cove 75.83 46 ⇓P **P 19 34 37.1 0.0**
baz=76
I08A Drewsey 75.98 47 ⇑P **P 19 34 38.3 +0.2**
baz=76
GOR Gori 76.04 310 P **P 19 34 39.7 +1.3**
KIV Kislovodsk 76.04 313 *eP* **P 19 34 39.4 +1.0**
KIV *e*S S 19 44 20.8 0.0
KIV pmax pmax
comp=Z,27nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,469nm,18.0s,MS4.8
KIV Kislovodsk 76.04 313 *eP* **P 19 34 38.6 +0.2**
comp=Z,29nm,1.1s,mb5.1
A13A Flathead Natio 76.08 41 ⇑P **P 19 34 38.9 +0.4**
baz=76
K07A Rock Creek Ran 76.11 49 ⇓P **P 19 34 38.9 +0.1**
baz=76
ONI Oni 76.19 311 P **P 19 34 40.3 +1.0**
H09A Durkee 76.19 46 ⇑P **P 19 34 39.1 -0.1**
baz=76
E11A Bogner Ranch, 76.28 44 ⇑P **P 19 34 39.3 -0.4**
baz=76
J08A Circle Bar Ran 76.30 48 ⇓P **P 19 34 39.5 -0.4**
baz=76
WALA Waterton Lakes 76.30 41 *eP* **P 19 34 39.6 -0.2**
comp=Z,0.4nm,1.0s
B13A Whitefish 76.32 42 ⇑P **P 19 34 39.7 -0.2**
baz=76
L07A Adell 76.37 49 ⇓P **P 19 34 40.3 0.0**
baz=76
GNI Garni 76.47 309 *eP* **P 19 34 41.6 +0.7**
GNI pmax pmax
comp=Z,12nm,1.3s
GNI Garni 76.47 309 *eP* **P 19 34 42.0 +1.1**
comp=Z,28nm,1.0s,mb5.1
I09A Lost Marbles R 76.48 47 ⇓P **P 19 34 40.7 -0.2**
baz=76
F11A Grangeville 76.54 45 ⇑P **P 19 34 41.2 0.0**
baz=76
K08A Mann Creek Ran 76.59 48 ⇓P **P 19 34 41.4 -0.2**
baz=76
C13A Hot Springs 76.61 43 ⇓P **P 19 34 41.5 0.0**
baz=76
A14A Double T Ranch 76.62 41 ⇑P **P 19 34 41.7 +0.1**
baz=76,SNR=5.3
N06A Buffalo Meadow 76.64 51 ⇑P **P 19 34 41.8 0.0**
baz=76
BEKR Beckwourth 76.70 52 ⇑P **P 19 34 42.1 0.0**
baz=76
G11A Walters Elk Ra 76.71 45 ⇓P **P 19 34 42.0 -0.1**
baz=76
J09A Fry Pan Ranch, 76.77 48 ⇑P **P 19 34 42.4 -0.2**
baz=76
M07A Soldier Meadow 76.78 50 ⇓P **P 19 34 42.7 +0.1**
baz=76
L08A Fields 76.94 49 ⇓P **P 19 34 43.5 0.0**
baz=77
D13A Huson 76.97 43 ⇓P **P 19 34 43.4 -0.1**
baz=77
A15A Johnson Ranch, 77.01 41 ⇓P **P 19 34 43.4 -0.4**
baz=77,SNR=5.6
B14A Marquette Ranc 77.02 41 ⇑P **P 19 34 44.5 +0.6**
baz=77,SNR=5.7
K09A Rome 77.10 48 ⇓P **P 19 34 44.4 0.0**
baz=77
B15A Bradely Ranch, 77.45 41 ⇑P **P 19 34 46.1 -0.1**
baz=77,SNR=10
D14A Greenough 77.53 43 ⇓P **P 19 34 46.6 -0.1**
baz=77
O07A Toulon 77.56 51 ⇑P **P 19 34 46.7 -0.3**
baz=77
K10A MacKenzie Ranc 77.61 48 ⇓P **P 19 34 47.5 +0.2**
baz=77
A16A West Butte Ran 77.67 40 ⇓P **P 19 34 47.1 -0.4**
baz=77
F13A Darby 77.70 44 ⇓P **P 19 34 47.5 -0.1**
baz=77
C15A Salmond Ranch, 77.70 42 ⇑P **P 19 34 48.0 +0.4**
baz=77,SNR=7.2

SUMG Summit 77.71 0 *eP* **P 19 34 46.7 -0.6**
comp=Z,192nm,2.3s,mb5.6
R06C Coleville 77.95 53 ⇑P **P 19 34 49.3 +0.1**
baz=78
MFID Camas Ranch 77.96 47 ⇓P **P 19 34 49.2 0.0**
baz=78
O08A Rochester Mine 77.98 50 ⇑P **P 19 34 49.7 +0.3**
baz=78
G13A Cobalt 78.11 45 ⇓P **P 19 34 49.6 -0.4**
baz=78
N09A Rock Creek Ran 78.13 50 ⇑P **P 19 34 50.0 -0.2**
baz=78
D15A Lincoln 78.13 42 ⇑P **P 19 34 49.6 -0.5**
baz=78
K11A Parker Ranch, 78.15 47 ⇑P **P 19 34 50.2 0.0**
baz=78
C16A Fuhringer Ranc 78.18 41 ⇓P **P 19 34 50.5 +0.1**
baz=78,SNR=9.1
L10A Juniper Basin 78.21 48 ⇓P **P 19 34 50.2 -0.4**
baz=78
H13A Challis 78.36 45 ⇑P **P 19 34 51.3 -0.2**
baz=78
E15A Deer Lodge 78.38 43 ⇓P **P 19 34 51.2 -0.3**
baz=78
M10A I.L. Ranch, Tu 78.44 49 ⇓P **P 19 34 51.9 0.0**
baz=78
B17A L&G Farms, Che 78.46 41 ⇓P **P 19 34 51.8 -0.1**
baz=78,SNR=8.1
J12A Stokes Ranch, 78.50 47 ⇓P **P 19 34 51.7 -0.5**
baz=78
L11A Cat Creek Ranc 78.63 48 ⇑P **P 19 34 52.8 -0.2**
baz=78
A18A Metzger Ranch, 78.66 40 ⇓P **P 19 34 52.8 -0.1**
baz=78
O09A Fish Creek Ran 78.68 50 ⇓P **P 19 34 53.2 -0.1**
baz=78
D16A Dana Ranch, Ca 78.70 42 ⇓P **P 19 34 53.2 0.0**
baz=78
F15A Butte 78.77 43 ⇓P **P 19 34 53.7 +0.1**
baz=78,SNR=15
HLID Hailey 78.78 46 ⇑P **P 19 34 53.7 0.0**
baz=78
HLID Hailey 78.78 46 *eP* **P 19 34 53.8 +0.1**
comp=Z,6.5nm,1.2s,mb4.4
I13A Wildhorse Cree 78.78 46 ⇓P **P 19 34 53.9 +0.2**
baz=78
NVAR Mina Array Bea 78.79 52 P **P 19 34 53.9 0.0**
comp=Z,4.2nm,0.8s,mb4.4,baz=290,slow=5.7,SNR=24
C17A Wharram Farm, 78.84 41 ⇓P **P 19 34 54.1 +0.1**
baz=79
H14A Leadore 78.88 45 ⇓P **P 19 34 54.5 +0.2**
baz=79
E16A East Helena 78.89 43 ⇓P **P 19 34 54.6 +0.4**
baz=79
ANN Anapa 78.89 315 *eP* **P 19 34 57.9 +3.6**
ANN pmax pmax
comp=Z,122nm,1.4s,mb5.6
K12A Draper Farm, C 78.94 47 ⇓P **P 19 34 54.5 -0.2**
baz=79
M11A Holland Ranch, 78.98 49 ⇓P **P 19 34 55.4 +0.6**
baz=79
B18A Beardsley Farm 78.98 40 ⇑P **P 19 34 55.2 +0.5**
baz=79
J13A Cove Ranch, Pi 79.01 46 ⇑P **P 19 34 55.3 +0.3**
baz=79
SMMC Simmler 79.11 56 ⇓P **P 19 34 55.8 +0.1**
baz=79
L12A House Creek Ra 79.11 48 ⇑P **P 19 34 56.2 +0.6**
baz=79
G15A Dillon 79.13 44 ⇑P **P 19 34 56.0 +0.3**
baz=79
D17A Six Diamond Ra 79.14 42 ⇓P **P 19 34 55.5 -0.1**
baz=79,SNR=7.6
I14A Mackay 79.19 45 ⇑P **P 19 34 56.5 +0.6**
baz=79,SNR=12
EGMT Eagleton 79.20 41 ⇑P **P 19 34 56.2 +0.2**
baz=79
F16A Kennard Place, 79.32 43 ⇑P **P 19 34 56.7 +0.1**
baz=79
FFC Flin Flon 79.33 32 *eP* **P 19 34 55.6 -0.9**
FFC pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
FFC Flin Flon 79.33 32 *eP* **P 19 34 55.6 -0.9**
comp=Z,5.0nm,0.7s,mb4.5
BOZ Bozeman (W) 79.39 43 ⇑P **P 19 34 57.0 0.0**
baz=79
E17A Martinsdale 79.41 42 ⇓P **P 19 34 56.8 -0.3**
baz=79,SNR=6.2
K13A Stover Farm, H 79.45 47 ⇑P **P 19 34 57.4 0.0**
baz=79
MIB Mutribah 79.45 298 *eP* **P 19 34 57.2 -0.4**
baz=298
MIB AMb AMB 19 35 02.7
comp=Z,116nm,0.9s,mb5.8,baz=298
J14A Carey 79.46 46 ⇓P **P 19 34 58.1 +0.7**
baz=79,SNR=6.3
VES Vestal, Richgr 79.51 55 ⇑P **P 19 34 57.3 -0.6**
baz=79
G16A Moss Hill, Enn 79.51 44 ⇓P **P 19 34 57.4 -0.3**
baz=79,SNR=5.5
M12A Wells 79.55 48 ⇑P **P 19 34 57.8 -0.2**
baz=79
D18A Linhart Farms, 79.62 41 ⇓P **P 19 34 58.0 -0.3**
baz=79
ELK Elko 79.68 49 P **P 19 34 58.0 -0.7**
ELK *e* 19 35 12.1
ELK pmax pmax
comp=Z,21nm,1.8s
ELK Elko 79.68 49 P **P 19 34 58.0 -0.8**
comp=Z,21nm,1.8s,mb4.8
ELK *e* 19 35 12.1
RDF Al-Radifah 79.71 297 *eP* **P 19 34 59.0 -0.1**
baz=297
RDF AMb AMB 19 35 03.7
comp=Z,146nm,1.1s,mb5.8,baz=297
R09A Tonopah 79.72 52 ⇑P **P 19 34 58.7 -0.3**
baz=80
I15A Monteview 79.74 45 ⇓P **P 19 34 59.2 +0.2**
baz=80
N12A Clover Valley, 79.76 49 ⇑P **P 19 34 59.3 +0.2**
baz=80
NAY Al-Naaiem 79.79 298 *eP* **P 19 34 59.1 -0.4**
baz=298
NAY AMb AMB 19 35 04.6
comp=Z,86nm,1.2s,mb5.6,baz=298
F17A Fitzpatrick Pl 79.83 43 ⇑P **P 19 34 59.5 +0.1**
baz=80
L13A Double Diamond 79.83 47 ⇓P **P 19 34 59.7 +0.2**
baz=80
S09A Goldfield 79.87 52 ⇓P **P 19 35 00.0 +0.2**
baz=80
Q10A Clear Creek Ra 79.88 51 ⇑P **P 19 34 59.9 +0.1**
baz=80
E18A Harlowton 79.90 42 ⇓P **P 19 34 59.9 +0.1**
baz=80,SNR=7.9
FCC Fort Churchill 80.04 26 *eP* **P 19 34 59.0 -1.2**
comp=Z,4.8nm,2.4s,mb4.0
M13A Montello 80.06 48 ⇓P **P 19 35 01.0 +0.2**
baz=80
K14A Jones Ranch, D 80.08 47 ⇑P **P 19 35 01.0 +0.2**
baz=80
J15A Blackfoot 80.09 45 ⇓P **P 19 35 01.1 +0.2**
baz=80
H16A Russell Place, 80.12 44 ⇑P **P 19 35 01.2 +0.2**
baz=80
GRAC Grapevine Rang 80.14 53 ⇓P **P 19 35 01.3 +0.1**
baz=80
S10A Tonopah Range, 80.20 52 ⇓P **P 19 35 01.5 -0.1**
baz=80
R10A Warm Springs 80.22 51 ⇓P **P 19 35 02.0 +0.3**
baz=80
O12A Currie 80.25 49 ⇓P **P 19 35 02.2 +0.4**
baz=80
AKASG Malin Array Be 80.26 324 P **P 19 35 01.3 -0.3**
comp=Z,5.1nm,0.7s,mb4.6,baz=48,slow=5.4,SNR=17
AKASG LR LR 20 13 11.3
comp=Z,1μm,18.2s,MS5.2,baz=50,slow=38
AKASG Malin Array Be 80.26 324 P **P 19 35 01.3 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG MLR MLR
comp=Z,1μm,18.2s
KIEV Kiev 80.28 324 *eP* **P 19 35 00.8 -0.9**
KIEV pmax pmax
comp=Z,14nm,0.9s,mb4.9
KIEV Kiev 80.28 324 *eP* **P 19 35 00.8 -0.9**
comp=Z,14nm,0.9s,mb4.9
Q11A Duckwater 80.38 51 ⇓P **P 19 35 02.3 -0.2**
baz=80
F18A Big Timber 80.38 42 ⇑P **P 19 35 02.2 -0.2**
baz=80
I16A Newdale 80.42 45 ⇑P **P 19 35 03.1 +0.5**
baz=80
M14A Sheep Mountain 80.52 47 ⇑P **P 19 35 03.4 +0.2**
baz=80
MPMC Manual Prospec 80.52 54 ⇓P **P 19 35 03.2 -0.2**
baz=80
P12A McGill 80.55 50 ⇑P **P 19 35 03.6 +0.2**
baz=80
J16A Bone 80.67 45 ⇓P **P 19 35 03.9 -0.1**
baz=80,SNR=5.2
LRMC Laurel Mountai 80.67 54 ⇑P **P 19 35 04.0 -0.2**
baz=80
R11A Troy Canyon, C 80.67 51 ⇓P **P 19 35 03.9 -0.2**
baz=80
H17A Grant Village 80.69 44 ⇑P **P 19 35 06.3 +2.2**
baz=80
IMW Indian Meadow 80.74 44 *eP* **P 19 35 04.5 +0.1**
FURC Furnace Creek, 80.75 53 ⇑P **P 19 35 04.6 +0.1**
baz=80
EDW2 Edwards Air Fo 80.76 55 ⇑P **P 19 35 04.7 0.0**
baz=80
L15A Malad City 80.86 47 ⇑P **P 19 35 05.5 +0.4**
baz=81
NB2 NORSAR Subarra 80.91 338 P **P 19 35 04.3 -0.6**
comp=Z,11nm,1.0s,mb4.8,baz=40,slow=5.3
NOA NORSAR Array B 80.91 338 P **P 19 35 05.1 +0.1**
comp=Z,5.9nm,0.8s,mb4.6,baz=40,slow=5.2,SNR=12
NOA LR LR 20 17 13.3
comp=Z,397nm,18.2s,MS4.8,baz=50,slow=40
NOA NORSAR Array B 80.91 338 P **P 19 35 05.1 +0.2**
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA MLR MLR
comp=Z,397nm,18.2s
NOA NORSAR Array B 80.91 338 P **P 19 35 05.1 +0.1**
NOA LR LR 20 17 13.2
K16A Soda Springs 80.92 46 ⇑P **P 19 35 05.6 +0.3**
baz=81,SNR=7.8
TPNV Topopah Spring 80.94 53 ⇓P **P 19 35 05.1 -0.4**
baz=81
TPNV Topopah Spring 80.94 53 *eP* **P 19 35 05.4 -0.1**
TPNV pmax pmax
comp=Z,45nm,1.5s,mb5.2
TPNV Topopah Spring 80.94 53 *eP* **P 19 35 05.4 -0.1**
comp=Z,45nm,1.5s,mb5.2
I17A Pilgram Creek 80.95 44 ⇑P **P 19 35 06.4 +0.9**
baz=81
N14A Grayback Hills 80.96 48 ⇓P **P 19 35 05.8 +0.2**
baz=81
PPT Papeete 80.98 116 *e*LR LR 19 59 54.0
comp=Z,384nm,25.8s
PPT Papeete 80.98 116 LR LR 20 08 27.4
comp=Z,282nm,19.2s,MS4.6,baz=322,slow=34
RLMT Red Lodge 81.07 43 ⇑P **P 19 35 06.4 +0.3**
baz=81
P13A Bates Ranch, G 81.15 50 ⇑P **P 19 35 07.1 +0.4**
baz=81
SUW Suwalki 81.16 328 *eP* **P 19 35 06.9 +0.5**
SUW Suwalki 81.16 328 *eP* **P 19 35 06.9 +0.5**
BFSC Mount Baldy St 81.31 56 ⇑P **P 19 35 07.8 +0.2**
baz=81
R12A Pony Springs, 81.34 51 ⇓P **P 19 35 07.9 +0.2**
baz=81
GSC Goldstone 81.38 54 ⇓P **P 19 35 08.4 +0.4**
baz=81
T11A Corn Creek, Al 81.49 52 ⇓P **P 19 35 08.4 -0.1**
baz=81,SNR=5.0
DUG Dugway 81.55 48 ⇓P **P 19 35 08.8 +0.1**
baz=81
DUG Dugway 81.55 48 *eP* **P 19 35 08.2 -0.5**
DUG pmax pmax
comp=Z,14nm,1.3s,mb4.7
DUG Dugway 81.55 48 *eP* **P 19 35 08.2 -0.5**
comp=Z,14nm,1.3s,mb4.8
MALT Malatya 81.64 309 *eP* **P 19 35 09.6 +0.4**
MALT pmax pmax
comp=Z,17nm,1.3s,mb4.8
MALT Malatya 81.64 309 *eP* **P 19 35 09.6 +0.4**
comp=Z,17nm,1.3s,mb4.8
J18A Kendall Valley 81.68 45 ⇑P **P 19 35 09.5 +0.2**
baz=81,SNR=6.9
P14A Drum Mountains 81.70 49 ⇑P **P 19 35 09.9 +0.3**
baz=81
R13A O'Grain Ranch, 81.85 51 ⇓P **P 19 35 10.3 -0.1**
baz=82
Q14A Sevier Lake (B 81.89 50 ⇑P **P 19 35 10.7 +0.2**
baz=82,SNR=7.8
TUQ Turquoise Moun 81.94 54 ⇑P **P 19 35 10.7 -0.2**
baz=82
HEC Hector,Ludlow 81.96 54 ⇓P **P 19 35 10.9 -0.1**
baz=82,SNR=5.6
K18A Toltan Ranch, 81.98 45 ⇑P **P 19 35 11.3 +0.3**
baz=82
BW06 Boulder Array 82.20 45 ⇓P **P 19 35 11.8 -0.3**
baz=82,SNR=5.8
BW06 Boulder Array 82.20 45 *eP* **P 19 35 11.2 -1.0**
comp=Z,4.5nm,1.2s,mb4.3
PDAR Pinedale Array 82.20 45 P **P 19 35 12.1 -0.1**
comp=Z,2.4nm,1.0s,mb4.1,baz=298,slow=3.2,SNR=12
PDAR LR LR 20 10 09.3
comp=Z,227nm,18.7s,MS4.6,baz=165,slow=34
P15A Leamington 82.23 49 ⇓P **P 19 35 12.1 -0.2**
baz=82
M17A Scullys Gap (B 82.23 46 ⇑P **P 19 35 12.2 -0.1**
baz=82
S13A Holt Ranch, En 82.24 51 ⇓P **P 19 35 12.3 -0.1**
baz=82
N17A Moffit Pass 82.42 47 ⇓P **P 19 35 13.5 +0.2**
baz=82
GMRC Granite Mounta 82.46 54 ⇓P **P 19 35 13.4 -0.2**
baz=82
PFO Pinyon Flat Ob 82.50 56 ⇑P **P 19 35 13.5 -0.3**
baz=82
PFO Pinyon Flat Ob 82.50 56 *eP* **P 19 35 12.3 -1.5**
PFO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
PFO Pinyon Flat Ob 82.50 56 *eP* **P 19 35 12.3 -1.6**
comp=Z,10.0nm,1.0s,mb4.7
T13A Saint George 82.50 52 ⇑P **P 19 35 13.9 0.0**
baz=82
V12A Nelson 82.53 53 ⇓P **P 19 35 13.7 -0.3**
baz=82
BELC Belle Mtn. 82.62 55 ⇓P **P 19 35 13.5 -0.9**
baz=82
U13A Pakoon Wash 82.78 52 ⇑P **P 19 35 15.3 0.0**
baz=82,SNR=6.2
SFJD Kangerlussuaq 82.84 5 LR LR 20 19 39.8
comp=Z,198nm,18.6s,MS4.5,baz=325,slow=41
O17A Robinson Place 82.89 48 ⇓P **P 19 35 15.7 -0.1**
baz=83
MONP Monument Peak 82.89 56 ⇓P **P 19 35 15.7 -0.2**
baz=83
K20A Yellowstone Ra 83.01 44 ⇓P **P 19 35 16.1 -0.2**
baz=83
V13A Grand Canyon W 83.07 53 ⇑P **P 19 35 16.3 -0.5**
baz=83
N18A Larsen Ranch, 83.13 46 ⇑P **P 19 35 16.7 -0.3**
baz=83
IRM Iron Mountain 83.14 55 ⇓P **P 19 35 16.8 -0.4**
baz=83,SNR=5.3
BC3 Big Chuckw Mtn 83.19 55 ⇑P **P 19 35 17.2 -0.2**
baz=83
DVTC Desert V Tower 83.24 56 ⇑P **P 19 35 17.7 -0.1**
baz=83
P17A Butcher Ranch, 83.28 48 ⇑P **P 19 35 17.7 -0.1**
baz=83
Q16A Castle Valley 83.31 49 ⇓P **P 19 35 18.2 +0.3**
baz=83
U14A Mt Trumbull 83.32 52 ⇓P **P 19 35 18.1 0.0**
baz=83
LVV L'vov 83.44 325 *eP* **P 19 35 22.1 +3.7**
R16A Teasdale 83.45 49 ⇓P **P 19 35 19.2 +0.5**
baz=83,SNR=7.0
N19A John Jarvie Ra 83.49 46 ⇓P **P 19 35 19.0 +0.2**
baz=83
P18A Preston Nutter 83.52 48 ⇑P **P 19 35 19.9 +0.9**
baz=83,SNR=7.3
T15A Red Dirt Ranch 83.53 51 ⇓P **P 19 35 19.3 +0.2**
baz=83
SRU San Rafael 83.62 48 ⇑P **P 19 35 19.6 0.0**
baz=83
M20A Sweetwater, Wa 83.77 45 ⇓P **P 19 35 20.2 -0.1**
baz=84
V14A Boquillas Ranc 83.79 52 ⇑P **P 19 35 20.8 +0.3**
baz=84,SNR=6.6

X13A	Yucca	83.84	54	⇑P		P	19 35 20.4	-0.3	
	baz=84								
O19A	Miners Draw (B	83.86	47	⇓P		P	19 35 20.8	0.0	
	baz=84								
R17A	Hanksville Air	83.88	49	⇓P		P	19 35 20.7	-0.2	
	baz=84,SNR=6.1								
U15A	North Rim	83.92	51	⇑P		P	19 35 21.3	+0.2	
	baz=84								
GLA	Glamis	83.95	55	⇑P		P	19 35 21.7	+0.3	
	baz=84								
L21A	Rawlins	84.00	45	⇑P		P	19 35 21.7	+0.3	
	baz=84								
BR131	Keskin Array S	84.00	313	eP		P	19 35 21.7	+0.2	
	comp=Z,16nm,0.8s,mb5.2								
BRTR	Keskin Array B	84.00	313	P		P	19 35 22.4	+0.9	
	comp=Z,14nm,1.0s,mb5.0,baz=92,slow=4.5,SNR=21								
BRTR				LR		LR	20 16 39.6		
	comp=Z,187nm,18.2s,MS4.5,baz=33,slow=38								
BRTR	Keskin Array B	84.00	313	P		P	19 35 22.4	+0.9	
BRTR				pmax		pmax			
	comp=Z,14nm,1.0s								
BRTR				MLR		MLR			
	comp=Z,187nm,18.2s								
W14A	Seligman	84.03	53	⇑P		P	19 35 21.8	0.0	
	baz=84								
N20A	Spence Gulch,	84.09	46	⇑P		P	19 35 22.2	+0.3	
	baz=84,SNR=5.4								
KWP	Kalwaria	84.22	325	eP		P	19 35 23.0	+0.6	
KWP	Kalwaria	84.22	325	eP		P	19 35 23.0	+0.6	
BUR08	Bucovina Ar. S	84.22	323	eP		P	19 35 22.0	-0.4	
S17A	Black Ridge (B	84.25	50	⇓P		P	19 35 22.6	-0.2	
	baz=84								
P19A	Cripple Cowboy	84.32	47	⇑P		P	19 35 23.4	+0.3	
	baz=84,SNR=7.2								
V15A	Kaibab Nationa	84.33	52	⇓P		P	19 35 23.3	0.0	
	baz=84								
TBI	Tubuai	84.42	121	eLR		LR	20 01 54.8		
	comp=Z,442nm,28.0s,baz=317								
R18A	Canyonlands Na	84.43	49	⇓P		P	19 35 23.6	-0.1	
	baz=84								
O20A	White River Ci	84.50	47	⇓P		P	19 35 24.4	+0.4	
	baz=84								
Q19A	Hogan Spring (	84.52	48	⇓P		P	19 35 24.4	+0.3	
	baz=84								
X14A	Yava	84.56	53	⇑P		P	19 35 24.7	+0.3	
	baz=84								
N21A	Black Mountain	84.60	46	⇑P		P	19 35 24.9	+0.4	
	baz=84								
T17A	Navajo Res., N	84.60	50	⇓P		P	19 35 25.0	+0.4	
	baz=84								
W15A	Williams	84.61	52	⇑P		P	19 35 24.7	0.0	
	baz=84								
BORG	Borgarnes	84.69	353	LR		LR	20 14 27.7		
	comp=Z,418nm,20.0s,MS4.8,baz=77,slow=36								
RSSD	Black Hills	84.70	41	P		P	19 35 24.7	-0.2	
RSSD				pmax		pmax			
	comp=Z,7.0nm,1.3s,mb4.6								
RSSD	Black Hills	84.70	41	P		P	19 35 24.7	-0.3	
	comp=Z,7.2nm,1.3s,mb4.6								
S18A	Hurst Farm, Bl	84.75	49	⇓P		P	19 35 25.1	-0.2	
	baz=84								
Y14A	Wickenburg	84.77	54	⇓P		P	19 35 25.5	0.0	
	baz=84								
M22A	Cedar Creek Ra	84.79	45	⇑P		P	19 35 25.9	+0.4	
	baz=84								
U16A	Tuba City	84.86	51	⇓P		P	19 35 25.9	0.0	
	baz=85								
R19A	Curley Farm, L	84.90	48	⇑P		P	19 35 26.2	+0.1	
	baz=85								
U17A	Shonto	84.92	51	⇓P		P	19 35 26.6	+0.4	
	baz=85,SNR=5.1								
O21A	Pagoda	84.94	46	⇑P		P	19 35 26.5	+0.3	
	baz=85								
PV10	Paradox Valley	84.99	48	eP		P	19 35 26.8	+0.2	
	comp=Z,261nm,0.8s								
X15A	Humboldt	85.00	53	⇓P		P	19 35 27.0	+0.3	
	baz=85								
WUAZ	Wupatki	85.03	52	⇑P		P	19 35 27.0	+0.1	
	baz=85,SNR=5.3								
ULM	Lac du Bonnet	85.06	33	LR		LR	20 14 16.3		
	comp=Z,283nm,18.2s,MS4.7,baz=284,slow=36								
Q20A	Ridgley Place,	85.14	47	⇓P		P	19 35 27.4	+0.1	
	baz=85,SNR=7.7								
T18A	Mexican Hat	85.14	50	⇓P		P	19 35 26.7	-0.6	
	baz=85								
W16A	Flagstaff	85.16	52	⇑P		P	19 35 27.6	+0.1	
	baz=85								
MLR	Muntele Rosu	85.17	321	LR		LR	20 14 35.9		
	comp=Z,320nm,19.0s,MS4.7,baz=50,slow=36								
Y15A	Casa Rosa Ranc	85.23	53	⇓P		P	19 35 28.0	+0.2	
	baz=85,SNR=5.1								
S19A	Harvey Farm, M	85.29	49	⇑P		P	19 35 27.9	-0.1	
	baz=85								
PV01	Paradox Valley	85.44	48	eP		P	19 35 27.8	-1.0	
	comp=Z,463nm,0.8s								
U18A	Rough Rock, Ch	85.55	50	⇑P		P	19 35 29.6	+0.3	
	baz=85,SNR=8.8								
X16A	Lo Mia Camp, P	85.59	53	⇓P		P	19 35 29.6	0.0	
	baz=85								
Y16A	Circle Bar Ran	85.86	53	⇓P		P	19 35 31.1	+0.1	
	baz=86								
T19A	Beclabito	85.88	50	⇑P		P	19 35 31.1	+0.1	
	baz=86								
V18A	Ganado	85.90	51	⇓P		P	19 35 31.4	+0.3	
	baz=86,SNR=5.5								
R21A	Cimarron	85.96	48	⇓P		P	19 35 31.6	+0.3	
	baz=86								
214A	Organ Pipe Nat	85.97	55	⇓P		P	19 35 31.5	-0.1	
	baz=86								
115A	Sonoran Desert	85.98	54	⇓P		P	19 35 32.0	+0.4	
	baz=86								
MVCO	Mesa Verde	86.01	49	⇓P		P	19 35 31.9	+0.3	
	baz=86								
OKC	Ostrava-Krasne	86.27	327	eP		P	19 35 35.7	+3.1	
ISCO	Idaho Springs	86.34	46	eP		P	19 35 33.4	+0.2	
ISCO				pmax		pmax			
	comp=Z,7.0nm,1.1s,mb4.8								
ISCO	Idaho Springs	86.34	46	eP		P	19 35 33.4	+0.2	
	comp=Z,6.6nm,1.1s,mb4.8								
W18A	Petrified Fore	86.37	51	⇓P		P	19 35 33.3	-0.1	
	baz=86								
Y17A	Roosevelt	86.40	53	⇓P		P	19 35 33.7	0.0	
	baz=86								
PSZ	Piszkesteto	86.75	325	P		P	19 35 32.6	-2.4	
PSZ				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.8								
PSZ	Piszkesteto	86.75	325	P		P	19 35 32.6	-2.4	
	comp=Z,6.7nm,1.0s,mb4.8								
DPC	Dobruska-Polom	86.75	329	eP		P	19 35 36.4	+1.4	
UPC	Upice	86.78	329	eP		P	19 35 36.1	+1.0	
X19A	St. Johns	87.06	52	⇑P		P	19 35 37.0	+0.1	
	baz=87								
VRAC	Vranov	87.36	328	LR		LR	20 17 56.9		
	comp=Z,608nm,18.4s,MS5.0,baz=168,slow=38								
217A	Green Valley	87.49	55	⇑P		P	19 35 39.1	+0.1	
	baz=87								
CLL	Collm	87.50	331	eP		P	19 35 36.0	-2.6	
CLL				pmax		pmax			
	comp=Z,22nm,1.9s,mb5.1								
CLL	Collm	87.50	331	eP		P	19 35 36.0	-2.6	
	comp=Z,22nm,1.9s,mb5.1								
SDCO	Great Sand Dun	87.63	47	eP		P	19 35 38.8	-0.8	
	comp=Z,5.5nm,1.3s,mb4.6								
119A	Ashpeak Ranch,	87.99	53	⇓P		P	19 35 41.8	+0.4	
	baz=88								
318A	Bisbee	88.26	54	⇓P		P	19 35 43.0	+0.4	
	baz=88								
219A	White Tail Can	88.46	54	⇓P		P	19 35 43.5	-0.1	
	baz=88								
ANMO	Albuquerque	88.66	50	eP		P	19 35 45.1	+0.6	
ANMO				pmax		pmax			
	comp=Z,2.0nm,0.9s								
ANMO	Albuquerque	88.66	50	eP		P	19 35 45.1	+0.6	
	comp=Z,2.3nm,0.9s,mb4.5								
KHC	Kasperske Hory	88.86	329	eP		P	19 35 45.3	+0.2	
GERES	GERESS Array B	89.02	329	P		P	19 35 44.5	-1.3	
	comp=Z,0.6nm,0.7s,mb4.0,baz=35,slow=3.3,SNR=5.7								
GERES				LR		LR	20 20 30.9		
	comp=Z,423nm,18.0s,MS4.9,baz=166,slow=39								
GERES	GERESS Array B	89.02	329	P		P	19 35 44.5	-1.4	
GERES				pmax		pmax			
	comp=Z,1.0nm,0.7s								
GERES				MLR		MLR			
	comp=Z,423nm,18.0s								
PERS	Pernice	89.97	327	i P		P	19 35 52.3	+1.9	
VISS	Visnje	90.70	326	i P		P	19 35 56.5	+2.7	
JAVS	Javornik	91.01	327	i P		P	19 35 54.0	-1.2	
SCHQ	Schefferville	91.92	16	LR		LR	20 20 13.0		
	comp=Z,154nm,18.9s,MS4.5,baz=352,slow=37								
CDF	Champ du Feu	92.11	332	eP		P	19 36 00.5	+0.2	
DAVOX	Davos/Dischmat	92.27	329	LR		LR	20 21 38.7		
	comp=Z,665nm,18.1s,MS5.1,baz=32,slow=38								
HINF	Hinteralfeld	92.75	332	eP		P	19 36 03.0	-0.3	
TXAR	Lajitas Array	93.92	53	P		P	19 36 09.6	+0.6	
	comp=Z,6.1nm,0.9s,mb5.0,baz=296,slow=2.9,SNR=44								
TXAR	Lajitas Array	93.92	53	P		P	19 36 09.6	+0.6	
TXAR				pmax		pmax			
	comp=Z,6.0nm,0.9s								
LPL	La Plagne	94.62	330	eP		P	19 36 14.3	+2.4	
LPG	La Plagne	94.63	330	eP		P	19 36 14.5	+2.6	
	comp=Z,19nm,1.3s,mb5.1								
LPG	La Plagne	94.63	330	eP		P	19 36 14.5	+2.6	
LPG				pmax		pmax			
	comp=Z,9.0nm,1.3s,mb5.0								
LPG	La Plagne	94.63	330	eP		P	19 36 14.5	+2.6	
	comp=Z,9.4nm,1.3s,mb5.1								
SSF	Saint Saulge	94.71	333	eP		P	19 36 12.3	0.0	
SMF	Signal de Mont	94.92	333	eP		P	19 36 12.4	-0.8	
AVF	Avril sur Loir	94.99	333	eP		P	19 36 13.9	+0.3	
RKT	Rikitea	95.48	113	eLR		LR	20 06 54.2		
	comp=Z,334nm,31.5s								
TORD	Torodi Ar. Bea	122.62	313	PKP		PKPdf	19 41 45.7	-1.6	
	comp=Z,0.6nm,0.8s,baz=332,slow=2.5,SNR=3.8								
TORD				PP		PP	19 43 22.0	-1.8	
	comp=Z,1.6nm,1.0s,baz=42,slow=7.0,SNR=5.4								
DBIC	Dimbokro	131.70	314	PP		PP	19 44 28.0	+4.2	
	comp=Z,2.2nm,0.8s,baz=346,slow=13,SNR=3.3								
PLCA	Paso Flores	151.43	121	PKPbc		PKPbc	19 42 44.5	-0.2	
	comp=Z,3.5nm,0.9s,baz=310,slow=1.4,SNR=4.0								
PLCA	Paso Flores	151.43	121	PKIKP		PKPbc	19 42 44.6	-0.2	
PLCA				pmax		pmax			
	comp=Z,4.0nm,0.9s								

KRSC 28 19:23:43.5±0.6, 5451N×16056E, h109km±38km, ML4.0,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.68	86	eP	Pn	19 24 02.2	+0.6
MKZ				i S	Sn	19 24 15.5	+0.3
KII	Karymskiy	0.81	234	eP	Pn	19 24 03.5	+0.8
KII				i S	Sn	19 24 18.5	+1.4
TUMR	Tumrok	0.81	343	eP	Pn	19 24 03.4	+0.7
KMNR	Kamenistaya	1.26	352	eP	Pn	19 24 08.4	+1.0
BZMR	Bezymyannaya	1.43	358	eP	Pn	19 24 10.5	+1.2
SPN	Mys Shipunski	1.45	193	eP	Pn	19 24 10.5	+0.9
SPN				i S	Sn	19 24 29.6	+0.2
KIRR	Kirishev	1.45	355	eP	Pn	19 24 10.8	+1.2
KPT	Kopyto	1.47	353	eP	Pn	19 24 10.6	+0.8
ZLN	Zelenaya	1.52	5	eP	Pn	19 24 11.8	+1.4
NLC	Nalytchevo	1.52	209	eP	Pn	19 24 11.6	+1.1
NLC				i S	Sn	19 24 32.0	+1.1
KOZ	Kozyrevsk	1.60	346	eP	Pn	19 24 12.2	+0.8
AVH	Avacha	1.65	222	eP	Pn	19 24 14.0	+2.0
AVH				i S	Sn	19 24 36.2	+2.5
KRSR	Krestovskiy	1.71	0	eP	Pn	19 24 13.5	+0.8
GNL	Ganaly	1.75	243	eP	Pn	19 24 14.5	+1.3
KLY	Klyuchi	1.81	2	eP	Pn	19 24 15.5	+1.6
KLY				i S	Sn	19 24 39.3	+2.1
PET	Petropavlovsk	1.87	218	eP	Pn	19 24 16.4	+1.7
PET				i S	Sn	19 24 40.6	+2.0
SRDR	Sredinnyy	1.87	345	eP	Pn	19 24 15.2	+0.4
KBTR	Krutoberegovo	2.13	36	eP	Pn	19 24 19.6	+1.5
SRKR	Sorokina	2.18	9	eP	Pn	19 24 20.5	+1.9
SRKR				i S	Sn	19 24 48.2	+2.7
RUS	Russkaya	2.41	211	i P	Pn	19 24 23.0	+1.3
RUS				i S	Sn	19 24 52.4	+1.4

*IDC **28** 19:32:60.0±0.7, 2992N×142.24E, h0km, mb4.1/15, mb1 4.2/18, mb1mx4.1/25, mbtmp4.1/18, ML3.7/4, MS3.6/2, Ms1 3.6/2, ms1mx3.2/40, Error ellipse: s-maj=22.1km s-min=13.8km az=78.0*
*NEIC **28** 19:33:00.7±4.2, 2990N×142.18E, h5km±25km, mb4.5/7, Error ellipse: s-maj=11.7km s-min=7.8km az=87.0*
*ISCJB **28** 19:33:01.9±1.7, 3010N±004×1422E±01, h22km±12km, mb4.2/22, Error ellipse: s-maj=15.2km s-min=4.9km az=164.9*
*JMA **28** 19:33:02.0±0.1, 3003N×14233E, h50km, M4.6*
ISC 28 19:33:04.2±1.7, 3006N±004×1422E±01, h27km±13km, n50,
σ1§11/65, mb4.2/22, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.96	180	Pn	Pn	19 33 47.7	-1.7
	11nm,0.3s,baz=290,slow=20,SNR=3.7						
CBIJ				Sn	Sn	19 34 20.2	-3.7
	40nm,0.3s,baz=306,slow=22,SNR=6.7						
CBIJ				LR	LR	19 34 22.7	
	comp=Z,903nm,18.9s,baz=16,slow=29						
CBIJ	Chichi jima	2.96	180	P	Pn	19 33 47.2	-2.2
CBIJ				eS	Sn	19 34 20.2	-3.8
JHJ2	Mitsune	3.65	327	eS	Sn	19 34 40.7	-0.5
JHJ	Hachijo jima 2	3.68	327	Pn	Pn	19 33 59.5	+0.2
	6.5nm,0.3s,baz=70,slow=20,SNR=5.4						
JHJ				Sn	Sn	19 34 40.4	-1.3
	18nm,0.3s,baz=58,slow=22,SNR=3.7						
JHJ				LR	LR	19 34 47.8	
	comp=Z,822nm,20.6s,baz=58,slow=28						
BSO1	Boso 1	4.69	348	P	Pn	19 34 13.2	-0.1
BSO1				eS	Sn	19 35 06.0	-0.8
BSO2	Boso 2	4.83	346	eS	Sn	19 35 10.8	+0.6
BSO3	Boso 3	4.94	344	P	Pn	19 34 16.9	+0.3
BSO3				eS	Sn	19 35 13.2	+0.4
BSO4	Boso 4	5.16	343	eS	Sn	19 35 17.8	-0.5
JOD2	Odawara 2	5.81	334	eS	Sn	19 35 33.7	-0.6
JHU	Hanno	6.27	338	P	Pn	19 34 35.6	+0.7
JHU				eS	Sn	19 35 43.9	-1.8
JYT	Yasato	6.37	345	eS	Sn	19 35 45.6	-2.6
JRY	Ryogami san	6.55	336	P	Pn	19 34 39.3	+0.5
JRY				eS	Sn	19 35 50.8	-1.7
JHO	Hitachi	6.67	349	P	Pn	19 34 39.8	-0.6
JHO				eS	Sn	19 35 51.4	-4.1
JAG	Ashikaga	6.75	341	P	Pn	19 34 41.3	-0.2
JAG				eS	Sn	19 35 54.7	-2.7
MJAR	Matsushiro Arr	7.27	334	Pn	Pn	19 34 49.8	+1.2
	2.9nm,0.3s,baz=158,slow=11,SNR=41						
MJAR				Sn	Sn	19 36 11.5	+1.2
	2.5nm,0.3s,baz=162,slow=17,SNR=7.2						
MAJO	Matsushiro	7.27	334	ePn	Pn	19 34 49.6	+0.9
	2.3nm,0.7s						
MAJO				eSn	Sn	19 35 59.3	-11
MAT	Matsushiro	7.27	334	P	Pn	19 34 49.9	+1.2
MAT				S	Sn	19 36 11.6	+1.3
MAT	Matsushiro	7.27	334	P	Pn	19 34 50.3	+1.6
MAT				eS	Sn	19 36 11.6	+1.3
JFK	Kawauchi	7.37	352	P	Pn	19 34 49.0	-1.0
JFK				eS	Sn	19 36 06.2	-6.5
JMK	Ichinoseki	8.90	355	P	Pn	19 35 08.9	-2.2
JMK				eS	Sn	19 36 41.8	-8.7
KSRS	Korea Array	13.96	306	Pn	Pn	19 36 23.1	+2.8
	0.4nm,0.3s,baz=109,slow=13,SNR=13						
MDJ	Mudanjiang	17.61	329	ePn	Pn	19 37 08.1	+0.4
	65nm,1.5s						
HIA	Hailar	25.65	325	eP	P	19 38 31.8	+0.3
	9.0nm,0.8s,mb4.3						
ULN	Ulaanbaatar	32.24	313	eP	P	19 39 31.6	+1.4
	8.8nm,1.1s,mb4.5						
CHTO	Chiang Mai	40.72	264	eP	P	19 40 42.1	-0.7
	2.3nm,0.7s,mb3.9						
CM31	Chiang Mai Arr	40.87	264	eP	P	19 40 43.4	-0.6
	2.5nm,0.8s,mb3.9						
CMAR	Chiang Mai Arr	40.87	264	P	P	19 40 43.6	-0.5
	1.2nm,0.7s,mb3.6,baz=63,slow=5.9,SNR=14						
ZALV	Zalesovo Beam	47.29	317	P	P	19 41 35.4	+0.3
	0.7nm,0.3s,mb4.0,baz=72,slow=9.5,SNR=3.9						
MK31	Makanchi Array	48.63	308	eP	P	19 41 46.2	+0.6
MKAR	Makanchi Array	48.63	308	P	P	19 41 46.6	+1.0
	3.8nm,0.8s,mb4.5,baz=89,slow=9.8,SNR=32						
WRAB	Tennant Creek	50.27	190	eP	P	19 41 56.6	-1.7
	14nm,1.3s,mb4.8						
WRA	Warramunga Arr	50.28	190	P	P	19 41 57.2	-1.2
	2.9nm,0.7s,mb4.4,baz=8.7,slow=7.9,SNR=27						
KURK	Kurchatov	50.95	313	P	P	19 42 03.9	+0.7
	1.2nm,0.5s,mb4.1,baz=91,slow=9.4,SNR=9.8						
KURK	Kurchatov	50.95	313	eP	P	19 42 02.8	-0.3
	6.8nm,1.3s,mb4.4						
ASAR	Alice Springs	54.01	189	P	P	19 42 24.4	-1.6
	1.2nm,1.0s,mb3.8,baz=6.3,slow=6.5,SNR=6.3						
BVAR	Borovoye Array	55.89	316	P	P	19 42 41.8	+2.4
	2.0nm,0.6s,mb4.3,baz=101,slow=8.0,SNR=12						
STKA	Stephens Creek	61.60	181	P	P	19 43 18.8	-0.5
	0.9nm,0.6s,mb4.1,baz=342,slow=21,SNR=2.9						
AKTK	Aktyubinsk	63.93	315	P	P	19 43 35.1	+0.4
AKTO	Aktyubinsk	63.93	315	P	P	19 43 35.1	+0.4
	1.4nm,0.6s,mb4.2,baz=79,slow=9.7,SNR=5.3						
YKA	Yellowknife Ar	69.55	29	P	P	19 44 10.7	+0.4
	0.8nm,0.6s,mb3.8,baz=295,slow=6.4,SNR=16						
YKA	Yellowknife Ar	69.55	29	P	P	19 44 10.7	+0.4
ARCES	ARCESS Array B	70.75	341	P	P	19 44 18.6	+1.1
	5.4nm,1.0s,mb4.4,baz=69,slow=4.9,SNR=2.2						
NVAR	Mina Array Bea	78.69	52	P	P	19 45 04.8	+0.7
	0.6nm,0.6s,mb3.7,baz=295,slow=4.6,SNR=4.7						
NVAR	Mina Array Bea	78.69	52	P	P	19 45 04.8	+0.7
MIB	Mutribah	79.47	298	eP	P	19 45 09.2	+0.6
MIB				AMb	AMB	19 45 10.2	
	comp=Z,23nm,0.9s,mb5.1						
NAY	Al-Naaiem	79.81	298	eP	P	19 45 11.1	+0.7
NAY				AMb	AMB	19 45 16.3	
	comp=Z,16nm,1.0s,mb4.9						
NOA	NORSAR Array B	80.87	338	P	P	19 45 15.6	+0.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=40,slow=5.1,SNR=2.9						
BRTR	Keskin Array B	84.00	313	P	P	19 45 33.3	+1.1
	comp=Z,1.5nm,0.7s,mb4.2,baz=52,slow=5.7,SNR=4.9						
TXAR	Lajitas Array	93.82	53	P	P	19 46 20.5	+1.2
	comp=Z,1.1nm,0.8s,mb4.3,baz=311,slow=3.2,SNR=8.9						
TXAR	Lajitas Array	93.82	53	P	P	19 46 20.5	+1.2

*ISCJB **28** 19:35:50.1±1.2, 4845N±009×1547E±02, h58km±11km, mb3.7/11, MS4.3/1, Error ellipse: s-maj=22.2km s-min=8.1km az=35.4*
*MOS **28** 19:35:50.4±1.4, 4848N×15473E, h65km, mb4.0/8, Error ellipse: s-maj=20.5km s-min=10.3km az=75.8*
*NEIC **28** 19:35:51.8±1.5, 4841N×15474E, h60km±16km, mb4.4/1, Error ellipse: s-maj=23.2km s-min=13.6km az=126.0*
*IDC **28** 19:35:52.1±3.0, 4836N×15473E, h63km±26km, mb3.5/10, mb1 3.7/13, mb1mx3.6/27, mbtmp3.6/13, ML3.6/3, MS4.3/1, Ms1 4.3/1, ms1mx3.1/40, Error ellipse: s-maj=25.0km s-min=18.6km az=116.0*
ISC 28 19:35:52.3±1.1, 4850N±009×1547E±02, h62km±10km, n30,
σ1§24/32, mb3.7/11, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.37	22	ePN	Pn	19 36 28.5	-0.3
SKR				eS	Sn	19 36 55.5	-1.3
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=E,170nm,0.5s						
SKR				smax			
	comp=N,170nm,0.7s						
SKR				smax			
	comp=Z,170nm,0.5s						
PEA0B	Petropavlovsk-	4.99	21	ePn	Pn	19 37 05.6	+1.1
PETK	Petropavlovsk-	4.99	21	P	Pn	19 37 05.8	+1.2
	comp=Z,1.2nm,0.3s,baz=168,slow=13,SNR=36						
PET	Petropavlovsk	5.18	27	Pn	Pn	19 37 06.0	-1.2
PET				eSn	Sn	19 38 06.8	+1.4
ASAJ	Asahikawa	9.45	247	P	Pn	19 38 06.3	+0.7
	comp=Z,0.9nm,0.3s,baz=3.3,slow=30,SNR=4.0						
ASAJ	Asahikawa	9.45	247	PN	Pn	19 38 06.3	+0.7
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	17.00	231	P	Pn	19 39 45.4	-0.3
	comp=Z,0.2nm,0.3s,baz=242,slow=11,SNR=4.6						
YAK	Yakutsk	19.50	323	eP	Pn	19 40 13.4	-2.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BILL	Bilibino	20.45	12	eP	P	19 40 22.4	-1.8
BILL				eS	S	19 44 06.6	-2.8
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSRS	Korea Array	22.37	250	P	P	19 40 44.2	-0.8
	comp=Z,1.2nm,0.6s,mb3.5,baz=53,slow=10,SNR=4.5						
KSRS	Korea Array	22.37	250	eP	P	19 40 45.0	0.0
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
TIXI	Tiksi	26.12	342	eP	P	19 41 21.2	+1.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
MKAR	Makanchi Array	47.11	297	P	P	19 44 17.8	+0.1
	comp=Z,1.4nm,0.7s,mb4.0,baz=62,slow=7.7,SNR=6.8						
MKAR	Makanchi Array	47.11	297	P	P	19 44 17.8	+0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	47.30	303	P	P	19 44 20.2	+1.0
	comp=Z,2.2nm,0.6s,mb4.3,baz=67,slow=8.4,SNR=15						
KURK	Kurchatov	47.30	303	P	P	19 44 20.2	+1.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KURK	Kurchatov	47.30	303	eP	P	19 44 19.2	0.0
	comp=Z,2.5nm,0.6s,mb4.3						
BVAR	Borovoye Array	50.59	309	P	P	19 44 43.0	-1.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=62,slow=7.4,SNR=3.2						
BVAR	Borovoye Array	50.59	309	P	P	19 44 43.0	-1.3

KURK	**Kurchatov**	**13.73**	**17**	Pn	**Pn**	**19 43 24.8**	**+1.4**
	0.0nm,0.3s,baz=199,slow=11,SNR=3.5							
ZALV	**Zalesovo Beam**	**18.36**	**24**	P	**P**	**19 44 16.8**	**+0.2**
	1.6nm,0.5s,baz=220,slow=11,SNR=6.3							
ASF	**Jabal al Asfar**	**29.41**	**270**	LR	LR	19 59 18.8		
	comp=Z,40nm,18.3s,baz=317,slow=40							
ARCES	**ARCESS Array B**	**40.39**	**337**	P	**P**	**19 47 35.2**	**0.0**
	3.9nm,1.0s,baz=108,slow=7.7,SNR=3.7							
YKA	**Yellowknife Ar**	**79.95**	**3**	P	**P**	**19 52 02.6**	**-0.9**
	0.2nm,0.4s,baz=350,slow=5.5,SNR=5.2							

NIED ***28*** *19:53:00,2990N×14270E,h5km,Mw4.0 Best double couple: Mo1.00000×10^15 NP1:φ=45.00000°,δ=69.00000°, λ=118.00000°. NP2:φ=169.00000°,δ=35.00000°,λ=39.00000°.*

IDC ***28*** *19:53:58.0±0.9,2982N×142.18E,h0km,mb3.8/8, mb1 3.9/12,mb1mx3.8/23,mbtmp3.8/12,ML3.3/4,MS3.1/1, Ms1 3.1/1,ms1mx2.7/34,Error ellipse: s-maj=29.5km s-min=14.7km az=77.0*

ISCJB ***28*** *19:53:59.5±0.8,2995N±005×1424E±02,h33km,mb3.9/9, Error ellipse: s-maj=20.7km s-min=5.2km az=165.0*

NEIC ***28*** *19:53:59.6±0.7,2984N×14209E,h10km,mb4.4/1,Error ellipse: s-maj=25.1km s-min=12.4km az=75.0*

ISC 28 19:54:02.6±0.7,2989N±005×1422E±01,h35km,n17, σ1$15/21,mb3.9/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.79**	**181**	Pn	**Pn**	**19 54 43.1**	**-1.6**
	5.0nm,0.3s,baz=84,slow=23,SNR=2.4						
CBIJ				Sn	**Sn**	**19 55 16.6**	**-0.6**
	29nm,0.3s,baz=273,slow=20,SNR=4.9						
JHJ	**Hachijo jima 2**	**3.84**	**328**	Pn	**Pn**	**19 54 59.1**	**0.0**
	2.8nm,0.3s,baz=259,slow=20,SNR=3.5						
JHJ				Sn	**Sn**	**19 55 44.4**	**+1.4**
	16nm,0.3s,baz=257,slow=23,SNR=4.0						
MJAR	**Matsushiro Arr**	**7.44**	**334**	Pn	**Pn**	**19 55 47.9**	**-0.7**
	1.3nm,0.3s,baz=159,slow=11,SNR=14						
MJAR				Sn	**Sn**	**19 57 10.6**	**-1.0**
	0.6nm,0.3s,baz=149,slow=14,SNR=4.9						
MJAR				LR	LR	19 58 13.1	
	comp=Z,145nm,21.4s,baz=145,slow=34						
MAJO	**Matsushiro**	**7.44**	**334**	*e*P	**Pn**	**19 55 47.8**	**-0.8**
	14nm,0.8s						
MAT	**Matsushiro**	**7.44**	**334**	P	**Pn**	**19 55 47.6**	**-1.0**
MAT				S	**Sn**	**19 57 10.7**	**-1.0**
KSRS	**Korea Array**	**14.09**	**306**	Pn	**Pn**	**19 57 20.1**	**+0.4**
	0.1nm,0.3s,baz=110,slow=11,SNR=2.8						
YHNB	**Yeheng**	**19.25**	**259**	P	**Pn**	**19 58 27.1**	**+1.9**
ULN	**Ulaanbaatar**	**32.38**	**314**	*e*P	**P**	**20 00 29.2**	**+0.5**
	5.9nm,1.2s,mb4.3						
CMAR	**Chiang Mai Arr**	**40.89**	**264**	P	**P**	**20 01 39.6**	**-1.9**
	0.4nm,0.7s,mb3.2,baz=67,slow=4.7,SNR=4.1						
MKAR	**Makanchi Array**	**48.77**	**308**	P	**P**	**20 02 44.7**	**+0.8**
	1.9nm,0.7s,mb4.2,baz=90,slow=8.4,SNR=21						
WRA	**Warramunga Arr**	**50.13**	**190**	P	**P**	**20 02 55.0**	**+0.6**
	1.9nm,0.6s,mb4.3,baz=8.5,slow=7.9,SNR=26						
ASAR	**Alice Springs**	**53.85**	**189**	P	**P**	**20 03 22.6**	**+0.5**
	0.2nm,0.3s,mb3.5,baz=8.2,slow=7.1,SNR=8.1						
STKA	**Stephens Creek**	**61.43**	**181**	P	**P**	**20 04 14.7**	**-0.6**
	1.7nm,1.1s,mb4.1,baz=0.0,slow=15,SNR=2.4						
YKA	**Yellowknife Ar**	**69.67**	**29**	P	**P**	**20 05 08.2**	**0.0**
	0.4nm,0.6s,mb3.5,baz=293,slow=6.5,SNR=6.2						
YKA	**Yellowknife Ar**	**69.67**	**29**	P	**P**	**20 05 08.2**	**0.0**
BRTR	**Keskin Array B**	**84.14**	**313**	P	**P**	**20 06 33.2**	**+3.1**
	1.3nm,0.7s,mb4.2,baz=98,slow=8.0,SNR=4.9						
TXAR	**Lajitas Array**	**93.89**	**53**	P	**P**	**20 07 19.3**	**+2.5**
	0.8nm,0.9s,mb4.1,baz=310,slow=4.7,SNR=4.9						

IDC 28 19:55:44.6±1.9,3405×12620E,h0km,mb3.4/2,mb1 3.7/3, mb1mx3.5/16,mbtmp3.5/3,ML3.4/1,Error ellipse: s-maj=157.1km s-min=27.0km az=64.0,Buru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.26**	**155**	P	Pn	19 59 58.2	-1.3
	0.1nm,0.3s,baz=332,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.48**	**160**	P	P	20 00 35.0	+0.1
	0.8nm,0.4s,baz=348,slow=12,SNR=15						
MKAR	**Makanchi Array**	**63.17**	**328**	P	P	20 06 14.9	+0.5
	0.3nm,0.6s,baz=117,slow=7.8,SNR=4.2						

IDC 28 19:57:18.3±4.6,5325×10336W,h0km,mb3.3/4, mb1 3.8/4,mb1mx3.7/14,mbtmp3.3/4,MS3.8/10, Ms1 3.8/10,ms1mx3.5/21,Error ellipse: s-maj=240.4km s-min=66.7km az=99.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**27.02**	**106**	LR	LR	20 11 35.7	
	comp=Z,199nm,20.8s,baz=330,slow=32						
TEIG	**Tepich**	**29.39**	**30**	LR	LR	20 13 21.4	
	comp=Z,277nm,21.3s,baz=324,slow=33						
LPIG	**La Paz**	**30.02**	**347**	LR	LR	20 12 10.8	
	comp=Z,314nm,18.2s,baz=104,slow=30						
TXAR	**Lajitas Array**	**34.45**	**360**	P	P	20 04 09.7	+1.9
	0.3nm,0.8s,baz=192,slow=8.3,SNR=3.2						
TXAR				LR	LR	20 15 33.0	
	comp=Z,349nm,19.8s,baz=0.0,slow=32						
CFAA	**Coronel Fontan**	**42.02**	**133**	LR	LR	20 19 02.1	
	comp=Z,22nm,21.4s,baz=303,slow=31						
SIV	**San Ignacio**	**42.80**	**108**	LR	LR	20 21 31.7	
	comp=Z,123nm,21.9s,baz=259,slow=34						
NVAR	**Mina Array Bea**	**45.68**	**344**	P	P	20 05 41.2	+0.2
	0.2nm,0.4s,baz=160,slow=9.3,SNR=2.7						
PLCA	**Paso Flores**	**45.91**	**145**	LR	LR	20 21 08.2	
	comp=Z,219nm,19.0s,baz=355,slow=31						
PPT	**Papeete**	**46.78**	**251**	LR	LR	20 19 38.8	
	comp=Z,173nm,20.8s,baz=89,slow=29						
PDAR	**Pinedale Array**	**48.19**	**354**	P	P	20 05 59.7	-0.8
	0.5nm,0.7s,baz=171,slow=6.1,SNR=3.2						
RAR	**Rarotonga**	**56.83**	**248**	LR	LR	20 24 55.2	
	comp=Z,173nm,18.8s,baz=102,slow=29						
YKA	**Yellowknife Ar**	**68.17**	**354**	P	P	20 08 18.5	-1.5
	0.2nm,0.7s,baz=161,slow=6.1,SNR=3.3						
YKA				LR	LR	20 36 47.4	
	comp=Z,23nm,20.1s,baz=320,slow=35						
CMAR	**Chiang Mai Arr**	**154.61**	**303**	PKPbc	PKPbc	20 17 23.1	+0.9
	0.3nm,0.7s,baz=299,slow=1.9,SNR=2.9						

ISCJB ***28*** *20:04:48.8±0.5,2100S±004×6860W±006,h104km±7km, mb3.8/4,Error ellipse: s-maj=9.8km s-min=5.8km az=175.3*

IDC ***28*** *20:04:50.2±1.8,2098S×6855W,h97km±19km,mb3.5/5, mb1 3.7/6,mb1mx3.5/17,mbtmp3.6/6,MS2.7/1,Ms1 2.6/1, ms1mx2.4/22,Error ellipse: s-maj=31.0km s-min=15.4km az=136.0*

GUC ***28*** *20:04:50.4±0.8,2107S×6838W,h109km±5km,ML4.0*

NEIC ***28*** *20:04:51.7±0.8,2120S×6838W,h110km±8km,Error ellipse: s-maj=14.8km s-min=13.0km az=134.0*

ISC 28 20:04:50.0±0.5,2102S±003×6863W±006,h100km±7km, n27,σ0$93/35,mb3.8/4,3C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.80**	**268**	↓*i*P	**Pn**	**20 05 08.1**	**-0.2**
PB01				*e*S	**Sn**	**20 05 21.2**	**-0.9**
PB01				AML	AML	20 05 23.0	
	comp=E,3μm,0.5s						
HMBC	**Humberston**	**1.39**	**302**	↑*e*P	**Pn**	**20 05 14.9**	**0.0**
HMBC				*e*S	**Sn**	**20 05 33.4**	**-0.3**
HMBC				AML	AML	20 05 37.6	
	comp=E,3μm,0.6s						
PB04	**Plate Boundary**	**1.48**	**213**	*e*P	**Pn**	**20 05 20.6**	**+4.7**
PB04				*e*S	**Sn**	**20 05 44.1**	**+8.5**
PB04				AML	AML	20 05 50.0	
	comp=N,2μm,0.4s						
MACH	**Maria Elena**	**1.58**	**222**	*e*P	**Pn**	**20 05 16.8**	**-0.4**
MACH				*i*S	**Sn**	**20 05 36.7**	**-1.1**
LVC	**Limon Verde**	**1.61**	**189**	P	**Pn**	**20 05 18.5**	**+0.9**
	comp=N,85nm,0.3s,baz=9.1,slow=9.0,SNR=916						
LVC				S	**Sn**	**20 05 40.1**	**+1.5**
	comp=N,99nm,0.3s,baz=109,slow=23,SNR=43						
LVC	**Limon Verde**	**1.61**	**189**	P	**Pn**	**20 05 18.5**	**+0.9**
LVC				S	**Sn**	**20 05 40.1**	**+1.5**
LVC	**Limon Verde**	**1.61**	**189**	↑*i*P	**Pn**	**20 05 19.1**	**+1.5**
LVC				*i*S	**Sn**	**20 05 40.2**	**+1.6**
LVC				AML	AML	20 05 42.2	
	comp=E,989nm,0.5s						
TOCH	**Tocopilla**	**1.81**	**234**	*e*P	**Pn**	**20 05 19.8**	**-0.4**
TOCH				*e*S	**Sn**	**20 05 41.9**	**-1.3**
TOCH				AML	AML	20 05 46.4	
	comp=N,3μm,0.6s						
PECH	**Pedro de Valdi**	**1.85**	**212**	*e*P	**Pn**	**20 05 20.7**	**+0.1**
PECH				*e*S	**Sn**	**20 05 43.2**	**-0.8**
PECH				AML	AML	20 05 48.1	
	comp=E,6μm,0.6s						
PSGC	**Pisagua**	**1.99**	**315**	↑*i*P	**Pn**	**20 05 22.3**	**-0.2**
PSGC				*e*S	**Sn**	**20 05 46.9**	**-0.3**
PSGC				AML	AML	20 05 53.8	
	comp=E,658nm,0.4s						
MNMC	**Miaee Miae**	**2.08**	**334**	*e*P	**Pn**	**20 05 25.2**	**+1.5**
MNMC				*e*S	**Sn**	**20 05 51.7**	**+2.3**
MNMC				AML	AML	20 05 59.4	
	comp=E,2μm,0.3s						
CEN1	**Los Morros**	**2.78**	**211**	*e*P	**Pn**	**20 05 35.2**	**+2.5**
CEN1				*i*S	**Sn**	**20 06 10.1**	**+4.5**
CEN1				AML	AML	20 06 20.2	
	comp=E,859nm,0.9s						
ANCH	**Antofagasta**	**3.12**	**212**	*e*P	**Pn**	**20 05 37.9**	**+0.5**
ARE	**Arequipa**	**5.28**	**329**	*e*P	**Pn**	**20 06 13.0**	**+6.4**
ARE				*e*S	**Sn**	**20 07 06.0**	**-0.2**
SIV	**San Ignacio**	**8.74**	**56**	P	**Pn**	**20 06 53.5**	**0.0**
	comp=E,3.5nm,0.3s,baz=241,slow=10,SNR=34						
SIV				S	**Sn**	**20 08 28.9**	**-1.4**
	comp=E,0.2nm,0.3s,baz=310,slow=20,SNR=4.4						
BDFB	**Brasilia**	**20.28**	**78**	P	**P**	**20 09 17.8**	**-0.1**
	comp=E,0.9nm,0.5s,baz=176,slow=24,SNR=3.3						
BDFB				LR	LR	20 17 20.6	
	comp=E,20nm,18.6s,baz=145,slow=37						
TXAR	**Lajitas Array**	**60.38**	**325**	P	**P**	**20 14 49.1**	**+0.2**
	comp=E,0.4nm,0.7s,mb3.6,baz=150,slow=8.5,SNR=3.8						
RKT	**Rikitea**	**61.03**	**255**	*e*LR	LR	20 13 47.6	
	comp=E,447nm,27.2s						
DBIC	**Dimbokro**	**68.34**	**73**	P	**P**	**20 15 40.5**	**-0.7**
	comp=E,2.1nm,0.9s,mb4.0,baz=230,slow=6.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**76.94**	**70**	P	**P**	**20 16 31.9**	**-0.2**
	comp=E,1.4nm,0.5s,mb4.0,baz=258,slow=5.3,SNR=28						
YKA	**Yellowknife Ar**	**90.82**	**340**	P	**P**	**20 17 41.7**	**+0.1**
	comp=E,0.4nm,0.7s,mb3.7,baz=133,slow=4.3,SNR=7.9						
YKA				pP	pP	20 18 11.1	+3.2
	comp=E,1.0nm,0.9s,baz=130,slow=4.5,SNR=13						
YKA	**Yellowknife Ar**	**90.82**	**340**	P	**P**	**20 17 41.7**	**+0.1**
YKA				pP	pP	20 18 11.1	+3.2
WRA	**Warramunga Arr**	**133.50**	**210**	PKP	PKPdf	20 23 55.8	+0.3
	comp=E,0.6nm,1.0s,baz=149,slow=2.4,SNR=3.2						
KURK	**Kurchatov**	**140.78**	**33**	PKP	PKPdf	20 24 09.4	+1.4
	comp=E,0.1nm,0.3s,baz=284,slow=3.7,SNR=2.0						
ZALV	**Zalesovo Beam**	**141.41**	**25**	PKP	PKPdf	20 24 10.0	+1.0
	comp=E,0.4nm,0.4s,baz=54,slow=2.6,SNR=3.7						
MKAR	**Makanchi Array**	**145.09**	**36**	PKPbc	PKPbc	20 24 16.3	+0.9
	comp=E,1.9nm,0.7s,baz=321,slow=2.8,SNR=25						
MKAR	**Makanchi Array**	**145.09**	**36**	PKPbc	PKPbc	20 24 16.3	+0.9

IDC ***28*** *20:31:43.1±1.2,2991N×14220E,h0km,mb3.6/7, mb1 3.8/9,mb1mx3.7/23,mbtmp3.6/9,ML3.4/2,MS3.3/1, Ms1 3.3/1,ms1mx2.6/35,Error ellipse: s-maj=37.5km s-min=16.8km az=79.0*

NEIC ***28*** *20:31:44.7±0.7,2992N×14221E,h10km,mb4.2/3,Error ellipse: s-maj=20.2km s-min=8.8km az=77.0*

ISCJB ***28*** *20:31:45.9±0.9,2997N±006×142.1E±02,h33km,mb3.8/10, Error ellipse: s-maj=28.7km s-min=5.7km az=166.5*

ISC 28 20:31:48.2±0.9,2993N±006×1421E±02,h35km,n16, σ0$84/19,mb3.8/10,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.83**	**179**	Pn	**Pn**	**20 32 29.4**	**-1.5**
	4.6nm,0.3s,baz=270,slow=20,SNR=1.9						
CBIJ				Sn	**Sn**	**20 33 02.9**	**-0.8**
	27nm,0.3s,baz=97,slow=23,SNR=7.6						
MJAR	**Matsushiro Arr**	**7.37**	**334**	Pn	**Pn**	**20 33 33.0**	**-0.2**
	1.8nm,0.3s,baz=159,slow=11,SNR=12						
MJAR				Sn	**Sn**	**20 34 54.4**	**-1.1**
	0.9nm,0.3s,baz=280,slow=26,SNR=4.1						
MJAR	**Matsushiro Arr**	**7.37**	**334**	Pn	**Pn**	**20 33 33.0**	**-0.2**
MJAR				Sn	**Sn**	**20 34 54.4**	**-1.1**
MAJO	**Matsushiro**	**7.37**	**334**	*e*Pn	**Pn**	**20 33 32.6**	**-0.6**
MAT	**Matsushiro**	**7.37**	**334**	P	**Pn**	**20 33 33.7**	**+0.5**
MAT				S	**Sn**	**20 34 54.2**	**-1.4**
HIA	**Hailar**	**25.73**	**325**	*e*P	**P**	**20 37 15.2**	**+0.1**
	4.9nm,0.8s,mb4.1						
PETK	**Petropavlovsk-comp=Z,59nm,18.0s,baz=92,slow=36**	**25.81**	**22**	LR	LR	20 47 16.1	
ULN	**Ulaanbaatar**	**32.29**	**314**	P	**P**	**20 38 14.9**	**+1.3**
	1.2nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**40.81**	**264**	P	**P**	**20 39 26.6**	**+0.2**
	0.5nm,0.7s,mb3.2,baz=72,slow=5.9,SNR=4.5						
MKAR	**Makanchi Array**	**48.68**	**308**	P	**P**	**20 40 29.8**	**+1.0**
	1.5nm,0.7s,mb4.1,baz=93,slow=9.0,SNR=16						
WRA	**Warramunga Arr**	**50.15**	**190**	P	**P**	**20 40 40.4**	**+0.2**
	0.7nm,0.6s,mb3.9,baz=8.5,slow=7.9,SNR=9.9						
KURK	**Kurchatov**	**51.00**	**313**	P	**P**	**20 40 46.8**	**+0.4**
	0.5nm,0.4s,mb3.8,baz=90,slow=7.2,SNR=3.5						
ASAR	**Alice Springs**	**53.88**	**189**	P	**P**	**20 41 08.1**	**+0.2**
	0.3nm,0.7s,mb3.3,baz=7.5,slow=7.9,SNR=3.7						
AML	**Almayashu**	**55.32**	**303**	*e*P	**P**	**20 41 19.9**	**+1.6**
	2.5nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**55.95**	**316**	P	**P**	**20 41 22.9**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=90,slow=8.6,SNR=4.1						
YKA	**Yellowknife Ar**	**69.68**	**29**	P	**P**	**20 42 54.1**	**+0.2**
	0.2nm,0.6s,mb3.2,baz=293,slow=6.7,SNR=4.5						

ISK ***28*** *20:43:50.8,3942N×3309E,h5km,MD2.7*

ISCJB ***28*** *20:43:51.1±1.0,3939N±004×3308E±004,h1km±8km, Error ellipse: s-maj=6.6km s-min=5.1km az=156.8*

CSEM ***28*** *20:43:51.0±0.2,3941N×3309E,h10km,MD2.7,Error ellipse: s-maj=4.6km s-min=3.9km az=157.0*

DDA ***28*** *20:43:51.6,3938N×3311E,h10km±1km,Md3.1*

ISC 28 20:43:51.8±0.8,3939N±004×3308E±005,h8km±9km,n12, σ0$76/19,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.49**	**93**	PG	**Pg**	**20 44 00.8**	**-0.5**
KAMT				SG	**Sg**	**20 44 08.1**	**+0.3**
LOD	**Lodumlu**	**0.55**	**334**	*e*PG	**Pg**	**20 44 01.6**	**-0.9**
LOD				*e*SG	**Sg**	**20 44 09.5**	**-0.1**
CDAG	**Cicekdag**	**1.03**	**77**	*i*P	**Pg**	**20 44 10.4**	**-1.1**
CDAG				*i*S	**Sg**	**20 44 25.2**	**+0.4**
CDAG	**Cicekdag**	**1.03**	**77**	*i*P	**Pg**	**20 44 10.4**	**-1.1**
CDAG				*i*S	**Sg**	**20 44 25.2**	**+0.3**
KIZT	**Kizilcal**	**1.06**	**242**	*e*Pn	**Pn**	**20 44 11.8**	**-1.1**
KIZT				*e*SN	**Sn**	**20 44 27.5**	**-0.4**
ELDT	**Eldivan**	**1.13**	**14**	*i*P	**Pb**	**20 44 13.5**	**0.0**
ELDT				*i*S	**Sg**	**20 44 29.8**	**+1.7**
KDHN	**Kadinhani**	**1.15**	**221**	*i*P	**Pb**	**20 44 14.1**	**+0.3**
KDHN				*i*S	**Sb**	**20 44 29.7**	**+0.8**
LADK	**Ladik-KONYA**	**1.31**	**205**	*e*PN	**Pn**	**20 44 16.9**	**+0.5**
CORM	**Corum**	**1.43**	**56**	*e*PN	**Pn**	**20 44 18.1**	**0.0**
KONT	**Konya--Tatoy**	**1.55**	**201**	*e*PN	**Pn**	**20 44 20.8**	**+1.1**
YOZ	**Yozgat**	**1.75**	**81**	*e*PN	**Pn**	**20 44 21.5**	**-1.0**
SVSK	**Karacayir**	**3.07**	**79**	*e*PN	**Pn**	**20 44 40.9**	**+0.2**

KRSC 28 20:49:52.5±0.6,5537N×16640E,h31km±30km,ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**2.19**	**294**	*e*P	Pn	20 50 27.5	+0.8
KBTR				*e*S	Sn	20 50 53.6	+0.9
MKZ	**Mys Kozlova**	**2.81**	**255**	P	Pn	20 50 37.9	+2.6
MKZ				*i*S	Sn	20 51 10.7	+2.6
ZLN	**Zelenaya**	**3.23**	**284**	P	Pn	20 50 44.8	+3.8
KMNR	**Kamenistaya**	**3.52**	**279**	*e*P	Pn	20 50 49.3	+4.3
SPN	**Mys Shipunski**	**4.38**	**241**	P	Pn	20 51 00.6	+3.8
SPN				*i*S	Sn	20 51 49.0	+2.3
NLC	**Nalytchevo**	**4.69**	**245**	P	Pn	20 51 04.7	+3.7
NLC				*i*S	Sn	20 51 55.8	+1.6
AVH	**Avacha**	**4.96**	**248**	*e*P	Pn	20 51 08.9	+4.2
AVH				*i*S	Sn	20 52 03.9	+3.0

CSEM ***28*** *20:57:06.9±0.1,3941N×3302E,h2km,MD3.7,Error ellipse: s-maj=1.6km s-min=1.5km az=167.0*

ISK ***28*** *20:57:06.8,3942N×3302E,h5km,ML3.5*

DDA ***28*** *20:57:07.5,3944N×3308E,h7km±1km,Md3.7*

ISCJB ***28*** *20:57:08.6±0.3,3942N±002×3303E±003,h10km,Error ellipse: s-maj=3.1km s-min=2.8km az=9.4*

ISC 28 20:57:09.2±0.3,3943N±002×3301E±003,h10km,n47, σ1$02/61,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.49**	**337**	PG	**Pg**	**20 57 17.8**	**-1.1**
LOD				*e*SG	**Sg**	**20 57 25.5**	**+0.1**
DAD	**Ankara**	**0.52**	**337**	*i*P	**Pg**	**20 57 18.1**	**-1.1**
DAD				*e*S	**Sg**	**20 57 25.9**	**-0.2**
KAMT	**Kaman**	**0.55**	**96**	PG	**Pg**	**20 57 17.7**	**-2.1**
KIZT	**Kizilcal**	**1.04**	**238**	PG	**Pg**	**20 57 28.1**	**-1.0**
CDAG	**Cicekdag**	**1.07**	**79**	*i*P	**Pg**	**20 57 26.9**	**-2.8**
CDAG				*i*S	**Sg**	**20 57 40.6**	**-3.0**
ELDT	**Eldivan**	**1.10**	**17**	*i*P	**Pb**	**20 57 28.4**	**-2.0**
ELDT				*i*S	**Sg**	**20 57 43.4**	**-1.4**
KDHN	**Kadinhani**	**1.15**	**218**	*i*P	**Pb**	**20 57 29.6**	**-1.4**
KDHN				*i*S	**Sb**	**20 57 46.4**	**+0.5**
CANT	**Cankiri**	**1.26**	**22**	PN	**Pn**	**20 57 32.1**	**-0.7**
CANT				*e*SN	**Sn**	**20 57 50.3**	**+0.4**
LADK	**Ladik-KONYA**	**1.33**	**203**	PN	**Pn**	**20 57 32.9**	**-0.9**
LADK				*e*SN	**Sn**	**20 57 51.6**	**+0.1**
SGKT	**Sivrigoynuk**	**1.36**	**328**	*i*P	**Pn**	**20 57 33.9**	**-0.3**
SGKT				*e*S	**Sb**	**20 57 51.3**	**-0.8**
CORM	**Corum**	**1.45**	**59**	*e*PN	**Pn**	**20 57 35.2**	**-0.3**
CORM				*e*SN	**Sn**	**20 57 56.8**	**+2.2**
KONT	**Konya--Tatoy**	**1.57**	**199**	*e*PN	**Pn**	**20 57 36.9**	**-0.1**
AVNT	**Avonos**	**1.58**	**114**	*i*P	**Pn**	**20 57 32.0**	**-5.1**
AVNT				*i*S	**Sn**	**20 57 52.1**	**-5.5**
AVNT	**Avonos**	**1.58**	**114**	*i*P	**Pn**	**20 57 32.0**	**-5.2**
AVNT				*i*S	**Sn**	**20 57 52.1**	**-5.5**
ESKT	**Eskisehir**	**1.68**	**274**	*e*PN	**Pn**	**20 57 38.1**	**-0.5**
BSTP	**Nigde**	**1.71**	**149**	*i*P	**Pn**	**20 57 38.6**	**-0.4**
BSTP				*i*S	**Sn**	**20 58 06.4**	**+5.5**
MDU	**Mudurnu**	**1.72**	**307**	*e*PN	**Pn**	**20 57 39.4**	**+0.2**
TOS	**Tosya**	**1.78**	**25**	*e*PN	**Pn**	**20 57 39.1**	**-0.8**
YOZ	**Yozgat**	**1.80**	**83**	*e*PN	**Pn**	**20 57 40.0**	**-0.2**
CTKT	**Corum**	**1.81**	**48**	*i*P	**Pn**	**20 57 40.7**	**+0.3**
CTKT				*e*S	**Sn**	**20 58 03.6**	**+0.2**
NIG	**Nigde**	**1.82**	**136**	*e*PN	**Pn**	**20 57 40.4**	**-0.1**
SAFT	**Safranbolu**	**1.82**	**352**	*e*PN	**Pn**	**20 57 41.5**	**+1.0**
BALT	**Daday**	**2.12**	**8**	*i*P	**Pn**	**20 57 46.5**	**+1.8**
BALT				*i*S	**Sn**	**20 58 13.4**	**+2.3**
GULT	**Gulveren**	**2.16**	**298**	*e*PN	**Pn**	**20 57 45.2**	**0.0**
KDZE	**Karadeniz Ereo**	**2.23**	**328**	*e*PN	**Pn**	**20 57 47.2**	**+1.1**
ALT	**Altintas**	**2.28**	**261**	*e*PN	**Pn**	**20 57 47.2**	**+0.3**
HDMB	**Hadim**	**2.50**	**190**	*e*PN	**Pn**	**20 57 49.8**	**-0.1**
ISP	**Isparta**	**2.52**	**232**	*e*PN	**Pn**	**20 57 51.0**	**+0.9**
CAVI	**Cavuskoy**	**2.56**	**289**	*e*PN	**Pn**	**20 57 51.1**	**+0.4**
BZK	**Bozkurt**	**2.64**	**16**	*e*PN	**Pn**	**20 57 52.6**	**+0.8**
KARA	**Karaisali**	**2.70**	**143**	*e*PN	**Pn**	**20 57 53.1**	**+0.5**
ADVT	**Abdulvahap**	**2.71**	**293**	*e*PN	**Pn**	**20 57 52.6**	**-0.1**
BCK	**Bucak**	**2.74**	**225**	*e*PN	**Pn**	**20 57 53.6**	**+0.4**
DIKM	**Dikmen**	**2.80**	**37**	*e*PN	**Pn**	**20 57 54.8**	**+0.8**
MERS	**Mersin**	**2.82**	**155**	*e*PN	**Pn**	**20 57 54.0**	**-0.3**
KVT	**Kavak**	**2.85**	**54**	*e*PN	**Pn**	**20 57 55.4**	**+0.7**
TOKT	**Tokat**	**2.86**	**71**	*e*PN	**Pn**	**20 57 56.0**	**+1.2**
KOZT	**Kozan**	**2.95**	**131**	*e*PN	**Pn**	**20 57 56.0**	**0.0**
SARI	**SarD1z-Kayseri**	**2.97**	**104**	*e*PN	**Pn**	**20 57 55.5**	**-0.8**
SVSK	**Karacayir**	**3.12**	**80**	*e*PN	**Pn**	**20 57 58.3**	**0.0**
KMRS	**Kahramanmaras**	**3.61**	**121**	*e*PN	**Pn**	**20 58 05.3**	**+0.2**
ELL	**Elmali**	**3.63**	**223**	*e*PN	**Pn**	**20 58 06.3**	**+0.9**
GAZ	**Gaziantep**	**4.00**	**123**	*e*PN	**Pn**	**20 58 10.7**	**+0.2**
MYA	**Malataya**	**4.37**	**103**	*e*PN	**Pn**	**20 58 16.5**	**+1.0**
MALT	**Malatya**	**4.37**	**103**	*e*PN	**Pn**	**20 58 17.2**	**+1.6**
PTK	**Pertek**	**4.99**	**94**	*e*PN	**Pn**	**20 58 25.8**	**+1.7**
EZC	**Erzincan**	**5.27**	**84**	*e*PN	**Pn**	**20 58 24.9**	**-3.0**

ISCJB ***28*** *21:13:59.

Greece.
SOF 28 21:14:18.4,3989N·2581E,h10km,MD4.1
ISC 28 21:14:15.5s0.3,**3952N**l001·**2599E**l001,**h13**km,s2km,
h23km,s3.6km:**pP-P,n563,**σ1**08**/594,**mb4.5**/86,**MS3.6**/14,
35C-19D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op		ISC		
SIGR	**SIGRI**	**0.33**	**198**	P		**Pg**	**21 14 22.5**	**+0.3**
SIGR				S		**Sg**	**21 14 28.0**	**+1.4**
PRK	**Paraskevi**	**0.35**	**141**	*e*PB		**Pg**	**21 14 23.0**	**+0.4**
PRK				*e*SB		**Sg**	**21 14 28.7**	**+1.3**
EZN	**Ezine**	**0.40**	**41**	PG		**Pg**	**21 14 22.5**	**-1.0**
EZN				*e*SG		**Sg**	**21 14 28.1**	**-0.8**
AYVA	**Ayvalik**	**0.58**	**111**	*i* S		**Sg**	**21 14 34.5**	**-0.2**
GADA	**Gvkgeada**	**0.67**	**354**	PG		**Pg**	**21 14 26.8**	**-1.8**
GADA				*e*SG		**Sg**	**21 14 36.3**	**-1.2**
LIA	**Limnos Island**	**0.72**	**301**	P		**Pg**	**21 14 29.0**	**-0.6**
LIA				S		**Sg**	**21 14 38.7**	**-0.4**
LIA	**Limnos Island**	**0.72**	**301**	*e*PN		**Pn**	**21 14 28.6**	**-2.9**
LIA				*e*SN		**Sg**	**21 14 38.6**	**-0.5**
LIA	**Limnos Island**	**0.72**	**301**	*e*Pn		**Pn**	**21 14 29.1**	**-2.4**
LIA				*e*Sn		**Sg**	**21 14 38.6**	**-0.5**
CHOS	**Chios island**	**1.13**	**177**	P		**Pb**	**21 14 36.7**	**-0.3**
CHOS				S		**Sb**	**21 14 52.2**	**+0.6**
ENEZ	**Enez**	**1.22**	**6**	*e*PN		**Pn**	**21 14 36.8**	**-1.5**
ENEZ				*e*SN		**Sn**	**21 14 54.5**	**-0.1**
URLA	**Izmir**	**1.25**	**158**	*i* S		**Sb**	**21 14 52.1**	**-2.9**
ALN	**Alexandroupoli**	**1.38**	**2**	P		**Pn**	**21 14 38.9**	**-1.5**
ALN				S		**Sn**	**21 14 58.3**	**-0.2**
BALB	**Balikesir**	**1.47**	**85**	*e*PN		**Pn**	**21 14 41.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.48**	**38**	*e*PN		**Pn**	**21 14 40.5**	**-1.4**
SART	**Tekirdag**	**1.48**	**38**	*i* S		**Sn**	**21 14 58.2**	**-2.9**
IZM	**Izmir**	**1.50**	**138**	*e*PN		**Pn**	**21 14 41.6**	**-0.5**
AKS	**Akhisar**	**1.56**	**114**	*e*PN		**Pn**	**21 14 42.3**	**-0.6**
AKHS	**Akhisar**	**1.56**	**114**	*i* S		**Sn**	**21 15 01.9**	**-1.0**
RDO	**Rodhopi**	**1.66**	**348**	*e*PN		**Pn**	**21 14 43.2**	**-1.1**
EDC	**Edincik**	**1.66**	**60**	*e*PN		**Pn**	**21 14 44.1**	**-0.2**
AOS	**Alonnisos**	**1.67**	**259**	P		**Pn**	**21 14 43.8**	**-0.7**
BNT	**Bandirma**	**1.70**	**60**	*e*PN		**Pn**	**21 14 43.7**	**-1.2**
PAIG	**Paliouri**	**1.82**	**284**	P		**Pn**	**21 14 45.3**	**-1.3**
TKR	**Tekirdag**	**1.89**	**38**	*e*PN		**Pn**	**21 14 47.4**	**-0.1**
SMG	**Samos**	**1.93**	**160**	*e*PB		**Pb**	**21 14 48.0**	**-2.5**
KCT	**Karacabey**	**1.97**	**67**	*e*PN		**Pn**	**21 14 48.7**	**+0.2**
DST	**Dursunbey**	**2.04**	**87**	*e*PN		**Pn**	**21 14 49.6**	**+0.1**
GCAM	**G?zelcaml?**	**2.06**	**151**	*i* S		**Sn**	**21 15 12.9**	**-2.6**
CRLT	**Corlu**	**2.09**	**39**	*e*PN		**Pn**	**21 14 50.1**	**-0.1**
PLG	**Polygyros**	**2.13**	**294**	P		**Pn**	**21 14 49.9**	**-0.9**
PLG	**Polygyros**	**2.13**	**294**	*e*PN		**Pn**	**21 14 49.8**	**-1.0**
NEO	**Neokhori**	**2.15**	**265**	*e*PN		**Pn**	**21 14 50.0**	**-1.1**
NEO	**Neokhori**	**2.15**	**265**	*e*Pn		**Pn**	**21 14 49.9**	**-1.2**
KDZ	**Kurdzhali**	**2.17**	**349**	*i* P		**Pn**	**21 14 50.2**	**-1.1**
XOR	**Xorichti**	**2.17**	**267**	P		**Pn**	**21 14 50.2**	**-1.1**
PTL	**Penteli**	**2.22**	**229**	*e*PN		**Pn**	**21 14 50.8**	**-1.2**
KULA	**Kula-Manisa**	**2.31**	**115**	*e*PN		**Pn**	**21 14 53.8**	**+0.5**
ATH	**Athens Observa**	**2.35**	**230**	*e*PN		**Pn**	**21 14 52.8**	**-1.1**
RZN	**Rozhen**	**2.37**	**336**	*i* P		**Pn**	**21 14 54.0**	**-0.1**
AYDN	**Tasoluk**	**2.38**	**141**	*i* S		**Sn**	**21 15 21.5**	**-1.7**
EDRB	**Edirne**	**2.39**	**14**	*e*PN		**Pn**	**21 14 53.8**	**-0.6**
SOK	**Sokhos**	**2.40**	**304**	P		**Pn**	**21 14 53.8**	**-0.6**
SLVT	**Silivri**	**2.41**	**44**	*e*PN		**Pn**	**21 14 55.2**	**+0.6**
ARMT	**Armutlu**	**2.44**	**64**	*e*PN		**Pn**	**21 14 55.2**	**+0.1**
NVR	**Nevrokopi**	**2.44**	**319**	*e*PN		**Pn**	**21 14 54.3**	**-0.8**
HORT	**Hortiatis**	**2.46**	**297**	P		**Pn**	**21 14 54.8**	**-0.6**
CTT	**Catalca**	**2.47**	**48**	*e*PN		**Pn**	**21 14 55.2**	**-0.3**
APE	**Apeiranthos**	**2.48**	**188**	P		**Pn**	**21 14 55.6**	**+0.1**
APE	**Apeiranthos**	**2.48**	**188**	*e*PN		**Pn**	**21 14 55.7**	**+0.2**
APE	**Apeiranthos**	**2.48**	**188**	⇑*i*P		**Pn**	**21 14 54.9**	**-0.6**
LKR	**Lokris**	**2.48**	**250**	P		**Pn**	**21 14 54.7**	**-0.9**
LKR	**Lokris**	**2.48**	**250**	*e*PN		**Pn**	**21 14 54.9**	**-0.7**
CTKS	**Kestanelik-??a**	**2.58**	**48**	*e*PN		**Pn**	**21 14 57.0**	**+0.1**
GEMT	**Gemlik**	**2.62**	**69**	*e*PN		**Pn**	**21 14 57.9**	**+0.4**
CTYL	**Yal??k??y-??at**	**2.62**	**41**	*e*PN		**Pn**	**21 14 57.8**	**+0.2**
MLSB	**Milas**	**2.63**	**147**	*e*PN		**Pn**	**21 14 57.5**	**-0.2**
MMB	**Musomiste**	**2.69**	**321**	*i* P		**Pn**	**21 14 57.0**	**-1.5**
BGKT	**Bogazkoy**	**2.70**	**51**	*e*PN		**Pn**	**21 14 58.8**	**+0.3**
LIT	**Litokhoron**	**2.75**	**283**	P		**Pn**	**21 14 58.5**	**-0.9**
PLD	**Plovdiv**	**2.76**	**340**	P		**Pn**	**21 14 59.2**	**-0.2**
LTK	**Loutraki**	**2.79**	**239**	P		**Pn**	**21 14 59.0**	**-0.9**
ISK	**Istanbul-Kandi**	**2.81**	**56**	*e*PN		**Pn**	**21 15 00.2**	**+0.1**
KNT	**Kendrikon**	**2.87**	**306**	P		**Pn**	**21 15 00.9**	**-0.1**
AGG	**Agios Georgios**	**2.88**	**261**	P		**Pn**	**21 15 00.6**	**-0.5**
AGG				S		**Sn**	**21 15 35.8**	**+0.2**
KLYT	**Kilyos**	**2.90**	**52**	*e*PN		**Pn**	**21 15 01.1**	**-0.3**
DID	**Didima**	**2.95**	**228**	P		**Pn**	**21 15 01.0**	**-1.1**
DENT	**Denizli**	**2.97**	**126**	*e*PN		**Pn**	**21 15 02.6**	**+0.3**
YER	**Yerkesik**	**2.99**	**142**	*e*PN		**Pn**	**21 15 02.5**	**-0.1**
KHL	**Karahalli**	**3.01**	**112**	*e*PN		**Pn**	**21 15 02.7**	**-0.1**
ADVT	**Abdulvahap**	**3.02**	**71**	*e*PN		**Pn**	**21 15 03.9**	**+0.9**
CAVI	**Cavuskoy**	**3.04**	**76**	*e*PN		**Pn**	**21 15 04.4**	**+1.0**
DAT	**Datca**	**3.06**	**155**	*e*PN		**Pn**	**21 15 03.4**	**-0.1**
THL	**Klokotos Trika**	**3.07**	**272**	P		**Pn**	**21 15 03.5**	**-0.2**
GRG	**Griva**	**3.10**	**299**	P		**Pn**	**21 15 04.8**	**+0.7**
VAY	**Valandovo**	**3.17**	**306**	*e*P		**Pn**	**21 14 59.8**	**-5.2**
VAY				*e*S		**Sg**	**21 15 55.1**	**-1.7**
KKB	**Krupnik**	**3.22**	**318**	*i* P		**Pn**	**21 15 05.0**	**+0.3**
ALT	**Altintas**	**3.23**	**97**	*e*PN		**Pn**	**21 15 06.7**	**+0.7**
SILT	**Sile**	**3.23**	**59**	*e*PN		**Pn**	**21 15 06.7**	**+0.7**
PGB	**Panagyurishte**	**3.32**	**336**	*i* P		**Pn**	**21 15 06.8**	**-0.4**
DALT	**Dalyan (Mudla)**	**3.45**	**142**	*e*PN		**Pn**	**21 15 09.9**	**+0.9**
BORA	**Eskisehir**	**3.46**	**83**	*i* S		**Sn**	**21 15 48.0**	**-2.0**
GULT	**Gulveren**	**3.60**	**74**	*e*PN		**Pn**	**21 15 12.2**	**+1.2**
STIP	**Stip**	**3.62**	**308**	*e*P		**Pn**	**21 15 12.0**	**+0.8**
STIP				*e*Sn		**Sg**	**21 16 11.2**	**-0.4**
VTS	**Vitosha**	**3.72**	**326**	*i* P		**Pn**	**21 15 13.6**	**+1.0**
PVL	**Pavlikeni**	**3.73**	**353**	*i* P		**Pn**	**21 15 12.5**	**-0.2**
FNA	**Florina**	**3.75**	**291**	P		**Pn**	**21 15 13.5**	**+0.4**
ESKT	**Eskisehir**	**3.76**	**88**	*e*PN		**Pn**	**21 15 13.6**	**+0.4**
BIA	**Bitola**	**3.87**	**294**	P		**Pn**	**21 15 14.8**	**+0.1**
ISP	**Isparta**	**3.92**	**114**	⇑*i*P		**Pn**	**21 15 15.9**	**+0.6**
ISP	**Isparta**	**3.92**	**114**	*e*Pn		**Pn**	**21 15 15.9**	**+0.6**
ELL	**Elmali**	**4.15**	**131**	*e*PN		**Pn**	**21 15 19.5**	**+1.0**
OHR	**Ohrid**	**4.27**	**293**	*e*P		**Pn**	**21 15 18.7**	**-1.5**
IDI	**Anoyia**	**4.32**	**192**	Pn		**Pn**	**21 15 20.7**	**-0.1**
	6.4nm,0.3s,baz=12,slow=13,SNR=26							
IDI				Sn		**Sn**	**21 16 09.5**	**-1.5**
	14nm,0.3s,baz=360,slow=17,SNR=3.1							
IDI				LR		LR	21 16 34.0	
	comp=Z,189nm,21.0s,baz=334,slow=33							
IDI	**Anoyia**	**4.32**	**192**	Pn		**Pn**	**21 15 20.7**	**-0.1**
IDI				Sn		**Sn**	**21 16 09.5**	**-1.5**
KSL	**Kastellorizon**	**4.41**	**139**	*e*PB		**Pb**	**21 15 28.0**	**-4.8**
KSL	**Kastellorizon**	**4.41**	**139**	*e*Pb		**Pb**	**21 15 27.0**	**-5.8**
BARS	**Barje**	**4.55**	**318**	⇓*i*Pn		**Pn**	**21 15 24.2**	**+0.1**
KIZT	**Kizilcal**	**4.62**	**96**	*e*PN		**Pn**	**21 15 26.0**	**+0.9**
KEK	**Kerkira**	**4.78**	**274**	*e*PN		**Pn**	**21 15 27.7**	**+0.5**
KEK	**Kerkira**	**4.78**	**274**	*e*Pn		**Pn**	**21 15 30.0**	**+2.8**
TIR	**Tirane**	**5.01**	**293**	*e*P		**Pn**	**21 15 31.1**	**+0.7**
TIR				pmax		pmax		
	comp=Z,62nm,0.5s							
TIR	**Tirane**	**5.01**	**293**	*e*Pn		**Pn**	**21 15 31.1**	**+0.7**
	comp=Z,62nm,0.5s							
TIR	**Tirane**	**5.01**	**293**	*e*Pn		**Pn**	**21 15 31.1**	**+0.7**
	comp=Z,62nm,0.5s							
CVD	**Cernavoda**	**5.03**	**17**	P		**Pn**	**21 15 30.8**	**+0.2**
CVD	**Cernavoda**	**5.03**	**17**	⇑*i*P		**Pn**	**21 15 31.0**	**+0.4**
CVD	**Cernavoda**	**5.03**	**17**	P		**Pn**	**21 15 30.8**	**+0.2**
CRAR	**CRAIOVA**	**5.07**	**342**	P		**Pn**	**21 15 30.5**	**-0.7**
LOD	**Lodumlu**	**5.24**	**84**	*e*PN		**Pn**	**21 15 35.2**	**+1.6**
TIRR	**Tirgusor**	**5.25**	**19**	P		**Pn**	**21 15 32.7**	**-1.0**
TIRR	**Tirgusor**	**5.25**	**19**	⇑*i*P		**Pn**	**21 15 32.6**	**-1.1**
TIRR	**Tirgusor**	**5.25**	**19**	*e*Pn		**Pn**	**21 15 32.5**	**-1.2**
	comp=Z,112nm,0.6s							
BOLS	**Boljevac**	**5.26**	**326**	⇓*i*Pn		**Pn**	**21 15 33.5**	**-0.2**
BOLS				*e*Sg		**Sg**	**21 17 02.1**	**-2.1**
HARR	**Harsova**	**5.36**	**15**	P		**Pn**	**21 15 34.7**	**-0.5**
HARR	**Harsova**	**5.36**	**15**	⇓*i*P		**Pn**	**21 15 34.6**	**-0.6**
PVY	**Plav**	**5.49**	**306**	⇓*i*Pn		**Pn**	**21 15 37.8**	**+0.9**
PVY				*e*Sn		**Sn**	**21 16 40.3**	**+0.5**
ISR	**Istrita**	**5.61**	**4**	⇑*i*P		**Pn**	**21 15 39.1**	**+0.5**
ISR	**Istrita**	**5.61**	**4**	⇑P		**Pn**	**21 15 39.1**	**+0.5**
ULC	**Ulcinj**	**5.67**	**296**	⇓*i*Pn		**Pn**	**21 15 39.7**	**+0.3**
ULC				*e*Sn		**Sn**	**21 16 44.5**	**+0.2**
BEY	**Berane**	**5.68**	**308**	⇓*i*Pn		**Pn**	**21 15 39.8**	**+0.2**
BEY				*e*Sn		**Sn**	**21 16 44.5**	**-0.2**
IVA	**Berane**	**5.68**	**308**	⇓*i*Pn		**Pn**	**21 15 39.8**	**+0.2**
IVA				*e*Sn		**Sn**	**21 16 44.5**	**-0.2**
DJES	**Djerdap**	**5.75**	**334**	⇑*i*Pn		**Pn**	**21 15 38.9**	**-1.6**
DJES				*e*Sg		**Sg**	**21 17 12.5**	**-7.5**
PDG	**Podgorica**	**5.86**	**302**	*e*Pn		**Pn**	**21 15 43.1**	**+1.1**
PDG				*e*Sn		**Sn**	**21 16 48.4**	**-0.7**
TTG	**Podgorica**	**5.86**	**302**	*e*Pn		**Pn**	**21 15 43.1**	**+1.1**
TTG				*e*Sn		**Sn**	**21 16 48.4**	**-0.7**
GRUS	**Gruza**	**5.88**	**320**	⇓*i*Pn		**Pn**	**21 15 41.5**	**-0.8**
GRUS				*e*Sn		**Sn**	**21 16 48.5**	**-1.1**
BR131	**Keskin Array S**	**5.91**	**86**	*e*Pn		**Pn**	**21 15 43.4**	**+0.6**
BRTR	**Keskin Array B**	**5.91**	**86**	Pn		**Pn**	**21 15 43.5**	**+0.8**
	comp=Z,9.8nm,0.3s,baz=254,slow=11,SNR=81							
BRTR				Lg			21 17 28.6	
	comp=Z,1.8nm,0.3s,baz=86,slow=20,SNR=3.5							
BRTR				LR		LR	21 18 26.8	
	comp=Z,582nm,18.7s,baz=11,slow=43							
BRTR	**Keskin Array B**	**5.91**	**86**	Pn		**Pn**	**21 15 43.5**	**+0.7**
SVIS	**Svilajnac**	**5.93**	**325**	*e*Pn		**Pn**	**21 15 41.6**	**-1.4**
SVIS				*e*Sg		**Sg**	**21 17 17.1**	**-8.6**
VOIR		**5.95**	**354**	P		**Pn**	**21 15 44.8**	**+1.5**
VOIR		**5.95**	**354**	⇓*i*P		**Pn**	**21 15 42.9**	**-0.4**
VOIR		**5.95**	**354**	P		**Pn**	**21 15 44.8**	**+1.5**
MLR	**Muntele Rosu**	**5.97**	**360**	Pn		**Pn**	**21 15 43.9**	**+0.4**
	comp=Z,34nm,0.3s,baz=200,slow=5.0,SNR=116							
MLR				Lg			21 17 30.5	
	comp=Z,3.1nm,0.3s,baz=152,slow=10,SNR=3.4							
KAMT	**Kaman**	**5.98**	**89**	*e*PN		**Pn**	**21 15 45.3**	**+1.5**
TLCR		**6.04**	**19**	⇑*i*P		**Pn**	**21 15 43.8**	**-0.6**
BUM	**Brajici-Budva**	**6.04**	**300**	⇑*i*Pn		**Pn**	**21 15 45.3**	**+0.7**
BUM				*e*Sn		**Sn**	**21 16 53.9**	**+0.3**
NKY	**Niksic**	**6.21**	**304**	⇑*i*Pn		**Pn**	**21 15 48.2**	**+1.3**
NKY				*e*Sn		**Sn**	**21 16 57.6**	**-0.1**
PLE	**Pljevlja**	**6.25**	**310**	⇓*i*Pn		**Pn**	**21 15 48.1**	**+0.8**
PLE				*e*Sn		**Sn**	**21 16 58.1**	**-0.4**
ODB	**Odobesti**	**6.30**	**7**	P		**Pn**	**21 15 49.3**	**+1.3**
ODB	**Odobesti**	**6.30**	**7**	⇑*i*P		**Pn**	**21 15 49.5**	**+1.5**
ODB	**Odobesti**	**6.30**	**7**	P		**Pn**	**21 15 49.3**	**+1.2**
GZR	**Gura Zlata**	**6.33**	**339**	P		**Pn**	**21 15 47.4**	**-1.1**
GZR	**Gura Zlata**	**6.33**	**339**	⇓*i*P		**Pn**	**21 15 47.7**	**-0.8**
GZR	**Gura Zlata**	**6.33**	**339**	P		**Pn**	**21 15 47.4**	**-1.1**
PLOR	**Plostina**	**6.34**	**4**	P		**Pn**	**21 15 49.2**	**+0.5**
PLOR	**Plostina**	**6.34**	**4**	⇑*i*P		**Pn**	**21 15 49.9**	**+1.2**
VRI	**Vrincioaia**	**6.37**	**5**	P		**Pn**	**21 15 49.7**	**+0.8**
VRI	**Vrincioaia**	**6.37**	**5**	⇓*i*P		**Pn**	**21 15 49.8**	**+0.9**
VRI	**Vrincioaia**	**6.37**	**5**	P		**Pn**	**21 15 49.7**	**+0.7**
HCY	**Herceg Novi**	**6.38**	**300**	⇑*i*Pn		**Pn**	**21 15 50.6**	**+1.5**
HCY				*e*Sn		**Sn**	**21 17 02.3**	**+0.6**
DIVS	**Divibare**	**6.40**	**318**	⇑*i*Pn		**Pn**	**21 15 49.3**	**-0.1**
DIVS				*e*Sn		**Sn**	**21 16 59.7**	**-2.6**
UPM	**Unac-Piva**	**6.47**	**307**	⇑*i*Pn		**Pn**	**21 15 51.2**	**+0.8**
UPM				*e*Sn		**Sn**	**21 17 03.6**	**-0.4**
BRY	**Bratogost**	**6.55**	**303**	*e*Pn		**Pn**	**21 15 53.4**	**+1.9**
BRY				*e*Sn		**Sn**	**21 17 06.0**	**0.0**
PE1	**Pezze di Greco**	**6.68**	**284**	*e*Pn		**Pn**	**21 15 53.5**	**+0.1**
MDB	**Medias**	**6.72**	**350**	P		**Pn**	**21 15 55.0**	**+1.2**
MDB	**Medias**	**6.72**	**350**	⇑*i*P		**Pn**	**21 15 55.2**	**+1.4**
MDB	**Medias**	**6.72**	**350**	P		**Pn**	**21 15 55.0**	**+1.1**
DEV	**Deva**	**6.75**	**341**	⇓*i*P		**Pn**	**21 15 54.6**	**+0.4**
DEV	**Deva**	**6.75**	**341**	⇓P		**Pn**	**21 15 54.6**	**+0.3**
BZS	**Buzias**	**6.89**	**334**	⇑*i*P		**Pn**	**21 15 55.3**	**-0.9**
TIP	**Timpagrande**	**7.16**	**270**	*e*Pn		**Pn**	**21 16 00.6**	**+0.7**
	comp=Z,63nm,0.8s							
SG1	**Sgolgore (BA)**	**7.25**	**283**	*e*Pn		**Pn**	**21 16 01.4**	**+0.3**
CSS	**Prodhromos**	**7.42**	**126**	*e*Pn		**Pn**	**21 16 02.1**	**-1.3**
	comp=Z,30nm,0.8s							
CSS	**Prodhromos**	**7.42**	**126**	*e*Pn		**Pn**	**21 16 02.1**	**-1.3**
	comp=Z,30nm,0.8s							
SEV	**Sevastopol'**	**7.61**	**46**	⇓*i*P		**Pn**	**21 16 03.1**	**-2.9**
SEV				*e*S		**Sn**	**21 17 23.1**	**-8.9**
DRGR		**7.65**	**343**	⇑*i*P		**Pn**	**21 16 05.5**	**-1.1**
DRGR		**7.65**	**343**	P		**Pn**	**21 16 05.4**	**-1.2**
KIS	**Kishinev**	**7.75**	**15**	*e*P		**Pn**	**21 16 07.0**	**-1.0**
KIS				*e*			21 17 45.0	
KIS				MLR		MLR		
	comp=Z,1μm,12.0s							
KIS				MLR		MLR		
	comp=Z,1μm,12.0s							
IAS	**Iasi**	**7.75**	**8**	P		**Pn**	**21 16 07.4**	**-0.6**
IAS	**Iasi**	**7.75**	**8**	⇓*i*P		**Pn**	**21 16 07.3**	**-0.7**
IAS	**Iasi**	**7.75**	**8**	P		**Pn**	**21 16 07.5**	**-0.6**
YAL	**Yalta**	**7.85**	**48**	*e*P		**Pn**	**21 16 08.3**	**-1.0**
YAL				*e*S		**Sn**	**21 17 31.5**	**-6.4**
CUC	**Castrocucco**	**7.85**	**277**	*e*Pn		**Pn**	**21 16 10.7**	**+1.4**
	comp=Z,262nm,0.9s							
MS1	**Monte Sant'Ang**	**7.95**	**289**	*e*Pn		**Pn**	**21 16 09.9**	**-0.8**
CEL	**Celeste**	**7.97**	**264**	*e*Pn		**Pn**	**21 16 11.2**	**+0.2**
	comp=Z,69nm,0.8s							
CEL	**Celeste**	**7.97**	**264**	*e*Pn		**Pn**	**21 16 11.2**	**+0.2**
	comp=Z,69nm,0.8s							
ALU	**Alushta**	**8.11**	**48**	*e*P		**Pn**	**21 16 12.9**	**+0.1**
ALU				*e*S		**Sn**	**21 17 37.2**	**-7.1**
SIM	**Simferopol'**	**8.11**	**45**	*e*P		**Pn**	**21 16 15.0**	**+2.1**
SIM				*e*S		**Sn**	**21 17 45.0**	**+0.7**
BURAR	**Bucovina Array**	**8.11**	**356**	P		**Pn**	**21 16 14.2**	**+1.3**
BURAR	**Bucovina Array**	**8.11**	**356**	⇑*i*P		**Pn**	**21 16 14.1**	**+1.2**
BURAR	**Bucovina Array**	**8.11**	**356**	P		**Pn**	**21 16 14.2**	**+1.4**
BUR08	**Bucovina Ar. S**	**8.14**	**356**	*e*Pn		**Pn**	**21 16 13.9**	**+0.6**
BUR08	**Bucovina Ar. S**	**8.14**	**356**	*e*Pn		**Pn**	**21 16 13.9**	**+0.6**
BMR	**Baia Mare**	**8.35**	**348**	⇑P		**Pn**	**21 16 16.6**	**+0.5**
BMR	**Baia Mare**	**8.35**	**348**	P		**Pn**	**21 16 16.0**	**-0.1**
BMR	**Baia Mare**	**8.35**	**348**	⇑*i*P		**Pn**	**21 16 16.5**	**+0.4**
BMR	**Baia Mare**	**8.35**	**348**	P		**Pn**	**21 16 16.0**	**-0.1**
SUDU	**Sudak**	**8.57**	**48**	*e*P		**Pn**	**21 16 17.0**	**-2.2**
SUDU				*e*S		**Sn**	**21 17 53.5**	**-2.2**
PKSM	**Moragy**	**8.59**	**324**	⇑*i*P		**Pn**	**21 16 19.1**	**-0.3**
PKSM	**Moragy**	**8.59**	**324**	⇑P		**Pn**	**21 16 19.1**	**-0.4**
VAE	**Valguarnera**	**9.30**	**261**	Pn		**Pn**	**21 16 27.9**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=270,slow=20,SNR=2.8							
VAE				LR		LR	21 20 23.3	
	comp=Z,283nm,19.4s,baz=307,slow=40							
BUD	**Budapest**	**9.43**	**330**	⇑*e*		**Pn**	**21 16 30.6**	**-0.3**
PSZ	**Piszkesteto**	**9.48**	**334**	*e*Pn		**Pn**	**21 16 29.7**	**-1.9**
	comp=Z,20nm,0.6s							
PSZ	**Piszkesteto**	**9.48**	**334**	⇑*e*		**Pn**	**21 16 30.5**	**-1.1**
PSZ	**Piszkesteto**	**9.48**	**334**	⇑*i*P		**Pn**	**21 16 30.4**	**-1.2**
PSZ	**Piszkesteto**	**9.48**	**334**	*e*Pn		**Pn**	**21 16 29.7**	**-2.0**
	comp=Z,20nm,0.6s							
UZH	**Uzhgorod**	**9.48**	**345**	*e*P		**Pn**	**21 16 32.6**	**+0.9**
MALT	**Malatya**	**9.77**	**93**	*e*P		**Pn**	**21 16 39.8**	**+4.1**
MALT				pmax		pmax		
	comp=Z,12nm,1.1s							
MALT	**Malatya**	**9.77**	**93**	*e*Pn		**Pn**	**21 16 39.8**	**+4.1**
	comp=Z,12nm,1.1s							
MALT	**Malatya**	**9.77**	**93**	*e*Pn		**Pn**	**21 16 39.8**	**+4.1**
	comp=Z,12nm,1.1s							
BOJS	**Bojanci**	**9.92**	**311**	*i* Pn		**Pn**	**21 16 39.6**	**+1.9**
CRVS	**Cervenica-Dubn**	**9.92**	**342**	*e*PN		**Pn**	**21 16 36.1**	**-1.6**
CRVS				*e*			21 16 49.6	
CRVS				*e*			21 19 52.6	
AQU	**L'Aquila**	**9.94**	**291**	*e*P		**Pn**	**21 16 36.0**	**-1.9**
AQU				pmax		pmax		
	comp=Z,34nm,1.0s							
AQU	**L'Aquila**	**9.94**	**291**	*e*Pn		**Pn**	**21 16 36.0**	**-1.9**
	comp=Z,34nm,1.0s							
CRES	**Cresnjev**	**9.99**	**313**	*e*Pn		**Pn**	**21 16 40.6**	**+2.0**
MMAI	**Mount Meron Ar**	**9.99**	**128**	Pn		**Pn**	**21 16 37.5**	**-1.3**
	comp=Z,2.4nm,0.3s,baz=321,slow=12,SNR=18							
MMAI				Sn		**Sn**	**21 18 27.5**	**-3.2**
	comp=Z,2.4nm,0.3s,baz=310,slow=26,SNR=8.0							
ANN	**Anapa**	**10.00**	**54**	*e*P		**Pn**	**21 16 37.4**	**-1.4**
ANN				*e*S		**Sn**	**21 18 30.9**	**+0.1**
ANN				pmax		pmax		
	comp=Z,126nm,1.8s							
VISS	**Visnje**	**10.33**	**311**	*i* Pn		**Pn**	**21 16 44.8**	**+1.5**
VYHS	**Vyhne**	**10.34**	**333**	*e*Pn		**Pn**	**21 16 42.4**	**-1.0**
VYHS	**Vyhne**	**10.34**	**333**	*e*PN		**Pn**	**21 16 42.3**	**-1.1**
VYHS				*ep*PN			21 16 46.8	
VYHS				*e*			21 20 06.7	
KWP	**Kalwaria**	**10.37**	**348**	*e*P		**Pn**	**21 16 44.9**	**+1.0**
LVV	**L'vov**	**10.39**	**353**	*e*P		**Pn**	**21 16 44.7**	**+0.6**
STHS	**Stebnicka Huta**	**10.46**	**343**	*e*PN		**Pn**	**21 16 46.9**	**+1.9**
CEY	**Cerknica**	**10.54**	**310**	*i* Pn		**Pn**	**21 16 47.7**	**+1.5**
KOLL	**Kolacno**	**10.57**	**331**	*e*PN		**Pn**	**21 16 46.2**	**-0.3**
KOLL				*ep*PN			21 16 50.2	
KOLL				*e*			21 16 57.8	
KOLL				*e*			21 49 16.8	
LJU	**Ljubljana**	**10.64**	**311**	*e*Pn		**Pn**	**21 16 48.9**	**+1.3**
NIE	**Niedzica**	**10.69**	**340**	*e*P		**Pn**	**21 16 49.6**	**+1.4**
ZST	**Bratislava**	**10.78**	**326**	*e*PN		**Pn**	**21 16 54.4**	**+5.0**
JAVS	**Javornik**	**10.83**	**310**	*i* Pn		**Pn**	**21 16 51.4**	**+1.2**
ARSA	**Arzberg**	**10.84**	**319**	⇑*i*Pn		**Pn**	**21 16 50.2**	**-0.1**
SMOL	**Smolenice**	**10.89**	**328**	*ep*PN		**Pn**	**21 16 59.8**	**+8.8**
SMOL	**Smolenice**	**10.89**	**328**	*e*P		**Pn**	**21 16 59.9**	**+8.9**
OBKA	**Obir**	**10.90**	**314**	⇓*i*Pn		**Pn**	**21 16 51.2**	**+0.1**
VOY	**Vojsko**	**11.01**	**310**	*e*Pn		**Pn**	**21 16 53.7**	**+1.1**
VOY				*e*			21 16 58.3	
VOY				*e*			21 17 13.2	
VOY				*e*			21 17 28.8	
KIEV	**Kiev**	**11.40**	**10**	*e*P		**Pn**	**21 16 55.8**	**-2.1**
KIEV				pmax		pmax

comp=Z,28nm,0.9s
ORIF Oris-en-Rattie 15.83 296 *e*P **Pn 21 18 01.8 +3.8**
comp=Z,28nm,0.9s
SMRF Simiane la Rot 15.86 293 *e*P **Pn 21 18 00.3 +1.9**
comp=Z,88nm,1.5s
SMRF Simiane la Rot 15.86 293 *e*P **Pn 21 18 00.3 +1.9**
comp=Z,44nm,1.5s
VRHR Novokhopersk 15.93 38 *e*P **Pn 21 18 02.5 +3.3**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,50nm,1.0s
VRHR pmax pmax
comp=E,50nm,1.6s
CDF Champ du Feu 16.11 310 *e*P **Pn 21 18 01.5 0.0**
comp=E,19nm,0.9s
CDF Champ du Feu 16.11 310 *e*P **Pn 21 18 01.5 0.0**
CDF pmax pmax
comp=Z,10.0nm,0.9s
CDF Champ du Feu 16.11 310 *e*P **Pn 21 18 01.5 0.0**
comp=Z,9.6nm,0.9s
HINF Hinteralfeld 16.11 307 *e*P **Pn 21 18 02.3 +0.8**
CABF La Chapelle 16.15 302 *e*P **Pn 21 18 00.9 -1.2**
comp=Z,43nm,1.1s
CABF La Chapelle 16.15 302 *e*P **Pn 21 18 00.9 -1.2**
CABF pmax pmax
comp=Z,21nm,1.0s
CABF La Chapelle 16.15 302 *e*P **Pn 21 18 00.9 -1.2**
comp=Z,21nm,1.1s
VIVF Saint-Julien-l 16.66 296 *e*P **Pn 21 18 11.5 +3.0**
comp=Z,62nm,1.1s
VIVF Saint-Julien-l 16.66 296 *e*P **Pn 21 18 11.5 +3.0**
VIVF pmax pmax
comp=Z,31nm,1.1s
VIVF Saint-Julien-l 16.66 296 *e*P **Pn 21 18 11.5 +3.0**
comp=Z,31nm,1.1s
LASF Ste Croix 17.10 293 *e*P **Pn 21 18 16.5 +2.3**
comp=Z,69nm,1.3s
LASF Ste Croix 17.10 293 *e*P **Pn 21 18 16.5 +2.3**
comp=Z,34nm,1.3s
OBN Obninsk 17.14 21⇑ *e*P **Pn 21 18 17.9 +3.4**
OBN *e*S **Sn 21 21 27.9 +3.1**
OBN pmax pmax
comp=Z,25nm,1.3s
OBN MLR MLR
comp=Z,300nm,14.0s
MEZF Maizieres J'vi 17.49 308 *e*P **Pn 21 18 25.2 +6.3**
comp=Z,17nm,0.7s
MEZF Maizieres J'vi 17.49 308 *e*P **Pn 21 18 25.2 +6.3**
comp=Z,17nm,0.7s
PLDF La Plantade 17.62 299 *e*P **Pn 21 18 23.3 +2.7**
SMF Signal de Mont 17.64 301 *e*P **Pn 21 18 21.5 +0.6**
comp=Z,46nm,1.1s
SMF Signal de Mont 17.64 301 *e*P **Pn 21 18 21.5 +0.6**
SMF pmax pmax
comp=Z,23nm,1.1s
SMF Signal de Mont 17.64 301 *e*P **Pn 21 18 21.5 +0.6**
comp=Z,23nm,1.1s
LBL Lubilhac 17.72 296 *e*P **Pn 21 18 23.2 +1.4**
LOR Lormes 17.81 303 *e*P **Pn 21 18 23.2 +0.3**
LOR *e*MLR MLR
comp=Z,99nm,19.1s
AGO Saint Agoulin 17.97 299 *e*P **Pn 21 18 26.3 +1.4**
SSF Saint Saulge 17.98 302 *e*P **Pn 21 18 25.4 +0.4**
comp=Z,27nm,1.1s
SSF Saint Saulge 17.98 302 *e*P **Pn 21 18 25.4 +0.4**
SSF pmax pmax
comp=Z,14nm,1.1s
SSF Saint Saulge 17.98 302 *e*P **Pn 21 18 25.4 +0.4**
comp=Z,14nm,1.1s
MOS Moscow 17.98 22 *e*P **Pn 21 18 27.9 +3.0**
MOS pmax pmax
comp=Z,36nm,1.1s
AVF Avril sur Loir 18.00 301 *e*P **Pn 21 18 25.5 +0.2**
comp=Z,35nm,1.1s
AVF Avril sur Loir 18.00 301 *e*P **Pn 21 18 25.5 +0.2**
AVF pmax pmax
comp=Z,18nm,1.1s
AVF Avril sur Loir 18.00 301 *e*P **Pn 21 18 25.5 +0.2**
comp=Z,18nm,1.1s
MTLF Montolieu 18.21 290 *e*P **Pn 21 18 28.1 +0.2**
CAF Calviac 18.49 295 *e*P **Pn 21 18 32.1 +0.8**
comp=Z,37nm,1.2s
CAF Calviac 18.49 295 *e*P **Pn 21 18 32.1 +0.8**
CAF pmax pmax
comp=Z,19nm,1.2s
CAF Calviac 18.49 295 *e*P **Pn 21 18 32.1 +0.8**
comp=Z,18nm,1.2s
BAIF Baives 18.64 312 *e*P **Pn 21 18 34.4 +1.3**
TCF Toulx Ste Croi 18.65 299 *e*P **Pn 21 18 33.2 0.0**
comp=Z,33nm,1.1s
TCF Toulx Ste Croi 18.65 299 *e*P **Pn 21 18 33.2 0.0**
TCF pmax pmax
comp=Z,16nm,1.1s
TCF Toulx Ste Croi 18.65 299 *e*P **Pn 21 18 33.2 0.0**
comp=Z,16nm,1.1s
RJF Les Rejaudoux 18.94 296 *e*P **Pn 21 18 38.6 +1.9**
RJF *e*MLR MLR
comp=Z,232nm,18.0s
VSU Vasula 18.96 1 *e*P **Pn 21 18 38.6 +1.7**
VSU pmax pmax
comp=Z,48nm,1.0s
EPF Esparros 19.57 289 *e*P **Pn 21 18 42.6 -1.7**
comp=Z,16nm,1.0s
EPF Esparros 19.57 289 *e*P **Pn 21 18 42.6 -1.7**
EPF pmax pmax
comp=Z,8.0nm,1.0s
EPF Esparros 19.57 289 *e*P **Pn 21 18 42.6 -1.7**
comp=Z,7.8nm,1.0s
EBIE Bielsa 19.71 288 P **Pn 21 18 46.0 0.0**
comp=Z,14nm,0.9s
EBIE Bielsa 19.71 288 P **Pn 21 18 46.0 +0.1**
comp=Z,14nm,0.9s
ESAC San Caprasio 20.18 285 P **P 21 18 49.5 -0.2**
comp=Z,10nm,0.6s
ESAC San Caprasio 20.18 285 P **P 21 18 49.5 -0.2**
comp=Z,10nm,0.6s
ETSF Etsaut 20.23 288 *e*P **P 21 18 50.4 +0.2**
comp=Z,32nm,0.9s
ETSF Etsaut 20.23 288 *e*P **P 21 18 50.4 +0.2**
ETSF pmax pmax
comp=Z,16nm,0.9s
ETSF Etsaut 20.23 288 *e*P **P 21 18 50.4 +0.2**
comp=Z,16nm,0.9s
EMOS Mosqueruela 20.28 281 P **P 21 18 51.5 +0.7**
comp=Z,12nm,0.7s
EMOS Mosqueruela 20.28 281 P **P 21 18 51.5 +0.7**
comp=Z,12nm,0.7s
EBEN Beniarda 20.34 276 P **P 21 18 52.3 +0.9**
comp=Z,22nm,0.5s
SJPF Ste Jean 20.72 289 *e*P **P 21 18 56.0 +0.5**
comp=Z,31nm,0.7s
SJPF Ste Jean 20.72 289 *e*P **P 21 18 56.0 +0.5**
SJPF pmax pmax
comp=Z,15nm,0.7s
SJPF Ste Jean 20.72 289 *e*P **P 21 18 56.0 +0.5**
comp=Z,15nm,0.7s
LDF La Druitiere 20.76 304 *e*P **P 21 18 55.5 -0.4**
EALK Alkurruntz 20.92 289 P **P 21 18 58.2 +0.5**
comp=Z,17nm,1.0s
EALK Alkurruntz 20.92 289 P **P 21 18 58.2 +0.5**
comp=Z,17nm,1.0s
ELIZ Elizondo 20.94 289 P **P 21 18 59.0 +1.1**
ELIZ pmax pmax
comp=Z,9.0nm,0.6s
ELIZ Elizondo 20.94 289 P **P 21 18 59.0 +1.1**
comp=Z,8.6nm,0.6s
FLN La Foliniere 21.03 305 *e*P **P 21 18 59.6 +0.8**
FLN *e*MLR MLR
comp=Z,168nm,19.2s,MS3.1
FLN La Foliniere 21.03 305 *e*P **P 21 18 59.6 +0.8**
FLN LR LR
comp=Z,170nm,19.3s,MS3.4
CART Cartagena 21.17 273 *e*P **P 21 18 58.3 -2.1**
comp=Z,21nm,0.8s,mb4.5
ETOB Tobarra 21.36 276 P **P 21 19 03.1 +0.6**
comp=Z,12nm,0.7s,mb4.3
ETOB Tobarra 21.36 276 P **P 21 19 03.1 +0.6**
comp=Z,12nm,0.7s,mb4.3
ETOR Torete 21.44 282 P **P 21 19 04.3 +1.0**
ETOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.1
ETOR Torete 21.44 282 P **P 21 19 04.3 +1.0**
comp=Z,6.6nm,0.7s,mb4.1
ETOR Torete 21.44 282 P **P 21 19 04.3 +1.0**
comp=Z,6.6nm,0.7s,mb4.1
ECRI Cripan 21.66 287 P **P 21 19 07.3 +1.6**
ECRI pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
ECRI Cripan 21.66 287 P **P 21 19 07.3 +1.6**
comp=Z,7.2nm,0.8s,mb4.2
HFS Hagfors 22.03 343 P **P 21 19 08.3 -1.2**
comp=Z,8.9nm,1.1s,mb4.1,baz=178,slow=12,SNR=8.1
HFS LR LR 21 28 16.3
comp=Z,402nm,18.9s,MS3.9,baz=147,slow=38
HFS Hagfors 22.03 343 P **P 21 19 08.3 -1.2**
HFS pmax pmax
comp=Z,9.0nm,1.1s
HFS MLR MLR
comp=Z,402nm,18.9s
HFS Hagfors 22.03 343 P **P 21 19 08.3 -1.2**
HFS LR LR 21 28 16.2
EVIA Vianos 22.10 277 P **P 21 19 11.3 +0.9**
EVIA pmax pmax
comp=Z,14nm,0.8s,mb4.4
EVIA Vianos 22.10 277 P **P 21 19 11.3 +0.9**
comp=Z,14nm,0.8s,mb4.4
SGMF Saint Gilles 22.24 302 *e*P **P 21 19 11.3 -0.5**
comp=Z,126nm,1.4s,mb4.9
SGMF Saint Gilles 22.24 302 *e*P **P 21 19 11.3 -0.5**
SGMF pmax pmax
comp=Z,63nm,1.4s,mb4.8
SGMF Saint Gilles 22.24 302 *e*P **P 21 19 11.3 -0.5**
comp=Z,63nm,1.4s,mb4.9
ENIJ Nijar 22.25 272 P **P 21 19 11.8 -0.3**
ENIJ pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
ENIJ Nijar 22.25 272 P **P 21 19 11.8 -0.3**
comp=Z,3.5nm,0.6s,mb4.0
ENIJ Nijar 22.25 272 P **P 21 19 11.8 -0.3**
comp=Z,3.5nm,0.6s,mb4.0
ELAN Lanestosa 22.33 289 P **P 21 19 13.5 +0.7**
comp=Z,22nm,0.9s,mb4.6
ELAN Lanestosa 22.33 289 P **P 21 19 13.5 +0.7**
comp=Z,22nm,0.9s,mb4.6
QUIF Quic 22.57 301 *e*P **P 21 19 16.3 +0.9**
KAF Kangasniemi 22.62 0 *e*p **P 21 19 12.7 -3.0**
comp=Z,12nm,0.7s,mb4.4
KAF Kangasniemi 22.62 0 *e*P **P 21 19 12.7 -3.0**
KAF pmax pmax
comp=Z,12nm,0.7s,mb4.4
EQES Quesada 22.72 275 P **P 21 19 17.0 0.0**
comp=Z,24nm,1.3s,mb4.5
EQES Quesada 22.72 275 P **P 21 19 17.0 0.0**
comp=Z,24nm,1.3s,mb4.5
ROSF Rostrenen 22.73 302 *e*P **P 21 19 16.1 -0.9**
EBER Berja 22.80 273 P **P 21 19 19.6 +1.7**
comp=Z,42nm,0.8s,mb4.9
EBER Berja 22.80 273 P **P 21 19 19.6 +1.7**
comp=Z,42nm,0.8s,mb4.9
KLMR Klimovskoe 22.95 17 P **P 21 19 26.7 +7.4**
KLMR pmax pmax
comp=Z,53nm,1.6s,mb4.7
ESDC Sonseca Array 23.03 280 P **P 21 19 18.6 -1.7**
comp=Z,4.9nm,0.6s,mb4.1,baz=72,slow=10,SNR=47
ESDC Sonseca Array 23.03 280 P **P 21 19 20.8 +0.5**
comp=Z,12nm,1.1s,mb4.2
ESDC Sonseca Array 23.03 280 P **P 21 19 20.8 +0.5**
comp=Z,12nm,1.1s,mb4.2
ESLA Sonseca Array 23.03 280 *e*P **P 21 19 18.8 -1.5**
comp=Z,6.4nm,1.1s,mb4.0
ESLA Sonseca Array 23.03 280 *e*P **P 21 19 18.8 -1.5**
comp=Z,6.4nm,1.1s,mb4.0
GUD Guadarrama 23.04 283 P **P 21 19 19.4 -1.0**
GUD pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
GUD Guadarrama 23.04 283 P **P 21 19 19.4 -1.0**
comp=Z,5.4nm,0.6s,mb4.2
GUD Guadarrama 23.04 283 P **P 21 19 19.4 -1.0**
comp=Z,5.4nm,0.6s,mb4.2
EALB Alboran 23.18 270 P **P 21 19 22.9 +1.0**
comp=Z,46nm,1.2s,mb4.8
EALB Alboran 23.18 270 P **P 21 19 22.9 +1.0**
comp=Z,46nm,1.2s,mb4.8
EBAN Banos Encina 23.18 276 P **P 21 19 22.8 +0.9**
EBAN pmax pmax
comp=Z,37nm,1.2s,mb4.7
EBAN Banos Encina 23.18 276 P **P 21 19 22.8 +0.9**
comp=Z,37nm,1.2s,mb4.7
EBAN Banos Encina 23.18 276 P **P 21 19 22.8 +0.9**
comp=Z,37nm,1.2s,mb4.7
ECOG Cogollos-Vega 23.23 274 P **P 21 19 22.8 +0.5**
ECOG pmax pmax
comp=Z,1.0nm,0.9s
ECOG Cogollos-Vega 23.23 274 P **P 21 19 22.8 +0.5**
comp=Z,1.0nm,0.9s
ECOG Cogollos-Vega 23.23 274 P **P 21 19 22.8 +0.5**
comp=Z,1.0nm,0.9s
NAO01 NORSAR Array S 23.32 341 *e*P **P 21 19 21.9 -1.2**
NAO01 NORSAR Array S 23.32 341 *e*P **P 21 19 21.9 -1.2**
comp=Z,27nm,0.8s,mb4.7
NAO01 *e* 21 19 34.0
EGUA Guajares 23.34 273 P **P 21 19 22.6 -1.0**
EGUA pmax pmax
comp=Z,189nm,1.0s,mb5.5
EGUA Guajares 23.34 273 P **P 21 19 22.6 -1.0**
comp=Z,189nm,1.0s,mb5.5
EGUA Guajares 23.34 273 P **P 21 19 22.6 -0.9**
comp=Z,189nm,1.0s,mb5.5
NB2 NORSAR Subarra 23.41 342 P **P 21 19 22.6 -1.4**
comp=Z,14nm,0.8s,mb4.5,baz=146,slow=9.3
NOA NORSAR Array B 23.41 342 P **P 21 19 23.1 -1.0**
comp=Z,2.8nm,0.6s,mb3.9,baz=145,slow=9.3,SNR=14
NOA LR LR 21 29 44.0
comp=Z,121nm,18.5s,MS3.4,baz=180,slow=40
NOA NORSAR Array B 23.41 342 P **P 21 19 23.1 -0.9**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,121nm,18.5s
NOA NORSAR Array B 23.41 342 P **P 21 19 23.0 -1.0**
ERON Agron 23.48 273 P **P 21 19 25.2 +0.2**
comp=Z,16nm,1.3s,mb4.3
ERON Agron 23.48 273 P **P 21 19 25.2 +0.2**
comp=Z,16nm,1.3s,mb4.3
EARI Arriondas 23.63 289 P **P 21 19 26.0 -0.4**
comp=Z,30nm,1.4s,mb4.5
EARI Arriondas 23.63 289 P **P 21 19 26.0 -0.4**
comp=Z,30nm,1.4s,mb4.5
JOF Joensuu 23.65 6 *e*p **P 21 19 23.1 -3.3**
comp=Z,7.0nm,0.8s,mb4.1
JOF Joensuu 23.65 6 *e*P **P 21 19 23.1 -3.3**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
ELUQ Luque 23.70 275 P **P 21 19 25.8 -1.3**
ELUQ pmax pmax
comp=Z,22nm,1.4s,mb4.4
ELUQ Luque 23.70 275 P **P 21 19 25.8 -1.3**
comp=Z,22nm,1.4s,mb4.4
ELUQ Luque 23.70 275 P **P 21 19 25.8 -1.3**
comp=Z,22nm,1.4s,mb4.4
ELOJ Sierra Loja 23.71 274 P **P 21 19 25.6 -1.6**
ELOJ pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
ELOJ Sierra Loja 23.71 274 P **P 21 19 25.6 -1.6**
comp=Z,4.7nm,0.6s,mb4.1
ELOJ Sierra Loja 23.71 274 P **P 21 19 25.6 -1.6**
comp=Z,4.7nm,0.6s,mb4.1
EADA Adamuz 23.79 277 P **P 21 19 26.1 -1.8**
comp=Z,24nm,0.8s,mb4.7
EADA Adamuz 23.79 277 P **P 21 19 26.1 -1.8**
comp=Z,24nm,0.8s,mb4.7
TAM Tamanrasset 24.09 232 *e*P **P 21 19 32.3 +1.5**
TAM pmax pmax
comp=Z,9.0nm,1.1s,mb4.1
TAM Tamanrasset 24.09 232 *e*P **P 21 19 32.3 +1.5**
comp=Z,9.3nm,1.1s,mb4.1
TAM Tamanrasset 24.09 232 *e*P **P 21 19 32.3 +1.5**
comp=Z,9.3nm,1.1s,mb4.1
EMIJ Mijas 24.35 273 P **P 21 19 32.0 -1.0**
comp=Z,16nm,0.6s,mb4.6
EMIJ Mijas 24.35 273 P **P 21 19 32.0 -1.1**
comp=Z,16nm,0.6s,mb4.6
TZK Tazeka 24.69 267 *i* P **P 21 19 37.5 +1.3**
ECAL Calabor 24.84 286 P **P 21 19 37.4 0.0**
comp=Z,11nm,0.7s,mb4.5
ECAL Calabor 24.84 286 P **P 21 19 37.4 0.0**
comp=Z,11nm,0.7s,mb4.5
PBRG Braganca 24.85 286 *e*P **P 21 19 36.8 -0.8**
EJIF Jimena Fronter 24.92 273 P **P 21 19 38.1 -0.1**
EJIF pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
EJIF Jimena Fronter 24.92 273 P **P 21 19 38.1 -0.1**
comp=Z,8.9nm,0.6s,mb4.5
AKTK Aktyubinsk 24.96 53 P **P 21 19 39.8 +1.4**
AKTK Aktyubinsk 24.96 53 P **P 21 19 39.8 +1.4**
AKTK LR LR 21 32 05.0
AKTO Aktyubinsk 24.96 53 P **P 21 19 39.8 +1.4**
comp=Z,7.4nm,1.1s,mb4.1,baz=253,slow=12,SNR=11
AKTO LR LR 21 32 05.0
comp=Z,102nm,19.0s,MS3.4,baz=47,slow=43
AKTO Aktyubinsk 24.96 53 P **P 21 19 39.8 +1.4**
AKTO pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
AKTO MLR MLR
comp=Z,102nm,19.0s,MS3.4
EKA Eskdalemuir Ar 25.02 319 P **P 21 19 38.7 -0.2**
comp=Z,17nm,0.6s,mb4.7,baz=113,slow=9.0,SNR=50
EKA Eskdalemuir Ar 25.02 319 P **P 21 19 38.7 -0.2**
EKA pmax pmax
comp=Z,17nm,0.6s
ESK Eskdalemuir 25.04 319 *e*P **P 21 19 38.6 -0.5**
ESK pmax pmax
comp=Z,24nm,0.7s,mb4.8
ESK Eskdalemuir 25.04 319 *e*P **P 21 19 38.6 -0.5**
comp=Z,24nm,0.7s,mb4.8
ESK Eskdalemuir 25.04 319 *e*P **P 21 19 38.6 -0.5**
comp=Z,24nm,0.7s,mb4.8
ESPR Espera 25.10 274 P **P 21 19 38.7 -1.2**
comp=Z,12nm,1.4s,mb4.2
ESPR Espera 25.10 274 P **P 21 19 38.7 -1.2**
comp=Z,12nm,1.4s,mb4.2
MVO Moncorvo 25.14 284 *e*P **P 21 19 40.2 0.0**
EMIN Mina Concepcio 25.50 277 P **P 21 19 43.5 0.0**
comp=Z,23nm,1.1s,mb4.6
EMIN Mina Concepcio 25.50 277 P **P 21 19 43.5 +0.1**
comp=Z,23nm,1.1s,mb4.6
MDT Midelt 25.51 264 P **P 21 19 43.9 +0.2**
comp=Z,11nm,0.9s,mb4.4,baz=83,slow=11,SNR=23
EBAD Badajoz 25.53 279 P **P 21 19 44.6 +0.8**
comp=Z,5.1nm,0.9s,mb4.0
EBAD Badajoz 25.53 279 P **P 21 19 44.6 +0.8**
comp=Z,5.1nm,0.9s,mb4.0
MTE Manteigas 25.63 283 *e*P **P 21 19 44.9 +0.2**
comp=Z,35nm,0.9s,mb4.9
MTE Manteigas 25.63 283 *e*P **P 21 19 44.3 -0.4**
comp=Z,18nm,0.8s,mb4.7
MTE Manteigas 25.63 283 *e*P **P 21 19 44.3 -0.4**
comp=Z,18nm,0.8s,mb4.7
ZFT Errachidia 25.64 263 *i* P **P 21 19 46.0 +1.2**
PCBR Castelo Branco 25.68 282 *e*P **P 21 19 44.9 -0.2**
PBAR Barrancos 25.68 278 *e*P **P 21 19 44.5 -0.6**
comp=Z,20nm,1.8s,mb4.4
PMRV Marv??o 25.69 281 *e*P **P 21 19 44.8 -0.4**
comp=Z,25nm,1.9s,mb4.4
RSA Sarsar 25.69 270 *i* P **P 21 19 44.5 -0.7**
MIF Mishlifen 25.75 266 *i* P **P 21 19 44.0 -1.8**
PVIS Viseu 25.85 284 *e*P **P 21 19 46.7 +0.1**
PESTR Estremoz 25.95 279 *e*P **P 21 19 46.6 -1.0**
comp=Z,19nm,1.1s,mb4.5
EGRO El Granado 26.18 276 P **P 21 19 48.9 -0.7**
comp=Z,3.7nm,0.6s,mb4.1
EGRO El Granado 26.18 276 P **P 21 19 48.9 -0.7**
comp=Z,3.7nm,0.6s,mb4.1
EVO Evora 26.34 279 *e*P **P 21 19 50.7 -0.4**
PBEJ Beja 26.35 278 *e*P **P 21 19 50.8 -0.4**
comp=Z,31nm,1.1s,mb4.7
PVAQ Vaqueiros 26.39 276 *e*P **P 21 19 51.3 -0.3**
comp=Z,46nm,1.6s,mb4.8
PBDV Barranco-do-Ve 26.60 276 *e*P **P 21 19 53.3 -0.1**
KIB El Ksiba 26.71 265 *e*P **P 21 19 56.0 +1.5**
ARU Arti 27.24 41 *c i*P **P 21 20 02.1 +3.1**
ARU *e* 21 20 42.1
ARU *e*S **S 21 24 44.1 +6.6**
ARU *e*SS 21 25 53.8
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.5
ARU Arti 27.24 41 *e*P **P 21 20 00.6 +1.6**
comp=Z,16nm,1.0s,mb4.5
ARU Arti 27.24 41 *e*P **P 21 20 00.6 +1.6**
comp=Z,16nm,1.0s,mb4.5
ARCES ARCESS Array B 30.08 360 LR LR 21 33 23.4
comp=Z,262nm,20.1s,MS3.9,baz=4.5,slow=38
TOA0 Torodi Ar. Sit 33.90 226 *e*P **P 21 20 58.1 -0.1**
TOA0 Torodi Ar. Sit 33.90 226 *e*P **P 21 20 58.1 -0.1**
TORD Torodi Ar. Bea 33.90 226 P **P 21 20 58.1 0.0**
comp=Z,10nm,0.7s,mb4.9,baz=35,slow=9.2,SNR=85
TORD PcP PcP 21 23 35.5 -1.2
comp=Z,0.6nm,0.7s,baz=36,slow=2.1,SNR=3.3
TORD LR LR 21 35 34.2
comp=Z,61nm,18.7s,MS3.4,baz=20,slow=38
TORD Torodi Ar. Bea 33.90 226 P **P 21 20 58.1 0.0**
TORD PcP PcP 21 23 35.5 -1.2
TORD LR LR 21 35 34.2
KBL Kabul 34.48 85 *e*P **P 21 21 05.6 +2.5**
KBL pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KBL Kabul 34.48 85 *e*P **P 21 21 05.6 +2.5**
comp=Z,1.7nm,0.6s,mb4.2
KBL Kabul 34.48 85 *e*P **P 21 21 05.6 +2.4**
comp=Z,1.7nm,0.6s,mb4.2
AAK Ala-Archa 36.30 69⇑ *e*P **P 21 21 20.9 +2.2**
AAK pmax pmax
comp=Z,11nm,1.7s,mb4.5
AAK Ala-Archa 36.30 69 *e*P **P 21 21 23.2 +4.5**
comp=Z,8.9nm,1.1s,mb4.6
KURK Kurchatov 38.03 55 LR LR 21 39 08.1
comp=Z,57nm,19.3s,MS3.4,baz=300,slow=39
KBS Kingsbay 39.92 356⇑ *e*P **P 21 21 51.4 +2.6**
KBS pmax pmax
comp=Z,22nm,1.3s,mb4.7
NVS Novosibirsk 40.62 48 *i* P **P 21 21 56.0 +1.2**
NVS pmax pmax
comp=N,10.0nm,1.6s
NVS pmax pmax
comp=Z,26nm,1.6s,mb4.6
NVS pmax pmax
comp=E,8.0nm,1.2s
MK31 Makanchi Array 40.94 61 *e*P **P 21 21 56.9 -0.7**
MK31 Makanchi Array 40.94 61 *e*P **P 21 21 56.9 -0.7**
MKAR Makanchi Array 40.94 61 P **P 21 21 57.8 +0.2**
comp=E,0.9nm,0.5s,mb3.6,baz=273,slow=8.1,SNR=13
MKAR PP PP 21 23 35.6 +3.7
comp=E,1.5nm,1.0s,baz=280,slow=7.3,SNR=3.7
MKAR PcP PcP 21 23 57.2 -0.5
comp=E,2.1nm,0.8s,baz=264,slow=5.6,SNR=4.5
MKAR LR LR 21 40 24.1
comp=E,64nm,18.2s,MS3.5,baz=8.3,slow=38
MKAR Makanchi Array 40.94 61 P **P 21 21 57.8 +0.2**
MKAR 21 23 35.6
MKAR 21 23 57.2
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR MLR MLR
comp=Z,64nm,18.3s
MKAR Makanchi Array 40.94 61 P **P 21 21 57.8 +0.2**
MKAR PP PP 21 23 35.6 +3.7
MKAR PcP PcP 21 23 57.2 -0.5
MKAR LR LR 21 40 24.1
ZAA0 Zalesovo Array 41.59 50 *e*P **P 21 22 02.8 0.0**
ZAA0 Zalesovo Array 41.59 50 *e*P **P 21 22 02.8 0.0**
ZALV Zalesovo Beam 41.59 50 P **P 21 22 02.2 -0.6**
comp=Z,6.7nm,0.8s,mb4.3,baz=270,slow=8.9,SNR=8.6
ZALV LR LR 21 40 42.8
comp=Z,64nm,18.6s,MS3.5,baz=26,slow=38
ZALV Zalesovo Beam 41.59 50 P **P 21 22 02.2 -0.6**
DBIC Dimbokro 42.88 228 P **P 21 22 13.2 -0.5**
comp=Z,11nm,0.8s,mb4.6,baz=18,slow=9.5,SNR=18
DBIC LR LR 21 40 32.6
comp=Z,59nm,18.4s,MS3.5,baz=135,slow=37
DBIC Dimbokro 42.88 228 P **P 21 22 13.3 -0.4**
DBIC pmax pmax
comp=Z,11nm,0.8s
DBIC MLR MLR
comp=Z,59nm,18.4s
DBIC Dimbokro 42.88 228 *e*P **P 21 22 13.4 -0.3**
comp=Z,13nm,0.9s,mb4.7
DBIC Dimbokro 42.88 228 *e*P **P 21 22 13.4 -0.3**
comp=Z,13nm,0.9s,mb4.7
TIC Toumodi 42.99 229 *e*P **P 21 22 14.2 -0.5**
comp=Z,48nm,0.9s,mb5.2
KIC Kosan Boka 43.06 228 *e*P **P 21 22 15.1 -0.1**
comp=Z,75nm,1.0s,mb5.4
LIC Lamto 43.34 228 *e*P **P 21 22 17.4 0.0**
comp=Z,40nm,0.9s,mb4.8
LIC Lamto 43.34 228 *e*P **P 21 22 17.4 0.0**
comp=Z,57nm,0.9s,mb5.3
WMQ Urumqi 45.36 64 *e*P **P 21 22 35.0 +1.7**

WMQ AMB AMB
comp=Z,8.0nm,1.0s,mb4.5
WMQ LR LR
comp=N,70nm,22.0s,MS3.7
WMQ LR LR
comp=E,89nm,24.0s,MS3.7
TLY Talaya 53.21 49 *e*P **P 21 23 38.6 +5.4**
TLY pmax pmax
comp=Z,11nm,1.3s,mb4.6
LSZ Lusaka 54.55 177 *e*P **P 21 23 44.2 +0.9**
LSZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
LSZ Lusaka 54.55 177 *e*P **P 21 23 44.2 +0.9**
comp=Z,2.4nm,0.7s,mb4.3
LSZ Lusaka 54.55 177 *e*P **P 21 23 44.2 +0.9**
comp=Z,2.4nm,0.7s,mb4.3
GTA Gaotai 55.41 65 *e*P **P 21 23 53.8 +4.3**
GTA AP pP 21 23 58.5 +4.9
GTA XP sP 21 24 01.3 +6.1
GTA AMB AMB
comp=Z,2.0nm,0.8s,mb4.2
BOD Bodaibo 56.65 40 *e*P **P 21 24 00.8 +2.8**
ULN Ulaanbaatar 56.67 53 *e*P **P 21 23 57.8 -0.5**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ULN Ulaanbaatar 56.67 53 *e*P **P 21 23 57.8 -0.5**
comp=Z,1.6nm,0.8s,mb4.1
ULN Ulaanbaatar 56.67 53 *e*P **P 21 23 57.8 -0.6**
comp=Z,1.6nm,0.8s,mb4.1
TSUM Tsumeb 58.94 189 LR LR 21 50 39.8
comp=Z,74nm,18.3s,MS3.9,baz=352,slow=37
LZH Lanzhou 59.77 66 *e*P **P 21 24 25.0 +4.8**
LZH AP pP 21 24 32.0 +7.6
LZH XP sP 21 24 35.5 +10
LZH AMB AMB
comp=Z,23nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,96nm,4.2s
SCHQ Schefferville 60.34 318 P **P 21 24 23.0 -0.8**
comp=Z,7.0nm,0.8s,mb4.8,baz=62,slow=6.0,SNR=12
SCHQ Schefferville 60.34 318 *e*P **P 21 24 22.9 -0.9**
comp=Z,9.0nm,0.7s,mb4.9
SCHQ Schefferville 60.34 318 *e*P **P 21 24 22.9 -0.9**
comp=Z,9.0nm,0.7s,mb4.9
YAK Yakutsk 61.80 31⇑ *e*P **P 21 24 37.5 +3.9**
YAK pmax pmax
comp=Z,11nm,1.7s,mb4.7
CD2 Chengdu 62.30 72 P **P 21 24 38.8 +1.3**
HHC Hu-ho-hao-te 62.73 58 *e*P **P 21 24 40.5 +0.3**
HHC AP pP 21 24 50.8 +6.4
HHC XP sP 21 24 55.0 +9.1
HHC PP PP 21 27 00.3 +2.5
HHC PCS PcS 21 29 20.5 -1.6
HHC *e*S **S 21 33 02.5 -6.0**
HHC XS sS 21 33 19.5 +4.1
HHC SCS ScS 21 34 25.8 -6.6
HHC SS SS 21 37 09.0 -3.7
HHC AMB AMB
comp=Z,6.0nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,158nm,4.8s
HHC LR LR
comp=N,236nm,15.5s,MS4.7
HHC LR LR
comp=E,377nm,15.5s,MS4.7
HHC LR LR
comp=Z,133nm,16.6s,MS4.2
LBTB Lobatse 64.20 180 *e*P **P 21 24 50.8 +0.9**
LBTB pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
LBTB Lobatse 64.20 180 *e*P **P 21 24 50.8 +0.9**
comp=Z,6.3nm,0.8s,mb4.7
LBTB Lobatse 64.20 180 *e*P **P 21 24 50.8 +1.0**
comp=Z,6.3nm,0.8s,mb4.7
XAN Xi'an 64.40 66 P **P 21 24 51.0 -0.3**
XAN AP pP 21 24 57.0 +1.5
XAN PP PP 21 27 11.8 -0.9
XAN S **S 21 33 27.8 -1.7**
XAN SS SS 21 37 38.5 -0.5
XAN AMB AMB
comp=Z,4.0nm,1.2s,mb4.3
XAN LR LR
comp=Z,65nm,19.8s,MS3.8
KMI Kunming 64.64 78 P **P 21 24 56.8 +3.8**
KMI AMB AMB
comp=Z,4.0nm,1.0s,mb4.4
CMAR Chiang Mai Arr 65.50 86 P **P 21 24 56.2 -2.5**
comp=Z,0.8nm,0.9s,mb3.7,baz=313,slow=7.3,SNR=6.0
CMAR Chiang Mai Arr 65.50 86 P **P 21 24 56.2 -2.5**
BJI Beijing 66.16 57 P **P 21 25 02.3 -0.3**
BJI AMB AMB
comp=Z,7.0nm,0.5s,mb5.0
GYA Guiyang 66.85 74 *e*P **P 21 25 08.3 +1.1**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
BOSA Boshof 67.79 181 P **P 21 25 12.4 -0.5**
comp=Z,1.8nm,0.5s,mb4.4,baz=3.9,slow=12,SNR=14
BOSA Boshof 67.79 181 P **P 21 25 12.4 -0.5**
BOSA pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
BILL Bilibino 68.69 15⇑ *e*P **P 21 25 22.5 +4.3**
BILL *e* 21 27 52.5
BILL *e*S S 21 34 20.6 +0.2
BILL pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
CN2 Changchun 69.81 50 *e*P **P 21 25 26.0 +0.5**
MDJ Mudanjiang 71.72 47 P **P 21 25 36.0 -1.1**
MDJ AMB AMB
comp=Z,12nm,2.1s,mb4.5
MDJ AMB AMB
comp=Z,168nm,3.7s
SADO Sadowa 72.48 314 P **P 21 25 41.5 -0.2**
comp=Z,8.1nm,0.7s,mb4.8,baz=62,slow=5.3,SNR=6.3
YKA Yellowknife Ar 73.51 342 P **P 21 25 46.6 -0.8**
comp=Z,2.2nm,0.9s,mb4.1,baz=35,slow=5.6,SNR=23
KSRS Korea Array 75.14 54 P **P 21 25 59.0 +1.6**
comp=Z,2.6nm,0.9s,mb4.2,baz=303,slow=5.8,SNR=5.4
KSRS Korea Array 75.14 54 P **P 21 25 59.1 +1.7**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ULM Lac du Bonnet 77.07 326 P **P 21 26 06.6 -1.5**
comp=Z,4.8nm,0.9s,mb4.4,baz=38,slow=5.4,SNR=4.7
EGMT Eagleton 84.38 332 P **P 21 26 45.9 -1.4**
comp=Z,12nm,1.1s,mb4.9
EGMT Eagleton 84.38 332 P **P 21 26 45.9 -1.5**
comp=Z,12nm,1.1s,mb4.9
LRAL Lakeview Retre 84.83 309 *e*P **P 21 26 48.7 -1.2**
comp=Z,17nm,1.0s,mb5.1
WALA Waterton Lakes 84.94 335 P **P 21 26 48.5 -1.6**
comp=Z,0.2nm,0.9s
RLMT Red Lodge 86.64 330 *e*P **P 21 26 58.9 +0.3**
comp=Z,1.6nm,0.8s,mb4.3
RLMT Red Lodge 86.64 330 *e*P **P 21 26 58.9 +0.3**
comp=Z,1.7nm,0.8s,mb4.3
MIAR Mount Ida 87.55 314 *e*P **P 21 27 03.2 -0.1**
MIAR pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
MIAR Mount Ida 87.55 314 *e*P **P 21 27 03.2 -0.1**
comp=Z,5.6nm,0.7s,mb4.9
MIAR Mount Ida 87.55 314 *e*P **P 21 27 03.2 -0.1**
comp=Z,5.6nm,0.7s,mb4.9
BDFB Brasilia 87.96 248 P **P 21 27 05.5 +0.1**
comp=Z,1.4nm,0.4s,mb4.6,baz=75,slow=10,SNR=12
BDFB Brasilia 87.96 248 P **P 21 27 05.5 +0.1**
BDFB pmax pmax
comp=Z,1.0nm,0.4s
NVAR Mina Array Bea 95.80 333 P **P 21 27 41.2 -0.2**
comp=Z,1.0nm,0.7s,mb4.3,baz=43,slow=4.5,SNR=8.4
TXAR Lajitas Array 97.01 317 P **P 21 27 46.6 -0.6**
comp=Z,1.4nm,0.9s,mb4.4,baz=80,slow=4.1,SNR=9.2
TXAR Lajitas Array 97.01 317 P **P 21 27 46.6 -0.6**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 116.36 95 PKP PKPdf 21 32 57.0 -2.1
comp=Z,0.7nm,0.8s,baz=312,slow=2.3,SNR=3.4
WRA Warramunga Arr 116.36 95 PKIKP PKPdf 21 32 57.0 -2.1
WRA pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 118.11 98 PKP PKPdf 21 32 59.8 -2.6
comp=Z,0.9nm,0.8s,baz=325,slow=1.5,SNR=7.8
ASAR Alice Springs 118.11 98 PKIKP PKPdf 21 32 59.8 -2.6
ASAR pmax pmax
comp=Z,1.0nm,0.8s

*ISCJB **28** 21:16:49.4±0.9, 123N±0.1×89.10W±005, h10km, mb3.8/8, MS3.4/2, Error ellipse: s-maj=15.7km s-min=6.3km az=14.7*
*SSS **28** 21:16:50.2, 1225N×8909W, h13km, MD3.9*
*IDC **28** 21:16:50.8±3.4, 1297N×8834W, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.8/22, mbtmp3.8/7, ML3.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/42, Error ellipse: s-maj=78.1km s-min=35.4km az=15.0*
*CASC **28** 21:16:50.8±2.1, 1228N×8909W, h10km±9km, MD3.9, ML3.2, mb4.0(NEIC)*
*INET **28** 21:16:52.4, 1234N×8913W, h15km, ML3.3*
*NEIC **28** 21:16:56.8±4.2, 1255N×8891W, h54km±20km, mb4.0/3, Error ellipse: s-maj=58.7km s-min=19.2km az=183.0*

ISC 28 21:16:53.2±3.0, 122N±01×8905W±005, h32km±28km, n35, σ1§09/22, mb3.8/8, MS3.4/2, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**1.38**	**360**	*e*P		x	21 17 14.3	
SNVI	**San Vicente**	**1.38**	**9**	*e*P		x	21 17 14.5	
SNVI				*e*S		x	21 17 33.7	
VSM	**San Miguel**	**1.41**	**33**⇑	*e*P		x	21 17 15.3	
VSM				*e*P		x	21 17 15.7	
BLLM	**Bellamira**	**1.44**	**33**	*e*P		x	21 17 15.5	
BLLM				*e*S		x	21 17 36.3	
LBRS	**Las Brisas**	**1.49**	**0**	*e*P		x	21 17 15.8	
BOQS	**Boqueron**	**1.51**	**352**⇓	*e*P		x	21 17 16.5	
BOQS				*e*P		x	21 17 16.7	
BOQS					AML	x	21 17 42.9	
	comp=Z,907nm,0.3s							
CNCH	**Conchagua**	**1.58**	**49**	*e*P		x	21 17 18.0	
CNCH				*e*P		x	21 17 18.4	
SBLS	**San Blas**	**1.69**	**341**	*e*P		x	21 17 19.2	
SBLS				*e*P		x	21 17 19.3	
SBLS				*e*S		x	21 17 41.5	
SNJE	**San Jose**	**1.71**	**342**	*e*P		x	21 17 19.4	
CAHU	**Cacacuatique**	**1.73**	**28**	*e*P		x	21 17 20.4	
CAHU				*e*P		x	21 17 20.8	
CAHU				*e*S		x	21 17 43.8	
CAHU					AML	x	21 17 47.9	
	comp=Z,814nm,0.9s							
RBDL	**Robledal**	**1.96**	**342**	*e*P		x	21 17 23.6	
RBDL				*e*S		x	21 17 49.1	
CRIN	**San Cristobal**	**2.01**	**77**	*e*P		**Pn**	**21 17 25.8 +0.8**	
MTO2	**Montecristo 2**	**2.17**	**352**	*e*P		x	21 17 26.1	
MTO2				*e*S		x	21 17 54.4	
TEL3	**Telica 3**	**2.18**	**81**	*e*P		**Pn**	**21 17 27.6 +0.3**	
MIRN	**Miramar**	**2.30**	**85**	*e*P		**Pn**	**21 17 29.0 +0.1**	
CNGN	**Cerro Negro**	**2.31**	**83**	*e*P		**Pn**	**21 17 29.4 +0.3**	
CNGN					AML	AML	21 18 09.5	
	comp=Z,97nm,0.6s							
COPN	**Copaltepe**	**2.41**	**91**	*e*P		**Pn**	**21 17 29.8 -0.6**	
COPN				*e*P			21 17 31.1	
COPN				*e*S		**Sn**	**21 17 59.6 +0.7**	
COPN					AML	AML	21 18 11.7	
	comp=Z,243nm,0.3s							
MOMN	**Momotombo**	**2.46**	**86**	*e*P		**Pn**	**21 17 30.1 -1.0**	
MOMN					AML	AML	21 18 06.9	
	comp=Z,5.8nm,0.2s							
TGUH	**Tegucigalpa,Un**	**2.51**	**44**	*e*P		**Pn**	**21 17 30.6 -1.2**	
TGUH				*e*P			21 17 31.6	
TGUH				*e*S		**Sn**	**21 18 01.8 +0.5**	
TGUH	**Tegucigalpa,Un**	**2.51**	**44**	*e*Pn		**Pn**	**21 17 31.4 -0.4**	
CMIG	**Matias Romero**	**7.42**	**311**	Pn		**Pn**	**21 18 40.0 +0.6**	
	comp=Z,0.7nm,0.3s,baz=143,slow=9.3,SNR=7.4							
CMIG					Sn	**Sn**	**21 20 12.0 +9.4**	
	comp=Z,0.4nm,0.3s,baz=235,slow=18,SNR=2.8							
CHI2		**16.91**	**115**	*e*P		x	21 17 26.2	
CHI2					AML	x	21 18 13.3	
	comp=Z,784nm,0.4s							
JCT	**Junction City**	**20.71**	**333**	*e*P		**P**	**21 21 30.5 -0.4**	
	comp=Z,4.9nm,0.6s							
TXAR	**Lajitas Array**	**21.78**	**324**	P		**P**	**21 21 43.9 +1.5**	
	comp=Z,3.2nm,0.6s,mb4.0,baz=144,slow=11,SNR=45							
TXAR	**Lajitas Array**	**21.78**	**324**	P		**P**	**21 21 43.9 +1.5**	
MIAR	**Mount Ida**	**22.59**	**350**	*e*P		**P**	**21 21 50.1 -0.9**	
	comp=Z,14nm,0.8s,mb4.4							
TKL	**Tuckaleechee C**	**23.80**	**11**	LR		LR	21 32 31.5	
	comp=Z,123nm,18.8s,MS3.4,baz=283,slow=41							
WMOK	**Wichita Mounta**	**24.08**	**340**	*e*P		**P**	**21 22 02.6 -3.2**	
	comp=Z,1.0nm,0.5s,mb3.5							
PDAR	**Pinedale Array**	**35.24**	**333**	P		**P**	**21 23 45.6 +0.8**	
	comp=Z,0.2nm,0.5s,mb3.3,baz=135,slow=10,SNR=2.6							
NVAR	**Mina Array Bea**	**36.85**	**320**	P		**P**	**21 23 59.4 +0.8**	
	comp=Z,0.4nm,0.7s,mb3.3,baz=122,slow=6.5,SNR=3.1							
ULM	**Lac du Bonnet**	**38.32**	**353**	P		**P**	**21 24 06.1 -4.7**	
	comp=Z,1.3nm,0.4s,mb4.0,baz=177,slow=7.4,SNR=4.0							
LVC	**Limon Verde**	**39.86**	**150**	LR		LR	21 41 08.2	
	comp=Z,40nm,18.2s,MS3.3,baz=51,slow=36							
FRB	**Frobisher Bay**	**53.43**	**11**	P		**P**	**21 26 06.6 -3.2**	
	comp=Z,1.2nm,0.4s,mb4.2,baz=194,slow=8.1,SNR=5.1							
RES	**Resolute Bay**	**62.52**	**358**	P		**P**	**21 27 10.6 -2.8**	
	comp=Z,0.3nm,0.4s,mb3.8,baz=169,slow=5.2,SNR=4.3							
CMAR	**Chiang Mai Arr**	**148.50**	**345**	PKPbc		PKPbc	21 36 38.6 +1.0	
	comp=Z,0.8nm,0.6s,baz=348,slow=3.5,SNR=7.3							

*DDA **28** 21:17:09.5, 3956N×2599E, h8km±4km, Md3.4*
*ATH **28** 21:17:10.6, 3963N×2611E, h5km, MD3.6/8*
*CSEM **28** 21:17:11.3±0.1, 3960N×2604E, h2km, MD3.3, Error ellipse: s-maj=1.8km s-min=1.4km az=46.0*
*ISCJB **28** 21:17:11.3±0.5, 3958N±002×2597E±003, h3km±4km, Error ellipse: s-maj=4.1km s-min=3.4km az=136.3*
*NEIC **28** 21:17:11.0, 3959N×2602E, h4km, MD3.3(ISK), MD3.6(ATH), After ISK.*
*ISK **28** 21:17:11.6, 3960N×2601E, h5km, MD3.3*
*SOF **28** 21:17:13.4, 3977N×2584E, h10km, MD3.1*

ISC 28 21:17:11.8±0.5, 3958N±002×2599E±003, h0km±4km, n47, σ1§11/57, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.35**	**47**	PG		**Pg**	**21 17 18.6 0.0**	
EZN				*e*SG		**Sg**	**21 17 24.0 +0.8**	
PRK	**Paraskevi**	**0.40**	**147**	*e*PB		**Pg**	**21 17 18.8 -0.7**	
PRK				*e*SB		**Sg**	**21 17 24.4 -0.3**	
AYVA	**Ayvalik**	**0.61**	**117**	*i* P		**Pg**	**21 17 22.1 -1.3**	
AYVA				*i* S		**Sg**	**21 17 33.8 +2.5**	
GADA	**Gvkgeada**	**0.61**	**354**	*e*PG		**Pg**	**21 17 23.2 -0.2**	
GADA				*e*SG		**Sg**	**21 17 32.5 +1.1**	
LIA	**Limnos Island**	**0.69**	**297**	*e*PG		**Pg**	**21 17 25.0 -0.1**	
LIA				*e*SB		**Sg**	**21 17 36.1 +2.0**	
ENEZ	**Enez**	**1.16**	**6**	*e*PN		**Pn**	**21 17 33.3 -1.9**	
ENEZ				*e*SN		**Sn**	**21 17 51.0 -0.7**	
URLA	**Izmir**	**1.31**	**159**	*i* P		**Pg**	**21 17 33.5 -3.4**	
URLA				*i* S		**Sg**	**21 17 51.8 -2.0**	
SART	**Tekirdag**	**1.43**	**39**	*i* P		**Pn**	**21 17 37.3 -1.7**	
SART				*i* S		**Sg**	**21 17 56.8 -1.0**	
BALB	**Balikesir**	**1.46**	**87**	*e*PN		**Pn**	**21 17 38.9 -0.5**	
BALB				*e*SN		**Sn**	**21 17 58.5 -0.7**	
IZM	**Izmir**	**1.55**	**140**	*e*PN		**Pn**	**21 17 40.3 -0.1**	
AKS	**Akhisar**	**1.58**	**116**	*e*PN		**Pn**	**21 17 41.0 0.0**	
RDO	**Rodhopi**	**1.60**	**348**	*e*PB		**Pn**	**21 17 40.5 -0.7**	
EDC	**Edincik**	**1.63**	**62**	*e*PN		**Pn**	**21 17 41.5 -0.1**	
EDC				*e*SN		**Sn**	**21 18 03.0 -0.3**	
BNT	**Bandirma**	**1.67**	**62**	*e*PN		**Pn**	**21 17 41.5 -0.7**	
TKR	**Tekirdag**	**1.84**	**40**	*e*PN		**Pn**	**21 17 44.5 +0.1**	
KCT	**Karacabey**	**1.94**	**69**	*e*PN		**Pn**	**21 17 44.8 -1.1**	
SMG	**Samos**	**1.99**	**160**	*e*PN		**Pn**	**21 17 48.1 +1.6**	
DST	**Dursunbey**	**2.04**	**89**	*e*PN		**Pn**	**21 17 47.0 -0.2**	
CRLT	**Corlu**	**2.04**	**40**	*e*PN		**Pn**	**21 17 47.5 +0.2**	
PLG	**Polygyros**	**2.11**	**293**	*e*PG		**Pg**	**21 17 51.0 -1.1**	
KDZ	**Kurdzhali**	**2.11**	**348**	*i* P		**Pn**	**21 17 47.1 -1.1**	
NEO	**Neokhori**	**2.16**	**264**	*e*PN		**Pn**	**21 17 47.0 -1.9**	
PTL	**Penteli**	**2.26**	**228**	*e*PN		**Pn**	**21 17 52.8 +2.5**	
PTL	**Penteli**	**2.26**	**228**	*e*Pn		**Pn**	**21 17 53.0 +2.7**	
RZN	**Rozhen**	**2.31**	**336**	*i* P		**Pn**	**21 17 51.0 0.0**	
EDRB	**Edirne**	**2.33**	**14**	*e*PN		**Pn**	**21 17 51.8 +0.5**	
KULA	**Kula-Manisa**	**2.34**	**116**	*e*PN		**Pn**	**21 17 51.7 +0.3**	
SLVT	**Silivri**	**2.36**	**45**	*e*PN		**Pn**	**21 17 52.1 +0.4**	
ATH	**Athens Observa**	**2.40**	**229**	*e*PN		**Pn**	**21 17 54.5 +2.3**	
NVR	**Nevrokopi**	**2.40**	**318**	P		**Pn**	**21 17 51.2 -1.0**	
ARMT	**Armutlu**	**2.41**	**65**	*e*PN		**Pn**	**21 17 53.0 +0.6**	
CTT	**Catalca**	**2.43**	**49**	*e*PN		**Pn**	**21 17 52.4 -0.3**	
CTKS	**Kestanelik-??a**	**2.53**	**49**	*e*PN		**Pn**	**21 17 54.8 +0.7**	
CTYL	**Yal??k??y-??at**	**2.58**	**42**	*e*PN		**Pn**	**21 17 54.8 +0.1**	
GEMT	**Gemlik**	**2.60**	**70**	*e*PN		**Pn**	**21 17 55.7 +0.7**	
MMB	**Musomiste**	**2.64**	**320**	*i* P		**Pn**	**21 17 54.0 -1.5**	
BGKT	**Bogazkoy**	**2.66**	**52**	*e*PN		**Pn**	**21 17 56.6 +0.9**	
MLSB	**Milas**	**2.68**	**148**	*e*PN		**Pn**	**21 17 57.1 +1.0**	
ISK	**Istanbul-Kandi**	**2.78**	**57**	*e*PN		**Pn**	**21 17 58.5 +1.1**	
KLYT	**Kilyos**	**2.87**	**53**	*e*PN		**Pn**	**21 17 58.9 +0.3**	
ADVT	**Abdulvahap**	**3.00**	**72**	*e*PN		**Pn**	**21 18 01.7 +1.2**	
SILT	**Sile**	**3.20**	**60**	*e*PN		**Pn**	**21 18 04.4 +1.2**	
ALT	**Altintas**	**3.24**	**98**	*e*PN		**Pn**	**21 18 04.9 +1.1**	
EVR	**Evrytania**	**3.31**	**260**	P		**Pn**	**21 18 05.6 +0.8**	
KZN	**Kozani**	**3.32**	**284**	P		**Pn**	**21 18 04.5 -0.4**	
NPS	**Neapolis**	**4.32**	**184**	P		**Pn**	**21 18 16.4 -2.3**	
KEK	**Kerkira**	**4.78**	**274**	P		**Pn**	**21 18 27.1 +2.2**	

*ISCJB **28** 21:37:33.3±0.5, 2404S±006×6673W±006, h190km±6km, mb4.0/19, Error ellipse: s-maj=11.0km s-min=7.7km az=137.1*
*IDC **28** 21:37:34.0±0.9, 2409S×6671W, h182km±8km, mb3.7/10, mb1 3.9/15, mb1mx3.8/22, mbtmp3.7/15, Error ellipse: s-maj=15.0km s-min=10.7km az=44.0*
*NEIC **28** 21:37:34.7±0.6, 2404S×6669W, h188km±5km, mb4.1/10, Error ellipse: s-maj=8.0km s-min=6.5km az=66.0*
*GUC **28** 21:37:36.5±0.6, 2392S×67.14W, h207km±16km, ML4.6*

ISC 28 21:37:34.2±0.5, 2403S±006×6671W±006, h183km±6km, n49, σ0§97/55, mb4.0/19, 1C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.46**	**304**	P		**Pn**	**21 38 18.7 +2.0**	
	157nm,0.3s,baz=130,slow=5.7,SNR=1148							
LVC					S	**Sn**	**21 38 50.5 +0.9**	
	121nm,0.3s,baz=253,slow=22,SNR=25							
LVC	**Limon Verde**	**2.46**	**304**	*e*Pn		**Pn**	**21 38 18.3 +1.6**	
LVC				*e*Sn		**Sn**	**21 38 50.7 +1.1**	
LVC	**Limon Verde**	**2.46**	**304**	*e*P		**Pn**	**21 38 18.2 +1.5**	
LVC				*e*S		**Sn**	**21 38 49.8 +0.2**	
LVC					AML	AML	21 38 53.8	
	comp=E,964nm,0.6s							
PECH	**Pedro de Valdi**	**3.07**	**297**	*e*P		**Pn**	**21 38 24.9 +1.0**	
PECH				*i* S		**Sn**	**21 39 01.7 -0.8**	
PECH					AML	AML	21 39 03.2	
	comp=N,3μm,0.3s							
PB04	**Plate Boundary**	**3.10**	**304**⇑	*i* P		**Pn**	**21 38 30.5 +6.3**	
PB04				*i* S		**Sn**	**21 39 11.1 +7.9**	
CEN1	**Los Morros**	**3.26**	**281**⇓	*i* P		**Pn**	**21 38 27.8 +1.7**	
CEN1				*e*S		**Sn**	**21 39 06.3 -0.4**	
CEN1					AML	AML	21 39 10.9	
	comp=E,434nm,0.5s							
MACH	**Maria Elena**	**3.35**	**302**	*e*P		**Pn**	**21 38 28.2 +0.9**	
MACH				*i* S		**Sn**	**21 39 07.5 -1.0**	
MECH	**Mejillones**	**3.55**	**284**	*e*P		**Pn**	**21 38 30.3 +0.5**	
MECH				*i* S		**Sn**	**21 39 10.5 -2.6**	
MECH					AML	AML	21 39 17.6	
	comp=E,1μm,0.5s							
TOCH	**Tocopilla**	**3.75**	**300**	*e*P		**Pn**	**21 38 32.4 +0.1**	
TOCH				*i* S		**Sn**	**21 39 13.6 -4.0**	
TOCH					AML	AML	21 39 16.8	
	comp=N,716nm,0.2s							
PSGC	**Pisagua**	**5.43**	**324**	*e*P		**Pn**	**21 38 51.7 -2.2**	
MNMC	**Miæe Miæ**	**5.56**	**331**	*e*P		**Pn**	**21 38 55.4 -0.2**	
CFAA	**Coronel Fontan**	**7.67**	**190**	P		**Pn**	**21 39 23.2 +0.1**	
	comp=N,0.2nm,0.3s,baz=13,slow=14,SNR=19							
CFAA					S	**Sn**	**21 40 44.4 -4.9**	
	comp=N,1.0nm,0.3s,baz=128,slow=17,SNR=15							
CFAA	**Coronel Fontan**	**7.67**	**190**	P		**Pn**	**21 39 23.2 +0.1**	
CFAA					S	**Sn**	**21 40 44.4 -4.9**	
CPUP	**Villa Florida**	**8.80**	**107**	P		**Pn**	**21 39 37.7 -0.3**	
	comp=N,0.5nm,0.3s,baz=275,slow=10,SNR=10							
CPUP	**Villa Florida**	**8.80**	**107**	*e*Pn		**Pn**	**21 39 39.0 +1.0**	
SIV	**San Ignacio**	**9.59**	**35**	P		**Pn**	**21 39 48.5 0.0**	
	comp=N,1.9nm,0.3s,baz=233,slow=13,SNR=22							
TRQA	**Tornquist**	**14.56**	**165**	*e*Pn		**Pn**	**21 40 50.8 -0.8**	
	comp=N,1.8nm,0.6s							
PLCA	**Paso Flores**	**16.97**	**190**	P		**Pn**	**21 41 20.6 -0.3**	
	comp=N,0.3nm,0.3s,baz=3.7,slow=12,SNR=6.8							
PLCA	**Paso Flores**	**16.97**	**190**	*e*P		**Pn**	**21 41 20.6 -0.3**	
	comp=N,4.3nm,0.5s							
BDFB	**Brasilia**	**19.45**	**68**	P		**P**	**21 41 48.2 +1.2**	
	comp=N,2.0nm,0.3s,baz=230,slow=18,SNR=53							
BDFB	**Brasilia**	**19.45**	**68**	*e*P		**P**	**21 41 47.4 +0.4**	
	comp=N,27nm,0.7s							
CMIG	**Matias Romero**	**49.26**	**323**	P		**P**	**21 46 04.5 0.0**	
	comp=N,0.6nm,0.3s,mb3.6,baz=74,slow=5.5,SNR=4.2							
SNAA	**Sanae**	**59.24**	**161**	*e*P		**P**	**21 47 16.1 +0.3**	
	comp=N,2.2nm,0.9s,mb4.0							
WVT	**Waverly**	**63.07**	**341**	*e*P		**P**	**21 47 40.7 -1.3**	
	comp=N,3.5nm,0.6s,mb4.4							
TXAR	**Lajitas Array**	**63.85**	**324**	P		**P**	**21 47 47.3 0.0**	
	comp=N,0.7nm,0.7s,mb3.6,baz=150,slow=8.1,SNR=7.1							
LIC	**Lamto**	**67.19**	**72**	*e*P		**P**	**21 48 07.7 -1.4**	
	comp=N,12nm,0.7s,mb4.8							
TIC	**Toumodi**	**67.41**	**71**	*e*P		**P**	**21 48 08.6 -1.8**	
	comp=N,6.3nm,0.2s,mb5.1							
KIC	**Kosan Boka**	**67.51**	**72**	*e*P		**P**	**21 48 10.3 -0.8**	
	comp=N,17nm,0.5s,mb5.0							
DBIC	**Dimbokro**	**67.56**	**71**	P		**P**	**21 48 10.7 -0.7**	
	comp=N,2.0nm,0.4s,mb4.2,baz=219,slow=6.8,SNR=16							
DBIC	**Dimbokro**	**67.56**	**71**	*e*P		**P**	**21 48 10.6 -0.8**	
	comp=N,2.1nm,0.4s,mb4.2							
ANMO	**Albuquerque**	**69.72**	**326**	*e*P		**P**	**21 48 25.4 +1.1**	
	comp=N,1.3nm,0.6s,mb3.8							
SDCO	**Great Sand Dun**	**71.45**	**328**	*e*P		**P**	**21 48 34.6 0.0**	
	comp=N,1.5nm,0.9s,mb3.7							
TOA0	**Torodi Ar. Sit**	**76.33**	**69**	*e*P		**P**	**21 49 02.7 -0.8**	
TORD	**Torodi Ar. Bea**	**76.33**	**69**	P		**P**	**21 49 03.1 -0.4**	
	comp=N,2.7nm,0.5s,mb4.2,baz=261,slow=6.1,SNR=100							
PDAR	**Pinedale Array**	**77.31**	**329**	P		**P**	**21 49 09.1 +0.8**	
	comp=N,0.4nm,0.4s,mb3.4,baz=133,slow=8.3,SNR=6.8							
TSUM	**Tsumeb**	**77.39**	**106**	P		**P**	**21 49 09.6 +0.1**	
	comp=N,2.6nm,0.6s,mb4.0,baz=158,slow=8.3,SNR=4.3							
ULM	**Lac du Bonnet**	**78.34**	**341**	P		**P**	**21 49 13.3 -0.5**	
	comp=N,3.3nm,0.6s,mb4.1,baz=168,slow=6.3,SNR=5.6							
NVAR	**Mina Array Bea**	**78.72**	**321**	P		**P**	**21 49 17.1 +0.8**	
	comp=N,0.3nm,0.5s,mb3.2,baz=133,slow=4.2,SNR=3.8							
HLID	**Hailey**	**80.25**	**327**	*e*P		**P**	**21 49 26.1 +1.7**	
	comp=N,2.4nm,0.6s,mb4.0							
TAM	**Tamanrasset**	**84.17**	**62**	*e*P		**P**	**21 49 46.3 +1.0**	
	comp=N,13nm,1.9s,mb4.3							
FCC	**Fort Churchill**	**85.55**	**346**	*e

DAT	**Datca**	**0.94**	**128**	*e*PG	**Pg**	**21 53 54.4**	**-0.2**
DAT				*e*SG	**Sg**	**21 54 06.7**	**0.0**
AYDN	**Tasoluk**	**1.03**	**70**	*i* P	**Pg**	**21 53 55.2**	**-1.2**
AYDN				*i* S	**Sg**	**21 54 09.1**	**-0.8**
URLA	**Izmir**	**1.05**	**357**	*i* P	**Pg**	**21 53 56.1**	**-0.7**
URLA				*i* S	**Sg**	**21 54 11.7**	**+1.2**
CHOS	**Chios island**	**1.18**	**336**	P	**Pb**	**21 53 58.2**	**-0.9**
CHOS				S	**Sb**	**21 54 15.3**	**+0.8**
IZM	**Izmir**	**1.19**	**24**	*e*PN	**Pn**	**21 53 58.9**	**-0.5**
IZM				*e*SN	**Sn**	**21 54 16.3**	**+0.6**
YER	**Yerkesik**	**1.31**	**97**	*e*PN	**Pn**	**21 54 00.3**	**-0.7**
YER				*e*SN	**Sn**	**21 54 18.1**	**-0.5**
THR4	**Thira Island,**	**1.32**	**230**	P	**Pn**	**21 54 00.1**	**-1.0**
THR3	**Thira Island,**	**1.35**	**229**	P	**Pn**	**21 54 01.4**	**-0.1**
THR5	**Thira Island,**	**1.37**	**230**	P	**Pn**	**21 54 01.3**	**-0.6**
THR6	**Thira Island,**	**1.39**	**227**	P	**Pn**	**21 54 01.1**	**-1.0**
TURN	**Turunc**	**1.61**	**105**	*i* P	**Pn**	**21 54 00.3**	**-4.9**
TURN				*i* S	**Sn**	**21 54 22.7**	**-3.5**
DALT	**Dalyan (Mudla)**	**1.67**	**108**	*e*PN	**Pn**	**21 54 06.7**	**+0.7**
KARP	**Karpathos**	**1.80**	**167**	*e*PN	**Pn**	**21 54 08.4**	**+0.6**
AKHS	**Akhisar**	**1.82**	**30**	*i* P	**Pn**	**21 54 09.1**	**+1.1**
AKHS				*i* S	**Sn**	**21 54 36.0**	**+4.8**
AKS	**Akhisar**	**1.82**	**30**	PN	**Pn**	**21 54 09.2**	**+1.2**
DENT	**Denizli**	**1.94**	**76**	*e*PN	**Pn**	**21 54 10.2**	**+0.5**
PRK	**Paraskevi**	**1.96**	**351**	P	**Pn**	**21 54 08.7**	**-1.3**
PRK				S	**Sn**	**21 54 34.0**	**-0.7**
PRK	**Paraskevi**	**1.96**	**351**	*e*PN	**Pn**	**21 54 13.3**	**+3.3**
PRK	**Paraskevi**	**1.96**	**351**	*e*Pn	**Pn**	**21 54 13.5**	**+3.5**
PRK				S	**Sn**	**21 54 34.0**	**-0.7**
KULA	**Kula-Manisa**	**1.99**	**52**	*e*PN	**Pn**	**21 54 10.8**	**+0.4**
SIGR	**SIGRI**	**2.00**	**342**	P	**Pn**	**21 54 09.1**	**-1.5**
SIGR				S	**Sn**	**21 54 34.8**	**-1.0**
ZKR	**Zakros**	**2.21**	**189**	P	**Pn**	**21 54 12.8**	**-0.7**
ZKR				S	**Sn**	**21 54 40.9**	**-0.1**
LAST	**Lasithi**	**2.34**	**204**	P	**Pn**	**21 54 14.9**	**-0.3**
LAST				S	**Sn**	**21 54 45.2**	**+1.1**
KHL	**Karahalli**	**2.49**	**65**	*e*PN	**Pn**	**21 54 17.7**	**+0.5**
BALB	**Balikesir**	**2.52**	**22**	*e*PN	**Pn**	**21 54 20.0**	**+2.3**
EZN	**Ezine**	**2.53**	**354**	*e*PN	**Pn**	**21 54 20.9**	**+3.1**
ELL	**Elmali**	**2.66**	**101**	*e*PN	**Pn**	**21 54 21.3**	**+1.7**
DID	**Didima**	**2.73**	**275**	P	**Pn**	**21 54 20.2**	**-0.4**
DST	**Dursunbey**	**2.77**	**33**	*e*PN	**Pn**	**21 54 22.7**	**+1.6**
ALN	**Alexandroupoli**	**3.62**	**353**	P	**Pn**	**21 54 32.1**	**-0.7**
ALN				S	**Sn**	**21 55 14.1**	**-1.5**
AGG	**Agios Georgios**	**3.82**	**298**	P	**Pn**	**21 54 36.1**	**+0.6**

*CSEM **28** 21:58:32.6±0.2, 36.95N×29.38E, h8km±2km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.6km az=29.0*

*ISCJB **28** 21:58:33.5±0.6, 36.94N±0.003×29.33E±0.004, h9km±6km, Error ellipse: s-maj=5.4km s-min=5.3km az=173.0*

*DDA **28** 21:58:33.4, 36.98N×29.70E, h28km, Md3.0*

*ISK **28** 21:58:33.0, 36.96N×29.35E, h8km, MD2.8*

ISC 28 21:58:33.9±0.5, 3694N±003×2934E±004, h11km±6km, n12, σ1§01/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
GOLH	**Golhisar**	**0.35**	**31**	*i* P		**Pg**		**21 58 40.3**	**-0.5**
GOLH				*i* S		**Sg**		**21 58 46.7**	**+1.2**
ELL	**Elmali**	**0.49**	**113**	*e*PG		**Pg**		**21 58 43.1**	**-0.5**
ELL				*e*SG		**Sg**		**21 58 50.8**	**+0.6**
DALT	**Dalyan (Mudla)**	**0.59**	**253**	*e*PG		**Pg**		**21 58 44.8**	**-0.6**
DALT				*e*SG		**Sg**		**21 58 53.3**	**+0.2**
AKAS	**Kas**	**0.74**	**163**	*i* P		**Pg**		**21 58 47.6**	**-0.6**
AKAS				*i* S		**Sg**		**21 58 59.6**	**+1.8**
AKAS				*i* S		**Sg**		**21 59 01.5**	**+3.7**
DENT	**Denizli**	**0.85**	**343**	*e*PG		**Pg**		**21 58 49.2**	**-1.1**
DENT				*e*SG		**Sg**		**21 59 02.0**	**+0.5**
YER	**Yerkesik**	**0.87**	**283**	*e*PG		**Pg**		**21 58 50.6**	**-0.1**
BCK	**Bucak**	**1.12**	**62**	*e*PN		**Pn**		**21 58 54.2**	**-1.4**
MLSB	**Milas**	**1.30**	**286**	*e*PN		**Pn**		**21 58 58.8**	**+0.8**
KHL	**Karahalli**	**1.39**	**6**	*e*PN		**Pn**		**21 58 58.3**	**-0.9**
DAT	**Datca**	**1.43**	**262**	*e*PN		**Pn**		**21 59 00.6**	**+0.8**
KHAL	**Karahalli**	**1.43**	**5**	*i* P		**Pn**		**21 58 58.0**	**-1.9**
KHAL				*i* S		**Sn**		**21 59 20.7**	**+2.0**
KULA	**Kula-Manisa**	**1.66**	**341**	*e*PN		**Pn**		**21 59 03.3**	**+0.3**

*IDC **28** 21:59:36.3±0.5, 1928S×17397W, h0km, mb4.7/18, mb1 4.9/18, mb1mx4.8/20, mbtmp4.7/18, MS4.9/22, Ms1 4.9/22, ms1mx4.8/27, Error ellipse: s-maj=18.1km s-min=14.2km az=123.0*

*BJI **28** 21:59:38.0, 1958S×173.10W, h35km, mB5.6, mb5.1, Ms5.3, Msz5.1*

*ISCJB **28** 21:59:40.2±0.2, 1949S±005×17394W±005, h33km, mb4.9/65, MS5.2/130, Error ellipse: s-maj=8.9km s-min=5.9km az=138.6*

*GCMT **28** 21:59:42.2±0.1, 1948S×17328W, h27km, MW5.6/96, Moment Tensor Solution. s84,c152; s96,c186; Duration: 1§5 Moment tensor: Scale 10^17 Nm; Mrr2.18±.05; Mθθ0.41±.04; Mϕϕ-2.59±.04; Mrθ0.14±.09; Mrϕ-0.71±.03; Mθϕ1.25±.07; Best double couple: M=2.76800×10^17 NP1:ϕs197.00000°, δ32.00000°, λ97.00000°. NP2:ϕs9.00000°, δ59.00000°, λ86.00000°. Principal axes: T 2.4880, Plg76.0000°, Azm266.0000°; N 0.5580, Plg4.0000°, Azm11.0000°; P -3.0480, Plg13.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 21:59:42.1±0.2, 1939S×17399W, h35km, mb5.1/38, MS5.2/91 Error ellipse: s-maj=10.6km s-min=6.2km az=142.0*

NEIC Felt at Neiafu.

*DJA **28** 21:59:42, 1991S×174.15W, h10km, mb5.6/12*

*MOS **28** 21:59:43.8±3.1, 1931S×17430W, h33km, mb5.2/16, MS5.2/19, Error ellipse: s-maj=12.3km s-min=11.2km az=74.2*

*SZGRF **28** 21:59:44.2, 19.15S×17393W, h38km, mb5.3, Tonga Islands*

ISC 28 21:59:42.1±0.2, 1948S±005×17392W±005, h35km, h35km±1.2km:pP-P, n349, σ1§06/135, mb4.9/65, MS5.2/130, 16C-14D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
AFI	**Afiamalu**	**5.90**	**21**	Pn		**Pn**		**22 01 00.4**	**-6.8**
	34nm,0.3s,baz=101,slow=2.4,SNR=10								
AFI				Sn		**Sn**		**22 01 57.9**	**-16**
	44nm,0.3s,baz=41,slow=23,SNR=7.0								
AFI				LR		LR		22 03 00.7	
	comp=Z,8μm,20.9s,baz=187,slow=36								
AFI				T				22 06 52.5	
	25nm,0.3s,baz=136,slow=16,SNR=6.4								
AFI	**Afiamalu**	**5.90**	**21**	*e*P		**Pn**		**22 01 00.5**	**-6.6**
AFI				pmax		pmax			
	comp=Z,185nm,0.6s								
AFI	**Afiamalu**	**5.90**	**21**	*e*Pn		**Pn**		**22 01 00.5**	**-6.6**
	comp=Z,185nm,0.6s								
AFI				*e*Sn		**Sn**		**22 02 00.8**	**-13**
RAO	**Raoul Island**	**10.39**	**200**	LR		LR		22 05 16.9	
	comp=Z,2μm,21.3s,baz=11,slow=32								
RAR	**Rarotonga**	**13.38**	**100**	Pn		**Pn**		**22 02 38.0**	**-12**
	comp=Z,21nm,0.3s,baz=251,slow=6.6,SNR=28								
RAR				Sn		Sn		22 04 53.5	-24
	comp=Z,3.7nm,0.3s,baz=50,slow=16,SNR=2.9								
RAR				T				22 16 47.1	
	comp=Z,11nm,0.3s,baz=73,slow=24,SNR=6.1								
DZM	**Mont Dzumac**	**18.55**	**259**	*e*P		**Pn**		**22 03 58.2**	**+1.9**
DZM	**Mont Dzumac**	**18.55**	**259**	*e*P		**Pn**		**22 03 58.3**	**+2.0**
	comp=Z,59nm,0.8s								
NOUC	**Port Laguerre**	**18.68**	**259**	*i* P		**Pn**		**22 03 59.1**	**+1.2**
URZ	**Urewera**	**20.28**	**201**	P		**P**		**22 04 15.3**	**+0.6**
	comp=Z,61nm,0.7s,baz=7.0,slow=4.8,SNR=27								
URZ				S		**S**		**22 07 52.5**	**-7.8**
	comp=Z,3.1nm,0.6s,baz=360,slow=22,SNR=4.7								
TBI	**Tubuai**	**23.08**	**104**	*e*LR		LR		22 10 11.5	
	comp=Z,8μm,27.5s,baz=278								
PPT	**Papeete**	**23.15**	**89**	*e*LR		LR		22 10 08.7	
	comp=Z,12μm,26.8s,baz=262								
PPT	**Papeete**	**23.15**	**89**	LR		LR		22 11 13.7	
	comp=Z,3μm,20.3s,MS4.7,baz=246,slow=30								
SNZO	**South Karori**	**23.83**	**202**	*e*P		**P**		**22 04 50.7**	**-1.3**
	comp=Z,64nm,1.1s,mb5.0								
HNR	**Honiara**	**27.17**	**288**	LR		LR		22 14 11.8	
	comp=Z,2μm,20.5s,MS4.7,baz=98,slow=32								
HNR	**Honiara**	**27.17**	**288**	PFAKE				22 05 30.0	+7.5
HNR				LR		LR			
	comp=Z,1μm,19.0s,MS4.5								
RPZ	**Rata Peaks**	**27.26**	**204**	P		**P**		**22 05 24.6**	**+1.6**
	comp=Z,11nm,0.7s,mb4.5,baz=12,slow=9.3,SNR=5.4								
RPZ				LR		LR		22 16 02.9	
	comp=Z,4μm,19.3s,MS5.0,baz=274,slow=36								
EIDS	**Eidsvold**	**32.82**	**253**	*e*P		**P**		**22 06 11.9**	**-0.6**
	comp=Z,10nm,0.9s,mb4.8								
ARMA	**Armidale**	**32.97**	**244**	*e*P		**P**		**22 06 13.5**	**-0.2**
TAOE	**Nuku Hiva Isla**	**34.33**	**77**	*e*LR		LR		22 15 29.3	
	comp=Z,17μm,24.3s,baz=255								
CNB	**Canberra Magne**	**35.98**	**236**	*e*P		**P**		**22 06 39.0**	**-0.7**
CAN	**Canberra**	**36.27**	**236**	*e*P		**P**		**22 06 42.5**	**+0.3**
CAN				*e*				22 06 56.7	
CAN				pmax		pmax			
	comp=Z,17nm,0.9s,mb5.0								
CAN	**Canberra**	**36.27**	**236**	*e*P		**P**		**22 06 42.5**	**+0.3**
	comp=Z,17nm,0.9s,mb5.0								
CAN				*e*				22 06 56.7	
RKT	**Rikitea**	**36.39**	**103**	*e*LR		LR		22 16 20.1	
	comp=Z,6μm,27.0s,baz=271								
CTA	**Charters Tower**	**37.42**	**262**	P		**P**		**22 06 51.4**	**-0.8**
	comp=Z,26nm,0.5s,mb5.3,baz=99,slow=11,SNR=30								
CTA	**Charters Tower**	**37.42**	**262**	*e*P		**P**		**22 06 50.7**	**-1.5**
	comp=Z,20nm,0.5s,mb5.2								
CTA				*e*S		**S**		**22 12 52.3**	**+14**
CTAO	**Charters Tower**	**37.42**	**262**	*e*P		**P**		**22 06 50.8**	**-1.4**
CTAO				pmax		pmax			
	comp=Z,683nm,3.0s								
CTAO				MLR		MLR			
	comp=Z,6μm,19.0s,MS5.4								
CTAO	**Charters Tower**	**37.42**	**262**	*e*P		**P**		**22 06 50.8**	**-1.4**
	comp=Z,683nm,3.0s								
CTAO				LR		LR			
	comp=Z,6μm,19.0s,MS5.4								
PMG	**Port Moresby**	**38.92**	**279**	P		**P**		**22 07 02.3**	**-2.6**
	comp=Z,26nm,0.9s,mb5.0,baz=182,slow=9.0,SNR=8.2								
PMG				LR		LR		22 18 55.3	
	comp=Z,1μm,21.9s,MS4.6,baz=0.3,slow=30								
PMG	**Port Moresby**	**38.92**	**279**	*e*P		**P**		**22 07 04.9**	**+0.1**
PMG				pmax		pmax			
	comp=Z,23nm,0.8s								
PMG	**Port Moresby**	**38.92**	**279**	*e*P		**P**		**22 07 04.1**	**-0.7**
	comp=Z,26nm,0.9s,mb5.0								
TOO	**Toolangi**	**39.60**	**234**	*e*P		**P**		**22 07 09.2**	**-1.1**
TAU	**Tasmania Unive**	**40.06**	**226**	PFAKE				22 07 30.0	+16
TAU				LR		LR			
	comp=Z,4μm,19.0s,MS5.2								
COEN	**Coen**	**41.38**	**271**	*e*P		**P**		**22 07 24.7**	**-0.6**
	comp=Z,27nm,1.0s,mb4.8								
STKA	**Stephens Creek**	**41.69**	**244**	P		**P**		**22 07 26.4**	**-1.1**
	comp=Z,19nm,0.7s,mb4.8,baz=92,slow=8.8,SNR=16								
STKA				LR		LR		22 22 51.3	
	comp=Z,3μm,19.1s,MS5.2,baz=70,slow=33								
STKA	**Stephens Creek**	**41.69**	**244**	*e*P		**P**		**22 07 28.3**	**+0.7**
	comp=Z,14nm,0.6s,mb4.8								
STKA	**Stephens Creek**	**41.69**	**244**	*e*P		**P**		**22 07 27.2**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.2								
ASAR	**Alice Springs**	**48.49**	**255**	P		**P**		**22 08 21.0**	**-0.8**
	comp=Z,14nm,0.6s,mb5.2,baz=95,slow=8.3,SNR=145								
ASAR				PcP		PcP		22 09 48.0	+0.4
	comp=Z,4.6nm,0.7s,baz=99,slow=4.3,SNR=5.6								
ASAR				S		**S**		**22 15 21.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=92,slow=14,SNR=2.9								
WB2	**Warramunga Arr**	**48.54**	**260**	*e*P		**P**		**22 08 20.1**	**-2.1**
WB2	**Warramunga Arr**	**48.54**	**260**	*e*P		**P**		**22 08 20.7**	**-1.5**
WRAB	**Tennant Creek**	**48.54**	**260**	P		**P**		**22 08 21.0**	**-1.2**
	comp=Z,110nm,0.9s,mb5.9,SNR=6.0								
WRAB	**Tennant Creek**	**48.54**	**260**	*e*P		**P**		**22 08 22.3**	**+0.1**
WRAB	**Tennant Creek**	**48.54**	**260**	*e*P		**P**		**22 08 20.7**	**-1.5**
	comp=Z,16nm,0.9s,mb5.0								
WRA	**Warramunga Arr**	**48.55**	**260**	P		**P**		**22 08 20.3**	**-2.0**
	comp=Z,9.1nm,0.6s,mb5.0,baz=97,slow=8.1,SNR=35								
WRA				PcP		PcP		22 09 46.2	-1.6
	comp=Z,2.6nm,0.6s,baz=95,slow=3.6,SNR=3.6								
WRA				LR		LR		22 28 24.2	
	comp=Z,4μm,18.2s,MS5.5,baz=95,slow=36								
WRA	**Warramunga Arr**	**48.55**	**260**	P		**P**		**22 08 20.3**	**-2.0**
WRA								22 09 46.2	
KAKA	**Kakadu**	**51.81**	**269**	*e*P		x		22 08 45.8	
	comp=Z,19nm,0.6s								
KAKA	**Kakadu**	**51.81**	**269**	*e*P		x		22 08 45.6	
	comp=Z,61nm,0.6s								
FORT	**Forrest**	**53.22**	**246**	*e*P		**P**		**22 08 55.4**	**-1.9**
	comp=Z,17nm,0.6s,mb5.2								
FORT	**Forrest**	**53.22**	**246**	*e*P		**P**		**22 08 56.5**	**-0.8**
	comp=Z,23nm,0.7s,mb5.2								
DRV	**Dumont d'Urvil**	**55.62**	**200**	P		**P**		**22 09 22.0**	**+7.9**
DRV				S		**S**		**22 17 03.0**	**+5.7**
DRV				L				22 23 00.0	
DRV				R				22 26 00.0	
FITZ	**Fitzroy Crossi**	**56.98**	**261**	*e*P		**P**		**22 09 23.1**	**-1.5**
	comp=Z,15nm,0.9s,mb5.0								
FITZ	**Fitzroy Crossi**	**56.98**	**261**	*e*P		**P**		**22 09 23.9**	**-0.7**
	comp=Z,7.3nm,0.7s,mb4.8								
SBA	**Scott Base**	**59.17**	**185**	*e*P		**P**		**22 09 41.5**	**+2.5**
SBA				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
SBA	**Scott Base**	**59.17**	**185**	*e*P		**P**		**22 09 41.5**	**+2.5**
	comp=Z,6.3nm,0.7s,mb4.8								
RPN	**Rapa Nui**	**59.25**	**111**	PFAKE				22 09 50.0	+10
RPN				LR		LR			
	comp=Z,2μm,21.0s,MS5.2								
VNDA	**Vanda**	**59.29**	**186**	P		**P**		**22 09 41.4**	**+1.5**
	comp=Z,1.8nm,0.7s,mb4.2,baz=18,slow=7.7,SNR=16								
VNDA				LR		LR		22 30 52.2	
	comp=Z,690nm,20.6s,MS4.8,baz=14,slow=32								
MBWA	**Marble Bar**	**61.83**	**256**	*e*P		**P**		**22 09 56.3**	**-1.8**
	comp=Z,26nm,0.8s,mb5.4								
MUN	**Mundaring**	**63.22**	**243**	*e*P		**P**		**22 10 07.9**	**+0.7**
DAV	**Davao City (W)**	**65.13**	**288**	LR		LR		22 38 33.5	
	comp=Z,783nm,18.1s,MS5.0,baz=108,slow=36								
DAV	**Davao City (W)**	**65.13**	**288**	PFAKE				22 10 30.0	+10
DAV				LR		LR			
	comp=Z,2μm,22.0s,MS5.2								
CASY	**Casey**	**66.52**	**205**	PFAKE				22 10 40.0	+12
CASY				LR		LR			
	comp=Z,978nm,19.0s,MS5.0								
QSPA	**South Pole Qui**	**70.59**	**180**	P		**P**		**22 10 53.8**	**+0.5**
	comp=Z,9.5nm,0.8s,mb4.8,baz=39,slow=2.5,SNR=21								
QSPA	**South Pole Qui**	**70.59**	**180**	P		**P**		**22 10 53.8**	**+0.5**
MJAR	**Matsushiro Arr**	**71.75**	**321**	P		**P**		**22 11 00.4**	**-0.5**
	comp=Z,9.6nm,0.7s,mb4.9,baz=160,slow=5.9,SNR=22								
MJAR				LR		LR		22 36 32.9	
	comp=Z,814nm,21.6s,MS5.0,baz=130,slow=31								
MAJO	**Matsushiro**	**71.75**	**321**	*e*P		**P**		**22 11 00.5**	**-0.4**
MAJO				pmax		pmax			
	comp=Z,29nm,0.9s,mb5.2								
MAJO	**Matsushiro**	**71.75**	**321**	*e*P		**P**		**22 11 00.5**	**-0.4**
	comp=Z,29nm,0.9s,mb5.2								
MAT	**Matsushiro**	**71.75**	**321**	P		**P**		**22 10 59.9**	**-1.0**
MAT				S		S		22 20 19.0	+0.3
ERM	**Erimo**	**72.91**	**328**	PFAKE				22 11 20.0	+12
ERM				LR		LR			
	comp=Z,1μm,21.0s,MS5.1								
FX1	**Attu Island--F**	**72.92**	**352**	LR		LR		22 38 30.3	
	comp=Z,1μm,19.2s,MS5.2,baz=183,slow=32								
SAO	**San Andreas Ge**	**74.69**	**41**	PFAKE				22 11 30.0	+12
SAO				LR		LR			
	comp=Z,2μm,19.0s,MS5.4								
MCCM	**Marconi Confer**	**74.70**	**39**	PFAKE				22 11 30.0	+12
MCCM				LR		LR			
	comp=Z,1μm,19.0s,MS5.2								
HOPS	**Hopland**	**75.13**	**39**	PFAKE				22 11 30.0	+9.3
HOPS				LR		LR			
	comp=Z,1μm,19.0s,MS5.3								
PET	**Petropavlovsk**	**76.01**	**343**	*e*P		**P**		**22 11 26.2**	**+0.8**
PET				*e*S		S		22 21 07.4	+1.4
PET				*e*SS		SS		22 26 05.8	+6.0
PET				pmax		pmax			
	comp=Z,300nm,13.1s								
PET				pmax		pmax			
	comp=Z,11nm,0.6s,mb5.0								
PFO	**Pinyon Flat Ob**	**76.06**	**46**	PFAKE				22 11 40.0	+14
PFO				LR		LR			
	comp=Z,997nm,22.0s,MS5.1								
TWG	**Pinlang**	**76.12**	**301**	*e*P		**P**		**22 11 26.5**	**-0.3**
	comp=Z,25nm,0.6s,mb5.3								
PETK	**Petropavlovsk-**	**76.35**	**343**	P		**P**		**22 11 26.3**	**-1.1**
	comp=Z,17nm,1.0s,mb4.9,baz=120,slow=8.8,SNR=7.2								
PETK				LR		LR		22 42 09.4	
	comp=Z,409nm,18.6s,MS4.8,baz=159,slow=34								
PETK	**Petropavlovsk-**	**76.35**	**343**	P		**P**		**22 11 26.3**	**-1.1**
PETK				LR		LR		22 42 09.4	
WDC	**Whiskeytown Da**	**76.48**	**38**	PFAKE				22 11 40.0	+12
WDC				LR		LR			
	comp=Z,1μm,21.0s,MS5.2								
TPUB	**Ta-pu**	**76.70**	**301**	*e*P		**P**		**22 11 29.3**	**-0.7**
	comp=Z,66nm,0.8s,mb5.6								
YSS	**Yuzh-Sakhalins**	**76.78**	**331**	*e*P		**P**		**22 11 31.3**	**+1.4**
YSS				pmax		pmax			
	comp=Z,25nm,1.3s,mb5.0								
KSM	**Kuching**	**77.10**	**276**	*e*P		**P**		**22 11 32.7**	**+0.2**
	comp=Z,17nm,0.7s,mb5.1								
HUMO	**Hull Mountain**	**77.57**	**36**	PFAKE				22 11 50.0	+16
HUMO				LR		LR			
	comp=Z,1μm,19.0s,MS5.2								
NVAR	**Mina Array Bea**	**77.68**	**42**	P		**P**		**22 11 34.3**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.3,baz=227,slow=8.9,SNR=16								
TPNV	**Topopah Spring**	**78.12**	**44**	*e*P		**P**		**22 11 38.8**	**+1.1**
TPNV				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
TPNV				MLR		MLR			
	comp=Z,1μm,19.0s,MS5.3								
TPNV	**Topopah Spring**	**78.12**	**44**	*e*P		**P**		**22 11 38.8**	**+1.1**
	comp=Z,4.3nm,0.9s,mb4.4								
TPNV				LR		LR			
	comp=Z,1μm,19.0s,MS5.3								
TPH	**Tonopah**	**78.15**	**42**	PFAKE				22 11 50.0	+12
TPH				LR		LR			
	comp=Z,1μm,19.0s,MS5.2								
MOD	**Modoc**	**78.62**	**38**	PFAKE				22 11 50.0	+10
MOD				LR		LR			
	comp=Z,1μm,22.0s,MS5.2								
KSRS	**Korea Array**	**78.73**	**316**	P		**P**		**22 11 41.7**	**+0.6**
	comp=Z,10nm,1.0s,mb4.7,baz=127,slow=6.2,SNR=14								
KSRS				LR		LR		22 43 59.1	
	comp=Z,597nm,18.4s,MS5.0,baz=122,slow=34								
KDAK	**Kodiak Island**	**78.99**	**11**	LR		LR		22 39 49.3	
	comp=Z,2μm,19.1s,MS5.4,baz=123,slow=31								
KDAK	**Kodiak Island**	**78.99**	**11**	PFAKE				22 11 50.0	+8.0
KDAK				LR		LR			
	comp=Z,2μm,19.0s,MS5.5								
QZH	**Quanzhou**	**79.11**	**301**	*i*P		**P**		**22 11 44.5**	**+1.1**
QZH				*e*S		S		22 21 39.5	-1.2
QZH				LR		LR			
	comp=Z,750nm,17.9s,MS5.1								
TUC	**Tucson**	**79.35**	**50**	*e*P		**P**		**22 11 44.5**	**-0.1**
TUC				pmax		pmax			
	comp=Z,11nm,1.3s,mb4.6								
TUC	**Tucson**	**79.35**	**50**	*e*P		**P**		**22 11 44.5**	**-0.1**
	comp=Z,11nm,1.3s,mb4.6								
BMN	**Battle Mountai**	**79.55**	**40**	PFAKE				22 12 00.0	+15
BMN				LR		LR			
	comp=Z,982nm,19.0s,MS5.2								
WVOR	**Wild Horse Val**	**79.92**	**38**	*e*P		**P**		**22 11 47.9**	**+0.5**
WVOR				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.5								
WVOR	**Wild Horse Val**	**79.92**	**38**	*e*P		**P**		**22 11 47.9**	**+0.5**
	comp=Z,7.3nm,1.0s,mb4.6								
SSE	**Sheshan**	**80.04**	**308**	P		**P**		**22 11 48.5**	**+0.2**
SSE				AMB		AMB			
	comp=Z,16nm,0.6s,mb5.1								
SSE				AMB		AMB			
	comp=Z,367nm,4.8s								
SSE				LR		LR			
	comp=N,168nm,26.8s,MS4.6								
SSE				LR		LR			
	comp=E,379nm,28.2s,MS4.6								
SSE				LR		LR			
	comp=Z,524nm,27.6s,MS4.7								
HABR	**Khabarovsk**	**81.52**	**328**	*e*P		**P**		**22 11 55.3**	**-0.5**
HABR				*e**PP		pP		22 12 05.9	-0.9
HABR				*e*				22 15 02.4	
HABR				*e*SSS				22 30 51.5	
HABR				MLR		MLR			
	comp=Z,457nm,19.0s,MS4.8								
MVU	**Marysvale**	**81.64**	**44**	PFAKE				22 12 10.0	+13
MVU				LR		LR			
	comp=Z,1μm,20.0s,MS5.2								
HAWA	**Hanford**	**81.89**	**35**	PFAKE				22 12 10.0	+12
HAWA				LR		LR			
	comp=Z,2μm,20.0s,MS5.5								
MDJ	**Mudanjiang**	**81.95**	**323**	P		**P**		**22 11 58.0**	**-0.2**
MDJ				XP		sP		22 12 11.5	-1.7
MDJ				S		S		22 22 09.8	+0.2
MDJ				AMB		AMB			

SNY LR LR
comp=N,707nm,18.6s,MS5.2
SNY LR LR
comp=E,396nm,17.4s,MS5.2
SNY LR LR
comp=Z,562nm,20.1s,MS4.9
QIZ Qiongzhong 83.98 292 P **P** **22 12 10.8 +1.5**
QIZ AP pP 22 12 21.5 +1.2
QIZ XP sP 22 12 25.5 +1.2
QIZ S S 22 22 29.5 -1.8
QIZ AMB AMB
comp=Z,29nm,1.6s,mb5.2
QIZ AMB AMB
comp=Z,400nm,10.3s
QIZ LR LR
comp=E,540nm,18.8s
QIZ LR LR
comp=Z,679nm,18.8s,MS5.0
GDL2 Guadalupe Moun 84.05 53 *e*P **P** **22 12 09.5 +0.2**
GDL2 *e*PP PP 22 15 25.1 +1.2
RRI2 Red Ridge 84.83 41 *e*P **P** **22 12 13.3 +0.3**
comp=Z,6.9nm,1.2s,mb4.7
TNA Tin City 84.89 2 *e*P **P** **22 12 13.5 +0.7**
comp=Z,32nm,1.2s,mb5.3
TNA *e*pP pP 22 12 25.1 +1.2
WHN Wuhan 84.98 305 P **P** **22 12 16.0 +1.9**
WHN LR LR
comp=Z,1μm,17.0s,MS5.3
REDW Red Top Meadow 85.13 41 *e*P **P** **22 12 14.8 +0.2**
comp=Z,8.2nm,1.4s,mb4.7
MCK McKinley 85.20 11 *e*P **P** **22 12 13.2 -1.2**
MCK pmax pmax
comp=Z,33nm,1.3s,mb5.3
MCK McKinley 85.20 11 *e*P **P** **22 12 13.2 -1.2**
comp=Z,33nm,1.3s,mb5.3
MSO Missoula 85.23 37 PFAKE 22 12 30.0 +15
MSO LR LR
comp=Z,704nm,22.0s,MS5.0
COCO West Island 85.32 259 PFAKE 22 12 30.0 +14
COCO LR LR
comp=Z,1μm,20.0s,MS5.3
IMW Indian Meadow 85.36 40 *e*P **P** **22 12 15.4 -0.3**
comp=Z,8.6nm,1.2s,mb4.8
BW06 Boulder Array 85.62 42 PFAKE 22 12 30.0 +13
BW06 LR LR
comp=Z,968nm,19.0s,MS5.2
PDAR Pinedale Array 85.62 42 P **P** **22 12 15.6 -1.4**
comp=Z,1.1nm,0.9s,mb4.1,baz=232,slow=5.6,SNR=5.0
PDAR LR LR 22 46 13.9
comp=Z,586nm,18.2s,MS5.0,baz=246,slow=33
SDCO Great Sand Dun 85.81 48 *e*P **P** **22 12 20.6 +2.5**
comp=Z,71nm,2.7s,mb5.4
SDCO LR LR
comp=Z,777nm,19.0s,MS5.1
BOZ Bozeman (W) 85.89 39 PFAKE 22 12 30.0 +12
BOZ LR LR
comp=Z,642nm,19.0s,MS5.0
SEY Seymchan 86.31 345⇑ *e*P **P** **22 12 20.3 +0.4**
COLA College 86.44 11 *e*P **P** **22 12 19.5 -1.0**
COLA *e**PP pP 22 12 29.5 -2.1
COLA pmax pmax
comp=Z,21nm,1.1s,mb5.3
COLA MLR MLR
comp=Z,2μm,19.0s,MS5.5
COLA College 86.44 11 *e*P **P** **22 12 19.5 -1.0**
comp=Z,22nm,1.1s,mb5.3
COLA *e*pP pP 22 12 29.5 -2.0
COLA LR LR
comp=Z,2μm,19.0s,MS5.5
ISCO Idaho Springs 86.71 46 PFAKE 22 12 30.0 +7.5
ISCO LR LR
comp=Z,418nm,19.0s,MS4.9
JCT Junction City 86.81 56 PFAKE 22 12 30.0 +6.8
JCT LR LR
comp=Z,769nm,19.0s,MS5.1
RLMT Red Lodge 87.02 40 PFAKE 22 12 40.0 +16
RLMT LR LR
comp=Z,732nm,19.0s,MS5.1
PLCA Paso Flores 87.15 132 P **P** **22 12 25.4 +0.6**
comp=Z,3.1nm,1.1s,mb4.5,baz=225,slow=1.4,SNR=2.4
PLCA LR LR 22 43 54.8
comp=Z,580nm,20.0s,MS5.0,baz=215,slow=30
PLCA Paso Flores 87.15 132 P **P** **22 12 25.4 +0.6**
PLCA LR LR 22 43 54.8
AMTX Amarillo 87.25 52 *e*P **P** **22 12 24.8 -0.4**
comp=Z,69nm,1.8s,mb5.6
AMTX LR LR
comp=Z,1μm,21.0s,MS5.3
KULM Kulim 87.45 276 *e*P **P** **22 12 27.2 +0.5**
comp=Z,25nm,1.1s,mb5.3
DAWY Dawson 87.47 14 *e*P **P** **22 12 25.0 -0.6**
EGAK Eagle 87.68 13 *e*P **P** **22 12 26.1 -0.5**
comp=Z,20nm,1.4s,mb5.2
EGAK LR LR
comp=Z,1μm,20.0s,MS5.4
BJT Baijiatuau 87.91 314 PFAKE 22 12 40.0 +12
BJT LR LR
comp=Z,785nm,19.0s,MS5.1
BJI Beijing 87.91 314 P **P** **22 12 30.0 +1.7**
BJI PP PP 22 15 57.0 +2.0
BJI S S 22 23 02.5 -6.5
BJI AMB AMB
comp=Z,15nm,2.0s,mb4.9
BJI AMB AMB
comp=Z,436nm,7.6s
BJI LR LR
comp=N,596nm,18.4s
BJI LR LR
comp=E,520nm,25.3s
BJI LR LR
comp=Z,528nm,25.3s
EGMT Eagleton 88.26 37 PFAKE 22 12 40.0 +10
EGMT LR LR
comp=Z,1μm,19.0s,MS5.3
BILL Bilibino 88.47 353⇑ *e*P **P** **22 12 30.5 +0.3**
BILL *e* 22 16 02.7
BILL *e*S SKSac 22 22 53.8 -2.2
BILL *e*PS 22 24 17.9
BILL pmax pmax
comp=Z,20nm,1.2s,mb5.2
BILL Bilibino 88.47 353 *e*P **P** **22 12 30.4 +0.2**
comp=Z,12nm,0.9s,mb5.1
BILL LR LR
comp=Z,1μm,20.0s,MS5.3
SYO Syowa Base 88.53 191⇑ *e*pP pP 22 12 43.2 +1.4
VNA3 Neumayer Olymp 88.86 175 *e*P **P** **22 12 31.3 -1.0**
VNA3 *e* 22 12 33.5
VNA3 *e* pP 22 12 41.1 -2.3
VNA3 *e* 22 12 48.0
SNAA Sanae 88.88 177 *e*P **P** **22 12 31.3 -1.1**
SNAA *e* 22 12 33.3
SNAA *e* pP 22 12 41.2 -2.3
SNAA *e* 22 12 47.8
SNAA Sanae 88.88 177⇑ *e*P **P** **22 12 32.0 -0.4**
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA Sanae 88.88 177 *e*P **P** **22 12 31.7 -0.6**
comp=Z,12nm,1.3s,mb5.1
EDM Edmonton 89.20 32 *e*P **P** **22 12 33.5 -0.5**
VNA2 Neumayer--Watz 89.35 176 *e*P **P** **22 12 34.3 -0.3**
VNA2 *e* 22 12 36.2
VNA2 *e* pP 22 12 43.9 -1.8
VNA2 *e* 22 12 51.9
GYA Guiyang 89.52 298⇑ *i*P **P** **22 12 37.5 +1.3**
GYA AP pP 22 12 49.0 +1.8
GYA XP sP 22 12 53.0 +1.8
GYA PP PP 22 16 10.5 +2.3
GYA SKS 22 23 06.5
GYA S S 22 23 28.0 +3.3
GYA XS sS 22 23 40.8 -2.3
GYA SS SS 22 29 24.5 +3.1
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,140nm,7.2s
GYA LR LR
comp=N,360nm,17.8s,MS5.0
GYA LR LR
comp=E,390nm,17.3s,MS5.0
GYA LR LR
comp=Z,530nm,18.5s,MS5.0
VNA1 Neumayer--Stat 89.55 175 *e*P **P** **22 12 35.1 -0.4**
VNA1 *e* 22 12 36.7
VNA1 *e* pP 22 12 45.2 -1.4
HKT Hockley 89.74 58 PFAKE 22 12 50.0 +13
HKT LR LR
comp=Z,804nm,19.0s,MS5.2
EFI East Falkland 89.82 146 PFAKE 22 12 50.0 +13
EFI LR LR
comp=Z,850nm,19.0s,MS5.2
HIA Hailar 90.14 323 PFAKE 22 12 50.0 +12
HIA LR LR
comp=Z,2μm,20.0s,MS5.5
CBKS Cedar Bluff 90.34 49 PFAKE 22 12 50.0 +10
CBKS LR LR
comp=Z,816nm,20.0s,MS5.2
XAN Xi'an 90.61 306 P **P** **22 12 42.5 +1.4**
XAN AP pP 22 12 51.3 -0.9
XAN PP PP 22 16 16.8 +0.1
XAN S S 22 23 35.5 +1.0
XAN SS SS 22 29 39.0 +2.1
XAN AMB AMB
comp=Z,7.0nm,1.3s,mb4.8
XAN LR LR
comp=N,63nm,26.2s,MS4.4
XAN LR LR
comp=E,169nm,25.1s,MS4.4
XAN LR LR
comp=Z,342nm,25.1s,MS4.7
NATX Nacogdoches 91.36 57 PFAKE 22 13 00.0 +15
NATX LR LR
comp=Z,908nm,19.0s,MS5.2
HHC Hu-ho-hao-te 91.43 313 *e*P **P** **22 12 46.0 +1.3**
HHC AP pP 22 12 56.8 +1.0
HHC XP sP 22 13 00.3 +0.5
HHC PP PP 22 16 26.0 +3.0
HHC SKS 22 23 13.3
HHC *e*S S 22 23 40.5 -1.1
HHC XS sS 22 23 57.8 -2.3
HHC SS SS 22 29 49.5 +1.1
HHC AMB AMB
comp=Z,14nm,1.3s,mb5.1
HHC AMB AMB
comp=Z,315nm,6.9s
HHC LR LR
comp=N,375nm,16.7s,MS5.0
HHC LR LR
comp=E,309nm,16.6s,MS5.0
HHC LR LR
comp=Z,593nm,20.2s,MS5.0
LCO Las Campanas 91.66 121 PFAKE 22 13 00.0 +14
LCO LR LR
comp=Z,1μm,20.0s,MS5.3
NANT Nan 91.96 289 P **P** **22 12 46.0 -1.7**
KMI Kunming 92.34 296 P **P** **22 12 50.3 +1.0**
KMI PP PP 22 16 33.5 +2.9
KMI S S 22 23 51.0 +0.5
KMI SS SS 22 30 05.0 +2.8
KMI AMB AMB
comp=Z,9.0nm,1.3s,mb4.9
KMI LR LR
comp=N,477nm,18.8s,MS5.2
KMI LR LR
comp=E,708nm,20.9s,MS5.2
KMI LR LR
comp=Z,1μm,19.8s,MS5.3
NNA Nana 92.60 104 PFAKE 22 13 00.0 +9.2
NNA LR LR
comp=Z,584nm,19.0s,MS5.0
YAK Yakutsk 92.64 337 *e*P **P** **22 12 49.6 -0.2**
YAK pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
KSU1 Kansas State U 92.69 49 PFAKE 22 13 00.0 +9.4
KSU1 LR LR
comp=Z,986nm,19.0s,MS5.3
CM31 Chiang Mai Arr 93.42 288 PFAKE 22 13 10.0 +16
CM31 LR LR
comp=Z,388nm,20.0s,MS4.9
CMAR Chiang Mai Arr 93.42 288 P **P** **22 12 56.4 +2.0**
comp=Z,5.9nm,1.0s,mb5.0,baz=115,slow=3.0,SNR=26
CMAR LR LR 22 54 03.1
comp=Z,430nm,19.2s,MS4.9,baz=278,slow=35
CD2 Chengdu 93.50 301 P **P** **22 12 55.0 +0.4**
CD2 PP PP 22 16 42.8 +3.2
CD2 SKS 22 23 27.5
CD2 S S 22 24 00.3 -0.3
CD2 SS SS 22 30 22.0 +3.3
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,280nm,8.8s
CD2 LR LR
comp=N,650nm,17.2s
CD2 LR LR
comp=Z,550nm,19.0s,MS5.0
CHG Chiang Mai 93.53 289 ‖P pP 22 13 07.9 +1.9
comp=Z,12nm,1.0s
CHTO Chiang Mai 93.53 289 *e*P **P** **22 12 54.6 -0.3**
CHTO *e**PP pP 22 13 07.7 +1.7
CHTO pmax pmax
comp=Z,17nm,1.3s,mb5.3
CHTO MLR MLR
comp=Z,591nm,21.0s,MS5.0
CHTO Chiang Mai 93.53 289 *e*P **P** **22 12 54.6 -0.4**
comp=Z,17nm,1.3s,mb5.3
CHTO *e*pP pP 22 13 07.7 +1.6
CHTO LR LR
comp=Z,591nm,21.0s,MS5.0
YKA Yellowknife Ar 94.01 24 P **P** **22 12 54.3 -1.8**
comp=Z,0.8nm,0.7s,mb4.2,baz=236,slow=4.5,SNR=13
YKA LR LR 22 47 29.2
comp=Z,73nm,20.0s,MS4.1,baz=230,slow=31
YKA Yellowknife Ar 94.01 24 P **P** **22 12 54.3 -1.8**
YKA LR LR 22 47 29.2
ECSD EROS,Sioux Fal 94.47 45 PFAKE 22 13 10.0 +11
ECSD LR LR
comp=Z,800nm,21.0s,MS5.2
VBMS Vicksburg 94.81 58 PFAKE 22 13 10.0 +9.5
VBMS LR LR
comp=Z,632nm,19.0s,MS5.1
LVC Limon Verde 95.68 116 PFAKE 22 13 20.0 +15
LVC LR LR
comp=Z,1μm,21.0s,MS5.3
FFC Flin Flon 95.75 34 PFAKE 22 13 20.0 +16
FFC LR LR
comp=Z,886nm,19.0s,MS5.3
OXF Oxford 96.45 56 PFAKE 22 13 20.0 +12
OXF LR LR
comp=Z,1μm,20.0s,MS5.4
AGMN Agassiz Refuge 96.68 41 PFAKE 22 13 20.0 +11
AGMN LR LR
comp=Z,757nm,22.0s,MS5.1
BCIP Isla Barro Col 96.82 83 PFAKE 22 13 20.0 +10
BCIP LR LR
comp=Z,480nm,22.0s,MS4.9
ULN Ulaanbaatar 97.13 318 *e*P **P** **22 13 11.8 +1.1**
BRAL Brewton 97.21 60 PFAKE 22 13 20.0 +8.5
BRAL LR LR
comp=Z,894nm,19.0s,MS5.3
ULM Lac du Bonnet 97.39 39 LR LR 22 53 33.0
comp=Z,700nm,18.2s,MS5.2,baz=345,slow=33
LRAL Lakeview Retre 97.89 58 PFAKE 22 13 30.0 +16
LRAL LR LR
comp=Z,919nm,20.0s,MS5.3
JFWS Jewell Farm 98.53 48 PFAKE 22 13 30.0 +13
JFWS LR LR
comp=Z,840nm,20.0s,MS5.2
EYMN Ely 99.31 42 PFAKE 22 13 30.0 +10
EYMN LR LR
comp=Z,649nm,19.0s,MS5.2
GTA Gaotai 99.32 308 *e*P **P** **22 13 18.0 -2.8**
GTA S S 22 24 43.5 -6.8
GTA AMB AMB
comp=Z,2.0nm,1.1s,mb4.6
GTA AMB AMB
comp=Z,119nm,5.3s
GTA LR LR
comp=N,282nm,20.8s,MS5.0
GTA LR LR
comp=E,473nm,20.5s,MS5.0
GTA LR LR
comp=Z,716nm,22.6s,MS5.1
TLY Talaya 100.49 321 *e*P Pdif 22 13 41.8 +16
TLY pmax pmax
comp=Z,10.0nm,1.2s
GOGA Godfrey 100.83 58 PFAKE 22 13 40.0 +13
GOGA LR LR
comp=Z,703nm,19.0s,MS5.2
DWPF Disney 101.04 64 PFAKE 22 13 40.0 +12
DWPF LR LR
comp=Z,371nm,20.0s,MS4.9
ACSO Alum Creek Sta 103.00 52 PFAKE 22 13 50.0 +13
ACSO LR LR
comp=Z,754nm,20.0s,MS5.2
AAM Ann Arbor 103.03 50 PFAKE 22 13 50.0 +13
AAM LR LR
comp=Z,759nm,19.0s,MS5.2
CPUP Villa Florida 103.46 124 PFAKE 22 13 50.0 +11
CPUP LR LR
comp=Z,130nm,19.0s,MS4.5
LSA Lhasa 103.53 297 PFAKE 22 13 50.0 +11
LSA LR LR
comp=Z,743nm,22.0s,MS5.2
BLA Blacksburg 104.21 55 PFAKE 22 13 50.0 +7.7
BLA LR LR
comp=Z,860nm,19.0s,MS5.3
GTBY Guantanamo Bay 104.37 74 PFAKE 22 14 00.0 +17
GTBY LR LR
comp=Z,341nm,21.0s,MS4.9
ERPA Erie 105.64 50 PFAKE 22 18 10.0 +8.2
ERPA LR LR
comp=Z,1μm,19.0s,MS5.4
CNNC Cliffs of the 105.75 58 PFAKE 22 18 10.0 +7.7
CNNC LR LR
comp=Z,845nm,20.0s,MS5.3
CBN Corbin 106.79 55 PFAKE 22 18 20.0 +16
CBN LR LR
comp=Z,1μm,19.0s,MS5.4
BINY Binghamton 108.57 51 PFAKE 22 18 20.0 +13
BINY LR LR
comp=Z,923nm,20.0s,MS5.3
WMQ Urumqi 109.17 311 *e*PDIF Pdif 22 14 05.5 +1.1
WMQ PP PP 22 18 41.8 +4.3
WMQ S Sdif 22 26 09.3 -2.9
WMQ PP PP
comp=Z,58nm,19.0s
WMQ LR LR
comp=N,268nm,19.0s,MS5.0
WMQ LR LR
comp=E,290nm,22.0s,MS5.0
WMQ LR LR
comp=Z,462nm,23.0s,MS5.0
ZALV Zalesovo Beam 112.10 321 PKiKP PKiKP 22 18 10.7 -2.9
comp=Z,1.0nm,0.8s,baz=207,slow=0.7,SNR=4.4
MK31 Makanchi Array 113.29 313 *e*PKIKP PKiKP 22 18 15.3 -0.8
MKAR Makanchi Array 113.29 313 PKiKP PKiKP 22 18 13.4 -2.7
comp=Z,0.5nm,0.6s,baz=160,slow=0.7,SNR=8.6
BDFB Brasilia 116.37 119 PFAKE 22 18 40.0 +17
BDFB LR LR
comp=Z,522nm,20.0s,MS5.2
EKS2 Erkin-Say 119.21 309 *e*PKPdf PKPdf 22 18 27.1 -0.4
BVAR Borovoye Array 120.75 321 PKP PKPdf 22 18 29.2 -1.0
comp=Z,1.8nm,0.5s,baz=113,slow=1.9,SNR=17
BRVK Borovoye 120.81 321 *e*PKIKP PKPdf 22 18 29.9 -0.4
BRVK MLR MLR
comp=Z,892nm,21.0s,MS5.4
KBL Kabul 122.76 299 *e*PKIKP PKPdf 22 18 34.2 -0.5
KBL *e* 22 18 46.4
ABPO Ambohimpanom 124.39 229 PFAKE 22 18 50.0 +12
ABPO LR LR
comp=Z,555nm,19.0s,MS5.2
MSEY Mahe Island 125.82 249 PFAKE 22 18 50.0 +8.8
MSEY LR LR
comp=Z,557nm,22.0s,MS5.2
ARU Arti 126.50 327 *i* PKIKP PKPdf 22 18 41.6 +0.5
ARU 22 20 34.6
ARU 22 25 43.7
ARU SS SS 22 37 38.0 -1.3
ARU Arti 126.50 327 *e*PKPdf PKPdf 22 18 41.0 -0.1
ARU LR LR
comp=Z,1μm,20.0s,MS5.6
SUR Sutherland 126.55 196 PFAKE 22 18 50.0 +7.9
SUR LR LR
comp=Z,1μm,19.0s,MS5.5
ARCES ARCESS Array B 128.55 351 PKP PKPdf 22 18 43.8 -0.9
comp=Z,4.8nm,1.0s,baz=0,slow=1.2,SNR=11
BOSA Boshof 128.73 202 PKP PKPdf 22 18 47.8 +1.4
comp=Z,2.0nm,0.9s,baz=96,slow=0.9,SNR=3.6
LBTB Lobatse 131.87 204 PFAKE 22 19 00.0 +7.6
LBTB LR LR
comp=Z,581nm,19.0s,MS5.3
OBN Obninsk 137.60 334⇑ *i*PKIKP PKPdf 22 19 02.8 +0.7
OBN *e*PS PS 22 32 14.3 -2.2
LSZ Lusaka 139.19 214 PFAKE 22 19 20.0 +14
LSZ LR LR
comp=Z,654nm,20.0s,MS5.4
KIV Kislovodsk 140.92 317 PFAKE 22 19 20.0 +11
KIV LR LR
comp=Z,520nm,19.0s,MS5.3
GNI Garni 141.04 310 PFAKE 22 19 20.0 +11
GNI LR LR
comp=Z,442nm,21.0s,MS5.2
AKASG Malin Array Be 143.85 335 PKP PKPdf 22 19 10.2 -3.3
comp=Z,1.6nm,0.4s,baz=38,slow=3.7,SNR=11
RGN Rugen 144.56 353 *e*L 23 24 41.1
comp=Z,481nm,21.4s
HLG Helgoland 145.33 358 *e*L 23 27 07.6
comp=Z,534nm,19.5s
BSEG Bad Segeberg 145.45 356 *e*PKPbc PKPbc 22 19 17.4 +1.2
BSEG *ep*PKPbc pPKPbc 22 19 28.6 +1.1
BSEG *e*L 23 25 20.0
comp=Z,525nm,19.6s
MALT Malatya 146.27 311 *e*PKIKP PKPdf 22 19 19.3 +1.2
LVV L'vov 146.50 339 *e*PKIKP PKPdf 22 19 20.1 +2.0
RUE Ruedersdorf 146.52 351 *e*L 23 29 50.5
comp=Z,595nm,20.9s
KIS Kishinev 146.85 331 *e*PKIKP PKPdf 22 19 21.0 +2.2
KIS MLR MLR
comp=Z,700nm,23.0s,MS5.4
KIS MLR MLR
comp=Z,600nm,22.0s
NRDL Niedersach Rie 146.90 355 *e*PKPbc PKPbc 22 19 21.9 +1.3
NRDL *e*L 23 26 39.3
comp=Z,740nm,20.6s
KWP Kalwaria 147.10 340 *e*PKP PKPbc 22 19 21.8 +0.5
KWP Kalwaria 147.10 340 *e*PKP PKPbc 22 19 21.8 +0.5
IBBN Ibbenburen 147.21 358 *e*PKPbc PKPbc 22 19 22.8 +1.3
IBBN *e*L 23 26 38.8
comp=Z,483nm,21.3s
OJC Ojcow 147.44 344 *e*PKP PKPbc 22 19 22.5 +0.3
CLZ Clausthal 147.53 355 *e*PKPbc PKPbc 22 19 24.0 +1.6
CLZ *e*L 23 27 25.9
comp=Z,467nm,20.3s
KSP Ksiaz 147.67 348 *e*PKP PKPbc 22 19 24.4 +1.6
KSP Ksiaz 147.67 348 *e*PKP PKPbc 22 19 23.0 +0.2
KSP *ep*PKP pPKPdf 22 19 33.3 +1.8
STHS Stebnicka Huta 147.75 341 *e*PKP PKPbc 22 19 24.2 +1.1
STHS *e* 22 19 33.5
STHS Stebnicka Huta 147.75 341 *e*PKP PKPbc 22 19 24.2 +1.1
STHS *e* 22 19 33.5
CLL Collm 147.77 352 *e*PKIKP PKPdf 22 19 22.0 +1.8
CLL pmax pmax
comp=Z,53nm,1.5s
CLL MLR MLR
comp=Z,600nm,19.0s,MS5.4
CLL Collm 147.77 352 *e*PKPbc PKPbc 22 19 24.1 +1.0
CLL *e*L 23 33 15.1
comp=Z,550nm,19.1s
CLL Collm 147.77 352 *e*(PKPdf) PKPdf 22 19 22.0 +1.8
CLL *i* PKPbc PKPbc 22 19 23.4 +0.3
comp=Z,53nm,1.5s
CLL *i* pPKiKP 22 19 35.9
CLL LmV 23 33 00.0
comp=Z,600nm,19.0s
CLL Collm 147.77 352 *e*PKP PKPdf 22 19 22.0 +1.8
CLL *i* PKP PKPbc 22 19 23.4 +0.3
CLL LR LR
comp=Z,600nm,19.0s,MS5.4
BUR08 Bucovina Ar. S 147.88 335 *e*PKPbc PKPbc 22 19 24.2 +0.7
BURAR Bucovina Array 147.90 335 ‖*i*P PKPbc 22 19 26.0 +2.5
NIE Niedzica 148.02 342 *e*PKP PKPbc 22 19 24.2 +0.4
UPC Upice 148.05 348 *e*PKP PKPbc 22 19 24.7 +0.9
UPC *ep*PKP pPKPdf 22 19 33.0 +0.9
BRG Berggiesshubel 148.06 351 *i* PKIKP PKPbc 22 19 24.6 +0.8
BRG *i* 22 19 36.3
BRG pmax pmax
comp=Z,24nm,1.5s
BRG Berggiesshubel 148.06 351 *e*PKPbc PKPbc 22 19 25.1 +1.3
BRG *e*L 23 28 46.7
comp=Z,524nm,21.6s
BRG Berggiesshubel 148.06 351 *i* PKP PKPbc 22 19 24.6 +0.8
BRG *i* 22 19 36.3
BUG Bochum--Univer 148.09 359 *e*L 23 27 27.8
comp=Z,575nm,19.8s
FBE Freiberg 148.10 351 *e*PKPbc PKPbc 22 19 25.6 +1.7

UZH	**Uzhgorod**	**148.11**	**339**	*i* PKP2	PKPab	22 19 25.0	-1.9
DPC	**Dobruska-Polom**	**148.14**	**348**	*e*PKP	PKPbc	22 19 24.4	+0.3
CRVS	**Cervenica-Dubn**	**148.14**	**341**	*e*PKP	PKPbc	22 19 24.9	+0.8
TLCR		**148.18**	**329**	||*i*P	PKPbc	22 19 24.7	+0.3
OKC	**Ostrava-Krasne**	**148.21**	**345**	*e*PKP	PKPbc	22 19 24.9	+0.6
OKC				*ep*PKP	pPKPdf	22 19 35.6	+3.2
PVCC	**Panska Ves**	**148.29**	**350**	*e*PKP	PKPbc	22 19 25.3	+0.8
MOX	**Moxa**	**148.59**	**353**	*e*PKP	PKPbc	22 19 25.3	+0.1
	comp=Z,52nm,2.0s						
MOX							
	comp=Z,500nm,19.0s						
MOX	**Moxa**	**148.59**	**353**	*e*PKPbc	PKPbc	22 19 26.7	+1.5
MOX				*e*PKPab	PKPab	22 19 29.4	+0.7
MOX				*e*L		23 30 53.6	
	comp=Z,463nm,21.5s						
VRI	**Vrincioaia**	**148.65**	**332**	||*i*P	PKPbc	22 19 26.3	+0.7
VRI	**Vrincioaia**	**148.65**	**332**	||P	PKPbc	22 19 26.3	+0.7
WERD	**Werda**	**148.70**	**352**	*e*PKPbc	PKPbc	22 19 26.9	+1.4
TANN	**Tannenbergstha**	**148.72**	**352**	*e*PKPbc	PKPbc	22 19 26.9	+1.3
TANN				*e*PKPab	PKPab	22 19 30.1	+0.8
TANN				*e*L		23 28 41.4	
	comp=Z,658nm,19.7s						
GUNZ	**Gunzen**	**148.78**	**352**	*e*PKPbc	PKPbc	22 19 27.4	+1.7
GUNZ				*e*PKPab	PKPab	22 19 30.4	+0.9
GUNZ				*ep*PKPbc	pPKPbc	22 19 38.7	+1.6
PRU	**Pruhonice**	**148.82**	**349**	*e*PKP	PKPbc	22 19 26.5	+0.7
PRU				*ep*PKP	pPKPbc	22 19 38.5	+1.3
PRU				AMS	AMS	23 25 20.0	
	comp=Z,900nm,15.3s						
WERN	**Wernitzgruen**	**148.85**	**352**	*e*PKPbc	PKPbc	22 19 27.7	+1.8
WERN				*e*PKPab	PKPab	22 19 30.7	+0.9
BR131	**Keskin Array S**	**148.88**	**316**	*e*PKPbc	PKPbc	22 19 26.1	-0.2
BR131				LR	LR		
	comp=Z,233nm,20.0s,MS5.0						
BRTR	**Keskin Array B**	**148.88**	**316**	PKPbc	PKPbc	22 19 26.5	+0.1
	comp=Z,4.3nm,0.7s,baz=136,slow=3.3,SNR=3.6						
HARR	**Harsova**	**148.97**	**329**	||*i*P	PKPbc	22 19 26.8	+0.4
HARR	**Harsova**	**148.97**	**329**	||P	PKPbc	22 19 26.8	+0.4
MANZ	**Manzenberg**	**149.18**	**352**	*e*PKPbc	PKPbc	22 19 28.2	+1.4
MANZ				*ep*PKPbc	pPKPbc	22 19 39.9	+1.8
MANZ				*e*L		23 28 14.4	
	comp=Z,636nm,20.7s						
TNS	**Taunus Mts**	**149.27**	**357**	*e*L		23 31 48.4	
	comp=Z,421nm,21.7s						
VYHS	**Vyhne**	**149.27**	**343**	*e*PKIKP	PKPbc	22 19 27.9	+0.9
VYHS				*e*		22 19 41.1	
VYHS	**Vyhne**	**149.27**	**343**	*e*PKP	PKPbc	22 19 27.9	+0.9
VYHS				*e*		22 19 41.1	
TREC	**Trest**	**149.31**	**348**	*e*PKP	PKPbc	22 19 27.7	+0.6
TREC				*ep*PKP	pPKPdf	22 19 35.9	+1.7
KOLL	**Kolacno**	**149.31**	**344**	*e*PKP	PKPbc	22 19 28.0	+0.9
KOLL				*e*		22 19 39.5	
ROTZ	**Rotzenmuhle**	**149.38**	**352**	*e*PKPbc	PKPbc	22 19 28.8	+1.5
ROTZ				*e*L		23 28 41.1	
	comp=Z,681nm,21.7s						
GIVF	**Givet**	**149.43**	**2**	*e*PKP1	PKPbc	22 19 27.3	-0.1
BAIF	**Baives**	**149.45**	**2**	*e*PKP1	PKPbc	22 19 27.5	+0.1
	comp=Z,147nm,1.6s						
PSZ	**Piszkesteto**	**149.49**	**342**	||*ep*PKP	PKPbc	22 19 28.9	+1.3
PSZ	**Piszkesteto**	**149.49**	**342**	⇑*i*P	PKPbc	22 19 28.5	+0.9
PSZ	**Piszkesteto**	**149.49**	**342**	*e*PKPbc	PKPbc	22 19 28.6	+1.0
PSZ				LR	LR		
	comp=Z,555nm,21.0s,MS5.3						
DRGR		**149.54**	**337**	⇑*i*P	PKPbc	22 19 28.6	+0.8
GRF	**Grafenberg Arr**	**149.57**	**353**	*e*PKPbc	PKPbc	22 19 29.3	+1.6
GRF				*e*L		23 27 11.2	
	comp=Z,480nm,20.8s						
GRFO	**Grafenberg**	**149.58**	**353**	*e*L		23 27 11.3	
	comp=Z,462nm,20.8s						
VOIR		**149.72**	**333**	⇑*i*P	PKPbc	22 19 29.3	+1.0
KHC	**Kasperske Hory**	**149.81**	**350**	*e*PKP	PKPbc	22 19 28.3	0.0
KHC				*ep*PKP	pPKPbc	22 19 41.2	+1.5
KHC				AMS	AMS	23 26 30.0	
	comp=Z,1μm,24.9s						
WET	**Wettzell**	**149.90**	**351**	*e*PKP2	PKPab	22 19 35.0	+0.9
WET				MLR	MLR		
	comp=Z,600nm,20.2s,MS5.4						
WET	**Wettzell**	**149.90**	**351**	*e*PKPbc	PKPbc	22 19 30.1	+1.5
WET				*e*PKPab	PKPab	22 19 35.0	+0.9
WET				*e*L		23 30 42.0	
	comp=Z,617nm,20.2s						
ZST	**Bratislava**	**149.99**	**345**	*e*PKP	PKPbc	22 19 30.2	+1.4
ZST				*e*		22 19 41.2	
GEC2	**GERESS Array S**	**150.06**	**350**	*e*PKP2	PKPab	22 19 35.4	+0.6
GEC2				MLR	MLR		
	comp=Z,600nm,20.7s,MS5.4						
GEC2	**GERESS Array S**	**150.06**	**350**	*e*PKPbc	PKPbc	22 19 30.3	+1.3
GEC2				*e*PKPab	PKPab	22 19 35.5	+0.7
GEC2				*e*L		23 26 56.8	
	comp=Z,644nm,20.7s						
GERES	**GERESS Array B**	**150.06**	**350**	PKPbc	PKPbc	22 19 28.5	-0.5
	comp=Z,6.1nm,1.0s,baz=29,slow=2.2,SNR=28						
BUD	**Budapest**	**150.14**	**342**	||*ep*PKP	PKPbc	22 19 30.5	+1.3
FLN	**La Foliniere**	**150.31**	**9**	*e*PKP1	PKPbc	22 19 28.8	-0.8
FLN				*e*MLR	MLR		
	comp=Z,558nm,19.2s,MS5.1						
FLN	**La Foliniere**	**150.31**	**9**	*e*PKP	PKPbc	22 19 28.8	-0.8
FLN				LR	LR		
	comp=Z,560nm,19.3s,MS5.4						
LDF	**La Druitiere**	**150.52**	**8**	*e*PKP1	PKPbc	22 19 29.3	-0.8
CONA	**Conrad Observa**	**150.53**	**347**	*i* PKiKP	PKiKP	22 19 30.7	-0.1
	comp=Z,29nm,1.4s,SNR=11						
CSNA	**Conrad Observa**	**150.53**	**347**	||*i*PKiKP	PKiKP	22 19 30.7	-0.1
	comp=Z,26nm,1.3s						
SOP	**Sopron**	**150.60**	**346**	||*ep*PKP	PKPbc	22 19 31.9	+1.6
GRR	**Gorron**	**150.62**	**9**	*e*PKP1	PKPbc	22 19 29.7	-0.6
STU	**Stuttgart**	**150.67**	**356**	*e*PKPbc	PKPbc	22 19 31.7	+1.3
STU				*e*L		23 27 00.8	
	comp=Z,503nm,21.2s						
STU	**Stuttgart**	**150.67**	**356**	*e*PKPbc	PKPbc	22 19 30.8	+0.3
STU				*e*PKPab	PKPab	22 19 37.3	0.0
GZR	**Gura Zlata**	**150.69**	**336**	⇑*i*P	PKPbc	22 19 30.2	-0.4
GZR	**Gura Zlata**	**150.69**	**336**	⇑P	PKPbc	22 19 30.2	-0.4
MOA	**Molln**	**150.93**	**349**	||*i*PKPdf	PKPdf	22 19 27.3	+1.9
	comp=Z,5.7nm,0.9s						
BZS	**Buzias**	**150.94**	**337**	||*i*P	PKPbc	22 19 31.6	+0.4
MEZF	**Maizieres J'vi**	**151.03**	**1**	*e*PKP1	PKPbc	22 19 31.3	0.0
FUR	**Furstenfeldbru**	**151.07**	**353**	*e*PKPbc	PKPbc	22 19 32.5	+1.1
FUR				*ep*PKPbc	pPKPbc	22 19 44.3	+1.5
FUR				*e*L		23 30 54.1	
	comp=Z,521nm,21.0s						
CDF	**Champ du Feu**	**151.12**	**358**	*e*PKP1	PKPbc	22 19 31.4	-0.1
	comp=Z,44nm,1.1s						
BFO	**Black Forest**	**151.16**	**357**	*e*PKPbc	PKPbc	22 19 32.7	+1.1
BFO				*e*L		23 24 11.0	
	comp=Z,417nm,22.0s						
RJOB	**Jochberg**	**151.29**	**351**	*e*PKPbc	PKPbc	22 19 32.8	+0.9
RJOB				*e*PKPab	PKPab	22 19 41.2	+1.3
RJOB				*e*L		23 29 06.1	
	comp=Z,669nm,21.0s						
PKSM	**Moragy**	**151.40**	**342**	⇑*i*P	PKPbc	22 19 32.4	+0.2
HAU	**Haudompre**	**151.54**	**360**	*e*PKP1	PKPbc	22 19 32.2	-0.3
	comp=Z,39nm,1.0s						
HAU				*e*MLR	MLR		
	comp=Z,605nm,20.2s,MS5.1						
HINF	**Hinteralfeld**	**151.72**	**359**	*e*PKP1	PKPbc	22 19 32.5	-0.4
SOKA	**Soboth**	**151.89**	**347**	⇑*i*PKiKP	PKiKP	22 19 32.7	-0.7
	comp=Z,12nm,1.2s						
WTTA	**Wattenberg**	**151.92**	**352**	⇑*i*PKiKP	PKiKP	22 19 33.4	-0.3
	comp=Z,10nm,0.7s						
DAVA	**Damuels**	**152.09**	**354**	||*i*PKiKP	PKiKP	22 19 34.9	+0.8
	comp=Z,14nm,1.0s						
HYF	**Humbligny**	**152.14**	**5**	*e*PKP1	PKPbc	22 19 33.8	-0.1
LOR	**Lormes**	**152.22**	**3**	*e*PKP1	PKPbc	22 19 32.9	-1.1
	comp=Z,64nm,1.4s						
LOR				*e*MLR	MLR		
	comp=Z,805nm,20.5s,MS5.2						
ABTA	**Abfaltersbach**	**152.29**	**350**	*i* PKPbc	PKPbc	22 19 33.6	-0.6
	comp=Z,17nm,1.1s,SNR=8.6						
SSF	**Saint Saulge**	**152.41**	**4**	*e*PKP1	PKPbc	22 19 34.3	-0.2
	comp=Z,64nm,1.2s						
MFF	**Saint Martin d**	**152.47**	**9**	*e*PKP1	PKPbc	22 19 34.8	+0.2
AVF	**Avril sur Loir**	**152.67**	**4**	*e*PKP1	PKPbc	22 19 34.5	-0.6
VISS	**Visnje**	**152.77**	**347**	*i* PKPdf	PKPbc	22 19 35.0	-0.3
JAVS	**Javornik**	**152.84**	**348**	*i* PKPdf	PKPbc	22 19 35.7	+0.2
BGF	**Bois d'Agland**	**152.86**	**5**	*e*PKP1	PKPbc	22 19 35.0	-0.5
	comp=Z,16nm,0.7s						
CABF	**La Chapelle**	**152.94**	**360**	*e*PKP1	PKPbc	22 19 35.3	-0.4
TUE	**Stuetta**	**152.94**	**355**	*e*PKPbc	PKPbc	22 19 36.4	+0.7
TUE				LR	LR		
	comp=Z,635nm,19.0s,MS5.5						
BOJS	**Bojanci**	**152.96**	**346**	*i* PKPdf	PKPbc	22 19 36.5	+0.7
BOJS				*i* PKPbc	pPKPdf	22 19 41.2	+1.3
TCF	**Toulx Ste Croi**	**153.07**	**6**	*e*PKP1	PKPbc	22 19 35.3	-0.7
	comp=Z,13nm,0.8s						
RJF	**Les Rejaudoux**	**153.97**	**7**	*e*PKP1	PKPbc	22 19 36.6	-1.4
RJF				*e*MLR	MLR		
	comp=Z,922nm,18.8s,MS5.3						
BNI	**Bardonecchia**	**154.49**	**359**	*e*PKP2	PKPab	22 19 54.4	+1.0
BNI				MLR	MLR		
	comp=Z,893nm,19.0s,MS5.6						
VLC	**Villacollemand**	**155.13**	**353**	PFAKE		22 19 40.0	+8.4
VLC				LR	LR		
	comp=Z,693nm,20.0s,MS5.5						
MTE	**Manteigas**	**156.09**	**26**	PFAKE		22 19 40.0	+7.0
MTE				LR	LR		
	comp=Z,770nm,20.0s,MS5.5						
ESDC	**Sonseca Array**	**158.09**	**21**	PKPab	PKPab	22 20 07.8	-1.3
	comp=Z,0.5nm,0.7s,baz=320,slow=6.4,SNR=4.0						
SFS	**San Fernando**	**159.93**	**30**	PFAKE		22 19 50.0	+12
SFS				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
WDD	**Wield Dalam**	**162.06**	**337**	PFAKE		22 19 50.0	+10
WDD				LR	LR		
	comp=Z,894nm,22.0s						
DBIC	**Dimbokro**	**163.41**	**139**	PFAKE		22 19 50.0	+7.9
DBIC				LR	LR		
	comp=Z,500nm,20.0s						
TORD	**Torodi Ar. Bea**	**172.43**	**146**	PKP	PKPdf	22 19 46.2	-2.1
	comp=Z,1.2nm,1.1s,baz=310,slow=1.6,SNR=4.6						
TORD				PKPab	PKPab	22 21 14.4	+1.7
	comp=Z,1.1nm,1.0s,baz=223,slow=2.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**172.43**	**146**	PKP	PKPdf	22 19 46.2	-2.1
TORD				PKPab	PKPab	22 21 14.4	+1.7
TAM	**Tamanrasset**	**176.66**	**9**	PFAKE		22 20 00.0	+11
TAM				LR	LR		
	comp=Z,653nm,19.0s						

DDA ***28*** *22:16:43.4,3939N×3311E,h14km±1km,Md4.0*
ISCJB ***28*** *22:16:44.8±0.4,3940N±003×3315E±003,h10km, Error ellipse: s-maj=3.8km s-min=3.3km az=139.6*
CSEM ***28*** *22:16:44.1±0.1,3940N×3313E,h5km,MD3.1, Error ellipse: s-maj=2.6km s-min=2.2km az=148.0*
ISK ***28*** *22:16:44.1,3941N×3313E,h5km,MD3.1*
ISC 28 22:16:45.2±0.4,3939N±003×3314E±003,h10km,n24,
σ1§13/33,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.44**	**93**	*e*PG	**Pg**	**22 16 53.2**	**-0.6**
KAMT				*e*SG	**Sg**	**22 17 00.6**	**+0.9**
LOD	**Lodumlu**	**0.58**	**330**	*e*PG	**Pg**	**22 16 54.4**	**-2.0**
LOD				*e*SG	**Sg**	**22 17 03.3**	**-0.8**
CDAG	**Cicekdag**	**0.98**	**76**	⇑*i*P	**Pg**	**22 17 02.8**	**-1.3**
CDAG				*i* S	**Sg**	**22 17 16.1**	**-0.7**
KIZT	**Kizilcal**	**1.11**	**243**	*e*PN	**Pg**	**22 17 06.0**	**-0.5**
ELDT	**Eldivan**	**1.12**	**11**	*i* P	**Pg**	**22 17 05.3**	**-1.5**
ELDT				*i* S	**Sg**	**22 17 20.4**	**-0.9**
KDHN	**Kadinhani**	**1.18**	**223**	*i* P	**Pb**	**22 17 05.8**	**-1.9**
KDHN				*i* S	**Sb**	**22 17 21.4**	**-1.6**
CANT	**Cankiri**	**1.27**	**17**	*e*PN	**Pn**	**22 17 08.9**	**-0.1**
CANT				*e*SN	**Sn**	**22 17 26.4**	**+0.3**
LADK	**Ladik-KONYA**	**1.34**	**207**	*e*PN	**Pn**	**22 17 09.8**	**-0.1**
LADK				*e*SN	**Sn**	**22 17 29.2**	**+1.5**
CORM	**Corum**	**1.39**	**55**	*e*PN	**Pn**	**22 17 09.9**	**-0.7**
AVNT	**Avonos**	**1.47**	**114**	*i* P	**Pn**	**22 17 07.5**	**-4.2**
AVNT				*i* S	**Sn**	**22 17 28.9**	**-2.0**
KONT	**Konya--Tatoy**	**1.57**	**203**	*e*PN	**Pn**	**22 17 13.3**	**+0.2**
YOZ	**Yozgat**	**1.70**	**81**	*e*PN	**Pn**	**22 17 15.9**	**+1.0**
CTKT	**Corum**	**1.76**	**45**	*e*P	**Pn**	**22 17 16.6**	**+0.7**
CTKT	**Corum**	**1.76**	**45**	*e*P	**Pn**	**22 17 16.5**	**+0.7**
TOS	**Tosya**	**1.78**	**22**	*e*PN	**Pn**	**22 17 16.3**	**+0.3**
ESKT	**Eskisehir**	**1.78**	**275**	*e*PN	**Pn**	**22 17 16.3**	**+0.3**
MDU	**Mudurnu**	**1.83**	**306**	*e*PN	**Pn**	**22 17 17.4**	**+0.6**
SAFT	**Safranbolu**	**1.88**	**349**	*e*PN	**Pn**	**22 17 18.1**	**+0.7**
BALT	**Daday**	**2.15**	**5**	*i* P	**Pn**	**22 17 23.4**	**+2.3**
BALT				*i* S	**Sn**	**22 17 50.7**	**+2.8**
GULT	**Gulveren**	**2.27**	**298**	*e*PN	**Pn**	**22 17 23.7**	**+0.9**
ALT	**Altintas**	**2.38**	**263**	*e*PN	**Pn**	**22 17 24.6**	**+0.3**
HDMB	**Hadim**	**2.48**	**192**	*e*PN	**Pn**	**22 17 26.9**	**+1.3**
KOZT	**Kozan**	**2.84**	**131**	*e*PN	**Pn**	**22 17 31.1**	**+0.5**
SVSK	**Karacayir**	**3.02**	**79**	*e*PN	**Pn**	**22 17 34.3**	**+1.2**

CSEM ***28*** *22:39:36.2,3909N×3340E,h20km,MD3.0, After ERD*
DDA 28 22:39:36.2,3909N×3340E,h20km,Md3.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAG	**Cicekdag**	**0.92**	**55**	*i* P	Pb	22 39 53.3	-0.3
CDAG				*i* S	Sb	22 40 06.7	+1.3
CDAG	**Cicekdag**	**0.92**	**55**	*i* P	Pb	22 39 53.2	-0.3
CDAG				*i* S	Sb	22 40 07.0	+1.6
CDAG	**Cicekdag**	**0.92**	**55**	*i* P	Pb	22 39 53.2	-0.4
CDAG				*i* S	Sb	22 40 07.0	+1.6
KDHN	**Kadinhani**	**1.15**	**241**	*i* P	Pn	22 39 57.3	+0.2
KDHN				*i* S	Sb	22 40 14.0	+2.1
KDHN	**Kadinhani**	**1.15**	**241**	*i* P	Pn	22 39 57.1	-0.1
KDHN				*i* S	Sb	22 40 13.9	+2.0
KDHN	**Kadinhani**	**1.15**	**241**	*i* P	Pn	22 39 57.1	-0.1
KDHN				*i* S	Sb	22 40 13.9	+2.0
AVNT	**Avonos**	**1.18**	**105**	*i* P	Pn	22 39 57.6	0.0
AVNT				*i* S	Sb	22 40 18.4	+5.6

IDC ***28*** *23:11:18.5±2.8, 4332N×10526W,h0km,mb1 3.5/3, mb1mx3.3/23,mbtmp3.3/3,ML3.3/3, Error ellipse: s-maj=64.3km s-min=9.0km az=155.0*
ISCJB ***28*** *23:11:20.9±0.7,4378N±007×10532W±007,h0km, Error ellipse: s-maj=9.8km s-min=7.0km az=158.1*
NEIC ***28*** *23:11:21.5±0.6,4370N×10521W,h0km,ML2.7, Error ellipse: s-maj=11.5km s-min=6.8km az=154.0,Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 28 23:11:21.6±0.7,4377N±006×10522W±007,h0km,n16,
σ0§85/23,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.93**	**67**	*e*Pg	**Pg**	**23 11 40.4**	**+1.0**
RSSD				*e*S	**Sg**	**23 11 57.8**	**+6.4**
RWWY	**Rawlins**	**2.54**	**216**	*e*Pn	**Pn**	**23 12 04.2**	**+0.2**
RWWY				*e*Sn	**Sn**	**23 12 36.7**	**+1.0**
RLMT	**Red Lodge**	**3.20**	**296**	*e*Pn	**Pn**	**23 12 12.9**	**-0.1**
PDAR	**Pinedale Array**	**3.32**	**254**	Pn	**Pn**	**23 12 13.8**	**-0.9**
	2.4nm,0.3s,baz=70,slow=14,SNR=49						
PDAR				Pg	**Pg**	**23 12 19.4**	**-5.8**
	3.0nm,0.3s,baz=69,slow=18,SNR=32						
PDAR				Lg		23 12 58.2	
	16nm,0.3s,baz=72,slow=33,SNR=31						
BW06	**Boulder Array**	**3.32**	**254**	*e*Pn	**Pn**	**23 12 13.7**	**-1.1**
BW06				*e*Sg	**Sg**	**23 13 01.3**	**-6.9**
LOHW	**Long Hollow**	**3.91**	**270**	*e*Pn	**Pn**	**23 12 23.3**	**+0.5**
ISCO	**Idaho Springs**	**3.98**	**184**	*e*Pn	**Pn**	**23 12 22.8**	**-1.0**
ISCO				*e*Sg	**Sg**	**23 13 21.7**	**-7.6**
MOOW	**Moose Ponds**	**4.00**	**272**	*e*Pn	**Pn**	**23 12 24.0**	**-0.1**
REDW	**Red Top Meadow**	**4.11**	**266**	*e*Pn	**Pn**	**23 12 25.4**	**-0.2**
REDW				*e*Sg	**Sg**	**23 13 33.3**	**-0.3**
IMW	**Indian Meadow**	**4.14**	**274**	*e*Pn	**Pn**	**23 12 26.1**	**+0.1**
RRI2	**Red Ridge**	**4.45**	**267**	*e*Pn	**Pn**	**23 12 31.9**	**+1.6**
AGMN	**Agassiz Refuge**	**7.93**	**52**	*e*Pn	**Pn**	**23 13 14.3**	**-3.7**
AGMN				*e*Pg	**Pg**	**23 13 47.2**	**-6.2**
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**23 13 33.2**	**-0.8**
	1.6nm,0.3s,baz=233,slow=11,SNR=10						
ULM	**Lac du Bonnet**	**9.10**	**41**	*e*Pn	**Pn**	**23 13 32.7**	**-1.3**
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**Pn**	**23 15 52.2**	**+0.6**
	0.1nm,0.3s,baz=156,slow=9.1,SNR=6.0						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**Pn**	**23 15 52.2**	**+0.6**

ISK ***28*** *23:15:27.9,3939N×3318E,h8km,MD2.7*
CSEM ***28*** *23:15:28.5±0.1,3947N×3313E,h20km,MD2.7, Error ellipse: s-maj=2.8km s-min=1.7km az=144.0*
DDA ***28*** *23:15:28.4,3939N×3312E,h8km±5km,Md3.3*
ISCJB ***28*** *23:15:29.5±0.8,3947N±007×3312E±005,h30km±10km, Error ellipse: s-maj=11.6km s-min=6.5km az=179.5*
ISC 28 23:15:29.1±0.9,3945N±006×3312E±005,h20km±8km,n11,
σ0§97/16,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.47**	**100**	*e*PG	**Pg**	**23 15 36.9**	**-1.8**
LOD	**Lodumlu**	**0.52**	**328**	*e*PG	**Pg**	**23 15 39.2**	**-0.4**
LOD				*e*SG	**Sg**	**23 15 49.2**	**+2.7**
CDAG	**Cicekdag**	**0.98**	**80**	*i* P	**Pb**	**23 15 47.1**	**-0.4**
CDAG				*i* S	**Sb**	**23 16 00.9**	**+0.8**
KIZT	**Kizilcal**	**1.12**	**240**	*e*PN	**Pn**	**23 15 49.7**	**0.0**
KDHN	**Kadinhani**	**1.21**	**220**	*i* P	**Pn**	**23 15 51.4**	**+0.4**
KDHN				*i* S	**Sb**	**23 16 07.4**	**+0.8**
CORM	**Corum**	**1.37**	**58**	*e*PN	**Pn**	**23 15 53.4**	**+0.2**
LADK	**Ladik-KONYA**	**1.38**	**205**	*e*PN	**Pn**	**23 15 53.8**	**+0.5**
KONT	**Konya--Tatoy**	**1.62**	**202**	*e*PN	**Pn**	**23 15 57.0**	**+0.5**
YOZ	**Yozgat**	**1.71**	**83**	*e*PN	**Pn**	**23 15 57.9**	**+0.1**
ESKT	**Eskisehir**	**1.76**	**273**	*i* P	**Pn**	**23 15 57.6**	**-0.8**
ESKT				*i* S	**Sn**	**23 16 18.6**	**-1.6**
SEYT	**Eskypehyr**	**1.76**	**273**	*i* P	**Pn**	**23 15 57.6**	**-0.8**
SEYT				*i* S	**Sn**	**23 16 18.6**	**-1.6**

ISCJB ***28*** *23:17:39.8±1.6,579S±0.1×254W±0.9,h10km,mb4.0/3, Error ellipse: s-maj=68.5km s-min=15.2km az=173.7*
IDC ***28*** *23:17:39.6±2.3,5778S×26.17W,h0km,mb4.0/3,mb1 4.0/3, mb1mx3.7/14,mbtmp4.0/3, Error ellipse: s-maj=225.6km s-min=32.0km az=103.0*
ISC 28 23:17:41.8±1.6,579S±01×254W±0.9,h10km,n7,σ0§37/6, mb4.0/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**14.91**	**160**	*e*P	**Pn**	**23 21 11.7**	**-0.5**
VNA3				*e*		23 21 13.2	
VNA2	**Neumayer--Watz**	**15.10**	**157**	*e*P	**Pn**	**23 21 15.0**	**+0.3**
	baz=320,slow=15						
VNA2				*e*		23 21 16.5	
SNAA	**Sanae**	**16.64**	**155**	*e*P	**Pn**	**23 21 34.9**	**+0.2**
VNDA	**Vanda**	**44.77**	**182**	P	**P**	**23 25 54.8**	**+0.1**
	1.1nm,0.8s,mb3.7,baz=230,slow=7.9,SNR=3.6						
DBIC	**Dimbokro**	**66.47**	**22**	P	**P**	**23 28 31.1**	**-0.1**
	1.0nm,0.4s,mb4.2,baz=166,slow=8.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**74.21**	**27**	P	**P**	**23 29 18.6**	**+0.1**
	0.7nm,0.4s,mb4.0,baz=199,slow=6.3,SNR=26						
YKA	**Yellowknife Ar**	**138.21**	**316**	PKP	PKPdf	23 37 03.8	-1.6
	0.2nm,0.4s,baz=129,slow=2.2,SNR=13						

IDC 28 23:18:11.2±8.2,588S×14734E,h83km±81km,mb3.1/1, mb1 3.6/3,mb1mx3.3/15,mbtmp3.5/3,ML3.5/2,Error ellipse: s-maj=104.0km s-min=56.6km az=113.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.51**	**183**	P	Pn	23 19 03.4	-0.1
	8.9nm,0.3s,baz=349,slow=6.4,SNR=29						
PMG				S	Sn	23 19 44.5	+0.6
	5.9nm,0.3s,baz=7.0,slow=23,SNR=4.0						
WRA	**Warramunga Arr**	**18.84**	**221**	P	Pn	23 22 25.8	-0.3
	0.4nm,0.3s,baz=39,slow=11,SNR=16						
ASAR	**Alice Springs**	**21.91**	**215**	P	P	23 22 57.2	-0.5
	1.3nm,0.4s,baz=46,slow=9.3,SNR=17						
TORD	**Torodi Ar. Bea**	**145.39**	**285**	PKPbc	PKPbc	23 37 39.8	-0.9
	0.3nm,0.6s,baz=87,slow=3.3,SNR=4.5						

ISCJB ***28*** *23:18:19.6±0.7,4303N±003×4101E±003,h5km±5km, Error ellipse: s-maj=4.5km s-min=3.2km az=29.0*
TIF ***28*** *23:18:19.2,4283N×4091E,h10km±5km*
MOS ***28*** *23:18:22.9±2.6,4316N×4114E,h9km,mb4.0/1, Error ellipse: s-maj=13.4km s-min=10.4km az=7.8*
CSEM ***28*** *23:18:28.7,4236N×4102E,h3km,MD3.3, After ERD*
DDA ***28*** *23:18:28.7,4236N×4102E,h3km,Md3.3*
ISC 28 23:18:20.5±0.8,4301N±003×4107E±003,h3km±6km,n34,
σ1§17/54,3C-2D,Western Caucasus

| Code | Station Name | Δ° | AZ° | Phase ID | | Time

σ1⁹06/25, **mb3.5**/9, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.36**	**29**	*e*PN	**Pn**	**23 32 36.0**	**0.0**
SKR				*e*		23 33 21.9	
PETK	**Petropavlovsk-**	**6.95**	**25**	P	**Pn**	**23 33 11.3**	**0.0**
	0.4nm,0.3s,baz=185,slow=11,SNR=6.3						
PETK				LR	LR	23 35 45.1	
	comp=Z,50nm,18.8s,baz=334,slow=36						
ASAJ	**Asahikawa**	**7.67**	**252**	P	**Pn**	**23 33 21.4**	**+0.2**
	1.1nm,0.3s,baz=82,slow=24,SNR=5.6						
ASAJ	**Asahikawa**	**7.67**	**252**	PN	**Pn**	**23 33 21.5**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**8.44**	**238**	*e*PN	**Pn**	**23 33 29.9**	**-1.9**
MJAR	**Matsushiro Arr**	**15.00**	**231**	P	**Pn**	**23 35 02.8**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=42,slow=9.5,SNR=5.0						
KSRS	**Korea Array**	**20.62**	**252**	P	**P**	**23 36 06.4**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=62,slow=7.9,SNR=4.1						
KSRS	**Korea Array**	**20.62**	**252**	P	**P**	**23 36 06.4**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	**Makanchi Array**	**46.65**	**297**	P	**P**	**23 39 51.9**	**-0.9**
	comp=Z,0.4nm,0.7s,mb3.3,baz=71,slow=10,SNR=3.9						
MKAR				PcP	PcP	23 41 25.2	-0.2
	comp=Z,0.2nm,0.5s,baz=59,slow=3.6,SNR=4.2						
MKAR	**Makanchi Array**	**46.65**	**297**	*e*P	**P**	**23 39 51.8**	**-1.0**
YKA	**Yellowknife Ar**	**50.92**	**37**	P	**P**	**23 40 25.7**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.5,baz=296,slow=7.1,SNR=5.2						
YKA				PcP	PcP	23 41 40.1	-0.5
	comp=Z,0.2nm,0.5s,baz=303,slow=3.8,SNR=4.0						
YKA	**Yellowknife Ar**	**50.92**	**37**	P	**P**	**23 40 25.7**	**+0.4**
YKA						23 41 40.1	
CMAR	**Chiang Mai Arr**	**52.18**	**256**	*e*P	**P**	**23 40 36.9**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVAR	**Mina Array Bea**	**62.56**	**62**	P	**P**	**23 41 48.7**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=294,slow=6.8,SNR=3.0						
PDAR	**Pinedale Array**	**64.83**	**54**	P	**P**	**23 42 02.9**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.4,baz=70,slow=1.7,SNR=3.9						
NB2	**NORSAR Subarra**	**67.98**	**341**	P	**P**	**23 42 22.5**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.8,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.98**	**341**	P	**P**	**23 42 21.8**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.0,baz=25,slow=6.2,SNR=4.6						
NOA	**NORSAR Array B**	**67.98**	**341**	*e*P	**P**	**23 42 22.8**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**68.60**	**199**	P	**P**	**23 42 25.4**	**-1.6**
	comp=Z,0.4nm,0.7s,mb3.4,baz=22,slow=7.0,SNR=2.9						
AKASG	**Malin Array Be**	**71.27**	**326**	P	**P**	**23 42 42.1**	**-0.9**
	comp=Z,0.8nm,0.3s,mb4.0,baz=31,slow=6.4,SNR=5.0						
AKASG	**Malin Array Be**	**71.27**	**326**	P	**P**	**23 42 42.1**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**72.30**	**198**	P	**P**	**23 42 48.2**	**-1.3**
	comp=Z,0.4nm,0.5s,mb3.5,baz=6.1,slow=4.9,SNR=9.3						
ASAR	**Alice Springs**	**72.30**	**198**	*e*P	**P**	**23 42 49.1**	**-0.3**
TXAR	**Lajitas Array**	**77.61**	**60**	P	**P**	**23 43 20.5**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.0,baz=299,slow=6.1,SNR=3.8						
TXAR	**Lajitas Array**	**77.61**	**60**	*e*P	**P**	**23 43 21.2**	**+1.0**
CPUP	**Villa Florida**	**148.59**	**60**	PKPbc	PKPbc	23 51 09.7	-0.7
	comp=Z,0.2nm,0.3s,baz=256,slow=4.2,SNR=2.9						

*IDC **28** 23:38:56.1±1.5, 1539N×12299E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, Error ellipse: s-maj=65.8km s-min=20.8km az=59.0*
*MAN **28** 23:38:58, 1540N×12265E, h0km, mb4.6, ML3.5, MS3.4*
*ISCJB **28** 23:38:59.9±0.9, 1541N±005×12280E±008, h33km, mb3.6/4, Error ellipse: s-maj=11.2km s-min=6.8km az=169.1*
ISC 28 23:39:01.7±0.9, **1539N**±005×**12273E**±008, **h35**km, **n10**, σ1⁹**36**/14, **mb3.6**/4, **1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**1.01**	**229**	*e*P	**Pn**	**23 39 17.3**	**-2.0**
POLP				*e*S	**Sn**	**23 39 31.4**	**-0.8**
BALP	**Baler**	**1.16**	**288**	*e*P	**Pn**	**23 39 18.7**	**-2.8**
BALP				*e*S	**Sn**	**23 39 36.0**	**-0.2**
GQP	**Guinayangan**	**1.50**	**190**↑	*e*P	**Pn**	**23 39 26.6**	**+0.4**
GQP				*e*S	**Sn**	**23 39 46.9**	**+2.3**
CAUP	**Cauayan**	**1.77**	**331**	*e*P	**Pn**	**23 39 29.0**	**-0.8**
CAUP				*e*S	**Sn**	**23 39 52.1**	**+0.9**
LUBP	**Lubang**	**2.91**	**236**	*e*P	**Pn**	**23 39 47.6**	**+2.0**
CMAR	**Chiang Mai Arr**	**22.95**	**281**	P	**P**	**23 44 04.4**	**+1.3**
	0.5nm,0.3s,mb3.4,baz=94,slow=8.5,SNR=4.8						
WRA	**Warramunga Arr**	**36.92**	**162**	P	**P**	**23 46 05.7**	**-1.7**
	0.5nm,0.7s,mb3.5,baz=345,slow=9.2,SNR=2.5						
ASAR	**Alice Springs**	**40.33**	**164**	P	**P**	**23 46 35.4**	**-0.6**
	0.2nm,0.4s,baz=342,slow=6.6,SNR=5.2						
MKAR	**Makanchi Array**	**45.89**	**322**	P	**P**	**23 47 21.8**	**+1.1**
	0.8nm,0.7s,mb3.8,baz=116,slow=8.8,SNR=9.0						
ZALV	**Zalesovo Beam**	**48.50**	**331**	P	**P**	**23 47 41.2**	**+0.3**
	0.3nm,0.4s,mb3.7,baz=120,slow=5.8,SNR=4.3						

*CSEM **28** 23:44:47.9±0.4, 3944N×3308E, h0km±2km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.6km az=160.0*
*ISCJB **28** 23:44:48.8±0.6, 3941N±002×3309E±003, h1km±5km, Error ellipse: s-maj=4.3km s-min=3.7km az=41.3*
*DDA **28** 23:44:48.3, 3947N×3306E, h7km±4km, Md3.7*
*ISK **28** 23:44:48.2, 3944N×3307E, h5km, MD3.2*
ISC 28 23:44:49.4±0.6, **3941N**±002×**3308E**±003, **h1**km±5km, **n27**, σ0⁹**88**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**94**	*e*PG	**Pg**	**23 44 58.8**	**-0.2**
LOD	**Lodumlu**	**0.54**	**333**	*e*PG	**Pg**	**23 44 59.0**	**-0.7**
LOD				*e*SG	**Sg**	**23 45 07.3**	**+0.5**
CDAG	**Cicekdag**	**1.02**	**77**	*i* P	**Pg**	**23 45 07.8**	**-1.3**
CDAG				*i* S	**Sg**	**23 45 22.1**	**-0.3**
KIZT	**Kizilcal**	**1.07**	**241**	*e*PG	**Pg**	**23 45 09.9**	**0.0**
KDHN	**Kadinhani**	**1.16**	**220**	*i* P	**Pg**	**23 45 11.0**	**-0.6**
KDHN				*i* S	**Sg**	**23 45 25.2**	**-1.5**
CANT	**Cankiri**	**1.27**	**19**	*e*PN	**Pn**	**23 45 12.8**	**-1.4**
CANT				*e*SN	**Sg**	**23 45 31.2**	**+1.0**
LADK	**Ladik-KONYA**	**1.33**	**205**	*e*PN	**Pn**	**23 45 15.0**	**-0.1**
LADK				*e*SN	**Sg**	**23 45 34.6**	**+2.5**
SGKT	**Sivrigoynuk**	**1.40**	**326**	*e*P	**Pn**	**23 45 15.8**	**-0.4**
SGKT				*e*S	**Sg**	**23 45 35.3**	**+0.8**
CORM	**Corum**	**1.42**	**57**	*e*PN	**Pn**	**23 45 15.3**	**-1.1**
CORM				*e*SN	**Sg**	**23 45 37.0**	**+1.8**
AVNT	**Avonos**	**1.52**	**114**	*i* P	**Pn**	**23 45 13.6**	**-4.1**
AVNT				*i* S	**Sn**	**23 45 34.0**	**-4.1**
KONT	**Konya--Tatoy**	**1.56**	**201**	*e*PN	**Pn**	**23 45 18.7**	**+0.3**
ESKT	**Eskisehir**	**1.73**	**274**	*e*PN	**Pn**	**23 45 20.6**	**0.0**
YOZ	**Yozgat**	**1.75**	**82**	*e*PN	**Pn**	**23 45 21.1**	**+0.2**
NIG	**Nigde**	**1.77**	**137**	*e*PN	**Pn**	**23 45 22.0**	**+0.9**
MDU	**Mudurnu**	**1.78**	**307**	*e*PN	**Pn**	**23 45 21.1**	**-0.2**
TOS	**Tosya**	**1.78**	**24**	*e*PN	**Pn**	**23 45 20.8**	**-0.5**
CTKT	**Corum**	**1.79**	**47**	*i* P	**Pn**	**23 45 22.0**	**+0.5**
CTKT				*e*S	**Sn**	**23 45 43.9**	**-0.9**
CTKT	**Corum**	**1.79**	**47**	*i* P	**Pn**	**23 45 22.0**	**+0.6**
CTKT				*e*S	**Sn**	**23 45 43.8**	**-1.0**
SAFT	**Safranbolu**	**1.85**	**351**	*e*PN	**Pn**	**23 45 22.5**	**+0.2**
BALT	**Daday**	**2.14**	**6**	*i* P	**Pg**	**23 45 29.1**	**-1.3**
BALT				*e*S	**Sn**	**23 45 54.3**	**+0.9**
GULT	**Gulveren**	**2.22**	**298**	*e*PN	**Pn**	**23 45 27.3**	**0.0**
ALT	**Altintas**	**2.33**	**262**	*e*PN	**Pn**	**23 45 29.3**	**+0.4**
HDMB	**Hadim**	**2.48**	**191**	*e*PN	**Pn**	**23 45 31.0**	**+0.1**
KVT	**Kavak**	**2.82**	**53**	*e*PN	**Pn**	**23 45 35.5**	**-0.1**
KOZT	**Kozan**	**2.89**	**131**	*e*PN	**Pn**	**23 45 38.0**	**+1.4**
SARI	**SarD1z-Kayseri**	**2.91**	**103**	*e*PN	**Pn**	**23 45 36.5**	**-0.3**
SVSK	**Karacayir**	**3.07**	**79**	*e*PN	**Pn**	**23 45 39.4**	**+0.4**

*BJI **28** 23:49:03.6, 1471N×12346E, h32km, mB4.7, mb4.8*
*IDC **28** 23:49:08.4±0.6, 1533N×12276E, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.3/19, mbtmp4.3/13, MS3.3/3, Ms1 3.4/3, ms1mx3.1/28, Error ellipse: s-maj=29.2km s-min=14.9km az=69.0*
*MAN **28** 23:49:11, 1545N×12264E, h15km, mb4.7, ML3.6, MS3.6*
*ISCJB **28** 23:49:12.9±0.7, 1543N±003×12271E±005, h36km±6km, mb4.7/33, MS3.1/3, Error ellipse: s-maj=8.6km s-min=5.6km az=167.8*
*NEIC **28** 23:49:13.2±0.3, 1530N×12277E, mb4.5/7, Error ellipse: s-maj=13.3km s-min=7.4km az=60.0*
ISC 28 23:49:10.2±1.3, **1544N**±003×**12272E**±005, **h6**km±8km, **h34**km±6km: **pP-P, n64**, σ1⁹**02**/66, **mb4.7**/33, **MS3.1**/3, **2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**1.03**	**227**	*e*P	**Pg**	**23 49 29.2**	**-0.9**
POLP				*e*S	**Sg**	**23 49 43.3**	**-0.2**
BALP	**Baler**	**1.14**	**285**	*e*P	**Pg**	**23 49 30.6**	**-1.5**
GQP	**Guinayangan**	**1.55**	**190**↓	*e*P	**Pn**	**23 49 38.4**	**0.0**
GQP				*e*S	**Sn**	**23 49 58.5**	**-0.4**
PCPH	**Palayan**	**1.57**	**275**↓	*e*P	**Pn**	**23 49 36.6**	**-2.1**
PCPH				*e*S	**Sn**	**23 49 57.8**	**-1.5**
PALP	**Palanan**	**1.63**	**350**	*e*P	**Pn**	**23 49 39.3**	**-0.3**
PALP				*e*S	**Sn**	**23 50 00.0**	**-0.9**
CAUP	**Cauayan**	**1.72**	**330**	*e*P	**Pn**	**23 49 40.9**	**+0.1**
AUQP	**San Andres**	**2.11**	**181**	*e*P	**Pn**	**23 49 48.1**	**+2.0**
PVCP	**Virac**	**2.30**	**143**	*e*P	**Pn**	**23 49 50.0**	**+1.2**
SCZP	**Santa Cruz**	**2.72**	**277**	*e*P	**Pn**	**23 49 55.7**	**+1.1**
BOLP	**Bolinao**	**2.85**	**289**	*e*P	**Pn**	**23 49 56.9**	**+0.6**
LUBP	**Lubang**	**2.93**	**235**	*e*P	**Pn**	**23 49 59.2**	**+1.7**
OTRP	**Odiongan**	**3.14**	**193**	*e*P	**Pn**	**23 50 01.2**	**+1.0**
SJMP	**San Jose**	**3.35**	**208**	*e*P	**Pn**	**23 50 05.0**	**+1.9**
CNP	**Catarman**	**3.47**	**147**	*e*P	**Pn**	**23 50 11.2**	**+6.3**
GUMO	**Guam**	**21.52**	**92**	LR	LR	00 00 25.9	
	comp=Z,82nm,19.1s,MS3.1,baz=81,slow=32						
XAN	**Xi'an**	**22.31**	**329**	P	**P**	**23 54 09.3**	**+0.7**
XAN				AP		23 54 19.3	
XAN				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.4						
XAN				AMB	AMB		
	comp=Z,106nm,5.2s						
KSRS	**Korea Array**	**22.40**	**11**	P	**P**	**23 54 10.3**	**+0.8**
	comp=Z,1.5nm,0.7s,mb3.6,baz=198,slow=11,SNR=4.0						
KSRS				LR	LR	00 02 49.2	
	comp=Z,51nm,18.9s,MS3.0,baz=195,slow=36						
CMAR	**Chiang Mai Arr**	**22.93**	**281**	P	**P**	**23 54 15.7**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.2,baz=92,slow=7.2,SNR=39						
CMAR				PcP	PcP	23 58 06.3	+0.4
	comp=Z,0.5nm,0.3s,baz=76,slow=0.4,SNR=4.2						
CMAR				LR	LR	00 03 27.1	
	comp=Z,111nm,18.2s,MS3.3,baz=85,slow=37						
CHTO	**Chiang Mai**	**22.96**	**282**	*e*P	**P**	**23 54 15.4**	**-0.2**
	comp=Z,2.6nm,0.8s,mb3.7						
CD2	**Chengdu**	**23.20**	**315**	P	**P**	**23 54 19.0**	**+1.0**
CD2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.0						
CD2				AMB	AMB		
	comp=Z,210nm,4.9s						
SHL	**Shillong**	**30.52**	**294**	*e*P	**P**	**23 55 28.0**	**+3.5**
LSA	**Lhasa**	**32.29**	**302**	*e*P	**P**	**23 55 41.7**	**+1.6**
	comp=Z,4.3nm,0.7s,mb4.4						
TAPN	**Taplejung**	**34.56**	**296**	*e*P	**P**	**23 56 00.3**	**+0.4**
	comp=Z,30nm,1.2s,mb5.1						
ODAN	**Odare**	**34.74**	**295**	*e*P	**P**	**23 56 01.8**	**+0.4**
	comp=Z,59nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**34.83**	**341**	*e*P	**P**	**23 56 02.7**	**+0.8**
	comp=Z,6.3nm,1.0s,mb4.5						
ULN				*e*pP	pP	23 56 13.0	+9.4
RAMN	**Ramite**	**35.45**	**295**	*e*P	**P**	**23 56 08.3**	**+0.8**
	comp=Z,61nm,0.7s,mb5.7						
JIRN	**Jiri**	**35.95**	**296**	*e*P	**P**	**23 56 12.5**	**+0.7**
	comp=Z,48nm,0.8s,mb5.5						
GUN	**Gumba**	**36.27**	**296**	*e*P	**P**	**23 56 15.1**	**+0.5**
	comp=Z,73nm,0.9s,mb5.6						
PKI	**Pulchoki**	**36.61**	**296**	*e*P	**P**	**23 56 17.5**	**0.0**
	comp=Z,24nm,0.6s,mb5.2						
KKN	**Kakani**	**36.76**	**296**	*e*P	**P**	**23 56 18.8**	**0.0**
	comp=Z,50nm,0.9s,mb5.3						
DMN	**Daman**	**36.88**	**296**	*e*P	**P**	**23 56 19.8**	**0.0**
	comp=Z,20nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	**36.97**	**162**	P	**P**	**23 56 17.9**	**-2.7**
	comp=Z,3.6nm,0.8s,mb4.3,baz=339,slow=9.8,SNR=15						
WB2	**Warramunga Arr**	**36.98**	**162**	*e*P	**P**	**23 56 17.9**	**-2.7**
GKN	**Gorkha**	**37.36**	**296**	*e*P	**P**	**23 56 23.6**	**-0.3**
	comp=Z,57nm,0.8s,mb5.5						
DANN	**Dangsing**	**38.19**	**296**	*e*P	**P**	**23 56 30.9**	**0.0**
	comp=Z,69nm,0.8s,mb5.4						
KOLN	**Koldanda**	**38.22**	**295**	*e*P	**P**	**23 56 31.2**	**0.0**
	comp=Z,50nm,0.9s,mb5.3						
ASAR	**Alice Springs**	**40.38**	**164**	P	**P**	**23 56 47.1**	**-2.0**
	comp=Z,1.5nm,0.5s,mb4.0,baz=340,slow=7.5,SNR=27						
MK31	**Makanchi Array**	**45.84**	**322**	*e*P	**P**	**23 57 34.1**	**+1.0**
MK31				*e*pP	pP	23 57 43.5	+8.7
MKAR	**Makanchi Array**	**45.84**	**322**	P	**P**	**23 57 34.0**	**+0.9**
	comp=Z,9.2nm,0.7s,mb4.8,baz=116,slow=9.1,SNR=95						
MKAR				PcP	PcP	23 59 10.1	-0.3
	comp=Z,1.6nm,0.7s,baz=94,slow=4.8,SNR=3.9						
PETK	**Petropavlovsk-**	**46.57**	**28**	P	**P**	**23 57 38.0**	**-0.7**
	comp=Z,3.0nm,0.7s,mb4.3,baz=211,slow=2.0,SNR=5.3						
ZAA0	**Zalesovo Array**	**48.45**	**331**	*e*P	**P**	**23 57 53.3**	**-0.1**
ZAA0				*e*pP	pP	23 58 03.1	+7.9
ZALV	**Zalesovo Beam**	**48.45**	**331**	P	**P**	**23 57 53.5**	**+0.1**
	comp=Z,9.6nm,0.9s,mb4.8,baz=116,slow=6.8,SNR=38						
STKA	**Stephens Creek**	**50.41**	**159**	P	**P**	**23 58 07.4**	**-1.2**
	comp=Z,2.8nm,0.8s,mb4.3,baz=319,slow=8.8,SNR=5.6						
KBL	**Kabul**	**51.62**	**302**	*e*P	**P**	**23 58 18.1**	**+0.3**
	comp=Z,3.1nm,0.6s,mb4.4						
KBL				*e*pP	pP	23 58 27.5	+8.0
KBL				*e*sP	sP	23 58 34.4	+14
BRVK	**Borovoye**	**55.54**	**325**	*e*P	**P**	**23 58 46.9**	**+0.7**
	comp=Z,24nm,0.9s,mb5.2						
BRVK				*e*pP	pP	23 58 56.4	+8.4
TIXI	**Tiksi**	**56.31**	**2**	*e*P	**P**	**23 58 51.4**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.4						
ARU	**Arti**	**63.03**	**326**	*e*P	**P**	**23 59 37.6**	**-0.4**
	comp=Z,5.7nm,0.8s,mb4.8						
ARU				*e*pP	pP	23 59 47.6	+7.8
ARU				*e*sP	sP	23 59 54.1	+14
JOF	**Joensuu**	**77.03**	**332**	*e*p	**P**	**00 01 02.8**	**-1.1**
ARCES	**ARCESS Array B**	**78.16**	**339**	P	**P**	**00 01 09.8**	**-0.3**
	comp=Z,3.9nm,1.0s,mb4.3,baz=81,slow=5.6,SNR=47						
ARCES	**ARCESS Array B**	**78.16**	**339**	P	**P**	**00 01 09.8**	**-0.3**
AKASG	**Malin Array Be**	**80.39**	**320**	P	**P**	**00 01 20.6**	**-2.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=63,slow=5.4,SNR=4.8						
DRGR		**85.58**	**317**↓	*i*P	**P**	**00 01 49.9**	**+0.3**
STHS	**Stebnicka Huta**	**85.69**	**320**	*e*P	**P**	**00 01 44.4**	**-5.7**
STHS	**Stebnicka Huta**	**85.69**	**320**	*e*	**P**	**00 01 44.4**	**-5.7**
CRVS	**Cervenica-Dubn**	**85.72**	**320**	*e*P	**P**	**00 01 51.0**	**+0.7**
CRVS				*e*		00 02 00.8	
CRVS	**Cervenica-Dubn**	**85.72**	**320**	*e*	**P**	**00 01 51.0**	**+0.7**
CRVS				*e*		00 02 00.8	
NB2	**NORSAR Subarra**	**86.61**	**333**	P	**P**	**00 01 53.6**	**-0.8**
	comp=Z,3.8nm,0.8s,mb4.7,baz=63,slow=5.1						
NOA	**NORSAR Array B**	**86.61**	**333**	P	**P**	**00 01 53.1**	**-1.3**
	comp=Z,3.5nm,0.8s,mb4.6,baz=63,slow=4.9,SNR=6.0						
BZS	**Buzias**	**86.66**	**316**↑	*i*P	**P**	**00 01 54.1**	**-0.9**
VYHS	**Vyhne**	**87.50**	**320**	*e*P	**P**	**00 01 53.3**	**-5.7**
VYHS	**Vyhne**	**87.50**	**320**	*e*	**P**	**00 01 53.3**	**-5.7**
YKA	**Yellowknife Ar**	**90.42**	**23**	P	**P**	**00 02 12.8**	**+0.4**
	comp=Z,0.7nm,0.6s,mb4.2,baz=304,slow=4.6,SNR=18						
GERES	**GERESS Array B**	**90.51**	**321**	P	**P**	**00 02 12.2**	**-1.0**
	comp=Z,0.6nm,0.8s,mb4.0,baz=66,slow=4.5,SNR=4.9						
PLCA	**Paso Flores**	**152.29**	**158**	PKPbc	PKPbc	00 09 06.6	-0.7
	comp=Z,1.2nm,0.7s,baz=119,slow=1.1,SNR=3.7						

MAN 28 23:57:58, 1537N×12251E, h10km, mb3.9, ML2.7, MS2.3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.84**	**221**	*e*P	Pg	23 58 15.0	+0.7
POLP				*e*S	Sg	23 58 29.1	+3.8
BALP	**Baler**	**0.97**	**292**	*e*P	Pg	23 58 16.3	-0.5
BALP				*e*S	Sg	23 58 24.3	-5.2
PCPH	**Palayan**	**1.38**	**278**↑	*e*P	Pn	23 58 23.0	-0.3
GQP	**Guinayangan**	**1.46**	**182**	*e*P	Pn	23 58 24.5	+0.1
GQP				*e*S	Sn	23 58 44.5	+1.0

*CSEM **28** 23:59:08.3±0.1, 3947N×3307E, h2km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.4km az=46.0*
*DDA **28** 23:59:09.0, 3942N×3308E, h14km±1km, Md3.5*
*ISCJB **28** 23:59:09.7±0.8, 3946N±004×3310E±004, h11km±7km, Error ellipse: s-maj=6.5km s-min=4.7km az=7.9*
*ISK **28** 23:59:09.2, 3946N×3307E, h6km, MD2.9*
ISC 28 23:59:09.4±0.7, **3945N**±004×**3308E**±004, **h3**km±6km, **n18**, σ0⁹**97**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.49**	**99**	*e*PG	**Pg**	**23 59 19.2**	**+0.4**
KAMT				*e*SG	**Sg**	**23 59 27.2**	**+2.0**
LOD	**Lodumlu**	**0.51**	**331**	*e*PG	**Pg**	**23 59 18.1**	**-1.0**
LOD				*e*SG	**Sg**	**23 59 26.7**	**+1.0**
CDAG	**Cicekdag**	**1.01**	**79**	*i* P	**Pg**	**23 59 28.3**	**-0.5**
CDAG				*i* S	**Sg**	**23 59 40.1**	**-1.8**
KIZT	**Kizilcal**	**1.09**	**239**	*e*PN	**Pn**	**23 59 30.6**	**-0.9**
KDHN	**Kadinhani**	**1.19**	**220**	*i* P	**Pg**	**23 59 31.5**	**-0.7**
KDHN				*i* S	**Sg**	**23 59 47.5**	**-0.1**
CANT	**Cankiri**	**1.23**	**19**	*e*PN	**Pn**	**23 59 32.7**	**-0.7**
LADK	**Ladik-KONYA**	**1.36**	**205**	*e*PN	**Pn**	**23 59 35.1**	**-0.1**
CORM	**Corum**	**1.40**	**58**	*e*PN	**Pn**	**23 59 35.9**	**+0.1**
AVNT	**Avonos**	**1.53**	**115**	*i* P	**Pn**	**23 59 33.8**	**-3.7**
AVNT				*i* S	**Sn**	**23 59 54.8**	**-3.1**
KONT	**Konya--Tatoy**	**1.60**	**201**	*e*PN	**Pn**	**23 59 39.1**	**+0.6**
ESKT	**Eskisehir**	**1.73**	**273**	*e*PN	**Pn**	**23 59 40.8**	**+0.6**
YOZ	**Yozgat**	**1.74**	**83**	*e*PN	**Pn**	**23 59 41.0**	**+0.6**
TOS	**Tosya**	**1.75**	**24**	*e*PN	**Pn**	**23 59 40.0**	**-0.5**
MDU	**Mudurnu**	**1.76**	**306**	*e*PN	**Pn**	**23 59 40.5**	**-0.2**
SAFT	**Safranbolu**	**1.82**	**351**	*e*PN	**Pn**	**23 59 41.5**	**0.0**
GULT	**Gulveren**	**2.21**	**297**	*e*PN	**Pn**	**23 59 47.4**	**+0.6**
KOZT	**Kozan**	**2.91**	**131**	*e*PN	**Pn**	**23 59 57.8**	**+1.2**
SVSK	**Karacayir**	**3.06**	**80**	*e*PN	**Pn**	**23 59 59.7**	**+1.2**

MAN 29 00:03:51, 1523N×12194E, h124km, mb3.9, ML2.6, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.50**	**180**	*e*P	Pn	00 04 10.3	+0.9
POLP				*e*S	Sn	00 04 24.8	+1.5
BALP	**Baler**	**0.61**	**326**	*e*P	Pn	00 04 11.8	+1.6
BALP				*e*S	Sn	00 04 27.4	+2.8
GQP	**Guinayangan**	**1.41**	**159**↓	*e*P	Pn	00 04 19.8	+2.1
GQP				*e*S	Sn	00 04 39.7	+1.8
PVCP	**Virac**	**2.70**	**127**	*e*P	Pn	00 04 34.3	+0.8

*DDA **29** 00:25:19.4, 39.12N×33.14E, h5km±1km, Md3.3*
*ISK **29** 00:25:21.6, 3941N×3313E, h3km, MD2.8*
CSEM 29 00:25:21.6±0.0, **3938N×3315E, h2**km, **MD2.8, Error ellipse: s-maj=1.3km s-min=1.1km az=162.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.44**	**92**	*e*PG	Pg	00 25 30.6	+0.6
KAMT				*e*SG	Sg	00 25 38.3	+2.6
LOD	**Lodumlu**	**0.59**	**330**	*e*PG	Pg	00 25 32.5	-0.3
LOD				*e*SG	Sg	00 25 41.2	+0.7
CDAG	**Cicekdag**	**0.98**	**75**	*i* P	Pg	00 25 40.2	-0.2
CDAG				*i* S	Sg	00 25 55.6	+2.6
KIZT	**Kizilcal**	**1.11**	**243**	*e*PN	Pn	00 25 43.2	-0.9
CANT	**Cankiri**	**1.27**	**16**	*e*PN	Pn	00 25 47.1	+0.7
LADK	**Ladik-KONYA**	**1.33**	**208**	*e*PN	Pn	00 25 47.9	+0.8
CORM	**Corum**	**1.39**	**55**	*e*PN	Pn	00 25 47.8	-0.2
AVNT	**Avonos**	**1.46**	**114**	*i* P	Pn	00 25 45.6	-3.4
AVNT				*i* S	Sb	00 26 05.7	-2.8
KONT	**Konya--Tatoy**	**1.56**	**203**	*e*PN	Pn	00 25 51.5	+1.2
YOZ	**Yozgat**	**1.70**	**81**	*e*PN	Pn	00 25 53.4	+1.2
CTKT	**Corum**	**1.77**	**45**	*i* P	Pn	00 25 55.2	+2.0
CTKT				*i* S	Sn	00 26 21.8

comp=Z,98nm,19.0s,MS3.8,baz=250,slow=38
BRVK Borovoye 49.21 343 *e*P P **00 55 56.5 -1.0**
comp=Z,3.1nm,0.9s,mb4.3
WRA Warramunga Arr 49.55 124 P P **00 56 01.2 +0.6**
comp=Z,1.4nm,0.5s,mb4.3,baz=306,slow=8.9,SNR=8.4
ASAR Alice Springs 51.05 128 P P **00 56 12.9 +1.1**
comp=Z,1.1nm,0.8s,mb3.8,baz=299,slow=6.8,SNR=9.8
AKTK Aktyubinsk 51.71 333 P P **00 56 15.9 -0.4**
AKTO Aktyubinsk 51.71 333 P P **00 56 15.9 -0.4**
comp=Z,2.1nm,0.7s,mb4.2,baz=122,slow=18,SNR=6.9
BRTR Keskin Array B 61.38 312 P P **00 57 24.5 -0.9**
comp=Z,1.1nm,0.8s,mb4.0,baz=109,slow=6.7,SNR=4.6
TIXI Tiksi 68.52 12 *e*P P **00 58 10.2 -1.1**
comp=Z,4.1nm,0.6s,mb4.5
GERES GERESS Array B 77.04 318 P P **00 59 02.5 +0.2**
comp=Z,1.0nm,0.7s,mb3.8,baz=101,slow=4.8,SNR=10.0

IDC 29 00:48:03.6±15.0, 271S×10078W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.5/3, MS3.8/5, Ms1 3.8/5, ms1mx3.2/18, Error ellipse: s-maj=382.2km s-min=200.1km az=32.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**28.21 341**		LR	LR	01 03 19.2	
	comp=Z,55nm,18.6s,baz=32,slow=32						
LVC	**Limon Verde**	**36.70 125**		LR	LR	01 06 59.3	
	comp=Z,119nm,21.5s,baz=267,slow=31						
NVAR	**Mina Array Bea**	**44.02 340**		P	P	00 56 12.0	-1.1
	0.7nm,1.0s,baz=164,slow=7.5,SNR=3.0						
PDAR	**Pinedale Array**	**45.95 351**		P	P	00 56 29.5	+1.2
	0.6nm,0.8s,baz=164,slow=10,SNR=4.2						
PLCA	**Paso Flores**	**46.66 148**		LR	LR	01 11 45.5	
	comp=Z,172nm,18.7s,baz=121,slow=30						
CPUP	**Villa Florida**	**47.82 124**		LR	LR	01 14 38.8	
	comp=Z,60nm,20.2s,baz=97,slow=33						
SCHQ	**Schefferville**	**63.82 21**		LR	LR	01 27 33.7	
	comp=Z,173nm,19.4s,baz=181,slow=37						
YKA	**Yellowknife Ar**	**65.87 353**		P	P	00 58 50.9	+0.1
	0.6nm,0.8s,baz=162,slow=6.0,SNR=11						

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*IDC **29** 01:12:05.2±1.8, 9.47N×12587E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, Error ellipse: s-maj=186.0km s-min=20.6km az=67.0*
*MAN **29** 01:12:15, 952N×12596E, h9km, mb4.7, ML3.6, MS3.5*
ISC 29 01:12:09.9±1.7, 961N±006×12636E±008, h10km±8km, n13, σ1§50/18, mb3.6/5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.87 282**		*i* P	**Pg**	**01 12 26.1**	**-0.5**
SCPH				*i*		01 12 37.2	
BUTP	**Butuan**	**0.96 229**		*e*P	**Pg**	**01 12 28.7**	**+0.3**
BUTP				*e*S	**Sg**	**01 12 39.6**	**-1.3**
MSLP	**Maasin**	**1.56 290**		*e*P	**Pn**	**01 12 38.5**	**+0.7**
MSLP				*e*S	**Sn**	**01 12 56.2**	**-1.9**
PLP	**Palo**	**2.06 319**	⇓	*e*P	**Pn**	**01 12 45.5**	**+1.0**
PLP				*e*S	**Sn**	**01 13 11.4**	**+1.2**
BUKP	**Musuan**	**2.14 217**		*e*P	**Pn**	**01 12 47.1**	**+1.4**
BUKP				*e*S	**Sn**	**01 13 14.7**	**+2.4**
TBP	**Tagbilaran**	**2.46 272**		*e*P	**Pn**	**01 12 50.6**	**+0.5**
TBP				*e*S	**Sn**	**01 13 18.3**	**-1.9**
PAGZ	**Pagadian**	**3.42 239**		*e*P	**Pn**	**01 13 04.7**	**+1.5**
RCP	**Roxas**	**4.04 299**	⇑	*e*P	**Pn**	**01 13 13.8**	**+1.9**
WRA	**Warramunga Arr**	**30.40 165**		P	**P**	**01 18 20.4**	**-2.0**
	0.4nm,1.0s,mb3.1,baz=341,slow=7.8,SNR=3.2						
ASAR	**Alice Springs**	**33.88 168**		P	**P**	**01 18 48.5**	**-4.5**
	0.2nm,0.3s,mb3.5,baz=346,slow=7.4,SNR=7.6						
MKAR	**Makanchi Array**	**52.60 323**		P	**P**	**01 21 20.1**	**-3.8**
	0.3nm,0.5s,mb3.5,baz=120,slow=8.1,SNR=11						
KURK	**Kurchatov**	**56.66 326**		P	**P**	**01 21 48.9**	**-4.4**
	0.2nm,0.4s,mb3.5,baz=125,slow=6.9,SNR=2.6						
ARCES	**ARCESS Array B**	**84.84 340**		P	**P**	**01 24 40.9**	**-3.5**
	3.2nm,0.8s,mb4.5,baz=88,slow=6.7,SNR=4.3						

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*ISCJB **29** 01:40:03.5±1.1, 247N×0.1×1098W×0.1, h10km, Error ellipse: s-maj=19.6km s-min=9.0km az=136.2*
*IDC **29** 01:40:04.3±1.3, 2467N×10987W, h0km, mb2.8/1, mb1 3.7/4, mb1mx3.5/20, mbtmp3.3/4, ML3.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/6, Error ellipse: s-maj=33.2km s-min=8.3km az=122.0*
*NEIC **29** 01:40:05.5±1.1, 2463N×10987W, h10km, Error ellipse: s-maj=22.2km s-min=10.3km az=118.0*
ISC 29 01:40:05.2±1.1, 246N±01×1098W±01, h10km, n9, σ0§85/10, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.68 223**		Pg	**Pg**	**01 40 18.1**	**-0.3**
	431nm,0.3s,baz=36,slow=1.4,SNR=102						
LPIG				Lg		01 40 27.0	
	974nm,0.3s,baz=143,slow=18,SNR=56						
TXAR	**Lajitas Array**	**7.22 48**		Pn	**Pn**	**01 41 51.0**	**+0.1**
	0.4nm,0.3s,baz=218,slow=13,SNR=31						
TXAR				Sn	**Sn**	**01 43 12.2**	**-0.7**
	0.4nm,0.3s,baz=267,slow=13,SNR=7.7						
TXAR				Lg		01 43 51.6	
	0.3nm,0.3s,baz=230,slow=28,SNR=3.9						
TXAR	**Lajitas Array**	**7.22 48**		Pn	**Pn**	**01 41 51.0**	**+0.1**
TXAR				Sn	**Sn**	**01 43 12.2**	**-0.7**
TUC	**Tucson**	**7.72 354**		*e*Pn	**Pn**	**01 41 57.3**	**-0.5**
PFO	**Pinyon Flat Ob**	**10.69 329**		Pn	**Pn**	**01 42 37.4**	**-1.0**
	0.2nm,0.3s,baz=153,slow=13,SNR=3.7						
NVAR	**Mina Array Bea**	**15.56 334**		Pn	**Pn**	**01 43 51.2**	**+6.6**
	0.1nm,0.3s,baz=161,slow=12,SNR=9.8						
CMIG	**Matias Romero**	**15.81 115**		LR	LR	01 50 02.0	
	comp=Z,149nm,20.5s,baz=280,slow=38						
PDAR	**Pinedale Array**	**18.12 1**		P	**Pn**	**01 44 18.1**	**+1.2**
	0.0nm,0.3s,baz=169,slow=9.9,SNR=10						
YKA	**Yellowknife Ar**	**38.01 356**		P	**P**	**01 47 24.5**	**+1.3**
	0.2nm,0.9s,baz=174,slow=8.8,SNR=2.9						

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*LDG **29** 01:43:39.8±0.2, 5156N×16.10E, h1km, Ml4.2/10, Error ellipse: s-maj=5.4km s-min=2.9km az=5.0, Suspected Mining induced.*
*ISCJB **29** 01:43:39.8±0.2, 5145N±001×1605E±002, h0km, mb3.6/6, Error ellipse: s-maj=2.1km s-min=1.6km az=7.0*
*NEIC **29** 01:43:40.5±0.3, 5159N×1602E, h5km, ML3.5(STR), ML3.8(SZGRF), Error ellipse: s-maj=4.7km s-min=4.1km az=2.0*
*IPEC **29** 01:43:40.4±0.3, 5157N×16.16E, h3km±1km, ML3.2/2, Error ellipse: s-maj=1.9km s-min=0.9km az=26.0*
*MOS **29** 01:43:40.6±1.4, 5166N×1603E, h23km, mb4.0/3, Error ellipse: s-maj=7.2km s-min=4.1km az=82.9*
*IDC **29** 01:43:40.9±0.6, 5154N×1596E, h0km, mb3.7/6, mb1 3.8/13, mb1mx3.7/26, mbtmp3.7/13, ML3.5/7, Error ellipse: s-maj=9.8km s-min=6.7km az=95.0*
*CSEM **29** 01:43:41.4±0.1, 5152N×1607E, h1km, ML4.2/25, Ms3.9, Error ellipse: s-maj=1.2km s-min=0.9km az=4.0*
*WAR **29** 01:43:41.9, 5153N×1609E, Mw3.3*
*PRU **29** 01:43:41.9, 5151N×16.10E, h0km*
*BGR **29** 01:43:42.3±0.3, 5144N×1607E, h1km, ML3.8, Error ellipse: s-maj=3.3km s-min=2.2km az=8.0*
*VIE **29** 01:43:44.8±0.5, 5130N×1587E, h0km, mb3.2/14, ML3.3/14, Ms3.9/2, Error ellipse: s-maj=3.3km s-min=3.1km az=120.0*
78 km NE of Liberec Suspected Mining induced.
*STR **29** 01:43:48.7±0.1, 5094N×1535E, h1km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 29 01:43:40.5±0.2, 5155N±001×1608E±002, h0km, n201, σ1§10/316, mb3.6/6, 20C-27D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72 169**		*e*Pg	**Pg**	**01 43 54.8**	**+0.6**
KSP				*e*Sg	**Sg**	**01 44 04.2**	**+0.7**
KSP	**Ksiaz**	**0.72 169**		*e*Pg	**Pg**	**01 43 54.6**	**+0.4**
KSP	**Ksiaz**	**0.72 169**		*e*P	**Pg**	**01 43 54.7**	**+0.5**
KSP				*e*		01 44 04.0	
KSP	**Ksiaz**	**0.72 169**		*e*Pg	**Pg**	**01 43 54.7**	**+0.5**
KSP				*e*Sg	**Sg**	**01 44 03.7**	**+0.2**
KSP	**Ksiaz**	**0.72 169**		*e*Pg	**Pg**	**01 43 54.7**	**+0.5**
KSP				*e*Sg	**Sg**	**01 44 04.0**	**+0.5**
KSP				*e*		01 44 09.0	
UPC	**Upice**	**1.04 182**		*e*P	**Pg**	**01 44 01.0**	**+0.6**
UPC				*e*		01 44 14.3	
UPC				smax			
	comp=N,217nm,0.3s						
UPC	**Upice**	**1.04 182**		*e*Pg	**Pg**	**01 44 00.8**	**+0.4**
UPC				Sg	**Sg**	**01 44 14.3**	**+0.4**
	comp=N,217nm,0.3s						
UPC	**Upice**	**1.04 182**		*e*PG	**Pg**	**01 44 01.0**	**+0.6**
UPC				*e*SG	**Sg**	**01 44 14.3**	**+0.4**
	comp=Z,217nm,0.3s						
DPC	**Dobruska-Polom**	**1.21 173**		*e*Pg	**Pg**	**01 44 03.5**	**-0.1**
DPC				*e*Sg	**Sg**	**01 44 19.2**	**-0.1**
DPC	**Dobruska-Polom**	**1.21 173**		*e*P	**Pg**	**01 44 03.5**	**-0.1**
DPC				*e*		01 44 18.9	
DPC				smax			
	comp=N,558nm,0.8s						
DPC	**Dobruska-Polom**	**1.21 173**		*e*Pg	**Pg**	**01 44 03.6**	**0.0**
DPC				*e*Sg	**Sg**	**01 44 18.7**	**-0.6**
DPC	**Dobruska-Polom**	**1.21 173**		*e*PG	**Pg**	**01 44 03.5**	**-0.1**
DPC				*e*SG	**Sg**	**01 44 18.9**	**-0.4**
	comp=Z,558nm,0.8s						
PVCC	**Panska Ves**	**1.40 224**		*e*P	**Pg**	**01 44 07.6**	**+0.4**
PVCC				*e*		01 44 25.9	
PVCC				smax			
	comp=N,987nm,0.3s						
PVCC	**Panska Ves**	**1.40 224**		*e*PG	**Pg**	**01 44 07.6**	**+0.4**
PVCC				*e*SG	**Sg**	**01 44 25.9**	**+0.6**
	comp=Z,987nm,0.3s						
BRG	**Berggiesshubel**	**1.50 244**		*e*Pn	**Pn**	**01 44 08.1**	**-0.5**
BRG				*e*Pg	**Pg**	**01 44 09.6**	**+0.3**
BRG				*e*Sg	**Sg**	**01 44 30.0**	**+1.3**
BRG	**Berggiesshubel**	**1.50 244**		P	**Pn**	**01 44 08.3**	**-0.3**
BRG						01 44 30.1	
BRG				smax			
	comp=N,447nm,0.4s						
BRG	**Berggiesshubel**	**1.50 244**		Pg	**Pg**	**01 44 09.6**	**+0.4**
BRG				*e*Sg	**Sg**	**01 44 29.8**	**+1.1**
BRG	**Berggiesshubel**	**1.50 244**		Pn	**Pn**	**01 44 08.3**	**-0.3**
BRG				Pg	**Pg**	**01 44 09.8**	**+0.6**
BRG				Sg	**Sg**	**01 44 30.1**	**+1.4**
RUE	**Ruedersdorf**	**1.70 304**		*e*Pn	**Pn**	**01 44 11.4**	**+0.1**
RUE				*e*Sn	**Sn**	**01 44 36.3**	**+2.6**
RUE	**Ruedersdorf**	**1.70 304**		*e*Pn	**Pn**	**01 44 11.4**	**+0.1**
RUE				*e*Sn	**Sn**	**01 44 36.3**	**+2.6**
FBE	**Freiberg**	**1.82 251**		*e*Pn	**Pn**	**01 44 12.8**	**-0.2**
FBE				*e*Pg	**Pg**	**01 44 15.4**	**+0.1**
FBE				*e*Sg	**Sg**	**01 44 39.4**	**+0.4**
PRU	**Pruhonice**	**1.84 213**		*e*P	**Pn**	**01 44 13.3**	**0.0**
PRU				*e*		01 44 39.0	
PRU				smax			
	comp=N,214nm,0.5s						
PRU	**Pruhonice**	**1.84 213**		*e*Pn	**Pn**	**01 44 13.2**	**-0.1**
PRU	**Pruhonice**	**1.84 213**		Pg	**Pg**	**01 44 15.2**	**-0.5**
PRU				Sg	**Sg**	**01 44 38.8**	**-0.7**
PRU	**Pruhonice**	**1.84 213**		*e*PN	**Pn**	**01 44 13.3**	**0.0**
PRU				*e*PG	**Pg**	**01 44 15.2**	**-0.5**
PRU				*e*SG	**Sg**	**01 44 39.0**	**-0.5**
	comp=Z,214nm,0.5s						
GKP	**Gorka Klasztor**	**1.86 22**		*e*Pn	**Pn**	**01 44 14.3**	**+0.7**
GKP				*e*Pg	**Pg**	**01 44 21.1**	**+4.9**
GKP				*e*Sg	**Sg**	**01 44 44.5**	**+4.2**
GKP	**Gorka Klasztor**	**1.86 22**		*e*Pn	**Pn**	**01 44 14.3**	**+0.7**
GKP				*e*Pg	**Pg**	**01 44 21.1**	**+4.9**
GKP				*e*Sg	**Sg**	**01 44 44.5**	**+4.2**
CLL	**Collm**	**1.94 264**		*e*Pn	**Pn**	**01 44 14.3**	**-0.3**
CLL			⇓	*e*Pg	**Pg**	**01 44 18.0**	**+0.4**
CLL				*e*Sg	**Sg**	**01 44 44.4**	**+1.7**
CLL	**Collm**	**1.94 264**	⇓	*i*P	**Pn**	**01 44 14.1**	**-0.5**
CLL				*i*		01 44 44.2	
CLL				pmax	pmax		
	comp=Z,52nm,0.5s						
CLL	**Collm**	**1.94 264**	⇓	*i*Pn	**Pn**	**01 44 14.1**	**-0.5**
	comp=Z,52nm,0.5s						
CLL				*e*Pg	**Pg**	**01 44 18.0**	**+0.4**
CLL				*ex*	x	01 44 22.0	
CLL				*i* Sg	**Sg**	**01 44 44.2**	**+1.5**
	comp=Z,315nm,0.7s						
CLL	**Collm**	**1.94 264**	⇓	*i*Pn	**Pn**	**01 44 14.1**	**-0.5**
CLL				*e*Pg	**Pg**	**01 44 18.0**	**+0.4**
CLL				*i* Sg	**Sg**	**01 44 44.2**	**+1.5**
RAC	**Raciborz**	**1.99 137**		*e*Pg	**Pg**	**01 44 18.6**	**+0.1**
RAC				*e*Sg	**Sg**	**01 44 43.7**	**-0.6**
OKC	**Ostrava-Krasne**	**2.16 142**		*e*Pn	**Pn**	**01 44 16.6**	**-1.0**
OKC				*e*Pg	**Pg**	**01 44 20.6**	**-1.3**
OKC				*e*Sg	**Sg**	**01 44 49.0**	**-0.8**
OKC	**Ostrava-Krasne**	**2.16 142**		Pg	**Pg**	**01 44 20.6**	**-1.2**
OKC				Sg	**Sg**	**01 44 49.0**	**-0.8**
OKC	**Ostrava-Krasne**	**2.16 142**		*e*SG	**Sg**	**01 44 48.2**	**-1.6**
	comp=Z,464nm,0.7s						
VRAC	**Vranov**	**2.27 171**		Pn	**Pn**	**01 44 19.3**	**+0.2**
	comp=Z,5.6nm,0.3s,baz=340,slow=14,SNR=45						
VRAC				Lg		01 44 52.5	
	comp=Z,35nm,0.3s,baz=65,slow=18,SNR=13						
VRAC	**Vranov**	**2.27 171**		*e*Pn	**Pn**	**01 44 19.3**	**+0.2**
VRAC	**Vranov**	**2.27 171**		*i*P	**Pn**	**01 44 20.3**	**+1.2**
VRAC				*e*Sg	**Sg**	**01 44 50.8**	**-2.4**
	comp=Z,115nm,0.4s						
VRAC	**Vranov**	**2.27 171**	⇓	*i*P	**Pn**	**01 44 20.3**	**+1.2**
VRAC	**Vranov**	**2.27 171**	⇓	P	**Pn**	**01 44 20.3**	**+1.2**
TREC	**Trest**	**2.29 190**		*e*PN	**Pn**	**01 44 19.8**	**+0.4**
TREC				*e*PG	**Pg**	**01 44 23.7**	**-0.6**
KRUC	**Moravsky**	**2.50 175**		*e*Pn	**Pn**	**01 44 22.6**	**+0.3**
KRUC	**Moravsky**	**2.50 175**		*e*Pg	**Pg**	**01 44 27.0**	**-1.3**
KRUC				*e*Sg	**Sg**	**01 44 59.4**	**-1.2**
	comp=Z,111nm,0.6s						
TANN	**Tannenbergstha**	**2.55 245**		*e*Pn	**Pn**	**01 44 23.5**	**+0.5**
TANN				*e*Sg	**Sg**	**01 45 02.3**	**-0.1**
WERD	**Werda**	**2.62 247**		*e*Pn	**Pn**	**01 44 24.2**	**+0.1**
WERD				*e*Sg	**Sg**	**01 45 04.5**	**-0.3**
NKC	**Novy Kostel**	**2.65 242**		*e*Pn	**Pn**	**01 44 24.7**	**+0.3**
NKC	**Novy Kostel**	**2.65 242**		*e*PN	**Pn**	**01 44 25.1**	**+0.7**
NKC				*e*PG	**Pg**	**01 44 30.8**	**-0.4**
NKC				*e*SG	**Sg**	**01 45 07.0**	**+1.5**
	comp=Z,583nm,0.4s						
OJC	**Ojcow**	**2.71 118**		*e*Pg	**Pg**	**01 44 32.1**	**-0.2**
OJC				*e*Sg	**Sg**	**01 45 07.3**	**-0.1**
OJC	**Ojcow**	**2.71 118**		*e*Pn	**Pn**	**01 44 24.9**	**-0.3**
OJC				*e*Pg	**Pg**	**01 44 30.9**	**-1.4**
OJC				*e*Sg	**Sg**	**01 45 07.3**	**-0.1**
OJC	**Ojcow**	**2.71 118**		*e*Pg	**Pg**	**01 44 32.1**	**-0.2**
OJC				Sg	**Sg**	**01 45 07.3**	**-0.1**
KHC	**Kasperske Hory**	**2.90 214**		*e*Pn	**Pn**	**01 44 27.9**	**+0.1**
KHC	**Kasperske Hory**	**2.90 214**		*e*PN	**Pn**	**01 44 28.7**	**+0.2**
KHC				*e*PG	**Pg**	**01 44 34.5**	**-1.5**
KHC				*e*SN	**Sn**	**01 45 03.7**	**+0.3**
KHC				*e*SG	**Sg**	**01 45 13.9**	**+0.3**
	comp=Z,124nm,0.6s						
MGBB	**Grossbuechelbe**	**2.92 239**	⇓	*i*Pn	**Pn**	**01 44 28.4**	**+0.4**
MOX	**Moxa**	**2.95 254**		*e*Pn	**Pn**	**01 44 28.7**	**+0.2**
MOX				*e*Pg	**Pg**	**01 44 36.8**	**-0.2**
MOX				*e*Sg	**Sg**	**01 45 15.9**	**+0.6**
MOX	**Moxa**	**2.95 254**		*e*PN	**Pn**	**01 44 28.7**	**+0.1**
MOX				*e*PG	**Pg**	**01 44 37.0**	**0.0**
MOX				*e*SG	**Sg**	**01 45 16.9**	**+1.6**
MOX	**Moxa**	**2.95 254**		*e*Pn	**Pn**	**01 44 28.5**	**-0.1**
MOX	**Moxa**	**2.95 254**		*e*Pg	**Pg**	**01 44 37.0**	**0.0**
MOX				*e*Sg	**Sg**	**01 45 14.2**	**-1.1**
MANZ	**Manzenberg**	**2.96 240**		*e*Pn	**Pn**	**01 44 29.2**	**+0.5**
MANZ				*e*Sg	**Sg**	**01 45 14.6**	**-1.0**
MANZ	**Manzenberg**	**2.96 240**		Pn	**Pn**	**01 44 29.2**	**+0.5**
MANZ				Sg	**Sg**	**01 45 14.6**	**-1.1**
ROTZ	**Rotzenmuhle**	**3.04 236**		*e*Pn	**Pn**	**01 44 30.1**	**+0.3**
ROTZ				*e*Sg	**Sg**	**01 45 16.6**	**-1.4**
GEC2	**GERESS Array S**	**3.11 210**		*e*Pn	**Pn**	**01 44 30.8**	**+0.2**
GEC2				*e*Pg	**Pg**	**01 44 38.2**	**-1.7**
GEC2				*e*Sg	**Sg**	**01 45 18.4**	**-1.8**
GEC2	**GERESS Array S**	**3.11 210**		*e*P	**Pn**	**01 44 31.4**	**+0.7**
GEC2				*e*		01 45 11.5	
GEC2	**GERESS Array S**	**3.11 210**		*e*Pn	**Pn**	**01 44 31.4**	**+0.7**
GEC2				*e*Pg	**Pg**	**01 44 38.2**	**-1.8**
GEC2				*e*Sn	**Sn**	**01 45 11.4**	**+3.0**
GEC2				*e*Sg	**Sg**	**01 45 18.4**	**-1.8**
GERES	**GERESS Array B**	**3.11 210**		Pn	**Pn**	**01 44 30.7**	**+0.1**
	comp=Z,5.6nm,0.3s,baz=30,slow=12,SNR=207						
GERES				Pg	**Pg**	**01 44 39.9**	**0.0**
	comp=Z,10nm,0.3s,baz=29,slow=15,SNR=58						
GERES				Lg		01 45 18.6	
	comp=Z,26nm,0.3s,baz=46,slow=29,SNR=17						
GERES	**GERESS Array B**	**3.11 210**		Pg	**Pg**	**01 44 39.9**	**-0.1**
SMOL	**Smolenice**	**3.16 163**		*e*P	**Pg**	**01 44 40.8**	**-0.2**
SMOL				*e*Sg	**Sg**	**01 45 24.3**	**+2.4**
SMOL	**Smolenice**	**3.16 163**		*e*	**Pg**	**01 44 40.8**	**-0.2**
WET	**Wettzell**	**3.16 222**		*e*Pn	**Pn**	**01 44 31.7**	**+0.3**
WET				*e*Pg	**Pg**	**01 44 38.1**	**-2.9**
WET				*e*Sg	**Sg**	**01 45 20.7**	**-1.2**
WET	**Wettzell**	**3.16 222**		*e*Pn	**Pn**	**01 44 31.7**	**+0.3**
WET				*e*Pg	**Pg**	**01 44 38.1**	**-2.9**
WET				*e*Sg	**Sg**	**01 45 20.7**	**-1.2**
KOLL	**Kolacno**	**3.33 152**		*e*P	**Pn**	**01 44 33.8**	**+0.1**
KOLL	**Kolacno**	**3.33 152**		*e*Pn	**Pn**	**01 44 33.8**	**+0.1**
KOLL				*e*Sg	**Sg**	**01 45 26.7**	**-0.6**
KOLL	**Kolacno**	**3.33 152**		*e*PN	**Pn**	**01 44 33.8**	**+0.1**
KOLL				*e*		01 44 47.5	
KOLL	**Kolacno**	**3.33 152**		*e*Pn	**Pn**	**01 44 33.8**	**+0.1**
KOLL				*e*		01 44 47.5	
KOLL				*e*Sg	**Sg**	**01 45 26.7**	**-0.6**
ZST	**Bratislava**	**3.42 168**		*e*PN	**Pn**	**01 44 36.2**	**+1.2**
ZST				*e*		01 44 45.3	
ZST	**Bratislava**	**3.42 168**		*e*SG	**Sg**	**01 45 30.1**	**-0.2**
ZST	**Bratislava**	**3.42 168**		*e*Pn	**Pn**	**01 44 36.3**	**+1.3**
ZST				*e*		01 44 45.3	
ZST				*e*Sg	**Sg**	**01 45 30.1**	**-0.2**
NIE	**Niedzica**	**3.44 127**		*e*P	**Pg**	**01 44 45.5**	**-0.9**
NIE				*e*S	**Sg**	**01 45 29.9**	**-1.1**
VYHS	**Vyhne**	**3.54 149**		*e*PN	**Pn**	**01 44 36.6**	**0.0**
VYHS				*e*		01 44 53.4	
VYHS	**Vyhne**	**3.54 149**		*e*SG	**Sg**	**01 45 34.0**	**0.0**
VYHS	**Vyhne**	**3.54 149**		*e*Pn	**Pn**	**01 44 36.6**	**0.0**
VYHS				*e*		01 44 53.4	
VYHS				*e*Sg	**Sg**	**01 45 34.0**	**0.0**
CLZ	**Clausthal**	**3.56 277**		*e*Pn	**Pn**	**01 44 37.9**	**+1.0**
CLZ	**Clausthal**	**3.56 277**		*e*Pn	**Pn**	**01 44 37.8**	**+0.9**
CLZ	**Clausthal**	**3.56 277**		*e*Pn	**Pn**	**01 44 37.9**	**+1.0**
GRA1	**Grafenberg Arr**	**3.61 241**		Pn	**Pn**	**01 44 38.0**	**+0.5**
GRA1				Sg	**Sg**	**01 45 35.7**	**-0.6**
GRA1	**Grafenberg Arr**	**3.61 241**		*e*Pn	**Pn**	**01 44 38.0**	**+0.5**
GRA1				*e*Sg	**Sg**	**01 45 35.7**	**-0.6**
GRF	**Grafenberg Arr**	**3.61 241**		*e*Pn	**Pn**	**01 44 38.0**	**+0.5**
GRF				*e*Sg	**Sg**	**01 45 35.7**	**-0.6**
GRF	**Grafenberg Arr**	**3.61 241**		*e*PN	**Pn**	**01 44 38.0**	**+0.5**
CONA	**Conrad Observa**	**3.63 182**		*i* Pn	**Pn**	**01 44 38.4**	**+0.6**
	SNR=31						
CONA			⇑	*i*Sg	**Sg**	**01 45 36.5**	**-0.4**
	comp=Z,130nm,0.4s						
CSNA	**Conrad Observa**	**3.63 182**	⇑	*i*Pn	**Pn**	**01 44 38.3**	**+0.5**
CSNA			⇑	*i*Sg	**Sg**	**01 45 36.6**	**-0.3**
	comp=Z,237nm,0.7s						
BSD	**Bornholm Skovb**	**3.64 349**		*i* P	**Pn**	**01 44 36.7**	**-1.3**
BSD				*e*S	**Sn**	**01 45 18.6**	**-3.0**
HROE	**Hohe Rhon--Fla**	**3.87 257**	⇓	*i*Pn	**Pn**	**01 44 41.5**	**+0.4**
SOP	**Sopron**	**3.88 175**	⇓	*e*Pn	**Pn**	**01 44 42.1**	**+0.8**
SOP				*e*SB	**Sb**	**01 45 44.3**	**+7.1**
MOA	**Molln**	**3.88 198**		*i* Pn	**Pn**	**01 44 42.0**	**+0.6**
	SNR=60						
MOA			⇑	*i*Sg	**Sg**	**01 45 45.4**	**+0.3**
	comp=Z,128nm,0.6s						
MOA	**Molln**	**3.88 198**		Pn	**Pn**	**01 44 42.0**	**+0.7**
	SNR=60						
MOA				Sg	**Sg**	**01 45 45.4**	**+0.2**
	comp=Z,128nm,0.6s						
STHS	**Stebnicka Huta**	**3.93 121**		*e*PN	**Pn**	**01 44 42.4**	**+0.4**
STHS				*e*		01 44 58.0	
STHS	**Stebnicka Huta**	**3.93 121**		*e*SG	**Sg**	**01 45 47.5**	**+0.9**
STHS	**Stebnicka Huta**	**3.93 121**		*e*Pn	**Pn**	**01 44 42.4**	**+0.4**
STHS				*e*		01 44 58.0	
STHS				*e*Sg	**Sg**	**01 45 47.5**	**+0.9**
ARSA	**Arzberg**	**4.32 185**	⇑	*i*Pn	**Pn**	**01 44 48.3**	**+1.1**
ARSA			⇓	*i*Sg	**Sg**	**01 45 58.7**	**-0.3**
	comp=Z,131nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.36 125**		*e*PN	**Pn**	**01 44 48.4**	**+0.6**
CRVS				*e*		01 45 04.0	
CRVS	**Cervenica-Dubn**	**4.36 125**		*e*SG	**Sg**	**01 45 59.3**	**-1.0**
CRVS	**Cervenica-Dubn**	**4.36 125**		*e*Pn	**Pn**	**01 44 48.4**	**+0.6**
CRVS				*e*		01 45 04.0	
CRVS				*e*Sg	**Sg**	**01 45 59.3**	**-1.0**
PSZ	**Piszkesteto**	**4.40 144**	⇓	*e*Pn	**Pn**	**01 44 49.3**	**+0.9**
PSZ	**Piszkesteto**	**4.40 144**	⇓	*e*Pn	**Pn**	**01 44 49.3**	**+0.9**
PSZ				*e*Sg	**Sg**	**01 46 05.8**	**+4.2**

	comp=Z,5.6nm,0.7s								
TUE	**Stuetta**	**6.74**	**224**	*e*Pn		**Pn**	**01 45 22.4**	**+1.9**
	comp=Z,5.6nm,0.7s								
BCLA	**Clavier**	**6.90**	**265**	P		**Pn**	**01 45 23.6**	**+0.9**
BZS	**Buzias**	**6.98**	**146**	⇑*i*P		**Pn**	**01 45 23.6**	**-0.2**
BZS	**Buzias**	**6.98**	**146**	⇑P		**Pn**	**01 45 23.6**	**-0.3**
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Pn		**Pn**	**01 45 22.0**	**-2.8**
HINF				*e*Sg		**Sg**	**01 47 20.3**	**-6.5**
	comp=Z,48nm,0.7s								
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Pn		**Pn**	**01 45 22.0**	**-2.8**
HINF				*e*Sg		**Sg**	**01 47 20.3**	**-6.5**
	comp=Z,24nm,0.7s								
BUR08	**Bucovina Ar. S**	**7.10**	**120**	*e*Pn		**Pn**	**01 45 26.3**	**+0.8**
BUR08	**Bucovina Ar. S**	**7.10**	**120**	*e*Pn		**Pn**	**01 45 26.3**	**+0.8**
BURAR	**Bucovina Array**	**7.13**	**120**	⇓*i*P		**Pn**	**01 45 26.0**	**+0.1**
BURAR	**Bucovina Array**	**7.13**	**120**	⇓P		**Pn**	**01 45 26.0**	**+0.1**
HAU	**Haudompre**	**7.23**	**244**	*e*Pn		**Pn**	**01 45 24.9**	**-2.3**
HAU				*e*Sg		**Sg**	**01 47 26.8**	**-5.6**
	comp=Z,40nm,0.6s								
HAU	**Haudompre**	**7.23**	**244**	*e*Pn		**Pn**	**01 45 24.9**	**-2.3**
HAU				*e*Sg		**Sg**	**01 47 26.8**	**-5.6**
	comp=Z,20nm,0.6s								
GIVF	**Givet**	**7.28**	**263**	*e*Sg		**Sg**	**01 47 27.1**	**-6.8**
	comp=Z,67nm,1.0s								
GIVF	**Givet**	**7.28**	**263**	*e*Sg		**Sg**	**01 47 27.1**	**-6.8**
	comp=Z,33nm,1.0s								
DOU	**Dourbes**	**7.42**	**263**	P		**Pn**	**01 45 31.7**	**+1.9**
GZR	**Gura Zlata**	**7.60**	**142**	⇓*i*P		**Pn**	**01 45 33.1**	**+0.8**
GZR	**Gura Zlata**	**7.60**	**142**	⇓P		**Pn**	**01 45 33.1**	**+0.8**
MEZF	**Maizieres J'vi**	**7.73**	**251**	*e*Sg		**Sg**	**01 47 42.9**	**-5.5**
	comp=Z,134nm,1.4s								
MEZF	**Maizieres J'vi**	**7.73**	**251**	*e*Sg		**Sg**	**01 47 42.9**	**-5.5**
	comp=Z,67nm,1.4s								
SFTF	**Sexfontaines**	**7.88**	**249**	*e*Pn		**Pn**	**01 45 33.7**	**-2.4**
SFTF				*e*Sg		**Sg**	**01 47 46.2**	**-7.0**
	comp=Z,62nm,0.9s								
SFTF	**Sexfontaines**	**7.88**	**249**	*e*Pn		**Pn**	**01 45 33.7**	**-2.4**
SFTF				*e*Sg		**Sg**	**01 47 46.2**	**-7.0**
	comp=Z,31nm,0.9s								
CABF	**La Chapelle**	**8.21**	**237**	*e*Sg		**Sg**	**01 47 59.2**	**-4.6**
	comp=Z,156nm,1.3s								
CABF	**La Chapelle**	**8.21**	**237**	*e*Sg		**Sg**	**01 47 59.2**	**-4.6**
	comp=Z,78nm,1.3s								
AKASG	**Malin Array Be**	**8.32**	**91**	Pn		**Pn**	**01 45 40.5**	**-1.7**
	comp=Z,2.9nm,0.3s,baz=279,slow=12,SNR=14								
AKASG				Sn		**Sn**	**01 47 11.0**	**-5.7**
	comp=Z,1.4nm,0.3s,baz=272,slow=23,SNR=6.0								
AKASG				Lg			01 48 08.1		
	comp=Z,0.5nm,0.3s,baz=269,slow=25,SNR=3.3								
AKASG	**Malin Array Be**	**8.32**	**91**	P		**Pn**	**01 45 40.5**	**-1.7**
AKASG							01 47 11.0		
AKASG				pmax		pmax			
	comp=Z,3.0nm,0.3s								
AKASG				smax					
	comp=N,1.0nm,0.3s								
AKASG	**Malin Array Be**	**8.32**	**91**	Pn		**Pn**	**01 45 40.5**	**-1.6**
AKASG				Sn		**Sn**	**01 47 11.0**	**-5.7**
AKASG				Lg			01 48 08.1		
LPG	**La Plagne**	**8.65**	**229**	*e*Pn		**Pn**	**01 45 44.2**	**-2.6**
LPG				*e*Sg		**Sg**	**01 48 12.3**	**-5.8**
	comp=N,53nm,1.1s								
HFS	**Hagfors**	**8.71**	**352**	Pn		**Pn**	**01 45 46.5**	**-1.0**
	comp=N,0.3nm,0.3s,baz=166,slow=18,SNR=8.2								
HFS				Sn		**Sn**	**01 47 21.2**	**-5.0**
	comp=N,0.2nm,0.3s,baz=197,slow=34,SNR=2.5								
LOR	**Lormes**	**9.04**	**247**	*e*Pn		**Pn**	**01 45 49.1**	**-3.0**
LOR				*e*Sg		**Sg**	**01 48 22.9**	**-7.6**
	comp=N,17nm,0.7s								
LOR	**Lormes**	**9.04**	**247**	*e*Pn		**Pn**	**01 45 49.1**	**-3.0**
LOR				*e*Sg		**Sg**	**01 48 22.9**	**-7.6**
	comp=N,8.3nm,0.7s								
MBDF	**Montbardon**	**9.23**	**226**	*e*P		**Pn**	**01 45 57.2**	**+2.5**
SSF	**Saint Saulge**	**9.36**	**246**	*e*Sg		Sx	01 48 32.4		
	comp=N,22nm,0.9s								
SSF	**Saint Saulge**	**9.36**	**246**	*e*Sg		Sx	01 48 32.4		
	comp=N,11nm,0.9s								
SBF	**Sospel**	**9.64**	**220**	*e*Pn		**Pn**	**01 45 57.2**	**-3.1**
NOA	**NORSAR Array B**	**9.89**	**346**	Pn		**Pn**	**01 46 00.9**	**-2.8**
	comp=N,0.2nm,0.3s,baz=174,slow=13,SNR=3.5								
NOA				Sn		**Sn**	**01 47 47.0**	**-8.2**
	comp=N,0.2nm,0.3s,baz=306,slow=19,SNR=2.7								
NOA				Lg			01 48 55.2		
	comp=N,0.4nm,0.3s,baz=233,slow=14,SNR=3.7								
NOA	**NORSAR Array B**	**9.89**	**346**	P		**Pn**	**01 46 00.9**	**-2.7**
NOA							01 47 47.0		
NOA	**NORSAR Array B**	**9.89**	**346**	Sn		**Sn**	**01 47 47.0**	**-8.2**
NOA	**NORSAR Array B**	**9.89**	**346**	Pn		**Pn**	**01 46 00.9**	**-2.8**
NOA				Sn		**Sn**	**01 47 47.0**	**-8.2**
NOA				Lg			01 48 55.2		
FRF	**La Foret Royal**	**10.21**	**222**	*e*Pn		**Pn**	**01 46 05.4**	**-2.8**
MFF	**Saint Martin d**	**11.73**	**251**	*e*Pn		**Pn**	**01 46 24.9**	**-4.0**
KAF	**Kangasniemi**	**11.96**	**24**	*e*p		**Pn**	**01 46 30.0**	**-2.0**
	comp=N,0.7nm,0.3s								
KAF	**Kangasniemi**	**11.96**	**24**	*e*P		**Pn**	**01 46 30.0**	**-2.0**
KAF				pmax		pmax			
	comp=Z,1.0nm,0.3s								
EKA	**Eskdalemuir Ar**	**12.07**	**296**	Pn		**Pn**	**01 46 30.7**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=105,slow=14,SNR=5.9								
JOF	**Joensuu**	**14.02**	**30**	*e*p		**Pn**	**01 46 55.7**	**-4.3**
	comp=Z,0.6nm,0.4s								
JOF	**Joensuu**	**14.02**	**30**	*e*P		**Pn**	**01 46 55.7**	**-4.3**
JOF				pmax		pmax			
	comp=Z,1.0nm,0.4s								
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn		**Pn**	**01 47 54.7**	**-4.2**
	comp=Z,0.3nm,0.3s,baz=193,slow=10.0,SNR=13								
KEV	**Kevo**	**18.98**	**12**	*e*p		**Pn**	**01 47 59.5**	**-4.1**
AKTK	**Aktyubinsk**	**26.17**	**76**	P		**P**	**01 49 16.2**	**0.0**
AKTO	**Aktyubinsk**	**26.17**	**76**	P		**P**	**01 49 16.2**	**0.0**
	comp=Z,0.8nm,0.4s,mb3.7,baz=282,slow=9.4,SNR=5.2								
AKTO	**Aktyubinsk**	**26.17**	**76**	P		**P**	**01 49 16.2**	**0.0**
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb3.8								
BVAR	**Borovoye Array**	**32.59**	**66**	P		**P**	**01 50 13.9**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.8,baz=284,slow=7.6,SNR=7.5								
BVAR	**Borovoye Array**	**32.59**	**66**	P		**P**	**01 50 13.9**	**+0.7**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P		**P**	**01 51 16.1**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.3,baz=11,slow=8.5,SNR=4.5								
ZALV	**Zalesovo Beam**	**40.20**	**59**	P		**P**	**01 51 19.0**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.2,baz=284,slow=6.0,SNR=4.1								
MKAR	**Makanchi Array**	**42.22**	**69**	P		**P**	**01 51 35.9**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.3,baz=298,slow=6.3,SNR=5.1								
YKA	**Yellowknife Ar**	**59.81**	**336**	P		**P**	**01 53 47.6**	**+0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=30,slow=6.6,SNR=24								
YKA	**Yellowknife Ar**	**59.81**	**336**	P		**P**	**01 53 47.6**	**+0.7**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.6s								

*IDC **29** 01:47:42.1±0.9,2171N×12129E,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.7/18,mbtmp3.7/6, Error ellipse: s-maj=65.7km s-min=19.8km az=67.0*
*ISCJB **29** 01:47:43.6±0.8,2160N±004×12108E±005,h20km±5km, mb3.6/6, Error ellipse: s-maj=8.5km s-min=6.1km az=161.4*
*NEIC **29** 01:47:43.7±0.5,2163N×12123E,h10km, Error ellipse: s-maj=25.5km s-min=7.3km az=80.0*
*TAP **29** 01:47:44.3,2169N×12103E,h21km, ML3.7, C*

ISC 29 01:47:44.2±0.8, 2165N±004×12111E±005, h14km±4km, n43, σ0°84/58, mb3.6/6, 3C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.32**	**322**	⇑*i*P	**Pg**	**01 47 51.3**	**+0.5**
	baz=317						
TSEB				*i* S	**Sg**	**01 47 56.4**	**+1.2**
	baz=317						
TWK1	**Hengchun**	**0.41**	**316**	⇑*i*P	**Pg**	**01 47 52.1**	**-0.3**
	baz=316						
TWK1				*i* S	**Sg**	**01 47 57.8**	**-0.2**
	baz=316						
HEN	**Hengchun**	**0.50**	**316**	*i* P	**Pg**	**01 47 53.9**	**-0.1**
	baz=319						
HEN				*i* S	**Sg**	**01 48 00.6**	**-0.1**
	baz=319						
LAY	**Lan-yu**	**0.56**	**46**	P	**Pg**	**01 47 56.6**	**+1.3**
	baz=54						
LAY				*e*S	**Sg**	**01 48 06.0**	**+3.2**
	baz=54						
TAW	**Tawu**	**0.73**	**344**	*i* P	**Pg**	**01 47 57.6**	**-0.9**
	baz=1.0						
TAW				S	**Sg**	**01 48 08.4**	**+0.3**
	baz=1.0						
EAST	**Anshuo**	**0.77**	**341**	*e*P	**Pg**	**01 47 58.3**	**-0.9**
	baz=356						
EAST				*e*S	**Sg**	**01 48 09.2**	**-0.2**
	baz=356						
SCZT	**Fangliau**	**0.85**	**328**	⇑*i*P	**Pg**	**01 48 00.2**	**-0.5**
	baz=331						
SCZT				S	**Sg**	**01 48 11.5**	**-0.5**
	baz=331						
ECL	**Taimali**	**0.96**	**351**	*e*P	**Pb**	**01 48 01.9**	**-0.7**
	baz=8.0						
TTN	**Taitung**	**1.10**	**2**	*e*P	**Pb**	**01 48 04.0**	**-1.0**
	baz=6.0						
TWG	**Pinlang**	**1.17**	**358**	*e*Pn	**Pn**	**01 48 06.6**	**+0.4**
TWG	**Pinlang**	**1.17**	**358**	*e*P	**Pn**	**01 48 02.9**	**-3.3**
	baz=2.0						
SSD	**Sandimen**	**1.18**	**338**	*e*P	**Pn**	**01 48 05.9**	**-0.5**
	baz=350						
SSD				*e*S	**Sb**	**01 48 21.1**	**-0.5**
	baz=350						
TWM1	**Shoushan**	**1.33**	**331**	*e*P	**Pn**	**01 48 08.5**	**0.0**
	baz=314						
CHKT	**Chengkung**	**1.46**	**9**	*e*P	**Pn**	**01 48 07.4**	**-2.9**
	baz=12						
ELDTW	**Lidau**	**1.54**	**357**	*e*P	**Pn**	**01 48 11.7**	**+0.4**
	baz=8.0						
STYT	**Tauyuan**	**1.54**	**348**	*e*P	**Pn**	**01 48 10.7**	**-0.6**
	baz=351						
STYT				*e*S	**Sn**	**01 48 32.1**	**+0.9**
	baz=351						
CHN1	**Nanshi**	**1.62**	**341**	*e*P	**Pn**	**01 48 12.1**	**-0.3**
	baz=344						
WTP	**Ta-pu**	**1.66**	**344**	*e*P	**Pn**	**01 48 12.6**	**-0.3**
	baz=347						
WTP				*e*S	**Sn**	**01 48 35.7**	**+1.7**
	baz=347						
TPUB	**Ta-pu**	**1.70**	**345**	*e*Pn	**Pn**	**01 48 15.6**	**+2.0**
TWF1	**Yuli**	**1.71**	**6**	*e*P	**Pn**	**01 48 12.8**	**-0.8**
	baz=9.0						
TWK	**Hsinying**	**1.71**	**340**	*e*P	**Pn**	**01 48 14.3**	**+0.6**
	baz=343						
YULB	**Yu-li**	**1.74**	**6**	*e*Pn	**Pn**	**01 48 13.8**	**-0.3**
CHN4	**Tsaushan**	**1.76**	**344**	*e*P	**Pn**	**01 48 15.7**	**+1.3**
	baz=347						
YUS	**Yu-Shan**	**1.84**	**355**	*e*P	**Pn**	**01 48 16.5**	**+1.1**
	baz=10.0						
YUS				*e*S	**Sn**	**01 48 38.7**	**+0.2**
	baz=10.0						
EHY	**Hungye**	**1.86**	**6**	*e*P	**Pn**	**01 48 15.9**	**+0.2**
	baz=9.0						
ALS	**Alishan**	**1.88**	**351**	*e*P	**Pn**	**01 48 15.9**	**0.0**
	baz=354						
CHN5	**Tsauling**	**1.98**	**348**	*e*P	**Pn**	**01 48 17.2**	**-0.2**
	baz=351						
SSLB	**Suanglung**	**2.13**	**356**	*e*Pn	**Pn**	**01 48 19.8**	**+0.3**
ESL	**Shilin**	**2.18**	**8**	*e*P	**Pn**	**01 48 18.6**	**-1.4**
	baz=11						
ESL				*e*S	**Sn**	**01 48 44.9**	**-2.0**
	baz=11						
SMLT	**Sun Moon Lake**	**2.23**	**355**	*e*P	**Pn**	**01 48 21.5**	**+0.7**
	baz=358						
SMLT				*e*S	**Sn**	**01 48 49.0**	**+0.8**
	baz=358						
TYC	**Yuchr**	**2.26**	**354**	P	**Pn**	**01 48 21.1**	**0.0**
	baz=357						
TYC				*e*S	**Sn**	**01 48 49.1**	**+0.2**
	baz=357						
WHF	**Hehuan Shan**	**2.49**	**3**	*e*P	**Pn**	**01 48 24.5**	**+0.2**
	baz=14						
NACB	**Ninganchiao**	**2.55**	**10**	*e*Pn	**Pn**	**01 48 25.1**	**-0.1**
NNS	**Nan Shan**	**2.79**	**5**	*e*P	**Pn**	**01 48 29.4**	**+0.9**
	baz=16						
ENTT	**Nioudou**	**3.01**	**8**	*e*P	**Pn**	**01 48 31.2**	**-0.3**
	baz=19						
ENTT				*e*S	**Sn**	**01 49 06.2**	**-1.1**
	baz=19						
YHNB	**Yeheng**	**3.02**	**5**	*e*Pn	**Pn**	**01 48 32.3**	**+0.6**
NSK	**Sanguang**	**3.02**	**4**	*e*P	**Pn**	**01 48 31.5**	**-0.2**
	baz=7.0						
MKAR	**Makanchi Array**	**40.14**	**318**	P	**P**	**01 55 20.5**	**+0.8**
	0.3nm,0.6s,mb3.2,baz=107,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**42.35**	**329**	P	**P**	**01 55 37.2**	**-0.5**
	0.5nm,0.4s,mb3.5,baz=95,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**43.31**	**162**	P	**P**	**01 55 45.3**	**-0.5**
	1.3nm,0.7s,mb3.8,baz=343,slow=9.0,SNR=5.0						
ASAR	**Alice Springs**	**46.73**	**164**	P	**P**	**01 56 13.2**	**+0.2**
	0.3nm,0.5s,mb3.5,baz=355,slow=12,SNR=6.1						
ASAR				PcP	PcP	01 57 46.9	+0.4
	0.4nm,1.0s,baz=343,slow=2.9,SNR=3.2						
STKA	**Stephens Creek**	**56.72**	**159**	P	**P**	**01 57 27.8**	**+0.2**
	2.2nm,1.0s,mb4.1,baz=326,slow=7.3,SNR=3.1						
YKA	**Yellowknife Ar**	**85.32**	**23**	P	**P**	**02 00 20.2**	**-0.4**
	0.4nm,0.6s,mb3.7,baz=307,slow=5.1,SNR=16						

*ISCJB **29** 02:09:50.5±1.6,514N±02×179.12W±008, h57km±12km, mb3.6/6, Error ellipse: s-maj=37.0km s-min=8.2km az=2.5*
*IDC **29** 02:09:51.8±3.8, 5138N×17908W, h51km±33km, mb3.4/6, mb1 3.7/8, mb1mx3.4/25, mbtmp3.5/8, ML3.5/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/17, Error ellipse: s-maj=36.9km s-min=16.3km az=177.0*
*NEIC **29** 02:09:51.8±1.3, 5142N×17904W, h50km±10km, ML3.4(AEIC), Error ellipse: s-maj=29.4km s-min=9.6km az=178.0*

ISC 29 02:09:51.8±1.6, 514N±02×17906W±008, h52km±12km, n12, σ0°83/13, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.57**	**70**	*e*Pn	**Pn**	**02 10 15.7**	**-1.5**
ADK				*e*Sn	**Sn**	**02 10 37.6**	**+1.2**
GSTR	**Great Sitkin T**	**2.01**	**67**	*e*Pn	**Pn**	**02 10 24.0**	**+0.8**
ATKA	**Atka Island**	**3.14**	**72**	P	**Pn**	**02 10 38.5**	**-0.2**
FX1	**Attu Island--F**	**5.03**	**291**	P	**Pn**	**02 11 04.6**	**0.0**
	3.8nm,0.3s,baz=255,slow=17,SNR=8.0						
FX1				S	**Sn**	**02 12 01.7**	**+0.4**
	0.7nm,0.3s,baz=262,slow=21,SNR=2.0						
PETK	**Petropavlovsk-**	**14.34**	**286**	LR	LR	02 18 33.2	
	comp=Z,24nm,21.3s,baz=298,slow=36						
KDAK	**Kodiak Island**	**16.57**	**57**	P	**Pn**	**02 13 38.6**	**-1.7**
	0.5nm,0.3s,baz=119,slow=22,SNR=7.1						
YKA	**Yellowknife Ar**	**35.36**	**46**	P	**P**	**02 16 42.1**	**+0.3**
	0.2nm,0.4s,mb3.4,baz=281,slow=8.0,SNR=11						
PDAR	**Pinedale Array**	**46.47**	**72**	P	**P**	**02 18 14.1**	**+0.6**
	1.3nm,0.7s,mb3.9,baz=321,slow=3.3,SNR=14						
TXAR	**Lajitas Array**	**58.82**	**81**	P	**P**	**02 19 44.8**	**0.0**
	0.2nm,0.6s,mb3.3,baz=336,slow=5.9,SNR=3.0						
MKAR	**Makanchi Array**	**59.92**	**308**	P	**P**	**02 19 51.3**	**-0.9**
	0.4nm,0.5s,mb3.7,baz=51,slow=6.8,SNR=9.0						
AKASG	**Malin Array Be**	**75.52**	**342**	P	**P**	**02 21 30.7**	**+0.5**
	0.8nm,0.4s,mb4.0,baz=17,slow=5.9,SNR=3.2						
WRA	**Warramunga Arr**	**81.89**	**224**	P	**P**	**02 22 05.8**	**+0.3**
	0.2nm,0.8s,mb3.1,baz=29,slow=5.5,SNR=2.6						

*BJI **29** 02:12:12.3, 1522N×12294E, h39km, mB4.2, mb4.6, Ms4.0, Msz3.7*
*MAN **29** 02:12:13, 1542N×12256E, h18km, mb5.1, ML4.0, MS4.2*
*ISCJB **29** 02:12:14.3±0.6, 1545N±003×12265E±005, h36km±5km, mb4.7/29, MS3.6/4, Error ellipse: s-maj=7.5km s-min=4.9km az=161.3*
*NEIC **29** 02:12:14.2±0.3, 1531N×12286E, mb4.5/3, Error ellipse: s-maj=13.3km s-min=6.0km az=68.0*
*IDC **29** 02:12:14.3±0.7, 1530N×12283E, h32km±4km, mb4.0/13, mb1 4.2/13, mb1mx4.0/20, mbtmp4.0/13, MS3.6/3, Ms1 3.7/3, ms1mx3.1/28, Error ellipse: s-maj=29.9km s-min=14.1km az=60.0*

ISC 29 02:12:15.8±0.5, 1540N±003×12264E±005, h36km±5km, h34km±.5km:pP-P, n69, σ1°19/77, mb4.7/29, MS3.6/4, 4C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.95**	**225**	*e*P	**Pn**	**02 12 30.2**	**-2.5**
POLP				*e*S	**Sn**	**02 12 44.5**	**-0.5**
BALP	**Baler**	**1.07**	**288**	*e*P	**Pn**	**02 12 31.5**	**-2.9**
BALP				*e*S	**Sn**	**02 12 46.0**	**-2.1**
PCPH	**Palayan**	**1.49**	**276**	⇑*e*P	**Pn**	**02 12 37.6**	**-2.5**
PCPH				*e*S	**Sn**	**02 12 58.2**	**-0.2**
GQP	**Guinayangan**	**1.50**	**187**	⇑*e*P	**Pn**	**02 12 39.2**	**-1.0**
GQP				*e*S	**Sn**	**02 12 59.7**	**+1.0**
PALP	**Palanan**	**1.66**	**353**	*e*P	**Pn**	**02 12 43.9**	**+1.4**
CAUP	**Cauayan**	**1.72**	**333**	*e*P	**Pn**	**02 12 41.7**	**-1.6**
CAUP				*e*S	**Sn**	**02 13 01.7**	**-2.3**
AUQP	**San Andres**	**2.07**	**179**	*e*P	**Pn**	**02 12 54.5**	**+6.4**
TGY	**Tagaytay City**	**2.09**	**232**	⇓*i*P	**Pn**	**02 12 51.0**	**+2.5**
TGY				*i* S	**Sn**	**02 13 16.4**	**+3.2**
PVCP	**Virac**	**2.32**	**141**	*e*P	**Pn**	**02 12 53.8**	**+2.2**
PVCP				*e*S	**Sn**	**02 13 19.7**	**+0.8**
PVCP	**Virac**	**2.32**	**141**	⇑*i*P	**Pn**	**02 12 53.1**	**+1.5**
PVCP				*i* S	**Sn**	**02 13 14.3**	**-4.6**
SCZP	**Santa Cruz**	**2.65**	**278**	*e*P	**Pn**	**02 12 55.4**	**-0.7**
SCZP				*e*S	**Sn**	**02 13 47.6**	**+21**
APYP	**Conner**	**2.79**	**332**	*e*P	**Pn**	**02 12 57.4**	**-0.6**
BOLP	**Bolinao**	**2.79**	**291**	*e*P	**Pn**	**02 12 56.5**	**-1.6**
LUBP	**Lubang**	**2.85**	**235**	*e*P	**Pn**	**02 12 59.8**	**+1.0**
LUBP				*e*S	**Sn**	**02 13 37.4**	**+5.5**
ABRA	**Dolores**	**2.90**	**321**	*e*P	**Pn**	**02 13 00.6**	**+1.1**
OTRP	**Odiongan**	**3.08**	**191**	*e*P	**Pn**	**02 13 01.8**	**-0.2**
OTRP				*e*S	**Sn**	**02 13 48.1**	**+10**
SIPP	**Brgy, Tapao**	**3.26**	**321**	⇓*i*P	**Pn**	**02 13 06.8**	**+2.4**
SIPP				*i* S	Px	02 13 17.4	
SJMP	**San Jose**	**3.27**	**207**	*e*P	**Pn**	**02 13 05.7**	**+1.0**
CNP	**Catarman**	**3.48**	**145**	*e*P	**Pn**	**02 13 06.9**	**-0.7**
SSLB	**Suanglung**	**8.49**	**350**	*e*Pn	**Pn**	**02 14 17.5**	**+1.2**
NACB	**Ninganchiao**	**8.78**	**354**	*e*Pn	**Pn**	**02 14 20.1**	**-0.2**
KMI	**Kunming**	**21.00**	**301**	P	**P**	**02 16 58.5**	**+2.2**
KMI				AMB	AMB		
	comp=Z,15nm,1.0s						
KMI				LR	LR		
	comp=N,212nm,11.2s,MS3.8						
KMI				LR	LR		
	comp=E,180nm,15.1s,MS3.8						
KMI				LR	LR		
	comp=Z,193nm,13.3s,MS3.7						
NST	**Nakhon Sawan**	**21.68**	**274**	P	**P**	**02 17 02.7**	**-1.0**
XAN	**Xi'an**	**22.30**	**329**	P	**P**	**02 17 10.0**	**-0.2**
XAN				AP		02 17 20.3	
XAN				AMB	AMB		
	comp=Z,16nm,0.9s,mb4.5						
XAN				AMB	AMB		
	comp=Z,61nm,5.6s						
CM31	**Chiang Mai Arr**	**22.86**	**281**	*e*P	**P**	**02 17 17.9**	**+1.6**
	comp=Z,8.2nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**22.86**	**281**	P	**P**	**02 17 17.8**	**+1.5**
	comp=Z,8.5nm,0.8s,mb4.2,baz=92,slow=7.3,SNR=25						
CMAR				pP		02 17 26.9	
	comp=Z,6.5nm,0.6s,baz=95,slow=7.5,SNR=7.1						
CMAR				LR	LR	02 27 04.3	
	comp=Z,117nm,18.1s,MS3.4,baz=90,slow=39						
CMAR	**Chiang Mai Arr**	**22.86**	**281**	P	**P**	**02 17 17.8**	**+1.5**
CMAR				pP		02 17 26.9	
CD2	**Chengdu**	**23.17**	**315**	P	**P**	**02 17 20.0**	**+0.6**
CD2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.0						
TAPN	**Taplejung**	**34.51**	**296**	*e*P	**P**	**02 19 01.1**	**+0.3**
	comp=Z,24nm,1.2s,mb5.0						
ODAN	**Odare**	**34.68**	**295**	*e*P	**P**	**02 19 02.1**	**-0.2**
	comp=Z,33nm,0.5s,mb5.5						
ULN	**Ulaanbaatar**	**34.84**	**342**	*e*P	**P**	**02 19 03.8**	**+0.4**
	comp=Z,6.7nm,1.0s,mb4.5						
ULN				*e*pP	pP	02 19 13.8	+0.2
RAMN	**Ramite**	**35.39**	**295**	*e*P	**P**	**02 19 09.0**	**+0.6**
	comp=Z,56nm,0.7s,mb5.6						
JIRN	**Jiri**	**35.89**	**296**	*e*P	**P**	**02 19 12.5**	**-0.2**
	comp=Z,42nm,0.8s,mb5.4						
GUN	**Gumba**	**36.22**	**296**	*e*P	**P**	**02 19 16.1**	**+0.6**
	comp=Z,69nm,0.9s,mb5.6						
PKI	**Pulchoki**	**36.55**	**296**	*e*P	**P**	**02 19 18.4**	**0.0**
	comp=Z,29nm,0.8s,mb5.2						
KKN	**Kakani**	**36.71**	**296**	*e*P	**P**	**02 19 19.6**	**-0.1**
	comp=Z,38nm,0.9s,mb5.2						
DMN	**Daman**	**36.83**	**296**	*e*P	**P**	**02 19 20.6**	**-0.1**
WRAB	**Tennant Creek**	**36.95**	**161**	*e*P	**P**	**02 19 19.1**	**-2.7**
WRA	**Warramunga Arr**	**36.96**	**161**	P	**P**	**02 19 18.8**	**-3.0**
	comp=Z,2.1nm,0.8s,mb4.0,baz=340,slow=9.5,SNR=7.0						
GKN	**Gorkha**	**37.31**	**296**	*e*P	**P**	**02 19 24.7**	**-0.1**
	comp=Z,54nm,0.8s,mb5.4						
DANN	**Dangsing**	**38.14**	**296**	*e*P	**P**	**02 19 31.9**	**+0.1**
	comp=Z,68nm,0.8s,mb5.4						
KOLN	**Koldanda**	**38.17**	**295**	*e*P	**P**	**02 19 32.1**	**0.0**
	comp=Z,48nm,0.9s,mb5.2						
ASAR	**Alice Springs**	**40.36**

TWVZ	**Taurewa**	**2.24 266**	P	Pn	02 16 19.6	+0.5
BFZ	**Birch Farm**	**2.36 222**	P	Pn	02 16 18.9	-1.8
MRZ	**Mangatainoka R**	**2.72 230**	P	Pn	02 16 24.0	-1.6
MTW	**Mount Morrison**	**3.09 223**	P	Pn	02 16 27.5	-3.2
KIW	**Kapiti Island**	**3.25 233**	P	Pn	02 16 31.3	-1.5
PAWZ	**Paruwai Farm**	**3.29 221**	P	Pn	02 16 30.6	-2.9
CAW	**Cannon Point**	**3.30 228**	P	Pn	02 16 31.3	-2.3
MSWZ	**Moikau Station**	**3.41 223**	P	Pn	02 16 31.9	-3.2
TCW	**Tory Channel**	**3.84 232**	P	Pn	02 16 38.3	-2.7
NNZ	**Nelson**	**4.41 237**	P	Pn	02 16 46.7	-2.2
QRZ	**Quartz Range**	**4.83 245**	P	Pn	02 16 51.8	-2.8

*ISCJB **29** 02:32:13.4±0.3, 4936N±001×678E±003, h0km, Error ellipse: s-maj=2.7km s-min=2.0km az=11.1*
*NEIC **29** 02:32:14.8, 4937N×683E, h1km, ML2.2(SZGRF), ML2.5(STR), ML2.8(LDG), After STR.*
*BNS **29** 02:32:14.6±1.1, 4934N×684E, h1km, ML1.9*
*STR **29** 02:32:14.8±0.3, 4937N×683E, h1km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **29** 02:32:15.2±0.1, 4938N×680E, h1km, Ml2.8/8, Error ellipse: s-maj=1.8km s-min=1.4km az=100.0, Suspected Mining induced.*
*CSEM **29** 02:32:15.0±0.0, 4938N×683E, h2km, ML2.8/8, Error ellipse: s-maj=0.9km s-min=0.7km az=110.0*
*BGR **29** 02:32:16.9±1.8, 4936N×693E, h1km, ML2.3/3, Error ellipse: s-maj=25.6km s-min=6.7km az=92.0*

ISC 29 02:32:14.4±0.3, **4937N**±001×**679E**±003, **h0km, n52,**
σ0**82**/88, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.37**	**28**	Pg	**Pg**	**02 32 22.0**	**+0.4**
RUP				Sg	**Sg**	**02 32 26.5**	**0.0**
WLF	**Walferdange**	**0.51**	**305**	P	**Pg**	**02 32 25.5**	**+1.3**
ABH	**Alteburg**	**0.71**	**44**	Pg	**Pg**	**02 32 28.2**	**+0.2**
ABH				Sg	**Sg**	**02 32 37.0**	**-0.2**
LANF	**Langenberg**	**0.77**	**120**	Pg	**Pg**	**02 32 29.2**	**0.0**
LANF				Sg	**Sg**	**02 32 39.4**	**+0.2**
LANF	**Langenberg**	**0.77**	**120**	*e*Pg	**Pg**	**02 32 29.3**	**+0.1**
LANF				*e*Sg	**Sg**	**02 32 39.5**	**+0.3**
BGG	**Burgeitz**	**0.91**	**23**	*e*Pg	**Pg**	**02 32 32.5**	**+0.7**
BGG				*e*Sg	**Sg**	**02 32 45.0**	**+1.4**
HILG	**Hillesheim**	**0.93**	**356**	*e*Pg	**Pg**	**02 32 32.4**	**+0.3**
HILG				*e*Sg	**Sg**	**02 32 46.1**	**+2.0**
CDF	**Champ du Feu**	**1.01**	**161**	*e*Pg	**Pg**	**02 32 34.2**	**+0.4**
CDF				*e*Sg	**Sg**	**02 32 47.8**	**+0.9**
	24nm,0.3s						
CDF	**Champ du Feu**	**1.01**	**161**	*e*Pg	**Pg**	**02 32 34.2**	**+0.4**
CDF				*e*Sg	**Sg**	**02 32 47.8**	**+0.9**
	12nm,0.3s						
RFYF	**Reffroy**	**1.14**	**230**	*e*Pg	**Pg**	**02 32 37.0**	**+0.7**
	baz=50						
RFYF				*e*Sg	**Sg**	**02 32 52.1**	**+1.0**
	33nm,0.3s						
RFYF	**Reffroy**	**1.14**	**230**	*e*Pg	**Pg**	**02 32 37.0**	**+0.7**
RFYF				*e*Sg	**Sg**	**02 32 52.1**	**+1.0**
	16nm,0.3s						
ECH	**Echery**	**1.18**	**168**	Pg	**Pg**	**02 32 37.6**	**+0.6**
ECH				Sg	**Sg**	**02 32 52.4**	**+0.1**
ECH	**Echery**	**1.18**	**168**	*e*Pg	**Pg**	**02 32 37.0**	**-0.1**
ECH				Sg	**Sg**	**02 32 52.4**	**+0.1**
ECH				*e*Sg	**Sg**	**02 32 53.7**	**+1.4**
KOE	**Koeppel**	**1.22**	**30**	*e*Pg	**Pg**	**02 32 36.5**	**-1.3**
STB	**Steinbach**	**1.23**	**1**	*e*Pg	**Pg**	**02 32 38.3**	**+0.4**
THEF	**They Montfort**	**1.26**	**205**	Pg	**Pg**	**02 32 38.6**	**0.0**
THEF	**They Montfort**	**1.26**	**205**	*e*Pg	**Pg**	**02 32 38.7**	**+0.1**
TOD	**Tromm**	**1.33**	**79**	Pg	**Pg**	**02 32 39.7**	**-0.3**
MEM	**Membach**	**1.34**	**338**	P	**Pg**	**02 32 40.2**	**+0.1**
DREG	**Dreilaegerbach**	**1.34**	**345**	*e*Pg	**Pg**	**02 32 39.9**	**-0.2**
TNS	**Taunus Mts**	**1.37**	**51**	*e*Pg	**Pg**	**02 32 41.0**	**+0.4**
TNS				*e*Sg	**Sg**	**02 32 58.6**	**+0.2**
TNS	**Taunus Mts**	**1.37**	**51**	*e*Pg	**Pg**	**02 32 40.3**	**-0.4**
TNS				*e*Sg	**Sg**	**02 32 58.5**	**+0.1**
HAU	**Haudompre**	**1.40**	**192**	*e*Pg	**Pg**	**02 32 41.5**	**+0.3**
HAU				*e*Sg	**Sg**	**02 32 59.9**	**+0.6**
	24nm,0.3s						
HAU	**Haudompre**	**1.40**	**192**	*e*Pg	**Pg**	**02 32 41.5**	**+0.3**
HAU				*e*Sg	**Sg**	**02 32 59.9**	**+0.6**
	12nm,0.3s						
BCLA	**Clavier**	**1.43**	**318**	P	**Pn**	**02 32 41.1**	**-0.5**
BCLA	**Clavier**	**1.43**	**318**	P	**Pn**	**02 32 41.0**	**-0.5**
MEZF	**Maizieres J'vi**	**1.44**	**233**	*e*Pg	**Pg**	**02 32 42.1**	**+0.1**
	baz=56						
MEZF				*e*Sg	**Sg**	**02 33 01.4**	**+0.8**
	12nm,0.3s						
MEZF	**Maizieres J'vi**	**1.44**	**233**	*e*Pg	**Pg**	**02 32 42.1**	**+0.1**
MEZF				*e*Sg	**Sg**	**02 33 01.4**	**+0.8**
	5.9nm,0.3s						
BFO	**Black Forest**	**1.46**	**135**	*e*Pg	**Pg**	**02 32 42.7**	**+0.4**
BFO				*e*Sg	**Sg**	**02 33 00.6**	**-0.5**
BFO	**Black Forest**	**1.46**	**135**	*e*Pn	**Pn**	**02 32 41.3**	**-0.6**
BFO	**Black Forest**	**1.46**	**135**	*e*Pg	**Pg**	**02 32 42.2**	**-0.1**
BFO				Sg	**Sg**	**02 33 00.6**	**-0.5**
BFO	**Black Forest**	**1.46**	**135**	*e*Pn	**Pn**	**02 32 41.3**	**-0.7**
BFO				*e*Pg	**Pg**	**02 32 42.2**	**-0.1**
BFO				*e*Sg	**Sg**	**02 33 00.7**	**-0.4**
BFO				*e*Sg	**Sg**	**02 33 02.1**	**+0.9**
GIVF	**Givet**	**1.47**	**301**	*e*Pn	**Pn**	**02 32 41.0**	**-1.2**
GIVF				*e*Sg	**Sg**	**02 33 01.7**	**0.0**
	33nm,0.5s						
GIVF	**Givet**	**1.47**	**301**	*e*Pn	**Pn**	**02 32 41.0**	**-1.2**
GIVF				*e*Sg	**Sg**	**02 33 01.7**	**0.0**
	16nm,0.5s						
MOF	**Molkenrain**	**1.54**	**171**	Pg	**Pg**	**02 32 44.0**	**+0.1**
MOF				Sg	**Sg**	**02 33 04.1**	**+0.3**
HINF	**Hinteralfeld**	**1.56**	**178**	*e*Pg	**Pg**	**02 32 44.0**	**-0.2**
HINF				*e*Sg	**Sg**	**02 33 04.8**	**+0.4**
	37nm,0.3s						
HINF	**Hinteralfeld**	**1.56**	**178**	*e*Pg	**Pg**	**02 32 44.0**	**-0.2**
HINF				*e*Sg	**Sg**	**02 33 04.8**	**+0.4**
	19nm,0.3s						
DOU	**Dourbes**	**1.60**	**298**	P	**Pn**	**02 32 44.2**	**+0.3**
DOU	**Dourbes**	**1.60**	**298**	P	**Pn**	**02 32 44.1**	**+0.2**
SFTF	**Sexfontaines**	**1.65**	**225**	*e*Pn	**Pn**	**02 32 44.0**	**-0.5**
	baz=44						
SFTF				*e*Sg	**Sg**	**02 33 07.5**	**+0.3**
	5.3nm,0.2s						
SFTF	**Sexfontaines**	**1.65**	**225**	*e*Pn	**Pn**	**02 32 44.0**	**-0.5**
SFTF				*e*Sg	**Sg**	**02 33 07.5**	**+0.3**
	2.7nm,0.2s						
HOBG	**Hohbusch**	**1.65**	**12**	*e*Pg	**Pg**	**02 32 45.1**	**-1.0**
STU	**Stuttgart**	**1.69**	**110**	*e*Sg	**Sg**	**02 33 04.5**	**-4.2**
BAIF	**Baives**	**1.81**	**293**	*e*Pn	**Pn**	**02 32 45.9**	**-1.0**
BAIF				*e*Sg	**Sg**	**02 33 12.2**	**-0.5**
	8.8nm,0.4s						
BAIF	**Baives**	**1.81**	**293**	*e*Pn	**Pn**	**02 32 45.9**	**-1.0**
BAIF				*e*Sg	**Sg**	**02 33 12.2**	**-0.5**
	4.4nm,0.4s						
BUG	**Bochum--Univer**	**2.10**	**8**	*e*Sg	**Sg**	**02 33 21.7**	**0.0**
LOR	**Lormes**	**2.87**	**224**	*e*Pn	**Pn**	**02 33 00.5**	**-0.9**
	baz=47						
LOR				*e*Sn	**Sn**	**02 33 33.9**	**-2.8**
SSF	**Saint Saulge**	**3.19**	**225**	*e*Pn	**Pn**	**02 33 04.5**	**-1.3**
SMF	**Signal de Mont**	**3.37**	**217**	*e*Pn	**Pn**	**02 33 06.5**	**-1.8**
GEC2	**GERESS Array S**	**4.57**	**94**	*e*Pn	**Pn**	**02 33 25.0**	**+0.3**
GEC2	**GERESS Array S**	**4.57**	**94**	Pn	**Pn**	**02 33 25.0**	**+0.3**
GEC2				*e*Sn	**Sn**	**02 34 15.8**	**-2.7**
GEC2	**GERESS Array S**	**4.57**	**94**	*e*Pn	**Pn**	**02 33 25.2**	**+0.5**
GEC2				*e*Sn	**Sn**	**02 34 15.8**	**-2.7**

MAN 29 02:34:06, 1533N×12215E, h47km, mb4.1, ML2.9, MS2.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.63**	**199**	*e*P	Pn	02 34 20.5	+1.7
BALP	**Baler**	**0.69**	**306**	*e*P	Pn	02 34 22.0	+2.5
GQP	**Guinayangan**	**1.45**	**169**	*e*P	Pn	02 34 29.8	0.0
GQP				*e*S	Sn	02 34 50.1	+2.6
CAUP	**Cauayan**	**1.64**	**349**	*e*P	Pn	02 34 32.2	-0.1
PALP	**Palanan**	**1.74**	**9**	*e*P	Sn	02 34 55.7	+0.8
PVCP	**Virac**	**2.59**	**131**	*e*P	Pn	02 34 47.8	+2.3
OTRP	**Odiongan**	**2.95**	**182**	*e*P	Pn	02 34 52.8	+2.3

*CSEM **29** 02:41:45.9±0.1, 4445N×1022E, h15km, ML2.5/7, Error ellipse: s-maj=2.0km s-min=1.4km az=32.0*
*GEN **29** 02:41:45.5, 4457N×1028E, h18km, ML1.0*

*ROM **29** 02:41:45.4±0.2, 4447N×1020E, h28km±3km, Md2.5/11, Ml2.1/8, Error ellipse: s-maj=3.2km s-min=2.7km az=82.0*
*ISCJB **29** 02:41:45.7±0.3, 4449N±003×1019E±004, h27km±4km, Error ellipse: s-maj=5.2km s-min=3.7km az=42.9*
*NEIC **29** 02:41:46.3, 4447N×1019E, h2km, ML2.5(LDG), After LDG.*
*LDG **29** 02:41:46.3±0.1, 4447N×1019E, h2km, Ml2.5/7, Error ellipse: s-maj=3.5km s-min=2.0km az=17.0*

ISC 29 02:41:46.3±0.3, **4448N**±003×**1022E**±004, **h23**km±5km, **n52,**
σ0**83**/82, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBM	**Eremo**	**0.15**	**114**	Pg	**Pb**	**02 41 50.3**	**-0.9**
ERBM	**Eremo**	**0.15**	**114**	Pg	**Pb**	**02 41 50.3**	**-0.9**
ERBM				Sg	**Sb**	**02 41 54.7**	**+0.2**
	216nm,0.1s						
GSCL	**Gusciola**	**0.29**	**116**	Pg	**Pb**	**02 41 52.2**	**-0.9**
GSCL				Sg	**Sb**	**02 41 59.3**	**+1.6**
	70nm,0.4s						
GSCL	**Gusciola**	**0.29**	**116**	Pg	**Pb**	**02 41 52.2**	**-0.9**
GSCL				Sg	**Sb**	**02 41 59.3**	**+1.6**
	70nm,0.4s						
SARO	**Sassorosso**	**0.32**	**156**	P	**Pb**	**02 41 52.5**	**-1.0**
SARO				S	**Sb**	**02 41 58.4**	**0.0**
VLC	**Villacollemand**	**0.34**	**160**	Pg	**Pb**	**02 41 53.1**	**-0.7**
VLC				Sg	**Sb**	**02 41 59.2**	**+0.3**
	108nm,0.8s						
VLC	**Villacollemand**	**0.34**	**160**	*e*Pg	**Pb**	**02 41 53.1**	**-0.8**
VLC	**Villacollemand**	**0.34**	**160**	Pg	**Pb**	**02 41 53.1**	**-0.7**
VLC				Sg	**Sb**	**02 41 59.2**	**+0.3**
	108nm,0.8s						
NOVE	**Novellara**	**0.47**	**48**	Pg	**Pb**	**02 41 54.7**	**-1.4**
NOVE				Sg	**Sb**	**02 42 04.1**	**+1.4**
NOVE	**Novellara**	**0.47**	**48**	Pg	**Pb**	**02 41 54.7**	**-1.4**
NOVE				Sg	**Sb**	**02 42 04.1**	**+1.4**
BDI	**Bagni Di Lucca**	**0.50**	**147**	Pg	**Pb**	**02 41 56.2**	**-0.2**
BDI				Sg	**Sb**	**02 42 03.6**	**+0.4**
	35nm,0.3s						
BDI	**Bagni Di Lucca**	**0.50**	**147**	Pg	**Pb**	**02 41 56.2**	**-0.2**
BDI				Sg	**Sb**	**02 42 03.6**	**+0.4**
	35nm,0.3s						
SC2M	**Scurtabo**	**0.50**	**261**	Pg	**Pb**	**02 41 55.7**	**-0.7**
SC2M				Sg	**Sb**	**02 42 03.8**	**+0.5**
	106nm,0.4s						
MAIM	**Mastiano**	**0.60**	**161**	Pg	**Pb**	**02 41 57.6**	**-0.5**
MAIM	**Mastiano**	**0.60**	**161**	P	**Pb**	**02 41 58.2**	**+0.1**
MAIM				Sg	**Sb**	**02 42 06.3**	**+0.2**
	32nm,0.7s						
MAIM	**Mastiano**	**0.60**	**161**	Pg	**Pb**	**02 41 57.6**	**-0.5**
MAIM				Sg	**Sb**	**02 42 06.3**	**+0.2**
	32nm,0.7s						
SBPO	**S.Benedetto Po**	**0.76**	**41**	Pg	**Pb**	**02 42 00.7**	**-0.1**
SBPO				Sg	**Sb**	**02 42 12.6**	**+1.9**
SBPO	**S.Benedetto Po**	**0.76**	**41**	Pg	**Pb**	**02 42 00.7**	**-0.1**
SBPO				Sg	**Sb**	**02 42 12.6**	**+1.9**
PII	**Pisa**	**0.79**	**164**	Pg	**Pb**	**02 42 01.1**	**-0.2**
	23nm,0.2s						
PII	**Pisa**	**0.79**	**164**	Pg	**Pb**	**02 42 01.1**	**-0.2**
	23nm,0.2s						
SEI	**Scarperia**	**0.92**	**117**	Pg	**Pb**	**02 42 03.7**	**+0.1**
SEI	**Scarperia**	**0.92**	**117**	Pg	**Pb**	**02 42 03.7**	**+0.1**
MAGA	**Magasa**	**1.33**	**12**	Pg	**Pn**	**02 42 08.4**	**-1.0**
MAGA				Sg	**Sn**	**02 42 26.9**	**+0.6**
	117nm,0.5s						
MAGA	**Magasa**	**1.33**	**12**	Pg	**Pn**	**02 42 08.4**	**-1.0**
MAGA				Sg	**Sn**	**02 42 26.9**	**+0.6**
	117nm,0.5s						
TEOL	**Teolo**	**1.35**	**49**	*e*Pg	**Pn**	**02 42 08.6**	**-1.1**
TEOL				*e*Sg	**Sn**	**02 42 28.0**	**+1.0**
CTI	**Castel Tesino**	**1.86**	**32**	Pg	**Pn**	**02 42 15.7**	**-1.1**
	20nm,0.3s						
CTI	**Castel Tesino**	**1.86**	**32**	Pg	**Pn**	**02 42 15.7**	**-1.1**
	20nm,0.3s						
SBF	**Sospel**	**2.10**	**254**	*e*Pn	**Pn**	**02 42 20.1**	**+0.1**
SBF				*e*Sn	**Sn**	**02 42 46.1**	**+0.8**
	3.4nm,0.2s						
SBF	**Sospel**	**2.10**	**254**	*e*Pn	**Pn**	**02 42 20.1**	**+0.1**
SBF				*e*Sn	**Sn**	**02 42 46.1**	**+0.8**
	1.7nm,0.2s						
APPI	**Appiano**	**2.12**	**19**	Pg	**Pn**	**02 42 20.1**	**-0.2**
	62nm,1.4s						
APPI	**Appiano**	**2.12**	**19**	Pg	**Pn**	**02 42 20.1**	**-0.2**
	62nm,1.4s						
PGF	**Pioggiola**	**2.13**	**205**	*e*Pn	**Pn**	**02 42 20.1**	**-0.3**
MBDF	**Montbardon**	**2.48**	**277**	*e*Pn	**Pn**	**02 42 25.7**	**+0.5**
MBDF				*e*Sn	**Sn**	**02 42 56.0**	**+1.3**
	2.3nm,0.3s						
MBDF	**Montbardon**	**2.48**	**277**	*e*Pn	**Pn**	**02 42 25.7**	**+0.5**
MBDF				*e*Sn	**Sn**	**02 42 56.0**	**+1.3**
	1.1nm,0.3s						
LPG	**La Plagne**	**2.66**	**294**	*e*Pn	**Pn**	**02 42 28.3**	**+0.5**
LPG	**La Plagne**	**2.66**	**294**	*e*P	**Pn**	**02 42 31.4**	**+3.6**
LPG	**La Plagne**	**2.66**	**294**	*e*P	**Pn**	**02 42 31.4**	**+3.6**
LPL	**La Plagne**	**2.68**	**294**	*e*Pn	**Pn**	**02 42 28.5**	**+0.5**
FRF	**La Foret Royal**	**2.74**	**252**	*e*Pn	**Pn**	**02 42 28.9**	**+0.1**
FRF				*e*Sn	**Sn**	**02 43 01.4**	**+0.3**
	5.3nm,0.3s						
FRF	**La Foret Royal**	**2.74**	**252**	*e*Pn	**Pn**	**02 42 28.9**	**+0.1**
FRF				*e*Sn	**Sn**	**02 43 01.4**	**+0.3**
	2.7nm,0.3s						
LMR	**La Mourre**	**2.92**	**248**	*e*Pn	**Pn**	**02 42 31.3**	**0.0**
LMR				*e*Sn	**Sn**	**02 43 05.0**	**-0.6**
	7.5nm,0.4s						
LMR	**La Mourre**	**2.92**	**248**	*e*Pn	**Pn**	**02 42 31.3**	**0.0**
LMR				*e*Sn	**Sn**	**02 43 05.0**	**-0.6**
	3.8nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.13**	**280**	*e*P	**Pn**	**02 42 37.2**	**+3.1**
SMRF	**Simiane la Rot**	**3.38**	**263**	*e*Pn	**Pn**	**02 42 38.2**	**+0.6**
CABF	**La Chapelle**	**3.60**	**308**	*e*Pn	**Pn**	**02 42 41.3**	**+0.6**
HINF	**Hinteralfeld**	**4.08**	**326**	*e*Pn	**Pn**	**02 42 46.5**	**-0.7**
HINF				*e*Sn	**Sn**	**02 43 32.9**	**-1.2**
	1.9nm,0.4s						
HINF	**Hinteralfeld**	**4.08**	**326**	*e*Pn	**Pn**	**02 42 46.5**	**-0.7**
HINF				*e*Sn	**Sn**	**02 43 32.9**	**-1.2**
	0.9nm,0.4s						
CDF	**Champ du Feu**	**4.43**	**334**	*e*Pn	**Pn**	**02 42 51.5**	**-0.5**
CDF				*e*Sn	**Sn**	**02 43 42.4**	**-0.4**
	1.3nm,0.4s						
CDF	**Champ du Feu**	**4.43**	**334**	*e*Pn	**Pn**	**02 42 51.5**	**-0.5**
CDF				*e*Sn	**Sn**	**02 43 42.4**	**-0.4**
	0.6nm,0.4s						
HAU	**Haudompre**	**4.43**	**324**	*e*Sn	**Sn**	**02 43 42.1**	**-0.8**
	2.8nm,0.3s						
HAU	**Haudompre**	**4.43**	**324**	*e*Sn	**Sn**	**02 43 42.1**	**-0.8**
	1.4nm,0.3s						
LOR	**Lormes**	**5.25**	**304**	*e*Pn	**Pn**	**02 43 03.1**	**-0.1**

*ISCJB **29** 02:45:19.2±0.5, 2471N±005×12250E±002, h6km±5km, Error ellipse: s-maj=8.4km s-min=3.0km az=6.3*
*TAP **29** 02:45:20.4, 2470N×12241E, h16km, ML3.1, C*
*JMA **29** 02:45:20.2±0.3, 2430N×12246E, h14km, M2.4*

ISC 29 02:45:19.5±0.5, **2471N**±005×**12251E**±002, **h7**km±4km, **n23,**
σ0**83**/39, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**118**	P	**Pg**	**02 45 30.5**	**+1.0**
YOJ				*e*S	**Sg**	**02 45 37.8**	**+1.5**
TWB1	**Santiao Chiao**	**0.56**	**302**	*i* P	**Pg**	**02 45 30.8**	**+0.6**
	baz=308						
TWB1				*i* S	**Sg**	**02 45 37.7**	**+0.3**
	baz=308						
TWC	**Suao**	**0.61**	**261**	*i* P	**Pg**	**02 45 30.6**	**-0.6**
	baz=259						
TWC				*e*S	**Sg**	**02 45 39.0**	**-0.1**
	baz=259						
ILA	**Ilan**	**0.69**	**275**	*e*P	**Pg**	**02 45 32.5**	**-0.3**
	baz=276						
ENA	**Nanau**	**0.75**	**248**	*e*P	**Pg**	**02 45 33.9**	**0.0**
	baz=255						
ENA				*e*S	**Sg**	**02 45 42.7**	**-0.9**
	baz=255						
NWF	**Wu-fen Shan**	**0.75**	**299**	P	**Pg**	**02 45 34.6**	**+0.7**
	baz=302						
NWF				S	**Sg**	**02 45 43.8**	**+0.1**
	baz=302						
TWE	**Neicheng**	**0.76**	**271**	*e*P	**Pg**	**02 45 34.1**	**-0.1**
	baz=271						
TWE				*e*S	**Sg**	**02 45 43.9**	**-0.1**
	baz=271						
ENTT	**Nioudou**	**0.86**	**266**	*e*P	**Pg**	**02 45 35.9**	**-0.1**
	baz=265						
ENTT				*e*S	**Sg**	**02 45 46.8**	**-0.3**
	baz=265						
TWD	**Chiawan**	**1.04**	**233**	*e*P	**Pg**	**02 45 39.7**	**+0.3**
	baz=239						
NSK	**Sanguang**	**1.04**	**268**	P	**Pg**	**02 45 39.4**	**-0.1**
	baz=268						
NSK				S	**Sg**	**02 45 52.3**	**-0.8**
	baz=268						
NNS	**Nan Shan**	**1.06**	**256**	P	**Pg**	**02 45 39.7**	**-0.2**
	baz=254						
NNS				*e*S	**Sg**	**02 45 53.0**	**-0.8**
	baz=254						
IRIF	**Iriomote-Funau**	**1.18**	**108**	P	**Pg**	**02 45 41.8**	**-0.2**
IRIF				*e*S	**Sg**	**02 45 57.0**	**-0.3**
WHF	**Hehuan Shan**	**1.26**	**244**	P	**Pn**	**02 45 43.3**	**-0.3**
	baz=249						
WHF				*e*S	**Sb**	**02 45 58.9**	**-1.2**
	baz=249						
TWT	**Tachien**	**1.29**	**250**	*e*P	**Pn**	**02 45 43.6**	**-0.4**
	baz=232						
ESL	**Shilin**	**1.32**	**228**	*e*P	**Pn**	**02 45 43.9**	**-0.5**
	baz=225						
HATJ	**Hateruma jima**	**1.35**	**118**	*e*S	**Sb**	**02 45 58.9**	**-3.7**
JKRS	**Kuro-shima**	**1.45**	**109**	*e*S	**Sn**	**02 46 03.9**	**-1.5**
JIJ	**Ishigaki jima**	**1.53**	**103**	P	**Pn**	**02 45 46.3**	**-0.9**
JIJ				*e*S	**Sn**	**02 46 06.7**	**-0.7**
TYC	**Yuchr**	**1.70**	**242**	*e*P	**Pn**	**02 45 50.4**	**+0.8**
	baz=225						
TYC				*e*S	**Sn**	**02 46 11.8**	**+0.1**
	baz=225						
TWF1	**Yuli**	**1.75**	**220**	*e*P	**Pn**	**02 45 49.3**	**-0.9**
	baz=204						
ALS	**Alishan**	**1.96**	**233**	*e*P	**Pn**	**02 45 54.6**	**+1.4**
	baz=215						
ALS				*e*S	**Sn**	**02 46 18.2**	**+0.2**
	baz=215						
CHN5	**Tsauling**	**2.00**	**237**	*e*P	**Pn**	**02 45 55.4**	**+1.7**
	baz=216						
CHN5				*e*S	**Sn**	**02 46 21.8**	**+2.7**
	baz=216						
CHN1	**Nanshi**	**2.36**	**230**	*e*P	**Pn**	**02 46 00.1**	**+1.5**
	baz=226						
CHN1				*e*S	**Sn**	**02 46 28.1**	**+0.1**
	baz=226						

*IDC **29** 02:58:35.4±5.3, 2677N×5299E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=110.8km s-min=72.8km az=163.0*
*NEIC **29** 02:58:39.9±1.5, 2731N×5265E, h10km, mb3.9/2, ML3.2(THR), Error ellipse: s-maj=20.8km s-min=15.4km az=30.0*
*ISCJB **29** 02:58:40.6±1.3, 2740N±007×525E±0.1, h23km±11km, mb3.6/7, Error ellipse: s-maj=17.9km s-min=7.7km az=32.6*
*CSEM **29** 02:58:40.0±0.3, 2733N×5256E, h25km, mb3.9/2, Error ellipse: s-maj=10.6km s-min=4.7km az=124.0*
*THR **29** 02:58:43.4±0.3, 2756N×5249E, h31km±9km, ML2.8*

ISC 29 02:58:40.2±1.7, **2735N**±007×**526E**±01, **h7**km±11km, **n25,**
σ0**80**/28, **mb3.6/7, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.98**	**18**	*e*Pg	**Pg**	**02 58 59.6**	**+0.6**
GHIR				*e*Sg	**Sg**	**02 59 11.4**	**-0.3**
GHIR				AML	AML	02 59 19.0	
	comp=N,898nm,0.5s						
GHIR				AML	AML	02 59 20.6	
	comp=E,633nm,0.5s						
GHIR	**Ghir-Karzin**	**0.98**	**18**	*e*Pg	**Pg**	**02 58 59.0**	**0.0**
GHIR				*e*Sg	**Sg**	**02 59 11.4**	**-0.4**
	SNR=103						
GHIR	**Ghir-Karzin**	**0.98**	**18**	*e*Pg	**Pg**	**02 58 59.0**	**0.0**
GHIR				*e*Sg	**Sg**	**02 59 11.0**	**-0.8**
SLWS		**3.12**	**216**	P	**Pn**	**02 59 34.2**	**+4.5**
SLWS		**3.12**	**216**	P	**Pn**	**02 59 34.2**	**+4.4**
BTHS		**3.67**	**207**	P	**Pn**	**02 59 37.9**	**+0.5**
HRDDS		**5.26**	**214**	P	**Pn**	**02 59 59.6**	**+0.2**
NASN	**Na'in**	**5.43**	**1**	*e*Pn	**Pn**	**03 00 02.1**	**+0.5**
NASN				AML	AML	03 00 20.7	
	comp=E,2.6nm,0.5s						
NASN				AML	AML	03 00 27.4	
	comp=N,2.4nm,0.5s						
NASN	**Na'in**	**5.43**	**1**	*e*Pn	**Pn**	**03 00 02.0**	**+0.4**
LYLS		**7.22**	**224**	P	**Pn**	**03 00 25.9**	**-0.2**
ASYS		**7.38**	**273**	P	**Pn**	**03 00 27.6**	**-0.8**
ASAO	**Ashtian**	**7.52**	**343**	*e*Pn	**Pn**	**03 00 30.3**	**+0.1**
ASAO	**Ashtian**	**7.52**	**343**	*e*Pn	**Pn**	**03 00 30.0**	**-0.3**
SNAE	**Sanandaj**	**8.95**	**331**	*e*Pn	**Pn**	**03 00 50.0**	**+0.1**
EKS2	**Erkin-Say**	**22.99**	**43**	*e*P	**P**	**03 03 45.7**	**+0.2**
EKS2	**Erkin-Say**	**22.99**	**43**	*e*P	**P**	**03 03 45.7**	**+0.2**
	comp=N,9.3nm,1.3s,mb4.0						
UCH	**Uchtor**	**23.21**	**45**	P	**P**	**03 03 48.3**	**+0.6**
	comp=N,1.9nm,0.7s,mb3.6						
AKTK	**Aktyubinsk**	**23.41**	**9**	P	**P**	**03 03 51.4**	**+1.6**
AKTO

VHO				*i* S		**Sn**	03 01 39.7	-0.5
PNIG	**Pinotepa**	**5.03**	**295**	*i* P		**Pn**	03 01 03.6	+1.3
PNIG				*i* S		**Sn**	03 01 58.4	-1.1
PNIG	**Pinotepa**	**5.03**	**295**	*i* P		**Pn**	03 01 03.6	+1.3
PNIG				*i* S		**Sn**	03 01 59.3	-0.2
SCIG	**Sabancuy**	**5.10**	**24**	*i* P		**Pn**	03 01 02.8	-0.4
SCIG				*i* S		**Sn**	03 02 00.7	-0.3
UTMO	**Huajuapan**	**5.52**	**310**	*i* P		**Pn**	03 01 08.9	-0.1
UTMO				*i* S		**Sn**	03 02 10.3	-1.1
TEIG	**Tepich**	**7.65**	**39**	P		**Pn**	03 01 36.7	-1.5
	6.5nm,0.3s,baz=263,slow=1.8,SNR=24							
TEIG				S		**Sn**	03 02 55.9	-8.0
	1.7nm,0.3s,baz=46,slow=21,SNR=3.4							
TEIG	**Tepich**	**7.65**	**39**	P		**Pn**	03 01 36.7	-1.5
TEIG				S		**Sn**	03 02 55.9	-8.0
TXAR	**Lajitas Array**	**17.73**	**329**	P		**Pn**	03 03 57.4	+3.8
	0.1nm,0.3s,baz=151,slow=13,SNR=15							
AMTX	**Amarillo**	**21.82**	**341**	*e*P		**P**	03 04 39.5	+0.8
	8.5nm,0.6s,mb4.3							
SDV	**Santo Domingo**	**22.91**	**101**	P		**P**	03 04 50.9	+0.4
	1.3nm,0.4s,mb3.8,baz=2.9,slow=2.9,SNR=4.2							
ANMO	**Albuquerque**	**23.71**	**332**	P		**P**	03 04 58.4	+0.1
	0.9nm,0.8s,mb3.2,baz=150,slow=12,SNR=3.3							
PDAR	**Pinedale Array**	**31.61**	**337**	P		**P**	03 06 08.3	-0.7
	0.3nm,0.9s,mb3.1,baz=168,slow=10,SNR=2.5							
NVAR	**Mina Array Bea**	**32.61**	**322**	P		**P**	03 06 21.4	+3.6
	1.5nm,0.8s,mb4.0,baz=136,slow=9.3,SNR=13							
YKA	**Yellowknife Ar**	**50.44**	**347**	P		**P**	03 08 43.8	+0.4
	2.2nm,0.7s,mb4.3,baz=152,slow=7.2,SNR=48							
YKA				PcP		PcP	03 10 01.5	+0.2
	0.2nm,0.6s,baz=152,slow=4.5,SNR=4.2							
YKA	**Yellowknife Ar**	**50.44**	**347**	P		**P**	03 08 43.8	+0.4
YKA				PcP		PcP	03 10 01.5	+0.2
CMAR	**Chiang Mai Arr**	**145.26**	**339**	PKPbc		PKPbc	03 19 23.1	-1.0
	1.1nm,0.4s,baz=346,slow=3.5,SNR=6.1							

MAN 29 03:04:38,1541N×12250E,h25km,mb4.4,ML3.3,MS3.1, 2C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
POLP	**Polilio Island**	**0.87**	**218**	*e*P		Pb	03 04 53.6	-0.9
POLP				*e*S		Sb	03 05 07.9	+2.2
BALP	**Baler**	**0.95**	**290**	*e*P		Pn	03 04 55.1	-0.6
BALP				*e*S		Sb	03 05 07.4	-0.4
PCPH	**Palayan**	**1.36**	**276**	*e*P		Pn	03 05 01.9	+0.5
GQP	**Guinayangan**	**1.50**	**182**	*e*P		Pn	03 05 02.9	-0.4
GQP				*e*S		Sn	03 05 22.9	+0.8
CAUP	**Cauayan**	**1.65**	**337**	*e*P		Pn	03 05 05.5	0.0
CAUP				*e*S		Sn	03 05 25.3	-0.6
PVCP	**Virac**	**2.42**	**138**	*e*P		Pn	03 05 17.1	+1.2
APYP	**Conner**	**2.71**	**334**	*e*P		Pn	03 05 20.4	+0.4
APYP				*e*S		Sn	03 05 47.5	-4.7
SCPH	**Surigao**	**6.31**	**152**	*i* P		Pn	03 06 03.9	-5.7
SCPH				*i*			03 06 06.2	

*IDC **29** 03:04:45.3±4.4, 1457N×93.12W, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.6/22, mbtmp3.4/5, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/21, Error ellipse: s-maj=64.1km s-min=36.3km az=174.0*

*MEX **29** 03:04:48.4±1.4, 1429N×9328W, h16km±108km, MD4.0*

*NEIC **29** 03:04:48.4, 1430N×9329W, h16km, MD4.0(MEX), After MEX.*

ISC 29 03:04:49.0±1.3,1438N±008×9317W±006,h35km,n13, σ1°47/21,mb3.5/2,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
THIG		**1.02**	**59**	*i* P		**Pn**	**03 05 05.8**	**-1.0**
THIG				*i* S		**Sn**	**03 05 20.0**	**+0.1**
PCIG		**1.32**	**358**	*i* P		**Pn**	**03 05 08.4**	**-2.5**
PCIG				*i* S		**Sn**	**03 05 25.9**	**-1.4**
CCIG	**Comitan**	**2.13**	**28**	*i* P		**Pn**	**03 05 23.9**	**+1.7**
CCIG				*i* S		**Sn**	**03 05 47.8**	**+0.3**
TGIG		**2.38**	**1**	*i* P		**Pn**	**03 05 25.8**	**+0.2**
TGIG				*i* S		**Sn**	**03 05 55.0**	**+1.4**
SCX	**San Cristobal**	**2.40**	**12**	*i* P		**Pn**	**03 05 27.2**	**+1.4**
SCX				*i* S		**Sn**	**03 05 55.7**	**+1.8**
CMIG	**Matias Romero**	**3.16**	**329**	P		**Pn**	**03 05 35.0**	**-1.3**
	1.8nm,0.3s,baz=149,slow=12,SNR=8.5							
CMIG				Sn		**Sn**	**03 06 10.7**	**-2.1**
	6.4nm,0.3s,baz=134,slow=12,SNR=6.9							
CMIG	**Matias Romero**	**3.16**	**329**	*i* P		**Pn**	**03 05 34.6**	**-1.7**
CMIG				*i* S		**Sn**	**03 06 12.4**	**-0.4**
TEIG	**Tepich**	**7.46**	**38**	Pn		**Pn**	**03 06 34.9**	**-0.5**
	3.7nm,0.3s,baz=103,slow=0.5,SNR=9.3							
TEIG				Sn		**Sn**	**03 07 56.3**	**-2.4**
	0.6nm,0.3s,baz=26,slow=23,SNR=2.8							
TEIG	**Tepich**	**7.46**	**38**	*e*Pn		**Pn**	**03 06 35.7**	**+0.4**
TEIG				Sn		**Sn**	**03 07 56.3**	**-2.4**
TXAR	**Lajitas Array**	**17.77**	**329**	Pn		**Pn**	**03 08 55.4**	**+1.8**
	0.0nm,0.3s,baz=144,slow=15,SNR=2.7							
ATAH	**Atahualpa**	**25.81**	**144**	LR		LR	03 17 06.2	
	comp=Z,20nm,19.1s,baz=22,slow=28							
NVAR	**Mina Array Bea**	**32.67**	**322**	P		**P**	**03 11 20.0**	**+2.1**
	0.2nm,0.5s,mb3.3,baz=145,slow=8.2,SNR=2.9							
YKA	**Yellowknife Ar**	**50.40**	**347**	P		**P**	**03 13 41.1**	**-1.5**
	0.5nm,0.7s,mb3.6,baz=150,slow=7.2,SNR=8.1							

*NEIC **29** 03:10:39.8, 1418N×9340W, h12km, MD4.1(MEX), After MEX.*

*MEX **29** 03:10:39.8±1.3, 1418N×9341W, h13km±30km, MD4.1*

*IDC **29** 03:10:46.7±6.3, 1476N×9306W, h44km±40km, mb3.4/2, mb1 3.8/5, mb1mx3.4/22, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=56.8km s-min=19.3km az=4.0*

ISC 29 03:10:38.4±2.9,143N±01×9337W±006,h17km±28km,n15, σ1°25/25,mb3.7/2,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
THIG		**1.25**	**58**	*i* P		**Pn**	**03 10 59.8**	**-1.4**
THIG				*i* S		**Sb**	**03 11 16.6**	**-0.9**
PCIG		**1.46**	**6**	*i* P		**Pn**	**03 11 02.5**	**-1.5**
PCIG				*i* S		**Sn**	**03 11 20.9**	**-1.8**
CCIG	**Comitan**	**2.34**	**30**	*i* P		**Pn**	**03 11 17.6**	**+1.4**
CCIG				*i* S		**Sn**	**03 11 44.7**	**0.0**
TGIG		**2.53**	**5**	*i* P		**Pn**	**03 11 19.7**	**+1.0**
TGIG				*i* S		**Sn**	**03 11 49.4**	**+0.3**
SCX	**San Cristobal**	**2.57**	**16**	*i* P		**Pn**	**03 11 21.2**	**+1.8**
SCX				*i* S		**Sn**	**03 11 51.7**	**+1.4**
HUIG	**Huatulco**	**3.05**	**300**	*i* P		**Pn**	**03 11 23.9**	**-2.0**
HUIG				*i* S		**Sn**	**03 12 01.7**	**-0.3**
CMIG	**Matias Romero**	**3.18**	**333**	P		**Pn**	**03 11 29.2**	**+1.4**
	4.0nm,0.3s,baz=142,slow=11,SNR=44							
CMIG				S		**Sn**	**03 12 04.7**	**-0.6**
	7.0nm,0.3s,baz=141,slow=12,SNR=5.7							
CMIG	**Matias Romero**	**3.18**	**333**	*i* P		**Pn**	**03 11 28.4**	**+0.7**
CMIG				*i* S		**Sn**	**03 12 04.8**	**-0.5**
TEIG	**Tepich**	**7.68**	**39**	P		**Pn**	**03 12 29.0**	**-0.6**
	3.7nm,0.3s,baz=58,slow=4.5,SNR=22							
TEIG				S		**Sn**	**03 13 47.7**	**-8.5**
	baz=146,slow=15,SNR=3.0							
TEIG	**Tepich**	**7.68**	**39**	*e*Pn		**Pn**	**03 12 29.2**	**-0.4**
TEIG				S		**Sn**	**03 13 47.7**	**-8.5**
TXAR	**Lajitas Array**	**17.78**	**329**	P		**Pn**	**03 14 49.5**	**+4.2**
	0.0nm,0.3s,baz=141,slow=12,SNR=4.9							
TXAR	**Lajitas Array**	**17.78**	**329**	P		**Pn**	**03 14 49.5**	**+4.2**
NVAR	**Mina Array Bea**	**32.65**	**322**	P		**P**	**03 17 13.2**	**+3.6**
	0.5nm,0.7s,mb3.6,baz=123,slow=9.1,SNR=5.1							
YKA	**Yellowknife Ar**	**50.49**	**347**	P		**P**	**03 19 36.3**	**+1.0**
	0.7nm,0.7s,mb3.8,baz=152,slow=7.3,SNR=15							
YKA	**Yellowknife Ar**	**50.49**	**347**	P		**P**	**03 19 36.3**	**+1.0**

*ISCJB **29** 03:10:41.2±0.9, 3047N±006×974W±007, h21km±8km, Error ellipse: s-maj=13.3km s-min=6.4km az=138.1*

*CNRM **29** 03:10:43.5, 3041N×967W, h6km, MD3.5*

*CSEM **29** 03:10:43.5, 3041N×967W, h6km, MD3.5, After CNRM*

*MDD **29** 03:10:43.5±1.2, 3041N×968W, h9km±7km, mb3.7/3, Error ellipse: s-maj=13.2km s-min=5.2km az=116.0*

ISC 29 03:10:42.9±0.8,3041N±006×967W±007,h18km±5km,n12, σ1°09/23,Morocco

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFS	**Agadir Fac de**	**0.14**	**84**	*i* P		**Pg**	**03 10 46.5**	**-0.6**
AFS				*i* S		**Sg**	**03 10 49.0**	**-1.0**
YBT	**Youssef Ben Ta**	**0.56**	**180**	P		**Pg**	**03 10 54.5**	**+0.5**
YBT				S		**Sg**	**03 11 02.0**	**+0.5**
CIA	**Chichaoua**	**1.39**	**34**	*i* P		**Pn**	**03 11 09.0**	**+1.5**
CIA				*i* S		**Sn**	**03 11 25.0**	**-0.4**
TZC	**Tazercounte**	**3.23**	**57**	*e*P		**Pn**	**03 11 34.0**	**+1.3**
TZC				*i* S		**Sn**	**03 12 12.0**	**+1.4**
KIB	**El Ksiba**	**3.78**	**54**	*i* P		**Pn**	**03 11 40.0**	**-0.3**
KIB				*i* S		**Sn**	**03 12 23.0**	**-1.2**
CFUE	**Fuerteventura**	**4.11**	**246**	S		**Sn**	**03 12 30.2**	**-2.2**
	2.4nm,0.2s,SNR=7.9							
CZD	**Col de Zad**	**4.73**	**55**	*e*P		**Pn**	**03 11 54.0**	**+0.7**
CZD				*e*S		**Sn**	**03 12 45.0**	**-2.7**
ZFT	**Errachidia**	**4.83**	**69**	*e*P		**Pn**	**03 11 56.0**	**+1.3**
ZFT				*i* S		**Sn**	**03 12 49.0**	**-1.2**
EGRO	**El Granado**	**7.34**	**14**	P		**Pn**	**03 12 29.5**	**+0.3**
	0.6nm,0.1s,SNR=7.9							
EGRO				S		**Sn**	**03 13 46.9**	**-5.0**
	0.7nm,0.1s,SNR=7.9							
EMIN	**Mina Concepcio**	**7.75**	**18**	P		**Pn**	**03 12 34.7**	**-0.1**
	0.4nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**03 13 55.4**	**-6.7**
	0.3nm,0.4s,SNR=7.9							
EBAD	**Badajoz**	**8.61**	**14**	P		**Pn**	**03 12 47.1**	**+0.5**
	0.2nm,0.1s,SNR=5.2							
EBAD				S		**Sn**	**03 14 13.2**	**-10**
	0.3nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**8.81**	**27**	P		**Pn**	**03 12 49.7**	**+0.3**
	0.6nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**03 14 23.0**	**-5.1**
	0.3nm,0.3s,SNR=7.9							

*NIED **29** 03:31:00, 2880N×14240E, h32km, Mw3.9 Best double couple: M07.36000×10^14 NP1:φs335.00000°, δ70.00000°, λ-31.00000°. NP2:φs76.00000°, δ61.00000°, λ-157.00000°.*

*IDC **29** 03:31:35.3±1.2, 2872N×14264E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.9/21, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=41.9km s-min=17.1km az=88.0*

*ISCJB **29** 03:31:36.7±2.1, 2889N±004×1425E±02, h23km±17km, mb4.0/7, Error ellipse: s-maj=25.3km s-min=5.1km az=169.8*

*JMA **29** 03:31:37.9±0.1, 2883N×14239E, h60km, M4.1*

*NEIC **29** 03:31:40.7±0.8, 2878N×14257E, h35km, mb4.4/1, Error ellipse: s-maj=32.5km s-min=11.3km az=78.0*

ISC 29 03:31:38.6±2.2,2883N±004×1425E±02,h22km±17km,n24, σ1°19/35,mb4.0/7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.75**	**190**	Pn		**Pn**	**03 32 06.7**	**-0.9**
	11nm,0.3s,baz=288,slow=24,SNR=4.1							
CBIJ				Sn		**Sn**	**03 32 27.1**	**-2.1**
	53nm,0.3s,baz=86,slow=22,SNR=12							
CBIJ	**Chichi jima**	**1.75**	**190**	P		**Pn**	**03 32 06.4**	**-1.2**
CBIJ				S		**Sn**	**03 32 28.0**	**-1.2**
JHJ	**Hachijo jima 2**	**4.88**	**332**	Pn		**Pn**	**03 32 51.1**	**+0.5**
	9.5nm,0.3s,baz=202,slow=4.3,SNR=3.5							
JHJ				Sn		**Sn**	**03 33 44.9**	**-1.6**
	9.0nm,0.3s,baz=86,slow=18,SNR=2.6							
BSO1	**Boso 1**	**5.96**	**348**	P		**Pn**	**03 33 03.3**	**-2.1**
BSO1				*e*S		**Sn**	**03 34 10.0**	**-3.0**
BSO2	**Boso 2**	**6.10**	**346**	*e*S		**Sn**	**03 34 16.6**	**+0.2**
BSO3	**Boso 3**	**6.20**	**344**	*e*S		**Sn**	**03 34 17.8**	**-1.1**
JHU	**Hanno**	**7.52**	**339**	P		**Pn**	**03 33 27.4**	**+0.5**
JHU				*e*S		**Sn**	**03 34 51.3**	**-0.2**
JRY	**Ryogami san**	**7.80**	**338**	P		**Pn**	**03 33 31.7**	**+1.0**
JRY				*e*S		**Sn**	**03 34 57.6**	**-0.6**
JHO	**Hitachi**	**7.94**	**348**	P		**Pn**	**03 33 31.6**	**-1.0**
JHO				*e*S		**Sn**	**03 34 56.6**	**-5.1**
JAG	**Ashikaga**	**8.01**	**342**	S		**Sn**	**03 35 02.0**	**-1.4**
JNG	**Nsakai**	**8.43**	**335**	P		**Pn**	**03 33 42.6**	**+3.3**
JNG				*e*S		**Sn**	**03 35 15.0**	**+1.2**
MJAR	**Matsushiro Arr**	**8.51**	**336**	Pn		**Pn**	**03 33 41.7**	**+1.3**
	1.1nm,0.3s,baz=158,slow=11,SNR=10.0							
MJAR				Sn		**Sn**	**03 35 15.8**	**0.0**
	0.6nm,0.3s,baz=334,slow=11,SNR=5.2							
MAJO	**Matsushiro**	**8.51**	**336**	*e*Pn		**Pn**	**03 33 41.7**	**+1.3**
MAJO				*e*Sn		**Sn**	**03 35 16.4**	**+0.6**
JFT	**Otama**	**8.86**	**349**	*e*S		**Sn**	**03 35 18.4**	**-6.0**
JMM	**Marumori**	**9.13**	**351**	P		**Pn**	**03 33 48.0**	**-1.0**
JMM				*e*S		**Sn**	**03 35 24.1**	**-6.9**
KSRS	**Korea Array**	**14.94**	**309**	Pn		**Pn**	**03 35 12.8**	**+4.4**
	0.2nm,0.3s,baz=114,slow=11,SNR=7.1							
ZALV	**Zalesovo Beam**	**48.40**	**318**	P		**P**	**03 40 20.6**	**+1.9**
	0.9nm,0.4s,mb4.2,baz=98,slow=9.1,SNR=5.2							
WRAB	**Tennant Creek**	**49.11**	**190**	*e*P		**P**	**03 40 24.5**	**0.0**
	2.7nm,0.6s,mb4.5							
WRA	**Warramunga Arr**	**49.12**	**190**	P		**P**	**03 40 24.0**	**-0.5**
	1.5nm,0.4s,mb4.3,baz=11,slow=8.4,SNR=8.9							
MKAR	**Makanchi Array**	**49.63**	**308**	P		**P**	**03 40 28.9**	**+0.7**
	0.9nm,0.7s,mb3.9,baz=94,slow=9.7,SNR=10							
MKAR	**Makanchi Array**	**49.63**	**308**	P		**P**	**03 40 28.9**	**+0.7**
YKA	**Yellowknife Ar**	**70.48**	**29**	P		**P**	**03 42 51.7**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=296,slow=6.0,SNR=6.1							
NOA	**NORSAR Array B**	**82.12**	**338**	P		**P**	**03 43 57.7**	**+0.6**
	1.8nm,1.1s,mb3.6,baz=33,slow=7.2,SNR=2.8							
BRTR	**Keskin Array B**	**85.05**	**313**	P		**P**	**03 44 14.5**	**+1.9**
	0.6nm,0.8s,mb3.8,baz=40,slow=4.7,SNR=2.7							

*ISCJB **29** 03:59:37.3±5.0, 69S±02×1555E±02, h37km±41km, mb4.0/10, MS3.5/3, Error ellipse: s-maj=38.8km s-min=22.9km az=20.1*

*IDC **29** 03:59:37.7±1.2, 6915×15549E, h29km±6km, mb4.0/9, mb1 4.1/10, mb1mx4.0/16, mbtmp4.0/10, ML3.4/1, MS3.2/6, Ms1 3.2/6, ms1mx2.9/28, Error ellipse: s-maj=28.6km s-min=19.9km az=116.0*

*NEIC **29** 03:59:37.5±0.6, 6905×15556E, mb3.8/1, Error ellipse: s-maj=20.8km s-min=12.0km az=137.0*

ISC 29 03:59:40.6±3.8,69S±02×1555E±02,h52km±32km,n19, σ0°55/12,mb4.0/10,MS3.5/3,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**5.11**	**120**	LR		LR	04 02 48.6	
	comp=Z,147nm,21.1s,baz=127,slow=38							
PMG	**Port Moresby**	**8.58**	**253**	Pn		**Pn**	**04 01 42.4**	**+0.1**
	2.6nm,0.3s,baz=41,slow=9.9,SNR=4.0							
PMG				LR		LR	04 05 00.3	
	comp=Z,98nm,18.8s,baz=14,slow=37							
PMG	**Port Moresby**	**8.58**	**253**	*e*Pn		**Pn**	**04 01 41.8**	**-0.4**
CTA	**Charters Tower**	**15.86**	**213**	LR		LR	04 07 31.2	
	comp=Z,23nm,20.3s,baz=231,slow=30							
GUMO	**Guam**	**22.91**	**333**	LR		LR	04 12 58.3	
	comp=Z,76nm,19.1s,MS3.2,baz=208,slow=35							
WRAB	**Tennant Creek**	**24.23**	**236**	*e*P		**P**	**04 04 53.1**	**+0.3**
	1.2nm,0.4s,mb3.7							
WRAB				*e*pP			04 05 01.1	
WRA	**Warramunga Arr**	**24.24**	**236**	P		**P**	**04 04 52.9**	**+0.1**
	2.0nm,0.4s,mb3.9,baz=60,slow=9.5,SNR=13							
WRA				pP			04 05 01.2	
	3.4nm,0.6s,baz=60,slow=9.6,SNR=8.9							
WRA				PcP		PcP	04 08 32.1	-0.1
	0.5nm,0.7s,baz=62,slow=2.5,SNR=3.5							
ASAR	**Alice Springs**	**26.57**	**229**	P		**P**	**04 05 13.5**	**-0.5**
	0.7nm,0.5s,mb3.5,baz=58,slow=9.5,SNR=24							
ASAR				pP			04 05 21.8	-5.4
	2.0nm,0.7s,baz=58,slow=9.6,SNR=9.5							
ASAR				PcP		PcP	04 08 37.3	-0.2
	0.4nm,0.5s,baz=66,slow=2.1,SNR=5.6							
RAR	**Rarotonga**	**45.53**	**113**	LR		LR	04 22 56.3	
	comp=Z,76nm,20.2s,MS3.6,baz=24,slow=31							
PETK	**Petropavlovsk-**	**59.81**	**2**	P		**P**	**04 09 41.4**	**+1.1**
	5.5nm,1.0s,mb4.6,baz=201,slow=7.7,SNR=3.9							
CMAR	**Chiang Mai Arr**	**61.16**	**295**	P		**P**	**04 09 50.8**	**+0.5**
	4.1nm,0.7s,mb4.7,baz=122,slow=5.6,SNR=14							
CMAR				pP			04 09 59.7	-4.9
	2.4nm,0.8s,baz=113,slow=5.4,SNR=1.8							
FX1	**Attu Island--F**	**61.43**	**12**	LR		LR	04 33 46.0	
	comp=Z,56nm,20.0s,MS3.7,baz=318,slow=33							
VNDA	**Vanda**	**70.66**	**179**	P		**P**	**04 10 50.8**	**+0.5**
	0.7nm,0.8s,mb3.6,baz=19,slow=8.9,SNR=3.7							
MKAR	**Makanchi Array**	**83.64**	**319**	P		**P**	**04 12 03.0**	**-0.6**
	0.8nm,0.7s,mb4.0,baz=101,slow=6.2,SNR=3.5							
ZALV	**Zalesovo Beam**	**84.36**	**326**	P		**P**	**04 12 06.5**	**-0.6**
	0.5nm,0.3s,mb4.0,baz=134,slow=4.6,SNR=3.7							
YKA	**Yellowknife Ar**	**96.04**	**28**	P		**P**	**04 13 02.0**	**0.0**
	0.5nm,0.5s,mb4.2,baz=266,slow=4.6,SNR=17							
PDAR	**Pinedale Array**	**98.30**	**48**	P		**P**	**04 13 12.0**	**-0.8**
	0.2nm,0.7s,mb3.7,baz=241,slow=0.9,SNR=2.5							
BDFB	**Brasilia**	**147.72**	**134**	PKPbc		PKPbc	04 19 20.5	-0.1
	1.7nm,0.5s,baz=225,slow=6.1,SNR=11							
TORD	**Torodi Ar. Bea**	**153.44**	**286**	PKPbc		PKPbc	04 19 33.0	-1.2
	0.8nm,0.7s,baz=73,slow=1.6,SNR=9.3							
TORD				PKPab		PKPab	04 19 45.8	-0.8
	0.7nm,0.5s,baz=82,slow=4.1,SNR=10							

*NEIC **29** 04:31:36.6±0.8, 137N×12435E, h35km, mb3.9/2, Error ellipse: s-maj=66.8km s-min=11.4km az=66.0*

IDC 29 04:32:00.7±12.0,075N×12366E,h274km±135km,mb3.4/5, mb1 3.5/5,mb1mx3.2/17,mbtmp3.4/5,Error ellipse: s-maj=182.5km s-min=24.4km az=61.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.83**	**174**	P		P	04 35 59.6	-1.3
	9.7nm,1.1s							
WRAB	**Tennant Creek**	**23.07**	**154**	*e*P		P	04 36 42.4	-0.2
	2.4nm,0.6s							
WRA	**Warramunga Arr**	**23.08**	**154**	P		P	04 36 42.4	-0.3
	3.2nm,0.6s,baz=332,slow=10,SNR=10							
ASAR	**Alice Springs**	**26.23**	**158**	P		P	04 37 11.5	+0.4
	0.4nm,0.3s,baz=329,slow=8.8,SNR=8.8							
STKA	**Stephens Creek**	**36.63**	**154**	P		P	04 38 41.4	0.0
	1.3nm,0.5s,baz=330,slow=14,SNR=2.7							
MKAR	**Makanchi Array**	**58.33**	**328**	P		P	04 41 27.5	+0.2
	1.6nm,0.5s,baz=122,slow=8.5,SNR=25							
MKAR				PcP		PcP	04 42 14.9	-0.1
	0.2nm,0.5s,baz=146,slow=3.3,SNR=3.4							
KURK	**Kurchatov**	**62.66**	**330**	P		P	04 41 56.1	-0.2
	1.3nm,0.7s,baz=131,slow=6.4,SNR=9.6							

*ISCJB **29** 05:08:14.7±1.8, 2425±008×1382E±05, h33km, mb4.1/4, Error ellipse: s-maj=65.2km s-min=11.9km az=179.6*

*IDC **29** 05:08:14.8±2.8, 2455×13713E, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.0/15, mbtmp4.2/5, ML4.2/1, Error ellipse: s-maj=131.4km s-min=25.0km az=83.0*

*NEIC **29** 05:08:17.6±1.2, 2475×13794E, h35km, mb3.8/1, Error ellipse: s-maj=50.5km s-min=8.7km az=90.0*

ISC 29 05:08:19.7±3.7,25S±01×1381E±05,h60km±30km,n13, σ0°40/12,mb4.0/4,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**11.55**	**209**	*e*P		x	05 11 00.8	
	7.8nm,0.4s							
KAKA				*e*S		x	05 13 05.4	
KAKA	**Kakadu**	**11.55**	**209**	*e*Pn		x	05 11 00.1	
	57nm,0.6s							
KAKA				*e*Sn		x	05 13 03.0	
KNA	**Kununurra**	**16.02**	**214**	*e*P		**Pn**	**05 12 01.4**	**+0.1**
	17nm,0.6s							
WRAB	**Tennant Creek**	**17.67**	**192**	*e*P		**Pn**	**05 12 21.6**	**-0.2**
	3.7nm,0.5s							
WB2	**Warramunga Arr**	**17.68**	**192**	*e*P		**Pn**	**05 12 21.5**	**-0.4**
WB2	**Warramunga Arr**	**17.68**	**192**	*e*P		**Pn**	**05 12 21.4**	**-0.5**
WRA	**Warramunga Arr**	**17.68**	**192**	P		**Pn**	**05 12 21.8**	**-0.1**
	0.8nm,0.3s,baz=9.3,slow=12,SNR=13							
WRA				S		**S**	**05 15 31.5**	**-11**
	0.3nm,0.3s,baz=6.7,slow=22,SNR=4.3							
FITZ	**Fitzroy Crossi**	**19.71**	**217**	*e*P		**Pn**	**05 12 50.8**	**+4.5**
	25nm,2.0s							
ASAR	**Alice Springs**	**21.39**	**191**	P		**P**	**05 13 03.4**	**+0.9**
	2.8nm,0.4s,mb3.9,baz=17,slow=11,SNR=48							
ASAR				S		**S**	**05 16 56.4**	**-0.2**
	1.5nm,0.8s,baz=8.1,slow=20,SNR=5.6							
MKAR	**Makanchi Array**	**69.28**	**323**	P		**P**	**05 19 20.6**	**0.0**
	2.3nm,0.7s,mb4.2,baz=111,slow=7.9,SNR=11							
KURK	**Kurchatov**	**73.22**	**325**	P		**P**	**05 19 44.5**	**+0.2**
	0.8nm,0.5s,mb3.9,baz=104,slow=6.8,SNR=2.7							
BVAR	**Borovoye Array**	**78.82**	**325**	P		**P**	**05 20 15.7**	**-0.4**
	1.6nm,0.6s,mb4.1,baz=116,slow=7.2,SNR=5.7							
TORD	**Torodi Ar. Bea**	**135.62**	**286**	PKP		PKPdf	05 27 35.2	+0.9
	0.5nm,1.2s,baz=96,slow=1

KZA Kyzart 11.98 19 P **Pn** **05 12 32.1 +3.3**
SNR=8.1
EKS2 Erkin-Say 12.17 14 P **Pn** **05 12 33.5 +2.0**
SNR=6.3
EKS2 Erkin-Say 12.17 14 *e*Pn **Pn** **05 12 31.0 -0.5**
comp=E,24nm,0.6s
EKS2 *e*Sn **Sn** **05 14 42.6 -4.2**
KK31 Karatay Array 12.22 2 ⇑Pn **Pn** **05 12 30.2 -2.0**
comp=E,12nm,0.5s,baz=178,slow=13,SNR=206
KK31 ⇑Sn **Sn** **05 14 46.1 -2.1**
comp=E,14nm,0.6s,baz=191,slow=21
KK31 Karatay Array 12.22 2 *i* P **Pn** **05 12 30.2 -2.0**
KK31 pmax pmax
comp=Z,21nm,0.5s
DANN Dangsing 12.30 98 *e*P **Pn** **05 12 32.7 -0.6**
AAK Ala-Archa 12.30 16 *e*P **Pn** **05 12 32.1 -1.1**
AAK pmax pmax
comp=Z,41nm,0.6s
AAK Ala-Archa 12.30 16 P **Pn** **05 12 35.8 +2.6**
SNR=6.4
AAK Ala-Archa 12.30 16 *e*Pn **Pn** **05 12 32.1 -1.1**
comp=Z,41nm,0.6s
KOLN Koldanda 12.32 101 *e*P **Pn** **05 12 33.1 -0.5**
comp=Z,169nm,0.7s
NGP Nagpur 12.68 138 *e*P **Pn** **05 12 30.1 -8.4**
NGP *e*S **Sn** **05 14 47.5 -12**
CHMS Chumysh 12.71 16 P **Pn** **05 12 40.6 +1.8**
SNR=14
TKM2 Tokmak 2 12.86 19 ⇑Pn **Pn** **05 12 40.0 -0.8**
comp=Z,16nm,0.7s
TKM2 ⇑Sn **Sn** **05 15 02.3 -1.3**
comp=Z,24nm,1.6s
TKM2 Tokmak 2 12.86 19 *e*Pn **Pn** **05 12 39.9 -0.9**
GKN Gorkha 13.13 99 *e*P **Pn** **05 12 43.0 -1.7**
comp=Z,56nm,0.3s
DMN Daman 13.65 100 *e*P **Pn** **05 12 50.2 -1.5**
comp=Z,62nm,0.9s
KKN Kakani 13.74 99 *e*P **Pn** **05 12 50.7 -2.3**
comp=Z,113nm,0.5s
LATR Latur 13.78 153 *ex* x 05 15 43.5
PKI Pulchoki 13.91 100 *e*P **Pn** **05 12 53.9 -1.4**
comp=Z,42nm,0.5s
GUN Gumba 14.22 98 *e*P **Pn** **05 12 56.8 -2.7**
comp=Z,251nm,0.5s
JIRN Jiri 14.55 99 *e*P **Pn** **05 13 01.7 -2.3**
comp=Z,79nm,0.5s
RAMN Ramite 15.11 101 *e*P **Pn** **05 13 08.5 -3.2**
comp=Z,98nm,0.8s
HYB Hyderabad 15.52 148 *i* P **Pn** **05 13 22.0 +5.0**
HYB *e* 05 16 03.5
HYB *e*S **Sn** **05 16 17.5 +8.7**
HYB Hyderabad 15.52 148 *e*P **Pn** **05 13 22.0 +5.0**
HYB *e*S **Sn** **05 16 26.0 +17**
ODAN Odare 15.81 100 *e*P **Pn** **05 13 17.9 -2.9**
comp=Z,82nm,0.7s
TAPN Taplejung 15.93 98 *e*P **Pn** **05 13 18.8 -3.6**
comp=Z,87nm,0.7s
LSA Lhasa 18.37 88 P **Pn** **05 13 55.0 +2.1**
LSA S **Sn** **05 17 17.0 -0.8**
LSA LR LR
comp=N,560nm,14.4s
LSA LR LR
comp=E,470nm,12.9s
LSA LR LR
comp=Z,480nm,12.9s
LSA Lhasa 18.37 88 *e*P **Pn** **05 13 55.2 +2.3**
LSA pmax pmax
comp=Z,23nm,0.9s
LSA Lhasa 18.37 88 *e*P **Pn** **05 13 55.2 +2.3**
comp=Z,23nm,0.9s
MK31 Makanchi Array 18.56 28 Pn **Pn** **05 13 53.7 -1.3**
comp=Z,4.3nm,0.6s,baz=205,slow=11,SNR=44
MK31 Makanchi Array 18.56 28 *e*P **Pn** **05 13 52.9 -2.1**
MKAR Makanchi Array 18.56 28 P **Pn** **05 13 53.6 -1.4**
comp=Z,0.6nm,0.3s,baz=207,slow=12,SNR=30
MKAR LR LR 05 22 03.1
comp=Z,296nm,18.7s,baz=220,slow=40
MKAR Makanchi Array 18.56 28 P **Pn** **05 13 53.6 -1.4**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR MLR MLR
comp=Z,296nm,18.7s
WMQ Urumqi 19.10 42 *e*P **Pn** **05 14 02.5 +0.8**
WMQ S **Sn** **05 17 29.0 -6.3**
WMQ AMB AMB
comp=Z,39nm,1.1s
WMQ AMB AMB
comp=Z,145nm,3.0s
WMQ LR LR
comp=N,731nm,8.0s
WMQ LR LR
comp=E,504nm,7.0s
WMQ LR LR
comp=Z,452nm,18.0s
RDF Al-Radifah 19.49 270 *e*P **Pn** **05 14 05.5 -1.0**
baz=268
RDF AMb AMB 05 14 15.8
comp=Z,75nm,1.1s,baz=268
MIB Mutribah 19.52 273 *e*P **Pn** **05 14 06.4 -0.5**
baz=271
MIB AMb AMB 05 14 14.4
comp=Z,41nm,0.8s,baz=271
NAY Al-Naaiem 19.70 271 *e*P **Pn** **05 14 08.1 -0.8**
baz=269
NAY AMb AMB 05 14 18.3
comp=Z,27nm,1.2s,baz=269
AB31 Akbulak array 19.86 340 Pn **Pn** **05 14 09.1 -1.6**
comp=Z,7.4nm,0.5s,baz=150,slow=11,SNR=169
AB31 Akbulak array 19.86 340 P **Pn** **05 14 08.9 -1.8**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
SHL Shillong 20.05 100 *ex* x 05 14 15.5
SHL *ex* x 05 20 34.0
KURBB Kurchatov Arra 20.76 16 Pn **P** **05 14 17.3 -1.5**
comp=Z,1.7nm,0.7s
KURK Kurchatov 20.87 16 P **P** **05 14 17.0 -2.9**
comp=Z,3.0nm,0.5s,baz=209,slow=11,SNR=8.5
KURK LR LR 05 23 16.6
comp=Z,329nm,18.2s,MS3.8,baz=205,slow=40
KURK Kurchatov 20.87 16 P **P** **05 14 17.0 -2.9**
KURK pmax pmax
comp=Z,3.0nm,0.5s
KURK MLR MLR
comp=Z,329nm,18.2s,MS3.8
KURK Kurchatov 20.87 16 P **P** **05 14 17.0 -2.9**
AKTK Aktyubinsk 21.49 339 P **P** **05 14 26.2 -0.4**
AKTO Aktyubinsk 21.49 339 ⇓Pn **P** **05 14 26.6 0.0**
comp=Z,8.1nm,1.3s,mb3.9
AKTO Aktyubinsk 21.49 339 P **P** **05 14 26.2 -0.4**
comp=Z,17nm,1.0s,mb4.3,baz=146,slow=14,SNR=20
AKTO LR LR 05 24 04.1
comp=Z,144nm,19.1s,MS3.4,baz=150,slow=40
AKTO Aktyubinsk 21.49 339 P **P** **05 14 26.5 -0.1**
AKTO pmax pmax
comp=Z,8.0nm,1.3s,mb3.9
MAK Makhachkala 21.54 310 *e*P **P** **05 14 30.9 +3.6**
MAK MLR MLR
comp=Z,575nm,14.0s,MS4.1
VOSK Vostochnaya 21.86 2 P Px 05 14 45.5
VOSK pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
BVA0 Borovoye Array 22.15 1 Pn **P** **05 14 32.5 -1.2**
BVAR Borovoye Array 22.15 1 P **P** **05 14 33.2 -0.5**
comp=Z,6.1nm,0.5s,mb4.3,baz=163,slow=11,SNR=34
BVAR LR LR 05 24 15.9
comp=Z,184nm,19.7s,MS3.5,baz=186,slow=40
BVAR Borovoye Array 22.15 1 P **P** **05 14 33.2 -0.5**
BVAR pmax pmax
comp=Z,6.0nm,0.5s
BVAR MLR MLR
comp=Z,184nm,19.7s
BRVK Borovoye 22.18 1 *e*P **P** **05 14 33.3 -0.7**
BRVK pmax pmax
comp=Z,24nm,0.8s,mb4.7
BRVK Borovoye 22.18 1 *e*P **P** **05 14 33.3 -0.8**
comp=Z,24nm,0.8s,mb4.7
GNI Garni 22.44 301 P **P** **05 14 41.1 +4.2**
comp=Z,27nm,0.9s,mb4.7,baz=338,slow=7.9,SNR=13
GNI LR LR 05 25 23.7
comp=Z,161nm,19.0s,MS3.5,baz=93,slow=42
GNI Garni 22.44 301 P **P** **05 14 41.1 +4.2**
GNI pmax pmax
comp=Z,27nm,0.9s
GNI MLR MLR
comp=Z,161nm,19.0s
GNI Garni 22.44 301 P **P** **05 14 41.1 +4.2**

KIV Kislovodsk 25.15 309 *e*P **P** **05 15 06.8 +3.7**
KIV pmax pmax
comp=Z,19nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,200nm,19.0s,MS3.6
ZAA0 Zalesovo Array 25.45 21 *e*P **P** **05 15 05.1 -0.7**
ZALV Zalesovo Beam 25.45 21 P **P** **05 15 05.0 -0.7**
comp=Z,6.0nm,0.6s,mb4.3,baz=205,slow=8.0,SNR=12
ZALV LR LR 05 26 08.6
comp=Z,185nm,18.7s,MS3.6,baz=213,slow=39
ZALV Zalesovo Beam 25.45 21 P **P** **05 15 05.0 -0.8**
ZALV pmax pmax
comp=Z,6.0nm,0.6s,mb4.3
ZALV MLR MLR
comp=Z,185nm,18.7s,MS3.6
NVS Novosibirsk 25.78 18 *e*P **P** **05 15 08.2 -0.6**
NVS *e*S **S** **05 19 32.9 -4.5**
NVS pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS smax
comp=N,31nm,2.4s
NVS smax
comp=E,6.0nm,1.3s
GTA Gaotai 25.80 63 *e*P **P** **05 15 14.5 +5.4**
GTA AP pP 05 15 24.5 +11
GTA XP sP 05 15 29.0 +14
GTA PP 05 15 51.8
GTA S **S** **05 19 33.5 -4.4**
GTA XS sS 05 19 47.8 +2.5
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb3.8
GTA AMB AMB
comp=Z,109nm,4.8s
GTA LR LR
comp=N,509nm,20.1s
GTA LR LR
comp=E,166nm,12.9s
GTA LR LR
comp=Z,162nm,11.1s
ARU Arti 26.77 346 *d*/*i*P **P** **05 15 20.4 +2.7**
ARU 05 15 56.8
ARU S **S** **05 19 52.7 -0.3**
ARU SS 05 20 55.3
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.4
ARU Arti 26.77 346 *e*P **P** **05 15 18.4 +0.7**
comp=Z,12nm,1.2s,mb4.3
ASF Jabal al Asfar 28.13 281 LR LR 05 28 45.4
comp=Z,164nm,18.2s,MS3.7,baz=119,slow=41
CMAR Chiang Mai Arr 29.03 108 P **P** **05 15 39.2 +1.0**
comp=Z,1.0nm,0.4s,mb3.9,baz=304,slow=9.7,SNR=3.7
CMAR LR LR 05 27 09.8
comp=Z,33nm,20.2s,MS2.9,baz=295,slow=36
CMAR Chiang Mai Arr 29.03 108 P **P** **05 15 39.3 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR MLR MLR
comp=Z,33nm,20.2s
MMAI Mount Meron Ar 29.30 283 LR LR 05 29 22.6
comp=Z,258nm,18.6s,MS3.9,baz=85,slow=40
BR131 Keskin Array S 30.74 297 *e*P **P** **05 15 53.1 -0.1**
comp=Z,1.6nm,0.6s,mb4.0
BRTR Keskin Array B 30.74 297 P **P** **05 15 53.9 +0.6**
comp=Z,1.3nm,0.6s,mb4.0,baz=107,slow=9.9,SNR=8.1
BRTR LR LR 05 29 58.7
comp=Z,106nm,20.5s,MS3.5,baz=111,slow=40
BRTR Keskin Array B 30.74 297 P **P** **05 15 53.9 +0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR MLR MLR
comp=Z,106nm,20.5s
MOY Mondy 30.90 39 *e*P **P** **05 15 56.0 +1.5**
ZAK Zakamensk 31.57 42 *e*P **P** **05 15 59.9 -0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
OBN Obninsk 33.85 325⇑ *e*P **P** **05 16 22.1 +1.8**
OBN *e* 05 17 38.2
OBN pmax pmax
comp=Z,35nm,1.6s,mb5.0
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.1
AKASG Malin Array Be 36.05 315 P **P** **05 16 39.0 -0.4**
comp=Z,3.1nm,0.6s,mb4.4,baz=97,slow=7.0,SNR=16
AKASG Malin Array Be 36.05 315 P **P** **05 16 39.0 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 36.05 315 P **P** **05 16 39.0 -0.4**
VOIR 37.67 306⇓ *i*P **P** **05 16 54.2 +1.0**
BURAR Bucovina Array 37.87 309⇑ *i*P **P** **05 16 55.7 +0.8**
BUR08 Bucovina Ar. S 37.89 309 *e*P **P** **05 16 55.2 +0.2**
GZR Gura Zlata 39.26 305⇑ *i*P **P** **05 17 07.0 +0.4**
DRGR 39.45 307⇓ *i*P **P** **05 17 08.8 +0.7**
BZS Buzias 40.09 306⇓ *i*P **P** **05 17 14.6 +1.1**
BOD Bodaibo 40.38 35 *e*P **P** **05 17 12.4 -3.3**
BOD pmax pmax
comp=Z,6.0nm,1.5s,mb4.1
JOF Joensuu 40.41 334 *ep* **P** **05 17 15.3 -0.6**
comp=Z,7.0nm,0.7s,mb4.5
JOF Joensuu 40.41 334 *e*P **P** **05 17 15.3 -0.6**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
PSZ Piszkesteto 41.47 309⇑ *i*P **P** **05 17 26.1 +1.2**
KAF Kangasniemi 41.99 331 *ep* **P** **05 17 28.4 -0.5**
comp=Z,3.4nm,0.5s,mb4.2
KAF Kangasniemi 41.99 331 *e*P **P** **05 17 28.4 -0.5**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
GERES GERESS Array B 45.65 310 P **P** **05 17 58.5 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=100,slow=6.8,SNR=12
GERES LR LR 05 38 02.2
comp=Z,123nm,19.4s,MS3.9,baz=72,slow=37
GERES GERESS Array B 45.65 310 P **P** **05 17 58.5 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES MLR MLR
comp=Z,123nm,19.4s
KEV Kevo 45.76 341 *ep* **P** **05 17 58.6 -0.4**
comp=Z,8.6nm,0.5s,mb4.9
KEV Kevo 45.76 341 *e*P **P** **05 17 58.6 -0.4**
KEV pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ARCES ARCESS Array B 46.06 340 P **P** **05 18 01.9 +0.5**
comp=Z,12nm,0.5s,mb5.1,baz=128,slow=7.4,SNR=110
ARCES LR LR 05 41 06.9
comp=Z,123nm,18.5s,MS3.9,baz=304,slow=41
ARCES ARCESS Array B 46.06 340 P **P** **05 18 02.0 +0.5**
ARCES pmax pmax
comp=Z,12nm,0.5s
ARCES MLR MLR
comp=Z,123nm,18.5s
KSRS Korea Array 47.80 66 P **P** **05 18 15.8 +0.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=262,slow=9.6,SNR=4.4
KSRS LR LR 05 38 40.0
comp=Z,48nm,19.0s,MS3.5,baz=270,slow=36
KSRS Korea Array 47.80 66 P **P** **05 18 15.8 +0.3**
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KSRS MLR MLR
comp=Z,48nm,19.0s,MS3.5
NB2 NORSAR Subarra 48.45 326 P **P** **05 18 19.1 -1.1**
comp=Z,1.9nm,0.6s,mb4.3,baz=104,slow=7.9
NOA NORSAR Array B 48.45 326 P **P** **05 18 19.0 -1.1**
comp=Z,2.8nm,0.9s,mb4.3,baz=100,slow=7.7,SNR=4.8
NOA LR LR 05 41 08.3
comp=Z,171nm,19.0s,MS4.0,baz=150,slow=39
NOA NORSAR Array B 48.45 326 P **P** **05 18 19.0 -1.2**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA MLR MLR
comp=Z,171nm,19.0s
NOA NORSAR Array B 48.45 326 P **P** **05 18 19.0 -1.2**
KEST Kesra 50.17 293 P **P** **05 18 34.6 +0.8**
comp=Z,1.4nm,0.8s,mb4.0,baz=318,slow=19,SNR=5.8
SBF Sospel 50.23 303 *e*P **P** **05 18 33.5 -0.5**
LPG La Plagne 50.52 306 *e*P **P** **05 18 37.0 +0.8**
comp=Z,8.0nm,0.7s,mb4.5
LPG La Plagne 50.52 306 *e*P **P** **05 18 37.0 +0.8**
LPG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LPG La Plagne 50.52 306 *e*P **P** **05 18 37.0 +0.8**
comp=Z,4.0nm,0.7s,mb4.5
LPL La Plagne 50.53 306 *e*P **P** **05 18 36.4 +0.1**
comp=Z,6.9nm,0.5s,mb4.5
LPL La Plagne 50.53 306 *e*P **P** **05 18 36.4 +0.1**
LPL pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LPL La Plagne 50.53 306 *e*P **P** **05 18 36.4 +0.1**
comp=Z,3.5nm,0.5s,mb4.5
MBDF Montbardon 50.59 305 *e*P **P** **05 18 37.2 +0.4**
comp=Z,8.9nm,0.8s,mb4.5
MBDF Montbardon 50.59 305 *e*P **P** **05 18 37.2 +0.4**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MBDF Montbardon 50.59 305 *e*P **P** **05 18 37.2 +0.4**
comp=Z,4.4nm,0.8s,mb4.4
FRF La Foret Royal 50.83 303 *e*P **P** **05 18 37.5 -1.1**
CABF La Chapelle 50.87 307 *e*P **P** **05 18 39.2 +0.4**
LMR La Mourre 50.96 303 *e*P **P** **05 18 38.4 -1.2**
ORIF Oris-en-Rattie 51.20 305 *e*P **P** **05 18 40.6 -0.8**
TIXI Tiksi 51.34 20⇑ *e*P **P** **05 18 41.9 -0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TIXI MLR MLR
comp=Z,100nm,19.0s,MS3.9
VIVF Saint-Julien-l 52.06 305 *e*P **P** **05 18 47.5 -0.3**
SMF Signal de Mont 52.40 307 *e*P **P** **05 18 49.7 -0.6**
comp=Z,37nm,1.2s,mb4.9
SMF Signal de Mont 52.40 307 *e*P **P** **05 18 49.7 -0.6**
SMF pmax pmax
comp=Z,18nm,1.2s,mb4.9
SMF Signal de Mont 52.40 307 *e*P **P** **05 18 49.7 -0.6**
comp=Z,18nm,1.2s,mb4.9
SSF Saint Saulge 52.58 308 *e*P **P** **05 18 51.5 -0.1**
comp=Z,20nm,1.1s,mb4.7
SSF Saint Saulge 52.58 308 *e*P **P** **05 18 51.5 -0.1**
SSF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
SSF Saint Saulge 52.58 308 *e*P **P** **05 18 51.5 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
AVF Avril sur Loir 52.72 308 *e*P **P** **05 18 52.3 -0.3**
SPITS Spitsbergen Ar 52.78 348 P **P** **05 18 53.9 +1.2**
comp=Z,3.7nm,0.5s,mb4.5,baz=342,slow=10,SNR=12
SPITS Spitsbergen Ar 52.78 348 P **P** **05 18 53.9 +1.2**
SPITS pmax pmax
comp=Z,4.0nm,0.5s
BGF Bois d'Agland 53.09 307 *e*P **P** **05 18 55.9 +0.5**
CAF Calviac 53.88 305 *e*P **P** **05 19 01.5 +0.3**
EPF Esparros 55.46 303 *e*P **P** **05 19 13.1 +0.4**
ETSF Etsaut 56.13 303 *e*P **P** **05 19 17.4 -0.1**
comp=Z,5.9nm,0.6s,mb4.5
ETSF Etsaut 56.13 303 *e*P **P** **05 19 17.4 -0.1**
ETSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ETSF Etsaut 56.13 303 *e*P **P** **05 19 17.4 -0.1**
comp=Z,3.0nm,0.6s,mb4.5
ESDC Sonseca Array 59.42 301 P **P** **05 19 40.0 -0.7**
comp=Z,0.7nm,0.5s,mb4.0,baz=68,slow=7.2,SNR=7.3
SEY Seymchan 59.63 32⇑ *e*P **P** **05 19 42.6 +0.8**
BILL Bilibino 64.07 25 *e*P **P** **05 20 13.2 +1.6**
BILL pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.1
PETK Petropavlovsk- 64.70 42 LR LR 05 51 19.1
comp=Z,120nm,18.9s,MS4.1,baz=104,slow=39
TORD Torodi Ar. Bea 64.78 271 P **P** **05 20 16.6 -0.5**
comp=Z,1.9nm,1.0s,mb4.1,baz=63,slow=5.2,SNR=8.9
SUMG Summit 66.11 342 *e*P **P** **05 20 26.4 +1.6**
comp=Z,7.6nm,1.0s,mb4.7
BOSA Boshof 72.87 220 P **P** **05 21 09.2 +2.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=131,slow=11,SNR=4.2
BOSA Boshof 72.87 220 P **P** **05 21 09.2 +2.1**
BOSA pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
DBIC Dimbokro 73.55 268 LR LR 05 56 08.3
comp=Z,104nm,19.9s,MS4.1,baz=38,slow=38
WRA Warramunga Arr 79.85 120 P **P** **05 21 47.8 +1.0**
comp=Z,5.3nm,0.9s,mb4.5,baz=318,slow=5.2,SNR=16
WRA Warramunga Arr 79.85 120 P **P** **05 21 47.8 +1.0**
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRAB Tennant Creek 79.85 120⇑ *e*P **P** **05 21 50.6 +3.7**
FRB Frobisher Bay 80.16 343 P **P** **05 21 47.3 -0.6**
comp=Z,0.8nm,0.7s,mb3.8,baz=84,slow=10,SNR=3.1
FRB Frobisher Bay 80.16 343 P **P** **05 21 47.3 -0.6**
FRB pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 81.83 124 P **P** **05 21 57.8 +0.4**
comp=Z,2.8nm,0.8s,mb4.3,baz=310,slow=5.3,SNR=16
ASAR Alice Springs 81.83 124 P **P** **05 21 57.8 +0.4**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 86.90 2 P **P** **05 22 22.3 -0.2**
comp=Z,1.3nm,0.6s,mb4.3,baz=349,slow=5.0,SNR=41
YKA Yellowknife Ar 86.90 2 P **P** **05 22 22.3 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.6s
CTA Charters Tower 89.04 114 LR LR 06 03 03.1
comp=Z,69nm,18.4s,MS4.1,baz=225,slow=36
STKA Stephens Creek 92.19 126 LR LR 06 03 57.6
comp=Z,75nm,19.9s,MS4.1,baz=205,slow=35

OTT 29 05:21:51.5±0.3, 7571N×10504W, h18km, MN3.6/2, 230km west from Polaris, Nu Byam Martin Channel, Nu Sverdrup Seismic Zone., Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
RES	**Resolute Bay**	**2.80**	**107**	PN	Pn		05 22 35.9	+0.6
RES				SN	Sn		05 23 08.0	-0.5
RES				SG	Sg		05 23 17.8	-3.5
RES				Trac			05 23 20.6	
	comp=Z,211nm,0.5s							
EUNU	**Eureka**	**5.83**	**33**	PN	Pn		05 23 16.0	-0.9
EUNU				SN	Sn		05 24 18.6	-4.5
ILON	**Igloolik, Nuna**	**9.36**	**121**	PN	Pn		05 24 04.3	-0.9
ILON				SN	Sn		05 25 41.2	-8.6
ILON				LG			05 26 29.4	
ILON				Trac			05 26 48.1	
	comp=Z,109nm,1.5s							
JERN	**Jeri Cho Mine,**	**9.96**	**195**	PN	Pn		05 24 13.4	0.0
JERN				SN	Sn		05 25 58.7	-5.7
YBKN	**Baker Lake, Hu**	**11.83**	**160**	PN	Pn		05 24 36.7	-2.4
YBKN				SN	Sn		05 26 39.2	-11
YKW3	**Yellowknife Ar**	**13.61**	**199**	PN	Pn		05 25 01.2	-2.1
YKW3				SN	Sn		05 27 23.7	-10
YKW3				LG			05 28 45.6	
YKW3				Trac			05 29 05.2	
	comp=Z,29nm,1.1s							
ARVN	**Arviat, NU**	**15.18**	**159**	PN	Pn		05 25 19.8	-4.9

MAN 29 06:12:11, 1490N×12159E, h152km, mb4.0, ML2.8, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
POLP	**Polilio Island**	**0.38**	**117**	*e*P	Pn		06 12 33.5	+1.5
POLP				*e*S	Sn		06 12 47.9	-0.1
BALP	**Baler**	**0.83**	**359**	*e*P	Pn		06 12 35.1	+0.4
BALP				*e*S	Sn		06 12 54.9	+2.2
GQP	**Guinayangan**	**1.29**	**140**⇓	*e*P	Pn		06 12 42.9	+4.3
GQP				*e*S	Sn		06 13 02.8	+3.1
PVCP	**Virac**	**2.80**	**117**	*e*P	Pn		06 12 56.8	+0.8
APYP	**Conner**	**2.96**	**354**	*e*P	Pn		06 12 59.6	+1.7
APYP				*e*S	Sn		06 13 36.4	+2.0

*ISCJB **29** 06:33:15.2±1.7, 39.32N±008×33.15E±006, h2km±11km, Error ellipse: s-maj=15.2km s-min=5.2km az=154.5*
*ISK **29** 06:33:15.5, 39.20N×3322E, h9km, MD2.7*
*CSEM **29** 06:33:15.8, 39.09N×3337E, h7km, MD2.9, After ERD*
*DDA **29** 06:33:15.8, 39.09N×3337E, h7km±2km, Md2.9*
ISC 29 06:33:15.8±1.0, 3930N±008×3317E±006, h6km±7km, n9, o0s84/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KAMT	**Kaman**	**0.43**	**81**	*e*PG	**Pg**		**06 33 24.1**	**-0.1**
CDAG	**Cicekdag**	**0.99**	**71**	*i* P	**Pg**		**06 33 33.6**	**-1.2**
CDAG				*i* S	**Sg**		**06 33 47.6**	**0.0**
KIZT	**Kizilcal**	**1.09**	**248**	*e*PN	**Pn**		**06 33 37.0**	**-0.5**
KIZT				*e*SN	**Sn**		**06 33 52.1**	**-0.8**
KDHN	**Kadinhani**	**1.13**	**227**	*i* P	**Pg**		**06 33 37.8**	**+0.3**
KDHN				*i* S	**Sg**		**06 33 53.2**	**+1.1**
KDHN	**Kadinhani**	**1.13**	**227**	*i* P	**Pg**		**06 33 37.8**	**+0.3**
KDHN				*i* S	**Sg**		**06 33 53.2**	**+1.0**
AVNT	**Avonos**	**1.41**	**111**	*i* P	**Pn**		**06 33 38.7**	**-3.4**

AVNT				*i* S		**Sb**	**06 34 01.1**	**+0.3**
AVNT	**Avonos**	**1.41**	**111**	*i* P		**Pn**	**06 33 38.7**	**-3.4**
AVNT				*i* S		**Sb**	**06 34 01.1**	**+0.2**
CORM	**Corum**	**1.43**	**52**	*e*PN		**Pn**	**06 33 43.0**	**+0.7**
CORM				*e*SN		**Sn**	**06 34 02.6**	**+1.2**
YOZ	**Yozgat**	**1.70**	**78**	*e*PN		**Pn**	**06 33 45.9**	**-0.2**

NIED ***29*** *06:46:00,30.00N×14.230E,h5km,Mw3.8 Best double couple: M₀5.45000×10¹⁴ NP1:φs171.00000°,δ88.00000°, λ55.00000°. NP2:φs78.00000°,δ35.00000°,λ176.00000°.*

IDC 29 06:46:55.6±1.1,2987N×14219E,h0km,mb3.5/5, mb1 3.6/7,mb1mx3.5/22,mbtmp3.5/7,ML3.5/2,Error ellipse: s-maj=40.9km s-min=20.1km az=78.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.83**	**328**	Pn	Pn	06 47 54.3	-1.5
	8.8nm,0.3s,baz=78,slow=20,SNR=3.1						
JHJ				Sn	Sn	06 48 37.9	-3.7
	9.8nm,0.3s,baz=72,slow=20,SNR=3.8						
MJAR	**Matsushiro Arr**	**7.44**	**334**	Pn	Pn	06 48 45.9	+0.5
	1.0nm,0.3s,baz=159,slow=11,SNR=11						
MKAR	**Makanchi Array**	**48.75**	**308**	P	P	06 55 42.1	+0.1
	0.5nm,0.7s,baz=85,slow=8.8,SNR=3.3						
WRA	**Warramunga Arr**	**50.10**	**190**	P	P	06 55 52.4	-0.1
	0.8nm,0.5s,baz=8.0,slow=8.0,SNR=15						
KURK	**Kurchatov**	**51.08**	**313**	P	P	06 56 00.1	+0.5
	0.4nm,0.6s,baz=92,slow=6.6,SNR=2.7						
ASAR	**Alice Springs**	**53.82**	**189**	P	P	06 56 20.2	0.0
	0.4nm,0.7s,baz=5.3,slow=6.2,SNR=5.0						
YKA	**Yellowknife Ar**	**69.71**	**29**	P	P	06 58 06.9	0.0
	0.1nm,0.6s,baz=295,slow=6.4,SNR=3.4						

IDC 29 06:50:16.0±0.8,2989N×14226E,h0km,mb3.8/7, mb1 4.1/8,mb1mx3.9/21,mbtmp3.8/8,ML3.7/1,Error ellipse: s-maj=29.7km s-min=21.0km az=89.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.46**	**334**	Pn	Pn	06 52 06.0	0.0
	1.3nm,0.3s,baz=159,slow=11,SNR=15						
MJAR				Sn	Sn	06 53 26.5	-4.8
	0.7nm,0.3s,baz=69,slow=29,SNR=4.2						
MKAR	**Makanchi Array**	**48.79**	**308**	P	P	06 59 03.1	+0.3
	0.7nm,0.7s,baz=93,slow=7.8,SNR=8.2						
WRA	**Warramunga Arr**	**50.12**	**190**	P	P	06 59 12.9	-0.2
	1.7nm,0.6s,baz=8.3,slow=8.0,SNR=9.9						
KURK	**Kurchatov**	**51.11**	**313**	P	P	06 59 20.3	0.0
	0.6nm,0.5s,baz=88,slow=6.8,SNR=3.5						
ASAR	**Alice Springs**	**53.85**	**190**	P	P	06 59 40.8	0.0
	0.3nm,0.5s,baz=16,slow=9.5,SNR=7.8						
YKA	**Yellowknife Ar**	**69.67**	**29**	P	P	07 01 26.6	-0.4
	0.8nm,0.6s,baz=296,slow=6.5,SNR=20						
NVAR	**Mina Array Bea**	**78.75**	**52**	P	P	07 02 21.1	+0.6
	0.7nm,0.7s,baz=300,slow=5.9,SNR=6.1						
TXAR	**Lajitas Array**	**93.88**	**53**	P	P	07 03 36.4	+0.7
	0.5nm,0.7s,baz=304,slow=1.3,SNR=6.5						

IDC 29 06:56:31.0±0.9,531N×7370W,h154km±5km,mb3.6/1, mb1 3.9/3,mb1mx3.2/21,mbtmp3.7/3,Error ellipse: s-maj=43.6km s-min=11.6km az=136.0,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.77**	**234**	P	Pn	06 56 56.2	+1.8
	144nm,0.3s,baz=100,slow=11,SNR=352						
ROSC				S	Sn	06 57 13.7	+1.5
	144nm,0.3s,baz=77,slow=20,SNR=46						
SDV	**Santo Domingo**	**4.68**	**40**	P	Pn	06 57 41.2	+0.9
	5.2nm,0.3s,baz=241,slow=11,SNR=50						
SDV				S	Sn	06 58 33.7	-0.6
	6.2nm,0.3s,baz=62,slow=23,SNR=17						
PCRV	**Puerto La Cruz**	**10.20**	**61**	P	Pn	06 58 55.8	+2.1
	0.4nm,0.3s,baz=88,slow=9.2,SNR=4.9						
YKA	**Yellowknife Ar**	**64.48**	**340**	P	P	07 06 51.2	+0.3
	1.1nm,0.6s,baz=135,slow=6.2,SNR=45						
ASAR	**Alice Springs**	**147.75**	**233**	PKPbc	PKPbc	07 15 57.1	-1.4
	0.4nm,1.0s,baz=111,slow=3.0,SNR=4.2						
WRA	**Warramunga Arr**	**149.09**	**239**	PKPbc	PKPbc	07 16 01.3	-0.8
	0.8nm,1.1s,baz=107,slow=2.5,SNR=3.2						

IDC 29 07:22:45.5±2.1,069N×12708E,h0km,mb3.2/3,mb1 3.4/3, mb1mx3.4/15,mbtmp3.3/3,Error ellipse: s-maj=179.5km s-min=24.3km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.70**	**161**	P	P	07 27 37.1	-1.2
	0.4nm,0.4s,baz=340,slow=9.7,SNR=11						
ASAR	**Alice Springs**	**25.10**	**165**	P	P	07 28 13.2	+1.1
	0.2nm,0.3s,baz=345,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**60.25**	**326**	P	P	07 32 55.6	-0.1
	0.3nm,0.4s,baz=117,slow=8.0,SNR=12						

IDC 29 07:51:54.1±2.1,236S×13910E,h0km,mb4.0/5,mb1 4.2/6, mb1mx3.9/15,mbtmp4.1/6,ML3.6/1,Error ellipse: s-maj=85.2km s-min=21.5km az=77.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.08**	**195**	P	Pn	07 56 06.1	-0.8
	0.2nm,0.3s,baz=17,slow=13,SNR=8.5						
ASAR	**Alice Springs**	**21.77**	**190**	P	P	07 56 47.6	+0.1
	2.8nm,0.8s,baz=24,slow=10.0,SNR=33						
STKA	**Stephens Creek**	**29.45**	**176**	P	P	07 58 00.1	+0.4
	2.1nm,0.7s,baz=355,slow=8.5,SNR=7.4						
CMAR	**Chiang Mai Arr**	**44.60**	**299**	P	P	08 00 08.7	+0.1
	0.7nm,0.3s,baz=128,slow=7.5,SNR=5.8						
MKAR	**Makanchi Array**	**69.75**	**322**	P	P	08 03 06.7	+0.6
	0.9nm,0.7s,baz=117,slow=5.0,SNR=3.4						
BVAR	**Borovoye Array**	**79.25**	**325**	P	P	08 04 01.0	-0.3
	2.3nm,0.7s,baz=118,slow=6.8,SNR=6.7						
TORD	**Torodi Ar. Bea**	**136.53**	**287**	PKP	PKPdf	08 11 18.2	-1.1
	0.4nm,0.7s,baz=96,slow=1.4,SNR=2.7						

IDC ***29*** *08:02:06.8±9.1,213S×696W,h116km±85km,mb3.5/3, mb1 3.5/4,mb1mx3.3/17,mbtmp3.4/4,ML3.9/1,Error ellipse: s-maj=118.5km s-min=52.4km az=11.0*
ISCJB ***29*** *08:02:11.9±0.7,1955S×6936W,h115km±9km, mb3.7/2,Error ellipse: s-maj=24.5km s-min=9.2km az=169.1*
GUC ***29*** *08:02:12.4±0.6,1959S×6932W,h108km±7km,ML3.8*

ISC 29 08:02:12.9±0.7,1955S±006×693W±02,h112km±9km,n8, σ0s65/12,mb3.7/2,2C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.49**	**330**	↑*i* P	Pn	**08 02 30.1**	**+0.1**
MNMC				*e*S	Sn	**08 02 42.8**	**+0.1**
MNMC				AML	AML	08 02 43.7	
	comp=N,22μm,0.2s						
PSGC	**Pisagua**	**0.74**	**267**	↑*i* P	Pn	**08 02 31.6**	**-0.3**
PSGC				*i* S	Sn	**08 02 45.9**	**-0.2**
PSGC				AML	AML	08 02 46.9	
	comp=N,1μm,0.5s						
PB01	**Plate Boundary**	**1.49**	**186**	*e*P	Pn	**08 02 39.2**	**-0.5**
PB01				*e*S	Sn	**08 02 59.8**	**-0.3**
PB01				AML	AML	08 03 00.6	
	comp=N,1μm,0.2s						
PB04	**Plate Boundary**	**2.70**	**183**	*e*P	Pn	**08 02 56.3**	**+1.2**
LVC	**Limon Verde**	**3.07**	**173**	*e*P	Pn	**08 03 00.2**	**+0.3**
LVC				*i* S	Sn	**08 03 35.9**	**-0.2**
BDFB	**Brasilia**	**20.69**	**83**	P	P	**08 06 44.5**	**+0.3**
	comp=N,1.4nm,0.5s,baz=236,slow=15,SNR=5.3						
TORD	**Torodi Ar. Bea**	**77.09**	**71**	P	P	**08 13 52.9**	**-1.5**
	comp=N,0.7nm,0.5s,mb3.6,baz=251,slow=5.5,SNR=10						
YKA	**Yellowknife Ar**	**89.23**	**341**	P	P	**08 14 56.4**	**+0.8**
	comp=N,0.6nm,0.7s,mb3.7,baz=133,slow=4.5,SNR=17						

NIED ***29*** *08:05:00,37.70N×141.00E,h89km,Mw3.9 Best double couple: M₀7.95000×10¹⁴ NP1:φs133.00000°,δ65.00000°, λ-35.00000°. NP2:φs240.00000°,δ58.00000°, λ-150.00000°.*
ISCJB ***29*** *08:05:54.8±0.7,3771N±004×141.10E±007,h91km±4km, mb3.6/5,Error ellipse: s-maj=9.8km s-min=5.9km az=31.6*
JMA ***29*** *08:05:56.4,3773N×14102E,h82km±1km,M3.6 Broadband fault plane solution: P waves. NP1: φs146.00000°,δ17.00000°,λ-175.00000°. NP2: φs51.00000°,δ88.00000°,λ-73.00000°. Principal axes: T Plg41.0000°, Azm125.0000°; N Plg17.0000°, Azm231.0000°; P Plg44.0000°, Azm338.0000°;*
JMA Felt II J1.
IDC ***29*** *08:06:08.7±1.6,3716N×13953E,h160km±11km,mb3.2/6, mb1 3.4/6,mb1mx3.1/22,mbtmp3.2/6 Error ellipse: s-maj=29.9km s-min=17.8km az=65.0*

ISC 29 08:05:56.0±0.6,3772N±004×14108E±007,h85km±4km, n21,σ0s37/34,mb3.6/5,11C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMM	**Marumori**	**0.27**	**303**	↑↑P	Pn	**08 06 08.4**	**-0.3**
JMM				S	Sn	**08 06 17.3**	**-0.7**
JFK	**Kawauchi**	**0.39**	**205**	↓↓P	Pn	**08 06 09.5**	**+0.1**
JFK				S	Sn	**08 06 19.1**	**-0.1**
JFT	**Otama**	**0.62**	**252**	↑↑P	Pn	**08 06 11.2**	**-0.1**
JFT				S	Sn	**08 06 22.3**	**-0.4**
JOU	**Okura**	**0.72**	**333**	↑↑P	Pn	**08 06 12.4**	**+0.1**
JOU				S	Sn	**08 06 24.6**	**+0.2**
JIO	**Ouri**	**0.76**	**16**	↑↑P	Pn	**08 06 13.0**	**+0.3**
JIO				S	Sn	**08 06 25.1**	**-0.1**
JYS	**Shirataka**	**0.95**	**302**	↑↑P	Pn	**08 06 14.6**	**-0.1**
JYS				*e*S	Sn	**08 06 28.6**	**-0.1**
JFY	**Yanaizu**	**1.14**	**255**	↑↑P	Pn	**08 06 16.8**	**-0.2**
JFY				*e*S	Sn	**08 06 32.2**	**-0.5**
JMK	**Ichinoseki**	**1.24**	**5**	↑↑P	Pn	**08 06 18.5**	**+0.3**
JMK				S	Sn	**08 06 35.2**	**+0.4**
JYK	**Kaneyama**	**1.33**	**335**	↑↑P	Pn	**08 06 19.6**	**+0.3**
JYK				*e*S	Sn	**08 06 36.7**	**-0.1**
JYA	**Atsumi**	**1.39**	**309**	↑↑P	Pn	**08 06 20.1**	**0.0**
JYA				*e*S	Sn	**08 06 38.5**	**+0.3**
JNS	**Sasagawa**	**1.40**	**275**	↑↑P	Pn	**08 06 20.2**	**0.0**
JNS				*e*S	Sn	**08 06 38.4**	**-0.1**
JAW	**Awa shima**	**1.62**	**298**	↑↑P	Pn	**08 06 22.9**	**-0.2**
JHK	**Hiroka**	**1.71**	**255**	P	Pn	**08 06 24.3**	**+0.1**
JHK				*e*S	Sn	**08 06 45.4**	**-0.2**
MJAR	**Matsushiro Arr**	**2.58**	**244**	P	Pn	**08 06 36.8**	**+1.1**
	1.8nm,0.3s,baz=57,slow=11,SNR=16						
MJAR				S	Sn	**08 06 57.4**	**-8.9**
	2.9nm,0.3s,baz=68,slow=15,SNR=17						
MAT	**Matsushiro**	**2.58**	**244**	P	Pn	**08 06 36.5**	**+0.8**
MAT				*e*S	Sn	**08 07 07.0**	**+0.8**
SONM	**Songino Array**	**27.19**	**303**	P	P	**08 11 30.8**	**-0.6**
	0.2nm,0.4s,mb3.0,baz=102,slow=10,SNR=5.0						
ZALV	**Zalesovo Beam**	**41.26**	**312**	P	P	**08 13 32.1**	**-0.4**
	0.9nm,0.5s,mb3.9,baz=86,slow=9.1,SNR=7.2						
MKAR	**Makanchi Array**	**43.53**	**301**	P	P	**08 13 50.9**	**-0.2**
	1.3nm,0.7s,mb3.8,baz=86,slow=10,SNR=16						
WRA	**Warramunga Arr**	**57.70**	**188**	P	P	**08 15 37.7**	**-0.1**
	0.9nm,0.8s,mb3.9,baz=5.9,slow=7.6,SNR=5.0						
ASAR	**Alice Springs**	**61.43**	**187**	P	P	**08 16 03.1**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=355,slow=4.2,SNR=3.9						
PDAR	**Pinedale Array**	**77.38**	**45**	P	PcP	08 17 53.0	+1.3
	0.5nm,0.9s,baz=300,slow=1.8,SNR=3.0						

NEIC ***29*** *08:11:37.2±0.7, 1469N×14432E, h10km, mb4.2/1, Error ellipse: s-maj=26.0km s-min=11.1km az=69.0*
ISCJB ***29*** *08:11:38.8±0.7, 147N±0.1×1443E±02, h33km, mb3.7/9, MS3.1/5, Error ellipse: s-maj=29.1km s-min=8.2km az=151.5*
IDC ***29*** *08:11:39.1±1.0, 1468N×14438E, h23km±4km, mb3.5/8, mb1 3.7/8, mb1mx3.6/22, mbtmp3.5/8, MS3.2/5, Ms1 3.3/5, ms1mx2.9/23, Error ellipse: s-maj=34.8km s-min=13.8km az=70.0*

ISC 29 08:11:40.6±0.7,146N±01×1444E±02,h35km, (h24km±1.7km:pP-P),n13,σ0s78/11,mb3.7/9,MS3.1/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.15**	**156**	Pn	Pn	**08 11 59.5**	**-0.7**
	126nm,0.3s,baz=304,slow=3.5,SNR=37						
GUMO				Sn	Sn	**08 12 14.3**	**-0.4**
	44nm,0.3s,baz=20,slow=22,SNR=5.7						
MJAR	**Matsushiro Arr**	**22.50**	**347**	LR	LR	08 23 39.6	
	comp=Z,83nm,19.7s,MS3.2,baz=20,slow=32						
KSRS	**Korea Array**	**27.02**	**330**	LR	LR	08 27 53.4	
	comp=Z,17nm,20.4s,MS2.6,baz=170,slow=36						
HNR	**Honiara**	**28.47**	**146**	LR	LR	08 28 18.4	
	comp=Z,53nm,18.2s,MS3.2,baz=291,slow=35						
WRA	**Warramunga Arr**	**35.76**	**196**	P	P	**08 18 36.7**	**+0.3**
	1.8nm,1.0s,mb4.0,baz=16,slow=9.0,SNR=4.5						
ASAR	**Alice Springs**	**39.43**	**195**	P	P	**08 19 09.2**	**+1.8**
	0.2nm,0.7s,mb3.0,baz=21,slow=8.4,SNR=3.9						
CMAR	**Chiang Mai Arr**	**43.64**	**281**	P	P	**08 19 41.7**	**-0.4**
	0.5nm,0.4s,mb3.6,baz=80,slow=8.4,SNR=4.3						
CMAR				pP	pP	08 19 49.6	-2.8
	0.8nm,0.5s,baz=82,slow=6.6,SNR=1.6						
CMAR				LR	LR	08 39 30.2	
	comp=Z,20nm,18.4s,MS3.1,baz=190,slow=38						
SONM	**Songino Array**	**45.60**	**325**	P	P	**08 19 57.3**	**0.0**
	0.3nm,0.7s,mb3.4,baz=128,slow=11,SNR=2.6						
SONM				pP	pP	08 20 04.7	-3.0
	0.7nm,0.8s,baz=124,slow=7.2,SNR=3.5						
SONM				LR	LR	08 38 31.8	
	comp=Z,79nm,18.9s,MS3.7,baz=148,slow=35						
MKAR	**Makanchi Array**	**60.41**	**316**	P	P	**08 21 46.4**	**-0.1**
	1.0nm,0.9s,mb3.9,baz=91,slow=7.2,SNR=7.1						
MKAR				pP	pP	08 21 54.2	-3.0
	0.7nm,0.7s,baz=91,slow=9.9,SNR=5.3						
KURK	**Kurchatov**	**63.48**	**320**	P	P	**08 22 07.0**	**0.0**
	2.0nm,0.7s,mb4.4,baz=100,slow=6.9,SNR=6.6						
KURK				pP	pP	08 22 14.4	-3.4
	2.5nm,0.7s,baz=100,slow=6.9,SNR=4.3						
BVAR	**Borovoye Array**	**68.81**	**321**	P	P	**08 22 40.9**	**-0.4**
	1.4nm,0.7s,mb4.0,baz=104,slow=6.3,SNR=6.8						
BVAR				pP	pP	08 22 48.4	-3.7
	1.0nm,0.6s,baz=106,slow=9.4,SNR=4.6						
BRVK	**Borovoye**	**68.88**	**322**	*e*P	P	**08 22 40.6**	**-1.1**
	0.9nm,0.5s,mb4.0						
YKA	**Yellowknife Ar**	**82.15**	**27**	P	P	**08 23 58.8**	**+1.3**
	0.3nm,0.8s,mb3.3,baz=286,slow=5.2,SNR=4.4						

DDA ***29*** *08:17:36.9,3830N×3938E,h5km,Md2.8*
CSEM ***29*** *08:17:37.6±0.1,3833N×3932E,h5km,MD2.8,Error ellipse: s-maj=2.5km s-min=2.4km az=48.0*
ISK ***29*** *08:17:37.8,3833N×3931E,h10km,MD2.8*
ISCJB ***29*** *08:17:38.2±0.6,3829N±003×3934E±004,h2km±6km, Error ellipse: s-maj=6.6km s-min=3.9km az=37.2*

ISC 29 08:17:38.7±0.5,3831N±004×3933E±004,h9km±5km,n14, σ0s97/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**344**	PG	Pg	**08 17 39.9**	**-0.9**
SVRC				*e*SG	Sg	**08 17 42.3**	**0.0**
ELZG	**Elazig**	**0.33**	**305**	*i* P	Pg	**08 17 45.1**	**-0.2**
ELZG				*i* S	Sg	**08 17 50.9**	**+1.2**
PTK	**Pertek**	**0.59**	**5**	*e*PG	Pg	**08 17 49.2**	**-0.9**
PTK				*e*SG	Sg	**08 17 57.5**	**-0.2**
MALT	**Malatya**	**0.71**	**271**	*e*PG	Pg	**08 17 51.5**	**-0.9**
MYA	**Malataya**	**0.71**	**272**	*e*PG	Pg	**08 17 52.0**	**-0.4**
DIYA	**Diyarbakir**	**0.73**	**121**	*i* P	Pg	**08 17 53.0**	**+0.2**
DIYA				*i* S	Sg	**08 18 03.8**	**+1.4**
DIY	**Diyarbakir**	**0.82**	**120**	*e*PG	Pg	**08 17 54.7**	**+0.2**
URFA	**Urfa**	**0.95**	**205**	*e*PG	Pg	**08 17 56.6**	**-0.4**
AKCD	**Akcadag**	**1.11**	**270**	*i* P	Pg	**08 17 58.9**	**-1.2**
AKCD				*i* S	Sg	**08 18 15.9**	**+1.5**
AKCD	**Akcadag**	**1.11**	**270**	*i* P	Pg	**08 17 58.8**	**-1.2**
AKCD				*i* S	Sg	**08 18 15.9**	**+1.5**
KEMA	**Kemaliye**	**1.16**	**326**	*i* P	Pb	**08 18 01.6**	**+0.6**
KEMA				*i* S	Sg	**08 18 18.1**	**+1.9**
EZC	**Erzincan**	**1.49**	**15**	*e*PN	Pn	**08 18 04.5**	**-1.2**
MARD	**Mardin**	**1.52**	**130**	*i* P	Pn	**08 18 05.6**	**-0.4**
MARD				*i* S	Sn	**08 18 25.8**	**-0.1**
BEST	**Besiri**	**1.58**	**105**	*i* P	Pn	**08 18 05.7**	**-1.3**
BEST				*i* S	Sn	**08 18 29.3**	**+1.7**

ISCJB ***29*** *08:44:59.9±0.4,554S±007×7171E±008,h10km,mb4.5/29, MS3.8/10,Error ellipse: s-maj=12.6km s-min=9.8km az=35.0*

IDC ***29*** *08:45:00.1±0.6,559S×7171E,h0km,mb4.2/19, mb1 4.3/19,mb1mx4.2/29,mbtmp4.2/19,MS3.8/10, Ms1 3.8/10,ms1mx3.4/37,Error ellipse: s-maj=18.1km s-min=15.9km az=175.0*
NEIC ***29*** *08:45:01.6±0.3,560S×7170E,h10km,mb4.7/10,Error ellipse: s-maj=10.8km s-min=8.5km az=142.0*

ISC 29 08:45:01.8±0.4,557S±007×7169E±008,h10km,n54, σ0s72/38,mb4.5/29,MS3.8/10,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**15.61**	**35**	*e*P	Pn	**08 48 43.3**	**+1.2**
	31nm,0.5s						
PSI	**Prapat**	**28.45**	**74**	LR	LR	09 00 10.4	
	comp=Z,251nm,19.7s,MS3.8,baz=198,slow=32						
CMAR	**Chiang Mai Arr**	**35.95**	**48**	P	P	**08 52 04.2**	**+1.3**
	1.1nm,0.7s,mb3.9,baz=242,slow=9.9,SNR=6.9						
CMAR				PcP	PcP	08 54 28.9	-1.0
	0.9nm,0.6s,baz=230,slow=5.7,SNR=4.0						
CMAR				LR	LR	09 05 01.3	
	comp=Z,69nm,18.9s,MS3.4,baz=230,slow=33						
LSZ	**Lusaka**	**43.77**	**254**	P	P	**08 53 08.7**	**+0.7**
	2.5nm,0.6s,mb4.1,baz=77,slow=11,SNR=6.8						
LSZ				PcP	PcP	08 54 53.6	-1.3
	1.6nm,0.7s,baz=111,slow=3.7,SNR=5.7						
LSZ	**Lusaka**	**43.77**	**254**	*e*P	P	**08 53 08.3**	**+0.3**
	2.9nm,0.6s,mb4.2						
LSZ				PcP	PcP	08 54 53.6	-1.3
AML	**Almayashu**	**47.51**	**2**	*e*P	P	**08 53 38.1**	**+1.0**
	9.3nm,0.8s,mb4.9						
LBTB	**Lobatse**	**48.17**	**241**	*e*P	P	**08 53 42.8**	**+0.1**
	3.6nm,0.8s,mb4.5						
BOSA	**Boshof**	**49.52**	**237**	P	P	**08 53 53.2**	**+0.2**
	2.6nm,0.8s,mb4.3,baz=77,slow=5.1,SNR=4.3						
BOSA				LR	LR	09 13 20.8	
	comp=Z,68nm,18.3s,MS3.7,baz=335,slow=34						
EIL	**Elat**	**49.71**	**317**	LR	LR	09 12 01.0	
	comp=Z,68nm,19.4s,MS3.7,baz=124,slow=33						
ASF	**Jabal al Asfar**	**50.05**	**321**	P	P	**08 53 58.7**	**+1.8**
	4.9nm,0.9s,mb4.5,baz=12,slow=3.0,SNR=6.5						
ASF				LR	LR	09 13 27.9	
	comp=Z,97nm,18.2s,MS3.9,baz=187,slow=34						
GNI	**Garni**	**51.82**	**334**	LR	LR	09 14 44.1	
	comp=Z,61nm,18.1s,MS3.7,baz=303,slow=34						
MKAR	**Makanchi Array**	**52.98**	**9**	P	P	**08 54 18.0**	**-0.5**
	1.0nm,0.6s,mb3.9,baz=193,slow=7.5,SNR=7.6						
MKAR				PcP	PcP	08 55 27.4	+0.1
	1.7nm,0.8s,baz=196,slow=3.6,SNR=5.5						
MKAR	**Makanchi Array**	**52.98**	**9**	P	P	**08 54 18.0**	**-0.5**
MKAR				PcP	PcP	08 55 27.4	+0.1
DAV	**Davao City (W)**	**55.23**	**77**	LR	LR	09 19 05.2	
	comp=Z,771nm,18.9s,MS3.8,baz=237,slow=37						
KURK	**Kurchatov**	**56.38**	**5**	P	P	**08 54 42.1**	**-1.0**
	3.2nm,1.0s,mb4.3,baz=199,slow=7.4,SNR=15						
AKTK	**Aktyubinsk**	**57.02**	**350**	P	P	**08 54 47.5**	**-0.2**
AKTO	**Aktyubinsk**	**57.02**	**350**	P	P	**08 54 47.5**	**-0.2**
	4.5nm,0.9s,mb4.5,baz=192,slow=7.9,SNR=12						
BRTR	**Keskin Array B**	**57.10**	**326**	P	P	**08 54 48.6**	**+0.1**
	2.7nm,1.0s,mb4.2,baz=149,slow=9.8,SNR=7.3						
BRTR				PcP	PcP	08 55 43.4	+0.1
	0.6nm,0.6s,baz=102,slow=4.7,SNR=2.7						
BVAR	**Borovoye Array**	**58.39**	**359**	P	P	**08 54 56.6**	**-0.6**
	1.3nm,0.7s,mb4.1,baz=163,slow=10,SNR=4.9						
BRVK	**Borovoye**	**58.42**	**359**	*e*P	P	**08 54 57.1**	**-0.4**
	3.0nm,0.8s,mb4.4						
ZALV	**Zalesovo Beam**	**60.32**	**9**	P	P	**08 55 09.8**	**-0.8**
	2.2nm,0.8s,mb4.3,baz=212,slow=8.1,SNR=11						
SONM	**Songino Array**	**61.31**	**26**	P	P	**08 55 18.4**	**+0.9**
	3.4nm,0.9s,mb4.5,baz=218,slow=7.4,SNR=17						
MAW	**Mawson**	**62.22**	**184**	LR	LR	09 15 22.4	
	comp=Z,132nm,18.3s,MS4.1,baz=179,slow=29						
ASAR	**Alice Springs**	**62.36**	**114**	P	P	**08 55 24.7**	**-0.4**
	1.6nm,0.7s,mb4.3,baz=280,slow=6.6,SNR=19						
WRA	**Warramunga Arr**	**62.43**	**109**	P	P	**08 55 25.1**	**-0.5**
	2.8nm,0.7s,mb4.5,baz=283,slow=6.6,SNR=13						
WRAB	**Tennant Creek**	**62.44**	**109**	*e*P	P	**08 55 25.2**	**-0.5**
	6.6nm,0.9s,mb4.8						
AKASG	**Malin Array Be**	**66.89**	**332**	P	P	**08 55 53.5**	**-0.6**
	3.1nm,0.9s,mb4.3,baz=131,slow=5.1,SNR=6.9						
STKA	**Stephens Creek**	**70.03**	**122**	LR	LR	09 24 17.7	
	comp=Z,78nm,18.1s,MS4.0,baz=205,slow=34						
TORD	**Torodi Ar. Bea**	**71.94**	**286**	P	P	**08 56 26.1**	**-0.1**
	1.3nm,0.8s,mb3.9,baz=98,slow=6.1,SNR=8.9						
BRG	**Berggiesshubel**	**74.81**	**326**	P	P	**08 56 42.1**	**-0.2**
	3.5nm,0.9s,mb4.3						
DAVOX	**Davos/Dischmat**	**75.34**	**321**	P	P	**08 56 45.8**	**+0.4**
	2.9nm,0.7s,mb4.3,baz=141,slow=6.7,SNR=15						
CLL	**Coll m**	**75.54**	**326**	*e*P	P	**08 56 47.0**	**+0.5**
	comp=Z,19nm,1.3s,mb4.9						
KIC	**Kosan Boka**	**77.20**	**278**	*e*PKP2	P	**08 56 56.6**	**-0.1**
	comp=Z,21nm,0.7s,mb5.2						
DBIC	**Dimbokro**	**77.35**	**278**	P	P	**08 56 57.2**	**-0.3**
	comp=Z,4.6nm,0.8s,mb4.5,baz=95,slow=5.7,SNR=7.7						
DBIC	**Dimbokro**	**77.35**	**278**	*e*P	P	**08 56 57.2**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.5						
LIC	**Lamto**

YOZ	**Yozgat**	**1.68**	**78**	*e*PN	**Pn**	**08 49 06.3**	**+0.7**

IDC 29 08:56:30.1±5.7, 2985N×14207E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=210.1km s-min=27.4km az=72.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.42**	**335**	Pn	Pn	08 58 18.3	-1.3
	0.5nm,0.3s,baz=157,slow=11,SNR=6.6						
SONM	**Songino Array**	**32.71**	**313**	P	P	09 03 04.9	+0.6
	0.8nm,0.8s,baz=114,slow=6.8,SNR=4.0						
MKAR	**Makanchi Array**	**48.69**	**308**	P	P	09 05 16.1	+0.1
	0.7nm,0.8s,baz=87,slow=10,SNR=5.4						
WRA	**Warramunga Arr**	**50.06**	**190**	P	P	09 05 26.5	-0.2
	0.4nm,0.7s,baz=7.8,slow=8.1,SNR=2.7						

HLW ***29*** *08:56:39.4, 2992N×3742E, h25km, Mb3.2*
CSEM ***29*** *08:56:43.1±0.6, 2996N×3681E, h10km, ML3.2, Error ellipse: s-maj=16.2km s-min=5.3km az=116.0*
SGS ***29*** *08:56:46.8, 3032N×3629E, h21km*
ISCJB ***29*** *08:56:48.2±1.0, 2989N±005×3625E±008, h0km, Error ellipse: s-maj=9.5km s-min=6.6km az=173.3*
GII ***29*** *08:56:50.3±0.9, 2996N×3610E, h0km, ML2.3/2, EXPLOSION*

ISC 29 08:56:48.2±1.0, 2989N±005×3629E±008, h0km, n19, σ0§63/22, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.09**	**262**	Pg	**Pg**	**08 57 09.4**	**+0.3**
ZFRI	**Zfri**	**1.17**	**305**	Pg	**Pg**	**08 57 09.7**	**-0.8**
EIL	**Elat**	**1.18**	**259**	Pg	**Pg**	**08 57 10.8**	**-0.1**
MBRI	**Mt Berech**	**1.20**	**266**	Pg	**Pg**	**08 57 10.9**	**-0.3**
MBRI				Sg	**Sg**	**08 57 27.8**	**+1.1**
PRNI	**Paran**	**1.20**	**293**	Pg	**Pg**	**08 57 10.5**	**-0.8**
JLOS		**1.35**	**211**	P	**Pg**	**08 57 13.7**	**-0.3**
KRMI	**Paran Flat**	**1.37**	**280**	Pg	**Pg**	**08 57 13.6**	**-1.0**
RMNI	**Mount Ramon**	**1.50**	**290**	Pn	**Pn**	**08 57 15.6**	**-0.7**
HBST	**Basata**	**1.51**	**244**	P	**Pn**	**08 57 16.8**	**+0.2**
MZDA	**Masada**	**1.62**	**331**	Pn	**Pn**	**08 57 18.3**	**+0.2**
TBKS	**Tabuk**	**1.68**	**172**	P	**Pn**	**08 57 19.1**	**+0.2**
BDAS	**Al Bad'**	**1.79**	**216**	S	**Sn**	**08 57 44.4**	**+0.6**
BDAS	**Al Bad'**	**1.79**	**216**	P	**Pn**	**08 57 19.8**	**-0.5**
RTMI	**Retamim**	**1.80**	**310**	Pn	**Pn**	**08 57 20.9**	**+0.4**
DSI	**Dead Sea**	**1.84**	**335**	Pn	**Pn**	**08 57 22.3**	**+1.2**
HNKL	**Nakhl**	**2.00**	**272**	P	**Pn**	**08 57 23.9**	**+0.6**
HKAT	**Jabal Katrina**	**2.43**	**236**	P	**Pn**	**08 57 28.8**	**-0.4**
HKAT				S	**Sn**	**08 58 05.0**	**+5.4**
TR2		**2.70**	**237**	P	**Pn**	**08 57 32.4**	**-0.5**
TR2				S	**Sn**	**08 58 11.1**	**+4.8**
AMAG	**Maghara**	**2.77**	**286**	P	**Pn**	**08 57 34.5**	**+0.7**

ISCJB ***29*** *09:26:35.6±1.7, 473N±02×1523E±03, h71km±15km, mb3.4/5, Error ellipse: s-maj=48.3km s-min=11.6km az=138.1*
MOS ***29*** *09:26:35.2±1.7, 47.10N×15250E, h81km, mb4.0/3, Error ellipse: s-maj=37.7km s-min=14.4km az=60.1*
IDC ***29*** *09:26:36.5±3.1, 4689N×15239E, h82km±28km, mb3.2/5, mb1 3.5/7, mb1mx3.2/23, mbtmp3.3/7, Error ellipse: s-maj=35.5km s-min=21.7km az=131.0*

ISC 29 09:26:36.8±1.5, 471N±02×1525E±03, h73km±14km, n14, σ1§13/14, mb3.4/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.30**	**32**	*e*PN	**Pn**	**09 27 38.5**	**-1.1**
SKR				*e*		09 28 23.2	
PETK	**Petropavlovsk-**	**6.88**	**27**	P	**Pn**	**09 28 15.8**	**+1.0**
	0.2nm,0.3s,baz=153,slow=13,SNR=3.6						
ASAJ	**Asahikawa**	**7.58**	**251**	P	**Pn**	**09 28 23.6**	**-0.8**
	0.6nm,0.3s,baz=356,slow=5.7,SNR=4.7						
ASAJ	**Asahikawa**	**7.58**	**251**	PN	**Pn**	**09 28 23.6**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**14.98**	**230**	P	**Pn**	**09 30 05.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=45,slow=8.9,SNR=6.0						
KSRS	**Korea Array**	**20.53**	**251**	P	**P**	**09 31 10.3**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=57,slow=12,SNR=3.7						
KSRS	**Korea Array**	**20.53**	**251**	P	**P**	**09 31 10.3**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**50.89**	**37**	P	**P**	**09 35 31.2**	**+1.5**
	comp=Z,0.1nm,0.5s,mb3.1,baz=299,slow=7.2,SNR=3.1						
NOA	**NORSAR Array B**	**67.78**	**341**	P	**P**	**09 37 25.8**	**-0.3**
	comp=Z,1.1nm,0.9s,mb3.7,baz=28,slow=6.5,SNR=4.4						
NOA	**NORSAR Array B**	**67.78**	**341**	P	**P**	**09 37 25.8**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**71.05**	**326**	P	**P**	**09 37 45.5**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.9,baz=36,slow=6.8,SNR=3.2						
AKASG	**Malin Array Be**	**71.05**	**326**	P	**P**	**09 37 45.5**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**72.41**	**198**	P	**P**	**09 37 51.8**	**-3.1**
	comp=Z,0.4nm,0.6s,mb3.4,baz=158,slow=5.2,SNR=5.5						
TXAR	**Lajitas Array**	**77.67**	**60**	P	**P**	**09 38 25.3**	**0.0**
	comp=Z,0.1nm,0.7s,mb2.7,baz=357,slow=3.6,SNR=2.1						

ISCJB ***29*** *09:32:54.4±0.7, 1546N±004×12268E±007, h33km, mb3.6/7, Error ellipse: s-maj=9.2km s-min=5.4km az=168.2*
IDC ***29*** *09:32:54.8±1.0, 1524N×12279E, h32km±7km, mb3.4/7, mb1 3.6/7, mb1mx3.5/20, mbtmp3.4/7, Error ellipse: s-maj=38.5km s-min=17.5km az=63.0*

ISC 29 09:32:56.1±0.7, 1545N±004×12260E±007, h35km, (h34km±9km:pP-P), n17, σ1§50/22, mb3.6/7, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.96**	**222**	*e*P	**Pn**	**09 33 10.6**	**-2.5**
POLP				*e*S	**Sn**	**09 33 25.1**	**-0.4**
BALP	**Baler**	**1.03**	**287**	*e*P	**Pn**	**09 33 12.1**	**-2.0**
BALP				*e*S	**Sn**	**09 33 27.7**	**+0.4**
PCPH	**Palayan**	**1.45**	**275**	*e*P	**Pn**	**09 33 18.7**	**-1.2**
GQP	**Guinayangan**	**1.54**	**186**	*e*P	**Pn**	**09 33 19.8**	**-1.3**
GQP				*e*S	**Sn**	**09 33 39.7**	**-0.2**
PALP	**Palanan**	**1.62**	**354**	*e*P	Px	09 33 37.1	
CAUP	**Cauayan**	**1.67**	**334**	*e*P	**Pn**	**09 33 22.4**	**-0.5**
CAUP				*e*S	**Sn**	**09 33 42.3**	**-0.7**
PVCP	**Virac**	**2.38**	**140**	*e*P	**Pn**	**09 33 29.7**	**-2.9**
PVCP				*e*S	**Sn**	**09 34 04.2**	**+3.6**
LUBP	**Lubang**	**2.84**	**234**	*e*P	**Pn**	**09 33 41.1**	**+2.1**
OTRP	**Odiongan**	**3.12**	**190**	*e*P	**Pn**	**09 33 44.4**	**+1.6**
SJMP	**San Jose**	**3.30**	**206**	*e*P	**Pn**	**09 33 47.3**	**+2.0**
SJMP				*e*S	**Sn**	**09 34 30.2**	**+6.9**
CMAR	**Chiang Mai Arr**	**22.82**	**281**	P	**P**	**09 37 58.2**	**+2.0**
	1.4nm,0.3s,mb3.8,baz=92,slow=7.3,SNR=8.1						
SONM	**Songino Array**	**34.97**	**341**	P	**P**	**09 39 45.7**	**+0.8**
	0.3nm,0.5s,mb3.5,baz=160,slow=8.9,SNR=2.7						
WRA	**Warramunga Arr**	**37.01**	**161**	P	**P**	**09 39 58.6**	**-4.0**
	0.7nm,1.0s,mb3.5,baz=344,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**40.41**	**164**	P	**P**	**09 40 28.4**	**-2.7**
	0.3nm,0.5s,mb3.2,baz=341,slow=7.7,SNR=8.2						
MKAR	**Makanchi Array**	**45.77**	**322**	P	**P**	**09 41 15.5**	**+1.3**
	1.2nm,0.6s,mb4.0,baz=116,slow=9.3,SNR=10						
MKAR				pP	pP	09 41 25.2	+0.6
	1.7nm,0.9s,baz=114,slow=11,SNR=7.5						
ZALV	**Zalesovo Beam**	**48.39**	**331**	P	**P**	**09 41 34.9**	**+0.3**
	1.4nm,0.8s,mb4.0,baz=90,slow=7.7,SNR=4.3						
ZALV				pP	pP	09 41 44.9	-0.1
	1.5nm,0.7s,baz=106,slow=5.3,SNR=2.3						
YKA	**Yellowknife Ar**	**90.47**	**23**	P	**P**	**09 45 54.5**	**+0.5**
	0.1nm,0.6s,mb3.4,baz=300,slow=4.5,SNR=3.5						
YKA				pP	pP	09 46 04.3	-0.8
	0.2nm,0.7s,baz=303,slow=4.1,SNR=3.1						

NNC ***29*** *09:35:59.8±1.6, 4320N×7723E, h5km±9km, mb3.2, mpv3.1, Error ellipse: s-maj=37.4km s-min=8.8km az=163.0*

ISC 29 09:36:03.8±1.1, 432N±01×771E±01, h10km, n15, σ1§31/17, 6C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**0.08**	**276**	⇑P	**Pg**	**09 36 04.2**	**-1.9**
	299nm,0.3s						
KNDC				⇓S	**Sg**	**09 36 07.6**	**-0.1**
	808nm,0.4s						
TKM2	**Tokmak 2**	**1.12**	**256**	⇑P	**Pb**	**09 36 23.5**	**-1.7**
	13nm,0.4s						
TKM2				⇑S	**Sb**	**09 36 39.8**	**-0.1**
	8.4nm,0.3s						
TKM2	**Tokmak 2**	**1.12**	**256**	P	**Pb**	**09 36 23.5**	**-1.7**
	SNR=37						
ULHL	**Ulahol**	**1.14**	**213**	P	**Pb**	**09 36 24.2**	**-1.3**
	SNR=19						
KBK	**Karagaybulak**	**1.66**	**251**	P	**Pn**	**09 36 33.4**	**+0.5**
	SNR=26						
CHMS	**Chumysh**	**1.71**	**264**	P	**Pn**	**09 36 33.5**	**-0.2**
	SNR=6.3						
KZA	**Kyzart**	**1.76**	**231**	P	**Pn**	**09 36 38.4**	**+4.1**
	SNR=5.8						
USP	**Ospenovka**	**1.88**	**273**	P	**Pn**	**09 36 36.3**	**+0.3**
	SNR=24						
AAK	**Ala-Archa**	**1.98**	**254**	P	**Pn**	**09 36 38.7**	**+1.4**
	SNR=17						
UCH	**Uchtor**	**2.13**	**243**	P	**Pn**	**09 36 42.3**	**+3.0**
	SNR=9.3						
EKS2	**Erkin-Say**	**2.48**	**258**	P	**Pn**	**09 36 47.1**	**+2.9**
	SNR=14						
AML	**Almayashu**	**2.71**	**248**	P	**Pn**	**09 36 52.1**	**+4.7**
	SNR=13						
KK31	**Karatay Array**	**4.80**	**271**	⇑Pg	**Pg**	**09 37 29.3**	**-6.4**
	0.7nm,0.5s,baz=94,slow=15,SNR=11						
KK31				⇓Lg		09 38 32.8	
	1.9nm,0.5s,baz=86,slow=28,SNR=5.9						
MK31	**Makanchi Array**	**5.15**	**44**	Pn	**Pn**	**09 37 20.8**	**-0.1**
	0.9nm,0.3s,baz=219,slow=14,SNR=24						
MK31				⇑Lg		09 38 40.0	
	0.6nm,0.5s,baz=222,slow=28,SNR=6						
KURBB	**Kurchatov Arra**	**7.48**	**7**	⇑Pn	**Pn**	**09 37 44.0**	**-8.9**
	0.4nm,1.2s						
KURBB				⇓Lg		09 39 57.1	
	0.8nm,0.6s						

CASC 29 09:41:41.9±2.0, 1145N×8873W, h33km±31km, MD3.9, ML2.8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**2.01**	**26**	*e*P	x	09 42 13.2	
CNCH				*e*P	x	09 42 13.3	
VSM	**San Miguel**	**2.01**	**13**	*e*P	x	09 42 13.8	
BLLM	**Bellamira**	**2.04**	**14**	*e*P	x	09 42 14.0	
CRIN	**San Cristobal**	**2.06**	**53**	*e*P	Pn	09 42 15.0	+0.9
CRIN				*e*S	Sn	09 42 41.6	+2.9
CRIN				AML	AML	09 42 45.6	
	comp=N,327nm,0.3s						
SNVI	**San Vicente**	**2.15**	**357**	*e*P	x	09 42 15.1	
COPN	**Copaltepe**	**2.21**	**71**	*e*P	Pn	09 42 16.2	-0.2
COPN				*e*S	Sn	09 42 42.9	+0.4
LBRS	**Las Brisas**	**2.29**	**352**	*e*P	x	09 42 17.5	
BOQS	**Boqueron**	**2.33**	**347**	*e*P	x	09 42 18.3	
BOQS				*e*P	x	09 42 18.5	
BOQS				*e*S	x	09 42 46.2	
CAHU	**Cacacuatique**	**2.36**	**12**	*e*P	x	09 42 19.0	
CAHU				*e*S	x	09 42 46.7	
TICN	**Ticuantepe**	**2.51**	**76**	*e*P	Pn	09 42 19.4	-1.1
MGAN	**Managua**	**2.53**	**74**	*e*P	Pn	09 42 21.5	+0.8
MGAN				*e*S	Sn	09 42 50.2	-0.1
MGAN				AML	AML	09 42 52.1	
	comp=N,12nm,0.6s						
SBLS	**San Blas**	**2.53**	**340**	*e*P	x	09 42 21.7	
SBLS				*e*P	x	09 42 21.7	
SBLS				*e*S	x	09 42 52.9	
SNJE	**San Jose**	**2.55**	**340**	*e*P	x	09 42 21.9	
RTR	**El Retiro**	**2.59**	**340**	*e*P	x	09 42 22.6	
TGUH	**Tegucigalpa,Un**	**2.95**	**29**	*e*P	Pn	09 42 26.8	+0.3
CHI2		**16.30**	**113**	*e*P	x	09 42 13.2	

IDC 29 09:56:41.0±3.6, 346S×7487W, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.8/3, Error ellipse: s-maj=136.8km s-min=42.4km az=29.0, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**70.61**	**82**	P	P	10 07 59.1	+0.3
	0.7nm,0.3s,baz=227,slow=5.7,SNR=4.4						
YKA	**Yellowknife Ar**	**72.34**	**342**	P	P	10 08 08.4	+0.1
	0.1nm,0.5s,baz=140,slow=6.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**77.74**	**76**	P	P	10 08 40.4	-0.1
	0.7nm,0.5s,baz=283,slow=5.9,SNR=18						
WRA	**Warramunga Arr**	**143.07**	**230**	PKP	PKPdf	10 16 17.6	-0.3
	0.4nm,0.7s,baz=121,slow=2.2,SNR=5.6						

ISCJB ***29*** *10:15:30.7±2.7, 513N±04×179.17W±008, h43km±18km, mb3.5/4, Error ellipse: s-maj=60.3km s-min=8.4km az=2.3*
NEIC ***29*** *10:15:31.9±3.7, 5127N×179.14W, h43km±18km, ML3.2(AEIC), Error ellipse: s-maj=99.3km s-min=12.3km az=180.0*
IDC ***29*** *10:15:37.9±4.3, 5183N×17960W, h94km±42km, mb3.1/4, mb1 3.5/5, mb1mx3.2/25, mbtmp3.1/5, Error ellipse: s-maj=89.8km s-min=27.2km az=7.0*

ISC 29 10:15:32.3±2.6, 513N±04×17912W±008, h38km±19km, n10, σ1§00/14, mb3.5/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.64**	**67**	P	**Pn**	**10 15 56.7**	**-1.8**
ADK				*e*Pn	**Pn**	**10 15 56.9**	**-1.6**
ADK				S	**Sn**	**10 16 18.3**	**-0.1**
ADK				*e*Sn	**Sn**	**10 16 19.6**	**+1.2**
GSTR	**Great Sitkin T**	**2.08**	**65**	*e*Pn	**Pn**	**10 16 05.2**	**+0.6**
FX1	**Attu Island--F**	**5.03**	**292**	P	**Pn**	**10 16 44.5**	**-0.5**
	4.8nm,0.3s,baz=153,slow=6.8,SNR=11						
FX1				S	**Sn**	**10 17 42.4**	**+0.6**
	baz=107,slow=19,SNR=1.7						
NIKO	**Nikolski**	**6.55**	**71**	Pn	**Pn**	**10 17 06.5**	**+0.6**
SDPT	**Sand Point**	**11.87**	**63**	*e*P	**Pn**	**10 18 18.6**	**-0.1**
	274nm,1.6s						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**10 22 23.6**	**-0.9**
	0.3nm,0.6s,mb3.4,baz=283,slow=7.3,SNR=4.2						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**10 22 23.6**	**-0.9**
PDAR	**Pinedale Array**	**46.53**	**72**	P	**P**	**10 23 55.2**	**-0.6**
	0.7nm,0.6s,mb3.8,baz=338,slow=3.8,SNR=8.6						
TXAR	**Lajitas Array**	**58.87**	**81**	P	**P**	**10 25 29.3**	**+2.2**
	0.3nm,0.9s,mb3.3,baz=320,slow=8.3,SNR=3.0						
MKAR	**Makanchi Array**	**59.94**	**308**	P	**P**	**10 25 29.6**	**-4.6**
	0.3nm,0.6s,mb3.5,baz=54,slow=6.5,SNR=4.1						

ISCJB ***29*** *10:25:48.8±2.0, 1136N±004×12632E±008, h16km±14km, mb3.9/10, Error ellipse: s-maj=12.6km s-min=7.0km az=175.6*
IDC ***29*** *10:25:48.7±0.9, 1116N×12591E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, Error ellipse: s-maj=59.9km s-min=15.3km az=65.0*
MAN ***29*** *10:25:50, 1132N×12608E, h4km, mb5.0, ML3.9, MS4.0*

ISC 29 10:25:49.2±1.8, 1133N±004×12623E±007, h4km±10km, n25, σ1§03/29, mb3.9/10, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.82**	**290**	*e*P	**Pg**	**10 26 04.2**	**-0.8**
BESP				*e*S	**Sg**	**10 26 12.2**	**-3.5**
OCLP	**Ormoc**	**1.61**	**260**	*e*P	**Pn**	**10 26 17.6**	**-0.9**
SCPH	**Surigao**	**1.70**	**205**	*e*P	**Pn**	**10 26 19.5**	**-0.2**
SCPH				*e*S	**Sn**	**10 26 41.8**	**0.0**
MSLP	**Maasin**	**1.79**	**229**	*e*P	**Pn**	**10 26 20.9**	**0.0**
MSLP				*e*S	**Sn**	**10 26 44.0**	**-0.2**
CNP	**Catarman**	**1.93**	**308**	*e*P	**Pn**	**10 26 22.2**	**-0.7**
CNP				*e*S	**Sn**	**10 26 47.6**	**+0.1**
LLP	**Lapu-Lapu**	**2.44**	**246**	*e*P	**Pn**	**10 26 31.1**	**+1.3**
TBP	**Tagbilaran**	**2.84**	**235**	*e*P	**Pn**	**10 26 36.2**	**+0.9**
PVCP	**Virac**	**3.03**	**318**	*e*P	**Pn**	**10 26 39.0**	**+1.0**
RCP	**Roxas**	**3.42**	**274**	*i* P	**Pn**	**10 26 44.1**	**+0.8**
BUKP	**Musuan**	**3.61**	**199**	*e*P	**Pn**	**10 26 48.8**	**+2.8**
BUKP				*e*S	**Sn**	**10 27 26.1**	**-3.0**
GUIM	**Jordan**	**3.64**	**259**	*e*P	**Pn**	**10 26 46.5**	**+0.1**
OTRP	**Odiongan**	**4.25**	**284**	*e*P	**Pn**	**10 26 54.4**	**-0.3**
PAGZ	**Pagadian**	**4.45**	**219**	*e*P	**Pn**	**10 26 59.2**	**+1.7**
LUBP	**Lubang**	**6.31**	**293**	*e*P	**Pn**	**10 27 24.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**27.28**	**288**	P	**P**	**10 31 33.0**	**-2.0**
	0.8nm,0.2s,mb3.8,baz=101,slow=7.5,SNR=7.0						
WRA	**Warramunga Arr**	**32.08**	**166**	P	**P**	**10 32 16.8**	**-0.7**
	0.4nm,0.6s,mb3.4,baz=344,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**35.58**	**168**	P	**P**	**10 32 47.5**	**-0.3**
	0.4nm,0.6s,mb3.6,baz=346,slow=7.3,SNR=12						
SONM	**Songino Array**	**40.02**	**339**	P	**P**	**10 33 26.4**	**+1.2**
	0.7nm,0.8s,mb3.5,baz=156,slow=8.3,SNR=4.5						
STKA	**Stephens Creek**	**45.41**	**162**	P	**P**	**10 34 08.1**	**-1.0**
	1.7nm,0.7s,mb4.0,baz=325,slow=9.9,SNR=5.4						
MKAR	**Makanchi Array**	**51.17**	**322**	P	**P**	**10 34 53.8**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=119,slow=8.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**53.69**	**331**	P	**P**	**10 35 11.8**	**-0.2**
	0.9nm,0.5s,mb4.0,baz=120,slow=7.0,SNR=6.1						
KURK	**Kurchatov**	**55.18**	**325**	P	**P**	**10 35 22.8**	**-0.1**
	1.7nm,0.7s,mb4.2,baz=128,slow=6.9,SNR=14						
BVAR	**Borovoye Array**	**60.78**	**325**	P	**P**	**10 36 01.2**	**-1.0**
	0.6nm,0.6s,mb3.9,baz=143,slow=10,SNR=4.7						
ARCES	**ARCESS Array B**	**83.20**	**340**	P	**P**	**10 38 16.4**	**+0.1**
	4.0nm,0.9s,mb4.4,baz=79,slow=5.8,SNR=6.2						
PLCA	**Paso Flores**	**147.19**	**156**	PKPbc	PKPbc	10 45 34.4	+0.4
	2.0nm,0.9s,baz=266,slow=5.1,SNR=3.5						

ISCJB ***29*** *10:40:07.1±1.7, 1546N±004×12272E±009, h15km±13km, mb3.7/7, Error ellipse: s-maj=14.3km s-min=6.3km az=170.4*
MAN ***29*** *10:40:08, 1539N×12258E, h7km, mb4.6, ML3.5, MS3.4*
IDC ***29*** *10:40:09.9±0.9, 1524N×12281E, h31km±6km, mb3.5/7, mb1 3.7/7, mb1mx3.5/20, mbtmp3.5/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/21, Error ellipse: s-maj=37.3km s-min=17.4km az=62.0*

ISC 29 10:40:07.3±2.4, 1543N±004×12265E±007, h7km±16km, h33km±.7km:pP-P, n20, σ1§20/25, mb3.7/7, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.97**	**225**	*e*P	**Pb**	**10 40 25.5**	**-1.0**
POLP				*e*S	**Sb**	**10 40 40.2**	**+0.6**
BALP	**Baler**	**1.08**	**287**	*e*P	**Pb**	**10 40 27.5**	**-0.7**
PCPH	**Palayan**	**1.50**	**275**	*e*P	**Pn**	**10 40 33.6**	**-1.1**
GQP	**Guinayangan**	**1.53**	**187**	*e*P	**Pn**	**10 40 34.9**	**-0.1**
GQP				*e*S	**Sn**	**10 40 54.9**	**-0.2**
PALP	**Palanan**	**1.64**	**353**	*i*P	**Pn**	**10 40 37.0**	**+0.4**
PALP				*i* S	**Sn**	**10 40 53.5**	**-4.4**
PALP	**Palanan**	**1.64**	**353**	*e*P	**Sn**	**10 40 52.6**	**-5.3**
CAUP	**Cauayan**	**1.70**	**332**	*e*P	**Pn**	**10 40 37.7**	**+0.3**
CAUP				*e*S	**Sn**	**10 40 59.0**	**-0.5**
PVCP	**Virac**	**2.33**	**141**	*e*P	**Pn**	**10 40 45.2**	**-1.0**
SCZP	**Santa Cruz**	**2.66**	**278**	*e*P	**Pn**	**10 40 48.4**	**-2.1**
LUBP	**Lubang**	**2.87**	**234**	*e*P	**Pn**	**10 40 55.3**	**+1.9**
LUBP				*e*S	**Sn**	**10 41 23.6**	**-4.7**
OTRP	**Odiongan**	**3.11**	**191**	*e*P	**Pn**	**10 40 58.5**	**+1.8**
OTRP				*e*S	**Sn**	**10 41 28.5**	**-5.6**
SJMP	**San Jose**	**3.30**	**207**	*e*P	**Pn**	**10 41 01.3**	**+1.9**
DAV	**Davao City (W)**	**8.79**	**161**	LR	LR	10 45 45.2	
	comp=Z,124nm,21.2s,baz=318,slow=39						
CMAR	**Chiang Mai Arr**	**22.87**	**281**	P	**P**	**10 45 13.2**	**+1.7**
	2.5nm,0.5s,mb3.9,baz=91,slow=7.5,SNR=18						
SONM	**Songino Array**	**35.00**	**341**	P	**P**	**10 47 01.0**	**+0.8**
	0.7nm,0.7s,mb3.7,baz=163,slow=13,SNR=5.7						
SONM				pP	pP	10 47 10.1	+7.7
	1.1nm,0.8s,baz=156,slow=9.7,SNR=6.2						
SONM				LR	LR	11 01 01.8	
	comp=Z,55nm,18.0s,baz=53,slow=36						
WRA	**Warramunga Arr**	**36.98**	**162**	P	**P**	**10 47 14.0**	**-3.5**
	0.5nm,0.8s,mb3.4,baz=342,slow=9.0,SNR=8.4						
ASAR	**Alice Springs**	**40.38**	**164**	P	**P**	**10 47 43.8**	**-2.3**
	0.3nm,0.4s,mb3.3,baz=341,slow=7.2,SNR=8.5						
MKAR	**Makanchi Array**	**45.81**	**322**	P	**P**	**10 48 30.9**	**+1.1**
	1.8nm,0.6s,mb4.2,baz=118,slow=9.4,SNR=9.5						
MKAR				pP	pP	10 48 40.5	+8.5
	1.7nm,0.7s,baz=112,slow=9.8,SNR=7.6						
ZALV	**Zalesovo Beam**	**48.43**	**331**	P	**P**	**10 48 50.4**	**+0.3**
	0.6nm,0.4s,mb4.0,baz=111,slow=7.1,SNR=5.0						
ZALV				pP	pP	10 49 00.2	+7.9
	2.0nm,0.6s,baz=121,slow=5.5,SNR=4.4						
YKA	**Yellowknife Ar**	**90.47**	**23**	P	**P**	**10 53 09.6**	**+0.1**
	0.1nm,0.5s,mb3.4,baz=360,slow=3.2,SNR=4.1						
YKA				pP	pP	10 53 18.9	+7.1
	0.2nm,0.7s,baz=300,slow=4.7,SNR=3.9						

IDC 29 10:40:34.6±1.1, 1524N×12285E, h29km±7km, mb3.5/7, mb1 3.7/7, mb1mx3.5/20, mbtmp3.5/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=40.8km s-min=18.4km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.58**	**11**	LR	LR	10 54 46.1	
	comp=Z,29nm,19.6s,baz=200,slow=38						
CMAR	**Chiang Mai Arr**	**23.10**	**281**	P	P	10 45 38.5	+0.1
	2.6nm,0.7s,baz=92,slow=7.6,SNR=9.8						
SONM	**Songino Array**	**35.24

PALP	**Palanan**	**1.72**	**349**	*e*P		**Pn**	**11 20 33.2**	**-2.3**
PALP				*e*S		**Sn**	**11 20 54.0**	**-2.3**
PALP	**Palanan**	**1.72**	**349**⇓	*e*P		**Pn**	**11 20 33.6**	**-1.9**
PALP				*e*S		**Sn**	**11 20 47.5**	**-8.9**
CAUP	**Cauayan**	**1.81**	**330**	*e*P		**Pn**	**11 20 34.8**	**-2.1**
CAUP				*e*S		**Sn**	**11 20 56.1**	**-2.7**
AUQP	**San Andres**	**2.04**	**183**	*e*P		**Pn**	**11 20 44.2**	**+4.2**
AUQP				*e*S		**Sn**	**11 21 14.1**	**+10**
TGY	**Tagaytay City**	**2.18**	**235**⇓	*e*P		**Pn**	**11 20 43.0**	**+1.1**
TGY				*e*S		**Sn**	**11 21 12.7**	**+4.9**
PVCP	**Virac**	**2.21**	**143**	*e*P		**Pn**	**11 20 43.1**	**+0.8**
PVCP				*e*S		**Sn**	**11 21 19.1**	**+11**
PVCP	**Virac**	**2.21**	**143**⇑	*i*P		**Pn**	**11 20 43.2**	**+0.9**
PVCP				*i* S		**Sn**	**11 21 17.7**	**+9.1**
SCZP	**Santa Cruz**	**2.79**	**279**	*e*P		**Pn**	**11 20 48.8**	**-1.5**
SCZP				*e*S		**Sn**	**11 21 22.2**	**-0.6**
BOLP	**Bolinao**	**2.93**	**290**	*e*P		**Pn**	**11 20 51.9**	**-0.4**
LUBP	**Lubang**	**2.94**	**237**	*e*P		**Pn**	**11 20 52.4**	**0.0**
ABRA	**Dolores**	**3.01**	**319**	*e*P		**Pn**	**11 20 53.4**	**+0.1**
OTRP	**Odiongan**	**3.08**	**194**	*e*P		**Pn**	**11 20 55.3**	**+1.0**
SJMP	**San Jose**	**3.31**	**209**	*e*P		**Pn**	**11 20 58.8**	**+1.3**
SJMP				*e*S		**Sn**	**11 21 46.5**	**+11**
SIPP	**Brgy, Tapao**	**3.37**	**319**⇓	*i*P		**Pn**	**11 21 00.0**	**+1.7**
SIPP				*i* S		**Sn**	**11 21 37.6**	**+0.3**
CNP	**Catarman**	**3.38**	**147**	*e*P		**Pn**	**11 21 04.8**	**+6.4**
RCP	**Roxas**	**3.79**	**180**⇑	*e*P		**Pn**	**11 21 07.0**	**+2.9**
BUSP	**Coron**	**4.18**	**217**	*e*P		**Pn**	**11 21 09.8**	**+0.3**
TWG	**Pinlang**	**7.58**	**348**	*e*Pn		**Pn**	**11 21 55.7**	**-0.5**
TWG				*e*Sn		**Sn**	**11 23 16.0**	**-5.0**
YULB	**Yu-li**	**8.10**	**350**	*e*Pn		**Pn**	**11 22 02.4**	**-0.9**
YULB				*e*Sn		**Sn**	**11 23 31.4**	**-2.4**
TPUB	**Ta-pu**	**8.14**	**346**	*e*Pn		**Pn**	**11 22 05.8**	**+1.9**
SSLB	**Suanglung**	**8.55**	**349**	*e*Pn		**Pn**	**11 22 08.5**	**-0.9**
SSLB				*e*Sn		**Sn**	**11 23 45.0**	**+0.2**
NACB	**Ninganchiao**	**8.83**	**353**	Pn		**Pn**	**11 22 13.2**	**-0.1**
YHNB	**Yeheng**	**9.35**	**352**	*e*Pn		**Pn**	**11 22 22.9**	**+2.5**
YHNB				*e*Sn		**Sn**	**11 23 55.6**	**-8.8**
QZH	**Quanzhou**	**10.30**	**338**	P		**Pn**	**11 22 36.8**	**+3.3**
QZH				S		**Sn**	**11 24 35.5**	**+7.7**
QZH				LR	LR			
	comp=Z,940nm,17.5s							
QIZ	**Qiongzhong**	**12.88**	**288**	P		**Pn**	**11 23 11.0**	**+2.2**
QIZ				*e*S		**Sn**	**11 25 37.5**	**+6.4**
QIZ				LR	LR			
	comp=E,618nm,15.3s							
QIZ				LR	LR			
	comp=Z,833nm,15.2s							
WHN	**Wuhan**	**16.97**	**334**	P		**Pn**	**11 24 06.5**	**+3.7**
WHN				*e*S		**Sn**	**11 27 20.8**	**+10**
WHN				LR	LR			
	comp=Z,1μm,11.4s							
NJ2	**Nanjing**	**16.99**	**349**	*e*P		**Pn**	**11 24 00.3**	**-2.8**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.7s							
GYA	**Guiyang**	**18.64**	**309**⇑	*i*P		**Pn**	**11 24 24.0**	**+0.5**
GYA				PP			11 24 41.3	
GYA				S		**Sn**	**11 27 56.5**	**+5.5**
GYA				SS			11 28 23.3	
GYA				AMB	AMB			
	comp=Z,20nm,1.0s							
GYA				AMB	AMB			
	comp=Z,100nm,4.8s							
GYA				LR	LR			
	comp=N,1μm,11.1s							
GYA				LR	LR			
	comp=E,890nm,11.4s							
GYA				LR	LR			
	comp=Z,2μm,12.3s							
KMI	**Kunming**	**21.13**	**301**	P		**P**	**11 24 52.3**	**+2.2**
KMI				AP			11 24 55.0	
KMI				PP			11 25 16.0	
KMI				S		**S**	**11 28 43.0**	**-0.5**
KMI				SS			11 29 16.8	
KMI				AMB	AMB			
	comp=Z,16nm,1.0s,mb4.3							
KMI				AMB	AMB			
	comp=Z,112nm,3.1s							
KMI				LR	LR			
	comp=N,392nm,11.8s,MS4.2							
KMI				LR	LR			
	comp=E,449nm,10.6s,MS4.2							
KMI				LR	LR			
	comp=Z,476nm,10.6s,MS4.2							
GUMO	**Guam**	**21.46**	**92**	LR		LR	11 31 40.1	
	comp=Z,190nm,20.4s,MS3.5,baz=95,slow=32							
CBIJ	**Chichi jima**	**21.49**	**54**	LR		LR	11 31 39.3	
	comp=Z,174nm,19.2s,MS3.5,baz=124,slow=32							
XAN	**Xi'an**	**22.40**	**329**	P		**P**	**11 25 03.5**	**-0.2**
XAN				AP			11 25 06.8	
XAN				PP			11 25 34.3	
XAN				S		**S**	**11 29 11.0**	**+2.8**
XAN				SS			11 29 50.0	
XAN				AMB	AMB			
	comp=Z,22nm,0.9s,mb4.6							
XAN				AMB	AMB			
	comp=Z,79nm,8.4s							
XAN				LR	LR			
	comp=N,75nm,9.7s							
XAN				LR	LR			
	comp=E,24nm,13.6s							
XAN				LR	LR			
	comp=Z,285nm,13.2s,MS3.9							
KSRS	**Korea Array**	**22.46**	**11**	P		**P**	**11 25 04.6**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=192,slow=12,SNR=3.8							
KSRS				pP			11 25 13.9	
	comp=Z,3.0nm,0.9s,baz=196,slow=11,SNR=5.0							
KSRS				LR		LR	11 34 16.3	
	comp=Z,168nm,19.3s,MS3.5,baz=61,slow=38							
CM31	**Chiang Mai Arr**	**23.00**	**281**	*e*P		**P**	**11 25 10.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**23.00**	**281**	P		**P**	**11 25 08.2**	**-2.0**
	comp=Z,111nm,0.9s,mb4.3,baz=91,slow=6.5,SNR=52							
CMAR				PcP		PcP	11 29 01.1	+1.7
	comp=Z,0.6nm,0.7s,baz=45,slow=1.4,SNR=4.1							
CMAR				LR		LR	11 34 30.6	
	comp=Z,292nm,18.2s,MS3.8,baz=110,slow=38							
CMAR	**Chiang Mai Arr**	**23.00**	**281**	P		**P**	**11 25 08.2**	**-2.0**
CMAR							11 29 01.1	
CHTO	**Chiang Mai**	**23.03**	**282**	*e*P		**P**	**11 25 10.4**	**-0.1**
CHTO				pmax	pmax			
	comp=Z,73nm,2.5s,mb4.7							
CHTO	**Chiang Mai**	**23.03**	**282**	*e*P		**P**	**11 25 10.4**	**-0.1**
	comp=Z,73nm,2.5s,mb4.7							
CD2	**Chengdu**	**23.29**	**315**	P		**P**	**11 25 13.5**	**+0.4**
CD2				AP			11 25 17.8	
CD2				XP	sP		11 25 22.5	-3.7
CD2				PP			11 25 45.5	
CD2				PCP	PcP		11 29 02.0	+2.2
CD2				S		**S**	**11 29 24.3**	**+1.2**
CD2				SS			11 30 09.5	
CD2				AMB	AMB			
	comp=Z,40nm,0.8s,mb4.9							
CD2				AMB	AMB			
	comp=Z,150nm,5.9s							
CD2				LR	LR			
	comp=N,590nm,15.5s							
CD2				LR	LR			
	comp=Z,680nm,13.7s,MS4.3							
JHJ	**Hachijo jima 2**	**23.45**	**38**	LR		LR	11 33 15.9	
	comp=Z,217nm,18.2s,MS3.6,baz=119,slow=33							
KULM	**Kulim**	**23.93**	**248**	*e*P		**P**	**11 25 17.5**	**-1.8**
	comp=Z,37nm,1.8s,mb4.5							
MJAR	**Matsushiro Arr**	**25.17**	**30**	LR		LR	11 32 59.4	
	comp=Z,114nm,21.8s,MS3.4,baz=230,slow=30							
BJI	**Beijing**	**25.25**	**348**	P		**P**	**11 25 30.0**	**-0.9**
BJI				S		**S**	**11 29 58.5**	**+4.1**
BJI				AMB	AMB			
	comp=Z,18nm,1.1s,mb4.5							
BJI				LR	LR			
	comp=N,221nm,16.4s,MS4.0							
BJI				LR	LR			
	comp=E,370nm,20.3s,MS4.0							
BJI				LR	LR			
	comp=Z,64nm,18.6s,MS3.2							
PSI	**Prapat**	**26.61**	**244**	LR		LR	11 36 45.6	
	comp=Z,142nm,18.2s,MS3.6,baz=259,slow=38							
LZH	**Lanzhou**	**26.67**	**324**	*e*P		**P**	**11 25 46.5**	**+2.6**
LZH				AP		pP	11 25 50.8	-2.6
LZH				XP		sP	11 25 53.3	-4.2
LZH				PP			11 26 31.5	
LZH				*e*S		**S**	**11 30 23.3**	**+6.2**
LZH				AMB	AMB			
	comp=Z,42nm,1.5s,mb4.8							
LZH				AMB	AMB			
	comp=Z,150nm,4.0s							
LZH				LR		LR		
	comp=E,1μm,12.9s							
LZH				LR		LR		
	comp=Z,2μm,14.9s,MS4.7							
HHC	**Hu-ho-hao-te**	**27.19**	**341**	*e*P		**P**	**11 25 49.3**	**+0.8**
HHC				AP		pP	11 25 53.3	-4.8
HHC				XP		sP	11 25 56.5	-5.6
HHC				PP			11 26 35.5	
HHC				S		**S**	**11 30 25.5**	**+0.3**
HHC				PCS		PcS	11 32 49.5	-0.3
HHC				AMB	AMB			
	comp=Z,12nm,0.9s,mb4.4							
HHC				AMB	AMB			
	comp=Z,139nm,5.1s							
HHC				LR	LR			
	comp=N,363nm,16.4s,MS4.3							
HHC				LR	LR			
	comp=E,510nm,15.3s,MS4.3							
HHC				LR	LR			
	comp=Z,407nm,14.9s,MS4.1							
CN2	**Changchun**	**28.43**	**4**	*e*P		**P**	**11 26 02.0**	**+2.5**
CN2				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.4							
CN2				AMB	AMB			
	comp=Z,200nm,4.0s							
MDJ	**Mudanjiang**	**29.72**	**10**	P		**P**	**11 26 11.5**	**+0.5**
MDJ				AP		pP	11 26 14.0	-6.6
MDJ				XP		sP	11 26 15.5	-9.1
MDJ				PCP		PcP	11 29 12.5	-2.0
MDJ				S		**S**	**11 31 07.0**	**+2.2**
MDJ				SCP		ScP	11 32 54.5	+0.3
MDJ				PCS		PcS	11 32 55.5	-2.0
MDJ				SCS		ScS	11 36 49.3	+0.3
MDJ				AMB	AMB			
	comp=Z,1μm,5.6s							
MDJ				LR	LR			
	comp=N,60nm,25.4s,MS3.5							
MDJ				LR	LR			
	comp=E,142nm,27.5s,MS3.5							
MDJ				LR	LR			
	comp=Z,93nm,24.5s,MS3.3							
SHL	**Shillong**	**30.60**	**294**	*e*P		**P**	**11 26 18.5**	**-0.5**
LSA	**Lhasa**	**32.38**	**302**	P		**P**	**11 26 35.5**	**+0.8**
LSA	**Lhasa**	**32.38**	**302**	*e*P		**P**	**11 26 35.8**	**+1.1**
LSA				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
LSA	**Lhasa**	**32.38**	**302**	*e*P		**P**	**11 26 35.8**	**+1.1**
	comp=Z,4.7nm,0.7s,mb4.4							
FITZ	**Fitzroy Crossi**	**33.38**	**175**	*e*P		**P**	**11 26 41.9**	**-1.5**
	comp=Z,6.8nm,0.4s,mb4.9							
FITZ	**Fitzroy Crossi**	**33.38**	**175**	*e*P		**P**	**11 26 42.1**	**-1.3**
	comp=Z,2.1nm,0.4s,mb4.4							
HABR	**Khabarovsk**	**34.52**	**14**	*e*P		**P**	**11 26 48.0**	**-5.0**
HABR				*e**PP		pP	11 26 58.2	-4.5
HABR				*e*PPP			11 28 15.8	
HABR				*e*SS		SS	11 34 27.4	-23
HABR				*e*			11 37 07.8	
HABR				MLR		MLR		
	comp=Z,258nm,14.0s,MS4.1							
TAPN	**Taplejung**	**34.65**	**296**	*e*P		**P**	**11 26 54.4**	**0.0**
	comp=Z,32nm,1.1s,mb5.2							
ODAN	**Odare**	**34.82**	**295**	*e*P		**P**	**11 26 55.6**	**-0.3**
	comp=Z,82nm,1.0s,mb5.6							
ULN	**Ulaanbaatar**	**34.91**	**341**	*e*P		**P**	**11 26 56.9**	**+0.5**
ULN				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
ULN	**Ulaanbaatar**	**34.91**	**341**	*e*P		**P**	**11 26 56.9**	**+0.5**
	comp=Z,8.4nm,1.1s,mb4.6							
SONM	**Songino Array**	**35.09**	**341**	P		**P**	**11 26 58.2**	**+0.2**
	comp=Z,4.8nm,0.9s,mb4.4,baz=162,slow=8.3,SNR=26							
SONM				pP		pP	11 27 07.9	+0.2
	comp=Z,5.3nm,1.0s,baz=158,slow=9.5,SNR=10.0							
SONM				PcP		PcP	11 29 29.5	+0.3
	comp=Z,0.7nm,0.9s,baz=177,slow=2.9,SNR=2.8							
SONM				LR		LR	11 42 51.9	
	comp=Z,206nm,18.2s,MS3.9,baz=176,slow=39							
SONM	**Songino Array**	**35.09**	**341**	P		**P**	**11 26 58.2**	**+0.2**
SONM				**PP*		pP	11 27 07.9	+0.3
SONM							11 29 29.5	
COEN	**Coen**	**35.44**	**144**	*e*P		**P**	**11 27 00.9**	**-0.4**
	comp=Z,2.3nm,0.5s,mb4.4							
RAMN	**Ramite**	**35.53**	**295**	*e*P		**P**	**11 27 02.1**	**0.0**
	comp=Z,124nm,1.1s,mb5.7							
JIRN	**Jiri**	**36.03**	**296**	*e*P		**P**	**11 27 06.4**	**0.0**
	comp=Z,96nm,1.0s,mb5.7							
GUN	**Gumba**	**36.35**	**296**	*e*P		**P**	**11 27 09.1**	**0.0**
	comp=Z,126nm,1.0s,mb5.8							
MBWA	**Marble Bar**	**36.42**	**185**	*e*P		**P**	**11 27 08.6**	**-1.0**
	comp=Z,2.4nm,0.5s,mb4.4							
PKI	**Pulchoki**	**36.69**	**296**	*e*P		**P**	**11 27 11.2**	**-0.8**
	comp=Z,66nm,1.1s,mb5.4							
KKN	**Kakani**	**36.85**	**296**	*e*P		**P**	**11 27 12.4**	**-0.9**
	comp=Z,66nm,1.0s,mb5.4							
WRAB	**Tennant Creek**	**36.88**	**162**⇑	*i*P		**P**	**11 27 12.8**	**-0.8**
WRAB	**Tennant Creek**	**36.88**	**162**	*e*P		**P**	**11 27 12.2**	**-1.4**
	comp=Z,99nm,2.0s,mb5.3							
WRA	**Warramunga Arr**	**36.89**	**162**	P		**P**	**11 27 11.9**	**-1.7**
	comp=Z,7.1nm,0.7s,mb4.6,baz=344,slow=9.2,SNR=76							
WB2	**Warramunga Arr**	**36.89**	**162**	*e*P		**P**	**11 27 12.6**	**-1.0**
WB2	**Warramunga Arr**	**36.89**	**162**	*e*P		**P**	**11 27 12.2**	**-1.5**
DMN	**Daman**	**36.96**	**296**	*e*P		**P**	**11 27 13.7**	**-0.6**
	comp=Z,86nm,1.1s,mb5.5							
GKN	**Gorkha**	**37.45**	**296**	*e*P		**P**	**11 27 17.3**	**-1.1**
	comp=Z,85nm,1.0s,mb5.5							
DANN	**Dangsing**	**38.27**	**296**	*e*P		**P**	**11 27 24.9**	**-0.5**
	comp=Z,97nm,0.9s,mb5.5							
KOLN	**Koldanda**	**38.30**	**295**	*e*P		**P**	**11 27 25.2**	**-0.5**
	comp=Z,89nm,1.0s,mb5.4							
ZAK	**Zakamensk**	**38.32**	**340**⇑	*i*P		**P**	**11 27 25.1**	**-0.3**
ZAK				*e*		pP	11 27 34.8	-0.4
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.0							
TLY	**Talaya**	**39.33**	**341**	*e*P		**P**	**11 27 44.2**	**+10**
TLY				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.5							
TLY				MLR	MLR			
	comp=Z,131nm,21.0s,MS3.7							
MOY	**Mondy**	**40.18**	**339**	*e*P		**P**	**11 27 41.4**	**+0.4**
ASAR	**Alice Springs**	**40.29**	**164**	P		**P**	**11 27 41.4**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.3,baz=342,slow=7.3,SNR=44							
WMQ	**Urumqi**	**41.14**	**321**	*e*P		**P**	**11 27 50.0**	**+1.0**
WMQ				AMB	AMB			
	comp=Z,16nm,1.0s,mb4.6							
WMQ				LR	LR			
	comp=N,205nm,24.0s,MS4.0							
WMQ				LR	LR			
	comp=E,87nm,22.0s,MS4.0							
WMQ				LR	LR			
	comp=Z,111nm,18.0s,MS3.8							
MEEK	**Meekatharra**	**41.95**	**186**	*e*P		**P**	**11 27 53.7**	**-2.1**
	comp=Z,16nm,0.5s,mb4.9							
CTA	**Charters Tower**	**42.12**	**146**	P		**P**	**11 27 58.4**	**+1.1**
	comp=Z,4.8nm,0.8s,mb4.2,baz=333,slow=14,SNR=3.4							
CTA				LR		LR	11 45 42.8	
	comp=Z,53nm,20.2s,MS3.4,baz=231,slow=36							
HNR	**Honiara**	**44.31**	**121**	LR		LR	11 43 38.8	
	comp=Z,93nm,18.5s,MS3.7,baz=327,slow=32							
MK31	**Makanchi Array**	**45.93**	**322**	*e*P		**P**	**11 28 27.9**	**+0.3**
MKAR	**Makanchi Array**	**45.93**	**322**	P		**P**	**11 28 27.9**	**+0.3**
	comp=Z,15nm,0.9s,mb4.9,baz=117,slow=8.5,SNR=91							
MKAR				pP		pP	11 28 37.8	+0.3
	comp=Z,21nm,0.9s,baz=116,slow=8.2,SNR=25							
MKAR				PcP		PcP	11 30 03.5	-0.7
	comp=Z,1.9nm,0.8s,baz=101,slow=2.9,SNR=3.6							
MKAR				pPcP			11 30 13.6	
	comp=Z,2.7nm,0.8s,baz=104,slow=3.9,SNR=3.9							
MKAR	**Makanchi Array**	**45.93**	**322**	P		**P**	**11 28 27.9**	**+0.3**
MKAR				pP		pP	11 28 37.8	+0.3
MKAR				PcP		PcP	11 30 03.5	-0.7
MKAR				pPcP			11 30 13.6	
KMBL	**Kambalda**	**46.48**	**181**	*e*P		**P**	**11 28 30.2**	**-1.7**
	comp=Z,92nm,0.4s							
PETK	**Petropavlovsk-**	**46.60**	**28**	P		**P**	**11 28 36.3**	**+3.5**
	comp=Z,3.7nm,0.8s,mb4.3,baz=230,slow=6.6,SNR=3.3							
PETK				LR		LR	11 49 28.9	
	comp=Z,47nm,18.5s,MS3.5,baz=90,slow=38							
YAK	**Yakutsk**	**46.86**	**4**	*e*P		**P**	**11 28 33.6**	**-1.0**
YAK				pmax	pmax			
	comp=Z,12nm,1.1s,mb4.7							
YAK				pmax	pmax			
	comp=N,8.0nm,1.2s							
PET	**Petropavlovsk**	**46.99**	**29**⇓	*i*P		**P**	**11 28 32.0**	**-3.8**
PET				pmax	pmax			
	comp=Z,60nm,2.1s,mb5.2							
KSH	**Kashi**	**47.34**	**310**	P		**P**	**11 28 40.8**	**+2.1**
KSH				AP		pP	11 28 45.5	-3.1
KSH				XP		sP	11 28 47.8	-4.7
KSH				PCP		PcP	11 30 11.5	+2.2
KSH				PP		PP	11 30 31.0	+1.0
KSH				SCP		ScP	11 34 03.0	+2.0
KSH				S		**S**	**11 35 33.5**	**+3.2**
KSH				SCS		ScS	11 38 31.8	+1.4
KSH				SS		SS	11 38 55.0	-3.1
KSH				LR	LR			
	comp=N,534nm,5.4s							
KSH				LR	LR			
	comp=E,319nm,4.8s							
KSH				LR	LR			
	comp=Z,591nm,6.2s							
ULHL	**Ulahol**	**48.00**	**314**	P		**P**	**11 28 44.7**	**+0.9**
	SNR=9.8							
NWAO	**Narrogin (SRO)**	**48.31**	**186**	*e*P		**P**	**11 28 44.7**	**-1.5**
	comp=Z,63nm,0.5s,mb5.9							
ZAA0	**Zalesovo Array**	**48.54**	**331**	*e*P		**P**	**11 28 47.7**	**0.0**
ZAA0				*e*pP		pP	11 28 57.0	-0.7
ZALV	**Zalesovo Beam**	**48.54**	**331**	P		**P**	**11 28 47.4**	**-0.4**
	comp=Z,13nm,0.9s,mb5.0,baz=116,slow=6.8,SNR=48							
ZALV				pP		pP	11 28 57.1	-0.6
	comp=Z,18nm,0.9s,baz=116,slow=6.8,SNR=17							
ZALV				LR	LR		11 51 09.2	
	comp=Z,59nm,18.8s,MS3.6,baz=85,slow=38							
ZALV	**Zalesovo Beam**	**48.54**	**331**	P		**P**	**11 28 47.4**	**-0.4**
ZALV				**PP*		pP	11 28 57.1	-0.6
ZALV	**Zalesovo Beam**	**48.54**	**331**	P		**P**	**11 28 47.4**	**-0.4**
ZALV				pP		pP	11 28 57.1	-0.6
ZALV				LR	LR		11 51 09.2	
KZA	**Kyzart**	**48.64**	**313**	P		**P**	**11 28 50.5**	**+1.8**
	SNR=13							
TKM2	**Tokmak 2**	**48.67**	**314**	*e*P		**P**	**11 28 49.1**	**+0.1**
TKM2				*e**PP		pP	11 28 59.2	+0.3
TKM2				pmax	pmax			
	comp=Z,28nm,1.3s,mb5.1							
TKM2	**Tokmak 2**	**48.67**	**314**	P		**P**	**11 28 48.8**	**-0.2**
	SNR=8.4							
TKM2	**Tokmak 2**	**48.67**	**314**	*e*P		**P**	**11 28 49.0**	**+0.1**
	comp=Z,28nm,1.3s,mb5.1							
TKM2				*e*pP		pP	11 28 59.2	+0.3
UCH	**Uchtor**	**49.21**	**313**	*e*P		**P**	**11 28 55.0**	**+2.0**
	comp=Z,26nm,1.2s,mb5.1							
CHMS	**Chumysh**	**49.28**	**314**	P		**P**	**11 28 54.4**	**+0.8**
	SNR=9.1							
FRU	**Bishkek**	**49.32**	**314**	*e*P		**P**	**11 28 54.0**	**0.0**
FRU				*e*			11 30 10.0	
AAK	**Ala-Archa**	**49.35**	**313**	*e*P		**P**	**11 28 56.0**	**+1.9**
AAK				pmax	pmax			
	comp=Z,23nm,1.4s,mb5.0							
AAK	**Ala-Archa**	**49.35**	**313**	*e*P		**P**	**11 28 56.0**	**+1.9**
	comp=Z,23nm,1.4s,mb5.0							
USP	**Ospenovka**	**49.54**	**314**	P		**P**	**11 28 56.1**	**+0.4**
	SNR=9.3							
BBOO	**Buckleboo**	**49.56**	**165**	*e*P		**P**	**11 28 55.1**	**-0.7**
	comp=Z,4.4nm,0.4s,mb4.8							
AML	**Almayashu**	**49.76**	**313**	P		**P**	**11 28 59.0**	**+1.7**
	SNR=12							
AML	**Almayashu**	**49.76**	**313**	*e*P		**P**	**11 28 58.9**	**+1.6**
	comp=Z,163nm,0.8s,mb6.1							
NVS	**Novosibirsk**	**49.82**	**331**⇑	*i*P		**P**	**11 28 56.3**	**-1.2**
NVS				pmax	pmax			
	comp=Z,49nm,1.3s,mb5.4							
NVS				pmax	pmax			
	comp=N,36nm,1.6s							
NVS				pmax	pmax			
	comp=E,35nm,1.4s							
EKS2	**Erkin-Say**	**49.86**	**313**	P		**P**	**11 28 59.3**	**+1.3**
	SNR=6.3							
EKS2	**Erkin-Say**	**49.86**	**313**	*e*P		**P**	**11 28 59.2**	**+1.1**
	comp=E,24nm,1.2s,mb5.1							
EKS2				*e*pP		pP	11 29 08.5	+0.5
KURK	**Kurchatov**	**49.96**	**325**	P		**P**	**11 28 59.4**	**+0.7**
	comp=E,821nm,0.9s,SNR=26							
KURK	**Kurchatov**	**49.96**	**325**	P		**P**	**11 28 59.2**	**+0.5**
	comp=E,50nm,0.9s,mb5.6,baz=120,slow=8.2,SNR=74							
KURK				pP		pP	11 29 09.1	+0.5
	comp=E,76nm,0.9s,baz=121,slow=7.9,SNR=30							
KURK	**Kurchatov**	**49.96**	**325**	P		**P**	**11 28 59.2**	**+0.5**
KURK				pP		pP	11 29 09.1	+0.5
STKA	**Stephens Creek**	**50.32**	**159**	P		**P**	**11 29 01.0**	**-0.6**
	comp=E,4.6nm,0.8s,mb4.5,baz=3.2,slow=7.6,SNR=7.5							
STKA	**Stephens Creek**	**50.32**	**159**	*e*P		**P**	**11 29 01.5**	**-0.1**
	comp=E,3.4nm,0.7s,mb4.5							
STKA	**Stephens Creek**	**50.32**	**159**	P		**P**	**11 29 01.0**	**-0.6**
KBL	**Kabul**	**51.70**	**302**	*e*P		**P**	**11 29 12.4**	**+0.3**
KBL				pmax	pmax			
	comp=Z,24nm,1.3s,mb5.0							
KBL	**Kabul**	**51.70**	**302**	*e*P		**P**	**11 29 12.4**	**+0.3**
	comp=Z,24nm,1.3s,mb5.0							
SEY	**Seymchan**	**51.84**	**17**⇓	*i*P		**P**	**11 29 09.4**	**-3.2**
BVAR	**Borovoye Array**	**55.56**	**325**	P		**P**	**11 29 40.2**	**+0.2**
	comp=Z,5.4nm,0.9s,mb4.6,baz=108,slow=9.5,SNR=27							
BVAR				pP		pP	11 29 49.9	-0.2
	comp=Z,14nm,0.9s,baz=119,slow=11,SNR=24							
BRVK	**Borovoye**	**55.63**	**325**	P		**P**	**11 29 41.2**	**+0.7**
	comp=Z,267nm,1.0s,SNR=11							
BRVK	**Borovoye**	**55.63**	**325**	*e*P		**P**	**11 29 41.0**	**+0.5**
BRVK				pmax	pmax			
	comp=Z,52n

VSR					pmax	pmax			
	comp=E,7.0nm,0.9s								
OBN	**Obninsk**	**75.39**	**324**				*eP*	**P**	**11 31 47.5 -0.7**
OBN					*e*	pP	11 31 59.2	+0.6	
OBN					pmax	pmax			
	comp=E,8.0nm,0.7s,mb4.8								
OBN					MLR	MLR			
	comp=E,100nm,13.0s,MS4.3								
MCK	**McKinley**	**75.60**	**27**		*eP*	**P**	**11 31 50.3 +1.1**		
MCK					pmax	pmax			
	comp=E,93nm,2.2s,mb5.3								
MCK	**McKinley**	**75.60**	**27**		*eP*	**P**	**11 31 50.2 +1.0**		
	comp=E,93nm,2.2s,mb5.3								
APA	**Apatity**	**75.68**	**337**	⇓	*eP*	**P**	**11 31 48.6 -1.0**		
APA					pmax	pmax			
	comp=E,100nm,1.6s,mb5.5								
MALT	**Malatya**	**76.27**	**306**		*eP*	**P**	**11 31 54.6 +1.0**		
MALT					*e*	pP	11 32 05.2	+1.2	
MALT					pmax	pmax			
	comp=E,11nm,1.3s,mb4.6								
MALT	**Malatya**	**76.27**	**306**		*eP*	**P**	**11 31 54.6 +1.0**		
	comp=E,10nm,1.3s,mb4.6								
MALT					*e*PcP	PcP	11 32 05.2	-0.3	
BRTR	**Keskin Array B**	**79.70**	**308**		P	**P**	**11 32 11.8 -0.7**		
	comp=Z,0.6nm,0.7s,baz=90,slow=4.9,SNR=3.6								
BRTR					pP	pP	11 32 21.8	-1.2	
	comp=E,1.0nm,0.8s,baz=90,slow=2.5,SNR=4.0								
AKASG	**Malin Array Be**	**80.49**	**320**		P	**P**	**11 32 15.4 -1.2**		
	comp=Z,0.3nm,0.3s,baz=62,slow=5.9,SNR=7.1								
AKASG					pP	pP	11 32 25.1	-2.0	
	comp=Z,4.6nm,0.8s,baz=65,slow=5.3,SNR=5.4								
VRI	**Vrincioaia**	**83.26**	**316**	⇑	*iP*	**P**	**11 32 31.9 +0.6**		
VRI	**Vrincioaia**	**83.26**	**316**	⇑	P	**P**	**11 32 31.9 +0.6**		
BURAR	**Bucovina Array**	**83.80**	**318**	⇑	*iP*	**P**	**11 32 34.4 +0.4**		
BURAR	**Bucovina Array**	**83.80**	**318**	⇑	P	**P**	**11 32 34.4 +0.4**		
MLR	**Muntele Rosu**	**83.89**	**315**	⇓	*iP*	**P**	**11 32 35.0 +0.5**		
MLR	**Muntele Rosu**	**83.89**	**315**	⇓	P	**P**	**11 32 35.0 +0.5**		
VOIR		**84.51**	**316**	⇑	*iP*	**P**	**11 32 37.9 +0.2**		
VOIR		**84.51**	**316**	⇑	P	**P**	**11 32 37.9 +0.2**		
UZH	**Uzhgorod**	**85.38**	**319**	⇓	*iP*	**P**	**11 32 42.0 0.0**		
UZH					*i*	pP	11 32 52.4	-0.1	
DRGR		**85.67**	**317**	⇑	*iP*	**P**	**11 32 43.6 +0.1**		
STHS	**Stebnicka Huta**	**85.78**	**320**		*eP*	**P**	**11 32 45.0 +1.0**		
STHS					*e*	pP	11 32 55.4	+0.9	
STHS					pmax	pmax			
	comp=Z,9.0nm,1.6s,mb4.8								
STHS	**Stebnicka Huta**	**85.78**	**320**		*eP*	**P**	**11 32 45.0 +1.0**		
	comp=Z,9.3nm,1.6s,mb4.8								
STHS					*e*	pP	11 32 55.4	+0.9	
STHS					*e*		11 33 04.2		
CRVS	**Cervenica-Dubn**	**85.81**	**320**		*eP*	**P**	**11 32 44.7 +0.5**		
CRVS					*e*	pP	11 32 54.9	+0.2	
CRVS					pmax	pmax			
	comp=Z,26nm,1.3s,mb5.3								
CRVS	**Cervenica-Dubn**	**85.81**	**320**		*eP*	**P**	**11 32 44.7 +0.5**		
	comp=Z,26nm,1.3s,mb5.3								
CRVS					*e*	pP	11 32 54.9	+0.2	
GZR	**Gura Zlata**	**86.05**	**316**	⇑	*iP*	**P**	**11 32 45.9 +0.5**		
GZR	**Gura Zlata**	**86.05**	**316**	⇑	P	**P**	**11 32 45.9 +0.5**		
NIE	**Niedzica**	**86.36**	**320**		*eP*	**P**	**11 32 47.8 +1.0**		
OJC	**Ojcow**	**86.41**	**321**		*eP*	**P**	**11 32 47.7 +0.6**		
NB2	**NORSAR Subarra**	**86.70**	**333**		P	**P**	**11 32 47.5 -0.8**		
	comp=Z,16nm,1.0s,mb5.2,baz=64,slow=4.8								
NOA	**NORSAR Array B**	**86.70**	**333**		P	**P**	**11 32 47.4 -0.9**		
	comp=Z,3.4nm,0.9s,mb4.6,baz=64,slow=4.9,SNR=5.1								
NOA					pP	pP	11 32 57.8	-1.1	
	comp=E,8.6nm,0.9s,baz=64,slow=5.0,SNR=9.1								
NOA					LR	LR	12 14 31.0		
	comp=Z,101nm,19.9s,MS4.2,baz=290,slow=38								
NOA	**NORSAR Array B**	**86.70**	**333**		P	**P**	**11 32 47.4 -0.9**		
NOA					*PP	pP	11 32 57.8	-1.0	
BZS	**Buzias**	**86.76**	**316**	⇑	*iP*	**P**	**11 32 47.9 -1.0**		
RES	**Resolute Bay**	**87.08**	**9**		*eP*	**P**	**11 32 50.6 +0.7**		
RES					pmax	pmax			
	comp=Z,133nm,3.0s								
RES	**Resolute Bay**	**87.08**	**9**		*eP*	**P**	**11 32 50.6 +0.7**		
	comp=Z,133nm,3.0s								
PSZ	**Piszkesteto**	**87.12**	**319**		*eP*	**P**	**11 32 50.9 +0.3**		
PSZ					pmax	pmax			
	comp=Z,15nm,1.1s,mb5.1								
PSZ	**Piszkesteto**	**87.12**	**319**	⇓	*iP*	**P**	**11 32 57.2 +6.6**		
PSZ	**Piszkesteto**	**87.12**	**319**		*eP*	**P**	**11 32 50.9 +0.3**		
	comp=Z,15nm,1.1s,mb5.1								
VYHS	**Vyhne**	**87.59**	**320**		*eP*	**P**	**11 32 52.7 -0.1**		
VYHS					*e*	pP	11 33 03.1	-0.3	
VYHS					pmax	pmax			
	comp=Z,7.0nm,1.5s,mb4.7								
VYHS	**Vyhne**	**87.59**	**320**		*eP*	**P**	**11 32 52.7 -0.1**		
VYHS					*e*pP	pP	11 33 03.1	-0.3	
VYHS	**Vyhne**	**87.59**	**320**		*eP*	**P**	**11 32 52.7 -0.1**		
	comp=Z,7.1nm,1.5s,mb4.7								
VYHS					*e*	pP	11 33 03.1	-0.3	
PKSM	**Moragy**	**88.51**	**318**	⇑	*iP*	**P**	**11 33 06.7 +9.4**		
BRG	**Berggiesshubel**	**89.63**	**323**		*eP*	**P**	**11 33 11.4 +9.0**		
BRG					pmax	pmax			
	comp=Z,4.0nm,1.3s,mb4.6								
YKA	**Yellowknife Ar**	**90.47**	**23**		P	**P**	**11 33 07.0 +1.0**		
	comp=Z,0.7nm,0.8s,mb4.0,baz=305,slow=4.7,SNR=15								
YKA					pP	pP	11 33 17.1	+0.4	
	comp=Z,0.5nm,0.5s,baz=303,slow=4.5,SNR=6.5								
YKA	**Yellowknife Ar**	**90.47**	**23**		P	**P**	**11 33 07.0 +1.0**		
YKA					pP	pP	11 33 17.1	+0.4	
KHC	**Kasperske Hory**	**90.56**	**322**	⇓	*iP*	**P**	**11 33 06.9 +0.1**		
GERES	**GERESS Array B**	**90.60**	**321**		P	**P**	**11 33 06.8 -0.2**		
	comp=Z,0.8nm,0.8s,mb4.1,baz=297,slow=0.6,SNR=5.2								
GERES					pP	pP	11 33 16.0	-1.6	
	comp=Z,2.6nm,1.0s,baz=54,slow=6.8,SNR=6.2								
CRES	**Cresnjev**	**90.72**	**318**		*eP*	**P**	**11 33 07.6 -0.1**		
CRES					*e*	pP	11 33 17.0	-1.2	
BOJS	**Bojanci**	**90.98**	**318**		*eP*	**P**	**11 33 10.0 +1.2**		
BOJS					*e*	pP	11 33 20.2	+0.8	
CEY	**Cerknica**	**91.42**	**318**		*eP*	**P**	**11 33 10.4 -0.4**		
CADS	**Cadrg**	**91.66**	**319**		*eP*	**P**	**11 33 11.0 -0.9**		
DAVOX	**Davos/Dischmat**	**93.82**	**321**		LR	LR	12 16 55.6		
	comp=Z,141nm,19.8s,MS4.4,baz=276,slow=36								
TORD	**Torodi Ar. Bea**	**115.19**	**293**		PKP	PKiKP	11 38 45.2	-1.7	
	comp=Z,0.7nm,1.0s,baz=34,slow=3.1,SNR=3.1								
TXAR	**Lajitas Array**	**116.88**	**45**		PKP	PKPdf	11 38 49.8	0.0	
	comp=Z,0.3nm,0.8s,baz=294,slow=0.9,SNR=3.6								
PLCA	**Paso Flores**	**152.20**	**158**		PKPbc	PKPbc	11 40 00.8	+0.4	
	comp=Z,1.6nm,1.0s,baz=188,slow=5.2,SNR=3.0								
PLCA					pPKPbc	pPKPbc	11 40 12.6	+1.4	
	comp=Z,2.6nm,1.0s,baz=4.6,slow=3.6,SNR=3.1								

MAN 29 11:23:57,1001N×12218E,h4km,mb4.5,ML3.4,MS3.3, 2D,Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.73**	**33**	*eP*	Pg	11 24 11.9	+0.9
GUIM				*eS*	Sg	11 24 20.9	+0.4
SNPH	**Sibulan**	**1.23**	**122**	*eP*	Pg	11 24 20.5	-0.2
CUYO	**Cuyo Island**	**1.42**	**306**	*eP*	Pn	11 24 23.9	+0.3
RCP	**Roxas**	**1.64**	**20** ⇓	*eP*	Pn	11 24 28.0	+1.5
RCP				*eS*	Sn	11 24 50.0	+1.9
TBP	**Tagbilaran**	**1.69**	**101**	*eP*	Pn	11 24 27.1	-0.1
LLP	**Lapu-Lapu**	**1.78**	**80** ⇓	*eP*	Pn	11 24 28.2	-0.4
LLP				*eS*	Sn	11 24 49.3	-2.4
IPIL	**Ipil**	**2.24**	**170**	*eP*	Pn	11 24 32.3	-2.7
OTRP	**Odiongan**	**2.34**	**356**	*eP*	Pn	11 24 36.5	+0.2
PAGZ	**Pagadian**	**2.46**	**151**	*eP*	Pn	11 24 40.8	+2.9
MSLP	**Maasin**	**2.64**	**87**	*eP*	Pn	11 24 40.9	+0.5
SJMP	**San Jose**	**2.65**	**337**	*eP*	Pn	11 24 43.2	+2.7
BUSP	**Coron**	**2.77**	**316**	*eP*	Pn	11 24 42.7	+0.4
ENPP	**El Nido**	**2.96**	**294**	*eP*	Pn	11 24 45.7	+0.9

*ISCJB **29** 11:27:45.7±4.9, 154N±02×123.1E±03, h40km±43km, mb3.4/4, Error ellipse: s-maj=57.5km s-min=21.6km az=161.1*
*IDC **29** 11:27:46.8±2.3, 1542N×123.13E, h32km±7km, mb3.3/4, mb1 3.4/4, mb1mx3.2/21, mbtmp3.3/4, Error ellipse: s-maj=214.1km s-min=17.3km az=63.0*
ISC 29 11:27:45.6±7.4, 1541N±009×1231E±02, h23km±55km, h34km±.8km:pP-P,n5,σ0§51/6,mb3.4/4,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**1.62**	**203** ⇓	*eP*	**Pn**	**11 28 12.7**	**0.0**
GQP				*eS*	**Sn**	**11 28 32.9**	**0.0**
WRA	**Warramunga Arr**	**36.83**	**162**	P	**P**	**11 34 51.8**	**-0.3**
	0.4nm,0.9s,mb3.3,baz=342,slow=9.1,SNR=5.0						
WRA				pP	pP	11 35 01.2	+2.1
	0.2nm,0.5s,baz=344,slow=9.0,SNR=1.3						
ASAR	**Alice Springs**	**40.25**	**165**	P	**P**	**11 35 21.0**	**+0.3**
	0.3nm,0.6s,mb3.2,baz=340,slow=7.4,SNR=5.3						
MKAR	**Makanchi Array**	**46.09**	**321**	P	**P**	**11 36 07.3**	**-0.4**
	0.1nm,0.4s,mb3.1,baz=133,slow=7.2,SNR=3.2						
MKAR				pP	pP	11 36 17.6	+2.6
	0.5nm,0.8s,baz=111,slow=7.9,SNR=3.7						
KURK	**Kurchatov**	**50.10**	**325**	P	**P**	**11 36 39.1**	**+0.4**
	0.8nm,0.4s,mb4.1,baz=121,slow=8.5,SNR=6.8						
KURK				pP	pP	11 36 48.6	+2.7
	1.3nm,0.5s,baz=120,slow=8.4,SNR=6.9						

*IDC **29** 11:29:58.9±1.0, 1530N×12284E, h31km±6km, mb3.6/7, mb1 3.7/7, mb1mx3.5/20, mbtmp3.6/7, Error ellipse: s-maj=50.1km s-min=16.5km az=64.0*
*ISCJB **29** 11:29:59.1±0.7, 1545N±003×12253E±008, h31km, mb3.8/7, Error ellipse: s-maj=11.5km s-min=4.9km az=178.7*
*NEIC **29** 11:29:59.7±0.6, 1527N×12281E, h40km, Error ellipse: s-maj=29.2km s-min=9.8km az=62.0*
*MAN **29** 11:29:59, 1540N×12242E, h49km, mb4.3, ML3.1, MS2.9*
ISC 29 11:30:00.1±0.6, 1543N±003×12256E±007, h33km, h33km±.9km:pP-P,n24,σ1§50/27,mb3.8/7,1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.92**	**221**	*eP*	**Pn**	**11 30 14.8**	**-2.0**
POLP				*eS*	**Sn**	**11 30 29.1**	**+0.2**
BALP	**Baler**	**1.00**	**288**	*eP*	**Pn**	**11 30 16.0**	**-1.8**
BALP				*eS*	**Sn**	**11 30 33.9**	**+3.0**
PCPH	**Palayan**	**1.42**	**276** ⇓	*eP*	**Pn**	**11 30 21.7**	**-1.9**
GQP	**Guinayangan**	**1.52**	**184** ⇓	*eP*	**Pn**	**11 30 34.4**	**+9.4**
GQP				*eS*	**Sn**	**11 30 44.1**	**+0.5**
PALP	**Palanan**	**1.63**	**355** ⇓	*eP*	**Pn**	**11 30 35.1**	**+8.7**
PALP				*eS*	**Sn**	**11 30 45.5**	**-0.8**
PALP	**Palanan**	**1.63**	**355**	*eP*	Px	11 30 38.4	
CAUP	**Cauayan**	**1.67**	**335**	*eP*	**Pn**	**11 30 26.5**	**-0.5**
CAUP				*eS*	**Sn**	**11 30 47.3**	**0.0**
AUQP	**San Andres**	**2.10**	**177**	*eP*	**Pn**	**11 30 35.9**	**+3.0**
PVCP	**Virac**	**2.39**	**140**	*eP*	**Pn**	**11 30 34.4**	**-2.5**
PVCP				*eS*	**Sn**	**11 31 11.0**	**+5.9**
PVCP	**Virac**	**2.39**	**140** ⇑	*eP*	**Pn**	**11 30 39.1**	**+2.2**
LUBP	**Lubang**	**2.81**	**233**	*eP*	**Pn**	**11 30 42.3**	**-0.4**
OTRP	**Odiongan**	**3.09**	**190**	*eP*	**Pn**	**11 30 47.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**22.79**	**281**	P	**P**	**11 35 01.7**	**+1.6**
	1.3nm,0.7s,mb3.5,baz=89,slow=7.9,SNR=9.6						
SONM	**Songino Array**	**34.97**	**341**	P	**P**	**11 36 49.9**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=155,slow=9.3,SNR=3.4						
SONM				pP	pP	11 36 58.6	-0.1
	0.7nm,0.9s,baz=161,slow=8.3,SNR=3.6						
WRA	**Warramunga Arr**	**37.01**	**161**	P	**P**	**11 37 03.7**	**-3.1**
	0.3nm,0.3s,mb3.5,baz=342,slow=9.1,SNR=10						
WB2	**Warramunga Arr**	**37.01**	**161**	*eP*	**P**	**11 37 03.5**	**-3.3**
ASAR	**Alice Springs**	**40.41**	**164**	P	**P**	**11 37 32.9**	**-2.4**
	0.4nm,0.5s,mb3.5,baz=338,slow=7.4,SNR=10						
MKAR	**Makanchi Array**	**45.76**	**322**	P	**P**	**11 38 19.6**	**+1.3**
	1.0nm,0.6s,mb3.9,baz=117,slow=8.7,SNR=13						
MKAR				pP	pP	11 38 29.4	+1.3
	1.8nm,0.8s,baz=114,slow=9.5,SNR=12						
MKAR	**Makanchi Array**	**45.76**	**322**	P	**P**	**11 38 19.6**	**+1.3**
MKAR				pP	pP	11 38 29.4	+1.3
ZALV	**Zalesovo Beam**	**48.39**	**331**	P	**P**	**11 38 39.2**	**+0.5**
	0.4nm,0.3s,mb3.9,baz=107,slow=5.0,SNR=4.4						
ZALV				pP	pP	11 38 48.9	+0.3
	0.8nm,0.4s,baz=126,slow=7.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**48.39**	**331**	P	**P**	**11 38 39.2**	**+0.4**
ZALV				pP	pP	11 38 48.9	+0.3
KURK	**Kurchatov**	**49.79**	**325**	P	**P**	**11 38 50.9**	**+1.3**
	4.0nm,0.6s,mb4.6,baz=121,slow=8.2,SNR=16						
KURK				pP	pP	11 39 00.1	+0.7
	7.0nm,0.6s,baz=122,slow=8.4,SNR=13						
BVAR	**Borovoye Array**	**55.39**	**325**	pP	pP	11 39 40.7	-0.3
	0.7nm,0.7s,baz=113,slow=9.9,SNR=4.6						
YKA	**Yellowknife Ar**	**90.49**	**23**	pP	pP	11 43 08.4	-0.5
	0.1nm,0.4s,baz=301,slow=4.6,SNR=2.7						

*ISCJB **29** 11:45:34.8±0.5, 1547N±003×12257E±005, h32km, mb4.0/11, Error ellipse: s-maj=7.2km s-min=4.2km az=169.0*
*IDC **29** 11:45:34.9±0.8, 1526N×12276E, h32km±5km, mb3.8/10, mb1 3.9/10, mb1mx3.7/23, mbtmp3.8/10, Error ellipse: s-maj=37.1km s-min=15.4km az=63.0*
*MAN **29** 11:45:34, 1542N×12251E, h16km, mb4.1, ML3.0, MS2.7*
*NEIC **29** 11:45:35.0±1.7, 1529N×12283E, h36km±18km, mb3.9/1, Error ellipse: s-maj=23.9km s-min=8.0km az=64.0*
ISC 29 11:45:36.6±0.5, 1542N±003×12251E±005, h33km, h33km±.4km:pP-P,n27,σ1§25/35,mb4.0/11,3C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.89**	**219**	*eP*	**Pn**	**11 45 50.7**	**-2.0**
POLP				*eS*	**Sn**	**11 46 04.5**	**+0.1**
BALP	**Baler**	**0.96**	**289**	*eP*	**Pn**	**11 45 51.8**	**-1.9**
BALP				*eS*	**Sn**	**11 46 01.0**	**-5.2**
PCPH	**Palayan**	**1.37**	**276** ⇑	*eP*	**Pn**	**11 45 57.8**	**-1.6**
PCPH				*eS*	**Sn**	**11 46 17.6**	**+1.2**
GQP	**Guinayangan**	**1.51**	**182** ⇑	*eP*	**Pn**	**11 46 00.1**	**-1.2**
GQP				*eS*	**Sn**	**11 46 20.7**	**+0.9**
PALP	**Palanan**	**1.63**	**357**	*eP*	**Pn**	**11 46 06.1**	**+3.1**
CAUP	**Cauayan**	**1.65**	**336**	*eP*	**Pn**	**11 46 02.1**	**-1.1**
CAUP				*eS*	**Sn**	**11 46 23.0**	**-0.3**
AUQP	**San Andres**	**2.09**	**176**	*eP*	**Pn**	**11 46 11.2**	**+1.9**
AUQP				*eS*	**Sn**	**11 46 43.3**	**+9.1**
PVCP	**Virac**	**2.41**	**139** ⇑	*eP*	**Pn**	**11 46 10.4**	**-3.3**
PVCP	**Virac**	**2.41**	**139**	*eP*	**Pn**	**11 46 11.3**	**-2.4**
PVCP				*eS*	**Sn**	**11 46 43.1**	**+0.9**
LUBP	**Lubang**	**2.76**	**233**	*eP*	**Pn**	**11 46 18.5**	**0.0**
OTRP	**Odiongan**	**3.08**	**189**	*eP*	**Pn**	**11 46 23.4**	**+0.5**
SJMP	**San Jose**	**3.24**	**205**	*eP*	**Pn**	**11 46 26.4**	**+1.3**
YULB	**Yu-li**	**8.01**	**352**	*e*Pn	**Pn**	**11 47 31.6**	**+0.9**
YULB				*e*Sn	**Sn**	**11 49 00.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.74**	**281**	P	**P**	**11 50 37.6**	**+1.6**
	1.4nm,0.7s,mb3.5,baz=91,slow=7.6,SNR=9.2						
SONM	**Songino Array**	**34.96**	**341**	P	**P**	**11 52 25.3**	**-0.1**
	1.1nm,0.9s,mb3.8,baz=168,slow=9.7,SNR=5.8						
SONM				pP	pP	11 52 34.6	-0.6
	0.6nm,0.6s,baz=159,slow=9.0,SNR=3.7						
WRAB	**Tennant Creek**	**37.01**	**161**	*eP*	**P**	**11 52 39.6**	**-3.6**
	0.7nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**37.02**	**161**	P	**P**	**11 52 39.3**	**-4.0**
	3.0nm,1.1s,mb4.0,baz=332,slow=11,SNR=18						
WB2	**Warramunga Arr**	**37.02**	**161**	*eP*	**P**	**11 52 39.5**	**-3.8**
ASAR	**Alice Springs**	**40.41**	**164**	P	**P**	**11 53 08.7**	**-3.1**
	0.8nm,0.6s,mb3.6,baz=341,slow=7.5,SNR=14						
MKAR	**Makanchi Array**	**45.73**	**322**	P	**P**	**11 53 55.5**	**+0.9**
	2.0nm,0.8s,mb4.1,baz=116,slow=9.5,SNR=18						
MKAR				pP	pP	11 54 05.1	+0.5
	1.9nm,0.8s,baz=114,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**45.73**	**322**	P	**P**	**11 53 55.5**	**+0.9**
MKAR				pP	pP	11 54 05.1	+0.5
ZALV	**Zalesovo Beam**	**48.37**	**331**	P	**P**	**11 54 15.0**	**-0.1**
	2.2nm,0.9s,mb4.2,baz=121,slow=5.7,SNR=7.8						
ZALV				pP	pP	11 54 24.4	-0.7
	2.0nm,0.8s,baz=116,slow=6.8,SNR=4.6						
ZALV	**Zalesovo Beam**	**48.37**	**331**	P	**P**	**11 54 15.0**	**-0.1**
ZALV				pP	pP	11 54 24.4	-0.7
KURK	**Kurchatov**	**49.77**	**325**	P	**P**	**11 54 26.7**	**+0.9**
	7.1nm,0.7s,mb4.8,baz=120,slow=8.1,SNR=19						
KURK				pP	pP	11 54 36.5	+0.7
	5.9nm,0.5s,baz=121,slow=8.2,SNR=6.4						
BVAR	**Borovoye Array**	**55.37**	**325**	P	**P**	**11 55 07.6**	**+0.4**
	0.3nm,0.5s,mb3.6,baz=99,slow=8.9,SNR=4.5						
BVAR				pP	pP	11 55 17.7	+0.3
	0.7nm,0.6s,baz=113,slow=10,SNR=4.1						
HFS	**Hagfors**	**85.81**	**332**	P	**P**	**11 58 11.7**	**-0.8**
	6.7nm,1.1s,mb4.8,baz=96,slow=15,SNR=3.8						
YKA	**Yellowknife Ar**	**90.52**	**23**	P	**P**	**11 58 34.6**	**-0.4**
	0.3nm,0.8s,mb3.7,baz=305,slow=4.6,SNR=5.3						
YKA				pP	pP	11 58 44.3	-1.3
	0.2nm,0.6s,baz=303,slow=4.7,SNR=3.6						

*CSEM **29** 11:54:16.7, 3936N×3319E, h5km, MD3.5, After ISK*
*ISK **29** 11:54:16.7, 3936N×3319E, h5km, MD3.5*
*ISCJB **29** 11:54:17.5±1.0, 3935N±004×3320E±004, h0km±9km, Error ellipse: s-maj=6.0km s-min=5.0km az=165.8*

*DDA **29** 11:54:17.3, 3937N×3319E, h7km±1km, Md2.1*
ISC 29 11:54:18.3±0.9, 3935N±004×3319E±004, h1km±8km, n29, σ0§73/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.40**	**87**	*eP*G	**Pg**	**11 54 25.7**	**-0.3**
LOD	**Lodumlu**	**0.63**	**329**	*eP*G	**Pg**	**11 54 29.5**	**-0.9**
LOD				*eS*G	**Sg**	**11 54 39.0**	**+0.4**
KIZT	**Kizilcal**	**1.12**	**246**	*eP*N	**Pg**	**11 54 39.3**	**-0.5**
KIZT				*eS*N	**Sg**	**11 54 55.9**	**+1.5**
CANT	**Cankiri**	**1.30**	**14**	*eP*N	**Pn**	**11 54 42.5**	**-0.9**
LADK	**Ladik-KONYA**	**1.32**	**210**	*eP*N	**Pn**	**11 54 42.7**	**-1.1**
CORM	**Corum**	**1.38**	**53**	*eP*N	**Pn**	**11 54 43.3**	**-1.3**
KONT	**Konya--Tatoy**	**1.55**	**205**	*eP*N	**Pn**	**11 54 46.5**	**-0.4**
NIG	**Nigde**	**1.66**	**138**	*eP*N	**Pn**	**11 54 48.3**	**-0.2**
YOZ	**Yozgat**	**1.67**	**79**	*eP*N	**Pn**	**11 54 48.2**	**-0.4**
TOS	**Tosya**	**1.80**	**20**	*eP*N	**Pn**	**11 54 50.3**	**-0.1**
ESKT	**Eskisehir**	**1.82**	**276**	*eP*N	**Pn**	**11 54 50.2**	**-0.5**
MDU	**Mudurnu**	**1.89**	**307**	*eP*N	**Pn**	**11 54 51.4**	**-0.2**
SAFT	**Safranbolu**	**1.93**	**349**	*eP*N	**Pn**	**11 54 52.0**	**-0.2**
GULT	**Gulveren**	**2.33**	**299**	*eP*N	**Pn**	**11 54 57.7**	**+0.1**
ALT	**Altintas**	**2.41**	**264**	*eP*N	**Pn**	**11 54 58.6**	**-0.2**
BYBT	**Boyabat**	**2.43**	**29**	*eP*N	**Pn**	**11 54 59.3**	**+0.2**
HDMB	**Hadim**	**2.45**	**193**	*eP*N	**Pn**	**11 54 59.3**	**0.0**
BZK	**Bozkurt**	**2.68**	**13**	*eP*N	**Pn**	**11 55 02.8**	**+0.3**
CAVI	**Cavuskoy**	**2.72**	**289**	*eP*N	**Pn**	**11 55 03.2**	**+0.2**
TOKT	**Tokat**	**2.76**	**68**	*eP*N	**Pn**	**11 55 03.5**	**0.0**
DIKM	**Dikmen**	**2.79**	**34**	*eP*N	**Pn**	**11 55 04.9**	**+1.0**
KOZT	**Kozan**	**2.79**	**131**	*eP*N	**Pn**	**11 55 04.3**	**+0.4**
KVT	**Kavak**	**2.79**	**51**	*eP*N	**Pn**	**11 55 04.3**	**+0.3**
SARI	**SarD1z-Kayseri**	**2.81**	**103**	*eP*N	**Pn**	**11 55 03.0**	**-1.3**
ADVT	**Abdulvahap**	**2.87**	**293**	*eP*N	**Pn**	**11 55 05.3**	**+0.2**
SVSK	**Karacayir**	**2.99**	**78**	*eP*N	**Pn**	**11 55 07.2**	**+0.4**
GEMT	**Gemlik**	**3.27**	**291**	*eP*N	**Pn**	**11 55 11.0**	**+0.4**
PTK	**Pertek**	**4.84**	**93**	*eP*N	**Pn**	**11 55 33.8**	**+1.6**
GUMT	**Gumushane**	**4.96**	**75**	*eP*N	**Pn**	**11 55 35.5**	**+1.6**

IDC 29 12:02:20.3±4.7, 678N×8133W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.5/19, mbtmp3.7/3, ML3.7/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/25, Error ellipse: s-maj=114.2km s-min=89.4km az=46.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**7.22**	**105**	LR	LR	12 06 56.2	
	comp=Z,114nm,18.4s,baz=202,slow=38						
ATAH	**Atahualpa**	**14.00**	**168**	LR	LR	12 10 27.8	
	comp=Z,256nm,18.9s,baz=346,slow=34						
TEIG	**Tepich**	**14.97**	**334**	LR	LR	12 11 23.3	
	comp=Z,114nm,21.2s,baz=33,slow=36						
CMIG	**Matias Romero**	**16.75**	**309**	Pn	Pn	12 06 16.6	+0.2
	0.3nm,0.3s,baz=95,slow=12,SNR=4.4						
CMIG				LR	LR	12 11 27.1	
	comp=Z,95nm,21.4s,baz=147,slow=33						
TXAR	**Lajitas Array**	**30.77**	**

DSI	Dead Sea	1.87 334	Pn	Pn	12 27 04.2	+1.3
RSHS		2.06 221	P	Pn	12 27 04.5	-1.0
HKAT	Jabal Katrina	2.45 237	P	Pn	12 27 10.4	-0.3
TR2		2.72 237	P	Pn	12 27 14.1	-0.5
TR2			S	Sn	12 27 52.3	+4.2
AMAG	Maghara	2.80 287	P	Pn	12 27 19.7	+4.0
SUZ		3.03 270	P	Pn	12 27 21.7	+2.8
SUZ			S	Sg	12 28 06.9	-0.3

NEIC ***29*** *13:03:56.9±0.6, 1794N×14726E, h35km, mb4.6/9, Error ellipse: s-maj=19.3km s-min=11.0km az=90.0*
IDC ***29*** *13:03:59.0±5.8, 1788N×14707E, h48km±54km, mb3.8/13, mb1 4.0/13, mb1mx3.9/22, mbtmp3.8/13, MS3.5/5, Ms1 3.6/5, ms1mx3.2/30, Error ellipse: s-maj=29.0km s-min=14.9km az=82.0*
ISCJB ***29*** *13:03:59.9±2.4, 1789N±007×147.1E±01, h77km±22km, mb4.2/20, Error ellipse: s-maj=21.9km s-min=11.2km az=173.7*

ISC 29 13:04:01.5±2.1, 1784N±007×1471E±01, h75km±19km, n33, σ1°16/30, mb4.2/20, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.73**	**207**	LR	LR	13 07 03.8	
	comp=Z,433nm,19.6s,baz=42,slow=39						
GUMO	**Guam**	**4.73**	**207**	*e*Pn	**Pn**	**13 05 09.4**	**-1.0**
GUMO				*e*Sn	**Sn**	**13 06 08.1**	**+4.1**
MJAR	**Matsushiro Arr**	**20.22**	**339**	P	**P**	**13 08 30.6**	**+0.2**
	8.3nm,0.7s,baz=170,slow=9.4,SNR=11						
MAJO	**Matsushiro**	**20.22**	**339**	*e*P	**P**	**13 08 31.9**	**+1.5**
	16nm,0.7s						
MAT	**Matsushiro**	**20.22**	**339**	P	**P**	**13 08 34.3**	**+4.0**
DAV	**Davao City (W)**	**23.54**	**246**	LR	LR	13 17 04.1	
	comp=Z,116nm,18.5s,baz=111,slow=33						
NACB	**Ninganchiao**	**24.60**	**289**	*e*P	**P**	**13 09 17.0**	**+2.2**
	44nm,0.6s,mb5.1						
YHNB	**Yeheng**	**24.88**	**290**	P	**P**	**13 09 16.8**	**-0.6**
	37nm,1.0s,mb4.8						
KSRS	**Korea Array**	**25.79**	**323**	P	**P**	**13 09 24.8**	**-0.7**
	6.1nm,0.9s,mb4.0,baz=150,slow=8.5,SNR=9.2						
KSRS				LR	LR	13 19 34.4	
	comp=Z,82nm,18.5s,baz=140,slow=36						
KS15	**Wonju Array Si**	**25.80**	**323**	*e*P	**P**	**13 09 22.5**	**-3.1**
PMG	**Port Moresby**	**27.07**	**180**	P	**P**	**13 09 38.7**	**+1.6**
	15nm,1.1s,mb4.5,baz=339,slow=8.6,SNR=2.7						
HIA	**Hailar**	**38.35**	**331**	*e*P	**P**	**13 11 14.9**	**-0.1**
	12nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**39.56**	**199**	*e*P	**P**	**13 11 25.0**	**-0.5**
	5.0nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**39.57**	**199**	P	**P**	**13 11 25.4**	**-0.1**
	1.1nm,0.9s,mb3.7,baz=30,slow=7.8,SNR=10						
WRA				PcP	PcP	13 13 33.1	+1.5
	0.6nm,0.6s,baz=14,slow=3.5,SNR=4.7						
ASAR	**Alice Springs**	**43.21**	**198**	P	**P**	**13 11 54.9**	**-0.4**
	0.8nm,0.7s,mb3.6,baz=22,slow=8.5,SNR=15						
SONM	**Songino Array**	**44.64**	**321**	P	**P**	**13 12 06.6**	**+0.2**
	1.7nm,0.8s,mb3.8,baz=140,slow=10.0,SNR=10						
SONM				PcP	PcP	13 13 49.0	+1.0
	0.7nm,0.7s,baz=161,slow=3.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	**45.64**	**279**	P	**P**	**13 12 15.6**	**+0.7**
	3.2nm,0.9s,mb4.1,baz=69,slow=6.3,SNR=22						
CMAR				LR	LR	13 29 56.2	
	comp=Z,48nm,20.6s,baz=218,slow=34						
PSI	**Prapat**	**49.50**	**258**	LR	LR	13 32 00.9	
	comp=Z,78nm,18.1s,baz=82,slow=34						
BILL	**Bilibino**	**51.65**	**9**	*e*P	**P**	**13 12 58.5**	**-1.7**
	2.0nm,0.5s,mb4.4						
NWAO	**Narrogin (SRO)**	**57.99**	**210**	*e*P	**P**	**13 13 42.3**	**-4.1**
	3.0nm,0.7s,mb4.4						
ZAA0	**Zalesovo Array**	**59.50**	**323**	*e*P	**P**	**13 13 56.0**	**-0.6**
ZALV	**Zalesovo Beam**	**59.50**	**323**	P	**P**	**13 13 56.0**	**-0.6**
	3.0nm,0.8s,mb4.4,baz=100,slow=6.5,SNR=18						
ZALV				PcP	PcP	13 14 43.4	-0.1
	1.5nm,0.7s,baz=108,slow=4.7,SNR=2.4						
MKAR	**Makanchi Array**	**60.01**	**314**	P	**P**	**13 14 00.5**	**+0.2**
	2.0nm,0.7s,mb4.2,baz=93,slow=9.3,SNR=24						
MKAR				PcP	PcP	13 14 46.7	+1.0
	0.8nm,0.7s,baz=84,slow=5.2,SNR=4.0						
MKAR	**Makanchi Array**	**60.01**	**314**	P	**P**	**13 14 00.5**	**+0.2**
MKAR				PcP	PcP	13 14 46.7	+1.0
COLD	**Coldfoot**	**63.23**	**23**	*e*P	**P**	**13 14 24.9**	**+3.3**
	1.4nm,0.8s,mb3.9						
BRVK	**Borovoye**	**68.04**	**321**	*e*P	**P**	**13 14 52.7**	**-0.2**
	7.9nm,1.0s,mb4.5						
YKA	**Yellowknife Ar**	**78.13**	**28**	P	**P**	**13 15 52.0**	**-0.2**
	0.4nm,0.5s,mb3.4,baz=288,slow=5.4,SNR=8.2						
YKA	**Yellowknife Ar**	**78.13**	**28**	P	**P**	**13 15 52.0**	**-0.2**
NVAR	**Mina Array Bea**	**82.63**	**52**	P	**P**	**13 16 18.1**	**+1.3**
	0.8nm,0.7s,mb3.6,baz=259,slow=5.5,SNR=6.1						
ARCES	**ARCESS Array B**	**83.71**	**342**	P	**P**	**13 16 22.8**	**+1.0**
	4.7nm,0.9s,mb4.3,baz=22,slow=1.3,SNR=4.7						
BRTR	**Keskin Array B**	**95.65**	**315**	P	**P**	**13 17 17.8**	**-1.2**
	0.7nm,0.7s,mb4.2,baz=80,slow=1.6,SNR=3.5						
CBKS	**Cedar Bluff**	**95.90**	**46**	*e*P	**P**	**13 17 17.0**	**-3.1**
	10nm,0.3s						
TORD	**Torodi Ar. Bea**	**134.02**	**310**	PKP	PKPdf	13 23 12.1	+1.0
	0.4nm,0.6s,baz=49,slow=1.1,SNR=3.5						

IDC 29 13:08:55.4±2.3, 480N×12646E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=192.2km s-min=24.7km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.78**	**163**	P	P	13 14 28.7	+0.5
	0.3nm,0.3s,baz=343,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**29.21**	**166**	P	P	13 14 58.7	-0.3
	0.4nm,0.9s,baz=344,slow=7.3,SNR=3.2						
MKAR	**Makanchi Array**	**56.53**	**325**	P	P	13 18 39.6	0.0
	0.6nm,0.5s,baz=119,slow=7.8,SNR=16						

IDC 29 13:19:59.5±35.0, 197S×10288E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/19, mbtmp3.7/3, Error ellipse: s-maj=629.6km s-min=222.3km az=140.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.55**	**122**	P	P	13 26 59.4	+0.6
	0.3nm,0.4s,baz=300,slow=9.1,SNR=5.2						
ASAR	**Alice Springs**	**36.98**	**128**	P	P	13 27 09.9	-1.0
	0.2nm,0.5s,baz=299,slow=8.1,SNR=6.6						
STKA	**Stephens Creek**	**47.05**	**133**	P	P	13 28 33.5	+0.4
	1.5nm,0.6s,baz=305,slow=9.7,SNR=4.8						

IDC 29 13:23:47.5±2.7, 1565S×17401W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.7/20, Error ellipse: s-maj=194.5km s-min=27.6km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.77**	**51**	Pn	Pn	13 24 33.2	+0.1
	14nm,0.3s,baz=152,slow=1.5,SNR=42						
AFI				Sn	Sn	13 25 01.3	-5.9
	24nm,0.3s,baz=249,slow=23,SNR=12						
AFI				LR	LR	13 25 06.7	
	comp=Z,245nm,18.1s,baz=354,slow=29						
STKA	**Stephens Creek**	**43.40**	**240**	P	P	13 31 52.2	+0.1
	3.3nm,1.2s,baz=112,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**49.22**	**257**	P	P	13 32 38.0	0.0
	0.5nm,0.9s,baz=93,slow=7.0,SNR=7.9						
ASAR	**Alice Springs**	**49.48**	**252**	P	P	13 32 39.6	-0.3
	0.5nm,0.4s,baz=88,slow=8.2,SNR=14						

ISCJB ***29*** *13:57:07.4±0.9, 156S±04×1752W±02, h33km, mb4.4/7, Error ellipse: s-maj=65.2km s-min=14.3km az=154.9*
IDC ***29*** *13:57:09.7±5.1, 1597S×17569W, h0km, mb4.5/3, mb1 4.6/3, mb1mx3.9/17, mbtmp4.5/3, Error ellipse: s-maj=159.1km s-min=99.1km az=151.0*
NEIC ***29*** *13:57:09.2±0.8, 1570S×175.10W, h35km, mb4.3/5, Error ellipse: s-maj=56.7km s-min=12.6km az=154.0*

ISC 29 13:57:09.3±0.9, 156S±04×1751W±02, h35km, n9, σ0°64/9, mb4.4/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.67**	**62**	Pn	**Pn**	**13 58 03.6**	**0.0**
CTAO	**Charters Tower**	**36.97**	**257**	P	**P**	**14 04 14.8**	**-0.7**
	12nm,1.1s,mb4.6						
TAU	**Tasmania Unive**	**42.02**	**222**	*e*P	**P**	**14 04 57.6**	**+0.2**
	7.3nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**42.48**	**240**	P	**P**	**14 05 01.7**	**+0.4**
	2.2nm,0.4s,mb4.1,baz=85,slow=9.7,SNR=13						
STKA	**Stephens Creek**	**42.48**	**240**	*e*P	**P**	**14 04 59.7**	**-1.6**
	0.6nm,0.7s,mb3.3						
WRAB	**Tennant Creek**	**48.16**	**257**	*e*P	**P**	**14 05 46.7**	**+0.2**
	1.3nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**48.17**	**257**	P	**P**	**14 05 47.4**	**+0.8**
	1.0nm,0.3s,mb4.3,baz=94,slow=7.3,SNR=64						
ASAR	**Alice Springs**	**48.46**	**252**	P	**P**	**14 05 49.4**	**+0.6**
	8.7nm,0.4s,mb5.1,baz=88,slow=8.9,SNR=271						
ASAR				PcP	PcP	14 07 18.2	+3.5
	0.2nm,0.4s,baz=96,slow=4.3,SNR=4.6						
MBWA	**Marble Bar**	**61.70**	**254**	*e*P	**P**	**14 07 23.9**	**-0.6**
	0.9nm,0.3s,mb4.4						

ISK ***29*** *14:05:48.9, 4000N×3895E, h5km, ML4.1*
CSEM ***29*** *14:05:48.9±0.1, 3999N×3896E, h2km, MD3.9, Error ellipse: s-maj=1.8km s-min=1.3km az=47.0*
IDC ***29*** *14:05:49.2±1.7, 3998N×3894E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/20, Error ellipse: s-maj=29.7km s-min=18.5km az=168.0*
NEIC ***29*** *14:05:49.1, 4000N×3895E, h3km, mb3.8/2, ML4.0(ISK), After ISK.*
ISCJB ***29*** *14:05:50.3±0.2, 4003N±002×3896E±003, h10km, mb3.4/2, MS3.3/2, Error ellipse: s-maj=3.1km s-min=2.6km az=159.4*
MOS ***29*** *14:05:50.3±1.8, 4006N×3885E, h14km, mb4.0/1, Error ellipse: s-maj=12.3km s-min=8.3km az=109.1*
DDA ***29*** *14:05:51.0, 3990N×3887E, h9km±3km, Md3.9*

ISC 29 14:05:51.4±0.2, 4001N±002×3898E±003, h10km, n92, σ1°35/109, mb3.4/2, MS3.3/2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	**0.59**	**41**	PG	**Pg**	**14 06 01.5**	**-1.3**
EZC	**Erzincan**	**0.70**	**112**	PG	Px	14 05 57.5	
EZC	**Erzincan**	**0.70**	**112**	Pg	Px	14 05 57.5	
KEMA	**Kemaliye**	**0.83**	**207**	*i* P	**Pg**	**14 06 04.7**	**-2.7**
KEMA				*i* S	**Sg**	**14 06 16.1**	**-2.2**
ESPY	**Espiye-Giresun**	**0.92**	**348**	PG	**Pg**	**14 06 07.6**	**-1.6**
KTUT	**Trabzon**	**1.14**	**32**	PN	**Pg**	**14 06 11.6**	**-1.8**
PTK	**Pertek**	**1.17**	**164**	PN	**Pg**	**14 06 12.3**	**-1.5**
PTK	**Pertek**	**1.17**	**164**	*i* Pn	**Pg**	**14 06 12.3**	**-1.5**
PTK				Sg	**Sg**	**14 06 27.9**	**-1.0**
PTK	**Pertek**	**1.17**	**164**	Pn	**Pg**	**14 06 10.9**	**-2.9**
PTK				Sg	**Sg**	**14 06 27.9**	**-1.0**
KOPT	**Kop Dagi**	**1.17**	**89**	*i* P	**Pb**	**14 06 11.6**	**-2.1**
KOPT				*i* S	**Sn**	**14 06 33.5**	**+3.7**
DARE	**Darende-Malaty**	**1.40**	**221**	*e*PN	Px	14 06 22.5	
ELZG	**Elazig**	**1.51**	**180**	*i* P	**Pn**	**14 06 16.8**	**-1.7**
ELZG				*i* S	**Sn**	**14 06 37.1**	**-1.2**
SVSK	**Karacayir**	**1.52**	**267**	PN	**Pn**	**14 06 17.1**	**-1.6**
SVRC	**Sivrice-ELAZID**	**1.65**	**171**	*e*PN	**Pn**	**14 06 20.0**	**-0.5**
MYA	**Malataya**	**1.74**	**194**	*e*PN	**Pn**	**14 06 20.7**	**-0.9**
MALT	**Malatya**	**1.75**	**194**	*e*PN	**Pn**	**14 06 20.9**	**-0.9**
MALT				*e*SN	**Sn**	**14 06 43.8**	**-0.3**
MALT	**Malatya**	**1.75**	**194**	*e*Pn	**Pn**	**14 06 20.5**	**-1.3**
MALT				*e*Sn	**Sn**	**14 06 42.2**	**-1.9**
EZM	**Erzurum**	**1.84**	**93**	*e*PN	**Pn**	**14 06 23.0**	**0.0**
PZAR	**Pazar-Rize**	**1.87**	**51**	*e*PN	**Pn**	**14 06 23.9**	**+0.5**
TOKT	**Tokat**	**1.89**	**280**	*e*PN	**Pn**	**14 06 23.2**	**-0.5**
AKCD	**Akcadag**	**1.90**	**206**	*i* P	**Pn**	**14 06 23.3**	**-0.6**
AKCD				*i* S	**Sn**	**14 06 49.6**	**+1.8**
BNGL	**BINGOL**	**1.99**	**122**	*i* P	**Pn**	**14 06 28.1**	**+3.0**
BNGL				*i* S	**Sn**	**14 06 53.1**	**+3.1**
SARI	**SarD1z-Kayseri**	**2.21**	**234**	*e*PN	**Pn**	**14 06 32.8**	**+4.7**
HOMI	**Horasan**	**2.25**	**88**	*i* P	**Pn**	**14 06 26.8**	**-1.9**
HOMI				*i* S	Sx	14 07 11.2	
DIYA	**Diyarbakir**	**2.27**	**156**	*i* P	**Pn**	**14 06 31.6**	**+2.7**
DIYA				*i* S	**Sn**	**14 06 57.4**	**+0.5**
DIY	**Diyarbakir**	**2.33**	**155**	*e*PN	**Pn**	**14 06 29.9**	**+0.1**
BCA	**Borcka**	**2.47**	**54**	*e*PN	**Pn**	**14 06 32.4**	**+0.8**
KVT	**Kavak**	**2.47**	**296**	*e*PN	**Pn**	**14 06 31.9**	**+0.2**
URFA	**Urfa**	**2.57**	**183**	*e*PN	**Pn**	**14 06 33.1**	**0.0**
ATAB	**Bozova**	**2.60**	**192**	*i* P	**Pn**	**14 06 38.9**	**+5.5**
ATAB				*i* S	**Sn**	**14 07 08.5**	**+3.5**
BNN	**Bunyan**	**2.69**	**245**	*e*PN	**Pn**	**14 06 34.4**	**-0.3**
BEST	**Besiri**	**2.77**	**139**	*i* P	**Pg**	**14 06 40.6**	**-3.9**
BEST				*i* S	**Sg**	**14 07 27.2**	**+6.7**
YOZ	**Yozgat**	**2.84**	**264**	*e*PN	**Pn**	**14 06 36.7**	**0.0**
KMRS	**Kahramanmaras**	**2.98**	**214**	*e*PN	**Pn**	**14 06 38.9**	**+0.1**
MARD	**Mardin**	**3.04**	**152**	*i* P	**Pn**	**14 06 43.7**	**+4.1**
AGRB	**Hanur-Agry**	**3.12**	**97**	*e*PN	**Pn**	**14 06 41.3**	**+0.6**
GAZ	**Gaziantep**	**3.16**	**207**	*e*PN	**Pn**	**14 06 41.3**	**+0.2**
GAZ	**Gaziantep**	**3.16**	**207**	Pn	**Pn**	**14 06 42.2**	**+1.1**
KARS	**Kars**	**3.20**	**78**	*e*PN	**Pn**	**14 06 43.4**	**+1.7**
KARS	**Kars**	**3.20**	**78**	Pn	**Pn**	**14 06 43.4**	**+1.6**
DIKM	**Dikmen**	**3.26**	**301**	*e*PN	**Pn**	**14 06 43.1**	**+0.6**
CORM	**Corum**	**3.34**	**274**	*e*PN	**Pn**	**14 06 43.6**	**0.0**
BYBT	**Boyabat**	**3.51**	**296**	*e*PN	**Pn**	**14 06 46.4**	**+0.4**
KOZT	**Kozan**	**3.53**	**225**	*e*PN	**Pn**	**14 06 46.7**	**+0.4**
NIG	**Nigde**	**3.89**	**242**	*e*PN	**Pn**	**14 06 52.5**	**+1.3**
TOS	**Tosya**	**3.91**	**287**	*e*PN	**Pn**	**14 06 51.8**	**+0.3**
CLDR	**Caldiran**	**3.92**	**101**	*e*PN	**Pn**	**14 06 52.5**	**+0.9**
CLDR	**Caldiran**	**3.92**	**101**	Pn	**Pn**	**14 06 54.1**	**+2.5**
CEYT	**Ceyhan**	**3.92**	**221**	*e*PN	**Pn**	**14 06 53.0**	**+1.3**
KAMT	**Kaman**	**4.11**	**263**	*e*PN	**Pn**	**14 06 55.6**	**+1.4**
BR131	**Keskin Array S**	**4.12**	**268**	*e*Pn	**Pn**	**14 06 53.9**	**-0.4**
BR131	**Keskin Array S**	**4.12**	**268**	*e*Pn	**Pn**	**14 06 53.9**	**-0.4**
BRTR	**Keskin Array B**	**4.12**	**268**	Pn	**Pn**	**14 06 54.5**	**+0.1**
BRTR	3.6nm,0.3s,baz=92,slow=13,SNR=54			Pg	**Pg**	**14 07 04.3**	**-6.0**
BRTR	6.6nm,0.3s,baz=105,slow=16,SNR=27			Lg		14 08 01.2	
BRTR	5.1nm,0.3s,baz=95,slow=32,SNR=13			Lg		14 08 01.2	
BRTR	**Keskin Array B**	**4.12**	**268**	Pg	**Pg**	**14 07 04.3**	**-5.9**
BRTR	**Keskin Array B**	**4.12**	**268**	Pn	**Pn**	**14 06 54.5**	**+0.1**
BRTR				Pg	**Pg**	**14 07 04.3**	**-6.0**
BRTR				Lg		14 08 01.2	
KARA	**Karaisali**	**4.12**	**229**	*e*PN	**Pn**	**14 06 54.6**	**+0.2**
CANT	**Cankiri**	**4.14**	**280**	*e*PN	**Pn**	**14 06 55.5**	**+0.9**
BZK	**Bozkurt**	**4.24**	**299**	*e*PN	**Pn**	**14 06 57.2**	**+1.3**
ONI	**Oni**	**4.24**	**51**	P	**Pn**	**14 06 55.9**	**-0.1**
GORI	**Gori**	**4.36**	**61**	P	**Pg**	**14 07 09.4**	**-5.4**
GNI	**Garni**	**4.42**	**86**	*e*PN	**Pn**	**14 07 00.7**	**+2.1**
GNI	**Garni**	**4.42**	**86**	Pn	**Pn**	**14 07 00.7**	**+2.1**
CUKT	**Cukurca**	**4.56**	**126**	*e*PN	**Pn**	**14 07 01.9**	**+1.5**
TBLG	**Delisi**	**4.69**	**67**	*e*P	**Pg**	**14 07 15.3**	**-6.0**
TBLG	**Delisi**	**4.69**	**67**	P	**Pg**	**14 07 15.2**	**-6.0**
MERS	**Mersin**	**4.70**	**229**	*e*PN	**Pn**	**14 07 03.8**	**+1.4**
MTA	**Mtatsminda**	**4.72**	**67**	P	**Pg**	**14 07 15.9**	**-5.9**
KIV	**Kislovodsk**	**4.81**	**34**	*e*P	**Pn**	**14 07 05.9**	**+2.0**
KIV				*e*S	**Sn**	**14 08 05.5**	**+5.9**
KIV	comp=Z,11nm,0.8s			pmax	pmax		
KIV	comp=N,22nm,0.9s			smax			
KIV	**Kislovodsk**	**4.81**	**34**	*e*Pn	**Pn**	**14 07 02.8**	**-1.1**
KIV				*e*Sn	**Sn**	**14 07 59.1**	**-0.5**
KIV	**Kislovodsk**	**4.81**	**34**	*e*Pn	**Pn**	**14 07 02.8**	**-1.1**
KIV				*e*Sn	**Sn**	**14 07 59.1**	**-0.6**
MSL	**Mosul**	**4.86**	**137**	*e*P	**Pg**	**14 07 20.0**	**-4.5**
MSL				*e*S	**Sg**	**14 08 32.0**	**+4.6**
SAFT	**Safranbolu**	**4.94**	**286**	*e*PN	**Pn**	**14 07 06.8**	**+1.2**
DGRG	**David-gareji**	**5.07**	**71**	P	**Pn**	**14 07 12.3**	**+4.9**
KIZT	**Kizilcal**	**5.61**	**261**	*e*PN	**Pn**	**14 07 15.5**	**+0.7**
SUDU	**Sudak**	**5.69**	**330**	*e*P	**Pn**	**14 07 14.3**	**-1.6**
SUDU				*i* S	**Sn**	**14 08 22.6**	**+1.3**
YAL	**Yalta**	**5.72**	**323**	*e*P	**Pn**	**14 07 17.5**	**+1.1**
YAL				*e*S	**Sn**	**14 08 26.5**	**+4.4**
ALU	**Alushta**	**5.76**	**326**	*e*P	**Pn**	**14 07 19.4**	**+2.5**
ALU				*e*S	**Sn**	**14 08 21.3**	**-1.8**
MDU	**Mudurnu**	**5.96**	**277**	*e*PN	**Pn**	**14 07 21.4**	**+1.8**
SEV	**Sevastopol'**	**6.00**	**321**	*e*P	**Pn**	**14 07 19.3**	**-0.9**
SEV				*e*S	**Sn**	**14 08 29.4**	**+0.5**
BUR08	**Bucovina Ar. S**	**12.52**	**312**	*e*Pn	**Pn**	**14 08 46.6**	**-2.9**
AKASG	**Malin Array Be**	**12.68**	**331**	Pn	**Pn**	**14 08 48.4**	**-3.3**
	comp=N,3.4nm,0.3s,baz=132,slow=14,SNR=7.1						
PSZ	**Piszkesteto**	**15.82**	**306**	*e*P	**Pn**	**14 09 32.5**	**-1.6**
PSZ	comp=Z,6.0nm,1.0s			pmax	pmax		
PSZ	**Piszkesteto**	**15.82**	**306**	*e*Pn	**Pn**	**14 09 32.5**	**-1.6**
	comp=Z,5.9nm,1.0s						
PSZ	**Piszkesteto**	**15.82**	**306**	*e*Pn	**Pn**	**14 09 32.5**	**-1.6**
	comp=Z,5.9nm,1.0s						
GERES	**GERESS Array B**	**20.02**	**305**	P	**P**	**14 10 24.4**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=101,slow=9.1,SNR=2.4						
ARU	**Arti**	**20.86**	**32**	*e*P	**P**	**14 10 31.0**	**-2.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	**Arti**	**20.86**	**32**	*e*P	**P**	**14 10 31.0**	**-2.2**
	comp=Z,6.6nm,1.0s						
MKAR	**Makanchi Array**	**31.87**	**63**	P	**P**	**14 12 17.2**	**+0.7**
	comp=Z,0.5nm,0.8s,mb3.4,baz=280,slow=8.6,SNR=2.3						
MDT	**Midelt**	**35.53**	**272**	LR	LR	14 27 29.6	
	comp=Z,44nm,19.9s,MS3.2,baz=357,slow=37						
TORD	**Torodi Ar. Bea**	**42.27**	**241**	P	**P**	**14 13 42.7**	**-2.4**
	comp=Z,0.7nm,0.8s,mb3.3,baz=44,slow=6.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**42.27**	**241**	P	**P**	**14 13 42.7**	**-2.4**
SONM	**Songino Array**	**47.78**	**57**	LR	LR	14 38 55.4	
	comp=Z,39nm,18.2s,MS3.4,baz=211,slow=42						

NEIC ***29*** *14:07:23.0, 2011S×6989W, h36km±1km, mb4.0/9, After GUC. NEIC Felt at Iquique.*

GUC 29 14:07:23.0±0.6, 2011S×6989W, h36km±1km, mL4.0, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberston**	**0.17**	**179**	*e*P	Pn	14 07 29.3	-0.4
HMBC				*i* S	Sn	14 07 33.8	-0.4
HMBC				AML	AML	14 07 34.1	
	comp=E,40μm,0.2s						
PB01	**Plate Boundary**	**1.01**	**158**	⇓*i* P	Pn	14 07 41.0	+0.3
PB01				*i* S	Sn	14 07 54.5	+0.9
PB01				AML	AML	14 07 56.5	
	comp=N,5μm,0.1s						
MNMC	**Miaee Miae**	**1.01**	**16**	⇓*i* P	Pn	14 07 40.8	+0.2
MNMC				*i* S	Sn	14 07 54.4	+0.8
MNMC				AML	AML	14 07 54.9	
	comp=E,9μm,0.8s						
MACH	**Maria Elena**	**2.08**	**177**	*i* P	Pn	14 07 57.9	+2.5
MACH				*i* S	Sn	14 08 24.3	+4.1
PB04	**Plate Boundary**	**2.18**	**170**	⇑*i* P	Pn	14 07 58.6	+1.8
PB04				*i* S	Sn	14 08 25.2	+2.6
PB04				AML	AML	14 08 39.4	
	comp=N,918nm,0.6s						
PECH	**Pedro de Valdi**	**2.49**	**175**	*e*P	Pn	14 08 03.0	+2.0
PECH				AML	AML	14 08 48.0	
	comp=E,962nm,0.6s						
LVC	**Limon Verde**	**2.66**	**160**	*e*Pn	Pn	14 08 06.3	+3.0
LVC				*e*Sn	Sn	14 08 41.3	+7.0
LVC	**Limon Verde**	**2.66**	**160**	⇑*i* P	Pn	14 08 06.3	+3.0
LVC				*i* S	Sn	14 08 38.5	+4.2
ARE	**Arequipa**	**3.93**	**337**	*e*P	Pn	14 08 22.0	+1.1
ARE				*e*S	Sn	14 09 15.0	+9.2
PLCA	**Paso Flores**	**20.57**	**181**	P	P	14 11 56.4	-2.2
	comp=E,4.1nm,1.1s						
SDV	**Santo Domingo**	**28.82**	**358**	P	P	14 13 16.7	-1.3
	comp=E,4.6nm,1.1s						

NEIC ***29*** *14:13:34.3±2.0, 2553S×17874W, h525km±18km, mb4.3/5, Error ellipse: s-maj=47.9km s-min=24.3km az=205.0*
ISCJB ***29*** *14:13:35.5±1.5, 259S±03×1790W±02, h527km±16km, mb3.8/11, Error ellipse: s-maj=40.9km s-min=23.5km az=11.7*
IDC ***29*** *14:13:40.3±3.8, 2339S×17988W, h492km±36km, mb3.2/6, mb1 3.5/6, mb1mx3.2/17, mbtmp3.2/6, Error ellipse: s-maj=96.4km s-min=24.4km az=160.0*

ISC 29 14:13:36.3±1.6, 259S±03×1790W±02, h527km±16km, n14, σ1°19/13, mb3.8/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.50**	**165**	*e*P	**P**	**14 14 52.7**	**-0.1**
EIDS	**Eidsvold**	**26.98**	**264**	*e*P	**P**	**14 18 36.6**	**+0.8**
	0.7nm,0.3s,mb3.8						
CTA	**Charters Tower**	**32.46**	**273**	P	**P**	**14 19 22.9**	**-0.4**
	7.7nm,0.4s,mb4.6,baz=95,slow=11,SNR=18						
CTAO	**Charters Tower**	**32.46**	**273**	*e*P	**P**	**14 19 21.1**	**-2.2**
	9.0nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**34.91**	**251**	P	**P**	**14 19 51.0**	**+7.2**
	2.0nm,0.9s,mb3.6,baz=81,slow=9.6,SNR=4.7						
ASAR	**Alice Springs**	**42.67**	**262**	P	**P**	**14 20 49.3**	**+2.6**
	1.2nm,0.5s,mb3.7,baz=93

Ms1 3.2/1, ms1mx2.4/17, Error ellipse: s-maj=27.5km s-min=17.2km az=133.0

ISC 29 14:40:49.9±1.1, 4696N±009×1526E±01, h63km±10km, n44, σ1$05/45, mb3.8/12, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.38**	**30**	*e*PN	**Pn**	**14 42 05.6**	**+12**
SKR				*e*S	**Sn**	**14 42 41.8**	**-1.7**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,50nm,0.5s						
SKR				smax			
	comp=E,60nm,0.5s						
SKR				smax			
	comp=Z,70nm,0.2s						
YSS	**Yuzh-Sakhalins**	**6.76**	**274**	⇑*i*PN	**Pn**	**14 42 16.7**	**-10**
PEA0B	**Petropavlovsk-**	**6.96**	**26**	*e*Pn	**Pn**	**14 42 31.0**	**+1.8**
PETK	**Petropavlovsk-**	**6.96**	**26**	P	**Pn**	**14 42 30.6**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=167,slow=11,SNR=12						
PET	**Petropavlovsk**	**7.20**	**30**	⇑*i*PN	**Pn**	**14 42 37.9**	**+5.5**
PET	**Petropavlovsk**	**7.20**	**30**	Pn	**Pn**	**14 42 32.4**	**0.0**
	comp=Z,163nm,2.0s						
ASAJ	**Asahikawa**	**7.60**	**252**	P	**Pn**	**14 42 38.4**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=52,slow=32,SNR=5.6						
ASAJ	**Asahikawa**	**7.60**	**252**	PN	**Pn**	**14 42 38.4**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**8.38**	**237**	⇑*i*PN	**Pn**	**14 42 48.5**	**-0.1**
ERM	**Erimo**	**8.38**	**237**	*e*Pn	**Pn**	**14 42 45.2**	**-3.4**
	comp=Z,164nm,1.6s						
FX1	**Attu Island--F**	**14.47**	**58**	P	**Pn**	**14 44 09.8**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=324,slow=17,SNR=3.5						
FX1				S	**Sn**	**14 46 37.3**	**-13**
	comp=Z,0.5nm,0.3s,baz=52,slow=18,SNR=3.3						
MAJO	**Matsushiro**	**14.95**	**231**	*e*P	**Pn**	**14 44 12.3**	**-5.2**
MAJO				pmax	pmax		
	comp=Z,17nm,1.3s						
MAJO	**Matsushiro**	**14.95**	**231**	*e*Pn	**Pn**	**14 44 12.3**	**-5.2**
	comp=Z,18nm,1.3s						
YAK	**Yakutsk**	**19.96**	**327**	⇓*i*P	**P**	**14 45 15.1**	**-1.5**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSRS	**Korea Array**	**20.55**	**251**	P	**P**	**14 45 23.4**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=51,slow=9.6,SNR=2.9						
KSRS	**Korea Array**	**20.55**	**251**	P	**P**	**14 45 23.4**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KS15	**Wonju Array Si**	**20.58**	**251**	*e*P	**P**	**14 45 19.1**	**-4.5**
PMR	**Palmer**	**35.68**	**44**	P	**P**	**14 47 42.8**	**+1.1**
	comp=Z,167nm,2.4s						
COLA	**College**	**36.18**	**39**	*e*P	**P**	**14 47 43.9**	**-2.0**
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
COLA	**College**	**36.18**	**39**	*e*P	**P**	**14 47 43.9**	**-2.0**
	comp=Z,2.2nm,1.0s,mb4.0						
ZALV	**Zalesovo Beam**	**42.22**	**305**	LR	LR	15 08 15.0	
	comp=Z,28nm,20.0s,baz=79,slow=39						
MK31	**Makanchi Array**	**46.55**	**297**	P	**P**	**14 49 10.4**	**-0.6**
MKAR	**Makanchi Array**	**46.55**	**297**	P	**P**	**14 49 11.1**	**+0.1**
	comp=Z,0.6nm,1.1s,mb3.5,baz=62,slow=7.0,SNR=4.8						
MKAR	**Makanchi Array**	**46.55**	**297**	P	**P**	**14 49 11.1**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**46.55**	**297**	P	**P**	**14 49 11.1**	**0.0**
YKA	**Yellowknife Ar**	**50.95**	**37**	P	**P**	**14 49 45.7**	**+1.1**
	comp=Z,0.1nm,0.5s,mb3.0,baz=296,slow=6.7,SNR=2.7						
YKA	**Yellowknife Ar**	**50.95**	**37**	P	**P**	**14 49 45.6**	**+1.1**
CMAR	**Chiang Mai Arr**	**52.10**	**256**	P	**P**	**14 49 54.0**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.4,baz=45,slow=6.8,SNR=4.3						
AAK	**Ala-Archa**	**53.44**	**296**	P	**P**	**14 50 04.4**	**+1.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
AAK	**Ala-Archa**	**53.44**	**296**	P	**P**	**14 50 04.4**	**+1.1**
	comp=Z,0.8nm,0.4s,mb4.0						
FCC	**Fort Churchill**	**61.27**	**33**	*e*P	**P**	**14 50 58.0**	**-0.1**
BOZ	**Bozeman (W)**	**61.89**	**52**	*e*P	**P**	**14 51 03.3**	**+0.8**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
BOZ	**Bozeman (W)**	**61.89**	**52**	*e*P	**P**	**14 51 03.3**	**+0.8**
	comp=Z,2.5nm,0.7s,mb4.5						
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**14 51 41.2**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=27,slow=6.4,SNR=3.8						
NOA	**NORSAR Array B**	**67.92**	**341**	*e*P	**P**	**14 51 43.5**	**+2.1**
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**14 51 41.2**	**-0.2**
WRA	**Warramunga Arr**	**68.61**	**198**	P	**P**	**14 51 45.1**	**-1.0**
	comp=Z,0.5nm,0.9s,mb3.4,baz=14,slow=6.4,SNR=2.8						
WRA	**Warramunga Arr**	**68.61**	**198**	P	**P**	**14 51 45.1**	**-1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	**Kislovodsk**	**70.41**	**314**	*e*P	**P**	**14 51 56.3**	**-0.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
KIV	**Kislovodsk**	**70.41**	**314**	*e*P	**P**	**14 51 56.3**	**-0.8**
	comp=Z,4.3nm,0.4s,mb4.7						
AKASG	**Malin Array Be**	**71.19**	**326**	P	**P**	**14 52 01.8**	**+0.1**
	comp=Z,0.7nm,0.3s,mb4.0,baz=38,slow=6.0,SNR=3.7						
AKASG	**Malin Array Be**	**71.19**	**326**	P	**P**	**14 52 01.8**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**72.31**	**198**	P	**P**	**14 52 08.3**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=14,slow=6.2,SNR=6.9						
TXAR	**Lajitas Array**	**77.68**	**60**	P	**P**	**14 52 40.4**	**+0.6**
	comp=Z,0.3nm,0.8s,mb3.3,baz=289,slow=2.8,SNR=2.9						

NEIC 29 14:44:44.4±4.4, 1573S×174.32W, h35km, mb4.3/3, Error ellipse: s-maj=90.0km s-min=19.5km az=76.0

IDC 29 14:45:05.8±52.0, 1637S×177.67W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/17, mbtmp4.3/3, Error ellipse: s-maj=963.9km s-min=149.1km az=77.0

ISC 29 14:44:43.8±5.2, 157S±02×1742W±07, h35km, n10, σ0$74/10, mb4.4/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**13.92**	**194**	*e*Pn	**Pn**	**14 47 58.5**	**-0.1**
	237nm,0.4s						
CTAO	**Charters Tower**	**37.82**	**257**	P	**P**	**14 51 56.0**	**-1.2**
	2.7nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**43.22**	**240**	P	**P**	**14 52 42.5**	**+0.8**
	1.7nm,0.4s,mb4.1,baz=90,slow=11,SNR=11						
STKA	**Stephens Creek**	**43.22**	**240**	*e*P	**P**	**14 52 39.9**	**-1.8**
	0.3nm,0.6s						
WB2	**Warramunga Arr**	**49.01**	**257**	*e*P	**P**	**14 53 27.8**	**+0.3**
WRAB	**Tennant Creek**	**49.01**	**257**	*e*P	**P**	**14 53 27.5**	**0.0**
	0.7nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**49.02**	**257**	P	**P**	**14 53 28.5**	**+0.9**
	0.8nm,0.3s,mb4.3,baz=92,slow=7.2,SNR=25						
ASAR	**Alice Springs**	**49.28**	**252**	P	**P**	**14 53 30.3**	**+0.8**
	7.1nm,0.5s,mb5.0,baz=88,slow=8.8,SNR=202						
GUMO	**Guam**	**49.84**	**304**	*e*P	**P**	**14 53 33.5**	**-0.3**
	143nm,1.2s						
MBWA	**Marble Bar**	**62.53**	**254**	*e*P	**P**	**14 55 04.5**	**0.0**
	18nm,1.1s,mb5.1						

ISCJB 29 14:52:29.4±0.4, 3681N±002×7170E±004, h105km±5km, mb4.2/39, Error ellipse: s-maj=4.7km s-min=3.2km az=169.6

MOS 29 14:52:30.3±1.2, 3696N×7156E, h101km, mb4.3/22, Error ellipse: s-maj=8.8km s-min=5.7km az=100.8

IDC 29 14:52:30.8±4.0, 3687N×7158E, h99km±36km, mb3.8/17, mb1 4.0/22, mb1mx3.9/30, mbtmp3.9/22, MS3.8/1, Ms1 3.8/1, ms1mx2.6/37, Error ellipse: s-maj=21.7km s-min=12.5km az=22.0

NEIC 29 14:52:31.8±0.8, 3695N×7157E, h101km±8km, mb4.3/20, Error ellipse: s-maj=7.7km s-min=7.3km az=142.0

BJI 29 14:52:31.5, 3696N×7172E, h67km, mb4.4, ML4.6, Ms4.0

NNC 29 14:52:38.5±5.3, 3748N×7115E, h200km±45km, mb3.5, mpv4.9, Error ellipse: s-maj=46.3km s-min=30.4km az=23.0

ISC 29 14:52:31.1±0.3, 3681N±002×7172E±004, h107km±4km, n164, σ1$31/196, mb4.2/39, 12C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.98**	**177**	⇑P	**Pn**	**14 53 19.6**	**+2.9**
CEP				S	**Sn**	**14 53 57.0**	**+5.2**
KBL	**Kabul**	**3.14**	**225**	⇑*i*Pn	**Pn**	**14 53 19.3**	**+0.5**
KBL				*e*Sn	**Sn**	**14 53 55.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.38**	**158**	⇑P	**Pn**	**14 53 26.4**	**+4.3**
KSH	**Kashi**	**4.31**	**50**	*e*P	**Pn**	**14 53 32.3**	**-2.1**
KSH				S	**Sn**	**14 54 18.5**	**-5.1**
KSH				Smax			
	comp=N,3μm,0.5s						
KSH				Smax			
	comp=E,2μm,0.4s						
SBDP	**Sheikh Budin**	**4.56**	**190**	P	**Pn**	**14 53 39.0**	**+1.1**
SARP	**Sargodha**	**4.94**	**171**	⇑P	**Pn**	**14 53 44.5**	**+1.5**
SARP				S	**Sn**	**14 54 38.0**	**-0.9**
THN	**Thein Dam**	**5.46**	**142**	*e*P	**Pn**	**14 53 51.5**	**+1.4**
THN				*e*S	**Sn**	**14 54 51.3**	**-0.4**
DLH	**Dalhousie**	**5.51**	**139**	*e*P	**Pn**	**14 53 58.0**	**+7.3**
DLH				*e*S	**Sn**	**14 54 58.0**	**+5.3**
AML	**Almayashu**	**5.53**	**15**	P	**Pn**	**14 53 51.9**	**+1.0**
	SNR=432						
AML	**Almayashu**	**5.53**	**15**	*e*Sn	**Sn**	**14 54 50.5**	**-2.7**
	comp=E,238nm,0.5s						
UCH	**Uchtor**	**5.83**	**21**	P	**Pn**	**14 53 57.1**	**+2.2**
	SNR=6.7						
UCH	**Uchtor**	**5.83**	**21**	*e*Pn	**Pn**	**14 53 56.6**	**+1.6**
UCH				*e*Sn	**Sn**	**14 54 58.8**	**-1.6**
KZA	**Kyzart**	**5.93**	**26**	P	**Pn**	**14 53 58.3**	**+2.0**
	SNR=37						
EKS2	**Erkin-Say**	**6.06**	**15**	P	**Pn**	**14 53 59.0**	**+1.0**
	SNR=49						
EKS2	**Erkin-Say**	**6.06**	**15**	*e*Pn	**Pn**	**14 53 58.8**	**+0.7**
	comp=E,41nm,0.6s						
EKS2				*e*Sn	**Sn**	**14 54 54.0**	**-12**
AAK	**Ala-Archa**	**6.20**	**19**	⇑*i*PN	**Pn**	**14 54 01.0**	**+1.0**
AAK				pmax	pmax		
	comp=Z,70nm,0.6s						
AAK	**Ala-Archa**	**6.20**	**19**	P	**Pn**	**14 54 01.3**	**+1.3**
	SNR=80						
AAK	**Ala-Archa**	**6.20**	**19**	⇑*i*Pn	**Pn**	**14 54 01.0**	**+1.0**
	comp=Z,70nm,0.6s						
AAK				*e*Sn	**Sn**	**14 55 08.3**	**-1.1**
KBK	**Karagaybulak**	**6.35**	**22**	P	**Pn**	**14 54 03.8**	**+1.8**
	SNR=23						
KK31	**Karatay Array**	**6.36**	**352**	⇓P	**Pn**	**14 54 00.5**	**-1.7**
	comp=Z,68nm,0.3s,baz=182,slow=13,SNR=6.7						
KK31				⇑S	**Sn**	**14 55 07.5**	**-5.7**
	comp=Z,85nm,0.3s,baz=185,slow=22,SNR=9.9						
KK31	**Karatay Array**	**6.36**	**352**	PN	**Pn**	**14 54 00.4**	**-1.7**
KK31				pmax	pmax		
	comp=Z,68nm,0.3s						
ULHL	**Ulahol**	**6.46**	**31**	P	**Pn**	**14 54 05.8**	**+2.3**
	SNR=15						
CHMS	**Chumysh**	**6.61**	**20**	P	**Pn**	**14 54 06.8**	**+1.2**
	SNR=68						
BHK	**Bhakra**	**6.64**	**143**	*e*P	**Pn**	**14 54 07.2**	**+1.2**
BHK				*e*S	**Sn**	**14 55 18.6**	**-1.6**
TKM2	**Tokmak 2**	**6.79**	**25**	⇑P	**Pn**	**14 54 09.5**	**+1.5**
	comp=Z,38nm,0.6s						
TKM2				⇓S	**Sn**	**14 55 25.5**	**+1.6**
	comp=E,56nm,0.9s						
TKM2	**Tokmak 2**	**6.79**	**25**	PN	**Pn**	**14 54 09.5**	**+1.4**
TKM2				S	**Sn**	**14 55 25.4**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,38nm,0.6s						
TKM2				smax			
	comp=N,56nm,1.0s						
TKM2	**Tokmak 2**	**6.79**	**25**	P	**Pn**	**14 54 09.4**	**+1.4**
	SNR=77						
TKM2	**Tokmak 2**	**6.79**	**25**	*e*Pn	**Pn**	**14 54 08.7**	**+0.7**
	comp=N,58nm,0.7s						
TKM2				*e*Sn	**Sn**	**14 55 19.4**	**-4.4**
USP	**Ospenovka**	**6.80**	**17**	P	**Pn**	**14 54 08.3**	**+0.3**
	SNR=50						
SMLA	**Simla**	**7.25**	**140**	*i* P	**Pn**	**14 54 16.1**	**+1.9**
SMLA				*i* S	**Sn**	**14 55 33.7**	**-1.3**
SMLA				*i* S	**Sn**	**14 55 36.1**	**+1.1**
SMLA				*ex*	x	14 55 40.1	
	comp=E,1μm,0.3s						
SMLA				*ex*	x	14 55 43.5	
	comp=N,1μm,0.2s						
KLP	**Kalpa**	**7.54**	**132**	*e*P	**Pn**	**14 54 20.1**	**+1.8**
KLP				*e*S	**Sn**	**14 55 41.0**	**-1.2**
KLP				AML	AML	14 55 45.8	
	comp=E,357nm,0.9s						
KLP				AML	AML	14 55 46.5	
	comp=N,274nm,1.5s						
DDI	**Dehra Dun**	**8.35**	**139**	*e*P	**Pn**	**14 54 30.3**	**+1.0**
DDI				*ex*	x	14 56 07.9	
JOSI	**Joshimath**	**9.02**	**131**	*e*P	**Pn**	**14 54 40.2**	**+1.7**
JOSI				*e*S	**Sn**	**14 56 17.6**	**-0.6**
JOSI				AML	AML	14 56 23.0	
	comp=N,180nm,0.2s						
JOSI				AML	AML	14 56 27.4	
	comp=E,218nm,0.8s						
NDI	**New Delhi**	**9.32**	**149**	*e*P	**Pn**	**14 54 41.0**	**-1.5**
NDI				*e*S	**Sn**	**14 56 20.0**	**-5.6**
KHET	**Khetri**	**9.36**	**157**	*e*P	**Pn**	**14 54 42.1**	**-1.0**
KHET				*e*S	**Sn**	**14 56 23.1**	**-3.4**
AYAN	**Aya Nagar**	**9.47**	**150**	*e*P	**Pn**	**14 54 44.0**	**-0.4**
AYAN				*e*S	**Sn**	**14 56 25.9**	**-3.1**
AYAN				AML	AML	14 56 30.2	
	comp=Z,30nm,0.2s						
KUDL	**Kundal**	**9.53**	**154**	*e*P	**Pn**	**14 54 44.8**	**-0.5**
KUDL				*e*S	**Sn**	**14 56 25.3**	**-5.2**
KUDL				AML	AML	14 56 32.2	
	comp=E,22nm,0.6s						
KUDL				AML	AML	14 56 32.2	
	comp=N,34nm,0.4s						
AGRA	**Agra**	**10.91**	**149**	*e*P	**Pn**	**14 55 04.2**	**+0.2**
AGRA				*e*S	**Sn**	**14 56 58.1**	**-5.8**
MK31	**Makanchi Array**	**12.71**	**35**	P	**Pn**	**14 55 28.0**	**+0.3**
	comp=N,6.1nm,0.7s,baz=225,slow=13,SNR=50						
MK31	**Makanchi Array**	**12.71**	**35**	*i* P	**Pn**	**14 55 28.0**	**+0.3**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	**Makanchi Array**	**12.71**	**35**	*e*Pn	**Pn**	**14 55 27.9**	**+0.3**
MKAR	**Makanchi Array**	**12.71**	**35**	P	**Pn**	**14 55 28.0**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=224,slow=14,SNR=58						
MKAR	**Makanchi Array**	**12.71**	**35**	P	**Pn**	**14 55 28.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**12.71**	**35**	P	**Pn**	**14 55 28.0**	**+0.4**
DANN	**Dangsing**	**13.19**	**126**	*e*P	**Pn**	**14 55 33.5**	**-0.6**
	comp=Z,73nm,0.4s						
KOLN	**Koldanda**	**13.48**	**129**	*e*P	**Pn**	**14 55 37.6**	**-0.4**
	comp=Z,64nm,0.6s						
GKN	**Gorkha**	**13.99**	**125**	*e*P	**Pn**	**14 55 43.0**	**-1.6**
	comp=Z,124nm,0.6s						
WMQ	**Urumqi**	**14.05**	**55**	*e*P	**Pn**	**14 55 49.8**	**+4.7**
WMQ				S	**Sn**	**14 58 21.0**	**+1.2**
KKN	**Kakani**	**14.56**	**124**	*e*P	**Pn**	**14 55 50.6**	**-1.2**
	comp=Z,39nm,0.4s						
DMN	**Daman**	**14.56**	**125**	*e*P	**Pn**	**14 55 51.4**	**-0.5**
	comp=Z,44nm,0.4s						
KURK	**Kurchatov**	**14.76**	**17**	P	**Pn**	**14 55 50.7**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=11						
PKI	**Pulchoki**	**14.79**	**125**	*e*P	**Pn**	**14 55 54.0**	**-0.7**
	comp=Z,45nm,0.4s						
GUN	**Gumba**	**14.88**	**123**	*e*P	**Pn**	**14 55 54.6**	**-1.3**
	comp=Z,160nm,0.5s						
AB31	**Akbulak array**	**15.11**	**329**	P	**Pn**	**14 55 53.2**	**-5.4**
AB31				pmax	pmax		
	comp=Z,16nm,0.5s						
AB09	**Akbulak array**	**15.12**	**329**	⇑P	**Pn**	**14 55 53.7**	**-5.1**
	comp=Z,8.1nm,0.4s						
AB09				⇓S	S	14 58 26.9	-29
	comp=Z,12nm,0.5s						
JIRN	**Jiri**	**15.25**	**123**	*e*P	**Pn**	**14 55 59.7**	**-0.9**
	comp=Z,124nm,0.4s						
VOSK	**Vostochnaya**	**15.93**	**358**	P	**Pn**	**14 56 21.9**	**+13**
VOSK				pmax	pmax		
	comp=Z,12nm,1.5s						
RAMN	**Ramite**	**15.99**	**124**	*e*P	**Pn**	**14 56 08.4**	**-1.4**
	comp=Z,154nm,0.6s						
BVA0	**Borovoye Array**	**16.25**	**357**	P	**Pn**	**14 56 10.2**	**-2.5**
	comp=Z,0.9nm,0.8s,baz=172,slow=9.6,SNR=26						
BVA0				⇑S	**S**	**14 59 00.5**	**-18**
	comp=Z,1.0nm,0.8s,baz=173,slow=23,SNR=4.3						
BVA0	**Borovoye Array**	**16.25**	**357**	*i* P	**Pn**	**14 56 10.1**	**-2.6**
BVA0				*i* S	**S**	**14 59 00.7**	**-18**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVA0				smax			
	comp=N,1.0nm,0.8s						
BVAR	**Borovoye Array**	**16.25**	**357**	P	**Pn**	**14 56 10.7**	**-2.1**
	comp=N,1.1nm,0.3s,baz=166,slow=13,SNR=18						
BVAR				S	**S**	**14 58 59.5**	**-19**
	comp=N,0.5nm,0.3s,baz=172,slow=22,SNR=5.0						
BVAR	**Borovoye Array**	**16.25**	**357**	P	**Pn**	**14 56 10.7**	**-2.0**
BVAR				S	**S**	**14 58 59.5**	**-19**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	**16.28**	**357**	*e*P	**Pn**	**14 56 10.0**	**-3.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	**Borovoye**	**16.28**	**357**	*e*Pn	**Pn**	**14 56 10.0**	**-3.2**
	comp=Z,9.3nm,0.6s						
TAPN	**Taplejung**	**16.49**	**120**	*e*P	**Pn**	**14 56 14.5**	**-1.5**
	comp=Z,24nm,0.3s						
ODAN	**Odare**	**16.58**	**122**	*e*P	**Pn**	**14 56 16.6**	**-0.5**
	comp=Z,106nm,0.6s						
AKTK	**Aktyubinsk**	**16.82**	**328**	P	**Pn**	**14 56 16.7**	**-3.0**
AKTK				S	**S**	**14 59 10.8**	**-16**
AKTO	**Aktyubinsk**	**16.82**	**328**	⇓P	**Pn**	**14 56 16.3**	**-3.4**
	comp=Z,4.4nm,0.8s						
AKTO				⇑S	S	14 59 06.2	-21
	comp=Z,4.4nm,1.1s						
AKTO	**Aktyubinsk**	**16.82**	**328**	P	**Pn**	**14 56 16.7**	**-3.0**
	comp=Z,2.1nm,0.3s,baz=136,slow=13,SNR=34						
AKTO				S	**S**	**14 59 10.8**	**-16**
	comp=Z,0.9nm,0.3s,baz=21,slow=19,SNR=5.8						
AKTO	**Aktyubinsk**	**16.82**	**328**	P	**Pn**	**14 56 16.7**	**-3.1**
AKTO				S	**S**	**14 59 10.8**	**-16**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
LSA	**Lhasa**	**17.71**	**108**	P	**Pn**	**14 56 34.3**	**+3.5**
LSA	**Lhasa**	**17.71**	**108**	*e*P	**Pn**	**14 56 33.5**	**+2.7**
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
LSA	**Lhasa**	**17.71**	**108**	*e*P	**Pn**	**14 56 33.5**	**+2.6**
	comp=Z,19nm,0.7s						
ZAA0	**Zalesovo Array**	**19.40**	**24**	*e*P	**P**	**14 56 48.6**	**+0.2**
ZALV	**Zalesovo Beam**	**19.40**	**24**	P	**P**	**14 56 49.0**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=222,slow=11,SNR=36						
ZALV	**Zalesovo Beam**	**19.40**	**24**	P	**P**	**14 56 49.0**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NVS	**Novosibirsk**	**19.69**	**20**	⇑*i*P	**P**	**14 56 52.4**	**+0.8**
NVS				*e*S	**S**	**15 00 25.3**	**-2.4**
NVS				pmax	pmax		
	comp=Z,11nm,0.9s						
NVS				pmax	pmax		
	comp=N,7.0nm,0.8s						
NVS				smax			
	comp=N,17nm,1.8s						
HYB	**Hyderabad**	**20.23**	**161**	*i* P	**P**	**14 57 01.0**	**+3.3**
HYB				*e*		16 16 30.0	
HYB	**Hyderabad**	**20.23**	**161**	*e*P	**P**	**14 57 01.0**	**+3.3**
SHL	**Shillong**	**20.52**	**117**	*e*P	**P**	**14 57 05.5**	**+4.7**
UMR	**Umm Al-Rimmam**	**21.32**	**257**	*e*P	**P**	**14 57 08.7**	**-0.6**
	baz=257						
UMR				AMb	AMB	14 57 14.2	
	comp=Z,87nm,0.6s,mb5.3,baz=257						
GNI	**Garni**	**21.36**	**287**	P	**P**	**14 57 09.3**	**-0.3**
	comp=Z,11nm,0.5s,mb4.4,baz=63,slow=4.1,SNR=8.8						
GNI	**Garni**	**21.36**	**287**	P	**P**	**14 57 09.3**	**-0.3**
GNI				pmax	pmax		
	comp=Z,11nm,0.5s						
GNI	**Garni**	**21.36**	**287**	*e*P	**P**	**14 57 08.6**	**-1.0**
	comp=Z,18nm,0.8s,mb4.5						
MIB	**Mutribah**	**21.51**	**258**	*e*P	**P**	**14 57 10.7**	**-0.6**
	baz=258						
MIB				AMb	AMB	14 57 16.8	
	comp=Z,81nm,0.7s,mb5.2,baz=258						
ARU	**Arti**	**21.54**	**340**	P	**P**	**14 57 14.0**	**+2.6**
ARU	**Arti**	**21.54**	**340**	*e*P	**P**	**14 57 10.4**	**-1.0**
	comp=Z,10nm,0.9s,mb4.2						
RDF	**Al-Radifah**	**21.73**	**256**	*e*P	**P**	**14 57 13.0**	**-0.7**
	baz=255						
RDF				AMb	AMB	14 57 18.3	
	comp=Z,85nm,1.0s,mb5.0,baz=255						
NAY	**Al-Naaiem**	**21.83**	**257**	*e*P	**P**	**14 57 13.5**	**-1.2**
	baz=256						
NAY				AMb	AMB	14 57 19.8	
	comp=Z,42nm,0.8s,mb4.8,baz=256						
GTA	**Gaotai**	**22.22**	**75**	P	**P**	**14 57 24.3**	**+5.5**
GTA				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.2						
KIV	**Kislovodsk**	**23.16**	**297**	*e*P	**P**	**14 57 27.0**	**-1.0**
KIV				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.3						
KIV	**Kislovodsk**	**23.16**	**297**	*e*P	**P**	**14 57 27.0**	**-1.0**
	comp=Z,12nm,0.8s,mb4.3						
ZAK	**Zakamensk**	**26.35**	**49**	*e*P	**P**	**14 58 00.7**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.6						
MALT	**Malatya**	**26.36**	**283**	*e*P	**P**	**14 57 55.7**	**-1.4**
MALT				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.9						
MALT	**Malatya**	**26.36**	**283**	*e*P	**P**	**14 57 55.7**	**-1.4**
	comp=Z,5.7nm,1.1s,mb3.9						
SONM	**Songino Array**	**27.68**	**56**	P	**P**	**14 58 12.3**	**+3.5**
	comp=Z,0.6nm,0.4s,mb3.5,baz=267,slow=9.0,SNR=12						
SONM	**Songino Array**	**27.68**	**56**	P	**P**	**14 58 12.3**	**+3.5**
SONM				pmax	pm

	comp=Z,1.0nm,0.4s,mb4.0							
HAU	**Haudompre**	**48.20**	**305**	*eP*	**P**	**15 01 02.0**	**+1.5**
	comp=Z,1.2nm,0.4s,mb4.1							
LPG	**La Plagne**	**48.48**	**302**	*eP*	**P**	**15 01 05.1**	**+2.4**
	comp=Z,3.5nm,0.5s,mb4.1							
LPG	**La Plagne**	**48.48**	**302**	*eP*	**P**	**15 01 05.1**	**+2.4**
LPG				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.2							
LPG	**La Plagne**	**48.48**	**302**	*eP*	**P**	**15 01 05.1**	**+2.4**
	comp=Z,1.8nm,0.5s,mb4.2							
LPL	**La Plagne**	**48.49**	**302**	*eP*	**P**	**15 01 04.7**	**+1.9**
MBDF	**Montbardon**	**48.66**	**301**	*eP*	**P**	**15 01 05.3**	**+1.2**
	comp=Z,4.7nm,0.6s,mb4.3							
MBDF	**Montbardon**	**48.66**	**301**	*eP*	**P**	**15 01 05.3**	**+1.2**
MBDF				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
MBDF	**Montbardon**	**48.66**	**301**	*eP*	**P**	**15 01 05.3**	**+1.2**
	comp=Z,2.3nm,0.6s,mb4.3							
FRF	**La Foret Royal**	**49.04**	**299**	*eP*	**P**	**15 01 07.2**	**+0.2**
	comp=Z,2.7nm,0.5s,mb4.1							
FRF	**La Foret Royal**	**49.04**	**299**	*eP*	**P**	**15 01 07.2**	**+0.2**
FRF				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0							
FRF	**La Foret Royal**	**49.04**	**299**	*eP*	**P**	**15 01 07.2**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.2							
KEST	**Kesra**	**49.49**	**289**	P	**P**	**15 01 10.7**	**+0.1**
	comp=Z,3.0nm,1.1s,mb4.2,baz=258,slow=0.7,SNR=7.1							
LOR	**Lormes**	**50.00**	**305**	*eP*	**P**	**15 01 16.9**	**+2.6**
VIVF	**Saint-Julien-l**	**50.07**	**301**	*eP*	**P**	**15 01 15.9**	**+1.1**
	comp=Z,10nm,0.8s,mb4.5							
VIVF	**Saint-Julien-l**	**50.07**	**301**	*eP*	**P**	**15 01 15.9**	**+1.1**
VIVF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
VIVF	**Saint-Julien-l**	**50.07**	**301**	*eP*	**P**	**15 01 15.9**	**+1.1**
	comp=Z,5.2nm,0.8s,mb4.5							
SMF	**Signal de Mont**	**50.17**	**304**	*eP*	**P**	**15 01 15.7**	**+0.2**
	comp=Z,2.7nm,0.4s,mb4.2							
SMF	**Signal de Mont**	**50.17**	**304**	*eP*	**P**	**15 01 15.7**	**+0.2**
SMF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
SMF	**Signal de Mont**	**50.17**	**304**	*eP*	**P**	**15 01 15.7**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.2							
AVF	**Avril sur Loir**	**50.45**	**304**	*eP*	**P**	**15 01 17.6**	**-0.1**
	comp=Z,21nm,1.0s,mb4.7							
AVF	**Avril sur Loir**	**50.45**	**304**	*eP*	**P**	**15 01 17.6**	**-0.1**
AVF				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7							
AVF	**Avril sur Loir**	**50.45**	**304**	*eP*	**P**	**15 01 17.6**	**-0.1**
	comp=Z,11nm,1.0s,mb4.7							
LASF	**Ste Croix**	**50.84**	**301**	*eP*	**P**	**15 01 22.0**	**+1.4**
	comp=Z,9.3nm,0.9s,mb4.5							
BGF	**Bois d'Agland**	**50.85**	**304**	*eP*	**P**	**15 01 21.9**	**+1.2**
	comp=Z,4.4nm,0.5s,mb4.5							
BGF	**Bois d'Agland**	**50.85**	**304**	*eP*	**P**	**15 01 21.9**	**+1.2**
BGF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
BGF	**Bois d'Agland**	**50.85**	**304**	*eP*	**P**	**15 01 21.9**	**+1.2**
	comp=Z,2.2nm,0.5s,mb4.4							
TCF	**Toulx Ste Croi**	**51.35**	**304**	*eP*	**P**	**15 01 24.3**	**-0.1**
EKA	**Eskdalemuir Ar**	**52.47**	**316**	P	**P**	**15 01 32.6**	**0.0**
	comp=Z,3.4nm,1.0s,mb4.3,baz=80,slow=6.4,SNR=4.9							
EKA	**Eskdalemuir Ar**	**52.47**	**316**	P	**P**	**15 01 32.6**	**0.0**
EKA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
ETSF	**Etsaut**	**54.26**	**300**	*eP*	**P**	**15 01 46.0**	**+0.1**
ESDC	**Sonseca Array**	**57.83**	**298**	P	**P**	**15 02 11.2**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=57,slow=8.3,SNR=9.2							
TORD	**Torodi Ar. Bea**	**66.31**	**269**	P	**P**	**15 03 06.7**	**-1.7**
	comp=Z,3.6nm,0.6s,mb4.3,baz=42,slow=5.9,SNR=15							
RES	**Resolute Bay**	**68.44**	**356**	P	**P**	**15 03 19.4**	**-1.4**
	comp=Z,0.4nm,0.3s,mb3.7,baz=186,slow=23,SNR=4.4							
YKA	**Yellowknife Ar**	**80.91**	**3**	P	**P**	**15 04 33.9**	**+0.9**
	comp=Z,1.5nm,0.7s,mb4.0,baz=349,slow=5.4,SNR=33							
YKA				pP	pP	15 05 00.9	+0.5	
	comp=Z,1.0nm,0.6s,baz=349,slow=5.4,SNR=7.2							
YKA	**Yellowknife Ar**	**80.91**	**3**	P	**P**	**15 04 33.9**	**+0.9**
YKA				*PP	pP	15 05 00.9	+0.5	
YKA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
WRA	**Warramunga Arr**	**81.66**	**122**	P	**P**	**15 04 38.7**	**+1.2**
	comp=Z,1.7nm,0.8s,mb4.0,baz=325,slow=4.9,SNR=23							
WRA	**Warramunga Arr**	**81.66**	**122**	P	**P**	**15 04 38.7**	**+1.2**
WRA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ASAR	**Alice Springs**	**83.95**	**125**	P	**P**	**15 04 50.6**	**+1.3**
	comp=Z,1.3nm,0.7s,mb3.9,baz=314,slow=5.1,SNR=26							
ASAR	**Alice Springs**	**83.95**	**125**	P	**P**	**15 04 50.6**	**+1.3**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							

IDC 29 15:22:00.9±17.0**, 035N**×**12608E, h0**km**, mb3.4/3, mb1 3.6/3, mb1mx3.3/17, mbtmp3.5/3, MS3.9/1, Ms1 3.9/1, ms1mx2.8/21, Error ellipse: s-maj=267.8km s-min=174.4km az=160.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.74**	**159**	P	P	15 26 53.9	-0.1
	0.2nm,0.2s,baz=337,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**25.06**	**163**	P	P	15 27 27.8	+0.7
	0.3nm,0.8s,baz=342,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**35.26**	**157**	P	P	15 28 56.8	-0.7
	4.6nm,1.2s,baz=323,slow=10,SNR=3.3						
RPZ	**Rata Peaks**	**59.42**	**143**	LR	LR	15 57 24.3	
	comp=Z,95nm,18.2s,baz=316,slow=36						

*CSEM **29** 15:22:02.6±0.1, 3703N×2824E, h2**km**, MD2.7, Error ellipse: s-maj=2.2km s-min=1.9km az=127.0*
*ISCJB **29** 15:22:03.8±0.6, 3699N±004×2827E±004, h10**km**, Error ellipse: s-maj=5.6km s-min=3.9km az=26.5*
*DDA **29** 15:22:03.3, 3700N×2829E, h7**km**±4**km**, Md3.0*
*ISK **29** 15:22:03.4, 3703N×2827E, h6**km**, MD2.7*
ISC 29 15:22:04.2±0.6**, 3702N**±004×**2828E**±004**, h3**km±6**km**, n14, σ0§81/23, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.12**	**3**	PG	**Pg**	**15 22 06.0**	**-0.5**
YER				*e*SG	**Sg**	**15 22 08.2**	**+0.1**
TURN	**Turunc**	**0.30**	**119**	*i* P	**Pg**	**15 22 09.0**	**-0.9**
TURN				*i* S	**Sg**	**15 22 13.6**	**-0.2**
DALT	**Dalyan (Mudla)**	**0.38**	**130**	*e*PG	**Pg**	**15 22 11.8**	**+0.2**
MLSB	**Milas**	**0.49**	**305**	*e*PG	**Pg**	**15 22 13.3**	**-0.2**
MLSB				*e*SG	**Sg**	**15 22 20.3**	**+0.5**
DAT	**Datca**	**0.63**	**243**	*e*PG	**Pg**	**15 22 15.6**	**-0.6**
BDRM	**Kayabasi**	**0.67**	**274**	*i* P	**Pg**	**15 22 16.3**	**-0.7**
BDRM				*i* S	**Sg**	**15 22 26.2**	**+0.6**
DENT	**Denizli**	**0.95**	**39**	*e*PG	**Pg**	**15 22 21.8**	**-0.6**
GOLH	**Golhisar**	**1.05**	**78**	*i* P	**Pg**	**15 22 27.1**	**+2.7**
GOLH				*i* S	**Sg**	**15 22 46.3**	**+8.4**
GCAM	**G?zelcaml?**	**1.07**	**310**	*i* P	**Pg**	**15 22 25.8**	**+1.0**
GCAM				*i* S	**Sg**	**15 22 39.2**	**+0.4**
AKAS	**Kas**	**1.32**	**126**	*i* P	**Pn**	**15 22 31.2**	**+1.6**
AKAS				*i* S	**Sg**	**15 22 54.5**	**+7.7**
MANT	**Manisa**	**1.49**	**9**	*i* P	**Pn**	**15 22 31.4**	**-0.4**
MANT				*i* S	**Sn**	**15 22 52.6**	**+0.9**
KULA	**Kula-Manisa**	**1.53**	**11**	*e*PN	**Pn**	**15 22 31.7**	**-0.6**
KULA				*e*SN	**Sn**	**15 22 52.4**	**-0.3**
BLCB	**Balcova**	**1.68**	**325**	*e*PN	**Pn**	**15 22 33.7**	**-0.8**
AKS	**Akhisar**	**1.89**	**349**	*e*PN	**Pn**	**15 22 36.6**	**-0.8**

*CSEM **29** 15:48:03.9±0.1, 3963N×2587E, h2**km**, MD3.2, Error ellipse: s-maj=1.7km s-min=1.3km az=18.0*
*ISCJB **29** 15:48:04.3±0.3, 3956N±002×2593E±003, h10**km**, Error ellipse: s-maj=3.5km s-min=2.7km az=162.3*
*THE **29** 15:48:04.2, 3956N×2598E, h5**km**±1**km**, ML3.1/2, Error ellipse: s-maj=1.8km s-min=0.5km az=232.0*
*ISK **29** 15:48:04.3, 3966N×2599E, h5**km**, MD3.2*
ISC 29 15:48:04.9±0.3**, 3956N**±002×**2593E**±003**, h10**km**, n32, σ1§11/43, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.35**	**190**	P	**Pg**	**15 48 11.0**	**-0.9**
SIGR				S	**Sg**	**15 48 16.7**	**+0.1**
EZN	**Ezine**	**0.40**	**49**	PG	**Pg**	**15 48 11.1**	**-1.8**
EZN				SG	**Sg**	**15 48 16.8**	**-1.4**
PRK	**Paraskevi**	**0.41**	**140**	P	**Pg**	**15 48 11.8**	**-1.1**
PRK				S	**Sg**	**15 48 17.7**	**-0.6**
GADA	**Gvkgeada**	**0.63**	**358**	*e*PG	**Pg**	**15 48 15.8**	**-1.3**
GADA				*e*SG	**Sg**	**15 48 24.2**	**-1.3**
LIA	**Limnos Island**	**0.67**	**300**	P	**Pg**	**15 48 17.7**	**-0.2**
LIA				S	**Sg**	**15 48 27.3**	**+0.6**
LOS	**Limnos**	**0.76**	**300**	P	**Pg**	**15 48 19.9**	**+0.4**
LOS				S	**Sg**	**15 48 31.3**	**+1.9**
CHOS	**Chios island**	**1.18**	**175**	P	**Pg**	**15 48 25.3**	**-2.2**
CHOS				S	**Sg**	**15 48 43.0**	**+0.2**
ENEZ	**Enez**	**1.19**	**8**	*e*PN	**Pg**	**15 48 25.9**	**-1.9**
ENEZ				*e*SN	**Sg**	**15 48 42.8**	**-0.3**
ALN	**Alexandroupoli**	**1.34**	**4**	P	**Pn**	**15 48 28.1**	**-1.6**
ALN				S	**Sb**	**15 48 46.7**	**-0.6**
BLCB	**Balcova**	**1.46**	**143**	*e*PN	**Pn**	**15 48 32.9**	**+1.6**
BLCB	**Balcova**	**1.46**	**143**	P	**Pn**	**15 48 30.4**	**-0.9**
BLCB				S	**Sn**	**15 48 49.5**	**-0.9**
BLCB	**Balcova**	**1.46**	**143**	*e*Pn	**Pn**	**15 48 32.9**	**+1.6**
BLCB				S	**Sn**	**15 48 49.5**	**-0.9**
BALB	**Balikesir**	**1.51**	**86**	*e*PN	**Pg**	**15 48 33.3**	**-0.5**
AKS	**Akhisar**	**1.61**	**114**	*e*PN	**Pg**	**15 48 35.6**	**-0.2**
AOS	**Alonnisos**	**1.64**	**257**	P	**Pn**	**15 48 32.6**	**-1.2**
EDC	**Edincik**	**1.68**	**61**	*e*PN	**Pn**	**15 48 34.2**	**-0.1**
BNT	**Bandirma**	**1.72**	**62**	*e*PN	**Pn**	**15 48 36.1**	**+1.2**
PAIG	**Paliouri**	**1.78**	**283**	P	**Pn**	**15 48 35.3**	**-0.4**
TKR	**Tekirdag**	**1.88**	**40**	*e*PN	**Pn**	**15 48 37.5**	**+0.4**
KCT	**Karacabey**	**1.99**	**69**	*e*PN	**Pn**	**15 48 38.8**	**+0.2**
DST	**Dursunbey**	**2.08**	**88**	*e*PN	**Pn**	**15 48 41.6**	**+1.7**
EDRB	**Edirne**	**2.37**	**15**	*e*PN	**Pn**	**15 48 44.4**	**+0.6**
KULA	**Kula-Manisa**	**2.37**	**115**	*e*PN	**Pn**	**15 48 46.1**	**+2.3**
HORT	**Hortiatis**	**2.41**	**296**	P	**Pn**	**15 48 44.0**	**-0.4**
SLVT	**Silivri**	**2.41**	**45**	*e*PN	**Pn**	**15 48 45.8**	**+1.4**
ARMT	**Armutlu**	**2.46**	**65**	*e*PN	**Pn**	**15 48 46.6**	**+1.5**
CTKS	**Kestanelik-??a**	**2.58**	**49**	*e*PN	**Pn**	**15 48 47.0**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.62**	**42**	*e*PN	**Pn**	**15 48 48.4**	**+1.1**
GEMT	**Gemlik**	**2.65**	**70**	*e*PN	**Pn**	**15 48 49.3**	**+1.7**
ISK	**Istanbul-Kandi**	**2.82**	**57**	*e*PN	**Pn**	**15 48 51.6**	**+1.6**
AGG	**Agios Georgios**	**2.85**	**260**	P	**Pn**	**15 48 50.7**	**+0.3**
KLYT	**Kilyos**	**2.91**	**54**	*e*PN	**Pn**	**15 48 52.1**	**+0.8**

*CSEM **29** 15:57:28.4±0.1, 3958N×2598E, h2**km**, MD3.1, Error ellipse: s-maj=2.7km s-min=2.4km az=167.0*
*ISCJB **29** 15:57:29.4±0.5, 3958N±003×2599E±004, h6**km**±5**km**, Error ellipse: s-maj=5.2km s-min=4.1km az=143.3*
*THE **29** 15:57:29.9, 3954N×2597E, h10**km**, ML3.1/2, Error ellipse: s-maj=1.1km s-min=0.4km az=233.0*
*ISK **29** 15:57:33.8, 3994N×2627E, h5**km**, MD3.1*
ISC 29 15:57:29.8±0.5**, 3957N**±003×**2600E**±004**, h7**km±6**km**, n27, σ1§06/35, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZN	**Ezine**	**0.36**	**45**	PG	**Pg**	**15 57 36.9**	**0.0**
SIGR	**SIGRI**	**0.38**	**197**	P	**Pg**	**15 57 36.7**	**-0.4**
SIGR				S	**Sg**	**15 57 41.9**	**-0.1**
PRK	**Paraskevi**	**0.39**	**147**	P	**Pg**	**15 57 37.1**	**-0.2**
PRK				S	**Sg**	**15 57 43.0**	**+0.6**
GADA	**Gvkgeada**	**0.62**	**353**	*e*PG	**Pg**	**15 57 41.7**	**-0.2**
LIA	**Limnos Island**	**0.71**	**298**	P	**Pg**	**15 57 43.5**	**+0.1**
LIA				S	**Sg**	**15 57 53.8**	**+1.1**
LOS	**Limnos**	**0.79**	**297**	P	**Pg**	**15 57 45.6**	**+0.5**
LOS				S	**Sg**	**15 57 56.9**	**+1.5**
ENEZ	**Enez**	**1.17**	**6**	*e*PG	**Pg**	**15 57 49.6**	**-2.7**
CHOS	**Chios island**	**1.18**	**178**	P	**Pg**	**15 57 50.7**	**-1.8**
CHOS				S	**Sg**	**15 58 07.5**	**-0.4**
ALN	**Alexandroupoli**	**1.32**	**2**	P	**Pn**	**15 57 54.0**	**-0.8**
ALN				S	**Sb**	**15 58 12.0**	**-0.2**
BLCB	**Balcova**	**1.44**	**145**	*e*PN	**Pn**	**15 58 04.7**	**+8.4**
BALB	**Balikesir**	**1.46**	**87**	*e*PN	**Pn**	**15 57 58.8**	**+2.2**
BALB				*e*SN	**Sn**	**15 58 16.2**	**+0.3**
EDC	**Edincik**	**1.63**	**61**	*e*PN	**Pn**	**15 57 59.2**	**+0.3**
BNT	**Bandirma**	**1.67**	**61**	*e*PN	**Pn**	**15 57 59.5**	**-0.1**
BNT				*e*SN	**Sn**	**15 58 18.5**	**-2.8**
OUR	**Ouranopolis**	**1.73**	**297**	P	**Pn**	**15 57 59.2**	**-1.1**
TKR	**Tekirdag**	**1.84**	**39**	*e*PN	**Pn**	**15 58 01.1**	**-0.8**
KCT	**Karacabey**	**1.94**	**68**	*e*PN	**Pn**	**15 58 03.8**	**+0.6**
DST	**Dursunbey**	**2.03**	**88**	*e*PN	**Pn**	**15 58 07.0**	**+2.5**
PLG	**Polygyros**	**2.12**	**293**	P	**Pn**	**15 58 04.8**	**-0.9**
KULA	**Kula-Manisa**	**2.33**	**116**	*e*PN	**Pn**	**15 58 13.9**	**+5.4**
EDRB	**Edirne**	**2.34**	**14**	*e*PN	**Pn**	**15 58 08.9**	**+0.1**
SLVT	**Silivri**	**2.37**	**45**	*e*PN	**Pn**	**15 58 07.9**	**-1.1**
ARMT	**Armutlu**	**2.41**	**65**	*e*PN	**Pn**	**15 58 10.2**	**+0.5**
CTKS	**Kestanelik-??a**	**2.54**	**48**	*e*PN	**Pn**	**15 58 11.6**	**+0.2**
CTYL	**Yal??k??y-??at**	**2.58**	**42**	*e*PN	**Pn**	**15 58 11.6**	**-0.4**
GEMT	**Gemlik**	**2.60**	**70**	*e*PN	**Pn**	**15 58 13.9**	**+1.6**
BGKT	**Bogazkoy**	**2.66**	**52**	*e*PN	**Pn**	**15 58 13.0**	**-0.1**
ALT	**Altintas**	**3.23**	**98**	*e*PN	**Pn**	**15 58 24.4**	**+3.5**

MOS 29 15:58:09.3±1.1**, 5262N**×**16356E, h34**km**, mb4.0/1, 3C-1D, Error ellipse: s-maj=45.3km s-min=33.9km az=27.9, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PET	**Petropavlovsk**	**3.00**	**280**	*i* PN	Pn	15 58 56.0	+1.6
YSS	**Yuzh-Sakhalins**	**14.56**	**255**	*i* P	Pn	16 01 33.9	+1.2
YAK	**Yakutsk**	**20.34**	**311**	*i* P	P	16 02 43.9	+1.7
YAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SONM	**Songino Array**	**36.05**	**286**	*e*P	P	16 05 10.5	+3.4
NOA	**NORSAR Array B**	**64.56**	**346**	*e*P	P	16 08 46.2	+3.9
WRAB	**Tennant Creek**	**76.58**	**208**	*i* P	P	16 09 57.8	+1.8

*IDC **29** 16:01:02.4±2.0, 1105N×9193E, h0**km**, mb3.5/5, mb1 3.6/6, mb1mx3.5/21, mbtmp3.4/6, ML3.5/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/24, Error ellipse: s-maj=67.1km s-min=21.4km az=67.0*
*BJI **29** 16:01:02.2, 1049N×9185E, h43**km**, mb3.6*
*NEIC **29** 16:01:07.0±1.0, 1110N×9192E, h35**km**, mb3.8/1, Error ellipse: s-maj=28.0km s-min=13.5km az=69.0*
*ISCJB **29** 16:01:11.3±4.3, 112N±02×923E±02, h81**km**±38**km**, mb3.6/7, Error ellipse: s-maj=43.2km s-min=15.3km az=137.0*
ISC 29 16:01:12.1±3.7**, 112N**±02×**922E**±02**, h72**km±31**km**, n17, σ0§99/16, mb3.6/7, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.68**	**41**	Pn	**Pn**	**16 03 28.0**	**-0.7**
	0.1nm,0.3s,baz=237,slow=15,SNR=2.7						
ODAN	**Odare**	**16.22**	**344**	*e*P	**Pn**	**16 05 00.8**	**+5.2**
	5.1nm,0.4s						
RAMN	**Ramite**	**16.53**	**342**	*e*P	**Pn**	**16 05 04.5**	**+5.1**
TAPN	**Taplejung**	**16.61**	**346**	*e*P	**Pn**	**16 05 01.8**	**+1.4**
	12nm,0.8s						
DMN	**Daman**	**17.63**	**339**	*e*P	**Pn**	**16 05 14.3**	**+1.3**
KOLN	**Koldanda**	**18.36**	**335**	*e*P	**Pn**	**16 05 21.2**	**-0.6**
	8.3nm,0.6s						
LSA	**Lhasa**	**18.42**	**357**	P	**Pn**	**16 05 23.3**	**+0.8**
DANN	**Dangsing**	**18.81**	**336**	*e*P	**Pn**	**16 05 25.7**	**-1.5**
	18nm,0.6s						
MK31	**Makanchi Array**	**36.45**	**348**	*e*P	**P**	**16 08 07.3**	**-2.6**
MKAR	**Makanchi Array**	**36.45**	**348**	P	**P**	**16 08 09.9**	**0.0**
	0.5nm,0.6s,mb3.6,baz=167,slow=7.8,SNR=6.4						
MKAR				LR	LR	16 24 22.7	
	comp=Z,58nm,19.1s,baz=348,slow=38						
SONM	**Songino Array**	**38.39**	**15**	P	**P**	**16 08 26.9**	**+0.6**
	0.3nm,0.6s,mb3.3,baz=196,slow=7.5,SNR=2.7						
KSRS	**Korea Array**	**41.30**	**45**	P	**P**	**16 08 57.3**	**+6.6**
	0.5nm,0.5s,mb3.6,baz=242,slow=8.0,SNR=3.3						
KSRS				LR	LR	16 28 43.9	
	comp=Z,29nm,20.7s,baz=210,slow=40						
ZALV	**Zalesovo Beam**	**43.03**	**354**	P	**P**	**16 09 04.5**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=163,slow=10,SNR=3.0						
WRA	**Warramunga Arr**	**51.73**	**127**	P	**P**	**16 10 12.8**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=299,slow=10.0,SNR=24						
WRAB	**Tennant Creek**	**51.73**	**127**	*e*P	**P**	**16 10 12.1**	**-0.4**
	0.5nm,0.4s,mb3.9						
WRAB				*e*	pP	16 10 26.0	-4.7
ASAR	**Alice Springs**	**53.49**	**131**	P	**P**	**16 10 25.9**	**+0.4**
	0.3nm,0.5s,mb3.6,baz=307,slow=7.4,SNR=14						
PMG	**Port Moresby**	**58.33**	**108**	LR	LR	16 35 28.5	
	comp=Z,19nm,19.5s,baz=88,slow=35						

*ISCJB **29** 16:30:18.9±0.9, 2113S×009×179.1W±0.1, h586**km**±15**km**, mb4.0/12, Error ellipse: s-maj=17.8km s-min=9.8km az=41.6*
*NEIC **29** 16:30:19.5±1.0, 2101S×17905W, h576**km**±16**km**, mb4.3/4, Error ellipse: s-maj=21.1km s-min=11.6km az=153.0*
*IDC **29** 16:30:21.9±1.5, 2126S×17904W, h606**km**±18**km**, mb3.5/10, mb1 3.7/11, mb1mx3.4/20, mbtmp3.5/11, Error ellipse: s-maj=22.4km s-min=12.7km az=161.0*
ISC 29 16:30:22.1±1.4**, 213S**±01×**1791W**±01**, h612**km±18**km**, n23, σ0§87/23, mb4.0/12, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**7.98**	**173**	P	**P**	**16 32 21.2**	**-0.3**
	124nm,0.3s,baz=72,slow=20,SNR=3.5						
AFI	**Afiamalu**	**10.11**	**45**	*e*P	**P**	**16 32 36.0**	**-6.2**
	8.7nm,0.5s						
AFI				*e*S	**S**	**16 34 27.9**	**-9.3**
URZ	**Urewera**	**17.22**	**190**	P	**P**	**16 33 50.6**	**+0.7**
	1.8nm,0.3s,baz=320,slow=3.1,SNR=10						
URZ				S	**S**	**16 36 37.8**	**-1.0**
	0.2nm,0.3s,baz=323,slow=20,SNR=3.0						
CTA	**Charters Tower**	**32.44**	**266**	P	**P**	**16 36 05.4**	**+1.4**
	16nm,0.4s,mb5.0,baz=91,slow=11,SNR=67						
CTA	**Charters Tower**	**32.44**	**266**	*i* P	**P**	**16 36 05.2**	**+1.2**
	13nm,0.4s,mb4.9						
CTAO	**Charters Tower**	**32.44**	**266**	*e*P	**P**	**16 36 04.8**	**+0.8**
	10nm,0.4s,mb4.8						
PMG	**Port Moresby**	**34.57**	**285**	P	**P**	**16 36 21.4**	**-0.6**
	12nm,0.8s,mb4.6,baz=62,slow=7.8,SNR=6.9						
STKA	**Stephens Creek**	**36.55**	**245**	P	**P**	**16 36 38.5**	**+0.4**
	2.2nm,0.5s,mb4.0,baz=80,slow=9.3,SNR=5.5						
STKA	**Stephens Creek**	**36.55**	**245**	*e*P	**P**	**16 36 38.0**	**0.0**
	0.9nm,1.3s,mb3.1						
ASAR	**Alice Springs**	**43.38**	**258**	P	**P**	**16 37 33.3**	**+0.9**
	8.7nm,0.5s,mb4.5,baz=91,slow=7.9,SNR=265						
ASAR				ScP	ScP	16 42 02.9	+2.0
	0.9nm,0.8s,baz=98,slow=4.5,SNR=6.7						
ASAR				S	**S**	**16 43 17.2**	**-0.4**
	0.8nm,0.9s,baz=96,slow=16,SNR=5.0						
WB2	**Warramunga Arr**	**43.51**	**263**	*e*P	**P**	**16 37 33.6**	**+0.1**
WB2	**Warramunga Arr**	**43.51**	**263**	*e*P	**P**	**16 37 33.5**	**0.0**
WRAB	**Tennant Creek**	**43.51**	**263**	*e*P	**P**	**16 37 31.5**	**-2.0**
	3.7nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**43.52**	**263**	P	**P**	**16 37 34.1**	**+0.5**
	5.8nm,0.3s,mb4.6,baz=97,slow=7.5,SNR=182						
WRA				ScP	ScP	16 42 04.2	+2.7
	0.4nm,1.0s,baz=102,slow=5.0,SNR=3.5						
KAKA	**Kakadu**	**47.01**	**272**	*e*P	x	16 38 00.2	
	5.2nm,0.3s						
KAKA	**Kakadu**	**47.01**	**272**	*e*P	x	16 37 59.8	
FITZ	**Fitzroy Crossi**	**51.95**	**263**	*e*P	**P**	**16 38 37.2**	**+1.0**
	8.0nm,0.9s,mb4.0						
YBH	**Yreka Blue Hor**	**81.53**	**39**	P	**P**	**16 41 37.5**	**+0.5**
	1.1nm,0.7s,mb3.5,baz=180,slow=4.0,SNR=3.6						
NVAR	**Mina Array Bea**	**82.28**	**44**	P	**P**	**16 41 40.9**	**0.0**
	0.8nm,0.5s,mb3.5,baz=223,slow=7.5,SNR=7.8						
TXAR	**Lajitas Array**	**88.32**	**58**	P	**P**	**16 42 11.0**	**+0.9**
	0.9nm,0.8s,mb3.6,baz=212,slow=5.6,SNR=9.4						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**16 42 14.1**	**-1.5**
	0.4nm,0.4s,mb3.6,baz=134,slow=2.6,SNR=3.9						
PDAR	**Pinedale Array**	**90.22**	**44**	P	**P**	**16 42 18.1**	**-0.5**
	0.6nm,0.7s,mb3.5,baz=224,slow=3.7,SNR=5.8						
AKASG	**Malin Array Be**	**143.22**	**330**	PKhKP		16 48 44.1	
	0.2nm,0.2s,baz=40,slow=4.1,SNR=5.3						

*IDC **29** 17:12:08.8±1.0, 4651N×153.13E, h0**km**, mb3.6/11, mb1 3.9/14, mb1mx3.7/27, mbtmp3.7/14, ML3.3/3, MS3.4/3, Ms1 3.4/3, ms1mx2.6/43, Error ellipse: s-maj=27.4km s-min=18.6km az=148.0*
*NEIC **29** 17:12:10.4±0.8, 4640N×152.91E, h10**km**, Error

*IDC **29** 17:26:56.1±6.8, 36.39N×7109E, h174km±58km, mb3.3/5, mb1 3.3/10, mb1mx3.1/26, mbtmp3.2/10, Error ellipse: s-maj=45.7km s-min=23.9km az=174.0*
*ISCJB **29** 17:27:00.1±0.5, 3670N±003×7131E±006, h215km±7km, mb3.5/6, Error ellipse: s-maj=7.8km s-min=4.5km az=171.3*
*NEIC **29** 17:27:01.2±1.1, 3666N×7128E, h216km±10km, mb4.0/6, Error ellipse: s-maj=25.4km s-min=11.3km az=132.0*
*NNC **29** 17:27:05.0±6.7, 3744N×7078E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=61.2km s-min=51.8km az=91.0*
*BJI **29** 17:27:06.0, 3705N×7173E, h226km, mb3.8*
ISC 29 17:27:01.1±0.4, 3671N±003×7133E±006, h202km±6km, n42,σ1°47/54, mb3.5/6, 4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.86**	**221**	*e*Pn	**Pn**	**17 27 50.0**	**+0.8**
KBL				*e*Sn	**Sn**	**17 28 25.5**	**-1.3**
KSH	**Kashi**	**4.61**	**51**	P	**Pn**	**17 28 08.5**	**-2.0**
KSH				S	**Sn**	**17 28 58.0**	**-7.2**
KSH				Smax			
	comp=N,132nm,0.3s						
KSH				Smax			
	comp=E,184nm,0.5s						
THN	**Thein Dam**	**5.59**	**138**	*e*P	**Pn**	**17 28 24.2**	**+1.0**
THN				*e*S	**Sn**	**17 29 27.4**	**-0.6**
DLH	**Dalhousie**	**5.65**	**136**	*e*S	**Sn**	**17 29 30.0**	**+0.8**
AML	**Almayashu**	**5.71**	**18**	P	**Pn**	**17 28 26.4**	**+1.8**
	SNR=26						
AML	**Almayashu**	**5.71**	**18**	*e*Pn	**Pn**	**17 28 26.3**	**+1.8**
	comp=E,19nm,0.4s						
AML				*e*Sn	**Sn**	**17 29 29.2**	**-1.5**
UCH	**Uchtor**	**6.03**	**23**	P	**Sn**	**17 29 38.1**	**0.0**
	SNR=13						
UCH	**Uchtor**	**6.03**	**23**	*e*Pn	**Pn**	**17 28 29.6**	**+0.9**
	comp=E,6.2nm,0.6s						
UCH				*e*Sn	**Sn**	**17 29 38.0**	**-0.1**
KZA	**Kyzart**	**6.16**	**28**	P	**Pn**	**17 28 31.9**	**+1.6**
	SNR=7.7						
EKS2	**Erkin-Say**	**6.23**	**17**	P	**Pn**	**17 28 33.4**	**+2.2**
	SNR=5.5						
EKS2	**Erkin-Say**	**6.23**	**17**	*e*Pn	**Pn**	**17 28 32.9**	**+1.6**
	comp=E,4.2nm,0.6s						
EKS2				*e*Sn	**Sn**	**17 29 41.1**	**-1.7**
AAK	**Ala-Archa**	**6.40**	**21**	P	**Pn**	**17 28 35.6**	**+2.2**
	SNR=6.2						
AAK	**Ala-Archa**	**6.40**	**21**	*e*Pn	**Pn**	**17 28 35.2**	**+1.8**
	comp=E,7.4nm,0.6s						
AAK				*e*Sn	**Sn**	**17 29 44.1**	**-2.5**
KK31	**Karatay Array**	**6.42**	**355**	⇓Pn	**Pn**	**17 28 34.4**	**+0.7**
	comp=E,0.2nm,0.2s,baz=175,slow=12,SNR=9.4						
KK31				Sn	**Sn**	**17 29 42.7**	**-4.3**
	comp=E,4.2nm,0.4s,baz=177,slow=22,SNR=14						
KBK	**Karagaybulak**	**6.56**	**24**	P	**Pn**	**17 28 38.2**	**+2.7**
	SNR=8.0						
ULHL	**Ulahol**	**6.70**	**33**	P	**Pn**	**17 28 39.2**	**+1.9**
	SNR=8.5						
USP	**Ospenovka**	**6.98**	**19**	P	**Pn**	**17 28 42.2**	**+1.2**
	SNR=5.7						
TKM2	**Tokmak 2**	**7.01**	**27**	⇓Pn	**Pn**	**17 28 43.2**	**+1.8**
	comp=E,13nm,0.7s						
TKM2				⇓Sn	**Sn**	**17 29 59.2**	**-1.9**
	comp=E,5.6nm,0.9s						
TKM2	**Tokmak 2**	**7.01**	**27**	P	**Pn**	**17 28 43.2**	**+1.8**
	SNR=14						
TKM2	**Tokmak 2**	**7.01**	**27**	*e*Pn	**Pn**	**17 28 43.2**	**+1.8**
	comp=E,14nm,0.6s						
SMLA	**Simla**	**7.38**	**137**	*e*P	**Pn**	**17 28 47.9**	**+1.6**
SMLA				*i* S	**Sn**	**17 30 07.8**	**-2.2**
SMLA				*i* S	**Sn**	**17 30 08.1**	**-1.9**
SMLA				*ex*	x	17 30 10.8	
	comp=N,270nm,0.4s						
SMLA				*ex*	x	17 30 10.8	
	comp=E,366nm,0.3s						
KLP	**Kalpa**	**7.72**	**130**	*e*P	**Pn**	**17 28 53.4**	**+2.7**
KLP				*e*S	**Sn**	**17 30 15.2**	**-2.7**
KLP				AML	AML	17 30 19.4	
	comp=N,101nm,0.7s						
KLP				AML	AML	17 30 20.2	
	comp=E,65nm,0.7s						
JOSI	**Joshimath**	**9.20**	**129**	*e*S	**Sn**	**17 30 48.0**	**-5.1**
JOSI				AML	AML	17 31 00.0	
	comp=E,36nm,0.8s						
JOSI				AML	AML	17 31 03.3	
	comp=N,46nm,0.6s						
KHET	**Khetri**	**9.40**	**155**	*e*S	**Sn**	**17 30 51.4**	**-6.6**
KUDL	**Kundal**	**9.59**	**152**	*e*S	**Sn**	**17 30 55.7**	**-6.7**
MK31	**Makanchi Array**	**12.96**	**36**	*e*Pn	**Pn**	**17 29 55.7**	**-2.2**
MKAR	**Makanchi Array**	**12.96**	**36**	P	**Pn**	**17 29 58.9**	**+1.0**
	comp=N,0.2nm,0.3s,baz=221,slow=8.9,SNR=12						
KURK	**Kurchatov**	**14.95**	**18**	P	**Pn**	**17 30 20.6**	**-1.8**
	comp=N,0.1nm,0.3s,baz=202,slow=13,SNR=6.6						
AB31	**Akbulak array**	**15.03**	**330**	Pn	**Pn**	**17 30 22.1**	**-1.3**
	comp=N,0.5nm,0.4s,baz=143,slow=12,SNR=29						
BVAR	**Borovoye Array**	**16.32**	**358**	P	**P**	**17 30 38.9**	**+0.7**
	comp=N,0.2nm,0.3s,baz=172,slow=10,SNR=4.7						
AKTK	**Aktyubinsk**	**16.73**	**329**	P	**P**	**17 30 42.8**	**0.0**
AKTO	**Aktyubinsk**	**16.73**	**329**	⇓Pn	**Pn**	**17 30 42.9**	**-1.0**
	comp=N,0.9nm,0.9s						
AKTO	**Aktyubinsk**	**16.73**	**329**	P	**P**	**17 30 42.8**	**0.0**
	comp=N,0.6nm,0.3s,baz=142,slow=9.8,SNR=12						
ZALV	**Zalesovo Beam**	**19.61**	**24**	P	**P**	**17 31 13.9**	**0.0**
	baz=224,slow=10,SNR=2.0						
SONM	**Songino Array**	**27.99**	**56**	P	**P**	**17 32 34.2**	**+1.2**
	comp=N,0.2nm,0.5s,mb3.0,baz=287,slow=10,SNR=2.7						
ULN	**Ulaanbaatar**	**28.44**	**56**	P	**P**	**17 32 31.2**	**-5.7**
	comp=N,1.7nm,0.6s,mb3.9						
ARCES	**ARCESS Array B**	**41.05**	**337**	P	**P**	**17 34 23.9**	**-0.4**
	comp=N,3.1nm,1.0s,mb3.7,baz=116,slow=9.0,SNR=7.6						
NB2	**NORSAR Subarra**	**44.37**	**323**	P	**P**	**17 34 50.0**	**-1.1**
	comp=Z,1.0nm,0.5s,mb3.4,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.37**	**323**	P	**P**	**17 34 49.8**	**-1.3**
	comp=Z,1.4nm,0.5s,mb3.5,baz=96,slow=7.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**17 37 22.7**	**-3.5**
	comp=Z,0.7nm,0.7s,mb3.4,baz=47,slow=5.9,SNR=6.9						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**17 37 22.7**	**-3.5**
YKA	**Yellowknife Ar**	**81.02**	**3**	P	**P**	**17 38 52.6**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.3,baz=347,slow=5.1,SNR=6.4						

*NEIC **29** 17:47:13.8, 2345N×12060E, h13km, ML4.0(TAP), After TAP.*
NEIC Recorded [3 TAP] at Chia-i and [1 TAP] in Kao-hsiung, Nan-t'ou, T'ai-nan and Yun-lin Counties.
TAP 29 17:47:13.8, 2346N×12057E, h9km, ML3.8, 7C-15D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHN4	**Tsaushan**	**0.10**	**170**	⇓*i*P	**Pg**	**17 47 17.1**	**+0.7**
	baz=170						
CHN4				*i* S	Sg	17 47 19.6	+1.5
	baz=170						
CHY	**Chiayi**	**0.14**	**287**	⇑*i*P	**Pg**	**17 47 17.8**	**+0.9**
	baz=288						
CHY				S	Sg	17 47 20.9	+1.8
	baz=288						
TPUB	**Ta-pu**	**0.16**	**161**	*e*Pg	**Pg**	**17 47 17.8**	**+0.5**
TPUB				*e*Sg	Sg	17 47 20.3	+0.6
CHN5	**Tsauling**	**0.17**	**34**	⇓*i*P	**Pg**	**17 47 18.2**	**+0.8**
	baz=42						
TWK	**Hsinying**	**0.20**	**203**	⇓*i*P	**Pg**	**17 47 19.0**	**+1.0**
	baz=203						
TWK				S	Sg	17 47 22.9	+2.1
	baz=203						
WTP	**Ta-pu**	**0.21**	**170**	⇓*i*P	**Pg**	**17 47 19.0**	**+0.9**
	baz=170						
WTP				*e*S	Sg	17 47 22.9	+1.8
	baz=170						
ALS	**Alishan**	**0.22**	**75**	⇑*i*P	**Pg**	**17 47 19.6**	**+1.3**
	baz=85						
ALS				*i* S	Sg	17 47 23.4	+2.1
	baz=85						
WGK	**Gukeng**	**0.23**	**357**	⇓*i*P	**Pg**	**17 47 19.8**	**+1.3**
	baz=357						
WGK				*e*S	Sg	17 47 24.3	+2.6
	baz=357						
CHN1	**Nanshi**	**0.27**	**189**	⇓*i*P	**Pg**	**17 47 20.2**	**+1.0**
	baz=189						
CHN1				S	Sg	17 47 25.0	+2.2
	baz=189						
STYT	**Tauyuan**	**0.34**	**150**	⇑*i*P	**Pg**	**17 47 21.4**	**+1.0**
	baz=150						
STYT				S	Sg	17 47 26.9	+2.0
	baz=150						
CHN8	**Yiju**	**0.35**	**252**	P	**Pg**	**17 47 21.6**	**+1.0**
	baz=252						
CHN8				S	Sg	17 47 28.5	+3.2
	baz=252						
YUS	**Yu-Shan**	**0.35**	**84**	⇑*i*P	**Pg**	**17 47 22.3**	**+1.6**
	baz=85						
YUS				S	Sg	17 47 28.0	+2.7
	baz=85						
WSF	**Szhu**	**0.37**	**300**	⇑*i*P	**Pg**	**17 47 22.1**	**+1.1**
	baz=300						
WSF				S	Sg	17 47 28.5	+2.5
	baz=300						
CHN3	**Shinhua**	**0.42**	**207**	*i* P	**Pg**	**17 47 23.9**	**+1.9**
	baz=219						
CHN3				*e*S	Sg	17 47 32.4	+4.8
	baz=219						
WNT	**Mingjian**	**0.43**	**14**	⇓*i*P	**Pg**	**17 47 23.6**	**+1.4**
	baz=13						
WNT				S	Sg	17 47 30.8	+2.8
	baz=13						
SCLT	**Jiali**	**0.45**	**231**	P	**Pg**	**17 47 23.7**	**+1.2**
	baz=231						
SCLT				*e*S	Sg	17 47 32.1	+3.8
	baz=231						
SSLB	**Suanglung**	**0.48**	**46**	*e*Pg	**Pg**	**17 47 23.3**	**+0.2**
SSLB				*e*Sg	Sg	17 47 31.1	+1.6
ELDTW	**Lidau**	**0.49**	**123**	⇑*i*P	**Pg**	**17 47 24.2**	**+1.0**
	baz=118						
ELDTW				S	Sg	17 47 31.1	+1.5
	baz=118						
WTCT	**Ta-ch'eng**	**0.49**	**327**	*i* P	**Pg**	**17 47 24.1**	**+0.9**
	baz=327						
WTCT				S	Sg	17 47 32.0	+2.4
	baz=327						
TYC	**Yuchr**	**0.52**	**30**	⇓*i*P	**Pg**	**17 47 25.1**	**+1.2**
	baz=29						
TYC				*e*S	Sg	17 47 33.2	+2.5
	baz=29						
SMLT	**Sun Moon Lake**	**0.52**	**35**	⇓*i*P	**Pg**	**17 47 25.1**	**+1.2**
	baz=34						
SMLT				S	Sg	17 47 34.1	+3.4
	baz=34						
TAI1	**Yung-k'ang**	**0.52**	**218**	*e*P	**Pg**	**17 47 25.6**	**+1.7**
	baz=217						
TAI1				*e*S	Sg	17 47 35.0	+4.3
	baz=217						
TWM1	**Shoushan**	**0.64**	**192**	*i* P	**Pg**	**17 47 28.7**	**+2.5**
	baz=177						
YULB	**Yu-li**	**0.67**	**95**	⇓*e*Pg	**Pg**	**17 47 27.1**	**+0.5**
TWF1	**Yuli**	**0.67**	**99**	⇑*i*P	**Pg**	**17 47 27.7**	**+0.9**
	baz=99						
TWF1				*i* S	Sg	17 47 36.9	+1.4
	baz=99						
EHY	**Hungye**	**0.69**	**86**	*i* P	**Pg**	**17 47 28.0**	**+1.0**
	baz=86						
EHY				S	Sg	17 47 37.4	+1.3
	baz=86						
TCU	**Taichung**	**0.70**	**8**	⇓*i*P	**Pg**	**17 47 28.3**	**+1.0**
	baz=7.0						
TCU				*e*S	Sg	17 47 38.3	+1.9
	baz=7.0						
SSD	**Sandimen**	**0.71**	**176**	⇓*i*P	**Pg**	**17 47 28.5**	**+1.1**
	baz=176						
SSD				*e*S	Sg	17 47 39.3	+2.6
	baz=176						
SGLT	**Jiouru**	**0.73**	**186**	*e*P	**Pg**	**17 47 30.0**	**+2.1**
	baz=174						
TWG	**Pinlang**	**0.78**	**144**	*e*Pg	**Pg**	**17 47 29.6**	**+0.8**
TWG				*e*Sg	Sg	17 47 40.4	+1.4
TWG	**Pinlang**	**0.78**	**144**	*i* P	**Pg**	**17 47 29.7**	**+0.9**
	baz=144						
TWG				*e*S	Sg	17 47 41.0	+2.0
	baz=144						
CHKT	**Chengkung**	**0.81**	**116**	*i* P	**Pg**	**17 47 30.8**	**+1.4**
	baz=116						
CHKT				*e*S	Sg	17 47 43.7	+3.8
	baz=116						
ESL	**Shilin**	**0.87**	**65**	*i* P	**Pg**	**17 47 31.3**	**+0.9**
	baz=71						
ESL				*e*S	Sg	17 47 43.3	+1.6
	baz=71						
TTN	**Taitung**	**0.88**	**143**	*e*P	**Pg**	**17 47 31.8**	**+1.2**
	baz=143						
TTN				*e*S	Sg	17 47 45.7	+3.7
	baz=143						
TWQ1	**Liyutan**	**0.91**	**12**	⇓*i*P	**Pg**	**17 47 32.1**	**+0.9**
	baz=11						
TWQ1				S	Sg	17 47 45.2	+2.1
	baz=11						
KAU	**Kaohsiung**	**0.92**	**196**	*e*P	**Pg**	**17 47 32.3**	**+1.0**
	baz=195						
ECL	**Taimali**	**0.92**	**158**	*i* P	**Pg**	**17 47 32.0**	**+0.5**
	baz=151						
ECL				*e*S	Sg	17 47 45.1	+1.6
	baz=151						
WHF	**Hehuan Shan**	**0.94**	**43**	P	**Pg**	**17 47 32.3**	**+0.6**
	baz=42						
WHF				*e*S	Sg	17 47 46.4	+2.5
	baz=42						
PNG	**Penghu**	**0.94**	**277**	*i* P	**Pg**	**17 47 31.3**	**-0.6**
	baz=277						
PNG				S	Sg	17 47 43.9	-0.3
	baz=277						
TWT	**Tachien**	**0.97**	**35**	*e*P	**Pg**	**17 47 32.2**	**-0.2**
	baz=34						
HWA	**Hwalien**	**1.08**	**61**	*e*P	**Pg**	**17 47 35.0**	**+0.5**
	baz=61						
SCZT	**Fangliau**	**1.08**	**178**	P	**Pg**	**17 47 34.9**	**+0.4**
	baz=169						
SCZT				*e*S	Sg	17 47 51.1	+2.6
	baz=169						
EAST	**Anshuo**	**1.10**	**167**	*e*P	**Pg**	**17 47 35.4**	**+0.5**
	baz=167						
TWD	**Chiawan**	**1.12**	**56**	P	**Pb**	**17 47 35.2**	**-0.2**
	baz=56						
TWD				*e*S	Sg	17 47 50.5	+0.5
	baz=56						
TAW	**Tawu**	**1.13**	**165**	*e*P	**Pb**	**17 47 36.1**	**+0.6**
	baz=157						
NACB	**Ninganchiao**	**1.18**	**52**	*e*Pg	**Pg**	**17 47 35.4**	**-1.0**
NACB				*e*Sg	Sg	17 47 51.9	+0.2
NNS	**Nan Shan**	**1.22**	**37**	⇓*i*P	**Pn**	**17 47 36.8**	**-0.2**
	baz=36						
NSTT	**Nanjuang**	**1.23**	**18**	⇓*i*P	**Pn**	**17 47 37.0**	**-0.1**
	baz=18						
NSTT				*e*S	Sb	17 47 54.0	+0.7
	baz=18						
NSK	**Sanguang**	**1.41**	**30**	*e*P	**Pn**	**17 47 40.1**	**+0.5**
	baz=30						
NSK				*e*S	Sn	17 47 58.9	+0.6
	baz=30						
YHNB	**Yeheng**	**1.41**	**31**	*e*Pn	**Pn**	**17 47 39.8**	**+0.2**
ENA	**Nanau**	**1.44**	**48**	*e*P	**Pn**	**17 47 40.5**	**+0.5**
	baz=35						
ENA				*e*S	Sn	17 48 02.6	+3.5
	baz=35						
HEN	**Hengchun**	**1.45**	**174**	*e*P	**Pn**	**17 47 40.5**	**+0.4**
	baz=167						
ENTT	**Nioudou**	**1.49**	**37**	P	**Pn**	**17 47 41.5**	**+0.8**
	baz=28						
ENTT				S	Sn	17 48 03.1	+2.9
	baz=28						
TWK1	**Hengchun**	**1.52**	**172**	*e*P	**Pn**	**17 47 42.5**	**+1.4**
	baz=172						
TWE	**Neicheng**	**1.61**	**38**	P	**Pn**	**17 47 43.8**	**+1.5**
	baz=30						
TWE				*e*S	Sn	17 48 07.8	+4.7
	baz=30						
TWC	**Suao**	**1.64**	**45**	P	**Pn**	**17 47 44.8**	**+2.1**
	baz=45						
TWC				*e*S	Sn	17 48 07.3	+3.4
	baz=45						
LAY	**Lan-yu**	**1.67**	**147**	*e*P	**Pn**	**17 47 42.4**	**-0.8**
	baz=137						
TATO	**Taipei**	**1.73**	**29**	*e*Pn	**Pn**	**17 47 39.5**	**-4.5**
TAP1	**Taipei**	**1.80**	**29**	*e*P	**Pn**	**17 47 48.0**	**+3.1**
	baz=12						
NWF	**Wu-fen Shan**	**1.95**	**34**	*e*P	**Pn**	**17 47 50.3**	**+3.3**
	baz=19						
TWB1	**Santiao Chiao**	**2.02**	**40**	*e*P	**Pn**	**17 47 49.2**	**+1.4**
	baz=23						
KNM	**Kinmen**	**2.18**	**296**	*e*P	**Pn**	**17 47 50.9**	**+0.7**
	baz=294						

*NIED **29** 17:52:00, 2170N×12160E, h38km, Mw4.1 Best double couple: M0 1.56000×10^15 NP1:φ216.00000°, δ71.00000°, λ39.00000°. NP2:φ111.00000°, δ53.00000°, λ156.00000°.*
*ISCJB **29** 17:52:02.5±0.9, 2163N±004×12117E±005, h20km±5km, mb3.7/11, MS3.0/3, Error ellipse: s-maj=8.4km s-min=6.4km az=4.7*
*TAP **29** 17:52:03.8, 2173N×12108E, h19km, ML3.8, C*
*NEIC **29** 17:52:03.9±3.8, 2171N×12120E, h21km±29km, mb4.0/4, Error ellipse: s-maj=17.8km s-min=11.8km az=73.0*
*IDC **29** 17:52:09.5±7.0, 2164N×121.10E, h67km±68km, mb3.3/7, mb1 3.5/8, mb1mx3.4/20, mbtmp3.3/8, ML3.3/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/19, Error ellipse: s-maj=33.8km s-min=17.8km az=72.0*
ISC 29 17:52:03.7±0.8, 2167N±003×12115E±005, h17km±3km, n62,σ1°05/76, mb3.7/11, MS3.0/3, 3C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.32**	**314**	*i* P	**Pg**	**17 52 10.8**	**+0.3**
	baz=304						
TSEB				*i* S	**Sg**	**17 52 15.9**	**+0.8**
	baz=304						
TWK1	**Hengchun**	**0.41**	**310**	⇑*i*P	**Pg**	**17 52 11.7**	**-0.5**
	baz=302						
TWK1				S	**Sg**	**17 52 17.2**	**-0.6**
	baz=302						
HEN	**Hengchun**	**0.50**	**311**	⇑*i*P	**Pg**	**17 52 13.4**	**-0.3**
	baz=311						
HEN				*i* S	**Sg**	**17 52 20.1**	**-0.4**
	baz=311						
LAY	**Lan-yu**	**0.52**	**46**	*e*P	**Pg**	**17 52 15.4**	**+1.4**
	baz=62						
TAW	**Tawu**	**0.72**	**341**	⇓*i*P	**Pg**	**17 52 17.2**	**-0.6**
	baz=357						
TAW				*i* S	**Sg**	**17 52 26.8**	**-0.6**
	baz=357						
EAST	**Anshuo**	**0.76**	**339**	P	**Pb**	**17 52 17.6**	**-0.9**
	baz=354						
EAST				S	**Sg**	**17 52 28.3**	**-0.2**
	baz=354						
SCZT	**Fangliau**	**0.85**	**325**	⇑*i*P	**Pb**	**17 52 19.7**	**-0.3**
	baz=336						
SCZT				*e*S	**Sb**	**17 52 31.5**	**+0.4**
	baz=336						
ECL	**Taimali**	**0.94**	**349**	⇓*i*P	**Pb**	**17 52 19.6**	**-1.9**
	baz=2.0						
ECL				*e*S	**Sb**	**17 52 31.1**	**-2.5**
	baz=2.0						
TTN	**Taitung**	**1.07**	**0**	*e*P	**Pb**	**17 52 22.9**	**-0.9**
	baz=3.0						
TWG	**Pinlang**	**1.14**	**357**	*e*Pg	**Pn**	**17 52 22.1**	**-2.9**
TWG				*e*Sg	**Pg**	**17 52 27.6**	**+1.8**
TWG	**Pinlang**	**1.14**	**357**	*e*P	**Pn**	**17 52 22.3**	**-2.6**
	baz=360						
SSD	**Sandimen**	**1.17**	**336**	⇓P	**Pn**	**17 52 24.2**	**-1.1**
	baz=349						
SSD				*e*S	**Sb**	**17 52 40.2**	**-0.1**
	baz=349						
KAU	**Kaohsiung**	**1.18**	**319**	*e*P	**Pn**	**17 52 26.0**	**+0.5**
	baz=300						
SGLT	**Jiouru**	**1.21**	**330**	*e*P	**Pn**	**17 52 26.2**	**+0.3**
	baz=348						
TWM1	**Shoushan**	**1.33**	**330**	*e*P	**Pn**	**17 52 28.8**	**+1.3**
	baz=331						
CHKT	**Chengkung**	**1.43**	**8**	P	**Pn**	**17 52 27.4**	**-1.5**
	baz=11						
CHKT				S	**Sn**	**17 52 45.5**	**-1.9**
	baz=11						
ELDTW	**Lidau**	**1.51**	**355**	*e*P	**Pn**	**17 52 28.1**	**-1.9**
	baz=6.0						
STYT	**Tauyuan**	**1.52**	**346**	*e*P	**Pn**	**17 52 29.9**	**-0.3**
	baz=348						
CHN1	**Nanshi**	**1.61**	**339**	P	**Pn**	**17 52 31.2**	**-0.1**
	baz=341						
WTP	**Ta-pu**	**1.64**	**343**	P	**Pn**	**17 52 32.1**	**+0.3**
	baz=358						
TWF1	**Yuli**	**1.68**	**5**	*e*P	**Pn**	**17 52 30.4**	**-1.9**
	baz=7.0						
TPUB	**Ta-pu**	**1.69**	**344**	*e*Pg	**Pn**	**17 52 32.6**	**+0.2**
TPUB				*e*Sg	**Pg**	**17 52 37.3**	**+1.1**
TWK	**Hsinying**	**1.70**	**339**	*e*P	**Pn**	**17 52 32.9**	**+0.3**
	baz=341						
YULB	**Yu-li**	**1.72**	**5**	*e*Pg	**Pn**	**17 52 31.1**	**-1.7**
YULB				*e*Sg	**Pg**	**17 52 36.1**	**-0.5**
CHN4	**Tsaushan**	**1.75**	**343**	*e*P	**Pn**	**17 52 34.2**	**+1.0**
	baz=345						
YUS	**Yu-Shan**	**1.82**	**354**	*e*P	**Pn**	**17 52 35.9**	**+1.7**
	baz=4.0						
EHY	**Hungye**	**1.83**	**5**	*e*P	**Pn**	**17 52 33.2**	**-1.2**
	baz=7.0						
ALS	**Alishan**	**1.85**	**350**	*e*P	**Pn**	**17 52 35.8**	**+1.0**
	baz=352						
CHY	**Chiayi**	**1.93**	**340**	*e*P	**Pn**	**17 52 36.5**	**+0.7**
	baz=342						
CHN5	**Tsauling**	**1.96**	**347**	*i* P	**Pn**	**17 52 36.7**	**+0.5**
	baz=349						
WGK	**Gukeng**	**2.07**	**345**	*e*P	**Pn**	**17 52 39.0**	**+1.2**
	baz=347						
SSLB	**Suanglung**	**2.11**	**355**	*e*Pg	**Pn**	**17 52 38.4**	**+0.2**
ESL	**Shilin**	**2.15**	**7**	*e*P	**Pn**	**17 52 37.3**	**-1.4**
	baz=8.0						
SMLT	**Sun Moon Lake**	**2.21**	**354**	P	**Pn**	**17 52 40.7**	**+1.1**
	baz=11						
SMLT				*e*S	**Sn**	**17 53 08.3**	**+1.7**
	baz=11						
WNT	**Mingjian**	**2.23**	**349**	*e*P	**Pn**	**17 52 40.9**	**+0.9**
	baz=351						
TYC	**Yuchr**	**2.24**	**353**	*e*P	**Pn**	**17 52 40.6**	**+0.6**
	baz=340						
WHF	**Hehuan Shan**	**2.46**	**3**	*e*P	**Pn**	**17 52 43.2**	**+0.1**
	baz=13						
NACB	**Ninganchiao**	**2.52**	**9**	*e*Pg	**Pn**	**17 52 43.7**	**-0.2**
TWQ1	**Liyutan**	**2.68**	**353**	*e*P	**Pn**	**17 52 46.7**	**+0.6**
	baz=342						
NNS	**Nan Shan**	**2.76**	**4**	*e*P	**Pn**	**17 52 48.8**	**+1.6**
	baz=15						
ENA	**Nanau**	**2.79**	**11**	*e*P	**Pn**	**17 52 47.0**	**-0.7**
	baz=1.0						
NSTT	**Nanjuang**	**2.95**	**357**	*e*P	**Pn**	**17 52 50.0**	**+0.2**
	baz=359						
NSTT				*e*S	**Sn**	**17 53 25.7**	**+0.9**
	baz=359						
ENTT	**Nioudou**	**2.98**	**7**	*e*P	**Pn**	**17 52 50.1**	**-0.1**
	baz=8.0						
YHNB	**Yeheng**	**2.99**	**4**	*e*Pn	**Pn**	**17 52 50.6**	**+0.3**
NSK	**Sanguang**	**2.99**	**4**	*e*P	**Pn**	**17 52 51.3**	**+0.9**
	baz=5.0						
NSK				*e*S	**Sn**	**17 53 27.5**	**+1.6**
	baz=5.0						
TWE	**Neicheng**	**3.07**	**9**	*e*P	**Pn**	**17 52 51.7**	**+0.2**
	baz=9.0						
TATO	**Taipei**	**3.30**	**5**	*e*Pn	**Pn**	**17 52 53.5**	**-1.1**
KSRS	**Korea Array**	**16.78**	**19**	P	**Pn**	**17 56 00.7**	**+2.7**
	0.1nm,0.3s,baz=200,slow=9.7,SNR=3.6						
CMAR	**Chiang Mai Arr**	**21.10**	**265**	P	**P**	**17 56 48.5**	**+1.0**
	0.9n

IDC 29 17:58:43.8±7.0, 081N×1751W, h0km, mb4.0/1, mb1 3.8/2, mb1mx3.3/23, mbtmp3.9/2, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/23, Error ellipse: s-maj=329.2km s-min=47.7km az=134.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**13.90**	**65**	Pn	Pn	18 02 01.9	-0.3
	0.3nm,0.3s,baz=234,slow=16,SNR=4.1						
DBIC				LR	LR	18 06 34.2	
	comp=Z,39nm,19.1s,baz=108,slow=34						
TORD	**Torodi Ar. Bea**	**22.63**	**56**	P	P	18 03 46.8	+0.2
	5.4nm,0.9s,baz=241,slow=11,SNR=24						
WRA	**Warramunga Arr**	**146.52**	**126**	PKPbc	PKPbc	18 18 27.3	-0.8
	0.8nm,1.0s,baz=234,slow=2.7,SNR=4.7						

*NEIC **29** 18:10:53.5±1.1, 16.11S×173.11W, h10km, Error ellipse: s-maj=48.8km s-min=15.7km az=127.0*

IDC 29 18:10:53.1±1.6, 1621S×17325W, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/20, mbtmp3.9/5, MS3.4/1, Ms1 3.4/1, ms1mx2.7/21, Error ellipse: s-maj=61.8km s-min=24.6km az=129.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.69**	**32**	Pn	Pn	18 11 35.7	-2.0
	6.5nm,0.3s,baz=337,slow=15,SNR=4.2						
AFI				Sn	Sn	18 12 03.5	-7.5
	27nm,0.3s,baz=66,slow=21,SNR=11						
AFI	**Afiamalu**	**2.69**	**32**	*e*Pn	Pn	18 11 33.6	-4.0
AFI				Pn	Pn	18 11 35.7	-2.0
AFI				Sn	Sn	18 12 03.5	-7.5
URZ	**Urewera**	**23.55**	**199**	P	P	18 16 05.3	-0.1
	2.3nm,0.5s,baz=26,slow=21,SNR=3.4						
HNR	**Honiara**	**26.97**	**281**	LR	LR	18 25 54.8	
	comp=Z,81nm,19.8s,baz=196,slow=33						
STKA	**Stephens Creek**	**43.77**	**241**	P	P	18 18 59.9	-0.8
	2.3nm,0.8s,baz=112,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**49.81**	**257**	P	P	18 19 47.7	-0.4
	0.3nm,0.4s,baz=95,slow=6.4,SNR=11						
ASAR	**Alice Springs**	**50.00**	**253**	P	P	18 19 49.3	-0.3
	1.5nm,0.6s,baz=89,slow=8.3,SNR=34						
BRTR	**Keskin Array B**	**146.87**	**320**	PKPbc	PKPbc	18 30 38.5	+0.9
	1.7nm,0.7s,baz=90,slow=1.4,SNR=8.9						
GERES	**GERESS Array B**	**146.96**	**352**	PKPbc	PKPbc	18 30 37.4	-0.2
	0.8nm,0.7s,baz=25,slow=3.5,SNR=6.7						

*DJA **29** 18:20:33, 0.17N×98.42E, h131km, MLv3.7/2*

*ISCJB **29** 18:20:36.6±1.0, 041N±008×987E±0.1, h79km±8km, mb3.7/9, Error ellipse: s-maj=20.1km s-min=9.8km az=145.0*

*IDC **29** 18:20:36.5±5.0, 0.31N×98.79E, h60km±36km, mb3.5/7, mb1 3.5/9, mb1mx3.4/23, mbtmp3.4/9, ML3.8/2, Error ellipse: s-maj=70.1km s-min=19.8km az=58.0*

*NEIC **29** 18:20:37.8±3.2, 0.39N×98.82E, h70km±21km, mb3.7/2, Error ellipse: s-maj=51.9km s-min=10.8km az=60.0*

ISC 29 18:20:37.1±1.1, 037N±009×986E±01, h67km±8km, n20, σ0§95/21, mb3.7/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.40**	**312**	P	**Pn**	**18 21 01.3**	**+0.7**
PPI	**Padang Panjang**	**1.96**	**115**	P	**Pn**	**18 21 08.8**	**+0.7**
PDSI	**Padang**	**2.24**	**125**	P	**Pn**	**18 21 12.3**	**+0.4**
PSI	**Prapat**	**2.43**	**7**	P	**Pn**	**18 21 13.4**	**-1.2**
	11nm,0.3s,baz=187,slow=7.4,SNR=18						
PSI				S	**Sn**	**18 21 34.5**	**-8.7**
	7.4nm,0.3s,baz=292,slow=9.6,SNR=7.4						
IPM	**Ipoh**	**4.74**	**30**	P	**Pn**	**18 21 47.1**	**+1.1**
	18nm,0.8s						
KULM	**Kulim**	**5.29**	**22**	*e*Pn	**Pn**	**18 21 53.4**	**-0.2**
	5.2nm,0.5s						
MYKOM	**Kota Tinggi**	**5.41**	**75**	P	**Pn**	**18 21 55.2**	**-0.1**
BSI	**Banda Aceh**	**6.08**	**327**	P	**Pn**	**18 22 01.7**	**-2.7**
CMAR	**Chiang Mai Arr**	**17.98**	**1**	P	**Pn**	**18 24 42.4**	**-0.1**
	0.2nm,0.3s,baz=191,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**40.39**	**122**	P	**P**	**18 28 07.2**	**-1.8**
	0.3nm,0.7s,mb3.2,baz=303,slow=8.8,SNR=3.3						
ASAR	**Alice Springs**	**41.75**	**127**	P	**P**	**18 28 18.9**	**-1.2**
	0.4nm,0.8s,mb3.2,baz=294,slow=7.8,SNR=4.5						
KSRS	**Korea Array**	**45.74**	**33**	P	**P**	**18 28 51.0**	**-0.9**
	0.8nm,0.6s,mb3.6,baz=220,slow=6.8,SNR=4.0						
SONM	**Songino Array**	**47.76**	**7**	P	**P**	**18 29 08.5**	**+1.1**
	1.2nm,0.5s,mb4.0,baz=190,slow=9.2,SNR=8.3						
ULN	**Ulaanbaatar**	**47.87**	**8**	P	**P**	**18 29 08.0**	**-0.3**
	1.1nm,0.6s,mb3.9						
MK31	**Makanchi Array**	**48.39**	**345**	*e*P	**P**	**18 29 13.3**	**+0.9**
MKAR	**Makanchi Array**	**48.39**	**345**	P	**P**	**18 29 13.0**	**+0.7**
	0.4nm,0.3s,mb3.7,baz=139,slow=8.3,SNR=6.4						
MKAR	**Makanchi Array**	**48.39**	**345**	P	**P**	**18 29 13.0**	**+0.7**
STKA	**Stephens Creek**	**51.75**	**132**	P	**P**	**18 29 38.8**	**+0.8**
	0.5nm,1.0s,mb3.5						
KURK	**Kurchatov**	**52.96**	**344**	P	**P**	**18 29 46.7**	**+0.1**
	0.5nm,0.5s,mb3.8,baz=173,slow=6.1,SNR=4.3						
ZALV	**Zalesovo Beam**	**54.60**	**350**	P	**P**	**18 29 59.3**	**+0.7**
	1.8nm,0.5s,mb4.3,baz=174,slow=7.5,SNR=10.0						

*CSEM **29** 18:22:28.6±0.1, 44.12N×1831E, h2km, ML2.6/9, Error ellipse: s-maj=2.4km s-min=1.6km az=42.0*

*BEO **29** 18:22:28.6±1.4, 4408N×1811E, h4km±5km, ML2.9/4*

*ISCJB **29** 18:22:29.2±0.3, 4402N±002×1825E±003, h10km, Error ellipse: s-maj=3.5km s-min=2.2km az=163.3*

*NEIC **29** 18:22:32.6, 4395N×1845E, h6km, ML2.6(PDG), After PDG.*

*PDG **29** 18:22:32.6±0.1, 4395N×1845E, h6km, ML2.6/9, Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*

ISC 29 18:22:30.3±0.3, 4404N±002×1825E±003, h10km, n33, σ1§23/57, 9C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.96**	**150**	⇓*i*Pg	**Pg**	**18 22 47.7**	**-1.1**
UPM				*e*Sg	**Sg**	**18 23 00.6**	**-0.7**
BLY	**Banja Luka**	**1.04**	**313**	*e*Pn	**Pg**	**18 22 48.4**	**-2.0**
BLY				*i* Sn	**Sg**	**18 23 03.7**	**-0.2**
PLE	**Pljevlja**	**1.09**	**130**	⇓*i*Pg	**Pg**	**18 22 49.5**	**-1.8**
PLE				*e*Sg	**Sg**	**18 23 04.3**	**-1.2**
BRY	**Bratogost**	**1.16**	**169**	⇑*i*Pg	**Pg**	**18 22 51.9**	**-0.6**
BRY				*e*Sg	**Sg**	**18 23 08.0**	**+0.5**
STON	**Ston**	**1.23**	**199**	*e*Pg	**Pg**	**18 22 51.8**	**-2.1**
STON				Sg	**Sg**	**18 23 09.7**	**-0.2**
DIVS	**Divibare**	**1.26**	**87**	*e*Pn	**Pn**	**18 22 53.9**	**0.0**
DIVS				*e*Sn	**Sn**	**18 23 12.8**	**+1.9**
DIVS	**Divibare**	**1.26**	**87**	⇑*i*Pn	**Pn**	**18 22 54.0**	**+0.1**
DIVS				*i* Sn	**Sn**	**18 23 11.9**	**+1.0**
NKY	**Niksic**	**1.34**	**156**	⇑*i*Pg	**Pg**	**18 22 55.1**	**-0.9**
NKY				*e*Sg	**Sg**	**18 23 13.7**	**+0.3**
SJES	**Sjenica**	**1.47**	**121**	*e*Pn	**Pn**	**18 22 57.3**	**+0.4**
FRGS	**Fruska Gora**	**1.58**	**44**	*e*Pn	**Pn**	**18 22 57.8**	**-0.6**
FRGS				*e*Sn	**Sn**	**18 23 19.6**	**+0.7**
HCY	**Herceg Novi**	**1.60**	**173**	⇓*i*Pg	**Pg**	**18 22 59.5**	**-1.5**
HCY				*e*Sg	**Sg**	**18 23 23.5**	**+1.8**
BEY	**Berane**	**1.67**	**134**	⇓*i*Pg	**Pg**	**18 23 00.5**	**-1.9**
BEY				*e*Sg	**Sg**	**18 23 24.2**	**+0.1**
IVA	**Berane**	**1.67**	**134**	⇓*i*Pg	**Pg**	**18 23 00.5**	**-1.9**
IVA				*e*Sg	**Sg**	**18 23 24.2**	**+0.1**
PDG	**Podgorica**	**1.77**	**155**	*e*Pn	**Pn**	**18 23 02.6**	**+1.7**
PDG				*e*Sn	**Sg**	**18 23 27.3**	**+0.1**
TTG	**Podgorica**	**1.77**	**155**	*e*Pn	**Pn**	**18 23 02.6**	**+1.7**
TTG				*e*Sn	**Sg**	**18 23 27.3**	**+0.1**
GRUS	**Gruza**	**1.79**	**94**	*e*Pn	**Pn**	**18 23 00.7**	**-0.5**
GRUS				*e*Sn	**Sn**	**18 23 26.0**	**+2.0**
BUM	**Brajici-Budva**	**1.80**	**164**	⇓*i*Pn	**Pn**	**18 23 03.8**	**+2.4**
BUM				*e*Sn	**Sg**	**18 23 28.3**	**+0.2**
RHK3	**Tenkes**	**1.85**	**0**	*e*Pn	**Pn**	**18 23 01.3**	**-0.8**
RHK3				*e*Sn	**Sg**	**18 23 30.2**	**+0.4**
PVY	**Plav**	**1.91**	**138**	⇑*i*Pn	**Pn**	**18 23 04.5**	**+1.6**
PVY				*e*Sn	**Sg**	**18 23 30.1**	**-1.7**
PKSM	**Moragy**	**2.19**	**7**	*e*Pn	**Pn**	**18 23 05.7**	**-1.1**
PKSM				*e*Sg	**Sg**	**18 23 39.1**	**-1.6**
PKSM	**Moragy**	**2.19**	**7**	⇑*i*P	**Pn**	**18 23 05.7**	**-1.1**
PKSM	**Moragy**	**2.19**	**7**	S	**Sn**	**18 23 35.3**	**+1.4**
ULC	**Ulcinj**	**2.20**	**160**	⇓*i*Pn	**Pn**	**18 23 09.0**	**+2.1**
ULC				*e*Sn	**Sn**	**18 23 37.5**	**+3.4**
NVLJ	**Novalja**	**2.48**	**283**	*e*Pn	**Pn**	**18 23 12.4**	**+1.6**
NVLJ				Sn	**Sn**	**18 23 42.8**	**+1.8**
NVLJ	**Novalja**	**2.48**	**283**	*e*Pn	**Pn**	**18 23 12.3**	**+1.6**
NVLJ				Sn	**Sn**	**18 23 42.8**	**+1.7**
CRES	**Cresnjev**	**2.67**	**313**	⇑*i*Pn	**Pn**	**18 23 13.1**	**-0.2**
CRES				⇑*i*Sn	**Sn**	**18 23 45.3**	**-0.4**
BZS	**Buzias**	**2.87**	**55**	*e*Pn	**Pn**	**18 23 16.0**	**-0.1**
BZS				*e*Sn	**Sn**	**18 23 50.9**	**+0.2**
BZS	**Buzias**	**2.87**	**55**	⇑*i*P	**Pg**	**18 23 24.3**	**-1.0**
BZS	**Buzias**	**2.87**	**55**	S	**Sn**	**18 23 50.6**	**-0.1**
GZR	**Gura Zlata**	**3.50**	**66**	S	**Sn**	**18 24 05.9**	**-0.3**
GZR	**Gura Zlata**	**3.50**	**66**	⇑*i*P	**Pg**	**18 23 39.5**	**+2.1**
DRGR		**4.18**	**47**	⇓*i*P	**Pg**	**18 23 54.0**	**+3.7**
DRGR		**4.18**	**47**	S	**Sg**	**18 24 44.2**	**-0.2**

*TIR **29** 18:40:20.8±1.3, 41.16N×20.17E, h20km±5km*

*SKO **29** 18:40:22.5, 41.12N×2000E, h18km, M2.3, ML2.8*

*CSEM **29** 18:40:23.3±0.0, 4128N×2014E, h2km, ML3.0, Error ellipse: s-maj=1.4km s-min=0.8km az=40.0*

*PDG **29** 18:40:23.7±0.3, 4126N×2012E, h8km, MD3.0/2, ML3.0/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

*NEIC **29** 18:40:23.7, 4126N×2012E, h8km, MD3.5(ATH), ML2.4(BUC), ML3.0(PDG), After PDG.*

*THE **29** 18:40:24.0, 4132N×2016E, h2km±1km, ML3.5/6, Error ellipse: s-maj=1.4km s-min=0.6km az=3.0*

*ISCJB **29** 18:40:24.3±0.3, 4125N±002×2012E±002, h10km, Error ellipse: s-maj=3.2km s-min=1.8km az=44.5*

*ATH **29** 18:40:29.1, 4094N×2033E, h16km±1km, MD3.5/5*

ISC 29 18:40:24.9±0.3, 4122N±002×2010E±002, h10km, n73, σ1§23/126, 14C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.22**	**305**	P	**Pg**	**18 40 27.8**	**-1.7**
TIR				S	**Sg**	**18 40 31.5**	**-1.0**
TIR	**Tirane**	**0.22**	**305**	*e*PG	**Pg**	**18 40 28.3**	**-1.2**
TIR				*i* SG	**Sg**	**18 40 32.5**	**0.0**
TIR	**Tirane**	**0.22**	**305**	*e*Pg	**Pg**	**18 40 28.1**	**-1.4**
TIR				*e*Sg	**Sg**	**18 40 32.0**	**-0.5**
TIR	**Tirane**	**0.22**	**305**	*e*Pg	**Pg**	**18 40 28.1**	**-1.4**
TIR				*e*Sg	**Sg**	**18 40 32.0**	**-0.5**
OHR	**Ohrid**	**0.54**	**102**	P	**Pg**	**18 40 33.8**	**-1.6**
OHR				S	**Sg**	**18 40 41.4**	**-1.0**
OHR	**Ohrid**	**0.54**	**102**	*i* Pg	**Pg**	**18 40 34.4**	**-1.0**
OHR				*e*Sg	**Sg**	**18 40 43.4**	**+1.0**
OHR	**Ohrid**	**0.54**	**102**	*i* Pg	**Pg**	**18 40 34.4**	**-0.9**
OHR				*e*Sg	**Sg**	**18 40 43.4**	**+1.0**
OHR				*e*Lg		18 40 44.0	
	comp=N,320nm,0.6s						
OHR				*e*Lg		18 40 45.2	
	comp=E,266nm,0.5s						
BIA	**Bitola**	**0.94**	**102**	P	**Pg**	**18 40 41.4**	**-1.7**
BIA				S	**Sg**	**18 40 55.0**	**-0.4**
BIA	**Bitola**	**0.94**	**102**	*i* Pg	**Pg**	**18 40 41.3**	**-1.8**
BIA				*e*Sg	**Sg**	**18 40 55.2**	**-0.2**
BIA	**Bitola**	**0.94**	**102**	*i* Pg	**Pg**	**18 40 41.4**	**-1.7**
BIA				*e*Sg	**Sg**	**18 40 55.2**	**-0.2**
BIA				*e*Lg		18 40 56.2	
	comp=N,137nm,0.6s						
BIA				*e*Lg		18 40 59.3	
	comp=E,87nm,0.3s						
ULC	**Ulcinj**	**0.98**	**319**	⇑*i*Pg	**Pg**	**18 40 41.3**	**-2.5**
ULC				*e*Sg	**Sg**	**18 40 56.4**	**-0.1**
FNA	**Florina**	**1.06**	**114**	P	**Pg**	**18 40 43.6**	**-1.7**
FNA				S	**Sg**	**18 41 00.2**	**+1.2**
SKO	**Skopje**	**1.25**	**53**	P	**Pn**	**18 40 46.3**	**-2.2**
SKO				S	**Sb**	**18 41 04.8**	**0.0**
SKO	**Skopje**	**1.25**	**53**	*i* Pg	**Pg**	**18 40 47.9**	**-1.1**
SKO				S	**Sb**	**18 41 04.8**	**0.0**
SKO				*e*Sg	**Sg**	**18 41 06.6**	**+1.4**
SKO	**Skopje**	**1.25**	**53**	*i* Pg	**Pg**	**18 40 48.0**	**-1.0**
SKO				*e*Sg	**Sg**	**18 41 06.6**	**+1.4**
SKO				*e*Lg		18 41 07.2	
	comp=E,101nm,0.5s						
SKO				*e*Lg		18 41 08.1	
	comp=N,195nm,0.4s						
PDG	**Podgorica**	**1.36**	**333**	*e*Pn	**Pn**	**18 40 48.0**	**-2.0**
PDG				*i* SN	**Sg**	**18 41 09.0**	**+0.3**
PDG	**Podgorica**	**1.36**	**333**	⇑*i*Pg	**Pn**	**18 40 48.0**	**-2.0**
PDG				*e*Sg	**Sg**	**18 41 09.0**	**+0.3**
TTG	**Podgorica**	**1.36**	**333**	⇑*i*Pg	**Pn**	**18 40 48.0**	**-2.0**
TTG				*e*Sg	**Sg**	**18 41 09.0**	**+0.3**
PVY	**Plav**	**1.38**	**356**	⇑*i*Pg	**Pg**	**18 40 48.2**	**-3.1**
PVY				*e*Sg	**Sg**	**18 41 09.5**	**+0.3**
PVY	**Plav**	**1.38**	**356**	*e*PN	**Pn**	**18 40 48.0**	**-2.2**
PVY				*i* SN	**Sg**	**18 41 09.5**	**+0.3**
BUM	**Brajici-Budva**	**1.41**	**321**	⇑*i*Pg	**Pn**	**18 40 48.9**	**-1.7**
BUM				*e*Sg	**Sg**	**18 41 11.1**	**+1.0**
BUM	**Brajici-Budva**	**1.41**	**321**	*i* PN	**Pn**	**18 40 48.9**	**-1.7**
BUM				*i* SN	**Sg**	**18 41 11.1**	**+1.0**
KEK	**Kerkira**	**1.52**	**189**	*e*PN	**Pn**	**18 40 53.1**	**+0.9**
KEK				*e*SN	**Sn**	**18 41 11.7**	**-0.8**
KEK	**Kerkira**	**1.52**	**189**	*e*P	**Pn**	**18 40 52.5**	**+0.8**
KEK				*e*S	**Sn**	**18 41 11.3**	**+0.6**
KZN	**Kozani**	**1.56**	**125**	*e*PN	**Pn**	**18 40 53.0**	**+0.3**
STIP	**Stip**	**1.64**	**73**	P	**Pn**	**18 40 52.3**	**-1.4**
STIP	**Stip**	**1.64**	**73**	*i* Pg	**Pg**	**18 40 53.1**	**-3.2**
BEY	**Berane**	**1.66**	**355**	*e*PN	**Pn**	**18 40 53.7**	**-0.3**
BEY				*i* SN	**Sn**	**18 41 17.1**	**+1.8**
BEY	**Berane**	**1.66**	**355**	⇓*i*Pn	**Pn**	**18 40 53.7**	**-0.3**
BEY				*i* Sn	**Sn**	**18 41 17.1**	**+1.8**
IVA	**Berane**	**1.66**	**355**	⇓*i*Pn	**Pn**	**18 40 53.7**	**-0.3**
IVA				*i* Sn	**Sn**	**18 41 17.1**	**+1.8**
JAN	**Janina**	**1.67**	**160**	*e*PN	**Pn**	**18 40 54.3**	**+0.2**
IGT	**Igoumenitsa**	**1.70**	**174**	P	**Pn**	**18 40 55.2**	**+0.6**
IGT				S	**Sn**	**18 41 19.9**	**+3.6**
HCY	**Herceg Novi**	**1.71**	**316**	⇑*i*Pn	**Pn**	**18 40 53.9**	**-0.9**
HCY				*e*Sn	**Sn**	**18 41 19.2**	**+2.4**
HCY	**Herceg Novi**	**1.71**	**316**	*e*PN	**Pn**	**18 40 53.7**	**-1.1**
HCY				*i* SN	**Sn**	**18 41 19.2**	**+2.4**
GRG	**Griva**	**1.76**	**98**	P	**Pn**	**18 40 55.0**	**-0.4**
GRG				S	**Sn**	**18 41 17.9**	**+0.1**
NKY	**Niksic**	**1.79**	**333**	⇑*i*Pn	**Pn**	**18 40 55.8**	**-0.1**
NKY				*e*Sn	**Sn**	**18 41 20.9**	**+2.3**
NKY	**Niksic**	**1.79**	**333**	*e*PN	**Pn**	**18 40 55.7**	**-0.2**
NKY				*i* SN	**Sn**	**18 41 20.9**	**+2.3**
VAY	**Valandovo**	**1.86**	**86**	P	**Pn**	**18 40 55.2**	**-1.7**
VAY	**Valandovo**	**1.86**	**86**	*i* Pg	**Pg**	**18 40 56.1**	**-4.5**
VAY				*e*Sg	**Sg**	**18 41 24.0**	**-0.8**
BRY	**Bratogost**	**2.04**	**326**	⇓*i*Pn	**Pn**	**18 40 59.7**	**+0.4**
BRY				*i* Sn	**Sn**	**18 41 27.0**	**+2.2**
BRY	**Bratogost**	**2.04**	**326**	*e*PN	**Pn**	**18 40 59.7**	**+0.4**
BRY				*i* SN	**Sn**	**18 41 27.0**	**+2.2**
SJES	**Sjenica**	**2.04**	**357**	*e*Pn	**Pn**	**18 41 01.8**	**+2.5**
PE1	**Pezze di Greco**	**2.07**	**259**	*e*Pn	**Pn**	**18 40 59.0**	**-0.7**
KNT	**Kendrikon**	**2.11**	**91**	P	**Pn**	**18 40 59.5**	**-0.8**
LIT	**Litokhoron**	**2.13**	**121**	P	**Pn**	**18 41 00.8**	**+0.2**
LIT				S	**Sn**	**18 41 28.5**	**+1.4**
UPM	**Unac-Piva**	**2.17**	**336**	⇓*i*Pn	**Pn**	**18 41 01.2**	**+0.1**
UPM				*e*Sn	**Sn**	**18 41 29.5**	**+1.5**
PLE	**Pljevlja**	**2.17**	**346**	⇑*i*Pn	**Pn**	**18 41 01.1**	**0.0**
PLE				*e*Sn	**Sn**	**18 41 29.7**	**+1.7**
THL	**Klokotos Trika**	**2.21**	**138**	P	**Pn**	**18 41 01.5**	**-0.1**
THL				S	**Sn**	**18 41 31.6**	**+2.7**
STON	**Ston**	**2.43**	**313**	*e*Pn	**Pn**	**18 41 02.8**	**-1.9**
STON				Sn	**Sn**	**18 41 34.1**	**-0.4**
SG1	**Sgolgore (BA)**	**2.62**	**263**	*e*Pn	**Pn**	**18 41 08.7**	**+1.5**
EVR	**Evrytania**	**2.65**	**150**	*e*PN	**Pn**	**18 41 09.0**	**+1.3**
EVR	**Evrytania**	**2.65**	**150**	*e*P	**Pn**	**18 41 09.2**	**+1.5**
PLG	**Polygyros**	**2.67**	**107**	P	**Pn**	**18 41 08.1**	**+0.1**
PLG				S	**Sn**	**18 41 41.0**	**+0.5**
GRUS	**Gruza**	**2.70**	**9**	*e*Pn	**Pn**	**18 41 07.5**	**-0.9**
AGG	**Agios Georgios**	**2.78**	**141**	P	**Pn**	**18 41 10.1**	**+0.6**
AGG				S	**Sn**	**18 41 45.0**	**+1.9**
DIVS	**Divibare**	**2.88**	**358**	*e*Pn	**Pn**	**18 41 11.7**	**+0.9**
BOLS	**Boljevac**	**2.94**	**27**	*e*Pn	**Pn**	**18 41 11.3**	**-0.4**
XOR	**Xorichti**	**3.00**	**127**	P	**Pn**	**18 41 12.9**	**+0.4**
PAIG	**Paliouri**	**3.02**	**114**	P	**Pn**	**18 41 13.1**	**+0.4**
PAIG				S	**Sn**	**18 41 49.9**	**+1.0**
VLS	**Valsamata**	**3.06**	**173**	*e*PN	**Pn**	**18 41 15.2**	**+1.8**
VLS	**Valsamata**	**3.06**	**173**	*e*P	**Pn**	**18 41 11.8**	**-1.6**
OUR	**Ouranopolis**	**3.08**	**105**	P	**Pn**	**18 41 12.9**	**-0.6**
BZS	**Buzias**	**4.53**	**14**	⇑P	**Pn**	**18 41 33.0**	**-0.5**
BZS				S	**Sn**	**18 42 27.1**	**+0.9**
BZS	**Buzias**	**4.53**	**14**	⇑*i*P	**Pn**	**18 41 33.0**	**-0.5**
BZS	**Buzias**	**4.53**	**14**	⇑P	**Pn**	**18 41 33.0**	**-0.5**
BZS				S	**Sn**	**18 42 27.1**	**+0.9**
GZR	**Gura Zlata**	**4.60**	**24**	⇓P	**Pn**	**18 41 34.7**	**+0.2**
GZR				S	**Sn**	**18 42 28.6**	**+0.6**
GZR	**Gura Zlata**	**4.60**	**24**	⇓*i*P	**Pn**	**18 41 34.7**	**+0.2**
GZR	**Gura Zlata**	**4.60**	**24**	⇓P	**Pn**	**18 41 34.6**	**+0.1**
GZR				S	**Sn**	**18 42 28.6**	**+0.6**
NVLJ	**Novalja**	**5.09**	**313**	*e*Pn	**Pn**	**18 41 39.3**	**-1.9**
NVLJ				Sn	**Sn**	**18 42 35.0**	**-5.1**
NVLJ	**Novalja**	**5.09**	**313**	*e*Pn	**Pn**	**18 41 39.3**	**-1.9**
NVLJ				Sn	**Sn**	**18 42 34.9**	**-5.1**
PKSM	**Moragy**	**5.10**	**349**	⇑P	**Pn**	**18 41 40.8**	**-0.5**
PKSM				S	**Sn**	**18 42 41.5**	**+1.3**
PKSM	**Moragy**	**5.10**	**349**	⇑*i*P	**Pn**	**18 41 40.8**	**-0.5**
PKSM	**Moragy**	**5.10**	**349**	⇑P	**Pn**	**18 41 40.8**	**-0.5**
PKSM				S	**Sn**	**18 42 41.5**	**+1.2**

*CSEM **29** 19:04:48.6±0.2, 38.14N×2727E, h15km, MD2.5, Error ellipse: s-maj=6.0km s-min=3.6km az=84.0*

*ISCJB **29** 19:04:49.5±0.7, 38.14N±003×2727E±008, h8km±9km, Error ellipse: s-maj=10.3km s-min=4.6km az=172.7*

*DDA **29** 19:04:49.5, 38.14N×2727E, h10km±2km, Md2.4*

*ISK **29** 19:04:49.6, 38.18N×2726E, h14km, MD2.5*

ISC 29 19:04:49.5±0.9, 3814N±003×2724E±008, h15km±8km, n8, σ0§38/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.25**	**5**	*e*PG	**Pg**	**19 04 55.0**	**0.0**
IZM				*e*SG	**Sg**	**19 04 59.3**	**+0.5**
BLCB	**Balcova**	**0.28**	**328**	*e*PG	**Pg**	**19 04 55.7**	**+0.1**
BLCB				*e*SG	**Sg**	**19 04 59.5**	**-0.1**
GCAM	**G?zelcaml?**	**0.44**	**180**	*i* P	**Pg**	**19 04 58.1**	**-0.3**
GCAM				*i* S	**Sg**	**19 05 04.5**	**+0.2**
AYDN	**Tasoluk**	**0.70**	**133**	*i* P	**Pg**	**19 05 03.3**	**+0.1**
AYDN				*i* S	**Sg**	**19 05 12.5**	**0.0**
AKS	**Akhisar**	**0.86**	**32**	*e*PG	**Pg**	**19 05 05.7**	**-0.5**
AKS				*e*SG	**Sg**	**19 05 17.4**	**-0.2**
AKHS	**Akhisar**	**0.86**	**32**	*i* P	**Pb**	**19 05 05.5**	**-0.8**
AKHS				*i* S	**Sb**	**19 05 18.0**	**+0.4**
AKHS	**Akhisar**	**0.86**	**32**	*i* P	**Pb**	**19 05 05.4**	**-0.8**
AKHS				*i* S	**Sb**	**19 05 18.0**	**+0.4**
KULA	**Kula-Manisa**	**1.18**	**71**	*e*PN	**Pn**	**19 05 12.0**	**+0.5**

*IDC **29** 19:26:29.8±0.9, 3369N×8753E, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.6/25, mbtmp3.6/12, ML3.3/2, Error ellipse: s-maj=38.5km s-min=16.3km az=56.0*

*ISCJB **29** 19:26:33.8±1.1, 3386N±005×876E±0.1, h40km±15km, mb3.6/7, Error ellipse: s-maj=14.1km s-min=8.7km az=167.4*

*NEIC **29** 19:26:35.5±1.2, 3380N×8746E, h40km±13km, mb3.6/2, Error ellipse: s-maj=15.0km s-min=8.6km az=57.0*

ISC 29 19:26:36.1±0.8, 3388N±005×876E±01, h43km±11km, n27, σ1§02/27, mb3.6/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.16**	**143**	*e*Pn	**Pn**	**19 27 52.7**	**+1.9**
	12nm,0.8s						
GUN	**Gumba**	**6.12**	**194**	*e*P	**Pn**	**19 28 05.2**	**+1.2**
JIRN	**Jiri**	**6.31**	**191**	*e*P	**Pn**	**19 28 07.1**	**+0.5**
	4.4nm,0.4s						
GKN	**Gorkha**	**6.37**	**204**	*e*P	**Pn**	**19 28 08.3**	**+0.8**
	2.8nm,0.3s						
KKN	**Kakani**	**6.38**	**199**	*e*P	**Pn**	**19 28 08.8**	**+1.2**
	4.1nm,0.5s						
DANN	**Dangsing**	**6.41**	**212**	*e*P	**Pn**	**19 28 07.7**	**-0.2**
	4.2nm,0.4s						
TAPN	**Taplejung**	**6.51**	**179**	*e*P	**Pn**	**19 28 07.9**	**-1.4**
	7.4nm,0.4s						
DMN	**Daman**	**6.60**	**199**	*e*P	**Pn**	**19 28

MS4.9/1, Error ellipse: s-maj=10.1km s-min=5.6km az=136.0

SZGRF ***29*** *20:55:21.8, 2128S×17255W, h33km, Tonga Islands region*

GCMT ***29*** *20:55:21.0±0.2, 2012S×17306W, h18km, MW5.1/76, Moment Tensor Solution. s43,c57; s76,c117; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.55±.19; Mθθ-0.83±.12; Mφφ-3.72±.13; Mrθ1.48±.34; Mrφ-1.58±.09; Mθφ2.30±.29; Best double couple: Mo5.25100×10^16 NP1:φs199.00000°, δ30.00000°, λ82.00000°. NP2: φs28.00000°, δ61.00000°, λ94.00000°. Principal axes: T 5.3320, Plg74.0000°, Azm310.0000°; N -0.1630, Plg4.0000°, Azm206.0000°; P -5.1700, Plg16.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***29*** *20:55:30.8±2.1, 1900S×17524W, h33km, mb5.4/21, MS4.5/4 Error ellipse: s-maj=14.7km s-min=12.0km az=132.1*

DJA ***29*** *20:55:48, 2092S×17488W, h184km, mb5.2/21*

ISC 29 20:55:21.1±0.3, 1998S±005×17367W±006, h11km, h11km±1.1km; pP-P, n313, σ1§04/142, mb5.0/64, MS4.5/29, 47C-19D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AFI	**Afiamalu**	**6.30**	**17**	Pn	**Pn**		**20 56 49.8**	**-4.1**
	24nm,0.3s,baz=35,slow=10.0,SNR=9.7							
AFI				Sn	**Sn**		**20 58 04.8**	**-1.1**
	17nm,0.3s,baz=31,slow=18,SNR=3.9							
AFI				T			21 03 12.7	
	16nm,0.3s,baz=86,slow=16,SNR=7.1							
AFI	**Afiamalu**	**6.30**	**17**	*e*P	**Pn**		**20 56 48.7**	**-5.2**
AFI				pmax	pmax			
	comp=Z,233nm,0.8s							
AFI	**Afiamalu**	**6.30**	**17**	*e*Pn	**Pn**		**20 56 48.7**	**-5.3**
	comp=Z,233nm,0.8s							
RAR	**Rarotonga**	**13.07**	**98**	Pn	**Pn**		**20 58 17.5**	**-9.2**
	comp=Z,12nm,0.3s,baz=269,slow=7.9,SNR=15							
RAR				LR	LR		21 02 31.9	
	comp=Z,1μm,18.7s,baz=284,slow=33							
RAR	**Rarotonga**	**13.07**	**98**	*e*Pn	**Pn**		**20 58 16.9**	**-10**
RAR				*e*Sn	Sn		21 00 30.8	-21
FUNA	**Funafuti**	**13.31**	**328**	Pn	**Pn**		**20 58 32.6**	**+2.5**
DZM	**Mont Dzumac**	**18.68**	**260**	*e*Pn	**Pn**		**20 59 41.3**	**+1.6**
	comp=Z,46nm,0.9s							
URZ	**Urewera**	**19.90**	**202**	P	**Pn**		**20 59 51.5**	**-2.7**
	comp=Z,2.5nm,0.3s,baz=358,slow=2.3,SNR=12							
TBI	**Tubuai**	**22.74**	**103**	*e*LR	LR		21 05 21.6	
	comp=Z,2μm,31.0s,baz=277							
PPT	**Papeete**	**22.93**	**88**	*e*LR	LR		21 05 37.8	
	comp=Z,2μm,27.2s,baz=264							
PPT	**Papeete**	**22.93**	**88**	LR	LR		21 07 32.9	
	comp=Z,1μm,18.5s,MS4.4,baz=250,slow=32							
SNZO	**South Karori**	**23.46**	**202**	*e*P	**P**		**21 00 31.6**	**+0.9**
	comp=Z,70nm,1.1s,mb5.0							
RPZ	**Rata Peaks**	**26.91**	**205**	P	**P**		**21 01 03.6**	**+1.5**
	comp=Z,25nm,0.7s,mb4.9,baz=351,slow=2.3,SNR=7.4							
HNR	**Honiara**	**27.55**	**289**	LR	LR		21 10 47.8	
	comp=Z,340nm,19.5s,MS3.9,baz=209,slow=34							
ARMA	**Armidale**	**32.96**	**245**	*e*P	**P**		**21 01 55.8**	**-0.1**
TAOE	**Nuku Hiva Isla**	**34.22**	**76**	*e*LR	LR		21 10 46.0	
	comp=Z,3μm,27.0s							
CNB	**Canberra Magne**	**35.91**	**237**	*e*P	**P**		**21 02 21.2**	**-0.2**
CAN	**Canberra**	**36.19**	**237**	*e*P	**P**		**21 02 23.2**	**-0.7**
CAN				pmax	pmax			
	comp=Z,69nm,1.3s,mb5.4							
CAN	**Canberra**	**36.19**	**237**	*e*P	**P**		**21 02 23.2**	**-0.6**
	comp=Z,70nm,1.3s,mb5.4							
CTA	**Charters Tower**	**37.59**	**263**	P	**P**		**21 02 34.8**	**-1.1**
	comp=Z,12nm,0.4s,mb4.9,baz=86,slow=8.4,SNR=29							
CTA	**Charters Tower**	**37.59**	**263**	*e*P	**P**		**21 02 35.3**	**-0.6**
	comp=Z,9.1nm,0.4s,mb4.9							
CTAO	**Charters Tower**	**37.59**	**263**	*e*P	**P**		**21 02 35.2**	**-0.7**
CTAO				pmax	pmax			
	comp=Z,56nm,1.1s,mb5.2							
CTAO	**Charters Tower**	**37.59**	**263**	*e*P	**P**		**21 02 35.2**	**-0.8**
	comp=Z,56nm,1.1s,mb5.2							
PMG	**Port Moresby**	**39.23**	**280**	P	**P**		**21 02 49.7**	**-0.1**
	comp=Z,64nm,1.1s,mb5.3,baz=135,slow=4.2,SNR=10							
PMG	**Port Moresby**	**39.23**	**280⇑**	*e*P	**P**		**21 02 49.5**	**-0.3**
PMG				pmax	pmax			
	comp=Z,84nm,1.3s							
PMG	**Port Moresby**	**39.23**	**280**	*e*P	**P**		**21 02 50.0**	**+0.2**
	comp=Z,68nm,1.1s,mb5.3							
TOO	**Toolangi**	**39.51**	**235**	*e*P	**P**		**21 02 51.4**	**-0.4**
TAU	**Tasmania Unive**	**39.89**	**226**	*e*P	**P**		**21 02 55.5**	**+0.6**
TAU				pmax	pmax			
	comp=Z,58nm,1.3s,mb5.2							
TAU	**Tasmania Unive**	**39.89**	**226**	*e*P	**P**		**21 02 55.5**	**+0.6**
	comp=Z,58nm,1.3s,mb5.2							
COEN	**Coen**	**41.63**	**271**	*e*P	**P**		**21 03 08.8**	**-0.8**
	comp=Z,23nm,0.9s,mb4.8							
STKA	**Stephens Creek**	**41.68**	**244**	P	**P**		**21 03 09.4**	**-0.5**
	comp=Z,16nm,0.9s,mb4.7,baz=82,slow=7.6,SNR=15							
STKA				LR	LR		21 18 24.1	
	comp=Z,593nm,18.9s,MS4.5,baz=44,slow=33							
STKA	**Stephens Creek**	**41.68**	**244**	*e*P	**P**		**21 03 09.1**	**-0.8**
	comp=Z,17nm,1.1s,mb4.6							
STKA	**Stephens Creek**	**41.68**	**244**	*e*P	**P**		**21 03 09.0**	**-0.8**
	comp=Z,11nm,1.3s,mb4.3							
ASAR	**Alice Springs**	**48.59**	**256**	P	**P**		**21 04 03.8**	**-1.2**
	comp=Z,10nm,0.8s,mb4.9,baz=92,slow=7.8,SNR=78							
ASAR				PcP	PcP		21 05 31.4	+0.8
	comp=Z,6.9nm,0.9s,baz=98,slow=5.3,SNR=7.8							
WB2	**Warramunga Arr**	**48.69**	**261**	*e*P	**P**		**21 04 03.7**	**-2.1**
WB2	**Warramunga Arr**	**48.69**	**261**	*e*P	**P**		**21 04 03.5**	**-2.3**
WRAB	**Tennant Creek**	**48.69**	**261**	P	**P**		**21 04 03.6**	**-2.2**
	comp=Z,232nm,1.1s,mb6.1,SNR=7.8							
WRAB	**Tennant Creek**	**48.69**	**261**	⇓*i*P	**P**		**21 04 04.0**	**-1.8**
WRAB	**Tennant Creek**	**48.69**	**261**	*e*P	**P**		**21 04 03.4**	**-2.4**
	comp=Z,103nm,1.4s,mb5.7							
WRA	**Warramunga Arr**	**48.70**	**261**	P	**P**		**21 04 04.3**	**-1.6**
	comp=Z,27nm,1.1s,mb5.2,baz=99,slow=7.4,SNR=108							
WRA				PcP	PcP		21 05 31.9	+0.9
	comp=Z,8.1nm,1.0s,baz=97,slow=3.8,SNR=4.9							
WRA				LR	LR		21 23 41.1	
	comp=Z,430nm,18.4s,MS4.5,baz=85,slow=35							
WRA	**Warramunga Arr**	**48.70**	**261**	P	**P**		**21 04 04.3**	**-1.5**
WRA							21 05 31.9	
KAKA	**Kakadu**	**52.04**	**269**	*e*P	x		21 04 30.2	
	comp=Z,14nm,0.6s							
KAKA	**Kakadu**	**52.04**	**269**	*e*P	x		21 04 30.0	
	comp=Z,94nm,0.9s							
GUMO	**Guam**	**52.70**	**306**	LR	LR		21 22 36.8	
	comp=Z,98nm,21.7s,MS3.8,baz=104,slow=31							
FORT	**Forrest**	**53.23**	**246**	*e*P	**P**		**21 04 39.9**	**+0.1**
	comp=Z,28nm,0.8s,mb5.2							
FITZ	**Fitzroy Crossi**	**57.13**	**261**	*e*P	**P**		**21 05 07.5**	**-0.6**
	comp=Z,37nm,2.2s,mb5.0							
FITZ	**Fitzroy Crossi**	**57.13**	**261**	*e*P	**P**		**21 05 07.3**	**-0.8**
	comp=Z,76nm,1.9s,mb5.4							
VNDA	**Vanda**	**58.82**	**186**	P	**P**		**21 05 19.8**	**+0.7**
	comp=Z,4.7nm,0.7s,mb4.6,baz=7.9,slow=6.7,SNR=12							
VNDA				LR	LR		21 26 12.8	
	comp=Z,181nm,18.7s,MS4.2,baz=6.2,slow=32							
VNDA	**Vanda**	**58.82**	**186**	*e*P	**P**		**21 05 20.3**	**+1.2**
VNDA				pmax	pmax			
	comp=Z,19nm,1.4s							
VNDA	**Vanda**	**58.82**	**186**	*e*P	**P**		**21 05 20.3**	**+1.2**
	comp=Z,19nm,1.4s,mb4.9							
MBWA	**Marble Bar**	**61.93**	**256**	*e*P	**P**		**21 05 40.1**	**-1.1**
	comp=Z,85nm,1.4s,mb5.7							
NWAO	**Narrogin (SRO)**	**62.23**	**243**	P	**P**		**21 05 43.3**	**+0.2**
	comp=Z,14nm,1.1s,mb5.0,baz=113,slow=4.5,SNR=2.9							
NWAO	**Narrogin (SRO)**	**62.23**	**243**	*e*P	**P**		**21 05 44.0**	**+0.9**
NWAO				pmax	pmax			
	comp=Z,41nm,1.4s							
NWAO	**Narrogin (SRO)**	**62.23**	**243**	*e*P	**P**		**21 05 44.0**	**+0.9**
	comp=Z,41nm,1.4s,mb5.4							
MUN	**Mundaring**	**63.21**	**244**	*e*P	**P**		**21 05 50.4**	**+0.8**
DAV	**Davao City (W)**	**65.51**	**288**	LR	LR		21 29 53.5	
	comp=Z,222nm,19.4s,MS4.4,baz=121,slow=32							
CASY	**Casey**	**66.18**	**205**	*e*P	**P**		**21 06 02.0**	**-6.3**
	comp=Z,17nm,0.5s,mb5.3							
QSPA	**South Pole Qui**	**70.09**	**180**	P	**P**		**21 06 34.2**	**+1.5**
	comp=Z,11nm,1.0s,mb4.7,baz=69,slow=2.1,SNR=26							
MJAR	**Matsushiro Arr**	**72.28**	**321**	P	**P**		**21 06 47.3**	**+0.7**
	comp=Z,11nm,0.9s,mb4.8,baz=153,slow=6.2,SNR=13							
MJAR				LR	LR		21 33 42.8	
	comp=Z,140nm,19.3s,MS4.2,baz=65,slow=32							
MAJO	**Matsushiro**	**72.29**	**321**	*e*P	**P**		**21 06 47.1**	**+0.5**
MAJO				pmax	pmax			
	comp=Z,36nm,1.2s,mb5.2							
MAJO	**Matsushiro**	**72.29**	**321**	*e*P	**P**		**21 06 47.1**	**+0.5**
	comp=Z,36nm,1.2s,mb5.2							
MAT	**Matsushiro**	**72.29**	**321**	P	**P**		**21 06 47.3**	**+0.7**
MAT				*e*S	S		21 15 59.2	-10
FX1	**Attu Island--F**	**73.45**	**352**	P	**P**		**21 06 53.1**	**0.0**
	comp=Z,18nm,0.8s,mb5.0,baz=149,slow=12,SNR=3.6							
PET	**Petropavlovsk**	**76.56**	**343**	*e*P	**P**		**21 07 08.6**	**-2.5**
PET				*e*S	S		21 16 52.6	-4.2
PET				MLR	MLR			
	comp=Z,200nm,18.0s,MS4.5							
NACB	**Ninganchiao**	**76.80**	**302**	*e*P	**P**		**21 07 11.6**	**-1.5**
	comp=Z,159nm,1.2s,mb5.8							
PETK	**Petropavlovsk-**	**76.89**	**343**	P	**P**		**21 07 14.1**	**+1.1**
	comp=Z,24nm,0.9s,mb5.1,baz=106,slow=7.9,SNR=16							
PETK				LR	LR		21 38 12.1	
	comp=Z,80nm,18.8s,MS4.1,baz=324,slow=34							
PETK	**Petropavlovsk-**	**76.89**	**343**	P	**P**		**21 07 14.1**	**+1.1**
PETK				LR	LR		21 38 12.1	
TPUB	**Ta-pu**	**77.16**	**301**	*e*P	**P**		**21 07 15.0**	**-0.2**
	comp=Z,216nm,1.2s,mb6.0							
TPUB				*e*			21 07 25.5	
YSS	**Yuzh-Sakhalins**	**77.33**	**331**	⇓*i*P	**P**		**21 07 17.1**	**+1.5**
KSM	**Kuching**	**77.39**	**276**	*e*P	**P**		**21 07 17.7**	**+0.9**
	comp=Z,85nm,1.3s,mb5.5							
YBH	**Yreka Blue Hor**	**77.39**	**37**	P	**P**		**21 07 16.7**	**+0.6**
	comp=Z,4.1nm,0.8s,mb4.4,baz=153,slow=2.1,SNR=6.9							
NVAR	**Mina Array Bea**	**77.90**	**41**	P	**P**		**21 07 19.4**	**+0.4**
	comp=Z,5.1nm,0.8s,mb4.5,baz=225,slow=9.3,SNR=29							
NVAR	**Mina Array Bea**	**77.90**	**41**	P	**P**		**21 07 19.4**	**+0.4**
TPH	**Tonopah**	**78.36**	**42**	*e*P	**P**		**21 07 21.5**	**-0.1**
TPH				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.5							
TPH	**Tonopah**	**78.36**	**42**	*e*P	**P**		**21 07 21.5**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.5							
KSRS	**Korea Array**	**79.25**	**316**	P	**P**		**21 07 27.7**	**+1.2**
	comp=Z,14nm,1.1s,mb4.8,baz=134,slow=5.6,SNR=13							
KSRS				LR	LR		21 40 42.9	
	comp=Z,115nm,18.1s,MS4.3,baz=296,slow=34							
TUC	**Tucson**	**79.49**	**50**	*e*P	**P**		**21 07 28.4**	**+0.5**
TUC				pmax	pmax			
	comp=Z,16nm,1.3s,mb4.8							
TUC	**Tucson**	**79.49**	**50**	*e*P	**P**		**21 07 28.4**	**+0.5**
	comp=Z,16nm,1.3s,mb4.8							
SSE	**Sheshan**	**80.53**	**308**	P	**P**		**21 07 33.3**	**-0.2**
SSE				XP	sP		21 07 38.0	-0.7
SSE				PP	PP		21 10 35.0	-2.3
SSE				S	S		21 17 37.8	-2.6
SSE				SS	SS		21 22 50.3	-2.9
SSE				AMB	AMB			
	comp=Z,28nm,0.7s,mb5.3							
SSE				AMB	AMB			
	comp=Z,125nm,5.5s							
SSE				LR	LR			
	comp=N,145nm,19.2s,MS4.9							
SSE				LR	LR			
	comp=E,474nm,19.2s,MS4.9							
SSE				LR	LR			
	comp=Z,114nm,21.1s,MS4.2							
HABR	**Khabarovsk**	**82.07**	**328**	*e*P	**P**		**21 07 39.9**	**-1.4**
HABR				*e*	pP		21 07 45.2	+0.1
HABR				*e*S	S		21 17 55.2	-0.4
HABR				MLR	MLR			
	comp=Z,233nm,22.0s,MS4.5							
MDJ	**Mudanjiang**	**82.49**	**323**	P	**P**		**21 07 43.0**	**-0.6**
MDJ				AP	pP		21 07 46.5	-0.9
MDJ				PP	PP		21 10 49.8	-3.4
MDJ				S	S		21 17 59.3	-0.8
MDJ				SS	SS		21 23 19.3	-2.6
MDJ				AMB	AMB			
	comp=Z,559nm,4.2s							
MDJ				LR	LR			
	comp=N,70nm,20.8s,MS4.2							
MDJ				LR	LR			
	comp=E,97nm,20.8s,MS4.2							
MDJ				LR	LR			
	comp=Z,157nm,20.8s,MS4.4							
NJ2	**Nanjing**	**82.73**	**308**	*e*P	**P**		**21 07 43.8**	**-1.4**
NJ2				AMB	AMB			
	comp=Z,20nm,0.6s,mb5.3							
HLID	**Hailey**	**83.32**	**39**	*e*P	**P**		**21 07 48.0**	**+0.1**
	comp=Z,8.7nm,1.0s,mb4.7							
TXAR	**Lajitas Array**	**83.37**	**56**	P	**P**		**21 07 49.3**	**+0.8**
	comp=Z,4.1nm,1.0s,mb4.4,baz=214,slow=5.9,SNR=20							
TXAR				LR	LR		21 38 39.0	
	comp=Z,155nm,19.2s,MS4.4,baz=25,slow=31							
MAW	**Mawson**	**83.40**	**199**	P	**P**		**21 07 49.2**	**+1.2**
	comp=Z,4.7nm,0.9s,mb4.5,baz=76,slow=5.6,SNR=3.9							
MAW				LR	LR		21 44 13.3	
	comp=Z,455nm,18.0s,MS4.9,baz=111,slow=35							
MAW	**Mawson**	**83.40**	**199**	*e*P	**P**		**21 07 49.0**	**+0.9**
MAW				pmax	pmax			
	comp=Z,4.0nm,1.3s							
MAW	**Mawson**	**83.40**	**199**	*e*P	**P**		**21 07 49.0**	**+0.9**
	comp=Z,4.4nm,1.3s,mb4.3							
PMR	**Palmer**	**83.63**	**12**	P	**P**		**21 07 49.2**	**+0.1**
PMR				pmax	pmax			
	comp=Z,12nm,1.1s,mb4.9							
PMR	**Palmer**	**83.63**	**12**	P	**P**		**21 07 49.2**	**+0.1**
	comp=Z,12nm,1.1s,mb5.0							
PV10	**Paradox Valley**	**83.87**	**46**	*e*P	**P**		**21 07 51.3**	**+0.5**
	comp=Z,261nm,0.8s							
ANMO	**Albuquerque**	**83.93**	**50**	P	**P**		**21 07 51.5**	**+0.1**
	comp=Z,9.4nm,1.1s,mb4.8,baz=221,slow=5.8,SNR=14							
ANMO	**Albuquerque**	**83.93**	**50**	*e*P	**P**		**21 07 52.1**	**+0.8**
ANMO				pmax	pmax			
	comp=Z,23nm,1.3s							
ANMO	**Albuquerque**	**83.93**	**50**	*e*P	**P**		**21 07 52.1**	**+0.8**
	comp=Z,23nm,1.3s,mb5.2							
PV01	**Paradox Valley**	**84.06**	**46**	*e*P	**P**		**21 07 51.8**	**0.0**
	comp=Z,2μm,0.9s							
QIZ	**Qiongzhong**	**84.39**	**292**	P	**P**		**21 07 53.8**	**-0.2**
QIZ				S	S		21 18 18.5	-1.8
QIZ				LR	LR			
	comp=Z,96nm,35.4s,MS3.9							
CN2	**Changchun**	**84.43**	**321**	*e*P	**P**		**21 07 54.8**	**+1.2**
CN2				*e*XP	sP		21 08 05.0	+6.2
CN2				*e*S	S		21 18 19.0	-0.7
CN2				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.2							
CN2				AMB	AMB			
	comp=Z,200nm,4.0s							
TRF	**Thorofare Moun**	**85.15**	**10**	*e*P	**P**		**21 07 56.5**	**-0.3**
	comp=Z,15nm,1.0s,mb5.1							
WHN	**Wuhan**	**85.45**	**305**	P	**P**		**21 07 58.5**	**-0.6**
MCK	**McKinley**	**85.64**	**11**	*e*P	**P**		**21 07 58.7**	**-0.5**
MCK				pmax	pmax			
	comp=Z,31nm,1.1s,mb5.5							
MCK	**McKinley**	**85.64**	**11**	*e*P	**P**		**21 07 58.7**	**-0.5**
	comp=Z,30nm,1.1s,mb5.4							
PDAR	**Pinedale Array**	**85.83**	**42**	P	**P**		**21 08 00.7**	**0.0**
	comp=Z,4.0nm,1.0s,mb4.6,baz=213,slow=3.2,SNR=23							
PDAR				LR	LR		21 43 59.5	
	comp=Z,193nm,18.6s,MS4.5,baz=131,slow=34							
SDCO	**Great Sand Dun**	**85.97**	**48**	*e*P	**P**		**21 08 01.5**	**0.0**
	comp=Z,3.1nm,1.0s,mb4.5							
PLCA	**Paso Flores**	**86.64**	**132**	P	**P**		**21 08 04.2**	**-0.7**
	comp=Z,7.1nm,1.1s,mb4.8,baz=229,slow=5.3,SNR=4.5							
PLCA				LR	LR		21 40 31.5	
	comp=Z,348nm,18.2s,MS4.8,baz=187,slow=31							
PLCA	**Paso Flores**	**86.64**	**132**	*e*P	**P**		**21 08 01.3**	**-3.6**
PLCA				pmax	pmax			
	comp=Z,13nm,1.3s							
PLCA	**Paso Flores**	**86.64**	**132**	*e*P	**P**		**21 08 01.3**	**-3.6**
	comp=Z,13nm,1.3s,mb5.0							
WALA	**Waterton Lakes**	**86.80**	**35**	P	**P**		**21 08 04.8**	**-0.4**
SEY	**Seymchan**	**86.85**	**345⇓**	*e*P	**P**		**21 08 05.9**	**+0.7**
SEY	**Seymchan**	**86.85**	**345⇑**	*e*P	**P**		**21 08 05.0**	**-0.2**
COLA	**College**	**86.88**	**11**	*e*P	**P**		**21 08 04.6**	**-0.7**
COLA				pmax	pmax			
	comp=Z,21nm,1.1s,mb5.3							
COLA	**College**	**86.88**	**11**	*e*P	**P**		**21 08 04.6**	**-0.7**
	comp=Z,21nm,1.1s,mb5.3							
UBT	**Ubonrachathani**	**87.23**	**287**	⇓P	**P**		**21 08 11.5**	**+3.4**
KULM	**Kulim**	**87.74**	**276**	P	**P**		**21 08 10.1**	**-0.7**
DAWY	**Dawson**	**87.89**	**14**	*e*P	**P**		**21 08 10.6**	**+0.4**
SYO	**Syowa Base**	**88.09**	**191⇑**	*e*P	**P**		**21 08 09.6**	**-1.7**
EGAK	**Eagle**	**88.11**	**13**	*e*P	**P**		**21 08 10.8**	**-0.4**
	comp=Z,13nm,1.1s,mb5.1							
VNA3	**Neumayer Olymp**	**88.35**	**175**	*e*P	**P**		**21 08 13.2**	**+0.7**
VNA3				*e*	pP		21 08 15.5	-0.8
VNA3				*e*			21 08 21.0	
SNAA	**Sanae**	**88.37**	**177**	*e*P	**P**		**21 08 11.8**	**-0.8**
SNAA				*e*	pP		21 08 14.6	-1.9
SNAA				*e*			21 08 21.5	
SNAA	**Sanae**	**88.37**	**177**	*e*P	**P**		**21 08 12.1**	**-0.5**
SNAA				pmax	pmax			
	comp=Z,12nm,1.3s							
SNAA	**Sanae**	**88.37**	**177⇑**	*e*P	**P**		**21 08 12.5**	**-0.1**
SNAA				pmax	pmax			
	comp=Z,17nm,1.7s							
SNAA	**Sanae**	**88.37**	**177**	*e*P	**P**		**21 08 12.1**	**-0.6**
	comp=Z,12nm,1.3s,mb5.0							
BJI	**Beijing**	**88.43**	**314**	P	**P**		**21 08 15.5**	**+2.2**
BJI				PP	PP		21 11 41.0	-0.5
BJI				S	S		21 18 47.5	-11
BJI				SS	SS		21 24 54.3	+4.8
BJI				AMB	AMB			
	comp=Z,20nm,1.6s,mb5.1							
BJI				LR	LR			
	comp=Z,69nm,31.6s,MS3.9							
VNA2	**Neumayer--Watz**	**88.84**	**176**	*e*P	**P**		**21 08 14.8**	**0.0**
VNA2				*e*	pP		21 08 17.4	-1.3
VNA2				*e*			21 08 23.3	
BILL	**Bilibino**	**88.99**	**353⇑**	*e*P	**P**		**21 08 15.6**	**+0.3**
BILL				pmax	pmax			
	comp=Z,14nm,1.3s,mb5.1							
BILL	**Bilibino**	**88.99**	**353**	*e*P	**P**		**21 08 15.4**	**+0.2**
	comp=Z,11nm,1.2s,mb5.0							
GYA	**Guiyang**	**89.96**	**298⇑**	*i*P	**P**		**21 08 23.0**	**+2.1**
GYA				PP	PP		21 12 01.0	+6.9
GYA				SKS			21 18 52.5	
GYA				S	S		21 19 16.3	+2.5
GYA				AMB	AMB			
	comp=Z,10.0nm,0.9s,mb5.2							
GYA				AMB	AMB			
	comp=Z,100nm,6.0s							
GYA				LR	LR			
	comp=N,530nm,18.5s,MS5.1							
GYA				LR	LR			
	comp=E,410nm,19.0s,MS5.1							
GYA				LR	LR			
	comp=Z,520nm,19.3s,MS5.0							
RSSD	**Black Hills**	**89.99**	**42**	*e*P	**P**		**21 08 19.9**	**-0.7**
RSSD				pmax	pmax			
	comp=Z,14nm,1.4s,mb5.1							
RSSD	**Black Hills**	**89.99**	**42**	*e*P	**P**		**21 08 19.9**	**-0.6**
	comp=Z,14nm,1.4s,mb5.1							
HIA	**Hailar**	**90.68**	**323⇓**	*i*P	**P**		**21 08 25.2**	**+1.6**
XAN	**Xi'an**	**91.09**	**306**	P	**P**		**21 08 26.3**	**+0.4**
XAN				PP	PP		21 12 01.5	-1.4
XAN				S	S		21 19 23.5	-0.4
XAN				SS	SS		21 25 28.3	-0.1
XAN				AMB	AMB			
	comp=Z,20nm,1.4s,mb5.2							
XAN				AMB	AMB			
	comp=Z,15nm,14.5s							
XAN				LR	LR			
	comp=N,24nm,15.9s,MS4.2							
XAN				LR	LR			
	comp=E,81nm,18.9s,MS4.2							
XAN				LR	LR			
	comp=Z,155nm,18.9s,MS4.5							
NST	**Nakhon Sawan**	**91.78**	**286**	P	**P**		**21 08 24.0**	**-5.5**
HHC	**Hu-ho-hao-te**	**91.94**	**313**	*e*P	**P**		**21 08 31.5**	**+1.8**
HHC				AP	pP		21 08 36.5	+2.9
HHC				XP	sP		21 08 39.0	+4.1
HHC				SKS			21 19 01.8	
HHC				*e*S	S		21 19 28.0	-3.3
HHC				XS	sS		21 19 37.0	-0.7
HHC				SS	SS		21 25 39.5	-0.8
HHC				AMB	AMB			
	comp=Z,27nm,1.0s,mb5.5							
HHC				AMB	AMB			
	comp=Z,193nm,6.8s							
HHC				LR	LR			
	comp=N,275nm,17.8s,MS4.9							
HHC				LR	LR			
	comp=E,210nm,15.5s,MS4.9							
HHC				LR	LR			
	comp=Z,199nm,16.7s,MS4.6							
CLNS	**Chul'man**	**92.10**	**331**	*e*P	**P**		**21 08 29.8**	**-0.2**
CLNS				pmax	pmax			
	comp=Z,18nm,0.9s,mb5.4							
CLNS				pmax	pmax			
	comp=N,10.0nm,1.0s							
CLNS				pmax	pmax			
	comp=E,9.0nm,1.4s							
CLNS				MLR	MLR			
	comp=Z,118nm,13.0s,MS4.5							
CLNS				MLR	MLR			
	comp=N,151nm,13.0s,MS4.7							
CLNS				MLR	MLR			
	comp=E,64nm,11.0s,MS4.7							
NANT	**Nan**	**92.35**	**289**	P	**P**		**21 08 31.0**	**-1.1**
KMI	**Kunming**	**92.77**	**296**	P	**P**		**21 08 35.3**	**+1.4**
KMI				AP	pP		21 08 38.5	+0.7
KMI				XP	sP		21 08 40.0	+0.9
KMI				PP	PP		21 12 17.0	+0.7
KMI				S	S	

TIXI	Tiksi	99.32	344	⇑	eP		P	21 09 01.9	-0.7
ZALV	Zalesovo Beam	112.64	321		PKiKP		PKiKP	21 13 56.9	-0.5
	comp=Z,0.7nm,0.5s,baz=357,slow=3.1,SNR=4.2								
MK31	Makanchi Array	113.80	313		ePKIKP		PKiKP	21 13 59.0	-0.8
MKAR	Makanchi Array	113.80	313		ePKIKP		PKiKP	21 13 59.2	-0.6
	comp=Z,1.0nm,0.7s,baz=108,slow=1.3,SNR=13								
MKAR	Makanchi Array	113.80	313		PKPdf		PKiKP	21 13 59.2	-0.6
KURK	Kurchatov	116.36	317		PKP		PKPdf	21 14 04.2	-0.4
	comp=Z,0.9nm,0.4s,baz=92,slow=1.6,SNR=7.8								
BRVK	Borovoye	121.34	321	⇑	ePKIKP		PKPdf	21 14 13.9	-0.2
SPITS	Spitsbergen Ar	121.55	358		PKP		PKPdf	21 14 15.2	+1.3
	comp=Z,5.5nm,0.8s,baz=270,slow=1.9,SNR=5.3								
KBL	Kabul	123.21	299		ePKIKP		PKPdf	21 14 18.3	0.0
ARU	Arti	127.04	327		i PKIKP		PKPdf	21 14 25.0	+0.1
ARU								21 16 23.9	
ARU					SS		SS	21 33 38.3	+7.4
ARU	Arti	127.04	327	⇑	ePKP		PKPdf	21 14 24.9	0.0
ARCES	ARCESS Array B	129.08	351		PKP		PKPdf	21 14 28.8	+0.4
	comp=Z,4.8nm,1.0s,baz=354,slow=1.2,SNR=8.1								
OBN	Obninsk	138.15	334	⇑	i PKIKP		PKPdf	21 14 46.5	+0.6
OBN					pmax		pmax		
	comp=Z,4.0nm,1.3s								
GOF	Gofitskoye	140.72	318		ePKIKP		PKPdf	21 14 53.0	+2.1
KIV	Kislovodsk	141.44	317	⇑	i PKIKP		PKPdf	21 14 54.7	+2.5
BHD	Baghdad	143.71	299		ePKP		PKPdf	21 14 57.0	+0.4
MSL	Mosul	143.95	305		ePKP		PKPdf	21 14 56.0	-0.9
EKA	Eskdalemuir Ar	143.98	9		PKP		PKPdf	21 14 56.4	+0.1
	comp=Z,1.9nm,0.8s,baz=20,slow=13,SNR=3.7								
AKASG	Malin Array Be	144.40	335		PKP		PKPdf	21 14 55.6	-1.7
	comp=Z,5.0nm,0.5s,baz=36,slow=4.0,SNR=50								
KIEV	Kiev	144.41	335		ePKHKP		PKPdf	21 14 55.3	-1.9
GKP	Gorka Klasztor	145.72	348		ePKP		PKPab	21 15 00.9	+0.8
GKP	Gorka Klasztor	145.72	348		ePKP		PKPab	21 15 00.9	+0.8
BSEG	Bad Segeberg	145.96	356		ePKPbc		PKPbc	21 15 01.4	+0.9
SIM	Simferopol'	146.10	324		ePKHKP			21 14 50.0	
SIM					pmax		pmax		
	comp=Z,31nm,1.1s								
MALT	Malatya	146.77	310	⇓	iP		PKPab	21 15 05.2	+0.5
MALT	Malatya	146.77	310		P		PKPab	21 15 05.6	+0.9
RUE	Ruedersdorf	147.04	352		ePKPbc		PKPbc	21 15 04.5	+0.8
LVV	L'vov	147.05	339		i PKIKP		PKPbc	21 15 04.3	+0.5
KIS	Kishinev	147.40	331		ePKP		PKPbc	21 15 05.0	+0.1
NRDL	Niedersach Rie	147.41	356		ePKPbc		PKPbc	21 15 05.2	+0.4
KWP	Kalwaria	147.65	340		ePKP		PKPab	21 15 06.7	-1.0
KWP	Kalwaria	147.65	340	⇑	iP		PKPab	21 15 06.7	-1.0
KWP	Kalwaria	147.65	340		ePKPbc		PKPbc	21 15 06.2	+0.7
IBBN	Ibbenburen	147.71	358		ePKPbc		PKPbc	21 15 06.4	+0.8
IAS	Iasi	147.81	332		PKIKP		PKPbc	21 15 07.0	+1.0
OJC	Ojcow	147.98	344		ePKP		PKPbc	21 15 07.2	+0.8
CLZ	Clausthal	148.04	355		ePKPbc		PKPbc	21 15 07.4	+0.9
KSP	Ksiaz	148.21	346		ePKP		PKPbc	21 15 08.2	+1.3
KSP	Ksiaz	148.21	348		ePKP		PKPbc	21 15 08.1	+1.1
STHS	Stebnicka Huta	148.29	341		ePKP		PKPdf	21 15 03.3	-0.6
STHS					e			21 15 08.5	
CLL	Collm	148.30	352	⇑	i PKIKP		PKPbc	21 15 07.8	+0.6
CLL					pmax		pmax		
	comp=Z,34nm,1.0s								
CLL	Collm	148.30	352		ePKPbc		PKPbc	21 15 08.0	+0.8
CLL	Collm	148.30	352	⇑	i PKPbc		PKPbc	21 15 07.8	+0.6
	comp=Z,34nm,1.0s								
BUR08	Bucovina Ar. S	148.44	335		ePKPbc		PKPbc	21 15 08.8	+1.1
BURAR	Bucovina Array	148.45	335	⇓	iP		PKPbc	21 15 09.4	+1.7
BURAR	Bucovina Array	148.45	335	⇓	P		PKPbc	21 15 09.4	+1.7
NIE	Niedzica	148.56	342		ePKP		PKPbc	21 15 09.4	+1.5
UPC	Upice	148.58	348		ePKPbc		PKPbc	21 15 08.8	+0.9
UPC					ex			21 15 19.5	
BRG	Berggiesshubel	148.59	351		ePKHKP		PKPdf	21 15 05.9	+1.6
BRG					i			21 15 08.9	
BRG					pmax		pmax		
	comp=Z,11nm,1.5s								
BRG	Berggiesshubel	148.59	351		ePKPbc		PKPbc	21 15 08.9	+1.0
BRG	Berggiesshubel	148.59	351		ePKP		PKPdf	21 15 05.9	+1.6
BRG					i			21 15 08.9	
BRG					e			21 15 29.5	
FBE	Freiberg	148.63	351		ePKPbc		PKPbc	21 15 09.3	+1.3
UZH	Uzhgorod	148.66	339		ePKHKP		PKPdf	21 15 06.4	+1.9
UZH					i			21 15 09.0	
UZH					i			21 15 16.2	
UZH					i			21 15 22.0	
DPC	Dobruska-Polom	148.67	348		ePKPbc		PKPbc	21 15 09.6	+1.4
DPC					ePKPab		PKPab	21 15 13.7	+2.0
CRVS	Cervenica-Dubn	148.68	341		ePKIKP		PKPbc	21 15 09.4	+1.1
CRVS	Cervenica-Dubn	148.68	341		ePKP		PKPdf	21 15 06.1	+1.6
CRVS					e			21 15 09.4	
TLCR		148.73	329	⇓	iP		PKPbc	21 15 09.6	+1.1
TLCR		148.73	329	⇓	P		PKPbc	21 15 09.6	+1.1
OKC	Ostrava-Krasne	148.75	345		ePKPbc		PKPbc	21 15 09.8	+1.4
PVCC	Panska Ves	148.82	350		ePKPbc		PKPbc	21 15 09.9	+1.3
BMR	Baia Mare	149.06	337	⇓	iP		PKPbc	21 15 10.4	+1.2
BMR	Baia Mare	149.06	337		P		PKPbc	21 15 10.8	+1.5
MOX	Moxa	149.11	353		ePKP		PKPbc	21 15 09.9	+0.6
	comp=Z,35nm,1.7s								
MOX	Moxa	149.11	353		ePKPbc		PKPbc	21 15 10.2	+0.9
VRI	Vrincioaia	149.20	332	⇑	iP		PKPbc	21 15 09.8	+0.1
VRI	Vrincioaia	149.20	332	⇑	P		PKPbc	21 15 09.8	+0.1
UCC	Uccle	149.23	2		PKPbc		PKPbc	21 15 09.6	+0.1
WERD	Werda	149.23	353		ePKPbc		PKPbc	21 15 10.6	+1.0
TANN	Tannenbergstha	149.24	352		ePKPbc		PKPbc	21 15 10.5	+0.9
PLOR	Plostina	149.25	332	⇑	iP		PKPbc	21 15 10.9	+1.1
GUNZ	Gunzen	149.31	352		ePKPbc		PKPbc	21 15 11.0	+1.2
PRU	Pruhonice	149.35	350		ePKPbc		PKPbc	21 15 10.6	+0.7
WERN	Wernitzgruen	149.38	352		ePKPbc		PKPbc	21 15 11.2	+1.2
BR131	Keskin Array S	149.40	316		ePKPbc		PKPbc	21 15 10.4	+0.1
BRTR	Keskin Array B	149.40	316		PKP		PKPdf	21 15 06.8	+0.9
	comp=Z,8.9nm,1.1s,baz=78,slow=6.4,SNR=7.7								
BRTR					PKPbc		PKPbc	21 15 11.1	+0.7
	comp=Z,8.9nm,1.1s,baz=119,slow=1.7,SNR=24								
NKC	Novy Kostel	149.42	352		ePKPbc		PKPbc	21 15 11.1	+1.0
MEM	Membach	149.43	0		PKPbc		PKPbc	21 15 11.5	+1.4
TIRR	Tirgusor	149.45	328	⇓	iP		PKPbc	21 15 11.5	+1.2
TIRR	Tirgusor	149.45	328		ePKPbc		PKPbc	21 15 10.8	+0.4
SNF	Seneffe	149.49	3		PKPbc		PKPbc	21 15 10.2	0.0
HARR	Harsova	149.52	329	⇓	iP		PKPbc	21 15 11.9	+1.4
HARR	Harsova	149.52	329		P		PKPbc	21 15 11.9	+1.4
VRAC	Vranov	149.60	347	⇓	iP		PKPbc	21 15 11.6	+1.1
VRAC	Vranov	149.60	347	⇓	P		PKPbc	21 15 11.6	+1.0
MANZ	Manzenberg	149.71	353		ePKPbc		PKPbc	21 15 11.8	+1.0
TNS	Taunus Mts	149.77	357		ePKPbc		PKPbc	21 15 11.6	+0.7
VYHS	Vyhne	149.81	343		ePKP		PKPbc	21 15 12.3	+1.2
MLR	Muntele Rosu	149.84	332		PKP		PKPdf	21 15 06.9	+0.4
	comp=Z,23nm,1.1s,baz=105,slow=6.1,SNR=3.3								
MLR					PKPbc		PKPbc	21 15 12.0	+0.8
	comp=Z,23nm,1.1s,baz=19,slow=3.7,SNR=28								
MLR	Muntele Rosu	149.84	332		PKIKP		PKPbc	21 15 12.5	+1.2
MLR	Muntele Rosu	149.84	332	⇓	iP		PKPbc	21 15 12.4	+1.1
MLR	Muntele Rosu	149.84	332		PKP		PKPdf	21 15 06.9	+0.5
MLR					PKPbc		PKPbc	21 15 12.0	+0.8
MLR					P			21 15 12.4	
TREC	Trest	149.84	348		ePKPbc		PKPbc	21 15 11.9	+0.8
KOLL	Kolacno	149.85	344		ePKP		PKPbc	21 15 12.5	+1.3
KOLL					e			21 03 09.3	
KOLL					e			21 15 25.8	
ROTZ	Rotzenmuhle	149.91	352		ePKPbc		PKPbc	21 15 12.1	+0.8
DOU	Dourbes	149.91	2		PKPbc		PKPbc	21 15 09.5	-1.8
GIVF	Givet	149.92	2	⇑	i PKP1		PKPbc	21 15 11.8	+0.5
	comp=Z,98nm,1.1s								
BAIF	Baives	149.94	3	⇑	i PKP1		PKPbc	21 15 12.0	+0.7
	comp=Z,76nm,1.1s								
PSZ	Piszkesteto	150.04	342		PKIKP		PKPbc	21 15 13.3	+1.6
PSZ	Piszkesteto	150.04	342	⇓	epPKP		PKPbc	21 15 13.1	+1.4
PSZ	Piszkesteto	150.04	342	⇑	iP		PKPbc	21 15 13.2	+1.5
PSZ	Piszkesteto	150.04	342		ePKPdf		PKPdf	21 15 08.1	+1.4
PSZ					P			21 15 13.3	
DRGR		150.09	337	⇑	iP		PKPbc	21 15 12.7	+0.9
DRGR		150.09	337		P		PKPbc	21 15 13.0	+1.2
ASF	Jabal al Asfar	150.09	300		PKPbc		PKPbc	21 15 11.0	-1.4
	comp=Z,4.9nm,1.0s,baz=195,slow=0.8,SNR=5.5								
GRA1	Grafenberg Arr	150.09	354		ePKPbc		PKPbc	21 15 12.3	+0.6
GRF	Grafenberg Arr	150.09	354		ePKPbc		PKPbc	21 15 12.3	+0.6
SMOL	Smolenice	150.16	345		ePKP		PKPbc	21 15 14.0	+2.1
VOIR		150.27	333	⇑	iP		PKPbc	21 15 13.7	+1.4
VOIR		150.27	333		P		PKPbc	21 15 13.5	+1.2
KHC	Kasperske Hory	150.34	350		ePKHKP		PKPdf	21 15 07.9	+0.8
KHC					e			21 15 13.0	
KHC					e			21 15 25.0	
KHC	Kasperske Hory	150.34	350		ePKPbc		PKPbc	21 15 13.3	+1.0
KHC					epPKP		pPKPab	21 15 25.0	+2.6
KHC	Kasperske Hory	150.34	350		ePKPdf		PKPdf	21 15 07.8	+0.7
KHC					ePKPbc		PKPbc	21 15 13.2	+0.8
KHC					ePKP		PKPbc	21 15 13.3	+1.0
KHC					e			21 15 25.0	
WLF	Walferdange	150.38	0		PKPbc		PKPbc	21 15 13.9	+1.5
WET	Wettzell	150.43	351		ePKPbc		PKPbc	21 15 13.2	+0.6
ZST	Bratislava	150.53	345		ePKP		PKPbc	21 15 14.2	+1.4
ZST					e			21 15 21.5	
GEC2	GERESS Array S	150.59	350		ePKPbc		PKPbc	21 15 13.7	+0.7
GERES	GERESS Array B	150.59	350		PKPbc		PKPbc	21 15 13.4	+0.5
	comp=Z,7.4nm,1.0s,baz=0.0,slow=1.5,SNR=17								
BUD	Budapest	150.68	342	⇓	epPKP		PKPbc	21 15 15.0	+1.8
FLN	La Foliniere	150.76	9	⇑	i PKP1		PKPbc	21 15 13.2	-0.2
	comp=Z,156nm,1.2s								
SGMF	Saint Gilles	150.89	12	⇑	i PKP1		PKPbc	21 15 13.4	-0.3
	comp=Z,55nm,1.0s								
LDF	La Druitiere	150.98	9	⇑	i PKP1		PKPbc	21 15 13.7	-0.2
	comp=Z,114nm,1.3s								
MMAI	Mount Meron Ar	151.03	303		PKPbc		PKPbc	21 15 14.3	-0.2
	comp=Z,8.9nm,0.8s,baz=69,slow=4.6,SNR=8.7								
LANF	Langenberg	151.04	358		PKP		PKPbc	21 15 14.8	+0.8
CONA	Conrad Observa	151.07	347	⇑	i PKiKP		PKiKP	21 15 15.1	+0.5
	comp=Z,20nm,1.1s								
GRR	Gorron	151.07	10	⇑	i PKP1		PKPbc	21 15 14.1	0.0
	comp=Z,87nm,1.1s								
CSNA	Conrad Observa	151.07	347	⇑	i PKiKP		PKiKP	21 15 15.2	+0.5
	comp=Z,18nm,1.1s								
SOP	Sopron	151.14	346	⇑	ePKP		PKPbc	21 15 15.2	+0.9
STU	Stuttgart	151.18	356		ePKPbc		PKPbc	21 15 15.1	+0.8
GZR	Gura Zlata	151.24	336	⇑	iP		PKPbc	21 15 15.6	+1.0
GZR	Gura Zlata	151.24	336		P		PKPbc	21 15 15.3	+0.7
BZS	Buzias	151.49	337	⇑	iP		PKPbc	21 15 16.0	+0.8
BZS	Buzias	151.49	337		P		PKPbc	21 15 15.8	+0.7
MEZF	Maizieres J'vi	151.52	2	⇑	i PKP1		PKPbc	21 15 15.7	+0.6
	comp=Z,54nm,1.1s								
FUR	Furstenfeldbru	151.60	353		ePKPbc		PKPbc	21 15 16.1	+0.8
CDF	Champ du Feu	151.62	359	⇑	i PKP1		PKPbc	21 15 15.7	+0.3
	comp=Z,42nm,1.2s								
BFO	Black Forest	151.67	357		ePKPbc		PKPbc	21 15 15.9	+0.4
BFO	Black Forest	151.67	357		ePKPbc		PKPbc	21 15 15.9	+0.4
RJOB	Jochberg	151.81	351		ePKPbc		PKPbc	21 15 16.3	+0.5
THEF	They Montfort	151.82	0		PKP		PKPbc	21 15 16.1	+0.3
PKSM	Moragy	151.95	342	⇑	iP		PKPbc	21 15 16.7	+0.5
PKSM	Moragy	151.95	342		P		PKPbc	21 15 16.5	+0.3
HAU	Haudompre	152.04	360	⇑	i PKP1		PKPbc	21 15 16.5	+0.2
	comp=Z,30nm,0.9s								
HINF	Hinteralfeld	152.22	359		i PKP1		PKPbc	21 15 16.8	0.0
	comp=Z,11nm,0.9s								
KBA	Koelnbreinsper	152.37	350	⇑	i PKiKP		PKiKP	21 15 17.0	-0.4
	comp=Z,8.7nm,1.1s								
MOTA	Moosalm	152.43	353	⇑	i PKiKP		PKiKP	21 15 17.7	+0.2
	comp=Z,11nm,1.0s,SNR=6.6								
WTTA	Wattenberg	152.44	352		i PKiKP		PKiKP	21 15 17.8	+0.3
	comp=Z,12nm,0.8s,SNR=11								
PERS	Pernice	152.45	347		ePKPbc		PKPbc	21 15 17.8	+0.5
HYF	Humbligny	152.61	5	⇑	i PKP1		PKPbc	21 15 18.1	+0.5
LOMF	Lomont	152.69	359		PKP		PKPbc	21 15 18.2	+0.4
LOR	Lormes	152.70	4	⇑	i PKP1		PKPbc	21 15 18.2	+0.3
	comp=Z,45nm,1.2s								
FETA	Feichten	152.79	353	⇓	i PKiKP		PKiKP	21 15 18.8	+0.5
	comp=Z,13nm,1.1s								
ABTA	Abfaltersbach	152.82	351		i PKiKP		PKiKP	21 15 18.0	-0.4
	comp=Z,12nm,0.8s,SNR=10								
SSF	Saint Saulge	152.88	4	⇑	i PKP1		PKPbc	21 15 18.5	+0.2
	comp=Z,42nm,1.1s								
DAVOS	Davos	153.06	355		PKIKP		PKPbc	21 15 19.0	+0.3
GCIS	Gornji Cirnik	153.07	346		ePKPdf		PKPdf	21 15 11.1	-0.2
GCIS					ePKPbc		PKPbc	21 15 19.0	+0.3
GCIS					ePKPab		PKPab	21 15 30.7	+0.6
DAVOX	Davos/Dischmat	153.11	355		PKPbc		PKPbc	21 15 19.0	+0.3
	comp=Z,5.8nm,0.8s,baz=307,slow=3.8,SNR=8.0								
LJU	Ljubljana	153.14	347		ePKPbc		PKPbc	21 15 18.1	-0.8
AVF	Avril sur Loir	153.14	5	⇑	i PKP1		PKPbc	21 15 18.7	-0.1
	comp=Z,20nm,1.1s								
BGF	Bois d'Agland	153.33	5	⇑	i PKP1		PKPbc	21 15 19.3	0.0
	comp=Z,40nm,1.1s								
CABF	La Chapelle	153.43	0		ePKP1		PKPbc	21 15 20.5	+1.0
	comp=Z,26nm,1.0s								
TUE	Stuetta	153.46	355		ePKPbc		PKPbc	21 15 20.0	+0.5
BOJS	Bojanci	153.50	346		ePKPdf		PKPdf	21 15 12.2	+0.2
BOJS					ePKPbc		PKPbc	21 15 20.3	+0.7
MDT	Midelt	163.90	35		PKP		PKPdf	21 15 24.9	+0.1
	comp=Z,4.7nm,1.1s,baz=341,slow=5.0,SNR=5.1								
MDT					PKPab		PKPab	21 16 18.3	+0.9
	comp=Z,3.8nm,1.1s,baz=33,slow=3.2,SNR=4.1								
TORD	Torodi Ar. Bea	171.88	146		PKP		PKPdf	21 15 29.6	-1.2
	comp=Z,2.0nm,1.1s,baz=310,slow=1.1,SNR=8.0								
TORD					PKPab		PKPab	21 16 51.6	-1.3
	comp=Z,2.0nm,1.0s,baz=227,slow=2.2,SNR=5.3								

*ISCJB **29** 21:27:21.8±0.5, 4291N±003×7698E±003, h20km±4km, mb4.2/23, MS3.6/6, Error ellipse: s-maj=4.5km s-min=3.2km az=156.8*

*NNC **29** 21:27:21.8±1.4, 4300N×7686E, h25km±6km, mb4.5, mpv4.3, Error ellipse: s-maj=18.7km s-min=3.9km az=154.0*

*MOS **29** 21:27:22.2±1.3, 4314N×7679E, h17km, mb4.6/10, Error ellipse: s-maj=7.8km s-min=6.2km az=86.2*

*IDC **29** 21:27:23.1±0.7, 4294N×7695E, h20km±3km, mb3.9/13, mb1 4.2/18, mb1mx4.1/28, mbtmp4.0/18, ML4.0/5, MS3.7/10, Ms1 3.7/10, ms1mx3.4/30, Error ellipse: s-maj=10.6km s-min=10.5km az=141.0*

*KNET **29** 21:27:23.8±0.6, 4286N×7669E, h13km±2km, ml4.0, Error ellipse: s-maj=3.9km s-min=1.9km az=49.0*

*NEIC **29** 21:27:24.0±0.4, 4305N×7686E, mb4.5/6, Error ellipse: s-maj=8.7km s-min=6.1km az=154.0*

NEIC Felt [IV] at Almaty.

*BJI **29** 21:27:25.1, 4301N×7738E, h14km, mB4.9, mb4.6, ML4.6, Ms3.9, Msz3.8*

ISC 29 21:27:21.8±0.6, 4291N±002×7690E±003, h8km±3km, h21km±.6km: pP-P, n121, σ1°31/146, mb4.2/23, MS3.6/6, 22C-11D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
KNDC	Almaty	0.32	9	⇑	P	Pg	21	27	29.7	+1.7
KNDC				⇑	S	Sg	21	27	35.0	+2.9
AAA	Alma-Ata	0.37	6	i	PG	Pg	21	27	29.2	+0.2
AAA				i	S	Sg	21	27	34.4	+0.6
ULHL	Ulahol	0.82	216	⇓	P	Pg	21	27	37.5	+0.1
	1μm,0.1s,SNR=118									
ULHL				⇑	S	Sg	21	27	47.9	-0.2
	5μm,0.2s									
TKM2	Tokmak 2	0.95	271	⇑	P	Pg	21	27	39.4	-0.7
	128nm,0.3s									
TKM2				⇑	S	Sg	21	27	52.1	-0.4
	1μm,0.3s									
TKM2	Tokmak 2	0.95	271		P	Pg	21	27	39.3	-0.8
	290nm,0.1s,SNR=1711									
TKM2				⇓	S	Sg	21	27	52.1	-0.3
	6μm,0.1s									
TKM2	Tokmak 2	0.95	271	e	Pg	Pg	21	27	39.4	-0.7
TKM2				e	Sg	Sg	21	27	52.1	-0.4
KBK	Karagaybulak	1.46	261		P	Pn	21	27	48.5	+0.2
	548nm,0.2s,SNR=1535									
KBK				⇑	S	Sn	21	28	08.0	+0.4
	2μm,0.2s									
KZA	Kyzart	1.47	236	⇑	P	Pn	21	27	49.1	+0.6
	178nm,0.2s,SNR=454									
KZA				⇑	S	Sn	21	28	09.1	+1.1
	550nm,0.2s									
CHMS	Chumysh	1.58	274	⇑	P	Pn	21	27	50.0	0.0
	232nm,0.1s,SNR=269									
CHMS				⇑	S	Sn	21	28	10.6	0.0
	1μm,0.2s									
FRU	Bishkek	1.68	268	i	PN	Pn	21	27	51.0	-0.4
FRU				i	S	Sn	21	28	13.0	-0.1
FRU					pmax	pmax				
	comp=Z,550nm,1.6s									
FRU					smax					
	comp=N,2μm,1.6s									
FRU					smax					
	comp=N,6μm,2.0s									
AAK	Ala-Archa	1.79	262	⇑	P	Pn	21	27	54.1	+1.1
	comp=N,355nm,0.2s,SNR=481									
AAK				⇑	S	Sn	21	28	17.1	+1.3
	comp=N,1μm,0.4s									
AAK	Ala-Archa	1.79	262	e	Pn	Pn	21	27	54.2	+1.2
AAK				e	Sn	Sn	21	28	15.9	+0.1
USP	Ospenovka	1.79	282		P	Pn	21	27	53.7	+0.7
	comp=N,320nm,0.2s,SNR=1664									
USP				⇑	S	Sn	21	28	17.2	+1.3
	comp=N,2μm,0.2s									
UCH	Uchtor	1.89	250	⇑	P	Pn	21	27	56.0	+1.7
	comp=N,130nm,0.2s,SNR=82									
UCH	Uchtor	1.89	250	e	Pn	Pn	21	27	56.6	+2.3

EKS2	Erkin-Say	2.31	265		P		Pn	21 28 02.1	+2.0
	comp=N,138nm,0.2s,SNR=411								
EKS2	Erkin-Say	2.31	265	e	Pn		Pn	21 28 02.2	+2.1
EKS2				e	Sn		Sn	21 28 32.4	+3.7
AML	Almayashu	2.49	253		P		Pn	21 28 06.2	+3.6
	comp=N,239nm,0.4s,SNR=191								
AML	Almayashu	2.49	253	e	Pn		Pn	21 28 06.2	+3.6
KSH	Kashi	3.46	192		P		Pg	21 28 25.5	-2.5
KSH					Smax				
	comp=N,907nm,1.0s								
KSH					Smax				
	comp=E,602nm,0.8s								
KK31	Karatay Array	4.69	275	⇓	Pn		Pn	21 28 33.5	+0.7
	comp=E,0.8nm,0.2s,baz=89,slow=13,SNR=652								
KK31				⇑	Pg		Pg	21 28 42.3	-9.3
	comp=E,20nm,0.2s,baz=89,slow=16,SNR=45								
KK31					Lg			21 29 46.6	
	comp=E,72nm,0.2s,baz=88,slow=30,SNR=14								
KK31	Karatay Array	4.69	275	i	PN		Pn	21 28 33.4	+0.6
KK31					pmax	pmax			
	comp=Z,1.0nm,0.2s								
MK31	Makanchi Array	5.46	43		Pn		Pn	21 28 44.9	+1.6
	comp=Z,37nm,0.5s,baz=217,slow=14,SNR=1188								
MK31				⇓	Pg		Pg	21 28 57.8	-8.5
	comp=Z,44nm,0.3s,baz=222,slow=16,SNR=21								
MK31				⇑	Sn		Sn	21 29 46.8	+0.5
	comp=Z,61nm,0.3s,baz=220,slow=24,SNR=7.5								
MK31				⇑	Lg			21 30 12.0	
	comp=Z,240nm,0.7s,baz=220,slow=31,SNR=4.0								
MK31	Makanchi Array	5.46	43	e	Pn		Pn	21 28 45.3	+1.9
MKAR	Makanchi Array	5.46	43		Pn		Pn	21 28 44.7	+1.4
	comp=Z,12nm,0.3s,baz=222,slow=15,SNR=507								
MKAR					Sn		Sn	21 29 46.8	+0.4
	comp=Z,54nm,0.3s,baz=220,slow=25,SNR=15								
MKAR					Lg			21 30 08.4	
	comp=Z,55nm,0.3s,baz=220,slow=28,SNR=5.2								
MKAR					LR		LR	21 31 19.5	
	comp=Z,173nm,20.3s,baz=63,slow=44								
MKAR	Makanchi Array	5.46	43		Pn		Pn	21 28 44.7	+1.4
MKAR					Sn

GTA					LR	LR			
	comp=E,245nm,10.2s								
GTA					LR	LR			
	comp=Z,303nm,12.6s								
RAMN	**Ramite**	**17.77**	**150**	*eP*	**Pn**		**21 31 28.3**	**-1.2**
	comp=Z,81nm,1.2s								
TAPN	**Taplejung**	**17.84**	**147**	*eP*	**Pn**		**21 31 31.2**	**+0.9**
	comp=Z,30nm,0.9s								
ARU	**Arti**	**17.92**	**325**	*d iP*	**Pn**		**21 31 27.7**	**-3.4**
ARU				*eS*	**Sn**		**21 34 42.8**	**-8.1**
ARU				pmax	pmax				
	comp=Z,12nm,1.1s								
ARU				MLR	MLR				
	comp=Z,465nm,17.0s								
ODAN	**Odare**	**18.15**	**149**	*eP*	**Pn**		**21 31 34.6**	**+0.5**
	comp=Z,37nm,1.0s								
ZAK	**Zakamensk**	**19.53**	**58**	*eP*	**Pn**		**21 31 50.0**	**-0.6**
ZAK				pmax	pmax				
	comp=Z,10.0nm,1.2s								
TLY	**Talaya**	**20.06**	**55**	*eP*	**P**		**21 32 02.4**	**+7.2**
TLY				pmax	pmax				
	comp=Z,7.0nm,0.8s								
TLY				MLR	MLR				
	comp=Z,75nm,12.0s,MS3.3								
SONM	**Songino Array**	**21.23**	**66**	*eP*	**P**		**21 32 08.8**	**+0.8**
	comp=Z,23nm,0.9s,mb4.5,baz=279,slow=11,SNR=46								
SONM	**Songino Array**	**21.23**	**66**	*eP*	**P**		**21 32 10.0**	**+2.1**
ULN	**Ulaanbaatar**	**21.68**	**66**	*⇓iP*	**P**		**21 32 14.7**	**+2.0**
ULN	**Ulaanbaatar**	**21.68**	**66**	*eP*	**P**		**21 32 15.2**	**+2.5**
	comp=Z,19nm,1.0s,mb4.5								
LZH	**Lanzhou**	**21.83**	**99**	*eP*	**P**		**21 32 16.0**	**+1.6**
LZH				AMB	AMB				
	comp=Z,39nm,1.2s,mb4.7								
LZH				AMB	AMB				
	comp=Z,120nm,5.1s								
GNI	**Garni**	**24.15**	**274**	LR	LR		21 42 57.4		
	comp=Z,78nm,21.5s,MS3.1,baz=258,slow=39								
GNI	**Garni**	**24.15**	**274**	*⇑iP*	**P**		**21 32 40.1**	**+1.9**
HHC	**Hu-ho-hao-te**	**25.79**	**83**	*eP*	**P**		**21 32 56.0**	**+2.9**
HHC				AMB	AMB				
	comp=Z,12nm,0.8s,mb4.5								
HHC				AMB	AMB				
	comp=Z,162nm,3.7s								
XAN	**Xi'an**	**26.46**	**99**	P	**P**		**21 32 59.5**	**+0.3**
XAN				AMB	AMB				
	comp=Z,6.0nm,1.1s,mb4.0								
BOD	**Bodaibo**	**27.55**	**44**	*eP*	**P**		**21 33 09.2**	**+0.4**
BOD				pmax	pmax				
	comp=Z,6.0nm,1.1s,mb4.1								
CMAR	**Chiang Mai Arr**	**30.70**	**136**	P	**P**		**21 33 36.6**	**-0.4**
	comp=Z,2.2nm,0.9s,mb4.0,baz=318,slow=9.1,SNR=17								
CMAR				PcP	PcP		21 36 34.2	-0.7	
	comp=Z,0.7nm,0.9s,baz=304,slow=2.1,SNR=4.8								
CMAR	**Chiang Mai Arr**	**30.70**	**136**	P	**P**		**21 33 36.6**	**-0.4**
CMAR							21 36 34.2		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.9s								
WHN	**Wuhan**	**32.20**	**100**	*⇓P*	**P**		**21 33 51.0**	**+0.8**
BRTR	**Keskin Array B**	**32.38**	**279**	P	**P**		**21 33 52.6**	**+0.9**
	comp=Z,0.4nm,0.7s,mb3.3,baz=81,slow=7.2,SNR=2.5								
BRTR				pP	pP		21 33 58.3	+4.2	
	comp=Z,3.1nm,0.9s,baz=94,slow=7.9,SNR=12								
BRTR	**Keskin Array B**	**32.38**	**279**	P	**P**		**21 33 52.6**	**+0.9**
BRTR				*PP	pP		21 33 58.3	+4.2	
BRTR				pmax	pmax				
	comp=Z,3.0nm,0.9s								
JOF	**Joensuu**	**33.02**	**323**	*ep*	**P**		**21 33 56.1**	**-1.0**
	comp=Z,5.1nm,0.8s,mb4.5								
JOF	**Joensuu**	**33.02**	**323**	*eP*	**P**		**21 33 56.1**	**-1.0**
JOF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.5								
AKASG	**Malin Array Be**	**33.06**	**300**	P	**P**		**21 33 55.9**	**-1.6**
	comp=Z,0.5nm,0.5s,mb3.8,baz=76,slow=8.1,SNR=5.7								
AKASG	**Malin Array Be**	**33.06**	**300**	*eP*	**P**		**21 33 58.0**	**+0.5**
AKASG	**Malin Array Be**	**33.06**	**300**	P	**P**		**21 33 55.9**	**-1.6**
YAK	**Yakutsk**	**36.13**	**40**	*⇑iP*	**P**		**21 34 24.1**	**+0.2**
YAK				pmax	pmax				
	comp=Z,12nm,0.7s,mb4.9								
YAK	**Yakutsk**	**36.13**	**40**	*eP*	**P**		**21 34 23.4**	**-0.5**
	comp=Z,10nm,0.8s,mb4.8								
BUR08	**Bucovina Ar. S**	**36.13**	**296**	*eP*	**P**		**21 34 24.3**	**+0.2**
ARCES	**ARCESS Array B**	**37.23**	**333**	P	**P**		**21 34 33.4**	**+0.2**
	comp=Z,7.2nm,0.9s,mb4.5,baz=95,slow=8.6,SNR=5.7								
ARCES				LR	LR		21 50 29.8		
	comp=Z,180nm,21.6s,MS3.8,baz=285,slow=37								
ARCES	**ARCESS Array B**	**37.23**	**333**	P	**P**		**21 34 33.4**	**+0.2**
ARCES				pmax	pmax				
	comp=Z,7.0nm,1.0s								
ARCES				MLR	MLR				
	comp=Z,180nm,21.6s								
TIXI	**Tiksi**	**38.11**	**24**	*⇓iP*	**P**		**21 34 40.4**	**-0.3**
TIXI				pmax	pmax				
	comp=Z,11nm,1.9s,mb4.3								
TIXI	**Tiksi**	**38.11**	**24**	*eP*	**P**		**21 34 40.6**	**-0.1**
	comp=Z,2.9nm,0.8s,mb4.1								
KSRS	**Korea Array**	**38.87**	**80**	LR	LR		21 52 18.1		
	comp=Z,39nm,18.2s,MS3.3,baz=130,slow=38								
NB2	**NORSAR Subarra**	**42.28**	**319**	P	**P**		**21 35 14.8**	**-0.6**
	comp=Z,8.1nm,1.0s,mb4.3,baz=86,slow=8.6								
NOA	**NORSAR Array B**	**42.28**	**319**	P	**P**		**21 35 15.5**	**+0.1**
	comp=Z,4.0nm,0.9s,mb4.1,baz=84,slow=8.1,SNR=8.6								
NOA				LR	LR		21 53 08.9		
	comp=Z,227nm,19.6s,MS4.1,baz=255,slow=37								
NOA	**NORSAR Array B**	**42.28**	**319**	*eP*	**P**		**21 35 15.3**	**-0.1**
NOA	**NORSAR Array B**	**42.28**	**319**	P	**P**		**21 35 15.5**	**+0.1**
NOA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
NOA				MLR	MLR				
	comp=Z,227nm,19.6s								
GERES	**GERESS Array B**	**43.27**	**301**	P	**P**		**21 35 24.4**	**+0.9**
	comp=Z,0.4nm,0.8s,mb3.2,baz=59,slow=5.1,SNR=4.7								
GERES				pP	pP		21 35 30.8	+4.8	
	comp=Z,0.7nm,0.7s,baz=67,slow=10,SNR=4.0								
GERES				LR	LR		21 57 13.6		
	comp=Z,263nm,19.7s,MS4.1,baz=261,slow=41								
GERES	**GERESS Array B**	**43.27**	**301**	P	**P**		**21 35 24.4**	**+0.9**
GERES				*PP	pP		21 35 30.8	+4.8	
GERES				pmax	pmax				
	comp=Z,1.0nm,0.7s								
GERES				MLR	MLR				
	comp=Z,263nm,19.7s								
GERES	**GERESS Array B**	**43.27**	**301**	P	**P**		**21 35 24.4**	**+0.9**
GERES				pP	pP		21 35 30.8	+4.8	
CDF	**Champ du Feu**	**47.44**	**302**	*eP*	**P**		**21 35 58.0**	**+1.4**
LPG	**La Plagne**	**48.87**	**299**	*eP*	**P**		**21 36 08.4**	**+0.7**
LPL	**La Plagne**	**48.88**	**299**	*eP*	**P**		**21 36 08.1**	**+0.3**
	comp=Z,16nm,1.2s,mb4.6								
LPL	**La Plagne**	**48.88**	**299**	*eP*	**P**		**21 36 08.1**	**+0.3**
LPL				pmax	pmax				
	comp=Z,8.0nm,1.2s,mb4.6								
LPL	**La Plagne**	**48.88**	**299**	*eP*	**P**		**21 36 08.1**	**+0.3**
	comp=Z,7.9nm,1.2s,mb4.6								
MBDF	**Montbardon**	**49.17**	**298**	*eP*	**P**		**21 36 10.8**	**+0.8**
	comp=Z,16nm,1.1s,mb4.7								
MBDF	**Montbardon**	**49.17**	**298**	*eP*	**P**		**21 36 10.8**	**+0.8**
MBDF				pmax	pmax				
	comp=Z,8.0nm,1.1s,mb4.7								
MBDF	**Montbardon**	**49.17**	**298**	*eP*	**P**		**21 36 10.8**	**+0.8**
	comp=Z,7.9nm,1.1s,mb4.7								
LMR	**La Mourre**	**49.92**	**296**	*eP*	**P**		**21 36 14.2**	**-1.6**
SMRF	**Simiane la Rot**	**50.26**	**297**	*eP*	**P**		**21 36 18.7**	**+0.3**
ESDC	**Sonseca Array**	**58.57**	**297**	P	**P**		**21 37 18.5**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.9,baz=57,slow=9.0,SNR=5.7								
ESDC				pP	pP		21 37 24.8	+3.4	
	comp=Z,1.5nm,0.9s,baz=59,slow=6.3,SNR=6.4								
ESDC	**Sonseca Array**	**58.57**	**297**	P	**P**		**21 37 18.5**	**-0.3**
ESDC				pP	pP		21 37 24.8	+3.5	
COLA	**College**	**67.01**	**19**	*⇓iP*	**P**		**21 38 15.4**	**+0.8**
TORD	**Torodi Ar. Bea**	**70.36**	**270**	P	**P**		**21 38 35.9**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=46,slow=4.1,SNR=3.5								
TORD				pP	pP		21 38 41.7	+2.8	
	comp=Z,2.7nm,1.0s,baz=41,slow=5.0,SNR=15								
YKA	**Yellowknife Ar**	**74.55**	**6**	P	**P**		**21 38 59.9**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.2,baz=349,slow=5.8,SNR=34								
YKA				pP	pP		21 39 06.4	+3.3	
	comp=Z,1.9nm,0.7s,baz=349,slow=5.9,SNR=12								
YKA	**Yellowknife Ar**	**74.55**	**6**	P	**P**		**21 38 59.9**	**-0.6**
YKA				*PP	pP		21 39 06.4	+3.3	
YKA				pmax	pmax				
	comp=Z,3.0nm,0.8s								
YKA				pmax	pmax				
	comp=Z,2.0nm,0.7s								
YKA	**Yellowknife Ar**	**74.55**	**6**	P	**P**		**21 38 59.9**	**-0.6**
YKA				pP	pP		21 39 06.4	+3.3	
WRA	**Warramunga Arr**	**81.84**	**127**	P	**P**		**21 39 40.2**	**-1.2**
	comp=Z,1.9nm,1.0s,mb4.0,baz=330,slow=5.0,SNR=7.0								
WRA	**Warramunga Arr**	**81.84**	**127**	*eP*	**P**		**21 39 40.8**	**-0.7**
ASAR	**Alice Springs**	**84.49**	**129**	P	**P**		**21 39 53.8**	**-1.3**
	comp=Z,1.5nm,1.0s,mb4.1,baz=333,slow=2.9,SNR=6.6								
ASAR	**Alice Springs**	**84.49**	**129**	P	**P**		**21 39 53.8**	**-1.3**
ASAR				pmax	pmax				
	comp=Z,2.0nm,1.0s								
PDAR	**Pinedale Array**	**94.52**	**5**	P	**P**		**21 40 41.4**	**-1.2**
	comp=Z,0.6nm,0.8s,mb4.1,baz=46,slow=4.3,SNR=5.8								

NEIC ***29*** *21:28:01.2, 1600N×9807W, h5km, MD4.1(MEX), After MEX.*

MEX 29 21:28:01.4±0.8, 1602N×9815W, h10km±6km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.37**	**4**	*i*	P		Pg	21 28 07.9	-0.9
PNIG				*i*	S		Sg	21 28 14.5	+0.7
VHO	**Vista Hermosa**	**1.72**	**52**	*i*	P		Pn	21 28 28.1	-3.3
VHO				*i*	S		Sn	21 28 48.7	-4.7
VHO	**Vista Hermosa**	**1.72**	**52**	*i*	P		Pn	21 28 28.7	-2.7
VHO				*i*	S		Sn	21 28 49.7	-3.7
HUIG	**Huatulco**	**1.98**	**97**	*i*	P		Pn	21 28 32.6	-2.4
HUIG				*i*	S		Sn	21 28 53.7	-6.2
CAIG	**El Cayaco**	**2.27**	**297**	*i*	P		Pn	21 28 36.4	-2.6
CAIG				*i*	S		Sn	21 29 01.7	-5.4
CAIG	**El Cayaco**	**2.27**	**297**	*i*	P		Pn	21 28 38.4	-0.6
CAIG				*i*	S		Sn	21 29 06.9	-0.2
MEIG	**Mezcala**	**2.36**	**324**	*i*	P		Pn	21 28 37.9	-2.3
MEIG				*i*	S		Sn	21 29 04.3	-4.9
TPIG	**Tehuac#an**	**2.51**	**17**	*i*	S		Sn	21 29 07.8	-5.0
PLIG	**Platanillo**	**2.69**	**332**	*i*	P		Pn	21 28 42.0	-2.7
PLIG				*i*	S		Sn	21 29 13.2	-4.2
PLIG	**Platanillo**	**2.69**	**332**	*i*	P		Pn	21 28 45.9	+1.1
PLIG				*i*	S		Sn	21 29 16.2	-1.2
CMIG	**Matias Romero**	**3.31**	**71**	*i*	P		Pn	21 28 50.2	-3.1
CMIG				*i*	S		Sn	21 29 30.9	-1.8
CMIG	**Matias Romero**	**3.31**	**71**	*i*	P		Pn	21 28 50.2	-3.1
CMIG				*i*	S		Sn	21 29 27.3	-5.4

NEIC ***29*** *21:48:16.5±2.4, 2379N×12178E, h10km, MG3.1(JMA), Error ellipse: s-maj=29.1km s-min=8.9km az=99.0*
ISCJB ***29*** *21:48:18.0±0.3, 2385N±002×12174E±002, h31km±2km, Error ellipse: s-maj=3.1km s-min=2.1km az=40.0*
TAP ***29*** *21:48:18.1, 2389N×12167E, h37km±1km, ML3.6, D*
JMA ***29*** *21:48:18.3±0.3, 2399N×12174E, h7km, M3.1*

ISC 29 21:48:18.4±0.3, 2387N±002×12173E±002, h31km±1km, n63, σ0s86/113, 9C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.16**	**315**	*i*	P		**Pb**	**21 48 24.8**	**+0.4**
	baz=323								
HWA				*eS*			**Sb**	**21 48 29.8**	**+1.4**
	baz=323								
ESF	**Shoufeng Towns**	**0.20**	**272**	P			**Pb**	**21 48 25.2**	**+0.4**
	baz=261								
ESF				*eS*			**Sb**	**21 48 30.6**	**+1.4**
	baz=261								
TEGC	**Jichi Village**	**0.23**	**228**	*eP*			**Pb**	**21 48 25.7**	**+0.5**
	baz=213								
TEGC				*eS*			**Sb**	**21 48 31.9**	**+2.2**
	baz=213								
TWD	**Chiawan**	**0.24**	**331**	*⇓iP*			**Pb**	**21 48 25.4**	**+0.1**
	baz=339								
TWD				S			**Sb**	**21 48 30.9**	**+0.9**
	baz=339								
ESL	**Shilin**	**0.27**	**259**	*⇑iP*			**Pb**	**21 48 25.4**	**-0.2**
	baz=250								
ESL				*i*	S		**Sb**	**21 48 30.5**	**-0.1**
	baz=250								
NACB	**Ninganchiao**	**0.33**	**339**	*e*	Pg		**Pb**	**21 48 26.0**	**-0.4**
NACB				*e*	Sg		**Sb**	**21 48 31.5**	**-0.3**
WHF	**Hehuan Shan**	**0.51**	**304**	*⇑iP*			**Pb**	**21 48 28.4**	**-0.6**
	baz=303								
WHF				*i*	S		**Sb**	**21 48 35.9**	**-0.4**
	baz=303								
EHY	**Hungye**	**0.52**	**226**	*i*	P		**Pb**	**21 48 27.9**	**-1.3**
	baz=219								
ENA	**Nanau**	**0.56**	**1**	P			**Pb**	**21 48 29.6**	**-0.4**
	baz=6.0								
ENA				S			**Sb**	**21 48 38.3**	**+0.6**
	baz=6.0								
YULB	**Yu-li**	**0.61**	**220**	*e*	Pg		**Pb**	**21 48 28.9**	**-1.9**
TWT	**Tachien**	**0.64**	**308**	*i*	P		**Pb**	**21 48 30.7**	**-0.4**
	baz=306								
TWT				*i*	S		**Sb**	**21 48 39.4**	**-0.4**
	baz=306								
TWF1	**Yuli**	**0.65**	**218**	*⇑iP*			**Pb**	**21 48 29.6**	**-1.7**
	baz=212								
NNS	**Nan Shan**	**0.66**	**331**	*⇑iP*			**Pb**	**21 48 30.8**	**-0.8**
	baz=333								
NNS				S			**Sb**	**21 48 39.7**	**-0.7**
	baz=333								
SSLB	**Suanglung**	**0.71**	**264**	*e*	Pg		**Pn**	**21 48 30.9**	**-1.5**
SSLB				*e*	Sg		**Sn**	**21 48 40.7**	**-1.2**
TWC	**Suao**	**0.75**	**9**	P			**Pn**	**21 48 32.7**	**-0.2**
	baz=12								
TWC				S			**Sb**	**21 48 43.3**	**+0.3**
	baz=12								
SMLT	**Sun Moon Lake**	**0.76**	**272**	*⇑iP*			**Pn**	**21 48 32.0**	**-1.0**
	baz=269								
SMLT				S			**Sb**	**21 48 41.5**	**-1.7**
	baz=269								
ENTT	**Nioudou**	**0.79**	**349**	*i*	P		**Pn**	**21 48 32.6**	**-0.8**
	baz=352								
ENTT				*eS*			**Sn**	**21 48 43.0**	**-1.0**
	baz=352								
TYC	**Yuchr**	**0.80**	**273**	*⇑iP*			**Pn**	**21 48 32.4**	**-1.1**
	baz=270								
YUS	**Yu-Shan**	**0.80**	**242**	*eP*			**Pn**	**21 48 33.1**	**-0.5**
	baz=238								
YUS				*eS*			**Sn**	**21 48 43.2**	**-1.3**
	baz=238								
CHKT	**Chengkung**	**0.83**	**204**	*eP*			**Pn**	**21 48 32.9**	**-1.1**
	baz=199								
CHKT				*eS*			**Sn**	**21 48 45.4**	**+0.2**
	baz=199								
TWE	**Neicheng**	**0.85**	**356**	*i*	P		**Pn**	**21 48 33.7**	**-0.7**
	baz=359								
TWE				S			**Sn**	**21 48 45.3**	**-0.5**
	baz=359								
YHNB	**Yeheng**	**0.86**	**338**	*e*	Pg		**Pn**	**21 48 33.8**	**-0.7**
YHNB				*e*	Sg		**Sn**	**21 48 44.8**	**-1.2**
NSK	**Sanguang**	**0.88**	**337**	*⇑iP*			**Pn**	**21 48 34.0**	**-0.6**
	baz=339								
NSK				S			**Sn**	**21 48 45.0**	**-1.2**
	baz=339								
ALS	**Alishan**	**0.92**	**248**	P			**Pn**	**21 48 34.9**	**-0.2**
	baz=244								
ALS				S			**Sn**	**21 48 46.6**	**-0.7**
	baz=244								
ELDTW	**Lidau**	**0.94**	**224**	*eP*			**Pn**	**21 48 34.2**	**-1.3**
	baz=220								
WNT	**Mingjian**	**0.95**	**271**	P			**Pn**	**21 48 35.7**	**0.0**
	baz=269								
WNT				S			**Sn**	**21 48 48.4**	**+0.2**
	baz=269								
TWQ1	**Liyutan**	**0.99**	**299**	*⇑iP*			**Pn**	**21 48 36.4**	**+0.1**
	baz=298								
TWQ1				S			**Sn**	**21 48 49.5**	**+0.2**
	baz=298								
CHN5	**Tsauling**	**1.00**	**255**	*i*	P		**Pn**	**21 48 36.1**	**-0.2**
	baz=252								
CHN5				S			**Sn**	**21 48 49.0**	**-0.3**
	baz=252								
TCU	**Taichung**	**1.00**	**287**	P			**Pn**	**21 48 36.5**	**+0.1**
	baz=285								
TCU				*eS*			**Sn**	**21 48 50.9**	**+1.5**
	baz=285								
NSTT	**Nanjuang**	**1.01**	**319**	*⇑iP*			**Pn**	**21 48 36.8**	**+0.3**
	baz=320								
NSTT				S			**Sn**	**21 48 49.4**	**-0.3**
	baz=320								
WGK	**Gukeng**	**1.08**	**261**	P			**Pn**	**21 48 37.2**	**-0.2**
	baz=258								
STYT	**Tauyuan**	**1.13**	**232**	*i*	P		**Pn**	**21 48 37.9**	**-0.2**
	baz=229								
STYT				S			**Sn**	**21 48 52.5**	**-0.1**
	baz=229								
TPUB	**Ta-pu**	**1.15**	**241**	*e*	Pn		**Pn**	**21 48 38.2**	**-0.2**
CHN4	**Tsaushan**	**1.16**	**244**	*eP*			**Pn**	**21 48 38.8**	**+0.3**
	baz=241								
CHN4				S			**Sn**	**21 48 54.3**	**+1.0**
	baz=241								
HSN	**Hsinchu**	**1.16**	**324**	*eP*			**Pn**	**21 48 39.0**	**+0.5**
	baz=326								
HSN				*eS*			**Sn**	**21 48 54.9**	**+1.5**
	baz=326								
TWB1	**Santiao Chiao**	**1.16**	**12**	*eP*			**Pn**	**21 48 39.5**	**+0.9**
	baz=14								
TWB1				*eS*			**Sn**	**21 48 54.5**	**+1.1**
	baz=14								
WTP	**Ta-pu**	**1.19**	**239**	P			**Pn**	**21 48 39.0**	**+0.1**
	baz=236								
WTP				*eS*			**Sn**	**21 48 54.6**	**+0.5**
	baz=236								
TWG	**Pinlang**	**1.20**	**210**	*e*	Pn		**Pn**	**21 48 38.7**	**-0.4**
TWG	**Pinlang**	**1.20**	**210**	*eP*			**Pn**	**21 48 37.7**	**-1.4**
	baz=207								
TWG				*eS*			**Sn**	**21 48 53.3**	**-1.0**
	baz=207								
NWF	**Wu-fen Shan**	**1.20**	**2**	P			**Pn**	**21 48 39.4**	**+0.3**
	baz=4.0								
NWF				*eS*			**Sn**	**21 48 55.6**	**+1.2**
	baz=4.0								
NCU	**National Centr**	**1.21**	**336**	P			**Pn**	**21 48 39.4**	**+0.2**
	baz=337								
NCU				*eS*			**Sn**	**21 48 55.1**	**+0.7**
	baz=337								
CHY	**Chiayi**	**1.25**	**253**	P			**Pn**	**21 48 39.9**	**+0.1**
	baz=251								
CHY				S			**Sn**	**21 48 56.4**	**+0.9**
	baz=251								
TWS1	**Kuangyinshan**	**1.26**	**347**	*eP*			**Pn**	**21 48 40.1**	**+0.2**
	baz=349								
TWS1				*eS*			**Sn**	**21 48 57.4**	**+1.5**
	baz=349								
TWK	**Hsinying**	**1.28**	**243**	P			**Pn**	**21 48 40.4**	**+0.2**
	baz=240								
TWK				S			**Sn**	**21 48 57.0**	**+0.7**
	baz=240								
CHN1	**Nanshi**	**1.29**	**239**	P			**Pn**	**21 48 40.3**	**-0.1**
	baz=236								
CHN1				S			**Sn**	**21 48 57.3**	**+0.7**
	baz=236								
YOJ	**Yonaguni jima**	**1.31**	**63**	P			**Pn**	**21 48 40.6**	**-0.1**
YOJ				*eS*			**Sn**	**21 48 57.2**	**+0.1**
WTCT	**Ta-ch'eng**	**1.32**	**270**	P			**Pn**	**21 48 40.8**	**0.0**
	baz=268								
WTCT				*eS*			**Sn**	**21 48 58.4**	**+1.0**
	baz=268								
WSF	**Szhu**	**1.40**	**261**	*eP*			**Pn**	**21 48 41.9**	**+0.1**
	baz=259								
WSF				*eS*			**Sn**	**21 49 00.1**	**+1.0**
	baz=259								
ECL	**Taimali**	**1.45**	**210**	*eP*			**Pn**	**21 48 41.3**	**-1.2**
	baz=207								
ECL				*eS*			**Sn**	**21 48 60.0**	**-0.5**
	baz=207								
CHN3	**Shinhua**	**1.48**	**238**	*eS*			**Sn**	**21 49 03.2**	**+2.1**
	baz=235								
CHN8	**Yiju**	**1.48**	**250**	*eP*			**Pn**	**21 48 42.8**	**-0.2**
	baz=247								
CHN8				*eS*			**Sn**	**21 49 01.5**	**+0.2**
	baz=247								
SSD	**Sandimen**	**1.50**	**222**	P			**Pn**	**21 48 44.2**	**+0.9**
	baz=219								
SSD				*eS*			**Sn**	**21 49 03.3**	**+1.6**
	baz=219								
SCLT	**Jiali**	**1.57**	**244**	*eP*			**Pn**	**21 48 43.1**	**-1.0**
	baz=242								
SCLT				*eS*			**Sn**	**21 49 04.2**	**+0.8**
	baz=242								
TWM1	**Shoushan**	**1.58**	**229**	*eP*			**Pn**	**21 48 46.2**	**+1.8**
	baz=227								
SGLT	**Jiouru**	**1.61**	**225**	*eP*			**Pn**	**21 48 46.5**	**+1.9**
	baz=223								
SCZT	**Fangliau**	**1.80**	**215**	*eP*			**Pn**	**21 48 48.4**	**+1.0**
	baz=212								
SCZT				*eS*			**Sn**	**21 49 10.6**	**+1.4**
	baz=212								
IRIF	**Iriomote-Funau**	**1.89**	**75**	P			**Pn**	**21 48 48.6**	**0.0**
IRIF				*eS*			**Sn**	**21 49 11.8**	**+0.5**
HATJ	**Hateruma jima**	**1.91**	**84**	P			**Pn**	**21 48 48.9**	**0.0**
PNG	**Penghu**	**2.01**	**262**	*eP*			**Pn**	**21 48 48.8**	**-1.4**
	baz=260								
PNG				*eS*			**Sn**	**21 49 13.1**	**-1.3**
	baz=260								
JKRS	**Kuro-shima**	**2.12**	**79**	P			**Pn**	**21 48 52.4**	**+0.7**
JKRS				*eS*			**Sn**	**21 49 17.9**	**+0.9**
JIJ	**Ishigaki jima**	**2.26**	**77**	P			**Pn**	**21 48 53.5**	**-0.2**
JIJ				*eS*			**Sn**	**21 49 19.8**	**-0.8**
JTJ	**Tarama**	**2.82**	**74**	P			**Pn**	**21 49 01.5**	**+0.1**
JTJ				*eS*			**Sn**	**21 49 33.6**	**-0.8**
KNM	**Kinmen**	**3.06**	**281**	*eP*			**Pn**	**21 49 04.7**	**+0.1**
	baz=279								

ISCJB ***29*** *22:01:14.9±1.1, 177S±02×1789W±0.1, h534km±15km, mb3.8/11, Error ellipse: s-maj=32.2km s-min=12.8km az=151.8*
IDC ***29*** *22:01:15.4±1.6, 1771S×17878W, h531km±19km, mb3.4/10, mb1 3.7/11, mb1mx3.5/19, mbtmp3.4/11, Error ellipse: s-maj=23.5km s-min=12.4km az=147.0*
*NEI

GRR	**Gorron**	**149.31**	**3**	*e*PKP1	PKPbc	22 20 03.8	-0.8
	comp=Z,8.1nm,0.5s								
HAU	**Haudompre**	**149.45**	**353**	*e*PKP1	PKPbc	22 20 04.2	-0.7
HINF	**Hinteralfeld**	**149.57**	**352**	*e*PKP1	PKPbc	22 20 04.0	-1.2
LOR	**Lormes**	**150.40**	**356**	*e*PKP1	PKPbc	22 20 06.5	-0.7
	comp=Z,8.1nm,0.4s								
SSF	**Saint Saulge**	**150.62**	**357**	*e*PKP1	PKPbc	22 20 07.1	-0.6
	comp=Z,6.7nm,0.5s								
MFF	**Saint Martin d**	**151.12**	**2**	*e*PKP1	PKPbc	22 20 07.9	-1.0
	comp=Z,6.6nm,0.6s								
BGF	**Bois d'Agland**	**151.16**	**358**	*e*PKP1	PKPbc	22 20 08.2	-0.7
	comp=Z,5.9nm,0.5s								
LPL	**La Plagne**	**151.85**	**352**	*e*PKP1	PKPbc	22 20 10.7	+0.2
LPG	**La Plagne**	**151.86**	**352**	*e*PKP1	PKPbc	22 20 10.9	+0.3
MBDF	**Montbardon**	**152.62**	**351**	*e*PKP1	PKPbc	22 20 12.2	0.0
	comp=Z,8.0nm,0.9s								
FRF	**La Foret Royal**	**153.78**	**351**	*e*PKP1	PKPbc	22 20 15.7	+0.9

ISCJB ***29*** *22:24:48.1±0.3, 49°35.9'N ± 001×681'E ± 003, h0km, Error ellipse: s-maj=2.8km s-min=2.0km az=15.6*
NEIC ***29*** *22:24:49.3, 49°36.9'N × 6°84.4'E, h1km, ML2.4(STR), ML2.7(LDG), After STR.*
LDG ***29*** *22:24:49.8±0.1, 49°37.9'N × 6°84.4'E, h1km, Ml2.7/11, Error ellipse: s-maj=1.7km s-min=1.3km az=108.0, Suspected Mining induced.*
CSEM ***29*** *22:24:49.6±0.1, 49°38.9'N × 6°86.4'E, h2km, ML2.7/10, Error ellipse: s-maj=1.2km s-min=0.9km az=116.0*
BNS ***29*** *22:24:50.3±0.4, 49°40.9'N × 6°85.4'E, h1km, ML1.7*
BGR ***29*** *22:24:50.1±1.2, 49°37.9'N × 6°83.4'E, h1km, ML2.2/2, Error ellipse: s-maj=20.0km s-min=8.9km az=92.0*

ISC 29 22:24:49.0±0.3, 49°36'N ± 001 × 681'E ± 003, h0km, n57, σ0°80/105, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.37**	**25**	*e*Pg	**Pg**	**22 24 56.3**	**+0.1**
RUP				*e*Sg	**Sg**	**22 25 01.9**	**+0.9**
WLF	**Walferdange**	**0.52**	**305**	P	**Pg**	**22 25 00.2**	**+1.2**
WLF	**Walferdange**	**0.52**	**305**	P	**Pg**	**22 25 00.1**	**+1.1**
ABH	**Alteburg**	**0.70**	**42**	Pg	**Pg**	**22 25 02.3**	**-0.2**
ABH				Sg	**Sg**	**22 25 11.7**	**+0.1**
LANF	**Langenberg**	**0.76**	**120**	Pg	**Pg**	**22 25 03.5**	**0.0**
BGG	**Burgeitz**	**0.91**	**22**	*e*Pg	**Pg**	**22 25 06.9**	**+0.5**
HILG	**Hillesheim**	**0.93**	**355**	*e*Pg	**Pg**	**22 25 07.3**	**+0.5**
HILG	**Hillesheim**	**0.93**	**355**	Pg	**Pg**	**22 25 07.3**	**+0.5**
CDF	**Champ du Feu**	**1.00**	**162**	*e*Pn	**Pn**	**22 25 09.3**	**-0.9**
	SNR=1.0								
CDF				*e*Sg	**Sg**	**22 25 21.5**	**+0.4**
	22nm,0.2s,SNR=1.0								
CDF	**Champ du Feu**	**1.00**	**162**	*e*Pn	**Pn**	**22 25 09.3**	**-0.9**
	SNR=1.0								
CDF				*e*Sg	**Sg**	**22 25 21.5**	**+0.4**
	11nm,0.2s,SNR=1.0								
CDF	**Champ du Feu**	**1.00**	**162**	*e*Pg	**Pg**	**22 25 08.8**	**+0.7**
CDF				*e*Pn	**Pn**	**22 25 09.3**	**-0.9**
CDF				*e*Sg	**Sg**	**22 25 21.5**	**+0.4**
RFYF	**Reffroy**	**1.15**	**231**	*e*Pg	**Pg**	**22 25 11.9**	**+1.0**
	baz=40								
RFYF				*e*Sg	**Sg**	**22 25 26.9**	**+1.1**
	23nm,0.2s								
RFYF	**Reffroy**	**1.15**	**231**	*e*Pg	**Pg**	**22 25 11.9**	**+1.0**
RFYF				*e*Sg	**Sg**	**22 25 26.9**	**+1.1**
	11nm,0.2s								
ECH	**Echery**	**1.17**	**169**	*e*Pg	**Pg**	**22 25 12.1**	**+0.7**
ECH				*e*Sg	**Sg**	**22 25 27.3**	**+0.7**
ECH	**Echery**	**1.17**	**169**	*e*Pg	**Pg**	**22 25 12.1**	**+0.7**
ECH				*e*Sg	**Sg**	**22 25 27.3**	**+0.8**
KOE	**Koeppel**	**1.22**	**29**	*e*Pg	**Pg**	**22 25 12.0**	**-0.3**
STB	**Steinbach**	**1.23**	**1**	*e*Pg	**Pg**	**22 25 12.7**	**+0.1**
STB				*e*Sg	**Sg**	**22 25 28.8**	**+0.3**
	13nm,0.2s								
THEF	**They Montfort**	**1.26**	**206**	*e*Pg	**Pg**	**22 25 13.3**	**+0.2**
THEF				*e*Sg	**Sg**	**22 25 30.4**	**+0.9**
THEF	**They Montfort**	**1.26**	**206**	Pg	**Pg**	**22 25 13.2**	**+0.1**
THEF				Sg	**Sg**	**22 25 30.3**	**+0.8**
TOD	**Tromm**	**1.32**	**79**	Pg	**Pg**	**22 25 13.5**	**-0.8**
MEM	**Membach**	**1.35**	**338**	P	**Pg**	**22 25 14.8**	**0.0**
TNS	**Taunus Mts**	**1.36**	**50**	*e*Pn	**Pn**	**22 25 14.3**	**-0.9**
TNS				*e*Sg	**Sg**	**22 25 33.3**	**+0.5**
TNS	**Taunus Mts**	**1.36**	**50**	Pn	**Pn**	**22 25 14.3**	**-0.9**
TNS				Sg	**Sg**	**22 25 33.3**	**+0.5**
TNS	**Taunus Mts**	**1.36**	**50**	*e*Pg	**Pg**	**22 25 14.2**	**-0.9**
TNS				*e*Sg	**Sg**	**22 25 34.3**	**+1.5**
HAU	**Haudompre**	**1.39**	**193**	*e*Pg	**Pg**	**22 25 15.6**	**-0.1**
HAU				*e*Sn	**Sn**	**22 25 32.6**	**-2.1**
	SNR=1.0								
HAU				*e*Sg	**Sg**	**22 25 34.2**	**+0.5**
	18nm,0.2s,SNR=1.0								
HAU	**Haudompre**	**1.39**	**193**	*e*Pg	**Pg**	**22 25 15.6**	**-0.1**
HAU				*e*Sn	**Sn**	**22 25 32.6**	**-2.1**
	SNR=1.0								
HAU				*e*Sg	**Sg**	**22 25 34.2**	**+0.5**
	8.9nm,0.2s,SNR=1.0								
HAU	**Haudompre**	**1.39**	**193**	*e*Pn	**Pn**	**22 25 14.7**	**-0.9**
HAU				*e*Pg	**Pg**	**22 25 15.6**	**-0.1**
HAU				*e*Sn	**Sn**	**22 25 32.6**	**-2.1**
HAU				*e*Sg	**Sg**	**22 25 34.2**	**+0.5**
BCLA	**Clavier**	**1.44**	**318**	P	**Pn**	**22 25 15.7**	**-0.6**
BFO	**Black Forest**	**1.44**	**135**	*e*Pn	**Pn**	**22 25 16.8**	**+0.5**
BFO				*e*Sg	**Sg**	**22 25 35.2**	**-0.1**
BFO	**Black Forest**	**1.44**	**135**	*e*Pn	**Pn**	**22 25 16.1**	**-0.2**
BFO				Sg	**Sg**	**22 25 35.2**	**0.0**
BFO				*e*Sn	**Sn**	**22 25 36.6**	**+0.7**
BFO	**Black Forest**	**1.44**	**135**	*e*Pn	**Pn**	**22 25 16.1**	**-0.1**
BFO				*e*Sn	**Sn**	**22 25 36.6**	**+0.7**
MEZF	**Maizieres J'vi**	**1.45**	**234**	*e*Pn	**Pn**	**22 25 16.3**	**-0.1**
	baz=51,SNR=1.0								
MEZF	**Maizieres J'vi**	**1.45**	**234**	*e*Pg	**Pg**	**22 25 17.3**	**+0.6**
MEZF				*e*Sg	**Sg**	**22 25 37.0**	**+1.6**
	10nm,0.3s,SNR=1.0								
MEZF	**Maizieres J'vi**	**1.45**	**234**	*e*Pg	**Pg**	**22 25 17.3**	**+0.6**
MEZF				*e*Sg	**Sg**	**22 25 37.0**	**+1.6**
	5.2nm,0.3s,SNR=1.0								
MEZF	**Maizieres J'vi**	**1.45**	**234**	*e*Pn	**Pn**	**22 25 16.3**	**-0.1**
MEZF				*e*Pg	**Pg**	**22 25 17.3**	**+0.6**
MEZF				*e*Sg	**Sg**	**22 25 37.0**	**+1.6**
GIVF	**Givet**	**1.49**	**301**	*e*Pg	**Pg**	**22 25 16.9**	**-0.6**
	SNR=1.0								
GIVF				*e*Sn	**Sn**	**22 25 37.0**	**0.0**
	19nm,0.4s,SNR=1.0								
GIVF	**Givet**	**1.49**	**301**	*e*Pg	**Pg**	**22 25 16.9**	**-0.6**
	SNR=1.0								
GIVF				*e*Sn	**Sn**	**22 25 37.0**	**0.0**
	9.4nm,0.4s,SNR=1.0								
GIVF	**Givet**	**1.49**	**301**	*e*Pn	**Pn**	**22 25 15.9**	**-1.0**
GIVF				*e*Pg	**Pg**	**22 25 16.9**	**-0.6**
GIVF				*e*Sn	**Sn**	**22 25 37.0**	**0.0**
MOF	**Molkenrain**	**1.53**	**172**	Pg	**Pg**	**22 25 18.6**	**+0.4**
MOF				Sg	**Sg**	**22 25 38.3**	**+0.3**
HINF	**Hinteralfeld**	**1.55**	**179**	*e*Pg	**Pg**	**22 25 18.4**	**-0.2**
	SNR=1.0								
HINF				*e*Sg	**Sg**	**22 25 39.0**	**+0.3**
	39nm,0.3s,SNR=1.0								
HINF	**Hinteralfeld**	**1.55**	**179**	*e*Pg	**Pg**	**22 25 18.4**	**-0.2**
	SNR=1.0								
HINF				*e*Sg	**Sg**	**22 25 39.0**	**+0.3**
	20nm,0.3s,SNR=1.0								
DOU	**Dourbes**	**1.61**	**298**	P	**Pn**	**22 25 18.7**	**0.0**
DOU	**Dourbes**	**1.61**	**298**	P	**Pn**	**22 25 18.6**	**-0.1**
SFTF	**Sexfontaines**	**1.65**	**226**	*e*Pg	**Pg**	**22 25 18.7**	**-1.9**
	baz=52								
SFTF				*e*Sg	**Sg**	**22 25 42.6**	**+0.7**
	6.2nm,0.3s								
SFTF	**Sexfontaines**	**1.65**	**226**	*e*Pg	**Pg**	**22 25 18.7**	**-1.9**
SFTF				*e*Sg	**Sg**	**22 25 42.6**	**+0.7**
	3.1nm,0.3s								
FELD	**Feldberg im Sc**	**1.69**	**152**	Pg	**Pg**	**22 25 21.7**	**+0.4**
BAIF	**Baives**	**1.83**	**293**	*e*Pg	**Pg**	**22 25 24.0**	**0.0**
BAIF				*e*Sn	**Sn**	**22 25 47.6**	**+2.2**
	6.7nm,0.3s,SNR=1.0								
BAIF	**Baives**	**1.83**	**293**	*e*Pn	**Pn**	**22 25 21.4**	**-0.2**
BAIF				*e*Pg	**Pg**	**22 25 24.0**	**0.0**
BAIF				*e*Sn	**Sn**	**22 25 47.6**	**+2.2**
CABF	**La Chapelle**	**2.80**	**190**	*e*Pn	**Pn**	**22 25 34.1**	**-0.8**
LOR	**Lormes**	**2.88**	**224**	*e*Pn	**Pn**	**22 25 35.0**	**-1.0**
	baz=48,SNR=1.0								
LOR				*e*Sg	**Sg**	**22 26 20.9**	**-0.5**
	3.2nm,0.2s,SNR=1.0								
LOR	**Lormes**	**2.88**	**224**	*e*Pn	**Pn**	**22 25 35.0**	**-1.0**
	SNR=1.0								
LOR				*e*Sg	**Sg**	**22 26 20.9**	**-0.5**
	1.6nm,0.2s,SNR=1.0								
SSF	**Saint Saulge**	**3.19**	**225**	*e*Pn	**Pn**	**22 25 38.9**	**-1.5**
SSF				*e*Sg	**Sg**	**22 26 30.7**	**-0.8**
	4.0nm,0.4s,SNR=1.0								
SSF	**Saint Saulge**	**3.19**	**225**	*e*Pn	**Pn**	**22 25 38.9**	**-1.5**
SSF				*e*Sg	**Sg**	**22 26 30.7**	**-0.8**
	2.0nm,0.4s,SNR=1.0								
SMF	**Signal de Mont**	**3.37**	**217**	*e*Pn	**Pn**	**22 25 42.0**	**-0.8**
SMF				*e*Pg	**Pg**	**22 25 52.9**	**-0.7**
GEC2	**GERESS Array S**	**4.56**	**94**	*e*Pn	**Pn**	**22 25 59.6**	**+0.5**
FLN	**La Foliniere**	**4.83**	**266**	*e*Sn	**Sn**	**22 26 55.9**	**-3.6**
	6.5nm,0.6s,SNR=1.0								
FLN	**La Foliniere**	**4.83**	**266**	*e*Sn	**Sn**	**22 26 55.9**	**-3.6**
	3.2nm,0.6s,SNR=1.0								

ISCJB ***29*** *22:34:03.9±1.4, 33°37.5'S × 004°17'E ± 008, h9km ± 8km, n40, σ0°83/43, mb3.6/3, Off east coast of North Island*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**0.45**	**320**	*e*P	**Pg**	**22 34 14.2**	**+1.6**
KNZ				S	**Sg**	**22 34 19.4**	**+0.9**
MWZ	**Matawai**	**1.10**	**339**	P	**Pg**	**22 34 25.0**	**-0.1**
MWZ				S	**Sg**	**22 34 38.0**	**-1.5**
BKZ	**Black Stump Fm**	**1.22**	**279**	P	**Pb**	**22 34 26.7**	**-0.5**
BKZ				S	**Sb**	**22 34 41.6**	**-1.4**
PUZ	**Puketiti**	**1.30**	**7**	P	**Pn**	**22 34 28.4**	**+0.1**
URZ	**Urewera**	**1.32**	**326**	Pg	**Pg**	**22 34 27.9**	**-1.4**
	313nm,0.3s,baz=165,slow=5.7,SNR=1781								
URZ				Lg		22 34 43.4	
	200nm,0.3s,baz=6.8,slow=20,SNR=34								
URZ	**Urewera**	**1.32**	**326**	P	**Pn**	**22 34 27.7**	**-0.9**
HATZ	**Hinemaiaia**	**1.59**	**287**	P	**Pn**	**22 34 32.2**	**0.0**
EDRZ	**Edgecumbe**	**1.62**	**321**	P	**Pn**	**22 34 32.2**	**+0.5**
MKRZ	**Makatiti**	**1.74**	**314**	P	**Pn**	**22 34 35.0**	**+0.7**
TSZ	**Takapari Road**	**1.75**	**246**	P	**Pn**	**22 34 34.6**	**+0.2**
MOVZ	**Moawhango**	**1.77**	**268**	P	**Pn**	**22 34 35.5**	**+0.7**
MXZ	**Matakaoa Point**	**1.81**	**7**	P	**Pn**	**22 34 35.6**	**+0.3**
RATZ	**Rangitukua**	**1.83**	**285**	P	**Pn**	**22 34 36.0**	**+0.4**
TUVZ	**Tukino**	**1.85**	**272**	P	**Pn**	**22 34 36.7**	**+0.8**
KATZ	**Kakaramea**	**1.87**	**281**	P	**Pn**	**22 34 36.4**	**+0.3**
WNVZ	**Wahianoa**	**1.90**	**270**	P	**Pn**	**22 34 37.1**	**+0.6**
BFZ	**Birch Farm**	**1.90**	**226**	P	**Pn**	**22 34 36.7**	**+0.1**
NGZ	**Ngauruhoe**	**1.90**	**275**	P	**Pn**	**22 34 37.2**	**+0.6**
WTVZ	**West Tongariro**	**1.92**	**277**	P	**Pn**	**22 34 37.4**	**+0.6**
FWVZ	**Far West T-bar**	**1.94**	**272**	P	**Pn**	**22 34 37.5**	**+0.5**
TWVZ	**Taurewa**	**2.04**	**277**	P	**Pn**	**22 34 38.8**	**+0.3**
MRZ	**Mangatainoka R**	**2.29**	**235**	P	**Pn**	**22 34 42.1**	**+0.2**
MTW	**Mount Morrison**	**2.64**	**227**	P	**Pn**	**22 34 46.5**	**-0.2**
KIW	**Kapiti Island**	**2.83**	**237**	P	**Pn**	**22 34 49.7**	**+0.4**
PAWZ	**Paruwai Farm**	**2.84**	**224**	P	**Pn**	**22 34 48.7**	**-0.7**
CAW	**Cannon Point**	**2.87**	**232**	P	**Pn**	**22 34 49.8**	**0.0**
MSWZ	**Moikau Station**	**2.96**	**225**	P	**Pn**	**22 34 50.3**	**-0.7**
NEZ	**North Egmont**	**3.06**	**271**	P	**Pn**	**22 34 54.9**	**+2.4**
MRW	**Makara Radio**	**3.16**	**233**	P	**Pn**	**22 34 53.6**	**-0.3**
SNZO	**South Karori**	**3.21**	**232**	*e*Pn	**Pn**	**22 34 54.0**	**-0.5**
SNZO				*e*Sn	**Sn**	**22 35 32.5**	**-0.2**
QRZ	**Quartz Range**	**4.47**	**249**	P	**Pn**	**22 35 10.6**	**-1.3**
KHZ	**Kahutara**	**4.58**	**227**	P	**Pn**	**22 35 15.1**	**+1.8**
DSZ	**Denniston Nort**	**5.31**	**241**	P	**Pn**	**22 35 23.6**	**+0.2**
RPZ	**Rata Peaks**	**6.81**	**228**	Pn	**Pn**	**22 35 42.0**	**-1.9**
	0.5nm,0.3s,baz=57,slow=14,SNR=3.8								
RPZ				Sn	**Sn**	**22 36 54.5**	**-7.1**
	3.7nm,0.3s,baz=5.1,slow=18,SNR=19								
ODZ	**Otahua Downs**	**7.89**	**222**	P	**Pn**	**22 35 58.4**	**-0.4**
CTA	**Charters Tower**	**33.38**	**296**	LR	LR	22 51 06.6	
	comp=Z,26nm,19.5s,baz=230,slow=31								
ASAR	**Alice Springs**	**40.34**	**279**	P	**P**	**22 41 41.9**	**0.0**
	1.1nm,0.7s,mb3.7,baz=130,slow=9.1,SNR=12								
WRA	**Warramunga Arr**	**42.15**	**284**	P	**P**	**22 41 56.4**	**-0.5**
	0.9nm,0.6s,mb3.5,baz=129,slow=7.1,SNR=5.0								
QSPA	**South Pole Qui**	**50.76**	**180**	P	**P**	**22 43 08.8**	**+5.1**
	0.4nm,0.6s,mb3.5,baz=60,slow=0.9,SNR=3.8								
TORD	**Torodi Ar. Bea**	**153.69**	**188**	PKPab	PKPab	22 54 18.9	+2.6
	0.6nm,0.8s,baz=159,slow=3.2,SNR=3.5								

NIED ***29*** *22:48:00, 28°80.0'N × 143°20.0'E, h8km, Mw4.1 Best double couple: M0 1.38000×10^15 NP1:φ210.00000°, δ87.00000°, λ-97.00000°. NP2:φ98.00000°, δ8.00000°, λ-22.00000°.*
IDC ***29*** *22:48:35.5±0.8, 28°74.4'N × 142°74.6'E, h0km, mb3.7/11, mb1 3.9/12, mb1mx3.8/23, mbtmp3.7/12, ML3.8/1, Error ellipse: s-maj=26.8km s-min=17.8km az=82.0*
JMA ***29*** *22:48:35.8±0.2, 28°81.0'N × 143°17.6'E, h46km, M4.1*
ISCJB ***29*** *22:48:38.6±0.6, 28°87.0'N × 004°14'E ± 0.1, h33km, mb3.8/12, Error ellipse: s-maj=18.7km s-min=4.8km az=172.4*
NEIC ***29*** *22:48:40.8±0.5, 28°76.0'N × 142°68.8'E, h35km, mb4.3/1, Error ellipse: s-maj=18.3km s-min=9.3km az=73.0*

ISC 29 22:48:38.5±2.8, 28°82.0'N ± 004 × 142°7'E ± 02, h19km ± 18km, n25, σ1°9°05/28, mb3.8/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.77**	**194**	Pn	**Pn**	**22 49 06.8**	**-1.2**
	9.4nm,0.3s,baz=240,slow=20,SNR=2.3								
CBIJ				Sn	**Sn**	**22 49 24.3**	**-5.8**
	14nm,0.3s,baz=306,slow=19,SNR=3.9								
CBIJ	**Chichi jima**	**1.77**	**194**	*e*S	**Sn**	**22 49 29.6**	**-0.5**
BSO2	**Boso 2**	**6.13**	**345**	*e*S	**Sn**	**22 51 17.0**	**-0.8**
BSO3	**Boso 3**	**6.24**	**343**	*e*S	**Sn**	**22 51 18.0**	**-1.4**
BSO4	**Boso 4**	**6.46**	**343**	*e*S	**Sn**	**22 51 22.6**	**-3.3**
JHU	**Hanno**	**7.57**	**339**	P	**Pn**	**22 50 25.8**	**-2.1**
JHU				*e*S	Sx	22 51 49.3	
JRY	**Ryogami san**	**7.85**	**337**	P	**Pn**	**22 50 32.3**	**+0.6**
JRY				*e*S	Sx	22 51 57.9	
JHO	**Hitachi**	**7.97**	**348**	P	**Pn**	**22 50 32.3**	**-1.0**
JHO				*e*S	Sx	22 51 56.3	
JAG	**Ashikaga**	**8.05**	**341**	P	**Pn**	**22 50 34.3**	**-0.1**
JAG				*e*S	Sx	22 52 00.8	
MJAR	**Matsushiro Arr**	**8.57**	**335**	Pn	**Pn**	**22 50 42.2**	**+0.7**
	1.0nm,0.3s,baz=160,slow=12,SNR=13								
MJAR				Sn	**Sn**	**22 52 18.0**	**+0.4**
	0.4nm,0.3s,baz=118,slow=21,SNR=4.0								
MJAR	**Matsushiro Arr**	**8.57**	**335**	Pn	**Pn**	**22 50 42.2**	**+0.7**
MJAR				Sn	**Sn**	**22 52 18.0**	**+0.4**
MAJO	**Matsushiro**	**8.57**	**335**	*e*Pn	**Pn**	**22 50 42.8**	**+1.3**
SONM	**Songino Array**	**33.79**	**314**	P	**P**	**22 55 21.0**	**+1.8**
	0.8nm,1.0s,mb3.6,baz=109,slow=8.6,SNR=4.5								
ZALV	**Zalesovo Beam**	**48.48**	**318**	P	**P**	**22 57 20.1**	**+0.3**
	0.5nm,0.5s,mb3.9,baz=74,slow=7.7,SNR=3.6								
ZALV				PcP	PcP	22 58 45.6	-0.1
	0.3nm,0.3s,baz=90,slow=4.3,SNR=2.6								
WRAB	**Tennant Creek**	**49.13**	**190**	*e*P	**P**	**22 57 24.8**	**-0.2**
	1.8nm,0.6s,mb4.3								
WRA	**Warramunga Arr**	**49.14**	**190**	P	**P**	**22 57 24.5**	**-0.6**
	3.0nm,0.8s,mb4.4,baz=13,slow=8.6,SNR=9.9								
MKAR	**Makanchi Array**	**49.72**	**308**	P	**P**	**22 57 29.0**	**-0.4**
	0.3nm,0.6s,mb3.5,baz=92,slow=8.9,SNR=3.2								
MKAR	**Makanchi Array**	**49.72**	**308**	P	**P**	**22 57 29.0**	**-0.4**
KURK	**Kurchatov**	**52.10**	**314**	P	**P**	**22 57 48.7**	**+1.5**
	0.6nm,0.7s,mb3.7,baz=93,slow=7.4,SNR=4.2								
ASAR	**Alice Springs**	**52.86**	**190**	P	**P**	**22 57 52.0**	**-1.0**
	0.4nm,0.8s,mb3.4,baz=17,slow=13,SNR=3.6								
BVAR	**Borovoye Array**	**57.07**	**317**	P	**P**	**22 58 24.2**	**+0.9**
	0.5nm,0.5s,mb3.6,baz=87,slow=7.3,SNR=7.9								
YKA	**Yellowknife Ar**	**70.43**	**29**	P	**P**	**22 59 50.6**	**-0.5**
	0.4nm,0.5s,mb3.6,baz=301,slow=5.9,SNR=5.9								
NVAR	**Mina Array Bea**	**79.13**	**52**	P	**P**	**23 00 43.1**	**+1.1**
	0.7nm,0.9s,mb3.6,baz=283,slow=6.2,SNR=3.5								
BRTR	**Keskin Array B**	**85.14**	**313**	P	**P**	**23 01 14.8**	**+1.2**
	0.6nm,0.7s,mb3.8,baz=35,slow=5.3,SNR=3.1								
TXAR	**Lajitas Array**	**94.24**	**53**	P	**P**	**23 01 57.2**	**+0.5**
	0.2nm,0.6s,mb3.7,baz=353,slow=4.7,SNR=2.7								

ISCJB ***29*** *22:56:11.7±0.6, 23°N × 008°94'E ± 007, h46km, mb4.1/17, Error ellipse: s-maj=14.3km s-min=5.7km az=37.8*
NEIC ***29*** *22:56:12.8±0.5, 20°N × 9°28'E, mb4.4/2, Error ellipse: s-maj=13.0km s-min=7.2km az=56.0*
IDC ***29*** *22:56:13.3±1.1, 31°N × 9°41'E, h46km ± 7km, mb3.6/8, mb1 3.7/10, mb1mx3.5/24, mbtmp3.6/10, ML4.1/2, Error ellipse: s-maj=37.5km s-min=12.1km az=46.0*

ISC 29 22:56:13.5±0.6, 24°N ± 008 × 9°34'E ± 007, h48km, h48km ± 1.7km: pP-P, n26, σ0°53/28, mb4.1/17, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.17**	**118**	P	**Pn**	**22 57 29.6**	**+1.1**
	2.0nm,0.3s,baz=305,slow=17,SNR=10								
PSI				S	**Sn**	**22 58 27.2**	**+0.3**
	0.7nm,0.3s,baz=338,slow=19,SNR=1.8								
KULM	**Kulim**	**6.28**	**89**	*e*Pn	**Pn**	**22 57 43.3**	**-0.4**
KULM				*e*Sn	**Sn**	**22 58 53.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**13.88**	**19**	P	**Pn**	**22 59 28.2**	**+0.5**
	0.7nm,0.3s,baz=208,slow=14,SNR=22								
CMAR	**Chiang Mai Arr**	**13.88**	**19**	P	**Pn**	**22 59 28.2**	**+0.5**
CHTO	**Chiang Mai**	**14.22**	**18**	Pn	**Pn**	**22 59 33.3**	**+1.0**
	4.5nm,0.6s								
ODAN	**Odare**	**22.50**	**344**	*e*P	**P**	**23 01 09.6**	**+0.6**
	5.2nm,0.5s,mb4.2								
RAMN	**Ramite**	**22.82**	**342**	*e*P	**P**	**23 01 12.5**	**+0.1**
	4.7nm,0.5s,mb4.2								
TAPN	**Taplejung**	**22.88**	**345**	*e*P	**P**	**23 01 12.8**	**-0.2**
	2.8nm,0.4s,mb4.0								
JIRN	**Jiri**	**23.61**	**342**	*e*P	**P**	**23 01 20.6**	**+0.4**
GUN	**Gumba**	**23.94**	**341**	*e*P	**P**	**23 01 23.1**	**-0.2**
	4.7nm,0.4s,mb4.3								
GKN	**Gorkha**	**24.45**	**339**	*e*P	**P**	**23 01 27.6**	**-0.3**
	4.2nm,0.3s,mb4.3								
LSA	**Lhasa**	**24.52**	**353**	*e*P	**P**	**23 01 29.1**	**+0.6**
	2.4nm,0.6s,mb3.9								
KOLN	**Koldanda**	**24.63**	**337**	*e*P	**P**	**23 01 29.2**	**-0.3**
	9.1nm,0.8s,mb4.4								
DANN	**Dangsing**	**25.08**	**338**	*e*P	**P**	**23 01 34.5**	**+0.8**
	13nm,0.6s,mb4.6								
MK31	**Makanchi Array**	**42.69**	**348**	*e*P	**P**	**23 04 05.2**	**-0.3**
MKAR	**Makanchi Array**	**42.69**	**348**	P	**P**	**23 04 05.2**	**-0.4**
	2.7nm,0.5s,mb4.2,baz=163,slow=8.2,SNR=66								
SONM	**Songino Array**	**43.68**	**12**	P	**P**	**23 04 12.6**	**-1.0**
	0.7nm,0.7s,mb3.5,baz=187,slow=8.9,SNR=5.8								
SONM				PcP	PcP	23 05 59.9	-0.1
	0.3nm,0.8s,baz=215,slow=4.2,SNR=4.1								
WRA	**Warramunga Arr**	**46.61**	**124**	P	**P**	**23 04 37.1**	**-0.1**
	0.8nm,0.5s,mb3.9,baz=308,slow=8.4,SNR=3.0								
WRA				pP	pP	23 04 49.9	-0.5
	2.2nm,0.7s,baz=302,slow=9.3,SNR=4.4								
WRAB	**Tennant Creek**	**46.62**	**124**	*e*P	**P**	**23 04 37.5**	**+0.2**
	40nm,2.2s,mb5.0								
WB2	**Warramunga Arr**	**46.62**	**124**	*e*P	**P**	**23 04 37.0**	**-0.4**
ASAR	**Alice Springs**	**48.11**	**128**	P	**P**	**23 04 49.0**	**+0.1**
	0.3nm,0.5s,mb3.6,baz=303,slow=7.7,SNR=6.4								
ZALV	**Zalesovo Beam**	**49.18**	**353**	P	**P**	**23 04 56.2**	**-0.4**
	2.1nm,0.4s,mb4.5,baz=175,slow=6.9,SNR=16								
ZALV				pP	pP	23 05 08.0	-1.8
	1.2nm,0.6s,baz=180,slow=8.9,SNR=4.6								
ZALV	**Zalesovo Beam**	**49.18**	**353**	P	**P**	**23 04 56.2**	**-0.4**
ZALV				pP	pP	23 05 08.0	-1.8
BVAR

comp=Z,143nm,0.8s
PPLA Purkeypile 13.54 33 *e*Pn **Pn 23 01 18.5 +2.3**
comp=Z,43µm,0.5s
PMR Palmer 13.87 41 *e*P **Pn 23 01 19.4 -1.2**
PMR Palmer 13.87 41 *e*P **Pn 23 01 19.0 -1.6**
comp=Z,36nm,1.0s
MID Middleton Isla 14.15 52 *e*P **Pn 23 01 22.8 -1.7**
MID pmax pmax
comp=Z,287nm,0.6s
MID Middleton Isla 14.15 52 *e*P **Pn 23 01 22.8 -1.7**
comp=Z,287nm,0.6s
CHUM Lake Minchumin 14.20 30 *e*Pn **Pn 23 01 26.8 +1.7**
comp=Z,86µm,0.5s
KTH Kantishna Hill 14.41 33 *e*Pn **Pn 23 01 27.7 -0.3**
comp=Z,374nm,1.0s
TRF Thorofare Moun 14.55 34 *e*Pn **Pn 23 01 30.0 0.0**
comp=Z,264nm,1.1s
BPAW Bear Paw Mtn. 14.76 31 *e*Pn **Pn 23 01 32.6 -0.1**
comp=Z,268nm,1.1s
MCK McKinley 15.20 34 *e*P **Pn 23 01 39.3 +0.9**
MCK pmax pmax
comp=Z,1µm,1.1s
MCK McKinley 15.20 34 *e*P **Pn 23 01 39.3 +0.9**
comp=Z,1µm,1.1s
PAX Paxson 16.05 40 *e*P **Pn 23 01 48.1 -1.3**
PAX *e*S **S 23 04 46.4 -12**
PAX pmax pmax
comp=Z,140nm,0.8s
PAX Paxson 16.05 40 *e*P **Pn 23 01 48.1 -1.3**
comp=Z,140nm,0.8s
PAX *e*S **S 23 04 46.4 -12**
COLA College 16.29 32 *e*P **Pn 23 01 51.9 -0.5**
COLA pmax pmax
comp=Z,433nm,1.0s
COLA College 16.29 32 *e*P **Pn 23 01 51.9 -0.5**
comp=Z,433nm,1.0s
MENT Mentasta 16.73 42 *e*P **Pn 23 01 56.5 -1.5**
COLD Coldfoot 17.29 24 *e*P **Pn 23 02 05.1 +0.2**
comp=Z,331nm,1.2s
PNL Peninsula 17.62 54 *e*P **Pn 23 02 09.1 +0.1**
comp=Z,235nm,0.7s
EGAK Eagle 18.60 38 *e*P **Pn 23 02 18.6 -2.4**
comp=Z,212nm,0.9s
HYT Haines Junctio 18.78 51 *e*Pn **Pn 23 02 23.5 +0.3**
DAWY Dawson 18.97 41 *e*Pn **Pn 23 02 23.5 -2.0**
SIT Sitka 19.51 63 *e*P **Pn 23 02 31.2 -0.7**
SIT pmax pmax
comp=Z,189nm,0.9s
SIT Sitka 19.51 63 *e*P **Pn 23 02 31.2 -0.7**
comp=Z,189nm,0.9s
SKAG Skagway 19.63 56 *e*P **Pn 23 02 31.8 -1.5**
comp=Z,346nm,0.9s
BILL Bilibino 19.80 332↑ *e*P **Pn 23 02 33.1 -2.2**
BILL pmax pmax
comp=Z,162nm,1.0s
BILL MLR MLR
comp=Z,25µm,16.0s
BILL Bilibino 19.80 332 *e*P **Pn 23 02 35.2 -0.1**
comp=Z,176nm,1.1s
PET Petropavlovsk 19.86 285*c i*P **Pn 23 02 33.4 -2.7**
PET *e*S **S 23 06 13.4 -2.1**
PET pmax pmax
comp=Z,3µm,12.7s
PET pmax pmax
comp=Z,417nm,0.7s
PET pmax pmax
comp=Z,4µm,14.1s
PET MLR MLR
comp=Z,17µm,18.0s
PET MLR MLR
comp=Z,16µm,18.0s
PET Petropavlovsk 19.86 285 *e*P **Pn 23 02 34.7 -1.4**
comp=Z,258nm,0.7s
PEA0B Petropavlovsk- 20.41 285 *e*P **P 23 02 40.5 +0.3**
PETK Petropavlovsk- 20.41 285 P **P 23 02 40.0 -0.2**
comp=Z,230nm,0.7s,baz=84,slow=12,SNR=353
PETK S **S 23 06 36.2 +10**
comp=Z,3.3nm,0.9s,baz=297,slow=13,SNR=2.5
PETK PcP PcP 23 06 51.9 +0.9
comp=Z,4.9nm,0.8s,baz=54,slow=2.5,SNR=3.5
PETK Petropavlovsk- 20.41 285 P **P 23 02 40.0 -0.2**
PETK S **S 23 06 36.2 +10**
PETK PcP PcP 23 06 51.9 +0.9
CRAG Craig 20.83 68 *e*P **P 23 02 45.7 +1.0**
comp=Z,128nm,0.8s
WRAK Wrangell Islan 21.18 65 *e*P **P 23 02 50.5 +2.1**
comp=Z,282nm,1.2s,mb5.5
WRAK LR LR
comp=Z,20µm,19.0s,MS5.5
SKR Severo-Kuril's 22.00 280 *e*P **P 23 02 52.0 -5.3**
SKR *e* 23 03 09.4
SKR *e*SS 23 07 40.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb5.5
SKR pmax pmax
comp=Z,4µm,8.0s
SKR MLR MLR
comp=N,12µm,18.0s,MS5.4
SKR MLR MLR
comp=E,8µm,18.0s,MS5.4
SKR MLR MLR
comp=Z,10µm,18.0s,MS5.3
DLBC Dease Lake 22.33 59 P **P 23 03 00.3 -0.5**
comp=Z,73nm,1.0s,mb5.1,baz=269,slow=11,SNR=47
DLBC S **S 23 07 09.3 +5.5**
comp=Z,13nm,1.1s,baz=318,slow=15,SNR=2.2
DLBC Dease Lake 22.33 59 *e*P **P 23 02 59.7 -1.1**
SEY Seymchan 23.05 312↑ *e*P **P 23 03 07.3 -1.0**
SEY Seymchan 23.05 312↑ *e*P **P 23 03 07.4 -0.9**
BBB Bella Bella 24.41 74 LR LR 23 11 27.4
comp=Z,9µm,21.9s,MS5.2,baz=288,slow=33
MIDW Midway 25.12 199 PFAKE 23 03 40.0 +12
MIDW LR LR
comp=Z,8µm,19.0s,MS5.3
NLWA Neilton Lookou 28.75 82 PFAKE 23 04 10.0 +10
NLWA LR LR
comp=Z,10µm,19.0s,MS5.5
JCW Jim Creek 29.57 79 *e*P **P 23 04 08.5 +0.9**
RPW Rockport 29.70 79 *e*P **P 23 04 12.5 +3.7**
YKA Yellowknife Ar 29.74 49 P **P 23 04 08.4 -0.4**
comp=Z,11nm,0.7s,mb4.7,baz=268,slow=9.1,SNR=89
YKA PcP PcP 23 07 11.4 -0.3
comp=Z,9.4nm,0.7s,baz=281,slow=2.4,SNR=9.0
YKA ScP ScP 23 10 52.0 +2.0
comp=Z,3.4nm,0.8s,baz=285,slow=3.1,SNR=9.2
YKA LR LR 23 17 51.0
comp=Z,2µm,19.9s,MS4.8,baz=130,slow=40
YKA P3KPbc 23 36 10.8
comp=Z,0.3nm,0.8s,baz=88,slow=5.3,SNR=4.6
YKA Yellowknife Ar 29.74 49 P **P 23 04 08.4 -0.5**
YKA 23 07 11.4
YKA 23 10 52.0
YKA Yellowknife Ar 29.74 49 P **P 23 04 08.4 -0.5**
YKA PcP PcP 23 07 11.4 -0.3
YKA ScP ScP 23 10 52.0 +2.0
YKA LR LR 23 17 51.0
YKA *e* 23 36 10.8
RCS Mount Rainier- 30.29 82 P **P 23 04 16.1 +2.2**
LON Longmire 30.30 82 *e*P **P 23 04 14.7 +0.7**
LON pmax pmax
comp=Z,39nm,1.5s,mb4.9
LON Longmire 30.30 82 *e*P **P 23 04 14.7 +0.7**
comp=Z,39nm,1.5s,mb4.9
COR Corvallis 30.46 87 *e*P **P 23 04 16.5 +1.0**
COR pmax pmax
comp=Z,138nm,1.0s,mb5.6
COR MLR MLR
comp=Z,9µm,22.0s,MS5.4
COR Corvallis 30.46 87 *e*P **P 23 04 16.5 +1.0**
comp=Z,138nm,1.0s,mb5.6
COR LR LR
comp=Z,9µm,22.0s,MS5.4
KEBM Edson Butte 30.75 90 *e*P **P 23 04 21.2 +3.1**
ETW Entiat 30.79 80 *e*P **P 23 04 18.9 +0.5**
TBM Table Mountain 30.83 80 P **P 23 04 20.3 +1.6**
EBG Ellensburg 30.97 81 P **P 23 04 21.1 +1.2**
WTV Waterville 30.98 79 P **P 23 04 20.5 +0.5**
HOOD Mount Hood Mea 31.09 84 *e*P **P 23 04 22.8 +1.8**
comp=Z,70nm,1.7s,mb5.2
EPH Ephrata 31.35 80 P **P 23 04 23.3 0.0**
YSS Yuzh-Sakhalins 31.57 280↑ *i*P **P 23 04 26.0 +0.8**
YSS *e*S **S 23 09 29.0 -1.8**
YSS *e* 23 09 44.0
YSS pmax pmax
comp=Z,60nm,0.9s,mb5.4
YSS MLR MLR
comp=Z,11µm,19.0s,MS5.5
YSS MLR MLR
comp=E,13µm,18.0s
YSS Yuzh-Sakhalins 31.57 280↓ *i*P **P 23 04 25.9 +0.7**
YSS LR LR
comp=Z,3µm,20.0s,MS5.0
CROR Criterion Ridg 31.67 84 P **P 23 04 27.2 +1.1**
HUMO Hull Mountain 31.74 90 *e*P **P 23 04 28.2 +1.5**
comp=Z,93nm,1.5s,mb5.4
HUMO LR LR
comp=Z,10µm,21.0s,MS5.5
GBL Gable Mountain 31.79 81 P **P 23 04 27.4 +0.2**
RSW Rattlesnake Hi 31.81 81 *e*P **P 23 04 28.2 +0.8**
HAWA Hanford 31.85 81 *e*P **P 23 04 28.4 +0.7**
comp=Z,38nm,1.2s,mb5.1
HAWA LR LR
comp=Z,8µm,19.0s,MS5.4
OD2 Odessa Site #2 31.86 79 P **P 23 04 27.8 0.0**
KHMM Horse Mountain 32.26 93 *e*P **P 23 04 33.7 +2.3**
YBH Yreka Blue Hor 32.39 91 *e*P **P 23 04 34.3 +1.8**
YBH pmax pmax
comp=Z,27nm,1.0s
YBH MLR MLR
comp=Z,7µm,19.0s
YBH Yreka Blue Hor 32.39 91 *e*P **P 23 04 34.3 +1.8**
comp=Z,27nm,1.0s,mb5.0
YBH LR LR
comp=Z,7µm,19.0s,MS5.3
NEW Newport 32.41 77 PFAKE 23 04 40.0 +7.4
NEW LR LR
comp=Z,9µm,19.0s,MS5.5
EDM Edmonton 32.57 66 *e*P **P 23 04 34.0 +0.1**
LNOR Lincton Mounta 32.86 81 *e*P **P 23 04 37.5 +1.0**
TIXI Tiksi 32.97 329↑ *e*P **P 23 04 36.3 -0.9**
TIXI pmax pmax
comp=Z,27nm,0.8s,mb5.2
TIXI MLR MLR
comp=Z,8µm,15.0s,MS5.5
TIXI Tiksi 32.97 329 *e*P **P 23 04 36.5 -0.7**
comp=Z,25nm,0.8s,mb5.2
TIXI LR LR
comp=Z,6µm,20.0s,MS5.3
ASAJ Asahikawa 33.09 275 P **P 23 04 38.1 -0.5**
comp=Z,18nm,0.7s,mb5.1,baz=59,slow=11,SNR=7.5
ASAJ LR LR 23 16 58.2
comp=Z,14µm,20.7s,MS5.6,baz=79,slow=34
WDC Whiskeytown Da 33.16 92 *e*P **P 23 04 39.2 -0.1**
WDC pmax pmax
comp=Z,34nm,1.3s,mb5.1
WDC MLR MLR
comp=Z,5µm,21.0s,MS5.2
WDC Whiskeytown Da 33.16 92 *e*P **P 23 04 39.2 -0.1**
comp=Z,34nm,1.3s,mb5.1
WDC LR LR
comp=Z,5µm,21.0s,MS5.2
YAK Yakutsk 33.56 311 *e*P **P 23 04 39.5 -3.0**
YAK *e*PPP 23 05 58.6
YAK *e* 23 07 21.3
YAK *e*S **S 23 09 59.9 -1.6**
YAK *e*SSS 23 12 30.4
YAK *e* 23 15 03.8
YAK pmax pmax
comp=Z,88nm,0.9s,mb5.7
YAK pmax pmax
comp=E,32nm,1.0s
YAK smax
comp=E,2µm,16.5s
YAK smax
comp=N,436nm,16.8s
YAK MLR MLR
comp=Z,16µm,19.0s,MS5.8
YAK MLR MLR
comp=E,14µm,18.0s,MS5.8
YAK MLR MLR
comp=N,10µm,20.0s,MS5.8
YAK Yakutsk 33.56 311 *e*P **P 23 04 41.3 -1.2**
comp=N,112nm,0.8s,mb5.8
YAK LR LR
comp=Z,20µm,19.0s,MS5.8
MOD Modoc 33.76 89 *e*P **P 23 04 45.6 +1.1**
comp=Z,62nm,0.8s,mb5.6
MOD LR LR
comp=Z,10µm,20.0s,MS5.5
HOPS Hopland 33.81 95 *e*P **P 23 04 46.2 +1.3**
comp=Z,130nm,1.3s,mb5.7
HOPS LR LR
comp=Z,6µm,20.0s,MS5.3
ERM Erimo 33.91 272 P **P 23 04 46.4 +0.7**
ERM pmax pmax
comp=Z,130nm,0.9s,mb5.9
ERM Erimo 33.91 272 *e*P **P 23 04 46.8 +1.1**
comp=Z,126nm,0.8s,mb5.9
ERM LR LR
comp=Z,11µm,20.0s,MS5.6
WALA Waterton Lakes 33.95 73 *e*P **P 23 04 46.2 +0.2**
comp=Z,0.7nm,1.3s
BMO Blue Mountains 33.97 82 *e*P **P 23 04 47.0 +0.8**
comp=Z,24nm,1.7s,mb4.8
BMO LR LR
comp=Z,8µm,21.0s,MS5.4
BSMT Bassoo Peak 33.99 76 *e*P **P 23 04 46.5 +0.1**
POHA Pohakuloa 34.14 158 PFAKE 23 05 00.0 +12
POHA LR LR
comp=Z,9µm,20.0s,MS5.5
JTMT Jette 34.34 76 *e*P **P 23 04 49.4 0.0**
YBMT Yellow Bay 34.45 75 *e*P **P 23 04 50.3 0.0**
MCCM Marconi Confer 34.46 96 PFAKE 23 05 00.0 +9.5
MCCM LR LR
comp=Z,8µm,20.0s,MS5.4
WVOR Wild Horse Val 34.48 87 P **P 23 04 51.4 +0.7**
WVOR pmax pmax
comp=Z,110nm,1.0s,mb5.7
WVOR Wild Horse Val 34.48 87 *e*P **P 23 04 51.8 +1.2**
comp=Z,114nm,1.0s,mb5.8
WVOR LR LR
comp=Z,8µm,19.0s,MS5.5
SWMT Swartz Lake 34.62 76 *e*P **P 23 04 51.5 -0.3**
MSO Missoula 34.99 77 *e*P **P 23 04 54.8 -0.2**
comp=Z,46nm,1.1s,mb5.3
MSO LR LR
comp=Z,3µm,19.0s,MS5.1
HABR Khabarovsk 35.43 287 *i* P **P 23 04 57.0 -1.8**
HABR *e**PP pP 23 05 06.5 -3.6
HABR *e**SP sP 23 05 11.0 -4.0
HABR *e* 23 06 16.0
HABR *e* 23 07 25.2
HABR *e*S **S 23 10 30.4 -0.2**
HABR *e**SS sS 23 10 46.9 -2.6
HABR *e*SS SS 23 12 51.5 -14
HABR *e* 23 15 13.3
HABR pmax pmax
comp=N,88nm,1.7s
HABR pmax pmax
comp=E,90nm,0.9s
HABR pmax pmax
comp=Z,135nm,0.9s,mb5.9
HABR MLR MLR
comp=Z,4µm,17.0s,MS5.3
HABR MLR MLR
comp=N,3µm,16.0s
HABR MLR MLR
comp=E,32µm,22.0s
RES Resolute Bay 36.03 26 P **P 23 05 02.1 -1.6**
comp=E,17nm,0.9s,mb5.0,baz=258,slow=11,SNR=47
RES PcP PcP 23 07 29.0 0.0
comp=E,10nm,0.7s,baz=355,slow=1.2,SNR=4.8
RES Resolute Bay 36.03 26 *e*P **P 23 05 02.5 -1.2**
RES pmax pmax
comp=Z,43nm,1.3s,mb5.2
RES Resolute Bay 36.03 26 *e*P **P 23 05 02.5 -1.2**
comp=Z,43nm,1.3s,mb5.2
CMB Columbia Colle 36.05 94 PFAKE 23 05 10.0 +5.8
CMB LR LR
comp=Z,6µm,19.0s,MS5.4
SAO San Andreas Ge 36.22 97 P **P 23 05 06.1 +0.4**
SAO pmax pmax
comp=Z,54nm,0.9s,mb5.5
SAO San Andreas Ge 36.22 97 *e*P **P 23 05 06.3 +0.6**
comp=Z,54nm,0.8s,mb5.5
SAO LR LR
comp=Z,5µm,20.0s,MS5.3
HRY Holter Researc 36.30 76 *e*P **P 23 05 06.5 +0.2**
LRM Limekiln Ridge 36.39 78 *e*P **P 23 05 07.0 0.0**
HLID Hailey 36.42 82 *e*P **P 23 05 07.7 +0.4**
comp=Z,123nm,1.5s,mb5.6
HLID LR LR
comp=Z,8µm,21.0s,MS5.5
BMN Battle Mountai 36.51 88 *e*P **P 23 05 10.1 +2.0**
BMN pmax pmax
comp=Z,57nm,1.1s,mb5.3
BMN MLR MLR
comp=Z,6µm,20.0s,MS5.4
BMN Battle Mountai 36.51 88 *e*P **P 23 05 10.1 +2.0**
comp=Z,57nm,1.1s,mb5.3
BMN LR LR
comp=Z,6µm,20.0s,MS5.4
DLMT Dillon 36.55 78 *e*P **P 23 05 08.3 0.0**
comp=Z,85nm,1.2s,mb5.5
EGMT Eagleton 36.87 73 *e*P **P 23 05 10.9 -0.2**
comp=Z,215nm,1.0s,mb5.9
EGMT LR LR
comp=Z,8µm,19.0s,MS5.5
BOZ Bozeman (W) 36.97 77 *e*P **P 23 05 12.0 0.0**
BOZ *e* 23 07 33.6
BOZ pmax pmax
comp=Z,115nm,1.5s,mb5.5
BOZ MLR MLR
comp=Z,3µm,20.0s,MS5.1
BOZ Bozeman (W) 36.97 77 *e*P **P 23 05 12.0 0.0**
comp=Z,115nm,1.5s,mb5.5
BOZ *e*PcP PcP 23 07 33.6 +1.3
BOZ LR LR
comp=Z,3µm,20.0s,MS5.1
NVAR Mina Array Bea 37.07 92 P **P 23 05 13.7 +0.8**
comp=Z,34nm,0.7s,mb5.3,baz=296,slow=8.5,SNR=91
NVAR PcP PcP 23 07 33.9 +1.2
comp=Z,2.9nm,0.8s,baz=282,slow=3.3,SNR=5.2
NVAR ScP ScP 23 11 17.4 +1.3
comp=Z,2.6nm,1.1s,baz=273,slow=4.2,SNR=5.8
CLNS Chul'man 37.47 304 *e*P **P 23 05 09.5 -6.5**
CLNS *e**PP pP 23 05 24.7 -2.7
CLNS *e*SS SS 23 13 34.7 -12
CLNS *e* 23 15 23.7
CLNS pmax pmax
comp=Z,24nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,8.0nm,0.7s
CLNS pmax pmax
comp=E,18nm,1.1s
CLNS MLR MLR
comp=E,9µm,15.0s
CLNS MLR MLR
comp=E,7µm,14.0s
CLNS MLR MLR
comp=Z,11µm,18.0s,MS5.7
ELK Elko 37.53 86 P **P 23 05 17.4 +0.6**
ELK pmax pmax
comp=Z,46nm,1.0s
ELK Elko 37.53 86 *e*P **P 23 05 17.6 +0.8**
comp=Z,46nm,1.0s,mb5.2
ELK LR LR
comp=Z,9µm,20.0s,MS5.5
NRGR Nerungri 37.62 304 *e*P **P 23 05 15.4 -1.9**
TPH Tonopah 37.96 91 *e*P **P 23 05 21.7 +1.3**
TPH pmax pmax
comp=Z,66nm,1.1s,mb5.3
TPH MLR MLR
comp=Z,5µm,20.0s,MS5.3
TPH Tonopah 37.96 91 *e*P **P 23 05 21.6 +1.3**
comp=Z,66nm,1.1s,mb5.3
TPH LR LR
comp=Z,5µm,20.0s,MS5.3
FFC Flin Flon 38.16 59 *e*P **P 23 05 21.5 -0.5**
FFC pmax pmax
comp=Z,31nm,1.0s,mb5.0
FFC MLR MLR
comp=Z,18µm,19.0s,MS5.9
FFC Flin Flon 38.16 59 *e*P **P 23 05 21.5 -0.4**
comp=Z,31nm,1.0s,mb5.0
FFC LR LR
comp=Z,18µm,19.0s,MS5.9
IMW Indian Meadow 38.33 79 *e*P **P 23 05 24.4 +0.9**
comp=Z,60nm,1.0s,mb5.3
DCID1 Drake Creek 38.35 80 *e*P **P 23 05 24.3 +0.6**
comp=Z,136nm,1.0s,mb5.6
RRI2 Red Ridge 38.41 80 *e*P **P 23 05 24.1 -0.1**
comp=Z,86nm,1.0s,mb5.4
RLMT Red Lodge 38.66 77 *e*P **P 23 05 26.6 +0.3**
comp=Z,95nm,0.9s,mb5.5
RLMT LR LR
comp=Z,4µm,21.0s,MS5.2
REDW Red Top Meadow 38.68 80 *e*P **P 23 05 27.0 +0.6**
comp=Z,90nm,1.1s,mb5.4
SNOW Snow King Moun 38.69 80 *e*P **P 23 05 27.8 +1.4**
comp=Z,89nm,1.3s,mb5.3
LOHW Long Hollow 38.69 79 *e*P **P 23 05 27.2 +0.7**
comp=Z,35nm,1.0s,mb5.0
DAC Darwin (Calif) 38.88 94 PFAKE 23 05 40.0 +12
DAC LR LR
comp=Z,5µm,20.0s,MS5.4
TPNV Topopah Spring 39.27 92 P **P 23 05 31.3 -0.1**
TPNV pmax pmax
comp=Z,71nm,0.8s,mb5.5
TPNV Topopah Spring 39.27 92 *e*P **P 23 05 31.6 +0.1**
comp=Z,71nm,0.8s,mb5.5
TPNV LR LR
comp=Z,6µm,20.0s,MS5.4
OSI Osito Adit 39.30 97 *e*P **P 23 05 32.6 +0.9**
comp=Z,58nm,0.8s,mb5.4
DUG Dugway 39.34 85 *e*P **P 23 05 31.9 -0.1**
DUG pmax pmax
comp=Z,139nm,1.3s,mb5.5
DUG MLR MLR
comp=Z,6µm,19.0s,MS5.4
DUG Dugway 39.34 85 *e*P **P 23 05 31.9 -0.2**
comp=Z,139nm,1.3s,mb5.5
DUG LR LR
comp=Z,6µm,19.0s,MS5.4
BW06 Boulder Array 39.80 80 *e*P **P 23 05 35.7 -0.1**
comp=Z,91nm,1.0s,mb5.5
BW06 LR LR
comp=Z,4µm,19.0s,MS5.3
PDAR Pinedale Array 39.80 80 P **P 23 05 35.4 -0.4**
comp=Z,35nm,0.7s,mb5.2,baz=300,slow=4.5,SNR=142
PASC Pasadena Art C 39.93 97 *e*P **P 23 05 37.3 +0.4**
comp=Z,73nm,1.0s,mb5.4
MWC Mount Wilson 39.97 97 *e*P **P 23 05 38.3 +1.0**
MWC pmax pmax
comp=Z,141nm,1.3s,mb5.5
MWC Mount Wilson 39.97 97 *e*P **P 23 05 38.3 +1.0**
comp=Z,141nm,1.3s,mb5.5
GSC Goldstone 40.01 94 P **P 23 05 37.3 -0.3**
GSC pmax pmax
comp=Z,95nm,1.0s,mb5.5
GSC Goldstone 40.01 94 *e*P **P 23 05 38.2 +0.6**
comp=Z,95nm,1.0s,mb5.5
MAJO Matsushiro 40.29 268 P **P 23 05 40.2 +0.3**
MAJO pmax pmax
comp=Z,170nm,1.0s,mb5.7
MAJO Matsushiro 40.29 268 *e*P **P 23 05 40.8 +0.9**
comp=Z,171nm,1.0s,mb5.7
MAJO LR LR
comp=Z,10µm,20.0s,MS5.7
MAT Matsushiro 40.29 268 P **P 23 05 39.3 -0.6**
MAT S **S 23 11 41.0 -3.4**
MJAR Matsushiro Arr 40.29 268 P **P 23 05 39.7 -0.3**
comp=Z,24nm,0.8s,mb5.0,baz=51,slow=7.0,SNR=44
MJAR PcP PcP 23 07 44.1 +1.2
comp=Z,8.0nm,0.9s,baz=75,slow=2.4,SNR=4.4
MJAR Matsushiro Arr 40.29 268 P **P 23 05 39.7 -0.3**
MJAR PcP PcP 23 07 44.1 +1.2
ALE Alert 40.37 11 P **P 23 05 40.0 -0.1**
comp=Z,155nm,0.5s,mb6.0,SNR=8.7
FCC Fort Churchill 40.43 51 P **P 23 05 40.1 -0.6**
FCC Fort Churchill 40.43 51 *e*P **P 23 05 40.8 0.0**
comp=Z,5.6nm,1.0s,mb4.2
MDJ Mudanjiang 40.65 285 P **P 23 05 42.5 -0.3**
MDJ AP pP 23 05 51.5 -2.8
MDJ XP sP 23 05 55.3 -3.8
MDJ PCP PcP 23 07 44.3 +0.4
MDJ SCP ScP 23 11 32.0 +2.3
MDJ PCS PcS 23 11 35.5 +1.0
MDJ S **S 23 11 49.8 +0.2**
MDJ AMB AMB
comp=Z,36nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,1µm,7.3s
MDJ LR LR
comp=N,3µm,14.4s
MDJ LR LR
comp=E,5µm,20.5s
MDJ LR LR
comp=Z,9µm,22.7s

MDJ Mudanjiang 40.65 285 *e*P P **23 05 41.4 -1.4**
comp=Z,31nm,0.8s,mb5.0
MDJ LR LR
comp=Z,8μm,19.0s,MS5.6
MVU Marysvale 40.75 87 PFAKE 23 05 50.0 +6.3
MVU LR LR
comp=Z,7μm,20.0s,MS5.5
LDFC Landfair 41.19 93 *e*P P **23 05 48.1 +0.7**
comp=Z,100nm,0.9s,mb5.5
PFO Pinyon Flat Ob 41.36 96 P P **23 05 49.0 +0.2**
PFO pmax pmax
comp=Z,50nm,1.0s,mb5.1
PFO Pinyon Flat Ob 41.36 96 *e*P P **23 05 49.7 +0.9**
comp=Z,50nm,1.0s,mb5.1
PFO LR LR
comp=Z,4μm,21.0s,MS5.3
RWWY Rawlins 41.85 80 *e*P P **23 05 50.3 -2.3**
comp=Z,159nm,1.3s,mb5.5
RSSD Black Hills 42.32 75 P P **23 05 55.8 -0.7**
RSSD pmax pmax
comp=Z,71nm,1.1s,mb5.2
RSSD Black Hills 42.32 75 *e*P P **23 05 56.1 -0.3**
comp=Z,71nm,1.1s,mb5.2
RSSD LR LR
comp=Z,6μm,20.0s,MS5.5
GLA Glamis 42.73 95 *e*P P **23 06 00.6 +0.6**
GLA pmax pmax
comp=Z,73nm,1.2s,mb5.3
GLA Glamis 42.73 95 *e*P P **23 06 00.6 +0.6**
comp=Z,73nm,1.2s,mb5.3
WUAZ Wupatki 43.19 90 *e*P P **23 06 04.6 +1.0**
comp=Z,76nm,1.0s,mb5.4
WUAZ LR LR
comp=Z,6μm,21.0s,MS5.5
CN2 Changchun 43.56 286 ⇓P P **23 06 05.5 -1.0**
CN2 *e*AP pP 23 06 16.0 -2.1
CN2 *e*XP sP 23 06 18.8 -4.1
CN2 PP PP 23 07 49.0 +0.9
CN2 PCP PcP 23 07 53.8 +0.3
CN2 *e*S **S** **23 12 30.5 -2.0**
CN2 AMB AMB
comp=Z,70nm,0.6s,mb5.6
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,10μm,16.0s,MS6.0
CN2 LR LR
comp=E,9μm,16.0s,MS6.0
CN2 LR LR
comp=Z,10μm,16.0s,MS5.8
ULM Lac du Bonnet 43.58 63 P P **23 06 05.0 -1.6**
comp=Z,18nm,0.9s,mb4.8,baz=301,slow=9.7,SNR=19
ULM LR LR 23 24 39.9
comp=Z,9μm,19.4s,MS5.7,baz=314,slow=37
ULM Lac du Bonnet 43.58 63 *e*P P **23 06 05.8 -0.8**
comp=Z,44nm,1.1s,mb5.1
ULM LR LR
comp=Z,10μm,20.0s,MS5.7
HIA Hailar 43.75 296 *e*P P **23 06 07.7 -0.2**
HIA pmax pmax
comp=Z,53nm,0.8s
HIA MLR MLR
comp=Z,11μm,19.0s
HIA Hailar 43.75 296 *e*P P **23 06 07.7 -0.3**
comp=Z,53nm,0.8s,mb5.3
HIA LR LR
comp=Z,11μm,19.0s,MS5.8
MVCO Mesa Verde 43.84 86 *e*P P **23 06 08.5 -0.3**
comp=Z,66nm,1.1s,mb5.3
MVCO LR LR
comp=Z,4μm,20.0s,MS5.3
ISCO Idaho Springs 43.96 81 P P **23 06 09.9 +0.2**
ISCO pmax pmax
comp=Z,51nm,1.3s,mb5.1
ISCO Idaho Springs 43.96 81 *e*P P **23 06 10.0 +0.3**
comp=Z,50nm,1.4s,mb5.1
ISCO LR LR
comp=Z,7μm,19.0s,MS5.6
AGMN Agassiz Refuge 44.65 65 *e*P P **23 06 14.0 -1.2**
comp=Z,92nm,1.2s,mb5.5
AGMN LR LR
comp=Z,10μm,20.0s,MS5.8
SDCO Great Sand Dun 45.32 83 *e*P P **23 06 20.9 +0.2**
comp=Z,74nm,1.2s,mb5.4
SDCO LR LR
comp=Z,4μm,20.0s,MS5.4
OGNE Ogallala 45.40 77 *e*P P **23 06 21.6 +0.4**
comp=Z,274nm,1.4s,mb5.9
OGNE LR LR
comp=Z,4μm,20.0s,MS5.3
TUC Tucson 45.71 93 P P **23 06 23.2 -0.6**
TUC pmax pmax
comp=Z,100nm,1.7s,mb5.5
TUC Tucson 45.71 93 *e*P P **23 06 24.1 +0.3**
comp=Z,101nm,1.7s,mb5.5
TUC LR LR
comp=Z,2μm,19.0s,MS5.2
SNY Shenyang 45.84 285 ⇑P P **23 06 24.8 +0.1**
SNY AP pP 23 06 34.8 -1.5
SNY XP sP 23 06 38.3 -2.9
SNY AMB AMB
comp=Z,50nm,1.7s,mb5.2
SNY AMB AMB
comp=Z,2μm,8.6s
SNY LR LR
comp=N,9μm,16.5s,MS5.8
SNY LR LR
comp=E,5μm,20.6s,MS5.8
SNY LR LR
comp=Z,11μm,16.8s,MS5.9
KSRS Korea Array 45.98 277 P P **23 06 26.2 +0.4**
comp=Z,73nm,0.8s,mb5.7,baz=52,slow=7.5,SNR=88
KSRS PcP PcP 23 08 03.5 +1.6
comp=Z,12nm,0.8s,baz=74,slow=3.7,SNR=4.4
KSRS LR LR 23 24 05.6
comp=Z,5μm,20.3s,MS5.5,baz=53,slow=34
ANMO Albuquerque 46.57 87 *e*P P **23 06 30.6 +0.1**
ANMO pmax pmax
comp=Z,55nm,1.2s
ANMO MLR MLR
comp=Z,5μm,20.0s
ANMO Albuquerque 46.57 87 *e*P P **23 06 30.6 +0.2**
comp=Z,55nm,1.2s,mb5.4
ANMO LR LR
comp=Z,5μm,20.0s,MS5.5
ECSD EROS,Sioux Fal 46.88 71 *e*P P **23 06 30.8 -2.0**
comp=Z,129nm,1.4s,mb5.7
ECSD LR LR
comp=Z,9μm,20.0s,MS5.7
EYMN Ely 47.26 63 *e*P P **23 06 34.5 -1.2**
comp=Z,63nm,1.0s,mb5.5
EYMN LR LR
comp=Z,7μm,22.0s,MS5.6
CBKS Cedar Bluff 48.11 78 P P **23 06 41.6 -0.9**
CBKS pmax pmax
comp=Z,160nm,1.1s,mb6.0
CBKS Cedar Bluff 48.11 78 *e*P P **23 06 41.8 -0.7**
comp=Z,160nm,1.1s,mb6.0
CBKS LR LR
comp=Z,4μm,19.0s,MS5.4
DL2 Dalian 48.84 283 P P **23 06 46.3 -1.7**
DL2 PP PP 23 08 39.8 -1.5
DL2 S **S** **23 13 45.5 -2.8**
DL2 AMB AMB
comp=Z,50nm,0.9s,mb5.5
DL2 AMB AMB
comp=Z,540nm,7.7s
DL2 LR LR
comp=N,2μm,14.5s
DL2 LR LR
comp=Z,3μm,17.2s,MS5.4
KBS Kingsbay 48.88 360 *e*P P **23 06 46.8 -1.1**
KBS AMb AMB 23 06 50.2
comp=Z,108nm,1.8s,mb5.6
KBS *e*S **S** **23 13 56.4 +8.5**
KBS *e* 23 17 57.5
KBS AMS AMS 23 30 55.8
comp=Z,7μm,17.3s,MS5.7
KBS Kingsbay 48.88 360 *e*P P **23 06 48.6 +0.8**
KBS pmax pmax
comp=Z,65nm,1.1s,mb5.6
KBS MLR MLR
comp=Z,6μm,19.0s,MS5.6
KBS Kingsbay 48.88 360 *e*P P **23 06 48.6 +0.7**
comp=Z,66nm,1.1s,mb5.6
KBS LR LR
comp=Z,6μm,19.0s,MS5.6

AMTX Amarillo 49.52 83 *e*P P **23 06 53.0 -0.3**
comp=Z,117nm,1.2s,mb5.8
AMTX LR LR
comp=Z,4μm,19.0s,MS5.4
SPB4 Spitsbergen Ar 49.60 359 *e*P P **23 06 53.0 -0.3**
DAG Danmarks Havn 49.62 9*d i*P SS 23 18 00.0 +30
DAG
comp=Z,11μm,17.0s
DAG Danmarks Havn 49.62 9 *e*P SS 23 18 00.0 +30
DAG LR LR
comp=Z,11μm,17.0s,MS5.9
KSU1 Kansas State U 49.79 75 *e*P P **23 06 54.0 -1.3**
comp=Z,98nm,1.1s,mb5.8
KSU1 *e*pP pP 23 07 06.2 -0.8
KSU1 LR LR
comp=Z,5μm,20.0s,MS5.5
SCIA State Center 49.98 70 *e*P P **23 06 55.7 -0.9**
comp=Z,317nm,1.5s,mb6.1
SCIA *e*pP pP 23 07 08.0 -0.4
SCIA LR LR
comp=Z,9μm,20.0s,MS5.8
IRK Irkutsk 50.12 307 *e*P P **23 06 56.7 -0.9**
IRK *e* pP 23 07 08.9 -0.4
IRK pmax pmax
comp=Z,87nm,1.4s,mb5.6
SUMG Summit 50.52 17 *e*P P **23 07 00.6 +0.3**
comp=Z,158nm,0.8s,mb6.0
TLY Talaya 50.77 307 P P **23 07 02.7 +0.2**
SNR=14
TLY Talaya 50.77 307 P P **23 07 02.7 +0.2**
SNR=14
TLY Talaya 50.77 307 P P **23 07 02.7 +0.2**
SNR=14
TLY Talaya 50.77 307 *e*P P **23 07 02.2 -0.3**
TLY *e* 23 09 00.1
TLY *e*S **S** **23 14 26.8 +12**
TLY *e* 23 16 52.9
TLY pmax pmax
comp=Z,48nm,0.9s,mb5.4
TLY Talaya 50.77 307 *e*P P **23 07 02.9 +0.4**
comp=Z,37nm,0.8s,mb5.4
TLY LR LR
comp=Z,8μm,19.0s,MS5.8
JFWS Jewell Farm 51.03 68 P P **23 07 02.5 -2.1**
JFWS pmax pmax
comp=Z,39nm,0.6s,mb5.5
JFWS Jewell Farm 51.03 68 *e*P P **23 07 02.8 -1.8**
comp=Z,39nm,0.6s,mb5.5
JFWS *e*pP pP 23 07 15.1 -1.3
JFWS LR LR
comp=Z,14μm,20.0s,MS6.0
XMAS Kiritimati 51.06 166 PFAKE 23 07 10.0 +4.9
XMAS LR LR
comp=Z,4μm,21.0s,MS5.4
BJI Beijing 51.32 288 P P **23 07 07.0 +0.2**
BJI PP PP 23 09 03.0 -0.8
BJI S **S** **23 14 26.8 +4.0**
BJI AMB AMB
comp=Z,61nm,0.8s,mb5.6
BJI AMB AMB
comp=Z,2μm,9.2s
BJI LR LR
comp=N,10μm,17.9s,MS6.1
BJI LR LR
comp=E,10μm,17.1s,MS6.1
BJI LR LR
comp=Z,9μm,18.6s,MS5.8
BJT Baijiatuau 51.34 288 *e*P P **23 07 07.2 +0.3**
BJT pmax pmax
comp=Z,43nm,0.6s
BJT MLR MLR
comp=Z,14μm,19.0s
BJT Baijiatuau 51.34 288 *e*P P **23 07 07.2 +0.3**
comp=Z,43nm,0.6s,mb5.5
BJT LR LR
comp=Z,14μm,19.0s,MS6.0
WMOK Wichita Mounta 51.38 81 P P **23 07 06.3 -1.0**
WMOK pmax pmax
comp=Z,52nm,0.8s,mb5.5
WMOK Wichita Mounta 51.38 81 *e*P P **23 07 06.7 -0.7**
comp=Z,52nm,0.8s,mb5.5
WMOK LR LR
comp=Z,4μm,21.0s,MS5.5
ULN Ulaanbaatar 51.40 301 P P **23 07 07.4 +0.1**
SNR=18
ULN Ulaanbaatar 51.40 301 P P **23 07 07.4 +0.1**
SNR=18
ULN Ulaanbaatar 51.40 301 P P **23 07 07.4 +0.1**
SNR=18
ULN Ulaanbaatar 51.40 301 *e*P P **23 07 07.3 0.0**
ULN pmax pmax
comp=Z,49nm,0.8s,mb5.5
ULN MLR MLR
comp=Z,8μm,20.0s,MS5.7
ULN Ulaanbaatar 51.40 301 *e*P P **23 07 07.3 0.0**
comp=Z,49nm,0.8s,mb5.5
ULN LR LR
comp=Z,8μm,20.0s,MS5.7
ZAK Zakamensk 51.75 305 ⇑*i*P P **23 07 09.9 0.0**
ZAK *e* 23 08 18.3
ZAK pmax pmax
comp=Z,24nm,1.4s,mb4.9
SONM Songino Array 51.77 301 P P **23 07 09.7 -0.3**
comp=Z,21nm,0.6s,mb5.2,baz=61,slow=4.3,SNR=94
SONM ScP ScP 23 12 19.2 +3.3
comp=Z,3.4nm,1.1s,baz=13,slow=3.3,SNR=4.1
SFJD Kangerlussuaq 52.04 26 LR LR 23 31 56.4
comp=Z,7μm,19.8s,MS5.7,baz=295,slow=39
MOY Mondy 52.07 308 *e*P P **23 07 12.1 -0.1**
MOY pmax pmax
comp=Z,142nm,2.6s,mb5.4
TXAR Lajitas Array 52.15 90 P P **23 07 12.2 -1.0**
comp=Z,27nm,0.6s,mb5.3,baz=302,slow=5.6,SNR=73
TXAR LR LR 23 27 50.1
comp=Z,3μm,18.1s,MS5.3,baz=105,slow=34
TXAR PKP2bc 23 38 00.6
comp=Z,0.9nm,1.0s,baz=197,slow=2.6,SNR=4.0
TXAR Lajitas Array 52.15 90 P P **23 07 12.2 -1.0**
TXAR LR LR 23 27 50.1
TXAR ⇑*e* 23 38 00.6
GLMI Grayling 52.93 62 PFAKE 23 07 30.0 +11
GLMI LR LR
comp=Z,6μm,21.0s,MS5.6
HDIL Hopedale 53.10 69 *e*P P **23 07 18.6 -1.4**
comp=Z,487nm,1.4s,mb6.2
HDIL *e*pP pP 23 07 30.9 -1.0
HDIL LR LR
comp=Z,10μm,20.0s,MS5.8
BJO Bjornoya 53.22 357 *e*P P **23 07 24.0 +3.6**
BJO AMS AMS 23 34 25.6
TARA Tarawa 53.27 204 PFAKE 23 07 30.0 +8.5
TARA LR LR
comp=Z,6μm,19.0s,MS5.7
TIA Tai'an 53.30 284 ⇑P P **23 07 20.5 -1.1**
TIA AMB AMB
comp=Z,37nm,0.8s,mb5.4
HHC Hu-ho-hao-te 53.44 292 *e*P P **23 07 22.8 +0.3**
HHC AP pP 23 07 32.8 -1.6
HHC XP sP 23 07 36.5 -2.7
HHC PP PP 23 09 24.0 +1.1
HHC PCS PcS 23 12 28.3 +0.2
HHC S **S** **23 14 50.5 -1.3**
HHC AMB AMB
comp=Z,43nm,1.3s,mb5.2
HHC AMB AMB
comp=Z,2μm,8.9s
HHC LR LR
comp=N,6μm,17.8s,MS6.0
HHC LR LR
comp=E,9μm,16.0s,MS6.0
HHC LR LR
comp=Z,9μm,18.1s,MS5.9
GUMO Guam 53.67 242 P P **23 07 21.9 -2.6**
comp=Z,80nm,0.5s,mb5.9,baz=19,slow=3.8,SNR=7.0
GUMO Guam 53.67 242 P P **23 07 21.9 -2.6**
GUMO LR LR
comp=Z,3μm,20.0s,MS5.4
JCT Junction City 53.70 86 P P **23 07 22.9 -1.7**
JCT pmax pmax
comp=Z,91nm,1.0s,mb5.7
JCT Junction City 53.70 86 *e*P P **23 07 23.5 -1.1**
comp=Z,92nm,1.0s,mb5.7
JCT *e*pP pP 23 07 35.9 -0.5
JCT LR LR
comp=Z,4μm,19.0s,MS5.4

SLM Saint Louis 53.84 72 *e*P P **23 07 23.8 -1.7**
SLM pmax pmax
comp=Z,169nm,1.3s,mb5.8
SLM Saint Louis 53.84 72 *e*P P **23 07 23.8 -1.6**
comp=Z,169nm,1.3s,mb5.8
FVM French Village 54.16 72 P P **23 07 25.3 -2.5**
FVM pmax pmax
comp=Z,130nm,1.3s,mb5.7
FVM French Village 54.16 72 *e*P P **23 07 25.8 -2.1**
comp=Z,175nm,1.3s,mb5.8
SSE Sheshan 54.38 276 P P **23 07 30.3 +0.8**
SSE AP pP 23 07 42.0 +0.6
SSE XP sP 23 07 47.0 +0.9
SSE PP PP 23 09 31.0 -0.6
SSE S **S** **23 15 03.8 -0.9**
SSE XS sS 23 15 22.8 -1.6
SSE SS SS 23 18 47.5 +0.6
SSE AMB AMB
comp=Z,94nm,1.3s,mb5.6
SSE AMB AMB
comp=Z,2μm,6.3s
SSE LR LR
comp=N,2μm,19.9s,MS5.3
SSE LR LR
comp=E,2μm,19.9s,MS5.3
SSE LR LR
comp=Z,3μm,14.9s,MS5.5
BTO Baotou 54.48 292 *e*P P **23 07 30.3 +0.2**
MIAR Mount Ida 54.64 78 P P **23 07 30.2 -1.2**
MIAR pmax pmax
comp=Z,160nm,1.2s,mb5.9
MIAR Mount Ida 54.64 78 *e*P P **23 07 30.4 -0.9**
comp=Z,162nm,1.3s,mb5.9
MIAR LR LR
comp=Z,4μm,22.0s,MS5.4
SCHQ Schefferville 54.96 44 P P **23 07 32.6 -0.8**
comp=Z,66nm,1.0s,mb5.6,baz=322,slow=7.4,SNR=27
SCHQ LR LR 23 33 34.3
comp=Z,11μm,18.1s,MS6.0,baz=316,slow=39
SCHQ Schefferville 54.96 44 *e*P P **23 07 33.5 +0.1**
comp=Z,141nm,1.2s,mb5.9
SCHQ LR LR
comp=Z,14μm,19.0s,MS6.1
OLIL Olney 55.01 70 *e*P P **23 07 32.9 -1.1**
comp=Z,179nm,1.0s,mb6.0
OLIL *e*pP pP 23 07 44.8 -1.0
SIUC Southern Illin 55.05 72 *e*P P **23 07 32.7 -1.5**
comp=Z,80nm,1.0s,mb5.7
SIUC *e*pP pP 23 07 44.7 -1.5
AAM Ann Arbor 55.11 64 PFAKE 23 07 50.0 +15
AAM LR LR
comp=Z,6μm,20.0s,MS5.7
NJ2 Nanjing 55.12 279 *e*P P **23 07 35.5 +0.6**
NJ2 AP pP 23 07 45.8 -1.0
NJ2 XP sP 23 07 49.5 -2.0
NJ2 PP PP 23 09 40.3 +2.1
NJ2 S **S** **23 15 15.0 +0.3**
NJ2 XS sS 23 15 33.0 -1.4
NJ2 AMB AMB
comp=Z,40nm,0.9s,mb5.5
NJ2 AMB AMB
comp=Z,1μm,6.6s
NJ2 LR LR
comp=N,4μm,23.7s,MS5.6
NJ2 LR LR
comp=E,4μm,22.0s,MS5.6
NJ2 LR LR
comp=Z,4μm,22.0s,MS5.5
UALR University of 55.22 77 *e*P P **23 07 34.6 -0.9**
comp=Z,83nm,1.4s,mb5.6
UALR *e*pP pP 23 07 46.4 -1.0
BLO Bloomington 55.61 69 P P **23 07 36.5 -1.8**
BLO pmax pmax
comp=Z,78nm,1.0s,mb5.7
BLO Bloomington 55.61 69 *e*P P **23 07 36.8 -1.6**
comp=Z,78nm,1.0s,mb5.7
BLO *e*pP pP 23 07 48.9 -1.3
USIN University of 55.78 71 *e*P P **23 07 38.5 -1.0**
comp=Z,287nm,1.1s,mb6.2
USIN *e*pP pP 23 07 50.4 -1.0
NATX Nacogdoches 55.93 81 *e*P P **23 07 40.4 -0.3**
comp=Z,451nm,1.6s,mb6.2
NATX LR LR
comp=Z,7μm,20.0s,MS5.7
JMIC Jan Mayen 56.02 8 LR LR 23 33 11.3
comp=Z,4μm,19.9s,MS5.5,baz=79,slow=38
WCI Wyandotte Cave 56.39 70 P P **23 07 42.1 -1.8**
WCI pmax pmax
comp=Z,65nm,1.0s,mb5.6
WCI Wyandotte Cave 56.39 70 *e*P P **23 07 42.5 -1.4**
comp=Z,65nm,1.0s,mb5.6
WCI *e*pP pP 23 07 55.0 -0.8
WCI LR LR
comp=Z,8μm,20.0s,MS5.8
HKT Hockley 56.50 83 P P **23 07 44.3 -0.4**
HKT pmax pmax
comp=Z,180nm,1.5s,mb5.9
HKT Hockley 56.50 83 *e*P P **23 07 44.5 -0.3**
comp=Z,180nm,1.5s,mb5.9
HKT LR LR
comp=Z,6μm,20.0s,MS5.7
ACSO Alum Creek Sta 56.89 66 *e*P P **23 07 45.6 -1.8**
comp=Z,32nm,0.9s,mb5.3
ACSO *e*pP pP 23 07 58.2 -1.1
ACSO LR LR
comp=Z,6μm,19.0s,MS5.7
WVT Waverly 56.94 72 P P **23 07 45.9 -1.9**
WVT pmax pmax
comp=Z,110nm,1.0s,mb5.8
WVT Waverly 56.94 72 *e*P P **23 07 46.7 -1.2**
comp=Z,114nm,1.0s,mb5.8
WVT *e*pP pP 23 07 59.0 -0.8
WVT LR LR
comp=Z,6μm,21.0s,MS5.7
KVTX Kingsville 56.97 87 PFAKE 23 08 00.0 +12
KVTX LR LR
comp=Z,5μm,19.0s,MS5.6
OXF Oxford 57.14 75 P P **23 07 47.6 -1.7**
OXF pmax pmax
comp=Z,540nm,1.1s,mb6.5
OXF Oxford 57.14 75 *e*P P **23 07 48.0 -1.3**
comp=Z,537nm,1.1s,mb6.5
OXF LR LR
comp=Z,4μm,20.0s,MS5.5
ERPA Erie 57.24 62 PFAKE 23 08 00.0 +10
ERPA LR LR
comp=Z,8μm,21.0s,MS5.8
KEV Kevo 57.58 354 P P **23 07 51.9 +0.1**
KEV pmax pmax
comp=Z,51nm,0.9s,mb5.5
KEV Kevo 57.58 354 *e*P P **23 07 50.3 -1.5**
comp=Z,68nm,0.8s,mb5.7
KEV LR LR
comp=Z,6μm,19.0s,MS5.7
NVS Novosibirsk 57.75 320 ⇑*i*P P **23 07 51.5 -1.7**
NVS *e*S **S** **23 15 43.6 -5.2**
NVS *e* 23 17 40.6
NVS pmax pmax
comp=Z,67nm,1.8s,mb5.4
NVS pmax pmax
comp=N,36nm,1.6s
NVS pmax pmax
comp=E,29nm,1.5s
NVS smax
comp=N,86nm,3.3s
ZAA0 Zalesovo Array 57.76 318 *e*P P **23 07 53.0 -0.3**
ZALV Zalesovo Beam 57.76 318 P P **23 07 52.3 -1.0**
comp=N,11nm,0.6s,mb5.1,baz=35,slow=7.4,SNR=42
ZALV LR LR 23 34 03.6
comp=N,6μm,19.9s,MS5.7,baz=49,slow=37
ARCES ARCESS Array B 57.90 354 P P **23 07 53.3 -0.7**
comp=N,49nm,0.8s,mb5.6,baz=12,slow=6.6,SNR=38
ARCES LR LR 23 35 18.4
comp=N,6μm,18.2s,MS5.7,baz=14,slow=39
ARE0 ARCESS Array S 57.90 354 *e*P P **23 07 54.5 +0.4**
VBMS Vicksburg 58.09 77 *e*P P **23 07 55.8 -0.2**
comp=N,278nm,1.2s,mb6.2
VBMS LR LR
comp=Z,5μm,19.0s,MS5.7
TRO Tromso 58.11 357 *e*P P **23 07 55.8 +0.3**
TRO *e*S **S** **23 16 03.9 +11**
TRO *e* 23 20 25.9
TRO AMS AMS 23 36 47.1
comp=Z,4μm,20.0s,MS5.6
LONY Lake Ozonia 58.36 57 *e*P P **23 07 56.7 -1.0**
comp=Z,56nm,0.9s,mb5.6

LONY ep P pP 23 08 08.6 -1.0
LONY LR LR
comp=Z,7μm,19.0s,MS5.8
KTK1 Kautokeino 58.54 355 eS **S** **23 16 04.4 +5.6**
KTK1 AMS AMS 23 37 38.1
comp=N,4μm,18.2s
TATO Taipei 58.60 271 PFAKE 23 08 10.0 +10
TATO LR LR
comp=Z,7μm,20.0s,MS5.8
LVZ Lovozero 58.74 350⇑ eP **P** **23 08 00.1 +0.2**
LVZ MLR MLR
comp=Z,4μm,21.0s,MS5.5
YHNB Yeheng 58.89 271 PFAKE 23 08 10.0 +8.4
YHNB LR LR
comp=Z,5μm,20.0s,MS5.6
WHN Wuhan 58.91 281 ⇑P **P** **23 08 01.3 -0.4**
WHN AMB AMB
comp=Z,131nm,0.8s,mb6.0
WHN AMB AMB
comp=Z,3μm,5.6s
WHN LR LR
comp=N,7μm,14.9s
WHN LR LR
comp=E,5μm,22.8s
WHN LR LR
comp=Z,7μm,18.4s,MS5.8
NCB Newcomb 59.00 57 eP **P** **23 08 01.4 -0.7**
comp=Z,64nm,0.9s,mb5.7
NCB LR LR
comp=Z,8μm,19.0s,MS5.9
TZTN Tazewell 59.13 69 eP **P** **23 08 01.9 -1.3**
comp=Z,166nm,1.4s,mb5.9
APA Apatity 59.18 350⇓ *i* P **P** **23 08 07.5 +4.5**
APA *i* S **S** **23 16 15.0 +7.9**
APA pmax pmax
comp=Z,65nm,1.2s,mb5.5
BINY Binghamton 59.33 60 eP **P** **23 08 03.9 -0.5**
comp=Z,96nm,1.1s,mb5.7
BINY LR LR
comp=Z,11μm,19.0s,MS6.0
SSPA Standing Stone 59.41 62 eP **P** **23 08 04.3 -0.7**
comp=Z,92nm,1.0s,mb5.8
SSPA LR LR
comp=Z,8μm,20.0s,MS5.8
LRAL Lakeview Retre 59.60 74 eP **P** **23 08 04.7 -1.8**
comp=Z,54nm,1.0s,mb5.5
LRAL LR LR
comp=Z,5μm,19.0s,MS5.7
TKL Tuckaleechee C 59.62 70 P **P** **23 08 05.3 -1.2**
TKL Tuckaleechee C 59.62 70 eP **P** **23 08 05.6 -1.0**
XAN Xi'an 59.64 287 P **P** **23 08 06.3 -0.4**
XAN AP pP 23 08 16.0 -2.7
XAN PP PP 23 10 18.0 -0.3
XAN AMB AMB
comp=Z,93nm,0.9s,mb5.8
XAN AMB AMB
comp=Z,1μm,10.4s
XAN LR LR
comp=N,1μm,17.2s,MS5.8
XAN LR LR
comp=E,6μm,18.3s,MS5.8
XAN LR LR
comp=Z,8μm,20.9s,MS5.8
SSLB Suanglung 59.80 270 eP **P** **23 08 08.3 +0.4**
comp=Z,370nm,1.3s,mb6.2
LBNH Lisbon 59.98 56 PFAKE 23 08 20.0 +11
LBNH LR LR
comp=Z,8μm,19.0s,MS5.9
BORG Borgarnes 60.39 16 LR LR 23 38 16.5
comp=Z,6μm,19.0s,MS5.8,baz=334,slow=40
BORG Borgarnes 60.39 16 PFAKE 23 08 20.0 +8.7
BORG LR LR
comp=Z,9μm,19.0s,MS6.0
QZH Quanzhou 60.40 273⇑ *i* P **P** **23 08 12.0 0.0**
QZH S **S** **23 16 29.0 +5.2**
QZH XS sS 23 16 35.3 -8.5
QZH AMB AMB
comp=Z,3μm,5.9s
QZH LR LR
comp=N,4μm,16.8s,MS5.8
QZH LR LR
comp=E,3μm,14.7s,MS5.8
QZH LR LR
comp=Z,4μm,19.9s
BLA Blacksburg 60.43 67 P **P** **23 08 11.1 -1.0**
BLA pmax pmax
comp=Z,130nm,1.0s,mb5.9
BLA Blacksburg 60.43 67 eP **P** **23 08 11.2 -0.9**
comp=Z,128nm,1.0s,mb5.9
BLA epP pP 23 08 23.7 -0.4
BLA LR LR
comp=Z,8μm,20.0s,MS5.9
PKME Peaks-Kenny Pk 60.56 53 eP **P** **23 08 12.8 0.0**
comp=Z,72nm,1.2s,mb5.7
PKME LR LR
comp=Z,13μm,19.0s,MS6.1
GTA Gaotai 60.97 298 P **P** **23 08 15.0 -0.7**
GTA AP pP 23 08 25.8 -1.9
GTA XP sP 23 08 29.5 -2.9
GTA PP PP 23 10 32.5 +2.6
GTA AMB AMB
comp=Z,69nm,0.9s,mb5.8
GTA AMB AMB
comp=Z,1μm,5.4s
GTA LR LR
comp=N,7μm,19.5s,MS6.2
GTA LR LR
comp=E,14μm,18.0s,MS6.2
GTA LR LR
comp=Z,13μm,20.1s,MS6.1
BRAL Brewton 61.02 76 PFAKE 23 08 30.0 +14
BRAL LR LR
comp=Z,4μm,19.0s,MS5.6
LZH Lanzhou 61.11 292 ⇓P **P** **23 08 17.0 +0.3**
LZH AP pP 23 08 29.0 +0.3
LZH XP sP 23 08 34.8 +1.4
LZH PP PP 23 10 33.5 +2.3
LZH AMB AMB
comp=Z,150nm,1.0s,mb6.1
LZH AMB AMB
comp=Z,1μm,6.5s
LZH LR LR
comp=N,13μm,16.5s
LZH LR LR
comp=Z,14μm,17.0s,MS6.2
GOGA Godfrey 61.40 72 P **P** **23 08 16.5 -2.2**
GOGA pmax pmax
comp=Z,67nm,1.0s,mb5.7
GOGA Godfrey 61.40 72 eP **P** **23 08 16.6 -2.1**
comp=Z,67nm,1.1s,mb5.7
GOGA LR LR
comp=Z,7μm,21.0s,MS5.8
CBN Corbin 61.41 64 eP **P** **23 08 17.9 -0.8**
comp=Z,46nm,0.7s,mb5.7
CBN LR LR
comp=Z,6μm,21.0s,MS5.8
FUNA Funafuti 61.66 194 PFAKE 23 08 30.0 +9.5
FUNA LR LR
comp=Z,5μm,19.0s,MS5.7
MOR8 Moi Rana 61.68 359 eP **P** **23 08 18.6 -1.5**
CNNC Cliffs of the 63.27 66 eP **P** **23 08 30.5 -0.7**
comp=Z,65nm,1.1s,mb5.7
CNNC LR LR
comp=Z,11μm,20.0s,MS6.0
NSS Namsos 63.35 360 eP **P** **23 08 29.6 -1.7**
NSS AMS AMS 23 35 31.1
comp=Z,3μm,21.4s,MS5.5
NHSC New Hope 63.52 70 eP **P** **23 08 32.4 -0.4**
comp=Z,334nm,1.2s,mb6.2
NHSC LR LR
comp=Z,12μm,19.0s,MS6.1
SVE Sverdlovsk 63.89 332⇑ eP **P** **23 08 34.5 -0.4**
SVE *e* 23 10 58.0
SVE ePPP 23 12 37.5
SVE eS **S** **23 17 11.8 +4.8**
SVE pmax pmax
comp=Z,156nm,1.2s,mb5.9
JOF Joensuu 63.93 350 ep **P** **23 08 34.4 -0.7**
comp=Z,92nm,0.9s,mb5.8
WMQ Urumqi 63.94 309 ⇑P **P** **23 08 35.5 0.0**
WMQ XP sP 23 08 50.5 -1.8
WMQ PCP PcP 23 09 11.0 +0.3
WMQ PP PP 23 10 57.8 +1.9
WMQ AMB AMB
comp=Z,70nm,1.3s,mb5.5
WMQ AMB AMB
comp=Z,2μm,5.0s
WMQ LR LR
comp=N,11μm,21.0s,MS6.1
WMQ LR LR
comp=E,3μm,19.0s,MS6.1
WMQ LR LR
comp=Z,7μm,17.5s,MS5.9
BVA0 Borovoye Array 63.98 325 *i* P **P** **23 08 34.4 -1.1**
BVA0 pmax pmax
comp=Z,23nm,1.2s,mb5.1
BRVK Borovoye 63.99 325 P **P** **23 08 35.6 0.0**
SNR=26
BRVK Borovoye 63.99 325 P **P** **23 08 35.6 0.0**
SNR=26
BRVK Borovoye 63.99 325 P **P** **23 08 35.6 0.0**
SNR=26
BRVK Borovoye 63.99 325 P **P** **23 08 35.6 0.0**
SNR=26
BRVK Borovoye 63.99 325 eP **P** **23 08 35.7 +0.1**
BRVK pmax pmax
comp=Z,113nm,1.1s,mb5.8
BRVK MLR MLR
comp=Z,16μm,19.0s,MS6.2
BRVK Borovoye 63.99 325 eP **P** **23 08 35.7 +0.1**
comp=Z,113nm,1.1s,mb5.8
BRVK LR LR
comp=Z,16μm,19.0s,MS6.2
VOSK Vostochnaya 64.01 324 P pP 23 08 50.9 +3.0
VOSK pmax pmax
comp=Z,85nm,1.2s,mb5.7
MK31 Makanchi Array 64.17 314 eP **P** **23 08 36.5 -0.5**
MKAR Makanchi Array 64.17 314 P **P** **23 08 35.6 -1.3**
comp=Z,32nm,0.8s,mb5.4,baz=45,slow=5.5,SNR=149
MKAR PKP2bc 23 37 32.6
comp=Z,0.8nm,0.9s,baz=250,slow=3.5,SNR=4.6
MKAR LR LR 23 37 45.5
comp=Z,9μm,18.5s,MS6.0,baz=39,slow=37
MKAR Makanchi Array 64.17 314 P **P** **23 08 35.6 -1.3**
MKAR ⇑*e* 23 37 32.6
MKAR LR LR 23 37 45.5
ARU Arti 64.81 333*c* *i* P **P** **23 08 40.3 -0.6**
ARU *e* S **S** **23 17 19.5 +1.1**
ARU *e* 23 18 33.9
ARU pmax pmax
comp=Z,256nm,1.7s,mb6.0
ARU Arti 64.81 333 eP **P** **23 08 41.1 +0.1**
comp=Z,129nm,0.9s,mb6.0
ARU LR LR
comp=Z,10μm,19.0s,MS6.0
KLMR Klimovskoe 64.85 345 eP **P** **23 08 40.4 -0.7**
KLMR pmax pmax
comp=Z,126nm,1.3s,mb5.8
CD2 Chengdu 64.91 288 P **P** **23 08 42.5 +0.5**
CD2 AP pP 23 08 53.3 -0.8
CD2 XP sP 23 08 57.3 -1.5
CD2 PCP PcP 23 09 16.8 +1.9
CD2 PP PP 23 11 07.0 +2.3
CD2 AMB AMB
comp=Z,160nm,1.0s,mb6.0
CD2 AMB AMB
comp=Z,2μm,8.3s
CD2 LR LR
comp=N,8μm,16.7s
CD2 LR LR
comp=Z,8μm,18.6s,MS6.0
GZH Guangzhou 64.97 276 P **P** **23 08 39.5 -3.0**
GZH S **S** **23 17 16.5 -4.8**
GZH LR LR
comp=N,2μm,15.5s,MS5.6
GZH LR LR
comp=E,2μm,12.7s,MS5.6
GZH LR LR
comp=Z,4μm,18.8s
KAF Kangasniemi 65.18 352 ep **P** **23 08 42.4 -0.9**
comp=Z,141nm,0.8s,mb6.0,baz=6.1,slow=6.0
KAF Kangasniemi 65.18 352 eP **P** **23 08 42.4 -0.9**
KAF pmax pmax
comp=Z,141nm,0.8s,mb6.0
MOL Molde 65.27 2 eP **P** **23 08 43.4 -0.5**
MOL AMS AMS 23 36 26.9
comp=Z,3μm,27.8s,MS5.3
TAOE Nuku Hiva Isla 65.68 149 eS S 23 17 30.3 +0.3
comp=Z,17μm,23.3s
TAOE eSS SS 23 21 43.0 -2.1
comp=Z,4μm,23.9s
TAOE eLR LR 23 28 33.0
comp=Z,9μm,22.9s,baz=352
DOMB Dombas 65.83 1 eP **P** **23 08 47.1 -0.3**
DOMB AMb AMB 23 08 48.8
comp=Z,124nm,1.0s,mb5.9
AFI Afiamalu 66.15 184 PFAKE 23 09 00.0 +10
AFI LR LR
comp=Z,3μm,19.0s,MS5.5
DWPF Disney 66.47 74 PFAKE 23 09 00.0 +7.9
DWPF LR LR
comp=Z,3μm,20.0s,MS5.5
GYA Guiyang 66.49 283⇑ *i* P **P** **23 08 52.5 +0.3**
GYA AP pP 23 09 02.0 -2.4
GYA XP sP 23 09 06.0 -3.1
GYA PCP PcP 23 09 23.0 +1.5
GYA PP PP 23 11 20.5 +1.8
GYA SCP 23 13 21.8
GYA AMB AMB
comp=Z,70nm,0.9s,mb5.7
GYA AMB AMB
comp=Z,920nm,7.2s
GYA LR LR
comp=N,4μm,17.2s,MS5.9
GYA LR LR
comp=E,5μm,18.5s,MS5.9
GYA LR LR
comp=Z,4μm,18.7s,MS5.7
NB2 NORSAR Subarra 66.85 0 P **P** **23 08 53.2 -0.8**
comp=Z,63nm,0.8s,mb5.7,baz=1.1,slow=6.5
NOA NORSAR Array B 66.85 0 P **P** **23 08 53.1 -0.9**
comp=Z,48nm,0.8s,mb5.5,baz=0.5,slow=6.4,SNR=86
NAO01 NORSAR Array S 67.05 0 eP **P** **23 08 55.5 +0.2**
comp=Z,116nm,2.0s,mb5.6
PUL Pulkovo 67.12 350⇑ eP **P** **23 08 56.4 +0.7**
LRW Lerwick 67.29 7 eP **P** **23 08 57.3 +0.5**
LRW AMb AMB 23 08 59.1
comp=Z,200nm,1.8s,mb5.8
LRW AMS AMS 23 43 10.2
comp=Z,4μm,20.1s,MS5.7
HNR Honiara 67.34 214 PFAKE 23 09 10.0 +12
HNR LR LR
comp=Z,2μm,19.0s,MS5.3
KONO Kongsberg 68.24 1 eP **P** **23 09 03.2 +0.5**
KONO AMb AMB 23 09 05.2
comp=Z,161nm,0.9s,mb6.1
KONO eS S 23 18 09.2 +9.5
KONO AMS AMS 23 43 54.8
comp=Z,3μm,16.0s,MS5.6
KONO Kongsberg 68.24 1⇑ eP **P** **23 09 02.4 -0.4**
KONO Kongsberg 68.24 1 eP **P** **23 09 03.1 +0.4**
comp=Z,89nm,0.9s,mb5.8
KONO LR LR
comp=Z,4μm,20.0s,MS5.6
TEIG Tepich 68.26 85 PFAKE 23 09 10.0 +6.5
TEIG LR LR
comp=Z,2μm,20.0s,MS5.3
BLS5 Blasjo 68.40 3 eP **P** **23 09 04.2 +0.4**
BLS5 AMb AMB 23 09 08.8
comp=Z,41nm,1.4s,mb5.3
ORE Reay 68.65 9 eP **P** **23 09 05.9 +0.5**
VSU Vasula 68.76 352⇓ *i* P **P** **23 09 06.4 +0.4**
MVH1 Achvaich 69.23 9 eP **P** **23 09 09.3 +0.4**
SOR Soroa 69.51 79 eP **P** **23 09 07.4 -3.9**
MCD Coleburn Disti 69.65 8 eP **P** **23 09 12.4 +0.9**
KPL Plockton 69.66 10 eP **P** **23 09 10.2 -1.4**
KPL AMb AMB 23 09 12.1
comp=Z,201nm,1.8s,mb5.8
KPL AMS AMS 23 46 14.4
comp=Z,3μm,18.0s,MS5.6
MDO Dochfour 69.69 9 eP **P** **23 09 11.1 -0.7**
KMI Kunming 69.82 285⇑ P **P** **23 09 13.5 +0.4**
KMI AP pP 23 09 24.0 -1.3
KMI XP sP 23 09 28.5 -1.5
KMI PP PP 23 11 48.5 +0.9
KMI AMB AMB
comp=Z,61nm,0.7s,mb5.6
KMI AMB AMB
comp=Z,2μm,4.1s
KMI LR LR
comp=N,3μm,17.3s,MS5.9
KMI LR LR
comp=E,4μm,15.0s,MS5.9
KMI LR LR
comp=Z,4μm,14.4s,MS5.8
DAV Davao City (W) 69.91 255 PFAKE 23 09 20.0 +6.2
DAV LR LR
comp=Z,7μm,21.0s,MS5.9
MME1 Meikle Cairn 69.94 8 eP **P** **23 09 13.2 -0.1**
MOS Moscow 70.05 345 eP **P** **23 09 12.3 -1.7**
MOS *e* 23 09 32.4
MOS eS S 23 18 20.6 -0.6
MOS eSS SS 23 22 57.6 +7.7
MOS pmax pmax
comp=Z,225nm,0.8s,mb6.2
TKM2 Tokmak 2 70.15 315 eP **P** **23 09 16.5 +1.6**
TKM2 pmax pmax
comp=Z,69nm,1.3s,mb5.4
TKM2 MLR MLR
comp=Z,8μm,19.0s,MS6.0
TKM2 Tokmak 2 70.15 315 P **P** **23 09 15.2 +0.3**
SNR=20
TKM2 Tokmak 2 70.15 315 eP **P** **23 09 16.5 +1.6**
comp=Z,69nm,1.3s,mb5.4
TKM2 LR LR
comp=Z,8μm,19.0s,MS6.0
QIZ Qiongzhong 70.17 276 PFAKE 23 09 30.0 +15
QIZ LR LR
comp=Z,2μm,21.0s,MS5.4
AKTK Aktyubinsk 70.23 331 P **P** **23 09 15.2 -0.1**
AKTO Aktyubinsk 70.23 331 P **P** **23 09 15.2 -0.1**
comp=Z,104nm,0.8s,mb5.8,baz=29,slow=6.1,SNR=152
USP Ospenovka 70.34 316 P **P** **23 09 16.1 +0.1**
SNR=34
CHMS Chumysh 70.45 316 P **P** **23 09 18.4 +1.7**
SNR=26
FRU Bishkek 70.64 316 eP **P** **23 09 18.0 +0.1**
FRU pmax pmax
comp=Z,150nm,1.8s,mb5.6
FRU MLR MLR
comp=Z,8μm,17.0s,MS6.0
KBK Karagaybulak 70.64 316 P **P** **23 09 18.3 +0.4**
SNR=32
AB31 Akbulak array 70.67 329 P **P** **23 09 17.2 -0.8**
AB31 pmax pmax
comp=Z,114nm,0.8s,mb5.8
OBN Obninsk 70.82 345*c* *i* P **P** **23 09 17.5 -1.2**
OBN *i* 23 09 37.5
OBN *e* 23 11 57.3
OBN *i* S S 23 18 36.1 +5.9
OBN *i* PPS 23 19 22.6
OBN *i* SS SS 23 23 10.5 +8.8
OBN pmax pmax
comp=Z,207nm,1.0s,mb6.0
OBN Obninsk 70.82 345 eP **P** **23 09 18.5 -0.2**
comp=Z,132nm,0.8s,mb5.9
OBN LR LR
comp=Z,4μm,19.0s,MS5.7
AAK Ala-Archa 70.86 316 P **P** **23 09 19.8 +0.6**
SNR=16
AAK Ala-Archa 70.86 316 P **P** **23 09 19.8 +0.6**
SNR=16
AAK Ala-Archa 70.86 316⇑ eP **P** **23 09 19.3 +0.1**
AAK pmax pmax
comp=Z,51nm,1.4s,mb5.3
AAK Ala-Archa 70.86 316 P **P** **23 09 19.5 +0.3**
SNR=44
AAK Ala-Archa 70.86 316 eP **P** **23 09 19.8 +0.6**
comp=Z,58nm,0.9s,mb5.5
AAK LR LR
comp=Z,6μm,19.0s,MS5.9
EAB Aberfoyle 70.92 9 eP **P** **23 09 19.2 -0.1**
EBH Black Hill 70.95 9 eP **P** **23 09 19.8 +0.3**
KZA Kyzart 70.98 315 P **P** **23 09 22.2 +2.3**
SNR=10
EKS2 Erkin-Say 71.14 316 P **P** **23 09 21.3 +0.4**
SNR=27
EKS2 Erkin-Say 71.14 316 eP **P** **23 09 21.3 +0.4**
comp=Z,48nm,0.9s,mb5.4
EKS2 LR LR
comp=Z,7μm,19.0s,MS6.0
UCH Uchtor 71.18 316 eP **P** **23 09 22.3 +1.2**
comp=Z,28nm,1.3s,mb5.0
UCH LR LR
comp=Z,4μm,19.0s,MS5.7
EAU Auchinoon 71.35 9⇑ eP **P** **23 09 21.3 -0.6**
EBL Broad Law 71.46 9 eP **P** **23 09 23.2 +0.6**
AML Almayashu 71.61 316 P **P** **23 09 24.6 +0.8**
SNR=26
AML Almayashu 71.61 316 eP **P** **23 09 24.8 +1.1**
comp=Z,89nm,1.3s,mb5.5
AML LR LR
comp=Z,7μm,19.0s,MS5.9
PPT Papeete 71.62 161 eS S 23 18 44.0 +3.8
comp=Z,9μm,25.0s
PPT eLQ 23 27 44.1
comp=Z,1μm,23.2s
PPT eLR LR 23 30 57.1
comp=Z,6μm,31.2s,baz=348
PPT Papeete 71.62 161 LR LR 23 39 44.5
comp=Z,1μm,18.0s,MS5.3,baz=324,slow=35
ISAL Salakas 71.67 351 eP **P** **23 09 24.1 +0.2**
XSO Sourhope Farm 71.81 8 eP **P** **23 09 25.1 +0.4**
MGV Managua 71.84 77 eP **P** **23 09 21.9 -3.5**
IDID Didziasalis 71.87 351 eP **P** **23 09 25.2 +0.2**
IIGN Ignalina 71.88 351 eP **P** **23 09 25.4 +0.2**
ESK Eskdalemuir 71.89 9 eP **P** **23 09 25.7 +0.4**
ESK AMb AMB 23 09 31.6
comp=Z,97nm,1.3s,mb5.6
ESK AMS AMS 23 51 22.9
comp=Z,3μm,18.3s,MS5.6
ESK Eskdalemuir 71.89 9 eP **P** **23 09 25.9 +0.7**
ESK pmax pmax
comp=Z,82nm,1.1s,mb5.6
ESK MLR MLR
comp=Z,4μm,19.0s,MS5.8
ESK Eskdalemuir 71.89 9 eP **P** **23 09 25.9 +0.7**
comp=Z,82nm,1.1s,mb5.6
ESK LR LR
comp=Z,4μm,19.0s,MS5.8
GAL1 Galloway 72.19 10 eP **P** **23 09 26.6 -0.5**
GAL1 AMb AMB 23 09 31.4
comp=Z,192nm,1.5s,mb5.8
COP Copenhagen 72.22 360 eP **P** **23 09 20.8 -6.4**
COP pmax pmax
comp=Z,51nm,1.0s,mb5.4
COP MLR MLR
comp=Z,1μm,19.0s,MS5.2
COP Copenhagen 72.22 360 *i* P **P** **23 09 20.8 -6.4**
comp=Z,51nm,1.0s,mb5.4
COP *i* S S 23 19 03.6 +17
COP
comp=Z,1μm,19.0s
GCD Castle Douglas 72.27 9 eP **P** **23 09 26.2 -1.3**
PMG Port Moresby 72.38 226 P **P** **23 09 28.3 -0.3**
comp=Z,32nm,0.9s,mb5.3,baz=359,slow=7.9,SNR=7.5
PMG Port Moresby 72.38 226⇑ eP **P** **23 09 27.9 -0.7**
PMG pmax pmax
comp=Z,53nm,1.4s
PMG Port Moresby 72.38 226 eP **P** **23 09 28.8 +0.2**
comp=Z,47nm,0.8s,mb5.5
PMG LR LR
comp=Z,2μm,20.0s,MS5.4
XAL Allendale 72.44 8 eP **P** **23 09 28.8 +0.3**
MNK Minsk 72.56 350⇓ eP **P** **23 09 28.0 -1.2**
MNK eS S 23 18 48.0 -2.3
MNK *e* 23 19 38.0
MNK pmax pmax
comp=Z,390nm,1.5s,mb6.1
MNK pmax pmax
comp=N,350nm,1.0s
MNK MLR MLR
comp=E,7μm,16.0s,MS6.2
MNK MLR MLR
comp=Z,12μm,18.0s,MS6.2
MNK MLR MLR
comp=N,8μm,18.0s,MS6.2
KSH Kashi 72.75 313 P **P** **23 09 34.0 +3.4**
KSH AP pP 23 09 44.3 +1.4
KSH XP sP 23 09 48.3 +0.7
KSH PCP PcP 23 09 51.5 +3.7
KSH PP PP 23 12 18.3 +6.1
KSH AMB AMB
comp=Z,1μm,4.3s
KSH LR LR
comp=N,17μm,16.9s,MS6.6
KSH LR LR
comp=E,18μm,16.1s,MS6.6

KSH LR LR
comp=Z,23µm,18.1s,MS6.5
BSD Bornholm Skovb 72.76 358 *eP* **P 23 09 24.0 -6.4**
BSD pmax pmax
comp=Z,45nm,0.8s,mb5.5
BSD MLR MLR
comp=Z,2µm,18.0s,MS5.5
BSD Bornholm Skovb 72.76 358 *i P* **P 23 09 24.0 -6.4**
comp=Z,45nm,0.8s,mb5.5
BSD
comp=Z,2µm,18.0s
WIM Isle of Man 72.90 10 *eP* **P 23 09 30.5 -0.8**
LSA Lhasa 72.94 296 P **P 23 09 33.5 +1.6**
LSA AP pP 23 09 41.8 -2.4
LSA XP sP 23 09 46.0 -2.9
LSA AMB AMB
comp=Z,130nm,1.0s,mb5.8
LSA LR LR
comp=N,3µm,15.8s,MS5.8
LSA LR LR
comp=E,4µm,17.2s,MS5.8
LSA LR LR
comp=Z,7µm,16.4s,MS6.0
LSA Lhasa 72.94 296 *eP* **P 23 09 33.5 +1.6**
LSA pmax pmax
comp=Z,273nm,1.4s,mb6.0
LSA MLR MLR
comp=Z,4µm,19.0s,MS5.7
LSA Lhasa 72.94 296 *eP* **P 23 09 33.5 +1.6**
comp=Z,273nm,1.4s,mb6.0
LSA LR LR
comp=Z,4µm,19.0s,MS5.7
RGN Rugen 73.36 359 *eL* 23 41 33.7
comp=Z,4µm,20.4s
SUW Suwalki 73.46 353 *eP* **P 23 09 33.2 -1.4**
SUW Suwalki 73.46 353 *eP* **P 23 09 33.2 -1.4**
TGUH Tegucigalpa,Un 73.59 88 *eP* **P 23 09 37.5 +1.6**
comp=Z,370nm,1.6s,mb6.1
TGUH LR LR
comp=Z,2µm,20.0s,MS5.4
HLG Helgoland 73.68 2 *eL* 23 42 21.1
comp=Z,2µm,21.1s
WME Myndd Eilian 73.68 10⇑ *eP* **P 23 09 36.6 +0.8**
RAR Rarotonga 73.74 172 LR LR 23 37 11.2
comp=Z,892nm,19.6s,MS5.1,baz=351,slow=32
RAR Rarotonga 73.74 172 PFAKE 23 09 50.0 +14
RAR LR LR
comp=Z,3µm,20.0s,MS5.5
VRHR Novokhopersk 73.76 341 *eP* **P 23 09 35.6 -0.7**
VRHR *e**SP sP 23 09 47.0 -6.3
VRHR pmax pmax
comp=Z,120nm,0.8s,mb5.9
VRHR pmax pmax
comp=N,100nm,1.0s
VRHR pmax pmax
comp=E,40nm,1.0s
LHO Holmfirth 73.77 8 *eP* **P 23 09 36.7 +0.3**
WLF1 Llynfaes 73.78 10 *eP* **P 23 09 35.2 -1.3**
WLF1 AMb AMB 23 09 40.9
comp=Z,166nm,1.8s,mb5.7
CCCC Cccc 73.86 76 *eP* **P 23 09 38.6 +1.2**
BSEG Bad Segeberg 73.97 1 *eP* **P 23 09 37.8 +0.2**
comp=Z,96nm,1.1s,mb5.6
BSEG *eL* 23 51 29.4
comp=Z,4µm,18.6s
KBI1 Birley Grange 74.09 8⇑ *eP* **P 23 09 37.6 -0.6**
VSR Storozhevoye 74.12 342 *eP* **P 23 09 38.1 -0.3**
VSR *e**SP sP 23 09 50.1 -5.3
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=N,40nm,0.9s
VSR pmax pmax
comp=E,20nm,1.0s
VSR MLR MLR
comp=Z,2µm,20.0s,MS5.4
VSR MLR MLR
comp=N,3µm,19.0s,MS5.7
VSR MLR MLR
comp=E,2µm,16.0s,MS5.7
STNC Stoke 74.19 9 *eP* **P 23 09 39.7 +0.9**
STNC AMb AMB 23 09 43.1
comp=Z,302nm,1.7s,mb5.9
SBD1 Bryn Du 74.27 9 *eP* **P 23 09 39.7 +0.4**
KWE Weaver Farm 74.30 8 *eP* **P 23 09 40.5 +1.0**
VORD Divnogorie 74.33 342 *eP* **P 23 09 38.9 -0.8**
VORD *e**PP pP 23 09 44.0 -8.0
VORD *e**SP sP 23 09 50.6 -6.1
VORD pmax pmax
comp=Z,80nm,0.7s,mb5.8
VORD pmax pmax
comp=N,60nm,0.8s
VORD pmax pmax
comp=E,50nm,0.8s
VORD MLR MLR
comp=Z,7µm,22.0s,MS5.9
VORD MLR MLR
comp=N,7µm,19.0s,MS6.0
VORD MLR MLR
comp=E,2µm,19.0s,MS6.0
GKP Gorka Klasztor 74.54 356 *eP* **P 23 09 41.6 +0.7**
GKP Gorka Klasztor 74.54 356 *eP* **P 23 09 41.6 +0.7**
CWF Charnwood Fore 74.62 8 *eP* **P 23 09 40.8 -0.5**
CWF AMb AMB 23 09 42.4
comp=Z,169nm,1.4s,mb5.8
CWF AMS AMS 23 49 33.3
comp=Z,2µm,18.7s,MS5.5
HTR Trewern Hill 75.09 9⇑ *eP* **P 23 09 44.0 -0.1**
MCH1 Michaelchurch 75.20 9 *eP* **P 23 09 45.0 +0.3**
MCH1 AMb AMB 23 09 46.9
comp=Z,233nm,1.2s,mb6.0
MCH1 AMS AMS 23 47 28.4
comp=Z,3µm,18.7s,MS5.6
IMP Imphal 75.20 291 *eP* **P 23 09 45.0 -0.1**
WAR Warsaw 75.38 354 *eP* **P 23 09 47.7 +2.0**
WAR Warsaw 75.38 354 *eP* **P 23 09 47.7 +2.0**
NRDL Niedersach Rie 75.42 1 *eP* **P 23 09 45.7 -0.2**
comp=Z,68nm,1.1s,mb5.5
NRDL *eL* 23 42 16.4
comp=Z,3µm,21.9s
RUE Ruedersdorf 75.42 359 *eP* **P 23 09 46.3 +0.3**
comp=Z,130nm,1.2s,mb5.7
RUE *eL* 23 45 41.6
comp=Z,3µm,19.9s
RUE Ruedersdorf 75.42 359 *eP* **P 23 09 46.3 +0.3**
comp=Z,122nm,1.3s,mb5.7
IBBN Ibbenburen 75.56 2 *eP* **P 23 09 47.1 +0.3**
comp=Z,109nm,1.1s,mb5.7
IBBN *eL* 23 48 08.0
comp=Z,3µm,19.9s
HGH Gray Hill 75.57 9⇑ *eP* **P 23 09 46.6 -0.2**
SHL Shillong 75.75 293⇑ *i P* **P 23 09 49.0 +0.7**
SHL *i* S S 23 19 31.0 +4.0
NANT Nan 75.86 282⇑ P **P 23 09 46.0 -3.0**
comp=Z,428nm,1.0s,mb6.3
WTSB Winterswijk 75.87 3⇑ *eP* **P 23 09 48.7 +0.1**
comp=Z,69nm,1.3s,mb5.4
UBT Ubonrachathani 76.00 277 P **P 23 09 51.0 +1.2**
HTL Hartland 76.03 10 AMS AMS 23 45 43.7
comp=Z,4µm,18.7s,MS5.8
HEX Exmoor 76.03 10 *eP* **P 23 09 49.0 -0.5**
WOL Wolverton 76.04 8 *eP* **P 23 09 48.7 -0.8**
WOL AMb AMB 23 09 56.6
comp=Z,430nm,1.6s,mb6.1
CLZ Clausthal 76.07 1 *eP* **P 23 09 50.2 +0.5**
CLZ pmax pmax
comp=Z,111nm,1.1s,mb5.7
CLZ MLR MLR
comp=Z,4µm,18.4s,MS5.8
CLZ Clausthal 76.07 1 *eP* **P 23 09 50.2 +0.5**
comp=Z,111nm,1.1s,mb5.7
CLZ *eL* 23 48 39.1
comp=Z,5µm,18.4s
AKASG Malin Array Be 76.14 349 P **P 23 09 48.9 -1.2**
comp=Z,61nm,0.7s,mb5.7,baz=14,slow=5.8,SNR=133
AKASG LR LR 23 48 11.7
comp=Z,6µm,18.8s,MS5.9,baz=15,slow=40
AKBB Malin Array Si 76.14 349 *eP* **P 23 09 49.5 -0.6**
KIEV Kiev 76.15 349 *eP* **P 23 09 49.6 -0.6**
KIEV pmax pmax
comp=Z,87nm,0.8s,mb5.7
KIEV MLR MLR
comp=Z,5µm,20.0s,MS5.9
KIEV Kiev 76.15 349 *eP* **P 23 09 49.6 -0.5**
comp=Z,87nm,0.8s,mb5.7
KIEV LR LR
comp=Z,5µm,20.0s,MS5.9
KKM Kota Kinabalu 76.33 262 PFAKE 23 10 00.0 +8.3
KKM LR LR
comp=Z,2µm,20.0s,MS5.5
GTBY Guantanamo Bay 76.41 75 PFAKE 23 10 00.0 +7.9
GTBY LR LR
comp=Z,3µm,20.0s,MS5.6
BUG Bochum--Univer 76.41 3 *eP* **P 23 09 51.7 +0.1**
comp=Z,85nm,1.1s,mb5.6
BUG *eL* 23 49 48.8
comp=Z,4µm,19.3s
KKTK Khon Kaen 76.49 279⇑ *eP* **P 23 09 53.0 +0.4**
comp=Z,741nm,1.0s,mb6.6
CLL Collm 76.60 359⇑ *i P* **P 23 09 52.5 -0.2**
CLL *e*S S 23 19 39.0 +3.4
CLL pmax pmax
comp=Z,50nm,1.1s,mb5.4
CLL MLR MLR
comp=Z,4µm,19.1s,MS5.7
CLL Collm 76.60 359 *eP* **P 23 09 52.4 -0.3**
comp=Z,50nm,1.1s,mb5.4
CLL *eL* 23 51 15.5
comp=Z,3µm,19.1s
CLL Collm 76.60 359⇑ *i P* **P 23 09 52.5 -0.2**
comp=Z,50nm,1.1s,mb5.4
CLL *e*Plp 23 09 53.0
CLL *e*PP PP 23 12 47.0 +2.6
CLL *e*S S 23 19 39.0 +3.4
comp=N,1µm,12.1s
CLL *e*S S 23 19 39.0 +3.4
comp=E,700nm,20.9s
CLL *e*SP 23 20 17.0
CLL *e*SS SS 23 24 48.0 +18
CLL Lm 23 51 00.0
comp=N,3µm,19.4s
CLL Lm 23 51 00.0
comp=E,1µm,20.8s
CLL Lm 23 51 00.0
comp=Z,4µm,19.1s
CLL Collm 76.60 359⇑ *i P* **P 23 09 52.5 -0.2**
comp=Z,50nm,1.1s,mb5.4
CLL *e*S S 23 19 39.0 +3.4
CLL LR LR
comp=Z,4µm,19.1s,MS5.7
TAPN Taplejung 76.66 297 *eP* **P 23 09 53.7 +0.3**
comp=Z,428nm,1.3s,mb6.2
CHG Chiang Mai 76.90 284⇑ P **P 23 09 54.6 -0.3**
comp=Z,48nm,1.0s,mb5.4
CHTO Chiang Mai 76.90 284 P **P 23 09 55.1 +0.2**
SNR=24
CHTO Chiang Mai 76.90 284 P **P 23 09 55.1 +0.2**
SNR=24
CHTO Chiang Mai 76.90 284 P **P 23 09 55.1 +0.2**
SNR=24
CHTO Chiang Mai 76.90 284 P **P 23 09 55.1 +0.2**
SNR=24
CHTO Chiang Mai 76.90 284 P **P 23 09 55.1 +0.2**
SNR=24
CHTO Chiang Mai 76.90 284 *eP* **P 23 09 55.0 +0.1**
CHTO pmax pmax
comp=Z,33nm,0.9s,mb5.3
CHTO MLR MLR
comp=Z,3µm,19.0s,MS5.7
CHTO Chiang Mai 76.90 284 *eP* **P 23 09 55.0 +0.1**
comp=Z,33nm,0.9s,mb5.3
CHTO LR LR
comp=Z,3µm,19.0s,MS5.7
UCC Uccle 76.94 5 P **P 23 09 54.3 -0.3**
FBE Freiberg 76.99 359 *eP* **P 23 09 55.0 +0.1**
comp=Z,120nm,1.3s,mb5.7
KSP Ksiaz 77.00 357 *eP* **P 23 09 55.1 +0.1**
KSP Ksiaz 77.00 357⇑ *eP* **P 23 09 54.8 -0.2**
KSP *e*S S 23 19 50.0 +10
KSP *e*SS SS 23 24 43.0 +7.2
KSP LR LR
comp=Z,6µm,18.4s,MS5.9
BEBN Eben Emael 77.00 4 P **P 23 09 55.5 +0.5**
comp=Z,23nm,1.3s,mb5.0
BRG Berggiesshubel 77.03 358 *i P* **P 23 09 55.1 0.0**
BRG pmax pmax
comp=Z,38nm,1.1s,mb5.2
BRG Berggiesshubel 77.03 358 *eP* **P 23 09 55.0 -0.1**
comp=Z,64nm,1.1s,mb5.5
BRG *eL* 23 50 02.8
comp=Z,3µm,19.8s
BRG Berggiesshubel 77.03 358 *i P* **P 23 09 55.1 0.0**
comp=Z,38nm,1.1s,mb5.2
BRG *i* 23 10 27.3
BRG SS SS 23 25 02.0 +26
BRG Berggiesshubel 77.03 358 S S 23 19 47.0 +6.8
HGN Heimansgroeve 77.04 4⇑ *eP* **P 23 09 55.2 0.0**
comp=Z,91nm,1.9s,mb5.4
HGN Heimansgroeve 77.04 4 *eS* S 23 19 45.7 +5.3
HGN Heimansgroeve 77.04 4 *eSS* SS 23 25 33.1 +57
MENF Mencas 77.05 6 *eP* **P 23 09 56.4 +1.2**
UBBA Unterbreizbach 77.09 1 *eP* **P 23 09 55.4 -0.1**
comp=Z,67nm,1.5s,mb5.3
UBBA *eL* 23 50 03.2
comp=Z,3µm,18.1s
CM31 Chiang Mai Arr 77.18 283 PFAKE 23 10 10.0 +14
CM31 LR LR
comp=Z,4µm,19.0s,MS5.8
CMAR Chiang Mai Arr 77.18 283 P **P 23 09 56.6 +0.1**
comp=Z,58nm,0.8s,mb5.5,baz=26,slow=5.8,SNR=178
CMAR LR LR 23 47 21.1
comp=Z,5µm,19.2s,MS5.8,baz=47,slow=38
MEM Membach 77.20 4 P **P 23 09 56.5 +0.4**
comp=Z,58nm,1.3s,mb5.3
GUN Gumba 77.20 299 *eP* **P 23 09 56.9 +0.4**
comp=Z,174nm,0.5s,mb6.2
ODAN Odare 77.22 297 *eP* **P 23 09 56.8 +0.2**
comp=Z,183nm,1.0s,mb5.9
SNF Seneffe 77.22 5 P **P 23 09 56.0 -0.2**
comp=Z,36nm,1.8s,mb5.0
JIRN Jiri 77.23 299 *eP* **P 23 09 57.2 +0.5**
comp=Z,199nm,0.7s,mb6.2
TBI Tubuai 77.27 162 *eS* S 23 19 43.0 -0.2
comp=Z,4µm,27.5s
TBI Tubuai 77.27 162 *eLQ* 23 29 51.1
comp=Z,753nm,27.0s
TBI *eLR* LR 23 33 21.9
comp=Z,3µm,35.0s,baz=346
MOX Moxa 77.28 360 *eP* **P 23 09 56.4 -0.1**
comp=Z,132nm,1.5s,mb5.6
MOX
comp=Z,2µm,21.0s
MOX Moxa 77.28 360 *eP* **P 23 09 56.4 -0.1**
MOX pmax pmax
comp=Z,132nm,1.5s,mb5.6
MOX MLR MLR
comp=Z,2µm,21.0s,MS5.4
MOX Moxa 77.28 360 *eP* **P 23 09 56.7 +0.2**
comp=Z,79nm,1.1s,mb5.6
MOX *eL* 23 49 32.9
comp=Z,2µm,21.4s
UPC Upice 77.34 357⇑ *i P* **P 23 09 56.7 -0.2**
BCLA Clavier 77.36 4 P **P 23 09 57.5 +0.5**
comp=Z,57nm,1.5s,mb5.3
PVCC Panska Ves 77.36 358⇑ *eP* **P 23 09 57.2 +0.2**
PVCC *ex* x 23 10 08.8
PVCC AMS AMS 23 49 50.0
comp=Z,4µm,20.7s
OJC Ojcow 77.47 355 *eP* **P 23 09 57.6 0.0**
OJC *ep*P pP 23 10 07.0 -2.9
OJC *e*S S 23 19 45.9 +0.9
OJC L 23 52 50.5
comp=Z,4.4nm,16.8s
WERD Werda 77.47 360 *eP* **P 23 09 58.0 +0.4**
comp=Z,39nm,1.2s,mb5.2
DPC Dobruska-Polom 77.49 357⇑ *i P* **P 23 09 58.2 +0.5**
DPC *e* pP 23 10 10.9 +0.8
DPC MLR MLR
comp=Z,4µm,19.8s,MS5.7
DPC Dobruska-Polom 77.49 357⇑ *i P* **P 23 09 58.2 +0.5**
DPC *ex* x 23 10 10.9
DPC *e*S S 23 19 55.8 +11
DPC AMS AMS 23 52 10.0
comp=Z,4µm,19.8s
TANN Tannenbergstha 77.50 359 *eP* **P 23 09 58.2 +0.4**
comp=Z,98nm,1.7s,mb5.5
TANN *eL* 23 48 29.8
comp=Z,2µm,20.2s
GUNZ Gunzen 77.55 360 *eP* **P 23 09 58.3 +0.2**
comp=Z,47nm,1.2s,mb5.3
LVV L'vov 77.56 352 *i P* **P 23 09 57.9 -0.2**
LVV *e* 23 13 01.5
LVV *e*PPP 23 14 44.7
LVV *e*S S 23 19 46.5 +0.5
LVV *e*PS 23 20 30.9
RAMN Ramite 77.58 298 *eP* **P 23 09 58.5 -0.1**
comp=Z,308nm,0.9s,mb6.2
KKN Kakani 77.62 299 *eP* **P 23 09 58.8 0.0**
comp=Z,314nm,1.4s,mb6.0
WERN Wernitzgruen 77.63 359 *eP* **P 23 09 59.0 +0.5**
comp=Z,71nm,1.1s,mb5.5
DOU Dourbes 77.65 5 P **P 23 09 58.4 -0.2**
comp=Z,42nm,1.6s,mb5.1
GIVF Givet 77.66 4⇑ *i P* **P 23 09 58.5 -0.1**
comp=Z,160nm,1.1s,mb5.6
GIVF Givet 77.66 4⇑ *i P* **P 23 09 58.5 -0.1**
GIVF pmax pmax
comp=Z,80nm,1.1s,mb5.6
GIVF Givet 77.66 4⇑ *i P* **P 23 09 58.5 -0.1**
comp=Z,80nm,1.1s,mb5.6
TNS Taunus Mts 77.66 2 *eP* **P 23 09 58.8 +0.1**
TNS pmax pmax
comp=Z,72nm,1.2s,mb5.5
TNS MLR MLR
comp=Z,4µm,18.9s,MS5.7
TNS Taunus Mts 77.66 2 *eP* **P 23 09 58.8 +0.1**
comp=Z,72nm,1.2s,mb5.5
TNS *eL* 23 48 45.4
comp=Z,4µm,18.9s
BAIF Baives 77.67 5⇑ *i P* **P 23 09 58.8 +0.1**
comp=Z,114nm,1.0s,mb5.5
BAIF Baives 77.67 5⇑ *i P* **P 23 09 58.8 +0.1**
BAIF pmax pmax
comp=Z,57nm,1.0s,mb5.5
BAIF Baives 77.67 5⇑ *i P* **P 23 09 58.8 +0.1**
comp=Z,57nm,1.0s,mb5.5
NKC Novy Kostel 77.68 359⇑ *eP* **P 23 09 58.9 +0.1**
NKC *ex* x 23 10 11.1
NKC AMS AMS 23 55 10.0
comp=Z,3µm,14.5s
NKC Novy Kostel 77.68 359 *eP* **P 23 09 58.9 +0.1**
NKC *e* pP 23 10 11.1 0.0
RAC Raciborz 77.68 356 *eP* **P 23 09 59.3 +0.5**
RAC MLR MLR
comp=Z,5µm,16.0s,MS5.9
PKI Pulchoki 77.72 299 *eP* **P 23 09 59.5 +0.1**
comp=Z,396nm,1.4s,mb6.2
GKN Gorkha 77.79 300 *eP* **P 23 09 59.4 -0.4**
comp=Z,290nm,1.1s,mb6.1
KWP Kalwaria 77.85 353 *eP* **P 23 10 00.1 +0.4**
KWP Kalwaria 77.85 353⇑ *i P* **P 23 10 00.1 +0.4**
KWP Kalwaria 77.85 353 *eP* **P 23 10 00.1 +0.4**
KWP LR LR
comp=Z,4µm,20.0s,MS5.7
DMN Daman 77.85 299 *eP* **P 23 10 00.2 +0.1**
comp=Z,228nm,1.1s,mb6.0
PRU Pruhonice 77.90 358⇑ *i P* **P 23 09 59.8 -0.2**
PRU *ex* x 23 10 13.3
PRU *e*S S 23 20 05.2 +16
PRU AMS AMS 23 50 10.0
comp=Z,3µm,18.1s
OKC Ostrava-Krasne 77.93 356⇑ *i P* **P 23 10 00.5 +0.3**
OKC *ex* x 23 10 12.6
OKC AMS AMS 23 53 50.0
comp=Z,4µm,18.4s
OKC Ostrava-Krasne 77.93 356⇑ *i P* **P 23 10 00.5 +0.3**
OKC *e* pP 23 10 12.6 +0.1
MANZ Manzenberg 77.93 360 *eP* **P 23 10 00.4 +0.2**
comp=Z,44nm,1.2s,mb5.3
MANZ *eL* 23 44 24.3
comp=Z,2µm,20.6s
DANN Dangsing 77.97 301 *eP* **P 23 10 01.2 +0.4**
comp=Z,289nm,0.6s,mb6.4
ABH Alteburg 77.98 3 *eP* **P 23 10 00.7 +0.2**
RUP Ruppelstein 78.15 3 *eP* **P 23 10 01.2 -0.2**
WLF Walferdange 78.15 4 P **P 23 10 02.5 +1.1**
comp=Z,60nm,1.7s,mb5.2
ROTZ Rotzenmuhle 78.15 360 *eP* **P 23 10 02.1 +0.7**
comp=Z,60nm,1.2s,mb5.4
ROTZ *eL* 23 59 47.8
comp=Z,2µm,18.6s
STHS Stebnicka Huta 78.17 354 *eP* **P 23 10 02.7 +1.2**
STHS pmax pmax
comp=Z,77nm,1.0s,mb5.6
STHS Stebnicka Huta 78.17 354 *eP* **P 23 10 02.7 +1.2**
comp=Z,77nm,1.0s,mb5.6
GRA1 Grafenberg Arr 78.23 0 *eP* **P 23 10 02.7 +0.9**
comp=Z,132nm,1.1s,mb5.8
GRA1 LR LR
comp=Z,2µm,18.2s,MS5.6
GRF Grafenberg Arr 78.23 0 *eP* **P 23 10 02.7 +0.9**
GRF pmax pmax
comp=Z,132nm,1.1s,mb5.8
GRF MLR MLR
comp=Z,2µm,18.2s,MS5.6
GRF Grafenberg Arr 78.23 0 *eP* **P 23 10 02.7 +0.9**
comp=Z,132nm,1.1s,mb5.8
GRF *eL* 23 52 45.9
comp=Z,2µm,18.2s
GRFO Grafenberg 78.23 0 *eP* **P 23 10 02.7 +0.9**
comp=Z,124nm,1.2s,mb5.7
GRFO *eL* 23 52 46.0
comp=Z,2µm,18.2s
NIE Niedzica 78.23 354 *eP* **P 23 10 02.8 +0.9**
TOD Tromm 78.29 2 *eP* **P 23 10 02.5 +0.3**
DLH Dalhousie 78.48 309 *eP* **P 23 10 03.5 0.0**
KOLN Koldanda 78.52 301 *eP* **P 23 10 03.8 0.0**
VRAC Vranov 78.52 357⇓ *i P* **P 23 10 04.3 +0.8**
VRAC Vranov 78.52 357 P **P 23 10 04.0 +0.5**
KTD Kalmit 78.56 2 *eP* **P 23 10 04.2 +0.6**
TREC Trest 78.57 357⇑ *i P* **P 23 10 03.8 +0.1**
TREC *ex* x 23 10 17.1
TREC AMS AMS 23 52 40.0
comp=Z,4µm,20.6s
NST Nakhon Sawan 78.63 281 P **P 23 10 04.0 -0.5**
FLN La Foliniere 78.64 8 *eP* **P 23 10 03.7 -0.4**
comp=Z,190nm,1.1s,mb5.6
FLN *e*MLR MLR
comp=Z,4µm,21.5s,MS5.4
FLN La Foliniere 78.64 8 *eP* **P 23 10 03.7 -0.4**
FLN pmax pmax
comp=Z,95nm,1.1s,mb5.6
FLN MLR MLR
comp=Z,4µm,21.5s,MS5.7
FLN La Foliniere 78.64 8 *eP* **P 23 10 03.7 -0.4**
comp=Z,95nm,1.1s,mb5.6
FLN LR LR
comp=Z,4µm,21.5s,MS5.7
CRVS Cervenica-Dubn 78.67 353 *eP* **P 23 10 04.6 +0.3**
CRVS pmax pmax
comp=Z,45nm,1.2s,mb5.3
CRVS MLR MLR
comp=Z,2µm,20.4s,MS5.5
CRVS Cervenica-Dubn 78.67 353 *eP* **P 23 10 04.6 +0.3**
comp=Z,45nm,1.2s,mb5.3
CRVS LR LR
comp=Z,2µm,20.4s,MS5.5
THN Thein Dam 78.68 309 *eP* **P 23 10 02.9 -1.8**
WET Wettzell 78.77 359 *eP* **P 23 10 05.3 +0.5**
WET pmax pmax
comp=Z,64nm,1.2s,mb5.4
WET MLR MLR
comp=Z,3µm,18.1s,MS5.7
WET Wettzell 78.77 359 *eP* **P 23 10 05.3 +0.5**
comp=Z,64nm,1.2s,mb5.4
WET *eL* 23 52 38.9
comp=Z,3µm,18.1s
KHC Kasperske Hory 78.78 359⇑ *eP* **P 23 10 05.1 +0.2**
KHC Kasperske Hory 78.78 359⇑ *i P* **P 23 10 05.3 +0.4**
KHC *ex* x 23 10 38.5
KHC *e*S S 23 20 09.1 +10
KHC AMS AMS 23 54 10.0
comp=Z,4µm,19.1s
ROSF Rostrenen 78.79 10⇑ *i P* **P 23 10 04.8 -0.1**
comp=Z,295nm,1.5s,mb5.7
ROSF Rostrenen 78.79 10⇑ *i P* **P 23 10 04.8 -0.1**
ROSF pmax pmax
comp=Z,147nm,1.5s,mb5.7
ROSF Rostrenen 78.79 10⇑ *i P* **P 23 10 04.8 -0.1**
comp=Z,147nm,1.5s,mb5.7
LDF La Druitiere 78.83 8 *eP* **P 23 10 04.7 -0.5**
comp=Z,214nm,1.1s,mb5.7
LDF La Druitiere 78.83 8 *eP* **P 23 10 04.7 -0.5**
LDF pmax pmax
comp=Z,107nm,1.1s,mb5.7
LDF La Druitiere 78.83 8 *eP* **P 23 10 04.7 -0.5**
comp=Z,107nm,1.1s,mb5.7
PTH Pithoragarh 78.83 304 *eP* **P 23 10 05.8 +0.3**

UZH Uzhgorod 78.88 353 *i* P **P** **23 10 05.0 -0.4**
UZH *e* pP 23 10 16.6 -1.2
UZH *e*S S 23 19 58.0 -2.2
UZH *i* 23 20 12.0
UZH *i* 23 20 19.0
UZH *e*PS 23 20 42.0
LANF Langenberg 78.89 3 *e*P **P** **23 10 05.7 +0.2**
LGTI Lohaghat 78.90 304 *e*P **P** **23 10 07.0 +1.1**
SGMF Saint Gilles 78.94 10⇑ *i*P **P** **23 10 05.5 -0.3**
comp=Z,207nm,1.1s,mb5.7
SGMF Saint Gilles 78.94 10⇑ *i*P **P** **23 10 05.5 -0.3**
SGMF pmax pmax
comp=Z,103nm,1.1s,mb5.7
SGMF Saint Gilles 78.94 10⇑ *i*P **P** **23 10 05.5 -0.3**
comp=Z,103nm,1.1s,mb5.7
GRR Gorron 78.97 8 *e*P **P** **23 10 05.8 -0.2**
comp=Z,162nm,1.0s,mb5.6
GRR Gorron 78.97 8 *e*P **P** **23 10 05.8 -0.2**
GRR pmax pmax
comp=Z,81nm,1.0s,mb5.6
GRR Gorron 78.97 8 *e*P **P** **23 10 05.8 -0.2**
comp=Z,81nm,1.0s,mb5.6
GEC2 GERESS Array S 79.06 359 *e*P **P** **23 10 06.7 +0.3**
GEC2 pmax pmax
comp=Z,84nm,1.3s,mb5.5
GEC2 MLR MLR
comp=Z,4μm,19.5s,MS5.8
GEC2 GERESS Array S 79.06 359 *e*P **P** **23 10 06.7 +0.3**
comp=Z,84nm,1.3s,mb5.5
GEC2 *e*L 23 51 46.6
comp=Z,4μm,19.5s
GERES GERESS Array B 79.06 359 P **P** **23 10 06.6 +0.1**
comp=Z,24nm,0.9s,mb5.1,baz=5.7,slow=4.0,SNR=102
SMLA Simla 79.06 307 *i* P **P** **23 10 06.9 +0.2**
SMLA *ex* x 23 10 10.4
comp=Z,146nm,0.3s
SMLA *i* x x 23 18 12.6
STU Stuttgart 79.13 2 *e*P **P** **23 10 07.8 +1.0**
STU pmax pmax
comp=Z,113nm,1.2s,mb5.7
STU Stuttgart 79.13 2 *e*P **P** **23 10 07.0 +0.2**
comp=Z,92nm,1.1s,mb5.6
STU *e*L 23 45 59.4
comp=Z,2μm,20.5s
STU Stuttgart 79.13 2 *e*P **P** **23 10 07.8 +1.0**
comp=Z,113nm,1.2s,mb5.7
KOLL Kolacno 79.18 355 *e*P **P** **23 10 08.0 +0.9**
BHK Bhakra 79.19 308 *e*P **P** **23 10 06.0 -1.4**
QUIF Quistinic 79.21 10⇑ *i*P **P** **23 10 06.9 -0.4**
comp=Z,327nm,1.5s,mb5.7
QUIF Quistinic 79.21 10⇑ *i*P **P** **23 10 06.9 -0.4**
QUIF pmax pmax
comp=Z,164nm,1.5s,mb5.7
QUIF Quistinic 79.21 10⇑ *i*P **P** **23 10 06.9 -0.4**
comp=Z,164nm,1.5s,mb5.7
VYHS Vyhne 79.24 355 *e*P **P** **23 10 07.9 +0.5**
VYHS *e*S S 23 20 12.2 +8.2
VYHS pmax pmax
comp=Z,66nm,1.1s,mb5.5
VYHS MLR MLR
comp=Z,2μm,21.8s,MS5.5
VYHS Vyhne 79.24 355 *e*P **P** **23 10 07.9 +0.5**
VYHS *e*S S 23 20 12.2 +8.2
VYHS Vyhne 79.24 355 *e*P **P** **23 10 07.9 +0.5**
comp=Z,66nm,1.1s,mb5.5
VYHS *e*S S 23 20 12.2 +8.2
VYHS LR LR
comp=Z,2μm,21.8s,MS5.5
MEZF Maizieres J'vi 79.27 4⇑ *i*P **P** **23 10 07.8 +0.3**
comp=Z,202nm,1.4s,mb5.6
MEZF Maizieres J'vi 79.27 4⇑ *i*P **P** **23 10 07.8 +0.3**
comp=Z,202nm,1.4s,mb5.9
STR Strasbourg 79.28 3 *e*P **P** **23 10 08.3 +0.7**
DDI Dehra Dun 79.28 306 *e*P **P** **23 10 06.5 -1.5**
SMOL Smolenice 79.28 356 *e*P **P** **23 10 08.8 +1.1**
TRPA Tarpa 79.36 353 *i*P **P** **23 10 08.9 +0.8**
SDDR Presa de Saban 79.39 73 *e*P **P** **23 10 08.3 -0.4**
comp=Z,36nm,0.9s,mb5.3
SDDR LR LR
comp=Z,5μm,22.0s,MS5.8
CDF Champ du Feu 79.44 3⇑ *i*P **P** **23 10 08.6 +0.1**
comp=Z,150nm,1.1s,mb5.5
CDF Champ du Feu 79.44 3⇑ *i*P **P** **23 10 08.6 +0.1**
CDF pmax pmax
comp=Z,75nm,1.1s,mb5.5
CDF Champ du Feu 79.44 3⇑ *i*P **P** **23 10 08.6 +0.1**
comp=Z,75nm,1.1s,mb5.5
BFO Black Forest 79.55 2 *e*P **P** **23 10 09.1 0.0**
BFO pmax pmax
comp=Z,92nm,1.3s,mb5.5
BFO MLR MLR
comp=Z,2μm,20.0s,MS5.5
BFO Black Forest 79.55 2 *e*P **P** **23 10 09.1 0.0**
comp=Z,92nm,1.3s,mb5.5
BFO *e*L 23 50 51.3
comp=Z,3μm,19.4s
THEF They Montfort 79.58 4 *e*P **P** **23 10 09.4 +0.1**
BUR08 Bucovina Ar. S 79.60 351 *e*P **P** **23 10 09.7 +0.3**
ZST Bratislava 79.62 356 *e*P **P** **23 10 10.5 +1.0**
ZST pmax pmax
comp=Z,139nm,1.1s,mb5.8
ZST Bratislava 79.62 356 *e*P **P** **23 10 10.5 +1.0**
comp=Z,139nm,1.1s,mb5.8
BURAR Bucovina Array 79.63 351 *j*P **P** **23 10 09.6 +0.1**
BURAR Bucovina Array 79.63 351 P **P** **23 10 09.6 +0.1**
ECH Echery 79.63 3 *e*P **P** **23 10 09.8 +0.2**
ECH Echery 79.63 3 *e*P **P** **23 10 10.5 +0.9**
ECH pmax pmax
comp=Z,91nm,1.0s,mb5.7
ECH Echery 79.63 3 *e*P **P** **23 10 10.5 +0.9**
comp=Z,91nm,1.0s,mb5.7
LIBD Limburg 79.71 3 *e*P **P** **23 10 10.5 +0.5**
BMR Baia Mare 79.73 352 P **P** **23 10 10.9 +0.8**
PSZ Piszkesteto 79.75 354⇑ *e*P **P** **23 10 11.3 +1.1**
PSZ Piszkesteto 79.75 354 *j*P **P** **23 10 11.1 +0.9**
PSZ Piszkesteto 79.75 354 *e*P **P** **23 10 11.6 +1.4**
comp=Z,164nm,1.3s,mb5.8
PSZ LR LR
comp=Z,4μm,20.0s,MS5.7
FUR Furstenfeldbru 79.76 0 *e*P **P** **23 10 10.7 +0.5**
FUR pmax pmax
comp=Z,150nm,1.2s,mb5.8
FUR MLR MLR
comp=Z,2μm,21.5s,MS5.5
FUR Furstenfeldbru 79.76 0 *e*P **P** **23 10 10.7 +0.5**
comp=Z,150nm,1.2s,mb5.8
FUR *e*L 23 44 27.0
comp=Z,2μm,21.5s
SPAK Spaichingen-Ko 79.79 2 *e*P **P** **23 10 10.9 +0.5**
HAU Haudompre 79.82 4⇑ *i*P **P** **23 10 10.6 +0.1**
comp=Z,159nm,1.1s,mb5.6
HAU *e*MLR MLR
comp=Z,4μm,20.5s,MS5.4
HAU Haudompre 79.82 4⇑ *i*P **P** **23 10 10.6 +0.1**
HAU pmax pmax
comp=Z,79nm,1.1s,mb5.6
HAU MLR MLR
comp=Z,4μm,20.5s,MS5.7
HAU Haudompre 79.82 4⇑ *i*P **P** **23 10 10.6 +0.1**
comp=Z,79nm,1.1s,mb5.6
HAU LR LR
comp=Z,4μm,20.5s,MS5.7
KIS Kishinev 79.83 348⇑ *i*P **P** **23 10 10.0 -0.7**
KIS *i* pP 23 10 23.0 -0.1
KIS *e*PPP 23 15 06.0
KIS *e*S S 23 20 08.0 -2.4
KIS *e* 23 20 25.0
KIS *e* 23 21 00.0
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.0
KIS MLR MLR
comp=Z,6μm,18.0s,MS6.0
KIS MLR MLR
comp=N,5μm,19.0s,MS6.0
KIS MLR MLR
comp=E,3μm,19.0s,MS6.0
KIS MLR MLR
comp=Z,7μm,18.0s
KIS Kishinev 79.83 348⇑ *i*P **P** **23 10 10.0 -0.7**
comp=Z,200nm,1.0s,mb6.0
KIS Kishinev 79.83 348 *e*PP PP 23 13 22.0 +11
KIS Kishinev 79.83 348 *e*PPP 23 15 06.0
KIS *e*S S 23 20 08.0 -2.4
KIS *e*SS SS 23 26 00.0 +41
KIS *e*SSS 23 29 30.0
KIS LRM 23 49 10.0
comp=Z,6μm,18.0s
KIS Kishinev 79.83 348 P **P** **23 10 10.9 +0.3**
CONA Conrad Observa 79.93 357 *i*P **P** **23 10 11.9 +0.7**
comp=Z,151nm,1.1s,mb5.8,SNR=88
CSNA Conrad Observa 79.93 357⇑ *i*P **P** **23 10 12.0 +0.8**
comp=Z,139nm,1.1s,mb5.8
KBL Kabul 79.95 315 *e*P **P** **23 10 10.9 -0.6**
KBL pmax pmax
comp=Z,102nm,0.8s,mb5.8
KBL Kabul 79.95 315 *e*P **P** **23 10 10.9 -0.6**
comp=Z,102nm,0.8s,mb5.8
MOF Molkenrain 80.00 3 *e*P **P** **23 10 11.8 +0.3**
FELD Feldberg im Sc 80.00 2 *e*P **P** **23 10 11.5 0.0**
HINF Hinteralfeld 80.02 3⇑ *i*P **P** **23 10 11.6 -0.1**
comp=Z,159nm,1.1s,mb5.6
HINF Hinteralfeld 80.02 3⇑ *i*P **P** **23 10 11.6 -0.1**
HINF pmax pmax
comp=Z,79nm,1.1s,mb5.6
HINF Hinteralfeld 80.02 3⇑ *i*P **P** **23 10 11.6 -0.1**
comp=Z,79nm,1.1s,mb5.6
MAK Makhachkala 80.03 334 *e*P **P** **23 10 12.1 +0.3**
MAK *e* 23 10 18.1
MAK *e* 23 13 14.9
MAK *e*PPP 23 15 03.8
MAK *e*S S 23 20 14.2 +1.6
MAK *e*SS SS 23 25 22.1 +0.4
MAK pmax pmax
comp=Z,18nm,0.3s,mb5.5
MOA Molln 80.05 358⇑ *i*P **P** **23 10 12.1 +0.3**
comp=Z,51nm,1.1s,mb5.3,SNR=16
CAL Calcutta 80.12 294 *e*P **P** **23 10 13.5 +0.9**
CAL *ex* x 23 20 17.9
CAL *ex* x 23 20 31.4
SOP Sopron 80.15 357 *j*P **P** **23 10 12.7 +0.3**
RJOB Jochberg 80.18 359 *e*P **P** **23 10 13.1 +0.6**
comp=Z,58nm,0.9s,mb5.5
RJOB *e*L 23 53 41.8
comp=Z,3μm,18.4s
BUD Budapest 80.24 355⇑ *e*P **P** **23 10 14.0 +1.2**
KIV Kislovodsk 80.30 338 P **P** **23 10 14.9 +1.7**
SNR=16
KIV Kislovodsk 80.30 338 P **P** **23 10 14.9 +1.7**
SNR=16
KIV Kislovodsk 80.30 338 P **P** **23 10 14.9 +1.7**
SNR=16
KIV Kislovodsk 80.30 338 P **P** **23 10 14.9 +1.7**
SNR=16
KIV Kislovodsk 80.30 338 P **P** **23 10 14.9 +1.7**
SNR=16
KIV Kislovodsk 80.30 338 *c*/*i*P **P** **23 10 13.7 +0.5**
KIV *i* pP 23 10 23.4 -2.2
KIV *e* 23 13 23.8
KIV *i* S S 23 20 21.9 +6.5
KIV pmax pmax
comp=Z,145nm,1.1s,mb5.8
KIV Kislovodsk 80.30 338 *e*P **P** **23 10 14.5 +1.3**
comp=Z,143nm,1.0s,mb5.9
KIV LR LR
comp=Z,4μm,19.0s,MS5.8
HYF Humbligny 80.36 6⇑ *i*P **P** **23 10 13.8 +0.3**
BBS Basel-Blauen 80.40 3 *e*P **P** **23 10 13.5 -0.2**
LOR Lormes 80.43 5⇑ *i*P **P** **23 10 13.9 0.0**
comp=Z,249nm,1.2s,mb5.7
LOR *e*MLR MLR
comp=Z,6μm,20.0s,MS5.6
LOR Lormes 80.43 5⇑ *i*P **P** **23 10 13.9 0.0**
LOR pmax pmax
comp=Z,124nm,1.2s,mb5.7
LOR MLR MLR
comp=Z,6μm,20.0s,MS5.9
LOR Lormes 80.43 5⇑ *i*P **P** **23 10 13.9 0.0**
comp=Z,124nm,1.2s,mb5.7
LOR LR LR
comp=Z,6μm,20.0s,MS5.9
RETA Reutte 80.43 1⇑ *i*P **P** **23 10 14.4 +0.5**
comp=Z,87nm,1.1s,mb5.6,SNR=19
BOK Bokaro 80.47 297 *e*P **P** **23 10 15.2 +0.7**
BOK AMb AMB 23 10 20.7
comp=Z,90nm,1.1s,mb5.6
LOMF Lomont 80.49 3 *e*P **P** **23 10 14.6 +0.4**
MOTA Moosalm 80.58 0⇑ *i*P **P** **23 10 15.2 +0.6**
comp=Z,132nm,1.0s,mb5.8,SNR=79
WATA Walderalm 80.59 0⇑ *i*P **P** **23 10 15.2 +0.5**
comp=Z,134nm,1.1s,mb5.8,SNR=70
ANN Anapa 80.60 342 *i*P **P** **23 10 13.4 -1.4**
ARSA Arzberg 80.61 357 *i*P **P** **23 10 15.7 +0.8**
comp=Z,106nm,1.1s,mb5.7,SNR=64
SSF Saint Saulge 80.62 6⇑ *i*P **P** **23 10 14.9 0.0**
comp=Z,258nm,1.1s,mb5.8
SSF Saint Saulge 80.62 6⇑ *i*P **P** **23 10 14.9 0.0**
SSF pmax pmax
comp=Z,129nm,1.1s,mb5.8
SSF Saint Saulge 80.62 6⇑ *i*P **P** **23 10 14.9 0.0**
comp=Z,129nm,1.1s,mb5.8
DAVA Damuels 80.62 1⇑ *i*P **P** **23 10 15.4 +0.4**
comp=Z,67nm,1.0s,mb5.5,SNR=18
WTTA Wattenberg 80.66 360⇑ *i*P **P** **23 10 15.9 +0.8**
comp=Z,144nm,1.0s,mb5.8,SNR=91
DRGR 80.67 352 *j*P **P** **23 10 15.5 +0.3**
DRGR 80.67 352 P **P** **23 10 15.3 +0.1**
MFF Saint Martin d 80.81 8⇑ *i*P **P** **23 10 16.0 +0.1**
comp=Z,427nm,1.1s,mb6.0
MFF Saint Martin d 80.81 8⇑ *i*P **P** **23 10 16.0 +0.1**
MFF pmax pmax
comp=Z,214nm,1.1s,mb6.0
MFF Saint Martin d 80.81 8⇑ *i*P **P** **23 10 16.0 +0.1**
comp=Z,214nm,1.1s,mb6.0
KBA Koelnbreinsper 80.83 359 *i* pP **P** **23 10 17.3 +1.2**
comp=Z,326nm,1.0s,mb6.2,SNR=125
AVF Avril sur Loir 80.88 6⇑ *i*P **P** **23 10 16.2 -0.1**
comp=Z,231nm,1.1s,mb5.7
AVF Avril sur Loir 80.88 6⇑ *i*P **P** **23 10 16.2 -0.1**
AVF pmax pmax
comp=Z,116nm,1.1s,mb5.7
AVF Avril sur Loir 80.88 6⇑ *i*P **P** **23 10 16.2 -0.1**
comp=Z,116nm,1.1s,mb5.7
FETA Feichten 80.90 1 *i*P **P** **23 10 17.2 +0.8**
comp=Z,162nm,1.0s,mb5.9,SNR=129
NDI New Delhi 81.05 306 *i*P **P** **23 10 15.0 -2.5**
NDI *e*S S 23 20 30.0 +6.3
SMF Signal de Mont 81.05 5⇑ *i*P **P** **23 10 17.2 0.0**
comp=Z,320nm,1.1s,mb5.9
SMF Signal de Mont 81.05 5⇑ *i*P **P** **23 10 17.2 0.0**
SMF pmax pmax
comp=Z,160nm,1.1s,mb5.9
SMF Signal de Mont 81.05 5⇑ *i*P **P** **23 10 17.2 0.0**
comp=Z,160nm,1.1s,mb5.9
SIM Simferopol' 81.06 344 *e*S S 23 20 29.0 +5.7
SIM pmax pmax
comp=Z,500nm,11.0s
SIM MLR MLR
comp=Z,7μm,17.0s,MS6.1
BGF Bois d'Agland 81.08 6⇑ *i*P **P** **23 10 17.3 -0.1**
comp=Z,298nm,1.3s,mb5.8
BGF Bois d'Agland 81.08 6⇑ *i*P **P** **23 10 17.3 -0.1**
BGF pmax pmax
comp=Z,149nm,1.3s,mb5.8
BGF Bois d'Agland 81.08 6⇑ *i*P **P** **23 10 17.3 -0.1**
comp=Z,149nm,1.3s,mb5.8
ABTA Abfaltersbach 81.17 359⇑ *i*P **P** **23 10 18.1 +0.3**
comp=Z,138nm,1.1s,mb5.8,SNR=102
CABF La Chapelle 81.20 4⇑ *i*P **P** **23 10 18.6 +0.6**
comp=Z,344nm,1.1s,mb5.9
CABF La Chapelle 81.20 4⇑ *i*P **P** **23 10 18.6 +0.6**
CABF pmax pmax
comp=Z,172nm,1.1s,mb5.9
CABF La Chapelle 81.20 4⇑ *i*P **P** **23 10 18.6 +0.6**
comp=Z,172nm,1.1s,mb5.9
VRI Vrincioaia 81.20 349⇑ *i*P **P** **23 10 19.1 +1.1**
VRI Vrincioaia 81.20 349 P **P** **23 10 19.1 +1.1**
SOKA Soboth 81.20 358⇑ *i*P **P** **23 10 18.7 +0.7**
comp=Z,265nm,1.2s,mb6.1
PLOR Plostina 81.22 349 P **P** **23 10 18.9 +0.8**
PERS Pernice 81.24 358 *e*P **P** **23 10 18.8 +0.6**
ODB Odobesti 81.25 349 P **P** **23 10 19.7 +1.4**
MYKA Terra Mystica 81.28 359⇑ *i*P **P** **23 10 18.8 +0.4**
comp=Z,65nm,1.2s,mb5.6
VAN Vannovskaya 81.30 325 *e*P **P** **23 10 19.0 +0.3**
TCF Toulx Ste Croi 81.31 7⇑ *i*P **P** **23 10 18.5 -0.1**
comp=Z,103nm,1.0s,mb5.4
TCF Toulx Ste Croi 81.31 7⇑ *i*P **P** **23 10 18.5 -0.1**
TCF pmax pmax
comp=Z,51nm,1.0s,mb5.4
TCF Toulx Ste Croi 81.31 7⇑ *i*P **P** **23 10 18.5 -0.1**
comp=Z,51nm,1.0s,mb5.4
ABKT Ailbek 81.31 325 P **P** **23 10 19.6 +0.9**
comp=Z,1μm,0.8s,mb6.8,SNR=58
SOC Sochi 81.31 340 *e*P **P** **23 10 17.0 -1.6**
SOC *e**PP pP 23 10 27.7 -3.3
SOC *e**SP sP 23 10 32.0 -3.7
SOC *e* 23 13 23.9
SOC *e*PPP 23 15 14.0
SOC *e*S S 23 20 23.7 -2.2
SOC *e*SS SS 23 25 38.6 -2.1
OBKA Obir 81.38 358 *i*P **P** **23 10 19.6 +0.6**
comp=Z,107nm,0.8s,mb5.8,SNR=46
KOGS Kog 81.39 357 *e*P **P** **23 10 19.4 +0.4**
TUE Stuetta 81.43 2 *e*P **P** **23 10 21.0 +1.8**
comp=Z,131nm,1.1s,mb5.8
TUE LR LR
comp=Z,4μm,19.0s,MS5.8
ALBI Allahabad 81.45 301 *ex* x 23 10 17.0
PKSM Moragy 81.53 355⇑ *i*P **P** **23 10 20.2 +0.5**
PKSM Moragy 81.53 355 P **P** **23 10 19.9 +0.2**
AGO Saint Agoulin 81.60 6 *e*P **P** **23 10 20.5 +0.4**
TLCR 81.62 348⇑ *i*P **P** **23 10 20.8 +0.6**
TLCR 81.62 348⇑ P **P** **23 10 20.8 +0.5**
MLR Muntele Rosu 81.66 350⇑ *i*P **P** **23 10 21.2 +0.8**
MLR Muntele Rosu 81.66 350 P **P** **23 10 21.3 +0.9**
CADS Cadrg 81.68 359 *e*P **P** **23 10 20.1 -0.5**
PLDF La Plantade 81.71 6 *e*P **P** **23 10 21.2 +0.5**
RAO Raoul Island 81.78 188 PFAKE **P** **23 10 30.0 +9.0**
RAO LR LR
comp=Z,3μm,19.0s,MS5.7
VOIR 81.80 350⇑ *i*P **P** **23 10 22.9 +1.7**
VOIR 81.80 350 P **P** **23 10 21.7 +0.5**
GOR Gori 81.82 336 P **P** **23 10 22.7 +1.4**
TIM Timisoara 81.84 353 *j*P **P** **23 10 22.6 +1.2**
TIM Timisoara 81.84 353 P **P** **23 10 22.6 +1.3**
LJU Ljubljana 81.85 358 *e*P **P** **23 10 21.5 +0.1**
VERF Verneugheol 81.86 6 *e*P **P** **23 10 23.8 +2.3**
VOY Vojsko 81.87 358 *e*P **P** **23 10 20.7 -0.9**
PYM Petit Puy Mans 81.89 6 *e*P **P** **23 10 22.1 +0.4**
TBLG Delisi 81.90 336 P **P** **23 10 22.0 +0.2**
MTA Mtatsminda 81.92 336 P **P** **23 10 20.8 -1.1**
BZS Buzias 81.93 353 *j*P **P** **23 10 21.9 0.0**
BZS Buzias 81.93 353 P **P** **23 10 21.6 -0.2**
BCIP Isla Barro Col 81.93 86 PFAKE 23 10 30.0 +7.7
BCIP LR LR
comp=Z,1μm,20.0s,MS5.2
DGRG David-gareji 82.00 335 P **P** **23 10 24.0 +1.7**
GZR Gura Zlata 82.06 352 *j*P **P** **23 10 22.6 +0.1**
GZR Gura Zlata 82.06 352 P **P** **23 10 22.6 0.0**
HARR Harsova 82.22 348⇑ *i*P **P** **23 10 24.0 +0.6**
HARR Harsova 82.22 348 P **P** **23 10 23.8 +0.4**
FRNF Fournols 82.23 6 *e*P **P** **23 10 25.1 +1.7**
RJF Les Rejaudoux 82.23 7⇑ *i*P **P** **23 10 23.3 -0.2**
comp=Z,121nm,1.0s,mb5.5
RJF *e*MLR MLR
comp=Z,6μm,18.2s,MS5.7
RJF Les Rejaudoux 82.23 7⇑ *i*P **P** **23 10 23.3 -0.2**
RJF pmax pmax
comp=Z,60nm,1.0s,mb5.5
RJF MLR MLR
comp=Z,6μm,18.3s,MS6.0
RJF Les Rejaudoux 82.23 7⇑ *i*P **P** **23 10 23.3 -0.2**
comp=Z,60nm,1.0s,mb5.5
RJF LR LR
comp=Z,6μm,18.3s,MS6.0
CTA Charters Tower 82.29 222 P **P** **23 10 22.8 -1.1**
comp=Z,18nm,0.9s,mb5.0,baz=9.2,slow=8.4,SNR=8.9
CTA Charters Tower 82.29 222 *e*P **P** **23 10 23.2 -0.7**
comp=Z,28nm,0.9s,mb5.2
CTAO Charters Tower 82.29 222 *e*P **P** **23 10 23.9 0.0**
CTAO *e**PP pP 23 10 35.6 -0.8
CTAO pmax pmax
comp=Z,48nm,1.0s,mb5.4
CTAO MLR MLR
comp=Z,2μm,20.0s,MS5.4
CTAO Charters Tower 82.29 222 *e*P **P** **23 10 23.9 0.0**
comp=Z,48nm,1.0s,mb5.4
CTAO *e*pP pP 23 10 35.6 -0.7
CTAO LR LR
comp=Z,2μm,20.0s,MS5.4
LPL La Plagne 82.32 3⇑ *i*P **P** **23 10 25.3 +1.4**
comp=Z,95nm,1.0s,mb5.4
LPL La Plagne 82.32 3⇑ *i*P **P** **23 10 25.3 +1.4**
LPL pmax pmax
comp=Z,47nm,1.0s,mb5.4
LPL La Plagne 82.32 3⇑ *i*P **P** **23 10 25.3 +1.4**
comp=Z,47nm,1.0s,mb5.4
LPG La Plagne 82.34 3⇑ *i*P **P** **23 10 25.6 +1.6**
comp=Z,102nm,1.1s,mb5.4
LPG La Plagne 82.34 3⇑ *i*P **P** **23 10 25.6 +1.6**
LPG pmax pmax
comp=Z,51nm,1.1s,mb5.4
LPG La Plagne 82.34 3⇑ *i*P **P** **23 10 25.6 +1.6**
comp=Z,51nm,1.1s,mb5.4
KAKA Kakadu 82.35 238 *e*P x 23 10 23.7
comp=Z,66nm,1.3s
KAKA Kakadu 82.35 238 *e*P x 23 10 24.9
comp=Z,272nm,1.3s
KAKA *e*pP x 23 10 36.3
BOJS Bojanci 82.37 357 *e*P **P** **23 10 24.2 0.0**
TIRR Tirgusor 82.38 348 *e*P **P** **23 10 24.6 +0.3**
TIRR pmax pmax
comp=Z,66nm,0.9s,mb5.6
TIRR Tirgusor 82.38 348 *j*P **P** **23 10 25.0 +0.7**
TIRR Tirgusor 82.38 348 *e*P **P** **23 10 24.6 +0.3**
comp=Z,66nm,0.9s,mb5.6
LBL Lubilhac 82.43 6 *e*P **P** **23 10 24.9 +0.4**
SSB Saint Sauveur 82.45 5 *e*P **P** **23 10 26.0 +1.4**
SSB pmax pmax
comp=Z,68nm,1.0s,mb5.5
SSB Saint Sauveur 82.45 5 *e*P **P** **23 10 26.0 +1.4**
comp=Z,68nm,1.0s,mb5.5
LFF La Frestale 82.53 8⇑ *i*P **P** **23 10 25.3 +0.3**
comp=Z,216nm,0.8s,mb5.9
LFF La Frestale 82.53 8⇑ *i*P **P** **23 10 25.3 +0.3**
LFF pmax pmax
comp=Z,108nm,0.8s,mb5.9
LFF La Frestale 82.53 8⇑ *i*P **P** **23 10 25.3 +0.3**
comp=Z,108nm,0.8s,mb5.9
GRN Grenoble 82.55 4 *e*P **P** **23 10 26.0 +0.9**
CVD Cernavoda 82.57 348 P **P** **23 10 26.0 +0.7**
GDM Grand'Maison 82.61 4 *e*P **P** **23 10 26.2 +0.8**
CAF Calviac 82.65 7⇑ *i*P **P** **23 10 25.9 +0.3**
comp=Z,142nm,1.0s,mb5.7
CAF Calviac 82.65 7⇑ *i*P **P** **23 10 25.9 +0.3**
CAF pmax pmax
comp=Z,71nm,1.0s,mb5.7
CAF Calviac 82.65 7⇑ *i*P **P** **23 10 25.9 +0.3**
comp=Z,71nm,1.0s,mb5.7
BNI Bardonecchia 82.78 4 *e*P **P** **23 10 28.7 +2.4**
BNI pmax pmax
comp=Z,120nm,0.9s,mb5.9
BNI MLR MLR
comp=Z,4μm,20.0s,MS5.8
BNI Bardonecchia 82.78 4 *e*P **P** **23 10 28.7 +2.4**
comp=Z,120nm,0.9s,mb5.9
BNI LR LR
comp=Z,4μm,20.0s,MS5.8
ORIF Oris-en-Rattie 82.88 4⇑ *i*P **P** **23 10 27.8 +1.0**
comp=Z,120nm,1.0s,mb5.6
ORIF *e*MLR MLR
comp=Z,5μm,20.0s,MS5.6
ORIF Oris-en-Rattie 82.88 4⇑ *i*P **P** **23 10 27.8 +1.0**
ORIF pmax pmax
comp=Z,60nm,1.0s,mb5.6
ORIF Oris-en-Rattie 82.88 4⇑ *i*P **P** **23 10 27.8 +1.0**
comp=Z,60nm,1.0s,mb5.6
VIVF Saint-Julien-l 82.88 5⇑ *i*P **P** **23 10 27.4 +0.5**
comp=Z,94nm,0.9s,mb5.5
VIVF Saint-Julien-l 82.88 5⇑ *i*P **P** **23 10 27.4 +0.5**
VIVF pmax pmax
comp=Z,47nm,0.9s,mb5.5
VIVF Saint-Julien-l 82.88 5⇑ *i*P **P** **23 10 27.4 +0.5**
comp=Z,47nm,0.9s,mb5.5
DBOC Borcka 83.01 338 *i*P **P** **23 10 22.0 -5.6**
SJG San Juan 83.06 69 PFAKE 23 10 40.0 +12
SJG LR LR
comp=Z,4μm,19.0s,MS5.8
ARTV Artvin 83.10 337 *i*P **P** **23 10 27.7 -0.3**
MBDF Montbardon 83.11 3⇑ *i*P **P** **23 10 29.4 +1.4**
comp=Z,168nm,0.9s,mb5.8
MBDF Montbardon 83.11 3⇑ *i*P **P** **23 10 29.4 +1.4**
MBDF pmax pmax
comp=Z,84nm,0.9s,mb5.8
MBDF Montbardon 83.11 3⇑ *i*P **P** **23 10 29.4 +1.4**
comp=Z,84nm,0.9s,mb5.8

PSN **Preselentsi** 83.18 348 *eP* P 23 10 27.6 -0.8
DAGI **Agillar** 83.20 337 *i* P P 23 10 25.0 -3.6
EPON **Pontenova** 83.23 14 P *eP* P 23 10 29.1 +0.4
comp=Z,494nm,2.4s,mb6.1
PAYG **Puerto Ayora** 83.29 100 PFAKE 23 10 40.0 +11
PAYG LR LR
comp=Z,1µm,20.0s,MS5.3
EMAZ **Mazaricos** 83.32 15 P P 23 10 28.9 -0.3
comp=Z,72nm,1.4s,mb5.5
SURF **Saint Ours** 83.35 3 *eP* P 23 10 31.2 +1.9
GNI **Garni** 83.39 335 P P 23 10 32.0 +2.4
SNR=8.1
GNI **Garni** 83.39 335 P P 23 10 32.0 +2.4
SNR=8.1
GNI **Garni** 83.39 335 P P 23 10 32.0 +2.4
SNR=8.1
GNI **Garni** 83.39 335 P P 23 10 32.0 +2.4
SNR=8.1
GNI **Garni** 83.39 335 P P 23 10 32.0 +2.4
SNR=8.1
GNI **Garni** 83.39 335 P P 23 10 30.7 +1.1
comp=Z,24nm,0.8s,mb5.3,baz=32,slow=3.2,SNR=17
GNI **Garni** 83.39 335⇑ *eP* P 23 10 30.8 +1.3
GNI pmax pmax
comp=Z,152nm,2.1s
GNI **Garni** 83.39 335 *eP* P 23 10 31.7 +2.2
comp=Z,156nm,1.3s,mb5.9
GNI LR LR
comp=Z,6µm,19.0s,MS6.0
MTP **Monte Pirata** 83.41 69 *eP* P 23 10 30.7 +0.7
comp=Z,137nm,1.1s,mb5.9
DDEM **Demirkent** 83.42 337 *i* P P 23 10 22.6 -7.1
STS **Santiago** 83.45 15 P P 23 10 29.9 +0.1
STS pmax pmax
comp=Z,19nm,0.6s,mb5.3
STS **Santiago** 83.45 15 P P 23 10 29.9 +0.1
comp=Z,19nm,0.6s,mb5.3
EARI **Arriondas** 83.52 12 P P 23 10 29.2 -1.0
comp=Z,225nm,1.3s,mb6.1
KSM **Kuching** 83.52 264 *eP* P 23 10 31.0 +0.4
comp=Z,71nm,0.9s,mb5.8
KSM LR LR
comp=Z,1µm,20.0s,MS5.3
LASF **Ste Croix** 83.61 6⇑ *iP* P 23 10 31.4 +0.8
comp=Z,80nm,1.0s,mb5.5
PRD **Provadia** 83.75 348 *eP* P 23 10 31.6 +0.3
VLC **Villacollemand** 83.76 1 *eP* P 23 10 32.5 +1.1
comp=Z,110nm,1.1s,mb5.9
VLC LR LR
comp=Z,3µm,20.0s,MS5.7
SMRF **Simiane la Rot** 83.81 4⇑ *iP* P 23 10 32.9 +1.3
comp=Z,202nm,1.0s,mb5.9
SMRF **Simiane la Rot** 83.81 4⇑ *iP* P 23 10 32.9 +1.3
comp=Z,202nm,1.0s,mb6.2
ELAN **Lanestosa** 83.81 11 P P 23 10 30.8 -0.8
comp=Z,353nm,1.5s,mb6.3
MACK **Trabzon** 83.82 339 *i* P P 23 10 31.6 -0.2
TOUF **Mont Tournerai** 83.84 3 *eP* P 23 10 32.7 +0.9
SZH **Strazhica** 83.86 350 *eP* P 23 10 31.2 -0.7
AUTN **L'Aution** 83.86 3 *eP* P 23 10 32.7 +0.8
SAOF **Saorge** 83.87 3 *eP* P 23 10 32.6 +0.6
MVIF **Mont Vial** 83.95 3 *eP* P 23 10 32.9 +0.5
LUCF **Luceram** 83.96 3 *eP* P 23 10 32.9 +0.5
SBF **Sospel** 83.99 3⇑ *iP* P 23 10 33.0 +0.4
comp=Z,368nm,1.0s,mb6.2
SBF **Sospel** 83.99 3⇑ *iP* P 23 10 33.0 +0.4
SBF pmax pmax
comp=Z,184nm,1.0s,mb6.2
SBF **Sospel** 83.99 3⇑ *iP* P 23 10 33.0 +0.4
comp=Z,184nm,1.0s,mb6.2
OSSF **Oses** 84.02 9 *eP* P 23 10 32.7 0.0
EALK **Alkurruntz** 84.03 10 P P 23 10 32.7 -0.1
comp=Z,201nm,1.2s,mb6.1
CALN **Calern** 84.08 3 *eP* P 23 10 33.9 +0.9
ELIZ **Elizondo** 84.08 10 P P 23 10 33.1 0.0
ELIZ pmax pmax
comp=Z,28nm,0.8s,mb5.4
ELIZ **Elizondo** 84.08 10 P P 23 10 33.1 0.0
comp=Z,28nm,0.8s,mb5.4
REVF **Revere** 84.11 3 *eP* P 23 10 33.7 +0.5
PTCN **Pitcairn Islan** 84.13 146 PFAKE 23 10 40.0 +6.7
PTCN LR LR
comp=Z,3µm,20.0s,MS5.7
AJM **Ajmer** 84.14 307 *i* P P 23 10 32.0 -1.6
ERUA **La Rua** 84.15 14 P P 23 10 33.7 +0.3
ERUA pmax pmax
comp=Z,37nm,0.8s,mb5.6
ERUA **La Rua** 84.15 14 P P 23 10 33.7 +0.3
comp=Z,37nm,0.8s,mb5.6
EZAM **Zamans** 84.15 15 P P 23 10 34.0 +0.6
EZAM pmax pmax
comp=Z,17nm,1.2s,mb5.0
EZAM **Zamans** 84.15 15 P P 23 10 34.0 +0.6
comp=Z,17nm,1.2s,mb5.0
JBP **Jabalpur** 84.15 301 *eP* P 23 10 32.7 -1.0
JBP *ex* x 23 20 50.9
SJPF **Ste Jean** 84.17 9 *eP* P 23 10 34.2 +0.7
comp=Z,70nm,0.7s,mb5.6
SJPF **Ste Jean** 84.17 9 *eP* P 23 10 34.2 +0.7
SJPF pmax pmax
comp=Z,35nm,0.7s,mb5.6
SJPF **Ste Jean** 84.17 9 *eP* P 23 10 34.2 +0.7
comp=Z,35nm,0.7s,mb5.6
DYDN **Diyadin** 84.22 336 *i* P P 23 10 35.0 +1.1
MTLF **Montolieu** 84.24 7⇑ *iP* P 23 10 34.3 +0.5
comp=Z,184nm,1.0s,mb5.9
MTLF **Montolieu** 84.24 7⇑ *iP* P 23 10 34.3 +0.5
MTLF pmax pmax
comp=Z,92nm,1.0s,mb5.9
MTLF **Montolieu** 84.24 7⇑ *iP* P 23 10 34.3 +0.5
comp=Z,92nm,1.0s,mb5.9
ATE **Arette** 84.24 9 *eP* P 23 10 33.4 -0.5
FRF **La Foret Royal** 84.27 4⇑ *iP* P 23 10 34.4 +0.4
comp=Z,232nm,0.9s,mb6.0
FRF **La Foret Royal** 84.27 4⇑ *iP* P 23 10 34.4 +0.4
FRF pmax pmax
comp=Z,116nm,0.9s,mb6.0
FRF **La Foret Royal** 84.27 4⇑ *iP* P 23 10 34.4 +0.4
comp=Z,116nm,0.9s,mb6.0
REYF **Montagne du Re** 84.29 9 *eP* P 23 10 33.6 -0.5
LABF **Labassere** 84.35 8 *eP* P 23 10 33.8 -0.6
PLE **Pljevlja** 84.36 354⇑ *iP* P 23 10 35.5 +1.1
EPF **Esparros** 84.39 8⇑ *iP* P 23 10 34.3 -0.3
comp=Z,141nm,0.9s,mb5.8
EPF **Esparros** 84.39 8⇑ *iP* P 23 10 34.3 -0.3
EPF pmax pmax
comp=Z,71nm,0.9s,mb5.8
EPF **Esparros** 84.39 8⇑ *iP* P 23 10 34.3 -0.3
comp=Z,71nm,0.9s,mb5.8
ETSF **Etsaut** 84.44 9⇑ *iP* P 23 10 35.6 +0.7
comp=Z,146nm,0.7s,mb5.9
ETSF **Etsaut** 84.44 9⇑ *iP* P 23 10 35.6 +0.7
ETSF pmax pmax
comp=Z,73nm,0.7s,mb5.9
ETSF **Etsaut** 84.44 9⇑ *iP* P 23 10 35.6 +0.7
comp=Z,73nm,0.7s,mb5.9
LMR **La Mourre** 84.49 4⇑ *iP* P 23 10 35.6 +0.5
comp=Z,189nm,1.0s,mb5.9
LMR **La Mourre** 84.49 4⇑ *iP* P 23 10 35.6 +0.5
LMR pmax pmax
comp=Z,94nm,1.0s,mb5.9
LMR **La Mourre** 84.49 4⇑ *iP* P 23 10 35.6 +0.5
comp=Z,94nm,1.0s,mb5.9
UPM **Unac-Piva** 84.51 355 *eP* P 23 10 35.3 +0.1
CMLA **Cha da Macela** 84.51 29 PFAKE 23 10 50.0 +15
CMLA LR LR
comp=Z,5µm,20.0s,MS5.9
VIEF **Viey** 84.51 9 *eP* P 23 10 36.2 +1.0
ELOB **Lobios** 84.52 15 P P 23 10 35.5 +0.2
comp=Z,91nm,1.6s,mb5.7
ECRI **Cripan** 84.53 10 P P 23 10 35.7 +0.4
ECRI pmax pmax
comp=Z,43nm,0.8s,mb5.6
ECRI **Cripan** 84.53 10 P P 23 10 35.7 +0.4
comp=Z,43nm,0.8s,mb5.6
MLS **Moulis** 84.53 8 *eP* P 23 10 35.8 +0.5
KOPT **Kop Dagi** 84.54 338 *i* P P 23 10 36.5 +1.1
JMB **Yambol** 84.57 349 P P 23 10 36.3 +0.8
RESF **Ens** 84.62 8 *eP* P 23 10 36.7 +0.9
ECAL **Calabor** 84.65 14 P P 23 10 36.1 +0.2
comp=Z,81nm,1.8s,mb5.5
PCAB **Cabril** 84.68 15 *eP* P 23 10 37.1 +1.0
comp=Z,61nm,1.1s,mb5.6
PCAB *epP* pP 23 10 49.3 +0.7
EBIE **Bielsa** 84.72 8 P P 23 10 35.3 -1.0
comp=Z,231nm,1.5s,mb6.1

SALF **Salau** 84.73 8 *eP* P 23 10 33.6 -2.8
IVA **Berane** 84.78 354⇑ *iP* P 23 10 36.9 +0.3
PBRG **Braganca** 84.78 14 *eP* P 23 10 37.9 +1.3
comp=Z,62nm,1.1s,mb5.7
PBRG *epP* pP 23 10 48.7 -0.4
VTS **Vitosha** 84.80 351 *eP* P 23 10 35.0 -1.7
BRY **Bratogost** 84.83 355⇑ *iP* P 23 10 36.2 -0.6
CARF **Carcanieres** 84.85 7 *eP* P 23 10 37.0 +0.1
NKY **Niksic** 84.89 355⇑ *iP* P 23 10 36.4 -0.8
SNG **Songkhla** 84.97 275 P P 23 10 39.0 +1.1
comp=Z,100nm,1.0s,mb5.9
FILF **Fillols** 85.04 7 *eP* P 23 10 37.9 0.0
PVY **Plav** 85.05 354⇑ *iP* P 23 10 37.3 -0.6
DIM **Dimitrovgrad** 85.10 350 *eP* P 23 10 39.3 +1.1
TOKA **Tokat** 85.11 341 *i* P P 23 10 38.4 +0.2
PLD **Plovdiv** 85.14 350 P P 23 10 38.2 -0.2
PTO **Porto** 85.15 15 *eP* P 23 10 40.6 +2.1
VALF **Valcebollere** 85.16 7 *eP* P 23 10 39.4 +0.9
EJON **La Jonquera** 85.17 6 P P 23 10 38.5 -0.1
comp=Z,156nm,1.7s,mb5.9
TTG **Podgorica** 85.26 354⇑ *iP* P 23 10 38.2 -0.8
HCY **Herceg Novi** 85.29 355⇑ *iP* P 23 10 38.5 -0.6
PGF **Pioggiola** 85.35 2⇑ *iP* P 23 10 39.9 +0.5
comp=Z,582nm,1.0s,mb6.4
PGF **Pioggiola** 85.35 2⇑ *iP* P 23 10 39.9 +0.5
PGF pmax pmax
comp=Z,291nm,1.0s,mb6.4
PGF **Pioggiola** 85.35 2⇑ *iP* P 23 10 39.9 +0.5
comp=Z,291nm,1.0s,mb6.4
MVO **Moncorvo** 85.37 14 *eP* P 23 10 40.2 +0.6
comp=Z,75nm,1.2s,mb5.7
MVO *epP* pP 23 10 53.5 +1.5
MVO *eS* S 23 21 09.9 +2.9
MVO *eLQ* 23 37 17.4
MVO *eLR* LR 23 42 07.2
comp=Z,3µm,18.0s
BNGL **BINGOL** 85.41 337 *i* P P 23 10 40.8 +1.0
BUM **Brajici-Budva** 85.41 355⇑ *iP* P 23 10 39.3 -0.4
RZN **Rozhen** 85.55 350 *eP* P 23 10 39.6 -0.8
AQU **L'Aquila** 85.56 359 *eP* P 23 10 41.6 +1.1
AQU pmax pmax
comp=Z,79nm,0.7s,mb6.0
AQU MLR MLR
comp=Z,2µm,19.0s,MS5.6
AQU **L'Aquila** 85.56 359 *eP* P 23 10 41.6 +1.2
comp=Z,79nm,0.7s,mb6.0
AQU LR LR
comp=Z,2µm,19.0s,MS5.6
SKO **Skopje** 85.56 353 P P 23 10 40.2 -0.3
SKO **Skopje** 85.56 353 *eP* P 23 10 41.0 +0.5
EMIR **Miracle** 85.60 8 P P 23 10 41.4 +0.7
comp=Z,75nm,1.4s,mb5.7
ESAC **San Caprasio** 85.62 9 P P 23 10 40.8 0.0
comp=Z,287nm,1.3s,mb6.3
ELBA **Catalca** 85.64 347 *i* P P 23 10 36.7 -4.2
PVIS **Viseu** 85.67 15 *eP* P 23 10 42.5 +1.4
comp=Z,55nm,1.3s,mb5.6
PVIS *epP* pP 23 10 54.9 +1.3
ULC **Ulcinj** 85.72 354⇑ *iP* P 23 10 41.1 -0.2
MMB **Musomiste** 85.74 351 *eP* P 23 10 40.6 -0.8
STIP **Stip** 85.78 352 P P 23 10 40.5 -1.1
STIP **Stip** 85.78 352 *eP* P 23 10 40.8 -0.8
ANWB **Willy Bob** 85.88 66 PFAKE 23 10 50.0 +7.5
ANWB LR LR
comp=Z,4µm,20.0s,MS5.8
NVR **Nevrokopi** 85.97 351 *eP* P 23 10 42.8 +0.3
RDO **Rodhopi** 85.99 349 *eP* P 23 10 43.0 +0.3
RDO **Rodhopi** 85.99 349 P P 23 10 46.2 +3.5
MTE **Manteigas** 86.04 15 *eP* P 23 10 43.6 +0.7
MTE *epP* pP 23 10 56.8 +1.4
MTE *eS* S 23 21 17.2 +3.5
MTE *eLQ* 23 36 23.7
MTE *eLR* LR 23 42 33.8
comp=Z,4µm,20.0s
MTE **Manteigas** 86.04 15 PFAKE 23 10 50.0 +7.1
MTE LR LR
comp=Z,4µm,19.0s,MS5.8
HAKT **HAKKARI** 86.09 335 *i* P P 23 10 42.9 -0.4
VAY **Valandovo** 86.12 352 P P 23 10 42.7 -0.6
VAY **Valandovo** 86.12 352 *eP* P 23 10 42.4 -0.9
EPOB **Poblet** 86.12 8 P P 23 10 41.8 -1.5
comp=Z,266nm,1.6s,mb6.2
ALN **Alexandroupoli** 86.18 349 P P 23 10 43.6 0.0
CDAG **Cicekdag** 86.18 343 *i* P P 23 10 42.4 -1.2
BR131 **Keskin Array S** 86.22 343 *eP* P 23 10 45.2 +1.4
comp=Z,30nm,0.7s,mb5.6
BR131 LR LR
comp=Z,1µm,20.0s,MS5.3
BRTR **Keskin Array B** 86.22 343 P P 23 10 44.3 +0.5
comp=Z,35nm,0.7s,mb5.7,baz=26,slow=2.0,SNR=100
BRTR PKKPbc PKKPbc 23 28 39.6 0.0
comp=Z,0.8nm,0.8s,baz=174,slow=5.8,SNR=5.0
BRTR LR LR 23 57 44.1
comp=Z,2µm,19.0s,MS5.4,baz=228,slow=42
KNT **Kendrikon** 86.25 351 P P 23 10 44.0 +0.1
SART **Tekirdag** 86.25 348 *iP* P 23 10 38.7 -5.2
GUD **Guadarrama** 86.27 12 P P 23 10 43.3 -0.8
GUD pmax pmax
comp=Z,18nm,0.8s,mb5.3
GUD **Guadarrama** 86.27 12 P P 23 10 43.3 -0.7
comp=Z,18nm,0.8s,mb5.3
NGP **Nagpur** 86.30 300 *i* P P 23 10 38.0 -6.5
NGP *ex* x 23 10 58.9
comp=Z,107nm,1.8s
NGP *eS* SKSac 23 21 01.0 -6.5
TIR **Tirane** 86.30 354 P P 23 10 44.1 -0.1
TIR MLR MLR
comp=Z,5µm,19.0s,MS5.9
ELZG **Elazig** 86.33 339 *i* P P 23 10 45.0 +0.7
ETOR **Torete** 86.35 10 P P 23 10 44.3 -0.1
ETOR pmax pmax
comp=Z,39nm,1.1s,mb5.5
ETOR **Torete** 86.35 10 P P 23 10 44.3 -0.1
comp=Z,38nm,1.1s,mb5.5
BEST **Besiri** 86.39 337 *iP* P 23 10 45.8 +1.1
KULM **Kulim** 86.43 274 *eP* P 23 10 45.5 +0.3
comp=Z,57nm,0.9s,mb5.8
KULM LR LR
comp=Z,2µm,20.0s,MS5.5
OHR **Ohrid** 86.47 353 P P 23 10 39.1 -5.9
OHR **Ohrid** 86.47 353 *eP* P 23 10 42.2 -2.8
GRG **Griva** 86.49 352 P P 23 10 45.6 +0.5
BIA **Bitola** 86.52 353 P P 23 10 44.9 -0.4
BIA **Bitola** 86.52 353 *eP* P 23 10 44.0 -1.3
SOH **Sokhos** 86.54 351 P P 23 10 43.1 -2.3
BORA **Eskisehir** 86.59 346 *iP* P 23 10 46.1 +0.5
DIYA **Diyarbakir** 86.63 338 *iP* P 23 10 46.7 +0.9
MALT **Malatya** 86.63 339 *eP* P 23 10 47.9 +2.0
MALT pmax pmax
comp=Z,61nm,1.3s,mb5.7
MALT MLR MLR
comp=Z,2µm,20.0s,MS5.6
MALT **Malatya** 86.63 339⇑ *iP* P 23 10 46.9 +1.0
MALT **Malatya** 86.63 339 *eP* P 23 10 47.9 +2.0
comp=Z,60nm,1.3s,mb5.7
MALT LR LR
comp=Z,2µm,20.0s,MS5.6
PINB **Pinarbasi** 86.71 341 *i* P P 23 10 43.7 -2.5
FNA **Florina** 86.75 353 P P 23 10 45.9 -0.5
AKCD **Akcadag** 86.76 340 *iP* P 23 10 46.5 0.0
THE **Thessaloniki** 86.77 351 P P 23 10 46.2 -0.3
VIS **Vishakhapatnam** 86.77 295 *eP* P 23 10 47.6 +0.8
VIS AMb AMB 23 11 07.8
comp=Z,66nm,1.2s,mb5.7
HORT **Hortiatis** 86.79 351 P P 23 10 46.1 -0.5
ESKT **Eskisehir** 86.88 345 *iP* P 23 10 47.1 +0.1
AVNT **Avonos** 86.91 342 *iP* P 23 10 42.4 -4.9
OUR **Ouranopolis** 86.96 351 P P 23 10 46.8 -0.6
EMOS **Mosqueruela** 86.96 9 P P 23 10 47.7 +0.2
comp=Z,128nm,1.8s,mb5.8
PLG **Polygyros** 86.98 351 *eP* P 23 10 46.7 -0.8
PMRV **Marv??o** 87.01 15 *eP* P 23 10 47.9 +0.2
comp=Z,36nm,1.3s,mb5.4
PMRV *epP* pP 23 11 00.8 +0.6
PMRV *eS* S 23 21 25.4 +2.2
PMRV *eLQ* 23 37 35.5
PMRV *eLR* LR 23 43 49.5
comp=Z,3µm,18.0s
MARD **Mardin** 87.05 337 *i* P P 23 10 47.9 -0.1
PMAFR **Mafra** 87.17 16 *eP* P 23 10 49.3 +0.9
comp=Z,121nm,1.2s,mb6.0
PMAFR *epP* pP 23 11 01.2 +0.2
PMAFR *eS* S 23 21 24.7 0.0
PMAFR *eLQ* 23 38 31.0

PMAFR *eLR* LR 23 42 44.6
comp=Z,4µm,16.0s
KZN **Kozani** 87.19 352 *eP* P 23 10 48.0 -0.5
LOS **Limnos** 87.24 350 P P 23 10 49.2 +0.4
ESBB **Sonseca Array** 87.25 12 P P 23 10 47.9 -0.9
comp=Z,116nm,1.7s,mb5.8
ESDC **Sonseca Array** 87.25 12 P P 23 10 49.0 +0.1
comp=Z,36nm,0.8s,mb5.7,baz=348,slow=4.5,SNR=183
ESDC PKKPbc PKKPbc 23 28 37.0 -0.2
comp=Z,0.5nm,0.8s,baz=195,slow=2.5,SNR=4.7
ESDC LR LR 23 53 01.9
comp=Z,4µm,18.9s,MS5.8,baz=325,slow=38
ESDC **Sonseca Array** 87.25 12 P P 23 10 48.6 -0.3
comp=Z,36nm,0.6s,mb5.8
ESLA **Sonseca Array** 87.25 12 *eP* P 23 10 49.8 +0.9
comp=Z,7.8nm,0.8s,mb5.0
ESLA LR LR
comp=Z,26µm,19.0s,MS6.7
LIA **Limnos Island** 87.27 350 P P 23 10 49.3 +0.4
LIA **Limnos Island** 87.27 350 *eP* P 23 10 48.5 -0.4
PAB **San Pablo** 87.33 12 *eP* P 23 10 50.2 +1.0
PAB *e*PP pP 23 11 01.3 -0.5
PAB pmax pmax
comp=Z,20nm,0.8s,mb5.4
PAB MLR MLR
comp=Z,4µm,19.0s,MS5.8
PAB **San Pablo** 87.33 12 *eP* P 23 10 50.2 +1.0
comp=Z,20nm,0.8s,mb5.4
PAB *epP* pP 23 11 01.2 -0.5
PAB LR LR
comp=Z,4µm,19.0s,MS5.8
LIT **Litokhoron** 87.33 352 P P 23 10 49.2 0.0
PAIG **Paliouri** 87.39 351 P P 23 10 48.2 -1.3
ATAB **Bozova** 87.47 339 *iP* P 23 10 50.4 +0.4
GDZ **Gediz** 87.51 346 *iP* P 23 10 49.5 -0.6
WRAB **Tennant Creek** 87.51 232⇑ *iP* P 23 10 49.9 -0.3
WRAB **Tennant Creek** 87.51 232 *eP* P 23 10 50.2 0.0
comp=Z,36nm,1.1s,mb5.5
WRAB LR LR
comp=Z,2µm,21.0s,MS5.5
WB2 **Warramunga Arr** 87.52 232 *eP* P 23 10 49.6 -0.6
WB2 **Warramunga Arr** 87.52 232 *eP* P 23 10 49.9 -0.3
WRA **Warramunga Arr** 87.53 232 P P 23 10 48.6 -1.6
comp=Z,10nm,0.7s,mb5.2,baz=37,slow=6.0,SNR=44
PESTR **Estremoz** 87.53 15 *eP* P 23 10 50.1 -0.1
comp=Z,50nm,1.0s,mb5.7
PESTR *epP* pP 23 11 02.7 0.0
PESTR *eS* S 23 21 32.1 +4.0
PESTR *eLQ* 23 38 14.6
PESTR *eLR* LR 23 43 22.9
comp=Z,3µm,16.0s
KDHN **Kadinhani** 87.65 344 *i* P P 23 10 41.9 -8.9
AYVA **Ayvalik** 87.67 348 *iP* P 23 10 49.1 -1.8
ECHE **Chera** 87.68 10 P P 23 10 50.6 -0.3
ECHE pmax pmax
comp=Z,29nm,0.8s,mb5.6
ECHE **Chera** 87.68 10 P P 23 10 50.6 -0.3
comp=Z,28nm,0.8s,mb5.5
SDV **Santo Domingo** 87.73 78 *eP* P 23 10 50.9 -0.6
comp=Z,59nm,1.5s,mb5.6
SDV LR LR
comp=Z,1µm,20.0s,MS5.3
EBAD **Badajoz** 87.73 14 P P 23 10 49.1 -2.1
comp=Z,62nm,1.4s,mb5.7
AKL **Akola** 87.73 302 *eP* P 23 10 51.2 -0.2
AKL AMb AMB 23 10 57.8
comp=Z,43nm,1.0s,mb5.7
ANDN **Andirin** 87.78 341 *i* P P 23 10 50.6 -0.8
PRK **Paraskevi** 87.78 349 P P 23 10 51.2 -0.2
PRK **Paraskevi** 87.78 349 *eP* P 23 10 51.4 0.0
EVO **Evora** 87.79 15⇑ *iP* P 23 10 50.5 -1.0
comp=Z,53nm,1.1s,mb5.4
EVO *e*MLR MLR
comp=Z,5µm,18.2s,MS5.7
EVO **Evora** 87.79 15 *eP* P 23 10 51.9 +0.4
comp=Z,38nm,1.3s,mb5.5
EVO *epP* pP 23 11 04.7 +0.7
ETOS **Mallorca** 87.83 7 P P 23 10 52.0 +0.3
comp=Z,94nm,1.1s,mb5.9
CUC **Castrocucco** 87.85 357 *eP* P 23 10 51.7 0.0
comp=Z,60nm,1.1s,mb5.7
CUC LR LR
comp=Z,3µm,19.0s,MS5.8
SIGR **SIGRI** 87.87 349 P P 23 10 51.5 -0.3
THL **Klokotos Trika** 87.91 352 P P 23 10 50.4 -1.6
THL **Klokotos Trika** 87.91 352 *eP* P 23 10 50.8 -1.2
JAN **Janina** 87.91 353 *eP* P 23 10 51.5 -0.5
KEK **Kerkira** 87.93 354 *eP* P 23 10 53.9 +1.8
AKHS **Akhisar** 87.95 347 *iP* P 23 10 47.2 -5.0
XOR **Xorichti** 88.00 351 P P 23 10 51.5 -0.9
NEO **Neokhori** 88.05 351 *eP* P 23 10 52.6 -0.1
IGT **Igoumenitsa** 88.07 353 P P 23 10 52.3 -0.5
AOS **Alonnisos** 88.12 350 P P 23 10 51.4 -1.6
KHAL **Karahalli** 88.22 346 *iP* P 23 10 50.7 -2.8
MANT **Manisa** 88.23 347 *iP* P 23 10 54.0 +0.4
PBAR **Barrancos** 88.29 15 *eP* P 23 10 53.9 +0.1
comp=Z,64nm,0.9s,mb5.8
PBAR *epP* pP 23 11 06.1 -0.3
PBAR *eS* S 23 21 39.5 +4.1
PBAR *eLQ* 23 38 06.5
PBAR *eLR* LR 23 42 55.7
comp=Z,3µm,18.0s
PBEJ **Beja** 88.31 15 *eP* P 23 10 54.5 +0.6
comp=Z,34nm,1.2s,mb5.5
PBEJ *epP* pP 23 11 06.6 +0.1
KUZU **Kuzuini** 88.40 340 *iP* P 23 10 50.0 -4.4
AGG **Agios Georgios** 88.42 352 P P 23 10 54.1 -0.3
EVIA **Vianos** 88.45 11 P P 23 10 54.2 -0.4
EVIA pmax pmax
comp=Z,35nm,0.8s,mb5.6
EVIA **Vianos** 88.45 11 P P 23 10 54.2 -0.3
comp=Z,35nm,0.8s,mb5.7
EIBI **Ibiza** 88.45 8 P P 23 10 54.5 -0.1
comp=Z,146nm,1.5s,mb6.0
BLCB **Balcova** 88.54 348 P P 23 10 54.8 -0.2
ETOB **Tobarra** 88.55 10 P P 23 10 54.2 -0.9
comp=Z,24nm,1.1s,mb5.5
EVR **Evrytania** 88.57 352 *eP* P 23 10 56.1 +1.0
ISP **Isparta** 88.58 345⇑ *iP* P 23 10 56.1 +0.9
ISP **Isparta** 88.58 345 P P 23 10 55.8 +0.6
ISP LR LR
comp=Z,3µm,21.0s,MS5.7
ISP **Isparta** 88.58 345 *e*Pn P 23 10 55.6 +0.4
FDF **Fort de France** 88.61 68 PFAKE 23 11 10.0 +14
FDF LR LR
comp=Z,8µm,21.0s,MS6.1
TIP **Timpagrande** 88.63 356 PFAKE 23 11 10.0 +15
TIP LR LR
comp=Z,3µm,19.0s,MS5.8
PTEO **Sao Teotonio** 88.64 16 *eP* P 23 10 56.2 +0.7
comp=Z,84nm,1.3s,mb5.9
PTEO *epP* pP 23 11 08.0 0.0
EADA **Adamuz** 88.66 13 P P 23 10 54.1 -1.4
comp=Z,237nm,2.5s,mb6.1
CHOS **Chios island** 88.66 349 P P 23 10 56.1 +0.5
LKR **Lokris** 88.73 351 P P 23 10 52.3 -3.6
LKR **Lokris** 88.73 351 *eP* P 23 10 55.0 -0.9
EMIN **Mina Concepcio** 88.75 14 P P 23 10 54.6 -1.4
comp=Z,72nm,1.1s,mb5.9
EBAN **Banos Encina** 88.76 12 P P 23 10 55.4 -0.7
EBAN pmax pmax
comp=Z,29nm,0.9s,mb5.6
EBAN **Banos Encina** 88.76 12 P P 23 10 55.4 -0.7
comp=Z,29nm,0.9s,mb5.6
EGRO **El Granado** 88.85 15 P P 23 10 54.6 -1.9
comp=Z,56nm,1.0s,mb5.8
MORF **Marmelete** 88.88 16 *eP* P 23 10 57.0 +0.4
comp=Z,73nm,1.2s,mb5.9
MORF *epP* pP 23 11 09.3 +0.1
MORF *eS* S 23 21 42.6 +1.6
MORF *eLQ* 23 42 22.1
MORF *eLR* LR 23 44 58.1
comp=Z,4µm,18.0s
PVAQ **Vaqueiros** 88.94 15 *eP* P 23 10 56.6 -0.3
comp=Z,42nm,1.2s,mb5.7
PVAQ *epP* pP 23 11 09.8 +0.3
PVAQ *eS* S 23 21 39.0 -2.6
PVAQ *eLQ* 23 37 41.3
PVAQ *eLR* LR 23 44 32.1
comp=Z,4µm,20.0s
PBDV **Barranco-do-Ve** 89.06 15 *eP* P 23 10 57.4 -0.1
comp=Z,66nm,1.7s,mb5.7
PBDV *epP* pP 23 11 09.8 -0.2
PBDV *eS* S 23 21 41.7 -1.0
PBDV *eLQ* 23 37 08.8

PBDV eLR LR 23 45 09.6
comp=Z,5μm,20.0s
AYDN Tasoluk 89.14 347 *i* P **P 23 10 57.0 -0.9**
EQES Quesada 89.21 12 P **P 23 10 57.4 -0.8**
comp=Z,28nm,1.2s,mb5.5
PTL Penteli 89.24 350 *e*P **P 23 10 58.7 +0.4**
BHJ Bhuj 89.27 309 *e*P **P 23 10 57.3 -1.4**
BHJ AMb AMB 23 10 59.6
comp=Z,83nm,1.8s,mb5.8
ELUQ Luque 89.29 13 P **P 23 10 58.5 -0.1**
ELUQ pmax pmax
comp=Z,17nm,1.0s,mb5.3
ELUQ Luque 89.29 13 P **P 23 10 58.5 0.0**
comp=Z,16nm,1.0s,mb5.3
LTK Loutraki 89.35 351 P **P 23 10 58.0 -0.8**
VLS Valsamata 89.40 353 P **P 23 10 58.6 -0.5**
VLS Valsamata 89.40 353 *e*P **P 23 11 00.2 +1.1**
RLS Riolos of Patr 89.45 352 *e*P **P 23 11 02.2 +2.9**
RLS Riolos of Patr 89.45 352 P sP 23 11 19.1 +2.6
CEL Celeste 89.58 357 PFAKE 23 11 10.0 +10
CEL LR LR
comp=Z,2μm,21.0s,MS5.5
ARMA Armidale 89.62 214 *e*P **P 23 10 57.0 -2.9**
HYB Hyderabad 89.62 299 *e*P **P 23 11 00.0 -0.4**
HYB *e*S S 23 21 44.0 -4.5
HYB pmax pmax
comp=Z,70nm,1.0s,mb6.0
HYB Hyderabad 89.62 299 *i* P **P 23 11 00.0 -0.4**
comp=Z,70nm,1.0s,mb6.0
HYB *e* pP 23 11 15.0 +2.0
HYB *e*PP PP 23 14 30.0 -2.0
HYB *e*SKS 23 21 28.0
HYB *e*S S 23 21 48.5 0.0
HYB LR LR 23 59 24.0
comp=Z,4.4nm,18.0s
HYB Hyderabad 89.62 299 *e*P **P 23 11 00.0 -0.4**
comp=Z,70nm,1.0s,mb6.0
HYB *e*S S 23 21 44.0 -4.5
ECOG Cogollos-Vega 89.66 12 P **P 23 11 00.1 -0.2**
ECOG pmax pmax
comp=Z,29nm,0.9s,mb5.6
ECOG Cogollos-Vega 89.66 12 P **P 23 11 00.1 -0.2**
comp=Z,29nm,0.9s,mb5.6
ELOJ Sierra Loja 89.72 13 P **P 23 11 00.5 0.0**
ELOJ pmax pmax
comp=Z,66nm,1.2s,mb5.8
ELOJ Sierra Loja 89.72 13 P **P 23 11 00.5 -0.1**
comp=Z,66nm,1.2s,mb5.8
ESPR Espera 89.75 14 P **P 23 10 58.8 -2.0**
comp=Z,50nm,1.1s,mb5.8
OTAV Otavalo 89.78 90 *e*P **P 23 11 01.6 +0.4**
comp=Z,79nm,1.6s,mb5.8
OTAV LR LR
comp=Z,865nm,20.0s,MS5.2
TURN Turunc 89.81 346 *i* P **P 23 10 55.2 -5.8**
DID Didima 89.84 351 P **P 23 10 59.8 -1.3**
ERON Agron 89.89 12 P **P 23 11 00.8 -0.6**
comp=Z,26nm,1.0s,mb5.5
SFS San Fernando 90.09 14 PFAKE 23 11 10.0 +7.7
SFS LR LR
comp=Z,7μm,19.0s,MS6.1
EGUA Guajares 90.10 12 P **P 23 11 01.4 -1.0**
EGUA pmax pmax
comp=Z,116nm,0.9s,mb6.2
EGUA Guajares 90.10 12 P **P 23 11 01.4 -1.0**
comp=Z,116nm,0.9s,mb6.2
EBER Berja 90.12 12 P **P 23 11 03.5 +1.1**
comp=Z,53nm,1.8s,mb5.6
ENIJ Nijar 90.13 11 P **P 23 11 00.7 -1.8**
ENIJ pmax pmax
comp=Z,18nm,1.3s,mb5.2
ENIJ Nijar 90.13 11 P **P 23 11 00.7 -1.8**
comp=Z,18nm,1.3s,mb5.2
EMIJ Mijas 90.20 13 P **P 23 11 01.5 -1.3**
comp=Z,402nm,4.0s
EJIF Jimena Fronter 90.22 14 P **P 23 11 02.8 -0.1**
EJIF pmax pmax
comp=Z,28nm,1.0s,mb5.5
EJIF Jimena Fronter 90.22 14 P **P 23 11 02.8 -0.1**
comp=Z,28nm,1.0s,mb5.5
ITM Ithomi 90.28 352 *e*P **P 23 11 04.5 +1.3**
AKAS Kas 90.29 346 *i* P **P 23 11 01.7 -1.6**
FITZ Fitzroy Crossi 90.41 240 *e*P **P 23 11 03.8 -0.1**
comp=Z,28nm,1.0s,mb5.5
GRGR Grenville 90.42 69 PFAKE 23 11 10.0 +5.9
GRGR LR LR
comp=Z,4μm,20.0s,MS5.8
ARG Arkhangelos 90.53 347 *e*P **P 23 11 03.4 -0.9**
PYL PYLOS 90.58 352 P **P 23 11 04.5 -0.1**
BBGH Gun Hill 90.79 67 PFAKE 23 11 20.0 +14
BBGH LR LR
comp=Z,6μm,20.0s,MS6.0
CSS Prodhromos 90.90 342 P **P 23 11 06.3 +0.2**
CSS LR LR
comp=Z,2μm,20.0s,MS5.6
ASAR Alice Springs 90.91 231 P **P 23 11 04.8 -1.2**
comp=Z,13nm,0.8s,mb5.3,baz=34,slow=4.7,SNR=74
POO Poona 91.18 303 *e*P **P 23 11 06.8 -0.8**
POO AMb AMB 23 11 28.7
comp=Z,111nm,2.3s,mb5.8
KARP Karpathos 91.32 347 *e*P **P 23 11 06.0 -2.0**
KARP Karpathos 91.32 347 P **P 23 11 08.2 +0.2**
BHL Bhannes 91.47 340 *e*P **P 23 11 08.9 +0.1**
NPS Neapolis 91.80 349 *e*P **P 23 11 09.4 -0.8**
NPS Neapolis 91.80 349 P **P 23 11 12.0 +1.8**
WDD Wield Dalam 92.01 358 PFAKE 23 11 20.0 +8.8
WDD LR LR
comp=Z,2μm,20.0s,MS5.6
KAD Karad 92.03 302 *e*P **P 23 11 11.5 -0.1**
KAD AMb AMB 23 11 30.4
comp=Z,82nm,1.6s,mb5.8
KEST Kesra 92.16 2 P **P 23 11 12.8 +0.8**
comp=Z,7.6nm,0.9s,mb5.0,baz=243,slow=1.1,SNR=14
RTC Rabat Centre 92.42 15 PFAKE 23 11 20.0 +6.8
RTC LR LR
comp=Z,1μm,19.0s,MS5.4
UMR Umm Al-Rimmam 92.44 329 *e*P **P 23 11 12.9 -0.4**
baz=329
UMR AMb AMB 23 11 14.7
comp=Z,69nm,1.3s,mb5.8,baz=329
ASF Jabal al Asfar 92.87 339 P **P 23 11 15.1 -0.1**
comp=Z,24nm,0.8s,mb5.7,baz=234,slow=3.6,SNR=36
NAY Al-Naaiem 92.88 329 *e*P **P 23 11 14.8 -0.6**
baz=329
NAY AMb AMB 23 11 16.6
comp=Z,36nm,1.0s,mb5.8,baz=329
RDF Al-Radifah 93.08 329 *e*P **P 23 11 16.0 -0.2**
baz=329
RDF AMb AMB 23 11 21.7
comp=Z,73nm,1.3s,mb6.0,baz=329
QRN Al-Qurain 93.13 329 *e*P **P 23 11 16.6 +0.1**
baz=329
QRN AMb AMB 23 11 17.9
comp=Z,71nm,1.7s,mb5.8,baz=329
SNZO South Karori 94.53 193 PFAKE 23 11 30.0 +7.7
SNZO LR LR
comp=Z,2μm,19.0s,MS5.6
STKA Stephens Creek 94.65 221 P **P 23 11 23.1 0.0**
comp=Z,5.3nm,1.1s,mb4.9,baz=143,slow=3.0,SNR=3.6
STKA LR LR 23 51 05.5
comp=Z,2μm,19.0s,MS5.5,baz=20,slow=34
STKA Stephens Creek 94.65 221 *e*P **P 23 11 21.7 -1.4**
comp=Z,4.0nm,0.9s,mb4.8
ARQ Araqi 94.98 319 P **P 23 11 24.7 -0.4**
SNR=13
ARQ Araqi 94.98 319 P **P 23 11 24.7 -0.4**
SNR=13
ARQ Araqi 94.98 319 P **P 23 11 24.7 -0.4**
SNR=13
ARQ Araqi 94.98 319 P **P 23 11 24.7 -0.4**
SNR=13
CAN Canberra 94.98 214 PFAKE 23 11 30.0 +5.4
CAN LR LR
comp=Z,3μm,19.0s,MS5.7
JMDO Jabal Madar 95.20 318 P **P 23 11 26.4 +0.3**
SNR=6.5
JMDO Jabal Madar 95.20 318 P **P 23 11 26.4 +0.3**
SNR=6.5
JMDO Jabal Madar 95.20 318 P **P 23 11 26.4 +0.3**
SNR=6.5
BSY Bisya 95.23 319 P **P 23 11 25.9 -0.4**
SNR=6.7
BSY Bisya 95.23 319 P **P 23 11 25.9 -0.4**
SNR=6.7
BSY Bisya 95.23 319 P **P 23 11 25.9 -0.4**
SNR=6.7
KOD Kodaikanal 96.12 295 *e*P **P 23 11 30.1 -0.3**
KOD AMb AMB 23 11 49.5
comp=Z,35nm,2.6s,mb5.3
NNA Nana 100.34 96 PFAKE 23 12 00.0 +11
NNA LR LR
comp=Z,1μm,21.0s,MS5.3
TAU Tasmania Unive 102.40 212 PFAKE 23 12 10.0 +12
TAU LR LR
comp=Z,1μm,19.0s,MS5.5
COCO West Island 102.45 266 PFAKE 23 12 10.0 +11
COCO LR LR
comp=Z,751nm,19.0s,MS5.2
TAM Tamanrasset 104.89 6 PFAKE 23 16 40.0 +16
TAM LR LR
comp=Z,3μm,19.0s,MS5.8
NWAO Narrogin (SRO) 106.81 238 PFAKE 23 16 40.0 +13
NWAO LR LR
comp=Z,2μm,19.0s,MS5.6
LVC Limon Verde 113.30 97 PFAKE 23 16 50.0 +10
LVC LR LR
comp=Z,1μm,20.0s,MS5.4
TOA0 Torodi Ar. Sit 114.11 11 *e*PKPdf PKiKP 23 16 42.0 +0.2
TORD Torodi Ar. Bea 114.11 11 PKP PKiKP 23 16 40.1 -1.7
comp=Z,2.7nm,0.8s,baz=339,slow=2.7,SNR=16
TORD PP PP 23 17 37.0 +1.4
comp=Z,2.2nm,0.9s,baz=0.3,slow=6.6,SNR=4.0
TORD PKKPbc PKKPbc 23 27 21.6 +1.2
comp=Z,2.5nm,0.8s,baz=182,slow=2.6,SNR=6.1
TORD Torodi Ar. Bea 114.11 11 PKP PKiKP 23 16 40.1 -1.7
TORD PP PP 23 17 37.0 +1.4
TORD PKKPbc PKKPbc 23 27 21.6 +1.2
LCO Las Campanas 116.96 103 PFAKE 23 17 00.0 +13
LCO LR LR
comp=Z,1μm,19.0s,MS5.6
RCBR Riachuelo 119.41 57 PFAKE 23 17 00.0 +8.0
RCBR LR LR
comp=Z,2μm,20.0s,MS5.8
TIC Toumodi 119.44 19 *e*PKIKP PKPdf 23 16 52.2 +0.1
comp=Z,42nm,0.7s
DBIC Dimbokro 119.45 19 PKP PKPdf 23 16 51.0 -1.2
comp=Z,4.8nm,0.8s,baz=314,slow=6.1,SNR=6.9
DBIC Dimbokro 119.45 19 PKP PKPdf 23 16 51.0 -1.2
DBIC LR LR
comp=Z,4μm,21.0s,MS6.0
KIC Kosan Boka 119.78 19 *e*PKIKP PKPdf 23 16 52.8 0.0
comp=Z,31nm,0.8s
LIC Lamto 119.85 19 ⇑*i*PKIKP PKPdf 23 16 52.8 -0.1
comp=Z,24nm,0.9s
LIC *e*MLR MLR
comp=Z,7μm,21.5s,MS6.0
LIC Lamto 119.85 19 *e*PKIKP PKPdf 23 16 53.0 +0.1
comp=Z,43nm,1.3s
LIC Lamto 119.85 19 ⇑*i*PKPdf PKPdf 23 16 52.8 -0.1
LIC LR LR
comp=Z,4μm,21.5s,MS6.0
MSEY Mahe Island 120.24 307 PFAKE 23 17 00.0 +6.4
MSEY LR LR
comp=Z,2μm,21.0s,MS5.8
BDFB Brasilia 120.67 75 PFAKE 23 17 00.0 +5.7
BDFB LR LR
comp=Z,2μm,19.0s,MS5.7
CPUP Villa Florida 123.12 91 PKP PKPdf 23 16 58.0 -0.6
comp=Z,0.3nm,0.4s,baz=354,slow=4.9,SNR=3.3
CPUP Villa Florida 123.12 91 PKP PKPdf 23 16 58.0 -0.6
CPUP LR LR
comp=Z,265nm,20.0s,MS4.9
DRV Dumont d'Urvil 125.03 202 PP PP 23 19 05.0 +14
DRV SKS SKSdf 23 23 59.0 -10
DRV SP SP 23 28 45.0 -0.7
DRV SS SS 23 35 43.0 -1.1
DRV L 23 50 00.0
DRV R 23 57 00.0
PLCA Paso Flores 125.28 113 PKP PKPdf 23 17 02.5 +0.2
comp=Z,4.0nm,1.0s,baz=296,slow=2.9,SNR=5.1
PLCA Paso Flores 125.28 113 PKP PKPdf 23 17 02.5 +0.2
PLCA LR LR
comp=Z,1μm,20.0s,MS5.6
TRQA Tornquist 128.47 105 PFAKE 23 17 20.0 +11
TRQA LR LR
comp=Z,1μm,19.0s,MS5.7
VNDA Vanda 131.03 188 PFAKE 23 17 20.0 +7.7
VNDA LR LR
comp=Z,1μm,19.0s,MS5.7
CASY Casey 133.22 213 PFAKE 23 17 30.0 +13
CASY LR LR
comp=Z,1μm,19.0s,MS5.7
ABPO Ambohimpanom 136.62 307 PFAKE 23 17 40.0 +16
ABPO LR LR
comp=Z,2μm,20.0s,MS5.9
EFI East Falkland 138.70 118 PFAKE 23 17 40.0 +13
EFI LR LR
comp=Z,2μm,19.0s,MS5.8
LSZ Lusaka 140.63 334 PKhKP 23 17 26.0
comp=Z,3.9nm,0.7s,baz=359,slow=5.2,SNR=8.0
LSZ Lusaka 140.63 334 PFAKE 23 17 40.0 +8.1
LSZ LR LR
comp=Z,3μm,21.0s,MS6.0
SHEL Horse Pasture 141.08 27 PFAKE 23 17 40.0 +7.3
SHEL LR LR
comp=Z,2μm,20.0s,MS5.9
PMSA Palmer Station 141.22 138 PFAKE 23 17 40.0 +8.5
PMSA LR LR
comp=Z,2μm,20.0s,MS5.9
TSUM Tsumeb 146.48 350 PKPbc PKPbc 23 17 43.8 +0.3
comp=Z,36nm,0.8s,baz=354,slow=6.1,SNR=52
TSUM Tsumeb 146.48 350 *e*PKPbc PKPbc 23 17 44.4 +0.8
TSUM LR LR
comp=Z,2μm,20.0s,MS6.0
LBTB Lobatse 150.61 333 *e*PKIKP PKPbc 23 17 55.2 +1.1
LBTB MLR MLR
comp=Z,2μm,20.0s,MS5.9
MAW Mawson 151.31 219 PKPbc PKPbc 23 17 53.7 -0.7
comp=Z,22nm,0.9s,baz=116,slow=1.6,SNR=13
MAW PKPab PKPab 23 18 03.0 +0.3
comp=Z,30nm,0.9s,baz=125,slow=4.5,SNR=8.9
MAW Mawson 151.31 219 *e*PKPbc PKPbc 23 17 55.0 +0.6
MAW LR LR
comp=Z,3μm,21.0s,MS6.0
BOSA Boshof 154.11 332 PKP PKPdf 23 17 54.5 +0.8
comp=Z,4.7nm,0.8s,baz=108,slow=6.8,SNR=5.2
BOSA PKPbc PKPbc 23 18 02.1 +0.2
comp=Z,16nm,0.9s,baz=95,slow=0.5,SNR=13
BOSA PKPab PKPab 23 18 16.1 +0.5
comp=Z,20nm,0.9s,baz=347,slow=3.6,SNR=7.0
BOSA Boshof 154.11 332 PKIKP PKPdf 23 17 54.5 +0.8
BOSA 23 18 02.1
BOSA *e* 23 18 02.6
BOSA MLR MLR
comp=Z,3μm,20.0s,MS6.2
BOSA Boshof 154.11 332 PKP PKPdf 23 17 54.5 +0.8
BOSA PKPbc PKPbc 23 18 02.1 +0.2
BOSA *e*PKPbc PKPbc 23 18 02.6 +0.8
BOSA PKPab PKPab 23 18 16.1 +0.5
BOSA LR LR
comp=Z,3μm,20.0s,MS6.2
TRIS Tristan da Cun 157.24 57 PFAKE 23 18 10.0 +12
TRIS LR LR
comp=Z,2μm,19.0s,MS6.0
SYO Syowa Base 158.83 208‖ *e*P PKPab 23 18 34.3 -0.5
SUR Sutherland 158.85 338 PKPab PKPab 23 18 36.6 +0.8
comp=Z,12nm,0.8s,baz=334,slow=8.0,SNR=5.9
SUR Sutherland 158.85 338 PFAKE 23 18 10.0 +10
SUR LR LR
comp=Z,3μm,19.0s,MS6.2
VNA3 Neumayer Olymp 158.88 161 *e*PKPdf PKPdf 23 18 07.3 +8.7
VNA3 *e* 23 18 11.6
VNA3 *e* 23 18 36.4
VNA3 *e* 23 18 46.8
VNA2 Neumayer--Watz 159.58 162 *e*PKPdf PKPdf 23 18 00.6 +1.2
VNA2 *e* 23 18 09.7
VNA2 *e* 23 18 14.3
VNA2 *e* 23 18 38.8
VNA2 *e* 23 18 49.9
SNAA Sanae 159.68 167 *e*PKPdf PKPab 23 18 39.6 +1.1

IDC 29 23:02:51.2±7.1,**582S**×**14963E,h110**km±49km,**mb3.2/2,**
mb1 3.4/3,mb1mx3.2/16,mbtmpg3.2/3,MS3.6/1,Ms1 3.6/1,
ms1mx2.8/18,Error ellipse: s-maj=124.8km
s-min=50.7km az=119.0,New Britain region

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

PMG Port Moresby 4.32 214 P Pn 23 03 55.7 +0.8
3.0nm,0.3s,baz=35,slow=7.5,SNR=8.9
PMG S Sn 23 04 44.4 +0.2
25nm,0.3s,baz=352,slow=19,SNR=15
CTA Charters Tower 14.55 193 LR LR 23 11 27.9
comp=Z,245nm,18.6s,baz=232,slow=36
WRA Warramunga Arr 20.44 225 P P 23 07 20.1 +0.1
2.0nm,0.4s,baz=50,slow=11,SNR=7.5
WRA pP pP 23 07 38.7 -1.9
1.3nm,0.4s,baz=51,slow=11,SNR=5.4
ASAR Alice Springs 23.32 219 P P 23 07 50.2 +0.7
0.4nm,0.3s,baz=57,slow=8.7,SNR=16
ASAR pP pP 23 08 09.9 -1.8
0.6nm,0.5s,baz=54,slow=9.8,SNR=4.4
TORD Torodi Ar. Bea 147.57 285 PKPbc PKPbc 23 22 22.5 -1.2
0.3nm,0.7s,baz=94,slow=1.9,SNR=6.9

MOS ***29*** *23:06:09.6±0.9, 5226N×168.56W, h33km, mb5.4/94, MS5.4/4, Error ellipse: s-maj=8.6km s-min=4.4km az=95.8*
ISCJB ***29*** *23:06:10.5±0.2, 5231N±0.03×168.46W±0.03, h38km, mb5.1/236, MS5.6/13, Error ellipse: s-maj=4.7km s-min=2.7km az=178.8*
NEIC ***29*** *23:06:11.1±0.8, 5237N×168.44W, h29km±5km, mb5.1/133, Error ellipse: s-maj=5.0km s-min=2.6km az=188.0*
IDC ***29*** *23:06:12.0±0.8, 5236N×168.43W, h38km±5km, mb4.7/33, mb1 4.8/34, mb1mx4.8/36, mbtmpg4.7/34, ML4.0/1, Error ellipse: s-maj=17.8km s-min=9.8km az=173.0*
BJI ***29*** *23:06:12.2, 5285N×169.11W, h29km, mB5.7, mb5.3, Ms5.7, Msz5.5*
SZGRF ***29*** *23:06:18.6, 5364N×167.97W, h33km, mb5.2, Fox Islands, Aleutian Islands, United States*
DJA ***29*** *23:07:13, 5360N×172.35W, h501km, mb4.7/8*
ISC 29 23:06:12.6±0.2,**5240N**×0.03×**16845W**±0.003,**h40**km,
h40km±1.2km**:pP-P,n593,**σ0**:86/**598,**mb5.1/**236,**MS5.5/**13,
97C-17D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.63**	**337**	P	**Pn**	**23 06 23.4**	**-1.6**
NIKO				S	**Sn**	**23 06 35.6**	**+1.7**
OKCE	**Okmok Cone E**	**1.04**	**9**	P	**Pn**	**23 06 30.0**	**-0.8**
OKCD	**Okmok Cone D**	**1.05**	**11**	P	**Pn**	**23 06 30.1**	**-0.8**
OKCD				S	**Sn**	**23 06 48.5**	**+4.2**
UNV	**Unalaska Valle**	**1.87**	**38**	P	**Pn**	**23 06 39.9**	**-2.1**
UNV				S	**Sn**	**23 07 05.1**	**+0.8**
AKLV	**Akutan Long Va**	**2.32**	**39**	P	**Pn**	**23 06 47.1**	**-1.1**
AKGG	**Akutan Green G**	**2.33**	**38**	P	**Pn**	**23 06 47.8**	**-0.5**
AKUT	**Akutan**	**2.37**	**42**	P	**Pn**	**23 06 48.1**	**-0.8**
ATKA	**Atka Island**	**3.53**	**269**	P	**Pn**	**23 07 05.2**	**+0.3**
FALS	**False Pass**	**3.88**	**49**	P	**Pn**	**23 07 09.6**	**0.0**
SPIA	**Saint Paul Isl**	**4.90**	**348**	P	**Pn**	**23 07 25.7**	**+2.1**
ADK	**Adak**	**5.10**	**267**	P	**Pn**	**23 07 27.0**	**+0.6**
SDPT	**Sand Point**	**5.57**	**55**	P	**Pn**	**23 07 32.3**	**-0.5**
CHGN	**Chignik**	**7.05**	**52**	*e*P	**Pn**	**23 07 51.8**	**-1.3**
OHAK	**Old Harbor**	**9.99**	**55**	*e*P	**Pn**	**23 08 31.2**	**-2.2**
	27nm,0.3s						
KDAK	**Kodiak Island**	**10.56**	**53**	Pn	**Pn**	**23 08 38.0**	**-3.2**
	465nm,0.6s,SNR=11						
KDAK	**Kodiak Island**	**10.56**	**53**	Pn	**Pn**	**23 08 37.4**	**-3.7**
	6.7nm,0.3s,baz=248,slow=7.8,SNR=56						
KDAK				Sn	**Sn**	**23 10 30.4**	**-7.6**
	0.8nm,0.3s,baz=323,slow=20,SNR=4.1						
KDAK	**Kodiak Island**	**10.56**	**53**	*e*Pn	**Pn**	**23 08 38.7**	**-2.5**
FX1	**Attu Island--F**	**11.19**	**280**	Pn	**Pn**	**23 08 50.2**	**+0.5**
	3.9nm,0.3s,baz=246,slow=23,SNR=29						
FX1				Sn	**Sn**	**23 10 46.9**	**-6.4**
	1.1nm,0.3s,baz=158,slow=19,SNR=2.5						
FX1	**Attu Island--F**	**11.19**	**280**	Pn	**Pn**	**23 08 50.2**	**+0.5**
FX1				Sn	**Sn**	**23 10 46.9**	**-6.4**
SVW2	**Sparrevohn**	**11.20**	**34**	*e*Pn	**Pn**	**23 08 48.8**	**-1.0**
TNA	**Tin City**	**13.21**	**1**	*e*Pn	**Pn**	**23 09 18.6**	**+1.4**
	51nm,1.0s						
RC01	**Rabbit Creek A**	**13.41**	**42**	*e*Pn	**Pn**	**23 09 17.1**	**-3.0**
	74nm,1.2s						
PPLA	**Purkeypile**	**13.61**	**33**	*e*Pn	**Pn**	**23 09 26.7**	**+4.0**
	72nm,0.8s						
PMR	**Palmer**	**13.93**	**41**	*e*P	**Pn**	**23 09 27.2**	**+0.1**
PMR	**Palmer**	**13.93**	**41**	*e*P	**Pn**	**23 09 29.2**	**+2.1**
	3.9nm,0.4s						
PMR				*e*P		23 09 29.8	
CHUM	**Lake Minchumin**	**14.26**	**30**	*e*Pn	**Pn**	**23 09 32.9**	**+1.2**
	66nm,1.0s						
KTH	**Kantishna Hill**	**14.47**	**33**	*e*Pn	**Pn**	**23 09 35.0**	**+0.4**
	80nm,1.1s						
TRF	**Thorofare Moun**	**14.62**	**34**	*e*Pn	**Pn**	**23 09 36.2**	**-0.3**
	26nm,0.8s						
BPAW	**Bear Paw Mtn.**	**14.83**	**31**	*e*Pn	**Pn**	**23 09 39.6**	**+0.3**
	72nm,0.8s						
MCK	**McKinley**	**15.27**	**34**	P	**Pn**	**23 09 45.0**	**+0.1**
MCK				pmax	pmax		
	comp=Z,190nm,1.8s						
MCK	**McKinley**	**15.27**	**34**	*e*Pn	**Pn**	**23 09 43.6**	**-1.4**
	comp=Z,192nm,1.9s						
PAX	**Paxson**	**16.11**	**40**	P	**Pn**	**23 09 54.2**	**-1.7**
PAX	**Paxson**	**16.11**	**40**	*e*Pn	**Pn**	**23 09 53.8**	**-2.0**
	comp=Z,26nm,0.8s						
COLA	**College**	**16.36**	**32**⇑	*i*P	**Pn**	**23 09 56.4**	**-2.6**
COLA	**College**	**16.36**	**32**	*e*Pn	**Pn**	**23 09 56.1**	**-2.9**
MENT	**Mentasta**	**16.80**	**41**	*e*P	**Pn**	**23 10 04.7**	**+0.2**
PNL	**Peninsula**	**17.68**	**54**	*e*Pn	**Pn**	**23 10 14.3**	**-1.1**
	comp=Z,71nm,0.8s						
EGAK	**Eagle**	**18.67**	**38**	*e*P	**Pn**	**23 10 24.8**	**-2.6**
	comp=Z,29nm,0.7s						
HYT	**Haines Junctio**	**18.84**	**51**	*e*P	**Pn**	**23 10 23.6**	**-6.0**
DAWY	**Dawson**	**19.04**	**41**	*e*P	**Pn**	**23 10 23.9**	**-8.0**
SKAG	**Skagway**	**19.69**	**56**	*e*P	**Pn**	**23 10 39.0**	**-0.7**
	comp=Z,58nm,0.8s						
BILL	**Bilibino**	**19.84**	**332**⇓	*i*P	**Pn**	**23 10 40.6**	**-0.8**
BILL				pmax	pmax		
	comp=Z,62nm,1.2s						
BILL	**Bilibino**	**19.84**	**332**	*e*Pn	**Pn**	**23 10 41.4**	**0.0**
PET	**Petropavlovsk**	**19.85**	**285**⇑	*e*P	**Pn**	**23 10 39.5**	**-2.2**
PET				pmax	pmax		
	comp=Z,127nm,0.8s						
PET	**Petropavlovsk**	**19.85**	**285**	*e*Pn	**Pn**	**23 10 39.8**	**-1.8**
	comp=Z,115nm,0.7s						
PEA0B	**Petropavlovsk-**	**20.40**	**286**	*e*P	**P**	**23 10 45.9**	**+0.1**
PETK	**Petropavlovsk-**	**20.40**	**286**	P	**P**	**23 10 45.7**	**-0.1**
	comp=Z,83nm,0.6s,baz=82,slow=14,SNR=209						
DLBC	**Dease Lake**	**22.39**	**59**	P	**P**	**23 11 09.2**	**+2.1**
	comp=Z,6.7nm,0.8s,mb4.1,baz=278,slow=10,SNR=7.4						
SEY	**Seymchan**	**23.07**	**312**⇑	*e*P	**P**	**23 11 13.0**	**-1.2**
SEY	**Seymchan**	**23.07**	**312**⇑	*e*P	**P**	**23 11 13.1**	**-1.1**
YKA	**Yellowknife Ar**	**29.80**	**49**	P	**P**	**23 12 14.6**	**-0.6**
	comp=Z,2.8nm,0.6s,mb4.1,baz=274,slow=7.8,SNR=16						
YKA				PcP	PcP	23 15 17.6	0.0
	comp=Z,2.2nm,0.9s,baz=273,slow=2.1,SNR=5.1						
YKA				ScP	ScP	23 18 57.7	+1.6
	comp=Z,1.2nm,0.8s,baz=286,slow=3.0,SNR=7.5						
YKA	**Yellowknife Ar**	**29.80**	**49**	P	**P**	**23 12 14.6**	**-0.6**
YKA						23 15 17.7	
YKA	**Yellowknife Ar**	**29.80**	**49**	P	**P**	**23 12 14.6**	**-0.6**
YKA				PcP	PcP	23 15 17.6	0.0
YKA				ScP	ScP	23 18 57.7	+1.5
HAWA	**Hanford**	**31.89**	**81**	*e*P	**P**	**23 12 34.5**	**+0.8**
	comp=Z,18nm,1.1s,mb4.8						
KHMM	**Horse Mountain**	**32.29**	**93**	*e*P	**P**	**23 12 38.7**	**+1.3**
YBH	**Yreka Blue Hor**	**32.42**	**91**	*e*P	**P**	**23 12 39.8**	**+1.3**
YBH				pmax	pmax		
	comp=Z,120nm,2.2s						
YBH	**Yreka Blue Hor**	**32.42**	**91**	*e*P	**P**	**23 12 39.8**	**+1.3**
	comp=Z,122nm,2.3s,mb5.3						
NEW	**Newport**	**32.46**	**76**	*e*P	**P**	**23 12 38.7**	**0.0**
NEW				pmax	pmax		
	comp=Z,13nm,0.8s						
NEW	**Newport**	**32.46**	**76**	*e*P	**P**	**23 12 38.7**	**0.0**
	comp=Z,13nm,0.8s,mb4.8						
EDM	**Edmonton**	**32.62**	**66**	*e*P	**P**	**23 12 40.3**	**+0.2**
TIXI	**Tiksi**	**33.00**	**329**‖	*e*P	**P**	**23 12 42.3**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,6μm,17.0s,MS5.3						
TIXI	**Tiksi**	**33.00**	**329**	*e*P	**P**	**23 12 42.4**	**-0.9**
	comp=Z,12nm,0.9s,mb4.8						
WDC	**Whiskeytown Da**	**33.19**	**92**	*e*P	**P**	**23 12 45.6**	**+0.3**
WDC				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
WDC	**Whiskeytown Da**	**33.19**	**92**	*e*P	**P**	**23 12 45.6**	**+0.3**
	comp=Z,15nm,1.0s,mb4.9						
YAK	**Yakutsk**	**33.58**	**311**	*ce*P	**P**	**23 12 46.2**	**-2.2**
YAK				pmax	pmax		

comp=N,6.0nm,1.2s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,51nm,0.8s,mb5.5
YAK Yakutsk 33.58 311 *e*P **P 23 12 46.5 -1.9**
comp=Z,57nm,0.7s,mb5.6
MOD Modoc 33.80 89 *e*P **P 23 12 51.3 +0.8**
comp=Z,49nm,1.6s,mb5.2
ERM Erimo 33.88 272⇑ *i*P **P 23 12 50.7 -0.5**
BSMT Bassoo Peak 34.04 76 *e*P **P 23 12 52.9 +0.3**
WVOR Wild Horse Val 34.51 87 *e*P **P 23 12 57.2 +0.5**
WVOR pmax pmax
comp=Z,26nm,1.1s,mb5.1
WVOR Wild Horse Val 34.51 87 *e*P **P 23 12 57.2 +0.5**
comp=Z,26nm,1.1s,mb5.1
MSO Missoula 35.03 77 *e*P **P 23 13 02.2 +1.0**
comp=Z,11nm,1.3s,mb4.6
HABR Khabarovsk 35.42 287 *e*P **P 23 13 03.3 -1.1**
HABR *e**PP pP 23 13 11.3 -4.2
HABR *e* 23 14 20.6
HABR *e*S **S 23 18 36.8 +0.5**
HABR *e**SS sS 23 18 53.3 -1.3
HABR *e*SS SS 23 20 58.2 -13
HABR *e*SSS 23 21 14.9
HABR *e* 23 23 18.4
HABR MLR MLR
comp=Z,3µm,15.0s,MS5.1
PAHR Pah Rah Range 35.65 91 *e*P **P 23 13 07.0 +0.5**
RES Resolute Bay 36.10 26 P **P 23 13 08.2 -1.8**
comp=Z,1nm,0.8s,mb4.2,baz=22,slow=20,SNR=4.4
WAKR Walker 36.36 93 *e*P **P 23 13 13.3 +0.7**
HLID Hailey 36.46 82 *e*P **P 23 13 13.5 +0.1**
comp=Z,24nm,1.4s,mb4.9
EGMT Eagleton 36.92 73 *e*P **P 23 13 17.6 +0.3**
comp=Z,33nm,0.9s,mb5.2
BOZ Bozeman (W) 37.02 77 *e*P **P 23 13 18.3 +0.2**
BOZ pmax pmax
comp=Z,22nm,1.5s,mb4.8
BOZ Bozeman (W) 37.02 77 *e*P **P 23 13 18.3 +0.2**
comp=Z,22nm,1.5s,mb4.8
NVAR Mina Array Bea 37.10 92 P **P 23 13 18.9 0.0**
comp=Z,6.0nm,0.8s,mb4.5,baz=295,slow=8.3,SNR=28
ELK Elko 37.57 86 *e*P **P 23 13 23.1 +0.3**
ELK Elko 37.57 86 *e*P **P 23 13 21.3 -1.5**
QLMT Earthquake Lak 37.57 78 *e*P **P 23 13 23.1 +0.3**
MTUM Tungsten Hills 37.62 93 *e*P **P 23 13 24.2 +0.8**
YNR Norris Junctio 38.08 78 *e*P **P 23 13 27.5 +0.4**
HVU Hansel Valley 38.47 83 *e*P **P 23 13 29.7 -0.7**
HVU pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
HVU Hansel Valley 38.47 83 *e*P **P 23 13 29.7 -0.7**
comp=Z,9.3nm,0.9s,mb4.5
RLMT Red Lodge 38.71 76 *e*P **P 23 13 35.0 +2.6**
comp=Z,28nm,1.0s,mb5.0
REDW Red Top Meadow 38.73 80 *e*P **P 23 13 34.5 +1.9**
comp=Z,29nm,1.3s,mb4.8
SPUT South Promonto 38.94 84 *e*P **P 23 13 35.0 +0.6**
TPNV Topopah Spring 39.30 92 *e*P **P 23 13 37.6 +0.2**
TPNV pmax pmax
comp=Z,16nm,0.9s,mb4.8
TPNV Topopah Spring 39.30 92 *e*P **P 23 13 37.6 +0.2**
comp=Z,16nm,0.9s,mb4.8
DUG Dugway 39.38 85 *e*P **P 23 13 38.1 0.0**
DUG pmax pmax
comp=Z,16nm,1.0s,mb4.7
DUG Dugway 39.38 85 *e*P **P 23 13 38.1 +0.1**
comp=Z,16nm,1.0s,mb4.7
BW06 Boulder Array 39.84 80 *e*P **P 23 13 41.3 -0.6**
comp=Z,14nm,0.9s,mb4.7
PDAR Pinedale Array 39.84 80 P **P 23 13 41.3 -0.6**
comp=Z,6.4nm,0.8s,mb4.4,baz=307,slow=4.6,SNR=30
JLU Jordanelle 39.97 84 *e*P **P 23 13 43.2 +0.2**
NLU North Lily Min 39.98 85 *e*P **P 23 13 43.6 +0.6**
GSC Goldstone 40.03 94 *e*P **P 23 13 43.5 -0.1**
GSC pmax pmax
comp=Z,24nm,1.2s,mb4.8
GSC Goldstone 40.03 94 *e*P **P 23 13 43.5 0.0**
comp=Z,24nm,1.3s,mb4.8
DAU Daniels Canyon 40.20 84 *e*P **P 23 13 45.4 +0.5**
MPU Maple Canyon 40.21 85 *e*P **P 23 13 43.5 -1.4**
comp=Z,8.4nm,1.0s,mb4.4
MAJO Matsushiro 40.26 269 *e*P **P 23 13 45.4 0.0**
MAJO pmax pmax
comp=Z,57nm,0.8s,mb5.3
MAJO Matsushiro 40.26 269 *e*P **P 23 13 45.4 0.0**
comp=Z,57nm,0.8s,mb5.3
MAT Matsushiro 40.26 269 P **P 23 13 45.1 -0.3**
MAT *e*S **S 23 20 04.0 +14**
MJAR Matsushiro Arr 40.26 269 P **P 23 13 45.1 -0.3**
comp=Z,16nm,0.9s,mb4.8,baz=51,slow=7.5,SNR=28
FCC Fort Churchill 40.49 51 *e*P **P 23 13 46.9 -0.1**
comp=Z,1.1nm,0.9s
MDJ Mudanjiang 40.63 285 P **P 23 13 47.3 -1.1**
MDJ AMB AMB
comp=Z,23nm,1.8s,mb4.5
MDJ AMB AMB
comp=Z,508nm,4.1s
MSU Marysvale 40.80 87 *e*P **P 23 13 50.1 +0.2**
TMUT Trail Mountain 40.91 85 *e*P **P 23 13 50.9 +0.2**
LDFC Landfair 41.22 93 *e*P **P 23 13 52.1 -1.2**
SRU San Rafael 41.44 85 *e*P **P 23 13 55.1 0.0**
SRU pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
SRU San Rafael 41.44 85 *e*P **P 23 13 55.1 0.0**
comp=Z,9.6nm,0.8s,mb4.5
RWWY Rawlins 41.89 80 *e*P **P 23 13 55.6 -3.1**
comp=Z,21nm,0.7s,mb4.9
BOD Bodaibo 42.41 309 *e*P **P 23 14 01.1 -1.7**
BOD pmax pmax
comp=Z,19nm,0.8s,mb4.8
PV04 Paradox Valley 42.88 85 *e*P **P 23 14 06.4 -0.4**
WUAZ Wupatki 43.22 90 *e*P **P 23 14 09.6 0.0**
comp=Z,22nm,1.0s,mb4.8
CN2 Changchun 43.55 286⇑ P **P 23 14 11.3 -0.9**
CN2 *e*AP pP 23 14 21.3 -2.1
CN2 *e*S **S 23 20 37.5 -0.7**
CN2 AMB AMB
comp=Z,60nm,0.7s,mb5.4
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,4µm,16.0s,MS5.5
CN2 LR LR
comp=E,4µm,16.0s,MS5.5
CN2 LR LR
comp=Z,4µm,15.0s,MS5.5
ULM Lac du Bonnet 43.64 63 P **P 23 14 11.4 -1.4**
comp=Z,4.1nm,0.9s,mb4.2,baz=309,slow=8.7,SNR=2.8
HIA Hailar 43.74 296 *d* iP **P 23 14 13.1 -0.6**
HIA Hailar 43.74 296 *i* P **P 23 14 13.2 -0.5**
MVCO Mesa Verde 43.88 86 *e*P **P 23 14 14.7 -0.2**
comp=Z,11nm,0.9s,mb4.6
ISCO Idaho Springs 44.00 81 *e*P **P 23 14 16.5 +0.7**
ISCO pmax pmax
comp=Z,14nm,1.5s,mb4.5
ISCO Idaho Springs 44.00 81 *e*P **P 23 14 16.5 +0.7**
comp=Z,14nm,1.5s,mb4.5
AGMN Agassiz Refuge 44.71 65 *e*P **P 23 14 20.3 -1.1**
comp=Z,23nm,1.0s,mb5.0
SDCO Great Sand Dun 45.36 83 *e*P **P 23 14 26.8 +0.1**
comp=Z,8.1nm,1.0s,mb4.5
OGNE Ogallala 45.44 77 *e*P **P 23 14 28.4 +1.1**
comp=Z,26nm,0.8s,mb5.1
TUC Tucson 45.74 93 *e*P **P 23 14 29.5 -0.3**
TUC pmax pmax
comp=Z,76nm,2.4s,mb5.2
TUC Tucson 45.74 93 *e*P **P 23 14 29.5 -0.3**
comp=Z,76nm,2.4s,mb5.2
KSRS Korea Array 45.96 277 P **P 23 14 32.0 +0.6**
comp=Z,40nm,0.9s,mb5.4,baz=56,slow=7.6,SNR=56
ANMO Albuquerque 46.60 86⇑ *e*P **P 23 14 36.0 -0.5**
ANMO pmax pmax
comp=Z,8.0nm,1.7s
ANMO Albuquerque 46.60 86 *e*P **P 23 14 35.5 -1.0**
comp=Z,13nm,1.3s,mb4.7
LENM Lemitar 46.81 88 *e*P **P 23 14 38.0 -0.2**
LPM Los Pinos Moun 46.92 87 *e*P **P 23 14 38.7 -0.3**
ECSD EROS,Sioux Fal 46.93 71 *e*P **P 23 14 37.4 -1.6**
comp=Z,10nm,0.9s,mb4.8
CBKS Cedar Bluff 48.16 78 P **P 23 14 48.4 -0.1**
CBKS pmax pmax
comp=Z,37nm,0.9s,mb5.4
CBKS Cedar Bluff 48.16 78 *e*P **P 23 14 48.3 -0.2**
comp=Z,37nm,0.9s,mb5.4
CBKS *e*pP pP 23 14 58.2 -1.7
CBKS *e*sP sP 23 15 03.3 -1.3
GDL2 Guadalupe Moun 49.75 88 *e*P **P 23 15 00.5 -0.4**
GDL2 *e*P 23 15 00.7
KSU1 Kansas State U 49.84 75 P **P 23 14 57.2 -4.2**
comp=Z,17nm,0.8s,mb5.1
IRK Irkutsk 50.13 307 *e*P **P 23 15 01.8 -1.6**
IRK pmax pmax
comp=Z,40nm,1.2s,mb5.3
SUMG Summit 50.59 17 *e*P **P 23 15 06.8 +0.2**
comp=Z,44nm,0.9s,mb5.4
TLY Talaya 50.78 307 *e*P **P 23 15 07.8 -0.5**
TLY *e* pP 23 15 21.5 +1.7
TLY pmax pmax
comp=Z,18nm,0.8s,mb5.0
TLY Talaya 50.78 307⇓ *i*P **P 23 15 08.0 -0.3**
BJI Beijing 51.31 288 P **P 23 15 12.0 -0.5**
BJI AMB AMB
comp=Z,28nm,0.8s,mb5.2
BJI AMB AMB
comp=Z,818nm,6.1s
BJT Baijiatuan 51.32 288 *e*P **P 23 15 12.8 +0.2**
BJT pmax pmax
comp=Z,31nm,0.9s
BJT Baijiatuan 51.32 288 *e*P **P 23 15 12.8 +0.1**
comp=Z,31nm,0.9s,mb5.2
ULN Ulaanbaatar 51.40 301 *e*P **P 23 15 12.4 -0.7**
WMOK Wichita Mounta 51.42 81 P **P 23 15 12.3 -1.1**
WMOK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WMOK Wichita Mounta 51.42 81 *e*P **P 23 15 12.3 -1.1**
comp=Z,8.5nm,0.8s,mb4.7
ZAK Zakamensk 51.76 305⇑ *i*P **P 23 15 15.4 -0.3**
ZAK *e* 23 16 24.1
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
SONM Songino Array 51.77 301 P **P 23 15 15.6 -0.2**
comp=Z,19nm,1.0s,mb5.0,baz=66,slow=5.7,SNR=44
SONM PcP PcP 23 16 27.4 -1.2
comp=Z,4.9nm,1.0s,baz=59,slow=1.5,SNR=4.4
SONM ScP ScP 23 20 23.1 +1.3
comp=Z,1.4nm,1.0s,baz=38,slow=3.1,SNR=4.2
SONM Songino Array 51.77 301 P **P 23 15 15.6 -0.2**
SONM 23 16 27.4
MOY Mondy 52.08 308 *e*P **P 23 15 17.3 -0.8**
TXAR Lajitas Array 52.18 90 P **P 23 15 18.4 -0.8**
comp=Z,11nm,0.7s,mb4.9,baz=296,slow=5.2,SNR=59
TIA Tai'an 53.28 284⇑ P **P 23 15 26.5 -0.7**
HHC Hu-ho-hao-te 53.44 292 *e*P **P 23 15 28.3 0.0**
HHC AP pP 23 15 39.0 -0.7
HHC XP sP 23 15 42.0 -2.4
HHC PP PP 23 17 29.5 +0.9
HHC PCS PcS 23 20 33.5 -0.4
HHC S **S 23 22 55.5 -2.1**
HHC XS sS 23 23 10.8 -5.8
HHC SS SS 23 26 34.8 -2.7
HHC AMB AMB
comp=Z,22nm,1.0s,mb5.0
HHC AMB AMB
comp=Z,996nm,9.4s
HHC LR LR
comp=N,2µm,14.3s,MS5.9
HHC LR LR
comp=E,8µm,16.7s,MS5.9
HHC LR LR
comp=Z,8µm,16.6s,MS5.9
JCT Junction City 53.74 86 P **P 23 15 29.0 -1.6**
JCT pmax pmax
comp=Z,18nm,0.9s,mb5.0
JCT Junction City 53.74 86 *e*P **P 23 15 29.0 -1.6**
comp=Z,18nm,0.9s,mb5.0
MIAR Mount Ida 54.69 78 P **P 23 15 36.8 -0.7**
MIAR pmax pmax
comp=Z,24nm,1.1s,mb5.1
MIAR Mount Ida 54.69 78 *e*P **P 23 15 36.3 -1.1**
comp=Z,24nm,1.1s,mb5.1
SCHQ Schefferville 55.03 44 P **P 23 15 39.0 -0.7**
comp=Z,18nm,1.0s,mb5.0,baz=318,slow=7.6,SNR=6.3
SCHQ Schefferville 55.03 44 *e*P **P 23 15 39.2 -0.4**
comp=Z,16nm,1.0s,mb5.0
OLIL Olney 55.06 70 *e*P **P 23 15 38.5 -1.5**
comp=Z,7.9nm,0.6s,mb4.9
NJ2 Nanjing 55.10 279 *e*P **P 23 15 43.0 +2.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
HKT Hockley 56.53 83 P **P 23 15 51.8 +1.0**
HKT pmax pmax
comp=Z,39nm,1.6s,mb5.2
HKT Hockley 56.53 83 *e*P **P 23 15 51.8 +1.0**
comp=Z,39nm,1.6s,mb5.2
OXF Oxford 57.19 75 *e*P **P 23 15 54.3 -1.0**
OXF pmax pmax
comp=Z,89nm,0.9s,mb5.8
OXF Oxford 57.19 75 *e*P **P 23 15 54.3 -1.0**
comp=Z,89nm,0.9s,mb5.8
KEV Kevo 57.64 354 *e*p **P 23 15 55.7 -2.3**
comp=Z,13nm,0.8s,mb5.0
KEV Kevo 57.64 354 *e*P **P 23 15 55.7 -2.3**
KEV pmax pmax
comp=Z,13nm,0.8s,mb5.0
NVS Novosibirsk 57.77 320 *e*P **P 23 15 57.8 -1.4**
NVS *e* 23 23 55.4
NVS pmax pmax
comp=Z,13nm,1.1s,mb4.9
NVS pmax pmax
comp=N,22nm,1.8s
NVS pmax pmax
comp=E,18nm,1.8s
ZALV Zalesovo Beam 57.78 318 P **P 23 15 58.3 -0.9**
comp=E,6.3nm,0.8s,mb4.7,baz=42,slow=6.9,SNR=12
ZALV PcP PcP 23 16 51.5 0.0
comp=E,2.5nm,0.6s,baz=55,slow=5.0,SNR=3.5
ARCES ARCESS Array B 57.95 354 P **P 23 15 59.4 -0.9**
comp=E,17nm,0.9s,mb5.0,baz=15,slow=4.9,SNR=11
ARCES PcP PcP 23 16 53.3 +1.3
comp=E,7.6nm,0.9s,baz=29,slow=5.7,SNR=4.5
LVZ Lovozero 58.79 350⇑ *e*P **P 23 16 05.4 -0.7**
WHN Wuhan 58.89 281⇑ P **P 23 16 07.3 0.0**
WHN S **S 23 24 05.3 -4.9**
WHN AMB AMB
comp=Z,106nm,1.0s,mb5.8
WHN AMB AMB
comp=Z,803nm,5.4s
WHN LR LR
comp=N,4µm,13.6s,MS5.8
WHN LR LR
comp=E,4µm,12.1s,MS5.8
WHN LR LR
comp=Z,5µm,18.5s
APA Apatity 59.24 350⇑ *e*P **P 23 16 13.0 +3.8**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.0
APA MLR MLR
comp=Z,5µm,16.0s,MS5.7
SSPA Standing Stone 59.46 62 *e*P **P 23 16 10.0 -1.2**
comp=Z,19nm,0.9s,mb5.1
XAN Xi'an 59.63 287 P **P 23 16 12.0 -0.4**
XAN AP pP 23 16 21.0 -3.0
XAN PP PP 23 18 23.0 -0.9
XAN S **S 23 24 19.3 -0.4**
XAN SS SS 23 28 16.0 +0.9
XAN AMB AMB
comp=Z,40nm,1.0s,mb5.4
XAN LR LR
comp=N,1µm,22.4s,MS5.5
XAN LR LR
comp=E,3µm,18.1s,MS5.5
XAN LR LR
comp=Z,5µm,19.9s,MS5.6
LRAL Lakeview Retre 59.65 74 *e*P **P 23 16 10.5 -2.0**
comp=Z,11nm,0.9s,mb4.9
SSLB Suanglung 59.77 270 *e*P **P 23 16 12.4 -1.1**
comp=Z,110nm,1.3s,mb5.7
BLA Blacksburg 60.48 66 P **P 23 16 17.7 -0.5**
BLA pmax pmax
comp=Z,170nm,1.8s,mb5.8
BLA Blacksburg 60.48 66 *e*P **P 23 16 16.9 -1.3**
comp=Z,173nm,1.8s,mb5.8
GTA Gaotai 60.97 298⇑ *i*P **P 23 16 21.3 -0.1**
GTA AMB AMB
comp=Z,34nm,0.7s,mb5.6
LZH Lanzhou 61.10 292 *e*P **P 23 16 23.0 +0.6**
LZH AP pP 23 16 33.8 -0.3
LZH XP sP 23 16 37.0 -1.6
LZH PP PP 23 18 39.5 +2.6
LZH S **S 23 24 36.3 -2.2**
LZH XS sS 23 24 49.0 -8.8
LZH SS SS 23 28 36.0 -2.1
LZH AMB AMB
comp=Z,74nm,1.0s,mb5.8
LZH AMB AMB
comp=Z,280nm,4.0s
LZH LR LR
comp=E,3µm,15.5s
LZH LR LR
comp=Z,4µm,16.6s,MS5.7
KURK Kurchatov 62.73 319 P **P 23 16 32.8 -0.3**
comp=Z,92nm,0.7s,mb6.0,SNR=8.3
SVE Sverdlovsk 63.93 332 *e*P **P 23 16 40.7 -0.2**
SVE pmax pmax
comp=Z,40nm,1.0s,mb5.4
WMQ Urumqi 63.96 309 P **P 23 16 41.5 +0.2**
WMQ AMB AMB
comp=Z,13nm,1.1s,mb4.9
WMQ AMB AMB
comp=Z,224nm,5.0s
WMQ LR LR
comp=N,4µm,18.0s,MS5.7
WMQ LR LR
comp=E,2µm,22.0s,MS5.7
WMQ LR LR
comp=Z,4µm,17.0s,MS5.7
JOF Joensuu 63.98 350 *e*p **P 23 16 38.4 -2.8**
comp=Z,30nm,0.8s,mb5.4
JOF Joensuu 63.98 350 *e*P **P 23 16 38.4 -2.8**
JOF pmax pmax
comp=Z,30nm,0.8s,mb5.4
BVA0 Borovoye Array 64.01 325 *i* P **P 23 16 40.7 -0.8**
BVA0 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BVAR Borovoye Array 64.01 325 P **P 23 16 41.2 -0.3**
comp=Z,14nm,0.5s,mb5.2,baz=53,slow=5.7,SNR=124
BRVK Borovoye 64.02 325 P **P 23 16 41.5 -0.1**
comp=Z,178nm,1.2s,mb6.0,SNR=14
BRVK Borovoye 64.02 325 *e*P **P 23 16 41.2 -0.4**
VOSK Vostochnaya 64.04 324 P sP 23 16 57.2 -0.8
VOSK pmax pmax
comp=Z,28nm,1.1s,mb5.2
MK31 Makanchi Array 64.19 314 P **P 23 16 42.0 -0.8**
MK31 Makanchi Array 64.19 314 *e*P **P 23 16 41.9 -1.0**
MKAR Makanchi Array 64.19 314 P **P 23 16 42.0 -0.9**
comp=Z,11nm,0.8s,mb5.0,baz=49,slow=6.1,SNR=52
ARU Arti 64.85 333 P **P 23 16 46.0 -1.0**
comp=Z,266nm,1.1s,mb6.2,SNR=10
ARU Arti 64.85 333⇑ *e*P **P 23 16 46.2 -0.8**
ARU pmax pmax
comp=Z,57nm,1.2s,mb5.5
ARU Arti 64.85 333 *e*P **P 23 16 46.2 -0.7**
CD2 Chengdu 64.90 288 P **P 23 16 48.0 +0.3**
CD2 AP pP 23 16 58.3 -1.1
CD2 XP sP 23 17 02.3 -1.7
CD2 PCP PcP 23 17 21.8 +1.1
CD2 PP PP 23 19 12.3 +1.9
CD2 S **S 23 25 24.5 -1.6**
CD2 XS sS 23 25 41.0 -4.6
CD2 SS SS 23 29 36.3 -1.3
CD2 AMB AMB
comp=Z,80nm,1.0s,mb5.7
CD2 AMB AMB
comp=Z,420nm,11.8s
CD2 LR LR
comp=N,4µm,22.0s
CD2 LR LR
comp=Z,6µm,12.3s
KLMR Klimovskoe 64.90 345 *e*P **P 23 16 45.5 -1.7**
KLMR pmax pmax
comp=Z,33nm,1.2s,mb5.2
KAF Kangasniemi 65.24 352 *e*p **P 23 16 46.5 -2.9**
comp=Z,47nm,0.8s,mb5.6,baz=6.2,slow=6.1
KAF Kangasniemi 65.24 352 *e*P **P 23 16 46.5 -2.9**
KAF pmax pmax
comp=Z,47nm,0.8s,mb5.6
GYA Guiyang 66.47 283⇑ *i*P **P 23 16 58.0 +0.1**
GYA AP pP 23 17 08.5 -1.2
GYA XP sP 23 17 12.5 -1.7
GYA PCP PcP 23 17 28.3 +1.0
GYA S S 23 25 44.8 -0.7
GYA SKS 23 26 48.0
GYA SS SS 23 30 04.0 +1.7
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,6.9s
GYA LR LR
comp=N,320nm,17.4s,MS4.7
GYA LR LR
comp=E,260nm,18.5s,MS4.7
GYA LR LR
comp=Z,430nm,17.3s,MS4.7
NOA NORSAR Array B 66.91 0 P **P 23 16 59.2 -1.0**
comp=Z,13nm,0.8s,mb5.0,baz=0.4,slow=6.3,SNR=26
KONO Kongsberg 68.30 1⇑ *e*P **P 23 17 08.9 0.0**
VSU Vasula 68.81 352⇓ *i*P **P 23 17 11.6 -0.5**
KMI Kunming 69.81 285⇑ P **P 23 17 19.3 +0.5**
KMI AP pP 23 17 31.3 +0.6
KMI XP sP 23 17 36.0 +0.8
KMI PP PP 23 19 59.0 +5.8
KMI S S 23 26 26.0 +0.8
KMI XS sS 23 26 41.5 -3.4
KMI SS SS 23 30 53.8 0.0
KMI AMB AMB
comp=Z,25nm,0.9s,mb5.1
KMI AMB AMB
comp=Z,259nm,3.1s
KMI LR LR
comp=N,2µm,17.0s,MS5.7
KMI LR LR
comp=E,3µm,15.8s,MS5.7
KMI LR LR
comp=Z,2µm,18.2s,MS5.5
TKM2 Tokmak 2 70.17 315 P **P 23 17 21.5 +0.8**
SNR=7.7
AKTK Aktyubinsk 70.27 330 P **P 23 17 21.1 -0.2**
AKTO Aktyubinsk 70.27 330 P **P 23 17 21.1 -0.2**
comp=Z,35nm,0.8s,mb5.3,baz=40,slow=6.5,SNR=82
USP Ospenovka 70.36 316 P **P 23 17 22.1 +0.2**
SNR=12
CHMS Chumysh 70.47 316 P **P 23 17 22.5 -0.1**
SNR=7.9
KBK Karagaybulak 70.66 316 P **P 23 17 24.2 +0.4**
SNR=14
OBN Obninsk 70.86 345 *c* *i*P **P 23 17 23.7 -1.1**
OBN pmax pmax
comp=Z,82nm,1.2s,mb5.5
OBN Obninsk 70.86 345 *e*P **P 23 17 24.1 -0.7**
comp=Z,26nm,0.7s,mb5.3
AAK Ala-Archa 70.88 316 P **P 23 17 25.0 -0.1**
comp=Z,145nm,0.8s,mb6.0,SNR=8.2
AAK Ala-Archa 70.88 316 P **P 23 17 25.4 +0.3**
AAK pmax pmax
comp=Z,11nm,1.0s,mb4.7
AAK Ala-Archa 70.88 316 P **P 23 17 25.6 +0.5**
SNR=11
AAK Ala-Archa 70.88 316 *e*P **P 23 17 25.4 +0.3**
comp=Z,22nm,1.0s,mb5.0
KZA Kyzart 71.00 315 P **P 23 17 26.7 +0.8**
SNR=6.0
EKS2 Erkin-Say 71.16 316 P **P 23 17 27.2 +0.4**
SNR=8.6
AML Almayashu 71.63 316 P **P 23 17 31.0 +1.4**
SNR=7.7
KK31 Karatay Array 72.14 319⇑ *e*P **P 23 17 31.9 -0.8**
KK31 pmax pmax
comp=Z,20nm,0.8s,mb5.1
KK31 Karatay Array 72.14 319⇑ *e*P **P 23 17 31.0 -1.7**
PMG Port Moresby 72.32 226⇑ *e*P **P 23 17 33.1 -0.9**
PMG pmax pmax
comp=Z,27nm,1.4s
KSH Kashi 72.77 313 P **P 23 17 40.0 +3.5**
KSH PCP PcP 23 17 57.0 +3.4
KSH S S 23 27 03.8 +4.7
KSH AMB AMB
comp=Z,304nm,4.7s
KSH LR LR
comp=N,2µm,17.4s
KSH LR LR
comp=E,552nm,7.8s
KSH LR LR
comp=Z,10µm,17.3s,MS6.2
LSA Lhasa 72.94 296 P **P 23 17 39.3 +1.6**
LSA AMB AMB
comp=Z,50nm,0.9s,mb5.4
SUW Suwalki 73.52 353 *e*P **P 23 17 40.0 -0.7**

SUW pmax pmax
comp=Z,93nm,0.9s,mb5.7
SUW Suwalki 73.52 353 *e*P **P** **23 17 40.0 -0.6**
comp=Z,93nm,0.9s,mb5.7
SUW Suwalki 73.52 353 *e* **P** **23 17 39.9 -0.8**
SUW Suwalki 73.52 353 *e* **P** **23 17 39.9 -0.8**
VRHR Novokhopersk 73.80 341 *e*P **P** **23 17 41.6 -0.8**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s,mb5.3
VRHR pmax pmax
comp=E,10.0nm,1.0s
VSR Storozhevoye 74.16 342 *e*P **P** **23 17 43.6 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,7.0nm,0.7s
VORD Divnogorie 74.38 342 *e*P **P** **23 17 43.8 -1.9**
VORD pmax pmax
comp=N,140nm,0.9s
VORD pmax pmax
comp=Z,30nm,0.9s,mb5.2
VORD pmax pmax
comp=E,60nm,0.3s
NRDL Niedersach Rie 75.47 1 *e*P **P** **23 17 52.0 0.0**
comp=Z,18nm,1.1s,mb4.9
RUE Ruedersdorf 75.48 359 *e*P **P** **23 17 52.4 +0.3**
comp=Z,34nm,1.1s,mb5.2
IBBN Ibbenburen 75.62 2 *e*P **P** **23 17 52.9 0.0**
comp=Z,57nm,1.2s,mb5.4
CLZ Clausthal 76.13 1 *e*P **P** **23 17 56.3 +0.5**
CLZ pmax pmax
comp=Z,38nm,1.2s,mb5.2
CLZ Clausthal 76.13 1 *e*P **P** **23 17 56.3 +0.5**
comp=Z,38nm,1.2s,mb5.2
AKASG Malin Array Be 76.19 349 P **P** **23 17 54.6 -1.5**
comp=Z,15nm,0.5s,mb5.2,baz=14,slow=5.7,SNR=46
AKBB Malin Array Si 76.19 349 P **P** **23 17 55.2 -1.0**
AKBB Malin Array Si 76.19 349 *e*P **P** **23 17 54.9 -1.3**
KIEV Kiev 76.20 349 P **P** **23 17 55.3 -0.9**
KIEV pmax pmax
comp=Z,60nm,1.0s,mb5.5
KIEV Kiev 76.20 349 *e*P **P** **23 17 54.8 -1.5**
comp=Z,96nm,1.3s,mb5.6
KKTK Khon Kaen 76.47 279 P **P** **23 17 58.5 +0.3**
TAPN Taplejung 76.66 297 *e*P **P** **23 17 59.6 +0.4**
comp=Z,96nm,1.0s,mb5.7
CLL Collm 76.66 359⇑*i*P **P** **23 17 58.5 -0.3**
CLL pmax pmax
comp=Z,17nm,1.0s,mb4.9
CLL Collm 76.66 359 *e*P **P** **23 17 58.6 -0.2**
comp=Z,16nm,1.0s,mb4.9
CLL Collm 76.66 359⇑*i*P **P** **23 17 58.5 -0.3**
comp=Z,17nm,1.0s,mb4.9
CLL Collm 76.66 359⇑*i*P **P** **23 17 58.5 -0.3**
comp=Z,17nm,1.0s,mb4.9
CHG Chiang Mai 76.88 284 ⇑P **P** **23 17 59.8 -0.8**
comp=Z,18nm,1.2s,mb4.9
CHTO Chiang Mai 76.88 284 *e*P **P** **23 18 00.6 0.0**
FBE Freiberg 77.05 359 *e*P **P** **23 18 01.2 +0.2**
comp=Z,32nm,1.1s,mb5.2
KSP Ksiaz 77.06 357 *e*P **P** **23 18 01.0 -0.1**
KSP *e**PP pP 23 18 10.0 -3.0
KSP Ksiaz 77.06 357 *e* **P** **23 18 01.1 +0.1**
BEBN Eben Emael 77.06 4 P **P** **23 18 00.9 -0.2**
comp=Z,8.1nm,1.4s,mb4.5
BRG Berggiesshubel 77.08 358 *i*P **P** **23 18 01.0 -0.2**
BRG *e* pP 23 18 12.9 -0.3
BRG pmax pmax
comp=Z,11nm,1.1s,mb4.7
BRG MLR MLR
comp=N,2µm,18.9s,MS5.5
BRG MLR MLR
comp=E,877nm,15.6s,MS5.5
BRG MLR MLR
comp=Z,2µm,19.8s,MS5.5
BRG Berggiesshubel 77.08 358 *e*P **P** **23 18 01.3 +0.1**
comp=Z,18nm,1.1s,mb4.9
BRG Berggiesshubel 77.08 358 *i*P **P** **23 18 01.0 -0.2**
comp=Z,10nm,1.1s,mb4.7
BRG *e* pP 23 18 12.9 -0.3
BRG *i* 23 20 45.0
BRG LR LR
comp=Z,2µm,19.8s,MS5.5
UBBA Unterbreizbach 77.15 1 *e*P **P** **23 18 01.2 -0.4**
comp=Z,50nm,1.9s,mb5.1
CMAR Chiang Mai Arr 77.16 283 P **P** **23 18 02.5 +0.3**
comp=Z,33nm,0.9s,mb5.2,baz=26,slow=6.2,SNR=118
CMAR pP pP 23 18 14.4 +0.3
comp=Z,21nm,0.8s,baz=24,slow=4.8,SNR=15
GUN Gumba 77.20 299 *e*P **P** **23 18 02.9 +0.6**
comp=Z,126nm,1.0s,mb5.8
ODAN Odare 77.22 297 *e*P **P** **23 18 02.5 +0.1**
comp=Z,34nm,0.9s,mb5.3
JIRN Jiri 77.23 299 *e*P **P** **23 18 03.0 +0.5**
comp=Z,154nm,1.0s,mb5.9
MEM Membach 77.26 4 P **P** **23 18 02.4 +0.2**
comp=Z,21nm,1.4s,mb4.9
SNF Seneffe 77.29 5 P **P** **23 18 02.7 +0.3**
MOX Moxa 77.33 360 *e*P **P** **23 18 02.6 0.0**
comp=Z,39nm,1.4s,mb5.1
MOX Moxa 77.33 360 *e*P **P** **23 18 02.6 0.0**
MOX pmax pmax
comp=Z,39nm,1.4s,mb5.1
MOX Moxa 77.33 360 *e*P **P** **23 18 02.7 +0.1**
comp=Z,23nm,1.1s,mb5.0
UPC Upice 77.40 357 *e*P **P** **23 18 03.1 +0.1**
UPC *e*pP pP 23 18 13.8 -1.2
PVCC Panska Ves 77.42 358 *e*P **P** **23 18 03.3 +0.2**
PVCC *e*pP pP 23 18 16.4 +1.3
BCLA Clavier 77.42 4 P **P** **23 18 02.2 -0.9**
OJC Ojcow 77.52 355 *e*P **P** **23 18 04.0 +0.3**
WERD Werda 77.53 360 *e*P **P** **23 18 03.7 0.0**
comp=Z,21nm,1.4s,mb4.9
DPC Dobruska-Polom 77.55 357 *e*P **P** **23 18 04.4 +0.6**
DPC *e*pP pP 23 18 16.7 +0.9
RAMN Ramite 77.58 298 *e*P **P** **23 18 04.5 +0.1**
comp=Z,126nm,1.0s,mb5.8
LVV L'vov 77.61 352 *i*P **P** **23 18 03.7 -0.5**
KKN Kakani 77.62 299 *e*P **P** **23 18 04.7 +0.1**
comp=Z,82nm,1.2s,mb5.5
WERN Wernitzgruen 77.69 359 *e*P **P** **23 18 05.1 +0.5**
comp=Z,20nm,1.1s,mb5.0
DOU Dourbes 77.71 5 P **P** **23 18 05.0 +0.2**
comp=Z,14nm,1.2s,mb4.8
GIVF Givet 77.72 4 *e*P **P** **23 18 04.7 -0.1**
comp=Z,61nm,1.1s,mb5.1
GIVF Givet 77.72 4 *e*P **P** **23 18 04.7 -0.1**
GIVF pmax pmax
comp=Z,30nm,1.1s,mb5.1
GIVF Givet 77.72 4 *e*P **P** **23 18 04.7 -0.1**
comp=Z,30nm,1.1s,mb5.1
TNS Taunus Mts 77.72 2 *e*P **P** **23 18 04.9 +0.1**
TNS pmax pmax
comp=Z,22nm,1.1s,mb5.0
TNS Taunus Mts 77.72 2 *e*P **P** **23 18 04.9 +0.1**
comp=Z,22nm,1.1s,mb5.0
PKI Pulchoki 77.72 299 *e*P **P** **23 18 05.5 +0.3**
comp=Z,125nm,1.2s,mb5.7
BAIF Baives 77.73 5 *e*P **P** **23 18 04.9 +0.1**
comp=Z,50nm,1.2s,mb5.0
BAIF Baives 77.73 5 *e*P **P** **23 18 04.9 +0.1**
BAIF pmax pmax
comp=Z,25nm,1.2s,mb5.0
BAIF Baives 77.73 5 *e*P **P** **23 18 04.9 +0.1**
comp=Z,25nm,1.2s,mb5.0
NKC Novy Kostel 77.74 359 *e*P **P** **23 18 05.1 +0.2**
GKN Gorkha 77.79 300 *e*P **P** **23 18 05.5 -0.1**
comp=Z,112nm,1.0s,mb5.7
DMN Daman 77.86 299 *e*P **P** **23 18 06.4 +0.5**
comp=Z,106nm,1.1s,mb5.7
KWP Kalwaria 77.91 353 *e*P **P** **23 18 06.2 +0.4**
KWP pmax pmax
comp=Z,62nm,1.0s,mb5.5
KWP Kalwaria 77.91 353 *e*P **P** **23 18 06.1 +0.3**
comp=Z,62nm,1.0s,mb5.5
KWP Kalwaria 77.91 353 *e* **P** **23 18 06.1 +0.3**
KWP Kalwaria 77.91 353 *e* **P** **23 18 06.1 +0.3**
PRU Pruhonice 77.96 358 *e*P **P** **23 18 06.2 +0.1**
PRU *e*pP pP 23 18 19.5 +1.4
DANN Dangsing 77.98 301 *e*P **P** **23 18 07.2 +0.6**
comp=Z,104nm,0.7s,mb5.8
OKC Ostrava-Krasne 77.99 356 *e*P **P** **23 18 06.7 +0.4**
OKC *e*pP pP 23 18 18.9 +0.6
RUP Ruppelstein 78.21 3 *e*P **P** **23 18 07.0 -0.5**
WLF Walferdange 78.21 4 P **P** **23 18 07.7 +0.2**
STHS Stebnicka Huta 78.23 354 *e*P **P** **23 18 08.6 +1.0**
STHS pmax pmax
comp=Z,24nm,1.1s,mb5.0
STHS Stebnicka Huta 78.23 354 *e*P **P** **23 18 08.6 +1.0**
comp=Z,24nm,1.1s,mb5.0
GRA1 Grafenberg Arr 78.29 0 *e*P **P** **23 18 08.6 +0.7**
comp=Z,28nm,1.0s,mb5.2
GRF Grafenberg Arr 78.29 0 *e*P **P** **23 18 08.6 +0.7**
GRF pmax pmax
comp=Z,28nm,1.0s,mb5.2
GRF Grafenberg Arr 78.29 0 *e*P **P** **23 18 08.6 +0.7**
comp=Z,28nm,1.0s,mb5.2
TOD Tromm 78.35 2 *e*P **P** **23 18 08.5 +0.2**
KOLN Koldanda 78.53 301 *e*P **P** **23 18 09.8 +0.2**
comp=Z,78nm,1.1s,mb5.6
VRAC Vranov 78.58 357 P **P** **23 18 10.1 +0.5**
comp=Z,26nm,0.9s,mb5.2,baz=10.0,slow=5.9,SNR=42
VRAC Vranov 78.58 357⇓*i*P **P** **23 18 10.4 +0.8**
TREC Trest 78.63 357 *e*P **P** **23 18 09.9 +0.1**
TREC *e*pP pP 23 18 21.9 +0.1
FLN La Foliniere 78.70 8⇑*i*P **P** **23 18 09.8 -0.4**
comp=Z,44nm,0.9s,mb5.1
FLN La Foliniere 78.70 8⇑*i*P **P** **23 18 09.8 -0.4**
FLN pmax pmax
comp=Z,22nm,0.9s,mb5.1
FLN La Foliniere 78.70 8⇑*i*P **P** **23 18 09.8 -0.4**
comp=Z,22nm,0.9s,mb5.1
CRVS Cervenica-Dubn 78.73 353 *e*P **P** **23 18 10.7 +0.3**
CRVS pmax pmax
comp=Z,16nm,1.2s,mb4.8
CRVS Cervenica-Dubn 78.73 353 *e*P **P** **23 18 10.7 +0.3**
comp=Z,16nm,1.2s,mb4.8
WET Wettzell 78.83 359 *e*P **P** **23 18 11.5 +0.6**
WET pmax pmax
comp=Z,16nm,1.2s,mb4.8
WET Wettzell 78.83 359 *e*P **P** **23 18 11.5 +0.6**
comp=Z,16nm,1.2s,mb4.8
KHC Kasperske Hory 78.83 359 *e*P **P** **23 18 11.4 +0.4**
KHC *e*pP pP 23 18 23.9 +0.9
LDF La Druitiere 78.90 8⇑*i*P **P** **23 18 10.8 -0.5**
comp=Z,51nm,1.0s,mb5.1
LDF La Druitiere 78.90 8⇑*i*P **P** **23 18 10.8 -0.5**
LDF pmax pmax
comp=Z,26nm,1.0s,mb5.1
LDF La Druitiere 78.90 8⇑*i*P **P** **23 18 10.8 -0.5**
comp=Z,26nm,1.0s,mb5.1
UZH Uzhgorod 78.93 353⇓*i*P **P** **23 18 11.0 -0.5**
UZH *e* pP 23 18 22.0 -1.5
UZH *i* 23 18 26.0
LANF Langenberg 78.95 3 *e*P **P** **23 18 12.0 +0.4**
SGMF Saint Gilles 79.01 10 *e*P **P** **23 18 11.6 -0.3**
comp=Z,73nm,1.2s,mb5.2
SGMF Saint Gilles 79.01 10 *e*P **P** **23 18 11.6 -0.3**
SGMF pmax pmax
comp=Z,36nm,1.2s,mb5.2
SGMF Saint Gilles 79.01 10 *e*P **P** **23 18 11.6 -0.3**
comp=Z,36nm,1.2s,mb5.2
GRR Gorron 79.04 8 *e*P **P** **23 18 11.8 -0.3**
comp=Z,167nm,1.4s,mb5.5
GRR Gorron 79.04 8 *e*P **P** **23 18 11.8 -0.3**
GRR pmax pmax
comp=Z,83nm,1.4s,mb5.5
GRR Gorron 79.04 8 *e*P **P** **23 18 11.8 -0.3**
comp=Z,83nm,1.4s,mb5.5
GEC2 GERESS Array S 79.12 359 *e*P **P** **23 18 12.8 +0.3**
GEC2 pmax pmax
comp=Z,26nm,1.2s,mb5.0
GEC2 GERESS Array S 79.12 359 *e*P **P** **23 18 12.8 +0.3**
comp=Z,26nm,1.2s,mb5.0
GERES GERESS Array B 79.12 359 P **P** **23 18 12.6 +0.1**
comp=Z,8.4nm,0.9s,mb4.7,baz=1.9,slow=4.0,SNR=43
STU Stuttgart 79.19 2 *e*P **P** **23 18 13.3 +0.4**
comp=Z,23nm,0.9s,mb5.1
KOLL Kolacno 79.23 355 *e*P **P** **23 18 13.9 +0.8**
VYHS Vyhne 79.30 355 *e*P **P** **23 18 14.2 +0.7**
VYHS pmax pmax
comp=Z,22nm,1.1s,mb5.0
VYHS Vyhne 79.30 355 *e*P **P** **23 18 14.2 +0.7**
comp=Z,22nm,1.1s,mb5.0
MEZF Maizieres J'vi 79.33 4 *e*P **P** **23 18 13.9 +0.2**
comp=Z,80nm,1.3s,mb5.2
MEZF Maizieres J'vi 79.33 4 *e*P **P** **23 18 13.9 +0.2**
comp=Z,80nm,1.3s,mb5.5
SMOL Smolenice 79.34 356 *e*P **P** **23 18 15.4 +1.7**
CDF Champ du Feu 79.50 3 *e*P **P** **23 18 14.8 +0.2**
comp=Z,35nm,1.0s,mb4.9
CDF Champ du Feu 79.50 3 *e*P **P** **23 18 14.8 +0.2**
CDF pmax pmax
comp=Z,17nm,1.0s,mb4.9
CDF Champ du Feu 79.50 3 *e*P **P** **23 18 14.8 +0.2**
comp=Z,17nm,1.0s,mb4.9
BFO Black Forest 79.61 2 P **P** **23 18 15.8 +0.6**
BFO pmax pmax
comp=Z,19nm,1.1s,mb4.9
BFO Black Forest 79.61 2 *e*P **P** **23 18 15.4 +0.2**
comp=Z,22nm,1.1s,mb5.0
THEF They Montfort 79.64 4 *e*P **P** **23 18 15.4 0.0**
BUR08 Bucovina Ar. S 79.66 351 *e*P **P** **23 18 15.6 +0.1**
ZST Bratislava 79.67 356 *e*P **P** **23 18 16.8 +1.3**
ZST pmax pmax
comp=Z,48nm,1.1s,mb5.3
ZST Bratislava 79.67 356 *e*P **P** **23 18 16.8 +1.3**
comp=Z,48nm,1.1s,mb5.3
BURAR Bucovina Array 79.68 351⇓*i*P **P** **23 18 15.6 0.0**
ECH Echery 79.69 3 *e*P **P** **23 18 15.8 +0.1**
ECH Echery 79.69 3 P **P** **23 18 16.2 +0.5**
ECH Echery 79.69 3 *e*P **P** **23 18 16.1 +0.5**
comp=Z,33nm,1.0s,mb5.2
LIBD Limburg 79.77 3 *e*P **P** **23 18 16.3 +0.2**
PSZ Piszkesteto 79.81 354 P **P** **23 18 17.5 +1.2**
PSZ pmax pmax
comp=Z,35nm,1.1s,mb5.2
PSZ Piszkesteto 79.81 354⇓*i*P **P** **23 18 17.2 +0.9**
PSZ Piszkesteto 79.81 354 *e*P **P** **23 18 17.3 +1.0**
comp=Z,35nm,1.1s,mb5.2
FUR Furstenfeldbru 79.81 0 *e*P **P** **23 18 16.7 +0.4**
FUR pmax pmax
comp=Z,50nm,1.4s,mb5.2
FUR Furstenfeldbru 79.81 0 *e*P **P** **23 18 16.7 +0.4**
comp=Z,50nm,1.4s,mb5.2
SPAK Spaichingen-Ko 79.85 2 *e*P **P** **23 18 16.9 +0.4**
HAU Haudompre 79.88 4 *e*P **P** **23 18 16.7 0.0**
comp=Z,45nm,1.0s,mb5.0
HAU Haudompre 79.88 4 *e*P **P** **23 18 16.7 0.0**
HAU pmax pmax
comp=Z,23nm,1.0s,mb5.1
HAU Haudompre 79.88 4 *e*P **P** **23 18 16.7 0.0**
comp=Z,22nm,1.0s,mb5.0
KIS Kishinev 79.89 348 *e*P **P** **23 18 15.0 -1.7**
KBL Kabul 79.97 315 P **P** **23 18 16.5 -0.9**
KBL pmax pmax
comp=Z,39nm,0.9s,mb5.3
KBL Kabul 79.97 315 *e*P **P** **23 18 16.4 -0.9**
comp=Z,39nm,0.9s,mb5.3
CONA Conrad Observa 79.98 357⇑*i*P **P** **23 18 18.1 +0.8**
comp=Z,43nm,1.1s,mb5.3,SNR=14
CSNA Conrad Observa 79.98 357⇑*i*P **P** **23 18 18.1 +0.9**
comp=Z,40nm,1.1s,mb5.3
FELD Feldberg im Sc 80.06 2 *e*P **P** **23 18 17.6 0.0**
MOF Molkenrain 80.06 3 *e*P **P** **23 18 17.8 +0.2**
HINF Hinteralfeld 80.08 3⇑*i*P **P** **23 18 17.8 0.0**
comp=Z,30nm,0.9s,mb4.9
HINF Hinteralfeld 80.08 3⇑*i*P **P** **23 18 17.8 0.0**
HINF pmax pmax
comp=Z,15nm,0.9s,mb4.9
HINF Hinteralfeld 80.08 3⇑*i*P **P** **23 18 17.8 0.0**
comp=Z,15nm,0.9s,mb4.9
MOA Molln 80.11 358⇑*i*P **P** **23 18 18.3 +0.4**
comp=Z,17nm,1.1s,mb4.9,SNR=12
RJOB Jochberg 80.24 359 *e*P **P** **23 18 19.1 +0.5**
comp=Z,20nm,0.9s,mb5.0
KIV Kislovodsk 80.34 338 P **P** **23 18 20.1 +0.9**
comp=Z,261nm,1.0s,mb6.1,SNR=10
KIV Kislovodsk 80.34 338⇓*i*P **P** **23 18 19.8 +0.6**
KIV *e* 23 18 26.2
KIV pmax pmax
comp=Z,48nm,1.0s,mb5.4
KIV Kislovodsk 80.34 338⇓*i*P **P** **23 18 19.9 +0.7**
HYF Humbligny 80.42 6 *e*P **P** **23 18 20.0 +0.4**
BBS Basel-Blauen 80.46 3 *e*P **P** **23 18 20.0 +0.2**
RETA Reutte 80.49 1⇑*i*P **P** **23 18 20.6 +0.6**
comp=Z,18nm,1.0s,mb5.0,SNR=11
LOR Lormes 80.50 5⇑*i*P **P** **23 18 20.1 +0.1**
comp=Z,85nm,1.2s,mb5.3
LOR Lormes 80.50 5⇑*i*P **P** **23 18 20.1 +0.1**
LOR pmax pmax
comp=Z,42nm,1.2s,mb5.2
LOR Lormes 80.50 5⇑*i*P **P** **23 18 20.1 +0.1**
comp=Z,42nm,1.2s,mb5.2
LOMF Lomont 80.55 3 *e*P **P** **23 18 20.8 +0.5**
MOTA Moosalm 80.64 0⇑*i*P **P** **23 18 21.3 +0.5**
comp=Z,35nm,1.0s,mb5.2,SNR=19
WATA Walderalm 80.65 360⇑*i*P **P** **23 18 21.3 +0.5**
comp=Z,19nm,0.8s,mb5.1,SNR=17
ANN Anapa 80.65 342 *e*P **P** **23 18 20.6 -0.3**
ANN pmax pmax
comp=Z,65nm,1.2s,mb5.4
ARSA Arzberg 80.67 357⇓*i*P **P** **23 18 21.7 +0.7**
comp=Z,30nm,1.1s,mb5.1,SNR=13
SSF Saint Saulge 80.68 6⇑*i*P **P** **23 18 21.1 +0.1**
comp=Z,58nm,1.0s,mb5.2
SSF Saint Saulge 80.68 6⇑*i*P **P** **23 18 21.1 +0.1**
SSF pmax pmax
comp=Z,29nm,1.0s,mb5.2
SSF Saint Saulge 80.68 6⇑*i*P **P** **23 18 21.1 +0.1**
comp=Z,29nm,1.0s,mb5.2
WTTA Wattenberg 80.72 360⇑*i*P **P** **23 18 21.9 +0.7**
comp=Z,48nm,1.2s,mb5.3,SNR=28
DRGR 80.73 352⇓*i*P **P** **23 18 21.4 +0.1**
MFF Saint Martin d 80.87 8⇑*i*P **P** **23 18 22.2 +0.2**
comp=Z,100nm,1.0s,mb5.4
MFF Saint Martin d 80.87 8⇑*i*P **P** **23 18 22.2 +0.2**
MFF pmax pmax
comp=Z,50nm,1.0s,mb5.4
MFF Saint Martin d 80.87 8⇑*i*P **P** **23 18 22.2 +0.2**
comp=Z,50nm,1.0s,mb5.4
KBA Koelnbreinsper 80.89 359 *i*P **P** **23 18 23.3 +1.2**
comp=Z,104nm,1.1s,mb5.7,SNR=68
AVF Avril sur Loir 80.94 6⇑*i*P **P** **23 18 22.3 -0.1**
comp=Z,54nm,1.0s,mb5.1
AVF Avril sur Loir 80.94 6⇑*i*P **P** **23 18 22.3 -0.1**
AVF pmax pmax
comp=Z,27nm,1.0s,mb5.1
AVF Avril sur Loir 80.94 6⇑*i*P **P** **23 18 22.3 -0.1**
comp=Z,27nm,1.0s,mb5.1
FETA Feichten 80.96 1 *i*P **P** **23 18 23.5 +1.0**
comp=Z,51nm,1.0s,mb5.4,SNR=22
SMF Signal de Mont 81.12 5⇑*i*P **P** **23 18 23.3 0.0**
comp=Z,108nm,1.1s,mb5.4
SMF Signal de Mont 81.12 5⇑*i*P **P** **23 18 23.3 0.0**
SMF pmax pmax
comp=Z,54nm,1.1s,mb5.4
SMF Signal de Mont 81.12 5⇑*i*P **P** **23 18 23.3 0.0**
comp=Z,54nm,1.1s,mb5.4
DAVOS Davos 81.13 1 P **P** **23 18 24.7 +1.3**
DAVOS *PP pP 23 18 36.9 +1.4
BGF Bois d'Agland 81.14 6⇑*i*P **P** **23 18 23.5 0.0**
comp=Z,42nm,1.0s,mb5.0
BGF Bois d'Agland 81.14 6⇑*i*P **P** **23 18 23.5 0.0**
BGF pmax pmax
comp=Z,21nm,1.0s,mb5.0
BGF Bois d'Agland 81.14 6⇑*i*P **P** **23 18 23.5 0.0**
comp=Z,21nm,1.0s,mb5.0
DAVOX Davos/Dischmat 81.19 1 P **P** **23 18 24.7 +1.0**
comp=Z,17nm,0.9s,mb5.0,baz=348,slow=23,SNR=14
DAVOX pP pP 23 18 36.9 +1.1
comp=Z,9.3nm,0.7s,baz=348,slow=16,SNR=5.0
ABTA Abfaltersbach 81.23 359⇑*i*P **P** **23 18 24.4 +0.5**
comp=Z,36nm,1.1s,mb5.2,SNR=26
SOKA Soboth 81.26 358⇑*i*P **P** **23 18 24.6 +0.5**
comp=Z,67nm,1.1s,mb5.5
CABF La Chapelle 81.26 4 *e*P **P** **23 18 24.8 +0.7**
comp=Z,81nm,1.0s,mb5.3
CABF La Chapelle 81.26 4 *e*P **P** **23 18 24.8 +0.7**
CABF pmax pmax
comp=Z,40nm,1.0s,mb5.3
CABF La Chapelle 81.26 4 *e*P **P** **23 18 24.8 +0.7**
comp=Z,40nm,1.0s,mb5.3
MYKA Terra Mystica 81.34 359⇑*i*P **P** **23 18 24.7 +0.2**
comp=Z,22nm,1.3s,mb4.9
ABKT Ailbek 81.34 324 P **P** **23 18 25.3 +0.6**
comp=Z,370nm,1.0s,mb6.3,SNR=25
TCF Toulx Ste Croi 81.37 7 *e*P **P** **23 18 24.6 -0.1**
comp=Z,41nm,1.1s,mb5.0
TCF Toulx Ste Croi 81.37 7 *e*P **P** **23 18 24.6 -0.1**
TCF pmax pmax
comp=Z,20nm,1.1s,mb5.0
TCF Toulx Ste Croi 81.37 7 *e*P **P** **23 18 24.6 -0.1**
comp=Z,20nm,1.1s,mb5.0
OBKA Obir 81.44 358 *i*P **P** **23 18 25.7 +0.6**
comp=Z,30nm,0.9s,mb5.2,SNR=17
TUE Stuetta 81.49 2 *e*P **P** **23 18 26.2 +0.9**
comp=Z,47nm,1.4s,mb5.2
PKSM Moragy 81.58 355⇑*i*P **P** **23 18 25.5 -0.3**
AGO Saint Agoulin 81.66 6 *e*P **P** **23 18 27.9 +1.7**
MLR Muntele Rosu 81.71 350 P **P** **23 18 27.1 +0.6**
comp=Z,7.7nm,0.9s,mb4.6,baz=59,slow=2.5,SNR=13
MLR Muntele Rosu 81.71 350⇓*i*P **P** **23 18 27.5 +1.0**
PLDF La Plantade 81.78 6 *e*P **P** **23 18 28.8 +2.0**
VOIR 81.86 350⇓*i*P **P** **23 18 27.7 +0.4**
PYM Petit Puy Mans 81.96 6 *e*P **P** **23 18 27.7 -0.1**
BZS Buzias 81.98 353⇓*i*P **P** **23 18 28.0 +0.1**
GZR Gura Zlata 82.11 352⇓*i*P **P** **23 18 28.7 +0.1**
RSL Roselend 82.20 3 *e*P **P** **23 18 30.0 +0.9**
HARR Harsova 82.27 348⇑*i*P **P** **23 18 29.8 +0.4**
RJF Les Rejaudoux 82.30 7⇑*i*P **P** **23 18 29.4 -0.2**
comp=Z,31nm,1.0s,mb4.9
RJF Les Rejaudoux 82.30 7⇑*i*P **P** **23 18 29.4 -0.2**
RJF pmax pmax
comp=Z,16nm,1.0s,mb4.9
RJF Les Rejaudoux 82.30 7⇑*i*P **P** **23 18 29.4 -0.2**
comp=Z,16nm,1.0s,mb4.9
LPL La Plagne 82.38 3 *e*P **P** **23 18 31.5 +1.5**
comp=Z,28nm,1.0s,mb4.8
LPL La Plagne 82.38 3 *e*P **P** **23 18 31.5 +1.5**
LPL pmax pmax
comp=Z,14nm,1.0s,mb4.8
LPL La Plagne 82.38 3 *e*P **P** **23 18 31.5 +1.5**
comp=Z,14nm,1.0s,mb4.8
LPG La Plagne 82.40 3⇑*i*P **P** **23 18 31.8 +1.7**
comp=Z,25nm,1.0s,mb4.8
LPG La Plagne 82.40 3⇑*i*P **P** **23 18 31.8 +1.7**
LPG pmax pmax
comp=Z,13nm,1.0s,mb4.8
LPG La Plagne 82.40 3⇑*i*P **P** **23 18 31.8 +1.7**
comp=Z,12nm,1.0s,mb4.8
SKDS Skadanscina 82.41 358 *e*P **P** **23 18 29.9 -0.2**
BOJS Bojanci 82.43 357 *i*P **P** **23 18 30.4 +0.1**
TIRR Tirgusor 82.44 348 *e*P **P** **23 18 30.0 -0.3**
TIRR Tirgusor 82.44 348⇑*i*P **P** **23 18 30.4 +0.1**
TIRR Tirgusor 82.44 348 *e*P **P** **23 18 29.9 -0.5**
LFF La Frestale 82.60 8⇑*i*P **P** **23 18 31.3 +0.2**
comp=Z,36nm,0.7s,mb5.2
LFF La Frestale 82.60 8⇑*i*P **P** **23 18 31.3 +0.2**
LFF pmax pmax
comp=Z,18nm,0.7s,mb5.2
LFF La Frestale 82.60 8⇑*i*P **P** **23 18 31.3 +0.2**
comp=Z,18nm,0.7s,mb5.2
CAF Calviac 82.71 7⇑*i*P **P** **23 18 32.0 +0.2**
comp=Z,46nm,1.0s,mb5.1
CAF Calviac 82.71 7⇑*i*P **P** **23 18 32.0 +0.2**
CAF pmax pmax
comp=Z,23nm,1.0s,mb5.2
CAF Calviac 82.71 7⇑*i*P **P** **23 18 32.0 +0.2**
comp=Z,23nm,1.0s,mb5.2
BNI Bardonecchia 82.84 3 P **P** **23 18 34.3 +1.9**
BNI pmax pmax
comp=Z,43nm,1.0s,mb5.4
BNI Bardonecchia 82.84 3 *e*P **P** **23 18 34.3 +1.9**
comp=Z,43nm,1.0s,mb5.4
ORIF Oris-en-Rattie 82.94 4⇑*i*P **P** **23 18 33.8 +0.9**
comp=Z,29nm,1.0s,mb5.0
ORIF Oris-en-Rattie 82.94 4⇑*i*P **P** **23 18 33.8 +0.9**
ORIF pmax pmax
comp=Z,15nm,1.0s,mb5.0
ORIF Oris-en-Rattie 82.94 4⇑*i*P **P** **23 18 33.8 +0.9**
comp=Z,15nm,1.0s,mb5.0
VIVF Saint-Julien-l 82.94 5⇑*i*P **P** **23 18 33.5 +0.5**
comp=Z,29nm,0.9s,mb5.0
VIVF Saint-Julien-l 82.94 5⇑*i*P **P** **23 18 33.5 +0.5**
VIVF pmax pmax
comp=Z,15nm,0.9s,mb5.0
VIVF Saint-Julien-l 82.94 5⇑*i*P **P** **23 18 33.5 +0.5**
comp=Z,15nm,0.9s,mb5.0
MBDF Montbardon 83.17 3⇑*i*P **P** **23 18 35.5 +1.4**
comp=Z,53nm,0.9s,mb5.3
MBDF Montbardon 83.17 3⇑*i*P **P** **23 18 35.5 +1.4**
MBDF pmax pmax
comp=Z,26nm,0.9s,mb5.3

MBDF	**Montbardon**	**83.17**		3⇑	*i* P		**P**	**23 18 35.5**	**+1.4**
	comp=Z,26nm,0.9s,mb5.3								
DAGI	**Agillar**	**83.25**	**337**		*i* P		**P**	**23 18 34.7**	**+0.1**
EPON	**Pontenova**	**83.30**	**14**		P		**P**	**23 18 35.2**	**+0.4**
	comp=Z,2μm,6.8s								
GNI	**Garni**	**83.43**	**335**		P		**P**	**23 18 36.4**	**+0.9**
	comp=Z,8.8nm,0.9s,mb4.8,baz=47,slow=7.3,SNR=5.9								
GNI	**Garni**	**83.43**	**335**		P		**P**	**23 18 36.9**	**+1.4**
GNI						pmax	pmax		
	comp=Z,49nm,1.4s								
GNI	**Garni**	**83.43**	**335**		*e*P		**P**	**23 18 36.3**	**+0.8**
	comp=Z,49nm,1.4s,mb5.3								
LASF	**Ste Croix**	**83.68**	**6**		*e*P		**P**	**23 18 37.6**	**+0.9**
	comp=Z,26nm,1.1s,mb5.0								
SMRF	**Simiane la Rot**	**83.87**		4⇑	*i* P		**P**	**23 18 39.1**	**+1.4**
	comp=Z,59nm,1.0s,mb5.3								
SMRF	**Simiane la Rot**	**83.87**		4⇑	*i* P		**P**	**23 18 39.1**	**+1.4**
	comp=Z,59nm,1.0s,mb5.7								
ELAN	**Lanestosa**	**83.87**	**11**		P		**P**	**23 18 38.4**	**+0.6**
	comp=Z,226nm,2.2s,mb5.9								
TOUF	**Mont Tournerai**	**83.90**	**3**		*e*P		**P**	**23 18 38.9**	**+1.0**
AUTN	**L'Aution**	**83.92**	**3**		*e*P		**P**	**23 18 39.1**	**+1.1**
SAOF	**Saorge**	**83.93**	**3**		*e*P		**P**	**23 18 38.3**	**+0.2**
MVIF	**Mont Vial**	**84.01**	**3**		*e*P		**P**	**23 18 39.1**	**+0.7**
LUCF	**Luceram**	**84.02**	**3**		*e*P		**P**	**23 18 39.2**	**+0.7**
SBF	**Sospel**	**84.05**	**3**		*e*P		**P**	**23 18 39.1**	**+0.4**
	comp=Z,120nm,1.0s,mb5.7								
SBF	**Sospel**	**84.05**	**3**		*e*P		**P**	**23 18 39.1**	**+0.4**
SBF						pmax	pmax		
	comp=Z,60nm,1.0s,mb5.7								
SBF	**Sospel**	**84.05**	**3**		*e*P		**P**	**23 18 39.1**	**+0.4**
	comp=Z,60nm,1.0s,mb5.7								
CALN	**Calern**	**84.14**	**3**		*e*P		**P**	**23 18 39.9**	**+0.8**
REVF	**Revere**	**84.17**	**3**		*e*P		**P**	**23 18 39.4**	**+0.1**
SJPF	**Ste Jean**	**84.23**	**9**		*e*P		**P**	**23 18 40.3**	**+0.7**
	comp=Z,16nm,0.7s,mb5.0								
SJPF	**Ste Jean**	**84.23**	**9**		*e*P		**P**	**23 18 40.3**	**+0.7**
SJPF						pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0								
SJPF	**Ste Jean**	**84.23**	**9**		*e*P		**P**	**23 18 40.3**	**+0.7**
	comp=Z,8.3nm,0.7s,mb5.0								
HOMI	**Horasan**	**84.23**	**337**		*i* P		**P**	**23 18 40.3**	**+0.6**
DYDN	**Diyadin**	**84.27**	**336**		*i* P		**P**	**23 18 41.2**	**+1.4**
MTLF	**Montolieu**	**84.30**		7⇑	*i* P		**P**	**23 18 40.4**	**+0.5**
	comp=Z,50nm,1.0s,mb5.3								
MTLF	**Montolieu**	**84.30**		7⇑	*i* P		**P**	**23 18 40.4**	**+0.5**
MTLF						pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3								
MTLF	**Montolieu**	**84.30**		7⇑	*i* P		**P**	**23 18 40.4**	**+0.5**
	comp=Z,25nm,1.0s,mb5.3								
FRF	**La Foret Royal**	**84.33**	**4**		*e*P		**P**	**23 18 40.5**	**+0.4**
	comp=Z,78nm,1.0s,mb5.5								
FRF	**La Foret Royal**	**84.33**	**4**		*e*P		**P**	**23 18 40.5**	**+0.4**
FRF						pmax	pmax		
	comp=Z,39nm,1.0s,mb5.5								
FRF	**La Foret Royal**	**84.33**	**4**		*e*P		**P**	**23 18 40.5**	**+0.4**
	comp=Z,39nm,1.0s,mb5.5								
EPF	**Esparros**	**84.46**	**8**		*e*P		**P**	**23 18 40.5**	**-0.2**
	comp=Z,35nm,0.9s,mb5.2								
EPF	**Esparros**	**84.46**	**8**		*e*P		**P**	**23 18 40.5**	**-0.2**
EPF						pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2								
EPF	**Esparros**	**84.46**	**8**		*e*P		**P**	**23 18 40.5**	**-0.2**
	comp=Z,18nm,0.9s,mb5.2								
ETSF	**Etsaut**	**84.51**	**9**		*e*P		**P**	**23 18 41.6**	**+0.6**
	comp=Z,39nm,0.8s,mb5.3								
ETSF	**Etsaut**	**84.51**	**9**		*e*P		**P**	**23 18 41.6**	**+0.6**
ETSF						pmax	pmax		
	comp=Z,19nm,0.8s,mb5.3								
ETSF	**Etsaut**	**84.51**	**9**		*e*P		**P**	**23 18 41.6**	**+0.6**
	comp=Z,20nm,0.8s,mb5.3								
LMR	**La Mourre**	**84.55**	**4**		*e*P		**P**	**23 18 41.8**	**+0.6**
	comp=Z,73nm,1.0s,mb5.5								
LMR	**La Mourre**	**84.55**	**4**		*e*P		**P**	**23 18 41.8**	**+0.6**
LMR						pmax	pmax		
	comp=Z,37nm,1.0s,mb5.5								
LMR	**La Mourre**	**84.55**	**4**		*e*P		**P**	**23 18 41.8**	**+0.6**
	comp=Z,37nm,1.0s,mb5.5								
MLS	**Moulis**	**84.59**	**8**		*e*P		**P**	**23 18 41.9**	**+0.5**
JMB	**Yambol**	**84.62**	**349**		P		**P**	**23 18 42.1**	**+0.5**
RESF	**Ens**	**84.68**	**8**		*e*P		**P**	**23 18 43.1**	**+1.2**
EBIE	**Bielsa**	**84.78**	**8**		P		**P**	**23 18 43.4**	**+1.0**
	comp=Z,42nm,1.0s,mb5.5								
PLD	**Plovdiv**	**85.19**	**350**		P		**P**	**23 18 44.1**	**-0.3**
EJON	**La Jonquera**	**85.24**	**6**		P		**P**	**23 18 45.8**	**+1.2**
	comp=Z,35nm,2.1s,mb5.1								
PGF	**Pioggiola**	**85.41**		2⇑	*i* P		**P**	**23 18 46.0**	**+0.5**
	comp=Z,153nm,1.0s,mb5.8								
PGF	**Pioggiola**	**85.41**		2⇑	*i* P		**P**	**23 18 46.0**	**+0.5**
PGF						pmax	pmax		
	comp=Z,77nm,1.0s,mb5.8								
PGF	**Pioggiola**	**85.41**		2⇑	*i* P		**P**	**23 18 46.0**	**+0.5**
	comp=Z,77nm,1.0s,mb5.8								
MVO	**Moncorvo**	**85.43**	**14**		eLQ			23 37 20.1	
MVO					eLR		LR	23 42 17.5	
	comp=Z,3μm,18.0s								
BNGL	**BINGOL**	**85.45**	**337**		*i* P		**P**	**23 18 47.7**	**+1.9**
AQU	**L'Aquila**	**85.61**	**359**		P		**P**	**23 18 47.5**	**+1.0**
AQU						pmax	pmax		
	comp=Z,24nm,0.8s,mb5.5								
AQU	**L'Aquila**	**85.61**	**359**	⇓	*i* P		**P**	**23 18 47.6**	**+1.1**
AQU	**L'Aquila**	**85.61**	**359**		*e*P		**P**	**23 18 47.2**	**+0.7**
	comp=Z,24nm,0.8s,mb5.5								
SKO	**Skopje**	**85.62**	**353**		*e*P		**P**	**23 18 46.6**	**0.0**
ESAC	**San Caprasio**	**85.68**	**9**		P		**P**	**23 18 48.1**	**+1.2**
	comp=Z,58nm,0.9s,mb5.8								
PVIS	**Viseu**	**85.74**	**15**		*e*P		**P**	**23 18 47.6**	**+0.4**
MTE	**Manteigas**	**86.10**	**15**		eLQ			23 38 35.5	
MTE					eLR		LR	23 43 00.9	
	comp=Z,4μm,20.0s								
VAY	**Valandovo**	**86.17**	**352**		*e*P		**P**	**23 18 47.7**	**-1.6**
EPOB	**Poblet**	**86.19**	**8**		P		**P**	**23 18 51.3**	**+1.9**
	comp=Z,55nm,1.3s,mb5.6								
ALN	**Alexandroupoli**	**86.23**	**349**		P		**P**	**23 18 49.7**	**+0.1**
BR131	**Keskin Array S**	**86.26**	**343**		*e*P		**P**	**23 18 49.9**	**+0.1**
BRTR	**Keskin Array B**	**86.26**	**343**		P		**P**	**23 18 50.4**	**+0.6**
	comp=Z,15nm,0.9s,mb5.2,baz=45,slow=2.4,SNR=31								
KNT	**Kendrikon**	**86.30**	**351**		P		**P**	**23 18 50.2**	**+0.2**
GUD	**Guadarrama**	**86.34**	**12**		P		**P**	**23 18 50.5**	**+0.3**
GUD						pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8								
GUD	**Guadarrama**	**86.34**	**12**		P		**P**	**23 18 50.5**	**+0.3**
	comp=Z,3.9nm,0.7s,mb4.8								
ETOR	**Torete**	**86.41**	**10**		P		**P**	**23 18 50.3**	**-0.2**
ETOR						pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.1								
ETOR	**Torete**	**86.41**	**10**		P		**P**	**23 18 50.3**	**-0.2**
	comp=Z,8.1nm,0.6s,mb5.1								
BEST	**Besiri**	**86.43**	**337**		*i* P		**P**	**23 18 50.6**	**-0.1**
OHR	**Ohrid**	**86.52**	**353**		*e*P		**P**	**23 18 48.7**	**-2.3**
GRG	**Griva**	**86.55**	**352**		P		**P**	**23 18 51.0**	**-0.2**
SOH	**Sokhos**	**86.59**	**351**		P		**P**	**23 18 50.5**	**-0.9**
HORT	**Hortiatis**	**86.84**	**351**		P		**P**	**23 18 52.2**	**-0.4**
OUR	**Ouranopolis**	**87.02**	**351**		P		**P**	**23 18 53.3**	**-0.2**
PLG	**Polygyros**	**87.03**	**351**		P		**P**	**23 18 54.2**	**+0.7**
PMRV	**Marv??o**	**87.08**	**15**		*e*P		**P**	**23 18 53.5**	**-0.3**
PMRV					eLQ			23 38 41.6	
PMRV					eLR		LR	23 42 54.4	
	comp=Z,3μm,18.0s								
PMAFR	**Mafra**	**87.23**	**16**		*e*P		**P**	**23 18 55.0**	**+0.5**
PMAFR					eLQ			23 38 33.2	
PMAFR					eLR		LR	23 44 18.0	
	comp=Z,4μm,16.0s								
LOS	**Limnos**	**87.30**	**350**		P		**P**	**23 18 53.9**	**-0.9**
ESDC	**Sonseca Array**	**87.32**	**12**		P		**P**	**23 18 54.6**	**-0.3**
	comp=Z,8.3nm,0.7s,mb5.0,baz=347,slow=4.6,SNR=54								
ESDC					pP		pP	23 19 05.3	-1.7
	comp=Z,4.8nm,0.8s,baz=349,slow=4.5,SNR=9.2								
ESDC	**Sonseca Array**	**87.32**	**12**		P		**P**	**23 18 54.9**	**0.0**
LIA	**Limnos Island**	**87.32**	**350**		P		**P**	**23 18 55.0**	**0.0**
LIT	**Litohoron**	**87.39**	**352**		P		**P**	**23 18 51.5**	**-3.8**
WRAB	**Tennant Creek**	**87.45**	**232**	⇑	*i* P		**P**	**23 18 52.5**	**-3.2**
WRA	**Warramunga Arr**	**87.47**	**232**		P		**P**	**23 18 54.2**	**-1.5**
	comp=Z,3.8nm,0.8s,mb4.7,baz=37,slow=6.0,SNR=15								
PESTR	**Estremoz**	**87.59**	**15**		*e*P		**P**	**23 18 55.7**	**-0.6**
	comp=Z,19nm,1.4s,mb5.1								
PESTR					eLQ			23 38 24.7	
PESTR					eLR		LR	23 43 36.6	
	comp=Z,3μm,16.0s								
ECHE	**Chera**	**87.74**	**10**		P		**P**	**23 18 57.9**	**+0.9**
ECHE						pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1								
ECHE	**Chera**	**87.74**	**10**		P		**P**	**23 18 57.9**	**+0.9**
	comp=Z,11nm,0.9s,mb5.1								
EVO	**Evora**	**87.86**	**15**		*e*P		**P**	**23 18 56.4**	**-1.1**
	comp=Z,54nm,1.6s,mb5.2								
EVO	**Evora**	**87.86**	**15**		*e*P		**P**	**23 18 56.7**	**-0.8**
XOR	**Xorichti**	**88.05**	**351**		P		**P**	**23 18 57.9**	**-0.6**
PBAR	**Barrancos**	**88.36**	**15**		*e*P		**P**	**23 18 59.3**	**-0.6**
PBAR					eLR		LR	23 43 04.8	
	comp=Z,3μm,18.0s								
PBEJ	**Beja**	**88.37**	**15**		*e*P		**P**	**23 19 00.3**	**+0.3**
EVIA	**Vianos**	**88.52**	**11**		P		**P**	**23 19 01.2**	**+0.5**
EVIA						pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0								
EVIA	**Vianos**	**88.52**	**11**		P		**P**	**23 19 01.2**	**+0.6**
	comp=Z,8.8nm,1.0s,mb5.0								
PTEO	**Sao Teotonio**	**88.70**	**16**		*e*P		**P**	**23 19 01.1**	**-0.5**
EADA	**Adamuz**	**88.72**	**13**		P		**P**	**23 19 02.0**	**+0.4**
	comp=Z,13nm,0.9s,mb5.3								
EMIN	**Mina Concepcio**	**88.81**	**14**		P		**P**	**23 19 01.9**	**-0.2**
	comp=Z,8.0nm,0.9s,mb5.0								
EBAN	**Banos Encina**	**88.83**	**12**		P		**P**	**23 19 02.5**	**+0.4**
EBAN						pmax	pmax		
	comp=Z,6.0nm,0.7s,mb5.0								
EBAN	**Banos Encina**	**88.83**	**12**		P		**P**	**23 19 02.5**	**+0.3**
	comp=Z,6.3nm,0.7s,mb5.0								
MORF	**Marmelete**	**88.95**	**16**		*e*P		**P**	**23 19 01.6**	**-1.1**
MORF					eLQ			23 42 48.3	
MORF					eLR		LR	23 44 59.5	
	comp=Z,4μm,18.0s								
PVAQ	**Vaqueiros**	**89.01**	**15**		*e*P		**P**	**23 19 02.3**	**-0.7**
PVAQ					eLQ			23 37 43.3	
PVAQ					eLR		LR	23 44 35.5	
	comp=Z,4μm,20.0s								
PBDV	**Barranco-do-Ve**	**89.13**	**15**		eLQ			23 37 12.3	
PBDV					eLR		LR	23 45 11.2	
	comp=Z,5μm,20.0s								
EQES	**Quesada**	**89.27**	**12**		P		**P**	**23 19 05.6**	**+1.4**
	comp=Z,8.2nm,1.0s,mb5.0								
ELUQ	**Luque**	**89.36**	**13**		P		**P**	**23 19 04.5**	**-0.2**
ELUQ						pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.3								
ELUQ	**Luque**	**89.36**	**13**		P		**P**	**23 19 04.5**	**-0.1**
	comp=Z,1.0nm,0.6s,mb4.3								
PSI	**Prapat**	**89.41**	**274**		P		**P**	**23 19 05.1**	**-0.1**
	comp=Z,26nm,1.0s,mb5.5,baz=342,slow=2.8,SNR=15								
HYB	**Hyderabad**	**89.62**	**298**		*i* P		**P**	**23 19 05.5**	**-0.7**
HYB					*e*		pP	23 19 18.0	-0.4
HYB	**Hyderabad**	**89.62**	**298**		*e*P		**P**	**23 19 05.5**	**-0.7**
HYB					*e*		pP	23 19 18.0	-0.4
ECOG	**Cogollos-Vega**	**89.73**	**12**		P		**P**	**23 19 06.6**	**+0.2**
ECOG						pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2								
ECOG	**Cogollos-Vega**	**89.73**	**12**		P		**P**	**23 19 06.6**	**+0.2**
	comp=Z,12nm,0.9s,mb5.2								
ELOJ	**Sierra Loja**	**89.78**	**12**		P		**P**	**23 19 07.2**	**+0.6**
ELOJ						pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2								
ELOJ	**Sierra Loja**	**89.78**	**12**		P		**P**	**23 19 07.2**	**+0.6**
	comp=Z,13nm,1.0s,mb5.2								
ESPR	**Espera**	**89.82**	**14**		P		**P**	**23 19 07.1**	**+0.3**
	comp=Z,13nm,1.0s,mb5.2								
ERON	**Agron**	**89.95**	**12**		P		**P**	**23 19 07.5**	**0.0**
ASAR	**Alice Springs**	**90.85**	**231**		P		**P**	**23 19 10.8**	**-0.8**
	comp=Z,4.5nm,0.9s,mb4.8,baz=35,slow=4.9,SNR=21								
KEST	**Kesra**	**92.22**	**2**		P		**P**	**23 19 17.9**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.5,baz=111,slow=5.2,SNR=4.9								
MIB	**Mutribah**	**92.36**	**329**		*e*P		**P**	**23 19 18.3**	**-0.5**
	baz=329								
MIB						AMb	AMB	23 19 19.2	
	comp=Z,66nm,0.8s,mb6.0,baz=329								
MMAI	**Mount Meron Ar**	**92.42**	**340**		P		**P**	**23 19 18.5**	**-0.5**
	comp=Z,6.8nm,0.8s,mb5.0,baz=314,slow=11,SNR=5.9								
UMR	**Umm Al-Rimmam**	**92.48**	**329**		*e*P		**P**	**23 19 18.8**	**-0.5**
	baz=329								
UMR						AMb	AMB	23 19 19.6	
	comp=Z,25nm,1.1s,mb5.5,baz=329								
NAY	**Al-Naaiem**	**92.91**	**329**		*e*P		**P**	**23 19 20.1**	**-1.2**
	baz=329								
NAY						AMb	AMB	23 19 21.9	
	comp=Z,9.0nm,1.0s,mb5.2,baz=329								
ASF	**Jabal al Asfar**	**92.92**	**339**		P		**P**	**23 19 21.3**	**0.0**
	comp=Z,8.4nm,0.9s,mb5.2,baz=255,slow=5.0,SNR=9.8								
MDT	**Midelt**	**93.98**	**14**		P		**P**	**23 19 25.5**	**-0.6**
	comp=Z,5.1nm,1.0s,mb4.9,baz=347,slow=7.8,SNR=8.3								
TORD	**Torodi Ar. Bea**	**114.17**	**11**		PKP		PKiKP	23 24 46.7	-1.0
	comp=Z,0.7nm,0.9s,baz=335,slow=3.8,SNR=3.7								
TSUM	**Tsumeb**	**146.54**	**350**		PKPbc		PKPbc	23 25 49.3	-0.2
	comp=Z,12nm,0.9s,baz=2.6,slow=2.5,SNR=15								
MAW	**Mawson**	**151.25**	**218**		PKPbc		PKPbc	23 25 57.5	-2.6
	comp=Z,6.3nm,0.7s,baz=100,slow=1.6,SNR=5.2								
BOSA	**Boshof**	**154.15**	**331**		PKPbc		PKPbc	23 26 07.7	0.0
	comp=Z,4.1nm,0.9s,baz=28,slow=2.4,SNR=5.3								
BOSA					PKPab		PKPab	23 26 19.3	-2.2
	comp=Z,6.5nm,0.8s,baz=30,slow=7.9,SNR=4.4								
SUR	**Sutherland**	**158.89**	**338**		PKPab		PKPab	23 26 42.2	+0.4
	comp=Z,9.4nm,1.0s,baz=105,slow=19,SNR=2.5								

*IDC **29** 23:11:03.3±1.4,5259N×168.18W,h0km,mb3.7/8, mb1 4.0/10,mb1mx3.7/28,mbtmp3.9/10,ML3.6/2, Error ellipse: s-maj=48.0km s-min=15.0km az=179.0*
*NEIC **29** 23:11:05.2,5228N×168.20W,h5km,ML3.2(AEIC), After AEIC.*
*ISCJB **29** 23:11:06.8±1.6,523N±0.1×168.3W±0.1,h45km±13km, mb3.7/7, Error ellipse: s-maj=21.0km s-min=9.3km az=156.9*

ISC 29 23:11:06.2±2.5,5228N±010×1682W±01,h22km±17km,n16, σ0s87/18,mb3.7/7,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.81**	**330**	P	**Pb**	**23 11 20.6**	**-0.9**
NIKO				S	**Sb**	**23 11 32.1**	**+0.2**
OKCE	**Okmok Cone E**	**1.15**	**0**	P	**Pn**	**23 11 26.9**	**0.0**
UNV	**Unalaska Valle**	**1.87**	**32**	P	**Pn**	**23 11 37.0**	**+0.2**
UNV				S	**Sn**	**23 12 00.9**	**+1.2**
GSTR	**Great Sitkin T**	**4.85**	**271**	*e*Pn	**Pn**	**23 12 19.1**	**+1.3**
ADK	**Adak**	**5.26**	**269**	*e*Pn	**Pn**	**23 12 24.1**	**+0.7**
KDAK	**Kodiak Island**	**10.50**	**52**	Pn	**Pn**	**23 13 34.6**	**-0.6**
	0.8nm,0.3s,baz=1.6,slow=20,SNR=7.5						
FX1	**Attu Island--F**	**11.37**	**280**	Pn	**Pn**	**23 13 47.4**	**+0.3**
	1.3nm,0.3s,baz=75,slow=22,SNR=6.0						
FIB	**Fire Island**	**13.26**	**41**	*e*Pn	**Pn**	**23 14 19.0**	**+6.2**
PETK	**Petropavlovsk-**	**20.59**	**286**	P	**P**	**23 15 42.8**	**-0.5**
	4.1nm,0.6s,baz=81,slow=15,SNR=12						
PDAR	**Pinedale Array**	**39.70**	**80**	P	**P**	**23 18 38.6**	**+2.1**
	0.7nm,0.7s,mb3.5,baz=263,slow=5.4,SNR=3.8						
KSRS	**Korea Array**	**46.14**	**278**	P	**P**	**23 19 29.0**	**+0.3**
	1.3nm,0.6s,mb4.1,baz=60,slow=6.9,SNR=3.9						
SONM	**Songino Array**	**51.97**	**302**	P	**P**	**23 20 13.3**	**0.0**
	0.2nm,0.4s,mb3.4,baz=56,slow=6.3,SNR=4.1						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**23 20 12.7**	**-1.2**
	0.4nm,0.7s,mb3.5,baz=300,slow=6.5,SNR=4.3						
BVAR	**Borovoye Array**	**64.20**	**325**	P	**P**	**23 21 37.9**	**-0.8**
	0.6nm,0.5s,mb3.9,baz=49,slow=6.4,SNR=6.5						
MKAR	**Makanchi Array**	**64.39**	**314**	P	**P**	**23 21 39.1**	**-1.1**
	0.2nm,0.6s,mb3.4,baz=59,slow=7.0,SNR=3.6						
HFS	**Hagfors**	**67.93**	**359**	P	**P**	**23 22 01.8**	**-0.8**
	3.0nm,0.9s,mb4.3,baz=15,slow=6.3,SNR=4.9						

*ISCJB **29** 23:13:37.8±2.2,522N±0.2×168.1W±0.1,h36km±16km, mb3.8/9, Error ellipse: s-maj=25.8km s-min=10.8km az=5.6*
*IDC **29** 23:13:37.8±1.6,5281N×168.20W,h0km,mb3.8/10, mb1 4.0/12,mb1mx3.8/28,mbtmp3.9/12,ML3.5/2, Error ellipse: s-maj=46.6km s-min=15.8km az=178.0*
*NEIC **29** 23:13:37.6,5221N×168.19W,h5km,ML3.1(AEIC), After AEIC.*

ISC 29 23:13:41.5±1.8,524N±02×1682W±01,h38km±13km,n17, σ0s95/18,mb3.8/9,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.73**	**327**	P	**Pn**	**23 13 53.9**	**-1.4**
NIKO				S	**Sn**	**23 14 06.7**	**+1.4**
OKCE	**Okmok Cone E**	**1.06**	**1**	P	**Pn**	**23 14 00.4**	**+0.5**
UNV	**Unalaska Valle**	**1.80**	**34**	P	**Pn**	**23 14 10.1**	**+0.2**
CHGN	**Chignik**	**6.94**	**52**	Pn	**Pn**	**23 15 20.5**	**-0.1**
OHAK	**Old Harbor**	**9.88**	**55**	*e*Pn	**Pn**	**23 16 00.5**	**-0.3**
KDAK	**Kodiak Island**	**10.45**	**53**	Pn	**Pn**	**23 16 07.5**	**-1.2**
	0.6nm,0.3s,baz=107,slow=8.0,SNR=7.7						
FX1	**Attu Island--F**	**11.35**	**280**	Pn	**Pn**	**23 16 21.4**	**+0.6**
	1.1nm,0.3s,baz=78,slow=19,SNR=5.9						
PETK	**Petropavlovsk-**	**20.56**	**286**	P	**P**	**23 18 15.7**	**-0.8**
	2.0nm,0.5s,baz=82,slow=15,SNR=6.7						
PDAR	**Pinedale Array**	**39.69**	**80**	P	**P**	**23 21 10.5**	**+0.8**
	0.6nm,0.9s,mb3.3,baz=324,slow=3.8,SNR=3.5						
SONM	**Songino Array**	**51.92**	**301**	P	**P**	**23 22 46.1**	**+0.1**
	0.8nm,1.0s,mb3.6,baz=47,slow=7.5,SNR=5.2						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**23 22 49.6**	**+2.6**
	0.6nm,0.9s,mb3.5,baz=303,slow=5.6,SNR=4.0						
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**23 23 29.5**	**-0.1**
	4.6nm,1.1s,mb4.4,baz=357,slow=6.7,SNR=2.8						
BVAR	**Borovoye Array**	**64.12**	**325**	P	**P**	**23 24 11.2**	**-0.1**
	0.7nm,0.5s,mb4.0,baz=51,slow=5.6,SNR=11						
MKAR	**Makanchi Array**	**64.33**	**314**	P	**P**	**23 24 11.9**	**-0.9**
	0.2nm,0.5s,mb3.4,baz=43,slow=7.3,SNR=5.1						
HFS	**Hagfors**	**67.84**	**359**	P	**P**	**23 24 33.9**	**-1.2**
	2.5nm,0.8s,mb4.3,baz=35,slow=5.3,SNR=3.9						
AKASG	**Malin Array Be**	**76.26**	**349**	P	**P**	**23 25 25.0**	**-0.5**
	0.6nm,0.3s,mb4.0,baz=16,slow=6.6,SNR=3.4						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**23 26 20.6**	**+1.3**
	0.6nm,0.9s,mb3.8,baz=32,slow=4.5,SNR=3.0						

*IDC **29** 23:16:56.9±5.0,2149S×177.72W,h334km±47km,mb3.6/9, mb1 3.9/10,mb1mx3.6/19,mbtmp3.6/10,Error ellipse: s-maj=26.3km s-min=19.0km az=8.0*
*ISCJB **29** 23:16:57.8±4.9,217S±02×1778W±02,h352km±50km, mb3.8/11, Error ellipse: s-maj=28.1km s-min=22.3km az=24.7*
*NEIC **29** 23:16:57.3±3.3,2153S×177.70W,h337km±31km,mb3.9/3, Error ellipse: s-maj=23.8km s-min=19.3km az=193.0*

ISC 29 23:16:58.1±3.6,216S±02×1777W±01,h341km±37km,n47, σ0s84/16,mb3.8/11,10C-5D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.70**	**265**	Pn	**Pn**	**23 20 12.3**	**+0.6**
	6.5nm,0.6s						
URZ	**Urewera**	**17.20**	**194**	P	**P**	**23 20 35.9**	**-0.9**
	6.6nm,0.3s,baz=77,slow=3.9,SNR=14						
RPZ	**Rata Peaks**	**23.96**	**200**	P	**P**	**23 21 43.3**	**+0.8**
	7.0nm,0.6s,mb4.1,baz=14,slow=13,SNR=6.7						
CTAO	**Charters Tower**	**33.64**	**266**	*e*P	**P**	**23 23 09.0**	**+1.0**
	4.0nm,0.6s,mb3.8						
PMG	**Port Moresby**	**35.83**	**284**	P	**P**	**23 23 25.5**	**-1.1**
	25nm,0.9s,mb4.4,baz=94,slow=2.3,SNR=6.4						
PMG	**Port Moresby**	**35.83**	**284**	P	**P**	**23 23 25.5**	**-1.1**
STKA	**Stephens Creek**	**37.55**	**245**	P	**P**	**23 23 41.2**	**+0.4**
	4.7nm,0.6s,mb3.9,baz=96,slow=9.7,SNR=12						
STKA	**Stephens Creek**	**37.55**	**245**	P	**P**	**23 23 41.2**	**+0.4**
ASAR	**Alice Springs**	**44.52**	**258**	P	**P**	**23 24 37.1**	**-0.1**
	6.1nm,0.8s,mb3.8,baz=98,slow=7.7,SNR=58						
ASAR				PcP	PcP	23 26 13.1	-0.7
	1.5nm,0.8s,baz=99,slow=3.8,SNR=5.7						
WRAB	**Tennant Creek**	**44.70**	**263**	P	**P**	**23 24 37.9**	**-0.7**
	0.4nm,0.4s,mb2.9						
WRA	**Warramunga Arr**	**44.70**	**263**	P	**P**	**23 24 37.8**	**-0.9**
	5.2nm,0.9s,mb3.7,baz=95,slow=8.0,SNR=16						
NVAR	**Mina Array Bea**	**81.64**	**43**	P	**P**	**23 28 39.5**	**+0.7**
	0.6nm,0.6s,mb3.6,baz=218,slow=8.6,SNR=5.2						
NVAR	**Mina Array

KOPT	**Kop Dagi**	**0.27**	**287**	*i* P	Pg	23 32 30.6	+0.7
KOPT				*i* S	Sg	23 32 35.8	+2.4
ERZM	**Erzurum**	**0.41**	**94**	*i* P	Pg	23 32 32.9	+0.3
ERZM				*i* S	Sg	23 32 40.3	+2.2
ERZM	**Erzurum**	**0.41**	**94**	*i* P	Pg	23 32 33.0	+0.3
ERZM				*i* S	Sg	23 32 40.9	+2.9
HOMI	**Horasan**	**0.83**	**82**	*i* P	Pg	23 32 40.1	-0.5
HOMI				*i* S	Sg	23 32 54.4	+3.0
HOMI	**Horasan**	**0.83**	**82**	*eP*	Pg	23 32 40.5	-0.1
HOMI				*i* S	Sg	23 32 55.6	+4.2
BNGL	**BINGOL**	**1.02**	**166**	*i* P	Pg	23 32 43.1	-1.0
DDEM	**Demirkent**	**1.18**	**36**	*i* P	Pb	23 32 46.6	-0.7
MACK	**Trabzon**	**1.29**	**321**	*i* P	Pn	23 32 49.2	+0.3
ARTV	**Artvin**	**1.50**	**34**	*i* P	Pn	23 32 51.6	-0.2
ARTV				*i* S	Sn	23 33 11.5	0.0
DBOC	**Borcka**	**1.54**	**24**	*i* P	Pn	23 32 52.9	+0.6
BEST	**Besiri**	**2.07**	**170**	*i* P	Pn	23 33 01.2	+1.6
BEST				*i* S	Sn	23 33 30.6	+5.0

ISCJB ***29*** *23:37:47.7±0.5, 3696N.004×2933E.003, h10km±5km, Error ellipse: s-maj=5.9km s-min=4.4km az=3.7*
CSEM ***29*** *23:37:47.1±0.1, 3697N×2935E, h10km, MD3.2*
DDA ***29*** *23:37:48.0, 3695N×2934E, h9km±5km, Md3.2*
ISK ***29*** *23:37:47.2, 3697N×2934E, h9km, MD3.0*

ISC 29 23:37:48.3±0.5, 3696N±004×2934E±003, h12km±5km, n18, σ0°81/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**33**	*i* P	**Pg**	**23 37 54.9**	**-0.1**
GOLH				*i* S	**Sg**	**23 38 01.1**	**+1.6**
ELL	**Elmali**	**0.51**	**114**	*ePG*	**Pg**	**23 37 57.0**	**-1.3**
ELL				*eSG*	**Sg**	**23 38 05.3**	**+0.4**
DALT	**Dalyan (Mudla)**	**0.59**	**251**	*ePG*	**Pg**	**23 37 59.5**	**-0.3**
DALT				*eSG*	**Sg**	**23 38 07.8**	**+0.1**
TURN	**Turunc**	**0.59**	**262**	*i* P	**Pg**	**23 38 04.3**	**+4.5**
TURN				*i* S	**Sg**	**23 38 19.1**	**+11**
AKAS	**Kas**	**0.76**	**163**	*i* P	**Pg**	**23 38 01.1**	**-1.9**
AKAS				*i* S	**Sg**	**23 38 14.3**	**+1.5**
DENT	**Denizli**	**0.83**	**343**	*ePG*	**Pg**	**23 38 03.3**	**-1.0**
YER	**Yerkesik**	**0.86**	**282**	*ePG*	**Pg**	**23 38 04.7**	**-0.2**
YER				*eSG*	**Sg**	**23 38 16.5**	**+0.4**
ANTB	**Antalya**	**1.06**	**93**	*ePG*	**Pg**	**23 38 08.3**	**-0.3**
BCK	**Bucak**	**1.12**	**63**	*ePN*	**Pn**	**23 38 08.8**	**-0.9**
MLSB	**Milas**	**1.29**	**286**	*ePN*	**Pn**	**23 38 12.0**	**-0.1**
KHL	**Karahalli**	**1.37**	**6**	*ePN*	**Pn**	**23 38 12.9**	**-0.3**
DAT	**Datca**	**1.43**	**261**	*ePN*	**Pn**	**23 38 14.2**	**+0.3**
BDRM	**Kayabasi**	**1.52**	**275**	*i* P	**Pn**	**23 38 16.4**	**+1.2**
KULA	**Kula-Manisa**	**1.64**	**341**	*ePN*	**Pn**	**23 38 17.0**	**0.0**
ALT	**Altintas**	**2.18**	**16**	*ePN*	**Pn**	**23 38 37.3**	**-0.1**
AKS	**Akhisar**	**2.26**	**328**	*ePN*	**Pn**	**23 38 25.2**	**-0.3**
HDMB	**Hadim**	**2.52**	**89**	*ePN*	**Pn**	**23 38 29.7**	**+0.7**
KONT	**Konya--Tatoy**	**2.60**	**67**	*ePN*	**Pn**	**23 38 30.6**	**+0.5**

ISCJB ***29*** *23:40:17.3±0.9, 5221N.009×1683W.01, h33km, mb3.6/5, Error ellipse: s-maj=13.5km s-min=10.8km az=33.1*
NEIC ***29*** *23:40:18.4, 5245N×168.17W, h1km, ML2.8(AEIC), After AEIC.*
IDC ***29*** *23:40:21.4±1.1, 5264N×168.14W, h43km±9km, mb3.4/6, mb1 3.8/8, mb1mx3.5/27, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=50.5km s-min=15.3km az=7.0*

ISC 29 23:40:19.8±0.9, 5237N±010×1681W±01, h35km, (h46km±3.4km: pP-P), n13, σ0°89/14, mb3.6/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.74**	**325**	P	**Pn**	**23 40 32.7**	**-1.1**
NIKO				S	**Sn**	**23 40 44.8**	**+0.9**
OKCE	**Okmok Cone E**	**1.06**	**359**	P	**Pn**	**23 40 39.0**	**+0.9**
UNV	**Unalaska Valle**	**1.78**	**33**	*ePn*	**Pn**	**23 40 47.9**	**-0.1**
KDAK	**Kodiak Island**	**10.43**	**53**	P	**Pn**	**23 42 45.4**	**-1.2**
	0.4nm,0.3s,baz=205,slow=6.6,SNR=3.0						
KDAK	**Kodiak Island**	**10.43**	**53**	P	**Pn**	**23 42 45.4**	**-1.2**
FX1	**Attu Island--F**	**11.38**	**280**	P	**Pn**	**23 43 00.1**	**+0.5**
	1.1nm,0.3s,baz=72,slow=6.3,SNR=5.7						
PETK	**Petropavlovsk-**	**20.59**	**286**	P	**P**	**23 44 54.5**	**-0.9**
	3.1nm,0.6s,baz=79,slow=14,SNR=9.7						
NVAR	**Mina Array Bea**	**36.91**	**92**	P	**P**	**23 47 26.9**	**+1.9**
	0.5nm,0.8s,mb3.4,baz=294,slow=9.7,SNR=3.2						
NVAR				pP	pP	23 47 38.0	+2.9
	0.2nm,0.5s,baz=291,slow=7.8,SNR=3.5						
SONM	**Songino Array**	**51.94**	**301**	P	**P**	**23 49 25.1**	**+0.2**
	0.5nm,0.8s,mb3.5,baz=68,slow=4.6,SNR=2.7						
TXAR	**Lajitas Array**	**52.00**	**90**	P	**P**	**23 49 25.8**	**+0.3**
	0.3nm,0.6s,mb3.4,baz=300,slow=6.1,SNR=3.1						
TXAR				pP	pP	23 49 37.2	+1.2
	0.4nm,0.8s,baz=298,slow=5.4,SNR=4.2						
TXAR	**Lajitas Array**	**52.00**	**90**	P	**P**	**23 49 25.8**	**+0.3**
TXAR				pP	pP	23 49 37.2	+1.2
HFS	**Hagfors**	**67.84**	**359**	P	**P**	**23 51 12.8**	**-0.9**
	2.7nm,0.8s,mb4.3,baz=324,slow=3.9,SNR=4.7						
CMAR	**Chiang Mai Arr**	**77.35**	**284**	P	**P**	**23 52 10.7**	**-0.3**
	0.7nm,0.9s,mb3.6,baz=21,slow=7.7,SNR=4.5						
CMAR				pP	pP	23 52 25.2	+3.3
	0.5nm,0.6s,baz=27,slow=6.3,SNR=3.1						

PRE ***29*** *23:40:23.4±1.4, 1232S×2759E, h10km, ML5.1*
IDC ***29*** *23:40:25.2±2.6, 1307S×2623E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.4/19, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=95.0km s-min=27.4km az=85.0*
ISCJB ***29*** *23:40:26.3±0.9, 1296S±006×2591E±009, h10km, mb3.7/2, Error ellipse: s-maj=12.7km s-min=7.8km az=162.7*
NEIC ***29*** *23:40:28.1±0.9, 1292S×2610E, h10km, mb3.7/1, Error ellipse: s-maj=19.7km s-min=13.3km az=68.0*

ISC 29 23:40:28.5±0.9, 1294S±006×2599E±009, h10km, n14, σ1°39/28, mb3.7/2, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**3.16**	**138**	*ePn*	**Pn**	**23 41 17.7**	**-0.6**
LSZ				*eSn*	**Sn**	**23 41 47.3**	**-8.8**
MSNA	**Messina**	**10.11**	**158**	*eP*	**Pn**	**23 42 53.3**	**-0.6**
MSNA				*eS*	**Sn**	**23 44 42.4**	**-5.0**
MSNA				AML	AML	23 45 57.3	
	comp=Z,14nm,0.5s						
TSUM	**Tsumeb**	**10.19**	**231**	*ePn*	**Pn**	**23 42 56.7**	**+1.7**
	comp=Z,6.8nm,0.6s						
TSUM				*eSn*	**Sn**	**23 44 47.9**	**-1.6**
LBTB	**Lobatse**	**12.02**	**182**	*ePn*	**Pn**	**23 43 18.9**	**-1.1**
LBTB				*eSn*	**Sn**	**23 43 29.6**	**-4.5**
KSR	**Koster**	**12.87**	**176**	*eP*	**Pn**	**23 43 37.6**	**+6.0**
KSR				*eS*	**Sn**	**23 45 58.9**	**+3.8**
KSR				AML	AML	23 47 34.1	
	comp=Z,8.2nm,0.6s						
SLR	**Silverton**	**12.91**	**171**	*eP*	**Pn**	**23 43 35.3**	**+3.1**
SLR				*eS*	**Sn**	**23 45 56.1**	**+0.2**
SLR				AML	AML	23 47 33.8	
	comp=Z,7.2nm,0.6s						
ERPM	**east rand prop**	**13.50**	**171**	*eP*	**Pn**	**23 43 42.0**	**+1.7**
ERPM				*eP*		23 46 04.1	
ERPM				*eS*	**Sn**	**23 46 06.8**	**-3.6**
ERPM				AML	AML	23 47 34.9	
	comp=Z,4.8nm,0.6s						
PRYS	**Parys**	**13.97**	**175**	*eP*	**Pn**	**23 43 52.1**	**+5.5**
PRYS				*eS*	**Sn**	**23 46 23.6**	**+1.7**
SWZ	**Schweizer**	**14.18**	**182**	*eP*	**Pn**	**23 43 56.6**	**+7.1**
SWZ				*eS*	**Sn**	**23 46 32.4**	**+5.4**
SWZ				AML	AML	23 48 12.6	
	comp=Z,8.7nm,0.7s						
SEK	**Senekal**	**15.38**	**175**	*eP*	**Pn**	**23 44 09.8**	**+4.1**
SEK				*eS*	**Sn**	**23 46 55.9**	**-0.4**
BOSA	**Boshof**	**15.61**	**182**	Pn	**Pn**	**23 44 05.5**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=12,slow=13,SNR=14						
BOSA				Sn	**Sn**	**23 46 56.5**	**-5.3**
	comp=Z,0.4nm,0.3s,baz=208,slow=14,SNR=5.4						
BOSA				Lg		23 48 38.9	
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=2.4						
BOSA	**Boshof**	**15.61**	**182**	Pn	**Pn**	**23 44 05.5**	**-3.2**
BOSA				*ePn*	**Pn**	**23 44 05.6**	**-3.1**
BOSA				*eSn*	**Sn**	**23 46 52.1**	**-10**
BOSA				Sn	**Sn**	**23 46 56.5**	**-5.3**
BOSA				Lg		23 48 38.9	
TORD	**Torodi Ar. Bea**	**35.38**	**316**	P	**P**	**23 47 24.9**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=126,slow=8.5,SNR=11						
GERES	**GERESS Array B**	**62.47**	**351**	P	**P**	**23 50 51.5**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.6,baz=163,slow=5.2,SNR=4.3						

NEIC ***30*** *00:03:05.0, 1679N×9976W, h22km, MD3.5(MEX), After MEX.*

MEX 30 00:03:05.3±0.6, 1680N×9978W, h24km±7km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.15**	**296**	*i* P	Pb	00 03 09.3	-1.0
ACX				*i* S	Sb	00 03 12.0	-1.6
ACX	**Acapulco**	**0.15**	**296**	*i* P	Pb	00 03 09.3	-1.0
ACX				*i* S	Sb	00 03 12.0	-1.6
ACX				*i* S	Sb	00 03 12.1	-1.5
CAIG	**El Cayaco**	**0.53**	**298**	*eP*	Pb	00 03 13.8	-2.1
CAIG				*i* S	Sb	00 03 22.0	-1.2
MEIG	**Mezcala**	**1.13**	**8**	*i* P	Pn	00 03 22.8	-2.8
MEIG				*i* S	Sn	00 03 36.4	-3.9
PNIG	**Pinotepa**	**1.64**	**104**	*i* P	Pn	00 03 30.5	-2.1
PNIG				*i* S	Sn	00 03 49.2	-3.7
ZIIG	**Zihuatanejo**	**1.80**	**297**	*i* P	Pn	00 03 32.0	-2.8
ZIIG				*i* S	Sn	00 03 53.8	-3.1
UTMO	**Huajuapan**	**2.15**	**61**	*i* P	Pn	00 03 36.8	-2.8
UTMO				*i* S	Sn	00 04 04.0	-1.5

IDC ***30*** *00:16:34.5±5.1, 2344N×12487E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, ML3.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/43, Error ellipse: s-maj=110.6km s-min=37.6km az=177.0*
ISCJB ***30*** *00:16:43.8±1.2, 243N±0.1×12520E±008, h48km±7km, mb3.4/4, Error ellipse: s-maj=22.5km s-min=6.2km az=149.7*
JMA ***30*** *00:16:43.5±0.2, 2425N×12520E, h27km, M3.5*
NEIC ***30*** *00:16:44.9±4.6, 2387N×12505E, h70km±25km, MG3.5(JMA), Error ellipse: s-maj=119.3km s-min=12.8km az=156.0*

ISC 30 00:16:42.5±2.0, 242N±01×12524E±007, h24km±11km, n17, σ0°88/23, mb3.4/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.58**	**15**	P	**Pb**	**00 16 54.5**	**+0.4**
JOGS				S	**Sb**	**00 17 02.7**	**+0.8**
JMJ	**Miyako jima 2**	**0.62**	**4**	P	**Pb**	**00 16 54.5**	**-0.2**
JMJ				S	**Sb**	**00 17 02.9**	**-0.1**
JTJ	**Tarama**	**0.67**	**312**	P	**Pb**	**00 16 55.1**	**-0.4**
JTJ				S	**Sb**	**00 17 03.7**	**-0.6**
JIJ	**Ishigaki jima**	**1.02**	**280**	P	**Pn**	**00 17 01.1**	**-0.1**
JIJ				*eS*	**Sb**	**00 17 14.1**	**-0.3**
JKRS	**Kuro-shima**	**1.13**	**272**	P	**Pn**	**00 17 03.7**	**+1.0**
JKRS				*eS*	**Sn**	**00 17 18.6**	**+1.1**
HATJ	**Hateruma jima**	**1.32**	**264**	P	**Pn**	**00 17 06.0**	**+0.6**
HATJ				*eS*	**Sn**	**00 17 22.5**	**+0.2**
IRIF	**Iriomote-Funau**	**1.39**	**276**	P	**Pn**	**00 17 07.0**	**+0.7**
YOJ	**Yonaguni jima**	**2.06**	**278**	P	**Pn**	**00 17 17.1**	**+1.6**
JKE	**Kume jima 2**	**2.54**	**33**	P	**Pn**	**00 17 22.3**	**+0.1**
NACB	**Ninganchiao**	**3.33**	**270**	*ePn*	**Pn**	**00 17 33.1**	**0.0**
YULB	**Yu-li**	**3.70**	**258**	*ePn*	**Pn**	**00 17 37.4**	**-0.8**
JOW	**Kunigami**	**3.79**	**46**	Pn	**Pn**	**00 17 45.8**	**+6.4**
	2.5nm,0.3s,baz=247,slow=15,SNR=3.8						
JOW				LR	LR	00 18 47.4	
	comp=Z,130nm,20.8s,baz=130,slow=29						
SSLB	**Suanglung**	**3.94**	**265**	*ePn*	**Pn**	**00 17 39.1**	**-2.4**
SONM	**Songino Array**	**27.94**	**332**	P	**P**	**00 22 31.0**	**+0.2**
	0.2nm,0.4s,mb3.1,baz=154,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**40.95**	**314**	P	**P**	**00 24 22.0**	**-1.0**
	0.8nm,0.4s,mb3.7,baz=102,slow=9.9,SNR=32						
ZALV	**Zalesovo Beam**	**42.30**	**325**	P	**P**	**00 24 31.9**	**-2.0**
	0.6nm,0.5s,mb3.5,baz=116,slow=9.8,SNR=4.5						
YKA	**Yellowknife Ar**	**81.49**	**24**	P	**P**	**00 28 57.8**	**+0.4**
	0.2nm,0.5s,mb3.3,baz=297,slow=5.1,SNR=4.1						

ISCJB ***30*** *00:19:53.1±1.8, 70S±0.1×15587E±006, h113km±18km, mb3.6/9, Error ellipse: s-maj=22.8km s-min=9.7km az=178.2*
NEIC ***30*** *00:19:54.0±1.3, 706S×15595E, h110km±13km, mb3.7/2, Error ellipse: s-maj=18.2km s-min=12.9km az=174.0*
IDC ***30*** *00:19:54.6±2.4, 708S×15585E, h112km±26km, mb3.5/7, mb1 3.6/10, mb1mx3.5/19, mbtmp3.6/10, MS4.2/1, Ms1 4.2/1, ms1mx3.1/31, Error ellipse: s-maj=24.0km s-min=15.7km az=171.0*

ISC 30 00:19:54.5±1.5, 70S±01×15587E±006, h111km±14km, n16, σ0°79/19, mb3.6/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.69**	**121**	P	**Pn**	**00 21 01.2**	**-2.0**
	12nm,0.3s,baz=204,slow=11,SNR=5.9						
HNR				S	**Sn**	**00 21 57.6**	**+1.1**
	11nm,0.3s,baz=20,slow=19,SNR=4.8						
HNR	**Honiara**	**4.69**	**121**	P	**Pn**	**00 21 01.2**	**-2.0**
HNR				S	**Sn**	**00 21 57.6**	**+1.1**
PMG	**Port Moresby**	**8.94**	**254**	P	**Pn**	**00 22 01.1**	**+0.3**
	1.9nm,0.3s,baz=39,slow=6.5,SNR=5.0						
PMG				S	**Sn**	**00 23 39.8**	**0.0**
	0.9nm,0.3s,baz=281,slow=23,SNR=2.5						
PMG	**Port Moresby**	**8.94**	**254**	P	**Pn**	**00 22 01.1**	**+0.3**
PMG				S	**Sn**	**00 23 39.8**	**0.0**
CTA	**Charters Tower**	**15.99**	**215**	P	**Pn**	**00 23 34.0**	**+0.9**
	0.3nm,0.3s,baz=60,slow=20,SNR=4.1						
WRAB	**Tennant Creek**	**24.50**	**236**	*eP*	**P**	**00 25 04.3**	**+0.6**
	1.3nm,0.4s,mb3.7						
WB2	**Warramunga Arr**	**24.51**	**236**	*eP*	**P**	**00 25 03.7**	**-0.1**
WRA	**Warramunga Arr**	**24.52**	**236**	P	**P**	**00 25 03.0**	**-0.9**
	2.7nm,0.7s,mb3.8,baz=61,slow=9.9,SNR=8.3						
ASAR	**Alice Springs**	**26.81**	**230**	P	**P**	**00 25 23.4**	**-1.1**
	0.8nm,0.5s,mb3.5,baz=57,slow=9.7,SNR=15						
STKA	**Stephens Creek**	**28.08**	**206**	P	**P**	**00 25 35.8**	**0.0**
	0.8nm,0.4s,mb3.6,baz=55,slow=12,SNR=2.5						
FITZ	**Fitzroy Crossi**	**31.44**	**247**	P	**P**	**00 26 05.5**	**-0.1**
	1.0nm,0.6s,mb3.7						
CBIJ	**Chichi jima**	**36.42**	**339**	LR	LR	00 38 11.5	
	comp=Z,341nm,19.8s,baz=160,slow=30						
CMAR	**Chiang Mai Arr**	**61.58**	**295**	P	**P**	**00 30 00.9**	**+0.2**
	0.3nm,0.4s,mb3.7,baz=123,slow=6.6,SNR=3.6						
SONM	**Songino Array**	**69.83**	**327**	P	**P**	**00 30 54.0**	**+0.9**
	0.7nm,0.5s,mb3.7,baz=137,slow=6.8,SNR=6.8						
MKAR	**Makanchi Array**	**84.00**	**318**	P	**P**	**00 32 13.2**	**+0.6**
	0.5nm,0.6s,mb3.5,baz=96,slow=8.2,SNR=6.9						
ZALV	**Zalesovo Beam**	**84.69**	**326**	P	**P**	**00 32 15.2**	**-0.7**
	0.2nm,0.3s,mb3.5,baz=108,slow=4.7,SNR=2.4						

ISCJB ***30*** *00:36:44.4±1.3, 5223N±006×16823W±006, h23km±8km, mb4.5/61, MS3.9/3, Error ellipse: s-maj=10.4km s-min=5.3km az=162.2*
BJI ***30*** *00:36:45.0, 5240N×16820W, h27km, mB5.3, mb4.8, Ms4.9, Msz4.5*
MOS ***30*** *00:36:46.9±1.1, 5246N×16841W, h33km, mb4.8/17, Error ellipse: s-maj=12.8km s-min=6.0km az=93.6*
NEIC ***30*** *00:36:47.3±1.4, 5237N×16824W, h28km±8km, mb4.5/21, ML3.8(AEIC), Error ellipse: s-maj=10.9km s-min=4.6km az=167.0*
IDC ***30*** *00:36:48.8±0.6, 5241N×16827W, h42km±4km, mb4.0/25, mb1 4.2/27, mb1mx4.2/32, mbtmp4.1/27, ML3.8/1, MS4.2/1, Ms1 4.2/1, ms1mx3.0/53, Error ellipse: s-maj=20.9km s-min=10.5km az=1.0*

ISC 30 00:36:46.6±1.2, 5231N±006×16825W±005, h25km±7km, h40km±3.0km: pP-P, n151, σ0°94/154, mb4.5/61, MS4.0/2, 15C-3D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.76**	**331**	P	**Pb**	**00 37 00.7**	**-0.4**
NIKO				S	**Sb**	**00 37 12.9**	**+1.9**
OKCE	**Okmok Cone E**	**1.12**	**3**	P	**Pn**	**00 37 06.4**	**-0.3**
OKFG	**Magazine Ridge**	**1.12**	**10**	P	**Pn**	**00 37 06.5**	**-0.2**
OKFG				S	**Sn**	**00 37 24.0**	**+2.7**
OKCD	**Okmok Cone D**	**1.12**	**4**	P	**Pn**	**00 37 06.5**	**-0.2**
UNV	**Unalaska Valle**	**1.86**	**34**	P	**Pn**	**00 37 15.7**	**-1.2**
UNV				S	**Sn**	**00 37 39.1**	**-0.5**
AKGG	**Akutan Green G**	**2.33**	**35**	P	**Pn**	**00 37 23.7**	**+0.5**
AKUT	**Akutan**	**2.36**	**38**	*eP*	**Pn**	**00 37 23.9**	**+0.2**
ATKA	**Atka Island**	**3.66**	**271**	P	**Pn**	**00 37 42.6**	**+1.1**
ADK	**Adak**	**5.22**	**269**	P	**Pn**	**00 38 04.3**	**+1.4**
SDPT	**Sand Point**	**5.52**	**53**	*eP*	**Pn**	**00 38 07.0**	**-0.1**
CHGN	**Chignik**	**7.00**	**51**	*eP*	**Pn**	**00 38 27.8**	**+0.3**
KDAK	**Kodiak Island**	**10.52**	**52**	P	**Pn**	**00 39 13.9**	**-1.6**
	2.1nm,0.3s,baz=259,slow=13,SNR=17						

FX1	**Attu Island--F**	**11.32**	**280**	P	**Pn**	**00 39 27.2**	**+0.7**
	2.0nm,0.3s,baz=304,slow=18,SNR=14						
PPLA	**Purkeypile**	**13.61**	**33**	*ePn*	**Pn**	**00 40 00.3**	**+2.5**
	19nm,0.7s						
CHUM	**Lake Minchumin**	**14.28**	**30**	*ePn*	**Pn**	**00 40 08.9**	**+2.1**
	11nm,0.5s						
KTH	**Kantishna Hill**	**14.48**	**32**	*ePn*	**Pn**	**00 40 10.4**	**+0.8**
	19nm,0.9s						
BPAW	**Bear Paw Mtn.**	**14.84**	**31**	*ePn*	**Pn**	**00 40 14.3**	**-0.3**
	20nm,0.8s						
MCK	**McKinley**	**15.27**	**34**	*eP*	**Pn**	**00 40 19.7**	**-0.5**
MCK				pmax	pmax		
	comp=Z,38nm,1.6s						
MCK	**McKinley**	**15.27**	**34**	*ePn*	**Pn**	**00 40 19.7**	**-0.5**
	comp=Z,38nm,1.6s						
PAX	**Paxson**	**16.10**	**40**	*eP*	**Pn**	**00 40 28.6**	**-2.4**
PAX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PAX	**Paxson**	**16.10**	**40**	*ePn*	**Pn**	**00 40 28.6**	**-2.4**
	comp=Z,6.9nm,0.6s						
COLA	**College**	**16.37**	**32**	*eP*	**Pn**	**00 40 33.1**	**-1.2**
COLA				pmax	pmax		
	comp=Z,18nm,0.8s						
COLA	**College**	**16.37**	**32**	*ePn*	**Pn**	**00 40 33.1**	**-1.2**
	comp=Z,18nm,0.8s						
MENT	**Mentasta**	**16.78**	**41**	*ePn*	**Pn**	**00 40 37.9**	**-1.8**
COLD	**Coldfoot**	**17.38**	**24**	*ePn*	**Pn**	**00 40 47.9**	**+0.9**
	comp=Z,14nm,1.0s						
EGAK	**Eagle**	**18.66**	**38**	*ePn*	**Pn**	**00 41 01.2**	**-1.6**
	comp=Z,9.2nm,0.8s						
DAWY	**Dawson**	**19.02**	**41**	*ePn*	**Pn**	**00 41 05.8**	**-1.4**
SKAG	**Skagway**	**19.64**	**56**	*eP*	**Pn**	**00 41 13.9**	**-0.6**
	comp=Z,29nm,0.8s						
BILL	**Bilibino**	**19.97**	**332**	*eP*	**Pn**	**00 41 16.4**	**-2.0**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
BILL	**Bilibino**	**19.97**	**332**	*eP*	**Pn**	**00 41 21.2**	**+2.8**
	comp=Z,12nm,1.1s						
PET	**Petropavlovsk**	**19.99**	**285**	*eP*	**Pn**	**00 41 16.8**	**-1.9**
PET				pmax	pmax		
	comp=Z,32nm,1.1s						
PETK	**Petropavlovsk-**	**20.54**	**286**	P	**P**	**00 41 21.9**	**-0.9**
	comp=Z,9.5nm,0.6s,baz=86,slow=14,SNR=17						
DLBC	**Dease Lake**	**22.33**	**59**	P	**P**	**00 41 42.1**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.0,baz=264,slow=12,SNR=6.3						
SEY	**Seymchan**	**23.21**	**319**	*eP*	**P**	**00 41 50.4**	**-1.0**
BBB	**Bella Bella**	**24.36**	**74**	P	**P**	**00 42 02.6**	**+0.4**
	comp=Z,22nm,1.0s,mb4.5,baz=94,slow=17,SNR=2.3						
YKA	**Yellowknife Ar**	**29.76**	**49**	P	**P**	**00 42 50.1**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.7,baz=268,slow=8.5,SNR=19						
YKA				PcP	PcP	00 45 53.2	-0.4
	comp=Z,0.8nm,0.8s,baz=284,slow=2.5,SNR=7.8						
YKA				ScP	ScP	00 49 32.8	-0.9
	comp=Z,0.1nm,0.6s,baz=292,slow=3.5,SNR=3.9						
YKA	**Yellowknife Ar**	**29.76**	**49**	P	**P**	**00 42 50.2**	**-0.5**
YKA						00 45 53.2	
YKA	**Yellowknife Ar**	**29.76**	**49**	P	**P**	**00 42 50.1**	**-0.5**
YKA				PcP	PcP	00 45 53.2	-0.4
YKA				ScP	ScP	00 49 32.9	-0.9
TIXI	**Tiksi**	**33.14**	**329**	*eP*	**P**	**00 43 19.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.9						
YAK	**Yakutsk**	**33.73**	**311**	*iP*	**P**	**00 43 23.2**	**-2.3**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
NVAR	**Mina Array Bea**	**36.98**	**92**	P	**P**	**00 43 54.7**	**+1.1**
	comp=Z,1.3nm,0.7s,mb3.9,baz=296,slow=8.8,SNR=9.0						
NVAR				pP	pP	00 44 06.3	+5.2
	comp=Z,2.4nm,0.7s,baz=297,slow=8.5,SNR=11						
NVAR	**Mina Array Bea**	**36.98**	**92**	P	**P**	**00 43 54.7**	**+1.1**
NVAR				pP	pP	00 44 06.3	+5.2
PDAR	**Pinedale Array**	**39.74**	**80**	P	**P**	**00 44 17.2**	**+0.4**
	comp=Z,3.1nm,0.9s,mb4.0,baz=308,slow=3.8,SNR=22						
PDAR				pP	pP	00 44 28.6	+4.3
	comp=Z,1.8nm,0.6s,baz=302,slow=3.4,SNR=6.7						
BOD	**Bodaibo**	**42.56**	**309**	*eP*	**P**	**00 44 37.6**	**-2.3**
BOD				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
CN2	**Changchun**	**43.69**	**286**	*eP*	**P**	**00 44 50.0**	**+0.9**
HIA	**Hailar**	**43.89**	**296**	*iP*	**P**	**00 44 49.7**	**-1.0**
KSRS	**Korea Array**

PVCC	**Panska Ves**	**77.51**	**358**	*eP*		**P**	**00 48 40.1**	**+0.5**
DPC	**Dobruska-Polom**	**77.64**	**357**	*eP*		**P**	**00 48 40.4**	**+0.1**
NKC	**Novy Kostel**	**77.83**	**360**	*eP*		**P**	**00 48 42.2**	**+0.8**
KWP	**Kalwaria**	**78.01**	**353**	P		**P**	**00 48 43.2**	**+0.8**
KWP				pmax	pmax			
	comp=Z,12nm,1.0s,mb4.8							
KWP	**Kalwaria**	**78.01**	**353**	P		**P**	**00 48 43.2**	**+0.8**
	comp=Z,12nm,1.0s,mb4.8							
PRU	**Pruhonice**	**78.05**	**358**	*eP*		**P**	**00 48 42.8**	**+0.2**
OKC	**Ostrava-Krasne**	**78.08**	**356**	*eP*		**P**	**00 48 43.4**	**+0.6**
STHS	**Stebnicka Huta**	**78.33**	**354**	*eP*		**P**	**00 48 38.1**	**-6.1**
STHS				*e*			00 48 29.1	
TREC	**Trest**	**78.72**	**358**	*eP*		**P**	**00 48 46.7**	**+0.4**
KHC	**Kasperske Hory**	**78.92**	**359**⇑	*eP*		**P**	**00 48 47.8**	**+0.3**
KHC	**Kasperske Hory**	**78.92**	**359**	*eP*		**P**	**00 48 47.9**	**+0.4**
KHC	**Kasperske Hory**	**78.92**	**359**	*eP*		**P**	**00 48 47.9**	**+0.4**
LDF	**La Druitiere**	**78.97**	**8**	*eP*		**P**	**00 48 47.4**	**-0.3**
SGMF	**Saint Gilles**	**79.07**	**10**	*eP*		**P**	**00 48 48.0**	**-0.3**
GERES	**GERESS Array B**	**79.21**	**359**	P		**P**	**00 48 49.3**	**+0.3**
	comp=Z,1.6nm,0.9s,mb4.0,baz=15,slow=5.5,SNR=9.9							
VYHS	**Vyhne**	**79.39**	**355**	*eP*		**P**	**00 48 50.7**	**+0.7**
VYHS				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3							
VYHS	**Vyhne**	**79.39**	**355**	*eP*		**P**	**00 48 50.7**	**+0.7**
	comp=Z,3.9nm,1.1s,mb4.2							
CDF	**Champ du Feu**	**79.58**	**3**	*eP*		**P**	**00 48 51.1**	**0.0**
ZST	**Bratislava**	**79.77**	**356**	*eP*		**P**	**00 48 53.3**	**+1.2**
ZST				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.4							
ZST	**Bratislava**	**79.77**	**356**	*eP*		**P**	**00 48 53.3**	**+1.2**
	comp=Z,6.3nm,1.1s,mb4.5							
HAU	**Haudompre**	**79.96**	**4**	*eP*		**P**	**00 48 53.2**	**+0.1**
HINF	**Hinteralfeld**	**80.16**	**3**	*eP*		**P**	**00 48 54.1**	**-0.1**
	comp=Z,9.0nm,0.9s,mb4.4							
HINF	**Hinteralfeld**	**80.16**	**3**	*eP*		**P**	**00 48 54.1**	**-0.1**
HINF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
HINF	**Hinteralfeld**	**80.16**	**3**	*eP*		**P**	**00 48 54.1**	**-0.1**
	comp=Z,4.5nm,0.9s,mb4.4							
KIV	**Kislovodsk**	**80.47**	**338**⇑	*eP*		**P**	**00 48 56.2**	**+0.3**
KIV				*e*		pP	00 49 03.2	-0.7
KIV				pmax	pmax			
	comp=Z,12nm,0.9s,mb4.8							
LOR	**Lormes**	**80.57**	**5**	*eP*		**P**	**00 48 56.4**	**0.0**
SSF	**Saint Saulge**	**80.75**	**6**	*eP*		**P**	**00 48 57.5**	**+0.1**
	comp=Z,18nm,1.0s,mb4.7							
WTTA	**Wattenberg**	**80.80**	**0**⇑	*iP*		**P**	**00 48 58.7**	**+1.0**
	comp=Z,12nm,1.3s,mb4.7							
MFF	**Saint Martin d**	**80.94**	**8**	*eP*		**P**	**00 48 58.5**	**+0.1**
	comp=Z,18nm,0.9s,mb4.7							
KBA	**Koelnbreinsper**	**80.98**	**359**⇑	*iP*		**P**	**00 48 59.8**	**+1.2**
	comp=Z,19nm,1.1s,mb4.9							
AVF	**Avril sur Loir**	**81.02**	**6**	*eP*		**P**	**00 48 58.7**	**-0.1**
	comp=Z,26nm,1.2s,mb4.7							
FETA	**Feichten**	**81.04**	**1**⇑	*iP*		**P**	**00 48 59.7**	**+0.8**
	comp=Z,9.3nm,1.0s,mb4.7							
SMF	**Signal de Mont**	**81.19**	**6**	*eP*		**P**	**00 48 59.8**	**+0.1**
	comp=Z,16nm,1.0s,mb4.6							
SMF	**Signal de Mont**	**81.19**	**6**	*eP*		**P**	**00 48 59.8**	**+0.1**
SMF				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6							
SMF	**Signal de Mont**	**81.19**	**6**	*eP*		**P**	**00 48 59.8**	**+0.1**
	comp=Z,8.1nm,1.0s,mb4.6							
BGF	**Bois d'Agland**	**81.22**	**6**	*eP*		**P**	**00 48 59.9**	**0.0**
DAVOS	**Davos**	**81.22**	**1**	P		**P**	**00 49 01.3**	**+1.4**
DAVOX	**Davos/Dischmat**	**81.28**	**1**	P		**P**	**00 49 01.3**	**+1.1**
	comp=Z,2.6nm,0.7s,mb4.3,baz=324,slow=7.6,SNR=11							
CABF	**La Chapelle**	**81.34**	**4**	*eP*		**P**	**00 49 01.1**	**+0.6**
	comp=Z,33nm,1.2s,mb4.8							
SOKA	**Soboth**	**81.35**	**358**⇑	*iP*		**P**	**00 49 01.3**	**+0.7**
	comp=Z,12nm,1.1s,mb4.7							
TCF	**Toulx Ste Croi**	**81.44**	**7**	*eP*		**P**	**00 49 01.1**	**0.0**
TUE	**Stuetta**	**81.58**	**2**	*eP*		**P**	**00 49 02.5**	**+0.7**
	comp=Z,5.1nm,1.0s,mb4.4							
MLR	**Muntele Rosu**	**81.81**	**350**	P		**P**	**00 49 04.2**	**+1.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=79,slow=8.5,SNR=6.3							
RJF	**Les Rejaudoux**	**82.37**	**7**	*eP*		**P**	**00 49 05.7**	**-0.3**
	comp=Z,45nm,1.4s,mb4.9							
LPL	**La Plagne**	**82.46**	**4**	*eP*		**P**	**00 49 08.5**	**+2.1**
LPG	**La Plagne**	**82.48**	**4**	*eP*		**P**	**00 49 08.1**	**+1.6**
LFF	**La Frestale**	**82.67**	**8**	*eP*		**P**	**00 49 07.7**	**+0.2**
	comp=Z,40nm,1.0s,mb5.1							
CAF	**Calviac**	**82.78**	**7**	*eP*		**P**	**00 49 08.4**	**+0.3**
ORIF	**Oris-en-Rattie**	**83.02**	**4**	*eP*		**P**	**00 49 10.1**	**+0.7**
VIVF	**Saint-Julien-l**	**83.02**	**5**	*eP*		**P**	**00 49 09.7**	**+0.3**
	comp=Z,26nm,1.4s,mb4.8							
MBDF	**Montbardon**	**83.25**	**4**	*eP*		**P**	**00 49 12.0**	**+1.5**
	comp=Z,10nm,0.8s,mb4.6							
MBDF	**Montbardon**	**83.25**	**4**	*eP*		**P**	**00 49 12.0**	**+1.5**
MBDF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
MBDF	**Montbardon**	**83.25**	**4**	*eP*		**P**	**00 49 12.0**	**+1.5**
	comp=Z,5.3nm,0.8s,mb4.6							
LASF	**Ste Croix**	**83.75**	**6**	*eP*		**P**	**00 49 13.8**	**+0.7**
SMRF	**Simiane la Rot**	**83.94**	**4**	*eP*		**P**	**00 49 15.5**	**+1.4**
	comp=Z,9.5nm,0.9s,mb4.6							
SMRF	**Simiane la Rot**	**83.94**	**4**	*eP*		**P**	**00 49 15.5**	**+1.4**
	comp=Z,9.5nm,0.9s,mb4.9							
SBF	**Sospel**	**84.13**	**3**	*eP*		**P**	**00 49 15.7**	**+0.6**
SJPF	**Ste Jean**	**84.29**	**10**	*eP*		**P**	**00 49 16.3**	**+0.4**
MTLF	**Montolieu**	**84.37**	**7**	*eP*		**P**	**00 49 16.8**	**+0.5**
FRF	**La Foret Royal**	**84.41**	**4**	*eP*		**P**	**00 49 16.9**	**+0.4**
	comp=Z,11nm,0.8s,mb4.8							
FRF	**La Foret Royal**	**84.41**	**4**	*eP*		**P**	**00 49 16.9**	**+0.4**
FRF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.7							
FRF	**La Foret Royal**	**84.41**	**4**	*eP*		**P**	**00 49 16.9**	**+0.4**
	comp=Z,5.3nm,0.8s,mb4.7							
EPF	**Esparros**	**84.53**	**8**	*eP*		**P**	**00 49 16.8**	**-0.3**
	comp=Z,20nm,1.1s,mb4.9							
ETSF	**Etsaut**	**84.57**	**9**	*eP*		**P**	**00 49 18.1**	**+0.7**
	comp=Z,8.8nm,0.7s,mb4.7							
LMR	**La Mourre**	**84.63**	**4**	*eP*		**P**	**00 49 18.2**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.6							
LMR	**La Mourre**	**84.63**	**4**	*eP*		**P**	**00 49 18.2**	**+0.6**
LMR				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.6							
LMR	**La Mourre**	**84.63**	**4**	*eP*		**P**	**00 49 18.2**	**+0.6**
	comp=Z,4.1nm,0.8s,mb4.6							
PGF	**Pioggiola**	**85.49**	**2**	*eP*		**P**	**00 49 22.4**	**+0.4**
	comp=Z,41nm,1.1s,mb5.2							
BRTR	**Keskin Array B**	**86.38**	**343**	P		**P**	**00 49 26.6**	**+0.1**
	comp=Z,2.5nm,0.6s,mb4.6,baz=17,slow=2.3,SNR=14							
ESDC	**Sonseca Array**	**87.38**	**12**	P		**P**	**00 49 30.2**	**-1.0**
	comp=Z,2.4nm,0.7s,mb4.5,baz=346,slow=4.6,SNR=19							
WRA	**Warramunga Arr**	**87.51**	**233**	P		**P**	**00 49 30.7**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.9,baz=34,slow=6.0,SNR=3.3							
ASAR	**Alice Springs**	**90.89**	**231**	P		**P**	**00 49 47.2**	**-0.5**
	comp=Z,0.7nm,0.8s,mb4.1,baz=37,slow=3.7,SNR=5.8							

IDC 30 00:39:19.6±2.0, 252N×12548E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, Error ellipse: s-maj=213.5km s-min=24.3km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.96**	**159**	P	P	00 44 35.7	0.0
	0.8nm,0.4s,baz=337,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**27.29**	**163**	P	P	00 45 06.7	+0.8
	0.3nm,0.6s,baz=344,slow=7.3,SNR=5.4						
STKA	**Stephens Creek**	**37.48**	**157**	P	P	00 46 34.7	-0.3
	2.0nm,0.8s,baz=351,slow=6.8,SNR=3.8						
MKAR	**Makanchi Array**	**57.85**	**326**	P	P	00 49 12.8	-0.2
	0.4nm,0.4s,baz=116,slow=7.3,SNR=6.9						

*NEIC **30** 01:03:44.8, 3642N×2303E, h18km, MD3.5(ATH), After ATH.*
*ATH **30** 01:03:44.8, 3642N×2304E, h18km±1km, MD3.5/11*
*ISCJB **30** 01:03:45.1±0.5, 3640N±004×2302E±004, h10km, Error ellipse: s-maj=6.2km s-min=3.6km az=35.5*
*CSEM **30** 01:03:45.1±0.1, 3641N×2297E, h10km, MD3.5, Error ellipse: s-maj=2.5km s-min=1.2km az=41.0*
*THE **30** 01:03:45.7, 3643N×2301E, h1km±2km, ML3.3/2, Error ellipse: s-maj=3.0km s-min=1.0km az=187.0*

ISC 30 01:03:45.2±0.9, 3639N±004×2302E±004, h4km±5km, n46, σ0°84/55, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	**Veliai**	**0.34**	**348**	*eP*	**Pg**	**01 03 51.7**	**0.0**
VLI				*e*	**Sg**	**01 03 56.2**	**+0.1**
VLI	**Veliai**	**0.34**	**348**	*eP*	**Pg**	**01 03 52.1**	**+0.4**
VLI				*e*	**Sg**	**01 03 56.2**	**+0.1**

DID	**Didima**	**1.13**	**9**	P		**Pg**	**01 04 06.4**	**-0.4**
DID				S		**Sg**	**01 04 22.4**	**+0.9**
PYL	**PYLOS**	**1.15**	**297**	P		**Pg**	**01 04 05.9**	**-1.3**
PYL				S		**Sg**	**01 04 22.8**	**+0.7**
ITM	**Ithomi**	**1.18**	**312**	*e*PN		**Pn**	**01 04 06.8**	**-1.7**
ITM				*e*SN		**Sn**	**01 04 23.3**	**-1.7**
VAM	**Vamos**	**1.37**	**135**	*e*PN		**Pn**	**01 04 11.0**	**0.0**
LTK	**Loutraki**	**1.63**	**358**	P		**Pn**	**01 04 14.6**	**-0.1**
LTK				S		**Sn**	**01 04 36.0**	**-0.1**
ATH	**Athens Observa**	**1.68**	**19**	*e*PN		**Pn**	**01 04 14.5**	**-0.8**
PTL	**Penteli**	**1.79**	**22**	*e*PN		**Pn**	**01 04 16.0**	**-0.8**
THR5	**Thira Island,**	**1.88**	**88**	P		**Pn**	**01 04 18.4**	**+0.4**
THR4	**Thira Island,**	**1.92**	**87**	P		**Pn**	**01 04 19.1**	**+0.5**
THR6	**Thira Island,**	**1.92**	**90**	P		**Pn**	**01 04 19.1**	**+0.5**
THR3	**Thira Island,**	**1.92**	**89**	P		**Pn**	**01 04 19.1**	**+0.5**
THR1	**Thera Island**	**1.97**	**90**	P		**Pn**	**01 04 19.6**	**+0.4**
RLS	**Riolos of Patr**	**2.08**	**324**	*e*PN		**Pn**	**01 04 21.2**	**+0.4**
RLS	**Riolos of Patr**	**2.08**	**324**	*e*Pn		**Pn**	**01 04 22.3**	**+1.5**
APE	**Apeiranthos**	**2.13**	**71**	*e*PN		**Pn**	**01 04 21.5**	**+0.1**
APE	**Apeiranthos**	**2.13**	**71**	P		**Pn**	**01 04 21.1**	**-0.3**
APE	**Apeiranthos**	**2.13**	**71**	*e*Pn		**Pn**	**01 04 21.5**	**+0.1**
LKR	**Lokris**	**2.26**	**360**	*e*Pb		**Pb**	**01 04 22.7**	**-3.8**
LKR				S		**Sn**	**01 04 51.4**	**-0.2**
NPS	**Neapolis**	**2.38**	**117**	*e*PB		**Pb**	**01 04 25.6**	**-3.0**
VLS	**Valsamata**	**2.64**	**313**	P		**Pn**	**01 04 28.2**	**-0.3**
VLS	**Valsamata**	**2.64**	**313**	P		**Pn**	**01 04 32.1**	**+3.6**
AGG	**Agios Georgios**	**2.69**	**348**	P		**Pn**	**01 04 29.6**	**+0.4**
AGG				S		**Sn**	**01 05 02.2**	**+0.1**
EVR	**Evrytania**	**2.70**	**339**	*e*PB		**Pb**	**01 04 30.5**	**-3.6**
EVR	**Evrytania**	**2.70**	**339**	*e*Pb		**Pb**	**01 04 30.6**	**-3.5**
AOS	**Alonnisos**	**2.86**	**13**	P		**Pn**	**01 04 30.6**	**-0.9**
NEO	**Neokhori**	**2.92**	**3**	P		**Pn**	**01 04 32.4**	**+0.1**
XOR	**Xoriati**	**2.98**	**3**	P		**Pn**	**01 04 33.5**	**+0.4**
CHOS	**Chios island**	**3.13**	**50**	P		**Pn**	**01 04 34.7**	**-0.6**
THL	**Klokotos Trika**	**3.27**	**346**	P		**Pn**	**01 04 37.1**	**-0.1**
SMG	**Samos**	**3.32**	**65**	P		**Pn**	**01 04 38.1**	**+0.2**
KARP	**Karpathos**	**3.46**	**103**	*e*PN		**Pn**	**01 04 40.5**	**+0.7**
PAIG	**Paliouri**	**3.57**	**8**	P		**Pn**	**01 04 40.5**	**-0.8**
LIT	**Litokhoron**	**3.73**	**354**	P		**Pn**	**01 04 43.9**	**+0.4**
IGT	**Igoumenitsa**	**3.79**	**327**	P		**Pn**	**01 04 45.1**	**+0.8**
IGT				S		**Sn**	**01 05 30.4**	**+1.0**
PRK	**Paraskevi**	**3.84**	**41**	P		**Pn**	**01 04 44.3**	**-0.7**
PLG	**Polygyros**	**3.99**	**5**	P		**Pn**	**01 04 46.8**	**-0.3**
PLG	**Polygyros**	**3.99**	**5**	P		**Pn**	**01 04 47.6**	**+0.5**
OUR	**Ouranopolis**	**4.01**	**11**	P		**Pn**	**01 04 46.4**	**-1.0**
HORT	**Hortiatis**	**4.20**	**1**	P		**Pn**	**01 04 50.1**	**+0.1**
SOH	**Sokhos**	**4.43**	**3**	P		**Pn**	**01 04 54.2**	**+1.0**
GRG	**Griva**	**4.59**	**354**	P		**Pn**	**01 04 55.8**	**+0.5**
TIP	**Timpagrande**	**5.69**	**301**	P		**Pn**	**01 05 11.4**	**+1.0**
CEL	**Celeste**	**5.98**	**290**	P		**Pn**	**01 05 14.4**	**0.0**
CUC	**Castrocucco**	**6.72**	**305**	P		**Pn**	**01 05 27.9**	**+3.3**

IDC 30 01:21:41.8±25.0, 2011S×17787W, h620km±261km, mb3.1/4, mb1 3.2/4, mb1mx2.9/17, mbtmp3.1/4, Error ellipse: s-maj=182.6km s-min=101.5km az=93.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.65**	**264**	P	P	01 27 33.7	+0.2
	2.8nm,0.4s,baz=87,slow=12,SNR=11						
STKA	**Stephens Creek**	**38.07**	**244**	P	P	01 28 09.0	-0.6
	0.4nm,0.3s,baz=74,slow=15,SNR=3.5						
ASAR	**Alice Springs**	**44.73**	**256**	P	P	01 29 02.5	+0.5
	1.3nm,0.3s,baz=90,slow=7.8,SNR=40						
WRA	**Warramunga Arr**	**44.77**	**262**	P	P	01 29 02.0	-0.4
	1.5nm,0.3s,baz=97,slow=6.9,SNR=15						
GERES	**GERESS Array B**	**149.86**	**345**	PKPbc	PKPbc	01 40 23.1	0.0
	0.3nm,0.8s,baz=38,slow=1.7,SNR=5.2						

*ISCJB **30** 01:23:09.8±0.5, 2472N±004×12251E±002, h21km±5km, Error ellipse: s-maj=7.0km s-min=3.0km az=4.0*
*TAP **30** 01:23:10.2, 2472N×12241E, h15km, ML3.2, D*
*JMA **30** 01:23:10.2±0.1, 2470N×12250E, h26km, M2.3*

ISC 30 01:23:09.6±0.5, 2472N±005×12251E±002, h16km±4km, n25, σ0°84/43, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**119**	P	**Pg**	**01 23 20.5**	**+0.5**
YOJ				*e*S	**Sg**	**01 23 27.9**	**+0.8**
TWB1	**Santiao Chiao**	**0.55**	**302**	*i* P	**Pg**	**01 23 20.4**	**0.0**
	baz=307						
TWB1				S	**Sg**	**01 23 27.2**	**-0.7**
	baz=307						
TWC	**Suao**	**0.61**	**260**	P	**Pg**	**01 23 20.4**	**-1.1**
	baz=257						
NWF	**Wu-fen Shan**	**0.75**	**298**	P	**Pg**	**01 23 24.6**	**+0.4**
	baz=301						
NWF				*e*S	**Sg**	**01 23 35.3**	**+1.3**
	baz=301						
ENA	**Nanau**	**0.75**	**248**	*e*P	**Pg**	**01 23 23.1**	**-1.2**
	baz=244						
TWE	**Neicheng**	**0.76**	**270**	P	**Pg**	**01 23 23.5**	**-1.0**
	baz=279						
TWE				S	**Sg**	**01 23 33.9**	**-0.6**
	baz=279						
ENTT	**Nioudou**	**0.86**	**265**	P	**Pb**	**01 23 25.6**	**-0.5**
	baz=264						
ENTT				S	**Sb**	**01 23 36.7**	**-0.7**
	baz=264						
NSK	**Sanguang**	**1.04**	**268**	P	**Pb**	**01 23 29.1**	**-0.2**
	baz=267						
NSK				S	**Sb**	**01 23 41.1**	**-1.6**
	baz=267						
TWD	**Chiawan**	**1.04**	**233**	*e*P	**Pb**	**01 23 30.2**	**+0.9**
	baz=236						
TWD				*e*S	**Sb**	**01 23 43.1**	**+0.4**
	baz=236						
TWS1	**Kuangyinshan**	**1.06**	**291**	*e*P	**Pb**	**01 23 31.2**	**+1.7**
	baz=292						
NNS	**Nan Shan**	**1.07**	**255**	P	**Pb**	**01 23 29.5**	**-0.1**
	baz=253						
NNS				S	**Sb**	**01 23 42.4**	**-1.0**
	baz=253						
IRIF	**Iriomote-Funau**	**1.18**	**109**	P	**Pn**	**01 23 31.3**	**-0.1**
IRIF				*e*S	**Sb**	**01 23 45.9**	**-0.7**
WHF	**Hehuan Shan**	**1.27**	**243**	*e*P	**Pn**	**01 23 32.9**	**+0.3**
	baz=251						
WHF				*e*S	**Sb**	**01 23 48.3**	**-0.9**
	baz=251						
TWT	**Tachien**	**1.30**	**249**	*e*S	**Sb**	**01 23 50.8**	**+0.8**
	baz=241						
ESL	**Shilin**	**1.33**	**228**	*e*P	**Pn**	**01 23 33.3**	**-0.2**
	baz=207						
ESL				*e*S	**Sn**	**01 23 50.8**	**-0.1**
	baz=207						
HATJ	**Hateruma jima**	**1.36**	**119**	*e*S	**Sn**	**01 23 50.9**	**-0.6**
NSTT	**Nanjuang**	**1.37**	**267**	*e*P	**Pn**	**01 23 33.9**	**-0.1**
	baz=266						
NSTT				*e*S	**Sn**	**01 23 53.0**	**+1.1**
	baz=266						
JKRS	**Kuro-shima**	**1.45**	**109**	P	**Pn**	**01 23 35.3**	**+0.1**
JKRS				*e*S	**Sn**	**01 23 53.0**	**-0.9**
JIJ	**Ishigaki jima**	**1.53**	**103**	P	**Pn**	**01 23 36.1**	**-0.2**
JIJ				*e*S	**Sn**	**01 23 55.1**	**-0.8**
EHY	**Hungye**	**1.62**	**222**	*e*P	**Pn**	**01 23 38.0**	**+0.5**
	baz=218						
EHY				*e*S	**Sn**	**01 23 58.3**	**+0.3**
	baz=218						
SMLT	**Sun Moon Lake**	**1.69**	**241**	*e*P	**Pn**	**01 23 40.7**	**+2.3**
	baz=223						
TYC	**Yuchr**	**1.71**	**242**	*e*P	**Pn**	**01 23 39.3**	**+0.6**
	baz=244						
TYC				*e*S	**Sn**	**01 23 59.6**	**-0.6**
	baz=244						
ALS	**Alishan**	**1.96**	**233**	*e*P	**Pn**	**01 23 44.9**	**+2.7**
	baz=215						
ALS				*e*S	**Sn**	**01 24 06.3**	**-0.3**
	baz=215						
ELDTW	**Lidau**	**2.04**	**222**	*e*P	**Pn**	**01 23 43.7**	**+0.4**
	baz=219						
STYT	**Tauyuan**	**2.23**	**226**	*e*P	**Pn**	**01 23 46.1**	**+0.3**
	baz=210						
STYT				*e*S	**Sn**	**01 24 13.2**	**+0.2**
	baz=210						

*GII **30** 01:36:41.4±0.0, 3583N×3824E, h0km±1km, ML3.4/3*
*ISCJB **30** 01:36:44.0±0.5, 3516N±003×3776E±005, h10km, Error ellipse: s-maj=6.3km s-min=2.9km az=29.9*

*DDA **30** 01:36:44.5, 3538N×3760E, h4km±13km, Md3.4*
*ISK **30** 01:36:47.2, 3532N×3774E, h25km, MD3.5, ML3.5*
*CSEM **30** 01:36:48.5±0.2, 3556N×3772E, h10km, MD3.4, Error ellipse: s-maj=4.0km s-min=2.2km az=149.0*

ISC 30 01:36:46.1±0.4, 3525N±003×3770E±004, h10km, n44, σ1°19/57, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTY	**Hatay**	**1.54**	**305**	*e*PN	**Pn**	**01 37 13.6**	**0.0**
HTY				*e*SN	**Sn**	**01 37 33.0**	**-0.6**
KUZU	**Kuzuini**	**1.60**	**342**	*i* P	**Pn**	**01 37 13.5**	**-0.9**
KUZU				*i* S	**Sn**	**01 37 32.6**	**-2.5**
COBT	**Iskenderun**	**1.73**	**318**	*i* P	**Pn**	**01 37 16.4**	**+0.3**
COBT				*i* S	**Sn**	**01 37 38.8**	**+0.5**
HWQ	**Hawqa**	**1.74**	**237**	*e*Pn	**Pg**	**01 37 19.9**	**+0.4**
GAZ	**Gaziantep**	**1.96**	**348**	*e*PN	**Pn**	**01 37 19.0**	**-0.3**
BHL	**Bhannes**	**2.16**	**232**	*e*Pn	**Pg**	**01 37 26.4**	**-1.1**
ATAB	**Bozova**	**2.27**	**12**	*i* P	**Pn**	**01 37 25.2**	**+1.6**
ATAB				*i* S	**Sn**	**01 37 51.5**	**0.0**
KRTS	**Karatas**	**2.30**	**306**	*e*PN	**Pn**	**01 37 25.1**	**+1.0**
KMRS	**Kahramanmaras**	**2.34**	**344**	*e*PN	**Pn**	**01 37 24.1**	**-0.5**
RCY	**Rachaya**	**2.35**	**222**	*e*Pn	**Pg**	**01 37 30.1**	**-1.0**
CEYT	**Ceyhan**	**2.36**	**319**	*e*PN	**Pn**	**01 37 25.5**	**+0.6**
URFA	**Urfa**	**2.37**	**22**	*e*PN	**Pn**	**01 37 25.1**	**+0.2**
ANDN	**Andirin**	**2.57**	**335**	*i* P	**Pn**	**01 37 26.6**	**-1.1**
ANDN				*i* S	**Sg**	**01 38 06.2**	**-2.4**
KSDI	**Kefar Szold**	**2.66**	**220**	Pn	**Pg**	**01 37 34.5**	**-2.6**
KSDI				Sn	**Sg**	**01 38 15.6**	**+4.1**
KOZT	**Kozan**	**2.69**	**326**	*e*PN	**Pn**	**01 37 29.7**	**+0.3**
KSHT	**Keshet**	**2.75**	**215**	Pn	**Pg**	**01 37 36.6**	**-2.3**
KARA	**Karaisali**	**2.93**	**314**	*e*PN	**Pn**	**01 37 33.9**	**+1.2**
MMA0	**Mount Meron ar**	**2.93**	**221**	Pn	**Pg**	**01 37 39.2**	**-3.1**
MMA0B	**Mount Meron ar**	**2.93**	**221**	Pn	**Pg**	**01 37 39.2**	**-3.1**
MMA0B				Sn	**Sg**	**01 38 23.7**	**+3.4**
MERS	**Mersin**	**3.04**	**303**	*e*PN	**Pn**	**01 37 34.9**	**+0.7**
AKCD	**Akcadag**	**3.04**	**3**	*i* P	**Pn**	**01 37 33.6**	**-0.6**
AKCD				*i* S	**Sg**	**01 38 17.1**	**-6.7**
MALT	**Malatya**	**3.11**	**11**	*e*PN	**Pn**	**01 37 34.4**	**-0.7**
MYA	**Malatya**	**3.12**	**10**	*e*PN	**Pn**	**01 37 34.9**	**-0.4**
MARD	**Mardin**	**3.23**	**49**	*i* P	**Pn**	**01 37 37.2**	**+0.4**
MARD				*i* S	**Sg**	**01 38 25.7**	**-4.0**
BLGI	**Bet Lehem HaGe**	**3.27**	**220**	Pn	**Pg**	**01 37 44.0**	**-4.6**
DIY	**Diyarbakir**	**3.33**	**37**	*e*PN	**Pn**	**01 37 38.6**	**+0.4**
SVRC	**Sivrice-ELAZID**	**3.38**	**22**	*e*PN	**Pn**	**01 37 39.1**	**+0.3**
MMLI	**Mount Malkishu**	**3.39**	**215**	Pn	**Pg**	**01 37 45.2**	**-5.7**
MMLI				Sn	**Sg**	**01 38 35.7**	**+0.8**
IKL	**Isikli**	**3.41**	**288**	*e*PN	**Pn**	**01 37 40.0**	**+0.7**
OFRI	**'Ofer**	**3.46**	**221**	Pn	**Pg**	**01 37 47.0**	**-5.3**
HMDT	**Nahal Hemdat**	**3.50**	**212**	Pn	**Pg**	**01 37 47.0**	**-6.0**
HMDT				Sn	**Sg**	**01 38 38.0**	**-0.4**
SARI	**SarD1z-Kayseri**	**3.52**	**347**	*e*PN	**Pn**	**01 37 38.6**	**-2.1**
CSS	**Prodhromos**	**3.60**	**267**	*e*PN	**Pn**	**01 37 43.4**	**+1.6**
DARE	**Darende-Malaty**	**3.69**	**1**	*e*PN	**Pn**	**01 37 38.1**	**-5.0**
SLTI	**Sal'it**	**3.73**	**217**	Pn	**Pg**	**01 37 50.1**	**-7.5**
SLTI				Sn	**Sg**	**01 38 44.8**	**-1.1**
NIG	**Nigde**	**3.78**	**320**	*e*PN	**Pn**	**01 37 45.6**	**+

PDAR	**Pinedale Array**	**39.85**	**80**	P	**P**	**02 08 14.8**	**-0.1**
	1.2nm,0.7s,mb3.7,baz=316,slow=5.3,SNR=11						
PDAR				pP	pP	02 08 26.5	+5.2
	1.7nm,1.0s,baz=300,slow=3.8,SNR=5.7						
KSRS	**Korea Array**	**45.99**	**277**	P	**P**	**02 09 05.5**	**+0.9**
	2.1nm,0.8s,mb4.1,baz=44,slow=7.5,SNR=3.2						
SPITS	**Spitsbergen Ar**	**49.76**	**359**	P	**P**	**02 09 32.5**	**-0.8**
	11nm,1.0s,mb4.8,baz=62,slow=5.0,SNR=3.0						
SONM	**Songino Array**	**51.83**	**301**	P	**P**	**02 09 49.9**	**+0.6**
	0.9nm,0.9s,mb3.7,baz=56,slow=4.0,SNR=4.9						
TXAR	**Lajitas Array**	**52.17**	**90**	P	**P**	**02 09 51.8**	**-0.4**
	1.5nm,0.8s,mb4.0,baz=300,slow=5.4,SNR=19						
TXAR				pP	pP	02 10 03.2	+4.6
	1.2nm,0.9s,baz=306,slow=4.9,SNR=4.7						
KURK	**Kurchatov**	**62.81**	**319**	P	**P**	**02 11 06.8**	**0.0**
	0.4nm,0.5s,mb3.8,baz=44,slow=8.1,SNR=3.8						
BVAR	**Borovoye Array**	**64.10**	**325**	P	**P**	**02 11 14.8**	**-0.4**
	0.7nm,0.5s,mb4.0,baz=53,slow=6.7,SNR=7.0						
BVAR				pP	pP	02 11 27.5	+5.6
	0.7nm,0.5s,baz=68,slow=7.1,SNR=3.8						
MKAR	**Makanchi Array**	**64.28**	**314**	P	**P**	**02 11 15.7**	**-0.8**
	0.3nm,0.7s,mb3.4,baz=26,slow=6.5,SNR=3.6						
MKAR				pP	pP	02 11 30.2	+7.1
	0.3nm,0.6s,baz=45,slow=6.2,SNR=2.3						
HFS	**Hagfors**	**67.92**	**359**	P	**P**	**02 11 38.5**	**-1.2**
	4.4nm,1.0s,mb4.5,baz=4.6,slow=3.7,SNR=5.3						
HFS				pP	pP	02 11 50.6	+4.3
	1.0nm,0.5s,baz=57,slow=5.5,SNR=1.6						
AKTK	**Aktyubinsk**	**70.36**	**331**	P	**P**	**02 11 54.5**	**-0.5**
AKTO	**Aktyubinsk**	**70.36**	**331**	P	**P**	**02 11 54.5**	**-0.5**
	1.3nm,0.9s,mb3.9,baz=12,slow=4.7,SNR=5.5						
AKASG	**Malin Array Be**	**76.30**	**349**	P	**P**	**02 12 28.6**	**-1.4**
	0.7nm,0.5s,mb3.9,baz=16,slow=5.5,SNR=3.5						
CMAR	**Chiang Mai Arr**	**77.20**	**283**	P	**P**	**02 12 36.1**	**+0.6**
	0.7nm,0.4s,mb4.0,baz=19,slow=5.9,SNR=7.3						
DAVOX	**Davos/Dischmat**	**91.30**	**1**	P	**P**	**02 12 57.5**	**+0.1**
	0.9nm,0.6s,mb3.9,baz=349,slow=10,SNR=3.6						
BRTR	**Keskin Array B**	**86.37**	**343**	P	**P**	**02 13 24.7**	**+1.2**
	0.5nm,0.7s,mb3.8,baz=6.7,slow=2.9,SNR=2.8						
ESDC	**Sonseca Array**	**87.42**	**12**	P	**P**	**02 13 28.5**	**-0.1**
	0.5nm,0.7s,mb3.9,baz=349,slow=4.2,SNR=4.8						
ASAR	**Alice Springs**	**90.79**	**231**	P	**P**	**02 13 48.1**	**+3.6**
	0.5nm,0.8s,mb3.9,baz=37,slow=4.8,SNR=3.4						

IDC 30 02:03:36.8±16.0, 1762S×17874W, h628km±214km, mb3.2/5, mb1 3.4/5, mb1mx3.1/18, mbtmp3.2/5, Error ellipse: s-maj=95.6km s-min=70.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.19**	**260**	P	P	02 09 24.2	+0.1
	2.7nm,0.6s,baz=90,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**38.50**	**241**	P	P	02 10 07.6	0.0
	3.1nm,0.7s,baz=97,slow=8.2,SNR=9.9						
WRA	**Warramunga Array**	**44.38**	**259**	P	P	02 10 53.9	0.0
	1.4nm,0.4s,baz=95,slow=7.1,SNR=19						
ASAR	**Alice Springs**	**44.57**	**254**	P	P	02 10 55.2	0.0
	9.1nm,0.6s,baz=87,slow=8.6,SNR=146						
TXAR	**Lajitas Array**	**86.10**	**58**	P	P	02 15 13.2	+0.2
	0.5nm,0.8s,baz=216,slow=6.2,SNR=5.0						

*ISCJB **30** 02:05:21.3±0.5, 5887N±004×14180W±005, h10km, Error ellipse: s-maj=6.6km s-min=3.7km az=15.7*
*NEIC **30** 02:05:23.6±0.4, 5890N×14178W, h10km, ML3.3(AEIC), ML3.7(PMR), Error ellipse: s-maj=6.3km s-min=3.5km az=196.0*
*PGC **30** 02:05:25.7±2.7, 5891N×14160W, h10km, ML3.4/4, 127km west of Yakutat, Ak Off Coast Of Southeastern Alaska*

ISC 30 02:05:23.5±0.4, 5891N±005×14172W±005, h10km, n40, σ0§75/46, 7D, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKU2	**Yakutat**	**1.21**	**59**	P	**Pn**	**02 05 47.2**	**+0.7**
PNL	**Peninsula**	**1.41**	**56**	P	**Pn**	**02 05 49.4**	**+0.2**
PNL				S	**Sn**	**02 06 06.6**	**-1.3**
RAGM	**Ragged Mountai**	**2.11**	**316**	P	**Pn**	**02 05 58.2**	**-0.6**
MID	**Middleton Isla**	**2.44**	**284**	*e*P	**Pn**	**02 06 02.8**	**-0.5**
EYAK	**Cordova Ski Ar**	**2.62**	**311**	P	**Pn**	**02 06 06.5**	**+0.7**
PLBC	**Pleasant Camp**	**2.81**	**76**	⇓Pn	**Pn**	**02 06 09.3**	**+1.0**
PLBC				⇓Sn	**Sn**	**02 06 41.7**	**-0.5**
HYT	**Haines Junctio**	**2.87**	**46**	⇑Pn	**Pn**	**02 06 10.4**	**+1.2**
SKAG	**Skagway**	**3.33**	**78**	P	**Pn**	**02 06 15.2**	**-0.3**
SIT	**Sitka**	**3.88**	**116**	*e*P	**Pn**	**02 06 24.0**	**+1.0**
WHY	**Whitehorse**	**3.88**	**60**	⇑Pn	**Pn**	**02 06 23.9**	**+0.9**
WHY				⇓Sn	**Sn**	**02 07 07.5**	**-1.0**
WHY	**Whitehorse**	**3.88**	**60**	P	**Pn**	**02 06 23.1**	**+0.1**
MENT	**Mentasta**	**4.16**	**347**	*e*P	**Pn**	**02 06 27.8**	**+0.9**
BCA3	**Beaver Creek A**	**4.17**	**360**	P	**Pn**	**02 06 27.1**	**0.0**
PAX	**Paxson**	**4.47**	**337**	P	**Pn**	**02 06 30.3**	**-0.8**
PMR	**Palmer**	**4.57**	**309**	*e*P	**Pn**	**02 06 33.1**	**+0.5**
RC01	**Rabbit Creek A**	**4.58**	**302**	P	**Pn**	**02 06 32.6**	**-0.1**
SLKM	**Skilak Lake**	**4.60**	**294**	P	**Pn**	**02 06 32.1**	**-0.9**
DAWY	**Dawson**	**5.29**	**11**	⇑Pn	**Pn**	**02 06 43.7**	**+1.2**
DAWY	**Dawson**	**5.29**	**11**	P	**Pn**	**02 06 43.6**	**+1.2**
SKT	**Skwentna**	**5.75**	**307**	P	**Pn**	**02 06 48.7**	**-0.1**
CRAG	**Craig**	**5.80**	**123**	*e*P	**Pn**	**02 06 50.3**	**+0.8**
EGAK	**Eagle**	**5.90**	**2**	*e*Pn	**Pn**	**02 06 51.9**	**+1.2**
	18nm,0.6s						
MCK	**McKinley**	**5.96**	**327**	P	**Pn**	**02 06 52.3**	**+0.7**
DLBC	**Dease Lake**	**6.12**	**89**	⇑Pn	**Pn**	**02 06 55.0**	**+1.2**
DLBC				⇓Sn	**Sn**	**02 08 01.7**	**-2.1**
TRF	**Thorofare Moun**	**6.16**	**321**	P	**Pn**	**02 06 53.6**	**-0.7**
OHAK	**Old Harbor**	**6.37**	**260**	*e*P	**Pn**	**02 06 56.9**	**-0.4**
IL1	**Eielson Array**	**6.37**	**340**	P	**Pn**	**02 06 56.8**	**-0.5**
KTH	**Kantishna Hill**	**6.44**	**320**	P	**Pn**	**02 06 58.7**	**+0.5**
PPLA	**Purkeypile**	**6.49**	**313**	P	**Pn**	**02 06 58.9**	**0.0**
COLA	**College**	**6.65**	**337**	P	**Pn**	**02 07 00.9**	**-0.1**
BPAW	**Bear Paw Mtn.**	**6.84**	**324**	P	**Pn**	**02 07 03.7**	**+0.1**
NDB	**Naden**	**6.95**	**132**	⇓Sn	**Sn**	**02 08 19.7**	**-4.4**
CHUM	**Lake Minchumin**	**7.12**	**319**	*e*Pn	**Pn**	**02 07 06.8**	**-0.7**
	6.5nm,0.4s						
VIB	**Van Inlet**	**7.64**	**134**	⇓Pn	**Pn**	**02 07 14.5**	**-0.2**
VIB				⇓Sn	**Sn**	**02 08 35.1**	**-6.2**
DIB	**Dawson Inlet,**	**7.71**	**134**	⇑Pn	**Pn**	**02 07 15.5**	**0.0**
DIB				⇑Sn	**Sn**	**02 08 36.9**	**-5.9**
TT01	**Tatalina**	**8.04**	**306**	P	**Pn**	**02 07 19.0**	**-1.1**
BNB	**Barry Inlet**	**8.47**	**134**	⇑Pn	**Pn**	**02 07 25.6**	**-0.5**
BM3	**Burnt Mountain**	**8.64**	**353**	P	**Pn**	**02 07 28.2**	**-0.1**
IM3	**Indian Mountai**	**9.01**	**327**	P	**Pn**	**02 07 33.5**	**+0.1**
COLD	**Coldfoot**	**9.18**	**339**	*e*Pn	**Pn**	**02 07 35.8**	**0.0**
	5.1nm,0.5s						

*ISCJB **30** 02:37:21.2±1.1, 2039S±009×17782W±0.10, h471km±14km, mb4.0/23, Error ellipse: s-maj=17.7km s-min=10.0km az=138.2*
*NEIC **30** 02:37:23.8±1.0, 2045S×17773W, h498km±11km, mb4.3/10, Error ellipse: s-maj=14.0km s-min=8.2km az=141.0*
*IDC **30** 02:37:24.1±2.1, 2046S×17774W, h496km±23km, mb3.5/12, mb1 3.7/14, mb1mx3.7/18, mbtmp3.5/14, Error ellipse: s-maj=17.8km s-min=13.2km az=135.0*

ISC 30 02:37:23.1±1.4, 2046S±010×17778W±010, h481km±17km, n69, σ0§67/37, mb4.0/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.68**	**42**	P	**P**	**02 39 26.3**	**-0.1**
	5.3nm,0.3s,baz=51,slow=11,SNR=8.5						
AFI				S	**S**	**02 41 02.5**	**-5.1**
	14nm,0.3s,baz=21,slow=21,SNR=13						
URZ	**Urewera**	**18.28**	**193**	P	**P**	**02 41 06.5**	**-0.3**
	2.9nm,0.3s,baz=349,slow=4.4,SNR=18						
CTA	**Charters Tower**	**33.70**	**264**	*e*P	**P**	**02 43 24.5**	**+1.1**
	8.4nm,0.4s,mb4.5						
CTAO	**Charters Tower**	**33.70**	**264**	*e*P	**P**	**02 43 24.2**	**+0.8**
	5.0nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**02 44 00.3**	**+1.4**
	3.5nm,0.5s,mb4.1,baz=93,slow=8.0,SNR=29						
STKA	**Stephens Creek**	**37.99**	**244**	*e*P	**P**	**02 44 00.2**	**+1.2**
	3.1nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**02 44 00.3**	**+1.4**
BBOO	**Buckleboo**	**42.75**	**243**	*e*P	**P**	**02 44 37.5**	**+0.4**
	4.9nm,0.3s,mb4.4						
ASAR	**Alice Springs**	**44.73**	**257**	P	**P**	**02 44 53.2**	**+0.5**
	14nm,0.5s,mb4.7,baz=96,slow=7.5,SNR=239						
ASAR				PcP	PcP	02 46 24.3	-0.7
	1.3nm,0.5s,baz=105,slow=4.1,SNR=5.6						
ASAR				S	**S**	**02 50 49.3**	**-4.5**
	1.3nm,1.1s,baz=100,slow=14,SNR=4.8						

WB2	**Warramunga Arr**	**44.80**	**262**	*e*P	**P**	**02 44 53.1**	**-0.2**
WB2	**Warramunga Arr**	**44.80**	**262**	*e*P	**P**	**02 44 52.7**	**-0.6**
WRAB	**Tennant Creek**	**44.80**	**262**	*e*P	**P**	**02 44 52.7**	**-0.6**
	6.2nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**44.81**	**262**	P	**P**	**02 44 53.2**	**-0.2**
	4.1nm,0.3s,mb4.3,baz=98,slow=7.6,SNR=39						
KAKA	**Kakadu**	**48.18**	**271**	*e*P	x	02 45 18.9	
	8.0nm,0.3s						
FORT	**Forrest**	**49.50**	**247**	*e*P	**P**	**02 45 28.3**	**-0.4**
	7.8nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.23**	**262**	*e*P	**P**	**02 45 56.1**	**0.0**
	7.6nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.23**	**262**	*e*P	**P**	**02 45 56.0**	**-0.1**
	3.7nm,0.5s,mb4.0						
VNDA	**Vanda**	**57.97**	**185**	P	**P**	**02 46 26.6**	**-1.5**
	0.5nm,0.4s,mb3.2,baz=51,slow=8.9,SNR=3.8						
MBWA	**Marble Bar**	**58.06**	**257**	*e*P	**P**	**02 46 28.8**	**-0.8**
	11nm,0.5s,mb4.5						
CASY	**Casey**	**64.08**	**205**	*e*P	**P**	**02 47 09.3**	**+0.7**
MJAR	**Matsushiro Arr**	**70.30**	**324**	P	**P**	**02 47 46.8**	**-0.5**
	1.1nm,0.5s,mb3.6,baz=159,slow=6.2,SNR=6.6						
KSM	**Kuching**	**73.61**	**278**	*e*P	**P**	**02 48 07.2**	**0.0**
	7.7nm,0.6s,mb4.4						
PETK	**Petropavlovsk-**	**76.29**	**345**	P	**P**	**02 48 20.6**	**-0.7**
	2.1nm,0.7s,mb3.8,baz=123,slow=5.4,SNR=5.7						
KSRS	**Korea Array**	**77.00**	**318**	P	**P**	**02 48 26.1**	**+0.5**
	1.3nm,0.8s,mb3.5,baz=111,slow=5.1,SNR=3.2						
NVAR	**Mina Array Bea**	**80.86**	**43**	P	**P**	**02 48 46.9**	**+0.8**
	1.4nm,0.9s,mb3.5,baz=232,slow=9.9,SNR=6.9						
NVAR	**Mina Array Bea**	**80.86**	**43**	P	**P**	**02 48 46.9**	**+0.8**
MAW	**Mawson**	**81.67**	**200**	P	**P**	**02 48 49.8**	**-0.1**
	2.0nm,0.6s,mb3.8,baz=126,slow=8.7,SNR=3.3						
KULM	**Kulim**	**83.97**	**278**	*e*P	**P**	**02 49 01.9**	**-0.7**
	6.3nm,0.7s,mb4.2						
TXAR	**Lajitas Array**	**86.86**	**57**	P	**P**	**02 49 17.4**	**+1.2**
	1.1nm,0.8s,mb3.7,baz=215,slow=6.6,SNR=13						
COLA	**College**	**88.13**	**12**	*e*P	**P**	**02 49 20.0**	**-1.2**
	3.6nm,0.7s,mb4.2						
VNA3	**Neumayer Olymp**	**88.17**	**176**	*e*	**P**	**02 49 21.3**	**-0.2**
VNA2	**Neumayer--Watz**	**88.61**	**177**	*e*	**P**	**02 49 24.1**	**+0.5**
	baz=206,slow=3.3						
BW06	**Boulder Array**	**88.79**	**43**	*e*P	**P**	**02 49 24.7**	**-0.2**
	1.1nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**88.79**	**43**	P	**P**	**02 49 25.1**	**+0.3**
	0.8nm,0.7s,mb3.7,baz=203,slow=3.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	**90.30**	**289**	P	**P**	**02 49 33.2**	**+0.8**
	1.7nm,0.5s,mb4.2,baz=131,slow=3.4,SNR=13						
CHTO	**Chiang Mai**	**90.42**	**290**	*e*P	**P**	**02 49 33.0**	**0.0**
	1.1nm,0.5s,mb3.9						
MK31	**Makanchi Array**	**111.32**	**313**	*e*PKP	PKiKP	02 54 59.4	-2.2
MKAR	**Makanchi Array**	**111.32**	**313**	PKiKP	PKiKP	02 54 59.4	-2.2
	0.5nm,0.6s,baz=223,slow=1.1,SNR=9.1						
KBL	**Kabul**	**120.05**	**299**	*e*PKPdf	PKPdf	02 55 17.7	-1.1
SFJD	**Kangerlussuaq**	**122.83**	**22**	PKP	PKPdf	02 55 21.1	-2.0
	3.7nm,0.6s,baz=243,slow=4.5,SNR=3.1						
ARU	**Arti**	**125.29**	**325**	*e*PKPdf	PKPdf	02 55 26.8	-1.3
BOSA	**Boshof**	**126.38**	**205**	PKP	PKPdf	02 55 30.9	-0.3
	10nm,1.4s,baz=158,slow=11,SNR=3.2						
ARCES	**ARCESS Array B**	**128.92**	**350**	PKP	PKPdf	02 55 33.2	-1.5
	1.9nm,0.7s,baz=22,slow=4.6,SNR=7.9						
ARCES	**ARCESS Array B**	**128.92**	**350**	PKP	PKPdf	02 55 33.2	-1.5
AKASG	**Malin Array Be**	**143.08**	**331**	PKhKP		02 55 57.2	
	4.1nm,0.5s,baz=43,slow=4.2,SNR=30						
AKASG	**Malin Array Be**	**143.08**	**331**	PKP		02 55 57.2	
AKBB	**Malin Array Si**	**143.08**	**331**	*e*PKPdf		02 55 56.9	
MALT	**Malatya**	**144.07**	**308**	*e*PKPdf	PKPdf	02 56 02.7	-0.8
BR131	**Keskin Array S**	**146.97**	**312**	*e*PKPbc	PKPbc	02 56 09.8	-1.4
BRTR	**Keskin Array B**	**146.97**	**312**	PKPbc	PKPbc	02 56 10.1	-1.1
	2.3nm,0.8s,baz=133,slow=4.4,SNR=14						
BUR08	**Buovina Ar. S**	**147.12**	**331**	*e*PKPbc	PKPbc	02 56 11.2	-0.1
CRVS	**Cervenica-Dubn**	**147.70**	**336**	*e*PKP	PKPbc	02 56 14.2	+1.4
CRVS	**Cervenica-Dubn**	**147.70**	**336**	*e*P	PKPbc	02 56 14.2	+1.4
KSP	**Ksiaz**	**147.72**	**343**	*e*P	PKPbc	02 56 12.3	-0.5
OKC	**Ostrava-Krasne**	**148.07**	**340**	*e*PKPbc	PKPbc	02 56 14.1	+0.4
CLL	**Collm**	**148.07**	**347**	*i* PKPbc	PKPbc	02 56 13.1	-0.6
	comp=Z,11nm,0.8s						
UPC	**Upice**	**148.09**	**343**	*e*PKPbc	PKPbc	02 56 13.4	-0.4
DPC	**Dobruska-Polom**	**148.15**	**343**	*e*PKPbc	PKPbc	02 56 13.4	-0.5
BRG	**Berggiesshubel**	**148.28**	**346**	*i* P	PKPbc	02 56 13.4	-0.8
	comp=Z,16nm,1.5s						
BRG				*i*		02 56 18.0	
	comp=Z,2.8nm,0.6s						
PRU	**Pruhonice**	**148.95**	**345**	*e*PKPbc	PKPbc	02 56 15.1	-0.8
VYHS	**Vyhne**	**149.00**	**338**	*e*PKP	PKPbc	02 56 15.7	-0.4
VYHS	**Vyhne**	**149.00**	**338**	*e*P	PKPbc	02 56 15.7	-0.4
CSS	**Prodhromos**	**149.05**	**304**	*e*PKPbc	PKPbc	02 56 14.9	-1.8
NKC	**Novy Kostel**	**149.21**	**347**	*e*PKPbc	PKPbc	02 56 14.0	-2.5
TREC	**Trest**	**149.34**	**343**	*e*PKPbc	PKPbc	02 56 15.9	-1.0
KHC	**Kasperske Hory**	**149.99**	**345**	*e*PKPbc	PKPbc	02 56 17.5	-0.9
GERES	**GERESS Array B**	**150.22**	**345**	PKPbc	PKPbc	02 56 18.1	-0.9
	comp=Z,1.3nm,0.7s,baz=42,slow=2.2,SNR=15						
DBIC	**Dimbokro**	**164.67**	**152**	PKPab	PKPab	02 57 30.8	+0.3
	comp=Z,3.0nm,1.0s,baz=159,slow=8.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**172.71**	**176**	PKP	PKPdf	02 56 35.3	-1.8
	comp=Z,1.0nm,0.9s,baz=56,slow=0.5,SNR=4.9						
TORD				PKPab	PKPab	02 58 05.6	-0.3
	comp=Z,0.4nm,0.8s,baz=215,slow=3.9,SNR=3.5						

GUC 30 03:09:53.9±0.6, 3188S×7028W, h119km±6km, MD3.5, ML3.4, 1C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.84**	**198**	*e*P	Pn	03 10 15.0	+0.7
PEL	**Peldehue**	**1.30**	**195**	*e*P	Pn	03 10 19.2	+0.2
PEL				*i* S	Sn	03 10 38.7	+0.5
PEL				AML	AML	03 10 39.7	
	comp=E,668nm,0.4s						
FCH	**Farellones**	**1.44**	**180**	⇑*e*P	Pn	03 10 21.5	+0.9
FCH				*e*S	Sn	03 10 42.6	+1.7
FCH				AML	AML	03 10 46.6	
	comp=E,612nm,0.2s						
CLCH	**Cerro Calan**	**1.53**	**188**	*e*P	Pn	03 10 22.1	+0.6
CLCH				*i* S	Sn	03 10 43.6	+1.0
CLCH				AML	AML	03 10 52.5	
	comp=E,395nm,0.5s						
RCDM	**Rinconada Maip**	**1.66**	**195**	*e*P	Pn	03 10 23.6	+0.5
RCDM				*e*S	Sn	03 10 46.5	+0.9
RCDM				AML	AML	03 10 46.9	
	comp=E,1μm,0.1s						
PCH	**Pirque**	**1.75**	**186**	*e*P	Pn	03 10 24.9	+0.7
PCH				*e*S	Sn	03 10 48.2	+0.9
TLL	**Tololo Astrono**	**1.77**	**345**	*e*P	Pn	03 10 25.6	+1.1
TLL				*e*S	Sn	03 10 49.1	+1.4
TLL				AML	AML	03 10 52.8	
	comp=N,138nm,0.6s						
TACH	**Talagante**	**1.85**	**197**	*e*P	Pn	03 10 25.6	+0.1
TACH				*i* S	Sn	03 10 50.1	+0.5
LMEL	**Las Melosas**	**1.96**	**178**	*e*P	Pn	03 10 27.5	+0.7
LMEL				*e*S	Sn	03 10 53.3	+1.3
LMEL				AML	AML	03 10 57.0	
	comp=N,294nm,0.3s						
CACH	**El Canelo**	**2.25**	**187**	*e*P	Pn	03 10 31.1	+0.7
LCO	**Las Campanas**	**2.88**	**353**	*e*P	Pn	03 10 39.1	+0.5

*NEIC **30** 03:25:53.0, 3777N×2022E, h4km, MD3.4(ATH), After ATH.*
*ATH **30** 03:25:54.0, 3779N×2030E, h6km±4km, MD3.4/5*
*CSEM **30** 03:25:56.9±0.2, 3806N×2013E, h2km, ML3.2/3, Error ellipse: s-maj=3.5km s-min=2.2km az=57.0*

THE 30 03:25:58.5, 3805N×2025E, h0km±2km, ML3.2/3, Error ellipse: s-maj=3.1km s-min=1.5km az=251.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.30**	**64**	P	Pg	03 26 03.8	-0.4
VLS				S	Sg	03 26 08.7	+0.6
VLS	**Valsamata**	**0.30**	**64**	*e*PB	Pg	03 26 03.0	-1.2
VLS				*e*SB	Sg	03 26 09.5	+1.4
VLS	**Valsamata**	**0.30**	**64**	P	Pg	03 26 03.8	-0.4
VLS				*e*Sg	Sg	03 26 09.5	+1.4
IGT	**Igoumenitsa**	**1.48**	**3**	P	Pn	03 26 24.7	-1.7
IGT				S	Sg	03 26 46.9	+0.7
EVR	**Evrytania**	**1.50**	**54**	*e*PB	Pn	03 26 25.0	-1.7
EVR	**Evrytania**	**1.50**	**54**	*e*Pb	Pn	03 26 26.1	-0.6
ITM	**Ithomi**	**1.59**	**123**	*e*PB	Px	03 26 20.8	
PYL	**PYLOS**	**1.65**	**134**	P	Pn	03 26 28.3	-0.4
PYL				S	Sn	03 26 51.5	+0.8
JAN	**Janina**	**1.67**	**16**	*e*PN	Pn	03 26 29.2	+0.2
JAN	**Janina**	**1.67**	**16**	*e*Pg	Pn	03 26 29.7	+0.7
KEK	**Kerkira**	**1.70**	**348**	*e*PN	Pn	03 26 29.7	+0.3
KEK	**Kerkira**	**1.70**	**348**	*e*Pb	Pn	03 26 28.0	-1.4

AGG	**Agios Georgios**	**1.90**	**59**	P	Pn	03 26 31.6	-0.6
AGG				S	Sn	03 26 57.1	+0.3
THL	**Klokotos Trika**	**2.05**	**42**	P	Pn	03 26 34.2	0.0
THL				S	Sn	03 27 01.7	+1.3
LTK	**Loutraki**	**2.15**	**90**	P	Pn	03 26 35.5	0.0
LKR	**Lokris**	**2.25**	**74**	P	Pn	03 26 35.6	-1.3
DID	**Didima**	**2.43**	**102**	P	Pn	03 26 38.1	-1.3
DID				S	Sn	03 27 10.2	+0.4
LIT	**Litokhoron**	**2.69**	**40**	P	Pn	03 26 43.7	+0.7
FNA	**Florina**	**2.87**	**17**	P	Pn	03 26 44.9	-0.6
STON	**Ston**	**5.20**	**339**	*e*Pn	Pn	03 27 13.5	-3.9
STON				Sn	Sn	03 28 10.6	-7.4

*BJI **30** 03:36:06.1, 042S×9850E, h33km, mB5.3, mb5.0, Ms4.7, Msz4.4*
*MOS **30** 03:36:11.8±0.9, 032N×9869E, h33km, mb5.1/23, Error ellipse: s-maj=11.4km s-min=6.3km az=106.3*
*ISCJB **30** 03:36:12.2±0.2, 026N±003×9844E±003, h33km, mb4.9/76, MS4.1/35, Error ellipse: s-maj=5.5km s-min=3.9km az=41.8*
*NEIC **30** 03:36:13.2±0.2, 023N×9857E, mb4.9/30, Error ellipse: s-maj=7.8km s-min=5.6km az=56.0*
*DJA **30** 03:36:15, 029N×9837E, h27km, Mw5.4/9*
*IDC **30** 03:36:15.5±1.6, 029N×9866E, h52km±12km, mb4.3/19, mb1 4.3/21, mb1mx4.2/26, mbtmp4.3/21, ML4.8/2, MS3.9/23, Ms1 3.9/23, ms1mx3.9/34, Error ellipse: s-maj=18.1km s-min=10.0km az=51.0*

ISC 30 03:36:14.2±0.3, 026N±003×9846E±003, h35km, h35km±1.8km: pP-P, n225, σ1§23/219, mb4.9/76, MS4.1/35, 31C-14D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.36**	**320**	P	**Pn**	**03 36 38.5**	**+1.7**
PPI	**Padang Panjang**	**2.06**	**110**	P	**Pn**	**03 36 47.6**	**+1.1**
PDSI	**Padang**	**2.32**	**120**	P	**Pn**	**03 36 50.6**	**+0.7**
PSI	**Prapat**	**2.57**	**10**	P	**Pn**	**03 36 52.5**	**-1.0**
	140nm,0.3s,baz=193,slow=8.1,SNR=179						
PSI				S	**Sn**	**03 37 15.5**	**-8.0**
	162nm,0.3s,baz=170,slow=16,SNR=13						
PSI				LR	LR	03 38 06.0	
	comp=Z,3μm,20.1s,baz=173,slow=46						
PSI	**Prapat**	**2.57**	**10**	P	**Pn**	**03 36 52.5**	**-0.9**
PSI				S	**Sn**	**03 37 15.5**	**-8.0**
RGRI	**Rengat**	**3.92**	**99**	P	**Pn**	**03 37 16.8**	**+4.8**
FRIM	**Kepong**	**4.33**	**47**	⇑P	**Pn**	**03 37 19.1**	**+1.4**
IPM	**Ipoh**	**4.92**	**31**	⇑P	**Pn**	**03 37 28.6**	**+2.9**
IPM	**Ipoh**	**4.92**	**31**	P	**Pn**	**03 37 28.3**	**+2.6**
KULM	**Kulim**	**5.46**	**24**	*e*Pn	**Pn**	**03 37 34.5**	**+1.4**
	321nm,0.7s						
KULM	**Kulim**	**5.46**	**24**	⇓P	**Pn**	**03 37 35.2**	**+2.0**
MYKOM	**Kota Tinggi**	**5.60**	**74**	P	**Pn**	**03 37 36.8**	**+1.7**
	120nm,1.2s,3μm1.1nm						
KSI	**Kapahiang**	**5.67**	**133**	P	**Pn**	**03 37 37.8**	**+1.7**

DAV Davao City (W) 27.88 75 LR LR 03 53 31.0
comp=Z,263nm,20.6s,MS3.8,baz=269,slow=37
ODAN Odare 28.51 339 *e*Pn **P** **03 42 08.5 +2.0**
comp=Z,34nm,0.7s,mb5.2
TAPN Taplejung 28.85 340 *e*Pn **P** **03 42 10.9 +1.4**
comp=Z,76nm,0.9s,mb5.4
RAMN Ramite 28.89 338 *e*Pn **P** **03 42 11.5 +1.7**
comp=Z,19nm,0.5s,mb5.1
JIRN Jiri 29.68 338 *e*Pn **P** **03 42 17.6 +0.7**
GUN Gumba 30.02 337 *e*Pn **P** **03 42 20.8 +0.9**
comp=Z,26nm,0.4s,mb5.3
DMN Daman 30.06 336 *e*Pn **P** **03 42 21.6 +1.3**
LSA Lhasa 30.10 347 P **P** **03 42 21.8 +1.3**
LSA Lhasa 30.10 347 *e*P **P** **03 42 21.1 +0.6**
LSA pmax pmax
comp=Z,25nm,0.8s,mb5.0
LSA Lhasa 30.10 347 *e*P **P** **03 42 21.1 +0.5**
comp=Z,25nm,0.8s,mb5.0
KKN Kakani 30.15 336 *e*Pn **P** **03 42 21.9 +0.8**
GKN Gorkha 30.61 335 *e*Pn **P** **03 42 25.3 +0.2**
comp=Z,26nm,0.5s,mb5.3
KOLN Koldanda 30.85 334 *e*Pn **P** **03 42 27.9 +0.7**
comp=Z,40nm,0.7s,mb5.3
CD2 Chengdu 30.90 9 P **P** **03 42 29.3 +1.7**
CD2 AP pP 03 42 39.0 +1.3
CD2 XP sP 03 42 43.0 +1.1
CD2 PP PP 03 43 32.0 -5.8
CD2 PCP PcP 03 45 25.0 +1.2
CD2 S **S** **03 47 31.5 +2.0**
CD2 XS sS 03 47 47.5 +1.4
CD2 AMB AMB
comp=Z,30nm,0.7s,mb5.2
CD2 AMB AMB
comp=Z,140nm,4.5s
CD2 LR LR
comp=N,740nm,16.6s
CD2 LR LR
comp=Z,440nm,19.0s,MS4.1
DANN Dangsing 31.28 334 *e*Pn **P** **03 42 31.4 +0.4**
comp=Z,23nm,0.4s,mb5.4
FITZ Fitzroy Crossi 32.36 126 *e*P **P** **03 42 41.1 +0.5**
comp=Z,12nm,0.6s,mb4.9
FITZ Fitzroy Crossi 32.36 126 *e*P **P** **03 42 40.2 -0.4**
comp=Z,7.5nm,0.8s,mb4.6
WHN Wuhan 33.70 25 P **P** **03 42 51.5 -0.6**
WHN S **S** **03 48 19.0 +5.9**
WHN AMB AMB
comp=Z,85nm,0.9s,mb5.7
WHN LR LR
comp=Z,729nm,15.3s,MS4.5
XAN Xi'an 35.01 15 P **P** **03 43 02.5 -1.0**
XAN AP pP 03 43 13.0 -0.6
XAN PP PP 03 44 24.3 +0.9
XAN S **S** **03 48 36.0 +2.7**
XAN AMB AMB
comp=Z,85nm,0.9s,mb5.7
XAN AMB AMB
comp=Z,64nm,6.8s
XAN LR LR
comp=N,178nm,16.4s,MS4.0
XAN LR LR
comp=E,161nm,16.8s,MS4.0
XAN LR LR
comp=Z,436nm,16.4s,MS4.3
LZH Lanzhou 36.00 7 ⇓P **P** **03 43 12.0 +0.1**
LZH AP pP 03 43 21.5 -0.6
LZH XP sP 03 43 25.8 -0.6
LZH PP PP 03 44 35.0 +0.7
LZH *e*S **S** **03 48 49.3 +0.9**
LZH XS sS 03 49 05.3 +0.1
LZH *e*SS SS 03 51 15.0 -11
LZH AMB AMB
comp=Z,39nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,168nm,6.2s
LZH LR LR
comp=E,647nm,14.2s
LZH LR LR
comp=Z,898nm,17.5s,MS4.6
NJ2 Nanjing 37.03 29 *e*P **P** **03 43 21.0 +0.1**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
NWAO Narrogin (SRO) 37.45 154 P **P** **03 43 24.0 -0.4**
comp=Z,12nm,0.9s,mb4.7,baz=248,slow=3.8,SNR=2.7
NWAO LR LR 03 56 58.2
comp=Z,237nm,19.6s,MS4.0,baz=41,slow=33
NWAO Narrogin (SRO) 37.45 154 P **P** **03 43 24.0 -0.4**
NWAO LR LR 03 56 58.2
THN Thein Dam 38.53 328 *e*P **P** **03 43 32.5 -1.0**
GTA Gaotai 38.99 2 ⇑P **P** **03 43 37.0 -0.2**
GTA AP pP 03 43 45.5 -1.9
GTA XP sP 03 43 50.0 -1.7
GTA S **S** **03 49 33.8 +0.1**
GTA XS sS 03 49 50.5 -0.1
GTA AMB AMB
comp=Z,13nm,1.0s,mb4.6
GTA AMB AMB
comp=Z,232nm,4.8s
GTA LR LR
comp=N,209nm,12.9s,MS4.3
GTA LR LR
comp=Z,291nm,17.7s,MS4.3
GTA LR LR
comp=Z,126nm,11.7s
WRA Warramunga Arr 40.47 122 P **P** **03 43 47.6 -2.3**
comp=Z,4.6nm,0.5s,mb4.5,baz=303,slow=9.0,SNR=12
WRA S **S** **03 49 53.1 -3.4**
comp=Z,1.2nm,0.9s,baz=292,slow=14,SNR=4.1
WRA LR LR 04 04 02.8
comp=Z,193nm,18.4s,MS4.0,baz=295,slow=41
WRA Warramunga Arr 40.47 122 P **P** **03 43 47.6 -2.3**
WRA S **S** **03 49 53.1 -3.4**
WRAB Tennant Creek 40.48 122 *e*P **P** **03 43 47.2 -2.7**
WRAB pmax pmax
comp=Z,19nm,0.9s,mb4.8
WRAB Tennant Creek 40.48 122 *e*P **P** **03 43 47.2 -2.7**
comp=Z,19nm,0.9s,mb4.8
WB2 Warramunga Arr 40.48 122 *e*P **P** **03 43 46.9 -3.1**
WB2 Warramunga Arr 40.48 122 *e*P **P** **03 43 47.2 -2.8**
FORT Forrest 41.75 140 *e*P **P** **03 44 01.0 +0.8**
comp=Z,30nm,0.5s,mb5.2
FORT Forrest 41.75 140 *e*P **P** **03 44 00.3 +0.1**
comp=Z,48nm,0.8s,mb5.2
FORT *e*pP pP 03 44 09.9 -0.6
ASAR Alice Springs 41.83 127 P **P** **03 43 58.9 -2.1**
comp=Z,3.1nm,0.6s,mb4.1,baz=298,slow=7.5,SNR=35
ASAR PcP PcP 03 45 55.6 -1.1
comp=Z,1.2nm,0.7s,baz=322,slow=2.8,SNR=3.1
ASAR S **S** **03 50 11.6 -5.0**
comp=Z,1.9nm,0.9s,baz=300,slow=16,SNR=5.9
HHC Hu-ho-hao-te 42.12 15 *e*P **P** **03 44 03.5 +0.4**
HHC AP pP 03 44 13.3 -0.1
HHC XP sP 03 44 17.5 -0.1
HHC PP PP 03 45 45.0 +3.9
HHC PCS PcS 03 49 49.0 +0.1
HHC S **S** **03 50 21.3 +0.9**
HHC XS sS 03 50 38.3 +0.9
HHC SS SS 03 53 23.8 -5.2
HHC SCS ScS 03 54 00.8 -2.0
HHC AMB AMB
comp=Z,44nm,1.5s,mb4.9
HHC AMB AMB
comp=Z,296nm,4.2s
HHC LR LR
comp=N,427nm,16.7s,MS4.5
HHC LR LR
comp=E,326nm,15.5s,MS4.5
HHC LR LR
comp=Z,414nm,17.8s,MS4.4
BJT Baijiatuau 42.74 20 *e*P **P** **03 44 08.3 +0.1**
BJT pmax pmax
comp=Z,265nm,1.1s
BJT Baijiatuau 42.74 20 *e*P **P** **03 44 08.2 +0.1**
comp=Z,265nm,1.1s,mb5.9
BJI Beijing 42.77 20 P **P** **03 44 08.8 +0.5**
BJI SS SS 03 53 42.0 +0.3
BJI AMB AMB
comp=Z,171nm,1.2s,mb5.7
BJI AMB AMB
comp=Z,425nm,3.5s
BJI LR LR
comp=N,312nm,24.9s,MS4.4
BJI LR LR
comp=E,570nm,24.5s,MS4.4
BJI LR LR
comp=Z,107nm,22.4s,MS3.7
WMQ Urumqi 44.42 349 P **P** **03 44 21.8 +0.2**
WMQ XP sP 03 44 35.3 -0.9
WMQ PP PP 03 46 07.0 +1.2
WMQ S **S** **03 50 54.0 -0.1**
WMQ XS sS 03 51 10.5 -0.7
WMQ SCS ScS 03 54 14.5 -2.6
WMQ AMB AMB
comp=Z,25nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,147nm,4.0s
WMQ LR LR
comp=N,86nm,24.0s,MS3.9
WMQ LR LR
comp=E,165nm,24.0s,MS3.9
WMQ LR LR
comp=Z,73nm,27.0s,MS3.5
KSRS Korea Array 45.93 33 P **P** **03 44 32.2 -1.4**
comp=Z,25nm,0.7s,mb5.2,baz=222,slow=8.5,SNR=71
KSRS LR LR 04 04 43.4
comp=Z,161nm,19.9s,MS4.0,baz=43,slow=37
TKM2 Tokmak 2 47.16 337 *e*P **P** **03 44 43.0 -0.3**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
TKM2 Tokmak 2 47.16 337 *e*P **P** **03 44 43.0 -0.3**
comp=Z,6.5nm,0.6s,mb4.7
SNY Shenyang 47.19 26 ⇑P **P** **03 44 41.5 -2.0**
SNY AMB AMB
comp=Z,17nm,0.9s,mb5.0
AML Almayashu 47.28 335 *e*P **P** **03 44 44.9 +0.7**
comp=Z,10nm,0.7s,mb4.9
AAK Ala-Archa 47.36 336 *e*P **P** **03 44 46.5 +1.7**
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
AAK Ala-Archa 47.36 336 *e*P **P** **03 44 46.5 +1.6**
comp=Z,6.8nm,0.8s,mb4.6
EKS2 Erkin-Say 47.68 335 *e*P **P** **03 44 47.6 +0.3**
comp=Z,8.6nm,0.7s,mb4.9
SONM Songino Array 47.89 7 P **P** **03 44 48.6 -0.2**
comp=Z,16nm,0.7s,mb5.2,baz=190,slow=8.3,SNR=87
SONM PcP PcP 03 46 17.0 0.0
comp=Z,4.0nm,0.8s,baz=181,slow=4.4,SNR=2.4
SONM ScP ScP 03 50 06.8 -2.1
comp=Z,0.6nm,0.9s,baz=238,slow=2.8,SNR=3.8
SONM LR LR 04 07 07.4
comp=Z,327nm,19.0s,MS4.3,baz=197,slow=39
SONM Songino Array 47.89 7 P **P** **03 44 48.6 -0.2**
SONM 03 46 17.0
SONM Songino Array 47.89 7 P **P** **03 44 48.6 -0.2**
SONM PcP PcP 03 46 17.0 0.0
SONM ScP ScP 03 50 06.8 -2.1
SONM LR LR 04 07 07.4
ULN Ulaanbaatar 48.00 8 *e*P **P** **03 44 49.7 0.0**
ULN pmax pmax
comp=Z,20nm,0.8s,mb5.2
ULN Ulaanbaatar 48.00 8⇑*e*P **P** **03 44 49.8 +0.1**
ULN Ulaanbaatar 48.00 8 *e*P **P** **03 44 49.7 0.0**
comp=Z,20nm,0.8s,mb5.2
MK31 Makanchi Array 48.46 345 *e*P **P** **03 44 53.1 -0.2**
MKAR Makanchi Array 48.46 345 P **P** **03 44 53.1 -0.1**
comp=Z,8.6nm,0.5s,mb5.0,baz=157,slow=7.3,SNR=99
MKAR LR LR 04 06 29.8
comp=Z,103nm,20.7s,MS3.8,baz=163,slow=37
CN2 Changchun 49.59 26 *e*P **P** **03 45 00.3 -1.7**
CN2 *e*AP pP 03 45 13.8 +1.3
CN2 *e*S **S** **03 52 05.8 -2.0**
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
CBIJ Chichi jima 49.74 54 LR LR 04 02 17.3
comp=Z,338nm,20.4s,MS4.3,baz=42,slow=32
ZAK Zakamensk 50.11 4⇑*i*P **P** **03 45 05.4 -0.4**
ZAK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
MOY Mondy 51.27 2 *e*P **P** **03 45 17.2 +2.7**
TLY Talaya 51.42 4 *e*P **P** **03 45 16.8 +1.1**
TLY *e*S **S** **03 52 37.0 +4.0**
TLY pmax pmax
comp=Z,13nm,0.7s,mb5.0
TLY MLR MLR
comp=Z,280nm,18.0s,MS4.3
MAJO Matsushiro 51.55 41 *e*P **P** **03 45 15.0 -1.9**
MAJO pmax pmax
comp=Z,15nm,0.8s,mb5.0
MAJO Matsushiro 51.55 41 *e*P **P** **03 45 15.0 -2.0**
comp=Z,15nm,0.8s,mb5.0
MAT Matsushiro 51.55 41 P **P** **03 45 14.3 -2.6**
MJAR Matsushiro Arr 51.55 41 P **P** **03 45 14.8 -2.1**
comp=Z,11nm,0.9s,mb4.8,baz=225,slow=6.9,SNR=20
MJAR LR LR 04 10 17.7
comp=Z,79nm,18.7s,MS3.8,baz=225,slow=40
STKA Stephens Creek 51.80 132 P **P** **03 45 17.9 -0.9**
comp=Z,2.5nm,0.5s,mb4.4,baz=311,slow=9.5,SNR=9.3
STKA LR LR 04 10 24.0
comp=Z,191nm,19.9s,MS4.1,baz=210,slow=40
STKA Stephens Creek 51.80 132 *e*P **P** **03 45 17.4 -1.4**
comp=Z,10nm,0.8s,mb4.8
STKA Stephens Creek 51.80 132 *e*P **P** **03 45 17.8 -1.0**
comp=Z,2.7nm,0.8s,mb4.2
STKA *e*pP pP 03 45 27.8 -1.6
MDJ Mudanjiang 52.09 28 P **P** **03 45 19.5 -1.3**
MDJ AMB AMB
comp=Z,17nm,1.7s,mb4.7
MDJ AMB AMB
comp=Z,371nm,5.0s
HIA Hailar 52.14 18⇓*i*P **P** **03 45 20.0 -1.1**
KURK Kurchatov 53.03 344 P **P** **03 45 26.9 -0.8**
comp=Z,3.2nm,0.5s,mb4.5,baz=166,slow=6.6,SNR=7.6
KURK LR LR 04 12 27.0
comp=Z,87nm,19.6s,MS3.8,baz=170,slow=41
KURK Kurchatov 53.03 344 *e*P **P** **03 45 26.9 -0.7**
KURK pmax pmax
comp=Z,23nm,1.2s,mb5.0
KURK Kurchatov 53.03 344 *e*P **P** **03 45 26.9 -0.7**
comp=Z,23nm,1.2s,mb5.0
OPO Ambohidratompo 53.70 247 LR LR 04 02 19.9
comp=Z,43nm,21.8s,MS3.5,baz=314,slow=29
ZAA0 Zalesovo Array 54.69 350 *e*P **P** **03 45 38.5 -1.1**
ZALV Zalesovo Beam 54.69 350 P **P** **03 45 39.0 -0.7**
comp=Z,7.8nm,0.6s,mb5.0,baz=175,slow=6.8,SNR=41
ZALV PKiKP PKiKP 03 53 15.6 0.0
comp=Z,1.0nm,0.7s,baz=150,slow=9.3,SNR=4.1
ZALV LR LR 04 14 16.9
comp=Z,66nm,19.2s,MS3.7,baz=173,slow=42
NVS Novosibirsk 55.82 349 *e*P **P** **03 45 47.3 -0.5**
NVS *e*S **S** **03 53 27.3 -5.2**
NVS *e* 03 55 28.5
NVS pmax pmax
comp=N,9.0nm,1.2s
NVS pmax pmax
comp=Z,13nm,1.2s,mb4.8
NVS smax
comp=N,27nm,2.0s
MIB Mutribah 56.78 306 *e*P **P** **03 45 55.2 0.0**
MIB AMb AMB 03 45 56.2
comp=Z,49nm,1.0s,mb5.5
BRVK Borovoye 57.61 340 *e*P **P** **03 45 59.3 -1.3**
BRVK pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
BRVK Borovoye 57.61 340 *e*P **P** **03 45 59.3 -1.3**
comp=Z,7.8nm,0.5s,mb5.0
YSS Yuzh-Sakhalins 60.43 33⇑*i*P **P** **03 46 18.6 -1.6**
YSS pmax pmax
comp=Z,166nm,2.5s,mb5.6
AKTK Aktyubinsk 60.65 332 P **P** **03 46 20.6 -1.1**
AKTO Aktyubinsk 60.65 332 P **P** **03 46 20.6 -1.1**
comp=Z,1.8nm,0.5s,mb4.5,baz=108,slow=4.6,SNR=10
GNI Garni 62.84 316 *e*P **P** **03 46 40.1 +3.4**
GNI pmax pmax
comp=Z,14nm,1.0s
GNI Garni 62.84 316 *e*P **P** **03 46 40.1 +3.4**
comp=Z,14nm,1.0s,mb5.0
SVE Sverdlovsk 64.03 338⇑*e*P **P** **03 46 44.5 +0.4**
SVE pmax pmax
comp=Z,24nm,1.1s,mb5.1
ARU Arti 64.54 337*c i*P **P** **03 46 45.3 -2.2**
ARU *e* 03 49 06.0
ARU S **S** **03 55 24.2 -0.1**
ARU SS SS 03 59 30.6 -4.6
ARU pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
ARU Arti 64.54 337 *e*P **P** **03 46 45.9 -1.6**
comp=Z,13nm,1.0s,mb4.9
KIV Kislovodsk 65.84 319⇑*i*P **P** **03 46 52.3 -3.9**
KIV *e* 03 49 23.3
KIV *e*SS SS 03 59 56.2 +0.2
KIV pmax pmax
comp=Z,16nm,1.2s,mb4.9
YAK Yakutsk 65.98 16 *e*P **P** **03 46 54.4 -2.3**
YAK pmax pmax
comp=Z,54nm,1.2s,mb5.5
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,11nm,1.2s
YAK Yakutsk 65.98 16 *e*P **P** **03 46 55.0 -1.7**
comp=E,42nm,0.9s,mb5.5
MALT Malatya 66.69 312 *e*P **P** **03 47 02.3 +0.5**
MALT pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MALT Malatya 66.69 312⇓*i*P **P** **03 47 03.0 +1.2**
MALT Malatya 66.69 312 *e*P **P** **03 47 02.3 +0.5**
comp=Z,6.4nm,0.9s,mb4.7
ANN Anapa 69.63 318 *e*P **P** **03 47 13.9 -6.2**
ANN pmax pmax
comp=Z,83nm,1.7s,mb5.4
BR131 Keskin Array S 70.67 312 *e*P **P** **03 47 25.6 -1.0**
comp=Z,3.0nm,0.6s,mb4.4
BRTR Keskin Array B 70.67 312 P **P** **03 47 25.8 -0.8**
comp=Z,2.5nm,0.7s,mb4.3,baz=133,slow=7.3,SNR=18
BRTR LR LR 04 20 12.9
comp=Z,46nm,19.3s,MS3.8,baz=267,slow=37
LSZ Lusaka 71.06 254 *e*P **P** **03 47 30.3 +0.9**
LSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
LSZ Lusaka 71.06 254 *e*P **P** **03 47 30.3 +0.9**
comp=Z,1.7nm,0.6s,mb4.2
PETK Petropavlovsk- 71.83 33 P **P** **03 47 31.7 -1.6**
comp=Z,2.9nm,0.7s,mb4.3,baz=161,slow=5.6,SNR=5.9
PETK LR LR 04 18 21.0
comp=Z,58nm,22.0s,MS3.8,baz=242,slow=35
PETK Petropavlovsk- 71.83 33 P **P** **03 47 31.7 -1.6**
PETK LR LR 04 18 20.9
MAW Mawson 72.09 194 LR LR 04 11 59.6
comp=Z,159nm,21.3s,MS4.3,baz=204,slow=30
PET Petropavlovsk 72.31 33 *e*P **P** **03 47 35.0 -1.2**
TIXI Tiksi 73.89 10⇑*e*P **P** **03 47 43.1 -2.1**
TIXI pmax pmax
comp=Z,17nm,1.3s,mb4.8
TIXI Tiksi 73.89 10 *e*P **P** **03 47 43.3 -1.9**
comp=Z,6.6nm,0.5s,mb4.8
OBN Obninsk 74.08 328⇑*i*P **P** **03 47 45.7 -0.9**
OBN *e* 03 50 33.6
OBN *e*SS SS 04 02 02.2 -0.1
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
SEY Seymchan 74.14 23⇑*e*P **P** **03 47 45.6 -1.2**
BOSA Boshof 75.41 240 P **P** **03 47 55.4 +0.5**
comp=Z,1.8nm,0.6s,mb4.2,baz=92,slow=19,SNR=6.1
BOSA LR LR 04 16 45.2
comp=Z,98nm,18.5s,MS4.1,baz=249,slow=32
TIRR Tirgusor 75.67 316⇓*i*P **P** **03 47 55.4 -0.6**
TIRR Tirgusor 75.67 316 ⇓P **P** **03 47 55.4 -0.6**
AKASG Malin Array Be 76.77 322 P **P** **03 48 00.9 -1.2**
comp=Z,1.5nm,0.5s,mb4.2,baz=92,slow=4.8,SNR=11
AKASG LR LR 04 27 08.1
comp=Z,56nm,21.0s,MS3.9,baz=305,slow=40
VRI Vrincioaia 77.16 317⇓*i*P **P** **03 48 04.9 +0.5**
VRI Vrincioaia 77.16 317 ⇑P **P** **03 48 04.9 +0.4**
MLR Muntele Rosu 77.61 317⇑*i*P **P** **03 48 07.5 +0.5**
MLR Muntele Rosu 77.61 317 ⇑P **P** **03 48 07.5 +0.5**
VOIR 78.22 316⇑*i*P **P** **03 48 09.5 -0.8**
VOIR 78.22 316 ⇑P **P** **03 48 09.5 -0.8**
BURAR Bucovina Array 78.56 319⇑*i*P **P** **03 48 13.1 +0.9**
BUR08 Bucovina Ar. S 78.58 319 *e*P **P** **03 48 12.9 +0.6**
JOF Joensuu 79.53 335 *e*p **P** **03 48 17.7 +0.5**
comp=Z,6.2nm,0.9s,mb4.5
DRGR 80.07 317⇓*i*P **P** **03 48 21.2 +0.7**
DRGR 80.07 317 ⇓P **P** **03 48 21.2 +0.8**
TRPA Tarpa 80.43 319⇑*i*P **P** **03 48 23.2 +0.8**
BZS Buzias 80.62 316⇑*i*P **P** **03 48 22.9 -0.6**
BZS Buzias 80.62 316 ⇑P **P** **03 48 22.9 -0.5**
URZ Urewera 81.25 129 LR LR 04 29 34.6
comp=Z,95nm,18.6s,MS4.2,baz=119,slow=39
KAF Kangasniemi 81.49 333 *e*p **P** **03 48 27.7 0.0**
comp=Z,18nm,1.0s,mb4.9
KAF Kangasniemi 81.49 333 *e*P **P** **03 48 27.7 0.0**
KAF pmax pmax
comp=Z,18nm,1.0s,mb5.0
BILL Bilibino 81.60 21⇑*i*P **P** **03 48 25.8 -2.4**
BILL *e* 03 48 41.2
BILL *e* 03 51 35.8
BILL pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
OJC Ojcow 82.55 321 *e*P **P** **03 48 33.8 +0.3**
PKSM Moragy 82.76 316⇓*i*P **P** **03 48 33.3 -1.4**
ARCES ARCESS Array B 83.84 340 P **P** **03 48 39.2 -0.6**
comp=Z,3.2nm,0.8s,mb4.5,baz=99,slow=5.2,SNR=14
ARCES LR LR 04 29 42.1
comp=Z,96nm,20.4s,MS4.2,baz=291,slow=38
VNDA Vanda 84.66 169 LR LR 04 21 30.7
comp=Z,61nm,19.4s,MS4.0,baz=70,slow=32
BOJS Bojanci 85.05 315 *i* P **P** **03 48 46.2 -0.2**
VISS Visnje 85.36 316 *i* P **P** **03 48 45.9 -2.0**
AQU L'Aquila 86.17 312 *e*P **P** **03 48 51.8 -0.3**
AQU pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
AQU L'Aquila 86.17 312 *e*P **P** **03 48 51.8 -0.3**
comp=Z,7.8nm,0.8s,mb5.0
GERES GERESS Array B 86.35 319 P **P** **03 48 52.8 0.0**
comp=Z,0.8nm,0.8s,mb4.0,baz=41,slow=4.3,SNR=7.0
SPITS Spitsbergen Ar 88.12 348 P **P** **03 49 01.0 +0.1**
comp=Z,2.0nm,0.6s,mb4.5,baz=29,slow=4.4,SNR=6.3
SPITS Spitsbergen Ar 88.12 348 P **P** **03 49 00.9 +0.1**
NOA NORSAR Array B 88.44 331 LR LR 04 30 09.0
comp=Z,68nm,18.3s,MS4.1,baz=165,slow=36
PGF Pioggiola 89.43 312 *e*P **P** **03 49 07.9 +0.2**
comp=Z,26nm,1.0s,mb5.2
PGF Pioggiola 89.43 312 *e*P **P** **03 49 07.9 +0.2**
PGF pmax pmax
comp=Z,13nm,1.0s,mb5.2
PGF Pioggiola 89.43 312 *e*P **P** **03 49 07.9 +0.2**
comp=Z,13nm,1.0s,mb5.2
LPG La Plagne 91.02 315 *e*P **P** **03 49 15.0 0.0**
LPL La Plagne 91.03 315 *e*P **P** **03 49 14.9 -0.2**
comp=Z,18nm,1.1s,mb5.0
LPL La Plagne 91.03 315 *e*P **P** **03 49 14.9 -0.2**
LPL pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
LPL La Plagne 91.03 315 *e*P **P** **03 49 14.9 -0.2**
comp=Z,9.0nm,1.1s,mb5.0
TAM Tamanrasset 92.61 293 *e*P **P** **03 49 24.1 +1.2**
TAM pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
TAM Tamanrasset 92.61 293 *e*P **P** **03 49 24.1 +1.1**
comp=Z,2.6nm,1.0s,mb4.6
TORD Torodi Ar. Bea 96.53 283 P **P** **03 49 40.6 -0.4**
comp=Z,0.3nm,0.7s,mb3.8,baz=111,slow=4.8,SNR=3.7
TORD LR LR 04 30 47.2
comp=Z,90nm,20.1s,MS4.2,baz=100,slow=34
YKA Yellowknife Ar 112.66 16 PP PP 03 55 23.5 -10
HLID Hailey 127.41 30 *e*PKPdf PKPdf 03 55 16.0 +0.4
ULM Lac du Bonnet 128.21 12 PKP PKPdf 03 55 16.1 -0.9
comp=Z,1.4nm,0.5s,baz=27,slow=2.3,SNR=3.5
ULM Lac du Bonnet 128.21 12 *e*PKPdf PKPdf 03 55 16.1 -0.9
NVAR Mina Array Bea 128.79 37 PKP PKPdf 03 55 18.9 +0.4
comp=Z,1.2nm,0.8s,baz=299,slow=1.6,SNR=7.8
SNOW Snow King Moun 129.23 27 *e*PKPdf PKPdf 03 55 19.6 +0.4
PDAR Pinedale Array 130.32 27 PKP PKPdf 03 55 21.1 -0.1
comp=Z,0.7nm,0.6s,baz=122,slow=1.7,SNR=6.3
PDAR SKPbc SKPbc 03 58 38.1 -3.7
comp=Z,2.1nm,0.9s,baz=45,slow=0.6,SNR=9.3
DUG Dugway 130.68 32 *e*PKIKP PKPdf 03 55 21.7 -0.3
RSSD Black Hills 131.48 22 *e*PKIKP PKPdf 03 55 22.8 -0.6
ANMO Albuquerque 137.94 31 *e*PKIKP PKPdf 03 55 35.8 0.0
MIAR Mount Ida 143.59 17 *e*PKIKP PKPdf 03 55 42.6 -3.4
TXAR Lajitas Array 143.78 34 PKP PKPdf 03 55 43.9 -2.6
comp=Z,0.6nm,0.5s,baz=226,slow=0.8,SNR=9.3
TXAR SKPbc SKPbc 03 59 19.4 -3.2
comp=Z,0.2nm,0.6s,baz=28,slow=3.0,SNR=4.2
JCT Junction City 144.84 28 *e*PKIKP PKPdf 03 55 46.2 -2.1
CPUP Villa Florida 145.13 220 PKPbc PKPbc 03 55 48.7 +0.4
comp=Z,3.0nm,0.5s,baz=91,slow=2.0,SNR=18
CPUP Villa Florida 145.13 220 *e*PKPbc PKPbc 03 55 48.0 -0.3
NATX Nacogdoches 145.82 20 *e*PKPbc PKPbc 03 55 49.9 -0.5
GOGA Godfrey 146.46 3 *e*PKP2 PKPbc 03 55 51.8 -0.5
LRAL Lakeview Retre 146.49 8 *e*PKPdf PKPdf 03 55 50.5 -0.5
HKT Hockley 147.02 23 *e*PKP2 PKPbc 03 55 53.5 -0.5

*IDC **30** 03:50:16.2±0.7, 555S×10390E, h0km, mb4.5/16, mb1 4.6/16, mb1mx4.5/21, mbtmp4.5/16, MS3.4/3, Ms1 3.4/3, ms1mx2.9/33, Error ellipse: s-maj=27.6km s-min=14.5km az=55.0*

*ISCJB **30** 03:50:19.5±0.4, 557S×007×10402E±008, h33km, mb4.7/36, MS3.5/2, Error ellipse: s-maj=13.7km s-min=6.8km az=138.7*

*NEIC **30** 03:50:19.7±3.0, 556S×10401E, h24km±21km, mb4.5/12, Error ellipse: s-maj=11.2km s-min=6.3km az=224.0*

*DJA **30** 03:50:28, 548S×10399E, h30km, MLv4.5/8*

ISC 30 03:50:21.6±0.3, 558S±007×10400E±007, h35km, n87, σ0s75/68, mb4.7/36, MS3.5/2, 7C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**2.18**	**104**	P	Px	03 51 06.8	
KSI	**Kapahiang**	**2.38**	**324**	P	**Pn**	**03 51 04.1**	**+6.0**
DBJI	**Dramaga**	**2.90**	**110**	P	**Pn**	**03 51 11.5**	**+6.2**
LEM	**Lembang**	**3.80**	**109**	P	Px	03 51 26.3	
TPI	**Tanjungpandan**	**4.60**	**53**	P	**Pn**	**03 51 34.8**	**+6.1**
XMIS	**Christmas Isla**	**5.13**	**162**	*e*Pn	**Pn**	**03 51 31.9**	**-4.2**
	158nm,0.3s						
XMIS				*e*Sn	**Sn**	**03 52 24.5**	**-10**
PDSI	**Padang**	**5.83**	**323**	P	**Pn**	**03 51 51.1**	**+5.4**
	62nm,0.7s,2μm0.4nm						
PPI	**Padang Panjang**	**6.24**	**325**	P	Px	03 51 59.6	
MYKOM	**Kota Tinggi**	**7.33**	**359**	P	Px	03 52 13.5	
COCO	**West Island**	**9.65**	**227**	*e*Pn	**Pn**	**03 52 36.5**	**-1.6**
	119nm,0.6s						
PSI	**Prapat**	**9.75**	**329**	LR	LR	03 56 40.9	
	comp=Z,102nm,19.9s,baz=144,slow=40						
MBWA	**Marble Bar**	**21.73**	**137**	*e*P	**P**	**03 55 09.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**24.40**	**348**	P	**P**	**03 55 36.3**	**-0.6**
	7.8nm,0.6s,mb4.3,baz=182,slow=9.0,SNR=47						
CMAR				LR	LR	04 05 09.9	
	comp=Z,58nm,18.0s,MS3.1,baz=130,slow=37						
FITZ	**Fitzroy Crossi**	**24.52**	**122**	*e*P	**P**	**03 55 38.3**	**+0.3**
	16nm,0.6s,mb4.7						
CHTO	**Chiang Mai**	**24.75**	**348**	*e*P	**P**	**03 55 39.7**	**-0.3**
	4.0nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**32.76**	**119**	P	**P**	**03 56 51.7**	**+0.1**
	2.7nm,0.7s,mb4.3,baz=298,slow=11,SNR=10						
WRA				PcP	PcP	03 59 36.7	+0.2
	1.1nm,0.6s,baz=299,slow=1.9,SNR=4.4						
WRAB	**Tennant Creek**	**32.77**	**119**	*e*P	**P**	**03 56 51.9**	**+0.3**
	3.8nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	**32.77**	**119**	*e*P	**P**	**03 56 52.0**	**+0.4**
WB2	**Warramunga Arr**	**32.77**	**119**	*e*P	**P**	**03 56 51.5**	**-0.2**
ASAR	**Alice Springs**	**33.93**	**125**	P	**P**	**03 57 02.2**	**+0.5**
	2.6nm,0.6s,mb4.4,baz=306,slow=8.2,SNR=27						
ASAR				PcP	PcP	03 59 40.3	+0.6
	1.5nm,0.6s,baz=304,slow=2.1,SNR=9.7						
ODAN	**Odare**	**36.04**	**334**	*e*P	**P**	**03 57 19.8**	**0.0**
	12nm,0.6s,mb5.0						
TAPN	**Taplejung**	**36.33**	**335**	*e*P	**P**	**03 57 22.1**	**-0.2**
	7.9nm,0.5s,mb4.9						
RAMN	**Ramite**	**36.47**	**333**	*e*P	**P**	**03 57 23.9**	**+0.5**
	9.1nm,0.4s,mb5.0						
JIRN	**Jiri**	**37.26**	**333**	*e*P	**P**	**03 57 30.7**	**+0.5**
	15nm,0.6s,mb5.0						
GUN	**Gumba**	**37.61**	**333**	*e*P	**P**	**03 57 33.4**	**+0.2**
	18nm,0.5s,mb5.0						
KKN	**Kakani**	**37.78**	**332**	*e*P	**P**	**03 57 34.6**	**0.0**
GKN	**Gorkha**	**38.26**	**332**	*e*P	**P**	**03 57 38.6**	**-0.1**
	7.7nm,0.3s,mb4.9						
KOLN	**Koldanda**	**38.57**	**330**	*e*P	**P**	**03 57 41.5**	**+0.3**
	12nm,0.6s,mb4.8						
DANN	**Dangsing**	**38.97**	**331**	*e*P	**P**	**03 57 44.7**	**+0.1**
	20nm,0.4s,mb5.2						
COEN	**Coen**	**39.44**	**105**	*e*P	**P**	**03 57 48.4**	**-0.4**
	8.0nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**43.80**	**131**	P	**P**	**03 58 25.5**	**+1.2**
	6.9nm,0.5s,mb4.6,baz=308,slow=8.5,SNR=32						
STKA	**Stephens Creek**	**43.80**	**131**	*e*P	**P**	**03 58 25.3**	**+1.1**
	5.5nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**43.80**	**131**	*e*P	**P**	**03 58 25.2**	**+0.9**
	1.5nm,0.7s,mb3.8						
KSRS	**Korea Array**	**48.28**	**26**	P	**P**	**03 58 59.9**	**+0.5**
	5.3nm,0.6s,mb4.8,baz=221,slow=7.4,SNR=22						
KBL	**Kabul**	**51.77**	**323**	*e*P	**P**	**03 59 25.5**	**-0.4**
	5.0nm,0.7s,mb4.5						
MJAR	**Matsushiro Arr**	**52.73**	**35**	P	**P**	**03 59 32.3**	**-0.7**
	2.6nm,0.7s,mb4.3,baz=206,slow=8.7,SNR=6.3						
SONM	**Songino Array**	**53.23**	**2**	P	**P**	**03 59 37.2**	**+0.7**
	4.5nm,0.7s,mb4.5,baz=179,slow=9.1,SNR=36						
SONM				PcP	PcP	04 00 44.1	+0.1
	2.0nm,0.5s,baz=185,slow=4.1,SNR=8.7						
TKM2	**Tokmak 2**	**54.72**	**335**	*e*P	**P**	**03 59 47.3**	**-0.2**
	4.5nm,0.5s,mb4.8						
AAK	**Ala-Archa**	**54.97**	**334**	*e*P	**P**	**03 59 49.1**	**-0.1**
	2.6nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**55.31**	**333**	*e*P	**P**	**03 59 51.8**	**0.0**
	6.2nm,0.6s,mb4.8						
MK31	**Makanchi Array**	**55.59**	**342**	*e*P	**P**	**03 59 52.8**	**-0.8**
MKAR	**Makanchi Array**	**55.59**	**342**	P	**P**	**03 59 53.2**	**-0.5**
	8.0nm,0.5s,mb5.0,baz=151,slow=8.9,SNR=153						
KURK	**Kurchatov**	**60.19**	**342**	P	**P**	**04 00 25.3**	**-0.6**
	6.7nm,0.5s,mb4.9,baz=160,slow=6.5,SNR=11						
KURK	**Kurchatov**	**60.19**	**342**	*e*P	**P**	**04 00 25.5**	**-0.3**
	11nm,0.8s,mb5.0						
ASAJ	**Asahikawa**	**60.45**	**31**	P	**P**	**04 00 27.7**	**-0.1**
	14nm,0.7s,mb5.1,baz=353,slow=33,SNR=7.0						
ZAA0	**Zalesovo Array**	**61.46**	**347**	*e*P	**P**	**04 00 33.5**	**-0.9**
ZALV	**Zalesovo Beam**	**61.46**	**347**	P	**P**	**04 00 33.8**	**-0.7**
	6.9nm,0.4s,mb5.2,baz=158,slow=4.8,SNR=49						
BRVK	**Borovoye**	**65.00**	**338**	*e*P	**P**	**04 00 56.8**	**-1.1**
	2.0nm,0.6s,mb4.3						
MAW	**Mawson**	**67.88**	**196**	LR	LR	04 24 24.6	
	comp=Z,59nm,18.5s,MS3.8,baz=305,slow=30						
YAK	**Yakutsk**	**70.27**	**13**	*e*P	**P**	**04 01 29.8**	**-1.2**
	22nm,0.5s,mb5.3						
PETK	**Petropavlovsk-**	**73.85**	**30**	P	**P**	**04 01 52.0**	**-0.7**
	1.4nm,0.7s,mb4.0,baz=264,slow=3.8,SNR=6.0						
BR131	**Keskin Array S**	**78.67**	**312**	*e*P	**P**	**04 02 19.9**	**-0.4**
	3.0nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**78.67**	**312**	P	**P**	**04 02 19.6**	**-0.8**
	2.7nm,0.7s,mb4.3,baz=131,slow=7.7,SNR=18						
TIRR	**Tirgusor**	**83.69**	**316**	*i*P	**P**	**04 02 47.1**	**+0.2**
AKASG	**Malin Array Be**	**84.74**	**322**	P	**P**	**04 02 51.7**	**-0.4**
	2.1nm,0.6s,mb4.5,baz=93,slow=4.9,SNR=9.1						
AKBB	**Malin Array Si**	**84.74**	**322**	*e*P	**P**	**04 02 51.6**	**-0.5**
VRI	**Vrincioaia**	**85.18**	**317**	⇑*i*P	**P**	**04 02 55.7**	**+1.3**
VRI	**Vrincioaia**	**85.18**	**317**	⇑P	**P**	**04 02 55.7**	**+1.3**
PLOR	**Plostina**	**85.23**	**317**	⇑*i*P	**P**	**04 02 56.8**	**+2.2**
MLR	**Muntele Rosu**	**85.63**	**316**	⇑*i*P	**P**	**04 02 57.8**	**+1.1**
MLR	**Muntele Rosu**	**85.63**	**316**	⇑P	**P**	**04 02 57.8**	**+1.1**
BURAR	**Bucovina Array**	**86.57**	**318**	⇓*i*P	**P**	**04 03 03.1**	**+1.8**
BURAR	**Bucovina Array**	**86.57**	**318**	⇓P	**P**	**04 03 03.1**	**+1.8**
BUR08	**Bucovina Ar. S**	**86.59**	**318**	*e*P	**P**	**04 03 02.7**	**+1.3**
JOF	**Joensuu**	**87.16**	**334**	*e*p	**P**	**04 03 03.6**	**-0.2**
	7.0nm,1.0s,mb4.8						
DRGR		**88.09**	**317**	⇓*i*P	**P**	**04 03 09.7**	**+1.1**
DRGR		**88.09**	**317**	⇓P	**P**	**04 03 09.7**	**+1.1**
TRPA	**Tarpa**	**88.44**	**318**	⇓*i*P	**P**	**04 03 11.1**	**+0.9**
BZS	**Buzias**	**88.64**	**316**	⇑*i*P	**P**	**04 03 11.8**	**+0.6**
BZS	**Buzias**	**88.64**	**316**	⇑P	**P**	**04 03 11.8**	**+0.5**
KAF	**Kangasniemi**	**89.17**	**333**	*e*p	**P**	**04 03 12.9**	**-0.5**
	9.0nm,0.9s,mb5.1						
ARCES	**ARCESS Array B**	**91.18**	**340**	P	**P**	**04 03 21.6**	**-1.0**
	2.4nm,0.9s,mb4.5,baz=89,slow=5.5,SNR=3.9						
GERES	**GERESS Array B**	**94.36**	**319**	P	**P**	**04 03 37.7**	**0.0**
	0.6nm,0.7s,mb4.2,baz=106,slow=2.9,SNR=7.1						
YKA	**Yellowknife Ar**	**116.53**	**19**	PKP	PKPdf	04 08 59.6	-1.9
	0.3nm,0.8s,baz=303,slow=2.2,SNR=4.7						
NVAR	**Mina Array Bea**	**129.64**	**43**	PKP	PKPdf	04 09 28.6	+1.1
	0.2nm,0.5s,baz=261,slow=4.2,SNR=2.7						
DUG	**Dugway**	**132.26**	**38**	*e*PKPdf	PKPdf	04 09 31.7	-0.6
PDAR	**Pinedale Array**	**132.54**	**34**	PKP	PKPdf	04 09 33.7	+0.9
	0.2nm,0.4s,baz=339,slow=2.2,SNR=3.4						
PDAR	**Pinedale Array**	**132.54**	**34**	PKP	PKPdf	04 09 33.6	+0.9
WMOK	**Wichita Mounta**	**144.15**	**33**	*e*PKPdf	PKPdf	04 09 51.4	-2.9
TXAR	**Lajitas Array**	**144.77**	**45**	PKP	PKPdf	04 09 55.4	-0.1
	5.3nm,0.7s,baz=273,slow=1.2,SNR=38						
BDFB	**Brasilia**	**145.18**	**232**	PKPbc	PKPbc	04 09 56.2	+0.1
	2.0nm,0.6s,baz=110,slow=7.8,SNR=7.2						
BLO	**Bloomington**	**145.23**	**14**	*e*PKPdf	PKPdf	04 09 55.0	-1.0
WCI	**Wyandotte Cave**	**146.18**	**15**	*e*PKPbc	PKPbc	04 09 58.0	-0.7
JCT	**Junction City**	**146.61**	**39**	*e*PKPbc	PKPbc	04 10 00.2	0.0
MIAR	**Mount Ida**	**146.91**	**27**	*e*PKPbc	PKPbc	04 10 00.5	-0.4
WVT	**Waverly**	**147.71**	**18**	*e*PKPbc	PKPbc	04 10 02.1	-1.0
TZTN	**Tazewell**	**148.42**	**12**	*e*PKPbc	PKPbc	04 10 04.1	-0.8

*NEIC **30** 04:10:55.9, 3541N×0.11W, h0km, MG3.8(MDD), After MDD.*

*CSEM **30** 04:10:55.4±0.1, 3551N×006W, h15km, mb3.8/1, Error ellipse: s-maj=3.6km s-min=2.3km az=47.0*

*ISCJB **30** 04:10:56.4±0.9, 355N±0.1×006W±007, h24km±12km, Error ellipse: s-maj=17.9km s-min=8.6km az=161.0*

*CRAAG **30** 04:10:56.5, 3543N×005E, Ml3.1*

*MDD **30** 04:10:57.0±0.7, 3544N×001E, h16km±9km, mb3.3/6, Error ellipse: s-maj=13.0km s-min=5.8km az=153.0, PRXIMO*

ISC 30 04:10:57.0±0.8, 3550N±010×007W±007, h15km±9km, n19, σ1s04/32, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODJA	**Bouhanifia**	**0.18**	**202**	P	**Pg**	**04 11 02.0**	**+0.6**
OJBR	**Djebel Berber**	**0.34**	**76**	P	**Pg**	**04 11 03.0**	**-1.1**
USTO	**Oran**	**0.46**	**301**	P	**Pg**	**04 11 06.0**	**-0.2**
OKGL	**Djebel Kef Gue**	**0.79**	**47**	P	**Pg**	**04 11 04.0**	**-8.3**
EBER	**Berja**	**2.68**	**302**	P	**Pn**	**04 11 38.5**	**-1.0**
	0.5nm,0.2s,SNR=11						
EBER				S	**Sn**	**04 12 11.7**	**+0.1**
	3.7nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.68**	**302**	P	**Pn**	**04 11 38.5**	**-1.0**
	0.5nm,0.2s,SNR=11						
EBER				S	**Sn**	**04 12 11.7**	**+0.1**
	3.7nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**3.13**	**296**	P	**Pn**	**04 11 44.1**	**-1.6**
	0.5nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**04 12 20.4**	**-2.4**
	0.3nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**3.33**	**303**	P	**Pn**	**04 11 50.2**	**+1.6**
	0.6nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.33**	**314**	P	**Pn**	**04 11 49.2**	**+0.6**
	1.0nm,0.2s,SNR=24						
EQES				S	**Sn**	**04 12 28.3**	**+0.4**
	0.6nm,0.1s,SNR=7.9						
EQES	**Quesada**	**3.33**	**314**	P	**Pn**	**04 11 49.2**	**+0.6**
	1.0nm,0.2s,SNR=24						
EQES				S	**Sn**	**04 12 28.3**	**+0.4**
	0.6nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**3.35**	**340**	P	**Pn**	**04 11 48.9**	**+0.1**
	0.2nm,0.1s,SNR=12						
ETOB				S	**Sn**	**04 12 27.1**	**-1.3**
	0.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.35**	**340**	P	**Pn**	**04 11 48.9**	**+0.1**
	0.2nm,0.1s,SNR=12						
ETOB				S	**Sn**	**04 12 27.1**	**-1.3**
	0.9nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**3.69**	**329**	P	**Pn**	**04 11 55.0**	**+1.6**
	0.3nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**04 12 36.9**	**+0.3**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.70**	**17**	P	**Pn**	**04 11 53.7**	**+0.2**
	1.3nm,0.1s,SNR=19						
EIBI				S	**Sn**	**04 12 37.0**	**+0.2**
	2.4nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.70**	**17**	P	**Pn**	**04 11 53.7**	**+0.2**
	1.3nm,0.1s,SNR=19						
EIBI				S	**Sn**	**04 12 37.0**	**+0.2**
	2.4nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.96**	**287**	P	**Pn**	**04 11 56.4**	**-0.8**
	0.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.96**	**287**	P	**Pn**	**04 11 56.4**	**-0.7**
	0.3nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**04 12 39.3**	**-4.0**
	0.3nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**3.96**	**287**	P	**Pn**	**04 11 56.4**	**-0.7**
EMIJ				S	**Sn**	**04 12 39.3**	**-4.0**
EBAN	**Banos Encina**	**4.00**	**313**	P	**Pn**	**04 11 59.0**	**+1.3**
	0.7nm,0.2s,SNR=7.9						
EBAN				S	**Sn**	**04 12 45.0**	**+0.8**
	0.4nm,0.1s,SNR=7.9						

IDC 30 04:13:16.8±11.0, 1553S×17640W, h345km±120km, mb3.0/5, mb1 3.4/5, mb1mx3.2/17, mbtmp3.0/5, Error ellipse: s-maj=180.2km s-min=26.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.00**	**257**	P	P	04 21 13.9	-0.8
	0.2nm,0.4s,baz=91,slow=8.2,SNR=3.7						
ASAR	**Alice Springs**	**47.32**	**252**	P	P	04 21 17.5	+0.3
	2.7nm,0.6s,baz=85,slow=8.0,SNR=50						
NVAR	**Mina Array Bea**	**76.38**	**43**	P	P	04 24 29.2	+0.5
	0.6nm,0.6s,baz=225,slow=8.3,SNR=6.8						
TXAR	**Lajitas Array**	**83.09**	**57**	P	P	04 25 04.9	+0.1
	0.5nm,0.9s,baz=222,slow=1.7,SNR=4.0						
PDAR	**Pinedale Array**	**84.31**	**43**	P	P	04 25 10.6	+0.1
	0.3nm,0.7s,baz=239,slow=5.1,SNR=3.3						
BRTR	**Keskin Array B**	**144.38**	**318**	PKP	PKPdf	04 32 11.5	-0.9
	1.0nm,0.6s,baz=56,slow=2.6,SNR=6.7						
MLR	**Muntele Rosu**	**144.71**	**332**	PKP	PKPdf	04 32 12.6	-0.2
	0.8nm,0.5s,baz=350,slow=9.7,SNR=5.2						
GERES	**GERESS Array B**	**145.75**	**348**	PKPbc	PKPbc	04 32 15.2	-0.4
	0.3nm,0.6s,baz=5.7,slow=4.0,SNR=4.6						

*BJI **30** 04:26:19.4, 624S×13054E, h165km, mB5.2, mb4.7*

*MOS **30** 04:26:23.5±1.0, 573S×13007E, h160km, mb4.6/19, Error ellipse: s-maj=12.1km s-min=6.9km az=117.7*

*NEIC **30** 04:26:25.5±0.9, 577S×130.13E, h166km±9km, mb4.8/39, Error ellipse: s-maj=7.4km s-min=5.0km az=49.0*

*ISCJB **30** 04:26:26.0±0.6, 585S±003×130.18E±004, h189km±6km, mb4.9/84, Error ellipse: s-maj=7.3km s-min=4.1km az=143.2*

*DJA **30** 04:26:28, 587S×130.16E, h173km, Mw5.4/10*

*IDC **30** 04:26:28.4±1.0, 572S×130.10E, h188km±8km, mb4.4/16, mb1 4.6/18, mb1mx4.6/19, mbtmp4.5/18, MS3.6/4, Ms1 3.6/4, ms1mx3.1/22, Error ellipse: s-maj=14.2km s-min=8.5km az=70.0*

ISC 30 04:26:27.4±0.6, 581S±004×13019E±004, h183km±6km, h177km±1.2km; pP-P, n235, σ1s06/214, mb4.9/84, 22C-10D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.90**	**317**	P	**Pn**	**04 27 14.2**	**-0.8**
LBMI	**Labuha**	**5.79**	**332**	P	**Pn**	**04 27 51.1**	**-0.7**
	1μm,0.9s,5.7nm						
KAKA	**Kakadu**	**7.21**	**162**	*e*P	**Pn**	**04 28 09.1**	**-1.2**
	284nm,0.3s						
KAKA				*e*S	**Sn**	**04 29 24.2**	**-7.5**
KAKA	**Kakadu**	**7.21**	**162**	*e*Pn	**Pn**	**04 28 09.1**	**-1.2**
	7.4nm,0.2s						
KAKA				*e*Sn	**Sn**	**04 29 25.9**	**-5.9**
KAKA	**Kakadu**	**7.21**	**162**	P	**Pn**	**04 28 09.3**	**-1.0**
	777nm,0.6s,16nm						
KDI	**Kendari**	**7.76**	**283**	P	**Pn**	**04 28 19.6**	**+2.0**
	159nm,1.2s,5μm0.5nm						
PCI	**Palu**	**11.42**	**295**	P	**Pn**	**04 29 07.8**	**+2.4**
	104nm,1.0s						
FITZ	**Fitzroy Crossi**	**13.00**	**200**	⇓*i*P	**Pn**	**04 29 23.1**	**-2.4**
	296nm,0.8s						
FITZ				*e*S	**Sn**	**04 31 37.9**	**-12**
FITZ	**Fitzroy Crossi**	**13.00**	**200**	*e*Pn	**Pn**	**04 29 23.4**	**-2.2**
	164nm,0.9s						
FITZ	**Fitzroy Crossi**	**13.00**	**200**	P	**Pn**	**04 29 23.9**	**-1.6**
	278nm,1.0s,5μm						
SMKI	**Samarinda**	**14.01**	**292**	P	**Pn**	**04 29 44.8**	**+6.6**
WRAB	**Tennant Creek**	**14.61**	**164**	⇓*i*P	**Pn**	**04 29 43.9**	**-1.7**
WRAB	**Tennant Creek**	**14.61**	**164**	*e*Pn	**Pn**	**04 29 43.0**	**-2.6**
WRAB				*e*Sn	**Sn**	**04 32 17.9**	**-11**
WRAB	**Tennant Creek**	**14.61**	**164**	P	**Pn**	**04 29 44.2**	**-1.4**
	105nm,0.8s						
WRA	**Warramunga Arr**	**14.62**	**164**	P	**Pn**	**04 29 43.3**	**-2.4**
	9.1nm,0.3s,baz=349,slow=12,SNR=70						
WRA				S	**Sn**	**04 32 18.9**	**-10**
	22nm,0.3s,baz=329,slow=23,SNR=13						
WRA				LR	LR	04 34 55.6	
	comp=Z,92nm,18.9s,baz=350,slow=34						
WRA	**Warramunga Arr**	**14.62**	**164**	P	**Pn**	**04 29 43.3**	**-2.4**
WRA				S	**Sn**	**04 32 18.9**	**-10**
WB2	**Warramunga Arr**	**14.62**	**164**	⇓*i*P	**Pn**	**04 29 43.0**	**-2.7**
WB2				*e*S	**Sn**	**04 32 19.1**	**-10**
WB2	**Warramunga Arr**	**14.62**	**164**	*e*Pn	**Pn**	**04 29 43.4**	**-2.3**
WB2				*e*Sn	**Sn**	**04 32 16.0**	**-13**
KHKI	**Kahang-Kahang**	**14.69**	**259**	P	**Pn**	**04 29 48.0**	**+1.3**
	136nm,0.8s						
COEN	**Coen**	**15.13**	**123**	*e*P	**Pn**	**04 29 52.2**	**+0.1**
	139nm,0.9s						
COEN				*e*S	**S**	**04 32 32.9**	**-7.5**
COEN	**Coen**	**15.13**	**123**	P	**Pn**	**04 29 53.1**	**+1.1**
	85nm,1.0s,865nm						
BBKI	**Banjar Baru**	**15.48**	**278**	P	**Pn**	**04 29 58.7**	**+2.4**
	567nm,0.9s,6μm						
TSM	**Tawau**	**15.87**	**309**	⇑P	**Pn**	**04 30 01.0**	**-0.1**
MYLDM	**Lahad Datu**	**15.98**	**313**	⇑P	**Pn**	**04 30 04.3**	**+1.9**
MYLDM	**Lahad Datu**	**15.98**	**313**	P	**Pn**	**04 30 03.9**	**+1.5**
	125nm,1.4s						
KMMI	**Kalianget**	**16.17**	**265**	P	**Pn**	**04 30 08.2**	**+3.5**
PLKI	**Palangkaraya**	**16.59**	**282**	P	**Pn**	**04 30 10.6**	**+0.9**
	617nm,1.0s						
PMG	**Port Moresby**	**17.19**	**103**	P	**Pn**	**04 30 18.9**	**+2.0**
	12nm,0.3s,baz=271,slow=6.3,SNR=35						
PMG	**Port Moresby**	**17.19**	**103**	*e*P	**Pn**	**04 30 18.5**	**+1.6**
PMG				pmax	pmax		
	comp=Z,215nm,0.9s						
PMG	**Port Moresby**	**17.19**	**103**	*e*P	**Pn**	**04 30 18.5**	**+1.6**
	comp=Z,215nm,0.9s						
PMG	**Port Moresby**	**17.19**	**103**	P	**Pn**	**04 30 19.0**	**+2.1**
	comp=Z,307nm,1.1s,comp=Z,2μm						
SDKM	**Sandakan**	**17.25**	**311**	⇑P	**Pn**	**04 30 18.7**	**+1.0**
ASAR	**Alice Springs**	**18.11**	**169**	P	**P**	**04 30 27.2**	**+1.6**
	comp=Z,39nm,0.3s,baz=352,slow=11,SNR=1539						
ASAR				S	**S**	**04 33 34.4**	**-9.2**
	comp=Z,1.2nm,0.3s,baz=348,slow=16,SNR=3.5						
ASAR				ScP	ScP	04 38 08.6	-0.7
	baz=332,slow=3.0,SNR=4.0						
ASAR	**Alice Springs**	**18.11**	**169**	P	**P**	**04 30 27.2**	**+1.6**
ASAR				S	**S**	**04 33 34.4**	**-9.2**
KKM	**Kota Kinabalu**	**18.25**	**310**	*e*P	**P**	**04 30 26.9**	**-0.4**
	comp=Z,128nm,0.6s						
KKM	**Kota Kinabalu**	**18.25**	**310**	⇑P	**P**	**04 30 27.9**	**+0.7**
KKM	**Kota Kinabalu**	**18.25**	**310**	P	**P**	**04 30 27.9**	**+0.7**
	comp=Z,209nm,0.7s,comp=Z,2μm						
MBWA	**Marble Bar**	**18.32**	**213**	*e*P	**P**	**04 30 27.9**	**0.0**
	comp=Z,154nm,0.8s						
MBWA	**Marble Bar**	**18.32**	**213**	P	**P**	**04 30 28.3**	**+0.4**
	comp=Z,253nm,0.9s						
KDM	**Kudat**	**18.37**	**313**	⇑P	**P**	**04 30 29.6**	**+1.1**
SJI	**Sawahan**	**18.40**	**263**	P	**P**	**04 30 30.8**	**+2.0**
	comp=Z,118nm,1.0s						
BTM	**Bintulu**	**19.29**	**297**	⇑P	**P**	**04 30 38.4**	**0.0**
STKI	**Sintang**	**19.57**	**287**	P	**P**	**04 30 41.9**	**+0.4**
	comp=Z,87nm,1.3s						
SBUM	**Sibu**	**19.73**	**294**	⇑P	**P**	**04 30 43.5**	**+0.2**
SBUM	**Sibu**	**19.73**	**294**	P	**P**	**04 30 43.7**	**+0.4**
	comp=Z,77nm,0.7s						
CTA	**Charters Tower**	**21.10**	**134**	P	**P**	**04 30 59.3**	**+1.6**
	comp=Z,59nm,1.0s,mb4.9,baz=311,slow=11,SNR=20						
CTA	**Charters Tower**	**21.10**	**134**	⇑*i*P	**P**	**04 30 58.3**	**+0.6**
	comp=Z,37nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**21.10**	**134**	*e*P	**P**	**04 30 58.8**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,56nm,0.9s,mb4.9						
CTAO	**Charters Tower**	**21.10**	**134**	*e*P	**P**	**04 30 58.8**	**+1.0**
	comp=Z,56nm,0.9s,mb4.9						
CTAO	**Charters Tower**	**21.10**	**134**	P	**P**	**04 30 59.4**	**+1.7**
	comp=Z,80nm,1.1s,mb5.0						
KSM	**Kuching**	**21.13**	**289**	*e*P	**P**	**04 30 57.2**	**-1.0**
	comp=Z,49nm,0.9s,mb4.8						
KSM	**Kuching**	**21.13**	**289**	⇑P	**P**	**04 30 57.4**	**-0.7**
KSM	**Kuching**	**21.13**	**289**	P	**P**	**04 30 57.7**	**-0.5**
	comp=Z,73nm,1.1s,comp=Z,679nm,mb4.9						
LEM	**Lembang**	**22.46**	**266**	P	**P**	**04 31 10.4**	**-1.0**
TPI	**Tanjungpandan**	**22.68**	**277**	P	**P**	**04 31 18.2**	**+4.8**
FORT	**Forrest**	**24.92**	**184**	⇑*i*P	**P**	**04

comp=E,22nm,17.9s
XAN LR LR
comp=Z,30nm,17.9s
BJI Beijing 47.41 345 P **P** **04 34 43.0 -0.3**
BJI S **S** **04 41 23.5 +0.1**
BJI AMB AMB
comp=Z,25nm,0.7s,mb5.0
BJI AMB AMB
comp=Z,335nm,4.2s
BJI LR LR
comp=N,341nm,15.1s
BJI LR LR
comp=E,475nm,14.6s
BJI LR LR
comp=Z,28nm,17.9s
LZH Lanzhou 48.45 331 ⇑P **P** **04 34 51.5 +0.1**
LZH AP pP 04 35 30.0 -2.0
LZH XP sP 04 35 49.5 -2.9
LZH PP PP 04 36 45.5 -0.5
LZH S **S** **04 41 38.8 +0.6**
LZH XS sS 04 42 46.5 -2.6
LZH *e*SS SS 04 45 07.3 -3.4
LZH AMB AMB
comp=Z,27nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,154nm,6.7s
LZH LR LR
comp=N,316nm,14.5s
LZH LR LR
comp=Z,483nm,17.9s
SHL Shillong 48.55 312 ⇓*i*P **P** **04 34 51.0 -1.3**
HHC Hu-ho-hao-te 49.48 341 *e*P **P** **04 35 02.5 +3.4**
HHC AP pP 04 35 41.5 +1.7
HHC PP PP 04 37 00.0 +4.8
HHC S **S** **04 41 56.5 +4.2**
HHC XS sS 04 43 05.8 +2.3
HHC SCS ScS 04 44 33.0 +1.3
HHC SS SS 04 45 28.5 +1.5
HHC AMB AMB
comp=Z,14nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,184nm,3.7s
CN2 Changchun 49.56 355 *e*P **P** **04 35 00.3 +0.7**
CN2 *e*AP pP 04 35 39.5 -0.9
CN2 *e*S **S** **04 41 55.0 +1.6**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
PALK Pallekele 51.06 284 *e*P **P** **04 35 10.5 -0.9**
PALK pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
PALK Pallekele 51.06 284 *e*P **P** **04 35 10.5 -0.9**
comp=Z,7.0nm,0.7s,mb4.4
LSA Lhasa 51.48 316 P **P** **04 35 15.0 +0.7**
LSA Lhasa 51.48 316 *e*P **P** **04 35 15.0 +0.7**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
LSA Lhasa 51.48 316 *e*P **P** **04 35 14.9 +0.7**
comp=Z,8.6nm,0.6s,mb4.6
VIS Vishakhapatnam 51.83 298 *e*P **P** **04 35 16.0 -1.1**
VIS AMb AMB 04 35 17.8
comp=Z,71nm,0.7s,mb5.4
RPZ Rata Peaks 52.06 143 P **P** **04 35 20.0 +1.7**
comp=Z,3.2nm,0.5s,mb4.2,baz=160,slow=6.1,SNR=5.3
BOK Bokaro 52.27 306 *e*P **P** **04 35 19.8 -0.5**
BOK AMb AMB 04 35 21.8
comp=Z,16nm,0.9s,mb4.7
ODAN Odare 52.63 310 *e*P **P** **04 35 22.8 0.0**
comp=Z,73nm,0.6s,mb5.6
TAPN Taplejung 52.65 311 *e*P **P** **04 35 23.0 +0.1**
comp=Z,68nm,0.5s,mb5.7
GTA Gaotai 53.03 331 P **P** **04 35 26.3 +0.8**
GTA AMB AMB
comp=Z,8.0nm,0.7s,mb4.6
RAMN Ramite 53.28 310 *e*P **P** **04 35 27.9 +0.3**
comp=Z,212nm,0.6s,mb6.1
JIRN Jiri 53.96 310 *e*P **P** **04 35 32.6 +0.1**
comp=Z,65nm,0.6s,mb5.5
HABR Khabarovsk 54.22 4 *e*P **P** **04 35 26.9 -7.0**
HABR *e**PP pP 04 36 08.5 -6.9
HABR *e* 04 36 32.7
HABR *e* 04 45 02.7
HABR *e*SS SS 04 46 40.8 -0.8
HABR MLR MLR
comp=Z,669nm,18.0s
GUN Gumba 54.32 310 *e*P **P** **04 35 35.2 +0.1**
comp=Z,145nm,0.6s,mb5.9
PKI Pulchoki 54.51 310 *e*P **P** **04 35 36.1 -0.4**
comp=Z,46nm,0.7s,mb5.3
PKIN Phulchoki 54.52 310 *e*P **P** **04 35 36.1 -0.5**
KKN Kakani 54.72 310 *e*P **P** **04 35 37.8 -0.2**
comp=Z,64nm,0.6s,mb5.5
DMN Daman 54.76 310 *e*P **P** **04 35 38.3 0.0**
KOD Kodaikanal 54.87 287 *e*P **P** **04 35 38.7 -0.6**
KOD AMb AMB 04 35 40.0
comp=Z,22nm,0.9s,mb4.9
GKN Gorkha 55.31 310 *e*P **P** **04 35 42.1 -0.1**
HYB Hyderabad 55.97 295 *e*P **P** **04 35 46.0 -1.1**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.3
HYB Hyderabad 55.97 295 *i* P **P** **04 35 46.0 -1.1**
comp=Z,50nm,1.0s,mb5.3
HYB Hyderabad 55.97 295 *e*P **P** **04 35 46.0 -1.1**
comp=Z,50nm,1.0s,mb5.3
KOLN Koldanda 55.99 309 *e*P **P** **04 35 47.2 +0.1**
comp=Z,89nm,0.8s,mb5.7
DANN Dangsing 56.16 310 *e*P **P** **04 35 48.1 -0.1**
comp=Z,50nm,0.7s,mb5.5
NGP Nagpur 56.86 300 *ex* x 04 35 46.9
NGP AMb AMB 04 35 47.8
comp=Z,62nm,1.1s,mb5.3
ULN Ulaanbaatar 57.20 342 *e*P **P** **04 35 56.2 +1.0**
ULN pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
ULN Ulaanbaatar 57.20 342 *e*P **P** **04 35 56.2 +1.0**
comp=Z,6.7nm,0.7s,mb4.6
SONM Songino Array 57.38 341 P **P** **04 35 57.2 +0.8**
comp=Z,1.4nm,0.2s,mb4.4,baz=161,slow=5.3,SNR=32
AFI Afiamalu 57.62 103 P **P** **04 35 59.5 +0.8**
comp=Z,17nm,0.5s,mb5.1,baz=300,slow=20,SNR=3.8
AKL Akola 58.47 298 *e*P **P** **04 36 02.8 -1.8**
AKL AMb AMB 04 36 04.3
comp=Z,68nm,1.1s,mb5.4
GOA Goa 59.69 292 *e*P **P** **04 36 12.8 -0.3**
POO Poona 60.56 295 *e*P **P** **04 36 18.5 -0.4**
POO AMb AMB 04 36 19.0
comp=Z,43nm,0.6s,mb5.5
ZAK Zakamensk 60.61 341 *e*P **P** **04 36 18.7 +0.1**
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
TLY Talaya 61.61 342 ⇑*i*P **P** **04 36 27.1 +1.8**
TLY pmax pmax
comp=Z,10.0nm,1.7s,mb4.4
CASY Casey 61.90 189 *e*P **P** **04 36 27.1 +0.1**
comp=Z,12nm,0.8s,mb4.8
WMQ Urumqi 62.51 327 P **P** **04 36 32.3 +0.8**
WMQ AMB AMB
comp=Z,8.0nm,1.0s,mb4.5
SMLA Simla 62.52 309 *e*P **P** **04 36 32.0 +0.2**
SMLA AMb AMB 04 36 33.1
comp=Z,86nm,0.7s,mb5.7
AJM Ajmer 62.62 304 *e*P **P** **04 36 31.6 -0.9**
AJM AMb AMB 04 36 35.0
comp=Z,23nm,1.3s,mb4.8
PETK Petropavlovsk- 63.14 18 P **P** **04 36 35.8 +0.4**
comp=Z,20nm,0.7s,mb5.1,baz=129,slow=1.5,SNR=34
PET Petropavlovsk 63.37 19 *e*P **P** **04 36 36.6 -0.3**
PET pmax pmax
comp=Z,45nm,0.9s,mb5.3
PET Petropavlovsk 63.37 19 *e*P **P** **04 36 37.0 +0.1**
BOD Bodaibo 64.76 351 *e*P **P** **04 36 43.0 -2.9**
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MK31 Makanchi Array 67.34 326 *e*P **P** **04 37 02.9 +0.3**
MKAR Makanchi Array 67.34 326 P **P** **04 37 03.2 +0.6**
comp=Z,17nm,0.6s,mb5.0,baz=125,slow=7.7,SNR=134
MKAR Makanchi Array 67.34 326 P **P** **04 37 03.2 +0.6**
YAK Yakutsk 67.64 360 *e*P **P** **04 37 03.3 -0.8**
YAK pmax pmax
comp=Z,57nm,0.9s,mb5.3
YAK pmax pmax
comp=N,19nm,1.3s
YAK Yakutsk 67.64 360 *e*P **P** **04 37 04.3 +0.1**
comp=N,68nm,0.7s,mb5.5
KZA Kyzart 69.00 319 P **P** **04 37 14.7 +1.6**
SNR=6.8

TKM2 Tokmak 2 69.19 320 *e*P **P** **04 37 15.1 +0.9**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
TKM2 Tokmak 2 69.19 320 P **P** **04 37 15.2 +1.0**
SNR=10
TKM2 Tokmak 2 69.19 320 *e*P **P** **04 37 15.1 +0.9**
comp=Z,9.1nm,0.6s,mb4.7
AAK Ala-Archa 69.76 319*c i*P **P** **04 37 18.4 +0.7**
AAK pmax pmax
comp=Z,11nm,1.7s,mb4.3
AAK Ala-Archa 69.76 319 P **P** **04 37 19.2 +1.6**
SNR=7.0
AAK Ala-Archa 69.76 319 *e*P **P** **04 37 18.3 +0.6**
comp=Z,15nm,1.1s,mb4.6
AML Almayashu 70.04 319 P **P** **04 37 21.0 +1.6**
SNR=12
AML Almayashu 70.04 319 *e*P **P** **04 37 20.9 +1.5**
comp=Z,37nm,1.2s,mb5.0
USP Ospenovka 70.06 320 P **P** **04 37 20.3 +0.8**
SNR=12
KBL Kabul 70.15 310 *e*P **P** **04 37 20.3 +0.1**
KBL pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KBL Kabul 70.15 310 *e*P **P** **04 37 20.3 0.0**
comp=Z,10nm,0.9s,mb4.6
EKS2 Erkin-Say 70.24 319 P **P** **04 37 22.0 +1.4**
SNR=7.4
EKS2 Erkin-Say 70.24 319 *e*P **P** **04 37 21.3 +0.7**
comp=Z,10nm,0.7s,mb4.7
ZAA0 Zalesovo Array 70.60 334 *e*P **P** **04 37 22.0 -0.5**
ZALV Zalesovo Beam 70.60 334 P **P** **04 37 22.1 -0.4**
comp=Z,4.4nm,0.3s,mb4.6,baz=140,slow=6.0,SNR=24
SEY Seymchan 70.61 11⇑*e*P **P** **04 37 22.6 +0.2**
KURK Kurchatov 71.61 328 *e*P **P** **04 37 28.7 +0.1**
KURK pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
KURK Kurchatov 71.61 328 *e*P **P** **04 37 28.7 +0.1**
comp=Z,8.6nm,0.8s,mb4.5
NVS Novosibirsk 71.89 334 *e*P **P** **04 37 29.6 -0.6**
NVS *e* pP 04 38 11.7 -2.3
NVS *e*S S 04 46 32.4 -3.5
NVS *e*PS 04 47 09.5
NVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=E,3.0nm,0.8s
NVS smax
comp=N,28nm,1.7s
NVS smax
comp=E,26nm,1.4s
VNDA Vanda 73.60 173 P **P** **04 37 41.1 +1.1**
comp=E,2.8nm,0.6s,mb4.2,baz=306,slow=6.9,SNR=20
VNDA LR LR 05 08 41.8
comp=E,48nm,19.9s,baz=91,slow=34
VNDA Vanda 73.60 173 *e*P **P** **04 37 40.3 +0.3**
VNDA pmax pmax
comp=Z,4.0nm,0.8s
VNDA Vanda 73.60 173 *e*P **P** **04 37 40.3 +0.3**
comp=Z,4.5nm,0.8s,mb4.2
MAW Mawson 76.12 201 P **P** **04 37 56.0 +1.4**
comp=Z,12nm,0.6s,mb4.7,baz=93,slow=6.2,SNR=20
MAW Mawson 76.12 201 *e*P **P** **04 37 55.3 +0.7**
MAW pmax pmax
comp=Z,4.0nm,0.8s
MAW Mawson 76.12 201 *e*P **P** **04 37 55.5 +0.9**
comp=Z,9.5nm,0.6s,mb4.6
MAW Mawson 76.12 201 *e*P **P** **04 37 55.3 +0.7**
comp=Z,3.9nm,0.8s,mb4.1
BRVK Borovoye 77.23 328 *e*P **P** **04 38 00.6 -0.5**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
BRVK Borovoye 77.23 328 *e*P **P** **04 38 00.6 -0.5**
comp=Z,6.2nm,0.8s,mb4.3
TIXI Tiksi 77.31 360⇑*e*P **P** **04 37 59.9 -1.2**
TIXI pmax pmax
comp=Z,18nm,1.0s,mb4.7
TIXI Tiksi 77.31 360 *e*P **P** **04 38 00.4 -0.7**
BILL Bilibino 77.92 13⇓*i*P **P** **04 38 04.2 -0.3**
BILL *e* 04 38 14.3
BILL *e*S S 04 47 42.5 +0.4
BILL pmax pmax
comp=Z,7.0nm,1.6s,mb4.0
TNA Tin City 84.05 22 *e*P **P** **04 38 36.7 -0.2**
comp=Z,16nm,1.3s,mb4.6
ARU Arti 84.80 328*c i*P **P** **04 38 39.9 -1.0**
ARU *e* 04 41 54.1
ARU S S 04 48 46.8 -6.5
ARU SS SS 04 54 26.7 -3.2
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ARU Arti 84.80 328 *e*P **P** **04 38 40.5 -0.4**
comp=Z,5.1nm,0.6s,mb4.4
SYO Syowa Base 84.84 201⇓*i*P **P** **04 38 40.1 -0.9**
QRN Al-Qurain 86.02 299 *e*P **P** **04 38 47.6 -0.1**
baz=299
QRN AMb AMB 04 38 48.5
comp=Z,50nm,0.6s,mb5.4,baz=299
UMR Umm Al-Rimmam 86.32 300 *e*P **P** **04 38 48.8 -0.3**
baz=300
UMR AMb AMB 04 38 49.5
comp=Z,36nm,1.1s,mb5.0,baz=300
RDF Al-Radifah 86.37 299 *e*P **P** **04 38 49.1 -0.3**
baz=299
RDF AMb AMB 04 38 52.4
comp=Z,42nm,1.3s,mb5.0,baz=299
CHUM Lake Minchumin 89.70 26 *e*P **P** **04 39 04.3 0.0**
comp=Z,12nm,0.8s,mb4.9
MCK McKinley 91.13 26 *e*P **P** **04 39 09.5 -1.5**
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MCK McKinley 91.13 26 *e*P **P** **04 39 09.5 -1.5**
comp=Z,7.5nm,0.8s,mb4.8
COLD Coldfoot 91.30 23 *e*P **P** **04 39 11.7 0.0**
comp=Z,11nm,0.9s,mb4.9
COLA College 91.80 25⇓*i*P **P** **04 39 13.3 -0.7**
COLA College 91.80 25 *e*P **P** **04 39 12.4 -1.6**
comp=Z,4.9nm,0.8s,mb4.6
EGAK Eagle 94.63 25 *e*P **P** **04 39 26.5 -0.6**
comp=Z,8.4nm,0.9s,mb5.0
DAWY Dawson 95.36 26 *e*P **P** **04 39 30.0 -0.4**
OBN Obninsk 96.80 325 *e*P **P** **04 39 36.1 -1.0**
OBN *e*S SKSac 04 49 58.1 +1.7
OBN *e*SS SS 04 57 24.7 +2.2
OBN pmax pmax
comp=Z,1.0nm,0.5s,mb4.4
SNAA Sanae 96.86 193 *e*P **P** **04 39 38.1 +1.0**
SNAA pmax pmax
comp=Z,2.0nm,0.7s
SNAA Sanae 96.86 193 *e*P **P** **04 39 38.1 +0.9**
comp=Z,1.9nm,0.7s,mb4.5
APA Apatity 97.93 337⇑*i*P Px 04 39 54.0
APA pmax pmax
comp=Z,54nm,1.2s,mb5.8
APA MLR MLR
comp=Z,1μm,18.0s
BRTR Keskin Array B 98.72 309 P **P** **04 39 44.8 -1.3**
comp=Z,1.1nm,0.9s,mb4.3,baz=98,slow=4.7,SNR=4.4
LSZ Lusaka 99.98 253 *e*P Pdif 04 39 52.1 +0.6
LSZ pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
LSZ Lusaka 99.98 253 *e*P Pdif 04 39 52.1 +0.7
comp=Z,3.1nm,1.0s
ARCES ARCESS Array B 100.53 340 P Pdif 04 39 52.4 -1.5
comp=Z,5.8nm,1.0s,baz=80,slow=6.1,SNR=5.2
YKA Yellowknife Ar 106.60 26 Pdiff Pdif 04 40 19.6 -1.3
comp=Z,0.4nm,0.8s,baz=291,slow=5.0,SNR=5.7
YKA PKiKP PKiKP 04 44 29.5 -0.8
comp=Z,0.6nm,0.6s,baz=295,slow=1.6,SNR=15
YKA SKP 04 47 46.6
comp=Z,0.3nm,0.7s,baz=298,slow=1.7,SNR=4.7
YKA PKKPbc PKKPbc 04 55 49.6 -3.1
comp=Z,0.5nm,0.6s,baz=120,slow=3.7,SNR=4.1
YKA Yellowknife Ar 106.60 26 Pdif Pdif 04 40 19.6 -1.3
YKA PKPdf PKiKP 04 44 29.5 -0.8
YKA SKP 04 47 46.6
YKA PKKPbc PKKPbc 04 55 49.6 -3.1
GERES GERESS Array B 111.63 321 PKiKP PKiKP 04 44 39.9 -0.2
GERES SKP 04 47 57.2
comp=Z,0.5nm,0.6s,baz=76,slow=1.8,SNR=8.5
HLID Hailey 112.28 45 *e*PKP PKiKP 04 44 42.1 +0.6
DUG Dugway 114.24 48 *e*PKIKP PKiKP 04 44 46.1 +0.7
DAVOX Davos/Dischmat 114.72 319 PKP PKiKP 04 44 46.1 0.0
comp=Z,1.1nm,0.5s,baz=198,slow=6.4,SNR=7.2

DAVOX SKP 04 48 03.6
comp=Z,0.6nm,0.7s,baz=246,slow=10.0,SNR=5.3
DAVOS Davos 114.75 319 PKIKP PKiKP 04 44 46.1 -0.1
SNOW Snow King Moun 114.88 45 *e*PKP PKiKP 04 44 47.2 +0.7
PDAR Pinedale Array 115.92 45 PKP PKPdf 04 44 47.9 -0.6
comp=Z,0.5nm,0.7s,baz=166,slow=0.6,SNR=4.5
PDAR SKP 04 48 06.6
comp=Z,1.0nm,0.8s,baz=229,slow=1.4,SNR=7.6
PDAR PKKPbc PKKPbc 04 55 24.6 +3.1
comp=Z,0.8nm,0.8s,baz=103,slow=5.8,SNR=3.7
FCC Fort Churchill 117.19 24 *e*PKIKP PKPdf 04 44 49.4 -1.1
RSSD Black Hills 119.25 42 *e*PKIKP PKPdf 04 44 55.2 +0.3
SDCO Great Sand Dun 120.39 49 *e*PKPdf PKPdf 04 44 58.2 +0.9
ANMO Albuquerque 120.44 53 *e*PKIKP PKPdf 04 44 57.6 +0.1
ULM Lac du Bonnet 121.35 33 PKP PKPdf 04 44 57.3 -1.4
comp=Z,2.7nm,0.8s,baz=260,slow=3.1,SNR=4.7
ULM Lac du Bonnet 121.35 33 *e*PKPdf PKPdf 04 44 57.8 -1.0
TXAR Lajitas Array 124.15 58 PKP PKPdf 04 45 05.3 +0.6
comp=Z,0.6nm,0.8s,baz=267,slow=1.1,SNR=6.0
TXAR PP PP 04 46 56.4 +4.6
comp=Z,0.5nm,0.9s,baz=278,slow=8.7,SNR=3.4
TXAR Lajitas Array 124.15 58 PKP PKPdf 04 45 05.3 +0.6
TXAR PP PP 04 46 56.4 +4.6
WMOK Wichita Mounta 126.50 51 *e*PKIKP PKPdf 04 45 09.3 +0.2
JCT Junction City 127.08 56 *e*PKIKP PKPdf 04 45 10.6 +0.3
TOA0 Torodi Ar. Sit 128.76 282 *e*PKPdf PKPdf 04 45 14.1 +0.2
TORD Torodi Ar. Bea 128.76 282 PKP PKPdf 04 45 14.3 +0.4
comp=Z,1.4nm,0.7s,baz=90,slow=2.4,SNR=12
TORD SKPbc 04 48 15.8
comp=Z,3.3nm,0.7s,baz=70,slow=3.6,SNR=14
SCHQ Schefferville 129.23 13 SKPbc 04 48 17.0
comp=Z,5.8nm,0.8s,baz=36,slow=5.7,SNR=5.2
MDT Midelt 130.14 309 SKPbc SKPbc 04 48 20.1 -1.8
comp=Z,2.8nm,1.0s,baz=97,slow=5.1,SNR=4.5
DBIC Dimbokro 135.32 274 PKP PKPdf 04 45 28.0 +1.6
comp=Z,2.1nm,0.7s,baz=93,slow=1.1,SNR=5.4
DBIC SKPbc SKPbc 04 48 39.0 -1.4
comp=Z,7.8nm,0.9s,baz=113,slow=1.7,SNR=7.1
TKL Tuckaleechee C 136.91 42 PKP PKPdf 04 45 29.4 +0.7
comp=Z,4.7nm,0.8s,baz=134,slow=3.9,SNR=6.7
TKL SKPbc SKPbc 04 48 43.1 -1.5
comp=Z,3.4nm,0.8s,baz=201,slow=8.6,SNR=3.9
TKL Tuckaleechee C 136.91 42 PKP PKPdf 04 45 29.4 +0.7
TKL SKPbc SKPbc 04 48 43.1 -1.5
LCO Las Campanas 139.97 151 *e*PKPdf PKPdf 04 45 34.9 +0.3
LVC Limon Verde 146.13 147 *e*PKPbc PKPbc 04 45 48.8 +2.0
BBTS Babate 146.13 288 PKPbc PKPbc 04 45 48.0 +1.0
comp=Z,20nm,0.6s,baz=48,slow=2.0,SNR=7.4
CPUP Villa Florida 147.23 167 PKPbc PKPbc 04 45 50.6 +0.8
comp=Z,2.0nm,0.4s,baz=208,slow=1.6,SNR=20
CPUP SKPbc SKPbc 04 49 10.7 -0.3
comp=Z,2.7nm,0.6s,baz=150,slow=4.4,SNR=9.7
CPUP Villa Florida 147.23 167 *e*PKPbc PKPbc 04 45 50.0 +0.2
CPUP *e*SKPbc SKPbc 04 49 10.6 -0.3
NNA Nana 147.82 123 *e*PKPbc PKPbc 04 45 52.8 +1.0
ATAH Atahualpa 148.77 114 PKPbc PKPbc 04 45 56.6 +2.4
comp=Z,7.5nm,0.6s,baz=214,slow=5.3,SNR=6.2
SDV Santo Domingo 159.12 80 PKP PKPdf 04 46 05.1 +0.4
comp=Z,6.1nm,1.1s,baz=208,slow=3.7,SNR=4.7
SDV PKPab PKPab 04 46 43.9 +1.4
comp=Z,5.4nm,0.8s,baz=261,slow=0.9,SNR=6.6

CSEM ***30*** *04:44:32.9±0.1, 41.42N×23.42E, h10km, MD2.8, Error ellipse: s-maj=1.9km s-min=1.4km az=108.0*
ISCJB ***30*** *04:44:33.5±0.5, 41.41N±0.003×23.45E±0.004, h4km±6km, Error ellipse: s-maj=5.8km s-min=3.7km az=34.2*
SOF ***30*** *04:44:34.6, 41.52N×23.49E, h17km, MD2.8*
THE ***30*** *04:44:34.9, 41.37N×23.44E, h9km±1km, ML2.5/4, Error ellipse: s-maj=1.9km s-min=0.5km az=243.0*
ISC 30 04:44:34.1±0.4, 4141N±0.002×2345E±0.004, h13km±7km, n21, σ0.64/31, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMB	**Musomiste**	**0.28**	**50**	*i* Pg		**Pg**	**04 44 39.6**	**-0.3**
KNT	**Kendrikon**	**0.48**	**239**	P		**Pg**	**04 44 43.5**	**-0.2**
KNT				S		**Sg**	**04 44 50.2**	**+0.1**
KKB	**Krupnik**	**0.53**	**329**	*i* Pg		**Pg**	**04 44 43.5**	**-1.0**
SOH	**Sokhos**	**0.59**	**187**	P		**Pg**	**04 44 45.6**	**-0.2**
SOH				S		**Sg**	**04 44 53.8**	**+0.2**
VAY	**Valandovo**	**0.67**	**262**	P		**Pg**	**04 44 47.5**	**+0.4**
VAY				S		**Sg**	**04 44 57.0**	**+1.1**
HORT	**Hortiatis**	**0.86**	**198**	P		**Pg**	**04 44 50.2**	**-0.5**
HORT				S		**Sg**	**04 45 02.0**	**+0.1**
THE	**Thessaloniki**	**0.86**	**205**	P		**Pg**	**04 44 50.4**	**-0.4**
THE				S		**Sg**	**04 45 02.1**	**+0.1**
GRG	**Griva**	**0.91**	**240**	P		**Pg**	**04 44 51.2**	**-0.5**
GRG				S		**Sg**	**04 45 04.1**	**+0.5**
STIP	**Stip**	**0.99**	**287**	P		**Pg**	**04 44 53.3**	**+0.1**
RZN	**Rozhen**	**0.99**	**74**	*i* P		**Pg**	**04 44 53.3**	**0.0**
PLG	**Polygyros**	**1.04**	**180**	P		**Pg**	**04 44 53.1**	**-1.1**
PLG				S		**Sg**	**04 45 07.5**	**-0.2**
OUR	**Ouranopolis**	**1.15**	**159**	P		**Pb**	**04 44 55.4**	**-0.5**
OUR				S		**Sg**	**04 45 11.9**	**+0.6**
PLD	**Plovdiv**	**1.17**	**53**	P		**Pb**	**04 44 57.4**	**+1.3**
PLD				S		**Sg**	**04 45 13.9**	**+2.1**
PLD	**Plovdiv**	**1.17**	**53**	P		**Pb**	**04 44 57.4**	**+1.3**
PLD				S		**Sg**	**04 45 13.9**	**+2.1**
PLD	**Plovdiv**	**1.17**	**53**	Pg		**Pg**	**04 44 56.4**	**-0.2**
VTS	**Vitosha**	**1.19**	**352**	*i* Pg		**Pg**	**04 44 56.5**	**-0.6**
PGIB	**Panagyurishte**	**1.26**	**25**	*i* Pg		**Pg**	**04 44 57.4**	**-0.9**
PAIG	**Paliouri**	**1.50**	**173**	P		**Pn**	**04 45 00.2**	**-0.4**
KDZ	**Kurdzhali**	**1.50**	**80**	P		**Pn**	**04 45 00.5**	**-0.2**
LIT	**Litokhoron**	**1.50**	**209**	P		**Pn**	**04 45 00.8**	**+0.1**
XOR	**Xorichti**	**2.05**	**185**	P		**Pn**	**04 45 08.5**	**+0.2**

ISCJB ***30*** *04:45:17.7±0.5, 12.46N×0.005×88.84W×0.004, h55km±4km, mb4.4/45, MS4.0/19, Error ellipse: s-maj=9.0km s-min=3.6km az=36.3*
CASC ***30*** *04:45:17.4±2.3, 12.38N×88.93W, h48km±94km, MD4.5, ML3.6, mb4.6(NEIC)*
IDC ***30*** *04:45:18.6±5.6, 12.86N×88.44W, h31km±40km, mb4.0/15, mb1 4.2/17, mb1mx4.1/25, mbtmp4.0/17, ML3.9/2, MS3.9/18, Ms1 3.9/18, ms1mx3.7/32, Error ellipse: s-maj=28.5km s-min=12.5km az=45.0*
NEIC ***30*** *04:45:20.0±0.8, 12.53N×88.79W, h56km±7km, mb4.6/38, Error ellipse: s-maj=9.2km s-min=5.6km az=225.0*
BJI ***30*** *04:45:20.0, 12.50N×88.80W, h55km, mB5.1, Ms5.5, Msz5.1*
ISC 30 04:45:19.4±0.4, 1250N±005×8880W±004, h52km±4km, n156, σ1.9/16/132, mb4.4/45, MS4.0/19, 4C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VSM	**San Miguel**	**1.05**	**29**⇑	*e*P		x	04 45 38.2	
VSM				*e*P		x	04 45 38.2	
BLLM	**Bellamira**	**1.08**	**30**	*e*P		x	04 45 38.4	
BLLM				*e*S		x	04 45 55.6	
SNVI	**San Vicente**	**1.11**	**358**	*e*P		x	04 45 37.1	
SNVI				*e*P		x	04 45 37.2	
SNVI				*e*S		x	04 45 56.2	
CNCH	**Conchagua**	**1.22**	**51**	*e*P		x	04 45 39.8	
CNCH				*e*P		x	04 45 40.2	
CNCH				*e*S		x	04 45 59.8	
LBRS	**Las Brisas**	**1.25**	**349**	*e*P		x	04 45 39.4	
BOQS	**Boqueron**	**1.31**	**339**	*e*P		x	04 45 39.9	
BOQS				*e*P		x	04 45 39.9	
BOQS				*e*S		x	04 45 58.9	
CAHU	**Cacacuatique**	**1.39**	**24**⇑	*e*P		x	04 45 43.3	
CAHU				*e*P		x	04 45 43.3	
SBLS	**San Blas**	**1.56**	**329**	*e*P		x	04 45 42.8	
SBLS				*e*P		x	04 45 42.8	
SNJE	**San Jose**	**1.57**	**330**	*e*P		x	04 45 43.1	
RTR	**El Retiro**	**1.61**	**329**	*e*P		x	04 45 43.8	
CRIN	**San Cristobal**	**1.72**	**83**	*e*P		**Pn**	**04 45 46.6**	**-0.4**
RBDL	**Robledal**	**1.82**	**332**	*e*P		x	04 45 47.3	
TEL3	**Telica 3**	**1.91**	**88**	*e*P		**Pn**	**04 45 49.1**	**-0.4**
MTO2	**Montecristo 2**	**1.97**	**344**	*e*P		x	04 45 50.3	
MTO2				*e*S		x	04 46 15.9	
MIRN	**Miramar**	**2.04**	**91**	*e*P		**Pn**	**04 45 50.8**	**-0.5**
CNGN	**Cerro Negro**	**2.05**	**90**	*e*P		**Pn**	**04 45 50.4**	**-1.1**
TGUH	**Tegucigalpa,Un**	**2.15**	**44**⇑	*e*P		**Pn**	**04 45 53.9**	**+1.1**
TGUH				AML		AML	04 46 30.8	
	comp=N,7μm,0.7s							
TGUH				AML		AML	04 46 30.8	
	comp=E,5μm,0.7s							
TGUH	**Tegucigalpa,Un**	**2.15**	**44**	*e*Pn		**Pn**	**04 45 53.8**	**+1.0**
COPN	**Copaltepe**	**2.18**	**98**	*e*P		**Pn**	**04 45 52.2**	**-1.1**
COPN				*e*P			04 45 52.3	

COPN				eS		Sn	04 46 21.4	+2.3
MOMN	**Momotombo**	**2.21**	**92**	eP		Pn	04 45 52.6	-1.0
IXG	**Ixpaco**	**2.32**	**316**	eP		Pn	04 45 54.1	-1.0
CSAN		**2.34**	**97**	eP		Pn	04 45 55.2	-0.3
APYN	**Apoyeque**	**2.41**	**96**	eP		Pn	04 45 56.5	+0.1
XAVN	**Gruta Xavier**	**2.44**	**98**	eP		Pn	04 45 56.5	-0.4
MGAN	**Managua**	**2.52**	**98**	eP		Pn	04 45 57.0	-0.9
MGAN				eS		Sn	04 46 29.6	+2.1
MGAN					AML	AML	04 46 40.3	
	comp=N,501nm,0.4s							
MGAN					AML	AML	04 46 41.6	
	comp=E,651nm,0.8s							
MGAN					AML	AML	04 46 42.0	
	comp=E,69nm,0.5s							
TICN	**Ticuantepe**	**2.55**	**100**	eP		Pn	04 45 58.1	-0.3
HUEN		**2.57**	**93**	eP		Pn	04 45 57.6	-1.1
HUEN				eP			04 45 58.1	
HUEN				eS		Sn	04 46 30.7	+2.0
WILN	**Americas 2**	**2.57**	**97**	eP		Pn	04 45 57.9	-0.8
APON	**Apoyo**	**2.73**	**102**	eP		Pn	04 46 00.8	0.0
FUG	**Fuego 3**	**2.77**	**314**	eP		Pn	04 46 00.2	-1.2
FG6		**2.88**	**316**	eP		Pn	04 46 03.2	+0.4
SSN	**San Juan del S**	**3.12**	**112**	eP		Pn	04 46 05.0	-1.1
CONN	**Concepcion**	**3.24**	**106**	eP		Pn	04 46 07.1	-0.7
CUI	**Cuipilapa**	**4.00**	**117**	*i* P		Pn	04 46 18.4	+0.1
CUI				*i* S		Sn	04 47 02.4	-1.6
JCR	**Jicaral**	**4.47**	**126**	eP		Pn	04 46 24.3	-0.5
JCR				eS		Sn	04 47 12.3	-3.3
JCR				*i* S		Sn	04 47 12.3	-3.3
CGA2	**Cerro Gallo 2**	**4.92**	**120**	eP		Pn	04 46 31.9	+1.1
CGA2				eS		Sn	04 47 25.0	-1.4
CCIG	**Comitan**	**4.96**	**320**	*i* P		Pn	04 46 31.9	+0.5
PRS1	**Puriscal**	**5.06**	**119**	eP		Pn	04 46 33.8	+0.9
PRS1				eS		Sn	04 47 31.6	+1.6
LAJ	**Bijagual**	**5.28**	**119**	eP		Pn	04 46 32.6	-3.3
LAJ				eS		Sn	04 47 26.4	-9.1
QCR	**Quepos**	**5.48**	**123**	eP		Pn	04 46 39.1	+0.5
QCR				eS		Sn	04 47 37.5	-2.8
URSC	**Urasca**	**5.59**	**118**‖	eP		Pn	04 46 43.0	+2.9
URSC				eS		Sn	04 47 43.8	+0.7
BAR1		**6.29**	**120**	eP		Pn	04 46 50.4	+0.8
BAR1				eS		Sn	04 47 56.8	-3.4
ACR	**Cerro Adams**	**6.73**	**124**	eP		Pn	04 46 57.2	+1.5
ACR				eS		Sn	04 48 06.3	-4.7
BRU2	**Volcan**	**7.04**	**121**	eP		Pn	04 47 00.6	+0.6
CMIG	**Matias Romero**	**7.45**	**309**	Pn		Pn	04 47 05.0	-0.6
	comp=E,1.1nm,0.3s,baz=110,slow=9.9,SNR=21							
CMIG				Sn		Sn	04 48 27.3	-1.3
	comp=E,1.6nm,0.3s,baz=29,slow=10,SNR=2.2							
CMIG	**Matias Romero**	**7.45**	**309**	*i* P		Pn	04 47 02.8	-2.7
CMIG				*i* S		Sn	04 48 21.5	-7.2
TEIG	**Tepich**	**7.70**	**4**	Pn		Pn	04 47 10.7	+1.7
	comp=E,5.8nm,0.3s,baz=22,slow=0.6,SNR=38							
TEIG				LR		LR	04 50 27.8	
	comp=E,1μm,18.8s,baz=134,slow=42							
TEIG	**Tepich**	**7.70**	**4**	eP		Pn	04 47 10.6	+1.6
TEIG	**Tepich**	**7.70**	**4**	ePn		Pn	04 47 10.4	+1.4
HUIG	**Huatulco**	**7.80**	**295**	*i* P		Pn	04 47 09.6	-0.8
VHO	**Vista Hermosa**	**8.92**	**302**	*i* P		Pn	04 47 27.6	+1.9
VHO				*i* S		Sn	04 48 56.8	-8.0
BCIP	**Isla Barro Col**	**9.40**	**110**	ePn		Pn	04 47 34.0	+1.6
PNIG	**Pinotepa**	**9.83**	**294**	*i* P		Pn	04 47 36.0	-2.1
SOR	**Soroa**	**11.62**	**28**	eP		Pn	04 48 05.2	+2.5
OTAV	**Otavalo**	**15.93**	**139**	ePn		Pn	04 49 02.2	+1.9
	comp=E,7.4nm,1.1s							
CHI2		**16.80**	**116**	eP		x	04 45 47.1	
SDV	**Santo Domingo**	**18.21**	**100**	P		Pn	04 49 27.5	-1.1
	comp=E,0.6nm,0.3s,baz=293,slow=5.4,SNR=13							
SDV	**Santo Domingo**	**18.21**	**100**	eP		Pn	04 49 28.4	-0.2
	comp=E,9.2nm,0.6s							
HKT	**Hockley**	**18.55**	**340**	eP		Pn	04 49 33.2	+0.6
	comp=E,5.4nm,0.8s							
VBMS	**Vicksburg**	**19.69**	**356**	eP		Pn	04 49 46.4	+0.2
	comp=E,42nm,0.6s							
NATX	**Nacogdoches**	**19.91**	**345**	eP		Pn	04 49 47.8	-1.1
	comp=E,44nm,0.6s							
LRAL	**Lakeview Retre**	**20.51**	**4**	eP		P	04 49 54.9	+1.7
	comp=E,11nm,0.8s							
JCT	**Junction City**	**20.59**	**332**↑	*i* P		P	04 49 53.5	-0.6
	comp=E,47nm,0.7s							
GOGA	**Godfrey**	**21.38**	**12**	eP		P	04 50 03.5	+0.9
	comp=E,17nm,0.6s,mb4.5							
TXAR	**Lajitas Array**	**21.72**	**323**	P		P	04 50 07.0	+0.7
	comp=E,18nm,0.6s,mb4.7,baz=146,slow=11,SNR=204							
TXAR				PcP		PcP	04 54 08.4	+2.7
	comp=E,0.9nm,0.9s,baz=130,slow=3.9,SNR=3.5							
TXAR				LR		LR	05 00 19.6	
	comp=E,130nm,21.6s,MS3.3,baz=5.0,slow=42							
ATAH	**Atahualpa**	**21.96**	**151**	LR		LR	04 57 50.1	
	comp=E,205nm,18.7s,MS3.6,baz=138,slow=34							
NHSC	**New Hope**	**21.98**	**20**	eP		P	04 50 10.2	+1.1
	comp=E,68nm,1.3s,mb4.9							
MIAR	**Mount Ida**	**22.37**	**350**	eP		P	04 50 13.7	+0.4
	comp=E,62nm,0.8s,mb5.1							
UALR	**University of**	**22.41**	**352**	eP		P	04 50 13.6	-0.1
	comp=E,52nm,0.8s,mb5.0							
SWET	**Sewanee**	**22.76**	**6**	eP		P	04 50 17.5	+0.2
CPCT	**Cooper Cave**	**23.17**	**9**	eP		P	04 50 21.6	-0.1
LPIG	**La Paz**	**23.42**	**303**	LR		LR	05 00 36.0	
	comp=E,448nm,18.6s,MS4.0,baz=359,slow=39							
TKL	**Tuckaleechee C**	**23.50**	**10**	P		P	04 50 24.2	-0.5
	comp=E,18nm,0.7s,mb4.6,baz=182,slow=11,SNR=31							
TKL				LR		LR	04 59 05.9	
	comp=E,269nm,21.8s,MS3.7,baz=244,slow=36							
WVT	**Waverly**	**23.54**	**2**	eP		P	04 50 24.2	-0.9
	comp=E,35nm,1.7s,mb4.5							
PCRV	**Puerto La Cruz**	**23.80**	**93**	P		P	04 50 28.0	+0.2
	comp=E,11nm,0.6s,mb4.5,baz=216,slow=8.3,SNR=5.1							
WMOK	**Wichita Mounta**	**23.92**	**339**	eP		P	04 50 27.1	-1.5
	comp=E,64nm,1.8s,mb4.8							
PARMO	**Parma**	**24.07**	**358**	eP		P	04 50 30.4	+0.4
SIUC	**Southern Illin**	**25.11**	**359**	eP		P	04 50 39.5	+0.1
	comp=E,22nm,0.8s,mb4.7							
AMTX	**Amarillo**	**25.16**	**334**	eP		P	04 50 39.9	-0.1
	comp=E,30nm,0.8s,mb4.9							
USIN	**University of**	**25.38**	**2**	eP		P	04 50 41.5	-0.4
	comp=E,16nm,0.8s,mb4.7							
FVM	**French Village**	**25.42**	**357**	eP		P	04 50 41.7	-0.5
	comp=E,5.7nm,0.7s,mb4.2							
WCI	**Wyandotte Cave**	**25.72**	**5**	eP		P	04 50 43.4	-1.6
	comp=E,26nm,0.7s,mb4.9							
OLIL	**Olney**	**26.13**	**1**	eP		P	04 50 48.4	-0.3
	comp=E,17nm,0.7s,mb4.7							
KSU1	**Kansas State U**	**27.39**	**347**	eP		P	04 50 59.3	-0.6
	comp=E,19nm,0.8s,mb4.7							
ANMO	**Albuquerque**	**27.49**	**327**	eP		P	04 51 02.8	+1.8
	comp=E,1.4nm,0.7s,mb3.6							
CBKS	**Cedar Bluff**	**27.95**	**342**	eP		P	04 51 05.0	0.0
ACSO	**Alum Creek Sta**	**28.09**	**9**	eP		P	04 51 06.1	-0.2
TUC	**Tucson**	**28.21**	**318**	eP		P	04 51 12.8	+5.4
SDCO	**Great Sand Dun**	**29.24**	**332**	eP		P	04 51 17.9	+1.4
	comp=E,2.2nm,0.6s,mb4.1							
SCIA	**State Center**	**29.55**	**353**	eP		P	04 51 18.8	-0.3
	comp=E,12nm,0.7s,mb4.7							
JFWS	**Jewell Farm**	**30.33**	**358**	eP		P	04 51 26.1	+0.1
PV04	**Paradox Valley**	**31.39**	**329**	eP		P	04 51 38.6	+3.1
ECSD	**EROS,Sioux Fal**	**31.84**	**349**	eP		P	04 51 38.3	-1.1
PHWY	**Pilot Hill**	**32.19**	**336**	eP		P	04 51 43.8	+1.4
LDFC	**Landfair**	**32.75**	**318**	eP		P	04 51 50.0	+2.5
RSSD	**Black Hills**	**34.12**	**340**	eP		P	04 52 00.2	+0.9
	comp=E,9.8nm,0.7s,mb4.8							
JLU	**Jordanelle**	**34.34**	**329**	eP		P	04 52 05.6	+4.4
DUG	**Dugway**	**34.76**	**327**	eP		P	04 52 05.7	+0.9
	comp=E,2.5nm,0.8s,mb4.2							
PDAR	**Pinedale Array**	**35.12**	**333**	P		P	04 52 07.8	-0.1
	comp=E,1.6nm,0.8s,mb4.0,baz=128,slow=11,SNR=11							
PDAR				PcP		PcP	04 54 39.2	+0.7
	comp=E,0.7nm,0.6s,baz=149,slow=5.2,SNR=5.3							
BW06	**Boulder Array**	**35.12**	**333**	eP		P	04 52 08.6	+0.7
	comp=E,1.8nm,0.6s,mb4.2							
EYMN	**Ely**	**35.41**	**357**	eP		P	04 52 09.0	-1.2
REDW	**Red Top Meadow**	**36.17**	**332**	eP		P	04 52 17.7	+0.8
AGMN	**Agassiz Refuge**	**36.17**	**352**	eP		P	04 52 15.7	-1.1
SNOW	**Snow King Moun**	**36.20**	**333**	eP		P	04 52 17.6	+0.5
	comp=E,14nm,0.6s,mb5.1							
LOHW	**Long Hollow**	**36.25**	**333**	eP		P	04 52 18.2	+0.6
	comp=E,6.6nm,0.8s,mb4.6							
MOOW	**Moose Ponds**	**36.42**	**333**	eP		P	04 52 19.5	+0.5
	comp=E,2.9nm,0.9s,mb4.2							
ELK	**Elko**	**36.47**	**325**	eP		P	04 52 20.6	+1.1
	comp=E,3.9nm,1.0s,mb4.3							
IMW	**Indian Meadow**	**36.63**	**333**	eP		P	04 52 22.4	+1.6
	comp=E,2.3nm,0.5s,mb4.3							
NVAR	**Mina Array Bea**	**36.81**	**320**	P		P	04 52 24.4	+2.0
	comp=E,2.2nm,0.7s,mb4.1,baz=133,slow=7.2,SNR=17							
NVAR				PcP		PcP	04 54 45.7	+2.0
	comp=E,1.5nm,0.6s,baz=124,slow=3.4,SNR=8.9							
HLID	**Hailey**	**38.02**	**329**	eP		P	04 52 33.0	+0.4
	comp=E,1.6nm,0.8s,mb3.8							
ULM	**Lac du Bonnet**	**38.09**	**353**	P		P	04 52 31.1	-2.0
	comp=E,9.4nm,0.7s,mb4.7,baz=170,slow=8.9,SNR=15							
ULM				LR		LR	05 09 15.6	
	comp=E,184nm,18.2s,MS3.9,baz=149,slow=38							
ULM	**Lac du Bonnet**	**38.09**	**353**	eP		P	04 52 30.9	-2.2
	comp=E,14nm,0.9s,mb4.7							
SIV	**San Ignacio**	**39.41**	**135**	P		P	04 52 45.1	+0.5
	comp=E,4.5nm,0.8s,mb4.3,baz=317,slow=7.6,SNR=28							
SIV				PcP		PcP	04 54 56.1	+4.1
	comp=E,1.7nm,0.7s,baz=311,slow=3.5,SNR=4.0							
EGMT	**Eagleton**	**39.50**	**338**	eP		P	04 52 44.9	0.0
	comp=E,8.7nm,0.6s,mb4.7							
FFC	**Flin Flon**	**43.38**	**349**	eP		P	04 53 16.0	-0.7
	comp=E,4.4nm,0.6s,mb4.4							
EDM	**Edmonton**	**45.09**	**339**	eP		P	04 53 29.3	-1.0
SCHQ	**Schefferville**	**45.62**	**18**	P		P	04 53 33.0	-1.4
	comp=E,11nm,0.7s,mb4.9,baz=212,slow=6.7,SNR=19							
SCHQ				LR		LR	05 13 52.7	
	comp=E,243nm,18.7s,MS4.2,baz=191,slow=38							
FCC	**Fort Churchill**	**46.34**	**356**	eP		P	04 53 38.8	-1.3
	comp=E,0.1nm,0.6s							
BDFB	**Brasilia**	**49.09**	**124**	P		P	04 54 02.4	+0.3
	comp=E,1.2nm,0.8s,mb4.0,baz=196,slow=26,SNR=4.4							
BDFB				LR		LR	05 16 41.8	
	comp=E,114nm,18.2s,MS3.9,baz=290,slow=38							
CPUP	**Villa Florida**	**49.26**	**142**	P		P	04 54 04.0	+0.8
	comp=E,0.8nm,0.6s,mb4.0,baz=304,slow=4.9,SNR=3.6							
CPUP				LR		LR	05 16 17.4	
	comp=E,86nm,18.2s,MS3.8,baz=197,slow=38							
CPUP	**Villa Florida**	**49.26**	**142**	eP		P	04 54 02.6	-0.5
	comp=E,4.7nm,0.6s,mb4.7							
YKA	**Yellowknife Ar**	**53.22**	**345**	P		P	04 54 31.2	-1.1
	comp=E,3.3nm,0.7s,mb4.4,baz=140,slow=7.8,SNR=61							
YKA				PcP		PcP	04 55 39.9	+0.3
	comp=E,0.4nm,0.6s,baz=152,slow=3.9,SNR=3.9							
YKA	**Yellowknife Ar**	**53.22**	**345**	P		P	04 54 31.2	-1.1
YKA				PcP		PcP	04 55 39.9	+0.3
DLBC	**Dease Lake**	**55.30**	**335**	P		P	04 54 48.0	+0.5
	comp=E,4.3nm,0.9s,mb4.5,baz=113,slow=7.3,SNR=3.1							
PLCA	**Paso Flores**	**55.59**	**163**	LR		LR	05 12 39.6	
	comp=E,84nm,19.7s,MS3.8,baz=35,slow=29							
PLCA	**Paso Flores**	**55.59**	**163**	eP		P	04 54 51.3	+1.5
	comp=E,3.4nm,1.0s,mb4.3							
RES	**Resolute Bay**	**62.27**	**358**	eP		P	04 55 34.0	-1.6
	comp=E,3.6nm,0.6s,mb4.7							
KDAK	**Kodiak Island**	**65.63**	**328**	LR		LR	05 29 33.0	
	comp=E,182nm,18.1s,MS4.3,baz=87,slow=40							
PPT	**Papeete**	**67.03**	**245**	eLR		LR	05 16 04.2	
	comp=E,118nm,24.5s							
PPT	**Papeete**	**67.03**	**245**	LR		LR	05 18 22.7	
	comp=E,54nm,20.3s,MS3.8,baz=26,slow=29							
TBI	**Tubuai**	**69.20**	**239**	eT			06 11 37.9	
	comp=E,4.1nm,0.3s							
EKA	**Eskdalemuir Ar**	**77.36**	**36**	P		P	04 57 06.3	-2.4
	comp=E,0.7nm,0.7s,mb3.7,baz=264,slow=6.6,SNR=5.1							
EKA	**Eskdalemuir Ar**	**77.36**	**36**	P		P	04 57 06.3	-2.4
ESDC	**Sonseca Array**	**78.19**	**52**	P		P	04 57 12.1	-1.6
	comp=E,0.5nm,0.6s,mb3.6,baz=291,slow=5.4,SNR=5.2							
DBIC	**Dimbokro**	**82.69**	**85**	P		P	04 57 38.9	+0.6
	comp=E,1.0nm,0.6s,mb4.0,baz=225,slow=5.4,SNR=4.4							
DBIC				LR		LR	05 32 34.6	
	comp=E,52nm,18.0s,MS3.9,baz=276,slow=34							
NOA	**NORSAR Array B**	**83.96**	**29**	LR		LR	05 32 44.9	
	comp=E,66nm,18.6s,MS4.0,baz=5.0,slow=34							
ARCES	**ARCESS Array B**	**86.56**	**19**	LR		LR	05 41 18.6	
	comp=E,72nm,18.1s,MS4.1,baz=22,slow=39							
TORD	**Torodi Ar. Bea**	**87.68**	**77**	P		P	04 58 01.0	-2.2
	comp=E,0.3nm,0.8s,mb3.6,baz=294,slow=5.0,SNR=5.9							
GERES	**GERESS Array B**	**88.75**	**40**	LR		LR	05 33 03.2	
	comp=E,138nm,19.3s,MS4.4,baz=278,slow=32							
KEST	**Kesra**	**89.29**	**54**	LR		LR	05 34 45.9	
	comp=E,37nm,20.3s,MS3.8,baz=278,slow=33							
AKASG	**Malin Array Be**	**97.23**	**34**	LR		LR	05 42 16.9	
	comp=E,83nm,20.0s,MS4.2,baz=295,slow=35							
SONM	**Songino Array**	**118.43**	**348**	PKP		PKPdf	05 04 02.7	+1.3
	comp=E,0.7nm,0.6s,baz=339,slow=2.2,SNR=6.1							
KSRS	**Korea Array**	**119.52**	**327**	PKP		PKPdf	05 04 05.7	+1.9
	comp=E,1.7nm,0.8s,baz=26,slow=1.7,SNR=3.1							
BJI	**Beijing**	**122.81**	**337**	PKP		PKPdf	05 04 09.0	-1.1
BJI				SS		SS	05 22 23.5	-2.4
BJI				LR		LR		
	comp=N,614nm,24.8s,MS5.2							
BJI				LR		LR		
	comp=E,335nm,24.8s,MS5.2							
WMQ	**Urumqi**	**123.86**	**3**	ePKP		PKPdf	05 04 12.5	+0.5
LZH	**Lanzhou**	**130.22**	**347**	ePKP		PKPdf	05 04 24.5	+0.1
LZH				LR		LR		
	comp=E,113nm,18.3s							
LZH				LR		LR		
	comp=Z,175nm,20.0s,MS4.8							
XAN	**Xi'an**	**130.74**	**341**	PKP		PKPdf	05 04 22.3	-3.1
XAN				PP		PP	05 06 41.5	+1.6
CD2	**Chengdu**	**135.19**	**345**	PKP		PKPdf	05 04 30.8	-3.1
WRAB	**Tennant Creek**	**138.01**	**254**	ePKPdf		PKPdf	05 04 40.9	+1.6
WRAB				*e*			05 04 46.9	
WRA	**Warramunga Arr**	**138.02**	**254**	PKP		PKPdf	05 04 39.1	-0.2
	comp=Z,0.5nm,0.7s,baz=79,slow=2.7,SNR=4.1							
ASAR	**Alice Springs**	**138.06**	**249**	PKP		PKPdf	05 04 40.2	+0.9
	comp=Z,0.4nm,0.6s,baz=102,slow=3.2,SNR=4.2							
GYA	**Guiyang**	**138.46**	**339**	ePDIF		Pdif	05 01 48.0	-1.9
GYA				PKP		PKPdf	05 04 38.3	-1.7
GYA				PP		PP	05 07 31.5	+2.7
GYA				PP		PP		
	comp=Z,90nm,7.8s							
HYB	**Hyderabad**	**147.76**	**23**	*i* PKP		PKPdf	05 04 58.0	+1.4
HYB	**Hyderabad**	**147.76**	**23**	eP		PKPdf	05 04 58.0	+1.4
CHTO	**Chiang Mai**	**147.96**	**346**	ePKPbc		PKPbc	05 04 59.6	-0.3
CMAR	**Chiang Mai Arr**	**148.31**	**346**	PKP		PKPdf	05 04 58.7	+1.2
	comp=Z,5.8nm,0.7s,baz=316,slow=1.7,SNR=21							
CMAR				PKPbc		PKPbc	05 05 01.6	+0.8
	comp=Z,5.9nm,0.7s,baz=335,slow=3.2,SNR=27							

KRSC 30 05:08:48.4±1.2, 5289N×16103E, h19km±18km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.64**	**289**	*i* P		Pb	05 09 02.0	+1.0
SPN				*i* S		Sb	05 09 11.7	+2.1
NLC	**Nalytchevo**	**1.06**	**286**	eP		Pb	05 09 07.8	-0.2
NLC				*i* S		Sb	05 09 22.4	+1.0
AVH	**Avacha**	**1.43**	**286**	eP		Pn	05 09 13.8	+0.5
AVH				*i* S		Sn	05 09 32.7	+1.1
KII	**Karymskiy**	**1.49**	**321**	eP		Pn	05 09 14.9	+0.8
KII				*i* S		Sn	05 09 34.2	+1.3
RUS	**Russkaya**	**1.60**	**254**	eP		Pn	05 09 14.4	-1.2
GNL	**Ganaly**	**2.02**	**295**	eP		Pn	05 09 23.0	+1.6
GNL				*i* S		Sn	05 09 48.3	+2.2
TUMR	**Tumrok**	**2.45**	**348**	P		Pn	05 09 29.0	+1.7
KMNR	**Kamenistaya**	**2.91**	**351**	P		Pn	05 09 35.8	+2.2
ZLN	**Zelenaya**	**3.14**	**358**	P		Pn	05 09 38.4	+1.7
KBTR	**Krutoberegovo**	**3.48**	**17**	P		Pn	05 09 41.2	-0.3
SRDR	**Sredinnyy**	**3.52**	**348**	P		Pn	05 09 43.7	+1.7

*IDC **30** 05:19:25.2±1.0, 5231N×16836W, h0km, mb3.7/13, mb1 4.0/14, mb1mx3.9/25, mbtmp3.8/14, ML3.4/1, Error ellipse: s-maj=33.2km s-min=14.2km az=2.0*
*NEIC **30** 05:19:26.3, 52.11N×168.09W, h25km, mb3.6/1, ML3.5(AEIC), After AEIC.*
*ISCJB **30** 05:19:27.0±2.2, 5222N±0.10×168.19W±0.09, h26km±15km, mb3.7/12, Error ellipse: s-maj=17.1km s-min=7.8km az=162.5*

ISC 30 05:19:28.5±1.7, 5229N±007×16819W±008, h20km±11km, n29, σ0°82/31, mb3.7/12, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.79**	**330**	P		**Pb**	**05 19 43.0**	**-0.6**
NIKO				S		**Sb**	**05 19 54.8**	**+1.0**
OKFG	**Magazine Ridge**	**1.14**	**9**	P		**Pn**	**05 19 48.6**	**-0.5**
OKFG				S		**Sn**	**05 20 05.1**	**+1.0**
OKCE	**Okmok Cone E**	**1.14**	**1**	P		**Pn**	**05 19 48.8**	**-0.4**
OKCD	**Okmok Cone D**	**1.14**	**2**	P		**Pn**	**05 19 48.9**	**-0.4**
UNV	**Unalaska Valle**	**1.86**	**33**	P		**Pn**	**05 19 58.3**	**-0.8**
AKUT	**Akutan**	**2.35**	**37**	eP		**Pn**	**05 20 05.3**	**-0.6**
ATKA	**Atka Island**	**3.69**	**271**	P		**Pn**	**05 20 24.9**	**+0.6**
ADK	**Adak**	**5.25**	**269**	P		**Pn**	**05 20 46.3**	**+0.6**
SDPT	**Sand Point**	**5.50**	**53**	eP		**Pn**	**05 20 49.9**	**+0.8**
CHGN	**Chignik**	**6.99**	**51**	eP		**Pn**	**05 21 10.8**	**+1.3**
OHAK	**Old Harbor**	**9.92**	**54**	eP		**Pn**	**05 21 49.2**	**-0.5**
	17nm,0.8s							
KDAK	**Kodiak Island**	**10.50**	**52**	Pn		Pn	05 21 55.5	-2.1
	2.2nm,0.3s,baz=300,slow=16,SNR=21							
FX1	**Attu Island--F**	**11.36**	**280**	Pn		Pn	05 22 09.0	-0.4
	0.8nm,0.3s,baz=284,slow=18,SNR=8.1							
BPAW	**Bear Paw Mtn.**	**14.84**	**30**	ePn		Pn	05 22 57.6	+0.7
	11nm,1.1s							
COLA	**College**	**16.37**	**32**	ePn		Pn	05 23 15.3	-1.4
	5.5nm,1.0s							
PETK	**Petropavlovsk-**	**20.58**	**286**	P		P	05 24 05.1	-0.6
	3.6nm,0.6s,baz=81,slow=14,SNR=10							
YKA	**Yellowknife Ar**	**29.75**	**49**	P		P	05 25 33.5	+0.5
	0.4nm,0.7s,mb3.3,baz=271,slow=9.0,SNR=6.3							
YKA	**Yellowknife Ar**	**29.75**	**49**	P		P	05 25 33.5	+0.5
NVAR	**Mina Array Bea**	**36.94**	**92**	P		P	05 26 37.6	+1.8
	0.6nm,0.7s,mb3.5,baz=288,slow=7.6,SNR=5.2							
PDAR	**Pinedale Array**	**39.71**	**80**	P		P	05 27 00.0	+0.9
	0.6nm,0.6s,mb3.5,baz=308,slow=5.5,SNR=6.3							
TXAR	**Lajitas Array**	**52.03**	**90**	P		P	05 28 36.3	-0.1
	0.6nm,0.7s,mb3.6,baz=286,slow=4.4,SNR=5.4							
ARCES	**ARCESS Array B**	**58.07**	**354**	P		P	05 29 19.0	-0.5
	2.4nm,0.8s,mb4.3,baz=14,slow=6.9,SNR=5.2							
MKAR	**Makanchi Array**	**64.38**	**314**	P		P	05 30 01.8	-0.7
	0.1nm,0.3s,mb3.4,baz=47,slow=4.3,SNR=2.4							
NOA	**NORSAR Array B**	**67.02**	**0**	P		P	05 30 19.2	-0.1
	1.4nm,1.1s,mb3.9,baz=348,slow=5.0,SNR=2.7							
AKASG	**Malin Array Be**	**76.33**	**349**	P		P	05 31 14.9	-0.6
	0.5nm,0.4s,mb3.8,baz=11,slow=5.3,SNR=4.2							
CMAR	**Chiang Mai Arr**	**77.34**	**284**	P		P	05 31 21.9	+0.2
	0.3nm,0.5s,mb3.4,baz=26,slow=5.7,SNR=4.5							
BRTR	**Keskin Array B**	**86.41**	**343**	P		P	05 32 09.8	+0.7
	0.5nm,0.6s,mb3.9,baz=9.9,slow=5.1,SNR=3.2							
ESDC	**Sonseca Array**	**87.39**	**12**	P		P	05 32 14.3	+0.5
	0.2nm,0.5s,mb3.6,baz=343,slow=6.5,SNR=4.2							
ASAR	**Alice Springs**	**90.90**	**231**	P		P	05 32 29.6	-0.7
	0.2nm,0.6s,mb3.6,baz=25,slow=4.0,SNR=7.1							

NEIC 30 05:25:11.6, 3888S×17866E, h30km, ML3.8(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**0.78**	**259**	P		Pn	05 25 25.9	-0.7
PUZ	**Puketiti**	**0.86**	**338**	P		Pn	05 25 26.6	-1.1
MWZ	**Matawai**	**1.04**	**301**	P		Pn	05 25 29.5	-0.6
MWZ				S		Sn	05 25 42.3	-1.3
MXZ	**Matakaoa Point**	**1.34**	**348**	P	

az=48.2
DJA 30 06:24:04, 19.30S×174.40W, h10km, mb5.3/10
ISC 30 06:24:02.3±0.2**, 1947S**±005×**17381W**±004**, h36**km, **h36**km±1.9km**:pP-P, n550**, σ0693/211**, mb5.1**/113**, MS5.4**/211**, 21C-17D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.86**	**20**	Pn		**Pn**	**06 25 19.7**	**-7.1**
	12nm,0.3s,baz=69,slow=4.1,SNR=20							
AFI				Sn		Sn	06 26 12.8	-20
	31nm,0.3s,baz=39,slow=18,SNR=3.7							
AFI				LR		LR	06 27 29.6	
	comp=Z,11μm,19.6s,baz=189,slow=36							
AFI	**Afiamalu**	**5.86**	**20**	*e*P		**Pn**	**06 25 19.6**	**-7.1**
AFI				pmax		pmax		
	comp=Z,173nm,0.6s							
AFI	**Afiamalu**	**5.86**	**20**	*e*Pn		**Pn**	**06 25 19.6**	**-7.2**
	comp=Z,173nm,0.6s							
RAO	**Raoul Island**	**10.43**	**200**	Sn		**Sn**	**06 28 14.9**	**-10**
	comp=Z,26nm,0.3s,baz=92,slow=23,SNR=1.9							
FUNA	**Funafuti**	**12.81**	**327**	Pn		**Pn**	**06 27 00.8**	**-1.3**
RAR	**Rarotonga**	**13.29**	**100**	Pn		**Pn**	**06 26 57.7**	**-11**
	comp=Z,30nm,0.3s,baz=246,slow=6.5,SNR=39							
RAR				Sn		Sn	06 29 10.7	-24
	comp=Z,2.5nm,0.3s,baz=135,slow=20,SNR=2.7							
RAR	**Rarotonga**	**13.29**	**100**	*e*Pn		**Pn**	**06 26 57.8**	**-11**
RAR				*e*Sn		**Sn**	**06 29 24.7**	**-10**
NOUC	**Port Laguerre**	**18.77**	**259**	*e*P		**Pn**	**06 28 20.5**	**+1.3**
URZ	**Urewera**	**20.32**	**201**	P		**P**	**06 28 35.3**	**0.0**
	comp=Z,79nm,0.8s,baz=360,slow=7.0,SNR=40							
URZ				S		**S**	**06 32 11.9**	**-9.3**
	comp=Z,5.6nm,0.6s,baz=59,slow=13,SNR=5.4							
TBI	**Tubuai**	**22.99**	**104**	*e*LR		LR	06 34 31.5	
	comp=Z,12μm,28.5s,baz=278							
TBI	**Tubuai**	**22.99**	**104**	*e*T			06 53 18.5	
	comp=Z,13nm,0.3s							
PPT	**Papeete**	**23.06**	**89**	*e*LR		LR	06 34 26.3	
	comp=Z,19μm,27.8s,baz=263							
PPT	**Papeete**	**23.06**	**89**	*e*T			06 53 15.6	
	comp=Z,4.4nm,0.3s							
PPT	**Papeete**	**23.06**	**89**	P		**P**	**06 29 07.7**	**+2.9**
	comp=Z,39nm,1.0s,mb4.8,baz=313,slow=22,SNR=5.1							
PPT				LR		LR	06 35 42.6	
	comp=Z,4μm,20.7s,MS4.8,baz=252,slow=31							
TVO	**Taravao**	**23.33**	**90**	*e*T			06 53 36.3	
	comp=Z,34nm,0.3s							
SNZO	**South Karori**	**23.87**	**202**	*e*P		**P**	**06 29 11.9**	**-0.5**
	comp=Z,115nm,1.1s,mb5.2							
SNZO				LR		LR		
	comp=Z,5μm,20.0s,MS5.0							
TARA	**Tarawa**	**24.45**	**326**	PFAKE			06 29 30.0	+12
TARA				LR		LR		
	comp=Z,8μm,19.0s,MS5.2							
XMAS	**Kiritimati**	**26.75**	**39**	PFAKE			06 29 50.0	+11
XMAS				LR		LR		
	comp=Z,4μm,20.0s,MS5.0							
HNR	**Honiara**	**27.26**	**288**	P		**P**	**06 29 40.0**	**-3.4**
	comp=Z,13nm,0.3s,mb4.9,baz=224,slow=23,SNR=2.0							
HNR				LR		LR	06 38 33.9	
	comp=Z,3μm,20.0s,MS4.9,baz=99,slow=32							
HNR	**Honiara**	**27.26**	**288**	*e*P		**P**	**06 29 41.2**	**-2.3**
HNR				LR		LR		
	comp=Z,3μm,22.0s,MS4.9							
RPZ	**Rata Peaks**	**27.31**	**204**	P		**P**	**06 29 41.4**	**-2.1**
	comp=Z,5.7nm,0.7s,mb4.2,baz=349,slow=13,SNR=2.2							
RPZ				LR		LR	06 40 31.5	
	comp=Z,6μm,18.0s,MS5.2,baz=23,slow=36							
EIDS	**Eidsvold**	**32.91**	**253**	*e*P		**P**	**06 30 32.9**	**-0.6**
	comp=Z,7.5nm,0.6s,mb4.8							
ARMA	**Armidale**	**33.05**	**244**	*e*P		**P**	**06 30 35.3**	**+0.7**
TAOE	**Nuku Hiva Isla**	**34.24**	**77**	*e*LR		LR	06 39 45.9	
	comp=Z,25μm,24.7s,baz=249							
CNB	**Canberra Magne**	**36.07**	**236**	*e*P		**P**	**06 31 01.3**	**+0.7**
CAN	**Canberra**	**36.35**	**236**	*e*P		**P**	**06 31 02.1**	**-0.9**
CAN				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.0							
CAN				MLR		MLR		
	comp=Z,4μm,19.0s,MS5.2							
CAN	**Canberra**	**36.35**	**236**	*e*P		**P**	**06 31 02.1**	**-1.0**
	comp=Z,19nm,0.9s,mb5.0							
CAN				LR		LR		
	comp=Z,4μm,19.0s,MS5.2							
YNG	**Young**	**36.57**	**238**	*e*P		**P**	**06 31 05.6**	**+0.7**
	comp=Z,4.8nm,0.8s,mb4.4							
CTA	**Charters Tower**	**37.52**	**262**	*e*P		**P**	**06 31 12.2**	**-0.9**
	comp=Z,17nm,0.5s,mb5.0							
CTAO	**Charters Tower**	**37.52**	**262**	*e*P		**P**	**06 31 11.7**	**-1.4**
CTAO				*e*			06 33 28.9	
CTAO				pmax		pmax		
	comp=Z,89nm,1.4s,mb5.3							
CTAO				MLR		MLR		
	comp=Z,10μm,19.0s,MS5.6							
CTAO	**Charters Tower**	**37.52**	**262**	*e*P		**P**	**06 31 11.7**	**-1.4**
	comp=Z,89nm,1.4s,mb5.3							
CTAO				*e*PcP		PcP	06 33 28.9	-2.0
CTAO				LR		LR		
	comp=Z,10μm,19.0s,MS5.6							
PMG	**Port Moresby**	**39.01**	**279**	P		**P**	**06 31 25.3**	**-0.4**
	comp=Z,20nm,0.9s,mb4.9,baz=175,slow=6.8,SNR=3.1							
PMG				LR		LR	06 46 03.1	
	comp=Z,7μm,18.1s,MS5.5,baz=70,slow=34							
PMG	**Port Moresby**	**39.01**	**279**	PFAKE			06 31 40.0	+14
PMG				LR		LR		
	comp=Z,6μm,19.0s,MS5.5							
TOO	**Toolangi**	**39.69**	**234**	*e*P		**P**	**06 31 31.7**	**+0.6**
TAU	**Tasmania Unive**	**40.14**	**226**	*e*P		**P**	**06 31 36.3**	**+1.5**
TAU				pmax		pmax		
	comp=Z,57nm,1.2s,mb5.2							
TAU				MLR		MLR		
	comp=Z,6μm,19.0s,MS5.4							
TAU	**Tasmania Unive**	**40.14**	**226**	*e*P		**P**	**06 31 36.3**	**+1.5**
	comp=Z,57nm,1.2s,mb5.2							
TAU				LR		LR		
	comp=Z,6μm,19.0s,MS5.4							
COEN	**Coen**	**41.48**	**271**	*e*P		**P**	**06 31 45.4**	**-0.8**
	comp=Z,37nm,0.9s,mb5.0							
STKA	**Stephens Creek**	**41.78**	**244**	P		**P**	**06 31 47.2**	**-1.2**
	comp=Z,7.8nm,0.5s,mb4.6,baz=82,slow=8.9,SNR=14							
STKA				LR		LR	06 47 51.1	
	comp=Z,6μm,18.6s,MS5.5,baz=71,slow=34							
STKA	**Stephens Creek**	**41.78**	**244**	*e*P		**P**	**06 31 48.2**	**-0.2**
	comp=Z,13nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**41.78**	**244**	*e*P		**P**	**06 31 47.9**	**-0.5**
	comp=Z,4.3nm,0.9s,mb4.1							
STKA				*e*pP		pP	06 31 59.6	+0.8
STKA				*e*sP		sP	06 32 03.6	+0.5
BBOO	**Buckleboo**	**46.52**	**243**	*e*P		**P**	**06 32 25.1**	**-1.4**
	comp=Z,24nm,0.7s,mb5.2							
MIDW	**Midway**	**47.53**	**356**	PFAKE			06 32 50.0	+16
MIDW				LR		LR		
	comp=Z,2μm,19.0s,MS5.2							
ASAR	**Alice Springs**	**48.59**	**255**	P		**P**	**06 32 41.5**	**-1.2**
	comp=Z,12nm,0.5s,mb5.2,baz=97,slow=7.9,SNR=193							
ASAR				S		**S**	**06 39 39.6**	**-2.6**
	comp=Z,0.3nm,0.9s,baz=218,slow=51,SNR=3.0							
WB2	**Warramunga Arr**	**48.64**	**260**	*e*P		**P**	**06 32 41.6**	**-1.5**
WRAB	**Tennant Creek**	**48.64**	**260**	P		**P**	**06 32 42.0**	**-1.1**
	comp=Z,115nm,0.5s,mb6.2,SNR=14							
WRAB	**Tennant Creek**	**48.64**	**260**⇑	*e*P		**P**	**06 32 43.1**	**0.0**
WRAB	**Tennant Creek**	**48.64**	**260**	*e*P		**P**	**06 32 41.0**	**-2.1**
	comp=Z,25nm,1.0s,mb5.2							
WRAB				*e*pP		pP	06 32 50.4	-3.2
WRAB				LR		LR		
	comp=Z,8μm,19.0s,MS5.7							
WRA	**Warramunga Arr**	**48.65**	**260**	P		**P**	**06 32 41.1**	**-2.1**
	comp=Z,7.2nm,0.5s,mb4.9,baz=97,slow=8.5,SNR=49							
WRA				S		**S**	**06 39 43.7**	**+0.5**
	comp=Z,1.9nm,1.0s,baz=96,slow=14,SNR=3.3							
WRA				LR		LR	06 52 27.3	
	comp=Z,7μm,18.8s,MS5.7,baz=95,slow=35							
WRA	**Warramunga Arr**	**48.65**	**260**	P		**P**	**06 32 41.1**	**-2.0**
WRA				S		**S**	**06 39 43.7**	**+0.5**
KAKA	**Kakadu**	**51.91**	**269**	*e*P		x	06 33 07.2	
	comp=Z,24nm,0.6s							
KAKA	**Kakadu**	**51.91**	**269**	*e*P		x	06 33 07.0	
KAKA				*e*pP		x	06 33 17.2	
GUMO	**Guam**	**52.29**	**306**	PFAKE			06 33 20.0	+9.4
GUMO				LR		LR		
	comp=Z,2μm,19.0s,MS5.2							
FORT	**Forrest**	**53.31**	**246**	*e*P		**P**	**06 33 16.5**	**-1.6**
	comp=Z,22nm,0.6s,mb5.3							
FORT	**Forrest**	**53.31**	**246**	*e*P		**P**	**06 33 16.6**	**-1.5**
	comp=Z,26nm,0.6s,mb5.3							
DRV	**Dumont d'Urvil**	**55.66**	**200**	P		**P**	**06 33 36.0**	**+1.5**
DRV				S		**S**	**06 41 22.0**	**+4.0**
DRV				L			06 47 00.0	
DRV				R			06 51 00.0	
FITZ	**Fitzroy Crossi**	**57.07**	**261**	*e*P		**P**	**06 33 44.6**	**-0.8**
	comp=Z,22nm,0.9s,mb5.2							
FITZ	**Fitzroy Crossi**	**57.07**	**261**	*e*P		**P**	**06 33 44.6**	**-0.8**
	comp=Z,47nm,1.4s,mb5.3							
FITZ				*e*pP		pP	06 33 54.1	-2.0
FITZ				*e*sP		sP	06 33 57.8	-2.5
RPN	**Rapa Nui**	**59.17**	**110**	PFAKE			06 34 10.0	+10
RPN				LR		LR		
	comp=Z,2μm,19.0s,MS5.3							
VNDA	**Vanda**	**59.31**	**186**	P		**P**	**06 34 00.4**	**+0.3**
	comp=Z,2.6nm,0.8s,mb4.3,baz=358,slow=6.6,SNR=3.7							
VNDA				LR		LR	06 55 11.5	
	comp=Z,821nm,21.2s,MS4.8,baz=12,slow=32							
MBWA	**Marble Bar**	**61.92**	**256**	*e*P		**P**	**06 34 17.5**	**-1.3**
	comp=Z,46nm,1.1s,mb5.5							
MBWA				LR		LR		
	comp=Z,5μm,19.0s,MS5.7							
NWAO	**Narrogin (SRO)**	**62.34**	**242**	LR		LR	07 00 28.2	
	comp=Z,4μm,18.6s,MS5.6,baz=78,slow=35							
NWAO	**Narrogin (SRO)**	**62.34**	**242**	*e*P		**P**	**06 34 21.8**	**+0.3**
NWAO				pmax		pmax		
	comp=Z,23nm,1.0s							
NWAO				MLR		MLR		
	comp=Z,4μm,19.0s							
NWAO	**Narrogin (SRO)**	**62.34**	**242**	*e*P		**P**	**06 34 21.8**	**+0.3**
	comp=Z,23nm,1.0s,mb5.3							
NWAO				LR		LR		
	comp=Z,4μm,19.0s,MS5.6							
MUN	**Mundaring**	**63.31**	**243**	*e*P		**P**	**06 34 28.5**	**+0.6**
DAV	**Davao City (W)**	**65.22**	**288**	PFAKE			06 34 50.0	+9.3
DAV				LR		LR		
	comp=Z,577nm,20.0s,MS4.8							
CASY	**Casey**	**66.57**	**205**	*e*P		**P**	**06 34 49.2**	**+0.7**
	comp=Z,31nm,1.2s,mb5.2							
CASY				LR		LR		
	comp=Z,1μm,19.0s,MS5.2							
QSPA	**South Pole Qui**	**70.60**	**180**	PFAKE			06 35 30.0	+17
QSPA				LR		LR		
	comp=Z,1μm,20.0s,MS5.2							
MJAR	**Matsushiro Arr**	**71.80**	**321**	P		**P**	**06 35 21.4**	**0.0**
	comp=Z,13nm,0.8s,mb4.9,baz=149,slow=5.8,SNR=23							
MJAR				LR		LR	07 02 51.9	
	comp=Z,762nm,19.9s,MS5.0,baz=135,slow=32							
MAJO	**Matsushiro**	**71.81**	**321**	PFAKE			06 35 30.0	+8.7
MAJO				LR		LR		
	comp=Z,938nm,20.0s,MS5.0							
MAT	**Matsushiro**	**71.81**	**321**	P		**P**	**06 35 21.0**	**-0.3**
MAT				S		S	06 44 35.2	-4.1
FX1	**Attu Island--F**	**72.93**	**352**	LR		LR	07 04 17.8	
	comp=Z,2μm,18.7s,MS5.5,baz=180,slow=33							
ERM	**Erimo**	**72.96**	**328**	PFAKE			06 35 40.0	+12
ERM				LR		LR		
	comp=Z,2μm,19.0s,MS5.3							
KKM	**Kota Kinabalu**	**73.34**	**283**	PFAKE			06 35 40.0	+9.0
KKM				LR		LR		
	comp=Z,719nm,20.0s,MS5.0							
MIR	**Mirnyy**	**73.58**	**205**κ	*i*P		**P**	**06 35 34.0**	**+2.6**
MIR				*i*		pP	06 35 47.0	+4.5
MIR				*i*	S	S	06 45 04.0	+5.2
MIR				pmax		pmax		
	comp=Z,200nm,1.5s,mb5.8							
MIR				pmax		pmax		
	comp=Z,1μm,6.0s							
MIR				MLR		MLR		
	comp=Z,1μm,19.0s,MS5.1							
SAO	**San Andreas Ge**	**74.62**	**41**	PFAKE			06 35 50.0	+12
SAO				LR		LR		
	comp=Z,2μm,19.0s,MS5.4							
MCCM	**Marconi Confer**	**74.63**	**39**	PFAKE			06 35 50.0	+12
MCCM				LR		LR		
	comp=Z,1μm,19.0s,MS5.3							
ASAJ	**Asahikawa**	**74.79**	**329**	P		**P**	**06 35 40.0**	**+1.3**
	comp=Z,20nm,0.9s,mb5.1,baz=220,slow=21,SNR=3.8							
HOPS	**Hopland**	**75.07**	**39**	PFAKE			06 35 50.0	+10
HOPS				LR		LR		
	comp=Z,3μm,21.0s,MS5.5							
MWC	**Mount Wilson**	**75.26**	**45**	*e*P		**P**	**06 35 37.1**	**-4.6**
MWC				pmax		pmax		
	comp=Z,75nm,1.9s,mb5.3							
MWC	**Mount Wilson**	**75.26**	**45**	*e*P		**P**	**06 35 37.1**	**-4.6**
	comp=Z,75nm,1.9s,mb5.3							
PFO	**Pinyon Flat Ob**	**75.98**	**46**	P		**P**	**06 35 45.2**	**-0.6**
	comp=Z,1.6nm,0.9s,mb4.0,baz=183,slow=6.0,SNR=4.4							
PFO				LR		LR	07 04 56.2	
	comp=Z,1μm,18.0s,MS5.3,baz=234,slow=32							
PFO	**Pinyon Flat Ob**	**75.98**	**46**	P		**P**	**06 35 47.4**	**+1.5**
PFO				pmax		pmax		
	comp=Z,29nm,1.5s,mb5.0							
PFO				MLR		MLR		
	comp=Z,1μm,19.0s,MS5.3							
PFO	**Pinyon Flat Ob**	**75.98**	**46**	P		**P**	**06 35 47.4**	**+1.6**
	comp=Z,29nm,1.5s,mb5.0							
PFO				LR		LR		
	comp=Z,1μm,19.0s,MS5.3							
PET	**Petropavlovsk**	**76.03**	**343**	*e*P		**P**	**06 35 42.1**	**-3.5**
PET				*e*S		S	06 45 23.1	-3.1
PET				*e*PS			06 45 58.7	
PET				*e*PPS			06 46 12.2	
PET				pmax		pmax		
	comp=Z,1μm,11.7s							
PET				pmax		pmax		
	comp=Z,700nm,11.8s							
PET				MLR		MLR		
	comp=Z,900nm,17.0s,MS5.2							
PET				MLR		MLR		
	comp=Z,1μm,17.0s							
PET	**Petropavlovsk**	**76.03**	**343**	PFAKE			06 36 00.0	+14
PET				LR		LR		
	comp=Z,1μm,19.0s,MS5.2							
CMB	**Columbia Colle**	**76.07**	**41**	PFAKE			06 36 00.0	+14
CMB				LR		LR		
	comp=Z,2μm,19.0s,MS5.3							
PETK	**Petropavlovsk-**	**76.37**	**343**	P		**P**	**06 35 48.3**	**+0.7**
	comp=Z,9.1nm,0.9s,mb4.7,baz=110,slow=8.2,SNR=6.1							
WDC	**Whiskeytown Da**	**76.41**	**38**	*e*P		**P**	**06 35 48.2**	**+0.1**
WDC				pmax		pmax		
	comp=Z,73nm,1.8s,mb5.3							
WDC				MLR		MLR		
	comp=Z,2μm,19.0s,MS5.5							
WDC	**Whiskeytown Da**	**76.41**	**38**	*e*P		**P**	**06 35 48.2**	**+0.1**
	comp=Z,73nm,1.8s,mb5.3							
WDC				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
GSC	**Goldstone**	**76.72**	**45**	*e*P		**P**	**06 35 49.4**	**-0.6**
GSC				pmax		pmax		
	comp=Z,73nm,2.0s,mb5.3							
GSC	**Goldstone**	**76.72**	**45**	*e*P		**P**	**06 35 49.4**	**-0.6**
	comp=Z,73nm,2.0s,mb5.3							
DAC	**Darwin (Calif)**	**76.78**	**44**	PFAKE			06 36 00.0	+10
DAC				LR		LR		
	comp=Z,2μm,19.0s,MS5.4							
TPUB	**Ta-pu**	**76.78**	**301**	*e*P		**P**	**06 35 50.4**	**-0.2**
	comp=Z,140nm,1.0s,mb5.8							
TPUB				*e*		pP	06 36 02.4	+0.7
GLA	**Glamis**	**76.79**	**48**	*e*P		**P**	**06 35 51.6**	**+1.1**
GLA				pmax		pmax		
	comp=Z,58nm,1.5s,mb5.3							
GLA	**Glamis**	**76.79**	**48**	*e*P		**P**	**06 35 51.6**	**+1.2**
	comp=Z,58nm,1.5s,mb5.3							
MTUM	**Tungsten Hills**	**76.80**	**42**	*e*P		**P**	**06 35 50.4**	**0.0**
YSS	**Yuzh-Sakhalins**	**76.82**	**331**	*i*P		**P**	**06 35 51.4**	**+1.1**
YSS				pmax		pmax		
	comp=Z,174nm,2.0s,mb5.6							
YSS	**Yuzh-Sakhalins**	**76.82**	**331**	PFAKE			06 36 00.0	+10
YSS				LR		LR		
	comp=Z,1μm,20.0s,MS5.2							
YHNB	**Yeheng**	**76.83**	**302**	PFAKE			06 36 00.0	+9.2
YHNB				LR		LR		
	comp=Z,1μm,19.0s,MS5.3							
TATO	**Taipei**	**76.89**	**303**	PFAKE			06 36 00.0	+8.8
TATO				LR		LR		
	comp=Z,2μm,20.0s,MS5.3							
WAKR	**Walker**	**76.95**	**41**	*e*P		**P**	**06 35 51.1**	**-0.1**
YBH	**Yreka Blue Hor**	**77.07**	**37**	*e*P		**P**	**06 35 51.3**	**-0.5**
YBH				pmax		pmax		
	comp=Z,144nm,2.1s							
YBH				MLR		MLR		
	comp=Z,2μm,20.0s							
YBH	**Yreka Blue Hor**	**77.07**	**37**	*e*P		**P**	**06 35 51.2**	**-0.6**
	comp=Z,144nm,2.1s,mb5.5							
YBH				LR		LR		
	comp=Z,2μm,20.0s,MS5.4							
KSM	**Kuching**	**77.19**	**276**	*e*P		**P**	**06 35 54.3**	**+1.1**
	comp=Z,38nm,1.1s,mb5.2							
KSM				*e*pP		pP	06 36 04.5	+0.3
KSM				LR		LR		
	comp=Z,719nm,20.0s,MS5.0							
HUMO	**Hull Mountain**	**77.51**	**36**	PFAKE			06 36 10.0	+16
HUMO				LR		LR		
	comp=Z,3μm,20.0s,MS5.5							
NVAR	**Mina Array Bea**	**77.61**	**42**	P		**P**	**06 35 54.7**	**-0.2**
	comp=Z,8.3nm,1.0s,mb4.6,baz=224,slow=9.0,SNR=25							
NVAR	**Mina Array Bea**	**77.61**	**42**	P		**P**	**06 35 54.7**	**-0.2**
PAHR	**Pah Rah Range**	**77.72**	**40**	*e*P		**P**	**06 35 55.8**	**+0.3**
	comp=Z,108nm,1.9s,mb5.5							
LDFC	**Landfair**	**77.73**	**46**	*e*P		**P**	**06 35 55.6**	**-0.1**
TPNV	**Topopah Spring**	**78.05**	**44**	*e*P		**P**	**06 35 57.3**	**-0.1**
TPNV				pmax		pmax		
	comp=Z,68nm,1.9s,mb5.2							
TPNV				MLR		MLR		
	comp=Z,2μm,19.0s,MS5.5							
TPNV	**Topopah Spring**	**78.05**	**44**	*e*P		**P**	**06 35 57.2**	**-0.1**
	comp=Z,68nm,1.9s,mb5.2							
TPNV				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
TPH	**Tonopah**	**78.08**	**42**	*e*P		**P**	**06 35 57.6**	**+0.1**
TPH				pmax		pmax		
	comp=Z,170nm,2.3s,mb5.6							
TPH				MLR		MLR		
	comp=Z,2μm,19.0s,MS5.3							
TPH	**Tonopah**	**78.08**	**42**	*e*P		**P**	**06 35 57.6**	**0.0**
	comp=Z,170nm,2.3s,mb5.6							
TPH				LR		LR		
	comp=Z,2μm,19.0s,MS5.3							
SHPR	**Sheep Range**	**78.51**	**45**	*e*P		**P**	**06 36 00.1**	**+0.2**
MOD	**Modoc**	**78.56**	**38**	*e*P		**P**	**06 35 59.8**	**-0.3**
	comp=Z,32nm,1.3s,mb5.1							
MOD				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
COR	**Corvallis**	**78.64**	**34**	PFAKE			06 36 10.0	+10
COR				LR		LR		
	comp=Z,5μm,19.0s,MS5.8							
KSRS	**Korea Array**	**78.79**	**316**	P		**P**	**06 36 02.8**	**+1.3**
	comp=Z,7.3nm,0.9s,mb4.6,baz=123,slow=6.4,SNR=9.9							
KSRS				LR		LR	07 06 46.9	
	comp=Z,972nm,20.0s,MS5.1,baz=120,slow=33							
KDAK	**Kodiak Island**	**78.97**	**11**	PFAKE			06 36 10.0	+8.1
KDAK				LR		LR		
	comp=Z,3μm,20.0s,MS5.6							
QZH	**Quanzhou**	**79.19**	**301**⇑	*i*P		**P**	**06 36 07.5**	**+3.5**
QZH				S		S	06 46 06.0	+4.4
QZH				AMB		AMB		
	comp=Z,2μm,6.2s							
QZH				LR		LR		
	comp=Z,1μm,26.5s,MS5.2							
TUC	**Tucson**	**79.27**	**50**	PFAKE			06 36 20.0	+16
TUC				LR		LR		
	comp=Z,1μm,19.0s,MS5.2							
BMN	**Battle Mountai**	**79.48**	**40**	*e*P		**P**	**06 36 04.6**	**-0.6**
BMN				pmax		pmax		
	comp=Z,28nm,1.3s,mb5.0							
BMN				MLR		MLR		
	comp=Z,2μm,19.0s,MS5.5							
BMN	**Battle Mountai**	**79.48**	**40**	*e*P		**P**	**06 36 04.6**	**-0.6**
	comp=Z,28nm,1.3s,mb5.0							
BMN				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
WVOR	**Wild Horse Val**	**79.85**	**38**	*e*P		**P**	**06 36 04.9**	**-2.3**
WVOR				pmax		pmax		
	comp=Z,54nm,1.6s,mb5.2							
WVOR				MLR		MLR		
	comp=Z,2μm,19.0s,MS5.5							
WVOR	**Wild Horse Val**	**79.85**	**38**	*e*P		**P**	**06 36 04.9**	**-2.2**
	comp=Z,54nm,1.6s,mb5.2							
WVOR				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
SSE	**Sheshan**	**80.11**	**308**	P		**P**	**06 36 10.8**	**+2.0**
SSE				AP		pP	06 36 22.8	+2.9
SSE				XP		sP	06 36 27.8	+3.8
SSE				PP		PP	06 39 11.5	0.0
SSE				S		S	06 46 12.0	+0.9
SSE				XS		sS	06 46 33.5	+4.0
SSE				SS		SS	06 51 21.8	-0.7
SSE				AMB		AMB		
	comp=Z,21nm,1.0s,mb5.0							
SSE				AMB		AMB		
	comp=Z,403nm,6.7s							
SSE				LR		LR		
	comp=N,222nm,20.8s,MS4.9							
SSE				LR		LR		
	comp=E,556nm,20.8s,MS4.9							
SSE				LR		LR		
	comp=Z,700nm,16.5s,MS5.1							
NLWA	**Neilton Lookou**	**80.24**	**32**	PFAKE			06 36 20.0	+11
NLWA				LR		LR		
	comp=Z,4μm,19.0s,MS5.7							
WUAZ	**Wupatki**	**80.53**	**47**	*e*P		**P**	**06 36 09.6**	**-1.4**
	comp=Z,63nm,1.9s,mb5.2							
WUAZ				LR		LR		
	comp=Z,860nm,20.0s,MS5.1							
PMSA	**Palmer Station**	**80.64**	**156**	PFAKE			06 36 20.0	+8.8
PMSA				LR		LR		
	comp=Z,1μm,20.0s,MS5.2							
ELK	**Elko**	**80.89**	**41**	*e*P		**P**	**06 36 12.7**	**-0.1**
ELK				*e*			06 36 19.2	
ELK				pmax		pmax		
	comp=Z,58nm,1.9s							
ELK				MLR		MLR		
	comp=Z,3μm,19.0s							
ELK	**Elko**	**80.89**	**41**	*e*P		**P**	**06 36 12.7**	**-0.1**
	comp=Z,58nm,1.9s,mb5.2							
ELK				*e*PcP		PcP	06

SRU **San Rafael** 83.00 44 eP P 06 36 24.7 +0.8
SRU pmax pmax
comp=Z,28nm,1.3s,mb5.1
SRU San Rafael 83.00 44 eP **P** **06 36 24.7 +0.8**
comp=Z,28nm,1.3s,mb5.1
HLID Hailey 83.01 39 eP **P** **06 36 23.9 +0.1**
comp=Z,26nm,1.3s,mb5.1
HLID LR LR
comp=Z,760nm,21.0s,MS5.0
PMR Palmer 83.16 12 eP **P** **06 36 23.6 -0.6**
PMR pmax pmax
comp=Z,38nm,1.6s,mb5.2
PMR Palmer 83.16 12 eP **P** **06 36 23.6 -0.6**
comp=Z,38nm,1.6s,mb5.2
JLU Jordanelle 83.20 43 eP **P** **06 36 24.9 0.0**
TXAR Lajitas Array 83.20 56 P **P** **06 36 25.1 -0.1**
comp=Z,5.2nm,1.1s,mb4.5,baz=212,slow=6.8,SNR=22
TXAR LR LR 07 09 00.1
comp=Z,1µm,18.0s,MS5.3,baz=90,slow=32
DAU Daniels Canyon 83.22 43 eP **P** **06 36 25.1 +0.1**
LPM Los Pinos Moun 83.28 50 eP **P** **06 36 25.9 +0.4**
MVCO Mesa Verde 83.39 47 eP **P** **06 36 26.6 +0.6**
comp=Z,23nm,1.3s,mb5.1
MVCO LR LR
comp=Z,1µm,19.0s,MS5.2
PV10 Paradox Valley 83.61 46 eP **P** **06 36 26.9 -0.2**
comp=Z,103nm,0.8s,mb6.0
PAYG Puerto Ayora 83.67 88 PFAKE 06 36 40.0 +12
PAYG LR LR
comp=Z,1µm,20.0s,MS5.3
ANMO Albuquerque 83.71 50 LR LR 07 08 10.4
comp=Z,848nm,18.5s,MS5.2,baz=248,slow=32
ANMO Albuquerque 83.71 50⇑ eP **P** **06 36 26.8 -0.9**
ANMO pmax pmax
comp=Z,17nm,1.7s
ANMO Albuquerque 83.71 50 PFAKE 06 36 40.0 +12
ANMO LR LR
comp=Z,987nm,19.0s,MS5.2
PV04 Paradox Valley 83.71 46 eP **P** **06 36 27.9 +0.3**
PV01 Paradox Valley 83.81 46 eP **P** **06 36 27.7 -0.4**
comp=Z,3µm,1.2s
MAW Mawson 83.83 199 P **P** **06 36 27.5 -0.3**
comp=Z,2.7nm,0.3s,mb4.8,baz=94,slow=22,SNR=6.6
MAW LR LR 07 10 54.4
comp=Z,2µm,20.6s,MS5.5,baz=112,slow=34
CN2 Changchun 83.95 321 eP **P** **06 36 30.3 +1.6**
CN2 eAP pP 06 36 40.5 +0.6
CN2 eS S 06 46 50.5 +0.5
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.4
CN2 LR LR
comp=Z,500nm,18.0s,MS4.9
GDL2 Guadalupe Moun 83.97 53 eP **P** **06 36 29.5 +0.4**
QIZ Qiongzhong 84.07 292 P **P** **06 36 30.8 +1.0**
QIZ S S 06 46 52.8 +0.6
QIZ XS sS 06 47 07.5 -3.2
QIZ AMB AMB
comp=Z,29nm,2.1s,mb5.0
QIZ AMB AMB
comp=Z,477nm,9.8s
QIZ LR LR
comp=E,638nm,18.6s
QIZ LR LR
comp=Z,1µm,19.6s,MS5.2
QIZ Qiongzhong 84.07 292 PFAKE 06 36 40.0 +10
QIZ LR LR
comp=Z,1µm,20.0s,MS5.2
NEW Newport 84.28 34 eP **P** **06 36 29.9 -0.3**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW MLR MLR
comp=Z,3µm,19.0s
NEW Newport 84.28 34 eP **P** **06 36 29.9 -0.3**
comp=Z,3.6nm,0.9s,mb4.5
NEW LR LR
comp=Z,3µm,19.0s,MS5.7
TRF Thorofare Moun 84.67 10 eP **P** **06 36 30.8 -1.1**
comp=Z,34nm,1.1s,mb5.4
SKAG Skagway 84.70 19 eP **P** **06 36 32.6 +0.5**
comp=Z,55nm,1.3s,mb5.5
RRI2 Red Ridge 84.76 41 eP **P** **06 36 32.6 -0.2**
comp=Z,38nm,1.3s,mb5.4
TNA Tin City 84.88 2 eP **P** **06 36 33.2 +0.3**
comp=Z,30nm,1.2s,mb5.3
DCID1 Drake Creek 84.98 40 eP **P** **06 36 34.0 +0.1**
comp=Z,58nm,1.4s,mb5.5
REDW Red Top Meadow 85.06 41 eP **P** **06 36 34.6 +0.3**
comp=Z,28nm,1.3s,mb5.2
DLMT Dillon 85.11 38 eP **P** **06 36 34.4 -0.1**
comp=Z,19nm,1.0s,mb5.2
MSO Missoula 85.16 37 eP **P** **06 36 37.9 +3.2**
comp=Z,33nm,2.0s,mb5.1
MSO LR LR
comp=Z,1µm,20.0s,MS5.3
MCK McKinley 85.17 11 eP **P** **06 36 33.7 -0.7**
MCK pmax pmax
comp=Z,60nm,1.1s,mb5.6
MCK McKinley 85.17 11 eP **P** **06 36 33.7 -0.7**
comp=Z,60nm,1.1s,mb5.6
SNOW Snow King Moun 85.17 41 eP **P** **06 36 35.1 +0.3**
comp=Z,20nm,1.0s,mb5.2
HYT Haines Junctio 85.20 17 eP **P** **06 36 34.9 +0.4**
BSMT Bassoo Peak 85.29 35 eP **P** **06 36 36.5 +1.1**
IMW Indian Meadow 85.29 40 eP **P** **06 36 35.5 +0.1**
comp=Z,23nm,1.2s,mb5.2
MOOW Moose Ponds 85.33 40 eP **P** **06 36 36.0 +0.4**
comp=Z,34nm,1.8s,mb5.2
LOHW Long Hollow 85.34 41 eP **P** **06 36 35.5 -0.2**
comp=Z,34nm,1.6s,mb5.2
LRM Limekiln Ridge 85.45 38 eP **P** **06 36 35.7 -0.5**
MENT Mentasta 85.48 13 eP **P** **06 36 36.0 +0.1**
QLMT Earthquake Lak 85.50 39 eP **P** **06 36 37.1 +0.6**
BW06 Boulder Array 85.55 42 eP **P** **06 36 36.0 -0.8**
comp=Z,41nm,1.8s,mb5.3
BW06 LR LR
comp=Z,1µm,19.0s,MS5.3
PDAR Pinedale Array 85.55 42 P **P** **06 36 35.9 -0.8**
comp=Z,1.9nm,0.8s,mb4.4,baz=219,slow=4.2,SNR=14
PDAR LR LR 07 11 01.7
comp=Z,1µm,18.3s,MS5.3,baz=244,slow=33
DLBC Dease Lake 85.61 21 LR LR 07 14 01.1
comp=Z,756nm,18.1s,MS5.1,baz=120,slow=35
SDCO Great Sand Dun 85.73 48 eP **P** **06 36 37.7 -0.1**
comp=Z,47nm,1.8s,mb5.4
SDCO LR LR
comp=Z,834nm,19.0s,MS5.2
BOZ Bozeman (W) 85.83 38 eP **P** **06 36 37.2 -0.9**
BOZ pmax pmax
comp=Z,58nm,1.9s,mb5.5
BOZ MLR MLR
comp=Z,1µm,21.0s,MS5.3
BOZ Bozeman (W) 85.83 38 eP **P** **06 36 37.2 -0.8**
comp=Z,58nm,1.9s,mb5.5
BOZ LR LR
comp=Z,1µm,21.0s,MS5.3
YNR Norris Junctio 85.89 40 eP **P** **06 36 37.6 -0.8**
HRY Holter Researc 86.30 37 eP **P** **06 36 40.4 0.0**
SEY Seymchan 86.33 345⇑ eP **P** **06 36 40.3 +0.2**
COLA College 86.41 11 i P **P** **06 36 40.0 -0.5**
COLA College 86.41 11 PFAKE 06 36 50.0 +10
COLA LR LR
comp=Z,2µm,21.0s,MS5.4
WALA Waterton Lakes 86.46 35 eP **P** **06 36 46.5 +5.4**
comp=Z,0.9nm,1.4s
ISCO Idaho Springs 86.63 46 eP **P** **06 36 49.8 +7.6**
ISCO pmax pmax
comp=Z,42nm,2.1s,mb5.3
ISCO MLR MLR
comp=Z,1µm,19.0s,MS5.3
ISCO Idaho Springs 86.63 46 eP **P** **06 36 49.8 +7.6**
comp=Z,42nm,2.1s,mb5.3
ISCO LR LR
comp=Z,1µm,19.0s,MS5.3
JCT Junction City 86.72 56 eP **P** **06 36 41.9 -1.0**
JCT pmax pmax
comp=Z,47nm,1.7s,mb5.4
JCT MLR MLR
comp=Z,1µm,19.0s,MS5.3
JCT Junction City 86.72 56 eP **P** **06 36 41.9 -0.9**
comp=Z,47nm,1.7s,mb5.4
JCT LR LR
comp=Z,1µm,19.0s,MS5.3
RLMT Red Lodge 86.95 40 P **P** **06 36 43.8 +0.2**
comp=Z,16nm,1.3s,mb5.1
RLMT LR LR
comp=Z,1µm,19.0s,MS5.3
KVTX Kingsville 87.05 60 PFAKE 06 37 00.0 +15
KVTX LR LR
comp=Z,932nm,19.0s,MS5.2
PLCA Paso Flores 87.09 132 P **P** **06 36 44.6 0.0**
comp=Z,7.8nm,1.1s,mb4.8,baz=253,slow=7.7,SNR=5.7
PLCA LR LR 07 10 24.8
comp=Z,938nm,18.1s,MS5.2,baz=75,slow=32
AMTX Amarillo 87.17 52 eP **P** **06 36 44.7 -0.2**
comp=Z,143nm,1.8s,mb5.9
AMTX LR LR
comp=Z,1µm,19.0s,MS5.4
DAWY Dawson 87.44 14 eP **P** **06 36 45.8 +0.3**
KULM Kulim 87.55 276 eP **P** **06 36 48.5 +1.3**
comp=Z,15nm,1.1s,mb5.1
KULM epP pP 06 36 58.2 -0.3
KULM LR LR
comp=Z,875nm,19.0s,MS5.2
EGAK Eagle 87.65 13 eP **P** **06 36 45.8 -0.7**
comp=Z,32nm,1.1s,mb5.5
EGAK LR LR
comp=Z,2µm,21.0s,MS5.5
BJT Baijiatuan 87.97 314 PFAKE 06 37 00.0 +11
BJT LR LR
comp=Z,1µm,19.0s,MS5.3
BJI Beijing 87.97 314 P **P** **06 36 49.3 +0.6**
BJI S S 06 47 21.8 -7.8
BJI SS SS 06 53 15.3 -3.1
BJI AMB AMB
comp=Z,14nm,0.6s,mb5.4
BJI AMB AMB
comp=Z,517nm,7.0s
BJI LR LR
comp=N,827nm,14.8s,MS5.4
BJI LR LR
comp=E,881nm,15.2s,MS5.4
BJI LR LR
comp=Z,712nm,25.4s
EGMT Eagleton 88.19 37 eP **P** **06 36 55.7 +6.2**
comp=Z,29nm,1.5s,mb5.3
EGMT LR LR
comp=Z,2µm,19.0s,MS5.6
SNG Songkhla 88.21 278 P **P** **06 36 53.0 +2.6**
comp=Z,100nm,0.9s,mb6.0
BILL Bilibino 88.47 353 c i P **P** **06 36 50.4 +0.1**
BILL e pP 06 37 03.9 +2.3
BILL pmax pmax
comp=Z,24nm,1.4s,mb5.2
BILL Bilibino 88.47 353 eP **P** **06 36 50.7 +0.3**
comp=Z,19nm,1.0s,mb5.3
BILL LR LR
comp=Z,1µm,20.0s,MS5.4
SYO Syowa Base 88.56 191⇑ ePcP PcP 06 36 54.6 +2.0
SYO Syowa Base 88.56 191⇑ epP pP 06 37 03.2 +0.9
VNA3 Neumayer Olymp 88.86 175 eP **P** **06 36 52.1 -0.3**
VNA3 e 06 36 54.1
VNA3 e 06 36 58.3
SNAA Sanae 88.89 177 eP **P** **06 36 51.7 -0.8**
SNAA e 06 36 53.5
SNAA e 06 36 57.9
SNAA Sanae 88.89 177 eP **P** **06 36 52.1 -0.4**
SNAA e*PP pP 06 36 58.5 -5.3
SNAA pmax pmax
comp=Z,3.0nm,0.8s
SNAA Sanae 88.89 177 eP **P** **06 36 52.1 -0.4**
comp=Z,3.2nm,0.8s,mb4.7
SNAA epP pP 06 36 58.5 -5.2
EDM Edmonton 89.14 32 eP **P** **06 36 53.6 -0.2**
WMOK Wichita Mounta 89.27 53 eP **P** **06 36 54.7 -0.2**
WMOK pmax pmax
comp=Z,30nm,1.6s,mb5.4
WMOK MLR MLR
comp=Z,846nm,19.0s,MS5.2
WMOK Wichita Mounta 89.27 53 eP **P** **06 36 54.7 -0.2**
comp=Z,30nm,1.6s,mb5.4
WMOK LR LR
comp=Z,846nm,19.0s,MS5.2
VNA2 Neumayer--Watz 89.35 176 eP **P** **06 36 55.0 +0.3**
VNA2 e 06 36 57.5
VNA2 e 06 37 01.5
OGNE Ogallala 89.59 46 PFAKE 06 37 10.0 +14
OGNE LR LR
comp=Z,1µm,19.0s,MS5.4
GYA Guiyang 89.60 298⇓ i P **P** **06 36 58.3 +1.7**
GYA AP pP 06 37 09.0 +1.1
GYA XP sP 06 37 14.0 +2.0
GYA PP PP 06 40 30.3 +1.4
GYA SKS S 06 47 22.5
GYA S S 06 47 43.0 -2.5
GYA XS sS 06 48 02.0 -2.2
GYA SS SS 06 53 43.0 +0.4
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,100nm,6.9s
GYA LR LR
comp=N,450nm,17.3s,MS5.0
GYA LR LR
comp=E,330nm,17.0s,MS5.0
GYA LR LR
comp=Z,640nm,17.5s,MS5.1
HKT Hockley 89.66 58 eP **P** **06 36 56.9 +0.1**
HKT pmax pmax
comp=Z,43nm,1.6s,mb5.5
HKT MLR MLR
comp=Z,953nm,20.0s,MS5.2
HKT Hockley 89.66 58 eP **P** **06 36 56.9 0.0**
comp=Z,43nm,1.6s,mb5.5
HKT LR LR
comp=Z,953nm,20.0s,MS5.2
RSSD Black Hills 89.71 43 eP **P** **06 36 56.3 -0.4**
RSSD e*PP pP 06 37 03.7 -4.3
RSSD pmax pmax
comp=Z,11nm,1.1s,mb5.1
RSSD MLR MLR
comp=Z,3µm,19.0s,MS5.8
RSSD Black Hills 89.71 43 eP **P** **06 36 56.3 -0.4**
comp=Z,11nm,1.1s,mb5.1
RSSD epP pP 06 37 03.7 -4.3
RSSD LR LR
comp=Z,3µm,19.0s,MS5.8
EFI East Falkland 89.77 146 PFAKE 06 37 10.0 +13
EFI LR LR
comp=Z,689nm,19.0s,MS5.1
HIA Hailar 90.19 323 PFAKE 06 37 10.0 +11
HIA LR LR
comp=Z,2µm,20.0s,MS5.6
CBKS Cedar Bluff 90.26 49 PFAKE 06 37 10.0 +11
CBKS LR LR
comp=Z,1µm,19.0s,MS5.3
XAN Xi'an 90.68 306 P **P** **06 37 02.5 +1.0**
XAN AP pP 06 37 13.5 +0.7
XAN AMB AMB
comp=Z,9.0nm,1.6s,mb4.8
NATX Nacogdoches 91.28 57 PFAKE 06 37 20.0 +16
NATX LR LR
comp=Z,1µm,19.0s,MS5.4
TGUH Tegucigalpa,Un 91.42 76 PFAKE 06 37 20.0 +15
TGUH LR LR
comp=Z,1µm,22.0s,MS5.2
HHC Hu-ho-hao-te 91.49 313 eP **P** **06 37 06.5 +1.4**
HHC AP pP 06 37 17.0 +0.6
HHC XP sP 06 37 20.8 +0.4
HHC PP PP 06 40 46.5 +2.8
HHC SKS 06 47 34.0
HHC eS S 06 48 00.5 -1.8
HHC XS sS 06 48 17.8 -3.2
HHC AMB AMB
comp=Z,17nm,1.1s,mb5.3
HHC AMB AMB
comp=Z,444nm,5.2s
HHC LR LR
comp=N,467nm,16.7s,MS5.1
HHC LR LR
comp=E,347nm,16.6s,MS5.1
HHC LR LR
comp=Z,456nm,17.8s,MS5.0
NST Nakhon Sawan 91.51 286 P pP 06 37 19.4 +2.4
LCO Las Campanas 91.58 121 PFAKE 06 37 20.0 +14
LCO LR LR
comp=Z,2µm,21.0s,MS5.5
CLNS Chul'man 91.59 331 eP **P** **06 37 03.0 -2.1**
CLNS pmax pmax
comp=Z,20nm,1.2s,mb5.3
CLNS pmax pmax
comp=N,16nm,1.7s
CLNS pmax pmax
comp=E,14nm,1.1s
NANT Nan 92.05 289 P **P** **06 37 07.0 -1.2**
KMI Kunming 92.42 296 P **P** **06 37 10.5 +0.7**
KMI XP sP 06 37 23.5 -1.6
KMI PP PP 06 40 54.5 +3.2
KMI SKS 06 47 40.5
KMI S S 06 48 10.8 -0.5
KMI XS sS 06 48 26.0 -4.1
KMI AMB AMB
comp=Z,23nm,1.6s,mb5.3
KMI AMB AMB
comp=Z,383nm,6.4s
KMI LR LR
comp=N,654nm,21.0s,MS5.3
KMI LR LR
comp=E,835nm,21.0s,MS5.3
KMI LR LR
comp=Z,1µm,21.0s,MS5.4
CFAA Coronel Fontan 92.49 125 P **P** **06 37 09.3 -0.8**
comp=Z,0.7nm,1.2s,mb3.9,baz=235,slow=1.6,SNR=6.1
NNA Nana 92.50 104 PFAKE 06 37 20.0 +10
NNA LR LR
comp=Z,849nm,20.0s,MS5.2
TEIG Tepich 92.58 70 PFAKE 06 37 20.0 +9.4
TEIG LR LR
comp=Z,924nm,20.0s,MS5.2
KSU1 Kansas State U 92.61 49 eP **P** **06 37 10.4 +0.1**
comp=Z,112nm,2.3s,mb5.9
KSU1 LR LR
comp=Z,1µm,20.0s,MS5.3
YAK Yakutsk 92.67 337 i P **P** **06 37 09.6 -0.5**
YAK pmax pmax
comp=Z,11nm,0.8s,mb5.3
YAK Yakutsk 92.67 337 PFAKE 06 37 20.0 +10
YAK LR LR
comp=Z,814nm,20.0s,MS5.2
MIAR Mount Ida 93.15 55 PFAKE 06 37 20.0 +7.0
MIAR LR LR
comp=Z,1µm,22.0s,MS5.2
CM31 Chiang Mai Arr 93.51 288 PFAKE 06 37 30.0 +15
CM31 LR LR
comp=Z,667nm,19.0s,MS5.1
CMAR Chiang Mai Arr 93.51 288 P **P** **06 37 15.5 +0.6**
comp=Z,2.7nm,0.9s,mb4.7,baz=128,slow=2.8,SNR=15
CMAR LR LR 07 16 12.7
comp=Z,719nm,21.0s,MS5.1,baz=276,slow=34
CD2 Chengdu 93.58 301 P **P** **06 37 16.5 +1.5**
CD2 AP pP 06 37 26.5 +0.2
CD2 XP sP 06 37 30.5 +0.1
CD2 PP PP 06 41 03.8 +3.5
CD2 SKS 06 47 46.3
CD2 S S 06 48 19.5 -1.8
CD2 XS sS 06 48 37.0 -3.1
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.8
CD2 AMB AMB
comp=Z,390nm,10.7s
CD2 LR LR
comp=N,990nm,17.3s
CD2 LR LR
comp=Z,860nm,16.6s,MS5.3
CHG Chiang Mai 93.62 289 ⇓P pP 06 37 28.3 +1.6
comp=Z,19nm,1.2s
CHTO Chiang Mai 93.62 289 eP **P** **06 37 17.3 +1.8**
CHTO e*PP pP 06 37 28.6 +1.9
CHTO pmax pmax
comp=Z,18nm,1.1s,mb5.4
CHTO MLR MLR
comp=Z,972nm,20.0s,MS5.3
CHTO Chiang Mai 93.62 289 eP **P** **06 37 17.3 +1.8**
comp=Z,18nm,1.1s,mb5.4
CHTO epP pP 06 37 28.6 +1.8
CHTO LR LR
comp=Z,972nm,20.0s,MS5.3
YKA Yellowknife Ar 93.97 24 P **P** **06 37 15.3 -0.6**
comp=Z,0.9nm,0.6s,mb4.3,baz=237,slow=4.2,SNR=19
YKA LR LR 07 11 47.4
comp=Z,70nm,19.8s,MS4.1,baz=60,slow=30
TRQA Tornquist 94.22 133 PFAKE 06 37 30.0 +12
TRQA LR LR
comp=Z,698nm,22.0s,MS5.1
ECSD EROS,Sioux Fal 94.40 45 PFAKE 06 37 30.0 +12
ECSD LR LR
comp=Z,976nm,19.0s,MS5.3
VBMS Vicksburg 94.73 58 PFAKE 06 37 30.0 +10
VBMS LR LR
comp=Z,1µm,19.0s,MS5.3
OTAV Otavalo 95.14 92 PFAKE 06 37 30.0 +7.4
OTAV LR LR
comp=Z,1µm,22.0s,MS5.3
LZH Lanzhou 95.30 306 eP **P** **06 37 22.0 -0.8**
LZH AP pP 06 37 32.8 -1.3
LZH XP sP 06 37 36.5 -1.6
LZH ePP PP 06 41 16.3 +2.7
LZH SKS 06 47 54.3
LZH eS S 06 48 33.5 -2.6
LZH XS sS 06 48 51.5 -3.5
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,117nm,8.6s
LZH LR LR
comp=N,265nm,17.9s
LZH LR LR
comp=Z,413nm,19.0s,MS4.9
LVC Limon Verde 95.60 116 PFAKE 06 37 40.0 +15
LVC LR LR
comp=Z,1µm,20.0s,MS5.4
FFC Flin Flon 95.69 34 PFAKE 06 37 40.0 +16
FFC LR LR
comp=Z,2µm,20.0s,MS5.6
SCIA State Center 96.05 48 PFAKE 06 37 40.0 +14
SCIA LR LR
comp=Z,1µm,20.0s,MS5.4
OXF Oxford 96.37 56 PFAKE 06 37 40.0 +12
OXF LR LR
comp=Z,1µm,20.0s,MS5.4
AGMN Agassiz Refuge 96.61 41 eP **P** **06 37 27.3 -1.1**
comp=Z,14nm,1.1s,mb5.3
AGMN LR LR
comp=Z,1µm,20.0s,MS5.3
BCIP Isla Barro Col 96.72 83 PFAKE 06 37 40.0 +10
BCIP LR LR
comp=Z,693nm,19.0s,MS5.2
BRAL Brewton 97.12 60 PFAKE 06 37 40.0 +8.8
BRAL LR LR
comp=Z,1µm,19.0s,MS5.4
ULN Ulaanbaatar 97.19 318 i P **P** **06 37 30.4 -0.7**
ULN Ulaanbaatar 97.19 318 PFAKE 06 37 40.0 +8.9
ULN LR LR
comp=Z,835nm,21.0s,MS5.2
ULM Lac du Bonnet 97.32 39 P **P** **06 37 31.9 +0.3**
comp=Z,1.5nm,0.8s,mb4.5,baz=22,slow=11,SNR=2.1
ULM LR LR 07 18 47.2
comp=Z,2µm,18.1s,MS5.6,baz=251,slow=34
SONM Songino Array 97.59 318 P **P** **06 37 32.6 -0.3**
comp=Z,0.6nm,1.0s,mb4.1,baz=141,slow=7.3,SNR=2.6
SONM LR LR 07 17 55.2
comp=Z,934nm,21.8s,MS5.2,baz=15,slow=33
LRAL Lakeview Retre 97.80 58 PFAKE 06 37 50.0 +16
LRAL LR LR
comp=Z,1µm,19.0s,MS5.4
WVT Waverly 98.11 55 PFAKE 06 37 50.0 +15
WVT LR LR
comp=Z,2µm,22.0s,MS5.4
JFWS Jewell Farm 98.46 48 PFAKE 06 37 50.0 +13
JFWS LR LR
comp=Z,961nm,19.0s,MS5.3
TIXI Tiksi 98.79 344⇑ eP **P** **06 37 37.1 -0.6**
TIXI pmax pmax
comp=Z,4.0nm,1.2s,mb4.8
TIXI Tiksi 98.79 344 PFAKE 06 37 50.0 +12
TIXI LR LR
comp=Z,1µm,20.0s,MS5.4
EYMN Ely 99.23 42 PFAKE 06 37 50.0 +10
EYMN LR LR
comp=Z,2µm,19.0s,MS5.5
WCI Wyandotte Cave 99.90 53 PFAKE 06 37 50.0 +6.7
WCI LR LR
comp=Z,2µm,19.0s,MS5.5
TLY Talaya 100.54 321 PFAKE 06 38 00.0 +14
TLY LR LR
comp=Z,2µm,20.0s,MS5.6
GOGA Godfrey 100.74 58 PFAKE 06 38 00.0 +13
GOGA LR LR
comp=Z,1µm,19.0s,MS5.5

DWPF Disney 100.95 64 PFAKE 06 38 00.0 +12
DWPF LR LR
comp=Z,643nm,21.0s,MS5.1
GLMI Grayling 102.91 47 PFAKE 06 38 10.0 +13
GLMI LR LR
comp=Z,1μm,20.0s,MS5.4
ACSO Alum Creek Sta 102.92 52 PFAKE 06 38 10.0 +13
ACSO LR LR
comp=Z,941nm,20.0s,MS5.3
AAM Ann Arbor 102.95 50 PFAKE 06 38 10.0 +13
AAM LR LR
comp=Z,2μm,19.0s,MS5.5
NHSC New Hope 103.32 59 PFAKE 06 38 10.0 +12
NHSC LR LR
comp=Z,2μm,19.0s,MS5.6
CPUP Villa Florida 103.38 124 PFAKE 06 38 10.0 +11
CPUP LR LR
comp=Z,125nm,20.0s,MS4.4
LSA Lhasa 103.61 297 PFAKE 06 38 10.0 +10
LSA LR LR
comp=Z,885nm,21.0s,MS5.3
BLA Blacksburg 104.13 55 PFAKE 06 38 10.0 +7.9
BLA LR LR
comp=Z,1μm,20.0s,MS5.3
GTBY Guantanamo Bay 104.28 74 PFAKE 06 38 10.0 +7.3
GTBY LR LR
comp=Z,626nm,21.0s,MS5.1
SDV Santo Domingo 105.28 86 PFAKE 06 42 30.0 +7.9
SDV LR LR
comp=Z,358nm,22.0s,MS4.9
ERPA Erie 105.56 50 PFAKE 06 42 30.0 +8.2
ERPA LR LR
comp=Z,1μm,20.0s,MS5.4
CNNC Cliffs of the 105.67 58 PFAKE 06 42 30.0 +7.8
CNNC LR LR
comp=Z,952nm,19.0s,MS5.4
CBN Corbin 106.70 55 PFAKE 06 42 40.0 +16
CBN LR LR
comp=Z,1μm,22.0s,MS5.4
SSPA Standing Stone 106.80 52 PFAKE 06 42 40.0 +16
SSPA LR LR
comp=Z,1μm,20.0s,MS5.5
SDDR Presa de Saban 107.50 76 PFAKE 06 42 40.0 +14
SDDR LR LR
comp=Z,2μm,22.0s,MS5.5
BINY Binghamton 108.49 51 PFAKE 06 42 40.0 +13
BINY LR LR
comp=Z,2μm,20.0s,MS5.6
WMQ Urumqi 109.23 311 *e*PDIF Pdif 06 38 25.5 +0.7
WMQ PP PP 06 43 02.0 +3.9
WMQ LR LR
comp=N,383nm,20.0s,MS5.1
WMQ LR LR
comp=E,460nm,23.0s,MS5.1
WMQ LR LR
comp=Z,630nm,20.0s,MS5.2
LONY Lake Ozonia 109.88 49 PFAKE 06 42 40.0 +10
LONY LR LR
comp=Z,783nm,19.0s,MS5.3
NCB Newcomb 110.04 49 PFAKE 06 42 40.0 +10
NCB LR LR
comp=Z,1μm,19.0s,MS5.5
LBNH Lisbon 111.72 49 PFAKE 06 42 40.0 +6.7
LBNH LR LR
comp=Z,2μm,19.0s,MS5.7
SJG San Juan 112.00 78 PFAKE 06 42 50.0 +15
SJG LR LR
comp=Z,800nm,19.0s,MS5.3
ZALV Zalesovo Beam 112.16 321 PKiKP PKiKP 06 42 32.9 -0.9
comp=Z,0.8nm,0.5s,baz=217,slow=1.5,SNR=5.4
MK31 Makanchi Array 113.35 313 *e*PKIKP PKiKP 06 42 35.8 -0.5
MKAR Makanchi Array 113.35 313 PKiKP PKiKP 06 42 35.9 -0.4
comp=Z,1.2nm,0.7s,baz=90,slow=1.2,SNR=11
PKME Peaks-Kenny Pk 113.68 48 PFAKE 06 42 50.0 +13
PKME LR LR
comp=Z,2μm,19.0s,MS5.6
SCHQ Schefferville 115.44 38 PFAKE 06 42 50.0 +10
SCHQ LR LR
comp=Z,2μm,19.0s,MS5.7
KURK Kurchatov 115.90 318 PKP PKPdf 06 42 39.8 -1.2
comp=Z,1.9nm,0.8s,baz=91,slow=1.7,SNR=12
KURK Kurchatov 115.90 318 PKP PKPdf 06 42 39.8 -1.2
KURK LR LR
comp=Z,1μm,20.0s,MS5.5
BDFB Brasilia 116.30 119 PFAKE 06 42 50.0 +7.1
BDFB LR LR
comp=Z,740nm,20.0s,MS5.3
TKM2 Tokmak 2 117.94 309 PFAKE 06 43 00.0 +15
TKM2 LR LR
comp=Z,552nm,19.0s,MS5.2
AAK Ala-Archa 118.75 309 ⇑ *i*PKIKP PKPdf 06 42 46.6 -0.2
AAK pmax pmax
comp=Z,1.0nm,1.3s
AAK Ala-Archa 118.75 309 PFAKE 06 43 00.0 +13
AAK LR LR
comp=Z,608nm,22.0s,MS5.2
EKS2 Erkin-Say 119.28 309 PFAKE 06 43 00.0 +12
EKS2 LR LR
comp=Z,516nm,20.0s,MS5.2
AML Almayashu 119.33 308 *e*PKPdf PKPdf 06 42 48.7 +0.7
AML LR LR
comp=Z,601nm,21.0s,MS5.2
KBS Kingsbay 120.43 359 PFAKE 06 43 00.0 +11
KBS LR LR
comp=Z,529nm,20.0s,MS5.2
BVAR Borovoye Array 120.80 321 PKP PKPdf 06 42 50.1 -0.3
comp=Z,3.6nm,0.8s,baz=102,slow=2.1,SNR=17
BRVK Borovoye 120.86 321 PFAKE 06 43 00.0 +9.5
BRVK LR LR
comp=Z,1μm,20.0s,MS5.5
ABPO Ambohimpanom 124.47 229 PFAKE 06 43 10.0 +11
ABPO LR LR
comp=Z,1μm,19.0s,MS5.5
MSEY Mahe Island 125.91 249 PFAKE 06 43 10.0 +8.5
MSEY LR LR
comp=Z,753nm,20.0s,MS5.4
ARU Arti 126.55 327 *i* PKIKP PKPdf 06 43 01.1 -0.2
ARU 06 44 54.6
ARU 06 50 03.2
ARU SS SS 07 02 01.3 +1.4
ARU MLR MLR
comp=Z,1μm,20.0s,MS5.6
ARU Arti 126.55 327 *e*PKPdf PKPdf 06 43 01.6 +0.3
ARU LR LR
comp=Z,1μm,20.0s,MS5.7
SUR Sutherland 126.58 195 PFAKE 06 43 10.0 +7.7
SUR LR LR
comp=Z,2μm,19.0s,MS5.7
KEV Kevo 128.14 351 PFAKE 06 43 20.0 +16
KEV LR LR
comp=Z,860nm,19.0s,MS5.5
LVZ Lovozero 128.36 347 PFAKE 06 43 20.0 +16
LVZ LR LR
comp=Z,866nm,20.0s,MS5.4
ARCES ARCESS Array B 128.56 351 PKP PKPdf 06 43 04.9 +0.1
comp=Z,3.5nm,0.7s,baz=4.9,slow=2.4,SNR=15
BOSA Boshof 128.77 202 PKP PKPdf 06 43 07.8 +1.2
comp=Z,2.4nm,0.9s,baz=184,slow=21,SNR=3.7
BOSA Boshof 128.77 202 PKP PKPdf 06 43 07.8 +1.2
BOSA LR LR
comp=Z,1μm,19.0s,MS5.5
AKTK Aktyubinsk 128.87 320 PKP PKPdf 06 43 06.6 +0.7
AKTO Aktyubinsk 128.87 320 PKP PKPdf 06 43 06.6 +0.7
comp=Z,0.8nm,0.5s,baz=20,slow=4.8,SNR=4.7
RCBR Riachuelo 131.55 117 PFAKE 06 43 20.0 +7.8
RCBR LR LR
comp=Z,789nm,19.0s,MS5.4
LBTB Lobatse 131.92 204 PFAKE 06 43 20.0 +7.4
LBTB LR LR
comp=Z,1μm,19.0s,MS5.6
JOF Joensuu 133.28 345 *ep* PKPdf 06 43 14.9 +1.0
comp=Z,7.1nm,0.9s
JOF Joensuu 133.28 345 *e*PKIKP PKPdf 06 43 14.9 +1.0
JOF pmax pmax
comp=Z,7.0nm,0.9s
KAF Kangasniemi 135.15 347 *ep* PKPdf 06 43 17.6 +0.1
OBN Obninsk 137.63 334 ‖ *i*PKIKP PKPdf 06 43 20.8 -1.5
OBN *e* 06 46 07.6
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 137.63 334 PFAKE 06 43 30.0 +7.7
OBN LR LR
comp=Z,976nm,20.0s,MS5.5
MAK Makhachkala 138.17 313 *e*PKIKP PKPdf 06 43 22.7 -1.0
MAK *e* 06 46 12.6

NOA NORSAR Array B 138.32 356 PKP PKPdf 06 43 21.3 -2.1
comp=Z,0.4nm,0.6s,baz=14,slow=4.0,SNR=2.5
LSZ Lusaka 139.25 214 PKP PKPdf 06 43 28.0 +1.6
comp=Z,2.2nm,0.8s,baz=251,slow=6.7,SNR=3.7
LSZ Lusaka 139.25 214 PKP PKPdf 06 43 28.0 +1.5
LSZ LR LR
comp=Z,1μm,19.0s,MS5.6
TSUM Tsumeb 139.98 197 PKP PKPdf 06 43 28.8 +1.1
comp=Z,0.7nm,0.6s,baz=239,slow=23,SNR=6.1
TSUM Tsumeb 139.98 197 PKP PKPdf 06 43 28.8 +1.1
TSUM LR LR
comp=Z,1μm,21.0s,MS5.7
KIV Kislovodsk 140.98 317 PFAKE 06 43 40.0 +11
KIV LR LR
comp=Z,722nm,19.0s,MS5.5
GNI Garni 141.11 310 PFAKE 06 43 40.0 +11
GNI LR LR
comp=Z,506nm,21.0s,MS5.2
SHEL Horse Pasture 142.89 161 PFAKE
SHEL LR LR 06 43 40.0 +7.0
comp=Z,814nm,19.0s,MS5.5
SUW Suwalki 143.13 343 *e*PKIKP PKPdf 06 43 28.9 -3.4
BHD Baghdad 143.33 300 *e*PKP PKPdf 06 43 32.5 -0.8
EKA Eskdalemuir Ar 143.50 9 PKP PKPdf 06 43 30.2 -2.7
comp=Z,2.1nm,0.9s,baz=316,slow=2.3,SNR=3.8
ANN Anapa 143.80 321 *e*PKIKP PKPdf 06 43 30.5 -3.2
ANN pmax pmax
comp=Z,49nm,1.3s
ANN MLR MLR
comp=N,739nm,23.0s
ANN MLR MLR
comp=Z,962nm,23.0s,MS5.5
AKASG Malin Array Be 143.88 335 PKP PKPdf 06 43 31.4 -2.3
comp=Z,1.7nm,0.4s,baz=34,slow=3.6,SNR=14
AKASG Malin Array Be 143.88 335 PKP PKPdf 06 43 31.4 -2.3
KIEV Kiev 143.90 335 PFAKE 06 43 50.0 +16
KIEV LR LR
comp=Z,802nm,20.0s,MS5.5
BNGL BINGOL 144.13 310 *i* P PKPdf 06 43 33.8 -0.7
EZC Erzincan 144.75 312 *e*P PKPdf 06 43 36.8 +1.2
MARD Mardin 145.01 308 *i* P PKPdf 06 43 34.4 -1.1
PTK Pertek 145.41 311 *e*P PKPdf 06 43 38.0 +1.3
BSEG Bad Segeberg 145.45 356 *e*PKPbc PKPbc 06 43 36.9 +0.6
SVRC Sivrice-ELAZIĞ 145.68 310 *e*P PKPbc 06 43 39.6 +2.0
ELZG Elazig 145.86 311 *i* P PKPbc 06 43 40.3 +2.1
KEMA Kemaliye 145.88 312 *i* P PKPbc 06 43 40.5 +2.3
MYA Malataya 146.33 311 *e*P PKPbc 06 43 39.6 0.0
MALT Malatya 146.34 311 *e*P PKPbc 06 43 40.3 +0.8
MALT Malatya 146.34 311 ‖ *i*P PKPbc 06 43 41.4 +1.8
MALT Malatya 146.34 311 *e*PKPbc PKPbc 06 43 41.1 +1.6
MALT LR LR
comp=Z,626nm,20.0s,MS5.4
URFA Urfa 146.41 309 *e*P PKPbc 06 43 41.0 +1.2
LVV L'vov 146.53 339 *e*PKP2 PKPdf 06 43 38.3 0.0
SVSK Karacayir 146.61 314 *e*P PKPdf 06 43 37.5 -1.3
KVT Kavak 146.66 317 *e*P PKPbc 06 43 42.4 +2.0
AKCD Akcadag 146.71 311 *i* P PKPbc 06 43 42.0 +1.4
ATAB Bozova 146.78 309 *i* P PKPbc 06 43 42.2 +1.4
DIKM Dikmen 146.86 318 *e*P PKPbc 06 43 43.1 +2.1
KIS Kishinev 146.89 331 *e*PKP2 PKPbc 06 43 40.0 -0.9
KIS pmax pmax
comp=Z,440nm,3.0s
KIS pmax pmax
comp=Z,1μm,10.0s
KIS pmax pmax
comp=Z,2μm,14.0s
KIS MLR MLR
comp=N,6μm,13.0s
KIS MLR MLR
comp=Z,7μm,13.0s,MS6.6
KIS MLR MLR
comp=Z,7μm,14.0s
KIS Kishinev 146.89 331 *e*P PKPdf 06 43 40.0 +1.0
comp=Z,400nm,3.0s
KIS *eS* 06 45 27.0
KIS LRM 06 50 18.0
comp=Z,7μm,14.0s
NRDL Niedersach Rie 146.90 356 *e*PKPbc PKPbc 06 43 41.1 +0.4
KWP Kalwaria 147.13 340 *e*PKP2 PKPbc 06 43 42.1 +0.7
KWP MLR MLR
comp=Z,337nm,19.0s,MS5.2
IBBN Ibbenburen 147.20 358 *e*PKPbc PKPbc 06 43 42.2 +0.6
GZT Gaziantep 147.36 310 *i* P PKPbc 06 43 43.7 +1.2
OJC Ojcow 147.46 344 *e*PKPab PKPbc 06 43 43.0 +0.7
CLZ Clausthal 147.53 355 *e*PKPbc PKPbc 06 43 43.2 +0.7
WTSB Winterswijk 147.56 359 *e*PKP PKPbc 06 43 42.6 0.0
PINB Pinarbasi 147.60 313 *i* P PKPbc 06 43 44.5 +1.4
KSP Ksiaz 147.68 348 *e*PKP PKPbc 06 43 42.4 -0.6
KSP Ksiaz 147.68 348 *e*PKP PKPbc 06 43 43.5 +0.6
KSP *ep*PKP pPKPdf 06 43 53.9 +2.1
CTKT Corum 147.71 317 *i* P PKPbc 06 43 45.0 +1.6
STHS Stebnicka Huta 147.77 341 *e*PKP PKPbc 06 43 44.3 +1.1
KMRS Kahramanmaras 147.77 310 *e*P PKPbc 06 43 44.5 +0.8
CLL Collm 147.78 352 ⇑ *i*PKP2 PKPbc 06 43 43.8 +0.6
CLL pmax pmax
comp=Z,57nm,1.4s
CLL MLR MLR
comp=Z,1μm,18.8s,MS5.6
CLL Collm 147.78 352 *e*PKPbc PKPbc 06 43 43.7 +0.5
CLL Collm 147.78 352 ⇑ *i*PKPbc PKPbc 06 43 43.8 +0.6
comp=Z,57nm,1.4s
CLL *ep*PKPab pPKPab 06 43 55.0 -1.9
CLL *ex* x 06 44 17.0
CLL LmV 07 57 00.0
comp=Z,1μm,18.8s
BNN Bunyan 147.91 313 *e*P PKPbc 06 43 44.5 +0.5
BUR08 Bucovina Ar. S 147.92 335 *e*PKPbc PKPbc 06 43 45.5 +1.8
BURAR Bucovina Array 147.93 335 ‖ *i*P PKPbc 06 43 45.2 +1.5
BURAR Bucovina Array 147.93 335 P PKPbc 06 43 45.4 +1.6
NIE Niedzica 148.04 342 *e*PKPab PKPbc 06 43 45.2 +1.3
CORM Corum 148.05 316 *e*P PKPdf 06 43 41.7 +0.6
UPC Upice 148.06 348 *e*PKP PKPbc 06 43 44.7 +0.7
BRG Berggiesshubel 148.06 351 *e*PKPbc PKPbc 06 43 44.5 +0.5
BRG Berggiesshubel 148.06 351 *i* PKP PKPbc 06 43 44.7 +0.7
comp=Z,48nm,1.5s
BRG *i* 06 43 47.6
comp=Z,22nm,1.0s
BRG *e* 06 43 55.8
comp=Z,56nm,1.3s
BALT Daday 148.09 320 *i* P PKPbc 06 43 46.0 +1.6
UZH Uzhgorod 148.13 340 ⇑ *e*PKP2 PKPbc 06 43 43.6 -0.6
ANDN Andirin 148.14 311 *i* P PKPbc 06 43 45.9 +1.3
DPC Dobruska-Polom 148.15 348 *e*PKP PKPbc 06 43 45.3 +1.1
DPC *ep*PKP pPKPdf 06 43 53.5 +0.9
DPC AMS AMS 07 50 20.0
comp=Z,800nm,22.3s
CRVS Cervenica-Dubn 148.16 341 *e*PKP PKPbc 06 43 45.1 +0.8
OKC Ostrava-Krasne 148.23 345 *e*PKP PKPbc 06 43 45.2 +0.8
OKC *ep*PKP pPKPdf 06 43 56.5 +3.8
OKC AMS AMS 07 49 00.0
comp=Z,900nm,21.5s
OKC Ostrava-Krasne 148.23 345 *e*PKP PKPbc 06 43 45.2 +0.8
OKC *e* 06 43 56.5
PVCC Panska Ves 148.30 350 *e*PKP PKPbc 06 43 45.6 +1.0
PVCC *ep*PKP pPKPdf 06 43 51.6 -1.2
PVCC AMS AMS 07 55 40.0
comp=Z,900nm,20.7s
CANT Cankiri 148.47 318 *e*P PKPdf 06 43 43.8 +2.0
CDAG Cicekdag 148.51 316 *i* P PKPbc 06 43 44.5 -1.0
MOX Moxa 148.59 353 *e*PKP PKPbc 06 43 46.5 +1.1
MOX
comp=Z,52nm,1.7s
comp=Z,600nm,20.0s
MOX Moxa 148.59 353 *e*PKPbc PKPbc 06 43 45.7 +0.3
AVNT Avonos 148.62 314 *i* P PKPdf 06 43 42.5 +0.5
UCC Uccle 148.70 2 PKPbc PKPbc 06 43 43.2 -2.4
TANN Tannenbergstha 148.72 352 *e*PKPbc PKPbc 06 43 46.5 +0.8
BEBN Eben Emael 148.74 1 PKPbc PKPbc 06 43 46.0 +0.3
HGN Heimansgroeve 148.77 0 *e*PKP PKPbc 06 43 47.7 +1.9
PRU Pruhonice 148.83 350 *e*PKP PKPbc 06 43 46.4 +0.4
PRU AMS AMS 07 49 50.0
comp=Z,1μm,22.5s
NKC Novy Kostel 148.90 352 *e*PKP PKPbc 06 43 47.1 +1.0
NKC AMS AMS 07 53 00.0
comp=Z,1μm,19.6s
MEM Membach 148.93 0 PKPbc PKPbc 06 43 46.5 +0.3
BR131 Keskin Array S 148.94 316 *e*PKPbc PKPbc 06 43 47.3 +0.7
BR131 LR LR
comp=Z,375nm,19.0s,MS5.2
BRTR Keskin Array B 148.94 316 PKP PKPdf 06 43 42.3 -0.2
comp=Z,1.6nm,0.9s,baz=343,slow=1.3,SNR=4.5
BRTR PKPbc PKPbc 06 43 47.0 +0.4
comp=Z,8.6nm,1.0s,baz=139,slow=3.6,SNR=22
TIRR Tirgusor 148.95 328 *e*PKP2 PKPbc 06 43 47.2 +0.7

HARR Harsova 149.02 329 ‖ *i*P PKPbc 06 43 47.9 +1.3
VRAC Vranov 149.08 347 PKPbc PKPbc 06 43 47.2 +0.6
comp=Z,2.4nm,0.4s,baz=180,slow=20,SNR=11
VRAC Vranov 149.08 347 ‖ *i*P PKPbc 06 43 47.8 +1.2
BCLA Clavier 149.11 1 PKPbc PKPbc 06 43 45.5 -1.2
TNS Taunus Mts 149.26 357 *e*PKPbc PKPbc 06 43 47.0 -0.1
VYHS Vyhne 149.29 343 *e*PKP PKPbc 06 43 48.1 +0.9
TREC Trest 149.32 348 *e*PKP PKPbc 06 43 47.8 +0.6
TREC *ep*PKP pPKPdf 06 43 53.9 -0.6
TREC AMS AMS 07 54 20.0
comp=Z,1μm,21.4s
KOLL Kolacno 149.33 344 *e*PKP PKPbc 06 43 48.5 +1.2
MLR Muntele Rosu 149.33 332 PKP PKPdf 06 43 42.6 -0.4
comp=Z,4.3nm,1.1s,baz=110,slow=6.2,SNR=3.3
MLR PKPbc PKPbc 06 43 48.2 +0.8
comp=Z,14nm,1.0s,baz=29,slow=4.0,SNR=12
MLR Muntele Rosu 149.33 332 ‖ *i*P PKPbc 06 43 48.5 +1.1
ROTZ Rotzenmuhle 149.39 352 *e*PKPbc PKPbc 06 43 48.3 +0.9
LOD Lodumlu 149.41 317 *e*P PKPbc 06 43 48.0 +0.2
DOU Dourbes 149.41 2 PKPbc PKPbc 06 43 47.1 -0.3
GIVF Givet 149.42 2 *e*PKP1 PKPbc 06 43 47.8 +0.4
comp=Z,188nm,1.6s
BAIF Baives 149.44 3 *e*PKP1 PKPbc 06 43 48.0 +0.5
comp=Z,227nm,1.7s
PSZ Piszkesteto 149.51 342 ‖ *ep*PKP pPKPdf 06 43 48.5 -6.4
PSZ Piszkesteto 149.51 342 ‖ *i*P PKPbc 06 43 48.5 +0.7
PSZ Piszkesteto 149.51 342 *e*PKPbc PKPbc 06 43 48.3 +0.5
PSZ LR LR
comp=Z,694nm,20.0s,MS5.5
DRGR 149.57 337 ‖ *i*P PKPbc 06 43 48.7 +0.8
GRF Grafenberg Arr 149.58 354 *e*PKPbc PKPbc 06 43 48.6 +0.7
GRF *eL* 07 51 29.8
comp=Z,589nm,20.9s
SMOL Smolenice 149.63 345 *e*PKP PKPbc 06 43 49.9 +1.9
ASF Jabal al Asfar 149.71 301 PKPbc PKPbc 06 43 49.8 +1.0
comp=Z,3.6nm,0.8s,baz=169,slow=2.9,SNR=5.4
VOIR 149.76 333 ‖ *i*P PKPbc 06 43 49.9 +1.5
KHC Kasperske Hory 149.81 350 ⇑ *i*PKP2 PKPbc 06 43 49.6 +1.1
KHC Kasperske Hory 149.81 350 *e*PKP PKPbc 06 43 49.3 +0.8
KHC *ep*PKP pPKPdf 06 43 54.5 -0.8
KHC AMS AMS 07 52 40.0
comp=Z,1μm,17.6s
WLF Walferdange 149.87 0 PKPbc PKPbc 06 43 50.0 +1.4
WET Wettzell 149.91 351 *e*PKPbc PKPbc 06 43 49.6 +0.9
ZST Bratislava 150.01 345 *e*PKP PKPbc 06 43 50.6 +1.6
GEC2 GERESS Array S 150.07 350 *e*PKPbc PKPbc 06 43 49.7 +0.6
GERES GERESS Array B 150.07 350 PKP PKPdf 06 43 43.9 -0.2
comp=Z,1.7nm,1.1s,baz=7.1,slow=4.3,SNR=3.9
GERES PKPbc PKPbc 06 43 49.9 +0.8
comp=Z,7.1nm,1.0s,baz=42,slow=2.2,SNR=35
BUD Budapest 150.16 342 ⇑ *ep*PKP pPKPdf 06 43 50.1 -5.8
FLN La Foliniere 150.28 9 *e*PKP1 PKPbc 06 43 49.4 -0.2
comp=Z,98nm,1.1s
FLN *e*MLR MLR
comp=Z,869nm,19.5s,MS5.3
LDF La Druitiere 150.50 9 *e*PKP1 PKPbc 06 43 49.8 -0.3
comp=Z,92nm,1.1s
LANF Langenberg 150.53 358 PKP PKPbc 06 43 50.3 +0.1
SILT Sile 150.55 322 *e*P PKPbc 06 43 48.7 -1.8
KDHN Kadinhani 150.59 316 *i* P PKPbc 06 43 51.3 +0.6
GRR Gorron 150.59 10 *e*PKP1 PKPbc 06 43 50.3 -0.1
comp=Z,188nm,1.5s
LADK Ladik-KONYA 150.59 315 *e*P PKPab 06 43 55.0 -2.5
SOP Sopron 150.62 346 ⇑ *ep*PKP pPKPdf 06 43 51.3 -5.3
QUIF Quistinic 150.62 13 *e*PKP1 PKPbc 06 43 49.9 -0.5
MMAI Mount Meron Ar 150.64 303 PKPbc PKPbc 06 43 52.4 +1.4
comp=Z,3.0nm,0.5s,baz=71,slow=5.4,SNR=4.8
STU Stuttgart 150.67 356 *e*PKPbc PKPbc 06 43 50.9 +0.4
STU Stuttgart 150.67 356 *e*PKPbc PKPbc 06 43 50.9 +0.4
GZR Gura Zlata 150.72 336 PKIKP PKPbc 06 43 51.0 +0.2
GZR Gura Zlata 150.72 336 ‖ *i*P PKPbc 06 43 51.3 +0.5
KONT Konya--Tatoy 150.73 314 *e*P PKPdf 06 43 47.3 +1.8
KLYT Kilyos 150.83 323 *e*P PKPab 06 43 58.5 +0.2
BORA Eskisehir 150.86 319 *i* P PKPbc 06 43 51.8 +0.6
MOA Molln 150.94 349 ⇑ *i*PKiKP PKiKP 06 43 51.5 -0.3
comp=Z,25nm,1.3s
ADVT Abdulvahap 150.95 321 *e*P PKPbc 06 43 52.9 +1.4
BZS Buzias 150.97 337 ‖ *i*P PKPbc 06 43 51.8 +0.5
MEZF Maizieres J'vi 151.02 2 *e*PKP1 PKPbc 06 43 50.7 -0.7
comp=Z,115nm,1.3s
BGKT Bogazkoy 151.03 323 *e*P PKPab 06 44 00.6 +1.4
CAVI Cavuskoy 151.04 321 *e*P PKPdf 06 43 48.7 +2.8
FUR Furstenfeldbru 151.08 353 *e*PKPbc PKPbc 06 43 52.0 +0.5
CTYL Yal??k??y-??at 151.10 324 *e*P PKPbc 06 43 52.9 +1.1
CDF Champ du Feu 151.11 358 *e*PKP1 PKPbc 06 43 51.9 +0.3
comp=Z,110nm,1.3s
BFO Black Forest 151.16 357 *e*PKPbc PKPbc 06 43 52.1 +0.4
BFO LR LR
comp=Z,696nm,19.0s,MS5.5
BOLV Bolvadin 151.23 317 *i* P PKPbc 06 43 52.6 +0.4
GEMT Gemlik 151.28 322 *e*P PKPdf 06 43 45.2 -1.1
RJOB Jochberg 151.29 351 *e*PKPbc PKPbc 06 43 52.4 +0.4
ECH Echery 151.31 359 PKP PKPbc 06 43 52.3 +0.3
ECH Echery 151.31 359 *e*PKPbc PKPbc 06 43 52.0 -0.1
ECH LR LR
comp=Z,825nm,21.0s,MS5.5
THEF They Montfort 151.31 0 PKP PKPbc 06 43 52.7 +0.7
SLVT Silivri 151.31 324 *e*P PKPbc 06 43 52.2 -0.1
ARMT Armutlu 151.38 322 *e*P PKPdf 06 43 48.0 +1.6
PKSM Moragy 151.42 342 ‖ *i*P PKPbc 06 43 52.6 +0.2
CSS Prodhromos 151.47 308 PFAKE 06 44 00.0 +13
CSS LR LR
comp=Z,727nm,20.0s,MS5.5
ULDT Uludag 151.50 321 *i* P PKPbc 06 43 55.3 +2.6
HAU Haudompre 151.53 360 *e*PKP1 PKPbc 06 43 52.7 +0.1
comp=Z,69nm,1.1s
HAU *e*MLR MLR
comp=Z,762nm,20.5s,MS5.2
ALT Altintas 151.57 318 *e*P PKPab 06 44 03.4 +1.9
MOF Molkenrain 151.58 359 PKP PKPbc 06 43 52.1 -0.8
HINF Hinteralfeld 151.72 359 *e*PKP1 PKPbc 06 43 53.1 +0.1
comp=Z,33nm,1.0s
RETA Reutte 151.80 353 ⇑ *i*PKiKP PKiKP 06 43 53.8 +0.2
comp=Z,24nm,1.1s
MOTA Moosalm 151.91 353 ⇑ *i*PKiKP PKiKP 06 43 53.8 0.0
comp=Z,20nm,0.9s
SOKA Soboth 151.91 347 ⇑ *i*PKiKP PKiKP 06 43 53.4 -0.5
comp=Z,20nm,1.2s
WTTA Wattenberg 151.92 352 ⇑ *i*PKiKP PKiKP 06 43 54.1 +0.2
comp=Z,32nm,1.3s
PERS Pernice 151.93 347 *e*PKPdf PKPbc 06 43 51.8 -1.7
GDZ Gediz 151.94 319 *i* P PKPbc 06 43 54.5 +0.7
EIL Elat 152.00 297 PKPbc PKPbc 06 43 53.2 -1.1
comp=Z,5.8nm,0.7s,baz=18,slow=18,SNR=3.3
ISP Isparta 152.01 316 *e*P PKPab 06 44 03.0 -0.4
ISP Isparta 152.01 316 PFAKE 06 44 00.0 +13
ISP LR LR
comp=Z,673nm,22.0s,MS5.4
BNT Bandirma 152.06 323 *e*P PKPdf 06 43 50.8 +3.4
DAVA Damuels 152.09 355 ‖ *i*PKiKP PKiKP 06 43 54.6 +0.4
comp=Z,48nm,1.1s
HYF Humbligny 152.12 5 *e*PKP1 PKPbc 06 43 54.2 +0.3
LOR Lormes 152.21 3 *e*PKP1 PKPbc 06 43 54.3 +0.2
comp=Z,96nm,1.4s
LOR *e*MLR MLR
comp=Z,1μm,19.0s,MS5.4
SSF Saint Saulge 152.39 4 *e*PKP1 PKPbc 06 43 54.7 +0.2
comp=Z,50nm,1.0s
MFF Saint Martin d 152.44 9 *e*PKP1 PKPbc 06 43 54.3 -0.4
comp=Z,126nm,1.6s
DAVOX Davos/Dischmat 152.59 354 PKPbc PKPbc 06 43 55.5 +0.5
comp=Z,4.7nm,0.7s,baz=61,slow=1.5,SNR=13
LJU Ljubljana 152.62 347 *e*PKPdf PKPbc 06 43 53.0 -2.1
AVF Avril sur Loir 152.65 4 *e*PKP1 PKPbc 06 43 54.8 -0.3
VOY Vojsko 152.75 348 *e*PKPdf PKPbc 06 43 57.2 +1.8
VOY *e* 06 44 15.8
VISS Visnje 152.78 347 *i* PKPdf PKPbc 06 43 55.8 +0.4
SMF Signal de Mont 152.83 4 *e*PKP1 PKPbc 06 43 55.3 -0.2
comp=Z,95nm,1.5s
BGF Bois d'Agland 152.84 5 *e*PKP1 PKPbc 06 43 55.5 -0.1
JAVS Javornik 152.85 348 *i* PKPdf PKPbc 06 43 55.5 -0.1
CABF La Chapelle 152.93 0 *e*PKP1 PKPbc 06 43 56.6 +0.9
comp=Z,84nm,1.2s
TUE Stuetta 152.94 355 *e*PKPbc PKPbc 06 43 55.0 -0.8
TUE LR LR
comp=Z,1μm,20.0s,MS5.8
BOJS Bojanci 152.97 346 *e*PKPdf PKPbc 06 43 53.6 -2.2
TCF Toulx Ste Croi 153.05 6 *e*PKP1 PKPbc 06 43 55.9 -0.1
comp=Z,50nm,1.3s
RJF Les Rejaudoux 153.95 8 *e*PKP1 PKPbc 06 43 57.9 -0.1
RJF *e*MLR MLR
comp=Z,1μm,18.5s,MS5.4
LPL La Plagne 154.02 359 *e*PKP1 PKPbc 06 43 59.2 +1.0
LFF La Frestale 154.20 9 *e*PKP1 PKPbc 06 43 58.1 -0.5

BNI	**Bardonecchia**	**154.49**	**359**	PFAKE			06 44 00.0	+9.2	
BNI				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
ORIF	**Oris-en-Rattie**	**154.62**	**1**	*e*PKP1	PKPbc		06 44 00.0	+0.5	
	comp=Z,12nm,1.0s								
ORIF				*e*MLR	MLR				
	comp=Z,959nm,18.8s,MS5.3								
VLC	**Villacollemand**	**155.13**	**353**	PFAKE			06 44 00.0	+8.3	
VLC				LR	LR				
	comp=Z,900nm,19.0s,MS5.6								
TIR	**Tirane**	**155.27**	**335**	PFAKE			06 44 00.0	+8.0	
TIR				LR	LR				
	comp=Z,1μm,22.0s,MS5.7								
SMRF	**Simiane la Rot**	**155.56**	**1**	*e*PKP1	PKPdf		06 44 01.1	+8.8	
MTE	**Manteigas**	**156.04**	**27**	PFAKE			06 44 00.0	+7.0	
MTE				LR	LR				
	comp=Z,985nm,19.0s,MS5.7								
AQU	**L'Aquila**	**156.38**	**347**	PFAKE			06 44 00.0	+6.6	
AQU				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
PAB	**San Pablo**	**158.02**	**22**	PFAKE			06 44 10.0	+14	
PAB				LR	LR				
	comp=Z,897nm,19.0s,MS5.6								
ESDC	**Sonseca Array**	**158.04**	**21**	PKPab	PKPab		06 44 30.9	+1.9	
	comp=Z,1.2nm,0.8s,baz=322,slow=4.6,SNR=4.8								
ESLA	**Sonseca Array**	**158.04**	**21**	PFAKE			06 44 10.0	+14	
ESLA				LR	LR				
	comp=Z,5μm,20.0s,MS6.3								
TIP	**Timpagrande**	**158.34**	**337**	PFAKE			06 44 10.0	+14	
TIP				LR	LR				
	comp=Z,993nm,22.0s,MS5.6								
CEL	**Celeste**	**159.46**	**338**	PFAKE			06 44 10.0	+13	
CEL				LR	LR				
	comp=Z,831nm,21.0s,MS5.5								
SFS	**San Fernando**	**159.87**	**30**	PFAKE			06 44 10.0	+12	
SFS				LR	LR				
	comp=Z,2μm,19.0s,MS6.0								
RTC	**Rabat Centre**	**161.46**	**36**	PFAKE			06 44 10.0	+10	
RTC				LR	LR				
	comp=Z,828nm,19.0s								
WDD	**Wield Dalam**	**162.09**	**337**	*e*PKPdf	PKPdf		06 44 01.4	+1.1	
WDD				LR	LR				
	comp=Z,798nm,20.0s								
DBIC	**Dimbokro**	**163.36**	**138**	PFAKE			06 44 10.0	+7.8	
DBIC				LR	LR				
	comp=Z,827nm,20.0s								
MDT	**Midelt**	**163.56**	**34**	PKP	PKPdf		06 44 02.4	+0.6	
	comp=Z,2.0nm,1.1s,baz=249,slow=5.7,SNR=6.0								
TORD	**Torodi Ar. Bea**	**172.38**	**145**	PKP	PKPdf		06 44 06.7	-1.7	
	comp=Z,1.2nm,1.0s,baz=315,slow=2.2,SNR=6.1								
TORD				PKPab	PKPab		06 45 32.4	-0.2	
	comp=Z,1.3nm,1.1s,baz=215,slow=2.7,SNR=2.7								
TAM	**Tamanrasset**	**176.64**	**10**	PFAKE			06 44 20.0	+10	
TAM				LR	LR				
	comp=Z,647nm,19.0s								

***IDC* 30 06:24:07.4±2.5, 220N×12596E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=258.8km s-min=27.1km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.49**	**160**	P	P	06 29 18.7	-0.4
	0.5nm,0.3s,baz=338,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**26.84**	**164**	P	P	06 29 50.3	+0.6
	0.2nm,0.5s,baz=356,slow=8.4,SNR=4.1						
MKAR	**Makanchi Array**	**58.38**	**326**	P	P	06 34 04.5	-0.1
	0.2nm,0.4s,baz=120,slow=7.4,SNR=4.8						

ISCJB ***30*** *06:42:31.0±1.2, 192S±0.1×1738W±0.2, h10km, mb3.9/6, Error ellipse: s-maj=36.8km s-min=9.0km az=30.1*
IDC ***30*** *06:42:32.5±1.4, 1932S×17392W, h0km, mb3.9/6, mb1 4.2/6, mb1mx4.0/18, mbtmp4.0/6, Error ellipse: s-maj=48.1km s-min=25.2km az=133.0*
NEIC ***30*** *06:42:32.8±1.0, 1925S×17388W, h4km±5km, mb4.4/1, Error ellipse: s-maj=28.5km s-min=11.4km az=125.0*

ISC 30 06:42:33.3±1.1, 192S±01×1738W±02, h10km, n12, σ1§09/10, mb3.9/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.59**	**21**	Pn	**Pn**	**06 43 54.8**	**-1.9**
	2.4nm,0.3s,baz=38,slow=20,SNR=4.8						
AFI				Sn	Sx	06 44 54.6	
	2.3nm,0.3s,baz=332,slow=20,SNR=2.8						
AFI	**Afiamalu**	**5.59**	**21**	*e*Pn	**Pn**	**06 43 57.1**	**+0.5**
AFI				*e*Sn	**Sn**	**06 45 00.3**	**-0.7**
URZ	**Urewera**	**20.59**	**201**	P	**P**	**06 47 11.3**	**-1.2**
	5.0nm,0.5s,baz=0.0,slow=2.9,SNR=6.3						
STKA	**Stephens Creek**	**41.89**	**243**	P	**P**	**06 50 24.6**	**+0.6**
	0.9nm,0.6s,mb3.6,baz=110,slow=5.3,SNR=3.2						
ASAR	**Alice Springs**	**48.65**	**255**	P	**P**	**06 51 17.4**	**-0.4**
	1.0nm,0.5s,mb4.1,baz=96,slow=8.0,SNR=29						
WRAB	**Tennant Creek**	**48.67**	**260**	*e*P	**P**	**06 51 18.4**	**+0.4**
	3.2nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**48.68**	**260**	P	**P**	**06 51 17.0**	**-1.1**
	0.7nm,0.5s,mb4.0,baz=98,slow=7.9,SNR=6.7						
MJAR	**Matsushiro Arr**	**71.57**	**321**	P	**P**	**06 53 56.2**	**+1.4**
	0.8nm,0.4s,mb4.0,baz=139,slow=6.0,SNR=3.3						
NVAR	**Mina Array Bea**	**77.40**	**42**	P	**P**	**06 54 30.5**	**+1.8**
	0.8nm,0.8s,mb3.7,baz=226,slow=7.4,SNR=4.5						
PMR	**Palmer**	**82.88**	**12**	*e*pP	pP	06 55 00.2	-0.8
BRTR	**Keskin Array B**	**148.72**	**317**	PKPbc	PKPbc	07 02 22.8	+1.6
	0.5nm,0.6s,baz=134,slow=3.6,SNR=3.6						
GERES	**GERESS Array B**	**149.78**	**350**	PKPbc	PKPbc	07 02 24.4	+0.9
	0.6nm,0.9s,baz=336,slow=1.6,SNR=4.2						

SZGRF ***30*** *06:42:11.9, 3539N×2287E, h10km, mb4.5, Central Mediterranean Sea*
BJI ***30*** *06:42:36.2, 3762N×2094E, h11km, mB5.3, mb4.9, Ms5.1, Msz4.8*
ISCJB ***30*** *06:42:39.2±0.1, 3764N±001×2094E±001, h15km, mb5.0/131, MS4.6/27, Error ellipse: s-maj=2.1km s-min=1.5km az=18.1*
THE ***30*** *06:42:39.5, 3749N×2078E, h10km±1km, ML5.4/9, Error ellipse: s-maj=2.9km s-min=0.8km az=235.0*
IDC ***30*** *06:42:39.6±2.6, 3770N×2107E, h13km±16km, mb4.8/32, mb1 4.8/42, mb1mx4.7/44, mbtmp4.7/42, ML4.5/9, MS4.4/17, Ms1 4.4/17, ms1mx4.1/42, Error ellipse: s-maj=10.2km s-min=9.1km az=114.0*
MOS ***30*** *06:42:39.9±2.1, 3768N×2084E, h17km, mb5.2/51, MS4.4/21, Error ellipse: s-maj=4.7km s-min=3.1km az=115.3*
NEIC ***30*** *06:42:40.3, 3758N×2093E, h23km, mb4.7/89, ML4.8(ATH), ML5.1(PDG), ML5.3(THE), After ATH.*
NEIC Felt at Ambelokipoi, Asvestokhorion, Ilioupoli, Kardamas, Mouzakion, Pantokrator, Patrai and Planos, Greece.
ATH ***30*** *06:42:40.0, 3757N×2091E, h23km±1km, MD4.7/26, ML4.8*
CSEM ***30*** *06:42:40.1±0.0, 3756N×2085E, h23km, mb5.0/57, Ms3.9, Error ellipse: s-maj=1.3km s-min=0.8km az=8.0*
PDG ***30*** *06:42:41.3±0.7, 3764N×2088E, h23km±2km, MD5.2/10, ML5.1/9, Error ellipse: s-maj=1.7km s-min=1.8km az=0.0*
BGS ***30*** *06:42:52.0±1.8, 3886N×2109E, h33km, mb4.9*
HLW ***30*** *06:43:06.3, 3663N×2336E, h33km, Mb4.3*

ISC 30 06:42:40.7±0.1, 3759N±001×2096E±001, h16km, h16km±2.3km: pP-P, n819, σ1§24/891, mb5.0/131, MS4.6/27, 52C-28D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.62**	**41**	*e*PN	**Pg**	**06 42 53.0**	**+0.1**
VLS	**Valsamata**	**0.66**	**334**	P	**Pg**	**06 42 53.0**	**-0.6**
VLS				S	**Sg**	06 43 03.5	+1.2
VLS	**Valsamata**	**0.66**	**334**	*e*Pn	**Pg**	**06 42 53.4**	**-0.2**
VLS				S	**Sg**	**06 43 03.5**	**+1.2**
VLS	**Valsamata**	**0.66**	**334**	P	**Pg**	**06 42 53.0**	**-0.6**
VLS				*e*Pn	**Pg**	**06 42 53.4**	**-0.2**
ITM	**Ithomi**	**0.87**	**118**	*e*PN	**Pg**	**06 42 57.6**	**-0.1**
PYL	**PYLOS**	**0.93**	**138**	P	**Pg**	**06 42 58.0**	**-0.8**
PYL				S	**Sg**	**06 43 12.5**	**+1.5**
EVR	**Evrytania**	**1.48**	**27**	*e*PN	**Pn**	**06 43 07.6**	**+0.8**
EVR	**Evrytania**	**1.48**	**27**	*e*Pn	**Pn**	**06 43 07.5**	**+0.7**
LTK	**Loutraki**	**1.65**	**74**	P	**Pn**	**06 43 10.5**	**+1.5**
LTK				S	**Sg**	**06 43 34.6**	**+0.7**
AGG	**Agios Georgios**	**1.79**	**37**	P	**Pn**	**06 43 12.6**	**+1.6**
AGG				S	**Sg**	**06 43 38.1**	**-0.4**
VLI	**Veliai**	**1.80**	**118**	*e*PN	**Pn**	**06 43 12.5**	**+1.3**
VLI	**Veliai**	**1.80**	**118**	*e*Pn	**Pn**	**06 43 13.5**	**+2.3**
DID	**Didima**	**1.81**	**92**	P	**Pn**	**06 43 12.4**	**+1.1**
DID				S	**Sg**	**06 43 38.2**	**-0.9**
LKR	**Lokris**	**1.93**	**56**	P	**Pn**	**06 43 14.7**	**+1.8**
LKR	**Lokris**	**1.93**	**56**	*e*PN	**Pn**	**06 43 14.4**	**+1.5**
LKR	**Lokris**	**1.93**	**56**	*e*Pn	**Pn**	**06 43 14.8**	**+1.9**
IGT	**Igoumenitsa**	**2.00**	**346**	P	**Pn**	**06 43 14.1**	**+0.2**
IGT				S	**Sn**	**06 43 40.4**	**+1.8**
NAIG	**Nisos Aigina**	**2.02**	**84**	*e*PB	**Pn**	**06 43 15.3**	**+1.2**
JAN	**Janina**	**2.07**	**358**	*e*PB	**Pn**	**06 43 16.1**	**+1.3**
JAN	**Janina**	**2.07**	**358**	*e*Pb	**Pn**	**06 43 16.5**	**+1.7**
THL	**Klokotos Trika**	**2.14**	**22**	P	**Pn**	**06 43 17.8**	**+2.0**
THL				S	**Sn**	**06 43 45.5**	**+3.5**
THL	**Klokotos Trika**	**2.14**	**22**	*e*PB	**Pn**	**06 43 17.5**	**+1.7**
THL	**Klokotos Trika**	**2.14**	**22**	*e*Pb	**Pn**	**06 43 18.0**	**+2.2**
THL				S	**Sn**	**06 43 45.5**	**+3.5**
ATH	**Athens Observa**	**2.22**	**79**	*e*PN	**Pn**	**06 43 17.8**	**+0.9**
ATH	**Athens Observa**	**2.22**	**79**	*e*Pn	**Pn**	**06 43 17.3**	**+0.4**
KEK	**Kerkira**	**2.31**	**337**	*e*PN	**Pn**	**06 43 18.7**	**+0.6**
PTL	**Penteli**	**2.35**	**78**	*e*PN	**Pn**	**06 43 20.0**	**+1.4**
NEO	**Neokhori**	**2.47**	**45**	*e*PB	**Pn**	**06 43 22.5**	**+2.2**
NEO	**Neokhori**	**2.47**	**45**	*e*Pb	**Pn**	**06 43 22.2**	**+1.9**
XOR	**Xorichti**	**2.49**	**44**	P	**Pn**	**06 43 22.1**	**+1.4**
LIT	**Litokhoron**	**2.78**	**25**	P	**Pn**	**06 43 25.6**	**+1.0**
AOS	**Alonnisos**	**2.79**	**55**	P	**Pn**	**06 43 26.0**	**+1.3**
KZN	**Kozani**	**2.79**	**13**	*e*PN	**Pn**	**06 43 26.5**	**+1.8**
KZN	**Kozani**	**2.79**	**13**	*e*Pn	**Pn**	**06 43 26.8**	**+2.1**
PAIG	**Paliouri**	**3.16**	**41**	P	**Pn**	**06 43 30.6**	**+0.8**
PAIG				S	**Sn**	**06 44 11.5**	**+4.4**
FNA	**Florina**	**3.21**	**6**	P	**Pn**	**06 43 31.8**	**+1.3**
PLG	**Polygyros**	**3.39**	**34**	P	**Pn**	**06 43 33.8**	**+0.8**
PLG	**Polygyros**	**3.39**	**34**	⇑*i*PN	**Pn**	**06 43 34.0**	**+1.0**
PLG	**Polygyros**	**3.39**	**34**	⇑*i*Pn	**Pn**	**06 43 33.9**	**+0.9**
VAM	**Vamos**	**3.40**	**129**	*e*PN	**Pn**	**06 43 34.5**	**+1.4**
THE	**Thessaloniki**	**3.42**	**27**	P	**Pn**	**06 43 34.0**	**+0.7**
THE				S	**Sn**	**06 44 18.5**	**+5.0**
HORT	**Hortiatis**	**3.44**	**28**	P	**Pn**	**06 43 34.3**	**+0.7**
HORT				S	**Sn**	**06 44 18.3**	**+4.3**
BIA	**Bitola**	**3.44**	**5**	*e*Pn	**Pn**	**06 43 34.7**	**+1.1**
OHR	**Ohrid**	**3.52**	**358**	*i* Pn	**Pn**	**06 43 35.9**	**+1.1**
GRG	**Griva**	**3.54**	**18**	P	**Pn**	**06 43 36.0**	**+0.9**
OUR	**Ouranopolis**	**3.62**	**40**	P	**Pn**	**06 43 37.3**	**+1.2**
TIP	**Timpagrande**	**3.66**	**297**	*e*PKIKP	**Pn**	**06 43 36.2**	**-0.5**
TIP	**Timpagrande**	**3.66**	**297**	*e*PKPdf	**Pn**	**06 43 36.2**	**-0.5**
APE	**Apeiranthos**	**3.68**	**97**	*e*PN	**Pn**	**06 43 39.2**	**+2.2**
APE	**Apeiranthos**	**3.68**	**97**	*e*P	**Pn**	**06 43 39.0**	**+2.0**
APE	**Apeiranthos**	**3.68**	**97**	P	**Pn**	**06 43 37.2**	**+0.2**
APE	**Apeiranthos**	**3.68**	**97**	*e*Pn	**Pn**	**06 43 39.2**	**+2.2**
THR5	**Thira Island,**	**3.70**	**107**	P	**Pn**	**06 43 38.3**	**+1.0**
SOH	**Sokhos**	**3.73**	**29**	P	**Pn**	**06 43 39.2**	**+1.6**
SOH				S	**Sn**	**06 44 24.3**	**+3.2**
THR4	**Thira Island,**	**3.73**	**106**	P	**Pn**	**06 43 38.5**	**+0.9**
GVD	**Gavdhos**	**3.73**	**136**	*e*PN	**Pn**	**06 43 38.9**	**+1.2**
GVD	**Gavdhos**	**3.73**	**136**	*e*Pn	**Pn**	**06 43 38.7**	**+1.0**
THR3	**Thira Island,**	**3.75**	**107**	P	**Pn**	**06 43 39.2**	**+1.3**
THR6	**Thira Island,**	**3.76**	**108**	P	**Pn**	**06 43 39.1**	**+1.0**
THR1	**Thera Island**	**3.80**	**107**	P	**Pn**	**06 43 39.8**	**+1.1**
TIR	**Tirane**	**3.85**	**348**	P	**Pn**	**06 43 39.9**	**+0.6**
KNT	**Kendrikon**	**3.87**	**22**	P	**Pn**	**06 43 41.0**	**+1.4**
KNT	**Kendrikon**	**3.87**	**22**	P	**Pn**	**06 43 41.0**	**+1.4**
KNT	**Kendrikon**	**3.87**	**22**	P	**Pn**	**06 43 41.0**	**+1.4**
IDI	**Anoyia**	**3.91**	**125**	Pn	**Pn**	**06 43 40.2**	**0.0**
	7.1nm,0.3s,baz=302,slow=17,SNR=44						
IDI				Sn	**Sn**	**06 44 24.3**	**-1.5**
	28nm,0.3s,baz=98,slow=22,SNR=4.4						
IDI				LR	LR	06 45 19.3	
	comp=Z,4μm,18.3s,baz=296,slow=41						
IDI	**Anoyia**	**3.91**	**125**	Pn	**Pn**	**06 43 40.2**	**0.0**
IDI				Sn	**Sn**	**06 44 24.3**	**-1.5**
VAY	**Valandovo**	**3.93**	**18**	*i* Pn	**Pn**	**06 43 40.9**	**+0.5**
VAY	**Valandovo**	**3.93**	**18**	*i* Pn	**Pn**	**06 43 41.0**	**+0.6**
LOS	**Limnos**	**3.98**	**53**	P	**Pn**	**06 43 42.4**	**+1.3**
LIA	**Limnos Island**	**4.03**	**54**	*e*PN	**Pn**	**06 43 43.5**	**+1.8**
LIA	**Limnos Island**	**4.03**	**54**	*e*Pn	**Pn**	**06 43 43.0**	**+1.3**
CEL	**Celeste**	**4.06**	**281**	*e*PKIKP	**Pn**	**06 43 41.4**	**-0.8**
CEL	**Celeste**	**4.06**	**281**	*e*PKPdf	**Pn**	**06 43 41.4**	**-0.8**
CHOS	**Chios island**	**4.10**	**77**	P	**Pn**	**06 43 43.9**	**+1.1**
CHOS				S	**Sn**	**06 44 35.5**	**+5.0**
SIGR	**SIGRI**	**4.17**	**66**	P	**Pn**	**06 43 44.9**	**+1.1**
STIP	**Stip**	**4.21**	**13**	*e*Pn	**Pn**	**06 43 45.3**	**+1.3**
STIP	**Stip**	**4.21**	**13**	*e*Pn	**Pn**	**06 43 45.6**	**+1.6**
PE1	**Pezze di Greco**	**4.23**	**321**	*e*Pn	**Pn**	**06 43 44.6**	**+0.1**
NVR	**Nevrokopi**	**4.38**	**30**	*e*PN	**Pn**	**06 43 48.3**	**+1.8**
NVR	**Nevrokopi**	**4.38**	**30**	*e*Pn	**Pn**	**06 43 47.5**	**+1.0**
SKO	**Skopje**	**4.39**	**5**	*e*Pn	**Pn**	**06 43 48.0**	**+1.2**
NPS	**Neapolis**	**4.41**	**120**	*e*PN	**Pn**	**06 43 48.6**	**+1.6**
NPS	**Neapolis**	**4.41**	**120**	*e*Pn	**Pn**	**06 43 49.6**	**+2.6**
PRK	**Paraskevi**	**4.49**	**67**	P	**Pn**	**06 43 50.4**	**+2.3**
PRK	**Paraskevi**	**4.49**	**67**	*e*PN	**Pn**	**06 43 50.7**	**+2.6**
PRK	**Paraskevi**	**4.49**	**67**	*e*Pn	**Pn**	**06 43 50.7**	**+2.6**
URLA	**Izmir**	**4.52**	**78**	*i* P	**Pn**	**06 43 50.2**	**+1.7**
ULC	**Ulcinj**	**4.56**	**344**	⇓*i*Pn	**Pn**	**06 43 48.3**	**-0.8**
ULC				*e*Sn	**Sn**	**06 44 41.5**	**-0.3**
ULC	**Ulcinj**	**4.56**	**344**	*e*Sn	**Sn**	**06 44 41.5**	**-0.3**
ULC	**Ulcinj**	**4.56**	**344**	⇓*i*Pn	**Pn**	**06 43 48.3**	**-0.8**
ULC				*e*Sn	**Sn**	**06 44 41.5**	**-0.3**
SMG	**Samos**	**4.67**	**87**	*e*PN	**Pn**	**06 43 52.4**	**+1.9**
SMG	**Samos**	**4.67**	**87**	*e*Pn	**Pn**	**06 43 51.8**	**+1.3**
CUC	**Castrocucco**	**4.68**	**302**	*e*PKPdf	**Pn**	**06 43 51.2**	**+0.5**
CUC				LR	LR		
	comp=Z,1μm,20.0s						
BAI	**Bari**	**4.73**	**319**	*e*Pn	**Pn**	**06 43 52.2**	**+0.9**
AYVA	**Ayvalik**	**4.82**	**67**	*i* P	**Pn**	**06 43 56.4**	**+3.8**
BLCB	**Balcova**	**4.87**	**79**	*e*P	**Pn**	**06 43 55.6**	**+2.3**
BLCB	**Balcova**	**4.87**	**79**	P	**Pn**	**06 43 55.1**	**+1.8**
BUM	**Brajici-Budva**	**4.96**	**342**	⇓*i*Pn	**Pn**	**06 43 54.0**	**-0.6**
BUM				*e*Sn	**Sn**	**06 44 51.1**	**-0.6**
GCAM	**G?zelcaml?**	**4.98**	**87**	*i* P	**Pn**	**06 43 57.0**	**+2.1**
PDG	**Podgorica**	**5.01**	**345**	⇓*i*Pn	**Pn**	**06 43 54.8**	**-0.4**
PDG				*e*Sn	**Sn**	**06 44 51.2**	**-1.5**
TTG	**Podgorica**	**5.01**	**345**	⇓*i*Pn	**Pn**	**06 43 54.8**	**-0.4**
TTG				*e*Sn	**Sn**	**06 44 51.2**	**-1.5**
TTG	**Podgorica**	**5.01**	**345**	⇓*i*Pn	**Pn**	**06 43 54.8**	**-0.4**
TTG				*e*Sn	**Sn**	**06 44 51.2**	**-1.5**
TTG	**Podgorica**	**5.01**	**345**	⇓*i*Pn	**Pn**	**06 43 54.8**	**-0.4**
TTG				*e*Sn	**Sn**	**06 44 51.2**	**-1.5**
RDO	**Rodhopi**	**5.02**	**44**	*e*PN	**Pn**	**06 43 57.4**	**+2.0**
RDO	**Rodhopi**	**5.02**	**44**	*e*Pn	**Pn**	**06 43 55.9**	**+0.5**
IZM	**Izmir**	**5.04**	**79**	*e*P	**Pn**	**06 43 57.4**	**+1.7**
PVY	**Plav**	**5.06**	**352**	⇑*i*Pn	**Pn**	**06 43 56.3**	**+0.4**
PVY				*e*Sn	**Sn**	**06 44 53.6**	**-0.3**
ENEZ	**Enez**	**5.12**	**50**	*e*P	**Pn**	**06 43 57.1**	**+0.4**
ALN	**Alexandroupoli**	**5.15**	**49**	P	**Pn**	**06 43 57.6**	**+0.5**
ALN				S	**Sn**	**06 45 01.8**	**+5.6**
ALN	**Alexandroupoli**	**5.15**	**49**	P	**Pn**	**06 43 57.6**	**+0.5**
ALN				S	**Sn**	**06 45 01.8**	**+5.6**
ALN	**Alexandroupoli**	**5.15**	**49**	P	**Pn**	**06 43 57.6**	**+0.5**
BDRM	**Kayabasi**	**5.20**	**94**	*i* P	**Pn**	**06 44 03.0**	**+5.2**
VAE	**Valguarnera**	**5.21**	**271**	Pn	**Pn**	**06 43 58.5**	**+0.5**
	comp=Z,14nm,0.3s,baz=42,slow=5.7,SNR=21						
VAE				Sn	**Sn**	**06 44 54.7**	**-2.9**
	comp=Z,46nm,0.3s,baz=128,slow=5.1,SNR=5.6						
VAE				LR	LR	06 46 16.5	
	comp=Z,3μm,20.4s,baz=210,slow=41						
VAE	**Valguarnera**	**5.21**	**271**	Pn	**Pn**	**06 43 58.5**	**+0.6**
VAE				Sn	**Sn**	**06 44 54.7**	**-2.9**
HCY	**Herceg Novi**	**5.21**	**340**	⇑*i*Pn	**Pn**	**06 43 56.9**	**-1.0**
HCY				*e*Sn	**Sn**	**06 44 55.6**	**-2.0**
BEY	**Berane**	**5.34**	**352**	⇑*i*Pn	**Pn**	**06 44 00.0**	**+0.3**
BEY				*e*Sn	**Sn**	**06 45 00.1**	**-0.8**
IVA	**Berane**	**5.34**	**352**	⇑*i*Pn	**Pn**	**06 44 00.0**	**+0.3**
IVA				*e*Sn	**Sn**	**06 45 00.1**	**-0.8**
PLD	**Plovdiv**	**5.35**	**31**	P	**Pn**	**06 44 01.1**	**+1.2**
KARP	**Karpathos**	**5.39**	**110**	*e*PN	**Pn**	**06 44 02.5**	**+2.0**
KARP	**Karpathos**	**5.39**	**110**	*e*Pn	**Pn**	**06 44 01.5**	**+1.0**
NKY	**Niksic**	**5.43**	**345**	⇓*i*Pn	**Pn**	**06 44 00.5**	**-0.5**
NKY				*e*Sn	**Sn**	**06 45 02.2**	**-0.9**
MLSB	**Milas**	**5.43**	**91**	*e*P	**Pn**	**06 43 58.5**	**-2.5**
AYDN	**Tasoluk**	**5.49**	**87**	*i* P	**Pn**	**06 44 03.4**	**+1.5**
AKHS	**Akhisar**	**5.55**	**74**	*i* P	**Pn**	**06 44 05.1**	**+2.5**
BRY	**Bratogost**	**5.62**	**342**	⇓*i*Pn	**Pn**	**06 44 02.4**	**-1.2**
BRY				*e*Sn	**Sn**	**06 45 05.7**	**-2.1**
MS1	**Monte Sant'Ang**	**5.65**	**318**	*e*Pn	**Pn**	**06 44 03.9**	**-0.1**
SJES	**Sjenica**	**5.72**	**353**	⇓*i*Pn	**Pn**	**06 44 05.4**	**+0.5**
SART	**Tekirdag**	**5.74**	**55**	*i* P	**Pn**	**06 44 08.7**	**+3.4**
SART	**Tekirdag**	**5.74**	**55**	*i* P	**Pn**	**06 44 08.6**	**+3.3**
UPM	**Unac-Piva**	**5.82**	**345**	⇓*i*Pn	**Pn**	**06 44 06.1**	**-0.3**
UPM				*e*Sn	**Sn**	**06 45 11.7**	**-1.1**
STON	**Ston**	**5.84**	**336**	*e*Pn	**Pn**	**06 44 05.2**	**-1.3**
STON				Sn	**Sn**	**06 45 07.6**	**-5.6**
STON	**Ston**	**5.84**	**336**	*e*Pn	**Pn**	**06 44 05.2**	**-1.4**
PLE	**Pljevlja**	**5.86**	**349**	⇓*i*Pn	**Pn**	**06 44 06.8**	**-0.1**
PLE				*e*Sn	**Sn**	**06 45 12.7**	**-1.0**
ARG	**Arkhangelos**	**5.91**	**101**	⇑*i*PN	**Pn**	**06 44 09.9**	**+2.4**
MANT	**Manisa**	**6.07**	**79**	*i* P	**Pn**	**06 44 12.4**	**+2.7**
MANT	**Manisa**	**6.07**	**79**	*i* P	**Pn**	**06 44 12.4**	**+2.7**
TKR	**Tekirdag**	**6.13**	**54**	*e*P	**Pn**	**06 44 11.1**	**+0.5**
KULA	**Kula-Manisa**	**6.15**	**79**	*e*P	**Pn**	**06 44 09.0**	**-1.8**
EDRB	**Edirne**	**6.16**	**45**	*e*P	**Pn**	**06 44 13.2**	**+2.2**
JMB	**Yambol**	**6.51**	**40**	P	**Pn**	**06 44 16.8**	**+1.0**
DIVS	**Divibare**	**6.54**	**354**	⇓*i*Pn	**Pn**	**06 44 15.7**	**-0.6**
GOLH	**Golhisar**	**6.86**	**90**	*i* P	**Pn**	**06 44 26.7**	**+6.1**
CTKS	**Kestanelik-??a**	**6.88**	**56**	*e*P	**Pn**	**06 44 21.7**	**+0.7**
AKAS	**Kas**	**7.06**	**98**	*i* P	**Pn**	**06 44 26.0**	**+2.6**
DJES	**Djerdap**	**7.17**	**9**	P	**Pn**	**06 44 24.5**	**-0.4**
ISK	**Istanbul-Kandi**	**7.17**	**59**	*e*P	**Pn**	**06 44 22.4**	**-2.6**
ELL	**Elmali**	**7.20**	**94**	*e*P	**Pn**	**06 44 30.1**	**+4.8**
BEO	**Beograd**	**7.22**	**357**	P	**Pn**	**06 44 25.1**	**-0.5**
AQU	**L'Aquila**	**7.50**	**312**	P	**Pn**	**06 44 33.0**	**+3.5**
ISP	**Isparta**	**7.58**	**85**	*i* P	**Pn**	**06 44 32.4**	**+1.9**
ISP	**Isparta**	**7.58**	**85**	P	**Pn**	**06 44 35.9**	**+5.4**
BLY	**Banja Luka**	**7.70**	**339**	⇑*i*Pn	**Pn**	**06 44 31.8**	**-0.3**
HMAT	**Matruh**	**8.23**	**140**	⇑P	**Pn**	**06 44 37.5**	**-1.9**
NVLJ	**Novalja**	**8.35**	**329**	*e*Pn	**Pn**	**06 44 39.9**	**-1.1**
NVLJ				Sn	**Sn**	**06 46 09.0**	**-5.9**
MLR	**Muntele Rosu**	**8.73**	**24**	Pn	**Pn**	**06 44 48.7**	**+2.4**
	comp=Z,3.3nm,0.3s,baz=187,slow=13,SNR=29						
MLR	**Muntele Rosu**	**8.73**	**24**	P	**Pn**	**06 44 48.7**	**+2.4**
MLR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BOJS	**Bojanci**	**8.99**	**333**	*i* Pn	**Pn**	**06 44 50.6**	**+0.8**
BOJS				*i* Sn	**Sn**	**06 46 25.8**	**-4.8**
CRES	**Cresnjev**	**9.20**	**335**	⇑*i*Pn	**Pn**	**06 44 51.7**	**-1.0**
DRGR		**9.29**	**7**	P	**Pn**	**06 44 55.5**	**+1.6**
VRI	**Vrincioaia**	**9.32**	**26**	P	**Pn**	**06 44 57.2**	**+2.8**
VISS	**Visnje**	**9.39**	**333**	*i* Pn	**Pn**	**06 44 55.8**	**+0.4**
VISS				*i* Sn	**Sn**	**06 46 33.8**	**-6.

comp=Z,33nm,1.1s
FRF La Foret Royal 12.40 303 *e*P Pn 06 45 37.1 +0.5
comp=Z,33nm,1.1s
LMR La Mourre 12.40 302 *e*P Pn 06 45 35.7 -0.9
comp=Z,63nm,1.3s
LMR La Mourre 12.40 302 *e*P Pn 06 45 35.7 -0.9
LMR pmax pmax
comp=Z,31nm,1.3s
LMR La Mourre 12.40 302 *e*P Pn 06 45 35.7 -0.9
comp=Z,31nm,1.3s
OKC Ostrava-Krasne 12.41 352 *e*P Pn 06 45 35.8 -0.8
OKC *ex* x 06 45 45.0
OKC *e*S Sn 06 47 49.7 -4.8
OKC AMS AMS 06 51 00.0
comp=Z,2µm,12.5s
OKC Ostrava-Krasne 12.41 352 *e*P Pn 06 45 35.8 -0.8
OKC *e*S Sn 06 47 49.7 -4.8
RETA Reutte 12.41 326 ⇓*i*Pn Pn 06 45 37.2 +0.5
RETA ⇓*i*Sn Sn 06 47 48.2 -6.4
GEC2 GERESS Array S 12.43 337 *e*Pn Pn 06 45 36.1 -0.7
GERES GERESS Array B 12.43 337 Pn Pn 06 45 34.8 -2.0
comp=Z,2.2nm,0.3s,baz=156,slow=14,SNR=12
GERES Sn Sn 06 47 46.9 -8.0
comp=Z,3.8nm,0.3s,baz=151,slow=25,SNR=8.4
GERES GERESS Array B 12.43 337 P Pn 06 45 34.8 -2.0
GERES 06 47 46.9
GERES pmax pmax
comp=Z,2.0nm,0.3s
GERES smax
comp=N,4.0nm,0.3s
LVV L'vov 12.43 9 *e*P Pn 06 45 38.1 +1.3
LVV *e*S Sn 06 47 57.1 +2.3
LVV MLR MLR
comp=N,710nm,10.0s
LVV MLR MLR
comp=E,520nm,10.0s
LVV MLR MLR
comp=Z,850nm,10.0s
SET Setif 12.54 268 P Pn 06 45 41.0 +2.6
SUZ 12.54 125 ⇓P Pn 06 45 34.8 -3.7
MMAI Mount Meron Ar 12.65 107 Pn Pn 06 45 37.8 -2.2
comp=Z,2.0nm,0.3s,baz=301,slow=11,SNR=3.3
MMAI Sn Sn 06 47 49.8 -11
comp=Z,4.6nm,0.3s,baz=307,slow=20,SNR=4.2
OJC Ojcow 12.65 357 *e*P Pn 06 45 38.9 -1.1
DAVA Damuels 12.67 323 ⇓*i*Pn Pn 06 45 41.2 +1.0
DAVA ⇓*i*Sn Sn 06 47 56.0 -4.8
KHC Kasperske Hory 12.72 337 *e*P Pn 06 45 39.1 -1.7
KHC *ex* x 06 45 49.2
KHC *e*S Sn 06 47 54.6 -7.4
KHC AMS AMS 06 51 30.0
comp=Z,2µm,12.4s
KHC Kasperske Hory 12.72 337 *e*P Pn 06 45 39.1 -1.7
KHC *e*S Sn 06 47 54.6 -7.4
FUR Furstenfeldbru 12.72 329 *e*Pn Pn 06 45 41.8 +0.9
FUR *e*P 06 45 54.0
MBDF Montbardon 12.84 308 *e*P Pn 06 45 45.2 +2.7
comp=Z,84nm,0.9s
MBDF Montbardon 12.84 308 *e*P Pn 06 45 45.2 +2.7
MBDF pmax pmax
comp=Z,42nm,0.9s
MBDF Montbardon 12.84 308 *e*P Pn 06 45 45.2 +2.7
comp=Z,42nm,0.9s
WET Wettzell 12.95 336 *e*Pn Pn 06 45 43.5 -0.5
DPC Dobruska-Polom 13.18 347 *e*P Pn 06 45 45.5 -1.7
DPC AMS AMS 06 51 40.0
comp=Z,4µm,12.4s
PRU Pruhonice 13.23 342 *e*P Pn 06 45 46.3 -1.5
PRU *ex* x 06 45 57.9
PRU AMS AMS 06 51 30.0
comp=Z,3µm,13.9s
LPG La Plagne 13.24 311 *e*P Pn 06 45 49.7 +1.7
comp=Z,44nm,0.7s
LPG La Plagne 13.24 311 *e*P Pn 06 45 49.7 +1.7
LPG pmax pmax
comp=Z,22nm,0.7s
LPG La Plagne 13.24 311 *e*P Pn 06 45 49.7 +1.7
comp=Z,22nm,0.7s
LPL La Plagne 13.26 311 *e*P Pn 06 45 49.8 +1.5
UPC Upice 13.39 346 *e*P Pn 06 45 51.7 +1.7
UPC *ex* x 06 46 00.1
ORIF Oris-en-Rattie 13.49 308 *e*P Pn 06 45 51.7 +0.3
comp=Z,64nm,1.1s
ORIF *e*MLR MLR
comp=Z,2µm,20.0s
ORIF Oris-en-Rattie 13.49 308 *e*P Pn 06 45 51.7 +0.3
ORIF pmax pmax
comp=Z,32nm,1.1s
ORIF Oris-en-Rattie 13.49 308 *e*P Pn 06 45 51.7 +0.3
comp=Z,32nm,1.1s
KSP Ksiaz 13.66 347 *e*P Pn 06 45 56.1 +2.4
KSP Ksiaz 13.66 347 *e*P Pn 06 45 53.8 +0.1
KSP *e*PP 06 46 04.0
ROTZ Rotzenmuhle 13.71 335 P Pn 06 45 55.8 +1.5
PVCC Panska Ves 13.72 343 *e*P Pn 06 45 53.8 -0.7
PVCC *ex* x 06 46 03.6
PVCC AMS AMS 06 52 00.0
comp=Z,3µm,9.6s
MALT Malatya 13.81 82 *e*P Pn 06 45 58.9 +3.1
BBS Basel-Blauen 13.97 319 *e*P Pn 06 45 57.5 -0.4
GRA1 Grafenberg Arr 13.99 333 *e*Pn Pn 06 46 00.0 +1.9
GRF Grafenberg Arr 13.99 333 *e*P Pn 06 46 08.0 +10
GRF MLR MLR
comp=Z,2µm,10.2s
GRF Grafenberg Arr 13.99 333 *e*Pn Pn 06 46 00.0 +1.9
GRF *e*P 06 46 08.0
GRF *e*L 06 52 30.0
comp=Z,2µm,10.2s
FELD Feldberg im Sc 13.99 321 *e*P Pn 06 45 59.9 +1.7
NKC Novy Kostel 14.04 337 *e*P Pn 06 45 59.0 +0.2
NKC *ex* x 06 46 08.2
NKC AMS AMS 06 52 20.0
comp=Z,2µm,10.7s
NKC Novy Kostel 14.04 337 *e*P Pn 06 45 59.0 +0.2
NKC *e* 06 46 08.2
EIL Elat 14.07 120 Pn Pn 06 45 56.9 -2.5
comp=Z,1.1nm,0.3s,baz=27,slow=7.7,SNR=10.0
EIL Sn Sn 06 48 19.7 -16
comp=Z,2.0nm,0.3s,baz=284,slow=17,SNR=4.4
EIL Elat 14.07 120 Pn Pn 06 45 56.9 -2.5
EIL Sn Sn 06 48 19.7 -16
STU Stuttgart 14.07 326 *e*Pn Pn 06 45 59.5 +0.2
KIZ Kirchzarten 14.09 321 P Pn 06 46 01.6 +2.1
ASF Jabal al Asfar 14.15 108 Sn Sn 06 48 26.1 -11
comp=Z,0.2nm,0.3s,baz=347,slow=22,SNR=2.3
BRG Berggiesshubel 14.19 342 *e*Pn Pn 06 45 59.7 -1.2
BRG Berggiesshubel 14.19 342 *i*P Pn 06 46 00.8 -0.1
comp=Z,9.5nm,1.0s
BRG *i* 06 46 09.6
comp=Z,33nm,0.8s
BRG
comp=N,701nm,19.6s
BRG
comp=E,571nm,19.1s
BRG
comp=Z,1µm,22.4s
BRG Berggiesshubel 14.19 342 *i*P Pn 06 46 00.8 -0.1
comp=Z,5.7nm,1.0s
BRG *i* 06 46 09.6
CABF La Chapelle 14.23 314 *e*P Pn 06 46 01.6 +0.1
comp=Z,36nm,0.6s
CABF La Chapelle 14.23 314 *e*P Pn 06 46 01.6 +0.1
CABF pmax pmax
comp=Z,18nm,0.6s
CABF La Chapelle 14.23 314 *e*P Pn 06 46 01.6 +0.1
comp=Z,18nm,0.6s
LOMF Lomont 14.26 318 *e*P Pn 06 46 02.0 +0.1
ANN Anapa 14.33 55 *e*P Pn 06 46 09.2 +6.3
ANN pmax pmax
comp=Z,108nm,1.3s
SIND Sindeldorf 14.34 329 P Pn 06 46 01.8 -1.1
AKASG Malin Array Be 14.38 22 Pn Pn 06 46 01.4 -2.0
comp=Z,3.4nm,0.3s,baz=209,slow=11,SNR=12
AKASG ScP ScP 06 54 49.4 -2.8
comp=Z,0.2nm,0.3s,baz=235,slow=1.6,SNR=4.7
MOF Molkenrain 14.41 320 *e*P Pn 06 46 04.0 0.0
HINF Hinteralfeld 14.54 319 *e*P Pn 06 46 06.6 +0.9
comp=Z,32nm,0.5s
HINF Hinteralfeld 14.54 319 *e*P Pn 06 46 06.6 +0.9
HINF pmax pmax
comp=Z,16nm,0.5s
HINF Hinteralfeld 14.54 319 *e*P Pn 06 46 06.6 +0.9
comp=Z,16nm,0.5s
ECH Echery 14.64 321 *e*P Pn 06 46 08.5 +1.4
ECH Echery 14.64 321 *e*P Pn 06 46 07.7 +0.6
ECH pmax pmax
comp=Z,31nm,0.9s
ECH Echery 14.64 321 *e*Pn Pn 06 46 07.7 +0.7
comp=Z,31nm,0.9s
MOX Moxa 14.66 336 *e*PN Pn 06 46 06.3 -1.0
MOX
comp=Z,2µm,14.0s
MOX Moxa 14.66 336 *e*Pn Pn 06 46 06.6 -0.7
MOX *e*P 06 46 15.5
CDF Champ du Feu 14.71 322 *e*P Pn 06 46 08.4 +0.3
comp=Z,56nm,0.8s
CDF Champ du Feu 14.71 322 *e*P Pn 06 46 08.4 +0.3
CDF pmax pmax
comp=Z,28nm,0.8s
CDF Champ du Feu 14.71 322 *e*P Pn 06 46 08.4 +0.3
comp=Z,28nm,0.8s
CLL Collm 14.83 340 *e*P Pn 06 46 16.7 +7.0
CLL Collm 14.83 340 *e*P Pn 06 46 11.0 +1.3
comp=Z,10.0nm,0.8s
CLL Collm 14.83 340 *e*(pP) Pn 06 46 11.0 +1.3
comp=Z,10.0nm,0.8s
CLL *i* PP 06 46 17.3
comp=Z,107nm,1.0s
LANF Langenberg 14.85 324 *e*P Pn 06 46 10.7 +0.7
TOD Tromm 14.87 328 *e*P Pn 06 46 10.7 +0.5
HAU Haudompre 14.92 319 *e*P Pn 06 46 10.9 0.0
comp=Z,98nm,0.8s
HAU *e*MLR MLR
comp=Z,1µm,18.0s
HAU Haudompre 14.92 319 *e*P Pn 06 46 10.9 0.0
HAU pmax pmax
comp=Z,49nm,0.8s
HAU Haudompre 14.92 319 *e*P Pn 06 46 10.9 0.0
comp=Z,49nm,0.8s
UBBA Unterbreizbach 15.36 333 *e*P Pn 06 46 23.2 +6.5
MTLF Montolieu 15.37 298 *e*P Pn 06 46 16.3 -0.5
comp=Z,56nm,1.3s
MTLF Montolieu 15.37 298 *e*P Pn 06 46 16.3 -0.5
MTLF pmax pmax
comp=Z,28nm,1.3s
MTLF Montolieu 15.37 298 *e*P Pn 06 46 16.3 -0.5
comp=Z,28nm,1.3s
PLDF La Plantade 15.38 308 *e*P Pn 06 46 19.8 +2.8
SOC Sochi 15.45 61 *e*P Pn 06 46 16.2 -1.6
SOC *e* 06 49 10.6
SOC MLR MLR
comp=Z,537nm,14.0s
EIBI Ibiza 15.47 281 P Pn 06 46 21.0 +2.8
comp=Z,16nm,0.7s
TNS Taunus Mts 15.49 329 *e*Pn Pn 06 46 18.1 -0.3
TNS *e*P 06 46 25.0
TNS Taunus Mts 15.49 329 *e*Pn Pn 06 46 18.2 -0.2
SMF Signal de Mont 15.57 311 *e*P Pn 06 46 21.0 +1.6
comp=Z,36nm,0.8s
SMF Signal de Mont 15.57 311 *e*P Pn 06 46 21.0 +1.6
SMF pmax pmax
comp=Z,18nm,0.8s
SMF Signal de Mont 15.57 311 *e*P Pn 06 46 21.0 +1.6
comp=Z,18nm,0.8s
PYM Petit Puy Mans 15.68 307 *e*P Pn 06 46 22.2 +1.4
RUP Ruppelstein 15.71 325 *e*P Pn 06 46 21.1 -0.1
RUE Ruedersdorf 15.72 344 *e*Pn Pn 06 46 21.8 +0.5
comp=Z,212nm,1.0s
RUE Ruedersdorf 15.72 344 *e*Pn Pn 06 46 21.8 +0.5
comp=Z,212nm,1.0s
EPOB Poblet 15.80 290 P Pn 06 46 27.1 +4.5
comp=Z,31nm,1.2s
LOR Lormes 15.87 313 *e*P Pn 06 46 24.2 +0.8
comp=Z,30nm,0.8s
LOR *e*MLR MLR
comp=Z,492nm,17.5s
LOR Lormes 15.87 313 *e*P Pn 06 46 24.2 +0.8
LOR pmax pmax
comp=Z,15nm,0.8s
LOR Lormes 15.87 313 *e*P Pn 06 46 24.2 +0.8
comp=Z,15nm,0.8s
GKP Gorka Klasztor 15.89 352 *e*P Pn 06 46 28.8 +5.2
GKP Gorka Klasztor 15.89 352 *e*P Pn 06 46 28.8 +5.2
MEZF Maizieres J'vi 15.91 318 *e*P Pn 06 46 24.1 +0.3
comp=Z,99nm,0.8s
MEZF Maizieres J'vi 15.91 318 *e*P Pn 06 46 24.1 +0.3
comp=Z,50nm,0.8s
AVF Avril sur Loir 15.93 311 *e*P Pn 06 46 24.1 -0.1
CAF Calviac 15.97 303 *e*P Pn 06 46 24.9 +0.3
comp=Z,27nm,1.0s
CAF Calviac 15.97 303 *e*P Pn 06 46 24.9 +0.3
CAF pmax pmax
comp=Z,14nm,1.0s
CAF Calviac 15.97 303 *e*P Pn 06 46 24.9 +0.3
comp=Z,14nm,1.0s
SSF Saint Saulge 15.97 312 *e*P Pn 06 46 26.0 +1.3
comp=Z,38nm,0.9s
SSF Saint Saulge 15.97 312 *e*P Pn 06 46 26.0 +1.3
SSF pmax pmax
comp=Z,19nm,0.9s
SSF Saint Saulge 15.97 312 *e*P Pn 06 46 26.0 +1.3
comp=Z,19nm,0.9s
CLZ Clausthal 16.09 336 *e*P Pn 06 46 31.2 +5.1
CLZ Clausthal 16.09 336 *e*Pn Pn 06 46 26.3 +0.2
CLZ *e*P 06 46 31.2
WLF Walferdange 16.11 323 P Pn 06 46 30.7 +4.3
comp=Z,92nm,1.7s
BGF Bois d'Agland 16.13 309 *e*P Pn 06 46 27.0 +0.3
comp=Z,36nm,0.8s
BGF Bois d'Agland 16.13 309 *e*P Pn 06 46 27.0 +0.3
BGF pmax pmax
comp=Z,18nm,0.8s
BGF Bois d'Agland 16.13 309 *e*P Pn 06 46 27.0 +0.3
comp=Z,18nm,0.8s
TCF Toulx Ste Croi 16.41 308 *e*P Pn 06 46 30.9 +0.7
comp=Z,35nm,1.0s
TCF Toulx Ste Croi 16.41 308 *e*P Pn 06 46 30.9 +0.7
TCF pmax pmax
comp=Z,18nm,1.0s
TCF Toulx Ste Croi 16.41 308 *e*P Pn 06 46 30.9 +0.7
comp=Z,18nm,1.0s
RJF Les Rejaudoux 16.46 304 *e*P Pn 06 46 30.1 -0.9
RJF *e*MLR MLR
comp=Z,940nm,17.8s
SUW Suwalki 16.50 5 *e*P Pn 06 46 30.7 -0.6
RESF Ens 16.58 295 *e*P Pn 06 46 36.2 +3.7
EPF Esparros 16.63 296 *e*P Pn 06 46 33.8 +0.8
comp=Z,26nm,1.0s
EPF Esparros 16.63 296 *e*P Pn 06 46 33.8 +0.8
EPF pmax pmax
comp=Z,13nm,1.0s
EPF Esparros 16.63 296 *e*P Pn 06 46 33.8 +0.8
comp=Z,13nm,1.0s
EBIE Bielsa 16.70 294 P Pn 06 46 36.9 +2.9
comp=Z,23nm,0.8s
NRDL Niedersach Rie 16.73 336 *e*Pn Pn 06 46 34.9 +0.6
NRDL *e*P 06 46 39.0
VIEF Viey 16.82 295 *e*P Pn 06 46 37.8 +2.3
MEM Membach 16.83 325 P Pn 06 46 40.1 +4.5
comp=Z,42nm,1.5s
LFF La Frestale 16.86 302 *e*P Pn 06 46 35.3 -0.6
EMOS Mosqueruela 16.89 286 P Pn 06 46 39.5 +3.1
comp=Z,19nm,1.1s
HGN Heimansgroeve 16.97 326 *e*P Pn 06 46 42.4 +5.0
comp=Z,27nm,0.7s
ESAC San Caprasio 17.00 291 P Pn 06 46 40.4 +2.7
comp=Z,38nm,0.6s
BCLA Clavier 17.02 324 P Pn 06 46 43.1 +5.1
GIVF Givet 17.04 322 *e*P Pn 06 46 40.1 +1.9
BEBN Eben Emael 17.11 325 P Pn 06 46 42.6 +3.5
DOU Dourbes 17.15 322 P Pn 06 46 42.7 +3.2
ETSF Etsaut 17.25 295 *e*P Pn 06 46 42.6 +1.7
comp=Z,53nm,1.0s
ETSF Etsaut 17.25 295 *e*P Pn 06 46 42.6 +1.7
ETSF pmax pmax
comp=Z,27nm,1.0s
ETSF Etsaut 17.25 295 *e*P Pn 06 46 42.6 +1.7
comp=Z,27nm,1.0s
ECHE Chera 17.26 283 P Pn 06 46 42.5 +1.5
ECHE pmax pmax
comp=Z,13nm,0.8s
ECHE Chera 17.26 283 P Pn 06 46 42.5 +1.5
comp=Z,13nm,0.8s
ECHE Chera 17.26 283 P Pn 06 46 42.5 +1.5
comp=Z,13nm,0.8s
BAIF Baives 17.31 321 *e*P Pn 06 46 42.8 +1.2
comp=Z,41nm,0.7s
BAIF Baives 17.31 321 *e*P Pn 06 46 42.8 +1.2
BAIF pmax pmax
comp=Z,21nm,0.7s
BAIF Baives 17.31 321 *e*P Pn 06 46 42.8 +1.2
comp=Z,20nm,0.7s
IBBN Ibbenburen 17.39 332 *e*Pn Pn 06 46 44.4 +1.9
WTSB Winterswijk 17.49 330 *e*P Pn 06 46 47.7 +3.8
comp=Z,18nm,0.7s
MNK Minsk 17.56 13 *e*P Pn 06 46 40.0 -4.6
MNK pmax pmax
comp=Z,390nm,1.0s
SNF Seneffe 17.57 323 P Pn 06 46 47.9 +3.2
KIV Kislovodsk 17.62 62 ⇓*e*P Pn 06 46 46.7 +1.2
KIV pmax pmax
comp=Z,42nm,1.3s
KIV MLR MLR
comp=Z,300nm,10.0s
KIV Kislovodsk 17.62 62 *e*Pn Pn 06 46 46.6 +1.1
comp=Z,23nm,0.7s
KIV Kislovodsk 17.62 62 *e*Pn Pn 06 46 46.6 +1.1
comp=Z,23nm,0.7s
UCC Uccle 17.72 323 P Pn 06 46 49.2 +2.5
comp=Z,53nm,1.8s
ETOB Tobarra 17.74 280 P Pn 06 46 46.4 -0.6
comp=Z,11nm,1.5s
ETOB Tobarra 17.74 280 P Pn 06 46 46.4 -0.6
comp=Z,11nm,1.5s
SJPF Ste Jean 17.77 295 *e*P Pn 06 46 47.7 +0.4
comp=Z,72nm,1.0s
SJPF Ste Jean 17.77 295 *e*P Pn 06 46 47.7 +0.4
SJPF pmax pmax
comp=Z,36nm,1.0s
SJPF Ste Jean 17.77 295 *e*P Pn 06 46 47.7 +0.4
comp=Z,36nm,1.0s
NE53 Naroch' 17.77 11 *e*PcP PcP 06 51 22.6 -1.6
ONI Oni 17.90 67 P Pn 06 46 50.5 +1.5
BSEG Bad Segeberg 17.92 339 *e*Pn Pn 06 46 48.7 -0.4
BSEG *e*P 06 46 50.8
ELIZ Elizondo 18.00 295 P Pn 06 46 51.5 +1.4
ELIZ pmax pmax
comp=Z,235nm,2.4s
ELIZ Elizondo 18.00 295 P Pn 06 46 51.5 +1.4
comp=Z,235nm,2.4s
ELIZ Elizondo 18.00 295 P Pn 06 46 51.5 +1.4
comp=Z,235nm,2.4s
BSD Bornholm Skovb 18.01 349 *e*P Pn 06 46 49.6 -0.5
BSD pmax pmax
comp=Z,40nm,0.9s
BSD MLR MLR
comp=Z,520nm,16.0s
BSD Bornholm Skovb 18.01 349 *i*P Pn 06 46 49.6 -0.5
comp=Z,40nm,0.9s
BSD *e*S Sn 06 50 16.7 +6.2
BSD *e* 06 51 43.2
BSD *i* 06 53 45.1
BSD
comp=Z,520nm,16.0s
BSD Bornholm Skovb 18.01 349 *e*P Pn 06 46 49.6 -0.5
comp=Z,40nm,0.9s
BSD *e*S Sn 06 50 16.7 +6.2
BSD *e* 06 51 43.2
BSD *i* 06 53 45.1
MFF Saint Martin d 18.02 307 *e*P Pn 06 46 50.7 +0.3
comp=Z,69nm,0.9s
MFF Saint Martin d 18.02 307 *e*P Pn 06 46 50.7 +0.3
MFF pmax pmax
comp=Z,34nm,0.9s
MFF Saint Martin d 18.02 307 *e*P Pn 06 46 50.7 +0.3
comp=Z,34nm,0.9s
ETOR Torete 18.12 287 P Pn 06 46 53.3 +1.7
ETOR pmax pmax
comp=Z,36nm,0.7s
ETOR Torete 18.12 287 P Pn 06 46 53.2 +1.6
comp=Z,36nm,0.7s
ETOR Torete 18.12 287 P Pn 06 46 53.2 +1.6
comp=Z,36nm,0.7s
IIGN Ignalina 18.12 10 *e*P Pn 06 46 49.5 -2.1
IDID Didziasalis 18.16 11 *e*P Pn 06 46 49.8 -2.2
ISAL Salakas 18.32 9 *e*P Pn 06 46 51.7 -2.3
ENIJ Nijar 18.44 275 P Pn 06 46 57.0 +1.4
ENIJ pmax pmax
comp=Z,12nm,0.8s
ENIJ Nijar 18.44 275 P Pn 06 46 57.0 +1.4
comp=Z,12nm,0.8s
ENIJ Nijar 18.44 275 P Pn 06 46 57.0 +1.3
comp=Z,12nm,0.8s
EVIA Vianos 18.49 280 P Pn 06 46 55.3 -0.9
EVIA pmax pmax
comp=Z,12nm,0.8s
EVIA Vianos 18.49 280 P Pn 06 46 55.3 -0.9
comp=Z,12nm,0.8s
EVIA Vianos 18.49 280 P Pn 06 46 55.3 -0.9
comp=Z,12nm,0.8s
ECRI Cripan 18.62 293 P Pn 06 46 58.1 +0.3
ECRI pmax pmax
comp=Z,106nm,2.8s
ECRI Cripan 18.62 293 P Pn 06 46 58.1 +0.3
comp=Z,106nm,2.8s
ECRI Cripan 18.62 293 P Pn 06 46 58.1 +0.4
comp=Z,106nm,2.8s
VORD Divnogorie 18.67 38 *e*P Pn 06 46 56.1 -2.2
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=Z,40nm,0.6s
VORD pmax pmax
comp=E,70nm,0.7s
VORD MLR MLR
comp=Z,2µm,12.0s
VORD MLR MLR
comp=N,1µm,13.0s
VORD MLR MLR
comp=E,2µm,14.0s
GNI Garni 18.68 75 Pn Pn 06 46 58.3 -0.2
comp=E,1.7nm,0.3s,baz=0.6,slow=2.9,SNR=12
GNI LR LR 06 55 02.4
comp=E,1µm,18.6s,baz=270,slow=40
GNI Garni 18.68 75 P Pn 06 46 58.3 -0.3
GNI pmax pmax
comp=Z,2.0nm,0.3s
GNI MLR MLR
comp=Z,1µm,18.6s
GNI Garni 18.68 75 *e*P Pn 06 47 00.1 +1.5
comp=Z,88nm,1.1s
GNI Garni 18.68 75 *e*P Pn 06 47 00.1 +1.6
comp=Z,88nm,1.1s
VSR Storozhevoye 18.77 38 *e*P Pn 06 46 56.9 -2.5
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR MLR MLR
comp=Z,860nm,12.0s
VSR MLR MLR
comp=N,970nm,15.0s
VSR MLR MLR
comp=E,970nm,12.0s
MTA Mtatsminda 18.79 70 P Pn 06 47 01.5 +1.7
LDF La Druitiere 18.86 312 *e*P Pn 06 47 00.4 -0.2
EBER Berja 18.99 275 P Pn 06 47 04.1 +1.8
comp=E,32nm,1.1s
EBER Berja 18.99 275 P Pn 06 47 04.1 +1.7
comp=E,32nm,1.1s
COP Copenhagen 19.00 345 *e*P Pn 06 47 05.2 +3.0
COP MLR MLR
comp=Z,360nm,16.0s
COP Copenhagen 19.00 345 *i*P Pn 06 47 05.2 +3.0
COP *e*S Sn 06 50 52.7 +18
COP
comp=Z,360nm,16.0s
COP Copenhagen 19.00 345 *e*P Pn 06 47 05.2 +3.0
COP *e*S Sn 06 50 52.7 +18
EQES Quesada 19.01 278 P Pn 06 47 04.1 +1.6
comp=Z,22nm,0.7s
EQES Quesada 19.01 278 P Pn 06 47 04.1 +1.5
comp=Z,22nm,0.7s
VOR Voronezh 19.11 36 *e*P Pn 06 47 02.0 -1.6
VOR pmax pmax
comp=Z,200nm,2.0s
FLN La Foliniere 19.15 312 *e*P Pn 06 47 03.5 -0.6
comp=Z,51nm,0.9s
FLN *e*MLR MLR
comp=Z,467nm,22.2s
FLN La Foliniere 19.15 312 *e*P Pn 06 47 03.5 -0.6
FLN pmax pmax
comp=Z,25nm,0.9s
FLN La Foliniere 19.15 312 *e*P Pn 06 47 03.5 -0.6
comp=Z,25nm,0.9s

GRR	Gorron	19.20	311	*e*P		Pn	06 47 03.3	-1.4
DGRG	David-gareji	19.21	71	P		Pn	06 47 04.8	-0.1
EALB	Alboran	19.29	272	P		Pn	06 47 06.3	+0.5
	comp=Z,42nm,0.8s							
EALB	Alboran	19.29	272	P		Pn	06 47 06.3	+0.5
	comp=Z,42nm,0.8s							
ELAN	Lanestosa	19.38	295	P		Pn	06 47 06.8	-0.1
	comp=Z,44nm,0.9s							
ELAN	Lanestosa	19.38	295	P		Pn	06 47 06.8	-0.2
	comp=Z,44nm,0.9s							
ECOG	Cogollos-Vega	19.47	277	P		Pn	06 47 08.8	+0.8
ECOG				pmax		pmax		
	comp=Z,3.0nm,0.5s							
ECOG	Cogollos-Vega	19.47	277	P		Pn	06 47 08.8	+0.8
	comp=Z,3.2nm,0.5s							
ECOG	Cogollos-Vega	19.47	277	P		Pn	06 47 08.8	+0.8
	comp=Z,3.2nm,0.5s							
EBAN	Banos Encina	19.53	279	P		Pn	06 47 08.0	-0.8
EBAN				pmax		pmax		
	comp=Z,8.0nm,0.6s							
EBAN	Banos Encina	19.53	279	P		Pn	06 47 08.0	-0.8
	comp=Z,7.9nm,0.6s							
EBAN	Banos Encina	19.53	279	P		Pn	06 47 08.0	-0.8
	comp=Z,7.9nm,0.6s							
EGUA	Guajares	19.54	275	P		Pn	06 47 08.3	-0.6
EGUA				pmax		pmax		
	comp=Z,258nm,0.9s							
EGUA	Guajares	19.54	275	P		Pn	06 47 08.3	-0.6
	comp=Z,258nm,0.9s							
EGUA	Guajares	19.54	275	P		Pn	06 47 08.3	-0.6
	comp=Z,258nm,0.9s							
ESDC	Sonseca Array	19.57	284	P		Pn	06 47 07.6	-1.6
	comp=Z,0.6nm,0.3s,baz=79,slow=11,SNR=106							
ESDC				LR		LR	06 55 44.0	
	comp=Z,470nm,18.5s,baz=100,slow=40							
ESDC	Sonseca Array	19.57	284	P		Pn	06 47 08.3	-0.9
	comp=Z,22nm,0.8s							
ESDC	Sonseca Array	19.57	284	P		Pn	06 47 08.3	-0.9
	comp=Z,22nm,0.8s							
ESLA	Sonseca Array	19.57	284	*e*P		Pn	06 47 08.4	-0.8
ESLA	Sonseca Array	19.57	284	*e*P		Pn	06 47 08.4	-0.7
GUD	Guadarrama	19.70	287	P		Pn	06 47 09.7	-1.1
GUD				pmax		pmax		
	comp=Z,64nm,1.5s							
GUD	Guadarrama	19.70	287	P		Pn	06 47 09.7	-1.1
	comp=Z,64nm,1.5s							
GUD	Guadarrama	19.70	287	P		Pn	06 47 09.7	-1.1
	comp=Z,64nm,1.5s							
TAM	Tamanrasset	19.85	226	*e*P		Pn	06 47 12.6	0.0
TAM				pmax		pmax		
	comp=Z,35nm,1.1s							
TAM	Tamanrasset	19.85	226	*e*Pn		Pn	06 47 12.6	0.0
	comp=Z,34nm,1.1s							
TAM	Tamanrasset	19.85	226	*e*Pn		Pn	06 47 12.6	0.0
	comp=Z,34nm,1.1s							
PAB	San Pablo	19.87	283	*e*P		Pn	06 47 12.1	-0.7
PAB				pmax		pmax		
	comp=Z,35nm,1.2s							
PAB	San Pablo	19.87	283	*e*P		Pn	06 47 12.1	-0.7
	comp=Z,35nm,1.2s							
PAB	San Pablo	19.87	283	*e*P		Pn	06 47 12.1	-0.6
	comp=Z,35nm,1.2s							
VRHR	Novokhopersk	19.93	41	*e*P		Pn	06 47 11.1	-2.3
VRHR				pmax		pmax		
	comp=Z,160nm,1.1s							
VRHR				pmax		pmax		
	comp=N,40nm,0.7s							
VRHR				pmax		pmax		
	comp=E,90nm,0.7s							
VRHR				MLR		MLR		
	comp=Z,1µm,11.0s							
VRHR				MLR		MLR		
	comp=N,780nm,13.0s							
VRHR				MLR		MLR		
	comp=E,1µm,13.0s							
ELOJ	Sierra Loja	19.95	276	P		Pn	06 47 14.4	+0.6
ELOJ				pmax		pmax		
	comp=Z,2.0nm,0.4s							
ELOJ	Sierra Loja	19.95	276	P		Pn	06 47 14.4	+0.6
	comp=Z,2.1nm,0.4s							
ELOJ	Sierra Loja	19.95	276	P		Pn	06 47 14.4	+0.6
	comp=Z,2.1nm,0.4s							
ELUQ	Luque	19.98	278	P		Pn	06 47 12.3	-1.8
ELUQ				pmax		pmax		
	comp=Z,31nm,1.0s							
ELUQ	Luque	19.98	278	P		Pn	06 47 12.3	-1.8
	comp=Z,31nm,1.0s							
ELUQ	Luque	19.98	278	P		Pn	06 47 12.3	-1.9
	comp=Z,31nm,1.0s							
EADA	Adamuz	20.15	279	P		P	06 47 13.1	-1.1
	comp=Z,21nm,1.0s							
EADA	Adamuz	20.15	279	P		P	06 47 13.1	-1.1
	comp=Z,21nm,1.0s							
SGMF	Saint Gilles	20.17	309	*e*P		P	06 47 13.8	-0.6
	comp=Z,144nm,1.2s							
SGMF	Saint Gilles	20.17	309	*e*P		P	06 47 13.8	-0.6
SGMF				pmax		pmax		
	comp=Z,72nm,1.2s							
SGMF	Saint Gilles	20.17	309	*e*P		P	06 47 13.8	-0.6
	comp=Z,72nm,1.2s							
QUIF	Quistinic	20.42	308	*e*P		P	06 47 16.5	-0.6
	comp=Z,39nm,0.7s							
QUIF	Quistinic	20.42	308	*e*P		P	06 47 16.5	-0.6
QUIF				pmax		pmax		
	comp=Z,19nm,0.7s							
QUIF	Quistinic	20.42	308	*e*P		P	06 47 16.5	-0.6
	comp=Z,19nm,0.7s							
OBN	Obninsk	20.49	26	P		P	06 47 17.9	+0.1
	comp=Z,2µm,0.4s,SNR=22							
OBN	Obninsk	20.49	26	*c i*P		P	06 47 16.1	-1.7
OBN				pmax		pmax		
	comp=Z,423nm,2.0s							
OBN				MLR		MLR		
	comp=Z,2µm,15.0s,MS4.6							
OBN	Obninsk	20.49	26	*e*P		P	06 47 16.6	-1.2
	comp=Z,150nm,0.5s							
EMIJ	Mijas	20.54	275	P		P	06 47 18.2	-0.3
	comp=Z,30nm,0.6s							
EMIJ	Mijas	20.54	275	P		P	06 47 18.2	-0.2
	comp=Z,30nm,0.6s							
TZK	Tazeka	20.66	268	*i* P		P	06 47 21.0	+1.2
EARI	Arriondas	20.68	294	P		P	06 47 19.2	-0.7
	comp=Z,24nm,0.9s							
EARI	Arriondas	20.68	294	P		P	06 47 19.2	-0.7
	comp=Z,24nm,0.9s							
SKP1	Kophill	20.85	320	*e*P		P	06 47 21.7	0.0
MAK	Makhachkala	20.91	67	*e*P		P	06 47 24.8	+2.4
MAK				pmax		pmax		
	comp=N,578nm,0.8s							
MAK				pmax		pmax		
	comp=E,268nm,0.6s							
EJIF	Jimena Fronter	21.11	275	P		P	06 47 25.2	+0.5
EJIF				pmax		pmax		
	comp=Z,99nm,1.8s,mb4.8							
EJIF	Jimena Fronter	21.11	275	P		P	06 47 25.2	+0.5
	comp=Z,99nm,1.8s,mb4.8							
EJIF	Jimena Fronter	21.11	275	P		P	06 47 25.2	+0.5
	comp=Z,99nm,1.8s,mb4.8							
VSU	Vasula	21.23	8	*c i*P		P	06 47 24.6	-1.1
SWN1	Swindon	21.26	318	*e*P		P	06 47 26.8	+0.7
SWN1				AMb		AMB	06 47 28.6	
	comp=Z,199nm,1.5s,mb5.2							
SWN1	Swindon	21.26	318	*e*P		P	06 47 26.8	+0.7
	comp=Z,199nm,1.5s,mb5.2							
ESPR	Espera	21.34	276	P		P	06 47 26.9	-0.2
	comp=Z,19nm,0.9s,mb4.4							
MOS	Moscow	21.36	26	*e*P		P	06 47 24.2	-2.9
MOS				*e*S		S	06 51 16.7	-6.8
MOS				pmax		pmax		
	comp=Z,396nm,0.8s,mb5.8							
MOS				MLR		MLR		
	comp=E,3µm,14.0s,MS4.9							
MOS				MLR		MLR		
	comp=Z,2µm,14.0s,MS4.7							
MOS				MLR		MLR		
	comp=N,2µm,14.0s,MS4.9							
MDT	Midelt	21.41	265	P		P	06 47 27.6	-0.2
	comp=N,28nm,0.9s,mb4.6,baz=82,slow=13,SNR=45							
MDT				LR		LR	06 57 54.9	
	comp=N,350nm,18.7s,MS3.8,baz=65,slow=43							
ZFT	Errachidia	21.48	263	*i* P		P	06 47 28.0	-0.6
SSW	Stow on the Wo	21.53	319	*e*P		P	06 47 29.5	+0.6
PBRG	Braganca	21.68	290	*e*P		P	06 47 31.0	+0.2
	comp=N,63nm,1.0s,mb5.0							
PBRG	Braganca	21.68	290	*e*P		P	06 47 31.2	+0.4
CWF	Charnwood Fore	21.68	321⇓	*e*P		P	06 47 30.7	+0.1
CWF				AMb		AMB	06 47 41.8	
	comp=Z,72nm,1.5s,mb4.9							
CWF	Charnwood Fore	21.68	321⇑	*e*P		P	06 47 30.7	0.0
	comp=Z,72nm,1.5s,mb4.9							
ECAL	Calabor	21.69	290	P		P	06 47 31.6	+0.8
	comp=Z,38nm,1.0s,mb4.8							
ECAL	Calabor	21.69	290	P		P	06 47 31.6	+0.8
	comp=Z,38nm,1.0s,mb4.8							
MIF	Mishlifen	21.70	267	*i* P		P	06 47 32.0	+1.0
TSY	Tnine Yamani	21.74	272	*i* P		P	06 47 33.0	+1.6
RSA	Sarsar	21.75	271	*i* P		P	06 47 32.0	+0.5
EMIN	Mina Concepcio	21.84	279	P		P	06 47 31.3	-1.2
	comp=Z,11nm,0.7s,mb4.4							
EMIN	Mina Concepcio	21.84	279	P		P	06 47 31.3	-1.2
	comp=Z,11nm,0.7s,mb4.4							
HGH	Gray Hill	21.86	318	*e*P		P	06 47 32.6	+0.1
MVO	Moncorvo	21.89	288	*e*P		P	06 47 32.5	-0.4
	comp=Z,107nm,2.0s,mb4.9							
MVO	Moncorvo	21.89	288	*e*P		P	06 47 32.4	-0.5
EBAD	Badajoz	21.99	282	P		P	06 47 33.6	-0.5
	comp=Z,35nm,1.2s,mb4.7							
EBAD	Badajoz	21.99	282	P		P	06 47 33.6	-0.5
	comp=Z,35nm,1.2s,mb4.7							
PBAR	Barrancos	22.08	280	*e*P		P	06 47 35.7	+0.7
	comp=Z,52nm,1.6s,mb4.7							
KBI1	Birley Grange	22.09	322⇑	*e*P		P	06 47 34.6	-0.4
KWE	Weaver Farm	22.11	322⇑	*e*P		P	06 47 34.9	-0.3
HEX	Exmoor	22.12	315	*e*P		P	06 47 35.2	-0.1
MCH1	Michaelchurch	22.14	318⇑	*e*P		P	06 47 35.0	-0.6
MCH1				AMb		AMB	06 47 41.3	
	comp=Z,133nm,1.3s,mb5.2							
MCH1	Michaelchurch	22.14	318⇓	*e*P		P	06 47 35.0	-0.6
	comp=Z,133nm,1.3s,mb5.2							
PMRV	Marv??o	22.23	284	*e*P		P	06 47 35.7	-0.9
	comp=Z,69nm,1.5s,mb4.9							
PCBR	Castelo Branco	22.27	285	*e*P		P	06 47 36.3	-0.7
	comp=Z,49nm,1.3s,mb4.8							
MTE	Manteigas	22.29	286	*e*P		P	06 47 36.7	-0.6
	comp=Z,91nm,1.7s,mb4.9							
MTE	Manteigas	22.29	286	*e*P		P	06 47 36.8	-0.5
HTR	Trewern Hill	22.33	318	*e*P		P	06 47 36.5	-1.0
LHO	Holmfirth	22.43	323⇑	*e*P		P	06 47 37.6	-0.9
PESTR	Estremoz	22.43	282	*e*P		P	06 47 38.0	-0.8
	comp=Z,45nm,1.1s,mb4.8							
PVIS	Viseu	22.55	287	*e*P		P	06 47 39.2	-0.8
	comp=Z,59nm,1.6s,mb4.8							
HPK	Haverah Park	22.56	324	*e*P		P	06 47 39.1	-0.9
HPK				AMb		AMB	06 47 48.5	
	comp=Z,95nm,1.4s,mb5.0							
HPK	Haverah Park	22.56	324	*e*P		P	06 47 39.1	-0.9
	comp=Z,95nm,1.4s,mb5.0							
KIB	El Ksiba	22.62	265	*i* P		P	06 47 42.0	+1.2
PCAB	Cabril	22.64	290	*e*P		P	06 47 40.8	-0.2
	comp=Z,87nm,1.9s,mb4.9							
ELOB	Lobios	22.67	290	P		P	06 47 39.7	-1.6
	comp=Z,30nm,1.1s,mb4.6							
ELOB	Lobios	22.67	290	P		P	06 47 39.7	-1.6
	comp=Z,30nm,1.1s,mb4.6							
PVAQ	Vaqueiros	22.72	278	*e*P		P	06 47 41.0	-0.8
	comp=Z,34nm,1.1s,mb4.7							
PBEJ	Beja	22.74	280	*e*P		P	06 47 40.9	-1.2
	comp=Z,23nm,1.4s,mb4.4							
SBD1	Bryn Du	22.76	320⇑	*e*P		P	06 47 41.8	-0.3
EVO	Evora	22.80	281	*e*P		P	06 47 42.2	-0.4
	comp=Z,42nm,1.1s,mb4.5							
EVO				*e*MLR		MLR		
	comp=Z,800nm,20.0s,MS3.9							
EVO	Evora	22.80	281	*e*P		P	06 47 41.4	-1.2
	comp=Z,30nm,1.2s,mb4.6							
RTC	Rabat Centre	22.81	269	*e*P		P	06 47 43.2	+0.3
	comp=Z,72nm,0.4s,mb5.5							
RTC	Rabat Centre	22.81	269	*e*P		P	06 47 43.2	+0.3
	comp=Z,72nm,0.4s,mb5.5							
EVOP	Sao Brissos	22.88	281	*e*P		P	06 47 42.2	-1.3
	comp=Z,21nm,1.1s,mb4.5							
PBDV	Barranco-do-Ve	22.91	278	*e*P		P	06 47 44.9	+1.0
HFS	Hagfors	23.04	351	P		P	06 47 42.9	-2.0
	comp=Z,30nm,0.4s,mb5.1,baz=160,slow=10,SNR=117							
HFS				LR		LR	06 56 58.0	
	comp=Z,200nm,18.3s,MS3.6,baz=348,slow=37							
HFS	Hagfors	23.04	351	P		P	06 47 42.9	-2.0
HFS				pmax		pmax		
	comp=Z,30nm,0.4s							
HFS				MLR		MLR		
	comp=Z,201nm,18.3s							
HFA0	Hagfors New Ar	23.05	351	Pn		P	06 47 45.0	0.0
HFA0	Hagfors New Ar	23.05	351	P		P	06 47 42.0	-3.0
HFA0				Pn		P	06 47 45.0	0.0
TZC	Tazercounte	23.12	265	*i* P		P	06 47 47.0	+0.8
EZAM	Zamans	23.15	291	P		P	06 47 45.6	-0.8
	comp=Z,1.9nm,0.6s,mb3.7							
EZAM	Zamans	23.15	291	P		P	06 47 45.6	-0.7
	comp=Z,1.9nm,0.6s,mb3.7							
KONO	Kongsberg	23.25	345	*e*P		P	06 47 45.8	-1.4
KONO				pmax		pmax		
	comp=Z,271nm,2.0s,mb5.3							
KONO	Kongsberg	23.25	345	*e*P		P	06 47 45.8	-1.4
	comp=Z,272nm,2.0s,mb5.3							
KONO	Kongsberg	23.25	345	*e*P		P	06 47 45.8	-1.4
	comp=Z,272nm,2.0s,mb5.3							
WPM1	Penmaenmawr	23.28	320	*e*P		P	06 47 47.2	-0.4
YLL	Llanberis	23.35	320⇑	*e*P		P	06 47 47.7	-0.7
XAL	Allendale	23.39	325	*e*P		P	06 47 47.9	-0.8
YRE	Yr Eifl	23.40	319⇑	*e*P		P	06 47 48.5	-0.3
NAY	Al-Naaiem	23.41	103	*e*P		P	06 47 47.0	-2.2
	comp=Z,35nm,0.7s,mb4.9							
NAY	Al-Naaiem	23.41	103	*e*P		P	06 47 47.0	-2.1
	baz=103							
NAY				AMb		AMB	06 48 03.9	
	comp=Z,35nm,0.7s,mb4.9,baz=103							
PTEO	Sao Teotonio	23.49	279	*e*P		P	06 47 50.0	+0.1
UMR	Umm Al-Rimmam	23.64	102	*e*P		P	06 47 49.9	-1.5
	comp=Z,77nm,0.8s,mb5.2							
UMR	Umm Al-Rimmam	23.64	102	*e*P		P	06 47 49.9	-1.5
	baz=102							
UMR				AMb		AMB	06 47 53.7	
	comp=Z,77nm,0.8s,mb5.2,baz=102							
BLS5	Blasjo	23.76	341	*e*P		P	06 47 52.4	+0.1
BLS5				AMb		AMB	06 47 54.1	
	comp=Z,28nm,0.8s,mb4.8							
BLS5	Blasjo	23.76	341	*e*P		P	06 47 52.3	0.0
	comp=Z,28nm,0.8s,mb4.8,SNR=61							
RDF	Al-Radifah	23.80	103	*e*P		P	06 47 51.0	-1.8
	comp=Z,59nm,1.0s,mb5.0							
RDF	Al-Radifah	23.80	103	*e*P		P	06 47 51.0	-1.9
	baz=104							
RDF				AMb		AMB	06 47 54.3	
	comp=Z,59nm,1.0s,mb5.0,baz=104							
XSO	Sourhope Farm	23.80	326⇑	*e*P		P	06 47 51.7	-0.9
FINES	FINESS Array B	24.09	6	P		P	06 47 52.0	-3.2
EKA	Eskdalemuir Ar	24.11	325	P		P	06 47 55.1	-0.3
	comp=Z,46nm,0.7s,mb5.0,baz=123,slow=8.6,SNR=67							
EKA	Eskdalemuir Ar	24.11	325	P		P	06 47 55.2	-0.2
EKA				pmax		pmax		
	comp=Z,46nm,0.7s							
ESK	Eskdalemuir	24.12	325	P		P	06 47 55.8	+0.3
	comp=Z,358nm,0.7s,mb5.9,SNR=15							
ESK	Eskdalemuir	24.12	325⇓	*e*P		P	06 47 55.0	-0.5
ESK				AMb		AMB	06 47 56.4	
	comp=Z,142nm,2.0s,mb5.0							
ESK	Eskdalemuir	24.12	325	*e*P		P	06 47 54.8	-0.7
ESK				pmax		pmax		
	comp=Z,43nm,0.8s,mb4.9							
ESK	Eskdalemuir	24.12	325⇑	*e*P		P	06 47 55.0	-0.5
	comp=Z,142nm,2.0s,mb5.0							
ESK	Eskdalemuir	24.12	325	*e*P		P	06 47 54.8	-0.7
	comp=Z,43nm,0.8s,mb4.9							
NAO01	NORSAR Array S	24.13	348	*e*P		P	06 47 55.4	-0.2
NAO01	NORSAR Array S	24.13	348	*e*P		P	06 47 55.4	-0.2
NB2	NORSAR Subarra	24.26	348	P		P	06 47 55.5	-1.3
	comp=Z,67nm,0.8s,mb5.1,baz=162,slow=11							
NOA	NORSAR Array B	24.26	348	P		P	06 47 55.6	-1.2
	comp=Z,35nm,0.8s,mb4.9,baz=172,slow=6.8,SNR=81							
NOA	NORSAR Array B	24.26	348	P		P	06 47 55.6	-1.2
NOA				pmax		pmax		
	comp=Z,35nm,0.8s							
EBL	Broad Law	24.33	326	*e*P		P	06 47 57.2	-0.2
EDI	Edinburgh	24.48	326⇑	*e*P		P	06 47 59.6	+0.7
EDI				AMb		AMB	06 48 01.6	
	comp=Z,95nm,1.1s,mb5.1							
EDI	Edinburgh	24.48	326⇑	*e*P		P	06 47 59.6	+0.7
	comp=Z,95nm,1.1s,mb5.1							
EAU	Auchinoon	24.55	326	*e*P		P	06 47 59.6	+0.1
GAL1	Galloway	24.56	323	*e*P		P	06 48 00.6	+1.0
GAL1				AMb		AMB	06 48 02.3	
	comp=Z,74nm,1.7s,mb4.9							
GAL1	Galloway	24.56	323	*e*P		P	06 48 00.6	+1.0
	comp=Z,74nm,1.7s,mb4.9							
DLF	Lyons Farm	24.66	318	*e*P		pP	06 48 09.9	+4.6
KAF	Kangasniemi	24.77	6	*e*p		P	06 48 00.1	-1.3
	comp=Z,36nm,0.5s,mb5.2,baz=186,slow=9.8							
KAF	Kangasniemi	24.77	6	*e*P		P	06 48 00.1	-1.3
KAF				pmax		pmax		
	comp=Z,36nm,0.5s,mb5.2							
EBH	Black Hill	24.83	327	*e*P		P	06 48 02.0	0.0
RUND	Rundenannen	24.90	342	*e*P		P	06 48 05.0	+2.4
DMUB	Kingscourt	25.15	319	*e*P		P	06 48 09.0	+4.1
EAB	Aberfoyle	25.16	326	*e*P		P	06 48 04.6	-0.4
MME1	Meikle Cairn	25.28	329	*e*P		P	06 48 05.1	-1.0
DOMB	Dombas	25.57	347	*e*P		P	06 48 08.4	-0.3
DOMB				AMb		AMB	06 48 11.4	
	comp=Z,61nm,0.8s,mb5.2							
DOMB	Dombas	25.57	347	*e*P		P	06 48 08.4	-0.3
	comp=Z,61nm,0.8s,mb5.2,SNR=60							
MCD	Coleburn Disti	25.58	329	*e*P		P	06 48 08.5	-0.3
KLMR	Klimovskoe	26.06	21	*e*P		P	06 48 12.0	-1.1
KLMR				pmax		pmax		
	comp=Z,90nm,0.9s,mb5.3							
MLA1	Latheron	26.10	330	*e*P		P	06 48 12.5	-1.0
JOF	Joensuu	26.14	11	*e*p		P	06 48 12.2	-1.6
	comp=Z,44nm,0.7s,mb5.1							
JOF	Joensuu	26.14	11	*e*P		P	06 48 12.2	-1.6
JOF				pmax		pmax		
	comp=Z,44nm,0.7s,mb5.1							
KAR1	Arisaig	26.26	326	*e*P		P	06 48 14.8	-0.1
KAC	Achnashellach	26.38	327⇑	*e*P		P	06 48 16.8	+0.8
NSS	Namsos	27.51	352	*e*P		P	06 48 23.7	-2.4
MOR8	Moi Rana	28.87	355	*e*P		P	06 48 38.0	-0.3
AKTK	Aktyubinsk	29.26	52	P		P	06 48 40.2	-1.7
AKTK				LR		LR	07 02 54.3	
AKTO	Aktyubinsk	29.26	52	P		P	06 48 40.2	-1.7
	comp=Z,30nm,0.7s,mb5.1,baz=262,slow=9.0,SNR=63							
AKTO				LR		LR	07 02 54.3	
	comp=Z,566nm,20.0s,MS4.2,baz=73,slow=42							
AKTO	Aktyubinsk	29.26	52	*i* P		P	06 48 40.5	-1.4
AKTO				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.4							
TOA0	Torodi Ar. Sit	29.80	220	*e*P		P	06 48 47.3	+0.4
TOA0	Torodi Ar. Sit	29.80	220	*e*P		P	06 48 47.3	+0.4
TORD	Torodi Ar. Bea	29.80	220	P		P	06 48 46.5	-0.4
	comp=Z,16nm,0.6s,mb5.0,baz=32,slow=8.7,SNR=168							
TORD				LR		LR	07 02 10.5	
	comp=Z,700nm,18.1s,MS4.3,baz=30,slow=39							
AB31	Akbulak array	30.29	55	P		P	06 48 49.9	-1.2
AB31				pmax		pmax		
	comp=Z,17nm,0.6s,mb5.0							
APA	Apatity	30.84	9⇑	*i* P		P	06 48 55.0	-0.7
APA				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.0							
APA				MLR		MLR		
	comp=Z,3µm,15.0s,MS5.0							
ARU	Arti	31.27	41	P		P	06 48 57.5	-2.1
	comp=Z,207nm,0.5s,mb6.2,SNR=10							
ARU	Arti	31.27	41	*c i*P		P	06 48 57.1	-2.5
ARU				*e*			06 49 58.4	
ARU				*e*S		S	06 54 01.2	-4.2
ARU				*e*SS		SS	06 55 47.1	-32
ARU				pmax		pmax		
	comp=Z,25nm,0.8s,mb5.1							
ARU				MLR		MLR		
	comp=Z,1µm,16.0s,MS4.6							
ARU	Arti	31.27	41	*e*P		P	06 48 57.4	-2.2
	comp=Z,19nm,0.6s,mb5.1							
KTK1	Kautokeino	31.50	2	*e*P		P	06 48 59.4	-2.1
ARCES	ARCESS Array B	32.10	3	P		P	06 49 04.0	-2.8
	comp=Z,14nm,0.7s,mb4.9,baz=192,slow=11,SNR=41							
ARCES				LR		LR	07 03 19.9	
	comp=Z,2µm,19.2s,MS4.8,baz=3.7,slow=39							
ARCES	ARCESS Array B	32.10	3	P		P	06 49 04.0	-2.7
ARCES				pmax		pmax		
	comp=Z,14nm,0.7s							
ARCES				MLR		MLR		
	comp=Z,2µm,19.3s							
ARCES	ARCESS Array B	32.10	3	P		P	06 49 10.0	+3.3
ARCES				LR		LR	07 03 19.9	
ARE0	ARCESS Array S	32.10	3	*e*P		P	06 49 05.2	-1.6
TRO	Tromso	32.12	359	*e*P		P	06 49 02.8	-4.2
KEV	Kevo	32.39	4	*e*p		P	06 49 07.6	-1.7
	comp=Z,16nm,0.8s,mb4.9							
KEV	Kevo	32.39	4	*e*P		P	06 49 07.6	-1.7
KEV				pmax		pmax		
	comp=Z,16nm,0.8s,mb4.9							
SVE	Sverdlovsk	32.49	41⇑	*e*P		P	06 49 09.1	-1.2
SVE				pmax		pmax		
	comp=Z,101nm,0.9s,mb5.7							
SVE				MLR		MLR		
	comp=Z,2µm,17.0s,MS4.8							
BRVK	Borovoye	37.17	49	P		P	06 49 50.5	-0.3
	comp=Z,300nm,0.6s,mb6.3,SNR=14							
BRVK	Borovoye	37.17	49	*e*P		P	06 49 49.6	-1.2
BRVK				pmax		pmax		
	comp=Z,34nm,0.7s,mb5.3							
BRVK	Borovoye	37.17

KSH AMB AMB
comp=Z,24nm,0.8s,mb5.0
KSH AMB AMB
comp=Z,257nm,4.2s
KSH LR LR
comp=N,326nm,5.9s
KSH LR LR
comp=E,520nm,7.3s
KSH LR LR
comp=Z,1µm,16.7s,MS4.8
NVS Novosibirsk 44.83 47 *e*P **P** **06 50 52.3 -1.4**
NVS *e* 06 52 34.7
NVS *e*S **S** **06 57 24.9 -5.4**
NVS *e* 07 00 47.3
NVS pmax pmax
comp=Z,67nm,1.2s,mb5.3
NVS pmax pmax
comp=N,13nm,0.7s
NVS pmax pmax
comp=E,26nm,0.9s
NVS smax
comp=N,20nm,1.7s
MK31 Makanchi Array 45.32 58 *e*P **P** **06 50 56.1 -1.7**
MKAR Makanchi Array 45.32 58 P **P** **06 50 55.8 -1.9**
comp=N,9.3nm,0.5s,mb4.9,baz=270,slow=7.5,SNR=9.7
MKAR ScP ScP 06 56 27.0 -2.2
comp=N,1.3nm,0.9s,baz=275,slow=6.8,SNR=5.2
MKAR Makanchi Array 45.32 58 P **P** **06 50 55.8 -2.0**
MKAR pmax pmax
comp=Z,9.0nm,0.5s
MKAR pmax pmax
comp=N,1.0nm,0.9s
SUMG Summit 45.49 339 *e*P **P** **06 50 59.4 +0.6**
comp=N,22nm,0.9s,mb5.0
SUMG Summit 45.49 339 *e*P **P** **06 50 59.4 +0.6**
comp=N,22nm,0.9s,mb5.0
ZALV Zalesovo Beam 45.83 48 P **P** **06 51 00.1 -1.5**
comp=N,41nm,0.5s,mb5.6,baz=274,slow=8.3,SNR=23
ZALV Zalesovo Beam 45.83 48 P **P** **06 51 00.2 -1.5**
ZALV pmax pmax
comp=Z,41nm,0.5s,mb5.6
WMQ Urumqi 49.74 61 *e*P **P** **06 51 33.0 +0.8**
WMQ AP pP 06 51 37.0 -0.2
WMQ PP PP 06 53 28.3 +1.7
WMQ S **S** **06 58 40.3 -0.3**
WMQ XS sS 06 58 48.0 -0.8
WMQ SCS ScS 07 01 21.3 -1.8
WMQ SS SS 07 02 08.8 -4.0
WMQ AMB AMB
comp=Z,11nm,1.0s,mb4.8
WMQ LR LR
comp=N,411nm,22.0s,MS4.5
WMQ LR LR
comp=E,465nm,24.0s,MS4.5
WMQ LR LR
comp=Z,316nm,22.0s,MS4.3
ALE Alert 52.10 350 P **P** **06 51 49.6 +0.2**
comp=Z,96nm,0.7s,mb5.8,SNR=8.1
DANN Dangsing 52.63 81 *e*P **P** **06 51 52.6 -1.5**
comp=Z,145nm,0.7s,mb6.0
KOLN Koldanda 52.77 81 *e*P **P** **06 51 53.0 -2.1**
comp=Z,61nm,0.7s,mb5.6
LSZ Lusaka 53.02 171 P **P** **06 51 57.6 +0.7**
comp=Z,2.4nm,0.4s,mb4.5,baz=1.7,slow=7.8,SNR=4.0
LSZ Lusaka 53.02 171 P **P** **06 51 57.6 +0.7**
LSZ pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
LSZ Lusaka 53.02 171 *e*P **P** **06 51 57.6 +0.7**
comp=Z,29nm,1.6s,mb5.0
LSZ Lusaka 53.02 171 *e*P **P** **06 51 57.6 +0.7**
comp=Z,29nm,1.6s,mb5.0
GKN Gorkha 53.48 80 *e*P **P** **06 51 58.2 -2.1**
comp=Z,58nm,0.6s,mb5.7
DMN Daman 54.03 81 *e*P **P** **06 52 02.3 -2.1**
comp=Z,50nm,0.6s,mb5.6
HYB Hyderabad 54.05 95 *e*P **P** **06 52 05.0 +0.4**
HYB Hyderabad 54.05 95 *i*P **P** **06 52 05.0 +0.4**
KKN Kakani 54.08 80 *e*P **P** **06 52 02.6 -2.2**
comp=Z,30nm,0.6s,mb5.4
PKIN Phulchoki 54.27 81 *e*P **P** **06 52 04.4 -1.8**
PKI Pulchoki 54.28 81 *e*P **P** **06 52 04.1 -2.1**
GUN Gumba 54.49 80 *e*P **P** **06 52 05.8 -2.0**
comp=Z,44nm,0.6s,mb5.6
JIRN Jiri 54.85 80 *e*P **P** **06 52 08.8 -1.6**
comp=Z,22nm,0.4s,mb5.5
RAMN Ramite 55.51 81 *e*P **P** **06 52 12.8 -2.3**
comp=Z,66nm,0.7s,mb5.8
ODAN Odare 56.17 80 *e*P **P** **06 52 18.0 -1.9**
comp=Z,10nm,0.3s,mb5.3
TAPN Taplejung 56.19 80 *e*P **P** **06 52 18.0 -2.0**
comp=Z,12nm,0.4s,mb5.2
TSUM Tsumeb 56.57 184 P **P** **06 52 22.6 -0.1**
comp=Z,1.6nm,0.5s,mb4.3,baz=18,slow=11,SNR=14
TSUM Tsumeb 56.57 184 P **P** **06 52 22.5 -0.1**
TLY Talaya 57.43 47 *e*P **P** **06 52 28.2 -0.3**
TLY *e*S **S** **07 00 28.5 +3.8**
TLY pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,2µm,18.0s,MS5.2
LSA Lhasa 57.75 75 P **P** **06 52 30.3 -0.7**
LSA Lhasa 57.75 75 P **P** **06 52 29.1 -1.9**
LSA pmax pmax
comp=Z,17nm,0.7s,mb5.2
LSA Lhasa 57.75 75 P **P** **06 52 29.1 -1.9**
comp=Z,17nm,0.7s,mb5.2
SCHQ Schefferville 59.13 318 P **P** **06 52 39.7 -0.6**
comp=Z,8.0nm,0.6s,mb4.9,baz=58,slow=12,SNR=13
SCHQ Schefferville 59.13 318 *e*P **P** **06 52 39.7 -0.6**
GTA Gaotai 59.80 62 *e*P **P** **06 52 40.3 -4.9**
GTA PP PP 06 54 55.0 -1.9
GTA S **S** **07 00 48.8 -7.0**
GTA SS SS 07 04 45.0 -6.5
GTA AMB AMB
comp=Z,4.0nm,1.7s,mb4.2
GTA AMB AMB
comp=Z,152nm,4.5s
GTA LR LR
comp=N,434nm,16.5s,MS4.8
GTA LR LR
comp=E,492nm,17.1s,MS4.8
GTA LR LR
comp=Z,657nm,20.7s,MS4.8
TIXI Tiksi 60.08 20⇑ *e*P **P** **06 52 45.9 -0.7**
TIXI pmax pmax
comp=Z,14nm,0.9s,mb5.0
TIXI Tiksi 60.08 20 *e*P **P** **06 52 46.7 +0.1**
comp=Z,12nm,0.9s,mb4.9
TIXI Tiksi 60.08 20 *e*P **P** **06 52 46.7 +0.1**
comp=Z,12nm,0.9s,mb4.9
SHL Shillong 60.32 79 *e*P **P** **06 52 47.0 -1.9**
RES Resolute Bay 60.43 344 *e*P **P** **06 52 48.6 -0.3**
RES pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
RES Resolute Bay 60.43 344 *e*P **P** **06 52 48.5 -0.4**
comp=Z,7.1nm,0.9s,mb4.7
RES Resolute Bay 60.43 344 *e*P **P** **06 52 48.5 -0.4**
comp=Z,7.1nm,0.9s,mb4.7
SONM Songino Array 60.56 50 P **P** **06 52 48.3 -2.0**
comp=Z,6.3nm,0.8s,mb4.8,baz=285,slow=9.3,SNR=15
SONM Songino Array 60.56 50 P **P** **06 52 48.3 -2.0**
SONM pmax pmax
comp=Z,6.0nm,0.9s
BOD Bodaibo 60.62 38 *e*P **P** **06 52 47.8 -2.7**
BOD pmax pmax
comp=Z,28nm,0.9s,mb5.4
ULN Ulaanbaatar 60.95 50⇑ *e*P **P** **06 52 51.9 -1.0**
IMP Imphal 62.31 79 *e*P **P** **06 53 01.0 -1.4**
LBTB Lobatse 62.42 175 *e*P **P** **06 53 03.9 +1.0**
LBTB pmax pmax
comp=Z,21nm,1.2s,mb5.1
LBTB Lobatse 62.42 175 *e*P **P** **06 53 03.9 +1.0**
comp=Z,21nm,1.2s,mb5.1
LBTB Lobatse 62.42 175 *e*P **P** **06 53 03.9 +1.0**
comp=Z,21nm,1.2s,mb5.1
LZH Lanzhou 64.16 63 *e*P **P** **06 53 15.0 +0.5**
LZH AP pP 06 53 18.3 -1.3
LZH XP sP 06 53 19.5 -2.0
LZH *e*PP PP 06 55 37.5 +2.1
LZH *e*S **S** **07 01 49.3 -1.7**
LZH XS sS 07 01 56.3 -3.1
LZH *e*SS SS 07 05 59.0 -0.8
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,116nm,7.2s
LZH LR LR
comp=N,387nm,14.7s
LZH LR LR
comp=Z,601nm,18.0s,MS4.8
YAK Yakutsk 65.45 29 *e*P **P** **06 53 20.4 -2.1**
YAK pmax pmax
comp=Z,16nm,0.8s,mb5.1
YAK Yakutsk 65.45 29 *e*P **P** **06 53 21.9 -0.6**
comp=Z,30nm,0.6s,mb5.5
YAK Yakutsk 65.45 29 *e*P **P** **06 53 21.9 -0.6**
comp=Z,30nm,0.6s,mb5.5
BOSA Boshof 65.98 176 P **P** **06 53 26.2 0.0**
comp=Z,3.6nm,0.5s,mb4.7,baz=19,slow=6.8,SNR=18
BOSA Boshof 65.98 176 P **P** **06 53 26.2 0.0**
BOSA pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
BOSA Boshof 65.98 176 P **P** **06 53 26.2 0.0**
BOSA *e*pP pP 06 53 33.6 +2.3
BOSA Boshof 65.98 176 P **P** **06 53 26.2 0.0**
BOSA *e*pP pP 06 53 33.6 +2.3
CLNS Chul'man 66.28 36 *e*P **P** **06 53 24.5 -3.4**
CLNS pmax pmax
comp=Z,13nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=N,5.0nm,1.4s
CD2 Chengdu 66.67 68 P **P** **06 53 30.5 -0.3**
CD2 AP pP 06 53 34.8 -1.2
CD2 XP sP 06 53 36.5 -1.4
CD2 PCP PcP 06 54 00.3 +0.4
CD2 PP PP 06 55 59.0 +1.5
CD2 S S 07 02 18.8 -3.1
CD2 SS SS 07 06 36.8 -2.3
CD2 AMB AMB
comp=Z,320nm,5.7s
CD2 LR LR
comp=N,490nm,13.7s
CD2 LR LR
comp=Z,680nm,22.0s
HHC Hu-ho-hao-te 67.08 55 *e*P **P** **06 53 33.5 +0.2**
HHC AP pP 06 53 38.0 -0.4
HHC XP sP 06 53 40.8 +0.5
HHC PP PP 06 56 02.8 +2.0
HHC PCS 06 58 05.5
HHC S S 07 02 23.8 -2.8
HHC XS sS 07 02 32.3 -2.8
HHC SCS ScS 07 03 26.5 -3.9
HHC SS SS 07 06 43.8 -1.2
HHC AMB AMB
comp=Z,9.0nm,0.8s,mb4.8
HHC AMB AMB
comp=Z,219nm,3.8s
HHC LR LR
comp=N,467nm,14.3s,MS4.9
HHC LR LR
comp=E,384nm,15.5s,MS4.9
HHC LR LR
comp=Z,570nm,16.6s,MS4.9
HIA Hailar 67.70 44 *i*P **P** **06 53 36.6 -0.5**
XAN Xi'an 68.78 63 P **P** **06 53 43.5 -0.6**
XAN AP pP 06 53 46.0 -3.3
XAN PP PP 06 56 13.8 -2.0
XAN S S 07 02 45.5 -1.7
XAN SS SS 07 07 10.5 -1.1
XAN AMB AMB
comp=Z,2.0nm,0.5s,mb4.3
XAN LR LR
comp=N,116nm,23.8s
XAN LR LR
comp=E,162nm,17.4s
XAN LR LR
comp=Z,316nm,19.8s,MS4.5
KMI Kunming 68.94 74 P **P** **06 53 44.8 -0.4**
KMI XP sP 06 53 51.0 -1.3
KMI AMB AMB
comp=Z,16nm,0.9s,mb5.0
CHG Chiang Mai 69.43 82 ⇓P **P** **06 53 46.9 -1.5**
comp=Z,22nm,0.9s,mb5.1
CHTO Chiang Mai 69.43 82 *e*P **P** **06 53 46.5 -1.9**
CHTO pmax pmax
comp=Z,19nm,0.9s,mb5.0
CHTO Chiang Mai 69.43 82 *e*P **P** **06 53 46.5 -1.9**
comp=Z,19nm,0.9s,mb5.0
SUR Sutherland 69.61 180 P **P** **06 53 50.7 +1.7**
comp=Z,17nm,1.2s,mb4.8,baz=31,slow=9.6,SNR=4.6
CM31 Chiang Mai Arr 69.63 82 *e*P **P** **06 53 47.4 -2.1**
comp=Z,19nm,1.0s,mb5.0
CMAR Chiang Mai Arr 69.63 82 P **P** **06 53 47.9 -1.7**
comp=Z,18nm,0.8s,mb5.0,baz=303,slow=7.6,SNR=84
CMAR Chiang Mai Arr 69.63 82 P **P** **06 53 47.9 -1.7**
CMAR pmax pmax
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 69.63 82 P **P** **06 53 47.8 -1.8**
FCC Fort Churchill 69.93 330 *e*P **P** **06 53 50.5 -0.3**
FCC Fort Churchill 69.93 330 *e*P **P** **06 53 50.5 -0.3**
BJI Beijing 70.50 54 P **P** **06 53 53.0 -1.6**
BJI S S 07 03 05.3 -1.9
BJI SS SS 07 07 36.5 -1.3
BJI AMB AMB
comp=Z,5.0nm,0.4s,mb4.8
BJI AMB AMB
comp=Z,81nm,3.5s
BJI LR LR
comp=N,630nm,10.7s
BJI LR LR
comp=E,1µm,18.7s
BJI LR LR
comp=Z,718nm,19.2s
NANT Nan 70.82 81 ⇑P **P** **06 53 54.0 -2.9**
comp=Z,290nm,1.0s,mb6.2
GYA Guiyang 71.19 71 ⇓*i*P **P** **06 53 58.3 -0.7**
GYA PP PP 06 56 37.0 +0.3
GYA S S 07 03 11.3 -4.3
GYA SKS 07 03 57.3
GYA SS SS 07 07 45.3 -3.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,70nm,6.0s
GYA LR LR
comp=N,320nm,17.6s,MS4.8
GYA LR LR
comp=E,280nm,17.2s,MS4.8
GYA LR LR
comp=Z,510nm,17.8s,MS4.8
BILL Bilibino 71.51 13 ⇓*i*P **P** **06 53 59.8 -0.5**
BILL pmax pmax
comp=Z,12nm,0.8s,mb4.9
BILL MLR MLR
comp=Z,400nm,23.0s,MS4.6
BILL Bilibino 71.51 13 *e*P **P** **06 53 59.9 -0.4**
comp=Z,6.4nm,0.7s,mb4.7
BILL Bilibino 71.51 13 *e*P **P** **06 53 59.9 -0.4**
comp=Z,6.4nm,0.7s,mb4.7
SEY Seymchan 72.56 21⇑ *e*P **P** **06 54 06.3 -0.3**
KKTK Khon Kaen 73.88 82 P **P** **06 54 14.1 -1.1**
comp=Z,309nm,0.7s,mb6.3
CN2 Changchun 74.04 47 *e*P **P** **06 54 15.0 -0.7**
CN2 *e*XP sP 06 54 22.0 -0.7
CN2 *e*S S 07 03 44.3 -3.3
CN2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
YKA Yellowknife Ar 74.06 340 P **P** **06 54 14.6 -0.9**
comp=Z,4.5nm,0.8s,mb4.5,baz=32,slow=5.8,SNR=69
YKA Yellowknife Ar 74.06 340 P **P** **06 54 14.6 -0.9**
YKA pmax pmax
comp=Z,5.0nm,0.8s
COLD Coldfoot 75.29 356 *e*P **P** **06 54 22.4 -0.1**
comp=Z,13nm,1.0s,mb4.8
COLD Coldfoot 75.29 356 *e*P **P** **06 54 22.4 -0.1**
comp=Z,13nm,1.0s,mb4.8
FFC Flin Flon 75.86 330 *e*P **P** **06 54 26.1 +0.1**
FFC pmax pmax
comp=Z,12nm,1.0s,mb4.8
FFC Flin Flon 75.86 330 *e*P **P** **06 54 26.1 +0.1**
comp=Z,12nm,1.0s,mb4.8
FFC Flin Flon 75.86 330 *e*P **P** **06 54 26.1 +0.1**
comp=Z,12nm,1.0s,mb4.8
MDJ Mudanjiang 75.88 44 P **P** **06 54 24.8 -1.5**
MDJ AMB AMB
comp=Z,7.0nm,2.1s,mb4.2
MDJ AMB AMB
comp=Z,236nm,5.5s
ULM Lac du Bonnet 76.38 324 P **P** **06 54 28.6 -0.4**
comp=Z,9.3nm,0.8s,mb4.8,baz=45,slow=4.7,SNR=17
ULM Lac du Bonnet 76.38 324 P **P** **06 54 28.6 -0.5**
NJ2 Nanjing 76.81 60 *e*P **P** **06 54 33.0 +1.1**
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
TNA Tin City 76.95 4 *e*P **P** **06 54 31.9 -0.1**
comp=Z,13nm,0.8s,mb4.9
TNA Tin City 76.95 4 *e*P **P** **06 54 31.9 -0.1**
comp=Z,13nm,0.8s,mb4.9
EGAK Eagle 77.00 352 *e*P **P** **06 54 32.5 +0.2**
EGAK Eagle 77.00 352 *e*P **P** **06 54 32.5 +0.2**
DAWY Dawson 77.49 351 *e*P **P** **06 54 35.3 +0.2**
DAWY Dawson 77.49 351 *e*P **P** **06 54 35.3 +0.2**
LHS Liberty Hill 77.97 304 *e*P **P** **06 54 41.2 +2.9**
BPAW Bear Paw Mtn. 78.45 356 *e*P **P** **06 54 39.2 -1.2**
comp=Z,8.9nm,0.9s,mb4.7
BPAW Bear Paw Mtn. 78.45 356 *e*P **P** **06 54 39.2 -1.2**
comp=Z,8.9nm,0.9s,mb4.7
BLO Bloomington 78.66 311 *e*P **P** **06 54 36.5 -5.5**
BLO *e**PP pP 06 54 51.7 +4.5
BLO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
BLO Bloomington 78.66 311 *e*P **P** **06 54 36.5 -5.5**
comp=Z,6.9nm,0.7s,mb4.7
BLO *e*pP pP 06 54 51.7 +4.5
MCK McKinley 78.70 355 *e*P **P** **06 54 42.2 +0.4**
MCK *e*pP pP 06 54 48.5 +1.5
MCK McKinley 78.70 355 *e*P **P** **06 54 42.2 +0.4**
MCK *e*pP pP 06 54 48.5 +1.5
CHUM Lake Minchumin 78.73 357 *e*P **P** **06 54 42.8 +0.9**
comp=Z,21nm,1.1s,mb5.0
CHUM Lake Minchumin 78.73 357 *e*P **P** **06 54 42.8 +0.9**
comp=Z,21nm,1.1s,mb5.0
WCI Wyandotte Cave 79.12 310 *e*P **P** **06 54 45.5 +0.9**
WCI Wyandotte Cave 79.12 310 *e*P **P** **06 54 45.5 +1.0**
KSRS Korea Array 79.44 51 P **P** **06 54 44.6 -1.7**
comp=Z,12nm,0.8s,mb4.9,baz=308,slow=5.0,SNR=21
KSRS LR LR 07 35 08.8
comp=Z,352nm,18.8s,MS4.7,baz=305,slow=40
PPLA Purkeypile 79.71 357 *e*P **P** **06 54 47.1 -0.2**
comp=Z,8.5nm,0.7s,mb4.8
PPLA Purkeypile 79.71 357 *e*P **P** **06 54 47.1 -0.2**
comp=Z,8.5nm,0.7s,mb4.8
HYT Haines Junctio 80.36 349 *e*P **P** **06 54 52.5 +1.6**
HYT Haines Junctio 80.36 349 *e*P **P** **06 54 52.5 +1.6**
ECSD EROS,Sioux Fal 81.26 319 *e*P **P** **06 54 55.8 -0.2**
comp=Z,5.2nm,0.7s,mb4.6
ECSD EROS,Sioux Fal 81.26 319 *e*P **P** **06 54 55.8 -0.2**
comp=Z,5.2nm,0.7s,mb4.6
EDM Edmonton 81.28 334 *e*P **P** **06 54 55.8 -0.1**
EDM Edmonton 81.28 334 *e*P **P** **06 54 55.8 -0.1**
DLBC Dease Lake 81.30 345 P **P** **06 54 56.9 +0.9**
comp=Z,2.4nm,0.7s,mb4.2,baz=22,slow=8.2,SNR=5.6
DLBC Dease Lake 81.30 345 P **P** **06 54 56.8 +0.9**
RC01 Rabbit Creek A 81.38 355 *e*P **P** **06 54 55.8 -0.5**
comp=Z,32nm,1.2s,mb5.1
RC01 Rabbit Creek A 81.38 355 *e*P **P** **06 54 55.9 -0.4**
comp=Z,32nm,1.2s,mb5.1
PETK Petropavlovsk- 82.19 25 LR LR 07 35 21.6
comp=Z,450nm,18.3s,MS4.9,baz=327,slow=38
LRAL Lakeview Retre 82.89 306 *e*P **P** **06 55 05.0 +0.3**
LRAL Lakeview Retre 82.89 306 *e*P **P** **06 55 05.0 +0.2**
BDFB Brasilia 83.58 245 P **P** **06 55 08.8 +0.5**
comp=Z,1.4nm,0.5s,mb4.3,baz=45,slow=14,SNR=7.5
BDFB Brasilia 83.58 245 P **P** **06 55 08.9 +0.5**
BDFB pmax pmax
comp=Z,1.0nm,0.5s
BDFB Brasilia 83.58 245 *e*P **P** **06 55 10.3 +1.9**
EGMT Eagleton 84.13 329 *e*P **P** **06 55 11.2 +0.4**
comp=Z,31nm,1.1s,mb5.3
EGMT Eagleton 84.13 329 *e*P **P** **06 55 11.2 +0.4**
comp=Z,31nm,1.1s,mb5.3
KDAK Kodiak Island 84.83 357 P **P** **06 55 12.5 -1.7**
comp=Z,26nm,1.2s,mb5.2,baz=298,slow=8.7,SNR=2.1
KDAK Kodiak Island 84.83 357 P **P** **06 55 12.5 -1.7**
KDAK pmax pmax
comp=Z,26nm,1.2s,mb5.2
WALA Waterton Lakes 84.90 332 *e*P **P** **06 55 15.4 +0.7**
WALA Waterton Lakes 84.90 332 *e*P **P** **06 55 15.4 +0.7**
YBMT Yellow Bay 85.93 331 *e*P **P** **06 55 21.6 +1.7**
YBMT Yellow Bay 85.93 331 *e*P **P** **06 55 21.6 +1.8**
MIAR Mount Ida 85.95 311 *e*P **P** **06 55 21.1 +0.8**
MIAR pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
MIAR Mount Ida 85.95 311 *e*P **P** **06 55 21.1 +0.8**
comp=Z,6.9nm,0.8s,mb4.9
MIAR Mount Ida 85.95 311 *e*P **P** **06 55 21.1 +0.9**
comp=Z,6.9nm,0.8s,mb4.9
JTMT Jette 86.13 332 *e*P **P** **06 55 22.0 +1.1**
JTMT Jette 86.13 332 *e*P **P** **06 55 22.0 +1.1**
MAT Matsushiro 86.15 46 P **P** **06 55 19.2 -2.0**
MJAR Matsushiro Arr 86.15 46 P **P** **06 55 19.7 -1.5**
comp=Z,7.2nm,0.8s,mb5.0,baz=316,slow=4.7,SNR=14
MJAR LR LR 07 38 45.5
comp=Z,345nm,18.4s,MS4.8,baz=35,slow=39
MJAR Matsushiro Arr 86.15 46 P **P** **06 55 19.7 -1.5**
MJAR LR LR 07 38 45.5
SWMT Swartz Lake 86.22 331 *e*P **P** **06 55 22.0 +0.7**
SWMT Swartz Lake 86.22 331 *e*P **P** **06 55 22.0 +0.7**
FX1 Attu Island--F 86.72 16 P **P** **06 55 22.5 -1.2**
comp=Z,12nm,0.7s,mb5.2,baz=199,slow=20,SNR=2.8
FX1 Attu Island--F 86.72 16 P **P** **06 55 22.5 -1.2**
FX1 pmax pmax
comp=Z,12nm,0.7s
PHWY Pilot Hill 87.47 323 *e*P **P** **06 55 31.4 +3.8**
PDAR Pinedale Array 88.23 326 P **P** **06 55 31.7 +0.6**
comp=Z,0.8nm,0.7s,mb4.1,baz=67,slow=5.0,SNR=6.2
PDAR LR LR 07 35 31.0
comp=Z,327nm,19.1s,MS4.8,baz=23,slow=36
PDAR Pinedale Array 88.23 326 P **P** **06 55 31.7 +0.6**
PDAR LR LR 07 35 31.0
JLU Jordanelle 90.81 326 *e*P **P** **06 55 44.3 +1.0**
SIV San Ignacio 93.46 253 P **P** **06 55 56.6 +0.8**
comp=Z,0.6nm,0.4s,mb4.4,baz=183,slow=15,SNR=5.3
NVAR Mina Array Bea 95.55 329 P **P** **06 56 05.3 +0.2**
comp=Z,0.5nm,0.8s,mb4.0,baz=42,slow=4.1,SNR=3.5
TXAR Lajitas Array 95.63 314 P **P** **06 56 06.0 +0.3**
comp=Z,0.5nm,0.7s,mb4.1,baz=68,slow=4.8,SNR=7.0
TXAR Lajitas Array 95.63 314 P **P** **06 56 06.0 +0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
CPUP Villa Florida 97.08 242 LR LR 07 40 01.9
comp=Z,802nm,18.2s,MS5.2,baz=32,slow=35
WRA Warramunga Arr 120.17 93 PKP PKPdf 07 01 29.9 -1.3
comp=Z,1.4nm,0.7s,baz=302,slow=1.9,SNR=6.1
WRA Warramunga Arr 120.17 93 PKIKP PKPdf 07 01 29.9 -1.3
WRA pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 121.76 97 PKP PKPdf 07 01 33.1 -1.1
comp=Z,2.2nm,0.8s,baz=310,slow=2.0,SNR=14
ASAR Alice Springs 121.76 97 PKIKP PKPdf 07 01 33.1 -1.1
ASAR pmax pmax
comp=Z,2.0nm,0.8s
CTA Charters Tower 129.70 86 PKP PKPdf 07 01 49.6 +0.1
comp=Z,3.4nm,0.8s,baz=270,slow=5.1,SNR=2.4
CTA Charters Tower 129.70 86 PKIKP PKPdf 07 01 49.6 +0.1
CTA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 131.58 102 PKP PKPdf 07 01 53.0 +0.4
comp=Z,2.7nm,0.8s,baz=30,slow=4.4,SNR=4.4
STKA Stephens Creek 131.58 102 PKIKP PKPdf 07 01 53.0 +0.3

BJI ***30*** *06:45:12.6,5076N∝8730E,h16km,ML3.8,Ms3.0,Msz2.8*
ASRS ***30*** *06:45:22.7±0.5,4985N∝8716E,h15km,Ms3.1*
IDC ***30*** *06:45:22.5±1.0,4992N∝8722E,h0km,mb3.8/6, mb1 3.8/11,mb1mx3.7/30,mbtmp3.8/11,ML3.7/5,Error ellipse: s-maj=13.8km s-min=11.8km az=124.0*
ISCJB ***30*** *06:45:23.4±0.5,4996N±003∝8709E±006,h10km,mb3.7/6, Error ellipse: s-maj=5.2km s-min=3.9km az=14.6*
NEIC ***30*** *06:45:25.0±0.7,4997N∝8716E,h10km, Error ellipse: s-maj=11.9km s-min=10.8km az=129.0*
NNC ***30*** *06:45:26.9±5.5,5004N∝8659E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=122.5km s-min=37.5km az=128.0*
ISC 30 06:45:25.3±0.5,4998N±003∝8713E±006,h10km,n26, σ**1§15/38,mb3.7/6,1C-3D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.46**	**43**	*e*Pg	**Pg**		**06 45 33.6**	**-0.7**
AKAR				*e*Sg	**Sg**		**06 45 41.1**	**+0.7**
UKR	**Ust'-Kan**	**1.78**	**303**	*e*Pg	**Pg**		**06 45 56.5**	**-3.0**
UKR				*e*Sg	**Sg**		**06 46 22.0**	**-0.6**

TASR	**Tashtagol**	**2.82**	**9**	*e*Pg	**Pg**	**06 46 15.9**	**-3.4**
TASR				*e*Sg	**Sg**	**06 46 54.6**	**-1.2**
ZAA0	**Zalesovo Array**	**4.22 341**		*e*Pn	**Pn**	**06 46 30.8**	**+1.2**
ZAA0				*e*Sn	**Sn**	**06 47 20.0**	**+1.1**
ZALV	**Zalesovo Beam**	**4.22 341**		Pn	**Pn**	**06 46 30.9**	**+1.3**
	8.5nm,0.3s,baz=163,slow=14,SNR=106						
ZALV				Sn	**Sn**	**06 47 20.8**	**+1.9**
	9.7nm,0.3s,baz=166,slow=26,SNR=8.3						
ZALV				Lg		06 47 36.9	
	16nm,0.3s,baz=161,slow=28,SNR=9.3						
MK31	**Makanchi Array**	**4.54 227**		Pn	**Pn**	**06 46 34.7**	**+0.7**
	6.9nm,0.6s,baz=52,slow=12,SNR=782						
MK31				⇓Pg	**Pg**	**06 46 46.2**	**-6.0**
	14nm,0.4s,baz=47,slow=15,SNR=17						
MK31				⇑Sn	**Sn**	**06 47 26.1**	**-0.6**
	12nm,0.3s						
MK31				⇓Lg		06 47 44.6	
	47nm,0.5s,baz=39,slow=30,SNR=12						
MK31	**Makanchi Array**	**4.54 227**		*e*Pn	**Pn**	**06 46 34.7**	**+0.7**
MKAR	**Makanchi Array**	**4.54 227**		Pn	**Pn**	**06 46 34.6**	**+0.7**
	4.8nm,0.3s,baz=54,slow=12,SNR=283						
MKAR				Sn	**Sn**	**06 47 26.2**	**-0.5**
	10nm,0.3s,baz=54,slow=16,SNR=6.9						
MKAR				Lg		06 47 43.8	
	20nm,0.3s,baz=45,slow=17,SNR=7.0						
MKAR	**Makanchi Array**	**4.54 227**		Pn	**Pn**	**06 46 34.6**	**+0.7**
MKAR				Sn	**Sn**	**06 47 26.2**	**-0.5**
MKAR				Lg		06 47 43.8	
NVS	**Novosibirsk**	**5.42 335**		*e*Pn	**Pn**	**06 46 46.2**	**+0.2**
NVS				*e*Pg	**Pg**	**06 47 04.1**	**-4.9**
NVS				*e*Sn	**Sn**	**06 47 49.5**	**+1.2**
NVS				*e*Sg	**Sg**	**06 48 15.8**	**-3.3**
KURK	**Kurchatov**	**5.50 281**		Pn	**Pn**	**06 46 47.6**	**+0.5**
	2.1nm,0.3s,baz=94,slow=15,SNR=74						
KURK				Sn	**Sn**	**06 47 52.7**	**+2.3**
	2.0nm,0.3s,baz=318,slow=16,SNR=7.7						
KURK				Lg		06 48 17.8	
	1.4nm,0.3s,baz=27,slow=7.6,SNR=4.5						
KURK	**Kurchatov**	**5.50 281**		Pn	**Pn**	**06 46 47.6**	**+0.5**
KURK				Sn	**Sn**	**06 47 52.7**	**+2.3**
KURK				Lg		06 48 17.8	
WMQ	**Urumqi**	**6.18 176**		P	**Pn**	**06 46 57.8**	**+1.3**
WMQ				S	**Sn**	**06 48 07.3**	**+0.2**
WMQ				Smax			
	comp=N,51nm,0.8s						
WMQ				Smax			
	comp=E,54nm,1.0s						
WMQ				LR	LR		
	comp=N,46nm,24.0s						
WMQ				LR	LR		
	comp=E,241nm,23.0s						
WMQ				LR	LR		
	comp=Z,205nm,29.0s						
TKM2	**Tokmak 2**	**10.63 233**		⇓Lg		06 50 58.9	
	comp=Z,7.6nm,0.7s						
BVAR	**Borovoye Array**	**10.87 293**		Pn	**Pn**	**06 47 59.3**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=108,slow=15,SNR=15						
SONM	**Songino Array**	**12.85 92**		Pn	**Pn**	**06 48 27.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=282,slow=14,SNR=3.6						
SONM				Lg		06 52 13.6	
	comp=Z,0.1nm,0.3s,baz=283,slow=27,SNR=5.7						
SONM	**Songino Array**	**12.85 92**		Pn	**Pn**	**06 48 27.4**	**-0.5**
SONM				Lg		06 52 13.6	
KK31	**Karatay Array**	**13.33 245**		Pn	**Pn**	**06 48 30.7**	**-3.8**
	comp=Z,0.8nm,0.5s,baz=51,slow=13,SNR=18						
HFS	**Hagfors**	**41.12 313**		P	**P**	**06 53 08.8**	**-0.2**
	comp=Z,1.9nm,0.6s,mb3.9,baz=82,slow=11,SNR=4.1						
NOA	**NORSAR Array B**	**41.96 315**		P	**P**	**06 53 15.7**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.6,baz=66,slow=7.7,SNR=2.5						
DAVOX	**Davos/Dischmat**	**49.26 298**		P	**P**	**06 54 13.8**	**+0.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=90,slow=11,SNR=4.4						
EKA	**Eskdalemuir Ar**	**51.39 315**		P	**P**	**06 54 28.8**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=66,slow=6.6,SNR=6.4						
ESDC	**Sonseca Array**	**61.57 299**		P	**P**	**06 55 41.8**	**-0.7**
	comp=Z,0.1nm,0.3s,mb3.4,baz=41,slow=7.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**77.14 275**		P	**P**	**06 57 17.6**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=31,slow=5.2,SNR=7.5						
MAW	**Mawson**	**118.68 190**		PKP	PKPdf	07 04 08.4	-3.5
	comp=Z,13nm,0.8s,baz=230,slow=15,SNR=11						
CPUP	**Villa Florida**	**143.93 298**		PKP	PKPdf	07 04 57.4	-3.3
	comp=Z,0.7nm,0.5s,baz=94,slow=2.2,SNR=5.6						

*IDC **30** 06:51:54.5±0.9, 5249N×16834W, h0km, mb4.0/17, mb1 4.2/18, mb1mx4.0/28, mbtmp4.0/18, ML3.2/1, MS4.9/1, Ms1 4.8/1, ms1mx3.4/41, Error ellipse: s-maj=30.1km s-min=13.6km az=2.0*

*ISCJB **30** 06:51:57.1±0.6, 5224N±007×1683W±0.1, h33km, mb3.9/16, Error ellipse: s-maj=10.6km s-min=9.2km az=19.6*

*NEIC **30** 06:51:58.8±1.9, 5240N×16822W, h30km±12km, ML3.4(AEIC), Error ellipse: s-maj=15.6km s-min=7.7km az=169.0*

ISC 30 06:51:59.4±0.6, 5237N±008×16818W±010, h35km, n28, σ1§04/28, mb3.9/16, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.73**	**326**	P	**Pn**	**06 52 12.8**	**-0.3**
NIKO				S	**Sn**	**06 52 25.0**	**+1.9**
OKCE	**Okmok Cone E**	**1.06**	**1**	P	**Pn**	**06 52 18.2**	**+0.5**
OKCD	**Okmok Cone D**	**1.06**	**2**	P	**Pn**	**06 52 18.0**	**+0.3**
UNV	**Unalaska Valle**	**1.79**	**34**	P	**Pn**	**06 52 27.1**	**-0.6**
AKUT	**Akutan**	**2.29**	**38**	*e*Pn	**Pn**	**06 52 33.5**	**-1.0**
KDAK	**Kodiak Island**	**10.45**	**53**	Pn	**Pn**	**06 54 24.4**	**-2.1**
	0.7nm,0.3s,baz=309,slow=16,SNR=11						
FX1	**Attu Island--F**	**11.35**	**280**	Pn	**Pn**	**06 54 37.9**	**-1.0**
	0.6nm,0.3s,baz=269,slow=21,SNR=3.8						
PETK	**Petropavlovsk-**	**20.56**	**286**	P	**P**	**06 56 34.9**	**+0.2**
	5.0nm,0.6s,baz=82,slow=14,SNR=16						
YKA	**Yellowknife Ar**	**29.70**	**49**	P	**P**	**06 58 02.1**	**+0.6**
	0.2nm,0.6s,mb3.1,baz=275,slow=8.3,SNR=3.7						
YKA				PcP	PcP	07 01 05.1	+0.4
	0.2nm,0.7s,baz=276,slow=2.9,SNR=3.8						
YKA	**Yellowknife Ar**	**29.70**	**49**	P	**P**	**06 58 02.1**	**+0.6**
YKA				PcP	PcP	07 01 05.1	+0.4
NVAR	**Mina Array Bea**	**36.94**	**92**	P	**P**	**06 59 06.8**	**+2.0**
	0.5nm,0.6s,mb3.5,baz=330,slow=6.3,SNR=4.5						
PDAR	**Pinedale Array**	**39.69**	**80**	P	**P**	**06 59 28.9**	**+1.1**
	1.3nm,1.0s,mb3.6,baz=300,slow=3.3,SNR=4.8						
SONM	**Songino Array**	**51.92**	**301**	P	**P**	**07 01 03.6**	**-0.7**
	0.6nm,0.6s,mb3.7,baz=62,slow=6.4,SNR=4.6						
TXAR	**Lajitas Array**	**52.02**	**90**	P	**P**	**07 01 05.8**	**+0.6**
	0.8nm,0.7s,mb3.8,baz=288,slow=5.7,SNR=8.3						
SCHQ	**Schefferville**	**54.94**	**44**	LR	LR	07 28 33.9	
	comp=Z,1μm,18.2s,baz=89,slow=40						
ARCES	**ARCESS Array B**	**58.00**	**354**	P	**P**	**07 01 45.5**	**-2.3**
	4.7nm,1.0s,mb4.5,baz=350,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**64.33**	**314**	P	**P**	**07 02 28.8**	**-2.2**
	0.4nm,0.6s,mb3.7,baz=50,slow=6.1,SNR=4.9						
NOA	**NORSAR Array B**	**66.94**	**0**	P	**P**	**07 02 47.6**	**0.0**
	1.4nm,0.8s,mb4.0,baz=0.4,slow=6.3,SNR=3.2						
HFS	**Hagfors**	**67.84**	**359**	P	**P**	**07 02 52.9**	**-0.4**
	2.3nm,0.4s,mb4.5,baz=35,slow=3.5,SNR=14						
AKTK	**Aktyubinsk**	**70.37**	**331**	P	**P**	**07 03 09.3**	**+0.2**
AKTO	**Aktyubinsk**	**70.37**	**331**	P	**P**	**07 03 09.3**	**+0.2**
	2.1nm,0.8s,mb4.1,baz=36,slow=8.1,SNR=9.3						
EKA	**Eskdalemuir Ar**	**71.95**	**9**	P	**P**	**07 03 19.3**	**+0.6**
	1.6nm,0.8s,mb4.0,baz=307,slow=47,SNR=3.0						
AKASG	**Malin Array Be**	**76.25**	**349**	P	**P**	**07 03 43.5**	**-0.3**
	1.3nm,0.5s,mb4.1,baz=13,slow=5.9,SNR=3.2						
CMAR	**Chiang Mai Ar**	**77.33**	**284**	P	**P**	**07 03 51.1**	**+0.8**
	1.3nm,0.8s,mb3.9,baz=40,slow=6.4,SNR=7.0						
BRTR	**Keskin Array B**	**86.34**	**343**	P	**P**	**07 04 38.9**	**+1.4**
	0.9nm,0.6s,mb4.2,baz=9.1,slow=3.1,SNR=4.2						
ESDC	**Sonseca Array**	**87.31**	**12**	P	**P**	**07 04 42.8**	**+0.5**
	0.3nm,0.5s,mb3.8,baz=349,slow=4.7,SNR=6.1						
STKA	**Stephens Creek**	**94.67**	**221**	P	**P**	**07 05 15.8**	**-0.5**
	1.3nm,0.7s,mb4.5,baz=0.0,slow=3.0,SNR=2.8						
STKA	**Stephens Creek**	**94.67**	**221**	P	**P**	**07 05 15.8**	**-0.5**

IDC 30 06:56:57.5±3.2, 799S×12007E, h209km±33km, mb3.4/5, mb1 3.5/6, mb1mx3.3/17, mbtmp3.4/6, Error ellipse: s-maj=87.2km s-min=9.6km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.22**	**132**	P	P	07 00 55.5	+0.3
	0.7nm,0.3s,baz=310,slow=10,SNR=13						
WRA				S	S	07 04 13.3	+0.5
	0.6nm,0.3s,baz=231,slow=29,SNR=7.6						
ASAR	**Alice Springs**	**20.46**	**141**	P	P	07 01 18.9	-0.4
	4.2nm,0.7s,baz=316,slow=8.5,SNR=30						
ASAR				S	S	07 04 57.7	+1.1
	1.8nm,0.9s,baz=315,slow=18,SNR=7.9						
STKA	**Stephens Creek**	**31.08**	**143**	P	P	07 02 57.0	+0.8
	3.8nm,0.6s,baz=316,slow=8.5,SNR=11						
SONM	**Songino Array**	**56.89**	**349**	P	P	07 06 21.7	+1.2
	0.4nm,0.6s,baz=169,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**64.06**	**332**	P	P	07 07 09.1	+0.1
	0.7nm,0.6s,baz=152,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	**68.49**	**338**	P	P	07 07 36.0	-1.0
	0.8nm,0.6s,baz=144,slow=2.8,SNR=3.6						

IDC 30 07:03:47.8±8.7, 1716S×17916W, h530km±101km, mb3.2/9, mb1 3.5/9, mb1mx3.3/17, mbtmp3.2/9, Error ellipse: s-maj=44.2km s-min=32.0km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.37**	**240**	P	P	07 10 24.0	+0.4
	2.5nm,0.6s,baz=91,slow=9.4,SNR=11						
WRA	**Warramunga Arr**	**44.07**	**259**	P	P	07 11 08.1	-0.8
	0.5nm,0.3s,baz=91,slow=7.7,SNR=3.5						
ASAR	**Alice Springs**	**44.31**	**254**	P	P	07 11 10.6	-0.3
	4.7nm,0.5s,baz=89,slow=7.8,SNR=122						
MJAR	**Matsushiro Arr**	**66.88**	**324**	P	P	07 13 47.3	+0.1
	1.2nm,0.5s,baz=157,slow=6.4,SNR=4.4						
PETK	**Petropavlovsk-**	**72.78**	**346**	P	P	07 14 22.1	+0.1
	2.5nm,0.8s,baz=139,slow=8.7,SNR=2.4						
NVAR	**Mina Array Bea**	**79.38**	**44**	P	P	07 14 59.6	+0.8
	0.2nm,0.4s,baz=216,slow=6.9,SNR=5.2						
TXAR	**Lajitas Array**	**86.20**	**58**	P	P	07 15 32.7	-0.6
	0.3nm,0.7s,baz=224,slow=6.8,SNR=4.1						
PDAR	**Pinedale Array**	**87.30**	**44**	P	P	07 15 38.5	+0.3
	0.6nm,0.7s,baz=213,slow=3.1,SNR=4.5						
YKA	**Yellowknife Ar**	**93.95**	**25**	P	P	07 16 07.9	-0.5
	0.2nm,0.6s,baz=237,slow=4.6,SNR=5.5						
ARCES	**ARCESS Array B**	**125.45**	**350**	PKP	PKPdf	07 21 47.3	-0.6
	3.8nm,1.0s,baz=0.0,slow=1.8,SNR=3.0						
GERES	**GERESS Array B**	**146.71**	**344**	PKPbc	PKPbc	07 22 30.1	0.0
	0.5nm,0.5s,baz=27,slow=3.3,SNR=6.3						

IDC 30 07:35:44.4±6.4, 2241S×17783W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/16, mbtmp4.2/3, Error ellipse: s-maj=176.9km s-min=101.4km az=143.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.14**	**246**	P	P	07 42 57.2	+0.2
	1.2nm,0.4s,baz=97,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**44.27**	**259**	P	P	07 43 55.9	-0.1
	1.6nm,0.4s,baz=94,slow=7.3,SNR=47						
WRA	**Warramunga Arr**	**44.52**	**264**	P	P	07 43 57.9	-0.2
	1.7nm,0.3s,baz=103,slow=8.4,SNR=51						
HFS	**Hagfors**	**141.44**	**351**	PKP	PKPdf	07 55 16.5	-0.4
	9.0nm,1.1s,baz=5.7,slow=1.4,SNR=9.7						

*ISCJB **30** 07:42:56.0±0.8, 585N±009×1259E±02, h151km±6km, mb3.8/10, Error ellipse: s-maj=27.4km s-min=12.9km az=165.8*

*IDC **30** 07:42:57.3±0.8, 593N×12597E, h150km±6km, mb3.6/9, mb1 3.7/9, mb1mx3.6/20, mbtmp3.6/9, Error ellipse: s-maj=44.5km s-min=12.2km az=71.0*

*NEIC **30** 07:42:57.2±1.1, 592N×12600E, h149km±10km, mb4.1/1, Error ellipse: s-maj=43.8km s-min=11.4km az=69.0*

ISC 30 07:42:57.2±0.8, 587N±008×1259E±02, h146km±6km, n15, σ0§78/17, mb3.8/10, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.94**	**283**	*e*P	**Pn**	**07 43 20.9**	**-0.3**
GSPH				*e*S	**Sn**	**07 43 39.1**	**-0.2**
DAV	**Davao City (W)**	**1.23**	**346**	P	**Pn**	**07 43 23.7**	**-0.1**
	78nm,0.3s,baz=236,slow=19,SNR=10						
DAV				S	**Sn**	**07 43 44.3**	**+0.3**
	105nm,0.3s,baz=100,slow=19,SNR=12						
DAV	**Davao City (W)**	**1.23**	**346**	P	**Pn**	**07 43 23.7**	**-0.1**
DAV				S	**Sn**	**07 43 44.3**	**+0.3**
CTBH	**Cotabato--PC H**	**2.10**	**310**	⇓*e*P	**Pn**	**07 43 33.4**	**+0.1**
WRAB	**Tennant Creek**	**26.96**	**162**	*e*P	**P**	**07 48 25.2**	**-0.1**
	3.6nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**26.97**	**162**	P	**P**	**07 48 24.9**	**-0.5**
	0.4nm,0.4s,mb3.4,baz=342,slow=9.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**29.09**	**298**	P	**P**	**07 48 45.2**	**+0.9**
	0.5nm,0.4s,mb3.6,baz=99,slow=7.2,SNR=4.4						
ASAR	**Alice Springs**	**30.38**	**165**	P	**P**	**07 48 55.8**	**+0.2**
	1.9nm,0.5s,mb4.0,baz=344,slow=7.2,SNR=45						
ASAR				PcP	PcP	07 51 51.6	-0.4
	0.5nm,0.6s,baz=348,slow=1.4,SNR=4.2						
NWAO	**Narrogin (SRO)**	**39.44**	**191**	P	**P**	**07 50 14.0**	**+0.9**
	5.3nm,0.5s,mb4.4,baz=25,slow=8.9,SNR=8.5						
SONM	**Songino Array**	**45.01**	**341**	P	**P**	**07 50 59.5**	**+1.5**
	0.2nm,0.4s,mb3.1,baz=159,slow=8.6,SNR=2.9						
SONM				PcP	PcP	07 52 36.3	-0.2
	0.3nm,0.7s,baz=138,slow=4.1,SNR=3.6						
MKAR	**Makanchi Array**	**55.32**	**325**	P	**P**	**07 52 15.1**	**-0.6**
	1.8nm,0.5s,mb4.0,baz=118,slow=7.9,SNR=29						
MKAR				PcP	PcP	07 53 13.1	-1.4
	0.5nm,0.6s,baz=126,slow=2.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**58.31**	**333**	P	**P**	**07 52 34.8**	**-1.8**
	0.5nm,0.3s,mb3.8,baz=118,slow=8.6,SNR=3.5						
BRTR	**Keskin Array B**	**88.01**	**310**	P	**P**	**07 55 30.0**	**-1.1**
	0.6nm,0.8s,mb3.5,baz=115,slow=3.9,SNR=3.3						
ARCES	**ARCESS Array B**	**88.16**	**340**	P	**P**	**07 55 31.8**	**+0.6**
	3.9nm,1.0s,mb4.2,baz=71,slow=8.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**121.43**	**289**	PKP	PKPdf	08 01 33.5	-0.8
	0.9nm,0.6s,baz=63,slow=1.5,SNR=8.3						

IDC 30 07:49:09.7±4.1, 3120S×13925E, h0km, mb1 3.4/3, mb1mx3.3/14, mbtmp3.1/3, ML3.1/2, Error ellipse: s-maj=83.7km s-min=15.0km az=35.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.12**	**109**	Pn	Pn	07 49 46.6	+0.3
	3.4nm,0.3s,baz=283,slow=16,SNR=42						
STKA				Pg	Pg	07 49 48.2	-2.1
	3.9nm,0.3s,baz=283,slow=17,SNR=42						
STKA				Lg		07 50 16.6	
	7.2nm,0.3s,baz=276,slow=13,SNR=6.7						
STKA	**Stephens Creek**	**2.12**	**109**	*e*P	Pn	07 49 46.5	+0.2
	9.5nm,0.3s						
STKA				*i*		07 50 12.9	
ASAR	**Alice Springs**	**8.88**	**326**	Pn	Pn	07 51 20.2	+0.9
	0.1nm,0.3s,baz=145,slow=13,SNR=4.5						
ASAR				Sn	Sn	07 52 59.0	-1.1
	0.4nm,0.3s,baz=149,slow=22,SNR=11						
WRA	**Warramunga Arr**	**12.05**	**337**	Pn	Pn	07 52 03.6	+0.8
	0.2nm,0.3s,baz=158,slow=13,SNR=4.2						
WRA				Sn	Sn	07 54 17.3	-0.7
	0.1nm,0.3s,baz=164,slow=22,SNR=2.7						

*TAP **30** 07:55:25.4, 2484N×12288E, h134km±1km, ML3.4, C*

*ISCJB **30** 07:55:26.3±0.9, 2489N±008×12286E±003, h128km±8km, Error ellipse: s-maj=13.7km s-min=4.4km az=178.3*

*JMA **30** 07:55:26.2±0.3, 2505N×12292E, h125km, M2.3*

ISC 30 07:55:26.5±1.1, 2492N±008×12287E±003, h128km±10km, n23, σ0§52/38, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**164**	P	**Pn**	**07 55 45.5**	**+0.2**
TWB1	**Santiao Chiao**	**0.81**	**276**	*e*P	**Pn**	**07 55 47.9**	**+0.3**
	baz=279						
IRIF	**Iriomote-Funau**	**0.98**	**127**	P	**Pn**	**07 55 49.1**	**+0.1**
IRIF				*e*S	**Sn**	**07 56 06.7**	**+0.6**
TWC	**Suao**	**0.98**	**252**	*e*P	**Pn**	**07 55 48.4**	**-0.7**
	baz=251						
TWC				*e*S	**Sn**	**07 56 05.0**	**-1.2**
	baz=251						
NWF	**Wu-fen Shan**	**1.00**	**279**	*e*P	**Pn**	**07 55 49.8**	**+0.6**
	baz=283						
TWE	**Neicheng**	**1.11**	**260**	*e*P	**Pn**	**07 55 50.2**	**-0.1**
	baz=264						
ENA	**Nanau**	**1.14**	**245**	*e*P	**Pn**	**07 55 50.2**	**-0.4**
	baz=244						
HATJ	**Hateruma jima**	**1.21**	**135**	*e*S	**Sn**	**07 56 10.4**	**+0.2**
ENTT	**Nioudou**	**1.22**	**257**	P	**Pn**	**07 55 51.5**	**0.0**
	baz=257						
ENTT				*e*S	**Sn**	**07 56 11.1**	**+0.8**
	baz=257						
JKRS	**Kuro-shima**	**1.24**	**123**	P	**Pn**	**07 55 52.0**	**+0.3**
JKRS				*e*S	**Sn**	**07 56 11.2**	**+0.5**
JIJ	**Ishigaki jima**	**1.28**	**115**	P	**Pn**	**07 55 52.0**	**-0.1**
JIJ				*e*S	**Sn**	**07 56 11.0**	**-0.6**
TWS1	**Kuangyinshan**	**1.33**	**278**	*e*P	**Pn**	**07 55 52.8**	**+0.2**
	baz=273						
NSK	**Sanguang**	**1.40**	**260**	P	**Pn**	**07 55 53.1**	**-0.2**
	baz=257						
NSK				*e*S	**Sn**	**07 56 13.8**	**+0.1**
	baz=257						
TWD	**Chiawan**	**1.43**	**234**	*e*P	**Pn**	**07 55 52.7**	**-1.0**
	baz=234						
TWD				*e*S	**Sn**	**07 56 12.5**	**-1.9**
	baz=234						
NNS	**Nan Shan**	**1.44**	**251**	P	**Pn**	**07 55 53.7**	**-0.1**
	baz=249						
NNS				*e*S	**Sn**	**07 56 15.4**	**+0.7**
	baz=249						
WHF	**Hehuan Shan**	**1.65**	**242**	P	**Pn**	**07 55 56.0**	**-0.2**
	baz=245						
WHF				*e*S	**Sn**	**07 56 18.6**	**-0.3**
	baz=245						
TWT	**Tachien**	**1.68**	**247**	P	**Pn**	**07 55 56.8**	**+0.2**
	baz=254						
TWT				*e*S	**Sn**	**07 56 19.8**	**+0.3**
	baz=254						
JTJ	**Tarama**	**1.69**	**99**	P	**Pn**	**07 55 56.7**	**0.0**
JTJ				*e*S	**Sn**	**07 56 19.3**	**-0.3**
SMLT	**Sun Moon Lake**	**2.07**	**240**	*e*P	**Pn**	**07 56 01.2**	**-0.1**
	baz=239						
TYC	**Yuchr**	**2.10**	**242**	*e*P	**Pn**	**07 56 01.8**	**+0.3**
	baz=242						
TYC				*e*S	**Sn**	**07 56 28.7**	**+0.3**
	baz=242						
ALS	**Alishan**	**2.35**	**234**	*e*P	**Pn**	**07 56 04.5**	**-0.3**
	baz=236						
ALS				*e*S	**Sn**	**07 56 34.6**	**+0.5**
	baz=236						
CHN5	**Tsauling**	**2.40**	**237**	P	**Pn**	**07 56 05.5**	**+0.1**
	baz=231						
CHN5				*e*S	**Sn**	**07 56 35.9**	**+0.7**
	baz=231						
CHN4	**Tsaushan**	**2.60**	**234**	*e*P	**Pn**	**07 56 07.7**	**-0.2**
	baz=235						
CHN4				*e*S	**Sn**	**07 56 40.0**	**+0.1**
	baz=235						

*ISCJB **30** 08:02:59.0±0.6, 2301S±004×7025W±007, h66km±5km, mb3.9/4, Error ellipse: s-maj=11.4km s-min=5.7km az=14.6*

*GUC **30** 08:02:59.3±1.3, 2300S×7020W, h49km±10km, MD4.2, ML3.8*

*IDC **30** 08:03:23.6±5.5, 2337S×6873W, h213km±43km, mb3.4/5, mb1 3.3/6, mb1mx3.2/16, mbtmp3.3/6, Error ellipse: s-maj=54.7km s-min=30.7km az=31.0*

ISC 30 08:02:59.7±0.6, 2299S±004×7028W±008, h60km±5km, n17, σ0§72/24, mb4.0/4, 3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	**Mejillones**	**0.20**	**233**	*e*P	**Pn**	**08 03 08.2**	**-0.9**
MECH				AML	AML	08 03 23.4	
	comp=N,11μm,0.5s						
CEN1	**Los Morros**	**0.41**	**170**	*e*P	**Pn**	**08 03 11.8**	**+1.0**
CEN1				*i* S	**Sn**	**08 03 20.9**	**+2.2**
CEN1				AML	AML	08 03 22.2	
	comp=N,7μm,0.5s						
PECH	**Pedro de Valdi**	**0.68**	**55**	*e*P	**Pn**	**08 03 12.8**	**-0.8**
PECH				*e*S	**Sn**	**08 03 22.8**	**-1.0**
PECH				AML	AML	08 03 23.2	
	comp=E,35μm,0.2s						
ANCH	**Antofagasta**	**0.70**	**190**	⇓*i*P	**Pn**	**08 03 13.5**	**-0.5**
ANCH				*e*S	**Sn**	**08 03 23.6**	**-0.9**
TOCH	**Tocopilla**	**0.89**	**4**	*e*P	**Pn**	**08 03 16.1**	**-0.2**
TOCH				*e*S	**Sn**	**08 03 28.5**	**0.0**
TOCH				AML	AML	08 03 29.1	
	comp=E,9μm,0.3s						
MACH	**Maria Elena**	**0.92**	**31**	*e*P	**Pn**	**08 03 16.6**	**0.0**
MACH				*e*S	**Sn**	**08 03 29.3**	**+0.1**
MACH				AML	AML	08 03 30.4	
	comp=E,164nm,0.3s						
PB04	**Plate Boundary**	**1.02**	**46**	⇓*i*P	**Pn**	**08 03 13.3**	**-4.6**
PB04				*e*S	**Sn**	**08 03 23.3**	**-8.3**
PB04				AML	AML	08 03 24.4	
	comp=E,19μm,0.2s						
LVC	**Limon Verde**	**1.31**	**74**	*e*P	**Pn**	**08 03 21.7**	**-0.1**
LVC				*i* S	**Sn**	**08 03 38.4**	**0.0**
LVC				AML	AML	08 03 39.4	
	comp=E,4μm,0.3s						
PB01	**Plate Boundary**	**2.07**	**21**	⇓*e*P	**Pn**	**08 03 32.6**	**+0.6**
PB01				*e*S	**Sn**	**08 03 57.5**	**+0.9**
PB01				AML	AML	08 04 03.0	
	comp=E,1μm,0.6s						
MNMC	**Miæe Miæ**	**3.89**	**10**	*e*P	**Pn**	**08 03 56.8**	**-0.2**
MNMC				*e*S	**Sn**	**08 04 45.2**	**+3.9**

TKM2	**Tokmak 2**	**7.30**	**28**	P		**Pn**	**08 20 57.9**	**+0.5**
	SNR=30							
TKM2	**Tokmak 2**	**7.30**	**28**	*e*Pn		**Pn**	**08 20 57.8**	**+0.5**
	25nm,0.7s							
SMLA	**Simla**	**7.50**	**134**	*i* P		**Pn**	**08 20 59.4**	**-0.7**
SMLA				*e*S		**Sn**	**08 22 18.3**	**-6.5**
SMLA				*ex*	x		08 22 23.9	
	comp=N,484nm,0.3s							
SMLA				*ex*	x		08 22 24.7	
	comp=E,385nm,0.3s							
KLP	**Kalpa**	**7.87**	**127**	*e*P		**Pn**	**08 21 05.1**	**+0.2**
KLP				*e*S		**Sn**	**08 22 27.3**	**-6.4**
JOSI	**Joshimath**	**9.36**	**127**	*e*P		**Pn**	**08 21 24.5**	**+0.1**
JOSI				*e*S		**Sn**	**08 23 02.6**	**-6.4**
KHET	**Khetri**	**9.41**	**153**	*e*S		**Sn**	**08 23 00.7**	**-10**
KUDL	**Kundal**	**9.61**	**149**	*e*S		**Sn**	**08 23 06.3**	**-8.9**
MK31	**Makanchi Array**	**13.28**	**36**	*e*Pn		**Pn**	**08 22 14.2**	**0.0**
MKAR	**Makanchi Array**	**13.28**	**36**	P		**Pn**	**08 22 14.2**	**-0.1**
	comp=E,0.1nm,0.3s,baz=228,slow=16,SNR=8.6							
DANN	**Dangsing**	**13.57**	**123**	*e*P		**Pn**	**08 22 17.0**	**-1.1**
	comp=E,7.0nm,0.2s							
KOLN	**Koldanda**	**13.84**	**126**	*e*P		**Pn**	**08 22 21.1**	**-0.4**
	comp=E,5.1nm,0.3s							
GKN	**Gorkha**	**14.38**	**122**	*e*P		**Pn**	**08 22 26.6**	**-1.6**
	comp=E,10nm,0.3s							
DMN	**Daman**	**14.95**	**123**	*e*P		**Pn**	**08 22 34.8**	**-0.4**
KKN	**Kakani**	**14.96**	**122**	*e*P		**Pn**	**08 22 35.2**	**0.0**
AB01	**Akbulak array**	**15.01**	**331**	⇓P		**Pn**	**08 22 34.0**	**-1.6**
	comp=E,2.0nm,0.5s							
PKI	**Pulchoki**	**15.18**	**122**	*e*P		**Pn**	**08 22 38.8**	**+0.8**
KURK	**Kurchatov**	**15.19**	**19**	P		**Pn**	**08 22 35.6**	**-2.3**
	comp=E,0.1nm,0.3s,baz=211,slow=11,SNR=4.0							
GUN	**Gumba**	**15.29**	**120**	*e*P		**Pn**	**08 22 39.8**	**+0.4**
	comp=E,5.3nm,0.3s							
JIRN	**Jiri**	**15.66**	**120**	*e*P		**Pn**	**08 22 45.3**	**+1.4**
	comp=E,12nm,0.3s							
RAMN	**Ramite**	**16.39**	**121**	*e*P		**Pn**	**08 22 54.5**	**+1.9**
	comp=E,5.8nm,0.3s							
BVA0	**Borovoye Array**	**16.47**	**359**	⇑P		**Pn**	**08 22 54.1**	**+0.8**
	comp=E,0.5nm,0.7s,baz=161,slow=11,SNR=13							
BVAR	**Borovoye Array**	**16.47**	**359**	P		**Pn**	**08 22 53.0**	**-0.3**
	comp=E,0.8nm,0.3s,baz=164,slow=11,SNR=13							
AKTK	**Aktyubinsk**	**16.70**	**330**	P		**Pn**	**08 22 56.4**	**+0.3**
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑P		**Pn**	**08 22 55.9**	**-0.1**
	comp=E,1.0nm,0.8s							
AKTO	**Aktyubinsk**	**16.70**	**330**	P		**Pn**	**08 22 56.4**	**+0.3**
	comp=E,1.1nm,0.3s,baz=133,slow=9.2,SNR=12							
TAPN	**Taplejung**	**16.92**	**118**	*e*P		**Pn**	**08 23 02.4**	**+3.5**
	comp=E,7.3nm,0.4s							
ODAN	**Odare**	**17.00**	**120**	*e*P		**Pn**	**08 23 02.0**	**+2.2**
	comp=E,11nm,0.5s							
ZALV	**Zalesovo Beam**	**19.88**	**25**	P		**P**	**08 23 30.2**	**+0.7**
	comp=E,1.9nm,0.5s,baz=216,slow=11,SNR=9.5							
ZALV	**Zalesovo Beam**	**19.88**	**25**	P		**P**	**08 23 30.2**	**+0.7**
ARCES	**ARCESS Array B**	**41.07**	**338**	P		**P**	**08 26 38.3**	**+1.0**
	comp=E,6.9nm,1.1s,mb4.0,baz=117,slow=9.6,SNR=5.5							
NOA	**NORSAR Array B**	**44.30**	**323**	P		**P**	**08 27 03.9**	**+0.6**
	comp=E,0.4nm,0.5s,mb3.0,baz=98,slow=7.8,SNR=2.8							
TORD	**Torodi Ar. Bea**	**65.67**	**269**	P		**P**	**08 29 35.0**	**-2.0**
	comp=E,0.3nm,0.5s,mb3.2,baz=49,slow=6.9,SNR=5.7							
YKA	**Yellowknife Ar**	**81.19**	**3**	P		**P**	**08 31 07.3**	**+0.6**
	comp=E,0.6nm,0.3s,mb3.6,baz=351,slow=5.5,SNR=16							
YKA	**Yellowknife Ar**	**81.19**	**3**	P		**P**	**08 31 07.3**	**+0.6**
WRA	**Warramunga Arr**	**82.07**	**122**	P		**P**	**08 31 10.9**	**-1.0**
	comp=E,0.2nm,0.3s,mb3.2,baz=325,slow=5.1,SNR=55							
ASAR	**Alice Springs**	**84.33**	**125**	P		**P**	**08 31 22.6**	**-0.8**
	comp=E,0.8nm,0.6s,mb3.6,baz=310,slow=4.9,SNR=16							

IDC 30 08:27:30.4±1.1, 1219N×14434E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/23, mbtmp3.9/7, MS3.0/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=41.2km s-min=18.1km az=97.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.48**	**20**	Pn		Pn	08 27 58.7	+0.4
	66nm,0.3s,baz=176,slow=8.8,SNR=16							
GUMO				Sn		Sn	08 28 13.4	-5.0
	71nm,0.3s,baz=27,slow=22,SNR=9.2							
HNR	**Honiara**	**26.49**	**143**	LR		LR	08 40 48.2	
	comp=Z,29nm,19.5s,baz=22,slow=30							
WRA	**Warramunga Arr**	**33.41**	**197**	P		P	08 34 10.6	-0.2
	0.9nm,0.7s,baz=20,slow=9.6,SNR=4.0							
ASAR	**Alice Springs**	**37.07**	**196**	P		P	08 34 42.6	+0.3
	0.9nm,0.7s,baz=20,slow=11,SNR=19							
SONM	**Songino Array**	**47.58**	**326**	P		P	08 36 07.6	-0.2
	0.5nm,0.6s,baz=141,slow=6.6,SNR=2.5							
MKAR	**Makanchi Array**	**62.14**	**317**	P		P	08 37 53.6	+0.3
	0.3nm,0.4s,baz=91,slow=8.6,SNR=5.1							
KURK	**Kurchatov**	**65.32**	**320**	P		P	08 38 15.3	+1.1
	1.7nm,0.2s,baz=104,slow=6.0,SNR=4.4							
BVAR	**Borovoye Array**	**70.70**	**322**	P		P	08 38 47.5	-0.5
	0.7nm,0.4s,baz=93,slow=5.9,SNR=7.9							
YKA	**Yellowknife Ar**	**84.33**	**27**	P		P	08 40 03.9	-0.2
	0.3nm,0.5s,baz=290,slow=5.1,SNR=4.8							

MAN 30 09:01:48, 1023N×12483E, h19km, mb4.4, ML3.3, MS3.1, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.10**	**165**	*e*P		Pg	09 01 53.7	+1.9
MSLP				*e*S		Sg	09 01 57.5	+3.2
OCLP	**Ormoc**	**0.84**	**345**	*e*P		Pb	09 02 03.8	-0.3
OCLP				*e*S		Sb	09 02 19.3	+4.2
LLP	**Lapu-Lapu**	**0.86**	**276**	⇓*i*P		Pb	09 02 05.3	+1.1
LLP				*i* S		Sb	09 02 17.8	+2.4
PLP	**Palo**	**0.94**	**9**	⇓*e*P		Pb	09 02 05.9	+0.2
PLP				*e*S		Sb	09 02 19.5	+1.7
TBP	**Tagbilaran**	**1.10**	**241**	*e*P		Pn	09 02 09.6	+1.2
TBP				*e*S		Sb	09 02 24.7	+2.4
BESP	**Borongan**	**1.48**	**24**	*e*P		Pn	09 02 15.6	+1.8

*TRN **30** 09:25:51.3, 19.12N×64.73W, h11km*
*NEIC **30** 09:25:52.8, 1920N×6449W, h68km, MD3.6(RSPR), After RSPR.*
*RSPR **30** 09:25:52.8, 1920N×6449W, h68km±4km, MD3.6/11, MD3.6/11*

ISC 30 09:25:52.3±1.6, 192N±02×645W±01, h63km±40km, n14, σ0≥35/22, 10C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.51**	**162**	⇑*e*P		**Pn**	**09 26 05.0**	**+0.4**
ABV	**Anegada**	**0.51**	**162**	⇑*e*P		**Pn**	**09 26 05.4**	**+0.8**
ABV				*e*S		**Sn**	**09 26 13.4**	**-0.2**
TBVI	**Tortola**	**0.80**	**188**	⇑*e*P		**Pn**	**09 26 08.1**	**+0.1**
TBVI				*e*S		**Sn**	**09 26 19.5**	**0.0**
STVI	**Saint Thomas**	**0.96**	**207**	⇑*e*P		**Pn**	**09 26 09.8**	**-0.2**
STVI				*e*S		**Sn**	**09 26 22.9**	**-0.1**
MTP	**Monte Pirata**	**1.50**	**222**	⇓*e*P		**Pn**	**09 26 17.1**	**+0.1**
CBYP	**Canovanas**	**1.59**	**234**	⇑*e*P		**Pn**	**09 26 17.5**	**-0.8**
CBYP				*e*S		**Sn**	**09 26 38.3**	**+0.3**
CBYP	**Canovanas**	**1.59**	**234**	⇑*e*P		**Pn**	**09 26 17.5**	**-0.8**
CBYP				*e*S		**Sn**	**09 26 38.0**	**+0.1**
HUMP	**Col San Antoni**	**1.67**	**230**	⇓*e*P		**Pn**	**09 26 19.1**	**-0.2**
HUMP				*e*S		**Sn**	**09 26 39.7**	**-0.1**
CPD	**Cerro la Pandu**	**1.78**	**229**	⇑*e*P		**Pn**	**09 26 20.9**	**+0.1**
CPD				*e*S		**Sn**	**09 26 42.7**	**+0.2**
SJG	**San Juan**	**1.91**	**235**	⇑*i*P		**Pn**	**09 26 22.4**	**-0.2**
SJG				*e*S		**Sn**	**09 26 45.9**	**+0.2**
AOPR	**Arecibo Observ**	**2.31**	**248**	⇓*e*P		**Pn**	**09 26 27.4**	**-0.5**
OBIP	**Obispado Ponce**	**2.32**	**240**	⇑*e*P		**Pn**	**09 26 27.8**	**-0.3**
LSP	**Las Mesas**	**2.66**	**248**	⇑*e*P		**Pn**	**09 26 33.3**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.75**	**245**	⇑*e*P		**Pn**	**09 26 34.6**	**+0.6**

*IDC **30** 09:55:27.8±0.6, 3631N×8459E, h0km, mb4.2/13, mb1 4.4/18, mb1mx4.3/27, mbtmp4.3/18, ML4.4/4, MS4.1/17, Ms1 4.1/17, ms1mx4.0/31, Error ellipse: s-maj=21.7km s-min=10.3km az=59.0*
*NNC **30** 09:55:28.9±5.6, 3644N×8490E, h7km±30km, mb4.6, Error ellipse: s-maj=34.2km s-min=27.8km az=93.0*
*ISCJB **30** 09:55:28.7±1.0, 3633N±002×8455E±003, h13km±6km, mb4.4/40, MS4.3/24, Error ellipse: s-maj=4.8km s-min=3.4km az=135.9*
*MOS **30** 09:55:31.7±1.1, 3635N×8448E, h33km, mb4.6/25, MS4.0/11, Error ellipse: s-maj=10.0km s-min=5.4km az=111.6*

*BJI **30** 09:55:32.7, 3650N×8459E, h42km, mB4.9, mb4.6, ML5.0, Ms4.9, Msz4.5*
*GCMT **30** 09:55:34.5±0.3, 3644N×8451E, h24km±1km, MW5.0/70, Moment Tensor Solution. s19,c21; s70,c111; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.45±.15; Mθθ -3.46±.13; Mφφ 3.01±.12; Mrθ 1.24±.29; Mrφ 1.43±.11; Mθφ -1.23±.28; Best double couple: Mo 3.92900×10^16 NP1: φs 236.00000°, δ 64.00000°, λ 0.00000°. NP2: φs 146.00000°, δ 90.00000°, λ 154.00000°. Principal axes: T 3.6230, Plg18.0000°, Azm98.0000°; N 0.6100, Plg64.0000°, Azm326.0000°; P -4.2340, Plg18.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **30** 09:55:34.5±0.7, 3641N×8453E, h40km±7km, mb4.5/13 Error ellipse: s-maj=9.0km s-min=6.5km az=49.0*

ISC 30 09:55:33.5±0.9, 3635N±002×8455E±003, h32km±7km, h42km±2.5km: pP-P, n167, σ1≤15/181, mb4.4/40, MS4.3/24, 10C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**7.48**	**298**	P		**Pn**	**09 57 21.0**	**+0.6**
KSH				Smax				
	comp=N,2μm,1.0s							
KSH				Smax				
	comp=E,4μm,1.3s							
WMQ	**Urumqi**	**7.84**	**17**	P		**Pn**	**09 57 27.0**	**+1.7**
WMQ				S		**Sn**	**09 58 52.3**	**-0.7**
WMQ				AMB	AMB			
	comp=Z,133nm,1.2s							
WMQ				Smax				
	comp=N,324nm,1.0s							
WMQ				Smax				
	comp=E,340nm,1.0s							
WMQ				LR	LR			
	comp=N,3μm,19.0s							
WMQ				LR	LR			
	comp=E,812nm,16.0s							
WMQ				LR	LR			
	comp=Z,3μm,19.5s							
DANN	**Dangsing**	**8.00**	**185**	*e*P		**Pn**	**09 57 26.3**	**-1.2**
	comp=Z,60nm,0.8s							
GKN	**Gorkha**	**8.32**	**179**	*e*P		**Pn**	**09 57 31.6**	**-0.3**
GUN	**Gumba**	**8.48**	**172**	*e*P		**Pn**	**09 57 34.2**	**0.0**
	comp=Z,85nm,1.0s							
KKN	**Kakani**	**8.55**	**176**	*e*P		**Pn**	**09 57 35.9**	**+0.8**
KOLN	**Koldanda**	**8.59**	**186**	*e*P		**Pn**	**09 57 34.2**	**-1.4**
	comp=Z,102nm,0.8s							
LSA	**Lhasa**	**8.63**	**138**	P		**Pn**	**09 57 42.0**	**+5.8**
LSA				LR	LR			
	comp=N,4μm,13.1s							
LSA				LR	LR			
	comp=E,10μm,15.0s							
LSA				LR	LR			
	comp=Z,4μm,10.3s							
LSA	**Lhasa**	**8.63**	**138**	*e*P		**Pn**	**09 57 40.9**	**+4.7**
LSA				pmax	pmax			
	comp=Z,5.0nm,0.7s							
LSA	**Lhasa**	**8.63**	**138**	*e*Pn		**Pn**	**09 57 40.9**	**+4.6**
	comp=Z,4.7nm,0.7s							
DMN	**Daman**	**8.72**	**177**	*e*P		**Pn**	**09 57 37.9**	**+0.5**
ULHL	**Ulahol**	**8.73**	**315**	P		**Pn**	**09 57 38.3**	**+0.9**
	SNR=27							
JIRN	**Jiri**	**8.77**	**170**	*e*P		**Pn**	**09 57 39.1**	**+1.0**
	comp=Z,56nm,0.7s							
PKI	**Pulchoki**	**8.78**	**175**	*e*P		**Pn**	**09 57 37.9**	**-0.3**
	comp=Z,58nm,0.8s							
KNDC	**Almaty**	**9.01**	**322**	⇑Pn		**Pn**	**09 57 42.3**	**+1.0**
	comp=Z,4.0nm,0.3s							
KNDC				⇓Lg			10 00 17.9	
	comp=Z,710nm,1.1s							
KZA	**Kyzart**	**9.21**	**311**	P		**Pn**	**09 57 45.2**	**+1.1**
	SNR=24							
TAPN	**Taplejung**	**9.36**	**162**	*e*P		**Pn**	**09 57 45.8**	**-0.4**
	comp=Z,174nm,1.3s							
RAMN	**Ramite**	**9.53**	**169**	*e*P		**Pn**	**09 57 47.2**	**-1.3**
	comp=Z,119nm,1.1s							
TKM2	**Tokmak 2**	**9.53**	**316**	⇑Pn		**Pn**	**09 57 48.7**	**+0.3**
	comp=Z,38nm,0.7s							
TKM2				⇑Lg			10 00 35.1	
	comp=Z,476nm,2.0s							
TKM2	**Tokmak 2**	**9.53**	**316**	*i* P		**Pn**	**09 57 48.6**	**+0.2**
TKM2				pmax	pmax			
	comp=Z,38nm,0.6s							
TKM2	**Tokmak 2**	**9.53**	**316**	P		**Pn**	**09 57 48.6**	**+0.2**
	SNR=51							
TKM2	**Tokmak 2**	**9.53**	**316**	*e*Pn		**Pn**	**09 57 48.4**	**0.0**
	comp=Z,33nm,0.6s							
TKM2				*e*Sn		**Sn**	**09 59 33.7**	**-0.6**
KBK	**Karagaybulak**	**9.73**	**313**	P		**Pn**	**09 57 51.8**	**+0.6**
	SNR=24							
UCH	**Uchtor**	**9.75**	**310**	*e*Pn		**Pn**	**09 57 52.5**	**+1.1**
	comp=Z,34nm,1.1s							
UCH				*e*Sn		**Sn**	**09 59 48.0**	**+8.3**
ODAN	**Odare**	**9.76**	**165**	*e*P		**Pn**	**09 57 50.9**	**-0.8**
	comp=Z,29nm,0.5s							
AAK	**Ala-Archa**	**9.99**	**312**	⇑*i*P		**Pn**	**09 57 56.2**	**+1.5**
AAK	**Ala-Archa**	**9.99**	**312**	P		**Pn**	**09 57 56.9**	**+2.2**
	SNR=20							
AAK	**Ala-Archa**	**9.99**	**312**	*e*Pn		**Pn**	**09 57 55.4**	**+0.6**
	comp=Z,30nm,0.8s							
FRU	**Bishkek**	**10.04**	**313**	*e*P		**Pn**	**09 57 56.0**	**+0.6**
FRU				pmax	pmax			
	comp=Z,117nm,1.6s							
CHMS	**Chumysh**	**10.06**	**314**	P		**Pn**	**09 57 55.9**	**+0.3**
	SNR=11							
AML	**Almayashu**	**10.21**	**308**	P		**Pn**	**09 57 58.7**	**+1.0**
	SNR=36							
AML	**Almayashu**	**10.21**	**308**	*e*Pn		**Pn**	**09 57 58.5**	**+0.8**
	comp=Z,32nm,0.6s							
AML				*e*Sn		Sn	10 00 11.5	+20
USP	**Ospenovka**	**10.37**	**315**	P		**Pn**	**09 57 59.7**	**-0.2**
	SNR=12							
EKS2	**Erkin-Say**	**10.44**	**310**	P		**Pn**	**09 58 02.9**	**+2.0**
	SNR=24							
EKS2	**Erkin-Say**	**10.44**	**310**	*e*Pn		**Pn**	**09 58 01.8**	**+0.8**
	comp=Z,29nm,0.9s							
MK31	**Makanchi Array**	**10.58**	**351**	⇑Pn		**Pn**	**09 58 01.7**	**-1.0**
	comp=Z,205nm,1.1s,baz=166,slow=14,SNR=533							
MK31				⇓Sn		**Sn**	**09 59 56.8**	**-3.2**
	comp=Z,70nm,1.1s,baz=164,slow=24,SNR=6.7							
MK31				⇓Lg			10 01 00.6	
	comp=Z,53nm,0.8s,baz=169,slow=26,SNR=3.6							
MK31	**Makanchi Array**	**10.58**	**351**	*e*Pn		**Pn**	**09 58 01.9**	**-0.9**
MK31				*e*Sn		**Sn**	**09 59 58.4**	**-1.6**
MKAR	**Makanchi Array**	**10.58**	**351**	Pn		**Pn**	**09 58 01.9**	**-0.8**
	comp=Z,4.9nm,0.3s,baz=167,slow=13,SNR=284							
MKAR				Sn		**Sn**	**09 59 56.9**	**-3.1**
	comp=Z,1.0nm,0.3s,baz=162,slow=20,SNR=3.7							
MKAR				Lg			10 01 07.7	
	comp=Z,1.3nm,0.3s,baz=172,slow=26,SNR=4.2							
MKAR				LR	LR		10 02 51.5	
	comp=Z,1μm,19.7s,baz=167,slow=42							
MKAR	**Makanchi Array**	**10.58**	**351**	P		**Pn**	**09 58 01.9**	**-0.8**
MKAR							09 59 56.9	
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.3s							
MKAR				smax				
	comp=N,1.0nm,0.3s							
MKAR				MLR	MLR			
	comp=Z,1μm,19.7s							
CEP	**Cherat**	**10.66**	**260**	P		**Pn**	**09 58 03.8**	**-0.2**
CEP				S		**Sn**	**10 00 05.0**	**+2.8**
SBDP	**Sheikh Budin**	**12.06**	**254**	P		**Pn**	**09 58 22.3**	**-0.8**
GTA	**Gaotai**	**12.44**	**71**	*e*P		**Pn**	**09 58 28.0**	**-0.3**
GTA				AP			09 58 37.3	
GTA				XP			09 58 44.0	
GTA				S		**Sn**	**10 00 40.0**	**-5.7**
GTA				AMB	AMB			
	comp=Z,14nm,1.6s							
GTA				AMB	AMB			
	comp=Z,234nm,3.9s							
GTA				LR	LR			
	comp=N,4μm,14.7s							
GTA				LR	LR			
	comp=E,1μm,12.3s							
GTA				LR	LR			
	comp=Z,2μm,15.3s							
SHL	**Shillong**	**12.44**	**148**	*e*P		**Pn**	**09 58 25.0**	**-3.4**
SHL				*e*S		Sx	10 02 08.0	
KK31	**Karatay Array**	**12.74**	**306**	Pn		**Pn**	**09 58 31.1**	**-1.1**
	comp=Z,8.3nm,0.8s,baz=116,slow=12,SNR=62							
KK31				⇓Sn		**Sn**	**10 01 01.5**	**+8.6**
	comp=Z,6.1nm,0.8s,baz=179,slow=13,SNR=5.2							
KK31				⇑Lg			10 02 15.0	
	comp=Z,32nm,1.1s,baz=117,slow=25,SNR=3.7							
KBL	**Kabul**	**12.78**	**266**	*e*P		**Pn**	**09 58 32.5**	**-0.4**
KBL				pmax	pmax			
	comp=Z,10.0nm,0.6s							
KBL	**Kabul**	**12.78**	**266**	*e*Pn		**Pn**	**09 58 32.5**	**-0.4**
	comp=Z,10nm,0.6s							
KURBB	**Kurchatov Arra**	**14.92**	**345**	⇓Pn		**Pn**	**09 58 58.3**	**-3.6**
	comp=Z,9.2nm,1.4s							
KURK	**Kurchatov**	**14.99**	**345**	Pn		**Pn**	**09 58 58.5**	**-4.4**
	comp=Z,0.3nm,0.3s,baz=170,slow=12,SNR=61							
KURK				Lg			10 03 24.6	
	baz=313,slow=49,SNR=2.7							
LZH	**Lanzhou**	**15.58**	**85**	*e*P		**Pn**	**09 59 09.3**	**-1.4**
LZH				AP		pP	09 59 16.8	-6.3
LZH				XP		sP	09 59 21.5	-5.6
LZH				*e*S		**Sn**	**10 02 01.3**	**-0.9**
LZH				XS		sS	10 02 13.5	-17
LZH				*e*SS			10 02 20.8	
LZH				AMB	AMB			
	comp=Z,31nm,1.0s							
LZH				AMB	AMB			
	comp=Z,136nm,4.2s							
LZH				LR	LR			
	comp=N,2μm,11.4s							
LZH				LR	LR			
	comp=Z,4μm,13.3s							
NGP	**Nagpur**	**15.88**	**199**	*ex*		**Pn**	**09 59 16.1**	**+1.3**
	comp=Z,57nm,1.8s							
NGP				*e*S		Sn	10 01 44.7	-25
CD2	**Chengdu**	**16.88**	**103**	P		**Pn**	**09 59 29.8**	**+2.5**
CD2				AP		pP	09 59 39.0	+1.4
CD2				XP		sP	09 59 45.3	+3.7
CD2				S		**Sn**	**10 02 35.3**	**+1.4**
CD2				XS		sS	10 02 46.8	-10
CD2				SS			10 02 55.3	
CD2				AMB	AMB			
	comp=Z,10.0nm,0.5s							
CD2				AMB	AMB			
	comp=Z,200nm,5.2s							
CD2				LR	LR			
	comp=N,2μm,8.3s							
ZAA0	**Zalesovo Array**	**17.60**	**1**	*e*Pn		**Pn**	**09 59 33.8**	**-2.4**
ZALV	**Zalesovo Beam**	**17.60**	**1**	P		**Pn**	**09 59 33.1**	**-3.0**
	comp=N,1.0nm,0.3s,baz=182,slow=11,SNR=119							
ZALV				S		**Sn**	**10 02 44.6**	**-6.5**
	comp=N,0.1nm,0.3s,baz=184,slow=19,SNR=4.2							
ZALV				Lg			10 04 47.5	
	comp=N,0.1nm,0.3s,baz=157,slow=24,SNR=2.5							
ZALV				LR	LR		10 07 21.0	
	comp=N,844nm,18.4s,baz=22,slow=40							
NVS	**Novosibirsk**	**18.52**	**358**	*e*P		**Pn**	**09 59 44.0**	**-3.4**
NVS				*e*S		**Sn**	**10 03 03.5**	**-10**
NVS				pmax	pmax			
	comp=Z,55nm,1.5s							
NVS				pmax	pmax			
	comp=N,108nm,1.6s							
NVS				pmax	pmax			
	comp=E,23nm,1.2s							
NVS				smax				
	comp=N,197nm,2.0s							
NVS				smax				
	comp=E,50nm,1.7s							
VOSK	**Vostochnaya**	**18.97**	**334**	P		Px	10 00 08.4	
VOSK				pmax	pmax			
	comp=Z,43nm,1.0s							
KMI	**Kunming**	**19.19**	**121**	P		**Pn**	**09 59 54.5**	**-1.2**
KMI				S		**Sn**	**10 03 23.5**	**-6.3**
KMI				AMB	AMB			
	comp=Z,12nm,0.9s							
KMI				LR	LR			
	comp=N,2μm,7.9s							
KMI				LR	LR			
	comp=E,1μm,8.2s							
KMI				LR	LR			
	comp=Z,2μm,8.5s							
MOY	**Mondy**	**19.28**	**32**	*e*P		**Pn**	**09 59 58.4**	**+1.9**
BVA0	**Borovoye Array**	**19.42**	**334**	⇑P		**Pn**	**09 59 58.2**	**0.0**
	comp=Z,10nm,1.7s							
BVA0	**Borovoye Array**	**19.42**	**334**	P		**Pn**	**09 59 58.1**	**-0.1**
BVA0				pmax	pmax			
	comp=Z,19nm,1.9s							
BVAR	**Borovoye Array**	**19.42**	**334**	P		**Pn**	**09 59 57.1**	**-1.1**
	comp=Z,1.6nm,0.3s,baz=134,slow=10,SNR=50							
BVAR				S		**Sn**	**10 03 34.6**	**-0.4**
	baz=124,slow=28,SNR=2.2							
BVAR				Lg			10 05 48.1	
	comp=Z,0.1nm,0.3s,baz=138,slow=28,SNR=3.9							
BVAR				LR	LR		10 08 08.1	
	comp=Z,425nm,18.1s,baz=327,slow=39							
ZAK	**Zakamensk**	**19.47**	**38**	*e*P		**Pn**	**10 00 00.0**	**+1.1**
ZAK				pmax	pmax			
	comp=Z,11nm,1.2s							
BRVK	**Borovoye**	**19.49**	**334**	*e*P		**Pn**	**09 59 58.9**	**-0.1**
BRVK				pmax	pmax			
	comp=Z,27nm,0.8s							
BRVK	**Borovoye**	**19.49**	**334**	*e*Pn		**Pn**	**09 59 58.9**	**-0.1**
	comp=Z,27nm,0.8s							
HYB	**Hyderabad**	**19.59**	**197**	*e*P		**Pn**	**09 59 58.0**	**-2.5**
HYB				pmax	pmax			
	comp=Z,64nm,1.2s							
HYB	**Hyderabad**	**19.59**	**197**	*i* P		**Pn**	**09 59 58.0**	**-2.5**
	comp=Z,64nm,1.2s							
HYB	**Hyderabad**	**19.59**	**197**	*e*P		**Pn**	**09 59 58.0**	**-2.5**
	comp=Z,64nm,1.2s							
SONM	**Songino Array**	**19.79**	**48**	P		**Pn**	**10 00 01.6**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=240,slow=11,SNR=31							
SONM				LR	LR		10 08 22.2	
	comp=Z,678nm,20.0s,baz=77,

HHC AMB AMB
comp=Z,23nm,1.2s,mb4.5
HHC LR LR
comp=Z,346nm,5.0s
HHC LR LR
comp=N,500nm,13.9s,MS4.5
HHC LR LR
comp=E,1µm,13.9s,MS4.5
HHC LR LR
comp=Z,1µm,15.4s,MS4.5
CHTO Chiang Mai 21.58 140 *e*P **P 10 00 20.5 0.0**
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.1
CHTO Chiang Mai 21.58 140 *e*P **P 10 00 20.5 0.0**
comp=Z,8.4nm,1.1s,mb4.1
CMAR Chiang Mai Arr 21.88 141 P **P 10 00 22.7 -1.0**
comp=Z,5.4nm,0.9s,mb4.0,baz=319,slow=10,SNR=29
CMAR Chiang Mai Arr 21.88 141 P **P 10 00 22.7 -1.0**
CMAR pmax pmax
comp=Z,5.0nm,0.9s
AB01 Akbulak array 22.07 313 ⇓P **P 10 00 24.9 -0.7**
comp=Z,23nm,0.8s,mb4.7
AB31 Akbulak array 22.07 313 P **P 10 00 24.9 -0.7**
AB31 pmax pmax
comp=Z,23nm,0.8s,mb4.7
AKTK Aktyubinsk 23.72 315 P **P 10 00 42.0 -0.6**
AKTK LR LR 10 10 58.7
AKTO Aktyubinsk 23.72 315 ⇑P **P 10 00 41.9 -0.6**
comp=Z,3.5nm,1.4s,mb3.6
AKTO Aktyubinsk 23.72 315 P **P 10 00 42.0 -0.5**
comp=Z,6.1nm,0.8s,mb4.1,baz=109,slow=9.1,SNR=21
AKTO LR LR 10 10 58.7
comp=Z,486nm,19.1s,MS4.0,baz=121,slow=39
AKTO Aktyubinsk 23.72 315 P **P 10 00 42.0 -0.5**
AKTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
AKTO MLR MLR
comp=Z,486nm,19.1s,MS4.0
BJI Beijing 25.05 72 P **P 10 00 57.3 +2.5**
BJI S **S 10 05 16.5 -0.5**
BJI AMB AMB
comp=Z,19nm,0.9s,mb4.6
BJI AMB AMB
comp=Z,246nm,4.0s
BJI LR LR
comp=N,2µm,18.9s,MS4.7
BJI LR LR
comp=E,948nm,16.4s,MS4.7
BJI LR LR
comp=Z,789nm,20.9s,MS4.2
WHN Wuhan 25.47 94 P **P 10 00 55.5 -3.2**
SVE Sverdlovsk 26.02 329⇓*e*P **P 10 01 04.6 +1.2**
SVE *e* 10 01 37.5
SVE *e* 10 04 28.1
SVE pmax pmax
comp=Z,37nm,1.1s,mb4.8
SVE MLR MLR
comp=Z,715nm,12.0s,MS4.4
ARU Arti 26.65 327*d i*P **P 10 01 10.3 +1.2**
ARU *e* 10 01 48.2
ARU S **S 10 05 42.6 +0.8**
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
ARU Arti 26.65 327 *e*P **P 10 01 08.1 -1.0**
comp=Z,15nm,0.8s,mb4.6
QIZ Qiongzhong 28.14 121 P **P 10 01 25.5 +2.7**
QIZ S **S 10 06 07.3 +1.3**
QIZ XS sS 10 06 27.8 +6.5
QIZ AMB AMB
comp=Z,26nm,1.5s,mb4.6
QIZ LR LR
comp=N,853nm,10.2s
QIZ LR LR
comp=Z,1µm,11.0s,MS4.7
NJ2 Nanjing 28.60 89 *e*P **P 10 01 29.5 +2.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
BOD Bodaibo 28.99 33 *e*P **P 10 01 29.4 -0.6**
SSE Sheshan 30.79 89 P **P 10 01 47.3 +1.1**
SSE XP sP 10 02 07.0 +7.6
SSE S **S 10 06 46.5 -1.1**
SSE XS sS 10 07 09.8 +6.9
SSE AMB AMB
comp=Z,42nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,124nm,6.5s
SSE LR LR
comp=N,735nm,14.6s,MS4.6
SSE LR LR
comp=E,505nm,14.6s,MS4.6
SSE LR LR
comp=Z,384nm,13.6s,MS4.2
QZH Quanzhou 31.26 102 P **P 10 01 52.5 +2.1**
QZH S **S 10 06 58.0 +3.0**
QZH LR LR
comp=N,2µm,8.4s
QZH LR LR
comp=E,2µm,9.7s
QZH LR LR
comp=Z,4µm,11.5s,MS5.3
CN2 Changchun 31.91 64 *e*P **P 10 01 57.5 +1.6**
CN2 *e*AP pP 10 02 09.5 +4.3
CN2 *e*S **S 10 07 03.0 -1.8**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CN2 LR LR
comp=N,1µm,12.0s,MS4.9
CN2 LR LR
comp=E,1µm,12.0s,MS4.9
CN2 LR LR
comp=Z,700nm,16.0s,MS4.4
ONI Oni 32.10 294 P **P 10 02 00.9 +3.3**
KSRS Korea Array 34.48 75 LR LR 10 18 56.5
comp=Z,88nm,19.0s,MS3.5,baz=110,slow=41
MDJ Mudanjiang 34.87 62 P **P 10 02 21.5 -0.2**
MDJ AP pP 10 02 32.3 +1.3
MDJ XP sP 10 02 36.8 +1.9
MDJ PP PP 10 03 40.3 -0.6
MDJ PCP PcP 10 04 53.5 -0.6
MDJ S **S 10 07 46.3 -4.3**
MDJ XS sS 10 08 09.0 +3.0
MDJ AMB AMB
comp=Z,18nm,2.3s,mb4.6
MDJ AMB AMB
comp=Z,509nm,5.2s
MDJ LR LR
comp=N,742nm,6.9s
MDJ LR LR
comp=E,926nm,4.4s
MDJ LR LR
comp=Z,876nm,6.0s
PSI Prapat 35.92 155 LR LR 10 19 58.0
comp=Z,194nm,19.4s,MS3.9,baz=148,slow=41
KLMR Klimovskoe 37.46 325 P **P 10 02 43.0 -0.6**
KLMR pmax pmax
comp=Z,42nm,2.0s,mb4.9
OBN Obninsk 37.49 315 *e*P **P 10 02 44.7 +0.7**
OBN *e* 10 03 02.4
OBN *e* 10 04 12.5
OBN *e*SS SS 10 11 09.0 -6.3
OBN pmax pmax
comp=Z,6.0nm,1.2s,mb4.3
BR131 Keskin Array S 39.81 291 *e*P **P 10 03 04.4 +0.7**
comp=Z,2.8nm,0.7s,mb4.1
BRTR Keskin Array B 39.81 291 P **P 10 03 04.4 +0.8**
comp=Z,2.4nm,0.7s,mb4.0,baz=98,slow=8.2,SNR=12
BRTR Keskin Array B 39.81 291 P **P 10 03 04.4 +0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 41.63 308 P **P 10 03 18.1 -0.5**
comp=Z,0.9nm,0.6s,mb3.6,baz=82,slow=7.2,SNR=3.9
AKASG PP PP 10 04 57.5 +2.7
comp=Z,0.8nm,0.6s,baz=82,slow=12,SNR=6.4
AKASG Malin Array Be 41.63 308 P **P 10 03 18.1 -0.4**
AKASG 10 04 57.5
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 41.78 327 *e*p **P 10 03 18.9 -0.6**
comp=Z,17nm,0.7s,mb4.8
JOF Joensuu 41.78 327 *e*P **P 10 03 18.9 -0.6**
JOF pmax pmax
comp=Z,17nm,0.7s,mb4.8
TIXI Tiksi 42.04 19 *e*P **P 10 03 22.2 +0.6**
TIXI *e**PP pP 10 03 34.7 +3.6
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
TIXI Tiksi 42.04 19 *e*P **P 10 03 22.2 +0.6**
comp=Z,7.2nm,1.0s,mb4.3
TIXI *e*pP pP 10 03 34.7 +3.7
TIXI *e*sP sP 10 03 40.1 +5.2
MJAR Matsushiro Arr 42.68 73 LR LR 10 20 49.7
comp=Z,174nm,21.4s,MS3.9,baz=315,slow=36
KEV Kevo 45.26 336 *e*p **P 10 03 42.9 -4.5**
comp=Z,14nm,1.0s,mb4.8
KEV Kevo 45.26 336 *e*P **P 10 03 42.9 -4.5**
KEV pmax pmax
comp=Z,14nm,1.0s,mb4.8
ARCES ARCESS Array B 45.70 335 P **P 10 03 50.9 -0.1**
comp=Z,4.2nm,0.7s,mb4.5,baz=83,slow=7.5,SNR=11
ARCES ARCESS Array B 45.70 335 P **P 10 03 50.9 -0.1**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
DAV Davao City (W) 47.42 118 LR LR 10 26 27.5
comp=Z,262nm,19.4s,MS4.2,baz=57,slow=39
SEY Seymchan 48.39 35⇑*i*P **P 10 04 12.2 +0.2**
CBIJ Chichi jima 49.26 84 LR LR 10 24 56.9
comp=Z,131nm,18.3s,MS4.0,baz=146,slow=36
NB2 NORSAR Subarra 51.09 323 P **P 10 04 32.3 -0.3**
comp=Z,3.5nm,0.6s,mb4.5,baz=84,slow=7.9
NOA NORSAR Array B 51.09 323 P **P 10 04 32.5 -0.1**
comp=Z,3.4nm,0.6s,mb4.5,baz=84,slow=7.5,SNR=7.7
NOA LR LR 10 27 49.6
comp=Z,256nm,18.6s,MS4.3,baz=90,slow=38
NOA NORSAR Array B 51.09 323 P **P 10 04 32.5 -0.1**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,256nm,18.6s
BRG Berggiesshubel 51.22 310 *e*P **P 10 04 39.0 +5.3**
BRG pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
BRG Berggiesshubel 51.22 310 *e*P **P 10 04 39.0 +5.3**
comp=Z,3.7nm,1.1s,mb4.2
CLL Collm 51.71 311 *e*P **P 10 04 41.0 +3.7**
CLL pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
CLL Collm 51.71 311 *e*P **P 10 04 37.0 -0.3**
CLL *e*S **S 10 12 00.0 +3.4**
CLL Lm 10 27 00.0
comp=N,400nm,18.7s
CLL Lm 10 27 00.0
comp=E,200nm,21.0s
CLL Lm 10 27 00.0
comp=Z,200nm,18.9s
CLL Collm 51.71 311 *e*P **P 10 04 41.0 +3.7**
comp=Z,9.0nm,1.5s,mb4.5
GERES GERESS Array B 51.84 307 P **P 10 04 39.3 +0.9**
comp=Z,1.9nm,0.7s,mb4.2,baz=85,slow=5.9,SNR=8.8
GERES LR LR 10 31 42.5
comp=Z,252nm,19.0s,MS4.3,baz=78,slow=42
GERES GERESS Array B 51.84 307 P **P 10 04 39.3 +0.9**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES MLR MLR
comp=Z,253nm,19.0s
PETK Petropavlovsk- 52.27 47 LR LR 10 28 03.4
comp=Z,223nm,19.1s,MS4.2,baz=111,slow=37
PET Petropavlovsk 52.85 47 *e*P **P 10 04 47.3 +1.5**
PET pmax pmax
comp=Z,29nm,1.0s,mb5.2
PET MLR MLR
comp=Z,400nm,17.0s,MS4.5
BILL Bilibino 53.81 27⇑*e*P **P 10 04 54.4 +1.8**
BILL pmax pmax
comp=Z,9.0nm,2.0s,mb4.3
LPG La Plagne 57.36 305 *e*P **P 10 05 19.1 +0.6**
LPL La Plagne 57.36 305 *e*P **P 10 05 19.0 +0.5**
comp=Z,15nm,0.8s,mb4.8
LPL La Plagne 57.36 305 *e*P **P 10 05 19.0 +0.5**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
LPL La Plagne 57.36 305 *e*P **P 10 05 19.0 +0.5**
comp=Z,7.3nm,0.8s,mb4.8
MEZF Maizieres J'vi 57.42 309 *e*P **P 10 05 19.2 +0.3**
GUMO Guam 58.23 96 LR LR 10 32 25.9
comp=Z,124nm,18.9s,MS4.0,baz=271,slow=38
SMF Signal de Mont 58.84 307 *e*P **P 10 05 28.3 -0.5**
SSF Saint Saulge 58.90 308 *e*P **P 10 05 28.7 -0.6**
comp=Z,4.1nm,0.7s,mb4.3
SSF Saint Saulge 58.90 308 *e*P **P 10 05 28.7 -0.6**
SSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
SSF Saint Saulge 58.90 308 *e*P **P 10 05 28.7 -0.6**
comp=Z,2.0nm,0.7s,mb4.3
AVF Avril sur Loir 59.10 308 *e*P **P 10 05 30.3 -0.3**
TCF Toulx Ste Croi 60.02 307 *e*P **P 10 05 37.0 0.0**
comp=Z,3.0nm,0.6s,mb4.2
TCF Toulx Ste Croi 60.02 307 *e*P **P 10 05 37.0 0.0**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TCF Toulx Ste Croi 60.02 307 *e*P **P 10 05 37.0 0.0**
comp=Z,1.5nm,0.6s,mb4.2
LDF La Druitiere 60.59 311 *e*P **P 10 05 40.3 -0.6**
FLN La Foliniere 60.75 311 *e*P **P 10 05 40.6 -1.3**
GRR Gorron 61.13 311 *e*P **P 10 05 43.9 -0.6**
ETSF Etsaut 63.21 305 *e*P **P 10 05 59.4 +0.9**
comp=Z,8.9nm,0.8s,mb4.6
ETSF Etsaut 63.21 305 *e*P **P 10 05 59.4 +0.9**
ETSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
ETSF Etsaut 63.21 305 *e*P **P 10 05 59.4 +0.9**
comp=Z,4.4nm,0.8s,mb4.6
ESDC Sonseca Array 66.96 303 P **P 10 06 22.3 -0.7**
comp=Z,1.0nm,0.6s,mb4.0,baz=59,slow=6.6,SNR=11
WRA Warramunga Arr 73.12 131 P **P 10 06 59.5 -1.3**
comp=Z,4.6nm,1.1s,mb4.3,baz=328,slow=5.7,SNR=12
WRA Warramunga Arr 73.12 131 P **P 10 06 59.5 -1.4**
WRA pmax pmax
comp=Z,5.0nm,1.1s
ASAR Alice Springs 75.72 134 P **P 10 07 14.8 -1.0**
comp=Z,2.7nm,0.9s,mb4.2,baz=325,slow=5.5,SNR=13
ASAR Alice Springs 75.72 134 P **P 10 07 14.9 -1.0**
ASAR pmax pmax
comp=Z,3.0nm,0.9s
TORD Torodi Ar. Bea 76.64 277 P **P 10 07 20.2 -1.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=49,slow=4.5,SNR=11
YKA Yellowknife Ar 80.30 9 P **P 10 07 40.1 -0.8**
comp=Z,1.0nm,0.6s,mb4.0,baz=336,slow=5.6,SNR=16
YKA LR LR 10 45 46.5
comp=Z,28nm,18.4s,MS3.6,baz=90,slow=38
YKA Yellowknife Ar 80.30 9 P **P 10 07 40.1 -0.7**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,28nm,18.4s
CTA Charters Tower 80.89 123 P **P 10 07 43.9 -0.7**
comp=Z,5.8nm,1.0s,mb4.5,baz=320,slow=9.3,SNR=3.0
CTA Charters Tower 80.89 123 P **P 10 07 43.9 -0.7**
CTA pmax pmax
comp=Z,6.0nm,1.0s
SCHQ Schefferville 85.92 344 LR LR 10 47 54.6
comp=Z,178nm,20.1s,MS4.5,baz=350,slow=37
ULM Lac du Bonnet 93.78 0 LR LR 10 54 13.7
comp=Z,205nm,19.6s,MS4.6,baz=26,slow=38
QSPA South Pole Qui 126.12 180 PKP PKPdf 10 14 29.9 -1.3
comp=Z,2.0nm,1.0s,baz=274,slow=1.2,SNR=3.7
CPUP Villa Florida 146.13 276 PKPbc PKPdf 10 15 08.5 -1.1
comp=Z,0.7nm,0.5s,baz=60,slow=4.2,SNR=5.8
CPUP Villa Florida 146.13 276 PKP2 PKPdf 10 15 08.5 -1.1
CPUP pmax pmax
comp=Z,1.0nm,0.5s

BJI ***30*** *10:06:26.6, 2550S×70.10E, h10km, mb4.8*
IDC ***30*** *10:06:28.0±0.5, 2543S×7009E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.5/24, mbtmp4.4/20, MS4.0/10, Ms1 4.0/10, ms1mx3.9/25, Error ellipse: s-maj=15.6km s-min=14.6km az=52.0*
ISCJB ***30*** *10:06:28.1±0.3, 2548S±007×7019E±007, h10km, mb4.7/47, MS4.1/10, Error ellipse: s-maj=9.8km s-min=9.1km az=8.0*
MOS ***30*** *10:06:28.1±0.8, 2547S×7019E, h10km, mb4.9/13, Error ellipse: s-maj=15.9km s-min=9.0km az=104.0*
NEIC ***30*** *10:06:29.7±0.2, 2547S×7010E, h10km, mb4.7/8, Error ellipse: s-maj=8.3km s-min=7.1km az=202.0*
ISC 30 10:06:30.0±0.3, 2547S×007×7012E±007, h10km, n94, σ0°76/88, mb4.7/47, MS4.1/10, 14C-9D, Mid-Indian Ridge

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

OPO Ambohidratompo 22.32 283 P **P 10 11 29.0 +1.1**
11nm,1.0s,mb4.3,baz=107,slow=9.9,SNR=9.6
BOSA Boshof 39.91 255 P **P 10 14 04.4 +0.1**
6.8nm,0.6s,mb4.5,baz=94,slow=5.6,SNR=17
BOSA LR LR 10 27 14.2
comp=Z,568nm,19.9s,MS4.4,baz=92,slow=31
LSZ Lusaka 40.45 276 *e*P **P 10 14 09.4 +0.5**
LSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
LSZ Lusaka 40.45 276 *e*P **P 10 14 09.4 +0.5**
comp=Z,4.5nm,0.8s,mb4.2
MAW Mawson 42.39 184 P **P 10 14 23.5 -0.7**
comp=Z,3.6nm,0.8s,mb4.0,baz=68,slow=19,SNR=3.4
MAW LR LR 10 27 17.2
comp=Z,209nm,21.6s,MS4.0,baz=180,slow=30
SUR Sutherland 43.40 249 P **P 10 14 32.5 -0.4**
comp=Z,9.7nm,0.9s,mb4.5,baz=80,slow=6.1,SNR=3.5
SUR Sutherland 43.40 249 P **P 10 14 32.5 -0.4**
CMAR Chiang Mai Arr 51.89 36 P **P 10 15 39.0 +0.1**
comp=Z,4.0nm,0.8s,mb4.4,baz=229,slow=6.9,SNR=28
CMAR LR LR 10 33 07.1
comp=Z,172nm,21.3s,MS4.0,baz=220,slow=31
ASAR Alice Springs 57.53 103 P **P 10 16 20.1 +0.2**
comp=Z,3.6nm,0.7s,mb4.5,baz=252,slow=6.2,SNR=44
WRA Warramunga Arr 59.01 99 P **P 10 16 30.7 +0.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=255,slow=6.9,SNR=13
WB2 Warramunga Arr 59.02 99 *e*P **P 10 16 30.9 +0.5**
WRAB Tennant Creek 59.02 99 *e*P **P 10 16 30.9 +0.5**
WRAB pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
WRAB Tennant Creek 59.02 99 *e*P **P 10 16 30.9 +0.5**
comp=Z,2.0nm,0.6s,mb4.3
KBL Kabul 59.69 359 P **P 10 16 35.6 +1.1**
KBL pmax pmax
comp=Z,15nm,1.4s,mb4.8
KBL Kabul 59.69 359 P **P 10 16 35.6 +1.1**
comp=Z,15nm,1.4s,mb4.8
SNAA Sanae 60.70 200⇑*e*P **P 10 16 42.4 +1.3**
SNAA pmax pmax
comp=Z,12nm,2.5s
STKA Stephens Creek 62.02 114 P **P 10 16 50.3 -0.4**
comp=Z,1.6nm,0.8s,mb4.2,baz=243,slow=6.8,SNR=3.1
STKA LR LR 10 39 34.0
comp=Z,157nm,18.9s,MS4.2,baz=253,slow=32
QSPA South Pole Qui 64.67 180 P **P 10 17 07.3 -0.1**
comp=Z,12nm,0.9s,mb4.9,baz=280,slow=3.0,SNR=23
VNDA Vanda 65.71 166 P **P 10 17 14.3 0.0**
comp=Z,4.1nm,0.8s,mb4.5,baz=255,slow=4.9,SNR=8.3
VNDA Vanda 65.71 166 P **P 10 17 14.3 0.0**
AAK Ala-Archa 67.88 3⇑*e*P **P 10 17 29.3 +0.9**
AAK pmax pmax
comp=Z,4.0nm,1.7s,mb4.2
GNI Garni 69.43 339⇑*e*P **P 10 17 39.7 +1.6**
GNI pmax pmax
comp=Z,16nm,1.3s
XAN Xi'an 69.71 34 P **P 10 17 39.5 -0.5**
XAN AP pP 10 17 45.0 +1.7
XAN AMB AMB
comp=Z,12nm,0.8s,mb4.9
WHN Wuhan 69.96 40 P **P 10 17 42.8 +1.1**
GTA Gaotai 70.25 24 *e*P **P 10 17 43.8 +0.6**
GTA AP pP 10 17 49.5 +3.0
GTA XP sP 10 17 53.3 +5.6
GTA AMB AMB
comp=Z,5.0nm,1.2s,mb4.3
WMQ Urumqi 70.81 13 *e*P **P 10 17 45.8 -0.7**
WMQ AMB AMB
comp=Z,11nm,1.4s,mb4.6
MK31 Makanchi Array 72.75 9 *e*P **P 10 17 57.4 -0.8**
MKAR Makanchi Array 72.75 9 P **P 10 17 57.6 -0.6**
comp=Z,5.2nm,0.7s,mb4.6,baz=193,slow=6.0,SNR=51
MKAR LR LR 10 49 04.5
comp=Z,80nm,18.5s,MS4.0,baz=311,slow=35
BRTR Keskin Array B 73.24 331 P **P 10 18 01.6 +0.3**
comp=Z,6.1nm,0.9s,mb4.5,baz=155,slow=6.1,SNR=24
BRTR LR LR 10 50 15.4
comp=Z,72nm,18.2s,MS4.0,baz=314,slow=36
BR131 Keskin Array S 73.24 331 *e*P **P 10 18 01.4 +0.2**
comp=Z,3.7nm,0.7s,mb4.4
KIV Kislovodsk 73.52 340⇓*i*P **P 10 18 04.9 +2.1**
KIV *e* 10 18 12.3
KIV *e* 10 20 45.2
KIV *e*SS SS 10 32 19.6 +3.7
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.8
NJ2 Nanjing 73.71 42 *e*P **P 10 18 03.5 -0.7**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
KURK Kurchatov 76.21 6 *e*P **P 10 18 18.2 0.0**
KURK pmax pmax
comp=Z,14nm,1.4s,mb4.7
KURK Kurchatov 76.21 6 *e*P **P 10 18 18.2 0.0**
comp=Z,14nm,1.4s,mb4.7
AKTK Aktyubinsk 76.32 352 P **P 10 18 17.5 -1.3**
AKTO Aktyubinsk 76.32 352 P **P 10 18 17.5 -1.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=149,slow=5.8,SNR=13
TOA0 Torodi Ar. Sit 76.87 292 *e*P **P 10 18 22.4 -0.4**
TORD Torodi Ar. Bea 76.87 292 P **P 10 18 22.1 -0.6**
comp=Z,4.0nm,0.7s,mb4.5,baz=107,slow=5.5,SNR=23
BVAR Borovoye Array 78.16 0 P **P 10 18 28.1 -0.9**
baz=167,slow=6.8
KIC Kosan Boka 79.19 282 *e*P **P 10 18 35.6 -0.1**
comp=Z,20nm,0.7s,mb5.2
TIRR Tirgusor 79.35 331⇑*i*P **P 10 18 35.2 -0.6**
LIC Lamto 79.38 282 *e*P **P 10 18 36.5 -0.2**
comp=Z,58nm,1.8s,mb5.2
DBIC Dimbokro 79.43 283 P **P 10 18 35.9 -1.1**
comp=Z,5.5nm,1.0s,mb4.4,baz=109,slow=9.4,SNR=4.6
TIC Toumodi 79.57 282 *e*P **P 10 18 37.4 -0.4**
comp=Z,16nm,0.5s,mb5.2
SONM Songino Array 79.92 24 P **P 10 18 39.3 +0.5**
comp=Z,2.4nm,0.8s,mb4.2,baz=215,slow=5.3,SNR=13
SONM LR LR 10 52 26.5
comp=Z,100nm,20.1s,MS4.2,baz=70,slow=34
ZAA0 Zalesovo Array 80.10 9 *e*P **P 10 18 39.0 -0.6**
ZAA0 *e*PcP PcP 10 18 46.6 -0.3
ZALV Zalesovo Beam 80.10 9 P **P 10 18 39.0 -0.6**
comp=Z,4.2nm,0.8s,mb4.5,baz=198,slow=4.4,SNR=24
ULN Ulaanbaatar 80.19 24⇑*e*P **P 10 18 40.1 -0.2**
ULN Ulaanbaatar 80.19 24 *e*P **P 10 18 40.6 +0.3**
ULN *e* 10 18 47.0
ULN pmax pmax
comp=Z,40nm,1.9s,mb5.0
ULN Ulaanbaatar 80.19 24 *e*P **P 10 18 40.6 +0.3**
comp=Z,40nm,1.9s,mb5.0
ULN *e*PcP PcP 10 18 47.0 -0.5
NVS Novosibirsk 80.77 8 *e*P **P 10 18 39.5 -3.7**
NVS pmax pmax
comp=Z,33nm,2.2s,mb4.9
NVS pmax pmax
comp=N,5.0nm,1.3s
NVS pmax pmax
comp=E,9.0nm,1.6s
VRI Vrinceioaia 81.19 331⇓*i*P **P 10 18 46.3 +0.6**
PLOR Plostina 81.22 331⇓*i*P **P 10 18 46.8 +1.0**
MLR Muntele Rosu 81.25 330⇑P **P 10 18 46.9 +0.9**
MLR Muntele Rosu 81.25 330⇑*i*P **P 10 18 46.8 +0.8**
VOIR 81.61 330⇓*i*P **P 10 18 48.0 0.0**
ARU Arti 82.16 354*d i*P **P 10 18 50.4 -0.1**
ARU *e* 10 21 56.3
ARU S S 10 29 03.9 -1.3
ARU SS SS 10 34 26.1 +0.5
ARU pmax pmax
comp=Z,25nm,2.5s,mb4.7
KSRS Korea Array 82.85 43 LR LR 10 55 39.8
comp=Z,75nm,18.0s,MS4.1,baz=67,slow=36
BZS Buzias 83.35 328⇑*i*P **P 10 18 56.6 -0.4**
BZS Buzias 83.35 328⇑P **P 10 18 56.6 -0.4**
KEST Kuza 83.66 314 LR LR 10 55 16.0
comp=Z,38nm,18.8s,MS3.8,baz=213,slow=35
DRGR 83.70 329⇓*i*P **P 10 18 58.8 0.0**
DRGR 83.70 329⇓P **P 10 18 58.9 0.0**
AKASG Malin Array Be 84.00 335 P **P 10 18 59.9 -0.4**
comp=Z,2.8nm,0.7s,mb4.5,baz=138,slow=4.3,SNR=8.8
PKSM Moragy 85.22 327⇓*i*P **P 10 19 06.6 +0.1**
PKSM Moragy 85.22 327⇓P **P 10 19 06.6 0.0**
OBN Obninsk 85.25 341⇑*e*P **P 10 19 06.6 +0.2**
OBN *e*SS SS 10 35 13.5 +2.1
OBN pmax pmax
comp=Z,19nm,1.5s,mb5.0
CRVS Cervenica-Dubn 85.83 330 *e*P **P 10 19 09.9 +0.4**
STHS Stebnicka Huta 86.31 330 *e*P **P 10 19 12.1 +0.3**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.3
STHS Stebnicka Huta 86.31 330 *e*P **P 10 19 12.1 +0.3**

VYHS	**Vyhne**	**86.74**	**329**	*e*P		**P**		**10 19 14.1**	**+0.1**
VYHS				pmax		pmax			
	comp=Z,3.0nm,1.2s,mb4.4								
VYHS	**Vyhne**	**86.74**	**329**	*e*P		**P**		**10 19 14.1**	**+0.1**
	comp=Z,3.0nm,1.2s,mb4.4								
ZST	**Bratislava**	**87.36**	**328**	*e*P		**P**		**10 19 17.2**	**+0.2**
ZST				pmax		pmax			
	comp=Z,8.0nm,0.7s,mb5.1								
ZST	**Bratislava**	**87.36**	**328**	*e*P		**P**		**10 19 17.2**	**+0.2**
ARSA	**Arzberg**	**87.49**	**326**			**P**		**10 19 18.2**	**+0.5**
	comp=Z,5.1nm,0.8s,mb4.8								
OJC	**Ojcow**	**87.53**	**330**	*e*P		**P**		**10 19 17.7**	**-0.1**
OJC	**Ojcow**	**87.53**	**330**	Pn		**P**		**10 19 17.7**	**0.0**
CONA	**Conrad Observa**	**87.78**	**327**⇑	*i*P		**P**		**10 19 19.3**	**+0.2**
	comp=Z,8.6nm,0.8s,mb5.0								
CSNA	**Conrad Observa**	**87.79**	**327**⇑	*i*P		**P**		**10 19 19.2**	**+0.2**
	comp=Z,7.8nm,0.8s,mb5.0								
OKC	**Ostrava-Krasne**	**88.01**	**329**	*e*P		**P**		**10 19 19.7**	**-0.4**
ABTA	**Abfaltersbach**	**88.71**	**324**⇑	*i*P		**P**		**10 19 23.9**	**+0.5**
	comp=Z,6.5nm,0.8s,mb5.0								
MJAR	**Matsushiro Arr**	**88.96**	**48**	LR		LR		10 59 48.6	
	comp=Z,73nm,20.6s,MS4.1.baz=320,slow=36								
UPC	**Upice**	**89.47**	**329**	*e*P		**P**		**10 19 27.4**	**+0.5**
GERES	**GERESS Array B**	**89.47**	**327**	P		**P**		**10 19 25.3**	**-1.7**
	comp=Z,0.8nm,0.8s,mb4.1,baz=142,slow=6.8,SNR=5.4								
KLMR	**Klimovskoe**	**89.54**	**346**	P		**P**		**10 19 24.4**	**-2.6**
KLMR				pmax		pmax			
	comp=Z,31nm,1.8s,mb5.3								
KHC	**Kasperske Hory**	**89.72**	**327**	*e*P		**P**		**10 19 27.7**	**-0.4**
FETA	**Feichten**	**89.83**	**324**⇑	*i*P		**P**		**10 19 29.3**	**+0.6**
	comp=Z,8.4nm,0.8s,mb5.1								
CLL	**Collm**	**91.42**	**328**	*e*P		**P**		**10 19 37.0**	**+1.0**
CLL				pmax		pmax			
	comp=Z,100nm,2.8s,mb5.7								
CLL	**Collm**	**91.42**	**328**	*e*P		**P**		**10 19 37.0**	**+1.0**
	comp=Z,100nm,2.8s,mb5.7								
ESDC	**Sonseca Array**	**94.62**	**312**	P		**P**		**10 19 49.7**	**-1.4**
	comp=Z,0.2nm,0.4s,mb3.9,baz=95,slow=3.0,SNR=6.8								
ESDC	**Sonseca Array**	**94.62**	**312**	P		**P**		**10 19 49.7**	**-1.4**
BILL	**Bilibino**	**115.63**	**25**	*e*PKIKP		PKPdf		10 25 09.8	-1.8
BILL				pmax		pmax			
	comp=Z,1.0nm,1.0s								
YKA	**Yellowknife Ar**	**142.84**	**4**	PKP		PKPdf		10 26 00.8	-2.3
	comp=Z,0.4nm,0.7s,baz=349,slow=2.2,SNR=5.5								
YKA				PP		PP		10 29 10.6	-1.0
	comp=Z,0.4nm,0.8s,baz=354,slow=6.3,SNR=4.2								
TXAR	**Lajitas Array**	**173.27**	**306**	PKP		PKPdf		10 26 39.5	-0.5
	comp=Z,0.4nm,0.8s,baz=110,slow=3.3,SNR=4.3								
TXAR				PKPab		PKPab		10 28 07.2	-0.8
	comp=Z,0.3nm,0.6s,baz=66,slow=3.1,SNR=4.3								

ISK ***30*** *10:11:27.6,4047N×2927E,h4km,MD2.6*
ISCJB ***30*** *10:11:28.9±0.6,4048N±003×2919E±006,h10km,Error ellipse: s-maj=6.6km s-min=4.0km az=157.1*
CSEM ***30*** *10:11:28.1±0.1,4048N×2922E,h2km,MD2.6,Error ellipse: s-maj=2.9km s-min=1.9km az=58.0*
DDA ***30*** *10:11:29.5,4042N×2918E,h7km±3km,Md2.5*

ISC 30 10:11:29.1±0.6,4047N±003×2922E±005,h5km±7km,n12, σ0°95/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.04**	**216**	*e*PG		**Pg**	**10 11 29.4**	**-0.9**
ARMT	**Armutlu**	**0.29**	**290**	*e*PG		**Pg**	**10 11 35.0**	**+0.3**
ARMT				*e*SG		**Sg**	**10 11 39.7**	**+1.1**
ULDT	**Uludag**	**0.33**	**191**	*i* P		**Pg**	**10 11 34.2**	**-1.3**
ULDT				*i* S		**Sg**	**10 11 40.2**	**+0.4**
KCT	**Karacabey**	**0.69**	**253**	*e*PG		**Pg**	**10 11 42.7**	**+0.4**
KLYT	**Kilyos**	**0.80**	**350**	*e*PG		**Pg**	**10 11 43.7**	**-0.7**
KLYT				*e*SG		**Sg**	**10 11 55.6**	**+0.9**
CTKS	**Kestanelik-??a**	**0.94**	**325**	*e*PG		**Pg**	**10 11 47.0**	**-0.1**
DST	**Dursunbey**	**0.97**	**208**	*e*PG		**Pg**	**10 11 47.4**	**-0.3**
GULT	**Gulveren**	**0.99**	**92**	*e*PG		**Pg**	**10 11 46.2**	**-1.9**
SLVT	**Silivri**	**1.08**	**315**	*e*PN		**Pn**	**10 11 50.0**	**-0.8**
BORA	**Eskisehir**	**1.11**	**121**	*i* P		**Pg**	**10 11 51.1**	**+0.7**
BORA				*i* S		**Sg**	**10 12 07.2**	**+2.4**
BORA	**Eskisehir**	**1.11**	**121**	*i* P		**Pg**	**10 11 51.1**	**+0.7**
BORA				*i* S		**Sg**	**10 12 07.2**	**+2.4**
GDZ	**Gediz**	**1.39**	**172**	*i* P		**Pn**	**10 11 55.2**	**+0.2**
GDZ				*i* S		**Sb**	**10 12 13.6**	**+0.1**

JMA 30 10:12:12.5±0.4,3167N×14051E,h99km±3km,M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.55**	**338**	P		Pn	10 12 39.8	+0.5
BSO1	**Boso 1**	**3.00**	**7**	P		Pn	10 12 58.9	+0.7
BSO3	**Boso 3**	**3.12**	**0**	P		Pn	10 13 00.0	+0.2
BSO3				*e*S		Sn	10 13 37.1	+0.8
BSO4	**Boso 4**	**3.31**	**358**	P		Pn	10 13 04.1	+1.7
JOD2	**Odawara 2**	**3.77**	**342**	P		Pn	10 13 11.0	+2.4
HMMJ	**Hamamatsu 2**	**3.94**	**324**	P		Pn	10 13 11.4	+0.5
JYN	**Shimob**	**4.16**	**337**	P		Pn	10 13 16.2	+2.5
JNY	**Yasuok**	**4.29**	**330**	P		Pn	10 13 17.4	+1.8
JHU	**Hanno**	**4.29**	**347**	P		Pn	10 13 16.3	+0.7
JRY	**Ryogami san**	**4.54**	**343**	P		Pn	10 13 19.9	+1.0
JAG	**Ashikaga**	**4.82**	**350**	P		Pn	10 13 22.1	-0.6
JHO	**Hitachi**	**4.93**	**1**	P		Pn	10 13 23.5	-0.7
JFK	**Kawauchi**	**5.69**	**3**	P		Pn	10 13 32.9	-1.6
JFK				*e*S		Sn	10 14 32.9	-5.5
JMK	**Ichinoseki**	**7.29**	**4**	P		Pn	10 13 55.2	-1.0

CASC 30 10:18:09.9±1.9,1229N×8893W,h31km±21km,MD4.0, ML3.2,2C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**1.30**	**30**⇑	*e*P		x	10 18 32.1	
VSM				*e*P		x	10 18 32.1	
VSM				*e*S		x	10 18 50.0	
VSM				*e*S		x	10 18 50.3	
SNVI	**San Vicente**	**1.32**	**4**	*e*P		x	10 18 31.6	
SNVI				*e*P		x	10 18 31.7	
SNVI				*e*S		x	10 18 48.9	
CNCH	**Conchagua**	**1.45**	**48**	*e*P		x	10 18 34.0	
CNCH				*e*P		x	10 18 34.2	
BOQS	**Boqueron**	**1.47**	**347**	*e*P		x	10 18 34.2	
BOQS				*e*P		x	10 18 34.2	
BOQS				*e*S		x	10 18 53.1	
BOQS				*e*S		x	10 18 53.5	
CAHU	**Cacacuatique**	**1.63**	**26**⇑	*e*P		x	10 18 37.0	
CAHU				*e*P		x	10 18 37.2	
CAHU				AML		x	10 19 03.7	
	comp=Z,467nm,0.4s							
SBLS	**San Blas**	**1.68**	**337**	*e*P		x	10 18 37.3	
SBLS				*e*P		x	10 18 37.3	
SNJE	**San Jose**	**1.70**	**337**	*e*P		x	10 18 37.7	
SNJE				*e*S		x	10 19 01.2	
CRIN	**San Cristobal**	**1.88**	**77**	*e*P		Pn	10 18 40.7	+0.7
RBDL	**Robledal**	**1.95**	**338**	*e*P		x	10 18 41.9	
MIRN	**Miramar**	**2.18**	**86**	*e*P		Pn	10 18 45.2	+1.2
COPN	**Copaltepe**	**2.29**	**93**	*e*P		Pn	10 18 45.0	-0.6
COPN				*e*S		Sn	10 19 12.8	0.0
COPN				AML		AML	10 19 15.0	
	comp=Z,123nm,0.3s							
TGUH	**Tegucigalpa,Un**	**2.39**	**42**	*e*P		Pn	10 18 47.3	+0.4
MGAN	**Managua**	**2.63**	**93**	*e*P		Pn	10 18 50.4	+0.1

IDC ***30*** *10:24:37.2±1.0,1638S×17338W,h0km,mb4.1/9, mb1 4.3/9,mb1mx4.1/18,mbtmp4.1/9,MS3.1/2,Ms1 3.1/2, ms1mx2.8/23,Error ellipse: s-maj=47.9km s-min=19.4km az=137.0*
NEIC ***30*** *10:24:38.5±0.6,1632S×17335W,h10km,mb3.8/1,Error ellipse: s-maj=25.2km s-min=9.3km az=134.0*
ISCJB ***30*** *10:24:40.5±0.8,163S±02×1735W±02,h33km,mb4.0/10, Error ellipse: s-maj=32.2km s-min=13.1km az=135.7*

ISC 30 10:24:42.2±0.8,164S±02×1734W±02,h35km,n21, σ0°57/18,mb4.0/10,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.90**	**32**	Pn		**Pn**	**10 25 20.6**	**-5.3**
	18nm,0.3s,baz=50,slow=1.7,SNR=14							
AFI				Sn		**Sn**	**10 25 49.4**	**-10**
	55nm,0.3s,baz=52,slow=23,SNR=15							
AFI				LR		LR	10 26 25.7	
	comp=Z,183nm,19.8s,baz=170,slow=37							

AFI	**Afiamalu**	**2.90**	**32**	Pn		**Pn**		**10 25 20.6**	**-5.3**
AFI				*e*Pn		**Pn**		**10 25 22.1**	**-3.8**
AFI				Sn		**Sn**		**10 25 49.4**	**-10**
AFI				*e*Sn		**Sn**		**10 25 51.7**	**-7.9**
AFI				LR		LR		10 26 25.7	
RAR	**Rarotonga**	**13.75**	**113**	LR		LR		10 31 39.2	
	comp=Z,175nm,20.4s,baz=272,slow=31								
PPT	**Papeete**	**22.79**	**96**	*e*LR		LR		10 35 07.6	
	130nm,24.5s								
URZ	**Urewera**	**23.35**	**199**	P		**P**		**10 29 47.7**	**0.0**
	5.2nm,0.8s,mb4.0,baz=255,slow=16,SNR=3.1								
TBI	**Tubuai**	**23.52**	**111**	*e*LR		LR		10 35 20.7	
	193nm,28.2s								
STKA	**Stephens Creek**	**43.58**	**241**	P		**P**		**10 32 43.1**	**+0.1**
	4.9nm,0.9s,mb4.2,baz=78,slow=11,SNR=7.5								
WB2	**Warramunga Arr**	**49.64**	**258**	*e*P		**P**		**10 33 30.8**	**0.0**
WRAB	**Tennant Creek**	**49.64**	**258**	*e*P		**P**		**10 33 30.4**	**-0.4**
	0.6nm,0.5s,mb3.9								
WRA	**Warramunga Arr**	**49.65**	**258**	P		**P**		**10 33 30.3**	**-0.6**
	0.6nm,0.5s,mb3.9,baz=92,slow=6.7,SNR=12								
WRA				PcP		PcP		10 34 52.6	+0.7
	0.9nm,0.9s,baz=89,slow=3.7,SNR=3.7								
ASAR	**Alice Springs**	**49.84**	**253**	P		**P**		**10 33 31.6**	**-0.5**
	7.8nm,0.8s,mb4.8,baz=89,slow=8.3,SNR=93								
ASAR				PcP		PcP		10 34 53.2	+0.6
	0.4nm,0.7s,baz=83,slow=3.8,SNR=2.9								
PETK	**Petropavlovsk-**	**73.56**	**342**	P		**P**		**10 36 12.1**	**+0.7**
	5.0nm,0.9s,mb4.4,baz=124,slow=2.6,SNR=3.4								
NVAR	**Mina Array Bea**	**75.04**	**42**	P		**P**		**10 36 21.1**	**+0.7**
	0.3nm,0.5s,mb3.5,baz=226,slow=12,SNR=4.7								
PDAR	**Pinedale Array**	**82.97**	**42**	P		**P**		**10 37 03.8**	**+0.1**
	0.9nm,0.8s,mb3.9,baz=207,slow=1.7,SNR=7.8								
YKA	**Yellowknife Ar**	**90.98**	**23**	P		**P**		**10 37 41.9**	**-0.3**
	0.2nm,0.8s,mb3.5,baz=230,slow=4.4,SNR=3.7								
YKA	**Yellowknife Ar**	**90.98**	**23**	P		**P**		**10 37 41.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**92.94**	**288**	P		**P**		**10 37 53.5**	**+1.2**
	0.7nm,0.7s,mb4.2,baz=115,slow=1.2,SNR=5.2								
BR131	**Keskin Array S**	**146.92**	**320**	*e*PKPbc		PKPbc		10 44 22.4	+1.1
BRTR	**Keskin Array B**	**146.92**	**320**	PKPbc		PKPbc		10 44 22.4	+1.1
	0.2nm,0.8s,baz=116,slow=2.9,SNR=8.9								
GERES	**GERESS Array B**	**147.11**	**351**	PKPbc		PKPbc		10 44 21.9	+0.4
	0.5nm,0.6s,baz=28,slow=3.2,SNR=5.5								
DAVOX	**Davos/Dischmat**	**149.57**	**356**	PKPbc		PKPbc		10 44 29.0	+1.0
	1.3nm,0.7s,baz=165,slow=20,SNR=3.4								

ISCJB ***30*** *10:46:30.7±1.7,56S±02×1100E±02,h594km±25km, mb3.5/11,Error ellipse: s-maj=37.4km s-min=11.1km az=144.7*
NEIC ***30*** *10:46:30.3±1.1,558S×10996E,h565km±15km,mb4.0/2, Error ellipse: s-maj=23.7km s-min=6.9km az=54.0*
IDC ***30*** *10:46:33.5±3.9,562S×11002E,h612km±55km,mb3.0/10, mb1 3.1/10,mb1mx2.9/22,mbtmp3.0/10,Error ellipse: s-maj=81.0km s-min=12.8km az=55.0*

ISC 30 10:46:30.3±1.7,56S±02×1099E±02,h564km±23km,n16, σ0°48/16,mb3.6/11,Java Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**13.14**	**29**	*e*P		**P**	**10 49 20.4**	**-0.2**
KULM	**Kulim**	**14.24**	**319**	*e*P		**P**	**10 49 31.5**	**-0.5**
MBWA	**Marble Bar**	**18.16**	**149**	*e*P		**P**	**10 50 09.3**	**+0.4**
	2.7nm,0.4s							
CMAR	**Chiang Mai Arr**	**26.24**	**336**	P		**P**	**10 51 22.8**	**+1.5**
	2.2nm,0.8s,mb3.9,baz=169,slow=8.3,SNR=15							
WRA	**Warramunga Arr**	**27.68**	**123**	P		**P**	**10 51 33.8**	**-0.1**
	0.6nm,0.3s,mb3.7,baz=294,slow=7.4,SNR=35							
WRAB	**Tennant Creek**	**27.69**	**123**	*e*P		**P**	**10 51 34.0**	**+0.1**
	0.9nm,0.4s,mb3.8							
WB2	**Warramunga Arr**	**27.69**	**123**	*e*P		**P**	**10 51 33.8**	**-0.2**
ASAR	**Alice Springs**	**29.24**	**130**	P		**P**	**10 51 47.3**	**-0.2**
	0.9nm,0.3s,mb3.9,baz=304,slow=7.8,SNR=55							
STKA	**Stephens Creek**	**39.50**	**135**	P		**P**	**10 53 13.2**	**+0.2**
	2.3nm,0.4s,mb4.0,baz=323,slow=8.2,SNR=13							
SONM	**Songino Array**	**53.28**	**357**	P		**P**	**10 54 57.4**	**+0.6**
	0.8nm,0.6s,mb3.2,baz=176,slow=8.2,SNR=6.9							
MKAR	**Makanchi Array**	**57.62**	**338**	P		**P**	**10 55 27.1**	**+0.2**
	1.4nm,0.4s,mb3.6,baz=152,slow=7.4,SNR=42							
KURK	**Kurtov**	**62.23**	**338**	P		**P**	**10 55 57.1**	**-0.2**
	0.5nm,0.4s,mb3.3,baz=148,slow=5.1,SNR=3.1							
ZALV	**Zalesovo Beam**	**62.96**	**344**	P		**P**	**10 56 01.4**	**-0.6**
	0.5nm,0.4s,mb3.3,baz=211,slow=5.2,SNR=5.0							
BVAR	**Borovoye Array**	**67.27**	**335**	P		**P**	**10 56 28.5**	**-0.5**
	0.5nm,0.5s,mb3.3,baz=140,slow=9.0,SNR=4.7							
AKTK	**Aktyubinsk**	**71.45**	**328**	P		**P**	**10 56 53.9**	**-0.2**
AKTO	**Aktyubinsk**	**71.45**	**328**	P		**P**	**10 56 53.9**	**-0.2**
	0.8nm,0.6s,mb3.4,baz=32,slow=5.4,SNR=4.7							

ISCJB ***30*** *11:06:25.8±1.6,3061S±009×1790W±0.1,h177km±13km, mb4.2/17,Error ellipse: s-maj=16.6km s-min=13.4km az=144.4*
NEIC ***30*** *11:06:26.1±1.6,3065S×17870W,h184km±17km,mb4.0/6, Error ellipse: s-maj=20.8km s-min=13.7km az=126.0*
IDC ***30*** *11:06:33.6±0.5,3022S×17900W,h242km±6km,mb3.9/12, mb1 4.1/13,mb1mx4.0/16,mbtmp3.9/13,Error ellipse: s-maj=15.3km s-min=13.2km az=109.0*

ISC 30 11:06:30.0±1.0,3078S±007×1791W±01,h199km±8km,n75, σ1°49/72,mb4.1/17,1D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.83**	**34**	P		**Pn**	**11 07 08.8**	**+2.0**
	515nm,0.3s,baz=93,slow=10,SNR=21							
RAO				S		Sx	11 07 39.0	
	2µm,0.3s,baz=70,slow=23,SNR=14							
RAO	**Raoul Island**	**1.83**	**34**	*e*Pn		**Pn**	**11 07 08.6**	**+1.9**
RAO				S		Sx	11 07 39.0	
MXZ	**Matakaoa Point**	**7.10**	**197**	P		**Pn**	**11 08 12.9**	**+1.4**
MXZ				S		**Sn**	**11 09 35.0**	**+3.2**
PUZ	**Puketiti**	**7.60**	**196**	P		**Pn**	**11 08 18.9**	**+1.0**
MWZ	**Matawai**	**8.04**	**199**	P		**Pn**	**11 08 24.6**	**+1.0**
URZ	**Urewera**	**8.10**	**202**	P		**Pn**	**11 08 25.8**	**+1.4**
	2.1nm,0.3s,baz=284,slow=3.8,SNR=31							
URZ				S		**Sn**	**11 09 59.7**	**+4.3**
	5.1nm,0.3s,baz=62,slow=5.3,SNR=9.6							
URZ	**Urewera**	**8.10**	**202**	P		**Pn**	**11 08 25.6**	**+1.2**
KNZ	**Kokohu**	**8.64**	**197**	P		**Pn**	**11 08 31.5**	**0.0**
BKZ	**Black Stump Fm**	**9.12**	**202**	P		**Pn**	**11 08 37.8**	**+0.1**
WNVZ	**Wahianoa**	**9.58**	**206**	P		**Pn**	**11 08 47.4**	**+3.8**
TSZ	**Takapari Road**	**10.10**	**202**	P		**Pn**	**11 08 49.0**	**-1.4**
BFZ	**Birch Farm**	**10.58**	**200**	P		**Pn**	**11 08 55.5**	**-1.1**
MRZ	**Mangatainoka R**	**10.77**	**202**	P		**Pn**	**11 08 56.7**	**-2.4**
KIW	**Kapiti Island**	**11.18**	**204**	P		**Pn**	**11 09 03.0**	**-1.3**
MTW	**Mount Morrison**	**11.24**	**201**	P		**Pn**	**11 09 02.8**	**-2.3**
CAW	**Cannon Point**	**11.34**	**203**	P		**Pn**	**11 09 03.8**	**-2.6**
SNZO	**South Karori**	**11.64**	**204**	P		**Pn**	**11 09 07.3**	**-3.0**
SNZO				*e*Pn		**Pn**	**11 09 12.0**	**+1.7**
SNZO				*e*Sn		**Sn**	**11 11 16.1**	**-3.8**
TCW	**Tory Channel**	**11.71**	**205**	P		**Pn**	**11 09 09.6**	**-1.5**
NNZ	**Nelson**	**12.07**	**208**	P		**Pn**	**11 09 14.1**	**-1.5**
QRZ	**Quartz Range**	**12.11**	**212**	P		**Pn**	**11 09 16.5**	**+0.3**
THZ	**Tophouse**	**12.72**	**208**	P		**Pn**	**11 09 22.5**	**-1.3**
KHZ	**Kahutara**	**13.03**	**205**	P		**Pn**	**11 09 25.0**	**-2.8**
DSZ	**Denniston Nort**	**13.18**	**211**	P		**Pn**	**11 09 29.3**	**-0.3**
LTZ	**Lake Taylor**	**13.83**	**208**	P		**Pn**	**11 09 36.5**	**-1.2**
RPZ	**Rata Peaks**	**15.10**	**208**	P		**Pn**	**11 09 54.0**	**+0.7**
	1.9nm,0.3s,baz=205,slow=11,SNR=7.6							
RPZ				S		**Sn**	**11 12 32.6**	**-10**
	1.4nm,0.3s,baz=74,slow=22,SNR=11							
FOZ	**Fox Glacier**	**15.57**	**212**	P		**Pn**	**11 09 57.9**	**-1.1**
DZM	**Mont Dzumac**	**15.59**	**300**	P		**Pn**	**11 10 03.0**	**+3.5**
	2.1nm,0.5s							
ODZ	**Otahua Downs**	**16.37**	**207**	P		**Pn**	**11 10 09.2**	**+0.6**
JCZ	**Jackson Bay**	**16.39**	**213**	P		**Pn**	**11 10 09.3**	**+0.4**
WKZ	**Wanaka**	**16.86**	**210**	P		**Pn**	**11 10 13.6**	**-0.9**
AFI	**Afiamalu**	**18.09**	**23**	P		**P**	**11 10 20.2**	**-6.7**
	5.1nm,0.3s,baz=255,slow=15,SNR=7.2							
AFI	**Afiamalu**	**18.09**	**23**	P		**P**	**11 10 20.2**	**-6.7**
AFI				*e*P			11 10 20.7	
ARMA	**Armidale**	**25.19**	**263**	*e*P		**P**	**11 11 41.3**	**+4.0**
EIDS	**Eidsvold**	**26.83**	**274**	P		**P**	**11 11 54.0**	**+2.0**
CAN	**Canberra**	**27.07**	**252**	*e*P		**P**	**11 11 56.4**	**+2.3**
	1.0nm,0.5s,mb3.7							
TOO	**Toolangi**	**29.96**	**247**	*e*P		**P**	**11 12 23.2**	**+3.6**
CTA	**Charters Tower**	**32.95**	**281**	*e*P		**P**	**11 12 47.3**	**+1.3**
	9.0nm,1.3s,mb4.1							
CTAO	**Charters Tower**	**32.95**	**281**	*e*P		**P**	**11 12 47.5**	**+1.6**
	2.4nm,0.5s,mb4.0							
STKA	**Stephens Creek**	**33.49**	**258**	P		**P**	**11 12 53.2**	**+2.6**
	6.0nm,0.8s,mb4.2,baz=95,slow=10,SNR=13							
STKA	**Stephens Creek**	**33.49**	**258**	*e*P		**P**	**11 12 52.8**	**+2.3**
	6.3nm,1.0s,mb4.1							

STKA	**Stephens Creek**	**33.49**	**258**	P		**P**		**11 12 53.2**	**+2.6**
ASAR	**Alice Springs**	**42.16**	**268**	P		**P**		**11 14 03.0**	**-0.2**
	3.5nm,0.7s,mb3.9,baz=103,slow=7.3,SNR=59								
ASAR				PcP		PcP		11 15 52.5	-1.2
	1.0nm,0.8s,baz=119,slow=4.3,SNR=4.9								
ASAR				ScP		ScP		11 19 19.6	-5.7
	1.5nm,0.7s,baz=113,slow=4.2,SNR=14								
WB2	**Warramunga Arr**	**43.18**	**273**	*e*P		**P**		**11 14 10.7**	**-0.7**
WB2	**Warramunga Arr**	**43.18**	**273**	*e*P		**P**		**11 14 10.8**	**-0.5**
WRAB	**Tennant Creek**	**43.18**	**273**	*e*P		**P**		**11 14 11.2**	**-0.2**
WRA	**Warramunga Arr**	**43.19**	**273**	P		**P**		**11 14 11.0**	**-0.4**
	5.3nm,0.6s,mb4.2,baz=111,slow=8.1,SNR=59								
WRA				ScP		ScP		11 19 23.9	-5.5
	4.7nm,1.1s,baz=108,slow=3.8,SNR=9.3								
FORT	**Forrest**	**45.05**	**256**	*e*P		**P**		**11 14 25.6**	**-0.5**
	7.8nm,0.5s,mb4.3								
VNDA	**Vanda**	**47.62**	**186**	P		**P**		**11 14 49.4**	**+3.9**
	4.0nm,0.7s,mb3.9,baz=10,slow=6.7,SNR=20								
VNDA	**Vanda**	**47.62**	**186**	*e*P		**P**		**11 14 49.4**	**+3.9**
	1.8nm,0.5s,mb3.7								
CASY	**Casey**	**54.37**	**208**	*e*P		**P**		**11 15 36.4**	**+0.6**
	4.4nm,0.5s,mb4.2								
QSPA	**South Pole Qui**	**59.33**	**180**	P		**P**		**11 16 14.0**	**+3.6**
	29nm,0.6s,mb5.1,baz=28,slow=1.3,SNR=82								
QSPA	**South Pole Qui**	**59.33**	**180**	P		**P**		**11 16 14.0**	**+3.6**
MAW	**Mawson**	**71.62**	**201**	P		**P**		**11 17 29.6**	**+0.3**
	5.3nm,0.9s,mb4.2,baz=128,slow=12,SNR=4.1								
SYO	**Syowa Base**	**76.53**	**193**⇓	*e*P		**P**		**11 17 56.6**	**-1.1**
SNAA	**Sanae**	**77.80**	**179**	*e*		**P**		**11 18 05.8**	**+1.1**
SNAA				*e*				11 18 08.4	
SNAA	**Sanae**	**77.80**	**179**	*e*P		**P**		**11 18 05.9**	**+1.2**
	6.7nm,0.7s,mb4.4								
VNA3	**Neumayer Olymp**	**77.98**	**177**	*e*		**P**		**11 18 06.9**	**+1.2**
VNA3				*e*				11 18 09.5	
MJAR	**Matsushiro Arr**	**78.03**	**326**	P		**P**		**11 18 01.7**	**-4.6**
	0.6nm,0.4s,mb3.6,baz=155,slow=5.0,SNR=6.2								
VNA2	**Neumayer--Watz**	**78.41**	**177**	*e*		**P**		**11 18 09.6**	**+1.6**
	baz=190,slow=5.0								
VNA2				*e*				11 18 12.0	
VNA1	**Neumayer--Stat**	**78.64**	**177**	*e*		**P**		**11 18 11.3**	**+2.0**
VNA1				*e*				11 18 13.9	
PLCA	**Paso Flores**	**82.92**	**133**	P		**P**		**11 18 33.7**	**+1.2**
	1.7nm,0.8s,mb3.8,baz=234,slow=14,SNR=3.9								
PLCA	**Paso Flores**	**82.92**	**133**	P		**P**		**11 18 33.7**	**+1.2**
KSRS	**Korea Array**	**84.04**	**320**	P		**P**		**11 18 35.1**	**-3.0**
	1.5nm,0.8s,mb3.8,baz=127,slow=4.9,SNR=4.2								
PETK	**Petropavlovsk-**	**85.95**	**346**	P		**P**		**11 18 44.7**	**-2.5**
	5.9nm,1.0s,mb4.3,baz=123,slow=4.6,SNR=4.2								
PETK	**Petropavlovsk-**	**85.95**	**346**	P		**P**		**11 18 44.7**	**-2.5**
NVAR	**Mina Array Bea**	**89.15**	**43**	P		**P**		**11 19 01.2**	**-1.5**
	1.8nm,0.9s,mb3.9,baz=227,slow=7.9,SNR=9.1								
PDAR	**Pinedale Array**

HBST	**Basata**	**1.52**	**245**	P	**Pn**	**12 31 15.8**	**-0.3**
TBKS	**Tabuk**	**1.67**	**173**	P	**Pn**	**12 31 19.0**	**+0.8**
BDAS	**Al Bad'**	**1.79**	**216**	P	**Pn**	**12 31 20.0**	**+0.2**
YTIR	**Yattir**	**1.80**	**326**	Pn	**Pn**	**12 31 20.6**	**+0.6**
RTMI	**Retamim**	**1.82**	**310**	Pn	**Pn**	**12 31 20.8**	**+0.6**
DSI	**Dead Sea**	**1.86**	**335**	Pn	**Pn**	**12 31 22.1**	**+1.2**
HNKL	**Nakhl**	**2.02**	**272**	P	**Pn**	**12 31 23.1**	**+0.2**
HNKL				S	**Sn**	**12 31 49.1**	**+0.2**
RSHS		**2.05**	**220**	P	**Pn**	**12 31 22.4**	**-1.0**
TR2		**2.70**	**237**	P	**Pn**	**12 31 31.8**	**-0.6**
TR1		**2.78**	**228**	P	**Pn**	**12 31 32.9**	**-0.6**
AMAG	**Maghara**	**2.78**	**287**	P	**Pn**	**12 31 33.0**	**-0.5**

*ATH **30** 12:31:28.9, 3498N×2344E, h2km, MD3.9/8*
*NEIC **30** 12:31:29.1, 3500N×2345E, h7km, ML3.9(ATH), After ATH.*
*IDC **30** 12:31:33.8±2.1, 3487N×2347E, h70km±17km, mb3.3/6, mb1 3.4/9, mb1mx3.3/25, mbtmp3.3/9, Error ellipse: s-maj=31.5km s-min=21.4km az=161.0*
*CSEM **30** 12:31:33.1±0.3, 3523N×2343E, h30km, MD3.9, Error ellipse: s-maj=6.2km s-min=2.5km az=31.0*
*THE **30** 12:31:34.2, 3520N×2340E, h31km±30km, ML3.7/2, Error ellipse: s-maj=30.9km s-min=1.2km az=143.0*

ISC 30 12:31:29.7±1.0, 3503N±005×2336E±005, h15km±6km, n45, σ1§38/52, mb3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.63**	**108**	*e*PG	**Pg**	**12 31 39.5**	**-2.4**
VAM	**Vamos**	**0.78**	**61**	*e*PG	**Pg**	**12 31 43.5**	**-1.4**
IDI	**Anoyia**	**1.28**	**78**	P	**Pn**	**12 31 54.0**	**+1.0**
	5.2nm,0.3s,baz=266,slow=16,SNR=26						
IDI				S	**Sb**	**12 32 11.9**	**+2.2**
	9.8nm,0.3s,baz=33,slow=22,SNR=8.3						
VLI	**Veliai**	**1.72**	**349**	*e*PB	**Pb**	**12 32 02.1**	**+1.2**
VLI	**Veliai**	**1.72**	**349**	*e*Pg	**Pn**	**12 32 01.0**	**+2.0**
NPS	**Neapolis**	**1.86**	**82**	*e*PB	**Pb**	**12 32 02.7**	**-0.6**
NPS	**Neapolis**	**1.86**	**82**	*e*Pg	**Pg**	**12 32 02.9**	**-2.5**
THR6	**Thira Island,**	**2.12**	**51**	P	**Pn**	**12 32 05.1**	**+0.6**
THR5	**Thira Island,**	**2.13**	**49**	P	**Pn**	**12 32 05.6**	**+1.0**
THR3	**Thira Island,**	**2.16**	**50**	P	**Pn**	**12 32 05.8**	**+0.8**
THR1	**Thera Island**	**2.17**	**51**	P	**Pn**	**12 32 06.0**	**+0.8**
PYL	**PYLOS**	**2.28**	**325**	P	**Pn**	**12 32 07.8**	**+1.1**
PYL				S	**Sn**	**12 32 33.7**	**-0.8**
ITM	**Ithomi**	**2.44**	**332**	*e*PB	**Pn**	**12 32 12.5**	**+3.6**
ITM	**Ithomi**	**2.44**	**332**	*e*Pn	**Pn**	**12 32 12.3**	**+3.4**
DID	**Didima**	**2.47**	**358**	P	**Pn**	**12 32 10.1**	**+0.7**
DID				S	**Sn**	**12 32 37.5**	**-1.8**
APE	**Apeiranthos**	**2.69**	**40**	P	**Pn**	**12 32 12.7**	**+0.4**
APE				S	**Sn**	**12 32 42.5**	**-2.1**
LTK	**Loutraki**	**3.00**	**354**	P	**Pn**	**12 32 17.1**	**+0.4**
LTK				S	**Sn**	**12 32 50.8**	**-1.6**
KARP	**Karpathos**	**3.15**	**79**	*e*PN	**Pn**	**12 32 20.9**	**+2.2**
KARP	**Karpathos**	**3.15**	**79**	*e*Pn	**Pn**	**12 32 20.0**	**+1.3**
RLS	**Riolos of Patr**	**3.38**	**334**	*e*PG	**Pg**	**12 32 33.3**	**-1.2**
VLS	**Valsamata**	**3.85**	**325**	P	**Pn**	**12 32 28.4**	**+0.1**
CHOS	**Chios island**	**3.99**	**32**	P	**Pn**	**12 32 30.6**	**+0.4**
AGG	**Agios Georgios**	**4.07**	**349**	P	**Pn**	**12 32 32.5**	**+1.2**
AGG				S	**Sn**	**12 33 16.4**	**-2.2**
EVR	**Evrytania**	**4.07**	**343**	*e*PN	**Pn**	**12 32 36.2**	**+4.8**
EVR	**Evrytania**	**4.07**	**343**	*e*Pg	**Pn**	**12 32 36.5**	**+5.1**
THL	**Klokotos Trika**	**4.65**	**347**	P	**Pn**	**12 32 40.5**	**+1.2**
THL				S	**Sn**	**12 33 31.8**	**-1.2**
PAIG	**Paliouri**	**4.89**	**3**	P	**Pn**	**12 32 43.3**	**+0.6**
IGT	**Igoumenitsa**	**5.10**	**333**	P	**Pn**	**12 32 46.4**	**+0.9**
HORT	**Hortiatis**	**5.56**	**358**	P	**Pn**	**12 32 52.9**	**+1.1**
KNT	**Kendrikon**	**6.13**	**357**	P	**Pn**	**12 33 01.0**	**+1.3**
TIP	**Timpagrande**	**6.71**	**310**	*e*Pn	**Pn**	**12 33 06.9**	**-0.6**
TIP	**Timpagrande**	**6.71**	**310**	*e*Pn	**Pn**	**12 33 06.9**	**-0.6**
CUC	**Castrocucco**	**7.78**	**312**	*e*Pn	**Pn**	**12 33 23.0**	**+0.8**
	5.8nm,0.6s						
CUC	**Castrocucco**	**7.78**	**312**	*e*Pn	**Pn**	**12 33 22.9**	**+0.7**
	5.8nm,0.6s						
BRTR	**Keskin Array B**	**9.43**	**57**	P	**Pn**	**12 33 46.3**	**+1.5**
	0.1nm,0.3s,baz=240,slow=14,SNR=6.2						
VRAC	**Vranov**	**15.11**	**343**	P	**Pn**	**12 35 06.1**	**+3.7**
	0.1nm,0.3s,baz=171,slow=10,SNR=4.0						
GERES	**GERESS Array B**	**15.54**	**336**	P	**Pn**	**12 35 11.6**	**+3.6**
	0.1nm,0.3s,baz=150,slow=14,SNR=4.8						
HFS	**Hagfors**	**25.89**	**349**	P	**P**	**12 37 00.2**	**-0.5**
	3.1nm,0.8s,mb3.9,baz=163,slow=9.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**29.30**	**227**	P	**P**	**12 37 29.6**	**-1.9**
	0.2nm,0.5s,mb3.1,baz=36,slow=8.5,SNR=3.3						
MKAR	**Makanchi Array**	**45.08**	**56**	P	**P**	**12 39 43.1**	**-1.8**
	0.5nm,0.6s,mb3.5,baz=268,slow=7.9,SNR=8.8						
ZALV	**Zalesovo Beam**	**46.16**	**46**	P	**P**	**12 39 50.2**	**-3.1**
	0.6nm,0.6s,mb3.7,baz=268,slow=10,SNR=2.8						
ZALV	**Zalesovo Beam**	**46.16**	**46**	P	**P**	**12 39 50.2**	**-3.1**
SONM	**Songino Array**	**60.70**	**50**	P	**P**	**12 41 38.7**	**-1.5**
	0.6nm,0.8s,mb3.8,baz=291,slow=7.8,SNR=4.1						
YKA	**Yellowknife Ar**	**77.11**	**341**	P	**P**	**12 43 20.7**	**-1.4**
	0.1nm,0.5s,mb3.0,baz=46,slow=4.4,SNR=2.3						
YKA	**Yellowknife Ar**	**77.11**	**341**	P	**P**	**12 43 20.6**	**-1.4**

*NIED **30** 12:47:00, 27.30N×140.70E, h480km, Mw4.9 Best double couple: M◎2.72000×10^16 NP1:φ◎332.00000°, δ75.00000°, λ-52.00000°. NP2:φ◎80.00000°, δ40.00000°, λ-157.00000°.*
*SZGRF **30** 12:47:06.7, 28.18N×140.27E, h33km, mb5.4, Bonin Islands, Japan, region*
*DJA **30** 12:47:47, 27.28N×140.30E, h439km, Mw5.4/4*
*MOS **30** 12:47:50.8±0.8, 27.18N×139.89E, h482km, mb5.0/86, Error ellipse: s-maj=9.2km s-min=4.5km az=110.9*
*BJI **30** 12:47:51.5, 27.17N×140.12E, h509km, mB5.1, mb5.3*
*ISCJB **30** 12:47:51.2±0.3, 2720N±003×13999E±003, h485km±2km, mb4.9/166, Error ellipse: s-maj=4.2km s-min=3.9km az=32.6*
*JMA **30** 12:47:51.2±0.1, 2734N×14073E, h502km, M4.7*
*IDC **30** 12:47:51.4±0.4, 27.13N×13998E, h480km±4km, mb4.3/34, mb1 4.4/39, mb1mx4.3/42, mbtmp4.3/39, Error ellipse: s-maj=9.3km s-min=6.1km az=83.0*
*NEIC **30** 12:47:53.1±0.4, 27.19N×13989E, h497km±5km, mb4.9/87, MW4.9(NIED), Error ellipse: s-maj=4.5km s-min=3.5km az=154.0*

ISC 30 12:47:52.2±0.3, 2721N±003×13999E±003, h483km±2km, h485km±5.1km:pP-P, n521, σ0§98/525, mb4.9/166, 31C-21D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.96**	**93**	P	**P**	**12 48 54.0**	**-1.5**
	180nm,0.3s,baz=277,slow=16,SNR=25						
CBIJ				S	**S**	**12 49 44.8**	**-2.2**
	696nm,0.3s,baz=126,slow=23,SNR=12						
CBIJ	**Chichi jima**	**1.96**	**93**	P	**P**	**12 48 54.0**	**-1.5**
CBIJ				S	**S**	**12 49 43.5**	**-3.4**
JHHJ	**Haha-jima-NKT**	**2.04**	**106**	P	**P**	**12 48 54.9**	**-1.1**
JHHJ				S	**S**	**12 49 45.4**	**-2.3**
JHJ2	**Mitsune**	**5.88**	**359**	P	**P**	**12 49 27.4**	**+0.9**
JHJ	**Hachijo jima 2**	**5.89**	**358**	P	**P**	**12 49 26.6**	**0.0**
	144nm,0.3s,baz=251,slow=23,SNR=15						
JHJ				S	**S**	**12 50 42.5**	**-1.3**
	39nm,0.3s,baz=68,slow=21,SNR=3.3						
JWZ	**Kozaga**	**7.30**	**331**	P	**P**	**12 49 42.2**	**+1.5**
BSO3	**Boso 3**	**7.58**	**3**	P	**P**	**12 49 43.6**	**0.0**
BSO3				*e*S	**S**	**12 51 13.5**	**-1.6**
JIE	**Ise**	**7.69**	**339**	P	**P**	**12 49 48.0**	**+3.2**
JIE				S	**S**	**12 51 18.7**	**+1.5**
JKN2	**Miekihoku**	**7.70**	**336**	P	**P**	**12 49 47.9**	**+3.0**
JKN2				S	**S**	**12 51 20.7**	**+3.4**
HMMJ	**Hamamatsu 2**	**7.86**	**346**	P	**P**	**12 49 47.1**	**+0.5**
JOD2	**Odawara 2**	**8.06**	**355**	P	**P**	**12 49 49.5**	**+0.8**
JOD2				S	**S**	**12 51 22.4**	**-1.9**
JNY	**Yasuok**	**8.32**	**348**	P	**P**	**12 49 53.1**	**+1.7**
JAO	**Obara**	**8.36**	**344**	P	**P**	**12 49 53.4**	**+1.6**
JAO				S	**S**	**12 51 31.5**	**+1.4**
JMN	**Monobe**	**8.36**	**322**	P	**P**	**12 49 55.3**	**+3.5**
JTO	**Tosashimizu**	**8.39**	**314**	P	**P**	**12 49 54.7**	**+2.5**
JEG	**Eigenji**	**8.47**	**340**	P	**P**	**12 49 57.1**	**+4.1**
JHU	**Hanno**	**8.63**	**356**	P	**P**	**12 49 53.6**	**-1.1**
JHU				S	**S**	**12 51 31.6**	**-3.8**
JGF	**Kuroka**	**8.66**	**346**	P	**P**	**12 49 55.1**	**+0.2**
JRY	**Ryogami san**	**8.82**	**354**	P	**P**	**12 49 56.8**	**+0.1**
JRY				S	**S**	**12 51 37.7**	**-1.4**
JWT	**Wachi**	**8.95**	**335**	P	**P**	**12 50 00.6**	**+2.6**
JYT	**Yasato**	**8.99**	**1**	P	**P**	**12 49 57.6**	**-0.8**
JYT				S	**S**	**12 51 39.4**	**-2.9**
JAG	**Ashikaga**	**9.20**	**357**	P	**P**	**12 49 59.1**	**-1.5**
JAG				S	**S**	**12 51 42.6**	**-3.7**
JHO	**Hitachi**	**9.38**	**3**	P	**P**	**12 50 02.3**	**-0.3**
JHO				S	**S**	**12 51 46.4**	**-3.6**
MJAR	**Matsushiro Arr**	**9.42**	**351**	P	**P**	**12 50 02.1**	**-0.9**
	8.9nm,0.3s,baz=169,slow=10,SNR=77						
MJAR				S	**S**	**12 51 49.8**	**-0.9**
	1.5nm,0.3s,baz=168,slow=18,SNR=4.3						
MJAR	**Matsushiro Arr**	**9.42**	**351**	P	**P**	**12 50 02.1**	**-1.0**
MJAR				S	**S**	**12 51 49.8**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MJAR				smax			
	comp=N,2.0nm,0.3s						
MAJO	**Matsushiro**	**9.42**	**351**	*e*P	**P**	**12 50 03.4**	**+0.3**
MAJO				*e*S	**S**	**12 51 49.1**	**-1.7**
MAT	**Matsushiro**	**9.42**	**351**	P	**P**	**12 50 03.4**	**+0.3**
MAT				S	**S**	**12 51 50.2**	**-0.6**
MAT	**Matsushiro**	**9.42**	**351**	P	**P**	**12 50 03.6**	**+0.5**
JOW	**Kunigami**	**10.45**	**271**	P	**P**	**12 50 15.8**	**+1.6**
	comp=N,101nm,0.3s,baz=115,slow=8.4,SNR=36						
GUMO	**Guam**	**14.30**	**160**	P	**P**	**12 50 55.7**	**+0.3**
	comp=N,11nm,0.3s,baz=178,slow=10,SNR=6.9						
GUMO	**Guam**	**14.30**	**160**	P	**P**	**12 50 55.7**	**+0.2**
GUMO				pmax	pmax		
	comp=Z,11nm,0.3s						
GUMO	**Guam**	**14.30**	**160**	*e*P	**P**	**12 50 55.4**	**-0.1**
KSRS	**Korea Array**	**14.42**	**318**	P	**P**	**12 50 56.1**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=136,slow=11,SNR=26						
KSRS				PcP	PcP	12 55 36.6	+0.7
	comp=Z,0.1nm,0.3s,baz=220,slow=0.2,SNR=5.6						
KSRS				ScP	ScP	12 58 23.2	-0.5
	comp=Z,0.1nm,0.3s,baz=281,slow=2.2,SNR=4.4						
ERM	**Erimo**	**14.99**	**9**	*e*P	**P**	**12 51 02.6**	**+0.3**
ERM				pmax	pmax		
	comp=Z,67nm,1.0s						
ERM	**Erimo**	**14.99**	**9**	*e*P	**P**	**12 51 02.6**	**+0.2**
	comp=Z,67nm,1.0s						
NACB	**Ninganchiao**	**16.85**	**264**	*e*P	**P**	**12 51 21.5**	**-0.6**
	comp=Z,11nm,0.3s						
YHNB	**Yeheng**	**16.93**	**266**	*e*P	**P**	**12 51 22.3**	**-0.6**
	comp=Z,30nm,0.5s						
ASAJ	**Asahikawa**	**17.00**	**6**	P	**P**	**12 51 23.9**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=142,slow=9.0,SNR=12						
ASAJ				ScP	ScP	12 58 28.4	-0.1
	comp=Z,0.7nm,0.3s,baz=127,slow=32,SNR=8.3						
ASAJ	**Asahikawa**	**17.00**	**6**	P	**P**	**12 51 24.0**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				pmax	pmax		
	comp=N,1.0nm,0.3s						
YULB	**Yu-li**	**17.32**	**261**	*e*P	**P**	**12 51 27.2**	**+0.2**
	comp=N,49nm,0.8s						
SSLB	**Suanglung**	**17.52**	**263**	*e*P	**P**	**12 51 29.1**	**+0.2**
	comp=N,214nm,0.9s						
TWG	**Pinlang**	**17.69**	**260**	*e*P	**P**	**12 51 30.2**	**-0.4**
	comp=N,48nm,0.7s						
TPUB	**Ta-pu**	**17.93**	**262**	*e*P	**P**	**12 51 32.9**	**0.0**
	comp=N,13nm,0.3s						
NJ2	**Nanjing**	**18.98**	**290**	*e*P	**P**	**12 51 42.8**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s						
DL2	**Dalian**	**19.27**	**312**	P	**P**	**12 51 46.5**	**+1.6**
DL2				XP	sP	12 53 48.3	-2.8
DL2				S	**S**	**12 54 56.8**	**+2.4**
DL2				AMB	AMB		
	comp=Z,60nm,1.0s						
MDJ	**Mudanjiang**	**19.27**	**337**	P	**P**	**12 51 45.0**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,72nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,593nm,5.2s						
MDJ	**Mudanjiang**	**19.27**	**337**	*e*P	**P**	**12 51 46.1**	**+1.3**
	comp=Z,54nm,0.8s						
SNY	**Shenyang**	**19.83**	**322**	⇓P	**P**	**12 51 50.3**	**+0.3**
SNY				AMB	AMB		
	comp=Z,52nm,0.9s						
CN2	**Changchun**	**20.30**	**328**	*e*P	**P**	**12 51 54.0**	**-0.2**
CN2				*e*S	**S**	**12 55 10.8**	**-0.1**
CN2				PCP	PcP	12 55 45.5	0.0
CN2				AMB	AMB		
	comp=Z,50nm,0.9s						
TIA	**Tai'an**	**21.38**	**300**	⇑P	**P**	**12 52 04.0**	**-0.1**
TIA				AMB	AMB		
	comp=Z,263nm,0.8s,mb5.8						
HABR	**Khabarovsk**	**21.57**	**351**	*e*P	**P**	**12 52 04.9**	**-0.7**
HABR				*e*S	**S**	**12 55 30.9**	**-0.2**
HABR				*e*		12 55 45.3	
HABR				MLR	MLR		
	comp=Z,63nm,13.0s						
WHN	**Wuhan**	**22.68**	**284**	⇑P	**P**	**12 52 15.3**	**-0.6**
BJT	**Baijiatuan**	**23.51**	**309**	*e*P	**P**	**12 52 22.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,24nm,0.4s						
BJT	**Baijiatuan**	**23.51**	**309**	*e*P	**P**	**12 52 22.6**	**-0.6**
	comp=Z,24nm,0.4s,mb5.0						
BJI	**Beijing**	**23.51**	**309**	P	**P**	**12 52 22.8**	**-0.4**
BJI				S	**S**	**12 56 02.0**	**0.0**
BJI				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.0						
BJI				AMB	AMB		
	comp=Z,117nm,3.4s						
HIA	**Hailar**	**27.00**	**330**	*e*P	**P**	**12 52 54.2**	**+0.2**
HIA				pmax	pmax		
	comp=Z,45nm,0.7s						
HIA	**Hailar**	**27.00**	**330**	*e*P	**P**	**12 52 54.2**	**+0.3**
	comp=Z,44nm,0.7s,mb5.0						
HHC	**Hu-ho-hao-te**	**27.06**	**307**	*e*P	**P**	**12 52 55.3**	**+0.6**
HHC				PCP	PcP	12 56 02.0	+1.6
HHC				S	**S**	**12 56 59.0**	**+1.3**
HHC				PCS	PcS	12 59 42.0	-0.4
HHC				SCS	ScS	13 02 46.5	-0.1
HHC				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.1						
HHC				AMB	AMB		
	comp=Z,273nm,4.5s						
XAN	**Xi'an**	**27.51**	**292**	P	**P**	**12 52 58.8**	**0.0**
XAN				S	**S**	**12 57 04.3**	**-0.7**
XAN				AMB	AMB		
	comp=Z,52nm,1.1s,mb4.9						
PETK	**Petropavlovsk-**	**29.03**	**22**	P	**P**	**12 53 12.1**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.1,baz=185,slow=4.5,SNR=9.3						
PETK				ScP	ScP	12 58 59.3	-1.1
	comp=Z,5.5nm,0.8s,baz=132,slow=4.3,SNR=3.8						
PET	**Petropavlovsk**	**29.29**	**23**	*e*P	**P**	**12 53 14.7**	**+0.7**
PET				pmax	pmax		
	comp=Z,61nm,0.8s,mb5.1						
PET	**Petropavlovsk**	**29.29**	**23**	*e*P	**P**	**12 53 14.8**	**+0.8**
	comp=Z,337nm,1.9s,mb5.5						
GYA	**Guiyang**	**29.70**	**276**	⇑P	**P**	**12 53 18.5**	**+0.5**
GYA				AP		12 54 42.0	
GYA				PCP	PcP	12 56 08.3	+1.0
GYA				S	**S**	**12 57 38.0**	**-1.2**
GYA				SCP	ScP	12 59 02.5	-0.7
GYA				PCS	PcS	12 59 51.3	0.0
GYA				SCS	ScS	13 02 58.0	-1.4
GYA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,5.4s						
CLNS	**Chul'man**	**31.51**	**344**	*e*P	**P**	**12 53 29.4**	**-3.7**
CLNS				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=N,17nm,0.9s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CD2	**Chengdu**	**31.79**	**285**	P	**P**	**12 53 36.0**	**0.0**
CD2				AP		12 55 01.0	
CD2				PP	PP	12 55 05.3	+2.4
CD2				S	**S**	**12 58 12.3**	**+0.9**
CD2				AMB	AMB		
	comp=Z,160nm,0.5s,mb5.7						
CD2				AMB	AMB		
	comp=Z,320nm,5.9s						
LZH	**Lanzhou**	**31.87**	**295**	⇓P	**P**	**12 53 37.8**	**+1.3**
LZH				AP		12 55 09.3	
LZH				PCP	PcP	12 56 13.5	+0.5
LZH				S	**S**	**12 58 10.5**	**-1.9**
LZH				XS	sS	13 00 54.3	+6.3
LZH				SS	SS	13 00 56.3	-2.7
LZH				SCS	ScS	13 03 05.0	-5.0
LZH				AMB	AMB		
	comp=Z,69nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,278nm,4.2s						
ULN	**Ulaanbaatar**	**32.90**	**318**	P	**P**	**12 53 46.4**	**+1.2**
	SNR=9.8

comp=Z,25nm,1.0s,mb4.6
WB2 Warramunga Arr 47.19 187 *e*P **P** **12 55 39.0 -1.4**
WB2 Warramunga Arr 47.19 187 *e*P **P** **12 55 39.5 -0.9**
WRA Warramunga Arr 47.20 187 P **P** **12 55 39.1 -1.3**
comp=Z,19nm,0.6s,mb4.7,baz=3.6,slow=7.7,SNR=117
WRA PcP PcP 12 57 02.6 +0.1
comp=Z,4.8nm,0.6s,baz=0.3,slow=3.5,SNR=9.7
WRA pP pP 12 57 10.9 -1.5
comp=Z,2.8nm,0.9s,baz=11,slow=7.5,SNR=1.8
WRA ScP ScP 13 00 07.6 -2.3
comp=Z,7.2nm,1.0s,baz=1.0,slow=4.5,SNR=9.4
WRA S **S** **13 01 51.8 -5.2**
comp=Z,5.2nm,0.9s,baz=4.9,slow=14,SNR=13
WRA Warramunga Arr 47.20 187 P **P** **12 55 39.1 -1.3**
WRA 12 57 02.6
WRA *PP pP 12 57 10.9 -1.4
WRA S **S** **13 01 51.8 -5.2**
WRA pmax pmax
comp=Z,19nm,0.6s
WRA smax
comp=N,5.0nm,0.9s
RAMN Ramite 47.22 283 *e*P **P** **12 55 41.3 +0.6**
comp=N,190nm,0.9s,mb5.5
CTA Charters Tower 47.41 172 P **P** **12 55 41.0 -1.0**
comp=N,8.8nm,0.8s,mb4.3,baz=296,slow=3.6,SNR=7.5
CTA Charters Tower 47.41 172 P **P** **12 55 41.0 -1.0**
CTA pmax pmax
comp=Z,9.0nm,0.8s
CTA Charters Tower 47.41 172 P **P** **12 55 41.0 -1.1**
JIRN Jiri 47.42 284 *e*P **P** **12 55 43.3 +1.2**
comp=Z,290nm,0.8s,mb5.8
GUN Gumba 47.63 284 *e*P **P** **12 55 44.9 +1.1**
comp=Z,273nm,0.7s,mb5.7
GAMB Gambell 47.88 27 *e*P **P** **12 55 45.5 +0.5**
comp=Z,24nm,1.4s,mb4.3
PKI Pulchoki 48.12 284 *e*P **P** **12 55 48.5 +1.1**
comp=Z,127nm,1.1s,mb5.2
ZAA0 Zalesovo Array 48.12 319 *e*P **P** **12 55 46.6 -0.3**
ZAA0 *e*PcP PcP 12 57 04.8 -0.5
ZALV Zalesovo Beam 48.12 319 P **P** **12 55 46.4 -0.6**
comp=Z,62nm,0.6s,mb5.1,baz=100,slow=7.1,SNR=292
ZALV PcP PcP 12 57 04.9 -0.5
comp=Z,18nm,0.7s,baz=96,slow=4.3,SNR=9.0
ZALV ScP ScP 13 00 11.9 -1.5
comp=Z,3.1nm,0.7s,baz=112,slow=4.2,SNR=5.1
ZALV S **S** **13 02 07.6 -1.5**
comp=Z,1.6nm,0.9s,baz=102,slow=12,SNR=4.0
ZALV Zalesovo Beam 48.12 319 P **P** **12 55 46.4 -0.5**
ZALV 12 57 04.9
ZALV S **S** **13 02 07.6 -1.5**
ZALV pmax pmax
comp=Z,62nm,0.6s,mb5.1
ZALV smax
comp=N,2.0nm,0.9s
KKN Kakani 48.18 284 *e*P **P** **12 55 49.1 +1.3**
comp=N,133nm,0.9s,mb5.3
DMN Daman 48.37 284 *e*P **P** **12 55 50.5 +1.2**
comp=N,105nm,0.9s,mb5.2
GKN Gorkha 48.69 284 *e*P **P** **12 55 52.7 +1.1**
comp=N,234nm,1.1s,mb5.4
MK31 Makanchi Array 48.89 310 *e*P **P** **12 55 52.5 -0.3**
MK31 *e*P 12 55 52.8
MK31 *e*PcP PcP 12 57 08.0 -0.4
MKAR Makanchi Array 48.89 310 P **P** **12 55 52.9 +0.1**
comp=N,35nm,0.7s,mb4.8,baz=72,slow=11,SNR=198
MKAR PcP PcP 12 57 08.3 -0.1
comp=N,13nm,0.8s,baz=78,slow=4.9,SNR=7.7
MKAR ScP ScP 13 00 16.0 -0.8
comp=N,2.3nm,0.5s,baz=79,slow=5.1,SNR=15
NVS Novosibirsk 49.20 320 ǁ *i*P **P** **12 55 50.0 -4.9**
NVS *i* 12 57 08.8
NVS *i* S **S** **13 02 19.5 -4.3**
NVS *e* 13 04 46.2
NVS *e*SS SS 13 06 10.2 +7.6
NVS pmax pmax
comp=N,20nm,1.3s
NVS pmax pmax
comp=E,49nm,1.3s
NVS pmax pmax
comp=Z,60nm,1.3s,mb4.8
NVS smax
comp=N,20nm,2.0s
NVS smax
comp=E,20nm,1.8s
DANN Dangsing 49.37 285 *e*P **P** **12 55 57.7 +1.0**
comp=E,355nm,0.8s,mb5.7
KOLN Koldanda 49.63 284 *e*P **P** **12 55 59.9 +1.2**
comp=E,133nm,0.9s,mb5.3
ASAR Alice Springs 50.92 187 P **P** **12 56 07.2 -0.9**
comp=E,6.7nm,0.7s,mb4.1,baz=352,slow=5.0,SNR=66
ASAR PcP PcP 12 57 16.4 +0.3
comp=E,4.5nm,0.8s,baz=9.8,slow=3.8,SNR=11
ASAR ScP ScP 13 00 24.3 -1.5
comp=E,2.1nm,0.8s,baz=6.2,slow=5.1,SNR=6.0
ASAR S **S** **13 02 44.5 -3.5**
comp=E,1.5nm,0.9s,baz=18,slow=16,SNR=6.5
ASAR Alice Springs 50.92 187 P **P** **12 56 07.2 -0.8**
ASAR 12 57 16.5
ASAR S **S** **13 02 44.6 -3.4**
ASAR pmax pmax
comp=Z,7.0nm,0.7s
ASAR smax
comp=N,2.0nm,0.9s
KURK Kurchatov 51.51 315 S **S** **13 02 54.8 -0.5**
comp=N,2.3nm,0.8s,baz=98,slow=14,SNR=9.3
KURK Kurchatov 51.51 315 *e*P **P** **12 56 11.9 -0.1**
KURK pmax pmax
comp=Z,144nm,1.0s,mb5.3
KURK Kurchatov 51.51 315 *e*P **P** **12 56 11.9 -0.1**
comp=Z,144nm,1.0s,mb5.3
PTH Pithoragarh 52.13 288 *e*P **P** **12 56 17.0 +0.1**
VIS Vishakhapatnam 52.83 272 *e*P **P** **12 56 21.8 -0.3**
ULHL Ulahol 53.33 304 P **P** **12 56 27.0 +1.8**
SNR=12
TKM2 Tokmak 2 53.74 305 *e*P **P** **12 56 29.2 +1.0**
TKM2 *e* 12 57 25.7
TKM2 pmax pmax
comp=Z,44nm,0.8s,mb4.8
TKM2 Tokmak 2 53.74 305 P **P** **12 56 29.3 +1.1**
SNR=39
TKM2 Tokmak 2 53.74 305 *e*P **P** **12 56 29.2 +1.0**
comp=Z,44nm,0.8s,mb4.8
TKM2 *e*PcP PcP 12 57 25.7 -1.0
KZA Kyzart 54.08 304 P **P** **12 56 32.6 +2.0**
SNR=49
KBK Karagaybulak 54.24 304 P **P** **12 56 32.7 +1.0**
SNR=82
SVW2 Sparrevohn 54.25 33 *e*P **P** **12 56 32.5 +1.1**
SMLA Simla 54.35 290 *e*P **P** **12 56 32.4 -0.3**
SMLA AMb AMB 12 56 34.0
comp=Z,113nm,0.4s,mb5.5
CHMS Chumysh 54.35 305 P **P** **12 56 33.6 +1.1**
SNR=18
FRU Bishkek 54.47 305 *e*P **P** **12 56 34.0 +0.7**
FRU pmax pmax
comp=Z,160nm,1.6s,mb5.1
USP Ospenovka 54.51 305 P **P** **12 56 34.0 +0.4**
SNR=40
AAK Ala-Archa 54.58 305 P **P** **12 56 35.3 +1.2**
SNR=9.5
AAK Ala-Archa 54.58 305 P **P** **12 56 35.3 +1.2**
SNR=9.5
AAK Ala-Archa 54.58 305 P **P** **12 56 35.3 +1.2**
SNR=9.5
AAK Ala-Archa 54.58 305 P **P** **12 56 35.3 +1.2**
SNR=9.5
AAK Ala-Archa 54.58 305 P **P** **12 56 35.3 +1.2**
SNR=9.5
AAK Ala-Archa 54.58 305 *e*P **P** **12 56 34.5 +0.4**
AAK *e* 12 57 30.4
AAK pmax pmax
comp=Z,27nm,0.8s,mb4.6
AAK Ala-Archa 54.58 305 P **P** **12 56 35.5 +1.4**
SNR=5.4
AAK Ala-Archa 54.58 305 *e*P **P** **12 56 34.5 +0.4**
comp=Z,26nm,0.8s,mb4.6
AAK *e*PcP PcP 12 57 30.4 +0.4
UCH Uchtor 54.61 304 P **P** **12 56 36.2 +1.9**
SNR=14
UCH Uchtor 54.61 304 *e*P **P** **12 56 36.3 +2.0**
comp=Z,28nm,0.8s,mb4.7
EKS2 Erkin-Say 55.10 305 P **P** **12 56 38.5 +0.7**
SNR=33
EKS2 Erkin-Say 55.10 305 *e*P **P** **12 56 38.4 +0.7**
comp=Z,29nm,0.9s,mb4.6
EKS2 *e*PcP PcP 12 57 32.1 +0.1

AML Almayashu 55.23 304 P **P** **12 56 40.2 +1.6**
SNR=64
AML Almayashu 55.23 304 *e*P **P** **12 56 40.1 +1.5**
comp=Z,79nm,0.8s,mb5.1
AML *e*PcP PcP 12 57 33.5 +0.9
THN Thein Dam 55.27 292 *e*P **P** **12 56 37.6 -1.5**
KDAK Kodiak Island 55.44 37 P **P** **12 56 38.9 -1.0**
comp=Z,13nm,0.6s,mb4.5,baz=274,slow=5.1,SNR=23
KDAK Kodiak Island 55.44 37 P **P** **12 56 38.9 -1.0**
KDAK pmax pmax
comp=Z,13nm,0.6s,mb4.4
NGP Nagpur 55.46 278 *ex* x 12 56 35.2
PPLA Purkeypile 56.06 31 *e*P **P** **12 56 45.0 +1.0**
comp=Z,14nm,0.9s,mb4.3
CHUM Lake Minchumin 56.12 30 *e*P **P** **12 56 45.5 +1.0**
comp=Z,8.2nm,0.5s,mb4.3
BVA0 Borovoye Array 56.63 317 *i* P **P** **12 56 48.1 -0.1**
BVA0 pmax pmax
comp=Z,7.0nm,0.3s,mb4.5
BVAR Borovoye Array 56.63 317 S **S** **13 04 02.4 -0.3**
comp=Z,0.9nm,0.7s,baz=85,slow=9.1,SNR=4.8
BRVK Borovoye 56.69 317 P **P** **12 56 48.9 +0.3**
SNR=26
BRVK Borovoye 56.69 317 P **P** **12 56 48.9 +0.3**
SNR=26
BRVK Borovoye 56.69 317 P **P** **12 56 48.9 +0.3**
SNR=26
BRVK Borovoye 56.69 317 P **P** **12 56 48.9 +0.3**
SNR=26
BRVK Borovoye 56.69 317 P **P** **12 56 48.9 +0.3**
SNR=26
BRVK Borovoye 56.69 317 *e*P **P** **12 56 48.8 +0.2**
BRVK pmax pmax
comp=Z,90nm,0.9s,mb5.1
BRVK Borovoye 56.69 317 *e*P **P** **12 56 48.8 +0.1**
comp=Z,90nm,0.9s,mb5.1
KTH Kantishna Hill 56.70 30 *e*P **P** **12 56 49.1 +0.6**
comp=Z,7.9nm,0.6s,mb4.2
BPAW Bear Paw Mtn. 56.73 29 *e*P **P** **12 56 49.5 +0.8**
comp=Z,16nm,0.7s,mb4.5
FIB Fire Island 56.86 33 *e*P **P** **12 56 50.3 +0.6**
TRF Thorofare Moun 56.97 30 *e*P **P** **12 56 50.9 +0.5**
comp=Z,32nm,0.9s,mb4.7
RC01 Rabbit Creek A 57.07 33 *e*P **P** **12 56 51.0 -0.1**
comp=Z,46nm,0.9s,mb4.8
HYB Hyderabad 57.19 274 *i* P **P** **12 56 52.5 -0.1**
HYB Hyderabad 57.19 274 *e*P **P** **12 56 52.5 -0.1**
PMR Palmer 57.39 32 *e*P **P** **12 56 53.1 -0.1**
PMR pmax pmax
comp=Z,38nm,0.9s,mb4.7
PMR Palmer 57.39 32 *e*P **P** **12 56 53.1 -0.2**
comp=Z,38nm,0.9s,mb4.7
AKL Akola 57.40 278 *e*P **P** **12 56 54.4 +0.4**
AKL AMb AMB 12 56 56.9
comp=Z,78nm,1.1s,mb4.9
COLD Coldfoot 57.41 26 *e*P **P** **12 56 54.5 +1.2**
comp=Z,23nm,0.9s,mb4.5
KK31 Karatay Array 57.42 306 *i* P **P** **12 56 54.1 +0.2**
KK31 pmax pmax
comp=Z,17nm,0.3s,mb4.8
MCK McKinley 57.60 30 *e*P **P** **12 56 54.9 +0.2**
MCK pmax pmax
comp=Z,17nm,0.6s,mb4.5
MCK McKinley 57.60 30 *e*P **P** **12 56 54.9 +0.2**
comp=Z,17nm,0.6s,mb4.6
COLA College 58.14 29 *e*P **P** **12 56 58.9 +0.6**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.1
COLA College 58.14 29 *e*P **P** **12 56 58.9 +0.5**
comp=Z,8.4nm,0.8s,mb4.1
ARMA Armidale 58.38 168 *e*P **P** **12 57 00.6 +0.2**
STKA Stephens Creek 58.78 178 P **P** **12 57 02.5 -0.6**
comp=Z,11nm,0.8s,mb4.2,baz=345,slow=6.0,SNR=6.3
STKA Stephens Creek 58.78 178 *e*P **P** **12 57 02.5 -0.6**
comp=Z,8.9nm,0.7s,mb4.2
STKA Stephens Creek 58.78 178 P **P** **12 57 02.5 -0.6**
FORT Forrest 58.78 192 *e*P **P** **12 57 02.7 -0.4**
comp=Z,21nm,0.5s,mb4.7
PAX Paxson 59.13 31 *e*P **P** **12 57 05.6 +0.5**
PAX pmax pmax
comp=Z,40nm,1.2s,mb4.6
PAX Paxson 59.13 31 *e*P **P** **12 57 05.6 +0.5**
comp=Z,40nm,1.2s,mb4.6
MENT Mentasta 59.93 31 *e*P **P** **12 57 10.9 +0.5**
KBL Kabul 60.21 296 *e*P **P** **12 57 13.3 +0.5**
KBL pmax pmax
comp=Z,143nm,0.9s,mb5.4
KBL Kabul 60.21 296 *e*P **P** **12 57 13.3 +0.4**
comp=Z,143nm,0.9s,mb5.4
POO Poona 60.95 277 *e*P **P** **12 57 17.9 -0.1**
POO AMb AMB 12 57 19.0
comp=Z,63nm,0.8s,mb5.1
KOD Kodaikanal 61.00 267 *e*P **P** **12 57 18.9 +0.5**
EGAK Eagle 61.00 29 *e*P **P** **12 57 17.3 -0.2**
comp=Z,8.6nm,0.7s,mb4.3
KAD Karad 61.11 276 *e*P **P** **12 57 18.3 -0.7**
KAD AMb AMB 12 57 19.8
comp=Z,53nm,0.6s,mb5.2
DAWY Dawson 61.81 29 *e*P **P** **12 57 23.5 +0.6**
SVE Sverdlovsk 61.94 322 ǁ *e*P **P** **12 57 24.0 +0.2**
SVE pmax pmax
comp=Z,45nm,0.9s,mb4.9
PNL Peninsula 62.25 34 *e*P **P** **12 57 25.9 +0.2**
comp=Z,11nm,0.4s,mb4.6
HYT Haines Junctio 63.04 33 *e*P **P** **12 57 32.1 +1.2**
ARU Arti 63.13 322 *d i*P **P** **12 57 30.9 -0.6**
ARU *e* 12 59 57.5
ARU S **S** **13 05 23.5 -0.6**
ARU SS SS 13 09 39.2 -1.5
ARU pmax pmax
comp=Z,58nm,0.7s,mb5.2
ARU Arti 63.13 322 *e*P **P** **12 57 30.6 -0.9**
comp=Z,60nm,0.7s,mb5.2
NWAO Narrogin (SRO) 63.60 201 P **P** **12 57 33.4 -1.4**
comp=Z,19nm,0.9s,mb4.6,baz=58,slow=8.6,SNR=6.0
NWAO Narrogin (SRO) 63.60 201 P **P** **12 57 33.4 -1.4**
NWAO pmax pmax
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 63.60 201 P **P** **12 57 33.4 -1.4**
AB31 Akbulak array 63.61 314 P **P** **12 57 34.3 -0.4**
AB31 pmax pmax
comp=Z,89nm,0.7s,mb5.4
AKTK Aktyubinsk 64.58 315 P **P** **12 57 40.4 -0.5**
AKTO Aktyubinsk 64.58 315 P **P** **12 57 40.4 -0.5**
comp=Z,36nm,0.7s,mb5.1
AKTO Aktyubinsk 64.58 315 P **P** **12 57 40.4 -0.5**
AKTO pmax pmax
comp=Z,36nm,0.7s,mb5.1
TOO Toolangi 64.65 175 *e*P **P** **12 57 41.8 +0.4**
SPB4 Spitsbergen Ar 69.92 349 *e*P **P** **12 58 13.3 0.0**
APA Apatity 71.19 337 ǁ *i*P **P** **12 58 21.6 +0.6**
APA pmax pmax
comp=Z,60nm,0.8s,mb5.2
KLMR Klimovskoe 71.49 329 *e*P **P** **12 58 22.0 -0.9**
KLMR pmax pmax
comp=Z,52nm,1.2s,mb4.9
KEV Kevo 72.22 340 *e*p **P** **12 58 26.7 -0.3**
comp=Z,30nm,0.8s,mb4.9
KEV Kevo 72.22 340 *e*P **P** **12 58 26.7 -0.3**
KEV pmax pmax
comp=Z,30nm,0.8s,mb4.9
RES Resolute Bay 72.40 13 *e*P **P** **12 58 28.9 +0.9**
WBK Wadi Bani Khal 72.40 287 P **P** **12 58 30.2 +1.3**
SNR=5.6
WBK Wadi Bani Khal 72.40 287 P **P** **12 58 30.2 +1.3**
SNR=5.6
WBK Wadi Bani Khal 72.40 287 P **P** **12 58 30.2 +1.3**
SNR=5.6
WBK Wadi Bani Khal 72.40 287 P **P** **12 58 30.2 +1.3**
SNR=5.6
WBK Wadi Bani Khal 72.40 287 P **P** **12 58 30.2 +1.3**
SNR=5.6
BIDO Bidbid 72.77 288 P **P** **12 58 32.2 +1.2**
SNR=6.3
BIDO Bidbid 72.77 288 P **P** **12 58 32.2 +1.2**
SNR=6.3
BIDO Bidbid 72.77 288 P **P** **12 58 32.2 +1.2**
SNR=6.3
BIDO Bidbid 72.77 288 P **P** **12 58 32.2 +1.2**
SNR=6.3
BIDO Bidbid 72.77 288 P **P** **12 58 32.2 +1.2**
SNR=6.3
ARCES ARCESS Array B 72.78 340 P **P** **12 58 30.2 0.0**
comp=Z,32nm,0.7s,mb4.9,baz=70,slow=8.2,SNR=89
ARCES ARCESS Array B 72.78 340 P **P** **12 58 30.2 -0.1**
ARCES pmax pmax
comp=Z,32nm,0.7s
YKA Yellowknife Ar 72.96 28 P **P** **12 58 31.3 -0.1**
comp=Z,7.7nm,0.6s,mb4.4,baz=297,slow=5.8,SNR=120
YKA pP pP 13 00 14.8 +0.4
comp=Z,1.1nm,0.7s,baz=296,slow=5.8,SNR=2.4
YKA Yellowknife Ar 72.96 28 P **P** **12 58 31.3 -0.1**
YKA *PP pP 13 00 14.8 +0.4
YKA pmax pmax
comp=Z,8.0nm,0.6s
YKA Yellowknife Ar 72.96 28 P **P** **12 58 31.3 -0.1**
YKA pP pP 13 00 14.8 +0.4
HOQ Hoqain 73.43 288 P **P** **12 58 35.6 +0.7**
SNR=8.0
HOQ Hoqain 73.43 288 P **P** **12 58 35.6 +0.7**
SNR=8.0
HOQ Hoqain 73.43 288 P **P** **12 58 35.6 +0.7**
SNR=8.0
HOQ Hoqain 73.43 288 P **P** **12 58 35.6 +0.7**
SNR=8.0
BSY Bisya 73.85 288 P **P** **12 58 38.0 +0.7**
SNR=9.1
BSY Bisya 73.85 288 P **P** **12 58 38.0 +0.7**
SNR=9.1
BSY Bisya 73.85 288 P **P** **12 58 38.0 +0.7**
SNR=9.1
BSY Bisya 73.85 288 P **P** **12 58 38.0 +0.7**
SNR=9.1
JOF Joensuu 74.10 333 *ep* **P** **12 58 37.3 -0.6**
comp=Z,54nm,0.6s,mb5.2
JOF Joensuu 74.10 333 *e*P **P** **12 58 37.3 -0.6**
JOF pmax pmax
comp=Z,54nm,0.6s,mb5.2
ARQ Araqi 74.20 288 P **P** **12 58 40.2 +1.0**
SNR=8.9
ARQ Araqi 74.20 288 P **P** **12 58 40.2 +1.0**
SNR=8.9
ARQ Araqi 74.20 288 P **P** **12 58 40.2 +1.0**
SNR=8.9
ARQ Araqi 74.20 288 P **P** **12 58 40.2 +1.0**
SNR=8.9
VRHR Novokhopersk 74.25 320 *e*P **P** **12 58 38.5 -0.5**
VRHR pmax pmax
comp=Z,100nm,0.7s,mb5.5
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,60nm,0.7s
MOS Moscow 74.50 325 *e*P **P** **12 58 39.2 -1.1**
MOS pmax pmax
comp=Z,73nm,1.1s,mb5.1
JCW Jim Creek 75.27 43 *e*P **P** **12 58 46.0 +1.2**
OBN Obninsk 75.31 325 ǁ *i*P **P** **12 58 44.7 -0.2**
OBN *e* 12 58 55.3
OBN *e*SS SS 13 12 45.2 -1.2
OBN pmax pmax
comp=Z,75nm,1.2s,mb5.1
OBN Obninsk 75.31 325 *e*P **P** **12 58 44.9 0.0**
comp=Z,58nm,1.1s,mb5.0
VSR Storozhevoye 75.61 320 *e*P **P** **12 58 46.4 -0.2**
VSR pmax pmax
comp=Z,30nm,1.0s,mb4.8
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,50nm,1.0s
VORD Divnogorie 75.65 320 *e*P **P** **12 58 46.0 -0.9**
VORD pmax pmax
comp=Z,50nm,0.9s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,40nm,1.0s
DGRG David-gareji 75.75 309 P **P** **12 58 48.2 +0.6**
ETW Entiat 76.49 43 *e*P **P** **12 58 52.3 +0.7**
KAF Kangasniemi 76.51 334 *ep* **P** **12 58 50.5 -0.9**
comp=E,75nm,0.6s,mb5.4,baz=55,slow=5.1
KAF Kangasniemi 76.51 334 *e*P **P** **12 58 50.5 -0.9**
KAF pmax pmax
comp=Z,75nm,0.6s,mb5.4
TBM Table Mountain 76.52 44 P **P** **12 58 52.6 +0.8**
KIV Kislovodsk 76.53 313 P **P** **12 58 53.5 +1.6**
SNR=5.4
KIV Kislovodsk 76.53 313 P **P** **12 58 53.5 +1.6**
SNR=5.4
KIV Kislovodsk 76.53 313 P **P** **12 58 53.5 +1.6**
SNR=5.4
KIV Kislovodsk 76.53 313 *d i*P **P** **12 58 52.6 +0.7**
KIV *e* 12 59 00.0
KIV *e*PP pP 13 00 40.2 +4.1
KIV pmax pmax
comp=Z,40nm,0.9s,mb5.0
KIV Kislovodsk 76.53 313 *e*P **P** **12 58 52.7 +0.8**
comp=Z,31nm,0.8s,mb4.9
VLL Laurance Lake 76.57 46 P **P** **12 58 53.3 +1.3**
ONI Oni 76.60 311 P **P** **12 58 52.4 +0.1**
HOOD Mount Hood Mea 76.64 46 *e*P **P** **12 58 54.0 +1.5**
EBG Ellensburg 76.65 44 P **P** **12 58 53.4 +0.9**
WTV Waterville 76.68 43 P **P** **12 58 53.0 +0.4**
GNI Garni 76.72 308 P **P** **12 58 54.5 +1.5**
comp=Z,18nm,0.9s,mb4.6,baz=309,slow=6.3,SNR=11
GNI Garni 76.72 308 ǁ *i*P **P** **12 58 53.4 +0.4**
GNI pmax pmax
comp=Z,38nm,1.2s
GNI Garni 76.72 308 *e*P **P** **12 58 53.7 +0.7**
comp=Z,40nm,1.0s,mb4.9
LAMM Antelope Mount 77.58 50 P **P** **12 58 58.5 +0.8**
EDM Edmonton 77.88 36 *e*P **P** **12 58 59.5 +0.4**
WDC Whiskeytown Da 78.08 51 *e*P **P** **12 59 01.0 +0.6**
LBCM Butte Creek Ri 78.78 50 P **P** **12 59 04.8 +0.6**
UMR Umm Al-Rimmam 78.90 297 *e*P **P** **12 59 04.5 -0.6**
baz=297
UMR AMb AMB 12 59 06.9
comp=Z,129nm,1.3s,mb5.3,baz=297
QRN Al-Qurain 79.08 297 *e*P **P** **12 59 05.5 -0.5**
baz=297
QRN AMb AMB 12 59 06.6
comp=Z,180nm,0.7s,mb5.7,baz=297
MIB Mutribah 79.09 298 *e*P **P** **12 59 05.5 -0.5**
baz=298
MIB AMb AMB 12 59 07.2
comp=Z,210nm,1.1s,mb5.6,baz=298
RDF Al-Radifah 79.30 297 *e*P **P** **12 59 06.6 -0.6**
baz=297
RDF AMb AMB 12 59 08.2
comp=Z,185nm,0.6s,mb5.8,baz=297
OHCM Honcut 79.36 51 *e*P **P** **12 59 09.1 +1.8**
ABTO Aybut 79.40 284 P **P** **12 59 08.0 +0.1**
SNR=5.7
ABTO Aybut 79.40 284 P **P** **12 59 08.0 +0.1**
SNR=5.7
NAY Al-Naaiem 79.41 297 *e*P **P** **12 59 07.2 -0.5**
baz=297
NAY AMb AMB 12 59 08.5
comp=Z,157nm,0.7s,mb5.7,baz=297
ANN Anapa 79.53 315 *e*P **P** **12 59 06.9 -1.2**
ANN pmax pmax
comp=Z,43nm,0.7s,mb5.1
BMO Blue Mountains 79.61 45 *e*P **P** **12 59 09.3 +0.8**
WALA Waterton Lakes 79.62 40 *e*P **P** **12 59 09.8 +1.4**
BSMT Bassoo Peak 79.71 41 P **P** **12 59 10.0 +1.1**
JTMT Jette 80.05 41 *e*P **P** **12 59 12.0 +1.2**
SWMT Swartz Lake 80.34 41 *e*P **P** **12 59 12.8 +0.6**
WAKR Walker 81.15 51 *e*P **P** **12 59 17.6 +0.9**
AKASG Malin Array Be 81.36 323 P **P** **12 59 16.5 -1.0**
comp=Z,53nm,0.7s,mb5.2,baz=52,slow=5.2,SNR=132
AKASG Malin Array Be 81.36 323 P **P** **12 59 16.5 -1.0**
AKASG pmax pmax
comp=Z,53nm,0.7s
AKBB Malin Array Si 81.36 323 *e*P **P** **12 59 16.8 -0.7**
KIEV Kiev 81.37 323 *e*P **P** **12 59 16.8 -0.7**
KIEV pmax pmax
comp=Z,51nm,0.6s,mb5.2
KIEV Kiev 81.37 323 *e*P **P** **12 59 16.8 -0.8**
comp=Z,51nm,0.6s,mb5.2
MALT Malatya 81.93 309 *e*P **P** **12 59 21.3 +0.6**
MALT pmax pmax
comp=Z,53nm,0.8s,mb5.1
MALT Malatya 81.93 309 ǁ *i*P **P** **12 59 21.6 +0.9**
MALT Malatya 81.93 309 *e*P **P** **12 59 21.3 +0.6**
comp=Z,53nm,0.8s,mb5.1
NVAR Mina Array Bea 81.97 51 P **P** **12 59 21.7 +0.8**
comp=Z,7.3nm,0.7s,mb4.3,baz=296,slow=5.8,SNR=56
NVAR Mina Array Bea 81.97 51 P **P** **12 59 21.7 +0.7**
HRY Holter Researc 82.02 41 *e*P **P** **12 59 21.5 +0.5**
DLMT Dillon 82.26 43 *e*P **P** **12 59 23.2 +1.0**
comp=Z,6.7nm,0.9s,mb4.2

MTUM	**Tungsten Hills**	**82.30**	**52**	*e*P		**P**		**12 59 23.6**	**+1.0**
SUW	**Suwalki**	**82.52**	**328**	*e*P		**P**		**12 59 22.1**	**-1.2**
SUW	**Suwalki**	**82.52**	**328**	*e*P		**P**		**12 59 22.1**	**-1.3**
EGMT	**Eagleton**	**82.52**	**39**	*e*P		**P**		**12 59 24.2**	**+0.7**
	comp=Z,18nm,0.9s,mb4.6								
HFS	**Hagfors**	**82.53**	**336**	P		**P**		**12 59 21.8**	**-1.5**
	comp=Z,25nm,0.6s,mb5.0,baz=92,slow=3.4,SNR=76								
HFS				PP		PP		13 02 39.2	-1.2
	comp=Z,5.6nm,0.8s,baz=347,slow=6.1,SNR=4.2								
HFS	**Hagfors**	**82.53**	**336**	P		**P**		**12 59 21.8**	**-1.5**
HFS								13 02 39.2	
HFS				pmax		pmax			
	comp=Z,25nm,0.6s								
HFS				pmax		pmax			
	comp=Z,6.0nm,0.9s								
NOA	**NORSAR Array B**	**82.77**	**338**	P		**P**		**12 59 23.2**	**-1.2**
	comp=Z,36nm,0.7s,mb5.0,baz=46,slow=4.8,SNR=84								
NOA				PP		PP		13 02 42.2	0.0
	comp=Z,4.2nm,0.9s,baz=47,slow=8.4,SNR=5.7								
NOA	**NORSAR Array B**	**82.77**	**338**	P		**P**		**12 59 23.2**	**-1.2**
NOA								13 02 42.3	
NOA				pmax		pmax			
	comp=Z,36nm,0.7s								
NOA				pmax		pmax			
	comp=Z,4.0nm,0.9s								
TPH	**Tonopah**	**82.89**	**51**	*e*P		**P**		**12 59 26.5**	**+0.9**
TPH				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb4.3								
TPH	**Tonopah**	**82.89**	**51**	*e*P		**P**		**12 59 26.4**	**+0.9**
	comp=Z,9.3nm,0.8s,mb4.4								
TPNV	**Topopah Spring**	**84.12**	**51**	*e*P		**P**		**12 59 32.2**	**+0.5**
TPNV				pmax		pmax			
	comp=Z,13nm,0.8s,mb4.5								
TPNV	**Topopah Spring**	**84.12**	**51**	*e*P		**P**		**12 59 32.2**	**+0.5**
	comp=Z,13nm,0.8s,mb4.5								
RLMT	**Red Lodge**	**84.38**	**42**	*e*P		**P**		**12 59 34.1**	**+1.2**
	comp=Z,9.7nm,0.6s,mb4.5								
BRTR	**Keskin Array B**	**84.48**	**312**	P		**P**		**12 59 33.0**	**-0.4**
	comp=Z,11nm,0.7s,mb4.5,baz=91,slow=3.8,SNR=14								
BRTR	**Keskin Array B**	**84.48**	**312**	P		**P**		**12 59 33.1**	**-0.3**
BRTR				pmax		pmax			
	comp=Z,11nm,0.7s								
LVV	**L'vov**	**84.60**	**324**	*e*P		**P**		**12 59 32.3**	**-1.5**
DUG	**Dugway**	**84.80**	**47**	*e*P		**P**		**12 59 35.7**	**+0.7**
DUG				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.2								
DUG	**Dugway**	**84.80**	**47**	*e*P		**P**		**12 59 35.7**	**+0.7**
	comp=Z,3.9nm,0.6s,mb4.2								
TIRR	**Tirgusor**	**85.24**	**318**	P		**P**		**12 59 36.9**	**-0.2**
TIRR	**Tirgusor**	**85.24**	**318**	*i*P		**P**		**12 59 36.5**	**-0.6**
TIRR	**Tirgusor**	**85.24**	**318**	*e*P		**P**		**12 59 36.7**	**-0.4**
	comp=Z,8.1nm,0.8s,mb4.4								
BURAR	**Bucovina Array**	**85.27**	**322**	*i*P		**P**		**12 59 37.0**	**-0.1**
BURAR	**Bucovina Array**	**85.27**	**322**	P		**P**		**12 59 37.0**	**-0.1**
ODB	**Odobesti**	**85.29**	**320**	*i*P		**P**		**12 59 37.9**	**+0.6**
ODB	**Odobesti**	**85.29**	**320**	P		**P**		**12 59 38.8**	**+1.5**
HARR	**Harsova**	**85.39**	**318**	*i*P		**P**		**12 59 37.4**	**-0.4**
HARR	**Harsova**	**85.39**	**318**	P		**P**		**12 59 38.0**	**+0.2**
KWP	**Kalwaria**	**85.40**	**325**	*e*P		**P**		**12 59 37.5**	**-0.2**
KWP	**Kalwaria**	**85.40**	**325**	*i*P		**P**		**12 59 37.6**	**-0.1**
KWP	**Kalwaria**	**85.40**	**325**	*e*P		**P**		**12 59 37.5**	**-0.2**
VRI	**Vrincioaia**	**85.43**	**320**	P		**P**		**12 59 38.9**	**+0.9**
VRI	**Vrincioaia**	**85.43**	**320**	*i*P		**P**		**12 59 38.8**	**+0.8**
VRI	**Vrincioaia**	**85.43**	**320**	P		**P**		**12 59 39.0**	**+1.1**
PLOR	**Plostina**	**85.48**	**320**	*i*P		**P**		**12 59 38.7**	**+0.5**
PDAR	**Pinedale Array**	**85.50**	**44**	P		**P**		**12 59 38.9**	**+0.6**
	comp=Z,1.8nm,0.6s,mb3.9,baz=230,slow=2.3,SNR=17								
PDAR				pP		pP		13 01 26.4	+1.0
	comp=Z,2.4nm,1.0s,baz=299,slow=4.0,SNR=5.7								
PFO	**Pinyon Flat Ob**	**85.62**	**54**	*e*P		**P**		**12 59 39.6**	**+0.5**
PFO				pmax		pmax			
	comp=Z,19nm,1.0s,mb4.7								
PFO	**Pinyon Flat Ob**	**85.62**	**54**	*e*P		**P**		**12 59 39.5**	**+0.4**
	comp=Z,19nm,1.0s,mb4.7								
ASF	**Jabal al Asfar**	**85.99**	**304**	P		**P**		**12 59 40.1**	**-0.8**
	comp=Z,8.6nm,0.9s,mb4.4,baz=290,slow=2.5,SNR=9.2								
ASF	**Jabal al Asfar**	**85.99**	**304**	P		**P**		**12 59 40.1**	**-0.8**
ASF				pmax		pmax			
	comp=Z,9.0nm,0.9s								
MLR	**Muntele Rosu**	**86.09**	**320**	P		**P**		**12 59 41.6**	**+0.5**
	comp=Z,5.2nm,0.7s,mb4.2,baz=330,slow=3.7,SNR=10								
MLR	**Muntele Rosu**	**86.09**	**320**	*i*P		**P**		**12 59 40.9**	**-0.3**
MLR	**Muntele Rosu**	**86.09**	**320**	P		**P**		**12 59 41.1**	**-0.1**
STHS	**Stebnicka Huta**	**86.28**	**325**	*e*P		**P**		**12 59 42.6**	**+0.6**
STHS				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.2								
STHS	**Stebnicka Huta**	**86.28**	**325**	*e*P		**P**		**12 59 42.6**	**+0.6**
	comp=Z,5.2nm,0.7s,mb4.3								
TRPA	**Tarpa**	**86.40**	**323**	*i*P		**P**		**12 59 42.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**86.49**	**324**	*e*P		**P**		**12 59 43.1**	**+0.1**
CRVS				pmax		pmax			
	comp=Z,16nm,1.2s,mb4.5								
CRVS	**Cervenica-Dubn**	**86.49**	**324**	*e*P		**P**		**12 59 43.1**	**+0.1**
	comp=Z,16nm,1.2s,mb4.5								
OJC	**Ojcow**	**86.51**	**326**	*e*P		**P**		**12 59 42.0**	**-1.0**
VOIR		**86.64**	**320**	*i*P		**P**		**12 59 43.2**	**-0.5**
VOIR		**86.64**	**320**	P		**P**		**12 59 43.2**	**-0.6**
MMAI	**Mount Meron Ar**	**86.66**	**305**	P		**P**		**12 59 44.1**	**0.0**
	comp=Z,14nm,0.7s,mb4.8,baz=103,slow=2.7,SNR=15								
NIE	**Niedzica**	**86.76**	**325**	*e*P		**P**		**12 59 44.0**	**-0.2**
DRGR		**87.13**	**322**	*i*P		**P**		**12 59 45.3**	**-0.7**
DRGR		**87.13**	**322**	P		**P**		**12 59 45.4**	**-0.6**
OKC	**Ostrava-Krasne**	**87.57**	**327**	*e*P		**P**		**12 59 47.7**	**-0.3**
KSP	**Ksiaz**	**87.79**	**328**	*e*P		**P**		**12 59 48.6**	**-0.4**
KSP	**Ksiaz**	**87.79**	**328**	*e*P		**P**		**12 59 48.5**	**-0.5**
PSZ	**Piszkesteto**	**87.92**	**324**	*i*P		**P**		**12 59 49.8**	**+0.1**
PSZ	**Piszkesteto**	**87.92**	**324**	P		**P**		**12 59 49.6**	**-0.1**
VYHS	**Vyhne**	**88.10**	**325**	*e*P		**P**		**12 59 50.2**	**-0.3**
VYHS				pmax		pmax			
	comp=Z,17nm,0.9s,mb4.8								
VYHS	**Vyhne**	**88.10**	**325**	*e*P		**P**		**12 59 50.2**	**-0.3**
	comp=Z,17nm,0.9s,mb4.8								
DPC	**Dobruska-Polom**	**88.11**	**328**	*e*P		**P**		**12 59 49.5**	**-1.0**
UPC	**Upice**	**88.15**	**328**	*e*P		**P**		**12 59 50.2**	**-0.5**
BSEG	**Bad Segeberg**	**88.24**	**333**	*e*P		**P**		**12 59 50.0**	**-1.1**
BSEG				pmax		pmax			
	comp=Z,20nm,0.9s,mb4.8								
BSEG	**Bad Segeberg**	**88.24**	**333**	*e*P		**P**		**12 59 50.0**	**-1.1**
	comp=Z,20nm,0.9s,mb4.8								
KOLL	**Kolacno**	**88.26**	**326**	*e*P		**P**		**12 59 51.1**	**-0.2**
BZS	**Buzias**	**88.45**	**322**	*i*P		**P**		**12 59 50.7**	**-1.5**
BZS	**Buzias**	**88.45**	**322**	P		**P**		**12 59 51.4**	**-0.9**
VRAC	**Vranov**	**88.68**	**327**	P		**P**		**12 59 53.0**	**-0.2**
	comp=Z,22nm,0.8s,mb5.0,baz=46,slow=4.0,SNR=32								
VRAC	**Vranov**	**88.68**	**327**	*i*P		**P**		**12 59 53.2**	**0.0**
VRAC	**Vranov**	**88.68**	**327**	P		**P**		**12 59 52.9**	**-0.3**
EIL	**Elat**	**88.69**	**303**	P		**P**		**12 59 52.0**	**-1.6**
	comp=Z,5.4nm,0.8s,mb4.4,baz=84,slow=5.7,SNR=4.5								
SMOL	**Smolenice**	**88.79**	**326**	*e*P		**P**		**12 59 54.3**	**+0.5**
PVCC	**Panska Ves**	**88.81**	**329**	*e*P		**P**		**12 59 53.5**	**-0.3**
BRG	**Berggiesshubel**	**88.86**	**329**	*i*P		**P**		**12 59 53.1**	**-0.9**
BRG				pmax		pmax			
	comp=Z,9.0nm,1.0s,mb4.5								
BRG	**Berggiesshubel**	**88.86**	**329**	*e*P		**P**		**12 59 53.0**	**-1.0**
	comp=Z,40nm,1.7s,mb5.0								
BRG	**Berggiesshubel**	**88.86**	**329**	*i*P		**P**		**12 59 53.1**	**-0.9**
	comp=Z,16nm,1.0s,mb4.8								
CLL	**Collm**	**88.98**	**330**	*i*P		**P**		**12 59 53.2**	**-1.4**
CLL				pmax		pmax			
	comp=Z,22nm,1.2s,mb4.9								
CLL	**Collm**	**88.98**	**330**	*e*P		**P**		**12 59 53.3**	**-1.3**
	comp=Z,22nm,1.2s,mb4.9								
CLL	**Collm**	**88.98**	**330**	*i*P		**P**		**12 59 53.2**	**-1.4**
	comp=Z,22nm,1.2s,mb4.9								
CLL				*e*pP		pP		13 01 45.0	+2.4
CLL				*e*PP		PP		13 03 33.0	+1.0
CLL	**Collm**	**88.98**	**330**	*i*P		**P**		**12 59 53.2**	**-1.4**
	comp=Z,22nm,1.2s,mb4.9								
ZST	**Bratislava**	**89.17**	**326**	*e*P		**P**		**12 59 55.4**	**-0.1**
ZST				pmax		pmax			
	comp=Z,12nm,0.7s,mb4.8								
ZST	**Bratislava**	**89.17**	**326**	*e*P		**P**		**12 59 55.4**	**-0.1**
	comp=Z,12nm,0.7s,mb4.8								
PRU	**Pruhonice**	**89.19**	**328**	*e*P		**P**		**12 59 55.0**	**-0.6**
TREC	**Trest**	**89.22**	**327**	*e*P		**P**		**12 59 55.3**	**-0.4**
PKSM	**Moragy**	**89.68**	**324**	*i*P		**P**		**12 59 57.1**	**-0.8**
PKSM	**Moragy**	**89.68**	**324**	P		**P**		**12 59 56.9**	**-1.0**
CLZ	**Clausthal**	**89.74**	**331**	*e*P		**P**		**12 59 57.3**	**-0.8**
CLZ				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.7								
CLZ	**Clausthal**	**89.74**	**331**	*e*P		**P**		**12 59 57.3**	**-0.8**
	comp=Z,10.0nm,0.8s,mb4.7								
CONA	**Conrad Observa**	**89.96**	**326**	*i* PcP		PcP		12 59 58.9	-1.2
	comp=Z,18nm,0.8s,SNR=24								
CSNA	**Conrad Observa**	**89.97**	**326**	*i*PcP		PcP		12 59 59.0	-1.1
	comp=Z,18nm,0.8s								
NKC	**Novy Kostel**	**89.99**	**329**	*e*P		**P**		**12 59 59.1**	**-0.2**
MOX	**Moxa**	**90.07**	**330**	*e*P		**P**		**12 59 58.6**	**-1.0**
	comp=Z,11nm,1.1s,mb4.6								
MOX	**Moxa**	**90.07**	**330**	*e*P		**P**		**12 59 58.6**	**-1.0**
MOX				pmax		pmax			
	comp=Z,11nm,1.1s,mb4.6								
MOX	**Moxa**	**90.07**	**330**	*e*P		**P**		**12 59 58.7**	**-0.9**
	comp=Z,12nm,1.1s,mb4.6								
KHC	**Kasperske Hory**	**90.24**	**328**	*e*P		**P**		**12 59 59.7**	**-0.8**
GEC2	**GERESS Array S**	**90.38**	**328**	*e*P		**P**		**13 00 00.2**	**-0.9**
GEC2				pmax		pmax			
	comp=Z,19nm,1.0s,mb4.9								
GEC2	**GERESS Array S**	**90.38**	**328**	*e*P		**P**		**13 00 00.2**	**-0.9**
	comp=Z,19nm,1.0s,mb4.9								
GERES	**GERESS Array B**	**90.38**	**328**	P		**P**		**13 00 00.0**	**-1.1**
	comp=Z,11nm,0.7s,mb4.8,baz=44,slow=4.6,SNR=94								
GERES				PP		PP		13 03 40.9	-2.1
	comp=Z,1.4nm,0.8s,baz=51,slow=7.0,SNR=6.2								
GERES	**GERESS Array B**	**90.38**	**328**	P		**P**		**13 00 00.0**	**-1.1**
GERES								13 03 40.9	
GERES				pmax		pmax			
	comp=Z,11nm,0.7s								
GERES				pmax		pmax			
	comp=Z,1.0nm,0.8s								
ROTZ	**Rotzenmuhle**	**90.43**	**329**	*e*P		**P**		**13 00 00.8**	**-0.5**
	comp=Z,18nm,0.9s,mb4.9								
IBBN	**Ibbenburen**	**90.49**	**333**	*e*P		**P**		**13 00 00.3**	**-1.2**
	comp=Z,35nm,1.0s,mb5.1								
WET	**Wettzell**	**90.56**	**328**	*e*P		**P**		**13 00 01.1**	**-0.8**
WET				pmax		pmax			
	comp=Z,12nm,1.1s,mb4.7								
WET	**Wettzell**	**90.56**	**328**	*e*P		**P**		**13 00 01.1**	**-0.8**
	comp=Z,12nm,1.1s,mb4.7								
ARSA	**Arzberg**	**90.59**	**326**	*i* PcP		PcP		13 00 01.4	-1.5
	comp=Z,12nm,0.8s,SNR=13								
MOA	**Molln**	**90.80**	**327**	*i* PcP		PcP		13 00 02.4	-1.4
	comp=Z,13nm,0.7s,SNR=21								
SDCO	**Great Sand Dun**	**90.89**	**46**	*e*P		**P**		**13 00 04.8**	**+1.1**
	comp=Z,5.5nm,1.1s,mb4.4								
GRA1	**Grafenberg Arr**	**90.93**	**330**	*e*P		**P**		**13 00 03.0**	**-0.6**
	comp=Z,22nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**90.93**	**330**	*e*P		**P**		**13 00 03.0**	**-0.6**
GRF				pmax		pmax			
	comp=Z,22nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**90.93**	**330**	*e*P		**P**		**13 00 03.0**	**-0.6**
GRF				pmax		pmax			
	comp=Z,22nm,1.0s,mb5.0								
GRF	**Grafenberg Arr**	**90.93**	**330**	*e*P		**P**		**13 00 03.0**	**-0.6**
	comp=Z,22nm,1.0s,mb5.0								
SOKA	**Soboth**	**91.23**	**326**	*i*PcP		PcP		13 00 04.2	-1.5
	comp=Z,15nm,0.8s								
OBKA	**Obir**	**91.59**	**326**	*i*PcP		PcP		13 00 05.7	-1.6
	comp=Z,11nm,0.7s								
RJOB	**Jochberg**	**91.59**	**327**	*e*P		**P**		**13 00 05.9**	**-0.8**
	comp=Z,31nm,0.9s,mb5.2								
TNS	**Taunus Mts**	**91.76**	**331**	*e*P		**P**		**13 00 06.6**	**-0.9**
TNS				pmax		pmax			
	comp=Z,25nm,1.6s,mb4.9								
TNS	**Taunus Mts**	**91.76**	**331**	*e*P		**P**		**13 00 06.6**	**-0.9**
	comp=Z,25nm,1.6s,mb4.9								
KBA	**Koelnbreinsper**	**91.79**	**327**	*i*PcP		PcP		13 00 06.5	-1.7
	comp=Z,8.9nm,0.6s,SNR=8.4								
ANMO	**Albuquerque**	**91.89**	**49**	*e*P		**P**		**13 00 09.5**	**+1.1**
ANMO				pmax		pmax			
	comp=Z,7.0nm,0.9s								
ANMO	**Albuquerque**	**91.89**	**49**	*e*P		**P**		**13 00 09.5**	**+1.2**
	comp=Z,6.5nm,0.9s,mb4.6								
EKA	**Eskdalemuir Ar**	**91.94**	**340**	P		**P**		**13 00 07.2**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.1,baz=44,slow=4.4,SNR=8.6								
EKA	**Eskdalemuir Ar**	**91.94**	**340**	P		**P**		**13 00 07.3**	**-0.9**
EKA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
MYKA	**Terra Mystica**	**91.95**	**326**	*i*P		**P**		**13 00 06.7**	**-1.7**
	comp=Z,12nm,0.6s,mb5.0								
FUR	**Furstenfeldbru**	**92.00**	**328**	*e*P		**P**		**13 00 08.1**	**-0.5**
FUR				pmax		pmax			
	comp=Z,57nm,0.9s,mb5.5								
FUR	**Furstenfeldbru**	**92.00**	**328**	*e*P		**P**		**13 00 08.1**	**-0.5**
	comp=Z,57nm,0.9s,mb5.5								
VOY	**Vojsko**	**92.25**	**326**	*e*P		**P**		**13 00 08.2**	**-1.6**
ABTA	**Abfaltersbach**	**92.43**	**327**	*i* P		**P**		**13 00 08.8**	**-1.7**
	comp=Z,12nm,0.7s,mb5.0,SNR=19								
WATA	**Walderalm**	**92.46**	**328**	*i*PcP		PcP		13 00 09.5	-1.7
	comp=Z,5.3nm,0.6s								
WTTA	**Wattenberg**	**92.48**	**328**	*i*PcP		PcP		13 00 09.7	-1.6
	comp=Z,8.7nm,0.8s								
STU	**Stuttgart**	**92.51**	**330**	*e*P		**P**		**13 00 10.0**	**-0.9**
	comp=Z,35nm,1.1s,mb5.3								
MOTA	**Moosalm**	**92.67**	**328**	*i*PcP		PcP		13 00 10.2	-1.9
	comp=Z,6.3nm,0.6s,SNR=6.8								
IDI	**Anoyia**	**92.72**	**312**	P		**P**		**13 00 10.6**	**-1.6**
	comp=Z,8.1nm,0.7s,mb4.8,baz=28,slow=8.7,SNR=4.1								
RETA	**Reutte**	**92.73**	**328**	*i*PcP		PcP		13 00 10.9	-1.5
	comp=Z,6.5nm,0.9s								
FETA	**Feichten**	**93.08**	**328**	*i*PcP		PcP		13 00 12.4	-1.5
	comp=Z,12nm,0.9s								
BFO	**Black Forest**	**93.22**	**330**	*e*P		**P**		**13 00 13.1**	**-1.1**
BFO				pmax		pmax			
	comp=Z,26nm,1.2s,mb5.1								
BFO	**Black Forest**	**93.22**	**330**	*e*P		**P**		**13 00 13.1**	**-1.1**
	comp=Z,26nm,1.2s,mb5.1								
DAVA	**Damuels**	**93.29**	**329**	*i*PcP		PcP		13 00 13.9	-1.0
	comp=Z,14nm,0.9s								
CDF	**Champ du Feu**	**93.63**	**331**	*e*P		**P**		**13 00 14.9**	**-1.2**
	comp=Z,13nm,0.8s,mb4.7								
CDF	**Champ du Feu**	**93.63**	**331**	*e*P		**P**		**13 00 14.9**	**-1.2**
CDF				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.7								
CDF	**Champ du Feu**	**93.63**	**331**	*e*P		**P**		**13 00 14.9**	**-1.2**
	comp=Z,6.5nm,0.8s,mb4.7								
BAIF	**Baives**	**93.64**	**333**	*e*P		**P**		**13 00 14.6**	**-1.5**
DAVOS	**Davos**	**93.66**	**328**	P		**P**		**13 00 14.6**	**-1.6**
DAVOX	**Davos/Dischmat**	**93.66**	**328**	P		**P**		**13 00 14.5**	**-1.7**
	comp=Z,12nm,0.7s,mb5.0,baz=52,slow=2.3,SNR=30								
TUE	**Stuetta**	**94.14**	**328**	*e*P		**P**		**13 00 17.8**	**-0.7**
	comp=Z,4.1nm,0.6s,mb4.6								
HINF	**Hinteralfeld**	**94.26**	**330**	*e*P		**P**		**13 00 17.3**	**-1.7**
	comp=Z,21nm,1.1s,mb4.8								
HINF	**Hinteralfeld**	**94.26**	**330**	*e*P		**P**		**13 00 17.3**	**-1.7**
HINF				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb4.8								
HINF	**Hinteralfeld**	**94.26**	**330**	*e*P		**P**		**13 00 17.3**	**-1.7**
	comp=Z,10nm,1.1s,mb4.8								
HAU	**Haudompre**	**94.34**	**331**	*e*P		**P**		**13 00 17.6**	**-1.7**
MEZF	**Maizieres J'vi**	**94.51**	**332**	*e*P		**P**		**13 00 18.1**	**-2.0**
	comp=Z,27nm,1.1s,mb4.9								
MEZF	**Maizieres J'vi**	**94.51**	**332**	*e*P		**P**		**13 00 18.1**	**-2.0**
	comp=Z,27nm,1.1s,mb5.2								
AQU	**L'Aquila**	**95.06**	**323**	*e*P		**P**		**13 00 22.7**	**0.0**
AQU				pmax		pmax			
	comp=Z,17nm,0.9s,mb5.1								
AQU	**L'Aquila**	**95.06**	**323**	*e*P		**P**		**13 00 22.7**	**+0.1**
	comp=Z,17nm,0.9s,mb5.1								
CABF	**La Chapelle**	**95.52**	**330**	*e*P		**P**		**13 00 23.4**	**-1.3**
	comp=Z,5.7nm,0.7s,mb4.5								
CABF	**La Chapelle**	**95.52**	**330**	*e*P		**P**		**13 00 23.4**	**-1.3**
CABF				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.5								
CABF	**La Chapelle**	**95.52**	**330**	*e*P		**P**		**13 00 23.4**	**-1.3**
	comp=Z,2.8nm,0.7s,mb4.5								
LPL	**La Plagne**	**96.06**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
	comp=Z,15nm,0.6s,mb5.0								
LPL	**La Plagne**	**96.06**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
LPL				pmax		pmax			
	comp=Z,7.0nm,0.6s,mb5.0								
LPL	**La Plagne**	**96.06**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
	comp=Z,7.3nm,0.6s,mb5.0								
LPG	**La Plagne**	**96.07**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
	comp=Z,20nm,0.7s,mb5.1								
LPG	**La Plagne**	**96.07**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
LPG				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb5.0								
LPG	**La Plagne**	**96.07**	**329**	*e*P		**P**		**13 00 26.1**	**-1.1**
	comp=Z,10nm,0.7s,mb5.1								
SMF	**Signal de Mont**	**96.47**	**331**	*e*P		**P**		**13 00 27.5**	**-1.5**
AVF	**Avril sur Loir**	**96.57**	**332**	*e*P		**P**		**13 00 28.0**	**-1.4**
	comp=Z,13nm,1.1s,mb4.8								
AVF	**Avril sur Loir**	**96.57**	**332**	*e*P		**P**		**13 00 28.0**	**-1.4**
AVF				pmax		pmax			
	comp=Z,6.0nm,1.0s,mb4.8								
AVF	**Avril sur Loir**	**96.57**	**332**	*e*P		**P**		**13 00 28.0**	**-1.4**
	comp=Z,6.4nm,1.0s,mb4.8								
ORIF	**Oris-en-Rattie**	**96.91**	**329**	*e*P		**P**		**13 00 29.1**	**-1.9**
	comp=Z,5.5nm,0.7s,mb4.6								
ORIF	**Oris-en-Rattie**	**96.91**	**329**	*e*P		**P**		**13 00 29.1**	**-1.9**
ORIF				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.6								
ORIF	**Oris-en-Rattie**	**96.91**	**329**	*e*P		**P**		**13 00 29.1**	**-1.9**
	comp=Z,2.8nm,0.7s,mb4.6								
TXAR	**Lajitas Array**	**97.09**	**52**	P		**P**		**13 00 32.8**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.4,baz=292,slow=1.2,SNR=27								
TXAR				pP		pP		13 02 20.0	-0.9
	comp=Z,0.9nm,1.0s,baz=302,slow=4.0,SNR=3.8								
TXAR				PP		PP		13 04 35.4	+0.1
	comp=Z,1.2nm,0.9s,baz=282,slow=5.0,SNR=6.1								
TXAR	**Lajitas Array**	**97.09**	**52**	P		**P**		**13 00 32.8**	**+0.7**
TXAR				*PP		pP		13 02 20.0	-0.9
TXAR								13 04 35.4	
TXAR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
TXAR	**Lajitas Array**	**97.09**	**52**	P		**P**		**13 00 32.8**	**+0.6**
TXAR				pP		pP		13 02 20.0	-0.9
TXAR				PP		PP		13 04 35.4	+0.1
VIVF	**Saint-Julien-l**	**97.50**	**330**	*e*P		**P**		**13 00 32.2**	**-1.4**
	comp=Z,22nm,1.0s,mb5.1								
VIVF	**Saint-Julien-l**	**97.50**	**330**	*e*P		**P**		**13 00 32.2**	**-1.4**
VIVF				pmax		pmax			
	comp=Z,11nm,1.0s,mb5.1								
VIVF	**Saint-Julien-l**	**97.50**	**330**	*e*P		**P**		**13 00 32.2**	**-1.4**
	comp=Z,11nm,1.0s,mb5.1								
ESDC	**Sonseca Array**	**105.45**	**332**	PP		PP		13 05 26.2	-11
	comp=Z,0.4nm,0.3s,baz=29,slow=7.2,SNR=5.3								
BOSA	**Boshof**	**122.97**	**252**	PKP		PKPdf		13 05 52.4	-0.9
	comp=Z,4.1nm,0.7s,baz=140,slow=2.2,SNR=11								
BOSA	**Boshof**	**122.97**	**252**	PKIKP		PKPdf		13 05 52.4	-0.9
BOSA				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BOSA	**Boshof**	**122.97**	**252**	PKP		PKPdf		13 05 52.4	-0.9
TORD	**Torodi Ar. Bea**	**123.01**	**309**	PKP		PKPdf		13 05 53.2	-0.6
	comp=Z,6.0nm,0.7s,baz=17,slow=2.8,SNR=36								
TORD				PP		PP		13 07 25.3	-15
	comp=Z,1.2nm,0.9s,ba

	comp=Z,1.4nm,0.7s,baz=340,slow=2.5,SNR=17							
ASAR	**Alice Springs**	**26.14**	**158**	P	**P**	**13 26 19.1**	**+0.7**	
ASAR						13 29 38.6		
ASAR				S	**S**	**13 30 24.1**	**-5.4**	
CMAR	**Chiang Mai Arr**	**30.05**	**307**	P	**P**	**13 26 53.9**	**+0.8**	
	comp=Z,1.1nm,0.8s,mb3.5,baz=136,slow=7.3,SNR=11							
CHTO	**Chiang Mai**	**30.25**	**308**	*e*P	**P**	**13 26 55.4**	**+0.6**	
CHTO				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.0							
CHTO	**Chiang Mai**	**30.25**	**308**	*e*P	**P**	**13 26 55.4**	**+0.6**	
	comp=Z,4.9nm,0.9s,mb4.0							
FORT	**Forrest**	**31.54**	**173**	*e*P	**P**	**13 27 06.4**	**+0.5**	
	comp=Z,15nm,0.6s,mb4.7							
NJ2	**Nanjing**	**31.55**	**352**	*e*P	**P**	**13 27 03.0**	**-3.0**	
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**36.54**	**154**	P	**P**	**13 27 48.1**	**-0.6**	
	comp=Z,4.7nm,0.6s,mb4.1,baz=331,slow=7.3,SNR=14							
STKA	**Stephens Creek**	**36.54**	**154**	*e*P	**P**	**13 27 49.4**	**+0.7**	
	comp=Z,3.5nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**36.54**	**154**	*e*P	**P**	**13 27 49.5**	**+0.8**	
KSRS	**Korea Array**	**36.82**	**6**	P	**P**	**13 27 50.9**	**-0.1**	
	comp=Z,3.8nm,1.1s,mb3.8,baz=187,slow=8.4,SNR=4.5							
MJAR	**Matsushiro Arr**	**38.15**	**19**	P	**P**	**13 28 01.8**	**-0.3**	
	comp=Z,3.0nm,0.7s,mb3.8,baz=186,slow=9.0,SNR=12							
LSA	**Lhasa**	**42.35**	**316**	*e*P	**P**	**13 28 38.5**	**+2.0**	
LSA				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb3.9							
LSA	**Lhasa**	**42.35**	**316**	*e*P	**P**	**13 28 38.5**	**+2.0**	
	comp=Z,5.0nm,0.6s,mb3.9							
ULN	**Ulaanbaatar**	**49.18**	**345**	*i*P	**P**	**13 29 29.9**	**+0.5**	
ULN	**Ulaanbaatar**	**49.18**	**345**	P	**P**	**13 29 28.1**	**-1.4**	
	comp=Z,5.0nm,0.9s,mb3.8							
SONM	**Songino Array**	**49.33**	**345**	P	**P**	**13 29 30.5**	**0.0**	
	comp=Z,3.8nm,0.8s,mb3.8,baz=156,slow=8.2,SNR=21							
BOD	**Bodaibo**	**57.51**	**354**	*e*P	**P**	**13 30 29.0**	**-0.5**	
BOD				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb3.9							
MK31	**Makanchi Array**	**58.42**	**328**	*e*P	**P**	**13 30 35.9**	**-0.2**	
MKAR	**Makanchi Array**	**58.42**	**328**	P	**P**	**13 30 36.0**	**0.0**	
	comp=Z,4.1nm,0.6s,mb4.0,baz=120,slow=8.5,SNR=46							
MKAR				PcP	PcP	13 31 22.5	-1.1	
	comp=Z,1.5nm,0.7s,baz=173,slow=3.2,SNR=9.6							
MKAR	**Makanchi Array**	**58.42**	**328**	P	**P**	**13 30 36.0**	**0.0**	
MKAR				PcP	PcP	13 31 22.5	-1.1	
PETK	**Petropavlovsk-**	**59.41**	**23**	P	**P**	**13 30 41.6**	**-1.1**	
	comp=Z,4.0nm,0.7s,mb4.0,baz=218,slow=7.2,SNR=3.5							
TKM2	**Tokmak 2**	**60.11**	**321**	*e*P	**P**	**13 30 48.1**	**+0.5**	
TKM2				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.9							
TKM2	**Tokmak 2**	**60.11**	**321**	*e*P	**P**	**13 30 48.1**	**+0.4**	
	comp=Z,2.8nm,0.8s,mb3.8							
AAK	**Ala-Archa**	**60.66**	**320**	*i*P	**P**	**13 30 53.2**	**+1.8**	
AAK				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.7							
AAK	**Ala-Archa**	**60.66**	**320**	*e*P	**P**	**13 30 52.2**	**+0.8**	
	comp=Z,3.0nm,0.8s,mb3.9							
AAK	**Ala-Archa**	**60.66**	**320**	P	**P**	**13 30 53.8**	**+2.4**	
YAK	**Yakutsk**	**61.38**	**3**	*e*P	**P**	**13 30 55.6**	**-0.2**	
YAK				pmax	pmax			
	comp=Z,15nm,0.8s,mb4.6							
YAK	**Yakutsk**	**61.38**	**3**	*e*P	**P**	**13 30 56.8**	**+1.0**	
	comp=Z,14nm,0.7s,mb4.6							
ZALV	**Zalesovo Beam**	**62.00**	**335**	P	**P**	**13 30 58.7**	**-1.4**	
	comp=Z,0.8nm,0.5s,mb3.6,baz=140,slow=7.4,SNR=4.6							
ZALV	**Zalesovo Beam**	**62.00**	**335**	P	**P**	**13 30 58.7**	**-1.4**	
KURK	**Kurchatov**	**62.75**	**330**	P	**P**	**13 31 04.4**	**-0.7**	
	comp=Z,4.5nm,0.8s,mb4.2,baz=126,slow=6.6,SNR=9.8							
KURK	**Kurchatov**	**62.75**	**330**	*e*P	**P**	**13 31 04.4**	**-0.7**	
BRVK	**Borovoye**	**68.35**	**329**	P	**P**	**13 31 41.1**	**+0.3**	
BRVK				pmax	pmax			
	comp=Z,8.0nm,1.3s,mb4.3							
BRVK	**Borovoye**	**68.35**	**329**	P	**P**	**13 31 41.1**	**+0.3**	
	comp=Z,7.6nm,1.3s,mb4.3							
TIXI	**Tiksi**	**70.95**	**2**	*e*P	**P**	**13 31 56.3**	**+0.1**	
TIXI				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.1							
TIXI	**Tiksi**	**70.95**	**2**	*e*P	**P**	**13 31 56.3**	**+0.1**	
	comp=Z,3.6nm,0.8s,mb4.0							
SVE	**Sverdlovsk**	**75.01**	**330**	*e*P	**P**	**13 32 19.6**	**-0.6**	
SVE				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.4							
OBN	**Obninsk**	**87.81**	**325**	P	**P**	**13 33 27.5**	**+0.5**	
OBN				*e**PP	pP	13 34 37.2	+4.8	
OBN				*e*		13 36 58.8		
OBN				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.2							
TORD	**Torodi Ar. Bea**	**120.90**	**286**	PKP	PKPdf	13 39 29.1	-0.5	
	comp=Z,0.2nm,0.3s,baz=89,slow=1.6,SNR=5.7							

*ISCJB **30** 13:40:23.0±0.5,3140S±006×6874W±0.10,h118km±5km, mb3.9/9, Error ellipse: s-maj=15.2km s-min=7.9km az=152.4*
*NEIC **30** 13:40:23.6±0.6,3141S×6872W,h110km±5km,mb4.3/4, Error ellipse: s-maj=13.1km s-min=8.1km az=77.0*
*IDC **30** 13:40:24.1±0.7,3140S×6871W,h111km±4km,mb3.7/6, mb1 3.8/10,mb1mx3.7/19,mbtmp3.6/10, Error ellipse: s-maj=22.5km s-min=14.0km az=76.0*
ISC 30 13:40:24.1±0.5,3138S±006×6872W±010,h113km±5km, n31,σ1°04/28,mb3.9/9,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.47**	**118**	P		**Pn**	**13 40 41.8**	**+0.8**
	27nm,0.3s,baz=289,slow=6.0,SNR=1642							
CFAA				S		**Sn**	**13 40 55.1**	**+1.3**
	96nm,0.3s,baz=197,slow=20,SNR=319							
LCO	**Las Campanas**	**2.92**	**324**	*e*Pn		**Pn**	**13 41 09.4**	**+0.2**
LCO				*e*Sn		**Sn**	**13 41 43.8**	**0.0**
TRQA	**Tornquist**	**8.66**	**142**	*e*Pn		**Pn**	**13 42 25.4**	**-1.0**
	13nm,0.4s							
LVC	**Limon Verde**	**8.74**	**359**	P		**Pn**	**13 42 26.7**	**-1.0**
	2.4nm,0.3s,baz=204,slow=7.6,SNR=14							
LVC				S		**Sn**	**13 44 00.9**	**-3.5**
	0.3nm,0.3s,baz=218,slow=17,SNR=2.2							
LVC	**Limon Verde**	**8.74**	**359**	*e*Pn		**Pn**	**13 42 26.2**	**-1.5**
LVC				S		**Sn**	**13 44 00.9**	**-3.5**
PLCA	**Paso Flores**	**9.45**	**189**	P		**Pn**	**13 42 35.1**	**-2.0**
	0.1nm,0.3s,baz=350,slow=12,SNR=2.4							
PLCA	**Paso Flores**	**9.45**	**189**	*e*P		**Pn**	**13 42 35.2**	**-2.0**
CPUP	**Villa Florida**	**11.18**	**66**	P		**Pn**	**13 42 58.9**	**-1.6**
	1.1nm,0.3s,baz=226,slow=12,SNR=12							
CPUP	**Villa Florida**	**11.18**	**66**	*e*Pn		**Pn**	**13 42 58.8**	**-1.7**
SIV	**San Ignacio**	**16.84**	**26**	P		**Pn**	**13 44 14.0**	**+0.9**
	0.1nm,0.3s,baz=233,slow=9.0,SNR=7.2							
USHA	**Ushuaia**	**23.44**	**180**	P		**P**	**13 45 22.5**	**-0.4**
	9.8nm,0.6s,mb4.3,baz=286,slow=11,SNR=7.5							
VNA3	**Neumayer Olymp**	**50.76**	**159**	*e*		**P**	**13 49 12.3**	**+0.2**
VNA3				*e*			13 49 14.0	
VNA3				*e*			13 49 16.5	
VNA2	**Neumayer--Watz**	**51.37**	**158**	*e*		**P**	**13 49 17.4**	**+0.8**
	baz=291,slow=8.3							
VNA2				*e*			13 49 18.8	
VNA2				*e*			13 49 22.0	
SNAA	**Sanae**	**52.98**	**159**	*e*		**P**	**13 49 28.5**	**0.0**
SNAA				*e*			13 49 30.1	
SNAA				*e*			13 49 32.8	
SNAA	**Sanae**	**52.98**	**159**	*e*P		**P**	**13 49 28.7**	**+0.1**
	4.9nm,1.0s,mb4.5							
TXAR	**Lajitas Array**	**68.93**	**328**	P		**P**	**13 51 17.9**	**+1.0**
	0.5nm,0.6s,mb3.5,baz=154,slow=8.8,SNR=7.1							
BOSA	**Boshof**	**78.77**	**117**	P		**P**	**13 52 14.8**	**+0.2**
	2.1nm,0.7s,mb4.0,baz=233,slow=11,SNR=4.1							
BOSA	**Boshof**	**78.77**	**117**	P		**P**	**13 52 14.8**	**+0.2**
TOA0	**Torodi Ar. Sit**	**80.67**	**68**	*e*P		**P**	**13 52 25.2**	**+0.3**
TORD	**Torodi Ar. Bea**	**80.67**	**68**	P		**P**	**13 52 25.6**	**+0.7**
	2.0nm,0.7s,mb4.1,baz=283,slow=6.5,SNR=23							
TORD				pP		pP	13 52 53.1	-0.5
	0.7nm,0.6s,baz=256,slow=4.9,SNR=3.2							
LBTB	**Lobatse**	**80.82**	**114**	*e*P		**P**	**13 52 25.5**	**-0.2**
	2.5nm,0.6s,mb4.2							
PDAR	**Pinedale Array**	**82.77**	**331**	P		**P**	**13 52 36.7**	**+1.5**
	0.5nm,0.6s,mb3.5,baz=132,slow=5.9,SNR=5.0							
NVAR	**Mina Array Bea**	**83.41**	**323**	P		**P**	**13 52 39.4**	**+0.7**
	0.1nm,0.3s,mb3.1,baz=162,slow=4.4,SNR=3.7							
BOZ	**Bozeman (W)**	**85.98**	**331**	*e*P		**P**	**13 52 49.2**	**-2.2**
	1.2nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**124.38**	**207**	PKP		PKPdf	13 59 09.0	-1.4
	0.7nm,1.0s,baz=153,slow=2.0,SNR=12							
ZAA0	**Zalesovo Array**	**150.52**	**32**	*e*PKPbc		PKPbc	14 00 02.1	+0.1
ZALV	**Zalesovo Beam**	**150.52**	**32**	PKPbc		PKPbc	14 00 02.4	+0.3
	3.6nm,0.6s,baz=306,slow=3.2,SNR=15							
ZALV				pPKPbc		pPKPbc	14 00 32.3	-0.2
	0.8nm,0.4s,baz=316,slow=3.6,SNR=3.8							
MK31	**Makanchi Array**	**152.94**	**47**	*e*PKPbc		PKPbc	14 00 07.6	-0.1
MK31				*e*PKPab		PKPab	14 00 19.7	+0.2
MKAR	**Makanchi Array**	**152.94**	**47**	PKPbc		PKPbc	14 00 07.7	-0.1
	0.8nm,0.8s,baz=287,slow=3.8,SNR=7.1							
MKAR				PKPab		PKPab	14 00 19.3	-0.1
	0.9nm,0.7s,baz=300,slow=2.7,SNR=7.3							
MKAR				pPKPbc		pPKPbc	14 00 38.5	+0.2
	0.2nm,0.6s,baz=325,slow=2.0,SNR=2.0							
MKAR				pPKPab		pPKPab	14 00 49.0	0.0
	0.5nm,0.6s,baz=290,slow=3.5,SNR=3.8							
MKAR	**Makanchi Array**	**152.94**	**47**	PKPbc		PKPbc	14 00 07.7	-0.1
MKAR				PKPab		PKPab	14 00 19.3	-0.1
MKAR				pPKPbc		pPKPbc	14 00 38.5	+0.2
MKAR				pPKPab		pPKPab	14 00 49.0	0.0
SONM	**Songino Array**	**163.15**	**11**	PKPab		PKPab	14 01 03.8	+0.3
	0.4nm,0.8s,baz=345,slow=4.5,SNR=3.3							

IDC 30 14:00:26.4±2.0,5384N×15497E,h520km±38km,mb2.4/3, mb1 2.5/3,mb1mx2.3/22,mbtmp2.4/3,Error ellipse: s-maj=133.4km s-min=31.0km az=47.0,Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PETK	**Petropavlovsk-**	**1.79**	**113**	P		P	14 01 32.3	0.0
	1.9nm,0.3s,baz=282,slow=8.1,SNR=23							
SONM	**Songino Array**	**30.75**	**279**	P		P	14 05 59.2	+0.5
	0.2nm,0.8s,baz=85,slow=8.8,SNR=2.2							
MKAR	**Makanchi Array**	**45.05**	**292**	P		P	14 07 54.9	-0.3
	0.2nm,0.4s,baz=52,slow=6.7,SNR=7.2							
ASAR	**Alice Springs**	**79.30**	**200**	P		P	14 11 37.7	+0.2
	0.3nm,0.7s,baz=10,slow=5.7,SNR=5.8							

*NEIC **30** 14:59:50.8±0.9,668N×7305W,h156km±8km,mb4.1/4, Error ellipse: s-maj=12.4km s-min=9.0km az=184.0*
*FUNV **30** 14:59:50.4,671N×7318W,h164km,MW4.2*
*ISCJB **30** 14:59:51.2±0.7,690N±006×7296W±005,h170km±5km, mb4.0/18,Error ellipse: s-maj=9.9km s-min=7.7km az=6.6*
*IDC **30** 14:59:52.1±2.2,682N×7291W,h166km±17km,mb3.6/12, mb1 3.9/15,mb1mx3.7/22,mbtmp3.7/15, Error ellipse: s-maj=22.7km s-min=12.5km az=27.0*
ISC 30 14:59:52.3±0.8,686N±007×7292W±005,h164km±6km,n49, σ0°91/58,mb4.0/18,3C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CAPV	**Capacho**	**1.16**	**31**	*i*P		**Pn**	**15 00 20.1**	**+0.3**
CAPV				*e*S		**Sn**	**15 00 41.2**	**+0.2**
SOCV	**Socops**	**2.49**	**55**	*e*P		**Pn**	**15 00 35.0**	**+1.0**
SOCV				*e*S		**Sn**	**15 01 07.1**	**+0.9**
VIGV	**El Vigia**	**2.50**	**38**	*e*P		**Pn**	**15 00 34.7**	**+0.5**
VIGV				*e*S		**Sn**	**15 01 07.3**	**+0.8**
SDV	**Santo Domingo**	**3.03**	**48**	P		**Pn**	**15 00 41.6**	**+0.9**
	56nm,0.3s,baz=226,slow=5.4,SNR=320							
SDV				S		**Sn**	**15 01 19.3**	**+1.2**
	224nm,0.3s,baz=268,slow=22,SNR=64							
SDV	**Santo Domingo**	**3.03**	**48**	*e*Pn		**Pn**	**15 00 41.5**	**+0.8**
SDV				S		**Sn**	**15 01 19.3**	**+1.2**
VIRV	**Villa del Rosa**	**3.65**	**8**	*e*P		**Pn**	**15 00 47.1**	**-1.4**
VIRV				*e*S		**Sn**	**15 01 29.8**	**-2.6**
QARV	**Quebrada Arrib**	**4.08**	**35**	*i*P		**Pn**	**15 00 54.7**	**+0.6**
QARV				*e*S		**Sn**	**15 01 41.4**	**-0.8**
SANV	**Sanarito**	**4.25**	**52**	*e*P		**Pn**	**15 00 56.5**	**+0.2**
SANV				*e*S		**Sn**	**15 01 46.0**	**-0.1**
CURV	**Curarigua**	**4.29**	**43**	*e*P		**Pn**	**15 00 57.1**	**+0.4**
CURV				*e*S		**Sn**	**15 01 45.8**	**-1.1**
DABV	**Dabajuro**	**4.62**	**29**	*e*P		**Pn**	**15 01 01.4**	**+0.3**
TEPV	**Terepaima**	**4.81**	**50**	*i*P		**Pn**	**15 01 03.9**	**+0.4**
TEPV				*e*S		**Sn**	**15 01 58.3**	**-0.8**
SIQV	**Siquisique**	**4.86**	**39**	*i*P		**Pn**	**15 01 04.2**	**0.0**
SIQV				*e*S		**Sn**	**15 01 59.1**	**-1.3**
BAUV	**El Baul**	**5.26**	**67**	*e*P		**Pn**	**15 01 08.5**	**-0.9**
MONV	**Montecano**	**5.84**	**30**	*e*P		**Pn**	**15 01 16.4**	**-0.7**
MONV				*e*S		**Sn**	**15 02 19.7**	**-3.8**
CAOV	**Caicara del Or**	**6.56**	**86**	*e*P		**Pn**	**15 01 25.8**	**-0.9**
BCIP	**Isla Barro Col**	**7.22**	**289**	*e*Pn		**Pn**	**15 01 30.4**	**-5.0**
CUPV	**Cepira**	**7.74**	**65**	*e*P		**Pn**	**15 01 41.6**	**-0.6**
OTAV	**Otavalo**	**8.59**	**220**	*e*Pn		**Pn**	**15 01 50.1**	**-3.4**
OTAV				*e*Sn		**Sn**	**15 03 21.5**	**-7.8**
PCRV	**Puerto La Cruz**	**8.83**	**68**	P		**Pn**	**15 01 56.6**	**-0.1**
	2.3nm,0.3s,baz=232,slow=6.2,SNR=15							
PCRV				S		**Sn**	**15 03 36.1**	**+1.0**
	3.2nm,0.3s,baz=340,slow=19,SNR=5.8							
MTDJ	**Mount Denham**	**12.16**	**339**	*e*Pn		**Pn**	**15 02 42.7**	**+2.5**
MTDJ				*e*Sn		**Sn**	**15 04 48.5**	**-6.5**
GRGR	**Grenville**	**12.28**	**64**	*e*P		**Pn**	**15 02 45.2**	**+3.3**
TEIG	**Tepich**	**19.96**	**313**	P		**P**	**15 04 12.2**	**+0.4**
	2.1nm,0.3s,baz=159,slow=14,SNR=9.8							
TEIG	**Tepich**	**19.96**	**313**	*e*P		**P**	**15 04 12.4**	**+0.5**
	10nm,0.4s							
BDFB	**Brasilia**	**33.30**	**132**	P		**P**	**15 06 15.3**	**+0.8**
	0.6nm,0.5s,mb3.6,baz=330,slow=20,SNR=4.3							
TXAR	**Lajitas Array**	**36.58**	**311**	P		**P**	**15 06 42.4**	**-0.3**
	2.0nm,0.6s,mb3.9,baz=128,slow=9.2,SNR=32							
TXAR				PcP		PcP	15 09 03.0	+0.6
	0.4nm,0.6s,baz=134,slow=5.2,SNR=5.1							
WUAZ	**Wupatki**	**45.33**	**314**	*e*P		**P**	**15 07 55.2**	**+1.1**
	7.9nm,1.0s,mb4.3							
ULM	**Lac du Bonnet**	**47.31**	**340**	P		**P**	**15 08 08.4**	**-0.8**
	2.7nm,0.4s,mb4.2,baz=153,slow=4.9,SNR=5.7							
SCHQ	**Schefferville**	**48.08**	**5**	P		**P**	**15 08 16.2**	**+1.2**
	8.0nm,0.6s,mb4.5,baz=186,slow=7.0,SNR=26							
BW06	**Boulder Array**	**48.16**	**324**	*e*P		**P**	**15 08 16.2**	**+0.3**
	1.0nm,0.5s,mb3.7							
PDAR	**Pinedale Array**	**48.16**	**324**	P		**P**	**15 08 15.7**	**-0.2**
	1.4nm,0.7s,mb3.7,baz=132,slow=8.4,SNR=10							
HLID	**Hailey**	**51.52**	**322**	*e*P		**P**	**15 08 42.1**	**+0.8**
	1.3nm,0.6s,mb3.7							
NVAR	**Mina Array Bea**	**51.59**	**314**	P		**P**	**15 08 42.2**	**+0.4**
	1.1nm,0.7s,mb3.6,baz=128,slow=6.7,SNR=8.2							
YKA	**Yellowknife Ar**	**63.29**	**340**	P		**P**	**15 10 03.0**	**-0.3**
	2.0nm,0.6s,mb4.1,baz=133,slow=6.6,SNR=50							
YKA	**Yellowknife Ar**	**63.29**	**340**	P		**P**	**15 10 03.0**	**-0.3**
TIC	**Toumodi**	**67.37**	**86**	*e*P		**P**	**15 10 31.2**	**+0.7**
	3.9nm,0.2s,mb4.9							
LIC	**Lamto**	**67.40**	**86**	*e*P		**P**	**15 10 29.5**	**-1.2**
	16nm,0.8s,mb4.9							
DBIC	**Dimbokro**	**67.53**	**86**	P		**P**	**15 10 30.8**	**-0.7**
	2.2nm,0.7s,mb4.0,baz=245,slow=7.1,SNR=4.0							
KIC	**Kosan Boka**	**67.67**	**86**	*e*P		**P**	**15 10 32.5**	**+0.1**
	42nm,1.1s,mb5.1							
TORD	**Torodi Ar. Bea**	**73.53**	**78**	P		**P**	**15 11 06.5**	**-1.4**
	0.3nm,0.3s,mb3.5,baz=284,slow=6.5,SNR=9.0							
NOA	**NORSAR Array B**	**81.19**	**29**	P		**P**	**15 11 49.5**	**0.0**
	0.9nm,0.8s,mb3.4,baz=270,slow=4.9,SNR=3.0							
GERES	**GERESS Array B**	**82.66**	**42**	P		**P**	**15 11 57.2**	**-0.2**
	0.2nm,0.4s,mb3.2,baz=282,slow=9.7,SNR=3.1							
ARCES	**ARCESS Array B**	**86.56**	**20**	P		**P**	**15 12 16.5**	**0.0**
	1.1nm,0.7s,mb3.8,baz=285,slow=3.8,SNR=5.8							
ARCES	**ARCESS Array B**	**86.56**	**20**	P		**P**	**15 12 16.5**	**0.0**
ZALV	**Zalesovo Beam**	**116.58**	**14**	PKP		PKPdf	15 18 16.5	-0.3
	0.4nm,0.3s,baz=330,slow=2.5,SNR=3.4							
MKAR	**Makanchi Array**	**122.22**	**20**	PKP		PKPdf	15 18 27.2	-0.6
	0.3nm,0.3s,baz=311,slow=2.5,SNR=15							
SONM	**Songino Array**	**125.54**	**1**	PKP		PKPdf	15 18 35.3	+1.2
	0.5nm,0.4s,baz=321,slow=1.1,SNR=5.9							
ASAR	**Alice Springs**	**149.30**	**234**	PKP		PKPdf	15 19 17.6	-0.4
	1.9nm,0.7s,baz=118,slow=3.5,SNR=14							
ASAR				PKPbc		PKPbc	15 19 21.1	-1.4
	2.0nm,0.5s,baz=119,slow=3.5,SNR=34							
WRA	**Warramunga Arr**	**150.53**	**241**	PKPbc		PKPbc	15 19 24.3	-1.3
	1.4nm,0.5s,baz=108,slow=2.6,SNR=29							
CMAR	**Chiang Mai Arr**	**153.59**	**18**	PKPbc		PKPbc	15 19 32.8	+0.3
	0.7nm,0.5s,baz=318,slow=3.4,SNR=8.3							

*ISCJB **30** 15:08:21.3±0.9,3155S±009×7193W±02,h118km±15km, mb3.9/5, Error ellipse: s-maj=33.3km s-min=9.4km az=19.7*
*IDC **30** 15:08:22.6±1.3,3152S×17926W,h120km±16km,mb3.6/4, mb1 3.7/6,mb1mx3.6/17,mbtmp3.6/6, Error ellipse: s-maj=30.8km s-min=13.3km az=112.0*
*NEIC **30** 15:08:23.1±1.2,3155S×17929W,h122km±16km,mb4.0/1, Error ellipse: s-maj=28.6km s-min=13.4km az=116.0*
ISC 30 15:08:22.6±0.8,3151S±009×1793W±02,h114km±14km, n11,σ0°95/14,mb3.9/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.56**	**29**	P		**Pn**	**15 09 04.9**	**+1.9**
	83nm,0.3s,baz=73,slow=19,SNR=3.2							
RAO				S		**Sn**	**15 09 34.1**	**+0.1**
	156nm,0.3s,baz=81,slow=23,SNR=4.3							
RAO	**Raoul Island**	**2.56**	**29**	P		**Pn**	**15 09 05.4**	**+2.3**
RAO				*e*S		**Sn**	**15 09 32.3**	**-1.7**
RAO				S		**Sn**	**15 09 34.1**	**+0.1**
URZ	**Urewera**	**7.34**	**203**	P		**Pn**	**15 10 06.1**	**-0.9**
	0.8nm,0.3s,baz=126,slow=19,SNR=14							
URZ				S		**Sn**	**15 11 28.7**	**-0.1**
	5.3nm,0.3s,baz=7.4,slow=23,SNR=11							
AFI	**Afiamalu**	**18.84**	**23**	*e*P		**P**	**15 12 31.9**	**-1.9**
STKA	**Stephens Creek**	**33.13**	**259**	P		**P**	**15 14 48.1**	**+0.1**
	1.5nm,1.1s,mb3.7,baz=110,slow=11,SNR=2.6							
ASAR	**Alice Springs**	**41.93**	**269**	P		**P**	**15 16 02.4**	**+0.2**
	0.7nm,0.5s,mb3.7,baz=108,slow=7.3,SNR=24							
ASAR				PcP		PcP	15 17 53.7	-2.0
	1.1nm,1.1s,baz=111,slow=3.8,SNR=3.2							
WB2	**Warramunga Arr**	**43.01**	**274**	*e*P		**P**	**15 16 11.0**	**0.0**
WRAB	**Tennant Creek**	**43.01**	**274**	*e*P		**P**	**15 16 11.1**	**+0.1**
	2.0nm,0.6s,mb4.0							
WRA	**Warramunga Arr**	**43.02**	**274**	P		**P**	**15 16 11.1**	**+0.1**
	1.9nm,0.3s,mb4.3,baz=111,slow=8.0,SNR=109							
WRA				PcP		PcP	15 17 57.3	-2.1
	0.5nm,0.7s,baz=111,slow=2.7,SNR=2.7							
QSPA	**South Pole Qui**	**58.60**	**180**	P		**P**	**15 18 08.0**	**+1.0**
	0.9nm,0.8s,mb3.8,baz=63,slow=9.0,SNR=3.9							
KAF	**Kangasniemi**	**145.20**	**339**	*e*p		PKPbc	15 27 41.5	-4.4

*CSEM **30** 15:08:50.9,3525N×007W,h0km,ML3.6,After ALG*
CRAAG 30 15:08:50.9,3525N×007W,MI3.6,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ODJA	**Bouhanifia**	**0.10**	**322**	P		Pg	15 08 56.0	+3.1
OJBR	**Djebel Berber**	**0.48**	**46**	P		Pg	15 09 02.0	+1.9
OJGS	**Djebel Guires**	**0.72**	**69**	P		Pg	15 09 18.0	+13
OKGL	**Djebel Kef Gue**	**0.98**	**36**	P		Pg	15 09 16.0	+6.3

*ISCJB **30** 15:11:51.8±0.7,3796N±004×2902E±006,h6km±9km, Error ellipse: s-maj=8.8km s-min=5.8km az=159.1*
*CSEM **30** 15:11:51.0±0.1,3793N×2905E,h5km,MD3.0, Error ellipse: s-maj=1.9km s-min=1.5km az=98.0*
*ISK **30** 15:11:51.1,3793N×2903E,h5km,MD3.0*
*DDA **30** 15:11:52.4,3797N×2901E,h7km±5km,Md2.4*
ISC 30 15:11:52.3±0.6,3796N±004×2902E±006,h9km±7km,n12, σ0°90/15,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DENT	**Denizli**	**0.21**	**178**	PG		**Pg**	**15 11 55.4**	**-1.1**
KHL	**Karahalli**	**0.54**	**47**	*e*PG		**Pg**	**15 12 02.3**	**-0.4**
KHAL	**Karahalli**	**0.55**	**42**	*i* P		**Pg**	**15 12 02.4**	**-0.6**

comp=Z,117nm,19.9s,MS4.2,baz=224,slow=38
GERES GERESS Array B 82.49 319 pP pP 15 49 51.6 -4.4
0.5nm,0.7s,baz=95,slow=11,SNR=3.7
NOA NORSAR Array B 84.77 331 LR LR 16 34 33.4
comp=Z,112nm,18.4s,MS4.3,baz=305,slow=40
KEST Kesra 85.26 305 LR LR 16 30 29.3
comp=Z,37nm,22.0s,MS3.7,baz=251,slow=37

IDC 30 15:50:13.3±4.4, 307S×10083E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, Error ellipse: s-maj=180.7km s-min=24.2km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.74**	**120**	P	P	15 57 21.4	-1.4
	2.8nm,1.4s,baz=308,slow=8.7,SNR=4.7						
ASAR	**Alice Springs**	**37.96**	**126**	P	P	15 57 34.0	+1.0
	0.2nm,0.4s,baz=300,slow=7.8,SNR=18						
SONM	**Songino Array**	**50.93**	**5**	P	P	15 59 17.0	+0.6
	0.2nm,0.8s,baz=187,slow=8.5,SNR=6.0						
MKAR	**Makanchi Array**	**52.28**	**344**	P	P	15 59 26.1	-0.4
	0.1nm,0.3s,baz=157,slow=8.0,SNR=4.0						
TXAR	**Lajitas Array**	**145.03**	**39**	PKPbc	PKPbc	16 09 52.0	-0.7
	0.2nm,0.6s,baz=284,slow=1.2,SNR=4.1						

*ISCJB **30** 15:53:59.8±5.6, 129N±0.1×934E±0.2, h53km±49km, mb3.5/7, Error ellipse: s-maj=35.8km s-min=20.4km az=152.3*
*NEIC **30** 15:53:59.5±0.7, 1281N×9319E, h35km, Error ellipse: s-maj=19.4km s-min=13.0km az=57.0*
*IDC **30** 15:54:02.1±9.7, 1290N×9333E, h56km±84km, mb3.2/6, mb1 3.3/7, mb1mx3.1/22, mbtmp3.2/7, ML3.6/1, Error ellipse: s-maj=66.1km s-min=18.8km az=56.0*

ISC 30 15:54:01.4±5.1, 129N±0.2×933E±0.2, h50km±45km, n9, σ0§34/11, mb3.5/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.78**	**44**	P	**Pn**	**15 55 52.1**	**0.0**
	0.3nm,0.3s,baz=234,slow=15,SNR=11						
CMAR				S	**Sn**	**15 57 19.0**	**+0.1**
	0.1nm,0.3s,baz=234,slow=27,SNR=5.6						
CMAR	**Chiang Mai Arr**	**7.78**	**44**	P	**Pn**	**15 55 52.1**	**0.0**
CMAR				S	**Sn**	**15 57 19.0**	**+0.1**
MKAR	**Makanchi Array**	**35.06**	**347**	P	**P**	**16 00 49.1**	**-0.4**
	0.5nm,0.8s,mb3.5,baz=155,slow=8.8,SNR=5.5						
ZALV	**Zalesovo Beam**	**41.52**	**352**	P	**P**	**16 01 43.5**	**-0.2**
	0.4nm,0.4s,mb3.4,baz=161,slow=8.1,SNR=2.8						
BVAR	**Borovoye Array**	**44.03**	**340**	P	**P**	**16 02 03.6**	**-0.3**
	0.3nm,0.5s,mb3.3,baz=155,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**51.92**	**128**	P	**P**	**16 03 05.0**	**-0.5**
	0.6nm,1.1s,mb3.4,baz=301,slow=9.8,SNR=3.8						
ASAR	**Alice Springs**	**53.82**	**132**	P	**P**	**16 03 19.8**	**+0.3**
	0.3nm,0.9s,mb3.2,baz=310,slow=6.9,SNR=6.5						
ARCES	**ARCESS Array B**	**70.31**	**340**	P	**P**	**16 05 09.7**	**+0.4**
	4.3nm,1.1s,mb4.3,baz=105,slow=6.9,SNR=4.5						
GERES	**GERESS Array B**	**73.58**	**317**	P	**P**	**16 05 29.9**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=65,slow=7.7,SNR=4.0						

NEIC 30 16:35:16.3, 3737S×17669E, h297km, MG4.4(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.50**	**223**	P	Pn	16 35 54.9	+0.4
URZ	**Urewera**	**0.95**	**160**	P	Pn	16 35 55.9	-0.1
MWZ	**Matawai**	**1.17**	**146**	P	Pn	16 35 57.4	+0.3
MXZ	**Matakaoa Point**	**1.30**	**99**	P	Pn	16 35 57.9	0.0
PUZ	**Puketiti**	**1.43**	**120**	P	Pn	16 35 58.6	0.0
WATZ	**Wairara**	**1.54**	**209**	P	Pn	16 35 59.9	+0.6
RATZ	**Rangitukua**	**1.66**	**206**	P	Pn	16 36 00.4	+0.3
BKZ	**Black Stump Fm**	**1.80**	**185**	P	Pn	16 36 01.2	+0.1
BKZ				S	S	16 36 37.7	+0.8
KNZ	**Kokohu**	**1.82**	**155**	P	Pn	16 36 01.6	+0.3
WTVZ	**West Tongariro**	**1.95**	**206**	P	Pn	16 36 02.4	+0.1
TWVZ	**Taurewa**	**1.96**	**210**	P	Pn	16 36 02.5	+0.1
NGZ	**Ngauruhoe**	**2.00**	**205**	P	Pn	16 36 02.7	0.0
TUVZ	**Tukino**	**2.06**	**203**	P	Pn	16 36 03.4	+0.2
FWVZ	**Far West T-bar**	**2.08**	**205**	P	Pn	16 36 03.8	+0.4
WNVZ	**Wahianoa**	**2.14**	**203**	P	Pn	16 36 03.9	+0.1
MOVZ	**Moawhango**	**2.16**	**200**	P	Pn	16 36 03.6	-0.4
VRZ	**Vera Road**	**2.32**	**220**	P	Pn	16 36 05.5	+0.1
WAZ	**Wanganui**	**2.73**	**209**	P	Pn	16 36 08.7	-0.4
TSZ	**Takapari Road**	**2.75**	**192**	P	Pn	16 36 08.6	-0.6
NEZ	**North Egmont**	**2.79**	**226**	P	Pn	16 36 10.4	+0.8
PKE	**Pukeiti**	**2.80**	**229**	P	Pn	16 36 10.2	+0.4
NWEZ	**Newall Road**	**2.92**	**229**	P	Pn	16 36 11.3	+0.3
BFZ	**Birch Farm**	**3.33**	**186**	P	Pn	16 36 14.3	-0.7
MRZ	**Mangatainoka R**	**3.40**	**194**	P	Pn	16 36 14.4	-1.4
KIW	**Kapiti Island**	**3.75**	**201**	P	Pn	16 36 17.9	-1.6
MTW	**Mount Morrison**	**3.90**	**193**	P	Pn	16 36 19.4	-1.7
CAW	**Cannon Point**	**3.94**	**198**	P	Pn	16 36 19.7	-1.9
PAWZ	**Paruwai Farm**	**4.12**	**193**	P	Pn	16 36 21.9	-1.7
MRW	**Makara Radio**	**4.15**	**201**	P	Pn	16 36 22.3	-1.6
WEL	**Wellington**	**4.18**	**200**	P	Pn	16 36 22.5	-1.8
MSWZ	**Moikau Station**	**4.19**	**195**	P	Pn	16 36 22.4	-1.9
SNZO	**South Karori**	**4.22**	**201**	P	Pn	16 36 22.7	-2.0
TCW	**Tory Channel**	**4.27**	**205**	P	Pn	16 36 23.4	-1.8
BHW	**Baring Head**	**4.27**	**199**	P	Pn	16 36 23.7	-1.5
NNZ	**Nelson**	**4.62**	**213**	P	Pn	16 36 26.4	-2.8
QRZ	**Quartz Range**	**4.73**	**222**	P	Pn	16 36 27.0	-3.5
BSWZ	**Blackbirch Sta**	**4.85**	**206**	P	Pn	16 36 30.0	-1.9
THZ	**Tophouse**	**5.27**	**213**	P	Pn	16 36 34.2	-2.5
KHZ	**Kahutara**	**5.59**	**205**	P	Pn	16 36 38.4	-2.1
DSZ	**Denniston Nort**	**5.78**	**219**	P	Pn	16 36 39.1	-3.6
LTZ	**Lake Taylor**	**6.38**	**211**	P	Pn	16 36 47.1	-2.8
CRLZ	**Canterbury Las**	**6.93**	**205**	P	Pn	16 36 54.0	-2.6
MQZ	**McQueen's Vall**	**7.04**	**205**	P	Pn	16 36 54.9	-3.0
WVZ	**Waitaha Valley**	**7.29**	**217**	P	Pn	16 36 57.1	-3.9
RPZ	**Rata Peaks**	**7.65**	**212**	P	Pn	16 37 01.4	-4.0
FOZ	**Fox Glacier**	**8.17**	**219**	P	Pn	16 37 06.7	-5.0
LBZ	**Lake Benmore**	**8.57**	**213**	P	Pn	16 37 12.8	-3.8
ODZ	**Otahua Downs**	**8.92**	**209**	P	Pn	16 37 18.4	-2.5
JCZ	**Jackson Bay**	**9.00**	**219**	P	Pn	16 37 18.0	-4.0
WKZ	**Wanaka**	**9.43**	**215**	P	Pn	16 37 23.2	-4.1
WB2	**Warramunga Arr**	**40.63**	**283**	*e*P	P	16 42 22.8	-5.3

*ISCJB **30** 16:39:32.2±0.5, 5229N±0.07×17992E±0.05, h186km±4km, mb4.0/26, Error ellipse: s-maj=11.5km s-min=4.6km az=175.5*
*MOS **30** 16:39:32.5±0.8, 5231N×17997E, h189km, mb4.0/19, Error ellipse: s-maj=14.0km s-min=11.2km az=65.8*
*NEIC **30** 16:39:33.7±0.3, 5225N×17992E, mb4.4/16, Error ellipse: s-maj=10.4km s-min=5.1km az=166.0*
*IDC **30** 16:39:34.5±0.6, 5244N×17983E, h194km±5km, mb3.6/23, mb1 3.8/25, mb1mx3.7/32, mbtmp3.7/25, Error ellipse: s-maj=13.6km s-min=7.3km az=174.0*

ISC 30 16:39:33.3±0.5, 5227N±0.07×17991E±0.05, h182km±4km, h194km±3.7km:pP-P, n90, σ1§03/93, mb4.0/26, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.14**	**99**	P	**Pn**	**16 40 11.4**	**-0.5**
ADK				S	**Sn**	**16 40 41.3**	**-0.4**
SMY	**Shemya**	**3.58**	**280**	P	**Pn**	**16 40 30.4**	**+1.3**
SMY				S	**Sn**	**16 41 13.2**	**+0.6**
ATKA	**Atka Island**	**3.62**	**89**	P	**Pn**	**16 40 29.3**	**-0.3**
FX1	**Attu Island--F**	**4.16**	**281**	P	**Pn**	**16 40 36.1**	**-0.2**
	47nm,0.3s,baz=128,slow=3.3,SNR=354						
FX1				S	**Sn**	**16 41 24.4**	**-1.4**
	67nm,0.3s,baz=358,slow=22,SNR=21						
FX1	**Attu Island--F**	**4.16**	**281**	P	**Pn**	**16 40 36.2**	**-0.2**
FX1				S	**Sn**	**16 41 24.4**	**-1.4**
FX1				pmax	pmax		
	comp=Z,47nm,0.3s						
FX1				smax			
	comp=N,67nm,0.3s						
FX1	**Attu Island--F**	**4.16**	**281**	P	**Pn**	**16 40 36.1**	**-0.2**
FX1				S	**Sn**	**16 41 25.3**	**-0.5**
SPIA	**Saint Paul Isl**	**7.53**	**45**	P	**Pn**	**16 41 20.1**	**0.0**
UNV	**Unalaska Valle**	**8.34**	**74**	P	**Pn**	**16 41 31.3**	**+0.5**
AKUT	**Akutan**	**8.80**	**72**	*e*P	**Pn**	**16 41 35.9**	**-0.9**
	comp=N,439nm,1.8s						
SDPT	**Sand Point**	**11.99**	**67**	*e*P	**Pn**	**16 42 16.9**	**-1.4**
	comp=N,265nm,1.3s						
PETK	**Petropavlovsk-**	**13.49**	**282**	P	**Pn**	**16 42 42.9**	**+5.5**
	comp=N,0.9nm,0.3s,baz=83,slow=17,SNR=14						
PETK				S	**Sn**	**16 45 02.8**	**-4.6**
	comp=N,0.7nm,0.3s,baz=125,slow=31,SNR=5.1						
PETK	**Petropavlovsk-**	**13.49**	**282**	P	**Pn**	**16 42 42.9**	**+5.6**
PETK				S	**Sn**	**16 45 02.8**	**-4.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax			
	comp=N,1.0nm,0.3s						
SVW2	**Sparrevohn**	**16.02**	**47**	*e*P	**Pn**	**16 43 10.1**	**+1.8**
OHAK	**Old Harbor**	**16.19**	**62**	*e*P	**Pn**	**16 43 07.8**	**-2.7**
	comp=N,14nm,0.3s						
KDAK	**Kodiak Island**	**16.64**	**60**	P	**Pn**	**16 43 13.3**	**-2.5**
	comp=N,3.7nm,0.3s,baz=277,slow=6.5,SNR=24						
KDAK	**Kodiak Island**	**16.64**	**60**	P	**Pn**	**16 43 13.3**	**-2.5**
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BILL	**Bilibino**	**17.14**	**342**	*e*P	**Pn**	**16 43 23.2**	**+1.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL	**Bilibino**	**17.14**	**342**	*e*Pn	**Pn**	**16 43 22.5**	**+0.8**
	comp=Z,3.5nm,0.5s						
PPLA	**Purkeypile**	**18.19**	**43**	*e*P	**P**	**16 43 34.5**	**+2.5**
	comp=Z,8.9nm,0.7s						
FIB	**Fire Island**	**18.52**	**50**	*e*P	**P**	**16 43 36.9**	**+1.3**
FIB				pmax	pmax		
	comp=Z,193nm,1.6s						
FIB	**Fire Island**	**18.52**	**50**	*e*P	**P**	**16 43 36.9**	**+1.3**
	comp=Z,194nm,1.6s						
CHUM	**Lake Minchumin**	**18.55**	**40**	*e*P	**P**	**16 43 37.8**	**+2.0**
	comp=Z,5.0nm,0.9s						
SEW	**Seward**	**18.62**	**53**	*e*P	**P**	**16 43 36.1**	**-0.6**
	comp=Z,32nm,0.8s						
RC01	**Rabbit Creek A**	**18.71**	**50**	*e*P	**P**	**16 43 38.2**	**+0.6**
	comp=Z,7.1nm,0.4s						
KTH	**Kantishna Hill**	**18.98**	**42**	*e*P	**P**	**16 43 41.9**	**+1.4**
	comp=Z,21nm,1.0s						
PMR	**Palmer**	**19.12**	**49**	*e*P	**P**	**16 43 42.6**	**+0.6**
PMR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PMR	**Palmer**	**19.12**	**49**	*e*P	**P**	**16 43 42.6**	**+0.6**
	comp=Z,8.1nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.17**	**41**	*e*P	**P**	**16 43 43.8**	**+1.2**
	comp=Z,25nm,1.5s						
TRF	**Thorofare Moun**	**19.20**	**43**	*e*P	**P**	**16 43 44.0**	**+1.0**
	comp=Z,14nm,1.0s						
MCK	**McKinley**	**19.87**	**43**	*e*P	**P**	**16 43 49.5**	**-0.6**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MCK	**McKinley**	**19.87**	**43**	*e*P	**P**	**16 43 49.5**	**-0.6**
	comp=Z,4.5nm,0.7s						
PAX	**Paxson**	**21.13**	**46**	*e*P	**P**	**16 44 03.0**	**-0.5**
PAX				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.2						
PAX	**Paxson**	**21.13**	**46**	*e*P	**P**	**16 44 03.0**	**-0.5**
	comp=Z,16nm,1.2s,mb4.2						
MENT	**Mentasta**	**21.90**	**47**	*e*P	**P**	**16 44 11.1**	**-0.4**
EGAK	**Eagle**	**23.42**	**43**	*e*P	**P**	**16 44 25.7**	**+0.1**
	comp=Z,21nm,1.1s,mb4.5						
DAWY	**Dawson**	**24.02**	**45**	*e*P	**P**	**16 44 31.4**	**+0.4**
DLBC	**Dease Lake**	**28.55**	**58**	P	**P**	**16 45 12.2**	**+0.7**
	comp=Z,1.8nm,0.5s,mb4.1,baz=296,slow=11,SNR=8.4						
MJAR	**Matsushiro Arr**	**33.16**	**258**	P	**P**	**16 45 53.2**	**+0.9**
	comp=Z,1.7nm,0.6s,mb4.0,baz=47,slow=7.6,SNR=9.0						
MJAR	**Matsushiro Arr**	**33.16**	**258**	P	**P**	**16 45 53.2**	**+0.9**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**35.21**	**47**	P	**P**	**16 46 09.8**	**+0.2**
	comp=Z,1.2nm,0.5s,mb3.8,baz=283,slow=7.7,SNR=16						
YKA				pP	pP	16 46 51.2	+3.6
	comp=Z,2.2nm,0.9s,baz=283,slow=8.2,SNR=3.7						
YKA				ScP	ScP	16 52 00.4	-3.8
	comp=Z,0.4nm,0.7s,baz=298,slow=3.5,SNR=6.3						
YKA	**Yellowknife Ar**	**35.21**	**47**	P	**P**	**16 46 09.8**	**+0.2**
YKA				pP	pP	16 46 51.2	+3.6
YKA				ScP	ScP	16 52 00.4	-3.8
KSRS	**Korea Array**	**38.84**	**269**	P	**P**	**16 46 42.0**	**+1.5**
	comp=Z,3.9nm,0.8s,mb4.1,baz=55,slow=7.9,SNR=9.4						
KSRS	**Korea Array**	**38.84**	**269**	P	**P**	**16 46 42.0**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
EDM	**Edmonton**	**39.08**	**61**	*e*P	**P**	**16 46 42.2**	**-0.1**
NVAR	**Mina Array Bea**	**44.23**	**83**	P	**P**	**16 47 25.1**	**+0.8**
	comp=Z,2.4nm,0.6s,mb4.0,baz=294,slow=8.5,SNR=11						
NVAR				pP	pP	16 48 05.0	+1.3
	comp=Z,1.0nm,0.7s,baz=309,slow=5.7,SNR=2.2						
ULN	**Ulaanbaatar**	**45.16**	**295**	*e*P	**P**	**16 47 31.7**	**+0.3**
SONM	**Songino Array**	**45.54**	**295**	P	**P**	**16 47 34.9**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.3,baz=57,slow=6.2,SNR=8.4						
RLMT	**Red Lodge**	**45.57**	**69**	*e*P	**P**	**16 47 34.1**	**-0.5**
TPNV	**Topopah Spring**	**46.43**	**83**	*e*P	**P**	**16 47 42.0**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
TPNV	**Topopah Spring**	**46.43**	**83**	*e*P	**P**	**16 47 42.0**	**+0.4**
	comp=Z,4.5nm,1.1s,mb4.0						
PDAR	**Pinedale Array**	**46.80**	**72**	P	**P**	**16 47 43.8**	**-0.5**
	comp=Z,1.6nm,0.4s,mb4.0,baz=325,slow=3.8,SNR=25						
PDAR				pP	pP	16 48 28.3	+4.1
	comp=Z,0.9nm,0.6s,baz=285,slow=3.5,SNR=4.3						
GSC	**Goldstone**	**47.17**	**85**	*e*P	**P**	**16 47 47.5**	**+0.2**
GSC				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
GSC	**Goldstone**	**47.17**	**85**	*e*P	**P**	**16 47 47.5**	**+0.2**
	comp=Z,3.6nm,0.5s,mb4.3						
SPITS	**Spitsbergen Ar**	**49.43**	**356**	P	**P**	**16 48 03.6**	**-0.4**
	comp=Z,2.2nm,0.4s,mb4.1,baz=46,slow=8.4,SNR=19						
SPITS	**Spitsbergen Ar**	**49.43**	**356**	P	**P**	**16 48 03.6**	**-0.4**
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	**ARCESS Array B**	**57.08**	**350**	P	**P**	**16 48 58.6**	**-1.1**
	comp=Z,3.7nm,1.1s,mb4.1,baz=30,slow=7.6,SNR=5.4						
ARCES	**ARCESS Array B**	**57.08**	**350**	P	**P**	**16 48 58.6**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**57.83**	**313**	P	**P**	**16 49 05.0**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=42,slow=6.5,SNR=5.8						
KURK				pP	pP	16 49 50.4	+3.6
	comp=Z,0.2nm,0.3s,baz=38,slow=7.6,SNR=2.1						
KURK	**Kurchatov**	**57.83**	**313**	P	**P**	**16 49 05.1**	**-0.2**
KURK				*PP	pP	16 49 50.4	+3.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
MKAR	**Makanchi Array**	**58.86**	**307**	P	**P**	**16 49 11.0**	**-1.4**
	comp=Z,0.6nm,0.3s,mb3.9,baz=47,slow=5.8,SNR=27						
MKAR	**Makanchi Array**	**58.86**	**307**	P	**P**	**16 49 11.0**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**58.86**	**307**	P	**P**	**16 49 11.0**	**-1.4**
TXAR	**Lajitas Array**	**59.30**	**81**	P	**P**	**16 49 15.7**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=308,slow=4.9,SNR=29						
TXAR				pP	pP	16 49 59.5	+2.0
	comp=Z,0.4nm,0.6s,baz=302,slow=4.4,SNR=2.6						
TXAR	**Lajitas Array**	**59.30**	**81**	P	**P**	**16 49 15.7**	**-0.1**
TXAR				*PP	pP	16 49 59.5	+1.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**59.69**	**319**	P	**P**	**16 49 17.3**	**-0.8**
	comp=Z,1.2nm,0.6s,mb3.9,baz=44,slow=6.8,SNR=11						
BVAR				pP	pP	16 50 00.1	+0.2
	comp=Z,0.4nm,0.5s,baz=15,slow=6.0,SNR=2.4						
BVAR	**Borovoye Array**	**59.69**	**319**	P	**P**	**16 49 17.3**	**-0.8**
BVAR				*PP	pP	16 50 00.1	+0.2
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTK	**Aktyubinsk**	**66.50**	**324**	P	**P**	**16 50 00.3**	**-2.6**
AKTO	**Aktyubinsk**	**66.50**	**324**	P	**P**	**16 50 00.3**	**-2.6**
	comp=Z,0.8nm,0.4s,mb3.9,baz=68,slow=7.2,SNR=4.8						
AKTO	**Aktyubinsk**	**66.50**	**324**	P	**P**	**16 50 00.3**	**-2.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
PMG	**Port Moresby**	**67.55**	**215**	P	**P**	**16 50 10.2**	**+0.3**
	comp=Z,5.0nm,0.6s,mb4.4,baz=355,slow=11,SNR=3.1						
PMG	**Port Moresby**	**67.55**	**215**	P	**P**	**16 50 10.2**	**+0.3**
PMG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**70.13**	**275**	P	**P**	**16 50 26.3**	**+0.4**
	comp=Z,2.0nm,0.6s,mb4.0,baz=26,slow=6.7,SNR=26						
CMAR	**Chiang Mai Arr**	**70.13**	**275**	P	**P**	**16 50 26.3**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**74.45**	**341**	P	**P**	**16 50 49.9**	**-1.1**
	comp=Z,1.3nm,0.4s,mb4.0,baz=21,slow=6.7,SNR=6.5						
AKASG	**Malin Array Be**	**74.45**	**341**	P	**P**	**16 50 49.9**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	**GERESS Array B**	**78.58**	**351**	P	**P**	**16 51 12.5**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=22,slow=5.5,SNR=3.1						
WRA	**Warramunga Arr**	**82.11**	**223**	P	**P**	**16 51 33.3**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.0,baz=34,slow=6.2,SNR=17						
WRA	**Warramunga Arr**	**82.11**	**223**	P	**P**	**16 51 33.3**	**0.0**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PSI	**Prapat**	**82.27**	**265**	P	**P**	**16 51 34.6**	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.0,baz=343,slow=11,SNR=5.6						
PSI	**Prapat**	**82.27**	**265**	P	**P**	**16 51 34.6**	**+0.2**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**83.80**	**334**	P	**P**	**16 51 40.9**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.4,baz=45,slow=3.1,SNR=3.1						
BRTR	**Keskin Array B**	**83.80**	**334**	P	**P**	**16 51 40.9**	**-1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**85.61**	**221**	P	**P**	**16 51 51.5**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.8,baz=25,slow=5.6,SNR=27						
ASAR	**Alice Springs**	**85.61**	**221**	P	**P**	**16 51 51.6**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**90.25**	**212**	P	**P**	**16 52 13.3**	**+0.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=333,slow=11,SNR=4.3						
STKA	**Stephens Creek**	**90.25**	**212**	P	**P**	**16 52 13.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**114.84**	**358**	PKiKP	PKiKP	16 57 50.4	-1.9
	comp=Z,0.2nm,0.4s,baz=359,slow=4.2,SNR=3.1						
MAW	**Mawson**	**146.69**	**218**	PKPbc	PKPbc	16 58 52.0	0.0
	comp=Z,3.2nm,0.5s,baz=155,slow=2.8,SNR=6.5						
MAW	**Mawson**	**146.69**	**218**	PKP2	PKPab	16 58 52.0	-1.7
MAW				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BOSA	**Boshof**	**149.79**	**312**	PKPbc	PKPbc	16 58 59.3	-2.0
	comp=Z,1.1nm,0.3s,baz=31,slow=1.4,SNR=10						

IDC 30 16:43:11.6±2.2, 128S×12727E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/17, mbtmp3.1/3, Error ellipse: s-maj=194.1km s-min=26.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.79**	**160**	P	Pn	16 47 43.8	-1.2
	0.1nm,0.3s,baz=342,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**23.16**	**164**	P	P	16 48 19.9	0.0
	0.3nm,0.8s,baz=345,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**61.98**	**327**	P	P	16 53 33.5	0.0
	0.2nm,0.4s,baz=117,slow=7.5,SNR=7.1						

IDC 30 16:44:40.6±4.1, 236S×13888E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/15, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=178.6km s-min=25.7km az=88.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.03**	**194**	P	Pn	16 48 53.5	+0.7
	0.3nm,0.3s,baz=17,slow=13,SNR=19						
ASAR	**Alice Springs**	**21.72**	**192**	P	P	16 49 33.6	0.0
	0.7nm,0.7s,baz=12,slow=12,SNR=11						
MKAR	**Makanchi Array**	**69.62**	**322**	P	P	16 55 52.1	+0.3
	0.3nm,0.6s,baz=98,slow=7.3,SNR=4.6						
BVAR	**Borovoye Array**	**79.12**	**325**	P	P	16 56 46.8	-0.2
	0.4nm,0.6s,baz=101,slow=3.1,SNR=2.4						

*IDC **30** 17:02:39.2±2.2, 3817N×7085E, h0km, mb3.4/1, mb1 3.6/6, mb1mx3.4/27, mbtmp3.6/6, ML3.3/5, MS3.1/1, Ms1 3.1/1, ms1mx2.6/18, Error ellipse: s-maj=39.8km s-min=20.2km az=143.0*
*NNC **30** 17:02:42.1±2.3, 3846N×7012E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=17.4km s-min=14.2km az=3.0*
*BJI **30** 17:02:42.5, 3870N×7040E, h10km, mb3.7, ML3.7*
*NEIC **30** 17:02:45.5±1.1, 3874N×7043E, h10km, Error ellipse: s-maj=21.0km s-min=12.6km az=118.0*
*ISCJB **30** 17:02:48.1±0.7, 3866N±0.004×7052E±0.010, h86km±17km, mb3.4/2, Error ellipse: s-maj=13.0km s-min=6.2km az=17.8*

ISC 30 17:02:47.6±2.5, 3875N±0.004×7034E±0.007, h19km±17km, n32, σ1§59/41, mb3.6/2, 4C-5D, Afghanistan-Tajikistan border region

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

CSEM ***30*** *17:03:39.6±0.1, 36°92'N×29°36'E, h5km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.1km az=175.0*
ISK ***30*** *17:03:39.8, 36°93'N×29°35'E, h11km, MD3.1*
ISCJB ***30*** *17:03:40.2±0.7, 36°90'N±0°04'×29°33'E±0°05, h7km±6km, Error ellipse: s-maj=8.2km s-min=5.6km az=144.4*
DDA ***30*** *17:03:40.6, 36°92'N×29°32'E, h7km±3km, Md3.0*

ISC 30 17:03:40.6±0.6, 3690N±005°×2934E±005, h10km±6km, n16, σ0§82/21, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.38**	**28**	*i*P	**Pg**		**17 03 47.8**	**-0.3**
GOLH				*i* S	**Sg**		**17 03 54.0**	**+0.9**
ELL	**Elmali**	**0.48**	**108**	*e*PG	**Pg**		**17 03 49.4**	**-0.6**
DALT	**Dalyan (Mudla)**	**0.58**	**257**	*e*PG	**Pg**		**17 03 51.6**	**-0.3**
DALT				*e*SG	**Sg**		**17 04 00.5**	**+1.0**
TURN	**Turunc**	**0.59**	**267**	*e*P	**Pg**		**17 03 57.1**	**+5.0**
TURN				*e*S	**Sg**		**17 04 08.7**	**+8.8**
AKAS	**Kas**	**0.70**	**162**	⇑*i*P	**Pg**		**17 03 54.7**	**+0.6**
AKAS				*i* S	**Sg**		**17 04 08.0**	**+4.7**
YER	**Yerkesik**	**0.88**	**286**	*e*PG	**Pg**		**17 03 57.2**	**-0.3**
DENT	**Denizli**	**0.89**	**344**	*e*PG	**Pg**		**17 03 56.9**	**-0.8**
BCK	**Bucak**	**1.14**	**60**	*e*PN	**Pn**		**17 04 02.3**	**-0.4**
MLSB	**Milas**	**1.31**	**288**	*e*PN	**Pn**		**17 04 04.1**	**-0.9**
ISP	**Isparta**	**1.32**	**44**	*e*PN	**Pn**		**17 04 05.2**	**0.0**
DAT	**Datca**	**1.43**	**264**	*e*PN	**Pn**		**17 04 07.3**	**+0.8**
DAT	**Datca**	**1.43**	**264**	*e*PN	**Pn**		**17 04 07.3**	**+0.7**
KHL	**Karahalli**	**1.43**	**6**	*e*PN	**Pn**		**17 04 05.4**	**-1.2**
KHAL	**Karahalli**	**1.47**	**5**	*e*P	**Pn**		**17 04 08.2**	**+1.0**
KHAL				*e*S	**Sn**		**17 04 28.4**	**+1.9**
KULA	**Kula-Manisa**	**1.70**	**342**	*e*PN	**Pn**		**17 04 09.7**	**-0.7**
IZM	**Izmir**	**2.23**	**313**	*e*PN	**Pn**		**17 04 16.9**	**-0.7**

NEIC ***30*** *17:07:45.4, 33°01'N×140°24'E, h129km, MG3.3(JMA), After JMA.*
JMA ***30*** *17:07:45.3±0.1, 33°01'N×140°24'E, h129km±2km, M3.3*
IDC ***30*** *17:07:46.0±2.4, 32°76'N×139°70'E, h119km±34km, mb3.2/3, mb1 3.0/4, mb1mx2.9/23, mbtmp3.0/4, Error ellipse: s-maj=159.4km s-min=47.2km az=67.0*

ISC 30 17:07:45.6±1.0, 3301N±005°×1403E±01, h130km±5km, n18, σ0§86/30, mb3.4/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.38**	**285**	P	**Pn**		**17 08 03.9**	**-0.2**
JHJ2				S	**Sn**		**17 08 17.8**	**-0.2**
JHJ	**Hachijo jima 2**	**0.41**	**285**	P	**Pn**		**17 08 04.0**	**-0.2**
	129nm,0.3s,baz=80,slow=22,SNR=16							
JHJ				S	**Sn**		**17 08 17.8**	**-0.5**
	577nm,0.3s,baz=221,slow=23,SNR=47							
BSO1	**Boso 1**	**1.75**	**20**	P	**Pn**		**17 08 16.4**	**-0.1**
BSO1				*e*S	**Sn**		**17 08 39.7**	**-0.5**
BSO2	**Boso 2**	**1.79**	**13**	*e*S	**Sn**		**17 08 42.0**	**+1.0**
BSO3	**Boso 3**	**1.80**	**7**	P	**Pn**		**17 08 17.6**	**+0.4**
BSO3				S	**Sn**		**17 08 42.6**	**+1.3**
JIM2	**Oshima 3**	**1.84**	**338**	P	**Pn**		**17 08 18.0**	**+0.4**
JIM2				*e*S	**Sn**		**17 08 41.8**	**-0.3**
BSO4	**Boso 4**	**1.98**	**2**	P	**Pn**		**17 08 19.9**	**+0.6**
BSO4				*e*S	**Sn**		**17 08 46.4**	**+1.3**
JOD2	**Odawara 2**	**2.45**	**337**	P	**Pn**		**17 08 25.6**	**+0.5**
JOD2				*e*S	**Sn**		**17 08 56.2**	**+0.7**
JHU	**Hanno**	**2.95**	**344**	P	**Pn**		**17 08 32.0**	**+0.5**
JHU				*e*S	**Sn**		**17 09 06.8**	**-0.1**
JRY	**Ryogami san**	**3.20**	**340**	P	**Pn**		**17 08 35.6**	**+0.8**
JRY				*e*S	**Sn**		**17 09 13.4**	**+0.6**
JYT	**Yasato**	**3.21**	**359**	P	**Pn**		**17 08 34.5**	**-0.4**
JYT				*e*S	**Sn**		**17 09 11.3**	**-1.8**
JAG	**Ashikaga**	**3.47**	**349**	P	**Pn**		**17 08 37.9**	**-0.4**
JAG				*e*S	**Sn**		**17 09 18.5**	**-0.6**
JHO	**Hitachi**	**3.60**	**4**	P	**Pn**		**17 08 39.4**	**-0.6**
JHO				*e*S	**Sn**		**17 09 19.7**	**-2.5**
MJAR	**Matsushiro Arr**	**3.91**	**335**	P	**Pn**		**17 08 44.9**	**+0.9**
	0.2nm,0.3s,baz=160,slow=10,SNR=4.8							
MAJO	**Matsushiro**	**3.91**	**335**	*e*Pn	**Pn**		**17 08 41.4**	**-2.7**
SONM	**Songino Array**	**29.45**	**310**	P	**P**		**17 13 36.9**	**+0.1**
	0.3nm,0.6s,mb3.2,baz=108,slow=9.5,SNR=3.0							
MKAR	**Makanchi Array**	**45.56**	**305**	P	**P**		**17 15 51.9**	**-0.3**
	0.5nm,0.5s,mb3.5,baz=85,slow=9.7,SNR=11							
BVAR	**Borovoye Array**	**52.64**	**314**	P	**P**		**17 16 46.5**	**+0.5**
	0.3nm,0.3s,mb3.5,baz=97,slow=8.2,SNR=4.2							

CSEM ***30*** *17:10:11.6±0.2, 36°95'N×29°36'E, h8km, MD2.8, Error ellipse: s-maj=4.5km s-min=3.8km az=19.0*
ISCJB ***30*** *17:10:12.8±0.6, 36°95'N±0°03'×29°34'E±0°04, h10km±5km, Error ellipse: s-maj=5.7km s-min=5.1km az=15.5*
DDA ***30*** *17:10:12.9, 36°96'N×29°32'E, h8km±5km, Md2.8*
ISK ***30*** *17:10:12.3, 36°97'N×29°36'E, h14km, MD3.0*

ISC 30 17:10:13.3±0.5, 3695N±004°×2935E±004, h14km±5km, n14, σ0§84/21, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**31**	⇑*i*P	**Pg**		**17 10 19.4**	**-0.6**
GOLH				*i* S	**Sg**		**17 10 25.5**	**+1.0**
ELL	**Elmali**	**0.50**	**114**	*e*PG	**Pg**		**17 10 22.5**	**-0.5**
ELL				*e*SG	**Sg**		**17 10 29.8**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.60**	**252**	*e*PG	**Pg**		**17 10 24.7**	**-0.2**
TURN	**Turunc**	**0.60**	**263**	*e*P	**Pg**		**17 10 29.3**	**+4.3**
TURN				*e*S	**Sg**		**17 10 40.7**	**+7.7**
AKAS	**Kas**	**0.75**	**164**	*e*P	**Pg**		**17 10 26.5**	**-1.3**
AKAS				*e*S	**Sg**		**17 10 39.4**	**+1.8**
DENT	**Denizli**	**0.84**	**343**	*e*PG	**Pg**		**17 10 28.5**	**-1.0**
YER	**Yerkesik**	**0.87**	**282**	*e*PG	**Pg**		**17 10 30.2**	**+0.2**
YER				*e*SG	**Sg**		**17 10 42.2**	**+0.7**
BCK	**Bucak**	**1.11**	**63**	*e*PN	**Pn**		**17 10 34.1**	**-0.4**
BCK				*e*SN	**Sn**		**17 10 49.8**	**+0.1**
MLSB	**Milas**	**1.30**	**286**	*e*PN	**Pn**		**17 10 37.2**	**+0.2**
KHL	**Karahalli**	**1.37**	**6**	*e*PN	**Pn**		**17 10 37.2**	**-0.9**
KHAL	**Karahalli**	**1.42**	**5**	*e*P	**Pn**		**17 10 39.6**	**+0.9**
KHAL				*e*S	**Sn**		**17 10 58.8**	**+1.7**
DAT	**Datca**	**1.44**	**262**	*e*PN	**Pn**		**17 10 38.6**	**-0.3**
KULA	**Kula-Manisa**	**1.65**	**341**	*e*PN	**Pn**		**17 10 41.3**	**-0.6**
ALT	**Altintas**	**2.18**	**16**	*e*PN	**Pn**		**17 10 48.4**	**-0.7**

MOS ***30*** *17:11:36.4±1.5, 589S×13372E, h33km, mb5.0/13, Error ellipse: s-maj=17.0km s-min=7.9km az=116.9*
BJI ***30*** *17:11:37.5, 529S×13350E, h10km, mB5.7, mb4.4*
ISCJB ***30*** *17:11:37.5±0.3, 595S±004°×13381E±006, h52km, mb4.7/39, MS4.3/4, Error ellipse: s-maj=9.0km s-min=4.3km az=154.3*
NEIC ***30*** *17:11:38.4±0.3, 585S×13374E, h35km, mb4.9/18, Error ellipse: s-maj=10.1km s-min=5.8km az=66.0*
DJA ***30*** *17:11:39, 567S×13376E, h30km, Mw5.5/5*
IDC ***30*** *17:11:40.3±0.6, 589S×13371E, h52km±4km, mb4.0/9, mb1 4.2/12, mb1mx4.2/15, mbtmp4.1/12, MS4.2/6, Ms1 4.1/6, ms1mx3.7/24, Error ellipse: s-maj=24.0km s-min=10.5km az=73.0*

ISC 30 17:11:37.5±2.6, 594S±004°×13376E±006, h31km±19km, h44km±4.0km: pP-P, n84, σ1§13/83, mb4.7/39, MS4.3/4, 7C-1D, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.85**	**191**	*e*P		x	17 13 20.1	
	54nm,0.4s							
KAKA				*e*S		x	17 14 36.1	
KAKA	**Kakadu**	**6.85**	**191**	*e*Pn		x	17 13 19.9	
	270nm,0.5s							
KAKA				*e*Sn		x	17 14 34.5	
COEN	**Coen**	**12.22**	**131**	*e*Pn		**Pn**	**17 14 29.0**	**-0.5**
	33nm,0.6s							
COEN				*e*Sn		**Sn**	**17 16 43.8**	**-1.0**
PMG	**Port Moresby**	**13.72**	**105**	P		**Pn**	**17 14 51.2**	**+1.2**
	1.2nm,0.3s,baz=279,slow=8.1,SNR=8.7							
PMG				LR		LR	17 19 53.0	
	comp=Z,155nm,21.2s,baz=316,slow=36							
WRAB	**Tennant Creek**	**13.92**	**178**	⇑*i*P		**Pn**	**17 14 52.0**	**-0.8**
WB2	**Warramunga Arr**	**13.93**	**178**	*e*P		**Pn**	**17 14 53.3**	**+0.4**
WB2				*e*S		**Sn**	**17 17 25.4**	**-1.2**
WB2	**Warramunga Arr**	**13.93**	**178**	*e*Pn		**Pn**	**17 14 53.0**	**+0.1**
WB2				*e*Sn		**Sn**	**17 17 24.4**	**-2.2**
WRA	**Warramunga Arr**	**13.93**	**178**	P		**Pn**	**17 14 53.3**	**+0.4**
	1.5nm,0.3s,baz=4.5,slow=13,SNR=90							
WRA				S		**Sn**	**17 17 22.5**	**-4.1**
	1.8nm,0.3s,baz=354,slow=23,SNR=5.4							

FITZ	**Fitzroy Crossi**	**14.46**	**213**	*e*P		**Pn**	**17 15 00.0**	**-0.1**
	12nm,0.3s							
FITZ				*e*S		**Sn**	**17 17 31.0**	**-8.4**
FITZ	**Fitzroy Crossi**	**14.46**	**213**	*e*Pn		**Pn**	**17 15 00.2**	**+0.1**
	12nm,0.6s							
ASAR	**Alice Springs**	**17.62**	**180**	P		**Pn**	**17 15 41.9**	**+1.0**
	1.4nm,0.3s,baz=358,slow=9.3,SNR=53							
ASAR				S		**Sn**	**17 18 54.9**	**-1.4**
	0.5nm,0.3s,baz=2.4,slow=29,SNR=3.1							
CTA	**Charters Tower**	**18.58**	**140**	P		**Pn**	**17 15 53.0**	**+0.5**
	0.1nm,0.3s,baz=329,slow=12,SNR=3.9							
CTA				LR		LR	17 24 03.6	
	comp=Z,998nm,18.4s,baz=325,slow=40							
CTA	**Charters Tower**	**18.58**	**140**	*e*P		**Pn**	**17 15 56.7**	**+4.1**
	14nm,1.2s							
CTAO	**Charters Tower**	**18.58**	**140**	*e*P		**Pn**	**17 15 55.4**	**+2.8**
CTAO				*e*			17 19 15.1	
CTAO				pmax		pmax		
	comp=Z,41nm,1.3s							
CTAO	**Charters Tower**	**18.58**	**140**	*e*P		**Pn**	**17 15 55.4**	**+2.8**
	comp=Z,41nm,1.3s							
CTAO				*e*Sn		**Sn**	**17 19 15.1**	**-4.4**
MBWA	**Marble Bar**	**20.34**	**221**	*e*P		**P**	**17 16 11.7**	**+0.3**
	comp=Z,117nm,1.8s							
KKM	**Kota Kinabalu**	**21.18**	**304**	*e*P		**P**	**17 16 16.1**	**-4.5**
	comp=Z,77nm,1.0s,mb5.0							
KSM	**Kuching**	**24.55**	**287**	*e*P		**P**	**17 16 55.0**	**+0.2**
	comp=Z,21nm,0.8s,mb4.7							
FORT	**Forrest**	**25.28**	**192**	*e*P		**P**	**17 17 04.1**	**+2.8**
	comp=Z,89nm,0.6s,mb5.5							
FORT	**Forrest**	**25.28**	**192**	*e*P		**P**	**17 17 03.7**	**+2.4**
	comp=Z,91nm,0.6s,mb5.5							
STKA	**Stephens Creek**	**26.82**	**165**	P		**P**	**17 17 18.2**	**+3.0**
	comp=Z,16nm,0.8s,mb4.6,baz=336,slow=8.6,SNR=33							
STKA				LR		LR	17 29 12.3	
	comp=Z,352nm,18.6s,MS4.0,baz=281,slow=39							
STKA	**Stephens Creek**	**26.82**	**165**	*e*P		**P**	**17 17 18.0**	**+2.8**
	comp=Z,11nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**26.82**	**165**	*e*P		**P**	**17 17 16.4**	**+1.2**
	comp=Z,6.2nm,1.1s,mb4.0							
KULM	**Kulim**	**34.89**	**288**	*e*P		**P**	**17 18 26.2**	**-0.4**
	comp=Z,22nm,1.3s,mb4.9							
PSI	**Prapat**	**35.86**	**283**	P		**P**	**17 18 33.6**	**-1.3**
	comp=Z,4.0nm,0.4s,mb4.7,baz=174,slow=4.6,SNR=6.9							
JHJ	**Hachijo jima 2**	**39.26**	**8**	LR		LR	17 32 55.7	
	comp=Z,2µm,21.3s,MS4.8,baz=291,slow=32							
WHN	**Wuhan**	**40.77**	**334**	P		**P**	**17 19 13.8**	**-2.2**
NANT	**Nan**	**40.82**	**308**	⇑P		**P**	**17 19 14.0**	**-2.6**
	comp=Z,250nm,1.0s,mb5.8							
CMAR	**Chiang Mai Arr**	**42.03**	**306**	P		**P**	**17 19 26.1**	**-0.5**
	comp=Z,8.8nm,0.9s,mb4.4,baz=134,slow=7.0,SNR=75							
CMAR				pP		pP	17 19 41.3	+5.6
	comp=Z,3.7nm,0.8s,baz=136,slow=6.1,SNR=7.9							
CHG	**Chiang Mai**	**42.22**	**306**	⇑P		**P**	**17 19 27.6**	**-0.5**
	comp=Z,12nm,1.3s,mb4.4							
CHTO	**Chiang Mai**	**42.22**	**306**	*e*P		**P**	**17 19 27.1**	**-1.0**
CHTO				pmax		pmax		
	comp=Z,15nm,1.1s,mb4.5							
CHTO	**Chiang Mai**	**42.22**	**306**	*e*P		**P**	**17 19 27.1**	**-1.0**
	comp=Z,15nm,1.1s,mb4.5							
MJAR	**Matsushiro Arr**	**42.46**	**5**	P		**P**	**17 19 27.9**	**-1.8**
	comp=Z,1.1nm,0.7s,mb3.6,baz=190,slow=6.8,SNR=5.0							
MJAR				pP		pP	17 19 42.7	+3.8
	comp=Z,3.9nm,1.1s,baz=182,slow=11,SNR=3.7							
MJAR	**Matsushiro Arr**	**42.46**	**5**	P		**P**	**17 19 27.9**	**-1.9**
MJAR				pP		pP	17 19 42.7	+3.8
KSRS	**Korea Array**	**43.51**	**353**	P		**P**	**17 19 36.6**	**-1.7**
	comp=Z,2.0nm,1.1s,mb3.8,baz=323,slow=45,SNR=3.0							
KSRS				pP		pP	17 19 51.8	+4.4
	comp=Z,5.2nm,1.1s,baz=178,slow=11,SNR=4.4							
KSRS				LR		LR	17 37 11.0	
	comp=Z,75nm,21.0s,MS3.6,baz=335,slow=35							
XAN	**Xi'an**	**46.19**	**331**	P		**P**	**17 19 58.0**	**-1.6**
XAN				AP		pP	17 20 03.0	-5.8
XAN				AMB		AMB		
	comp=Z,7.0nm,1.2s,mb4.5							
SHL	**Shillong**	**51.33**	**309**	⇓*i*P		**P**	**17 20 39.8**	**+0.5**
LSA	**Lhasa**	**54.11**	**313**	P		**P**	**17 21 00.5**	**+0.7**
LSA	**Lhasa**	**54.11**	**313**	*e*P		**P**	**17 21 00.4**	**+0.6**
LSA				pmax		pmax		
	comp=Z,14nm,1.3s,mb4.7							
LSA	**Lhasa**	**54.11**	**313**	*e*P		**P**	**17 21 00.4**	**+0.6**
	comp=Z,14nm,1.3s,mb4.7							
GTA	**Gaotai**	**54.95**	**328**	*e*P		**P**	**17 21 06.0**	**+0.3**
GTA				AP		pP	17 21 15.5	+0.4
GTA				XP		sP	17 21 20.0	+1.3
GTA				AMB		AMB		
	comp=Z,7.0nm,0.9s,mb4.7							
TAPN	**Taplejung**	**55.45**	**309**	*e*P		**P**	**17 21 09.7**	**+0.1**
	comp=Z,6.6nm,0.5s,mb5.0							
ODAN	**Odare**	**55.46**	**308**	*e*P		**P**	**17 21 09.6**	**-0.1**
	comp=Z,12nm,0.8s,mb5.0							
RAMN	**Ramite**	**56.13**	**308**	*e*P		**P**	**17 21 14.4**	**0.0**
JIRN	**Jiri**	**56.78**	**309**	*e*P		**P**	**17 21 19.2**	**+0.1**
GUN	**Gumba**	**57.15**	**309**	*e*P		**P**	**17 21 21.7**	**0.0**
	comp=Z,26nm,0.7s,mb5.3							
KKN	**Kakani**	**57.56**	**308**	*e*P		**P**	**17 21 24.5**	**-0.1**
	comp=Z,15nm,0.8s,mb5.1							
GKN	**Gorkha**	**59.16**	**308**	*e*P		**P**	**17 21 28.6**	**-0.2**
	comp=Z,22nm,0.9s,mb5.2							
ULN	**Ulaanbaatar**	**58.51**	**339**	*e*P		**P**	**17 21 30.7**	**-0.1**
SONM	**Songino Array**	**58.72**	**339**	P		**P**	**17 21 31.8**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=149,slow=8.5,SNR=3.8							
SONM				pP		pP	17 21 47.5	+5.8
	comp=Z,1.7nm,0.7s,baz=152,slow=7.8,SNR=9.4							
KOLN	**Koldanda**	**58.87**	**307**	*e*P		**P**	**17 21 34.1**	**+0.4**
	comp=Z,10nm,0.7s,mb5.0							
DANN	**Dangsing**	**59.01**	**308**	*e*P		**P**	**17 21 34.8**	**+0.1**
	comp=Z,18nm,1.0s,mb5.1							
ZAK	**Zakamensk**	**61.98**	**338**	*e*P		**P**	**17 21 56.0**	**+1.5**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.2s,mb4.4							
CASY	**Casey**	**62.37**	**190**	*e*P		**P**	**17 21 50.0**	**-6.9**
	comp=Z,17nm,0.8s,mb5.2							
WMQ	**Urumqi**	**64.62**	**325**	P		**P**	**17 22 12.3**	**+0.1**
WMQ				AMB		AMB		
	comp=Z,9.0nm,1.6s,mb4.5							
YAK	**Yakutsk**	**67.85**	**358**	*e*P		**P**	**17 22 31.3**	**-1.2**
YAK				*e*			17 22 46.5	
YAK				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.9							
YAK	**Yakutsk**	**67.85**	**358**	*e*P		**P**	**17 22 32.0**	**-0.5**
	comp=Z,22nm,0.9s,mb5.2							
MKAR	**Makanchi Array**	**69.45**	**325**	P		**P**	**17 22 43.3**	**+0.5**
	comp=Z,0.9nm,0.3s,mb4.2,baz=111,slow=8.1,SNR=31							
MKAR				pP		pP	17 22 58.2	+5.8
	comp=Z,5.9nm,0.6s,baz=116,slow=7.7,SNR=18							
MKAR	**Makanchi Array**	**69.45**	**325**	P		**P**	**17 22 43.3**	**+0.5**
MKAR				pP		pP	17 22 58.2	+5.8
SEY	**Seymchan**	**70.14**	**9**	⇑P		**P**	**17 22 45.5**	**-1.2**
TKM2	**Tokmak 2**	**71.60**	**319**	*e*P		**P**	**17 22 56.8**	**+0.8**
TKM2				*e*			17 23 11.8	
TKM2				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.5							
TKM2	**Tokmak 2**	**71.60**	**319**	*e*P		**P**	**17 22 56.8**	**+0.8**
	comp=Z,3.8nm,0.6s,mb4.5							
TKM2				*e*			17 23 11.8	
AAK	**Ala-Archa**	**72.20**	**318**	*e*P		**P**	**17 23 00.1**	**+0.5**
AAK				*e*			17 23 14.3	
AAK				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
AAK	**Ala-Archa**	**72.20**	**318**	*e*P		**P**	**17 23 00.1**	**+0.5**
	comp=Z,3.3nm,1.0s,mb4.2							
AAK				*e*			17 23 14.3	
ZAA0	**Zalesovo Array**	**72.35**	**332**	*e*P		**P**	**17 22 59.0**	**-1.2**
ZAA0				*e*pP		pP	17 23 09.9	0.0
ZAA0				*e*sP		sP	17 23 14.2	+0.7
ZALV	**Zalesovo Beam**	**72.35**	**332**	P		**P**	**17 22 58.9**	**-1.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=122,slow=5.3,SNR=9.5							
ZALV				pP		pP	17 23 14.7	+4.9
	comp=Z,11nm,0.8s,baz=139,slow=6.2,SNR=20							
ZALV	**Zalesovo Beam**	**72.35**	**332**	P		**P**	**17 22 58.9**	**-1.3**
ZALV				pP		pP	17 23 14.7	+4.9
AML	**Almayashu**	**72.51**	**317**	*e*P		**P**	**17 23 02.8**	**+1.3**
	comp=Z,16nm,0.9s,mb5.0							
AML				*e*pP		pP	17 23 13.2	+2.1
AML				*e*			17 23 18.3	
EKS2	**Erkin-Say**	**72.69**	**318**	*e*P		**P**	**17 23 03.3**	**+0.8**
	comp=Z,27nm,1.6s,mb4.9							
VNDA	**Vanda**	**73.07**	**174**	P		**P**	**17 23 06.3**	**+2.1**
	comp=Z,2.0nm,0.9s,mb4.0,baz=319,slow=1.5,SNR=5.6							
KURK	**Kurchatov**	**73.62**	**327**	*e*P		**P**	**17 23 08.0**	**+0.2**
KURK				*e*PP		pP	17 23 18.3	+0.8
KURK				*e*			17 23 22.7	
KURK				pmax		pmax		
	comp=Z,18nm,1.1s,mb4.9							

KURK	**Kurchatov**	**73.62**	**327**	*e*P		**P**	**17 23 08.0**	**+0.1**
	comp=Z,18nm,1.1s,mb4.9							
KURK				*e*pP		pP	17 23 18.2	+0.8
KURK				*e*			17 23 22.7	
NVS	**Novosibirsk**	**73.62**	**332**	*i* P		**P**	**17 23 10.5**	**+2.7**
NVS				pmax		pmax		
	comp=Z,22nm,1.1s,mb5.0							
NVS				pmax		pmax		
	comp=N,14nm,1.3s							
NVS				pmax		pmax		
	comp=E,15nm,1.3s							
TIXI	**Tiksi**	**77.50**	**358**	⇑*e*P		**P**	**17 23 29.2**	**-0.5**
TIXI				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
BRVK	**Borovoye**	**79.27**	**327**	*e*P		**P**	**17 23 40.2**	**+0.3**
BRVK				*e*		pP	17 23 49.7	+0.1
BRVK				*e*			17 23 55.5	
BRVK				pmax		pmax		
	comp=Z,14nm,0.8s,mb4.9							
BRVK	**Borovoye**	**79.27**	**327**	*e*P		**P**	**17 23 40.2**	**+0.4**
	comp=Z,14nm,0.8s,mb5.0							
BRVK				*e*		pP	17 23 49.7	+0.1
BRVK				*e*			17 23 55.5	
QSPA	**South Pole Qui**	**84.03**	**180**	*e*P		**P**	**17 24 06.4**	**+1.8**
	comp=Z,11nm,1.3s,mb4.8							
ARU	**Arti**	**86.81**	**327**	*c* i P		**P**	**17 24 20.9**	**+2.1**
ARU				*e*			17 27 42.0	
ARU				S		S	17 34 44.8	-10
ARU				SS		SS	17 40 42.0	+5.2
ARU				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.8							
GNI	**Garni**	**93.04**	**310**	⇑*e*P		**P**	**17 24 50.3**	**+1.9**
GNI				pmax		pmax		
	comp=Z,5.0nm,1.1s							
BBB	**Bella Bella**	**99.65**	**38**	LR		LR	18 07 48.2	
	comp=Z,332nm,20.6s,MS4.8,baz=260,slow=34							
TXAR	**Lajitas Array**	**121.18**	**59**	PKP		PKPdf	17 30 28.4	+0.3
	comp=Z,0.2nm,0.8s,baz=222,slow=3.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**132.25**	**282**	PKP		PKPdf	17 30 50.5	+1.0
	comp=Z,0.5nm,0.7s,baz=96,slow=2.0,SNR=4.1							
TORD				pPKP		pPKPdf	17 31 04.4	+4.7
	comp=Z,1.8nm,0.8s,baz=58,slow=2.2,SNR=10							
CPUP	**Villa Florida**	**146.16**	**162**	PKPbc		PKPbc	17 31 17.1	+1.6
	comp=Z,3.5nm,0.6s,baz=197,slow=2.7,SNR=19							
CPUP				pPKPbc		pPKPbc	17 31 30.1	+4.5
	comp=Z,3.5nm,0.7s,baz=284,slow=1.7,SNR=6.5							
CPUP	**Villa Florida**	**146.16**	**162**	*e*PKP		PKPdf	17 31 16.1	+1.5
CPUP				PKPbc		PKPbc	17 31 17.1	+1.6
CPUP				pPKPbc		pPKPbc	17 31 30.1	+4.5

DDA ***30*** *17:19:18.5, 39°41'N×33°09'E, h15km±2km, Md3.6*
CSEM ***30*** *17:19:18.4±0.1, 39°44'N×33°13'E, h2km, MD3.2, Error ellipse: s-maj=1.8km s-min=1.4km az=36.0*
ISK ***30*** *17:19:18.7, 39°42'N×33°11'E, h4km, MD3.2*
ISCJB ***30*** *17:19:19.9±0.3, 39°39'N±0°02'×33°12'E±0°03, h10km, Error ellipse: s-maj=3.4km s-min=3.0km az=140.1*

ISC 30 17:19:20.4±0.3, 3940N±002°×3310E±003, h10km, n32, σ1§19/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.47**	**93**	*e*PG		**Pg**	**17 19 28.3**	**-1.3**
LOD	**Lodumlu**	**0.56**	**332**	*e*PG		**Pg**	**17 19 29.5**	**-1.7**
LOD				*e*SG		**Sg**	**17 19 38.1**	**-0.4**
CDAG	**Cicekdag**	**1.01**	**77**	*i* P		**Pg**	**17 19 37.7**	**-2.1**
CDAG				*i* S		**Sg**	**17 19 53.7**	**+0.8**
KIZT	**Kizilcal**	**1.08**	**242**	*e*PN		**Pg**	**17 19 39.7**	**-1.4**
ELDT	**Eldivan**	**1.12**	**13**	*i* P		**Pb**	**17

ASAR	**Alice Springs**	**31.73**	**163**	P		**P**	17 51 09.4	+1.1	
	1.0nm,0.4s,mb3.6,baz=337,slow=8.0,SNR=50								
MAJO	**Matsushiro**	**32.22**	**21**	*eP*		**P**	17 51 10.6	-1.8	
MJAR	**Matsushiro Arr**	**32.22**	**21**	P		**P**	17 51 12.3	-0.1	
	0.5nm,0.5s,mb3.2,baz=199,slow=9.8,SNR=4.2								
CTAO	**Charters Tower**	**34.39**	**141**	P		**P**	17 51 30.5	-0.5	
	15nm,1.3s,mb4.3								
SHL	**Shillong**	**36.09**	**305**	*ex*		x	17 51 45.5		
LSA	**Lhasa**	**38.57**	**310**	*eP*		**P**	17 52 06.9	+1.4	
	3.1nm,0.7s,mb3.9								
TAPN	**Taplejung**	**40.23**	**305**	*eP*		**P**	17 52 19.3	+0.3	
	7.7nm,0.4s,mb4.5								
ODAN	**Odare**	**40.30**	**304**	*eP*		**P**	17 52 19.7	+0.1	
	9.2nm,0.4s,mb4.5								
RAMN	**Ramite**	**40.99**	**304**	*eP*		**P**	17 52 25.3	+0.2	
	5.5nm,0.5s,mb4.2								
JIRN	**Jiri**	**41.59**	**305**	*eP*		**P**	17 52 30.0	+0.1	
	4.1nm,0.3s,mb4.4								
GUN	**Gumba**	**41.94**	**305**	*eP*		**P**	17 52 32.5	-0.2	
	7.0nm,0.4s,mb4.4								
KKN	**Kakani**	**42.39**	**304**	*eP*		**P**	17 52 35.6	-0.6	
	3.9nm,0.4s,mb4.2								
DMN	**Daman**	**42.47**	**304**	*eP*		**P**	17 52 36.0	-0.8	
GKN	**Gorkha**	**43.00**	**304**	*eP*		**P**	17 52 40.5	-0.5	
	3.1nm,0.3s,mb4.2								
SONM	**Songino Array**	**43.62**	**343**	P		**P**	17 52 46.4	+0.9	
	1.6nm,0.6s,mb3.6,baz=160,slow=8.2,SNR=17								
KOLN	**Koldanda**	**43.77**	**303**	*eP*		**P**	17 52 47.0	0.0	
	7.3nm,0.2s,mb4.7								
DANN	**Dangsing**	**43.84**	**304**	*eP*		**P**	17 52 47.5	-0.1	
	10.0nm,0.4s,mb4.6								
MK31	**Makanchi Array**	**53.63**	**325**	⇑*iP*		**P**	17 54 00.4	+0.1	
MKAR	**Makanchi Array**	**53.63**	**325**	P		**P**	17 54 00.4	+0.2	
	2.9nm,0.4s,mb3.9,baz=118,slow=7.4,SNR=96								
UCH	**Uchtor**	**56.25**	**317**	*eP*		**P**	17 54 22.1	+3.4	
	12nm,0.5s,mb4.5								
ZALV	**Zalesovo Beam**	**56.74**	**333**	P		**P**	17 54 20.9	-0.9	
	1.0nm,0.5s,mb3.4,baz=122,slow=7.2,SNR=6.7								
EKS2	**Erkin-Say**	**56.93**	**317**	*eP*		**P**	17 54 24.6	+1.3	
	8.5nm,0.8s,mb4.1								
KURK	**Kurchatov**	**57.83**	**328**	*eP*		**P**	17 54 28.4	-1.0	
	8.1nm,0.6s,mb4.2								

CASC 30 17:47:57.5±1.2, 1328N×8972W, h41km±21km, MD3.5, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.57**	**10**	*eP*	x	17 48 09.5	
SBLS				*eS*	x	17 48 19.2	
SNJE	**San Jose**	**0.60**	**11**	*eP*	x	17 48 09.7	
SNJE				*eS*	x	17 48 18.8	
RTR	**El Retiro**	**0.62**	**7**	*eP*	x	17 48 10.3	
BOQS	**Boqueron**	**0.63**	**43**	*eP*	x	17 48 10.2	
BOQS				*eS*	x	17 48 20.0	
LFRS	**El Faro**	**0.73**	**62**	*eP*	x	17 48 11.3	
LFRS				*eS*	x	17 48 22.1	
LFU	**La Fuente**	**0.75**	**51**	*eP*	x	17 48 12.0	
LFU				*eS*	x	17 48 23.5	
LBRS	**Las Brisas**	**0.80**	**55**	*eP*	x	17 48 12.7	
LBRS				*eS*	x	17 48 24.0	
RBDL	**Robledal**	**0.83**	**2**	*eP*	x	17 48 13.2	
RBDL				*eS*	x	17 48 26.0	
IXG	**Ixpaco**	**1.14**	**321**	*eP*	Pn	17 48 17.2	+0.2
IXG				*eS*	Sn	17 48 32.1	+0.7
MTO2	**Montecristo 2**	**1.17**	**17**	*eP*	x	17 48 17.5	
MTO2				*eS*	x	17 48 33.2	
VSM	**San Miguel**	**1.42**	**84**	*eP*	x	17 48 21.1	
VSM				*eS*	x	17 48 40.0	
BLLM	**Bellamira**	**1.45**	**83**	*eP*	x	17 48 21.6	
CAHU	**Cacacuatique**	**1.55**	**71**	*eP*	x	17 48 22.6	
CAHU				*eP*	x	17 48 22.8	
FUG	**Fuego 3**	**1.59**	**317**	*eP*	Pn	17 48 24.1	+0.9
FUG				*eS*	Sn	17 48 44.0	+1.4
CNCH	**Conchagua**	**1.84**	**90**	*eP*	x	17 48 26.7	
CNCH				*eP*	x	17 48 27.2	

*ISCJB **30** 17:52:03.2±1.0, 482S±0.1×164.2E±0.1, h33km, mb3.8/5, MS3.4/2, Error ellipse: s-maj=22.3km s-min=9.5km az=160.9*
*IDC **30** 17:52:04.1±1.8, 45.38S×166.19E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, MS3.5/2, Ms1 3.4/2, ms1mx2.7/27, Error ellipse: s-maj=163.2km s-min=41.8km az=28.0*
*NEIC **30** 17:52:05.7±0.9, 48.17S×164.28E, h35km, mb4.1/2, Error ellipse: s-maj=22.6km s-min=9.8km az=162.0*

ISC 30 17:52:05.7±1.0, 482S±01×164.2E±01, h35km, n18, σ1§30/15, mb3.8/5, MS3.4/2, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**3.42**	**50**	P	**Pn**	**17 52 56.3**	**-0.1**
MLZ	**Mavora Lakes**	**3.92**	**45**	P	**Pn**	**17 53 03.9**	**+0.6**
MLZ				S	**Sn**	**17 53 55.3**	**+7.3**
TUZ	**Tuapeka**	**4.31**	**61**	P	**Pn**	**17 53 07.3**	**-1.4**
EAZ	**Earnscleugh**	**4.57**	**52**	P	**Pn**	**17 53 11.7**	**-0.5**
WKZ	**Wanaka**	**4.71**	**46**	P	**Pn**	**17 53 15.6**	**+1.5**
JCZ	**Jackson Bay**	**5.17**	**39**	P	**Pn**	**17 53 22.9**	**+2.4**
ODZ	**Otahua Downs**	**5.42**	**57**	P	**Pn**	**17 53 21.9**	**-2.0**
SNZO	**South Karori**	**10.13**	**51**	*ePn*	**Pn**	**17 54 20.5**	**-7.9**
	60nm,1.0s						
STKA	**Stephens Creek**	**23.64**	**305**	P	**P**	**17 57 15.8**	**+2.2**
	1.4nm,0.7s,mb3.5,baz=130,slow=10,SNR=2.8						
STKA				LR	LR	18 05 27.9	
	comp=Z,100nm,20.7s,MS3.3,baz=205,slow=34						
ASAR	**Alice Springs**	**34.27**	**305**	P	**P**	**17 58 48.1**	**-0.2**
	0.8nm,0.7s,mb3.8,baz=136,slow=7.6,SNR=12						
WB2	**Warramunga Arr**	**37.06**	**309**	*eP*	**P**	**17 59 11.9**	**-0.4**
WRA	**Warramunga Arr**	**37.07**	**309**	P	**P**	**17 59 10.4**	**-2.0**
	1.2nm,1.1s,mb3.6,baz=136,slow=7.7,SNR=5.4						
WRA				LR	LR	18 13 09.7	
	comp=Z,76nm,18.1s,MS3.5,baz=160,slow=35						
WRAB	**Tennant Creek**	**37.07**	**309**	*eP*	**P**	**17 59 11.8**	**-0.6**
	1.7nm,0.8s,mb3.9						
SNAA	**Sanae**	**60.11**	**185**	*eP*	**P**	**18 02 09.7**	**+0.9**
	2.6nm,1.2s,mb4.1						
BRTR	**Keskin Array B**	**143.97**	**275**	PKPbc	PKPdf	18 11 42.1	+5.4
	1.1nm,0.9s,baz=166,slow=5.7,SNR=5.2						
ARCES	**ARCESS Array B**	**150.73**	**332**	PKPbc	PKPbc	18 11 52.3	-0.2
	3.8nm,0.9s,baz=336,slow=2.0,SNR=2.8						
AKASG	**Malin Array Be**	**150.97**	**292**	PKPbc	PKPbc	18 11 58.6	+4.9
	0.3nm,0.4s,baz=85,slow=2.1,SNR=4.5						
MLR	**Muntele Rosu**	**151.58**	**280**	PKPbc	PKPbc	18 11 59.5	+4.2
	1.6nm,0.9s,baz=162,slow=9.5,SNR=3.6						

*ISCJB **30** 18:07:43.6±0.6, 362S±0.1×535E±0.1, h10km, mb4.2/14, MS3.4/5, Error ellipse: s-maj=16.5km s-min=14.0km az=150.8*
*IDC **30** 18:07:44.0±0.9, 3606S×5351E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/22, mbtmp4.0/7, ML4.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.3/28, Error ellipse: s-maj=31.5km s-min=24.0km az=59.0*
*NEIC **30** 18:07:44.8±0.6, 3614S×5327E, h10km, mb4.5/8, Error ellipse: s-maj=18.0km s-min=14.6km az=212.0*

ISC 30 18:07:45.4±0.6, 362S±01×535E±01, h10km, n20, σ0§65/16, mb4.2/14, MS3.4/5, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.36**	**341**	P	**Pn**	**18 12 00.6**	**+0.4**
	1.3nm,0.3s,baz=140,slow=12,SNR=10						
BOSA	**Boshof**	**24.91**	**279**	P	**P**	**18 13 08.8**	**+0.2**
	18nm,1.5s,mb4.4						
LBTB	**Lobatse**	**26.34**	**287**	*eP*	**P**	**18 13 17.3**	**-4.3**
	37nm,1.9s,mb4.6						
SUR	**Sutherland**	**27.17**	**268**	LR	LR	18 21 31.0	
	comp=Z,104nm,19.3s,MS3.4,baz=101,slow=30						
LSZ	**Lusaka**	**30.66**	**306**	LR	LR	18 25 04.0	
	comp=Z,51nm,18.2s,MS3.2,baz=217,slow=34						
MAW	**Mawson**	**31.96**	**173**	LR	LR	18 23 39.1	
	comp=Z,74nm,21.9s,MS3.3,baz=21,slow=30						
TSUM	**Tsumeb**	**35.72**	**288**	*eP*	**P**	**18 14 40.1**	**-4.2**
	2.3nm,0.9s,mb4.1						
SNAA	**Sanae**	**45.64**	**202**	*eP*	**P**	**18 16 05.3**	**-0.3**
	2.6nm,0.8s,mb4.2						
COCO	**West Island**	**45.70**	**70**	*eP*	**P**	**18 16 06.5**	**-0.3**
	97nm,0.9s						
PALK	**Pallekele**	**50.21**	**36**	*eP*	**P**	**18 16 33.1**	**-8.5**
	26nm,1.4s,mb5.1						

QSPA	**South Pole Qui**	**54.04**	**180**	P		**P**	18 17 10.4	+1.1	
	4.4nm,1.0s,mb4.4,baz=276,slow=4.1,SNR=18								
VNDA	**Vanda**	**58.83**	**166**	LR		LR	18 39 46.0		
	comp=Z,48nm,18.1s,MS3.7,baz=87,slow=33								
VNDA	**Vanda**	**58.83**	**166**	*eP*		**P**	18 17 42.9	-0.6	
	1.9nm,0.9s,mb4.1								
ASAR	**Alice Springs**	**69.05**	**104**	P		**P**	18 18 52.2	+0.6	
	0.9nm,0.8s,mb3.8,baz=233,slow=6.0,SNR=7.7								
TORD	**Torodi Ar. Bea**	**69.19**	**305**	P		**P**	18 18 52.5	+0.1	
	0.4nm,0.7s,mb3.4,baz=143,slow=5.9,SNR=2.9								
CMAR	**Chiang Mai Arr**	**69.28**	**46**	P		**P**	18 18 52.5	-0.4	
	1.4nm,0.9s,mb3.9,baz=229,slow=6.7,SNR=13								
CMAR				LR		LR	18 46 43.2		
	comp=Z,29nm,18.3s,MS3.6,baz=205,slow=34								
WRA	**Warramunga Arr**	**71.35**	**101**	P		**P**	18 19 05.9	+0.1	
	2.4nm,0.8s,mb4.2,baz=235,slow=5.6,SNR=11								
WRAB	**Tennant Creek**	**71.37**	**101**	*eP*		**P**	18 19 05.5	-0.3	
	4.2nm,1.0s,mb4.3								
AAK	**Ala-Archa**	**80.72**	**16**	P		**P**	18 19 59.7	+1.2	
	6.3nm,1.1s,mb4.5								
MKAR	**Makanchi Array**	**86.53**	**19**	P		**P**	18 20 27.2	-0.9	
	0.5nm,0.8s,mb3.8,baz=176,slow=4.3,SNR=3.5								

*ISCJB **30** 18:14:59.7±0.4, 3640N±002×7121E±005, h121km±6km, mb3.7/13, Error ellipse: s-maj=6.5km s-min=3.8km az=172.6*
*MOS **30** 18:14:59.9±1.4, 3639N×7095E, h135km, mb3.7/7, Error ellipse: s-maj=14.7km s-min=8.0km az=82.8*
*NEIC **30** 18:15:00.7±0.9, 3639N×7098E, h125km±9km, mb4.5/10, Error ellipse: s-maj=11.2km s-min=9.6km az=115.0*
*IDC **30** 18:15:05.2±4.7, 3650N×7137E, h152km±44km, mb3.2/9, mb1 3.4/14, mb1mx3.3/27, mbtmp3.3/14, Error ellipse: s-maj=23.8km s-min=14.7km az=21.0*
*NNC **30** 18:15:09.0±4.2, 3701N×7094E, h181km±37km, mb3.0, mpv4.6, Error ellipse: s-maj=35.5km s-min=21.4km az=21.0*

ISC 30 18:15:00.8±0.4, 3638N±002×7119E±005, h120km±5km, n82, σ1§20/95, mb3.7/13, 4C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.54**	**224**	*ePn*	**Pn**	**18 15 40.4**	**-0.6**
KBL				*eSn*	**Sn**	**18 16 10.8**	**-1.2**
CEP	**Cherat**	**2.62**	**167**	⇓P	**Pn**	**18 15 43.7**	**+1.6**
CEP				S	**Sn**	**18 16 14.0**	**+0.2**
CHCP	**Chirah Chowk**	**3.20**	**147**	P	**Pn**	**18 15 51.9**	**+2.2**
SBDP	**Sheikh Budin**	**4.08**	**185**	P	**Pn**	**18 16 01.3**	**-0.1**
SARP	**Sargodha**	**4.61**	**164**	P	**Pn**	**18 16 08.8**	**+0.3**
THN	**Thein Dam**	**5.43**	**135**	*eP*	**Pn**	**18 16 19.5**	**0.0**
THN				*eS*	**Sn**	**18 17 20.7**	**-0.1**
AML	**Almayashu**	**6.06**	**18**	P	**Pn**	**18 16 29.1**	**+1.1**
	SNR=223						
AML	**Almayashu**	**6.06**	**18**	*ePn*	**Pn**	**18 16 28.8**	**+0.8**
	80nm,0.3s						
AML				*eSn*	**Sn**	**18 17 32.7**	**-3.4**
UCH	**Uchtor**	**6.38**	**23**	P	**Sn**	**18 17 42.9**	**-0.9**
	SNR=10.0						
KZA	**Kyzart**	**6.50**	**28**	P	**Pn**	**18 16 35.7**	**+1.7**
	SNR=9.0						
EKS2	**Erkin-Say**	**6.58**	**17**	P	**Pn**	**18 16 35.8**	**+0.8**
	SNR=20						
EKS2	**Erkin-Say**	**6.58**	**17**	*ePn*	**Pn**	**18 16 35.6**	**+0.6**
	16nm,0.5s						
EKS2				*eSn*	**Sn**	**18 17 46.6**	**-2.1**
KK31	**Karatay Array**	**6.74**	**356**	⇑P	**Pn**	**18 16 36.7**	**-0.4**
	29nm,0.4s,baz=34,slow=60,SNR=6.1						
KK31				⇓S	**Sn**	**18 17 48.0**	**-4.3**
	4.7nm,0.4s,baz=187,slow=23,SNR=3.6						
AAK	**Ala-Archa**	**6.75**	**21**	*ePN*	**Pn**	**18 16 38.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,18nm,0.3s						
AAK	**Ala-Archa**	**6.75**	**21**	P	**Pn**	**18 16 38.5**	**+1.2**
	SNR=21						
AAK	**Ala-Archa**	**6.75**	**21**	*ePn*	**Pn**	**18 16 38.5**	**+1.2**
	comp=Z,18nm,0.3s						
AAK				*eSn*	**Sn**	**18 17 51.1**	**-1.5**
KBK	**Karagaybulak**	**6.91**	**24**	P	**Pn**	**18 16 41.3**	**+1.9**
	SNR=20						
CHMS	**Chumysh**	**7.16**	**21**	P	**Pn**	**18 16 44.8**	**+2.0**
	SNR=16						
SMLA	**Simla**	**7.22**	**135**	*i* P	**Pn**	**18 16 43.6**	**-0.1**
SMLA				*i* S	**Sn**	**18 18 01.2**	**-3.0**
SMLA				*i* S	**Sn**	**18 18 02.1**	**-2.1**
SMLA				*ex*	x	18 18 04.0	
	comp=N,502nm,0.3s						
SMLA				*ex*	x	18 18 05.1	
	comp=E,526nm,0.4s						
USP	**Ospenovka**	**7.33**	**19**	P	**Pn**	**18 16 45.9**	**+0.8**
	SNR=25						
TKM2	**Tokmak 2**	**7.36**	**26**	⇓P	**Pn**	**18 16 46.9**	**+1.4**
	comp=E,22nm,0.6s						
TKM2				⇓S	**Sn**	**18 18 06.8**	**-0.7**
	comp=E,5.3nm,0.7s						
TKM2	**Tokmak 2**	**7.36**	**26**	*ePN*	**Pn**	**18 16 46.4**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,29nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**26**	P	**Pn**	**18 16 50.7**	**+5.2**
	SNR=21						
TKM2	**Tokmak 2**	**7.36**	**26**	*ePn*	**Pn**	**18 16 46.4**	**+0.8**
	comp=Z,29nm,0.6s						
KLP	**Kalpa**	**7.59**	**127**	*eP*	**Pn**	**18 16 50.4**	**+1.6**
KLP				*eS*	**Sn**	**18 18 10.2**	**-3.0**
KLP				AML	AML	18 18 20.1	
	comp=E,159nm,0.6s						
KLP				AML	AML	18 18 20.6	
	comp=N,123nm,0.6s						
JOSI	**Joshimath**	**9.08**	**127**	*eS*	**Sn**	**18 18 44.0**	**-5.3**
KHET	**Khetri**	**9.15**	**153**	*eS*	**Sn**	**18 18 43.4**	**-7.7**
KUDL	**Kundal**	**9.35**	**150**	*eS*	**Sn**	**18 18 47.0**	**-8.9**
DANN	**Dangsing**	**13.29**	**123**	*eP*	**Pn**	**18 18 03.6**	**-1.2**
	comp=N,8.7nm,0.3s						
MK31	**Makanchi Array**	**13.30**	**35**	⇓P	**Pn**	**18 18 04.5**	**-0.2**
	comp=N,1.4nm,0.6s,baz=214,slow=16,SNR=18						
MK31	**Makanchi Array**	**13.30**	**35**	*ePn*	**Pn**	**18 18 04.0**	**-0.7**
MKAR	**Makanchi Array**	**13.30**	**35**	P	**Pn**	**18 18 05.0**	**+0.3**
	comp=N,0.2nm,0.3s,baz=216,slow=14,SNR=9.4						
KOLN	**Koldanda**	**13.56**	**126**	*eP*	**Pn**	**18 18 06.4**	**-1.9**
	comp=N,3.5nm,0.4s						
GKN	**Gorkha**	**14.11**	**122**	*eP*	**Pn**	**18 18 14.2**	**-1.1**
	comp=N,8.7nm,0.4s						
DMN	**Daman**	**14.68**	**123**	*eP*	**Pn**	**18 18 21.4**	**-1.1**
	comp=N,5.1nm,0.3s						
KKN	**Kakani**	**14.68**	**122**	*eP*	**Pn**	**18 18 21.8**	**-0.8**
	comp=N,9.7nm,0.5s						
GUN	**Gumba**	**15.02**	**120**	*eP*	**Pn**	**18 18 26.9**	**0.0**
	comp=N,6.1nm,0.3s						
KURBB	**Kurchatov Arra**	**15.19**	**18**	⇓P	**Pn**	**18 18 28.3**	**-0.4**
	comp=N,0.5nm,0.7s						
AB01	**Akbulak array**	**15.27**	**331**	⇑P	**Pn**	**18 18 28.6**	**-1.1**
	comp=N,1.2nm,0.3s						
AB01				⇑S	**Sn**	**18 21 07.5**	**-11**
	comp=N,3.0nm,0.6s						
KURK	**Kurchatov**	**15.30**	**18**	P	**Pn**	**18 18 29.9**	**-0.2**
	comp=N,0.1nm,0.3s,baz=203,slow=11,SNR=6.9						
JIRN	**Jiri**	**15.39**	**120**	*eP*	**Pn**	**18 18 31.5**	**0.0**
	comp=N,11nm,0.3s						
RAMN	**Ramite**	**16.12**	**121**	*eP*	**Pn**	**18 18 40.4**	**-0.1**
TAPN	**Taplejung**	**16.65**	**118**	*eP*	**Pn**	**18 18 48.0**	**+1.0**
	comp=N,6.9nm,0.3s						
BVA0	**Borovoye Array**	**16.66**	**358**	P	**Pn**	**18 18 46.9**	**0.0**
	comp=N,0.4nm,0.7s,baz=171,slow=12,SNR=19						
BVAR	**Borovoye Array**	**16.66**	**358**	P	**Pn**	**18 18 46.8**	**0.0**
	comp=N,0.6nm,0.3s,baz=177,slow=12,SNR=22						
BVAR	**Borovoye Array**	**16.66**	**358**	P	**Pn**	**18 18 46.8**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**16.69**	**358**	*eP*	**Pn**	**18 18 45.6**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**16.69**	**358**	*eP*	**Pn**	**18 18 45.6**	**-1.7**
	comp=Z,1.9nm,0.5s						
ODAN	**Odare**	**16.72**	**120**	*eP*	**Pn**	**18 18 48.0**	**+0.1**
AKTK	**Aktyubinsk**	**16.96**	**330**	P	**Pn**	**18 18 51.0**	**+0.4**
AKTO	**Aktyubinsk**	**16.96**	**330**	⇑P	**Pn**	**18 18 47.8**	**-2.9**
	comp=Z,1.1nm,0.9s						
AKTO				⇓S	**Sn**	**18 21 47.9**	**-12**
	comp=Z,0.6nm,0.9s						
AKTO	**Aktyubinsk**	**16.96**	**330**	P	**Pn**	**18 18 51.0**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=144,slow=11,SNR=23						
AKTO	**Aktyubinsk**	**16.96**	**330**	P	**Pn**	**18 18 51.0**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						

LSA	**Lhasa**	**17.99**	**106**	*eP*		**Pn**	18 19 04.3	+1.1	
LSA				pmax	pmax				
	comp=Z,4.0nm,0.6s								
LSA	**Lhasa**	**17.99**	**106**	*eP*		**Pn**	18 19 04.3	+1.0	
	comp=Z,4.2nm,0.6s								
ZAA0	**Zalesovo Array**	**19.96**	**24**	*eP*		**P**	18 19 24.0	+0.8	
ZALV	**Zalesovo Beam**	**19.96**	**24**	P		**P**	18 19 23.9	+0.7	
	comp=Z,1.0nm,0.3s,baz=218,slow=11,SNR=19								
ZALV	**Zalesovo Beam**	**19.96**	**24**	P		**P**	18 19 24.0	+0.7	
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ARU	**Arti**	**21.80**	**341**	P		**P**	18 19 37.7	-5.2	
ARU				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb3.7								
ARU	**Arti**	**21.80**	**341**	P		**P**	18 19 37.7	-5.2	
	comp=Z,1.8nm,0.5s,mb3.7								
MALT	**Malatya**	**26.05**	**284**	P		**P**	18 20 19.8	-3.1	
MALT				pmax	pmax				
	comp=Z,1.0nm,0.4s,mb3.6								
MALT	**Malatya**	**26.05**	**284**	P		**P**	18 20 19.8	-3.1	
	comp=Z,0.7nm,0.4s,mb3.4								
SONM	**Songino Array**	**28.28**	**55**	P		**P**	18 20 44.3	+1.7	
	comp=Z,0.4nm,0.9s,mb2.9,baz=251,slow=8.4,SNR=4.8								
MMAI	**Mount Meron Ar**	**29.51**	**274**	P		**P**	18 20 57.0	+3.2	
	comp=Z,0.5nm,0.3s,mb3.6,baz=249,slow=37,SNR=3.0								
CMAR	**Chiang Mai Arr**	**30.26**	**119**	P		**P**	18 21 02.2	+1.8	
	comp=Z,0.4nm,0.6s,mb3.2,baz=299,slow=9.7,SNR=4.0								
ARCES	**ARCESS Array B**	**41.32**	**338**	P		**P**	18 22 35.0	+0.9	
	comp=Z,3nm,0.9s,mb4.0,baz=108,slow=7.8,SNR=4.5								
ARCES	**ARCESS Array B**	**41.32**	**338**	P		**P**	18 22 35.0	+0.9	
ARCES				pmax	pmax				
	comp=Z,2.0nm,0.9s								
NOA	**NORSAR Array B**	**44.57**	**323**	P		**P**	18 23 00.3	-0.2	
	comp=Z,0.9nm,0.8s,mb3.6,baz=90,slow=4.0,SNR=3.2								
NOA	**NORSAR Array B**	**44.57**	**323**	P		**P**	18 23 00.3	-0.1	
NOA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
KONO	**Kongsberg**	**45.28**	**321**	*eP*		**P**	18 23 03.9	-2.1	
KONO				pmax	pmax				
	comp=Z,34nm,1.3s,mb4.9								
KONO	**Kongsberg**	**45.28**	**321**	*eP*		**P**	18 23 03.9	-2.1	
	comp=Z,34nm,1.3s,mb4.9								
STU	**Stuttgart**	**46.09**	**306**	*eP*		**P**	18 23 07.9	-4.7	
STU				pmax	pmax				
	comp=Z,6.0nm,0.3s,mb4.8								
STU	**Stuttgart**	**46.09**	**306**	*eP*		**P**	18 23 07.9	-4.8	
	comp=Z,5.8nm,0.3s,mb4.8								
TORD	**Torodi Ar. Bea**	**65.87**	**269**	P		**P**	18 25 36.9	+3.0	
	comp=Z,0.2nm,0.5s,mb3.2,baz=54,slow=5.9,SNR=7.0								
TORD	**Torodi Ar. Bea**	**65.87**	**269**	P		**P**	18 25 36.9	+3.0	
YKA	**Yellowknife Ar**	**81.36**	**3**	P		**P**	18 27 04.1	+0.5	
	comp=Z,0.2nm,0.3s,mb3.4,baz=352,slow=5.6,SNR=7.6								
YKA				pP	pP	18 27 39.4	+5.4		
	comp=Z,0.6nm,0.8s,baz=13,slow=2.1,SNR=9.5								
YKA	**Yellowknife Ar**	**81.36**	**3**	P		**P**	18 27 04.1	+0.4	
YKA				*PP	pP	18 27 39.4	+5.4		
YKA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**81.36**	**3**	P		**P**	18 27 04.1	+0.5	
YKA				pP	pP	18 27 39.4	+5.4		
WRA	**Warramunga Arr**	**81.79**	**122**	P		**P**	18 27 05.8	-0.8	
	comp=Z,0.6nm,0.8s,mb3.5,baz=325,slow=4.9,SNR=7.1								
WRA	**Warramunga Arr**	**81.79**	**122**	P		**P**	18 27 05.8	-0.7	
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**84.06**	**125**	P		**P**	18 27 17.5	-0.6	
	comp=Z,0.5nm,0.7s,mb3.5,baz=314,slow=5.1,SNR=8.2								
ASAR	**Alice Springs**	**84.06**	**125**	P		**P**	18 27 17.5	-0.6	
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								

*IDC **30** 18:30:10.4±3.4, 21.16S×175.76W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=196.9km s-min=42.4km az=153.0*
*NEIC **30** 18:30:16.6±1.6, 2071S×17591W, h35km, mb3.9/2, Error ellipse: s-maj=66.2km s-min=29.2km az=145.0*

ISC 30 18:30:15.7±4.2, 207S±04×1758W±06, h35km, n11, σ1§08/6, mb3.8/5, Tonga Islands

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC

FCH				*i* S		**Sn**	19 45 43.3	+1.2
FCH				AML		AML	19 45 44.6	
	comp=N,3μm,0.2s							
PEL	**Peldehue**	**1.07**	**228**↑	*e*P		**Pn**	**19 45 25.2**	**-0.5**
PEL				*e*S		**Sn**	**19 45 42.8**	**-0.4**
PEL				AML		AML	19 45 45.0	
	comp=N,5μm,0.3s							
CLCH	**Cerro Calan**	**1.18**	**215**↑	*i* P		**Pn**	**19 45 26.8**	**+0.1**
CLCH				*i* S		**Sn**	**19 45 45.5**	**+0.4**
CLCH				AML		AML	19 45 50.1	
	comp=E,4μm,0.5s							
YECH	**El Yeso**	**1.27**	**194**	*i* P		**Pn**	**19 45 28.6**	**+0.9**
SJCH	**San Jose de Ma**	**1.31**	**203**	*e*P		**Pn**	**19 45 28.4**	**+0.2**
SJCH				*e*S		**Sn**	**19 45 48.4**	**+0.7**
PCH	**Pirque**	**1.36**	**209**↓	*i*P		**Pn**	**19 45 28.7**	**+0.1**
RCDM	**Rinconada Maip**	**1.39**	**220**	*e*P		**Pn**	**19 45 28.6**	**-0.4**
RCDM				*i* S		**Sn**	**19 45 48.6**	**-0.6**
RCDM				AML		AML	19 45 50.7	
	comp=E,9μm,0.2s							
LMEL	**Las Melosas**	**1.47**	**196**↑	*i*P		**Pn**	**19 45 30.3**	**+0.4**
LMEL				*e*S		**Sn**	**19 45 52.2**	**+1.5**
LMEL				AML		AML	19 45 59.3	
	comp=N,3μm,0.2s							
CFAA	**Coronel Fontan**	**1.51**	**57**	P		**Pn**	**19 45 30.4**	**-0.1**
	comp=N,13nm,0.3s,baz=230,slow=11,SNR=321							
CFAA				S		**Sn**	**19 45 51.6**	**+0.1**
	comp=N,39nm,0.3s,baz=118,slow=20,SNR=117							
TACH	**Talagante**	**1.59**	**220**↓	*i*P		**Pn**	**19 45 30.6**	**-0.6**
TACH				*i* S		**Sn**	**19 45 52.2**	**-0.9**
IHA	**Instituto Hidr**	**1.72**	**249**↑	*e*P		**Pn**	**19 45 31.4**	**-1.4**
TLL	**Tololo Astrono**	**2.44**	**338**↓	*e*P		**Pn**	**19 45 42.9**	**+1.1**
TLL				*e*S		**Sn**	**19 46 12.5**	**+0.7**
TLL				AML		AML	19 46 20.8	
	comp=N,880nm,0.5s							
NICH	**Los Niches**	**2.85**	**206**↑	*e*P		**Pn**	**19 45 45.6**	**-1.5**
LCO	**Las Campanas**	**3.51**	**346**	*e*Pn		**Pn**	**19 45 56.2**	**+0.4**
LCO				*e*Sn		**Sn**	**19 46 30.7**	**-6.1**
PLCA	**Paso Flores**	**8.31**	**184**	P		**Pn**	**19 46 58.7**	**-1.5**
	comp=N,0.1nm,0.3s,baz=293,slow=7.9,SNR=2.8							
TRQA	**Tornquist**	**8.46**	**134**	*e*Pn		**Pn**	**19 47 00.6**	**-1.7**
	comp=N,5.3nm,0.6s							
LVC	**Limon Verde**	**9.81**	**4**	P		**Pn**	**19 47 18.7**	**-1.8**
	comp=N,0.3nm,0.3s,baz=153,slow=9.0,SNR=3.2							
LVC				S		**Sn**	**19 49 03.8**	**-5.1**
	comp=N,0.3nm,0.3s,baz=269,slow=18,SNR=2.1							
LVC	**Limon Verde**	**9.81**	**4**	*e*Pn		**Pn**	**19 47 17.6**	**-3.0**
CPUP	**Villa Florida**	**12.40**	**64**	P		**Pn**	**19 47 50.9**	**-4.0**
	comp=N,0.8nm,0.3s,baz=216,slow=11,SNR=8.4							
CPUP	**Villa Florida**	**12.40**	**64**	*e*Pn		**Pn**	**19 47 50.8**	**-4.1**
	comp=N,8.4nm,0.5s							
CPUP				*e*Sn		**Sn**	**19 50 03.3**	**-8.2**
SIV	**San Ignacio**	**18.16**	**28**	P		**P**	**19 49 05.8**	**+0.3**
	comp=N,1.1nm,0.3s,baz=214,slow=11,SNR=37							
SIV				pP			19 49 31.1	
	comp=N,0.1nm,0.3s,baz=263,slow=11,SNR=2.5							
USHA	**Ushuaia**	**22.41**	**178**	P		**P**	**19 49 51.7**	**+0.8**
	comp=N,15nm,0.8s,mb4.4,baz=354,slow=14,SNR=4.8							
BDFB	**Brasilia**	**25.85**	**55**	P		**P**	**19 50 22.8**	**+0.1**
	comp=N,5.1nm,1.0s,mb3.9,baz=211,slow=17,SNR=10.0							
BDFB	**Brasilia**	**25.85**	**55**	*e*P		**P**	**19 50 21.1**	**-1.6**
	comp=N,8.0nm,1.0s,mb4.1							
QSPA	**South Pole Qui**	**57.80**	**180**	*e*P		**P**	**19 54 41.8**	**+1.5**
	comp=N,6.9nm,1.1s,mb4.6							
BRAL	**Brewton**	**65.20**	**344**	*e*P		**P**	**19 55 28.8**	**-1.7**
	comp=N,353nm,1.6s							
TXAR	**Lajitas Array**	**69.36**	**329**	P		**P**	**19 55 58.4**	**+1.6**
	comp=N,0.3nm,0.7s,baz=160,slow=8.6,SNR=3.0							
DBIC	**Dimbokro**	**72.83**	**70**	P		**P**	**19 56 18.6**	**+0.5**
	comp=N,1.6nm,0.6s,mb4.0,baz=201,slow=12,SNR=4.3							
TORD	**Torodi Ar. Bea**	**81.85**	**69**	P		**P**	**19 57 09.3**	**+1.0**
	comp=N,1.1nm,0.6s,mb3.9,baz=244,slow=2.8,SNR=15							
TORD				pP		pP	19 57 40.9	+1.2
	comp=N,2.3nm,0.8s,baz=246,slow=3.0,SNR=10							
ARCES	**ARCESS Array B**	**121.79**	**24**	PKP		PKPdf	20 03 40.4	-0.5
	comp=N,1.4nm,0.7s,baz=189,slow=5.0,SNR=3.0							
WRA	**Warramunga Arr**	**123.06**	**207**	PKP		PKPdf	20 03 44.3	-0.7
	comp=N,0.5nm,0.7s,baz=153,slow=1.6,SNR=6.6							
WRA				pPKP		pPKPdf	20 04 17.8	-0.5
	comp=N,0.5nm,1.0s,baz=158,slow=1.6,SNR=1.4							
ZALV	**Zalesovo Beam**	**151.87**	**33**	PKPbc		PKPbc	20 04 43.1	+0.8
	comp=N,0.6nm,0.4s,baz=287,slow=4.2,SNR=4.4							
ZALV				pPKPbc		pPKPbc	20 05 17.5	+2.1
	comp=N,3.7nm,0.5s,baz=312,slow=3.3,SNR=13							
ZALV	**Zalesovo Beam**	**151.87**	**33**	PKPbc		PKPbc	20 04 43.1	+0.8
ZALV				pPKPbc		pPKPbc	20 05 17.5	+2.1
MKAR	**Makanchi Array**	**154.28**	**48**	PKPab		PKPab	20 05 03.4	+1.1
	comp=N,0.4nm,0.7s,baz=318,slow=3.9,SNR=3.6							

*NEIC **30** 19:58:08.9±10.0, 2463S×17988W, h445km±69km, mb4.1/4, Error ellipse: s-maj=145.2km s-min=21.1km az=221.0*
*IDC **30** 19:58:12.4±12.0, 2510S×17835W, h650km±259km, mb2.8/3, mb1 3.1/4, mb1mx2.8/16, mbtmp3.0/4, Error ellipse: s-maj=271.6km s-min=68.3km az=79.0*
ISC 30 19:58:16.9±5.0, 253S±02×1795E±04, h487km±48km, n8, σ0§61/9, mb3.8/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.13**	**188**	P	**P**	**20 01 07.4**	**+0.1**
	1.5nm,0.3s,baz=46,slow=4.8,SNR=10.0						
URZ				S	**S**	**20 03 27.6**	**-0.3**
	1.1nm,0.3s,baz=211,slow=22,SNR=6.4						
CTAO	**Charters Tower**	**31.06**	**273**	*e*P	**P**	**20 03 53.9**	**-0.4**
	5.5nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**33.82**	**250**	P	**P**	**20 04 19.0**	**+1.3**
	0.7nm,0.5s,mb3.4,baz=78,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**41.38**	**262**	P	**P**	**20 05 20.4**	**+0.5**
	0.6nm,0.4s,mb3.4,baz=101,slow=7.6,SNR=20						
WRAB	**Tennant Creek**	**41.87**	**268**	P	**P**	**20 05 23.2**	**-0.7**
	12nm,1.3s,mb4.2						
WRA	**Warramunga Arr**	**41.88**	**268**	P	**P**	**20 05 24.1**	**+0.2**
	1.0nm,0.3s,mb3.7,baz=100,slow=7.0,SNR=48						
MBWA	**Marble Bar**	**54.70**	**261**	*e*P	**P**	**20 06 59.0**	**-0.9**
	10nm,1.0s,mb4.1						
QSPA	**South Pole Qui**	**64.84**	**180**	*e*P	**P**	**20 08 06.7**	**+0.2**
	4.7nm,1.4s,mb3.9						

*IDC **30** 20:04:55.6±2.3, 1920S×17006E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/15, mbtmp4.3/3, Error ellipse: s-maj=117.0km s-min=36.9km az=149.0*
*NEIC **30** 20:05:05.1±1.5, 1734S×16889E, h35km, mb3.9/2, Error ellipse: s-maj=35.9km s-min=24.5km az=122.0*
*NOU **30** 20:05:16.9±0.3, 1858S×16936E, h30km, MD3.0, ML2.6*
ISC 30 20:05:18.9±2.9, 183S±03×1685E±05, h130km±39km, n12, σ1§16/12, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.16**	**207**	*e*P	**Pn**	**20 06 21.1**	**+0.3**
DZM				*e*S	**Sn**	**20 07 08.4**	**-0.4**
DZM				AMP		20 07 13.0	
	comp=Z,113nm,2.6s						
DZM	**Mont Dzumac**	**4.16**	**207**	*e*Pn	**Pn**	**20 06 21.0**	**+0.2**
	comp=Z,18nm,0.6s						
NOUC	**Port Laguerre**	**4.25**	**208**	*e*P	**Pn**	**20 06 22.8**	**+0.9**
NOUC				AMP		20 07 10.8	
	comp=Z,6.1nm,0.8s						
NOUC				*e*S	**Sn**	**20 07 11.5**	**+0.6**
PLUM	**Mont Dore**	**4.26**	**203**	*e*P	**Pn**	**20 06 21.3**	**-0.8**
ONTRN	**Noumea**	**4.36**	**205**	*e*P	**Pn**	**20 06 23.2**	**-0.3**
CTAO	**Charters Tower**	**21.03**	**262**	P	**P**	**20 09 50.7**	**-1.8**
	comp=Z,2.0nm,0.7s,mb3.6						
STKA	**Stephens Creek**	**27.71**	**236**	P	**P**	**20 10 53.5**	**-1.5**
	comp=Z,1.3nm,0.5s,mb3.9,baz=70,slow=6.3,SNR=8.2						
WRAB	**Tennant Creek**	**32.22**	**262**	*e*P	**P**	**20 11 34.7**	**-0.3**
	comp=Z,2.5nm,0.9s,mb3.9						
WRA	**Warramunga Arr**	**32.23**	**262**	P	**P**	**20 11 37.8**	**+2.7**
	comp=Z,0.5nm,0.3s,mb3.7,baz=97,slow=6.8,SNR=30						
ASAR	**Alice Springs**	**32.63**	**255**	P	**P**	**20 11 40.2**	**+1.7**
	comp=Z,7.7nm,0.5s,mb4.7,baz=84,slow=9.2,SNR=158						
ARCES	**ARCESS Array B**	**124.02**	**345**	PKP	PKPdf	20 23 57.4	-3.8
	comp=Z,4.6nm,1.1s,baz=66,slow=2.5,SNR=16						
GERES	**GERESS Array B**	**143.35**	**332**	PKP	PKPdf	20 24 34.4	-3.4
	comp=Z,0.9nm,0.6s,baz=34,slow=4.2,SNR=10						

*TAP **30** 20:15:07.9, 2455N×12287E, h97km±1km, ML3.6, C*
*ISCJB **30** 20:15:08.7±0.6, 2447N±004×12291E±002, h83km±6km, Error ellipse: s-maj=6.7km s-min=3.2km az=178.0*
*JMA **30** 20:15:08.6±0.1, 2464N×12295E, h87km±1km, M2.5*
ISC 30 20:15:09.3±0.6, 2448N±004×12291E±002, h80km±7km, n42, σ0§91/80, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.10**	**100**	P	**Pn**	**20 15 21.2**	**+0.4**
YOJ				*e*S	**Sn**	**20 15 30.6**	**+1.4**
IRIF	**Iriomote-Funau**	**0.77**	**101**	P	**Pn**	**20 15 25.6**	**-0.1**
IRIF				S	**Sn**	**20 15 38.3**	**+0.5**
HATJ	**Hateruma jima**	**0.92**	**117**	P	**Pn**	**20 15 27.9**	**+0.4**
HATJ				*e*S	**Sn**	**20 15 42.3**	**+1.3**
TWC	**Suao**	**0.97**	**278**	P	**Pn**	**20 15 27.5**	**-0.5**
	baz=278						
TWC				*e*S	**Sn**	**20 15 40.8**	**-1.2**
	baz=278						
JKRS	**Kuro-shima**	**1.03**	**103**	P	**Pn**	**20 15 28.9**	**+0.1**
JKRS				*e*S	**Sn**	**20 15 43.9**	**+0.6**
ENA	**Nanau**	**1.06**	**268**	P	**Pn**	**20 15 28.3**	**-0.8**
	baz=258						
ENA				S	**Sn**	**20 15 43.4**	**-0.5**
	baz=258						
JIJ	**Ishigaki jima**	**1.13**	**96**	P	**Pn**	**20 15 29.5**	**-0.5**
JIJ				*e*S	**Sn**	**20 15 44.7**	**-0.8**
TWE	**Neicheng**	**1.15**	**282**	P	**Pn**	**20 15 29.8**	**-0.4**
	baz=274						
TWE				S	**Sn**	**20 15 45.5**	**-0.4**
	baz=274						
NWF	**Wu-fen Shan**	**1.18**	**300**	P	**Pn**	**20 15 30.4**	**-0.2**
	baz=290						
NWF				S	**Sn**	**20 15 45.9**	**-0.6**
	baz=290						
ENTT	**Nioudou**	**1.23**	**278**	P	**Pn**	**20 15 31.4**	**+0.2**
	baz=274						
ENTT				S	**Sn**	**20 15 48.0**	**+0.4**
	baz=274						
TWD	**Chiawan**	**1.26**	**252**	*i* P	**Pn**	**20 15 30.9**	**-0.7**
	baz=241						
TWD				*i* S	**Sn**	**20 15 47.7**	**-0.6**
	baz=241						
HWA	**Hwalien**	**1.29**	**247**	P	**Pn**	**20 15 31.5**	**-0.4**
	baz=238						
NNS	**Nan Shan**	**1.40**	**269**	*e*P	**Pn**	**20 15 33.1**	**-0.2**
	baz=258						
NNS				S	**Sn**	**20 15 51.0**	**-0.4**
	baz=258						
NSK	**Sanguang**	**1.42**	**278**	P	**Pn**	**20 15 33.5**	**-0.1**
	baz=268						
NSK				*e*S	**Sn**	**20 15 51.7**	**-0.3**
	baz=268						
TWS1	**Kuangyinshan**	**1.49**	**295**	P	**Pn**	**20 15 34.1**	**-0.4**
	baz=285						
ESL	**Shilin**	**1.50**	**244**	P	**Pn**	**20 15 33.7**	**-0.9**
	baz=236						
ESL				*e*S	**Sn**	**20 15 53.0**	**-0.7**
	baz=236						
WHF	**Hehuan Shan**	**1.53**	**258**	P	**Pn**	**20 15 34.8**	**-0.2**
	baz=254						
WHF				S	**Sn**	**20 15 54.8**	**+0.2**
	baz=254						
TWT	**Tachien**	**1.59**	**262**	P	**Pn**	**20 15 36.2**	**+0.4**
	baz=255						
TWT				*e*S	**Sn**	**20 15 56.1**	**+0.2**
	baz=255						
JTJ	**Tarama**	**1.64**	**84**	P	**Pn**	**20 15 36.0**	**-0.5**
JTJ				*e*S	**Sn**	**20 15 56.3**	**-0.8**
NSTT	**Nanjuang**	**1.74**	**275**	*e*P	**Pn**	**20 15 38.0**	**+0.2**
	baz=272						
NSTT				*e*S	**Sn**	**20 15 58.6**	**-0.8**
	baz=272						
EHY	**Hungye**	**1.74**	**237**	P	**Pn**	**20 15 36.9**	**-0.9**
	baz=233						
EHY				*e*S	**Sn**	**20 15 56.2**	**-3.2**
	baz=233						
TWF1	**Yuli**	**1.85**	**233**↓	*i*P	**Pn**	**20 15 38.6**	**-0.7**
	baz=240						
TWF1				*e*S	**Sn**	**20 16 01.2**	**-0.8**
	baz=240						
SMLT	**Sun Moon Lake**	**1.93**	**252**	P	**Pn**	**20 15 40.3**	**+0.1**
	baz=245						
SMLT				*e*S	**Sn**	**20 16 04.1**	**+0.3**
	baz=245						
TWQ1	**Liyutan**	**1.95**	**267**	*e*P	**Pn**	**20 15 41.4**	**+0.9**
	baz=263						
TWQ1				*e*S	**Sn**	**20 16 05.4**	**+1.1**
	baz=263						
TYC	**Yuchr**	**1.96**	**253**	P	**Pn**	**20 15 40.8**	**+0.2**
	baz=246						
TYC				*e*S	**Sn**	**20 16 04.2**	**-0.3**
	baz=246						
CHKT	**Chengkung**	**1.97**	**226**	*e*P	**Pn**	**20 15 39.0**	**-1.8**
	baz=221						
CHKT				*e*S	**Sn**	**20 16 02.3**	**-2.5**
	baz=221						
YUS	**Yu-Shan**	**2.04**	**242**	*e*P	**Pn**	**20 15 42.4**	**+0.6**
	baz=233						
YUS				*e*S	**Sn**	**20 16 06.0**	**-0.5**
	baz=233						
WNT	**Mingjian**	**2.12**	**254**	*e*P	**Pn**	**20 15 43.6**	**+0.9**
	baz=251						
WNT				*e*S	**Sn**	**20 16 09.9**	**+1.6**
	baz=251						
ALS	**Alishan**	**2.15**	**244**	P	**Pn**	**20 15 43.9**	**+0.7**
	baz=235						
ALS				*e*S	**Sn**	**20 16 09.7**	**+0.6**
	baz=235						
ELDTW	**Lidau**	**2.15**	**234**	P	**Pn**	**20 15 42.5**	**-0.7**
	baz=227						
ELDTW				*e*S	**Sn**	**20 16 07.8**	**-1.4**
	baz=227						
CHN5	**Tsauling**	**2.22**	**247**	P	**Pn**	**20 15 44.7**	**+0.5**
	baz=244						
CHN5				*e*S	**Sn**	**20 16 11.3**	**+0.6**
	baz=244						
WGK	**Gukeng**	**2.28**	**250**	*e*P	**Pn**	**20 15 45.2**	**+0.2**
	baz=258						
WGK				*e*S	**Sn**	**20 16 14.6**	**+2.3**
	baz=258						
TWG	**Pinlang**	**2.36**	**226**	P	**Pn**	**20 15 45.1**	**-0.9**
	baz=230						
TWG				*e*S	**Sn**	**20 16 12.4**	**-1.7**
	baz=230						
STYT	**Tauyuan**	**2.36**	**237**	*e*P	**Pn**	**20 15 46.6**	**+0.5**
	baz=231						
STYT				*e*S	**Sn**	**20 16 14.7**	**+0.5**
	baz=231						
CHN4	**Tsaushan**	**2.40**	**243**	*e*P	**Pn**	**20 15 47.7**	**+1.2**
	baz=234						
CHN4				*e*S	**Sn**	**20 16 16.2**	**+1.2**
	baz=234						
WTP	**Ta-pu**	**2.43**	**240**	P	**Pn**	**20 15 47.6**	**+0.7**
	baz=232						
WTP				*e*S	**Sn**	**20 16 16.4**	**+0.6**
	baz=232						
TWK	**Hsinying**	**2.52**	**242**	*e*P	**Pn**	**20 15 50.0**	**+1.8**
	baz=239						
TWK				*e*S	**Sn**	**20 16 19.4**	**+1.4**
	baz=239						
CHN1	**Nanshi**	**2.53**	**240**	*e*P	**Pn**	**20 15 49.5**	**+1.2**
	baz=237						
CHN1				*e*S	**Sn**	**20 16 19.1**	**+0.8**
	baz=237						
ECL	**Taimali**	**2.59**	**224**	*e*P	**Pn**	**20 15 47.7**	**-1.5**
	baz=222						
ECL				*e*S	**Sn**	**20 16 17.9**	**-1.9**
	baz=222						
SSD	**Sandimen**	**2.71**	**231**	*e*P	**Pn**	**20 15 50.8**	**0.0**
	baz=221						
SSD				*e*S	**Sn**	**20 16 24.1**	**+1.6**
	baz=221						
LAY	**Lan-yu**	**2.73**	**207**	*e*P	**Pn**	**20 15 50.1**	**-0.9**
	baz=206						
SCZT	**Fangliau**	**2.97**	**225**	*e*P	**Pn**	**20 15 56.0**	**+1.8**
	baz=224						

*MOS **30** 20:20:07.9±2.3, 5552N×11025E, h13km, mb4.2/1, Error ellipse: s-maj=51.9km s-min=15.1km az=47.7*
BYKL 30 20:20:08.2±0.3, 5551N×11037E, h6km±12km, 6C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.54**	**300**	*e*Pg	Pg	20 20 18.9	+0.3
NIZ				*e*Sg	Sg	20 20 27.2	+1.6
NIZ				Pmax			
	44nm,0.3s						
NIZ				Smax			
	233nm,0.4s						
KMO	**Kumora**	**0.60**	**51**	*e*PG	Pg	20 20 18.5	-1.3
KMO				*e*		20 20 26.7	

KMO					pmax	pmax		
	comp=Z,58nm,0.2s							
KMO					smax			
	comp=N,584nm,0.9s							
KMO	**Kumora**	**0.60**	**51**↑	*i*Pg	Pg		20 20 18.5	-1.3
KMO				*i* Sg	Sg		20 20 27.3	-0.3
KMO				Pmax				
	comp=N,126nm,0.7s							
KMO				Smax				
	comp=N,593nm,0.9s							
YLYR	**Ulyunkhan**	**0.78**	**144**↑	*i*Pg	Pg		20 20 21.2	-2.0
YLYR				*i* Sg	Sg		20 20 32.1	-1.2
YLYR				Pmax				
	comp=N,48nm,0.3s							
YLYR				Smax				
	comp=N,192nm,0.1s							
YOA	**Uoyan**	**0.99**	**50**↑	*i*PG	Pg		20 20 25.6	-1.5
YOA				*i*			20 20 40.5	
YOA				pmax	pmax			
	comp=Z,102nm,0.3s							
YOA				smax				
	comp=N,464nm,0.4s							
YOA	**Uoyan**	**0.99**	**50**	*e*Pg	Pg		20 20 25.9	-1.2
YOA				*e*Sg	Sg		20 20 40.8	+0.9
YOA				Pmax				
	comp=N,128nm,0.4s							
YOA				Smax				
	comp=N,444nm,0.4s							
UKT	**Uakit**	**1.85**	**89**	*e*PN	Pn		20 20 40.5	+0.1
UKT				*e*			20 21 06.3	
UKT				pmax	pmax			
	comp=Z,81nm,0.3s							
UKT				smax				
	comp=N,233nm,0.3s							
UKT	**Uakit**	**1.85**	**89**↓	*i*Pg	Pg		20 20 40.8	-2.9
UKT				*i* Sg	Sg		20 21 06.6	-1.1
UKT				Pmax				
	comp=N,100nm,0.7s							
UKT				Smax				
	comp=N,232nm,0.5s							
SYVR	**Suvo**	**1.87**	**187**↓	*i*Pn	Pn		20 20 40.8	+0.2
SYVR				↑*i*Pg	Pg		20 20 41.7	-2.3
SYVR				*i* Sg	Sg		20 21 06.7	-1.5
SYVR				Pmax				
	comp=N,40nm,0.4s							
SYVR				Smax				
	comp=N,150nm,0.6s							
SVKR	**Severomuysk**	**1.90**	**70**	*e*PN	Pn		20 20 41.8	+0.7
SVKR				*e*			20 21 07.9	
SVKR				pmax	pmax			
	comp=Z,120nm,0.6s							
SVKR				smax				
	comp=E,419nm,0.5s							
SVKR	**Severomuysk**	**1.90**	**70**	*e*Pg	Pg		20 20 42.2	-2.4
SVKR				*e*Sg	Sg		20 21 09.4	+0.2
SVKR				Pmax				
	comp=E,126nm,0.5s							
SVKR				Smax				
	comp=E,405nm,0.9s							
MXMB	**Maximikha**	**2.44**	**204**	*e*Pn	Pn		20 20 49.1	+0.5
MXMB				*e*Pg	Pg		20 20 51.7	-3.3
MXMB				*e*Sg	Sg		20 21 25.0	-1.6
MXMB				Pmax				
	comp=E,20nm,0.3s							
MXMB				Smax				
	comp=E,169nm,0.7s							
OGRR	**Ongureny**	**2.47**	**222**	*e*PN	Pn		20 20 52.2	+3.3
OGRR				*e*			20 21 23.9	
OGRR				pmax	pmax			
	comp=Z,15nm,0.2s							
OGRR				smax				
	comp=E,174nm,0.5s							
OGRR	**Ongureny**	**2.47**	**222**	*e*Pn	Pn		20 20 49.8	+0.9
OGRR				*e*Pg	Pg		20 20 51.6	-3.9
OGRR				*e*Sg	Sg		20 21 24.2	-3.3
OGRR				Pmax				
	comp=E,122nm,0.3s							
OGRR				Smax				
	comp=E,128nm,0.5s							
BOD	**Bodaibo**	**3.06**	**39**↑	*i*Pn	Pn		20 20 57.9	+0.8
BOD				*e*Pg	Pg		20 21 01.5	-5.3
BOD				*e*PgPg			20 21 03.7	
BOD				*i* Sg	Sg		20 21 42.5	-4.0
BOD				max				
	comp=E,14nm,0.3s							
BOD				Smax				
	comp=E,47nm,0.9s							
NLYR	**Nelyaty**	**3.15**	**70**↑	*i*Pn	Pn		20 20 59.2	+0.9
NLYR				*e*Pg	Pg		20 21 03.6	-4.9
NLYR				*i* Sg	Sg		20 21 46.4	-3.0
NLYR				Pmax				
	comp=E,25nm,0.6s							
NLYR				Smax				
	comp=E,79nm,1.9s							
ZRHB	**Zarechye**	**3.52**	**214**	*e*Sg	Sg		20 21 56.0	-5.1
ZRHB				Smax				
	comp=E,128nm,1.1s							
TRG	**Tyrgan**	**3.63**	**222**	*e*Pn	Pn		20 21 05.6	+0.7
TRG				*e*Sg	Sg		20 21 59.4	-5.3
TRG				Smax				
	comp=E,51nm,0.6s							
TRTB	**Turuntaevo**	**3.67**	**207**	*e*Pn	Pn		20 21 05.7	+0.4
TRTB				*e*Sg	Sg		20 22 01.7	-4.1
TRTB				Smax				
	comp=E,32nm,1.2s							
CIT	**Chita**	**3.97**	**150**	*e*Sg	Sg		20 22 12.0	-3.7
CIT				Smax				
	comp=E,76nm,0.4s							
UUDB	**Ulan-Yde**	**3.99**	**205**	*e*Sg	Sg		20 22 12.4	-3.8
UUDB				Smax				
	comp=E,38nm,1.6s							
FFNB	**Fofonovo**	**4.08**	**213**	*e*Pn	Pn		20 21 11.1	+0.1
FFNB				*e*Sg	Sg		20 22 13.1	-5.9
FFNB				Smax				
	comp=E,74nm,0.4s							
KAB	**Kabansk**	**4.11**	**214**	*e*Sg	Sg		20 22 16.4	-3.6
KAB				Smax				
	comp=E,68nm,0.4s							
HRMR	**Khuramsha**	**4.39**	**209**	*e*	Pn		20 21 15.8	+0.5
HRMR				*e*Pg	Pg		20 21 27.1	-5.1
HRMR				*e*Sg	Sg		20 22 24.1	-4.9
HRMR				Pmax				
	comp=E,31nm,1.7s							
HRMR				Smax				
	comp=E,93nm,0.7s							
CRS	**Chara**	**4.63**	**69**	*e*PN	Pn		20 21 31.8	+13
CRS				*e*			20 22 31.1	
CRS				pmax	pmax			
	comp=Z,39nm,0.9s							
CRS				smax				
	comp=E,49nm,1.0s							
CRS	**Chara**	**4.63**	**69**	*e*Pg	Pg		20 21 31.8	-4.9
CRS				*e*Sg	Sg		20 22 31.9	-4.7
CRS			

KPC	**Khapcheranga**	**5.94**	**167**	*e*Pn	Pn	20	21	36.1 -0.5
KPC				*e*		20	21	45.9
KPC				*e*		20	21	57.7
KPC				*e*		20	22	45.2
KPC				*e*		20	22	57.7
KPC				*e*Sg	Sg	20	23	12.1 -6.8
KPC	comp=E,26nm,0.8s			Smax				
MOY	**Mondy**	**6.78**	**239**	*e*Pn	Pn	20	21	50.1 +2.0
MOY				*e*		20	23	06.7
MOY				*e*Sg	Sg	20	23	39.5 -6.2
ORL	**Orlik**	**6.90**	**249**	*e*Pn	Pn	20	21	51.2 +1.5
ORL				*e*		20	23	08.4
ORL				*e*Sg	Sg	20	23	42.3 -7.1

CSEM ***30*** *20:39:09.6±0.1, 3696N×2934E, h12km, MD3.1, Error ellipse: s-maj=2.4km s-min=1.5km az=6.0*
ISK ***30*** *20:39:09.8, 3696N×2934E, h13km, MD3.0*
ISCJB ***30*** *20:39:10.1±0.6, 3696N±003×2933E±004, h9km±5km, Error ellipse: s-maj=5.9km s-min=4.7km az=159.5*
DDA ***30*** *20:39:10.0, 3698N×2930E, h8km±5km, Md3.1*

ISC 30 20:39:10.7±0.5**, 3696N**±004×**2934E**±004**, h13**km±5km**, n18,** σ0§**81**/25**, 2C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.33**	**32**	⇑*i*P	**Pg**	**20 39 16.8**	**-0.6**
GOLH				*i* S	**Sg**	**20 39 23.3**	**+1.4**
ELL	**Elmali**	**0.50**	**114**	*e*PG	**Pg**	**20 39 20.2**	**-0.3**
DALT	**Dalyan (Mudla)**	**0.59**	**252**	*e*PG	**Pg**	**20 39 22.1**	**-0.3**
DALT				*e*SG	**Sg**	**20 39 30.3**	**+0.2**
TURN	**Turunc**	**0.60**	**262**	*e*P	**Pg**	**20 39 26.0**	**+3.6**
TURN				*e*S	**Sg**	**20 39 40.6**	**+10**
AKAS	**Kas**	**0.75**	**164**	⇑*i*P	**Pg**	**20 39 23.9**	**-1.4**
AKAS				*i* S	**Sg**	**20 39 37.4**	**+2.2**
DENT	**Denizli**	**0.83**	**343**	*e*PG	**Pg**	**20 39 26.4**	**-0.4**
YER	**Yerkesik**	**0.87**	**282**	*e*PG	**Pg**	**20 39 26.7**	**-0.8**
YER				*e*SG	**Sg**	**20 39 39.5**	**+0.8**
ANTB	**Antalya**	**1.05**	**93**	*e*PG	**Pg**	**20 39 30.1**	**-0.9**
BCK	**Bucak**	**1.11**	**63**	*e*PN	**Pn**	**20 39 31.9**	**-0.2**
BCK				*e*SN	**Sn**	**20 39 47.8**	**+0.5**
ISP	**Isparta**	**1.28**	**46**	*e*PN	**Pn**	**20 39 34.6**	**+0.3**
MLSB	**Milas**	**1.30**	**286**	*e*PN	**Pn**	**20 39 34.3**	**-0.2**
KHL	**Karahalli**	**1.37**	**6**	*e*PN	**Pn**	**20 39 34.9**	**-0.6**
KHAL	**Karahalli**	**1.42**	**5**	*e*P	**Pn**	**20 39 35.9**	**-0.3**
KHAL				*e*S	**Sn**	**20 39 55.9**	**+1.2**
DAT	**Datca**	**1.43**	**261**	*e*PN	**Pn**	**20 39 37.0**	**+0.6**
KULA	**Kula-Manisa**	**1.65**	**341**	*e*PN	**Pn**	**20 39 38.7**	**-0.6**
IZM	**Izmir**	**2.19**	**312**	*e*PN	**Pn**	**20 39 46.5**	**-0.3**
AKS	**Akhisar**	**2.27**	**328**	*e*PN	**Pn**	**20 39 47.8**	**-0.1**
BLCB	**Balcova**	**2.32**	**309**	*e*PN	**Pn**	**20 39 48.4**	**-0.1**

ISCJB ***30*** *21:11:56.7±0.9, 1002N×007×6160W×005, h25km±7km, Error ellipse: s-maj=11.3km s-min=7.0km az=161.2*
FUNV ***30*** *21:11:56.1, 1002N×6154W, h2km, MW2.9*
NEIC ***30*** *21:11:57.8, 1018N×6167W, h26km, MD3.0(TRN), After TRN.*
TRN ***30*** *21:11:57.8, 1018N×6167W, h26km, MD3.0*

ISC 30 21:11:57.6±0.8**, 1008N**±006×**6160W**±004**, h22**km±6km**, n14,** σ1§**16**/24**, 1C, Trinidad**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAY	**Buenos Aires**	**0.09**	**290**	*e*P	**Pb**	**21 12 02.5**	**+0.7**
ALNG	**Atlantic LNG**	**0.14**	**320**	*e*P	**Pb**	**21 12 02.3**	**+0.2**
TPP	**Pointe-a-Pierr**	**0.28**	**31**	⇑*i*P	**Pb**	**21 12 03.9**	**-0.3**
TPP				*e*S	**Sb**	**21 12 08.8**	**+0.3**
TRN	**Trinidad (W)**	**0.60**	**19**	*e*P	**Pb**	**21 12 08.6**	**-0.8**
TRN				*e*S	**Sb**	**21 12 16.8**	**-0.7**
TCE	**Chacachacare**	**0.64**	**346**	*e*P	**Pb**	**21 12 08.8**	**-1.3**
TCE				*e*S	**Sb**	**21 12 16.4**	**-2.1**
TBH	**Brigand Hill**	**0.66**	**52**	*i*P	**Pb**	**21 12 10.8**	**+0.3**
TBH				*e*S	**Sb**	**21 12 21.3**	**+2.0**
GUIV	**Guiria**	**0.84**	**313**	*e*P	**Pb**	**21 12 12.6**	**-0.9**
GUIV				*e*S	**Sb**	**21 12 26.0**	**+1.7**
GUNV	**Guanoco**	**1.33**	**274**	*e*P	**Pn**	**21 12 21.5**	**+0.6**
GUNV				*e*S	**Sn**	**21 12 40.9**	**+3.0**
TPR	**Prospect**	**1.37**	**36**	*e*P	**Pn**	**21 12 20.8**	**-0.6**
CRUV	**Carupano**	**1.72**	**290**	*e*P	**Pn**	**21 12 26.9**	**+0.6**
CRUV				*e*S	**Sn**	**21 12 48.9**	**+1.3**
ITEV	**Isla Los Testi**	**1.97**	**310**	*e*P	**Pn**	**21 12 31.4**	**+1.7**
CUPV	**Cœpira**	**4.13**	**270**	*e*P	**Pn**	**21 12 59.0**	**-0.4**
CUPV				*e*S	**Sn**	**21 13 46.6**	**-0.4**
CAOV	**Caicara del Or**	**5.41**	**240**	*e*P	**Pn**	**21 13 16.7**	**-0.4**
CAOV				*e*S	**Sn**	**21 14 15.9**	**-2.8**
BAUV	**El Baul**	**6.45**	**260**	*e*P	**Pn**	**21 13 30.8**	**-0.6**
BAUV				*e*S	**Sn**	**21 14 40.6**	**-3.9**

CSEM ***30*** *21:16:32.6±0.1, 3701N×2925E, h8km, MD2.9, Error ellipse: s-maj=3.3km s-min=3.0km az=18.0*
ISCJB ***30*** *21:16:33.3±0.5, 3699N±003×2925E±004, h10km±5km, Error ellipse: s-maj=5.7km s-min=5.0km az=150.0*
ISK ***30*** *21:16:33.0, 3701N×2925E, h15km, MD2.9*
DDA ***30*** *21:16:35.4, 3714N×2923E, h7km±8km, Md2.9*

ISC 30 21:16:33.8±0.5**, 3699N**±003×**2925E**±004**, h12**km±5km**, n17,** σ0§**67**/25**, 2C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.35**	**44**	⇑*i*P	**Pg**	**21 16 40.0**	**-0.8**
GOLH				*i* S	**Sg**	**21 16 46.3**	**+0.7**
TURN	**Turunc**	**0.53**	**258**	*e*P	**Pg**	**21 16 48.4**	**+4.2**
TURN				*e*S	**Sg**	**21 17 00.6**	**+9.4**
DALT	**Dalyan (Mudla)**	**0.54**	**247**	*e*PG	**Pg**	**21 16 43.8**	**-0.5**
DALT				*e*SG	**Sg**	**21 16 52.4**	**+0.9**
ELL	**Elmali**	**0.58**	**114**	*e*PG	**Pg**	**21 16 45.2**	**+0.2**
ELL				*e*SG	**Sg**	**21 16 53.7**	**+1.0**
DENT	**Denizli**	**0.79**	**347**	*e*PG	**Pg**	**21 16 48.3**	**-0.7**
DENT				*e*SG	**Sg**	**21 16 59.3**	**0.0**
YER	**Yerkesik**	**0.79**	**281**	*e*PG	**Pg**	**21 16 49.2**	**+0.2**
AKAS	**Kas**	**0.80**	**159**	⇑*i*P	**Pg**	**21 16 48.4**	**-0.9**
AKAS				*i* S	**Sg**	**21 17 04.5**	**+4.8**
BCK	**Bucak**	**1.17**	**66**	*e*PN	**Pn**	**21 16 55.2**	**-0.6**
MLSB	**Milas**	**1.22**	**285**	*e*PN	**Pn**	**21 16 56.1**	**-0.4**
KHL	**Karahalli**	**1.35**	**9**	*e*PN	**Pn**	**21 16 57.6**	**-0.8**
DAT	**Datca**	**1.37**	**260**	*e*PN	**Pn**	**21 16 58.6**	**0.0**
KHAL	**Karahalli**	**1.40**	**8**	*e*P	**Pn**	**21 16 59.3**	**+0.3**
KHAL				*e*S	**Sn**	**21 17 18.1**	**+0.8**
BDRM	**Kayabasi**	**1.45**	**274**	*e*P	**Pn**	**21 17 00.4**	**+0.7**
KULA	**Kula-Manisa**	**1.60**	**343**	*e*PN	**Pn**	**21 17 00.8**	**-1.0**
MANT	**Manisa**	**1.60**	**340**	*e*P	**Pn**	**21 17 01.8**	**0.0**
MANT				*e*S	**Sn**	**21 17 23.5**	**+1.1**
IZM	**Izmir**	**2.12**	**312**	*e*PN	**Pn**	**21 17 08.7**	**-0.2**
AKS	**Akhisar**	**2.21**	**329**	*e*PN	**Pn**	**21 17 09.8**	**-0.4**

IDC ***30*** *21:35:55.4±1.3, 2666S×17642W, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.1/15, mbtmp4.1/7, ML4.8/1, MS3.7/3, Ms1 3.7/3, ms1mx3.3/21, Error ellipse: s-maj=38.8km s-min=24.0km az=114.0*
NEIC ***30*** *21:35:57.7±4.0, 2665S×17636W, h17km±24km, mb4.4/5, Error ellipse: s-maj=13.6km s-min=9.0km az=109.0*
ISCJB ***30*** *21:35:58.3±0.6, 2661S±007×1764W±0.1, h33km, mb4.1/11, MS3.8/2, Error ellipse: s-maj=16.9km s-min=8.4km az=17.7*

ISC 30 21:35:55.3±5.0**, 2663S**±007×**1764W**±031**, h0**km±31km**, n33,** σ0§**83**/25**, mb4.2**/11**, MS3.8**/2**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.95**	**207**	Pn	**Pn**	**21 36 44.1**	**+0.8**
	142nm,0.3s,baz=78,slow=23,SNR=8.6						
RAO				Sn	**Sn**	**21 37 20.7**	**+1.3**
	156nm,0.3s,baz=86,slow=23,SNR=3.7						
RAO	**Raoul Island**	**2.95**	**207**	*e*Pn	**Pn**	**21 36 43.6**	**+0.3**
RAO				*e*Sn	**Sn**	**21 37 20.3**	**+0.9**
AFI	**Afiamalu**	**13.37**	**20**	Pn	**Pn**	**21 39 06.9**	**+0.5**
RAR	**Rarotonga**	**16.10**	**74**	LR	LR	21 43 54.1	
	comp=Z,176nm,19.4s,baz=121,slow=30						
TBI	**Tubuai**	**24.59**	**88**	*e*LR	LR	21 47 21.4	
	126nm,25.2s						
PPT	**Papeete**	**26.36**	**76**	*e*LR	LR	21 48 08.6	
	170nm,24.5s						
HNR	**Honiara**	**28.20**	**303**	LR	LR	21 50 58.2	
	comp=Z,150nm,18.5s,MS3.6,baz=162,slow=32						
CTAO	**Charters Tower**	**34.84**	**273**	*e*P	**P**	**21 42 49.1**	**+0.9**
	3.6nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**36.88**	**252**	P	**P**	**21 43 05.1**	**-0.5**
	0.9nm,0.7s,mb3.6,baz=148,slow=22,SNR=3.6						
STKA				LR	LR	21 57 16.8	
	comp=Z,199nm,18.2s,MS3.9,baz=192,slow=35						
STKA	**Stephens Creek**	**36.88**	**252**	*e*P	**P**	**21 43 05.2**	**-0.4**
	0.1nm,0.4s						
STKA				LR	LR	21 57 16.8	
ASAR	**Alice Springs**	**44.89**	**262**	P	**P**	**21 44 10.9**	**-0.9**
	0.4nm,0.3s,mb3.8,baz=101,slow=7.4,SNR=15						
WB2	**Warramunga Arr**	**45.53**	**268**	*e*P	**P**	**21 44 16.5**	**-0.4**
WRAB	**Tennant Creek**	**45.54**	**268**	*e*P	**P**	**21 44 16.3**	**-0.7**
	4.5nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**45.55**	**268**	P	**P**	**21 44 15.8**	**-1.3**
	1.5nm,0.4s,mb4.4,baz=104,slow=8.6,SNR=46						
VNDA	**Vanda**	**51.98**	**186**	P	**P**	**21 45 06.4**	**+0.7**
MBWA	**Marble Bar**	**58.16**	**261**	P	**P**	**21 45 51.4**	**+0.1**
CASY	**Casey**	**59.13**	**207**	*e*P	**P**	**21 45 56.5**	**-0.7**
	4.2nm,0.5s,mb4.7						
KKM	**Kota Kinabalu**	**72.83**	**286**	P	**P**	**21 47 25.7**	**-0.6**
PMSA	**Palmer Station**	**75.10**	**156**	P	**P**	**21 47 38.2**	**-0.6**
MJAR	**Matsushiro Arr**	**76.02**	**324**	P	**P**	**21 47 43.7**	**-0.6**
	0.5nm,0.4s,mb4.0,baz=150,slow=6.1,SNR=3.8						
MAJO	**Matsushiro**	**76.02**	**324**	P	**P**	**21 47 44.9**	**+0.6**
MAW	**Mawson**	**76.33**	**200**	*e*P	**P**	**21 47 45.0**	**-0.7**
	3.4nm,1.2s,mb4.3						
SNAA	**Sanae**	**81.86**	**178**	*e*P	**P**	**21 48 15.0**	**-1.0**
	0.7nm,0.5s,mb4.0						
KSRS	**Korea Array**	**82.45**	**318**	P	**P**	**21 48 21.2**	**+1.7**
	1.3nm,0.8s,mb4.1,baz=110,slow=5.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**93.54**	**289**	P	**P**	**21 49 15.2**	**+1.7**
	0.8nm,0.8s,mb4.1,baz=132,slow=4.0,SNR=6.7						
CHTO	**Chiang Mai**	**93.69**	**289**	*e*P	**P**	**21 49 14.4**	**+0.2**
COLA	**College**	**93.86**	**12**	P	**P**	**21 49 14.0**	**+0.1**
NOA	**NORSAR Array B**	**145.22**	**354**	PKPbc	PKPbc	21 55 32.5	-1.4
	2.3nm,0.8s,baz=5.3,slow=2.3,SNR=5.4						
NOA	**NORSAR Array B**	**145.22**	**354**	PKPbc	PKPbc	21 55 32.5	-1.4
AKASG	**Malin Array Be**	**149.03**	**328**	PKPbc	PKPbc	21 55 43.7	-1.3
	0.4nm,0.4s,baz=39,slow=6.0,SNR=3.1						
AKASG	**Malin Array Be**	**149.03**	**328**	PKPbc	PKPbc	21 55 43.7	-1.3
BRTR	**Kesikin Array B**	**151.84**	**305**	PKPbc	PKPbc	21 55 54.1	+2.0
	0.3nm,0.6s,baz=96,slow=2.3,SNR=2.8						
BRTR				PKPab	PKPab	21 56 01.1	0.0
	1.2nm,0.6s,baz=98,slow=2.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**166.46**	**172**	PKPab	PKPab	21 57 03.3	-1.4
	0.9nm,0.8s,baz=201,slow=3.6,SNR=7.0						

IDC ***30*** *21:35:53.9±6.3, 2469N×12305E, h179km±41km, mb3.0/3, mb1 3.2/5, mb1mx2.9/22, mbtmp3.2/5, Error ellipse: s-maj=94.6km s-min=34.3km az=9.0*
ISCJB ***30*** *21:35:57.0±0.7, 253N±02×12308E±009, h182km±13km, mb3.2/3, Error ellipse: s-maj=27.0km s-min=9.0km az=156.5*
JMA ***30*** *21:36:00.7±0.2, 2525N×123.12E, h162km±3km, M3.6*

ISC 30 21:35:57.9±0.7**, 253N**±02×**12306E**±010**, h176**km±14km**, n19,** σ0§**94**/30**, mb3.2**/3**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.87**	**183**	P	**Pn**	**21 36 25.2**	**+0.8**
YOJ				*e*S	**Sn**	**21 36 44.0**	**-0.7**
IRIF	**Iriomote-Funau**	**1.17**	**149**	P	**Pn**	**21 36 27.1**	**+0.5**
IRIF				*e*S	**Sn**	**21 36 47.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.38**	**134**	P	**Pn**	**21 36 28.9**	**+0.5**
JIJ				S	**Sn**	**21 36 50.3**	**-1.6**
JKRS	**Kuro-shima**	**1.39**	**142**	P	**Pn**	**21 36 29.4**	**+0.8**
JKRS				S	**Sn**	**21 36 51.5**	**-0.6**
HATJ	**Hateruma jima**	**1.44**	**152**	P	**Pn**	**21 36 30.0**	**+1.0**
HATJ				*e*S	**Sn**	**21 36 52.3**	**-0.7**
JTJ	**Tarama**	**1.64**	**115**	P	**Pn**	**21 36 32.1**	**+1.2**
JTJ				S	**Sn**	**21 36 56.1**	**-0.3**
JMJ	**Miyako jima 2**	**2.09**	**104**	P	**Pn**	**21 36 37.2**	**+1.5**
JMJ				*e*S	**Sn**	**21 37 04.5**	**-0.3**
JOGS	**Gusukube**	**2.20**	**105**	P	**Pn**	**21 36 38.6**	**+1.7**
JOGS				*e*S	**Sn**	**21 37 07.0**	**-0.1**
JKE	**Kume jima 2**	**3.50**	**73**	P	**Pn**	**21 36 53.1**	**+0.6**
JKE				*e*S	**Sn**	**21 37 35.8**	**+0.8**
NAH1	**Naha**	**4.26**	**77**	P	**Pn**	**21 37 02.9**	**+0.7**
JJT2	**Tamagusuku 2**	**4.30**	**78**	P	**Pn**	**21 37 03.1**	**+0.4**
JIH	**Iheya**	**4.72**	**68**	P	**Pn**	**21 37 07.8**	**-0.3**
JOW	**Kunigami**	**4.92**	**71**	P	**Pn**	**21 37 09.9**	**-0.7**
	16nm,0.3s,baz=149,slow=16,SNR=16						
JOW				S	**Sn**	**21 38 04.0**	**-3.7**
	6.5nm,0.3s,baz=114,slow=19,SNR=2.5						
JOW	**Kunigami**	**4.92**	**71**	P	**Pn**	**21 37 09.8**	**-0.9**
JOW				*e*S	**Sn**	**21 38 04.9**	**-2.8**
JTK	**Tokunoshima**	**5.81**	**64**	P	**Pn**	**21 37 21.0**	**-1.3**
KSRS	**Korea Array**	**12.77**	**18**	P	**Pn**	**21 38 58.1**	**+5.0**
	0.2nm,0.3s,baz=198,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**38.73**	**314**	P	**P**	**21 43 05.1**	**+0.3**
	0.5nm,0.3s,mb3.5,baz=100,slow=9.2,SNR=17						
ZALV	**Zalesovo Beam**	**40.24**	**325**	P	**P**	**21 43 15.7**	**-1.4**
	0.4nm,0.4s,mb3.4,baz=117,slow=8.8,SNR=2.7						
YKA	**Yellowknife Ar**	**81.24**	**23**	P	**P**	**21 47 53.0**	**-0.8**
	0.1nm,0.5s,mb2.7,baz=308,slow=5.9,SNR=4.7						

MDD ***30*** *21:44:08.0±2.2, 3723N×1306W, h0km, mb3.7/8, Error ellipse: s-maj=19.0km s-min=16.4km az=32.0, PRXIMO*
NEIC ***30*** *21:44:08.4, 3734N×1307W, h0km, MG3.7(MDD), After MDD.*
INMG ***30*** *21:44:09.9±0.9, 3705N×1342W, h10km, ML2.2, Error ellipse: s-maj=6.4km s-min=5.6km az=98.0*
CSEM ***30*** *21:44:09.6±0.6, 3738N×1308W, h10km, ML3.2/12, Error ellipse: s-maj=11.5km s-min=7.9km az=40.0*

ISC 30 21:44:10.9±1.2**, 3737N**±005×**1282W**±007**, h10**km**, n41,** σ0§**90**/71**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.19**	**93**	*e*Pn	**Pn**	**21 45 00.2**	**-0.9**
PFVI				*e*Sn	**Sn**	**21 45 39.1**	**-0.1**
PFVI				A		21 45 41.8	
	3.8nm,0.1s						
PFVI	**Vila Bisbo**	**3.19**	**93**	*e*Pn	**Pn**	**21 45 00.2**	**-0.9**
PFVI				*e*Sn	**Sn**	**21 45 39.1**	**-0.1**
	3.8nm,0.1s						
PTEO	**Sao Teotonio**	**3.26**	**86**	*e*Pn	**Pn**	**21 45 02.0**	**-0.1**
PTEO				*e*Sn	**Sn**	**21 45 41.2**	**+0.2**
PTEO				A		21 45 45.6	
	3.4nm,0.2s						
PTEO	**Sao Teotonio**	**3.26**	**86**	*e*Pn	**Pn**	**21 45 02.0**	**-0.1**
PTEO				*e*Sn	**Sn**	**21 45 41.2**	**+0.2**
	3.4nm,0.2s						
MORF	**Marmelete**	**3.32**	**90**	*e*Sn	**Sn**	**21 45 42.3**	**-0.1**
MOE	**Montemor**	**3.71**	**71**	*e*Sn	**Sn**	**21 45 53.1**	**+1.0**
PBDV	**Barranco-do-Ve**	**3.90**	**90**	*e*Pn	**Pn**	**21 45 10.7**	**-0.1**
PBDV				*e*Sn	**Sn**	**21 45 56.4**	**-0.2**
EVO	**Evora**	**3.97**	**71**	*e*Sn	**Sn**	**21 45 59.1**	**+0.6**
EVO				A		21 46 01.9	
	5.7nm,0.1s						
EVO	**Evora**	**3.97**	**71**	*e*Sn	**Sn**	**21 45 59.1**	**+0.6**
	5.7nm,0.1s						
PBEJ	**Beja**	**3.98**	**79**	*e*Sn	**Sn**	**21 46 00.3**	**+1.6**
PVAQ	**Vaqueiros**	**4.06**	**88**	*e*Pn	**Pn**	**21 45 13.2**	**+0.1**
PVAQ				*e*Sn	**Sn**	**21 46 00.2**	**-0.5**
PVAQ				A		21 46 03.6	
	3.8nm,0.1s						
PVAQ	**Vaqueiros**	**4.06**	**88**	*e*Pn	**Pn**	**21 45 13.2**	**+0.1**
PVAQ				*e*Sn	**Sn**	**21 46 00.2**	**-0.5**
	3.8nm,0.1s						
EGRO	**El Granado**	**4.25**	**86**	Pn	**Pn**	**21 45 15.5**	**-0.2**
	0.3nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**21 46 05.3**	**0.0**
	2.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.25**	**86**	Pn	**Pn**	**21 45 15.5**	**-0.2**
	0.3nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**21 46 05.3**	**0.0**
	2.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.25**	**86**	Pn	**Pn**	**21 45 15.5**	**-0.2**
EGRO				Sn	**Sn**	**21 46 05.3**	**0.0**
PESTR	**Estremoz**	**4.39**	**68**	*e*Sn	**Sn**	**21 46 09.8**	**+1.1**
PBAR	**Barrancos**	**4.65**	**78**	*e*Pn	**Pn**	**21 45 22.2**	**+1.0**
PBAR				*e*Sn	**Sn**	**21 46 15.0**	**-0.2**
PMRV	**Marv??o**	**4.73**	**63**	*e*Sn	**Sn**	**21 46 18.2**	**+0.9**
EBAD	**Badajoz**	**4.79**	**71**	Pn	**Pn**	**21 45 23.5**	**+0.4**
	0.1nm,0.0s,SNR=4.0						
EBAD				Sn	**Sn**	**21 46 17.8**	**-0.8**
	1.3nm,0.1s,SNR=10						
EBAD	**Badajoz**	**4.79**	**71**	Pn	**Pn**	**21 45 23.5**	**+0.4**
	0.1nm,0.0s,SNR=4.0						
EBAD				Sn	**Sn**	**21 46 17.8**	**-0.7**
	1.3nm,0.1s,SNR=10						
PCBR	**Castelo Branco**	**4.86**	**58**	*e*Sn	**Sn**	**21 46 21.5**	**+1.2**
EMIN	**Mina Concepcio**	**4.90**	**83**	Pn	**Pn**	**21 45 24.9**	**+0.3**
	0.1nm,0.1s,SNR=4.0						
EMIN				Sn	**Sn**	**21 46 20.7**	**-0.6**
	0.2nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.90**	**83**	Pn	**Pn**	**21 45 24.9**	**+0.3**
	0.1nm,0.1s,SNR=4.0						
EMIN				Sn	**Sn**	**21 46 20.7**	**-0.6**
	0.2nm,0.0s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.90**	**83**	Pn	**Pn**	**21 45 24.9**	**+0.3**
EMIN				Sn	**Sn**	**21 46 20.7**	**-0.6**
PVIS	**Viseu**	**5.09**	**47**	*e*Sn	**Sn**	**21 46 27.2**	**+1.2**
ESPR	**Espera**	**5.58**	**93**	Pn	**Pn**	**21 45 33.2**	**-0.8**
	0.7nm,0.1s,SNR=7.9						
ESPR				Sn	**Sn**	**21 46 37.0**	**-1.2**
	1.7nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.58**	**93**	Pn	**Pn**	**21 45 33.2**	**-0.8**
	0.7nm,0.1s,SNR=7.9						
ESPR				Sn	**Sn**	**21 46 37.0**	**-1.3**
	1.7nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.58**	**93**	Pn	**Pn**	**21 45 33.2**	**-0.8**
ESPR				Sn	**Sn**	**21 46 37.0**	**-1.3**
ELOB	**Lobios**	**5.80**	**38**	Pn	**Pn**	**21 45 37.0**	**0.0**
	0.3nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**21 46 41.7**	**-1.9**
	0.7nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.80**	**38**	Pn	**Pn**	**21 45 37.0**	**0.0**
	0.3nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**21 46 41.7**	**-2.0**
	0.7nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.80**	**38**	Pn	**Pn**	**21 45 37.0**	**0.0**
ELOB				Sn	**Sn**	**21 46 41.6**	**-2.0**
MVO	**Moncorvo**	**5.88**	**48**	*e*Sn	**Sn**	**21 46 45.2**	**-0.3**
EMAZ	**Mazaricos**	**6.30**	**27**	Pn	**Pn**	**21 45 42.3**	**-1.6**
	0.1nm,0.0s,SNR=7.9						
EMAZ	**Mazaricos**	**6.30**	**27**	Pn	**Pn**	**21 45 42.3**	**-1.6**
	0.1nm,0.0s,SNR=7.9						
EMAZ				Sn	**Sn**	**21 46 50.6**	**-5.4**
	1.4nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.55**	**44**	Pn	**Pn**	**21 45 48.3**	**+1.1**
	0.5nm,0.1s,SNR=4.0						
ECAL				Sn	**Sn**	**21 47 00.9**	**-1.0**
	0.3nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.55**	**44**	Pn	**Pn**	**21 45 48.3**	**+1.1**
	0.5nm,0.1s,SNR=4.0						
ECAL				Sn	**Sn**	**21 47 00.9**	**-1.1**
	0.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.58**	**81**	Pn	**Pn**	**21 45 49.0**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**21 47 02.0**	**-0.7**
	0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.58**	**81**	Pn	**Pn**	**21 45 49.0**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**21 47 02.0**	**-0.7**
	0.4nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**7.31**	**69**	Pn	**Pn**	**21 45 58.8**	**+1.0**
	0.1nm,0.1s,SNR=4.0						
ESDC				Sn	**Sn**	**21 47 18.9**	**-1.9**
	0.4nm,0.3s,SNR=4.2						
ESDC	**Sonseca Array**	**7.31**	**69**	Pn	**Pn**	**21 45 58.8**	**+1.0**
	0.1nm,0.1s,baz=262,slow=12,SNR=4.0						
ESDC				Sn	**Sn**	**21 47 18.9**	**-1.9**
	0.4nm,0.3s,baz=257,slow=23,SNR=4.2						
ESDC	**Sonseca Array**	**7.31**	**69**	Pn	**Pn**	**21 45 58.8**	**+1.0**
ESDC				Sn	**Sn**	**21 47 18.9**	**-1.9**

DJA 30 21:50:39, 2814N×9842E, h31km, MLv3.9/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.72**	**209**	P	Pn	21 51 06.8	0.0
GSI				S	Sn	21 51 28.1	+0.4
IPM	**Ipoh**	**3.08**	**57**	P	Pn	21 51 24.9	-0.7
PPI	**

mpv5.1,Error ellipse: s-maj=31.1km s-min=18.1km az=38.0

ISC 30 21:53:26.7E0.3,**3649N**L002W**7094E**L003,**h184**km±3km, **h205**km±2.9km:**pP-P,n235,**σ1⁄**09**/274,**mb4.2**/59,**24C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.48**	**219**	*e*Pn	**Pn**	**21 54 10.7**	**+1.3**
KBL				*e*Sn	**Sn**	**21 54 43.2**	**+0.7**
CEP	**Cherat**	**2.77**	**163**	⇑P	**Pn**	**21 54 15.2**	**+2.4**
CEP				S	**Sn**	**21 54 50.0**	**+1.4**
CHCP	**Chirah Chowk**	**3.41**	**145**	⇑P	**Pn**	**21 54 23.2**	**+2.8**
SBDP	**Shaikh Budin**	**4.18**	**182**	⇑P	**Pn**	**21 54 31.1**	**+0.9**
SARP	**Sargodha**	**4.78**	**162**	P	**Pn**	**21 54 38.9**	**+1.1**
JMU	**Jammu**	**4.98**	**138**	*ex*	x	21 54 54.0	
JMU				*e*S	**Sn**	**21 55 35.5**	**-2.8**
KSH	**Kashi**	**4.99**	**51**	⇑*i*P	**Pn**	**21 54 37.5**	**-3.0**
KSH				S	**Sn**	**21 55 30.3**	**-8.2**
KSH				Smax			
	comp=N,2μm,0.7s						
KSH				Smax			
	comp=E,2μm,0.3s						
THN	**Thein Dam**	**5.65**	**134**	*e*P	**Pn**	**21 54 49.2**	**+0.1**
THN				*e*S	**Sn**	**21 55 51.7**	**-2.3**
AML	**Almayashu**	**6.03**	**20**	P	**Pn**	**21 54 54.9**	**+1.0**
	SNR=450						
AML	**Almayashu**	**6.03**	**20**	*e*Pn	**Pn**	**21 54 55.1**	**+1.3**
	comp=E,455nm,0.4s						
AML				*e*Sn	**Sn**	**21 56 01.2**	**-1.5**
UCH	**Uchtor**	**6.36**	**25**	P	**Pn**	**21 54 59.6**	**+1.3**
	SNR=35						
UCH	**Uchtor**	**6.36**	**25**	*e*Pn	**Pn**	**21 54 59.4**	**+1.1**
	comp=E,42nm,0.6s						
UCH				*e*Sn	**Sn**	**21 56 09.5**	**-1.2**
KZA	**Kyzart**	**6.50**	**30**	P	**Pn**	**21 55 00.6**	**+0.4**
	SNR=30						
EKS2	**Erkin-Say**	**6.54**	**19**	P	**Pn**	**21 55 01.5**	**+0.9**
	SNR=299						
EKS2	**Erkin-Say**	**6.54**	**19**	*e*Pn	**Pn**	**21 55 01.5**	**+0.8**
	comp=E,107nm,0.4s						
EKS2				Sn	**Sn**	**21 56 12.8**	**-2.1**
KK31	**Karatay Array**	**6.62**	**357**	P	**Pn**	**21 55 01.8**	**+0.1**
	comp=E,130nm,0.6s,baz=185,slow=12,SNR=1929						
KK31				⇑S	**Sn**	**21 56 11.7**	**-4.9**
	comp=E,490nm,0.6s,baz=199,slow=22,SNR=19						
AAK	**Ala-Archa**	**6.72**	**23**	P	**Pn**	**21 55 04.2**	**+1.1**
	SNR=69						
AAK	**Ala-Archa**	**6.72**	**23**	*e*Pn	**Pn**	**21 55 04.2**	**+1.2**
BHK	**Bhakra**	**6.80**	**136**	*e*P	**Pn**	**21 55 02.2**	**-2.0**
BHK				*e*S	**Sn**	**21 56 15.8**	**-5.4**
KBK	**Karagaybulak**	**6.89**	**25**	P	**Pn**	**21 55 06.5**	**+1.3**
	SNR=60						
SDNR	**Sundarnagar**	**7.06**	**133**	*e*P	**Pn**	**21 55 06.6**	**-0.9**
SDNR				*e*S	**Sn**	**21 56 22.6**	**-4.6**
ULHL	**Ulahol**	**7.06**	**34**	P	**Pn**	**21 55 08.2**	**+0.7**
	SNR=5.8						
CHMS	**Chumysh**	**7.13**	**23**	P	**Pn**	**21 55 08.9**	**+0.5**
	SNR=54						
USP	**Ospenovka**	**7.30**	**21**	P	**Pn**	**21 55 10.5**	**-0.1**
	SNR=92						
TKM2	**Tokmak 2**	**7.36**	**28**	⇑P	**Pn**	**21 55 11.9**	**+0.6**
	comp=E,117nm,0.6s						
TKM2				⇑S	**Sn**	**21 56 32.6**	**-1.6**
	comp=E,62nm,0.8s						
TKM2	**Tokmak 2**	**7.36**	**28**	PN	**Pn**	**21 55 12.2**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,117nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**28**	P	**Pn**	**21 55 12.1**	**+0.8**
	SNR=171						
TKM2	**Tokmak 2**	**7.36**	**28**	*e*Pn	**Pn**	**21 55 12.0**	**+0.7**
	comp=Z,41nm,0.4s						
TKM2				*e*Sn	**Sn**	**21 56 34.5**	**+0.3**
SMLA	**Simla**	**7.44**	**134**	*i* P	**Pn**	**21 55 13.1**	**+0.5**
SMLA				*i* P		21 56 31.0	
SMLA				*i* S	**Sn**	**21 56 32.5**	**-3.9**
SMLA				*i* S	**Sn**	**21 56 32.9**	**-3.5**
KLP	**Kalpa**	**7.82**	**127**	*e*P	**Pn**	**21 55 18.3**	**+0.7**
KLP				*e*S	**Sn**	**21 56 42.9**	**-2.6**
KNDC	**Almaty**	**8.16**	**33**	⇑P	**Pn**	**21 55 23.0**	**+1.2**
	comp=Z,52nm,0.8s						
DDI	**Dehra Dun**	**8.55**	**134**	*e*P	**Pn**	**21 55 25.6**	**-1.6**
DDI				*ex*	x	21 56 53.0	
JOSI	**Joshimath**	**9.31**	**127**	*e*P	**Pn**	**21 55 37.4**	**+0.3**
JOSI				*e*S	**Sn**	**21 57 16.4**	**-4.6**
KHET	**Khetri**	**9.34**	**153**	⇓*i*P	**Pn**	**21 55 36.5**	**-1.0**
KHET				*e*S	**Sn**	**21 57 14.3**	**-7.5**
KHET				AML	AML	21 57 17.5	
	comp=E,150nm,0.1s						
KHET				AML	AML	21 57 17.6	
	comp=N,151nm,0.4s						
AYAN	**Aya Nagar**	**9.54**	**145**	*e*P	**Pn**	**21 55 38.5**	**-1.6**
AYAN				*e*S	**Sn**	**21 57 19.3**	**-7.1**
AYAN				AML	AML	21 57 24.1	
	comp=Z,103nm,0.9s						
PTH	**Pithoragarh**	**10.41**	**129**	*ex*	x	21 56 17.2	
PTH				*e*S	**Sn**	**21 57 41.9**	**-5.4**
AJM	**Ajmer**	**10.46**	**161**	⇑*i*P	**Pn**	**21 55 51.6**	**-0.5**
AJM				*e*S	**Sn**	**21 57 39.2**	**-9.4**
AJM				AML	AML	21 58 17.2	
	comp=E,100nm,0.1s						
AJM				AML	AML	21 58 18.4	
	comp=N,78nm,0.6s						
LGTI	**Lohaghat**	**10.50**	**129**	*e*P	**Pn**	**21 55 50.3**	**-2.3**
LGTI				*e*S	**Sn**	**21 57 41.0**	**-8.4**
AGRA	**Agra**	**10.98**	**145**	⇑*ex*	**Pn**	**21 55 58.2**	**-0.6**
AGRA				*e*S	**Sn**	**21 57 53.7**	**-7.3**
MK31	**Makanchi Array**	**13.33**	**36**	P	**Pn**	**21 56 29.1**	**+0.5**
	comp=N,12nm,0.8s,baz=219,slow=10,SNR=51						
MK31	**Makanchi Array**	**13.33**	**36**	*e*Pn	**Pn**	**21 56 29.3**	**+0.7**
MKAR	**Makanchi Array**	**13.33**	**36**	P	**Pn**	**21 56 29.3**	**+0.7**
	comp=N,0.5nm,0.3s,baz=211,slow=11,SNR=26						
MKAR	**Makanchi Array**	**13.33**	**36**	P	**Pn**	**21 56 29.3**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**13.33**	**36**	P	**Pn**	**21 56 29.3**	**+0.7**
DANN	**Dangsing**	**13.52**	**123**	*e*P	**Pn**	**21 56 30.4**	**-0.8**
	comp=Z,156nm,0.5s						
KOLN	**Koldanda**	**13.79**	**125**	*e*P	**Pn**	**21 56 33.9**	**-0.8**
	comp=Z,96nm,0.6s						
GKN	**Gorkha**	**14.34**	**122**	*e*P	**Pn**	**21 56 40.9**	**-0.5**
	comp=Z,222nm,0.5s						
WMQ	**Urumqi**	**14.74**	**55**	*e*P	**Pn**	**21 56 48.3**	**+2.1**
DMN	**Daman**	**14.91**	**122**	*e*P	**Pn**	**21 56 48.3**	**-0.1**
	comp=Z,248nm,0.8s						
KKN	**Kakani**	**14.91**	**122**	*e*P	**Pn**	**21 56 48.7**	**+0.2**
	comp=Z,380nm,1.0s						
KKN				*e*S	**Sn**	**21 59 23.4**	**-12**
AB01	**Akbulak array**	**15.07**	**331**	⇓P	**Pn**	**21 56 48.7**	**-1.5**
	comp=Z,15nm,0.5s						
AB01				⇑S	**S**	**21 59 28.6**	**-9.1**
	comp=Z,9.2nm,0.6s						
AB31	**Akbulak array**	**15.07**	**331**	P	**Pn**	**21 56 48.7**	**-1.5**
AB31				S	**S**	**21 59 28.6**	**-9.1**
AB31				pmax	pmax		
	comp=Z,24nm,0.6s						
AB31				smax			
	comp=N,9.0nm,0.4s						
PKIN	**Phulchoki**	**15.12**	**122**	*e*P	**Pn**	**21 56 51.1**	**0.0**
	comp=N,343nm,0.6s						
PKI	**Pulchoki**	**15.14**	**122**	*e*P	**Pn**	**21 56 51.5**	**+0.2**
	comp=N,505nm,0.6s						
GUN	**Gumba**	**15.25**	**120**	*e*P	**Pn**	**21 56 52.9**	**+0.3**
	comp=N,96nm,0.6s						
KURK	**Kurchatov**	**15.26**	**19**	P	**Pn**	**21 56 51.1**	**-1.3**
	comp=N,0.7nm,0.3s,baz=209,slow=10,SNR=15						
KURK	**Kurchatov**	**15.26**	**19**	*e*P	**Pn**	**21 56 52.8**	**+0.3**
KURK				*e*S	**S**	**21 59 41.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**15.26**	**19**	*e*Pn	**Pn**	**21 56 52.8**	**+0.3**
	comp=Z,6.4nm,0.8s						
KURK				*e*S	**S**	**21 59 41.7**	**-0.3**
JIRN	**Jiri**	**15.62**	**120**	*e*P	**Pn**	**21 56 57.1**	**-0.1**
	comp=Z,158nm,0.4s						
RAMN	**Ramite**	**16.35**	**121**	*e*P	**Pn**	**21 57 06.3**	**+0.3**
	comp=Z,219nm,0.6s						
BVA0	**Borovoye Array**	**16.54**	**359**	⇑P	**Pn**	**21 57 07.8**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=166,slow=9.2,SNR=4.7						
BVA0				S	**S**	**22 00 06.9**	**-3.7**
	comp=Z,4.8nm,1.4s,baz=168,slow=28,SNR=7.7						
BVA0	**Borovoye Array**	**16.54**	**359**	*i* P	**Pn**	**21 57 08.1**	**+0.1**
BVA0				*e*S	**S**	**22 00 06.4**	**-4.3**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVA0				smax			
	comp=N,5.0nm,1.4s						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**21 57 08.2**	**+0.2**
	comp=N,2.4nm,0.3s,baz=162,slow=12,SNR=53						
BVAR				S	**S**	**22 00 07.9**	**-2.8**
	comp=N,1.8nm,0.3s,baz=162,slow=24,SNR=6.4						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**21 57 08.2**	**+0.2**
BVAR				S	**S**	**22 00 07.9**	**-2.8**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax			
	comp=N,2.0nm,0.3s						
BRVK	**Borovoye**	**16.57**	**359**	*e*P	**Pn**	**21 57 08.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,16nm,0.8s						
BRVK	**Borovoye**	**16.57**	**359**	*e*Pn	**Pn**	**21 57 08.5**	**+0.1**
	comp=Z,16nm,0.8s						
AKL	**Akola**	**16.60**	**160**	*e*P	**Pn**	**21 57 05.9**	**-3.1**
AKL				*ex*	x	22 00 05.9	
AKTK	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**21 57 10.7**	**0.0**
AKTK				S	**S**	**22 00 13.9**	**-1.4**
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**21 57 10.7**	**0.0**
	comp=Z,4.6nm,0.3s,baz=140,slow=11,SNR=215						
AKTO				S	**S**	**22 00 13.9**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=18,slow=19,SNR=5.0						
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**21 57 10.7**	**0.0**
AKTO				S	**S**	**22 00 13.9**	**-1.4**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
NGP	**Nagpur**	**16.84**	**153**	*i* P	**Pn**	**21 57 07.0**	**-4.9**
NGP				*ex*	x	22 00 05.4	
TAPN	**Taplejung**	**16.88**	**118**	*e*P	**Pn**	**21 57 13.2**	**+0.9**
	comp=N,75nm,0.4s						
ODAN	**Odare**	**16.95**	**120**	*e*P	**Pn**	**21 57 14.1**	**+0.9**
	comp=N,146nm,0.6s						
ODAN				*e*S	**S**	**22 00 12.1**	**-7.4**
LSA	**Lhasa**	**18.22**	**106**	P	**P**	**21 57 29.8**	**+3.9**
LSA				*e*S	**S**	**22 00 46.3**	**+1.5**
LSA				AMB	AMB		
	comp=Z,40nm,0.8s						
LSA	**Lhasa**	**18.22**	**106**	*e*P	**P**	**21 57 29.8**	**+3.9**
LSA				*e*S	**S**	**22 00 46.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**18.22**	**106**	*e*P	**P**	**21 57 29.8**	**+3.9**
	comp=Z,30nm,0.8s						
LSA				*e*S	**S**	**22 00 46.0**	**+1.1**
ZAA0	**Zalesovo Array**	**19.95**	**25**	*e*P	**P**	**21 57 44.8**	**+0.5**
ZAA0				*e*S	**S**	**22 01 19.0**	**+0.7**
ZALV	**Zalesovo Beam**	**19.95**	**25**	P	**P**	**21 57 44.5**	**+0.3**
	comp=Z,25nm,0.6s,baz=220,slow=12,SNR=124						
ZALV	**Zalesovo Beam**	**19.95**	**25**	P	**P**	**21 57 44.6**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,25nm,0.6s						
HYB	**Hyderabad**	**20.16**	**158**	*i* P	**P**	**21 57 48.0**	**+1.1**
HYB				*e*		22 02 09.0	
HYB	**Hyderabad**	**20.16**	**158**	*e*P	**P**	**21 57 48.0**	**+1.1**
HYB				*e*		22 02 09.0	
NVS	**Novosibirsk**	**20.21**	**21**	⇑*i*P	**P**	**21 57 47.0**	**-0.1**
NVS				*e**PP		21 58 16.5	
NVS				*i*		21 58 44.7	
NVS				*i* S	**S**	**22 01 20.5**	**-3.0**
NVS				pmax	pmax		
	comp=Z,26nm,1.2s						
NVS				pmax	pmax		
	comp=N,25nm,1.6s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				smax			
	comp=N,23nm,1.4s						
NVS				smax			
	comp=E,15nm,1.4s						
UMR	**Umm Al-Rimmam**	**20.64**	**257**	*e*P	**P**	**21 57 49.3**	**-2.7**
	baz=257						
UMR				AMb	AMB	21 57 55.0	
	comp=Z,83nm,1.3s,baz=257						
KBD	**Kabd**	**20.82**	**256**	*e*P	**P**	**21 57 51.7**	**-2.3**
	baz=256						
KBD				AMb	AMB	21 57 58.3	
	comp=Z,82nm,1.6s,baz=256						
MIB	**Mutribah**	**20.83**	**258**	*e*P	**P**	**21 57 52.1**	**-1.9**
	baz=258						
MIB				AMb	AMB	21 57 56.7	
	comp=Z,107nm,1.2s,baz=258						
GNI	**Garni**	**20.85**	**288**	P	**P**	**21 57 56.0**	**+1.9**
	comp=Z,17nm,0.9s,baz=323,slow=2.3,SNR=12						
GNI	**Garni**	**20.85**	**288**	*e*P	**P**	**21 57 55.7**	**+1.6**
GNI				pmax	pmax		
	comp=Z,34nm,1.0s						
GNI	**Garni**	**20.85**	**288**	*e*P	**P**	**21 57 55.7**	**+1.6**
	comp=Z,34nm,1.0s						
SHL	**Shillong**	**20.95**	**115**	*ex*	**P**	**21 57 57.3**	**+2.1**
SHL				*e*S	**S**	**22 01 38.4**	**+0.1**
SVE	**Sverdlovsk**	**21.49**	**344**	⇑*e*P	**P**	**21 58 01.3**	**+0.6**
SVE				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.6						
ARU	**Arti**	**21.63**	**341**	*c i*P	**P**	**21 58 02.4**	**+0.3**
ARU				*e*		21 58 32.3	
ARU				S	**S**	**22 01 48.7**	**-0.4**
ARU				SS		22 02 38.5	
ARU				pmax	pmax		
	comp=Z,56nm,1.2s,mb4.9						
ARU	**Arti**	**21.63**	**341**	*e*P	**P**	**21 58 02.3**	**+0.2**
	comp=Z,34nm,0.9s,mb4.8						
KIV	**Kislovodsk**	**22.75**	**298**	*e*P	**P**	**21 58 11.7**	**-1.3**
KIV				*e**PP		21 58 50.6	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
KIV	**Kislovodsk**	**22.75**	**298**	*e*P	**P**	**21 58 15.7**	**+2.8**
	comp=Z,18nm,1.0s,mb4.5						
GTA	**Gaotai**	**22.91**	**74**	*e*P	**P**	**21 58 17.5**	**+3.0**
GTA				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.1						
GTA				AMB	AMB		
	comp=Z,272nm,5.1s						
GTA				LR	LR		
	comp=N,137nm,14.4s						
GTA				LR	LR		
	comp=E,142nm,12.0s						
GTA				LR	LR		
	comp=Z,143nm,14.1s						
VRHR	**Novokhopersk**	**25.50**	**314**	*e*P	**P**	**21 58 36.6**	**-1.2**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,20nm,0.6s						
MALT	**Malatya**	**25.83**	**284**	*e*P	**P**	**21 58 41.3**	**+0.4**
MALT				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
MALT	**Malatya**	**25.83**	**284**	*e*P	**P**	**21 58 41.3**	**+0.4**
	comp=Z,3.6nm,1.1s,mb3.9						
VORD	**Divnogorie**	**26.81**	**313**	*e*P	**P**	**21 58 48.7**	**-0.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3						
VORD				pmax	pmax		
	comp=N,20nm,0.9s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.6s						
VSR	**Storozhevoye**	**26.98**	**313**	*e*P	**P**	**21 58 50.7**	**-0.3**
VSR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
VSR				pmax	pmax		
	comp=N,10.0nm,1.2s						
VSR				pmax	pmax		
	comp=E,20nm,1.0s						
TLY	**Talaya**	**27.68**	**46**	*e*P	**P**	**21 58 55.0**	**-2.3**
SONM	**Songino Array**	**28.38**	**55**	P	**P**	**21 59 05.6**	**+2.0**
	comp=E,0.9nm,0.7s,mb3.6,baz=253,slow=9.5,SNR=9.4						
SONM				pP	pP	21 59 47.2	+6.0
	comp=E,1.2nm,0.7s,baz=258,slow=7.1,SNR=5.7						
SONM	**Songino Array**	**28.38**	**55**	P	**P**	**21 59 05.6**	**+2.1**
SONM				*PP	pP	21 59 47.2	+6.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	**Ulaanbaatar**	**28.82**	**55**	*e*P	**P**	**21 59 08.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ULN	**Ulaanbaatar**	**28.82**	**55**	*e*P	**P**	**21 59 08.4**	**+1.0**
	comp=Z,0.9nm,0.6s,mb3.7						
BRTR	**Keskin Array B**	**29.39**	**288**	P	**P**	**21 59 13.0**	**+0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=111,slow=8.8,SNR=7.2						
BRTR				pP	pP	21 59 53.6	+3.3
	comp=Z,1.1nm,0.6s,baz=100,slow=8.5,SNR=2.7						
BRTR	**Keskin Array B**	**29.39**	**288**	P	**P**	**21 59 13.0**	**+0.4**
BRTR				*PP	pP	21 59 53.7	+3.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	**Obninsk**	**29.92**	**319**	⇑*e*P	**P**	**21 59 17.2**	**+0.2**
OBN				*e*		22 03 56.7	
OBN				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.0						
OBN	**Obninsk**	**29.92**	**319**	*e*P	**P**	**21 59 17.5**	**+0.5**
	comp=Z,24nm,0.7s,mb5.0						
CHTO	**Chiang Mai**	**30.25**	**118**	*e*P	**P**	**21 59 21.8**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
CHTO	**Chiang Mai**	**30.25**	**118**	*e*P	**P**	**21 59 21.8**	**+1.4**
	comp=Z,1.8nm,0.6s,mb4.0						
PALK	**Pallekele**	**30.41**	**161**	P	**P**	**21 59 23.2**	**+1.4**
CM31	**Chiang Mai Arr**	**30.49**	**119**	*e*P	**P**	**21 59 24.8**	**+2.3**
	comp=Z,3.2nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**30.49**	**119**	P	**P**	**21 59 23.1**	**+0.7**
	comp=Z,3.9nm,0.8s,mb4.2,baz=300,slow=8.4,SNR=31						
CMAR				pP	pP	22 00 05.0	+4.7
	comp=Z,0.8nm,0.7s,baz=297,slow=8.9,SNR=2.3						
CMAR	**Chiang Mai Arr**	**30.49**	**119**	⇑*e*P	**P**	**21 59 24.3**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	**32.92**	**309**	P	**P**	**21 59 43.2**	**-0.2**
	comp=Z,8.0nm,0.6s,mb4.6,baz=79,slow=7.4,SNR=34						
AKASG	**Malin Array Be**	**32.92**	**309**	⇑*e*P	**P**	**21 59 43.5**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	**Malin Array Be**	**32.92**	**309**	P	**P**	**21 59 43.2**	**-0.2**
KIEV	**Kiev**	**32.93**	**309**	*e*P	**P**	**21 59 43.5**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
KIEV	**Kiev**	**32.93**	**309**	*e*P	**P**	**21 59 43.5**	**+0.1**
	comp=Z,5.1nm,0.5s,mb4.5						
MLR	**Muntele Rosu**	**34.75**	**299**	⇓*i*P	**P**	**22 00 01.2**	**+2.0**
MLR	**Muntele Rosu**	**34.75**	**299**	⇓P	**P**	**22 00 01.2**	**+2.0**
BURAR	**Bucovina Array**	**35.25**	**303**	⇓*i*P	**P**	**22 00 04.2**	**+0.7**
BURAR	**Bucovina Array**	**35.25**	**303**	⇓P	**P**	**22 00 04.2**	**+0.7**
VOIR		**35.38**	**299**	⇓*i*P	**P**	**22 00 05.4**	**+0.8**
VOIR		**35.38**	**299**	⇓P	**P**	**22 00 05.4**	**+0.8**
JOF	**Joensuu**	**35.86**	**330**	*ep*	**P**	**22 00 08.6**	**+0.2**
	comp=Z,13nm,0.5s,mb4.8						
JOF	**Joensuu**	**35.86**	**330**	*e*P	**P**	**22 00 08.6**	**+0.2**
JOF				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.8						
VSU	**Vasula**	**36.16**	**322**	*e*P	**P**	**22 00 11.3**	**+0.2**
VSU				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.8						
WHN	**Wuhan**	**36.44**	**86**	P	**P**	**22 00 20.5**	**+6.7**
DRGR		**36.96**	**302**	⇓*i*P	**P**	**22 00 19.3**	**+1.3**
DRGR		**36.96**	**302**	⇓P	**P**	**22 00 19.3**	**+1.3**
KWP	**Kalwaria**	**36.98**	**306**	⇓*i*P	**P**	**22 00 18.9**	**+0.8**
KWP	**Kalwaria**	**36.98**	**306**	*e*P	**P**	**22 00 18.9**	**+0.8**
	comp=Z,4.8nm,0.6s,mb4.3						
TRPA	**Tarpa**	**37.06**	**304**	⇓*i*P	**P**	**22 00 19.8**	**+1.0**
SUW	**Suwalki**	**37.09**	**314**	*e*P	**P**	**22 00 19.1**	**+0.1**
KAF	**Kangasniemi**	**37.61**	**327**	*ep*	**P**	**22 00 23.4**	**+0.2**
	comp=Z,13nm,1.0s,mb4.5,baz=111,slow=8.3						
KAF	**Kangasniemi**	**37.61**	**327**	*e*P	**P**	**22 00 23.4**	**+0.2**
KAF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
BZS	**Buzias**	**37.78**	**300**	⇑*i*P	**P**	**22 00 25.4**	**+0.5**
BZS	**Buzias**	**37.78**	**300**	⇑P	**P**	**22 00 25.4**	**+0.5**
PSZ	**Piszkesteto**	**38.84**	**303**	P	**P**	**22 00 34.1**	**+0.4**
KEV	**Kevo**	**40.80**	**338**	*ep*	**P**	**22 00 49.6**	**+0.1**
	comp=Z,15nm,0.8s,mb4.7						
KEV	**Kevo**	**40.80**	**338**	*e*P	**P**	**22 00 49.6**	**+0.1**
KEV				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
VRAC	**Vranov**	**40.97**	**306**	⇑*i*P	**P**	**22 00 52.1**	**+0.9**
VRAC	**Vranov**	**40.97**	**306**	⇑P	**P**	**22 00 52.1**	**+0.9**
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**22 00 53.0**	**+0.7**
	comp=Z,17nm,0.8s,mb4.8,baz=109,slow=8.4,SNR=47						
ARCES				pP	pP	22 01 34.8	+3.1
	comp=Z,3.3nm,0.7s,baz=98,slow=8.8,SNR=2.5						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	**P**	**22 00 53.0**	**+0.7**
ARCES				pP	pP	22 01 34.8	+3.2
ARE0	**ARCESS Array S**	**41.14**	**338**	*e*P	**P**	**22 00 53.4**	**+1.1**
PSI	**Prapat**	**42.30**	**136**	P	**P**	**22 01 02.4**	**-0.1**
	comp=Z,8.5nm,0.9s,mb4.4,baz=319,slow=7.0,SNR=9.8						
BRG	**Berggiesshubel**	**42.59**	**308**	*i* P	**P**	**22 01 04.8**	**+0.5**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
BRG	**Berggiesshubel**	**42.59**	**308**	*i* P	**P**	**22 01 04.8**	**+0.5**
	comp=Z,4.2nm,0.7s,mb4.2						
RUE	**Ruedersdorf**	**42.63**	**311**	P	**P**	**22 01 05.7**	**+1.1**
GERES	**GERESS Array B**	**42.90**	**305**	P	**P**	**22 01 05.2**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.4,baz=93,slow=7.2,SNR=7.2						
CLL	**Collm**	**43.16**	**309**	*e*P	**P**	**22 01 10.0**	**+1.1**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
CLL	**Collm**	**43.16**	**309**	*e*P	**P**	**22 01 10.0**	**+1.1**
	comp=Z,3.0nm,0.6s,mb4.1						
YAK	**Yakutsk**

SMF					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.2								
SMF	**Signal de Mont**	**49.82**	**304**	*eP*	**P**		**22 02 00.2**	**-0.5**	
	comp=Z,5.4nm,0.8s,mb4.2								
AVF	**Avril sur Loir**	**50.11**	**304**	*eP*	**P**		**22 02 02.3**	**-0.6**	
	comp=Z,7.4nm,0.8s,mb4.1								
AVF	**Avril sur Loir**	**50.11**	**304**	*eP*	**P**		**22 02 02.3**	**-0.6**	
AVF					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.1								
AVF	**Avril sur Loir**	**50.11**	**304**	*eP*	**P**		**22 02 02.3**	**-0.6**	
	comp=Z,3.7nm,0.8s,mb4.1								
TCF	**Toulx Ste Croi**	**51.00**	**304**	*eP*	**P**		**22 02 09.3**	**-0.3**	
	comp=Z,5.2nm,0.8s,mb3.9								
TCF	**Toulx Ste Croi**	**51.00**	**304**	*eP*	**P**		**22 02 09.3**	**-0.3**	
TCF					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.0								
TCF	**Toulx Ste Croi**	**51.00**	**304**	*eP*	**P**		**22 02 09.3**	**-0.3**	
	comp=Z,2.6nm,0.8s,mb3.9								
FLN	**La Foliniere**	**52.14**	**307**	*eP*	**P**		**22 02 16.9**	**-1.0**	
	comp=Z,19nm,1.0s,mb4.4								
FLN	**La Foliniere**	**52.14**	**307**	*eP*	**P**		**22 02 16.9**	**-1.0**	
FLN					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.4								
FLN	**La Foliniere**	**52.14**	**307**	*eP*	**P**		**22 02 16.9**	**-1.0**	
	comp=Z,9.6nm,1.0s,mb4.4								
GRR	**Gorron**	**52.47**	**307**	*eP*	**P**		**22 02 20.2**	**-0.2**	
	comp=Z,38nm,1.2s,mb4.6								
GRR	**Gorron**	**52.47**	**307**	*eP*	**P**		**22 02 20.2**	**-0.2**	
GRR					pmax	pmax			
	comp=Z,19nm,1.2s,mb4.6								
GRR	**Gorron**	**52.47**	**307**	*eP*	**P**		**22 02 20.2**	**-0.2**	
	comp=Z,19nm,1.2s,mb4.6								
ETSF	**Etsaut**	**53.88**	**300**	*eP*	**P**		**22 02 30.6**	**-0.2**	
ROSF	**Rostrenen**	**54.04**	**308**	*eP*	**P**		**22 02 31.6**	**-0.2**	
CART	**Cartagena**	**56.08**	**294**	*eP*	**P**		**22 02 47.2**	**+0.6**	
	comp=Z,20nm,0.7s,mb5.1								
ESDC	**Sonseca Array**	**57.42**	**298**	P	**P**		**22 02 55.0**	**-1.0**	
	comp=Z,0.7nm,0.6s,mb3.7,baz=57,slow=7.8,SNR=11								
ESLA	**Sonseca Array**	**57.42**	**298**	*eP*	**P**		**22 02 55.9**	**-0.2**	
	comp=Z,0.8nm,0.9s,mb3.5								
BILL	**Bilibino**	**58.64**	**26**‖	*eP*	**P**		**22 03 04.0**	**0.0**	
BILL				*e*			22 03 51.1		
BILL					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
BILL	**Bilibino**	**58.64**	**26**	*eP*	**P**		**22 03 04.1**	**+0.1**	
BILL					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.3								
BILL	**Bilibino**	**58.64**	**26**	*eP*	**P**		**22 03 04.1**	**+0.1**	
	comp=Z,1.9nm,0.4s,mb4.3								
SUMG	**Summit**	**61.06**	**341**	P	**P**		**22 03 21.0**	**+0.6**	
LSZ	**Lusaka**	**65.41**	**226**	*eP*	**P**		**22 03 50.0**	**+0.2**	
LSZ					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.1								
LSZ	**Lusaka**	**65.41**	**226**	*eP*	**P**		**22 03 50.0**	**+0.2**	
	comp=Z,1.6nm,0.6s,mb4.0								
TOA0	**Torodi Ar. Sit**	**65.67**	**269**	*eP*	**P**		**22 03 49.1**	**-2.5**	
TORD	**Torodi Ar. Bea**	**65.67**	**269**	P	**P**		**22 03 49.1**	**-2.5**	
	comp=Z,6.2nm,0.6s,mb4.6,baz=49,slow=6.0,SNR=103								
TORD					pP	pP	22 04 38.7	+4.1	
	comp=Z,1.8nm,0.8s,baz=44,slow=5.7,SNR=3.3								
TORD	**Torodi Ar. Bea**	**65.67**	**269**	P	**P**		**22 03 49.1**	**-2.5**	
TORD					pP	pP	22 04 38.7	+4.1	
MBWA	**Marble Bar**	**73.55**	**133**	*eP*	**P**		**22 04 40.1**	**+0.6**	
	comp=Z,6.0nm,0.8s,mb4.4								
LBTB	**Lobatse**	**74.64**	**222**	*eP*	**P**		**22 04 46.4**	**+0.7**	
LBTB					pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.1								
LBTB	**Lobatse**	**74.64**	**222**	*eP*	**P**		**22 04 46.4**	**+0.7**	
	comp=Z,4.9nm,1.1s,mb4.0								
DBIC	**Dimbokro**	**74.65**	**267**	*eP*	**P**		**22 04 46.8**	**+0.6**	
DBIC					pmax	pmax			
	comp=Z,1.0nm,0.6s								
DBIC	**Dimbokro**	**74.65**	**267**	*eP*	**P**		**22 04 46.8**	**+0.6**	
	comp=Z,0.8nm,0.6s,mb3.5								
TSUM	**Tsumeb**	**74.87**	**232**	*eP*	**P**		**22 04 47.4**	**+0.2**	
BOSA	**Boshof**	**77.71**	**220**	P	**P**		**22 05 02.1**	**-0.8**	
	comp=Z,3.9nm,0.9s,mb4.0,baz=346,slow=7.8,SNR=6.4								
BOSA	**Boshof**	**77.71**	**220**	*eP*	**P**		**22 05 03.0**	**0.0**	
BOSA					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb3.9								
BOSA	**Boshof**	**77.71**	**220**	*eP*	**P**		**22 05 03.0**	**0.0**	
	comp=Z,2.4nm,0.7s,mb3.9								
KDAK	**Kodiak Island**	**79.23**	**22**	P	**P**		**22 05 11.0**	**0.0**	
	comp=Z,4.8nm,0.7s,mb4.2,baz=300,slow=13								
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**		**22 05 21.5**	**-0.2**	
	comp=Z,1.7nm,0.5s,mb4.0,baz=351,slow=5.4,SNR=67								
YKA					pP	pP	22 06 10.7	+4.2	
	comp=Z,1.0nm,0.7s,baz=352,slow=5.6,SNR=4.0								
YKA					sP	sP	22 06 33.1	+7.2	
	comp=Z,1.5nm,0.7s,baz=351,slow=5.6,SNR=3.7								
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**		**22 05 21.6**	**-0.2**	
YKA					pP	pP	22 06 10.7	+4.2	
YKA					sP	sP	22 06 33.1	+7.2	
WRA	**Warramunga Arr**	**82.02**	**122**	P	**P**		**22 05 25.2**	**-1.1**	
	comp=Z,2.3nm,0.7s,mb3.9,baz=324,slow=4.9,SNR=29								
WRAB	**Tennant Creek**	**82.02**	**122**	*eP*	**P**		**22 05 25.4**	**-1.0**	
WRAB					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.7								
WRAB	**Tennant Creek**	**82.02**	**122**	*eP*	**P**		**22 05 25.4**	**-0.9**	
	comp=Z,1.4nm,0.5s,mb3.9								
WB2	**Warramunga Arr**	**82.03**	**122**	*eP*	**P**		**22 05 25.3**	**-1.1**	
ASAR	**Alice Springs**	**84.28**	**125**	P	**P**		**22 05 37.0**	**-0.9**	
	comp=Z,1.6nm,0.6s,mb3.9,baz=311,slow=5.0,SNR=24								
ASAR					pP	pP	22 06 26.2	+3.2	
	comp=Z,1.0nm,0.8s,baz=323,slow=6.1,SNR=4.2								
CTAO	**Charters Tower**	**90.58**	**115**	*eP*	**P**		**22 06 08.3**	**+0.2**	
CTAO					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2								
CTAO	**Charters Tower**	**90.58**	**115**	*eP*	**P**		**22 06 08.3**	**+0.2**	
	comp=Z,1.5nm,0.8s,mb4.1								
CPUP	**Villa Florida**	**135.17**	**268**	PKP	PKPdf		22 12 23.2	-1.1	
	comp=Z,1.3nm,0.7s,baz=357,slow=1.7,SNR=5.5								
PLCA	**Paso Flores**	**149.78**	**250**	PKPbc	PKPbc		22 12 54.3	-0.2	
	comp=Z,2.7nm,0.9s,baz=124,slow=6.4,SNR=6.0								

*ISCJB **30** 21:54:55.8±0.3,2340N±002×12232E±002,h33km, Error ellipse: s-maj=3.3km s-min=2.0km az=151.3*
*JMA **30** 21:54:55.2±0.3,2336N×12232E,h32km,M3.0*
*TAP **30** 21:54:56.3,2342N×12225E,h29km,ML3.5, C*
ISC 30 21:54:54.8±0.9,**2341N**±002×**12230E**±002,**h18**±6km, **n50**,σ0**97**/92,**2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HWA	**Hwalien**	**0.85**	**312**	*eP*		**Pb**	**21 55 09.3**	**-1.7**
	baz=313							
ESL	**Shilin**	**0.89**	**297**	*i* P		**Pb**	**21 55 11.0**	**-0.7**
	baz=298							
ESL				*e*	S	**Sb**	**21 55 20.9**	**-2.3**
	baz=298							
EHY	**Hungye**	**0.90**	**276**	*i* P		**Pb**	**21 55 11.6**	**-0.3**
	baz=276							
EHY				*i* S		**Sb**	**21 55 23.0**	**-0.6**
	baz=276							
CHKT	**Chengkung**	**0.91**	**250**	P		**Pb**	**21 55 11.1**	**-1.1**
	baz=248							
CHKT				*e*	S	**Sb**	**21 55 21.6**	**-2.3**
	baz=248							
TWF1	**Yuli**	**0.92**	**266**‖	*i* P		**Pb**	**21 55 11.8**	**-0.5**
	baz=253							
TWF1				*i* S		**Sb**	**21 55 24.1**	**-0.1**
	baz=253							
TWD	**Chiawan**	**0.92**	**316**	*i* P		**Pb**	**21 55 12.0**	**-0.4**
	baz=318							
TWD				S		**Sb**	**21 55 23.1**	**-1.2**
	baz=318							
ENA	**Nanau**	**1.13**	**333**	P		**Pn**	**21 55 15.8**	**0.0**
	baz=323							
ENA				*e*	S	**Sb**	**21 55 30.1**	**-0.2**
	baz=323							
WHF	**Hehuan Shan**	**1.19**	**308**	*i* P		**Pn**	**21 55 16.3**	**-0.4**
	baz=309							
WHF				*e*	S	**Sb**	**21 55 31.4**	**-0.7**
	baz=309							
ELDTW	**Lidau**	**1.20**	**260**‖	*i* P		**Pn**	**21 55 15.7**	**-1.0**
	baz=259							
ELDTW				S		**Sb**	**21 55 29.9**	**-2.3**
	baz=259							
YOJ	**Yonaguni jima**	**1.23**	**32**	P		**Pn**	**21 55 17.1**	**-0.1**
YOJ				*e*	S	**Sb**	**21 55 33.6**	**+0.4**
YUS	**Yu-Shan**	**1.24**	**274**	*eP*		**Pn**	**21 55 17.3**	**0.0**
	baz=273							
YUS				S		**Sb**	**21 55 32.8**	**-0.6**
	baz=273							
TTN	**Taitung**	**1.25**	**238**	*eP*		**Pn**	**21 55 16.9**	**-0.4**
	baz=236							
TWC	**Suao**	**1.26**	**341**	*eP*		**Pn**	**21 55 18.8**	**+1.3**
	baz=356							
TWC				*e*	S	**Sb**	**21 55 33.0**	**-0.9**
	baz=356							
TWG	**Pinlang**	**1.27**	**243**	*i* P		**Pn**	**21 55 16.8**	**-0.9**
	baz=231							
TWG				*e*	S	**Sb**	**21 55 31.8**	**-2.6**
	baz=231							
TWT	**Tachien**	**1.32**	**309**	*eP*		**Pn**	**21 55 18.6**	**+0.2**
	baz=310							
TWT				*e*	S	**Sn**	**21 55 34.7**	**-1.0**
	baz=310							
NNS	**Nan Shan**	**1.33**	**321**	*eP*		**Pn**	**21 55 18.7**	**+0.2**
	baz=322							
NNS				*e*	S	**Sn**	**21 55 34.9**	**-0.8**
	baz=322							
SMLT	**Sun Moon Lake**	**1.36**	**290**	P		**Pn**	**21 55 19.1**	**+0.2**
	baz=299							
SMLT				*e*	S	**Sn**	**21 55 36.7**	**0.0**
	baz=299							
ALS	**Alishan**	**1.37**	**274**	*eP*		**Pn**	**21 55 19.9**	**+0.8**
	baz=283							
ALS				S		**Sn**	**21 55 36.5**	**-0.4**
	baz=283							
ENTT	**Nioudou**	**1.39**	**331**	*eP*		**Pn**	**21 55 19.8**	**+0.4**
	baz=333							
ENTT				*e*	S	**Sn**	**21 55 36.7**	**-0.7**
	baz=333							
TYC	**Yuchr**	**1.41**	**291**	*eP*		**Pn**	**21 55 19.7**	**+0.1**
	baz=302							
TYC				*e*	S	**Sn**	**21 55 37.2**	**-0.5**
	baz=302							
TWE	**Neicheng**	**1.42**	**336**	*eP*		**Pn**	**21 55 20.9**	**+1.0**
	baz=338							
TWE				*e*	S	**Sn**	**21 55 38.0**	**-0.2**
	baz=338							
STYT	**Tauyuan**	**1.44**	**260**	*eP*		**Pn**	**21 55 19.7**	**-0.3**
	baz=252							
STYT				*e*	S	**Sn**	**21 55 37.3**	**-1.2**
	baz=252							
ECL	**Taimali**	**1.48**	**237**	*eP*		**Pn**	**21 55 19.2**	**-1.4**
	baz=248							
CHN5	**Tsauling**	**1.50**	**277**	*eP*		**Pn**	**21 55 21.6**	**+0.7**
	baz=278							
CHN5				*e*	S	**Sn**	**21 55 40.4**	**+0.5**
	baz=278							
NSK	**Sanguang**	**1.52**	**326**	*eP*		**Pn**	**21 55 21.7**	**+0.6**
	baz=328							
NSK				*e*	S	**Sn**	**21 55 40.0**	**-0.6**
	baz=328							
HATJ	**Hateruma jima**	**1.52**	**65**	*eS*		**Sn**	**21 55 39.7**	**-0.9**
LAY	**Lan-yu**	**1.53**	**207**	*eP*		**Pn**	**21 55 19.4**	**-1.9**
	baz=204							
WNT	**Mingjian**	**1.55**	**288**	*eP*		**Pn**	**21 55 22.8**	**+1.2**
	baz=288							
WTP	**Ta-pu**	**1.56**	**264**	P		**Pn**	**21 55 22.6**	**+1.0**
	baz=256							
WTP				*e*	S	**Sn**	**21 55 42.7**	**+1.3**
	baz=256							
CHN4	**Tsaushan**	**1.57**	**268**	*eP*		**Pn**	**21 55 23.2**	**+1.4**
	baz=268							
CHN4				*e*	S	**Sn**	**21 55 42.5**	**+0.8**
	baz=268							
IRIF	**Iriomote-Funau**	**1.60**	**55**	P		**Pn**	**21 55 22.5**	**+0.2**
IRIF				*e*	S	**Sn**	**21 55 42.7**	**+0.2**
TWB1	**Santiao Chiao**	**1.61**	**350**	*eP*		**Pn**	**21 55 23.0**	**+0.6**
	baz=352							
TWB1				*e*	S	**Sn**	**21 55 42.0**	**-0.8**
	baz=352							
CHN1	**Nanshi**	**1.64**	**262**	*eP*		**Pn**	**21 55 24.3**	**+1.5**
	baz=262							
CHN1				*e*	S	**Sn**	**21 55 44.9**	**+1.4**
	baz=262							
TCU	**Taichung**	**1.66**	**297**	*eP*		**Pn**	**21 55 24.9**	**+1.9**
	baz=297							
TWK	**Hsinying**	**1.67**	**265**	*eP*		**Pn**	**21 55 24.5**	**+1.3**
	baz=254							
TWK				*e*	S	**Sn**	**21 55 45.1**	**+0.9**
	baz=254							
SSD	**Sandimen**	**1.67**	**247**	*eP*		**Pn**	**21 55 23.0**	**-0.2**
	baz=241							
SSD				*e*	S	**Sn**	**21 55 44.4**	**+0.1**
	baz=241							
TWQ1	**Liyutan**	**1.68**	**304**	*eP*		**Pn**	**21 55 24.9**	**+1.6**
	baz=306							
TWQ1				*e*	S	**Sn**	**21 55 45.1**	**+0.7**
	baz=306							
NSTT	**Nanjuang**	**1.69**	**316**	*eP*		**Pn**	**21 55 24.6**	**+1.0**
	baz=318							
NSTT				*e*	S	**Sn**	**21 55 45.1**	**+0.3**
	baz=318							
NWF	**Wu-fen Shan**	**1.72**	**344**	*eP*		**Pn**	**21 55 25.0**	**+1.2**
	baz=346							
NWF				*e*	S	**Sn**	**21 55 45.6**	**+0.2**
	baz=346							
JKRS	**Kuro-shima**	**1.77**	**62**	P		**Pn**	**21 55 24.9**	**+0.3**
JKRS				*e*	S	**Sn**	**21 55 46.3**	**-0.4**
TWM1	**Shoushan**	**1.82**	**252**	*eP*		**Pn**	**21 55 27.6**	**+2.3**
	baz=251							
TWM1				*e*	S	**Sn**	**21 55 52.1**	**+4.1**
	baz=251							
SCZT	**Fangliau**	**1.86**	**236**	*eP*		**Pn**	**21 55 26.9**	**+1.0**
	baz=227							
SCZT				*e*	S	**Sn**	**21 55 50.1**	**+1.2**
	baz=227							
TWS1	**Kuangyinshan**	**1.86**	**335**	*eP*		**Pn**	**21 55 27.9**	**+2.1**
	baz=336							
TWS1				*e*	S	**Sn**	**21 55 49.9**	**+1.0**
	baz=336							
CHN8	**Yiju**	**1.92**	**268**	*eP*		**Pn**	**21 55 26.6**	**0.0**
	baz=269							
CHN8				*e*	S	**Sn**	**21 55 51.8**	**+1.5**
	baz=269							
JIJ	**Ishigaki jima**	**1.94**	**60**	P		**Pn**	**21 55 26.8**	**-0.1**
JIJ				*e*	S	**Sn**	**21 55 49.6**	**-1.2**
HEN	**Hengchun**	**2.01**	**226**	*eP*		**Pn**	**21 55 28.4**	**+0.6**
	baz=216							
HEN				*e*	S	**Sn**	**21 55 52.0**	**-0.6**
	baz=216							
TWK1	**Hengchun**	**2.01**	**224**	*eP*		**Pn**	**21 55 28.4**	**+0.6**
	baz=222							
TWK1				*e*	S	**Sn**	**21 55 51.4**	**-1.2**
	baz=222							
JTJ	**Tarama**	**2.52**	**60**	P		**Pn**	**21 55 35.0**	**+0.2**
JTJ				*e*	S	**Sn**	**21 56 04.6**	**-0.5**
JOGS	**Gusukube**	**3.14**	**64**	*eS*		**Sn**	**21 56 19.8**	**-0.8**
JKE	**Kume jima 2**	**5.00**	**54**	P		**Pn**	**21 56 08.2**	**-0.8**
JKE				*e*	S	**Sn**	**21 57 06.1**	**-0.4**

*IDC **30** 22:05:21.2±1.4,5580N×162.35E,h0km,mb3.3/2, mb1 3.6/4,mb1mx3.3/25,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=26.6km s-min=13.3km az=0.0*
*MOS **30** 22:05:23.3±1.3,5573N×162.41E,h24km,mb4.2/1,Error ellipse: s-maj=20.9km s-min=10.5km az=74.3*
*ISCJB **30** 22:05:24.3±0.8,5574N±003×162.37E±006,h32km±6km, mb3.3/2,Error ellipse: s-maj=6.0km s-min=4.8km az=156.3*
*KRSC **30** 22:05:25.0±0.7,5571N×162.15E,h19km±19km,ML4.1*
ISC 30 22:05:24.8±0.8,**5575N**±003×**16230E**±006,**h23**km±7km, **n24**,σ0**96**/45,**mb3.3**/2,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBTR	**Krutoberegovo**	**0.55**	**32**	*i* P		**Pb**	**22 05 36.8**	**+1.1**
KBTR				*i* S		**Sb**	**22 05 45.6**	**+2.5**
ZLN	**Zelenaya**	**0.89**	**289**	*i* P		**Pb**	**22 05 41.1**	**-0.3**
ZLN				*i* S		**Sb**	**22 05 53.0**	**+0.2**
BZMR	**Bezymyannaya**	**1.04**	**281**	*i* P		**Pn**	**22 05 43.1**	**-0.8**
BZMR				*i* S		**Sb**	**22 05 56.7**	**-0.5**
KRSR	**Krestovskiy**	**1.08**	**297**	*i* P		**Pn**	**22 05 43.3**	**-1.2**
KRSR				*i* S		**Sb**	**22 05 57.2**	**-1.3**
KLY	**Klyuchi**	**1.09**	**302**	*i* P		**Pn**	**22 05 42.2**	**-2.3**
KLY				*i* S		**Sb**	**22 05 55.3**	**-3.3**
SRKR	**Sorokina**	**1.11**	**326**	*i* P		**Pn**	**22 05 44.4**	**-0.4**
SRKR				*i* S		**Sb**	**22 05 58.9**	**-0.3**
KMNR	**Kamenistaya**	**1.17**	**271**	*i* P		**Pn**	**22 05 45.6**	**0.0**
KMNR				*i* S		**Sn**	**22 06 00.6**	**-0.2**
KPT	**Kopyto**	**1.19**	**282**	*i* P		**Pn**	**22 05 45.6**	**-0.4**
KPT				*i* S		**Sn**	**22 06 01.7**	**+0.3**
MKZ	**Mys Kozlova**	**1.24**	**196**	*eP*		**Pn**	**22 05 45.9**	**-0.7**
MKZ				*i* S		**Sn**	**22 06 01.4**	**-1.1**
TUMR	**Tumrok**	**1.31**	**250**	*i* P		**Pn**	**22 05 47.9**	**+0.3**
TUMR				*i* S		**Sn**	**22 06 04.9**	**+0.6**
KOZR	**Kozyr**	**1.39**	**284**	PN		**Pn**	**22 05 49.3**	**+0.6**
KOZR				S		**Sn**	**22 06 07.7**	**+1.4**
KOZ	**Kozyrevsk**	**1.40**	**284**	*i* P		**Pn**	**22 05 49.3**	**+0.4**
KOZ				*i* S		**Sn**	**22 06 07.7**	**+1.1**
SRDR	**Sredinnyy**	**1.56**	**293**	*i* P		**Pn**	**22 05 51.1**	**+0.1**
SRDR				*i* S		**Sn**	**22 06 10.6**	**+0.1**
KII	**Karymskiy**	**2.38**	**225**	P		**Pn**	**22 06 02.9**	**+0.7**
KII				*i* S		**Sn**	**22 06 31.3**	**+0.7**
SPN	**Mys Shipunski**	**2.97**	**208**	P		**Pn**	**22 06 09.5**	**-0.9**
SPN				*i* S		**Sn**	**22 06 41.8**	**-3.4**
NLC	**Nalytchevo**	**3.10**	**215**	P		**Pn**	**22 06 13.5**	**+1.3**
NLC				*i* S		**Sn**	**22 06 48.0**	**-0.5**
AVH	**Avacha**	**3.24**	**221**	P		**Pn**	**22 06 15.3**	**+1.2**
AVH				*i* S		**Sn**	**22 06 51.9**	**0.0**
GNL	**Ganaly**	**3.26**	**233**	P		**Pn**	**22 06 15.3**	**+1.0**
PET	**Petropavlovsk**	**3.46**	**220**	*e*PN		**Pn**	**22 06 16.7**	**-0.4**
PET				*eS*		**Sn**	**22 06 57.4**	**0.0**
PET				smax				
	comp=E,75nm,0.4s							
PET				smax				
	comp=N,117nm,0.8s							
PET	**Petropavlovsk**	**3.46**	**220**	P		**Pn**	**22 06 17.8**	**+0.7**
PET				*i* S		**Sn**	**22 06 57.0**	**-0.4**
PETK	**Petropavlovsk-**	**3.77**	**227**	Pn		**Pn**	**22 06 22.4**	**+1.0**
	comp=N,0.9nm,0.3s,baz=59,slow=16,SNR=10							
PETK				Sn		**Sn**	**22 07 08.6**	**+3.7**
	comp=N,0.3nm,0.3s,baz=86,slow=20,SNR=2.9							
PETK				Lg			22 07 21.2	
	comp=N,1.1nm,0.3s,baz=287,slow=31,SNR=3.1							
FX1	**Attu Island--F**	**6.97**	**110**	Pn		**Pn**	**22 07 05.3**	**0.0**
	comp=N,3.5nm,0.3s,baz=113,slow=22,SNR=19							
FX1				Sn		**Sn**	**22 08 20.2**	**-3.6**
	comp=N,4.9nm,0.3s,baz=295,slow=23,SNR=7.1							
MKAR	**Makanchi Array**	**48.19**	**295**	P		**P**	**22 14 02.4**	**-0.5**
	comp=N,0.1nm,0.5s,mb3.1,baz=59,slow=6.9,SNR=4.2							
TXAR	**Lajitas Array**	**68.45**	**69**	P		**P**	**22 16 24.1**	**-0.6**
	comp=N,0.3nm,0.5s,mb3.5,baz=292,slow=5.6,SNR=4.0							

*CSEM **30** 22:10:10.9±0.1,4083N×3170E,h2km,MD2.9,Error ellipse: s-maj=2.8km s-min=1.8km az=139.0*
*ISK **30** 22:10:10.9,4083N×3171E,h3km,MD2.8*
*ISCJB **30** 22:10:11.9±0.5,4083N±003×3170E±003,h10km,Error ellipse: s-maj=4.9km s-min=3.5km az=153.7*
*DDA **30** 22:10:11.3,4081N×3170E,h7km±3km,Md2.9*
ISC 30 22:10:12.2±0.5,**4081N**±003×**3170E**±004,**h6**km±8km,**n12**, σ0**67**/21,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGKT	**Sivrigoynuk**	**0.36**	**131**	*i* P		**Pg**	**22 10 19.2**	**0.0**
SGKT				*i* S		**Sg**	**22 10 23.9**	**0.0**
MDU	**Mudurnu**	**0.51**	**227**	*e*PG		**Pg**	**22 10 21.8**	**-0.2**
KDZE	**Karadeniz Ereo**	**0.54**	**339**	*e*PG		**Pg**	**22 10 22.1**	**-0.5**
KDZE				*e*SG		**Sg**	**22 10 29.9**	**+0.2**
HENT	**Hendek**	**0.61**	**271**	*e*P		**Pg**	**22 10 23.6**	**-0.3**
HENT				*e*S		**Sg**	**22 10 31.6**	**-0.2**
SAFT	**Safranbolu**	**0.86**	**60**	*e*PG		**Pg**	**22 10 27.9**	**-0.8**
SAFT				*e*SG		**Sg**	**22 10 40.4**	**+0.5**
GULT	**Gulveren**	**0.98**	**248**	*e*PG		**Pg**	**22 10 30.1**	**-0.9**
GULT				*e*SG		**Sg**	**22 10 45.4**	**+1.7**
BORA	**Eskisehir**	**1.33**	**226**	*e*P		**Pn**	**22 10 36.7**	**-0.6**
BORA				*e*S		**Sg**	**22 10 55.5**	**+0.5**
BORA	**Eskisehir**	**1.33**	**226**	*e*P		**Pn**	**22 10 36.7**	**-0.6**
BORA				*e*S		**Sg**	**22 10 55.5**	**+0.5**
ESKT	**Eskisehir**	**1.45**	**207**	*e*P		**Pn**	**22 10 35.4**	**-3.5**
ESKT				*e*S		**Sb**	**22 10 57.8**	**-0.3**
ESKT	**Eskisehir**	**1.45**	**207**	*e*Pn		**Pn**	**22 10 39.5**	**+0.6**
SEYT	**Eskypehyr**	**1.45**	**207**	*e*S		**Sb**	**22 10 57.8**	**-0.3**
BALT	**Daday**	**1.46**	**60**	*e*P		**Pn**	**22 10 39.1**	**0.0**
BALT				*e*S		**Sb**	**22 10 59.4**	**+0.8**

*ISCJB **30** 22:29:54.8±0.5,1387N±006×14706E±007,h48km, mb3.8/11,Error ellipse: s-maj=10.3km s-min=9.2km az=20.4*
*NEIC **30** 22:29:55.5±2.0,1387N×14704E,h38km±17km,mb4.2/4, Error ellipse: s-maj=16.0km s-min=7.2km az=82.0*
*IDC **30** 22:29:57.0±0.8,1390N×14700E,h48km±6km,mb3.2/7, mb1 3.4/8,mb1mx3.4/22,mbtmp3.3/8,MS3.2/1,Ms1 3.2/1, ms1mx2.7/11,Error ellipse: s-maj=16.6km s-min=9.4km az=162.0*
ISC 30 22:29:56.9±0.5,**1386N**±006×**14702E**±008,**h50**km, **h50**km±2.2km:**pP-P,n26**,σ0**72**/27,**mb3.8**/11,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**2.10**	**263**	P		**Pn**	**22 30 28.4**	**-1.2**
	27nm,0.3s,baz=190,slow=22,SNR=9.5							
GUMO				S		**Sn**	**22 30 55.1**	**+0.4**
	47nm,0.3s,ba

*BGR **30** 22:37:08.4±1.2, 49.36N×6.84E, h1km, ML2.2/2, Error ellipse: s-maj=20.0km s-min=7.8km az=92.0*
*BNS **30** 22:37:08.7±0.9, 49.41N×6.87E, h1km, ML1.6*
ISC 30 22:37:06.9±0.2, **4936N**±001×**675E**±002, **h0**km, **n59, σ0§86**/106, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.40**	**31**	*e*Pg		**Pg**	**22 37 14.7**	**+0.2**
RUP					Sg	**Sg**	**22 37 20.2**	**+0.6**
ABH	**Alteburg**	**0.73**	**45**	Pg		**Pg**	**22 37 20.7**	**-0.3**
LANF	**Langenberg**	**0.79**	**119**	*e*Pg		**Pg**	**22 37 21.7**	**-0.4**
LANF					*e*Sg	**Sg**	**22 37 34.2**	**+1.8**
LANF	**Langenberg**	**0.79**	**119**	Pg		**Pg**	**22 37 21.6**	**-0.5**
LANF					Sg	**Sg**	**22 37 34.2**	**+1.8**
KTD	**Kalmit**	**0.88**	**92**	Pg		**Pg**	**22 37 24.6**	**+0.9**
BGG	**Burgeitz**	**0.93**	**24**	*e*Pg		**Pg**	**22 37 25.5**	**+0.8**
HILG	**Hillesheim**	**0.93**	**357**	*e*Pg		**Pg**	**22 37 25.5**	**+0.8**
CDF	**Champ du Feu** SNR=1.0	**1.01**	**160**	*e*Pn		**Pn**	**22 37 27.4**	**-0.9**
CDF					*e*Sg	**Sg**	**22 37 39.6**	**+0.2**
	17nm,0.2s,SNR=1.0							
CDF					*e*Sn	**Sn**	**22 37 41.5**	**-1.8**
	SNR=1.0							
CDF	**Champ du Feu** SNR=1.0	**1.01**	**160**	*e*Pn		**Pn**	**22 37 27.4**	**-0.9**
CDF					*e*Sg	**Sg**	**22 37 39.6**	**+0.2**
	8.6nm,0.2s,SNR=1.0							
CDF					*e*Sn	**Sn**	**22 37 41.5**	**-1.8**
	SNR=1.0							
CDF	**Champ du Feu**	**1.01**	**160**	*e*Pg		**Pg**	**22 37 26.8**	**+0.5**
CDF					*e*Pn	**Pn**	**22 37 27.4**	**-0.9**
CDF					*e*Sg	**Sg**	**22 37 39.6**	**+0.2**
CDF					*e*Sn	**Sn**	**22 37 41.5**	**-1.8**
RFYF	**Reffroy** baz=44	**1.11**	**229**	*e*Pg		**Pg**	**22 37 29.3**	**+1.1**
RFYF					*e*Sn	**Sn**	**22 37 44.5**	**-1.2**
	19nm,0.2s							
RFYF	**Reffroy**	**1.11**	**229**	*e*Pg		**Pg**	**22 37 29.3**	**+1.1**
RFYF					*e*Sn	**Sn**	**22 37 44.5**	**-1.2**
	9.5nm,0.2s							
ECH	**Echery**	**1.18**	**167**	*e*P		**Pg**	**22 37 30.1**	**+0.6**
ECH					*e*S	**Sg**	**22 37 45.0**	**+0.2**
ECH	**Echery**	**1.18**	**167**	*e*P		**Pg**	**22 37 30.1**	**+0.6**
ECH					*e*S	**Sg**	**22 37 45.0**	**+0.2**
STB	**Steinbach**	**1.23**	**3**	*e*Pg		**Pg**	**22 37 30.7**	**+0.2**
STB					*e*Sg	**Sg**	**22 37 46.8**	**+0.3**
	11nm,0.4s							
KOE	**Koeppel**	**1.24**	**31**	*e*Pg		**Pg**	**22 37 29.5**	**-1.2**
THEF	**They Montfort**	**1.24**	**204**	*e*Pg		**Pg**	**22 37 31.4**	**+0.7**
THEF					*e*Sg	**Sg**	**22 37 48.1**	**+1.3**
THEF	**They Montfort**	**1.24**	**204**	Pg		**Pg**	**22 37 31.3**	**+0.6**
THEF					Sg	**Sg**	**22 37 48.1**	**+1.3**
DREG	**Dreilaegerbach**	**1.34**	**346**	*e*Pg		**Pg**	**22 37 32.7**	**+0.1**
TOD	**Tromm**	**1.36**	**79**	Pg		**Pg**	**22 37 31.8**	**-1.2**
HAU	**Haudompre** SNR=1.0	**1.39**	**191**	*e*Pg		**Pg**	**22 37 33.4**	**0.0**
HAU					*e*Sg	**Sg**	**22 37 52.0**	**+0.7**
	14nm,0.2s,SNR=1.0							
HAU	**Haudompre** SNR=1.0	**1.39**	**191**	*e*Pg		**Pg**	**22 37 33.4**	**0.0**
HAU					*e*Sg	**Sg**	**22 37 52.0**	**+0.7**
	7.0nm,0.2s,SNR=1.0							
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pn		**Pn**	**22 37 32.8**	**-0.8**
TNS					*e*Sg	**Sg**	**22 37 51.5**	**-0.2**
TNS	**Taunus Mts**	**1.40**	**51**	Pn		**Pn**	**22 37 32.8**	**-0.8**
TNS					Sg	**Sg**	**22 37 51.5**	**-0.3**
TNS	**Taunus Mts**	**1.40**	**51**	*e*Pg		**Pg**	**22 37 32.2**	**-1.5**
TNS					*e*Sg	**Sg**	**22 37 51.9**	**+0.1**
MEZF	**Maizieres J'vi** baz=52,SNR=1.0	**1.41**	**233**	*e*Pg		**Pg**	**22 37 34.3**	**+0.4**
MEZF					*e*Sg	**Sg**	**22 37 53.1**	**+0.9**
	8.1nm,0.3s,SNR=1.0							
MEZF	**Maizieres J'vi** SNR=1.0	**1.41**	**233**	*e*Pg		**Pg**	**22 37 34.3**	**+0.4**
MEZF					*e*Sg	**Sg**	**22 37 53.1**	**+0.9**
	4.1nm,0.3s,SNR=1.0							
GIVF	**Givet** SNR=1.0	**1.45**	**301**	*e*Pg		**Pg**	**22 37 34.9**	**+0.2**
GIVF					*e*Sg	**Sg**	**22 37 54.1**	**+0.6**
	13nm,0.3s,SNR=1.0							
GIVF	**Givet** SNR=1.0	**1.45**	**301**	*e*Pg		**Pg**	**22 37 34.9**	**+0.2**
GIVF					*e*Sg	**Sg**	**22 37 54.1**	**+0.6**
	6.3nm,0.3s,SNR=1.0							
GIVF	**Givet**	**1.45**	**301**	*e*Pn		**Pn**	**22 37 33.9**	**-0.4**
GIVF					*e*Pg	**Pg**	**22 37 34.9**	**+0.2**
GIVF					*e*Sg	**Sg**	**22 37 54.1**	**+0.6**
BFO	**Black Forest**	**1.47**	**134**	*e*Pn		**Pn**	**22 37 34.9**	**+0.3**
BFO					*e*Sg	**Sg**	**22 37 53.3**	**-0.8**
BFO	**Black Forest**	**1.47**	**134**	Pn		**Pn**	**22 37 34.9**	**+0.3**
BFO					Sg	**Sg**	**22 37 53.8**	**-0.3**
BFO	**Black Forest**	**1.47**	**134**	*e*Pg		**Pg**	**22 37 34.2**	**-0.9**
BFO					*e*Sg	**Sg**	**22 37 53.8**	**-0.3**
HGN	**Heimansgroeve** 2.8nm,0.2s	**1.50**	**340**	*e*Pg		**Pg**	**22 37 36.3**	**+0.7**
HGN					*e*Sg	**Sg**	**22 37 54.6**	**-0.4**
MOF	**Molkenrain**	**1.54**	**170**	Pg		**Pg**	**22 37 36.8**	**+0.5**
MOF					Sg	**Sg**	**22 37 56.5**	**+0.3**
HINF	**Hinteralfeld** SNR=1.0	**1.55**	**177**	*e*Pg		**Pg**	**22 37 36.7**	**+0.1**
HINF					*e*Sg	**Sg**	**22 37 56.9**	**+0.3**
	30nm,0.3s,SNR=1.0							
HINF	**Hinteralfeld** SNR=1.0	**1.55**	**177**	*e*Pg		**Pg**	**22 37 36.7**	**+0.1**
HINF					*e*Sg	**Sg**	**22 37 56.9**	**+0.3**
	15nm,0.3s,SNR=1.0							
SFTF	**Sexfontaines** baz=43	**1.62**	**225**	*e*Pn		**Pn**	**22 37 36.3**	**-0.3**
SFTF					*e*Sg	**Sg**	**22 37 59.4**	**+0.5**
	6.4nm,0.3s							
SFTF	**Sexfontaines**	**1.62**	**225**	*e*Pn		**Pn**	**22 37 36.3**	**-0.3**
SFTF					*e*Sg	**Sg**	**22 37 59.4**	**+0.5**
	3.2nm,0.3s							
FELD	**Feldberg im Sc**	**1.71**	**150**	Pg		**Pg**	**22 37 37.6**	**-2.0**
FELD					Sg	**Sg**	**22 38 01.9**	**+0.2**
STU	**Stuttgart**	**1.72**	**109**	*e*Sg		**Sg**	**22 38 03.6**	**+1.7**
BAIF	**Baives**	**1.79**	**294**	*e*Pg		**Pg**	**22 37 42.1**	**+0.9**
BAIF					*e*Sg	**Sg**	**22 38 04.0**	**-0.3**
	6.9nm,0.3s,SNR=1.0							
BAIF	**Baives**	**1.79**	**294**	*e*Pg		**Pg**	**22 37 42.1**	**+0.9**
BAIF					*e*Sg	**Sg**	**22 38 04.0**	**-0.3**
	3.5nm,0.3s,SNR=1.0							
BAIF	**Baives**	**1.79**	**294**	*e*Pn		**Pn**	**22 37 39.5**	**+0.5**
BAIF					*e*Pg	**Pg**	**22 37 42.1**	**+0.9**
BAIF					*e*Sg	**Sg**	**22 38 04.0**	**-0.3**
CABF	**La Chapelle**	**2.79**	**189**	*e*Pn		**Pn**	**22 37 52.5**	**-0.2**
LOR	**Lormes** baz=45,SNR=1.0	**2.85**	**224**	*e*Pn		**Pn**	**22 37 53.0**	**-0.5**
LOR	**Lormes** baz=44,SNR=1.0	**2.85**	**224**	*e*Pg		**Pg**	**22 38 01.5**	**+0.1**
LOR	**Lormes** SNR=1.0	**2.85**	**224**	*e*Pg		**Pg**	**22 38 01.5**	**+0.1**
LOR	**Lormes**	**2.85**	**224**	*e*Pn		**Pn**	**22 37 53.0**	**-0.5**
LOR					*e*Pg	**Pg**	**22 38 01.5**	**+0.1**
GRA1	**Grafenberg Arr**	**2.93**	**82**	Sg		**Sg**	**22 38 42.4**	**+1.3**
GRF	**Grafenberg Arr**	**2.93**	**82**	*e*Sg		**Sg**	**22 38 42.4**	**+1.3**
SSF	**Saint Saulge** SNR=1.0	**3.16**	**224**	*e*Pn		**Pn**	**22 37 57.2**	**-0.7**
SSF					*e*Sg	**Sg**	**22 38 47.8**	**-0.6**
	3.2nm,0.4s,SNR=1.0							
SSF	**Saint Saulge** SNR=1.0	**3.16**	**224**	*e*Pn		**Pn**	**22 37 57.2**	**-0.7**
SSF					*e*Sg	**Sg**	**22 38 47.8**	**-0.6**
	1.6nm,0.4s,SNR=1.0							
SMF	**Signal de Mont** SNR=1.0	**3.35**	**217**	*e*Pn		**Pn**	**22 37 58.0**	**-2.4**
AVF	**Avril sur Loir**	**3.44**	**223**	*e*Pn		**Pn**	**22 38 00.6**	**-1.0**
BGF	**Bois d'Agland** SNR=1.0	**3.84**	**224**	*e*Pn		**Pn**	**22 38 06.5**	**-0.7**
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn		**Pn**	**22 38 17.7**	**+0.2**
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn		**Pn**	**22 38 17.5**	**-0.1**
GEC2					*e*Sn	**Sn**	**22 39 08.5**	**-3.2**
GEC2	**GERESS Array S**	**4.60**	**94**	*e*Pn		**Pn**	**22 38 17.5**	**-0.1**
GEC2					*e*Sn	**Sn**	**22 39 08.5**	**-3.2**

*IDC **30** 22:50:35.1±2.7, 50.3S×153.11E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/17, mbtmp3.7/5, ML3.0/1, MS3.4/1, Ms1 3.3/1, ms1mx2.7/16, Error ellipse: s-maj=80.9km s-min=28.5km az=112.0*
*ISCJB **30** 22:50:39.4±4.7, 5.1S±0.1×152.9E±0.02, h33km±36km, mb3.7/6, Error ellipse: s-maj=36.7km s-min=21.6km az=164.0*
*NEIC **30** 22:50:40.5±1.0, 5.08S×153.04E, h35km, mb3.9/2, Error ellipse: s-maj=24.6km s-min=12.1km az=96.0*
ISC 30 22:50:41.4±4.1, **51S**±01×**1529E**±02, **h36**km±32km, **n18, σ1§02**/18, **mb3.7**/6, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.13**	**233**	Pn		**Pn**	**22 52 24.2**	**+1.0**
	1.6nm,0.3s,baz=12,slow=11,SNR=4.3							
PMG					Sn	**Sn**	**22 53 40.9**	**-2.2**
	1.2nm,0.3s,baz=202,slow=19,SNR=3.0							
PMG	**Port Moresby**	**7.13**	**233**	*e*Pn		**Pn**	**22 52 23.8**	**+0.6**
PMG					*e*Sn	**Sn**	**22 53 37.1**	**-6.0**
CTAO	**Charters Tower**	**16.24**	**203**	*e*Pn		**Pn**	**22 54 26.5**	**-0.4**
WRAB	**Tennant Creek** 3.3nm,0.8s,mb3.8	**23.31**	**229**	*e*P		**P**	**22 55 48.3**	**+1.7**
WRA	**Warramunga Arr** 1.0nm,0.9s,mb3.2,baz=56,slow=10,SNR=4.2	**23.33**	**229**	P		**P**	**22 55 45.6**	**-1.1**
ASAR	**Alice Springs** 1.0nm,0.8s,mb3.4,baz=56,slow=9.8,SNR=7.5	**26.00**	**223**	P		**P**	**22 56 13.5**	**+2.4**
STKA	**Stephens Creek** comp=Z,74nm,19.2s,baz=204,slow=33	**28.66**	**200**	LR		LR	23 06 35.5	
STKA	**Stephens Creek**	**28.66**	**200**	P		**P**	**22 56 34.2**	**-0.8**
FITZ	**Fitzroy Crossi** 1.8nm,0.7s,mb3.9	**29.61**	**242**	*e*P		**P**	**22 56 44.9**	**+1.3**
MBWA	**Marble Bar**	**35.91**	**241**	P		**P**	**22 57 38.5**	**-0.1**
TAU	**Tasmania Unive**	**37.97**	**187**	P		**P**	**22 57 55.2**	**-0.5**
KKM	**Kota Kinabalu**	**38.28**	**286**	*e*P		**P**	**22 57 57.9**	**-0.9**
KSM	**Kuching**	**43.06**	**278**	*e*P		**P**	**22 58 37.8**	**-0.4**
CMAR	**Chiang Mai Arr** 1.0nm,0.8s,mb3.9,baz=118,slow=5.5,SNR=7.3	**58.11**	**295**	P		**P**	**23 00 32.6**	**+0.8**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,mb3.7,baz=124,slow=7.2,SNR=2.5	**81.47**	**326**	P		**P**	**23 02 54.7**	**-0.1**
KURK	**Kurchatov**	**84.08**	**322**	P		**P**	**23 03 07.8**	**-0.6**
TKM2	**Tokmak 2**	**84.22**	**314**	P		**P**	**23 03 09.1**	**-0.2**
TORD	**Torodi Ar. Bea** 0.4nm,0.4s,baz=72,slow=1.7,SNR=15	**150.51**	**288**	PKPbc		PKPbc	23 10 30.2	-0.2
TORD				PKPab		PKPab	23 10 34.7	-2.4
	0.4nm,0.4s,baz=71,slow=2.4,SNR=15							

*ISCJB **30** 22:55:50.9±0.5, 3699N±003×2908E±003, h7km±5km, Error ellipse: s-maj=5.8km s-min=4.6km az=167.1*
*CSEM **30** 22:55:50.4±0.1, 3699N×2910E, h8km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.4km az=179.0*
*ISK **30** 22:55:50.8, 3701N×2908E, h11km, MD3.1*
*DDA **30** 22:55:51.2, 3699N×2917E, h7km±4km, Md3.0*
ISC 30 22:55:51.5±0.5, **3699N**±003×**2908E**±004, **h9**km±5km, **n21, σ0§65**/28, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.40**	**252**	*e*P		**Pg**	**22 56 04.1**	**+4.9**
TURN					*e*S	**Sg**	**22 56 15.6**	**+11**
DALT	**Dalyan (Mudla)**	**0.42**	**238**	*e*PG		**Pg**	**22 55 59.3**	**-0.3**
DALT					*e*SG	**Sg**	**22 56 06.3**	**+1.3**
GOLH	**Golhisar**	**0.46**	**58**	*i*P		**Pg**	**22 55 59.0**	**-1.4**
GOLH					*i*S	**Sg**	**22 56 06.4**	**0.0**
YERK	**Yerkesik**	**0.65**	**283**	*e*PG		**Pg**	**22 56 04.0**	**0.0**
ELL	**Elmali**	**0.71**	**110**	*e*PG		**Pg**	**22 56 04.6**	**-0.6**
ELL					*e*SG	**Sg**	**22 56 15.8**	**+1.3**
DENT	**Denizli**	**0.76**	**358**	*e*PG		**Pg**	**22 56 05.5**	**-0.6**
DENT					*e*SG	**Sg**	**22 56 16.4**	**+0.4**
AKAS	**Kas**	**0.87**	**150**	*e*P		**Pg**	**22 56 07.9**	**-0.3**
AKAS					*e*S	**Sg**	**22 56 25.3**	**+5.8**
MLSB	**Milas**	**1.08**	**287**	*e*PG		**Pg**	**22 56 12.2**	**0.0**
DAT	**Datca**	**1.23**	**258**	*e*PN		**Pn**	**22 56 13.7**	**-1.1**
BCK	**Bucak**	**1.30**	**68**	*e*PN		**Pn**	**22 56 15.3**	**-0.4**
KHL	**Karahalli**	**1.37**	**15**	*e*PN		**Pn**	**22 56 16.5**	**-0.3**
KHAL	**Karahalli**	**1.41**	**13**	*e*P		**Pn**	**22 56 17.8**	**+0.5**
KHAL					*e*S	**Sb**	**22 56 37.2**	**+1.0**
ISP	**Isparta**	**1.42**	**53**	*e*PN		**Pn**	**22 56 17.4**	**-0.1**
KULA	**Kula-Manisa**	**1.55**	**348**	*e*PN		**Pn**	**22 56 19.2**	**-0.1**
IZM	**Izmir**	**2.01**	**315**	*e*PN		**Pn**	**22 56 25.6**	**+0.1**
BLCB	**Balcova**	**2.13**	**311**	*e*PN		**Pn**	**22 56 27.0**	**-0.1**
ALT	**Altintas**	**2.21**	**21**	*e*PN		**Pn**	**22 56 27.9**	**-0.4**
HDMB	**Hadim**	**2.73**	**90**	*e*PN		**Pn**	**22 56 35.3**	**-0.1**
KONT	**Konya--Tatoy**	**2.78**	**69**	*e*PN		**Pn**	**22 56 36.2**	**+0.1**
LADK	**Ladik-KONYA**	**2.88**	**64**	*e*PN		**Pn**	**22 56 37.6**	**+0.2**
KIZT	**Kizilcal**	**2.91**	**49**	*e*PN		**Pn**	**22 56 39.0**	**+1.1**

*LJU **30** 22:56:34.6, 4633N×1366E, h9km, ML2.1*
*NEIC **30** 22:56:34.9±0.4, 4631N×1366E, h5km, ML2.3(LJU), Error ellipse: s-maj=5.7km s-min=3.7km az=216.0*
NEIC Felt [III] at Soca.
*VIE **30** 22:56:34.3±0.1, 4631N×1366E, h9km±1km, mb1.6/8, ML2.2/10, Error ellipse: s-maj=0.6km s-min=0.5km az=14.0*
*ISCJB **30** 22:56:34.3±0.3, 4633N±002×1365E±002, h11km±4km, Error ellipse: s-maj=2.9km s-min=1.9km az=20.7*
*CSEM **30** 22:56:34.5±0.0, 4631N×1365E, h12km, ML2.5/6, Error ellipse: s-maj=1.1km s-min=0.7km az=16.0*
*PRU **30** 22:56:36.5, 4635N×1365E, h0km*
ISC 30 22:56:35.2±0.2, **4632N**±002×**1366E**±002, **h7**km±4km, **n55, σ0§81**/101, **27C-15D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CADS	**Cadrg**	**0.11**	**150**	⇓*i*Pg		**Pg**	**22 56 37.4**	**-0.2**
CADS				*i* Sg		**Sg**	**22 56 39.4**	**+0.2**
CADS								
	comp=Z,485nm,0.1s							
CADS	**Cadrg**	**0.11**	**150**	⇓*i*Pg		**Pg**	**22 56 37.4**	**-0.2**
CADS				*i* Sg		**Sg**	**22 56 39.4**	**+0.1**
	comp=Z,485nm,0.1s							
CADS	**Cadrg**	**0.11**	**150**	⇓*i*Pg		**Pg**	**22 56 37.4**	**-0.2**
CADS				*i* Sg		**Sg**	**22 56 39.4**	**+0.2**
ROBS	**Robic**	**0.13**	**233**	⇑*i*Pg		**Pg**	**22 56 37.5**	**-0.4**
ROBS				*i* Sg		**Sg**	**22 56 39.6**	**-0.3**
ROBS								
	comp=Z,854nm,0.1s							
ROBS	**Robic**	**0.13**	**233**	⇑*i*Pg		**Pg**	**22 56 37.5**	**-0.4**
ROBS				*i* Sg		**Sg**	**22 56 39.6**	**-0.2**
	comp=Z,854nm,0.1s							
ROBS	**Robic**	**0.13**	**233**	⇑*i*Pg		**Pg**	**22 56 37.5**	**-0.4**
ROBS				*i* Sg		**Sg**	**22 56 39.6**	**-0.3**
DRE	**Drenchia**	**0.15**	**184**	⇓*i*Pg		**Pg**	**22 56 38.0**	**-0.3**
DRE				*i* Sg		**Sg**	**22 56 40.5**	**+0.1**
GORS	**Gorjuse**	**0.23**	**92**	⇑*i*Pg		**Pg**	**22 56 39.7**	**-0.1**
GORS				*i* Sg		**Sg**	**22 56 43.6**	**+0.7**
GORS								
	comp=Z,102nm,0.1s							
GORS	**Gorjuse**	**0.23**	**92**	⇑*i*Pg		**Pg**	**22 56 39.7**	**-0.1**
GORS				*i* Sg		**Sg**	**22 56 43.6**	**+0.7**
	comp=Z,102nm,0.1s							
GORS	**Gorjuse**	**0.23**	**92**	⇑*i*Pg		**Pg**	**22 56 39.7**	**-0.1**
GORS				*i* Sg		**Sg**	**22 56 43.6**	**+0.7**
COLI	**Coloredo**	**0.27**	**226**	⇑*i*Pg		**Pg**	**22 56 40.1**	**-0.4**
COLI				*i* Sg		**Sg**	**22 56 44.6**	**+0.5**
BAD	**Bernadia**	**0.30**	**253**	⇑*i*Pg		**Pg**	**22 56 40.4**	**-0.6**
BAD				*i* Sg		**Sg**	**22 56 45.7**	**+0.6**
MYKA	**Terra Mystica**	**0.31**	**358**	⇓*i*Pg		**Pg**	**22 56 41.1**	**-0.1**
MYKA				⇑*i*Sg		**Sg**	**22 56 45.8**	**+0.6**
	comp=Z,42nm,0.2s							
VOJS	**Vojsko**	**0.33**	**152**	*i* Pg		**Pg**	**22 56 41.4**	**-0.3**
VOJS				*i* Sg		**Sg**	**22 56 47.0**	**+1.1**
BUA	**Buia**	**0.39**	**254**	⇓*i*Pg		**Pg**	**22 56 42.1**	**-0.6**
BUA				*i* Sg		**Sg**	**22 56 48.5**	**+0.8**
BOO	**Bordano**	**0.39**	**270**	⇓*i*Pg		**Pg**	**22 56 42.0**	**-0.7**
PLRO	**Paularo**	**0.42**	**303**	⇓*i*Pg		**Pg**	**22 56 43.1**	**-0.2**
PLRO				*i* Sg		**Sg**	**22 56 49.5**	**+0.7**
MPRI	**Monte Prat**	**0.47**	**260**	⇓*i*Pg		**Pg**	**22 56 43.5**	**-0.8**
MPRI				*i* Sg		**Sg**	**22 56 51.2**	**+0.7**
JAVS	**Javornik**	**0.52**	**147**	*i* Pg		**Pg**	**22 56 44.4**	**-0.7**
JAVS				*e*Sg		**Sg**	**22 56 52.7**	**+0.9**
ZOU	**Zoufplan**	**0.53**	**296**	⇓*i*Pg		**Pg**	**22 56 45.2**	**-0.2**
ZOU				*i* Sg		**Sg**	**22 56 53.0**	**+0.8**
MOZS	**Mozjanca**	**0.55**	**93**	*i* Pg		**Pg**	**22 56 45.8**	**+0.1**
MOZS				*e*Sg		**Sg**	**22 56 54.4**	**+1.6**
OBKA	**Obir** SNR=18	**0.64**	**73**	⇓*e*Pg		**Pg**	**22 56 47.0**	**-0.6**
OBKA				⇑*i*Sg		**Sg**	**22 56 56.2**	**+0.3**
	comp=Z,29nm,0.2s							
LJU	**Ljubljana**	**0.67**	**115**	*i* Pg		**Pg**	**22 56 48.0**	**+0.1**
LJU				*i* Sg		**Sg**	**22 56 57.8**	**+1.2**
LJU								
	comp=Z,45nm,0.1s							
LJU	**Ljubljana**	**0.67**	**115**	*i* Pg		**Pg**	**22 56 48.0**	**0.0**
LJU				*i* Sg		**Sg**	**22 56 57.8**	**+1.2**
	comp=Z,45nm,0.1s							
LJU	**Ljubljana**	**0.67**	**115**	*i* Pg		**Pg**	**22 56 48.0**	**+0.1**
LJU				*i* Sg		**Sg**	**22 56 57.8**	**+1.2**
VNDS	**Vrh nad Dolski**	**0.76**	**107**	*i* Pg		**Pg**	**22 56 50.0**	**+0.3**
VNDS				*e*Sg		**Sg**	**22 57 00.5**	**+1.0**
KBA	**Koelnbreinsper**	**0.79**	**344**	⇑*i*Pg		**Pg**	**22 56 50.0**	**-0.2**
KBA				⇑*i*Sg		**Sg**	**22 57 00.9**	**+0.4**
	comp=Z,10nm,0.2s							
CEY	**Cerknica**	**0.79**	**137**	*i* Pg		**Pg**	**22 56 49.3**	**-1.1**
CEY				*e*Sg		**Sg**	**22 57 02.2**	**+1.5**
CEY								
	comp=Z,23nm,0.2s							
CEY	**Cerknica**	**0.79**	**137**	*i* Pg		**Pg**	**22 56 49.3**	**-1.1**
CEY				*e*Sg		**Sg**	**22 57 02.2**	**+1.5**
CEY	**Cerknica**	**0.79**	**137**	*i* Pg		**Pg**	**22 56 49.3**	**-1.1**
CEY				*e*Sg		**Sg**	**22 57 02.2**	**+1.5**
SKDS	**Skadanscina**	**0.82**	**162**	*i* Pg		**Pg**	**22 56 49.5**	**-1.4**
ABTA	**Abfaltersbach**	**0.90**	**299**	⇑*i*Pg		**Pg**	**22 56 52.1**	**-0.3**
ABTA				⇑*i*Sg		**Sg**	**22 57 04.6**	**+0.5**
	comp=Z,10nm,0.2s							
ZAVS	**Zavodnje**	**0.95**	**83**	*e*Pg		**Pg**	**22 56 52.4**	**-1.0**
PDKS	**Podkum**	**0.97**	**105**	*e*Pg		**Pg**	**22 56 53.3**	**-0.4**
PDKS								
	comp=Z,21nm,0.1s							
VISS	**Visnje**	**0.97**	**122**	*i* Pg		**Pg**	**22 56 53.7**	**-0.2**
VISS								
	comp=Z,20nm,0.2s							
SOKA	**Soboth**	**1.01**	**69**	⇓*i*Pg		**Pg**	**22 56 53.8**	**-0.8**
SOKA				⇓*i*Sg		**Sg**	**22 57 08.3**	**+0.5**
	comp=Z,3.9nm,0.2s							
PERS	**Pernice**	**1.05**	**72**	*i* Pg		**Pg**	**22 56 54.8**	**-0.6**
VARN	**Col Varnada, M**	**1.13**	**254**	⇑*i*Pg		**Pg**	**22 56 57.0**	**+0.2**
VARN				*i* Sg		**Sg**	**22 57 14.1**	**+2.6**
DOBS	**Dobrina**	**1.27**	**97**	*e*Pg		**Pg**	**22 56 59.1**	**-0.4**
DOBS								
	comp=Z,20nm,0.2s							
BOJS	**Bojanci**	**1.38**	**126**	*i* Pg		**Pg**	**22 57 01.0**	**-0.7**
BOJS				*e*Sg		**Sg**	**22 57 20.0**	**+0.4**
BOJS								
	comp=Z,8.0nm,0.1s							
BOJS	**Bojanci**	**1.38**	**126**	*i* Pg		**Pg**	**22 57 01.0**	**-0.7**
BOJS				*e*Sg		**Sg**	**22 57 20.0**	**+0.4**
BOJS	**Bojanci**	**1.38**	**126**	*i* Pg		**Pg**	**22 57 01.0**	**-0.7**
BOJS				*e*Sg		**Sg**	**22 57 20.0**	**+0.4**
BGLD	**Berchtesgaden**	**1.40**	**342**	⇓*i*Pg		**Pg**	**22 57 01.4**	**-0.6**
BGLD				*i* Sg		**Sg**	**22 57 20.1**	**-0.1**
GOLS	**Golise**	**1.40**	**102**	*e*Pg		**Pg**	**22 57 01.3**	**-0.8**
GOLS								
	comp=Z,19nm,0.3s							
SCE	**Schlegeis**	**1.52**	**299**	⇑*i*Pg		**Pg**	**22 57 03.4**	**-0.9**
SCE				*i* Sg		**Sg**	**22 57 23.9**	**-0.1**
ARSA	**Arzberg**	**1.58**	**53**	⇑*i*Pn		**Pn**	**22 57 02.8**	**-0.7**
ARSA				⇑*e*Pg		**Pg**	**22 57 04.7**	**-0.8**
	SNR=24							
ARSA				⇑*i*Sn		**Sn**	**22 57 24.1**	**-0.1**
MOA	**Molln**	**1.58**	**15**	⇑*i*Pg		**Pg**	**22 57 05.9**	**+0.4**
MOA				⇑*i*Sg		**Sg**	**22 57 27.6**	**+1.6**
	comp=Z,5.2nm,0.3s							
WTTA	**Wattenberg**	**1.68**	**305**	⇓*i*Pg		**Pg**	**22 57 06.6**	**-0.7**
WTTA				⇑*i*Sg		**Sg**	**22 57 30.1**	**+1.1**
	comp=Z,4.6nm,0.3s							
TEOL	**Teolo**	**1.69**	**236**	⇑*e*Pg		**Pg**	**22 57 06.0**	**-1.5**
TEOL				*e*Sg		**Sg**	**22 57 28.8**	**-0.7**
WATA	**Walderalm** SNR=6.2	**1.75**	**306**	⇑*e*Pg		**Pg**	**22 57 07.7**	**-1.0**
WATA				⇑*i*Sg	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**120**	P	**Pg**	**00 08 53.8**	**+0.9**
YOJ				S	**Sg**	**00 09 00.9**	**+1.1**
TWB1	**Santiao Chiao** baz=304	**0.56**	**301**	*i* P	**Pg**	**00 08 53.8**	**+0.2**
TWB1				*i* S	**Sg**	**00 09 00.9**	**-0.2**
TWC	**Suao** baz=258	**0.62**	**260**	*e*P	**Pg**	**00 08 54.1**	**-0.6**
TWC				*e*S	**Sg**	**00 09 02.2**	**-0.7**
ILA	**Ilan** baz=273	**0.70**	**274**	*e*P	**Pg**	**00 08 56.2**	**-0.1**
ILA				*e*S	**Sg**	**00 09 05.6**	**+0.1**
NWF	**Wu-fen Shan** baz=299	**0.75**	**298**	*i* P	**Pg**	**00 08 57.8**	**+0.5**
NWF				S	**Sg**	**00 09 07.3**	**+0.1**
ENA	**Nanau** baz=254	**0.76**	**248**	P	**Pg**	**00 08 57.0**	**-0.5**
ENA				*e*S	**Sg**	**00 09 06.8**	**-0.7**
TWE	**Neicheng** baz=269	**0.77**	**270**	*i* P	**Pg**	**00 08 57.1**	**-0.6**
TWE				S	**Sg**	**00 09 07.7**	**-0.1**
ENTT	**Nioudou** baz=264	**0.87**	**265**	*i* P	**Pg**	**00 08 59.2**	**-0.3**
ENTT				S	**Sg**	**00 09 10.0**	**-0.9**
TWY	**Chenhua** baz=304	**1.00**	**304**	*e*P	**Pb**	**00 09 02.6**	**+0.8**
TWY				S	**Sb**	**00 09 14.6**	**-0.4**
TWD	**Chiawan** baz=238	**1.05**	**233**	P	**Pb**	**00 09 03.4**	**+0.6**
TWD				S	**Sb**	**00 09 16.9**	**+0.4**
NSK	**Sanguang** baz=267	**1.05**	**268**	*i* P	**Pb**	**00 09 02.5**	**-0.3**
NSK				S	**Sb**	**00 09 15.1**	**-1.4**
TWS1	**Kuangyinshan** baz=291	**1.07**	**291**	*e*P	**Pb**	**00 09 04.1**	**+1.0**
TWS1				*e*S	**Sb**	**00 09 15.5**	**-1.4**
NNS	**Nan Shan** baz=254	**1.08**	**255**	P	**Pb**	**00 09 02.7**	**-0.5**
NNS				*e*S	**Sb**	**00 09 16.6**	**-0.5**
IRIF	**Iriomote-Funau**	**1.17**	**109**	P	**Pn**	**00 09 03.8**	**-1.0**
IRIF				S	**Sb**	**00 09 19.4**	**-0.4**
WHF	**Hehuan Shan** baz=226	**1.28**	**244**	P	**Pn**	**00 09 06.1**	**-0.1**
WHF				*e*S	**Sb**	**00 09 22.8**	**-0.1**
TWT	**Tachien** baz=261	**1.31**	**249**	*e*P	**Pn**	**00 09 07.4**	**+0.7**
TWT				*e*S	**Sb**	**00 09 24.3**	**+0.5**
ESL	**Shilin** baz=225	**1.34**	**228**	*e*P	**Pn**	**00 09 06.6**	**-0.5**
ESL				*e*S	**Sb**	**00 09 25.0**	**+0.3**
HATJ	**Hateruma jima**	**1.35**	**119**	*e*S	**Sb**	**00 09 23.7**	**-1.3**
NSTT	**Nanjuang** baz=266	**1.38**	**267**	*e*P	**Pn**	**00 09 08.5**	**+0.9**
NSTT				*e*S	**Sn**	**00 09 25.4**	**-0.4**
JKRS	**Kuro-shima**	**1.44**	**109**	P	**Pn**	**00 09 08.2**	**-0.3**
JKRS				S	**Sn**	**00 09 26.7**	**-0.6**
JIJ	**Ishigaki jima**	**1.52**	**103**	P	**Pn**	**00 09 09.0**	**-0.6**
JIJ				S	**Sn**	**00 09 28.5**	**-0.8**
EHY	**Hungye** baz=220	**1.63**	**222**	*e*P	**Pn**	**00 09 11.3**	**+0.2**
EHY				*e*S	**Sn**	**00 09 30.4**	**-1.4**
TWQ1	**Liyutan** baz=256	**1.63**	**257**	*e*P	**Pn**	**00 09 13.0**	**+1.9**
SMLT	**Sun Moon Lake** baz=227	**1.69**	**241**	P	**Pn**	**00 09 13.4**	**+1.4**
TYC	**Yuchr** baz=226	**1.72**	**242**	*e*P	**Pn**	**00 09 13.5**	**+1.2**
TYC				*e*S	**Sn**	**00 09 35.0**	**+0.9**
TWF1	**Yuli** baz=217	**1.76**	**220**	*e*P	**Pn**	**00 09 12.0**	**-0.8**
TWF1				*e*S	**Sn**	**00 09 32.4**	**-2.7**
ALS	**Alishan** baz=216	**1.97**	**233**	*e*P	**Pn**	**00 09 16.5**	**+0.7**
CHN5	**Tsauling** baz=218	**2.02**	**237**	P	**Pn**	**00 09 17.5**	**+1.1**
CHN5				*e*S	**Sn**	**00 09 41.8**	**+0.3**
ELDTW	**Lidau** baz=208	**2.05**	**222**	*e*P	**Pn**	**00 09 16.5**	**-0.4**
ELDTW				*e*S	**Sn**	**00 09 41.0**	**-1.3**
CHN4	**Tsaushan** baz=215	**2.23**	**233**	*e*P	**Pn**	**00 09 21.0**	**+1.8**
CHN4				*e*S	**Sn**	**00 09 48.6**	**+2.0**
CHN1	**Nanshi** baz=229	**2.38**	**230**	*e*P	**Pn**	**00 09 23.4**	**+2.0**

*CSEM **31** 00:46:46.0, 3744N×3878E, h6km, MD2.8, After ERD*
DDA 31 00:46:46.0, 3744N×3878E, h6km±4km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.03**	**94**	PG	Pg	00 46 47.6	+0.3
URFA				SG	Sg	00 46 49.0	+0.7
ATAB	**Bozova**	**0.39**	**274**	*e*P	Pg	00 46 54.0	+0.4
ATAB				*e*S	Sg	00 46 59.3	+0.6
SVRC	**Sivrice-ELAZID**	**1.02**	**24**	*e*PG	Pg	00 47 06.8	+1.1
SVRC				*e*SG	Sg	00 47 21.0	+2.0
AKCD	**Akcadag**	**1.09**	**322**	*e*P	Pg	00 47 07.9	+1.0
AKCD				*e*S	Sg	00 47 22.6	+1.5
KUZU	**Kuzuini**	**1.52**	**244**	*e*P	Pn	00 47 18.0	+4.3
KUZU				*e*S	Sn	00 47 36.5	+2.8

*ISCJB **31** 00:52:51.0±1.0, 4936N±004×128.1W±0.1, h10km, Error ellipse: s-maj=11.2km s-min=5.4km az=169.4*
*IDC **31** 00:52:50.3±3.1, 4924N×12827W, h0km, mb3.2/1, mb1 3.7/5, mb1mx3.4/23, mbtmp3.3/5, ML3.4/4, Error ellipse: s-maj=63.8km s-min=14.6km az=69.0*
*NEIC **31** 00:52:52.0, 4927N×12794W, h10km, ML3.1(PGC), After PGC.*
*PGC **31** 00:52:52.3±1.3, 4927N×12794W, h10km, ML3.1/7, Mw3.8, 141km Wsw of Gold R., Bc Vancouver Island Region*
ISC 31 00:52:52.1±0.9, 4940N±004×1280W±01, h10km, n17, σ1§14/25, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**0.75**	**50**	⇑P	**Pg**	**00 53 06.8**	**+0.2**
EDB				⇑S	**Sg**	**00 53 16.7**	**+0.3**
BPBC	**Brooks Peninsu**	**0.78**	**11**	⇓P	**Pg**	**00 53 08.6**	**+1.5**
BPBC				⇑S	**Sg**	**00 53 19.7**	**+2.5**
MAYB	**Maynard**	**1.14**	**28**	⇓P	**Pb**	**00 53 13.8**	**-0.1**
MAYB				⇑S	**Sb**	**00 53 29.1**	**+0.3**
WOSB	**Woss**	**1.21**	**50**	⇓P	**Pn**	**00 53 13.9**	**-1.1**
HOLB	**Holberg**	**1.25**	**356**	⇓Pn	**Pn**	**00 53 15.3**	**-0.3**
HOLB				⇑Sn	**Sn**	**00 53 31.8**	**-0.6**
GDR	**Gold River**	**1.34**	**73**	⇓P	**Pn**	**00 53 14.7**	**-2.1**
PHC	**Port Hardy**	**1.36**	**16**	⇓Pn	**Pn**	**00 53 17.1**	**-0.1**
PHC				⇑Sn	**Sn**	**00 53 34.5**	**-0.8**
BBB	**Bella Bella** 2.7nm,0.3s,baz=123,slow=9.3,SNR=32	**2.79**	**359**	Pn	**Pn**	**00 53 37.5**	**+0.7**
BBB				Sn	**Sn**	**00 54 09.2**	**-1.3**
BBB	**Bella Bella** 12nm,0.3s,baz=109,slow=23,SNR=6.7	**2.79**	**359**	⇑Pn	**Pn**	**00 53 37.4**	**+0.7**
BBB				⇑Sn	**Sn**	**00 54 09.8**	**-0.7**
BBB	**Bella Bella**	**2.79**	**359**	Pn	**Pn**	**00 53 37.5**	**+0.7**
BBB				Sn	**Sn**	**00 54 09.2**	**-1.3**
PGC	**Sidney**	**3.09**	**102**	*e*Pn	**Pn**	**00 53 40.4**	**-0.5**
NLWA	**Neilton Lookou**	**3.41**	**124**	*e*Pn	**Pn**	**00 53 44.0**	**-1.3**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=313,slow=14,SNR=4.1	**12.99**	**144**	Pn	**Pn**	**00 55 59.3**	**+2.7**
PDAR	**Pinedale Array**	**14.40**	**110**	Pn	**Pn**	**00 56 19.1**	**+3.2**
	0.1nm,0.3s,baz=306,slow=11,SNR=5.7						
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=213,slow=12,SNR=11	**15.07**	**24**	Pn	**Pn**	**00 56 24.4**	**-0.4**
YKA	**Yellowknife Ar**	**15.07**	**24**	Pn	**Pn**	**00 56 24.4**	**-0.4**
TXAR	**Lajitas Array** 0.3nm,0.8s,baz=335,slow=8.3,SNR=4.1	**27.28**	**128**	P	**P**	**00 58 37.1**	**+0.6**

*NEIC **31** 01:07:25.4, 35.11N×27.10E, h5km, MD3.6(ATH), After ATH.*
*ATH **31** 01:07:25.2, 35.10N±27.11E, h5km±3km, MD3.6/3*
*ISCJB **31** 01:07:27.8±1.3, 3526N±007×2702E±007, h10km, Error ellipse: s-maj=11.9km s-min=5.8km az=147.4*
*CSEM **31** 01:07:28.4±0.3, 3531N×2699E, h10km, MD3.6, Error ellipse: s-maj=7.5km s-min=2.9km az=163.0*
*THE **31** 01:07:30.1, 3533N×2690E, h0km±6km, Error ellipse: s-maj=15.6km s-min=1.0km az=152.0*
ISC 31 01:07:27.7±1.4, 3521N±008×2701E±009, h9km±8km, n15, σ0§75/21, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.36**	**20**	*e*PB	**Pg**	**01 07 33.9**	**-0.8**
KARP				*e*SB	**Sg**	**01 07 40.9**	**+1.4**
NPS	**Neapolis**	**1.15**	**273**	*e*PG	**Pg**	**01 07 48.4**	**-1.3**
NPS				*e*SB	**Sb**	**01 08 05.7**	**+1.0**
ARG	**Arkhangelos**	**1.35**	**42**	*e*PB	**Pb**	**01 07 52.1**	**-1.1**
ARG	**Arkhangelos**	**1.35**	**42**	*e*Pb	**Pb**	**01 07 52.6**	**-0.6**
THR1	**Thera Island**	**1.71**	**313**	P	**Pn**	**01 07 57.2**	**-0.5**
THR1				S	**Sn**	**01 08 19.1**	**-0.6**
IDI	**Anoyia**	**1.74**	**273**	*e*Pn	**Pn**	**01 07 59.2**	**+1.1**
IDI	**Anoyia**	**1.74**	**273**	*e*Pn	**Pn**	**01 07 59.2**	**+1.1**
THR6	**Thira Island,**	**1.74**	**312**	P	**Pn**	**01 07 58.0**	**-0.1**
THR3	**Thira Island,**	**1.77**	**313**	P	**Pn**	**01 07 58.2**	**-0.4**
THR4	**Thira Island,**	**1.81**	**314**	P	**Pn**	**01 07 59.3**	**+0.2**
THR5	**Thira Island,**	**1.81**	**312**	P	**Pn**	**01 07 58.5**	**-0.6**
APE	**Apeiranthos**	**2.21**	**328**	P	**Pn**	**01 08 04.8**	**+0.3**
APE				S	**Sn**	**01 08 31.7**	**-0.3**
BLCB	**Balcova**	**3.17**	**0**	P	**Pn**	**01 08 18.5**	**+0.8**
BLCB				S	**Sn**	**01 08 55.9**	**+0.2**
CHOS	**Chios island**	**3.26**	**347**	P	**Pn**	**01 08 19.2**	**+0.2**
CHOS				S	**Sn**	**01 08 57.3**	**-0.7**
DID	**Didima**	**3.81**	**308**	P	**Pn**	**01 08 27.5**	**+0.9**

*ISCJB **31** 01:50:34.1±0.4, 2215S±003×7005W±005, h55km±3km, mb4.1/8, Error ellipse: s-maj=8.1km s-min=5.2km az=177.9*
*GUC **31** 01:50:34.8±0.8, 2223S×7005W, h44km±1km, ML4.5*
*NEIC **31** 01:50:34.7±1.1, 2220S×7005W, h48km±11km, mb3.6/1, Error ellipse: s-maj=15.0km s-min=10.9km az=84.0*
*IDC **31** 01:50:35.8±0.8, 2173S×6973W, h42km±6km, mb3.9/8, mb1 3.9/10, mb1mx3.8/18, mbtmp3.8/10, ML3.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/26, Error ellipse: s-maj=26.6km s-min=6.3km az=54.0*
ISC 31 01:50:35.1±0.4, 2220S±003×7007W±005, h48km±4km, h43km±2.6km:pP-P, n41, σ1§10/53, mb4.1/8, 7C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**0.17**	**311**	*e*P	**Pn**	**01 50 42.3**	**-0.8**
TOCH				*i* S	**Sn**	**01 50 48.0**	**-0.7**
TOCH				AML	AML	01 50 48.6	
	comp=N,90μm,0.2s						
MACH	**Maria Elena**	**0.28**	**89**	⇓*i*P	**Pn**	**01 50 44.0**	**0.0**
MACH				*i* S	**Sn**	**01 50 50.2**	**0.0**
PECH	**Pedro de Valdi**	**0.53**	**137**	⇓*i*P	**Pn**	**01 50 46.5**	**-0.2**
PECH				*i* S	**Sn**	**01 50 54.5**	**-0.5**
PECH				AML	AML	01 50 55.6	
	comp=E,93μm,0.4s						
PB04	**Plate Boundary**	**0.54**	**97**	⇑*i*P	**Pn**	**01 50 42.4**	**-4.3**
PB04				*i* S	**Sn**	**01 50 47.6**	**-7.5**
PB04				AML	AML	01 50 48.4	
	comp=E,58μm,0.1s						
MECH	**Mejillones**	**0.96**	**202**	⇑*i*P	**Pn**	**01 50 51.9**	**-0.4**
MECH				*i* S	**Sn**	**01 51 05.2**	**+0.2**
MECH				AML	AML	01 51 07.4	
	comp=E,16μm,0.4s						
LVC	**Limon Verde** baz=311,slow=9.3	**1.14**	**111**	P	**Pn**	**01 50 56.1**	**+1.4**
LVC				S	**Sn**	**01 51 10.8**	**+1.6**
	comp=E,574nm,0.3s,baz=16,slow=23,SNR=39						
LVC	**Limon Verde**	**1.14**	**111**	*e*Pn	**Pn**	**01 50 56.1**	**+1.4**
LVC				*e*Sn	**Sn**	**01 51 07.5**	**-1.8**
LVC	**Limon Verde**	**1.14**	**111**	⇓*i*P	**Pn**	**01 50 55.2**	**+0.5**
LVC				*i* S	**Sn**	**01 51 10.8**	**+1.5**
CEN1	**Los Morros**	**1.19**	**186**	⇑*i*P	**Pn**	**01 50 57.8**	**+2.5**
CEN1				*e*S	**Sn**	**01 51 14.9**	**+4.5**
PB01	**Plate Boundary**	**1.27**	**25**	⇓*e*P	**Pn**	**01 50 57.4**	**+0.9**
PB01				*i* S	**Sn**	**01 51 14.7**	**+2.2**
PB01				AML	AML	01 51 16.9	
	comp=E,13μm,0.3s						
ANCH	**Antofagasta**	**1.51**	**192**	⇓*e*P	**Pn**	**01 51 00.2**	**+0.5**
ANCH				*e*S	**Sn**	**01 51 19.1**	**+0.9**
SPCH	**San Pedro de A**	**1.86**	**113**	*e*P	**Pn**	**01 51 08.6**	**+4.1**
SPCH				*e*S	**Sn**	**01 51 32.2**	**+5.3**
SPCH				AML	AML	01 51 41.2	
	comp=E,6μm,0.8s						
HMBC	**Humberston**	**1.92**	**5**	⇑*e*P	**Pn**	**01 51 06.2**	**+0.8**
PSGC	**Pisagua**	**2.59**	**359**	⇑*e*P	**Pn**	**01 51 14.6**	**0.0**
MNMC	**Miæe Miæ**	**3.09**	**8**	⇑*e*P	**Pn**	**01 51 22.6**	**+1.3**
ARE	**Arequipa**	**5.87**	**346**	*e*P	**Pn**	**01 51 59.0**	**-0.6**
ARE				*e*S	**Sn**	**01 53 04.0**	**-1.5**
LCO	**Las Campanas** comp=E,20nm,0.6s	**6.80**	**185**	*e*Pn	**Pn**	**01 52 11.1**	**-1.3**
LCO				*e*Sn	**Sn**	**01 53 41.6**	**+13**
CFAA	**Coronel Fontan**	**9.51**	**171**	P	**Pn**	**01 52 47.7**	**-1.7**
	comp=E,0.1nm,0.3s,baz=343,slow=12,SNR=13						
CFAA				S	**Sn**	**01 54 46.4**	**+12**
	comp=E,0.2nm,0.3s,baz=194,slow=19,SNR=3.3						
CFAA	**Coronel Fontan**	**9.51**	**171**	P	**Pn**	**01 52 47.7**	**-1.7**
CFAA				S	**Sn**	**01 54 46.4**	**+12**
SIV	**San Ignacio** comp=E,1.8nm,0.3s,baz=247,slow=12,SNR=56	**10.51**	**56**	P	**Pn**	**01 53 02.0**	**-1.1**
CPUP	**Villa Florida**	**12.32**	**112**	P	**Pn**	**01 53 26.1**	**-1.9**
	comp=E,0.2nm,0.3s,baz=260,slow=10,SNR=3.4						
CPUP				LR	LR	01 58 59.7	
	comp=E,74nm,19.4s,baz=234,slow=41						
CPUP	**Villa Florida** comp=E,14nm,0.6s	**12.32**	**112**	*e*Pn	**Pn**	**01 53 28.7**	**+0.8**
CPUP				LR	LR	01 58 59.7	
TRQA	**Tornquist** comp=E,2.5nm,0.5s	**17.27**	**158**	*e*P	**Pn**	**01 54 33.5**	**+0.8**
PLCA	**Paso Flores**	**18.48**	**181**	P	**Pn**	**01 54 54.0**	**+6.5**
	comp=E,0.1nm,0.3s,baz=8.1,slow=7.1,SNR=2.5						
BDFB	**Brasilia**	**21.84**	**76**	P	**P**	**01 55 21.4**	**-2.2**
	comp=E,0.9nm,0.6s,mb3.4,baz=230,slow=17,SNR=3.5						
BDFB				LR	LR	02 04 50.7	
	comp=E,31nm,21.3s,baz=7.3,slow=40						
PCRV	**Puerto La Cruz** comp=E,23nm,1.1s,mb5.0,baz=102,slow=18,SNR=2.5	**32.62**	**10**	P	**P**	**01 56 57.7**	**-4.7**
TXAR	**Lajitas Array**	**60.60**	**326**	P	**P**	**02 00 41.4**	**+0.5**
	comp=E,0.3nm,0.7s,mb3.5,baz=126,slow=6.4,SNR=4.5						
TXAR				pP	pP	02 00 54.2	-0.4
	comp=E,0.3nm,0.7s,baz=131,slow=6.8,SNR=3.1						
DBIC	**Dimbokro**	**69.96**	**74**	P	**P**	**02 01 41.0**	**-1.0**
	comp=E,4.7nm,0.8s,mb4.5,baz=238,slow=23,SNR=6.7						
DBIC	**Dimbokro**	**69.96**	**74**	P	**P**	**02 01 41.0**	**-1.0**
NVAR	**Mina Array Bea**	**75.39**	**323**	P	**P**	**02 02 15.6**	**+1.9**
	comp=E,0.8nm,0.8s,mb3.7,baz=152,slow=6.6,SNR=5.2						
NVAR	**Mina Array Bea**	**75.39**	**323**	P	**P**	**02 02 15.6**	**+1.9**
SYO	**Syowa Base**	**76.22**	**160**	⇑*e*P	**P**	**02 02 17.2**	**-0.8**
TORD	**Torodi Ar. Bea** comp=E,3.7nm,0.8s,mb4.4,baz=255,slow=5.2,SNR=54	**78.60**	**71**	P	**P**	**02 02 31.7**	**-0.5**
TORD				pP	pP	02 02 42.9	-3.3
	comp=E,1.2nm,0.5s,baz=255,slow=5.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**78.60**	**71**	P	**P**	**02 02 31.7**	**-0.5**
TORD				pP	pP	02 02 42.9	-3.3
BOSA	**Boshof**	**84.06**	**118**	P	**P**	**02 03 01.0**	**0.0**
	comp=E,1.6nm,0.8s,mb4.2,baz=183,slow=16,SNR=3.7						
BOSA	**Boshof**	**84.06**	**118**	P	**P**	**02 03 01.0**	**0.0**
YKA	**Yellowknife Ar** comp=E,0.8nm,0.7s,mb4.2,baz=136,slow=4.3,SNR=23	**91.49**	**341**	P	**P**	**02 03 36.1**	**+0.3**
YKA				pP	pP	02 03 48.9	-1.2
	comp=E,0.6nm,0.9s,baz=139,slow=4.8,SNR=6.1						
ASAR	**Alice Springs**	**128.79**	**209**	PKP	PKPdf	02 09 37.8	-0.1
	comp=E,0.3nm,0.7s,baz=134,slow=2.2,SNR=4.2						
ASAR				pPKP	pPKPdf	02 09 52.0	-0.6
	comp=E,0.8nm,0.7s,baz=130,slow=2.3,SNR=4.1						
ZALV	**Zalesovo Beam** comp=E,0.5nm,0.6s,baz=270,slow=5.8,SNR=2.4	**143.04**	**25**	PKhKP		02 09 58.7	
ZALV				PKP	PKPdf	02 10 03.8	+0.6
	comp=E,1.1nm,0.7s,baz=318,slow=2.0,SNR=6.2						
ZALV	**Zalesovo Beam**	**143.04**	**25**	PKP		02 09 58.7	
ZALV				PKP	PKPdf	02 10 03.8	+0.6
MKAR	**Makanchi Array** comp=E,2.2nm,0.7s,baz=319,slow=2.0,SNR=16	**146.83**	**36**	PKPbc	PKPbc	02 10 09.7	-2.2

*IDC **31** 01:58:47.7±1.5, 3296S×179.18W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.9/17, mbtmp4.0/4, ML4.0/1, MS3.8/11, Ms1 3.8/11, ms1mx3.6/29, Error ellipse: s-maj=42.1km s-min=31.2km az=57.0*
*NEIC **31** 01:58:52.0±1.1, 3331S×17867W, h35km, Error ellipse: s-maj=25.8km s-min=13.0km az=110.0*
ISC 31 01:58:53.2±3.7, 3328S±009×1790W±02, h24km±26km, n34, σ1§08/17, mb4.0/4, MS3.8/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.80**	**206**	P	**Pn**	**02 00 03.9**	**-0.1**
PUZ	**Puketiti**	**5.28**	**204**	P	**Pn**	**02 00 05.9**	**-4.5**
PUZ				S	**Sn**	**02 01 11.0**	**+0.6**
MWZ	**Matawai**	**5.78**	**208**	P	**Pn**	**02 00 17.6**	**+0.3**
URZ	**Urewera** 3.6nm,0.3s,baz=146,slow=12,SNR=22	**5.88**	**211**	Pn	**Pn**	**02 00 19.2**	**+0.4**
URZ				Sn	**Sn**	**02 01 25.0**	**-0.4**
	3.9nm,0.3s,baz=120,slow=23,SNR=3.9						
URZ	**Urewera**	**5.88**	**211**	P	**Pn**	**02 00 17.7**	**-1.1**
OUZ	**Omahuta**	**6.42**	**250**	P	**Pn**	**02 00 28.5**	**+2.4**
BKZ	**Black Stump Fm**	**6.91**	**210**	P	**Pn**	**02 00 31.3**	**-1.5**
RAR	**Rarotonga** comp=E,101nm,19.1s,MS3.2,baz=294,slow=32	**20.87**	**60**	LR	LR	02 09 55.7	
TBI	**Tubuai** 288nm,30.5s	**27.76**	**77**	*e*LR	LR	02 11 40.7	
TBI	**Tubuai** 12nm,0.3s	**27.76**	**77**	*e*T		02 33 33.6	
PPT	**Papeete** 256nm,26.0s	**30.71**	**67**	*e*LR	LR	02 13 11.6	
PPT	**Papeete** 5.3nm,0.3s	**30.71**	**67**	*e*T		02 36 56.6	
STKA	**Stephens Creek** comp=E,190nm,18.6s,MS3.8,baz=26,slow=34	**33.09**	**261**	LR	LR	02 17 37.1	
CTA	**Charters Tower** 1.2nm,0.3s,mb4.3,baz=245,slow=14,SNR=3.9	**33.53**	**284**	P	**P**	**02 05 31.5**	**+0.5**
CTA				LR	LR	02 16 44.9	
	comp=Z,133nm,19.3s,MS3.7,baz=52,slow=32						
CTA	**Charters Tower**	**33.53**	**284**	P	**P**	**02 05 31.5**	**+0.5**
CTA				LR	LR	02 16 45.0	
ASAR	**Alice Springs** 0.8nm,0.4s,mb3.7,baz=107,slow=7.4,SNR=18	**42.18**	**271**	P	**P**	**02 06 42.2**	**-1.9**
WRA	**Warramunga Arr** 1.3nm,0.5s,mb3.9,baz=118,slow=7.6,SNR=5.7	**43.43**	**276**	P	**P**	**02 06 49.6**	**-4.6**
WRA				LR	LR	02 23 30.7	
	comp=Z,94nm,21.2s,MS3.7,baz=85,slow=34						
VNDA	**Vanda** comp=Z,15nm,19.3s,MS2.9,baz=346,slow=31	**45.16**	**186**	LR	LR	02 22 23.5	
QSPA	**South Pole Qui** 0.9nm,0.6s,mb4.0,baz=68,slow=2.9,SNR=8.0	**56.84**	**180**	P	**P**	**02 08 36.7**	**+1.6**
MAW	**Mawson** comp=Z,54nm,18.1s,MS3.8,baz=288,slow=34	**69.32**	**201**	LR	LR	02 38 45.8	
SNAA	**Sanae**	**75.31**	**179**	*e*	**P**	**02 10 33.2**	**-0.6**
SNAA				*e*	pP	02 10 39.0	-2.6
VNA3	**Neumayer Olymp**	**75.50**	**176**	*e*	**P**	**02 10 34.5**	**-0.4**
VNA3				*e*		02 10 39.7	
VNA2	**Neumayer--Watz** baz=153,slow=4.7	**75.92**	**177**	*e*	**P**	**02 10 37.8**	**+0.5**
VNA2				*e*		02 10 42.6	
FX1	**Attu Island--F** comp=Z,51nm,18.7s,MS4.0,baz=302,slow=32	**86.07**	**355**	LR	LR	02 44 44.9	
CMAR	**Chng Mai Arr** comp=Z,45nm,19.2s,MS3.9,baz=172,slow=36	**93.54**	**290**	LR	LR	02 54 39.2	
TXAR	**Lajitas Array** comp=Z,82nm,18.2s,MS4.2,baz=0.0,slow=34	**94.66**	**58**	LR	LR	02 51 45.9	
BBB	**Bella Bella** comp=Z,242nm,18.3s,MS4.7,baz=225,slow=32	**96.03**	**29**	LR	LR	02 50 03.4	
CPUP	**Villa Florida** comp=Z,63nm,19.6s,MS4.1,baz=48,slow=30	**98.86**	**129**	LR	LR	02 47 59.4	
JOF	**Joensuu**	**144.73**	**336**	*e*p	PKPdf	02 18 23.5	-3.5
KAF	**Kangasniemi**	**146.93**	**338**	*e*p	PKPdf	02 18 28.0	-2.7
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.7s,baz=16,slow=2.5	**151.44**	**350**	PKP	PKPbc	02 18 42.4	-1.7
NOA	**NORSAR Array B** comp=Z,1.8nm,0.9s,baz=29,slow=2.0,SNR=5.3	**151.44**	**350**	PKPbc	PKPbc	02 18 42.6	-1.5
BRTR	**Keskin Array B** comp=Z,0.7nm,0.9s,baz=72,slow=4.0,SNR=3.7	**153.07**	**293**	PKPbc	PKPbc	02 18 46.2	-2.3
TORD	**Torodi Ar. Bea** comp=Z,1.0nm,0.8s,baz=166,slow=3.6,SNR=5.5	**159.95**	**182**	PKPab	PKPab	02 19 28.0	-2.0

*ATH **31** 02:09:51.6, 3592N×2737E, h4km, MD3.3/3*
*NEIC **31** 02:09:51.6, 3592N×2737E, h4km, MD3.3(ATH), After ATH.*
*ISCJB **31** 02:09:52.2±0.8, 3576N±006×2748E±006, h9km±6km, Error ellipse: s-maj=11.2km s-min=4.9km az=143.6*
*CSEM **31** 02:09:52.8±0.1, 3580N×2747E, h15km, MD3.1, Error ellipse: s-maj=3.7km s-min=1.7km az=144.0*
*DDA **31** 02:09:53.4, 3589N×2767E, h6km±3km, Md3.1*
ISC 31 02:09:52.6±0.8, 3578N±006×2746E±006, h8km±7km, n10, σ1§07/19, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**226**	*e*PG	**Pg**	**02 09 59.7**	**+0.5**
KARP				*e*SG	**Sg**	**02 10 05.2**	**+1.5**
ARG	**Arkhangelos**	**0.69**	**51**	*e*PG	**Pg**	**02 10 04.7**	**-1.3**
ARG				*e*SG	**Sg**	**02 10 14.3**	**-0.7**
BDRM	**Kayabasi**	**1.28**	**359**	*e*P	**Pn**	**02 10 15.8**	**-0.9**
BDRM				*e*S	**Sb**	**02 10 33.5**	**0.0**
TURN	**Turunc**	**1.43**	**40**	*e*P	**Pn**	**02 10 13.1**	**-5.7**
TURN				*e*S	**Sn**	**02 10 29.1**	**-8.6**
NPS	**Neapolis**	**1.59**	**252**	*e*PB	**Pb**	**02 10 20.8**	**-1.4**
AKAS	**Kas**	**1.80**	**75**	*e*P	**Pn**	**02 10 23.8**	**-0.1**
AKAS				*e*S	**Sn**	**02 10 46.6**	**-0.3**
AYDN	**Tasoluk**	**1.91**	**10**	*e*P	**Pn**	**02 10 26.7**	**+1.4**
AYDN				*e*S	**Sn**	**02 10 51.1**	**+1.6**
IDI	**Anoyia**	**2.15**	**257**	*e*Pn	**Pn**	**02 10 28.5**	**-0.2**
IDI				*e*Sn	**Sn**	**02 10 54.2**	**-1.4**
IDI	**Anoyia**	**2.15**	**257**	*e*Pn

MBWA				*e*S		**Sn**	02 36 51.1	**-13**	
MBWA	**Marble Bar**	**12.28**	**161**	*e*Pn		**Pn**	02 34 45.9	**-2.7**	
	8.2nm,0.3s								
FITZ	**Fitzroy Crossi**	**13.07**	**132**	*e*P		**Pn**	02 34 58.5	**-0.8**	
	24nm,1.9s								
FITZ				*e*S		**Sn**	02 37 11.7	**-11**	
MEEK	**Meekatharra**	**17.28**	**170**	*e*P		**Pn**	02 35 54.1	**+0.9**	
	14nm,0.6s								
MEEK				*e*S		**S**	02 38 51.1	**-19**	
WRA	**Warramunga Arr**	**20.99**	**122**	P		**P**	02 36 36.2	**+1.9**	
	1.2nm,0.4s,baz=297,slow=12,SNR=5.8								
WRA				pP			02 36 52.7		
	2.3nm,0.5s,baz=299,slow=12,SNR=6.4								
WRA				S		**S**	02 40 21.9	**-2.4**	
	0.6nm,0.8s,baz=289,slow=24,SNR=4.5								
WRAB	**Tennant Creek**	**20.99**	**122**	*e*P		**P**	02 36 36.3	**+1.9**	
	9.2nm,1.2s								
WB2	**Warramunga Arr**	**21.00**	**122**	*e*P		**P**	02 36 36.4	**+2.0**	
WB2				*e*S		**S**	02 40 22.1	**-2.4**	
ASAR	**Alice Springs**	**22.56**	**131**	P		**P**	02 36 53.2	**+2.2**	
	2.6nm,0.5s,mb3.8,baz=307,slow=8.9,SNR=35								
ASAR				pP			02 37 10.6		
	1.6nm,0.6s,baz=303,slow=10,SNR=5.6								
ASAR				S		**S**	02 41 01.1	**+7.5**	
	1.5nm,0.6s,baz=298,slow=23,SNR=7.6								
CMAR	**Chiang Mai Arr**	**32.22**	**330**	P		**P**	02 38 18.8	**+0.5**	
	0.6nm,0.5s,mb3.6,baz=165,slow=8.6,SNR=5.2								
STKA	**Stephens Creek**	**32.90**	**136**	P		**P**	02 38 26.7	**+2.6**	
	1.4nm,0.6s,mb4.0,baz=303,slow=5.3,SNR=8.4								
SONM	**Songino Array**	**57.67**	**353**	P		**P**	02 41 38.5	**-1.0**	
	0.5nm,0.8s,mb3.6,baz=181,slow=9.5,SNR=3.0								
MKAR	**Makanchi Array**	**63.39**	**335**	P		**P**	02 42 18.9	**+0.4**	
	0.5nm,0.5s,mb3.7,baz=148,slow=7.1,SNR=14								
KURK	**Kurchatov**	**67.97**	**336**	P		**P**	02 42 47.8	**-0.1**	
	0.4nm,0.7s,mb3.4,baz=152,slow=5.0,SNR=3.0								
ZALV	**Zalesovo Beam**	**68.34**	**341**	P		**P**	02 42 49.5	**-0.6**	
	0.3nm,0.3s,mb3.6,baz=158,slow=5.9,SNR=4.4								
BVAR	**Borovoye Array**	**73.15**	**333**	P		**P**	02 43 18.3	**-1.1**	
	1.2nm,0.7s,mb3.9,baz=146,slow=11,SNR=6.3								
LSZ	**Lusaka**	**84.90**	**255**	*e*P		**P**	02 44 28.6	**+4.1**	
YKA	**Yellowknife Ar**	**116.09**	**23**	pPKP		pPKPdf	02 50 51.7	+0.3	
	0.2nm,0.5s,baz=311,slow=1.9,SNR=8.2								
BDFB	**Brasilia**	**150.09**	**213**	PKPbc		PKPbc	02 51 44.0	+3.8	
	1.3nm,0.5s,baz=111,slow=5.2,SNR=12								
BDFB				pPKPbc		pPKPbc	02 52 01.3	+1.0	
	1.6nm,0.7s,baz=101,slow=16,SNR=3.6								

*NEIC **31** 02:32:51.4, 1594N×9754W, h24km, MD3.6(MEX), After MEX.*

MEX 31 02:32:51.7±0.6, 1596N×9754W, h22km±42km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.71**	**307**	*i* P	Pb	02 33 03.0	-2.4
PNIG				*i* S	Sb	02 33 12.4	-2.4
PNIG	**Pinotepa**	**0.71**	**307**	*e*P	Pb	02 33 03.0	-2.4
PNIG				*i* S	Sb	02 33 12.4	-2.4
VHO	**Vista Hermosa**	**1.35**	**35**	*i* P	Pn	02 33 12.5	-2.7
VHO				*i* S	Sn	02 33 28.3	-4.1
VHO	**Vista Hermosa**	**1.35**	**35**	*e*P	Pn	02 33 12.5	-2.7
VHO				*i* S	Sn	02 33 28.3	-4.1
OXX	**Oaxaca**	**1.36**	**35**	*i* P	Pn	02 33 14.0	-1.4
OXX				*i* S	Sn	02 33 30.7	-2.0
HUIG	**Huatulco**	**1.39**	**98**	*e*P	Pn	02 33 13.2	-2.5
HUIG				*i* S	Sn	02 33 29.2	-4.2
UTMO	**Huajuapan**	**1.88**	**352**	*i* P	Pn	02 33 20.9	-1.6
UTMO				*i* S	Sn	02 33 42.6	-2.8
CMIG	**Matias Romero**	**2.78**	**66**	*i* P	Pn	02 33 33.3	-1.6
CMIG				*i* S	Sn	02 34 04.1	-3.7

*THR **31** 03:19:51.0±0.5, 3120N×4867E, h18km±7km, ML2.8*
*CSEM **31** 03:19:53.7±0.1, 3133N×4882E, h20km, ML2.8, Error ellipse: s-maj=6.0km s-min=1.6km az=117.0*
*ISCJB **31** 03:19:54.5±1.6, 3133N±007×488E±0.1, h26km±18km, Error ellipse: s-maj=22.1km s-min=6.7km az=30.2*
*KISR **31** 03:19:54.2, 3122N×4895E, h33km, ML2.5*

ISC 31 03:19:53.7±2.0, 3130N±008×488E±01, h7km±16km, n16, σ0§48/24, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.81**	**2**	*e*Pg	**Pg**	**03 20 08.3**	**-1.0**
SHGR				*e*Sg	**Sg**	**03 20 20.6**	**+0.8**
SHGR				AML	AML	03 20 37.7	
	comp=E,511nm,0.8s						
SHGR	**Shooshtar-Gavs**	**0.81**	**2**	*e*Pg	**Pg**	**03 20 08.3**	**-1.0**
	SNR=93						
SHGR				*e*Sg	**Sg**	**03 20 20.6**	**+0.8**
	SNR=93						
MIB	**Mutribah**	**1.94**	**220**	*e*P	**Pn**	**03 20 27.1**	**+0.1**
MIB	**Mutribah**	**1.94**	**220**	*e*P	**Pn**	**03 20 27.1**	**+0.2**
	baz=225						
UMR	**Umm Al-Rimmam**	**1.96**	**208**	*e*P	**Pn**	**03 20 27.3**	**-0.1**
KBD	**Kabd**	**2.31**	**204**	*e*P	**Pn**	**03 20 32.4**	**+0.3**
KBD				*e*S	**Sn**	**03 21 00.6**	**-0.2**
KBD	**Kabd**	**2.31**	**204**	*e*P	**Pn**	**03 20 32.4**	**+0.2**
	baz=208						
KBD				*e*S	**Sn**	**03 21 00.6**	**-0.3**
	baz=208						
KBD				AML	AML	03 21 04.5	
	comp=Z,23nm,0.4s,baz=208						
NAY	**Al-Naaiem**	**2.43**	**213**	*e*P	**Pn**	**03 20 34.3**	**+0.5**
NAY				*e*S	**Sn**	**03 21 04.4**	**+0.6**
	comp=Z,16nm,0.6s						
NAY	**Al-Naaiem**	**2.43**	**213**	*e*P	**Pn**	**03 20 34.3**	**+0.4**
	baz=217						
NAY				*e*S	**Sn**	**03 21 04.4**	**+0.6**
	baz=217						
NAY				AML	AML	03 21 07.9	
	comp=Z,16nm,0.6s,baz=217						
RDF	**Al-Radifah**	**2.59**	**204**	*e*P	**Pn**	**03 20 35.9**	**-0.1**
RDF				*e*S	**Sn**	**03 21 07.1**	**-0.6**
	comp=Z,30nm,0.4s						
RDF	**Al-Radifah**	**2.59**	**204**	*e*P	**Pn**	**03 20 35.9**	**-0.1**
	baz=208						
RDF				*e*S	**Sn**	**03 21 07.1**	**-0.6**
	baz=208						
RDF				AML	AML	03 21 14.0	
	comp=Z,30nm,0.4s,baz=208						
ASAO	**Ashtian**	**3.41**	**18**	*e*Pn	**Pn**	**03 20 47.4**	**+0.1**
ASAO				AML	AML	03 21 44.4	
	comp=E,13nm,0.5s						
NASN	**Na'in**	**3.74**	**65**	*e*Pn	**Pn**	**03 20 51.7**	**-0.1**
GHVR	**GHOM**	**3.82**	**33**	*e*Pn	**Pn**	**03 20 52.8**	**0.0**
GHVR				AML	AML	03 22 01.4	
	comp=E,16nm,0.8s						
GHVR				AML	AML	03 22 09.4	
	comp=N,11nm,0.6s						
SNGE	**Sanandaj**	**3.97**	**343**	*e*Pn	**Pn**	**03 20 54.2**	**-0.8**
SNGE				AML	AML	03 21 58.8	
	comp=E,7.1nm,0.5s						
DAMV	**Damavand**	**5.08**	**31**	*e*Pn	**Pn**	**03 21 10.6**	**+0.4**

NEIC 31 03:29:21.0, 4479N×11095W, h8km, ML3.6(SLC), After SLC., Yellowstone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YMR	**Madison River**	**0.12**	**185**	*e*Pg	Pg	03 29 24.3	+0.6
YMR				*e*Sg	Sg	03 29 27.0	+1.5
YNR	**Norris Junctio**	**0.21**	**111**	*e*Pg	Pg	03 29 25.8	+0.7
YNR				*e*Sg	Sg	03 29 28.5	+0.5
QLMT	**Earthquake Lak**	**0.34**	**277**	*e*Pg	Pg	03 29 28.4	+0.7
YFT	**Old Faithful**	**0.35**	**166**	*e*Pg	Pg	03 29 28.4	+0.7
BOZ	**Bozeman (W)**	**0.98**	**331**	*e*Pg	Pg	03 29 39.4	-0.4
MOOW	**Moose Ponds**	**1.05**	**172**	*e*Pg	Pg	03 29 40.7	-0.5
MOOW				*e*Sg	Sg	03 29 55.4	+0.6
LOHW	**Long Hollow**	**1.20**	**168**	*e*Pg	Pg	03 29 43.4	-0.6
LOHW				*e*Sg	Sg	03 30 00.8	+1.2
DCID1	**Drake Creek**	**1.21**	**188**	*e*Pg	Pg	03 29 43.8	-0.4
DCID1				*e*Sg	Sg	03 30 02.5	+2.7
RLMT	**Red Lodge**	**1.24**	**74**	*e*Pg	Pg	03 29 44.2	-0.6
RLMT				*e*Sg	Sg	03 30 00.4	-0.5
DLMT	**Dillon**	**1.30**	**297**	*e*Pg	Pg	03 29 45.9	-0.1
SNOW	**Snow King Moun**	**1.33**	**174**	*e*Pn	Pn	03 29 46.1	+0.2
GCMT	**Greycliff**	**1.35**	**42**	*e*Pn	Pn	03 29 46.6	+0.5
GCMT				*e*Sn	Sn	03 30 04.8	+0.5
MCMT	**McKenzie Canyo**	**1.35**	**272**	*e*Pn	Pn	03 29 47.0	+0.8
MCMT				*e*Sn	Sn	03 30 05.0	+0.7
RRI2	**Red Ridge**	**1.47**	**191**	*e*Pn	Pn	03 29 48.1	+0.3
RRI2				*e*Sn	Sn	03 30 09.2	+2.0
LRM	**Limekiln Ridge**	**1.48**	**315**	*e*Pn	Pn	03 29 47.8	-0.1
HRY	**Holter Researc**	**2.02**	**343**	*e*Pb	Pb	03 29 56.7	-1.2
BW06	**Boulder Array**	**2.26**	**153**	*e*Pn	Pn	03 30 00.9	+2.2
MSO	**Missoula**	**2.92**	**315**	*e*Pn	Pn	03 30 09.5	+1.7
HVU	**Hansel Valley**	**3.29**	**205**	*e*Pn	Pn	03 30 15.3	+2.5
EGMT	**Eagleton**	**3.34**	**14**	*e*Pn	Pn	03 30 15.3	+1.8
SWMT	**Swartz Lake**	**3.45**	**323**	*e*Pn	Pn	03 30 16.6	+1.6
SPUT	**South Promonto**	**3.65**	**198**	*e*Pb	Pb	03 30 25.6	-0.1
YBMT	**Yellow Bay**	**3.73**	**326**	*e*Pn	Pn	03 30 21.6	+2.6
JTMT	**Jette**	**3.75**	**323**	*e*Pn	Pn	03 30 21.3	+2.1
BSMT	**Bassoo Peak**	**4.05**	**320**	*e*Pn	Pn	03 30 25.8	+2.4
CTU	**Camp Tracy**	**4.14**	**188**	*e*Pn	Pn	03 30 24.6	+0.2
BGU	**Big Grassy Mou**	**4.15**	**202**	*e*Pn	Pn	03 30 27.1	+2.4
NOQ	**North Oquirrh**	**4.22**	**192**	*e*Pn	Pn	03 30 27.9	+2.2
DAU	**Daniels Canyon**	**4.38**	**183**	*e*Pn	Pn	03 30 27.9	+0.1
BMO	**Blue Mountains**	**4.52**	**273**	*e*Pn	Pn	03 30 31.7	+1.9
WALA	**Waterton Lakes**	**4.73**	**336**	*e*Pn	Pn	03 30 35.8	+3.2
DUG	**Dugway**	**4.79**	**197**	Pn	Pn	03 30 37.2	+3.7
MPU	**Maple Canyon**	**4.80**	**186**	*e*Pn	Pn	03 30 35.2	+1.7
NLU	**North Lily Min**	**4.90**	**190**	*e*Pn	Pn	03 30 35.4	+0.4
RSSD	**Black Hills**	**5.00**	**95**	*e*Pn	Pn	03 30 39.3	+3.0
ELK	**Elko**	**5.13**	**219**	*e*Pn	Pn	03 30 43.6	+5.5
ELK				*e*Sn	Sn	03 31 56.9	+19
LNOR	**Lincton Mounta**	**5.28**	**284**	*e*Pn	Pn	03 30 44.6	+4.4
LNOR				*e*Sg	Sg	03 32 11.1	+0.5
TMUT	**Trail Mountain**	**5.49**	**182**	*e*Pn	Pn	03 30 43.6	+0.5
SRU	**San Rafael**	**5.68**	**177**	*e*Pn	Pn	03 30 46.3	+0.6
OD2	**Odessa Site #2**	**5.99**	**298**	*e*Pn	Pn	03 30 51.5	+1.6
ISCO	**Idaho Springs**	**6.37**	**140**	*e*Pn	Pn	03 30 55.9	+0.8
ETW	**Entiat**	**7.09**	**297**	*e*Pn	Pn	03 31 06.6	+1.6
ETW				*e*Sg	Sg	03 33 08.2	-0.4

*IDC **31** 03:46:19.1±3.8, 5226N×16859W, h14km±23km, mb4.3/24, mb1 4.5/25, mb1mx4.5/27, mbtmp4.3/25, ML4.0/1, MS3.8/5, Ms1 3.8/5, ms1mx3.4/34, Error ellipse: s-maj=20.9km s-min=10.4km az=173.0*
*NEIC **31** 03:46:19.8±1.4, 5220N×16858W, h18km±7km, mb4.9/67, ML4.0(AEIC), Error ellipse: s-maj=7.8km s-min=3.7km az=170.0*
*ISCJB **31** 03:46:19.4±1.0, 5226N±005×16863W±004, h23km±6km, mb4.7/126, MS4.0/12, Error ellipse: s-maj=8.0km s-min=3.8km az=166.7*
*MOS **31** 03:46:21.1±1.0, 5234N×16879W, h33km, mb5.1/58, Error ellipse: s-maj=11.6km s-min=5.0km az=95.8*
*SZGRF **31** 03:46:25.3, 5241N×16723W, h33km, mb5.3, Fox Islands, Aleutian Islands, United States*
*BJI **31** 03:46:25.6, 5295N×16945W, h42km, mB5.4, mb4.9, Ms5.0, Msz4.6*

ISC 31 03:46:22.4±0.9, 5231N±005×16860W±004, h31km±5km, h33km±1.6km:pP-P, n316, σ0§99/330, mb4.7/126, MS4.0/12, 95C-14D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.68**	**347**	*e*Pg	**Pb**	**03 46 35.7**	**-0.1**
NIKO				S	**Sb**	**03 46 45.4**	**+0.4**
OKCE	**Okmok Cone E**	**1.15**	**13**	P	**Pn**	**03 46 39.6**	**-2.7**
OKCD	**Okmok Cone D**	**1.16**	**15**	P	**Pn**	**03 46 39.1**	**-3.3**
OKFG	**Magazine Ridge**	**1.18**	**20**	P	**Pn**	**03 46 39.0**	**-3.7**
OKFG				S	**Sn**	**03 46 57.5**	**-0.1**
UNV	**Unalaska Valle**	**1.99**	**39**	*e*Pn	**Pn**	**03 46 53.2**	**-0.7**
UNV				S	**Sn**	**03 47 17.3**	**-0.4**
ATKA	**Atka Island**	**3.44**	**270**	P	**Pn**	**03 47 11.1**	**-2.7**
ATKA				S	**Sn**	**03 47 55.4**	**+1.9**
GSTR	**Great Sitkin T**	**4.59**	**270**	*e*Pn	**Pn**	**03 47 30.2**	**+0.5**
GSTR				*e*Sn	**Sn**	**03 48 23.9**	**+2.0**
SPIA	**Saint Paul Isl**	**4.97**	**350**	P	**Pn**	**03 47 33.9**	**-0.9**
ADK	**Adak**	**5.00**	**268**	P	**Pn**	**03 47 32.5**	**-2.7**
ADK				S	**Sn**	**03 48 32.7**	**+0.8**
CHGN	**Chignik**	**7.17**	**52**	*e*Pn	**Pn**	**03 48 05.7**	**+0.8**
OHAK	**Old Harbor**	**10.11**	**55**	*e*P	**Pn**	**03 48 43.1**	**-2.2**
	23nm,0.7s						
KDAK	**Kodiak Island**	**10.69**	**53**	Pn	**Pn**	**03 48 50.9**	**-2.1**
	2.3nm,0.3s,baz=276,slow=10,SNR=13						
KDAK				Sn	**Sn**	**03 50 45.5**	**-6.0**
	0.3nm,0.3s,baz=26,slow=4.2,SNR=2.8						
KDAK	**Kodiak Island**	**10.69**	**53**	Pn	**Pn**	**03 48 50.9**	**-2.2**
KDAK				Sn	**Sn**	**03 50 45.5**	**-6.0**
FX1	**Attu Island--F**	**11.11**	**280**	Pn	**Pn**	**03 48 58.4**	**-0.5**
	3.9nm,0.3s,baz=236,slow=23,SNR=18						
FX1	**Attu Island--F**	**11.11**	**280**	Pn	**Pn**	**03 48 58.4**	**-0.5**
SVW2	**Sparrevohn**	**11.32**	**34**	*e*Pn	**Pn**	**03 49 04.8**	**+3.1**
GAMB	**Gambell**	**11.61**	**353**	*e*Pn	**Pn**	**03 49 08.4**	**+2.7**
	28nm,1.2s						
RSO	**Redoubt South**	**11.96**	**41**	*e*Pn	**Pn**	**03 49 11.7**	**+1.2**
SEW	**Seward**	**13.17**	**46**	*e*Pn	**Pn**	**03 49 25.2**	**-1.8**
	24nm,0.7s						
TNA	**Tin City**	**13.29**	**1**	*e*Pn	**Pn**	**03 49 30.8**	**+2.1**
	14nm,1.1s						
PPLA	**Purkeypile**	**13.73**	**33**	*e*Pn	**Pn**	**03 49 37.0**	**+2.4**
	84nm,1.5s						
CHUM	**Lake Minchumin**	**14.38**	**30**	*e*Pn	**Pn**	**03 49 45.9**	**+2.4**
	19nm,0.9s						
KTH	**Kantishna Hill**	**14.60**	**33**	*e*Pn	**Pn**	**03 49 47.2**	**+0.8**
	22nm,0.9s						
TRF	**Thorofare Moun**	**14.74**	**34**	*e*Pn	**Pn**	**03 49 48.1**	**-0.2**
	8.1nm,0.8s						
BPAW	**Bear Paw Mtn.**	**14.95**	**31**	*e*Pn	**Pn**	**03 49 52.0**	**+0.8**
	20nm,0.8s						
MCK	**McKinley**	**15.39**	**34**	*e*P	**Pn**	**03 49 56.7**	**-0.2**
MCK				pmax	pmax		
	comp=Z,259nm,3.0s						
MCK	**McKinley**	**15.39**	**34**	*e*Pn	**Pn**	**03 49 56.7**	**-0.2**
	comp=Z,259nm,3.0s						
PAX	**Paxson**	**16.24**	**40**	*e*P	**Pn**	**03 50 05.3**	**-2.6**
PAX				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PAX	**Paxson**	**16.24**	**40**	*e*P	**Pn**	**03 50 05.3**	**-2.6**
	comp=Z,9.1nm,0.8s						
COLA	**College**	**16.48**	**32**	*e*P	**Pn**	**03 50 09.6**	**-1.3**
COLA	**College**	**16.48**	**32**	*e*P	**Pn**	**03 50 09.4**	**-1.5**
	comp=Z,21nm,0.9s						
MENT	**Mentasta**	**16.92**	**41**	*e*P	**Pn**	**03 50 11.4**	**-5.1**
COLD	**Coldfoot**	**17.47**	**24**	*e*P	**Pn**	**03 50 24.1**	**+0.8**
	comp=Z,23nm,1.2s						
EGAK	**Eagle**	**18.79**	**38**	*e*P	**Pn**	**03 50 37.1**	**-2.3**
	comp=Z,9.4nm,0.7s						
HYT	**Haines Junctio**	**18.97**	**51**	*e*Pn	**Pn**	**03 50 41.9**	**+0.3**
DAWY	**Dawson**	**19.16**	**41**	*e*P	**Pn**	**03 50 42.1**	**-1.8**
SKAG	**Skagway**	**19.81**	**56**	*e*Pn	**Pn**	**03 50 50.9**	**-0.8**
	comp=Z,31nm,0.8s						
BILL	**Bilibino**	**19.87**	**332**	⇓*e*P	**Pn**	**03 50 49.3**	**-3.0**
BILL				*e*S	**Sn**	**03 54 17.6**	**-17**
BILL				pmax	pmax		
	comp=Z,11nm,0.9s						
BILL				MLR	MLR		
	comp=Z,200nm,14.0s						
BILL	**Bilibino**	**19.87**	**332**	*e*P	**Pn**	**03 50 52.4**	**0.0**
	comp=Z,26nm,1.0s						
PEA0B	**Petropavlovsk-**	**20.33**	**286**	*e*P	**P**	**03 50 56.0**	**+0.3**
PETK	**Petropavlovsk-**	**20.33**	**286**	P	**P**	**03 50 55.6**	**-0.1**
	comp=Z,24nm,0.6s,baz=84,slow=14,SNR=37						
DLBC	**Dease Lake**	**22.51**	**59**	P	**P**	**03 51 19.4**	**+0.4**
	comp=Z,2.8nm,0.9s,mb3.7,baz=256,slow=14,SNR=4.6						
SEY	**Seymchan**	**23.06**	**313**	⇑*e*P	**P**	**03 51 23.5**	**-1.2**
BBB	**Bella Bella**	**24.57**	**74**	LR	LR	03 59 47.3	
	comp=Z,220nm,18.5s,MS3.7,baz=256,slow=33						
YKA	**Yellowknife Ar**	**29.92**	**49**	P	**P**	**03 52 27.3**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.1,baz=269,slow=8.0,SNR=39						
YKA				PcP	PcP	03 55 27.5	-1.4
	comp=Z,0.8nm,0.7s,baz=292,slow=2.1,SNR=7.1						
YKA				ScP	ScP	03 59 09.1	+0.7
	comp=Z,0.6nm,0.9s,baz=287,slow=3.1,SNR=5.5						
YKA	**Yellowknife Ar**	**29.92**	**49**	P	**P**	**03 52 27.3**	**+0.2**
YKA						03 55 27.5	
ETW	**Entiat**	**30.94**	**79**	*e*P	**P**	**03 52 37.2**	**+1.0**
EDM	**Edmonton**	**32.74**	**66**	*e*P	**P**	**03 52 52.0**	**+0.1**
TIXI	**Tiksi**	**33.03**	**329**	⇑*e*P	**P**	**03 52 52.8**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TIXI	**Tiksi**	**33.03**	**329**	*e*P	**P**	**03 52 53.6**	**-0.7**
	comp=Z,5.2nm,0.8s,mb4.5						
YAK	**Yakutsk**	**33.57**	**311**	⇑*e*P	**P**	**03 52 57.4**	**-1.6**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
YAK	**Yakutsk**	**33.57**	**311**	*e*P	**P**	**03 52 57.9**	**-1.1**
	comp=Z,7.0nm,0.9s,mb4.6						
MOD	**Modoc**	**33.89**	**88**	*e*P	**P**	**03 53 03.4**	**+1.3**
	comp=Z,8.8nm,1.0s,mb4.6						
BSMT	**Bassoo Peak**	**34.15**	**76**	*e*P	**P**	**03 53 04.8**	**+0.5**
MSO	**Missoula**	**35.14**	**77**	*e*P	**P**	**03 53 12.4**	**-0.4**
	comp=Z,8.6nm,1.3s,mb4.5						
HABR	**Khabarovsk**	**35.36**	**287**	*e*P	**P**	**03 53 12.5**	**-2.2**
HABR				*e**SP	sP	03 53 26.1	-1.4
HABR				*e*		03 55 41.0	
HABR				*e*S	**S**	**03 58 45.2**	**-1.6**
HABR				*e**SS	sS	03 59 01.7	0.0
HABR				*e*		04 03 29.9	
HABR				MLR	MLR		
	comp=Z,76nm,16.0s,MS3.5						
HABR				MLR	MLR		
	comp=Z,97nm,15.0s						
RES	**Resolute Bay**	**36.22**	**26**	P	**P**	**03 53 19.9**	**-1.9**
	comp=Z,2.1nm,0.9s,mb4.1,baz=238,slow=12,SNR=4.9						
RES				PcP	PcP	03 55 46.1	-0.2
	comp=Z,1.5nm,0.9s,baz=35,slow=1.8,SNR=4.0						
HRY	**Holter Researc**	**36.46**	**76**	*e*P	**P**	**03 53 30.7**	**+6.6**
HLID	**Hailey**	**36.56**	**82**	*e*P	**P**	**03 53 25.9**	**+0.8**
	comp=Z,30nm,1.9s,mb4.8						
EGMT	**Eagleton**	**37.03**	**73**	*e*P	**P**	**03 53 29.8**	**+0.8**
	comp=Z,14nm,1.0s,mb4.8						
NVAR	**Mina Array Bea**	**37.19**	**92**	P	**P**	**03 53 30.5**	**0.0**
	comp=Z,1.6nm,0.9s,mb3.9,baz=291,slow=7.6,SNR=8.0						
PDAR	**Pinedale Array**	**39.95**	**80**	P	**P**	**03 53 53.0**	**-0.5**
	comp=Z,5.7nm,0.7s,mb4.4,baz=304,slow=4.6,SNR=45						
MJAR	**Matsushiro Arr**	**40.17**	**268**	P	**P**	**03 53 55.8**	**+0.4**
	comp=Z,3.4nm,1.0s,mb4.0,baz=53,slow=6.4,SNR=4.1						
MAT	**Matsushiro**	**40.17**	**269**	P	**P**	**03 53 55.0**	**-0.4**
MDJ	**Mudanjiang**	**40.57**	**285**	P	**P**	**03 53 55.0**	**-3.6**
MDJ				AMB	AMB		
	comp=Z,526nm,5.4s						
FCC	**Fort Churchill**	**40.61**	**50**	*e*P	**P**	**03 53 58.7**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.4						
BOD	**Bodaibo**	**42.40**	**309**	*e*P	**P**	**03 54 11.8**	**-1.7**
BOD				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
CN2	**Changchun**	**43.48**	**286**	*e*P	**P**	**03 54 21.8**	**-0.6**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
ULM	**Lac du Bonnet**	**43.76**	**62**	P	**P**	**03 54 23.6**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.0,baz=310,slow=7.0,SNR=3.9						
AGMN	**Agassiz Refuge**	**44.83**	**65**	*e*P	**P**	**03 54 31.8**	**-1.4**
	comp=Z,7.2nm,1.0s,mb4.5						
KSRS	**Korea Array**	**45.88**	**277**	P	**P**	**03 54 42.0**	**+0.4**
	comp=Z,7.7nm,0.9s,mb4.6,baz=50,slow=7.0,SNR=10						
KSRS				LR	LR	04 12 47.4	
	comp=Z,79nm,18.8s,MS3.7,baz=343,slow=35						
ANMO	**Albuquerque**	**46.70**	**86**	⇑*e*P	**P**	**03 54 48.8**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SUMG	**Summit**	**50.70**	**17**	*e*P	**P**	**03 55 19.1**	**+0.8**
	comp=Z,28nm,0.9s,mb5.2						
TLY	**Talaya**	**50.76**	**307**	*e*P	**P**	**03 55 18.7**	**-0.3**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
TLY				MLR	MLR		
	comp=Z,124nm,19.0s,MS4.0						
BJI	**Beijing**	**51.24**	**288**	P	**P**	**03 55 22.3**	**-0.5**
BJI				S	**S**	**04 02 37.0**	**-2.2**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
BJI				AMB	AMB		
	comp=Z,224nm,4.1s						
BJI				LR	LR		
	comp=N,338nm,14.5s,MS4.7						
BJI				LR	LR		
	comp=E,405nm,14.9s,MS4.7						
BJI				LR	LR		
	comp=Z,117nm,18.1s,MS4.0						
ULN	**Ulaanbaatar**	**51.37**	**301**	*e*P	**P**	**03 55 23.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**51.37**	**301**	*e*P	**P**	**03 55 23.4**	**-0.3**
	comp=Z,10.0nm,0.8s,mb4.8			

LZH LR LR
comp=Z,467nm,18.5s,MS4.7
WMQ Urumqi 63.94 308 P **P** **03 56 52.3 +0.2**
WMQ AMB AMB
comp=Z,8.0nm,1.2s,mb4.6
SVE Sverdlovsk 63.96 332⇑ *eP* **P** **03 56 52.2 +0.2**
SVE pmax pmax
comp=Z,22nm,1.0s,mb5.1
BVA0 Borovoye Array 64.03 325 P **P** **03 56 52.2 -0.3**
BVA0 pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BRVK Borovoye 64.03 325 *eP* **P** **03 56 52.8 +0.2**
BRVK pmax pmax
comp=Z,16nm,0.9s,mb5.0
BRVK Borovoye 64.03 325 *eP* **P** **03 56 52.8 +0.3**
comp=Z,16nm,0.9s,mb5.0
JOF Joensuu 64.05 350 *ep* **P** **03 56 51.2 -1.3**
comp=Z,7.4nm,0.6s,mb4.9
MK31 Makanchi Array 64.19 314 *eP* **P** **03 56 53.0 -0.7**
MKAR Makanchi Array 64.19 314 P **P** **03 56 52.6 -1.0**
comp=Z,6.5nm,0.8s,mb4.7,baz=49,slow=6.4,SNR=65
CD2 Chengdu 64.84 288 P **P** **03 56 59.0 +0.8**
CD2 AP pP 03 57 09.5 +1.7
CD2 XP sP 03 57 13.5 +2.1
CD2 PP PP 03 59 23.5 +2.9
CD2 S **S** **04 05 35.3 -1.7**
CD2 XS sS 04 05 52.5 -0.3
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
CD2 AMB AMB
comp=Z,310nm,5.7s
CD2 LR LR
comp=N,480nm,5.4s
CD2 LR LR
comp=Z,440nm,5.3s
ARU Arti 64.89 333 *c iP* **P** **03 56 57.7 -0.4**
ARU *e* 03 59 16.4
ARU S **S** **04 05 36.4 -0.4**
ARU pmax pmax
comp=Z,18nm,1.2s,mb5.0
ARU Arti 64.89 333 *eP* **P** **03 56 58.1 0.0**
comp=Z,21nm,1.0s,mb5.1
KLMR Klimovskoe 64.96 345 *eP* **P** **03 56 56.1 -2.4**
KLMR pmax pmax
comp=Z,13nm,1.0s,mb4.9
KAF Kangasniemi 65.31 352 *ep* **P** **03 56 59.2 -1.5**
comp=Z,19nm,0.6s,mb5.3,baz=6.5,slow=6.1
KAF Kangasniemi 65.31 352 *eP* **P** **03 56 59.2 -1.5**
KAF pmax pmax
comp=Z,19nm,0.6s,mb5.3
GYA Guiyang 66.41 283 P **P** **03 57 08.5 +0.2**
GYA AP pP 03 57 20.5 +2.5
GYA XP sP 03 57 26.5 +4.9
GYA PCP PcP 03 57 39.3 +1.4
GYA PP PP 03 59 36.8 +2.4
GYA SCP 04 01 37.8
GYA S S 04 05 53.3 -3.0
GYA XS sS 04 06 11.8 -0.3
GYA SKS 04 06 59.0
GYA SS SS 04 10 11.3 -1.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,490nm,19.2s,MS4.9
GYA LR LR
comp=E,460nm,20.1s,MS4.7
GYA LR LR
comp=Z,470nm,21.7s,MS4.7
NB2 NORSAR Subarra 67.00 0 P **P** **03 57 11.1 -0.5**
comp=Z,3.5nm,0.6s,mb4.6,baz=359,slow=6.2
NOA NORSAR Array B 67.00 0 P **P** **03 57 11.3 -0.2**
comp=Z,4.5nm,0.6s,mb4.7,baz=0.2,slow=6.3,SNR=19
VSU Vasula 68.88 351 *eP* **P** **03 57 22.5 -0.9**
VSU pmax pmax
comp=Z,42nm,1.1s,mb5.3
TKM2 Tokmak 2 70.17 315 *eP* **P** **03 57 32.0 +0.4**
TKM2 pmax pmax
comp=Z,11nm,1.3s,mb4.6
TKM2 Tokmak 2 70.17 315 *eP* **P** **03 57 32.0 +0.4**
comp=Z,11nm,1.3s,mb4.6
USP Ospenovka 70.36 316 P **P** **03 57 33.0 +0.2**
SNR=14
KBK Karagaybulak 70.66 316 P **P** **03 57 35.5 +0.8**
SNR=9.0
AB31 Akbulak array 70.73 329 P **P** **03 57 34.8 -0.2**
AB31 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
AAK Ala-Archa 70.88 316 *eP* **P** **03 57 36.3 +0.3**
AAK pmax pmax
comp=Z,13nm,0.9s,mb4.9
AAK Ala-Archa 70.88 316 P **P** **03 57 36.4 +0.5**
SNR=8.7
AAK Ala-Archa 70.88 316 *eP* **P** **03 57 36.3 +0.4**
comp=Z,13nm,0.9s,mb4.8
KK31 Karatay Array 72.15 319⇑ *eP* **P** **03 57 43.1 -0.5**
KK31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LSA Lhasa 72.90 296 P **P** **03 57 49.5 +1.2**
SUW Suwalki 73.59 353 *eP* **P** **03 57 51.4 -0.6**
SUW Suwalki 73.59 353 *eP* **P** **03 57 51.4 -0.6**
VRHR Novokhopersk 73.85 341 *eP* **P** **03 57 56.5 +2.9**
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,40nm,0.7s
VSR Storozhevoye 74.22 342 *eP* **P** **03 57 55.2 -0.5**
VSR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VSR pmax pmax
comp=N,3.0nm,1.2s
VSR pmax pmax
comp=E,5.0nm,0.8s
VORD Divnogorie 74.43 342 *eP* **P** **03 57 53.9 -3.0**
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,60nm,0.7s
VORD pmax pmax
comp=E,30nm,0.6s
SHL Shillong 75.69 293 *eP* **P** **03 58 03.0 -1.6**
WTSB Winterswijk 76.03 3 *eP* **P** **03 58 06.3 +0.2**
comp=E,10nm,1.1s,mb4.7
AKASG Malin Array Be 76.26 348 P **P** **03 58 06.7 -0.8**
comp=E,2.1nm,0.4s,mb4.5,baz=13,slow=5.7,SNR=23
KIEV Kiev 76.27 348 *eP* **P** **03 58 06.6 -0.9**
KIEV pmax pmax
comp=Z,15nm,1.0s,mb4.9
KIEV Kiev 76.27 348 *eP* **P** **03 58 06.6 -0.9**
comp=Z,15nm,1.0s,mb4.9
TAPN Taplejung 76.62 297 *eP* **P** **03 58 09.7 -0.2**
comp=Z,17nm,0.7s,mb5.1
CLL Collm 76.75 359⇓ *iP* **P** **03 58 10.3 +0.1**
CLL pmax pmax
comp=Z,13nm,1.2s,mb4.7
CLL Collm 76.75 359⇓ *iP* **P** **03 58 10.3 +0.1**
comp=Z,13nm,1.2s,mb4.7
CLL *e*PP PP 04 01 01.0 -1.1
CMAR Chiang Mai Arr 77.09 283 P **P** **03 58 12.8 +0.2**
comp=Z,6.8nm,0.8s,mb4.6,baz=26,slow=6.5,SNR=33
CMAR LR LR 04 35 42.6
comp=Z,50nm,19.3s,MS3.9,baz=45,slow=38
KSP Ksiaz 77.14 357 *eP* **P** **03 58 12.8 +0.4**
KSP Ksiaz 77.14 357 *eP* **P** **03 58 12.6 +0.2**
GUN Gumba 77.17 299 *eP* **P** **03 58 13.4 +0.5**
comp=Z,9.3nm,0.5s,mb5.0
BRG Berggiesshubel 77.17 358 *i* P **P** **03 58 13.0 +0.4**
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BRG Berggiesshubel 77.17 358 *i* P **P** **03 58 13.0 +0.5**
comp=Z,9.4nm,1.1s,mb4.6
HGN Heimansgroeve 77.20 4 *eP* **P** **03 58 12.7 0.0**
comp=Z,19nm,1.2s,mb4.9
JIRN Jiri 77.20 299 *eP* **P** **03 58 13.7 +0.6**
comp=Z,28nm,0.7s,mb5.3
MEM Membach 77.35 4 P **P** **03 58 14.2 +0.6**
comp=Z,8.9nm,1.3s,mb4.5
MOX Moxa 77.42 360 *eP* **P** **03 58 14.7 +0.7**
comp=Z,34nm,1.7s,mb5.0
MOX Moxa 77.42 360 *eP* **P** **03 58 14.7 +0.7**
MOX pmax pmax
comp=Z,34nm,1.7s,mb5.0
UPC Upice 77.48 357 *eP* **P** **03 58 14.3 0.0**
PVCC Panska Ves 77.50 358 *eP* **P** **03 58 14.7 +0.3**
BCLA Clavier 77.52 4 P **P** **03 58 14.4 -0.1**
comp=Z,20nm,3.1s
RAMN Ramite 77.54 298 *eP* **P** **03 58 15.2 +0.2**
comp=Z,34nm,0.8s,mb5.3
KKN Kakani 77.58 299 *eP* **P** **03 58 15.5 +0.2**
OJC Ojcow 77.60 354 *eP* **P** **03 58 15.2 +0.2**
DPC Dobruska-Polom 77.63 357 *eP* **P** **03 58 15.9 +0.7**
LVV L'vov 77.68 352 *eP* **P** **03 58 14.3 -1.2**
PKI Pulchoki 77.69 299 *eP* **P** **03 58 15.8 -0.1**
GKN Gorkha 77.76 300 *eP* **P** **03 58 16.3 +0.1**
DOU Dourbes 77.81 4 P **P** **03 58 15.7 -0.4**
GIVF Givet 77.81 4⇑ *iP* **P** **03 58 16.2 0.0**
comp=Z,36nm,1.1s,mb4.9
GIVF Givet 77.81 4⇑ *iP* **P** **03 58 16.2 0.0**
GIVF pmax pmax
comp=Z,18nm,1.1s,mb4.9
GIVF Givet 77.81 4⇑ *iP* **P** **03 58 16.2 0.0**
comp=Z,18nm,1.1s,mb4.9
DMN Daman 77.82 299 *eP* **P** **03 58 16.9 +0.3**
BAIF Baives 77.82 5 *eP* **P** **03 58 16.4 +0.2**
comp=Z,42nm,1.2s,mb5.0
BAIF Baives 77.82 5 *eP* **P** **03 58 16.4 +0.2**
BAIF pmax pmax
comp=Z,21nm,1.2s,mb4.9
BAIF Baives 77.82 5 *eP* **P** **03 58 16.4 +0.2**
comp=Z,21nm,1.2s,mb5.0
NKC Novy Kostel 77.83 359 *eP* **P** **03 58 16.7 +0.4**
NKC *ep*P pP 03 58 25.8 -0.3
DANN Dangsing 77.94 301 *eP* **P** **03 58 17.8 +0.5**
comp=Z,41nm,0.6s,mb5.5
KWP Kalwaria 77.98 353 *eP* **P** **03 58 17.7 +0.6**
KWP Kalwaria 77.98 353⇓ *iP* **P** **03 58 17.8 +0.7**
KWP Kalwaria 77.98 353 *eP* **P** **03 58 17.7 +0.6**
PRU Pruhonice 78.04 358 *eP* **P** **03 58 18.0 +0.5**
PRU *ep*P pP 03 58 26.2 -1.1
OKC Ostrava-Krasne 78.07 356 *eP* **P** **03 58 17.4 -0.2**
WLF Walferdange 78.30 3 P **P** **03 58 19.8 +0.9**
STHS Stebnicka Huta 78.31 353 *eP* **P** **03 58 20.1 +1.2**
STHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
STHS Stebnicka Huta 78.31 353 *eP* **P** **03 58 20.1 +1.2**
comp=Z,11nm,1.1s,mb4.7
NIE Niedzica 78.36 354 *eP* **P** **03 58 19.7 +0.4**
GRA1 Grafenberg Arr 78.37 0 *eP* **P** **03 58 20.2 +0.9**
comp=Z,28nm,1.2s,mb5.1
GRF Grafenberg Arr 78.37 0 *eP* **P** **03 58 20.2 +0.9**
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.1
GRF Grafenberg Arr 78.37 0 *eP* **P** **03 58 20.2 +0.9**
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.1
GRF Grafenberg Arr 78.37 0 *eP* **P** **03 58 20.2 +0.9**
comp=Z,28nm,1.2s,mb5.1
KOLN Koldanda 78.49 301 *eP* **P** **03 58 20.5 +0.2**
VRAC Vranov 78.66 357⇓ *iP* **P** **03 58 21.9 +1.0**
VRAC Vranov 78.66 357⇓ *P* **P** **03 58 21.9 +1.0**
TREC Trest 78.71 357 *eP* **P** **03 58 21.5 +0.3**
FLN La Foliniere 78.80 8⇑ *iP* **P** **03 58 21.2 -0.4**
comp=Z,28nm,1.1s,mb4.8
FLN La Foliniere 78.80 8⇑ *iP* **P** **03 58 21.2 -0.4**
FLN pmax pmax
comp=Z,14nm,1.1s,mb4.8
FLN La Foliniere 78.80 8⇑ *iP* **P** **03 58 21.2 -0.4**
comp=Z,14nm,1.1s,mb4.8
CRVS Cervenica-Dubn 78.80 353 *eP* **P** **03 58 22.1 +0.4**
CRVS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
CRVS Cervenica-Dubn 78.80 353 *eP* **P** **03 58 22.1 +0.4**
comp=Z,5.0nm,1.1s,mb4.4
KHC Kasperske Hory 78.92 359⇑ *eP* **P** **03 58 22.0 -0.3**
KHC Kasperske Hory 78.92 359 *eP* **P** **03 58 23.1 +0.8**
KHC *ep*P pP 03 58 30.5 -1.6
LDF La Druitiere 78.99 8⇑ *iP* **P** **03 58 22.4 -0.3**
comp=Z,6.8nm,0.5s,mb4.6
LDF La Druitiere 78.99 8⇑ *iP* **P** **03 58 22.4 -0.3**
LDF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
LDF La Druitiere 78.99 8⇑ *iP* **P** **03 58 22.4 -0.3**
comp=Z,3.4nm,0.4s,mb4.6
GRR Gorron 79.14 8 *eP* **P** **03 58 23.4 -0.1**
GERES GERESS Array B 79.20 358 P **P** **03 58 24.6 +0.7**
comp=Z,3.5nm,0.8s,mb4.3,baz=6.7,slow=4.6,SNR=34
VYHS Vyhne 79.37 355 *eP* **P** **03 58 25.5 +0.7**
VYHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
VYHS Vyhne 79.37 355 *eP* **P** **03 58 25.5 +0.7**
comp=Z,8.0nm,1.0s,mb4.6
MEZF Maizieres J'vi 79.42 4 *eP* **P** **03 58 25.2 +0.1**
comp=Z,19nm,1.1s,mb4.7
MEZF Maizieres J'vi 79.42 4 *eP* **P** **03 58 25.2 +0.1**
comp=Z,19nm,1.1s,mb5.0
SMOL Smolenice 79.42 356 *eP* **P** **03 58 26.3 +1.2**
TRPA Tarpa 79.49 352⇓ *iP* **P** **03 58 26.1 +0.7**
CDF Champ du Feu 79.59 3⇑ *iP* **P** **03 58 26.2 +0.2**
comp=Z,8.7nm,0.8s,mb4.5
CDF Champ du Feu 79.59 3⇑ *iP* **P** **03 58 26.2 +0.2**
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
CDF Champ du Feu 79.59 3⇑ *iP* **P** **03 58 26.2 +0.2**
comp=Z,4.3nm,0.8s,mb4.4
BFO Black Forest 79.70 2 *eP* **P** **03 58 26.9 +0.3**
BFO pmax pmax
comp=Z,11nm,1.1s,mb4.7
BFO Black Forest 79.70 2 *eP* **P** **03 58 26.9 +0.3**
comp=Z,11nm,1.1s,mb4.7
BUR08 Bucovina Ar. S 79.73 351 *eP* **P** **03 58 27.1 +0.3**
ZST Bratislava 79.75 356 *eP* **P** **03 58 28.4 +1.5**
ZST pmax pmax
comp=Z,15nm,1.1s,mb4.8
ZST Bratislava 79.75 356 *eP* **P** **03 58 28.4 +1.5**
comp=Z,15nm,1.1s,mb4.8
BURAR Bucovina Array 79.75 351⇓ *iP* **P** **03 58 26.3 -0.6**
BURAR Bucovina Array 79.75 351⇓ *P* **P** **03 58 26.3 -0.6**
ECH Echery 79.79 3 *eP* **P** **03 58 27.8 +0.7**
ECH pmax pmax
comp=Z,12nm,0.9s,mb4.8
ECH Echery 79.79 3 *eP* **P** **03 58 27.8 +0.7**
comp=Z,12nm,0.9s,mb4.8
KBL Kabul 79.97 315 *eP* **P** **03 58 27.7 -0.6**
KBL pmax pmax
comp=Z,13nm,1.1s,mb4.8
KBL Kabul 79.97 315 *eP* **P** **03 58 27.7 -0.6**
comp=Z,13nm,1.1s,mb4.8
HAU Haudompre 79.97 3⇑ *iP* **P** **03 58 28.2 +0.2**
comp=Z,22nm,1.0s,mb4.8
HAU Haudompre 79.97 3⇑ *iP* **P** **03 58 28.2 +0.2**
HAU pmax pmax
comp=Z,11nm,1.0s,mb4.7
HAU Haudompre 79.97 3⇑ *iP* **P** **03 58 28.2 +0.2**
comp=Z,11nm,1.0s,mb4.7
CONA Conrad Observa 80.07 357⇑ *iP* **P** **03 58 29.6 +1.1**
comp=Z,19nm,1.2s,mb4.9,SNR=14
CSNA Conrad Observa 80.07 357⇑ *iP* **P** **03 58 29.6 +1.1**
comp=Z,18nm,1.2s,mb4.9
HINF Hinteralfeld 80.17 3⇑ *iP* **P** **03 58 29.2 0.0**
comp=Z,15nm,0.9s,mb4.6
HINF Hinteralfeld 80.17 3⇑ *iP* **P** **03 58 29.2 0.0**
HINF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
HINF Hinteralfeld 80.17 3⇑ *iP* **P** **03 58 29.2 0.0**
comp=Z,7.4nm,0.9s,mb4.6
KIV Kislovodsk 80.39 338⇑ *eP* **P** **03 58 29.9 -0.5**
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV Kislovodsk 80.39 338 *eP* **P** **03 58 31.5 +1.2**
comp=Z,13nm,0.9s,mb4.8
RETA Reutte 80.58 0⇑ *iP* **P** **03 58 31.9 +0.5**
comp=Z,5.1nm,0.8s,mb4.5
LOR Lormes 80.59 5⇑ *iP* **P** **03 58 31.6 +0.2**
comp=Z,24nm,1.1s,mb4.7
LOR Lormes 80.59 5⇑ *iP* **P** **03 58 31.6 +0.2**
LOR pmax pmax
comp=Z,12nm,1.1s,mb4.7
LOR Lormes 80.59 5⇑ *iP* **P** **03 58 31.6 +0.2**
comp=Z,12nm,1.1s,mb4.7
ANN Anapa 80.70 342 *eP* **P** **03 58 30.2 -1.9**
ANN *e**PP pP 03 58 40.5 -1.4
ANN *e*S S 04 08 35.1 -2.1
ANN *e*SS SS 04 13 44.6 -4.4
ANN pmax pmax
comp=Z,60nm,1.2s,mb5.4
MOTA Moosalm 80.72 0⇑ *iP* **P** **03 58 32.8 +0.7**
comp=Z,11nm,0.9s,mb4.8,SNR=7.8
WATA Walderalm 80.73 360⇑ *iP* **P** **03 58 32.9 +0.7**
comp=Z,16nm,1.1s,mb4.9
ARSA Arzberg 80.75 357⇑ *iP* **P** **03 58 33.3 +1.0**
comp=Z,8.7nm,0.8s,mb4.7
SSF Saint Saulge 80.78 5⇑ *iP* **P** **03 58 32.5 +0.1**
comp=Z,31nm,1.1s,mb4.8
SSF Saint Saulge 80.78 5⇑ *iP* **P** **03 58 32.5 +0.1**
SSF pmax pmax
comp=Z,16nm,1.1s,mb4.9
SSF Saint Saulge 80.78 5⇑ *iP* **P** **03 58 32.5 +0.1**
comp=Z,16nm,1.1s,mb4.8
DRGR 80.80 352⇑ *iP* **P** **03 58 32.4 -0.1**
DRGR 80.80 352 ⇑ *P* **P** **03 58 32.4 -0.2**
WTTA Wattenberg 80.80 360⇑ *iP* **P** **03 58 33.4 +0.8**
comp=Z,13nm,0.7s,mb5.0,SNR=12
MFF Saint Martin d 80.97 8⇑ *iP* **P** **03 58 33.6 +0.2**
comp=Z,29nm,1.0s,mb4.9
MFF Saint Martin d 80.97 8⇑ *iP* **P** **03 58 33.6 +0.2**
MFF pmax pmax
comp=Z,15nm,1.0s,mb4.9
MFF Saint Martin d 80.97 8⇑ *iP* **P** **03 58 33.6 +0.2**
comp=Z,14nm,1.0s,mb4.9
KBA Koelnbreinsper 80.98 359⇑ *ipP* **P** **03 58 35.0 +1.5**
comp=Z,33nm,1.0s,mb5.2
AVF Avril sur Loir 81.04 6⇑ *iP* **P** **03 58 33.7 -0.1**
comp=Z,39nm,1.2s,mb4.9
AVF Avril sur Loir 81.04 6⇑ *iP* **P** **03 58 33.7 -0.1**
AVF pmax pmax
comp=Z,20nm,1.2s,mb4.9
AVF Avril sur Loir 81.04 6⇑ *iP* **P** **03 58 33.7 -0.1**
comp=Z,20nm,1.2s,mb4.9
FETA Feichten 81.05 0⇑ *iP* **P** **03 58 34.9 +1.1**
comp=Z,20nm,1.0s,mb5.0,SNR=13
SMF Signal de Mont 81.21 5⇑ *iP* **P** **03 58 34.8 +0.1**
comp=Z,46nm,1.2s,mb5.0
SMF Signal de Mont 81.21 5⇑ *iP* **P** **03 58 34.8 +0.1**
SMF pmax pmax
comp=Z,23nm,1.3s,mb5.0
SMF Signal de Mont 81.21 5⇑ *iP* **P** **03 58 34.8 +0.1**
comp=Z,23nm,1.3s,mb5.0
BGF Bois d'Agland 81.24 6⇑ *iP* **P** **03 58 34.9 0.0**
comp=Z,19nm,1.0s,mb4.7
BGF Bois d'Agland 81.24 6⇑ *iP* **P** **03 58 34.9 0.0**
BGF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BGF Bois d'Agland 81.24 6⇑ *iP* **P** **03 58 34.9 0.0**
comp=Z,9.7nm,1.0s,mb4.7
ABTA Abfaltersbach 81.32 359⇑ *iP* **P** **03 58 36.0 +0.7**
comp=Z,12nm,0.9s,mb4.8,SNR=8.4
SOKA Soboth 81.34 357⇑ *iP* **P** **03 58 36.2 +0.8**
comp=Z,24nm,1.2s,mb5.0
CABF La Chapelle 81.35 4⇑ *iP* **P** **03 58 36.2 +0.7**
comp=Z,37nm,1.0s,mb5.0
CABF La Chapelle 81.35 4⇑ *iP* **P** **03 58 36.2 +0.7**
CABF pmax pmax
comp=Z,18nm,1.0s,mb5.0
CABF La Chapelle 81.35 4⇑ *iP* **P** **03 58 36.2 +0.7**
comp=Z,18nm,1.0s,mb5.0
PERS Pernice 81.38 357 *eP* **P** **03 58 36.5 +0.8**
TCF Toulx Ste Croi 81.46 6⇑ *iP* **P** **03 58 36.1 0.0**
comp=Z,11nm,1.0s,mb4.5
TCF Toulx Ste Croi 81.46 6⇑ *iP* **P** **03 58 36.1 0.0**
TCF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TCF Toulx Ste Croi 81.46 6⇑ *iP* **P** **03 58 36.1 0.0**
comp=Z,5.6nm,1.0s,mb4.5
KOGS Kog 81.53 357 *i P* **P** **03 58 37.1 +0.7**
GROS Grobnik 81.55 357 *i P* **P** **03 58 37.0 +0.5**
TUE Stuetta 81.58 1 *eP* **P** **03 58 37.8 +1.1**
comp=Z,13nm,1.3s,mb4.7
MLR Muntele Rosu 81.78 350⇑ *iP* **P** **03 58 38.8 +1.1**
MLR Muntele Rosu 81.78 350 ⇑ *P* **P** **03 58 38.8 +1.1**
VOIR 81.93 350⇓ *iP* **P** **03 58 39.0 +0.5**
VOIR 81.93 350⇓ *P* **P** **03 58 39.0 +0.5**
BZS Buzias 82.06 353⇓ *iP* **P** **03 58 39.4 +0.2**
BZS Buzias 82.06 353⇓ *P* **P** **03 58 39.4 +0.1**
RJF Les Rejaudoux 82.39 7⇑ *iP* **P** **03 58 40.8 -0.2**
comp=Z,13nm,1.0s,mb4.5
RJF Les Rejaudoux 82.39 7⇑ *iP* **P** **03 58 40.8 -0.2**
RJF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
RJF Les Rejaudoux 82.39 7⇑ *iP* **P** **03 58 40.8 -0.2**
comp=Z,6.6nm,1.0s,mb4.5
LFF La Frestale 82.69 8⇑ *iP* **P** **03 58 42.8 +0.2**
comp=Z,16nm,0.7s,mb4.9
LFF La Frestale 82.69 8⇑ *iP* **P** **03 58 42.8 +0.2**
LFF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
LFF La Frestale 82.69 8⇑ *iP* **P** **03 58 42.8 +0.2**
comp=Z,7.8nm,0.7s,mb4.8
CAF Calviac 82.81 7 *eP* **P** **03 58 43.4 +0.2**
comp=Z,17nm,0.9s,mb4.8
CAF Calviac 82.81 7 *eP* **P** **03 58 43.4 +0.2**
CAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
CAF Calviac 82.81 7 *eP* **P** **03 58 43.4 +0.2**
comp=Z,8.5nm,0.9s,mb4.8
ORIF Oris-en-Rattie 83.03 4⇑ *iP* **P** **03 58 45.2 +0.9**
comp=Z,13nm,0.8s,mb4.7
ORIF Oris-en-Rattie 83.03 4⇑ *iP* **P** **03 58 45.2 +0.9**
ORIF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
ORIF Oris-en-Rattie 83.03 4⇑ *iP* **P** **03 58 45.2 +0.9**
comp=Z,6.7nm,0.8s,mb4.7
VIVF Saint-Julien-l 83.04 5⇑ *iP* **P** **03 58 44.9 +0.6**
comp=Z,34nm,1.1s,mb5.0
VIVF Saint-Julien-l 83.04 5⇑ *iP* **P** **03 58 44.9 +0.6**
VIVF pmax pmax
comp=Z,17nm,1.1s,mb5.0
VIVF Saint-Julien-l 83.04 5⇑ *iP* **P** **03 58 44.9 +0.6**
comp=Z,17nm,1.1s,mb5.0
MBDF Montbardon 83.26 3⇑ *iP* **P** **03 58 46.9 +1.4**
comp=Z,29nm,0.9s,mb5.0
MBDF Montbardon 83.26 3⇑ *iP* **P** **03 58 46.9 +1.4**
MBDF pmax pmax
comp=Z,14nm,0.9s,mb5.0
MBDF Montbardon 83.26 3⇑ *iP* **P** **03 58 46.9 +1.4**
comp=Z,14nm,0.9s,mb5.0
GNI Garni 83.47 335⇑ *eP* **P** **03 58 46.2 -0.4**
GNI pmax pmax
comp=Z,13nm,1.3s
SJPF Ste Jean 84.33 9 *eP* **P** **03 58 51.0 0.0**
MTLF Montolieu 84.40 7⇑ *iP* **P** **03 58 51.9 +0.6**
comp=Z,17nm,0.9s,mb4.9
MTLF Montolieu 84.40 7⇑ *iP* **P** **03 58 51.9 +0.6**
MTLF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
MTLF Montolieu 84.40 7⇑ *iP* **P** **03 58 51.9 +0.6**
comp=Z,8.4nm,0.9s,mb4.9
EPF Esparros 84.56 8⇑ *iP* **P** **03 58 51.9 -0.2**
comp=Z,18nm,1.0s,mb4.9
EPF Esparros 84.56 8⇑ *iP* **P** **03 58 51.9 -0.2**
EPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
EPF Esparros 84.56 8⇑ *iP* **P** **03 58 51.9 -0.2**
comp=Z,9.1nm,1.0s,mb4.9
ETSF Etsaut 84.61 9⇑ *iP* **P** **03 58 53.2 +0.8**
comp=Z,22nm,0.9s,mb5.0
ETSF Etsaut 84.61 9⇑ *iP* **P** **03 58 53.2 +0.8**
ETSF pmax pmax
comp=Z,11nm,0.9s,mb5.0
ETSF Etsaut 84.61 9⇑ *iP* **P** **03 58 53.2 +0.8**
comp=Z,11nm,0.9s,mb5.0
BR131 Keskin Array S 86.32 343 *eP* **P** **03 59 01.6 +0.6**
comp=Z,0.7nm,0.3s,mb4.4
BRTR Keskin Array B 86.32 343 P **P** **03 59 01.8 +0.8**
comp=Z,2.5nm,0.8s,mb4.5,baz=30,slow=2.3,SNR=13
MALT Malatya 86.73 339⇑ *iP* **P** **03 59 04.8 +1.8**
MALT Malatya 86.73 339 ⇑ *P* **P** **03 59 04.8 +1.8**
WRA Warramunga Arr 87.34 232 P **P** **03 59 04.1 -1.9**
comp=Z,0.9nm,0.6s,mb4.2,baz=36,slow=6.1,SNR=5.8
ESDC Sonseca Array 87.42 12 P **P** **03 59 06.2 -0.2**
comp=Z,2.9nm,0.9s,mb4.5,baz=351,slow=4.7,SNR=16
HYB Hyderabad 89.59 298 *eP* **P** **03 59 16.0 -0.9**

ASAR	**Alice Springs**	**90.72**	**231**	P		**P**	**03 59 20.5**	**-1.4**	
	comp=Z,3.0nm,0.8s,mb4.7,baz=30,slow=4.6,SNR=32								
STKA	**Stephens Creek**	**94.46**	**221**	P		**P**	**03 59 37.9**	**-1.0**	
	comp=Z,0.8nm,0.6s,mb4.3,baz=315,slow=3.7,SNR=2.9								
STKA	**Stephens Creek**	**94.46**	**221**	P		**P**	**03 59 37.9**	**-1.0**	
TORD	**Torodi Ar. Bea**	**114.27**	**10**	PKP	PKiKP		04 04 57.0	-1.9	
	comp=Z,0.4nm,0.8s,baz=319,slow=4.1,SNR=2.5								
TORD				PP	PP		04 05 59.3	+5.9	
	comp=Z,0.9nm,1.1s,baz=355,slow=6.1,SNR=4.2								

*ISCJB **31** 04:24:42.0±0.4,534N±0.1×17066W±0.08,h195km±5km, mb3.6/9, Error ellipse: s-maj=20.1km s-min=4.9km az=163.6*
*NEIC **31** 04:24:42.9±0.5,5345N×17067W,h194km±6km, MG3.8(AEIC),Error ellipse: s-maj=26.1km s-min=7.9km az=161.0*
*IDC **31** 04:24:45.4±2.7,5346N×17083W,h215km±25km,mb3.3/9, mb1 3.6/10,mb1mx3.3/25,mbtmp3.3/10,MS3.9/1, Ms1 3.9/1,ms1mx2.8/22,Error ellipse: s-maj=24.2km s-min=13.0km az=167.0*

ISC 31 04:24:42.9±0.4,535N±01×17072W±007,h189km±5km,n31, σ1§12/38,mb3.7/9,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**1.24**	**115**	P	**Pn**	**04 25 12.7**	**-0.7**
NIKO				S	**Sn**	**04 25 35.6**	**-1.1**
OKCD	**Okmok Cone D**	**1.56**	**92**	P	**Pn**	**04 25 16.3**	**+0.2**
OKCD				S	**Sn**	**04 25 43.3**	**+1.5**
OKFG	**Magazine Ridge**	**1.68**	**92**	P	**Pn**	**04 25 17.5**	**+0.2**
OKFG				S	**Sn**	**04 25 44.9**	**+1.0**
ATKA	**Atka Island**	**2.48**	**240**	P	**Pn**	**04 25 25.8**	**0.0**
ATKA				S	**Sn**	**04 25 58.9**	**-0.2**
UNV	**Unalaska Valle**	**2.53**	**81**	*e*Pn	**Pn**	**04 25 26.8**	**+0.5**
UNV				S	**Sn**	**04 26 00.6**	**+0.4**
UNV				*e*Sn	**Sn**	**04 26 01.3**	**+1.1**
AKGG	**Akutan Green G**	**2.88**	**74**	P	**Pn**	**04 25 31.9**	**+1.5**
AKLV	**Akutan Long Va**	**2.90**	**75**	P	**Pn**	**04 25 32.4**	**+1.8**
ADK	**Adak**	**3.98**	**248**	*e*Pn	**Pn**	**04 25 43.8**	**-0.1**
ADK				*e*Sn	**Sn**	**04 26 30.1**	**-1.6**
SDPT	**Sand Point**	**6.25**	**69**	*e*Pn	**Pn**	**04 26 12.4**	**-0.8**
SDPT				*e*Sn	**Sn**	**04 27 21.9**	**-2.5**
CHGN	**Chignik**	**7.62**	**64**	*e*Pn	**Pn**	**04 26 29.8**	**-1.3**
CHGN				*e*Sn	**Sn**	**04 27 54.7**	**-2.1**
FX1	**Attu Island--F**	**9.70**	**273**	P	**Pn**	**04 26 59.7**	**+1.5**
	1.4nm,0.3s,baz=296,slow=19,SNR=14						
FX1				S	**Sn**	**04 28 46.5**	**+0.2**
	0.3nm,0.3s,baz=51,slow=7.1,SNR=2.9						
FX1	**Attu Island--F**	**9.70**	**273**	P	**Pn**	**04 26 59.7**	**+1.5**
FX1				S	**Sn**	**04 28 46.5**	**+0.2**
KDAK	**Kodiak Island**	**11.09**	**60**	P	**Pn**	**04 27 13.5**	**-2.7**
	6.1nm,0.3s,baz=261,slow=7.4,SNR=52						
KDAK				S	**Sn**	**04 29 10.9**	**-8.5**
	0.5nm,0.3s,baz=350,slow=13,SNR=4.6						
KDAK	**Kodiak Island**	**11.09**	**60**	P	**Pn**	**04 27 13.5**	**-2.7**
KDAK				S	**Sn**	**04 29 10.9**	**-8.5**
DLBC	**Dease Lake**	**23.02**	**61**	P	**P**	**04 29 32.9**	**+1.9**
	1.9nm,0.6s,mb3.7,baz=221,slow=20,SNR=8.3						
YKA	**Yellowknife Ar**	**30.12**	**50**	P	**P**	**04 30 34.2**	**-0.2**
	0.2nm,0.3s,mb3.3,baz=274,slow=9.1,SNR=12						
YKA				PcP	PcP	04 33 30.4	-0.3
	0.2nm,0.4s,baz=283,slow=3.0,SNR=9.0						
YKA	**Yellowknife Ar**	**30.12**	**50**	P	**P**	**04 30 34.2**	**-0.2**
YKA				PcP	PcP	04 33 30.4	-0.3
YBH	**Yreka Blue Hor**	**33.80**	**91**	LR	LR	04 41 00.8	
	comp=Z,222nm,20.6s,baz=60,slow=29						
PDAR	**Pinedale Array**	**40.99**	**80**	P	**P**	**04 32 07.9**	**+0.8**
	1.3nm,0.5s,mb3.8,baz=300,slow=3.4,SNR=14						
SONM	**Songino Array**	**50.02**	**299**	pP	pP	04 34 05.0	+5.5
	0.7nm,0.8s,baz=61,slow=6.9,SNR=6.3						
TXAR	**Lajitas Array**	**53.54**	**89**	P	**P**	**04 33 44.4**	**+0.3**
	1.1nm,0.6s,mb3.8,baz=304,slow=6.4,SNR=16						
TXAR				PcP	PcP	04 34 47.5	-0.7
	0.2nm,0.4s,baz=304,slow=1.4,SNR=5.2						
TXAR	**Lajitas Array**	**53.54**	**89**	P	**P**	**04 33 44.4**	**+0.3**
TXAR				PcP	PcP	04 34 47.5	-0.7
NOA	**NORSAR Array B**	**65.79**	**359**	P	**P**	**04 35 07.1**	**0.0**
	0.8nm,0.7s,mb3.7,baz=358,slow=8.9,SNR=3.0						
GERES	**GERESS Array B**	**77.95**	**357**	P	**P**	**04 36 19.6**	**0.0**
	0.4nm,0.5s,mb3.3,baz=19,slow=4.5,SNR=7.1						
CTA	**Charters Tower**	**82.15**	**220**	P	**P**	**04 36 41.3**	**-1.0**
	3.6nm,0.9s,mb4.0,baz=40,slow=16,SNR=3.4						
BRTR	**Keskin Array B**	**84.78**	**341**	P	**P**	**04 36 56.7**	**+1.0**
	0.6nm,0.7s,mb3.4,baz=11,slow=6.8,SNR=3.5						
ASAR	**Alice Springs**	**90.52**	**229**	P	**P**	**04 37 22.5**	**-0.5**
	0.9nm,0.5s,mb4.0,baz=22,slow=4.6,SNR=16						
TORD	**Torodi Ar. Bea**	**113.30**	**8**	PKiKP	PKiKP	04 42 55.9	-2.2
	0.1nm,0.3s,baz=339,slow=2.7,SNR=5.3						
DBIC	**Dimbokro**	**118.87**	**16**	PKP	PKPdf	04 43 06.7	-2.2
	3.5nm,1.0s,baz=295,slow=5.8,SNR=3.1						
DBIC	**Dimbokro**	**118.87**	**16**	PKP	PKPdf	04 43 06.7	-2.2
BOSA	**Boshof**	**152.49**	**328**	PKPbc	PKPbc	04 44 15.7	-0.6
	0.5nm,0.5s,baz=247,slow=0.8,SNR=3.5						

*ISCJB **31** 04:37:22.4±0.5,2471N±004×12249E±002,h6km±4km, Error ellipse: s-maj=6.8km s-min=2.7km az=8.3*
*JMA **31** 04:37:23.5±0.2,2442N×12243E,h14km,M2.4*
*TAP **31** 04:37:24.4,2471N×12234E,h9km±1km,ML3.0,C*

ISC 31 04:37:22.7±0.5,2470N±004×12249E±002,h7km±4km,n28, σ0§99/48,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**117**	P	**Pg**	**04 37 33.8**	**+0.9**
YOJ				*e*S	**Sg**	**04 37 41.0**	**+1.2**
TWB1	**Santiao Chiao**	**0.55**	**304**	*i* P	**Pg**	**04 37 34.0**	**+0.6**
	baz=312						
TWB1				*e*S	**Sg**	**04 37 40.7**	**+0.1**
	baz=312						
TWC	**Suao**	**0.59**	**261**	P	**Pg**	**04 37 33.6**	**-0.6**
	baz=268						
TWC				*e*S	**Sg**	**04 37 40.4**	**-1.5**
	baz=268						
ILA	**Ilan**	**0.68**	**275**	*e*P	**Pg**	**04 37 35.8**	**0.0**
	baz=273						
ENA	**Nanau**	**0.74**	**248**	*e*P	**Pg**	**04 37 36.8**	**-0.1**
	baz=243						
ENA				*e*S	**Sg**	**04 37 46.0**	**-0.5**
	baz=243						
NWF	**Wu-fen Shan**	**0.74**	**300**	*e*P	**Pg**	**04 37 37.7**	**+0.7**
	baz=292						
NWF				S	**Sg**	**04 37 48.4**	**+1.7**
	baz=292						
TWE	**Neicheng**	**0.75**	**272**	P	**Pg**	**04 37 36.9**	**-0.3**
	baz=270						
TWE				*e*S	**Sg**	**04 37 45.5**	**-1.5**
	baz=270						
ENTT	**Nioudou**	**0.85**	**266**	*e*P	**Pg**	**04 37 38.9**	**-0.2**
	baz=263						
ENTT				S	**Sg**	**04 37 49.0**	**-1.1**
	baz=263						
TWA	**Mucha**	**0.87**	**289**	*e*P	**Pg**	**04 37 40.6**	**+1.1**
	baz=276						
TWA				*e*S	**Sg**	**04 37 50.9**	**0.0**
	baz=276						
TWY	**Chenhua**	**0.99**	**305**	*e*P	**Pg**	**04 37 41.6**	**-0.2**
	baz=308						
TWD	**Chiawan**	**1.03**	**233**	*e*P	**Pg**	**04 37 43.1**	**+0.7**
	baz=235						
TWD				*e*S	**Sg**	**04 37 56.4**	**+0.6**
	baz=235						
NSK	**Sanguang**	**1.03**	**269**	P	**Pg**	**04 37 42.1**	**-0.4**
	baz=277						
NSK				*e*S	**Sg**	**04 37 54.5**	**-1.5**
	baz=277						
NNS	**Nan Shan**	**1.05**	**256**	*e*P	**Pg**	**04 37 43.1**	**+0.1**
	baz=251						
NNS				*e*S	**Sg**	**04 37 55.9**	**-0.7**
	baz=251						
TWS1	**Kuangyinshan**	**1.05**	**292**	*e*P	**Pg**	**04 37 41.5**	**-1.5**
	baz=292						
IRIF	**Iriomote-Funau**	**1.18**	**108**	P	**Pg**	**04 37 45.5**	**+0.1**
IRIF				*e*S	**Sg**	**04 38 01.7**	**+0.9**
WHF	**Hehuan Shan**	**1.25**	**244**	P	**Pb**	**04 37 46.4**	**-0.2**
	baz=238						
WHF				*e*S	**Sg**	**04 38 02.6**	**-0.3**
	baz=238						
TWT	**Tachien**	**1.28**	**250**	*e*P	**Pn**	**04 37 47.1**	**0.0**
	baz=245						
TWT				*e*S	**Sb**	**04 38 04.1**	**+0.2**
	baz=245						
ESL	**Shilin**	**1.31**	**228**	*e*P	**Pn**	**04 37 48.1**	**+0.6**
	baz=199						
ESL				*e*S	**Sb**	**04 38 05.8**	**+1.1**
	baz=199						
HATJ	**Hateruma jima**	**1.36**	**118**	P	**Pn**	**04 37 47.1**	**-1.0**
HATJ				*e*S	**Sb**	**04 38 04.1**	**-2.0**
NSTT	**Nanjuang**	**1.36**	**267**	*e*P	**Pn**	**04 37 48.8**	**+0.6**
	baz=255						
NSTT				S	**Sb**	**04 38 05.8**	**-0.3**
	baz=255						
JKRS	**Kuro-shima**	**1.46**	**108**	P	**Pn**	**04 37 49.0**	**-0.5**
JKRS				*e*S	**Sn**	**04 38 06.8**	**-2.0**
JIJ	**Ishigaki jima**	**1.54**	**102**	*e*S	**Sn**	**04 38 08.4**	**-2.5**
TWQ1	**Liyutan**	**1.61**	**258**	*e*P	**Pn**	**04 37 53.5**	**+1.9**
	baz=252						
SMLT	**Sun Moon Lake**	**1.67**	**241**	*e*P	**Pn**	**04 37 53.8**	**+1.4**
	baz=242						
SMLT				*e*S	**Sn**	**04 38 14.2**	**+0.1**
	baz=242						
TYC	**Yuchr**	**1.69**	**242**	*e*P	**Pn**	**04 37 53.8**	**+1.1**
	baz=236						
TYC				*e*S	**Sn**	**04 38 14.2**	**-0.5**
	baz=236						
TWF1	**Yuli**	**1.73**	**219**	*e*P	**Pn**	**04 37 52.8**	**-0.5**
	baz=212						
ALS	**Alishan**	**1.95**	**233**	*e*P	**Pn**	**04 37 58.5**	**+2.2**
	baz=210						
CHN5	**Tsauling**	**1.99**	**237**	*e*P	**Pn**	**04 37 57.9**	**+1.0**
	baz=212						

*ISK **31** 04:37:37.5,3706N×4354E,h6km,MD2.9*
*ISCJB **31** 04:37:38.9±0.7,3707N±003×4368E±007,h10km,Error ellipse: s-maj=7.8km s-min=4.2km az=3.5*
*CSEM **31** 04:37:38.7±0.2,3715N×4350E,h5km,MD2.9,Error ellipse: s-maj=13.6km s-min=3.4km az=109.0*
*DDA **31** 04:37:42.8,3697N×4321E,h6km±2km,Md3.3*

ISC 31 04:37:39.8±0.7,3709N±003×4367E±007,h10km,n11, σ1§16/19,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	**0.17**	**343**	*e*PG	**Pg**	**04 37 41.6**	**-1.8**
CUKT				*e*SG	**Sg**	**04 37 44.9**	**-1.0**
HAKT	**HAKKARI**	**0.47**	**4**	*i*P	**Pg**	**04 37 56.8**	**+7.8**
HAKT				*i* S	**Sg**	**04 38 03.7**	**+8.4**
HAKT	**HAKKARI**	**0.47**	**4**	*i* S	**Sg**	**04 38 03.7**	**+8.5**
HKR	**Hakkari**	**0.49**	**7**	*e*PG	**Pg**	**04 37 48.8**	**-0.6**
HKR				*e*SG	**Sg**	**04 37 56.6**	**+0.6**
MSL	**Mosul**	**0.82**	**213**	*e*Pn	**Pg**	**04 37 55.0**	**-0.6**
MSL				*e*Sn	**Sg**	**04 38 04.0**	**-2.3**
TATV	**Tatvan**	**1.80**	**322**	*e*P	**Pn**	**04 38 11.0**	**+0.1**
TATV				*e*S	**Sn**	**04 38 35.4**	**+1.6**
CLDR	**Caldiran**	**2.06**	**5**	*e*PN	**Pn**	**04 38 14.4**	**-0.1**
BEST	**Besiri**	**2.07**	**294**	*e*P	**Pn**	**04 38 13.9**	**-0.7**
BEST				*e*S	**Sn**	**04 38 41.8**	**+1.4**
MARD	**Mardin**	**2.32**	**276**	*e*P	**Pn**	**04 38 18.9**	**+1.0**
MARD				*e*S	**Sn**	**04 38 47.4**	**+0.9**
SVRC	**Sivrice-ELAZID**	**3.69**	**292**	*e*PN	**Pn**	**04 38 35.4**	**-1.4**
BHD	**Baghdad**	**3.85**	**171**	*e*Pn	**Pn**	**04 38 40.0**	**+0.9**
BHD				*e*Sn	**Sn**	**04 39 26.0**	**+1.6**

*IDC **31** 04:41:13.8±1.4,340S×14299E,h0km,mb3.8/6,mb1 4.0/7, mb1mx3.9/15,mbtmp3.9/7,ML4.3/1,MS3.1/3,Ms1 3.1/3, ms1mx2.8/18, Error ellipse: s-maj=50.4km s-min=14.9km az=96.0*
*ISCJB **31** 04:41:18.0±0.8,347S±006×14259E±008,h33km,mb3.8/7, Error ellipse: s-maj=12.3km s-min=8.5km az=157.4*
*NEIC **31** 04:41:19.9±0.7,349S×14264E,h35km,mb4.0/2, Error ellipse: s-maj=17.7km s-min=11.3km az=88.0*

ISC 31 04:41:20.6±0.8,348S±008×14251E±009,h35km,n23, σ1§20/18,mb3.8/7,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.48**	**142**	Pn	**Pn**	**04 43 06.4**	**-0.9**
	0.6nm,0.3s,baz=114,slow=23,SNR=3.5						
PMG				Sn	**Sn**	**04 44 32.4**	**+1.4**
	0.3nm,0.3s,baz=257,slow=20,SNR=2.0						
KAKA	**Kakadu**	**13.54**	**227**	*e*P	x	04 44 30.9	
	7.8nm,0.6s						
KAKA				*e*S	x	04 46 57.5	
KAKA	**Kakadu**	**13.54**	**227**	*e*Pn	x	04 44 30.3	
	192nm,1.4s						
CTA	**Charters Tower**	**16.91**	**168**	LR	LR	04 51 49.7	
	comp=Z,91nm,21.3s,baz=224,slow=38						
GUMO	**Guam**	**17.12**	**8**	LR	LR	04 51 28.5	
	comp=Z,34nm,20.1s,baz=79,slow=36						
WRAB	**Tennant Creek**	**18.19**	**205**	*e*P	**Pn**	**04 45 29.2**	**-1.2**
	23nm,1.2s						
WB2	**Warramunga Arr**	**18.20**	**205**	*e*P	**Pn**	**04 45 30.1**	**-0.4**
WB2	**Warramunga Arr**	**18.20**	**205**	*e*P	**Pn**	**04 45 30.2**	**-0.3**
WB2				*e*S	**S**	**04 48 49.8**	**-7.3**
WRA	**Warramunga Arr**	**18.20**	**205**	P	**Pn**	**04 45 29.4**	**-1.2**
	1.1nm,0.3s,baz=25,slow=11,SNR=13						
WRA				LR	LR	04 53 33.6	
	comp=Z,103nm,19.3s,baz=25,slow=40						
KNA	**Kununurra**	**18.21**	**227**	*e*P	**Pn**	**04 45 31.1**	**+0.4**
	18nm,0.8s						
ASAR	**Alice Springs**	**21.72**	**202**	P	**P**	**04 46 10.1**	**+1.2**
	1.3nm,0.8s,mb3.4,baz=31,slow=11,SNR=11						
ASAR				S	**S**	**04 50 15.1**	**+7.7**
	0.5nm,0.8s,baz=28,slow=26,SNR=4.3						
FITZ	**Fitzroy Crossi**	**22.00**	**227**	*e*P	**P**	**04 46 14.1**	**+2.1**
	16nm,1.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**22.00**	**227**	*e*P	**P**	**04 46 14.3**	**+2.4**
	5.5nm,1.2s,mb3.9						
STKA	**Stephens Creek**	**28.26**	**182**	P	**P**	**04 47 08.9**	**-1.6**
	2.1nm,0.8s,mb3.8,baz=329,slow=5.9,SNR=3.1						
CMAR	**Chiang Mai Arr**	**48.12**	**299**	P	**P**	**04 49 58.5**	**+1.0**
	1.1nm,0.8s,mb3.9,baz=126,slow=5.9,SNR=5.2						
SONM	**Songino Array**	**60.09**	**333**	P	**P**	**04 51 24.5**	**+0.3**
	1.2nm,1.0s,mb3.9,baz=158,slow=5.6,SNR=4.8						
MKAR	**Makanchi Array**	**72.73**	**321**	P	**P**	**04 52 45.9**	**+0.7**
	1.1nm,0.8s,mb3.8,baz=108,slow=7.8,SNR=8.9						
MKAR	**Makanchi Array**	**72.73**	**321**	P	**P**	**04 52 45.9**	**+0.7**
ZALV	**Zalesovo Beam**	**74.53**	**329**	P	**P**	**04 52 53.8**	**-1.7**
	0.4nm,0.5s,mb3.6,baz=101,slow=7.5,SNR=2.9						
TKL	**Tuckaleechee C**	**126.64**	**47**	PKP	PKPdf	05 00 19.3	-1.4
	5.7nm,0.9s,baz=169,slow=3.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**140.11**	**286**	PKhKP		05 00 39.5	
	0.7nm,1.2s,baz=85,slow=3.6,SNR=2.5						
TORD	**Torodi Ar. Bea**	**140.11**	**286**	PKP	PKPdf	05 00 39.5	-7.1
DBIC	**Dimbokro**	**147.35**	**277**	PKPbc	PKPbc	05 01 01.1	-0.6
	3.3nm,1.0s,baz=135,slow=3.8,SNR=2.3						

*NEIC **31** 04:43:01.2±2.1,2641S×17650W,h35km,Error ellipse: s-maj=66.6km s-min=15.7km az=136.0*

IDC 31 04:43:09.9±6.1,2555S×17710W,h85km±54km,mb3.8/4, mb1 4.0/5,mb1mx3.7/15,mbtmp3.9/5,ML2.4/1,MS2.7/1, Ms1 2.7/1,ms1mx2.5/20,Error ellipse: s-maj=49.4km s-min=25.3km az=150.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.76**	**191**	LR	LR	04 45 29.3	
	comp=Z,101nm,18.0s,baz=349,slow=37						
AFI	**Afiamalu**	**12.61**	**24**	P	Pn	04 46 07.3	+1.1
	1.1nm,0.3s,baz=207,slow=2.3,SNR=1.9						
AFI				S	Sn	04 48 23.2	-1.6
	2.1nm,0.3s,baz=153,slow=14,SNR=3.5						
AFI	**Afiamalu**	**12.61**	**24**	*e*Pn	Pn	04 46 06.8	+0.6
AFI				*e*Sn	Sn	04 48 23.3	-1.6
CTA	**Charters Tower**	**34.14**	**272**	P	P	04 49 47.6	+0.8
	3.6nm,0.7s,baz=116,slow=9.9,SNR=6.3						
STKA	**Stephens Creek**	**36.61**	**250**	P	P	04 50 08.1	+0.1
	0.7nm,0.5s,baz=56,slow=7.3,SNR=2.9						
STKA	**Stephens Creek**	**36.61**	**250**	P	P	04 50 08.1	+0.1
ASAR	**Alice Springs**	**44.39**	**262**	P	P	04 51 11.7	-0.5
	0.7nm,0.4s,baz=91,slow=6.7,SNR=8.8						
WRAB	**Tennant Creek**	**44.93**	**267**	*e*P	P	04 51 17.6	+1.1
WRA	**Warramunga Arr**	**44.94**	**267**	P	P	04 51 15.6	-1.0
	2.7nm,0.5s,baz=103,slow=8.2,SNR=4.7						
GNI	**Garni**	**142.31**	**303**	*e*PKPdf	PKPdf	05 02 31.2	-1.3
NB2	**NORSAR Subarra**	**144.07**	**353**	PKP	PKPdf	05 02 34.5	-0.5
	comp=Z,1.3nm,0.6s,baz=11,slow=3.6						
NOA	**NORSAR Array B**	**144.07**	**353**	PKP	PKPdf	05 02 33.5	-1.5
	comp=Z,2.5nm,0.8s,baz=8.9,slow=2.3,SNR=8.6						
BRTR	**Keskin Array B**	**150.67**	**306**	PKPbc	PKPbc	05 02 51.8	-0.4
	comp=Z,0.7nm,0.7s,baz=43,slow=2.7,SNR=4.5						
BRTR				PKPab	PKPab	05 03 00.5	+1.1
	comp=Z,0.8nm,0.6s,baz=138,slow=4.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**167.61**	**175**	PKPab	PKPab	05 04 12.7	-0.3
	comp=Z,0.2nm,0.6s,baz=167,slow=4.2,SNR=3.7						

*TEH **31** 05:03:52.0,3061N×5750E,h4km,ML3.9*
*IDC **31** 05:04:43.9±2.7,3025N×5756E,h0km,mb3.3/4,mb1 3.5/4, mb1mx3.2/23,mbtmp3.4/4,Error ellipse: s-maj=81.1km s-min=30.5km az=158.0*
*CSEM **31** 05:04:46.6±0.2,3058N×5753E,h16km,ML3.7,Error ellipse: s-maj=4.2km s-min=1.9km az=154.0*
*ISCJB **31** 05:04:47.2±0.6,3070N±005×5737E±004,h10km,mb3.3/4, Error ellipse: s-maj=6.5km s-min=4.4km az=174.0*
*THR **31** 05:04:50.2±0.8,3047N×5712E,h10km±9km,ML3.2*

ISC 31 05:04:48.3±0.5,3064N±004×5741E±004,h10km,n49, σ1§00/58,mb3.3/4,2D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.86**	**221**	*e*Pg	**Pg**	**05 05 02.0**	**-3.0**
KRBR				*e*Sg	**Sg**	**05 05 10.2**	**-5.9**
KRBR				AML	AML	05 05 18.1	
	comp=N,1µm,0.2s						
KRBR	**Kerman**	**0.86**	**221**	*e*Pg	**Pg**	**05 05 02.0**	**-2.9**
	SNR=92						
KRBR				*e*Sg	**Sg**	**05 05 10.2**	**-5.9**
	SNR=92						
IBAF	**Bafgh**	**1.84**	**302**	*e*Sg	**Sg**	**05 05 48.7**	**+1.0**
IBAF	**Bafgh**	**1.84**	**302**	*e*Pn	**Pn**	**05 05 21.2**	**+1.2**
IBAF				*e*Sg	**Sg**	**05 05 48.7**	**+1.0**
IBAF				*e*		05 05 53.8	
IKOO	**Kooshah**	**2.24**	**37**	*e*Pn	**Pn**	**05 05 25.0**	**-0.5**
IKOO				*e*Sg	**Sn**	**05 05 56.9**	**+3.7**
IKOO	**Kooshah**	**2.24**	**37**	*e*Pn	**Pn**	**05 05 25.0**	**-0.5**
IKOO				*e*Sg	**Sn**	**05 05 56.9**	**+3.7**
IKOO				*e*		05 06 00.8	
IMEH	**Mehriz**	**2.52**	**288**	*e*Pn	**Pn**	**05 05 30.4**	**+1.2**
IMEH				*e*Sg	**Sg**	**05 06 07.6**	**-1.6**
IMEH	**Mehriz**	**2.52**	**288**	*e*Pn	**Pn**	**05 05 30.4**	**+1.2**
IMEH				*e*Sg	**Sg**	**05 06 07.6**	**-1.6**
IMEH				*e*		05 06 08.0	
ITEG	**Tejag**	**2.53**	**26**	*i e*Pn	**Pn**	**05 05 29.0**	**-0.4**
ITEG	**Tejag**	**2.53**	**26**	*i e*Pn	**Pn**	**05 05 29.0**	**-0.4**
ITEG				*e*		05 06 10.2	
IDAH	**Dahanechah**	**2.96**	**44**	*e*Pn	**Pn**	**05 05 35.3**	**-0.1**
IDAH	**Dahanechah**	**2.96**	**44**	*e*Pn	**Pn**	**05 05 35.3**	**-0.1**
IDAH				*e*		05 06 28.3	
ICHK	**Chekchek**	**3.03**	**303**	*e*Pn	**Pn**	**05 05 37.8**	**+1.6**
ICHK				*e*Sg	**Sg**	**05 06 24.5**	**-1.1**
ICHK	**Chekchek**	**3.03**	**303**	*e*Pn	**Pn**	**05 05 37.8**	**+1.6**
ICHK				*e*Sg	**Sg**	**05 06 24.5**	**-1.1**
ICHK				*e*		05 06 27.2	
ZHSF	**Zahedan**	**3.09**	**108**	*e*Pn	**Pn**	**05 05 43.8**	**+6.7**
ZHSF				AML	AML	05 06 31.3	
	comp=N,46nm,0.7s						
BNDS	**Bandar-Abbas**	**3.40**	**199**	*e*Pn	**Pn**	**05 05 42.1**	**+0.7**
BNDS				AML	AML	05 06 37.2	
	comp=N,45nm,0.6s						
BNDS				AML	AML	05 06 40.5	
	comp=E,50nm,0.6s						
ISAD	**Sadrabad**	**3.43**	**293**	*e*Sg	**Sg**	**05 06 37.5**	**-1.2**
ISAD	**Sadrabad**	**3.43**	**293**	*e*Sg	**Sg**	**05 06 37.5**	**-1.2**
IPAR	**Pars**	**3.86**	**259**	*e*Pn	**Pn**	**05 05 48.7**	**+1.0**
IPAR	**Pars**	**3.86**	**259**	*e*Pn	**Pn**	**05 05 48.7**	**+1.0**
IPAR				*e*		05 07 16.3	
IMOK	**Mouk**	**4.38**	**250**	*e*Pn	**Pn**	**05 05 55.7**	**+0.9**
IMOK	**Mouk**	**4.38**	**250**	*e*Pn	**Pn**	**05 05 55.7**	**+0.9**
IMOK				*e*		05 07 38.2	
NASN	**Na'in**	**4.48**	**300**	*e*P	**Pn**	**05 05 58.4**	**+2.3**
NASN				AML	AML	05 07 16.3	
	comp=N,43nm,0.6s						
NASN				AML	AML	05 07 22.7	
	comp=E,34nm,0.6s						
GHIR	**Ghir-Karzin**	**4.51**	**240**	*e*P	**Pn**	**05 05 57.1**	**+0.4**
GHIR				AML	AML	05 07 23.9	
	comp=N,17nm,0.7s						
IZEF	**Zefreh**	**4.88**	**299**	*e*Pn	**Pn**	**05 06 02.3**	**+0.6**
IZEF	**Zefreh**	**4.88**	**299**	*e*Pn	**Pn**	**05 06 02.3**	**+0.6**
IMOG	**Moghan**	**5.69**	**16**	*e*Pn	**Pn**	**05 06 12.6**	**-0.3**
IMOG	**Moghan**	**5.69**	**16**	*e*Pn	**Pn**	**05 06 12.6**	**-0.3**
ISFB	**Sefidab**	**5.73**	**312**	*e*Pn	**Pn**	**05 06 13.8**	**+0.4**
ISFB	**Sefidab**	**5.73**	**312**	*e*Pn	**Pn**	**05 06 13.8**	**+0.4**
IPAY	**Payeh**	**5.95**	**12**	*e*Pn	**Pn**	**05 06 16.1**	**-0.3**
IPAY	**Payeh**	**5.95**	**12**	*e*Pn	**Pn**	**05 06 16.1**	**-0.3**
IAKL	**Akhelmad**	**6.06**	**10**	*e*Pn	**Pn**	**05 06 17.9**	**0.0**
**IAKL

SNAA				*e*			05 39 53.8		
VNA2	**Neumayer--Watz**	**91.09**	**176**	*e*		**P**	**05 39 41.5**	**+0.3**
	baz=209,slow=5.3								
VNA2				*e*			05 39 57.0		
VNA2				*e*			05 40 01.2		
YKA	**Yellowknife Ar**	**92.45**	**24**	P		**P**	**05 39 47.3**	**-0.1**
	0.2nm,0.6s,mb3.6,baz=237,slow=4.6,SNR=9.3								
CMAR	**Chiang Mai Arr**	**92.79**	**288**	P		**P**	**05 39 53.1**	**+3.1**
	0.8nm,0.6s,mb4.3,baz=80,slow=3.1,SNR=6.2								
ARCES	**ARCESS Array B**	**126.82**	**352**	PKP		PKPdf	05 45 40.4	+0.5	
	2.4nm,0.8s,baz=323,slow=1.8,SNR=4.1								
MALT	**Malatya**	**145.05**	**313**	⇑*i*P		PKPbc	05 46 15.9	+1.9	
KWP	**Kalwaria**	**145.44**	**341**	⇑*i*P		PKPbc	05 46 16.2	+1.4	
CLL	**Collm**	**146.03**	**352**	*e*(P)		PKPdf	05 46 17.0	+1.2	
	comp=Z,6.0nm,1.0s								
BRTR	**Keskin Array B**	**147.54**	**318**	PKPbc		PKPbc	05 46 22.4	+1.0	
	comp=Z,1.2nm,0.8s,baz=94,slow=5.0,SNR=5.4								
DRGR		**147.90**	**338**	⇓*i*P		PKPbc	05 46 23.6	+1.6	
GERES	**GERESS Array B**	**148.34**	**350**	PKPbc		PKPbc	05 46 24.5	+1.3	
	comp=Z,0.5nm,0.7s,baz=42,slow=2.2,SNR=6.3								
TORD	**Torodi Ar. Bea**	**173.84**	**137**	PKP		PKPdf	05 46 45.6	-1.7	
	comp=Z,0.5nm,0.9s,baz=148,slow=0.7,SNR=2.7								
TORD				PKPab		PKPab	05 48 16.5	-1.0	
	comp=Z,0.4nm,1.0s,baz=212,slow=3.7,SNR=3.0								

MAN 31 05:40:33,1234N×12529E,h15km,mb4.2,ML3.0,MS2.8, 1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.64**	**286**	*e*P	Pg	05 40 46.0	+0.4
CNP				*e*S	Sg	05 40 55.1	+1.1
BESP	**Borongan**	**0.74**	**169**	*e*P	Pg	05 40 48.3	+0.8
BESP				*e*S	Sg	05 41 00.8	+3.4
PLP	**Palo**	**1.21**	**195**	⇓*e*P	Pn	05 40 55.4	0.0
PLP				*e*S	Sb	05 41 11.2	+0.3
PVCP	**Virac**	**1.67**	**319**	*e*P	Pn	05 41 01.7	-0.1
PVCP				*e*S	Sn	05 41 24.7	+1.7

*CSEM **31** 06:03:17.6±0.2,3782N×2963E,h18km±2km,MD2.8,Error ellipse: s-maj=6.7km s-min=3.2km az=81.0*
*DDA **31** 06:03:19.1,3784N×2953E,h7km±3km, Md2.9*
*ISCJB **31** 06:03:20.0±0.9,3785N±004×2939E±008,h24km±17km, Error ellipse: s-maj=10.6km s-min=6.8km az=160.7*
*ISK **31** 06:03:22.0,3807N×2956E,h17km,MD2.8*

ISC 31 06:03:20.1±0.8,3784N±004×2940E±007,h23km±20km,n8, σ1§17/12,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.31**	**253**	*e*PG	**Pb**	**06 03 33.2**	**+6.2**
KHL	**Karahalli**	**0.49**	**11**	*e*PG	**Pb**	**06 03 28.5**	**-1.5**
KHAL	**Karahalli**	**0.53**	**8**	*i*P	**Pb**	**06 03 29.2**	**-1.6**
KHAL				*i*S	**Sb**	**06 03 37.8**	**-0.2**
GOLH	**Golhisar**	**0.62**	**168**	*i*P	**Pb**	**06 03 30.4**	**-1.8**
GOLH				*i*S	**Sb**	**06 03 40.6**	**+0.1**
ISP	**Isparta**	**0.88**	**90**	*e*PG	**Pb**	**06 03 38.4**	**+1.8**
ISP				*e*SG	**Sb**	**06 03 48.6**	**+0.8**
KULA	**Kula-Manisa**	**0.89**	**319**	*e*PG	**Pb**	**06 03 37.9**	**+1.1**
MANT	**Manisa**	**0.93**	**314**	*i*P	**Pb**	**06 03 38.3**	**+0.8**
MANT				*i*S	**Sb**	**06 03 53.7**	**+4.3**
ALT	**Altintas**	**1.33**	**24**	*e*PG	**Pn**	**06 03 42.9**	**-0.4**

*ISCJB **31** 06:05:07.4±2.5,408N±0.1×7166E±008,h8km±17km, mb3.5/4,Error ellipse: s-maj=16.9km s-min=9.9km az=172.7*
*IDC **31** 06:05:07.2±1.8,4080N×7195E,h0km,mb3.6/4,mb1 3.5/7, mb1mx3.3/25,mbtmp3.3/7,ML2.9/3,MS2.9/1,Ms1 2.9/1, ms1mx2.0/40,Error ellipse: s-maj=34.0km s-min=18.7km az=143.0*
*NEIC **31** 06:05:09.8±1.3,4097N×7177E,h10km,Error ellipse: s-maj=24.4km s-min=10.8km az=159.0*
*NNC **31** 06:05:12.2±2.5,4103N×7161E,h0km,mb3.5,mpv3.4, Error ellipse: s-maj=22.1km s-min=8.1km az=13.0*

ISC 31 06:05:10.6±2.7,4085N±010×7173E±007,h16km±19km, n23,σ1§27/26,mb3.5/4,4C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.95**	**48**	P	**Pn**	**06 05 41.5**	**-1.6**
	SNR=62						
EKS2	**Erkin-Say**	**2.37**	**39**	P	**Pn**	**06 05 48.8**	**0.0**
	SNR=39						
KK31	**Karatau Array**	**2.43**	**338**	⇑Pn	**Pn**	**06 05 50.0**	**+0.4**
	4.1nm,0.2s,baz=153,slow=15,SNR=263						
KK31				⇑Sn	**Sn**	**06 06 19.9**	**+0.9**
	35nm,0.4s,baz=160,slow=25,SNR=16						
UCH	**Uchtor**	**2.50**	**56**	P	**Sn**	**06 06 22.3**	**+1.6**
	SNR=9.3						
AAK	**Ala-Archa**	**2.73**	**48**	P	**Pn**	**06 05 55.4**	**+1.6**
	SNR=8.3						
AAK	**Ala-Archa**	**2.73**	**48**	*e*Pn	**Pn**	**06 05 53.1**	**-0.6**
AAK				*e*Sn	**Sn**	**06 06 24.5**	**-1.9**
KZA	**Kyzart**	**2.91**	**64**	P	**Pn**	**06 05 56.9**	**+0.6**
	SNR=23						
CHMS	**Chumysh**	**3.11**	**45**	P	**Pn**	**06 06 00.4**	**+1.4**
	SNR=11						
USP	**Ospenovka**	**3.17**	**40**	P	**Pn**	**06 06 00.3**	**+0.4**
	SNR=14						
TKM2	**Tokmak 2**	**3.55**	**53**	⇓Pn	**Pn**	**06 06 08.8**	**+3.8**
	9.5nm,0.5s						
TKM2				⇑Sn	**Sn**	**06 06 52.2**	**+5.6**
	22nm,0.5s						
TKM2	**Tokmak 2**	**3.55**	**53**	*e*Pn	**Pn**	**06 06 04.6**	**-0.4**
TKM2				*e*Sg	**Sn**	**06 06 53.2**	**+6.6**
MK31	**Makanchi Array**	**9.67**	**49**	⇓P	**Pn**	**06 07 31.1**	**+2.2**
	0.6nm,0.6s,baz=237,slow=15,SNR=5.5						
MKAR	**Makanchi Array**	**9.67**	**49**	Pn	**Pn**	**06 07 27.2**	**-1.7**
	0.1nm,0.3s,baz=238,slow=14,SNR=3.2						
MKAR				Lg		06 10 10.7	
	0.2nm,0.3s,baz=241,slow=28,SNR=5.5						
KURBB	**Kurchatov Arra**	**10.86**	**24**	⇑P	**Pn**	**06 07 46.8**	**+1.5**
	0.1nm,0.5s						
KURK	**Kurchatov**	**10.97**	**24**	Pn	**Pn**	**06 07 45.8**	**-1.0**
	0.0nm,0.3s,baz=221,slow=11,SNR=2.5						
KURK				Lg		06 10 45.7	
	0.1nm,0.3s,baz=211,slow=30,SNR=6.3						
BVAR	**Borovoye Array**	**12.22**	**356**	Pn	**Pn**	**06 08 02.3**	**-1.5**
	0.1nm,0.3s,baz=152,slow=12,SNR=2.1						
BVAR				Lg		06 11 35.0	
	0.2nm,0.3s,baz=172,slow=26,SNR=4.3						
ZALV	**Zalesovo Beam**	**15.78**	**29**	Pn	**Pn**	**06 08 48.7**	**-3.3**
	0.1nm,0.3s,baz=249,slow=12,SNR=2.4						
GNI	**Garni**	**20.52**	**277**	LR	LR	06 18 10.3	
	comp=Z,33nm,18.4s,baz=89,slow=38						
AKASG	**Malin Array Be**	**30.86**	**303**	P	**P**	**06 11 26.0**	**+0.2**
	0.4nm,0.4s,mb3.6,baz=96,slow=8.4,SNR=4.0						
ARCES	**ARCESS Array B**	**37.39**	**335**	P	**P**	**06 12 21.7**	**-0.5**
	2.9nm,0.9s,mb4.1,baz=101,slow=9.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**66.45**	**267**	P	**P**	**06 16 00.1**	**+0.7**
	0.4nm,1.0s,mb3.4,baz=54,slow=4.3,SNR=2.9						
YKA	**Yellowknife Ar**	**76.88**	**3**	P	**P**	**06 17 00.1**	**-1.3**
	0.1nm,0.5s,mb3.0,baz=352,slow=5.7,SNR=6.7						
YKA	**Yellowknife Ar**	**76.88**	**3**	P	**P**	**06 17 00.1**	**-1.3**

*NEIC **31** 06:05:58.5,1795N×10046W,h52km,MD3.8(MEX),After MEX.*

MEX 31 06:05:58.8±0.9,1797N×10045W,h50km±15km,MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.79**	**93**	*i*P	Pn	06 06 11.9	-1.8
MEIG				*i*S	Sn	06 06 23.2	-1.5
CAIG	**El Cayaco**	**0.94**	**169**	*i*P	Pn	06 06 13.6	-2.1
CAIG				*i*S	Sn	06 06 26.7	-1.4
CAIG	**El Cayaco**	**0.94**	**169**	*i*P	Pn	06 06 13.4	-2.3
CAIG				*i*S	Sn	06 06 25.9	-2.1
PLIG	**Platanillo**	**0.99**	**65**	*i*P	Pn	06 06 14.8	-1.6
PLIG				*i*S	Sn	06 06 28.0	-1.5
ZIIG	**Zihuatanejo**	**1.03**	**249**	*e*P	Pn	06 06 15.2	-1.7
ZIIG				*e*S	Sn	06 06 28.8	-1.5
ZIIG	**Zihuatanejo**	**1.03**	**249**	*i*P	Pn	06 06 15.6	-1.3
ZIIG				*i*S	Sn	06 06 26.8	-3.6
ACX	**Acapulco**	**1.21**	**155**	*e*P	Pn	06 06 19.3	-0.1
ACX				*i*S	Sn	06 06 32.5	-2.2
ACX	**Acapulco**	**1.21**	**155**	*i*P	Pn	06 06 16.5	-2.9
ACX				*i*S	Sn	06 06 32.0	-2.7
UTMO	**Huajuapan**	**2.52**	**93**	*i*P	Pn	06 06 37.0	-0.3
UTMO				*i*S	Sn	06 07 05.2	-1.7
PNIG	**Pinotepa**	**2.72**	**125**	*i*P	Pn	06 06 40.2	+0.2
PNIG				*i*S	Sn	06 07 09.6	-2.2
PNIG	**Pinotepa**	**2.72**	**125**	*i*P	Pn	06 06 40.3	+0.3
PNIG				*i*S	Sn	06 07 09.6	-2.2

*IDC **31** 06:28:59.2±2.1,2062S×16883E,h0km,mb4.0/5, mb1 4.3/5,mb1mx4.0/15,mbtmp4.0/5,MS3.4/3,Ms1 3.3/3, ms1mx2.9/21,Error ellipse: s-maj=112.7km s-min=27.9km az=160.0*
*NOU **31** 06:29:02.8±0.8,1995S×16832E,h10km,MD2.6,ML3.4*
*ISCJB **31** 06:29:03.8±2.1,2035S±02×1686E±02,h37km±18km, mb4.1/5,MS3.3/2,Error ellipse: s-maj=34.5km s-min=16.1km az=142.1*

ISC 31 06:29:04.4±3.5,2045S±02×1687E±01,h30km±25km,n18, σ0§44/14,mb4.1/5,MS3.3/2,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUM	**Mont Dore**	**2.67**	**226**	*e*P	**Pn**	**06 29 45.3**	**+0.1**
PLUM				AMP		06 30 20.2	
	comp=Z,217nm,2.8s						
DZM	**Mont Dzumac**	**2.67**	**232**	*e*P	**Pn**	**06 29 44.9**	**-0.5**
DZM				*e*S	**Sn**	**06 30 16.4**	**-0.4**
DZM				AMP		06 30 19.8	
	comp=Z,1μm,2.2s						
NORM	**Noumea**	**2.74**	**229**	*e*P	**Pn**	**06 29 46.4**	**0.0**
NORM				*e*S	**Sn**	**06 30 18.8**	**+0.3**
NORM				AMP		06 30 20.0	
	comp=Z,305nm,1.1s						
NOUC	**Port Laguerre**	**2.80**	**233**	*e*P	**Pn**	**06 29 47.5**	**+0.5**
NOUC				*e*S	**Sn**	**06 30 19.6**	**-0.2**
NOUC				AMP		06 30 32.7	
	comp=Z,97nm,0.0s						
AFI	**Afiamalu**	**19.73**	**74**	LR	LR	06 39 52.8	
	comp=Z,72nm,20.1s,baz=244,slow=33						
CTA	**Charters Tower**	**21.06**	**267**	LR	LR	06 40 41.2	
	comp=Z,96nm,19.8s,MS3.2,baz=59,slow=33						
STKA	**Stephens Creek**	**26.80**	**239**	LR	LR	06 44 33.6	
	comp=Z,91nm,19.3s,MS3.4,baz=200,slow=35						
WRA	**Warramunga Arr**	**32.23**	**265**	P	**P**	**06 35 29.9**	**-0.3**
	comp=Z,1.7nm,1.1s,mb3.8,baz=93,slow=8.6,SNR=3.2						
ASAR	**Alice Springs**	**32.37**	**258**	P	**P**	**06 35 31.4**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.0,baz=87,slow=8.8,SNR=14						
SONM	**Songino Array**	**87.85**	**323**	P	**P**	**06 41 51.4**	**+0.7**
	comp=Z,1.0nm,0.8s,mb4.1,baz=142,slow=4.4,SNR=6.1						
VNA3	**Neumayer Olymp**	**88.58**	**181**	*e*	**P**	**06 41 54.2**	**+0.3**
VNA3				*e*		06 42 00.9	
VNA3				*e*		06 42 08.4	
VNA2	**Neumayer--Watz**	**88.86**	**181**	*e*	**P**	**06 41 55.6**	**+0.4**
	baz=185,slow=4.6						
VNA2				*e*	pP	06 42 03.0	-2.0
VNA2				*e*		06 42 10.6	
NVAR	**Mina Array Bea**	**89.95**	**49**	P	**P**	**06 42 00.9**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.4,baz=238,slow=6.0,SNR=4.9						
TXAR	**Lajitas Array**	**97.77**	**62**	P	**P**	**06 42 35.8**	**-1.1**
	comp=Z,0.5nm,0.8s,mb4.1,baz=218,slow=5.7,SNR=3.4						
YKA	**Yellowknife Ar**	**101.94**	**28**	P	Pdif	06 42 54.6	-0.5
	comp=Z,0.3nm,0.8s,baz=258,slow=4.6,SNR=5.2						
ARCES	**ARCESS Array B**	**126.07**	**345**	PKP	PKPdf	06 48 03.8	+1.0
	comp=Z,3.1nm,1.0s,baz=5.7,slow=0.9,SNR=3.7						
GERES	**GERESS Array B**	**145.28**	**331**	PKPbc	PKPbc	06 48 38.9	+0.2
	comp=Z,0.9nm,0.7s,baz=45,slow=4.0,SNR=7.6						
DAVOX	**Davos/Dischmat**	**148.54**	**332**	PKPbc	PKPbc	06 48 48.3	+0.1
	comp=Z,3.3nm,1.0s,baz=322,slow=8.0,SNR=4.1						

*SKHL **31** 06:30:42.8±2.7,4591N×15375E,h55km±25km,mb4.9/3*
*IDC **31** 06:30:45.5±0.6,4620N×15299E,h0km,mb4.1/21, mb1 4.3/23,mb1mx4.2/29,mbtmp4.1/23,ML3.5/2,MS3.9/5, Ms1 3.9/5,ms1mx3.3/27,Error ellipse: s-maj=18.0km s-min=14.6km az=153.0*
*BJI **31** 06:30:46.5,4644N×15291E,h10km,mB5.1,mb4.6,Ms4.6, Msz4.4*
*NEIC **31** 06:30:48.7±0.6,4645N×15290E,h10km,mb4.6/19,Error ellipse: s-maj=16.0km s-min=7.5km az=141.0*
*ISCJB **31** 06:30:50.8±0.5,4633N±007×15280E±007,h33km, mb4.5/65,MS3.9/14,Error ellipse: s-maj=11.3km s-min=4.5km az=148.8*
*MOS **31** 06:30:55.5±1.8,4637N×15261E,h73km,mb4.7/20,Error ellipse: s-maj=10.8km s-min=7.5km az=112.9*

ISC 31 06:30:53.0±0.5,4641N±007×15283E±008,h35km, (h6km±6.4km:pP-P),n162,σ1§12/172,mb4.5/65,MS3.9/14, 20C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.66**	**253**	*i*PN	**Pn**	**06 31 43.8**	**-3.3**
KUR				*i*S	**Sn**	**06 32 27.5**	**-1.5**
KUR				pmax	pmax		
	comp=N,130nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,560nm,0.5s						
KUR				smax			
	comp=N,520nm,0.6s						
KUR				smax			
	comp=E,380nm,0.6s						
KUR	**Kuril'sk**	**3.66**	**253**	⇓*i*P	**Pn**	**06 31 43.8**	**-3.3**
KUR				AMB	AMB	06 31 44.5	
	comp=E,130nm,0.5s						
KUR				AMB	AMB	06 31 44.5	
	comp=E,80nm,0.5s						
KUR				AMB	AMB	06 31 44.5	
	comp=E,530nm,0.5s						
KUR				*i*S	**Sn**	**06 32 27.5**	**-1.5**
KUR				A		06 32 47.5	
	comp=E,520nm,0.6s						
KUR				A		06 32 47.5	
	comp=E,380nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.47**	**247**	*e*P	**Pn**	**06 32 08.0**	**-3.8**
YUK				*e*S	**Sn**	**06 33 13.9**	**+0.5**
YUK				A		06 33 20.0	
	comp=E,750nm,0.8s						
YUK				A		06 33 20.0	
	comp=E,450nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.95**	**278**	*e*PN	**Pn**	**06 32 36.5**	**+4.3**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.95**	**278**	*e*P	**Pn**	**06 32 36.5**	**+4.3**
YSS				AMB	AMB	06 32 38.0	
	comp=Z,30nm,1.0s						
YSS				*e*S	**Sn**	**06 33 59.0**	**+9.0**
PETK	**Petropavlovsk-**	**7.41**	**23**	Pn	**Pn**	**06 32 36.2**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=172,slow=12,SNR=9.2						
PETK	**Petropavlovsk-**	**7.41**	**23**	Pn	**Pn**	**06 32 36.1**	**-2.2**
ASAJ	**Asahikawa**	**7.58**	**256**	Pn	**Pn**	**06 32 42.1**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=94,slow=21,SNR=13						
ASAJ	**Asahikawa**	**7.58**	**256**	PN	**Pn**	**06 32 42.2**	**+1.4**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PET	**Petropavlovsk**	**7.62**	**28**	*i*PN	**Pn**	**06 32 37.7**	**-3.6**
PET	**Petropavlovsk**	**7.62**	**28**	Pn	**Pn**	**06 32 35.5**	**-5.8**
TYV	**Tymovskoe**	**8.07**	**307**	*e*P	**Pn**	**06 32 48.0**	**+0.4**
TYV				AMB	AMB	06 32 58.0	
	comp=Z,22nm,0.8s						
TYV				AMB	AMB	06 32 58.0	
	comp=Z,33nm,0.8s						
TYV				AMB	AMB	06 32 58.0	
	comp=Z,27nm,1.0s						
ERM	**Erimo**	**8.22**	**241**	*e*Pn	**Pn**	**06 32 49.0**	**-0.6**
ERM				*e*Sn	**Sn**	**06 34 14.0**	**-7.2**
HABR	**Khabarovsk**	**12.21**	**286**	*e*PN	**Pn**	**06 33 40.8**	**-3.4**
HABR				MLR	MLR		
	comp=Z,109nm,13.0s						
MJAR	**Matsushiro Arr**	**14.72**	**233**	Pn	**Pn**	**06 34 12.9**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=25,slow=14,SNR=3.7						
MAJO	**Matsushiro**	**14.72**	**233**	P	**Pn**	**06 34 19.5**	**+1.0**
MAT	**Matsushiro**	**14.72**	**233**	P	**Pn**	**06 34 22.0**	**+3.5**
MDJ	**Mudanjiang**	**16.38**	**272**	P	**Pn**	**06 34 37.8**	**-2.2**
MDJ				AP	pP	06 34 43.5	-8.1
MDJ				S	**S**	**06 37 39.3**	**-13**
MDJ				SCP	ScP	06 43 05.8	+3.0
MDJ				AMB	AMB		
	comp=Z,8.0nm,2.4s						
MDJ				AMB	AMB		
	comp=Z,351nm,5.5s						
MDJ				LR	LR		
	comp=N,449nm,6.1s						
MDJ				LR	LR		
	comp=E,552nm,4.9s						
MDJ				LR	LR		
	comp=Z,810nm,5.6s						
MDJ	**Mudanjiang**	**16.38**	**272**	*e*P	**Pn**	**06 34 37.5**	**-2.5**
	comp=Z,19nm,1.2s						
CN2	**Changchun**	**19.47**	**272**	*e*P	**Pn**	**06 35 16.5**	**-1.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
YAK	**Yakutsk**	**20.50**	**328**	⇑*e*P	**P**	**06 35 28.4**	**+0.8**
YAK				MLR	MLR		
	comp=Z,200nm,26.0s,MS3.4						
KSRS	**Korea Array**	**20.51**	**253**	P	**P**	**06 35 27.2**	**-0.7**
	comp=Z,3.6nm,0.7s,baz=54,slow=11,SNR=7.6						
KSRS	**Korea Array**	**20.51**	**253**	P	**P**	**06 35 27.2**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL	**Bilibino**	**22.76**	**13**	⇑*e*P	**P**	**06 35 50.3**	**-1.4**
BILL				*e*		06 36 14.7	
BILL				*e*S	**S**	**06 39 57.6**	**-0.5**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.4						
BOD	**Bodaibo**	**26.05**	**310**	*e*P	**P**	**06 36 20.5**	**-2.2**
BJI	**Beijing**	**27.28**	**270**	P	**P**	**06 36 32.8**	**-1.1**
BJI				S	**S**	**06 41 12.5**	**+1.7**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.4s,mb4.5						
BJI				AMB	AMB		
	comp=Z,161nm,5.8s						
BJI				LR	LR		
	comp=N,486nm,15.3s,MS4.4						
BJI				LR	LR		
	comp=E,581nm,14.9s,MS4.4						
BJI				LR	LR		
	comp=Z,111nm,18.4s,MS3.5						
NJ2	**Nanjing**	**29.71**	**253**	*e*P	**P**	**06 36 55.3**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
HHC	**Hu-ho-hao-te**	**30.12**	**274**	*e*P	**P**	**06 36 58.8**	**-0.4**
HHC				AP	pP	06 37 02.8	-6.4
HHC				PP	PP	06 37 56.0	-11
HHC				PCP	PcP	06 40 00.8	+0.9
HHC				S	**S**	**06 41 55.5**	**0.0**
HHC				SS	SS	06 43 32.0	-32
HHC				SCP	ScP	06 43 41.5	+2.3
HHC				SCS	ScS	06 47 35.5	+0.7
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,187nm,5.8s						
HHC				LR	LR		
	comp=N,195nm,13.3s,MS4.2						
HHC				LR	LR		
	comp=E,388nm,15.1s,MS4.2						
HHC				LR	LR		
	comp=Z,258nm,14.6s,MS4.0						
ULN	**Ulaanbaatar**	**30.82**	**290**	⇑*e*P	**P**	**06 37 07.5**	**+2.2**
ULN	**Ulaanbaatar**	**30.82**	**290**	*e*P	**P**	**06 37 04.4**	**-0.8**
	comp=Z,3.4nm,1.1s,mb4.1						
SONM	**Songino Array**	**31.26**	**290**	P	**P**	**06 37 08.0**	**-1.1**
	comp=Z,1.3nm,0.9s,mb3.8,baz=75,slow=7.5,SNR=5.7						
SONM				LR	LR	06 50 49.7	
	comp=Z,140nm,18.2s,MS3.7,baz=67,slow=38						
TLY	**Talaya**	**32.16**	**298**	*e*P	**P**	**06 37 15.7**	**-1.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TLY	**Talaya**	**32.16**	**298**	*e*P	**P**	**06 37 15.7**	**-1.3**
	comp=Z,7.3nm,1.0s,mb4.5						
ZAK	**Zakamensk**	**32.64**	**295**	*e*P	**P**	**06 37 13.9**	**-7.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
SSLB	**Suanglung**	**34.13**	**240**	*e*P	**P**	**06 37 34.0**	**-0.4**
	comp=Z,20nm,0.9s,mb5.0						
XAN	**Xi'an**	**35.29**	**265**	P	**P**	**06 37 45.3**	**+0.9**
XAN				AP	pP	06 37 47.5	-7.0
XAN				PP	PP	06 39 05.3	+0.6
XAN				S	**S**	**06 43 19.5**	**+3.6**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
COLA	**College**	**36.52**	**38**	*i*P	**P**	**06 37 53.3**	**-1.3**
LZH	**Lanzhou**	**37.70**	**272**	*e*P	**P**	**06 38 04.5**	**-0.4**
LZH				AP	pP	06 38 07.8	-7.3
LZH				PP	PP	06 39 33.3	+2.1
LZH				AMB	AMB		
	comp=Z,22nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,95nm,5.0s						
LZH				LR	LR		
	comp=N,402nm,12.9s						
LZH				LR	LR		
	comp=Z,578nm,17.2s,MS4.4						
GTA	**Gaotai**	**38.83**	**279**	P	**P**	**06 38 15.0**	**+0.6**
GTA				AP	pP	06 38 18.3	-6.3
GTA				XP	sP	06 38 21.0	-7.8
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
CD2	**Chengdu**	**40.66**	**265**	P	**P**	**06 38 29.0**	**-0.6**
CD2				AP	pP	06 38 36.8	-3.1
CD2				XP	sP	06 38 38.5	-5.6
CD2				PP	PP	06 40 09.8	+6.2
CD2				S	**S**	**06 44 42.3**	**+5.1**
CD2				XS	sS	06 44 48.8	-5.2
CD2				SS	SS	06 47 36.0	-2.0
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
CD2				AMB	AMB		
	comp=Z,130nm,4.2s						
CD2				LR	LR		
	comp=N,270nm,5.6s						
CD2				LR	LR		
	comp=Z,210nm,6.2s						
GYA	**Guiyang**	**41.45**	**258**	P	**P**	**06 38 36.8**	**+0.6**
GYA				PP	PP	06 40 16.0	+3.8
GYA				PCP	PcP	06 40 37.3	+3.7
GYA				SCP	ScP	06 44 23.5	+2.8
GYA				S	**S**	**06 44 54.0**	**+5.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,60nm,4.9s						
GYA				LR	LR		
	comp=N,420nm,16.2s,MS4.5						
GYA				LR	LR		
	comp=E,340nm,17.1s,MS4.5						
GYA				LR	LR		
	comp=Z,380nm,16.7s,MS4.3						
ZALV	**Zalesovo Beam**	**42.65**	**306**	P	**P**	**06 38 43.8**	**-1.

RES pmax pmax
comp=Z,13nm,1.6s,mb4.6
RES Resolute Bay 51.22 18 *e*P **P 06 39 50.3 -2.0**
comp=Z,14nm,1.6s,mb4.6
YKA Yellowknife Ar 51.31 36 P **P 06 39 51.6 -1.5**
comp=Z,1.2nm,0.8s,mb3.9,baz=297,slow=7.1,SNR=20
CHTO Chiang Mai 51.85 257 *e*P **P 06 39 57.3 -0.4**
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CHTO Chiang Mai 51.85 257 *e*P **P 06 39 57.2 -0.5**
comp=Z,1.8nm,0.6s,mb4.2
CMAR Chiang Mai Arr 52.10 256 P **P 06 39 59.0 -0.6**
comp=Z,1.6nm,0.7s,mb4.0,baz=38,slow=7.5,SNR=14
AAK Ala-Archa 53.81 296⇓ *i*P **P 06 40 11.5 -0.4**
AAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
AAK MLR MLR
comp=Z,100nm,21.0s,MS3.9
AAK Ala-Archa 53.81 296 *e*P **P 06 40 11.3 -0.6**
comp=Z,6.0nm,0.8s,mb4.6
JIRN Jiri 54.78 275 *e*P **P 06 40 19.8 +0.6**
comp=Z,13nm,0.6s,mb5.2
GUN Gumba 54.84 275 *e*P **P 06 40 19.9 +0.3**
RAMN Ramite 54.94 274 *e*P **P 06 40 20.4 +0.1**
comp=Z,22nm,0.7s,mb5.3
ARU Arti 55.13 318*c i*P **P 06 40 19.5 -1.8**
ARU *e* 06 42 21.2
ARU *e*S **S 06 48 01.4 0.0**
ARU *e*SS SS 06 51 43.6 -1.3
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.7
ARU Arti 55.13 318 *e*P **P 06 40 19.4 -1.9**
comp=Z,6.2nm,0.7s,mb4.8
KKN Kakani 55.32 275 *e*P **P 06 40 24.0 +0.9**
PKIN Phulchoki 55.38 275 *e*P **P 06 40 23.2 -0.3**
DMN Daman 55.56 275 *e*P **P 06 40 25.3 +0.5**
GKN Gorkha 55.63 276 *e*P **P 06 40 26.1 +0.8**
DANN Dangsing 56.02 277 *e*P **P 06 40 29.1 +1.0**
comp=Z,34nm,0.6s,mb5.5
KOLN Koldanda 56.49 276 *e*P **P 06 40 32.0 +0.5**
comp=Z,20nm,0.7s,mb5.2
ARCES ARCESS Array B 58.11 341 P **P 06 40 41.4 -0.8**
comp=Z,1.8nm,0.8s,mb4.1,baz=32,slow=6.5,SNR=5.2
ARCES LR LR 07 09 08.6
comp=Z,73nm,18.7s,MS3.8,baz=210,slow=40
ARCES ARCESS Array B 58.11 341 P **P 06 40 41.4 -0.8**
ARCES LR LR 07 09 08.6
AKTK Aktyubinsk 58.80 312 P **P 06 40 45.9 -1.5**
AKTO Aktyubinsk 58.80 312 P **P 06 40 45.9 -1.5**
comp=Z,1.2nm,0.6s,mb4.1,baz=74,slow=7.1,SNR=6.7
SUMG Summit 61.05 4 P **P 06 41 02.4 -0.1**
comp=Z,13nm,0.9s,mb5.1
KBL Kabul 62.01 292 *e*P **P 06 41 08.8 -0.7**
KBL pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
KBL Kabul 62.01 292 *e*P **P 06 41 08.8 -0.8**
comp=Z,9.4nm,0.9s,mb4.9
NVAR Mina Array Bea 62.77 62 P **P 06 41 13.8 -0.7**
comp=Z,0.6nm,0.6s,mb3.9,baz=301,slow=6.3,SNR=4.4
PDAR Pinedale Array 65.10 54 P **P 06 41 28.4 -1.4**
comp=Z,1.2nm,0.8s,mb4.0,baz=299,slow=3.2,SNR=9.2
OBN Obninsk 65.48 326⇓ *e*P **P 06 41 30.9 -1.1**
OBN *e* 06 43 57.0
OBN *e*S S 06 50 14.7 +0.8
OBN pmax pmax
comp=Z,12nm,1.4s,mb4.7
HYB Hyderabad 66.81 271 *e*P **P 06 41 40.0 -1.1**
WRA Warramunga Arr 68.13 199 P **P 06 41 44.9 -4.3**
comp=Z,0.7nm,0.7s,mb3.8,baz=14,slow=6.4,SNR=3.3
NB2 NORSAR Subarra 68.48 341 P **P 06 41 50.2 -0.8**
comp=Z,6.6nm,1.0s,mb4.6,baz=29,slow=6.5
NOA NORSAR Array B 68.48 341 P **P 06 41 50.3 -0.7**
comp=Z,1.4nm,0.5s,mb4.2,baz=28,slow=6.4,SNR=15
KIV Kislovodsk 70.89 314⇑ *e*P **P 06 42 08.1 +1.9**
KIV *e* 06 44 40.4
KIV *e*S S 06 51 18.5 -0.4
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KIV MLR MLR
comp=Z,100nm,12.0s,MS4.3
AKASG Malin Array Be 71.72 326 P **P 06 42 10.0 -1.0**
comp=Z,7.4nm,0.5s,mb4.9,baz=33,slow=6.1,SNR=36
ASAR Alice Springs 71.83 198 P **P 06 42 09.2 -2.7**
comp=Z,0.6nm,0.8s,mb3.6,baz=12,slow=5.4,SNR=10
GNI Garni 72.60 310⇑ *e*P **P 06 42 18.1 +1.6**
GNI pmax pmax
comp=Z,8.0nm,1.0s
GNI MLR MLR
comp=Z,100nm,24.0s
OJC Ojcow 75.52 331 *e*P **P 06 42 24.4 -8.9**
BUR08 Bucovina Ar. S 75.74 326 *e*P **P 06 42 34.1 -0.6**
BURAR Bucovina Array 75.76 326⇑ *i*P **P 06 42 34.5 -0.3**
BURAR Bucovina Array 75.76 326⇑ P **P 06 42 34.5 -0.3**
TRPA Tarpa 76.33 328 *i*P **P 06 42 38.0 0.0**
DPC Dobruska-Polom 76.54 333 *e*P **P 06 42 39.0 -0.1**
CLL Collm 76.69 335 *e*P **P 06 42 40.0 0.0**
CLL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CLL Collm 76.69 335 *e*P **P 06 42 40.0 0.0**
comp=Z,10.0nm,1.2s,mb4.6
CLL *e*PcP PcP 06 42 50.0 -1.3
MLR Muntele Rosu 77.23 325 P **P 06 42 43.0 -0.1**
comp=Z,2.7nm,0.6s,mb4.3,baz=205,slow=3.5,SNR=11
MALT Malatya 77.24 313⇑ *i*P **P 06 42 44.4 +1.1**
MALT Malatya 77.24 313 *e*P **P 06 42 44.9 +1.5**
comp=Z,3.1nm,0.8s,mb4.5
VRAC Vranov 77.36 332 P **P 06 42 43.0 -0.8**
comp=Z,1.7nm,0.6s,mb4.2,baz=77,slow=3.0,SNR=4.3
DRGR 77.39 327⇓ *i*P **P 06 42 43.8 -0.2**
DRGR 77.39 327 ⇓P **P 06 42 43.8 -0.2**
PRU Pruhonice 77.40 334 *e*P **P 06 42 43.6 -0.4**
VOIR 77.63 325⇑ *i*P **P 06 42 45.4 +0.1**
VOIR 77.63 325⇑P **P 06 42 45.4 +0.1**
NKC Novy Kostel 77.81 335 *e*P **P 06 42 46.7 +0.4**
TXAR Lajitas Array 77.83 60 P **P 06 42 44.8 -1.9**
comp=Z,0.9nm,0.6s,mb3.9,baz=298,slow=4.5,SNR=17
TXAR Lajitas Array 77.83 60 P **P 06 42 44.8 -1.9**
KHC Kasperske Hory 78.46 334 *e*P **P 06 42 49.9 0.0**
BRTR Keskin Array B 78.50 317 P **P 06 42 50.8 +0.4**
comp=Z,2.5nm,1.1s,mb4.1,baz=76,slow=5.2,SNR=7.8
BRTR Keskin Array B 78.50 317 *i*P **P 06 42 50.7 +0.4**
BRTR pmax pmax
comp=Z,3.0nm,1.1s
MIB Mutribah 78.67 301 *e*P **P 06 42 51.9 +0.5**
MIB AMb AMB 06 42 53.4
comp=Z,62nm,1.6s,mb5.3
GERES GERESS Array B 78.67 334 P **P 06 42 50.7 -0.3**
comp=Z,1.1nm,0.6s,mb4.0,baz=34,slow=5.3,SNR=13
GERES LR LR 07 21 46.5
comp=Z,80nm,20.3s,MS4.0,baz=278,slow=39
BZS Buzias 78.79 327⇑ *i*P **P 06 42 50.8 -1.0**
BZS Buzias 78.79 327⇑P **P 06 42 50.9 -0.9**
CONA Conrad Observa 78.80 332⇑ *i*pP **P 06 42 52.2 +0.4**
comp=Z,5.1nm,1.1s,mb4.4
CSNA Conrad Observa 78.80 332⇑ *i*pP **P 06 42 52.2 +0.4**
comp=Z,4.5nm,1.1s,mb4.3
MEM Membach 79.19 339 P **P 06 42 53.9 0.0**
PKSM Moragy 79.36 330⇑ *i*P **P 06 42 53.7 -1.2**
PKSM Moragy 79.36 330⇑P **P 06 42 53.7 -1.1**
BCLA Clavier 79.54 340 P **P 06 42 55.8 0.0**
comp=Z,15nm,2.6s,mb4.5
GIVF Givet 79.95 340 *e*P **P 06 42 59.6 +1.6**
BAIF Baives 80.14 340 *e*P **P 06 42 59.9 +0.9**
KBA Koelnbreinsper 80.35 333⇑ *i*pP **P 06 43 01.2 +0.9**
comp=Z,20nm,1.5s,mb4.8
WATA Walderalm 80.66 334⇓ *i*pP **P 06 43 02.4 +0.5**
comp=Z,5.5nm,0.6s,mb4.7
WTTA Wattenberg 80.71 334⇑ *i*pP **P 06 43 02.3 +0.1**
comp=Z,9.6nm,0.6s,mb4.9
MOTA Moosalm 80.80 335⇓ *i*pP **P 06 43 02.9 +0.3**
comp=Z,3.7nm,0.6s,mb4.5
CDF Champ du Feu 80.89 338 *e*P **P 06 43 04.0 +0.9**
comp=Z,13nm,1.0s,mb4.5
CDF Champ du Feu 80.89 338 *e*P **P 06 43 04.0 +0.9**
CDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
CDF Champ du Feu 80.89 338 *e*P **P 06 43 04.0 +0.9**
comp=Z,6.6nm,1.0s,mb4.5
MEZF Maizieres J'vi 81.38 339 *e*P **P 06 43 06.9 +1.2**
HAU Haudompre 81.51 338 *e*P **P 06 43 07.1 +0.7**
HINF Hinteralfeld 81.55 338 *e*P **P 06 43 07.2 +0.6**
DAVOX Davos/Dischmat 81.66 335 P **P 06 43 07.8 +0.6**
comp=Z,2.5nm,0.7s,mb4.3,baz=15,slow=13,SNR=6.9
LOR Lormes 82.82 339 *e*P **P 06 43 14.4 +1.1**
comp=Z,10nm,0.7s,mb4.7
LOR Lormes 82.82 339 *e*P **P 06 43 14.4 +1.1**
LOR pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
LOR Lormes 82.82 339 *e*P **P 06 43 14.4 +1.1**
comp=Z,5.2nm,0.7s,mb4.7
GRR Gorron 82.83 343 *e*P **P 06 43 14.7 +1.4**
CABF La Chapelle 82.87 338 *e*P **P 06 43 14.7 +1.2**
MMAI Mount Meron Ar 82.89 311 P **P 06 43 14.6 +0.7**
comp=Z,2.2nm,0.5s,mb4.5,baz=58,slow=7.9,SNR=4.5
SSF Saint Saulge 83.10 339 *e*P **P 06 43 15.8 +1.1**
comp=Z,8.1nm,0.8s,mb4.5
SSF Saint Saulge 83.10 339 *e*P **P 06 43 15.8 +1.1**
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SSF Saint Saulge 83.10 339 *e*P **P 06 43 15.8 +1.1**
comp=Z,4.1nm,0.8s,mb4.5
SGMF Saint Gilles 83.30 344 *e*P **P 06 43 17.3 +1.6**
AVF Avril sur Loir 83.39 339 *e*P **P 06 43 17.5 +1.3**
comp=Z,3.9nm,0.6s,mb4.3
AVF Avril sur Loir 83.39 339 *e*P **P 06 43 17.5 +1.3**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
AVF Avril sur Loir 83.39 339 *e*P **P 06 43 17.5 +1.3**
comp=Z,2.0nm,0.6s,mb4.3
SMF Signal de Mont 83.41 339 *e*P **P 06 43 17.5 +1.2**
comp=Z,5.7nm,0.6s,mb4.5
LPL La Plagne 83.70 337 *e*P **P 06 43 19.7 +1.8**
LPG La Plagne 83.72 337 *e*P **P 06 43 19.9 +2.0**
comp=Z,7.4nm,0.8s,mb4.6
LPG La Plagne 83.72 337 *e*P **P 06 43 19.9 +2.0**
LPG pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
LPG La Plagne 83.72 337 *e*P **P 06 43 19.9 +2.0**
comp=Z,3.7nm,0.8s,mb4.6
TCF Toulx Ste Croi 84.14 340 *e*P **P 06 43 21.7 +1.6**
MFF Saint Martin d 84.38 342 *e*P **P 06 43 23.1 +1.8**
comp=Z,3.7nm,0.6s,mb4.4
MBDF Montbardon 84.42 336 *e*P **P 06 43 22.8 +1.3**
ORIF Oris-en-Rattie 84.49 337 *e*P **P 06 43 22.9 +1.0**
VIVF Saint-Julien-l 84.87 338 *e*P **P 06 43 24.8 +1.0**
LFF La Frestale 85.75 341 *e*P **P 06 43 30.5 +2.3**
comp=Z,8.3nm,0.6s,mb4.8
TORD Torodi Ar. Bea 115.28 329 PKP PKPdf 06 49 28.3 -2.7
comp=Z,0.5nm,1.0s,baz=10,slow=2.8,SNR=3.0
PLCA Paso Flores 148.37 96 PKPbc PKPdf 06 50 33.0 +1.5
comp=Z,2.5nm,1.0s,baz=285,slow=4.5,SNR=4.0
CPUP Villa Florida 148.80 61 PKPbc PKPdf 06 50 33.3 +0.6
comp=Z,0.3nm,0.5s,baz=0.2,slow=20,SNR=2.8

*CSEM **31** 06:49:37.2±1.0, 4554N×2646E, h149km±11km, MD3.8/1, Error ellipse: s-maj=13.1km s-min=3.9km az=48.0, After BUC*
*NEIC **31** 06:49:38.1, 4558N×2651E, h138km, MD3.4(BUC), After BUC.*
BUC 31 06:49:37.5±0.4, 4559N×2651E, h142km±3km, MD3.8/1, 6C-6D, Error ellipse: s-maj=4.1km s-min=2.3km az=17.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.28**	**20**	⇑*i*P		Pn	06 49 57.0	0.0
PLOR				*i* S		Sn	06 50 12.1	+0.2
VRI	**Vrincioaia**	**0.32**	**29**	⇑*i*P		Pn	06 49 57.4	+0.3
VRI				*i* S		Sn	06 50 11.9	-0.2
MLR	**Muntele Rosu**	**0.41**	**256**	⇑*i*P		Pn	06 49 58.0	+0.5
MLR				*i* S		Sn	06 50 13.0	+0.4
MLR	**Muntele Rosu**	**0.41**	**256**	P		Pn	06 49 58.1	+0.6
MLR				S		Sn	06 50 15.3	+2.7
ODB	**Odobesti**	**0.43**	**64**	⇑*i*P		Pn	06 49 58.7	+1.2
ODB				*i* S		Sn	06 50 17.2	+0.4
ODB	**Odobesti**	**0.43**	**64**	P		Pn	06 49 58.7	+1.2
VARR		**0.99**	**72**	⇓*i*P		Pn	06 50 01.6	+0.2
VARR				*i* S		Sn	06 50 19.3	-0.3
VOIR		**1.04**	**262**	⇑*i*P		Pn	06 50 02.1	+0.3
VOIR				*i* S		Sn	06 50 20.1	-0.2
VOIR		**1.04**	**262**	P		Pn	06 50 02.0	+0.2
CFR	**Carcaliu**	**1.22**	**109**	⇓*i*P		Pn	06 50 03.6	+0.1
CFR				*i* S		Sn	06 50 23.2	-0.1
BUC1	**Bucharest**	**1.29**	**196**	*i* S		Sn	06 50 25.5	+0.9
TLCR		**1.67**	**103**	⇓*i*P		Pn	06 50 08.6	+0.3
TLCR				*i* S		Sn	06 50 31.7	-0.2
TLCR		**1.67**	**103**	⇓P		Pn	06 50 08.6	+0.3
TLCR				S		Sn	06 50 31.7	-0.3
TIRR	**Tirgusor**	**1.76**	**129**	⇓*i*P		Pn	06 50 09.9	+0.6
TIRR				*i* S		Sn	06 50 33.4	-0.3
TIRR	**Tirgusor**	**1.76**	**129**	P		Pn	06 50 09.9	+0.5
BURAR	**Bucovina Array**	**2.21**	**337**	⇑*i*P		Pn	06 50 15.6	+1.0
BURAR	**Bucovina Array**	**2.21**	**337**	⇓P		Pn	06 50 15.6	+0.9
BUR08	**Bucovina Ar. S**	**2.25**	**337**	*e*Pn		Pn	06 50 15.6	+0.5

*IDC **31** 07:41:21.9±0.9, 1301N×8845W, h0km, mb4.2/8, mb1 4.5/9, mb1mx4.1/21, mbtmp4.2/9, ML3.5/1, MS3.7/13, Ms1 3.6/13, ms1mx3.4/27, Error ellipse: s-maj=43.1km s-min=17.8km az=53.0*
*BJI **31** 07:41:23.2, 1240N×8890W, h54km, mB5.1, Ms4.9, Msz4.7*
*CASC **31** 07:41:24.7±2.4, 1239N×8905W, h32km±13km, MD3.9, mb4.7(NEIC)*
*ISCJB **31** 07:41:25.9±0.8, 1247N±005×8894W±006, h67km±7km, mb4.5/32, Error ellipse: s-maj=11.5km s-min=5.6km az=44.2*
*NEIC **31** 07:41:26.2±1.2, 1245N×8891W, h54km±11km, mb4.7/30, Error ellipse: s-maj=15.0km s-min=7.9km az=48.0*
ISC 31 07:41:27.5±0.7, 1252N±005×8890W±005, h62km±7km, n110, σ1$0^7$/87, mb4.5/32, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**1.09**	**3**	*e*P		x	07 41 45.4	
VSM	**San Miguel**	**1.09**	**34**	*e*P		x	07 41 46.4	
VSM				*e*P		x	07 41 46.4	
VSM				*e*S		x	07 42 05.3	
BLLM	**Bellamira**	**1.12**	**35**	*e*P		x	07 41 46.6	
BLLM				*e*S		x	07 42 04.8	
BOQS	**Boqueron**	**1.26**	**343**	*e*P		x	07 41 47.0	
BOQS				*e*P		x	07 41 47.2	
BOQS				*e*S		x	07 42 06.5	
CNCH	**Conchagua**	**1.28**	**54**	*e*P		x	07 41 49.1	
CNCH				*e*P		x	07 41 49.1	
CAHU	**Cacacuatique**	**1.41**	**28**	*e*P		x	07 41 51.0	
CAHU				*e*P		x	07 41 51.2	
CAHU				*e*S		x	07 42 13.0	
SBLS	**San Blas**	**1.49**	**332**	*e*P		x	07 41 49.7	
SBLS				*e*P		x	07 41 50.1	
SNJE	**San Jose**	**1.50**	**333**	*e*P		x	07 41 50.1	
SNJE				*e*S		x	07 42 10.5	
RTR	**El Retiro**	**1.55**	**332**	*e*P		x	07 41 50.6	
RBDL	**Robledal**	**1.76**	**334**	*e*P		x	07 41 53.7	
RBDL				*e*S		x	07 42 17.4	
CRIN	**San Cristobal**	**1.82**	**84**	*e*P		**Pn**	**07 41 56.6**	**+0.1**
MTO2	**Montecristo 2**	**1.92**	**347**	*e*P		x	07 41 57.1	
MTO2				*e*S		x	07 42 22.3	
TEL3	**Telica 3**	**2.01**	**88**	*e*P		**Pn**	**07 41 58.0**	**-1.0**
MIRN	**Miramar**	**2.14**	**92**	*e*P		**Pn**	**07 41 59.5**	**-1.4**
CNGN	**Cerro Negro**	**2.15**	**90**	*e*P		**Pn**	**07 41 59.8**	**-1.2**
CNGN				*e*P			07 41 59.9	
CNGN				*e*S		**Sn**	**07 42 27.5**	**+0.8**
TGUH	**Tegucigalpa,Un**	**2.20**	**46**	*e*P		**Pn**	**07 42 02.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.20**	**46**	*e*Pn		**Pn**	**07 42 00.7**	**-1.0**
COPN	**Copaltepe**	**2.28**	**98**	*e*P		**Pn**	**07 42 01.1**	**-1.7**
COPN				*e*P			07 42 01.6	
COPN				*e*S		**Sn**	**07 42 30.6**	**+0.7**
MOMN	**Momotombo**	**2.31**	**93**	*e*P		**Pn**	**07 42 02.7**	**-0.5**
CSAN		**2.45**	**98**	*e*P		**Pn**	**07 42 05.1**	**+0.1**
NBG	**Las Nubes**	**2.49**	**326**	*e*P		**Pn**	**07 42 05.8**	**+0.2**
APYN	**Apoyeque**	**2.51**	**96**	*e*P		**Pn**	**07 42 05.9**	**0.0**
XAVN	**Gruta Xavier**	**2.54**	**98**	*e*P		**Pn**	**07 42 05.9**	**-0.5**
MGAN	**Managua**	**2.62**	**98**	*e*P		**Pn**	**07 42 07.3**	**-0.2**
MGAN				*e*S		**Sn**	**07 42 38.1**	**0.0**
HUEN		**2.67**	**94**	*e*P		**Pn**	**07 42 07.3**	**-0.8**
HUEN				*e*P			07 42 07.3	
HUEN				*e*S		**Sn**	**07 42 40.3**	**+0.9**
APON	**Apoyo**	**2.84**	**102**	*e*P		**Pn**	**07 42 10.1**	**-0.3**
SSN	**San Juan del S**	**3.22**	**112**	*e*P		**Pn**	**07 42 14.7**	**-1.0**
CONN	**Concepcion**	**3.34**	**106**	*e*P		**Pn**	**07 42 17.4**	**+0.1**
JCR	**Jicaral**	**4.57**	**125**	*e*P		**Pn**	**07 42 33.4**	**-0.7**
CGA2	**Cerro Gallo 2**	**5.01**	**119**	*e*P		**Pn**	**07 42 41.8**	**+1.6**
PRS1	**Puriscal**	**5.16**	**119**	*e*P		**Pn**	**07 42 43.5**	**+1.3**

QCR Quepos 5.58 123 *e*P **Pn 07 42 48.4 +0.4**
QCR *e*S **Sn 07 43 48.9 -1.8**
URSC Urasca 5.69 117⇑ *e*P **Pn 07 42 52.3 +2.8**
URSC *e*S **Sn 07 43 55.2 +1.7**
BUS Buena Vista 5.85 120 *e*P **Pn 07 42 53.1 +1.5**
BUS *e*S **Sn 07 43 56.1 -1.2**
BAR1 6.38 120 *e*P **Pn 07 42 59.8 +0.8**
BAR1 *e*S **Sn 07 44 03.9 -6.7**
ACR Cerro Adams 6.82 124 *e*P **Pn 07 43 06.4 +1.4**
CMIG Matias Romero 7.36 309 Pn **Pn 07 43 10.3 -1.9**
0.8nm,0.3s,baz=120,slow=9.1,SNR=31
CMIG Sn **Sn 07 44 28.9 -5.4**
0.6nm,0.3s,baz=233,slow=20,SNR=2.6
TEIG Tepich 7.68 4 Pn **Pn 07 43 18.6 +1.9**
1.6nm,0.3s,baz=128,slow=4.1,SNR=12
TEIG LR LR 07 46 34.8
comp=Z,501nm,18.9s,baz=134,slow=44
TEIG Tepich 7.68 4 *e*Pn **Pn 07 43 17.8 +1.1**
BCIP Isla Barro Col 9.51 110 Pn **Pn 07 43 38.4 -3.3**
OTAV Otavalo 16.01 139 P **Pn 07 45 08.4 -0.5**
0.5nm,0.3s
CHI2 16.90 116 *e*P x 07 41 57.2
SDV Santo Domingo 18.31 100 P **Pn 07 45 36.4 -0.9**
0.2nm,0.3s,baz=349,slow=5.5,SNR=8.1
HKT Hockley 18.50 341 *e*P **Pn 07 45 40.0 +0.5**
8.5nm,1.1s
VBMS Vicksburg 19.66 356 *e*P **Pn 07 45 53.0 -0.2**
35nm,0.8s
NATX Nacogdoches 19.87 345 *e*P **Pn 07 45 54.6 -1.1**
24nm,0.8s
LRAL Lakeview Retre 20.49 5 *e*P **P 07 46 02.3 +1.9**
7.9nm,0.7s
JCT Junction City 20.52 332 *e*P **P 07 46 00.7 0.0**
27nm,0.7s
GOGA Godfrey 21.38 13 *e*P **P 07 46 10.8 +0.9**
13nm,0.6s,mb4.4
TXAR Lajitas Array 21.64 323 P **P 07 46 13.9 +1.2**
16nm,0.7s,mb4.6,baz=145,slow=11,SNR=151
OXF Oxford 21.90 359 *e*P **P 07 46 16.3 +0.9**
32nm,0.9s,mb4.8
ATAH Atahualpa 22.03 151 LR LR 07 53 12.4
comp=Z,94nm,21.1s,baz=350,slow=32
MIAR Mount Ida 22.33 350 *e*P **P 07 46 20.7 +0.6**
59nm,0.8s,mb5.1
UALR University of 22.37 353 *e*P **P 07 46 21.8 +1.3**
21nm,0.7s,mb4.7
SWET Sewanee 22.75 6 *e*P **P 07 46 24.5 0.0**
LPIG La Paz 23.32 303 LR LR 07 56 40.6
comp=Z,177nm,18.2s,baz=181,slow=39
TKL Tuckaleechee C 23.50 11 P **P 07 46 30.8 -1.0**
18nm,0.7s,mb4.6,baz=187,slow=11,SNR=27
TKL LR LR 07 55 36.5
comp=Z,123nm,21.9s,baz=88,slow=37
TKL Tuckaleechee C 23.50 11 *e*P **P 07 46 32.3 +0.5**
WVT Waverly 23.53 2 *e*P **P 07 46 32.2 +0.1**
4.1nm,0.6s,mb4.0
WMOK Wichita Mounta 23.87 340 *e*P **P 07 46 33.7 -1.6**
11nm,1.1s,mb4.2
PARMO Parma 24.05 358 *e*P **P 07 46 37.0 +0.2**
SIUC Southern Illin 25.09 359 *e*P **P 07 46 46.9 +0.6**
16nm,0.6s,mb4.7
AMTX Amarillo 25.10 335 *e*P **P 07 46 46.4 0.0**
20nm,0.9s,mb4.6
FVM French Village 25.39 357 *e*P **P 07 46 48.2 -0.9**
8.1nm,0.8s,mb4.3
WCI Wyandotte Cave 25.71 5 *e*P **P 07 46 51.9 0.0**
22nm,0.6s,mb4.9
OLIL Olney 26.11 1 *e*P **P 07 46 55.9 +0.3**
11nm,0.7s,mb4.5
KSU1 Kansas State U 27.34 347 *e*P **P 07 47 06.8 +0.1**
14nm,0.6s,mb4.7
ANMO Albuquerque 27.42 327 P **P 07 47 08.1 +0.7**
0.7nm,0.7s,mb3.3,baz=143,slow=15,SNR=4.2
ACSO Alum Creek Sta 28.09 10 *e*P **P 07 47 13.5 +0.2**
16nm,0.8s,mb4.7
TUC Tucson 28.12 318 *e*P **P 07 47 18.4 +4.6**
4.7nm,1.0s,mb4.1
JFWS Jewell Farm 30.30 358 *e*P **P 07 47 33.4 +0.5**
27nm,1.1s,mb4.9
PV04 Paradox Valley 31.32 329 *e*P **P 07 47 42.4 +0.4**
PV10 Paradox Valley 31.37 329 *e*P **P 07 47 42.9 +0.4**
61nm,0.8s,mb5.5
RSSD Black Hills 34.07 340 *e*P **P 07 48 07.9 +2.0**
7.9nm,0.8s,mb4.7
PDAR Pinedale Array 35.05 333 P **P 07 48 13.0 -1.4**
1.0nm,0.9s,mb3.8,baz=132,slow=8.8,SNR=6.6
PDAR PcP PcP 07 50 47.1 +2.0
0.7nm,0.7s,baz=158,slow=5.7,SNR=4.5
EYMN Ely 35.38 357 *e*P **P 07 48 16.5 -0.6**
19nm,0.6s,mb5.2
AGMN Agassiz Refuge 36.13 352 *e*P **P 07 48 23.0 -0.6**
17nm,0.7s,mb5.1
SNOW Snow King Moun 36.14 333 *e*P **P 07 48 25.0 +1.3**
11nm,0.8s,mb4.8
NVAR Mina Array Bea 36.72 320 P **P 07 48 31.0 +2.2**
1.9nm,0.8s,mb4.0,baz=138,slow=7.7,SNR=8.5
NVAR PcP PcP 07 50 53.7 +3.4
1.0nm,0.7s,baz=142,slow=3.9,SNR=5.5
ULM Lac du Bonnet 38.05 353 P **P 07 48 38.4 -1.4**
12nm,0.8s,mb4.7,baz=169,slow=8.9,SNR=14
ULM Lac du Bonnet 38.05 353 *e*P **P 07 48 38.3 -1.6**
4.5nm,0.6s,mb4.4
EGMT Eagleton 39.44 338 *e*P **P 07 48 52.2 +0.7**
8.9nm,0.9s,mb4.5
SIV San Ignacio 39.50 135 P **P 07 48 53.8 +1.4**
2.9nm,0.8s,mb4.1,baz=310,slow=10.0,SNR=15
SIV PcP PcP 07 51 04.7 +5.5
0.8nm,0.5s,baz=302,slow=5.1,SNR=5.9
FFC Flin Flon 43.34 349 *e*P **P 07 49 21.8 -1.5**
30nm,1.8s,mb4.7
EDM Edmonton 45.04 339 *e*P **P 07 49 36.3 -0.6**
SCHQ Schefferville 45.63 18 P **P 07 49 39.4 -2.2**
7.7nm,0.7s,mb4.8,baz=212,slow=7.3,SNR=17
SCHQ LR LR 08 11 32.5
comp=Z,150nm,18.1s,baz=210,slow=40
SCHQ Schefferville 45.63 18 *e*P **P 07 49 40.6 -1.0**
7.1nm,0.6s,mb4.8
FCC Fort Churchill 46.31 356 *e*P **P 07 49 46.0 -0.9**
0.1nm,0.9s
BDFB Brasilia 49.19 124 LR LR 08 12 41.9
comp=Z,48nm,18.7s,baz=7.9,slow=38
CPUP Villa Florida 49.34 142 LR LR 08 11 12.4
comp=Z,52nm,19.3s,baz=185,slow=36
YKA Yellowknife Ar 53.18 345 P **P 07 50 38.7 -0.3**
2.2nm,0.7s,mb4.2,baz=140,slow=7.7,SNR=42
YKA PcP PcP 07 51 47.6 +1.4
0.3nm,0.6s,baz=148,slow=4.1,SNR=5.6
YKA ScP ScP 07 55 46.3 +7.6
0.1nm,0.7s,baz=140,slow=4.0,SNR=3.7
YKA LR LR 08 14 48.3
comp=Z,9.4nm,18.6s,baz=105,slow=38
YKA Yellowknife Ar 53.18 345 P **P 07 50 38.7 -0.3**
YKA PcP PcP 07 51 47.6 +1.4
YKA ScP ScP 07 55 46.4 +7.6
YKA LR LR 08 14 48.3
PLCA Paso Flores 55.64 163 LR LR 08 09 08.3
comp=Z,66nm,19.1s,baz=100,slow=30
RES Resolute Bay 62.24 358 *e*P **P 07 51 41.0 -1.4**
1.9nm,0.7s,mb4.3
CHGN Chignik 68.32 326 *e*P **P 07 52 19.1 -2.9**
NOA NORSAR Array B 83.99 29 LR LR 08 29 11.4
comp=Z,46nm,18.2s,baz=270,slow=34
ARCES ARCESS Array B 86.58 19 LR LR 08 31 25.6
comp=Z,77nm,18.9s,baz=189,slow=35
TORD Torodi Ar. Bea 87.78 77 LR LR 08 28 10.9
comp=Z,44nm,18.3s,baz=315,slow=32
GERES GERESS Array B 88.80 40 LR LR 08 34 02.6
comp=Z,83nm,18.2s,baz=67,slow=36
CN2 Changchun 115.80 333 *e*PKP PKPdf 07 59 58.0 -5.3
SONM Songino Array 118.39 348 PKP PKPdf 08 00 10.2 +2.1
0.4nm,0.7s,baz=346,slow=1.9,SNR=2.9
BJI Beijing 122.75 337 PKP PKPdf 08 00 14.5 -2.3
HHC Hu-ho-hao-te 123.62 341 *e*PKP PKPdf 08 00 13.3 -5.1
HHC PP PP 08 02 00.5 +0.7
HHC PKS 08 03 47.8
HHC PP PP
comp=Z,116nm,7.9s
HHC LR LR
comp=N,230nm,20.1s
HHC LR LR
comp=E,374nm,20.0s
HHC LR LR
comp=Z,192nm,21.2s
WMQ Urumqi 123.85 3 *e*PKP PKPdf 08 00 16.5 -2.3
LZH Lanzhou 130.18 346 *e*PKP PKPdf 08 00 29.0 -2.1
LZH LR LR
comp=N,107nm,18.0s

LZH					LR	LR		
	comp=Z,163nm,20.1s							
XAN	**Xi'an**	**130.69**	**340**		PKP	PKPdf	08 00 27.0	-5.1
XAN					PP	PP	08 02 47.5	+1.0
XAN					SKS	SKSdf	08 07 27.0	-12
XAN					LR	LR		
	comp=E,22nm,17.7s							
XAN					LR	LR		
	comp=Z,37nm,22.5s							
CD2	**Chengdu**	**135.14**	**345**		PKP	PKPdf	08 00 34.3	-6.3
ASAR	**Alice Springs**	**137.98**	**249**		PKhKP		08 00 47.4	
	comp=Z,0.3nm,0.7s,baz=74,slow=2.9,SNR=3.8							
GYA	**Guiyang**	**138.40**	**339**	*e*PDIF		Pdif	07 57 55.3	-1.2
GYA					PKP	PKPdf	08 00 45.8	-1.0
GYA					PP	PP	08 03 39.5	+4.1
GYA					PP	PP		
	comp=Z,60nm,7.8s							
CMAR	**Chiang Mai Arr**	**148.26**	**346**		PKP	PKPdf	08 01 07.0	+2.8
	comp=Z,3.8nm,0.7s,baz=344,slow=3.5,SNR=18							
CMAR					PKPbc	PKPbc	08 01 09.4	+1.9
	comp=Z,3.8nm,0.7s,baz=348,slow=3.7,SNR=18							

*ISCJB **31** 08:17:19.0±0.6, 3898N±004×2900E±004, h0km±9km, Error ellipse: s-maj=7.1km s-min=4.1km az=149.3*
*CSEM **31** 08:17:18.7±0.1, 3896N×2900E, h8km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.4km az=102.0*
*ISK **31** 08:17:18.9, 3897N×2900E, h8km, MD2.8*
*DDA **31** 08:17:19.5, 3896N×2902E, h9km±3km, Md3.1*

ISC 31 08:17:19.7±0.4, 3897N±003×2901E±004, h8km±6km, n19, σ0°47/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.38**	**72**	*i* P	**Pg**	**08 17 27.1**	**-0.1**
GDZ				*i* S	**Sg**	**08 17 32.3**	**+0.1**
KULA	**Kula-Manisa**	**0.53**	**211**	*e*PG	**Pg**	**08 17 29.8**	**-0.3**
KULA				*e*SG	**Sg**	**08 17 37.3**	**+0.3**
MANT	**Manisa**	**0.60**	**217**	*i* P	**Pg**	**08 17 31.1**	**-0.1**
MANT				*i* S	**Sg**	**08 17 39.2**	**+0.2**
DST	**Dursunbey**	**0.70**	**335**	*e*PG	**Pg**	**08 17 32.7**	**-0.6**
KHAL	**Karahalli**	**0.71**	**148**	*i* P	**Pg**	**08 17 33.2**	**-0.1**
KHAL				*i* S	**Sg**	**08 17 42.8**	**+0.3**
KHL	**Karahalli**	**0.76**	**148**	*e*PG	**Pg**	**08 17 34.1**	**-0.2**
ALT	**Altintas**	**0.86**	**84**	*e*PG	**Pg**	**08 17 35.8**	**-0.4**
AKHS	**Akhisar**	**0.94**	**265**	*i* P	**Pg**	**08 17 37.6**	**-0.2**
AKHS				*i* S	**Sg**	**08 17 51.2**	**+1.2**
AKS	**Akhisar**	**0.94**	**265**	*e*PG	**Pg**	**08 17 37.6**	**-0.3**
BALB	**Balikesir**	**1.10**	**308**	*e*PN	**Pn**	**08 17 40.2**	**-1.3**
ULDT	**Uludag**	**1.17**	**5**	*i* P	**Pb**	**08 17 42.1**	**-0.1**
ULDT				*i* S	**Sg**	**08 17 58.1**	**+0.6**
CAVI	**Cavuskoy**	**1.39**	**27**	*e*PN	**Pn**	**08 17 44.8**	**-0.6**
BORA	**Eskisehir**	**1.44**	**50**	*i* P	**Pn**	**08 17 46.8**	**+0.8**
BORA				*i* S	**Sn**	**08 18 05.6**	**+0.5**
GEMT	**Gemlik**	**1.47**	**5**	*e*PN	**Pn**	**08 17 46.4**	**0.0**
ADVT	**Abdulvahap**	**1.56**	**21**	*e*PN	**Pn**	**08 17 47.6**	**-0.1**
ARMT	**Armutlu**	**1.60**	**356**	*e*PN	**Pn**	**08 17 48.1**	**-0.1**
BNT	**Bandirma**	**1.62**	**329**	*e*PN	**Pn**	**08 17 48.4**	**-0.1**
GULT	**Gulveren**	**1.86**	**38**	*e*PN	**Pn**	**08 17 52.2**	**+0.4**
CTKS	**Kestanelik-??a**	**2.29**	**350**	*e*PN	**Pn**	**08 17 58.1**	**+0.3**

*CSEM **31** 08:25:26.5±0.1, 3723N×2821E, h2km, MD2.6, Error ellipse: s-maj=1.9km s-min=1.1km az=45.0*
*ISCJB **31** 08:25:27.3±0.8, 3720N±006×2820E±007, h11km±7km, Error ellipse: s-maj=11.1km s-min=6.3km az=41.7*
*DDA **31** 08:25:27.2, 3720N×2818E, h7km±2km, Md2.8*
*ISK **31** 08:25:27.0, 3723N×2822E, h5km, MD2.6*

ISC 31 08:25:27.7±0.8, 3720N±006×2821E±006, h10km±9km, n8, σ0°37/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.09**	**138**	*e*PG	**Pg**	**08 25 29.6**	**-0.4**
YER				*e*SG	**Sg**	**08 25 32.0**	**+0.2**
MLSB	**Milas**	**0.36**	**285**	*e*PG	**Pg**	**08 25 34.6**	**-0.1**
MLSB				*e*SG	**Sg**	**08 25 40.1**	**+0.6**
TURN	**Turunc**	**0.45**	**136**	*i* P	**Pg**	**08 25 36.5**	**0.0**
AYDN	**Tasoluk**	**0.53**	**330**	*i* P	**Pg**	**08 25 37.5**	**-0.5**
AYDN				*i* S	**Sg**	**08 25 45.2**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.55**	**141**	*e*PG	**Pg**	**08 25 38.7**	**+0.3**
BDRM	**Kayabasi**	**0.63**	**258**	*i* P	**Pg**	**08 25 39.1**	**-0.7**
DAT	**Datca**	**0.69**	**227**	*e*PG	**Pg**	**08 25 41.2**	**+0.2**
KULA	**Kula-Manisa**	**1.36**	**15**	*e*PN	**Pn**	**08 25 52.9**	**+0.2**

*CSEM **31** 08:41:42.4±0.1, 3854N×3028E, h5km, MD2.7, Error ellipse: s-maj=3.1km s-min=2.6km az=36.0*
*ISCJB **31** 08:41:43.4±0.7, 3856N±003×3028E±004, h4km±7km, Error ellipse: s-maj=5.5km s-min=5.0km az=145.7*
*ISK **31** 08:41:43.2, 3853N×3026E, h14km, MD2.7*
*DDA **31** 08:41:44.1, 3857N×3023E, h9km±4km, Md3.1*

ISC 31 08:41:44.0±0.6, 3856N±003×3026E±004, h8km±6km, n15, σ0°89/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.51**	**347**	*e*PG	**Pg**	**08 41 54.3**	**+0.4**
ALT				*e*SG	**Sg**	**08 42 01.4**	**+0.7**
KHL	**Karahalli**	**0.62**	**248**	*e*PG	**Pg**	**08 41 56.0**	**-0.1**
KHAL	**Karahalli**	**0.63**	**253**	*i* P	**Pg**	**08 41 55.8**	**-0.5**
KHAL				*i* S	**Sg**	**08 42 04.0**	**-0.5**
ISP	**Isparta**	**0.74**	**165**	*e*PG	**Pg**	**08 41 57.4**	**-0.8**
ISP				*e*SG	**Sg**	**08 42 08.7**	**+0.8**
GDZ	**Gediz**	**0.81**	**311**	*i* P	**Pg**	**08 41 59.8**	**+0.2**
GDZ				*i* S	**Sg**	**08 42 10.7**	**+0.6**
ESKT	**Eskisehir**	**1.06**	**25**	*e*PN	**Pn**	**08 42 05.0**	**-0.2**
KULA	**Kula-Manisa**	**1.26**	**269**	*e*PN	**Pn**	**08 42 06.9**	**-1.0**
KIZT	**Kizilcal**	**1.31**	**75**	*e*PN	**Pn**	**08 42 08.0**	**-0.5**
MANT	**Manisa**	**1.34**	**268**	*i* P	**Pn**	**08 42 08.8**	**-0.2**
MANT				*i* S	**Sb**	**08 42 26.1**	**-0.6**
MANT	**Manisa**	**1.34**	**268**	*i* P	**Pn**	**08 42 08.8**	**-0.2**
MANT				*i* S	**Sb**	**08 42 26.0**	**-0.6**
GOLH	**Golhisar**	**1.43**	**203**	*i* P	**Pn**	**08 42 12.2**	**+1.9**
GOLH				*i* S	**Sn**	**08 42 30.8**	**+1.6**
KDHN	**Kadinhani**	**1.46**	**91**	*i* P	**Pn**	**08 42 11.4**	**+0.8**
KDHN				*i* S	**Sn**	**08 42 33.3**	**+3.4**
LADK	**Ladik-KONYA**	**1.69**	**102**	*e*PN	**Pn**	**08 42 12.9**	**-1.0**
KONT	**Konya--Tatoy**	**1.76**	**110**	*e*PN	**Pn**	**08 42 14.0**	**-0.8**
HDMB	**Hadim**	**2.37**	**131**	*e*PN	**Pn**	**08 42 22.1**	**-1.2**

*ISCJB **31** 08:46:32.3±0.6, 5355N±004×15944E±0.10, h117km±5km, mb3.2/3, Error ellipse: s-maj=10.4km s-min=5.1km az=22.9*
*KRSC **31** 08:46:32.8±0.6, 5358N×15948E, h109km±29km, ML3.7*
*IDC **31** 08:46:33.1±0.9, 5334N×15916E, h133km±12km, mb2.8/3, mb1 3.2/4, mb1mx3.0/24, mbtmp3.0/4, Error ellipse: s-maj=38.0km s-min=21.1km az=5.0*

ISC 31 08:46:33.2±0.6, 5354N±004×15940E±010, h114km±5km, n18, σ0°81/33, mb3.2/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.38**	**185**	*i* P	**Pn**	**08 46 49.4**	**-0.3**
NLC				*i* S	**Sn**	**08 47 02.1**	**+0.1**
AVH	**Avacha**	**0.49**	**235**	*e*P	**Pn**	**08 46 50.7**	**+0.4**
AVH				*i* S	**Sn**	**08 47 03.7**	**+0.5**
KII	**Karymskiy**	**0.49**	**3**	P	**Pn**	**08 46 49.7**	**-0.6**
KII				*i* S	**Sn**	**08 47 03.1**	**-0.2**
SPN	**Mys Shipunski**	**0.58**	**140**	*e*P	**Pn**	**08 46 50.5**	**-0.4**
SPN				*i* S	**Sn**	**08 47 03.8**	**-0.5**
PET	**Petropavlovsk**	**0.69**	**221**	*i* P	**Pn**	**08 46 51.7**	**-0.1**
PET				*i* S	**Sn**	**08 47 05.5**	**-0.2**
GNL	**Ganaly**	**0.88**	**280**	*i* P	**Pn**	**08 46 53.0**	**-0.5**
GNL				*e*S	**Sn**	**08 47 08.1**	**-0.7**
PETK	**Petropavlovsk-** 25nm,0.3s,baz=82,slow=16,SNR=341	**1.11**	**248**	P	**Pn**	**08 46 55.7**	**0.0**
PETK				S	**Sn**	**08 47 12.9**	**0.0**
	3.1nm,0.3s,baz=70,slow=22,SNR=3.9						
RUS	**Russkaya**	**1.24**	**206**	*e*P	**Pn**	**08 46 57.5**	**+0.4**
RUS				*i* S	**Sn**	**08 47 16.0**	**+0.7**
TUMR	**Tumrok**	**1.80**	**14**	P	**Pn**	**08 47 03.3**	**-0.4**
TUMR				*i* S	**Sn**	**08 47 26.0**	**-1.0**
KMNR	**Kamenistaya**	**2.27**	**12**	P	**Pn**	**08 47 11.1**	**+1.5**
KMNR				*i* S	**Sn**	**08 47 38.3**	**+0.7**
ZLN	**Zelenaya**	**2.61**	**18**	*i* P	**Pn**	**08 47 15.3**	**+1.3**
ZLN				*e*S	**Sn**	**08 47 46.7**	**+1.2**

KLY	**Klyuchi**	**2.87**	**14**	P		**Pn**	**08 47 18.3**	**+0.9**
KLY				*i* S		**Sn**	**08 47 52.3**	**+0.8**
SRKR	**Sorokina**	**3.28**	**17**	P		**Pn**	**08 47 23.2**	**+0.4**
SRKR				*i* S		**Sn**	**08 48 00.4**	**-0.8**
KBTR	**Krutoberegovo**	**3.32**	**35**	*e*P		**Pn**	**08 47 23.2**	**-0.2**
KBTR				*e*S		**Sn**	**08 47 59.9**	**-2.3**
FX1	**Attu Island--F** 1.0nm,0.3s,baz=333,slow=9.0,SNR=3.3	**8.29**	**89**	P		**Pn**	**08 48 30.8**	**+0.4**
FX1				S		**Sn**	**08 49 52.4**	**-10**
	1.1nm,0.3s,baz=236,slow=11,SNR=2.0							
YKA	**Yellowknife Ar** 0.1nm,0.4s,mb2.9,baz=304,slow=7.5,SNR=3.4	**43.11**	**43**	P		**P**	**08 54 20.7**	**-0.7**
MKAR	**Makanchi Array** 0.3nm,0.4s,mb3.4,baz=58,slow=7.8,SNR=6.1	**47.59**	**295**	P		**P**	**08 54 54.0**	**-3.1**
TXAR	**Lajitas Array** 0.2nm,0.4s,mb3.3,baz=301,slow=5.4,SNR=5.7	**70.84**	**67**	P		**P**	**08 57 37.9**	**+0.5**

*IDC **31** 08:58:26.4±0.7, 4731N×15380E, h0km, mb4.0/18, mb1 4.2/19, mb1mx4.2/24, mbtmp4.0/19, ML3.9/1, MS3.1/3, Ms1 3.1/3, ms1mx2.6/40, Error ellipse: s-maj=20.6km s-min=14.2km az=164.0*
*ISCJB **31** 08:58:27.5±1.4, 4719N±007×15392E±009, h20km±11km, mb4.0/26, MS3.2/2, Error ellipse: s-maj=14.5km s-min=5.5km az=140.6*
*MOS **31** 08:58:30.2±1.5, 4722N×154.12E, h38km, mb4.2/11, Error ellipse: s-maj=11.1km s-min=7.3km az=69.2*
*NEIC **31** 08:58:32.5±1.0, 4728N×15392E, h42km±9km, mb4.3/7, Error ellipse: s-maj=14.5km s-min=7.1km az=141.0*

ISC 31 08:58:30.7±1.5, 4721N±007×15395E±009, h27km±11km, n83, σ1°25/92, mb4.0/26, MS3.2/2, 1C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.76**	**22**	*e*PN	**Pn**	**08 59 25.7**	**-1.1**
SKR				*e*S	**Sn**	**09 00 07.0**	**-3.1**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				smax			
	comp=N,150nm,0.5s						
SKR				smax			
	comp=E,170nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
KUR	**Kuril'sk**	**4.66**	**247**	*e*PN	**Pn**	**08 59 38.0**	**-1.2**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
PETK	**Petropavlovsk-** comp=Z,3.9nm,0.3s,baz=174,slow=12,SNR=63	**6.38**	**21**	Pn	**Pn**	**09 00 04.2**	**+1.5**
PETK	**Petropavlovsk-**	**6.38**	**21**	Pn	**Pn**	**09 00 04.2**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**6.50**	**244**	*i* PN	**Pn**	**09 00 09.0**	**+4.5**
YUK				*e*S	**Sn**	**09 01 24.5**	**+6.9**
YUK				pmax	pmax		
	comp=Z,230nm,0.5s						
YUK				smax			
	comp=E,220nm,0.5s						
YUK				smax			
	comp=N,380nm,0.5s						
PET	**Petropavlovsk**	**6.56**	**26**	*e*PN	**Pn**	**09 00 05.5**	**+0.3**
NEM2	**Nemuro 2**	**6.95**	**239**	P	**Pn**	**09 00 09.6**	**-1.0**
NEM2				*e*S	**Sn**	**09 01 22.7**	**-6.0**
YSS	**Yuzh-Sakhalins**	**7.65**	**272**	*e*PN	**Pn**	**09 00 24.5**	**+4.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
JAK	**Akkeshi**	**7.78**	**241**	P	**Pn**	**09 00 20.5**	**-1.6**
JAK				*e*S	**Sn**	**09 01 43.0**	**-6.2**
JAR	**Ashorobuto**	**8.18**	**245**	P	**Pn**	**09 00 28.6**	**+1.1**
JAR				*e*S	**Sn**	**09 01 58.7**	**-0.2**
ASAJ	**Asahikawa** comp=Z,2.0nm,0.3s,baz=55,slow=10,SNR=13	**8.53**	**253**	Pn	**Pn**	**09 00 35.5**	**+3.2**
ASAJ				LR	LR	09 03 01.7	
	comp=Z,86nm,20.2s,baz=332,slow=32						
JKK2	**Kamakawa 2**	**8.54**	**251**	P	**Pn**	**09 00 34.8**	**+2.3**
JWK2	**Keihoku**	**8.56**	**262**	P	**Pn**	**09 00 39.7**	**+6.9**
JCH	**Churui**	**8.80**	**242**	P	**Pn**	**09 00 35.0**	**-1.1**
JCH				*e*S	**Sn**	**09 02 08.8**	**-5.5**
JFR	**Furan**	**8.98**	**247**	P	**Pn**	**09 00 41.1**	**+2.6**
ERM	**Erimo**	**9.28**	**240**	*i* PN	**Pn**	**09 00 50.6**	**+8.0**
ERM	**Erimo**	**9.28**	**240**	*e*Pn	**Pn**	**09 00 45.7**	**+3.1**
JBT2	**Biratori 2**	**9.32**	**246**	P	**Pn**	**09 00 43.6**	**+0.4**
JNBK	**Urakawa-nobuka**	**9.37**	**242**	P	**Pn**	**09 00 42.1**	**-1.7**
JNB	**Noboribetsu**	**10.32**	**247**	P	**Pn**	**09 00 57.1**	**+0.3**
JNB				*e*S	**Sn**	**09 02 47.5**	**-4.0**
JKB	**Kayabe**	**10.64**	**245**	P	**Pn**	**09 00 59.8**	**-1.4**
JKB				*e*S	**Sn**	**09 02 51.2**	**-8.2**
JYM2	**Yakumo 2**	**10.93**	**247**	P	**Pn**	**09 01 04.1**	**-1.0**
JANG	**Nango**	**11.28**	**237**	P	**Pn**	**09 01 06.1**	**-3.9**
JANG				*e*S	**Sn**	**09 03 02.5**	**-13**
HABR	**Khabarovsk**	**12.76**	**283**	*e*PN	**Pn**	**09 01 36.0**	**+5.8**
FX1	**Attu Island--F** comp=Z,2.2nm,0.3s,baz=277,slow=18,SNR=5.8	**13.57**	**58**	Pn	**Pn**	**09 01 39.4**	**-1.8**
FX1				Sn	**Sn**	**09 04 00.8**	**-10**
	comp=Z,2.7nm,0.3s,baz=232,slow=19,SNR=4.2						
FX1	**Attu Island--F**	**13.57**	**58**	Pn	**Pn**	**09 01 39.4**	**-1.8**
FX1				Sn	**Sn**	**09 04 00.8**	**-10**
MAJO	**Matsushiro**	**15.81**	**233**	*e*P	**Pn**	**09 02 12.0**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAJO	**Matsushiro** comp=Z,7.0nm,0.7s	**15.81**	**233**	*e*P	**Pn**	**09 02 12.0**	**+0.7**
MAT	**Matsushiro**	**15.81**	**233**	P	**Pn**	**09 02 17.4**	**+6.1**
MJAR	**Matsushiro Arr** comp=Z,0.4nm,0.3s,baz=40,slow=9.1,SNR=11	**15.81**	**233**	Pn	**Pn**	**09 02 12.3**	**+1.0**
MJAR	**Matsushiro Arr**	**15.81**	**233**	*e*P	**Pn**	**09 02 16.1**	**+4.8**
MJAR	**Matsushiro Arr**	**15.81**	**233**	Pn	**Pn**	**09 02 12.3**	**+1.0**
YAK	**Yakutsk**	**20.25**	**326**	*i* P	**P**	**09 03 05.6**	**+2.1**
YAK				pmax	pmax		
	comp=Z,12nm,1.1s						
KSRS	**Korea Array** comp=Z,1.8nm,0.5s,mb3.6,baz=54,slow=11,SNR=9.9	**21.48**	**252**	P	**P**	**09 03 22.8**	**+5.8**
KSRS	**Korea Array**	**21.48**	**252**	P	**P**	**09 03 22.8**	**+5.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
BILL	**Bilibino**	**21.82**	**12**	*e*P	**P**	**09 03 20.8**	**+0.4**
BILL				*e*S	**S**	**09 07 14.8**	**-5.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
SONM	**Songino Array** comp=Z,0.2nm,0.4s,mb3.3,baz=52,slow=10,SNR=2.6	**31.72**	**289**	P	**P**	**09 04 51.4**	**-0.5**
KDAK	**Kodiak Island** comp=Z,7.6nm,0.7s,mb4.8,baz=213,slow=15,SNR=4.9	**33.37**	**52**	P	**P**	**09 05 05.0**	**-1.2**
COLA	**College**	**35.42**	**39**	*e*P	**P**	**09 05 24.5**	**+0.6**
COLA	**College** comp=Z,8.0nm,0.8s,mb4.8	**35.42**	**39**	*e*P	**P**	**09 05 24.7**	**+0.8**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,mb3.6,baz=58,slow=6.0,SNR=3.9	**42.80**	**306**	P	**P**	**09 06 23.0**	**-2.8**
ZALV				LR	LR	09 23 30.1	
	comp=Z,25nm,18.2s,MS3.1,baz=64,slow=35						
MKAR	**Makanchi Array** comp=Z,0.8nm,0.9s,mb3.7,baz=67,slow=9.3,SNR=4.7	**47.24**	**297**	P	**P**	**09 06 59.7**	**-1.3**
MKAR				PcP	PcP	09 08 32.0	0.0
	comp=Z,0.2nm,0.5s,baz=58,slow=3.6,SNR=3.7						
MKAR				LR	LR	09 26 57.2	
	comp=Z,28nm,21.6s,MS3.2,baz=173,slow=36						
MKAR	**Makanchi Array**	**47.24**	**297**	*e*P	**P**	**09 07 02.8**	**+1.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov** comp=Z,2.3nm,0.5s,mb4.4,baz=69,slow=8.4,SNR=12	**47.58**	**304**	P	**P**	**09 07 02.8**	**-0.9**
YKA	**Yellowknife Ar** comp=Z,1.9nm,0.5s,mb4.4,baz=296,slow=7.1,SNR=59	**50.21**	**37**	P	**P**	**09 07 24.5**	**+0.9**
YKA	**Yellowknife Ar**	**50.21**	**37**	P	**P**	**09 07 24.5**	**+0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
RES	**Resolute Bay**	**50.22**	**19**	*e*P	**P**	**09 07 24.0**	**+0.4**
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
RES	**Resolute Bay** comp=Z,2.1nm,0.9s,mb4.2	**50.22**	**19**	*e*P	**P**	**09 07 23.9**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.9s,mb3.7,baz=35,slow=6.6,SNR=4.2	**53.03**	**257**	P	**P**	**09 07 45.8**	**+0.5**
ARU	**Arti**	**55.06**	**318**	*d* P	**P**	**09 08 01.1**	**+1.5**
ARU				*e*		09 10 01.9	
ARU				S	**S**	**09 15 37.5**	**-2.5**
ARU				SS	SS	09 19 23.1	-0.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ARU	**Arti** comp=Z,2.5nm,0.6s,mb4.4	**55.06**	**318**	P	**P**	**09 07 58.1**	**-1.5**

ARCES	**ARCESS Array B** comp=Z,2.3nm,0.9s,mb4.2,baz=30,slow=7.6,SNR=7.2	**57.60**	**341**	P		**P**	**09 08 16.3**	**-1.2**
FCC	**Fort Churchill** comp=Z,0.4nm,1.3s,mb3.4	**60.56**	**34**	*e*P		**P**	**09 08 38.2**	**0.0**
JOF	**Joensuu**	**61.17**	**334**	*e*p		**P**	**09 08 41.8**	**-0.5**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.6s,mb3.8,baz=301,slow=7.3,SNR=3.5	**61.72**	**63**	P		**P**	**09 08 46.9**	**+0.6**
KAF	**Kangasniemi**	**63.26**	**335**	*e*p		**P**	**09 08 56.7**	**+0.4**
PDAR	**Pinedale Array** comp=Z,0.6nm,0.8s,mb3.7,baz=315,slow=0.8,SNR=4.2	**64.01**	**54**	P		**P**	**09 09 02.6**	**+1.0**
NB2	**NORSAR Subarra** comp=Z,1.8nm,0.7s,mb4.2,baz=26,slow=6.5	**67.97**	**341**	P		**P**	**09 09 26.2**	**-0.5**
NOA	**NORSAR Array B** comp=Z,2.9nm,0.8s,mb4.4,baz=26,slow=6.3,SNR=10	**67.97**	**341**	P		**P**	**09 09 25.4**	**-1.3**
NOA	**NORSAR Array B**	**67.97**	**341**	*e*P		**P**	**09 09 26.5**	**-0.2**
NOA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
WRA	**Warramunga Arr** comp=Z,0.6nm,0.7s,mb3.6,baz=20,slow=6.6,SNR=2.3	**69.14**	**200**	P		**P**	**09 09 33.0**	**-1.3**
AKASG	**Malin Array Be** comp=Z,1.5nm,0.4s,mb4.2,baz=34,slow=6.1,SNR=8.7	**71.48**	**327**	P		**P**	**09 09 47.2**	**-1.2**
SCHQ	**Schefferville** comp=Z,2.1nm,0.7s,mb4.2,baz=273,slow=8.0,SNR=6.2	**72.66**	**23**	P		**P**	**09 09 53.9**	**-1.5**
SCHQ	**Schefferville**	**72.66**	**23**	P		**P**	**09 09 53.9**	**-1.5**
ASAR	**Alice Springs** comp=Z,1.0nm,0.8s,mb3.8,baz=10,slow=5.2,SNR=13	**72.83**	**199**	P		**P**	**09 09 57.5**	**+0.8**
ASAR	**Alice Springs**	**72.83**	**199**	*e*P		**P**	**09 09 57.4**	**+0.7**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
OJC	**Ojcow**	**75.19**	**332**	*e*P		**P**	**09 10 11.8**	**+1.5**
BUR08	**Bucovina Ar. S**	**75.50**	**327**	*e*P		**P**	**09 10 12.4**	**+0.2**
BURAR	**Bucovina Array**	**75.52**	**327**	*i* P		**P**	**09 10 12.3**	**+0.1**
CLL	**Collm**	**76.28**	**336**	*i* P		**P**	**09 10 16.6**	**+0.1**
CLL				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							
CLL	**Collm** comp=Z,8.0nm,1.1s,mb4.6	**76.28**	**336**	*i* P		**P**	**09 10 16.6**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.5nm,0.4s,mb3.8,baz=306,slow=5.0,SNR=15	**76.77**	**61**	P		**P**	**09 10 20.1**	**+0.4**
MLR	**Muntele Rosu**	**77.01**	**325**	*i* P		**P**	**09 10 21.8**	**+1.0**
DRGR		**77.13**	**328**	*i* P		**P**	**09 10 23.2**	**+1.8**
MALT	**Malatya**	**77.25**	**313**	*e*P		**P**	**09 10 25.4**	**+3.1**
MALT				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
MALT	**Malatya** comp=Z,2.1nm,0.6s,mb4.2	**77.25**	**313**	*e*P		**P**	**09 10 25.4**	**+3.1**
GERES	**GERESS Array B** comp=Z,0.5nm,0.4s,mb3.8,baz=37,slow=6.6,SNR=7.2	**78.29**	**334**	P		**P**	**09 10 27.8**	**0.0**
BRTR	**Keskin Array B** comp=Z,1.4nm,0.8s,mb3.9,baz=0.0,slow=3.7,SNR=6.3	**78.44**	**317**	P		**P**	**09 10 29.9**	**+1.1**
BRTR	**Keskin Array B**	**78.44**	**317**	*e*P		**P**	**09 10 29.9**	**+1.0**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.7s,baz=23,slow=1.9,SNR=2.9	**114.99**	**330**	PKP		PKiKP	09 17 07.3	-2.0
PLCA	**Paso Flores** comp=Z,2.0nm,0.8s,baz=252,slow=6.2,SNR=5.1	**147.68**	**95**	PKPbc		PKPbc	09 18 12.3	+0.2
VNA2	**Neumayer--Watz** baz=119,slow=3.2	**154.59**	**194**	*e*PKPdf		PKPab	09 18 42.1	-0.2
VNA3	**Neumayer Olymp**	**154.67**	**192**	*e*PKPdf		PKPab	09 18 42.2	-0.4

*NEIC **31** 09:13:21.3, 1625N×9397W, h118km, MD3.6(MEX), After MEX.*

MEX 31 09:13:22.1±0.9, 1629N×9396W, h112km±12km, MD3.6, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.92**	**129**	*i* P	Pn	09 13 41.3	-1.3
PCIG				*i* S	Sn	09 13 56.7	-1.4
TGIG		**0.94**	**59**	*i* P	Pn	09 13 41.2	-1.6
TGIG				*i* S	Sn	09 13 56.2	-2.3
CMIG	**Matias Romero**	**1.19**	**312**	*i* P	Pn	09 13 44.6	-0.9
CMIG				*i* S	Sn	09 14 02.6	-0.7
SCX	**San Cristobal**	**1.35**	**70**	*i* P	Pn	09 13 46.5	-0.7
SCX				*i* S	Sn	09 14 05.5	-0.8
CCIG	**Comitan**	**1.75**	**90**	*e*P	Pn	09 13 51.3	-0.7
CCIG				*i* S	Sn	09 14 13.3	-1.6
HUIG	**Huatulco**	**2.13**	**256**	*i* P	Pn	09 13 53.9	-2.9
HUIG				*i* S	Sn	09 14 20.6	-2.8
HUIG	**Huatulco**	**2.13**	**256**	*i* P	Pn	09 13 53.9	-2.9
HUIG				*i* S	Sn	09 14 19.9	-3.5
THIG		**2.13**	**130**	*i* P

*ISCJB **31** 09:36:03.6±0.2,906S×005×11406E±007,h31km, mb4.7/62,MS3.8/20,Error ellipse: s-maj=11.3km s-min=5.2km az=146.9*

*MOS **31** 09:36:03.8±1.0,896S×114.19E,h33km,mb5.0/15,Error ellipse: s-maj=16.0km s-min=8.3km az=119.7*

*IDC **31** 09:36:04.5±0.4,904S×114.15E,h27km±3km,mb4.4/24, mb1 4.4/24,mb1mx4.4/28,mbtmp4.4/24,MS3.7/14, Ms1 3.7/14,ms1mx3.5/30,Error ellipse: s-maj=16.3km s-min=9.0km az=54.0*

*BJI **31** 09:36:05.5,9.10S×114.40E,h45km,mB5.3,mb4.7,Ms4.8, Msz4.3*

*NEIC **31** 09:36:05.0±1.6,9.14S×114.40E,h36km±14km,mb4.9/15, Error ellipse: s-maj=16.6km s-min=8.1km az=55.0*

NEIC Felt [III] at Banyuwangi, Denpasar and Krui. Also felt at Kuta.

*DJA **31** 09:36:06,9.44S×114.03E,h30km,Mw5.3/5*

ISC 31 09:36:05.7±0.2,911S±005×11408E±007,h33km, h33km±1.1km:pP-P,n156,σ1§11/137,mb4.7/62,MS3.8/20, 3C-5D,South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSM	**Kuching**	**11.16**	**340**	*e*Pn		**Pn**	**09 38 48.9**	**+5.8**
	20nm,0.8s							
MBWA	**Marble Bar**	**13.16**	**156**	*e*P		**Pn**	**09 39 03.5**	**-6.9**
MBWA				*e*S		Sx	09 41 14.9	
MBWA	**Marble Bar**	**13.16**	**156**	*e*Pn		**Pn**	**09 39 03.7**	**-6.7**
FITZ	**Fitzroy Crossi**	**14.35**	**130**	*e*P		**Pn**	**09 39 21.8**	**-4.8**
	54nm,0.9s							
FITZ				*e*S		Sx	09 41 49.8	
FITZ	**Fitzroy Crossi**	**14.35**	**130**	*e*Pn		**Pn**	**09 39 21.7**	**-4.9**
	35nm,0.9s							
FITZ				*e*Sn		Sx	09 41 47.8	
KAKA	**Kakadu**	**18.38**	**103**	*e*P		x	09 40 14.1	
	23nm,0.6s							
KAKA	**Kakadu**	**18.38**	**103**	*e*Pn		x	09 40 11.8	
	74nm,0.6s							
WRA	**Warramunga Arr**	**22.35**	**121**	P		**P**	**09 41 00.1**	**-0.9**
	16nm,0.6s,mb4.6,baz=293,slow=12,SNR=61							
WRA				S		**S**	**09 45 02.9**	**-2.2**
	3.9nm,1.0s,baz=284,slow=22,SNR=5.8							
WRA				LR		LR	09 49 44.0	
	comp=Z,203nm,19.8s,MS3.5,baz=295,slow=37							
WRA	**Warramunga Arr**	**22.35**	**121**	P		**P**	**09 41 00.1**	**-0.8**
WRA				S		**S**	**09 45 02.9**	**-2.2**
WRAB	**Tennant Creek**	**22.35**	**121**	*e*P		**P**	**09 40 56.6**	**-4.4**
WRAB	**Tennant Creek**	**22.35**	**121**	*e*P		**P**	**09 40 55.7**	**-5.3**
	31nm,1.0s,mb4.7							
WB2	**Warramunga Arr**	**22.36**	**121**	*e*P		**P**	**09 41 01.3**	**+0.3**
WB2				*e*S		**S**	**09 45 01.1**	**-4.2**
WB2	**Warramunga Arr**	**22.36**	**121**	*e*P		**P**	**09 40 57.7**	**-3.4**
MUN	**Mundaring**	**22.84**	**175**	*e*P		**P**	**09 41 14.9**	**+8.8**
ASAR	**Alice Springs**	**23.85**	**130**	P		**P**	**09 41 15.9**	**-0.3**
	19nm,0.6s,mb4.7,baz=302,slow=9.1,SNR=369							
ASAR				PcP		PcP	09 44 59.6	+0.7
	3.4nm,0.6s,baz=339,slow=2.2,SNR=9.7							
ASAR				pPcP			09 45 09.1	
	1.9nm,0.7s,baz=312,slow=1.7,SNR=4.5							
ASAR				S		**S**	**09 45 36.8**	**+6.6**
	1.9nm,0.9s,baz=289,slow=24,SNR=4.6							
ASAR	**Alice Springs**	**23.85**	**130**	P		**P**	**09 41 16.0**	**-0.2**
ASAR							09 44 59.6	
NWAO	**Narrogin (SRO)**	**23.88**	**173**	P		**P**	**09 41 16.1**	**-0.3**
	7.7nm,1.0s,mb4.1,baz=328,slow=9.5,SNR=4.4							
NWAO				S		**S**	**09 45 32.4**	**+1.9**
	7.1nm,0.7s,baz=225,slow=13,SNR=5.1							
FORT	**Forrest**	**25.20**	**151**	*e*P		**P**	**09 41 28.2**	**-0.2**
	88nm,0.7s,mb5.4							
FORT	**Forrest**	**25.20**	**151**	*e*P		**P**	**09 41 25.2**	**-3.2**
	98nm,0.8s,mb5.4							
COEN	**Coen**	**28.90**	**102**	*e*P		**P**	**09 41 56.1**	**-5.8**
	30nm,1.0s,mb5.0							
CMAR	**Chiang Mai Arr**	**31.20**	**331**	P		**P**	**09 42 22.9**	**+0.9**
	3.8nm,0.9s,mb4.2,baz=163,slow=7.9,SNR=20							
CMAR				pP		pP	09 42 31.8	+0.2
	8.0nm,0.9s,baz=162,slow=8.3,SNR=16							
CHTO	**Chiang Mai**	**31.50**	**332**	*e*P		**P**	**09 42 26.5**	**+1.7**
CHTO				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.3							
CHTO	**Chiang Mai**	**31.50**	**332**	*e*P		**P**	**09 42 26.5**	**+1.7**
	comp=Z,4.7nm,1.0s,mb4.3							
PMG	**Port Moresby**	**32.64**	**93**	P		**P**	**09 42 35.7**	**+0.8**
	comp=Z,5.6nm,0.6s,mb4.7,baz=324,slow=7.7,SNR=3.6							
PMG				LR		LR	09 55 21.9	
	comp=Z,80nm,20.1s,MS3.4,baz=329,slow=36							
PMG	**Port Moresby**	**32.64**	**93**	*i* P		**P**	**09 42 33.3**	**-1.6**
PMG	**Port Moresby**	**32.64**	**93**	P		**P**	**09 42 35.7**	**+0.8**
PMG	**Port Moresby**	**32.64**	**93**	P		**P**	**09 42 35.7**	**+0.8**
PMG				LR		LR	09 55 21.9	
CTA	**Charters Tower**	**32.93**	**113**	P		**P**	**09 42 38.5**	**+1.2**
	comp=Z,8.5nm,0.5s,mb4.9,baz=280,slow=10,SNR=34							
CTA				LR		LR	09 55 49.7	
	comp=Z,134nm,18.1s,MS3.7,baz=286,slow=36							
CTA	**Charters Tower**	**32.93**	**113**	*e*P		**P**	**09 42 38.4**	**+1.1**
	comp=Z,8.4nm,0.6s,mb4.8							
CTAO	**Charters Tower**	**32.93**	**113**	*e*P		**P**	**09 42 30.3**	**-7.0**
CTAO				pmax		pmax		
	comp=Z,57nm,1.7s,mb5.2							
CTAO	**Charters Tower**	**32.93**	**113**	*e*P		**P**	**09 42 30.3**	**-7.1**
	comp=Z,57nm,1.7s,mb5.2							
STKA	**Stephens Creek**	**34.13**	**136**	P		**P**	**09 42 47.9**	**+0.3**
	comp=Z,13nm,0.6s,mb5.0,baz=312,slow=8.5,SNR=32							
STKA				PcP		PcP	09 45 24.4	-0.1
	comp=Z,5.1nm,0.8s,baz=308,slow=3.9,SNR=2.9							
STKA				LR		LR	09 58 18.0	
	comp=Z,145nm,18.3s,MS3.7,baz=229,slow=39							
STKA	**Stephens Creek**	**34.13**	**136**	*e*P		**P**	**09 42 47.8**	**+0.2**
	comp=Z,10nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**34.13**	**136**	*e*P		**P**	**09 42 44.5**	**-3.1**
	comp=Z,3.7nm,0.8s,mb4.4							
STKA				PcP		PcP	09 45 24.4	-0.1
STKA				LR		LR	09 58 18.0	
GYA	**Guiyang**	**36.08**	**349**	P		**P**	**09 43 08.5**	**+4.1**
GYA				AP		pP	09 43 19.5	+5.5
GYA				XP		sP	09 43 25.0	+7.1
GYA				PP		PP	09 44 32.8	+5.9
GYA				PCP		PcP	09 45 31.0	+0.8
GYA				S		**S**	**09 48 46.8**	**+5.1**
GYA				XS		sS	09 49 06.8	+9.3
GYA				SCP		ScP	09 49 13.5	-0.8
GYA				SCS		ScS	09 53 18.0	-2.0
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
GYA				AMB		AMB		
	comp=Z,90nm,4.6s							
GYA				LR		LR		
	comp=N,490nm,16.8s,MS4.5							
GYA				LR		LR		
	comp=E,420nm,17.6s,MS4.5							
GYA				LR		LR		
	comp=Z,440nm,16.5s,MS4.3							
TOO	**Toolangi**	**40.08**	**140**	*e*P		**P**	**09 43 39.1**	**+1.0**
YNG	**Young**	**40.23**	**134**	*e*P		**P**	**09 43 40.7**	**+1.3**
	comp=Z,12nm,0.7s,mb4.7							
SHL	**Shillong**	**40.68**	**328**	*e*P		**P**	**09 43 43.0**	**-0.1**
ARMA	**Armidale**	**40.92**	**127**	*e*P		**P**	**09 43 47.1**	**+1.9**
CD2	**Chengdu**	**41.00**	**346**	P		**P**	**09 43 49.3**	**+3.6**
CD2				AP		pP	09 44 01.5	+6.1
CD2				XP		sP	09 44 07.0	+7.7
CD2				PP		PP	09 45 29.3	+8.5
CD2				S		**S**	**09 50 02.0**	**+6.1**
CD2				AMB		AMB		
	comp=Z,20nm,0.5s,mb5.0							
CD2				AMB		AMB		
	comp=Z,180nm,4.9s							
CD2				LR		LR		
	comp=N,760nm,7.1s							
CD2				LR		LR		
	comp=Z,330nm,5.2s							
XAN	**Xi'an**	**43.18**	**354**	P		**P**	**09 44 04.0**	**+0.5**
XAN				AP		pP	09 44 15.5	+2.3
XAN				PP		PP	09 45 46.0	+1.7
XAN				S		**S**	**09 50 31.0**	**+2.9**
XAN				AMB		AMB		
	comp=Z,2.0nm,0.5s,mb4.1							
XAN				AMB		AMB		
	comp=Z,20nm,14.5s							
XAN				LR		LR		
	comp=Z,62nm,19.8s,MS3.5							
HYB	**Hyderabad**	**43.90**	**307**	*e*P		**P**	**09 44 16.0**	**+6.5**
ODAN	**Odare**	**44.15**	**325**	*e*P		**P**	**09 44 11.5**	**+0.1**
TAPN	**Taplejung**	**44.34**	**326**	*e*P		**P**	**09 44 13.2**	**+0.3**
	comp=Z,28nm,1.1s,mb4.9							
HNR	**Honiara**	**45.24**	**94**	*e*P		**P**	**09 44 16.3**	**-4.1**
	comp=Z,165nm,1.1s,mb5.8							
JIRN	**Jiri**	**45.44**	**324**	*e*P		**P**	**09 44 21.1**	**-0.6**
	comp=Z,25nm,0.6s,mb5.2							
GUN	**Gumba**	**45.81**	**324**	*e*P		**P**	**09 44 24.1**	**-0.5**
	comp=Z,23nm,0.6s,mb5.3							
LZH	**Lanzhou**	**45.97**	**348**	*e*P		**P**	**09 44 30.0**	**+4.3**
LZH				AP		pP	09 44 42.0	+6.5
LZH				XP		sP	09 44 47.3	+7.9
LZH				AMB		AMB		
	comp=Z,25nm,1.3s,mb5.0							
LZH				AMB		AMB		
	comp=Z,87nm,5.2s							
LZH				LR		LR		
	comp=N,376nm,13.8s							
LZH				LR		LR		
	comp=Z,502nm,17.7s,MS4.5							
GKN	**Gorkha**	**46.61**	**323**	*e*P		**P**	**09 44 31.0**	**+0.1**
	comp=Z,9.0nm,0.2s,mb5.3							
KOLN	**Koldanda**	**47.05**	**322**	*e*P		**P**	**09 44 33.8**	**-0.6**
	comp=Z,3.7nm,0.3s,mb4.8							
DANN	**Dangsing**	**47.38**	**323**	*e*P		**P**	**09 44 36.2**	**-0.7**
	comp=Z,20nm,0.6s,mb5.2							
KSRS	**Korea Array**	**48.09**	**15**	LR		LR	10 04 51.6	
	comp=Z,49nm,19.9s,MS3.5,baz=357,slow=36							
BJI	**Beijing**	**48.93**	**2**	P		**P**	**09 44 50.8**	**+2.1**
BJI				S		**S**	**09 51 54.8**	**+4.3**
BJI				AMB		AMB		
	comp=Z,8.0nm,0.4s,mb5.1							
BJI				AMB		AMB		
	comp=Z,241nm,5.4s							
BJI				LR		LR		
	comp=N,213nm,24.7s,MS4.5							
BJI				LR		LR		
	comp=E,601nm,24.5s,MS4.5							
BJI				LR		LR		
	comp=Z,76nm,24.5s,MS3.6							
HHC	**Hu-ho-hao-te**	**49.76**	**357**	*e*P		**P**	**09 44 55.8**	**+0.8**
HHC				XP		sP	09 45 13.5	+4.8
HHC				PCP		PcP	09 46 15.3	-0.3
HHC				PP		PP	09 46 51.3	+1.4
HHC				SCP		ScP	09 50 04.0	-4.9
HHC				PCS		PcS	09 50 10.5	-1.8
HHC				S		**S**	**09 52 03.5**	**+1.5**
HHC				XS		sS	09 52 23.0	+4.8
HHC				SCS		ScS	09 54 40.3	-3.8
HHC				SS		SS	09 55 33.0	-2.1
HHC				AMB		AMB		
	comp=Z,7.0nm,0.6s,mb4.9							
HHC				AMB		AMB		
	comp=Z,276nm,7.5s							
HHC				LR		LR		
	comp=N,262nm,15.1s,MS4.7							
HHC				LR		LR		
	comp=E,478nm,16.1s,MS4.7							
HHC				LR		LR		
	comp=Z,213nm,15.8s,MS4.2							
GTA	**Gaotai**	**50.05**	**346**	*e*P		**P**	**09 44 59.0**	**+1.8**
GTA				AP		pP	09 45 13.3	+6.2
GTA				XP		sP	09 45 20.5	+10
GTA				AMB		AMB		
	comp=Z,3.0nm,0.9s,mb4.3							
MJAR	**Matsushiro Arr**	**50.76**	**25**	P		**P**	**09 45 00.2**	**-2.4**
	comp=Z,1.7nm,0.8s,mb4.1,baz=208,slow=7.8,SNR=7.4							
MJAR				LR		LR	10 08 58.3	
	comp=Z,52nm,19.0s,MS3.6,baz=320,slow=39							
MDJ	**Mudanjiang**	**55.28**	**13**	P		**P**	**09 45 36.0**	**+0.2**
MDJ				AP		pP	09 45 47.8	+2.0
MDJ				XP		sP	09 45 52.5	+2.9
MDJ				SCP		ScP	09 50 31.3	-1.5
MDJ				PCS		PcS	09 50 36.0	-0.1
MDJ				S		**S**	**09 53 19.0**	**+1.6**
MDJ				XS		sS	09 53 38.5	+4.7
MDJ				AMB		AMB		
	comp=Z,8.0nm,1.5s,mb4.5							
MDJ				AMB		AMB		
	comp=Z,362nm,4.6s							
MDJ				LR		LR		
	comp=Z,53nm,33.2s,MS3.4							
ULN	**Ulaanbaatar**	**57.06**	**354**	*e*P		**P**	**09 45 48.5**	**+0.1**
ULN				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.6							
ULN	**Ulaanbaatar**	**57.06**	**354**	*e*P		**P**	**09 45 48.5**	**0.0**
	comp=Z,7.1nm,1.1s,mb4.6							
SONM	**Songino Array**	**57.10**	**354**	P		**P**	**09 45 48.4**	**-0.3**
	comp=Z,1.2nm,0.3s,mb4.4,baz=172,slow=9.6,SNR=20							
SONM				pP		pP	09 45 56.8	-1.9
	comp=Z,3.7nm,0.8s,baz=175,slow=9.4,SNR=12							
SONM				LR		LR	10 11 50.2	
	comp=Z,106nm,18.9s,MS4.0,baz=137,slow=38							
SONM	**Songino Array**	**57.10**	**354**	P		**P**	**09 45 48.4**	**-0.3**
SONM				*PP		pP	09 45 56.8	-1.9
WMQ	**Urumqi**	**57.87**	**338**	*e*P		**P**	**09 45 57.0**	**+2.8**
ZAK	**Zakamensk**	**59.98**	**352**	*e*P		**P**	**09 46 05.5**	**-3.3**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.6s,mb4.1							
RPZ	**Rata Peaks**	**60.10**	**135**	P		**P**	**09 46 10.1**	**+0.3**
	comp=Z,25nm,0.9s,mb5.2,baz=20,slow=8.0,SNR=9.5							
TLY	**Talaya**	**61.20**	**353**	*e*P		**P**	**09 46 14.8**	**-2.3**
TLY				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb4.6							
KZA	**Kyzart**	**62.11**	**328**	P		**P**	**09 46 24.0**	**+0.6**
	SNR=6.9							
MK31	**Makanchi Array**	**62.45**	**336**	*e*P		**P**	**09 46 25.1**	**-0.5**
MKAR	**Makanchi Array**	**62.45**	**336**	P		**P**	**09 46 24.9**	**-0.6**
	comp=Z,2.2nm,0.3s,mb4.7,baz=148,slow=7.2,SNR=59							
MKAR				pP		pP	09 46 33.8	-1.8
	comp=Z,5.8nm,0.7s,baz=146,slow=6.7,SNR=19							
MKAR				LR		LR	10 16 31.3	
	comp=Z,50nm,20.2s,MS3.7,baz=320,slow=39							
MKAR	**Makanchi Array**	**62.45**	**336**	P		**P**	**09 46 25.0**	**-0.6**
MKAR				*PP		pP	09 46 33.8	-1.9
TKM2	**Tokmak 2**	**62.54**	**329**	*e*P		**P**	**09 46 26.0**	**-0.2**
TKM2				pmax		pmax		
	comp=Z,14nm,0.9s,mb5.1							
TKM2	**Tokmak 2**	**62.54**	**329**	P		**P**	**09 46 26.2**	**0.0**
	SNR=9.2							
TKM2	**Tokmak 2**	**62.54**	**329**	*e*P		**P**	**09 46 26.0**	**-0.2**
	comp=Z,14nm,0.9s,mb5.1							
KBK	**Karagaybulak**	**62.68**	**328**	P		**P**	**09 46 27.4**	**+0.2**
	SNR=7.7							
AAK	**Ala-Archa**	**62.90**	**328**	*d* *i* P		**P**	**09 46 28.9**	**+0.2**
AAK				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.6							
AAK	**Ala-Archa**	**62.90**	**328**	P		**P**	**09 46 29.0**	**+0.3**
	SNR=6.6							
AAK	**Ala-Archa**	**62.90**	**328**	*e*P		**P**	**09 46 28.6**	**0.0**
	comp=Z,7.4nm,0.8s,mb4.9							
AML	**Almayashu**	**62.97**	**327**	P		**P**	**09 46 29.4**	**+0.3**
	SNR=8.9							
URZ	**Urewera**	**63.28**	**128**	P		**P**	**09 46 31.0**	**-0.4**
	comp=Z,5.2nm,0.6s,mb4.9,baz=293,slow=9.3,SNR=6.0							
EKS2	**Erkin-Say**	**63.30**	**328**	P		**P**	**09 46 31.2**	**0.0**
	SNR=11							
EKS2	**Erkin-Say**	**63.30**	**328**	*e*P		**P**	**09 46 31.3**	**0.0**
	comp=Z,16nm,0.9s,mb5.1							
USP	**Ospenovka**	**63.34**	**329**	P		**P**	**09 46 31.0**	**-0.6**
	SNR=8.3							
OPO	**Ambohidratompo**	**65.33**	**254**	P		**P**	**09 46 44.6**	**-0.6**
	comp=Z,2.0nm,0.9s,mb4.2,baz=345,slow=1.0,SNR=4.1							
KURK	**Kurchatov**	**67.04**	**336**	P		**P**	**09 46 54.0**	**-1.5**
	comp=Z,1.1nm,0.5s,mb4.1,baz=152,slow=5.9,SNR=4.3							
KURK				pP		pP	09 47 02.9	-2.7
	comp=Z,2.9nm,0.8s,baz=152,slow=6.1,SNR=4.5							
KURK				LR		LR	10 18 59.9	
	comp=Z,36nm,21.0s,MS3.6,baz=330,slow=38							
KURK	**Kurchatov**	**67.04**	**336**	P		**P**	**09 46 54.0**	**-1.4**
KURK				*PP		pP	09 47 02.9	-2.7
KURK	**Kurchatov**	**67.04**	**336**	P		**P**	**09 46 54.0**	**-1.5**
KURK				pP		pP	09 47 02.9	-2.7
KURK				LR		LR	10 18 59.9	
ZAA0	**Zalesovo Array**	**67.51**	**342**	*e*P		**P**	**09 46 56.9**	**-1.5**
ZALV	**Zalesovo Beam**	**67.51**	**342**	P		**P**	**09 46 56.5**	**-1.9**
	comp=Z,1.0nm,0.4s,mb4.2,baz=153,slow=5.6,SNR=8.5							
ZALV				pP		pP	09 47 05.9	-2.6
	comp=Z,2.0nm,0.5s,baz=128,slow=2.3,SNR=8.2							
ZALV	**Zalesovo Beam**	**67.51**	**342**	P		**P**	**09 46 56.5**	**-1.9**
ZALV				pP		pP	09 47 05.9	-2.6
MAW	**Mawson**	**67.52**	**199**	P		**P**	**09 46 57.4**	**-0.9**
	comp=Z,4.9nm,0.9s,mb4.5,baz=346,slow=4.2,SNR=3.0							
MAW				LR		LR	10 10 35.2	
	comp=Z,49nm,18.9s,MS3.8,baz=274,slow=31							
YAK	**Yakutsk**	**71.95**	**8**	*e*P		**P**	**09 47 25.0**	**-0.5**
YAK				pmax		pmax		
	comp=Z,11nm,0.7s,mb4.9							
BVAR	**Borovoye Array**	**72.18**	**334**	P		**P**	**09 47 26.2**	**-0.9**
	comp=Z,1.3nm,0.6s,mb4.0,baz=130,slow=8.4,SNR=2.8							
BVAR				pP		pP	09 47 34.8	-2.5
	comp=Z,3.8nm,0.7s,baz=149,slow=8.0,SNR=6.7							
BVAR				LR		LR	10 21 07.9	
	comp=Z,56nm,18.6s,MS3.9,baz=134,slow=38							
BVAR	**Borovoye Array**	**72.18**	**334**	P		**P**	**09 47 26.2**	**-0.9**
BVAR				*PP		pP	09 47 34.8	-2.5
BRVK	**Borovoye**	**72.25**	**334**	*e*P		**P**	**09 47 30.8**	**+3.3**
BRVK				pmax		pmax		
	comp=Z,17nm,1.4s,mb4.8							
BRVK	**Borovoye**	**72.25**	**334**	*e*P		**P**	**09 47 30.8**	**+3.3**
	comp=Z,17nm,1.4s,mb4.8							
VNDA	**Vanda**	**72.67**	**170**	P		**P**	**09 47 29.9**	**+0.2**
	comp=Z,1.9nm,0.6s,mb4.2,baz=304,slow=4.7,SNR=6.7							
VNDA	**Vanda**	**72.67**	**170**	P		**P**	**09 47 29.9**	**+0.2**
SYO	**Syowa Base**	**76.01**	**201**	*i* *e*P		**P**	**09 47 47.6**	**-1.6**
AKTK	**Aktyubinsk**	**76.60**	**327**	P		**P**	**09 47 52.1**	**-0.8**
AKTK				pP		pP	09 48 00.5	-2.7
AKTO	**Aktyubinsk**	**76.60**	**327**	P		**P**	**09 47 52.1**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.2,baz=110,slow=3.6,SNR=5.8							
AKTO				pP		pP	09 48 00.5	-2.7
	comp=Z,4.8nm,0.8s,baz=157,slow=5.4,SNR=7.6							
SEY	**Seymchan**	**77.60**	**17**	*i* P		**P**	**09 48 00.2**	**+2.0**
SVE	**Sverdlovsk**	**78.93**	**333**	*e*P		**P**	**09 48 05.4**	**-0.3**
SVE				pmax		pmax		
	comp=Z,13nm,1.1s,mb4.8							
ARU	**Arti**	**79.64**	**332**	*d* *i* P		**P**	**09 48 09.1**	**-0.5**
ARU				S		S	09 58 10.0	+0.7
ARU				SS		SS	10 03 14.9	-3.4
ARU				pmax		pmax		
	comp=Z,9.0nm,1.7s,mb4.4							
ARU	**Arti**	**79.64**	**332**	*e*P		**P**	**09 48 08.9**	**-0.7**
	comp=Z,10nm,1.1s,mb4.7							
QSPA	**South Pole Qui**	**80.89**	**180**	P		**P**	**09 48 16.3**	**+0.3**
	comp=Z,4.9nm,1.1s,mb4.4,baz=135,slow=1.5,SNR=10							
QSPA	**South Pole Qui**	**80.89**	**180**	P		**P**	**09 48 16.3**	**+0.3**
TIXI	**Tiksi**	**81.18**	**5**	*e*P		**P**	**09 48 15.9**	**-1.6**
TIXI				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
TIXI	**Tiksi**	**81.18**	**5**	*e*P		**P**	**09 48 16.0**	**-1.6**
KIV	**Kislovodsk**	**83.18**	**316**	*e*P		**P**	**09 48 29.7**	**+1.1**
KIV				*e*			09 51 43.4	
KIV				eS		S	09 58 42.3	-4.2
KIV				eSS		SS	10 04 16.3	+4.6
KIV				pmax		pmax		
	comp=Z,20nm,2.1s,mb4.8							
ASF	**Jabal al Asfar**	**84.12**	**304**	P		**P**	**09 48 35.0**	**+1.3**
	comp=Z,5.6nm,0.8s,mb4.8,baz=320,slow=7.3							
ASF				pP		pP	09 48 43.9	-0.2
	baz=328,slow=9.2							
ASF				LR		LR	10 28 17.7	
	comp=Z,42nm,18.3s,MS3.9,baz=252,slow=37							
ASF	**Jabal al Asfar**	**84.12**	**304**	P		**P**	**09 48 35.0**	**+1.3**
ASF				*PP		pP	09 48 43.9	-0.2
MALT	**Malatya**	**84.52**	**310**	*e*P		**P**	**09 48 35.5**	**-0.1**
MALT				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb4.6							
MALT	**Malatya**	**84.52**	**310**	*e*P		**P**	**09 48 35.5**	**-0.2**
	comp=Z,6.6nm,1.3s,mb4.6							
BOSA	**Boshof**	**84.68**	**242**	P		**P**	**09 48 36.6**	**-0.2**
	comp=Z,3.2nm,0.9s,mb4.5,baz=111,slow=11,SNR=4.8							
BOSA				LR		LR	10 19 26.3	
	comp=Z,69nm,18.6s,MS4.1,baz=334,slow=31							
BOSA	**Boshof**	**84.68**	**242**	P		**P**	**09 48 36.6**	**-0.1**
BOSA				LR		LR	10 19 26.3	
VRHR	**Novokhopersk**	**86.23**	**323**	*e*P		**P**	**09 48 43.7**	**-0.2**
VRHR				*e*PP		pP	09 48 51.8	-2.5
VRHR				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.3							
VRHR				pmax		pmax		
	comp=N,30nm,1.1s							
VRHR				pmax		pmax		
	comp=E,20nm,0.6s							
ANN	**Anapa**	**87.02**	**316**	*e*P		**P**	**09 48 47.4**	**-0.5**
ANN				*e*PP		pP	09 48 57.9	-0.4
ANN				*e*			09 52 10.7	
ANN				eS		S	09 59 11.1	-13
ANN				pmax		pmax		
	comp=Z,34nm,1.1s,mb5.5							
VORD	**Divnogorie**	**87.59**	**322**	*e*P		**P**	**09 48 44.7**	**-5.8**
VORD				*e*PP		pP	09 48 54.2	-6.7
VORD				pmax		pmax		
	comp=N,10.0nm,0.4s							
VORD				pmax		pmax		
	comp=Z,10.0nm,0.4s,mb5.4							
VORD				pmax		pmax		
	comp=E,30nm,0.5s							
VSR	**Storozhevoye**	**87.74**	**323**	*e*P		**P**	**09 48 50.5**	**-0.7**
VSR				*e*PP		pP	09 48 59.4	-2.2
VSR				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.2							
VSR				pmax		pmax		
	comp=N,5.0nm,0.7s							
VSR				pmax		pmax		
	comp=E,10.0nm,0.8s							
BR131	**Keskin Array S**	**88.49**	**310**	*e*P		**P**	**09 48 54.9**	**-0.2**
BRTR	**Keskin Array B**	**88.49**	**310**	P		**P**	**09 48 55.0**	**0.0**
	comp=E,6.4nm,0.8s,m

BDFB	**Brasilia**	**149.68**	**216**	PKPbc	PKPbc	09 55 54.6	+1.6
	comp=Z,5.5nm,0.7s,baz=88,slow=2.4,SNR=15						
GOGA	**Godfrey**	**150.90**	**31**	*e*PKIKP	PKPbc	09 55 54.8	-0.7

FUNV ***31*** *09:49:48.8, 10.13N×6087W, h27km, MW3.5*
ISCJB ***31*** *09:49:49.2±0.7, 1008N±005×6110W±005, h65km±8km, Error ellipse: s-maj=9.5km s-min=6.0km az=40.8*
NEIC ***31*** *09:49:51.6, 10.15N×6101W, h34km, MD3.1(TRN), After TRN.*
TRN ***31*** *09:49:51.6, 10.15N×6101W, h36km, MD3.1*
ISC 31 09:49:50.0±0.6**,1006N**±004×**6105W**±005**,h50**km±10km**,**
n21,σ1§09/34,2C,Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	**0.42**	**357**	⇑*i*P	**Pn**	**09 50 00.4**	**-0.1**
TBH				*e*S	**Sn**	**09 50 06.4**	**-1.5**
TPP	**Pointe-a-Pierr**	**0.48**	**303**	⇑*i*P	**Pn**	**09 50 02.3**	**+1.3**
TPP				*e*S	**Sn**	**09 50 09.2**	**+0.2**
BUAY	**Buenos Aires**	**0.63**	**275**	*e*P	**Pn**	**09 50 05.7**	**+2.8**
TRN	**Trinidad (W)**	**0.68**	**329**	*e*P	**Pn**	**09 50 03.6**	**0.0**
TRN				*e*S	**Sn**	**09 50 13.7**	**+0.3**
TCE	**Chacachacare**	**0.94**	**312**	*e*P	**Pn**	**09 50 07.1**	**+0.1**
TCE				*e*S	**Sn**	**09 50 17.9**	**-1.6**
TPR	**Prospect**	**1.15**	**13**	*e*P	**Pn**	**09 50 09.8**	**0.0**
TPR				*e*S	**Sn**	**09 50 24.0**	**-0.5**
GUIV	**Guiria**	**1.30**	**297**	*e*P	**Pn**	**09 50 12.2**	**+0.4**
TOSP	**Speyside**	**1.33**	**22**	*e*P	**Pn**	**09 50 13.0**	**+0.7**
TOSP				*e*S	**Sn**	**09 50 28.2**	**-0.6**
GUNV	**Guanoco**	**1.87**	**273**	*e*P	**Pn**	**09 50 21.4**	**+1.8**
GUNV				*e*S	**Sn**	**09 50 44.6**	**+2.5**
RIOV	**Rio Grande**	**2.12**	**201**	*e*P	**Pn**	**09 50 24.7**	**+1.7**
GRW	**Mount Saint Ca**	**2.17**	**344**	*e*P	**Pn**	**09 50 24.2**	**+0.4**
CRUV	**Carupano**	**2.24**	**286**	*e*P	**Pn**	**09 50 24.5**	**-0.2**
SVB	**Belmont**	**3.20**	**356**	*e*P	**Pn**	**09 50 38.4**	**+0.5**
SVB				*e*S	**Sn**	**09 51 14.2**	**-0.5**
PCRV	**Puerto La Cruz**	**3.54**	**272**	*e*P	**Pn**	**09 50 43.0**	**+0.5**
PRGV	**PARIAGUAN**	**3.78**	**250**	*e*P	**Pn**	**09 50 46.5**	**+0.6**
LUEV	**Luepa**	**4.21**	**186**	*e*P	**Pn**	**09 50 51.4**	**-0.3**
LUEV				*e*S	**Sn**	**09 51 37.3**	**-2.3**
CUPV	**Cœpira**	**4.67**	**270**	*e*P	**Pn**	**09 50 58.4**	**+0.4**
CUPV				*e*S	**Sn**	**09 51 50.5**	**-0.5**
BIRV	**Birongo**	**5.16**	**275**	*e*P	**Pn**	**09 51 04.6**	**-0.2**
MERV	**Las Mercedes**	**5.24**	**262**	*e*P	**Pn**	**09 51 06.1**	**+0.2**
MERV				*e*S	**Sn**	**09 52 03.5**	**-1.5**
CAOV	**Caicara del Or**	**5.88**	**243**	*e*P	**Pn**	**09 51 14.9**	**+0.2**
CAOV				*e*S	**Sn**	**09 52 17.9**	**-2.9**
BAUV	**El Baul**	**6.99**	**261**	*e*P	**Pn**	**09 51 29.0**	**-0.9**
BAUV				*e*S	**Sn**	**09 52 44.7**	**-3.4**

ISCJB ***31*** *09:56:12.2±0.7, 3670N±007×10098E±008, h10km, mb3.6/4, Error ellipse: s-maj=11.7km s-min=5.9km az=39.8*
IDC ***31*** *09:56:13.1±1.2, 3666N×10066E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.5/25, mbtmp3.6/8, ML3.7/3, Error ellipse: s-maj=34.4km s-min=20.2km az=59.0*
BJI ***31*** *09:56:16.4, 3699N×10105E, h15km, ML4.0*
ISC 31 09:56:14.4±0.7**,3670N**±007×**10095E**±008**,h10**km**,n10,**
σ0§91/15,mb3.6/4,Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**2.42**	**104**	P	**Pn**	**09 56 57.8**	**+3.9**
LZH				PG	**Pg**	**09 56 59.3**	**-1.4**
LZH				SG	**Sg**	**09 57 31.8**	**-0.3**
LZH				Smax			
	comp=N,1μm,0.7s						
LZH				Smax			
	comp=E,662nm,0.8s						
GTA	**Gaotai**	**2.85**	**342**	P	**Pn**	**09 57 00.5**	**+0.7**
GTA				PG	**Pg**	**09 57 03.5**	**-5.4**
GTA				S	**Sn**	**09 57 34.5**	**+0.4**
GTA				SG	**Sg**	**09 57 39.5**	**-6.3**
GTA				Smax			
	comp=N,121nm,0.8s						
GTA				Smax			
	comp=E,225nm,1.1s						
SONM	**Songino Array**	**11.83**	**18**	Pn	**Pn**	**09 59 03.4**	**+0.4**
	comp=E,0.5nm,0.3s,baz=202,slow=14,SNR=12						
SONM				Lg		10 02 19.3	
	comp=E,0.1nm,0.3s,baz=215,slow=24,SNR=3.2						
MKAR	**Makanchi Array**	**17.15**	**312**	P	**Pn**	**10 00 13.1**	**-0.9**
	comp=E,0.1nm,0.3s,baz=117,slow=12,SNR=3.7						
CMAR	**Chiang Mai Arr**	**18.26**	**186**	P	**Pn**	**10 00 28.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=349,slow=14,SNR=3.4						
ZALV	**Zalesovo Beam**	**20.55**	**332**	P	**P**	**10 00 52.3**	**-0.6**
	comp=E,1.1nm,0.5s,baz=136,slow=12,SNR=6.2						
KURK	**Kurchatov**	**21.26**	**318**	P	**P**	**10 00 59.4**	**-1.1**
	comp=E,2.4nm,0.6s,mb3.7,baz=125,slow=11,SNR=12						
KSRS	**Korea Array**	**21.52**	**80**	P	**P**	**10 01 06.8**	**+3.4**
	comp=E,1.5nm,0.6s,mb3.6,baz=273,slow=8.5,SNR=7.5						
WRA	**Warramunga Arr**	**64.56**	**145**	P	**P**	**10 06 52.4**	**+0.6**
	comp=E,0.5nm,0.7s,mb3.6,baz=340,slow=7.0,SNR=3.4						
ASAR	**Alice Springs**	**67.62**	**147**	P	**P**	**10 07 11.7**	**+0.4**
	comp=E,0.3nm,0.6s,mb3.5,baz=335,slow=6.1,SNR=3.9						

CSEM ***31*** *10:04:14.5±0.1, 3873N×2026E, h15km, MD3.5, Error ellipse: s-maj=4.0km s-min=2.1km az=74.0*
ISCJB ***31*** *10:04:15.1±1.0, 3870N±003×2040E±006, h7km±9km, Error ellipse: s-maj=8.5km s-min=5.1km az=159.5*
NEIC ***31*** *10:04:15.4, 3867N×2054E, h18km, MD3.5(ATH), After ATH.*
ATH ***31*** *10:04:15.4, 3867N×2054E, h18km, MD3.5/6*
THE ***31*** *10:04:16.0, 3871N×2051E, h0km±3km, ML3.7/5, Error ellipse: s-maj=4.0km s-min=1.1km az=264.0*
ISC 31 10:04:15.7±0.8**,3870N**±003×**2036E**±006**,h12**km±6km**,n22,**
σ1§24/36,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.55**	**161**	P	**Pg**	**10 04 26.0**	**-0.4**
VLS				S	**Sg**	**10 04 34.5**	**+0.9**
VLS	**Valsamata**	**0.55**	**161**	*e*Pb	**Pb**	**10 04 25.5**	**-1.8**
VLS	**Valsamata**	**0.55**	**161**	P	**Pg**	**10 04 26.0**	**-0.4**
VLS				S	**Sg**	**10 04 34.5**	**+0.9**
IGT	**Igoumenitsa**	**0.84**	**358**	P	**Pg**	**10 04 31.3**	**-0.6**
IGT				S	**Sg**	**10 04 43.7**	**+0.9**
JAN	**Janina**	**1.03**	**21**	*e*PN	**Pn**	**10 04 34.5**	**-1.6**
JAN				*e*SN	**Sn**	**10 04 48.5**	**-2.0**
KEK	**Kerkira**	**1.11**	**337**	*e*PN	**Pn**	**10 04 38.0**	**+0.9**
EVR	**Evrytania**	**1.15**	**78**	*e*PN	**Pn**	**10 04 35.0**	**-2.7**
EVR				*e*SN	**Sn**	**10 04 49.0**	**-4.4**
THL	**Klokotos Trika**	**1.55**	**55**	P	**Pn**	**10 04 41.3**	**-1.9**
THL				S	**Sn**	**10 05 03.3**	**+0.1**
AGG	**Agios Georgios**	**1.57**	**77**	P	**Pn**	**10 04 41.4**	**-2.1**
AGG				S	**Sn**	**10 05 02.9**	**-0.8**
KZN	**Kozani**	**1.94**	**34**	*e*PN	**Pn**	**10 04 49.0**	**+0.4**
ITM	**Ithomi**	**1.95**	**140**	*e*PN	**Pn**	**10 04 48.5**	**-0.2**
PYL	**PYLOS**	**2.10**	**148**	P	**Pn**	**10 04 51.9**	**+1.1**
PYL				S	**Sn**	**10 05 18.0**	**+1.1**
LTK	**Loutraki**	**2.15**	**107**	P	**Pn**	**10 04 52.0**	**+0.5**
LIT	**Litokhoron**	**2.17**	**49**	P	**Pn**	**10 04 52.1**	**+0.5**
LIT				S	**Sn**	**10 05 19.6**	**+1.2**
FNA	**Florina**	**2.23**	**20**	P	**Pn**	**10 04 53.4**	**+0.9**
FNA				S	**Sn**	**10 05 21.7**	**+1.8**
BIA	**Bitola**	**2.44**	**17**	*e*Pn	**Pn**	**10 04 58.9**	**+3.6**
BIA				*e*Sg	**Sg**	**10 05 25.5**	**-8.5**
DID	**Didima**	**2.56**	**117**	P	**Pn**	**10 04 56.9**	**-0.2**
HORT	**Hortiatis**	**2.84**	**47**	P	**Pn**	**10 05 01.9**	**+1.0**
HORT				S	**Sn**	**10 05 36.6**	**+1.5**
PAIG	**Paliouri**	**2.85**	**63**	P	**Pn**	**10 05 01.0**	**-0.1**
SG1	**Sgolgore (BA)**	**3.56**	**308**	*e*Pn	**Pn**	**10 05 12.3**	**+1.5**
STON	**Ston**	**4.63**	**335**	*e*Pn	**Pn**	**10 05 25.1**	**-0.5**
STON				Sn	**Sn**	**10 06 17.3**	**-2.0**
STON	**Ston**	**4.63**	**335**	*e*Pn	**Pn**	**10 05 25.0**	**-0.6**
STON				Sn	**Sn**	**10 06 17.3**	**-2.0**

SZGRF ***31*** *10:04:57.8, 4442N×1019E, h10km, mb3.6, Northern Italy*
STR ***31*** *10:04:57.4±0.7, 4424N×1013E, h10km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
PRU ***31*** *10:04:57.0, 4452N×1025E, h0km*
ISCJB ***31*** *10:04:59.6±0.2, 4456N±002×1025E±002, h26km±3km, Error ellipse: s-maj=3.1km s-min=2.1km az=150.7*
NEIC ***31*** *10:04:60.0, 4453N×1022E, h16km, ML3.0(ROM), After ROM.*

CSEM ***31*** *10:04:59.4±0.1, 4453N×1049E, h15km, ML3.5/14, Error ellipse: s-maj=1.2km s-min=1.1km az=91.0*
LDG ***31*** *10:04:59.2±0.1, 4460N×1035E, h2km, Ml3.4/18, Error ellipse: s-maj=3.0km s-min=2.6km az=178.0*
GEN ***31*** *10:04:59.7, 4460N×1032E, h4km, ML3.0*
VIE ***31*** *10:04:59.8±0.3, 4455N×1038E, h10km±2km, mb3.1/13, ML3.4/16, Error ellipse: s-maj=2.1km s-min=1.8km az=118.0*
ROM ***31*** *10:05:00.0±0.1, 4448N×1021E, h24km±2km, Md3.0/4, Ml3.1/25, Error ellipse: s-maj=2.6km s-min=2.0km az=50.0*
ISC 31 10:04:59.9±0.2**,4454N**±001×**1022E**±002**,h19**km±2km**,**
n175,σ1§25/277,17C-13D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRAM	**Graiana**	**0.12**	**246**	P	**Pg**	**10 05 04.2**	**+0.3**
ERBM	**Eremo**	**0.18**	**131**	⇑*i*Pg	**Pg**	**10 05 04.7**	**+0.1**
ERBM	**Eremo**	**0.18**	**131**	⇑*i*Pg	**Pg**	**10 05 04.7**	**+0.1**
ERBM				Sg	**Sg**	**10 05 08.9**	**+1.0**
	4μm,0.7s						
VALM	**Valbona**	**0.19**	**175**	P	**Pg**	**10 05 04.4**	**-0.4**
BACM	**Baccana**	**0.28**	**202**	P	**Pg**	**10 05 05.8**	**-0.4**
GSCL	**Gusciola**	**0.32**	**126**	⇑*i*Pg	**Pg**	**10 05 06.5**	**-0.4**
GSCL	**Gusciola**	**0.32**	**126**	⇑*i*Pg	**Pg**	**10 05 06.5**	**-0.4**
GSCL				Sg	**Sg**	**10 05 11.7**	**+0.1**
SARO	**Sassorosso**	**0.38**	**160**	P	**Pg**	**10 05 06.8**	**-1.0**
SARO				S	**Sg**	**10 05 13.2**	**+0.1**
VLC	**Villacollemand**	**0.40**	**163**	*e*Pg	**Pg**	**10 05 07.4**	**-0.8**
VLC				Sg	**Sg**	**10 05 13.6**	**-0.1**
	617nm,0.6s						
VLC	**Villacollemand**	**0.40**	**163**	*e*Pg	**Pg**	**10 05 07.4**	**-0.7**
VLC				*e*Sg	**Sg**	**10 05 14.0**	**+0.3**
VLC	**Villacollemand**	**0.40**	**163**	Pg	**Pg**	**10 05 07.2**	**-1.0**
VLC				Sg	**Sg**	**10 05 13.6**	**-0.1**
	617nm,0.6s						
NOVE	**Novellara**	**0.44**	**54**	Pg	**Pg**	**10 05 09.2**	**+0.3**
NOVE	**Novellara**	**0.44**	**54**	Pg	**Pg**	**10 05 09.2**	**+0.3**
NOVE				Sg	**Sg**	**10 05 18.5**	**+3.6**
	2μm,0.7s						
SC2M	**Scurtabo**	**0.51**	**255**	P	**Pg**	**10 05 10.1**	**-0.1**
SC2M	**Scurtabo**	**0.51**	**255**	Pg	**Pg**	**10 05 10.2**	**0.0**
SC2M				Sg	**Sg**	**10 05 18.2**	**+1.1**
	2μm,0.2s						
BDI	**Bagni Di Lucca**	**0.55**	**150**	Pg	**Pg**	**10 05 09.4**	**-1.5**
	498nm,0.3s						
BDI	**Bagni Di Lucca**	**0.55**	**150**	Pg	**Pg**	**10 05 09.4**	**-1.5**
	498nm,0.3s						
BOB	**Bobbio (Coli)**	**0.60**	**293**	Pg	**Pg**	**10 05 12.2**	**+0.4**
BOB				Sg	**Sg**	**10 05 22.8**	**+3.0**
PZZT	**Monte Pizzetto**	**0.61**	**131**	Pg	**Pg**	**10 05 10.8**	**-1.3**
PZZT	**Monte Pizzetto**	**0.61**	**131**	Pg	**Pg**	**10 05 10.8**	**-1.3**
PZZT				Sg	**Sg**	**10 05 20.4**	**+0.1**
	1μm,0.6s						
MAIM	**Mastiano**	**0.66**	**163**	Pg	**Pg**	**10 05 11.8**	**-1.0**
MAIM				Sg	**Sg**	**10 05 22.5**	**+0.9**
	447nm,0.3s						
MAIM	**Mastiano**	**0.66**	**163**	Pg	**Pg**	**10 05 11.8**	**-1.0**
MAIM				Sg	**Sg**	**10 05 22.5**	**+0.9**
	447nm,0.3s						
SBPO	**S.Benedetto Po**	**0.71**	**44**	Pg	**Pg**	**10 05 14.9**	**+1.0**
SBPO				Sg	**Sg**	**10 05 26.7**	**+3.3**
FNVD	**Fontana Vidola**	**0.75**	**120**	Pg	**Pg**	**10 05 13.8**	**-0.7**
FNVD	**Fontana Vidola**	**0.75**	**120**	Pg	**Pg**	**10 05 13.8**	**-0.7**
FNVD				Sg	**Sg**	**10 05 26.7**	**+2.2**
	412nm,0.5s						
PII	**Pisa**	**0.85**	**165**	Pg	**Pg**	**10 05 15.3**	**-1.1**
PII				Sg	**Sg**	**10 05 28.5**	**+0.9**
PII	**Pisa**	**0.85**	**165**	Pg	**Pg**	**10 05 15.3**	**-1.1**
PII				Sg	**Sg**	**10 05 28.5**	**+0.9**
FIU	**Minerbio Fiu**	**0.91**	**83**	Pg	**Pg**	**10 05 19.5**	**+1.8**
	2μm,0.8s						
CRMI	**Carmignano**	**0.92**	**144**	Pg	**Pg**	**10 05 17.4**	**-0.5**
CRMI	**Carmignano**	**0.92**	**144**	Pg	**Pg**	**10 05 17.4**	**-0.5**
CRMI				Sg	**Sg**	**10 05 30.8**	**+0.8**
	209nm,0.6s						
SEI	**Scarperia**	**0.95**	**120**	Pg	**Pg**	**10 05 18.0**	**-0.3**
	509nm,0.4s						
SALO	**Salr**	**1.10**	**11**	Pg	**Pg**	**10 05 20.9**	**-0.3**
	1μm,0.5s						
SALO	**Salr**	**1.10**	**11**	Pg	**Pg**	**10 05 20.9**	**-0.3**
	1μm,0.5s						
GROG	**Isola di Gorgo**	**1.14**	**192**	Pg	**Pg**	**10 05 19.8**	**-2.2**
	446nm,0.7s						
PCP	**Piancastagn**	**1.20**	**271**	P	**Pg**	**10 05 22.5**	**-0.6**
PCP	**Piancastagn**	**1.20**	**271**	Pg	**Pg**	**10 05 22.5**	**-0.6**
	243nm,0.9s						
MAGA	**Magasa**	**1.27**	**13**	Pg	**Pg**	**10 05 22.6**	**-1.8**
	2μm,0.4s						
MAGA	**Magasa**	**1.27**	**13**	Pg	**Pg**	**10 05 22.6**	**-1.8**
	2μm,0.4s						
MDI	**Monti di Nese**	**1.29**	**344**	Pg	**Pg**	**10 05 23.3**	**-1.5**
MDI				Sg	**Sg**	**10 05 42.8**	**+1.2**
	352nm,0.4s						
CSNT	**Castellina Chi**	**1.32**	**144**	Pg	**Pg**	**10 05 23.0**	**-2.3**
	149nm,0.6s						
CSNT	**Castellina Chi**	**1.32**	**144**	Pg	**Pg**	**10 05 23.0**	**-2.3**
	149nm,0.6s						
SFI	**Santa Sofia**	**1.33**	**118**	Pg	**Pg**	**10 05 25.4**	**-0.2**
	165nm,0.8s						
QLNO	**Quiliano**	**1.36**	**262**	Pg	**Pg**	**10 05 24.4**	**-1.8**
	87nm,0.3s						
MABI	**Malga Bissina**	**1.53**	**8**	Sg	**Sg**	**10 05 48.6**	**-0.7**
	230nm,0.4s						
MABI	**Malga Bissina**	**1.53**	**8**	Pg	**Pg**	**10 05 26.5**	**-2.9**
MABI				Sg	**Sg**	**10 05 48.6**	**-0.7**
	230nm,0.4s						
MUGIO	**Muggio**	**1.61**	**329**	Pg	**Pg**	**10 05 27.6**	**-3.4**
CAFI	**Castiglion Fio**	**1.75**	**133**	Pg	**Pg**	**10 05 29.6**	**-3.9**
CAFI	**Castiglion Fio**	**1.75**	**133**	Pg	**Pg**	**10 05 29.6**	**-3.9**
IMI	**Imperia**	**1.79**	**250**	Pg	**Pg**	**10 05 29.9**	**-4.4**
	85nm,0.5s						
CASP	**Castiglione de**	**1.81**	**165**	Pg	**Pg**	**10 05 29.5**	**-5.2**
	80nm,0.5s						
CTI	**Castel Tesino**	**1.81**	**33**	Pg	**Pg**	**10 05 29.8**	**-5.0**
	191nm,0.4s						
BERNI	**Berninapass**	**1.88**	**356**	Pg	**Pg**	**10 05 32.3**	**-3.7**
ORO	**Oropa**	**1.92**	**305**	Pg	**Pg**	**10 05 31.7**	**-5.2**
	89nm,0.3s						
BRMO	**Bormio**	**1.94**	**3**	Pg	**Pg**	**10 05 32.8**	**-4.4**
	48nm,0.5s						
NEGI	**Seborga**	**1.94**	**250**	P	**Pn**	**10 05 32.0**	**+0.2**
SAOF	**Saorge**	**1.99**	**255**	Pg	**Pg**	**10 05 33.3**	**-4.9**
SAOF				Sg	**Sg**	**10 05 58.1**	**-6.0**
TRAV	**Traversella**	**2.01**	**300**	P	**Pn**	**10 05 32.7**	**-0.1**
TRAV	**Traversella**	**2.01**	**300**	Pg	**Pg**	**10 05 32.8**	**-5.6**
TUE	**Stuetta**	**2.03**	**343**	*e*Pn	**Pn**	**10 05 33.6**	**+0.6**
TUE				*e*Sn	**Sn**	**10 06 00.8**	**+3.0**
TUE	**Stuetta**	**2.03**	**343**	*e*Pn	**Pn**	**10 05 33.6**	**+0.5**
TUE				*e*Sn	**Sn**	**10 06 00.8**	**+3.0**
TUE	**Stuetta**	**2.03**	**343**	Pg	**Pg**	**10 05 34.3**	**-4.5**
	90nm,0.3s						
ENR	**Entracque**	**2.03**	**262**	P	**Pn**	**10 05 33.8**	**+0.7**
APPI	**Appiano**	**2.06**	**20**	Pg	**Pg**	**10 05 34.2**	**-5.3**
	356nm,0.4s						
AUTN	**L'Aution**	**2.08**	**256**	Pg	**Pg**	**10 05 35.1**	**-4.7**
AUTN				Sg	**Sg**	**10 06 01.3**	**-5.5**
STV	**Sant Anna di V**	**2.10**	**263**	P	**Pn**	**10 05 35.2**	**+1.2**
SBF	**Sospel**	**2.12**	**252**	*e*Pn	**Pn**	**10 05 34.6**	**+0.4**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**10 06 01.4**	**+1.4**
	101nm,0.3s,SNR=1.0						
SBF	**Sospel**	**2.12**	**252**	*e*Pn	**Pn**	**10 05 34.6**	**+0.4**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**10 06 01.4**	**+1.4**
	50nm,0.3s,SNR=1.0						
LUCF	**Luceram**	**2.17**	**254**	Pg	**Pg**	**10 05 35.6**	**-5.9**
LUCF				Sg	**Sg**	**10 06 05.1**	**-4.5**
PGF	**Pioggiola**	**2.18**	**204**	*e*Pn	**Pn**	**10 05 34.5**	**-0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**10 06 00.0**	**-1.6**
	28nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.18**	**204**	*e*Pn	**Pn**	**10 05 34.5**	**-0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**10 06 00.0**	**-1.6**
	14nm,0.3s,SNR=1.0						
RSP	**Reno Superiore**	**2.19**	**287**	P	**Pn**	**10 05 35.1**	**-0.2**
TOUF	**Mont Tournerai**	**2.20**	**257**	Pg	**Pg**	**10 05 36.6**	**-5.5**
PZZ	**Stroppo**	**2.22**	**270**	P	**Pn**	**10 05 37.4**	**+1.7**
DAVOX	**Davos/Dischmat**	**2.25**	**354**	Pg	**Pg**	**10 05 38.2**	**-4.9**
MVIF	**Mont Vial**	**2.30**	**255**	Pg	**Pg**	**10 05 37.9**	**-6.1**
MVIF				Sg	**Sg**	**10 06 09.3**	**-4.5**
OG22	**Abries**	**2.35**	**278**	Pg	**Pg**	**10 05 40.8**	**-4.3**
OG22				Sg	**Sg**	**10 06 13.8**	**-1.8**

LSD	**Lago del Serru**	**2.38**	**294**	P	**Pn**	**10 05 38.0**	**+0.2**
MBDF	**Montbardon**	**2.47**	**276**	*e*Pn	**Pn**	**10 05 40.3**	**+1.2**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**10 06 09.5**	**+0.7**
	38nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**2.47**	**276**	*e*Pn	**Pn**	**10 05 40.3**	**+1.2**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**10 06 09.5**	**+0.7**
	19nm,0.4s,SNR=1.0						
FETA	**Feichten**	**2.51**	**8**	⇑*e*Pn	**Pn**	**10 05 41.1**	**+1.5**
	SNR=7.9						
FETA				⇓*i*Sn	**Sn**	**10 06 12.0**	**+2.3**
CALN	**Calern**	**2.52**	**253**	Pg	**Pg**	**10 05 41.0**	**-7.3**
BNI	**Bardonecchia**	**2.57**	**283**	*e*Pn	**Pn**	**10 05 43.7**	**+3.1**
BNI	**Bardonecchia**	**2.57**	**283**	*e*Pn	**Pn**	**10 05 43.7**	**+3.1**
SEST	**Monte Rota**	**2.62**	**32**	Pg	**Pg**	**10 05 42.5**	**-7.5**
	120nm,0.6s						
LPG	**La Plagne**	**2.64**	**292**	*e*Pn	**Pn**	**10 05 42.7**	**+1.2**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**10 06 13.5**	**+0.5**
	37nm,0.5s						
LPG	**La Plagne**	**2.64**	**292**	*e*Pn	**Pn**	**10 05 42.7**	**+1.2**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**10 06 13.5**	**+0.5**
	19nm,0.5s						
LPL	**La Plagne**	**2.66**	**293**	*e*P	**Pn**	**10 05 45.3**	**+3.6**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**10 06 14.7**	**+1.3**
	28nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**2.66**	**293**	*e*P	**Pn**	**10 05 45.3**	**+3.6**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**10 06 14.7**	**+1.3**
	14nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**2.66**	**293**	*e*Pn	**Pn**	**10 05 42.6**	**+0.9**
LPL				*e*Sn	**Sn**	**10 06 14.7**	**+1.3**
SCE	**Schlegeis**	**2.71**	**22**	⇓*i*Pn	**Pn**	**10 05 42.9**	**+0.5**
ABTA	**Abfaltersbach**	**2.73**	**351**	*e*Pn	**Pn**	**10 05 43.5**	**+0.8**
	SNR=16						
ABTA				⇓*i*Sn	**Sn**	**10 06 15.9**	**+0.7**
ABTA				⇑*i*Sg	**Sg**	**10 06 27.8**	**+0.1**
	37nm,0.4s						
DAVA	**Damuels**	**2.76**	**355**	⇓*e*Pn	**Pn**	**10 05 44.5**	**+1.5**
	SNR=23						
DAVA				⇑*i*Sn	**Sn**	**10 06 18.7**	**+2.9**
FRF	**La Foret Royal**	**2.76**	**250**	*e*Pn	**Pn**	**10 05 43.1**	**0.0**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**10 06 15.2**	**-0.6**
	37nm,0.2s,SNR=1.0						
MOTA	**Moosalm**	**2.87**	**12**	⇑*e*Pn	**Pn**	**10 05 45.5**	**+0.8**
	SNR=72						
WTTA	**Wattenberg**	**2.90**	**19**	⇑*e*Pn	**Pn**	**10 05 46.0**	**+1.0**
	SNR=88						
WTTA				⇓*i*Sn	**Sn**	**10 06 21.5**	**+2.2**
LMR	**La Mourre**	**2.94**	**247**	*e*Pn	**Pn**	**10 05 45.5**	**-0.1**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**10 06 18.9**	**-1.5**
	37nm,0.3s,SNR=1.0						
WATA	**Walderalm**	**2.95**	**18**	⇓*e*Pn	**Pn**	**10 05 47.1**	**+1.4**
	SNR=54						
WATA				⇓*i*Sn	**Sn**	**10 06 23.0**	**+2.4**
WATA	**Walderalm**	**2.95**	**18**	Pn	**Pn**	**10 05 47.1**	**+1.4**
	SNR=54						
WATA				Sn	**Sn**	**10 06 23.0**	**+2.4**
RETA	**Reutte**	**2.97**	**7**	⇑*e*Pn	**Pn**	**10 05 47.7**	**+1.6**
	SNR=48						
RETA				⇑*i*Sn	**Sn**	**10 06 23.9**	**+2.7**
VOY	**Vojsko**	**2.99**	**59**	*e*Pn	**Pn**	**10 05 45.3**	**-1.0**
VOY				*e*		10 06 13.8	
VOY				*e*Sn	**Sn**	**10 06 20.5**	**-1.1**
ORIF	**Oris-en-Rattie**	**3.12**	**278**	*e*Pg	**Pg**	**10 06 01.3**	**+1.7**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**10 06 25.6**	**+0.9**
	31nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.12**	**278**	*e*Pg	**Pg**	**10 06 01.3**	**+1.7**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**10 06 25.6**	**+0.9**
	15nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.12**	**278**	*e*P	**Pn**	**10 05 51.5**	**+3.5**
ORIF				*e*Pg	**Pg**	**10 06 01.3**	**+1.7**
ORIF				*e*Sn	**Sn**	**10 06 25.6**

6.3nm,0.5s,SNR=1.0
GRB4 Grafenberg Arr 5.01 10 *e*Sn **Sn 10 07 09.1 -2.4**
SFTF Sexfontaines 5.13 317 *e*Pn **Pn 10 06 15.6 0.0**
baz=132
KHC Kasperske Hory 5.14 25 *e*PN **Pn 10 06 15.5 -0.3**
KHC *e*PG **Pg 10 06 41.0 +2.8**
KHC *e*SN **Sn 10 07 11.4 -3.1**
KHC *e*SG **Sg 10 07 40.1 -4.6**
comp=Z,11nm,0.6s
KHC Kasperske Hory 5.14 25 *e*Pn **Pn 10 06 15.5 -0.3**
comp=Z,11nm,0.6s
KHC *e*Sn **Sn 10 07 11.4 -3.1**
KHC *e*Sg **Sg 10 07 40.1 -4.6**
CSNA Conrad Observa 5.17 47⇑*i*Pn **Pn 10 06 16.3 +0.1**
CSNA ⇓*i*Sn **Sn 10 07 16.3 +0.9**
CSNA Conrad Observa 5.17 47 Pn **Pn 10 06 16.3 0.0**
CSNA Sn **Sn 10 07 16.3 +0.9**
CONA Conrad Observa 5.17 47⇓*i*Pn **Pn 10 06 16.3 0.0**
SNR=8.4
GRA1 Grafenberg Arr 5.20 7 *e*Pn **Pn 10 06 15.4 -1.2**
GRF Grafenberg Arr 5.20 7 *e*Pn **Pn 10 06 15.4 -1.2**
LOR Lormes 5.21 304 *e*Pn **Pn 10 06 17.3 +0.5**
baz=123,SNR=1.0
LOR *e*Sn **Sn 10 07 14.1 -2.2**
comp=Z,11nm,0.3s,SNR=1.0
LOR Lormes 5.21 304 *e*Pn **Pn 10 06 17.3 +0.5**
SNR=1.0
LOR *e*Sn **Sn 10 07 14.1 -2.2**
comp=Z,5.7nm,0.3s,SNR=1.0
RFYF Reffroy 5.24 323 *e*Pn **Pn 10 06 16.6 -0.5**
baz=137
RFYF *e*Sn **Sn 10 07 14.0 -3.0**
comp=Z,12nm,0.3s
RFYF Reffroy 5.24 323 *e*Pn **Pn 10 06 16.6 -0.5**
RFYF *e*Sn **Sn 10 07 14.0 -3.0**
comp=Z,5.8nm,0.3s
AVF Avril sur Loir 5.31 297 *e*Pn **Pn 10 06 18.7 +0.5**
SNR=1.0
SSF Saint Saulge 5.33 301 *e*Pn **Pn 10 06 19.0 +0.6**
SNR=1.0
SSF *e*Sn **Sn 10 07 17.3 -1.9**
comp=Z,8.0nm,0.4s,SNR=1.0
SSF Saint Saulge 5.33 301 *e*Pn **Pn 10 06 19.0 +0.6**
SNR=1.0
SSF *e*Sn **Sn 10 07 17.3 -1.9**
comp=Z,4.0nm,0.4s,SNR=1.0
MEZF Maizieres J'vi 5.33 320 *e*Pn **Pn 10 06 18.1 -0.3**
baz=147
BGF Bois d'Agland 5.56 294 *e*Pn **Pn 10 06 22.4 +0.8**
SNR=1.0
BGF *e*Sn **Sn 10 07 23.2 -1.7**
comp=Z,13nm,0.4s
BGF Bois d'Agland 5.56 294 *e*Pn **Pn 10 06 22.4 +0.8**
SNR=1.0
BGF *e*Sn **Sn 10 07 23.2 -1.7**
comp=Z,6.7nm,0.4s
MANZ Manzenberg 5.60 13 *e*Pn **Pn 10 06 20.5 -1.6**
CAF Calviac 5.82 277 *e*Pn **Pn 10 06 26.3 +1.1**
NKC Novy Kostel 5.89 14 *e*PN **Pn 10 06 24.9 -1.2**
NKC *e*SN **Sn 10 07 29.8 -3.3**
MTLF Montolieu 5.90 261 *e*Pn **Pn 10 06 26.8 +0.5**
TCF Toulx Ste Croi 5.91 290 *e*Pn **Pn 10 06 26.8 +0.5**
MOX Moxa 6.18 8 *e*PN **Pn 10 06 29.0 -1.1**
MOX *e*SN **Sn 10 07 37.0 -3.2**
MOX Moxa 6.18 8 *e*Pn **Pn 10 06 28.9 -1.2**
PRU Pruhonice 6.19 27 Pn **Pn 10 06 29.4 -0.8**
PRU Sn **Sn 10 07 37.0 -3.4**
PRU Pruhonice 6.19 27 *e*PN **Pn 10 06 29.4 -0.8**
PRU *e*SN **Sn 10 07 37.0 -3.4**
PRU *e*SG **Sn 10 08 12.7 +32**
VRAC Vranov 6.46 40 *e*Sn **Sn 10 07 43.8 -3.3**
VRAC *e*Sg **Sn 10 08 24.4 +37**
BRG Berggiesshubel 6.81 20 PN **Pn 10 06 39.3 +0.5**
BRG SN **Sn 10 07 52.4 -3.4**
BRG SG **Sn 10 08 38.7 +43**
comp=Z,3.2nm,0.6s
BRG Berggiesshubel 6.81 20 Pn **Pn 10 06 39.3 +0.5**
comp=Z,1.9nm,0.6s
BRG Sn **Sn 10 07 52.4 -3.4**
BRG Sg **Sn 10 08 38.7 +43**
CLL Collm 7.02 14 *i* Pn **Pn 10 06 40.1 -1.5**
comp=Z,3.0nm,0.4s
CLL *e*Sg **Sn 10 08 44.0 +43**
CLL Collm 7.02 14 *i* Pn **Pn 10 06 40.1 -1.5**
comp=Z,3.0nm,0.4s
CLL *e*Sg **Sn 10 08 48.0 +47**
DPC Dobruska-Polom 7.13 33 *e*PN **Pn 10 06 42.1 -1.0**
UPC Upice 7.14 31 *e*PN **Pn 10 06 43.1 -0.1**
MFF Saint Martin d 7.56 289 *e*Pn **Pn 10 06 49.6 +0.5**

711nm,0.5s
PCP Piancastagn 1.22 274 P **Pn 10 20 43.0 -0.9**
MAGA Magasa 1.32 11 Pg **Pn 10 20 44.5 -0.8**
842nm,0.5s
MAGA Magasa 1.32 11 Pg **Pn 10 20 44.5 -0.8**
842nm,0.5s
MDI Monti di Nese 1.35 344 Pg **Pn 10 20 45.6 -0.1**
118nm,0.3s
MDI Monti di Nese 1.35 344 Pg **Pn 10 20 45.6 -0.1**
118nm,0.3s
MABI Malga Bissina 1.59 7 Pg **Pn 10 20 48.5 -0.4**
70nm,0.5s
MABI Malga Bissina 1.59 7 Pg **Pn 10 20 48.5 -0.4**
70nm,0.5s
CTI Castel Tesino 1.85 32 Pg **Pn 10 20 52.0 -0.5**
55nm,0.2s
CTI Castel Tesino 1.85 32 Pg **Pn 10 20 52.0 -0.5**
55nm,0.2s
TUE Stuetta 2.09 343 *e*Pn **Pn 10 20 56.0 +0.2**
TUE Stuetta 2.09 343 *e*Pn **Pn 10 20 56.0 +0.2**
APPI Appiano 2.12 19 Pg **Pn 10 20 56.4 +0.3**
140nm,0.5s
APPI Appiano 2.12 19 Pg **Pn 10 20 56.4 +0.3**
140nm,0.5s
SBF Sospel 2.12 254 *e*Pn **Pn 10 20 56.4 +0.2**
PGF Pioggiola 2.13 206 *e*Pn **Pn 10 20 56.2 -0.2**
MBDF Montbardon 2.50 277 *e*Pn **Pn 10 21 02.2 +0.8**
FETA Feichten 2.56 7⇓*e*Pn **Pn 10 21 03.1 +0.8**
SNR=9.8
FRF La Foret Royal 2.76 252 *e*Pn **Pn 10 21 05.0 0.0**
FRF *e*Sn **Sn 10 21 36.9 -0.6**
12nm,0.2s
FRF La Foret Royal 2.76 252 *e*Pn **Pn 10 21 05.0 0.0**
FRF *e*Sn **Sn 10 21 36.9 -0.6**
6.2nm,0.2s
DAVA Damuels 2.82 355⇓*i*Pn **Pn 10 21 06.5 +0.7**
MOTA Moosalm 2.93 11⇓*e*Pn **Pn 10 21 08.2 +0.9**
SNR=12
LMR La Mourre 2.94 248 *e*Pn **Pn 10 21 07.2 -0.2**
WTTA Wattenberg 2.95 19⇑*e*Pn **Pn 10 21 08.5 +0.9**
SNR=16
WTTA ⇑*i*Sg **Sn 10 21 57.8 +16**
66nm,0.7s
VOY Vojsko 3.00 58 *e*Pn **Pn 10 21 07.5 -0.8**
VOY *e* 10 21 29.1
VOY *e*Sn **Sn 10 21 42.2 -1.3**
WATA Walderalm 3.00 17⇓*e*Pn **Pn 10 21 09.4 +1.0**
SNR=16
RETA Reutte 3.03 7⇑*i*Pn **Pn 10 21 09.6 +0.8**
RETA ⇑*i*Sn **Sn 10 21 46.3 +2.1**
ORIF Oris-en-Rattie 3.15 280 *e*P **Pn 10 21 13.3 +2.9**
ORIF *e*Sn **Sn 10 21 47.2 +0.1**
10nm,0.4s
ORIF Oris-en-Rattie 3.15 280 *e*P **Pn 10 21 13.3 +2.9**
ORIF *e*Sn **Sn 10 21 47.2 +0.1**
5.1nm,0.4s
SMRF Simiane la Rot 3.40 263 *e*Pn **Pn 10 21 15.3 +1.5**
SMRF *e*Sn **Sn 10 21 54.1 +0.8**
1.2nm,0.2s
SMRF Simiane la Rot 3.40 263 *e*Pn **Pn 10 21 15.3 +1.5**
SMRF *e*Sn **Sn 10 21 54.1 +0.8**
0.6nm,0.2s
CABF La Chapelle 3.62 308 *e*Pn **Pn 10 21 17.2 +0.4**
VIVF Saint-Julien-l 4.00 277 *e*Pn **Pn 10 21 22.6 +0.6**
HINF Hinteralfeld 4.09 326 *e*Pn **Pn 10 21 21.7 -1.6**
HINF *e*Sn **Sn 10 22 06.4 -3.9**
9.2nm,0.4s
HINF Hinteralfeld 4.09 326 *e*Pn **Pn 10 21 21.7 -1.6**
HINF *e*Sn **Sn 10 22 06.4 -3.9**
4.6nm,0.4s
CDF Champ du Feu 4.44 333 *e*Pn **Pn 10 21 26.9 -1.2**
CDF *e*Sn **Sn 10 22 14.9 -4.0**
5.8nm,0.4s
CDF Champ du Feu 4.44 333 *e*Pn **Pn 10 21 26.9 -1.2**
CDF *e*Sn **Sn 10 22 14.9 -4.0**
2.9nm,0.4s
KHC Kasperske Hory 5.18 25 Pn **Pn 10 21 37.4 -0.9**
KHC Sn **Sn 10 22 34.3 -2.9**
KHC Kasperske Hory 5.18 25 *e*PN **Pn 10 21 37.4 -0.9**
KHC *e*SN **Sn 10 22 34.3 -2.9**
KHC Kasperske Hory 5.18 25 *e*Pn **Pn 10 21 37.4 -0.9**
KHC *e*Sn **Sn 10 22 34.3 -2.9**
LOR Lormes 5.27 304 *e*Pn **Pn 10 21 38.8 -0.6**
LOR *e*Sn **Sn 10 22 35.9 -3.4**
4.0nm,0.4s
LOR Lormes 5.27 304 *e*Pn **Pn 10 21 38.8 -0.6**
LOR *e*Sn **Sn 10 22 35.9 -3.4**
2.0nm,0.4s
MTLF Montolieu 5.92 262 *e*Pn **Pn 10 21 48.6 +0.2**

9.1nm,0.5s
SMRF Simiane la Rot 3.43 262 *e*Pn **Pn 10 21 35.9 +1.4**
SMRF *e*Sn **Sn 10 22 14.9 +0.7**
6.8nm,0.5s,SNR=1.0
SMRF Simiane la Rot 3.43 262 *e*Pn **Pn 10 21 35.9 +1.4**
SMRF *e*Sn **Sn 10 22 14.9 +0.7**
3.4nm,0.5s,SNR=1.0
CABF La Chapelle 3.61 307 *e*Pn **Pn 10 21 37.0 +0.1**
SNR=1.0
VIVF Saint-Julien-l 4.02 277 *e*Pn **Pn 10 21 43.7 +1.2**
SNR=1.0
HINF Hinteralfeld 4.06 325 *e*Pn **Pn 10 21 43.2 +0.1**
SNR=1.0
HINF *e*Sn **Sn 10 22 27.2 -2.5**
4.4nm,0.3s,SNR=1.0
HINF Hinteralfeld 4.06 325 *e*Pn **Pn 10 21 43.2 +0.1**
SNR=1.0
HINF *e*Sn **Sn 10 22 27.2 -2.5**
2.2nm,0.3s,SNR=1.0
CDF Champ du Feu 4.40 333 *e*Pn **Pn 10 21 47.3 -0.5**
SNR=1.0
CDF *e*Sn **Sn 10 22 36.0 -2.1**
6.8nm,0.4s,SNR=1.0
CDF Champ du Feu 4.40 333 *e*Pn **Pn 10 21 47.3 -0.5**
SNR=1.0
CDF *e*Sn **Sn 10 22 36.0 -2.1**
3.4nm,0.4s,SNR=1.0
LASF Ste Croix 4.64 267 *e*Pn **Pn 10 21 51.7 +0.6**
GERES GERESS Array B 4.91 27 Pn **Pn 10 21 54.9 +0.1**
0.6nm,0.3s,baz=203,slow=14,SNR=9.9
GERES Sn **Sn 10 22 50.7 0.0**
1.5nm,0.3s,baz=209,slow=23,SNR=7.3
SMF Signal de Mont 4.99 297 *e*Pn **Pn 10 21 56.0 0.0**
KHC Kasperske Hory 5.12 25 *e*PN **Pn 10 21 58.0 +0.3**
KHC *e*SN **Sn 10 22 54.3 -1.6**
KHC *ex* x 10 22 52.0
KHC Kasperske Hory 5.12 25 *ex* x 10 21 58.0
SFTF Sexfontaines 5.17 317 *e*Pn **Pn 10 21 57.9 -0.4**
LOR Lormes 5.26 304 *e*Pn **Pn 10 21 59.9 +0.4**
SNR=1.0
LOR *e*Sn **Sn 10 22 56.8 -2.4**
3.9nm,0.3s
LOR Lormes 5.26 304 *e*Pn **Pn 10 21 59.9 +0.4**
SNR=1.0
LOR *e*Sn **Sn 10 22 56.8 -2.4**
2.0nm,0.3s
RFYF Reffroy 5.27 323 *e*Pn **Pn 10 21 58.6 -1.2**
AVF Avril sur Loir 5.36 297 *e*Pn **Pn 10 22 01.5 +0.5**
SSF Saint Saulge 5.38 300 *e*Pn **Pn 10 22 01.6 +0.4**
SSF *e*Sn **Sn 10 23 00.0 -2.1**
3.7nm,0.4s
SSF Saint Saulge 5.38 300 *e*Pn **Pn 10 22 01.6 +0.4**
SSF *e*Sn **Sn 10 23 00.0 -2.1**
1.9nm,0.4s
BGF Bois d'Agland 5.61 294 *e*Pn **Pn 10 22 05.2 +0.8**
SNR=1.0
BGF *e*Sn **Sn 10 23 06.1 -1.7**
5.3nm,0.3s
BGF Bois d'Agland 5.61 294 *e*Pn **Pn 10 22 05.2 +0.8**
SNR=1.0
BGF *e*Sn **Sn 10 23 06.1 -1.7**
2.7nm,0.3s
CAF Calviac 5.87 277 *e*Pn **Pn 10 22 08.8 +0.8**
NKC Novy Kostel 5.89 14 *e*PN **Pn 10 22 09.1 +0.9**
MTLF Montolieu 5.95 261 *e*Pn **Pn 10 22 09.2 +0.1**
YKA Yellowknife Ar 64.59 335 P **P 10 31 18.1 +0.9**
0.1nm,0.5s,mb3.1,baz=38,slow=6.1,SNR=5.0
YKA Yellowknife Ar 64.59 335 P **P 10 31 18.1 +0.9**
PDAR Pinedale Array 77.84 319 P **P 10 32 37.0 -0.7**
0.3nm,0.8s,mb3.3,baz=4.2,slow=3.7,SNR=3.8

*ISCJB **31** 10:20:21.8±0.3, 4446N±003×1025E±003, h32km±3km, Error ellipse: s-maj=4.8km s-min=3.8km az=146.0*
*ROM **31** 10:20:21.7±0.2, 4448N×1024E, h26km±3km, Md2.2/1, Ml2.8/11, Error ellipse: s-maj=3.8km s-min=3.0km az=30.0*
*LDG **31** 10:20:21.9±0.1, 4453N×1024E, h2km, Ml2.9/6, Error ellipse: s-maj=4.4km s-min=3.0km az=40.0*
*GEN **31** 10:20:21.9, 4452N×1025E, h20km, ML2.0*
*CSEM **31** 10:20:21.9±0.1, 4445N×1037E, h30km, ML3.0/5, Error ellipse: s-maj=2.0km s-min=1.7km az=82.0*
*NEIC **31** 10:20:22.3, 4448N×1034E, h24km, ML2.7(ROM), ML2.9(LDG), After ROM.*
*VIE **31** 10:20:22.0±0.2, 4454N×1028E, h10km, mb2.6/8, ML3.1/10, Error ellipse: s-maj=4.6km s-min=1.5km az=87.0*
*PRU **31** 10:20:24.8, 4459N×1049E, h20km*

ISC 31 10:20:22.4±0.3, 4448N±003×1025E±004, h25km±4km, n66, σ0§90/96, 6C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ERBM	**Eremo**	**0.13**	**117**⇑*i*Pg		**Pb**		**10 20 26.6**	**-0.6**
ERBM				Sg	**Sb**		**10 20 30.9**	**+0.5**
1µm,0.2s								
ERBM	**Eremo**	**0.13**	**117**⇑*i*Pg		**Pb**		**10 20 26.6**	**-0.6**
ERBM				Sg	**Sb**		**10 20 30.9**	**+0.5**
1µm,0.2s								
VALM	**Valbona**	**0.13**	**182**	P	**Pb**		**10 20 26.4**	**-0.8**
BACM	**Baccana**	**0.24**	**213**	P	**Pb**		**10 20 27.9**	**-0.6**
GSCL	**Gusciola**	**0.27**	**118**	Pg	**Pb**		**10 20 28.4**	**-0.5**
GSCL				Sg	**Sb**		**10 20 33.3**	**-0.1**
195nm,0.4s								
GSCL	**Gusciola**	**0.27**	**118**	Pg	**Pb**		**10 20 28.4**	**-0.5**
GSCL				Sg	**Sb**		**10 20 33.3**	**-0.1**
195nm,0.4s								
SARO	**Sassorosso**	**0.31**	**160**	P	**Pb**		**10 20 29.1**	**-0.4**
SARO				S	**Sb**		**10 20 34.6**	**+0.2**
VLC	**Villacollemand**	**0.33**	**163**	*e*Pg	**Pb**		**10 20 29.6**	**-0.2**
VLC				Sg	**Sb**		**10 20 35.5**	**+0.6**
362nm,0.8s								
VLC	**Villacollemand**	**0.33**	**163**	*e*Pg	**Pb**		**10 20 29.6**	**-0.2**
VLC				*e*Sg	**Sb**		**10 20 34.9**	**0.0**
VLC	**Villacollemand**	**0.33**	**163**	Pg	**Pb**		**10 20 29.3**	**-0.5**
VLC				Sg	**Sb**		**10 20 35.5**	**+0.6**
362nm,0.8s								
NOVE	**Novellara**	**0.46**	**46**	Pg	**Pb**		**10 20 31.3**	**-0.6**
NOVE				Sg	**Sb**		**10 20 40.0**	**+1.6**
668nm,0.8s								
NOVE	**Novellara**	**0.46**	**46**	Pg	**Pb**		**10 20 31.3**	**-0.6**
NOVE				Sg	**Sb**		**10 20 40.0**	**+1.6**
668nm,0.8s								
BDI	**Bagni Di Lucca**	**0.48**	**149**	Pg	**Pb**		**10 20 31.8**	**-0.5**
149nm,0.5s								
BDI	**Bagni Di Lucca**	**0.48**	**149**	Pg	**Pb**		**10 20 31.8**	**-0.5**
149nm,0.5s								
PZZT	**Monte Pizzetto**	**0.56**	**128**	Pg	**Pb**		**10 20 32.9**	**-0.6**
PZZT				Sg	**Sb**		**10 20 42.5**	**+1.4**
268nm,0.6s								
PZZT	**Monte Pizzetto**	**0.56**	**128**	Pg	**Pb**		**10 20 32.9**	**-0.6**
PZZT				Sg	**Sb**		**10 20 42.5**	**+1.4**
268nm,0.6s								
BOB	**Bobbio (Coli)**	**0.64**	**297**	Pg	**Pb**		**10 20 34.9**	**-0.1**
BOB	**Bobbio (Coli)**	**0.64**	**297**	Pg	**Pb**		**10 20 34.9**	**-0.1**
FNVD	**Fontana Vidola**	**0.70**	**116**	Pg	**Pb**		**10 20 36.5**	**+0.7**
125nm,0.6s								
FNVD	**Fontana Vidola**	**0.70**	**116**	Pg	**Pb**		**10 20 36.5**	**+0.7**
125nm,0.6s								
PII	**Pisa**	**0.78**	**165**	Pg	**Pb**		**10 20 37.2**	**-0.1**
126nm,0.2s								
PII	**Pisa**	**0.78**	**165**	Pg	**Pb**		**10 20 37.2**	**-0.1**
126nm,0.2s								
SALO	**Salr**	**1.16**	**9**	Pg	**Pn**		**10 20 42.9**	**-0.1**
711nm,0.5s								
SALO	**Salr**	**1.16**	**9**	Pg	**Pn**		**10 20 42.9**	**-0.1**

*IDC **31** 10:20:37.8±2.6, 4437N×1043E, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/21, mbtmp3.2/4, ML3.2/1, Error ellipse: s-maj=49.3km s-min=20.7km az=132.0*
*ISCJB **31** 10:20:41.4±0.7, 4457N±004×1031E±005, h31km±8km, mb3.2/2, Error ellipse: s-maj=7.6km s-min=4.4km az=41.8*
*NEIC **31** 10:20:41.4±0.6, 4454N×1030E, h10km, ML3.1(LDG), Error ellipse: s-maj=8.5km s-min=6.0km az=115.0*
*LDG **31** 10:20:41.5±0.4, 4452N×1036E, h2km, Ml3.1/14, Error ellipse: s-maj=7.5km s-min=4.2km az=92.0*

ISC 31 10:20:42.9±0.7, 4453N±004×1029E±005, h28km±8km, n47, σ1§11/76, mb3.2/2, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VLC	**Villacollemand**	**0.38**	**169**	Pg	**Pb**		**10 20 50.1**	**-1.1**
VLC				*e*Sg	**Sb**		**10 20 56.0**	**-1.0**
TUE	**Stuetta**	**2.05**	**341**	*e*Pn	**Pn**		**10 21 17.3**	**+1.8**
SBF	**Sospel**	**2.16**	**253**	*e*Pn	**Pn**		**10 21 16.9**	**-0.1**
SNR=1.0								
SBF				*e*Sn	**Sn**		**10 21 43.7**	**+0.9**
35nm,0.3s,SNR=1.0								
SBF	**Sospel**	**2.16**	**253**	*e*Pn	**Pn**		**10 21 16.9**	**-0.1**
SNR=1.0								
SBF				*e*Sn	**Sn**		**10 21 43.7**	**+0.9**
18nm,0.3s,SNR=1.0								
PGF	**Pioggiola**	**2.19**	**206**	*e*Pn	**Pn**		**10 21 17.2**	**-0.3**
PGF				*e*Sn	**Sn**		**10 21 42.6**	**-1.1**
9.7nm,0.3s,SNR=1.0								
PGF	**Pioggiola**	**2.19**	**206**	*e*Pn	**Pn**		**10 21 17.2**	**-0.3**
PGF				*e*Sn	**Sn**		**10 21 42.6**	**-1.1**
4.8nm,0.3s,SNR=1.0								
DAVOX	**Davos/Dischmat**	**2.27**	**353**	Pn	**Pn**		**10 21 21.0**	**+2.5**
5.8nm,0.3s,baz=170,slow=14,SNR=17								
DAVOX				Sn	**Sn**		**10 21 49.8**	**+4.3**
4.2nm,0.3s,baz=333,slow=20,SNR=6.8								
MBDF	**Montbardon**	**2.52**	**276**	*e*Pn	**Pn**		**10 21 22.8**	**+0.9**
SNR=1.0								
MBDF				*e*Sn	**Sn**		**10 21 52.0**	**+0.3**
20nm,0.4s,SNR=1.0								
MBDF	**Montbardon**	**2.52**	**276**	*e*Pn	**Pn**		**10 21 22.8**	**+0.9**
SNR=1.0								
MBDF				*e*Sn	**Sn**		**10 21 52.0**	**+0.3**
10nm,0.4s,SNR=1.0								
LPG	**La Plagne**	**2.69**	**292**	*e*Sn	**Sn**		**10 21 55.9**	**0.0**
12nm,0.5s								
LPG	**La Plagne**	**2.69**	**292**	*e*Sn	**Sn**		**10 21 55.9**	**0.0**
6.2nm,0.5s								
LPL	**La Plagne**	**2.71**	**293**	*e*P	**Pn**		**10 21 27.7**	**+3.2**
LPL				*e*Sn	**Sn**		**10 21 56.7**	**+0.4**
22nm,0.5s								
LPL	**La Plagne**	**2.71**	**293**	*e*P	**Pn**		**10 21 27.7**	**+3.2**
LPL				*e*Sn	**Sn**		**10 21 56.7**	**+0.4**
11nm,0.5s								
FRF	**La Foret Royal**	**2.80**	**251**	*e*Pn	**Pn**		**10 21 25.7**	**-0.1**
SNR=1.0								
FRF				*e*Sn	**Sn**		**10 21 57.6**	**-1.0**
24nm,0.3s								
FRF	**La Foret Royal**	**2.80**	**251**	*e*Pn	**Pn**		**10 21 25.7**	**-0.1**
SNR=1.0								
FRF				*e*Sn	**Sn**		**10 21 57.6**	**-1.0**
12nm,0.3s								
LMR	**La Mourre**	**2.98**	**248**	*e*Pn	**Pn**		**10 21 28.0**	**-0.3**
SNR=1.0								
LMR				*e*Sn	**Sn**		**10 22 01.8**	**-1.3**
40nm,0.3s,SNR=1.0								
LMR	**La Mourre**	**2.98**	**248**	*e*Pn	**Pn**		**10 21 28.0**	**-0.3**
SNR=1.0								
LMR				*e*Sn	**Sn**		**10 22 01.8**	**-1.3**
20nm,0.3s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**3.17**	**279**	*e*P	**Pn**		**10 21 33.8**	**+3.0**
ORIF				*e*Sn	**Sn**		**10 22 08.8**	**+1.1**
18nm,0.5s								
ORIF	**Oris-en-Rattie**	**3.17**	**279**	*e*P	**Pn**		**10 21 33.8**	**+3.0**
ORIF				*e*Sn	**Sn**		**10 22 08.8**	**+1.1**

IDC 31 10:32:09.6±1.6, 198N×12463E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, Error ellipse: s-maj=179.1km s-min=21.9km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.78**	**157**	P		P	10 37 24.6	+0.4
2.4nm,0.3s,baz=334,slow=10,SNR=100								
ASAR	**Alice Springs**	**27.04**	**161**	P		P	10 37 54.5	+0.7
0.2nm,0.3s,baz=343,slow=7.5,SNR=14								
STKA	**Stephens Creek**	**37.32**	**156**	P		P	10 39 22.8	-0.9
1.8nm,0.9s,baz=313,slow=14,SNR=2.7								
MKAR	**Makanchi Array**	**57.83**	**327**	P		P	10 42 02.9	0.0
0.3nm,0.3s,baz=123,slow=8.1,SNR=12								

IDC 31 10:36:24.1±4.2, 715S×8063W, h60km±38km, mb3.2/4, mb1 3.5/6, mb1mx3.4/19, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=63.1km s-min=31.3km az=48.0, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.22**	**86**	P		Pn	10 36 59.2	+0.6
4.2nm,0.3s,baz=296,slow=6.2,SNR=68								
NNA	**Nana**	**6.09**	**143**	P		Pn	10 37 51.5	-0.1
1.5nm,0.3s,baz=333,slow=18,SNR=4.2								
NNA				S		Sn	10 38 50.1	-10
3.3nm,0.3s,baz=247,slow=18,SNR=3.1								
SIV	**San Ignacio**	**21.06**	**116**	P		P	10 41 03.0	-0.4
1.9nm,0.8s,baz=297,slow=12,SNR=8.5								
PDAR	**Pinedale Array**	**56.22**	**335**	P		P	10 45 59.2	+1.0
0.5nm,0.8s,baz=125,slow=9.3,SNR=4.7								
YKA	**Yellowknife Ar**	**74.18**	**344**	P		P	10 47 53.3	-0.7
0.3nm,0.8s,baz=136,slow=5.6,SNR=8.3								
TORD	**Torodi Ar. Bea**	**84.19**	**76**	P		P	10 48 50.6	+0.9
0.5nm,0.8s,baz=275,slow=4.5,SNR=3.0								

*ISCJB **31** 10:39:42.1±0.2, 1486S±004×7558W±006, h28km, mb4.9/70, MS4.5/30, Error ellipse: s-maj=9.5km s-min=4.2km az=148.5*
*IDC **31** 10:39:43.7±0.6, 1481S×7549W, h25km±3km, mb4.5/25, mb1 4.6/28, mb1mx4.5/30, mbtmp4.5/28, ML4.5/1, MS4.5/23, Ms1 4.5/23, ms1mx4.4/28, Error ellipse: s-maj=18.9km s-min=10.9km az=63.0*
*BJI **31** 10:39:43.0, 1515S×7585W, h32km, mB5.3, Ms5.2, Msz5.2*
*MOS **31** 10:39:43.5±1.1, 1472S×7547W, h33km, mb5.2/26, MS4.4/5, Error ellipse: s-maj=11.5km s-min=7.1km az=110.2*
*GCMT **31** 10:39:44.1±0.3, 1488S×7586W, h23km, MW5.2/41, Moment Tensor Solution. s31,c41; s41,c53; Duration: 1§0 Moment tensor: Scale 10¹⁶Nm; M_{rr}3.13±.25; $M_{\theta\theta}$0.73±.20; $M_{\phi\phi}$-3.87±.22; $M_{r\theta}$1.26±.30; $M_{\theta\phi}$1.57±.13; $M_{\phi r}$-6.85±.31; Best double couple: M_o7.91400×10¹⁶ NP1:φ331.00000°, δ15.00000°, λ73.00000°. NP2: φ169.00000°, δ76.00000°, λ94.00000°. Principal axes: T 7.3330, Plg59.0000°, Azm86.0000°; N 1.1540, Plg4.0000°, Azm348.0000°; P -8.4950, Plg31.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **31** 10:39:44.1±0.2, 1479S×7543W, mb5.1/41, MS4.5/3 Error ellipse: s-maj=8.1km s-min=3.8km az=56.0*
NEIC Felt [III] at Palpa and San Juan de Marcona; [II] at Ica.
*SZGRF **31** 10:39:53.2, 1341S×7411W, h33km, mb5.6, Central Peru*

ISC 31 10:39:44.4±0.2, 1483S±004×7547W±006, h30km, h30km±.6km: pP-P, n228, σ0§97/185, mb4.9/70, MS4.5/30, 5C-2D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NNA	**Nana**	**3.13**	**335**	Pn	**Pn**		**10 40 34.0**	**+2.2**
15µm,0.5s,SNR=15								
NNA	**Nana**	**3.13**	**335**	Pn	**Pn**		**10 40 27.1**	**-4.6**
70nm,0.3s,baz=166,slow=12,SNR=35								
NNA				Sn	**Sn**		**10 41 10.0**	**+1.8**
368nm,0.3s,baz=212,slow=10,SNR=5.8								
NNA				LR	LR		10 41 46.8	
comp=Z,5µm,18.1s,baz=182,slow=40								
NNA	**Nana**	**3.13**	**335**	*e*Pn	**Pn**		**10 40 30.5**	**-1.2**
NNA				Sn	**Sn**		**10 41 10.0**	**+1.8**
NNA				*e*Sn	**Sn**		**10 41 16.9**	**+8.8**
NNA				LR	LR		10 41 46.8	
ARE	**Arequipa**	**4.16**	**113**	*e*P	**Pn**		**10 40 47.0**	**+1.1**
ARE				*e*S	**Sn**		**10 41 41.0**	**+7.4**
ATAH	**Atahualpa**	**8.30**	**339**	Pn	**Pn**		**10 41 43.5**	**+0.6**
1.2nm,0.3s,baz=329,slow=4.7,SNR=4.3								
ATAH				Sn	**Sn**		**10 43 19.1**	**+3.5**
6.3nm,0.3s,baz=166,slow=15,SNR=1

ATAH LR LR 10 45 29.4
comp=Z,2µm,18.7s,baz=349,slow=42
LVC Limon Verde 9.92 142 Pn **Pn 10 42 04.5 -0.5**
33nm,0.3s,baz=310,slow=9.5,SNR=291
LVC Sn **Sn 10 43 49.7 -5.7**
baz=294,slow=20,SNR=1.2
LVC LR LR 10 46 28.0
comp=Z,3µm,18.3s,baz=315,slow=41
LVC Limon Verde 9.92 142 *e*Pn **Pn 10 42 05.4 +0.3**
LVC *e*Sn **Sn 10 43 53.4 -2.0**
SIV San Ignacio 13.93 97 Pn **Pn 10 42 57.9 -2.0**
1.1nm,0.3s,baz=279,slow=12,SNR=23
LCO Las Campanas 14.78 163 *e*Pn **Pn 10 43 11.2 -0.2**
52nm,1.0s
OTAV Otavalo 15.26 349 *e*P **Pn 10 43 24.1 +6.2**
67nm,1.1s
CFAA Coronel Fontan 17.96 160 P **Pn 10 43 52.0 +0.1**
0.1nm,0.3s,baz=335,slow=12,SNR=32
CFAA LR LR 10 49 42.0
comp=Z,78nm,19.6s,baz=342,slow=33
CPUP Villa Florida 20.45 127 P **P 10 44 20.1 +0.6**
12nm,0.9s,baz=288,slow=11,SNR=20
CPUP LR LR 10 53 55.6
comp=Z,852nm,18.1s,MS4.2,baz=285,slow=42
CPUP Villa Florida 20.45 127 *e*P **P 10 44 20.0 +0.4**
CPUP pmax pmax
comp=Z,58nm,0.9s
CPUP Villa Florida 20.45 127 *e*P **P 10 44 20.0 +0.4**
comp=Z,58nm,0.9s
SDV Santo Domingo 24.05 12 P **P 10 44 57.6 +0.5**
comp=Z,22nm,0.8s,mb4.7,baz=247,slow=4.4,SNR=24
SDV LR LR 10 55 21.2
comp=Z,2µm,20.1s,MS4.5,baz=186,slow=39
SDV Santo Domingo 24.05 12 *e*P **P 10 44 57.7 +0.5**
comp=Z,68nm,0.7s,mb5.2
BCIP Isla Barro Col 24.23 349 *e*P **P 10 44 57.6 -1.3**
TRQA Tornquist 26.03 155 *e*P **P 10 45 14.6 -0.5**
comp=Z,15nm,1.1s,mb4.4
PLCA Paso Flores 26.16 172 P **P 10 45 15.9 -0.2**
comp=Z,5.5nm,0.9s,mb4.1,baz=351,slow=9.7,SNR=11
PLCA Paso Flores 26.16 172 *e*P **P 10 45 15.4 -0.7**
PLCA pmax pmax
comp=Z,21nm,1.3s
PLCA Paso Flores 26.16 172 *e*P **P 10 45 15.4 -0.7**
comp=Z,21nm,1.3s,mb4.5
BDFB Brasilia 26.50 95 P **P 10 45 19.2 -0.3**
comp=Z,4.0nm,0.6s,mb4.2,baz=253,slow=20,SNR=12
BDFB LR LR 10 56 49.3
comp=Z,2µm,18.4s,MS4.7,baz=198,slow=39
PCRV Puerto La Cruz 27.07 24 LR LR 10 57 25.3
comp=Z,1µm,18.4s,MS4.6,baz=322,slow=39
TGUH Tegucigalpa,Un 30.99 337 *e*P **P 10 45 58.2 -1.2**
CELP Cerrillos 33.85 15 *e*P **P 10 46 24.4 -0.1**
TEIG Tepich 37.05 340 P **P 10 46 51.5 -0.4**
comp=Z,6.5nm,0.8s,mb4.5,baz=158,slow=19,SNR=4.9
CMIG Matias Romero 37.06 328 P **P 10 46 52.2 +0.2**
comp=Z,3.8nm,0.8s,mb4.3,baz=124,slow=5.9,SNR=7.3
CMIG LR LR 10 59 56.6
comp=Z,433nm,20.0s,MS4.2,baz=140,slow=33
USHA Ushuaia 40.29 174 P **P 10 47 18.9 +0.2**
comp=Z,10.0nm,0.8s,mb4.6,baz=320,slow=7.9,SNR=3.4
KVTX Kingsville 47.41 333 *e*P **P 10 48 16.8 +0.5**
comp=Z,56nm,0.7s,mb5.6
LRAL Lakeview Retre 48.86 347 *e*P **P 10 48 26.2 -1.1**
comp=Z,22nm,1.0s,mb5.1
LRAL *e*pP pP 10 48 35.2 -1.1
CPCT Cooper Cave 50.74 350 *e*P **P 10 48 39.5 -2.1**
SWET Sewanee 50.75 349 *e*P **P 10 48 40.6 -1.1**
JCT Junction City 50.78 333 *e*P **P 10 48 40.7 -1.3**
JCT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
JCT Junction City 50.78 333 *e*P **P 10 48 40.7 -1.3**
comp=Z,8.0nm,0.9s,mb4.7
TKL Tuckaleechee C 50.83 351 P **P 10 48 40.6 -1.7**
comp=Z,8.5nm,0.9s,mb4.7,baz=170,slow=9.0,SNR=5.4
TZTN Tazewell 51.66 352 *e*P **P 10 48 47.0 -1.5**
comp=Z,5.8nm,0.7s,mb4.6
TXAR Lajitas Array 51.67 328 P **P 10 48 48.4 -0.4**
comp=Z,5.0nm,0.7s,mb4.5,baz=148,slow=8.9,SNR=38
TXAR LR LR 11 08 51.9
comp=Z,325nm,18.1s,MS4.4,baz=100,slow=34
UALR University of 51.88 342 *e*P **P 10 48 49.3 -0.8**
comp=Z,17nm,1.1s,mb4.9
WVT Waverly 52.02 347 *e*P **P 10 48 48.8 -2.4**
WVT *e**PP pP 10 48 57.5 -2.7
WVT pmax pmax
comp=Z,15nm,1.1s,mb4.8
WVT Waverly 52.02 347 *e*P **P 10 48 48.8 -2.4**
comp=Z,15nm,1.1s,mb4.8
WVT *e*pP pP 10 48 57.5 -2.7
MIAR Mount Ida 52.04 341 *e*P **P 10 48 50.9 -0.5**
MIAR pmax pmax
comp=Z,88nm,2.1s,mb5.3
MIAR Mount Ida 52.04 341 *e*P **P 10 48 50.9 -0.5**
comp=Z,88nm,2.1s,mb5.3
PARMO Parma 52.96 346 *e*P **P 10 48 57.1 -1.1**
WCI Wyandotte Cave 53.75 349 *e*P **P 10 49 02.4 -1.5**
WCI *e**PP pP 10 49 10.4 -2.6
WCI pmax pmax
comp=Z,38nm,0.9s,mb5.3
WCI Wyandotte Cave 53.75 349 *e*P **P 10 49 02.4 -1.5**
comp=Z,38nm,0.9s,mb5.3
WCI *e*pP pP 10 49 10.4 -2.6
USIN University of 53.75 348 *e*P **P 10 49 02.7 -1.3**
comp=Z,35nm,0.8s,mb5.3
USIN *e*pP pP 10 49 11.6 -1.4
SIUC Southern Illin 53.84 346 *e*P **P 10 49 03.3 -1.3**
comp=Z,40nm,0.8s,mb5.4
WMOK Wichita Mounta 54.05 336 *e*P **P 10 49 05.7 -0.5**
WMOK pmax pmax
comp=Z,17nm,1.1s,mb4.9
WMOK Wichita Mounta 54.05 336 *e*P **P 10 49 05.7 -0.5**
comp=Z,17nm,1.1s,mb4.9
GDL2 Guadalupe Moun 54.34 330 *e*P **P 10 49 08.8 +0.4**
FVM French Village 54.38 345 *e*P **P 10 49 07.1 -1.5**
FVM pmax pmax
comp=Z,16nm,0.8s,mb5.0
FVM French Village 54.38 345 *e*P **P 10 49 07.1 -1.5**
comp=Z,16nm,0.8s,mb5.0
OLIL Olney 54.58 348 *e*P **P 10 49 08.4 -1.6**
comp=Z,48nm,0.8s,mb5.6
BLO Bloomington 54.71 349 *e*P **P 10 49 09.5 -1.4**
BLO pmax pmax
comp=Z,18nm,0.8s,mb5.2
BLO Bloomington 54.71 349 *e*P **P 10 49 09.5 -1.4**
comp=Z,18nm,0.8s,mb5.2
ANMO Albuquerque 57.59 330 *i* P **P 10 49 31.8 +0.2**
ANMO pmax pmax
comp=Z,12nm,1.1s
ANMO Albuquerque 57.59 330 *e*P **P 10 49 31.6 0.0**
comp=Z,8.7nm,0.8s,mb4.8
TUC Tucson 57.80 325 *e*P **P 10 49 32.5 -0.6**
TUC pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TUC Tucson 57.80 325 *e*P **P 10 49 32.5 -0.6**
comp=Z,4.3nm,0.8s,mb4.5
CBKS Cedar Bluff 58.00 338 *e*P **P 10 49 34.2 -0.2**
CBKS pmax pmax
comp=Z,21nm,0.9s,mb5.2
CBKS Cedar Bluff 58.00 338 *e*P **P 10 49 34.2 -0.2**
comp=Z,21nm,0.9s,mb5.2
MIV Mineville/With 58.65 2 *e*P **P 10 49 40.0 +1.2**
SDCO Great Sand Dun 59.43 333 *e*P **P 10 49 44.3 -0.1**
comp=Z,11nm,0.7s,mb5.0
WUAZ Wupatki 60.53 327 *e*P **P 10 49 54.1 +2.1**
OGNE Ogallala 60.71 337 *e*P **P 10 49 53.1 0.0**
comp=Z,30nm,1.0s,mb5.4
ISCO Idaho Springs 61.18 334 *e*P **P 10 49 56.2 -0.1**
PFO Pinyon Flat Ob 62.03 322 *e*P **P 10 50 04.4 +2.3**
PFO pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
PFO Pinyon Flat Ob 62.03 322 *e*P **P 10 50 04.4 +2.2**
comp=Z,6.1nm,0.7s,mb4.8
SRU San Rafael 62.87 330 *e*P **P 10 50 08.1 +0.5**
SRU pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
SRU San Rafael 62.87 330 *e*P **P 10 50 08.1 +0.4**
comp=Z,6.7nm,1.1s,mb4.7
MSU Marysvale 63.23 328 *e*P **P 10 50 16.6 +6.6**
SHPR Sheep Range 63.33 325 *e*P **P 10 50 11.6 +0.8**
GSC Goldstone 63.41 323 *e*P **P 10 50 14.0 +2.6**
RSSD Black Hills 64.20 338 *e*P **P 10 50 16.4 0.0**
RSSD pmax pmax
comp=Z,14nm,1.3s,mb4.8
RSSD Black Hills 64.20 338 *e*P **P 10 50 16.4 0.0**
comp=Z,14nm,1.3s,mb4.8

DAU Daniels Canyon 64.23 330 *e*P **P 10 50 18.2 +1.6**
TPNV Topopah Spring 64.25 324 *e*P **P 10 50 17.5 +0.6**
TPNV *e**PP pP 10 50 25.8 -0.3
JLU Jordanelle 64.47 330 *e*P **P 10 50 19.1 +0.9**
DUG Dugway 64.83 329 *e*P **P 10 50 21.1 +0.6**
DUG pmax pmax
comp=Z,12nm,0.7s,mb5.0
DUG Dugway 64.83 329 *e*P **P 10 50 21.1 +0.6**
comp=Z,12nm,0.7s,mb5.0
BW06 Boulder Array 65.31 333 *e*P **P 10 50 23.3 -0.3**
PDAR Pinedale Array 65.31 333 P **P 10 50 23.1 -0.5**
comp=Z,2.0nm,0.9s,mb4.1,baz=133,slow=8.3,SNR=12
PDAR LR LR 11 18 28.7
comp=Z,199nm,21.4s,MS4.3,baz=149,slow=36
AGMN Agassiz Refuge 65.42 345 *e*P **P 10 50 23.7 -0.5**
TPH Tonopah 65.60 325 *e*P **P 10 50 28.0 +2.4**
HVU Hansel Valley 66.02 330 *e*P **P 10 50 28.3 +0.1**
LOHW Long Hollow 66.45 333 *e*P **P 10 50 31.1 +0.2**
RRI2 Red Ridge 66.56 332 *e*P **P 10 50 32.2 +0.6**
comp=Z,13nm,0.8s,mb5.0
RLMT Red Lodge 67.09 335 *e*P **P 10 50 35.2 +0.2**
ULM Lac du Bonnet 67.24 346 P **P 10 50 34.6 -1.2**
comp=Z,5.7nm,0.7s,mb4.7,baz=148,slow=5.0,SNR=6.8
ULM LR LR 11 24 53.0
comp=Z,227nm,18.6s,MS4.4,baz=153,slow=40
ULM Lac du Bonnet 67.24 346 *e*P **P 10 50 34.6 -1.2**
comp=Z,12nm,0.8s,mb5.0
VNA3 Neumayer Olymp 68.35 161 *e*P **P 10 50 42.6 0.0**
VNA3 *e* pP 10 50 52.2 +0.3
VNA3 *e* 10 50 56.0
BOZ Bozeman (W) 68.51 334 *e*P **P 10 50 43.7 -0.2**
BOZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
BOZ Bozeman (W) 68.51 334 *e*P **P 10 50 43.7 -0.2**
comp=Z,6.3nm,1.1s,mb4.5
VNA1 Neumayer--Stat 68.61 161 *e*P **P 10 50 45.2 +1.0**
VNA1 *e* pP 10 50 54.0 +0.5
VNA1 *e* 10 50 57.2
DLMT Dillon 68.70 333 *e*P **P 10 50 45.6 +0.5**
VNA2 Neumayer--Watz 68.96 161 *e*P **P 10 50 46.7 +0.3**
VNA2 *e* pP 10 50 55.8 +0.1
VNA2 *e* 10 50 58.6
EGMT Eagleton 69.64 336 *e*P **P 10 50 51.0 +0.1**
SCHQ Schefferville 69.78 5 P **P 10 50 51.2 -0.3**
comp=Z,4.8nm,0.7s,mb4.6,baz=186,slow=3.8,SNR=13
SCHQ LR LR 11 23 10.3
comp=Z,242nm,18.3s,MS4.5,baz=182,slow=37
SCHQ Schefferville 69.78 5 P **P 10 50 51.2 -0.3**
SCHQ LR LR 11 23 10.3
TBI Tubuai 69.80 250 *e*S S 11 00 02.8 +2.5
comp=Z,144nm,23.2s
TBI Tubuai 69.80 250 *e*LR LR 11 12 13.6
comp=Z,560nm,26.0s
SNAA Sanae 70.57 161 *e*P **P 10 50 56.3 0.0**
SNAA *e* pP 10 51 05.3 -0.3
SNAA *e* 10 51 08.3
SNAA Sanae 70.57 161 *c i*P **P 10 50 56.2 -0.1**
SNAA pmax pmax
comp=Z,30nm,0.9s
SNAA Sanae 70.57 161 *e*P **P 10 50 56.5 +0.2**
comp=Z,47nm,1.1s,mb5.3
PPT Papeete 70.80 256 *e*S S 11 00 14.0 +1.9
comp=Z,137nm,23.8s
PPT Papeete 70.80 256 *e*LR LR 11 12 32.3
comp=Z,391nm,26.8s
PPT Papeete 70.80 256 LR LR 11 13 01.7
comp=Z,191nm,20.6s,MS4.3,baz=94,slow=28
YBH Yreka Blue Hor 71.17 325 P **P 10 51 01.0 +0.6**
comp=Z,4.5nm,0.9s,mb4.4,baz=54,slow=14,SNR=6.8
WALA Waterton Lakes 72.14 335 *e*P **P 10 51 08.8 +2.7**
LIC Lamto 72.87 79 *e*P **P 10 51 11.5 +0.3**
comp=Z,58nm,1.7s,mb5.2
TIC Toumodi 73.01 78 *e*P **P 10 51 11.7 -0.3**
comp=Z,98nm,1.3s,mb5.6
OD2 Odessa Site #2 73.02 331 *e*P **P 10 51 13.9 +2.6**
DBIC Dimbokro 73.17 78 P **P 10 51 12.9 0.0**
comp=Z,4.5nm,0.6s,mb4.6,baz=242,slow=7.0,SNR=15
DBIC LR LR 11 22 08.8
comp=Z,908nm,18.1s,MS5.1,baz=223,slow=35
DBIC Dimbokro 73.17 78 *e*P **P 10 51 12.4 -0.6**
DBIC pmax pmax
comp=Z,7.0nm,0.8s
DBIC Dimbokro 73.17 78 *e*P **P 10 51 12.4 -0.6**
comp=Z,6.8nm,0.8s,mb4.6
KIC Kosan Boka 73.19 79 *e*P **P 10 51 12.9 -0.2**
comp=Z,76nm,0.9s,mb5.6
FCC Fort Churchill 74.90 350 *e*P **P 10 51 21.4 -0.7**
EDM Edmonton 75.19 338 *e*P **P 10 51 22.9 -0.9**
FRB Frobisher Bay 76.52 3 P **P 10 51 41.5 -0.9**
comp=Z,4.8nm,0.8s,mb4.5,baz=205,slow=7.8,SNR=10
FRB pP pP 10 51 50.5 -1.2
comp=Z,3.6nm,0.7s,baz=230,slow=6.4,SNR=5.4
RAR Rarotonga 79.57 251 LR LR 11 19 38.7
comp=Z,274nm,18.3s,MS4.6,baz=116,slow=30
TOA0 Torodi Ar. Sit 81.27 74 *e*P **P 10 51 58.7 +0.3**
TORD Torodi Ar. Bea 81.27 74 P **P 10 51 58.9 +0.5**
comp=Z,31nm,0.8s,mb5.3,baz=258,slow=5.1,SNR=138
TORD LR LR 11 26 07.6
comp=Z,601nm,20.7s,MS4.9,baz=245,slow=34
MORF Marmelete 81.37 48 *e*P **P 10 52 00.4 +1.9**
comp=Z,36nm,1.4s,mb5.1
PTEO Sao Teotonio 81.42 48 *e*P **P 10 51 59.3 +0.6**
comp=Z,51nm,1.9s,mb5.1
PBEJ Beja 82.25 47 *e*P **P 10 52 04.9 +1.9**
comp=Z,31nm,1.7s,mb5.0
VNDA Vanda 82.26 191 P **P 10 52 03.2 +0.7**
comp=Z,2.0nm,0.8s,mb4.1,baz=65,slow=2.8,SNR=3.8
VNDA LR LR 11 21 36.6
comp=Z,280nm,18.6s,MS4.7,baz=127,slow=30
EVO Evora 82.36 47 *e*P **P 10 52 04.8 +1.2**
comp=Z,40nm,1.1s,mb5.0
EVO *e*MLR MLR
comp=Z,428nm,19.8s,MS4.5
EVO Evora 82.36 47 *e*P **P 10 52 04.9 +1.3**
comp=Z,24nm,1.9s,mb4.8
MDT Midelt 82.54 53 P **P 10 52 06.2 +1.5**
comp=Z,2.9nm,0.8s,mb4.4,baz=227,slow=5.8,SNR=7.9
MDT LR LR 11 24 28.9
comp=Z,134nm,19.4s,MS4.3,baz=263,slow=32
PESTR Estremoz 82.80 47 *e*P **P 10 52 07.1 +1.2**
comp=Z,41nm,1.9s,mb5.1
PBAR Barrancos 82.90 48 *e*P **P 10 52 08.0 +1.6**
comp=Z,21nm,2.1s,mb4.8
YKA Yellowknife Ar 82.94 343 P **P 10 52 05.1 -0.9**
comp=Z,3.3nm,0.7s,mb4.5,baz=142,slow=6.3,SNR=77
YKA pP pP 10 52 13.4 -2.1
comp=Z,3.7nm,0.7s,baz=144,slow=5.4,SNR=15
YKA LR LR 11 33 36.7
comp=Z,17nm,20.4s,MS3.4,baz=210,slow=39
YKA Yellowknife Ar 82.94 343 P **P 10 52 05.1 -1.0**
YKA *PP pP 10 52 13.4 -2.1
YKA Yellowknife Ar 82.94 343 P **P 10 52 05.1 -0.9**
YKA pP pP 10 52 13.4 -2.1
YKA LR LR 11 33 36.7
PMRV Marv??o 83.18 46 *e*P **P 10 52 08.6 +0.7**
PCBR Castelo Branco 83.30 46 *e*P **P 10 52 09.4 +0.9**
comp=Z,24nm,1.6s,mb5.0
PVIS Viseu 83.39 45 *e*P **P 10 52 10.3 +1.4**
comp=Z,31nm,2.0s,mb5.0
MTE Manteigas 83.49 45 *e*P **P 10 52 10.6 +1.1**
comp=Z,38nm,1.2s,mb5.3
MVO Moncorvo 84.17 45 *e*P **P 10 52 13.8 +0.9**
comp=Z,20nm,2.0s,mb4.9
SYO Syowa Base 84.85 161⇓ *e*P **P 10 52 14.2 -1.7**
DLBC Dease Lake 85.49 335 P **P 10 52 19.8 +0.7**
comp=Z,8.6nm,0.8s,mb4.9,baz=131,slow=6.4,SNR=13
DLBC pP pP 10 52 28.0 -0.6
comp=Z,5.8nm,0.7s,baz=172,slow=4.1,SNR=5.1
ESDC Sonseca Array 85.70 47 P **P 10 52 21.3 +0.7**
comp=Z,1.2nm,0.7s,mb4.3,baz=252,slow=5.4,SNR=9.9
ESDC LR LR 11 28 34.3
comp=Z,207nm,18.6s,MS4.5,baz=255,slow=34
TAM Tamanrasset 87.61 66 *e*P **P 10 52 31.0 +0.6**
TAM *e**PP pP 10 52 39.9 0.0
TAM pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
TAM Tamanrasset 87.61 66 *e*P **P 10 52 31.0 +0.7**
comp=Z,5.3nm,0.8s,mb4.8
TAM *e*pP pP 10 52 39.9 0.0
SJPF Ste Jean 88.91 45 *e*P **P 10 52 36.7 +0.7**
ETSF Etsaut 89.29 45 *e*P **P 10 52 37.8 0.0**
SGMF Saint Gilles 89.96 40 *e*P **P 10 52 40.5 -0.3**
RES Resolute Bay 90.17 355 P **P 10 52 41.3 0.0**
comp=Z,5.3nm,0.9s,mb4.9,baz=184,slow=8.4,SNR=19
RES pP pP 10 52 49.5 -1.2
comp=Z,6.2nm,0.8s,baz=173,slow=10,SNR=10

RES Resolute Bay 90.17 355 *e*P **P 10 52 40.7 -0.5**
RES *e**PP pP 10 52 49.5 -1.3
RES pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
RES Resolute Bay 90.17 355 *e*P **P 10 52 40.7 -0.5**
comp=Z,10nm,1.0s,mb5.1
RES *e*pP pP 10 52 49.5 -1.3
MFF Saint Martin d 90.88 42 *e*P **P 10 52 45.1 -0.1**
comp=Z,13nm,0.8s,mb5.0
MFF Saint Martin d 90.88 42 *e*P **P 10 52 45.1 -0.1**
MFF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
MFF Saint Martin d 90.88 42 *e*P **P 10 52 45.1 -0.1**
comp=Z,6.3nm,0.8s,mb5.0
LFF La Frestale 90.88 44 *e*P **P 10 52 45.2 0.0**
GORR Gorron 91.06 40 *e*P **P 10 52 45.7 -0.3**
FLN La Foliniere 91.43 40 *e*P **P 10 52 47.6 -0.1**
comp=Z,16nm,0.8s,mb5.1
FLN *e*MLR MLR
comp=Z,160nm,20.0s,MS4.2
FLN La Foliniere 91.43 40 *e*P **P 10 52 47.6 -0.1**
FLN pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,160nm,20.0s,MS4.5
FLN La Foliniere 91.43 40 *e*P **P 10 52 47.6 -0.1**
comp=Z,7.8nm,0.8s,mb5.1
FLN LR LR
comp=Z,160nm,20.0s,MS4.5
LDF La Druitiere 91.59 40 *e*P **P 10 52 48.3 -0.1**
comp=Z,23nm,0.9s,mb5.2
LDF La Druitiere 91.59 40 *e*P **P 10 52 48.3 -0.1**
LDF pmax pmax
comp=Z,12nm,0.9s,mb5.2
LDF La Druitiere 91.59 40 *e*P **P 10 52 48.3 -0.1**
comp=Z,12nm,0.9s,mb5.2
BOSA Boshof 92.12 120 P **P 10 52 51.1 -0.3**
comp=Z,2.5nm,1.0s,mb4.5,baz=270,slow=4.0,SNR=2.6
BOSA LR LR 11 32 04.2
comp=Z,324nm,18.6s,MS4.8,baz=333,slow=34
TCF Toulx Ste Croi 92.30 43 *e*P **P 10 52 51.9 +0.1**
MAW Mawson 92.40 165 P **P 10 52 51.6 -0.3**
comp=Z,9.7nm,1.1s,mb5.0,baz=258,slow=7.9,SNR=3.8
MAW LR LR 11 31 13.7
comp=Z,302nm,20.0s,MS4.7,baz=234,slow=33
AFI Afiamalu 92.43 255 LR LR 11 24 41.4
comp=Z,192nm,18.4s,MS4.6,baz=118,slow=29
BGF Bois d'Agland 92.81 43 *e*P **P 10 52 54.0 -0.1**
AVF Avril sur Loir 93.21 42 *e*P **P 10 52 55.4 -0.6**
SSF Saint Saulge 93.39 42 *e*P **P 10 52 56.1 -0.7**
SMF Signal de Mont 93.49 43 *e*P **P 10 52 57.0 -0.2**
LOR Lormes 93.69 42 *e*P **P 10 52 57.9 -0.2**
LOR *e*MLR MLR
comp=Z,142nm,20.0s,MS4.1
LOR Lormes 93.69 42 *e*P **P 10 52 57.9 -0.2**
LOR LR LR
comp=Z,140nm,20.0s,MS4.4
URZ Urewera 94.07 229 LR LR 11 25 45.0
comp=Z,340nm,19.9s,MS4.8,baz=131,slow=29
BAIF Baives 94.75 40 *e*P **P 10 53 02.8 -0.2**
MEZF Maizieres J'vi 94.82 41 *e*P **P 10 53 03.2 -0.1**
GIVF Givet 95.14 40 *e*P **P 10 53 04.7 0.0**
HAU Haudompre 95.51 42 *e*P **P 10 53 06.4 -0.1**
HAU *e*MLR MLR
comp=Z,179nm,18.5s,MS4.3
HAU Haudompre 95.51 42 *e*P **P 10 53 06.4 -0.1**
HAU LR LR
comp=Z,180nm,18.5s,MS4.6
COLA College 96.03 336 *i* P **P 10 53 06.6 -1.9**
CDF Champ du Feu 96.22 42 *e*P **P 10 53 09.6 -0.1**
comp=Z,22nm,1.1s,mb5.2
CDF Champ du Feu 96.22 42 *e*P **P 10 53 09.6 -0.1**
CDF pmax pmax
comp=Z,11nm,1.1s,mb5.2
CDF Champ du Feu 96.22 42 *e*P **P 10 53 09.6 -0.1**
comp=Z,11nm,1.1s,mb5.2
DAVOS Davos 97.48 44 P **P 10 53 15.4 0.0**
DAVOX Davos/Dischmat 97.52 44 P **P 10 53 15.4 -0.3**
comp=Z,3.4nm,0.9s,mb4.9,baz=269,slow=6.3,SNR=5.7
GRA1 Grafenberg Arr 99.05 41 *e*P **P 10 53 22.8 +0.4**
comp=Z,35nm,2.3s,mb5.5
GRF Grafenberg Arr 99.05 41 *e*P **P 10 53 22.8 +0.4**
GRF pmax pmax
comp=Z,35nm,2.3s,mb5.5
GRF Grafenberg Arr 99.05 41 *e*P **P 10 53 22.8 +0.4**
GRF pmax pmax
comp=Z,35nm,2.3s,mb5.5
GRF Grafenberg Arr 99.05 41 *e*P **P 10 53 22.8 +0.4**
comp=Z,35nm,2.3s,mb5.5
GERES GERESS Array B 100.47 42 P Pdif 10 53 29.5 +0.8
comp=Z,1.5nm,0.8s,baz=250,slow=2.7,SNR=12
BILL Bilibino 114.08 339⇑ *i*PKIKP PKiKP 10 58 30.9 +11
BILL *e* 10 59 15.8
BILL pmax pmax
comp=Z,5.0nm,1.5s
OBN Obninsk 114.63 36⇓ *i*PKIKP PKiKP 10 58 19.4 -2.2
OBN *e* 10 59 19.0
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN MLR MLR
comp=Z,100nm,21.0s,MS4.4
KIV Kislovodsk 120.37 48⇑ *i*PKIKP PKPdf 10 58 31.9 -1.1
KIV *e* 10 59 56.4
KIV pmax pmax
comp=Z,3.0nm,0.8s
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.5
TIXI Tiksi 121.36 351 *i* PKIKP PKPdf 10 58 33.0 -1.1
STKA Stephens Creek 121.52 217 PKP PKPdf 10 58 35.1 -0.6
comp=Z,1.1nm,0.6s,baz=130,slow=3.2,SNR=4.7
STKA pPKP pPKPdf 10 58 44.1 -1.4
comp=Z,1.2nm,0.5s,baz=67,slow=4.3,SNR=2.3
CTA Charters Tower 126.27 231 PKP PKPdf 10 58 44.4 -0.7
comp=Z,2.4nm,0.9s,baz=105,slow=8.4,SNR=3.6
AKTK Aktyubinsk 128.40 36 PKP PKPdf 10 58 48.5 +0.3
AKTO Aktyubinsk 128.40 36 PKP PKPdf 10 58 48.5 +0.3
comp=Z,3.0nm,0.8s,baz=336,slow=0.4,SNR=14
YAK Yakutsk 129.57 345 *i* PKIKP PKPdf 10 58 49.7 -0.3
ASAR Alice Springs 132.16 217 PKP PKPdf 10 58 55.4 -0.8
comp=Z,1.3nm,0.5s,baz=120,slow=1.6,SNR=26
ASAR pPKP pPKPdf 10 59 04.2 -1.9
comp=Z,2.0nm,0.5s,baz=115,slow=1.5,SNR=7.0
ASAR Alice Springs 132.16 217 PKP PKPdf 10 58 55.4 -0.8
ASAR pPKP pPKPdf 10 59 04.2 -1.9
BVAR Borovoye Array 133.33 28 PKP PKPdf 10 58 58.3 +0.8
comp=Z,1.1nm,0.7s,baz=256,slow=6.0,SNR=7.0
WRA Warramunga Arr 134.68 221 PKP PKPdf 10 59 00.4 -0.6
comp=Z,2.7nm,0.7s,baz=128,slow=1.9,SNR=24
WRA Warramunga Arr 134.68 221 PKP PKPdf 10 59 00.4 -0.6
WRAB Tennant Creek 134.68 221 *i* PKIKP PKPdf 10 59 02.2 +1.2
NVS Novosibirsk 136.78 18 *e*PKHKP 10 58 48.0
ZALV Zalesovo Beam 138.02 17 PKhKP 10 59 02.9
comp=Z,9.6nm,0.9s,baz=253,slow=1.5,SNR=19
ZALV PKP PKPdf 10 59 06.7 +0.6
comp=Z,10nm,0.8s,baz=304,slow=2.7,SNR=29
ZALV Zalesovo Beam 138.02 17 PKP 10 59 02.9
ZALV PKP PKPdf 10 59 06.7 +0.6
KURK Kurchatov 138.54 25 PKhKP 10 59 00.5
comp=Z,0.7nm,0.8s,baz=341,slow=1.7,SNR=3.0
KURK PKP PKPdf 10 59 07.7 +0.5
comp=Z,3.7nm,0.8s,baz=314,slow=2.4,SNR=17
KURK Kurchatov 138.54 25 PKP PKPdf 10 59 07.7 +0.5
AAK Ala-Archa 142.14 37 *i* PKIKP PKPdf 10 59 11.2 -2.8
MJAR Matsushiro Arr 143.03 312 PKhKP 10 59 09.0
comp=Z,1.5nm,0.6s,baz=90,slow=2.8,SNR=6.2
MKAR Makanchi Array 143.12 26 PKhKP 10 59 11.6
comp=Z,1.2nm,0.6s,baz=348,slow=4.4,SNR=12
MKAR Makanchi Array 143.12 26 PKP 10 59 11.6
MDJ Mudanjiang 143.49 329 PKP PKPdf 10 59 16.0 -0.3
ZAK Zakamensk 144.53 1⇑ *i*PKIKP PKPdf 10 59 16.8 -1.1
ZAK pmax pmax
comp=Z,22nm,1.1s
CN2 Changchun 146.06 332 *e*PKP PKiKP 10 59 24.8 -0.2
ULN Ulaanbaatar 147.00 357⇑ *i*PKP2 PKPdf 10 59 22.7 +0.5
SONM Songino Array 147.06 358 PKP PKPdf 10 59 22.2 -0.1
comp=Z,11nm,0.8s,baz=332,slow=1.5,SNR=55
SONM PKPbc PKPbc 10 59 24.8 +0.4
comp=Z,11nm,0.8s,baz=333,slow=2.2,SNR=57
WMQ Urumqi 147.73 23 *e*PKP PKPdf 10 59 22.3 -1.3
WMQ LR LR
comp=N,64nm,34.0s,MS4.3
WMQ LR LR
comp=E,57nm,30.0s,MS4.3
WMQ LR LR
comp=Z,76nm,34.0s,MS4.2
THN Thein Dam 148.47 51 *e*P PKPbc 10 59 28.0 -0.7

KSRS	**Korea Array**	**149.37**	**322**	PKP	PKPdf	10 59 27.3	+0.8		
	comp=Z,3.4nm,0.9s,baz=30,slow=2.0,SNR=4.7								
KSRS				PKPbc	PKPbc	10 59 30.7	-0.1		
	comp=Z,3.4nm,0.7s,baz=6.1,slow=1.4,SNR=7.5								
BJI	**Beijing**	**152.90**	**340**	PKP	PKPdf	10 59 31.5	-0.3		
GTA	**Gaotai**	**155.17**	**9**	PKP	PKPdf	10 59 36.0	+1.0		
GTA				APKP		10 59 45.8			
GTA				XPKP		10 59 50.3			
GTA				SKS	SKSdf	11 06 36.8	-2.8		
GTA				PP	PP				
	comp=Z,198nm,7.5s								
GTA				LR	LR				
	comp=N,193nm,20.1s,MS5.1								
GTA				LR	LR				
	comp=E,143nm,15.9s,MS5.1								
GTA				LR	LR				
	comp=Z,188nm,16.8s,MS5.0								
NJ2	**Nanjing**	**158.44**	**325**	*e*PKP	PKPdf	10 59 37.5	-1.9		
LZH	**Lanzhou**	**158.83**	**2**	*e*PKP	PKPdf	10 59 38.5	-1.3		
LZH				APKP		10 59 49.3			
LZH				XPKP		10 59 52.5			
LZH				PKP2	PKPab	11 00 16.8	+1.3		
LZH				*e*PP	PP	11 03 57.5	+2.7		
LZH				SKKS	SKKSac	11 10 41.3	-1.7		
LZH				PP	PP				
	comp=Z,123nm,8.7s								
LZH				LR	LR				
	comp=N,135nm,18.2s								
LZH				LR	LR				
	comp=Z,213nm,20.3s,MS5.0								
XAN	**Xi'an**	**160.47**	**349**	PKP	PKPdf	10 59 39.3	-2.4		
XAN				APKP		10 59 50.0			
XAN				PP	PP	11 04 05.8	+2.0		
XAN				SKS	SKSdf	11 06 39.3	-5.8		
XAN				SKKS	SKKSac	11 10 48.8	-2.9		
XAN				LR	LR				
	comp=N,57nm,21.6s								
XAN				LR	LR				
	comp=E,48nm,22.4s								
XAN				LR	LR				
	comp=Z,97nm,21.0s								
CD2	**Chengdu**	**163.98**	**2**	PKP	PKPdf	10 59 43.3	-2.0		
CD2				APKP		10 59 54.0			
CD2				XPKP		10 59 57.5			
CD2				PKP2	PKPab	11 00 38.0	-0.1		
CD2				PKS		11 03 15.0			
CD2				PP	PP	11 04 24.8	+2.4		
CD2				SKS	SKSdf	11 06 42.5	-5.5		
CD2				SKKS	SKKSac	11 11 07.0	-2.7		
CD2				PP	PP				
	comp=Z,220nm,6.4s								
CD2				LR	LR				
	comp=E,400nm,5.9s								
CD2				LR	LR				
	comp=Z,420nm,5.5s								
GYA	**Guiyang**	**168.26**	**351**	PKP	PKPdf	10 59 46.3	-2.6		
GYA				XPKP		11 00 01.3			
GYA				PKP2	PKPab	11 00 57.0	-0.1		
GYA				PKS		11 03 19.0			
GYA				PP	PP	11 04 46.8	+2.2		
GYA				SKS	SKSdf	11 06 47.3	-3.5		
GYA				SKKS	SKKSac	11 11 31.3	0.0		
GYA				PP	PP				
	comp=Z,130nm,8.7s								
GYA				LR	LR				
	comp=N,190nm,24.8s								
GYA				LR	LR				
	comp=E,120nm,23.6s								
GYA				LR	LR				
	comp=Z,140nm,25.5s								
CMAR	**Chiang Mai Arr**	**173.54**	**55**	PKP	PKPdf	10 59 51.0	-0.9		
	comp=Z,0.3nm,0.3s,baz=321,slow=1.6,SNR=5.4								

*ISK **31** 10:40:07.5, 3835N×2585E, h5km, ML4.1*
*IDC **31** 10:40:08.6±0.9, 3827N×2607E, h0km, mb3.6/11, mb1 3.8/14, mb1mx3.7/25, mbtmp3.7/14, ML4.2/4, MS3.0/5, Ms1 3.0/5, ms1mx2.7/35, Error ellipse: s-maj=17.6km s-min=16.5km az=172.0*
*DDA **31** 10:40:08.2, 3837N×2587E, h28km±1km, Md3.6*
*ISCJB **31** 10:40:09.1±0.5, 3836N±002×2589E±002, h9km±3km, mb3.6/13, Error ellipse: s-maj=2.7km s-min=2.4km az=44.4*
*ATH **31** 10:40:09.9, 3839N×2602E, h38km±1km, MD3.9/16, ML3.7*
*CSEM **31** 10:40:09.3±0.0, 3838N×2591E, h10km, ML4.2/6, Error ellipse: s-maj=1.3km s-min=0.9km az=30.0*
*NEIC **31** 10:40:10.0, 3835N×2596E, h10km, ML3.6(ATH), After ATH.*
*THE **31** 10:40:10.3, 3834N×2597E, h11km±1km, ML4.2/6, Error ellipse: s-maj=1.5km s-min=0.6km az=82.0*
*MOS **31** 10:40:11.3±1.3, 3844N×2592E, h32km, mb4.0/8, Error ellipse: s-maj=15.3km s-min=5.9km az=90.1*

ISC 31 10:40:09.4±0.5, 3833N±001×2590E±002, h5km±3km, n175, σ0°96/196, mb3.6/13, 10C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.14**	**67**	P	**Pg**	**10 40 12.9**	**+0.7**
CHOS				S	**Sg**	**10 40 14.8**	**+0.7**
URLA	**Izmir**	**0.55**	**87**	*i* P	**Pg**	**10 40 20.1**	**+0.1**
URLA				*i* S	**Sg**	**10 40 28.9**	**+1.7**
SIGR	**SIGRI**	**0.88**	**358**	P	**Pg**	**10 40 26.3**	**0.0**
SIGR				S	**Sg**	**10 40 38.8**	**+1.1**
BLCB	**Balcova**	**0.90**	**86**	P	**Pg**	**10 40 26.5**	**-0.3**
BLCB				S	**Sg**	**10 40 38.5**	**0.0**
BLCB	**Balcova**	**0.90**	**86**	*e*Pg	**Pg**	**10 40 26.4**	**-0.4**
PRK	**Paraskevi**	**0.96**	**18**	P	**Pg**	**10 40 27.0**	**-0.2**
PRK				S	**Sg**	**10 40 40.7**	**+0.4**
PRK	**Paraskevi**	**0.96**	**18**	*e*Pn	**Pn**	**10 40 27.0**	**-2.6**
PRK				S	**Sg**	**10 40 40.7**	**+0.4**
PRK	**Paraskevi**	**0.96**	**18**	P	**Pg**	**10 40 27.7**	**-0.1**
SMG	**Samos**	**0.97**	**130**	*e*PN	**Pn**	**10 40 28.0**	**-1.7**
SMG				*e*SN	**Sn**	**10 40 41.0**	**-2.9**
IZM	**Izmir**	**1.08**	**86**	*e*PN	**Pn**	**10 40 29.7**	**-1.5**
IZM				*e*SN	**Sn**	**10 40 46.0**	**-0.5**
AYVA	**Ayvalik**	**1.16**	**32**	*i* P	**Pg**	**10 40 30.1**	**-1.5**
AYVA				*i* S	**Sg**	**10 40 44.8**	**-1.8**
GCAM	**G?zelcaml?**	**1.23**	**120**	*i* P	**Pg**	**10 40 31.8**	**-1.2**
GCAM				*i* S	**Sg**	**10 40 48.9**	**-0.2**
GCAM	**G?zelcaml?**	**1.23**	**120**	*i* P	**Pg**	**10 40 31.8**	**-1.2**
GCAM				*i* S	**Sg**	**10 40 48.8**	**-0.2**
APE	**Apeiranthos**	**1.29**	**193**	P	**Pn**	**10 40 33.2**	**-1.0**
APE				S	**Sg**	**10 40 51.1**	**+0.1**
APE	**Apeiranthos**	**1.29**	**193**	P	**Pn**	**10 40 33.4**	**-0.8**
APE	**Apeiranthos**	**1.29**	**193**	*e*Pb	**Pb**	**10 40 34.0**	**-0.3**
APE				S	**Sg**	**10 40 51.1**	**+0.1**
APE				*e*Sn	**Sn**	**10 40 52.0**	**+0.1**
EZN	**Ezine**	**1.53**	**13**	*e*PN	**Pn**	**10 40 37.1**	**-0.3**
AKS	**Akhisar**	**1.60**	**69**	*e*PN	**Pn**	**10 40 38.0**	**-0.4**
AKHS	**Akhisar**	**1.60**	**69**	*i* P	**Pn**	**10 40 36.6**	**-1.8**
AKHS				*i* S	**Sn**	**10 41 00.2**	**+0.8**
PTL	**Penteli**	**1.62**	**261**	*e*PN	**Pn**	**10 40 39.0**	**+0.3**
LIA	**Limnos Island**	**1.66**	**341**	P	**Pn**	**10 40 38.2**	**-1.0**
LIA	**Limnos Island**	**1.66**	**341**	P	**Pn**	**10 40 38.4**	**-0.8**
AYDN	**Tasoluk**	**1.71**	**113**	*i* P	**Pn**	**10 40 40.0**	**+0.1**
AYDN				*i* S	**Sn**	**10 41 03.0**	**+1.0**
ATH	**Athens Observa**	**1.75**	**259**	*e*PN	**Pn**	**10 40 41.0**	**+0.5**
AOS	**Alonnisos**	**1.78**	**299**	P	**Pn**	**10 40 40.6**	**-0.3**
MLSB	**Milas**	**1.81**	**124**	*e*PN	**Pn**	**10 40 41.8**	**+0.5**
GADA	**Gvkgeada**	**1.86**	**0**	*e*PN	**Pn**	**10 40 40.9**	**-1.0**
THR4	**Thira Island,**	**1.91**	**192**	P	**Pn**	**10 40 41.9**	**-0.8**
THR3	**Thira Island,**	**1.96**	**192**	P	**Pn**	**10 40 42.5**	**-0.8**
THR5	**Thira Island,**	**1.96**	**193**	P	**Pn**	**10 40 42.5**	**-0.9**
NISR	**Nisiros**	**1.98**	**150**	*e*PN	**Pn**	**10 40 43.0**	**-0.6**
NAIG	**Nisos Aigina**	**1.98**	**254**	*e*PN	**Pn**	**10 40 44.7**	**+1.0**
NAIG	**Nisos Aigina**	**1.98**	**254**	*e*Pn	**Pn**	**10 40 45.0**	**+1.3**
THR1	**Thera Island**	**1.99**	**190**	P	**Pn**	**10 40 42.8**	**-0.9**
THR6	**Thira Island,**	**2.01**	**192**	P	**Pn**	**10 40 43.4**	**-0.7**
BALB	**Balikesir**	**2.02**	**49**	*e*PN	**Pn**	**10 40 44.8**	**+0.5**
DAT	**Datca**	**2.09**	**140**	*e*PN	**Pn**	**10 40 44.6**	**-0.5**
LPK	**Lapseki**	**2.15**	**18**	*e*PN	**Pn**	**10 40 45.6**	**-0.3**
KULA	**Kula-Manisa**	**2.18**	**84**	*e*PN	**Pn**	**10 40 46.9**	**+0.5**
YER	**Yerkesik**	**2.24**	**122**	*e*PN	**Pn**	**10 40 48.2**	**+1.0**
DID	**Didima**	**2.26**	**249**	P	**Pn**	**10 40 46.9**	**-0.5**
LKR	**Lokris**	**2.29**	**279**	P	**Pn**	**10 40 48.0**	**+0.1**
LTK	**Loutraki**	**2.33**	**263**	P	**Pn**	**10 40 49.1**	**+0.7**
PAIG	**Paliouri**	**2.35**	**313**	P	**Pn**	**10 40 48.1**	**-0.6**
PAIG				S	**Sn**	**10 41 18.4**	**+0.6**
XOR	**Xorichti**	**2.35**	**297**	P	**Pn**	**10 40 48.5**	**-0.2**
ENEZ	**Enez**	**2.41**	**5**	*e*PN	**Pn**	**10 40 49.0**	**-0.5**
DST	**Dursunbey**	**2.48**	**58**	*e*PN	**Pn**	**10 40 49.9**	**-0.6**
OUR	**Ouranopolis**	**2.49**	**324**	P	**Pn**	**10 40 50.0**	**-0.6**
DENT	**Denizli**	**2.54**	**102**	*e*PN	**Pn**	**10 40 52.0**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.55**	**22**	*e*PN	**Pn**	**10 40 51.6**	**+0.1**
BNT	**Bandirma**	**2.56**	**37**	*e*PN	**Pn**	**10 40 51.2**	**-0.4**
ALN	**Alexandroupoli**	**2.56**	**3**	P	**Pn**	**10 40 50.2**	**-1.4**
ALN				S	**Sn**	**10 41 22.1**	**-1.1**
DALT	**Dalyan (Mudla)**	**2.68**	**125**	*e*PN	**Pn**	**10 40 54.1**	**+0.9**
KCT	**Karacabey**	**2.71**	**44**	*e*PN	**Pn**	**10 40 54.1**	**+0.4**
ARG	**Arkhangelos**	**2.76**	**139**	*e*PN	**Pn**	**10 40 54.0**	**-0.4**
PLG	**Polygyros**	**2.79**	**318**	*e*PN	**Pn**	**10 40 54.0**	**-0.7**
RDO	**Rodhopi**	**2.82**	**355**	*e*PN	**Pn**	**10 40 54.0**	**-1.2**
RDO	**Rodhopi**	**2.82**	**355**	P	**Pn**	**10 40 54.4**	**-0.8**
RDO	**Rodhopi**	**2.82**	**355**	P	**Pn**	**10 40 54.4**	**-0.8**
VLI	**Veliai**	**2.85**	**236**	*e*PN	**Pn**	**10 40 56.5**	**+0.9**
AGG	**Agios Georgios**	**2.87**	**285**	P	**Pn**	**10 40 56.5**	**+0.6**
TKR	**Tekirdag**	**2.94**	**25**	*e*PN	**Pn**	**10 40 56.7**	**-0.1**
KARP	**Karpathos**	**2.96**	**160**	*e*PN	**Pn**	**10 40 57.0**	**-0.1**
NPS	**Neapolis**	**3.07**	**184**	*e*PN	**Pn**	**10 40 58.5**	**-0.1**
NPS	**Neapolis**	**3.07**	**184**	P	**Pn**	**10 40 58.2**	**-0.4**
NPS	**Neapolis**	**3.07**	**184**	*e*Pn	**Pn**	**10 40 58.5**	**-0.1**
ULDT	**Uludag**	**3.10**	**53**	*i* P	**Pn**	**10 41 04.5**	**+5.6**
ULDT				*i* S	**Sn**	**10 41 44.9**	**+8.5**
HORT	**Hortiatis**	**3.13**	**317**	P	**Pn**	**10 40 59.4**	**0.0**
HORT				S	**Sn**	**10 41 36.8**	**-0.4**
IDI	**Anoyia**	**3.14**	**195**	Pn	**Pn**	**10 40 58.6**	**-1.1**
	9.4nm,0.3s,baz=14,slow=10,SNR=28						
IDI	**Anoyia**	**3.14**	**195**	Pn		**10 40 58.5**	**-1.1**
SOH	**Sokhos**	**3.17**	**322**	P	**Pn**	**10 41 00.0**	**+0.1**
SOH				S	**Sn**	**10 41 38.2**	**+0.1**
LIT	**Litokhoron**	**3.18**	**305**	P	**Pn**	**10 41 00.4**	**+0.3**
LIT				S	**Sn**	**10 41 39.6**	**+1.2**
ARMT	**Armutlu**	**3.20**	**45**	*e*PN	**Pn**	**10 41 01.8**	**+1.4**
VAM	**Vamos**	**3.22**	**205**	*e*PN	**Pn**	**10 41 02.0**	**+1.3**
THE	**Thessaloniki**	**3.23**	**316**	P	**Pn**	**10 41 00.9**	**+0.1**
EVR	**Evrytania**	**3.25**	**282**	*e*PN	**Pn**	**10 41 02.0**	**+0.9**
THL	**Klokotos Trika**	**3.27**	**293**	P	**Pn**	**10 41 01.9**	**+0.6**
GEMT	**Gemlik**	**3.31**	**50**	*e*PN	**Pn**	**10 41 02.7**	**+0.8**
ITM	**Ithomi**	**3.35**	**251**	*e*PN	**Pn**	**10 41 03.5**	**+1.1**
ITM	**Ithomi**	**3.35**	**251**	P	**Pn**	**10 41 04.2**	**+1.8**
ITM	**Ithomi**	**3.35**	**251**	P	**Pn**	**10 41 04.2**	**+1.8**
ALT	**Altintas**	**3.38**	**76**	*e*PN	**Pn**	**10 41 03.5**	**+0.7**
NVR	**Nevrokopi**	**3.40**	**333**	P	**Pn**	**10 41 03.0**	**-0.1**
SLVT	**Silivri**	**3.40**	**31**	*e*PN	**Pn**	**10 41 03.9**	**+0.8**
RZN	**Rozhen**	**3.47**	**345**	P	**Pn**	**10 41 03.7**	**-0.4**
CTKS	**Kestanelik-??a**	**3.53**	**34**	*e*PN	**Pn**	**10 41 05.6**	**+0.7**
ELL	**Elmali**	**3.56**	**115**	*e*PN	**Pn**	**10 41 06.5**	**+1.1**
EDRB	**Edirne**	**3.57**	**10**	*e*PN	**Pn**	**10 41 05.6**	**+0.2**
CAVI	**Cavuskoy**	**3.59**	**57**	*e*PN	**Pn**	**10 41 06.9**	**+1.2**
BGKT	**Bogazkoy**	**3.61**	**37**	*e*PN	**Pn**	**10 41 06.1**	**+0.1**
CTYL	**Yal??k??y-??at**	**3.64**	**30**	*e*PN	**Pn**	**10 41 06.9**	**+0.5**
ADVT	**Abdulvahap**	**3.64**	**54**	*e*PN	**Pn**	**10 41 08.2**	**+1.7**
KNT	**Kendrikon**	**3.65**	**322**	P	**Pn**	**10 41 06.9**	**+0.3**
MMB	**Musomiste**	**3.65**	**334**	P	**Pn**	**10 41 05.8**	**-0.8**
ISK	**Istanbul-Kandi**	**3.66**	**41**	*e*PN	**Pn**	**10 41 07.8**	**+1.0**
ISP	**Isparta**	**3.67**	**96**	*e*PN	**Pn**	**10 41 09.1**	**+2.2**
ISP	**Isparta**	**3.67**	**96**	P	**Pn**	**10 41 06.8**	**-0.1**
DIM	**Dimitrovgrad**	**3.72**	**356**	P	**Pn**	**10 41 06.6**	**-1.0**
GRG	**Griva**	**3.76**	**315**	P	**Pn**	**10 41 08.9**	**+0.8**
GRG				S	**Sn**	**10 41 52.4**	**-0.3**
KLYT	**Kilyos**	**3.79**	**39**	*e*PN	**Pn**	**10 41 09.1**	**+0.5**
PLD	**Plovdiv**	**3.88**	**347**	P	**Pn**	**10 41 10.5**	**+0.8**
PLD	**Plovdiv**	**3.88**	**347**	P	**Pn**	**10 41 09.6**	**-0.1**
VAY	**Valandovo**	**3.93**	**320**	*e*Pn	**Pn**	**10 41 18.5**	**+8.1**
SILT	**Sille**	**4.03**	**45**	*e*PN	**Pn**	**10 41 13.3**	**+1.5**
KKB	**Karapnik**	**4.11**	**329**	P	**Pn**	**10 41 13.1**	**-0.2**
GULT	**Gulveren**	**4.15**	**58**	*e*PN	**Pn**	**10 41 14.6**	**+1.2**
STIP	**Stip**	**4.40**	**321**	*e*Pn	**Pn**	**10 41 21.0**	**+4.1**
PGB	**Panagyurishte**	**4.41**	**343**	P	**Pn**	**10 41 16.3**	**-0.8**
IGT	**Igoumenitsa**	**4.50**	**287**	P	**Pn**	**10 41 18.9**	**+0.6**
MDU	**Mudurnu**	**4.64**	**61**	*e*PN	**Pn**	**10 41 21.4**	**+1.2**
KRUS	**Krusevo**	**4.69**	**312**	*i* Pn	**Pn**	**10 41 17.1**	**-3.7**
KRUS	**Krusevo**	**4.69**	**312**	*i* Pn	**Pn**	**10 41 17.2**	**-3.7**
VTS	**Vitosha**	**4.72**	**335**	P	**Pn**	**10 41 22.0**	**+0.7**
SZH	**Strazhica**	**4.93**	**0**	P	**Pn**	**10 41 22.9**	**-1.2**
AVR	**AVREN**	**4.97**	**15**	P	**Pn**	**10 41 23.4**	**-1.3**
PRD	**Provadia**	**4.99**	**13**	P	**Pn**	**10 41 23.3**	**-1.7**
HDMB	**Hadim**	**5.41**	**103**	*e*PN	**Pn**	**10 41 32.9**	**+2.2**
PSN	**Preselentsi**	**5.62**	**17**	P	**Pn**	**10 41 32.3**	**-1.3**
BR131	**Keskin Array S**	**6.19**	**75**	*e*Pn	**Pn**	**10 41 41.6**	**+0.2**
BR131	**Keskin Array S**	**6.19**	**75**	*e*Pn	**Pn**	**10 41 41.6**	**+0.1**
BRTR	**Keskin Array B**	**6.19**	**75**	Pn	**Pn**	**10 41 41.7**	**+0.3**
	0.9nm,0.3s,baz=252,slow=12,SNR=26						
BRTR				Lg		10 43 32.7	
	0.1nm,0.3s,baz=256,slow=26,SNR=6.2						
TIRR	**Tirgusor**	**6.41**	**16**	⇓*i*P	**Pn**	**10 41 43.0**	**-1.4**
TIRR	**Tirgusor**	**6.41**	**16**	⇓P	**Pn**	**10 41 43.0**	**-1.5**
HARR	**Harsova**	**6.53**	**13**	⇑*i*P	**Pn**	**10 41 44.3**	**-1.9**
HARR	**Harsova**	**6.53**	**13**	⇑P	**Pn**	**10 41 44.3**	**-1.9**
VOIR		**7.13**	**355**	P	**Pn**	**10 41 53.6**	**-0.7**
VOIR		**7.13**	**355**	⇓*i*P	**Pn**	**10 41 53.4**	**-0.9**
VOIR		**7.13**	**355**	⇓P	**Pn**	**10 41 53.6**	**-0.7**
MLR	**Muntele Rosu**	**7.15**	**0**	Pn	**Pn**	**10 41 55.1**	**+0.5**
	5.3nm,0.3s,baz=214,slow=7.1,SNR=25						
MLR	**Muntele Rosu**	**7.15**	**0**	P	**Pn**	**10 41 55.4**	**+0.7**
MLR	**Muntele Rosu**	**7.15**	**0**	⇑*i*P	**Pn**	**10 41 55.2**	**+0.5**
MLR	**Muntele Rosu**	**7.15**	**0**	P	**Pn**	**10 41 55.4**	**+0.7**
GZR	**Gura Zlata**	**7.43**	**343**	⇓*i*P	**Pn**	**10 41 58.1**	**-0.3**
GZR	**Gura Zlata**	**7.43**	**343**	⇓P	**Pn**	**10 41 58.1**	**-0.4**
PLOR	**Plostina**	**7.53**	**4**	P	**Pn**	**10 42 01.4**	**+1.5**
PLOR	**Plostina**	**7.53**	**4**	⇓*i*P	**Pn**	**10 42 00.1**	**+0.2**
VRI	**Vrincioaia**	**7.55**	**4**	P	**Pn**	**10 42 02.5**	**+2.3**
VRI	**Vrincioaia**	**7.55**	**4**	⇑*i*P	**Pn**	**10 42 00.0**	**-0.2**
BZS	**Buzias**	**7.94**	**338**	⇓*i*P	**Pn**	**10 42 04.4**	**-1.1**
BZS	**Buzias**	**7.94**	**338**	P	**Pn**	**10 42 04.7**	**-0.8**
DRGR		**8.77**	**346**	⇑*i*P	**Pn**	**10 42 17.7**	**+0.8**
DRGR		**8.77**	**346**	⇑P	**Pn**	**10 42 17.7**	**+0.8**
BURAR	**Bucovina Array**	**9.29**	**357**	⇑*i*P	**Pn**	**10 42 25.1**	**+1.1**
BURAR	**Bucovina Array**	**9.29**	**357**	⇑P	**Pn**	**10 42 25.1**	**+1.2**
BUR08	**Bucovina Ar. S**	**9.32**	**357**	*e*Pn	**Pn**	**10 42 24.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**9.32**	**357**	*e*Pn	**Pn**	**10 42 24.8**	**+0.5**
MMAI	**Mount Meron Ar**	**9.38**	**122**	Pn	**Pn**	**10 42 22.4**	**-2.8**
	2.6nm,0.3s,baz=305,slow=8.0,SNR=4.3						
PKSM	**Moragy**	**9.53**	**328**	⇑*i*P	**Pn**	**10 42 26.2**	**-1.1**
EIL	**Elat**	**11.44**	**136**	LR	LR	10 47 49.3	
	comp=Z,31nm,21.2s,baz=298,slow=41						
DAVOX	**Davos/Dischmat**	**14.49**	**311**	LR	LR	10 50 09.5	
	comp=Z,115nm,18.3s,baz=263,slow=41						
GNI	**Garni**	**14.72**	**77**	LR	LR	10 49 21.4	
	comp=Z,54nm,21.0s,baz=124,slow=38						
HFS	**Hagfors**	**23.15**	**344**	P	**P**	**10 45 17.1**	**+0.6**
	3.9nm,0.9s,mb3.8,baz=184,slow=6.4,SNR=3.4						
HFS	**Hagfors**	**23.15**	**344**	P	**P**	**10 45 17.1**	**+0.6**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ESDC	**Sonseca Array**	**23.20**	**283**	P	**P**	**10 45 18.2**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.1,baz=95,slow=12,SNR=3.8						
KLMR	**Klimovskoe**	**24.11**	**16**	*e*P	**P**	**10 45 35.5**	**+10**
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.2						
NB2	**NORSAR Subarra**	**24.52**	**343**	P	**P**	**10 45 31.2**	**+1.7**
	comp=Z,0.9nm,0.7s,mb3.4,baz=145,slow=9.3						
NOA	**NORSAR Array B**	**24.52**	**343**	P	**P**	**10 45 29.6**	**+0.1**
	comp=Z,1.2nm,0.8s,mb3.5,baz=153,slow=9.9,SNR=4.3						
NOA				LR	LR	10 56 06.1	
	comp=Z,32nm,20.4s,baz=230,slow=39						
NOA	**NORSAR Array B**	**24.52**	**343**	*e*P	**P**	**10 45 31.5**	**+2.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**25.88**	**321**	P	**P**	**10 45 44.8**	**+2.9**
	comp=Z,1.0nm,0.6s,mb3.5,baz=110,slow=9.9,SNR=3.0						
EKA	**Eskdalemuir Ar**	**25.88**	**321**	P	**P**	**10 45 44.8**	**+2.9**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARU	**Arti**	**28.19**	**39**	*e*P	**P**	**10 46 04.3**	**+1.6**
ARU				*e*		10 46 50.7	
ARU				S	**S**	**10 50 48.4**	**-0.1**
ARU				SS		10 52 01.5	
TORD	**Torodi Ar. Bea**	**33.03**	**227**	P	**P**	**10 46 45.9**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=32,slow=8.8,SNR=6.4						
AAK	**Ala-Archa**	**36.81**	**68**	⇑*e*P	**P**	**10 47 18.7**	**+0.5**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
KURK	**Kurchatov**	**38.78**	**54**	P	**P**	**10 47 33.6**	**-1.2**
	comp=Z,0.9nm,0.8s,mb3.5,baz=280,slow=8.5,SNR=4.3						
KURK				LR	LR	11 05 25.1	
	comp=Z,31nm,20.4s,baz=40,slow=39						
KURK	**Kurchatov**	**38.78**	**54**	P	**P**	**10 47 33.6**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
KURK				MLR	MLR		
	comp=Z,31nm,20.4s						
MKAR	**Makanchi Array**	**41.60**	**60**	P	**P**	**10 47 57.5**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.3,baz=282,slow=7.2,SNR=4.8						
MKAR	**Makanchi Array**	**41.60**	**60**	P	**P**	**10 47 57.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**42.42**	**49**	P	**P**	**10 48 03.6**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.4,baz=256,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	**42.42**	**49**	P	**P**	**10 48 03.6**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
SONM	**Songino Array**	**57.05**	**52**	P	**P**	**10 49 55.9**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.7,baz=282,slow=8.9,SNR=5.0						
SONM	**Songino Array**	**57.05**	**52**	*e*P	**P**	**10 49 54.4**	**-1.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**65.67**	**85**	P	**P**	**10 50 53.9**	**-1.1**
	comp=Z,0.7nm,0.7s,mb3.8,baz=310,slow=8.2,SNR=6.0						
CMAR	**Chiang Mai Arr**	**65.67**	**85**	P	**P**	**10 50 53.9**	**-1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**74.62**	**342**	P	**P**	**10 51 50.5**	**+1.3**
	comp=Z,0.2nm,0.7s,mb3.2,baz=30,slow=5.2,SNR=5.4						
YKA	**Yellowknife Ar**	**74.62**	**342**	P	**P**	**10 51 50.5**	**+1.3**

IDC 31 10:41:29.6±8.9, 642S×15533E, h47km±67km, mb3.2/5, mb1 3.6/6, mb1mx3.5/16, mbtmp3.4/6, ML3.7/1, Error ellipse: s-maj=73.6km s-min=32.1km az=97.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.62**	**249**	P	Pn	10 43 32.0	+0.1
	4.6nm,0.3s,baz=89,slow=6.7,SNR=15						
PMG				S	Sn	10 45 08.2	+0.4
	0.7nm,0.3s,baz=300,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**24.42**	**235**	P	P	10 46 44.0	+0.1
	1.2nm,0.4s,baz=58,slow=9.3,SNR=25						
WRA				PcP	PcP	10 50 21.7	-0.6
	0.6nm,1.0s,baz=59,slow=2.9,SNR=5.0						
ASAR	**Alice Springs**	**26.80**	**228**	P	P	10 47 05.4	-0.1
	0.8nm,1.1s,baz=61,slow=8.8,SNR=6.0						
CMAR	**Chiang Mai Arr**	**60.84**	**295**	P	P	10 51 38.2	+0.5
	0.3nm,0.7s,baz=116,slow=8.4,SNR=3.2						
CMAR				pP	pP	10 51 52.0	+1.2
	1.0nm,0.7s,baz=122,slow=5.4,SNR=6.3						
SONM	**Songino Array**	**69.04**	**327**	P	P	10 52 30.8	+0.4
	0.1nm,0.4s,baz=134,slow=4.2,SNR=3.2						
MKAR	**Makanchi Array**	**83.20**	**319**	P	P	10 53 50.5	-0

comp=N,1.1nm,0.7s,mb3.8,baz=103,slow=8.8,SNR=5.1
ARCES ARCESS Array B 40.79 337 P **P 10 54 55.2 +0.9**
HFS Hagfors 42.94 321 P **P 10 55 13.6 +1.7**
comp=N,1.2nm,0.5s,mb3.9,baz=106,slow=11,SNR=12
NOA NORSAR Array B 44.24 323 P **P 10 55 23.5 +1.2**
comp=N,0.4nm,0.6s,mb3.3,baz=91,slow=8.1,SNR=2.8
YKA Yellowknife Ar 80.58 3 P **P 10 59 25.4 +0.9**
comp=N,0.6nm,0.5s,mb3.7,baz=350,slow=5.5,SNR=24

DDA ***31*** *10:54:59.8, 3698N×2927E, h23km±1km, Md3.4*
ISK ***31*** *10:54:59.9, 3701N×2927E, h6km, ML3.4*
NEIC ***31*** *10:54:59.0, 3701N×2927E, h7km, ML3.4(ISK), After ISK.*
CSEM ***31*** *10:54:59.8±0.1, 3701N×2930E, h5km, MD3.4, Error ellipse: s-maj=1.3km s-min=1.0km az=171.0*
ISCJB ***31*** *10:55:00.4±0.3, 3697N±002×2929E±002, h10km, mb3.5/6, Error ellipse: s-maj=3.3km s-min=2.5km az=172.9*
ATH ***31*** *10:55:04.6, 3657N×2901E, h10km, MD3.7/3*
IDC ***31*** *10:55:04.3±1.5, 3696N×2940E, h49km±18km, mb3.4/5, mb1 3.7/9, mb1mx3.5/21, mbtmp3.5/9, ML3.8/3, MS2.7/2, Ms1 2.7/2, ms1mx2.4/27, Error ellipse: s-maj=20.3km s-min=12.0km az=175.0*

ISC 31 10:55:00.8±0.5, 3696N±002×2928E±002, h9km±3km, n65, σ0s99/83, mb3.5/6, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.36**	**39**	*i* P		**Pg**	**10 55 06.8**	**-1.0**
GOLH				*i* S		**Sg**	**10 55 13.3**	**+0.7**
DALT	**Dalyan (Mudla)**	**0.55**	**250**	PG		**Pg**	**10 55 10.6**	**-0.7**
DALT				*e*SG		**Sg**	**10 55 19.3**	**+0.7**
TURN	**Turunc**	**0.55**	**261**	*i* P		**Pg**	**10 55 15.7**	**+4.3**
TURN				*i* S		**Sg**	**10 55 28.2**	**+10**
ELL	**Elmali**	**0.55**	**112**	*e*PG		**Pg**	**10 55 11.5**	**0.0**
ELL				*e*SG		**Sg**	**10 55 19.7**	**+1.1**
AKAS	**Kas**	**0.77**	**160**	*i* P		**Pg**	**10 55 15.5**	**-0.1**
AKAS				*i* S		**Sg**	**10 55 30.9**	**+5.2**
YER	**Yerkesik**	**0.81**	**283**	*e*PG		**Pg**	**10 55 16.5**	**+0.1**
DENT	**Denizli**	**0.82**	**346**	*e*PG		**Pg**	**10 55 15.0**	**-1.5**
KSL	**Kastellorizon**	**0.84**	**163**	*e*PB		**Pb**	**10 55 16.5**	**-1.1**
ANTB	**Antalya**	**1.11**	**93**	*e*PN		**Pn**	**10 55 22.5**	**+0.1**
BCK	**Bucak**	**1.16**	**64**	*e*PN		**Pn**	**10 55 22.1**	**-1.1**
ARG	**Arkhangelos**	**1.19**	**232**	P		**Pb**	**10 55 22.9**	**-0.5**
MLSB	**Milas**	**1.24**	**286**	*e*PN		**Pn**	**10 55 23.8**	**-0.5**
MLSB				*e*SN		**Sn**	**10 55 41.4**	**+0.2**
AYDN	**Tasoluk**	**1.31**	**303**	*i* P		**Pn**	**10 55 24.7**	**-0.6**
AYDN				*i* S		**Sb**	**10 55 42.8**	**+0.2**
ISP	**Isparta**	**1.32**	**48**	*e*PN		**Pn**	**10 55 24.8**	**-0.6**
ISP	**Isparta**	**1.32**	**48**	P		**Pn**	**10 55 25.0**	**-0.4**
ISP	**Isparta**	**1.32**	**48**	P		**Pn**	**10 55 25.0**	**-0.4**
KHL	**Karahalli**	**1.38**	**8**	*e*PN		**Pn**	**10 55 25.8**	**-0.3**
DAT	**Datca**	**1.38**	**261**	*e*PN		**Pn**	**10 55 26.7**	**+0.4**
KHAL	**Karahalli**	**1.42**	**7**	*i* P		**Pn**	**10 55 26.3**	**-0.4**
KHAL				*i* S		**Sn**	**10 55 46.1**	**+0.6**
BDRM	**Kayabasi**	**1.47**	**275**	*i* P		**Pn**	**10 55 27.4**	**0.0**
BDRM				*i* S		**Sn**	**10 55 48.0**	**+1.2**
KULA	**Kula-Manisa**	**1.63**	**343**	*e*PN		**Pn**	**10 55 29.1**	**-0.5**
MANT	**Manisa**	**1.63**	**340**	*i* P		**Pn**	**10 55 29.2**	**-0.5**
MANT				*i* S		**Sn**	**10 55 51.2**	**+0.4**
NISR	**Nisiros**	**1.76**	**259**	*e*PB		**Pb**	**10 55 33.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.79**	**295**	*i* P		**Pn**	**10 55 31.8**	**0.0**
GCAM				*i* S		**Sn**	**10 55 53.9**	**-0.7**
SMG	**Samos**	**2.08**	**292**	P		**Pn**	**10 55 35.9**	**0.0**
GDZ	**Gediz**	**2.13**	**4**	*i* P		**Pn**	**10 55 36.2**	**-0.4**
GDZ				*i* S		**Sn**	**10 56 03.1**	**0.0**
IZM	**Izmir**	**2.15**	**313**	*e*PN		**Pn**	**10 55 36.8**	**0.0**
ALT	**Altintas**	**2.19**	**17**	*e*PN		**Pn**	**10 55 36.8**	**-0.6**
KARP	**Karpathos**	**2.21**	**231**	*e*PN		**Pn**	**10 55 38.0**	**+0.3**
KARP	**Karpathos**	**2.21**	**231**	P		**Pn**	**10 55 39.1**	**+1.4**
KARP	**Karpathos**	**2.21**	**231**	P		**Pn**	**10 55 39.1**	**+1.4**
AKHS	**Akhisar**	**2.24**	**329**	*i* P		**Pn**	**10 55 37.3**	**-0.7**
AKHS				*i* S		**Sn**	**10 56 00.7**	**-5.0**
AKS	**Akhisar**	**2.24**	**329**	*e*PN		**Pn**	**10 55 37.5**	**-0.5**
BLCB	**Balcova**	**2.27**	**309**	*e*PN		**Pn**	**10 55 38.8**	**+0.4**
HDMB	**Hadim**	**2.57**	**89**	*e*PN		**Pn**	**10 55 42.8**	**+0.2**
KONT	**Konya--Tatoy**	**2.65**	**67**	*e*PN		**Pn**	**10 55 44.1**	**+0.5**
KDHN	**Kadinhani**	**2.74**	**54**	*i* P		**Pn**	**10 55 45.6**	**+0.7**
LADK	**Ladik-KONYA**	**2.75**	**62**	*e*PN		**Pn**	**10 55 45.5**	**+0.5**
KIZT	**Kizilcal**	**2.81**	**46**	*e*PN		**Pn**	**10 55 46.0**	**+0.1**
ESKT	**Eskisehir**	**2.84**	**25**	*i* P		**Pn**	**10 55 46.6**	**+0.3**
SEYT	**Eskypehyr**	**2.84**	**25**	*i* P		**Pn**	**10 55 46.6**	**+0.3**
NPS	**Neapolis**	**3.42**	**241**	P		**Pn**	**10 55 55.7**	**+1.5**
LEF	**Lefka**	**3.46**	**121**	*e*PN		**Pn**	**10 55 56.1**	**+1.3**
IKL	**Isikli**	**3.62**	**100**	*e*PN		**Pn**	**10 55 58.8**	**+1.8**
LFK	**Lefkose**	**3.83**	**115**	*e*PN		**Pn**	**10 56 02.5**	**+2.6**
CSS	**Prodhromos**	**3.85**	**120**	*e*Pn		**Pn**	**10 55 58.7**	**-1.4**
CSS	**Prodhromos**	**3.85**	**120**	*e*Pn		**Pn**	**10 55 58.7**	**-1.4**
IDI	**Anoyia**	**3.92**	**246**	P		**Pn**	**10 56 02.0**	**+0.8**
	4.1nm,0.3s,baz=62,slow=15,SNR=17							
IDI				S		**Sn**	**10 56 50.4**	**+3.1**
	9.4nm,0.3s,baz=3.6,slow=17,SNR=10.0							
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn		**Pn**	**10 56 08.3**	**+0.5**
BR131				*e*Sn		**Sn**	**10 56 59.6**	**+0.5**
BR131	**Keskin Array S**	**4.40**	**50**	*e*Pn		**Pn**	**10 56 08.3**	**+0.5**
BR131				*e*Sn		**Sn**	**10 56 59.6**	**+0.5**
BRTR	**Keskin Array B**	**4.40**	**50**	P		**Pn**	**10 56 08.5**	**+0.7**
	1.0nm,0.3s,baz=234,slow=16,SNR=20							
BRTR				S		**Sn**	**10 57 00.7**	**+1.5**
	0.5nm,0.3s,baz=234,slow=27,SNR=6.9							
BRTR	**Keskin Array B**	**4.40**	**50**	P		**Pn**	**10 56 08.5**	**+0.7**
BRTR				S		**Sn**	**10 57 00.6**	**+1.5**
NVR	**Nevrokopi**	**6.08**	**318**	P		**Pn**	**10 56 32.5**	**+1.8**
MMAI	**Mount Meron Ar**	**6.38**	**126**	P		**Pn**	**10 56 34.2**	**-0.8**
	7.4nm,0.3s,baz=316,slow=12,SNR=4.4							
MMAI				S		**Sn**	**10 57 46.1**	**-2.0**
	baz=302,slow=27,SNR=2.3							
MLR	**Muntele Rosu**	**8.88**	**345**	P		**Pn**	**10 57 10.0**	**+0.7**
	0.3nm,0.3s,baz=191,slow=2.7,SNR=7.4							
MLR				LR		LR	11 01 20.2	
	comp=Z,88nm,18.1s,baz=43,slow=42							
MLR	**Muntele Rosu**	**8.88**	**345**	*i*P		**Pn**	**10 57 10.6**	**+1.4**
VOIR		**9.05**	**341**	*i*P		**Pn**	**10 57 12.3**	**+0.8**
VAE	**Valguarnera**	**11.86**	**277**	P		**Pn**	**10 57 47.2**	**-2.9**
	1.9nm,0.3s,baz=108,slow=20,SNR=3.6							
GNI	**Garni**	**12.52**	**71**	LR		LR	11 03 19.4	
	comp=Z,19nm,19.1s,baz=236,slow=40							
ESDC	**Sonseca Array**	**26.14**	**286**	P		**P**	**11 00 34.5**	**-0.7**
	0.1nm,0.3s,mb2.8,baz=88,slow=6.9,SNR=3.8							
TORD	**Torodi Ar. Bea**	**34.22**	**233**	P		**P**	**11 01 46.0**	**-0.8**
	0.8nm,0.7s,mb3.7,baz=39,slow=9.0,SNR=5.5							
MKAR	**Makanchi Array**	**40.00**	**59**	P		**P**	**11 02 37.6**	**+1.9**
	0.5nm,0.7s,mb3.3,baz=270,slow=7.4,SNR=3.0							
CMAR	**Chiang Mai Arr**	**63.09**	**86**	P		**P**	**11 05 26.4**	**-2.4**
	0.4nm,0.6s,mb3.7,baz=285,slow=7.2,SNR=4.7							
SCHQ	**Schefferville**	**63.96**	**320**	P		**P**	**11 05 31.9**	**-2.2**
	3.0nm,1.0s,mb4.3,baz=63,slow=14,SNR=4.1							
YKA	**Yellowknife Ar**	**76.72**	**344**	P		**P**	**11 06 50.8**	**-1.1**
	0.3nm,0.9s,mb3.2,baz=29,slow=5.7,SNR=3.8							

IDC 31 10:58:13.6±3.4, 349N×9420E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/22, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=121.6km s-min=28.9km az=62.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.58**	**17**	Pn		Pn	11 01 54.7	0.0
	0.1nm,0.3s,baz=211,slow=11,SNR=9.1							
MKAR	**Makanchi Array**	**44.35**	**348**	P		P	11 06 25.5	0.0
	0.3nm,0.6s,baz=160,slow=8.8,SNR=3.5							
WRA	**Warramunga Arr**	**45.79**	**122**	P		P	11 06 37.3	-0.1
	0.9nm,0.7s,baz=300,slow=9.0,SNR=5.8							
ASAR	**Alice Springs**	**47.16**	**127**	P		P	11 06 48.1	0.0
	0.6nm,0.9s,baz=300,slow=8.8,SNR=5.1							

IDC ***31*** *10:58:58.4±0.6, 1481S×7556W, h0km, mb4.6/19, mb1 4.6/22, mb1mx4.6/25, mbtmp4.5/22, ML4.5/2, MS4.4/19, Ms1 4.4/19, ms1mx4.2/25, Error ellipse: s-maj=20.7km s-min=12.3km az=67.0*
ISCJB ***31*** *10:59:01.8±0.3, 1487S±004×7565W±007, h36km, mb4.8/48, MS4.5/24, Error ellipse: s-maj=10.9km s-min=4.7km az=153.7*
MOS ***31*** *10:59:01.9±0.9, 1476S×7552W, h33km, mb5.2/15, Error ellipse: s-maj=12.9km s-min=9.8km az=106.1*
BJI ***31*** *10:59:01.2, 1572S×7595W, h32km, mB5.2, Ms5.6, Msz5.1*
NEIC ***31*** *10:59:03.2±0.2, 1480S×7549W, mb5.0/29, MS4.7/1, Error ellipse: s-maj=7.1km s-min=3.5km az=60.0*
NEIC Felt [III] at Palpa and San Juan de Marcona.

ISC 31 10:59:02.5±2.0, 1484S±005×7555W±007, h26km±14km, h34km±1.4km: pP-P, n155, σ0s92/125, mb4.8/48, MS4.5/24, 3C-3D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.10**	**336**	Pn		**Pn**	**10 59 51.0**	**+1.3**
	7μm,0.4s,SNR=23							
NNA	**Nana**	**3.10**	**336**	Pn		**Pn**	**10 59 46.0**	**-3.6**
	30nm,0.3s,baz=179,slow=14,SNR=27							
NNA				Sn		**Sn**	**11 00 27.4**	**+1.5**
	166nm,0.3s,baz=145,slow=16,SNR=4.2							
NNA				LR		LR	11 01 05.2	
	comp=Z,4μm,18.1s,baz=169,slow=41							
NNA	**Nana**	**3.10**	**336**	*e*Pn		**Pn**	**10 59 50.0**	**+0.3**
NNA				Sn		**Sn**	**11 00 27.4**	**+1.5**
NNA				LR		LR	11 01 05.2	
ARE	**Arequipa**	**4.24**	**113**	*e*P		**Pn**	**11 00 06.0**	**+0.6**
ATAH	**Atahualpa**	**8.27**	**340**	Pn		**Pn**	**11 01 00.5**	**-0.3**
	0.5nm,0.3s,baz=117,slow=18,SNR=3.7							
ATAH				LR		LR	11 04 48.1	
	comp=Z,1μm,18.6s,baz=337,slow=43							
LVC	**Limon Verde**	**9.97**	**142**	Pn		**Pn**	**11 01 24.3**	**+0.2**
	43nm,0.3s,baz=309,slow=11,SNR=239							
LVC				Sn		**Sn**	**11 03 08.5**	**-6.7**
	2.2nm,0.3s,baz=84,slow=16,SNR=3.2							
LVC				Lg			11 04 07.6	
	5.3nm,0.3s,baz=111,slow=23,SNR=4.6							
LVC				LR		LR	11 05 37.4	
	comp=Z,2μm,18.6s,baz=315,slow=40							
LVC	**Limon Verde**	**9.97**	**142**	*e*Pn		**Pn**	**11 01 24.1**	**0.0**
	141nm,0.5s							
SIV	**San Ignacio**	**14.01**	**97**	Pn		**Pn**	**11 02 17.4**	**-2.1**
	2.7nm,0.3s,baz=281,slow=12,SNR=60							
LCO	**Las Campanas**	**14.80**	**163**	*e*Pn		**Pn**	**11 02 31.9**	**+1.7**
	40nm,0.8s							
OTAV	**Otavalo**	**15.25**	**349**	*e*P		**Pn**	**11 02 40.1**	**+4.0**
	22nm,0.8s							
CFAA	**Coronel Fontan**	**17.98**	**159**	P		**Pn**	**11 03 10.2**	**-0.5**
	0.1nm,0.3s,baz=338,slow=11,SNR=37							
CFAA				LR		LR	11 09 12.3	
	comp=Z,49nm,18.6s,baz=338,slow=34							
CPUP	**Villa Florida**	**20.51**	**127**	P		**P**	**11 03 38.5**	**-0.2**
	15nm,0.8s,baz=294,slow=10,SNR=23							
CPUP				LR		LR	11 13 14.3	
	comp=Z,693nm,18.1s,MS4.1,baz=286,slow=42							
CPUP	**Villa Florida**	**20.51**	**127**	*e*P		**P**	**11 03 38.5**	**-0.3**
CPUP				pmax		pmax		
	comp=Z,54nm,0.8s							
CPUP	**Villa Florida**	**20.51**	**127**	*e*P		**P**	**11 03 38.5**	**-0.3**
	comp=Z,54nm,0.8s							
SDV	**Santo Domingo**	**24.07**	**12**	P		**P**	**11 04 15.6**	**-0.3**
	comp=Z,15nm,0.7s,mb4.5,baz=220,slow=6.5,SNR=23							
SDV				LR		LR	11 14 39.6	
	comp=Z,1μm,19.9s,MS4.3,baz=183,slow=39							
SDV	**Santo Domingo**	**24.07**	**12**	*e*P		**P**	**11 04 15.5**	**-0.4**
	comp=Z,108nm,1.5s,mb5.1							
TRQA	**Tornquist**	**26.07**	**155**	*e*P		**P**	**11 04 34.2**	**+0.4**
	comp=Z,14nm,1.0s,mb4.5							
PLCA	**Paso Flores**	**26.17**	**171**	P		**P**	**11 04 34.4**	**-0.4**
	comp=Z,5.4nm,0.9s,mb4.1,baz=342,slow=9.1,SNR=8.0							
PLCA				LR		LR	11 12 45.6	
	comp=Z,335nm,19.4s,MS3.9,baz=338,slow=32							
BDFB	**Brasilia**	**26.58**	**95**	P		**P**	**11 04 38.4**	**-0.4**
	comp=Z,6.7nm,0.5s,mb4.4,baz=258,slow=18,SNR=19							
BDFB				LR		LR	11 16 07.6	
	comp=Z,1μm,18.3s,MS4.5,baz=89,slow=39							
PCRV	**Puerto La Cruz**	**27.10**	**24**	P		**P**	**11 04 44.1**	**+0.8**
	comp=Z,8.6nm,0.8s,mb4.3,baz=9.6,slow=2.1,SNR=4.3							
PCRV				LR		LR	11 16 44.1	
	comp=Z,980nm,18.8s,MS4.4,baz=53,slow=39							
USHA	**Ushuaia**	**40.29**	**174**	P		**P**	**11 06 37.3**	**0.0**
	comp=Z,9.3nm,0.8s,mb4.6,baz=238,slow=6.4,SNR=3.7							
KVTX	**Kingsville**	**47.37**	**333**	*e*P		**P**	**11 07 34.8**	**+0.3**
	comp=Z,39nm,0.6s,mb5.5							
LRAL	**Lakeview Retre**	**48.84**	**347**	*e*P		**P**	**11 07 44.8**	**-1.0**
	comp=Z,195nm,2.8s,mb5.6							
SWET	**Sewanee**	**50.74**	**349**	*e*P		**P**	**11 07 59.2**	**-0.9**
TXAR	**Lajitas Array**	**51.62**	**328**	P		**P**	**11 08 07.3**	**+0.4**
	comp=Z,3.0nm,0.7s,mb4.3,baz=149,slow=8.8,SNR=27							
TXAR				LR		LR	11 28 48.7	
	comp=Z,241nm,19.9s,MS4.2,baz=0.0,slow=35							
UALR	**University of**	**51.85**	**342**	*e*P		**P**	**11 08 08.5**	**0.0**
	comp=Z,11nm,0.9s,mb4.8							
WVT	**Waverly**	**52.00**	**347**	*e*P		**P**	**11 08 07.8**	**-1.8**
WVT				pmax		pmax		
	comp=Z,133nm,2.7s,mb5.4							
WVT	**Waverly**	**52.00**	**347**	*e*P		**P**	**11 08 07.8**	**-1.8**
	comp=Z,133nm,2.7s,mb5.4							
MIAR	**Mount Ida**	**52.01**	**341**	*e*P		**P**	**11 08 09.2**	**-0.5**
MIAR				pmax		pmax		
	comp=Z,7.0nm,0.6s,mb4.8							
MIAR	**Mount Ida**	**52.01**	**341**	*e*P		**P**	**11 08 09.2**	**-0.5**
	comp=Z,7.4nm,0.6s,mb4.8							
PARMO	**Parma**	**52.94**	**346**	*e*P		**P**	**11 08 16.4**	**-0.1**
WCI	**Wyandotte Cave**	**53.73**	**350**	*e*P		**P**	**11 08 21.2**	**-1.2**
WCI				*e*PP		pP	11 08 30.6	+0.1
WCI				pmax		pmax		
	comp=Z,44nm,1.3s,mb5.2							
WCI	**Wyandotte Cave**	**53.73**	**350**	*e*P		**P**	**11 08 21.2**	**-1.2**
	comp=Z,44nm,1.3s,mb5.2							
WCI				*e*pP		pP	11 08 30.6	0.0
USIN	**University of**	**53.74**	**348**	*e*P		**P**	**11 08 21.2**	**-1.2**
	comp=Z,18nm,0.8s,mb5.0							
SIUC	**Southern Illin**	**53.82**	**347**	*e*P		**P**	**11 08 21.9**	**-1.1**
	comp=Z,24nm,0.8s,mb5.2							
SIUC				*e*pP		pP	11 08 31.6	+0.4
FVM	**French Village**	**54.36**	**346**	*e*P		**P**	**11 08 26.7**	**-0.3**
FVM				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
FVM	**French Village**	**54.36**	**346**	*e*P		**P**	**11 08 26.7**	**-0.3**
	comp=Z,9.5nm,0.8s,mb4.8							
OLIL	**Olney**	**54.56**	**348**	*e*P		**P**	**11 08 27.2**	**-1.2**
	comp=Z,23nm,0.8s,mb5.3							
ANMO	**Albuquerque**	**57.55**	**330**	*e*P		**P**	**11 08 50.6**	**+0.7**
ANMO				pmax		pmax		
	comp=Z,4.0nm,0.8s							
ANMO	**Albuquerque**	**57.55**	**330**	*e*P		**P**	**11 08 50.6**	**+0.8**
	comp=Z,4.2nm,0.8s,mb4.5							
SDCO	**Great Sand Dun**	**59.39**	**333**	*e*P		**P**	**11 09 02.6**	**0.0**
	comp=Z,8.3nm,0.9s,mb4.8							
JLU	**Jordanelle**	**64.43**	**330**	*e*P		**P**	**11 09 38.2**	**+1.7**
DUG	**Dugway**	**64.78**	**329**	*e*P		**P**	**11 09 40.0**	**+1.2**
DUG				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
DUG	**Dugway**	**64.78**	**329**	*e*P		**P**	**11 09 40.0**	**+1.2**
	comp=Z,8.4nm,0.9s,mb4.8							
PDAR	**Pinedale Array**	**65.28**	**333**	P		**P**	**11 09 42.0**	**+0.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=134,slow=6.4,SNR=5.8							
PDAR				LR		LR	11 38 10.2	
	comp=Z,182nm,19.5s,MS4.3,baz=149,slow=36							
BBTS	**Babate**	**65.30**	**66**	LR		LR	11 35 31.5	
	comp=Z,332nm,21.0s,MS4.5,baz=19,slow=34							
AGMN	**Agassiz Refuge**	**65.40**	**345**	*e*P		**P**	**11 09 42.3**	**-0.3**
	comp=Z,7.1nm,0.9s,mb4.7							
RRI2	**Red Ridge**	**66.52**	**332**	*e*P		**P**	**11 09 50.9**	**+1.0**
	comp=Z,7.4nm,0.8s,mb4.8							
ULM	**Lac du Bonnet**	**67.22**	**346**	P		**P**	**11 09 53.0**	**-1.3**
	comp=Z,4.4nm,0.7s,mb4.6,baz=153,slow=6.2,SNR=6.6							
VNA3	**Neumayer Olymp**	**68.37**	**161**	*e*P		**P**	**11 10 01.3**	**0.0**
VNA3				*e*			11 10 03.8	
VNA3				*e*			11 10 13.0	
VNA3				*e*			11 10 16.3	
VNA1	**Neumayer--Stat**	**68.64**	**161**	*e*P		**P**	**11 10 03.8**	**+0.8**
VNA1				*e*			11 10 05.8	
VNA1				*e*			11 10 13.6	
VNA1				*e*			11 10 16.0	
VNA2	**Neumayer--Watz**	**68.99**	**161**	*e*P		**P**	**11 10 05.2**	**0.0**
	baz=284,slow=7.0							
VNA2				*e*			11 10 07.3	
VNA2				*e*			11 10 18.0	
TBI	**Tubuai**	**69.72**	**250**	*e*S		S	11 19 21.6	+3.4
	comp=Z,134nm,25.4s							
SCHQ	**Schefferville**	**69.78**	**5**	P		**P**	**11 10 09.4**	**-0.8**
	comp=Z,5.3nm,0.8s,mb4.5,baz=31,slow=15,SNR=8.9							
SNAA	**Sanae**	**70.59**	**161**	*e*P		**P**	**11 10 14.7**	**-0.3**
SNAA				*e*			11 10 17.2	
SNAA				*e*			11 10 25.1	
SNAA	**Sanae**	**70.59**	**161**	*c* *i*P		**P**	**11 10 15.0**	**0.0**
SNAA				pmax		pmax		
	comp=Z,30nm,1.3s							
SNAA	**Sanae**	**70.59**	**161**	*e*P		**P**	**11 10 14.9**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1							
PPT	**Papeete**	**70.72**	**256**	*e*S		S	11 19 42.5	+12
	comp=Z,86nm,22.0s							
LIC	**Lamto**	**72.95**	**79**	*e*P		**P**	**11 10 29.4**	**-0.9**
	comp=Z,14nm,0.9s,mb4.6							
LIC				*e*MLR		MLR		
	comp=Z,782nm,18.5s,MS4.7							
LIC	**Lamto**	**72.95**	**79**	*e*P		**P**	**11 10 28.9**	**-1.4**
	comp=Z,34nm,1.3s,mb5.1							
LIC	**Lamto**	**72.95**	**79**	*e*P		**P**	**11 10 29.4**	**-0.9**
	comp=Z,6.8nm,0.9s,mb4.6							
LIC				LR		LR		
	comp=Z,390nm,18.5s,MS4.7							
TIC	**Toumodi**	**73.09**	**78**	*e*P		**P**	**11 10 33.7**	**+2.6**
	comp=Z,7.1nm,0.2s,mb5.2							
DBIC	**Dimbokro**	**73.25**	**78**	P		**P**	**11 10 31.4**	**-0.7**
	comp=Z,4.9nm,0.7s,mb4.6,baz=234,slow=6.3,SNR=15							
DBIC				LR		LR	11 41 08.6	
	comp=Z,683nm,18.8s,MS5.0,baz=226,slow=34							
KIC	**Kosan Boka**	**73.27**	**79**	*e*P		**P**	**11 10 31.2**	**-0.9**
	comp=Z,36nm,0.7s,mb5.4							
FCC	**Fort Churchill**	**74.89**	**350**	*e*P		**P**	**11 10 40.3**	**-0.2**
EDM	**Edmonton**	**75.15**	**338**	*e*P		**P**	**11 10 41.9**	**-0.3**
QSPA	**South Pole Qui**	**75.32**	**180**	LR		LR	11 37 34.4	
	comp=Z,79nm,18.1s,MS4.0,baz=168,slow=31							
TOA0	**Torodi Ar. Sit**	**81.35**	**74**	*e*P		**P**	**11 11 17.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**81.35**	**74**	P		**P**	**11 11 17.3**	**-0.1**
	comp=Z,26nm,0.7s,mb5.3,baz=258,slow=5.1,SNR=145							
TORD				LR		LR	11 45 26.0	
	comp=Z,456nm,20.9s,MS4.8,baz=270,slow=34							
MORF	**Marmelete**	**81.43**	**48**	*e*P		**P**	**11 11 19.3**	**+1.9**
PTEO	**Sao Teotonio**	**81.48**	**48**	*e*P		**P**	**11 11 19.7**	**+2.1**
VNDA	**Vanda**	**82.24**	**191**	P		**P**	**11 11 21.8**	**+0.8**
	comp=Z,2.2nm,0.9s,mb4.1,baz=55,slow=3.1,SNR=4.0							
VNDA				LR		LR	11 41 25.2	
	comp=Z,208nm,18.3s,MS4.5,baz=127,slow=31							
PBEJ	**Beja**	**82.31**	**47**	*e*P		**P**	**11 11 23.2**	**+1.3**
EVO	**Evora**	**82.42**	**47**	*i*P		**P**	**11 11 23.2**	**+0.7**
	comp=Z,28nm,1.0s,mb4.8							
EVO				*e*MLR		MLR		
	comp=Z,308nm,19.2s,MS4.4							
EVO	**Evora**	**82.42**	**47**	*e*P		**P**	**11 11 23.8**	**+1.3**
MDT	**Midelt**	**82.61**	**53**	P		**P**	**11 11 24.9**	**+1.3**
	comp=Z,3.3nm,0.8s,mb4.4,baz=238,slow=5.1,SNR=8.9							
YKA	**Yellowknife Ar**	**82.91**	**343**	P		**P**	**11 11 23.7**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.5,baz=142,slow=6.1,SNR=88							
PBAR	**Barrancos**	**82.96**	**48**	*e*P		**P**	**11 11 26.5**	**+1.2**
	comp=Z,15nm,1.8s,mb4.7							
PCBR	**Castelo Branco**	**83.36**	**46**	*e*P		**P**	**11 11 28.5**	**+1.1**
PVIS	**Viseu**	**83.45**	**45**	*e*P		**P**	**11 11 28.8**	**+1.0**
MTE	**Manteigas**	**83.55**	**45**	*e*P		**P**	**11 11 29.2**	**+0.9**
PCAB	**Cabril**	**83.79**	**44**	*e*P		**P**	**11 11 30.5**	**+1.0**
MVO	**Moncorvo**	**84.23**	**45**	*e*P		**P**	**11 11 33.1**	**+1.3**
PBRG	**Braganca**	**84.70**	**44**	*e*P		**P**	**11 11 34.4**	**+0.3**
SYO	**Syowa Base**	**84.88**	**161**	*i*P		**P**	**11 11 32.6**	**-2.0**
SYO	**Syowa Base**	**84.88**	**161**	*i

ZAK	**Zakamensk**	**144.53**	**1**	*e*PKIKP	PKPdf	11 18 35.2	-1.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH	**Kashi**	**144.97**	**40**	*e*PKP	PKPdf	11 18 38.0	+0.4
KSH				*e*PKP2	PKPdf	11 18 40.5	+2.9
KSH				APKP		11 18 48.8	
KSH				XPKP		11 18 52.8	
KSH				PP	PP	11 22 02.8	+7.5
KSH				SKS	SKSdf	11 25 41.3	-4.0
KSH				SKKS	SKKSac	11 28 48.0	+1.5
KSH				SS	SS	11 40 49.5	+6.4
KSH				PP	PP		
	comp=Z,374nm,6.5s						
KSH				LR	LR		
	comp=N,328nm,5.3s						
KSH				LR	LR		
	comp=E,435nm,5.3s						
KSH				LR	LR		
	comp=Z,502nm,5.8s						
CN2	**Changchun**	**146.02**	**332**	*e*PKP	PKPdf	11 18 43.8	+4.5
ULN	**Ulaanbaatar**	**147.00**	**357**	*i*PKP2	PKPab	11 18 41.4	-2.8
SONM	**Songino Array**	**147.06**	**358**	PKP	PKPdf	11 18 41.0	+0.1
	comp=Z,8.1nm,0.8s,baz=327,slow=1.3,SNR=48						
SONM				PKPbc	PKPbc	11 18 43.4	+0.4
	comp=Z,8.0nm,0.8s,baz=65,slow=0.4,SNR=48						
WMQ	**Urumqi**	**147.76**	**23**	*e*PKP	PKPdf	11 18 41.5	-0.7
KSRS	**Korea Array**	**149.31**	**322**	PKP	PKPdf	11 18 45.9	+0.9
	comp=Z,2.2nm,0.8s,baz=43,slow=2.0,SNR=4.4						
KSRS				PKPbc	PKPbc	11 18 50.6	+1.3
	comp=Z,2.1nm,0.7s,baz=353,slow=2.9,SNR=5.2						
BJI	**Beijing**	**152.87**	**340**	PKP	PKPdf	11 18 49.0	-1.3
BJI				SS	SS	11 42 11.3	+1.0
BJI				LR	LR		
	comp=N,545nm,25.8s,MS5.3						
BJI				LR	LR		
	comp=E,445nm,27.3s,MS5.3						
BJI				LR	LR		
	comp=Z,81nm,28.3s,MS4.4						
HHC	**Hu-ho-hao-te**	**153.35**	**348**	*e*PKP	PKPdf	11 18 48.3	-2.7
HHC				APKP		11 18 59.5	
HHC				PKS		11 22 21.5	
HHC				PP	PP	11 22 44.5	+1.4
HHC				SKS	SKSdf	11 25 49.8	-6.6
HHC				SKKS	SKKSac	11 29 28.3	-4.3
HHC				PP	PP		
	comp=Z,172nm,8.3s						
HHC				LR	LR		
	comp=N,292nm,20.5s,MS5.3						
HHC				LR	LR		
	comp=E,408nm,20.0s,MS5.3						
HHC				LR	LR		
	comp=Z,233nm,20.1s,MS5.0						
GTA	**Gaotai**	**155.18**	**9**	PKP	PKPdf	11 18 54.5	+0.9
GTA				APKP		11 19 04.0	
GTA				XPKP		11 19 08.0	
GTA				PKP2	PKPab	11 19 26.5	+8.2
GTA				PP	PP	11 23 05.8	+12
GTA				SKS	SKSdf	11 25 55.0	-3.5
GTA				PP	PP		
	comp=Z,140nm,7.5s						
GTA				LR	LR		
	comp=N,173nm,20.0s,MS5.0						
GTA				LR	LR		
	comp=E,123nm,16.9s,MS5.0						
GTA				LR	LR		
	comp=Z,153nm,17.8s,MS4.9						
LZH	**Lanzhou**	**158.83**	**1**	*e*PKP	PKPdf	11 18 58.0	-0.4
LZH				APKP		11 19 08.8	
LZH				XPKP		11 19 12.5	
LZH				PKP2	PKPab	11 19 36.0	+2.0
LZH				*e*PP	PP	11 23 17.3	+3.9
LZH				SKKS	SKKSac	11 30 00.3	-1.6
LZH				PP	PP		
	comp=Z,125nm,8.5s						
LZH				LR	LR		
	comp=E,142nm,18.1s						
LZH				LR	LR		
	comp=Z,218nm,20.2s,MS5.0						
XAN	**Xi'an**	**160.46**	**349**	PKP	PKPdf	11 18 58.5	-1.8
XAN				APKP		11 19 09.0	
XAN				PP	PP	11 23 25.0	+2.7
XAN				SKS	SKSdf	11 25 58.5	-5.5
XAN				SKKS	SKKSac	11 30 08.0	-2.5
XAN				LR	LR		
	comp=N,57nm,21.6s						
XAN				LR	LR		
	comp=E,48nm,22.4s						
XAN				LR	LR		
	comp=Z,97nm,21.0s						
CD2	**Chengdu**	**163.99**	**2**	PKP	PKPdf	11 19 02.3	-1.6
CD2				APKP		11 19 13.0	
CD2				XPKP		11 19 16.5	
CD2				PKS		11 22 34.0	
CD2				PP	PP	11 23 43.8	+2.8
CD2				SKS	SKSdf	11 26 01.5	-5.4
CD2				SKKS	SKKSac	11 30 26.0	-2.6
CD2				PP	PP		
	comp=Z,160nm,6.5s						
CD2				LR	LR		
	comp=N,370nm,5.6s						
CD2				LR	LR		
	comp=Z,400nm,5.3s						
GYA	**Guiyang**	**168.25**	**350**	PKP	PKPdf	11 19 06.3	-1.1
GYA				XPKP		11 19 20.8	
GYA				PKP2	PKPab	11 20 17.0	+1.4
GYA				PKS		11 22 35.5	
GYA				PP	PP	11 24 05.0	+1.9
GYA				SKS	SKSdf	11 26 03.5	-6.3
GYA				SKKS	SKKSac	11 30 48.3	-1.8
GYA				PP	PP		
	comp=Z,130nm,8.5s						
GYA				LR	LR		
	comp=N,180nm,25.8s						
GYA				LR	LR		
	comp=E,140nm,24.6s						
GYA				LR	LR		
	comp=Z,160nm,26.5s						

*ISCJB **31** 11:23:43.9±1.0, 38.35N±003×2589E±005, h9km±5km, Error ellipse: s-maj=7.7km s-min=4.6km az=153.2*
*CSEM **31** 11:23:43.0±0.3, 38.36N×2593E, h8km, ML3.2/2, Error ellipse: s-maj=7.5km s-min=4.8km az=76.0*
*ATH **31** 11:23:44.0, 38.37N×2596E, h45km, MD3.1/3*
*THE **31** 11:23:45.1, 38.36N×2599E, h12km, ML3.2/2, Error ellipse: s-maj=1.7km s-min=0.9km az=74.0*

ISC 31 11:23:43.6±1.0, 3834N±003×2587E±006, h5km±5km, n20, σ0≤89/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.15**	**71**	P	**Pg**	**11 23 47.4**	**+0.7**
CHOS				S	**Sg**	**11 23 49.5**	**+0.8**
URLA	**Izmir**	**0.57**	**87**	*i* P	**Pg**	**11 23 54.6**	**+0.1**
URLA				*i* S	**Sg**	**11 24 01.8**	**-0.1**
SIGR	**SIGRI**	**0.87**	**359**	P	**Pg**	**11 24 00.8**	**+0.4**
SIGR				S	**Sg**	**11 24 13.2**	**+1.4**
BLCB	**Balcova**	**0.92**	**87**	P	**Pg**	**11 24 00.8**	**-0.5**
BLCB				S	**Sg**	**11 24 12.8**	**-0.4**
PRK	**Paraskevi**	**0.96**	**19**	*e*P	**Pg**	**11 24 01.5**	**-0.6**
PRK				*e*S	**Sg**	**11 24 14.0**	**-0.5**
PRK	**Paraskevi**	**0.96**	**19**	P	**Pg**	**11 24 02.4**	**+0.3**
PRK				S	**Sg**	**11 24 15.2**	**+0.7**
SMG	**Samos**	**0.99**	**129**	*e*P	**Pg**	**11 24 02.0**	**-0.5**
SMG				*e*S	**Sg**	**11 24 15.0**	**-0.3**
AYVA	**Ayvalik**	**1.16**	**33**	*i* P	**Pg**	**11 24 05.5**	**-0.4**
AYVA	**Ayvalik**	**1.16**	**33**	*i* P	**Pg**	**11 24 05.5**	**-0.4**
AYVA				*i* S	**Sg**	**11 24 19.3**	**-1.7**
GCAM	**G?zelcami?**	**1.25**	**120**	*i* P	**Pn**	**11 24 07.2**	**-0.5**
GCAM	**G?zelcami?**	**1.25**	**120**	*i* P	**Pn**	**11 24 07.2**	**-0.5**
GCAM				*i* S	**Sg**	**11 24 22.9**	**-0.8**
APE	**Apeiranthos**	**1.29**	**192**	*e*P	**Pn**	**11 24 07.5**	**-0.8**
APE	**Apeiranthos**	**1.29**	**192**	P	**Pn**	**11 24 07.9**	**-0.4**
AKHS	**Akhisar**	**1.61**	**70**	*i* P	**Pn**	**11 24 13.2**	**+0.5**
AKHS				*i* S	**Sn**	**11 24 34.3**	**+0.4**
LIA	**Limnos Island**	**1.65**	**341**	P	**Pn**	**11 24 13.8**	**+0.6**
AYDN	**Tasoluk**	**1.72**	**112**	*i* P	**Pn**	**11 24 15.8**	**+1.6**
AYDN	**Tasoluk**	**1.72**	**112**	*i* P	**Pn**	**11 24 15.8**	**+1.6**
AYDN				*i* S	**Sn**	**11 24 37.8**	**+1.2**
MANT	**Manisa**	**2.11**	**85**	*i* P	**Pn**	**11 24 23.1**	**+3.4**
MANT	**Manisa**	**2.11**	**85**	*i* P	**Pn**	**11 24 23.0**	**+3.4**
ALN	**Alexandroupoli**	**2.56**	**3**	P	**Pn**	**11 24 25.2**	**-0.6**
ALN				S	**Sn**	**11 24 55.4**	**-1.9**

*IDC **31** 11:49:22.8±2.2, 3612N×6676E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/24, mbtmp3.4/7, ML3.1/3, Error ellipse: s-maj=42.1km s-min=24.3km az=49.0*
*NEIC **31** 11:49:25.3±1.0, 3638N×6679E, h10km, mb3.7/1, Error ellipse: s-maj=15.7km s-min=9.6km az=64.0*
*ISCJB **31** 11:49:27.0±0.7, 3652N±004×6683E±007, h33km, mb3.4/5, Error ellipse: s-maj=8.0km s-min=5.7km az=154.1*
*NNC **31** 11:49:29.2±5.1, 3684N×6674E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=50.5km s-min=32.4km az=168.0*

ISC 31 11:49:28.3±0.7, 3644N±004×6670E±007, h35km, n24, σ1≤08/32, mb3.4/5, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.69**	**134**	*e*Pn	**Pn**	**11 50 08.1**	**-1.1**
KBL				*e*Sn	**Sn**	**11 50 39.9**	**-0.6**
KK31	**Karatay Array**	**7.27**	**23**	Pn	**Pn**	**11 51 13.4**	**+1.4**
	1.1nm,0.3s,baz=210,slow=15,SNR=28						
KK31				⇓Sn	**Sn**	**11 52 31.9**	**-1.4**
	1.3nm,0.3s,baz=208,slow=22,SNR=5.6						
AML	**Almayashu**	**7.85**	**42**	*e*Pn	**Pn**	**11 51 20.0**	**+0.1**
AML				*e*Sn	**Sn**	**11 52 48.2**	**+0.6**
EKS2	**Erkin-Say**	**8.27**	**39**	*e*Pn	**Pn**	**11 51 26.0**	**+0.3**
EKS2				*e*Sn	**Sn**	**11 52 57.8**	**0.0**
AAK	**Ala-Archa**	**8.63**	**42**	*e*Pn	**Pn**	**11 51 30.7**	**+0.1**
TKM2	**Tokmak 2**	**9.42**	**44**	⇓Pn	**Pn**	**11 51 41.4**	**-0.2**
	5.7nm,0.8s						
TKM2				⇑Sn	**Sn**	**11 53 26.2**	**+0.1**
	5.7nm,0.8s						
TKM2	**Tokmak 2**	**9.42**	**44**	*e*Pn	**Pn**	**11 51 40.5**	**-1.1**
AB09	**Akbulak array**	**13.73**	**341**	⇓P	**Pn**	**11 52 39.9**	**-0.5**
	0.8nm,0.5s						
AKTK	**Aktyubinsk**	**15.33**	**339**	Pn	**Pn**	**11 53 02.4**	**+0.6**
AKTK				Sn	**Sn**	**11 55 48.5**	**-1.8**
AKTO	**Aktyubinsk**	**15.33**	**339**	⇑P	**Pn**	**11 53 02.0**	**+0.2**
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**15.33**	**339**	Pn	**Pn**	**11 53 02.4**	**+0.6**
	0.3nm,0.3s,baz=157,slow=13,SNR=5.3						
AKTO				Sn	**Sn**	**11 55 48.5**	**-1.8**
	0.2nm,0.3s,baz=28,slow=15,SNR=3.6						
MK31	**Makanchi Array**	**15.56**	**44**	⇓P	**Pn**	**11 53 01.6**	**-3.2**
	0.8nm,0.7s,baz=221,slow=9.4,SNR=6.0						
MKAR	**Makanchi Array**	**15.56**	**44**	Pn	**Pn**	**11 53 04.0**	**-0.9**
	0.0nm,0.3s,baz=229,slow=14,SNR=4.4						
KURBB	**Kurchatov Arra**	**16.54**	**27**	⇑P	**Pn**	**11 53 19.1**	**+1.8**
	0.3nm,0.6s						
KURK	**Kurchatov**	**16.64**	**27**	Pn	**Pn**	**11 53 14.3**	**-4.4**
	0.0nm,0.3s,baz=212,slow=12,SNR=3.1						
BVA0	**Borovoye Array**	**16.78**	**8**	⇑P	**Pn**	**11 53 21.3**	**+0.9**
	0.4nm,0.6s,baz=183,slow=14,SNR=17						
BVAR	**Borovoye Array**	**16.78**	**8**	Pn	**Pn**	**11 53 20.3**	**-0.2**
	0.8nm,0.3s,baz=179,slow=11,SNR=11						
BVAR				Sn	**Sn**	**11 56 17.8**	**-7.8**
	0.2nm,0.3s,baz=172,slow=24,SNR=3.9						
BRVK	**Borovoye**	**16.80**	**7**	*e*Pn	**Pn**	**11 53 21.1**	**+0.4**
	4.4nm,0.6s						
ZAA0	**Zalesovo Array**	**21.56**	**30**	*e*P	**P**	**11 54 16.9**	**+2.4**
ZALV	**Zalesovo Beam**	**21.56**	**30**	P	**P**	**11 54 14.3**	**-0.1**
	1.3nm,0.6s,mb3.5,baz=226,slow=12,SNR=6.6						
SONM	**Songino Array**	**31.23**	**56**	P	**P**	**11 55 49.3**	**+5.0**
	0.2nm,0.6s,mb3.1,baz=270,slow=11,SNR=3.0						
CMAR	**Chiang Mai Arr**	**33.54**	**114**	P	**P**	**11 56 03.8**	**-1.1**
	0.2nm,0.4s,mb3.4,baz=308,slow=8.9,SNR=3.0						
ARCES	**ARCESS Array B**	**39.91**	**339**	P	**P**	**11 57 00.1**	**+1.6**
	1.8nm,0.8s,mb3.9,baz=126,slow=9.2,SNR=3.8						
YKA	**Yellowknife Ar**	**81.40**	**1**	P	**P**	**12 01 42.1**	**+1.0**
	0.2nm,0.7s,mb3.2,baz=351,slow=5.4,SNR=5.6						

*CSEM **31** 12:12:31.3, 3075N×3561E, h1km, ML2.6, After SNSN*
*SGS **31** 12:12:31.3, 3075N×3561E, h1km*
*ISCJB **31** 12:12:34.7±1.4, 3030N±005×3592E±010, h0km, Error ellipse: s-maj=12.4km s-min=7.4km az=175.4*
*GII **31** 12:12:36.2±1.3, 3027N×3582E, h0km, EXPLOSION*

ISC 31 12:12:33.6±1.9, 3036N±009×360E±01, h0km, n13, σ0≤78/15, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRNI	**Paran**	**0.87**	**269**	Pg	**Pg**	**12 12 50.8**	**+0.6**
HRFI	**Mount Harif**	**0.90**	**249**	Pg	**Pg**	**12 12 51.7**	**+0.8**
AQBJ	**Aqaba**	**1.04**	**233**	Pg	**Pg**	**12 12 54.1**	**+0.5**
MZDA	**Masada**	**1.09**	**330**	Pg	**Pg**	**12 12 58.2**	**+3.6**
MBRI	**Mt Berech**	**1.10**	**239**	Pg	**Pg**	**12 12 54.3**	**-0.5**
KRMI	**Paran Flat**	**1.14**	**258**	Pg	**Pg**	**12 12 54.8**	**-0.6**
EIL	**Elat**	**1.15**	**233**	Pg	**Pg**	**12 12 54.7**	**-0.9**
EIL				Sg	**Sg**	**12 13 10.1**	**-0.3**
JLOS		**1.68**	**196**	P	**Pn**	**12 13 04.5**	**+0.2**
JLOS		**1.68**	**196**	P	**Pn**	**12 13 04.5**	**+0.2**
JLOS				S	**Sn**	**12 13 26.5**	**-0.1**
BDAS	**Al Bad'**	**2.08**	**203**	S	**Sn**	**12 13 37.8**	**+1.4**
BDAS	**Al Bad'**	**2.08**	**203**	P	**Pn**	**12 13 09.4**	**-0.4**
TBKS	**Tabuk**	**2.19**	**168**	S	**Sn**	**12 13 45.0**	**+6.0**
RSHS		**2.31**	**207**	P	**Pn**	**12 13 12.0**	**-1.0**

*SGS **31** 12:16:36.6, 3031N×3628E, h1km*
*CSEM **31** 12:16:38.0±0.6, 2989N×3653E, h10km, ML3.0, Error ellipse: s-maj=12.4km s-min=6.8km az=64.0*
*HLW **31** 12:16:38.5, 2992N×3659E, h10km, Mb3.0*
*GII **31** 12:16:39.8±0.0, 2981N×3633E, h0km, ML2.1/3, EXPLOSION*
*ISCJB **31** 12:16:40.1±0.8, 2987N±004×3630E±005, h0km, Error ellipse: s-maj=6.9km s-min=5.2km az=167.8*

ISC 31 12:16:40.3±0.8, 2987N±004×3633E±006, h0km, n24, σ0≤86/29, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.12**	**263**	Pg	**Pg**	**12 17 01.2**	**-0.6**
HRFI	**Mount Harif**	**1.13**	**279**	Pg	**Pg**	**12 17 01.3**	**-0.8**
EIL	**Elat**	**1.21**	**261**	Pg	**Pg**	**12 17 02.8**	**-0.8**
EIL				Sg	**Sg**	**12 17 20.3**	**+0.9**
MBRI	**Mt Berech**	**1.23**	**267**	Pg	**Pg**	**12 17 03.0**	**-0.9**
MBRI				Sg	**Sg**	**12 17 20.2**	**+0.3**
PRNI	**Paran**	**1.24**	**293**	Pg	**Pg**	**12 17 02.8**	**-1.4**
JLOS		**1.34**	**213**	P	**Pg**	**12 17 05.7**	**-0.4**
JLOS		**1.34**	**213**	P	**Pg**	**12 17 05.7**	**-0.4**
JLOS				S	**Sg**	**12 17 24.3**	**+0.8**
KRMI	**Paran Flat**	**1.41**	**281**	Pn	**Pn**	**12 17 06.5**	**-0.7**
HBST	**Basata**	**1.53**	**245**	P	**Pn**	**12 17 08.5**	**-0.5**
TBKS	**Tabuk**	**1.65**	**173**	S	**Sn**	**12 17 36.9**	**+4.4**
TBKS	**Tabuk**	**1.65**	**173**	P	**Pn**	**12 17 11.0**	**+0.4**
BDAS	**Al Bad'**	**1.79**	**217**	S	**Sn**	**12 17 38.0**	**+2.0**
BDAS	**Al Bad'**	**1.79**	**217**	P	**Pn**	**12 17 12.1**	**-0.4**
YTIR	**Yattir**	**1.82**	**325**	Pn	**Pn**	**12 17 13.3**	**+0.3**
RTMI	**Retamim**	**1.84**	**310**	Pn	**Pn**	**12 17 13.6**	**+0.4**
DSI	**Dead Sea**	**1.88**	**335**	Pn	**Pn**	**12 17 14.5**	**+0.8**
DSI				Sn	**Sn**	**12 17 40.3**	**+2.1**
HNKL	**Nakhl**	**2.04**	**272**	P	**Pn**	**12 17 16.1**	**+0.2**
HNKL				S	**Sn**	**12 17 43.4**	**+1.3**
RSHS		**2.06**	**221**	P	**Pn**	**12 17 15.1**	**-1.1**
HKAT	**Jabal Katrina**	**2.44**	**237**	P	**Pn**	**12 17 21.2**	**-0.2**
TR2		**2.72**	**238**	P	**Pn**	**12 17 24.6**	**-0.6**
TR1		**2.79**	**229**	P	**Pn**	**12 17 26.0**	**-0.2**
AMAG	**Maghara**	**2.81**	**287**	P	**Pn**	**12 17 25.6**	**-0.9**
SUZ		**3.04**	**270**	P	**Pn**	**12 17 29.6**	**0.0**
BIDS	**Bi'r al Bayda'**	**3.04**	**169**	P	**Pn**	**12 17 30.3**	**+0.6**

*CASC **31** 12:41:49.7±2.4, 1237N×8905W, h17km±9km, MD4.1, ML3.6, mb4.7(NEIC)*
*ISCJB **31** 12:41:52.9±0.7, 1254N±006×8890W±005, h62km±6km, mb4.5/38, Error ellipse: s-maj=12.5km s-min=5.0km az=36.3*
*BJI **31** 12:41:53.5, 1260N×8880W, h59km, mB5.2, Ms5.3, Msz4.6*
*IDC **31** 12:41:54.1±3.3, 1270N×8871W, h51km±28km, mb4.1/11, mb1 4.3/13, mb1mx4.1/24, mbtmp4.1/13, ML3.8/2, MS3.8/13, Ms1 3.7/13, ms1mx3.5/31, Error ellipse: s-maj=29.6km s-min=14.5km az=40.0*
*NEIC **31** 12:41:54.6±1.5, 1259N×8877W, h60km±11km, mb4.7/31, Error ellipse: s-maj=15.2km s-min=8.3km az=212.0*

ISC 31 12:41:54.7±0.6, 1260N±006×8885W±005, h59km±6km, n107, σ1≤09/85, mb4.5/38, MS3.9/16, 4C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLLM	**Bellamira**	**1.03**	**35⇑**	*e*P	x	12 42 12.8	
BLLM				*e*S	x	12 42 31.7	
CNCH	**Conchagua**	**1.20**	**56**	*e*P	x	12 42 14.5	
CNCH				*e*S	x	12 42 36.0	
CAHU	**Cacacuatique**	**1.32**	**28⇑**	*e*P	x	12 42 17.4	
CAHU				*e*S	x	12 42 40.2	
SBLS	**San Blas**	**1.45**	**329**	*e*P	x	12 42 15.8	
SNJE	**San Jose**	**1.46**	**330**	*e*P	x	12 42 15.9	
SNJE				*e*S	x	12 42 39.6	
RTR	**El Retiro**	**1.51**	**329**	*e*P	x	12 42 17.1	
RTR				*e*S	x	12 42 39.6	
CRIN	**San Cristobal**	**1.76**	**87**	*e*P	**Pn**	**12 42 22.9**	**+0.1**
MTO2	**Montecristo 2**	**1.86**	**344**	*e*P	x	12 42 23.1	
MTO2				*e*S	x	12 42 50.5	
MTO2				*e*S	x	12 42 50.8	
CNGN	**Cerro Negro**	**2.10**	**92**	*e*P	**Pn**	**12 42 25.8**	**-1.7**
CNGN				*e*S	**Sn**	**12 42 53.9**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.11**	**46**	*e*P	**Pn**	**12 42 28.7**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.11**	**46**	*e*Pn	**Pn**	**12 42 28.7**	**+1.0**
COPN	**Copaltepe**	**2.24**	**100**	*e*P	**Pn**	**12 42 27.6**	**-1.9**
COPN				*e*S	**Sn**	**12 42 57.2**	**+1.1**
MOMN	**Momotombo**	**2.26**	**95**	*e*P	**Pn**	**12 42 28.8**	**-0.9**
NBG	**Las Nubes**	**2.46**	**324**	*e*P	**Pn**	**12 42 32.2**	**-0.2**
APYN	**Apoyeque**	**2.47**	**98**	*e*P	**Pn**	**12 42 32.0**	**-0.5**
XAVN	**Gruta Xavier**	**2.50**	**100**	*e*P	**Pn**	**12 42 32.8**	**-0.3**
MGAN	**Managua**	**2.58**	**100**	*e*P	**Pn**	**12 42 33.5**	**-0.5**
MGAN				*e*S	**Sn**	**12 43 06.0**	**+1.7**
WILN	**Americas 2**	**2.64**	**99**	*e*P	**Pn**	**12 42 34.3**	**-0.5**
WILN				AML	AML	12 43 16.1	
	comp=N,396nm,0.7s						
FUG	**Fuego 3**	**2.67**	**314**	*e*P	**Pn**	**12 42 33.2**	**-2.1**
FUG				*e*S	**Sn**	**12 43 09.3**	**+2.7**
APON	**Apoyo**	**2.80**	**104**	*e*P	**Pn**	**12 42 36.8**	**-0.3**
CONN	**Concepcion**	**3.31**	**108**	*e*P	**Pn**	**12 42 43.4**	**-0.8**
JCR	**Jicaral**	**4.57**	**126**	*e*P	**Pn**	**12 43 00.7**	**-0.6**
PRS1	**Puriscal**	**5.15**	**120**	*e*P	**Pn**	**12 43 10.8**	**+1.5**
LAJ	**Bijagual**	**5.38**	**120**	*e*P	**Pn**	**12 43 09.1**	**-3.3**
QCR	**Quepos**	**5.58**	**124⇑**	*e*P	**Pn**	**12 43 15.0**	**-0.1**
QCR				*e*S	**Sn**	**12 44 12.7**	**-5.2**
URSC	**Urasca**	**5.68**	**118⇑**	*e*P	**Pn**	**12 43 18.9**	**+2.3**
URSC				*e*S	**Sn**	**12 44 21.6**	**+1.1**
BAR1		**6.38**	**121**	*e*P	**Pn**	**12 43 26.2**	**+0.1**
BAR1				*e*S	**Sn**	**12 44 31.6**	**-6.0**
ACR	**Cerro Adams**	**6.82**	**125**	*e*P	**Pn**	**12 43 32.8**	**+0.6**
CMIG	**Matias Romero**	**7.35**	**308**	P	**Pn**	**12 43 37.8**	**-1.6**
	comp=N,1.0nm,0.3s,baz=138,slow=8.4,SNR=23						
CMIG				S	**Sn**	**12 44 54.2**	**-7.1**
	comp=N,0.3nm,0.3s,baz=197,slow=19,SNR=1.3						
TEIG	**Tepich**	**7.60**	**4**	P	**Pn**	**12 43 43.3**	**+0.5**
	comp=N,0.7nm,0.3s,baz=178,slow=11,SNR=4.7						
TEIG				LR	LR	12 47 01.4	
	comp=N,826nm,18.7s,baz=130,slow=41						
TEIG	**Tepich**	**7.60**	**4**	P	**Pn**	**12 43 43.3**	**+0.4**
TEIG				LR	LR	12 47 01.4	
CHI2		**16.89**	**117**	*e*P	x	12 42 22.2	
SDV	**Santo Domingo**	**18.27**	**100**	P	**Pn**	**12 46 02.7**	**-1.5**
	comp=N,0.5nm,0.3s,baz=312,slow=9.4,SNR=9.7						
SDV	**Santo Domingo**	**18.27**	**100**	*e*Pn	**Pn**	**12 46 01.3**	**-2.9**
	comp=N,6.3nm,0.7s						
VBMS	**Vicksburg**	**19.59**	**356**	*e*Pn	**Pn**	**12 46 17.9**	**-1.8**
	comp=N,62nm,0.7s						
NATX	**Nacogdoches**	**19.81**	**345**	*e*P	**Pn**	**12 46 21.7**	**-0.7**
	comp=N,28nm,0.8s						
LRAL	**Lakeview Retre**	**20.41**	**4**	*e*P	**P**	**12 46 28.4**	**+1.5**
	comp=N,14nm,0.8s						
JCT	**Junction City**	**20.48**	**332**	*e*P	**P**	**12 46 27.5**	**-0.1**
	comp=N,34nm,0.8s						
GOGA	**Godfrey**	**21.29**	**12**	*e*P	**P**	**12 46 37.2**	**+0.8**
	comp=N,18nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**21.61**	**323**	P	**P**	**12 46 40.5**	**+0.6**
	comp=N,19nm,0.8s,mb4.6,baz=146,slow=11,SNR=205						
OXF	**Oxford**	**21.82**	**359**	*e*P	**P**	**12 46 42.1**	**+0.1**
	comp=N,46nm,0.9s,mb4.9						
ATAH	**Atahualpa**	**22.07**	**151**	LR	LR	12 54 25.2	
	comp=N,158nm,19.2s,MS3.5,baz=135,slow=34						
MIAR	**Mount Ida**	**22.27**	**350**	*e*P	**P**	**12 46 47.4**	**+0.7**
	comp=N,73nm,0.8s,mb5.2						
UALR	**University of**	**22.30**	**352**	*e*P	**P**	**12 46 47.6**	**+0.4**
	comp=N,27nm,0.7s,mb4.8						
SWET	**Sewanee**	**22.67**	**6**	*e*P	**P**	**12 46 51.6**	**+0.5**
LHS	**Liberty Hill**	**22.97**	**17**	*e*P	**P**	**12 46 52.8**	**-1.4**
LPIG	**La Paz**	**23.32**	**302**	LR	LR	12 57 17.1	
	comp=N,314nm,18.3s,MS3.8,baz=70,slow=40						
TKL	**Tuckaleechee C**	**23.41**	**10**	P	**P**	**12 46 59.1**	**+0.6**
	comp=N,23nm,0.7s,mb4.7,baz=186,slow=12,SNR=30						
TKL				LR	LR	12 57 42.2	
	comp=N,136nm,18.1s,MS3.5,baz=5.9,slow=41						
TKL	**Tuckaleechee C**	**23.41**	**10**	*e*P	**P**	**12 46 58.7**	**+0.2**
WMOK	**Wichita Mounta**	**23.81**	**339**	*e*P	**P**	**12 47 01.2**	**-1.0**
	comp=N,14nm,1.0s,mb4.3						
PCRV	**Puerto La Cruz**	**23.85**	**93**	P	**P**	**12 47 03.8**	**+1.0**
	comp=N,8.5nm,0.7s,mb4.3,baz=239,slow=8.8,SNR=5.6						
PARMO	**Parma**	**23.98**	**358**	*e*P	**P**	**12 47 05.2**	**+1.5**
SIUC	**Southern Illin**	**25.01**	**359**	*e*P	**P**	**12 47 13.3**	**+0.3**
	comp=N,19nm,0.7s,mb4.7						
AMTX	**Amarillo**	**25.05**	**334**	*

YKA	**Yellowknife Ar**	**53.12**	**345**	P	**P**	**12**	**51**	**05.0 -1.0**
	comp=N,3.3nm,0.8s,mb4.3,baz=140,slow=7.7,SNR=59							
YKA				PcP	PcP	12	52	13.9 +0.4
	comp=N,0.4nm,0.6s,baz=148,slow=4.0,SNR=5.4							
YKA				LR	LR	13	17	55.2
	comp=N,8.4nm,18.3s,MS2.8,baz=200,slow=41							
YKA	**Yellowknife Ar**	**53.12**	**345**	P	**P**	**12**	**51**	**05.0 -0.9**
YKA				PcP	PcP	12	52	13.9 +0.4
YKA				LR	LR	13	17	55.2
PLCA	**Paso Flores**	**55.70**	**163**	LR	LR	13	13	12.8
	comp=N,55nm,18.0s,MS3.7,baz=0.6,slow=34							
USHA	**Ushuaia**	**69.36**	**168**	LR	LR	13	16	52.8
	comp=N,150nm,18.4s,MS4.3,baz=251,slow=30							
ESDC	**Sonseca Array**	**78.17**	**52**	P	**P**	**12**	**53**	**46.8 -1.2**
	comp=N,0.7nm,0.5s,mb3.8,baz=283,slow=5.2,SNR=6.5							
ARCES	**ARCESS Array B**	**86.48**	**19**	LR	LR	13	37	08.4
	comp=N,59nm,18.9s,MS4.0,baz=6.4,slow=38							
TORD	**Torodi Ar. Bea**	**87.71**	**77**	P	**P**	**12**	**54**	**36.7 -1.0**
	comp=N,0.2nm,0.7s,mb3.4,baz=292,slow=5.3,SNR=3.7							
GERES	**GERESS Array B**	**88.71**	**40**	LR	LR	13	32	57.9
	comp=N,95nm,18.6s,MS4.2,baz=284,slow=35							
CN2	**Changchun**	**115.75**	**333**	*e*PKP	PKPdf	13	00	28.0 -2.7
SONM	**Songino Array**	**118.32**	**348**	PKP	PKPdf	13	00	36.5 +1.0
	comp=N,0.3nm,0.7s,baz=312,slow=1.5,SNR=3.3							
MKAR	**Makanchi Array**	**120.35**	**7**	PKP	PKPdf	13	00	39.8 +0.3
	comp=N,0.1nm,0.4s,baz=355,slow=3.3,SNR=4.0							
BJI	**Beijing**	**122.70**	**337**	PKP	PKPdf	13	00	43.0 -1.2
BJI				SS	SS	13	18	57.5 -0.8
BJI				LR	LR			
	comp=N,313nm,24.7s,MS5.1							
BJI				LR	LR			
	comp=E,427nm,26.1s,MS5.1							
BJI				LR	LR			
	comp=Z,45nm,22.4s,MS4.1							
HHC	**Hu-ho-hao-te**	**123.56**	**341**	*e*PKP	PKPdf	13	00	42.5 -3.3
HHC				PP	PP	13	02	27.5 +0.6
HHC				PKS		13	04	17.8
HHC				SKS	SKSdf	13	07	43.3 -10
HHC				PP	PP			
	comp=Z,150nm,5.2s							
HHC				LR	LR			
	comp=N,239nm,17.8s,MS5.0							
HHC				LR	LR			
	comp=E,208nm,17.8s,MS5.0							
HHC				LR	LR			
	comp=Z,118nm,16.7s,MS4.6							
WMQ	**Urumqi**	**123.77**	**3**	*e*PKP	PKPdf	13	00	44.0 -2.1
GTA	**Gaotai**	**127.63**	**352**	*e*PKP	PKPdf	13	00	56.0 +2.3
LZH	**Lanzhou**	**130.12**	**347**	*e*PKP	PKPdf	13	00	55.0 -3.5
LZH				LR	LR			
	comp=N,109nm,18.0s							
LZH				LR	LR			
	comp=Z,167nm,20.3s,MS4.7							
XAN	**Xi'an**	**130.63**	**340**	PKP	PKPdf	13	00	56.0 -3.5
XAN				PP	PP	13	03	16.0 +2.4
XAN				SKS	SKSdf	13	07	56.0 -10
XAN				SKKS	SKKSac	13	09	56.8 -10
XAN				LR	LR			
	comp=Z,40nm,23.1s,MS4.0							
CD2	**Chengdu**	**135.08**	**345**	PKP	PKPdf	13	01	04.8 -3.2
WRA	**Warramunga Arr**	**138.00**	**254**	PKP	PKPdf	13	01	13.4 -0.2
	comp=Z,0.9nm,1.0s,baz=81,slow=2.1,SNR=3.6							
ASAR	**Alice Springs**	**138.05**	**249**	PKP	PKPdf	13	01	12.4 -1.2
	comp=Z,0.2nm,0.6s,baz=88,slow=2.9,SNR=6.3							
GYA	**Guiyang**	**138.35**	**339**	PKP	PKPdf	13	01	12.0 -2.2
GYA				PP	PP	13	04	06.3 +3.7
GYA				PP	PP			
	comp=Z,80nm,7.8s							
CMAR	**Chiang Mai Arr**	**148.20**	**346**	PKPbc	PKPbc	13	01	33.4 -1.5
	comp=Z,4.7nm,0.8s,baz=324,slow=2.6,SNR=30							

*GRAL **31** 12:45:13.9±0.3,3347N×3659E,h28km±25km, MD2.9*
*GII **31** 12:45:15.3±0.0,3363N×3647E,h0km, ML2.2/2, EXPLOSION*

ISC 31 12:45:14.7±1.5,3362N±005×3655E±009,h0km,n11, σ0§72/17,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	**0.62**	**258**	*e*P	**Pg**	**12 45 25.6**	**-1.0**
RCY				*e*S	**Sg**	**12 45 34.2**	**-0.4**
RCY	**Rachaya**	**0.62**	**258**	*e*P	**Pg**	**12 45 25.6**	**-1.0**
RCY				*e*S	**Sg**	**12 45 34.2**	**-0.5**
BHL	**Bhannes**	**0.80**	**291**	*e*P	**Pg**	**12 45 29.7**	**-0.3**
BHL				*e*S	**Sg**	**12 45 41.4**	**+1.0**
HWQ	**Hawqa**	**0.83**	**323**	*e*P	**Pg**	**12 45 30.9**	**+0.3**
KSDI	**Kefar Szold**	**0.85**	**241**	Pg	**Pg**	**12 45 30.6**	**-0.5**
KSDI				Sg	**Sg**	**12 45 43.0**	**+0.9**
KSHT	**Keshet**	**0.88**	**224**	Pg	**Pg**	**12 45 31.6**	**-0.1**
MMC3	**Mount Meron ar**	**1.12**	**238**	Pg	**Pg**	**12 45 35.6**	**-0.6**
MMC5	**Mount Meron ar**	**1.13**	**238**	Pg	**Pg**	**12 45 35.6**	**-0.7**
MMA0B	**Mount Meron ar**	**1.13**	**238**	Pg	**Pg**	**12 45 35.6**	**-0.8**
MMLI	**Mount Malkishu**	**1.51**	**219**	Pn	**Pn**	**12 45 43.0**	**0.0**
MMLI				Sn	**Sn**	**12 46 03.1**	**-0.2**
HMDT	**Nahal Hemdat**	**1.61**	**213**	Pn	**Pn**	**12 45 45.3**	**+1.0**
HMDT				Sn	**Sn**	**12 46 07.1**	**+1.3**

*IDC **31** 13:11:53.7±2.8,2562S×17666W,h0km,mb4.1/4, mb1 4.3/4,mb1mx4.0/15,mbtmp4.1/4,MS3.1/1,Ms1 3.1/1, ms1mx2.7/21,Error ellipse: s-maj=151.9km s-min=36.2km az=157.0*

NEIC 31 13:11:58.7±1.8,2575S×17663W,h35km,mb4.2/1,Error ellipse: s-maj=105.0km s-min=24.3km az=161.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**34.57**	**272**	P	P	13	18	45.6 +1.4
	2.8nm,0.6s,baz=104,slow=2.8,SNR=6.8							
CTA				LR	LR	13	29	21.2
	comp=Z,31nm,21.0s,baz=17,slow=30							
CTAO	**Charters Tower**	**34.57**	**272**	*e*P	P	13	18	45.8 +1.5
STKA	**Stephens Creek**	**36.94**	**251**	P	P	13	19	05.7 +1.2
	2.8nm,1.1s,baz=112,slow=13,SNR=4.7							
ASAR	**Alice Springs**	**44.78**	**262**	P	P	13	20	08.2 -0.9
	1.4nm,0.4s,baz=88,slow=7.0,SNR=36							
WB2	**Warramunga Arr**	**45.34**	**267**	*e*P	P	13	20	12.3 -1.3
WRAB	**Tennant Creek**	**45.34**	**267**	*e*P	P	13	20	12.7 -0.9
	1.4nm,0.5s							
WRA	**Warramunga Arr**	**45.35**	**267**	P	P	13	20	12.7 -1.0
	1.3nm,0.5s,baz=103,slow=7.7,SNR=29							
MKAR	**Makanchi Array**	**115.66**	**312**	PKP	PKPdf	13	30	37.3 +0.4
	0.3nm,0.8s,baz=161,slow=2.6,SNR=4.3							
NB2	**NORSAR Subarra1**	**44.32**	**353**	PKP	PKPdf	13	31	29.6 -0.8
	comp=Z,12nm,1.7s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**44.32**	**353**	PKP	PKPdf	13	31	30.5 +0.1
	comp=Z,2.3nm,0.7s,baz=4.3,slow=2.3,SNR=9.8							
AKASG	**Malin Array Be**	**148.16**	**328**	PKPbc	PKPbc	13	31	40.0 -0.5
	comp=Z,0.1nm,0.2s,baz=336,slow=2.1,SNR=4.5							
BRTR	**Keskin Array B**	**151.13**	**306**	PKPbc	PKPbc	13	31	49.2 +1.0
	comp=Z,0.7nm,0.6s,baz=90,slow=2.7,SNR=4.7							

MAN 31 13:12:30,1186N×12221E,h1km,mb3.9,ML2.7,MS2.3, 1C,Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	**0.54**	**340**	*e*P	Pg	13	12	41.1 +0.8
OTRP				*e*S	Sg	13	12	48.8 +1.5
RCP	**Roxas**	**0.60**	**119↑**	*e*P	Pg	13	12	41.9 +0.4
RCP				*e*S	Sg	13	12	50.5 +1.2
SJMP	**San Jose**	**1.23**	**299**	*e*P	Pg	13	12	54.8 +1.2
SJMP				*e*S	Sg	13	13	12.1 +2.6
GUIM	**Jordan**	**1.28**	**163**	*e*P	Pg	13	12	55.0 +0.5
GUIM				*e*S	Sg	13	13	15.0 +3.9
CUYO	**Cuyo Island**	**1.54**	**230**	*e*P	Pn	13	12	59.1 +0.5
CUYO				*e*S	Sn	13	13	18.9 -0.4
BUSP	**Coron**	**1.98**	**274**	*e*P	Pn	13	13	05.6 +1.0
BUSP				*e*S	Sn	13	13	38.3 +8.3

IDC 31 13:12:53.7±2.6,5173N×17839E,h0km,mb3.2/4, mb1 3.5/4,mb1mx3.3/23,mbtmp3.2/4,Error ellipse: s-maj=97.5km s-min=25.6km az=3.0,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YKA	**Yellowknife Ar**	**36.26**	**46**	P	P	13	19	58.2 +0.1
	0.3nm,0.6s,baz=283,slow=8.2,SNR=6.1							
SONM	**Songino Array**	**44.91**	**295**	P	P	13	21	11.1 +1.4
	0.5nm,1.1s,baz=56,slow=6.7,SNR=2.7							
MKAR	**Makanchi Array**	**58.43**	**307**	P	P	13	22	49.2 -1.6
	0.1nm,0.3s,baz=54,slow=6.8,SNR=4.8							
TXAR	**Lajitas Array**	**60.33**	**79**	P	P	13	23	04.4 +0.2
	0.1nm,0.3s,baz=312,slow=5.8,SNR=3.4							

IDC 31 13:14:01.9±2.0,107S×12757E,h0km,mb3.2/2,mb1 3.4/3, mb1mx3.3/16,mbtmp3.2/3,ML3.2/1,Error ellipse: s-maj=155.9km s-min=25.6km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.89**	**161**	P	Pn	13	18	34.8 -1.7
	0.1nm,0.3s,baz=340,slow=11,SNR=7.5							
ASAR	**Alice Springs**	**23.28**	**165**	P	P	13	19	11.7 +0.2
	0.5nm,0.7s,baz=345,slow=12,SNR=7.4							
MKAR	**Makanchi Array**	**61.98**	**326**	P	P	13	24	23.8 0.0
	0.1nm,0.4s,baz=108,slow=8.1,SNR=3.3							

IDC 31 14:00:22.4±2.2,591S×15272E,h0km,mb3.7/4,mb1 3.8/5, mb1mx3.6/17,mbtmp3.7/5,ML2.4/1,Error ellipse: s-maj=69.5km s-min=27.8km az=109.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.52**	**237**	Pn	Pn	14	01	57.9 -1.7
	0.5nm,0.3s,baz=328,slow=19,SNR=2.5							
PMG				Sn	Sn	14	03	18.9 +4.2
	6.1nm,0.3s,baz=2.9,slow=16,SNR=8.2							
WRA	**Warramunga Arr**	**22.67**	**230**	P	P	14	05	26.1 +0.7
	1.0nm,0.5s,baz=56,slow=10,SNR=12							
ASAR	**Alice Springs**	**25.29**	**224**	P	P	14	05	51.2 +0.5
	0.9nm,0.6s,baz=58,slow=9.3,SNR=22							
STKA	**Stephens Creek**	**27.86**	**201**	P	P	14	06	13.7 0.0
	1.7nm,0.8s,baz=10,slow=14,SNR=2.9							
MKAR	**Makanchi Array**	**81.10**	**319**	P	P	14	12	40.1 +0.6
	0.5nm,0.9s,baz=99,slow=8.9,SNR=3.6							
TORD	**Torodi Ar. Bea**	**150.56**	**286**	PKPbc	PKPbc	14	20	16.6 -0.7
	1.2nm,0.7s,baz=72,slow=3.0,SNR=7.6							
TORD				PKPab	PKPab	14	20	22.9 -1.0
	0.6nm,0.7s,baz=56,slow=3.9,SNR=4.4							

*CSEM **31** 14:01:48.5,3796N×3478E,h6km,MD2.9,After ISK*
ISK 31 14:01:48.5,3796N×3478E,h6km,MD2.9,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIG	**Nigde**	**0.20**	**320**	PG	Pg	14	01	53.1 +0.5
GULE	**Gulek**	**0.67**	**180**	*i* P	Px	14	01	40.7
KARA	**Karaisali**	**0.73**	**162**	*e*PG	Pg	14	02	02.9 +0.4
KARA				*e*SG	Sg	14	02	13.5 +1.6
AVNT	**Avonos**	**0.83**	**4**	*i* P	Pg	14	01	59.5 -4.9
KOZT	**Kozan**	**0.96**	**119**	*e*PG	Pg	14	02	07.5 +0.6
MERS	**Mersin**	**1.10**	**191**	*e*PN	Pn	14	02	10.2 -0.2
SARI	**SarD1z-Kayseri**	**1.68**	**64**	*e*PN	Pn	14	02	14.8 -3.5
CDAG	**Cicekdag**	**1.70**	**349**	*i* P	Pn	14	02	19.2 +0.6
CDAG				*i* S	Sn	14	02	43.9 +3.3

*CSEM **31** 14:05:10.9,3797N×3480E,h5km,MD2.8,After ISK*
ISK 31 14:05:10.9,3797N×3480E,h5km,MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIG	**Nigde**	**0.21**	**314**	*e*PG	Pg	14	05	15.9 +0.9
GULE	**Gulek**	**0.68**	**182**	*i* P	Px	14	05	03.7
KARA	**Karaisali**	**0.73**	**164**	*e*PG	Pg	14	05	26.2 +1.3
KARA				*e*SG	Sg	14	05	37.7 +3.2
AVNT	**Avonos**	**0.81**	**3**	*i* P	Pg	14	05	22.2 -4.4
KOZT	**Kozan**	**0.95**	**120**	*e*PG	Pg	14	05	30.1 +1.0
KOZT				*e*SG	Sg	14	05	44.3 +2.9
SARI	**SarD1z-Kayseri**	**1.65**	**64**	*e*PN	Pn	14	05	38.2 -2.4
CDAG	**Cicekdag**	**1.69**	**349**	*i* P	Pn	14	05	41.7 +0.6

IDC 31 14:32:57.4±1.2,392N×12605E,h0km,mb3.6/6,mb1 3.7/6, mb1mx3.6/19,mbtmp3.6/6,Error ellipse: s-maj=143.1km s-min=17.6km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.07**	**161**	P	P	14	38	23.7 +0.1
	1.4nm,0.5s,baz=337,slow=11,SNR=26							
ASAR	**Alice Springs**	**28.46**	**165**	P	P	14	38	55.3 +1.1
	0.1nm,0.4s,baz=354,slow=8.9,SNR=6.5							
STKA	**Stephens Creek**	**38.55**	**159**	P	P	14	40	20.9 -1.0
	1.6nm,0.4s,baz=324,slow=7.7,SNR=16							
SONM	**Songino Array**	**46.91**	**342**	P	P	14	41	28.2 -1.4
	0.2nm,0.8s,baz=162,slow=8.6,SNR=3.2							
MKAR	**Makanchi Array**	**57.02**	**325**	P	P	14	42	46.0 +1.0
	0.4nm,0.6s,baz=118,slow=7.5,SNR=4.3							
KURK	**Kurchatov**	**61.22**	**328**	P	P	14	43	14.3 +0.3
	0.4nm,0.6s,baz=130,slow=6.4,SNR=3.5							

*ISCJB **31** 14:33:54.8±1.4,3521N±004×276E±0.1,h25km±17km, Error ellipse: s-maj=14.9km s-min=6.6km az=175.6*
*CSEM **31** 14:33:54.6±0.1,3522N×2761E,h20km,ML3.3,Error ellipse: s-maj=3.3km s-min=2.0km az=70.0*
*HLW **31** 14:33:56.5,3531N×2756E,h33km,Mb3.3*
*ATH **31** 14:33:57.6,3579N×2691E,h10km,MD3.4/3*
ISC 31 14:33:56.5±1.8,3523N±004×276E±01,h22km±21km,n13, σ1§28/18,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.48**	**311**	*e*PB	**Pb**	**14**	**34**	**04.0 -2.3**
ARG	**Arkhangelos**	**1.07**	**23**	*e*PB	**Pn**	**14**	**34**	**18.0 +1.9**
NPS	**Neapolis**	**1.63**	**272**	*e*PB	**Pn**	**14**	**34**	**19.5 -4.4**
TURN	**Turunc**	**1.83**	**26**	*i* P	**Pn**	**14**	**34**	**25.7 -0.8**
TURN	**Turunc**	**1.83**	**26**	*i* P	**Pn**	**14**	**34**	**25.7 -0.8**
TURN				*i* S	**Sn**	**14**	**34**	**47.4 -1.6**
AYDN	**Tasoluk**	**2.43**	**5**	*i* P	**Pn**	**14**	**34**	**35.7 +0.8**
AYDN				*i* S	**Sn**	**14**	**35**	**04.4 +0.4**
HMAT	**Matruh**	**4.15**	**186**	P	**Pn**	**14**	**34**	**58.8 +0.3**
SLUM		**4.23**	**209**	P	**Pn**	**14**	**34**	**59.4 -0.3**
AMAG	**Maghara**	**6.56**	**133**	P	**Pn**	**14**	**35**	**32.5 +0.8**
AMAG				S	**Sn**	**14**	**36**	**42.5 -3.4**
GLL	**Jalalah**	**6.62**	**147**	P	**Pn**	**14**	**35**	**33.4 +0.9**
GLL				S	**Sn**	**14**	**36**	**44.0 -3.2**
SUZ		**6.95**	**139**	P	**Pn**	**14**	**35**	**37.8 +0.7**
HNKL	**Nakhl**	**7.54**	**133**	P	**Pn**	**14**	**35**	**46.2 +1.1**
HKAT	**Jabal Katrina**	**8.61**	**139**	P	**Pn**	**14**	**36**	**00.6 +0.8**
HKAT				S	**Sn**	**14**	**37**	**32.2 -4.1**

*NIED **31** 14:39:00,2750N×14090E,h360km,Mw4.8 Best double couple: M0 1.99000×10^16 NP1:φ§255.00000°,δ71.00000°, λ48.00000°. NP2:φ§146.00000°,δ46.00000°,λ153.00000°.*
*SZGRF **31** 14:39:25.4,2785N×141.13E,h33km,mb5.2,Bonin Islands, Japan, region*
*ISCJB **31** 14:39:57.3±0.3,2730N±003×14033E±003,h331km±2km, mb4.6/129,Error ellipse: s-maj=4.8km s-min=4.0km az=164.7*
*JMA **31** 14:39:59.5±0.1,2752N×14091E,h332km±2km,M5.6*
JMA Felt II J1.
*IDC **31** 14:39:59.1±0.6,2728N×14026E,h336km±5km,mb4.3/25, mb1 4.4/30,mb1mx4.3/32,mbtmp4.3/30,Error ellipse: s-maj=9.7km s-min=7.2km az=86.0*
*MOS **31** 14:40:00.0±0.9,2730N×14021E,h359km,mb4.9/50,Error ellipse: s-maj=8.6km s-min=4.7km az=104.1*
*BJI **31** 14:40:00.5,2744N×14022E,h357km,mB4.9,mb4.7*
*NEIC **31** 14:40:02.0±0.7,2731N×140.19E,h366km±7km,mb4.7/72, MW4.8(NIED),Error ellipse: s-maj=4.8km s-min=4.3km az=111.0*
NEIC Recorded [2 JMA] in the Chichijima-retto.
*DJA **31** 14:40:03,2749N×14084E,h399km,mb4.9/9*
ISC 31 14:39:59.1±0.4,2731N±003×14033E±003,h334km±3km, h341km±3.6km:pP-P,n355,σ1§04/374,mb4.6/129,22C-26D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.67**	**97**	P	**Pn**	**14**	**40**	**44.5 -2.2**
	2μm,0.3s,baz=68,slow=3.6,SNR=157							
CBIJ				S	**S**	**14**	**41**	**19.6 -5.1**
	8μm,0.3s,baz=287,slow=20,SNR=58							
CBIJ	**Chichi jima**	**1.67**	**97**	↓P	**Pn**	**14**	**40**	**44.4 -2.3**
CBIJ				*e*S	**S**	**14**	**41**	**19.1 -5.6**
JHHJ	**Haha-jima-NKT**	**1.79**	**112**	↓P	**Pn**	**14**	**40**	**45.5 -1.9**
JHHJ				*e*S	**S**	**14**	**41**	**22.0 -4.1**
JHJ2	**Mitsune**	**5.80**	**356**	P	**Pn**	**14**	**41**	**26.1 -0.8**
JHJ2				*e*S	**S**	**14**	**42**	**31.3 -6.7**
JHJ	**Hachijo jima 2**	**5.81**	**355**	P	**Pn**	**14**	**41**	**26.4 -0.6**
	153nm,0.3s,baz=302,slow=14,SNR=32							
JHJ				S	**S**	**14**	**42**	**31.8 -6.4**
	313nm,0.3s,baz=57,slow=21,SNR=10							
TK01	**Tokai 1**	**6.85**	**341**	P	**Pn**	**14**	**41**	**40.9 +1.7**
TK02	**Tokai 2**	**6.97**	**342**	↓P	**Pn**	**14**	**41**	**42.2 +1.5**
NJJJ	**Nii jima 2**	**7.12**	**353**	*e*S	**S**	**14**	**43**	**02.7 -3.7**
BSO1	**Boso 1**	**7.34**	**4**	P	**Pn**	**14**	**41**	**43.7 -1.3**
BSO1				*e*S	**S**	**14**	**43**	**04.8 -6.3**
JWZ	**Kozaga**	**7.37**	**328**	P	**Pn**	**14**	**41**	**47.5 +2.2**
JWZ				*e*S	**S**	**14**	**43**	**13.4 +1.7**
JIM2	**Oshima 2**	**7.42**	**354**	P	**Pn**	**14**	**41**	**45.7 -0.3**
BSO3	**Boso 3**	**7.47**	**1**	P	**Pn**	**14**	**41**	**45.0 -1.5**
JIE	**Ise**	**7.71**	**337**	↓P	**Pn**	**14**	**41**	**51.4 +2.0**
JIE				*e*S	**S**	**14**	**43**	**17.7 -1.5**
SHZ3	**Shizuoka 3**	**7.94**	**347**	S	**S**	**14**	**43**	**20.5 -3.7**
JOD2	**Odawara 2**	**8.00**	**353**	P	**Pn**	**14**	**41**	**52.4 -0.4**
JOD2				*e*S	**S**	**14**	**43**	**19.6 -5.9**
JYN	**Shimob**	**8.30**	**350**	P	**Pn**	**14**	**41**	**56.2 -0.3**
JTO	**Tosashimizu**	**8.55**	**312**	P	**Pn**	**14**	**42**	**01.9 +2.4**
JRY	**Ryogami san**	**8.76**	**352**	P	**Pn**	**14**	**42**	**00.9 -1.1**
JRY				*e*S	**S**	**14**	**43**	**34.2 -8.2**
JFM	**Mihama**	**8.99**	**337**	↓P	**Pn**	**14**	**42**	**06.8 +2.0**
JAG	**Ashikaga**	**9.12**	**356**	P	**Pn**	**14**	**42**	**03.9 -2.4**
JHO	**Hitachi**	**9.27**	**1**	↓P	**Pn**	**14**	**42**	**06.3 -1.9**
JKIT	**Kitakata**	**9.34**	**307**	↑P	**Pn**	**14**	**42**	**12.3 +3.3**
MJAR	**Matsushiro Arr**	**9.38**	**349**	P	**Pn**	**14**	**42**	**08.4 -1.0**
	4.9nm,0.3s,baz=122,slow=14,SNR=65							
MJAR				S	**S**	**14**	**43**	**51.0 -5.0**
	5.9nm,0.3s,baz=57,slow=32,SNR=5.4							
MAJO	**Matsushiro**	**9.38**	**349**	*e*P	**Pn**	**14**	**42**	**09.7 +0.3**
MAJO				pmax	pmax			
	comp=Z,29nm,0.5s							
MAJO	**Matsushiro**	**9.38**	**349**	*e*P	**Pn**	**14**	**42**	**09.7 +0.3**
	comp=Z,29nm,0.5s							
MAT	**Matsushiro**	**9.38**	**349**	P	**Pn**	**14**	**42**	**09.5 +0.1**
MAT				*e*S	**S**	**14**	**43**	**49.6 -6.4**
MAT	**Matsushiro**	**9.38**	**349**	P	**Pn**	**14**	**42**	**09.6 +0.2**
MAT				*e*S	**S**	**14**	**43**	**50.9 -5.1**
JHS	**Saijyo**	**9.84**	**323**	P	**Pn**	**14**	**42**	**18.0 +3.0**
JHK	**Hiroka**	**9.97**	**354**	P	**Pn**	**14**	**42**	**14.9 -1.6**
JMM	**Marumori**	**10.53**	**2**	P	**Pn**	**14**	**42**	**22.1 -1.2**
JOW	**Kunigami**	**10.75**	**270**	P	**Pn**	**14**	**42**	**27.8 +1.7**
	comp=Z,2.7nm,0.3s,baz=103,slow=13,SNR=6.4							
JOW	**Kunigami**	**10.75**	**270**	P	**Pn**	**14**	**42**	**28.5 +2.4**
JYK	**Kaneyama**	**11.57**	**0**	P	**Pn**	**14**	**42**	**35.5 -0.3**
JMK	**Ichinoseki**	**11.63**	**3**	P	**Pn**	**14**	**42**	**36.1 -0.4**
JMK				*e*S	**S**	**14**	**44**	**37.6 -8.5**
OFUJ	**Ofunato**	**11.79**	**5**	P	**Pn**	**14**	**42**	**38.5 +0.1**
JTU	**Tsushima**	**11.81**	**310**	P	**Pn**	**14**	**42**	**42.1 +3.4**
JRG	**Rokugo**	**12.06**	**1**	P	**Pn**	**14**	**42**	**41.7 +0.2**
JOM	**Ohasama**	**12.16**	**4**	P	**Pn**	**14**	**42**	**42.8 +0.1**
JKZ	**Kuzumaki**	**12.67**	**4**	P	**Pn**	**14**	**42**	**49.1 +0.3**
JOT	**Ohata**	**14.05**	**2**	P	**P**	**14**	**43**	**05.4 +1.6**
GUMO	**Guam**	**14.30**	**162**	P	**P**	**14**	**43**	**06.6 -0.3**
	comp=Z,24nm,0.3s,baz=193,slow=8.1,SNR=10							
GUMO				S	**S**	**14**	**45**	**43.1 +0.5**
	comp=Z,4.2nm,0.3s,baz=343,slow=19,SNR=2.4							
GUMO	**Guam**	**14.30**	**162**	P	**P**	**14**	**43**	**06.6 -0.3**
GUMO				S	**S**	**14**	**45**	**43.1 +0.5**
GUMO				pmax	pmax			
	comp=Z,24nm,0.3s							
GUMO				smax				
	comp=N,4.0nm,0.3s							
GUMO	**Guam**	**14.30**	**162**	*e*P	**P**	**14**	**43**	**09.4 +2.6**
	comp=N,182nm,0.9s							
KSRS	**Korea Array**	**14.55**	**317**	P	**P**	**14**	**43**	**10.4 +1.1**
	comp=N,1.4nm,0.3s,baz=132,slow=11,SNR=33							
KSRS	**Korea Array**	**14.55**	**317**	P	**P**	**14**	**43**	**10.5 +1.1**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.3s							
JKB	**Kayabe**	**14.55**	**2**	P	**P**	**14**	**43**	**09.7 +0.4**
JOSM	**Okushiri--Mats**	**14.75**	**358**	P	**P**	**14**	**43**	**12.1 +0.6**
ERM	**Erimo**	**14.85**	**8**	*e*P	**P**	**14**	**43**	**16.0 +3.4**
ERM				pmax	pmax			
	comp=Z,281nm,0.9s							
ERM	**Erimo**	**14.85**	**8**	*e*P	**P**	**14**	**43

XAN LR LR
comp=E,37nm,21.9s
XAN LR LR
comp=Z,37nm,16.9s
PETK Petropavlovsk- 28.83 22 P **P** **14 45 27.3 +0.1**
comp=Z,6.3nm,0.7s,mb3.9,baz=184,slow=3.5,SNR=13
PETK Petropavlovsk- 28.83 22 P **P** **14 45 27.3 +0.1**
GYA Guiyang 29.99 276⇑*i*P **P** **14 45 37.8 0.0**
GYA AP 14 46 46.3
GYA PP PP 14 46 56.5 +3.0
GYA XP sP 14 47 24.8 +5.1
GYA PCP PcP 14 48 31.3 +0.5
GYA S **S** **14 50 08.5 -2.1**
GYA SCP ScP 14 51 40.0 -0.6
GYA PCS PcS 14 52 14.5 -0.2
GYA SCS ScS 14 55 34.0 -2.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.1
GYA AMB AMB
comp=Z,70nm,4.5s
NRGR Nerungri 31.38 343 *e*P **P** **14 45 50.6 +1.1**
CLNS Chul'man 31.50 344 *e*P **P** **14 45 50.7 +0.2**
CLNS pmax pmax
comp=Z,21nm,0.8s,mb4.4
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS pmax pmax
comp=E,6.0nm,0.7s
CD2 Chengdu 32.06 285 P **P** **14 45 56.0 +0.2**
CD2 AP pP 14 47 02.8 +3.5
CD2 PP PP 14 47 19.5 +3.2
CD2 XP sP 14 47 42.8 +4.8
CD2 S **S** **14 50 41.0 -1.7**
CD2 XS sS 14 52 40.5 +2.1
CD2 SS SS 14 53 08.8 -8.3
CD2 AMB AMB
comp=Z,90nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,160nm,6.3s
LZH Lanzhou 32.10 295 ⇓P **P** **14 45 56.8 +0.8**
LZH AP pP 14 47 04.3 +4.7
LZH PP PP 14 47 21.3 +4.6
LZH XP sP 14 47 43.5 +5.2
LZH PCP PcP 14 48 36.0 -0.3
LZH S **S** **14 50 43.0 -0.2**
LZH SCP ScP 14 51 45.0 -2.6
LZH XS sS 14 52 43.0 +4.1
LZH SS SS 14 53 12.3 -5.5
LZH SCS ScS 14 55 45.0 -2.1
LZH AMB AMB
comp=Z,87nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,279nm,5.1s
ULN Ulaanbaatar 33.04 317⇑*e*P **P** **14 46 04.3 +0.4**
ULN Ulaanbaatar 33.04 317 *e*P **P** **14 46 04.1 +0.2**
comp=Z,26nm,0.8s,mb4.5
SONM Songino Array 33.42 317 P **P** **14 46 07.3 +0.1**
comp=Z,16nm,0.8s,mb4.3,baz=124,slow=8.1,SNR=161
SONM PcP PcP 14 48 40.2 +0.4
comp=Z,2.6nm,0.7s,baz=151,slow=3.5,SNR=5.5
SONM ScP ScP 14 51 51.2 -0.7
comp=Z,5.8nm,0.8s,baz=148,slow=3.6,SNR=25
SONM Songino Array 33.42 317 P **P** **14 46 07.3 +0.1**
SONM 14 48 40.2
KMI Kunming 33.71 275 P **P** **14 46 10.8 +0.8**
KMI AMB AMB
comp=Z,20nm,1.0s,mb4.3
KMI LR LR
comp=Z,50nm,21.7s
FX1 Attu Island--F 35.30 35 P **P** **14 46 24.9 +1.7**
comp=Z,58nm,0.6s,mb5.0,baz=126,slow=0.9,SNR=18
YAK Yakutsk 35.44 351 *e*P **P** **14 46 22.8 -1.3**
YAK pmax pmax
comp=Z,70nm,0.9s,mb4.9
YAK pmax pmax
comp=N,22nm,1.1s
YAK Yakutsk 35.44 351 *e*P **P** **14 46 23.1 -1.0**
comp=N,97nm,0.8s,mb5.1
GTA Gaotai 35.65 300 P **P** **14 46 26.5 +0.2**
GTA AP pP 14 47 37.0 +6.2
GTA PP PP 14 47 58.8 +3.3
GTA XP sP 14 48 16.8 +7.5
GTA PCP PcP 14 48 47.5 +1.0
GTA S **S** **14 51 38.3 +1.0**
GTA SCP ScP 14 52 00.5 +0.4
GTA XS sS 14 53 37.0 +2.8
GTA SCS ScS 14 56 04.3 -1.6
GTA AMB AMB
comp=Z,20nm,0.9s,mb4.3
GTA AMB AMB
comp=Z,85nm,5.4s
BOD Bodaibo 35.67 336 *e*P **P** **14 46 25.9 -0.3**
BOD pmax pmax
comp=Z,39nm,0.9s,mb4.6
ZAK Zakamensk 36.37 319 *e*P **P** **14 46 30.3 -1.8**
ZAK *e* 14 47 43.0
ZAK pmax pmax
comp=Z,27nm,1.0s,mb4.4
SEY Seymchan 36.50 9⇑*e*P **P** **14 46 34.0 +1.0**
IRK Irkutsk 36.66 323 *e*P **P** **14 46 34.7 +0.1**
IRK pmax pmax
comp=Z,50nm,1.4s,mb4.5
TLY Talaya 36.73 322 *e*P **P** **14 46 35.8 +0.6**
TLY pmax pmax
comp=Z,23nm,0.9s,mb4.4
TLY Talaya 36.73 322 *e*P **P** **14 46 35.5 +0.3**
comp=Z,18nm,0.8s,mb4.3
PMG Port Moresby 37.09 169 P **P** **14 46 38.1 -0.6**
comp=Z,5.0nm,0.6s,mb4.0,baz=347,slow=6.6,SNR=5.1
PMG ScP ScP 14 52 04.2 -1.6
comp=Z,11nm,0.9s,baz=358,slow=9.8,SNR=4.6
MOY Mondy 38.22 320 *e*P **P** **14 46 47.8 +0.3**
CHTO Chiang Mai 38.86 266 *e*P **P** **14 46 53.3 0.0**
CHTO pmax pmax
comp=Z,4.0nm,0.9s,mb3.6
CHTO Chiang Mai 38.86 266 *e*P **P** **14 46 53.3 0.0**
comp=Z,3.6nm,0.9s,mb3.6
CMAR Chiang Mai Arr 38.99 266 P **P** **14 46 54.9 +0.6**
comp=Z,2.7nm,0.9s,mb3.5,baz=58,slow=8.3,SNR=19
CMAR ScP ScP 14 52 12.8 -0.3
comp=Z,2.1nm,1.0s,baz=82,slow=1.8,SNR=9.1
CMAR Chiang Mai Arr 38.99 266 *i*P **P** **14 46 55.2 +0.9**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
KAKA Kakadu 40.51 192 *e*P x 14 47 06.0
comp=Z,46nm,0.8s
KAKA Kakadu 40.51 192 *e*P x 14 47 05.9
comp=Z,131nm,0.8s
COEN Coen 41.11 176 *e*P **P** **14 47 11.9 +0.3**
comp=Z,34nm,0.9s,mb4.6
LSA Lhasa 43.02 285 P **P** **14 47 28.0 +1.1**
SHL Shillong 43.20 279 *e*P **P** **14 47 28.5 +0.2**
BILL Bilibino 43.63 14⇓*e*P **P** **14 47 31.2 +0.2**
BILL *e* 14 49 19.7
BILL *e*S **S** **14 53 30.7 -3.8**
BILL pmax pmax
comp=Z,59nm,0.9s,mb4.7
BILL Bilibino 43.63 14 *e*P **P** **14 47 31.0 0.0**
comp=Z,84nm,1.2s,mb4.7
TIXI Tiksi 44.84 355 *e*P **P** **14 47 39.7 -0.8**
TIXI pmax pmax
comp=Z,32nm,0.8s,mb4.5
TIXI Tiksi 44.84 355 *e*P **P** **14 47 39.7 -0.7**
comp=Z,32nm,0.8s,mb4.5
WMQ Urumqi 45.11 306 P **P** **14 47 43.5 +0.5**
WMQ AMB AMB
comp=Z,38nm,1.0s,mb4.5
TAPN Taplejung 46.44 283 *e*P **P** **14 47 54.7 +1.1**
ODAN Odare 46.83 282 *e*P **P** **14 47 57.6 +1.0**
comp=Z,17nm,0.7s,mb4.4
WRAB Tennant Creek 47.32 188*c i*P **P** **14 48 00.0 -0.3**
WRAB Tennant Creek 47.32 188 *e*P **P** **14 47 59.9 -0.4**
comp=Z,81nm,0.8s,mb5.0
WB2 Warramunga Arr 47.33 188⇑*i*P **P** **14 48 00.0 -0.3**
WB2 Warramunga Arr 47.33 188 *e*P **P** **14 47 59.9 -0.4**
WRA Warramunga Arr 47.33 188 P **P** **14 48 00.0 -0.3**
comp=Z,83nm,0.6s,mb5.1,baz=6.8,slow=8.2,SNR=461
WRA pP pP 14 49 09.3 +0.5
comp=Z,13nm,0.8s,baz=6.6,slow=8.4,SNR=3.8
WRA ScP ScP 14 52 45.3 -1.4
comp=Z,12nm,0.8s,baz=4.8,slow=4.5,SNR=19
WRA S **S** **14 54 25.7 -2.5**
comp=Z,13nm,1.0s,baz=4.1,slow=14,SNR=13
WRA Warramunga Arr 47.33 188 P **P** **14 48 00.0 -0.4**
WRA *PP pP 14 49 09.3 +0.5
WRA S **S** **14 54 25.7 -2.4**
FITZ Fitzroy Crossi 47.34 199⇑*i*P **P** **14 48 00.3 -0.1**
comp=Z,30nm,0.6s,mb4.7
CTA Charters Tower 47.47 172 P **P** **14 48 01.0 -0.4**
comp=Z,9.4nm,0.8s,mb4.0,baz=332,slow=6.2,SNR=9.7
CTA Charters Tower 47.47 172 *e*P **P** **14 48 00.6 -0.8**
comp=Z,8.4nm,0.9s,mb4.0
CTA Charters Tower 47.47 172 P **P** **14 48 01.0 -0.4**
CTAO Charters Tower 47.47 172 *e*P **P** **14 48 01.2 -0.2**
RAMN Ramite 47.50 283 *e*P **P** **14 48 02.6 +0.9**
GAMB Gambell 47.66 27 *e*P **P** **14 48 03.2 +0.9**
comp=Z,15nm,0.7s,mb4.3
JIRN Jiri 47.69 284 *e*P **P** **14 48 04.7 +1.5**
comp=Z,196nm,1.5s,mb5.1
GUN Gumba 47.91 284 *e*P **P** **14 48 06.3 +1.5**
ZAA0 Zalesovo Array 48.24 319 *e*P **P** **14 48 05.9 -1.1**
ZAA0 *e*PcP PcP 14 49 27.4 -0.7
ZALV Zalesovo Beam 48.24 319 P **P** **14 48 06.3 -0.6**
comp=Z,24nm,0.7s,mb4.5,baz=97,slow=6.7,SNR=93
ZALV PcP PcP 14 49 27.6 -0.6
comp=Z,11nm,0.7s,baz=104,slow=3.7,SNR=11
ZALV ScP ScP 14 52 49.3 -0.9
comp=Z,5.6nm,0.8s,baz=108,slow=4.8,SNR=11
ZALV Zalesovo Beam 48.24 319 P **P** **14 48 06.3 -0.6**
ZALV 14 49 27.6
ZALV Zalesovo Beam 48.24 319 P **P** **14 48 06.3 -0.6**
ZALV PcP PcP 14 49 27.6 -0.6
ZALV ScP ScP 14 52 49.3 -0.8
PKI Pulchoki 48.39 284 *e*P **P** **14 48 09.3 +0.8**
PKIN Phulchoki 48.40 284 *e*P **P** **14 48 09.0 +0.5**
comp=Z,20nm,1.0s,mb4.3
KKN Kakani 48.45 284 *e*P **P** **14 48 09.9 +1.0**
DMN Daman 48.64 284 *e*P **P** **14 48 11.2 +0.8**
comp=Z,41nm,1.1s,mb4.6
GKN Gorkha 48.96 284 *e*P **P** **14 48 13.6 +0.8**
comp=Z,65nm,1.1s,mb4.8
MK31 Makanchi Array 49.06 310 *e*P **P** **14 48 13.0 -0.2**
MK31 *e* 14 49 27.3
MKAR Makanchi Array 49.06 310 P **P** **14 48 13.2 0.0**
comp=Z,14nm,0.8s,mb4.2,baz=90,slow=8.4,SNR=82
MKAR pP pP 14 49 21.6 -0.5
comp=Z,0.7nm,0.8s,baz=102,slow=6.2,SNR=1.0
MKAR ScP ScP 14 52 53.2 -0.6
comp=Z,9.1nm,0.8s,baz=85,slow=4.6,SNR=27
NVS Novosibirsk 49.31 320⇓*i*P **P** **14 48 14.2 -0.8**
NVS *e* 14 49 28.7
NVS *e* 14 57 19.6
NVS pmax pmax
comp=N,7.0nm,0.8s
NVS pmax pmax
comp=E,25nm,0.8s
NVS pmax pmax
comp=Z,34nm,0.8s,mb4.6
DANN Dangsing 49.63 285 *e*P **P** **14 48 19.3 +1.5**
comp=Z,87nm,0.8s,mb5.0
TNA Tin City 49.89 25 *e*P **P** **14 48 20.0 +0.8**
comp=Z,40nm,1.5s,mb4.4
KOLN Koldanda 49.90 284 *e*P **P** **14 48 20.8 +1.0**
comp=Z,52nm,0.9s,mb4.8
ASAR Alice Springs 51.06 188 P **P** **14 48 27.8 -0.5**
comp=Z,35nm,1.0s,mb4.5,baz=9.0,slow=5.3,SNR=203
ASAR pP pP 14 49 38.9 +1.0
comp=Z,1.8nm,0.6s,baz=11,slow=11,SNR=1.8
ASAR ScP ScP 14 53 01.4 -1.2
comp=Z,4.1nm,0.8s,baz=8.3,slow=4.9,SNR=12
ASAR S **S** **14 55 17.4 -2.1**
comp=Z,1.7nm,0.9s,baz=7.4,slow=16,SNR=5.9
ASAR Alice Springs 51.06 188 P **P** **14 48 27.8 -0.5**
ASAR *PP pP 14 49 38.9 +1.0
ASAR S **S** **14 55 17.5 -2.0**
KURK Kurchatov 51.65 314 P **P** **14 48 32.2 -0.2**
comp=Z,37nm,0.7s,mb4.8,baz=93,slow=7.4,SNR=111
KURK PcP PcP 14 49 40.2 -0.6
comp=Z,5.2nm,0.6s,baz=94,slow=4.0,SNR=4.4
KURK ScP ScP 14 53 03.9 -1.1
comp=Z,2.1nm,0.8s,baz=92,slow=3.8,SNR=4.8
KURK Kurchatov 51.65 314 P **P** **14 48 32.2 -0.2**
KURK pP 14 49 40.3 -1.8
KURK Kurchatov 51.65 314 P **P** **14 48 32.2 -0.2**
KURK PcP PcP 14 49 40.2 -0.6
KURK ScP ScP 14 53 03.9 -1.1
MBWA Marble Bar 52.15 205 *e*P **P** **14 48 36.1 -0.2**
TKM2 Tokmak 2 53.94 305 *e*P **P** **14 48 49.9 +0.8**
TKM2 pmax pmax
comp=Z,16nm,1.0s,mb4.3
TKM2 Tokmak 2 53.94 305 P **P** **14 48 50.3 +1.2**
SNR=11
TKM2 Tokmak 2 53.94 305 *e*P **P** **14 48 49.9 +0.8**
comp=Z,16nm,1.0s,mb4.3
SVW2 Sparrevohn 54.00 33 *e*P **P** **14 48 50.5 +1.3**
KZA Kyzart 54.28 304 P **P** **14 48 53.5 +2.0**
SNR=7.6
KBK Karagaybulak 54.44 304 P **P** **14 48 53.7 +1.0**
SNR=26
CHMS Chumysh 54.55 305 P **P** **14 48 54.0 +0.5**
SNR=6.0
USP Ospenovka 54.70 305 P **P** **14 48 54.9 +0.4**
SNR=8.3
AAK Ala-Archa 54.77 304*d i*P **P** **14 48 55.7 +0.6**
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb3.9
AAK Ala-Archa 54.77 304 P **P** **14 48 55.7 +0.6**
SNR=8.4
AAK Ala-Archa 54.77 304 *e*P **P** **14 48 55.5 +0.4**
comp=Z,8.5nm,0.7s,mb4.2
UCH Uchtor 54.80 304 *e*P **P** **14 48 57.1 +1.7**
comp=Z,8.7nm,0.9s,mb4.1
KDAK Kodiak Island 55.19 37 P **P** **14 48 58.0 +0.2**
comp=Z,16nm,0.6s,mb4.5,baz=257,slow=7.2,SNR=28
DZM Mont Dzumac 55.21 150 *e*P **P** **14 48 57.7 -0.7**
EKS2 Erkin-Say 55.30 305 P **P** **14 48 59.6 +0.8**
SNR=7.9
EKS2 Erkin-Say 55.30 305 *e*P **P** **14 48 59.1 +0.4**
comp=Z,7.4nm,0.8s,mb4.1
AML Almayashu 55.42 304 P **P** **14 49 01.4 +1.7**
SNR=20
AML Almayashu 55.42 304 *e*P **P** **14 49 00.7 +1.0**
comp=Z,25nm,0.8s,mb4.6
PPLA Purkeypile 55.82 31 *e*P **P** **14 49 02.7 +0.6**
comp=Z,14nm,0.7s,mb4.4
CHUM Lake Minchumin 55.88 30 *e*P **P** **14 49 03.7 +1.2**
comp=Z,10nm,0.8s,mb4.2
KTH Kantishna Hill 56.46 30 *e*P **P** **14 49 07.2 +0.6**
comp=Z,14nm,1.1s,mb4.2
BPAW Bear Paw Mtn. 56.49 29 *e*P **P** **14 49 07.6 +0.8**
comp=Z,13nm,0.7s,mb4.4
TRF Thorofare Moun 56.74 30 *e*P **P** **14 49 09.2 +0.7**
comp=Z,20nm,0.8s,mb4.5
BVAR Borovoye Array 56.76 317 P **P** **14 49 08.9 0.0**
comp=Z,15nm,0.5s,mb4.6,baz=92,slow=7.4,SNR=133
BVAR PcP PcP 14 50 00.5 0.0
comp=Z,5.7nm,0.6s,baz=93,slow=5.0,SNR=5.3
BVAR ScP ScP 14 53 26.5 -0.7
comp=Z,3.6nm,0.9s,baz=193,slow=6.1,SNR=6.9
BVAR Borovoye Array 56.76 317 P **P** **14 49 08.9 0.0**
BVAR 14 50 00.5
BRVK Borovoye 56.83 317 *e*P **P** **14 49 09.3 0.0**
BRVK pmax pmax
comp=Z,51nm,1.2s,mb4.7
BRVK Borovoye 56.83 317 *e*P **P** **14 49 09.3 0.0**
comp=Z,51nm,1.2s,mb4.7
SEW Seward 56.92 34 *e*P **P** **14 49 09.3 -0.6**
PMR Palmer 57.14 32 *e*P **P** **14 49 11.6 +0.2**
PMR pmax pmax
comp=Z,33nm,0.8s,mb4.7
PMR Palmer 57.14 32 *e*P **P** **14 49 11.6 +0.2**
comp=Z,33nm,0.8s,mb4.7
COLD Coldfoot 57.19 26 *e*P **P** **14 49 12.6 +0.9**
comp=Z,15nm,0.9s,mb4.3
MCK McKinley 57.36 30 *e*P **P** **14 49 12.8 -0.1**
MCK pmax pmax
comp=Z,64nm,0.9s,mb5.0
MCK McKinley 57.36 30 *e*P **P** **14 49 12.8 -0.1**
comp=Z,64nm,0.9s,mb5.0
HYB Hyderabad 57.48 274 *e*P **P** **14 49 15.0 +0.5**
COLA College 57.91 29⇓*e*P **P** **14 49 17.2 +0.5**
COLA College 57.91 29 *e*P **P** **14 49 16.7 0.0**
comp=Z,20nm,0.6s,mb4.6
STKA Stephens Creek 58.87 179 P **P** **14 49 22.9 -0.7**
comp=Z,13nm,0.9s,mb4.4,baz=339,slow=8.6,SNR=20
STKA Stephens Creek 58.87 179⇑*i*P **P** **14 49 22.8 -0.8**
comp=Z,9.5nm,0.9s,mb4.2
STKA Stephens Creek 58.87 179 *e*P **P** **14 49 22.5 -1.1**
comp=Z,2.6nm,0.9s,mb3.7
PAX Paxson 58.89 31 *e*P **P** **14 49 23.8 +0.4**
PAX pmax pmax
comp=Z,31nm,1.1s,mb4.7
PAX Paxson 58.89 31 *e*P **P** **14 49 23.8 +0.4**
comp=Z,31nm,1.1s,mb4.7
FORT Forrest 58.94 192⇑*i*P **P** **14 49 23.9 -0.2**
comp=Z,131nm,0.6s,mb5.5
MENT Mentasta 59.69 31 *e*P **P** **14 49 30.0 +1.2**
KBL Kabul 60.44 296 *e*P **P** **14 49 34.7 +0.3**
KBL pmax pmax
comp=Z,21nm,0.9s,mb4.6
KBL Kabul 60.44 296 *e*P **P** **14 49 34.7 +0.3**
comp=Z,21nm,0.9s,mb4.6
EGAK Eagle 60.77 29 *e*P **P** **14 49 35.7 -0.4**
comp=Z,12nm,0.6s,mb4.5
DAWY Dawson 61.58 30 *e*P **P** **14 49 41.7 +0.3**
SVE Sverdlovsk 62.05 322⇓*e*P **P** **14 49 45.0 +0.4**
SVE pmax pmax
comp=Z,52nm,1.1s,mb5.0
ARU Arti 63.24 322*d i*P **P** **14 49 52.0 -0.5**
ARU *e* 14 50 25.4
ARU *e* 14 52 14.1
ARU S **S** **14 57 55.8 -0.9**
ARU SS SS 15 02 09.3 -0.1
ARU pmax pmax
comp=Z,71nm,1.2s,mb5.1
ARU Arti 63.24 322 *e*P **P** **14 49 51.6 -0.8**
comp=Z,37nm,0.7s,mb5.0
NWAO Narrogin (SRO) 63.80 202 *e*P **P** **14 49 56.1 -0.3**
SKAG Skagway 64.08 34 *e*P **P** **14 49 58.6 +0.8**
TOO Toolangi 64.72 175 *e*P **P** **14 50 02.3 +0.1**
DLBC Dease Lake 66.98 35 P **P** **14 50 16.9 +0.6**
comp=Z,7.5nm,0.7s,mb4.5,baz=288,slow=6.7,SNR=22
KBS Kingsbay 70.06 351 *i*P **P** **14 50 35.5 +0.6**
KLMR Klimovskoe 71.56 330 *i*P **P** **14 50 43.7 -0.4**
KLMR pmax pmax
comp=Z,42nm,1.0s,mb5.1
KEV Kevo 72.23 340 *ep* **P** **14 50 46.8 -1.1**
comp=Z,24nm,0.8s,mb5.0
KEV Kevo 72.23 340 *e*P **P** **14 50 46.8 -1.1**
KEV pmax pmax
comp=Z,24nm,0.8s,mb5.0
RES Resolute Bay 72.23 13 *e*P **P** **14 50 47.5 -0.4**
RES pmax pmax
comp=Z,11nm,0.8s,mb4.6
RES Resolute Bay 72.23 13 *e*P **P** **14 50 47.5 -0.4**
comp=Z,11nm,0.8s,mb4.7
YKA Yellowknife Ar 72.73 28 P **P** **14 50 50.7 -0.2**
comp=Z,20nm,0.7s,mb5.0,baz=295,slow=5.9,SNR=375
YKA Yellowknife Ar 72.73 28 P **P** **14 50 50.7 -0.2**
ARCES ARCESS Array B 72.79 340 P **P** **14 50 51.4 +0.2**
comp=Z,22nm,0.7s,mb5.0,baz=72,slow=8.2,SNR=76
JOF Joensuu 74.15 333 *ep* **P** **14 50 57.9 -1.3**
comp=Z,60nm,0.7s,mb5.4
VRHR Novokhopersk 74.38 320 *e*P **P** **14 50 59.9 -0.8**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,40nm,0.6s
HDW Hoodsport 74.52 44 P **P** **14 51 03.2 +1.7**
MOS Moscow 74.59 325 *e*P **P** **14 50 58.0 -3.8**
MOS pmax pmax
comp=Z,79nm,1.2s,mb5.3
OBN Obninsk 75.41 325⇓*i*P **P** **14 51 06.1 -0.4**
OBN *e* 14 53 59.3
OBN *e*S S 15 00 07.3 -11
OBN pmax pmax
comp=Z,66nm,1.1s,mb5.3
OBN MLR MLR
comp=Z,100nm,18.0s
OBN Obninsk 75.41 325 *e*P **P** **14 51 05.9 -0.5**
comp=Z,55nm,0.9s,mb5.3
TDL Tradedollar La 75.57 45 P **P** **14 51 09.1 +1.6**
VSR Storozhevoye 75.73 320 *e*P **P** **14 51 07.6 -0.8**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,30nm,1.0s
VORD Divnogorie 75.77 320 *e*P **P** **14 51 07.5 -1.1**
VORD pmax pmax
comp=Z,20nm,0.7s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.6s
TBM Table Mountain 76.24 44 P **P** **14 51 12.3 +1.0**
VLL Laurance Lake 76.28 46 P **P** **14 51 13.1 +1.5**
EBG Ellensburg 76.37 44 P **P** **14 51 13.2 +1.2**
KAF Kangasniemi 76.56 334 *ep* **P** **14 51 11.4 -1.4**
comp=E,40nm,0.6s,mb5.3
KAF Kangasniemi 76.56 334 *e*P **P** **14 51 11.4 -1.4**
KAF pmax pmax
comp=Z,40nm,0.6s,mb5.3
KIV Kislovodsk 76.69 313⇓*e*P **P** **14 51 15.3 +1.4**
KIV *e* 14 54 12.2
KIV *e*S S 15 00 20.7 -12
KIV pmax pmax
comp=Z,39nm,1.6s,mb4.9
KIV Kislovodsk 76.69 313 *e*P **P** **14 51 14.7 +0.8**
comp=Z,15nm,1.1s,mb4.6
EPH Ephrata 76.77 43 P **P** **14 51 14.9 +0.7**
YBH Yreka Blue Hor 77.18 50 P **P** **14 51 17.4 +0.7**
comp=Z,7.3nm,0.8s,mb4.5,baz=313,slow=2.3,SNR=17
YBH Yreka Blue Hor 77.18 50 *e*P **P** **14 51 18.0 +1.4**
YBH pmax pmax
comp=Z,6.0nm,0.8s
YBH Yreka Blue Hor 77.18 50 *e*P **P** **14 51 18.0 +1.3**
comp=Z,6.0nm,0.8s,mb4.4
OD2 Odessa Site #2 77.30 43 P **P** **14 51 17.6 +0.4**
EDM Edmonton 77.63 36 *e*P **P** **14 51 19.1 +0.3**
VSU Vasula 78.40 331⇑*e*P **P** **14 51 23.0 0.0**
VSU pmax pmax
comp=Z,78nm,1.0s,mb5.4
SOC Sochi 78.79 313*c i*P **P** **14 51 25.4 0.0**
SOC *e* 14 51 30.9
SOC *e**SP sP 14 53 26.6 +9.4
SOC *e*PPP 14 56 17.3
SOC *e*S S 15 00 55.1 +0.4
SOC *e*SS SS 15 06 00.5 -6.3
SOC *e*SSS 15 09 35.7
SOC pmax pmax
comp=Z,16nm,0.9s,mb4.8
MIB Mutribah 79.32 298 *e*P **P** **14 51 28.3 -0.2**
baz=298
MIB AMb AMB 14 51 28.8
comp=Z,51nm,0.9s,mb5.2,baz=298
BMO Blue Mountains 79.33 45 *e*P **P** **14 51 28.9 +0.7**
BMO pmax pmax
comp=Z,18nm,1.2s,mb4.7
BMO Blue Mountains 79.33 45 *e*P **P** **14 51 28.9 +0.6**
comp=Z,18nm,1.2s,mb4.7
WALA Waterton Lakes 79.35 40 *e*P **P** **14 51 29.0 +0.7**
comp=Z,0.3nm,0.7s
RDF Al-Radifah 79.53 297 *e*P **P** **14 51 29.3 -0.3**
baz=297
RDF AMb AMB 14 51 36.8
comp=Z,123nm,1.7s,mb5.4,baz=297
NAY Al-Naaiem 79.63 297 *e*P **P** **14 51 29.6 -0.6**
baz=297
NAY AMb AMB 14 51 31.5
comp=Z,36nm,1.5s,mb4.9,baz=297
ANN Anapa 79.68 315 *e*P **P** **14 51 24.6 -5.5**
ANN *e* 14 51 30.6
ANN *e**PP pP 14 52 44.0 -2.9
ANN *e* 14 54 35.5
ANN *e*PPP 14 56 29.0
ANN *e*S S 15 00 54.7 -9.3
ANN pmax pmax
comp=Z,41nm,1.5s,mb4.9
AKASG Malin Array Be 81.46 323 P **P** **14 51 38.6 -0.7**
comp=Z,5.7nm,0.3s,mb4.7,baz=51,slow=5.4,SNR=53
AKBB Malin Array Si 81.46 323 *e*P **P** **14 51 38.5 -0.9**
KIEV Kiev 81.47 323 *e*P **P** **14 51 38.6 -0.8**
KIEV pmax pmax
comp=Z,28nm,1.0s,mb5.0
KIEV Kiev 81.47 323 *e*P **P** **14 51 38.6 -0.9**
comp=Z,28nm,1.0s,mb4.9
NVAR Mina Array Bea 81.68 51 P **P** **14 51 41.9 +1.1**
comp=Z,7.4nm,0.7s,mb4.7,baz=288,slow=5.2,SNR=61
HLID Hailey 81.77 45 *e*P **P** **14 51 42.3 +1.1**
comp=Z,8.5nm,0.8s,mb4.6
DLMT Dillon 81.98 43 *e*P **P** **14 51 42.9 +0.7**

comp=Z,13nm,1.2s,mb4.6
MALT Malatya 82.10 309 *e*P **P** **14 51 44.3 +1.3**
MALT pmax pmax
comp=Z,21nm,1.1s,mb4.9
MALT Malatya 82.10 309⇑ *i*P **P** **14 51 44.4 +1.4**
MALT Malatya 82.10 309 *e*P **P** **14 51 44.3 +1.4**
comp=Z,22nm,1.1s,mb4.9
EGMT Eagleton 82.25 40 *e*P **P** **14 51 43.7 +0.2**
comp=Z,9.4nm,0.7s,mb4.7
FFC Flin Flon 82.42 31 *e*P **P** **14 51 44.1 -0.2**
FFC pmax pmax
comp=Z,17nm,1.0s,mb4.8
FFC Flin Flon 82.42 31 *e*P **P** **14 51 44.1 -0.1**
comp=Z,17nm,1.0s,mb4.8
SUW Suwalki 82.60 328 *e*P **P** **14 51 44.4 -0.8**
SUW Suwalki 82.60 328 *e*P **P** **14 51 44.4 -0.8**
NOA NORSAR Array B 82.79 338 P **P** **14 51 45.0 -1.0**
comp=Z,27nm,0.7s,mb5.2,baz=46,slow=4.9,SNR=106
NOA PP PP 14 54 59.7 -1.1
comp=Z,5.1nm,1.0s,baz=47,slow=8.6,SNR=4.6
NOA NORSAR Array B 82.79 338 P **P** **14 51 45.0 -1.0**
NOA PP PP 14 54 59.7 -1.1
NAO01 NORSAR Array S 83.04 338 *e*P **P** **14 51 46.2 -1.1**
comp=Z,16nm,0.7s,mb5.0
RRI2 Red Ridge 83.81 44 *e*P **P** **14 51 52.8 +1.3**
comp=Z,16nm,0.7s,mb5.0
TPNV Topopah Spring 83.82 52 *e*P **P** **14 51 52.5 +0.8**
TPNV pmax pmax
comp=Z,13nm,0.8s,mb4.8
TPNV Topopah Spring 83.82 52 *e*P **P** **14 51 52.5 +0.7**
comp=Z,13nm,0.8s,mb4.8
SNOW Snow King Moun 84.10 44 *e*P **P** **14 51 54.4 +1.4**
comp=Z,6.5nm,0.6s,mb4.6
RLMT Red Lodge 84.11 42 *e*P **P** **14 51 54.2 +1.2**
comp=Z,9.4nm,0.6s,mb4.8
LOHW Long Hollow 84.11 44 *e*P **P** **14 51 54.3 +1.3**
comp=Z,6.3nm,0.8s,mb4.5
DUG Dugway 84.51 47 *e*P **P** **14 51 55.4 +0.3**
DUG pmax pmax
comp=Z,20nm,1.2s,mb4.8
DUG Dugway 84.51 47 *e*P **P** **14 51 55.4 +0.3**
comp=Z,20nm,1.2s,mb4.8
BR131 Keskin Array S 84.64 312 *e*P **P** **14 51 55.4 -0.4**
comp=Z,1.8nm,0.7s,mb4.0
BRTR Keskin Array B 84.64 312 P **P** **14 51 55.5 -0.3**
comp=Z,2.9nm,0.7s,mb4.2,baz=92,slow=3.8,SNR=18
BRTR pP pP 14 53 12.8 -0.7
comp=Z,6.3nm,0.9s,baz=108,slow=4.0,SNR=8.0
PDAR Pinedale Array 85.22 44 P **P** **14 51 58.8 +0.3**
comp=Z,5.6nm,0.9s,mb4.4,baz=272,slow=3.2,SNR=32
PFO Pinyon Flat Ob 85.32 55 *e*P **P** **14 51 59.5 +0.3**
PFO pmax pmax
comp=Z,12nm,0.7s,mb4.8
PFO Pinyon Flat Ob 85.32 55 *e*P **P** **14 51 59.5 +0.2**
comp=Z,12nm,0.7s,mb4.8
BUR08 Bucovina Ar. S 85.37 322 *e*P **P** **14 51 59.1 -0.1**
BURAR Bucovina Array 85.38 322⇓ *i*P **P** **14 51 59.0 -0.2**
HARR Harsova 85.52 319⇓ *i*P **P** **14 52 00.1 +0.1**
VRI Vrincioaia 85.55 320⇑ *i*P **P** **14 52 01.1 +1.0**
STHS Stebnicka Huta 86.38 325 *e*P **P** **14 52 05.1 +1.0**
STHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
STHS Stebnicka Huta 86.38 325 *e*P **P** **14 52 05.0 +0.9**
STHS Stebnicka Huta 86.38 325 *e*P **P** **14 52 05.1 +1.0**
comp=Z,3.8nm,1.2s,mb4.1
CRVS Cervenica-Dubn 86.59 325 *e*P **P** **14 52 05.0 -0.1**
CRVS pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
CRVS Cervenica-Dubn 86.59 325 *e*P **P** **14 52 05.0 -0.1**
comp=Z,7.1nm,1.1s,mb4.4
OJC Ojcow 86.59 326 *e*P **P** **14 52 04.1 -1.0**
VOIR 86.76 320⇓ *i*P **P** **14 52 05.6 -0.4**
NIE Niedzica 86.85 326 *e*P **P** **14 52 06.4 +0.1**
DRGR 87.24 322⇑ *i*P **P** **14 52 07.1 -1.1**
OKC Ostrava-Krasne 87.65 327 *i*P **P** **14 52 08.7 -1.4**
KSP Ksiaz 87.87 328 *e*P **P** **14 52 10.7 -0.4**
KSP Ksiaz 87.87 328⇓ *e*P **P** **14 52 10.5 -0.6**
PSZ Piszkesteto 88.02 325⇑ *i*P **P** **14 52 11.6 -0.3**
ULM Lac du Bonnet 88.16 32 P **P** **14 52 11.9 -0.6**
comp=Z,4.5nm,0.7s,mb4.4,baz=287,slow=2.7,SNR=6.6
DPC Dobruska-Polom 88.19 328 *i*P **P** **14 52 12.3 -0.3**
VYHS Vyhne 88.19 325 *e*P **P** **14 52 12.3 -0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
VYHS Vyhne 88.19 325 *e*P **P** **14 52 12.3 -0.4**
comp=Z,7.0nm,1.0s,mb4.5
UPC Upice 88.23 328 *i*P **P** **14 52 12.2 -0.6**
KOLL Kolacno 88.35 326 *e*P **P** **14 52 13.5 +0.1**
BZS Buzias 88.56 322⇓ *i*P **P** **14 52 13.4 -1.1**
VRAC Vranov 88.76 327⇑ *i*P **P** **14 52 15.0 -0.3**
SMOL Smolenice 88.88 326 *e*P **P** **14 52 16.1 +0.2**
PVCC Panska Ves 88.88 329 *i*P **P** **14 52 15.2 -0.7**
BRG Berggiesshubel 88.93 329 *i*P **P** **14 52 14.9 -1.2**
BRG pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BRG Berggiesshubel 88.93 329 *i*P **P** **14 52 14.9 -1.2**
comp=Z,7.0nm,0.7s,mb4.6
CLL Collm 89.05 330 *i*P **P** **14 52 15.2 -1.4**
CLL pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
CLL Collm 89.05 330 *i*P **P** **14 52 15.2 -1.4**
comp=Z,8.0nm,0.7s,mb4.7
CLL *e*PP PP 14 55 48.0 -3.1
ZST Bratislava 89.26 326 *e*P **P** **14 52 17.9 +0.2**
ZST pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
ZST Bratislava 89.26 326 *e*P **P** **14 52 17.8 +0.1**
ZST Bratislava 89.26 326 *e*P **P** **14 52 17.9 +0.2**
comp=Z,5.7nm,1.0s,mb4.4
PRU Pruhonice 89.27 328 *i*P **P** **14 52 16.9 -0.8**
PKSM Moragy 89.78 324⇓ *i*P **P** **14 52 19.2 -0.9**
CONA Conrad Observa 90.05 326⇑ *i*PcP PcP 14 52 20.9 -1.5
comp=Z,16nm,1.4s
CSNA Conrad Observa 90.05 326⇑ *i*PcP PcP 14 52 20.9 -1.5
comp=Z,13nm,1.4s
NKC Novy Kostel 90.06 330 *i*P **P** **14 52 20.5 -0.8**
KHC Kasperske Hory 90.32 328⇑ *e*P **P** **14 52 22.0 -0.6**
KHC Kasperske Hory 90.32 328 *i*P **P** **14 52 21.7 -0.9**
GERES GERESS Array B 90.46 328 P **P** **14 52 22.1 -1.1**
comp=Z,4.9nm,0.7s,mb4.5,baz=41,slow=4.9,SNR=46
GERES PP PP 14 56 02.3 0.0
comp=Z,0.7nm,0.7s,baz=36,slow=7.1,SNR=4.4
MOA Molln 90.89 327⇓ *i*PcP PcP 14 52 24.6 -1.5
comp=Z,10nm,1.1s
GRA1 Grafenberg Arr 91.00 330 *e*P **P** **14 52 24.8 -0.9**
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 91.00 330 *e*P **P** **14 52 24.8 -0.9**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 91.00 330 *e*P **P** **14 52 24.8 -0.9**
GRF pmax pmax
comp=Z,12nm,0.9s,mb4.8
GRF Grafenberg Arr 91.00 330 *e*P **P** **14 52 24.8 -0.9**
comp=Z,12nm,0.9s,mb4.8
SOKA Soboth 91.32 326⇓ *i*PcP PcP 14 52 25.7 -2.3
comp=Z,9.4nm,0.9s
ANMO Albuquerque 91.59 49⇑ *e*P **P** **14 52 30.0 +1.2**
ANMO pmax pmax
comp=Z,5.0nm,0.7s
ANMO Albuquerque 91.59 49 *e*P **P** **14 52 29.8 +1.0**
comp=Z,5.7nm,0.9s,mb4.5
DAVA Damuels 93.36 329⇑ *i*PcP PcP 14 52 35.7 -1.4
comp=Z,13nm,1.0s
CDF Champ du Feu 93.69 331 *e*P **P** **14 52 36.7 -1.4**
comp=Z,14nm,0.8s,mb4.8
CDF Champ du Feu 93.69 331 *e*P **P** **14 52 36.7 -1.4**
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CDF Champ du Feu 93.69 331 *e*P **P** **14 52 36.7 -1.4**
comp=Z,7.1nm,0.8s,mb4.8
BAIF Baives 93.69 333 *e*P **P** **14 52 35.4 -2.7**
comp=Z,14nm,1.2s,mb4.6
BAIF Baives 93.69 333 *e*P **P** **14 52 35.4 -2.7**
BAIF pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
BAIF Baives 93.69 333 *e*P **P** **14 52 35.4 -2.7**
comp=Z,6.8nm,1.2s,mb4.5
HINF Hinteralfeld 94.33 331 *e*P **P** **14 52 38.9 -2.2**
HAU Haudompre 94.40 331 *e*P **P** **14 52 39.6 -1.8**
comp=Z,6.8nm,0.7s,mb4.5
HAU Haudompre 94.40 331 *e*P **P** **14 52 39.6 -1.8**
HAU pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
HAU Haudompre 94.40 331 *e*P **P** **14 52 39.6 -1.8**
comp=Z,3.4nm,0.7s,mb4.5
MEZF Maizieres J'vi 94.57 332 *e*P **P** **14 52 39.9 -2.2**

CABF La Chapelle 95.59 330 *e*P **P** **14 52 44.7 -2.1**
LOR Lormes 96.03 332 *e*P **P** **14 52 47.0 -1.8**
LPL La Plagne 96.13 329 *e*P **P** **14 52 48.0 -1.3**
LPG La Plagne 96.14 329 *e*P **P** **14 52 48.2 -1.1**
comp=Z,8.6nm,0.6s,mb4.7
LPG La Plagne 96.14 329 *e*P **P** **14 52 48.2 -1.1**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
LPG La Plagne 96.14 329 *e*P **P** **14 52 48.2 -1.1**
comp=Z,4.3nm,0.6s,mb4.8
SSF Saint Saulge 96.35 332 *e*P **P** **14 52 48.6 -1.6**
SMF Signal de Mont 96.53 331 *e*P **P** **14 52 49.2 -1.9**
AVF Avril sur Loir 96.62 332 *e*P **P** **14 52 49.8 -1.7**
comp=Z,12nm,1.0s,mb4.7
AVF Avril sur Loir 96.62 332 *e*P **P** **14 52 49.8 -1.7**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
AVF Avril sur Loir 96.62 332 *e*P **P** **14 52 49.8 -1.7**
comp=Z,6.2nm,1.0s,mb4.7
TXAR Lajitas Array 96.79 52 P **P** **14 52 53.1 +0.5**
comp=Z,1.7nm,0.7s,mb4.3,baz=308,slow=2.7,SNR=21
TXAR pP pP 14 54 12.9 +1.3
comp=Z,0.5nm,0.7s,baz=308,slow=3.1,SNR=3.3
ORIF Oris-en-Rattie 96.98 329 *e*P **P** **14 52 50.7 -2.4**
GRR Gorron 97.00 335 *e*P **P** **14 52 50.3 -2.9**
comp=Z,16nm,1.0s,mb4.8
GRR Gorron 97.00 335 *e*P **P** **14 52 50.3 -2.9**
GRR pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
GRR Gorron 97.00 335 *e*P **P** **14 52 50.3 -2.9**
comp=Z,8.1nm,1.0s,mb4.8
BGF Bois d'Agland 97.02 332 *e*P **P** **14 52 51.9 -1.4**
TCF Toulx Ste Croi 97.50 332 *e*P **P** **14 52 54.2 -1.2**
ESDC Sonseca Array 105.51 332 PP PP 14 57 55.6 -0.8
comp=Z,3.2nm,0.8s,baz=28,slow=7.2,SNR=12
TORD Torodi Ar. Bea 123.19 310 PKP PKPdf 14 58 16.4 -0.6
comp=Z,2.3nm,0.8s,baz=16,slow=3.0,SNR=12
SNAA Sanae 131.17 195 *e*PKPdf PKPdf 14 58 30.3 -0.2
SNAA *e* 15 01 21.0
DBIC Dimbokro 132.30 310 PKP PKPdf 14 58 34.9 +0.5
comp=Z,3.0nm,0.8s,baz=335,slow=5.3,SNR=5.0
DBIC SKPbc SKPbc 15 01 28.9 -0.3
comp=Z,9.3nm,0.7s,baz=36,slow=4.9,SNR=15
VNA2 Neumayer--Watz 132.71 194 *e*PKPdf PKPdf 14 58 35.0 +1.5
baz=66,slow=0.7
VNA2 *e* 15 01 27.1
VNA2 *e* 15 01 28.7
VNA3 Neumayer Olymp 132.93 193 *e*PKPdf PKPdf 14 58 32.6 -1.3
VNA3 *e* 14 58 34.9
VNA3 *e* 15 01 27.1
VNA3 *e* 15 01 28.8
PLCA Paso Flores 151.28 126 PKPbc PKPbc 14 59 13.4 +0.2
comp=Z,2.4nm,0.7s,baz=227,slow=5.6,SNR=9.7
CPUP Villa Florida 164.21 90 PKPab PKPab 15 00 18.2 -0.9
comp=Z,0.9nm,0.6s,baz=200,slow=6.2,SNR=5.2
CPUP Villa Florida 164.21 90 PKP2 PKPab 15 00 18.3 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.6s

*IDC **31** 14:48:45.4±0.8, 0.92N×12596E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/19, mbtmp3.9/10, Error ellipse: s-maj=55.6km s-min=15.5km az=69.0*
*ISCJB **31** 14:48:48.5±0.6, 10N±01×1260E±03, h33km, mb3.9/10, Error ellipse: s-maj=45.6km s-min=10.2km az=158.6*
*NEIC **31** 14:48:50.6±0.4, 0.93N×12604E, h35km, mb4.4/1, Error ellipse: s-maj=32.1km s-min=7.0km az=69.0*
*DJA **31** 14:48:52, 103N×126.14E, h60km, MLv4.0/3*
ISC 31 14:48:50.7±0.6, 09N±01×1260E±03, h35km, n15, σ0≧54/15, mb3.9/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WRAB	**Tennant Creek**	**22.27**	**159**	*e*P	**P**	**14 53 45.1**	**+0.2**
WRA	**Warramunga Arr**	**22.28**	**159**	P	**P**	**14 53 43.8**	**-1.1**
	3.3nm,0.6s,mb4.0,baz=336,slow=11,SNR=18						
WB2	**Warramunga Arr**	**22.28**	**159**	*e*P	**P**	**14 53 45.4**	**+0.4**
ASAR	**Alice Springs**	**25.61**	**163**	P	**P**	**14 54 17.7**	**+0.8**
	1.8nm,0.3s,mb4.0,baz=346,slow=12,SNR=24						
STKA	**Stephens Creek**	**35.80**	**157**	P	**P**	**14 55 46.4**	**-0.4**
	1.7nm,0.6s,mb4.1,baz=347,slow=15,SNR=5.0						
MJAR	**Matsushiro Arr**	**37.19**	**16**	P	**P**	**14 55 58.6**	**0.0**
	1.8nm,0.9s,mb3.9,baz=177,slow=9.2,SNR=6.3						
SONM	**Songino Array**	**49.74**	**343**	P	**P**	**14 57 40.2**	**+0.8**
	0.6nm,0.8s,mb3.7,baz=153,slow=6.6,SNR=4.4						
MK31	**Makanchi Array**	**59.48**	**327**	*e*P	**P**	**14 58 50.0**	**-0.2**
MKAR	**Makanchi Array**	**59.48**	**327**	P	**P**	**14 58 49.8**	**-0.4**
	0.6nm,0.4s,mb4.0,baz=125,slow=6.9,SNR=20						
ZALV	**Zalesovo Beam**	**62.77**	**334**	P	**P**	**14 59 12.1**	**-0.3**
	0.3nm,0.4s,mb3.8,baz=138,slow=5.0,SNR=3.7						
KURK	**Kurchatov**	**63.74**	**329**	P	**P**	**14 59 18.4**	**-0.5**
	1.1nm,0.7s,mb4.0,baz=128,slow=6.2,SNR=8.6						
KURK	**Kurchatov**	**63.74**	**329**	*e*P	**P**	**14 59 18.9**	**0.0**
	2.3nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**69.30**	**328**	P	**P**	**14 59 54.0**	**-0.4**
	0.4nm,0.4s,mb3.7,baz=134,slow=8.9,SNR=4.5						
BRTR	**Keskin Array B**	**91.27**	**310**	P	**P**	**15 01 53.6**	**+0.8**
	0.4nm,0.6s,mb3.9,baz=44,slow=4.0,SNR=2.8						
BRTR	**Keskin Array B**	**91.27**	**310**	P	**P**	**15 01 53.6**	**+0.8**

*IDC **31** 14:53:05.5±3.2, 3957N×2057E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.3/21, mbtmp3.5/4, Error ellipse: s-maj=325.6km s-min=24.9km az=136.0*
*ATH **31** 14:53:06.8, 3944N×2063E, h5km±1km, MD3.7/6*
*NEIC **31** 14:53:06.8, 3943N×2063E, h5km, MD3.7(ATH), After ATH.*
*THE **31** 14:53:08.0, 3942N×2059E, h0km±2km, ML3.6/8, Error ellipse: s-maj=2.3km s-min=0.9km az=220.0*
*CSEM **31** 14:53:08.2±0.1, 3943N×2054E, h8km, ML3.6/8, Error ellipse: s-maj=2.8km s-min=2.0km az=122.0*
*ISCJB **31** 14:53:08.1±0.4, 3940N±003×2055E±004, h10km, mb3.4/4, Error ellipse: s-maj=4.0km s-min=3.7km az=162.2*
*SKO **31** 14:53:12.5, 3964N×2092E, h0km*
ISC 31 14:53:07.8±0.6, 3940N±003×2057E±004, h3km±4km, n33, σ1≧21/48, mb3.4/4, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.22**	**305**	P	**Pg**	**14 53 12.1**	**0.0**
IGT				S	**Sg**	**14 53 16.0**	**+1.0**
JAN	**Janina**	**0.33**	**41**	*e*PG	**Pg**	**14 53 12.0**	**-2.2**
KEK	**Kerkira**	**0.67**	**298**	*e*PB	**Pg**	**14 53 20.5**	**-0.1**
EVR	**Evrytania**	**1.08**	**116**	*e*PB	**Pg**	**14 53 27.0**	**-1.5**
THL	**Klokotos Trika**	**1.13**	**81**	P	**Pg**	**14 53 28.4**	**-1.1**
THL				S	**Sg**	**14 53 44.7**	**+0.6**
VLS	**Valsamata**	**1.23**	**179**	*e*PB	**Pn**	**14 53 31.0**	**-0.8**
VLS				*e*SB	**Sn**	**14 53 49.0**	**+0.2**
VLS	**Valsamata**	**1.23**	**179**	P	**Pg**	**14 53 31.8**	**+0.6**
VLS				*e*Sb	**Sn**	**14 53 49.0**	**+0.2**
VLS				S	**Sg**	**14 53 49.4**	**+2.3**
KZN	**Kozani**	**1.29**	**45**	*e*PB	**Pn**	**14 53 30.9**	**-1.8**
KZN	**Kozani**	**1.29**	**45**	*e*Pb	**Pn**	**14 53 31.0**	**-1.7**
AGG	**Agios Georgios**	**1.42**	**105**	P	**Pn**	**14 53 33.3**	**-1.2**
AGG				S	**Sg**	**14 53 55.1**	**+1.7**
FNA	**Florina**	**1.51**	**24**	P	**Pn**	**14 53 34.9**	**-0.8**
FNA				S	**Sn**	**14 53 56.2**	**+0.3**
LIT	**Litokhoron**	**1.64**	**64**	P	**Pn**	**14 53 36.5**	**-0.9**
LIT				S	**Sn**	**14 53 59.5**	**+0.5**
BIA	**Bitola**	**1.71**	**20**	*e*Pn	**Pn**	**14 53 37.4**	**-1.1**
OHR	**Ohrid**	**1.71**	**6**	*e*Pn	**Pn**	**14 53 38.2**	**-0.3**
OHR				*e*Sg	**Sn**	**14 54 00.3**	**-0.6**
TIR	**Tirane**	**2.01**	**345**	P	**Pn**	**14 53 43.1**	**+0.5**
TIR				S	**Sn**	**14 54 08.8**	**+0.5**
TIR	**Tirane**	**2.01**	**345**	*e*Pn	**Pn**	**14 53 44.2**	**+1.6**
TIR	**Tirane**	**2.01**	**345**	*e*Pn	**Pn**	**14 53 44.2**	**+1.6**
LKR	**Lokris**	**2.04**	**111**	P	**Pn**	**14 53 43.3**	**+0.4**
GRG	**Griva**	**2.09**	**42**	P	**Pn**	**14 53 44.0**	**+0.3**
GRG				S	**Sn**	**14 54 10.8**	**+0.6**
HORT	**Hortiatis**	**2.28**	**58**	P	**Pn**	**14 53 46.9**	**+0.6**
HORT				S	**Sn**	**14 54 16.4**	**+1.5**
PLG	**Polygyros**	**2.42**	**65**	*e*PN	**Pn**	**14 53 49.0**	**+0.8**
PLG	**Polygyros**	**2.42**	**65**	P	**Pn**	**14 53 48.8**	**+0.6**
PLG	**Polygyros**	**2.42**	**65**	*e*Pn	**Pn**	**14 53 49.0**	**+0.8**
VAY	**Valandovo**	**2.45**	**38**	*e*Pn	**Pn**	**14 53 48.8**	**+0.2**
VAY				*e*Sg	**Sn**	**14 54 18.9**	**-0.2**
PAIG	**Paliouri**	**2.46**	**77**	P	**Pn**	**14 53 48.2**	**-0.5**
PAIG				S	**Sn**	**14 54 20.1**	**+0.8**
STIP	**Stip**	**2.60**	**28**	*e*Pn	**Pn**	**14 53 52.8**	**+2.1**
STIP	**Stip**	**2.60**	**28**	*e*Pn	**Pn**	**14 53 52.9**	**+2.2**
SKO	**Skopje**	**2.65**	**14**	*e*Pn	**Pn**	**14 53 54.3**	**+2.9**
SKO	**Skopje**	**2.65**	**14**	*e*Pn	**Pn**	**14 53 54.4**	**+3.0**
SKO				*e*Sg	**Sn**	**14 54 27.2**	**+3.2**
TORD	**Torodi Ar. Bea**	**31.01**	**218**	P	**P**	**14 59 26.0**	**-0.6**
	0.3nm,0.5s,mb3.4,baz=32,slow=9.8,SNR=3.5						
KURK	**Kurchatov**	**41.53**	**54**	P	**P**	**15 00 53.2**	**-2.9**
	0.2nm,0.6s,mb3.0,baz=286,slow=9.7,SNR=2.7						
MKAR	**Makanchi Array**	**44.64**	**59**	P	**P**	**15 01 18.9**	**-2.5**
	0.3nm,0.4s,mb3.5,baz=276,slow=7.5,SNR=11						
ZALV	**Zalesovo Beam**	**44.85**	**49**	P	**P**	**15 01 20.2**	**-2.8**
	0.7nm,0.4s,mb3.8,baz=276,slow=9.1,SNR=5.5						

*ISCJB **31** 14:59:33.2±0.9, 1897N±005×14536E±005, h226km±9km, mb4.2/53, Error ellipse: s-maj=8.8km s-min=8.0km az=36.2*
*BJI **31** 14:59:33.7, 1922N×14539E, h222km, mB5.0, mb4.4*
*MOS **31** 14:59:34.3±0.7, 1899N×14522E, h239km, mb4.5/13, Error ellipse: s-maj=16.0km s-min=7.7km az=94.7*
*IDC **31** 14:59:35.0±1.3, 1890N×14531E, h234km±12km, mb3.9/24, mb1 4.0/26, mb1mx4.0/29, mbtmp3.9/26, Error ellipse: s-maj=13.3km s-min=7.8km az=86.0*
*NEIC **31** 14:59:35.9±1.0, 1893N×14534E, h242km±10km, mb4.4/21, Error ellipse: s-maj=7.7km s-min=6.4km az=86.0*
ISC 31 14:59:34.9±0.9, 1894N±005×14537E±005, h230km±9km, h225km±1.8km; pP-P, n108, σ0≧94/107, mb4.2/53, 4C-3D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
GUMO	**Guam**	**5.34**	**185**	P	**Pn**	**15 00 55.2**	**+0.7**
	12nm,0.3s,baz=151,slow=17,SNR=10						
GUMO				S	**S**	**15 01 54.6**	**-3.1**
	26nm,0.3s,baz=18,slow=20,SNR=4.6						
JOW	**Kunigami**	**17.59**	**300**	P	**P**	**15 03 28.1**	**+3.8**
	27nm,0.3s,baz=136,slow=14,SNR=13						
MJAR	**Matsushiro Arr**	**18.63**	**342**	P	**P**	**15 03 35.1**	**-0.5**
	2.9nm,0.3s,baz=167,slow=9.8,SNR=32						
MJAR				S	**S**	**15 06 55.3**	**-0.2**
	0.2nm,0.3s,baz=173,slow=16,SNR=4.5						
MAJO	**Matsushiro**	**18.64**	**342**	*e*P	**P**	**15 03 35.5**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,29nm,0.6s						
MAJO	**Matsushiro**	**18.64**	**342**	*e*P	**P**	**15 03 35.5**	**-0.1**
	comp=Z,29nm,0.6s						
MAT	**Matsushiro**	**18.64**	**342**	P	**P**	**15 03 35.4**	**-0.2**
KSRS	**Korea Array**	**23.94**	**324**	P	**P**	**15 04 28.1**	**-0.1**
	comp=Z,2.6nm,0.6s,mb4.0,baz=143,slow=9.2,SNR=14						
ASAJ	**Asahikawa**	**25.21**	**355**	P	**P**	**15 04 41.0**	**+1.4**
	comp=Z,9.2nm,0.6s,mb4.6,baz=244,slow=16,SNR=11						
MDJ	**Mudanjiang**	**28.80**	**336**	P	**P**	**15 05 11.0**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,189nm,4.5s						
CN2	**Changchun**	**29.91**	**330**	*e*P	**P**	**15 05 23.0**	**+1.7**
HABR	**Khabarovsk**	**30.63**	**346**	*e*P	**P**	**15 05 26.0**	**-1.6**
HABR				*e*SP	sP	15 06 41.9	+1.6
HABR				*e*		15 08 18.1	
HABR				*e*S	**S**	**15 10 10.0**	**-2.4**
HABR				*e*		15 15 34.2	
BJI	**Beijing**	**32.74**	**316**	P	**P**	**15 05 46.3**	**+0.1**
PETK	**Petropavlovsk-**	**35.42**	**13**	P	**P**	**15 06 09.3**	**+0.3**
	comp=Z,3.9nm,0.7s,mb4.1,baz=184,slow=6.1,SNR=6.0						
PETK	**Petropavlovsk-**	**35.42**	**13**	P	**P**	**15 06 09.3**	**+0.3**
XAN	**Xi'an**	**35.71**	**302**	P	**P**	**15 06 09.0**	**-2.7**
XAN				AP	pP	15 06 54.8	-3.9
XAN				PP	PP	15 07 35.5	-2.5
XAN				S	**S**	**15 11 30.5**	**-0.7**
XAN				AMB	AMB		
	comp=Z,2.0nm,0.6s,mb3.8						
XAN				LR	LR		
	comp=E,30nm,18.8s						
XAN				LR	LR		
	comp=Z,43nm,17.8s						
HHC	**Hu-ho-hao-te**	**36.21**	**314**	*e*P	**P**	**15 06 15.5**	**-0.4**
HHC				AP	pP	15 07 01.5	-1.4
HHC				XP	sP	15 07 26.5	-2.8
HHC				PP	PP	15 07 46.8	+3.4
HHC				S	**S**	**15 11 39.0**	**+0.4**
HHC				PCS	PcS	15 12 22.8	-1.0
HHC				XS	sS	15 12 58.8	-3.6
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,197nm,5.0s						
GYA	**Guiyang**	**36.38**	**289**	P	**P**	**15 06 19.0**	**+1.5**
GYA				AP	pP	15 07 06.5	+1.9
GYA				XP	sP	15 07 31.0	+0.1
GYA				PCP	PcP	15 08 38.5	+1.8
GYA				S	**S**	**15 11 43.5**	**+2.0**
GYA				SCP	ScP	15 12 03.5	+2.2
GYA				PCS	PcS	15 12 26.0	+1.1
GYA				SCS	ScS	15 16 08.3	0.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
HIA	**Hailar**	**36.60**	**332**	*e*P	**P**	**15 06 18.3**	**-0.7**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
HIA	**Hailar**	**36.60**	**332**	*e*P	**P**	**15 06 18.3**	**-0.8**
	comp=Z,3.6nm,0.4s,mb4.2						
CD2	**Chengdu**	**39.36**	**296**	P	**P**	**15 06 42.8**	**+0.4**
CD2				AP	pP	15 07 29.8	-0.3
CD2				XP	sP	15 07 54.8	-1.5
CD2				PP	PP	15 08 21.5	+3.7
CD2				S	**S**	**15 12 26.5**	**+0.2**
CD2				XS	sS	15 13 49.0	-2.0
CD2				SS	SS	15 15 24.8	-5.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
CD2				AMB	AMB		
	comp=Z,160nm,5.5s						
WRAB	**Tennant Creek**	**40.11**	**196**⇑	*e*P	**P**	**15 06 48.8**	**+0.3**
WRAB	**Tennant Creek**	**40.11**	**196**	*e*P	**P**	**15 06 48.6**	**0.0**
	comp=Z,8.0nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**40.12**	**196**	P	**P**	**15 06 48.6**	**0.0**
	comp=Z,2.7nm,0.5s,mb3.9,baz=19,slow=8.5,SNR=64						
WRA				PcP	PcP	15 08 47.7	-0.7
	comp=Z,0.6nm,0.4s,baz=16,slow=3.4,SNR=5.7						
FX1	**Attu Island--F**	**40.18**	**26**	P	**P**	**15 06 49.5**	**+0.9**
	comp=Z,16nm,0.7s,mb4.6,baz=281,slow=5.2,SNR=3.7						
LZH	**Lanzhou**	**40.26**	**304**	⇑P	**P**	**15 06 48.5**	**-1.1**
LZH				PP	PP	15 08 28.5	+1.1
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,105nm,5.6s						
ULN	**Ulaanbaatar**	**42.39**	**322**	*e*P	**P**	**15 07 07.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ULN	**Ulaanbaatar**	**42.39**	**322**	*e*P	**P**	**15 07 07.1**	**+0.3**
	comp=Z,1.9nm,0.5s,mb3.8						
SONM	**Songino Array**	**42.76**	**321**	P	**P**	**15 07 09.8**	**+0.1**
	comp=Z,2.7nm,0.5s,mb3.9,baz=138,slow=9.6,SNR=53			

BILL	**Bilibino**	**50.84**	**10**	*eP*		**P**	**15 08 12.3**	**+0.4**
	comp=Z,20nm,0.9s,mb4.5							
TIXI	**Tiksi**	**53.60**	**354**	*i* P		**P**	**15 08 31.1**	**-0.9**
TIXI				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb3.9							
TIXI	**Tiksi**	**53.60**	**354**	*eP*		**P**	**15 08 31.3**	**-0.8**
	comp=Z,3.7nm,0.5s,mb4.2							
WMQ	**Urumqi**	**53.92**	**311**	P		**P**	**15 08 36.3**	**+1.5**
CHGN	**Chignik**	**55.86**	**34**	*eP*		**P**	**15 08 48.0**	**-0.5**
ZALV	**Zalesovo Beam**	**57.64**	**322**	P		**P**	**15 09 00.0**	**-1.0**
	comp=Z,2.9nm,0.6s,mb4.1,baz=107,slow=7.4,SNR=18							
ZALV				PcP	PcP		15 09 50.4	-1.0
	comp=Z,0.5nm,0.4s,baz=101,slow=4.7,SNR=3.5							
MK31	**Makanchi Array**	**58.07**	**314**	*eP*		**P**	**15 09 04.2**	**0.0**
MKAR	**Makanchi Array**	**58.07**	**314**	P		**P**	**15 09 04.3**	**+0.1**
	comp=Z,4.3nm,0.6s,mb4.2,baz=89,slow=9.1,SNR=50							
KDAK	**Kodiak Island**	**59.33**	**33**	P		**P**	**15 09 12.8**	**+0.2**
	comp=Z,16nm,0.8s,mb4.7,baz=315,slow=2.5,SNR=17							
CHUM	**Lake Minchumin**	**61.06**	**27**	*eP*		**P**	**15 09 24.7**	**+0.5**
	comp=Z,16nm,0.7s,mb4.8							
RC01	**Rabbit Creek A**	**61.50**	**30**	*eP*		**P**	**15 09 26.6**	**-0.7**
BPAW	**Bear Paw Mtn.**	**61.68**	**27**	*eP*		**P**	**15 09 28.4**	**0.0**
	comp=Z,18nm,0.6s,mb4.9							
COLD	**Coldfoot**	**62.86**	**23**	*eP*		**P**	**15 09 36.5**	**+0.4**
	comp=Z,5.4nm,0.9s,mb4.2							
COLA	**College**	**63.19**	**26⇑**	*eP*		**P**	**15 09 39.3**	**+1.0**
COLA	**College**	**63.19**	**26**	*eP*		**P**	**15 09 37.2**	**-1.1**
	comp=Z,9.3nm,0.8s,mb4.5							
PAX	**Paxson**	**63.84**	**28**	*eP*		**P**	**15 09 42.6**	**0.0**
PAX				pmax	pmax			
	comp=Z,9.0nm,0.5s,mb4.7							
PAX	**Paxson**	**63.84**	**28**	*eP*		**P**	**15 09 42.6**	**0.0**
	comp=Z,9.2nm,0.5s,mb4.7							
BRVK	**Borovoye**	**66.16**	**320**	*eP*		**P**	**15 09 57.3**	**-0.4**
BRVK				pmax	pmax			
	comp=Z,13nm,0.9s,mb4.6							
BRVK	**Borovoye**	**66.16**	**320**	*eP*		**P**	**15 09 57.3**	**-0.3**
	comp=Z,13nm,0.9s,mb4.6							
KBL	**Kabul**	**68.48**	**300**	*eP*		**P**	**15 10 12.9**	**+0.3**
KBL				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.1							
KBL	**Kabul**	**68.48**	**300**	*eP*		**P**	**15 10 12.9**	**+0.3**
	comp=Z,5.2nm,0.9s,mb4.2							
DLBC	**Dease Lake**	**71.27**	**34**	P		**P**	**15 10 29.8**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.4,baz=306,slow=5.9,SNR=12							
ARU	**Arti**	**72.69**	**324**	*d iP*		**P**	**15 10 37.7**	**+0.2**
ARU				*e*			15 13 20.3	
ARU				PPP			15 15 02.8	
ARU				S	S		15 19 42.9	-0.6
ARU				SS	SS		15 24 33.3	+5.7
ARU				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.5							
HDW	**Hoodsport**	**77.29**	**44**	P		**P**	**15 11 05.3**	**+1.4**
YKA	**Yellowknife Ar**	**77.92**	**28**	P		**P**	**15 11 06.6**	**-0.5**
	comp=Z,6.5nm,0.5s,mb4.5,baz=289,slow=5.5,SNR=164							
YKA	**Yellowknife Ar**	**77.92**	**28**	P		**P**	**15 11 06.6**	**-0.5**
TDL	**Tradedollar La**	**78.17**	**45**	P		**P**	**15 11 10.0**	**+1.1**
YBH	**Yreka Blue Hor**	**79.04**	**50**	P		**P**	**15 11 14.0**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.2,baz=273,slow=3.5,SNR=12							
EBG	**Ellensburg**	**79.11**	**44**	P		**P**	**15 11 14.7**	**+0.7**
RES	**Resolute Bay**	**79.27**	**14**	P		**P**	**15 11 14.1**	**-0.2**
	comp=Z,4.7nm,0.6s,mb4.3,baz=338,slow=5.5,SNR=20							
RES	**Resolute Bay**	**79.27**	**14**	P		**P**	**15 11 14.1**	**-0.2**
MXC	**Moxie City**	**79.39**	**44**	P		**P**	**15 11 16.1**	**+0.6**
HAWA	**Hanford**	**79.94**	**44**	*eP*		**P**	**15 11 18.6**	**+0.2**
OD2	**Odessa Site #2**	**80.19**	**43**	P		**P**	**15 11 19.9**	**+0.1**
LBCM	**Butte Creek Ri**	**80.27**	**50**	P		**P**	**15 11 20.8**	**+0.4**
KEV	**Kevo**	**81.61**	**342**	*ep*		**P**	**15 11 21.7**	**-5.1**
ARCES	**ARCESS Array B**	**82.17**	**342**	P		**P**	**15 11 28.8**	**-0.9**
	comp=Z,3.9nm,0.9s,mb4.1,baz=87,slow=9.8,SNR=17							
BSMT	**Bassoo Peak**	**82.56**	**42**	P		**P**	**15 11 32.8**	**+0.6**
NVAR	**Mina Array Bea**	**83.24**	**52**	P		**P**	**15 11 36.0**	**+0.2**
	comp=Z,12nm,0.7s,mb4.7,baz=264,slow=6.0,SNR=85							
JOF	**Joensuu**	**83.67**	**335**	*ep*		**P**	**15 11 35.0**	**-2.6**
	comp=Z,7.2nm,0.5s,mb4.7							
TPNV	**Topopah Spring**	**85.27**	**53**	*eP*		**P**	**15 11 46.1**	**0.0**
TPNV				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.5							
TPNV	**Topopah Spring**	**85.27**	**53**	*eP*		**P**	**15 11 46.1**	**0.0**
	comp=Z,8.8nm,0.8s,mb4.5							
BOZ	**Bozeman (W)**	**85.38**	**43**	*eP*		**P**	**15 11 46.3**	**-0.2**
BOZ				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.0							
BOZ	**Bozeman (W)**	**85.38**	**43**	*eP*		**P**	**15 11 46.3**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.1							
KAF	**Kangasniemi**	**86.07**	**336**	*ep*		**P**	**15 11 47.5**	**-2.0**
	comp=Z,1.9nm,0.4s,mb4.2							
KAF	**Kangasniemi**	**86.07**	**336**	*eP*		**P**	**15 11 47.5**	**-2.0**
KAF				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.2							
RRI2	**Red Ridge**	**86.46**	**45**	*eP*		**P**	**15 11 52.4**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.2							
DUG	**Dugway**	**86.62**	**49**	*eP*		**P**	**15 11 52.3**	**-0.4**
DUG				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.4							
DUG	**Dugway**	**86.62**	**49**	*eP*		**P**	**15 11 52.3**	**-0.4**
	comp=Z,8.1nm,1.1s,mb4.4							
PDAR	**Pinedale Array**	**87.88**	**45**	P		**P**	**15 11 58.1**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.8,baz=236,slow=0.8,SNR=11							
WUAZ	**Wupatki**	**89.46**	**53**	*eP*		**P**	**15 12 06.7**	**+0.6**
	comp=Z,7.0nm,1.0s,mb4.5							
AKASG	**Malin Array Be**	**90.93**	**325**	P		**P**	**15 12 11.7**	**-1.0**
	comp=Z,0.3nm,0.4s,mb3.6,baz=47,slow=5.3,SNR=3.3							
NOA	**NORSAR Array B**	**92.24**	**340**	P		**P**	**15 12 17.9**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=38,slow=5.0,SNR=3.4							
ULM	**Lac du Bonnet**	**92.58**	**34**	P		**P**	**15 12 19.2**	**-1.1**
	comp=Z,1.2nm,0.4s,mb4.3,baz=300,slow=6.1,SNR=4.5							
ANMO	**Albuquerque**	**93.35**	**51**	P		**P**	**15 12 23.9**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=307,slow=7.6,SNR=3.1							
ANMO	**Albuquerque**	**93.35**	**51⇓**	*eP*		**P**	**15 12 25.2**	**+1.0**
ANMO				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ANMO	**Albuquerque**	**93.35**	**51**	P		**P**	**15 12 23.9**	**-0.3**
BRTR	**Keskin Array B**	**93.72**	**314**	P		**P**	**15 12 24.9**	**-0.9**
	comp=Z,1.5nm,0.8s,mb4.1,baz=50,slow=1.9,SNR=7.2							
TXAR	**Lajitas Array**	**97.96**	**55**	P		**P**	**15 12 45.0**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.6,baz=258,slow=4.5,SNR=2.8							
VNA2	**Neumayer--Watz**	**125.55**	**191**	*e*PKPdf		PKPdf	15 18 07.1	-0.9
	baz=353,slow=1.4							
VNA3	**Neumayer Olymp**	**125.65**	**190**	*e*PKPdf		PKPdf	15 18 07.2	-1.0
TORD	**Torodi Ar. Bea**	**132.06**	**309**	PKP		PKPdf	15 18 21.0	-1.1
	comp=Z,0.2nm,0.4s,baz=61,slow=0.9,SNR=6.1							
TORD				SKPbc	SKPbc		15 21 24.5	-2.1
	comp=Z,0.9nm,0.7s,baz=37,slow=4.6,SNR=6.4							
TORD	**Torodi Ar. Bea**	**132.06**	**309**	PKP		PKPdf	15 18 21.0	-1.1
TORD				SKPbc	SKPbc		15 21 24.5	-2.2
PLCA	**Paso Flores**	**142.39**	**133**	PKhKP			15 18 36.3	
	comp=Z,0.8nm,0.6s,baz=162,slow=11,SNR=3.6							
PLCA				SKPbc	SKPbc		15 21 50.6	-5.6
	comp=Z,1.8nm,0.9s,baz=240,slow=5.8,SNR=3.1							
CFAA	**Coronel Fontan**	**147.23**	**119**	PKPbc	PKPbc		15 18 50.3	-1.3
	comp=Z,0.5nm,0.6s,baz=283,slow=3.4,SNR=9.0							
LVC	**Limon Verde**	**147.78**	**103**	PKPbc	PKPbc		15 18 53.9	+0.6
	comp=Z,8.1nm,0.7s,baz=170,slow=2.0,SNR=5.3							
LVC	**Limon Verde**	**147.78**	**103**	PKPbc	PKPbc		15 18 53.9	+0.6
SIV	**San Ignacio**	**154.62**	**88**	PKPab	PKPab		15 19 24.0	-1.0
	comp=Z,0.8nm,0.5s,baz=287,slow=14,SNR=3.8							

*ISCJB **31** 15:14:40.3±1.2, 150S±0.1×759W±02, h10km, mb3.5/3, Error ellipse: s-maj=37.9km s-min=7.5km az=147.4*
*IDC **31** 15:14:41.6±1.2, 1481S×754W, h0km, mb3.4/4, mb1 3.8/8, mb1mx3.6/21, mbtmp3.7/8, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/23, Error ellipse: s-maj=53.3km s-min=17.8km az=52.0*
*NEIC **31** 15:14:47.2±1.5, 1472S×754W, h38km±14km, Error ellipse: s-maj=32.3km s-min=11.4km az=48.0*
ISC 31 15:14:43.1±1.2, 149S±01×757W±02, h10km, n16, σ1§39/18, mb3.5/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	**Nana**	**3.11**	**339**	Pn		**Pn**	**15 15 30.9**	**-1.3**
	12nm,0.3s,baz=133,slow=9.5,SNR=14							
NNA				Sn		**Sn**	**15 16 12.1**	**+2.7**
	23nm,0.3s,baz=216,slow=16,SNR=5.2							
NNA	**Nana**	**3.11**	**339**	*e*Pn		**Pn**	**15 15 32.7**	**+0.5**
NNA				Sn		**Sn**	**15 16 12.1**	**+2.7**
NNA				*e*Sg		**Sg**	**15 16 19.6**	**-3.3**
ARE	**Arequipa**	**4.33**	**112**	*eP*		**Pn**	**15 15 51.0**	**+2.1**
ARE				*eS*		**Sn**	**15 16 47.0**	**+7.5**
ATAH	**Atahualpa**	**8.29**	**341**	Pn		**Pn**	**15 16 42.5**	**-0.9**
	0.5nm,0.3s,baz=166,slow=4.2,SNR=2.5							
ATAH				Sn		**Sn**	**15 18 18.2**	**+1.0**
	0.3nm,0.3s,baz=155,slow=14,SNR=2.1							
ATAH				LR		LR	15 20 11.5	
	comp=Z,57nm,20.3s,baz=318,slow=40							
LVC	**Limon Verde**	**10.00**	**141**	Pn		**Pn**	**15 17 07.2**	**+0.4**
	2.9nm,0.3s,baz=309,slow=9.9,SNR=32							
LVC				Lg			15 19 52.6	
	0.3nm,0.3s,baz=260,slow=22,SNR=9.6							
LVC				LR		LR	15 20 15.2	
	comp=Z,63nm,20.2s,baz=217,slow=34							
LVC	**Limon Verde**	**10.00**	**141**	*e*Pn		**Pn**	**15 17 07.7**	**+0.9**
LVC				Lg			15 19 52.6	
LVC				LR		LR	15 20 15.2	
SIV	**San Ignacio**	**14.13**	**96**	Pn		**Pn**	**15 17 59.8**	**-3.6**
	0.1nm,0.3s,baz=280,slow=19,SNR=2.9							
CPUP	**Villa Florida**	**20.57**	**126**	P		**P**	**15 19 21.2**	**-1.0**
	0.2nm,0.3s,baz=163,slow=11,SNR=1.7							
CPUP				LR		LR	15 29 05.1	
	comp=Z,33nm,19.8s,baz=165,slow=42							
CPUP	**Villa Florida**	**20.57**	**126**	P		**P**	**15 19 21.2**	**-1.0**
CPUP				LR		LR	15 29 05.1	
TXAR	**Lajitas Array**	**51.61**	**328**	P		**P**	**15 23 50.8**	**+0.9**
	0.2nm,0.6s,mb3.3,baz=137,slow=11,SNR=2.9							
TORD	**Torodi Ar. Bea**	**81.49**	**74**	P		**P**	**15 27 00.3**	**-0.9**
	2.0nm,0.9s,mb4.1,baz=258,slow=5.0,SNR=8.9							
YKA	**Yellowknife Ar**	**82.94**	**343**	P		**P**	**15 27 07.0**	**-0.8**
	0.1nm,0.4s,mb3.2,baz=142,slow=5.9,SNR=6.0							
YKA	**Yellowknife Ar**	**82.94**	**343**	P		**P**	**15 27 07.0**	**-0.8**
ASAR	**Alice Springs**	**131.98**	**218**	PKP		PKPdf	15 33 57.5	-0.2
	0.3nm,0.9s,baz=111,slow=2.1,SNR=3.0							
WRA	**Warramunga Arr**	**134.50**	**221**	PKP		PKPdf	15 34 02.9	+0.4
	0.3nm,0.7s,baz=127,slow=1.9,SNR=3.2							
SONM	**Songino Array**	**147.12**	**357**	PKPbc		PKPbc	15 34 25.9	-0.4
	0.6nm,0.7s,baz=319,slow=1.9,SNR=4.4							

*ISCJB **31** 15:32:49.9±0.6, 2415S±005×6702W±006, h169km±6km, mb3.6/9, Error ellipse: s-maj=8.6km s-min=8.1km az=148.9*
*NEIC **31** 15:32:50.9±0.6, 2420S×6698W, h166km±6km, mb4.0/1, Error ellipse: s-maj=8.9km s-min=7.6km az=89.0*
*IDC **31** 15:32:51.3±1.0, 2414S×6700W, h168km±8km, mb3.5/9, mb1 3.7/13, mb1mx3.6/20, mbtmp3.5/13, Error ellipse: s-maj=17.2km s-min=11.7km az=36.0*
*GUC **31** 15:32:53.0±0.7, 2403S×6740W, h194km±17km, ML4.3*
ISC 31 15:32:51.0±0.6, 2419S±005×6703W±006, h164km±7km, n35, σ1§08/42, mb3.6/9, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**2.33**	**312**	P		**Pn**	**15 33 32.9**	**+2.1**
	112nm,0.3s,baz=136,slow=5.6,SNR=1388							
LVC				S		**Sn**	**15 34 02.6**	**+1.1**
	48nm,0.3s,baz=23,slow=23,SNR=14							
LVC	**Limon Verde**	**2.33**	**312**	*e*Pn		**Pn**	**15 33 32.7**	**+1.9**
LVC				*e*Sn		**Sn**	**15 34 02.2**	**+0.7**
LVC				*S*		**Sn**	**15 34 02.6**	**+1.1**
LVC	**Limon Verde**	**2.33**	**312**	*eP*		**Pn**	**15 33 32.2**	**+1.4**
LVC				*eS*		**Sn**	**15 34 02.8**	**+1.3**
LVC				AML	AML		15 34 06.8	
	comp=E,334nm,0.2s							
PECH	**Pedro de Valdi**	**2.90**	**303⇑**	*iP*		**Pn**	**15 33 38.9**	**+1.2**
PECH				*i* S		**Sn**	**15 34 13.1**	**-0.6**
PECH				AML	AML		15 34 16.1	
	comp=N,985nm,0.8s							
CEN1	**Los Morros**	**3.01**	**285⇓**	*iP*		**Pn**	**15 33 40.9**	**+1.9**
CEN1				*i* S		**Sn**	**15 34 17.0**	**+0.8**
CEN1				AML	AML		15 34 18.9	
	comp=N,419nm,0.4s							
CPN1	**Cerro Paranal**	**3.10**	**261⇑**	*iP*		**Pn**	**15 33 40.8**	**+0.7**
CPN1				*i* S		**Sn**	**15 34 17.0**	**-1.3**
ANCH	**Antofagasta**	**3.13**	**279⇑**	*iP*		**Pn**	**15 33 41.4**	**+0.9**
ANCH				*i* S		**Sn**	**15 34 17.3**	**-1.6**
ANCH				AML	AML		15 34 20.1	
	comp=N,977nm,0.3s							
MECH	**Mejillones**	**3.31**	**288**	*eP*		**Pn**	**15 33 43.5**	**+0.6**
MECH				*eS*		**Sn**	**15 34 21.5**	**-1.5**
MECH				AML	AML		15 34 28.5	
	comp=E,748nm,0.3s							
TOCH	**Tocopilla**	**3.58**	**305⇑**	*iP*		**Pn**	**15 33 46.6**	**+0.3**
TOCH				*i* S		**Sn**	**15 34 26.6**	**-2.6**
LCO	**Las Campanas**	**5.82**	**214**	*e*Pn		**Pn**	**15 34 14.1**	**-1.3**
CFAA	**Coronel Fontan**	**7.46**	**188**	P		**Pn**	**15 34 37.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=5.0,slow=11,SNR=9.9							
CFAA				S		**Sn**	**15 35 57.1**	**-3.7**
	comp=E,0.4nm,0.3s,baz=112,slow=23,SNR=8.5							
CPUP	**Villa Florida**	**9.04**	**106**	P		**Pn**	**15 34 56.8**	**-1.3**
	comp=E,0.2nm,0.3s,baz=283,slow=11,SNR=8.1							
CPUP	**Villa Florida**	**9.04**	**106**	P		**Pn**	**15 34 56.8**	**-1.3**
SIV	**San Ignacio**	**9.89**	**36**	P		**Pn**	**15 35 08.6**	**-0.8**
	comp=E,0.4nm,0.3s,baz=220,slow=11,SNR=8.9							
SIV				S		**Sn**	**15 36 54.7**	**-4.6**
	comp=E,0.2nm,0.3s,baz=198,slow=19,SNR=2.2							
TRQA	**Tornquist**	**14.48**	**164**	*e*Pn		**Pn**	**15 36 07.9**	**-0.3**
TRQA				*eP*			15 36 10.9	
PLCA	**Paso Flores**	**16.76**	**189**	P		**Pn**	**15 36 39.5**	**+3.4**
	comp=E,0.2nm,0.3s,baz=18,slow=14,SNR=4.7							
BDFB	**Brasilia**	**19.78**	**68**	P		**P**	**15 37 09.3**	**+0.6**
	comp=E,1.0nm,0.3s,baz=231,slow=17,SNR=36							
TXAR	**Lajitas Array**	**63.81**	**325**	P		**P**	**15 43 05.7**	**-0.2**
	comp=E,0.5nm,0.8s,mb3.4,baz=151,slow=9.1,SNR=4.5							
QSPA	**South Pole Qui**	**66.02**	**180**	P		**P**	**15 43 20.4**	**+1.1**
	comp=E,0.7nm,0.5s,mb3.8,baz=295,slow=2.6,SNR=7.8							
QSPA	**South Pole Qui**	**66.02**	**180**	P		**P**	**15 43 20.4**	**+1.1**
ANMO	**Albuquerque**	**69.69**	**326**	P		**P**	**15 43 42.4**	**-0.5**
	comp=E,2.0nm,0.9s,mb3.8,baz=131,slow=9.5,SNR=5.0							
ANMO	**Albuquerque**	**69.69**	**326**	P		**P**	**15 43 42.4**	**-0.5**
TOA0	**Torodi Ar. Sit**	**76.67**	**69**	*eP*		**P**	**15 44 23.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P		**P**	**15 44 23.6**	**-0.7**
	comp=E,0.9nm,0.6s,mb3.6,baz=260,slow=6.0,SNR=15							
PDAR	**Pinedale Array**	**77.29**	**329**	P		**P**	**15 44 27.4**	**+0.3**
	comp=E,0.3nm,0.5s,mb3.2,baz=134,slow=8.8,SNR=5.1							
ULM	**Lac du Bonnet**	**78.39**	**342**	P		**P**	**15 44 32.4**	**-0.6**
	comp=E,1.0nm,0.5s,mb3.8,baz=179,slow=9.4,SNR=3.8							
ULM	**Lac du Bonnet**	**78.39**	**342**	*eP*		**P**	**15 44 32.3**	**-0.7**
	comp=E,1.8nm,0.6s,mb3.9							
NVAR	**Mina Array Bea**	**78.67**	**321**	P		**P**	**15 44 35.7**	**+0.9**
	comp=E,0.2nm,0.4s,mb3.1,baz=150,slow=4.2,SNR=3.7							
BOSA	**Boshof**	**80.67**	**117**	P		**P**	**15 44 46.1**	**+0.1**
	comp=E,1.2nm,0.4s,mb3.9,baz=320,slow=4.1,SNR=11							
YKA	**Yellowknife Ar**	**94.29**	**340**	P		**P**	**15 45 51.0**	**-0.1**
	comp=E,0.8nm,0.8s,mb3.9,baz=130,slow=4.5,SNR=18							
ASAR	**Alice Springs**	**128.27**	**205**	PKP		PKPdf	15 51 38.3	-0.3
	comp=E,0.5nm,0.7s,baz=147,slow=1.5,SNR=8.1							
WRA	**Warramunga Arr**	**131.45**	**207**	PKP		PKPdf	15 51 44.3	-0.4
	comp=E,0.6nm,0.6s,baz=159,slow=1.8,SNR=13							
WRA				SKPbc	SKPbc		15 54 52.6	-2.1
	comp=E,0.7nm,0.8s,baz=149,slow=3.5,SNR=7.5							
ZALV	**Zalesovo Beam**	**143.57**	**28**	PKhKP			15 52 01.3	
	comp=E,0.7nm,0.5s,baz=308,slow=4.9,SNR=5.1							
MK31	**Makanchi Array**	**146.69**	**40**	*e*PKPbc		PKPbc	15 52 13.4	+0.1
MKAR	**Makanchi Array**	**146.69**	**40**	PKPbc		PKPbc	15 52 12.0	-1.4
	comp=E,0.8nm,0.6s,baz=310,slow=3.0,SNR=8.1							

*BEO **31** 16:05:47.2±1.1, 4415N×1785E, h8km±7km, ML4.3/4*
*SZGRF **31** 16:05:48.3, 4378N×1867E, h10km, mb3.8, Northwestern Balkan Peninsula*
*PRU **31** 16:05:49.9, 4396N×1821E, h0km, M3.9*
*ISCJB **31** 16:05:49.9±0.3, 4408N±001×1819E±002, h6km±2km, mb3.8/11, MS3.5/3, Error ellipse: s-maj=2.4km s-min=1.7km az=143.1*
*IDC **31** 16:05:49.9±0.7, 4399N×1821E, h0km, mb3.8/11, mb1 3.9/21, mb1mx3.9/32, mbtmp3.8/21, ML3.6/10, MS3.1/9, Ms1 3.1/9, ms1mx2.7/43, Error ellipse: s-maj=11.2km s-min=9.1km az=37.0*
*NEIC **31** 16:05:50.9±0.7, 4402N×1820E, h1km±6km, mb3.9/1, ML3.6(BRA), ML3.9(ZAG), ML3.6(BUC), ML4.0(PDG), Error ellipse: s-maj=3.2km s-min=2.6km az=213.0*
NEIC Felt at Sarajevo and Visoko.
*CSEM **31** 16:05:50.9±0.1, 4400N×1823E, h15km, ML4.1/4, Ms3.8, Error ellipse: s-maj=1.7km s-min=1.0km az=40.0*
*PDG **31** 16:05:50.7±0.8, 4411N×1834E, h1km±11km, MD4.0/10, ML4.0/7, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*LDG **31** 16:05:51.6±0.1, 4417N×1840E, h10km, Ml4.0/10, Error ellipse: s-maj=3.9km s-min=2.3km az=53.0*
*MOS **31** 16:05:52.5±0.8, 4405N×1812E, h33km, mb4.3/1, Error ellipse: s-maj=5.4km s-min=3.5km az=107.4*
*VIE **31** 16:05:54.2±0.4, 4424N×1825E, h12km±1km, mb3.4/17, ML3.6/13, Ms3.8/4, Error ellipse: s-maj=2.5km s-min=2.1km az=174.0*

ISC 31 16:05:52.1±0.4, 4406N±001×1822E±002, h9km±3km, n221, σ1§23/308, mb3.8/11, MS3.5/3, 39C-35D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UPM	**Unac-Piva**	**0.99**	**150⇑**	*iPg*		**Pg**	**16 06 09.1**	**-2.1**
UPM				*eSg*		**Sg**	**16 06 24.2**	**+0.1**
BLY	**Banja Luka**	**1.01**	**313⇑**	*iPn*		**Pn**	**16 06 09.8**	**-2.7**
BLY				*eSn*		**Sn**	**16 06 25.4**	**-1.4**
PLE	**Pljevlja**	**1.12**	**130⇑**	*iPg*		**Pg**	**16 06 11.3**	**-2.4**
PLE				*eSg*		**Sg**	**16 06 27.9**	**-0.3**
BRY	**Bratogost**	**1.19**	**169⇑**	*iPg*		**Pg**	**16 06 12.2**	**-2.7**
BRY				*eSg*		**Sg**	**16 06 31.6**	**+1.4**
STON	**Ston**	**1.25**	**198**	*ePg*		**Pg**	**16 06 13.3**	**-2.8**
STON				Sg		**Sg**	**16 06 30.9**	**-1.4**
DIVS	**Divibare**	**1.27**	**88⇑**	*iPg*		**Pg**	**16 06 15.1**	**-1.5**
DIVS				*eSg*		**Sg**	**16 06 36.4**	**+3.3**
NKY	**Niksic**	**1.37**	**155⇓**	*iPg*		**Pg**	**16 06 16.0**	**-2.4**
NKY				*eSg*		**Sg**	**16 06 37.2**	**+1.0**
SJES	**Sjenica**	**1.50**	**122⇑**	*iPg*		**Pg**	**16 06 19.2**	**-1.7**
SJES				*eSg*		**Sg**	**16 06 42.9**	**+2.5**
SJES	**Sjenica**	**1.50**	**122⇑**	*iPn*		**Pn**	**16 06 19.6**	**+0.4**
SJES				*eSn*		**Sn**	**16 06 39.8**	**+0.9**
FRGS	**Fruska Gora**	**1.58**	**45⇑**	*iPg*		**Pg**	**16 06 18.9**	**-3.5**
FRGS				*eSg*		**Sg**	**16 06 41.2**	**-1.6**
HCY	**Herceg Novi**	**1.63**	**173⇑**	*iPn*		**Pn**	**16 06 20.7**	**-0.2**
HCY				*eSn*		**Sn**	**16 06 46.8**	**+4.9**
BEY	**Berane**	**1.70**	**134⇑**	*iPn*		**Pn**	**16 06 21.5**	**-0.5**
BEY				*eSn*		**Sn**	**16 06 46.7**	**+2.9**
IVA	**Berane**	**1.70**	**134⇑**	*iPn*		**Pn**	**16 06 21.5**	**-0.5**
IVA				*eSn*		**Sn**	**16 06 46.7**	**+2.9**
BEO	**Beograd**	**1.77**	**64**	*ePg*		**Pg**	**16 06 23.3**	**-2.9**
BEO				*eSg*		**Sg**	**16 06 50.6**	**+1.4**
PDG	**Podgorica**	**1.80**	**155⇓**	*iPn*		**Pn**	**16 06 23.2**	**-0.1**
PDG				*eSn*		**Sn**	**16 06 50.8**	**+4.6**
TTG	**Podgorica**	**1.80**	**155⇓**	*iPn*		**Pn**	**16 06 23.2**	**-0.1**
TTG				*eSn*		**Sn**	**16 06 50.8**	**+4.6**
GRUS	**Gruza**	**1.81**	**95⇑**	*iPg*		**Pg**	**16 06 22.3**	**-4.5**
GRUS				*eSg*		**Sg**	**16 06 53.5**	**+3.3**
RHK3	**Tenkes**	**1.83**	**1⇑**	*ePn*		**Pn**	**16 06 22.7**	**-1.0**
RHK3	**Tenkes**	**1.83**	**1**	*ePg*		**Pg**	**16 06 23.7**	**-3.4**
RHK3				*eSn*		**Sn**	**16 06 49.1**	**+2.2**
BUM	**Brajici-Budva**	**1.83**	**164⇑**	*iPn*		**Pn**	**16 06 25.1**	**+1.4**
BUM				*eSn*		**Sn**	**

TIP	**Timpagrande**	**5.00**	**193**	*e*Pn		**Pn**	**16 07 07.9**	**+0.6**
TIP	**Timpagrande**	**5.00**	**193**	*e*Pn		**Pn**	**16 07 07.9**	**+0.6**
VOIR		**5.05**	**72**	⇓*i*P		**Pn**	**16 07 09.2**	**+1.2**
VOIR		**5.05**	**72**	⇓P		**Pn**	**16 07 09.2**	**+1.2**
LIT	**Litokhoron**	**5.07**	**140**	P		**Pn**	**16 07 09.1**	**+0.8**
BGLD	**Berchtesgaden**	**5.11**	**316**	⇑*i*Pn		**Pn**	**16 07 09.6**	**+0.8**
RJOB	**Jochberg**	**5.28**	**316**	*e*Pn		**Pn**	**16 07 12.3**	**+1.2**
RJOB				*e*Sn		**Sn**	**16 08 12.7**	**+0.8**
THL	**Klokotos Trika**	**5.31**	**146**	P		**Pn**	**16 07 11.3**	**-0.3**
CRVS	**Cervenica-Dubn**	**5.33**	**24**	*e*P		**Pn**	**16 07 13.0**	**+1.2**
CRVS				*e*			16 08 11.8	
CRVS				pmax	pmax			
	comp=Z,77nm,1.8s							
CRVS	**Cervenica-Dubn**	**5.33**	**24**	*e*PN		**Pn**	**16 07 13.0**	**+1.2**
CRVS				*e*			16 07 40.6	
CRVS	**Cervenica-Dubn**	**5.33**	**24**	*e*SN		**Sn**	**16 08 11.8**	**-1.5**
CRVS				*e*			16 08 57.9	
CRVS	**Cervenica-Dubn**	**5.33**	**24**	*e*Pn		**Pn**	**16 07 13.0**	**+1.2**
	comp=Z,77nm,1.8s							
CRVS				*e*			16 07 40.6	
CRVS				*e*			16 08 11.8	
CRVS				*e*			16 08 57.9	
PLG	**Polygyros**	**5.35**	**132**	*e*P		**Pn**	**16 07 13.0**	**+0.9**
VRAC	**Vranov**	**5.37**	**349**	Pn		**Pn**	**16 07 12.5**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=185,slow=14,SNR=9.2							
VRAC				Sn		**Sn**	**16 08 13.7**	**-0.5**
	comp=Z,4.3nm,0.3s,baz=130,slow=8.7,SNR=8.4							
VRAC				LR		LR	16 09 08.4	
	comp=Z,107nm,20.3s,baz=189,slow=36							
VRAC	**Vranov**	**5.37**	**349**	P		**Pn**	**16 07 12.5**	**+0.2**
VRAC							16 08 13.7	
VRAC				pmax	pmax			
	comp=Z,1.0nm,0.3s							
VRAC				smax				
	comp=N,4.0nm,0.3s							
VRAC	**Vranov**	**5.37**	**349**	*e*Pn		**Pn**	**16 07 11.8**	**-0.5**
VRAC				*e*Sn		**Sn**	**16 08 13.6**	**-0.5**
VRAC	**Vranov**	**5.37**	**349**	⇓*i*P		**Pn**	**16 07 12.0**	**-0.3**
VRAC	**Vranov**	**5.37**	**349**	⇓P		**Pn**	**16 07 12.0**	**-0.3**
UZH	**Uzhgorod**	**5.37**	**30**	*e*P		**Pn**	**16 07 11.8**	**-0.5**
UZH				*e*S		**Sn**	**16 08 12.2**	**-2.0**
UZH				smax				
	comp=E,86μm,0.8s							
SCE	**Schlegeis**	**5.46**	**305**	⇑*i*Pn		**Pn**	**16 07 15.4**	**+1.9**
NIE	**Niedzica**	**5.55**	**14**	*e*Pn		**Pn**	**16 07 16.6**	**+1.8**
NIE				*e*Sn		**Sn**	**16 08 21.5**	**+2.9**
WTTA	**Wattenberg**	**5.62**	**307**	⇓*i*Pn		**Pn**	**16 07 17.3**	**+1.6**
	SNR=54							
WTTA	**Wattenberg**	**5.62**	**307**	*e*Pn		**Pn**	**16 07 18.2**	**+2.5**
VLC	**Villacollemand**	**5.64**	**274**	*e*Pn		**Pn**	**16 07 16.9**	**+0.8**
	comp=E,17nm,0.7s							
MLR	**Muntele Rosu**	**5.68**	**73**	Pn		**Pn**	**16 07 15.1**	**-1.5**
	comp=E,0.3nm,0.3s,baz=150,slow=8.1,SNR=4.3							
MLR				Lg			16 08 50.0	
	comp=E,0.3nm,0.3s,baz=259,slow=14,SNR=3.5							
MLR	**Muntele Rosu**	**5.68**	**73**	⇓*i*P		**Pn**	**16 07 18.1**	**+1.5**
MLR	**Muntele Rosu**	**5.68**	**73**	⇓P		**Pn**	**16 07 18.1**	**+1.5**
WATA	**Walderalm**	**5.69**	**307**	⇑*i*Pn		**Pn**	**16 07 18.4**	**+1.7**
	SNR=43							
WATA				⇓*i*Sn		**Sn**	**16 08 23.3**	**+1.2**
GEC2	**GERESS Array S**	**5.71**	**328**	*e*Pn		**Pn**	**16 07 17.6**	**+0.6**
GERES	**GERESS Array B**	**5.71**	**328**	Pn		**Pn**	**16 07 17.6**	**+0.6**
	comp=E,2.5nm,0.3s,baz=155,slow=14,SNR=59							
GERES				Sn		**Sn**	**16 08 23.0**	**+0.4**
	comp=E,2.1nm,0.3s,baz=164,slow=19,SNR=4.4							
GERES				LR		LR	16 08 57.0	
	comp=E,61nm,19.4s,baz=133,slow=32							
GERES	**GERESS Array B**	**5.71**	**328**	P		**Pn**	**16 07 17.6**	**+0.6**
GERES							16 08 23.0	
STHS	**Stebnicka Huta**	**5.74**	**20**	*e*P		**Pn**	**16 07 19.0**	**+1.5**
STHS				*e*			16 08 18.9	
STHS				pmax	pmax			
	comp=Z,18nm,1.1s							
STHS	**Stebnicka Huta**	**5.74**	**20**	*e*PN		**Pn**	**16 07 19.0**	**+1.5**
STHS				*e*			16 07 48.9	
STHS	**Stebnicka Huta**	**5.74**	**20**	*e*SN		**Sn**	**16 08 18.9**	**-4.5**
STHS				*e*			16 09 23.7	
STHS	**Stebnicka Huta**	**5.74**	**20**	*e*Pn		**Pn**	**16 07 19.0**	**+1.5**
	comp=Z,18nm,1.1s							
STHS				*e*			16 07 48.9	
STHS				*e*			16 08 18.9	
STHS				*e*			16 09 23.7	
OKC	**Ostrava-Krasne**	**5.78**	**360**	*e*PN		**Pn**	**16 07 18.2**	**+0.3**
OKC				*ex*		x	16 07 26.0	
OKC				*e*SN		**Sn**	**16 08 21.5**	**-2.8**
EVR	**Evrytania**	**5.80**	**151**	*e*P		**Pn**	**16 07 19.0**	**+0.7**
AGG	**Agios Georgios**	**5.90**	**147**	P		**Pn**	**16 07 19.6**	**-0.1**
MOTA	**Moosalm**	**5.97**	**306**	⇓*i*Pn		**Pn**	**16 07 21.0**	**+0.5**
	SNR=62							
MOTA				⇑*i*Sn		**Sn**	**16 08 29.3**	**+0.4**
KHC	**Kasperske Hory**	**5.99**	**329**	*e*PN		**Pn**	**16 07 21.4**	**+0.5**
KHC				*ex*		x	16 07 29.4	
KHC				*ex*		x	16 07 37.0	
KHC				*e*SN		**Sn**	**16 08 29.1**	**-0.5**
KHC	**Kasperske Hory**	**5.99**	**329**	*e*Pn		**Pn**	**16 07 21.4**	**+0.5**
KHC				*e*			16 07 29.4	
KHC				*e*Sn		**Sn**	**16 08 29.1**	**-0.5**
FETA	**Feichten**	**6.04**	**302**	⇑*i*Pn		**Pn**	**16 07 22.8**	**+1.3**
	SNR=20							
BURAR	**Bucovina Array**	**6.04**	**52**	⇓*i*P		**Pn**	**16 07 24.0**	**+2.5**
NEO	**Neokhori**	**6.05**	**140**	*e*P		**Pn**	**16 07 25.0**	**+3.3**
VLS	**Valsamata**	**6.14**	**162**	P		**Pn**	**16 07 26.1**	**-2.9**
OJC	**Ojcow**	**6.25**	**9**	*e*Pn		**Pn**	**16 07 24.6**	**+0.2**
OJC				*e*PP			16 07 31.5	
OJC				*e*Sn		**Sn**	**16 08 38.3**	**+2.4**
WET	**Wettzell**	**6.28**	**326**	*e*Pn		**Pn**	**16 07 26.3**	**+1.5**
DPC	**Dobruska-Polom**	**6.42**	**349**	*e*PN		**Pn**	**16 07 26.8**	**0.0**
DPC				*e*SN		**Sn**	**16 08 36.0**	**-4.1**
PRU	**Pruhonice**	**6.44**	**338**	*e*PN		**Pn**	**16 07 26.6**	**-0.4**
PRU				*ex*		x	16 07 34.9	
PRU				*ex*		x	16 08 51.8	
DAVOX	**Davos/Dischmat**	**6.47**	**298**	Pn		**Pn**	**16 07 28.5**	**+1.0**
	comp=Z,5.8nm,0.3s,baz=115,slow=11,SNR=42							
DAVOX				LR		LR	16 10 12.4	
	comp=Z,95nm,18.2s,baz=116,slow=40							
DAVOS	**Davos**	**6.55**	**298**	P		**Pn**	**16 07 28.5**	**0.0**
UPC	**Upice**	**6.62**	**348**	*e*PN		**Pn**	**16 07 29.7**	**+0.2**
UPC				*e*SN		**Sn**	**16 08 42.7**	**-2.3**
DAVA	**Damuels**	**6.67**	**302**	⇓*i*Pn		**Pn**	**16 07 30.9**	**+0.7**
DAVA				⇓*i*Sg		**Sg**	**16 09 31.5**	**+5.3**
	comp=Z,32nm,0.7s							
TUE	**Stuetta**	**6.71**	**294**	*e*Pn		**Pn**	**16 07 32.0**	**+1.3**
	comp=Z,18nm,0.6s							
TUE	**Stuetta**	**6.71**	**294**	*e*Pn		**Pn**	**16 07 32.0**	**+1.3**
	comp=Z,18nm,0.6s							
GRC1	**Grafenberg Arr**	**6.76**	**319**	*e*Pn		**Pn**	**16 07 31.1**	**-0.3**
PGF	**Pioggiola**	**6.90**	**261**	*e*Pn		**Pn**	**16 07 33.7**	**+0.4**
KSP	**Ksiaz**	**6.91**	**350**	*e*Pn		**Pn**	**16 07 33.5**	**+0.1**
KSP				*e*			16 07 36.3	
KSP				*e*Sn		**Sn**	**16 08 49.8**	**-2.3**
HARR	**Harsova**	**6.99**	**81**	⇑*i*P		**Pn**	**16 07 35.2**	**+0.7**
HARR	**Harsova**	**6.99**	**81**	⇑P		**Pn**	**16 07 35.2**	**+0.7**
ROTZ	**Rotzenmuhle**	**7.04**	**326**	*e*Pn		**Pn**	**16 07 36.0**	**+0.8**
MANZ	**Manzenberg**	**7.25**	**327**	*e*Pn		**Pn**	**16 07 39.9**	**+1.8**
NKC	**Novy Kostel**	**7.32**	**330**	*e*PN		**Pn**	**16 07 39.2**	**+0.1**
GRA1	**Grafenberg Arr**	**7.39**	**322**	*e*Pn		**Pn**	**16 07 40.6**	**+0.5**
GRF	**Grafenberg Arr**	**7.39**	**322**	*e*Pn		**Pn**	**16 07 40.5**	**+0.4**
GRF	**Grafenberg Arr**	**7.39**	**322**	*e*Pn		**Pn**	**16 07 40.6**	**+0.5**
BRG	**Berggiesshubel**	**7.40**	**338**	SG		**Sb**	**16 09 26.5**	**-2.5**
	comp=Z,21nm,0.7s							
BRG	**Berggiesshubel**	**7.40**	**338**	Pg		**Pb**	**16 07 54.2**	**-6.5**
BRG				S		**Sn**	**16 09 14.3**	**+10**
BRG				Sg		**Sb**	**16 09 26.5**	**-2.5**
ITM	**Ithomi**	**7.43**	**156**	*e*P		**Pn**	**16 07 41.0**	**+0.4**
SPAK	**Spaichingen-Ko**	**7.70**	**305**	*e*P		**Pn**	**16 07 44.5**	**+0.1**
SBF	**Sospel**	**7.79**	**272**	*e*Pn		**Pn**	**16 07 44.3**	**-1.2**
SBF				*e*Sn		**Sn**	**16 09 08.3**	**-5.4**
	comp=Z,127nm,1.1s							
SBF	**Sospel**	**7.79**	**272**	*e*Pn		**Pn**	**16 07 44.3**	**-1.2**
SBF				*e*Sn		**Sn**	**16 09 08.3**	**-5.4**
	comp=Z,64nm,1.1s							
STU	**Stuttgart**	**7.81**	**310**	*e*Pn		**Pn**	**16 07 46.1**	**+0.2**
MOX	**Moxa**	**7.96**	**328**	*e*PN		**Pn**	**16 07 48.7**	**+0.8**
MOX	**Moxa**	**7.96**	**328**	*e*Pn		**Pn**	**16 07 48.0**	**+0.1**
CLL	**Collm**	**8.06**	**336**	*e*(Pn)		**Pn**	**16 07 51.0**	**+1.8**
CLL				*e*Sn		**Sn**	**16 09 03.0**	**-17**
CLL				*ex*		x	16 09 35.0	
CLL				*e*Sb		**Sb**	**16 09 49.0**	**+1.3**
	comp=Z,24nm,0.8s							
CLL				*e*Sg		Sn	16 10 11.0	+51
FELD	**Feldberg im Sc**	**8.07**	**302**	*e*P		**Pn**	**16 07 49.7**	**+0.3**
BFO	**Black Forest**	**8.08**	**305**	*e*Pn		**Pn**	**16 07 49.2**	**-0.3**
BFO	**Black Forest**	**8.08**	**305**	*e*Pn		**Pn**	**16 07 49.4**	**-0.1**
MBDF	**Montbardon**	**8.23**	**279**	*e*Pn		**Pn**	**16 07 49.1**	**-2.5**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**16 09 18.1**	**-6.5**
	comp=Z,21nm,0.7s							
MBDF	**Montbardon**	**8.23**	**279**	*e*Pn		**Pn**	**16 07 49.1**	**-2.5**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**16 09 18.1**	**-6.5**
	comp=Z,10nm,0.7s							
LPG	**La Plagne**	**8.29**	**284**	*e*Pn		**Pn**	**16 07 51.1**	**-1.3**
LPG				*e*Sn		**Sn**	**16 09 20.5**	**-5.5**
	comp=Z,32nm,0.8s							
LPG	**La Plagne**	**8.29**	**284**	*e*Pn		**Pn**	**16 07 51.1**	**-1.3**
LPG				*e*Sn		**Sn**	**16 09 20.5**	**-5.5**
	comp=Z,16nm,0.8s							
LPL	**La Plagne**	**8.30**	**284**	*e*Pn		**Pn**	**16 07 51.9**	**-0.7**
LPL				*e*Sn		**Sn**	**16 09 21.6**	**-4.8**
	comp=Z,42nm,0.8s,SNR=1.0							
LPL	**La Plagne**	**8.30**	**284**	*e*Pn		**Pn**	**16 07 51.9**	**-0.7**
LPL				*e*Sn		**Sn**	**16 09 21.6**	**-4.8**
	comp=Z,21nm,0.8s,SNR=1.0							
FRF	**La Foret Royal**	**8.39**	**271**	*e*Pn		**Pn**	**16 07 53.0**	**-0.8**
RSL	**Roselend**	**8.40**	**285**	*e*P		**Pn**	**16 07 55.0**	**+1.1**
LMR	**La Mourre**	**8.52**	**269**	*e*Pn		**Pn**	**16 07 54.0**	**-1.6**
MOF	**Molkenrain**	**8.60**	**300**	*e*P		**Pn**	**16 07 56.8**	**+0.1**
ECH	**Echery**	**8.73**	**302**	*e*P		**Pn**	**16 07 58.3**	**-0.2**
ECH				pmax	pmax			
	comp=Z,2.0nm,0.4s							
ECH	**Echery**	**8.73**	**302**	*e*Pn		**Pn**	**16 07 58.3**	**-0.2**
	comp=Z,2.4nm,0.4s							
CDF	**Champ du Feu**	**8.74**	**304**	*e*Pn		**Pn**	**16 07 58.8**	**+0.2**
CDF				*e*Sg		Sn	16 10 26.0	+49
	comp=Z,11nm,0.7s							
HINF	**Hinteralfeld**	**8.77**	**299**	*e*Pn		**Pn**	**16 07 58.6**	**-0.3**
HINF				*e*Sn		**Sn**	**16 09 31.2**	**-6.6**
	comp=Z,10nm,0.7s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**8.87**	**280**	*e*Pn		**Pn**	**16 08 00.0**	**-0.3**
ORIF				*e*Sn		**Sn**	**16 09 34.2**	**-6.1**
	comp=Z,32nm,0.8s							
ORIF	**Oris-en-Rattie**	**8.87**	**280**	*e*Pn		**Pn**	**16 08 00.0**	**-0.3**
ORIF				*e*Sn		**Sn**	**16 09 34.2**	**-6.1**
	comp=Z,16nm,0.8s							
CABF	**La Chapelle**	**8.92**	**291**	*e*Pn		**Pn**	**16 08 00.9**	**-0.1**
TNS	**Taunus Mts**	**9.07**	**316**	*e*Pn		**Pn**	**16 08 03.9**	**+0.8**
SMRF	**Simiane la Rot**	**9.12**	**274**	*e*Pn		**Pn**	**16 08 03.4**	**-0.3**
HAU	**Haudompre**	**9.15**	**300**	*e*Pn		**Pn**	**16 08 02.8**	**-1.4**
HAU				*e*Sn		**Sn**	**16 09 40.5**	**-6.7**
	comp=Z,15nm,0.7s							
VIVF	**Saint-Julien-l**	**9.72**	**279**	*e*Pn		**Pn**	**16 08 10.6**	**-1.5**
AKASG	**Malin Array Be**	**9.98**	**44**	Pn		**Pn**	**16 08 16.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=232,slow=13,SNR=3.2							
IDI	**Anoyia**	**10.15**	**147**	Pn		**Pn**	**16 08 15.3**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=330,slow=14,SNR=3.4							
IDI				Sn		**Sn**	**16 10 04.1**	**-7.8**
	comp=Z,0.8nm,0.3s,baz=101,slow=19,SNR=5.1							
IDI				LR		LR	16 11 21.2	
	comp=Z,30nm,20.3s,baz=240,slow=33							
IDI	**Anoyia**	**10.15**	**147**	Pn		**Pn**	**16 08 15.3**	**-2.7**
IDI				Sn		**Sn**	**16 10 04.1**	**-7.8**
SMF	**Signal de Mont**	**10.45**	**289**	*e*Pn		**Pn**	**16 08 20.5**	**-1.5**
SMF				*e*Sn		**Sn**	**16 10 12.0**	**-7.1**
	comp=Z,17nm,0.9s							
LOR	**Lormes**	**10.55**	**293**	*e*Pn		**Pn**	**16 08 23.3**	**-0.1**
LOR				*e*Sn		**Sn**	**16 10 14.2**	**-7.4**
	comp=Z,6.9nm,0.7s							
AVF	**Avril sur Loir**	**10.80**	**290**	*e*Pn		**Pn**	**16 08 25.5**	**-1.3**
BRTR	**Keskin Array B**	**12.28**	**105**	Pn		**Pn**	**16 08 46.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=307,slow=12,SNR=7.8							
OBN	**Obninsk**	**16.18**	**40**	⇓*i*P		**Pn**	**16 09 39.7**	**+0.2**
OBN				*e*S		**Sn**	**16 12 31.0**	**-8.0**
OBN				pmax	pmax			
	comp=Z,15nm,1.4s							
OBN				MLR	MLR			
	comp=Z,100nm,17.0s							
HFS	**Hagfors**	**16.33**	**352**	LR		LR	16 16 13.0	
	comp=Z,89nm,18.9s,baz=236,slow=38							
ESDC	**Sonseca Array**	**17.08**	**263**	P		**Pn**	**16 09 48.8**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=5.2							
MMAI	**Mount Meron Ar**	**17.35**	**124**	P		**Pn**	**16 09 53.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=310,slow=11,SNR=2.0							
NOA	**NORSAR Array B**	**17.51**	**349**	LR		LR	16 17 31.3	
	comp=Z,40nm,18.4s,baz=280,slow=40							
KIV	**Kislovodsk**	**17.59**	**82**	*e*P		**Pn**	**16 09 56.7**	**-0.6**
KIV				*e*S		**Sn**	**16 13 09.0**	**-4.1**
KIV				pmax	pmax			
	comp=Z,9.0nm,2.1s							
KIV				MLR	MLR			
	comp=Z,100nm,18.0s							
EKA	**Eskdalemuir Ar**	**17.76**	**317**	P		**Pn**	**16 10 00.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=125,slow=16,SNR=3.0							
GNI	**Garni**	**20.03**	**92**	P		**P**	**16 10 25.2**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=317,slow=18,SNR=3.0							
MDT	**Midelt**	**21.05**	**245**	P		**P**	**16 10 34.5**	**-1.8**
	comp=Z,1.5nm,0.9s,mb3.3,baz=34,slow=7.6,SNR=5.4							
MDT				LR		LR	16 18 13.1	
	comp=Z,50nm,18.4s,MS2.9,baz=52,slow=35							
TORD	**Torodi Ar. Bea**	**33.91**	**210**	P		**P**	**16 12 33.7**	**-1.7**
	comp=Z,2.4nm,0.8s,mb4.2,baz=22,slow=8.5,SNR=16							
TORD	**Torodi Ar. Bea**	**33.91**	**210**	P		**P**	**16 12 33.7**	**-1.8**
AAK	**Ala-Archa**	**40.26**	**72**	*e*P		**P**	**16 13 29.7**	**+0.5**
AAK				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.0							
AAK	**Ala-Archa**	**40.26**	**72**	*e*P		**P**	**16 13 29.7**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.0							
DBIC	**Dimbokro**	**42.38**	**215**	P		**P**	**16 13 45.1**	**-1.6**
	comp=Z,1.9nm,0.6s,mb3.9,baz=5.7,slow=8.8,SNR=5.2							
ZALV	**Zalesovo Beam**	**43.26**	**52**	P		**P**	**16 13 53.6**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.8,baz=281,slow=8.9,SNR=6.7							
MK31	**Makanchi Array**	**43.93**	**63**	*e*P		**P**	**16 13 58.5**	**-0.6**
MKAR	**Makanchi Array**	**43.93**	**63**	P		**P**	**16 13 59.0**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.7,baz=281,slow=7.9,SNR=14							
SONM	**Songino Array**	**58.16**	**52**	P		**P**	**16 15 45.3**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.2,baz=291,slow=9.0,SNR=16							
SONM				LR		LR	16 40 56.3	
	comp=Z,31nm,18.3s,MS3.5,baz=129,slow=36							
YKA	**Yellowknife Ar**	**67.28**	**338**	P		**P**	**16 16 46.4**	**-0.1**
	comp=Z,0.4nm,0.8s,mb3.5,baz=36,slow=6.0,SNR=6.1							
CMAR	**Chiang Mai Arr**	**70.83**	**83**	P		**P**	**16 17 08.9**	**-0.4**
	comp=Z,1.0nm,0.9s,mb3.8,baz=305,slow=7.2,SNR=5.9							
PDAR	**Pinedale Array**	**81.74**	**324**	P		**P**	**16 18 10.6**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.4,baz=73,slow=5.1,SNR=3.6							
TEIG	**Tepich**	**87.37**	**296**	LR		LR	16 53 43.8	
	comp=Z,54nm,19.7s,MS4.0,baz=2.2,slow=33							
TXAR	**Lajitas Array**	**89.70**	**312**	P		**P**	**16 18 51.3**	**+0.6**
	comp=Z,0.5nm,0.8s,mb3.9,baz=64,slow=2.9,SNR=4.7							

*ISCJB **31** 16:45:03.2±1.8,259S±0.1×1778W±0.1,h171km±15km, mb3.9/12, Error ellipse: s-maj=20.9km s-min=15.4km az=23.4*

*IDC **31** 16:45:04.3±2.1,2594S×17770W,h170km±19km,mb3.7/12, mb1 4.0/13,mb1mx3.9/19,mbtmp3.8/13,MS2.9/1, Ms1 2.9/1,ms1mx2.4/24,Error ellipse: s-maj=21.2km s-min=15.2km az=12.0*

*NEIC **31** 16:45:05.2±0.3,2606S×17770W,mb4.0/1,Error ellipse: s-maj=13.2km s-min=10.7km az=170.0*

ISC 31 16:45:04.4±1.7,260S±01×1777W±01,h170km±15km,n34, σ0s55/25,mb3.9/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**3.30**	**183**	P		**Pn**	**16 45 55.1**	**-1.1**
	116nm,0.3s,baz=110,slow=23,SNR=9.7							
RAO				S		**Sn**	**16 46 37.6**	**+0.9**
	200nm,0.3s,baz=87,slow=22,SNR=10							
RAO				LR		LR	16 46 48.5	
	comp=Z,199nm,20.1s,baz=152,slow=32							
URZ	**Urewera**	**13.03**	**198**	P		**Pn**	**16 47 54.6**	**-8.6**
	0.2nm,0.3s,baz=288,slow=20,SNR=5.3							
URZ				S		**Sn**	**16 50 15.5**	**-12**
	1.7nm,0.3s,baz=172,slow=14,SNR=9.5							
AFI	**Afiamalu**	**13.22**	**26**	S		**Sn**	**16 50 10.5**	**-22**
	7.7nm,0.3s,baz=144,slow=19,SNR=4.8							
CTA	**Charters Tower**	**33.58**	**272**	P		**P**	**16 51 29.7**	**+1.1**
	3.4nm,0.7s,mb4.2,baz=106,slow=10,SNR=8.2							
CTA	**Charters Tower**	**33.58**	**272**	P		**P**	**16 51 29.7**	**+1.1**
CTAO	**Charters Tower**	**33.58**	**272**	*e*P		**P**	**16 51 28.2**	**-0.4**
	2.0nm,0.5s,mb4.1							
PMG	**Port Moresby**	**37.11**	**290**	P		**P**	**16 51 59.1**	**+0.3**
	8.4nm,0.8s,mb4.4,baz=200,slow=4.5,SNR=4.8							
ASAR	**Alice Springs**	**43.76**	**262**	P		**P**	**16 52 53.0**	**-0.2**
	0.9nm,0.6s,mb3.6,baz=94,slow=7.2,SNR=25							
ASAR				pP			16 53 33.1	+2.6
	4.3nm,0.9s,baz=106,slow=8.3,SNR=15							
ASAR				PcP		PcP	16 54 35.9	-1.2
	0.7nm,0.9s,baz=108,slow=3.0,SNR=2.9							
WB2	**Warramunga Arr**	**44.34**	**267**	*e*P		**P**	**16 52 57.6**	**-0.3**
WRAB	**Tennant Creek**	**44.34**	**267**	*e*P		**P**	**16 52 57.6**	**-0.3**
WRA	**Warramunga Arr**	**44.35**	**267**	P		**P**	**16 52 57.4**	**-0.6**
	1.1nm,0.5s,mb3.7,baz=102,slow=7.6,SNR=39							
WRA				pP		pP	16 53 37.3	+2.0
	4.6nm,1.1s,baz=106,slow=8.0,SNR=6.2							
MJAR	**Matsushiro Arr**	**74.74**	**325**	P		**P**	**16 56 25.4**	**-0.2**
	1.7nm,0.9s,mb3.7,baz=170,slow=4.1,SNR=3.5							
MAW	**Mawson**	**76.55**	**200**	P		**P**	**16 56 35.7**	**+0.2**
	2.8nm,0.6s,mb4.1,baz=146,slow=7.3,SNR=5.5							
SNAA	**Sanae**	**82.59**	**178**	*e*		**P**	**16 57 07.5**	**-0.5**
SNAA				*e*			16 57 09.5	
VNA3	**Neumayer Olymp**	**82.72**	**176**	*e*		**P**	**16 57 08.1**	**-0.6**
VNA3				*e*			16 57 10.7	
VNA2	**Neumayer--Watz**	**83.16**	**177**	*e*		**P**	**16 57 11.0**	**+0.1**
	baz=177,slow=2.4							
VNA2				*e*			16 57 13.5	
VNA1	**Neumayer--Stat**	**83.39**	**176**	*e*		**P**	**16 57 12.1**	**0.0**
VNA1				*e*			16 57 14.4	
YBH	**Yreka Blue Hor**	**84.39**	**38**	P		**P**	**16 57 18.0**	**+0.5**
	3.0nm,1.0s,mb4.0,baz=229,slow=3.6,SNR=3.5							
NVAR	**Mina Array Bea**	**84.82**	**43**	P		**P**	**16 57 19.9**	**+0.2**
	1.2nm,0.7s,mb3.7,baz=221,slow=8.4,SNR=8.7							
PLCA	**Paso Flores**	**85.37**	**133**	P		**P**	**16 57 22.9**	**+0.2**
	2.7nm,1.0s,mb3.9,baz=230,slow=10.0,SNR=3.7							
TXAR	**Lajitas Array**	**89.79**	**57**	P		**P**	**16 57 44.0**	**+0.2**
	0.8nm,0.9s,mb3.6,baz=207,slow=7.8,SNR=5.6							
CMAR	**Chiang Mai Arr**	**92.15**	**289**	P		**P**	**16 57 56.1**	**+1.1**
	0.6nm,0.8s,mb3.6,baz=136,slow=3.7,SNR=5.6							
PDAR	**Pinedale Array**	**92.75**	**43**	P		**P**	**16 57 56.6**	**-0.5**
	0.7nm,0.8s,mb3.9,baz=243,slow=3.1,SNR=6.8							
MKAR	**Makanchi Array**	**115.04**	**312**	PKP		PKiKP	17 03 23.4	-1.7
	0.5nm,0.8s,baz=147,slow=0.5,SNR=4.9							
BOSA	**Boshof**	**121.43**	**204**	PKP		PKPdf	17 03 38.0	-0.1
	1.1nm,0.6s,baz=207,slow=4.5,SNR=3.4							
BVAR	**Borovoye Array**	**123.33**	**318**	PKP		PKPdf	17 03 39.9	-0.9
	0.3nm,0.6s,baz=113,slow=3.3,SNR=4.7							
ARCES	**ARCESS Array B**	**134.29**	**

comp=Z,0.6nm,0.5s,mb3.2,baz=126,slow=5.5,SNR=5.1
PETK Petropavlovsk- 79.55 347 P **P 17 18 33.5 -1.1**
comp=Z,7.4nm,1.0s,mb4.0,baz=106,slow=5.5,SNR=7.0
MDJ Mudanjiang 82.64 326 P **P 17 18 51.0 +0.2**
MDJ AMB AMB
comp=Z,473nm,4.7s
SNAA Sanae 84.19 179 *e*P **P 17 18 57.5 -0.8**
SNAA *e* 17 19 00.5
SNAA Sanae 84.19 179 *i* P **P 17 18 59.0 +0.7**
SNAA pmax pmax
comp=Z,10.0nm,1.6s
VNA3 Neumayer Olymp 84.41 177 *e*P **P 17 18 58.9 -0.5**
VNA3 *e* 17 19 01.4
VNA3 *e* 17 20 57.3
VNA3 *e* 18 42 40.8
VNA2 Neumayer--Watz 84.82 178 *e*P **P 17 19 01.2 -0.2**
VNA2 *e* 17 19 03.5
VNA2 *e* 17 20 59.0
VNA2 *e* 18 42 39.7
NVAR Mina Array Bea 85.12 44 P **P 17 19 03.2 -0.1**
comp=Z,2.9nm,0.8s,mb3.8,baz=223,slow=8.6,SNR=16
NVAR Mina Array Bea 85.12 44 P **P 17 19 03.2 -0.1**
TPNV Topopah Spring 85.59 46 *e*P **P 17 19 04.4 -1.2**
TUC Tucson 86.84 52 *e*P **P 17 19 12.3 +0.6**
TUC pmax pmax
comp=Z,13nm,1.0s,mb4.5
TUC Tucson 86.84 52 *e*P **P 17 19 12.3 +0.7**
comp=Z,13nm,1.0s,mb4.5
GYA Guiyang 86.95 301 P **P 17 19 13.3 +0.9**
GYA AP pP 17 21 02.5 -2.2
GYA XP sP 17 21 51.5 -4.9
GYA PP PP 17 22 47.0 +2.0
GYA SKS 17 28 52.3
GYA S S 17 29 09.8 +1.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
GYA AMB AMB
comp=Z,80nm,5.2s
BJI Beijing 87.34 316 P **P 17 19 14.3 +0.4**
BJI AMB AMB
comp=Z,10.0nm,0.4s,mb4.8
PLCA Paso Flores 87.96 134 P **P 17 19 17.6 +0.6**
comp=Z,2.5nm,0.9s,mb3.9,baz=272,slow=6.5,SNR=3.8
XAN Xi'an 89.00 308 P **P 17 19 23.5 +1.7**
XAN AP pP 17 21 09.5 -5.2
XAN PP PP 17 23 00.0 -1.0
XAN S S 17 29 29.3 +2.4
XAN SS SS 17 35 37.3 +1.6
XAN AMB AMB
comp=Z,1.0nm,0.5s,mb3.9
DUG Dugway 89.63 45 *e*P **P 17 19 24.3 -0.2**
CMAR Chiang Mai Arr 89.65 290 P **P 17 19 26.4 +1.3**
comp=Z,1.9nm,1.0s,mb3.9,baz=139,slow=3.4,SNR=10
TXAR Lajitas Array 90.72 58 P **P 17 19 30.1 +0.3**
comp=Z,6.2nm,0.8s,mb4.6,baz=213,slow=6.4,SNR=71
CD2 Chengdu 91.31 303 P **P 17 19 32.5 0.0**
CD2 AP pP 17 21 20.5 -5.2
CD2 XP sP 17 22 08.3 -8.8
CD2 PP PP 17 23 20.5 +1.4
CD2 SKS 17 29 18.5
CD2 S S 17 29 48.0 +0.3
CD2 XS sS 17 32 59.5 -11
CD2 SS SS 17 36 12.0 +3.2
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,230nm,5.3s
PDAR Pinedale Array 93.06 44 P **P 17 19 39.6 -0.7**
comp=Z,1.6nm,0.7s,mb4.1,baz=232,slow=4.6,SNR=9.6
LZH Lanzhou 93.63 308 P **P 17 19 41.0 -2.1**
LZH AP pP 17 21 30.3 -6.1
LZH XP sP 17 22 18.3 -10
LZH PP PP 17 23 36.0 -1.0
LZH AMB AMB
comp=Z,29nm,1.1s,mb5.3
LZH AMB AMB
comp=Z,128nm,6.4s
SONM Songino Array 97.44 319 P **P 17 20 00.7 +0.8**
comp=Z,0.3nm,0.8s,mb3.6,baz=101,slow=2.9,SNR=2.8
SONM pP pP 17 21 50.9 -2.8
comp=Z,0.5nm,1.0s,baz=123,slow=5.3,SNR=1.9
SONM PP PP 17 23 59.5 -6.3
comp=Z,1.0nm,1.1s,baz=139,slow=7.0,SNR=3.9
SONM Songino Array 97.44 319 P **P 17 20 00.7 +0.8**
SONM *PP pP 17 21 50.9 -2.7
MK31 Makanchi Array 112.44 313 *e*PKIKP PKiKP 17 24 57.8 -1.4
MKAR Makanchi Array 112.44 313 PKiKP PKiKP 17 24 58.3 -0.9
comp=Z,0.3nm,0.5s,baz=110,slow=1.5,SNR=5.9
MKAR PKKPbc PKKPbc 17 35 49.5 -1.6
comp=Z,0.5nm,0.8s,baz=347,slow=2.5,SNR=2.9
MKAR PKKPab PKKPab 17 36 00.1 +0.9
comp=Z,0.5nm,0.8s,baz=252,slow=2.4,SNR=4.1
KURK Kurchatov 115.52 316 PKP PKPdf 17 25 03.9 -1.1
comp=Z,0.7nm,0.6s,baz=82,slow=1.8,SNR=5.1
BVAR Borovoye Array 120.77 319 PKP PKPdf 17 25 14.3 -0.7
comp=Z,0.9nm,0.4s,baz=47,slow=2.1,SNR=8.8
ARU Arti 127.24 323 *i* PKIKP PKPdf 17 25 27.1 -0.2
ARU 17 27 33.5
ARU 17 28 20.9
ARU SS SS 17 44 11.6 +7.6
ARCES ARCESS Array B 132.34 348 PKP PKPdf 17 25 35.9 -0.7
comp=Z,2.9nm,0.8s,baz=51,slow=1.5,SNR=10
ARCES SKPbc SKPbc 17 28 15.2 -0.4
comp=Z,3.5nm,1.0s,baz=64,slow=2.8,SNR=4.2
ARCES ARCESS Array B 132.34 348 PKP PKPdf 17 25 35.9 -0.7
ARCES SKPbc SKPbc 17 28 15.2 -0.4
NOA NORSAR Array B 142.54 351 PKhKP 17 25 50.9
comp=Z,1.3nm,0.8s,baz=16,slow=4.6,SNR=3.3
HFS Hagfors 143.00 349 PKhKP 17 25 52.8
comp=Z,4.5nm,0.4s,baz=66,slow=3.6,SNR=58
AKASG Malin Array Be 145.35 327 PKPbc PKPbc 17 26 00.6 -1.2
comp=Z,1.6nm,0.5s,baz=45,slow=3.8,SNR=16
AKASG pPKPbc 17 27 57.8
comp=Z,1.2nm,0.6s,baz=45,slow=4.6,SNR=2.8
AKASG SKPbc SKPbc 17 28 52.4 +0.3
comp=Z,3.3nm,0.8s,baz=46,slow=2.9,SNR=8.4
AKASG Malin Array Be 145.35 327 PKPbc PKPbc 17 26 00.6 -1.1
AKASG pPKPbc 17 27 57.8
AKASG SKPbc SKPbc 17 28 52.4 +0.3
KIEV Kiev 145.36 327 *e*PKHKP 17 26 00.4
BR131 Keskin Array S 147.83 307 *e*PKPbc PKPbc 17 26 08.3 -0.6
BRTR Keskin Array B 147.83 307 PKPbc PKPbc 17 26 08.6 -0.4
comp=Z,1.5nm,0.7s,baz=136,slow=4.1,SNR=8.6
BRTR PKPab PKPab 17 26 13.1 -0.2
comp=Z,1.6nm,0.6s,baz=102,slow=3.7,SNR=10
BRTR pPKPbc pPKPbc 17 28 04.8 -3.1
comp=Z,1.6nm,0.8s,baz=152,slow=5.6,SNR=4.1
MMAI Mount Meron Ar 147.86 294 PKPbc PKPbc 17 26 10.2 +1.0
comp=Z,3.7nm,0.5s,baz=66,slow=4.9,SNR=14
EIL Elat 148.46 287 PKPbc PKPbc 17 26 11.8 +0.9
comp=Z,4.3nm,0.8s,baz=338,slow=3.8,SNR=4.7
EIL Elat 148.46 287 PKPbc PKPbc 17 26 11.8 +0.9
EKA Eskdalemuir Ar 148.99 3 PKPbc PKPbc 17 26 10.4 -0.9
comp=Z,3.0nm,0.7s,baz=348,slow=2.7,SNR=10
KWP Kalwaria 149.16 331⇓*i*P PKPbc 17 26 12.1 +0.2
BURAR Bucovina Array 149.34 326⇓*i*P PKPbc 17 26 13.6 +1.2
BSEG Bad Segeberg 149.47 348 *e*PKPbc PKPbc 17 26 11.9 -0.6
HARR Harsova 149.55 319⇑*i*P PKPbc 17 26 12.9 -0.1
OJC Ojcow 149.94 334 *e*PKPbc PKPbc 17 26 13.2 -0.5
STHS Stebnicka Huta 149.96 332 *e*PKP PKPbc 17 26 14.0 +0.2
CRVS Cervenica-Dubn 150.25 331 *e*PKP PKPbc 17 26 13.0 -1.5
CRVS *e* 17 26 23.8
NIE Niedzica 150.36 333 *e*PKPbc PKPbc 17 26 15.5 +0.8
KSP Ksiaz 150.71 339 *e*PKP PKPbc 17 26 15.9 +0.5
KSP Ksiaz 150.71 339 *e*PKP PKPbc 17 26 15.3 -0.2
KSP *e*pPKP pPKPdf 17 28 18.3 +8.1
NRDL Niedersach Rie 150.88 347 *e*PKPbc PKPbc 17 26 15.3 -0.5
OKC Ostrava-Krasne 150.89 335 *e*pPKP pPKPab 17 28 18.9 -1.7
UPC Upice 151.09 339 *e*pPKP pPKPbc 17 28 18.2 +2.2
DPC Dobruska-Polom 151.12 338 *e*pPKP pPKPab 17 28 19.2 -2.3
DRGR 151.16 327⇑*i*P PKPbc 17 26 16.3 -0.4
CLL Collm 151.30 343 *e*PKPbc PKPbc 17 26 16.7 -0.1
CLL *e*pPKPbc pPKPbc 17 28 15.6 -0.9
CLL Collm 151.30 343⇓*i*PKPbc PKPbc 17 26 16.5 -0.3
comp=Z,11nm,0.8s
CLL *e*PKPab PKPab 17 26 26.0 -1.2
CLL *e*pPKPbc pPKPbc 17 28 16.0 -0.5
CLL *i* pPKPab pPKPab 17 28 19.2 -3.0
comp=Z,18nm,1.2s
CLL *e*x x 17 28 26.0
CLL Collm 151.30 343⇓*i*PKP PKPbc 17 26 16.5 -0.3
CLL *i* pPKP pPKPdf 17 28 19.2 +8.1
BRG Berggiesshubel 151.42 341 *e*PKPbc PKPbc 17 26 17.0 -0.1
BRG Berggiesshubel 151.42 341 *i* PKP PKPbc 17 26 17.0 -0.1
comp=Z,6.3nm,0.8s
BRG pPKP pPKPdf 17 28 19.5 +8.2
comp=Z,7.8nm,1.1s
CLZ Clausthal 151.44 346 *e*PKPbc PKPbc 17 26 17.1 0.0
CLZ *e*pPKPbc pPKPbc 17 28 15.6 -1.2
VYHS Vyhne 151.69 333 *e*PKP PKPab 17 26 27.2 -1.8
VYHS Vyhne 151.69 333 *e*P PKPab 17 26 27.2 -1.8
KOLL Kolacno 151.80 334 *e*PKP PKPbc 17 26 17.6 -0.4
KOLL *e* 17 26 26.5
PRU Pruhonice 152.02 340 *e*pPKP pPKPbc 17 28 20.9 +2.7
PRU *e*x x 17 28 30.0
TANN Tannenbergstha 152.25 343 *e*PKPbc PKPbc 17 26 18.8 -0.2
NKC Novy Kostel 152.42 343 *e*pPKP pPKPbc 17 28 21.7 +2.6
NKC *e*x x 17 28 30.5
BZS Buzias 152.52 326⇓*i*P PKPbc 17 26 19.4 -0.3
KHC Kasperske Hory 153.07 340 *e*pPKP pPKPbc 17 28 23.7 +3.0
KHC *e*x x 17 28 34.4
GRF Grafenberg Arr 153.24 344 *e*pPKPbc PKPbc 17 26 22.8 +1.7
GERES GERESS Array B 153.29 340 PKPbc PKPbc 17 26 20.5 -0.8
comp=Z,0.6nm,0.7s,baz=352,slow=3.0,SNR=6.9
DAVOX Davos/Dischmat 156.27 343 PKPab PKPab 17 26 48.6 0.0
comp=Z,1.4nm,0.5s,baz=189,slow=10,SNR=4.0
ESDC Sonseca Array 164.39 11 PKPab PKPab 17 27 23.2 -1.1
comp=Z,0.1nm,0.3s,baz=334,slow=5.3,SNR=5.6
TORD Torodi Ar. Bea 168.71 189 PKP PKPdf 17 26 28.7 -1.7
comp=Z,2.1nm,1.1s,baz=324,slow=2.1,SNR=7.1
TORD PKPab PKPab 17 27 43.5 -0.3
comp=Z,2.4nm,1.0s,baz=176,slow=3.8,SNR=9.3
TORD Torodi Ar. Bea 168.71 189 PKP PKPdf 17 26 28.7 -1.7
TORD PKPab PKPab 17 27 43.5 -0.3

KRSC ***31*** *17:09:15.7±1.3, 5467N×15846E, h295km±45km, ML4.1*
MOS ***31*** *17:09:15.1±1.3, 5488N×15751E, h281km, mb4.0/3, Error ellipse: s-maj=31.1km s-min=16.5km az=87.5*
IDC ***31*** *17:09:16.6±1.4, 5487N×15763E, h287km±14km, mb3.0/6, mb1 3.2/6, mb1mx2.9/23, mbtmp3.0/6, Error ellipse: s-maj=31.1km s-min=17.2km az=143.0*
ISCJB ***31*** *17:09:17.1±0.6, 5461N±007×1586E±02, h290km±5km, mb3.2/6, Error ellipse: s-maj=23.0km s-min=8.3km az=22.5*
ISC 31 17:09:17.2±0.6**, 5463N**±007×**1583E**±02**, h287**km±5km**, n26,** σ**0.91**/31**, mb3.2**/6**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	**0.96**	**193**	*i* P	**Pn**	**17 09 56.9**	**+0.9**
GNL				*i* S	**S**	**17 10 26.9**	**+0.1**
TUMR	**Tumrok**	**1.25**	**58**	*e*P	**Pn**	**17 09 58.2**	**+0.8**
SMAR	**Somma**	**1.41**	**168**	P	**Pn**	**17 09 59.8**	**+1.3**
PETK	**Petropavlovsk-**	**1.57**	**193**	P	**Pn**	**17 10 00.4**	**+0.8**
	4.7nm,0.3s,baz=35,slow=6.9,SNR=124						
PETK	**Petropavlovsk-**	**1.57**	**193**	PN	**Pn**	**17 10 00.4**	**+0.8**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KMNR	**Kamenistaya**	**1.58**	**44**	P	**Pn**	**17 09 59.8**	**+0.3**
NLC	**Nalytchevo**	**1.59**	**157**	P	**Pn**	**17 10 00.1**	**+0.4**
NLC				*i* S	**S**	**17 10 32.9**	**-0.5**
PET	**Petropavlovsk**	**1.63**	**173**	*e*P	**Pn**	**17 10 01.0**	**+1.0**
PET				*e*S	**S**	**17 10 33.6**	**-0.3**
KOZ	**Kozyrevsk**	**1.69**	**32**	*e*P	**Pn**	**17 10 00.2**	**0.0**
KOZR	**Kozyr**	**1.70**	**32**	PN	**Pn**	**17 10 00.2**	**-0.1**
KPT	**Kopyto**	**1.73**	**39**	P	**Pn**	**17 10 00.3**	**-0.2**
SPN	**Mys Shipunski**	**1.85**	**146**	*e*P	**Pn**	**17 10 01.6**	**0.0**
SPN				*i* S	**S**	**17 10 34.7**	**-2.1**
SRDR	**Sredinnyy**	**1.87**	**25**	*e*P	**Pn**	**17 10 01.3**	**-0.3**
KRSR	**Krestovskiy**	**2.04**	**38**	P	**Pn**	**17 10 02.5**	**-0.5**
RUS	**Russkaya**	**2.21**	**177**	P	**Pn**	**17 10 05.3**	**+0.7**
RUS				*i* S	**S**	**17 10 41.6**	**-0.6**
KBTR	**Krutoberegovo**	**3.02**	**57**	*e*P	**Pn**	**17 10 11.7**	**-0.4**
KBTR				*i* S	**S**	**17 10 52.7**	**-3.2**
KSRS	**Korea Array**	**26.89**	**243**	P	**P**	**17 14 29.5**	**-2.7**
	comp=Z,2.8nm,1.0s,mb3.6,baz=45,slow=14,SNR=4.4						
KSRS	**Korea Array**	**26.89**	**243**	P	**P**	**17 14 29.5**	**-2.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
YKA	**Yellowknife Ar**	**42.75**	**43**	P	**P**	**17 16 46.3**	**+0.1**
	comp=Z,0.2nm,0.3s,mb2.8,baz=299,slow=7.2,SNR=5.7						
YKA	**Yellowknife Ar**	**42.75**	**43**	P	**P**	**17 16 46.3**	**0.0**
MKAR	**Makanchi Array**	**46.55**	**293**	P	**P**	**17 17 12.3**	**-4.0**
	comp=Z,0.2nm,0.6s,mb2.6,baz=46,slow=5.5,SNR=5.3						
PDAR	**Pinedale Array**	**57.69**	**61**	P	**P**	**17 18 39.1**	**+1.2**
	comp=Z,0.7nm,0.5s,mb3.4,baz=315,slow=3.3,SNR=6.1						
WRA	**Warramunga Arr**	**77.06**	**203**	P	**P**	**17 20 38.6**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.5,baz=11,slow=5.8,SNR=6.1						
WRA	**Warramunga Arr**	**77.06**	**203**	P	**P**	**17 20 38.6**	**-0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**80.75**	**203**	P	**P**	**17 20 59.0**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.2,baz=16,slow=4.9,SNR=4.5						
QSPA	**South Pole Qui**	**144.38**	**180**	PKP	PKPdf	17 28 15.9	-1.4
	comp=Z,0.7nm,0.7s,baz=45,slow=0.4,SNR=5.3						

IDC 31 17:19:53.2±16.0**, 2406S**×**17972E, h599**km±213km**, mb3.3**/5**, mb1 3.5**/5**, mb1mx3.2**/16**, mbtmp3.3**/5**, Error ellipse: s-maj=84.9km s-min=73.9km az=142.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMSA	**Cobar Meteorol**	**30.92**	**248**	*e*P	P	17 25 22.0	-0.8
	18nm,1.6s						
CTA	**Charters Tower**	**31.22**	**271**	P	P	17 25 26.0	+0.5
	10nm,0.4s,baz=92,slow=11,SNR=50						
CTA	**Charters Tower**	**31.22**	**271**	*e*P	P	17 25 25.7	+0.2
	8.4nm,0.3s						
MTSU	**Mount Surprise**	**33.49**	**273**	*e*P	P	17 25 45.4	+0.7
	6.6nm,0.5s						
STKA	**Stephens Creek**	**34.43**	**248**	P	P	17 25 51.7	-0.6
	1.3nm,0.5s,baz=82,slow=10,SNR=12						
STKA	**Stephens Creek**	**34.43**	**248**	*e*P	P	17 25 52.0	-0.3
	3.7nm,1.1s						
BBOO	**Buckleboo**	**39.15**	**247**	*e*P	P	17 26 28.9	-2.0
	2.4nm,0.4s						
ASAR	**Alice Springs**	**41.76**	**261**	P	P	17 26 51.8	+0.1
	1.0nm,0.3s,baz=96,slow=7.0,SNR=62						
WB2	**Warramunga Arr**	**42.13**	**266**	*e*P	P	17 26 54.4	-0.3
WRA	**Warramunga Arr**	**42.14**	**266**	P	P	17 26 54.6	-0.2
	2.8nm,0.3s,baz=97,slow=8.3,SNR=172						
TXAR	**Lajitas Array**	**90.73**	**58**	P	P	17 31 53.6	+0.1
	0.4nm,0.7s,baz=216,slow=6.2,SNR=4.3						

ISCJB ***31*** *17:25:26.5±0.3, 5529N±002×11048E±004, h10km, Error ellipse: s-maj=3.9km s-min=2.1km az=136.7*
MOS ***31*** *17:25:29.1±1.6, 5541N×11042E, h17km, mb4.4/1, Error ellipse: s-maj=18.2km s-min=8.5km az=55.8*
BYKL ***31*** *17:25:29.1±0.3, 5543N×11038E, h6km±17km*
IDC ***31*** *17:25:34.5±7.8, 5528N×10971E, h0km, mb3.0/1, mb1 3.3/5, mb1mx3.2/27, mbtmp3.3/5, ML3.2/4, MS3.5/1, Ms1 3.6/1, ms1mx2.6/11, Error ellipse: s-maj=107.5km s-min=30.7km az=77.0*
ISC 31 17:25:28.7±0.3**, 5534N**±002×**11046E**±003**, h10**km**, n49,** σ**1.64**/94**, 6C-1D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.62**	**139**⇑	*i*Pg	**Pg**	**17 25 41.5**	**+0.9**
YLYR				*i* Sg	**Sg**	**17 25 50.8**	**+2.1**
YLYR				Pmax			
	113nm,0.2s						
YLYR				Smax			
	387nm,0.1s						
NIZ	**Nizh Angarsk**	**0.68**	**310**⇑	*i*Pg	**Pg**	**17 25 40.5**	**-1.3**
NIZ				*e*Sg	**Sg**	**17 25 48.9**	**-1.7**
NIZ				*e*Sb	**Sb**	**17 25 55.7**	**+3.7**
NIZ				Pmax			
	131nm,0.2s						
NIZ				max			
	383nm,0.3s						
KMO	**Kumora**	**0.69**	**37**	*e*PG	**Pg**	**17 25 40.7**	**-1.3**
KMO				*e*		17 25 49.1	
KMO				pmax	pmax		
	comp=Z,205nm,0.3s						
KMO				smax			
	comp=N,1μm,1.0s						
KMO	**Kumora**	**0.69**	**37**⇑	*i*Pg	**Pg**	**17 25 40.8**	**-1.2**
KMO				*i* Sg	**Sg**	**17 25 49.3**	**-1.8**
KMO				Pmax			
	comp=N,367nm,0.5s						
KMO				Smax			
	comp=N,1μm,1.0s						
YOA	**Uoyan**	**1.07**	**42**⇑	*i*PG	**Pg**	**17 25 48.1**	**-1.1**
YOA				*i*		17 26 02.7	
YOA				pmax	pmax		
	comp=Z,363nm,0.2s						
YOA				smax			
	comp=N,2μm,0.4s						
YOA	**Uoyan**	**1.07**	**42**⇑	*i*Pg	**Pg**	**17 25 48.1**	**-1.1**
YOA				*e*Sg	**Sg**	**17 26 02.8**	**-0.3**
YOA				Pmax			
	comp=N,359nm,0.2s						
YOA				Smax			
	comp=N,1μm,0.3s						
SYVR	**Suvo**	**1.71**	**189**	*e*PN	**Pn**	**17 26 01.3**	**+2.8**
SYVR				*e*		17 26 26.2	
SYVR				pmax	pmax		
	comp=Z,69nm,0.5s						
SYVR				smax			
	comp=N,231nm,0.7s						
SYVR	**Suvo**	**1.71**	**189**	*e*Pg	**Pg**	**17 26 01.2**	**-0.2**
SYVR				*e*Pb	**Pb**	**17 26 04.0**	**+3.9**
SYVR				*e*Sg	**Sg**	**17 26 26.3**	**+2.8**
SYVR				max			
	comp=N,69nm,0.3s						
SYVR				Smax			
	comp=N,229nm,0.6s						
UKT	**Uakit**	**1.81**	**84**	*e*PN	**Pn**	**17 26 01.7**	**+1.8**
UKT				*e*		17 26 26.2	
UKT				pmax	pmax		
	comp=Z,97nm,0.2s						
UKT				smax			
	comp=N,574nm,0.2s						
UKT	**Uakit**	**1.81**	**84**⇑	*i*Pg	**Pg**	**17 26 01.6**	**-1.8**
UKT				*e*Sg	**Sg**	**17 26 26.5**	**-0.4**
UKT				Pmax			
	comp=N,108nm,0.4s						
UKT				Smax			
	comp=N,679nm,0.4s						
SVKR	**Severomuysk**	**1.92**	**65**	*e*PN	**Pn**	**17 26 03.4**	**+2.0**
SVKR				*e*		17 26 29.3	
SVKR				pmax	pmax		
	comp=Z,216nm,0.5s						
SVKR				smax			
	comp=N,1μm,0.4s						
SVKR	**Severomuysk**	**1.92**	**65**	*e*Pg	**Pg**	**17 26 03.5**	**-2.0**
SVKR				*i* Sg	**Sg**	**17 26 29.7**	**-0.6**
SVKR				Pmax			
	comp=N,196nm,0.3s						
SVKR				Smax			
	comp=N,1μm,0.4s						
MXMB	**Maximikha**	**2.31**	**206**	*e*Pn	**Pn**	**17 26 08.0**	**+1.3**
MXMB				*e*Pg	**Pg**	**17 26 11.8**	**-1.1**
MXMB				*e*		17 26 40.1	
MXMB				*e*Sg	**Sg**	**17 26 43.9**	**+1.0**
MXMB				Pmax			
	comp=N,54nm,0.7s						
MXMB				Smax			
	comp=N,487nm,0.9s						
OGRR	**Ongureny**	**2.38**	**226**	*e*PN	**Pn**	**17 26 10.4**	**+2.7**
OGRR				*e*		17 26 13.6	
OGRR				*e*		17 26 44.1	
OGRR				pmax	pmax		
	comp=Z,42nm,0.5s						
OGRR				smax			
	comp=N,271nm,0.7s						
OGRR	**Ongureny**	**2.38**	**226**	*e*Pn	**Pn**	**17 26 10.2**	**+2.5**
OGRR				*e*Pg	**Pg**	**17 26 12.6**	**-1.7**
OGRR				*e*Sn	**Sn**	**17 26 39.5**	**+2.5**
OGRR				*e*Sg	**Sg**	**17 26 44.2**	**-1.0**
OGRR				Pmax			
	comp=N,34nm,0.2s						
OGRR				Smax			
	comp=N,273nm,0.7s						
BOD	**Bodaibo**	**3.17**	**37**	*e*Pn	**Pn**	**17 26 19.0**	**+0.5**
BOD				*e*		17 26 21.9	
BOD				*e*Pg	**Pg**	**17 26 24.4**	**-4.9**
BOD				*e*Sn	**Sn**	**17 26 56.5**	**+0.3**
BOD				*e*Sg	**Sg**	**17 27 04.8**	**-5.4**
BOD				Pmax			
	comp=N,30nm,0.7s						
BOD				Smax			
	comp=N,131nm,1.0s						
NLYR	**Nelyaty**	**3.17**	**67**	*e*PN	**Pn**	**17 26 19.5**	**+1.0**
NLYR				*e*		17 26 25.8	
NLYR				*e*		17 27 06.9	
NLYR				pmax	pmax		
	comp=Z,49nm,1.0s						
NLYR				smax			
	comp=E,296nm,1.0s						
NLYR	**Nelyaty**	**3.17**	**67**	*e*Pn	**Pn**	**17 26 20.0**	**+1.5**
NLYR				*e*Pg	**Pg**	**17 26 25.7**	**-3.7**
NLYR				*e*Sn	**Sn**	**17 26 56.0**	**-0.4**
NLYR				*e*Sg	**Sg**	**17 27 07.1**	**-3.3**
NLYR				Pmax			
	comp=E,44nm,0.6s						
NLYR				Smax			
	comp=E,298nm,0.8s						
ZRHB	**Zarechye**	**3.41**	**216**	*e*Sg	**Sg**	**17 27 18.7**	**+0.7**
ZRHB				Smax			
	comp=E,245nm,1.0s						
TRTB	**Turuntaevo**	**3.54**	**209**	*e*Pn	**Pn**	**17 26 26.3**	**+2.7**
TRTB				*e*Pg	**Pg**	**17 26 33.4**	**-3.0**
TRTB				*e*Sg	**Sg**	**17 27 20.2**	**-2.1**
TRTB				Pmax			
	comp=E,10.0nm,0.4s						
TRTB				Smax			
	comp=E,69nm,0.8s						
TRG	**Tyrgan**	**3.54**	**225**	*e*Pn	**Pn**	**17 26 26.2**	**+2.5**
TRG				*e*Pg	**Pg**	**17 26 33.2**	**-3.3**
TRG				*e*Sg	**Sg**	**17 27 19.8**	**-2.6**
TRG				Pmax			
	comp=E,14nm,0.6s						
TRG				Smax			
	comp=E,94nm,0.6s						
CIT	**Chita**	**3.80**	**150**	*e*Sg	**Sg**	**17 27 29.7**	**-1.0**
CIT				Smax			
	comp=E,196nm,0.5s						
UUDB	**Ulan-Yde**	**3.86**	**207**	*e*Sg	**Sg**	**17 27 30.9**	**-1.6**
UUDB				Smax			
	comp=E,68nm,1.9s						
FFNB	**Fofonovo**	**3.96**	**215**	*e*Pn	**Pn**	**17 26 30.2**	**+0.8**
FFNB				*e*Pg	**Pg**	**17 26 40.1**	**-4.4**
FFNB				*e*		17 26 43.7	
FFNB				*e*Sg	**Sg**	**17 27 32.8**	**-3.0**
FFNB				max			
	comp=E,40nm,0.2s						
FFNB				Smax			
	comp=E,178nm,0.7s						
KAB	**Kabansk**	**4.00**	**216**	*e*Sg	**Sg**	**17 27 35.3**	**-1.6**
KAB				Smax			
	comp=E,211nm,1.1s						
HRMR	**Khuramsha**	**4.27**	**211**	*e*Pn	**Pn**	**17 26 37.1**	**+3.5**
HRMR				*e*Pg	**Pg**	**17 26 45.1**	**-5.3**
HRMR				*i* Sg	**Sg**	**17 27 42.1**	**-3.5**
HRMR				Pmax			
	comp=E,21nm,0.4s						
HRMR				Smax			
	comp=E,202nm,0.6s						
CRS	**Chara**	**4.64**	**67**	*e*PN	**Pb**	**17 26 52.2**	**+2.1**
CRS				*e*		17 27 52.8	
CRS				pmax	pmax		
	comp=Z,30nm,1.1s						
CRS				smax			
	comp=E,95nm,1.2s						
CRS	**Chara**	**4.64**	**67**	*e*Pn	**Pn**	**17 26 40.0**	**+1.2**
CRS				*e*Pg	**Pg**	**17 26 52.0**	**-5.5**
CRS				*e*Sg	**Sg**	**17 27 52.5**	**-5.1**
CRS				Pmax			
	comp=E,17nm,1.0s						
CRS				Smax			
	comp=E,96nm,1.5s						
IRK	**Irkutsk**	**4.80**	**232**	*e*PN	**Pb**	**17 26 57.4**	**+4.5**
IRK				*e*		17 27 57.8	
IRK				pmax	pmax		
	comp=Z,35nm,0.2s						
IRK				smax			
	comp=N,207nm,0.8s						
IRK	**Irkutsk**	**4.80**	**232**	*e*Sg	**Sg**	**17 27 58.3**	**-4.5**
IRK				Smax			
	comp=N,210nm,0.4s						
LSTR	**Listvyanka**	**4.83**	**226**	*e*Sg	**Sg**	**17 27 59.0**	**-4.6**
LSTR				Smax			
	comp=N,46nm,0.9s						
TLY	**Talaya**	**5.47**	**231**	*e*PN	**Pn**	**17 26 51.8**	**+1.6**
TLY				*e*		17 27 07.9	

TLY				*e*S	**Sn**	**17 27 53.8**	**+0.7**			
TLY				*e*		17 28 18.5				
TLY				pmax	pmax					
	comp=Z,8.0nm,0.5s									
TLY				smax						
	comp=N,50nm,0.4s									
TLY	**Talaya**	**5.47**	**231**	*e*Pn	**Pn**	**17 26 51.8**	**+1.6**			
TLY				*e*Pg	**Pg**	**17 27 07.3**	**-6.1**			
TLY				*e*		17 27 54.8				
TLY				*e*Sg	**Sg**	**17 28 18.9**	**-5.4**			
TLY				Pmax						
	comp=N,12nm,0.6s									
TLY				Smax						
	comp=N,50nm,0.4s									
TUP	**Tupik**	**5.56**	**96**	*e*PN	**Pn**	**17 26 53.1**	**+1.7**			
TUP				*e*		17 27 10.1				
TUP				*e*S	**Sn**	**17 27 55.0**	**-0.2**			
TUP				*e*		17 28 23.4				
TUP				pmax	pmax					
	comp=Z,7.0nm,0.5s									
TUP				smax						
	comp=N,60nm,0.7s									
TUP	**Tupik**	**5.56**	**96**	*e*Pn	**Pn**	**17 26 53.2**	**+1.8**			
TUP				*e*Pg	**Pg**	**17 27 08.6**	**-6.5**			
TUP				*e*		17 28 10.5				
TUP				*i* Sg	**Sg**	**17 28 23.7**	**-3.3**			
TUP				Pmax						
	comp=N,7.0nm,0.8s									
TUP				Smax						
	comp=N,60nm,0.9s									
KPC	**Khapcheranga**	**5.77**	**167**	*e*Pn	**Pn**	**17 26 55.7**	**+1.5**			
KPC				*e*Pg	**Pg**	**17 27 13.3**	**-5.8**			
KPC				*e*Sn	**Sn**	**17 28 00.7**	**+0.3**			
KPC				*i* Sg	**Sg**	**17 28 30.7**	**-3.0**			
KPC				Pmax						
	comp=N,4.0nm,1.0s									
KPC				Smax						
	comp=N,25nm,1.2s									
ARS	**Arshan**	**5.88**	**238**	*e*PN	**Pn**	**17 26 56.5**	**+0.7**			
ARS				*e*		17 27 16.1				
ARS				*e*S	**Sn**	**17 28 03.4**	**+0.3**			
ARS				*e*		17 28 30.5				
ARS				pmax	pmax					
	comp=Z,28nm,0.5s									
ARS				smax						
	comp=E,171nm,0.7s									
ARS	**Arshan**	**5.88**	**238**	*e*Pn	**Pn**	**17 26 56.5**	**+0.7**			
ARS				*e*Pg	**Pg**	**17 27 14.0**	**-7.2**			
ARS				*e*Sn	**Sn**	**17 28 03.0**	**-0.1**			
ARS				*e*Sg	**Sg**	**17 28 30.6**	**-6.7**			
ARS				Pmax						
	comp=E,25nm,0.6s									
ARS				Smax						
	comp=E,169nm,0.8s									
ZAK	**Zakamensk**	**6.60**	**224**	*e*PN	**Pn**	**17 27 05.5**	**-0.1**			
ZAK				*e*		17 27 26.5				
ZAK				*e*S	**Sn**	**17 28 21.0**	**+0.2**			
ZAK				*e*		17 28 52.6				
ZAK				pmax	pmax					
	comp=Z,4.0nm,1.0s									
ZAK				smax						
	comp=E,33nm,1.1s									
ZAK	**Zakamensk**	**6.60**	**224**	*e*Sg	**Sg**	**17 28 55.0**	**-5.3**			
ZAK				Smax						
	comp=E,33nm,1.0s									
MOY	**Mondy**	**6.74**	**241**	*e*PN	**Pn**	**17 27 10.7**	**+3.2**			
MOY				*e*		17 27 32.2				
MOY				*e*		17 28 59.4				
MOY				pmax	pmax					
	comp=Z,5.0nm,0.4s									
MOY				smax						
	comp=N,52nm,1.2s									
MOY	**Mondy**	**6.74**	**241**	*e*Pn	**Pn**	**17 27 10.7**	**+3.2**			
MOY				*e*		17 28 26.0				
MOY				*e*Sg	**Sg**	**17 28 58.0**	**-6.8**			
MOY				max						
	comp=N,10.0nm,1.3s									
MOY				Smax						
	comp=N,52nm,1.2s									
ORL	**Orlik**	**6.88**	**250**	⇓*i*Pn	**Pn**	**17 27 12.1**	**+2.6**			
ORL				*e*		17 28 28.4				
ORL				*e*Sg	**Sg**	**17 29 02.6**	**-6.8**			
ORL				max						
	comp=N,9.0nm,1.2s									
ORL				Smax						
	comp=N,52nm,1.4s									
SONM	**Songino Array**	**7.93**	**200**	Pn	**Pn**	**17 27 27.3**	**+3.4**			
	comp=N,0.1nm,0.3s,baz=14,slow=13,SNR=12									
SONM				Lg		17 29 42.0				
	comp=N,0.8nm,0.3s,baz=8.0,slow=26,SNR=12									
ZALV	**Zalesovo Beam**	**14.88**	**275**	Pn	**Pn**	**17 28 59.3**	**+0.4**			
	comp=N,0.1nm,0.3s,baz=81,slow=9.2,SNR=11									
MKAR	**Makanchi Array**	**19.54**	**256**	P	**Pn**	**17 29 58.5**	**+1.0**			
	comp=N,0.1nm,0.3s,baz=46,slow=10,SNR=5.4									
KURK	**Kurchatov**	**19.59**	**270**	P	**Pn**	**17 30 01.4**	**+3.3**			
	comp=N,0.0nm,0.3s,baz=66,slow=11,SNR=5.5									
BVAR	**Borovoye Array**	**23.34**	**281**	P	**P**	**17 30 39.9**	**+3.1**			
	comp=N,0.3nm,0.4s,baz=81,slow=12,SNR=3.8									
ARCES	**ARCESS Array B**	**38.19**	**325**	LR	LR	17 53 54.4				
	comp=N,70nm,18.2s,baz=196,slow=45									

*IDC **31** 17:49:02.3±2.8, 400N×95.87E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/22, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=78.4km s-min=23.0km az=52.0*
*ISCJB **31** 17:49:05.2±1.9, 4.1N±02×958E±02, h33km, mb3.5/3, Error ellipse: s-maj=38.6km s-min=10.9km az=43.8*
*NEIC **31** 17:49:08.2±1.8, 4.12N×96.05E, h35km, Error ellipse: s-maj=47.9km s-min=13.8km az=62.0*

ISC 31 17:49:07.2±1.9, 41N±02×958E±02, h35km, n6, σ0.99/7, mb3.5/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**3.32**	**112**	Pn		**Pn**	**17 49 55.6**	**-1.1**
	7.9nm,0.3s,baz=324,slow=17,SNR=21							
PSI				Sn		**Sn**	**17 50 35.5**	**+0.6**
	7.3nm,0.3s,baz=50,slow=23,SNR=4.1							
KULM	**Kulim**	**4.95**	**75**	*e*P		**Pn**	**17 50 10.3**	**-8.8**
CMAR	**Chiang Mai Arr**	**14.64**	**12**	Pn		**Pn**	**17 52 31.1**	**-0.8**
	0.0nm,0.3s,baz=198,slow=11,SNR=2.5							
MKAR	**Makanchi Array**	**44.17**	**347**	P		**P**	**17 57 12.2**	**-0.4**
	0.6nm,0.8s,mb3.4,baz=168,slow=9.4,SNR=4.1							
SONM	**Songino Array**	**44.56**	**10**	P		**P**	**17 57 17.6**	**+2.0**
	0.2nm,0.7s,mb3.1,baz=201,slow=11,SNR=2.2							
WRA	**Warramunga Arr**	**44.71**	**124**	P		**P**	**17 57 17.3**	**0.0**
	1.2nm,0.4s,mb4.1,baz=303,slow=9.2,SNR=8.2							

IDC 31 17:51:33.8±1.6, 549N×12561E, h140km±17km, mb3.4/4, mb1 3.6/4, mb1mx3.2/18, mbtmp3.4/4, Error ellipse: s-maj=82.4km s-min=16.6km az=73.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.57**	**359**	P		Pn	17 52 04.8	+1.4
	69nm,0.3s,baz=88,slow=2.3,SNR=9.4							
DAV				S		Sn	17 52 26.0	-0.2
	86nm,0.3s,baz=269,slow=23,SNR=9.0							
WRA	**Warramunga Arr**	**26.69**	**161**	P		P	17 56 59.7	-0.3
	0.8nm,0.3s,baz=342,slow=10,SNR=21							
WRA				ScP		ScP	18 03 46.9	-0.4
	0.9nm,1.0s,baz=343,slow=3.4,SNR=3.3							
ASAR	**Alice Springs**	**30.09**	**165**	P		P	17 57 29.6	-0.5
	0.7nm,0.4s,baz=339,slow=7.3,SNR=36							
ASAR				ScP		ScP	18 03 57.9	0.0
	0.7nm,0.9s,baz=339,slow=3.0,SNR=4.5							
STKA	**Stephens Creek**	**40.16**	**159**	P		P	17 58 57.0	+0.8
	2.4nm,0.8s,baz=348,slow=6.9,SNR=4.9							
MKAR	**Makanchi Array**	**55.48**	**325**	P		P	18 00 53.8	-0.2
	0.2nm,0.6s,baz=122,slow=6.7,SNR=4.5							

IDC 31 18:05:36.7±5.1, 1290N×14711E, h44km±7km, mb3.1/4, mb1 3.2/5, mb1mx3.1/23, mbtmp3.1/5, ML3.8/1, Error ellipse: s-maj=154.1km s-min=11.9km az=6.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**2.29**	**288**	P		Pn	18 06 13.1	+1.2
	25nm,0.3s,baz=8.5,slow=1.5,SNR=19							
GUMO				S		Sn	18 06 39.5	+0.6
	63nm,0.3s,baz=330,slow=19,SNR=9.5							
WRA	**Warramunga Arr**	**34.97**	**201**	pP		pP	18 12 38.5	+1.9
	0.6nm,0.9s,baz=16,slow=9.1,SNR=2.2							
SONM	**Songino Array**	**48.56**	**324**	P		P	18 14 16.6	+1.1
	0.1nm,0.4s,baz=151,slow=7.3,SNR=2.3							
SONM				pP		pP	18 14 26.2	-1.6
	0.5nm,0.8s,baz=114,slow=7.0,SNR=3.1							
MKAR	**Makanchi Array**	**63.50**	**316**	P		P	18 16 02.0	-0.4
	0.2nm,0.6s,baz=84,slow=8.5,SNR=4.6							
MKAR				pP		pP	18 16 14.9	-0.1
	0.5nm,0.6s,baz=88,slow=8.6,SNR=4.7							
KURK	**Kurchatov**	**66.52**	**320**	P		P	18 16 21.6	-0.3
	0.3nm,0.4s,baz=97,slow=7.2,SNR=3.6							
KURK				pP		pP	18 16 35.1	+0.5
	1.7nm,0.6s,baz=98,slow=7.3,SNR=11							
YKA	**Yellowknife Ar**	**82.46**	**28**	P		P	18 17 54.5	+0.3
	0.1nm,0.3s,baz=287,slow=5.1,SNR=4.7							
YKA				pP		pP	18 18 08.4	+1.1
	0.2nm,0.6s,baz=277,slow=5.1,SNR=3.4							

IDC 31 18:15:52.5±3.7, 535S×15136E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.8/16, mbtmp3.8/4, ML2.9/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/24, Error ellipse: s-maj=105.5km s-min=26.0km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**5.80**	**226**	Pn		Pn	18 17 22.0	+2.2
	2.0nm,0.3s,baz=28,slow=12,SNR=11							
PMG				Sn		Sn	18 18 29.6	+2.5
	2.3nm,0.3s,baz=126,slow=22,SNR=8.4							
PMG				LR		LR	18 19 23.5	
	comp=Z,86nm,19.2s,baz=32,slow=36							
CTA	**Charters Tower**	**15.47**	**198**	LR		LR	18 24 34.3	
	comp=Z,54nm,19.3s,baz=212,slow=34							
WRA	**Warramunga Arr**	**22.01**	**227**	P		P	18 20 48.2	-0.4
	2.3nm,0.5s,baz=52,slow=10.0,SNR=28							
ASAR	**Alice Springs**	**24.79**	**221**	P		P	18 21 15.7	-0.6
	2.5nm,0.7s,baz=55,slow=8.6,SNR=34							
SONM	**Songino Array**	**66.03**	**329**	P		P	18 26 41.4	+0.5
	0.4nm,0.7s,baz=127,slow=4.4,SNR=3.6							

*LDG **31** 18:23:31.4±0.2, 4093N×72.17E, h10km, Mb5.0/36, Ms4.0/7, Error ellipse: s-maj=20.4km s-min=4.7km az=43.0*
*ISCJB **31** 18:23:34.2±0.1, 4088N±002×7189E±002, h17km, mb4.8/166, MS4.3/59, Error ellipse: s-maj=2.9km s-min=2.1km az=29.6*
*IDC **31** 18:23:35.9±0.5, 4108N×7200E, h17km±2km, mb4.5/37, mb1 4.6/42, mb1mx4.6/42, mbtmp4.5/42, ML4.5/5, MS4.1/24, Ms1 4.1/24, ms1mx4.0/34, Error ellipse: s-maj=8.8km s-min=7.8km az=11.0*
*NNC **31** 18:23:35.7±2.4, 4103N×7181E, h0km, mb5.4, mpv5.5, Error ellipse: s-maj=22.2km s-min=9.7km az=8.0*
*BJI **31** 18:23:36.3, 41.19N×72.12E, h15km, mB5.1, mb4.7, ML5.1, Ms4.7, Msz4.6*
*NEIC **31** 18:23:36.5±0.2, 41.11N×7194E, mb4.9/76, Error ellipse: s-maj=4.9km s-min=3.1km az=172.0*
NEIC Felt [II] at Tashkent.
*GCMT **31** 18:23:36.5±0.3, 41.11N×7197E, h20km, MW5.0/76, Moment Tensor Solution. s36,c44; s76,c125; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.65±.16; Mθθ -3.07±.11; Mϕϕ -0.57±.09; Mre 1.44±.20; Mθϕ 0.88±.06; Mϕr 0.59±.20; Best double couple: Mo 3.81200×10^16 NP1: ϕ=299.00000°, δ=37.00000°, λ=110.00000°. NP2: ϕ=94.00000°, δ=56.00000°, λ=75.00000°. Principal axes: T 4.0690, Plg74.0000°, Azm323.0000°; N -0.5140, Plg12.0000°, Azm102.0000°; P -3.5540, Plg10.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **31** 18:23:36.9±0.9, 4114N×7197E, h33km, mb5.1/70, MS4.4/27 Error ellipse: s-maj=6.6km s-min=3.7km az=132.2*
*SZGRF **31** 18:23:37.1, 4089N×7241E, h33km, mb4.9, Kyrgyzstan*

ISC 31 18:23:36.2±0.1, 4092N±002×7190E±002, h18km, h18km±.6km: pP-P, n479, σ1.09/515, mb4.8/166, MS4.3/59, 102C-20D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**1.81**	**47**	P		**Pn**	**18 24 07.1**	**+0.6**
	SNR=1072							
AML	**Almayashu**	**1.81**	**47**	*e*P		**Pn**	**18 24 05.2**	**-1.3**
EKS2	**Erkin-Say**	**2.24**	**38**	P		**Pn**	**18 24 13.1**	**+0.8**
	SNR=790							
EKS2	**Erkin-Say**	**2.24**	**38**	*e*P		**Pn**	**18 24 12.5**	**+0.2**
UCH	**Uchtor**	**2.36**	**55**	P		**Pn**	**18 24 15.4**	**+1.5**
	SNR=70							
UCH	**Uchtor**	**2.36**	**55**	*e*P		**Pn**	**18 24 15.4**	**+1.5**
KK31	**Karatay Array**	**2.42**	**335**	Pn		**Pn**	**18 24 15.3**	**+0.5**
	2μm,0.5s,baz=156,slow=15							
KK31				⇓Sn		**Sn**	**18 24 45.1**	**+1.2**
	5μm,0.5s,baz=152,slow=28,SNR=18							
KK31	**Karatay Array**	**2.42**	**335**	*i* PN		**Pn**	**18 24 15.3**	**+0.5**
KK31				pmax	pmax			
	comp=Z,4μm,0.4s							
AAK	**Ala-Archa**	**2.59**	**48**	*d* iPN		**Pn**	**18 24 18.2**	**+1.1**
AAK	**Ala-Archa**	**2.59**	**48**	P		**Pn**	**18 24 18.1**	**+0.9**
	SNR=746							
AAK	**Ala-Archa**	**2.59**	**48**	*e*P		**Pn**	**18 24 17.9**	**+0.8**
KZA	**Kyzart**	**2.77**	**64**	P		**Pn**	**18 24 21.8**	**+2.1**
	SNR=599							
FRU	**Bishkek**	**2.79**	**46**	⇓*i*PN		**Pn**	**18 24 21.0**	**+1.1**
FRU				*i* S		**Sn**	**18 24 54.0**	**+1.0**
FRU				pmax	pmax			
	comp=Z,6μm,2.0s							
FRU				smax				
	comp=N,10μm,3.0s							
KBK	**Karagaybulak**	**2.87**	**52**	P		**Pn**	**18 24 22.8**	**+1.8**
	SNR=490							
CHMS	**Chumysh**	**2.97**	**45**	P		**Pn**	**18 24 23.3**	**+0.9**
	SNR=173							
USP	**Ospenovka**	**3.04**	**39**	P		**Pn**	**18 24 23.6**	**+0.2**
	SNR=398							
TKM2	**Tokmak 2**	**3.41**	**53**	⇓Pn		**Pn**	**18 24 30.1**	**+1.7**
	comp=N,498nm,0.6s							
TKM2				⇓Sn		**Sn**	**18 25 13.3**	**+5.0**
	comp=N,3μm,0.6s							
TKM2	**Tokmak 2**	**3.41**	**53**	P		**Pn**	**18 24 29.6**	**+1.2**
	SNR=342							
TKM2	**Tokmak 2**	**3.41**	**53**	*e*P		**Pn**	**18 24 29.4**	**+1.0**
ULHL	**Ulahol**	**3.52**	**66**	P		**Pn**	**18 24 31.9**	**+2.0**
	SNR=166							
KNDC	**Almaty**	**4.42**	**57**	⇓Pn		**Pn**	**18 24 44.1**	**+1.9**
	comp=N,766nm,0.7s							
KNDC				⇓Lg			18 25 54.8	
	comp=N,3μm,0.8s							
AAA	**Alma-Ata**	**4.43**	**56**	*e*PN		**Pg**	**18 24 52.7**	**-8.3**
AAA				*e*S		**Sg**	**18 25 48.4**	**-10**
AAA				pmax	pmax			
	comp=Z,1μm,0.4s							
AAA				smax				
	comp=E,3μm,0.5s							
KBL	**Kabul**	**6.75**	**200**	*e*PN		**Pn**	**18 25 19.8**	**+5.4**
KBL				pmax	pmax			
	comp=Z,803nm,1.5s							
KBL	**Kabul**	**6.75**	**200**	*e*P		**Pn**	**18 25 19.8**	**+5.4**
	comp=Z,803nm,1.5s							
CEP	**Cherat**	**7.08**	**180**	P		**Pn**	**18 25 24.4**	**+5.6**
CEP				S		**Sn**	**18 26 45.0**	**+6.2**
CHCP	**Chirah Chowk**	**7.33**	**171**	P		**Pn**	**18 25 27.9**	**+5.7**
JMU	**Jammu**	**8.53**	**163**	*ex*		x	18 27 16.0	
SBDP	**Sheikh Budin**	**8.64**	**186**	P		**Pn**	**18 25 45.3**	**+5.0**
SARP	**Sargodha**	**9.00**	**176**	P		**Pn**	**18 25 48.7**	**+3.5**
THN	**Thein Dam**	**9.00**	**159**	*e*P		**Pn**	**18 25 48.1**	**+2.9**
THN				*e*S		**Sn**	**18 27 25.5**	**-0.6**
MK31	**Makanchi Array**	**9.53**	**48**	⇑Pn		**Pn**	**18 25 52.0**	**-0.3**
	comp=Z,65nm,0.6s,baz=236,slow=13							
MK31				⇓Lg			18 28 37.7	
	comp=Z,199nm,0.8s,baz=240,slow=27							
MK31	**Makanchi Array**	**9.53**	**48**	*e*P		**Pn**	**18 25 52.5**	**+0.1**
MKAR	**Makanchi Array**	**9.53**	**48**	Pn		**Pn**	**18 25 51.3**	**-1.0**
	comp=Z,3.3nm,0.3s,baz=238,slow=13,SNR=232							
MKAR				Lg			18 28 32.4	
	comp=Z,8.7nm,0.3s,baz=237,slow=21,SNR=5.3							
MKAR	**Makanchi Array**	**9.53**	**48**	Pn		**Pn**	**18 25 51.3**	**-1.0**
MKAR				Lg			18 28 32.4	
BHK	**Bhakra**	**10.15**	**158**	*e*P		**Pn**	**18 26 03.4**	**+2.4**
BHK				*ex*		x	18 27 53.0	
SDNR	**Sundarnagar**	**10.25**	**155**	*e*P		**Pn**	**18 26 04.4**	**+2.1**
SDNR				*e*S		**Sn**	**18 27 51.0**	**-5.7**
SMLA	**Simla**	**10.65**	**155**	*i* P		**Pn**	**18 26 08.9**	**+1.1**
SMLA				AMb		AMB	18 26 12.9	
	comp=Z,47nm,1.8s							
SMLA				*i* S		**Sn**	**18 28 02.4**	**-4.2**
SMLA				*i* S		**Sn**	**18 28 02.9**	**-3.7**
KLP	**Kalpa**	**10.67**	**149**	*e*P		**Pn**	**18 26 08.5**	**+0.4**
KLP				*e*S		**Sn**	**18 28 00.3**	**-6.8**
KURK	**Kurchatov**	**10.86**	**23**	Pn		**Pn**	**18 26 05.0**	**-5.6**
	comp=Z,0.7nm,0.3s,baz=213,slow=13,SNR=50							
KURK				Lg			18 29 08.7	
	comp=Z,2.9nm,0.3s,baz=159,slow=32,SNR=5.6							
KURK				LR		LR	18 30 37.7	
	comp=Z,379nm,20.4s,baz=215,slow=40							
VAN	**Vannovskaya**	**11.07**	**259**	⇑*i*P		**Pn**	**18 26 12.7**	**-0.9**
VAN				*e*S		**Sn**	**18 28 14.8**	**-2.1**
DDI	**Dehra Dun**	**11.69**	**153**	*e*P		**Pn**	**18 26 21.8**	**-0.2**
DDI				*ex*		x	18 28 30.6	
AB01	**Akbulak array**	**11.86**	**319**	⇓P		**Pn**	**18 26 21.6**	**-2.7**
	comp=Z,45nm,0.6s							
AB31	**Akbulak array**	**11.86**	**319**	P		**Pn**	**18 26 21.1**	**-3.2**
AB31				pmax	pmax			
	comp=Z,44nm,0.4s							
WMQ	**Urumqi**	**12.04**	**71**	P		**Pn**	**18 26 32.0**	**+5.3**
WMQ				XP			18 26 38.8	
WMQ				S		**Sn**	**18 28 46.3**	**+5.9**
WMQ				XS			18 28 51.8	
WMQ				AMB	AMB			
	comp=Z,19nm,1.2s							
WMQ				LR	LR			
	comp=N,2μm,21.0s							
WMQ				LR	LR			
	comp=E,694nm,17.0s							
WMQ				LR	LR			
	comp=Z,1μm,16.0s							
JOSI	**Joshimath**	**12.06**	**147**	*e*P		**Pn**	**18 26 27.3**	**+0.3**
JOSI				*e*S		**Sn**	**18 28 35.1**	**-5.9**
BVA0	**Borovoye Array**	**12.16**	**356**	⇑P		**Pn**	**18 26 24.7**	**-3.6**
	comp=Z,5.2nm,0.6s							
BVA0	**Borovoye Array**	**12.16**	**356**	P		**Pn**	**18 26 24.6**	**-3.7**
BVA0							18 28 48.4	
BVA0				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BVA0				smax				
	comp=N,26nm,0.9s							
BVAR	**Borovoye Array**	**12.16**	**356**	Pn		**Pn**	**18 26 24.1**	**-4.2**
	comp=N,4.5nm,0.3s,baz=155,slow=12,SNR=64							
BVAR				Sn		**Sn**	**18 28 31.8**	**-11**
	comp=N,11nm,0.3s,baz=166,slow=26,SNR=7.4							
BVAR				Lg			18 29 56.4	
	comp=N,8.4nm,0.3s,baz=159,slow=30,SNR=5.7							
BVAR				LR		LR	18 31 12.4	
	comp=N,2μm,18.4s,baz=175,slow=38							
BVAR	**Borovoye Array**	**12.16**	**356**	P		**Pn**	**18 26 24.1**	**-4.2**
BVAR							18 28 31.8	
BRVK	**Borovoye**	**12.20**	**355**	Pn		**Pn**	**18 26 25.5**	**-3.3**
	comp=N,190nm,1.0s,SNR=23							
BRVK	**Borovoye**	**12.20**	**355**	*e*P		**Pn**	**18 26 25.0**	**-3.8**
BRVK				pmax	pmax			
	comp=Z,33nm,0.5s							
BRVK	**Borovoye**	**12.20**	**355**	*e*P		**Pn**	**18 26 25.0**	**-3.8**
	comp=Z,33nm,0.5s							
AYAN	**Aya Nagar**	**13.12**	**159**	*e*P		**Pn**	**18 26 39.5**	**-2.1**
KHET	**Khetri**	**13.21**	**165**	*e*P		**Pn**	**18 26 41.2**	**-1.5**
KHET				*e*S		**Sn**	**18 29 00.1**	**-9.1**
PTH	**Pithoragarh**	**13.21**	**147**	*e*P		**Pn**	**18 26 45.0**	**+2.2**
PTH				*e*S		**Sn**	**18 29 04.0**	**-5.2**
LGTI	**Lohaghat**	**13.31**	**147**	*e*P		**Pn**	**18 26 44.0**	**-0.2**
AKTK	**Aktyubinsk**	**13.57**	**319**	Pn		**Pn**	**18 26 44.8**	**-2.9**
AKTK				Sn		**Sn**	**18 29 08.7**	**-9.2**
AKTK				Lg			18 30 45.1	
AKTK				LR		LR	18 32 22.0	
AKTO	**Aktyubinsk**	**13.57**	**319**	⇑P		**Pn**	**18 26 44.6**	**-3.1**
	comp=Z,22nm,1.2s							
AKTO	**Aktyubinsk**	**13.57**	**319**	Pn		**Pn**	**18 26 44.8**	**-2.9**
	comp=Z,6.9nm,0.3s,baz=129,slow=12,SNR=106							
AKTO				Sn		**Sn**	**18 29 08.7**	**-9.2**
	comp=Z,0.6nm,0.3s,baz=180,slow=19,SNR=3.1							
AKTO				Lg			18 30 45.1	
	comp=Z,1.3nm,0.3s,baz=7.9,slow=23,SNR=5.0							
AKTO				LR		LR	18 32 22.0	
	comp=Z,1μm,19.2s,baz=319,slow=39							
AKTO	**Aktyubinsk**	**13.57**	**319**	P		**Pn**	**18 26 44.8**	**-2.9**
AKTO							18 29 08.7	
AGRA	**Agra**	**14.53**	**158**	*e*P		**Pn**	**18 27 00.8**	**0.0**
AGRA				*ex*		x	18 29 21.9	
AJM	**Ajmer**	**14.58**	**170**	*e*P		**Pn**	**18 27 00.0**	**-1.5**
ZAA0	**Zalesovo Array**	**15.66**	**29**	*e*P		**Pn**	**18 27 12.1**	**-3.6**
ZALV	**Zalesovo Beam**	**15.66**	**29**	Pn		**Pn**	**18 27 11.8**	**-3.9**
	comp=Z,1.4nm,0.3s,baz=230,slow=13,SNR=34							
ZALV				Lg			18 31 42.8	
	baz=216,slow=25,SNR=2.5							
ZALV				LR		LR	18 33 18.0	
	comp=Z,713nm,19.1s,baz=24,slow=38							
NVS	**Novosibirsk**	**15.84**	**25**	⇓*i*P		**Pn**	**18 27 15.3**	**-2.7**
NVS				*e*S		**Sn**	**18 30 14.0**	**+1.0**
NVS				pmax	pmax			
	comp=N,104nm,1.6s							
NVS				pmax	pmax			
	comp=E,25nm,1.6s							
NVS				pmax	pmax			
	comp=Z,68nm,1.6s							
NVS				smax				
	comp=N,504nm,2.4s							
NVS				smax				
	comp=E,153nm,2.4s							
DANN	**Dangsing**	**15.87**	**139**	*e*P		**Pn**	**18 27 15.7**	**-2.8**
	comp=E,39nm,0.3s							
KOLN	**Koldanda**	**16.27**	**140**	*e*P		**Pn**	**18 27 20.7**	**-3.0**
GKN	**Gorkha**	**16.59**	**137**	*e*P		**Pn**	**18 27 25.0**	**-2.9**
	comp=E,71nm,0.8s							
KKN	**Kakani**	**17.10**	**136**	*e*P		**Pn**	**18 27 31.3**	**-2.9**
	comp=E,87nm,0.6s							
DMN	**Daman**	**17.16**	**137**	*e*P		**Pn**	**18 27 32.3**	**-2.6**
GUN	**Gumba**	**17.33**	**

AKL AMb AMB 18 28 20.9
comp=Z,89nm,1.2s
NGP Nagpur 20.62 161 *e*P **P** **18 28 10.1 -4.4**
NGP *ex* x 18 28 13.2
comp=Z,48nm,1.4s
NGP *e*S **S** **18 32 02.6 -1.6**
GNI Garni 20.63 277 P **P** **18 28 17.0 +2.5**
comp=Z,44nm,0.9s,baz=357,slow=3.0,SNR=32
GNI LR LR 18 37 31.9
comp=Z,188nm,19.1s,MS3.5,baz=299,slow=40
GNI Garni 20.63 277 *e*P **P** **18 28 16.5 +2.0**
comp=Z,312nm,1.3s
BOK Bokaro 20.71 141 *e*P **P** **18 28 16.4 +0.9**
GOR Gori 20.83 282 P **P** **18 28 17.9 +1.2**
ONI Oni 21.26 284 P **P** **18 28 22.1 +0.9**
GTA Gaotai 21.35 85 P **P** **18 28 23.3 +1.0**
GTA AP 18 28 27.0
GTA XP sP 18 28 30.5 +0.6
GTA S **S** **18 32 13.8 -4.7**
GTA XS sS 18 32 21.3 -5.6
GTA SS 18 32 47.5
GTA AMB AMB
comp=Z,7.0nm,0.8s,mb4.0
GTA AMB AMB
comp=Z,188nm,5.1s
GTA LR LR
comp=N,904nm,11.0s,MS4.7
GTA LR LR
comp=E,2µm,13.1s,MS4.7
GTA LR LR
comp=Z,2µm,13.1s,MS4.7
KIV Kislovodsk 21.73 288 *e*P **P** **18 28 25.3 -1.0**
KIV pmax pmax
comp=Z,70nm,0.8s,mb5.1
KIV Kislovodsk 21.73 288 *e*P **P** **18 28 25.3 -0.9**
comp=Z,70nm,0.8s,mb5.1
POO Poona 22.37 175 *e*P **P** **18 28 32.1 -1.3**
POO AMb AMB 18 28 41.8
comp=Z,60nm,1.2s,mb4.9
SHL Shillong 22.58 127 *e*P **P** **18 28 37.0 +1.4**
SHL *ex* x 18 32 40.0
MOY Mondy 22.65 52 *e*P **P** **18 28 36.0 0.0**
MOY pmax pmax
comp=Z,60nm,2.6s,mb4.6
MIB Mutribah 22.82 249 *e*P **P** **18 28 40.1 +2.1**
baz=248
MIB AMb AMB 18 28 50.3
comp=Z,109nm,0.7s,mb5.4,baz=248
MSL Mosul 22.88 268 *e*P **P** **18 28 41.0 +2.4**
KBD Kabd 22.94 247 *e*P **P** **18 28 40.8 +1.4**
baz=246
KBD AMb AMB 18 28 47.9
comp=Z,42nm,0.8s,mb4.9,baz=246
VRHR Novokhopersk 23.21 306 *e*P **P** **18 28 41.0 -1.0**
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,60nm,1.0s
VRHR MLR MLR
comp=Z,1µm,19.0s,MS4.4
VRHR MLR MLR
comp=N,440nm,18.0s,MS4.5
VRHR MLR MLR
comp=E,1µm,18.0s,MS4.5
NAY Al-Naaiem 23.21 248 *e*P **P** **18 28 43.9 +1.7**
baz=247
NAY AMb AMB 18 28 52.3
comp=Z,43nm,1.4s,mb4.7,baz=247
ZAK Zakamensk 23.73 56 ⇑*i*P **P** **18 28 46.9 -0.2**
ZAK pmax pmax
comp=Z,15nm,1.1s,mb4.3
SOC Sochi 23.89 287 *e*P **P** **18 28 45.9 -2.8**
SOC *e**SP sP 18 28 55.2 -1.3
SOC *e*S **S** **18 33 01.6 -2.3**
SOC *e*SS 18 33 42.4
HYB Hyderabad 24.11 164 *e*P **P** **18 28 52.5 +1.7**
HYB pmax pmax
comp=Z,50nm,1.0s,mb4.9
HYB Hyderabad 24.11 164 ⇑*i*P **P** **18 28 52.5 +1.7**
comp=Z,50nm,1.0s,mb4.9
HYB *e*pP 18 28 58.0
HYB *e* 18 29 31.0
HYB *e*S **S** **18 33 06.0 -1.7**
HYB LR LR 18 38 46.0
comp=Z,3.4nm,8.0s
HYB Hyderabad 24.11 164 *e*P **P** **18 28 52.5 +1.7**
comp=Z,50nm,1.0s,mb4.9
HYB *e*S **S** **18 33 27.0 +19**
HYB *e* 18 35 09.0
TLY Talaya 24.24 53 *e*P **P** **18 28 57.1 +5.3**
TLY pmax pmax
comp=Z,16nm,1.1s,mb4.4
TLY MLR MLR
comp=Z,590nm,11.0s,MS4.3
IMP Imphal 24.42 124 *e*P **P** **18 28 55.0 +1.4**
VORD Divnogorie 24.62 305 *e*P **P** **18 28 53.2 -2.0**
VORD pmax pmax
comp=Z,30nm,1.1s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,20nm,0.5s
VORD MLR MLR
comp=Z,1µm,15.0s,MS4.6
VORD MLR MLR
comp=N,1µm,16.0s,MS4.5
VORD MLR MLR
comp=E,660nm,17.0s,MS4.5
VSR Storozhevoye 24.75 306 *e*P **P** **18 28 55.0 -1.4**
VSR pmax pmax
comp=Z,10.0nm,1.4s,mb4.2
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.3s
VSR MLR MLR
comp=Z,470nm,17.0s,MS4.0
VSR MLR MLR
comp=N,460nm,20.0s,MS4.2
VSR MLR MLR
comp=E,630nm,17.0s,MS4.2
VIS Vishakhapatnam 25.12 154 *e*P **P** **18 28 59.3 -0.7**
VIS AMb AMB 18 29 11.2
comp=Z,47nm,0.6s,mb5.2
LZH Lanzhou 25.38 91 *e*P **P** **18 29 04.8 +2.6**
LZH AP pP 18 29 14.3 +6.5
LZH XP sP 18 29 18.3 +8.2
LZH *e*PP 18 29 44.0
LZH *e*S **S** **18 33 27.5 -0.3**
LZH XS sS 18 33 42.0 +5.0
LZH *e*SS 18 34 29.5
LZH AMB AMB
comp=Z,27nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,105nm,4.1s
LZH LR LR
comp=N,1µm,12.0s
LZH LR LR
comp=Z,2µm,13.6s,MS4.7
ANN Anapa 25.45 290 *e*P **P** **18 28 52.6 -10**
ANN *e**PP pP 18 28 58.9 -9.4
ANN pmax pmax
comp=Z,69nm,1.8s,mb4.9
ANN MLR MLR
comp=N,523nm,14.0s,MS4.4
ANN MLR MLR
comp=E,634nm,14.0s,MS4.4
ANN MLR MLR
comp=Z,904nm,14.0s,MS4.4
SONM Songino Array 25.45 63 P **P** **18 29 03.1 +0.3**
comp=Z,2.8nm,0.6s,mb4.0,baz=273,slow=9.6,SNR=31
SONM PcP PcP 18 32 33.6 -0.7
comp=Z,1.6nm,0.8s,baz=267,slow=3.4,SNR=4.0
SONM LR LR 18 40 20.3
comp=Z,505nm,18.9s,MS4.1,baz=285,slow=40
SONM Songino Array 25.45 63 P **P** **18 29 03.1 +0.3**
SONM 18 32 33.6
MALT Malatya 25.83 275 *e*P **P** **18 29 08.7 +2.3**
MALT *e* 18 29 21.7
MALT pmax pmax
comp=Z,61nm,1.1s,mb5.0
MALT Malatya 25.83 275 *e*P **P** **18 29 08.7 +2.3**
comp=Z,61nm,1.1s,mb5.0
MALT *e* 18 29 21.7

ULN Ulaanbaatar 25.89 63 *e*P **P** **18 29 06.4 -0.4**
ULN pmax pmax
comp=Z,32nm,1.3s,mb4.7
ULN Ulaanbaatar 25.89 63 *e*P **P** **18 29 06.3 -0.5**
comp=Z,32nm,1.3s,mb4.7
MOS Moscow 26.84 315 *e*P **P** **18 29 13.2 -2.1**
MOS *e* 18 29 55.9
MOS *e*S **S** **18 33 52.5 +1.9**
MOS pmax pmax
comp=Z,49nm,0.8s,mb5.1
MOS MLR MLR
comp=Z,900nm,10.0s,MS4.6
MOS MLR MLR
comp=E,1µm,10.0s
OBN Obninsk 27.23 313 ⇓*e*P **P** **18 29 17.9 -0.9**
OBN *e* 18 29 58.4
OBN *e*S **S** **18 33 53.8 -2.9**
OBN pmax pmax
comp=Z,45nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,1µm,17.0s,MS4.5
OBN Obninsk 27.23 313 *e*P **P** **18 29 18.0 -0.7**
comp=Z,20nm,0.6s,mb4.8
CD2 Chengdu 27.53 101 P **P** **18 29 23.3 +1.5**
CD2 AP pP 18 29 28.0 +0.7
CD2 XP sP 18 29 31.0 +1.4
CD2 PP 18 30 11.5
CD2 S **S** **18 34 02.8 +0.8**
CD2 XS sS 18 34 11.0 -0.2
CD2 AMB AMB
comp=Z,20nm,0.7s,mb4.9
CD2 AMB AMB
comp=Z,230nm,5.4s
CD2 LR LR
comp=N,1µm,14.9s
CD2 LR LR
comp=Z,1µm,14.9s,MS4.6
KLMR Klimovskoe 28.09 326 *e*P **P** **18 29 24.3 -2.1**
KLMR *e*S **S** **18 34 12.8 +2.6**
KLMR pmax pmax
comp=Z,63nm,1.4s,mb5.0
BR131 Keskin Array S 29.05 280 *e*P **P** **18 29 34.9 -0.3**
comp=Z,12nm,0.7s,mb4.7
BRTR Keskin Array B 29.05 280 P **P** **18 29 36.5 +1.3**
comp=Z,13nm,0.8s,mb4.7,baz=93,slow=8.4,SNR=80
ASF Jabal al Asfar 29.29 264 LR LR 18 43 37.0
comp=Z,100nm,18.7s,MS3.5,baz=123,slow=41
HHC Hu-ho-hao-te 29.81 77 *e*P **P** **18 29 43.5 +1.6**
HHC AP pP 18 29 48.0 +0.5
HHC XP sP 18 29 51.0 +1.2
HHC PP PP 18 30 39.8 -9.4
HHC *e*S **S** **18 34 36.8 -0.8**
HHC XS sS 18 34 44.0 -2.8
HHC SS SS 18 36 10.0 -34
HHC PCS PcS 18 36 30.0 +1.8
HHC AMB AMB
comp=Z,17nm,0.8s,mb4.8
HHC AMB AMB
comp=Z,171nm,3.8s
HHC LR LR
comp=N,680nm,15.5s,MS4.6
HHC LR LR
comp=E,813nm,13.1s,MS4.6
HHC LR LR
comp=Z,796nm,11.9s,MS4.6
XAN Xi'an 30.00 91 P **P** **18 29 44.0 +0.3**
XAN AP pP 18 29 48.8 -0.5
XAN S **S** **18 34 44.8 +4.0**
XAN AMB AMB
comp=Z,8.0nm,0.6s,mb4.6
XAN AMB AMB
comp=Z,11nm,13.5s
XAN LR LR
comp=N,214nm,19.4s,MS4.1
XAN LR LR
comp=E,343nm,20.2s,MS4.1
XAN LR LR
comp=Z,599nm,24.3s,MS4.1
MMAI Mount Meron Ar 30.04 267 PcP PcP 18 32 46.9 +1.1
comp=Z,0.7nm,0.6s,baz=103,slow=6.5,SNR=2.4
KMI Kunming 30.08 112 P **P** **18 29 50.8 +6.4**
KMI S **S** **18 34 48.0 +5.9**
KMI LR LR
comp=N,389nm,10.1s,MS4.5
KMI LR LR
comp=E,429nm,12.3s,MS4.5
KMI LR LR
comp=Z,585nm,12.7s,MS4.4
AKASG Malin Array Be 30.93 303 P **P** **18 29 51.1 -0.6**
comp=Z,3.4nm,0.5s,mb4.5,baz=83,slow=7.8,SNR=24
AKASG PcP PcP 18 32 46.4 -1.4
comp=Z,2.5nm,0.6s,baz=85,slow=2.3,SNR=4.5
AKBB Malin Array Si 30.93 303 *e*P **P** **18 29 50.9 -0.8**
AKBB *e**PP pP 18 29 56.1 -1.2
KIEV Kiev 30.94 303 *e*P **P** **18 29 51.0 -0.8**
KIEV *e**PP pP 18 29 56.0 -1.4
KIEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
KIEV Kiev 30.94 303 *e*P **P** **18 29 51.0 -0.8**
comp=Z,10.0nm,0.8s,mb4.7
KIEV *e*pP pP 18 29 56.0 -1.4
KOD Kodaikanal 30.95 169 *e*P **P** **18 29 51.9 -0.3**
KOD AMb AMB 18 29 55.1
comp=Z,23nm,0.9s,mb5.0
KIS Kishinev 31.30 296 *e*P **P** **18 29 54.0 -1.0**
KIS *e* 18 30 08.0
KIS *e* 18 31 19.0
KIS MLR MLR
comp=N,500nm,14.0s,MS4.6
KIS MLR MLR
comp=E,800nm,14.0s,MS4.6
KIS MLR MLR
comp=Z,1µm,14.0s,MS4.6
KIS MLR MLR
comp=Z,900nm,14.0s
KIS Kishinev 31.30 296 *e*P **P** **18 29 54.0 -1.0**
KIS *e*Lg2 18 43 14.0
KIS *e*Rg 18 44 08.0
KIS LRM 18 46 15.0
comp=Z,500nm,14.0s
BOD Bodaibo 31.56 43 *e*P **P** **18 29 56.1 -1.1**
BOD pmax pmax
comp=Z,15nm,0.9s,mb4.8
ISP Isparta 31.93 278 *e*P **P** **18 30 00.2 -0.5**
ISP pmax pmax
comp=Z,18nm,0.9s,mb4.9
ISP Isparta 31.93 278 *e*P **P** **18 30 00.2 -0.5**
comp=Z,18nm,0.9s,mb4.9
GYA Guiyang 32.09 106 P **P** **18 30 05.5 +3.4**
GYA AP pP 18 30 11.8 +4.1
GYA PP PP 18 31 14.3 -0.4
GYA PCP PcP 18 32 55.5 +4.2
GYA S **S** **18 35 18.3 +4.8**
GYA SCP ScP 18 36 37.5 +3.7
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,120nm,4.7s
GYA LR LR
comp=N,680nm,16.8s,MS4.5
GYA LR LR
comp=E,540nm,17.6s,MS4.5
GYA LR LR
comp=Z,560nm,17.5s,MS4.3
CMAR Chiang Mai Arr 32.22 126 P **P** **18 30 03.7 +0.4**
comp=Z,0.8nm,0.7s,mb3.7,baz=310,slow=8.4,SNR=10
CMAR PcP PcP 18 32 52.3 +0.6
comp=Z,1.6nm,0.7s,baz=311,slow=3.7,SNR=8.4
CMAR pPcP 18 32 58.1
comp=Z,0.7nm,0.6s,baz=306,slow=3.6,SNR=4.8
CMAR Chiang Mai Arr 32.22 126 P **P** **18 30 03.7 +0.4**
CMAR 18 32 52.3
JOF Joensuu 32.49 326 *ep* **P** **18 30 03.4 -1.9**
comp=Z,12nm,0.7s,mb4.8
TRD Trivandrum 32.59 171 ⇓*e*P **P** **18 30 06.0 -0.5**
VRI Vrincioaia 32.86 294 ⇓*i*P **P** **18 30 09.8 +1.1**
PLOR Plostina 32.91 294 ⇑*i*P **P** **18 30 10.7 +1.5**
VSU Vasula 33.29 317 ⇓*e*P **P** **18 30 11.2 -1.1**
VSU pmax pmax
comp=Z,63nm,1.7s,mb5.3
BJI Beijing 33.42 77 P **P** **18 30 14.8 +1.1**
BJI S **S** **18 35 36.3 +2.3**
BJI AMB AMB
comp=Z,17nm,0.4s,mb5.3
BJI AMB AMB
comp=Z,207nm,4.2s
BJI LR LR
comp=N,732nm,19.7s,MS4.6
BJI LR LR
comp=E,669nm,15.0s,MS4.6
BJI LR LR
comp=Z,354nm,17.0s,MS4.2
MLR Muntele Rosu 33.45 293 P **P** **18 30 15.7 +1.8**
comp=Z,16nm,0.7s,mb5.0,baz=20,slow=7.7,SNR=48
MLR Muntele Rosu 33.45 293 ⇑*i*P **P** **18 30 16.1 +2.2**
LVZ Lovozero 33.67 336 ⇑*e*P **P** **18 30 15.5 -0.1**
LVZ pmax pmax
comp=Z,46nm,1.1s,mb5.3
LVZ MLR MLR
comp=Z,4µm,18.0s,MS5.2
BURAR Bucovina Array 33.68 297 ⇓*i*P **P** **18 30 16.4 +0.6**
BUR08 Bucovina Ar. S 33.69 297 *e*P **P** **18 30 16.2 +0.3**
APA Apatity 33.89 335 ⇑*i*P **P** **18 30 17.0 -0.4**
APA pmax pmax
comp=Z,25nm,1.2s,mb5.0
APA MLR MLR
comp=Z,3µm,10.0s,MS5.4
VOIR 34.09 294 ⇑*i*P **P** **18 30 20.8 +1.4**
LVV L'vov 34.27 301 *e*P **P** **18 30 20.0 -1.0**
LVV MLR MLR
comp=Z,300nm,16.4s,MS4.1
LVV MLR MLR
comp=N,100nm,15.0s,MS4.2
LVV MLR MLR
comp=E,300nm,16.4s,MS4.2
KAF Kangasniemi 34.40 324 *ep* **P** **18 30 21.0 -0.9**
comp=E,5.4nm,0.6s,mb4.7
KAF Kangasniemi 34.40 324 *e*P **P** **18 30 21.0 -0.9**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
SUW Suwalki 34.74 309 *e*P **P** **18 30 24.4 -0.5**
SUW Suwalki 34.74 309 *e*P **P** **18 30 24.4 -0.5**
KWP Kalwaria 35.15 301 *e*P **P** **18 30 29.2 +0.7**
KWP Kalwaria 35.15 301 *e*P **P** **18 30 29.2 +0.7**
TRPA Tarpa 35.41 299 ⇓*i*P **P** **18 30 31.1 +0.3**
DRGR 35.48 296 ⇓*i*P **P** **18 30 32.4 +1.0**
UZH Uzhgorod 35.51 300 *e*P **P** **18 30 32.0 +0.3**
UZH *e* 18 31 45.4
UZH MLR MLR
comp=E,700nm,14.0s
APE Apeiranthos 35.92 279 *c i*P **P** **18 30 36.1 +0.8**
CRVS Cervenica-Dubn 36.03 300 *e*P **P** **18 30 36.1 0.0**
CRVS pmax pmax
comp=Z,15nm,2.3s,mb4.5
CRVS MLR MLR
comp=Z,300nm,17.7s,MS4.1
CRVS Cervenica-Dubn 36.03 300 *e*P **P** **18 30 36.1 0.0**
CRVS *e*PP PP 18 31 48.8 -9.2
CRVS *e* 18 36 43.5
CRVS Cervenica-Dubn 36.03 300 *e*P **P** **18 30 36.1 0.0**
comp=Z,15nm,2.3s,mb4.5
CRVS *e*PP PP 18 31 48.8 -9.2
CRVS *e*S S 18 36 43.5 +29
CRVS LR LR
comp=Z,300nm,17.7s,MS4.1
STHS Stebnicka Huta 36.12 301 *e*P **P** **18 30 36.9 +0.1**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 36.12 301 *e*P **P** **18 30 36.9 +0.1**
comp=Z,3.8nm,0.8s,mb4.4
BZS Buzias 36.43 295 ⇑*i*P **P** **18 30 40.6 +1.0**
NIE Niedzica 36.72 301 *e*P **P** **18 30 43.0 +1.0**
NIE *e*pP pP 18 30 47.7 +0.1
OJC Ojcow 36.96 303 *e*P **P** **18 30 44.2 +0.2**
OJC *e*pP pP 18 30 48.8 -0.9
OJC *e*S **S** **18 36 28.6 +0.4**
OJC *e*sS sS 18 36 35.0 -2.5
OJC *e*SS SS 18 39 09.0 -0.9
OJC L 18 48 51.9
comp=Z,0.6nm,17.4s
OJC Ojcow 36.96 303 *e*P **P** **18 30 44.2 +0.2**
OJC *e*S **S** **18 36 28.6 +0.4**
OJC MLR MLR
comp=Z,600nm,17.4s,MS4.4
KEV Kevo 37.01 336 *ep* **P** **18 30 42.9 -1.3**
comp=Z,8.9nm,0.6s,mb4.8
KEV Kevo 37.01 336 *e*P **P** **18 30 42.9 -1.3**
KEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
PSZ Piszkesteto 37.20 299 ⇑*e*P **P** **18 30 47.0 +0.9**
PSZ Piszkesteto 37.20 299 ⇑*i*P **P** **18 30 46.8 +0.7**
ARCES ARCESS Array B 37.39 335 P **P** **18 30 46.9 -0.5**
comp=Z,16nm,0.5s,mb5.1,baz=110,slow=8.7,SNR=238
ARCES pP pP 18 30 52.0 -1.1
comp=Z,9.2nm,0.6s,baz=109,slow=9.4,SNR=16
ARCES LR LR 18 46 40.2
comp=Z,702nm,20.8s,MS4.4,baz=118,slow=37
ARCES ARCESS Array B 37.39 335 P **P** **18 30 46.9 -0.5**
ARCES *PP pP 18 30 52.0 -1.1
ARCES ARCESS Array B 37.39 335 P **P** **18 30 46.9 -0.5**
ARCES pP pP 18 30 52.0 -1.1
ARCES LR LR 18 46 40.2
ARE0 ARCESS Array S 37.39 335 *e*P **P** **18 30 46.9 -0.5**
ARE0 *e*pP pP 18 30 52.1 -1.0
VYHS Vyhne 37.81 300 *e*P **P** **18 30 52.1 +0.9**
VYHS pmax pmax
comp=Z,12nm,1.4s,mb4.4
VYHS Vyhne 37.81 300 *e*P **P** **18 30 52.1 +0.9**
comp=Z,12nm,1.4s,mb4.4
VYHS *e*PP PP 18 32 13.1 -4.4
BUD Budapest 37.85 298 *e*P **P** **18 30 52.9 +1.3**
OKC Ostrava-Krasne 38.06 302 *e*P **P** **18 30 52.6 -0.8**
KOLL Kolacno 38.08 300 *e*P **P** **18 30 54.6 +1.1**
PKSM Moragy 38.35 296 ⇓*i*P **P** **18 30 56.4 +0.6**
NJ2 Nanjing 38.39 88 *e*P **P** **18 31 00.5 +4.2**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
SMOL Smolenice 38.73 300 *e*P **P** **18 31 00.4 +1.4**
ZST Bratislava 39.00 300 *e*P **P** **18 31 01.5 +0.3**
ZST pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
ZST MLR MLR
comp=Z,800nm,15.0s,MS4.7
ZST Bratislava 39.00 300 *e*P **P** **18 31 01.5 +0.3**
comp=Z,4.4nm,0.8s,mb4.2
ZST LR LR
comp=Z,800nm,15.0s,MS4.7
QIZ Qiongzhong 39.03 113 P **P** **18 31 04.3 +2.5**
QIZ S **S** **18 37 04.8 +4.8**
QIZ AMB AMB
comp=Z,40nm,2.0s,mb4.8
QIZ LR LR
comp=Z,760nm,13.5s,MS4.7
CN2 Changchun 39.10 67 *e*P **P** **18 31 03.8 +1.6**
CN2 *e*S **S** **18 37 01.5 +0.8**
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,700nm,17.0s,MS4.7
CN2 LR LR
comp=E,500nm,17.0s,MS4.7
CN2 LR LR
comp=Z,800nm,18.0s,MS4.6
KSP Ksiaz 39.11 304 *e*P **P** **18 31 02.5 +0.4**
KSP Ksiaz 39.11 304 *e*P **P** **18 31 02.4 +0.2**
KSP *e* 18 32 42.2
VRAC Vranov 39.14 302 P **P** **18 31 02.7 +0.2**
comp=Z,10nm,1.1s,mb4.5,baz=79,slow=9.6,SNR=10
VRAC LR LR 18 48 45.7
comp=Z,226nm,20.3s,MS4.0,baz=74,slow=39
VRAC Vranov 39.14 302 ⇑*i*P **P** **18 31 03.2 +0.8**
DPC Dobruska-Polom 39.16 303 *e*P **P** **18 31 03.1 +0.5**
DPC *e*pP pP 18 31 07.7 -0.5
UPC Upice 39.33 303 *e*P **P** **18 31 04.4 +0.4**
SOP Sopron 39.45 299 ⇓*e*P **P** **18 31 06.1 +1.0**
TREC Trest 39.86 302 *e*P **P** **18 31 09.1 +0.7**
CONA Conrad Observa 39.87 300 *i* P **P** **18 31 09.3 +0.8**
comp=Z,33nm,1.2s,mb4.9,SNR=24
CSNA Conrad Observa 39.87 300 ⇑*i*P **P** **18 31 09.3 +0.8**
comp=Z,22nm,1.0s,mb4.9
YAK Yakutsk 40.02 38 *e*P **P** **18 31 06.7 -2.8**
YAK *e* 18 37 19.6
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.0
YAK pmax pmax
comp=E,27nm,1.5s
YAK pmax pmax
comp=N,6.0nm,1.4s

YAK MLR MLR
comp=Z,772nm,11.0s,MS4.8
YAK MLR MLR
comp=N,143nm,7.0s
YAK MLR MLR
comp=E,530nm,9.0s
YAK Yakutsk 40.02 38 *e*P **P 18 31 08.2 -1.4**
comp=E,74nm,0.8s,mb5.5
YAK *ep*P pP 18 31 13.1 -2.1
HFS Hagfors 40.12 319 P **P 18 31 10.0 -0.5**
comp=E,8.1nm,0.5s,mb4.8,baz=98,slow=11,SNR=94
HFS pP pP 18 31 15.0 -1.2
comp=E,22nm,0.6s,baz=103,slow=11,SNR=22
PVCC Panska Ves 40.24 304 *e*P **P 18 31 11.7 +0.1**
PRU Pruhonice 40.35 303 *e*P **P 18 31 12.8 +0.4**
PRU *ep*P pP 18 31 17.1 -1.0
GOLS Golise 40.44 297 *e*P **P 18 31 13.9 +0.7**
BRG Berggiesshubel 40.58 304 *i* P **P 18 31 14.7 +0.3**
BRG *e* pP 18 31 21.2 +1.2
BRG pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
BRG MLR MLR
comp=Z,660nm,19.3s,MS4.5
BRG Berggiesshubel 40.58 304 *e*P **P 18 31 14.7 +0.3**
comp=Z,40nm,1.5s,mb4.8
BRG Berggiesshubel 40.58 304 *i* P **P 18 31 14.7 +0.3**
comp=Z,14nm,0.8s,mb4.6
BRG *e* pP 18 31 21.2 +1.2
comp=Z,24nm,1.6s
BRG
comp=N,479nm,16.2s
BRG
comp=E,688nm,19.8s
BRG
comp=Z,1μm,19.3s
BRG Berggiesshubel 40.58 304 *i* P **P 18 31 14.7 +0.3**
comp=Z,8.7nm,0.8s,mb4.4
BRG *e* pP 18 31 21.2 +1.2
BRG LR LR
comp=Z,660nm,19.3s,MS4.5
SSE Sheshan 40.59 88 P **P 18 31 16.5 +1.8**
SSE XP sP 18 31 25.3 +2.6
SSE S **S 18 37 26.0 +2.6**
SSE XS sS 18 37 37.0 +4.3
SSE AMB AMB
comp=Z,24nm,1.0s,mb4.8
SSE AMB AMB
comp=Z,434nm,5.2s
SSE LR LR
comp=N,449nm,11.7s,MS4.7
SSE LR LR
comp=E,364nm,11.7s,MS4.7
SSE LR LR
comp=Z,563nm,10.6s,MS4.7
SOKA Soboth 40.68 298⇑ *i*P **P 18 31 15.8 +0.5**
comp=Z,28nm,1.2s,mb4.8
MOA Molln 40.93 300 *i* P **P 18 31 17.5 +0.2**
comp=Z,8.3nm,0.7s,mb4.5,SNR=11
VISS Visnje 41.02 297 *e*P **P 18 31 18.6 +0.5**
GEC2 GERESS Array S 41.10 301 *e*P **P 18 31 19.6 +1.0**
GEC2 pmax pmax
comp=Z,57nm,1.5s,mb5.0
GEC2 GERESS Array S 41.10 301 *e*P **P 18 31 19.6 +1.0**
comp=Z,57nm,1.5s,mb5.0
GERES GERESS Array B 41.10 301 P **P 18 31 19.4 +0.7**
comp=Z,11nm,0.6s,mb4.6,baz=67,slow=7.7,SNR=109
GERES LR LR 18 51 24.1
comp=Z,319nm,18.7s,MS4.2,baz=74,slow=41
CLL Collm 41.10 305⇑ *i*P **P 18 31 18.2 -0.4**
CLL pmax pmax
comp=Z,14nm,0.7s,mb4.7
CLL MLR MLR
comp=Z,700nm,18.7s,MS4.5
CLL Collm 41.10 305 *e*P **P 18 31 18.6 0.0**
comp=Z,30nm,1.4s,mb4.7
CLL Collm 41.10 305⇑ *i*P **P 18 31 18.2 -0.4**
comp=Z,14nm,0.7s,mb4.7
CLL *es*P sP 18 31 25.0 -1.6
CLL *e*(PP) 18 32 59.0
CLL Lm 18 49 00.0
comp=Z,700nm,18.7s
KHC Kasperske Hory 41.12 302 *e*P **P 18 31 19.4 +0.6**
KHC *ep*P pP 18 31 23.7 -0.8
KHC *ex* x 18 31 46.0
KHC Kasperske Hory 41.12 302 *e*P **P 18 31 19.4 +0.6**
KHC *e* pP 18 31 23.7 -0.8
LJU Ljubljana 41.17 297 *e*P **P 18 31 20.1 +0.7**
CEY Cerknica 41.32 297 *e*P **P 18 31 21.2 +0.7**
NB2 NORSAR Subarra 41.37 320 P **P 18 31 19.8 -0.9**
comp=Z,11nm,0.8s,mb4.5,baz=91,slow=8.6
NOA NORSAR Array B 41.37 320 P **P 18 31 19.8 -0.9**
comp=Z,5.1nm,0.6s,mb4.4,baz=91,slow=8.4,SNR=31
NOA LR LR 18 49 02.0
comp=Z,543nm,19.0s,MS4.4,baz=80,slow=37
TIXI Tiksi 41.44 24*c i*P **P 18 31 19.5 -1.7**
TIXI pmax pmax
comp=Z,38nm,1.0s,mb5.0
TIXI MLR MLR
comp=Z,400nm,10.0s,MS4.6
TIXI Tiksi 41.44 24 *e*P **P 18 31 19.7 -1.4**
comp=Z,26nm,0.6s,mb5.0
NAO01 NORSAR Array S 41.52 320 *e*P **P 18 31 20.6 -1.4**
comp=Z,6.8nm,0.7s,mb4.4
NAO01 pP pP 18 31 26.1 -1.6
WET Wettzell 41.57 302 *e*P **P 18 31 23.2 +0.7**
WET pmax pmax
comp=Z,27nm,1.3s,mb4.7
WET Wettzell 41.57 302 *e*P **P 18 31 23.2 +0.7**
comp=Z,27nm,1.3s,mb4.7
TANN Tannenbergstha 41.59 304 *e*P **P 18 31 23.1 +0.4**
VOY Vojsko 41.60 297 *e*P **P 18 31 22.8 -0.1**
VOY *e* 18 31 34.7
NKC Novy Kostel 41.63 304 *e*P **P 18 31 23.5 +0.5**
NKC *ex* x 18 31 45.2
KBA Koelnbreinsper 41.72 299⇑ *i*P **P 18 31 24.1 +0.3**
comp=Z,14nm,0.5s,mb4.8
MDJ Mudanjiang 41.76 65 P **P 18 31 24.5 +0.4**
MDJ AP pP 18 31 27.5 -2.3
MDJ SCP ScP 18 37 11.8 +2.4
MDJ S **S 18 37 41.0 +0.6**
MDJ AMB AMB
comp=Z,9.0nm,2.2s,mb4.0
MDJ AMB AMB
comp=Z,354nm,6.0s
MDJ LR LR
comp=N,312nm,19.9s,MS4.2
MDJ LR LR
comp=E,92nm,21.9s,MS4.2
MDJ LR LR
comp=Z,237nm,19.3s,MS4.1
ROTZ Rotzenmuhle 41.87 303 *e*P **P 18 31 25.7 +0.7**
RJOB Jochberg 41.92 300 *e*P **P 18 31 25.6 +0.1**
MOX Moxa 42.08 304 *e*P **P 18 31 27.1 +0.5**
comp=Z,49nm,1.9s,mb4.8
MOX
comp=Z,500nm,19.0s
MOX Moxa 42.08 304 *e*P **P 18 31 27.1 +0.5**
MOX pmax pmax
comp=Z,49nm,1.9s,mb4.8
MOX MLR MLR
comp=Z,500nm,19.0s,MS4.4
MOX Moxa 42.08 304 *e*P **P 18 31 27.3 +0.7**
comp=Z,21nm,1.2s,mb4.6
ABTA Abfaltersbach 42.35 299⇑ *i*P **P 18 31 28.2 -0.8**
comp=Z,6.7nm,0.6s,mb4.4,SNR=7.3
GRA1 Grafenberg Arr 42.51 303 *e*P **P 18 31 31.2 +1.0**
comp=Z,44nm,1.4s,mb5.0
GRF Grafenberg Arr 42.51 303 *e*P **P 18 31 31.2 +1.0**
GRF pmax pmax
comp=Z,44nm,1.4s,mb5.0
GRF Grafenberg Arr 42.51 303 *e*P **P 18 31 31.2 +1.0**
GRF pmax pmax
comp=Z,44nm,1.4s,mb5.0
GRF Grafenberg Arr 42.51 303 *e*P **P 18 31 31.2 +1.0**
comp=Z,44nm,1.4s,mb5.0
CLZ Clausthal 42.62 306 *e*P **P 18 31 31.1 0.0**
NRDL Niedersach Rie 42.67 307 *e*P **P 18 31 31.5 0.0**
comp=Z,42nm,1.7s,mb4.9
WTTA Wattenberg 42.80 299⇑ *i*P **P 18 31 32.5 -0.1**
comp=Z,16nm,0.6s,mb5.0,SNR=19
WATA Walderalm 42.82 300⇑ *i*P **P 18 31 32.5 -0.3**
comp=Z,12nm,0.6s,mb4.8,SNR=15
KSRS Korea Array 42.93 76 P **P 18 31 32.9 -0.9**
comp=Z,1.2nm,0.7s,mb3.8,baz=286,slow=6.8,SNR=4.5
KSRS LR LR 18 52 38.8
comp=Z,305nm,19.6s,MS4.2,baz=291,slow=41
KSRS Korea Array 42.93 76 P **P 18 31 32.9 -0.9**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KSRS MLR MLR
comp=Z,305nm,19.6s,MS4.2
UBBA Unterbreizbach 43.05 305 *e*P **P 18 31 34.9 +0.4**
comp=Z,51nm,1.8s,mb5.0
MOTA Moosalm 43.13 300 *i* P **P 18 31 34.9 -0.4**
comp=Z,8.1nm,0.6s,mb4.6,SNR=12
RETA Reutte 43.32 300⇑ *i*P **P 18 31 36.9 +0.1**
comp=Z,10.0nm,0.9s,mb4.6
SPITS Spitsberger Ar 43.38 346 P **P 18 31 36.6 -0.3**
comp=Z,17nm,1.0s,mb4.7,baz=176,slow=33,SNR=18
SPITS LR LR 18 53 27.1
comp=Z,191nm,20.6s,MS4.0,baz=335,slow=41
FETA Feichten 43.46 299⇑ *i*P **P 18 31 37.4 -0.5**
comp=Z,16nm,1.3s,mb4.6,SNR=9.2
DAVA Damuels 43.95 300 *i* P **P 18 31 42.0 +0.1**
comp=Z,28nm,0.6s,mb5.2,SNR=25
TOD Tromm 44.06 303 *e*P **P 18 31 42.9 +0.1**
DAVOX Davos/Dischmat 44.09 299 P **P 18 31 42.9 -0.1**
comp=Z,29nm,0.5s,mb5.3,baz=103,slow=5.6,SNR=100
IBBN Ibbenburen 44.12 307 *e*P **P 18 31 43.1 -0.1**
DAVOS Davos 44.13 299 P **P 18 31 42.9 -0.4**
HABR Khabarovsk 44.38 58 *e*P **P 18 31 43.6 -1.7**
HABR *e**SP sP 18 31 52.0 -1.2
HABR *e* 18 33 27.0
HABR *e*S **S 18 38 17.8 -0.9**
HABR *e**SS sS 18 38 28.2 +0.1
HABR *e*SS SS 18 41 38.5 +1.3
HABR MLR MLR
comp=Z,308nm,15.0s,MS4.3
SPAK Spaichingen-Ko 44.45 301 *e*P **P 18 31 46.1 +0.2**
VLC Villacollemand 44.51 296 *e*P **P 18 31 47.5 +1.1**
comp=Z,23nm,0.7s,mb5.1
TUE Stuetta 44.53 299 *e*P **P 18 31 45.8 -0.7**
comp=Z,7.8nm,0.6s,mb4.7
BFO Black Forest 44.69 302 *e*P **P 18 31 48.0 +0.3**
BFO pmax pmax
comp=Z,50nm,1.7s,mb5.1
BFO Black Forest 44.69 302 *e*P **P 18 31 48.0 +0.3**
comp=Z,50nm,1.7s,mb5.1
LANF Langenberg 44.85 303 *e*P **P 18 31 50.2 +1.1**
FELD Feldberg im Sc 45.02 301 *e*P **P 18 31 50.2 -0.2**
PSI Prapat 45.09 140 P **P 18 31 51.6 +0.3**
comp=Z,3.5nm,0.6s,mb4.4,baz=294,slow=10.0,SNR=3.9
PSI LR LR 18 52 07.9
comp=Z,308nm,20.8s,MS4.2,baz=303,slow=38
RUP Ruppelstein 45.14 304 *e*P **P 18 31 51.6 +0.3**
CDF Champ du Feu 45.34 302⇑ *i*P **P 18 31 52.9 0.0**
comp=Z,18nm,0.8s,mb4.7
CDF Champ du Feu 45.34 302⇑ *i*P **P 18 31 52.9 0.0**
CDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CDF Champ du Feu 45.34 302⇑ *i*P **P 18 31 52.9 0.0**
comp=Z,8.8nm,0.8s,mb4.6
ECH Echery 45.47 302 *e*P **P 18 31 54.3 +0.3**
MEM Membach 45.57 305 P **P 18 31 54.7 -0.1**
comp=Z,16nm,3.8s
MOF Molkenrain 45.59 301 *e*P **P 18 31 55.1 +0.2**
WLF Walferdange 45.72 304 P **P 18 31 56.7 +0.7**
comp=Z,15nm,2.4s,mb4.5
HINF Hinzelfeld 45.78 301⇑ *i*P **P 18 31 56.3 -0.1**
LOMF Lomont 45.93 301 *e*P **P 18 31 56.4 -1.2**
PGF Pioggiola 46.00 294 *e*P **P 18 31 58.7 +0.5**
HAU Haudompre 46.05 302⇑ *i*P **P 18 31 58.5 -0.1**
comp=Z,26nm,0.7s,mb5.0
HAU *e*MLR MLR
comp=Z,437nm,20.0s,MS4.1
HAU Haudompre 46.05 302⇑ *i*P **P 18 31 58.5 -0.1**
HAU pmax pmax
comp=Z,13nm,0.7s,mb5.0
HAU MLR MLR
comp=Z,440nm,20.0s,MS4.4
HAU Haudompre 46.05 302⇑ *i*P **P 18 31 58.5 -0.1**
comp=Z,13nm,0.7s,mb5.0
HAU LR LR
comp=Z,440nm,20.0s,MS4.4
BCLA Clavier 46.05 305 P **P 18 31 58.3 -0.2**
THEF They Montfort 46.22 302 *e*P **P 18 31 59.3 -0.6**
GIVF Givet 46.43 305 *e*P **P 18 32 01.9 +0.4**
SAOF Saorge 46.50 296 *e*P **P 18 32 02.9 +0.7**
LPG La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
comp=Z,25nm,0.5s,mb5.1
LPG La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
LPG pmax pmax
comp=Z,13nm,0.5s,mb5.1
LPG La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
comp=Z,13nm,0.5s,mb5.1
LPL La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
comp=Z,48nm,0.5s,mb5.4
LPL La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
LPL pmax pmax
comp=Z,24nm,0.5s,mb5.4
LPL La Plagne 46.55 298 *e*P **P 18 32 03.3 +0.8**
comp=Z,24nm,0.5s,mb5.4
DOU Dourbes 46.58 305 P **P 18 32 03.1 +0.4**
comp=Z,14nm,2.7s,mb4.4
AUTN L'Aution 46.58 296 *e*P **P 18 32 03.9 +1.1**
SBF Sospel 46.62 296⇑ *i*P **P 18 32 03.7 +0.6**
comp=Z,87nm,0.8s,mb5.5
SBF Sospel 46.62 296⇑ *i*P **P 18 32 03.7 +0.6**
SBF pmax pmax
comp=Z,43nm,0.8s,mb5.4
SBF Sospel 46.62 296⇑ *i*P **P 18 32 03.7 +0.6**
comp=Z,44nm,0.8s,mb5.4
CABF La Chapelle 46.63 300⇑ *i*P **P 18 32 03.0 -0.2**
comp=Z,31nm,1.0s,mb4.9
CABF La Chapelle 46.63 300⇑ *i*P **P 18 32 03.0 -0.2**
CABF pmax pmax
comp=Z,15nm,1.0s,mb4.9
CABF La Chapelle 46.63 300⇑ *i*P **P 18 32 03.0 -0.2**
comp=Z,15nm,1.0s,mb4.9
LUCF Luceram 46.67 296 *e*P **P 18 32 07.4 +3.9**
MEZF Maizieres J'vi 46.74 303⇑ *i*P **P 18 32 04.2 +0.3**
comp=Z,40nm,1.1s,mb5.0
MEZF Maizieres J'vi 46.74 303⇑ *i*P **P 18 32 04.2 +0.3**
comp=Z,40nm,1.1s,mb5.3
BNI Bardonecchia 46.74 298 *e*P **P 18 32 04.1 +0.1**
BNI *e**PP pP 18 32 09.7 -0.1
BNI pmax pmax
comp=Z,32nm,0.9s,mb5.2
BNI Bardonecchia 46.74 298 *e*P **P 18 32 04.1 +0.1**
comp=Z,32nm,0.9s,mb5.2
BNI *ep*P pP 18 32 09.7 0.0
MBDF Montbardon 46.78 297⇑ *i*P **P 18 32 04.2 -0.2**
comp=Z,32nm,0.6s,mb5.1
MBDF Montbardon 46.78 297⇑ *i*P **P 18 32 04.2 -0.2**
MBDF pmax pmax
comp=Z,16nm,0.6s,mb5.1
MBDF Montbardon 46.78 297⇑ *i*P **P 18 32 04.2 -0.2**
comp=Z,16nm,0.6s,mb5.1
BAIF Baives 46.83 305⇑ *i*P **P 18 32 05.0 +0.4**
comp=Z,10nm,0.7s,mb4.5
BAIF Baives 46.83 305⇑ *i*P **P 18 32 05.0 +0.4**
BAIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BAIF Baives 46.83 305⇑ *i*P **P 18 32 05.0 +0.4**
comp=Z,5.2nm,0.7s,mb4.6
CALN Calern 47.03 296 *e*P **P 18 32 05.3 -1.0**
OG05 Jujurieux 47.23 300 *e*P **P 18 32 08.5 +0.7**
FRF La Foret Royal 47.27 296⇑ *i*P **P 18 32 08.3 +0.2**
comp=Z,37nm,0.7s,mb5.1
FRF La Foret Royal 47.27 296⇑ *i*P **P 18 32 08.3 +0.2**
FRF pmax pmax
comp=Z,19nm,0.7s,mb5.1
FRF La Foret Royal 47.27 296⇑ *i*P **P 18 32 08.3 +0.2**
comp=Z,19nm,0.7s,mb5.1
ORIF Oris-en-Rattie 47.32 298⇑ *i*P **P 18 32 08.1 -0.4**
comp=Z,16nm,0.7s,mb4.7
ORIF *e*MLR MLR
comp=Z,341nm,23.0s,MS4.0
ORIF Oris-en-Rattie 47.32 298⇑ *i*P **P 18 32 08.1 -0.4**
ORIF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 47.32 298⇑ *i*P **P 18 32 08.1 -0.4**
comp=Z,7.8nm,0.7s,mb4.8
LMR La Mourre 47.44 296 *e*P **P 18 32 09.8 +0.3**
comp=Z,27nm,0.7s,mb5.0
LMR La Mourre 47.44 296 *e*P **P 18 32 09.8 +0.3**
LMR pmax pmax
comp=Z,13nm,0.7s,mb5.0
LMR La Mourre 47.44 296 *e*P **P 18 32 09.8 +0.3**
comp=Z,13nm,0.7s,mb5.0
SMRF Simiane la Rot 47.85 297 *e*P **P 18 32 13.0 +0.3**
comp=Z,34nm,0.8s,mb5.1
SMRF Simiane la Rot 47.85 297 *e*P **P 18 32 13.0 +0.3**
comp=Z,34nm,0.8s,mb5.4
LOR Lormes 47.88 302⇑ *i*P **P 18 32 12.2 -0.6**
comp=Z,7.2nm,0.6s,mb4.6
LOR *e*MLR MLR
comp=Z,372nm,19.2s,MS4.1
LOR Lormes 47.88 302⇑ *i*P **P 18 32 12.2 -0.6**
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
LOR MLR MLR
comp=Z,370nm,19.3s,MS4.4
LOR Lormes 47.88 302⇑ *i*P **P 18 32 12.2 -0.6**
comp=Z,3.6nm,0.6s,mb4.6
LOR LR LR
comp=Z,370nm,19.3s,MS4.4
SSB Saint Sauveur 48.09 299 *e*P **P 18 32 14.5 0.0**
SSB pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
SSB Saint Sauveur 48.09 299 *e*P **P 18 32 14.5 0.0**
comp=Z,8.1nm,0.7s,mb4.9
SMF Signal de Mont 48.09 301⇑ *i*P **P 18 32 14.1 -0.4**
comp=Z,16nm,0.7s,mb4.9
SMF Signal de Mont 48.09 301⇑ *i*P **P 18 32 14.1 -0.4**
SMF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
SMF Signal de Mont 48.09 301⇑ *i*P **P 18 32 14.1 -0.4**
comp=Z,8.1nm,0.7s,mb4.9
VIVF Saint-Julien-l 48.15 298⇑ *i*P **P 18 32 15.2 +0.2**
comp=Z,30nm,0.6s,mb5.2
VIVF Saint-Julien-l 48.15 298⇑ *i*P **P 18 32 15.2 +0.2**
VIVF pmax pmax
comp=Z,15nm,0.6s,mb5.2
VIVF Saint-Julien-l 48.15 298⇑ *i*P **P 18 32 15.2 +0.2**
comp=Z,15nm,0.6s,mb5.2
SSF Saint Saulge 48.17 301⇑ *i*P **P 18 32 14.5 -0.6**
comp=Z,9.7nm,0.7s,mb4.6
SSF Saint Saulge 48.17 301⇑ *i*P **P 18 32 14.5 -0.6**
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SSF Saint Saulge 48.17 301⇑ *i*P **P 18 32 14.5 -0.6**
comp=Z,4.8nm,0.7s,mb4.6
AVF Avril sur Loir 48.36 301⇑ *i*P **P 18 32 16.3 -0.3**
comp=Z,35nm,0.8s,mb5.2
AVF Avril sur Loir 48.36 301⇑ *i*P **P 18 32 16.3 -0.3**
AVF pmax pmax
comp=Z,18nm,0.8s,mb5.2
AVF Avril sur Loir 48.36 301⇑ *i*P **P 18 32 16.3 -0.3**
comp=Z,18nm,0.8s,mb5.1
KEST Kesra 48.43 285 P **P 18 32 18.8 +1.4**
comp=Z,2.3nm,0.6s,mb4.4,baz=318,slow=1.9,SNR=7.7
KEST LR LR 18 57 36.1
comp=Z,60nm,19.5s,MS3.6,baz=237,slow=42
HYF Humbligny 48.66 302 *e*P **P 18 32 19.2 +0.3**
AGO Saint Agoulin 48.75 300 *e*P **P 18 32 20.4 +0.8**
BGF Bois d'Agland 48.77 301⇑ *i*P **P 18 32 19.4 -0.3**
comp=Z,12nm,0.6s,mb4.8
BGF Bois d'Agland 48.77 301⇑ *i*P **P 18 32 19.4 -0.3**
BGF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
BGF Bois d'Agland 48.77 301⇑ *i*P **P 18 32 19.4 -0.3**
comp=Z,6.1nm,0.6s,mb4.8
PYM Petit Puy Mans 48.94 300 *e*P **P 18 32 22.2 +1.2**
LBL Lubilhac 48.96 299 *e*P **P 18 32 22.2 +1.0**
LASF Ste Croix 48.97 298⇑ *i*P **P 18 32 21.8 +0.5**
comp=Z,29nm,0.6s,mb5.2
TCF Toulx Ste Croi 49.27 301⇑ *i*P **P 18 32 23.7 +0.1**
comp=Z,19nm,0.7s,mb4.9
TCF Toulx Ste Croi 49.27 301⇑ *i*P **P 18 32 23.7 +0.1**
TCF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
TCF Toulx Ste Croi 49.27 301⇑ *i*P **P 18 32 23.7 +0.1**
comp=Z,9.4nm,0.7s,mb4.9
EKA Eskdalemuir Ar 49.68 314 P **P 18 32 25.9 -0.7**
comp=Z,2.6nm,0.9s,mb4.2,baz=87,slow=8.1,SNR=8.6
CAF Calviac 49.85 299⇑ *i*P **P 18 32 28.5 +0.5**
comp=Z,17nm,0.9s,mb4.8
CAF Calviac 49.85 299⇑ *i*P **P 18 32 28.5 +0.5**
CAF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CAF Calviac 49.85 299⇑ *i*P **P 18 32 28.5 +0.5**
comp=Z,8.4nm,0.9s,mb4.8
LDF La Druitiere 49.97 304⇑ *i*P **P 18 32 28.2 -0.7**
RJF Les Rejaudoux 50.08 300⇑ *i*P **P 18 32 30.2 +0.5**
comp=Z,32nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,284nm,23.0s,MS3.9
RJF Les Rejaudoux 50.08 300⇑ *i*P **P 18 32 30.2 +0.5**
RJF pmax pmax
comp=Z,16nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,280nm,23.0s,MS4.2
RJF Les Rejaudoux 50.08 300⇑ *i*P **P 18 32 30.2 +0.5**
comp=Z,16nm,0.9s,mb5.0
RJF LR LR
comp=Z,280nm,23.0s,MS4.2
FLN La Foliniere 50.14 305 *e*P **P 18 32 29.5 -0.7**
FLN *e*MLR MLR
comp=Z,497nm,18.5s,MS4.2
FLN La Foliniere 50.14 305 *e*P **P 18 32 29.5 -0.7**
FLN LR LR
comp=Z,500nm,18.5s,MS4.5
MTLF Montolieu 50.35 297⇑ *i*P **P 18 32 32.2 +0.4**
comp=Z,14nm,0.7s,mb4.8
MTLF Montolieu 50.35 297⇑ *i*P **P 18 32 32.2 +0.4**
MTLF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
MTLF Montolieu 50.35 297⇑ *i*P **P 18 32 32.2 +0.4**
comp=Z,6.9nm,0.7s,mb4.8
SEY Seymchan 50.40 36‖ *e*P **P 18 32 31.5 -0.4**
GRR Gorron 50.50 304 *e*P **P 18 32 32.2 -0.7**
MFF Saint Martin d 50.68 302⇑ *i*P **P 18 32 33.6 -0.7**
comp=Z,15nm,0.8s,mb4.7
MFF Saint Martin d 50.68 302⇑ *i*P **P 18 32 33.6 -0.7**
MFF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MFF Saint Martin d 50.68 302⇑ *i*P **P 18 32 33.6 -0.7**
comp=Z,7.6nm,0.8s,mb4.7
DAG Danmarks Havn 50.71 343⇑ *i*P **P 18 32 33.8 -0.3**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DAG Danmarks Havn 50.71 343⇑ *i*P **P 18 32 33.8 -0.3**
comp=Z,9.7nm,0.8s,mb4.8
LFF La Frestale 50.72 300⇑ *i*P **P 18 32 34.9 +0.3**
comp=Z,29nm,0.7s,mb5.0
LFF La Frestale 50.72 300⇑ *i*P **P 18 32 34.9 +0.3**
LFF pmax pmax
comp=Z,15nm,0.7s,mb5.0
LFF La Frestale 50.72 300⇑ *i*P **P 18 32 34.9 +0.3**
comp=Z,15nm,0.7s,mb5.0
MAT Matsushiro 50.80 72 P **P 18 32 33.8 -1.5**
MJAR Matsushiro Arr 50.80 72 P **P 18 32 34.6 -0.8**
comp=Z,6.4nm,1.1s,mb4.5,baz=299,slow=9.3,SNR=10
MJAR LR LR 18 55 28.4
comp=Z,145nm,18.4s,MS4.0,baz=280,slow=38
SGMF Saint Gilles 51.61 305 *e*P **P 18 32 40.9 -0.3**
comp=Z,22nm,0.7s,mb4.9
SGMF Saint Gilles 51.61 305 *e*P **P 18 32 40.9 -0.3**
SGMF pmax pmax
comp=Z,11nm,0.7s,mb4.9
SGMF Saint Gilles 51.61 305 *e*P **P 18 32 40.9 -0.3**
comp=Z,11nm,0.7s,mb4.9
EPF Esparros 51.73 298 *e*P **P 18 32 42.9 +0.7**
comp=Z,30nm,1.1s,mb4.9
EPF Esparros 51.73 298 *e*P **P 18 32 42.9 +0.7**
EPF pmax pmax
comp=Z,15nm,1.1s,mb4.8
EPF Esparros 51.73 298 *e*P **P 18 32 42.9 +0.7**
comp=Z,15nm,1.1s,mb4.8
ROSF Rostrenen 52.02 305 *e*P **P 18 32 43.8 -0.5**
comp=Z,8.7nm,0.6s,mb4.6
ROSF Rostrenen 52.02 305 *e*P **P 18 32 43.8 -0.5**
ROSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ROSF Rostrenen 52.02 305 *e*P **P 18 32 43.8 -0.5**
comp=Z,4.3nm,0.6s,mb4.6
QUIF Quistinic 52.11 305⇑ *i*P **P 18 32 44.3 -0.7**
comp=Z,37nm,1.0s,mb5.0
QUIF Quistinic 52.11 305⇑ *i*P **P 18 32 44.3 -0.7**
QUIF pmax pmax
comp=Z,19nm,1.0s,mb5.0
QUIF Quistinic 52.11 305⇑ *i*P **P 18 32 44.3 -0.7**
comp=Z,18nm,1.0s,mb5.0
ETSF Etsaut 52.39 298 *e*P **P 18 32 47.5 +0.4**
comp=Z,13nm,0.6s,mb4.8
ETSF Etsaut 52.39 298 *e*P **P 18 32 47.5 +0.4**
ETSF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8

ETSF	**Etsaut**	**52.39**	**298**	*e*P		**P**		**18 32 47.5**	**+0.4**	
	comp=Z,6.6nm,0.6s,mb4.7									
SJPF	**Ste Jean**	**52.74**	**298**	*e*P		**P**		**18 32 50.1**	**+0.3**	
BILL	**Bilibino**	**54.35**	**27**⇑	*e*P		**P**		**18 33 00.7**	**-0.5**	
BILL				*e*				18 34 58.5		
BILL				*e*S		**S**		**18 40 33.4**	**-4.5**	
BILL				pmax	pmax					
	comp=Z,20nm,1.2s,mb4.9									
BILL				MLR	MLR					
	comp=Z,500nm,21.0s,MS4.6									
BILL	**Bilibino**	**54.35**	**27**	*e*P		**P**		**18 33 00.4**	**-0.7**	
	comp=Z,26nm,1.4s,mb5.0									
BILL				LR	LR					
	comp=Z,296nm,21.0s,MS4.3									
ESDC	**Sonseca Array**	**56.10**	**296**	P		**P**		**18 33 14.0**	**-0.3**	
	comp=Z,1.8nm,0.6s,mb4.3,baz=56,slow=7.4,SNR=24									
ESLA	**Sonseca Array**	**56.10**	**296**	*e*P		**P**		**18 33 13.7**	**-0.6**	
	comp=Z,2.5nm,1.0s,mb4.2									
ESLA				*e*pP		pP		18 33 19.3	-0.8	
PETK	**Petropavlovsk-**	**56.36**	**46**	P		**P**		**18 33 14.3**	**-1.5**	
	comp=Z,3.8nm,0.9s,mb4.4,baz=291,slow=6.1,SNR=3.3									
SUMG	**Summit**	**57.13**	**340**	*e*P		**P**		**18 33 20.9**	**-0.2**	
	comp=Z,26nm,0.9s,mb5.3									
MVO	**Moncorvo**	**57.48**	**299**	*e*P		**P**		**18 33 24.3**	**+0.3**	
	comp=Z,21nm,2.0s,mb4.8									
PCAB	**Cabril**	**57.88**	**299**	*e*P		**P**		**18 33 27.4**	**+0.6**	
	comp=Z,29nm,1.4s,mb5.1									
PVRL	**Vila Real**	**57.88**	**299**	*e*P		**P**		**18 33 27.1**	**+0.3**	
	comp=Z,21nm,1.6s,mb4.9									
TAM	**Tamanrasset**	**57.89**	**273**	*e*P		**P**		**18 33 27.6**	**+0.5**	
TAM				pmax	pmax					
	comp=Z,9.0nm,1.4s,mb4.6									
TAM	**Tamanrasset**	**57.89**	**273**	*e*P		**P**		**18 33 27.6**	**+0.4**	
	comp=Z,9.2nm,1.4s,mb4.6									
PVIS	**Viseu**	**58.27**	**298**	*e*P		**P**		**18 33 29.6**	**+0.1**	
	comp=Z,27nm,1.5s,mb5.1									
PCBR	**Castelo Branco**	**58.41**	**297**	*e*P		**P**		**18 33 30.9**	**+0.4**	
PMRV	**Marv??o**	**58.55**	**297**	*e*P		**P**		**18 33 31.7**	**+0.2**	
	comp=Z,30nm,1.5s,mb5.1									
PBAR	**Barrancos**	**58.93**	**295**	*e*P		**P**		**18 33 34.2**	**+0.1**	
	comp=Z,24nm,1.5s,mb5.0									
PBAR				*e*pP		pP		18 33 39.5	-0.5	
PESTR	**Estremoz**	**58.96**	**296**	*e*P		**P**		**18 33 35.5**	**+1.1**	
	comp=Z,16nm,1.4s,mb4.9									
EVO	**Evora**	**59.41**	**296**	*e*P		**P**		**18 33 38.4**	**+0.9**	
	comp=Z,43nm,1.7s,mb4.9									
EVO				*e*MLR	MLR					
	comp=Z,205nm,19.8s,MS4.0									
EVO	**Evora**	**59.41**	**296**	*e*P		**P**		**18 33 38.4**	**+0.9**	
	comp=Z,18nm,1.7s,mb4.8									
PBEJ	**Beja**	**59.57**	**296**	*e*P		**P**		**18 33 38.7**	**+0.1**	
	comp=Z,14nm,1.4s,mb4.8									
PVAQ	**Vaqueiros**	**59.78**	**295**	*e*P		**P**		**18 33 40.2**	**+0.2**	
	comp=Z,21nm,1.7s,mb4.9									
MDT	**Midelt**	**59.95**	**289**	P		**P**		**18 33 41.7**	**+0.4**	
	comp=Z,0.8nm,0.6s,mb4.0,baz=49,slow=12,SNR=3.8									
PBDV	**Barranco-do-Ve**	**60.01**	**295**	*e*pP		pP		18 33 46.9	-0.6	
SFJD	**Kangerlussuaq**	**63.91**	**338**	P		**P**		**18 34 06.5**	**-0.8**	
	comp=Z,7.9nm,0.7s,mb4.8,baz=38,slow=12,SNR=4.1									
SFJD	**Kangerlussuaq**	**63.91**	**338**	P		**P**		**18 34 06.5**	**-0.9**	
SFJD				pmax	pmax					
	comp=Z,8.0nm,0.7s,mb4.9									
RES	**Resolute Bay**	**64.35**	**356**	P		**P**		**18 34 09.1**	**-1.1**	
	comp=Z,2.2nm,0.9s,mb4.2,baz=19,slow=10,SNR=6.5									
TOA0	**Torodi Ar. Sit**	**66.58**	**267**	*e*P		**P**		**18 34 24.9**	**-0.6**	
TOA0				*e*pP		pP		18 34 30.2	-1.2	
TORD	**Torodi Ar. Bea**	**66.58**	**267**	P		**P**		**18 34 25.0**	**-0.5**	
	comp=Z,6.9nm,0.6s,mb4.9,baz=54,slow=5.7,SNR=79									
TORD				pP		pP		18 34 30.2	-1.2	
	comp=Z,7.7nm,0.6s,baz=54,slow=5.5,SNR=21									
COLD	**Coldfoot**	**67.54**	**16**	*e*P		**P**		**18 34 29.9**	**-0.8**	
	comp=Z,16nm,0.8s,mb5.1									
COLD				*e*pP		pP		18 34 35.2	-1.4	
CHUM	**Lake Minchumin**	**69.84**	**19**	*e*P		**P**		**18 34 44.7**	**-0.4**	
	comp=Z,37nm,0.5s,mb5.6									
BPAW	**Bear Paw Mtn.**	**69.98**	**19**	*e*P		**P**		**18 34 44.7**	**-1.3**	
	comp=Z,7.5nm,0.8s,mb4.7									
COLA	**College**	**70.05**	**17**⇑	*e*P		**P**		**18 34 45.4**	**-1.0**	
MCK	**McKinley**	**70.78**	**18**	*e*P		**P**		**18 34 49.6**	**-1.3**	
FRB	**Frobisher Bay**	**71.07**	**343**	P		**P**		**18 34 51.5**	**-1.2**	
	comp=Z,2.2nm,0.5s,mb4.3,baz=33,slow=7.9,SNR=8.8									
FRB	**Frobisher Bay**	**71.07**	**343**	P		**P**		**18 34 51.5**	**-1.2**	
PAX	**Paxson**	**72.23**	**17**	*e*P		**P**		**18 34 58.3**	**-1.4**	
PAX				*e**PP		pP		18 35 03.8	-1.8	
PAX				pmax	pmax					
	comp=Z,36nm,1.3s,mb5.1									
PAX	**Paxson**	**72.23**	**17**	*e*P		**P**		**18 34 58.3**	**-1.3**	
	comp=Z,36nm,1.3s,mb5.2									
PAX				*e*pP		pP		18 35 03.8	-1.8	
RC01	**Rabbit Creek A**	**72.84**	**20**	*e*P		**P**		**18 35 02.2**	**-1.1**	
	comp=Z,15nm,0.7s,mb5.0									
KDAK	**Kodiak Island**	**74.86**	**23**	P		**P**		**18 35 14.2**	**-0.9**	
	comp=Z,5.6nm,0.6s,mb4.7,baz=86,slow=23,SNR=7.3									
DBIC	**Dimbokro**	**75.66**	**266**	P		**P**		**18 35 20.4**	**-0.1**	
	comp=Z,8.3nm,0.7s,mb4.8,baz=48,slow=6.8,SNR=12									
DBIC				LR	LR			19 14 06.6		
	comp=Z,80nm,18.1s,MS4.1,baz=217,slow=40									
DBIC	**Dimbokro**	**75.66**	**266**	P		**P**		**18 35 20.4**	**-0.1**	
DBIC				pmax	pmax					
	comp=Z,8.0nm,0.7s									
DBIC				MLR	MLR					
	comp=Z,80nm,18.1s									
DBIC	**Dimbokro**	**75.66**	**266**	*e*P		**P**		**18 35 20.2**	**-0.3**	
	comp=Z,17nm,1.1s,mb4.9									
DBIC				*e*pP		pP		18 35 25.5	-1.1	
KIC	**Kosan Boka**	**75.77**	**266**	*e*P		**P**		**18 35 21.0**	**-0.1**	
	comp=Z,139nm,1.2s,mb5.8									
TIC	**Toumodi**	**75.80**	**266**	*e*P		**P**		**18 35 21.1**	**-0.2**	
	comp=Z,156nm,1.3s,mb5.8									
LIC	**Lamto**	**76.08**	**266**⇑	*i*P		**P**		**18 35 22.6**	**-0.3**	
	comp=Z,27nm,0.9s,mb4.9									
LIC	**Lamto**	**76.08**	**266**	*e*P		**P**		**18 35 22.5**	**-0.4**	
	comp=Z,39nm,0.9s,mb5.3									
LIC	**Lamto**	**76.08**	**266**⇑	*i*P		**P**		**18 35 22.6**	**-0.3**	
	comp=Z,13nm,0.9s,mb4.9									
YKA	**Yellowknife Ar**	**76.81**	**3**	P		**P**		**18 35 25.4**	**-0.8**	
	comp=Z,5.9nm,0.5s,mb4.8,baz=351,slow=6.0,SNR=180									
YKA				pP		pP		18 35 30.7	-1.6	
	comp=Z,15nm,0.7s,baz=355,slow=6.1,SNR=42									
YKA	**Yellowknife Ar**	**76.81**	**3**	*i*P		**P**		**18 35 25.3**	**-0.9**	
YKA				pmax	pmax					
	comp=Z,6.0nm,0.5s									
YKA	**Yellowknife Ar**	**76.81**	**3**	P		**P**		**18 35 25.4**	**-0.8**	
YKA				pP		pP		18 35 30.7	-1.6	
TSUM	**Tsumeb**	**78.20**	**232**	*e*P		**P**		**18 35 35.5**	**+0.9**	
	comp=Z,2.8nm,0.5s,mb4.5									
TSUM				*e*pP		pP		18 35 40.4	-0.2	
SCHQ	**Schefferville**	**78.31**	**337**	P		**P**		**18 35 34.3**	**-0.5**	
	comp=Z,3.1nm,0.6s,mb4.4,baz=48,slow=4.5,SNR=8.8									
SCHQ				pP		pP		18 35 39.7	-1.1	
	comp=Z,4.5nm,0.6s,baz=52,slow=7.8,SNR=5.3									
SCHQ				LR	LR			19 09 34.6		
	comp=Z,300nm,18.1s,MS4.7,baz=30,slow=35									
SCHQ	**Schefferville**	**78.31**	**337**	P		**P**		**18 35 34.3**	**-0.5**	
SCHQ				pP		pP		18 35 39.7	-1.1	
SCHQ				LR		LR		19 09 34.6		
DLBC	**Dease Lake**	**79.33**	**12**	P		**P**		**18 35 39.5**	**-0.9**	
	comp=Z,3.7nm,0.7s,mb4.4,baz=1.4,slow=6.8,SNR=12									
DLBC				pP		pP		18 35 45.6	-0.7	
	comp=Z,7.0nm,0.7s,baz=324,slow=6.8,SNR=11									
BBTS	**Babate**	**79.39**	**280**	P		**P**		**18 35 42.0**	**+0.6**	
	comp=Z,4.6nm,0.3s,mb4.8,baz=76,slow=4.8,SNR=3.8									
BOSA	**Boshof**	**81.57**	**220**	P		**P**		**18 35 53.0**	**+0.4**	
	comp=Z,3.5nm,0.8s,mb4.4,baz=38,slow=6.3,SNR=8.0									
BOSA				LR	LR			19 16 14.8		
	comp=Z,84nm,18.1s,MS4.1,baz=166,slow=39									
BOSA	**Boshof**	**81.57**	**220**	P		**P**		**18 35 53.0**	**+0.4**	
BOSA				LR	LR			19 16 14.8		
WRA	**Warramunga Arr**	**83.76**	**123**	P		**P**		**18 36 04.2**	**0.0**	
	comp=Z,2.3nm,0.7s,mb4.4,baz=328,slow=5.0,SNR=31									
WRA				pP		pP		18 36 10.4	+0.1	
	comp=Z,2.9nm,0.8s,baz=328,slow=4.4,SNR=8.4									
WRA				PKKPbc		PKKPbc		18 54 20.5	+0.5	
	comp=Z,0.6nm,0.5s,baz=135,slow=2.6,SNR=18									
WRA				LR	LR			19 17 26.5		
	comp=Z,55nm,18.2s,MS4.0,baz=235,slow=39									
WRA	**Warramunga Arr**	**83.76**	**123**	P		**P**		**18 36 04.2**	**0.0**	
WRA				*PP		pP		18 36 10.4	+0.1	
FFC	**Flin Flon**	**84.59**	**356**	P		**P**		**18 36 07.5**	**-0.5**	
	comp=Z,71nm,1.0s,mb5.8,SNR=6.5									
FFC	**Flin Flon**	**84.59**	**356**	*e*P		**P**		**18 36 07.2**	**-0.8**	
FFC				*e**PP		pP		18 36 12.5	-1.6	
FFC				pmax	pmax					
	comp=Z,11nm,0.9s,mb5.0									
FFC	**Flin Flon**	**84.59**	**356**	*e*P		**P**		**18 36 07.2**	**-0.9**	
	comp=Z,11nm,0.9s,mb5.0									
FFC				*e*pP		pP		18 36 12.4	-1.6	
ASAR	**Alice Springs**	**86.23**	**126**	P		**P**		**18 36 16.2**	**-0.3**	
	comp=Z,5.1nm,0.7s,mb4.9,baz=315,slow=4.9,SNR=70									
ASAR				PKKPbc		PKKPbc		18 54 15.4	+1.1	
	comp=Z,0.3nm,0.6s,baz=135,slow=1.9,SNR=4.1									
ULM	**Lac du Bonnet**	**88.58**	**352**	P		**P**		**18 36 25.6**	**-2.0**	
	comp=Z,1.1nm,0.5s,mb4.5,baz=56,slow=7.3,SNR=2.2									
ULM				LR		LR		19 21 17.3		
	comp=Z,251nm,19.1s,MS4.7,baz=41,slow=39									
SADO	**Sadowa**	**90.83**	**340**	LR		LR		19 16 58.0		
	comp=Z,142nm,18.9s,MS4.4,baz=69,slow=35									
PDAR	**Pinedale Array**	**96.69**	**1**	P		**P**		**18 37 05.0**	**-0.2**	
	comp=Z,0.6nm,0.6s,mb4.2,baz=63,slow=3.0,SNR=5.9									
PDAR				LR		LR		19 26 06.4		
	comp=Z,137nm,18.5s,MS4.5,baz=183,slow=39									
STKA	**Stephens Creek**	**96.84**	**127**	P		**P**		**18 37 05.3**	**-0.6**	
	comp=Z,1.1nm,0.6s,mb4.4,baz=195,slow=6.4,SNR=3.5									
STKA				LR		LR		19 23 44.6		
	comp=Z,70nm,19.2s,MS4.2,baz=270,slow=37									
CPUP	**Villa Florida**	**135.89**	**273**	PKP		PKPdf		18 42 55.5	-0.3	
	comp=Z,2.1nm,0.6s,baz=37,slow=2.1,SNR=13									
CPUP				pPKP		pPKPdf		18 43 00.9	-1.2	
	comp=Z,2.5nm,0.7s,baz=17,slow=3.1,SNR=5.0									
TRQA	**Tornquist**	**144.61**	**259**	*e*PKP		PKPdf		18 43 09.4	-1.8	
PLCA	**Paso Flores**	**151.73**	**258**	PKPbc		PKPbc		18 43 29.8	+0.6	
	comp=Z,6.3nm,1.0s,baz=128,slow=2.4,SNR=8.9									
PLCA	**Paso Flores**	**151.73**	**258**	PKIKP		PKPbc		18 43 29.8	+0.6	
PLCA				pmax	pmax					
	comp=Z,6.0nm,1.0s									

*IDC **31** 18:31:12.5±2.0, 4089N×7203E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, Error ellipse: s-maj=51.1km s-min=25.5km az=171.0*
*NEIC **31** 18:31:14.2±1.5, 4080N×7191E, h10km, Error ellipse: s-maj=37.6km s-min=11.7km az=162.0*
*ISCJB **31** 18:31:16.2±0.9, 4080N±009×7179E±007, h33km, mb3.7/7, Error ellipse: s-maj=12.9km s-min=7.0km az=170.2*

ISC 31 18:31:18.2±0.9, 4085N±009×7185E±007, h35km, n21, σ0s96/21, mb3.7/7, 3C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.89**	**47**	P	**Pn**	**18 31 47.1**	**-0.9**
	SNR=50						
EKS2	**Erkin-Say**	**2.32**	**38**	P	**Pn**	**18 31 52.9**	**-1.0**
	SNR=15						
EKS2	**Erkin-Say**	**2.32**	**38**	*e*P	**Pn**	**18 31 52.8**	**-1.0**
UCH	**Uchtor**	**2.43**	**55**	P	**Sn**	**18 32 26.6**	**+2.7**
	SNR=7.3						
KK31	**Karatay Array**	**2.47**	**337**	Pn	**Pn**	**18 31 55.7**	**-0.2**
	20nm,0.2s,baz=154,slow=16,SNR=82						
KK31				⇑Sn	**Sn**	**18 32 24.9**	**+0.2**
	410nm,0.5s,baz=148,slow=25						
AAK	**Ala-Archa**	**2.67**	**47**	P	**Pn**	**18 31 58.5**	**-0.1**
	SNR=13						
KZA	**Kyzart**	**2.84**	**63**	P	**Pn**	**18 32 01.9**	**+0.9**
	SNR=22						
KBK	**Karagaybulak**	**2.94**	**51**	P	**Pn**	**18 32 02.8**	**+0.3**
	SNR=15						
CHMS	**Chumysh**	**3.05**	**44**	P	**Pn**	**18 32 03.5**	**-0.5**
	SNR=5.7						
TKM2	**Tokmak 2**	**3.48**	**52**	⇑Pn	**Pn**	**18 32 14.5**	**+4.7**
	26nm,0.6s						
TKM2				⇑Sn	**Sn**	**18 32 55.2**	**+5.3**
	86nm,0.6s						
TKM2	**Tokmak 2**	**3.48**	**52**	P	**Pn**	**18 32 09.6**	**-0.2**
	SNR=11						
TKM2	**Tokmak 2**	**3.48**	**52**	*e*P	**Pn**	**18 32 09.7**	**-0.2**
KURK	**Kurchatov**	**10.94**	**23**	Lg		18 36 47.3	
	0.3nm,0.3s,baz=254,slow=21,SNR=4.6						
BVAR	**Borovoye Array**	**12.22**	**356**	Lg		18 37 36.2	
	0.5nm,0.3s,baz=146,slow=21,SNR=3.4						
SONM	**Songino Array**	**25.52**	**62**	P	**P**	**18 36 41.6**	**-1.6**
	0.4nm,0.8s,mb3.0,baz=265,slow=8.5,SNR=3.5						
BRTR	**Keskin Array B**	**29.02**	**280**	P	**P**	**18 37 16.5**	**+1.7**
	0.9nm,0.8s,mb3.6,baz=72,slow=7.3,SNR=4.4						
ARCES	**ARCESS Array B**	**37.43**	**335**	P	**P**	**18 38 26.9**	**-0.7**
	1.6nm,0.5s,mb4.2,baz=110,slow=8.2,SNR=18						
HFS	**Hagfors**	**40.15**	**319**	P	**P**	**18 38 49.6**	**-0.8**
	1.2nm,0.5s,mb3.9,baz=98,slow=11,SNR=5.4						
GERES	**GERESS Array B**	**41.10**	**301**	P	**P**	**18 38 59.5**	**+1.1**
	0.5nm,0.4s,mb3.5,baz=66,slow=7.8,SNR=11						
DAVOX	**Davos/Dischmat**	**44.09**	**299**	P	**P**	**18 39 22.7**	**0.0**
	2.1nm,0.4s,mb4.2,baz=90,slow=3.0,SNR=8.2						
TORD	**Torodi Ar. Bea**	**66.54**	**267**	P	**P**	**18 42 04.8**	**0.0**
	0.3nm,0.5s,mb3.6,baz=51,slow=5.3,SNR=6.3						
TORD				pP	pP	18 42 10.2	-5.4
	0.5nm,0.5s,baz=50,slow=5.6,SNR=4.7						

*NEIC **31** 18:33:32.7, 1000N×6223W, h3km, MD3.2(TRN), After TRN.*
*TRN **31** 18:33:39.8, 1037N×6221W, h3km, MD3.2*

FUNV 31 18:33:37.2, 1040N×6234W, h5km, MW2.9, 3C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.28**	**25**⇑	*e*P	Pg	18 33 42.8	+0.2
GUIV				*e*S	Sg	18 33 46.8	+0.6
GUNV	**Guanoco**	**0.63**	**249**⇓	*e*P	Pg	18 33 48.3	-1.1
GUNV				*e*S	Sg	18 33 58.7	+1.1
TCE	**Chacachacare**	**0.65**	**63**⇑	*e*P	Pg	18 33 50.0	+0.3
TCE				*e*S	Sg	18 33 59.2	+0.9
TPP	**Pointe-a-Pierr**	**0.88**	**95**	*e*P	Pg	18 33 55.1	+1.0
CRUV	**Carupano**	**0.92**	**288**	*e*P	Pg	18 33 52.7	-2.2
CRUV				*e*S	Sg	18 34 05.8	-1.0
TRN	**Trinidad (W)**	**0.96**	**75**	*e*P	Pg	18 33 55.3	-0.3
TRN				*e*S	Sg	18 34 07.9	-0.1
ITEV	**Isla Los Testi**	**1.23**	**321**⇑	*e*P	Pg	18 33 59.4	-1.4
ITEV				*e*S	Sg	18 34 16.8	0.0
TBH	**Brigand Hill**	**1.26**	**86**	*e*P	Pg	18 34 01.9	+0.5
ORIV	**Oritupano**	**1.69**	**219**	*e*P	Pn	18 34 07.3	-0.1
ORIV				*e*S	Sn	18 34 29.0	-0.3
TPR	**Prospect**	**1.73**	**63**	*e*P	Pn	18 34 09.2	+1.3
GRW	**Mount Saint Ca**	**1.88**	**21**	*e*P	Pn	18 34 13.5	+3.5
GRW				*e*S	Sn	18 34 37.0	+2.9
GRW	**Mount Saint Ca**	**1.88**	**21**	*e*P	Pn	18 34 15.0	+5.0
GRW				*e*S	Sn	18 34 37.0	+2.9
PCRV	**Puerto La Cruz**	**2.27**	**265**	*e*P	Pn	18 34 14.2	-1.1
PCRV				*e*S	Sn	18 34 41.5	-2.1
CUPV	**Cœpira**	**3.41**	**265**	*e*P	Pn	18 34 30.6	-0.4
CAOV	**Caicara del Or**	**4.98**	**233**	*e*P	Pn	18 34 50.7	-1.9
BAUV	**El Baul**	**5.80**	**256**	*e*P	Pn	18 35 02.4	-1.5

IDC 31 18:35:10.8±2.0, 2267S×17975W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/16, mbtmp4.0/4, Error ellipse: s-maj=158.5km s-min=31.7km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.41**	**247**	P	P	18 42 07.7	-0.8
	1.0nm,0.5s,baz=108,slow=13,SNR=5.9						
ASAR	**Alice Springs**	**42.47**	**259**	P	P	18 43 07.7	-0.2
	0.7nm,0.3s,baz=94,slow=6.7,SNR=44						
WRA	**Warramunga Arr**	**42.73**	**265**	P	P	18 43 10.7	+0.6
	2.1nm,0.3s,baz=97,slow=8.3,SNR=120						
TXAR	**Lajitas Array**	**89.59**	**58**	P	P	18 48 10.8	+0.2
	0.1nm,0.5s,baz=212,slow=4.4,SNR=5.3						

*LDG **31** 19:26:21.0±0.2, 4095N×7219E, h10km, Mb4.7/33, Ms3.7/7, Error ellipse: s-maj=20.6km s-min=4.7km az=42.0*
*NNC **31** 19:26:22.5±3.4, 4054N×7147E, h74km±100km, mb4.5, mpv5.2, Error ellipse: s-maj=37.0km s-min=12.4km az=6.0*
*ISCJB **31** 19:26:24.1±0.1, 4093N±002×7187E±002, h17km, mb4.6/110, MS4.0/30, Error ellipse: s-maj=3.2km s-min=2.4km az=13.8*
*IDC **31** 19:26:25.2±0.4, 4100N×7198E, h16km±2km, mb4.3/24, mb1 4.4/29, mb1mx4.4/30, mbtmp4.3/29, ML4.2/5, MS3.8/13, Ms1 3.8/13, ms1mx3.5/42, Error ellipse: s-maj=8.9km s-min=8.4km az=9.0*
*MOS **31** 19:26:26.5±1.0, 4107N×7194E, h33km, mb4.8/57, MS4.0/15, Error ellipse: s-maj=6.5km s-min=4.5km az=126.5*
*BJI **31** 19:26:26.3, 4127N×72.14E, h16km, mB5.0, mb4.5, ML4.8, Ms4.6, Msz4.3*
*NEIC **31** 19:26:26.2±0.2, 4112N×7195E, mb4.7/56, MS4.1/3, Error ellipse: s-maj=5.5km s-min=3.8km az=173.0*

NEIC Felt at Tashkent.
*SZGRF **31** 19:26:30.5, 4052N×7137E, h20km, mb4.5, Tajikistan*

ISC 31 19:26:26.1±0.1, 4096N±002×7190E±002, h18km, h18km±.6km; pP-P, n356, σ1s15/381, mb4.6/110, MS4.0/30, 39C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.78**	**49**	P	**Pn**	**19 26 54.9**	**-1.0**
	SNR=574						
EKS2	**Erkin-Say**	**2.20**	**39**	P	**Pn**	**19 27 01.9**	**+0.2**
	SNR=582						
EKS2	**Erkin-Say**	**2.20**	**39**⇓	*e*Pn	**Pn**	**19 27 01.7**	**0.0**
UCH	**Uchtor**	**2.33**	**56**	P	**Pn**	**19 27 05.0**	**+1.6**
	SNR=210						
UCH	**Uchtor**	**2.33**	**56**	*e*Pn	**Pn**	**19 27 05.0**	**+1.5**
KK31	**Karatay Array**	**2.38**	**335**	⇑Pn	**Pn**	**19 27 04.8**	**+0.7**
	385nm,0.4s,baz=149,slow=15						
KK31				⇓Sn	**Sn**	**19 27 34.3**	**+1.5**
	1µm,0.3s,baz=166,slow=25,SNR=18						
KK31	**Karatay Array**	**2.38**	**335**	PN	**Pn**	**19 27 04.4**	**+0.3**
KK31						19 27 34.2	
KK31				pmax	pmax		
	comp=Z,367nm,0.2s						
KK31				smax			
	comp=N,1µm,0.2s						
AAK	**Ala-Archa**	**2.56**	**48***c*	*i*PN	**Pn**	**19 27 07.5**	**+0.9**
AAK				pmax	pmax		
	comp=Z,316nm,1.3s						
AAK	**Ala-Archa**	**2.56**	**48**	P	**Pn**	**19 27 07.3**	**+0.7**
	SNR=441						
AAK	**Ala-Archa**	**2.56**	**48**	*e*Pn	**Pn**	**19 27 07.4**	**+0.8**
KZA	**Kyzart**	**2.75**	**65**	P	**Pn**	**19 27 11.1**	**+1.8**
	SNR=752						
FRU	**Bishkek**	**2.76**	**46**⇑	*i*PN	**Pn**	**19 27 11.0**	**+1.7**
FRU				*i* S	**Sn**	**19 27 48.0**	**+5.9**
FRU				pmax	pmax		
	comp=Z,4µm,2.0s						
FRU				smax			
	comp=N,10µm,3.0s						
KBK	**Karagaybulak**	**2.84**	**52**	P	**Pn**	**19 27 12.1**	**+1.7**
	SNR=296						
CHMS	**Chumysh**	**2.94**	**45**	P	**Pn**	**19 27 12.1**	**+0.3**
	SNR=185						
USP	**Ospenovka**	**3.01**	**39**	P	**Pn**	**19 27 13.0**	**+0.3**
	SNR=315						
TKM2	**Tokmak 2**	**3.38**	**53**	⇑Pn	**Pn**	**19 27 18.8**	**+0.9**
TKM2	comp=N,980nm,0.8s			⇑Sn	**Sn**	**19 28 06.2**	**+8.7**
	comp=N,2µm,0.7s						
TKM2	**Tokmak 2**	**3.38**	**53**	P	**Pn**	**19 27 18.9**	**+1.0**
	SNR=125						
TKM2	**Tokmak 2**	**3.38**	**53**	*e*Pn	**Pn**	**19 27 18.8**	**+0.9**
ULHL	**Ulahol**	**3.50**	**67**	P	**Pn**	**19 27 21.4**	**+1.9**
	SNR=7.5						
KNDC	**Almaty**	**4.39**	**57**	⇑Pn	**Pn**	**19 27 33.4**	**+1.6**
	comp=N,68nm,0.3s						
KNDC				⇓Sn	**Sn**	**19 28 28.6**	**+6.2**
	comp=N,4µm,1.1s						
AAA	**Alma-Ata**	**4.41**	**57**	*e*PN	**Pb**	**19 27 42.9**	**0.0**
AAA				*e*S	**Sb**	**19 28 38.3**	**+2.7**
AAA				pmax	pmax		
	comp=Z,1µm,1.2s						
AAA				smax			
	comp=E,2µm,1.1s						
KBL	**Kabul**	**6.80**	**200**	*e*PN	**Pn**	**19 28 09.6**	**+4.7**
KBL				pmax	pmax		
	comp=Z,81nm,0.5s						
KBL	**Kabul**	**6.80**	**200**	*e*Pn	**Pn**	**19 28 09.6**	**+4.7**
	comp=Z,81nm,0.5s						
**

AKTK LR LR 19 35 10.2
AKTO Aktyubinsk 13.54 319 ⇓P Pn 19 29 34.7 -2.4
comp=Z,2.9nm,0.7s
AKTO Aktyubinsk 13.54 319 Pn Pn 19 29 34.9 -2.2
comp=Z,2.9nm,0.3s,baz=127,slow=13,SNR=42
AKTO Sn Sn **19 31 60.0 -6.9**
comp=Z,0.8nm,0.3s,baz=177,slow=22,SNR=2.8
AKTO LR LR 19 35 10.2
comp=Z,618nm,19.6s,baz=134,slow=39
AKTO Aktyubinsk 13.54 319 P Pn 19 29 34.9 -2.2
AKTO 19 32 00.0
AGRA Agra 14.58 158 eP Pn 19 29 52.8 +1.4
AJM Ajmer 14.62 170 eP Pn 19 29 51.9 -0.1
AJM *e*P 19 29 54.0
AJM AMb AMB 19 30 05.5
comp=Z,22nm,1.1s
AJM *i* x x 19 32 26.0
ZAA0 Zalesovo Array 15.62 29 eP Pn 19 30 03.1 -1.9
ZALV Zalesovo Beam 15.62 29 Pn Pn 19 30 03.2 -1.9
comp=Z,1.8nm,0.3s,baz=226,slow=14,SNR=23
ZALV Sn **Sn 19 33 09.4 +12**
comp=Z,1.0nm,0.3s,baz=228,slow=20,SNR=7.2
ZALV Lg 19 34 43.5
baz=207,slow=23,SNR=4.7
ZALV LR LR 19 36 32.5
comp=Z,238nm,19.9s,baz=26,slow=39
ZALV Zalesovo Beam 15.62 29 Pn Pn 19 30 03.2 -1.9
ZALV Sn **Sn 19 33 09.4 +12**
ZALV Lg 19 34 43.5
ZALV LR LR 19 36 32.5
NVS Novosibirsk 15.80 25 eP Pn 19 30 08.8 +1.4
NVS *e*S **Sn 19 33 01.7 -0.1**
NVS pmax pmax
comp=N,45nm,1.3s
NVS pmax pmax
comp=E,21nm,1.3s
NVS pmax pmax
comp=Z,43nm,1.3s
NVS smax
comp=N,162nm,2.0s
NVS smax
comp=E,34nm,1.4s
DANN Dangsing 15.90 139 eP Pn 19 30 05.2 -3.7
KOLN Koldanda 16.30 140 eP Pn 19 30 10.6 -3.5
comp=E,39nm,0.4s
GKN Gorkha 16.63 137 eP Pn 19 30 14.8 -3.4
comp=E,82nm,0.4s
KKN Kakani 17.14 136 eP Pn 19 30 21.1 -3.5
comp=E,56nm,0.5s
DMN Daman 17.19 137 eP Pn 19 30 22.4 -2.9
comp=E,36nm,0.6s
GUN Gumba 17.36 134 eP Pn 19 30 24.4 -3.0
comp=E,36nm,0.4s
PKIN Phulchoki 17.37 136 eP Pn 19 30 24.2 -3.3
PKI Pulchoki 17.38 136 eP Pn 19 30 24.6 -3.0
SVE Sverdlovsk 17.48 339⇓ eP Pn 19 30 29.7 +1.1
SVE pmax pmax
comp=Z,21nm,1.2s
SVE MLR MLR
comp=Z,2μm,10.0s
JIRN Jiri 17.73 134 eP Pn 19 30 29.0 -2.9
comp=Z,64nm,0.4s
ARU Arti 17.75 335 *d* iP **Pn 19 30 29.6 -2.4**
ARU eS **Sn 19 33 45.3 -3.9**
ARU pmax pmax
comp=Z,57nm,1.7s
ARU MLR MLR
comp=Z,806nm,12.0s
ARU Arti 17.75 335 eP Pn 19 30 28.5 -3.5
comp=Z,31nm,0.9s
BHJ Bhuj 17.76 187 eP Pn 19 30 31.3 -1.1
BHJ AMb AMB 19 30 46.2
comp=Z,95nm,1.6s
MAK Makhachkala 18.24 284 eP Pn 19 30 34.9 -3.2
MAK S **Sn 19 33 55.6 -5.6**
MAK pmax pmax
comp=Z,499nm,1.5s
MAK MLR MLR
comp=Z,1μm,11.0s
BHPL Bhopal 18.27 164 eP Pn 19 30 37.6 -1.1
BHPL AMb AMB 19 30 46.1
comp=Z,24nm,0.9s
RAMN Ramite 18.51 134 eP Pn 19 30 37.8 -3.8
comp=Z,55nm,0.6s
TAPN Taplejung 18.82 131 eP Pn 19 30 41.4 -3.8
ODAN Odare 19.01 133 eP Pn 19 30 43.9 -3.8
comp=Z,30nm,0.5s
LSA Lhasa 19.27 120 P Pn 19 30 52.0 +1.3
LSA Lhasa 19.27 120 eP Pn 19 30 53.4 +2.7
LSA pmax pmax
comp=Z,19nm,1.1s
LSA Lhasa 19.27 120 eP Pn 19 30 53.4 +2.7
comp=Z,19nm,1.1s
DGRG David-gareji 19.94 280 P Pn 19 30 59.1 +0.5
MTA Mtatsminda 20.34 281 P P 19 31 01.3 0.0
GNI Garni 20.63 277 P P 19 31 06.6 +2.3
comp=Z,9.6nm,0.6s,baz=344,slow=7.3,SNR=13
GNI Garni 20.63 277 eP P 19 31 06.1 +1.7
GNI pmax pmax
comp=Z,30nm,0.8s
GNI Garni 20.63 277 eP P 19 31 06.1 +1.8
comp=Z,30nm,0.8s
AKL Akola 20.66 166 eP P 19 31 06.0 +1.1
AKL AMb AMB 19 31 15.0
comp=Z,63nm,0.7s
NGP Nagpur 20.66 161 *ex* x x 19 31 01.2
NGP *ex* x 19 31 07.3
comp=Z,34nm,1.0s
NGP *ex* x 19 34 42.0
BOK Bokaro 20.75 141 eP P 19 31 05.4 -0.4
BOK AMb AMB 19 31 12.8
comp=Z,40nm,0.1s
GOR Gori 20.82 282 P P 19 31 07.7 +1.2
ONI Oni 21.24 284 P P 19 31 12.8 +1.8
GTA Gaotai 21.35 85 P P 19 31 12.8 +0.6
GTA AP 19 31 17.0
GTA XP sP 19 31 20.3 +0.5
GTA S **S 19 35 06.5 -1.9**
GTA XS sS 19 35 13.5 -3.2
GTA AMB AMB
comp=Z,11nm,1.2s,mb4.1
GTA AMB AMB
comp=Z,199nm,5.0s
GTA LR LR
comp=N,565nm,12.8s,MS4.5
GTA LR LR
comp=E,936nm,11.9s,MS4.5
GTA LR LR
comp=Z,1μm,13.4s,MS4.5
KIV Kislovodsk 21.71 288 eP P 19 31 15.1 -0.9
KIV pmax pmax
comp=Z,22nm,0.6s,mb4.8
KIV Kislovodsk 21.71 288 eP P 19 31 15.1 -0.9
comp=Z,22nm,0.6s,mb4.8
SHL Shillong 22.61 127 eP P 19 31 26.8 +1.0
SHL *ex* x 19 35 31.5
MOY Mondy 22.62 52 eP P 19 31 26.7 +1.1
MOY pmax pmax
comp=Z,37nm,2.3s,mb4.4
UMR Umm Al-Rimmam 22.72 248 eP P 19 31 28.6 +1.7
baz=247
UMR AMb AMB 19 31 34.4
comp=Z,63nm,0.7s,mb5.2,baz=247
MIB Mutribah 22.84 249 eP P 19 31 29.2 +1.1
baz=248
MIB AMb AMB 19 31 36.9
comp=Z,66nm,0.6s,mb5.2,baz=248
RDF Al-Radifah 23.21 247 eP P 19 31 33.3 +1.2
baz=246
RDF AMb AMB 19 31 56.5
comp=Z,90nm,1.3s,mb5.0,baz=246
NAY Al-Naaiem 23.23 248 eP P 19 31 33.2 +0.9
baz=247
NAY AMb AMB 19 31 56.8
comp=Z,22nm,1.1s,mb4.5,baz=247
ZAK Zakamensk 23.71 56⇑ *i* P **P 19 31 35.4 -1.4**
ZAK pmax pmax
comp=Z,14nm,1.3s,mb4.2
HYB Hyderabad 24.16 164 *i* P **P 19 31 41.5 +0.4**
HYB Hyderabad 24.16 164 eP P 19 31 41.5 +0.4
HYB eS **S 19 36 08.0 +10**
IMP Imphal 24.45 125 eP P 19 31 45.0 +1.2
LZH Lanzhou 25.38 91 eP P 19 31 52.5 +0.3
LZH AP pP 19 32 01.8 +4.1
LZH XP sP 19 32 06.0 +6.0
LZH *e*PP 19 32 31.8
LZH *e*S **S 19 36 14.5 -3.3**
LZH XS sS 19 36 30.3 +3.4
LZH *e*SS 19 37 17.3
LZH AMB AMB
comp=Z,21nm,1.0s,mb4.6
LZH AMB AMB
comp=Z,93nm,4.3s
LZH LR LR
comp=N,998nm,12.3s
LZH LR LR
comp=Z,1μm,13.5s,MS4.7
ANN Anapa 25.43 290 eP P 19 31 43.5 -9.1
ANN *e**PP pP 19 31 51.0 -7.1
ANN pmax pmax
comp=Z,31nm,1.0s,mb4.8
ANN MLR MLR
comp=N,337nm,14.0s,MS4.2
ANN MLR MLR
comp=E,321nm,14.0s,MS4.2
ANN MLR MLR
comp=Z,370nm,14.0s,MS4.0
SONM Songino Array 25.43 63 P P 19 31 52.5 -0.1
comp=Z,1.3nm,0.4s,mb3.8,baz=267,slow=10.0,SNR=17
MALT Malatya 25.82 275 eP P 19 31 58.0 +1.8
MALT pmax pmax
comp=Z,6.0nm,0.7s,mb4.2
MALT Malatya 25.82 275 eP P 19 31 58.0 +1.8
comp=Z,5.9nm,0.7s,mb4.2
ULN Ulaanbaatar 25.87 63 eP P 19 31 56.2 -0.4
ULN pmax pmax
comp=Z,15nm,1.2s,mb4.4
ULN Ulaanbaatar 25.87 63 eP P 19 31 56.2 -0.3
comp=Z,15nm,1.2s,mb4.4
OBN Obninsk 27.19 313⇑ eP P 19 32 06.8 -1.6
OBN *e* 19 32 48.4
OBN *e*S **S 19 36 49.2 +3.2**
OBN pmax pmax
comp=Z,27nm,2.5s,mb4.3
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.0
CD2 Chengdu 27.54 101 P P 19 32 14.8 +3.0
CD2 AP pP 19 32 19.8 +2.5
CD2 XP sP 19 32 21.5 +1.9
CD2 PP 19 33 03.0
CD2 S **S 19 36 54.3 +2.3**
CD2 XS sS 19 37 01.5 +0.3
CD2 SS 19 38 12.8
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,150nm,4.7s
CD2 LR LR
comp=N,560nm,7.1s
CD2 LR LR
comp=Z,540nm,12.5s,MS4.3
KLMR Klimovskoe 28.05 326 P P 19 32 14.4 -1.6
KLMR pmax pmax
comp=Z,41nm,2.0s,mb4.7
BR131 Keskin Array S 29.04 280 eP P 19 32 26.3 +1.3
comp=Z,4.9nm,0.6s,mb4.4
BRTR Keskin Array B 29.04 280 P P 19 32 26.4 +1.4
comp=Z,6.5nm,0.7s,mb4.5,baz=93,slow=8.5,SNR=35
BRTR Keskin Array B 29.04 280 *i* P **P 19 32 26.3 +1.3**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
HHC Hu-ho-hao-te 29.80 77 eP P 19 32 33.8 +2.0
HHC AP pP 19 32 38.0 +0.7
HHC XP sP 19 32 40.8 +1.2
HHC PP PP 19 33 30.8 -8.2
HHC S **S 19 37 27.8 +0.4**
HHC XS sS 19 37 36.0 -0.6
HHC SS SS 19 39 02.8 -31
HHC PCS PcS 19 39 18.5 +0.4
HHC AMB AMB
comp=Z,8.0nm,0.7s,mb4.6
HHC AMB AMB
comp=Z,154nm,4.8s
HHC LR LR
comp=N,420nm,12.0s
HHC LR LR
comp=E,625nm,9.8s
HHC LR LR
comp=Z,474nm,14.2s,MS4.3
XAN Xi'an 30.01 91 P P 19 32 34.3 +0.6
XAN AP pP 19 32 38.8 -0.4
XAN PP PP 19 33 34.0 -7.4
XAN S **S 19 37 34.5 +3.8**
XAN SS SS 19 39 10.0 -28
XAN AMB AMB
comp=Z,4.0nm,0.7s,mb4.3
XAN LR LR
comp=N,72nm,16.2s,MS3.8
XAN LR LR
comp=E,151nm,17.8s,MS3.8
XAN LR LR
comp=Z,271nm,19.3s,MS3.9
KMI Kunming 30.10 112 P P 19 32 41.0 +6.5
KMI S **S 19 37 37.5 +5.2**
KMI LR LR
comp=N,302nm,10.6s,MS4.3
KMI LR LR
comp=E,287nm,12.7s,MS4.3
KMI LR LR
comp=Z,344nm,11.7s,MS4.2
AKASG Malin Array Be 30.90 303 P P 19 32 41.1 -0.2
comp=Z,2.3nm,0.4s,mb4.3,baz=81,slow=8.1,SNR=17
AKASG PcP PcP 19 35 37.2 -0.4
comp=Z,1.3nm,0.5s,baz=84,slow=2.1,SNR=4.0
AKASG pPcP 19 35 42.5
comp=Z,1.9nm,0.6s,baz=89,slow=2.9,SNR=5.9
AKASG Malin Array Be 30.90 303 P P 19 32 41.1 -0.3
AKASG 19 35 37.2
TLCR 31.48 292⇑ *i* P **P 19 32 47.0 +0.5**
BOD Bodaibo 31.53 43 *eP* **P 19 32 45.4 -1.4**
BOD *e* 19 43 14.4
BOD pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
GYA Guiyang 32.10 106 P P 19 32 55.8 +3.6
GYA AP pP 19 33 00.8 +3.0
GYA PP PP 19 34 02.5 -2.2
GYA PCP PcP 19 35 43.3 +2.1
GYA S **S 19 38 06.3 +2.7**
GYA SCP ScP 19 39 26.0 +2.2
GYA SS SS 19 40 01.3 -20
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,110nm,4.9s
GYA LR LR
comp=N,580nm,16.9s,MS4.4
GYA LR LR
comp=E,440nm,17.7s,MS4.4
GYA LR LR
comp=Z,460nm,17.5s,MS4.2
CMAR Chiang Mai Arr 32.25 126 P P 19 32 52.7 -0.8
comp=Z,0.3nm,0.4s,mb3.5,baz=313,slow=9.0,SNR=7.4
CMAR PcP PcP 19 35 42.2 +0.5
comp=Z,0.9nm,0.7s,baz=317,slow=4.0,SNR=5.8
CMAR pPcP 19 35 47.6
comp=Z,0.7nm,0.6s,baz=310,slow=3.6,SNR=7.7
CMAR Chiang Mai Arr 32.25 126 *i* P **P 19 32 53.5 0.0**
JOF Joensuu 32.45 326 *ep* **P 19 32 53.4 -1.4**
comp=Z,3.8nm,0.5s,mb4.5
PLOR Plostina 32.89 294⇓ *i* P **P 19 33 00.4 +1.5**
VSU Vasula 33.26 317 *i* P **P 19 33 01.3 -0.6**
BJI Beijing 33.41 77 P P 19 33 04.8 +1.3
BJI S **S 19 38 26.0 +2.3**
BJI AMB AMB
comp=Z,3.0nm,0.6s,mb4.4
BJI AMB AMB
comp=Z,197nm,4.4s
BJI LR LR
comp=N,334nm,15.8s,MS4.3
BJI LR LR
comp=E,379nm,17.2s,MS4.3
BJI LR LR
comp=Z,180nm,16.6s,MS3.9
MLR Muntele Rosu 33.43 293⇑ *i* P **P 19 33 05.5 +1.9**
BURAR Bucovina Array 33.65 297⇑ *i* P **P 19 33 06.1 +0.6**
BUR08 Bucovina Ar. S 33.66 297 *eP* **P 19 33 05.9 +0.3**
APA Apatity 33.85 335⇑ *eP* **P 19 33 07.0 0.0**
APA pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
APA MLR MLR
comp=Z,2μm,11.0s,MS5.0
VOIR 34.06 293⇑ *i* P **P 19 33 10.4 +1.3**
KAF Kangasniemi 34.36 323 *ep* **P 19 33 10.0 -1.5**
comp=Z,1.4nm,0.4s,mb4.2
KAF Kangasniemi 34.36 323 *eP* **P 19 33 10.0 -1.5**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
TRPA Tarpa 35.39 299⇓ *i* P **P 19 33 21.6 +1.1**
DRGR 35.46 296⇑ *i* P **P 19 33 22.1 +1.0**
CRVS Cervenica-Dubn 36.01 300 *eP* **P 19 33 21.1 -4.7**
CRVS pmax pmax
comp=Z,51nm,2.8s,mb5.0
CRVS Cervenica-Dubn 36.01 300 *eP* **P 19 33 21.1 -4.7**
comp=Z,51nm,2.8s,mb5.0
STHS Stebnicka Huta 36.09 301 *eP* **P 19 33 26.7 +0.2**
STHS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
STHS Stebnicka Huta 36.09 301 *eP* **P 19 33 26.7 +0.2**
comp=Z,1.8nm,0.6s,mb4.2
BZS Buzias 36.41 295⇑ *i* P **P 19 33 30.4 +1.1**
NIE Niedzica 36.69 301 *eP* **P 19 33 32.9 +1.2**
OJC Ojcow 36.94 302 *eP* **P 19 33 33.6 -0.1**
OJC *e*PcP PcP 19 35 56.7 +2.0
OJC *e*S **S 19 39 18.1 +0.4**
OJC *e*SS SS 19 41 53.5 -5.7
OJC L 19 51 59.4
comp=Z,0.3nm,16.4s
OJC Ojcow 36.94 302 *eP* **P 19 33 33.6 -0.1**
OJC *e* 19 35 56.7
OJC *e*S **S 19 39 18.1 +0.4**
OJC MLR MLR
comp=Z,300nm,16.4s,MS4.2
KEV Kevo 36.97 336 *ep* **P 19 33 32.5 -1.3**
comp=Z,3.7nm,0.5s,mb4.5
KEV Kevo 36.97 336 *eP* **P 19 33 32.5 -1.3**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
ARCES ARCESS Array B 37.34 335 P P 19 33 36.2 -0.7
comp=Z,11nm,0.4s,mb5.0,baz=111,slow=8.6,SNR=218
ARCES pP pP 19 33 41.5 -1.1
comp=Z,7.2nm,0.5s,baz=106,slow=9.5,SNR=9.3
ARCES LR LR 19 49 27.6
comp=Z,346nm,19.1s,MS4.2,baz=227,slow=37
ARCES ARCESS Array B 37.34 335 P P 19 33 36.2 -0.7
ARCES *PP pP 19 33 41.5 -1.1
ARCES ARCESS Array B 37.34 335 P P 19 33 36.2 -0.7
ARCES pP pP 19 33 41.5 -1.1
ARCES LR LR 19 49 27.6
VYHS Vyhne 37.78 300 *eP* **P 19 33 41.7 +0.8**
VYHS pmax pmax
comp=Z,6.0nm,1.5s,mb4.1
VYHS Vyhne 37.78 300 *eP* **P 19 33 41.7 +0.8**
comp=Z,6.4nm,1.5s,mb4.1
KTK1 Kautokeino 37.87 334 *eP* **P 19 33 40.7 -0.7**
KOLL Kolacno 38.05 300 *eP* **P 19 33 43.6 +0.4**
PKSM Moragy 38.33 296⇑ *i* P **P 19 33 46.5 +1.0**
NJ2 Nanjing 38.38 88 *eP* **P 19 33 50.5 +4.3**
NJ2 AMB AMB
comp=Z,40nm,0.7s,mb5.3
ZST Bratislava 38.97 300 *eP* **P 19 33 51.8 +0.8**
ZST pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
ZST Bratislava 38.97 300 *eP* **P 19 33 51.8 +0.8**
comp=Z,2.2nm,0.8s,mb3.9
CN2 Changchun 39.08 67 *eP* **P 19 33 53.8 +1.9**
DPC Dobruska-Polom 39.13 303 *eP* **P 19 33 53.1 +0.8**
UPC Upice 39.31 303 *eP* **P 19 33 54.1 +0.4**
TRO Tromso 39.52 334 *eP* **P 19 33 51.9 -3.4**
TRO AMb AMB 19 33 59.8
comp=Z,46nm,2.2s,mb4.8
CONA Conrad Observa 39.84 299⇑ *i* P **P 19 33 58.8 +0.6**
comp=Z,8.0nm,0.7s,mb4.6
CSNA Conrad Observa 39.84 299⇑ *i* P **P 19 33 58.7 +0.5**
comp=Z,7.1nm,0.6s,mb4.6
YAK Yakutsk 39.98 38 *eP* **P 19 33 56.7 -2.4**
YAK pmax pmax
comp=Z,20nm,1.0s,mb4.8
YAK pmax pmax
comp=E,18nm,1.7s
YAK Yakutsk 39.98 38 *eP* **P 19 33 57.2 -1.9**
comp=E,26nm,0.7s,mb5.1
YAK *ep*P pP 19 34 02.6 -2.2
PRU Pruhonice 40.32 303 *eP* **P 19 34 02.7 +0.6**
PRU *ep*P pP 19 34 07.3 -0.5
MOR8 Moi Rana 40.34 328 *eP* **P 19 34 00.8 -1.2**
MOR8 AMb AMB 19 34 04.5
comp=Z,46nm,3.1s
BRG Berggiesshubel 40.55 304 *eP* **P 19 34 04.5 +0.5**
SSE Sheshan 40.59 88 P P 19 34 05.0 +0.4
SSE S **S 19 40 15.3 +2.0**
SSE XS sS 19 40 26.3 +3.7
SSE AMB AMB
comp=Z,19nm,1.0s,mb4.7
SSE AMB AMB
comp=Z,324nm,5.2s
SSE LR LR
comp=N,65nm,12.5s,MS3.8
SSE LR LR
comp=E,59nm,12.5s,MS3.8
SSE LR LR
comp=Z,103nm,14.3s,MS3.8
CLL Collm 41.07 305 *i* P **P 19 34 08.3 0.0**
CLL pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
CLL Collm 41.07 305 *eP* **P 19 34 08.6 +0.3**
CLL Collm 41.07 305 *i* P **P 19 34 08.3 0.0**
comp=Z,7.0nm,0.6s,mb4.5
GEC2 GERESS Array S 41.07 301 *eP* **P 19 34 09.1 +0.8**
GEC2 *e**PP pP 19 34 14.2 +0.2
GEC2 pmax pmax
comp=Z,17nm,1.4s,mb4.5
GEC2 GERESS Array S 41.07 301 *eP* **P 19 34 09.1 +0.8**
comp=Z,17nm,1.4s,mb4.5
GEC2 *ep*P pP 19 34 14.2 +0.2
GERES GERESS Array B 41.07 301 P P 19 34 09.0 +0.7
comp=Z,4.8nm,0.4s,mb4.4,baz=64,slow=8.1,SNR=118
GERES pP pP 19 34 14.0 0.0
comp=Z,4.4nm,0.7s,baz=71,slow=7.4,SNR=16
GERES LR LR 19 54 12.7
comp=Z,148nm,18.6s,MS3.9,baz=293,slow=41
GERES GERESS Array B 41.07 301 P P 19 34 09.0 +0.7
GERES *PP pP 19 34 14.0 0.0
KHC Kasperske Hory 41.09 302⇑ *eP* **P 19 34 08.4 -0.1**
KHC Kasperske Hory 41.09 302 *eP* **P 19 34 09.0 +0.5**
KHC *ep*P pP 19 34 13.9 -0.3
NB2 NORSAR Subarra 41.33 320 P P 19 34 09.1 -1.2
comp=Z,2.2nm,0.5s,mb4.0,baz=92,slow=8.6
NOA NORSAR Array B 41.33 320 P P 19 34 09.5 -0.8
comp=Z,2.2nm,0.5s,mb4.0,baz=91,slow=8.2,SNR=16
NOA pP pP 19 34 14.3 -1.6
comp=Z,1.9nm,0.5s,baz=91,slow=8.3,SNR=6.1
NOA LR LR 19 51 57.7
comp=Z,252nm,20.1s,MS4.1,baz=90,slow=37
TIXI Tiksi 41.39 24 *d* iP **P 19 34 09.5 -1.2**
TIXI pmax pmax
comp=Z,30nm,1.3s,mb4.8
TIXI MLR MLR
comp=Z,200nm,23.0s,MS3.9
TIXI Tiksi 41.39 24 *eP* **P 19 34 08.9 -1.8**
comp=Z,15nm,0.6s,mb4.8
TIXI *ep*P pP 19 34 14.4 -2.0
NAO01 NORSAR Array S 41.49 320 *eP* **P 19 34 10.6 -1.0**
comp=Z,2.6nm,0.6s,mb4.0
WET Wettzell 41.54 302 *eP* **P 19 34 12.8 +0.6**
WET *e**PP pP 19 34 18.0 +0.1
WET pmax pmax
comp=Z,22nm,1.8s,mb4.5
WET Wettzell 41.54 302 *eP* **P 19 34 12.8 +0.6**
comp=Z,22nm,1.8s,mb4.5
WET *ep*P pP 19 34 18.0 +0.1
TANN Tannenbergstha 41.56 304 *eP* **P 19 34 12.8 +0.5**
comp=Z,2.0nm,0.6s,mb3.9
MDJ Mudanjiang 41.74 65 P P 19 34 13.5 -0.4
MDJ AP pP 19 34 16.5 -3.1
MDJ SCP ScP 19 40 01.0 +1.7
MDJ PCS PcS 19 40 02.5 +1.1
MDJ S **S 19 40 29.3 -0.7**
MDJ AMB AMB
comp=Z,7.0nm,2.4s,mb3.9
MDJ LR LR
comp=N,84nm,23.4s,MS3.6
MDJ LR LR
comp=E,28nm,20.9s,MS3.6
MDJ LR LR
comp=Z,130nm,18.4s,MS3.8

BSEG Bad Segeberg 42.29 309 *e*P **P** **19 34 18.4 +0.1**
GRA1 Grafenberg Arr 42.49 303 *e*P **P** **19 34 21.0 +1.1**
comp=Z,11nm,0.6s,mb4.7
GRA1 *e*pP pP 19 34 26.2 +0.6
GRF Grafenberg Arr 42.49 303 *e*P **P** **19 34 21.0 +1.1**
GRF *e**PP pP 19 34 26.2 +0.6
GRF pmax pmax
comp=Z,11nm,0.6s,mb4.7
GRF Grafenberg Arr 42.49 303 *e*P **P** **19 34 21.0 +1.1**
GRF *e**PP pP 19 34 26.2 +0.6
GRF pmax pmax
comp=Z,11nm,0.6s,mb4.7
GRF Grafenberg Arr 42.49 303 *e*P **P** **19 34 21.0 +1.1**
comp=Z,11nm,0.6s,mb4.7
GRF *e*pP pP 19 34 26.2 +0.6
CLZ Clausthal 42.59 306 *e*P **P** **19 34 21.8 +1.0**
NRDL Niedersach Rie 42.64 307 *e*P **P** **19 34 21.7 +0.6**
WTTA Wattenberg 42.78 299 *i*P **P** **19 34 22.5 +0.2**
comp=Z,9.6nm,0.5s,mb4.8,SNR=15
FUR Furstenfeldbru 42.79 301 *e*P **P** **19 34 23.5 +1.1**
FUR pmax pmax
comp=Z,12nm,0.7s,mb4.7
FUR Furstenfeldbru 42.79 301 *e*P **P** **19 34 23.5 +1.1**
comp=Z,12nm,0.7s,mb4.7
WATA Walderalm 42.80 300⇑*i*P **P** **19 34 21.8 -0.7**
comp=Z,5.1nm,0.5s,mb4.5,SNR=11
KSRS Korea Array 42.92 76 P **P** **19 34 22.2 -1.4**
comp=Z,2.7nm,1.0s,mb3.9,baz=289,slow=9.3,SNR=3.5
KSRS LR LR 19 55 16.9
comp=Z,137nm,18.3s,MS3.9,baz=102,slow=40
KSRS Korea Array 42.92 76 P **P** **19 34 22.2 -1.4**
KSRS pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
KSRS MLR MLR
comp=Z,137nm,18.3s,MS3.9
UBBA Unterbreizbach 43.02 305 *e*P **P** **19 34 24.7 +0.5**
MOTA Moosalm 43.11 300 *i*P **P** **19 34 24.9 -0.1**
comp=Z,4.9nm,0.6s,mb4.4,SNR=10.0
SPITS Spitsbergen Ar 43.33 346 P **P** **19 34 26.4 0.0**
comp=Z,2.0nm,0.4s,mb4.2,baz=353,slow=9.8,SNR=19
SPB4 Spitsbergen Ar 43.34 346 P **P** **19 34 26.3 -0.2**
DAVA Damuels 43.93 300⇑*i*P **P** **19 34 31.4 -0.2**
comp=Z,12nm,0.5s,mb4.9
IBBN Ibbenburen 44.09 307 *e*P **P** **19 34 33.2 +0.4**
comp=Z,5.0nm,0.7s,mb4.3
HABR Khabarovsk 44.35 58 P **P** **19 34 34.6 -0.4**
HABR *e**SP sP 19 34 42.2 -0.8
HABR *e* 19 36 17.0
HABR *e*PPP 19 36 53.5
HABR *e*S **S** **19 41 07.9 -0.3**
HABR *e**SS sS 19 41 18.6 +1.0
HABR *e*SS SS 19 44 28.5 +1.8
HABR *e*SSS 19 45 09.8
HABR MLR MLR
comp=Z,207nm,15.0s,MS4.2
VLC Villacollemand 44.49 295 *e*P **P** **19 34 37.1 +1.0**
comp=Z,13nm,0.6s,mb4.8
TUE Stuetta 44.50 299 *e*P **P** **19 34 35.6 -0.6**
comp=Z,6.3nm,0.7s,mb4.5
BFO Black Forest 44.66 302 *e*P **P** **19 34 37.6 +0.2**
PSI Prapat 45.13 140 LR LR 19 54 37.8
comp=Z,61nm,20.0s,MS3.5,baz=196,slow=37
CDF Champ du Feu 45.31 302⇑*i*P **P** **19 34 42.6 0.0**
comp=Z,6.2nm,0.6s,mb4.3
CDF Champ du Feu 45.31 302⇑*i*P **P** **19 34 42.6 0.0**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
CDF Champ du Feu 45.31 302⇑*i*P **P** **19 34 42.6 0.0**
comp=Z,3.1nm,0.6s,mb4.3
HINF Hinteralfeld 45.75 301 *e*P **P** **19 34 45.9 -0.2**
comp=Z,4.7nm,0.6s,mb4.3
HINF Hinteralfeld 45.75 301 *e*P **P** **19 34 45.9 -0.2**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HINF Hinteralfeld 45.75 301 *e*P **P** **19 34 45.9 -0.2**
comp=Z,2.3nm,0.6s,mb4.3
PGF Pioggiola 45.98 294 *e*P **P** **19 34 48.3 +0.3**
comp=Z,31nm,0.9s,mb4.9
PGF Pioggiola 45.98 294 *e*P **P** **19 34 48.3 +0.3**
PGF pmax pmax
comp=Z,16nm,0.9s,mb5.0
PGF Pioggiola 45.98 294 *e*P **P** **19 34 48.3 +0.3**
comp=Z,16nm,0.9s,mb4.9
HAU Haudompre 46.02 302 *e*P **P** **19 34 48.2 -0.1**
comp=Z,13nm,0.6s,mb4.8
HAU *e*MLR MLR
comp=Z,225nm,20.0s,MS3.8
HAU Haudompre 46.02 302 *e*P **P** **19 34 48.2 -0.1**
HAU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
HAU MLR MLR
comp=Z,220nm,20.0s,MS4.1
HAU Haudompre 46.02 302 *e*P **P** **19 34 48.2 -0.1**
comp=Z,6.5nm,0.6s,mb4.7
HAU LR LR
comp=Z,220nm,20.0s,MS4.1
SAOF Saorge 46.48 296 *e*P **P** **19 34 52.5 +0.6**
LPG La Plagne 46.52 298 *e*P **P** **19 34 53.2 +1.0**
comp=Z,20nm,0.5s,mb5.0
LPG La Plagne 46.52 298 *e*P **P** **19 34 53.2 +1.0**
LPG pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
LPG La Plagne 46.52 298 *e*P **P** **19 34 53.2 +1.0**
comp=Z,9.8nm,0.5s,mb5.0
LPL La Plagne 46.53 298 *e*P **P** **19 34 53.2 +0.9**
comp=Z,27nm,0.5s,mb5.2
LPL La Plagne 46.53 298 *e*P **P** **19 34 53.2 +0.9**
LPL pmax pmax
comp=Z,14nm,0.5s,mb5.2
LPL La Plagne 46.53 298 *e*P **P** **19 34 53.2 +0.9**
comp=Z,14nm,0.5s,mb5.1
RSL Roselend 46.55 299 *e*P **P** **19 34 52.3 -0.1**
SBF Sospel 46.60 296 *e*P **P** **19 34 53.4 +0.5**
comp=Z,114nm,1.0s,mb5.5
SBF Sospel 46.60 296 *e*P **P** **19 34 53.4 +0.5**
SBF pmax pmax
comp=Z,57nm,1.0s,mb5.5
SBF Sospel 46.60 296 *e*P **P** **19 34 53.4 +0.5**
comp=Z,57nm,1.0s,mb5.5
CABF La Chapelle 46.61 300 *e*P **P** **19 34 52.7 -0.2**
MEZF Maizieres J'vi 46.71 303 *e*P **P** **19 34 53.9 +0.3**
BNI Bardonecchia 46.72 298 *e*P **P** **19 34 53.7 0.0**
BNI *e**PP pP 19 34 59.1 -0.4
BNI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
BNI Bardonecchia 46.72 298 *e*P **P** **19 34 53.7 -0.1**
comp=Z,9.3nm,0.4s,mb5.1
BNI *e*pP pP 19 34 59.1 -0.4
MBDF Montbardon 46.76 297 *e*P **P** **19 34 53.9 -0.2**
comp=Z,18nm,0.5s,mb4.9
MBDF Montbardon 46.76 297 *e*P **P** **19 34 53.9 -0.2**
MBDF pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
MBDF Montbardon 46.76 297 *e*P **P** **19 34 53.9 -0.2**
comp=Z,9.2nm,0.5s,mb5.0
MVIF Mont Vial 46.78 296 *e*P **P** **19 34 58.8 +4.5**
BAIF Baives 46.80 305 *e*P **P** **19 34 54.6 +0.3**
comp=Z,3.2nm,0.4s,mb4.3
FRF La Foret Royal 47.24 296 *e*P **P** **19 34 58.0 +0.1**
comp=Z,22nm,0.6s,mb4.9
FRF La Foret Royal 47.24 296 *e*P **P** **19 34 58.0 +0.1**
FRF pmax pmax
comp=Z,11nm,0.6s,mb5.0
FRF La Foret Royal 47.24 296 *e*P **P** **19 34 58.0 +0.1**
comp=Z,11nm,0.6s,mb5.0
ORIF Oris-en-Rattie 47.29 298 *e*P **P** **19 34 57.8 -0.5**
comp=Z,5.6nm,0.5s,mb4.4
ORIF *e*MLR MLR
comp=Z,158nm,22.5s,MS3.6
ORIF Oris-en-Rattie 47.29 298 *e*P **P** **19 34 57.8 -0.5**
ORIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
ORIF Oris-en-Rattie 47.29 298 *e*P **P** **19 34 57.8 -0.5**
comp=Z,2.8nm,0.5s,mb4.5
LMR La Mourre 47.42 296 *e*P **P** **19 34 59.5 +0.3**
SMRF Simiane la Rot 47.82 297 *e*P **P** **19 35 02.7 +0.3**
comp=Z,13nm,0.6s,mb4.8
SMRF Simiane la Rot 47.82 297 *e*P **P** **19 35 02.7 +0.3**
comp=Z,13nm,0.6s,mb5.1
LOR Lormes 47.85 302 *e*P **P** **19 35 01.8 -0.8**
comp=Z,3.4nm,0.6s,mb4.3
LOR *e*MLR MLR
comp=Z,148nm,21.0s,MS3.6
LOR Lormes 47.85 302 *e*P **P** **19 35 01.8 -0.8**
LOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
LOR MLR MLR
comp=Z,150nm,21.0s,MS3.9
LOR Lormes 47.85 302 *e*P **P** **19 35 01.8 -0.8**
comp=Z,1.7nm,0.6s,mb4.2
LOR LR LR
comp=Z,150nm,21.0s,MS3.9
SMF Signal de Mont 48.06 301⇑*i*P **P** **19 35 03.8 -0.4**
comp=Z,4.9nm,0.5s,mb4.5
SMF Signal de Mont 48.06 301⇑*i*P **P** **19 35 03.8 -0.4**
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
SMF Signal de Mont 48.06 301⇑*i*P **P** **19 35 03.8 -0.4**
comp=Z,2.5nm,0.5s,mb4.5
VIVF Saint-Julien-l 48.12 298⇑*i*P **P** **19 35 04.9 +0.2**
comp=Z,11nm,0.5s,mb4.9
VIVF Saint-Julien-l 48.12 298⇑*i*P **P** **19 35 04.9 +0.2**
VIVF pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
VIVF Saint-Julien-l 48.12 298⇑*i*P **P** **19 35 04.9 +0.2**
comp=Z,5.7nm,0.5s,mb4.9
SSF Saint Saulge 48.15 301⇑*i*P **P** **19 35 04.2 -0.6**
comp=Z,4.2nm,0.6s,mb4.4
SSF Saint Saulge 48.15 301⇑*i*P **P** **19 35 04.2 -0.6**
SSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
SSF Saint Saulge 48.15 301⇑*i*P **P** **19 35 04.2 -0.6**
comp=Z,2.1nm,0.6s,mb4.3
AVF Avril sur Loir 48.33 301⇑*i*P **P** **19 35 05.9 -0.4**
comp=Z,16nm,0.6s,mb4.9
AVF Avril sur Loir 48.33 301⇑*i*P **P** **19 35 05.9 -0.4**
AVF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
AVF Avril sur Loir 48.33 301⇑*i*P **P** **19 35 05.9 -0.4**
comp=Z,8.0nm,0.6s,mb4.9
KEST Kesra 48.42 285 P **P** **19 35 06.9 -0.2**
comp=Z,2.0nm,0.9s,mb4.2,baz=208,slow=15,SNR=6.1
BGF Bois d'Agland 48.74 301 *e*P **P** **19 35 08.9 -0.5**
comp=Z,5.6nm,0.6s,mb4.5
BGF Bois d'Agland 48.74 301 *e*P **P** **19 35 08.9 -0.5**
BGF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
BGF Bois d'Agland 48.74 301 *e*P **P** **19 35 08.9 -0.5**
comp=Z,2.8nm,0.6s,mb4.5
LASF Ste Croix 48.95 298 *e*P **P** **19 35 11.5 +0.5**
comp=Z,16nm,0.7s,mb4.9
TCF Toulx Ste Croi 49.25 301 *e*P **P** **19 35 13.3 0.0**
comp=Z,5.4nm,0.5s,mb4.5
TCF Toulx Ste Croi 49.25 301 *e*P **P** **19 35 13.3 0.0**
TCF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
TCF Toulx Ste Croi 49.25 301 *e*P **P** **19 35 13.3 0.0**
comp=Z,2.7nm,0.5s,mb4.5
CAF Calviac 49.83 299 *e*P **P** **19 35 18.1 +0.3**
comp=Z,5.7nm,0.6s,mb4.5
CAF Calviac 49.83 299 *e*P **P** **19 35 18.1 +0.3**
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
CAF Calviac 49.83 299 *e*P **P** **19 35 18.1 +0.3**
comp=Z,2.8nm,0.6s,mb4.5
LDF La Druitiere 49.94 304⇑*i*P **P** **19 35 17.9 -0.7**
comp=Z,5.8nm,0.4s,mb4.7
RJF Les Rejaudoux 50.05 300 *e*P **P** **19 35 19.9 +0.4**
comp=Z,9.3nm,0.6s,mb4.7
RJF *e*MLR MLR
comp=Z,128nm,17.5s,MS3.7
RJF Les Rejaudoux 50.05 300 *e*P **P** **19 35 19.9 +0.4**
RJF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
RJF MLR MLR
comp=Z,130nm,17.5s,MS4.0
RJF Les Rejaudoux 50.05 300 *e*P **P** **19 35 19.9 +0.4**
comp=Z,4.7nm,0.6s,mb4.7
RJF LR LR
comp=Z,130nm,17.5s,MS4.0
FLN La Foliniere 50.11 305 *e*P **P** **19 35 19.0 -0.8**
FLN *e*MLR MLR
comp=Z,278nm,20.0s,MS4.0
FLN La Foliniere 50.11 305 *e*P **P** **19 35 19.0 -0.8**
FLN LR LR
comp=Z,280nm,20.0s,MS4.3
MTLF Montolieu 50.32 297 *e*P **P** **19 35 21.8 +0.3**
comp=Z,10.0nm,0.8s,mb4.6
MTLF Montolieu 50.32 297 *e*P **P** **19 35 21.8 +0.3**
MTLF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MTLF Montolieu 50.32 297 *e*P **P** **19 35 21.8 +0.3**
comp=Z,5.0nm,0.8s,mb4.6
GRR Gorron 50.47 304 *e*P **P** **19 35 21.8 -0.8**
MFF Saint Martin d 50.66 302 *e*P **P** **19 35 23.3 -0.7**
comp=Z,5.0nm,0.7s,mb4.3
MFF Saint Martin d 50.66 302 *e*P **P** **19 35 23.3 -0.7**
MFF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
MFF Saint Martin d 50.66 302 *e*P **P** **19 35 23.3 -0.7**
comp=Z,2.5nm,0.7s,mb4.2
LFF La Frestale 50.70 300 *e*P **P** **19 35 24.6 +0.3**
comp=Z,19nm,0.7s,mb4.8
LFF La Frestale 50.70 300 *e*P **P** **19 35 24.6 +0.3**
LFF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
LFF La Frestale 50.70 300 *e*P **P** **19 35 24.6 +0.3**
comp=Z,9.4nm,0.7s,mb4.8
MJAR Matsushiro Arr 50.79 72 P **P** **19 35 23.6 -1.6**
comp=Z,6.7nm,1.1s,mb4.5,baz=290,slow=9.7,SNR=5.9
MJAR LR LR 19 57 43.7
comp=Z,68nm,19.4s,MS3.7,baz=310,slow=37
SGMF Saint Gilles 51.58 305 *e*P **P** **19 35 30.4 -0.5**
comp=Z,7.2nm,0.6s,mb4.5
SGMF Saint Gilles 51.58 305 *e*P **P** **19 35 30.4 -0.5**
SGMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SGMF Saint Gilles 51.58 305 *e*P **P** **19 35 30.4 -0.5**
comp=Z,3.6nm,0.6s,mb4.5
EPF Esparros 51.71 298 *e*P **P** **19 35 32.6 +0.6**
ROSF Rostrenen 52.00 305 *e*P **P** **19 35 33.2 -0.8**
QUIF Quistinic 52.09 305 *e*P **P** **19 35 33.9 -0.8**
comp=Z,10.0nm,0.7s,mb4.5
QUIF Quistinic 52.09 305 *e*P **P** **19 35 33.9 -0.8**
QUIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
QUIF Quistinic 52.09 305 *e*P **P** **19 35 33.9 -0.8**
comp=Z,5.0nm,0.7s,mb4.5
ETSF Etsaut 52.36 298 *e*P **P** **19 35 37.1 +0.3**
comp=Z,6.9nm,0.5s,mb4.5
ETSF Etsaut 52.36 298 *e*P **P** **19 35 37.1 +0.3**
ETSF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
ETSF Etsaut 52.36 298 *e*P **P** **19 35 37.1 +0.3**
comp=Z,3.5nm,0.5s,mb4.5
SJPF Ste Jean 52.72 298 *e*P **P** **19 35 39.7 +0.2**
BILL Bilibino 54.31 28⇓*i*P **P** **19 35 50.4 -0.4**
BILL *e*S **S** **19 43 26.3 -1.0**
BILL pmax pmax
comp=Z,18nm,2.5s,mb4.6
BILL MLR MLR
comp=Z,200nm,16.0s,MS4.3
ESDC Sonseca Array 56.08 296 P **P** **19 36 03.8 -0.2**
comp=Z,0.7nm,0.4s,mb4.0,baz=60,slow=6.9,SNR=23
ESDC pP pP 19 36 09.1 -0.8
comp=Z,2.1nm,0.7s,baz=56,slow=7.3,SNR=11
PETK Petropavlovsk- 56.33 46 P **P** **19 36 03.1 -2.4**
comp=Z,2.9nm,0.8s,mb4.3,baz=308,slow=14,SNR=2.8
PET Petropavlovsk 56.88 46 *i*P **P** **19 36 09.9 +0.4**
TOA0 Torodi Ar. Sit 66.58 267 *e*P **P** **19 37 14.8 -0.6**
TOA0 *e*pP pP 19 37 19.8 -1.5
TORD Torodi Ar. Bea 66.58 267 P **P** **19 37 14.9 -0.4**
comp=Z,4.0nm,0.5s,mb4.7,baz=56,slow=5.5,SNR=68
TORD pP pP 19 37 19.8 -1.5
comp=Z,5.1nm,0.6s,baz=52,slow=5.5,SNR=20
COLD Coldfoot 67.49 16 *e*P **P** **19 37 19.4 -0.9**
comp=Z,8.0nm,0.6s,mb4.9
COLD *e*pP pP 19 37 24.9 -1.4
BPAW Bear Paw Mtn. 69.94 19 *e*P **P** **19 37 34.2 -1.5**
comp=Z,21nm,1.4s,mb4.9
BPAW *e*pP pP 19 37 40.2 -1.5
COLA College 70.00 17 *e*P **P** **19 37 34.8 -1.2**
COLA *e**PP pP 19 37 40.5 -1.5
COLA pmax pmax
comp=Z,16nm,1.1s,mb4.9
COLA College 70.00 17 *e*P **P** **19 37 34.8 -1.3**
comp=Z,16nm,1.1s,mb4.9
COLA *e*pP pP 19 37 40.5 -1.5
PAX Paxson 72.19 17 *e*P **P** **19 37 48.1 -1.2**
PAX *e**PP pP 19 37 53.1 -2.2
PAX pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
PAX Paxson 72.19 17 *e*P **P** **19 37 48.0 -1.2**
comp=Z,5.1nm,0.4s,mb4.8
PAX *e*pP pP 19 37 53.1 -2.2
DBIC Dimbokro 75.66 266 P **P** **19 38 10.0 -0.4**
comp=Z,2.7nm,0.4s,mb4.5,baz=18,slow=5.3,SNR=12
DBIC pP pP 19 38 15.3 -1.1
comp=Z,4.6nm,0.7s,baz=46,slow=6.8,SNR=4.2
KIC Kosan Boka 75.77 266 *e*P **P** **19 38 10.3 -0.8**
comp=Z,134nm,1.3s,mb5.7
TIC Toumodi 75.80 266 *e*P **P** **19 38 10.1 -1.1**
comp=Z,10nm,0.2s,mb5.3
LIC Lamto 76.08 266 *e*P **P** **19 38 12.4 -0.4**
comp=Z,22nm,0.9s,mb4.8
LIC Lamto 76.08 266 *e*P **P** **19 38 12.0 -0.8**
comp=Z,72nm,1.5s,mb5.4
LIC Lamto 76.08 266 *e*P **P** **19 38 12.4 -0.4**
comp=Z,11nm,0.9s,mb4.8
YKA Yellowknife Ar 76.76 3 P **P** **19 38 14.6 -1.2**
comp=Z,4.5nm,0.4s,mb4.7,baz=351,slow=5.9,SNR=117
YKA pP pP 19 38 20.1 -1.8
comp=Z,7.4nm,0.6s,baz=351,slow=5.8,SNR=30
YKA LR LR 20 16 24.1
comp=Z,9.3nm,19.3s,MS3.1,baz=315,slow=39
YKA Yellowknife Ar 76.76 3 P **P** **19 38 14.6 -1.3**
YKA *PP pP 19 38 20.1 -1.8
YKA pmax pmax
comp=Z,5.0nm,0.4s
YKA MLR MLR
comp=Z,9.0nm,19.3s
KAKA Kakadu 77.25 119 *e*P x 19 38 19.3
SCHQ Schefferville 78.27 337 P **P** **19 38 23.7 -0.8**
comp=Z,2.4nm,0.8s,mb4.2,baz=309,slow=6.0,SNR=7.9
SCHQ Schefferville 78.27 337 P **P** **19 38 23.7 -0.8**
BOSA Boshof 81.61 220 P **P** **19 38 42.4 -0.4**
comp=Z,2.6nm,0.7s,mb4.3,baz=99,slow=10,SNR=8.2
BOSA pP pP 19 38 48.2 -0.5
comp=Z,2.7nm,0.7s,baz=66,slow=2.1,SNR=2.8
WRA Warramunga Arr 83.79 123 P **P** **19 38 53.1 -1.2**
comp=Z,1.6nm,0.8s,mb4.2,baz=331,slow=4.7,SNR=13
WRA pP pP 19 38 58.7 -1.7
comp=Z,1.1nm,0.5s,baz=328,slow=4.4,SNR=5.0
WRA PKKPbc PKKPbc 19 57 10.4 +0.5
comp=Z,0.5nm,0.4s,baz=135,slow=2.5,SNR=18
WRA Warramunga Arr 83.79 123 *i*P **P** **19 38 53.7 -0.6**
WRA pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 86.26 126 P **P** **19 39 06.0 -0.6**
comp=Z,2.2nm,0.7s,mb4.5,baz=316,slow=5.2,SNR=27
ASAR pP pP 19 39 11.2 -1.5
comp=Z,1.9nm,0.7s,baz=316,slow=4.9,SNR=10
ASAR PKKPbc PKKPbc 19 57 04.4 +0.3
comp=Z,0.3nm,0.5s,baz=131,slow=3.4,SNR=6.2
ASAR Alice Springs 86.26 126 P **P** **19 39 06.0 -0.6**
ASAR *PP pP 19 39 11.2 -1.5
CTA Charters Tower 91.78 115 P **P** **19 39 33.0 +0.2**
comp=Z,1.5nm,0.5s,mb4.6,baz=315,slow=4.3,SNR=3.2
CTA Charters Tower 91.78 115 P **P** **19 39 33.0 +0.2**
PDAR Pinedale Array 96.64 1 P **P** **19 39 54.8 -0.2**
comp=Z,0.3nm,0.6s,mb3.9,baz=91,slow=2.7,SNR=3.9
PDAR pP pP 19 40 00.1 -0.9
comp=Z,0.3nm,0.6s,baz=90,slow=3.3,SNR=2.7
PDAR LR LR 20 29 57.2
comp=Z,71nm,18.8s,MS4.2,baz=275,slow=40
STKA Stephens Creek 96.87 127 P **P** **19 39 55.0 -0.9**
comp=Z,1.0nm,0.7s,mb4.4,baz=336,slow=20,SNR=3.7
VNA2 Neumayer--Watz 124.78 203 *e*PKPdf PKPdf 19 45 24.1 +0.7
baz=6.4,slow=2.9
VNA2 *e* 19 45 29.7
VNA3 Neumayer Olymp 125.59 203 *e*PKPdf PKPdf 19 45 24.6 -0.3
VNA3 *e* 19 45 31.0
QSPA South Pole Qui 130.75 180 PKP PKPdf 19 45 35.1 +0.6
comp=Z,1.2nm,0.6s,baz=324,slow=0.9,SNR=3.7
QSPA South Pole Qui 130.75 180 PKP PKPdf 19 45 35.1 +0.6
CPUP Villa Florida 135.88 273 PKP PKPdf 19 45 45.0 -0.8
comp=Z,1.1nm,0.5s,baz=179,slow=1.2,SNR=7.9
CPUP Villa Florida 135.88 273 PKIKP PKPdf 19 45 45.0 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.5s
CPUP Villa Florida 135.88 273 *e*PKPdf PKPdf 19 45 45.0 -0.7
CPUP *e*pPKPdf pPKPdf 19 45 50.7 -1.4
TRQA Tornquist 144.61 259 *e*PKP PKPdf 19 45 59.5 -1.7
PLCA Paso Flores 151.74 258 PKPbc PKPbc 19 46 18.4 -0.7
comp=Z,1.4nm,0.8s,baz=43,slow=3.0,SNR=6.9

IDC 31 19:39:20.0±2.4, 464N×12606E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/18, mbtmp3.4/3, Error ellipse: s-maj=204.8km s-min=27.7km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.75**	**162**	P		P	19 44 53.3	+0.8
	0.6nm,0.9s,baz=340,slow=11,SNR=6.9							
ASAR	**Alice Springs**	**29.16**	**165**	P		P	19 45 22.2	-0.8
	0.4nm,0.9s,baz=357,slow=7.4,SNR=4.1							
MKAR	**Makanchi Array**	**56.43**	**325**	P		P	19 49 03.4	0.0
	0.2nm,0.5s,baz=114,slow=8.2,SNR=4.6							

CASC 31 20:00:49.9±1.9, 1326N×9110W, h20km±8km, MD3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IXG	**Ixpaco**	**1.10**	**34**	*e*P		Pn	20 01 09.7	-0.5
IXG				*e*S		Sb	20 01 25.9	+1.7
JAT	**Jato**	**1.18**	**334**	*e*P		Pn	20 01 12.6	+1.4
JAT				*e*S		Sb	20 01 25.6	-0.7
FUG	**Fuego 3**	**1.21**	**12**	*e*P		Pn	20 01 11.7	0.0
FG6		**1.31**	**9**	*e*P		Pn	20 01 13.3	+0.3
FG6				*e*S		Sn	20 01 31.4	+1.4
SBLS	**San Blas**	**1.54**	**68**	*e*P		x	20 01 15.9	
SNJE	**San Jose**	**1.57**	**67**	*e*P		x	20 01 16.3	
RBDL	**Robledal**	**1.61**	**58**	*e*P		x	20 01 17.1	
BOQS	**Boqueron**	**1.83**	**75**	*e*P		x	20 01 20.6	
BOQS				*e*S		x	20 01 45.1	
LFRS	**El Faro**	**2.01**	**79**	*e*P		x	20 01 23.4	
LFRS				*e*S		x	20 01 48.6	

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*ISCJB **31** 20:10:36.6±0.7, 7388N±005×90E±04, h10km, mb3.4/7, Error ellipse: s-maj=15.5km s-min=6.6km az=1.8*
*IDC **31** 20:10:37.1±1.0, 7375N×8.14E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.5/24, mbtmp3.5/9, ML2.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/41, Error ellipse: s-maj=21.3km s-min=13.4km az=84.0*
*NEIC **31** 20:10:38.3±0.8, 7385N×866E, h10km, Error ellipse: s-maj=18.7km s-min=9.0km az=83.0*
ISC 31 20:10:38.4±0.7, 7387N±005×88E±04, h10km, n19, σ1914/19, mb3.4/7, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPB4	**Spitsbergen Ar**	**4.70**	**19**	*e*P		**Pn**	**20 11 50.0**	**+0.9**
SPITS	**Spitsbergen Ar**	**4.70**	**19**	Pn		**Pn**	**20 11 50.2**	**+1.1**
	baz=245,slow=13,SNR=80							
SPITS				Sn		**Sn**	**20 12 43.6**	**0.0**
	baz=176,slow=40,SNR=1.7							
HOPEN	**Hopen**	**4.92**	**50**	*e*P		**Pn**	**20 11 51.0**	**-1.2**
HOPEN				*e*S		**Sn**	**20 12 43.7**	**-5.4**
KBS	**Kingsbay**	**5.14**	**7**	*e*P		**Pn**	**20 11 54.0**	**-1.2**
ARCES	**ARCESS Array B**	**6.80**	**121**	Pn		**Pn**	**20 12 18.6**	**+0.6**
	0.3nm,0.3s,baz=328,slow=11,SNR=16							
ARCES				Sn		**Sn**	**20 13 28.1**	**-7.3**
	0.1nm,0.3s,baz=334,slow=25,SNR=2.3							
ARCES				LR		LR	20 15 11.5	
	comp=Z,76nm,18.6s,baz=237,slow=40							
ARE0	**ARCESS Array S**	**6.80**	**121**	*e*P		**Pn**	**20 12 16.7**	**-1.4**
HFS	**Hagfors**	**13.92**	**170**	Pn		**Pn**	**20 13 57.4**	**+2.0**
	0.0nm,0.3s,baz=148,slow=18,SNR=2.7							
AKASG	**Malin Array Be**	**24.83**	**148**	P		**P**	**20 15 59.6**	**-0.7**
	0.6nm,0.5s,mb3.4,baz=346,slow=9.9,SNR=3.4							
VRAC	**Vranov**	**24.88**	**168**	P		**P**	**20 16 01.2**	**+0.4**
	1.8nm,0.8s,mb3.7,baz=5.4,slow=11,SNR=2.8							
GERES	**GERESS Array B**	**25.20**	**172**	P		**P**	**20 16 02.1**	**-1.6**
	0.1nm,0.5s,mb2.6,baz=334,slow=37,SNR=2.4							
KURK	**Kurchatov**	**36.64**	**89**	LR		LR	20 35 58.5	
	comp=Z,51nm,19.1s,baz=305,slow=41							
YKA	**Yellowknife Ar**	**38.84**	**322**	P		**P**	**20 18 02.9**	**0.0**
	0.8nm,0.7s,mb3.6,baz=17,slow=8.5,SNR=7.1							
YKA	**Yellowknife Ar**	**38.84**	**322**	P		**P**	**20 18 02.9**	**0.0**
MKAR	**Makanchi Array**	**41.22**	**89**	P		**P**	**20 18 24.4**	**+1.6**
	0.3nm,0.8s,mb3.0,baz=330,slow=7.0,SNR=3.3							
SONM	**Songino Array**	**46.80**	**66**	P		**P**	**20 19 11.1**	**+3.6**
	0.9nm,1.1s,mb3.6,baz=320,slow=7.8,SNR=2.6							
TORD	**Torodi Ar. Bea**	**60.84**	**188**	P		**P**	**20 20 50.0**	**-0.6**

0.9nm,0.7s,mb4.0,baz=2.4,slow=6.6,SNR=8.6
TORD Torodi Ar. Bea 60.84 188 P **P** 20 20 50.0 **-0.6**
VNA2 Neumayer--Watz 144.94 189 *e* PKPdf 20 30 12.8 -0.6
baz=32,slow=5.2
VNA2 *e* 20 30 17.7
VNA3 Neumayer Olymp 145.36 190 *e* PKPdf 20 30 14.1 -0.1
VNA3 *e* 20 30 19.5

IDC ***31*** *20:18:46.5±2.7, 275.5×14064E, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.9/15, mbtmp4.0/6, ML3.8/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=96.2km s-min=25.0km az=88.0*
ISCJB ***31*** *20:18:50.1±1.2, 285.5±008×1405E±03, h33km, mb4.0/8, MS3.3/2, Error ellipse: s-maj=41.1km s-min=11.0km az=2.8*
NEIC ***31*** *20:18:52.0±0.8, 286.5×14056E, h35km, mb4.4/4, Error ellipse: s-maj=29.8km s-min=8.2km az=92.0*

ISC 31 20:18:51.9±1.1, 286.5±008×1406E±03, h35km, n16, σ0§55/11, mb4.0/8, MS3.3/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.88**	**14**	LR		LR	LR	20 29 14.6	
	comp=Z,73nm,18.5s,baz=147,slow=37								
CTA	**Charters Tower**	**17.99**	**163**	LR		LR		20 30 48.4	
	comp=Z,86nm,18.2s,baz=142,slow=40								
WRAB	**Tennant Creek**	**18.03**	**199**	*e*P		**Pn**		**20 22 59.3**	**-0.5**
	28nm,1.4s								
WB2	**Warramunga Arr**	**18.04**	**199**	*e*P		**Pn**		**20 23 00.2**	**+0.3**
WRA	**Warramunga Arr**	**18.04**	**199**	P		**Pn**		**20 22 59.9**	**-0.1**
	0.3nm,0.3s,baz=23,slow=12,SNR=21								
ASAR	**Alice Springs**	**21.67**	**197**	P		**P**		**20 23 39.9**	**+0.3**
	1.8nm,0.7s,mb3.6,baz=31,slow=9.7,SNR=11								
STKA	**Stephens Creek**	**28.88**	**178**	LR		LR		20 37 37.4	
	comp=Z,96nm,19.4s,MS3.4,baz=28,slow=39								
KSRS	**Korea Array**	**41.80**	**345**	LR		LR		20 41 27.4	
	comp=Z,24nm,18.2s,MS3.1,baz=170,slow=33								
CMAR	**Chiang Mai Arr**	**46.15**	**299**	P		**P**		**20 27 13.0**	**-0.4**
	1.6nm,0.9s,mb4.0,baz=121,slow=6.2,SNR=13								
LSA	**Lhasa**	**57.28**	**308**	P		**P**		**20 28 37.6**	**+1.3**
	4.6nm,1.2s,mb4.4								
MKAR	**Makanchi Array**	**71.06**	**322**	P		**P**		**20 30 06.4**	**0.0**
	1.1nm,0.8s,mb3.8,baz=120,slow=6.4,SNR=9.4								
ZALV	**Zalesovo Beam**	**73.02**	**329**	P		**P**		**20 30 16.9**	**-1.0**
	0.5nm,0.6s,mb3.6,baz=86,slow=6.4,SNR=4.8								
BVAR	**Borovoye Array**	**80.51**	**325**	P		**P**		**20 31 00.3**	**0.0**
	1.8nm,0.8s,mb4.0,baz=121,slow=7.1,SNR=8.4								
BRVK	**Borovoye**	**80.58**	**325**	*e*P		**P**		**20 31 00.7**	**0.0**
	4.0nm,1.0s,mb4.3								
CHUM	**Lake Minchumin**	**82.67**	**24**	*e*P		**P**		**20 31 11.8**	**+0.3**
	5.4nm,0.9s,mb4.6								
DBIC	**Dimbokro**	**145.37**	**278**	PKPbc		PKPbc		20 38 28.1	+0.9
	2.8nm,0.7s,baz=36,slow=7.2,SNR=4.6								

ISCJB ***31*** *20:24:01.8±0.7, 37.19N±005×2874E±004, h14km±7km, Error ellipse: s-maj=8.2km s-min=5.6km az=168.6*
ISK ***31*** *20:24:01.6, 3721N×2874E, h17km, MD2.7*
CSEM ***31*** *20:24:01.3±0.1, 3721N×2874E, h15km, MD2.7, Error ellipse: s-maj=1.8km s-min=1.3km az=164.0*
DDA ***31*** *20:24:03.9, 3729N×2866E, h7km±5km, Md2.3*

ISC 31 20:24:02.9±0.6, 3723N±005×2869E±004, h26km±9km, n11, σ1§08/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.34**	**254**	*e*PG		**Pb**		**20 24 09.6**	**-1.0**
YER				*e*SG		**Sb**		**20 24 15.7**	**-0.1**
TURN	**Turunc**	**0.36**	**191**	*i* P		**Pb**		**20 24 13.5**	**+2.6**
TURN				*i* S		**Sb**		**20 24 23.5**	**+7.1**
DALT	**Dalyan (Mudla)**	**0.46**	**185**	*e*PG		**Pb**		**20 24 11.0**	**-1.5**
DENT	**Denizli**	**0.59**	**27**	*e*PG		**Pb**		**20 24 13.5**	**-1.1**
DENT				*e*SG		**Sb**		**20 24 22.8**	**+0.2**
GOLH	**Golhisar**	**0.69**	**89**	*i* P		**Pb**		**20 24 15.1**	**-1.3**
GOLH				*i* S		**Sb**		**20 24 27.6**	**+2.1**
GOLH	**Golhisar**	**0.69**	**89**	*i* P		**Pb**		**20 24 15.1**	**-1.3**
GOLH				*i* S		**Sb**		**20 24 27.6**	**+2.0**
MLSB	**Milas**	**0.73**	**275**	*e*PG		**Pb**		**20 24 16.8**	**-0.2**
MLSB				*e*SG		**Sb**		**20 24 28.1**	**+1.5**
AYDN	**Tasoluk**	**0.78**	**304**	*i* P		**Pb**		**20 24 17.8**	**0.0**
AYDN				*i* S		**Sb**		**20 24 27.6**	**-0.4**
DAT	**Datca**	**1.02**	**241**	*e*PG		**Pn**		**20 24 21.7**	**+0.1**
ELL	**Elmali**	**1.09**	**116**	*e*PG		**Pn**		**20 24 21.9**	**-0.5**
KULA	**Kula-Manisa**	**1.28**	**359**	*e*PN		**Pn**		**20 24 25.8**	**+0.7**

SSNC 31 20:31:12.1±3.8, 2019N×7346W, h46km±60km, MD3.4, ML4.1, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.72**	**269**	*e*PG		**Pn**		20 31 26.3	+0.3
	baz=90								
MASC				*e*SG		Sn		20 31 34.3	-1.7
	comp=N,111μm,0.1s								
MASC				*e*					
	comp=E,126μm,0.1s								
RCC	**Rio Carpintero**	**2.11**	**265**	*e*P		Pn		20 31 44.7	-0.2
	baz=99								
RCC				*e*S		Sn		20 32 07.8	-2.1
	comp=N,800nm,0.2s								
RCC				*e*					
	comp=E,541nm,0.3s								
CCCC	**Cccc**	**4.15**	**285**	*e*P		Pn		20 32 07.7	-5.3
MGV	**Manicaragua**	**6.38**	**289**	*e*P		Pn		20 32 41.4	-2.1

IDC 31 20:42:52.4±1.8, 3575S×5345E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/20, mbtmp3.8/3, MS3.5/1, Ms1 3.4/1, ms1mx2.9/20, Error ellipse: s-maj=81.1km s-min=36.1km az=13.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**32.35**	**173**	LR		LR	LR	20 59 21.0	
	comp=Z,69nm,18.1s,baz=46,slow=31								
TORD	**Torodi Ar. Bea**	**68.96**	**305**	P		P		20 53 59.6	-0.1
	0.9nm,1.0s,baz=143,slow=4.9,SNR=4.3								
CMAR	**Chiang Mai Arr**	**69.02**	**46**	P		P		20 54 00.0	+0.1
	1.4nm,0.9s,baz=238,slow=6.4,SNR=11								
WRA	**Warramunga Arr**	**71.44**	**102**	P		P		20 54 14.9	0.0
	1.0nm,0.9s,baz=233,slow=5.5,SNR=4.5								
YKA	**Yellowknife Ar**	**152.21**	**348**	PKP		PKPdf		21 02 42.0	-0.4
	0.2nm,1.0s,baz=46,slow=1.8,SNR=3.8								
YKA				PKPbc		PKPbc		21 02 49.0	0.0
	0.5nm,0.9s,baz=10,slow=2.3,SNR=9.1								

GUC 31 21:22:54.4±0.7, 2228S×6910W, h85km±4km, ML3.7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.36**	**272**	↑*i*P		Pn		21 23 14.1	+6.5
PB04				*i* S		Sn		21 23 28.8	+11
PB04				AML		AML		21 23 32.9	
	comp=N,2μm,0.1s								
LVC	**Limon Verde**	**0.37**	**153**	↓*e*P		Pn		21 23 08.0	+0.3
LVC				*i* S		Sn		21 23 19.1	+1.6
LVC				AML		AML		21 23 20.2	
	comp=E,3μm,0.6s								
MACH	**Maria Elena**	**0.62**	**278**	↑*i*P		Pn		21 23 10.4	+0.8
MACH				*i* S		Sn		21 23 22.5	+1.5
PECH	**Pedro de Valdi**	**0.62**	**239**	*e*P		Pn		21 23 10.4	+0.7
PECH				*i* S		Sn		21 23 22.6	+1.6
PECH				AML		AML		21 23 23.2	
	comp=E,5μm,0.2s								
TOCH	**Tocopilla**	**1.04**	**280**	*e*P		Pn		21 23 14.4	+0.2
TOCH				*i* S		Sn		21 23 29.4	+0.3
TOCH				AML		AML		21 23 34.9	
	comp=N,3μm,0.1s								
PB01	**Plate Boundary**	**1.28**	**344**	↑*i*P		Pn		21 23 17.8	+0.6
PB01				*i* S		Sn		21 23 35.5	+1.3
PB01				AML		AML		21 23 36.3	
	comp=E,5μm,0.3s								
CEN1	**Los Morros**	**1.50**	**222**	*e*P		Pn		21 23 23.7	+3.8
CEN1				*e*S		Sn		21 23 45.5	+6.2
ANCH	**Antofagasta**	**1.85**	**221**	*e*P		Pn		21 23 22.7	-1.7
HMBC	**Humberston**	**2.12**	**340**	*e*P		Pn		21 23 27.6	-0.4
PSGC	**Pisagua**	**2.83**	**340**	↓*e*P		Pn		21 23 35.9	-1.7

GUC 31 21:35:36.0±1.1, 3384S×7065W, h20km±5km, MD3.6, ML2.3, 3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHCH	**Chadas Angostu**	**0.10**	**181**	↓*i*P		Pb		21 35 39.8	-0.1
CHCH				*i* S		Sb		21 35 42.1	-0.5
ANTU	**Antumapu**	**0.27**	**3**	*e*P		Pb		21 35 42.2	0.0
ANTU				*i* S		Sb		21 35 46.2	-0.1
ANTU				AML		AML		21 35 46.5	
	comp=E,927nm,0.2s								
CACH	**El Canelo**	**0.28**	**172**	*i* P		Pb		21 35 43.1	+0.7
CACH				*i* S		Sb		21 35 47.9	+1.1
SJCH	**San Jose de Ma**	**0.32**	**52**	↓*i*P		Pb		21 35 43.0	0.0
SJCH				*i* S		Sb		21 35 47.7	+0.1
LMEL	**Las Melosas**	**0.37**	**92**	*e*P		Pb		21 35 43.9	0.0
LMEL				*e*S		Sb		21 35 49.5	+0.2
LMEL				AML		AML		21 35 50.5	
	comp=E,910nm,0.1s								
RCDM	**Rinconada Maip**	**0.37**	**339**	*e*P		Pb		21 35 43.3	-0.6
RCDM				*e*S		Sb		21 35 48.5	-0.7
RCDM				AML		AML		21 35 49.0	
	comp=N,460nm,0.2s								
CLCH	**Cerro Calan**	**0.45**	**12**	*e*P		Pb		21 35 45.1	-0.1
CLCH				*i* S		Sb		21 35 51.6	+0.1
CLCH				AML		AML		21 35 52.3	
	comp=N,185nm,0.4s								
FCH	**Farellones**	**0.59**	**31**	*e*P		Pb		21 35 47.2	-0.4
FCH				*e*S		Sb		21 35 55.5	-0.1
FCH				AML		AML		21 35 56.1	
	comp=N,339nm,0.3s								
LNV	**Longovilo**	**0.64**	**259**	↓*i*P		Pb		21 35 47.9	-0.7

IDC 31 21:44:50.4±2.8, 707S×12881E, h0km, mb3.2/1, mb1 3.3/3, mb1mx3.2/15, mbtmp3.1/3, ML3.3/2, Error ellipse: s-maj=304.2km s-min=31.5km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.87**	**158**	Pn		Pn		21 48 07.5	-1.0
	0.2nm,0.3s,baz=334,slow=13,SNR=12								
WRA				Sn		Sn		21 50 30.2	-13
	0.2nm,0.3s,baz=318,slow=26,SNR=8.1								
ASAR	**Alice Springs**	**17.21**	**164**	P		Pn		21 48 53.3	+0.9
	0.1nm,0.3s,baz=346,slow=9.4,SNR=7.2								
MKAR	**Makanchi Array**	**67.64**	**327**	P		P		21 55 49.3	+0.1
	0.1nm,0.4s,baz=114,slow=7.0,SNR=3.9								

VIE ***31*** *21:46:22.1±2.4, 4379N×1822E, h10km, mb2.5/3, ML2.4/3, Error ellipse: s-maj=19.6km s-min=18.6km az=49.0 16 km WSW of Sarajevo*
CSEM ***31*** *21:46:23.9±0.1, 4402N×1813E, h8km, ML2.7/9, Error ellipse: s-maj=4.5km s-min=2.3km az=62.0*
ISCJB ***31*** *21:46:24.6±0.3, 4405N±002×1829E±004, h10km, Error ellipse: s-maj=3.9km s-min=2.1km az=156.8*
PDG ***31*** *21:46:26.9±0.1, 4395N×1836E, h3km, ML2.7/9, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
NEIC ***31*** *21:46:26.9, 4395N×1836E, h3km, ML2.7(PDG), ML2.9(ZAG), After PDG.*
BEO ***31*** *21:46:29.6±1.5, 4426N×1824E, ML0.9/1*
PRU ***31*** *21:46:30.2, 4434N×1802E, h0km*

ISC 31 21:46:25.0±0.6, 4407N±002×1825E±004, h0km±4km, n27, σ1§14/51, 9C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.99**	**151**	↓*i*Pg		**Pg**		**21 46 42.4**	**-1.6**
UPM				*e*Sg		**Sg**		**21 46 55.7**	**-1.1**
BLY	**Banja Luka**	**1.02**	**312**	*e*Pg		**Pg**		**21 46 45.9**	**+1.3**
BLY				*e*Sg		**Sg**		**21 46 59.3**	**+1.5**
PLE	**Pljevlja**	**1.11**	**131**	↓*i*Pg		**Pg**		**21 46 45.1**	**-1.2**
PLE				*e*Sg		**Sg**		**21 47 00.5**	**-0.2**
BRY	**Bratogost**	**1.19**	**169**	↑*i*Pg		**Pn**		**21 46 46.5**	**-2.3**
BRY				*e*Sg		**Sg**		**21 47 03.5**	**+0.3**
STON	**Ston**	**1.26**	**199**	*e*Pg		**Pn**		**21 46 46.9**	**-2.9**
STON				Sg		**Sg**		**21 47 04.8**	**-0.7**
NKY	**Niksic**	**1.37**	**156**	↑*i*Pg		**Pn**		**21 46 49.2**	**-2.1**
NKY				*e*Sg		**Sg**		**21 47 09.4**	**+0.4**
FRGS	**Fruska Gora**	**1.56**	**45**	*e*Pg		**Pg**		**21 46 55.2**	**+0.3**
FRGS				*e*Sg		**Sg**		**21 47 15.4**	**+0.3**
HCY	**Herceg Novi**	**1.63**	**173**	↓*i*Pg		**Pn**		**21 46 54.5**	**-0.4**
HCY				*e*Sg		**Sg**		**21 47 18.1**	**+0.7**
BEY	**Berane**	**1.70**	**134**	↓*i*Pg		**Pn**		**21 46 55.4**	**-0.4**
BEY				*e*Sg		**Sg**		**21 47 19.9**	**+0.4**
IVA	**Berane**	**1.70**	**134**	↓*i*Pg		**Pn**		**21 46 55.4**	**-0.4**
IVA				*e*Sg		**Sg**		**21 47 19.9**	**+0.4**
GRUS	**Gruza**	**1.79**	**95**	*e*Pn		**Pg**		**21 47 01.4**	**+2.1**
GRUS				*e*Sn		**Sg**		**21 47 23.8**	**+1.3**
PDG	**Podgorica**	**1.80**	**155**	↑*i*Pn		**Pn**		**21 46 57.6**	**+0.4**
PDG				*e*Sn		**Sn**		**21 47 22.4**	**+1.7**
TTG	**Podgorica**	**1.80**	**155**	↑*i*Pn		**Pn**		**21 46 57.6**	**+0.4**
TTG				*e*Sn		**Sn**		**21 47 22.4**	**+1.7**
RHK3	**Tenkes**	**1.82**	**0**	‖*e*Pn		**Pn**		**21 46 56.2**	**-1.3**
RHK3				*e*Sn		**Sn**		**21 47 20.4**	**-0.8**
BUM	**Brajici-Budva**	**1.83**	**165**	↑*i*Pn		**Pn**		**21 46 58.0**	**+0.3**
BUM				*e*Sn		**Sg**		**21 47 23.4**	**-0.4**
PVY	**Plav**	**1.94**	**139**	↓*i*Pn		**Pn**		**21 46 59.3**	**+0.2**
PVY				*e*Sn		**Sn**		**21 47 25.7**	**+1.6**
PKSM	**Moragy**	**2.16**	**7**	‖*e*Pn		**Pn**		**21 47 00.7**	**-1.5**
PKSM				*e*Sn		**Sn**		**21 47 27.2**	**-2.5**
ULC	**Ulcinj**	**2.23**	**160**	↓*i*Pn		**Pn**		**21 47 03.9**	**+0.8**
ULC				*e*Sn		**Sn**		**21 47 33.0**	**+1.7**
NVLJ	**Novalja**	**2.47**	**283**	*e*Pn		**Pn**		**21 47 05.7**	**-0.8**
NVLJ				Sn		**Sn**		**21 47 38.8**	**+1.4**
BOJS	**Bojanci**	**2.57**	**305**	*i* Pn		**Pn**		**21 47 08.4**	**+0.6**
CRES	**Cresnjev**	**2.65**	**313**	*e*Pn		**Pn**		**21 47 08.5**	**-0.4**
PKSG		**3.32**	**2**	‖*e*Pn		**Pn**		**21 47 17.2**	**-1.0**
PKSG				*e*Sn		**Sn**		**21 47 58.7**	**+0.3**
ARSA	**Arzberg**	**3.71**	**330**	↓*i*Pn		**Pn**		**21 47 22.5**	**-1.0**
ARSA				↓*i*Sn		**Sn**		**21 48 08.3**	**+0.4**
CONA	**Conrad Observa**	**4.20**	**338**	↑*i*Pn		**Pn**		**21 47 29.9**	**-0.3**
CONA				↓*i*Sn		**Sn**		**21 48 21.3**	**+1.3**
MOA	**Molln**	**4.69**	**325**	↓*i*Pn		**Pn**		**21 47 37.3**	**+0.4**
MOA				↑*i*Sn		**Sn**		**21 48 36.2**	**+4.2**
MOA	**Molln**	**4.69**	**325**	Pn		**Pn**		**21 47 36.5**	**-0.5**
MOA				Sn		**Sn**		**21 48 36.2**	**+4.2**
KHC	**Kasperske Hory**	**6.00**	**329**	*e*PN		**Pn**		**21 47 56.2**	**+1.3**

IDC ***31*** *22:00:20.5±0.5, 1379N×9052W, h0km, mb4.4/16, mb1 4.6/17, mb1mx4.5/21, mbtmp4.4/17, ML5.0/1, MS4.2/23, Ms1 4.2/23, ms1mx3.9/44, Error ellipse: s-maj=26.5km s-min=12.1km az=61.0*
MOS ***31*** *22:00:24.3±1.2, 1365N×9075W, h33km, mb5.0/27, Error ellipse: s-maj=11.6km s-min=5.5km az=108.9*
MEX ***31*** *22:00:25.5±0.6, 1326N×9143W, h40km±19km, MD4.6*
CASC ***31*** *22:00:26.9±1.8, 1361N×9111W, h31km±12km, MD4.5, ML4.6, mb4.9(NEIC)*
ISCJB ***31*** *22:00:28.2±0.4, 1363N±003×9093W±003, h73km±3km, mb4.7/81, Error ellipse: s-maj=7.2km s-min=2.9km az=136.4*
GCMT ***31*** *22:00:29.4±0.3, 1343N×9138W, h34km, MW5.0/59, Moment Tensor Solution. s51,c67; s59,c74; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.10±.21; Mθθ-3.98±.14; Mϕϕ-0.12±.18; Mre1.82±.13; Mθϕ 1.17±.13; Mϕr-0.99±.21; Best double couple: Mo4.68700×10^16 NP1:ϕ280.00000°, δ32.00000°, λ80.00000°. NP2: ϕ111.00000°, δ58.00000°, λ96.00000°. Principal axes: T 4.6050, Plg76.0000°, Azm40.0000°; N 0.1600, Plg5.0000°, Azm288.0000°; P -4.7690, Plg13.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***31*** *22:00:29.4±0.7, 1370N×9080W, h66km±5km, mb4.9/70, MD4.8(SNET) Error ellipse: s-maj=7.3km s-min=3.8km az=223.0*
NEIC Felt [II] at San Salvador, El Salvador. Also felt at Guatemala City, Guatemala.
BJI ***31*** *22:00:30.8, 1370N×9080W, h75km, mB5.1, Ms5.4, Msz4.8*

ISC 31 22:00:30.6±0.4, 1374N±003×9082W±004, h75km±3km, n316, σ1§08/276, mb4.7/80, 3C-8D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.56**	**40**	*e*P		**Pn**		**22 00 43.1**	**-1.4**
PCG	**Pacaya**	**0.68**	**18**	*e*P		**Pn**		**22 00 44.4**	**-1.3**
FUG	**Fuego 3**	**0.70**	**359**	*e*P		**Pn**		**22 00 43.6**	**-2.4**
FG6		**0.81**	**356**	*e*P		**Pn**		**22 00 44.8**	**-2.4**
NBG	**Las Nubes**	**0.96**	**29**	*e*P		**Pn**		**22 00 49.5**	**+0.5**
NBG				*e*S		**Sn**		**22 01 07.8**	**+5.2**
JAT	**Jato**	**0.97**	**306**	*e*P		**Pn**		**22 00 42.9**	**-6.2**
SONS		**1.08**	**90**	*e*P		x		22 00 48.7	
SONS				*e*S		x		22 01 07.2	
SONS				AML		x		22 01 12.3	
	comp=Z,12μm,0.4s								
SONS				*i*				22 01 12.4	
RTR	**El Retiro**	**1.16**	**82**	↓*e*P		x		22 00 50.9	
RBDL	**Robledal**	**1.17**	**71**	↓*i*P		x		22 00 51.6	
SBLS	**San Blas**	**1.17**	**85**	*e*P		x		22 00 50.7	
SBLS				↓*i*P		x		22 00 50.7	
SNJE	**San Jose**	**1.19**	**84**	↓*i*P		x		22 00 51.2	
BOQS	**Boqueron**	**1.50**	**90**	*e*P		x		22 00 55.4	
BOQS				*e*P		x		22 00 55.5	
BOQS				*e*S		x		22 01 18.9	
SNET	**Serv Nac Est T**	**1.55**	**92**	*e*P		x		22 00 56.2	
SNET				*e*S		x		22 01 19.4	
SNET				AML		x		22 01 23.8	
	comp=Z,16μm,0.3s								
MTO2	**Montecristo 2**	**1.56**	**65**	↓*i*P		x		22 00 57.6	
MRL	**Marmol**	**1.71**	**40**	*e*P		**Pn**		**22 01 01.0**	**+2.4**
LFRS	**El Faro**	**1.72**	**94**	*e*P		x		22 00 58.2	
LBRS	**Las Brisas**	**1.73**	**90**	*e*P		x		22 00 59.0	
THIG		**1.81**	**310**	*i* P		**Pn**		**22 00 52.7**	**-7.2**
THIG				*i* S		**Sn**		**22 01 14.1**	**-8.1**
SNVI	**San Vicente**	**1.93**	**94**	*e*P		x		22 01 02.1	
SNVI				*e*P		x		22 01 02.1	
VSM	**San Miguel**	**2.50**	**97**	*e*P		x		22 01 09.7	
VSM				*e*P		x		22 01 09.9	
BLLM	**Bellamira**	**2.53**	**96**	*e*P		x		22 01 09.9	
CAHU	**Cacacuatique**	**2.54**	**89**	*e*P		x		22 01 10.1	
CAHU				*e*P		x		22 01 10.2	
CCIG	**Comitan**	**2.83**	**333**	*i* P		**Pn**		**22 01 11.8**	**-1.7**
CCIG				*i* S		**Sn**		**22 01 46.1**	**-0.5**
CCIG	**Comitan**	**2.83**	**333**	*i* P		**Pn**		**22 01 11.8**	**-1.7**
CCIG				*i* S		**Sn**		**22 01 46.3**	**-0.3**
CNCH	**Conchagua**	**2.94**	**99**	*e*P		x		22 01 15.2	
CNCH				*e*P		x		22 01 15.5	
PCIG		**3.03**	**310**	*i* P		**Pn**		**22 01 08.9**	**-7.4**
PCIG				*i* S		**Sn**		**22 01 42.5**	**-9.0**
SCX	**San Cristobal**	**3.45**	**330**	*i* P		**Pn**		**22 01 19.2**	**-2.9**
SCX				*i* S		**Sn**		**22 02 01.5**	**-0.3**
SCX	**San Cristobal**	**3.45**	**330**	*i* P		**Pn**		**22 01 19.2**	**-2.9**
SCX				*i* S		**Sn**		**22 02 07.5**	**+5.7**
TGUH	**Tegucigalpa,Un**	**3.46**	**84**	*e*P		**Pn**		**22 01 23.2**	**+1.0**
TGUH	**Tegucigalpa,Un**	**3.46**	**84**	*e*Pn		**Pn**		**22 01 23.3**	**+1.1**
TGIG		**3.75**	**324**	*i* P		**Pn**		**22 01 21.6**	**-4.4**
TGIG				*i* S		**Sn**		**22 02 05.2**	**-3.8**
CRIN	**San Cristobal**	**3.82**	**105**	*e*P		**Pn**		**22 01 28.0**	**+0.9**
CRIN				*e*S		**Sn**		**22 02 11.0**	**+0.2**
CRIN				AML		AML		22 02 37.8	
	comp=N,5μm,0.6s								
TEL3	**Telica 3**	**4.05**	**106**	*e*P		**Pn**		**22 01 30.5**	**+0.3**
CNGN	**Cerro Negro**	**4.21**	**107**	*e*P		**Pn**		**22 01 31.7**	**-0.6**
CNGN				*e*P				22 01 31.7	
MIRN	**Miramar**	**4.21**	**107**	*e*P		**Pn**		**22 01 32.9**	**+0.5**
MOMN	**Momotombo**	**4.38**	**107**	*e*P		**Pn**		**22 01 35.8**	**+1.1**
COPN	**Copaltepe**	**4.41**	**110**	*e*P		**Pn**		**22 01 34.7**	**-0.7**
CSAN		**4.56**	**109**	*e*P		**Pn**		**22 01 37.7**	**+0.5**
APYN	**Apoyeque**	**4.61**	**108**	*e*P		**Pn**		**22 01 38.0**	**+0.1**
XAVN	**Gruta Xavier**	**4.66**	**109**	*e*P		**Pn**		**22 01 39.0**	**+0.4**
MGAN	**Managua**	**4.74**	**109**	*e*P		**Pn**		**22 01 39.1**	**-0.5**
MGAN				*e*P				22 01 40.7	
HUEN		**4.74**	**107**	*e*P		**Pn**		**22 01 39.6**	**-0.1**
CRUN	**El Crucero**	**4.75**	**111**	*e*P		**Pn**		**22 01 40.8**	**+1.0**
WILN	**Americas 2**	**4.79**	**109**	*e*P		**Pn**		**22 01 40.3**	**0.0**
WILN				*e*S		**Sn**		**22 02 33.4**	**-1.1**
WILN				AML		AML		22 03 01.6	
	comp=E,557nm,0.8s								
TICN	**Ticuantepe**	**4.79**	**110**	*e*P		**Pn**		**22 01 41.4**	**+1.1**
APON	**Apoyo**	**4.98**	**111**	*e*P		**Pn**		**22 01 44.6**	**+1.7**
CMIG	**Matias Romero**	**5.14**	**311**	Pn		**Pn**		**22 01 38.3**	**-6.8**
	comp=E,19nm,0.3s,baz=129,slow=11,SNR=114								
CMIG				Sn		**Sn**		**22 02 32.3**	**-11**
	comp=E,44nm,0.3s,baz=22,slow=13,SNR=7.0								
CMIG				LR		LR		22 03 39.3	
	comp=E,2μm,21.4s,baz=122,slow=37								
CMIG	**Matias Romero**	**5.14**	**311**	*i* P		**Pn**		**22 01 38.5**	**-6.6**
CMIG				*i* S		**Sn**		**22 02 35.2**	**-7.9**
CMIG	**Matias Romero**	**5.14**	**311**	*i* P		**Pn**		**22 01 38.5**	**-6.6**
CMIG				*i* S		**Sn**		**22 02 38.4**	**-4.7**
SCIG	**Sabancuy**	**5.21**	**356**	*i* P		**Pn**		**22 01 44.8**	**-1.3**
SCIG				*i* S		**Sn**		**22 02 48.8**

comp=Z,54nm,1.2s
UALR University of 20.99 357 *e*P **P** 22 05 07.8 **0.0**
comp=Z,61nm,1.0s
NHSC New Hope 21.58 25 *e*pP pP 22 05 27.4 -2.3
SWET Sewanee 21.83 11 *e*P **P** **22 05 11.6 -5.3**
WMOK Wichita Mounta 22.11 342 *e*P **P** **22 05 19.4 -0.4**
WMOK pmax pmax
comp=Z,40nm,1.1s,mb4.7
WMOK Wichita Mounta 22.11 342 *e*P **P** **22 05 19.4 -0.4**
comp=Z,40nm,1.1s,mb4.7
GDL2 Guadalupe Moun 22.16 328 *e*P **P** **22 05 20.1 -0.3**
CPCT Cooper Cave 22.35 14 *e*P **P** **22 05 23.1 +0.8**
WVT Waverly 22.45 6 *e*P **P** **22 05 23.8 +0.3**
WVT pmax pmax
comp=Z,31nm,0.9s,mb4.6
WVT Waverly 22.45 6 *e*P **P** **22 05 23.8 +0.3**
comp=Z,31nm,0.9s,mb4.6
TKL Tuckaleechee C 22.73 15 P **P** **22 05 27.3 +0.9**
comp=Z,26nm,0.7s,mb4.7,baz=174,slow=13,SNR=13
TKL Tuckaleechee C 22.73 15 P **P** **22 05 27.3 +1.0**
TKL pmax pmax
comp=Z,26nm,0.7s,mb4.7
TKL Tuckaleechee C 22.73 15 *e*P **P** **22 05 26.7 +0.3**
AMTX Amarillo 23.22 337 *e*P **P** **22 05 29.4 -1.9**
comp=Z,37nm,0.8s,mb4.8
TZTN Tazewell 23.62 15 *e*P **P** **22 05 35.8 +0.9**
comp=Z,380nm,2.2s,mb5.3
SIUC Southern Illin 23.92 3 *e*P **P** **22 05 38.1 +0.5**
comp=Z,67nm,0.9s,mb5.0
ATAH Atahualpa 24.02 148 P **P** **22 05 42.1 +3.4**
comp=Z,6.4nm,0.7s,mb4.1,baz=337,slow=8.1,SNR=5.7
ATAH LR LR 22 13 47.1
comp=Z,495nm,19.8s,baz=140,slow=34
SJG San Juan 24.11 76 P **P** **22 05 38.4 -1.2**
CCM Cathedral Cave 24.22 359 *e*P **P** **22 05 40.7 +0.4**
CCM pmax pmax
comp=Z,37nm,0.9s,mb4.7
CCM Cathedral Cave 24.22 359 *e*P **P** **22 05 40.6 +0.3**
comp=Z,37nm,0.9s,mb4.7
MTP Monte Pirata 24.68 77 P **P** **22 05 43.9 -0.9**
WCI Wyandotte Cave 24.72 9 *e*P **P** **22 05 44.7 -0.2**
WCI *e* 22 09 20.6
WCI pmax pmax
comp=Z,95nm,0.8s,mb5.3
WCI Wyandotte Cave 24.72 9 *e*P **P** **22 05 44.7 -0.1**
comp=Z,95nm,0.8s,mb5.3
WCI *e*PcP PcP 22 09 20.6 +0.4
LPM Los Pinos Moun 24.99 328 *e*P **P** **22 05 48.1 +0.7**
OLIL Olney 25.01 5 *e*P **P** **22 05 47.2 -0.3**
comp=Z,32nm,0.8s,mb4.8
LENM Lemitar 25.06 327 *e*P **P** **22 05 49.0 +1.0**
ANMO Albuquerque 25.40 329 P **P** **22 05 51.2 +0.1**
comp=Z,10nm,0.7s,mb4.4
ANMO PcP PcP 22 09 22.6 +0.8
ANMO LR LR 22 17 16.6
comp=Z,226nm,18.5s,slow=40
ANMO Albuquerque 25.40 329 *e*P **P** **22 05 51.6 +0.5**
ANMO *e* 22 09 24.0
ANMO pmax pmax
comp=Z,10.0nm,0.7s
ANMO Albuquerque 25.40 329 *e*P **P** **22 05 51.6 +0.5**
comp=Z,10nm,0.7s,mb4.4
ANMO *e*PcP PcP 22 09 24.0 +2.2
KSU1 Kansas State U 25.77 350 *e*P **P** **22 05 54.1 -0.4**
comp=Z,25nm,0.9s,mb4.6
TUC Tucson 25.97 319 *e*P **P** **22 05 57.7 +1.3**
TUC pmax pmax
comp=Z,18nm,1.1s,mb4.4
TUC Tucson 25.97 319 *e*P **P** **22 05 57.7 +1.3**
comp=Z,18nm,1.1s,mb4.4
SDCO Great Sand Dun 27.24 334 *e*P **P** **22 06 08.4 +0.8**
ACSO Alum Creek Sta 27.27 13 *e*P **P** **22 06 08.3 +0.3**
comp=Z,126nm,1.8s,mb5.2
MVCO Mesa Verde 28.20 329 *e*P **P** **22 06 17.3 +1.1**
comp=Z,19nm,0.8s,mb4.7
MVCO *e*PcP PcP 22 09 29.7 +1.4
SDMD Soldier's Deli 28.39 23 *e*P **P** **22 06 18.8 +0.9**
comp=Z,20nm,0.8s,mb4.7
WUAZ Wupatki 28.50 323 *e*P **P** **22 06 20.1 +1.1**
comp=Z,30nm,0.8s,mb5.0
WUAZ *e*PcP PcP 22 09 30.8 +1.7
PV01 Paradox Valley 28.96 330 *e*P **P** **22 06 23.6 +0.7**
comp=Z,641nm,0.9s
PV01 *e*PP PP 22 07 25.6 -4.0
NNA Nana 29.08 151 LR LR 22 15 53.7
comp=Z,348nm,20.5s,baz=315,slow=32
NNA Nana 29.08 151 *e*P **P** **22 06 24.8 +0.6**
PV04 Paradox Valley 29.32 330 *e*P **P** **22 06 27.1 +0.9**
PV10 Paradox Valley 29.37 330 *e*P **P** **22 06 26.4 -0.2**
comp=Z,154nm,0.7s,mb5.7
ECSD EROS,Sioux Fal 30.30 352 *e*P **P** **22 06 33.8 -0.9**
comp=Z,14nm,1.2s,mb4.5
BBGH Gun Hill 30.41 87 P **P** **22 06 35.3 -0.8**
PFO Pinyon Flat Ob 30.55 315 LR LR 22 18 59.2
comp=Z,510nm,20.0s,baz=290,slow=36
PFO Pinyon Flat Ob 30.55 315 *e*P **P** **22 06 37.4 +0.3**
PFO *e* 22 07 45.7
PFO *e* 22 09 34.0
PFO pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
PFO Pinyon Flat Ob 30.55 315 *e*P **P** **22 06 37.4 +0.3**
comp=Z,4.1nm,0.9s,mb4.2
PFO *e*PP PP 22 07 45.7 -1.6
PFO *e*PcP PcP 22 09 34.0 -0.4
SRU San Rafael 30.68 329 *e*P **P** **22 06 39.2 +1.0**
SRU pmax pmax
comp=Z,25nm,1.5s,mb4.7
SRU San Rafael 30.68 329 *e*P **P** **22 06 39.2 +1.0**
comp=Z,25nm,1.5s,mb4.7
MSU Marysvale 31.09 326 *e*P **P** **22 06 42.8 +1.0**
MSU *e* 22 09 37.8
TMUT Trail Mountain 31.16 329 *e*P **P** **22 06 43.7 +1.3**
SHPR Sheep Range 31.44 320 *e*P **P** **22 06 46.1 +1.2**
SHPR *e*PcP PcP 22 09 38.6 +1.9
MPU Maple Canyon 31.92 329 *e*P **P** **22 06 50.1 +1.0**
comp=Z,19nm,0.9s,mb4.8
DAU Daniels Canyon 32.04 330 *e*P **P** **22 06 51.2 +1.1**
NLU North Lily Min 32.10 328 *e*P **P** **22 06 52.3 +1.7**
JLU Jordanelle 32.28 330 *e*P **P** **22 06 53.2 +1.0**
JLU *e*pP pP 22 07 02.0 -7.9
TPNV Topopah Spring 32.40 320 *e*P **P** **22 06 55.0 +1.7**
TPNV pmax pmax
comp=Z,11nm,1.1s,mb4.5
TPNV Topopah Spring 32.40 320 *e*P **P** **22 06 55.0 +1.7**
comp=Z,11nm,1.1s,mb4.5
SADO Sadowa 32.49 16 LR LR 22 21 00.6
comp=Z,476nm,19.0s,baz=56,slow=38
NOQ North Oquirrh 32.64 329 *e*P **P** **22 06 56.9 +1.5**
comp=Z,43nm,1.0s,mb5.2
DUG Dugway 32.65 328 *e*P **P** **22 06 56.7 +1.2**
DUG *e* 22 09 40.2
DUG pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
DUG Dugway 32.65 328 *e*P **P** **22 06 56.7 +1.2**
comp=Z,8.9nm,0.9s,mb4.6
DUG *e*PcP PcP 22 09 40.2 +0.2
PDAR Pinedale Array 33.14 334 P **P** **22 06 59.6 -0.1**
comp=Z,2.5nm,0.7s,mb4.2,baz=102,slow=12,SNR=11
PDAR PcP PcP 22 09 41.6 +0.4
comp=Z,1.9nm,0.7s,baz=172,slow=3.0,SNR=6.2
PDAR ScP ScP 22 13 27.9 +8.9
comp=Z,0.7nm,0.8s,baz=126,slow=4.6,SNR=3.5
SPUT South Promonto 33.30 330 *e*P **P** **22 07 02.2 +1.1**
TPH Tonopah 33.70 321 *e*P **P** **22 07 05.3 +0.6**
TPH *e* 22 08 24.2
TPH *e* 22 09 43.3
TPH pmax pmax
comp=Z,12nm,0.9s,mb4.7
TPH Tonopah 33.70 321 *e*P **P** **22 07 05.3 +0.6**
comp=Z,12nm,0.9s,mb4.7
TPH *e*PP PP 22 08 24.2 +1.9
TPH *e*PcP PcP 22 09 43.3 +0.3
HVU Hansel Valley 33.82 330 *e*P **P** **22 07 06.5 +0.8**
HVU pmax pmax
comp=Z,32nm,1.2s,mb5.0
HVU Hansel Valley 33.82 330 *e*P **P** **22 07 06.5 +0.9**
comp=Z,32nm,1.2s,mb5.0
REDW Red Top Meadow 34.17 334 *e*P **P** **22 07 05.2 -3.5**
comp=Z,38nm,1.0s,mb5.2
SNOW Snow King Moun 34.21 334 *e*P **P** **22 07 09.2 +0.2**
comp=Z,36nm,0.9s,mb5.2
SNOW *e*PP PP 22 08 26.6 -1.2
SNOW *e*PcP PcP 22 09 43.8 -0.5
LOHW Long Hollow 34.27 334 *e*P **P** **22 07 05.9 -3.6**
comp=Z,8.3nm,0.8s,mb4.6

LOHW *e*PcP PcP 22 09 44.0 -0.4
ELK Elko 34.33 326 *e*P **P** **22 07 11.4 +1.3**
ELK *e* 22 08 29.1
ELK *e* 22 09 46.0
ELK pmax pmax
comp=Z,16nm,0.8s
ELK Elko 34.33 326 *e*P **P** **22 07 11.4 +1.3**
comp=Z,16nm,0.8s,mb4.9
ELK *e*PP PP 22 08 29.1 -0.1
ELK *e*PcP PcP 22 09 46.0 +1.3
RRI2 Red Ridge 34.36 333 *e*P **P** **22 07 11.0 +0.6**
comp=Z,18nm,1.1s,mb4.8
RRI2 *e*PP PP 22 08 35.9 +6.4
RRI2 *e*PcP PcP 22 09 46.7 +2.0
NVAR Mina Array Bea 34.59 320 P **P** **22 07 13.8 +1.4**
comp=Z,36nm,0.8s,mb5.3,baz=131,slow=7.9,SNR=144
NVAR PcP PcP 22 09 46.2 +0.8
comp=Z,6.1nm,0.7s,baz=126,slow=3.3,SNR=21
NVAR Mina Array Bea 34.59 320 P **P** **22 07 13.8 +1.4**
NVAR PcP PcP 22 09 46.2 +0.7
AGMN Agassiz Refuge 34.71 354 *e*P **P** **22 07 11.6 -1.6**
comp=Z,21nm,1.4s,mb4.8
AGMN *e*PcP PcP 22 09 45.4 -0.2
BMN Battle Mountai 35.22 324 *e*P **P** **22 07 19.0 +1.2**
BMN pmax pmax
comp=Z,24nm,0.8s,mb5.1
BMN Battle Mountai 35.22 324 *e*P **P** **22 07 19.0 +1.2**
comp=Z,24nm,0.8s,mb5.1
BMN *e*PP PP 22 08 38.3 -0.7
BMN *e*PcP PcP 22 09 47.7 +0.4
WAKR Walker 35.35 319 *e*P **P** **22 07 20.5 +1.6**
HLID Hailey 35.96 330 *e*P **P** **22 07 24.6 +0.6**
comp=Z,12nm,1.0s,mb4.8
HLID *e*PcP PcP 22 09 49.0 -0.4
PAHR Pah Rah Range 36.04 321 *e*P **P** **22 07 26.5 +1.7**
MCMT McKenzie Canyo 36.21 333 P **P** **22 07 27.6 +1.5**
BOZ Bozeman (W) 36.35 335 *e*P **P** **22 07 26.7 -0.6**
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BOZ Bozeman (W) 36.35 335 *e*P **P** **22 07 26.7 -0.6**
comp=Z,3.9nm,0.9s,mb4.3
DLMT Dillon 36.52 334 *e*P **P** **22 07 30.1 +1.3**
comp=Z,7.8nm,0.8s,mb4.7
DLMT *e*PP PP 22 08 53.5 +0.3
DLMT *e*PcP PcP 22 09 52.9 +1.9
ULM Lac du Bonnet 36.64 355 P **P** **22 07 27.6 -2.2**
comp=Z,6.2nm,0.7s,mb4.7,baz=172,slow=9.9,SNR=10.0
ULM LR LR 22 25 56.4
comp=Z,268nm,21.2s,baz=206,slow=42
WVOR Wild Horse Val 37.35 325 *e*P **P** **22 07 35.3 -0.6**
WVOR *e* 22 09 54.1
WVOR pmax pmax
comp=Z,30nm,0.9s,mb5.2
WVOR Wild Horse Val 37.35 325 *e*P **P** **22 07 35.3 -0.5**
comp=Z,30nm,0.9s,mb5.2
WVOR *e*PcP PcP 22 09 54.1 +0.5
EGMT Eagleton 37.63 339 *e*P **P** **22 07 38.2 +0.1**
comp=Z,96nm,2.5s,mb5.2
MOD Modoc 37.95 323 *e*P **P** **22 07 41.5 +0.5**
MOD *e*PcP PcP 22 09 56.5 +1.1
MSO Missoula 38.26 334 *e*P **P** **22 07 44.1 +0.6**
comp=Z,16nm,1.5s,mb4.6
BMO Blue Mountains 38.32 329 *e*P **P** **22 07 43.5 -0.5**
comp=Z,14nm,1.3s,mb4.6
LASM Arnica Sink 38.51 322 P **P** **22 07 46.2 +0.5**
YBH Yreka Blue Hor 39.27 321 LR LR 22 26 22.1
comp=Z,381nm,18.3s,baz=144,slow=40
YBH Yreka Blue Hor 39.27 321 *e*P **P** **22 07 51.2 -0.9**
YBH pmax pmax
comp=Z,129nm,2.8s
YBH Yreka Blue Hor 39.27 321 *e*P **P** **22 07 51.2 -0.9**
comp=Z,129nm,2.8s,mb5.3
KHMM Horse Mountain 39.42 320 *e*P **P** **22 07 54.3 +1.0**
WALA Waterton Lakes 40.02 336 *e*P **P** **22 07 59.0 +0.9**
WALA *e*PcP PcP 22 10 02.1 +0.3
NEW Newport 40.74 333 *e*P **P** **22 08 04.6 +0.5**
NEW *e*PP pP 22 08 13.5 -8.8
OD2 Odessa Site #2 40.82 331 P **P** **22 08 04.7 0.0**
HOOD Mount Hood Mea 40.89 326 *e*P **P** **22 08 03.1 -2.2**
comp=Z,171nm,1.0s,mb5.8
KEBM Edson Butte 40.92 322 *e*P **P** **22 08 08.2 +2.6**
ASR Mount Adams--S 41.40 327 P **P** **22 08 10.7 +1.1**
SIV San Ignacio 41.69 134 P **P** **22 08 12.2 -0.1**
comp=Z,21nm,0.7s,mb5.0,baz=312,slow=8.8,SNR=128
FFC Flin Flon 41.81 350 *e*P **P** **22 08 11.4 -1.4**
LON Longmire 41.91 328 *e*P **P** **22 08 13.6 -0.1**
LON *e* 22 09 51.9
LON *e* 22 10 08.1
LON pmax pmax
comp=Z,15nm,0.9s,mb4.7
LON Longmire 41.91 328 *e*P **P** **22 08 13.6 -0.1**
comp=Z,16nm,0.9s,mb4.7
LON *e*PP PP 22 09 51.9 -0.1
LON *e*PcP PcP 22 10 08.1 0.0
LVC Limon Verde 42.03 149 P **P** **22 08 14.4 -0.5**
comp=Z,3.5nm,0.8s,mb4.2,baz=284,slow=4.4,SNR=4.5
LVC Limon Verde 42.03 149 *e*P **P** **22 08 14.3 -0.6**
LVC *e*PcP PcP 22 10 09.5 +0.7
RPW Rockport 42.91 330 P **P** **22 08 21.0 -0.7**
JCW Jim Creek 42.94 330 *e*P **P** **22 08 21.3 -0.7**
CMW Cultus Mountai 43.18 330 P **P** **22 08 23.1 -0.9**
EDM Edmonton 43.25 340 *e*P **P** **22 08 23.6 -0.9**
EDM *e* 22 10 06.4
EDM *e* 22 10 12.2
FCC Fort Churchill 45.00 358 *e*P **P** **22 08 36.7 -1.7**
FCC *e* 22 10 18.9
FCC *e* 22 10 26.2
SCHQ Schefferville 45.08 19 P **P** **22 08 38.2 -0.8**
comp=Z,56nm,0.9s,mb5.3,baz=220,slow=7.5,SNR=47
SCHQ PcP PcP 22 10 18.6 0.0
comp=Z,4.9nm,0.6s,baz=219,slow=3.9,SNR=5.1
SCHQ Schefferville 45.08 19 *e*P **P** **22 08 38.1 -1.0**
comp=Z,49nm,0.8s,mb5.3
LCO Las Campanas 46.74 156 *e*P **P** **22 08 52.3 -0.1**
comp=Z,5.8nm,0.6s,mb4.5
BBB Bella Bella 48.55 330 LR LR 22 33 60.0
comp=Z,167nm,20.1s,baz=167,slow=42
CFAA Coronel Fontan 50.02 155 P **P** **22 09 17.1 -0.6**
comp=Z,0.5nm,0.7s,mb3.6,baz=326,slow=6.3,SNR=9.7
BDFB Brasilia 51.42 123 P **P** **22 09 25.9 -2.5**
comp=Z,1.8nm,0.7s,mb4.2,baz=10,slow=23,SNR=6.6
BDFB LR LR 22 32 49.8
comp=Z,81nm,18.9s,baz=154,slow=38
BDFB Brasilia 51.42 123 P **P** **22 09 25.9 -2.5**
BDFB pmax pmax
comp=Z,2.0nm,0.7s
BDFB MLR MLR
comp=Z,81nm,18.9s
BDFB Brasilia 51.42 123 *e*P **P** **22 09 25.8 -2.6**
BDFB *e*PcP PcP 22 10 45.1 +3.0
CPUP Villa Florida 51.45 141 P **P** **22 09 26.9 -1.7**
comp=Z,2.1nm,0.7s,mb4.3,baz=317,slow=9.1,SNR=12
CPUP PcP PcP 22 10 41.4 -0.6
comp=Z,1.4nm,0.7s,baz=297,slow=7.8,SNR=3.9
CPUP LR LR 22 32 54.6
comp=Z,214nm,18.4s,baz=307,slow=38
CPUP Villa Florida 51.45 141 *e*P **P** **22 09 26.9 -1.6**
CPUP *e* 22 10 42.0
CPUP pmax pmax
comp=Z,9.0nm,0.7s
CPUP Villa Florida 51.45 141 *e*P **P** **22 09 26.9 -1.7**
comp=Z,9.0nm,0.7s,mb4.9
CPUP *e*PcP PcP 22 10 42.0 0.0
YKA Yellowknife Ar 51.54 346 P **P** **22 09 27.4 -1.3**
comp=Z,5.2nm,0.7s,mb4.7,baz=148,slow=7.5,SNR=101
YKA PcP PcP 22 10 41.3 -0.4
comp=Z,1.3nm,0.6s,baz=153,slow=3.8,SNR=8.9
YKA LR LR 22 33 58.9
comp=Z,18nm,21.4s,baz=240,slow=39
YKA Yellowknife Ar 51.54 346 P **P** **22 09 27.4 -1.2**
YKA 22 10 41.4
DLBC Dease Lake 53.36 336 *e*P **P** **22 09 43.5 +1.4**
PLCA Paso Flores 57.37 162 P **P** **22 10 10.1 -1.0**
comp=Z,1.3nm,0.8s,mb4.0,baz=24,slow=6.4,SNR=3.0
PLCA PcP PcP 22 11 03.4 -1.0
comp=Z,1.4nm,0.8s,baz=16,slow=7.4,SNR=3.1
PLCA LR LR 22 30 29.1
comp=Z,251nm,18.2s,baz=122,slow=32
PLCA Paso Flores 57.37 162 P **P** **22 10 10.1 -1.0**
PLCA 22 11 03.4
PLCA pmax pmax
comp=Z,1.0nm,0.8s
PLCA MLR MLR
comp=Z,251nm,18.3s
PLCA Paso Flores 57.37 162 *e*P **P** **22 10 09.7 -1.4**

RCBR Riachuelo 57.87 106 *e*P **P** **22 10 16.0 +0.7**
RCBR *e*PP PP 22 12 26.4 +2.1
TRQA Tornquist 58.20 153 *e*P **P** **22 10 15.9 -1.1**
RES Resolute Bay 60.98 359 LR LR 22 38 19.7
comp=Z,186nm,21.6s,baz=111,slow=37
RES Resolute Bay 60.98 359 *e*P **P** **22 10 33.9 -1.7**
RES pmax pmax
comp=Z,11nm,0.7s,mb5.0
RES Resolute Bay 60.98 359 *e*P **P** **22 10 33.9 -1.7**
comp=Z,11nm,0.7s,mb5.0
PMR Palmer 63.16 333 *e*P **P** **22 10 50.0 -0.5**
PMR pmax pmax
comp=Z,11nm,0.7s,mb4.9
PMR Palmer 63.16 333 *e*P **P** **22 10 50.0 -0.4**
comp=Z,11nm,0.7s,mb4.9
RC01 Rabbit Creek A 63.25 332 *e*P **P** **22 10 50.7 -0.4**
comp=Z,31nm,0.8s,mb5.3
RC01 *e*PcP PcP 22 11 28.0 +0.3
COLA College 63.94 337⇓ *e*P **P** **22 10 55.0 -0.5**
COLA College 63.94 337 *e*P **P** **22 10 54.4 -1.1**
comp=Z,6.3nm,0.7s,mb4.5
COLA *e*PcP PcP 22 11 31.0 +0.5
TRF Thorofare Moun 64.36 335 *e*P **P** **22 10 58.0 -0.3**
comp=Z,15nm,0.8s,mb4.9
TRF *e*PP PP 22 13 20.4 -0.1
MEH Mehetia 64.61 242 *e*T 23 20 27.7
comp=Z,186nm,0.2s
KTH Kantishna Hill 64.66 335 *e*P **P** **22 10 59.5 -0.7**
comp=Z,15nm,0.9s,mb4.8
BPAW Bear Paw Mtn. 64.89 335 *e*P **P** **22 11 00.7 -1.0**
comp=Z,11nm,0.8s,mb4.8
BPAW *e*PcP PcP 22 11 36.6 +2.2
PPT Papeete 65.79 243 *e*LR LR 22 30 34.4
comp=Z,371nm,25.8s,baz=57
PPT Papeete 65.79 243 LR LR 22 32 05.5
comp=Z,359nm,18.3s,baz=35,slow=29
SVW2 Sparrevohn 65.94 331 *e*P **P** **22 11 07.6 -1.0**
SUMG Summit 66.18 15 *e*P **P** **22 11 09.5 -0.4**
comp=Z,5.8nm,0.6s,mb4.6
TBI Tubuai 68.17 238 *e*LR LR 22 31 59.0
comp=Z,247nm,26.0s,baz=58
ESK Eskdalemuir 77.48 36 P **P** **22 12 17.5 -0.4**
ESDC Sonseca Array 78.98 52 P **P** **22 12 24.9 -1.6**
comp=Z,0.7nm,0.6s,mb3.7,baz=288,slow=4.8,SNR=15
ESLA Sonseca Array 78.98 52 *e*P **P** **22 12 25.0 -1.6**
SPITS Spitsbergen Ar 80.11 12 LR LR 22 50 12.8
comp=Z,329nm,19.9s,baz=180,slow=37
BILL Bilibino 82.12 338⇓ *i*P **P** **22 12 43.0 +0.2**
BILL *i* 22 12 52.8
BILL *e* 22 15 55.3
BILL *e*S S 22 22 49.2 -2.1
BILL pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
BILL Bilibino 82.12 338 *e*P **P** **22 12 42.4 -0.3**
comp=Z,7.7nm,0.6s,mb4.7
BILL *e* 22 12 52.4
BILL *e*PcP PP 22 15 50.4 -0.9
TCF Toulx Ste Croi 82.28 44 *e*P **P** **22 12 44.3 +0.3**
BAIF Baives 82.79 40 *e*P **P** **22 12 46.8 +0.2**
AVF Avril sur Loir 82.94 44 *e*P **P** **22 12 46.9 -0.6**
SSF Saint Saulge 82.99 43 *e*P **P** **22 12 47.2 -0.5**
LOR Lormes 83.18 43 *e*P **P** **22 12 48.6 -0.1**
SMF Signal de Mont 83.30 44 *e*P **P** **22 12 49.4 +0.1**
MEZF Maizieres J'vi 83.68 42 *e*P **P** **22 12 51.4 +0.2**
comp=Z,9.7nm,0.9s,mb4.3
MEZF Maizieres J'vi 83.68 42 *e*P **P** **22 12 51.4 +0.2**
comp=Z,9.7nm,0.9s,mb4.6
NB2 NORSAR Subarra 83.83 29 P **P** **22 12 54.5 +2.8**
comp=Z,2.2nm,0.8s,mb4.0,baz=287,slow=4.8
NOA NORSAR Array B 83.83 29 P **P** **22 12 51.1 -0.6**
comp=Z,1.6nm,0.8s,mb3.9,baz=289,slow=4.7,SNR=4.9
NOA LR LR 22 53 13.3
comp=Z,76nm,18.3s,baz=350,slow=38
TIC Toumodi 84.39 85 *e*P **P** **22 12 55.5 0.0**
comp=Z,38nm,0.8s,mb5.3
LIC Lamto 84.48 85 *e*P **P** **22 12 54.9 -1.1**
comp=Z,22nm,0.8s,mb4.8
LIC Lamto 84.48 85 *e*P **P** **22 12 54.6 -1.4**
comp=Z,35nm,0.8s,mb5.3
LIC Lamto 84.48 85 *e*P **P** **22 12 54.9 -1.1**
comp=Z,11nm,0.8s,mb4.8
DBIC Dimbokro 84.54 84 P **P** **22 12 54.9 -1.4**
comp=Z,7.1nm,0.7s,mb4.7,baz=266,slow=5.1,SNR=14
DBIC LR LR 22 46 09.3
comp=Z,143nm,20.1s,baz=286,slow=33
DBIC Dimbokro 84.54 84 *e*P **P** **22 12 55.0 -1.3**
DBIC pmax pmax
comp=Z,6.0nm,0.6s
DBIC Dimbokro 84.54 84 *e*P **P** **22 12 55.0 -1.3**
comp=Z,5.9nm,0.6s,mb4.7
HAU Haudompre 84.64 42 *e*P **P** **22 12 56.2 +0.1**
comp=Z,6.1nm,0.7s,mb4.4
HAU Haudompre 84.64 42 *e*P **P** **22 12 56.2 +0.1**
HAU pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
HAU Haudompre 84.64 42 *e*P **P** **22 12 56.2 +0.1**
comp=Z,3.0nm,0.7s,mb4.3
AFI Afiamalu 84.72 254 LR LR 22 41 22.3
comp=Z,111nm,21.3s,baz=60,slow=29
KIC Kosan Boka 84.72 85 *e*P **P** **22 12 56.7 -0.5**
comp=Z,55nm,0.8s,mb5.5
HINF Hinteralfeld 85.02 42 *e*P **P** **22 12 57.2 -0.8**
CDF Champ du Feu 85.14 41 *e*P **P** **22 12 58.0 -0.6**
HFS Hagfors 85.27 29 LR LR 22 48 30.2
comp=Z,176nm,19.6s,baz=59,slow=34
ARCES ARCESS Array B 86.02 18 P **P** **22 13 01.6 -1.0**
comp=Z,2.8nm,0.7s,mb4.3,baz=266,slow=1.9,SNR=7.4
CLL Collm 87.82 38⇑ *i*P **P** **22 13 12.3 +0.6**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
CLL Collm 87.82 38⇑ *i*P **P** **22 13 12.3 +0.6**
comp=Z,5.0nm,0.9s,mb4.5
BRG Berggiesshubel 88.53 38 *e*P **P** **22 13 13.0 -2.0**
BRG pmax pmax
comp=Z,7.0nm,1.9s,mb4.4
BRG Berggiesshubel 88.53 38 *e*P **P** **22 13 13.0 -2.0**
comp=Z,12nm,1.9s,mb4.6
GERES GERESS Array B 89.07 40 P **P** **22 13 18.0 +0.4**
comp=Z,0.8nm,0.8s,mb3.8,baz=316,slow=3.7,SNR=7.7
GERES LR LR 22 55 19.7
comp=Z,170nm,18.3s,baz=98,slow=37
TOA0 Torodi Ar. Sit 89.33 77 *e*P **P** **22 13 18.4 -1.1**
TORD Torodi Ar. Bea 89.33 77 P **P** **22 13 17.0 -2.5**
comp=Z,0.9nm,0.7s,mb3.9,baz=290,slow=5.0,SNR=10
TORD LR LR 22 51 27.5
comp=Z,149nm,20.1s,baz=295,slow=34
VRAC Vranov 90.68 39 LR LR 22 56 48.2
comp=Z,117nm,18.3s,baz=291,slow=38
TIXI Tiksi 90.74 348⇓ *e*P **P** **22 13 23.6 -1.4**
TIXI pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
TIXI MLR MLR
comp=Z,200nm,27.0s
PETK Petropavlovsk- 91.50 326 P **P** **22 13 29.8 +1.0**
comp=Z,9.9nm,0.9s,mb5.0,baz=78,slow=14,SNR=5.5
AKASG Malin Array Be 97.31 34 LR LR 22 57 38.8
comp=Z,111nm,18.1s,baz=300,slow=35
ZALV Zalesovo Beam 112.48 3 PKiKP PKiKP 22 18 58.1 0.0
comp=Z,1.0nm,0.5s,baz=255,slow=3.1,SNR=7.3
CN2 Changchun 113.86 332 *e*PKP PKiKP 22 18 58.0 -3.1
SONM Songino Array 116.81 347 PKP PKPdf 22 19 06.7 0.0
comp=Z,0.9nm,0.8s,baz=337,slow=1.2,SNR=6.9
KSRS Korea Array 117.40 326 PKP PKPdf 22 19 08.2 +0.1
comp=Z,2.2nm,0.7s,baz=358,slow=1.5,SNR=6.4
KSRS Korea Array 117.40 326 PKiKP PKPdf 22 19 08.2 +0.1
KSRS pmax pmax
comp=Z,2.0nm,0.7s
BOSA Boshof 119.21 115 PKP PKPdf 22 19 12.2 +0.5
comp=Z,7.1nm,0.8s,baz=155,slow=1.5,SNR=11
MK31 Makanchi Array 119.43 5 *e*PKiKP PKPdf 22 19 11.6 -0.1
MKAR Makanchi Array 119.43 5 PKP PKPdf 22 19 11.7 0.0
comp=Z,1.2nm,0.6s,baz=0.7,slow=2.1,SNR=16
LBTB Lobatse 119.44 111 *e*PKiKP PKPdf 22 19 14.4 +2.1
BJI Beijing 120.89 336 PKP PKPdf 22 19 14.8 +0.1
BJI SS SS 22 37 09.0 +0.7
BJI LR LR
comp=N,70nm,30.6s
BJI LR LR
comp=E,72nm,34.1s
BJI LR LR
comp=Z,66nm,39.5s
LSZ Lusaka 121.11 100 *e*PKiKP PKPdf 22 19 16.6 +0.9
HHC Hu-ho-hao-te 121.86 340 *e*PKP PKPdf 22 19 16.8 +0.2
HHC PP PP 22 20 56.0 +6.4
HHC PKS 22 22 52.0
HHC SKS SKSdf 22 26 17.0 -5.1

HHC					SKKS	SKKSac	22 27 38.0	-5.3		
HHC					SS	SS	22 37 22.8	+2.4		
HHC					PP	PP				
	comp=Z,59nm,5.6s									
HHC					LR	LR				
	comp=N,222nm,14.3s									
HHC					LR	LR				
	comp=E,226nm,15.5s									
HHC					LR	LR				
	comp=Z,199nm,14.3s									
AML	**Almayashu**	**122.61**	**14**	*e*PKPdf	PKPdf	22 19 18.8	+0.9			
WMQ	**Urumqi**	**122.70**	**1**	*e*PKP	PKPdf	22 19 17.3	-0.8			
CTAO	**Charters Tower**	**125.24**	**255**	*e*PKIKP	PKPdf	22 19 23.2	-0.3			
GTA	**Gaotai**	**126.20**	**350**	PKP	PKPdf	22 19 25.5	+0.6			
GTA				XPKP		22 19 56.0				
NJ2	**Nanjing**	**126.32**	**329**	*e*PKP	PKPdf	22 19 23.0	-2.4			
KBL	**Kabul**	**128.31**	**21**	*e*PKIKP	PKPdf	22 19 29.8	+0.7			
LZH	**Lanzhou**	**128.54**	**345**	*e*PKP	PKPdf	22 19 30.5	+1.0			
LZH				XPKP		22 20 00.5				
LZH				*e*PP	PP	22 21 39.5	+5.4			
LZH				SKKS	SKKSac	22 28 22.8	-3.2			
LZH				*e*SS	SS	22 38 45.8	+1.7			
LZH				PP	PP					
	comp=Z,97nm,8.1s									
LZH				LR	LR					
	comp=N,123nm,18.3s									
LZH				LR	LR					
	comp=Z,195nm,20.0s									
XAN	**Xi'an**	**128.90**	**339**	PKP	PKPdf	22 19 27.0	-3.2			
XAN				XPKP		22 20 02.3				
XAN				PP	PP	22 21 38.0	+1.4			
XAN				SKS	SKSdf	22 26 27.0	-8.6			
XAN				SS	SS	22 38 54.3	+5.4			
XAN				LR	LR					
	comp=Z,68nm,22.7s									
CD2	**Chengdu**	**133.44**	**343**	PKP	PKPdf	22 19 34.5	-4.4			
WRAB	**Tennant Creek**	**136.43**	**255**	*e*PKIKP	PKPdf	22 19 46.2	+1.5			
WRA	**Warramunga Arr**	**136.44**	**255**	PKP	PKPdf	22 19 44.1	-0.6			
	comp=Z,1.6nm,0.7s,baz=88,slow=3.0,SNR=12									
GYA	**Guiyang**	**136.57**	**337**	*e*PDIF	Pdif	22 16 48.8	-1.2			
GYA				PKP	PKPdf	22 19 43.8	-1.1			
GYA				XPKP		22 20 14.3				
GYA				PP	PP	22 22 30.3	+4.5			
GYA				PKS		22 23 20.0				
GYA				SKS	SKSdf	22 26 46.3	-3.3			
GYA				SKKS	SKKSac	22 29 13.5	-1.8			
GYA				SS	SS	22 40 23.8	+1.7			
GYA				PP	PP					
	comp=Z,120nm,7.8s									
GYA				LR	LR					
	comp=N,180nm,20.9s									
GYA				LR	LR					
	comp=E,140nm,21.7s									
GYA				LR	LR					
	comp=Z,160nm,20.5s									
ASAR	**Alice Springs**	**136.65**	**250**	PKhKP		22 19 36.8				
	comp=Z,0.2nm,0.5s,baz=98,slow=2.8,SNR=4.2									
ASAR				PKP	PKPdf	22 19 45.1	+0.1			
	comp=Z,1.3nm,0.8s,baz=83,slow=2.2,SNR=8.8									
LSA	**Lhasa**	**136.77**	**357**	PKP	PKPdf	22 19 46.5	+1.3			
LSA	**Lhasa**	**136.77**	**357**	*e*PKPdf	PKPdf	22 19 46.8	+1.6			
SHL	**Shillong**	**140.84**	**356**	*e*P	P	22 19 53.5	+0.8			
CHTO	**Chiang Mai**	**146.25**	**343**	*e*PKP2	PKPbc	22 20 02.9	-0.6			
CM31	**Chiang Mai Arr**	**146.59**	**343**	*e*PKPdf	PKPbc	22 20 04.3	-0.2			
CMAR	**Chiang Mai Arr**	**146.59**	**343**	PKPbc	PKPbc	22 20 04.0	-0.4			
	comp=Z,18nm,0.6s,baz=342,slow=3.1,SNR=135									
HYB	**Hyderabad**	**147.31**	**19**	*i* PKP	PKPab	22 20 07.0	-1.4			
HYB				*e*		22 20 16.0				
HYB	**Hyderabad**	**147.31**	**19**	*e*P	PKPdf	22 20 04.5	+0.3			
MBWA	**Marble Bar**	**149.97**	**251**	*e*PKPdf	PKPdf	22 20 08.9	+0.5			

CSEM ***31*** *22:02:57.0, 3389N×3554E, h32km, ML2.6, After GRAL GII* ***31*** *22:02:57.5±0.0, 3400N×3578E, h0km, EXPLOSION GRAL* ***31*** *22:02:57.0±0.3, 3389N×3554E, h33km±2km, MD2.6 ISCJB* ***31*** *22:02:58.4±1.1, 3389N±004×3593E±008, h0km, Error ellipse: s-maj=10.0km s-min=6.3km az=171.8*

ISC 31 22:02:59.0±1.1, 3390N±004×3592E±008, h0km, n11, σ0s82/14, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.22**	**272**	*e*P		**Pg**	**22 03 02.5**	**-0.7**
BHL				*e*S		**Sg**	**22 03 06.5**	**+0.4**
HWQ	**Hawqa**	**0.38**	**3**	*e*P		**Pg**	**22 03 07.3**	**+1.0**
RCY	**Rachaya**	**0.42**	**192**	*e*P		**Pg**	**22 03 06.5**	**-0.5**
RCY				*e*S		**Sg**	**22 03 13.5**	**+1.1**
MMB4	**Mount Meron ar**	**0.97**	**207**	Pg		**Pg**	**22 03 17.1**	**-0.6**
MMC7	**Mount Meron ar**	**0.98**	**207**	Pg		**Pg**	**22 03 17.0**	**-0.7**
MMA0	**Mount Meron ar**	**0.98**	**206**	Pg		**Pg**	**22 03 17.4**	**-0.3**
MMA2	**Mount Meron ar**	**0.98**	**206**	Pg		**Pg**	**22 03 17.1**	**-0.7**
MMC4	**Mount Meron ar**	**0.98**	**205**	Pg		**Pg**	**22 03 17.2**	**-0.5**
MMC4				Sg		**Sg**	**22 03 32.7**	**+2.3**
MMC5	**Mount Meron ar**	**0.98**	**206**	Pg		**Pg**	**22 03 17.1**	**-0.7**
OFRI	**'Ofer**	**1.50**	**212**	Pn		**Pn**	**22 03 27.4**	**+0.4**
HMDT	**Nahal Hemdat**	**1.67**	**192**	Pn		**Pn**	**22 03 29.7**	**+0.2**

IDC 31 23:31:32.9±65.0, 2147S×17818W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=1183.0km s-min=177.3km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.23**	**245**	P		P	23 38 46.2	0.0
	5.7nm,1.2s,baz=85,slow=9.2,SNR=3.1							
ASAR	**Alice Springs**	**44.14**	**258**	P		P	23 39 42.9	-0.7
	0.5nm,0.6s,baz=81,slow=8.3,SNR=6.1							
WRA	**Warramunga Arr**	**44.31**	**263**	P		P	23 39 45.3	+0.4
	0.2nm,0.3s,baz=103,slow=8.3,SNR=10							

ISCJB ***31*** *23:43:13.7±0.7, 2577S±007×17959E±008, h495km±9km, mb4.4/17, Error ellipse: s-maj=11.3km s-min=10.2km az=143.5*
NEIC ***31*** *23:43:14.1±0.7, 2585S×17964E, h492km±7km, mb4.6/9, Error ellipse: s-maj=9.8km s-min=8.8km az=164.0*
IDC ***31*** *23:43:14.1±1.2, 2571S×17962E, h483km±12km, mb4.0/7, mb1 4.2/8, mb1mx3.8/18, mbtmp4.1/8, Error ellipse: s-maj=20.4km s-min=14.0km az=9.0*

ISC 31 23:43:14.5±0.6, 2585S±007×17964E±008, h493km±8km, n54, σ0s95/42, mb4.4/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.03**	**148**	P		**P**	**23 44 32.8**	**+0.3**
	194nm,0.3s,baz=92,slow=5.8,SNR=14							
RAO				S		**S**	**23 45 37.2**	**+1.0**
	65nm,0.3s,baz=54,slow=23,SNR=3.3							
URZ	**Urewera**	**12.56**	**189**	P		**P**	**23 45 56.9**	**-1.9**
	0.9nm,0.3s,baz=295,slow=17,SNR=5.6							
URZ				S		**S**	**23 48 13.1**	**-1.2**
	0.3nm,0.3s,baz=18,slow=11,SNR=3.7							
DZM	**Mont Dzumac**	**12.63**	**285**	*e*P		**P**	**23 45 59.0**	**-0.9**
DZM	**Mont Dzumac**	**12.63**	**285**	*e*P		**P**	**23 46 01.1**	**+1.3**
	42nm,1.0s							
AFI	**Afiamalu**	**14.35**	**36**	P		**P**	**23 46 16.6**	**-1.5**
SNZO	**South Karori**	**15.96**	**194**	*e*P		**P**	**23 46 34.1**	**-0.4**
	20nm,0.9s							
YNG	**Young**	**28.23**	**245**	*e*P		**P**	**23 48 28.7**	**+1.9**
	10nm,0.8s,mb4.3							
CMSA	**Cobar Meteorol**	**30.23**	**251**	*e*P		**P**	**23 48 45.1**	**+0.8**
	13nm,0.7s,mb4.5							
TOO	**Toolangi**	**31.15**	**240**	*e*P		**P**	**23 48 53.2**	**+1.1**
CTA	**Charters Tower**	**31.21**	**274**	*e*P		**P**	**23 48 53.3**	**+0.5**
	13nm,0.4s,mb4.7							
CTAO	**Charters Tower**	**31.21**	**274**	*e*P		**P**	**23 48 53.4**	**+0.6**
	22nm,0.7s,mb4.7							
MTSU	**Mount Surprise**	**33.56**	**276**	*e*P		**P**	**23 49 13.5**	**+0.6**
	50nm,0.8s,mb5.0							
STKA	**Stephens Creek**	**33.73**	**251**	P		**P**	**23 49 15.2**	**+1.0**
	13nm,0.5s,mb4.6,baz=97,slow=10,SNR=75							
STKA	**Stephens Creek**	**33.73**	**251**	*e*P		**P**	**23 49 14.9**	**+0.7**
	10nm,0.4s,mb4.6							
STKA	**Stephens Creek**	**33.73**	**251**	*e*P		**P**	**23 49 15.0**	**+0.9**
	2.3nm,0.4s,mb4.0							
PMG	**Port Moresby**	**34.87**	**292**	P		**P**	**23 49 23.8**	**-0.1**
	21nm,0.8s,mb4.6,baz=110,slow=9.8,SNR=5.6							
PMG	**Port Moresby**	**34.87**	**292**	*e*P		**P**	**23 49 23.6**	**-0.3**
	15nm,0.7s,mb4.5							
COEN	**Coen**	**36.15**	**282**	*e*P		**P**	**23 49 35.2**	**+0.6**
	15nm,0.5s,mb4.7							

ASAR	**Alice Springs**	**41.43**	**263**	P		**P**	**23 50 17.6**	**+0.1**		
	17nm,0.4s,mb4.8,baz=92,slow=7.3,SNR=397									
ASAR				ScP		ScP	23 55 09.7	+2.8		
	1.1nm,0.9s,baz=120,slow=4.1,SNR=4.5									
ASAR				S		**S**	**23 55 51.0**	**-5.4**		
	0.9nm,1.0s,baz=96,slow=16,SNR=3.5									
WB2	**Warramunga Arr**	**41.97**	**268**	*e*P		**P**	**23 50 21.2**	**-0.6**		
WB2	**Warramunga Arr**	**41.97**	**268**	*e*P		**P**	**23 50 21.2**	**-0.6**		
WB2				*e*		pP	23 51 49.9	-2.2		
WRAB	**Tennant Creek**	**41.98**	**268**	*e*P		**P**	**23 50 21.2**	**-0.6**		
	29nm,1.0s,mb4.7									
WRA	**Warramunga Arr**	**41.98**	**268**	P		**P**	**23 50 21.4**	**-0.4**		
	25nm,0.7s,mb4.8,baz=104,slow=7.9,SNR=90									
WRA				S		**S**	**23 56 04.1**	**-0.4**		
	1.1nm,0.7s,baz=100,slow=14,SNR=6.0									
FORT	**Forrest**	**45.35**	**251**	*e*P		**P**	**23 50 47.3**	**-0.7**		
	37nm,0.6s,mb5.0									
KAKA	**Kakadu**	**46.19**	**277**	*e*P		x	23 50 53.8			
	31nm,0.8s									
KAKA	**Kakadu**	**46.19**	**277**	*e*P		x	23 50 53.7			
	51nm,0.6s									
FITZ	**Fitzroy Crossi**	**50.38**	**267**	*e*P		**P**	**23 51 26.1**	**+0.2**		
	23nm,0.6s,mb4.7									
GUMO	**Guam**	**51.79**	**315**	P		**P**	**23 51 34.9**	**-1.2**		
MIDW	**Midway**	**53.83**	**3**	P		**P**	**23 51 50.1**	**-0.3**		
MBWA	**Marble Bar**	**54.74**	**262**	P		**P**	**23 51 56.5**	**-0.6**		
CASY	**Casey**	**58.23**	**206**	*e*P		**P**	**23 52 18.1**	**-2.4**		
	3.5nm,0.7s,mb3.8									
QSPA	**South Pole Qui**	**64.25**	**180**	P		**P**	**23 53 01.5**	**+1.7**		
	7.8nm,0.8s,mb4.3,baz=358,slow=0.5,SNR=22									
KSM	**Kuching**	**72.13**	**281**	P		**P**	**23 53 48.7**	**-0.2**		
SNAA	**Sanae**	**82.74**	**179**	*e*P		**P**	**23 54 45.5**	**-0.1**		
	2.3nm,0.9s,mb3.7									
NVAR	**Mina Array Bea**	**86.37**	**44**	P		**P**	**23 55 04.7**	**+0.8**		
	1.6nm,0.8s,mb3.7,baz=218,slow=8.0,SNR=8.4									
PLCA	**Paso Flores**	**87.15**	**134**	*e*P		**P**	**23 55 08.5**	**+0.8**		
TXAR	**Lajitas Array**	**91.73**	**58**	P		**P**	**23 55 30.2**	**+1.1**		
	1.4nm,0.9s,mb3.9,baz=212,slow=7.8,SNR=11									
TXAR	**Lajitas Array**	**91.73**	**58**	P		**P**	**23 55 30.2**	**+1.1**		
MCK	**McKinley**	**92.64**	**13**	*e*P		**P**	**23 55 32.1**	**-0.2**		
WALA	**Waterton Lakes**	**95.15**	**37**	P		**P**	**23 55 43.7**	**-0.5**		
TKM2	**Tokmak 2**	**117.05**	**307**	PKPdf		PKPdf	00 01 07.3	+4.5		
EKS2	**Erkin-Say**	**118.32**	**306**	PKPdf		PKPdf	00 01 06.5	+1.3		
BVAR	**Borovoye Array**	**121.67**	**318**	PKP		PKPdf	00 01 10.7	-0.7		
	0.9nm,0.5s,baz=131,slow=4.1,SNR=5.8									
ARU	**Arti**	**128.24**	**323**	*e*PKPdf		PKPdf	00 01 23.6	-0.3		
ARCES	**ARCESS Array B**	**133.71**	**348**	PKP		PKPdf	00 01 33.6	-0.2		
	2.4nm,0.8s,baz=54,slow=2.6,SNR=8.7									
ARCES				SKPbc		SKPbc	00 04 17.0	+0.8		
	1.8nm,0.8s,baz=358,slow=4.1,SNR=5.6									
OBN	**Obninsk**	**140.24**	**327**	*e*PKPdf		PKPdf	00 01 46.9	+0.6		
NOA	**NORSAR Array B**	**143.94**	**350**	PKP		PKPdf	00 01 51.0	-1.6		
	3.5nm,0.7s,baz=21,slow=3.8,SNR=16									
MMAI	**Mount Meron Ar**	**148.15**	**291**	PKPbc		PKPbc	00 02 06.0	+1.4		
	1.2nm,0.4s,baz=78,slow=7.8,SNR=12									
BRTR	**Keskin Array B**	**148.44**	**304**	PKPbc		PKPbc	00 02 04.9	-0.2		
	0.5nm,0.5s,baz=112,slow=2.6,SNR=4.0									
MLR	**Muntele Rosu**	**151.21**	**320**	PKPbc		PKPbc	00 02 11.5	0.0		
	1.3nm,0.7s,baz=90,slow=4.0,SNR=3.1									
KSP	**Ksiaz**	**151.96**	**337**	*e*P		PKPbc	00 02 13.0	0.0		
ESDC	**Sonseca Array**	**165.88**	**11**	PKPab		PKPab	00 03 24.5	-0.9		
	0.1nm,0.5s,baz=339,slow=4.7,SNR=3.2									
TOA0	**Torodi Ar. Sit**	**167.22**	**189**	*e*PKPdf		PKPdf	00 02 23.9	-0.2		
TORD	**Torodi Ar. Bea**	**167.22**	**189**	PKP		PKPdf	00 02 23.0	-1.1		
	0.7nm,0.9s,baz=3.9,slow=0.7,SNR=4.0									
TORD				PKPab		PKPab	00 03 31.9	0.0		
	1.0nm,0.6s,baz=163,slow=4.1,SNR=13									

IDC ***31*** *23:54:10.8±4.2, 4125N×7164E, h0km, mb3.3/2, mb1 3.3/3, mb1mx3.1/23, mbtmp3.2/3, ML2.4/1, Error ellipse: s-maj=175.2km s-min=22.7km az=152.0*
ISCJB ***31*** *23:54:11.7±2.6, 4082N±008×7181E±007, h26km±21km, mb3.2/2, Error ellipse: s-maj=14.5km s-min=8.7km az=163.5*
NEIC ***31*** *23:54:12.4±0.9, 4128N×7159E, h10km, Error ellipse: s-maj=22.3km s-min=8.9km az=165.0*

ISC 31 23:54:11.3±2.7, 4086N±009×7181E±007, h10km±19km, n20, σ0s94/24, mb3.2/2, 1C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.91**	**47**	P		**Pn**	**23 54 44.0**	**+0.1**
	SNR=48							
AML	**Almayashu**	**1.91**	**47**	*e*P		**Pn**	**23 54 43.5**	**-0.4**
AML				*e*S		**Sn**	**23 55 04.2**	**-3.7**
EKS2	**Erkin-Say**	**2.33**	**39**	P		**Pn**	**23 54 50.2**	**+0.5**
	SNR=11							
EKS2	**Erkin-Say**	**2.33**	**39**	*e*Pn		**Pn**	**23 54 49.6**	**-0.1**
EKS2				*e*S		**Sn**	**23 55 16.7**	**-1.6**
KK31	**Karatay Array**	**2.44**	**337**	⇑Pn		**Pn**	**23 54 52.0**	**+0.8**
	5.9nm,0.3s,baz=150,slow=17,SNR=149							
KK31				⇓Sn		**Sn**		
	32nm,0.3s,baz=147,slow=24,SNR=23						**23 55 21.6**	**+0.4**
UCH	**Uchtor**	**2.45**	**55**	P		**Sn**	**23 55 22.2**	**+0.9**
	SNR=6.8							
UCH	**Uchtor**	**2.45**	**55**	*e*P		**Pn**	**23 54 50.5**	**-0.8**
AAK	**Ala-Archa**	**2.68**	**48**	P		**Pn**	**23 54 58.9**	**+4.4**
	SNR=11							
AAK	**Ala-Archa**	**2.68**	**48**	*e*Pn		**Pn**	**23 54 54.7**	**+0.1**
KZA	**Kyzart**	**2.86**	**64**	P		**Pn**	**23 55 00.8**	**+3.9**
	SNR=6.5							
KBK	**Karagaybulak**	**2.96**	**52**	P		**Pn**	**23 54 59.4**	**+1.1**
	SNR=5.9							
USP	**Ospenovka**	**3.13**	**39**	P		**Pn**	**23 55 00.2**	**-0.5**
	SNR=6.0							
TKM2	**Tokmak 2**	**3.50**	**53**	⇓Pn		**Pn**	**23 55 05.7**	**-0.1**
	4.8nm,0.5s							
TKM2				⇓Sn		**Sn**	**23 55 49.2**	**+1.9**
	14nm,0.7s							
TKM2	**Tokmak 2**	**3.50**	**53**	*e*Pn		**Pn**	**23 55 06.2**	**+0.4**
MKAR	**Makanchi Array**	**9.62**	**48**	Pn		**Pn**	**23 56 28.8**	**-1.0**
	0.0nm,0.3s,baz=237,slow=13,SNR=4.1							
MKAR				Lg			23 59 04.7	
	0.0nm,0.3s,baz=224,slow=31,SNR=2.8							
BRVK	**Borovoye**	**12.25**	**356**	Pn		**Pn**	**23 57 00.1**	**-5.6**
MALT	**Malatya**	**25.76**	**275**	P		**P**	**23 59 41.8**	**-0.4**
ULN	**Ulaanbaatar**	**25.99**	**62**	*e*P		**P**	**23 59 44.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**66.51**	**267**	P		**P**	**00 05 01.9**	**+0.4**
	0.3nm,0.9s,mb3.3,baz=59,slow=4.8,SNR=3.0							
YKA	**Yellowknife Ar**	**76.87**	**3**	P		**P**	**00 06 02.1**	**-1.0**
	0.2nm,0.7s,mb3.1,baz=353,slow=6.1,SNR=4.2							

ISC Computed Locations for December 2007

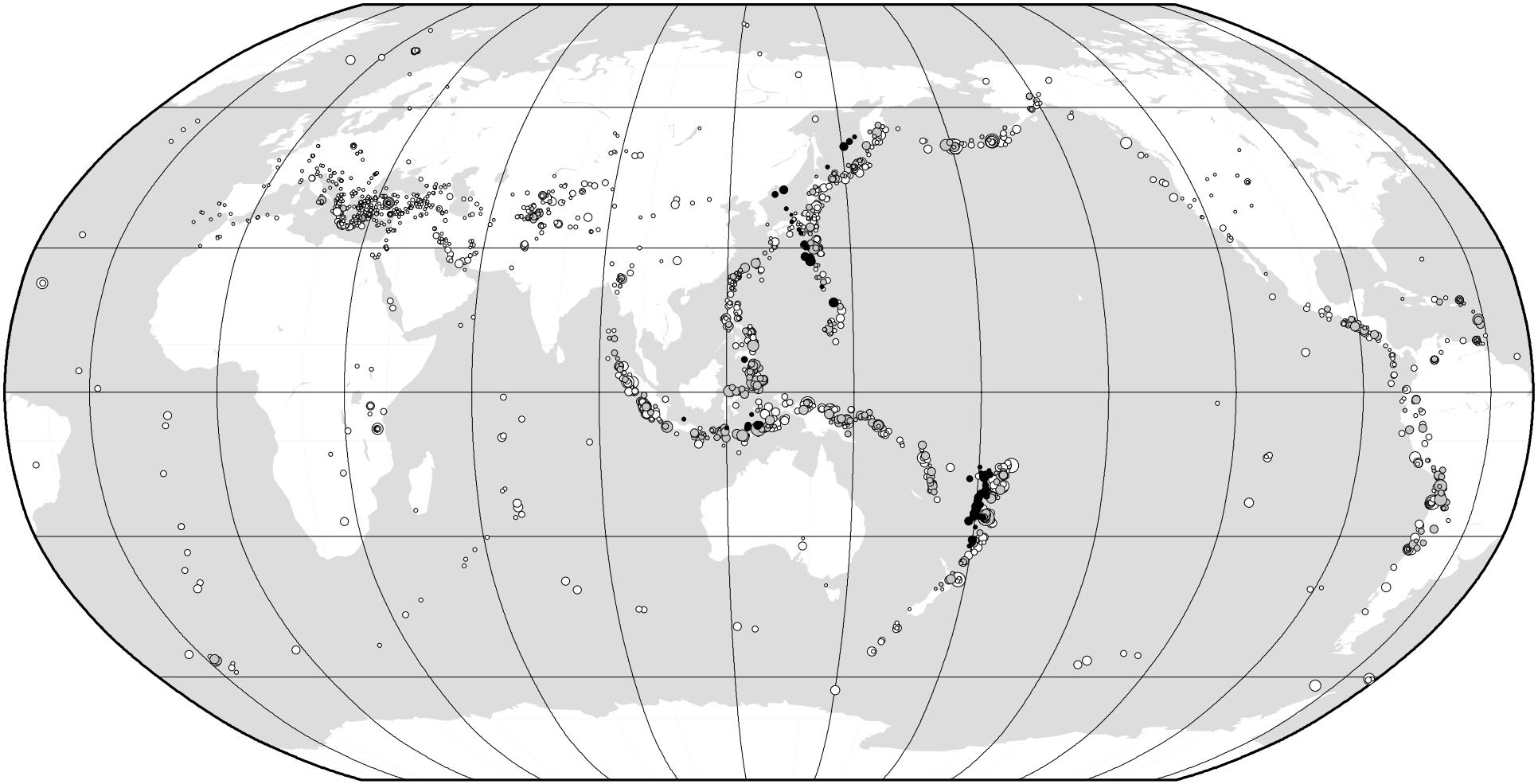

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

2357 Events